Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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  NEIC 01 18:45:41.7±1.7,21˚.70S×179˚.55W,h600km,mb4.6/6,
          Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
   IDC 01 18:45:46.3±2.6,21˚.76S×179˚.70W,h627km±37km,mb3.5/4,
          mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
          s-min=20.6km az=159.0
   ISC 01 18:45:43.1±2.7,22˚.3S±0˚.2×179˚.6W±0˚.3,h613km±42km,
          n22,σ1˚.15/21,mb4.4/9,1C,South of Fiji Islands
Code  Station Name       Δ°    AZ°    Phase ID         Time      Res
                                    Op       ISC      h  m  s    ISC
HBZ   Hicks Bay          15.41 186  eP       P        18 48 53.1 -1.7
URZ   Urewera            16.21 189   P       P        18 49 01.5 -0.9
MRZ   Mangatainoka R     18.81 192  eP       P        18 49 26.7  0.0
DIW   D'Urville Isla     19.30 195  eP       P        18 49 27.3 -3.9
CAW   Cannon Point       19.34 192  eP       P        18 49 31.7 +0.1
OTW   Orongorongo Tu     19.52 192  eP       P        18 49 33.0 -0.2
MOW   Moikau             19.61 192  eP       P        18 49 35.5 +1.5
THZ   Tophouse           20.46 196  eP       P        18 49 42.0 +0.2
KHZ   Kahutara           20.93 194   P       P        18 49 46.2 +0.2
ARMA  Armidale           27.03 246  eP       P        18 50 42.4 +2.3
      4.9nm,0.5s,mb4.4
CTA   Charters Tower     31.93 267⇑iP       P        18 51 22.3 +0.4
      13nm,0.5s,mb4.8
STKA  Stephens Creek     35.75 246  eP       P        18 51 55.3 +1.8
      3.1nm,0.4s,mb4.2
ASAR  Alice Springs      42.74 259   P       P        18 52 50.1 +0.3
      9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                 S       S        18 58 31.3 -0.1
      1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA  Alice Springs      42.74 259  eP       P        18 52 50.1 +0.2
WRA   Warramunga Arr     42.96 264   P       P        18 52 51.0 -0.7
      1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                  S       S        18 58 33.0 -1.5
      0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA  Kakadu             46.64 273  eP       P        18 53 18.2 -1.8
      14nm,0.4s,mb4.8
FITZ  Fitzroy Crossi     51.39 264  eP       P        18 53 54.3 -0.7
      12nm,0.3s,mb4.8
MBWA  Marble Bar         56.08 259  eP       P        18 54 27.1 -0.7
      11nm,0.6s,mb4.2
CMAR  Chiang Mai Arr     89.35 290   P       P        18 57 38.1 +1.0
      1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES ARCESS Array B    130.36 349   PKP     PKP      19 03 43.7 -0.5
      0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES FINESS Array B    137.02 342   PKP     PKP      19 03 57.3 +0.5
      3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR   Muntele Rosu      148.85 324   PKPbc   PKP      19 04 22.7 +5.2
      0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*IDC **01** 00:09:58.3±1.4, 3°.15S×146°.29E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/36, mbtmp3.8/10, ML2.8/2, MS3.3/11, Ms1 3.3/11, ms1mx3.1/37, Error ellipse: s-maj=44.7km s-min=19.5km az=96.0*

*NEIC **01** 00:10:00.6±1.1, 3°.3S±0°.1×146°.2E±0°.2, h10km±2km, mb4.4/7, Error ellipse: s-maj=30.0km s-min=6.5km az=303.0*

ISC 01 00:10:00.4±0.8, **3°.16S**±0°.09×**146°.2E**±0°.1, **h10km, n27, σ0^{s}.68**/20, **mb3.6**/8, **MS3.3**/8, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	1.62	47	Pn	Pn	00 10 29.8	+0.7
PMG	Port Moresby	6.29	171	Pn	Pn	00 11 32.8	-0.4
	1.5nm,0.3s,baz=148,slow=16,SNR=8.9						
PMG				LR	LR	00 13 41.3	
	comp=Z,127nm,18.4s,baz=352,slow=36						
PMG	Port Moresby	6.29	171		Pn	00 11 33.0	-0.3
COEN	Coen	11.13	195	Pn	Pn	00 12 40.8	+1.0
HNR	Honiara	15.04	115	LR	LR	00 19 15.9	
	comp=Z,78nm,18.7s,baz=277,slow=37						
SIJI	Sorong	15.07	278	LR	LR	00 18 36.3	
	comp=Z,62nm,21.2s,baz=136,slow=34						
CTA	Charters Tower	16.83	180	Pn	Pn	00 13 56.8	+0.5
	0.2nm,0.3s,baz=204,slow=12,SNR=1.5						
CTAO	Charters Tower	16.83	180		Pn	00 13 56.8	+0.5
MTN	Manton Dam	17.72	236	Pn	Pn	00 14 06.8	-0.7
MTN				IAmb	IAmb	00 14 13.6	
	comp=Z,53nm,1.4s						
WB0	Warramunga Arr	20.12	214	P	P	00 14 34.3	-0.4
WB0				IAmb	IAmb	00 14 37.0	
	comp=Z,27nm,1.1s						
WB2	Warramunga Arr	20.29	214	P	P	00 14 36.5	+0.1
WB2				IAmb	IAmb	00 14 38.4	
	comp=Z,20nm,0.8s						
WRA	Warramunga Arr	20.29	214	P	P	00 14 36.7	+0.1
	comp=Z,16nm,0.8s,baz=38,slow=12,SNR=59						
DAV	Davao City (W)	22.93	296	LR	LR	00 24 02.7	
	comp=Z,52nm,18.9s,baz=348,slow=37						
BATI	Baumata	23.42	252	LR	LR	00 24 12.9	
	comp=Z,115nm,20.1s,baz=40,slow=36						
AS31	Alice Springs	23.59	209	P	P	00 15 11.1	-0.4
AS31				IAmb	IAmb	00 15 19.2	
	comp=Z,2.1nm,0.8s						
ASAR	Alice Springs	23.59	209	P	P	00 15 11.2	-0.3
	comp=Z,6.6nm,0.8s,baz=44,slow=7.6,SNR=72						
ASAR				LR	LR	00 24 24.3	
	comp=Z,98nm,19.7s,baz=3.0,slow=37						
FITZ	Fitzroy Crossi	25.01	232	P	P	00 15 24.4	-0.3
	comp=Z,7.5nm,0.7s,baz=50,slow=9.4,SNR=25						
FITZ				LR	LR	00 25 50.1	
	comp=Z,94nm,18.6s,baz=55,slow=38						
FITZ	Fitzroy Crossi	25.01	232	P	P	00 15 24.9	+0.2
FITZ				IAmb	IAmb	00 15 31.2	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	28.89	188	LR	LR	00 28 22.9	
	comp=Z,101nm,20.2s,baz=332,slow=38						
FORT	Forrest	32.37	210	P	P	00 16 29.8	-0.5
KSRS	Korea Array	43.82	339	LR	LR	00 35 58.0	
	comp=Z,22nm,18.2s,baz=155,slow=36						
CMAR	Chiang Mai Arr	51.22	297	P	P	00 19 06.3	+1.7
	comp=Z,0.3nm,0.5s,baz=131,slow=6.4,SNR=2.2						
CMAR				LR	LR	00 39 12.8	
	comp=Z,36nm,21.2s,baz=234,slow=34						
SONM	Songino Array	61.54	331	P	P	00 20 17.2	-0.7
	comp=Z,0.2nm,0.6s,baz=143,slow=3.6,SNR=2.8						
MKAR	Makanchi Array	74.80	320	P	P	00 21 41.4	+0.4
	comp=Z,0.2nm,0.8s,baz=100,slow=6.0,SNR=2.4						
ILAR	Eielson Array	83.21	23	P	P	00 22 26.1	-0.6
	comp=Z,0.4nm,1.0s,baz=251,slow=5.6,SNR=2.3						
BVAR	Borovoye Array	84.00	324	P	P	00 22 30.3	-0.7
	comp=Z,0.2nm,0.4s,baz=165,slow=8.6,SNR=4.1						
QSPA	South Pole Qui	86.79	180	LR	LR	00 59 28.1	
	comp=Z,34nm,20.1s,baz=24,slow=34						

MAN 01 00:26:54.0, 8°.23N×125°.24E, h34km, mb4.2, ML3.0, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.39	207	*e*P	Pn	00 27 04.8	+1.5
BUKP				*e*S	Sn	00 27 11.5	+2.2
CGP	Cagayan de Oro	0.58	293⇑	*e*P	Pb	00 27 06.7	+0.7
CGP				*i* S	Sn	00 27 13.3	-0.8

*IDC **01** 00:33:44.2±3.3, 9°.67S×33°.43E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.2/51, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=558.6km s-min=24.7km az=114.0*

ISC 01 00:33:45.6±1.5, **9°.9S**±0°.3×**3°4E**±°, **h10km, n4, σ1^{s}.88**/6, **Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VWZMW	Thunduwike	1.34	193	*i* P	Pn	00 34 10.3	-0.2
VWZMW				S	Sg	00 34 28.4	-0.4
KMBO	Kilima Mbogo	9.30	21	Pn	Pn	00 36 01.2	+1.2
	1.2nm,0.3s,baz=202,slow=16,SNR=16						
KMBO				Sn	Sn	00 37 42.2	-2.8
	0.9nm,0.3s,baz=76,slow=24,SNR=2.0						
KMBO				Lg	Lg	00 38 36.0	
	0.9nm,0.3s,baz=86,slow=23,SNR=5.7						
BOSA	Boshof	20.34	202	P	P	00 38 21.8	-0.5
	3.9nm,0.8s,baz=27,slow=12,SNR=6.5						
MKAR	Makanchi Array	70.98	33	P	P	00 45 04.6	+1.1
	0.2nm,0.7s,baz=243,slow=6.3,SNR=1.9						

*REY **01** 00:36:08.9, 64°.66N×17°.45W, h1km*

*IDC **01** 00:36:09.9±0.8, 64°.62N×17°.50W, h0km, mb3.7/15, mb1 3.9/16, mb1mx3.7/58, mbtmp3.7/16, ML4.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/44, Error ellipse: s-maj=23.2km s-min=14.6km az=33.0*

*NEIC **01** 00:36:10.2±1.6, 64°.61N±0°.09×17°.7W±0°.1, h6km±5km, mb4.3/7, Error ellipse: s-maj=13.4km s-min=8.8km az=188.0*

ISC 01 00:36:10.4±0.5, **64°.69N**±0°.02×**17°.49W**±0°.03, **h10km, n72, σ2^{s}.03**/80, **mb3.9**/23, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARD	Bardarbunga	0.05	156	P	Pg	00 36 09.6	-3.0
	baz=224						
IDYN	Dyngjuhals	0.12	27	P	Pg	00 36 12.2	-1.1
	baz=14						
IURH	Urdarhals	0.20	47	P	Pg	00 36 13.5	-1.1
	baz=38						
IHAM	Hamarinn	0.25	215	P	Pg	00 36 14.0	-1.6
	baz=222						
IKVE	Kverkfjoll	0.35	91	P	Pg	00 36 15.8	-1.6
	baz=86						
ISKR	Skrokkalda	0.41	252	P	Pg	00 36 16.9	-1.4
	baz=257						
THOR	Thorvaldshraun	0.43	54	P	Pg	00 36 17.2	-1.6
	baz=50						
THOR				S	Sg	00 36 23.9	-0.5
	baz=50						
IKRE	Kreppuhraun	0.49	78	P	Pg	00 36 17.9	-2.0
	baz=74						
IJOK	Jokulheimar	0.49	221	P	Pg	00 36 18.1	-1.8
	baz=225						
IASK	Askja	0.52	44	P	Pg	00 36 18.6	-1.8
	baz=40						
IMKO	Mokollar	0.57	59	P	Pg	00 36 19.6	-1.9
	baz=55						
IMKO				S	Sg	00 36 28.2	-0.8
	baz=55						
IIEY	Innrieyrar	0.65	205	P	Pg	00 36 20.9	-2.1
	baz=208						
ISVA	Svartarkot	0.66	9	P	Pg	00 36 21.4	-1.8
	baz=6.7						
ISVA				S	Sb	00 36 31.1	-2.2
	baz=6.7						
IKSK	Karasker	0.69	139	P	Pg	00 36 20.7	-3.0
	baz=139						
IKAL	Kalfafell	0.74	187	P	Pg	00 36 22.4	-2.3
	baz=188						
IVSH	V-Sauoahnukur	0.77	80	P	Pg	00 36 22.5	-2.7
	baz=78						
IVSH				S	Sg	00 36 32.8	-2.3
	baz=78						
IADA	Aoalbol	0.89	67	P	Pg	00 36 24.5	-2.9
	baz=65						
IMEL	Melhnausar	0.96	21	P	Pg	00 36 26.1	-2.7
	baz=20						
IREN	Reynihlio	1.00	14	P	Pg	00 36 26.9	-2.7
	baz=13						
IKVO	Krokottuvotn	1.06	14	P	Pg	00 36 27.9	-2.9
	baz=12						
ISNB	Snabyli	1.07	208	P	Pb	00 36 28.0	-3.0
	baz=210						
IGRS	Grimsstaoir	1.12	31	S	Sg	00 36 45.0	-1.3
	baz=29						
IGRS				P	Pb	00 36 28.8	-3.0
	baz=29						
IFED	Fedgar	1.16	236	P	Pb	00 36 30.1	-2.5
	baz=238						
IRJU	Rjupnafell	1.19	206	P	Pn	00 36 30.1	-2.9
	baz=208						
ISKI	Skildingahlsh	1.21	9	P	Pb	00 36 30.4	-2.9
	baz=8.0						
IMJO	Mjoaskard	1.21	233	P	Pb	00 36 30.9	-2.5
	baz=234						
IGHA	Grjothals	1.22	16	P	Pb	00 36 30.2	-3.2
	baz=15						
IGRA	Granastaoir	1.24	358	P	Pb	00 36 30.7	-3.1
	baz=358						
IDIM	Dimmadalss	1.30	10	P	Pn	00 36 31.8	-2.8
	baz=9.1						
IHVO	Lagu-Hvolar	1.31	208	P	Pn	00 36 32.0	-2.6
	baz=209						
ISAU	Saurbar	1.45	243	P	Pn	00 36 34.0	-2.6
	baz=244						
IBRE	Brettingsstaoi	1.46	353	P	Pn	00 36 34.2	-2.4
	baz=353						
IGIL	Gilhagi	1.48	18	P	Pn	00 36 34.2	-2.7
	baz=17						
ISIG	Siglufjorour	1.57	338	P	Pn	00 36 36.1	-2.1
	baz=338						
BORG	Borgarnes	1.65	274		Pn	00 36 36.9	-2.4
BORG				Sn	Sg	00 37 01.0	-2.3
SCO	Scoresbysund	6.07	346		Pn	00 37 39.9	-0.1
SCO	Scoresbysund	6.07	346	*e*	Pn	00 37 35.2	-4.7
	baz=167,slow=11						
SCO				*i* P	Pn	00 37 40.8	+0.9
SCO				*e*S	Sb	00 38 56.2	-12
SCO				IAML		00 38 57.9	
	comp=Z,0.8nm,0.5s						
EKA	Eskdalemuir Ar	11.77	136	Pn	Pn	00 38 59.0	+0.9
	baz=323,slow=14,SNR=12						
ESK	Eskdalemuir	11.77	136	Pn	Pn	00 38 58.1	0.0
CLL	Collm	20.71	116	P	P	00 40 50.8	+0.4
CLL				IAmb	IAmb	00 40 55.2	
	comp=Z,24nm,1.8s						
BRG	Berggiesshubel	21.42	115	*e*P	P	00 40 59.0	+0.9
BRG				Amp		00 41 00.5	
	comp=Z,6.4nm,1.2s						
BRG	Berggiesshubel	21.42	115	*e*P	P	00 40 59.0	+0.9
BRG				Amp		00 41 00.5	
	comp=Z,6.4nm,1.2s						
PRU	Pruhonice	22.36	116	*e*P	P	00 41 11.0	+2.9
CHVC	Chvalec	22.47	113	*e*P	P	00 41 11.8	+2.4
KHC	Kasperske Hory	22.68	118	*e*P	P	00 41 13.0	+1.3
KHC	Kasperske Hory	22.68	118	P	P	00 41 13.2	+1.6
DPC	Dobruska-Polom	22.77	113	*e*P	P	00 41 14.7	+2.1
GERES	GERESS Array B	22.96	119	P	P	00 41 14.1	-0.6
	comp=Z,1.1nm,0.9s,baz=324,slow=7.7,SNR=4.3						
GERES				LR	LR	00 51 32.2	
	comp=Z,48nm,19.4s,baz=1.0,slow=40						
SQTA	Sankt Quirin	23.41	125	*e*P	P	00 41 19.9	+0.6
	comp=Z,11nm,1.5s						
FETA	Feichten	23.41	125	*e*P	P	00 41 20.8	+1.4
	comp=Z,5.1nm,1.1s						
WATA	Walderalm	23.44	124	*e*P	P	00 41 21.6	+2.0
	comp=Z,5.9nm,0.9s						
EUNU	Eureka	23.65	336	P	P	00 41 22.4	+1.0
EUNU				IAmb	IAmb	00 41 39.6	
	comp=Z,17nm,1.6s						
KBA	Koelnbreinsper	24.30	122	*e*P	P	00 41 28.2	+0.3
	comp=Z,14nm,1.6s						
CONA	Conrad Observa	24.54	117	*e*P	P	00 41 31.1	+1.2
	comp=Z,7.2nm,1.3s						
ARSA	Arzberg	24.97	118	*e*P	P	00 41 34.8	+1.1
	comp=Z,7.0nm,1.4s						
ESDC	Sonseca Array	26.27	156	P	P	00 41 46.1	+0.5
	comp=Z,0.8nm,0.9s,baz=347,slow=7.5,SNR=4.5						
AKASG	Malin Array Be	27.84	98	P	P	00 42 01.3	+1.8
	comp=Z,0.4nm,0.6s,baz=326,slow=9.6,SNR=2.9						
KBZ	Khabaz	39.11	92	P	P	00 43 39.9	+2.5
	comp=Z,3.0nm,1.1s,baz=296,slow=3.9,SNR=3.7						
YKA	Yellowknife Ar	39.20	313	P	P	00 43 38.4	+0.5
	comp=Z,0.7nm,0.9s,baz=40,slow=8.9,SNR=7.0						
YKA				PcP	PcP	00 45 48.8	+2.0
	comp=Z,0.5nm,1.1s,baz=51,slow=4.9,SNR=4.2						
INK	Inuvik	39.83	329	P	P	00 43 44.3	+1.2
	comp=Z,1.3nm,1.0s,baz=30,slow=6.5,SNR=3.7						
AKTO	Aktyubinsk	40.28	73	P	P	00 43 48.0	+0.9
	comp=Z,0.3nm,0.3s,baz=288,slow=9.3,SNR=3.7						
TOLK	Toolik Lake Re	42.73	336	P	P	00 44 09.0	+1.9
TOLK				IAmb	IAmb	00 44 10.9	
	comp=Z,8.7nm,1.2s						
BVAR	Borovoye Array	43.19	62	P	P	00 44 12.3	+1.4
	comp=Z,0.4nm,0.7s,baz=312,slow=45,SNR=4.5						
ILAR	Eielson Array	45.67	332	P	P	00 44 32.6	+2.0
	comp=Z,1.7nm,1.1s,baz=33,slow=5.3,SNR=9.9						
ZALV	Zalesovo Beam	47.62	51	P	P	00 44 46.9	+1.0
	comp=Z,0.4nm,0.3s,baz=322,slow=11,SNR=2.1						
KURK	Kurchatov	48.10	58	P	P	00 44 50.7	+1.1
KURBB	Kurchatov Arra	48.14	58	P	P	00 44 51.4	+1.4
	comp=Z,2.0nm,0.9s,baz=322,slow=7.5,SNR=15						
MKAR	Makanchi Array	52.71	58	P	P	00 45 25.5	+0.8
	comp=Z,1.0nm,0.9s,baz=308,slow=6.0,SNR=5.6						
TORD	Torodi Ar. Bea	53.16	156	P	P	00 45 28.3	+0.1
	comp=Z,1.2nm,0.8s,baz=358,slow=4.3,SNR=4.8						
PD31	Pinedale Array	53.17	293	P	P	00 45 28.1	-0.3
PD31				IAmb	IAmb	00 45 30.0	
	comp=Z,2.5nm,1.0s						
PDAR	Pinedale Array	53.17	293	P	P	00 45 29.9	+1.5
	comp=Z,1.7nm,1.0s,baz=64,slow=6.8,SNR=9.4						
SONM	Songino Array	59.62	40	P	P	00 46 14.9	+0.8
	comp=Z,0.3nm,0.6s,baz=352,slow=8.7,SNR=2.7						

IDC 01 00:41:07.8±1.1, **2°.79N**×**128°.66E, h0km, mb3.4**/5, **mb1 3.6**/5, **mb1mx3.2**/54, **mbtmp3.4**/5, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx2.4**/27, **Error ellipse: s-maj=75.2km s-min=21.5km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.27	166	P	P	00 46 17.9	+0.7
	0.2nm,0.3s,baz=344,slow=10,SNR=6.3						
ASAR	Alice Springs	26.78	169	P	P	00 46 48.8	-0.9
	0.2nm,0.4s,baz=353,slow=7.7,SNR=7.9						
MKAR	Makanchi Array	59.43	325	P	P	00 51 12.9	+0.6
	0.2nm,0.4s,baz=120,slow=7.8,SNR=6.5						
MKAR				LR	LR	01 17 45.8	
	comp=Z,48nm,18.9s,baz=3.5,slow=37						
KURBB	Kurchatov Arra	63.57	327	P	P	00 51 40.4	+0.1
	0.3nm,0.5s,baz=128,slow=6.3,SNR=5.8						
ILAR	Eielson Array	85.13	25	P	P	00 53 44.9	-0.7
	0.2nm,0.6s,baz=272,slow=3.2,SNR=2.3						

*AEIC **01** 00:45:11.9±2.9, 53°.75N±0°.06×165°.64W±0°.08, h62km±5km, ML4.1/58, mb4.2/24(NEIC), Error ellipse: s-maj=8.6km s-min=6.3km az=160.0*

*NEIC **01** 00:45:12.0±2.4, 53°.83N±0°.07×165°.78W±0°.08, h73km±5km, Error ellipse: s-maj=11.4km s-min=3.2km az=148.0*

*IDC **01** 00:45:12.5±4.2, 54°.02N×165°.89W, h73km±36km, mb3.6/19, mb1 3.8/21, mb1mx3.6/56, mbtmp3.9/21, ML4.0/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/45, Error ellipse: s-maj=25.6km s-min=15.1km az=19.0*

ISC 01 00:45:12.1±0.8, **53°.83N**±0°.08×**165°.69W**±0°.05, **h74km**±5km, **n138, σ1^{s}.31**/150, **mb4.0**/28, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHB	Akutan Harbor	0.30	346		Pn	00 45 23.4	-0.3
AHB					Sn	00 45 31.6	-0.6
AKSA	Akutan Strait	0.31	360		Pn	00 45 23.2	-0.5
AKSA					Sn	00 45 32.4	+0.1
AKUT	Akutan	0.31	351		Pn	00 45 23.5	-0.3
AKUT					Sn	00 45 32.4	+0.1
AKMO	Akutan Morgan	0.32	325		Pn	00 45 23.5	-0.3
AKMO					Sn	00 45 32.6	0.0
AKLV	Akutan Long Va	0.37	335		Pn	00 45 23.4	-0.9
AKLV					Sn	00 45 33.0	-0.2
AKRB	Akutan Reef Bi	0.38	324		Pn	00 45 24.0	-0.3
AKRB					Sn	00 45 33.8	+0.6
HSB	Akutan Spr’s B	0.38	340		Pn	00 45 23.9	-0.4
LVA	Lava Point	0.39	329		Pn	00 45 24.1	-0.3
AKGG	Akutan Green G	0.41	335		Pn	00 45 24.1	-0.4
UNV	Unalaska Valle	0.48	272		Sn	00 45 34.5	-0.1
UNV	Unalaska Valle	0.48	272		Pn	00 45 24.5	-0.5
MNAT	Makushin Natee	0.59	276		Pn	00 45 25.8	-0.4
MNAT					Sn	00 45 37.2	+0.7
MTBL	Makushin Table	0.60	284		Pn	00 45 26.2	-0.2
MREP	Makushin Rep’t	0.62	269		Pn	00 45 26.5	-0.1
MSW	Makushin Switc	0.65	278		Pn	00 45 26.5	-0.3
MSW					Sn	00 45 38.8	+1.2
MGOD	Makushin Gods	0.70	268		Pn	00 45 27.3	-0.1
MGOD					Sn	00 45 39.4	+0.8
MAPS	Pakushin South	0.74	269		Pn	00 45 27.7	-0.1
MAPS					Sn	00 45 40.3	+1.0
WESP	Westdahl Peak	0.88	40		Pn	00 45 29.6	+0.2
WESP					Sn	00 45 43.2	+0.9
WEBT	Westdahl Beart	0.94	35		Pn	00 45 30.5	+0.3
WTUG	Tugumak	1.28	36		Pn	00 45 34.5	+0.2
SSBA	Shishaldin	1.32	44		Pn	00 45 35.1	+0.2
SSBA					Sn	00 45 53.7	+1.7
SSLW	Shishaldin Wes	1.32	44		Pn	00 45 35.2	+0.3
SSLS	Shishaldin Sou	1.33	48		Pn	00 45 35.5	+0.4
OKFG	Magazine Ridge	1.39	253		Pn	00 45 35.8	+0.1
SSLN	Shishaldin Nor	1.40	45		Pn	00 45 36.7	+0.8
SSLN					Sn	00 45 55.9	+2.0
BRPK	Brown Peak	1.41	54		Pn	00 45 36.3	+0.3
OKER	Okmok East Rim	1.45	256		Pn	00 45 36.9	+0.2
OKRE	Okmok R’deer P	1.50	259		Pn	00 45 37.3	+0.1
OKSO	Okmok South	1.54	253		Pn	00 45 38.0	+0.2
OKSP	Okmok Steeple	1.65	251		Pn	00 45 39.2	-0.1
FALS	False Pass	1.68	51	Pn	Pn	00 45 40.1	+0.5
FALS	False Pass	1.68	51		Sn	00 46 02.5	+2.1
NIKH	Nikolski High	2.08	247	Pn	Pn	00 45 44.5	-0.3
DT1	Dutton Round H	2.37	56		Pn	00 45 49.4	+0.6
HAG	Hague Volcano	2.66	54		Pn	00 45 54.1	+1.3
PS4A	Pavlof South-4	2.70	54		Pn	00 45 54.4	+1.1
PVV	Pavlof Volcano	2.75	54		Pn	00 45 55.1	+1.2
SDPT	Sand Point	3.40	61	Pn	Pn	00 46 03.0	+0.3
CNBA	Chernabura Isl	3.71	72	Pn	Pn	00 46 06.3	-0.7
SPIA	Saint Paul Isl	4.24	324	Pn	Pn	00 46 15.8	+1.6
VNFG	Fog Glacier, M	4.30	53		Pn	00 46 16.0	+0.9
VNHG	Veniaminof 1	4.46	55		Pn	00 46 18.2	+1.0
CHGN	Chignik	4.86	56	Pn	Pn	00 46 23.4	+0.7
ATKA	Atka Island	5.38	256	Pn	Pn	00 46 30.2	+0.4
ADK	Adak	6.94	258	Pn	Pn	00 46 52.8	+1.8
OHAK	Old Harbor	7.82	59	Pn	Pn	00 47 01.5	-1.5
KDAK	Kodiak Island	8.38	57	P	Pn	00 47 09.2	-1.4
	5.0nm,0.3s,baz=251,slow=3.8,SNR=28						
KDAK				S	Sn	00 48 37.2	-6.3
	0.3nm,0.3s,baz=105,slow=15,SNR=1.4						
KDAK				LR	LR	00 51 03.9	
	comp=Z,130nm,18.1s,baz=239,slow=42						
KDAK	Kodiak Island	8.38	57	Pn	Pn	00 47 09.0	-1.6
RSO	Redoubt South	9.66	41		Pn	00 47 31.1	+2.7
CNPM	China Poot	9.78	49	Pn	Pn	00 47 28.9	-0.8
TTA	Tatalina	10.43	25	Pn	Pn	00 47 39.8	+1.1
ANM	Nome	10.77	1	Pn	Pn	00 47 45.3	+2.1
O22K	Cooper Landing	10.92	46		Pn	00 47 44.4	-0.9
SUA	Susitna One	11.05	40		Pn	00 47 46.8	-0.4
SKT	Skwentna	11.09	37		Pn	00 47 49.1	+1.5
HIN	Hinchinbrook I	12.30	50	Pn	Pn	00 48 02.0	-2.1
KTH	Kantishna Hill	12.37	32	Pn	Pn	00 48 07.0	+1.8
SCM	Sheep Creek Mo	12.61	43		Pn	00 48 06.1	-2.3
BPAW	Bear Paw Mtn.	12.75	30	Pn	Pn	00 48 11.1	+0.9
KLU	Klutina	13.03	46		Pn	00 48 11.2	-2.8
RAGM	Ragged Mountai	13.14	52	Pn	Pn	00 48 13.3	-2.1
M24K	Tolsona, Glenn	13.22	43	Pn	Pn	00 48 14.9	-1.6
HMT	Hamilton	13.31	52		Pn	00 48 15.8	-2.0
N25K	Chitina, Valde	13.65	47		Pn	00 48 19.9	-2.3
GLB	Gilahina Butte	13.93	48	Pn	Pn	00 48 23.9	-1.9
PAX	Paxson	13.95	41		Pn	00 48 25.6	-0.5
I23K	Minto, Yukon-K	14.00	29		Pn	00 48 26.5	-0.2
VRDI	Verde Repeater	14.00	49		Pn	00 48 24.6	-2.3
TGL	Tana Glacier	14.12	51		Pn	00 48 26.8	-1.7
CCB	Clear Creek Bu	14.12	33		Pn	00 48 26.0	-2.3
MDM	Murphy Dome	14.20	31	Pn	Pn	00 48 29.5	+0.1
MCARA	McCarthy VSAT	14.25	49		Pn	00 48 29.3	-0.7
ISLE	Juniper Island	14.30	52		Pn	00 48 29.0	-1.8
BALM	Baldy	14.44	51		Pn	00 48 31.0	-1.5
ILAR	Eielson Array	14.50	33	P	Pn	00 48 33.8	+0.5
	0.3nm,0.3s,baz=221,slow=12,SNR=13						
YAH	Yahtse	14.51	54		Pn	00 48 32.4	-1.3
RIDG	Independent Ri	14.60	39	Pn	Pn	00 48 33.9	-0.6
BARN	Barnard Glacie	14.76	51		Pn	00 48 35.9	-0.9
TABL	Table Mountain	14.82	54		Pn	00 48 36.7	-0.9
CTGM	Chitina Glacie	14.88	52	Pn	Pn	00 48 36.9	-1.5
COLD	Coldfoot	15.38	23	Pn	P	00 48 45.9	-1.7
EGAK	Eagle	16.52	39	Pn	Pn	00 48 58.8	0.0
HYT	Haines Junctio	16.65	54		Pn	00 49 00.7	+0.1
HYT				IAmb	IAmb	00 49 05.3	
	comp=Z,18nm,1.1s						
TOLK	Toolik Lake Re	16.67	21	Pn	P	00 49 01.4	-0.5
DAWY	Dawson	16.86	42	P	Pn	00 49 02.2	-0.9
SKAG	Skagway	17.52	59	P	P	00 49 12.2	+1.0
SKAG				IAmb	IAmb	00 49 19.3	
	comp=Z,8.9nm,0.7s						
WHY	Whitehorse	17.89	55	P	P	00 49 15.7	+0.2
WHY				IAmb	IAmb	00 49 22.4	
	comp=Z,10nm,0.9s						
DLBC	Dease Lake	20.24	62	P	P	00 49 42.3	+1.2
	comp=Z,1.1nm,0.8s,baz=2.2,slow=22,SNR=5.6						
DLBC	Dease Lake	20.24	62	P	P	00 49 41.6	+0.5
INK	Inuvik	20.90	34	P	P	00 49 45.9	-2.2
	comp=Z,3.0nm,0.5s,baz=234,slow=9.4,SNR=21						
INK	Inuvik	20.90	34	P	P	00 49 46.1	-2.0
INK				IAmb	IAmb	00 49 54.9	
	comp=Z,4.6nm,0.6s						
C36M	Paulatuk	24.47	35	P	P	00 50 23.1	-0.6
C36M				IAmb	IAmb	00 50 28.7	
	comp=Z,3.8nm,0.7s						
YKA	Yellowknife Ar	27.60	51	P	P	00 50 52.8	+0.7
	comp=Z,1.5nm,0.4s,baz=274,slow=7.0,SNR=55						
YKA				PcP	PcP	00 54 06.8	-0.7
	comp=Z,0.3nm,0.5s,baz=287,slow=2.1,SNR=3.2						
YAK	Yakutsk	33.90	310	P	P	00 51 47.4	-0.1
	comp=Z,5.8nm,0.4s,baz=230,slow=0.5,SNR=5.6						
PAHR	Pah Rah Range	34.07	95	P	P	00 51 51.2	+1.8
PAHR				IAmb	IAmb	00 51 58.2	
	comp=Z,2.3nm,0.9s						
PNTR	Pine Nut	34.34	96	P	P	00 51 54.4	+2.5
PNTR				IAmb	IAmb	00 51 57.5	
	comp=Z,6.9nm,0.8s						
BCYI	Bear Canyon	34.82	84	P	P	00 51 57.5	+1.6
WAKR	Walker	34.82	97	P	P	00 51 58.5	+2.6
WAKR				IAmb	IAmb	00 52 02.4	
	comp=Z,2.7nm,0.6s						
MCMT	McKenzie Canyo	34.85	83	P	P	00 51 56.9	+0.7
NVAR	Mina Array Bea	35.54	96	P	P	00 52 04.5	+2.4
	comp=Z,0.7nm,0.6s,baz=311,slow=8.2,SNR=6.2						
EUNU	Eureka	35.68	17	P	P	00 52 03.1	+0.4
EUNU				IAmb	IAmb	00 52 06.1	
	comp=Z,5.7nm,1.4s						
YHH	Holmes Hill	36.05	82	P	P	00 52 08.1	+1.6
PDAR	Pinedale Array	37.99	83	P	P	00 52 24.2	+1.3
	comp=Z,0.6nm,0.8s,baz=306,slow=5.3,SNR=5.3						
FCC	Fort Churchill	38.30	53	P	P	00 52 25.9	+0.9
H11N2	WAKE ISLAND Hy	40.00	222	T	T	01 35 09.5	
	baz=25,slow=76,SNR=238						
H11N3	WAKE ISLAND Hy	40.01	222	T	T	01 35 10.3	
	baz=25,slow=76,SNR=243						
H11N1	WAKE ISLAND Hy	40.02	222	T	T	01 35 05.2	
	baz=25,slow=76,SNR=108						
O20A	White River Ci	40.40	86	P	P	00 52 44.1	+1.2
O20A				IAmb	IAmb	00 52 47.0	
	comp=Z,5.2nm,0.6s						
ULM	Lac du Bonnet	41.52	65	P	P	00 52 52.0	+0.2
	comp=Z,2.1nm,1.0s,baz=307,slow=10,SNR=1.8						
SUMG	Summit	48.71	19	P	P	00 53 49.4	+0.4
SUMG				IAmb	IAmb	00 53 52.0	
	comp=Z,1.7nm,0.6s						
WMOK	Wichita Mounta	49.59	84	P	P	00 53 56.6	+0.9
WMOK				IAmb	IAmb	00 53 59.5	
	comp=Z,2.6nm,0.7s						
TX31	Lajitas Ar. Si	50.55	93	P	P	00 54 04.2	+1.0
TXAR	Lajitas Array	50.55	93	P	P	00 54 04.3	+1.2
	comp=Z,0.8nm,0.3s,baz=293,slow=5.5,SNR=25						
ULN	Ulaanbaatar	52.08	302	P	P	00 54 13.7	-0.7
ULN				IAmb	IAmb	00 54 14.4	
	comp=Z,2.9nm,1.1s						
SONM	Songino Array	52.43	302	P	P	00 54 16.5	-0.4

	comp=Z,0.6nm,0.8s,baz=41,slow=4.6,SNR=3.1						
SONM				PcP	**PcP**	**00 55 26.9**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=77,slow=1.7,SNR=5.4						
HHC	**Hu-ho-hao-te**	**54.44**	**292**	*e*P	**P**	**00 54 34.9**	**+3.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
ARCES	**ARCESS Array B**	**56.67**	**355**	P	**P**	**00 54 45.7**	**-1.5**
	comp=Z,4.8nm,0.9s,baz=16,slow=4.5,SNR=8.1						
ARCES				PcP	**PcP**	**00 55 41.7**	**-0.7**
	comp=Z,5.2nm,1.0s,baz=348,slow=4.0,SNR=1.8						
ZALV	**Zalesovo Beam**	**57.81**	**319**	PcP	**PcP**	**00 55 46.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=3.6,slow=4.6,SNR=2.5						
BATG	**Bathurst New B**	**58.52**	**52**	P	**P**	**00 55 00.7**	**+0.3**
DRLN	**Deer Lake**	**60.84**	**45**	P	**P**	**00 55 16.4**	**+0.1**
KURBB	**Kurchatov Arra**	**62.83**	**320**	P	**P**	**00 55 29.2**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=116,slow=20,SNR=1.5						
KURBB				PcP	**PcP**	**00 56 06.4**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=37,slow=4.1,SNR=4.0						
BVAR	**Borovoye Array**	**63.77**	**326**	PcP	**PcP**	**00 56 10.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=42,slow=2.4,SNR=5.0						
WMQ	**Urumqi**	**64.34**	**310**	*e*P	**P**	**00 55 42.8**	**+3.0**
MKAR	**Makanchi Array**	**64.38**	**315**	P	**P**	**00 55 38.5**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=49,slow=5.5,SNR=4.6						
FIA1	**FINESS Array S**	**64.69**	**354**	P	**P**	**00 55 40.3**	**-1.4**
FINES	**FINESS Array B**	**64.69**	**354**	P	**P**	**00 55 40.5**	**-1.2**
	comp=Z,2.3nm,0.7s,baz=22,slow=7.2,SNR=20						
NOA	**NORSAR Array B**	**65.45**	**2**	P	**P**	**00 55 45.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=360,slow=6.0,SNR=1.7						
AKASG	**Malin Array Be**	**75.09**	**350**	P	**P**	**00 56 44.0**	**-1.6**
	comp=Z,1.0nm,0.4s,baz=13,slow=6.0,SNR=10						
GERES	**GERESS Array B**	**77.70**	**0**	P	**P**	**00 57 00.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=347,slow=8.4,SNR=2.7						
CLF	**Chambon-Foret**	**78.01**	**8**	P	**P**	**00 57 02.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**78.41**	**285**	P	**P**	**00 57 04.1**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=20,slow=5.2,SNR=4.3						
ESDC	**Sonseca Array**	**85.55**	**14**	P	**P**	**00 57 41.5**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=356,slow=5.4,SNR=2.6						
WRA	**Warramunga Arr**	**89.65**	**235**	P	**P**	**00 58 00.8**	**-0.9**
	comp=Z,0.8nm,1.1s,baz=37,slow=5.9,SNR=2.8						
ASAR	**Alice Springs**	**93.04**	**233**	P	**P**	**00 58 16.8**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=28,slow=5.0,SNR=2.2						
H03N2	**Juan Fernandez**	**114.44**	**114**	T	T	03 08 30.7	
	baz=322,slow=77,SNR=51						
H03N1	**Juan Fernandez**	**114.45**	**113**	T	T	03 08 38.5	
	baz=322,slow=77,SNR=62						
H03N3	**Juan Fernandez**	**114.45**	**114**	T	T	03 08 37.5	
	baz=322,slow=77,SNR=69						
BOSA	**Boshof**	**153.56**	**338**	PKPbc	**PKPbc**	**01 05 02.1**	**+0.1**
	comp=Z,5.5nm,1.2s,baz=190,slow=0.4,SNR=4.7						

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*IDC **01** 00:55:41.1±0.8, 81°.64N×118°.58E, h0^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.8/40, mbtmp3.8/15, ML4.1/1, MS3.3/15, Ms1 3.3/15, ms1mx3.0/57, Error ellipse: s-maj=27.5km s-min=13.5km az=160.0*

*IEPN **01** 00:55:43.0, 81°.55N×118°.82E, h10^{km}*

*NEIC **01** 00:55:43.1±1.4, 81°.70N±0°.09×118°.4E±0°.5, h10^{km}±1^{km}, mb4.3/31, Error ellipse: s-maj=16.2km s-min=10.9km az=202.0*

ISC 01 00:55:42.8±0.5, **81°.69N**±0°.08×**118°.23E**±0°.07, **h10**^{km}, **n62**, σ**1^{s}.38**/55, **mb4.1**/25, **MS3.3**/14, **East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**10.18**	**301**	*e*P	**Pn**	**00 58 06.8**	**-1.7**
ZFI2				*e*S	Sn	00 59 52.2	-10
ZFI	**Zemlya Franca-**	**10.18**	**301**	*e*P	**Pn**	**00 58 07.5**	**-1.1**
ZFI				*e*S	Sn	00 59 54.0	-8.4
TIXI	**Tiksi**	**10.36**	**161**	Pn	**Pn**	**00 58 10.3**	**-0.7**
NRIK	**Noril'sk**	**14.22**	**227**	Pn	**Pn**	**00 59 01.5**	**-2.2**
	0.9nm,0.3s,baz=28,slow=11,SNR=33						
NRIK				Sn	Sn	01 01 30.2	-11
	0.2nm,0.3s,baz=176,slow=22,SNR=1.9						
NRIK				LR	LR	01 04 59.2	
	comp=Z,120nm,21.0s,baz=8.5,slow=39						
NRIK	**Noril'sk**	**14.22**	**227**		**Pn**	**00 59 02.1**	**-1.7**
KBS	**Kingsbay**	**15.68**	**317**	Pn	**Pn**	**00 59 19.6**	**-3.6**
KBS				IAmb	IAmb	00 59 39.4	
	comp=Z,8.8nm,0.7s						
KBS	**Kingsbay**	**15.68**	**317**	*e*P	**Pn**	**00 59 19.2**	**-4.0**
KBS				*e*S	Sn	01 01 59.0	-18
SPA0	**Spitsbergen Ar**	**15.86**	**312**	Pn	**Pn**	**00 59 23.2**	**-2.4**
SPA0				IAmb	IAmb	00 59 36.3	
	comp=Z,98nm,1.7s						
SPA0	**Spitsbergen Ar**	**15.86**	**312**	*e*P	**Pn**	**00 59 22.9**	**-2.7**
SPA0				*e*S	Sn	01 02 02.5	-19
SPITS	**Spitsbergen Ar**	**15.86**	**312**	Pn	**Pn**	**00 59 21.7**	**-3.9**
	baz=50,slow=13,SNR=15						
YAK	**Yakutsk**	**19.99**	**164**	P	**P**	**01 00 13.8**	**-1.1**
YAK				IAmb	IAmb	01 00 19.7	
	comp=Z,7.4nm,0.7s						
KEV	**Kevo**	**22.12**	**292**	P	**P**	**01 00 37.9**	**+0.2**
ARA0	**ARCESS Array S**	**22.52**	**293**	P	**P**	**01 00 42.0**	**-0.1**
ARCES	**ARCESS Array B**	**22.52**	**293**	P	**P**	**01 00 42.2**	**+0.1**
	comp=Z,7.6nm,0.7s,baz=24,slow=11,SNR=15						
ARCES				LR	LR	01 11 17.7	
	comp=Z,55nm,18.4s,baz=115,slow=42						
LVZ	**Lovozero**	**22.79**	**284**	P	**P**	**01 00 44.4**	**-0.6**
RES	**Resolute Bay**	**22.87**	**22**	LR	LR	01 10 03.1	
	comp=Z,50nm,19.9s,baz=166,slow=38						
TOLK	**Toolik Lake Re**	**23.29**	**68**	P	**P**	**01 00 49.8**	**-0.3**
TOLK				IAmb	IAmb	01 01 01.8	
	comp=Z,10nm,1.6s						
COLD	**Coldfoot**	**24.53**	**70**	P	**P**	**01 01 01.5**	**-0.4**
ANM	**Nome**	**24.89**	**86**	P	**P**	**01 01 05.4**	**+0.3**
ANM				IAmb	IAmb	01 01 07.3	
	comp=Z,5.6nm,1.0s						
INK	**Inuvik**	**25.64**	**55**	P	**P**	**01 01 12.1**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=344,slow=11,SNR=9.9						
INK				LR	LR	01 12 25.9	
	comp=Z,48nm,19.1s,baz=108,slow=39						
INK	**Inuvik**	**25.64**	**55**	P	**P**	**01 01 12.2**	**+0.4**
INK				IAmb	IAmb	01 01 14.6	
	comp=Z,4.9nm,1.0s						
C36M	**Paulatuk**	**25.71**	**46**	P	**P**	**01 01 11.9**	**-0.5**
C36M				IAmb	IAmb	01 01 14.4	
	comp=Z,9.3nm,0.8s						
ILAR	**Eielson Array**	**27.30**	**69**	P	**P**	**01 01 27.1**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=339,slow=8.8,SNR=12						
ILAR				LR	LR	01 12 50.4	
	comp=Z,40nm,18.6s,baz=328,slow=38						
KIRV	**Kirov**	**29.50**	**263**	LR	LR	01 13 52.5	
	comp=Z,67nm,20.8s,baz=37,slow=37						
ZALV	**Zalesovo Beam**	**29.57**	**221**	P	**P**	**01 01 46.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=356,slow=13,SNR=2.4						
ZALV				LR	LR	01 14 27.3	
	comp=Z,86nm,19.1s,baz=7.5,slow=38						
FINES	**FINESS Array B**	**30.11**	**287**	P	**P**	**01 01 52.3**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=19,slow=11,SNR=7.2						
ARU	**Arti**	**30.29**	**252**	LR	LR	01 15 33.7	
	comp=Z,73nm,18.9s,baz=302,slow=39						
ARU	**Arti**	**30.29**	**252**	P	**P**	**01 01 54.6**	**+1.0**
KLU	**Klutina**	**30.58**	**70**	P	**P**	**01 01 56.3**	**+0.2**
BRVK	**Borovoye**	**32.05**	**238**	P	**P**	**01 02 10.8**	**+1.8**
BRVK				IAmb	IAmb	01 02 11.7	
	comp=Z,2.4nm,0.8s						
NOA	**NORSAR Array B**	**32.48**	**300**	P	**P**	**01 02 13.7**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=13,slow=8.8,SNR=3.5						
YKA	**Yellowknife Ar**	**33.34**	**42**	P	**P**	**01 02 19.1**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=346,slow=8.9,SNR=7.0						
YKA				PcP	**PcP**	**01 05 01.0**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=336,slow=3.7,SNR=3.7						
YKA				LR	LR	01 16 11.5	
	comp=Z,70nm,18.7s,baz=0.0,slow=37						
BELG	**Belogornoye**	**35.76**	**261**	LR	LR	01 19 07.6	
	comp=Z,43nm,20.4s,baz=141,slow=39						
AKTO	**Aktyubinsk**	**36.21**	**250**	LR	LR	01 19 19.5	
	comp=Z,46nm,19.2s,baz=3.2,slow=39						
MK31	**Makanchi Array**	**36.89**	**222**	P	**P**	**01 02 51.2**	**+0.3**
MKAR	**Makanchi Array**	**36.89**	**222**	P	**P**	**01 02 51.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=4.5,slow=7.9,SNR=13						
MAKZ	**Makanchi**	**36.91**	**223**	P	**P**	**01 02 51.9**	**+0.8**
MAKZ				IAmb	IAmb	01 02 54.4	
	comp=Z,4.4nm,1.1s						
NRS	**Narsarsuaq**	**37.10**	**347**	P	**P**	**01 02 53.6**	**+1.1**
AKASG	**Malin Array Be**	**40.08**	**279**	P	**P**	**01 03 18.2**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=12,slow=8.7,SNR=5.2						
AKBB	**Malin Array Si**	**40.08**	**279**	P	**P**	**01 03 17.7**	**0.0**
KK31	**Karatay Array**	**41.81**	**234**	P	**P**	**01 03 34.0**	**+1.9**
KKAR	**Karatay Array**	**41.81**	**234**	P	**P**	**01 03 33.7**	**+1.6**
AAK	**Ala-Archa**	**41.82**	**230**	P	**P**	**01 03 34.1**	**+1.8**
BUR08	**Bucovina Ar. S**	**43.64**	**282**	P	**P**	**01 03 48.4**	**+1.4**
BUR08				IAmb	IAmb	01 04 06.8	
	comp=Z,12nm,1.7s						
GERES	**GERESS Array B**	**44.06**	**293**	P	**P**	**01 03 51.5**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=19,slow=9.7,SNR=4.3						
MLR	**Muntele Rosu**	**45.64**	**281**	LR	LR	01 25 26.0	
	comp=Z,61nm,18.4s,baz=66,slow=39						
DAVOX	**Davos/Dischmat**	**46.59**	**296**	LR	LR	01 25 50.8	
	comp=Z,33nm,18.4s,baz=74,slow=39						
JTMT	**Jette**	**47.91**	**46**	P	**P**	**01 04 21.0**	**+0.3**
JTMT				IAmb	IAmb	01 04 22.1	
	comp=Z,4.8nm,0.9s						
YNE	**Yellowstone No**	**51.05**	**43**	P	**P**	**01 04 45.5**	**+0.6**
YHH	**Holmes Hill**	**51.19**	**44**	P	**P**	**01 04 46.5**	**+0.6**
ESDC	**Sonseca Array**	**55.30**	**307**	P	**P**	**01 05 16.6**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=12,slow=7.4,SNR=1.7						
IDI	**Anoyia**	**55.80**	**279**	LR	LR	01 32 21.7	
	comp=Z,23nm,18.5s,baz=246,slow=39						
NVAR	**Mina Array Bea**	**56.67**	**52**	P	**P**	**01 05 26.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=325,slow=4.8,SNR=4.2						
Q24A	**Divide**	**57.51**	**39**	P	**P**	**01 05 32.9**	**+0.9**
PV01	**Paradox Valley**	**58.00**	**43**	P	**P**	**01 05 36.1**	**+0.8**
PV01				IAmb	IAmb	01 05 37.0	
	comp=Z,6.1nm,0.8s						
S22A	**4UR Ranch, Cre**	**58.56**	**41**	P	**P**	**01 05 40.4**	**+1.1**
S22A				IAmb	IAmb	01 05 40.9	
	comp=Z,3.6nm,0.9s						
SDCO	**Great Sand Dun**	**58.68**	**40**	P	**P**	**01 05 40.6**	**+0.4**
SDCO				IAmb	IAmb	01 05 41.4	
	comp=Z,1.7nm,0.9s						
WMOK	**Wichita Mounta**	**62.26**	**34**	P	**P**	**01 06 04.1**	**-0.2**
TX31	**Lajitas Ar. Si**	**67.19**	**39**	P	**P**	**01 06 36.5**	**-0.1**
TXAR	**Lajitas Array**	**67.19**	**39**	P	**P**	**01 06 36.3**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=32,slow=6.5,SNR=20						
TXAR				LR	LR	01 36 37.5	
	comp=Z,32nm,18.3s,baz=0.0,slow=37						
TOA0	**Torodi Ar. Sit**	**80.78**	**298**	P	**P**	**01 07 56.0**	**0.0**
TOA0				IAmb	IAmb	01 08 02.6	
	comp=Z,6.4nm,1.5s						
TORD	**Torodi Ar. Bea**	**80.78**	**298**	P	**P**	**01 07 55.9**	**-0.2**
	comp=Z,1.1nm,1.1s,baz=1.8,slow=5.7,SNR=5.0						

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*HEL **01** 01:23:44.7, 67°.86N×20°.50E, h0^{km}, ML1.8, Explosion*

UPP 01 01:23:43.2±0.5, **67°.82N**×**20°.20E**, **h2**^{km}±11^{km}, **ML1.6**, **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**20**	P	Pg	01 23 46.1	0.0
RATU	**Laukkuluspa**	**0.23**	**272**	P	Pg	01 23 47.7	0.0
KOVU	**Salmi**	**0.41**	**358**	P	Pg	01 23 50.8	-0.2
DUNU	**Dundret**	**0.71**	**168**	P	Pg	01 23 56.4	-0.4
LANU	**Lannavaara**	**0.71**	**70**	P	Pg	01 23 56.5	-0.4
SALU	**Saltoluokta**	**0.78**	**237**	P	Pg	01 23 57.8	-0.4
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	01 24 06.3	-0.1
	baz=193						
KIF				MSG		01 24 21.0	
	comp=Z,8.6nm,0.2s						
KIF				*e*S	Sg	01 24 22.1	0.0
PAJU	**Pajala**	**1.38**	**124**	P	Pn	01 24 08.3	-1.2
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pn	01 24 08.3	-1.2
KALU	**Kalix**	**2.33**	**146**	*e*P	Pn	01 24 23.8	+1.4
	baz=338						
KALU				*e*SG	Sb	01 24 54.9	-0.1
TOF	**Tornio**	**2.38**	**135**	*e*P	Pn	01 24 24.7	+1.5
TOF				MSG		01 24 53.9	
	comp=Z,3.8nm,0.2s						
TOF				*e*SG	Sb	01 24 56.5	0.0
SGF	**Sodankyl**	**2.45**	**96**	*e*P	Pn	01 24 25.7	+1.6
	baz=295						
SGF				*e*SG	Sb	01 24 59.0	+0.5
RNF	**Rovaniemi**	**2.57**	**115**	*e*P	Pn	01 24 27.4	+1.6
RNF				*e*SG	Sb	01 25 02.0	+0.1
BURU	**Burvik**	**3.28**	**171**	*e*P	Pn	01 24 38.2	+2.6
	baz=5.0						
MSF	**Maaselka**	**3.98**	**115**	*e*P	Pn	01 24 47.3	+2.2
	baz=305						
KU6	**Riekki**	**4.22**	**111**	*e*PG	Pb	01 24 58.9	+0.9
	baz=307						

UPP 01 01:23:45.5±0.2, **67°.81N**×**20°.22E**, **h0**^{km}, **ML2.8**, **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**17**	P	Pg	01 23 48.6	+0.2
KUA				S	Sg	01 23 50.7	+0.3
KUA	**Kurravaara**	**0.15**	**17**	*i* P	Pg	01 23 48.6	+0.2
KUA				*i* S	Sg	01 23 50.7	+0.3
KUA	**Kurravaara**	**0.15**	**17**	S	Pg	01 23 48.2	-0.2
RATU	**Laukkuluspa**	**0.24**	**273**	P	Pg	01 23 50.2	+0.2
RATU	**Laukkuluspa**	**0.24**	**273**	*i* P	Pg	01 23 50.2	+0.2
LANU	**Lannavaara**	**0.71**	**69**	S	Sg	01 24 07.8	-0.5
LANU	**Lannavaara**	**0.71**	**69**	*i* S	Sg	01 24 07.8	-0.5
PAJU	**Pajala**	**1.37**	**124**	P	Pg	01 24 11.0	-0.7
OUF	**Merijarvi**	**3.92**	**150**	*e*	Sg	01 25 48.4	-2.7

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*TEH **01** 01:34:23.4, 39°.38N×51°.54E, h60^{km}, ML3.1*

ISC 01 01:34:21.1±1.2, **39°.60N**±0°.06×**51°.75E**±0°.07, **h35**^{km}, **n17**, σ**2^{s}.52**/19, **3C-1D**, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GBS	**Qobustan**	**2.35**	**294**	*e*Pn	**Pn**	**01 35 01.6**	**+4.3**
ATGJ	**Altiaghaj**	**2.50**	**301**	*e*Pn	**Pn**	**01 35 02.2**	**+2.9**
ASTR	**Astara**	**2.53**	**247**	*e*Pn	**Pn**	**01 35 00.2**	**+0.6**
GLBA	**Clilabad**	**2.62**	**263**	*e*Pn	**Pn**	**01 35 02.5**	**+1.5**
YRD	**Yardimli**	**2.81**	**257**	*e*Pn	**Pn**	**01 35 04.1**	**+0.4**
LRK	**Lerik**	**2.82**	**251**	*e*Pn	**Pn**	**01 35 04.4**	**+0.6**
QALM	**Alamut, Qazvin**	**3.28**	**196**	*e*Pn	**Pn**	**01 35 09.9**	**-0.3**
IGLO	**Ghaloghah**	**3.50**	**151**	*e*Pn	**Pn**	**01 35 15.3**	**+2.0**
ISRB	**Sarab**	**3.65**	**242**	*e*Pn	**Pn**	**01 35 15.8**	**+0.5**
ISRB				*e*		01 36 00.9	
	comp=Z,99nm,0.2s						
QSDN	**Sirdan**	**3.70**	**214**	*e*Pn	**Pn**	**01 35 16.2**	**+0.2**
IHRS	**Heris**	**3.89**	**252**	*e*Pn	**Pn**	**01 35 20.2**	**+1.6**
IHRS				*e*		01 35 21.1	
	comp=Z,99nm,0.2s						
ISHM	**Shahmirzad**	**3.98**	**162**	*e*Pn	**Pn**	**01 35 22.2**	**+2.3**
QABG	**Abgarm-Qazvin**	**4.25**	**205**	*e*Pn	**Pn**	**01 35 23.5**	**0.0**
IANJ	**Anjilo**	**4.47**	**157**	*e*Pn	**Pn**	**01 35 30.7**	**+4.1**
IMRD	**Marand**	**4.78**	**261**	*e*Pn	**Pn**	**01 35 33.2**	**+2.4**
AB31	**Akbulak array**	**11.29**	**28**	⇑P	**Pn**	**01 37 00.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=210,slow=14,SNR=5.3						
AB31				⇑S	**Sn**	**01 39 01.8**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=215,slow=26,SNR=5.4						
AKTO	**Aktyubinsk**	**11.70**	**20**	⇓P	**Pn**	**01 37 05.4**	**-0.1**
	comp=Z,6.6nm,1.5s						
AKTO				⇑S	**Sn**	**01 39 09.4**	**-5.4**
	comp=Z,4.8nm,1.4s						

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*KISR **01** 02:11:57.1±0.8, 31°.24N×49°.44E, h4^{km}±198^{km}, ML3.5, Hypocentre not reviewed by the ISC*

TEH 01 02:11:55.5, 31°.65N×49°.63E, h14^{km}**, ML3.5, 1D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.84**	**304**	*e*Pg	Pn	02 12 12.6	-0.3
AHWZ	**Ahwaz**	**0.90**	**250**	*e*Pg	Pb	02 12 12.2	-0.6
SHK1	**Shahrekord**	**1.27**	**57**	*e*Pg	Pn	02 12 19.1	+0.1
IPIR	**Pirpir**	**1.49**	**46**	*e*Pg	Pb	02 12 23.4	+0.3
IPIR				*e*		02 12 46.1	
	comp=Z,99nm,0.6s						
KHMZ	**Khomeyn**	**2.11**	**8**	*e*Pn	Pb	02 12 32.9	-0.7
IKMR	**Kamar-syah**	**2.14**	**331**	*e*Pn	Pn	02 12 31.6	+0.8
IKMR				*e*		02 13 06.8	
	comp=Z,99nm,0.5s						
IGAR	**Gharneh**	**2.19**	**69**	*e*Pn	Pb	02 12 33.8	-1.1
IGAR				*e*		02 13 11.6	
	comp=Z,99nm,0.2s						
IKLH	**Kolahrood**	**2.35**	**44**	*e*Pn	Pb	02 12 36.7	-1.0
IKLH				*e*		02 12 38.5	
	comp=Z,99nm,0.2s						
IRAM	**Ramesheh**	**2.35**	**85**	*e*Pn	Pn	02 12 35.8	+1.9
IKFM	**Kafar-mosalman**	**2.40**	**322**	*e*Pn	Pn	02 12 35.1	+0.8
QAM	**Ghamsar**	**2.60**	**35**	*e*Pn	Pb	02 12 40.3	-1.8
IZEF	**Zefreh**	**2.61**	**61**	*e*Pn	Pb	02 12 39.8	-2.3
UMR	**Umm Al-Rimmam**	**2.66**	**219**	*e*P		02 12 38.3	
MIB	**Mutribah**	**2.69**	**228**	*e*P		02 12 38.9	
MIB				*e*S		02 13 10.8	
ASAO	**Ashtian**	**2.91**	**6**	*e*Pn	Pn	02 12 44.0	+2.4
NASN	**Na'in**	**2.93**	**66**	*e*Pn	Pn	02 12 44.2	+2.3
KBD	**Kabd**	**2.98**	**215**	*e*P		02 12 42.5	
KBD				⇓*e*S		02 13 16.1	
KBD				IAML		02 13 21.6	
	comp=Z,237nm,0.4s						
IKOM	**Komasi**	**3.09**	**325**	*e*Pn	Pn	02 12 44.4	+0.5
IKOM				*e*		02 13 48.9	
	comp=Z,99nm,0.6s						
RST	**Umm Al-Ruwaisa**	**3.12**	**227**	*e*P		02 12 44.4	
KRSH	**Karshahi**	**3.13**	**42**	*e*Pn	Pn	02 12 47.5	+2.9
GHVR	**GHOM**	**3.15**	**26**	*e*Pn	Pn	02 12 46.6	+1.8
QRN	**Al-Qurain**	**3.25**	**208**	*e*P		02 12 46.1	
RDF	**Al-Radifah**	**3.25**	**214**	*e*P		02 12 46.8	
RDF				IAML		02 13 30.6	
	comp=Z,146nm,0.3s						
IQOM	**Qom**	**3.41**	**20**	*e*Pn	Pn	02 12 50.1	+1.6
IALM	**Almabolaq**	**3.43**	**340**	*e*Pn	Pn	02 12 49.7	+0.9
ISAD	**Sadrabad**	**3.47**	**85**	*e*Pn	Pn	02 12 51.8	+2.5
IGHG	**Ghaleghazi**	**3.71**	**317**	*e*Pn	Pn	02 12 52.4	-0.2
IGHG				*e*		02 13 38.2	
	comp=Z,99nm,0.2s						
IRAZ	**Razeghan**	**3.76**	**4**	*e*Pn	Pn	02 12 54.9	+1.7
HSRG	**Sareghieh**	**3.76**	**343**	*e*Pn	Pn	02 12 54.6	+1.3
HSRG				*e*		02 13 42.1	
	comp=Z,99nm,0.4s						
IVRN	**Varamin**	**3.77**	**27**	*e*Pn	Pn	02 12 54.9	+1.6
ANAR	**Anarak**	**3.79**	**65**	*e*Pn	Pn	02 12 55.7	+2.1
ILIN	**Lien**	**3.96**	**326**	*e*Pn	Pn	02 12 55.9	-0.1
ILIN				*e*		02 13 45.7	
	comp=Z,99nm,0.3s						
QABG	**Abgarm-Qazvin**	**4.05**	**359**	*e*Pn	Pn	02 12 57.5	+0.2
IDHR	**Dehrash**	**4.08**	**319**	*e*Pn	Pn	02 12 57.5	-0.2
ICHK	**Chekchek**	**4.11**	**80**	*e*Pn	Pn	02 12 59.9	+1.9
IMHD	**Mahdasht**	**4.12**	**12**	*e*Pn	Pn	02 12 59.5	+1.4
IMEH	**Mehriz**	**4.26**	**92**	*e*Pn	Pn	02 13 02.4	+2.2
IDMV	**Damavand**	**4.41**	**26**	*e*Pn	Pn	02 13 03.7	+1.5
ILAS	**Lasjerd**	**4.65**	**36**	*e*Pn	Pn	02 13 06.7	+1.2
IFIR	**Firoozkooh**	**4.76**	**32**	*e*Pn	Pn	02 13 09.3	+2.2
QALM	**Alamut, Qazvin**	**4.85**	**10**	*e*Pn	Pn	02 13 09.5	+1.3
QSDN	**Sirdan**	**4.86**	**356**	*e*Pn	Pn	02 13 08.9	+0.5
IPRN	**Peran**	**5.11**	**25**	*e*Pn	Pn	02 13 14.5	+2.8
ISHM	**Shahmirzad**	**5.15**	**35**	*e*Pn	Pn	02 13 14.3	+1.9
IANJ	**Anjilo**	**5.23**	**42**	*e*Pn	Pn	02 13 14.5	+1.1
IGLO	**Ghaloghah**	**5.97**	**35**	*e*Pn	Pn	02 13 26.3	+2.7
TPRV	**Parvadeh(Tabas**	**6.13**	**75**	*e*Pn	Pn	02 13 28.2	+2.5
TNSJ	**Nastanj**	**6.32**	**67**	*e*Pn	Pn	02 13 30.1	+1.8

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*IDC **01** 02:49:14.6±2.9, 41°.22N×49°.54E, h0^{km}, mb3.3/2, mb1 3.2/4, mb1mx3.1/30, mbtmp3.1/4, ML2.4/2, Error ellipse: s-maj=83.2km s-min=17.1km az=19.0*

ISC 01 02:49:17.3±1.3, **41°.4N**±0°.1×**49°.77E**±0°.08, **h10**^{km}, **n6**, σ**2^{s}.54**/9, **2C-2D**, **Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBZ	**Khabaz**	**5.59**	**297**	Pn	**Pn**	**02 50 41.4**	**+0.9**
	0.0nm,0.3s,baz=140,slow=11,SNR=1.7						
KBZ				Sn	**Sn**	**02 51 42.5**	**-2.2**
	0.2nm,0.3s,baz=112,slow=13,SNR=1.4						
GEYT	**Alibeck**	**7.30**	**115**	Pn	**Pn**	**02 51 02.5**	**-1.6**
	0.2nm,0.3s,baz=100,slow=32,SNR=1.3						
GEYT				Sn	Sn	02 52 17.7	-9.4
	0.5nm,0.3s,baz=314,slow=20,SNR=2.0						
AB31	**Akbulak array**	**10.63**	**39**	⇑P	**Pn**	**02 51 52.3**	**+2.7**
	0.1nm,0.2s,baz=217,slow=12,SNR=19						
AB31				⇓S	**Sn**	**02 53 46.3**	**-2.4**
	0.3nm,0.3s,baz=214,slow=25,SNR=6.0						
AKTO	**Aktyubinsk**	**10.71**	**30**	⇑P	**Pn**	**02 51 53.7**	**+3.0**
	4.7nm,1.4s						
AKTO				⇓S	**Sn**	**02 53 47.8**	**-2.8**
	5.1nm,1.4s						
MKAR	**Makanchi Array**	**23.87**	**66**	P	**P**	**02 54 31.7**	**+0.9**
	0.2nm,0.5s,baz=266,slow=10,SNR=2.4						
FINES	**FINESS Array B**	**24.68**	**332**	P	**P**	**02 54 37.6**	**-0.4**
	0.7nm,0.4s,baz=132,slow=11,SNR=5.2						

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*NEIC **01** 02:58:26.5±1.2, 18°.2S±0°.2×177°.8W±0°.1, h635^{km}±11^{km}, mb4.0/18, Error ellipse: s-maj=26.6km s-min=12.5km az=153.0*

*IDC **01** 02:58:28.2±3.7, 17°.93S×178°.10W, h638^{km}±23^{km}, mb2.9/4, mb1 3.1/5, mb1mx2.8/31, mbtmp3.9/5, Error ellipse: s-maj=113.9km s-min=29.4km az=140.0*

ISC 01 02:58:27.6±1.0, **18°.2S**±0°.2×**177°.9W**±0°.2, **h650**^{km}, **n25**, σ**0^{s}.74**/27, **mb3.8**/14, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.90**	**276**	P	**P**	**02 59 54.5**	**-1.7**
	6.7nm,0.3s,baz=128,slow=10,SNR=30						
MSVF	**Nonsavu**	**3.90**	**276**	P	**P**	**02 59 54.6**	**-1.6**
HIZ	**Hauiti**	**21.24**	**196**	P	**P**	**03 02 30.4**	**+0.3**
BKZ	**Black Stump Fm**	**21.48**	**192**	P	**P**	**03 02 32.2**	**-0.1**
BKZ				IAmb	IAmb	03 02 45.3	
	comp=Z,18nm,1.5s						
MSWZ	**Moikau Station**	**23.91**	**193**	P	**P**	**03 02 52.6**	**-1.1**
CAN	**Canberra**	**33.95**	**233**	P	**P**	**03 04 20.2**	**+0.2**
COEN	**Coen**	**37.61**	**271**	P	**P**	**03 04 50.8**	**+0.6**
COEN				IAmb	IAmb	03 04 57.2	
	comp=Z,3.6nm,1.1s						
STKA	**Stephens Creek**	**38.95**	**242**	P	**P**	**03 05 01.6**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=83,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**38.95**	**242**	P	**P**	**03 05 00.9**	**+0.2**
BBOO	**Buckleboo**	**43.72**	**241**	P	**P**	**03 05 38.5**	**+0.4**
BBOO				IAmb	IAmb	03 05 51.4	
	comp=Z,3.0nm,1.0s						
WR0	**Warramunga Arr**	**44.89**	**260**	P	**P**	**03 05 47.5**	**+0.3**
WR0				IAmb	IAmb	03 05 47.8	
	comp=Z,13nm,1.5s						
WB0	**Warramunga Arr**	**45.05**	**260**	P	**P**	**03 05 48.7**	**+0.3**
WB0				IAmb	IAmb	03 05 57.8	
	comp=Z,5.3nm,1.4s						
WB2	**Warramunga Arr**	**45.07**	**260**	P	**P**	**03 05 48.3**	**-0.3**
WB2				IAmb	IAmb	03 05 48.6	
	comp=Z,4.6nm,1.1s						
WRAB	**Tennant Creek**	**45.07**	**260**	P	**P**	**03 05 48.3**	**-0.3**
WRAB				IAmb	IAmb	03 05 58.0	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**03 05 48.7**	**0.0**
	comp=Z,0.8nm,0.3s,baz=97,slow=7.0,SNR=36						
WRA				PcP	**PcP**	**03 07 16.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=92,slow=3.2,SNR=1.3						
AS31	**Alice Springs**	**45.20**	**254**	P	**P**	**03 05 50.0**	**+0.4**
ASAR	**Alice Springs**	**45.20**	**254**	P	**P**	**03 05 49.9**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=92,slow=7.8,SNR=68						
ASAR				PcP	**PcP**	**03 07 16.4**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=104,slow=3.9,SNR=8.6						
MTN	**Manton Dam**	**49.29**	**269**	P	**P**	**03 06 20.0**	**0.0**
FORT	**Forrest**	**50.35**	**245**	P	**P**	**03 06 27.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**53.48**	**261**	P	**P**	**03 06 50.7**	**+0.8**
PSA00	**Pilbara Seismi**	**58.33**	**255**	P	**P**	**03 07 22.6**	**-0.5**
PSA00				IAmb	IAmb	03 07 29.6	
	comp=Z,13nm,1.4s						
LUWI	**Luwuk**	**60.64**	**279**	P	**P**	**03 07 38.5**	**-0.1**
LUWI				IAmb	IAmb	03 07 47.2	
	comp=Z,16nm,0.8s						
CASY	**Casey**	**66.11**	**205**	P	**P**	**03 08 12.0**	**-0.3**
TPNV	**Topopah Spring**	**79.84**	**46**	P	**P**	**03 09 30.6**	**-0.4**
TPNV				IAmb	IAmb	03 09 31.3	
	comp=Z,3.5nm,0.7s						
ILAR	**Eielson Array**	**86.03**	**13**	P	**P**	**03 10 01.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=221,slow=5.2,SNR=4.8						

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*IDC **01** 03:03:36.4±1.1, 27°.75N×141°.50E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.4/45, mbtmp3.6/5, ML2.5/1, Error ellipse: s-maj=30.0km s-min=16.3km az=61.0*

ISC 01 03:03:41.2±0.9, **27°.9N**±0°.2×**141°.7E**±0°.3, **h35**^{km}, **n9**, σ**1^{s}.64**/7, **mb3.5**/4, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.91**	**149**	Pn	**Pn**	**03 03 57.0**	**-0.4**
	20nm,0.3s,baz=314,slow=23,SNR=1.5						
JCJ				Sn	**Sn**	**03 04 10.7**	**+1.3**
	43nm,0.3s,baz=300,slow=22,SNR=7.4						
MJAR	**Matsushiro Arr**	**9.12**	**342**	Pn	**Pn**	**03 05 49.2**	**-1.1**
	0.1nm,0.3s,baz=160,slow=10,SNR=1.6						
H11N2	**WAKE ISLAND Hy**	**24.45**	**104**	T	T	03 33 08.9	
	baz=299,slow=74						
H11N1	**WAKE ISLAND Hy**	**24.45**	**104**	T	T	03 32 58.0	
	baz=299						
H11N3	**WAKE ISLAND Hy**	**24.46**	**104**	T	T	03 33 35.9	
	baz=299,slow=74						

WRA	Warramunga Arr	48.06	189	P	P	03 12 16.7	-0.7
	0.3nm,0.4s,baz=12,slow=8.6,SNR=8.0						
MKAR	Makanchi Array	49.62	309	P	P	03 12 31.1	+2.0
	0.1nm,0.3s,baz=89,slow=6.7,SNR=3.0						
ASAR	Alice Springs	51.78	189	P	P	03 12 43.9	-1.7
	0.4nm,1.0s,baz=8.4,slow=5.7,SNR=1.2						
SPITS	Spitsbergen Ar	69.53	350	P	P	03 14 46.2	+0.4
	5.5nm,0.9s,baz=48,slow=17,SNR=7.2						

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*NEIC **01** 03:12:33.6±0.8, 36°.497N±0°.010×89°.587W±0°.003, h12^{km}±2^{km}, Error ellipse: s-maj=1.5km s-min=0.4km az=172.0*

SLM 01 03:12:33.2±1.0**, 36°.495N**±0°.010×**89°.60W**±0°.01**, h11**^{km}±2^{km}**, Md2.4**/14**, ML2.2**/22(NEIC)**, Error ellipse: s-maj=1.5km s-min=1.4km az=94.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PENMO	Penman	0.05	210		Pg	03 12 36.4	+1.0
PENMO				IAML		03 12 37.7	
	comp=E,2µm,0.5s						
WALK	Watson Lake	0.06	44		Pg	03 12 35.9	+0.4
WALK					Sg	03 12 38.0	+0.9
PPLM	Point Pleasant	0.09	173		Pg	03 12 36.1	+0.3
PPLM					Sg	03 12 38.5	+0.8
NMMO	New Madrid	0.10	21		Pg	03 12 36.4	+0.5
NMMO					Sg	03 12 38.9	+1.0
POBM	Portage Bay	0.10	212		Pg	03 12 36.3	+0.4
POBM					Sg	03 12 38.6	+0.8
PGVM	Portageville	0.11	252		Pg	03 12 36.5	+0.5
PGVM					Sg	03 12 39.0	+0.9
PVMO	Portageville	0.12	226		Pg	03 12 36.5	+0.4
PVMO				Sg	Sg	03 12 39.0	+0.8
PVMO				IAML		03 12 39.2	
	comp=E,1µm,0.3s						
CATM	Catron	0.12	341		Pg	03 12 36.9	+0.6
CATM					Sg	03 12 39.5	+1.1
SJMO	Saint John's B	0.17	36		Pg	03 12 37.4	+0.4
SJMO					Sg	03 12 40.6	+1.1
WYBT	Wynnburg	0.17	151		Pg	03 12 37.2	+0.3
WYBT					Sg	03 12 40.5	+1.1
KEWM	Kewanee	0.20	1		Pg	03 12 38.0	+0.4
KEWM					Sg	03 12 41.6	+1.1
WADM	Wardell	0.21	231		Pg	03 12 38.0	+0.4
WADM					Sg	03 12 41.6	+1.1
PARMO	Parma	0.21	323	Pg	Pg	03 12 38.3	+0.6
PARMO				Sg	Sg	03 12 41.9	+1.2
PARMO				IAML		03 12 42.0	
	comp=E,309nm,0.2s						
PARMO				IAML		03 12 42.1	
	comp=N,415nm,0.3s						
TOPM	Tallapoosa	0.24	278		Pg	03 12 38.6	+0.5
TOPM					Sg	03 12 42.4	+0.9
FLPT	Flippin	0.24	111		Pg	03 12 38.5	+0.3
COKM	Charter Oak	0.24	334		Pg	03 12 38.8	+0.6
COKM					Sg	03 12 42.8	+1.3
HENM	Henderson Moun	0.24	24	Pg	Pg	03 12 38.6	+0.4
HENM				Sg	Sg	03 12 42.5	+0.9
HENM				IAML		03 12 43.0	
	comp=E,443nm,0.1s						
MATM	Matthews	0.28	359		Sg	03 12 43.7	+1.0
MLDM	Malden	0.29	297		Sg	03 12 44.1	+1.0
EPRM	East Prairie	0.29	41		Pg	03 12 39.4	+0.2
EPRM					Sg	03 12 44.0	+0.9
HICK	Hickman	0.30	81	Pg	Pg	03 12 39.4	+0.1
HICK				Sg	Sg	03 12 43.7	+0.4
HICK				IAML		03 12 44.4	
	comp=N,347nm,0.2s						
HICK				IAML		03 12 44.4	
	comp=E,498nm,0.3s						
DWDM	Dogwood	0.31	15		Pg	03 12 39.9	+0.3
DWDM					Sg	03 12 44.8	+1.1
GLST	Glass	0.34	132		Pg	03 12 40.3	+0.3
GLST					Sg	03 12 45.5	+1.0
BRGM	Braggadocio	0.36	216		Pg	03 12 40.7	+0.3
BRGM					Sg	03 12 46.1	+1.0
BETM	Bethany	0.39	288		Pg	03 12 41.3	+0.3
BETM					Sg	03 12 46.8	+0.7
LNXT	Lenox	0.40	168	Pg	Pg	03 12 41.5	+0.3
LNXT					Sg	03 12 46.8	+0.3
LNXT				IAML		03 12 48.0	
	comp=E,244nm,0.1s						
LNXT				IAML		03 12 51.5	
	comp=N,172nm,0.4s						
CHRM	Charleston	0.40	28		Pg	03 12 41.4	+0.2
CHRM					Sg	03 12 47.2	+0.6
PBMO	Poplar Bluff	0.73	293	Pg	Pg	03 12 47.1	-0.3
PBMO					Sg	03 12 56.9	0.0
T45A	Paducah	0.93	55	Pg	Pg	03 12 50.8	-0.3
T45A					Sg	03 13 02.4	-0.8
S44A	Carbondale	1.23	13	Pn	Pn	03 12 56.2	-0.2
S44A					Sb	03 13 12.3	0.0
S44A				IAML		03 13 15.4	
	comp=E,46nm,0.1s						
S44A				IAML		03 13 15.5	
	comp=N,47nm,0.2s						
SIUC	Southern Illin	1.25	14	Pn	Pn	03 12 56.5	-0.3
SIUC					Sn	03 13 13.5	-0.2
SIUC				IAML		03 13 17.0	
	comp=E,73nm,0.1s						
T42A	Van Buren	1.31	294	Pn	Pn	03 12 57.4	-0.2
T42A					Sb	03 13 14.8	-0.1
WVT	Waverly	1.47	104	Pn	Pn	03 12 59.4	-0.3
WVT					Sn	03 13 18.4	-0.6
FVM	French Village	1.63	336	Pn	Pn	03 13 02.0	+0.1
FVM					Sn	03 13 23.1	+0.2
CCM	Cathedral Cave	2.04	320	Pn	Pn	03 13 07.5	-0.1
CCM				Sn	Sn	03 13 34.2	+1.2
FCAR	Ozark Folk Cen	2.13	254	Pn	Pn	03 13 09.6	+0.7
MGMO	Mountain Grove	2.24	288	Pn	Pn	03 13 10.3	-0.1
WHAR	Wooly Hollow	2.50	242	Pn	Pn	03 13 14.0	+0.2
W41B	Gary Mavity, V	2.53	239	Pn	Pn	03 13 14.9	+0.6
U40A	Yellville	2.63	268	Pn	Pn	03 13 16.4	+0.6

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*IDC **01** 03:57:47.8±4.2, 29°.87N×140°.46E, h101^{km}±38^{km}, mb3.1/6, mb1 3.3/7, mb1mx3.0/55, mbtmp3.5/7, Error ellipse: s-maj=56.8km s-min=19.2km az=86.0*

ISC 01 03:57:47.6±1.2**, 29°.9N**±0°.1×**140°.5E**±0°.4**, h100**^{km}**, n7, σ0^{s}.21**/7**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.93	344	P	Pn	03 59 26.3	-0.2
	0.1nm,0.3s,baz=162,slow=13,SNR=7.0						
KLR	Kul'dur	20.45	343	P	P	04 02 16.9	-0.1
	1.0nm,0.6s,baz=176,slow=13,SNR=2.1						
WRA	Warramunga Arr	49.88	188	P	P	04 06 30.7	-0.2
	0.5nm,0.7s,baz=3.5,slow=7.4,SNR=8.4						
ASAR	Alice Springs	53.61	188	P	P	04 06 58.7	0.0
	0.2nm,0.5s,baz=358,slow=4.7,SNR=8.3						
BVAR	Borovoye Array	55.02	316	P	P	04 07 08.9	+0.2
	0.2nm,0.4s,baz=74,slow=11,SNR=3.5						
YKA	Yellowknife Ar	70.41	28	P	P	04 08 50.7	+0.1
	0.1nm,0.7s,baz=297,slow=4.5,SNR=2.6						
FINES	FINESS Array B	74.81	333	P	P	04 09 16.8	0.0
	0.8nm,0.5s,baz=54,slow=7.1,SNR=5.6						

WEL 01 04:11:54.4±1.0**, 38°S**±8°×**18°0E**±°**, h33**^{km}**, M3.3**/13**, ML3.6**/13**, MLv3.3**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=19.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.21	260	P	Pn	04 12 14.9	-0.1
WMGZ				S	Sn	04 12 31.1	+0.8
MXZ	Matakaoa Point	1.29	272	P	Pn	04 12 14.6	-1.5
PUZ	Puketiti	1.39	251	P	Pn	04 12 17.7	+0.1
PUZ				S	Sn	04 12 35.8	+1.0
PKGZ	Pakihiroa	1.49	259	P	Pn	04 12 18.3	-0.6
PKGZ				S	Sn	04 12 36.2	-1.0
CNGZ	Carnagh Statio	1.60	237	P	Pn	04 12 21.6	+1.2
TWGZ	Tauwhareparae	1.63	250	P	Pn	04 12 21.4	+0.5
TWGZ				S	Sb	04 12 42.5	-1.7
HAZ	Te Kaha	1.71	265	P	Pn	04 12 21.3	-0.4
HAZ				S	Sn	04 12 43.1	+0.7
RUGZ	Raukumara Rang	1.81	259	P	Pn	04 12 23.0	-0.4
TKGZ	Te Karaka	1.83	243	P	Pn	04 12 24.1	+0.5
TKGZ				S	Sn	04 12 46.7	+1.2
MWZ	Matawai	2.02	249	P	Pn	04 12 26.2	0.0
MWZ				S	Sn	04 12 49.9	-0.5
PRGZ	Paritu Road	2.06	231	P	Pn	04 12 27.4	+0.6
MHGZ	Mahia Peninsul	2.20	226	P	Pn	04 12 29.6	+1.0
MHGZ				S	Sn	04 12 56.8	+2.1
URZ	Urewera	2.31	253	P	Pn	04 12 30.3	+0.1
URZ				S	Sn	04 12 57.2	-0.3
SNGZ	Shannon Statio	2.34	240	P	Pn	04 12 31.1	+0.5
SNGZ				S	Sn	04 12 58.5	+0.3
CTZ	Chatham Island	6.64	158	P	Pn	04 13 33.2	+3.6
CTZ				S	Sn	04 14 41.2	-3.0

IDC 01 04:38:10.6±1.6**, 10°.15S**×**160°.37E, h0**^{km}**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/38**, mbtmp3.6**/4**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/27**, Error ellipse: s-maj=35.1km s-min=20.8km az=80.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.83	330	Pg	Pg	04 38 26.7	+0.3
	2µm,0.3s,baz=171,slow=2.7,SNR=562						
HNR				Lg	Lg	04 38 32.9	
	2µm,0.3s,baz=182,slow=7.7,SNR=13						
DZM	Mont Dzumac	13.21	155	LR	LR	04 45 38.0	
	comp=Z,70nm,18.8s,baz=104,slow=34						
WRA	Warramunga Arr	26.92	246	P	P	04 43 53.4	-0.5
	0.3nm,0.6s,baz=72,slow=9.6,SNR=2.0						
ASAR	Alice Springs	28.60	239	P	P	04 44 09.8	+1.0
	0.1nm,0.5s,baz=59,slow=11,SNR=1.4						
ILAR	Eielson Array	84.42	20	P	P	04 50 45.0	+0.4
	0.6nm,0.5s,baz=247,slow=5.1,SNR=17						
MKAR	Makanchi Array	89.28	318	P	P	04 51 07.4	-1.4
	0.5nm,0.6s,baz=90,slow=5.8,SNR=5.3						

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*IDC **01** 04:46:43.5±5.0, 37°.93N×75°.33E, h117^{km}±32^{km}, mb3.3/6, mb1 3.3/12, mb1mx3.1/51, mbtmp3.6/12, Error ellipse: s-maj=54.0km s-min=26.1km az=147.0*

*NNC **01** 04:46:49.8±3.9, 38°.64N×74°.70E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=29.0km s-min=25.8km az=169.0*

ISC 01 04:46:32.0±0.7**, 37°.91N**±0°.04×**75°.19E**±0°.07**, h10**^{km}**, n29, σ2^{s}.66**/35**, mb3.5**/7**, 5C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.72	21	P	Pg	04 47 11.0	+6.1
KSH				Sn	Sg	04 47 27.2	0.0
KSH				smax	smax		
	comp=N,670nm,0.5s						
KSH				smax	smax		
	comp=E,790nm,0.4s						
UCH	Uchtor	4.34	353	P	Pb	04 47 48.0	-0.6
	SNR=28						
AML	Almayashu	4.37	345	P	Pb	04 47 48.2	-0.9
	SNR=33						
ULHL	Ulahol	4.40	10	P	Pb	04 47 48.6	-1.0
	SNR=9.6						
KBK	Karagaybulak	4.74	358	P	Pb	04 47 54.6	-0.7
	SNR=10						
AAK	Ala-Archa	4.75	354	P	Pb	04 47 53.4	-2.0
	comp=E,1.8nm,0.3s,baz=154,slow=7.2,SNR=24						
AAK				S	Sn	04 48 42.2	+3.2
	comp=E,2.6nm,0.3s,baz=30,slow=19,SNR=9.4						
AAK	Ala-Archa	4.75	354	P	Pb	04 47 53.5	-2.0
	SNR=8.4						
AAK	Ala-Archa	4.75	354	⇓Pn	Pb	04 47 53.3	-2.1
	comp=E,4.9nm,0.8s						
AAK				⇑Pg	Pg	04 48 03.7	+0.8
	comp=E,7.6nm,0.7s						
AAK				⇑Sn	Sn	04 48 41.6	+2.6
	comp=E,20nm,0.9s						
EKS2	Erkin-Say	4.86	348	P	Pb	04 47 55.0	-2.3
	SNR=8.0						
CEP	Cherat	4.87	214	P	Pg	04 48 04.5	-0.8
TKM2	Tokmak 2	5.01	3	P	Pb	04 47 56.9	-3.1
	SNR=12						
TKM2	Tokmak 2	5.01	3	⇓Pn	Pb	04 47 56.6	-3.3
	comp=E,3.0nm,0.3s						
TKM2				⇑Pg	Pg	04 48 09.7	+1.7
	comp=E,3.2nm,0.4s						
TKM2				⇓Sn	Sn	04 48 48.2	+2.7
	comp=E,19nm,0.8s						
DHRM	DHARAMSHALA	5.72	170	*e*P	Pb	04 48 14.9	+2.8
DHRM				*e*S	Sb	04 49 19.5	-1.3
THW	Thamme Wali	5.83	210	P	Pb	04 48 16.2	+2.4
KK31	Karatay Array	6.29	327	⇓Pn	Pb	04 48 13.4	-8.1
	comp=E,1.5nm,0.3s,baz=144,slow=13,SNR=73						
KK31				⇑Sn	Sn	04 49 17.4	+0.7
	comp=E,18nm,0.5s,baz=148,slow=23,SNR=5.3						
PDGK	Podgornoye	6.32	30	⇑Pn	Pb	04 48 18.2	-4.0
	comp=E,14nm,0.7s						
MKAR	Makanchi Array	10.31	28	P	Pn	04 49 07.0	+7.1
	comp=E,0.2nm,0.3s,baz=202,slow=12,SNR=11						
WMQ	Urumqi	11.15	54	*e*P	Pn	04 49 20.5	+8.9
WMQ				smax	smax		
	comp=N,13nm,0.9s						
WMQ				smax	smax		
	comp=E,13nm,0.9s						
GEYT	Alibeck	13.48	275	P	P	04 49 50.2	-2.5
	comp=E,0.2nm,0.3s,baz=96,slow=9.3,SNR=5.4						
GEYT				S	Sn	04 52 11.3	-1.9
	comp=E,0.3nm,0.3s,baz=94,slow=15,SNR=3.0						
BVAR	Borovoye Array	15.48	349	P	P	04 50 17.2	+2.5
	comp=E,0.2nm,0.3s,baz=79,slow=7.8,SNR=7.5						
BVAR				S	S	04 53 10.3	-7.2
	comp=E,0.1nm,0.3s,baz=200,slow=17,SNR=2.2						
ZALV	Zalesovo Beam	17.35	19	P	P	04 50 36.5	+1.0
	comp=E,0.1nm,0.3s,baz=200,slow=11,SNR=3.3						
AKTO	Aktyubinsk	17.51	321	P	P	04 50 40.2	+3.0
	comp=E,0.5nm,0.3s,baz=130,slow=7.3,SNR=5.5						
ARU	Arti	21.59	334	P	P	04 51 28.3	+6.5
	comp=E,1.3nm,0.6s,baz=108,slow=6.9,SNR=7.9						
AKASG	Malin Array Be	34.73	307	P	P	04 53 22.8	+0.8
	comp=E,0.3nm,0.4s,baz=77,slow=7.5,SNR=5.3						
FINES	FINESS Array B	38.24	324	P	P	04 53 51.7	-0.1
	comp=E,2.1nm,0.9s,baz=118,slow=8.2,SNR=12						
ARCES	ARCESS Array B	41.17	336	P	P	04 54 15.9	-0.2
	comp=E,8.6nm,1.2s,baz=105,slow=8.9,SNR=5.7						
ESDC	Sonseca Array	59.73	299	P	P	04 56 36.9	-0.1
	comp=E,0.4nm,1.0s,baz=49,slow=7.1,SNR=4.8						
TORD	Torodi Ar. Bea	69.07	271	P	P	04 57 38.0	-0.3
	comp=E,0.6nm,0.5s,baz=45,slow=5.5,SNR=11						
YKA	Yellowknife Ar	79.63	5	P	P	04 58 37.2	-1.8
	comp=E,0.2nm,0.5s,baz=2.5,slow=5.6,SNR=5.1						

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*BJI **01** 05:01:09.5±0.0, 38°.81N×142°.17E, h64^{km}, mB5.0/23, mb4.5/41, Ms4.2/4, Ms7 4.1/3*

*MOS **01** 05:01:09.2±0.9, 38°.95N×142°.04E, h45^{km}, mb5.1/35, Error ellipse: s-maj=8.1km s-min=4.4km az=90.8*

*JMA **01** 05:01:10.1±0.1, 38°.88N×142°.07E, h44^{km}±1^{km}, M4.5*

JMA Felt III J1.

*NIED **01** 05:01:10.2, 38°.88N×142°.07E, h44^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-6.06; $M_{\theta\theta}$4.98; $M_{\phi\phi}$1.08; $M_{r\theta}$-3.19; $M_{\theta\phi}$2.38; $M_{\phi r}$0.95; Fault plane solution: $M_0$6.92000×10^{15} NP1:ϕ_s82.00000°, δ59.00000°, λ-71.00000°. NP2:ϕ_s229.00000°, δ36.00000°, λ-118.00000°.*

*NEIC **01** 05:01:10.6±1.6, 38°.90N±0°.06×142°.0E±0°.1, h41^{km}±6^{km}, mb4.8/149 Error ellipse: s-maj=12.1km s-min=7.5km az=110.0*

*BGR **01** 05:01:12.8±0.0, 39°.67N×142°.74E, h33^{km}, mb4.7*

*IDC **01** 05:01:12.7±2.0, 38°.87N×141°.95E, h63^{km}±17^{km}, mb4.2/26, mb1 4.4/31, mb1mx4.3/36, mbtmp4.5/31, MS3.6/26, Ms1 3.6/26, ms1mx3.5/51, Error ellipse: s-maj=13.8km s-min=11.2km az=123.0*

ISC 01 05:01:10.1±0.5**, 38°.88N**±0°.04×**142°.15E**±0°.05**, h42**^{km}±4^{km}**, h42**^{km}**:pP-P, n426,** σ**1^{s}.35**/399**, mb4.8**/130**, MS3.7**/26**, 27C-16D, Fault plane solution: NP1:**ϕ_s85.47085°, δ47.58366°, λ-96.08382°. **NP2:**ϕ_s274.45023°, δ42.76835°, λ-83.38326°. **Principal axes:** T Plg2.4150°, Azm179.7725°**;** N Plg4.4876°**,** Azm89.5829°**;** P Plg84.9015°**,** Azm297.9825°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.43	299	P	Pn	05 01 19.6	-0.4
OFUJ				S	Sn	05 01 26.0	-0.9
JKMT	Kesennumamotoy	0.53	263	P	Pn	05 01 20.6	-0.7
JKMT				S	Sn	05 01 27.7	-1.5
JMK	Ichinoseki	0.73	276	P	Pn	05 01 23.2	-0.7
JMK				S	Sn	05 01 32.3	-1.6
JIO	Ouri	0.76	236	P	Pn	05 01 23.5	-0.8
JIO				S	Sn	05 01 32.6	-1.9
JOM	Ohasama	0.90	312	P	Pn	05 01 25.8	-0.4
JOM				S	Sn	05 01 37.0	-1.0
JOU	Okura	1.27	247	P	Pn	05 01 30.7	-0.7
JOU				S	Sn	05 01 46.2	-1.0
JRG	Rokugo	1.29	294	P	Pn	05 01 31.2	-0.4
JRG				*e*S	Sn	05 01 46.9	-0.7
JYK	Kaneyama	1.40	272	P	Pn	05 01 32.7	-0.4
JYK				*e*S	Sn	05 01 49.5	-0.8
JMM	Marumori	1.47	227	P	Pn	05 01 33.2	-0.8
JMM				S	Sn	05 01 50.5	-1.5
JMM	Marumori	1.47	227	Pn	Pn	05 01 33.2	-0.8
JANG	Nango	1.57	342	P	Pn	05 01 35.2	-0.3
JTM	Tenmabayashi	2.08	337	Pn	Pn	05 01 42.5	+0.1
JYT	Yasato	3.07	211	Pn	Pn	05 01 56.2	+0.2
JSD	Sado	3.17	256	Pn	Pn	05 01 56.5	-0.9
ERM	Erimo	3.23	13	*ce*P	Pn	05 02 00.1	+1.9
ERM				pmax	pmax		
	comp=Z,171nm,0.8s						
ERM	Erimo	3.23	13	Pn	Pn	05 01 58.8	+0.6
MAJO	Matsushiro	3.90	235	P	Pn	05 02 09.0	+1.5
MAJO	Matsushiro	3.90	235	Pn	Pn	05 02 09.0	+1.5
MAT	Matsushiro	3.90	235	P	Pn	05 02 08.6	+1.1
MAT				*e*S	Sn	05 02 57.4	+5.4
MJAR	Matsushiro Arr	3.90	235	P	Pn	05 02 09.1	+1.7
	comp=Z,3.9nm,0.3s,baz=38,slow=11,SNR=152						
MJAR				S	Sn	05 03 02.8	+11
	comp=Z,2.4nm,0.3s,baz=60,slow=15,SNR=2.0						
MJB9	Matsu-Tunnel	3.90	235		Pn	05 02 09.5	+2.0
JEW	Eniwo	4.00	353	Pn	Pn	05 02 10.9	+2.2
JGF	Kuroka	5.03	231	Pn	Pn	05 02 25.6	+2.6
NMR	Nemuro--Hokkai	5.24	30	⇓*i*P	Pn	05 02 24.8	-1.0
NMR				*i* S	Sn	05 03 21.0	-3.9
ASAJ	Asahikawa	5.25	4	P	Pn	05 02 27.2	+1.3
	comp=Z,7.4nm,0.3s,baz=219,slow=9.5,SNR=43						
ASAJ				S	Sn	05 03 23.9	-1.2
	comp=Z,4.9nm,0.3s,baz=172,slow=10,SNR=3.7						
JKA	Kamikawa-asahi	5.25	4	Pn	Pn	05 02 27.2	+1.3
JSG	Sagara	5.26	218		Pn	05 02 27.2	+1.0
INU	Inuyama	5.41	231		Pn	05 02 30.7	+2.5
RUSJ	Misakicho	5.72	23	*e*P	Pn	05 02 33.1	+0.8
RUSJ				*e*S	Sn	05 03 35.4	-1.2
GRPR	Tuman	5.79	27	*e*P	Pn	05 02 33.0	-0.4
GRPR				*e*S	Sn	05 03 34.5	-4.0
GRPR				pmax	pmax		
	comp=N,77nm,0.4s						
GRPR				pmax	pmax		
	comp=E,99nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,278nm,0.4s						
GRPR				smax	smax		
	comp=N,880nm,0.4s						
GRPR				smax	smax		
	comp=E,346nm,0.2s						
YUK	Yuzh-Kuril'sk	5.86	27	*e*P	Pn	05 02 33.2	-1.1
YUK				*e*S	Sn	05 03 37.5	-2.6
JHJ	Hachijo jima 2	6.06	199	P	Pn	05 02 35.8	-1.3
	comp=E,44nm,0.3s,baz=93,slow=22,SNR=5.8						
JHJ				S	Sn	05 03 41.5	-3.6
	comp=E,81nm,0.3s,baz=68,slow=23,SNR=8.3						
JWT	Wachi	6.48	238	Pn	Pn	05 02 47.0	+4.1
TEY	Ternei	7.41	328	⇑*e*P	Pn	05 02 58.9	+3.3
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,60nm,0.7s						
TEY				pmax	pmax		
	comp=Z,90nm,0.7s						
KUR	Kuril'sk	7.64	32	⇑*i*P	Pn	05 02 59.3	+0.6
KUR				*i* S	Sn	05 04 21.8	-2.2
KUR				pmax	pmax		
	comp=Z,84nm,0.7s						
KUR				pmax	pmax		
	comp=E,35nm,0.3s						
KUR				smax	smax		
	comp=E,151nm,0.4s						
KUR				smax	smax		
	comp=E,94nm,0.6s						
YSS	Yuzh-Sakhalins	8.09	3	⇓*i*P	Pn	05 03 07.0	+2.2
YSS				*e*S	Sn	05 04 34.8	-0.1
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax	smax		
	comp=N,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s						
YSS	Yuzh-Sakhalins	8.09	3	Pn	Pn	05 03 06.7	+1.9
USRK	Ussuriysk Ar.	9.29	308	P	Pn	05 03 21.8	+0.4
	baz=118,slow=15,SNR=30						
USRK				LR	LR	05 06 44.3	
	comp=Z,298nm,20.2s,baz=150,slow=36						
USA0B	Ussuriysk Arra	9.29	308	P	Pn	05 03 25.0	+3.7
USA0B	Ussuriysk Arra	9.29	308	Pn	Pn	05 03 25.0	+3.7
JNU	Nakatsue	10.78	241	P	Pn	05 03 43.6	+1.7
	comp=Z,0.9nm,0.3s,baz=38,slow=1.3,SNR=5.9						
JNU				LR	LR	05 08 01.1	
	comp=Z,285nm,21.3s,baz=57,slow=38						
MDJ	Mudanjiang	10.99	305	P	Pn	05 03 46.0	+1.4
MDJ				pmax	pmax		
	comp=Z,38nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,620nm,3.7s						
MDJ	Mudanjiang	10.99	305	Pn	Pn	05 03 48.3	+3.7
KSRS	Korea Array	11.29	267	P	Pn	05 03 53.0	+4.2
	comp=Z,0.3nm,0.3s,baz=81,slow=14,SNR=8.7						
KSRS	Korea Array	11.29	267	P	Pn	05 03 53.0	+4.2
JCJ	Chichijima	11.75	180	LR	LR	05 09 31.9	
	comp=Z,55nm,20.2s,baz=130,slow=42						
TYV	Tymovskoe	11.99	2	*e*P	Pn	05 03 57.9	-0.3
TYV				*e*S	Sn	05 06 10.8	+0.3
TYV				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,4.6s						
TYV				smax	smax		
	comp=E,500nm,5.2s						
KLR	Kul'dur	12.76	328	P	Pn	05 04 09.2	+0.5
	comp=E,0.2nm,0.3s,baz=128,slow=14,SNR=7.3						
KLR				LR	LR	05 08 57.3	
	comp=E,403nm,19.2s,baz=176,slow=37						
PETK	Petropavlovsk-	17.81	32	P	Pn	05 05 14.4	-0.1
	comp=E,0.2nm,0.3s,baz=302,slow=8.5,SNR=4.2						
ZEA	Zeya	18.02	330	*e*P	Pn	05 05 15.9	-1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
HIA	Hailar	19.09	310	*i* P	P	05 05 28.7	-0.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NJ2	Nanjing	20.13	257	*e*P	P	05 05 40.1	-0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MA2	Magadan	21.43	12	*ce*P	P	05 05 54.2	-0.1
MA2				pmax	pmax		
	comp=Z,40nm,1.3s						
MA2	Magadan	21.43	12	P	P	05 05 55.0	+0.7
MA2				IAmb	IAmb	05 05 55.8	
	comp=Z,33nm,0.8s						
HHC	Hu-ho-hao-te	23.51	285	*e*P	P	05 06 15.2	-1.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
YAK	Yakutsk	24.42	346	*e*P	P	05 06 22.6	-1.7
YAK				*e**PP	pP	05 06 33.8	-1.8
YAK				*e*S	S	05 10 37.3	-3.7
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.7s						
YAK				smax	smax		
	comp=E,176nm,4.2s						
YAK				smax	smax		
	comp=N,185nm,3.5s						
YAK	Yakutsk	24.42	346	P	P	05 06 23.1	-1.1
SEY	Seymchan	24.87	11	P	P	05 06 30.3	+1.9
	comp=N,20nm,0.7s,baz=205,slow=6.3,SNR=35						

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SEY                                 LR     LR     05 17 16.1
      comp=N,68nm,21.8s,baz=145,slow=39
SEY   Seymchan          24.87  11 i P      P      05 06 28.6 +0.2
GUMO  Guam              25.30 174   LR     LR     05 16 49.4
      comp=N,37nm,20.9s,baz=79,slow=37
BOD   Bodaibo           26.32 325 eP       P      05 06 39.9 -1.6
BOD                                 pmax   pmax
      comp=Z,14nm,0.8s
XAN   Xi'an             27.07 270   P      P      05 06 50.0 +1.4
XAN                                 pmax   pmax
      comp=Z,6.0nm,1.0s
SONM  Songino Array     27.29 301   P      P      05 06 51.0 +0.4
      comp=Z,1.1nm,0.5s,baz=98,slow=8.3,SNR=6.2
SONM                                LR     LR     05 17 41.8
      comp=Z,74nm,18.7s,baz=298,slow=36
SONM  Songino Array     27.29 301   P      P      05 06 51.0 +0.4
H11N2 WAKE ISLAND Hy    28.65 125   T      T      05 37 24.4
      baz=317,slow=75,SNR=6359
H11N1 WAKE ISLAND Hy    28.66 125   T      T      05 37 26.3
      baz=317,slow=75,SNR=7821
H11N3 WAKE ISLAND Hy    28.67 125   T      T      05 37 25.7
      baz=317,slow=75,SNR=6812
H11S1 WAKE ISLAND Hy    29.43 127   T      T      05 38 21.2
      baz=318,slow=76,SNR=958
H11S3 WAKE ISLAND Hy    29.43 127   T      T      05 38 21.2
      baz=318,slow=76,SNR=1442
H11S2 WAKE ISLAND Hy    29.45 127   T      T      05 38 22.4
      baz=318,slow=76,SNR=1008
ZAK   Zakamensk         29.63 306 eP       P      05 07 10.0 -1.3
ZAK                                 pmax   pmax
      comp=Z,3.0nm,1.3s
LZH   Lanzhou           30.38 277 eP       P      05 07 16.9 -1.3
LZH                                 pP     pP     05 07 28.5 -1.1
LZH                                 pmax   pmax
      comp=Z,15nm,1.1s
BILL  Bilibino          32.10  17ceP      P      05 07 32.1 -0.7
BILL                              eS       S      05 12 43.3 +1.4
BILL                                pmax   pmax
      comp=Z,15nm,1.7s
GYA   Guiyang           32.14 258 eP       P      05 07 39.6 +5.9
GYA                                 pmax   pmax
      comp=Z,13nm,0.8s
GTA   Gaotai            32.62 285 eP       P      05 07 38.4 +0.5
GTA                                 pP     pP     05 07 52.0 +2.7
GTA                                 sP     sP     05 07 59.2 +4.9
GTA                                 PcP    PcP    05 10 24.0 +0.8
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.0s
GTA                                 pmax   pmax
      comp=Z,120nm,6.1s
GTA                                 LR     LR
      comp=Z,120nm,14.5s
GTA                                 LR     LR
      comp=Z,180nm,14.2s
GTA                                 LR     LR
      comp=Z,200nm,17.8s
TIXI  Tiksi             33.54 352 eP       P      05 07 44.1 -1.2
TIXI  Tiksi             33.54 352   P      P      05 07 44.5 -0.8
ANM   Nome              39.73  32   P      P      05 08 40.7 +2.7
ANM                                 pmax   pmax
      comp=Z,39nm,1.6s
ANM   Nome              39.73  32   P      P      05 08 40.7 +2.7
ANM                                 IAmb   IAmb   05 08 41.7
      comp=Z,39nm,1.6s
DGZ   Jazzator, Alta    39.81 304 i P      P      05 08 39.2  0.0
DGZ                                 pmax   pmax
      comp=Z,21nm,0.7s
WMQ   Urumqi            40.56 295 eP       P      05 08 46.7 +1.4
WMQ                                 sP     sP     05 09 04.7 +2.8
WMQ                                 pmax   pmax
      comp=Z,17nm,1.1s
SIJI  Sorong            40.80 197   LR     LR     05 22 14.9
      comp=Z,89nm,21.2s,baz=106,slow=31
ZAA0  Zalesovo Array    41.13 311   IAmb   IAmb   05 09 06.7
      comp=Z,8.9nm,0.6s
ZALV  Zalesovo Beam     41.13 311   P      P      05 08 49.5 -0.3
      comp=Z,6.1nm,0.5s,baz=85,slow=7.8,SNR=52
ZALV                                PcP    PcP    05 10 48.2 -0.3
      comp=Z,2.8nm,0.5s,baz=84,slow=2.9,SNR=5.8
ZALV                                LR     LR     05 26 26.1
      comp=Z,92nm,19.4s,baz=104,slow=37
NRIK  Noril'sk          41.85 334   P      P      05 08 55.1 -0.4
      comp=Z,3.9nm,0.7s,baz=115,slow=10,SNR=6.3
NRIK                                LR     LR     05 26 51.3
      comp=Z,170nm,20.1s,baz=132,slow=37
NRIK  Noril'sk          41.85 334   P      P      05 08 55.0 -0.4
CMAR  Chiang Mai Arr    42.55 254   P      P      05 09 01.3 -0.4
      comp=Z,0.3nm,0.4s,baz=40,slow=7.7,SNR=1.6
CMAR                                LR     LR     05 26 30.5
      comp=Z,33nm,19.4s,baz=85,slow=36
MK31  Makanchi Array    43.66 301ceP      P      05 09 09.9 -0.6
MK31                                pmax   pmax
      comp=Z,11nm,0.7s
MKAR  Makanchi Array    43.66 301   P      P      05 09 10.2 -0.3
      comp=Z,11nm,0.8s,baz=84,slow=9.5,SNR=98
MKAR                                PcP    PcP    05 10 57.2 +0.1
      comp=Z,1.5nm,0.8s,baz=72,slow=4.7,SNR=2.1
MKAR                                LR     LR     05 27 14.3
      comp=Z,58nm,19.4s,baz=98,slow=36
MAKZ  Makanchi          43.87 301   P      P      05 09 12.0 -0.2
MAKZ                                pmax   pmax
      comp=Z,10.0nm,1.0s
MAKZ  Makanchi          43.87 301   P      P      05 09 12.0 -0.2
KRVT  Keravat (AS076    43.93 166   LR     LR     05 27 25.4
      comp=Z,48nm,18.1s,baz=41,slow=36
KURK  Kurchatov         45.28 307ceP      P      05 09 22.8 -0.5
KURK                                pmax   pmax
      comp=Z,38nm,1.3s
KURK  Kurchatov         45.28 307   P      P      05 09 22.7 -0.5
KDAK  Kodiak Island     45.35  43   P      P      05 09 24.6 +0.8
      comp=Z,24nm,0.8s,baz=296,slow=3.8,SNR=12
KDAK  Kodiak Island     45.35  43   P      P      05 09 25.0 +1.3
KDAK                                pmax   pmax
      comp=Z,29nm,0.8s
KDAK  Kodiak Island     45.35  43   P      P      05 09 25.0 +1.3
KTH   Kantishna Hill    45.90  35   IAmb   IAmb   05 09 31.3
      comp=Z,16nm,0.8s
MLY   Manley            45.98  33   P      P      05 09 30.0 +1.2
      baz=269,SNR=7.3
SUA   Susitna One       46.04  38   IAmb   IAmb   05 09 32.9
      comp=Z,23nm,1.0s
CUT   Chulitna          46.23  37   P      P      05 09 31.0 +0.4
      baz=272
COLD  Coldfoot          46.27  30   P      P      05 09 31.9 +1.0
      baz=268
COLD  Coldfoot          46.27  30   IAmb   IAmb   05 10 41.5
      comp=Z,12nm,1.6s
RC01  Rabbit Creek A    46.55  38   P      P      05 09 34.3 +1.1
      baz=274,SNR=5.8
I23K  Minto, Yukon-K    46.57  33   P      P      05 09 35.1 +1.9
      baz=271
I23K  Minto, Yukon-K    46.57  33   IAmb   IAmb   05 09 35.9
      comp=Z,35nm,1.8s
TOLK  Toolik Lake Re    46.57  28   P      P      05 09 34.9 +1.6
      baz=267,SNR=8.6
TOLK  Toolik Lake Re    46.57  28   IAmb   IAmb   05 09 36.3
      comp=Z,12nm,1.0s
NEA2  Nenana            46.70  34   P      P      05 09 36.0 +1.7
      baz=271,SNR=8.3
MCK   McKinley          46.78  35   P      P      05 09 36.4 +1.4
      baz=272
PMR   Palmer            46.81  38   P      P      05 09 36.5 +1.3
PMR                                 pmax   pmax
      comp=Z,27nm,1.2s
PMR   Palmer            46.81  38   P      P      05 09 36.5 +1.3
PMR                                 IAmb   IAmb   05 09 37.6
      comp=Z,27nm,1.2s
RND   Reindeer          46.83  35   P      P      05 09 36.8 +1.3
RND                                 pmax   pmax
      comp=Z,14nm,0.9s
RND   Reindeer          46.83  35   P      P      05 09 36.8 +1.3
RND                                 IAmb   IAmb   05 09 37.5
      comp=Z,14nm,0.9s
MDM   Murphy Dome       47.05  33   P      P      05 09 39.4 +2.3
MDM                                 IAmb   IAmb   05 09 40.0
      comp=Z,16nm,1.0s
TCOL  CIGO, UAF Yank    47.21  33   P      P      05 09 39.8 +1.5
      baz=272
COLA  College           47.22  33 i P      P      05 09 39.0 +0.7
COLA                                pmax   pmax
      comp=Z,26nm,1.9s
POKR  Poker Plat Res    47.38  33   P      P      05 09 41.5 +1.9
      baz=272,SNR=11
HDA   Harding Lake      47.63  34   P      P      05 09 42.4 +0.8
      baz=273,SNR=5.2
HDA   Harding Lake      47.63  34   IAmb   IAmb   05 09 43.3
      comp=Z,10nm,0.7s
ILAR  Eielson Array     47.63  33   P      P      05 09 42.6 +1.0
      comp=Z,10nm,0.7s,baz=267,slow=6.5,SNR=75
M24K  Tolsona, Glenn    48.16  37   P      P      05 09 47.3 +1.6
      baz=276
SCRK  Sand Creek        48.95  34   P      P      05 09 52.6 +0.7
      baz=276,SNR=7.5
N25K  Chitina, Valde    48.96  37   P      P      05 09 53.7 +1.7
      baz=278
L26K  Log Cabin Wild    49.35  35   P      P      05 09 56.2 +1.3
      baz=278,SNR=10
K27K  Chicken           49.78  34   P      P      05 09 59.9 +1.8
      baz=278
K27K  Chicken           49.78  34   IAmb   IAmb   05 10 00.5
      comp=Z,6.2nm,0.8s
BRVK  Borovoye          49.84 311ceP      P      05 09 58.6  0.0
BRVK                                pmax   pmax
      comp=Z,8.0nm,0.8s
BRVK  Borovoye          49.84 311   P      P      05 09 58.7  0.0
BRVK                                IAmb   IAmb   05 09 59.7
      comp=Z,7.0nm,0.7s
AAK   Ala-Archa         50.15 297   P      P      05 10 01.0 -0.4
AAK                                 pmax   pmax
      comp=Z,3.0nm,1.1s
AAK   Ala-Archa         50.15 297   P      P      05 10 01.0 -0.4
KSH   Kashi             50.21 293   P      P      05 10 05.8 +4.0
KSH                                 pP     sP     05 10 20.3 +1.7
KSH                                 pmax   pmax
      comp=Z,15nm,1.2s
HNR   Honiara           50.84 157   LR     LR     05 29 48.8
      comp=Z,76nm,21.4s,baz=320,slow=34
HYT   Haines Junctio    52.48  38   IAmb   IAmb   05 10 22.3
      comp=Z,20nm,1.0s
INK   Inuvik            52.48  28   P      P      05 10 19.8 +1.5
      comp=Z,10nm,0.8s,baz=290,slow=7.0,SNR=35
INK                                 LR     LR     05 33 23.0
      comp=Z,60nm,21.3s,baz=237,slow=37
INK   Inuvik            52.48  28   IAmb   IAmb   05 10 20.6
      comp=Z,12nm,0.9s
COEN  Coen              52.56 179   P      P      05 10 20.8 +1.4
PSI   Prapat            53.24 239   LR     LR     05 34 33.6
      comp=Z,132nm,20.5s,baz=96,slow=38
WHY   Whitehorse        53.77  37   IAmb   IAmb   05 10 30.8
      comp=Z,6.4nm,0.8s
SVE   Sverdlovsk        54.16 318 eP       P      05 10 30.9 +0.1
SVE                                 pmax   pmax
      comp=Z,27nm,0.8s
NIL   Nilore            54.61 287   P      P      05 10 35.1 +0.7
NIL                                 pmax   pmax
      comp=Z,11nm,0.7s
NIL   Nilore            54.61 287   P      P      05 10 35.1 +0.7
NIL                                 IAmb   IAmb   05 10 35.6
      comp=Z,11nm,0.7s
ARU   Arti              55.38 318d iP      P      05 10 39.2 -0.4
ARU                                 *PP    pP     05 10 50.6 -1.0
ARU                                               05 12 44.3
ARU                                 S      S      05 18 22.0 +1.3
ARU                                 SS     SS     05 22 03.8 -1.3
ARU                                 pmax   pmax
      comp=Z,24nm,0.8s
ARU   Arti              55.38 318   P      P      05 10 38.5 -1.0
C36M  Paulatuk          55.52  25   P      P      05 10 41.4 +1.1
      baz=289,SNR=15
C36M  Paulatuk          55.52  25   IAmb   IAmb   05 10 42.4
      comp=Z,16nm,0.9s
EUNU  Eureka            58.28   9   IAmb   IAmb   05 11 01.0
      comp=Z,12nm,0.8s
WB0   Warramunga Arr    58.78 189   P      P      05 11 03.7 -0.3
WRAB  Tennant Creek     58.95 189   P      P      05 11 04.9 -0.2
WRAB                                *PP    pP     05 11 17.2 +0.1
WRAB                                pmax   pmax
      comp=Z,13nm,1.0s
WRAB  Tennant Creek     58.95 189   P      P      05 11 04.9 -0.2
WRAB                                       pP     05 11 17.2 +0.1
WRAB                                IAmb   IAmb   05 11 18.3
      comp=Z,13nm,0.9s
WB2   Warramunga Arr    58.96 189   P      P      05 11 04.5 -0.7
WRA   Warramunga Arr    58.96 189   P      P      05 11 04.8 -0.4
      comp=Z,5.2nm,0.4s,baz=6.1,slow=7.0,SNR=140
WRA                                 LR     LR     05 33 33.2
      comp=Z,38nm,21.5s,baz=145,slow=33
RES   Resolute Bay      60.67  15   P      P      05 11 16.5 +0.2
RES                                 pmax   pmax
      comp=Z,8.0nm,0.8s
RES   Resolute Bay      60.67  15   P      P      05 11 16.5 +0.2
RES                                 IAmb   IAmb   05 11 17.4
      comp=Z,7.7nm,0.8s
YKA   Yellowknife Ar    61.93  31   P      P      05 11 25.7 +0.7
      comp=Z,3.3nm,0.7s,baz=308,slow=5.2,SNR=80
ARCES ARCESS Array B    62.48 339   P      P      05 11 28.3 -0.4
      comp=Z,1.8nm,0.5s,baz=58,slow=3.1,SNR=12
AS31  Alice Springs     62.69 189   P      P      05 11 30.6 +0.1
ASAR  Alice Springs     62.69 189   P      P      05 11 30.4 -0.1
      comp=Z,2.3nm,0.6s,baz=6.4,slow=5.2,SNR=47
TULEG Thule             63.20   8 i P      P      05 11 32.6 -0.7
TULEG                               IAmb   IAmb   05 11 33.4
      comp=Z,13nm,0.6s
GEYT  Alibeck           63.46 298   P      P      05 11 33.9 -1.8
      comp=Z,2.9nm,0.7s,baz=27,slow=1.7,SNR=11
DAG   Danmarks Havn     63.99 355 i P      P      05 11 38.0 -0.5
      comp=Z,9.1nm,0.9s
DAG   Danmarks Havn     63.99 355 i P      P      05 11 38.0 -0.5
DAG                                 IAmb   IAmb   05 11 39.4
      comp=Z,9.1nm,0.9s
DZM   Mont Dzumac       64.76 155   LR     LR     05 37 12.7
      comp=Z,62nm,21.4s,baz=237,slow=33
DZM   Mont Dzumac       64.76 155 eLR      LR     05 31 20.0
      comp=Z,105nm,22.4s
NLWA  Neilton Lookou    65.05  48   IAmb   IAmb   05 11 49.4
      comp=Z,15nm,1.1s
D03D  Eldon             65.43  48   P      P      05 11 49.6 +1.2
      baz=301
B05A  Bryant            65.62  47   P      P      05 11 51.3 +1.8
      baz=302
E04D  Cinebar           66.25  49   P      P      05 11 55.4 +1.8
      baz=302
LTY   Liberty           66.97  47   IAmb   IAmb   05 12 00.5
      comp=Z,21nm,1.6s
OBN   Obninsk           66.97 323ceP      P      05 11 57.8 -0.2
OBN                                 pmax   pmax
      comp=Z,39nm,2.5s
B08A  Colville Reser    67.13  46   IAmb   IAmb   05 12 01.7
      comp=Z,8.9nm,1.2s
I03D  Drain, OR         67.30  52   P      P      05 12 02.1 +1.7
      baz=303
FINES FINESS Array B    67.46 332   P      P      05 12 00.6 -0.4
      comp=Z,9.5nm,0.6s,baz=42,slow=8.9,SNR=48
FINES                               LR     LR     05 43 05.6
      comp=Z,87nm,19.0s,baz=30,slow=37
E07A  Sunnyside         67.82  48   P      P      05 12 06.2 +2.6
E07A                                IAmb   IAmb   05 12 06.3
      comp=Z,8.7nm,1.2s
C09A  Chrisman Ranch    68.03  46   IAmb   IAmb   05 12 06.8
      comp=Z,5.4nm,0.6s
D08A  Wollman Farm,     68.08  47   IAmb   IAmb   05 12 07.5
      comp=Z,8.7nm,1.1s
F07A  Phinny Hill Vi    68.14  48   IAmb   IAmb   05 12 08.4
      comp=Z,5.8nm,0.8s
PINE  Pine Mountain     68.71  50   P      P      05 12 12.1 +2.6
PINE                                IAmb   IAmb   05 12 12.7
      comp=Z,8.5nm,0.9s
L04D  Klamath Falls     68.75  52   P      P      05 12 11.0 +1.3
      baz=304
J05D  Fort Rock, OR     68.81  51   P      P      05 12 11.5 +1.4
      baz=304
E09A  Wood Farm, Sta    68.83  47   IAmb   IAmb   05 12 12.4
      comp=Z,8.9nm,1.3s
SUMG  Summit            68.84   0 i P      P      05 12 10.2 +0.2
SUMG                                pmax   pmax
      comp=Z,29nm,0.6s
SUMG  Summit            68.84   0 i P      P      05 12 10.2 +0.2
      comp=Z,29nm,0.6s
SUMG  Summit            68.84   0 i P      P      05 12 10.3 +0.2
SUMG                                IAmb   IAmb   05 12 11.5
      comp=Z,29nm,0.6s
M02C  Callahan          68.86  53   P      P      05 12 11.8 +1.5
      baz=304
N02D  Trinity Center    69.19  54   P      P      05 12 14.0 +1.6
      baz=304
K05A  Summer Lake       69.33  51   IAmb   IAmb   05 12 16.1
      comp=Z,16nm,1.2s
O02D  Mt. Diablo Mer    69.58  55   P      P      05 12 16.7 +1.9
      baz=304
ZEI   Tsey              70.08 309 eP       P      05 12 15.5 -2.5
ZEI                                 pmax   pmax
      comp=Z,4.0nm,1.0s
O03E  Paynes Creek      70.14  54   P      P      05 12 19.4 +1.2
      baz=305
KIV   Kislovodsk        70.14 311c iP      P      05 12 18.6 +0.4
KIV                               i                 05 12 29.0
KIV                               i                 05 12 36.2
KIV                                 pmax   pmax
      comp=Z,20nm,1.0s
KIV                                 MLR    MLR
      comp=Z,34nm,15.0s
KIV   Kislovodsk        70.14 311   P      P      05 12 18.7 +0.5
KIV                                 IAmb   IAmb   05 12 20.1
      comp=Z,15nm,0.8s
KBZ   Khabaz            70.15 310   P      P      05 12 18.3 +0.2
      comp=Z,6.6nm,0.8s,baz=91,slow=3.5,SNR=15
STKA  Stephens Creek    70.39 181   P      P      05 12 20.1 +0.6
      comp=Z,0.9nm,0.6s,baz=344,slow=10,SNR=3.3
STKA  Stephens Creek    70.39 181   P      P      05 12 20.1 +0.6
STKA                                pmax   pmax
      comp=Z,3.0nm,1.5s
STKA  Stephens Creek    70.39 181   IAmb   IAmb   05 12 22.6
      comp=Z,3.2nm,1.4s
ORV   Oroville          70.75  54   P      P      05 12 23.1 +1.3
ORV                                 pmax   pmax
      comp=Z,3.0nm,0.7s
ORV   Oroville          70.75  54   P      P      05 12 23.1 +1.3
MSO   Missoula          71.00  45   P      P      05 12 24.3 +0.9
      baz=307
BEKR  Beckworth         71.29  54   IAmb   IAmb   05 12 27.6
      comp=Z,7.1nm,0.9s
MNK   Minsk             71.30 326 i P      P      05 12 24.1 -0.8
      comp=E,1.0nm,0.9s
MNK                               i P      P      05 12 24.1 -0.8
      comp=N,8.0nm,0.9s
MNK                               i P      P      05 12 24.1 -0.8
      comp=Z,12nm,0.9s
MNK                               i PcP    sP     05 12 43.6 +1.6
MNK                               i PP     PP     05 15 02.1 -0.7
MNK                               i PPP    PPP    05 16 45.4
MNK                               i S      S      05 21 38.5 -0.6
MNK                               i SS     SS     05 26 13.0 +0.2
MNK                               i SSS    SSS    05 29 32.4
MNK                               i LQ     LQ     05 36 12.0
MNK                               i LR     LR     05 40 20.8
MNK                               i LRM    MLR    05 45 55.8
      comp=N,76nm,18.1s
MNK                               i LRM    MLR    05 45 59.0
      comp=E,8.0nm,18.1s
MNK                               i LRM    MLR    05 46 02.9
      comp=Z,108nm,18.1s
FFC   Flin Flon         71.84  33   P      P      05 12 29.2 +1.0
FFC                                 pmax   pmax
      comp=Z,9.0nm,1.0s
FFC   Flin Flon         71.84  33   P      P      05 12 29.2 +1.0
FFC                                 IAmb   IAmb   05 12 29.8
      comp=Z,9.3nm,0.9s
FCC   Fort Churchill    72.10  27   P      P      05 12 30.0 +0.4
FCC                                 pmax   pmax
      comp=Z,23nm,1.4s
FCC   Fort Churchill    72.10  27   P      P      05 12 30.0 +0.4
FCC                                 IAmb   IAmb   05 12 30.9
      comp=Z,23nm,1.4s
ICESG Greenland Ices    72.34   1 i P      P      05 12 31.5 +0.1
EGMT  Eagleton          72.51  42   P      P      05 12 33.5 +1.1
      baz=309
DLMT  Dillon            72.63  45   IAmb   IAmb   05 12 35.7
      comp=Z,7.8nm,0.9s
HFS   Hagfors           72.65 336   LR     LR     05 47 51.3
      comp=Z,78nm,19.0s,baz=63,slow=39
HLID  Hailey            72.70  48   P      P      05 12 35.1 +1.3
      baz=308
NB2   NORSAR Subarra    72.71 337   P      P      05 12 33.3  0.0
      comp=Z,1.7nm,0.6s,baz=37,slow=6.2
NOA   NORSAR Array B    72.71 337   P      P      05 12 33.1 -0.2
      comp=Z,3.0nm,0.7s,baz=34,slow=4.9,SNR=10
NOA                                 LR     LR     05 48 32.0
      comp=Z,69nm,18.6s,baz=35,slow=39
BOZ   Bozeman (W)       73.02  45   P      P      05 12 36.9 +1.3
      baz=309,SNR=7.0
AKASG Malin Array Be    73.20 322   P      P      05 12 35.7 -0.6
      comp=Z,3.6nm,0.5s,baz=44,slow=6.4,SNR=42
AKASG                               LR     LR     05 45 48.1
      comp=Z,41nm,18.6s,baz=15,slow=37
AKBB  Malin Array Si    73.20 322   P      P      05 12 35.8 -0.5
AKBB                                pmax   pmax
      comp=Z,14nm,1.3s
AKBB  Malin Array Si    73.20 322   P      P      05 12 35.8 -0.5
AKBB                                IAmb   IAmb   05 12 37.1
      comp=Z,14nm,1.2s
LHV   Little Huntoon    73.41  54   IAmb   IAmb   05 12 40.6
      comp=Z,8.9nm,1.0s
NVAR  Mina Array Bea    73.43  54   P      P      05 12 39.9 +1.7
      comp=Z,5.2nm,0.9s,baz=288,slow=6.4,SNR=19
SFJD  Kangerlussuaq     74.00   5   LR     LR     05 46 32.1
      comp=Z,44nm,19.5s,baz=2.5,slow=37
H17A  Grant Village     74.36  45   P      P      05 12 46.7 +3.2
      baz=310,SNR=7.5
H17A  Grant Village     74.36  45   IAmb   IAmb   05 12 47.8
      comp=Z,7.6nm,0.9s
VES   Vestal, Richgr    74.47  56   P      P      05 12 45.0 +1.0
      baz=307
RLMT  Red Lodge         74.61  44   P      P      05 12 46.5 +1.5
      baz=310
RLMT  Red Lodge         74.61  44   IAmb   IAmb   05 13 56.7
      comp=Z,20nm,1.9s
MOOW  Moose Ponds       74.67  46   P      P      05 12 46.8 +1.5
FRB   Frobisher Bay     74.85  14   LR     LR     05 44 43.6
      comp=Z,39nm,21.5s,baz=16,slow=35
GRAC  Grapevine Rang    74.88  55   P      P      05 12 48.3 +1.9
      baz=308
ARVC  Arvin             75.06  57   P      P      05 12 48.9 +1.4
      baz=307
AHID  Auburn Hatcher    75.09  47   IAmb   IAmb   05 15 35.4
      comp=Z,12nm,0.7s
R11A  Troy Canyon, C    75.17  53   P      P      05 12 49.9 +1.6
      baz=308,SNR=7.1
LAO   LASA Array        75.20  41   P      P      05 12 49.7 +1.6
      baz=312
SORM  Soroca            75.34 321 ⇑P       P      05 12 47.4 -1.4
SORM  Soroca            75.34 321 ⇑P       P      05 12 47.4 -1.4
MPMC  Manual Prospec    75.37  55   P      P      05 12 50.7 +1.2
      baz=308
FURC  Furnace Creek,    75.52  55   P      P      05 12 51.9 +1.9
      baz=308
TPNV  Topopah Spring    75.62  54   P      P      05 12 52.3 +1.5
      baz=308
DUG   Dugway, Tooele    75.72  50   P      P      05 12 53.1 +1.8
      baz=309,SNR=8.0
DUG   Dugway, Tooele    75.72  50   IAmb   IAmb   05 12 54.0
      comp=Z,6.8nm,0.8s
EDW2  Edwards Air Fo    75.76  57   P      P      05 12 52.8 +1.2
      baz=308
BW06  Boulder Array     75.97  46   P      P      05 12 53.8 +1.0
      baz=310,SNR=5.5
PDAR  Pinedale Array    75.97  46   P      P      05 12 53.8 +1.0
      comp=Z,2.5nm,0.7s,baz=273,slow=2.0,SNR=31
GSC   Goldstone, Bar    76.27  56   P      P      05 12 55.8 +1.3
      baz=308
BUR08 Bucovina Ar. S    77.22 322   P      P      05 12 59.4 -0.2
BUR08                               IAmb   IAmb   05 15 05.7
      comp=Z,30nm,1.9s
BURAR Bucovina Array    77.23 322 ⇑P       P      05 12 59.9 +0.2
BURAR Bucovina Array    77.23 322 ⇑P       P      05 12 59.9 +0.2
GMRC  Granite Mounta    77.33  56   P      P      05 13 01.8 +1.3
      baz=309
BELC  Belle Mtn. Jos    77.60  56   P      P      05 13 03.4 +1.3
      baz=309
ULM   Lac du Bonnet     77.65  34   P      P      05 13 02.2 +0.4
      comp=Z,2.7nm,0.6s,baz=328,slow=9.1,SNR=4.9
ULM   Lac du Bonnet     77.65  34   IAmb   IAmb   05 14 25.8
      comp=Z,30nm,1.8s
KOLS  Kolonicke sedl    77.67 324 eP       P      05 13 02.2 +0.2
KOLS  Kolonicke sedl    77.67 324 eP       P      05 13 02.2 +0.2
K22A  Casper            77.73  45   P      P      05 13 03.6 +0.9
      baz=312
OJC   Ojcow             77.83 326   P      P      05 13 02.7 -0.2
OJC                                 pmax   pmax
      comp=Z,14nm,1.1s
OJC   Ojcow             77.83 326   P      P      05 13 02.7 -0.2
OJC                                 IAmb   IAmb   05 13 04.1
      comp=Z,14nm,1.1s
RWWY  Rawlins           77.99  46   IAmb   IAmb   05 14 36.5
      comp=Z,31nm,1.9s
IRM   Iron Mountain     78.05  56   P      P      05 13 05.7 +1.2
      baz=309
BRTR  Keskin Array B    78.07 312   P      P      05 13 04.4 -0.2
      comp=Z,1.9nm,0.6s,baz=113,slow=3.0,SNR=12
RSSD  Black Hills       78.07  42   P      P      05 13 05.6 +1.0
RSSD                                pmax   pmax
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	comp=Z,6.0nm,0.9s						
RSSD	Black Hills	78.07	42	P	P	05 13 05.2	+0.6
	baz=313						
RSSD	Black Hills	78.07	42	P	P	05 13 05.6	+1.0
RSSD				IAmb	IAmb	05 13 06.3	
	comp=Z,6.1nm,0.8s						
BC3	Big Chuckawall	78.17	56	P	P	05 13 06.5	+1.4
	baz=309						
MLR	Muntele Rosu	78.36	320	⇑P	P	05 13 09.7	+3.6
MLR	Muntele Rosu	78.36	320	⇑P	P	05 13 09.7	+3.6
IKP	In-Ko-Pah, Jac	78.37	57	P	P	05 13 07.6	+1.3
	baz=309						
SWSC	Sam W. Stewart	78.39	57	P	P	05 13 07.7	+1.4
	baz=309						
U15A	North Rim	78.42	52	IAmb	IAmb	05 13 09.7	
	comp=Z,9.3nm,1.3s						
O20A	White River Ci	78.43	47	P	P	05 13 07.8	+1.1
	baz=312						
O20A	White River Ci	78.43	47	IAmb	IAmb	05 13 08.7	
	comp=Z,7.3nm,1.0s						
PDMCI	Parker Dam,Lak	78.61	55	P	P	05 13 08.4	+0.9
	baz=310						
OKC	Ostrava-Krasne	78.83	327	*e*P	P	05 13 10.7	+2.3
GLA	Glamis	78.95	56	P	P	05 13 10.9	+1.4
	baz=310						
AGMN	Agassiz Nation	79.09	35	P	P	05 13 09.5	-0.3
	baz=318						
MORC	Moravsky Berou	79.13	327	⇑P	P	05 13 09.5	-0.6
MORC	Moravsky Berou	79.13	327	*e*P	P	05 13 10.5	+0.4
MORC	Moravsky Berou	79.13	327	⇑P	P	05 13 09.5	-0.6
DPC	Dobruska-Polom	79.21	328	*e*P	P	05 13 10.7	+0.2
UPC	Upice	79.22	328	*e*P	P	05 13 10.2	-0.3
UPC	Upice	79.22	328	*e*P	P	05 13 10.2	-0.3
KRLC	Kraliky	79.23	328	*e*P	P	05 13 10.6	0.0
KRLC	Kraliky	79.23	328	*e*P	P	05 13 10.6	0.0
N23A	Red Feather La	79.23	46	P	P	05 13 12.6	+1.5
	baz=313						
VYHS	Vyhne	79.54	326	*e*P	P	05 13 12.8	+0.5
VYHS	Vyhne	79.54	326	*e*P	P	05 13 12.8	+0.5
WUAZ	Wupatki	79.58	53	P	P	05 13 14.4	+1.4
	baz=311						
BRG	Berggiesshubel	79.76	330	*i* P	P	05 13 13.7	+0.3
BRG				Amp		05 13 14.5	
	comp=Z,7.3nm,0.9s						
BRG	Berggiesshubel	79.76	330	*i* P	P	05 13 13.7	+0.3
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	79.76	330	*i* P	P	05 13 13.7	+0.3
BRG				Amp		05 13 14.5	
	comp=Z,7.3nm,0.9s						
JAVC	Velka Javorina	79.77	326	*e*P	P	05 13 15.0	+1.4
PVCC	Panska Ves	79.78	329	*e*P	P	05 13 14.2	+0.6
PVCC	Panska Ves	79.78	329	*e*P	P	05 13 14.2	+0.6
CLL	Collm	79.79	330	*i* P	P	05 13 13.6	0.0
	comp=Z,8.0nm,0.8s						
CLL				*e*pP	pP	05 13 26.0	-0.1
CLL	Collm	79.79	330	P	P	05 13 13.4	-0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	79.79	330	P	P	05 13 13.4	-0.2
CLL				IAmb	IAmb	05 13 14.3	
	comp=Z,8.7nm,0.9s						
VRAC	Vranov	79.89	327	⇑P	P	05 13 14.1	-0.1
VRAC	Vranov	79.89	327	*e*P	P	05 13 14.8	+0.6
VRAC	Vranov	79.89	327	⇑P	P	05 13 14.1	-0.1
SIRR	Siria	79.89	323	⇑P	P	05 13 14.4	+0.1
ISCO	Idaho Springs	80.16	46	P	P	05 13 17.4	+1.2
	baz=313						
ISCO	Idaho Springs	80.16	46	IAmb	IAmb	05 13 18.2	
	comp=Z,18nm,1.9s						
KRUC	Moravsky	80.16	327	*e*P	P	05 13 16.1	+0.4
PRU	Pruhonice	80.22	329	*e*P	P	05 13 21.5	+5.6
PRU	Pruhonice	80.22	329	*e*P	P	05 13 15.6	-0.3
MVCO	Mesa Verde	80.22	50	P	P	05 13 17.8	+1.3
	baz=312						
BZS	Buzias	80.39	322	⇓P	P	05 13 16.8	-0.2
BZS	Buzias	80.39	322	⇓P	P	05 13 16.8	-0.2
S22A	4UR Ranch, Cre	80.84	49	P	P	05 13 21.4	+1.5
	baz=313,SNR=5.9						
W18A	Petrified Fore	80.85	52	P	P	05 13 21.3	+1.5
	baz=312						
NKC	Novy Kostel	80.86	330	*e*P	P	05 13 19.1	-0.3
NKC	Novy Kostel	80.86	330	*e*P	P	05 13 19.1	-0.3
MDVR	Moldovita	80.96	322	⇑P	P	05 13 19.7	-0.3
214A	Organ Pipe Nat	80.96	56	P	P	05 13 21.7	+1.4
	baz=310						
Q24A	Divide	80.99	47	P	P	05 13 21.6	+0.9
	baz=313						
CONA	Conrad Observa	81.26	327	*e*P	P	05 13 21.6	-0.1
	comp=Z,6.1nm,1.0s						
EYMN	Ely	81.28	33	P	P	05 13 21.7	0.0
	baz=321						
KHC	Kasperske Hory	81.28	329	*ce*P	P	05 13 21.2	-0.5
KHC				pmax	pmax		
	comp=Z,26nm,1.7s						
KHC	Kasperske Hory	81.28	329	*e*P	P	05 13 21.5	-0.2
KHC	Kasperske Hory	81.28	329	IAmb	IAmb	05 13 23.2	
	comp=Z,19nm,1.6s						
OGNE	Ogallala	81.34	44	P	P	05 13 22.6	+0.4
	baz=315						
GERES	GERESS Array B	81.45	328	P	P	05 13 22.6	0.0
	comp=Z,1.9nm,0.7s,baz=38,slow=5.6,SNR=16						
SDCO	Great Sand Dun	81.62	48	P	P	05 13 25.0	+1.0
	baz=313						
GRA1	Grafenberg Arr	81.77	330	P	P	05 13 24.6	+0.4
GRF	Grafenberg Arr	81.77	330	P	P	05 13 24.6	+0.4
GRF				pmax	pmax		
	comp=Z,69nm,1.9s						
GRF	Grafenberg Arr	81.77	330	*e*P	P	05 13 24.6	+0.4
	comp=Z,7.2nm,0.8s,baz=38,slow=4.5						
VTS	Vitosha	81.77	319	⇓P	P	05 13 24.6	0.0
VTS	Vitosha	81.77	319	⇓P	P	05 13 24.6	0.0
ARSA	Arzberg	81.93	326	*e*P	P	05 13 23.6	-1.6
	comp=Z,6.7nm,1.3s						
MOA	Molln	82.00	328	*e*P	P	05 13 24.6	-0.9
	comp=Z,3.8nm,1.1s						
TUC	Tucson	82.04	55	P	P	05 13 26.9	+0.8
	baz=311						
ECSD	EROS Data Cent	82.11	39	P	P	05 13 26.3	+0.1
	baz=318						
ECSD	EROS Data Cent	82.11	39	IAmb	IAmb	05 13 27.4	
	comp=Z,7.1nm,0.8s						
KSCO	Kaye Shedlock’	82.37	45	P	P	05 13 29.1	+1.4
	baz=315						
SOKA	Soboth	82.59	326	*e*P	P	05 13 27.2	-1.4
	comp=Z,8.1nm,1.0s						
T25A	Trinidad	82.67	48	P	P	05 13 30.5	+1.1
	baz=314,SNR=7.1						
T25A	Trinidad	82.67	48	IAmb	IAmb	05 13 31.6	
	comp=Z,8.2nm,0.8s						
OBKA	Obir	82.93	327	*e*P	P	05 13 27.7	-2.7
	comp=Z,18nm,1.6s						
ANMO	Albuquerque	82.96	50	P	P	05 13 32.9	+1.9
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	82.96	50	P	P	05 13 32.8	+1.9
	baz=313						
ANMO	Albuquerque	82.96	50	P	P	05 13 32.9	+1.9
BGNE	Belgrade	83.05	41	P	P	05 13 31.2	+0.1
	baz=317						
MYKA	Terra Mystica	83.22	327	*e*P	P	05 13 29.3	-2.7
	comp=Z,5.1nm,0.6s						
WATA	Walderalm	83.52	329	*e*P	P	05 13 33.4	-0.2
	comp=Z,4.3nm,0.8s						
ABTA	Abfaltersbach	83.60	328	*e*P	P	05 13 32.0	-1.9
	comp=Z,14nm,1.4s						
BMRD	Maredsous	83.61	334	*d*PcP	PcP	05 13 37.8	-0.1
MOTA	Moosalm	83.70	329	*e*P	P	05 13 34.4	-0.1
	comp=Z,14nm,1.2s						
RETA	Reutte	83.72	329	*e*P	P	05 13 34.6	+0.1
	comp=Z,10nm,0.9s						
SQTA	Sankt Quirin	83.76	329	*e*P	P	05 13 34.7	0.0
	comp=Z,5.9nm,0.8s						
121A	Cookes Peak, D	83.78	53	P	P	05 13 36.5	+1.3
	baz=313						
BFO	Black Forest	83.98	331	P	P	05 13 35.5	-0.3
BFO				pmax	pmax		
	comp=Z,22nm,1.4s						
BFO	Black Forest	83.98	331	P	P	05 13 35.5	-0.3
BFO				IAmb	IAmb	05 13 36.5	
	comp=Z,22nm,1.4s						
FETA	Feichten	84.11	329	*e*P	P	05 13 36.4	-0.2
	comp=Z,10.0nm,1.1s						
DAVA	Damuels	84.24	330	*e*P	P	05 13 37.4	+0.2
	comp=Z,13nm,0.9s						
PPT2	Papeete2	84.96	117	*e*LR	LR	05 40 32.2	
	comp=Z,82nm,24.8s						
PPT2	Papeete2	84.96	117	*e*T	T	06 47 36.6	
	comp=Z,14nm,0.3s						
PAE	Paea	85.01	117	*e*T	T	06 47 39.3	
	comp=Z,2.3nm,0.3s						
TIAR	Tiarei	85.10	117	*e*T	T	06 47 46.2	
	comp=Z,3.4nm,0.3s						
TVO	Taravao	85.32	117	*e*T	T	06 48 02.6	
	comp=Z,1.0nm,0.3s						
KSU1	Kansas State U	85.55	42	P	P	05 13 43.8	0.0
	baz=318						
AMTX	Amarillo	85.82	48	P	P	05 13 46.3	+1.0
	baz=316						
MSTX	Muleshoe	85.83	49	P	P	05 13 46.3	+0.8
	baz=315						
MSTX	Muleshoe	85.83	49	IAmb	IAmb	05 13 47.6	
	comp=Z,4.5nm,0.8s						
MNTX	Cornudas Mount	85.84	52	P	P	05 13 46.4	+1.0
	baz=314						
MNTX	Cornudas Mount	85.84	52	P	P	05 13 46.4	+1.0
CHGQ	Chibougamau	85.91	23	P	P	05 13 45.4	0.0
	baz=332						
GDL2	Guadalupe Moun	86.11	51	P	P	05 13 47.2	+0.4
MEH	Mehetia	86.20	116	*e*T	T	06 49 09.3	
	comp=Z,69nm,0.3s						
KAN08	Anthony NE Sta	86.21	44	P	P	05 13 47.7	+0.7
RPZ	Rata Peaks	86.27	159	LR	LR	05 49 08.2	
	comp=Z,44nm,18.6s,baz=318,slow=33						
GLMI	Grayling	86.64	31	P	P	05 13 49.2	+0.2
	baz=326						
P38A	Dawn	86.72	40	P	P	05 13 50.0	+0.5
P40A	Paris	87.53	39	P	P	05 13 54.7	+1.2
WMOK	Wichita Mounta	87.58	46	P	P	05 13 55.0	+1.2
WMOK				pmax	pmax		
	comp=Z,22nm,1.9s						
WMOK	Wichita Mounta	87.58	46	P	P	05 13 55.1	+1.3
	baz=317						
WMOK	Wichita Mounta	87.58	46	P	P	05 13 55.0	+1.2
WMOK				IAmb	IAmb	05 14 39.6	
	comp=Z,22nm,1.9s						
HDIL	Hopedale	88.04	37	P	P	05 13 56.6	+0.7
	baz=323						
S39A	Bolivar	88.30	41	P	P	05 13 57.5	+0.3
S39A				IAmb	IAmb	05 13 58.0	
	comp=Z,6.3nm,0.7s						
D56A	ZEC Mazanza, M	88.32	24	P	P	05 13 57.6	+0.5
	baz=332						
R40A	Maddies Statio	88.38	40	P	P	05 13 57.6	+0.1
TX31	Lajitas Ar. Si	88.54	53	P	P	05 13 59.2	+0.6
TX32	Lajitas Array	88.54	53	P	P	05 13 59.3	+0.7
TX32				IAmb	IAmb	05 14 00.4	
	comp=Z,2.8nm,0.7s						
TXAR	Lajitas Array	88.54	53	P	P	05 13 59.4	+0.8
	comp=Z,2.4nm,0.6s,baz=299,slow=3.5,SNR=30						
ABTX	Abilene, Hawle	88.62	48	P	P	05 13 59.6	+0.8
	baz=317						
E56A	St. Veronique	88.68	25	P	P	05 13 58.7	-0.1
	baz=332						
U38A	Gravette	88.70	42	P	P	05 13 59.4	+0.3
CCM	Cathedral Cave	89.07	39	P	P	05 14 01.5	+0.8
CCM				pmax	pmax		
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	89.07	39	P	P	05 14 01.5	+0.8
	baz=322						
CCM	Cathedral Cave	89.07	39	P	P	05 14 01.5	+0.8
E57A	Chemin Saint G	89.08	24	P	P	05 14 01.0	+0.3
	baz=333						
L48A	N Adams	89.08	33	P	P	05 14 01.8	+1.0
E58A	La Victoria	89.39	24	P	P	05 14 02.4	+0.2
	baz=333						
Z35A	Perchaven, San	89.47	46	P	P	05 14 03.5	+0.7
FVM	French Village	89.53	39	P	P	05 14 03.3	+0.4
FVM				pmax	pmax		
	comp=Z,38nm,1.9s						
FVM	French Village	89.53	39	P	P	05 14 03.3	+0.4
U40A	Yellville	89.57	41	P	P	05 14 03.2	+0.1
	baz=320,SNR=9.1						
D60A	Saint Jean D’O	89.62	22	P	P	05 14 03.6	+0.5
	baz=335						
P46A	Rosedale	89.75	36	P	P	05 14 04.6	+0.6
T42A	Van Buren	89.94	40	P	P	05 14 05.3	+0.5
T42A				IAmb	IAmb	05 14 06.3	
	comp=Z,10nm,1.1s						
D62A	Allapoint, All	90.00	21	P	P	05 14 05.8	+0.9
	baz=336						
JCT	Junction City	90.08	50	P	P	05 14 05.8	+0.1
	baz=317						
FCAR	Ozark Folk Cen	90.30	41	P	P	05 14 06.8	+0.2
FCAR				IAmb	IAmb	05 14 07.2	
	comp=Z,4.5nm,0.7s						
WHTX	Lake Whitney,	90.34	47	P	P	05 14 07.6	+0.8
	baz=318						
PBMO	Poplar Bluff	90.47	40	P	P	05 14 07.8	+0.5
MIAR	Mount Ida	90.57	43	P	P	05 14 09.0	+1.1
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MIAR	Mount Ida	90.57	43	P	P	05 14 08.9	+1.0
	baz=320						
MIAR	Mount Ida	90.57	43	P	P	05 14 09.0	+1.1
W41B	Gary Mavity, V	90.79	42	P	P	05 14 09.2	+0.3
	baz=321						
H58A	Gabriels	90.84	25	P	P	05 14 09.4	+0.4
	baz=333						
X40A	Basin Creek Fa	91.01	43	P	P	05 14 10.7	+0.8
	baz=320						
435B	Jarrell	91.16	48	P	P	05 14 11.2	+0.6
	baz=318						
WVT	Waverly	92.26	38	P	P	05 14 15.9	+0.2
	baz=324						
I63A	Otisfield	92.31	23	P	P	05 14 15.4	-0.3
	baz=335						
OXF	Oxford	92.76	40	P	P	05 14 18.6	+0.6
	baz=322						
P56A	Dayton Farm, R	93.43	31	P	P	05 14 21.6	+0.6
	baz=329						
R56A	Bull Pasture M	94.14	32	P	P	05 14 23.8	-0.5
	baz=329						
S58A	Poland Farm, P	95.37	31	P	P	05 14 28.8	-1.1
	baz=330						
R60A	Leonardtown, M	95.38	30	P	P	05 14 29.0	-0.9
	baz=331						
T57A	Hurt	95.40	32	P	P	05 14 29.5	-0.6
	baz=329						
ESDC	Sonseca Array	95.89	334	P	P	05 14 31.9	-0.4
	comp=Z,0.5nm,0.8s,baz=13,slow=4.2,SNR=4.9						
ESDC				LR	LR	06 02 41.4	
	comp=Z,79nm,18.1s,baz=40,slow=38						
V57A	Coltrane Farms	96.13	33	P	P	05 14 33.5	+0.1
	baz=329						
TORD	Torodi Ar. Bea	116.43	316	PKP	PKPdf	05 19 48.2	-1.5
	comp=Z,0.4nm,0.7s,baz=347,slow=2.7,SNR=2.0						
DBIC	Dimbokro	125.32	318	PKP	PKPdf	05 20 06.2	-0.6
	comp=Z,1.4nm,0.6s,baz=323,slow=5.1,SNR=3.8						
BOSA	Boshof	127.46	261	PKP	PKPdf	05 20 10.2	-0.4
	comp=Z,1.3nm,0.8s,baz=146,slow=3.6,SNR=2.1						
SNAA	Sanae	142.68	197	PKPdf	PKPdf	05 20 31.4	-6.1
VNA2	Neumayer--Watz	144.25	197	PKPdf	PKPab	05 20 38.4	+0.2
VNA3	Neumayer Olymp	144.49	195	PKPdf	PKPab	05 20 38.7	-0.3
PLCA	Paso Flores	154.88	105	PKPab	PKPab	05 21 25.8	+3.5
	comp=Z,1.5nm,0.8s,baz=285,slow=4.7,SNR=3.5						
BDFB	Brasilia	155.19	24	PKPab	PKPab	05 21 23.9	-0.1
	comp=Z,1.9nm,0.7s,baz=210,slow=6.9,SNR=3.7						

DJA 01 05:13:08.1±1.0, 2°S±3°×12°0E±°, h17^{km}±9^{km}, M3.4/8, MLv3.4/8, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.20	209	P	Pn	05 13 29.4	-0.8
TTSI				S	Sg	05 13 46.7	-0.4
APSI	Ampana	1.64	49	P	Pn	05 13 35.4	-0.7
APSI				S	Sn	05 13 57.5	+0.7
SPSI	Sidrap Palu	2.06	198	P	Pn	05 13 41.3	-0.7
SPSI				S	Sn	05 14 08.2	+0.8
MPSI	Mapaga	2.37	348	P	Pn	05 13 47.9	+1.7
BNSI	Bone	2.41	187	P	Pn	05 13 45.4	-1.4
BNSI				S	Sn	05 14 17.9	+1.9
LUWI	Luwuk	2.54	68	P	Pb	05 13 51.2	-2.1
MRSI	Marisa	2.89	32	P	Pn	05 13 53.2	-0.2
MRSI				S	Sn	05 14 26.9	-0.9

IDC 01 05:14:59.1±1.9, 2°.34N×125°.10E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/41, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/23, Error ellipse: s-maj=189.8km s-min=25.3km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	12.54	187	LR	LR	05 23 24.3	
	comp=Z,117nm,20.7s,baz=292,slow=40						
WRA	Warramunga Arr	23.93	158	P	P	05 20 14.1	-0.9
	0.8nm,0.5s,baz=337,slow=11,SNR=5.3						
ASAR	Alice Springs	27.23	162	P	P	05 20 46.3	+1.3
	0.2nm,0.6s,baz=336,slow=8.2,SNR=4.9						
MKAR	Makanchi Array	57.79	327	P	P	05 24 51.8	-0.4
	0.2nm,0.5s,baz=119,slow=6.7,SNR=7.8						

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*IDC **01** 05:31:07.8±0.8, 82°.89N×5°.54W, h0^{km}, mb3.5/9, mb1 3.8/11, mb1mx3.5/39, mbtmp3.5/11, ML3.7/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/31, Error ellipse: s-maj=28.1km s-min=16.5km az=31.0*

*DNK **01** 05:31:08.0±1.3, 82°.98N×4°.34W, h15^{km}±12^{km}, ML3.0*

*IEPN **01** 05:31:12.0, 83°.00N×3°.44W, h10^{km}*

ISC 01 05:31:08.3±0.7, 82°.72N±0°.07×5°.85W±0°.05, h10^{km}, n32, σ2^{s}.54/45, mb3.4/9, MS3.1/5, 1D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	4.73	134	*i* P	Pn	05 32 20.4	+1.0
KBS				*i* S	Sn	05 33 12.4	-1.8
KBS				IAML		05 33 19.1	
	comp=Z,30nm,0.4s						
KBS	Kingsbay	4.73	134	*e*P	Pn	05 32 20.8	+1.3
KBS				*e*S	Sn	05 33 11.5	-2.7
KBS	Kingsbay	4.73	134	*i* P	Pn	05 32 20.4	+1.0
KBS				*i* S	Sn	05 33 12.4	-1.8
KBS				IAML		05 33 19.1	
	comp=Z,30nm,0.4s						
SPA0	Spitsbergen Ar	5.81	130	*e*P	Pn	05 32 35.5	+1.2
SPA0	Spitsbergen Ar	5.81	130	⇓*i*P	Pn	05 32 35.5	+1.2
SPA0				*e*S	Sn	05 33 36.9	-3.9
SPITS	Spitsbergen Ar	5.81	130	Pn	Pn	05 32 35.5	+1.2
	baz=356,slow=10,SNR=125						
SPITS				Sn	Sn	05 33 38.2	-2.7
	baz=7.6,slow=16,SNR=1.2						
DAG	Danmarks Havn	6.38	207	*i* P	Pn	05 32 45.0	+3.0
DAG				*i* S	Sn	05 33 55.4	+0.7
DAG				IAML		05 33 58.7	
	comp=Z,4.5nm,0.3s						
DAG	Danmarks Havn	6.38	207	*i* P	Pn	05 32 45.0	+3.0
DAG				*i* S	Sn	05 33 55.4	+0.7
DAG	Danmarks Havn	6.38	207	*i* P	Pn	05 32 45.0	+3.0
DAG				*i* S	Sn	05 33 55.4	+0.7
DAG				IAML		05 33 58.7	
	comp=Z,4.5nm,0.3s						
HSPB	Hornsund (broa	6.80	136	*e*P	Pn	05 32 50.7	+2.9
HSPB	Hornsund (broa	6.80	136	*e*P	Pn	05 32 50.2	+2.4
HSPB				*e*S	Sn	05 34 03.0	-2.1
ZFI2	Zemlya Franca-	7.64	76	*e*P	Pn	05 32 55.7	-3.6
ZFI2				*i* AML	AML	05 34 12.1	
	comp=Z,14nm,1.2s						
ZFI2				*e*S	Sn	05 34 12.1	-14
HOPEN	Hopen	8.18	122	*e*P	Pn	05 33 06.9	+0.1
HOPEN				*e*S	Sn	05 34 31.7	-7.5
DBG	Daneborg	8.88	206	*i* P	Pn	05 33 17.2	+0.9
DBG				*i* S	Sn	05 34 52.6	-3.6
DBG				IAML		05 35 02.7	
	comp=Z,1.5nm,0.3s						
DBG	Daneborg	8.88	206	*i* P	Pn	05 33 17.2	+0.9
DBG				*i* S	Sn	05 34 52.6	-3.6
DBG				IAML		05 35 02.7	
	comp=Z,1.5nm,0.3s						
SUMG	Summit	12.01	231	*i* P	Pn	05 33 58.9	-0.6
SUMG				*i* S	Sn	05 36 08.7	-4.8
SUMG				IAML		05 36 15.3	
	comp=Z,3.8nm,0.3s						
SUMG	Summit	12.01	231	*i* P	Pn	05 33 58.9	-0.6
SUMG				*i* S	Sn	05 36 08.6	-4.8
SUMG	Summit	12.01	231	*i* P	Pn	05 33 58.9	-0.6
SUMG				*i* S	Sn	05 36 08.7	-4.8
SUMG				IAML		05 36 15.3	
	comp=Z,3.8nm,0.3s						
TULEG	Thule	12.09	275	*i* P	Pn	05 33 56.8	-3.4
TULEG				IAML		05 35 53.9	
	comp=Z,2.6nm,0.4s						
TULEG				*i* S	Sn	05 36 02.2	-13
TULEG	Thule	12.09	275	*i* P	Pn	05 33 56.8	-3.4
TULEG				IAML		05 35 53.9	
	comp=Z,2.6nm,0.4s						
TULEG				*i* S	Sn	05 36 02.2	-13
ARCES	ARCESS Array B	14.81	134	Pn	Pn	05 34 36.7	-0.7
	baz=356,slow=9.6,SNR=6.2						
ARCES				LR	LR	05 40 04.3	
	comp=Z,124nm,19.8s,baz=50,slow=36						
RES	Resolute Bay	16.92	294	Pn	Pn	05 34 59.0	-5.5
	comp=Z,0.3nm,0.3s,baz=36,slow=12,SNR=8.6						
RES				LR	LR	05 41 32.4	
	comp=Z,146nm,19.2s,baz=190,slow=37						
INK	Inuvik	26.91	319	LR	LR	05 49 27.1	
	comp=Z,47nm,18.1s,baz=10.0,slow=41						
YKA	Yellowknife Ar	30.75	301	P	P	05 37 23.4	+0.3
	comp=Z,0.2nm,0.8s,baz=32,slow=12,SNR=7.3						
YKA				PcP	PcP	05 40 21.2	+1.2
	comp=Z,0.2nm,0.6s,baz=17,slow=2.7,SNR=3.9						
YKA				LR	LR	05 50 33.0	
	comp=Z,42nm,18.0s,baz=0.0,slow=38						
GERES	GERESS Array B	34.51	157	P	P	05 37 59.6	+3.4
	comp=Z,0.4nm,0.8s,baz=359,slow=5.3,SNR=4.2						
ZALV	Zalesovo Beam	36.95	79	P	P	05 38 18.9	+2.0
	comp=Z,0.3nm,0.5s,baz=310,slow=11,SNR=1.6						
ZALV				LR	LR	05 53 44.9	
	comp=Z,31nm,18.7s,baz=73,slow=37						
ESDC	Sonseca Array	43.19	178	P	P	05 39 10.3	+1.5
	comp=Z,0.7nm,0.8s,baz=1.0,slow=8.1,SNR=5.5						
MKAR	Makanchi Array	43.66	84	P	P	05 39 13.0	+0.5
	comp=Z,0.3nm,0.8s,baz=347,slow=5.9,SNR=2.2						
MKAR				LR	LR	05 59 18.2	
	comp=Z,41nm,19.0s,baz=328,slow=39						
PDAR	Pinedale Array	49.55	290	P	P	05 40 00.8	+1.8
	comp=Z,0.2nm,0.5s,baz=2.9,slow=3.0,SNR=3.5						
PDAR				LR	LR	06 01 28.0	
	comp=Z,45nm,19.1s,baz=332,slow=37						
TXAR	Lajitas Array	62.08	282	P	P	05 41 29.5	+0.8
	comp=Z,0.5nm,0.8s,baz=26,slow=3.2,SNR=5.6						
TORD	Torodi Ar. Bea	69.68	172	P	P	05 42 19.7	+2.0
	comp=Z,0.4nm,0.6s,baz=341,slow=6.2,SNR=2.1						
CMAR	Chiang Mai Arr	73.67	73	P	P	05 42 40.7	-1.0
	comp=Z,0.7nm,0.7s,baz=342,slow=7.3,SNR=4.2						

IDC 01 05:31:54.2±5.5, 20°.08S×176°.05W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/26, mbtmp3.9/3, Error ellipse: s-maj=259.4km s-min=88.5km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.36	263	P	P	05 38 53.5	+1.8
	1.2nm,0.5s,baz=112,slow=5.4,SNR=1.7						
ASAR	Alice Springs	46.40	256	P	P	05 40 22.3	-0.6
	1.4nm,0.6s,baz=96,slow=7.8,SNR=22						
WRA	Warramunga Arr	46.48	261	P	P	05 40 22.6	-0.8
	0.6nm,0.6s,baz=97,slow=7.6,SNR=14						
AKASG	Malin Array Be	143.51	333	PKP	PKPdf	05 51 30.4	-0.3
	1.4nm,0.5s,baz=42,slow=4.0,SNR=11						

IDC 01 05:51:34.2±1.8, 3°.88S×151°.21E, h0^{km}, mb3.0/3, mb1 3.2/3, mb1mx3.1/27, mbtmp3.1/3, Error ellipse: s-maj=40.4km s-min=20.9km az=17.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.92	118	Pg	Pg	05 51 52.1	+0.3
	25nm,0.3s,baz=30,slow=20,SNR=2.4						
KRVT				Lg	Lg	05 52 12.4	
	50nm,0.3s,baz=301,slow=16,SNR=2.7						
WRA	Warramunga Arr	22.93	224	P	P	05 56 38.7	-1.4
	0.3nm,0.6s,baz=55,slow=9.2,SNR=1.7						
ASAR	Alice Springs	25.82	219	P	P	05 57 08.2	+0.8
	0.1nm,0.4s,baz=63,slow=8.5,SNR=1.4						
MKAR	Makanchi Array	78.59	319	P	P	06 03 37.9	0.0
	0.2nm,0.6s,baz=102,slow=6.5,SNR=2.1						

JMA 01 06:10:11.1±0.1, 38°.18N×144°.47E, h43^{km}, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.37**	**274**	P	Pn	06 10 48.6	+1.2
JIKH				S	Sn	06 11 16.3	+1.0
OFUJ	**Ofunato**	**2.37**	**293**	P	Pn	06 10 48.8	+1.3
OFUJ				*e*S	Sn	06 11 16.8	+1.5
JKMT	**Kesennumamotoy**	**2.43**	**286**	P	Pn	06 10 49.6	+1.3
JKMT				S	Sn	06 11 18.3	+1.4
JIO	**Ouri**	**2.47**	**277**	P	Pn	06 10 50.2	+1.4
JIO				S	Sn	06 11 19.1	+1.4
MIYJ	**Miyakonagasawa**	**2.50**	**305**	P	Pn	06 10 50.2	+1.0
MIYJ				*e*S	Sn	06 11 19.6	+1.2
JMK	**Ichinoseki**	**2.66**	**288**	P	Pn	06 10 53.1	+1.6
JMK				*e*S	Sn	06 11 24.4	+1.9
JOM	**Ohasama**	**2.80**	**298**	P	Pn	06 10 55.2	+1.9
JOM				S	Sn	06 11 27.8	+2.0
JANG	**Nango**	**3.17**	**315**	P	Pn	06 11 00.0	+1.5
JANG				S	Sn	06 11 35.6	+0.6
JYK	**Kaneyama**	**3.31**	**284**	P	Pn	06 11 02.8	+2.5
JYK				*e*S	Sn	06 11 41.4	+3.0
JFT	**Otama**	**3.34**	**260**	P	Pn	06 11 02.9	+2.1
JFT				S	Sn	06 11 41.4	+2.2
JOT	**Ohata**	**4.14**	**322**	P	Pn	06 11 14.1	+2.3
JOT				*e*S	Sn	06 11 58.4	-0.6
JCH	**Churui**	**4.51**	**350**	P	Pn	06 11 16.5	-0.3
JCH				*e*S	Sn	06 12 05.7	-2.3
JKB	**Kayabe**	**4.55**	**326**	*e*S	Sn	06 12 09.6	+0.7
JRY	**Ryogami san**	**4.95**	**246**	P	Pn	06 11 24.0	+1.1
JRY				S	Sn	06 12 17.8	-1.1
JOD2	**Odawara 2**	**5.21**	**238**	P	Pn	06 11 27.7	+1.2
NEM2	**Nemuro 2**	**5.27**	**10**	P	Pn	06 11 24.2	-3.0
NEM2				*e*S	Sn	06 12 20.0	-6.6
JTKR	**Abashiri--Toko**	**5.80**	**356**	P	Pn	06 11 33.5	-1.0
JTKR				*e*S	Sn	06 12 35.9	-3.8
JHR	**Hokuryu**	**5.93**	**340**	*e*S	Sn	06 12 43.4	+0.4

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*MOS **01** 06:43:22.6±2.1, 48.°08N×19.°43E, h10^{km}, mb3.9/3, Error ellipse: s-maj=7.1km s-min=6.4km az=114.9*

*LDG **01** 06:43:22.5±0.1, 47.°98N×19.°46E, h6^{km}, Ml2.9/22, Error ellipse: s-maj=4.0km s-min=2.6km az=178.0*

*IDC **01** 06:43:22.9±1.5, 47.°99N×19.°43E, h0^{km}, mb3.3/3, mb1 3.5/6, mb1mx3.4/40, mbtmp3.4/6, ML3.1/3, MS2.4/2, Ms1 2.4/2, ms1mx2.3/19, Error ellipse: s-maj=28.9km s-min=9.4km az=173.0*

*PRU **01** 06:43:23.9±0.0, 48.°16N×19.°32E, h0^{km}*

*IPEC **01** 06:43:23.6±0.1, 48.°01N×19.°43E, h14^{km}, ML3.1/9, Error ellipse: s-maj=0.7km s-min=0.5km az=20.0*

*KRSZO **01** 06:43:23.5±0.8, 48.°05N×19.°42E, h6^{km}±5^{km}, ML3.9/16, Error ellipse: s-maj=2.1km s-min=2.0km az=150.0*

*BEO **01** 06:43:25.4±1.0, 48.°10N×19.°48E, h33^{km}±3^{km}, ML3.6/11*

ISC 01 06:43:25.2±0.7, **48.°06N**±0.°01×**19.°41E**±0.°01, **h16**^{km}±4^{km}, **n383**, σ**2.^{s}11**/586, **mb3.6**/6, **39C-22D**, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.36**	**112**	⇑P	**Pg**	**06 43 30.7**	**-1.8**
PSZ				⇑S	**Sg**	**06 43 36.0**	**-1.6**
PSZ	**Piszkesteto**	**0.36**	**112**	⇑*i*PG	**Pg**	**06 43 30.7**	**-1.8**
PSZ				*e*SG	**Sg**	**06 43 35.6**	**-2.0**
PSZ	**Piszkesteto**	**0.36**	**112**	⇑Pg	**Pg**	**06 43 30.7**	**-1.8**
	comp=Z,39nm,SNR=348						
PSZ				Lg	Lg	06 43 35.4	
PSZ				Sg	**Sg**	**06 43 35.6**	**-2.0**
PSZ				Sb	**Sg**	**06 43 36.0**	**-1.6**
VYHS	**Vyhne**	**0.58**	**319**	*e*P	**Pg**	**06 43 35.9**	**-0.7**
VYHS				*e*		06 43 43.9	
VYHS	**Vyhne**	**0.58**	**319**	*e*PG	**Pg**	**06 43 35.9**	**-0.7**
VYHS				*e*SG	**Sg**	**06 43 43.9**	**-0.5**
VYHS	**Vyhne**	**0.58**	**319**	Pg	**Pg**	**06 43 36.0**	**-0.7**
	comp=Z,1.0nm,SNR=77						
VYHS				⇑Pg	**Pb**	**06 43 36.0**	**-1.0**
VYHS				Lg	Lg	06 43 43.9	
VYHS				Sg	**Sg**	**06 43 44.1**	**-0.4**
BUD	**Budapest**	**0.63**	**204**	⇓*i*PG	**Pg**	**06 43 35.2**	**-2.3**
BUD				*e*SG	**Sg**	**06 43 46.2**	**+0.4**
BUD	**Budapest**	**0.63**	**204**	Pg	**Pg**	**06 43 35.2**	**-2.3**
	comp=Z,4.7nm,SNR=92						
BUD				⇓Pg	**Pg**	**06 43 35.2**	**-2.3**
	comp=Z,4.7nm,SNR=92						
BUD				Lg	Lg	06 43 44.4	
BUD				Sg	**Sg**	**06 43 46.2**	**+0.4**
SRO	**Srobarova**	**0.77**	**252**	*e*P	**Pg**	**06 43 38.4**	**-1.8**
SRO				*e*		06 43 50.3	
SRO				pmax	pmax		
	comp=N,2μm,0.7s						
SRO	**Srobarova**	**0.77**	**252**	*e*PG	**Pg**	**06 43 38.4**	**-1.8**
SRO				*e*SG	**Sg**	**06 43 50.3**	**-0.1**
SRO				*e*LG	Lg	06 43 54.8	
SRO	**Srobarova**	**0.77**	**252**	Pg	**Pg**	**06 43 38.4**	**-1.8**
SRO				Pg	**Pg**	**06 43 38.4**	**-1.8**
SRO				Pb	**Pb**	**06 43 38.6**	**-1.6**
	comp=Z,18nm,SNR=209						
SRO				Sg	**Sg**	**06 43 50.1**	**-0.3**
SRO				Lg	Lg	06 43 50.3	
SRO				Sn	**Sn**	**06 43 54.8**	**+2.1**
KECS	**Kecovo**	**0.84**	**59**	*e*P	**Pb**	**06 43 39.3**	**-2.1**
KECS				*e*		06 43 52.0	
KECS				pmax	pmax		
	comp=N,813nm,0.2s						
KECS	**Kecovo**	**0.84**	**59**	*e*PG	**Pb**	**06 43 39.3**	**-2.1**
KECS				*e*SG	**Sb**	**06 43 52.0**	**-0.5**
KECS				*e*LG	Lg	06 43 54.5	
KECS	**Kecovo**	**0.84**	**59**	Pb	**Pb**	**06 43 39.3**	**-2.1**
KECS				Pb	**Pb**	**06 43 39.3**	**-2.1**
KECS				⇑Pg	**Pg**	**06 43 39.6**	**-1.9**
	comp=Z,57nm,SNR=504						
KECS				Lg	Lg	06 43 51.8	
KECS				Sg	**Sb**	**06 43 52.0**	**-0.5**
KECS				Sn	**Sn**	**06 43 54.5**	**+0.1**
KOLL	**Kolacno**	**0.85**	**308**	*e*PG	**Pb**	**06 43 41.0**	**-0.6**
KOLL				*e*SG	**Sb**	**06 43 52.3**	**-0.5**
KOLL	**Kolacno**	**0.85**	**308**	Pn	**Pb**	**06 43 41.0**	**-0.6**
KOLL				Lg	Lg	06 43 52.3	
BSZH	**Besenyszg**	**0.95**	**142**	⇓*e*PG	**Pb**	**06 43 42.3**	**-1.0**
BSZH				*e*SG	**Sb**	**06 43 56.0**	**+0.3**
BSZH	**Besenyszg**	**0.95**	**142**	⇑Pn	**Pb**	**06 43 42.1**	**-1.2**
	comp=Z,4.4nm,SNR=42						
BSZH				Pg	**Pb**	**06 43 42.3**	**-1.0**
BSZH				Sn	**Sb**	**06 43 56.0**	**+0.3**
CSKK	**Cskako**	**1.04**	**229**	*e*PN	**Pb**	**06 43 43.0**	**-1.8**
CSKK				*e*SN	**Sn**	**06 44 00.7**	**+1.4**
CSKK	**Cskako**	**1.04**	**229**	Pg	**Pb**	**06 43 42.8**	**-2.0**
	comp=Z,4.5nm,SNR=746						
CSKK				Pn	**Pb**	**06 43 43.0**	**-1.8**
CSKK				Lg	Lg	06 44 00.7	
SMOL	**Smolenice**	**1.40**	**290**	*e*P	**Pn**	**06 43 49.2**	**-0.9**
SMOL				*e*		06 44 11.1	
SMOL	**Smolenice**	**1.40**	**290**	*e*	**Pn**	**06 43 49.2**	**-0.9**
SMOL	**Smolenice**	**1.40**	**290**	*e*PG	**Pg**	**06 43 51.7**	**-0.4**
SMOL				*e*SG	**Sg**	**06 44 11.1**	**+0.8**
SMOL	**Smolenice**	**1.40**	**290**	Pn	**Pn**	**06 43 49.2**	**-0.9**
SMOL				Pn	**Pn**	**06 43 49.2**	**-0.9**
SMOL				Pg	**Pg**	**06 43 51.7**	**-0.4**
SMOL				Lg	Lg	06 44 11.1	
JAVC	**Velka Javorina**	**1.41**	**306**	*e*PG	**Pn**	**06 43 50.0**	**-0.3**
JAVC				*e*SG	**Sb**	**06 44 09.1**	**+0.2**
JAVC	**Velka Javorina**	**1.41**	**306**	*e*Pg	**Pn**	**06 43 50.0**	**-0.3**
	baz=125						
JAVC				*e*Sg	**Sb**	**06 44 09.1**	**+0.2**
	comp=Z,572nm,1.5s,baz=125						
JAVC	**Velka Javorina**	**1.41**	**306**	Pn	**Pn**	**06 43 50.0**	**-0.3**
JAVC				Pn	**Pn**	**06 43 50.0**	**-0.3**
JAVC				Sn	**Sb**	**06 44 09.1**	**+0.2**
	comp=Z,572nm,1.5s						
MODS	**Modra-Piesok**	**1.46**	**283**	*e*P	**Pn**	**06 43 49.0**	**-1.9**
MODS				*e*		06 44 10.4	
MODS				pmax	pmax		
	comp=N,610nm,0.8s						
MODS	**Modra-Piesok**	**1.46**	**283**	*e*	**Pn**	**06 43 49.0**	**-1.9**
MODS	**Modra-Piesok**	**1.46**	**283**	*e*PG	**Pb**	**06 43 52.4**	**+0.4**
MODS				*e*SG	**Sb**	**06 44 10.4**	**+0.1**
MODS				*e*LG	Lg	06 44 14.4	
MODS	**Modra-Piesok**	**1.46**	**283**	Pn	**Pn**	**06 43 49.0**	**-1.9**
MODS				Pn	**Pn**	**06 43 49.0**	**-1.9**
MODS				Pg	**Pb**	**06 43 52.4**	**+0.4**
MODS				Sn	**Sb**	**06 44 10.4**	**+0.1**
MODS				Lg	Lg	06 44 14.4	
NIE	**Niedzica**	**1.49**	**23**	*e*Pg	**Pb**	**06 43 52.3**	**-0.2**
NIE				*e*Sg	**Sg**	**06 44 12.8**	**-0.4**
NIE	**Niedzica**	**1.49**	**23**	Pg	**Pb**	**06 43 52.3**	**-0.2**
NIE				Lg	Lg	06 44 12.8	
EGYH	**Egyhazaskeszo**	**1.54**	**246**	*e*PN	**Pn**	**06 43 48.0**	**-4.0**
EGYH				*e*SN	**Sn**	**06 44 11.4**	**-0.2**
EGYH	**Egyhazaskeszo**	**1.54**	**246**	Pn	**Pn**	**06 43 48.0**	**-4.0**
EGYH				Sn	**Sn**	**06 44 11.4**	**-0.2**
MPLH	**Magyarpolny**	**1.54**	**236**	⇓*e*PN	**Pn**	**06 43 51.7**	**-0.3**
MPLH				*e*SN	**Sg**	**06 44 17.3**	**+2.4**
MPLH	**Magyarpolny**	**1.54**	**236**	Pn	**Pn**	**06 43 51.7**	**-0.3**
	comp=Z,2.3nm,SNR=38						
MPLH				Lg	Lg	06 44 13.0	
MPLH				Lg	Lg	06 44 17.3	
TIH	**Tihany**	**1.54**	**222**	⇓*e*PN	**Pn**	**06 43 51.5**	**-0.6**
TIH				*e*SN	**Sg**	**06 44 17.7**	**+2.7**
TIH	**Tihany**	**1.54**	**222**	Pn	**Pn**	**06 43 51.5**	**-0.6**
TIH				Lg	Lg	06 44 17.7	
ZST	**Bratislava**	**1.55**	**276**	*e*P	**Pn**	**06 43 51.0**	**-1.1**
ZST				*e*		06 44 10.9	
ZST				pmax	pmax		
	comp=N,998nm,0.8s						
ZST	**Bratislava**	**1.55**	**276**	*e*	**Pn**	**06 43 51.0**	**-1.1**
ZST	**Bratislava**	**1.55**	**276**	*e*PG	**Pg**	**06 43 54.4**	**-0.6**
ZST				*e*		06 44 10.9	
ZST	**Bratislava**	**1.55**	**276**	*e*SG	**Sg**	**06 44 14.5**	**-0.6**
ZST				*e*LG	Lg	06 44 16.4	
ZST	**Bratislava**	**1.55**	**276**	Pn	**Pn**	**06 43 51.0**	**-1.1**
ZST				Pn	**Pn**	**06 43 51.0**	**-1.1**
ZST				Pg	**Pg**	**06 43 54.4**	**-0.6**
ZST				Sn	**Sn**	**06 44 11.1**	**-0.8**
ZST				Lg	Lg	06 44 14.5	
ZST				Sg	**Sg**	**06 44 16.4**	**+1.3**
CRVS	**Cervenica-Dubn**	**1.61**	**57**	*e*P	**Pn**	**06 43 52.9**	**-0.1**
CRVS				*e*		06 44 14.4	
CRVS				pmax	pmax		
	comp=N,619nm,0.4s						
CRVS	**Cervenica-Dubn**	**1.61**	**57**	*e*	**Pn**	**06 43 52.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**1.61**	**57**	*e*PG	**Pb**	**06 43 54.7**	**+0.1**
CRVS				*e*		06 44 14.4	
CRVS	**Cervenica-Dubn**	**1.61**	**57**	*e*SG	**Sg**	**06 44 17.2**	**+0.2**
CRVS				*e*LG	Lg	06 44 20.9	
CRVS	**Cervenica-Dubn**	**1.61**	**57**	Pn	**Pn**	**06 43 52.9**	**-0.1**
CRVS				Pn	**Pn**	**06 43 52.9**	**-0.1**
CRVS				Pg	**Pb**	**06 43 54.7**	**+0.1**
CRVS				Lg	Lg	06 44 17.2	
CRVS				Sg	**Sg**	**06 44 20.9**	**+3.9**
LTVH	**Ltavrtes, Hu**	**1.81**	**111**	⇓*e*PN	**Pn**	**06 43 55.0**	**-0.7**
LTVH				*e*PG	**Pb**	**06 43 58.1**	**+0.1**
LTVH				*e*SN	**Sg**	**06 44 23.4**	**-0.2**
LTVH	**Ltavrtes, Hu**	**1.81**	**111**	Pn	**Pn**	**06 43 55.0**	**-0.7**
LTVH				Pg	**Pb**	**06 43 58.1**	**+0.1**
LTVH				Lg	Lg	06 44 23.4	
AMBH	**Ambrzfalva**	**1.93**	**152**	*e*PN	**Pn**	**06 43 57.1**	**-0.2**
AMBH				*e*PG	**Pb**	**06 44 01.0**	**+1.1**
AMBH				*e*SN	**Sg**	**06 44 34.9**	**+7.7**
AMBH	**Ambrzfalva**	**1.93**	**152**	Pn	**Pn**	**06 43 56.8**	**-0.6**
	comp=Z,1.9nm,SNR=6.3						
AMBH				Pg	**Pn**	**06 43 57.1**	**-0.2**
AMBH				Pb	**Pb**	**06 44 01.0**	**+1.1**
AMBH				Sn	**Sn**	**06 44 20.3**	**-1.0**
AMBH				Lg	Lg	06 44 34.9	
SOP	**Sopron**	**1.95**	**260**	⇑*e*PN	**Pn**	**06 43 56.7**	**-1.0**
SOP				*e*SN	**Sn**	**06 44 21.0**	**-0.8**
SOP	**Sopron**	**1.95**	**260**	Pn	**Pn**	**06 43 56.7**	**-1.0**
SOP				Sn	**Sn**	**06 44 21.0**	**-0.8**
OKC	**Ostrava-Krasne**	**1.97**	**336**	*e*P	**Pn**	**06 43 57.0**	**-0.9**
OKC				*e*		06 44 22.8	
OKC				smax	smax		
	comp=N,232nm,0.7s						
OKC	**Ostrava-Krasne**	**1.97**	**336**	*e*PG	**Pn**	**06 43 57.0**	**-0.9**
OKC				*e*SG	**Sn**	**06 44 22.8**	**+0.6**
	comp=N,232nm,0.7s						
OKC	**Ostrava-Krasne**	**1.97**	**336**	Pn	**Pn**	**06 43 57.0**	**-0.9**
OKC				Sn	**Sn**	**06 44 22.8**	**+0.6**
	comp=N,232nm,0.7s						
UZH	**Uzhgorod**	**2.01**	**72**	*e*P	**Pn**	**06 43 57.0**	**-1.5**
UZH				*e*S	**Sn**	**06 44 22.0**	**-1.3**
UZH	**Uzhgorod**	**2.01**	**72**	Pn	**Pn**	**06 43 57.0**	**-1.5**
UZH				Sn	**Sn**	**06 44 22.0**	**-1.3**
LOSC	**Losov**	**2.06**	**320**	*e*Pn	**Pn**	**06 43 59.0**	**-0.2**
	baz=139						
LOSC				*e*Sn	**Sn**	**06 44 25.0**	**+0.3**
	comp=N,114nm,0.5s,baz=139						
LOSC	**Losov**	**2.06**	**320**	Pn	**Pn**	**06 43 59.0**	**-0.2**
LOSC				Sn	**Sn**	**06 44 25.0**	**+0.3**
	comp=N,114nm,0.5s						
KOLS	**Kolonicke sedl**	**2.10**	**64**	*e*P	**Pn**	**06 43 59.2**	**-0.5**
KOLS				*e*		06 44 26.3	
KOLS				pmax	pmax		
	comp=N,377nm,1.0s						
KOLS	**Kolonicke sedl**	**2.10**	**64**	*e*	**Pn**	**06 43 59.1**	**-0.6**
KOLS	**Kolonicke sedl**	**2.10**	**64**	*e*PG	**Pb**	**06 44 04.1**	**+1.2**
KOLS				*e*SN	**Sn**	**06 44 26.3**	**+0.8**
KOLS				*e*		06 44 35.8	
KOLS				*e*LG	Lg	06 44 44.7	
KOLS	**Kolonicke sedl**	**2.10**	**64**	Pb	**Pn**	**06 43 59.1**	**-0.6**
KOLS				Pn	**Pn**	**06 43 59.3**	**-0.5**
	comp=Z,3.8nm,SNR=18						
KOLS				Pg	**Pb**	**06 44 04.1**	**+1.2**
KOLS				Pg	Pg	06 44 04.3	-1.2
KOLS				Sn	**Sn**	**06 44 26.4**	**+0.8**
KOLS				Lg	Lg	06 44 44.7	
MORC	**Moravsky Berou**	**2.12**	**325**	⇑P	**Pn**	**06 43 59.9**	**-0.1**
MORC				⇑S	**Sn**	**06 44 27.1**	**+1.1**
MORC	**Moravsky Berou**	**2.12**	**325**	*e*PN	**Pn**	**06 43 59.8**	**-0.2**
MORC				*e*SN	**Sn**	**06 44 26.8**	**+0.7**
MORC				*e*SG	**Sg**	**06 44 31.5**	**-1.8**
MORC	**Moravsky Berou**	**2.12**	**325**	*e*Pn	**Pn**	**06 43 59.7**	**-0.2**
	baz=144						
MORC				*e*Sn	**Sn**	**06 44 26.7**	**+0.7**
	baz=144						
MORC				*e*Sg	**Sg**	**06 44 31.4**	**-1.8**
	comp=Z,195nm,0.8s,baz=144						
MORC	**Moravsky Berou**	**2.12**	**325**	Pn	**Pn**	**06 43 59.7**	**-0.2**
MORC				Pn	**Pn**	**06 43 59.8**	**-0.2**
MORC				Pb	Pg	06 43 59.9	-5.9
MORC				Sn	**Sn**	**06 44 26.7**	**+0.7**
MORC				Sn	**Sn**	**06 44 26.8**	**+0.7**
MORC				Sg	**Sn**	**06 44 27.1**	**+1.1**
MORC				Sb	Sb	06 44 31.4	+2.1
	comp=Z,195nm,0.8s						
MORC				x	x	06 44 31.5	
RAC	**Raciborz**	**2.18**	**339**	*e*P	**Pg**	**06 44 06.3**	**-0.7**
RAC				*e*		06 44 35.4	
RAC	**Raciborz**	**2.18**	**339**	Pg	**Pg**	**06 44 06.3**	**-0.7**
OJC	**Ojcow**	**2.18**	**7**	*e*Pn	**Pn**	**06 44 02.1**	**+1.2**
OJC				*e*Pg	**Pg**	**06 44 05.7**	**-1.3**
OJC				*e*Sn	**Sn**	**06 44 27.5**	**0.0**
OJC				*e*Sg	**Sg**	**06 44 33.5**	**-1.8**
OJC	**Ojcow**	**2.18**	**7**	Pn	**Pn**	**06 44 02.1**	**+1.2**
OJC				Pg	**Pg**	**06 44 05.7**	**-1.3**
OJC				Sn	**Sn**	**06 44 27.5**	**0.0**
OJC				Lg	Lg	06 44 33.5	
KRUC	**Moravsky**	**2.24**	**298**	*e*PN	**Pn**	**06 44 00.7**	**-0.9**
KRUC				*e*SN	**Sn**	**06 44 29.3**	**+0.3**
KRUC	**Moravsky**	**2.24**	**298**	*e*Pn	**Pn**	**06 44 00.7**	**-0.9**
	baz=116						
KRUC				*e*Sn	**Sn**	**06 44 29.3**	**+0.3**
	comp=Z,71nm,0.9s,baz=116						
KRUC	**Moravsky**	**2.24**	**298**	Pn	**Pn**	**06 44 00.7**	**-0.9**
KRUC				Pn	**Pn**	**06 44 00.7**	**-0.9**
KRUC				Sn	**Sn**	**06 44 29.3**	**+0.3**
	comp=Z,71nm,0.9s						
VRAC	**Vranov**	**2.25**	**305**	⇓P	**Pn**	**06 44 01.6**	**-0.1**
VRAC	**Vranov**	**2.25**	**305**	*e*PN	**Pn**	**06 44 01.3**	**-0.4**
VRAC				*e*SN	**Sn**	**06 44 29.7**	**+0.5**
VRAC	**Vranov**	**2.25**	**305**	*e*Pn	**Pn**	**06 44 01.3**	**-0.4**
	baz=124						
VRAC				*e*Sn	**Sn**	**06 44 29.6**	**+0.4**
	comp=Z,63nm,0.8s,baz=124						
VRAC	**Vranov**	**2.25**	**305**	Pn	**Pn**	**06 44 01.3**	**-0.4**
VRAC				Pn	**Pn**	**06 44 01.3**	**-0.4**
VRAC				Pg	**Pn**	**06 44 01.6**	**-0.1**
VRAC				Sn	**Sn**	**06 44 29.6**	**+0.4**
	comp=Z,63nm,0.8s						
VRAC				Lg	Lg	06 44 29.7	
SIRR	**Siria**	**2.36**	**138**	⇑P	**Pn**	**06 44 01.7**	**-1.6**
SIRR	**Siria**	**2.36**	**138**	Pn	**Pn**	**06 44 01.7**	**-1.6**
CONA	**Conrad Observa**	**2.38**	**268**	*e*Pn	**Pn**	**06 44 02.8**	**-0.9**
	comp=Z,22nm,0.6s,SNR=46						
CONA				*e*Sn	**Sn**	**06 44 31.8**	**-0.9**
	comp=Z,0.1nm,0.1s						
CONA	**Conrad Observa**	**2.38**	**268**	Pn	**Pn**	**06 44 02.8**	**-0.9**
	comp=Z,22nm,0.6s,SNR=46						
CONA				Sn	**Sn**	**06 44 31.8**	**-0.9**
	comp=Z,0.1nm,0.1s						
BEHE	**Becsehely**	**2.39**	**229**	*e*PN	**Pn**	**06 44 05.3**	**+1.6**
BEHE	**Becsehely**	**2.39**	**229**	*e*Pn	**Pn**	**06 44 05.0**	**+1.3**
BEHE	**Becsehely**	**2.39**	**229**	Pn	**Pn**	**06 44 05.0**	**+1.3**
BEHE				Pg	**Pn**	**06 44 05.3**	**+1.6**
DRGR		**2.58**	**118**	⇓P	**Pn**	**06 44 05.2**	**-1.1**
DRGR		**2.58**	**118**	*e*Pn	**Pn**	**06 44 05.0**	**-1.3**
DRGR				*e*Sn	**Sn**	**06 44 34.7**	**-2.7**
DRGR		**2.58**	**118**	Pn	**Pn**	**06 44 05.0**	**-1.3**
DRGR				Pg	**Pn**	**06 44 05.2**	**-1.1**
DRGR				Sn	**Sn**	**06 44 34.7**	**-2.7**
TIM	**Timisoara**	**2.63**	**151**	⇑P	**Pn**	**06 44 05.6**	**-1.4**
TIM	**Timisoara**	**2.63**	**151**	Pn	**Pn**	**06 44 05.6**	**-1.4**
ARSA	**Arzberg**	**2.75**	**254**	*e*Pn	**Pn**	**06 44 08.3**	**-0.3**
	comp=Z,2.9nm,0.3s,SNR=12						
ARSA				*e*Sn	**Sn**	**06 44 42.4**	**+0.9**
	comp=Z,13nm,0.4s						
ARSA	**Arzberg**	**2.75**	**254**	Pn	**Pn**	**06 44 08.3**	**-0.3**
	comp=Z,2.9nm,0.3s,SNR=12						
ARSA				Sn	**Sn**	**06 44 42.4**	**+0.9**
	comp=Z,13nm,0.4s						
BMR	**Baia Mare**	**2.78**	**96**	⇑P	**Pn**	**06 44 07.3**	**-1.8**
BMR				⇓S	**Sn**	**06 44 41.3**	**-1.0**
BMR	**Baia Mare**	**2.78**	**96**	Pn	**Pn**	**06 44 07.3**	**-1.8**
BMR				Sn	**Sn**	**06 44 41.3**	**-1.0**
KALN	**Kalnik**	**2.79**	**227**	*e*Pn	**Pn**	**06 44 08.1**	**-1.1**
KALN	**Kalnik**	**2.79**	**227**	Pn	**Pn**	**06 44 08.1**	**-1.1**
BZS	**Buzias**	**2.87**	**147**	⇑P	**Pn**	**06 44 09.0**	**-1.3**
BZS	**Buzias**	**2.87**	**147**	*e*Pn	**Pn**	**06 44 09.0**	**-1.3**
BZS				*e*Sn	**Sn**	**06 44 41.5**	**-3.1**
BZS	**Buzias**	**2.87**	**147**	Pn	**Pn**	**06 44 09.0**	**-1.3**
BZS				Pg	**Pn**	**06 44 09.0**	**-1.3**
BZS				Sn	**Sn**	**06 44 41.5**	**-3.1**
TREC	**Trest**	**2.88**	**297**	*e*P	**Pn**	**06 44 08.2**	**-2.2**
TREC	**Trest**	**2.88**	**297**	*e*PN	**Pn**	**06 44 08.2**	**-2.2**
TREC	**Trest**	**2.88**	**297**	Pn	**Pn**	**06 44 08.2**	**-2.2**
FRGS	**Fruska Gora**	**2.91**	**174**	*e*Pn	**Pn**	**06 44 10.3**	**-0.6**
FRGS				*e*Sn	**Sn**	**06 44 44.7**	**-0.9**
FRGS	**Fruska Gora**	**2.91**	**174**	*e*Pn	**Pn**	**06 44 09.3**	**-1.6**
FRGS	**Fruska Gora**	**2.91**	**174**	Pn	**Pn**	**06 44 09.3**	**-1.6**
FRGS				Pg	Pb	06 44 10.3	-6.4
FRGS				Sn	**Sn**	**06 44 44.7**	**-0.9**
BANR	**Banloc**	**2.93**	**155**	⇑P	**Pn**	**06 44 10.4**	**-0.7**
BANR				⇓S	**Sn**	**06 44 44.3**	**-1.6**
BANR	**Banloc**	**2.93**	**155**	Pn	**Pn**	**06 44 10.4**	**-0.7**
BANR				Sn	**Sn**	**06 44 44.3**	**-1.6**
DPC	**Dobruska-Polom**	**3.06**	**320**	*e*PN	**Pn**	**06 44 11.5**	**-1.5**
DPC				*e*SG	**Sb**	**06 44 55.9**	**-0.5**
DPC	**Dobruska-Polom**	**3.06**	**320**	Pn	**Pn**	**06 44 11.5**	**-1.5**
DPC				Lg	Lg	06 44 55.9	
GROS	**Grobnik**	**3.10**	**240**	*i* Pn	**Pn**	**06 44 12.8**	**-0.8**
GROS				*i* Sn	**Sn**	**06 44 48.5**	**-1.8**
GROS	**Grobnik**	**3.10**	**240**	Pn	**Pn**	**06 44 12.8**	**-0.8**
GROS				Sn	**Sn**	**06 44 48.5**	**-1.8**
ZAG	**Zagreb**	**3.23**	**228**	*e*Pn	**Pb**	**06 44 23.9**	**+1.7**
ZAG	**Zagreb**	**3.23**	**228**	Pg	**Pb**	**06 44 23.9**	**+1.7**
DEV	**Deva**	**3.23**	**131**	⇑P	**Pn**	**06 44 14.1**	**-1.1**
DEV				⇑S	**Sn**	**06 44 52.5**	**-1.0**
DEV	**Deva**	**3.23**	**131**	Pn	**Pn**	**06 44 14.1**	**-1.1**
DEV				Sn	**Sn**	**06 44 52.5**	**-1.0**
PERS	**Pernice**	**3.24**	**246**	*i* Pn	**Pn**	**06 44 15.1**	**-0.3**
PERS				*i* Sn	**Sn**	**06 44 53.7**	**-0.1**
PERS	**Pernice**	**3.24**	**246**	Pn	**Pn**	**06 44 15.1**	**-0.3**
PERS				Sn	**Sn**	**06 44 53.7**	**-0.1**
OSTC	**Ostas**	**3.26**	**321**	*e*PN	**Pn**	**06 44 14.5**	**-1.2**
OSTC	**Ostas**	**3.26**	**321**	Pn	**Pn**	**06 44 14.5**	**-1.2**
SOKA	**Soboth**	**3.27**	**247**	*e*Pn	**Pn**	**06 44 16.8**	**+0.9**
	comp=Z,1.1nm,0.2s						
SOKA				*e*Sn	**Sn**	**06 44 54.3**	**-0.3**
	comp=Z,8.2nm,0.5s						
SOKA	**Soboth**	**3.27**	**247**	Pn	**Pn**	**06 44 16.8**	**+0.9**
	comp=Z,1.1nm,0.2s						
SOKA				Sn	**Sn**	**06 44 54.3**	**-0.3**
	comp=Z,8.2nm,0.5s						
GOLS	**Golise**	**3.30**	**233**	*i* Pn	**Pn**	**06 44 15.7**	**-0.5**
GOLS				*i* Sn	**Sn**	**06 44 54.9**	**-0.2**
GOLS	**Golise**	**3.30**	**233**	Pn	**Pn**	**06 44 15.7**	**-0.5**
GOLS				Sn	**Sn**	**06 44 54.9**	**-0.2**
UPC	**Upice**	**3.31**	**319**	*e*P	**Pn**	**06 44 15.1**	**-1.3**
UPC	**Upice**	**3.31**	**319**	*e*PN	**Pn**	**06 44 15.1**	**-1.3**
UPC	**Upice**	**3.31**	**319**	Pn	**Pn**	**06 44 15.1**	**-1.3**
CHVC	**Chvalec**	**3.35**	**320**	*e*PN	**Pn**	**06 44 15.6**	**-1.3**
CHVC	**Chvalec**	**3.35**	**320**	Pn	**Pn**	**06 44 15.6**	**-1.3**
KSP	**Ksiaz**	**3.45**	**325**	*e*Pn	**Pn**	**06 44 19.1**	**+0.8**
KSP				*e*Pg	**Pg**	**06 44 29.9**	**-1.4**
KSP				*e*S	**Sb**	**06 45 11.6**	**+4.0**
KSP	**Ksiaz**	**3.45**	**325**	Pn	**Pn**	**06 44 19.1**	**+0.8**
	comp=Z,0.3nm,SNR=2.3						
KSP				Pg	**Pg**	**06 44 29.9**	**-1.4**
KSP				Lg	Lg	06 45 11.6	
MOA	**Molln**	**3.46**	**269**	*e*Pn	**Pn**	**06 44 17.8**	**-0.6**
MOA	**Molln**	**3.46**	**269**	*i* Pn	**Pn**	**06 44 18.3**	**-0.2**
	comp=Z,1.0nm,0.1s,SNR=9.0						
MOA				*e*Sn	**Sn**	**06 45 01.0**	**+1.9**
	comp=Z,24nm,0.7s						
MOA	**Molln**	**3.46**	**269**	Pn	**Pn**	**06 44 17.8**	**-0.6**
MOA				Pg	**Pn**	**06 44 18.3**	**-0.2**
	comp=Z,1.0nm,0.1s,SNR=9.0						
MOA				Sn	**Sn**	**06 45 01.0**	**+1.9**
	comp=Z,24nm,0.7s						
ARCR	**ARCALIA**	**3.49**	**104**	⇑P	**Pn**	**06 44 18.4**	**-0.4**
ARCR				⇑S	**Sn**	**06 44 59.3**	**-0.5**
ARCR	**ARCALIA**	**3.49**	**104**	Pn	**Pn**	**06 44 18.4**	**-0.4**
ARCR				Sn	**Sn**	**06 44 59.3**	**-0.5**
CRES	**Cresnjev**	**3.50**	**232**	*e*Pn	**Pn**	**06 44 17.4**	**-1.6**
CRES	**Cresnjev**	**3.50**	**232**	Pn	**Pn**	**06 44 17.4**	**-1.6**
LVV	**L'vov**	**3.52**	**58**	*e*P	**Pn**	**06 44 19.0**	**-0.3**
LVV				*e*S	**Sn**	**06 45 01.0**	**+0.4**
LVV	**L'vov**	**3.52**	**58**	Pn	**Pn**	**06 44 19.0**	**-0.3**
LVV				Sn	**Sn**	**06 45 01.0**	**+0.4**
GZR	**Gura Zlata**	**3.53**	**138**	⇓P	**Pn**	**06 44 18.6**	**-0.9**
GZR				⇓S	**Sn**	**06 45 00.1**	**-0.8**
GZR	**Gura Zlata**	**3.53**	**138**	Pn	**Pn**	**06 44 18.6**	**-0.9**
GZR				Sn	**Sn**	**06 45 00.1**	**-0.8**
OZLJ	**Ozalj**	**3.64**	**229**	*e*Pn	**Pn**	**06 44 20.6**	**-0.2**
OZLJ	**Ozalj**	**3.64**	**229**	Pn	**Pn**	**06 44 20.6**	**-0.2**
MDVR	**Moldovita**	**3.64**	**153**	⇓P	**Pn**	**06 44 19.4**	**-1.5**
MDVR	**Moldovita**	**3.64**	**153**	Pn	**Pn**	**06 44 19.4**	**-1.5**
BLY	**Banja Luka**	**3.65**	**206**	*e*Pn	**Pn**	**06 44 19.8**	**-1.2**
BLY	**Banja Luka**	**3.65**	**206**	*e*Pn	**Pn**	**06 44 19.6**	**-1.4**
BLY	**Banja Luka**	**3.65**	**206**	Pn	**Pn**	**06 44 19.6**	**-1.4**
BLY				Pg	**Pn**	**06 44 19.8**	**-1.2**
BLY				Pn	**Pn**	**06 44 20.0**	**-1.0**
	comp=Z,0.2nm,SNR=1.9						
BLY				Pg	**Pg**	**06 44 32.4**	**-2.6**
OBKA	**Obir**	**3.65**	**247**	*i* Pn	**Pn**	**06 44 21.2**	**+0.1**
	comp=Z,3.7nm,0.6s,SNR=7.1						
OBKA	**Obir**	**3.65**	**247**	Pn	**Pn**	**06 44 21.2**	**+0.1**
	comp=Z,3.7nm,0.6s,SNR=7.1						
OBKA				Pg	**Pn**	**06 44 21.6**	**+0.5**
	comp=Z,0.2nm,SNR=2.8						
PRU	**Pruhonice**	**3.74**	**303**	*e*P	**Pn**	**06 44 23.6**	**+1.4**
PRU				*e*		06 45 09.8	
PRU	**Pruhonice**	**3.74**	**303**	*e*PN	**Pn**	**06 44 19.9**	**-2.3**
PRU				*e*SN	**Sn**	**06 45 02.8**	**-3.1**
PRU	**Pruhonice**	**3.74**	**303**	Pn	**Pn**	**06 44 19.9**	**-2.3**
PRU				Pg	**Pn**	**06 44 23.6**	**+1.4**
PRU				Sn	**Sn**	**06 45 02.8**	**-3.1**
PRA	**Prague**	**3.84**	**304**	*e*P	**Pn**	**06 44 21.7**	**-1.9**
PRA	**Prague**	**3.84**	**304**	*e*PN	**Pn**	**06 44 21.7**	**-1.9**
PRA	**Prague**	**3.84**	**304**	Pn	**Pn**	**06 44 21.7**	**-1.9**
GERES	**GERESS Array B**	**3.88**	**284**	Pn	**Pn**	**06 44 24.1**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=104,slow=13,SNR=113						
GERES				Sn	**Sn**	**06 45 09.7**	**+0.2**
	comp=Z,4.3nm,0.3s,baz=98,slow=25,SNR=8.9						
GERES				LR	LR	06 45 29.8	
	comp=Z,32nm,19.5s,baz=44,slow=32						
GERES	**GERESS Array B**	**3.88**	**284**	Pn	**Pn**	**06 44 24.1**	**-0.1**
	comp=Z,2.1nm,0.3s,SNR=113						
GERES				Sn	**Sn**	**06 45 09.7**	**+0.2**
	comp=Z,4.3nm,0.3s,SNR=8.9						
GERES				LR	LR	06 45 29.8	
	comp=Z,32nm,19.5s						
LJU	**Ljubljana**	**3.89**	**241**	*e*Pn	**Pn**	**06 44 26.0**	**+1.6**
LJU	**Ljubljana**	**3.89**	**241**	Pn	**Pn**	**06 44 26.0**	**+1.6**
TRUS	**Trudelj**	**3.90**	**169**	*e*Pn	**Pn**	**06 44 23.7**	**-0.7**
TRUS	**Trudelj**	**3.90**	**169**	Pn	**Pn**	**06 44 23.7**	**-0.7**
MDB	**Medias**	**3.90**	**118**	⇑P	**Pn**	**06 44 22.7**	**-1.8**
MDB	**Medias**	**3.90**	**118**	Pn	**Pn**	**06 44 22.7**	**-1.8**

PBCC	Pribram	3.93	297	*e*PN	Pn	06 44 23.0	-1.8
PBCC	Pribram	3.93	297	Pn	Pn	06 44 23.0	-1.8
BURAR	Bucovina Array	3.94	94	⇑P	Pn	06 44 24.7	-0.4
BURAR				⇑S	Sn	06 45 10.5	-0.6
BURAR	Bucovina Array	3.94	94	Pn	Pn	06 44 24.7	-0.4
BURAR				Sn	Sn	06 45 10.5	-0.6
KUBS	Kucevo	3.97	156	*e*Pn	Pn	06 44 23.3	-2.1
KUBS	Kucevo	3.97	156	Pn	Pn	06 44 23.3	-2.1
LOT	Lotru	3.97	129	⇑P	Pn	06 44 25.1	-0.5
LOT	Lotru	3.97	129	Pn	Pn	06 44 25.1	-0.5
DIVS	Divibare	3.98	174	*e*Pn	Pn	06 44 24.7	-0.9
DIVS	Divibare	3.98	174	*e*Pn	Pn	06 44 24.0	-1.6
DIVS	Divibare	3.98	174	Pg	Pn	06 44 24.0	-1.6
DIVS				Pn	Pn	06 44 24.7	-0.9
	comp=Z,0.3nm,SNR=3.2						
DIVS				Sn	Sn	06 45 09.9	-2.1
HAPS	Han Pijesak,BI	3.98	185	*e*Pn	Pn	06 44 24.1	-1.6
HAPS	Han Pijesak,BI	3.98	185	*e*Pn	Pn	06 44 24.1	-1.6
HAPS	Han Pijesak,BI	3.98	185	Pn	Pn	06 44 24.1	-1.6
HAPS				Pn	Pn	06 44 24.1	-1.6
KHC	Kasperske Hory	4.01	288*d*	*i*P	Pn	06 44 26.1	0.0
KHC	Kasperske Hory	4.01	288	*e*PN	Pn	06 44 23.6	-2.5
KHC				*e*SN	Sn	06 45 09.8	-3.0
KHC	Kasperske Hory	4.01	288	Pn	Pn	06 44 23.6	-2.5
KHC				Pg	Pn	06 44 26.1	0.0
KHC				Sn	Sn	06 45 09.8	-3.0
PVCC	Panska Ves	4.02	310	*e*P	Pn	06 44 23.8	-2.3
PVCC	Panska Ves	4.02	310	*e*PN	Pn	06 44 23.8	-2.3
PVCC	Panska Ves	4.02	310	Pn	Pn	06 44 23.8	-2.3
CEY	Cerknica	4.12	238	*e*Pn	Pn	06 44 26.4	-1.2
CEY	Cerknica	4.12	238	Pn	Pn	06 44 26.4	-1.2
MYKA	Terra Mystica	4.17	252	*e*Pn	Pn	06 44 29.0	+0.7
	comp=Z,0.3nm,0.1s						
MYKA				*e*Sn	Sn	06 45 18.6	+2.0
	comp=Z,3.9nm,0.3s						
MYKA	Terra Mystica	4.17	252	Pn	Pn	06 44 29.0	+0.7
	comp=Z,0.3nm,0.1s						
MYKA				Sn	Sn	06 45 18.6	+2.0
	comp=Z,3.9nm,0.3s						
BBLS	Lazići	4.19	180	*e*Pn	Pn	06 44 27.6	-0.9
BBLS	Lazići	4.19	180	*e*Pn	Pn	06 44 22.7	-5.8
BBLS	Lazići	4.19	180	Pn	Pn	06 44 22.7	-5.8
BBLS				Pg	Pn	06 44 27.6	-0.9
KBA	Koelnbreinsper	4.22	259	*i* Pn	Pn	06 44 29.3	+0.3
	comp=Z,3.0nm,0.4s,SNR=6.2						
KBA				*e*Sn	Sn	06 45 22.8	+4.8
	comp=Z,9.3nm,0.7s						
KBA	Koelnbreinsper	4.22	259	Pn	Pn	06 44 29.3	+0.3
	comp=Z,3.0nm,0.4s,SNR=6.2						
KBA				Sn	Sn	06 45 22.8	+4.8
	comp=Z,9.3nm,0.7s						
GRUS	Gruza	4.27	167	*e*Pn	Pn	06 44 28.8	-0.7
GRUS	Gruza	4.27	167	Pn	Pn	06 44 28.8	-0.7
SRE	Strehaia	4.29	141	⇓P	Pn	06 44 27.8	-2.1
SRE	Strehaia	4.29	141	Pn	Pn	06 44 27.8	-2.1
UDBI	Udbina	4.34	217	*e*Pn	Pn	06 44 30.9	+0.3
UDBI				Sn	Sn	06 45 20.9	+0.1
UDBI	Udbina	4.34	217	Pn	Pn	06 44 30.9	+0.3
UDBI				Sn	Sn	06 45 20.9	+0.1
ARR	Arges	4.49	125	⇓P	Pn	06 44 32.0	-0.7
ARR				⇑S	Sn	06 45 23.2	-1.4
ARR	Arges	4.49	125	Pn	Pn	06 44 32.0	-0.7
ARR				Sn	Sn	06 45 23.2	-1.4
IVAS	Ivanjica	4.51	173	*e*Pn	Pn	06 44 31.0	-1.9
IVAS				*e*Sn	Sn	06 45 21.6	-3.4
IVAS	Ivanjica	4.51	173	Pn	Pn	06 44 31.0	-1.9
IVAS				Sn	Sn	06 45 21.6	-3.4
BRG	Berggiesshubel	4.54	310	Pn	Pn	06 44 32.9	-0.4
BRG				Amp		06 44 36.0	
	comp=Z,8.9nm,0.8s						
BRG	Berggiesshubel	4.54	310	Pg	Pg	06 44 51.9	-0.2
BRG				*e*x	x	06 45 33.0	
BRG				Amp		06 46 00.2	
	comp=Z,48nm,1.1s						
BRG	Berggiesshubel	4.54	310	P	Pn	06 44 32.9	-0.4
BRG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRG	Berggiesshubel	4.54	310	Pn	Pn	06 44 32.9	-0.4
BRG				Amp		06 44 36.0	
	comp=Z,8.9nm,0.8s						
BRG	Berggiesshubel	4.54	310	Pg	Pg	06 44 51.9	-0.2
BRG				*e*x	x	06 45 33.0	
BRG				Amp		06 46 00.2	
	comp=Z,48nm,1.1s						
BRG	Berggiesshubel	4.54	310	Pn	Pn	06 44 32.9	-0.4
BRG				Pn	Pn	06 44 32.9	-0.4
BRG				x	x	06 44 36.0	
	comp=Z,8.9nm,0.8s						
BRG				Pg	Pg	06 44 51.9	-0.2
BRG				x	x	06 45 33.0	
BRG				x	x	06 46 00.2	
	comp=Z,48nm,1.1s						
KIJV	Kijevo	4.56	208	*e*Pn	Pn	06 44 33.9	+0.3
KIJV	Kijevo	4.56	208	Pn	Pn	06 44 33.9	+0.3
DOPR	Dopca	4.59	115	⇑P	Pn	06 44 33.7	-0.3
DOPR	Dopca	4.59	115	Pn	Pn	06 44 33.7	-0.3
PRAR	RASCA	4.66	96	⇑P	Pn	06 44 34.8	-0.1
PRAR	RASCA	4.66	96	Pn	Pn	06 44 34.8	-0.1
BIZ	Bicaz	4.68	101	⇓P	Pn	06 44 33.8	-1.4
BIZ	Bicaz	4.68	101	Pn	Pn	06 44 33.8	-1.4
ZAGS	Zajecar	4.68	154	*e*Pn	Pn	06 44 32.9	-2.2
ZAGS	Zajecar	4.68	154	Pn	Pn	06 44 32.9	-2.2
VOIR		4.68	122	⇓P	Pn	06 44 34.8	-0.4
VOIR		4.68	122	Pn	Pn	06 44 34.8	-0.4
NVLJ	Novalja	4.70	224	*e*Pn	Pn	06 44 36.5	+1.1
NVLJ				Sn	Sn	06 45 30.1	+0.6
NVLJ	Novalja	4.70	224	Pn	Pn	06 44 36.5	+1.1
NVLJ				Sn	Pg	06 45 30.1	+35
OZUR		4.78	112	⇑P	Pn	06 44 34.8	-1.8
OZUR		4.78	112	Pn	Pn	06 44 34.8	-1.8
SJES	Sjenica	4.81	175	*e*Pn	Pn	06 44 36.5	-0.6
SJES	Sjenica	4.81	175	*e*Pn	Pn	06 44 35.8	-1.3
SJES	Sjenica	4.81	175	Pn	Pn	06 44 35.8	-1.3
SJES				Pg	Pn	06 44 36.5	-0.6
ABTA	Abfaltersbach	4.86	257	*e*Pn	Pn	06 44 38.7	+1.0
	comp=Z,1.3nm,0.5s						
ABTA	Abfaltersbach	4.86	257	Pn	Pn	06 44 38.7	+1.0
	comp=Z,1.3nm,0.5s						
MORI	Morici	4.92	213	*e*Pn	Pn	06 44 39.3	+0.8
MORI				Sn	Sn	06 45 35.1	+0.1
MORI	Morici	4.92	213	Pn	Pn	06 44 39.3	+0.8
MORI				Sn	Sn	06 45 35.1	+0.1
ROTZ	Rotzenmuhle	5.05	293	x	Pn	06 44 39.8	-0.4
	comp=Z,11nm,0.6s						
ROTZ				x	x	06 44 40.5	
	comp=Z,11nm,0.7s						
MAKA	Makarska	5.05	200	*e*Pn	Pn	06 44 40.7	+0.4
MAKA				Sn	Sn	06 45 38.1	-0.1
MAKA	Makarska	5.05	200	Pn	Pn	06 44 40.7	+0.4
MAKA				Sn	Sn	06 45 38.1	-0.1
NKC	Novy Kostel	5.06	298	*e*P	Pn	06 44 38.7	-1.7
NKC	Novy Kostel	5.06	298	*e*PN	Pn	06 44 38.7	-1.7
NKC	Novy Kostel	5.06	298	Pn	Pn	06 44 38.7	-1.7
NKC				x	x	06 44 40.6	
	comp=Z,7.5nm,0.9s						
DUGI	Dugi Otok	5.07	218	*e*Pn	Pn	06 44 41.9	+1.4
DUGI	Dugi Otok	5.07	218	Pn	Pn	06 44 41.9	+1.4
TANN	Tannenbergstha	5.12	300	x	Pn	06 44 41.7	+0.4
	comp=Z,26nm,0.9s						
ZIRJ	Zirje	5.12	212	*e*Pn	Pn	06 44 42.5	+1.2
ZIRJ				Sn	Sn	06 45 39.3	-0.7
ZIRJ	Zirje	5.12	212	Pn	Pn	06 44 42.5	+1.2
ZIRJ				Sn	Sn	06 45 39.3	-0.7
TESR	Tescani	5.17	105	⇑P	Pn	06 44 40.5	-1.3
TESR	Tescani	5.17	105	Pn	Pn	06 44 40.5	-1.3
TESR				x	Pn	06 44 43.5	+1.7
	comp=Z,20nm,0.7s						
MLR	Muntele Rosu	5.17	117	⇑P	Pn	06 44 41.3	-0.7
MLR	Muntele Rosu	5.17	117	Pn	Pn	06 44 41.3	-0.7
MLR				x	Pn	06 44 41.6	-0.5
	comp=Z,26nm,0.9s						
MANZ	Manzenberg	5.17	295	x	Pn	06 44 42.1	+0.1
	comp=Z,14nm,2.1s						
CLL	Collm	5.28	310	*i* Pn	Pn	06 44 43.2	-0.2
CLL				*e*		06 44 50.0	
CLL				*e*		06 45 10.0	
CLL				*e*		06 45 56.0	
CLL				*e*Sg	Sg	06 46 15.0	+0.5
	comp=Z,30nm,0.8s						
CLL	Collm	5.28	310	Pn	Pn	06 44 43.2	-0.2
CLL				x	x	06 44 43.4	
	comp=Z,22nm,0.6s						
CLL				Lg	Lg	06 46 15.0	
	comp=Z,30nm,0.8s						
ZAPS	Zavoj	5.29	153	*e*Pn	Pn	06 44 43.4	-0.2
ZAPS	Zavoj	5.29	153	Pn	Pn	06 44 43.4	-0.2
HVAR	Hvar	5.30	204	*e*Pn	Pn	06 44 44.5	+0.8
HVAR				Sn	Sn	06 45 44.3	0.0
HVAR	Hvar	5.30	204	Pn	Pn	06 44 44.5	+0.8
HVAR				Sn	Sn	06 45 44.3	0.0
STON	Ston	5.32	194	*e*Pn	Pn	06 44 44.3	+0.3
STON				Sn	Sn	06 45 44.8	-0.1
STON	Ston	5.32	194	Pn	Pn	06 44 44.3	+0.3
STON				Sn	Sn	06 45 44.8	-0.1
WATA	Walderalm	5.33	265	*i* Pn	Pn	06 44 44.7	+0.4
	comp=Z,2.1nm,0.4s,SNR=5.1						
WATA	Walderalm	5.33	265	Pn	Pn	06 44 44.7	+0.4
	comp=Z,2.1nm,0.4s,SNR=5.1						
TREB	Trebinje	5.39	188	*e*Pn	Pn	06 44 39.9	-5.0
TREB	Trebinje	5.39	188	Pn	Pn	06 44 39.9	-5.0
PLOR	Plostina	5.43	111	⇑P	Pn	06 44 44.2	-1.3
PLOR	Plostina	5.43	111	Pn	Pn	06 44 44.2	-1.3
VRI	Vrincioaia	5.47	111	⇓P	Pn	06 44 45.7	-0.4
VRI	Vrincioaia	5.47	111	Pn	Pn	06 44 45.7	-0.4
VRI				x	x	06 44 45.9	
	comp=Z,20nm,0.9s						
SQTA	Sankt Quirin	5.60	264	*e*Pn	Pn	06 44 48.2	+0.3
	comp=Z,2.3nm,0.4s						
SQTA	Sankt Quirin	5.60	264	Pn	Pn	06 44 48.2	+0.3
	comp=Z,2.3nm,0.4s						
PDG	Podgorica	5.63	181	*e*Pn	Pn	06 44 48.4	+0.3
PDG	Podgorica	5.63	181	x	Pn	06 44 48.3	+0.2
	comp=Z,31nm,1.6s						
PDG				Pn	Pb	06 44 48.4	-15
MOTA	Moosalm	5.65	266	*e*Pn	Pn	06 44 48.9	+0.3
	comp=Z,1.5nm,0.5s						
MOTA	Moosalm	5.65	266	Pn	Pn	06 44 48.9	+0.3
	comp=Z,1.5nm,0.5s						
MOX	Moxa	5.71	300	x	Pn	06 44 50.0	+0.7
	comp=Z,11nm,0.9s						
RETA	Reutte	5.86	268	*i* Pn	Pn	06 44 51.0	-0.4
	comp=Z,1.6nm,0.4s,SNR=5.4						
RETA	Reutte	5.86	268	Pn	Pn	06 44 51.0	-0.4
	comp=Z,1.6nm,0.4s,SNR=5.4						
DRME	Dracevica, Mon	5.87	182	*e*Pn	Pn	06 44 49.7	-1.8
DRME	Dracevica, Mon	5.87	182	Pn	Pn	06 44 49.7	-1.8
FETA	Feichten	5.96	263	*i* Pn	Pn	06 44 52.8	-0.1
	comp=Z,2.8nm,0.5s,SNR=8.6						
FETA	Feichten	5.96	263	Pn	Pn	06 44 52.8	-0.1
	comp=Z,2.8nm,0.5s,SNR=8.6						
BOSS	Bosilegrad	5.97	158	*e*Pn	Pn	06 44 52.5	-0.4
BOSS	Bosilegrad	5.97	158	Pn	Pn	06 44 52.5	-0.4
SORM	Soroca	6.00	86	⇑P	Pn	06 44 52.1	-1.1
SORM	Soroca	6.00	86	Pn	Pn	06 44 52.1	-1.1
VTS	Vitosha	6.07	152	⇑P	Pn	06 44 52.3	-2.1
VTS				⇓S	Sn	06 46 02.9	-0.7
VTS	Vitosha	6.07	152	Pn	Pn	06 44 52.3	-2.1
VTS				x	x	06 44 54.1	
	comp=Z,11nm,2.5s						
VTS				Sn	Sn	06 46 02.9	-0.7
UBR	Ueberruh	6.27	270	x	Pn	06 44 57.2	+0.2
	comp=Z,36nm,0.8s						
KIS	Kishinev	6.46	96	*e*P	Pn	06 44 55.5	-4.1
	comp=Z,40nm,0.2s						
KIS	Kishinev	6.46	96	*e*P	Pn	06 44 55.5	-4.1
KIS				pmax	pmax		
	comp=Z,40nm,0.2s						
KIS	Kishinev	6.46	96	Pn	Pn	06 44 55.5	-4.1
	comp=Z,40nm,0.2s						
KIS				Pn	Pn	06 44 55.5	-4.1
DAVA	Damuels	6.48	267	*i* Pn	Pn	06 44 59.9	-0.1
	comp=Z,3.1nm,0.4s,SNR=10						
DAVA	Damuels	6.48	267	Pn	Pn	06 44 59.9	-0.1
	comp=Z,3.1nm,0.4s,SNR=10						
DAVA				x	x	06 45 00.1	
	comp=Z,14nm,0.8s						
UBBA	Unterbreizbach	6.73	298	x	x	06 45 03.8	
	comp=Z,6.4nm,2.7s						
AKASG	Malin Array Be	6.94	64	Pn	Pn	06 45 04.0	-2.0
	comp=Z,1.8nm,0.3s,baz=247,slow=12,SNR=9.2						
AKASG				Sn	Sn	06 46 21.2	-3.4
	comp=Z,2.6nm,0.3s,baz=244,slow=22,SNR=6.5						
AKASG				Lg	Lg	06 46 55.6	
	comp=Z,1.6nm,0.3s,baz=246,slow=28,SNR=2.5						
AKASG	Malin Array Be	6.94	64	Pn	Pn	06 45 04.0	-2.0
	comp=Z,1.8nm,0.3s,SNR=9.2						
AKASG				Pg	Pn	06 45 04.1	-2.0
AKASG				Sn	Sn	06 46 21.2	-3.4
	comp=Z,2.6nm,0.3s,SNR=6.5						
AKASG				Lg	Lg	06 46 55.6	
	comp=Z,1.6nm,0.3s,SNR=2.5						
CLZ	Clausthal	6.95	306	x	Pn	06 45 07.4	+1.0
	comp=Z,11nm,0.9s						
TUE	Stuetta	7.03	261	x	Pn	06 45 08.3	+0.7
	comp=Z,7.2nm,0.8s						
BFO	Black Forest	7.41	276	x	Pn	06 45 12.3	-0.4
	comp=Z,15nm,2.7s						
TNS	Taunus Mts	7.51	291	x	Pn	06 45 14.4	+0.4
	comp=Z,17nm,0.8s						
BNALP	Bannalp	7.54	265	x	Pn	06 45 14.5	0.0
	comp=Z,12nm,0.8s						
CDF	Champ du Feu	8.11	277	*e*P	Pn	06 45 26.2	+3.9
CDF				*e*Sn	Sn	06 46 46.4	-7.2
	comp=Z,0.8nm,0.3s						
CDF				*e*Sg	Sb	06 47 37.7	+16
	comp=Z,2.0nm,0.5s						
CDF	Champ du Feu	8.11	277	Pn	Pn	06 45 26.2	+3.9
CDF				Sn	Sn	06 46 46.4	-7.2
	comp=Z,0.4nm,0.3s						
CDF				Lg	Lg	06 47 37.7	
	comp=Z,1.0nm,0.5s						
MNK	Minsk	8.36	36	*i* P	Pn	06 45 21.9	-3.7
	comp=E,1.0nm,0.7s						
MNK				*i* P	Pn	06 45 21.9	-3.7
	comp=N,6.0nm,0.7s						
MNK				*i* P	Pn	06 45 21.9	-3.7
	comp=Z,3.0nm,0.7s						
MNK				*i* S	Sn	06 46 57.4	-2.2
MNK				*i* LR	LR	06 47 51.3	
MNK				*i* LRM	MLR	06 48 52.8	
	comp=Z,75nm,17.2s						
MNK				*i* LRM	MLR	06 48 55.6	
	comp=E,7.0nm,17.2s						
MNK				*i* LRM	MLR	06 49 01.7	
	comp=N,135nm,17.2s						
MNK	Minsk	8.36	36	Pn	Pn	06 45 21.9	-3.7
	comp=N,1.0nm,0.7s						
MNK				Pn	Pn	06 45 21.9	-3.7
	comp=N,6.0nm,0.7s						
MNK				Pn	Pn	06 45 21.9	-3.7
	comp=N,3.0nm,0.7s						
MNK				Sn	Sn	06 46 57.4	-2.2
MNK				MLR	MLR	06 48 52.8	
	comp=N,75nm,17.2s						
MNK				MLR	MLR	06 48 55.6	
	comp=N,7.0nm,17.2s						
MNK				MLR	MLR	06 49 01.7	
	comp=N,135nm,17.2s						
HAU	Haudompre	8.75	275	*e*P	Pn	06 45 32.6	+1.5
HAU	Haudompre	8.75	275	Pn	Pn	06 45 32.6	+1.5
LPG	La Plagne	9.05	258	*e*P	Pn	06 45 36.7	+1.3
LPG				*e*Sn	Sn	06 47 09.1	-8.1
	comp=N,0.2nm,0.2s						
LPG	La Plagne	9.05	258	Pn	Pn	06 45 36.7	+1.3
LPG				Sn	Sn	06 47 09.1	-8.1
	comp=N,0.1nm,0.2s						
LPL	La Plagne	9.06	258	*e*P	Pn	06 45 36.2	+0.7
LPL				*e*Sn	Sn	06 47 09.2	-8.0
	comp=N,0.4nm,0.3s						
LPL	La Plagne	9.06	258	Pn	Pn	06 45 36.2	+0.7
LPL				Sn	Sn	06 47 09.2	-8.0
	comp=N,0.2nm,0.3s						
PAGF	Fort de Pagny	9.13	278	*e*P	Pn	06 45 38.9	+2.6
PAGF	Fort de Pagny	9.13	278	Pn	Pn	06 45 38.9	+2.6
CABF	La Chapelle	9.16	266	*e*P	Pn	06 45 38.4	+1.7
CABF				*e*Sn	Sn	06 47 11.6	-7.9
	comp=N,0.5nm,0.3s						
CABF	La Chapelle	9.16	266	Pn	Pn	06 45 38.4	+1.7
CABF				Sn	Sn	06 47 11.6	-7.9
	comp=N,0.2nm,0.3s						
BNI	Bardonecchia	9.27	256	x	x	06 45 38.7	
	comp=N,10.0nm,1.4s						
MBDF	Montbardon	9.34	254	*e*Pn	Pn	06 45 36.5	-2.8
MBDF				*e*Sn	Sn	06 47 15.8	-8.3
MBDF				*e*Sg		06 48 15.9	
	comp=N,0.7nm,0.3s						
MBDF	Montbardon	9.34	254	Pn	Pn	06 45 36.5	-2.8
MBDF				Sn	Sn	06 47 15.8	-8.3
MBDF				Lg	Lg	06 48 15.9	
	comp=N,0.3nm,0.3s						
MEZF	Maizieres J’vi	9.58	278	*e*P	Pn	06 45 46.3	+3.9
MEZF				*e*Sn	Sn	06 47 21.5	-8.2
	comp=N,1.2nm,0.4s,baz=81						
MEZF	Maizieres J’vi	9.58	278	Pn	Pn	06 45 46.3	+3.9
MEZF				Sn	Sn	06 47 21.5	-8.2
	comp=N,0.6nm,0.4s						
SFTF	Sexfontaines	9.61	276	*e*P	Pn	06 45 45.6	+2.8
SFTF				*e*Sn	Sn	06 47 22.1	-8.3
	comp=N,1.7nm,0.4s						
SFTF	Sexfontaines	9.61	276	Pn	Pn	06 45 45.6	+2.8
SFTF				Sn	Sn	06 47 22.1	-8.3
	comp=N,0.8nm,0.4s						
ORIF	Oris-en-Rattie	9.84	256	*e*P	Pn	06 45 47.2	+1.1
ORIF				*e*Sn	Sn	06 47 27.3	-8.9
	comp=N,1.1nm,0.5s						
ORIF	Oris-en-Rattie	9.84	256	Pn	Pn	06 45 47.2	+1.1
ORIF				x	x	06 45 47.3	
	comp=N,14nm,0.8s						
ORIF				Sn	Sn	06 47 27.3	-8.9
	comp=N,0.6nm,0.5s						
BAIF	Baives	10.18	287	*e*P	Pn	06 45 53.4	+2.9
BAIF				*e*Sn	Sn	06 47 35.9	-8.4
	comp=N,0.2nm,0.2s						
BAIF	Baives	10.18	287	Pn	Pn	06 45 53.4	+2.9
BAIF				Sn	Sn	06 47 35.9	-8.4
	comp=N,0.1nm,0.2s						
SMRF	Simiane la Rot	10.45	252	*e*P	Pn	06 45 56.6	+2.3
SMRF				*e*Sn	Sn	06 47 41.7	-9.3
	comp=N,0.4nm,0.2s						
SMRF	Simiane la Rot	10.45	252	Pn	Pn	06 45 56.6	+2.3
SMRF				Sn	Sn	06 47 41.7	-9.3
	comp=N,0.2nm,0.2s						
LOR	Lormes	10.52	271	*e*P	Pn	06 45 58.5	+3.2
	baz=92						
LOR				*e*Sn	Sn	06 47 43.8	-8.9
	comp=N,0.2nm,0.2s						
LOR	Lormes	10.52	271	Pn	Pn	06 45 58.5	+3.2
LOR				Sn	Sn	06 47 43.8	-8.9
	comp=N,0.1nm,0.2s						
VIVF	Saint-Julien-l	10.66	258	*e*Pn	Pn	06 45 55.9	-1.3
VIVF				*e*Sn	Sn	06 47 47.0	-9.1
	comp=N,0.2nm,0.2s						
VIVF	Saint-Julien-l	10.66	258	Pn	Pn	06 45 55.9	-1.3
VIVF				Sn	Sn	06 47 47.0	-9.1
	comp=N,0.1nm,0.2s						
SMF	Signal de Mont	10.66	268	*e*P	Pn	06 45 59.7	+2.5
SMF				*e*Sn	Sn	06 47 48.0	-8.1
	comp=N,0.5nm,0.2s						
SMF	Signal de Mont	10.66	268	Pn	Pn	06 45 59.7	+2.5
SMF				Sn	Sn	06 47 48.0	-8.1
	comp=N,0.2nm,0.2s						
SSF	Saint Saulge	10.79	271	*e*P	Pn	06 46 01.5	+2.5
SSF				*e*Sn	Sn	06 47 50.5	-8.9
	comp=N,0.1nm,0.2s						
SSF	Saint Saulge	10.79	271	Pn	Pn	06 46 01.5	+2.5
SSF				Sn	Sn	06 47 50.5	-8.9
	comp=N,0.1nm,0.2s						
AVF	Avril sur Loir	10.95	269	*e*P	Pn	06 46 01.0	-0.2
AVF				*e*Sn	Sn	06 47 54.2	-9.1
	comp=N,0.3nm,0.3s						
AVF	Avril sur Loir	10.95	269	Pn	Pn	06 46 01.0	-0.2
AVF				Sn	Sn	06 47 54.2	-9.1
	comp=N,0.1nm,0.3s						
VSU	Vasula	11.30	20	⇓*e*P	Pn	06 46 04.1	-1.8
VSU	Vasula	11.30	20	Pn	Pn	06 46 04.1	-1.8
HYF	Humbligny	11.34	272	*e*P	Pn	06 46 09.4	+2.9
HYF	Humbligny	11.34	272	Pn	Pn	06 46 09.4	+2.9
BGF	Bois d'Agland	11.35	269	*e*P	Pn	06 46 06.4	-0.2
BGF				*e*Sn	Sn	06 48 03.4	-10
	comp=N,1.2nm,0.3s						
BGF	Bois d'Agland	11.35	269	Pn	Pn	06 46 06.4	-0.2
BGF				Sn	Sn	06 48 03.4	-10
	comp=N,0.6nm,0.3s						
APE	Apeiranthos	11.87	155	⇓*e*P	Pn	06 46 15.0	+1.3
APE				pmax	pmax		
	comp=Z,64nm,1.2s						
APE	Apeiranthos	11.87	155	Pn	Pn	06 46 15.0	+1.3
OBN	Obninsk	12.78	50	⇑*e*P	Pn	06 46 23.7	-2.3
OBN				*e*S	Sn	06 48 44.4	-3.4
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,75nm,16.0s						
OBN	Obninsk	12.78	50	Pn	Pn	06 46 23.7	-2.3
OBN				Sn	Sn	06 48 44.4	-3.4
ANN	Anapa	12.86	98	⇑*e*P	Pn	06 46 29.6	+2.5
ANN	Anapa	12.86	98	Pn	Pn	06 46 29.6	+2.5
BRTR	Keskin Array B	13.20	124	LR	LR	06 52 03.4	
	comp=Z,26nm,18.4s,baz=288,slow=40						
BRTR	Keskin Array B	13.20	124	LR	LR	06 52 03.4	
	comp=Z,26nm,18.4s						
MFF	Saint Martin d	13.34	271	*e*P	Pn	06 46 35.8	+2.0
MFF				*e*Sn	Sn	06 48 51.4	-10
	comp=Z,0.1nm,0.2s						
MFF	Saint Martin d	13.34	271	Pn	Pn	06 46 35.8	+2.0
MFF				Sn	Sn	06 48 51.4	-10
	comp=Z,0.1nm,0.2s						
FINES	FINESS Array B	13.95	13	Pn	Pn	06 46 38.7	-3.2
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=2.5						
FINES				Sn	Sn	06 49 06.2	-10
	comp=Z,0.2nm,0.3s,baz=199,slow=21,SNR=4.0						
FINES	FINESS Array B	13.95	13	Pn	Pn	06 46 38.7	-3.2
FINES				P	Pn	06 46 38.7	-3.2
	comp=Z,0.1nm,0.3s,SNR=2.5						
FINES				Sn	Sn	06 49 06.2	-10
	comp=Z,0.2nm,0.3s,SNR=4.0						
VALR	Valaam	14.86	22	⇑*e*P	Pn	06 46 54.4	+0.1
VALR				pmax	pmax		
	comp=Z,32nm,1.0s						
VALR	Valaam	14.86	22	Pn	Pn	06 46 54.4	+0.1
ARU	Arti	25.10	56	⇑*e*P	P	06 48 48.0	-0.8
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARU	Arti	25.10	56	P	P	06 48 48.0	-0.8
BRVK	Borovoye	32.14	62	⇑*e*P	P	06 49 51.8	+0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRVK	Borovoye	32.14	62	P	P	06 49 51.8	+0.1
KURK	Kurchatov	37.75	63	⇑*e*P	P	06 50 39.8	-0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	Kurchatov	37.75	63	P	P	06 50 39.8	-0.2
MKAR	Makanchi Array	41.51	67	P	P	06 51 13.2	+1.8
	comp=Z,0.2nm,0.5s,baz=293,slow=7.7,SNR=2.7						
MKAR	Makanchi Array	41.51	67	P	P	06 51 13.2	+1.8
	comp=Z,0.2nm,0.5s,SNR=2.7						
MKAR				P	P	06 51 13.2	+1.8
TIXI	Tiksi	50.76	23	⇑*e*P	P	06 52 25.3	+1.5
TIXI	Tiksi	50.76	23	P	P	06 52 25.3	+1.5
SONM	Songino Array	55.13	55	P	P	06 52 58.5	+1.9
	comp=Z,0.7nm,0.7s,baz=312,slow=8.7,SNR=4.8						
SONM	Songino Array	55.13	55	P	P	06 52 58.5	+1.9
SONM				P	P	06 52 58.5	+1.9
	comp=Z,0.7nm,0.7s,SNR=4.8						
YKA	Yellowknife Ar	63.87	338	P	P	06 53 58.1	+1.6
	comp=Z,0.3nm,0.9s,baz=44,slow=8.1,SNR=2.0						
YKA	Yellowknife Ar	63.87	338	P	P	06 53 58.1	+1.6
YKA				P	P	06 53 58.1	+1.6
	comp=Z,0.3nm,0.9s,SNR=2.0						
CM34	Chiang Mai Arr	69.43	84	P	P	06 54 34.0	+1.3
PAYA	Payao	69.56	84	P	P	06 54 40.1	+6.7
CM35	Chiang Mai Arr	69.56	85	P	P	06 54 32.0	-1.4
CM35				P	sP	06 54 43.0	+2.4
CM15	Chiang Mai Arr	69.56	85	P	P	06 54 36.0	+2.5
CM31	Chiang Mai Arr	69.57	85	P	P	06 54 36.0	+2.5
CM13	Chiang Mai Arr	69.58	85	P	P	06 54 36.0	+2.4
CM02	Chiang Mai Arr	69.59	85	P	P	06 54 35.0	+1.3
CM01	Chiang Mai Arr	69.61	85	P	P	06 54 36.0	+2.2
CM05	Chiang Mai Arr	69.61	85	P	P	06 54 35.0	+1.2
CM09	Chiang Mai Arr	69.62	85	P	P	06 54 42.0	+8.2
CM36	Chiang Mai Arr	69.63	85	P	P	06 54 40.0	+6.1
CM04	Chiang Mai Arr	69.64	85	P	P	06 54 35.2	+1.3

ISC 01 06:45:50.1±1.1, **45°.20N**±0°.02×**14°.59E**±0°.03, **h1**km±11km, **n26**, σ**0s.73**/45, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIY	Rijeka	0.15	329	*e*Pg	Pg	06 45 53.0	0.0
RIY				Sg	Sg	06 45 55.3	+0.4
KNDS	Knezji Dol	0.36	336	*i* Pg	Pg	06 45 56.9	-0.2
KNDS				*i* Sg	Sg	06 46 03.3	+1.5

KNDS				IAML		06 46 03.4	
	comp=Z,31nm,0.1s						
GBRS	**Gornja Briga**	**0.37**	**25**	*i* Pg	**Pg**	**06 45 57.1**	**-0.1**
GBRS				*i* Sg	**Sg**	**06 46 02.8**	**+0.8**
SKDS	**Skadanscina**	**0.54**	**311**	*i* Pg	**Pg**	**06 45 59.7**	**-0.7**
SKDS				*i* Sg	**Sg**	**06 46 08.3**	**+1.0**
SKDS	**Skadanscina**	**0.54**	**311**	Lg	Lg	06 46 08.3	
SKDS				Pg	**Pg**	**06 45 59.7**	**-0.7**
CEY	**Cerknica**	**0.55**	**348**	*i* Pg	**Pg**	**06 46 00.6**	**-0.2**
CEY				*i* Sg	**Sb**	**06 46 09.7**	**-1.4**
BOJS	**Bojanci**	**0.56**	**57**	*i* Pg	**Pg**	**06 46 00.4**	**-0.5**
BOJS				*i* Sg	**Sg**	**06 46 08.4**	**+0.3**
BOJS				IAML		06 46 09.0	
	comp=Z,14nm,0.1s						
VISS	**Visnje**	**0.63**	**16**	*i* Pg	**Pg**	**06 46 01.5**	**-0.7**
VISS				*i* Sg	**Sg**	**06 46 11.1**	**+0.7**
NVLJ	**Novalja**	**0.67**	**163**	*e*Pg	**Pg**	**06 46 01.7**	**-1.2**
NVLJ				Sg	**Sg**	**06 46 11.8**	**+0.3**
NVLJ	**Novalja**	**0.67**	**163**	Pg	Sg	06 46 01.7	-10
NVLJ				Lg	Lg	06 46 11.8	
GBAS	**Gorenja Brezov**	**0.74**	**352**	*i* Pg	**Pg**	**06 46 03.8**	**-0.6**
GBAS				*i* Sg	**Sb**	**06 46 16.0**	**-0.7**
OZLJ	**Ozalj**	**0.74**	**56**	*e*Pg	**Pg**	**06 46 04.8**	**+0.4**
OZLJ				Sg	**Sg**	**06 46 13.2**	**-0.9**
JAVS	**Javornik**	**0.79**	**332**	*i* Pg	**Pg**	**06 46 04.2**	**-1.0**
JAVS				*i* Sg	**Sg**	**06 46 16.8**	**+1.3**
JAVS				IAML		06 46 18.6	
	comp=Z,12nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.91**	**5**	*i* Pg	**Pg**	**06 46 07.9**	**+0.4**
PDKS	**Podkum**	**0.91**	**18**	*i* Pg	**Pb**	**06 46 08.6**	**-0.2**
SABO	**M.te Sabotino**	**1.05**	**319**	*e*Pg	**Pg**	**06 46 09.6**	**-0.6**
SABO				*e*Sg	**Sb**	**06 46 25.7**	**+0.3**
UDBI	**Udbina**	**1.07**	**128**	*e*Pg	**Pg**	**06 46 10.4**	**-0.3**
DRE	**Drenchia**	**1.18**	**326**	*e*Pg	**Pg**	**06 46 12.5**	**-0.2**
DRE				*e*Sg	**Sn**	**06 46 30.5**	**-0.1**
PTJ	**Puntijarka**	**1.20**	**53**	*e*Pg	**Pb**	**06 46 13.8**	**0.0**
PTJ				Sg	**Sg**	**06 46 28.6**	**-0.1**
DUGI	**Dugi Otok**	**1.25**	**164**	*e*Pg	**Pb**	**06 46 14.8**	**+0.2**
DUGI				Sg	**Sg**	**06 46 31.0**	**+0.7**
VINO	**Villanova**	**1.40**	**320**	*e*Pg	**Pn**	**06 46 16.1**	**-0.8**
VINO				*e*Sg	**Sn**	**06 46 37.7**	**+1.6**
PRED	**Cave del Predi**	**1.44**	**330**	*e*Pg	**Pn**	**06 46 16.8**	**-0.6**
MORI	**Morici**	**1.55**	**149**	*e*Pn	**Pg**	**06 46 20.0**	**+0.1**
MORI				Sn	**Sg**	**06 46 41.4**	**+1.4**
KALN	**Kalnik**	**1.61**	**54**	*e*Pn	**Pn**	**06 46 20.0**	**+0.3**
KALN				Sn	**Sg**	**06 46 41.9**	**+0.1**
ZIRJ	**Zirje**	**1.72**	**154**	*e*Pn	**Pb**	**06 46 22.4**	**-0.1**
ZIRJ				Sn	**Sg**	**06 46 45.8**	**+0.5**
KIJV	**Kijevo**	**1.76**	**132**	*e*Pn	**Pb**	**06 46 23.3**	**+0.1**
KIJV				Sn	**Sb**	**06 46 45.8**	**0.0**

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*NEIC **01** 06:48:29.7±1.0, 18°.71S±0°.09×169°.18E±0°.10, h224^{km}±9^{km}, mb4.6/31, Error ellipse: s-maj=13.5km s-min=12.4km az=126.0*

*NOU **01** 06:48:31.0, 18°.86S×169°.16E, h227^{km}, MLv4.8, Vanuatu Islands*

*IDC **01** 06:48:32.3±1.5, 18°.93S×169°.23E, h254^{km}±15^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.7/39, mbtmp4.4/15, Error ellipse: s-maj=19.3km s-min=11.1km az=155.0*

ISC 01 06:48:31.9±0.4**, 18°.85S**±0°.05×**169°.22E**±0°.06**, h250^{km}, n88,** σ**1^{s}.43**/88**, mb4.4**/28**, 3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.48**	**319**	P	**Pn**	**06 49 09.2**	**-1.0**
DVP	**Devils Point**	**1.48**	**319**	P	**Pn**	**06 49 07.2**	**-3.0**
LIFNC	**LIFOU**	**2.67**	**224**	P	**Pn**	**06 49 16.9**	**-4.0**
LIFNC	**LIFOU**	**2.67**	**224**	P	**Pn**	**06 49 16.9**	**-4.0**
MARNC	**Mare, Loyalty**	**2.85**	**203**	P	**Pn**	**06 49 19.9**	**-2.8**
MARNC	**Mare, Loyalty**	**2.85**	**203**	P	**Pn**	**06 49 18.8**	**-3.9**
YATNC	**Mamie plateau,**	**3.87**	**214**	P	**Pn**	**06 49 31.3**	**-2.9**
YATNC	**Mamie plateau,**	**3.87**	**214**	P	**Pn**	**06 49 30.4**	**-3.8**
SANVU	**Saraoutou**	**3.89**	**330**	Pn	Pn	06 49 29.1	-5.5
SANVU	**Saraoutou**	**3.89**	**330**	P	**Pn**	**06 49 31.1**	**-3.4**
PINNC	**Pines Island,**	**4.09**	**204**	P	**Pn**	**06 49 34.9**	**-1.9**
PINNC	**Pines Island,**	**4.09**	**204**	P	**Pn**	**06 49 34.8**	**-2.0**
DZM	**Mont Dzumac**	**4.13**	**219**	P	**Pn**	**06 49 35.7**	**-1.6**
	28nm,0.3s,baz=182,slow=20,SNR=194						
DZM				S	**S**	**06 50 31.1**	**+1.9**
	baz=315,slow=15,SNR=1.1						
DZM	**Mont Dzumac**	**4.13**	**219**	P	**Pn**	**06 49 36.0**	**-1.3**
DZM	**Mont Dzumac**	**4.13**	**219**	P	**Pn**	**06 49 35.2**	**-2.1**
OUENC	**Ouen Island, N**	**4.19**	**212**	P	**Pn**	**06 49 36.6**	**-1.3**
OUENC	**Ouen Island, N**	**4.19**	**212**	P	**Pn**	**06 49 36.0**	**-1.9**
NOUC	**Port Laguerre**	**4.23**	**220**	P	**Pn**	**06 49 37.2**	**-1.3**
NOUC	**Port Laguerre**	**4.23**	**220**	P	**Pn**	**06 49 36.6**	**-1.9**
KOUNC	**Koumac, New Ca**	**4.94**	**249**	P	**Pn**	**06 49 47.1**	**+0.1**
KOUNC	**Koumac, New Ca**	**4.94**	**249**	P	**Pn**	**06 49 44.9**	**-2.1**
MSVF	**Nonsavu**	**8.47**	**84**	P	**Pn**	**06 50 31.4**	**+0.1**
	1.3nm,0.3s,baz=268,slow=10,SNR=10						
MSVF	**Nonsavu**	**8.47**	**84**		**Pn**	**06 50 29.3**	**-1.9**
MSVF	**Nonsavu**	**8.47**	**84**	P	**Pn**	**06 50 31.7**	**+0.4**
	64nm,1.6s						
HNR	**Honiara**	**12.97**	**315**	P	**P**	**06 51 28.1**	**-1.3**
	6.3nm,0.3s,baz=200,slow=2.8,SNR=5.1						
OUZ	**Omahuta**	**16.76**	**167**	P	**Pn**	**06 52 12.0**	**-1.0**
OUZ				IAmb	IAmb	06 52 15.3	
	comp=Z,33nm,1.0s						
EIDS	**Eidsvold**	**18.00**	**246**	P	**P**	**06 52 24.0**	**-0.6**
URZ	**Urewera**	**20.53**	**162**	P	**P**	**06 52 51.2**	**-0.4**
	comp=Z,9.5nm,0.8s,baz=315,slow=8.6,SNR=1.7						
URZ	**Urewera**	**20.53**	**162**	P	**P**	**06 52 52.5**	**+1.0**
URZ				IAmb	IAmb	06 53 08.4	
	comp=Z,44nm,1.3s						
BKZ	**Black Stump Fm**	**21.21**	**164**	P	**P**	**06 52 59.1**	**+0.6**
BKZ				IAmb	IAmb	06 53 00.9	
	comp=Z,12nm,0.9s						
CTA	**Charters Tower**	**21.68**	**263**	P	**P**	**06 53 04.0**	**+0.8**
	comp=Z,6.2nm,0.5s,baz=94,slow=11,SNR=14						
CTAO	**Charters Tower**	**21.68**	**263**	P	**P**	**06 53 02.9**	**-0.3**
CTAO				IAmb	IAmb	06 53 04.9	
	comp=Z,16nm,1.1s						
TUWZ	**Tuamarina**	**22.87**	**171**	P	**P**	**06 53 14.7**	**+1.0**
SNZO	**South Karori**	**22.88**	**169**	P	**P**	**06 53 14.8**	**+1.0**
PMG	**Port Moresby**	**23.33**	**291**	P	**P**	**06 53 19.0**	**+0.8**
	comp=Z,30nm,0.8s,baz=128,slow=6.2,SNR=7.6						
COEN	**Coen**	**25.44**	**277**	P	**P**	**06 53 36.4**	**-0.9**
STKA	**Stephens Creek**	**28.04**	**237**	P	**P**	**06 54 00.9**	**+0.7**
	comp=Z,3.3nm,0.6s,baz=59,slow=9.4,SNR=12						
STKA	**Stephens Creek**	**28.04**	**237**	P	**P**	**06 54 00.9**	**+0.7**
RAR	**Rarotonga**	**29.21**	**100**	P	**P**	**06 54 12.0**	**+1.3**
RAR				IAmb	IAmb	06 54 36.3	
	comp=Z,28nm,1.3s						
WR0	**Warramunga Arr**	**32.69**	**262**	P	**P**	**06 54 40.4**	**-0.8**
WR0				IAmb	IAmb	06 54 41.1	
	comp=Z,10.0nm,1.1s						
BBOO	**Buckleboo**	**32.77**	**238**	P	**P**	**06 54 42.4**	**+0.6**
WB0	**Warramunga Arr**	**32.84**	**263**	P	**P**	**06 54 41.8**	**-0.8**
WB0				IAmb	IAmb	06 54 42.5	
	comp=Z,8.9nm,0.6s						
WB2	**Warramunga Arr**	**32.87**	**262**	P	**P**	**06 54 42.1**	**-0.8**
WB2				IAmb	IAmb	06 54 45.6	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**32.87**	**262**	P	**P**	**06 54 42.0**	**-0.8**
WRAB				IAmb	IAmb	06 54 42.3	
	comp=Z,9.4nm,1.1s						
WRA	**Warramunga Arr**	**32.88**	**262**	P	**P**	**06 54 42.0**	**-0.9**
	comp=Z,3.8nm,0.4s,baz=88,slow=8.6,SNR=46						
AS31	**Alice Springs**	**33.20**	**255**	P	**P**	**06 54 45.8**	**+0.1**
ASAR	**Alice Springs**	**33.20**	**255**	P	**P**	**06 54 45.5**	**-0.2**
	comp=Z,37nm,0.4s,baz=83,slow=8.8,SNR=1047						
ASAR				S	**S**	**06 59 46.2**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=87,slow=17,SNR=6.2						
MTN	**Manton Dam**	**37.06**	**274**	P	**P**	**06 55 18.7**	**+0.1**
FORT	**Forrest**	**38.99**	**244**	P	**P**	**06 55 34.7**	**+0.2**
FORT				IAmb	IAmb	06 55 38.3	
	comp=Z,21nm,1.1s						
FAKI	**Fak Fak**	**39.47**	**289**	P	**P**	**06 55 38.3**	**-0.4**
FAKI				IAmb	IAmb	06 55 38.6	
	comp=Z,9.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.26**	**264**	P	**P**	**06 55 53.9**	**+0.7**
FITZ				IAmb	IAmb	06 55 54.5	
	comp=Z,14nm,0.8s						
PSA00	**Pilbara Seismi**	**46.26**	**258**	P	**P**	**06 56 32.3**	**-0.5**
PSA00				IAmb	IAmb	06 56 34.2	
	comp=Z,9.8nm,0.7s						
AIN	**Ainahou**	**51.42**	**44**	P	**P**	**06 57 12.1**	**0.0**
NJ2	**Nanjing**	**69.91**	**316**	*e*P	**P**	**06 59 17.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PET	**Petropavlovsk**	**72.15**	**353**	P	**P**	**06 59 29.1**	**0.0**
PEA0B	**Petropavlovsk-**	**72.35**	**353**	P	**P**	**06 59 31.2**	**+0.9**
PETK	**Petropavlovsk-**	**72.35**	**353**	P	**P**	**06 59 31.1**	**+0.8**
	comp=Z,6.4nm,0.7s,baz=135,slow=4.9,SNR=18						
NIKH	**Nikolski High**	**74.00**	**14**	P	**P**	**06 59 40.0**	**0.0**
CMAR	**Chiang Mai Arr**	**78.32**	**294**	P	**P**	**07 00 06.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=126,slow=4.6,SNR=2.3						
HHC	**Hu-ho-hao-te**	**79.91**	**319**	*e*P	**P**	**07 00 13.7**	**+0.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,87nm,5.4s						
SEY	**Seymchan**	**82.58**	**352**	P	**P**	**07 00 27.8**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=126,slow=8.7,SNR=1.5						
TTA	**Tatalina**	**85.97**	**15**	P	**P**	**07 00 43.5**	**-0.2**
SONM	**Songino Array**	**86.89**	**323**	P	**P**	**07 00 49.2**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=114,slow=7.2,SNR=4.5						
CMB	**Columbia Colle**	**86.91**	**48**	P	**P**	**07 00 49.5**	**+0.6**
NVAR	**Mina Array Bea**	**88.56**	**49**	P	**P**	**07 00 57.0**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=224,slow=7.1,SNR=7.1						
K05A	**Summer Lake**	**88.69**	**44**	P	**P**	**07 00 57.9**	**+0.6**
K05A				IAmb	IAmb	07 00 59.4	
	comp=Z,10nm,1.2s						
MOD	**Modoc Plateau**	**88.71**	**45**	P	**P**	**07 00 57.8**	**+0.5**
MOD				IAmb	IAmb	07 01 01.4	
	comp=Z,6.4nm,0.7s						
PINE	**Pine Mountain**	**89.15**	**43**	P	**P**	**07 00 59.7**	**+0.3**
PINE				IAmb	IAmb	07 01 01.3	
	comp=Z,20nm,1.4s						
IL31		**89.87**	**17**	P	**P**	**07 01 00.6**	**-1.3**
ILAR	**Eielson Array**	**89.87**	**17**	P	**P**	**07 01 00.3**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=238,slow=5.0,SNR=22						
U15A	**North Rim**	**92.15**	**52**	P	**P**	**07 01 13.5**	**-0.1**
U15A				IAmb	IAmb	07 01 15.5	
	comp=Z,4.0nm,0.8s						
TXAR	**Lajitas Array**	**96.60**	**61**	P	**P**	**07 01 34.6**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=240,slow=5.0,SNR=2.9						
WMQ	**Urumqi**	**96.92**	**314**	*e*P	**P**	**07 01 36.1**	**+1.1**
YKA	**Yellowknife Ar**	**100.33**	**27**	P	**Pdif**	**07 01 50.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=255,slow=4.3,SNR=13						
ARCES	**ARCESS Array B**	**124.69**	**345**	PKP	**PKPdf**	**07 06 59.9**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=59,slow=1.7,SNR=14						
AKASG	**Malin Array Be**	**135.16**	**325**	PKP	**PKPdf**	**07 07 20.6**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=90,slow=1.3,SNR=2.0						
CONA	**Conrad Observa**	**143.80**	**329**	*e*P	**PKPdf**	**07 07 37.3**	**-0.1**
	comp=Z,9.1nm,2.0s						
GERES	**GERESS Array B**	**144.14**	**332**	PKP	PKPbc	07 07 36.5	-0.3
	comp=Z,1.2nm,0.7s,baz=36,slow=5.0,SNR=11						
MOA	**Molln**	**144.61**	**330**	*e*P	**PKPab**	**07 07 37.6**	**-0.4**
	comp=Z,6.4nm,0.8s						
MEM	**Membach**	**145.61**	**341**	*d*PKPab	**PKPbc**	**07 07 40.5**	**-0.5**
WATA	**Walderalm**	**146.21**	**332**	*e*P	**PKPbc**	**07 07 42.6**	**-0.5**
	comp=Z,5.4nm,1.7s						
ABTA	**Abfaltersbach**	**146.23**	**331**	*e*P	**PKPdf**	**07 07 41.7**	**+0.2**
	comp=Z,3.8nm,0.8s						
WLF	**Walferdange**	**146.38**	**340**	*d*PKPab	**PKPbc**	**07 07 43.6**	**+0.3**
MOTA	**Moosalm**	**146.41**	**333**	*e*P	**PKPbc**	**07 07 42.5**	**-1.2**
	comp=Z,4.9nm,1.3s						
SQTA	**Sankt Quirin**	**146.46**	**332**	*e*P	**PKPdf**	**07 07 41.4**	**-0.6**
	comp=Z,8.6nm,1.4s						
DOU	**Dourbes**	**146.49**	**342**	*d*PKPab	**PKPbc**	**07 07 43.5**	**-0.1**
FETA	**Feichten**	**146.82**	**333**	*e*P	**PKPbc**	**07 07 44.4**	**-0.5**
	comp=Z,5.2nm,1.1s						
DAVA	**Damuels**	**146.98**	**334**	*e*P	**PKPbc**	**07 07 45.5**	**+0.2**
	comp=Z,5.9nm,1.2s						

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*IDC **01** 06:54:20.0±0.5, 3°.56N×31°.83W, h0^{km}, mb4.2/19, mb1 4.4/20, mb1mx4.2/41, mbtmp4.2/20, ML3.9/1, MS3.8/18, Ms1 3.8/18, ms1mx3.5/41, Error ellipse: s-maj=19.9km s-min=12.5km az=151.0*

*NEIC **01** 06:54:20.6±1.3, 3°.48N±0°.09×31°.8W±0°.1, h10^{km}±1^{km}, mb4.7/64, Error ellipse: s-maj=19.3km s-min=13.6km az=117.0*

ISC 01 06:54:21.2±0.4**, 3°.46N**±0°.06×**31°.81W**±0°.07**, h10^{km}, n156,** σ**1^{s}.47**/144**, mb4.6**/48**, MS3.8**/17**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.09**	**204**	Pn	**Pn**	**06 56 45.6**	**-0.8**
	1.0nm,0.3s,baz=5.9,slow=15,SNR=13						
RCBR				Sn	**Sn**	**06 58 33.7**	**-6.0**
	1.2nm,0.3s,baz=256,slow=18,SNR=7.7						
RCBR				LR	LR	06 59 45.7	
	comp=Z,560nm,21.7s,baz=6.0,slow=32						
RCBR	**Riachuelo**	**10.09**	**204**	Pn	**Pn**	**06 56 45.5**	**-0.8**
RCBR				Sn	**Sn**	**06 58 32.8**	**-6.8**
ROSB	**Rosrio**	**13.84**	**243**	*e*P	**Pn**	**06 57 37.2**	**-0.3**
SACV	**Santiago Islan**	**14.00**	**35**	Pn	**Pn**	**06 57 36.4**	**-3.5**
GDU01	**Guandu, BA**	**18.73**	**204**	*e*P	**Pn**	**06 58 42.0**	**+1.4**
SMTB	**Santa Maria do**	**19.93**	**232**	*e*P	**Pn**	**06 58 55.5**	**+0.4**
SDBA	**SAO DESIDERIO**	**20.44**	**219**	*e*P	Pn	06 59 01.4	+0.3
H10N3	**ASCENSION HYDR**	**20.59**	**123**	T	T	07 20 24.3	
	baz=302,slow=75,SNR=298						
MCPB	**Macapa, AP**	**20.59**	**260**	*e*P	**P**	**06 59 01.4**	**+0.8**
H10N2	**ASCENSION HYDR**	**20.60**	**123**	T	T	07 20 25.8	
	baz=302,slow=75,SNR=314						
H10N1	**ASCENSION HYDR**	**20.61**	**123**	T	T	07 20 27.1	
	baz=302,slow=75,SNR=328						
ASCN	**Ascension**	**20.76**	**123**	P	**P**	**06 59 02.5**	**+0.1**
MDP	**Montagnes des**	**20.84**	**275**	LR	LR	07 05 44.9	
	comp=Z,169nm,21.8s,baz=92,slow=33						
JANB	**Januaria**	**22.18**	**214**	*e*P	**P**	**06 59 20.3**	**+2.5**
NAN01	**Guarapari, ES**	**22.70**	**201**	*e*P	**P**	**06 59 24.1**	**+0.9**
BDFB	**Brasilia**	**24.85**	**220**	P	**P**	**06 59 44.9**	**+0.7**
	3.2nm,0.7s,baz=66,slow=12,SNR=6.2						
BDFB				LR	LR	07 08 37.1	
	comp=Z,272nm,19.1s,baz=52,slow=34						
BDFB	**Brasilia**	**24.85**	**220**	P	**P**	**06 59 45.8**	**+1.6**
ITTB	**Itaituba**	**25.14**	**252**	*e*P	**P**	**06 59 48.7**	**+1.9**
LIC	**Lamto**	**26.82**	**83**	*e*P	**P**	**07 00 05.4**	**+3.4**
	15nm,0.7s						
TIC	**Toumodi**	**26.86**	**82**	*e*P	P	07 00 09.2	+6.8
DBIC	**Dimbokro**	**27.03**	**82**	P	**P**	**07 00 04.9**	**+1.1**
	6.4nm,1.0s,baz=258,slow=15,SNR=3.6						
DBIC				LR	LR	07 08 42.0	
	comp=Z,247nm,19.8s,baz=252,slow=32						
DBIC	**Dimbokro**	**27.03**	**82**	P	**P**	**07 00 02.5**	**-1.4**
DBIC				IAmb	IAmb	07 00 13.8	
	comp=Z,17nm,1.1s						
KIC	**Kosan Boka**	**27.12**	**83**	*e*P	**P**	**07 00 08.2**	**+3.5**
	comp=Z,8.4nm,0.7s						
PTGA	**Pitinga**	**28.45**	**262**	LR	LR	07 10 29.2	
	comp=Z,242nm,19.0s,baz=72,slow=34						
ESAR	**Angra dos Reis**	**29.06**	**205**	*e*P	**P**	**07 00 23.7**	**+1.9**
KOWA	**Kowa**	**29.52**	**66**	P	**P**	**07 00 26.0**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=252,slow=7.6,SNR=4.7						
KOWA				LR	LR	07 10 48.6	
	comp=Z,485nm,20.0s,baz=260,slow=34						
KOWA	**Kowa**	**29.52**	**66**	P	**P**	**07 00 26.1**	**+0.1**
KOWA				IAmb	IAmb	07 00 51.2	
	comp=Z,21nm,1.6s						
H05S1	**Guadeloupe/Mar**	**30.63**	**293**	T	T	07 32 34.4	
	SNR=10						
H05N1	**Guadeloupe/Mar**	**31.46**	**296**	T	T	07 33 35.8	
	SNR=3.1						
VILB	**Vilhena**	**32.57**	**239**	*e*P	**P**	**07 00 55.9**	**+2.8**
SAML	**Samuel**	**33.62**	**248**	P	**P**	**07 01 00.6**	**-1.6**
SAML				IAmb	IAmb	07 01 22.0	
	comp=Z,8.0nm,1.1s						
SAML	**Samuel**	**33.62**	**248**	*e*P	**P**	**07 01 04.2**	**+2.0**
TOA0	**Torodi Ar. Sit**	**34.47**	**72**	P	**P**	**07 01 07.1**	**-2.5**
TOA0				IAmb	IAmb	07 01 17.3	
	comp=Z,7.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**34.47**	**72**	P	**P**	**07 01 09.2**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=262,slow=8.1,SNR=16						
TORD				LR	LR	07 13 18.8	
	comp=Z,269nm,19.8s,baz=250,slow=33						
SIV	**San Ignacio**	**34.80**	**235**	P	**P**	**07 01 13.7**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=100,slow=8.8,SNR=15						
ITAB	**Concordia**	**36.28**	**212**	*e*P	**P**	**07 01 27.8**	**+2.8**
ETMB	**Extrema**	**36.73**	**249**	*e*P	**P**	**07 01 30.0**	**+1.0**
MPR	**Mayaguez**	**37.56**	**296**	P	**P**	**07 01 34.5**	**-1.5**
CPUP	**Villa Florida**	**38.56**	**218**	P	**P**	**07 01 46.3**	**+2.0**
	comp=Z,2.2nm,0.7s,baz=30,slow=6.9,SNR=6.9						
CPUP				LR	LR	07 17 32.3	
	comp=Z,299nm,18.5s,baz=43,slow=36						
CPUP	**Villa Florida**	**38.56**	**218**	P	**P**	**07 01 43.2**	**-1.2**
SDV	**Santo Domingo**	**38.96**	**280**	P	**P**	**07 01 48.9**	**+0.8**
	comp=Z,5.1nm,0.6s,baz=75,slow=7.0,SNR=6.8						
SDV	**Santo Domingo**	**38.96**	**280**	P	**P**	**07 01 47.9**	**-0.2**
SDV				IAmb	IAmb	07 02 02.5	
	comp=Z,14nm,1.1s						
SDV	**Santo Domingo**	**38.96**	**280**	*e*P	**P**	**07 01 49.8**	**+1.7**
SOCV	**Socops**	**39.12**	**279**	*e*P	**P**	**07 01 50.7**	**+1.4**
CPSB	**Cacapava Do Su**	**39.51**	**210**	*e*P	**P**	**07 01 54.1**	**+1.8**
PBDV	**Barranco-do-Ve**	**40.13**	**30**	*e*P	**P**	**07 01 58.5**	**+1.1**
	comp=Z,72nm,1.4s						
PVAQ	**Vaqueiros**	**40.37**	**30**	*e*P	**P**	**07 02 00.2**	**+0.9**
	comp=Z,37nm,1.4s						
PCVE	**Castro Verde**	**40.38**	**30**	*e*P	**P**	**07 02 01.2**	**+1.8**
	comp=Z,16nm,1.7s						
PNCL	**Nicolau / Gran**	**40.52**	**29**	*e*P	**P**	**07 02 01.3**	**+0.7**
	comp=Z,12nm,1.4s						
PLTB	**Pedras Altas**	**40.70**	**209**	*e*P	**P**	**07 02 04.9**	**+2.7**
PMAFR	**Mafra**	**40.85**	**27**	*e*P	**P**	**07 02 03.5**	**+0.2**
	comp=Z,53nm,1.3s						
RUSC	**La Rusia**	**41.20**	**275**	*e*P	**P**	**07 02 09.0**	**+1.9**
BARC	**Barichara**	**41.32**	**276**	*e*P	**P**	**07 02 09.8**	**+2.0**
CHIC	**Chingaza**	**41.83**	**273**	*e*P	**P**	**07 02 11.8**	**-0.4**
BRRC	**Barranca, Sant**	**41.87**	**277**	*e*P	**P**	**07 02 11.4**	**-0.6**
CZSB	**Cruzeiro do Su**	**42.29**	**255**	*e*P	**P**	**07 02 15.9**	**+0.5**
SMLC	**San Martn de**	**42.33**	**279**	*e*P	**P**	**07 02 12.9**	**-2.9**
ROSC	**El Rosal**	**42.42**	**273**	P	**P**	**07 02 18.1**	**+1.1**
	comp=Z,11nm,0.6s,baz=88,slow=6.6,SNR=13						
ROSC				LR	LR	07 19 34.6	
	comp=Z,225nm,19.4s,baz=130,slow=36						
ROSC	**El Rosal**	**42.42**	**273**	P	**P**	**07 02 17.1**	**+0.2**
ROSC	**El Rosal**	**42.42**	**273**	*e*P	**P**	**07 02 18.8**	**+1.8**
PTBC	**PUERTO BERRIO,**	**42.59**	**276**	*e*P	**P**	**07 02 16.2**	**-1.7**
NORC	**Norcasia**	**42.97**	**274**	*e*P	**P**	**07 02 20.3**	**-0.8**
ZARC	**Zaragoza, Cauc**	**43.03**	**277**	*e*P	**P**	**07 02 20.6**	**-0.8**
ORTC	**Ortega, Tolima**	**43.35**	**272**	*e*P	**P**	**07 02 24.2**	**+0.1**
TOLC	**Tolima**	**43.42**	**273**	*e*P	**P**	**07 02 23.8**	**-1.2**
HELC	**Santa Helena**	**43.64**	**275**	*e*P	**P**	**07 02 24.7**	**-2.1**
UREC	**San Jos de Ur**	**43.71**	**278**	*e*P	**P**	**07 02 25.8**	**-1.2**
ESDC	**Sonseca Array**	**44.00**	**31**	P	**P**	**07 02 29.4**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=227,slow=8.6,SNR=22						
ESDC				LR	LR	07 19 33.9	
	comp=Z,37nm,18.4s,baz=335,slow=34						
CBOC	**Ciudad Bolivar**	**44.12**	**275**	*e*P	**P**	**07 02 29.7**	**-0.7**
DBBC	**Dabeiba**	**44.34**	**276**	*e*P	**P**	**07 02 31.9**	**-0.2**
PLMC	**San Jos del P**	**44.38**	**273**	*e*P	**P**	**07 02 32.2**	**-0.2**
YOTC	**Yotoco, Valle**	**44.44**	**272**	*e*P	**P**	**07 02 29.5**	**-3.5**
BBAC	**Balboa, Cauca**	**45.41**	**269**	*e*P	**P**	**07 02 40.2**	**-0.6**
OTAV	**Otavalo**	**46.72**	**267**	P	**P**	**07 02 50.5**	**-1.0**
OTAV				IAmb	IAmb	07 02 59.5	
	comp=Z,8.1nm,1.3s						
OTAV	**Otavalo**	**46.72**	**267**	*e*P	**P**	**07 02 52.6**	**+1.1**
AC02	**Maricunga**	**46.97**	**228**	P	**P**	**07 02 54.6**	**+1.3**
AC02				IAmb	IAmb	07 02 57.0	
	comp=Z,14nm,1.4s						
CBN	**Corbin Frederi**	**54.02**	**316**	P	**P**	**07 03 45.1**	**-0.7**
CBN				IAmb	IAmb	07 03 47.4	
	comp=Z,12nm,1.1s						
PLCA	**Paso Flores**	**56.45**	**215**	LR	LR	07 27 29.2	
	comp=Z,178nm,20.9s,baz=26,slow=35						
SWET	**Sewanee**	**59.11**	**309**	P	**P**	**07 04 22.9**	**+0.7**
GERES	**GERESS Array B**	**59.53**	**33**	P	**P**	**07 04 26.1**	**+1.2**
	comp=Z,1.3nm,1.0s,baz=267,slow=2.7,SNR=5.7						
BOSA	**Boshof**	**63.34**	**124**	LR	LR	07 27 56.1	
	comp=Z,62nm,19.4s,baz=355,slow=32						
NOA	**NORSAR Array B**	**65.95**	**21**	LR	LR	07 29 17.8	
	comp=Z,29nm,21.6s,baz=35,slow=32						
BRTR	**Keskin Array B**	**69.02**	**49**	P	**P**	**07 05 28.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=305,slow=37,SNR=2.5						
BRTR				LR	LR	07 35 42.1	
	comp=Z,28nm,21.7s,baz=267,slow=36						
AKASG	**Malin Array Be**	**69.29**	**36**	P	**P**	**07 05 28.6**	**0.0**
	comp=Z,3.8nm,0.9s,baz=250,slow=6.1,SNR=7.0						
ULM	**Lac du Bonnet**	**70.96**	**322**	P	**P**	**07 05 37.6**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=105,slow=6.7,SNR=4.3						
ULM	**Lac du Bonnet**	**70.96**	**322**	IAmb	IAmb	07 05 43.7	
	comp=Z,12nm,1.4s						
FINES	**FINESS Array B**	**72.09**	**25**	LR	LR	07 34 56.4	
	comp=Z,43nm,18.6s,baz=326,slow=34						
TX32	**Lajitas Array**	**72.51**	**300**	P	**P**	**07 05 48.7**	**-0.2**
TXAR	**Lajitas Array**	**72.51**	**300**	P	**P**	**07 05 48.9**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=122,slow=6.7,SNR=9.6						
TX31	**Lajitas Ar. Si**	**72.51**	**300**	P	**P**	**07 05 49.4**	**+0.5**
TX31				IAmb	IAmb	07 05 49.9	
	comp=Z,9.3nm,1.1s						
FCC	**Fort Churchill**	**72.96**	**331**	P	**P**	**07 05 49.8**	**-0.9**
FCC				IAmb	IAmb	07 05 50.7	
	comp=Z,11nm,1.0s						
KSCO	**Kaye Shedlock’**	**72.96**	**310**	P	**P**	**07 05 50.1**	**-1.2**
E28A	**Huff**	**73.06**	**318**	P	**P**	**07 05 50.5**	**-1.1**
ISCO	**Idaho Springs**	**75.36**	**310**	P	**P**	**07 06 03.0**	**-2.6**
ISCO				IAmb	IAmb	07 06 07.6	
	comp=Z,9.7nm,1.3s						
ANMO	**Albuquerque**	**75.45**	**305**	P	**P**	**07 06 04.5**	**-1.6**
PHWY	**Pilot Hill**	**75.46**	**312**	P	**P**	**07 06 05.2**	**-0.9**
PHWY				IAmb	IAmb	07 06 08.0	
	comp=Z,8.0nm,1.5s						
VNA1	**Neumayer--Stat**	**75.61**	**172**	P	**P**	**07 06 07.4**	**+1.5**
N23A	**Red Feather La**	**75.77**	**311**	P	**P**	**07 06 07.0**	**-0.9**
ARCES	**ARCESS Array B**	**75.78**	**18**	LR	LR	07 37 11.2	
	comp=Z,19nm,19.4s,baz=45,slow=34						
VNA3	**Neumayer Olymp**	**75.97**	**173**	P	**P**	**07 06 09.0**	**+1.0**
VNA2	**Neumayer--Watz**	**75.98**	**172**	P	**P**	**07 06 09.3**	**+1.3**
	baz=329,slow=3.9						
SMCO	**Snowmass**	**76.33**	**309**	P	**P**	**07 06 10.8**	**-0.5**
SMCO				IAmb	IAmb	07 06 23.2	
	comp=Z,5.6nm,1.1s						
KBZ	**Khabaz**	**76.58**	**46**	P	**P**	**07 06 12.9**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=309,slow=3.1,SNR=5.8						
MVCO	**Mesa Verde**	**77.32**	**307**	P	**P**	**07 06 15.9**	**-0.8**
MVCO				IAmb	IAmb	07 06 40.3	
	comp=Z,6.4nm,1.1s						
SNAA	**Sanae**	**77.32**	**171**	P	**P**	**07 06 16.7**	**+1.0**
SNAA	**Sanae**	**77.32**	**171**	P	**P**	**07 06 15.1**	**-0.6**
SNAA				IAmb	IAmb	07 06 17.6	
	comp=Z,5.4nm,0.8s						
PV10	**Paradox Valley**	**77.85**	**308**	P	**P**	**07 06 18.9**	**-0.8**
RDMU	**Red Mountain**	**78.46**	**311**	P	**P**	**07 06 22.7**	**-0.3**
PD31	**Pinedale Array**	**78.67**	**313**	P	**P**	**07 06 23.4**	**-0.7**
PDAR	**Pinedale Array**	**78.67**	**313**	P	**P**	**07 06 23.6**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=83,slow=5.1,SNR=10						
PDAR				LR	LR	07 36 28.3	
	comp=Z,28nm,21.7s,baz=131,slow=32						
RLMT	**Red Lodge**	**78.71**	**315**	P	**P**	**07 06 23.8**	**-0.4**
RLMT				IAmb	IAmb	07 06 32.6	
	comp=Z,14nm,1.4s						
TUC	**Tucson**	**78.84**	**302**	P	**P**	**07 06 24.9**	**-0.1**
SRU	**San Rafael Swe**	**79.07**	**309**	P	**P**	**07 06 25.4**	**-0.9**
YNE	**Yellowstone No**	**79.22**	**315**	P	**P**	**07 06 25.9**	**-1.2**
X16A	**Lo Mia Camp, P**	**79.50**	**304**	P	**P**	**07 06 28.1**	**-0.6**
LOHW	**Long Hollow**	**79.51**	**314**	P	**P**	**07 06 28.3**	**-0.4**
FLWY	**Flagg Ranch**	**79.62**	**314**	P	**P**	**07 06 28.5**	**-0.8**
FLWY				IAmb	IAmb	07 06 30.6	
	comp=Z,6.3nm,0.9s						
MOOW	**Moose Ponds**	**79.63**	**314**	P	**P**	**07 06 28.8**	**-0.5**
REDW	**Red Top Meadow**	**79.67**	**313**	P	**P**	**07 06 29.3**	**-0.2**
RES	**Resolute Bay**	**79.76**	**346**	P	**P**	**07 06 28.6**	**-0.4**
RES				IAmb	IAmb	07 06 29.7	
	comp=Z,5.0nm,0.9s						
AHID	**Auburn Hatcher**	**79.80**	**313**	P	**P**	**07 06 29.9**	**-0.3**
YMR	**Madison River**	**79.87**	**315**	P	**P**	**07 06 30.8**	**+0.2**
TCUT	**Toone Canyon**	**79.90**	**311**	P	**P**	**07 06 30.4**	**-0.4**
YHB	**Horse Butte**	**80.04**	**315**	P	**P**	**07 06 31.2**	**-0.3**
YHL	**Hebgen Lake**	**80.04**	**315**	P	**P**	**07 06 32.3**	**+0.7**
CTU	**Camp Tracy**	**80.13**	**311**	P	**P**	**07 06 31.1**	**-0.9**
MTPU	**Mount Pierson**	**80.30**	**308**	P	**P**	**07 06 33.3**	**+0.1**
MVU	**Marysvale**	**80.35**	**308**	P	**P**	**07 06 33.3**	**0.0**
TCRU	**Three Creeks R**	**80.54**	**308**	P	**P**	**07 06 35.4**	**+1.0**
HRY	**Holter Researc**	**80.65**	**317**	P	**P**	**07 06 34.3**	**-0.3**
EUNU	**Eureka**	**80.82**	**352**	P	**P**	**07 06 35.2**	**+0.4**
EUNU				IAmb	IAmb	07 06 35.9	
	comp=Z,12nm,1.1s						
CCUT	**Cedar City**	**81.21**	**307**	P	**P**	**07 06 38.1**	**+0.2**
MCMT	**McKenzie Canyo**	**81.22**	**315**	P	**P**	**07 06 37.5**	**-0.3**
BELA	**Belgrano 2**	**81.25**	**181**	P	**P**	**07 06 37.4**	**+0.4**
PSUT	**Pine Spring**	**81.64**	**308**	P	**P**	**07 06 40.0**	**-0.2**
WALA	**Waterton Lakes**	**82.22**	**319**	P	**P**	**07 06 43.2**	**+0.3**
WALA				IAmb	IAmb	07 06 43.8	
	comp=Z,11nm,1.2s						
YKA	**Yellowknife Ar**	**83.62**	**332**	P	**P**	**07 06 48.7**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=92,slow=5.3,SNR=23						
TPH	**Tonopah**	**84.28**	**308**	P	**P**	**07 06 54.7**	**+0.9**
BMO	**Blue Mountains**	**84.39**	**315**	P	**P**	**07 06 52.7**	**-1.4**
BMO				IAmb	IAmb	07 06 55.6	
	comp=Z,7.5nm,1.2s						
E09A	**Wood Farm, Sta**	**84.99**	**316**	P	**P**	**07 06 56.6**	**-0.4**
E09A				IAmb	IAmb	07 06 57.8	
	comp=Z,6.8nm,1.2s						
NVAR	**Mina Array Bea**	**85.12**	**308**	P	**P**	**07 06 57.5**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=104,slow=4.5,SNR=6.5						
ISA	**Isabella, Lake**	**85.30**	**305**	P	**P**	**07 06 58.0**	**-0.9**
ISA				IAmb	IAmb	07 07 00.9	

	comp=Z,4.3nm,1.1s						
WVOR	Wild Horse Val	85.35	312	P	P	07 06 58.9	-0.1
G08A	Pilot Rock	85.56	315	P	P	07 06 59.1	-0.9
MDPB	Devils Postpil	85.75	307	P	P	07 06 59.8	-1.5
MDPB				IAmb	IAmb	07 07 03.1	
	comp=Z,6.0nm,1.1s						
PNTR	Pine Nut	86.13	309	P	P	07 07 03.4	+0.2
F07A	Phinny Hill Vi	86.23	316	P	P	07 07 02.5	-0.7
MOD	Modoc Plateau	86.59	312	P	P	07 07 03.8	-1.5
MOD				IAmb	IAmb	07 07 08.5	
	comp=Z,5.1nm,0.9s						
ARU	Arti	87.35	34	LR	LR	07 45 06.2	
	comp=Z,42nm,18.3s,baz=142,slow=35						
ILAR	Eielson Array	97.31	337	P	P	07 07 53.8	-0.6
	comp=Z,1.1nm,0.9s,baz=49,slow=4.2,SNR=11						
SONM	Songino Array	117.20	30	PKP	PKiKP	07 13 07.4	+0.3
	comp=Z,0.4nm,0.6s,baz=22,slow=1.6,SNR=3.0						
CMAR	Chiang Mai Arr	126.84	64	PKP	PKiKP	07 13 26.4	-0.3
	comp=Z,0.7nm,0.6s,baz=263,slow=3.6,SNR=4.6						
STKA	Stephens Creek	151.06	168	PKPbc	PKiKP	07 14 15.4	-0.4
	comp=Z,5.0nm,0.8s,baz=125,slow=2.7,SNR=9.7						
STKA	Stephens Creek	151.06	168		PKiKP	07 14 15.4	-0.4
STKA				PKPab	PKPab	07 14 21.1	-1.4
ASAR	Alice Springs	155.62	147	PKP	PKPdf	07 14 16.0	-0.3
	comp=Z,1.1nm,0.9s,baz=144,slow=1.0,SNR=10						
ASAR				PKPab	PKPab	07 14 42.1	0.0
	comp=Z,1.5nm,0.9s,baz=213,slow=3.9,SNR=8.3						
WRA	Warramunga Arr	158.76	142	PKP	PKPdf	07 14 18.9	-1.4
	comp=Z,0.7nm,0.9s,baz=265,slow=1.5,SNR=4.1						

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*JMA **01** 06:56:58.8±0.1, 36°.42N×139°.78E, h88^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s351.00000°, δ19.00000°, λ-116.00000°. NP2: ϕ_s198.00000°, δ73.00000°, λ-82.00000°. Principal axes: T Plg28.0000°, Azm281.0000°; N Plg8.0000°, Azm15.0000°; P Plg61.0000°, Azm120.0000°;*

JMA Felt II J1.

*NEIC **01** 06:56:58.5±2.0, 36°.44N±0°.03×139°.80E±0°.07, h91^{km}±6^{km}, mb4.3/23 Error ellipse: s-maj=8.3km s-min=2.9km az=107.0*

*NIED **01** 06:56:58.8, 36°.42N×139°.78E, h88^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.94; $M_{\theta\theta}$0.21; $M_{\phi\phi}$1.72; $M_{r\theta}$0.65; $M_{\theta\phi}$-0.64; $M_{\phi r}$1.45; Fault plane solution: $M_0$2.49000×10^{15} NP1: ϕ_s184.00000°, δ64.00000°, λ-69.00000°. NP2: ϕ_s322.00000°, δ33.00000°, λ-127.00000°.*

*IDC **01** 06:56:59.9±0.9, 36°.35N×139°.62E, h107^{km}±8^{km}, mb3.7/17, mb1 3.9/20, mb1mx3.8/34, mbtmp4.0/20, MS3.1/3, Ms1 3.1/3, ms1mx2.6/56 Error ellipse: s-maj=15.9km s-min=9.3km az=69.0*

ISC 01 06:56:58.4±0.7, **36°.45N**±0°.04×**139°.80E**±0°.05, **h91**^{km}±6^{km}, **n78**, σ**1^{s}09**/89, **mb4.1**/27, **1C-7D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.28	265	⇓P	Pn	06 57 11.8	-0.1
JAG				S	Sn	06 57 21.8	-0.1
JYT	Yasato	0.39	125	Pn	Pn	06 57 12.6	+0.2
JYT				Sn	Sn	06 57 22.8	-0.1
JKT	Katashina	0.55	305	⇓P	Pn	06 57 13.8	0.0
JKT				S	Sn	06 57 25.7	+0.5
JRY	Ryogami san	0.85	240	⇓P	Pn	06 57 16.7	+0.2
JRY				S	Sn	06 57 29.7	-0.4
JFY	Yanaizu	0.96	355	⇓P	Pn	06 57 18.1	+0.3
JFY				S	Sn	06 57 32.7	+0.4
JHK	Hiroka	1.02	322	⇓P	Pn	06 57 18.6	+0.2
JHK				S	Sn	06 57 33.4	0.0
JFT	Otama	1.15	22	⇓P	Pn	06 57 20.7	+0.8
MJAR	Matsushiro Arr	1.29	275	P	Pn	06 57 21.3	-0.3
	13nm,0.3s,baz=92,slow=12,SNR=674						
MJAR				S	Sn	06 57 39.0	-0.1
	8.3nm,0.3s,baz=89,slow=23,SNR=6.9						
MAJO	Matsushiro	1.29	275	Pn	Pn	06 57 21.6	0.0
MAJO				Sn	Sn	06 57 39.1	0.0
MAT	Matsushiro	1.29	275	P	Pn	06 57 21.5	-0.1
MAT				S	Sn	06 57 39.1	0.0
MJB9	Matsu-Tunnel	1.29	275		Pn	06 57 21.8	+0.1
JOD2	Odawara 2	1.32	206	⇑P	Pn	06 57 21.7	-0.3
JOD2				S	Sn	06 57 39.0	-0.8
JYN	Shimob	1.40	227	P	Pn	06 57 23.4	+0.4
JNS	Sasagawa	1.42	344	⇓P	Pn	06 57 23.6	+0.4
JFNN	Fujinakano	1.55	216	P	Pn	06 57 25.4	+0.6
JFNN				S	Sn	06 57 45.1	+0.3
JMM	Marumori	1.62	29	Pn	Pn	06 57 26.7	+1.0
JMM				Sn	Sn	06 57 46.4	0.0
JSD	Sado	2.01	323	Pn	Pn	06 57 30.4	-0.3
JGF	Kuroka	2.16	248	Pn	Pn	06 57 33.2	+0.5
JSG	Sagara	2.21	217		Pn	06 57 34.0	+0.6
INU	Inuyama	2.52	245		Pn	06 57 37.6	+0.2
JHJ	Hachijo jima 2	3.32	180	P	Pn	06 57 48.0	-0.3
	148nm,0.3s,baz=317,slow=24,SNR=14						
JHJ				S	Sn	06 58 27.5	+0.7
	81nm,0.3s,baz=59,slow=23,SNR=1.7						
JHJ2	Mitsune	3.33	180		Pn	06 57 48.3	-0.1
JWT	Wachi	3.76	253	Pn	Pn	06 57 54.9	+0.7
JTM	Tenmabayashi	4.44	12	Pn	Pn	06 58 04.7	+1.3
JMN	Monobe	5.56	243	Pn	Pn	06 58 20.7	+1.9
JHS	Saijyo	5.63	257	Pn	Pn	06 58 20.4	+0.8
ERM	Erimo	6.14	24	Pn	Pn	06 58 24.8	-1.6
JEW	Eniwo	6.51	11	Pn	Pn	06 58 32.5	+1.0
ASAJ	Asahikawa	7.95	15	P	Pn	06 58 49.7	-1.4
	1.4nm,0.3s,baz=211,slow=9.6,SNR=12						
ASAJ				S	Sn	07 00 15.3	-4.0
	0.6nm,0.3s,baz=32,slow=25,SNR=1.5						
ASAJ				LR	LR	07 02 07.4	
	comp=Z,60nm,19.6s,baz=212,slow=38						
KSRS	Korea Array	9.56	280	P	Pn	06 59 15.6	+2.5
	0.3nm,0.3s,baz=96,slow=14,SNR=7.5						
KSRS				LR	LR	07 02 43.0	
	comp=Z,78nm,18.8s,baz=98,slow=36						
USA0B	Ussuriysk Arra	9.77	325	Pn	Pn	06 59 15.8	0.0
USRK	Ussuriysk Ar.	9.77	325	P	Pn	06 59 18.8	+3.0
	baz=140,slow=13,SNR=14						
YSS	Yuzh-Sakhalins	10.72	11	Pn	Pn	06 59 28.2	-0.7
BJT	Baijiatuau	18.89	288	P	P	07 01 11.2	-0.3
PETK	Petropavlovsk-	20.85	31	P	Pn	07 01 35.4	-0.6
	6.1nm,1.0s,baz=232,slow=12,SNR=2.1						
SONM	Songino Array	27.05	305	P	P	07 02 31.8	-0.4
	1.5nm,0.5s,baz=104,slow=9.5,SNR=8.7						
SEY	Seymchan	27.62	12	P	P	07 02 39.3	+2.4
	4.4nm,0.3s,baz=18,slow=0.3,SNR=20						
PBKT	Sadao Pong	39.65	250		PcP	07 06 24.9	-1.8
FAKI	Fak Fak	39.80	192	P	P	07 04 22.4	-0.2
ZAA0	Zalesovo Array	41.36	313		P	07 04 34.6	-0.5
ZAA0				IAmb	IAmb	07 04 35.4	
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	41.36	313	P	P	07 04 34.8	-0.3
	comp=Z,2.0nm,0.6s,baz=98,slow=7.2,SNR=12						
NRIK	Noril'sk	43.26	336	P	P	07 04 50.9	+0.5
	comp=Z,0.8nm,0.3s,baz=149,slow=5.9,SNR=1.8						
MK31	Makanchi Array	43.34	302	P	P	07 04 51.1	-0.2
MKAR	Makanchi Array	43.34	302	P	P	07 04 51.0	-0.3
	comp=Z,1.9nm,0.7s,baz=90,slow=9.9,SNR=18						
MAKZ	Makanchi	43.55	302		P	07 04 52.4	-0.6
KURK	Kurchatov	45.28	308		P	07 05 06.0	-0.7
KDAK	Kodiak Island	48.39	41	P	P	07 05 31.4	+0.6
MTN	Manton Dam	49.70	191	P	P	07 05 41.1	-0.1
RND	Reindeer	49.88	34	P	P	07 05 43.4	+1.2
RND				IAmb	IAmb	07 05 59.1	
	comp=Z,6.2nm,1.5s						
BRVK	Borovoye	50.07	312	P	P	07 05 44.4	+0.7
BRVK				IAmb	IAmb	07 05 48.8	
	comp=Z,1.7nm,0.8s						
IL31		50.68	32	P	P	07 05 49.1	+1.1
IL31				IAmb	IAmb	07 05 49.4	
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	50.68	32	P	P	07 05 48.8	+0.7
	comp=Z,1.8nm,0.8s,baz=273,slow=6.4,SNR=20						
JAGI	Jajag, Banyuwa	50.77	214	P	P	07 05 50.7	+1.4
DOT	Dot Lake	52.01	33	P	P	07 05 59.3	+1.2
DOT				IAmb	IAmb	07 06 00.9	
	comp=Z,2.9nm,0.8s						
KK31	Karatay Array	52.30	300	P	P	07 06 00.9	+0.3
KKAR	Karatay Array	52.30	300	P	P	07 06 00.9	+0.3
EGAK	Eagle	53.12	32	P	P	07 06 07.3	+1.1
EGAK				IAmb	IAmb	07 06 12.7	
	comp=Z,4.6nm,1.4s						
FITZ	Fitzroy Crossi	55.88	196	P	P	07 06 27.3	+0.6
FITZ				IAmb	IAmb	07 06 33.3	
	comp=Z,5.5nm,1.1s						
WB0	Warramunga Arr	56.15	186	P	P	07 06 27.6	-0.9
WB0				IAmb	IAmb	07 06 46.4	
	comp=Z,3.5nm,0.9s						
WB2	Warramunga Arr	56.32	186	P	P	07 06 29.1	-0.8
WRA	Warramunga Arr	56.32	186	P	P	07 06 28.8	-1.0
	comp=Z,0.7nm,0.4s,baz=1.1,slow=7.6,SNR=20						
ABKAR	Akbulak array	57.33	310	P	P	07 06 36.2	-0.5
ABKAR				IAmb	IAmb	07 06 39.5	
	comp=Z,6.0nm,1.5s						
C36M	Paulatuk	58.50	24	P	P	07 06 45.1	+0.6
C36M				IAmb	IAmb	07 06 59.7	
	comp=Z,4.0nm,1.4s						
ASAR	Alice Springs	60.05	186	P	P	07 06 55.2	-0.5
	comp=Z,0.4nm,0.6s,baz=7.8,slow=5.7,SNR=7.5						
YKA	Yellowknife Ar	64.96	30	P	P	07 07 28.4	+0.5
	comp=Z,0.8nm,0.8s,baz=305,slow=6.4,SNR=8.7						
FINES	FINESS Array B	68.72	332	P	P	07 07 51.0	-0.9
	comp=Z,1.4nm,0.8s,baz=64,slow=4.4,SNR=6.2						
LTY	Liberty	69.99	46	P	P	07 08 01.0	+1.0
GDXM	Geysers	73.26	54		PcP	07 08 31.2	-4.6
AKASG	Malin Array Be	73.96	322	P	P	07 08 22.5	-1.1
	comp=Z,0.4nm,0.4s,baz=50,slow=6.0,SNR=5.8						
NOA	NORSAR Array B	74.22	337	P	P	07 08 24.6	-0.5
	comp=Z,1.5nm,0.9s,baz=41,slow=5.9,SNR=3.1						
DLMT	Dillon	75.66	44	P	P	07 08 33.6	-0.2
DLMT				IAmb	IAmb	07 08 35.8	
	comp=Z,2.9nm,0.8s						
NVAR	Mina Array Bea	76.37	52	P	P	07 08 39.4	+1.4
	comp=Z,1.6nm,0.7s,baz=287,slow=5.6,SNR=11						
MLR	Muntele Rosu	78.99	319	LR	LR	07 44 38.1	
	comp=Z,38nm,21.6s,baz=122,slow=36						
PDAR	Pinedale Array	78.99	45	P	P	07 08 52.9	+0.4
	comp=Z,1.0nm,0.9s,baz=276,slow=1.8,SNR=5.6						
TKX	Tecate	80.97	56	P	P	07 09 04.4	+1.3
GERES	GERESS Array B	82.52	327	P	P	07 09 10.2	-0.8
	comp=Z,0.3nm,0.5s,baz=45,slow=5.7,SNR=2.5						
GDL2	Guadalupe Moun	89.09	50		pP	07 10 06.0	-2.1
TXAR	Lajitas Array	91.50	51	P	P	07 09 55.5	+0.5
	comp=Z,0.6nm,0.7s,baz=299,slow=2.6,SNR=5.7						

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*IDC **01** 07:12:40.5±0.7, 11°.39S×162°.45E, h0^{km}, mb4.2/15, mb1 4.4/19, mb1mx4.2/47, mbtmp4.3/19, ML2.0/1, MS3.5/9, Ms1 3.6/9, ms1mx3.3/37, Error ellipse: s-maj=19.7km s-min=15.7km az=93.0*

*NEIC **01** 07:12:44.2±2.5, 11°.38S±0°.08×162°.50E±0°.09, h26^{km}±6^{km}, mb4.6/24, Error ellipse: s-maj=15.3km s-min=8.4km az=54.0*

*NOU **01** 07:12:45.0, 11°.34S×162°.60E, h46^{km}, mb4.9, Solomon Islands*

ISC 01 07:12:45.9±0.5, **11°.38S**±0°.06×**162°.47E**±0°.07, **h39**^{km}, **n90**, σ**1^{s}09**/78, **mb4.5**/25, **MS3.6**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.15	308	Pn	Pn	07 13 33.3	+0.3
	768nm,0.3s,baz=166,slow=5.4,SNR=102						
HNR				Sn	Sn	07 14 08.8	-0.5
	790nm,0.3s,baz=182,slow=17,SNR=10						
HNR	Honiara	3.15	308	P	Pn	07 13 33.1	+0.1
SANVU	Saraoutou	6.13	132	Pn	Pn	07 14 12.9	-1.1
SANVU	Saraoutou	6.13	132	P	Pn	07 14 12.3	-1.6
	644nm,0.6s						
DVP	Devils Point	8.39	139	P	Pn	07 14 44.5	-0.5
	651µm,0.9s						
KOUNC	Koumac, New Ca	9.28	169	P	Pn	07 14 56.3	-0.9
LIFNC	LIFOU	10.40	154	P	Pn	07 15 09.7	-2.9
NOUC	Port Laguerre	11.27	162	P	Pn	07 15 23.8	-0.7
DZM	Mont Dzumac	11.29	161	Pn	Pn	07 15 24.3	-0.5
	4.7nm,0.3s,baz=24,slow=7.6,SNR=109						
DZM				LR	LR	07 18 48.5	
	comp=Z,241nm,20.5s,baz=356,slow=33						
DZM	Mont Dzumac	11.29	161	*e*Pn	Pn	07 15 24.0	-0.8
	11nm,0.2s						
DZM				*e*Sn	Sn	07 17 12.4	-17
	3.1nm,0.3s						
DZM				*e*LR	LR	07 17 45.0	
	comp=Z,327nm,25.4s						
DZM	Mont Dzumac	11.29	161	Pn	Pn	07 15 24.8	0.0
DZM	Mont Dzumac	11.29	161	P	Pn	07 15 24.1	-0.8
MARNC	Mare, Loyalty	11.37	153	P	Pn	07 15 25.0	-0.8
YATNC	Mamie plateau,	11.43	159	P	Pn	07 15 24.9	-1.7
OUENC	Ouen Island, N	11.74	160	P	Pn	07 15 30.1	-0.8
RABL	Rabaul	12.46	304	Pn	Pn	07 15 39.7	-1.0
PMG	Port Moresby	15.19	276	Pn	Pn	07 16 15.3	-2.4
	0.3nm,0.3s,baz=90,slow=15,SNR=1.5						
PMG	Port Moresby	15.19	276	Pn	Pn	07 16 19.7	+2.0
PMG				IAmb	IAmb	07 16 26.2	
	comp=Z,37nm,1.1s						
TARA	Tarawa	16.38	40	Pn	Pn	07 16 31.7	-1.3
EIDS	Eidsvold	17.60	216	P	P	07 16 48.9	0.0
	baz=18,SNR=3.9						
EIDS	Eidsvold	17.60	216	P	P	07 16 51.0	+2.1
CTA	Charters Tower	17.83	239	P	P	07 16 52.0	+0.4
	comp=Z,2.0nm,0.3s,baz=67,slow=14,SNR=30						
CTAO	Charters Tower	17.83	239	P	P	07 16 52.4	+0.8
CTAO				IAmb	IAmb	07 16 55.9	
	comp=Z,57nm,0.9s						
PATS	Pohnpei	18.57	347	P	Pn	07 17 01.4	+1.3
MTSU	Mount Surprise	18.78	247	P	P	07 16 59.6	-2.5
	baz=19,SNR=5.6						
COEN	Coen	19.00	260	P	Pn	07 17 07.7	+2.3
COEN				IAmb	IAmb	07 17 08.5	
	comp=Z,46nm,0.8s						
RMQ	Roma	19.82	219	P	Pn	07 17 15.4	+0.4
	baz=21,SNR=41						
ARMA	Armidale	21.45	206	P	P	07 17 32.2	+1.2
	baz=22,SNR=5.6						
ARMA	Armidale	21.45	206	P	P	07 17 32.0	+1.0
ARMA				IAmb	IAmb	07 17 32.9	
	comp=Z,17nm,1.1s						
JAY	Jayapura	23.31	291	P	P	07 17 49.6	-1.1
	comp=Z,15nm,0.8s,baz=119,slow=3.0,SNR=5.5						
QIS	Mount Isa	23.77	245	P	P	07 17 53.5	-1.6
	baz=24,SNR=7.4						
STKA	Stephens Creek	28.05	220	P	P	07 18 33.8	+0.2
	baz=29,SNR=8.6						
STKA	Stephens Creek	28.05	220	P	P	07 18 33.5	-0.1
	comp=Z,3.4nm,0.7s,baz=52,slow=10,SNR=10						
STKA				LR	LR	07 29 06.3	
	comp=Z,254nm,18.8s,baz=28,slow=35						
STKA	Stephens Creek	28.05	220	P	P	07 18 33.6	-0.1
WR0	Warramunga Arr	28.17	249	P	P	07 18 33.5	-1.5
WR0				IAmb	IAmb	07 18 47.0	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	28.27	249	P	P	07 18 34.8	-1.0
WB0				IAmb	IAmb	07 18 35.3	
	comp=Z,12nm,1.0s						
WB2	Warramunga Arr	28.34	249	P	P	07 18 35.2	-1.2
WB2				IAmb	IAmb	07 18 51.3	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	28.36	249	P	P	07 18 35.5	-1.0
	comp=Z,3.4nm,0.8s,baz=81,slow=8.8,SNR=18						
KDU	Kakadu	29.36	264	P	P	07 18 40.5	-4.9
	baz=30,SNR=15						
AS31	Alice Springs	29.78	242	P	P	07 18 48.1	-1.1
ASAR	Alice Springs	29.78	242	P	P	07 18 47.9	-1.4
	comp=Z,8.3nm,0.9s,baz=68,slow=9.8,SNR=99						
URZ	Urewera	29.80	156	LR	LR	07 29 23.7	
	comp=Z,109nm,18.5s,baz=30,slow=34						
H11S2	WAKE ISLAND Hy	29.98	8	T	T	07 49 48.9	
	baz=187,slow=76						
H11S3	WAKE ISLAND Hy	29.98	8	T	T	07 49 45.3	
	baz=187,slow=76						
H11S1	WAKE ISLAND Hy	29.99	8	T	T	07 49 51.1	
	baz=187,slow=76						
TOO	Toolangi	30.20	207	P	P	07 18 53.5	+0.8
	baz=31,SNR=6.4						
TOO	Toolangi	30.20	207	P	P	07 18 53.6	+0.8
TOO				IAmb	IAmb	07 18 54.0	
	comp=Z,7.4nm,0.8s						
HTT	Hallett	30.77	221	P	P	07 18 57.7	-0.1
	baz=32,SNR=6.6						
H11N1	WAKE ISLAND Hy	31.20	8	T	T	07 51 21.1	
	baz=188,slow=76						
H11N3	WAKE ISLAND Hy	31.21	8	T	T	07 51 17.8	
	baz=188,slow=76						
H11N2	WAKE ISLAND Hy	31.22	8	T	T	07 51 18.1	
	baz=188,slow=76						
BBOO	Buckleboo	32.29	225	P	P	07 19 10.6	-0.5
	baz=33,SNR=29						
SIJI	Sorong	32.69	286	LR	LR	07 32 30.6	
	comp=Z,140nm,19.9s,baz=100,slow=36						
WRKA	Warakurna	35.07	242	P	P	07 19 34.4	-1.1
	baz=36,SNR=21						
FITZ	Fitzroy Crossi	36.19	255	P	P	07 19 44.1	-1.0
	baz=37,SNR=6.0						
FITZ	Fitzroy Crossi	36.19	255	P	P	07 19 44.3	-0.8
FITZ				IAmb	IAmb	07 19 44.9	
	comp=Z,5.3nm,0.8s						
FORT	Forrest	37.24	233	P	P	07 19 53.8	-0.1
	baz=38,SNR=16						
KAPI	Kappang	42.71	275	P	P	07 20 39.5	-0.1
KAPI				IAmb	IAmb	07 21 02.6	
	comp=Z,31nm,1.2s						
MEEK	Meekatharra	43.92	243	P	P	07 20 49.3	+0.1
	baz=45,SNR=24						
BLDU	Ballidu	46.44	238	P	P	07 21 09.2	+0.1
	baz=47,SNR=6.2						
NWAO	Narrogin (SRO)	46.62	235	P	P	07 21 09.5	-1.0
MORW	Morawa	46.65	241	P	P	07 21 10.5	-0.3
	baz=47,SNR=4.4						
MORW	Morawa	46.65	241	P	P	07 21 10.2	-0.7
PPT2	Papeete2	46.74	103	*e*LR	LR	07 34 23.8	
	comp=Z,79nm,24.8s						
KKM	Kota Kinabalu	49.17	288	P	P	07 21 29.4	-1.2
MJAR	Matsushiro Arr	52.86	335	P	P	07 21 57.9	+0.1
	comp=Z,0.5nm,0.4s,baz=170,slow=8.8,SNR=1.5						
ASAJ	Asahikawa	58.12	343	P	P	07 22 36.6	+1.1
	comp=Z,5.0nm,0.6s,baz=97,slow=5.4,SNR=5.1						
KSRS	Korea Array	58.40	328	LR	LR	07 45 33.6	
	comp=Z,24nm,19.5s,baz=170,slow=34						
USRK	Ussuriysk Ar.	61.86	336	P	P	07 23 02.6	+1.5
	comp=Z,6.3nm,0.9s,baz=166,slow=7.1,SNR=7.0						
CASY	Casey	64.92	201	P	P	07 23 21.0	-0.1
CASY				IAmb	IAmb	07 23 22.0	
	comp=Z,7.1nm,0.9s						
VNDA	Vanda	66.13	180	P	P	07 23 30.4	+1.7
	comp=Z,1.7nm,0.8s,baz=330,slow=7.3,SNR=8.5						
VNDA				LR	LR	07 46 38.8	
	comp=Z,35nm,21.4s,baz=3.0,slow=31						
VNDA	Vanda	66.13	180	P	P	07 23 30.7	+2.0
KLR	Kul'dur	66.14	339	LR	LR	07 50 36.0	
	comp=Z,24nm,20.5s,baz=308,slow=34						
CMAR	Chiang Mai Arr	69.31	295	P	P	07 23 50.6	+0.7
	comp=Z,0.3nm,0.4s,baz=130,slow=3.7,SNR=2.1						
SONM	Songino Array	77.06	325	P	P	07 24 36.1	+1.0
	comp=Z,1.0nm,0.6s,baz=141,slow=6.0,SNR=6.5						
QSPA	South Pole Qui	78.62	180	P	P	07 24 44.2	+0.6
QSPA				IAmb	IAmb	07 24 45.2	
	comp=Z,3.4nm,0.8s						
MAW	Mawson	83.20	202	P	P	07 25 08.8	+1.1
	comp=Z,3.6nm,0.7s,baz=114,slow=11,SNR=4.5						
MAW	Mawson	83.20	202	P	P	07 25 08.0	+0.3
ILAR	Eielson Array	84.87	19	P	P	07 25 16.2	0.0
	comp=Z,0.5nm,0.7s,baz=231,slow=5.1,SNR=6.9						
ILAR				LR	LR	07 57 53.5	
	comp=Z,26nm,19.3s,baz=240,slow=32						
NVAR	Mina Array Bea	88.71	51	P	P	07 25 35.8	0.0
	comp=Z,0.2nm,0.5s,baz=246,slow=6.8,SNR=1.6						
BELA	Belgrano 2	90.37	176	P	P	07 25 42.8	+0.1
MK31	Makanchi Array	91.58	317	P	P	07 25 48.7	0.0
MK31				IAmb	IAmb	07 26 06.5	
	comp=Z,2.6nm,1.5s						
MKAR	Makanchi Array	91.58	317	P	P	07 25 48.7	-0.1
	comp=Z,1.0nm,0.5s,baz=94,slow=6.2,SNR=15						
YKA	Yellowknife Ar	96.75	28	P	P	07 26 12.1	+0.1
	comp=Z,0.2nm,0.6s,baz=259,slow=4.2,SNR=3.7						
TXAR	Lajitas Array	98.82	62	LR	LR	08 02 08.0	
	comp=Z,23nm,21.9s,baz=0.0,slow=30						
USHA	Ushuaia	101.41	153	P	Pdif	07 26 31.9	-1.3
	comp=Z,40nm,0.6s,baz=176,slow=0.5,SNR=3.5						
ARCES	ARCESS Array B	115.83	345	PKP	PKiKP	07 31 22.9	-0.9
	comp=Z,1.6nm,0.8s,baz=47,slow=2.1,SNR=6.8						
FINES	FINESS Array B	120.87	337	PKP	PKiKP	07 31 33.5	-0.2
	comp=Z,1.3nm,0.8s,baz=56,slow=3.4,SNR=5.7						
GERES	GERESS Array B	134.51	331	PKP	PKiKP	07 32 01.2	-0.4
	comp=Z,0.2nm,0.7s,baz=90,slow=2.0,SNR=1.4						
ESDC	Sonseca Array	149.36	339	PKPbc	PKiKP	07 32 31.8	-0.4
	comp=Z,0.5nm,0.6s,baz=359,slow=3.2,SNR=6.9						

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*IDC **01** 07:23:04.8±2.4, 46°.39N×149°.38E, h176^{km}±24^{km}, mb3.0/9, mb1 3.2/14, mb1mx3.0/57, mbtmp3.5/14, Error ellipse: s-maj=28.2km s-min=13.1km az=140.0*

ISC 01 07:23:03.0±0.8, **46°.4N**±0°.1×**149°.5E**±0°.1, **h158**^{km}, **n20**, σ**1^{s}19**/14, **mb3.3**/9, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	5.34	248	P	Pn	07 24 22.7	+1.7
	0.5nm,0.3s,baz=74,slow=15,SNR=2.1						
PETK	Petropavlovsk-	8.61	35	P	Pn	07 25 04.8	+0.5
	0.5nm,0.3s,baz=194,slow=6.7,SNR=16						
USRK	Ussuriysk Ar.	12.50	266	P	Pn	07 25 56.3	+1.0
	baz=78,slow=14,SNR=4.2						
SEY	Seymchan	16.70	5	P	Pn	07 26 49.1	+1.6
	0.1nm,0.3s,baz=195,slow=9.8,SNR=1.4						
KSRS	Korea Array	18.29	249	P	Pn	07 27 06.8	+0.3
	0.1nm,0.3s,baz=52,slow=11,SNR=6.7						
SONM	Songino Array	29.08	289	P	P	07 28 47.2	-1.4
	0.1nm,0.3s,baz=75,slow=6.1,SNR=1.3						
H11N2	WAKE ISLAND Hy	30.16	146	T	T	08 00 09.8	
	baz=336,slow=76,SNR=5.4						
H11N1	WAKE ISLAND Hy	30.18	146	T	T	08 00 08.9	
	baz=336,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	30.18	146	T	T	08 00 12.5	
	baz=336,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	31.20	147	T	T	08 01 30.0	
	baz=336,slow=76,SNR=6.6						
H11S3	WAKE ISLAND Hy	31.21	147	T	T	08 01 28.2	
	baz=336,slow=76,SNR=5.9						
H11S2	WAKE ISLAND Hy	31.22	147	T	T	08 01 35.0	
	baz=336,slow=76,SNR=4.0						
ILAR	Eielson Array	38.43	38	P	P	07 30 08.9	+0.1
	0.7nm,0.8s,baz=280,slow=8.5,SNR=5.7						
INK	Inuvik	43.33	32	P	P	07 30 47.0	-1.8
	0.5nm,0.4s,baz=307,slow=5.4,SNR=4.4						
MKAR	Makanchi Array	44.87	296	P	P	07 31 00.2	-1.2
	0.1nm,0.6s,baz=71,slow=7.6,SNR=1.7						
YKA	Yellowknife Ar	52.73	35	P	P	07 32 01.4	+0.4
	0.3nm,0.4s,baz=305,slow=5.5,SNR=14						
NVAR	Mina Array Bea	64.84	60	P	P	07 33 25.1	0.0
	0.7nm,0.8s,baz=301,slow=7.2,SNR=3.8						
WRA	Warramunga Arr	67.38	195	P	P	07 33 39.8	-1.3
	0.3nm,0.8s,baz=12,slow=7.0,SNR=1.9						
ASAR	Alice Springs	71.09	195	P	P	07 34 04.4	+0.5
	0.2nm,0.9s,baz=9.1,slow=8.0,SNR=1.4						
TXAR	Lajitas Array	79.86	58	P	P	07 34 54.4	+0.2
	0.4nm,0.6s,baz=306,slow=4.6,SNR=6.9						

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*NEIC **01** 07:28:11.7±1.0, 12°.3S±0°.1×167°.1E±0°.2, h248^{km}±8^{km}, mb4.3/18, Error ellipse: s-maj=23.1km s-min=15.0km az=110.0*

*IDC **01** 07:28:13.3±5.0, 12°.45S×167°.03E, h269^{km}±52^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.4/39, mbtmp4.0/10, Error ellipse: s-maj=42.5km s-min=20.7km az=152.0*

ISC 01 07:28:11.5±0.6, **12°.35S**±0°.08×**167°.1E**±0°.1, **h250**^{km}, **n32**, σ**0^{s}89**/33, **mb4.1**/16, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.08	179	Pn	Pn	07 29 05.4	+0.5
SANVU				S	S	07 29 45.8	-1.4
DZM	Mont Dzumac	9.70	184	P	Pn	07 30 27.2	+0.9
	0.3nm,0.3s,baz=5.3,slow=15,SNR=2.4						
EIDS	Eidsvold	19.93	227	P	P	07 32 25.8	+1.0
EIDS				IAmb	IAmb	07 32 26.1	
	comp=Z,10nm,0.5s						
CTA	Charters Tower	21.45	246	P	P	07 32 40.3	-0.3
	comp=Z,2.8nm,0.5s,baz=71,slow=12,SNR=6.2						
CTAO	Charters Tower	21.45	246	P	P	07 32 40.7	+0.1
CTAO				IAmb	IAmb	07 32 42.3	
	comp=Z,6.3nm,0.9s						
ARMA	Armidale	23.01	216	P	P	07 32 55.5	+0.6
ARMA				IAmb	IAmb	07 32 57.1	
	comp=Z,5.4nm,0.8s						
COEN	Coen	23.38	263	P	P	07 33 00.1	+1.9
STKA	Stephens Creek	30.48	226	P	P	07 34 01.0	-0.4
	comp=Z,0.4nm,0.4s,baz=66,slow=12,SNR=1.3						
STKA	Stephens Creek	30.48	226	P	P	07 34 02.0	+0.6
WRAB	Tennant Creek	32.33	252	P	P	07 34 16.5	-1.2
WRAB				IAmb	IAmb	07 34 39.9	
	comp=Z,9.4nm,1.4s						
WRA	Warramunga Arr	32.34	252	P	P	07 34 16.6	-1.2
	comp=Z,0.7nm,0.4s,baz=84,slow=9.2,SNR=14						
AS31	Alice Springs	33.46	246	P	P	07 34 26.1	-1.4
ASAR	Alice Springs	33.46	246	P	P	07 34 25.7	-1.8
	comp=Z,1.7nm,0.7s,baz=71,slow=9.6,SNR=36						

KNRA	Kununurra	37.34	260	P	P	07 35 00.5	+0.1
FITZ	Fitzroy Crossi	40.37	257	P	P	07 35 25.5	0.0
FITZ				IAmb	IAmb	07 35 46.3	
	comp=Z,8.6nm,1.2s						
KIP	Kipapa	47.94	46	P	P	07 36 25.2	-0.1
SBUM	Sibu	56.48	281	P	P	07 37 28.8	+0.6
SBUM				IAmb	IAmb	07 37 30.6	
	comp=Z,42nm,1.5s						
SSLB	Suanglung	57.68	309	P	P	07 37 35.0	-1.4
CASY	Casey	65.67	202	P	P	07 38 29.4	+0.5
SEY	Seymchan	75.91	353	P	P	07 39 30.8	+0.6
	comp=Z,1.8nm,0.6s,baz=25,slow=1.1,SNR=11						
QSPA	South Pole Qui	77.67	180	P	P	07 39 40.6	+0.3
TTA	Tatalina	80.28	16	P	P	07 39 54.9	+0.5
SUA	Susitna One	80.69	19	P	P	07 39 57.1	+0.5
SUA				IAmb	IAmb	07 40 04.2	
	comp=Z,9.4nm,1.4s						
HDA	Harding Lake	84.04	18	P	P	07 40 14.2	+0.6
HDA				IAmb	IAmb	07 40 14.8	
	comp=Z,7.8nm,0.6s						
IL31		84.31	18	P	P	07 40 15.5	+0.6
IL31				IAmb	IAmb	07 40 16.0	
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	84.31	18	P	P	07 40 14.8	-0.2
	comp=Z,3.0nm,0.6s,baz=246,slow=5.1,SNR=60						
TXAR	Lajitas Array	95.26	61	P	P	07 41 07.3	-0.2
	comp=Z,0.2nm,0.8s,baz=238,slow=5.0,SNR=1.6						
MKAR	Makanchi Array	95.39	317	P	P	07 41 08.2	+0.6
	comp=Z,0.8nm,0.8s,baz=101,slow=7.5,SNR=7.2						
YKA	Yellowknife Ar	95.50	27	P	P	07 41 07.0	-0.6
	comp=Z,0.3nm,0.7s,baz=256,slow=3.7,SNR=9.1						
ARCES	ARCESS Array B	117.92	346	PKP	PKPdf	07 46 27.8	0.0
	comp=Z,1.5nm,0.4s,baz=56,slow=1.8,SNR=14						
FINES	FINESS Array B	123.47	339	PKP	PKPdf	07 46 38.6	0.0
	comp=Z,1.9nm,0.8s,baz=198,slow=3.6,SNR=4.0						
TORD	Torodi Ar. Bea	165.77	275	PKP	PKPdf	07 47 45.8	-1.5
	comp=Z,0.7nm,0.7s,baz=171,slow=10,SNR=4.0						

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*KRSC **01** 07:34:55.7±1.6, 52°.80N×160°.81E, h40^{km}±15^{km}, ML4.4*
*MOS **01** 07:34:59.1±0.9, 52°.90N×160°.53E, h50^{km}, mb4.1/3, Error ellipse: s-maj=6.9km s-min=4.8km az=90.4*
*NEIC **01** 07:35:00.9±1.4, 53°.1N±0°.2×160°.3E±0°.1, h48^{km}±11^{km}, mb4.1/12, Error ellipse: s-maj=23.6km s-min=12.6km az=169.0*
*IDC **01** 07:35:02.8±1.9, 53°.00N×160°.43E, h70^{km}±16^{km}, mb3.6/21, mb1 3.8/23, mb1mx3.6/53, mbtmp3.9/23, MS3.8/2, Ms1 3.8/2, ms1mx2.8/35, Error ellipse: s-maj=17.1km s-min=13.0km az=153.0*
ISC 01 07:34:58.7±1.2**, 52°.87N**±0°.04×**160°.61E**±0°.04**, h33**^{km}±8^{km}**, n129, σ1^{s}61**/160**, mb4.0**/28**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.42	303	PN	Pb	07 35 07.1	-0.9
SPN				S	Sb	07 35 14.2	-0.2
SPN	Mys Shipunski	0.42	303	*i* P	Pb	07 35 07.1	-0.9
SPN				*e*S	Sb	07 35 14.2	-0.2
NLC	Nalytchevo	0.82	292	PN	Pn	07 35 13.0	-0.8
NLC				S	Sb	07 35 25.4	+0.2
NLC	Nalytchevo	0.82	292	*e*P	Pn	07 35 13.0	-0.8
NLC				*e*S	Sb	07 35 25.4	+0.2
SDLR	Sedlovina	1.11	292	PN	Pn	07 35 18.2	+0.1
SDLR	Sedlovina	1.11	292	*e*P	Pn	07 35 18.2	+0.1
UGLR	Uglovaya	1.13	288	PN	Pn	07 35 18.4	+0.2
UGLR	Uglovaya	1.13	288	*e*P	Pn	07 35 18.4	+0.2
DALK	Dalny	1.13	279	PN	Pn	07 35 18.2	0.0
DALK				S	Sn	07 35 33.8	+1.3
DALK	Dalny	1.13	279	*e*P	Pn	07 35 18.2	0.0
DALK				*e*S	Sn	07 35 33.8	+1.3
SMAR	Somma	1.16	291	PN	Pn	07 35 18.3	-0.4
SMAR	Somma	1.16	291	*e*P	Pn	07 35 18.3	-0.4
PET	Petropavlovsk	1.19	278	*e*PN	Pn	07 35 19.2	+0.3
PET				*e*S	Sn	07 35 35.3	+1.3
PET				smax	smax		
	comp=N,3μm,0.6s						
PET				smax	smax		
	comp=E,5μm,0.6s						
PET	Petropavlovsk	1.19	278	*e*P	Pn	07 35 19.1	+0.1
PET				*e*S	Sn	07 35 34.7	+0.7
PET	Petropavlovsk	1.19	278		Pn	07 35 19.3	+0.3
AVH	Avacha	1.19	290	PN	Pn	07 35 19.5	+0.4
AVH	Avacha	1.19	290	*e*P	Pn	07 35 19.5	+0.4
KRER	Koryakskii	1.20	292	PN	Pn	07 35 19.6	+0.3
KRER	Koryakskii	1.20	292	*e*P	Pn	07 35 19.6	+0.3
KOK	Koryaka	1.26	290	PN	Pn	07 35 20.2	+0.2
KOK	Koryaka	1.26	290	*e*P	Pn	07 35 20.2	+0.2
KRX	Arik	1.28	293	PN	Pn	07 35 20.3	0.0
KRX	Arik	1.28	293	*e*P	Pn	07 35 20.3	0.0
RUS	Russkaya	1.35	252	PN	Pn	07 35 21.1	0.0
RUS				S	Sn	07 35 37.8	-0.1
RUS	Russkaya	1.35	252	*e*P	Pn	07 35 21.1	0.0
RUS				*e*S	Sn	07 35 37.8	-0.1
KII	Karymskiy	1.36	330	PN	Pn	07 35 22.3	+0.9
KII				S	Sb	07 35 41.2	+0.7
KII	Karymskiy	1.36	330	*e*P	Pn	07 35 22.3	+0.9
KII				*e*S	Sb	07 35 41.2	+0.7
KRMR	Karymshinskiy	1.50	269	PN	Pn	07 35 23.8	+0.5
KRMR				S	Sn	07 35 42.9	+1.2
KRMR	Karymshinskiy	1.50	269	*e*P	Pn	07 35 23.8	+0.5
KRMR				*e*S	Sn	07 35 42.9	+1.2
MTVR	Mutnovka	1.52	256	PN	Pn	07 35 24.0	+0.3
MTVR				S	Sn	07 35 43.9	+1.4
MTVR	Mutnovka	1.52	256	*e*P	Pn	07 35 24.0	+0.3
MTVR				*e*S	Sn	07 35 43.9	+1.4
GRL	Gorelyy	1.57	259	PN	Pn	07 35 25.2	+0.8
GRL				S	Sn	07 35 45.7	+2.1
GRL	Gorelyy	1.57	259	*e*P	Pn	07 35 25.2	+0.8
GRL				*e*S	Sn	07 35 45.7	+2.1
ASAK	Asacha	1.72	255	PN	Pn	07 35 27.4	+1.1
ASAK				S	Sb	07 35 50.1	-0.8
ASAK	Asacha	1.72	255	*e*P	Pn	07 35 27.4	+1.1
ASAK				*e*S	Sb	07 35 50.1	-0.8
PEA0B	Petropavlovsk-	1.77	279	PN	Pn	07 35 26.8	-0.2
PEA0B	Petropavlovsk-	1.77	279		Pn	07 35 26.8	-0.2
PETK	Petropavlovsk-	1.77	279	P	Pn	07 35 28.1	+1.1
	comp=E,35nm,0.3s,baz=87,slow=19,SNR=315						
PETK				S	Sn	07 35 51.1	+2.7
	comp=E,42nm,0.3s,baz=100,slow=20,SNR=3.4						
PETK				LR	LR	07 36 19.7	
	comp=E,296nm,18.7s,baz=84,slow=47						
GNL	Ganaly	1.80	298	PN	Pn	07 35 28.9	+1.4
GNL				S	Sn	07 35 51.3	+2.1
GNL	Ganaly	1.80	298	*e*P	Pn	07 35 28.9	+1.4
GNL				*e*S	Sn	07 35 51.3	+2.1
MKZ	Mys Kozlova	1.81	21	PN	Pn	07 35 26.6	-1.0
MKZ				S	Sn	07 35 48.4	-1.0
MKZ	Mys Kozlova	1.81	21	*e*P	Pn	07 35 26.6	-1.0
MKZ				*e*S	Sn	07 35 48.4	-1.0
KDTR	Khodutka, Kamc	1.88	237	PN	Pn	07 35 29.2	+0.7
KDTR				S	Sn	07 35 52.9	+1.9
KDTR	Khodutka, Kamc	1.88	237	*e*P	Pn	07 35 29.2	+0.7
KDTR				*e*S	Sn	07 35 52.9	+1.9
APC	Apacha	2.09	273	PN	Pn	07 35 33.7	+2.4
APC				S	Sb	07 36 00.1	-1.3
APC	Apacha	2.09	273	*e*P	Pn	07 35 33.7	+2.4
APC				*e*S	Sb	07 36 00.1	-1.3
KZV	Kizimen	2.25	355	PN	Pn	07 35 35.2	+1.4
KZV				S	Sn	07 36 03.4	+2.9
KZV	Kizimen	2.25	355	*e*P	Pn	07 35 35.2	+1.4
KZV				*e*S	Sn	07 36 03.4	+2.9
MIPR	Malaya Ipel'ka	2.42	257	PN	Pn	07 35 38.8	+2.9
MIPR	Malaya Ipel'ka	2.42	257	*e*P	Pn	07 35 38.8	+2.9
TUMR	Tumrok	2.43	354	PN	Pn	07 35 37.8	+1.6
TUMR				S	Sn	07 36 07.1	+2.3
TUMR	Tumrok	2.43	354	*e*P	Pn	07 35 37.8	+1.6
TUMR				*e*S	Sn	07 36 07.1	+2.3
PAU	Pauzhetka	2.73	240	PN	Pn	07 35 42.9	+2.8
PAU				S	Sn	07 36 15.7	+3.8
PAU	Pauzhetka	2.73	240	*e*P	Pn	07 35 42.9	+2.8
PAU				*e*S	Sn	07 36 15.7	+3.8
KMNR	Kamenistaya	2.90	356	PN	Pn	07 35 45.0	+2.4
KMNR				S	Sn	07 36 19.6	+3.3
KMNR	Kamenistaya	2.90	356	*e*P	Pn	07 35 45.0	+2.4
KMNR				*e*S	Sn	07 36 19.6	+3.3
KIRR	Kirishev	3.09	357	PN	Pn	07 35 46.9	+1.6
KIRR	Kirishev	3.09	357	*e*P	Pn	07 35 46.9	+1.6
KOZ	Kozyrevsk	3.22	353	PN	Pn	07 35 49.6	+2.7
KOZ	Kozyrevsk	3.22	353	*e*P	Pn	07 35 49.6	+2.7
ESO	Esso	3.26	341	PN	Pn	07 35 49.9	+2.5
ESO	Esso	3.26	341	*e*P	Pn	07 35 49.9	+2.5
KLY	Klyuchi	3.45	0	PN	Pn	07 35 53.1	+3.1
KLY	Klyuchi	3.45	0	*e*P	Pn	07 35 53.1	+3.1
SRDR	Sredinnyy	3.49	352	PN	Pn	07 35 52.5	+1.8
SRDR	Sredinnyy	3.49	352	*e*P	Pn	07 35 52.5	+1.8
SKR	Severo-Kuril's	3.55	234	*e*PN	Pn	07 35 55.1	+3.8
SKR				*e*S	Sn	07 36 33.3	+1.2
SKR				smax	smax		
	comp=N,136nm,0.7s						
SKR				smax	smax		
	comp=E,177nm,0.7s						
SKR				MLR	MLR		
	comp=Z,400nm,16.0s						
SKR	Severo-Kuril's	3.55	234	*e*P	Pn	07 35 53.4	+2.1
SKR				*e*S	Sn	07 36 34.4	+2.3
KBTR	Krutoberegovo	3.58	20	PN	Pn	07 35 52.2	+0.3
KBTR	Krutoberegovo	3.58	20	*e*P	Pn	07 35 52.2	+0.3
BDR	Baidarnaya	3.72	5	PN	Pn	07 35 56.2	+2.4
BDR	Baidarnaya	3.72	5	*e*P	Pn	07 35 56.2	+2.4
SMKR	Semkarok	3.75	7	PN	Pn	07 35 56.6	+2.3
SMKR	Semkarok	3.75	7	*e*P	Pn	07 35 56.6	+2.3
SRKR	Sorokina	3.81	5	PN	Pn	07 35 57.9	+2.9
SRKR	Sorokina	3.81	5	*e*P	Pn	07 35 57.9	+2.9
BKI	Bering	3.93	51	*e*S	Sn	07 36 36.1	-5.5
JKA	Kamikawa-asahi	14.77	241	Pn	Pn	07 38 25.4	+0.4
ASAJ	Asahikawa	14.77	241	P	Pn	07 38 25.4	+0.3
	comp=Z,0.9nm,0.3s,baz=87,slow=11,SNR=2.4						
BILL	Bilibino	15.46	8	*e*P	P	07 38 40.8	+2.7
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	Kul'dur	18.44	270	P	P	07 39 11.0	-0.2
	comp=Z,0.1nm,0.3s,baz=82,slow=7.1,SNR=1.9						
USRK	Ussuriysk Ar.	20.73	257	P	P	07 39 35.9	-0.2
	comp=Z,2.1nm,0.7s,baz=16,slow=8.9,SNR=5.1						
MAJO	Matsushiro	22.66	233	P	P	07 39 58.3	+1.4
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAJO	Matsushiro	22.66	233	P	P	07 39 58.3	+1.4
MAJO				IAmb	IAmb	07 40 18.8	
	comp=Z,8.4nm,0.8s						
MJAR	Matsushiro Arr	22.66	233	P	P	07 39 58.3	+1.4
	comp=Z,2.8nm,0.7s,baz=25,slow=11,SNR=8.6						
TIXI	Tiksi	23.41	335	P	P	07 40 02.5	-1.8
TTA	Tatalina	24.66	49	P	P	07 40 16.3	+0.2
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TTA	Tatalina	24.66	49	P	P	07 40 16.3	+0.2
TTA				IAmb	IAmb	07 40 17.1	
	comp=Z,3.8nm,1.0s						
JHJ	Hachijo jima 2	24.77	225	LR	LR	07 49 24.5	
	comp=Z,752nm,21.1s,baz=58,slow=35						
KSRS	Korea Array	27.42	249	P	P	07 40 40.8	-0.3
	comp=Z,1.1nm,0.8s,baz=53,slow=5.9,SNR=1.5						
TOLK	Toolik Lake Re	27.96	37	P	P	07 40 45.2	-0.5
TOLK				IAmb	IAmb	07 40 59.1	
	comp=Z,2.3nm,0.8s						
MDM	Murphy Dome	28.18	45	P	P	07 40 48.0	+0.3
ILAR	Eielson Array	28.75	45	P	P	07 40 52.8	0.0
	comp=Z,0.4nm,0.6s,baz=260,slow=7.3,SNR=2.2						
H11N2	WAKE ISLAND Hy	33.44	169	T	T	08 16 51.8	
	baz=353,slow=76,SNR=139						
H11N3	WAKE ISLAND Hy	33.45	169	T	T	08 16 52.9	
	baz=353,slow=76,SNR=91						
H11N1	WAKE ISLAND Hy	33.45	169	T	T	08 16 53.0	
	baz=353,slow=76,SNR=112						
SONM	Songino Array	34.25	284	P	P	07 41 40.2	-1.2
	comp=Z,0.4nm,0.4s,baz=66,slow=8.8,SNR=3.0						
SONM				PcP	PcP	07 44 17.4	+0.1
	comp=Z,0.3nm,0.6s,baz=90,slow=2.9,SNR=3.6						
H11S1	WAKE ISLAND Hy	34.62	170	T	T	08 18 46.2	
	baz=352,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	34.63	170	T	T	08 18 20.4	
	baz=352,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	34.64	170	T	T	08 18 19.0	
	baz=352,slow=76,SNR=17						
XAN	Xi'an	40.95	264	P	P	07 42 38.4	+0.3
XAN				pmax	pmax		
	comp=Z,13nm,1.4s						
XAN	Xi'an	40.95	264	P	P	07 42 38.4	+0.3
EUNU	Eureka	42.09	14	P	P	07 42 47.6	+0.7
EUNU				IAmb	IAmb	07 42 51.7	
	comp=Z,1.9nm,0.6s						
YKA	Yellowknife Ar	43.12	43	P	P	07 42 55.3	0.0
	comp=Z,0.7nm,0.8s,baz=303,slow=8.0,SNR=10						
SPA0	Spitsbergen Ar	47.41	351	P	P	07 43 29.1	-0.1
KURK	Kurchatov	48.11	302	P	P	07 43 33.9	-1.0
KURK	Kurchatov	48.11	302	P	P	07 43 33.6	-1.3
KURK				IAmb	IAmb	07 43 35.0	
	comp=Z,6.6nm,1.4s						
KURBB	Kurchatov Arra	48.21	302	P	P	07 43 33.9	-1.8
	comp=Z,0.9nm,0.4s,baz=59,slow=7.4,SNR=16						
MK31	Makanchi Array	48.53	296	P	P	07 43 35.8	-2.5
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	48.53	296	P	P	07 43 35.8	-2.5
MKAR	Makanchi Array	48.53	296	P	P	07 43 36.3	-1.9
	comp=Z,0.4nm,0.5s,baz=57,slow=7.1,SNR=9.0						
ARCES	ARCESS Array B	53.59	342	P	P	07 44 14.5	-1.4
	comp=Z,2.6nm,1.0s,baz=45,slow=9.0,SNR=1.2						
ARU	Arti	53.77	318	P	P	07 44 15.9	-1.5
	comp=Z,0.6nm,0.3s,baz=138,slow=3.8,SNR=3.5						
SUMG	Summit	54.14	7	P	P	07 44 22.0	+1.6
SUMG	Summit	54.14	7	P	P	07 44 22.0	+1.6
WAKR	Walker	54.83	71	P	P	07 44 26.7	+1.2
WAKR				IAmb	IAmb	07 44 27.3	
	comp=Z,1.9nm,0.8s						
NVAR	Mina Array Bea	55.53	70	P	P	07 44 31.2	+0.6
	comp=Z,0.5nm,0.5s,baz=300,slow=7.2,SNR=3.7						
PDAR	Pinedale Array	57.36	61	P	P	07 44 44.1	+0.5
	comp=Z,1.0nm,0.9s,baz=327,slow=2.5,SNR=6.8						
CMAR	Chiang Mai Arr	58.44	259	LR	LR	08 13 22.6	
	comp=Z,21nm,19.0s,baz=195,slow=39						
FINES	FINESS Array B	60.45	337	P	P	07 45 03.0	-1.5
	comp=Z,2.5nm,0.8s,baz=44,slow=9.3,SNR=9.8						
FINES	FINESS Array B	60.45	337	P	P	07 45 03.0	-1.5
NOA	NORSAR Array B	63.84	344	P	P	07 45 26.1	-1.2
	comp=Z,1.2nm,1.0s,baz=14,slow=5.6,SNR=1.7						
AKASG	Malin Array Be	68.96	329	P	P	07 45 59.1	-1.0
	comp=Z,3.3nm,0.4s,baz=29,slow=6.8,SNR=24						
KBZ	Khabaz	69.91	317	P	P	07 46 06.2	+0.2
	comp=Z,1.4nm,0.6s,baz=78,slow=3.5,SNR=8.0						
TXAR	Lajitas Array	70.44	67	P	P	07 46 09.9	+0.2
	comp=Z,0.9nm,0.6s,baz=297,slow=4.5,SNR=15						
GERES	GERESS Array B	74.83	338	P	P	07 46 35.2	-0.3
	comp=Z,0.3nm,0.4s,baz=29,slow=5.1,SNR=9.5						
WRA	Warramunga Arr	76.01	205	P	P	07 46 42.1	-0.3
	comp=Z,1.1nm,0.9s,baz=26,slow=6.5,SNR=5.8						
ASAR	Alice Springs	79.69	205	P	P	07 47 03.5	+0.7
	comp=Z,1.0nm,0.5s,baz=17,slow=5.2,SNR=29						
ESDC	Sonseca Array	86.86	348	P	P	07 47 37.2	-2.6
	comp=Z,0.8nm,0.9s,baz=8.0,slow=3.5,SNR=5.0						

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*KRSC **01** 08:27:22.4±0.8, 52°.84N×160°.72E, h21^{km}±9^{km}, ML3.9*
*IDC **01** 08:27:28.9±3.9, 53°.10N×160°.52E, h73^{km}±32^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.0/43, mbtmp3.5/4, Error ellipse: s-maj=33.6km s-min=33.0km az=76.0*
ISC 01 08:27:22.6±0.9**, 52°.83N**±0°.06×**160°.69E**±0°.06**, h21**^{km}±4^{km}**, n39, σ1^{s}36**/49**, mb3.4**/4**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.48	304	*i* P	Pn	08 27 33.2	-1.1
SPN				*i* S	Sb	08 27 40.2	+1.2
NLC	Nalytchevo	0.88	293	*e*P	Pn	08 27 39.3	-0.4
NLC				*e*S	Sb	08 27 50.7	+0.3
SDLR	Sedlovina	1.18	293	*e*P	Pb	08 27 44.2	-0.1
DALK	Dalny	1.19	280	*e*P	Pb	08 27 44.2	-0.2
DALK				*e*S	Sn	08 27 59.8	+0.3
UGLR	Uglovaya	1.19	289	*e*P	Pb	08 27 44.5	+0.1
SMAR	Somma	1.22	291	*e*P	Pb	08 27 44.7	-0.3
PET	Petropavlovsk	1.25	280	*e*P	Pb	08 27 45.4	0.0
PET				*e*S	Sb	08 28 01.2	+0.2
AVH	Avacha	1.25	291	*e*P	Pb	08 27 45.7	+0.1
KRER	Koryakskii	1.26	293	*e*P	Pb	08 27 45.9	+0.1
KOK	Koryaka	1.32	291	*e*P	Pb	08 27 46.8	+0.1
KRX	Arik	1.34	294	*e*P	Pb	08 27 46.5	-0.5
KRX				*e*S	Sb	08 28 03.6	-0.2
RUS	Russkaya	1.39	254	*e*P	Pb	08 27 47.6	-0.1
RUS				*e*S	Sn	08 28 04.7	+0.4
KII	Karymskiy	1.42	329	*e*P	Pb	08 27 48.4	+0.1
KII				*e*S	Sb	08 28 06.6	+0.7
KRMR	Karymshinskiy	1.55	271	*e*P	Pb	08 27 50.2	-0.4
KRMR				*e*S	Sb	08 28 10.1	+0.3
MTVR	Mutnovka	1.57	258	*e*P	Pb	08 27 50.2	-0.7
MTVR				*e*S	Sb	08 28 10.2	-0.1
GRL	Gorelyy	1.62	261	*e*P	Pb	08 27 51.5	-0.3
GRL				*e*S	Sb	08 28 12.8	+1.1
ASAK	Asacha	1.76	256	*e*P	Pb	08 27 53.6	-0.6
ASAK				*e*S	Sb	08 28 15.9	+0.1
PETK	Petropavlovsk-	1.83	280	P	Pb	08 27 55.5	+0.2
	14nm,0.3s,baz=76,slow=17,SNR=248						
PETK				S	Sb	08 28 18.0	+0.3
	26nm,0.3s,baz=99,slow=21,SNR=5.1						
MKZ	Mys Kozlova	1.83	19	*e*P	Pb	08 27 54.1	-1.2
GNL	Ganaly	1.86	299	*e*P	Pb	08 27 55.4	-0.5
GNL				*e*S	Sb	08 28 18.8	0.0
KDTR	Khodutka, Kamc	1.90	238	*e*P	Pb	08 27 55.3	-1.2
KDTR				*e*S	Sn	08 28 18.4	+1.3
APC	Apacha	2.14	274	*e*P	Pb	08 27 59.9	-0.7
APC				*e*S	Sb	08 28 26.7	0.0
KZV	Kizimen	2.30	354	*e*P	Pb	08 28 01.3	-2.0
KZV				*e*S	Sb	08 28 30.1	-1.2
KMNR	Kamenistaya	2.94	355	*e*P	Pb	08 28 11.6	-2.7
ESO	Esso	3.31	340	*e*P	Pn	08 28 16.2	+3.1
SRDR	Sredinnyy	3.54	351	*e*P	Pn	08 28 19.4	+3.1
KBTR	Krutoberegovo	3.60	19	*e*P	Pn	08 28 20.1	+3.0
BDR	Baidarnaya	3.75	4	*e*P	Pn	08 28 22.1	+2.8
SRKR	Sorokina	3.84	4	*e*P	Pn	08 28 24.0	+3.6
H11N2	WAKE ISLAND Hy	33.39	169	T	T	09 09 34.1	
	baz=353,slow=76,SNR=32						
H11N3	WAKE ISLAND Hy	33.40	169	T	T	09 09 36.6	
	baz=353,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	33.41	169	T	T	09 09 36.7	
	baz=353,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	34.58	170	T	T	09 10 50.7	
	baz=352,slow=76,SNR=3.6						
H11S3	WAKE ISLAND Hy	34.59	170	T	T	09 11 03.1	
	baz=352,slow=76,SNR=5.8						
H11S2	WAKE ISLAND Hy	34.59	170	T	T	09 10 50.3	
	baz=352,slow=76,SNR=4.0						
MKAR	Makanchi Array	48.59	296	P	P	08 36 01.4	-2.9
	0.1nm,0.4s,baz=56,slow=8.7,SNR=1.7						
AKASG	Malin Array Be	69.02	329	P	P	08 38 25.5	-0.6
	0.6nm,0.4s,baz=30,slow=6.8,SNR=5.5						
TXAR	Lajitas Array	70.41	67	P	P	08 38 35.3	+0.2
	0.2nm,0.6s,baz=322,slow=5.7,SNR=1.8						
ASAR	Alice Springs	79.67	205	P	P	08 39 29.2	+0.9
	0.3nm,0.7s,baz=17,slow=4.6,SNR=5.2						

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*MAN **01** 08:45:47.6, 5°.18N×126°.44E, h26^{km}, mb4.6, ML3.5, MS3.4*
*IDC **01** 08:45:54.2±2.3, 5°.30N×126°.26E, h105^{km}±22^{km}, mb3.5/10, mb1 3.6/10, mb1mx3.4/56, mbtmp3.8/10, MS3.0/4, Ms1 3.0/4, ms1mx2.7/30, Error ellipse: s-maj=48.1km s-min=11.8km az=74.0*
ISC 01 08:45:49.4±1.7**, 5°.22N**±0°.08×**126°.4E**±0°.1**, h58**^{km}±16^{km}**, n20, σ2^{s}53**/24**, mb3.9**/10**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.14	321	*e*P	Pn	08 46 06.6	-2.6
DDMP				*e*S	Sn	08 46 20.4	-3.5
MATI	Mati	1.73	354	*e*P	Pn	08 46 17.1	0.0
MATI				*e*S	Sn	08 46 39.1	+1.0
DAV	Davao City (W)	2.03	335	P	Pn	08 46 25.8	+4.6
	32nm,0.3s,baz=219,slow=1.1,SNR=1.8						
DAV				S	Sn	08 46 44.5	-1.0
	50nm,0.3s,baz=110,slow=21,SNR=6.9						
KCP	Kidapawan	2.23	323	⇑*e*P	Pn	08 46 23.9	-0.2
KCP				*i* S	Sn	08 46 55.4	+4.9
SKMP	Bagumbayan, Su	2.29	305	*e*P	Pn	08 46 24.9	+0.2
SKMP				*e*S	Sn	08 46 52.7	+0.9
BUKP	Musuan	2.98	333	*e*P	Pn	08 46 33.5	-0.7
BUKP				*e*S	Sn	08 47 14.1	+5.3
CGP	Cagayan de Oro	3.65	332	⇑*e*P	Pn	08 46 44.6	+1.2
CGP				*i* S	Sn	08 47 30.9	+5.6
SIJI	Sorong	7.73	141	LR	LR	08 51 02.5	
	comp=Z,103nm,18.6s,baz=20,slow=39						
KAPI	Kappang	12.16	213	LR	LR	08 54 11.0	
	comp=Z,58nm,19.1s,baz=330,slow=41						
JAY	Jayapura	16.19	118	LR	LR	08 54 44.6	
	comp=Z,30nm,19.7s,baz=244,slow=32						
FITZ	Fitzroy Crossi	23.18	182	P	P	08 50 53.6	+2.3
	1.5nm,0.5s,baz=8.8,slow=9.1,SNR=7.7						
WRA	Warramunga Arr	26.18	163	P	P	08 51 20.4	+1.7
	2.1nm,0.7s,baz=342,slow=10,SNR=16						
WRA				LR	LR	09 02 30.9	
	comp=Z,44nm,19.9s,baz=315,slow=38						
ASAR	Alice Springs	29.62	166	P	P	08 51 50.0	+0.6
	0.6nm,0.6s,baz=342,slow=6.2,SNR=15						
ASAR				PcP	PcP	08 54 53.4	+0.3
	0.5nm,0.6s,baz=345,slow=3.7,SNR=4.9						
USRK	Ussuriysk Ar.	39.13	6	P	P	08 53 10.8	-0.4
	2.1nm,0.8s,baz=186,slow=5.8,SNR=4.2						
STKA	Stephens Creek	39.62	160	P	P	08 53 16.2	+0.7
	1.1nm,0.5s,baz=334,slow=9.7,SNR=8.8						
SONM	Songino Array	45.80	341	P	P	08 54 04.4	-1.2
	0.2nm,0.4s,baz=150,slow=6.0,SNR=2.2						
MKAR	Makanchi Array	56.18	325	P	P	08 55 21.5	-1.9
	0.9nm,0.5s,baz=122,slow=7.7,SNR=16						
KURBB	Kurchatov Arra	60.34	327	P	P	08 55 50.1	-2.2
	1.0nm,0.6s,baz=126,slow=5.8,SNR=10						
NRIK	Noril'sk	68.92	346	P	P	08 56 48.1	+0.2
	0.6nm,0.3s,baz=131,slow=11,SNR=4.6						
ILAR	Eielson Array	83.89	25	P	P	08 58 11.7	-1.1
	0.2nm,0.5s,baz=239,slow=5.7,SNR=4.7						

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*IDC **01** 08:48:42.8±1.0, 4°.12N×126°.09E, h0^{km}, mb4.0/10, mb1 4.0/10, mb1mx3.7/58, mbtmp4.0/10, Error ellipse: s-maj=125.9km s-min=17.4km az=67.0*
*MAN **01** 08:49:00.2, 4°.14N×125°.88E, h0^{km}, mb4.2, ML3.0, MS2.7*
ISC 01 08:48:55.7±0.8**, 3°.9N**±0°.1×**126°.1E**±0°.3**, h107**^{km}**, n12, σ1^{s}67**/14**, mb3.9**/10**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.26	351	*e*P	Pn	08 49 34.5	+2.5
DDMP				*e*S	Sn	08 50 00.5	+0.7
SKMP	Bagumbayan, Su	3.05	330	*e*P	Pn	08 49 45.2	+2.8
SKMP				*e*S	Sn	08 50 19.6	+1.3
WRA	Warramunga Arr	25.01	161	P	P	08 54 10.8	+1.0
	1.5nm,0.8s,baz=343,slow=10,SNR=7.3						
ASAR	Alice Springs	28.40	165	P	P	08 54 41.3	+1.0
	0.3nm,0.7s,baz=343,slow=7.4,SNR=2.2						
STKA	Stephens Creek	38.48	159	P	P	08 56 08.8	+1.2
	0.7nm,0.4s,baz=330,slow=11,SNR=4.1						
SONM	Songino Array	46.97	342	P	P	08 57 14.3	-1.7
	0.4nm,0.8s,baz=168,slow=7.4,SNR=2.5						
MKAR	Makanchi Array	57.08	326	P	P	08 58 29.6	-1.3
	0.7nm,0.5s,baz=120,slow=7.7,SNR=1.5						
AAK	Ala-Archa	59.82	318	P	P	08 58 49.7	-0.5
	2.8nm,0.6s,baz=90,slow=5.1,SNR=2.7						
KURBB	Kurchatov Arra	61.28	328	P	P	08 58 58.3	-1.4
	1.6nm,0.9s,baz=114,slow=8.2,SNR=2.8						
NRIK	Noril'sk	70.15	346	P	P	08 59 55.8	-0.6
	2.7nm,0.5s,baz=180,slow=4.0,SNR=1.7						
ARU	Arti	74.48	328	P	P	09 00 20.7	-1.6
	0.9nm,0.5s,baz=33,slow=20,SNR=1.8						
ARCES	ARCESS Array B	90.10	340	P	P	09 01 42.3	-1.1
	3.2nm,1.0s,baz=69,slow=4.9,SNR=1.3						

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*BJI **01** 08:49:53.0±0.0, 28°.80N×51°.90E, h10^{km}, mB5.2/39, mb5.1/66, Ms4.6/26, Ms7 4.4/24*
*TEH **01** 08:49:53.2, 28°.73N×51°.86E, h10^{km}, ML5.2*
*NEIC **01** 08:49:53.2±1.9, 28°.72N±0°.06×51°.80E±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=10.1km s-min=8.6km az=1.0*
*IDC **01** 08:49:55.1±1.9, 28°.71N×51°.92E, h19^{km}±11^{km}, mb4.7/43, mb1 4.8/51, mb1mx4.7/61, mbtmp4.8/51, ML4.3/7, MS3.7/25, Ms1 3.7/25, ms1mx3.6/46, Error ellipse: s-maj=9.9km s-min=9.0km az=25.0*
*MOS **01** 08:49:55.6±1.0, 28°.69N×51°.85E, h39^{km}, mb5.2/83, Error ellipse: s-maj=4.6km s-min=3.1km az=103.2*
*DSN **01** 08:49:56.0±1.4, 28°.56N×51°.94E, h10^{km}, ML5.2/11, Error ellipse: s-maj=21.9km s-min=8.2km az=15.0*
*OMAN **01** 08:49:56.4±0.1, 28°.61N×52°.01E, h10^{km}, mb6.2/12, ml5.1/12, ms3.4/1, Error ellipse: s-maj=3.7km s-min=1.7km az=254.0*
ISC 01 08:49:54.3±0.6**, 28°.71N**±0°.03×**51°.87E**±0°.03**, h15**^{km}±3^{km}**, n761, σ1^{s}30**/791**, mb5.1**/214**, MS4.2**/60**, 42C-57D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	0.53	287	*e*Pg	Pg	08 50 03.7	-1.1
KAZ1	Kazerun	0.94	348	Pg	Pb	08 50 11.0	-1.3
KAZ1	Kazerun	0.94	348	*e*Pg	Pb	08 50 10.7	-1.6
KAZ1				*e*		08 50 37.6	
	comp=Z,99nm,0.6s						
QIR1	Qir	1.06	102	*e*Pg	Pb	08 50 14.1	-0.2
QIR1				*e*		08 50 44.5	
	comp=Z,99nm,0.6s						
GHIR	Ghir-Karzin	1.07	113	Pg	Pg	08 50 15.0	+0.1
GHIR	Ghir-Karzin	1.07	113	*e*Pg	Pg	08 50 15.2	+0.3
SHI	Shiraz	1.09	31	P	Pb	08 50 14.0	-0.9
SHI	Shiraz	1.09	31	Pg	Pb	08 50 14.0	-0.9
SHI	Shiraz	1.09	31	*e*Pg	Pb	08 50 13.6	-1.3
JHRM	Jahrom	1.51	97		Pg	08 50 23.0	-0.4
JHRM	Jahrom	1.51	97	*e*Pg	Pg	08 50 23.0	-0.4
JHRM				*e*		08 50 53.2	
	comp=Z,99nm,0.5s						
LMD1	Lamerd	1.78	140	Pn	Pb	08 50 27.0	+0.4
LMD1	Lamerd	1.78	140	*e*Pn	Pb	08 50 26.6	0.0
LMD1				*e*		08 51 10.8	
	comp=Z,99nm,0.6s						
LAR1	LAR	2.44	114	Pn	Pn	08 50 35.0	+1.4
LAR1	LAR	2.44	114	*e*Pn	Pn	08 50 35.3	+1.7
LAR1				*e*		08 51 34.6	
	comp=Z,99nm,0.9s						
IRAM	Ramesheh	3.12	8	*e*Pn	Pn	08 50 44.0	+0.9
QRN	Al-Qurain	3.47	272	*e*P		08 50 48.0	
ISAD	Sadrabad	3.56	26	*e*Pn	Pn	08 50 52.3	+3.1
IMEH	Mehriz	3.58	41	*e*Pn	Pn	08 50 51.6	+2.2
IGAR	Gharneh	3.69	2	*e*Pn	Pn	08 50 52.1	+1.2
KBD	Kabd	3.69	278	*e*P		08 50 51.1	
SHK1	Shahrekord	3.71	347	*e*Pn	Pn	08 50 52.7	+1.5
UMR	Umm Al-Rimmam	3.73	284	*e*P		08 50 52.0	
RDF	Al-Radifah	3.80	274	*e*P		08 50 52.9	
AHWZ	Ahwaz	3.83	314	*e*Pn	Pn	08 50 54.2	+1.6
JRN	Qarnain Island	3.85	167	*e*Pn	Pn	08 50 55.1	+2.2
JRN	Qarnain Island	3.85	167	P	Pn	08 50 54.8	+1.8
	SNR=16						
GENO	Geno	4.02	108	*e*Pn	Pn	08 50 55.5	+0.1
GENO				*e*		08 52 24.6	
	comp=Z,99nm,0.8s						
MIB	Mutribah	4.11	287	*e*P		08 50 56.4	
ICHK	Chekchek	4.15	31	*e*Pn	Pn	08 50 59.0	+1.7
IZEF	Zefreh	4.19	5	*e*Pn	Pn	08 50 58.8	+0.9
IBAF	Bafgh	4.30	47	*e*Pn	Pn	08 51 01.1	+1.8
SHGR	Shooshtar-Gavs	4.30	323	*e*Pn	Pn	08 51 00.0	+0.8
RST	Umm Al-Ruwaisa	4.34	282	*e*P		08 51 00.1	
KHGB	Koh Gabri	4.34	66	*e*Pn	Pn	08 51 01.3	+1.4
KHGB				*e*		08 51 22.5	
	comp=Z,99nm,1.0s						
NGRK	Negar Kerman	4.35	76	*e*		08 51 07.7	
	comp=Z,99nm,0.8s						
NGRK				*e*Pn	Pn	08 51 01.9	+1.7
YZKH	Yazd	4.36	32	*e*Pn	Pn	08 51 02.0	+2.0
KRBR	Kerman	4.45	72	*e*Pn	Pn	08 51 03.6	+2.1
TVBK	TV Kerman	4.45	72	*e*		08 51 24.2	
	comp=Z,99nm,0.6s						
TVBK				*e*Pn	Pn	08 51 03.4	+1.8
IKLH	Kolahrood	4.60	357	*e*Pn	Pn	08 51 04.4	+0.9
SLWR	Sila	4.62	182	*e*Pn	Pn	08 51 05.9	+2.4
SLWR	Sila	4.62	182	P	Pn	08 51 05.5	+1.9
SHME	Shamm	4.63	124	*i* P	Pn	08 51 04.5	+0.9
	SNR=19						
SHME				*i* P	Pn	08 51 04.6	+1.0
	SNR=12						
SHME	Shamm	4.63	124	P	Pn	08 51 04.6	+1.0
	SNR=12						
SHME				S	Sn	08 51 59.2	+2.1
UMQ	Umm Al-Quwin	4.63	132	*e*Pn	Pn	08 51 05.1	+1.4
UMQ	Umm Al-Quwin	4.63	132	P	Pn	08 51 06.5	+2.8
ANAR	Anarak	4.74	19	*e*Pn	Pn	08 51 05.8	+0.4
BANOM	Banah	4.82	124	*i* P	Pn	08 51 06.8	+0.5
	SNR=76						
BANOM				S	Sn	08 52 00.5	-1.4
BANOM	Banah	4.82	124	*e*Pn	Pn	08 51 07.3	+1.0
BANOM	Banah	4.82	124	P	Pn	08 51 07.2	+0.9
	SNR=76						
BANOM				S	Sn	08 52 02.2	+0.4
AJN	Ajban	4.98	145	*i* P	Pn	08 51 10.3	+1.9
	SNR=15						
AJN	Ajban	4.98	145	*e*Pn	Pn	08 51 10.6	+2.1
AJN	Ajban	4.98	145	P	Pn	08 51 10.4	+1.9
	SNR=21						
NAZ	Nazwa, Dubai	5.02	137	*i* P	Pn	08 51 10.5	+1.5
	SNR=58						
NAZ				S	Sn	08 52 07.5	+0.7
NAZ	Nazwa, Dubai	5.02	137	*e*Pn	Pn	08 51 10.7	+1.7
NAZ	Nazwa, Dubai	5.02	137	P	Pn	08 51 10.6	+1.7
	SNR=58						
NAZ				S	Sn	08 52 07.6	+0.9
QAM	Ghamsar	5.05	356	*e*Pn	Pn	08 51 08.0	-1.6
MASF	Masafi	5.07	130	P	Pn	08 51 10.7	+1.0
	SNR=118						
MASF				S	Sn	08 52 07.7	-0.3
MSFE	Esma-Masafi	5.07	130	*i* P	Pn	08 51 10.1	+0.3
	SNR=118						
MSFE	Esma-Masafi	5.07	130	*e*Pn	Pn	08 51 10.7	+0.9
CHMN	Cheshme madani	5.08	76	*e*Pn	Pn	08 51 11.8	+1.6
CHMN				*e*		08 51 40.7	
	comp=Z,99nm,0.9s						
ASUD	Al Ashush, Dub	5.11	142	*i* P	Pn	08 51 11.9	+1.6
	SNR=121						
ASUD	Al Ashush, Dub	5.11	142	*e*Pn	Pn	08 51 12.3	+2.1
ASUD	Al Ashush, Dub	5.11	142	P	Pn	08 51 12.7	+2.5
	SNR=29						
ASUD				S	Sn	08 52 10.3	+1.4
FAQ	Al Faqa, Dubai	5.16	139	*i* P	Pn	08 51 12.1	+1.1
	SNR=27						
FAQ	Al Faqa, Dubai	5.16	139	*e*Pn	Pn	08 51 12.7	+1.7
FAQ	Al Faqa, Dubai	5.16	139	P	Pn	08 51 12.4	+1.4
	SNR=27						
FAQ				S	Sn	08 52 10.7	+0.4
MDH	Madha	5.21	130	*i* P	Pn	08 51 11.7	+0.1
	SNR=109						
MDH	Madha	5.21	130	*e*Pn	Pn	08 51 12.3	+0.7
MDH	Madha	5.21	130	P	Pn	08 51 12.1	+0.5
	SNR=109						
KRSH	Karshahi	5.25	2	*e*Pn	Pn	08 51 13.3	+0.9
KHMZ	Khomeyn	5.28	342	*e*Pn	Pn	08 51 14.1	+1.3
UOSS	Minazif	5.39	133	*i* P	Pn	08 51 14.3	+0.2
	SNR=131						
UOSS	Minazif	5.39	133	Pn	Pn	08 51 14.3	+0.2
UOSS	Minazif	5.39	133	*e*Pn	Pn	08 51 14.5	+0.4
UOSS	Minazif	5.39	133	P	Pn	08 51 14.3	+0.2
UOSS				S	Sn	08 52 14.2	-1.7
HATD	Hatta, Dubai	5.43	134	*i* P	Pn	08 51 15.4	+0.8
	SNR=122						
HATD	Hatta, Dubai	5.43	134	*e*Pn	Pn	08 51 15.4	+0.8
HATD	Hatta, Dubai	5.43	134	P	Pn	08 51 15.4	+0.8
	SNR=122						
HATD				S	Sn	08 52 17.8	+0.9
ASHO	Ashiyiah	5.48	136	*i* P	Pn	08 51 16.0	+0.5
	SNR=171						
ASHO	Ashiyiah	5.48	136	*e*Pn	Pn	08 51 16.3	+0.8
ASHO	Ashiyiah	5.48	136	P	Pn	08 51 16.3	+0.8
	SNR=171						
ASHO				S	Sn	08 52 18.0	-0.3
IKMR	Kamar-syah	5.65	329	*e*Pn	Pn	08 51 18.5	+0.8
GHVR	GHOM	5.78	355	*e*Pn	Pn	08 51 20.8	+1.3
KBAM	BAM	5.78	84	*e*Pn	Pn	08 51 21.6	+2.0
ALNE	Al Ain	5.79	142	*i* P	Pn	08 51 20.8	+1.1
	SNR=80						
ALNE	Al Ain	5.79	142	*e*Pn	Pn	08 51 21.4	+1.7
ALNE	Al Ain	5.79	142	P	Pn	08 51 20.7	+1.1
	SNR=78						
ALNE				S	Sn	08 52 27.0	+1.1
IKFM	Kafar-mosalman	5.91	325	*e*Pn	Pn	08 51 22.6	+1.3
TPRV	Parvadeh(Tabas	5.97	43	*e*Pn	Pn	08 51 23.7	+1.5
ASAO	Ashtian	6.03	345	*e*Pn	Pn	08 51 24.3	+1.1
IQOM	Qom	6.15	354	*e*Pn	Pn	08 51 24.5	-0.3
SOHO	SOHO	6.18	136	*i* P	Pn	08 51 25.3	+0.3
	SNR=43						
SOHO	SOHO	6.18	136	*e*Pn	Pn	08 51 25.5	+0.5
SOHO	SOHO	6.18	136	P	Pn	08 51 25.2	+0.3
IVRN	Varamin	6.27	359	*e*Pn	Pn	08 51 26.6	+0.3
IKOM	Komasi	6.60	327	*e*Pn	Pn	08 51 32.4	+1.5
TNSJ	Nastanj	6.62	37	*e*Pn	Pn	08 51 32.5	+1.4
TKDS	Koohdasht(Taba	6.64	41	*e*Pn	Pn	08 51 32.7	+1.2
UMZA	Um Al Zommool	6.66	153	*e*Pn	Pn	08 51 32.8	+1.2
UMZA	Um Al Zommool	6.66	153	P	Pn	08 51 32.5	+0.9
UMZA				S	Sn	08 52 46.7	-0.6
TABS	Tabas	6.67	41	*e*Pn	Pn	08 51 33.7	+1.9
ILAS	Lasjerd	6.72	8	*e*Pn	Pn	08 51 33.5	+0.9
ARQ	Araqi	6.79	141	P	Pn	08 51 33.9	+0.5
	SNR=146						
IDMV	Damavand	6.85	1	*e*Pn	Pn	08 51 34.4	0.0
IRAZ	Razeghan	6.88	347	*e*Pn	Pn	08 51 36.3	+1.6
IALM	Almabolaq	6.90	334	*e*Pn	Pn	08 51 35.9	+0.8
KCHF	Cheshme Sefid,	6.92	325	*e*Pn	Pn	08 51 36.1	+0.9
IFIR	Firoozkooh	6.95	6	*e*Pn	Pn	08 51 36.9	+1.1
IANJ	Anjilo	6.96	14	*e*Pn	Pn	08 51 36.3	+0.4
IMHD	Mahdasht	7.03	352	*e*Pn	Pn	08 51 37.1	+0.3
BSRN	Basiran	7.06	61	*e*Pn	Pn	08 51 39.4	+2.2
HOQ	Hoqain	7.07	135	P	Pn	08 51 37.7	+0.5
	SNR=23						
HOQ				S	Sn	08 52 55.2	-2.1
ISHM	Shahmirzad	7.18	9	*e*Pn	Pn	08 51 40.6	+1.6
HSRG	Sareghieh	7.19	336	*e*Pn	Pn	08 51 38.3	-0.9
IGHG	Ghaleghazi	7.20	322	*e*Pn	Pn	08 51 40.2	+1.0
IVIS	Veis	7.21	325	*e*Pn	Pn	08 51 39.4	+0.2
QABG	Abgarm-Qazvin	7.25	345	*e*Pn	Pn	08 51 39.9	+0.1
ILIN	Lien	7.47	327	*e*Pn	Pn	08 51 43.8	+0.9
IPRN	Peran	7.52	3	*e*Pn	Pn	08 51 43.1	-0.4
NHDN	Nehbandan	7.58	67	*e*Pn	Pn	08 51 45.3	+1.0
IDHR	Dehrash	7.58	323	*e*Pn	Pn	08 51 44.4	0.0
BIDO	Bidbid	7.63	131	P	Pn	08 51 46.0	+1.0
	SNR=13						
BSY	Bisya	7.64	140	P	Pn	08 51 45.4	+0.4
	SNR=28						
BSY				S	Sn	08 53 11.0	-0.3
RAYN	Ar Rayn	7.71	229	*i* P	Pn	08 51 45.8	-0.2
	SNR=78						
RAYN	Ar Rayn	7.71	229	P	Pn	08 51 45.6	-0.4
RAYN	Ar Rayn	7.71	229	Pn	Pn	08 51 45.6	-0.4
AFRZ	Afriz	7.72	51	*e*Pn	Pn	08 51 46.7	+0.4
QALM	Alamut, Qazvin	7.77	353	*e*Pn	Pn	08 51 47.8	+0.8
IGZV	Ghazvin	7.78	350	*e*Pn	Pn	08 51 48.9	+1.7
SMDO	Samad	7.91	134	P	Pn	08 51 49.0	+0.1
	SNR=110						
SMDO				P	Pn	08 51 49.0	+0.1
	SNR=110						
SMDO				S	Sn	08 53 18.8	+0.7
SMDO				S	Sn	08 53 18.8	+0.7
IGLO	Ghaloghah	7.95	11	*e*Pn	Pn	08 51 51.7	+2.3
WSAR	Wadi Sarin	8.16	130	Pn	Pn	08 51 51.9	-0.3
	comp=Z,13nm,0.3s,baz=324,slow=7.8,SNR=101						
WSAR				Sn	Sn	08 53 21.3	-2.9
	comp=Z,13nm,0.3s,baz=148,slow=19,SNR=2.5						
WSAR				LR	LR	08 55 47.0	
	comp=Z,463nm,18.9s,baz=325,slow=43						
JMDO	Jabal Madar	8.45	137	P	Pn	08 51 56.4	+0.2
	SNR=22						
WBK	Wadi Bani Khal	8.82	132	P	Pn	08 52 00.8	-0.5
	SNR=97						
SBZV	Sabzevar	9.06	31	*e*Pn	Pn	08 52 06.1	+1.4
JLN	Jalan Bani Buh	9.43	132	P	Pn	08 52 08.5	-1.1
	SNR=38						
JLN				S	Sn	08 53 52.3	-3.2
MHTO	MHTO	9.47	143	P	Pn	08 52 10.3	+0.2
	SNR=149						
MHTO				S	Sn	08 53 52.6	-3.8
MAHB	Mahabad	9.56	329	*e*Pn	Pn	08 52 11.7	+0.2
ISFR	Sfrayin	9.79	30	*e*Pn	Pn	08 52 16.2	+1.5
DQM	DQM	10.15	148	P	Pn	08 52 19.1	-0.4
	SNR=15						
IKRD	Kardeh	10.30	37	*e*Pn	Pn	08 52 23.2	+8.4
IMYA	Miami	10.30	40	*e*Pn	Pn	08 52 22.8	+1.1
IHRS	Heris	10.40	338	*e*Pn	Pn	08 52 22.9	-0.1
HRA	Herat	10.50	55	Pn	Pn	08 52 25.9	+1.4
GEYT	Alibeck	10.57	28	Pn	Pn	08 52 26.3	+1.1
	comp=Z,2.0nm,0.3s,baz=214,slow=16,SNR=20						
GYA0B	ALIBECK ARRAY	10.57	28		Pn	08 52 25.0	-0.2
CUKT	Cukurca	10.98	323	*e*P	Pn	08 52 28.9	-2.0
IMRD	Marand	11.22	334	*e*Pn	Pn	08 52 34.3	+0.1
SIRT	Sirnak	11.80	320	*e*P	Pn	08 52 38.7	-3.4
GEVA	Gevas	12.07	325	Pn	Pn	08 52 44.6	-1.3
AKDM	Akdamar-Van	12.12	325	*e*P	Pn	08 52 45.6	-1.0
CLDR	Caldiran	12.32	330	*e*P	Pn	08 52 49.0	-0.3
MARD	Mardin	12.65	316	Pn	Pn	08 52 53.0	-0.8
GNI	Garni	12.84	335	Pn	Pn	08 52 59.9	+3.6
	comp=Z,0.7nm,0.3s,baz=49,slow=10,SNR=8.5						
GNI				LR	LR	08 58 43.0	
	comp=Z,187nm,18.3s,baz=153,slow=41						
GNI	Garni	12.84	335	*e*P	Pn	08 52 58.2	+1.9
GNI	Garni	12.84	335	⇑*e*P	Pn	08 52 55.7	-0.6
GNI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GNI	Garni	12.84	335	Pn	Pn	08 52 56.9	+0.6
SVAN	Silvan-Diyarba	12.96	319	*e*P	Pn	08 52 54.4	-3.5
AGRB	Hanur-Agry	13.09	328	*e*P	Pn	08 53 01.9	+2.1
AKT	Akhty	13.18	346	*de*P	Pn	08 53 03.1	+2.1
DYBB	Diyarbakir	13.45	316	*e*P	P	08 53 10.1	-3.8
BNGB	Bingl	13.83	321	*e*P	Pn	08 53 07.4	-2.5
SENK	Senkaya-Erzuru	14.17	329	*e*P	Pn	08 53 16.6	+2.0
YEDI	Yedisu-Bingol	14.22	322	*e*P	Pn	08 53 13.2	-2.1
SVRC	Sivrice-ELAZID	14.23	316	*e*P	Pn	08 53 12.7	-2.7
PTK	Pertek	14.51	318	*e*P	Pn	08 53 16.3	-2.9
MAK	Makhachkala	14.65	347	*e*P	Pn	08 53 18.8	-2.1
MAK				*e*S	Sn	08 55 59.9	-3.1
MAK				pmax	pmax		
	comp=Z,160nm,1.7s						
MAK				MLR	MLR		
	comp=Z,208nm,16.0s						
KOPT	Kop Dagi	14.66	323	Pn	Pn	08 53 21.4	0.0
MALT	Malatya	14.73	314	*e*P	Pn	08 53 21.1	-1.1
MMAI	Mount Meron Ar	14.78	291	Pn	Pn	08 53 22.4	-0.4
	comp=Z,1.6nm,0.3s,baz=105,slow=15,SNR=11						
MMAI				Sn	Sn	08 56 08.7	+2.3
	comp=Z,1.6nm,0.3s,baz=92,slow=21,SNR=2.9						
MMAI				LR	LR	09 00 21.2	
	comp=Z,579nm,18.7s,baz=105,slow=42						
EIL	Elat	14.81	278	Pn	Pn	08 53 25.1	+1.9
	comp=Z,0.7nm,0.3s,baz=22,slow=0.1,SNR=7.5						
EIL				LR	LR	09 00 08.5	
	comp=Z,945nm,18.3s,baz=95,slow=41						
DBC	Dubki	14.85	345	⇓*e*P	Pn	08 53 24.8	+1.1
GAZ	Gaziantep	14.91	308	*e*P	Pn	08 53 22.8	-1.8
GAZ	Gaziantep	14.91	308	Pn	Pn	08 53 23.1	-1.4
DVE	Vedeno	14.96	343	⇑*e*P	Pn	08 53 26.4	+1.3
DVE				pmax	pmax		
	comp=Z,19nm,1.0s						
ARPR	Arapgir-MALATY	15.27	316	*e*P	Pn	08 53 26.6	-2.8
TAHT	Tahtakopru-Hat	15.27	304	*e*P	Pn	08 53 29.3	0.0
GROC	Groznyy	15.27	343	*e*P	Pn	08 53 28.2	-1.0
GROC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KMRS	Kahramanmaras	15.29	309	*e*P	Pn	08 53 31.2	+1.6
ZEI	Tsey	15.46	337	*e*P	Pn	08 53 33.0	+1.1
ZEI				pmax	pmax		
	comp=Z,85nm,1.0s						
DARE	Darende-Malaty	15.49	313	*e*P	Pn	08 53 31.7	-0.5
DAMY	Dhamar	15.68	208	Pn	Pn	08 53 34.0	-1.1
KOZT	Kozan	16.02	307	*e*P	Pn	08 53 36.3	-2.8
NCK	Nalchik	16.19	338	⇑*e*P	Pn	08 53 42.1	+1.0
NCK				pmax	pmax		
	comp=Z,34nm,1.0s						
SOCY	Socotra	16.56	173	Pn	Pn	08 53 41.7	-4.3
SVSK	Karacayir	16.59	316	*e*P	P	08 53 47.6	-1.1
KBZ	Khabaz	16.63	337	Pn	P	08 53 48.2	-0.8
	comp=Z,0.4nm,0.3s,baz=143,slow=8.6,SNR=31						
KBZ				LR	LR	09 00 49.9	
	comp=Z,251nm,20.0s,baz=154,slow=39						
RSDY	Resadiye-TOKAT	16.69	318	*e*P	Pn	08 53 48.7	+1.1
CMRD	Camardi-Nigde	16.70	307	*e*P	Pn	08 53 48.4	+0.6
KIV	Kislovodsk	16.90	337	*c i*P	P	08 53 51.4	-0.9
KIV				pmax	pmax		
	comp=Z,40nm,1.1s						
KIV				MLR	MLR		
	comp=Z,163nm,21.0s						
KIV	Kislovodsk	16.90	337	P	P	08 53 51.6	-0.6
CSS	Mathiatis	16.94	296	*e*P	Pn	08 53 50.7	0.0
CSS	Mathiatis	16.94	296	P	Pn	08 53 50.5	-0.1
CSS				IAmb	IAmb	08 53 57.0	
	comp=Z,135nm,1.0s						
TOKT	Tokat	17.11	317	*e*P	Pn	08 53 52.5	-0.4
TOKA	Tokat	17.15	317	P	P	08 53 54.5	-0.5
THW	Thamme Wali	17.56	72	⇓P	Pn	08 53 57.6	-0.9
RPOR	Krasnaya Polya	17.62	331	*c i*P	P	08 54 00.7	+0.5
GOF	Gofitskoye	17.76	339	⇑*e*P	P	08 54 05.0	+3.4
SOC	Sochi	17.77	330	*e*P	P	08 54 01.4	-0.3
SOC				*e*		08 57 22.7	
SOC				pmax	pmax		
	comp=Z,32nm,0.9s						
SOC				MLR	MLR		
	comp=Z,258nm,11.0s						
CEP	Cherat	17.86	68	P	Pn	08 54 02.3	-0.1
KVT	Kavak	17.88	318	*e*P	P	08 54 03.1	+0.1
GUZR	Guzeripl'	17.93	331	*de*P	P	08 54 04.1	+0.6
GUZR				pmax	pmax		
	comp=Z,19nm,0.9s						
CORM	Corum	18.22	313	*e*P	P	08 54 08.3	+1.4
BRTR	Keskin Array B	18.62	311	P	P	08 54 11.4	+0.1
	comp=Z,0.9nm,0.3s,baz=132,slow=13,SNR=24						
BRTR				LR	LR	09 03 07.0	
	comp=Z,212nm,18.7s,baz=132,slow=42						
BRTR	Keskin Array B	18.62	311	*e*P	P	08 54 09.4	-1.9
BRTR	Keskin Array B	18.62	311	*i* P	P	08 54 11.5	+0.1
BRTR				pmax	pmax		
	comp=Z,27nm,0.9s						
BR131	Keskin Array S	18.62	311	P	P	08 54 10.0	-1.4
BR131				pmax	pmax		
	comp=Z,58nm,0.9s						
BR131	Keskin Array S	18.62	311	P	P	08 54 09.9	-1.4
LADK	Ladik-KONYA	18.80	305	*e*P	Pn	08 54 14.7	+0.9
NIL	Nilore	18.94	70	P	P	08 54 14.4	-0.3
NIL				pmax	pmax		
	comp=Z,102nm,0.9s						
NIL	Nilore	18.94	70	P	P	08 54 14.4	-0.3
NIL				IAmb	IAmb	08 54 21.4	
	comp=Z,102nm,0.9s						
ATD	Arta Tunnel	19.06	208	P	Pn	08 54 18.5	+1.5
	comp=Z,1.0nm,0.3s,baz=68,slow=8.9,SNR=7.0						
BR231	Keskin MP Arra	19.26	310	P	Pn	08 54 19.1	-0.2
ILGA	Ilgaz	19.28	314		P	08 54 18.5	-0.2
ANN	Anapa	19.74	328	*e*P	Pn	08 54 25.6	+0.7
ANN				*e*S	Sn	08 58 11.7	+5.3
ANN				pmax	pmax		
	comp=Z,137nm,1.7s						
AUSIV	SIVRIHISAR	19.91	308	*e*P	Pn	08 54 26.7	-0.4
IUG	Iuzhnay	19.91	43	*e*P	P	08 54 26.1	+0.7
	comp=Z,68nm,1.5s,baz=43						
IUG	Iuzhnay	19.91	43	*e*P	P	08 54 26.1	+0.7
IUG				pmax	pmax		
	comp=Z,68nm,1.5s						
SVRH	Sivrihisar-ESK	19.93	308	*e*P	Pn	08 54 26.7	-0.6
ISP	Isparta	20.00	303	P	P	08 54 23.5	-2.9
ISP				pmax	pmax		
	comp=Z,53nm,0.9s						
ISP	Isparta	20.00	303		P	08 54 23.5	-2.9
ELL	Elmali	20.11	299	P	P	08 54 26.8	-0.8
ELL				pmax	pmax		
	comp=Z,277nm,0.9s						
ELL	Elmali	20.11	299	P	P	08 54 26.8	-0.8
BRLS	Borolday	20.34	41	*e*P	P	08 54 28.1	-1.9
	comp=Z,56nm,1.0s,baz=41						
BRLS	Borolday	20.34	41	*e*P	P	08 54 28.0	-1.9
BRLS				pmax	pmax		
	comp=Z,56nm,1.0s						
MDUB	Mudurnu	20.62	310	P	P	08 54 33.7	+0.6
KK31	Karatay Array	20.77	41	P	P	08 54 35.1	+0.5
KK31				pmax	pmax		
	comp=Z,71nm,0.9s						
KK31	Karatay Array	20.77	41	P	P	08 54 35.1	+0.5
KK31				IAmb	IAmb	08 54 37.7	
	comp=Z,71nm,0.8s						
KKAR	Karatay Array	20.77	41	P	P	08 54 34.2	-0.5
KKAR				pmax	pmax		
	comp=Z,71nm,0.9s						
KKAR	Karatay Array	20.77	41	P	P	08 54 34.2	-0.5
KKAR				IAmb	IAmb	08 54 37.7	
	comp=Z,71nm,0.8s						
SRCK	Saricakaya, Es	20.81	308	*e*P	Pn	08 54 36.6	-0.9
DZA	Taraz	21.13	43	*e*P	P	08 54 38.9	+0.3
	baz=43						
DZA	Taraz	21.13	43	*e*P	P	08 54 38.8	+0.3
ABKAR	Akbulak array	21.43	15	P	P	08 54 41.2	-0.4
MANT	Manisa	21.68	303	P	P	08 54 45.2	+0.5
KARP	Karpathos	21.98	294	P	P	08 54 48.5	+0.8
AML	Almayashu	22.18	47	P	P	08 54 50.8	+0.6
	SNR=76						
AKTO	Aktyubinsk	22.20	10	P	P	08 54 51.0	+1.2
	comp=Z,41nm,0.8s,baz=204,slow=11,SNR=85						
AKTO				LR	LR	09 05 32.4	
	comp=Z,108nm,18.0s,baz=184,slow=42						
POO	Poona	22.51	112	*e*P	P	08 54 52.0	-1.5
EKS2	Erkin-Say	22.51	46	P	P	08 54 54.1	+0.7
	SNR=17						
KSH	Kashi	22.61	55	P	P	08 54 50.8	-3.8
KSH				sP	pP	08 54 59.0	-0.2
KSH				pmax	pmax		
	comp=Z,500nm,5.8s						
KSH				LR	LR		
	comp=Z,1µm,6.0s						
KSH				LR	LR		
	comp=Z,930nm,7.0s						
KSH				LR	LR		
	comp=Z,1µm,7.3s						
UCH	Uchtor	22.76	48	P	P	08 54 56.9	+0.4
	SNR=59						
AAK	Ala-Archa	22.95	47	P	P	08 54 59.0	+0.9
	comp=Z,29nm,0.9s,baz=225,slow=8.4,SNR=38						
AAK				ScP	ScP	09 02 25.5	+0.1
	comp=Z,2.6nm,0.7s,baz=250,slow=5.4,SNR=4.9						
AAK				LR	LR	09 04 16.4	
	comp=Z,120nm,18.2s,baz=260,slow=38						
AAK	Ala-Archa	22.95	47	P	P	08 55 00.5	+2.4
	SNR=33						
AAK	Ala-Archa	22.95	47	P	P	08 54 58.7	+0.5
AAK				IAmb	IAmb	08 55 08.4	
	comp=Z,49nm,0.8s						
KBK	Karagaybulak	23.25	47	P	P	08 55 02.8	+1.6
	SNR=49						
USP	Ospenovka	23.27	45	P	P	08 55 01.6	+0.3
	SNR=70						
CHMS	Chumysh	23.30	46	P	P	08 55 03.4	+1.9
	SNR=43						
SGDS	Sogindy	23.45	45	*e*P	P	08 55 03.8	+0.7
	comp=Z,35nm,1.7s,baz=45						
SGDS	Sogindy	23.45	45	*e*P	P	08 55 03.8	+0.7
SGDS				pmax	pmax		
	comp=Z,35nm,1.7s						
SANT	Santorini	23.49	296	⇑P	P	08 55 06.6	+3.1
SANT	Santorini	23.49	296	P	P	08 55 03.8	+0.3
APE	Apeiranthos	23.58	297	⇑*i*P	P	08 55 04.2	-0.2
APE				pmax	pmax		
	comp=Z,33nm,0.7s						
VRH	Novokhopyorsk	23.73	344	*e*P	P	08 55 06.6	+1.0
VRH				*e*S	S	08 59 17.8	-2.3
VRH				pmax	pmax		
	comp=Z,330nm,1.4s						
VRH				smax	smax		
	comp=E,2µm,5.5s						
IDI	Anoyia	23.76	293	P	P	08 55 07.0	+0.8
	comp=E,74nm,0.6s,baz=84,slow=10,SNR=20						
IDI				LR	LR	09 08 02.7	
	comp=E,78nm,21.1s,baz=80,slow=46						
IDI	Anoyia	23.76	293	⇑P	P	08 55 06.1	-0.1
IDI	Anoyia	23.76	293	P	P	08 55 07.0	+0.8
TKM2	Tokmak 2	23.80	47	P	P	08 55 07.3	+0.6
	SNR=30						
TKM2	Tokmak 2	23.80	47	*i* P	P	08 55 07.0	+0.4
TKM2				pmax	pmax		
	comp=Z,19nm,0.8s						
BELG	Belogornoye	23.87	354	P	P	08 55 07.6	+0.7
	comp=Z,121nm,1.1s,baz=50,slow=1.9,SNR=22						
BELG				S	S	08 59 22.9	+0.6
	comp=Z,31nm,1.0s,baz=299,slow=20,SNR=4.0						
BELG				LR	LR	09 06 35.6	
	comp=Z,143nm,18.3s,baz=167,slow=42						
ULHL	Ulahol	23.90	49	P	P	08 55 09.3	+1.6
	SNR=26						
BTLS	Baital	23.97	41	*e*P	P	08 55 08.0	0.0
	comp=Z,14nm,0.8s,baz=41						
BTLS	Baital	23.97	41	*e*P	P	08 55 08.0	0.0
BTLS				pmax	pmax		
	comp=Z,14nm,0.8s						
JURR	Jurilovca	24.30	317	⇑P	P	08 55 12.0	+1.0
ALN	Alexandroupoli	24.35	307	P	P	08 55 11.5	0.0
ALN				pmax	pmax		
	comp=Z,74nm,1.2s						
ALN	Alexandroupoli	24.35	307	P	P	08 55 11.5	0.0
ALN				IAmb	IAmb	08 55 19.7	
	comp=Z,74nm,1.2s						
TIRR	Tirgusor	24.41	316	⇑P	P	08 55 19.9	+7.9
TIRR	Tirgusor	24.41	316	P	P	08 55 12.8	+0.8
TIRR				pmax	pmax		
	comp=Z,258nm,1.4s						
TIRR	Tirgusor	24.41	316	P	P	08 55 12.8	+0.8
VSR	Storozhevoye	24.43	340	*e*P	P	08 55 11.6	-0.5

VSR				eS	S	08 59 30.1	-1.2
VSR				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR				smax	smax		
	comp=N,2µm,4.8s						
MTBS	Maitube	24.43	47	eP	P	08 55 13.4	+0.9
	baz=47						
MTBS	Maitube	24.43	47	eP	P	08 55 13.3	+0.9
TLCR		24.57	318	⇑P	P	08 55 18.5	+5.0
TLCR		24.57	318	⇑P	P	08 55 18.5	+5.0
TPGR	Topolog	24.62	317	⇑P	P	08 55 14.4	+0.4
TNSS	Tian-Shan	24.73	48	eP	P	08 55 16.5	+1.1
	baz=48						
TNSS	Tian-Shan	24.73	48	eP	P	08 55 16.5	+1.1
KUU	Kurty	24.74	46	eP	P	08 55 15.5	+0.4
	comp=N,82nm,1.3s,baz=46						
KUU				LR	LR	09 06 10.9	
	baz=46						
KUU	Kurty	24.74	46	eP	P	08 55 15.5	+0.4
KUU				pmax	pmax		
	comp=Z,82nm,1.3s						
AAA	Alma-Ata	24.78	48	eP	P	08 55 16.3	+0.7
	comp=Z,21nm,1.1s,baz=48						
AAA				LR	LR	09 05 52.0	
	comp=Z,321nm,13.0s,baz=48						
AAA	Alma-Ata	24.78	48	eP	P	08 55 16.2	+0.7
AAA				pmax	pmax		
	comp=Z,21nm,1.1s						
AAA				MLR	MLR		
	comp=Z,321nm,13.0s						
VORR	Voronezh	24.82	341	eP	P	08 55 16.0	+0.3
VORR				pmax	pmax		
	comp=Z,600nm,1.6s						
HARR	Harsova	24.83	316	⇑P	P	08 55 16.5	+0.7
HARR	Harsova	24.83	316	⇑P	P	08 55 16.5	+0.7
MDOK	Medeo	24.85	48	eP	P	08 55 17.0	+0.7
	baz=48						
MDOK				LR	LR	09 05 41.8	
	comp=Z,393nm,12.1s,baz=48						
MDOK	Medeo	24.85	48	eP	P	08 55 16.9	+0.7
MDOK				MLR	MLR		
	comp=Z,393nm,12.0s						
CFR	Carcaliu	24.97	318	⇓P	P	08 55 17.6	+0.6
CFR	Carcaliu	24.97	318	⇓P	P	08 55 17.6	+0.6
CHKK	Chushkaly	25.13	46	eP	P	08 55 19.1	+0.5
	baz=46						
CHKK	Chushkaly	25.13	46	eP	P	08 55 19.1	+0.5
TUDR		25.47	318	⇑P	P	08 55 24.6	+3.0
VARL	Varlezi	25.53	319	⇑P	P	08 55 25.0	+2.9
MILM	Milestii Mici	25.58	322	⇑P	P	08 55 22.0	-0.6
KIS	Kishinev	25.63	322	eP	P	08 55 33.0	+10
	comp=Z,10.0nm,0.6s						
KIS	Kishinev	25.63	322	eP	P	08 55 33.0	+10
KIS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SATY	Saty	25.70	49	eP	P	08 55 24.5	+0.6
	comp=Z,24nm,1.3s,baz=49						
SATY	Saty	25.70	49	eP	P	08 55 24.5	+0.6
SATY				pmax	pmax		
	comp=Z,24nm,1.3s						
SULR		25.85	315	⇑P	P	08 55 27.0	+2.0
BIR	Birlad	25.87	319	⇓P	P	08 55 25.4	+0.2
BIR	Birlad	25.87	319	⇓P	P	08 55 25.4	+0.2
ISR	Istrita	25.89	316	⇓P	P	08 55 25.4	-0.1
ISR	Istrita	25.89	316	⇓P	P	08 55 25.4	-0.1
VASR	Vaslui	25.99	320	⇑P	P	08 55 27.6	+1.3
BISRR	Bisoca	26.01	317	⇑P	P	08 55 29.1	+2.5
KPKS	Kokpek	26.05	48	eP	P	08 55 27.5	+0.4
	comp=Z,50nm,1.1s,baz=48						
KPKS	Kokpek	26.05	48	eP	P	08 55 27.5	+0.4
KPKS				pmax	pmax		
	comp=Z,50nm,1.1s						
VRI	Vrincioaia	26.17	318	⇓P	P	08 55 29.3	+1.3
VRI	Vrincioaia	26.17	318	⇓P	P	08 55 29.3	+1.3
PLOR	Plostina	26.21	318	⇓P	P	08 55 29.7	+1.3
PLOR	Plostina	26.21	318	⇓P	P	08 55 29.7	+1.3
COPA	Copaceanca	26.25	313	⇓P	P	08 55 31.3	+2.6
ITM	Ithomi	26.43	296	P	P	08 55 31.4	+0.9
ITM				IAmb	IAmb	08 55 42.9	
	comp=Z,69nm,0.9s						
IAS	Iasi	26.43	321	⇓P	P	08 55 32.9	+2.6
IAS	Iasi	26.43	321	⇓P	P	08 55 32.9	+2.6
SHLS	Shalkode	26.44	50	eP	P	08 55 33.4	+2.8
	comp=Z,29nm,0.8s,baz=50						
SHLS	Shalkode	26.44	50	eP	P	08 55 33.4	+2.8
SHLS				pmax	pmax		
	comp=Z,29nm,0.8s						
MLR	Muntele Rosu	26.45	316	P	P	08 55 32.7	+2.1
	comp=Z,30nm,0.9s,baz=336,slow=6.6,SNR=14						
MLR				LR	LR	09 08 40.3	
	comp=Z,265nm,21.2s,baz=149,slow=42						
MLR	Muntele Rosu	26.45	316	⇑P	P	08 55 34.5	+3.8
MLR	Muntele Rosu	26.45	316	P	P	08 55 32.0	+1.4
MLR				pmax	pmax		
	comp=Z,63nm,1.1s						
MLR	Muntele Rosu	26.45	316	P	P	08 55 32.0	+1.4
MLR				IAmb	IAmb	08 55 46.2	
	comp=Z,63nm,1.1s						
AGG	Agios Georgios	26.50	301	P	P	08 55 31.4	+0.3
AGG				pmax	pmax		
	comp=Z,98nm,1.4s						
AGG	Agios Georgios	26.50	301	P	P	08 55 31.4	+0.3
AGG				IAmb	IAmb	08 55 35.0	
	comp=Z,98nm,1.4s						
TESR	Tescani	26.57	319	⇓P	P	08 55 32.3	+0.7
SORM	Soroca	26.58	323	⇓P	P	08 55 31.1	-0.5
SORM	Soroca	26.58	323	⇓P	P	08 55 31.1	-0.5
TDK	Taldyqorghan	26.58	45	eP	P	08 55 31.7	0.0
	comp=Z,41nm,0.8s,baz=45						
TDK				LR	LR	09 06 55.7	
	comp=Z,354nm,12.9s,baz=45						
TDK	Taldyqorghan	26.58	45	eP	P	08 55 31.7	0.0
TDK				pmax	pmax		
	comp=Z,41nm,0.8s						
TDK				MLR	MLR		
	comp=Z,354nm,13.0s						
LIT	Litokhoron	26.66	303	P	P	08 55 32.7	+0.2
LIT				pmax	pmax		
	comp=Z,41nm,1.0s						
LIT	Litokhoron	26.66	303	P	P	08 55 32.7	+0.2
LIT				IAmb	IAmb	08 55 43.3	
	comp=Z,41nm,1.0s						
OZUR		26.85	317	⇑P	P	08 55 34.9	+0.7
HYB	Hyderabad	26.93	109	i P	P	08 55 37.0	+1.8
VTS	Vitosha	26.94	309	⇓P	P	08 55 36.5	+1.3
VTS	Vitosha	26.94	309	⇓P	P	08 55 36.5	+1.3
VAY	Valandovo	26.96	306	i P	P	08 55 36.5	+1.3
VOIR		26.96	316	⇓P	P	08 55 36.9	+1.6
VOIR		26.96	316	⇓P	P	08 55 36.9	+1.6
DOPR	Dopca	27.02	317	⇑P	P	08 55 36.7	+1.0
BIZ	Bicaz	27.11	319	⇓P	P	08 55 37.8	+1.3
ARR	Arges	27.19	315	⇓P	P	08 55 38.1	+0.8
PYUN	Piuthan	27.34	84	eP	P	08 55 39.7	+0.7
	comp=Z,92nm,0.5s						
FNA	Florina	27.66	304	P	P	08 55 42.2	+0.7
FNA				pmax	pmax		
	comp=Z,33nm,1.0s						
FNA	Florina	27.66	304	P	P	08 55 42.2	+0.7
FNA				IAmb	IAmb	08 56 03.4	
	comp=Z,32nm,1.0s						
SRE	Strehaia	27.77	313	⇓P	P	08 55 43.6	+1.1
SRE	Strehaia	27.77	313	⇓P	P	08 55 43.6	+1.1
AKASG	Malin Array Be	27.83	328	P	P	08 55 42.5	-0.4
	comp=Z,6.3nm,0.6s,baz=129,slow=7.7,SNR=42						
AKBB	Malin Array Si	27.83	328	P	P	08 55 42.6	-0.2
AKBB				pmax	pmax		
	comp=Z,27nm,1.0s						
AKBB	Malin Array Si	27.83	328	P	P	08 55 42.6	-0.2
AKBB				IAmb	IAmb	08 55 52.0	
	comp=Z,27nm,0.9s						
BRVK	Borovoye	27.86	24d	iP	P	08 55 43.8	+0.7
BRVK				pmax	pmax		
	comp=Z,17nm,0.9s						
BRVK	Borovoye	27.86	24	P	P	08 55 42.6	-0.5
BVAR	Borovoye Array	27.87	24	P	P	08 55 41.7	-1.6
	comp=Z,6.2nm,0.6s,baz=92,slow=28,SNR=24						
BVAR				PcP	PcP	08 58 58.1	-0.7
	comp=Z,2.3nm,0.6s,baz=225,slow=0.4,SNR=6.2						
KOLN	Koldanda	27.93	84	eP	P	08 55 44.5	+0.3
	comp=Z,208nm,1.3s						
DANN	Dangsing	27.98	83	eP	P	08 55 45.7	+0.9
	comp=Z,283nm,0.7s						
BURAR	Bucovina Array	27.99	320	⇑P	P	08 55 45.4	+1.0
BURAR	Bucovina Array	27.99	320	⇑P	P	08 55 45.4	+1.0
BUR08	Bucovina Ar. S	28.01	320	P	P	08 55 43.1	-1.5
ARU	Arti	28.11	8	P	P	08 55 46.9	+1.6
	comp=Z,1.3nm,0.5s,baz=168,slow=4.5,SNR=8.5						
ARU	Arti	28.11	8d	iP	P	08 55 47.4	+2.1
ARU						08 56 36.4	
ARU				S	S	09 00 35.2	+5.6
ARU				SS	SnSn	09 01 47.4	+2.1
ARU				pmax	pmax		
	comp=Z,22nm,1.5s						
ARU	Arti	28.11	8	P	P	08 55 44.8	-0.5
OHR	Ohrid	28.17	304	i P	P	08 55 50.6	+4.5
CJR	Cluj-Napoca	28.47	317	⇑P	P	08 55 48.7	0.0
CJR	Cluj-Napoca	28.47	317	⇑P	P	08 55 48.7	0.0
OBN	Obninsk	28.61	342	P	P	08 55 50.5	+0.8
	comp=Z,2.0nm,0.3s,baz=116,slow=14,SNR=4.5						
OBN	Obninsk	28.61	342c	iP	P	08 55 50.4	+0.7
OBN				i		08 56 36.8	
OBN				eS	S	09 00 38.3	+0.9
OBN				eSS	SnSn	09 02 16.5	+19
OBN				pmax	pmax		
	comp=Z,51nm,1.7s						
OBN				MLR	MLR		
	comp=Z,106nm,17.0s						
SVE	Sverdlovsk	28.78	10	eP	P	08 55 52.5	+1.2
SVE				pmax	pmax		
	comp=Z,24nm,1.4s						
MDVR	Moldovita	28.79	312	⇓P	P	08 55 51.9	+0.4
GKN	Gorkha	28.80	83	eP	P	08 55 52.0	+0.1
MOS	Moscow	28.88	343	eP	P	08 55 51.4	-0.7
MOS				e		08 56 09.5	
MOS				e		08 56 54.4	
MOS				eS	S	09 00 42.7	+1.0
MOS				pmax	pmax		
	comp=Z,61nm,1.5s						
DRGR		29.04	316	⇓P	P	08 55 54.5	+0.7
DRGR		29.04	316	⇓P	P	08 55 54.5	+0.7
BZS	Buzias	29.20	314	⇑P	P	08 55 55.6	+0.6
BZS	Buzias	29.20	314	⇑P	P	08 55 55.7	+0.6
DMN	Daman	29.27	84	eP	P	08 55 56.5	+0.2
	comp=Z,29nm,0.5s						
KKN	Kakani	29.39	84	eP	P	08 55 57.5	+0.2
	comp=Z,78nm,0.6s						
SIRR	Siria	29.45	315	⇓P	P	08 55 58.8	+1.4
PKIN	Phulchoki	29.53	84	eP	P	08 55 58.6	0.0
	comp=Z,77nm,0.8s						
PKI	Pulchoki	29.54	84	eP	P	08 55 58.8	+0.1
	comp=Z,177nm,1.1s						
MAKZ	Makanchi	29.62	44	P	P	08 55 59.0	+0.1
MAKZ				pmax	pmax		
	comp=Z,41nm,1.0s						
MAKZ	Makanchi	29.62	44	P	P	08 55 59.0	+0.1
MAKZ				IAmb	IAmb	08 56 02.1	
	comp=Z,41nm,1.0s						
PDG	Podgorica	29.66	306	⇓P	P	08 56 04.0	+4.8
KURBB	Kurchatov Arra	29.72	35	P	P	08 56 00.4	+0.7
	comp=Z,14nm,0.8s,baz=235,slow=8.6,SNR=7.9						
KURBB				PcP	PcP	08 59 03.0	-0.4
	comp=Z,2.7nm,0.7s,baz=237,slow=3.1,SNR=4.7						
KURBB				ScP	ScP	09 02 44.0	-0.9
	comp=Z,1.6nm,0.8s,baz=242,slow=3.1,SNR=4.7						
MK31	Makanchi Array	29.81	44	i P	P	08 56 00.8	+0.2
MK31				pmax	pmax		
	comp=Z,27nm,0.8s						
MK31	Makanchi Array	29.81	44	P	P	08 56 00.7	+0.1
MK31				IAmb	IAmb	08 56 03.6	
	comp=Z,25nm,0.9s						
MKAR	Makanchi Array	29.81	44	P	P	08 56 01.3	+0.7
	comp=Z,19nm,0.8s,baz=232,slow=6.0,SNR=67						
MKAR				PcP	PcP	08 59 04.0	+0.2
	comp=Z,2.3nm,0.6s,baz=229,slow=1.7,SNR=4.9						
MKAR				ScP	ScP	09 02 44.9	-0.4
	comp=Z,1.4nm,0.9s,baz=251,slow=3.7,SNR=4.0						
MKAR				LR	LR	09 09 26.5	
	comp=Z,101nm,18.6s,baz=236,slow=39						
KURK	Kurchatov	29.82	35	P	P	08 56 00.4	-0.2
KURK						08 59 03.0	
LVV	L'vov	29.87	323	eP	P	08 56 00.6	-0.4
LVV				e		09 00 53.5	
GUN	Gumba	29.89	83	eP	P	08 56 02.2	+0.3
	comp=Z,118nm,0.8s						
KIRV	Kirov	29.92	357	P	P	08 56 02.6	+1.3
	comp=Z,16nm,0.5s,baz=164,slow=1.3,SNR=5.5						
KOLS	Kolonicke sedl	30.35	320	eP	P	08 56 06.9	+1.6
KOLS				pmax	pmax		
	comp=Z,52nm,1.7s						
KOLS	Kolonicke sedl	30.35	320	eP	P	08 56 06.9	+1.6
SEM	Semipalatinsk	30.48	37	eP	P	08 56 07.3	+0.6
	comp=Z,9.4nm,0.9s,baz=37						
SEM	Semipalatinsk	30.48	37	eP	P	08 56 07.3	+0.6
SEM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RAMN	Ramite	30.70	85	eP	P	08 56 08.3	-0.6
	comp=Z,42nm,0.7s						
TIP	Timpagrande	30.78	299	P	P	08 56 07.7	-1.6
CRVS	Cervenica-Dubn	30.80	319	eP	P	08 56 10.5	+1.2
CRVS				pmax	pmax		
	comp=Z,45nm,1.2s						
CRVS	Cervenica-Dubn	30.80	319	eP	P	08 56 10.5	+1.2
MNK	Minsk	31.10	333	i P	P	08 56 09.0	-2.8
	comp=E,2.0nm,0.9s						
MNK				i P	P	08 56 09.0	-2.8
	comp=N,6.0nm,0.9s						
MNK				i P	P	08 56 09.0	-2.8
	comp=Z,13nm,0.9s						
MNK				i PP	PnPn	08 57 10.2	-3.0
MNK				i PPP	PPP	08 57 19.0	
MNK				i PcP	PcP	08 59 04.2	-2.7
MNK				i S	S	09 01 13.5	-3.1
MNK				i ScP	ScP	09 02 47.1	-2.1
MNK				i PcS	PcS	09 02 48.4	-2.3
MNK				i SS	SnSn	09 02 57.2	-0.8
MNK				i SSS	SSS	09 03 12.3	
MNK				i LQ	LQ	09 05 31.6	
MNK				i ScS	ScS	09 05 55.8	-50
MNK				i LR	LR	09 08 36.4	
MNK				i LRM	MLR	09 10 46.7	
	comp=Z,111nm,17.8s						
MNK				i LRM	MLR	09 10 49.9	
	comp=N,87nm,17.8s						
MNK				i LRM	MLR	09 11 14.1	
	comp=E,19nm,17.8s						
KECS	Kecovo	31.17	318	eP	P	08 56 13.8	+1.3
KECS				pmax	pmax		
	comp=Z,14nm,0.9s						
KECS	Kecovo	31.17	318	eP	P	08 56 13.8	+1.3
PSZ	Piszkesteto	31.26	317	⇓P	P	08 56 19.2	+5.8
PSZ	Piszkesteto	31.26	317	eP	P	08 56 18.7	+5.3
PSZ	Piszkesteto	31.26	317	⇓P	P	08 56 19.2	+5.8
ODAN	Odare	31.41	85	eP	P	08 56 14.4	-0.7
	comp=Z,52nm,1.1s						
TAPN	Taplejung	31.59	84	eP	P	08 56 16.5	-0.3
	comp=Z,15nm,0.5s						
BUD	Budapest	31.60	315	eP	P	08 56 17.3	+1.0
ZSN	Zaisan	31.68	45	eP	P	08 56 16.8	-0.3
	baz=45						
ZSN	Zaisan	31.68	45	eP	P	08 56 16.7	-0.3
NACGM	Naroch	31.84	332	i P	P	08 56 18.4	+0.2
NACGM				i P	P	08 56 18.4	+0.2
NACGM				i P	P	08 56 18.4	+0.2
NACGM				i Pb	sP	08 56 27.4	+2.2
	comp=Z,15nm,0.6s						
NACGM				i PP	PnPn	08 57 22.8	0.0
NACGM				i PPP	PPP	08 57 32.0	
NACGM				i S	S	09 01 29.9	+1.9
NACGM				i SS	ScP	09 02 27.6	-24
NACGM				i SSS	SSS	09 03 43.0	
NACGM				i LQ	LQ	09 07 11.6	
NACGM				i LR	LR	09 08 39.6	
CSKK	Cskako	32.03	315	eP	P	08 56 21.0	+0.9
VYHS	Vyhne	32.15	317	eP	P	08 56 21.6	+0.4
VYHS				pmax	pmax		
	comp=Z,16nm,1.1s						
VYHS	Vyhne	32.15	317	eP	P	08 56 21.6	+0.4
SRO	Srobarova	32.18	316	eP	P	08 56 22.7	+1.3
SRO				pmax	pmax		
	comp=Z,24nm,1.2s						
SRO	Srobarova	32.18	316	eP	P	08 56 22.7	+1.3
WMQ	Urumqi	32.30	52	eP	P	08 56 24.4	+1.8
WMQ				sP	sP	08 56 34.1	+4.4
WMQ				pmax	pmax		
	comp=Z,43nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.9s						
WMQ				LR	LR		
	comp=Z,840nm,28.9s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
WMQ	Urumqi	32.30	52	P	P	08 56 21.3	-1.3
WMQ				pmax	pmax		
	comp=Z,33nm,0.9s						
WMQ	Urumqi	32.30	52	P	P	08 56 21.3	-1.3
WMQ				IAmb	IAmb	08 56 25.9	
	comp=Z,33nm,0.9s						
IIGN	Ignalina	32.38	333	eP	P	08 56 23.6	+0.6
OJC	Ojcow	32.39	320	P	P	08 56 21.9	-1.4
OJC				pmax	pmax		
	comp=Z,37nm,1.2s						
OJC	Ojcow	32.39	320	P	P	08 56 21.9	-1.4
OJC				IAmb	IAmb	08 56 26.4	
	comp=Z,37nm,1.2s						
MPLH	Magyarpolny	32.41	314	eP	P	08 56 23.5	+0.1
ISAL	Salakas	32.57	333	eP	P	08 56 25.1	+0.4
EGYH	Egyhazaskeszo	32.63	314	eP	P	08 56 22.7	-2.7
BEHE	Becsehely	32.64	313	eP	P	08 56 26.7	+1.2
SUW	Suwalki	32.80	328	eP	P	08 56 26.5	-0.2
SUW	Suwalki	32.80	328	P	P	08 56 25.9	-0.9
SUW				pmax	pmax		
	comp=Z,50nm,1.0s						
SUW	Suwalki	32.80	328	P	P	08 56 25.9	-0.9
KMBO	Kilima Mbogo	32.81	208	P	P	08 56 29.2	+1.8
	comp=Z,3.0nm,0.9s,baz=13,slow=11,SNR=6.2						
JAVC	Velka Javorina	33.00	317	eP	P	08 56 30.0	+1.3
SMOL	Smolenice	33.01	316	eP	P	08 56 29.0	+0.4
SMOL				pmax	pmax		
	comp=Z,14nm,1.4s						
SMOL	Smolenice	33.01	316	eP	P	08 56 29.0	+0.4
MODS	Modra-Piesok	33.04	316	eP	P	08 56 28.8	-0.2
MODS				pmax	pmax		
	comp=Z,40nm,1.6s						
MODS	Modra-Piesok	33.04	316	eP	P	08 56 28.8	-0.2
OKC	Ostrava-Krasne	33.15	319	eP	P	08 56 30.6	+0.7
OKC	Ostrava-Krasne	33.15	319	eP	P	08 56 30.6	+0.7
KLMR	Klimovskoe	33.20	349	eP	P	08 56 28.4	-1.7
KLMR				eS	S	09 01 46.0	-3.1
KLMR				pmax	pmax		
	comp=Z,67nm,1.2s						
KLMR	Klimovskoe	33.20	349	eP	P	08 56 28.5	-1.7
KLMR				eP	P	08 56 28.5	-1.7
KLMR				eP	P	08 56 28.5	-1.7
KLMR				AMP		08 56 33.2	
	comp=Z,67nm,1.2s						
KLMR				eS	S	09 01 46.1	-3.1
KLMR				eS	S	09 01 46.1	-3.1
SOP	Sopron	33.22	315	eP	P	08 56 31.7	+1.2
PABE	Paberze	33.42	331	eP	P	08 56 32.3	+0.2
MORC	Moravsky Berou	33.48	318	⇓P	P	08 56 32.8	0.0
MORC	Moravsky Berou	33.48	318	eP	P	08 56 32.8	0.0
MORC	Moravsky Berou	33.48	318	⇓P	P	08 56 32.8	0.0
MORC	Moravsky Berou	33.48	318	P	P	08 56 31.8	-1.0
MORC				IAmb	IAmb	08 56 42.2	
	comp=Z,14nm,0.8s						
ARSA	Arzberg	33.72	313	eP	P	08 56 35.6	+0.7
	comp=Z,3.7nm,0.7s						
CONA	Conrad Observa	33.74	315	i P	P	08 56 35.8	+0.6
	comp=Z,3.1nm,0.6s,SNR=5.5						
VRAC	Vranov	33.84	317	P	P	08 56 36.5	+0.6
	comp=Z,6.5nm,0.7s,baz=124,slow=9.3,SNR=12						
VRAC	Vranov	33.84	317	⇑P	P	08 56 36.5	+0.6
VRAC	Vranov	33.84	317	eP	P	08 56 36.3	+0.4
SOKA	Soboth	33.84	312	eP	P	08 56 36.6	+0.6
	comp=Z,3.0nm,0.7s						
KRUC	Moravsky	33.85	317	eP	P	08 56 36.1	+0.1
KRLC	Kraliky	34.05	319	eP	P	08 56 37.0	-0.8
KRLC	Kraliky	34.05	319	eP	P	08 56 37.0	-0.8
OBKA	Obir	34.10	312	eP	P	08 56 38.7	+0.4
	comp=Z,5.1nm,0.9s						
DGZ	Jazzator, Alta	34.16	42d	iP	P	08 56 39.9	+1.0
DGZ				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	Lhasa	34.19	79	P	P	08 56 40.3	+0.6
LSA				pmax	pmax		
	comp=Z,70nm,0.9s						
DPC	Dobruska-Polom	34.43	319	eP	P	08 56 41.1	0.0
VSU	Vasula	34.46	337	eP	P	08 56 41.2	+0.1
VSU	Vasula	34.46	337	⇑eP	P	08 56 41.9	+0.8
VSU				pmax	pmax		
	comp=Z,32nm,0.9s						
OSTC	Ostas	34.58	319	eP	P	08 56 42.0	-0.4
PBUR	Paburge	34.63	330	eP	P	08 56 42.9	+0.3
MURB	Monte Urbino	34.66	305	P	P	08 56 43.6	+0.4
UPC	Upice	34.68	319	eP	P	08 56 42.8	-0.4
UPC	Upice	34.68	319	eP	P	08 56 42.8	-0.4
CHVC	Chvalec	34.69	319	eP	P	08 56 43.1	-0.2
MOA	Molln	34.72	314	eP	P	08 56 44.0	+0.5
	comp=Z,6.9nm,0.7s						
MYKA	Terra Mystica	34.73	312	eP	P	08 56 45.1	+1.3
	comp=Z,2.2nm,0.4s						
ZAA0	Zalesovo Array	34.80	34	P	P	08 56 44.1	0.0
ZAA0				IAmb	IAmb	08 56 46.5	
	comp=Z,30nm,0.8s						
ZALV	Zalesovo Beam	34.80	34	P	P	08 56 44.3	+0.2
	comp=Z,25nm,0.8s,baz=243,slow=8.5,SNR=58						
ZALV				ScP	ScP	09 03 01.6	-0.5
	comp=Z,1.1nm,0.5s,baz=225,slow=6.1,SNR=3.8						
ZALV				LR	LR	09 13 43.1	
	comp=Z,116nm,20.0s,baz=235,slow=41						
LATE	Laterza	35.05	304	P	P	08 56 47.3	+0.7
LATE				IAmb	IAmb	08 56 50.2	
	comp=Z,43nm,1.1s						
KBA	Koelnbreinsper	35.06	312	i P	P	08 56 46.4	-0.4
	comp=Z,7.4nm,0.6s,SNR=7.7						
STAL	STALIGIAL	35.24	311	P	P	08 56 46.7	-1.4
STAL				IAmb	IAmb	08 56 57.4	
	comp=Z,44nm,1.4s						
PRU	Pruhonice	35.33	317	eP	P	08 56 51.5	+2.7
PRU				e		08 57 00.0	
PRU	Pruhonice	35.33	317	eP	P	08 56 48.5	-0.3
GERES	GERESS Array B	35.42	315	P	P	08 56 49.6	0.0
	comp=Z,2.6nm,0.6s,baz=108,slow=8.6,SNR=21						
GERES				PcP	PcP	08 59 19.7	+0.4
	comp=Z,1.0nm,0.6s,baz=128,slow=2.2,SNR=3.8						
GERES				ScP	ScP	09 03 05.1	+0.5
	comp=Z,0.8nm,0.9s,baz=90,slow=4.0,SNR=4.3						
GERES				LR	LR	09 13 24.5	
	comp=Z,147nm,19.7s,baz=110,slow=40						
MBAR	Mbarara	35.48	218	⇑eP	P	08 56 51.7	+1.1
MBAR				pmax	pmax		
	comp=Z,12nm,0.9s						
ABTA	Abfaltersbach	35.51	311	eP	P	08 56 51.2	+0.7
	comp=Z,7.4nm,0.8s						
VALR	Valaam	35.52	343	⇓iP	P	08 56 49.5	-0.7
VALR				pmax	pmax		
	comp=Z,48nm,0.9s						
PVCC	Panska Ves	35.53	318	eP	P	08 56 50.4	-0.1
PVCC	Panska Ves	35.53	318	eP	P	08 56 50.4	-0.1
SLIT	Slitere, Latvi	35.53	333	eP	P	08 56 50.7	+0.4
PBCC	Pribram	35.54	317	eP	P	08 56 50.3	-0.3
KHC	Kasperske Hory	35.59	316	⇓iP	P	08 56 51.4	+0.3
KHC				pmax	pmax		
	comp=Z,54nm,1.3s						
KHC	Kasperske Hory	35.59	316	eP	P	08 56 51.5	+0.3
KHC				ex	x	08 57 00.0	
KHC	Kasperske Hory	35.59	316	P	P	08 56 50.6	-0.5
KHC				IAmb	IAmb	08 56 56.3	
	comp=Z,38nm,1.5s						
SHL	Shillong	35.63	85	P	P	08 56 50.6	-1.3
SHL				pmax	pmax		
	comp=Z,25nm,1.0s						
SHL	Shillong	35.63	85	P	P	08 56 50.6	-1.3
SHL				IAmb	IAmb	08 56 53.7	
	comp=Z,25nm,1.0s						
MTSE	Matsula	35.69	335	eP	P	08 56 51.9	+0.2
CTI	Castel Tesino	35.90	310	P	P	08 56 53.9	0.0
CTI				pmax	pmax		
	comp=Z,18nm,0.9s						
CTI	Castel Tesino	35.90	310	P	P	08 56 53.9	0.0
CTI				IAmb	IAmb	08 57 00.0	
	comp=Z,18nm,0.9s						
ZCCA	Zocca	35.98	307	P	P	08 56 55.5	+1.0
BRG	Berggiesshubel	36.03	319	i P	P	08 56 54.7	0.0
BRG				Amp		08 56 57.6	
	comp=Z,5.6nm,0.8s						
BRG				ex	x	08 57 03.2	
BRG				Amp		08 57 04.9	
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	36.03	319	i P	P	08 56 54.7	0.0
BRG				e		08 57 03.1	
BRG				pmax	pmax		

	comp=Z,6.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**36.03**	**319**	*i* P	**P**	**08 56 54.7**	**0.0**
BRG				Amp		08 56 57.6	
	comp=Z,5.6nm,0.8s						
BRG				*e*x	x	08 57 03.2	
BRG				Amp		08 57 04.9	
	comp=Z,12nm,0.9s						
WATA	**Walderalm**	**36.29**	**312**	*i* P	**P**	**08 56 56.6**	**-0.6**
	comp=Z,18nm,0.5s,SNR=8.7						
VSL	**Villasalto**	**36.50**	**299**	P	**P**	**08 56 57.0**	**-1.9**
SQTA	**Sankt Quirin**	**36.50**	**312**	*i* P	**P**	**08 56 58.6**	**-0.4**
	comp=Z,20nm,0.7s,SNR=10						
PRMA	**PARMA**	**36.52**	**307**	P	**P**	**08 56 57.7**	**-1.4**
PRMA				IAmb	IAmb	08 57 11.1	
	comp=Z,52nm,1.2s						
MOTA	**Moosalm**	**36.60**	**312**	*i* P	**P**	**08 56 59.3**	**-0.6**
	comp=Z,9.7nm,0.5s,SNR=9.4						
NKC	**Novy Kostel**	**36.67**	**317**	*e*P	**P**	**08 57 00.7**	**+0.4**
NKC	**Novy Kostel**	**36.67**	**317**	*e*P	**P**	**08 57 00.7**	**+0.4**
CLL	**Collm**	**36.75**	**319**	*i* P	**P**	**08 57 00.9**	**0.0**
	comp=Z,19nm,1.1s						
CLL				*i* pP	**pP**	**08 57 03.6**	**-2.2**
	comp=Z,28nm,1.2s						
CLL				*i*		08 57 09.5	
	comp=Z,32nm,1.1s						
CLL				*e*PP	**PnPn**	**08 58 24.0**	**-0.4**
CLL	**Collm**	**36.75**	**319**	P	**P**	**08 56 59.6**	**-1.3**
CLL				pmax	pmax		
	comp=Z,25nm,1.0s						
CLL	**Collm**	**36.75**	**319**	P	**P**	**08 56 59.5**	**-1.3**
CLL				IAmb	IAmb	08 57 10.8	
	comp=Z,25nm,1.0s						
FETA	**Feichten**	**36.76**	**311**	*i* P	**P**	**08 57 01.4**	**+0.1**
	comp=Z,12nm,0.8s,SNR=9.5						
RETA	**Reutte**	**36.87**	**312**	*e*P	**P**	**08 57 01.1**	**-0.9**
	comp=Z,6.5nm,0.6s						
FINES	**FINESS Array B**	**36.95**	**340**	P	**P**	**08 57 02.5**	**0.0**
	comp=Z,13nm,0.5s,baz=144,slow=8.9,SNR=135						
FINES				LR	LR	09 15 01.2	
	comp=Z,178nm,18.0s,baz=138,slow=41						
FUORN	**Ofenpass-Fuorn**	**36.97**	**310**	P	**P**	**08 57 02.6**	**-0.6**
GRA1	**Grafenberg Arr**	**37.23**	**316**	P	**P**	**08 57 04.1**	**-0.9**
GRA1				IAmb	IAmb	08 57 18.3	
	comp=Z,22nm,0.7s						
GRF	**Grafenberg Arr**	**37.23**	**316**	P	**P**	**08 57 04.1**	**-0.9**
GRF				pmax	pmax		
	comp=Z,22nm,0.7s						
GRF	**Grafenberg Arr**	**37.23**	**316**	*e*P	**P**	**08 57 05.2**	**+0.1**
	comp=Z,13nm,1.1s,baz=109,slow=9.6						
DAVOX	**Davos/Dischmat**	**37.27**	**311**	P	**P**	**08 57 05.7**	**+0.1**
	comp=Z,9.4nm,0.6s,baz=83,slow=1.7,SNR=19						
DAVA	**Damuels**	**37.39**	**311**	*i* P	**P**	**08 57 06.3**	**-0.3**
	comp=Z,29nm,0.6s,SNR=16						
BSD	**Bornholm Skovb**	**37.40**	**325**	IAmb	IAmb	08 57 06.1	
	comp=Z,18nm,0.7s						
BFO	**Black Forest**	**38.66**	**313**	P	**P**	**08 57 15.8**	**-1.4**
BFO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BFO	**Black Forest**	**38.66**	**313**	P	**P**	**08 57 15.8**	**-1.4**
SENIN	**Lac Senin/Sane**	**38.91**	**309**	P	**P**	**08 57 18.4**	**-1.2**
BNI	**Bardonecchia**	**39.12**	**307**	P	**P**	**08 57 19.6**	**-1.6**
BNI				pmax	pmax		
	comp=Z,75nm,1.4s						
BNI	**Bardonecchia**	**39.12**	**307**	P	**P**	**08 57 19.6**	**-1.6**
BNI				IAmb	IAmb	08 57 27.2	
	comp=Z,75nm,1.4s						
SET	**Setif**	**39.62**	**293**	P	**P**	**08 57 29.0**	**+3.6**
WLF	**Walferdange**	**40.38**	**314**	κP	**P**	**08 57 31.4**	**0.0**
APA	**Apatity**	**40.45**	**349**	⇓*i*P	**P**	**08 57 34.6**	**+2.9**
APA				pmax	pmax		
	comp=Z,16nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
LVZ	**Lovozero**	**40.55**	**350**	⇓*e*P	**P**	**08 57 32.2**	**-0.4**
LVZ				pmax	pmax		
	comp=Z,40nm,1.5s						
HFS	**Hagfors**	**40.60**	**332**	P	**P**	**08 57 32.9**	**-0.2**
	comp=Z,17nm,0.4s,baz=127,slow=9.5,SNR=185						
MEM	**Membach**	**40.71**	**315**	*d*P	**P**	**08 57 34.6**	**+0.5**
MEM				*d*x	x	08 57 47.4	
MEM				*d*PP	**PP**	**08 59 09.5**	**+1.6**
GTA	**Gaotai**	**40.71**	**62**	⇓P	**P**	**08 57 36.0**	**+1.5**
GTA				pP	sP	08 57 41.3	-0.3
GTA				sP	pP	08 57 44.6	+5.0
GTA				pmax	pmax		
	comp=Z,110nm,0.7s						
GTA				pmax	pmax		
	comp=Z,290nm,5.1s						
GTA				LR	LR		
	comp=Z,150nm,15.8s						
GTA				LR	LR		
	comp=Z,180nm,16.8s						
GTA				LR	LR		
	comp=Z,220nm,17.5s						
SNF	**Seneffe**	**41.75**	**315**	κP	**P**	**08 57 43.8**	**+1.1**
OSL	**Oslo**	**41.76**	**330**	*e*P	**P**	**08 57 42.7**	**+0.1**
NC602	**NORSAR Array S**	**41.82**	**332**	P	**P**	**08 57 42.4**	**-0.7**
NC602	**NORSAR Array S**	**41.82**	**332**	*e*P	**P**	**08 57 43.0**	**-0.2**
NC405	**NORSAR Array S**	**41.95**	**332**	P	**P**	**08 57 43.0**	**-1.2**
NC405				IAmb	IAmb	08 57 49.3	
	comp=Z,38nm,0.8s						
TAM	**Tamanrasset**	**41.96**	**273**	P	**P**	**08 57 44.3**	**-0.7**
TAM				pmax	pmax		
	comp=Z,23nm,0.8s						
TAM	**Tamanrasset**	**41.96**	**273**	P	**P**	**08 57 44.3**	**-0.7**
HOMB	**Homborsund**	**42.00**	**327**	*i* P	**P**	**08 57 44.9**	**+0.3**
HOMB				⇑*e*		08 57 45.5	
NB201	**NORSAR Array S**	**42.09**	**332**	P	**P**	**08 57 44.4**	**-1.0**
NB2	**NORSAR Subarra**	**42.12**	**332**	P	**P**	**08 57 44.8**	**-0.8**
	comp=Z,8.7nm,0.5s,baz=123,slow=8.6						
NB2	**NORSAR Subarra**	**42.12**	**332**	P	**P**	**08 57 44.8**	**-0.8**
	baz=123,slow=8.6						
NOA	**NORSAR Array B**	**42.12**	**332**	P	**P**	**08 57 44.9**	**-0.7**
	comp=Z,6.1nm,0.5s,baz=126,slow=9.1,SNR=47						
NOA				LR	LR	09 16 36.3	
	comp=Z,89nm,19.8s,baz=120,slow=38						
KONO	**Kongsberg**	**42.12**	**329**	⇑*e*P	**P**	**08 57 44.9**	**-0.7**
KONO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KONO	**Kongsberg**	**42.12**	**329**	⇓*e*P	**P**	**08 57 45.7**	**+0.1**
SNART	**Snartemo**	**42.65**	**327**	*e*P	**P**	**08 57 48.8**	**-1.0**
MOY	**Mondy**	**42.95**	**44**	*e*P	**P**	**08 57 54.4**	**+1.8**
MOY				pmax	pmax		
	comp=Z,63nm,1.8s						
SKAR	**Skarslia**	**43.18**	**330**	*e*P	**P**	**08 57 54.9**	**+0.6**
BLS5	**Blasjo**	**43.45**	**328**	*e*P	**P**	**08 57 57.4**	**+0.9**
DOMB	**Dombas**	**43.52**	**332**	*e*P	**P**	**08 57 57.4**	**+0.4**
ODD1	**Odda**	**43.58**	**329**	*e*P	**P**	**08 57 58.7**	**+1.2**
ARA0	**ARCESS Array S**	**43.60**	**347**	*e*P	**P**	**08 57 58.2**	**+0.8**
ARCES	**ARCESS Array B**	**43.60**	**347**	P	**P**	**08 57 57.6**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=137,slow=6.6,SNR=34						
ARCES				LR	LR	09 18 20.4	
	comp=Z,94nm,18.2s,baz=75,slow=39						
KTK1	**Kautokeino**	**43.65**	**346**	*e*P	**P**	**08 57 58.5**	**+0.7**
MOR8	**Moi Rana**	**43.94**	**339**	*e*P	**P**	**08 58 00.5**	**+0.2**
CHTO	**Chiang Mai**	**43.95**	**92**	P	**P**	**08 58 00.5**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,43nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,200nm,22.0s						
CHTO	**Chiang Mai**	**43.95**	**92**	P	**P**	**08 58 00.5**	**-0.5**
CHTO				IAmb	IAmb	08 58 03.0	
	comp=Z,43nm,1.0s						
LZH	**Lanzhou**	**44.06**	**67**	*e*P	**P**	**08 58 02.9**	**+1.0**
LZH				pP	sP	08 58 08.2	-0.8
LZH				sP	pP	08 58 11.4	+4.4
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,350nm,15.7s						
LZH				LR	LR		
	comp=Z,210nm,14.4s						
LZH				LR	LR		
	comp=Z,340nm,15.6s						
CM31	**Chiang Mai Arr**	**44.09**	**93**	P	**P**	**08 58 02.3**	**+0.2**
CM31				IAmb	IAmb	08 58 04.0	
	comp=Z,26nm,1.1s						
CMAR	**Chiang Mai Arr**	**44.09**	**93**	P	**P**	**08 58 02.4**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=285,slow=9.2,SNR=34						
CMAR				PcP	**PcP**	**08 59 46.2**	**-1.0**
	comp=Z,2.6nm,0.6s,baz=281,slow=5.0,SNR=6.6						
CMAR				LR	LR	09 19 47.2	
	comp=Z,74nm,19.9s,baz=267,slow=41						
ZAK	**Zakamensk**	**44.12**	**46**	*e*P	**P**	**08 58 03.1**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
BER	**Bergen**	**44.37**	**329**	*e*P	**P**	**08 58 04.5**	**+0.8**
MOL	**Molde**	**44.39**	**332**	*e*P	**P**	**08 58 04.2**	**+0.3**
KONS	**Konsvik**	**44.56**	**339**	*e*P	**P**	**08 58 05.7**	**+0.5**
TLY	**Talaya**	**44.57**	**44**	*e*P	**P**	**08 58 07.5**	**+2.0**
TLY				*e*S	S	09 04 56.0	+15
TLY				pmax	pmax		
	comp=Z,44nm,1.1s						
TLY				MLR	MLR		
	comp=Z,737nm,13.0s						
CD2	**Chengdu**	**44.74**	**74**	P	**P**	**08 58 06.7**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
STEI	**Steigen**	**44.86**	**341**	*e*P	**P**	**08 58 07.8**	**+0.2**
HAMF	**Hammerfest**	**44.87**	**347**	*e*P	**P**	**08 58 08.5**	**+0.9**
SUE	**Sulen**	**44.90**	**330**	*e*P	**P**	**08 58 08.1**	**+0.2**
IRK	**Irkutsk**	**45.06**	**43**	*e*P	**P**	**08 58 09.6**	**+0.2**
IRK				pmax	pmax		
	comp=Z,49nm,1.4s						
TRO	**Tromso**	**45.11**	**344**	*e*P	**P**	**08 58 10.0**	**+0.5**
KMI	**Kunming**	**45.23**	**82**	⇑*i*P	**P**	**08 58 11.6**	**+0.3**
KMI				pP	sP	08 58 19.0	+0.5
KMI				sP	pP	08 58 24.9	+8.4
KMI				pmax	pmax		
	comp=Z,39nm,1.3s						
KMI				pmax	pmax		
	comp=Z,220nm,4.2s						
KMI				LR	LR		
	comp=Z,150nm,6.4s						
KMI				LR	LR		
	comp=Z,290nm,4.9s						
KMI				LR	LR		
	comp=Z,140nm,5.4s						
KMI	**Kunming**	**45.23**	**82**	P	**P**	**08 58 10.6**	**-0.7**
KMI				pmax	pmax		
	comp=Z,43nm,1.0s						
KMI	**Kunming**	**45.23**	**82**	P	**P**	**08 58 10.6**	**-0.7**
KMI				IAmb	IAmb	08 58 17.0	
	comp=Z,43nm,1.0s						
LOF	**Lofoten**	**45.48**	**341**	*e*P	**P**	**08 58 12.3**	**-0.1**
NRIK	**Noril'sk**	**45.57**	**17**	P	**P**	**08 58 14.3**	**+1.2**
	comp=Z,14nm,0.8s,baz=219,slow=4.8,SNR=23						
NRIK				LR	LR	09 20 53.8	
	comp=Z,110nm,18.6s,baz=201,slow=41						
NRIK	**Noril'sk**	**45.57**	**17**	P	**P**	**08 58 13.4**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,50nm,1.3s						
NRIK	**Noril'sk**	**45.57**	**17**	P	**P**	**08 58 13.4**	**+0.2**
NRIK				IAmb	IAmb	08 58 16.8	
	comp=Z,50nm,1.2s						
CWF	**Charnwood Fore**	**45.62**	**317**	*e*P	**P**	**08 58 13.6**	**-0.1**
JSA	**Saint Aubin**	**45.65**	**312**	*e*P	**P**	**08 58 13.8**	**-0.3**
JSA				IAmb	IAmb	08 58 14.1	
	comp=Z,39nm,0.8s						
SONM	**Songino Array**	**45.84**	**50**	P	**P**	**08 58 16.6**	**+0.8**
	comp=Z,8.8nm,0.9s,baz=260,slow=9.3,SNR=45						
SONM				PcP	**PcP**	**08 59 52.4**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=238,slow=4.5,SNR=4.5						
SONM				LR	LR	09 20 29.7	
	comp=Z,163nm,18.1s,baz=255,slow=40						
LBWR	**Ladybower, Pea**	**45.98**	**318**	*e*P	**P**	**08 58 16.3**	**-0.4**
LBWR				IAmb	IAmb	08 58 17.3	
	comp=Z,56nm,1.2s						
ULN	**Ulaanbaatar**	**46.29**	**50**	*d i*P	**P**	**08 58 19.9**	**+0.5**
ULN				pmax	pmax		
	comp=Z,37nm,1.3s						
ULN	**Ulaanbaatar**	**46.29**	**50**	P	**P**	**08 58 18.6**	**-0.7**
ULN				IAmb	IAmb	08 58 22.4	
	comp=Z,40nm,1.3s						
EDMD	**Edmundbyers**	**46.40**	**320**	*e*P	**P**	**08 58 19.4**	**-0.5**
MCH1	**Michaelchurch**	**46.52**	**316**	*e*P	**P**	**08 58 20.5**	**-0.4**
MCH1				IAmb	IAmb	08 58 21.4	
	comp=Z,97nm,1.3s						
HLM1	**Long Mynd**	**46.52**	**317**	*e*P	**P**	**08 58 20.6**	**-0.4**
HLM1				IAmb	IAmb	08 58 22.2	
	comp=Z,20nm,1.0s						
FOEL	**Foel Wylfa**	**46.77**	**317**	*e*P	**P**	**08 58 23.2**	**+0.3**
FOEL				IAmb	IAmb	08 58 24.1	
	comp=Z,26nm,0.9s						
ESBB	**Sonseca Array**	**46.80**	**299**	P	**P**	**08 58 23.2**	**-0.1**
ESDC	**Sonseca Array**	**46.80**	**299**	P	**P**	**08 58 23.7**	**+0.3**
	comp=Z,9.2nm,1.1s,baz=61,slow=7.2,SNR=22						
ESDC				PcP	**PcP**	**08 59 56.8**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=35,slow=3.4,SNR=4.9						
ESDC				LR	LR	09 21 34.1	
	comp=Z,28nm,19.0s,baz=0.0,slow=41						
PAB	**San Pablo**	**47.10**	**299**	P	**P**	**08 58 25.4**	**-0.4**
PAB				pmax	pmax		
	comp=Z,13nm,1.0s						
PAB	**San Pablo**	**47.10**	**299**	P	**P**	**08 58 25.4**	**-0.4**
PAB				IAmb	IAmb	08 58 29.3	
	comp=Z,13nm,0.9s						
EKA	**Eskdalemuir Ar**	**47.17**	**320**	P	**P**	**08 58 25.8**	**-0.1**
	comp=Z,5.9nm,0.6s,baz=109,slow=8.4,SNR=11						
ESK	**Eskdalemuir**	**47.19**	**320**	*e*P	**P**	**08 58 26.4**	**+0.3**
EDI	**Edinburgh**	**47.30**	**321**	*e*P	**P**	**08 58 26.9**	**0.0**
LRW	**Lerwick**	**47.31**	**327**	*e*P	**P**	**08 58 26.9**	**0.0**
SLVN	**Son La**	**47.42**	**87**	P	**P**	**08 58 27.9**	**-0.6**
SLVN				IAmb	IAmb	08 58 30.2	
	comp=Z,16nm,1.1s						
ABPO	**Ambohimpanom**	**47.66**	**186**	P	**P**	**08 58 30.5**	**+0.2**
ABPO				pmax	pmax		
	comp=Z,14nm,0.7s						
ABPO	**Ambohimpanom**	**47.66**	**186**	P	**P**	**08 58 30.4**	**+0.2**
ABPO				IAmb	IAmb	08 58 33.1	
	comp=Z,14nm,0.7s						
INVG	**Invergeldie, C**	**47.87**	**322**	*e*P	**P**	**08 58 30.9**	**-0.4**
INVG				IAmb	IAmb	08 58 34.2	
	comp=Z,43nm,1.0s						
GYA	**Guiyang**	**48.26**	**79**	⇑P	**P**	**08 58 35.8**	**+0.8**
GYA				sP	pP	08 58 40.2	+0.1
GYA				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN	**Xi'an**	**48.47**	**69**	P	**P**	**08 58 36.2**	**-0.2**
XAN				pP	pP	08 58 41.3	-0.3
XAN				pmax	pmax		
	comp=Z,28nm,0.7s						
XAN	**Xi'an**	**48.47**	**69**	P	**P**	**08 58 35.5**	**-0.9**
XAN	**Xi'an**	**48.47**	**69**	P	**P**	**08 58 35.5**	**-0.9**
BTO	**Baotou**	**48.49**	**60**	*e*P	**P**	**08 58 36.4**	**-0.1**
DSB	**Dublin**	**48.72**	**317**	IAMs_20	IAMs_20	09 18 03.8	
	comp=Z,1µm,22.0s						
PBRG	**Braganca**	**48.75**	**302**	*e*P	**P**	**08 58 38.8**	**+0.4**
	comp=Z,25nm,1.4s						
TOC2	**Torodi Ar. Sit**	**48.98**	**262**	IAMs_20	IAMs_20	09 21 08.4	
	comp=Z,219nm,18.0s						
TOC1	**Torodi Ar. Sit**	**48.99**	**262**	IAMs_20	IAMs_20	09 19 07.7	
	comp=Z,180nm,18.0s						
TOB1	**Torodi Ar. Sit**	**49.00**	**262**	IAMs_20	IAMs_20	09 21 10.0	
	comp=Z,231nm,19.0s						
TOA0	**Torodi Ar. Sit**	**49.00**	**262**	P	**P**	**08 58 39.9**	**-0.7**
TOA0				IAMs_20	IAMs_20	09 21 10.1	
	comp=Z,223nm,18.0s						
TORD	**Torodi Ar. Bea**	**49.00**	**262**	P	**P**	**08 58 40.9**	**+0.2**
	comp=Z,39nm,0.6s,baz=56,slow=7.8,SNR=188						
TORD				LR	LR	09 21 19.9	
	comp=Z,143nm,20.7s,baz=40,slow=38						
TOA3	**Torodi Ar. Sit**	**49.01**	**262**	IAMs_20	IAMs_20	09 21 09.2	
	comp=Z,206nm,18.0s						
MVO	**Moncorvo**	**49.01**	**301**	*e*P	**P**	**08 58 41.4**	**+0.9**
	comp=Z,20nm,1.0s						
TOB4	**Torodi Ar. Sit**	**49.02**	**262**	IAMs_20	IAMs_20	09 21 09.5	
	comp=Z,225nm,18.0s						
TOC5	**Torodi Ar. Sit**	**49.03**	**262**	IAMs_20	IAMs_20	09 21 09.8	
	comp=Z,262nm,18.0s						
LSZ	**Lusaka**	**49.36**	**211**	P	**P**	**08 58 43.1**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,13nm,1.2s						
LSZ	**Lusaka**	**49.36**	**211**	P	**P**	**08 58 43.1**	**-0.3**
PMRV	**Marv??o**	**49.46**	**299**	*e*P	**P**	**08 58 44.2**	**+0.3**
	comp=Z,21nm,1.5s						
MTE	**Manteigas**	**49.47**	**300**	*e*P	**P**	**08 58 44.9**	**+0.9**
	comp=Z,32nm,1.4s						
PCBR	**Castelo Branco**	**49.48**	**299**	*e*P	**P**	**08 58 45.5**	**+1.5**
	comp=Z,47nm,1.1s						
POLO	**Lamas de Olo**	**49.57**	**301**	*e*P	**P**	**08 58 45.6**	**+0.8**
	comp=Z,21nm,1.3s						
HHC	**Hu-ho-hao-te**	**49.64**	**59**	*e*P	**P**	**08 58 46.9**	**+1.6**
HHC				pP	pP	08 58 51.4	+0.9
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.0s						
PESTR	**Estremoz**	**49.68**	**298**	P	**P**	**08 58 45.2**	**-0.3**
ENH	**Enshi**	**49.70**	**73**	P	**P**	**08 58 45.0**	**-0.9**
ENH				IAmb	IAmb	08 58 56.6	
	comp=Z,25nm,0.9s						
PVIS	**Viseu**	**49.71**	**301**	*e*P	**P**	**08 58 46.9**	**+1.1**
	comp=Z,54nm,1.4s						
PGAV	**Gavieira, Arco**	**49.87**	**302**	*e*P	**P**	**08 58 48.1**	**+1.0**
	comp=Z,44nm,1.2s						
PVAQ	**Vaqueiros**	**49.97**	**296**	*e*P	**P**	**08 58 48.4**	**+0.6**
	comp=Z,31nm,1.4s						
EVO	**Evora**	**50.05**	**298**	*e*P	**P**	**08 58 48.6**	**+0.2**
	comp=Z,38nm,1.6s						
PMTG	**Montargil**	**50.14**	**298**	*e*P	**P**	**08 58 49.9**	**+0.8**
	comp=Z,18nm,1.5s						
COI	**Coimbra**	**50.15**	**300**	*e*P	**P**	**08 58 50.7**	**+1.6**
	comp=Z,35nm,1.0s						
PCVE	**Castro Verde**	**50.19**	**297**	*e*P	**P**	**08 58 49.8**	**+0.3**
	comp=Z,31nm,1.6s						
PCAS	**Casmilo, Conde**	**50.23**	**300**	*e*P	**P**	**08 58 50.9**	**+1.1**
	comp=Z,30nm,1.5s						
PNCL	**Nicolau / Gran**	**50.51**	**297**	*e*P	**P**	**08 58 52.9**	**+1.1**
	comp=Z,17nm,1.3s						
PSBE	**So Bento**	**50.53**	**299**	*e*P	**P**	**08 58 52.8**	**+0.8**
	comp=Z,31nm,1.4s						
TIY	**Taiyuan**	**50.69**	**63**	*e*P	**P**	**08 58 54.8**	**+1.5**
TIY				pmax	pmax		
	comp=Z,60nm,1.3s						
PFVI	**Vila Bisbo**	**50.89**	**296**	*e*P	**P**	**08 58 55.8**	**+1.1**
BOD	**Bodaibo**	**51.43**	**37**	*e*P	**P**	**08 58 58.5**	**0.0**
BOD				pmax	pmax		
	comp=Z,65nm,1.2s						
PSI	**Prapat**	**51.61**	**111**	P	**P**	**08 59 00.1**	**-0.4**
	comp=Z,9.1nm,0.7s,baz=360,slow=5.2,SNR=8.2						
SPA0	**Spitsbergen Ar**	**52.04**	**351**	*e*P	**P**	**08 59 02.8**	**0.0**
IPM	**Ipoh**	**52.42**	**108**	IAMs_20	IAMs_20	09 13 08.6	
	comp=Z,253nm,22.0s						
BJT	**Baijiatuau**	**53.23**	**60**	P	**P**	**08 59 12.7**	**+0.6**
BJT				pmax	pmax		
	comp=Z,19nm,0.7s						
BJT	**Baijiatuau**	**53.23**	**60**	P	**P**	**08 59 12.7**	**+0.6**
BJT				IAmb	IAmb	08 59 15.8	
	comp=Z,19nm,0.7s						
BJI	**Beijing**	**53.23**	**60**	P	**P**	**08 59 12.7**	**+0.6**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
KOWA	**Kowa**	**53.41**	**267**	P	**P**	**08 59 12.8**	**-1.0**
WHN	**Wuhan**	**53.71**	**72**	P	**P**	**08 59 15.9**	**+0.1**
WHN				pmax	pmax		
	comp=Z,38nm,0.7s						
TIA	**Tai'an**	**54.66**	**64**	P	**P**	**08 59 23.2**	**+0.6**
TIA				pmax	pmax		
	comp=Z,41nm,0.7s						
HIA	**Hailar**	**54.70**	**48**	P	**P**	**08 59 22.2**	**-0.6**
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	**Hailar**	**54.70**	**48**	P	**P**	**08 59 22.2**	**-0.6**
HIA				IAmb	IAmb	08 59 26.3	
	comp=Z,11nm,0.8s						
PDSI	**Padang**	**55.01**	**114**	P	**P**	**08 59 24.0**	**-1.4**
	comp=Z,12nm,0.6s						
KRJI	**Kerinci**	**56.51**	**114**	P	**P**	**08 59 33.2**	**-3.1**
NJ2	**Nanjing**	**57.04**	**69**	*e*P	**P**	**08 59 40.1**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
DL2	**Dalian**	**57.58**	**60**	P	**P**	**08 59 44.4**	**+0.9**
DL2				pmax	pmax		
	comp=Z,44nm,0.8s						
DBIC	**Dimbokro**	**57.73**	**259**	P	**P**	**08 59 45.2**	**+0.4**
	comp=Z,40nm,0.6s,baz=39,slow=6.8,SNR=64						
DBIC				LR	LR	09 26 13.0	
	comp=Z,173nm,19.4s,baz=40,slow=38						
DBIC	**Dimbokro**	**57.73**	**259**	P	**P**	**08 59 44.6**	**-0.3**
DBG	**Daneborg**	**57.77**	**342**	*i* P	**P**	**08 59 45.5**	**+1.3**
KIC	**Kosan Boka**	**57.79**	**259**	*e*P	**P**	**08 59 45.3**	**0.0**
	comp=Z,49nm,0.7s						
DAG	**Danmarks Havn**	**57.83**	**345**	*i* P	**P**	**08 59 44.4**	**-0.2**
	comp=Z,6.6nm,0.7s						
DAG	**Danmarks Havn**	**57.83**	**345**	*i* P	**P**	**08 59 44.6**	**0.0**
DAG				IAmb	IAmb	08 59 46.4	
	comp=Z,4.2nm,0.6s						
DAG	**Danmarks Havn**	**57.83**	**345**	*i* P	**P**	**08 59 44.4**	**-0.2**
DAG				IAmb	IAmb	08 59 47.0	
	comp=Z,6.6nm,0.7s						
TIC	**Toumodi**	**57.89**	**259**	*e*P	**P**	**08 59 46.2**	**+0.2**
TSUM	**Tsumeb**	**58.02**	**219**	P	**P**	**08 59 46.4**	**-0.4**
LIC	**Lamto**	**58.10**	**259**	*e*P	**P**	**08 59 47.7**	**+0.2**
	comp=Z,38nm,0.5s						
ZEA	**Zeya**	**58.93**	**42**	*e*P	**P**	**08 59 54.2**	**+1.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
TIXI	**Tiksi**	**58.94**	**21**	⇓*i*P	**P**	**08 59 53.2**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,77nm,1.7s						
TIXI	**Tiksi**	**58.94**	**21**	P	**P**	**08 59 52.5**	**+0.1**
LBTB	**Lobatse**	**59.09**	**208**	P	**P**	**08 59 53.5**	**-0.7**
LBTB				pmax	pmax		
	comp=Z,29nm,1.0s						
LBTB	**Lobatse**	**59.09**	**208**	P	**P**	**08 59 53.5**	**-0.7**
LHSI	**Lahat**	**59.19**	**114**	P	**P**	**08 59 52.9**	**-2.1**
	comp=Z,3µmcomp=Z,18nm,1.6s						
CN2	**Changchun**	**59.37**	**54**	*e*P	**P**	**08 59 56.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK	**Yakutsk**	**59.41**	**32**	*e*P	**P**	**08 59 55.2**	**-0.6**
YAK				*e**PP	sP	09 00 11.8	+8.9
YAK				*e*		09 00 41.1	
YAK				*e*S	**S**	**09 08 00.8**	**-3.2**
YAK				*e**SS	sS	09 08 27.0	+14
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,18nm,1.3s						
YAK				pmax	pmax		
	comp=Z,167nm,4.5s						
YAK				pmax	pmax		
	comp=N,86nm,3.0s						
YAK				smax	smax		
	comp=N,140nm,3.8s						
YAK				smax	smax		
	comp=E,85nm,3.6s						
YAK	**Yakutsk**	**59.41**	**32**	P	**P**	**08 59 54.9**	**-1.0**
MDSI	**Maura Dua**	**60.11**	**115**	P	**P**	**09 00 00.7**	**-0.6**
	comp=E,21nm,1.4s						
BOSA	**Boshof**	**62.43**	**206**	P	**P**	**09 00 17.4**	**+0.5**
	comp=E,12nm,0.8s,baz=30,slow=5.8,SNR=17						
TJN	**Taejon**	**62.63**	**62**	⇓*e*P	**P**	**09 00 18.9**	**+0.8**
KS19	**Wonju Array Si**	**62.69**	**60**	P	**P**	**09 00 17.7**	**-0.9**
KSRS	**Korea Array**	**62.75**	**60**	P	**P**	**09 00 18.4**	**-0.5**
	comp=E,14nm,0.6s,baz=280,slow=6.5,SNR=62						
KSRS				LR	LR	09 31 43.8	
	comp=E,85nm,18.1s,baz=271,slow=40						
USRK	**Ussuriysk Ar.**	**63.87**	**52**	P	**P**	**09 00 25.4**	**-0.8**
	comp=E,4.1nm,0.6s,baz=260,slow=5.6,SNR=16						
TULEG	**Thule**	**68.93**	**348**	P	**P**	**09 00 58.5**	**+0.4**
TULEG				IAmb	IAmb	09 01 01.8	
	comp=Z,28nm,1.2s						
EUNU	**Eureka**	**69.11**	**353**	P	**P**	**09 00 58.4**	**-0.9**
EUNU				IAmb	IAmb	09 01 03.1	
	comp=Z,23nm,1.4s						
SEY	**Seymchan**	**69.41**	**29**	⇑*i*P	**P**	**09 01 02.3**	**+1.0**
MA2	**Magadan**	**69.99**	**32**	⇑*e*P	**P**	**09 01 07.4**	**+2.5**
MA2				pmax	pmax		
	comp=Z,34nm,1.7s						
YSS	**Yuzh-Sakhalins**	**70.19**	**47**	*e*P	**P**	**09 01 06.0**	**-0.4**
YSS				*e*		09 01 19.4	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,13.0s						
MPSI	**Mapaga**	**70.64**	**101**	P	**P**	**09 01 07.3**	**-2.3**
	comp=Z,58nm,1.3s						
MJAR	**Matsushiro Arr**	**70.82**	**58**	P	**P**	**09 01 10.5**	**0.0**
	comp=Z,2.5nm,0.7s,baz=225,slow=3.1,SNR=8.6						
BILL	**Bilibino**	**72.17**	**21**	⇓*e*P	**P**	**09 01 19.2**	**+1.2**
BILL				*i*		09 01 37.6	
BILL				*e*S	**S**	**09 10 43.6**	**+4.1**
BILL				pmax	pmax		
	comp=Z,31nm,1.7s						
BILL	**Bilibino**	**72.17**	**21**	P	**P**	**09 01 18.3**	**+0.3**
KAPI	**Kappang**	**73.26**	**105**	LR	LR	09 37 38.5	
	comp=Z,45nm,19.6s,baz=277,slow=39						
BKSI	**Bulukumba**	**73.73**	**106**	P	**P**	**09 01 26.3**	**-1.8**

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          comp=Z,17nm,1.3s
RES    Resolute Bay     74.61 351  P        P        09 01 32.6 +0.3
          comp=Z,4.1nm,0.9s,baz=76,slow=20,SNR=7.2
PETK   Petropavlovsk-   76.30  37  P        P        09 01 41.1 -1.3
          comp=Z,24nm,1.3s,baz=217,slow=8.7,SNR=4.4
FRB    Frobisher Bay    76.69 337  P        P        09 01 44.6 +0.3
          comp=Z,29nm,0.9s,baz=53,slow=8.4,SNR=6.9
SANI   Sanana           77.10 100  P        P        09 01 46.7 -0.8
          comp=Z,26nm,1.1s
RDOG   Red Dog Mine     80.12  13  P        P        09 02 01.2 -2.0
RDOG                               IAmb     IAmb     09 02 06.6
          comp=Z,26nm,1.4s
SWI    Sorong           81.11  96  P        P        09 02 08.0 -1.4
TOLK   Toolik Lake Re   81.66   8  P        P        09 02 13.3 +1.8
          baz=341
TOLK   Toolik Lake Re   81.66   8  P        P        09 02 09.6 -1.9
TOLK                               IAmb     IAmb     09 02 15.1
          comp=Z,26nm,1.2s
C36M   Paulatuk         82.19 359  P        P        09 02 14.4 +0.3
          baz=3.6
C36M   Paulatuk         82.19 359  P        P        09 02 13.6 -0.6
C36M                               IAmb     IAmb     09 02 16.4
          comp=Z,14nm,0.8s
C36M                               IAMs_20  IAMs_20  09 32 59.5
          comp=Z,314nm,19.0s
PSAA1  Pilbara Seismi   82.41 119  IAMs_20  IAMs_20  09 29 23.6
          comp=Z,625nm,21.0s
ANM    Nome             82.59  15  P        P        09 02 15.0 -1.4
ANM                                pmax     pmax
          comp=Z,54nm,1.4s
ANM    Nome             82.59  15  P        P        09 02 15.0 -1.4
COLD   Coldfoot         82.92   8  P        P        09 02 20.4 +2.3
          baz=341
COLD   Coldfoot         82.92   8  P        P        09 02 17.2 -0.9
INK    Inuvik           83.20   2  P        P        09 02 20.3 +0.9
          comp=Z,4.6nm,0.6s,baz=1.5,slow=8.0,SNR=19
INK    Inuvik           83.20   2  P        P        09 02 17.9 -1.5
INK                                pmax     pmax
          comp=Z,9.0nm,1.0s
INK    Inuvik           83.20   2  P        P        09 02 17.9 -1.5
INK                                IAmb     IAmb     09 02 22.2
          comp=Z,9.5nm,0.9s
MLY    Manley           84.92   9  P        P        09 02 29.9 +1.5
          baz=340
EPYK   Eagle Plains     85.00   3  P        P        09 02 29.8 +1.1
          baz=352
I23K   Minto, Yukon-K   85.01   9  P        P        09 02 31.2 +2.5
          baz=341
I23K   Minto, Yukon-K   85.01   9  P        P        09 02 27.6 -1.1
I23K                               IAmb     IAmb     09 02 32.2
          comp=Z,30nm,1.4s
FITZ   Fitzroy Crossi   85.07 114  P        P        09 02 29.9 +0.1
          comp=Z,8.2nm,0.8s,baz=238,slow=1.6,SNR=11
FITZ   Fitzroy Crossi   85.07 114  P        P        09 02 28.8 -1.0
FITZ                               IAmb     IAmb     09 02 31.1
          comp=Z,15nm,1.0s
POKR   Poker Plat Res   85.28   8  P        P        09 02 31.2 +1.1
          baz=343
POKR   Poker Plat Res   85.28   8  P        P        09 02 29.2 -0.9
POKR                               IAmb     IAmb     09 02 34.2
          comp=Z,24nm,1.1s
MDM    Murphy Dome      85.33   8  P        P        09 02 29.9 -0.5
TCOL   CIGO, UAF Yank   85.46   8  P        P        09 02 32.8 +1.7
          baz=343
NEA2   Nenana           85.57   9  P        P        09 02 33.5 +1.9
          baz=342
IL31                    85.68   8  P        P        09 02 31.4 -0.6
ILAR   Eielson Array    85.68   8  P        P        09 02 32.2 +0.1
          comp=Z,3.3nm,0.6s,baz=326,slow=3.7,SNR=54
ILAR                               PP       PP       09 05 51.4 +1.0
          comp=Z,1.5nm,1.1s,baz=345,slow=5.6,SNR=4.4
CCB    Clear Creek Bu   85.69   8  P        P        09 02 31.2 -0.9
CCB                                IAmb     IAmb     09 02 34.3
          comp=Z,14nm,1.4s
BPAW   Bear Paw Mtn.    85.77  10  P        P        09 02 32.5 -0.1
TTA    Tatalina         86.00  12  P        P        09 02 34.0 +0.1
TTA                                pmax     pmax
          comp=Z,25nm,1.2s
TTA    Tatalina         86.00  12  P        P        09 02 34.0 +0.1
TTA                                IAmb     IAmb     09 02 37.8
          comp=Z,25nm,1.2s
HDA    Harding Lake     86.03   8  P        P        09 02 34.0 +0.2
          baz=344
HDA    Harding Lake     86.03   8  P        P        09 02 33.1 -0.7
HDA                                IAmb     IAmb     09 02 36.1
          comp=Z,19nm,1.4s
MCK    McKinley         86.41   9  P        P        09 02 36.6 +0.8
          baz=342
TRF    Thorofare Moun   86.48  10  P        P        09 02 34.7 -1.6
TRF                                IAmb     IAmb     09 02 39.9
          comp=Z,9.2nm,0.8s
RND    Reindeer         86.73   9  P        P        09 02 36.9 -0.6
RND                                pmax     pmax
          comp=Z,32nm,1.2s
RND    Reindeer         86.73   9  P        P        09 02 36.9 -0.6
SCRK   Sand Creek       86.78   7  P        P        09 02 39.1 +1.3
          baz=346
K27K   Chicken          86.92   6  P        P        09 02 39.8 +1.6
          baz=348
L26K   Log Cabin Wild   87.78   7  P        P        09 02 44.2 +1.8
          baz=347
SUA    Susitna One      88.29  11  P        P        09 02 43.0 -2.1
FCC    Fort Churchill   88.37 343  P        P        09 02 43.5 -1.7
FCC                                pmax     pmax
          comp=Z,5.0nm,0.9s
FCC                                MLR      MLR
          comp=Z,200nm,19.0s
FCC    Fort Churchill   88.37 343  P        P        09 02 43.5 -1.7
FCC                                IAMs_20  IAMs_20  09 42 30.1
          comp=Z,228nm,19.0s
YKA    Yellowknife Ar   88.47 354  P        P        09 02 46.7 +1.0
          comp=Z,9.8nm,1.0s,baz=8.1,slow=5.2,SNR=72
RC01   Rabbit Creek A   88.81  10  P        P        09 02 48.5 +1.1
          baz=341
RCBR   Riachuelo        90.82 264 eP        P        09 02 58.7 +1.2
KDAK   Kodiak Island    91.42  13  P        P        09 03 00.2 +0.7
          comp=Z,8.9nm,0.7s,baz=296,slow=3.8,SNR=8.3
KDAK   Kodiak Island    91.42  13  P        P        09 02 57.6 -1.9
KDAK                               pmax     pmax
          comp=Z,47nm,1.5s
KDAK   Kodiak Island    91.42  13  P        P        09 02 57.6 -1.9
WRA    Warramunga Arr   93.08 111  P        P        09 03 07.6 -0.2
          comp=Z,1.9nm,0.8s,baz=314,slow=4.2,SNR=13
WRAB   Tennant Creek    93.08 111⇑iP        P        09 03 08.0 +0.2
WRAB                               pmax     pmax
          comp=Z,3.0nm,0.9s
ASAR   Alice Springs    94.54 114  P        P        09 03 14.4 -0.1
          comp=Z,2.6nm,0.6s,baz=304,slow=4.6,SNR=72
ROSB   Rosrio           96.64 270 eP        P        09 03 25.9 +1.6
COEN   Coen             97.70 102  IAMs_20  IAMs_20  09 39 37.4
          comp=Z,158nm,20.0s
GDU01  Guandu, BA       97.71 259 eP        Pdif     09 03 29.9 +0.7
ACSO   Alum Creek Sta   99.61 327  IAMs_20  IAMs_20  09 37 59.4
          comp=Z,305nm,19.0s
NAN01  Guarapari, ES   100.06 255 eP        Pdif     09 03 40.4 +0.8
SEUS   St. Eustatius   102.10 298  IAMs_20  IAMs_20  09 37 34.0
          comp=Z,325nm,18.0s
O44A   Mansfield       102.20 330  IAMs_20  IAMs_20  09 44 43.8
          comp=Z,196nm,22.0s
OLIL   Olney           103.20 329  IAMs_20  IAMs_20  09 54 39.2
          comp=Z,289nm,21.0s
WVT    Waverly         105.18 327  IAMs_20  IAMs_20  09 45 07.9
          comp=Z,191nm,21.0s
LNXT   Lenox           105.98 328  IAMs_20  IAMs_20  09 49 59.0
          comp=Z,170nm,20.0s
SNAA   Sanae           107.02 196  IAMs_20  IAMs_20  09 50 41.3
          comp=Z,128nm,19.0s
KS21   Milan North St  108.40 335  IAMs_20  IAMs_20  09 56 24.5
          comp=Z,312nm,21.0s
PV16   Nyswonger Mesa  110.95 344  IAMs_20  IAMs_20  10 05 01.4
          comp=Z,282nm,21.0s
PV03   Paradox Valley  110.99 344  IAMs_20  IAMs_20  10 02 55.4
          comp=Z,270nm,22.0s
PV17   East Wray Mesa  110.99 344  IAMs_20  IAMs_20  10 01 12.5
          comp=Z,295nm,19.0s
PV18   Skein Mesa, Pa  111.01 344  IAMs_20  IAMs_20  09 57 08.0
          comp=Z,174nm,22.0s
NATX   Nacogdoches     111.96 330  IAMs_20  IAMs_20  10 04 54.1
          comp=Z,165nm,21.0s
SDV    Santo Domingo   113.15 295  IAMs_20  IAMs_20  09 42 58.2
          comp=Z,91nm,19.0s
TPNV   Topopah Spring  113.74 350  IAMs_20  IAMs_20  09 46 24.2
          comp=Z,225nm,20.0s
TXAR   Lajitas Array   117.73 336  PKP      PKPdf    09 08 40.0 -0.5
          comp=Z,0.3nm,0.6s,baz=62,slow=3.2,SNR=3.7
CPUP   Villa Florida   118.04 254  PKP      PKPdf    09 08 39.4 -1.5
          comp=Z,1.0nm,0.7s,baz=75,slow=4.3,SNR=3.9
QSPA   South Pole Qui  118.55 180           PKPdf    09 08 40.7  0.0
SFX    San Felipe      119.25 347  IAMs_20  IAMs_20  09 42 39.2
          comp=Z,301nm,22.0s
CZSB   Cruzeiro do Su  123.91 281 eP        PKiKP    09 08 53.8 +1.0
OTAV   Otavalo         124.50 292 eP        PKiKP    09 08 55.5 +0.9
PMSA   Palmer Station  126.61 209 eP        PKiKP    09 08 57.5 +1.0
LVC    Limon Verde     126.73 262 eP        PKiKP    09 08 59.1 +0.5
PLCA   Paso Flores     131.95 240  PKP      PKiKP    09 09 08.3 +0.2
          comp=Z,1.4nm,0.6s,baz=56,slow=1.8,SNR=6.6
PLCA   Paso Flores     131.95 240 eP        PKiKP    09 09 08.4 +0.2
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*UCR **01** 08:56:49.0±0.7, 1.°99N×81.°67W, h18^{km}±999^{km}, MW3.8*

*UPA **01** 08:57:41.5±0.7, 5.°86N×82.°54W, h0^{km}±4^{km}, MW3.7*

ISC 01 08:57:40.6±2.1**, 5.°6N**±0.°1×**82.°71W**±0.°08**, h15**^{km}**, n40, σ1^{s}57**/46**, 2C-1D, South of Panama**

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Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
CACAO  El Cacao, Vera    2.51  47 eP        Pn       08 58 19.0 -1.8
CACAO                             eS        Sn       08 58 47.7 -3.5
GMAL   Guarumal, Vera    2.58  35⇓iP        Pn       08 58 20.4 -1.4
GMAL                              eS        Sn       08 58 50.9 -2.1
CDITO  Canoas            2.93 357⇑eP        Pn       08 58 26.3 -0.4
CDITO  Canoas            2.93 357 eP        Pn       08 58 25.9 -0.8
PTJ1   Puerto Jimnez     2.95 349 eS        Sn       08 59 02.4 +0.3
BCO2   Palmira           3.08   3 eP        Pn       08 58 27.8 -1.0
BCO2                              eS        Sn       08 59 06.6 +1.1
BRU2   Volcan            3.15   0 eP        Pn       08 58 28.9 -0.8
BRU2                              eS        Sn       08 59 08.0 +0.8
BRU2   Volcan            3.15   0 eP        Pn       08 58 29.1 -0.7
RIOS   Rincon, Osa       3.16 345 eP        Pn       08 58 28.6 -1.2
AZU    Azuero            3.24  48⇑iP        Pn       08 58 29.4 -1.5
AZU                               eS        Sn       08 59 06.7 -2.5
DRK0   Durika            3.65 352 eP        Pn       08 58 36.8  0.0
DRK0                              eS        Sn       08 59 19.3 -0.4
DRK0   Durika            3.65 352 eP        Pn       08 58 36.7  0.0
EDLM   Las Mercedes      3.73 347 eP        Pn       08 58 38.0 +0.3
EDDO   Dominical         3.78 342 eP        Pn       08 58 38.8 +0.5
PEZE   Perez Zeledon,    3.85 346 eP        Pn       08 58 40.1 +0.7
RIMA   Rio Macho         4.27 345 eP        Pn       08 58 45.7 +0.5
LCR2   La Lucha 2        4.29 343 eP        Pn       08 58 45.7 +0.2
JACO   JACO, Garabito    4.45 334 eP        Pn       08 58 47.1 -0.5
UPA    Univ. de Panam    4.59  43 eP        Pn       08 58 50.4 +0.9
UPA    Univ. de Panam    4.59  43 eP        Pn       08 58 50.5 +1.1
JTS    Las Juntas de     5.14 335 eP        Pn       08 58 57.3 +0.2
JTS    Las Juntas de     5.14 335 eP        Pn       08 58 57.2 +0.2
DUNO   Dulce Nombre,     5.21 328 eP        Pn       08 58 58.2 +0.1
PLVR   Palo Verde        5.37 331 eP        Pn       08 59 00.2 -0.2
ORTG   Ortega, Santa     5.44 330 eP        Pn       08 59 02.6 +1.4
UPD2   Meteti            5.49  58 eP        Pn       08 59 05.5 +3.7
UPD2   Meteti            5.49  58 eP        Pn       08 59 05.4 +3.5
PLMC   San Jos del P     6.44  96 eP        Pn       08 59 14.3 -0.7
BBAC   Balboa, Cauca     6.52 123 eP        Pn       08 59 15.6 -0.6
YOTC   Yotoco, Valle     6.55 104 eP        Pn       08 59 15.8 -0.7
DBBC   Dabeiba           6.61  78 eP        Pn       08 59 19.4 +2.1
PCON   Cinco Dias        7.10 117 eP        Pn       08 59 26.1 +1.6
HELC   Santa Helena      7.17  85 eP        Pn       08 59 27.2 +2.0
MARP   Paez Belalcaza    7.28 112 eP        Pn       08 59 27.8 +1.1
TOLC   Tolima            7.43  98 eP        Pn       08 59 30.9 +2.0
UREC   San Jos de Ur     7.43  73 eP        Pn       08 59 28.6  0.0
ORTC   Ortega, Tolima    7.63 103 eP        Pn       08 59 32.5 +1.2
MOTC   Monteria, Cord    7.66  65 eP        Pn       08 59 34.6 +2.9
ZARC   Zaragoza, Cauc    8.02  76 eP        Pn       08 59 38.3 +1.7
PTBC   PUERTO BERRIO,    8.26  83 eP        Pn       08 59 42.8 +2.8
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*IDC **01** 09:02:27.8±2.6, 12.°82S×76.°54W, h71^{km}±12^{km}, mb3.4/8, mb1 3.7/9, mb1mx3.4/34, mbtmp3.7/9, MS3.1/3, Ms1 3.1/3, ms1mx2.5/18, Error ellipse: s-maj=45.6km s-min=25.4km az=41.0*

ISC 01 09:02:25.9±1.3**, 13.°0S**±0.°1×**76.°5W**±0.°2**, h59**^{km}**, n19, σ1^{s}10**/18**, mb3.6**/7**, MS3.0**/3**, Near coast of Peru**

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Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
NNA    Nana              1.02 341  P        Pn       09 02 44.7 +0.5
          48nm,0.3s,baz=169,slow=8.1,SNR=135
NNA                                S        Sn       09 02 58.4 +0.6
          513nm,0.3s,baz=226,slow=21,SNR=41
NNA                                LR       LR       09 03 15.6
          comp=Z,114nm,21.2s,baz=196,slow=54
ATAH   Atahualpa         6.08 342  P        Pn       09 03 55.2 +1.7
          2.2nm,0.3s,baz=196,slow=3.6,SNR=12
ATAH                               S        Sn       09 04 59.6 -2.3
          1.2nm,0.3s,baz=72,slow=8.9,SNR=1.7
MACC   Macarena, Meta   15.24  10 eP        Pn       09 05 57.1 -0.5
ORTC   Ortega, Tolima   16.80   4 eP        Pn       09 06 16.8 -0.7
VILC   Villavicencio,   17.19  10 eP        P        09 06 22.8 -0.3
RUSC   La Rusia         19.04  11 eP        Pn       09 06 47.6 +2.5
PTBC   PUERTO BERRIO,   19.48   6 eP        P        09 06 47.8 -0.3
ZARC   Zaragoza, Cauc   20.38   5 eP        P        09 06 58.2 +0.2
PTGA   Pitinga          20.41  55  P        Pn       09 07 00.2 -0.6
          0.8nm,0.3s,baz=309,slow=22,SNR=1.2
PTGA                               LR       LR       09 15 18.5
          comp=Z,47nm,20.4s,baz=184,slow=38
MDP    Montagnes des    29.74  54  LR       LR       09 20 41.8
          comp=Z,32nm,18.3s,baz=44,slow=37
TXAR   Lajitas Array    49.55 328  P        P        09 11 11.3 +0.2
          0.2nm,0.6s,baz=147,slow=12,SNR=4.1
ANMO   Albuquerque      55.47 330  P        P        09 11 55.3 +0.3
          0.4nm,0.4s,baz=124,slow=7.3,SNR=2.3
PDAR   Pinedale Array   63.19 333  P        P        09 12 48.3 +0.1
          0.1nm,0.5s,baz=134,slow=10,SNR=2.3
NVAR   Mina Array Bea   64.35 325  P        P        09 12 56.0 +0.1
          0.5nm,0.7s,baz=140,slow=7.1,SNR=3.5
ULM    Lac du Bonnet    65.19 346  P        P        09 12 59.7 -1.1
          1.4nm,0.7s,baz=154,slow=6.4,SNR=4.6
YKA    Yellowknife Ar   80.86 343  P        P        09 14 32.6 -0.5
          0.8nm,0.9s,baz=131,slow=6.0,SNR=9.9
TORD   Torodi Ar. Bea   81.73  74  P        P        09 14 38.4 -0.4
          0.9nm,1.0s,baz=250,slow=3.3,SNR=2.6
ESDC   Sonseca Array    85.18  48  LR       LR       09 50 55.3
          comp=Z,10nm,19.0s,baz=40,slow=34
SONM   Songino Array   145.15 357  PKPbc    PKPab    09 21 57.1 +0.4
          2.5nm,0.7s,baz=330,slow=2.6,SNR=18
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*IDC **01** 09:41:59.1±0.5, 55.°29N×163.°03E, h0^{km}, mb4.3/29, mb1 4.5/33, mb1mx4.5/43, mbtmp4.3/33, ML4.2/4, MS4.1/23, Ms1 4.1/23, ms1mx3.8/46, Error ellipse: s-maj=15.2km s-min=9.3km az=157.0*

*KRSC **01** 09:42:00.2±0.8, 55.°10N×163.°45E, h47^{km}±21^{km}, ML4.9*

*NEIC **01** 09:42:00.7±2.1, 55.°29N±0.°08×163.°1E±0.°1, h10^{km}±1^{km}, mb4.8/140, Error ellipse: s-maj=14.9km s-min=10.4km az=147.0*

*MOS **01** 09:42:03.5±1.2, 55.°22N×163.°14E, h52^{km}, mb4.8/37, MS4.2/12, Error ellipse: s-maj=5.4km s-min=3.9km az=81.9*

*BJI **01** 09:42:05.9±0.0, 55.°50N×162.°05E, h40^{km}, mB5.1/35, mb4.7/44, Ms4.9/25, Ms7 4.6/25*

*BGR **01** 09:42:05.8±0.0, 55.°61N×165.°13E, h33^{km}, mb5.0*

*GCMT **01** 09:42:05.7±0.4, 55.°07N±0.°04×163.°94E±0.°05, h29^{km}±1^{km}, MW4.9/61, Moment Tensor Solution. s22,c24; s61,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.03±.20; $M_{\theta\theta}$-0.42±.12; $M_{\phi\phi}$-1.61±.12; $M_{r\theta}$0.89±.18; $M_{\theta\phi}$-0.90±.08; $M_{\phi r}$0.90±.13; Best double couple: $M_0$2.42000×10^{16} NP1:ϕ_s200.00000°, δ30.00000°, λ75.00000°. NP2: ϕ_s37.00000°, δ61.00000°, λ99.00000°. Principal axes: T 2.4110, Plg73.0000°, Azm328.0000°; N 0.0200, Plg7.0000°, Azm213.0000°; P -2.4290, Plg15.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 09:42:03.4±0.4**, 55.°21N**±0.°03×**163.°30E**±0.°03**, h36**^{km}±1^{km}**, n522, σ1^{s}60**/536**, mb4.8**/158**, MS4.2**/32**, 27C-20D, Fault plane solution: NP1:**ϕ_s70.38168°, δ67.59979°, λ98.23983°. **NP2:**ϕ_s229.57439°, δ23.79422°, λ70.82697°. **Principal axes:** T Plg66.4143°, Azm355.0531°; N Plg7.6143°, Azm247.2231°; P Plg22.1816°, Azm154.0986°; **Off east coast of Kamchatka Peninsula**

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Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
KBTR   Krutoberegovo     1.04 345  PN       Pn       09 42 20.1 -1.2
KBTR   Krutoberegovo     1.04 345 eP        Pn       09 42 20.1 -1.2
KBG    Krutoberegovo     1.10 343  PN       Pn       09 42 21.5 -0.7
KBG                                S        Sn       09 42 37.1 +1.0
KBG    Krutoberegovo     1.10 343 eP        Pn       09 42 21.5 -0.7
KBG                               eS        Sn       09 42 37.1 +1.0
MKZ    Mys Kozlova       1.12 235  PN       Pn       09 42 21.5 -0.9
MKZ                                S        Sn       09 42 36.4 -0.1
MKZ    Mys Kozlova       1.12 235 eP        Pn       09 42 21.5 -0.9
MKZ                               eS        Sn       09 42 36.4 -0.1
BKI    Bering            1.54  89  PN       Pn       09 42 26.2 -1.9
BKI                                S        Sn       09 42 44.2 -2.6
BKI    Bering            1.54  89 eP        Pn       09 42 26.2 -1.9
BKI                               eS        Sn       09 42 44.2 -2.6
ZLN    Zelenaya          1.63 301  PN       Pn       09 42 30.6 +1.0
ZLN    Zelenaya          1.63 301 eP        Pn       09 42 30.6 +1.0
CIRR   Tsirk             1.71 303  PN       Pn       09 42 31.7 +1.0
CIRR   Tsirk             1.71 303 eP        Pn       09 42 31.7 +1.0
SMKR   Semkarok          1.72 324  PN       Pn       09 42 31.4 +0.6
SMKR   Semkarok          1.72 324 eP        Pn       09 42 31.4 +0.6
KZV    Kizimen           1.73 268  PN       Pn       09 42 31.4 +0.5
KZV    Kizimen           1.73 268 eP        Pn       09 42 31.4 +0.5
BZMR   Bezymyannaya      1.75 296  PN       Pn       09 42 32.0 +0.7
BZMR   Bezymyannaya      1.75 296 eP        Pn       09 42 32.0 +0.7
BZWR   Bezymyannyi-We    1.76 297  PN       Pn       09 42 32.9 +1.5
BZWR   Bezymyannyi-We    1.76 297 eP        Pn       09 42 32.9 +1.5
BDR    Baidarnaya        1.80 320  PN       Pn       09 42 32.8 +0.9
BDR    Baidarnaya        1.80 320 eP        Pn       09 42 32.8 +0.9
TUMR   Tumrok            1.81 274  PN       Pn       09 42 32.9 +0.9
TUMR   Tumrok            1.81 274 eP        Pn       09 42 32.9 +0.9
KMNR   Kamenistaya       1.82 289  PN       Pn       09 42 33.7 +1.4
KMNR   Kamenistaya       1.82 289 eP        Pn       09 42 33.7 +1.4
KIRR   Kirishev          1.83 295  PN       Pn       09 42 33.8 +1.4
KIRR   Kirishev          1.83 295 eP        Pn       09 42 33.8 +1.4
KRSR   Krestovskiy       1.85 304  PN       Pn       09 42 33.0 +0.5
KRSR                               S        Sn       09 42 56.2 +1.5
KRSR   Krestovskiy       1.85 304 eP        Pn       09 42 33.0 +0.5
KRSR                              eS        Sn       09 42 56.2 +1.5
KLY    Klyuchi           1.86 308  PN       Pn       09 42 32.3 -0.3
KLY                                S        Sn       09 42 56.2 +1.4
KLY    Klyuchi           1.86 308 i P       Pn       09 42 32.3 -0.3
KLY                               eS        Sn       09 42 56.2 +1.4
SRKR   Sorokina          1.88 321  PN       Pn       09 42 33.9 +0.9
SRKR   Sorokina          1.88 321 eP        Pn       09 42 33.9 +0.9
KOZ    Kozyrevsk         2.12 295  PN       Pn       09 42 37.9 +1.7
KOZ    Kozyrevsk         2.12 295 eP        Pn       09 42 37.9 +1.7
SRDR   Sredinnyy         2.31 300  PN       Pn       09 42 40.7 +1.9
SRDR   Sredinnyy         2.31 300 eP        Pn       09 42 40.7 +1.9
KII    Karymskiy         2.53 244  PN       Pn       09 42 42.6 +0.7
KII    Karymskiy         2.53 244 eP        Pn       09 42 42.6 +0.7
ESO    Esso              2.71 287  PN       Pn       09 42 46.2 +1.9
ESO    Esso              2.71 287 eP        Pn       09 42 46.2 +1.9
SPN    Mys Shipunski     2.86 224  PN       Pn       09 42 45.0 -1.4
SPN                                S        Sn       09 43 17.6 -1.9
SPN    Mys Shipunski     2.86 224 eP        Pn       09 42 45.0 -1.4
SPN                               eS        Sn       09 43 17.6 -1.9
NLC    Nalytchevo        3.09 230  PN       Pn       09 42 50.1 +0.6
NLC    Nalytchevo        3.09 230 eP        Pn       09 42 50.1 +0.6
SDLR   Sedlovina         3.23 235  PN       Pn       09 42 52.5 +0.9
SDLR   Sedlovina         3.23 235 i P       Pn       09 42 52.5 +0.9
KRER   Koryakskii        3.28 236  PN       Pn       09 42 53.7 +1.4
KRER   Koryakskii        3.28 236 eP        Pn       09 42 53.7 +1.4
SMAR   Somma             3.28 235  PN       Pn       09 42 53.2 +0.9
SMAR   Somma             3.28 235 eP        Pn       09 42 53.2 +0.9
KRX    Arik              3.29 238  PN       Pn       09 42 53.8 +1.3
KRX    Arik              3.29 238 eP        Pn       09 42 53.8 +1.3
UGLR   Uglovaya          3.30 234  PN       Pn       09 42 53.4 +0.8
UGLR   Uglovaya          3.30 234 eP        Pn       09 42 53.4 +0.8
AVH    Avacha            3.31 236  PN       Pn       09 42 54.1 +1.5
AVH    Avacha            3.31 236 eP        Pn       09 42 54.1 +1.5
KOK    Koryaka           3.34 237  PN       Pn       09 42 54.2 +1.1
KOK    Koryaka           3.34 237 eP        Pn       09 42 54.2 +1.1
DALK   Dalny             3.45 233  PN       Pn       09 42 55.0 +0.5
DALK                               S        Sn       09 43 34.5 +0.5
DALK   Dalny             3.45 233 eP        Pn       09 42 55.0 +0.5
DALK                              eS        Sn       09 43 34.5 +0.5
GNL    Ganaly            3.47 246  PN       Pn       09 42 56.6 +1.7
GNL    Ganaly            3.47 246 eP        Pn       09 42 56.6 +1.7
PET    Petropavlovsk     3.50 233 ePN       Pn       09 42 55.5 +0.4
PET                               eS        Sn       09 43 35.5 +0.2
PET                                pmax     pmax
          comp=Z,482nm,0.9s
PET                                smax     smax
          comp=N,2µm,0.6s
PET                                smax     smax
          comp=E,1µm,0.8s
PET    Petropavlovsk     3.50 233 eP        Pn       09 42 55.8 +0.6
PET                               eS        Sn       09 43 36.2 +0.9
PET    Petropavlovsk     3.50 233  Pn       Pn       09 42 55.6 +0.4
KRMR   Karymshinskiy     3.87 234  PN       Pn       09 43 01.3 +1.1
KRMR                               S        Sn       09 43 45.4 +1.1
KRMR   Karymshinskiy     3.87 234 eP        Pn       09 43 01.3 +1.1
KRMR                              eS        Sn       09 43 45.4 +1.1
PEA0B  Petropavlovsk-    3.91 240  PN       Pn       09 43 01.4 +0.6
PEA0B  Petropavlovsk-    3.91 240           Pn       09 43 01.4 +0.6
PETK   Petropavlovsk-    3.91 240  Pn       Pn       09 43 01.0 +0.3
          comp=E,11nm,0.3s,baz=79,slow=18,SNR=78
PETK                               Sn       Sn       09 43 47.4 +2.1
          comp=E,6.9nm,0.3s,baz=56,slow=24,SNR=1.7
RUS    Russkaya          3.97 227  PN       Pn       09 43 01.6  0.0
RUS                                S        Sn       09 43 46.7 -0.1
RUS    Russkaya          3.97 227 i P       Pn       09 43 01.6  0.0
RUS                               eS        Sn       09 43 46.7 -0.1
MTVR   Mutnovka          4.08 230  PN       Pn       09 43 04.2 +1.0
MTVR   Mutnovka          4.08 230 eP        Pn       09 43 04.2 +1.0
GRL    Gorelyy           4.08 231  PN       Pn       09 43 05.3 +2.1
GRL    Gorelyy           4.08 231 eP        Pn       09 43 05.3 +2.1
ASAK   Asacha            4.27 231  PN       Pn       09 43 08.4 +2.6
ASAK   Asacha            4.27 231 eP        Pn       09 43 08.4 +2.6
APC    Apacha            4.28 240  PN       Pn       09 43 08.5 +2.7
APC    Apacha            4.28 240 eP        Pn       09 43 08.5 +2.7
KDTR   Khodutka, Kamc    4.61 225  PN       Pn       09 43 10.2 -0.3
KDTR   Khodutka, Kamc    4.61 225 eP        Pn       09 43 10.2 -0.3
PAU    Pauzhetka         5.40 229  PN       Pn       09 43 21.7 +0.5
PAU    Pauzhetka         5.40 229 eP        Pn       09 43 21.7 +0.5
SKR    Severo-Kuril's    6.27 227 ePN       Pn       09 43 41.9 +8.7
SKR                               eS        Sn       09 44 55.0  +11
SKR                                pmax     pmax
          comp=Z,48nm,0.8s
SKR                                pmax     pmax
          comp=Z,1µm,6.9s
SKR                                smax     smax
          comp=E,107nm,0.8s
SKR                                smax     smax
          comp=N,201nm,0.9s
SKR                                MLR      MLR
          comp=Z,800nm,18.0s
SKR                                MLR      MLR
          comp=Z,2µm,18.0s
SKR    Severo-Kuril's    6.27 227 eP        Pn       09 43 33.2  0.0
MA2    Magadan           8.05 308⇑ePN       Pn       09 43 55.4 -2.2
MA2                                pmax     pmax
          comp=Z,12nm,0.8s
MA2    Magadan           8.05 308           Pn       09 44 00.7 +3.0
SEY    Seymchan          9.55 329  Pn       Pn       09 44 17.6 -0.5
          comp=Z,0.1nm,0.3s,baz=13,slow=23,SNR=3.3
SEY    Seymchan          9.55 329⇑iPN       Pn       09 44 18.6 +0.4
OKH    Okha             11.98 270dePN       Pn       09 44 38.4  -13
OKH                                MLR      MLR
          comp=Z,2µm,14.0s
OKH                                MLR      MLR
          comp=E,2µm,15.0s
OKH                                MLR      MLR
          comp=N,700nm,22.0s
BILL   Bilibino         12.95   5⇑ePN       Pn       09 45 06.6 +2.0
BILL                               pmax     pmax
          comp=Z,8.0nm,1.1s
BILL                               MLR      MLR
          comp=Z,845nm,13.0s
BILL   Bilibino         12.95   5  Pn       Pn       09 45 05.1 +0.6
TYV    Tymovskoe        13.14 259 ePN       P        09 45 14.4 -2.5
TYV                                pmax     pmax
          comp=Z,800nm,5.1s
TYV                                pmax     pmax
          comp=Z,24nm,1.4s
NKL    Nikolayevsk      13.39 270 ePN       Pn       09 45 11.7 +1.1
NKL                                pmax     pmax
          comp=E,34nm,0.8s
NKL                                pmax     pmax
          comp=N,10.0nm,1.2s
NKL                                pmax     pmax
          comp=Z,59nm,1.2s
NKL                                MLR      MLR
          comp=E,753nm,13.0s
NKL                                MLR      MLR
          comp=N,172nm,17.0s
NKL                                MLR      MLR
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      comp=Z,1µm,16.0s
ATKA  Atka Island      13.65  93   Pn    P     09 45 22.1 -0.4
UGL   Uglegorsk        14.38 254   P     P     09 45 30.4 -0.1
UGL                               eS     Sn    09 48 04.0 +2.0
UGL                                pmax  pmax
      comp=Z,94nm,1.1s
UGL                                MLR   MLR
      comp=Z,2µm,21.0s
UGL                                MLR   MLR
      comp=N,3µm,15.0s
UGL                                MLR   MLR
      comp=E,2µm,17.0s
YSS   Yuzh-Sakhalins   15.28 246⇓iP    P     09 45 40.3 -0.3
YSS                                MLR   MLR
      comp=Z,2µm,11.0s
YSS   Yuzh-Sakhalins   15.28 246   P     P     09 45 40.9 +0.3
YSS                                IAmb  IAmb  09 45 41.6
      comp=Z,40nm,0.9s
GRNR  Gornyy           16.73 266⇑iP    P     09 45 57.1 +0.5
GRNR                              eS     S     09 49 06.0 -3.3
GRNR                               pmax  pmax
      comp=E,10.0nm,0.8s
GRNR                               pmax  pmax
      comp=N,8.0nm,0.7s
GRNR                               pmax  pmax
      comp=Z,20nm,0.8s
GRNR                               smax  smax
      comp=E,1.0nm,0.6s
GRNR                               MLR   MLR
      comp=E,340nm,12.0s
GRNR                               MLR   MLR
      comp=N,350nm,13.0s
GRNR                               MLR   MLR
      comp=Z,620nm,14.0s
JKA   Kamikawa-asahi   17.32 239         Pn    09 46 00.8 -1.3
ASAJ  Asahikawa        17.32 239   P     Pn    09 46 02.1 -0.1
      comp=Z,1.3nm,0.3s,baz=78,slow=6.2,SNR=15
ASAJ                               LR    LR    09 52 56.2
      comp=Z,699nm,18.0s,baz=46,slow=38
ASAJ  Asahikawa        17.32 239   P     Pn    09 46 00.9 -1.2
ASAJ                               pmax  pmax
      comp=Z,45nm,1.0s
UNV   Unalaska Valle   17.52  82   Pn    Pn    09 46 04.7 +0.2
UNV                                IAmb  IAmb  09 46 17.7
      comp=Z,52nm,1.0s
AKUT  Akutan           17.85  81   Pn    Pn    09 46 09.3 +0.7
AKUT                               IAmb  IAmb  09 46 23.3
      comp=Z,98nm,1.1s
YAK   Yakutsk          18.61 305   P     Pn    09 46 17.2 -0.5
      comp=Z,0.1nm,0.3s,baz=264,slow=2.4,SNR=37
YAK                                LR    LR    09 53 36.5
      comp=Z,255nm,18.8s,baz=98,slow=38
YAK   Yakutsk          18.61 305  eP     P     09 46 16.5 -0.8
YAK                               eS     Sn    09 49 36.6 -7.9
YAK                                pmax  pmax
      comp=Z,88nm,0.9s
YAK                                pmax  pmax
      comp=E,29nm,1.1s
YAK                                pmax  pmax
      comp=N,10.0nm,1.0s
YAK                                smax  smax
      comp=N,182nm,3.7s
YAK                                smax  smax
      comp=E,166nm,3.4s
YAK                                MLR   MLR
      comp=Z,590nm,15.0s
YAK   Yakutsk          18.61 305   P     P     09 46 15.9 -1.3
YAK                                IAmb  IAmb  09 46 18.6
      comp=Z,77nm,0.8s
ERM   Erimo            18.66 233⇑eP    P     09 46 15.7 -2.2
ERM   Erimo            18.66 233   P     P     09 46 15.2 -2.7
ERM                                IAmb  IAmb  09 46 24.2
      comp=Z,81nm,1.4s
JEW   Eniwo            18.83 238   P     P     09 46 19.1 -0.7
JEW                                IAmb  IAmb  09 46 22.9
      comp=Z,127nm,1.4s
TEY   Ternei           19.79 250  eP     Pn    09 46 31.4 -0.6
KLR   Kul'dur          20.11 266   P     P     09 46 31.2 -2.6
      comp=Z,0.1nm,0.3s,baz=357,slow=13,SNR=3.1
KLR                                LR    LR    09 55 48.0
      comp=Z,482nm,18.7s,baz=66,slow=42
RDOG  Red Dog Mine     20.22  37   P     Pn    09 46 38.2 +1.3
ZEA   Zeya             20.86 281  eP     Pn    09 46 46.3 +1.9
ZEA                                MLR   MLR
      comp=E,500nm,13.0s
ZEA                                MLR   MLR
      comp=Z,600nm,15.0s
TTA   Tatalina         21.96  53   P     P     09 46 55.7 +2.1
TTA                                pmax  pmax
      comp=Z,17nm,1.2s
TTA   Tatalina         21.96  53   P     P     09 46 55.7 +2.1
TIXI  Tiksi            22.03 331⇓eP    P     09 46 53.9 -0.3
TIXI                               pmax  pmax
      comp=Z,110nm,1.3s
TIXI  Tiksi            22.03 331   P     P     09 46 54.5 +0.3
TIXI                               IAmb  IAmb  09 47 11.7
      comp=Z,23nm,0.9s
USRK  Ussuriysk Ar.    22.85 254   P     P     09 47 00.9 -2.3
      comp=Z,2.7nm,0.7s,baz=51,slow=13,SNR=8.6
USRK                               LR    LR    09 56 28.7
      comp=Z,713nm,18.1s,baz=49,slow=38
JMM   Marumori         23.08 231   P     P     09 47 06.3 +0.8
JMM                                IAmb  IAmb  09 47 12.0
      comp=Z,42nm,0.9s
RSO   Redoubt South    23.62  59   P     P     09 47 14.1 +3.1
OHAK  Old Harbor       23.93  67   P     P     09 47 13.4 -0.2
SKT   Skwentna         24.06  55   P     P     09 47 17.0 +2.2
KDAK  Kodiak Island    24.17  66   P     P     09 47 16.0 +0.2
      comp=Z,6.7nm,0.6s,baz=281,slow=3.4,SNR=14
KDAK                               LR    LR    09 56 46.1
      comp=Z,261nm,18.1s,baz=294,slow=36
KDAK  Kodiak Island    24.17  66   P     P     09 47 15.6 -0.2
KDAK                               pmax  pmax
      comp=Z,13nm,0.9s
KDAK  Kodiak Island    24.17  66         P     09 47 16.7 +0.8
KDAK  Kodiak Island    24.17  66   P     P     09 47 15.6 -0.2
KDAK                               IAmb  IAmb  09 47 24.2
      comp=Z,13nm,0.9s
BPAW  Bear Paw Mtn.    24.23  50   P     P     09 47 17.8 +1.4
KTH   Kantishna Hill   24.26  51   P     P     09 47 18.1 +1.4
KTH                                IAmb  IAmb  09 47 32.2
      comp=Z,21nm,1.1s
MLY   Manley           24.35  48   P     P     09 47 18.7 +1.2
      baz=269,SNR=8.5
SUA   Susitna One      24.48  56   P     P     09 47 19.3 +0.5
SUA                                IAmb  IAmb  09 47 35.0
      comp=Z,25nm,0.9s
CNPM  China Poot       24.51  61   P     P     09 47 19.3 +0.3
CNPM                               IAmb  IAmb  09 47 26.4
      comp=Z,30nm,1.0s
TRF   Thorofare Moun   24.55  52   P     P     09 47 20.8 +1.3
CUT   Chulitna         24.62  54   P     P     09 47 21.6 +1.8
      baz=275
BRLK  Bradley Lake     24.64  61   P     P     09 47 21.9 +1.7
BRLK                               IAmb  IAmb  09 47 32.7
      comp=Z,19nm,0.8s
COLD  Coldfoot         24.72  42   P     P     09 47 21.8 +1.0
      baz=264,SNR=26
COLD  Coldfoot         24.72  42   P     P     09 47 21.5 +0.7
COLD                               IAmb  IAmb  09 47 41.0
      comp=Z,13nm,0.8s
BWN   Browne           24.89  50   P     P     09 47 25.1 +2.7
I23K  Minto, Yukon-K   24.93  47   P     P     09 47 24.4 +1.7
      baz=270,SNR=13
I23K  Minto, Yukon-K   24.93  47   P     P     09 47 24.9 +2.2
I23K                               IAmb  IAmb  09 47 31.0
      comp=Z,32nm,1.2s
NEA2  Nenana           25.06  49   P     P     09 47 25.1 +1.2
      baz=271,SNR=11
O22K  Cooper Landing   25.10  59   P     P     09 47 25.5 +1.2
      baz=279
TOLK  Toolik Lake Re   25.13  39   P     P     09 47 25.2 +0.6
      baz=262,SNR=9.0
TOLK  Toolik Lake Re   25.13  39   P     P     09 47 24.9 +0.3
TOLK                               IAmb  IAmb  09 47 28.7
      comp=Z,11nm,0.8s
MCK   McKinley         25.14  51   P     P     09 47 26.1 +1.5
      baz=273
RND   Reindeer         25.20  52   P     P     09 47 25.0 -0.2
RND                                pmax  pmax
      comp=Z,16nm,1.0s
RND   Reindeer         25.20  52   P     P     09 47 24.9 -0.2
RND                                IAmb  IAmb  09 47 31.5
      comp=Z,16nm,1.0s
SEW   Seward           25.30  59   P     P     09 47 29.2 +3.1
SEW                                IAmb  IAmb  09 47 48.7
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      comp=Z,31nm,1.0s
MJB9  Matsu-Tunnel     25.33 233   P     P     09 47 27.6 +1.0
MAJO  Matsushiro       25.33 233deP    P     09 47 27.6 +1.0
MAJO                               pmax  pmax
      comp=Z,73nm,1.0s
MAJO  Matsushiro       25.33 233   P     P     09 47 27.8 +1.2
MAT   Matsushiro       25.33 233   P     P     09 47 27.6 +1.0
MAT                               eS     S     09 51 51.4 +1.1
MJAR  Matsushiro Arr   25.33 233   P     P     09 47 27.4 +0.8
      comp=Z,53nm,0.8s,baz=24,slow=7.6,SNR=80
MJAR                               LR    LR    09 57 43.1
      comp=Z,345nm,21.5s,baz=35,slow=37
MDM   Murphy Dome      25.41  48   P     P     09 47 28.9 +1.8
WRH   Wood River Hil   25.48  49   P     P     09 47 28.9 +1.2
WRH                                IAmb  IAmb  09 47 35.4
      comp=Z,22nm,1.2s
TCOL  CIGO, UAF Yank   25.57  48   P     P     09 47 29.7 +1.2
COLA  College          25.58  48ceP    P     09 47 30.7 +2.2
COLA                               pmax  pmax
      comp=Z,7.0nm,1.0s
COLA  College          25.58  48   P     P     09 47 29.1 +0.6
KNK   Knik Glacier     25.58  56   P     P     09 47 29.5 +0.9
KNK                                IAmb  IAmb  09 47 36.1
      comp=Z,41nm,1.4s
SML   Sawmill          25.59  55   P     P     09 47 29.7 +1.0
SML                                IAmb  IAmb  09 47 45.6
      comp=Z,16nm,0.9s
CCB   Clear Creek Bu   25.60  49   P     P     09 47 29.7 +0.9
POKR  Poker Plat Res   25.75  48   P     P     09 47 32.1 +1.9
      baz=272
POKR  Poker Plat Res   25.75  48   P     P     09 47 32.2 +2.1
HDA   Harding Lake     25.98  49   P     P     09 47 33.8 +1.5
      baz=273
ILAR  Eielson Array    25.99  48   P     P     09 47 33.5 +1.1
      comp=Z,4.0nm,0.8s,baz=262,slow=8.4,SNR=28
ILAR                               LR    LR    09 58 07.9
      comp=Z,144nm,18.8s,baz=282,slow=37
M24K  Tolsona, Glenn   26.55  54   P     P     09 47 39.2 +1.7
      baz=279
M24K  Tolsona, Glenn   26.55  54   P     P     09 47 39.1 +1.7
BOD   Bodaibo          26.84 296  eP     P     09 47 37.7 -2.3
BOD                                pmax  pmax
      comp=Z,17nm,1.6s
INU   Inuyama          26.86 233   P     P     09 47 41.8 +1.4
RIDG  Independent Ri   26.95  51   P     P     09 47 42.0 +0.9
SCRK  Sand Creek       27.31  50   P     P     09 47 45.1 +0.8
      baz=277,SNR=7.5
DOT   Dot Lake         27.31  51   P     P     09 47 43.8 -0.5
N25K  Chitina, Valde   27.37  55   P     P     09 47 46.3 +1.4
      baz=281
N25K  Chitina, Valde   27.37  55   P     P     09 47 46.2 +1.4
JHJ   Hachijo jima 2   27.54 226   LR    LR    09 58 13.0
      comp=Z,273nm,19.6s,baz=330,slow=35
RAGM  Ragged Mountai   27.58  58   P     P     09 47 48.1 +1.4
RAGM                               IAmb  IAmb  09 48 06.5
      comp=Z,32nm,1.2s
JWT   Wachi            27.67 236   P     P     09 47 47.8 +0.1
L26K  Log Cabin Wild   27.71  52   P     P     09 47 49.7 +1.8
      baz=279
K27K  Chicken          28.14  50   P     P     09 47 53.2 +1.6
      baz=278
K27K  Chicken          28.14  50   P     P     09 47 52.2 +0.6
EGAK  Eagle            28.44  48   P     P     09 47 53.9 -0.4
CTGM  Chitina Glacie   29.05  56   P     P     09 48 01.4 +1.5
KSRS  Korea Array      29.76 248   P     P     09 48 06.2  0.0
      comp=Z,3.0nm,0.8s,baz=44,slow=8.7,SNR=7.2
EPYK  Eagle Plains     30.06  44   P     P     09 48 09.5 +0.8
      baz=278
HYT   Haines Junctio   30.89  55   P     P     09 48 18.0 +1.9
INK   Inuvik           31.04  40   P     P     09 48 18.3 +1.2
      comp=Z,1.2nm,0.6s,baz=277,slow=10.0,SNR=3.3
WHY   Whitehorse       32.17  55   P     P     09 48 27.3 -0.1
JIS   Juneau Island    33.24  59   P     P     09 48 37.6 +1.0
JIS                                IAmb  IAmb  09 48 53.5
      comp=Z,26nm,1.2s
C36M  Paulatuk         34.23  37   P     P     09 48 45.8 +0.8
      baz=284,SNR=6.6
TLY   Talaya           34.76 290⇑eP    P     09 48 49.1 -0.8
TLY                                pmax  pmax
      comp=Z,5.0nm,0.8s
ULN   Ulaanbaatar      34.89 282⇑eP    P     09 48 51.8 +0.6
ULN                                pmax  pmax
      comp=Z,1.0nm,0.8s
SONM  Songino Array    35.27 282   P     P     09 48 53.6 -0.9
      comp=Z,1.2nm,0.5s,baz=60,slow=7.7,SNR=12
SONM                               PcP   PcP   09 51 25.7 +1.4
      comp=Z,3.9nm,0.8s,baz=58,slow=1.6,SNR=10
SONM                               LR    LR    10 05 01.6
      comp=Z,258nm,18.1s,baz=123,slow=39
DLBC  Dease Lake       35.29  57   P     P     09 48 56.8 +2.3
      comp=Z,4.0nm,0.8s,baz=288,slow=11,SNR=11
DLBC  Dease Lake       35.29  57   P     P     09 48 56.9 +2.5
NRIK  Noril'sk         35.29 323   P     P     09 48 54.2  0.0
      comp=Z,1.4nm,0.8s,baz=92,slow=15,SNR=1.3
NRIK                               PcP   PcP   09 51 25.4 +1.5
      comp=Z,0.9nm,0.5s,baz=168,slow=2.7,SNR=3.9
NRIK                               LR    LR    10 06 13.3
      comp=Z,277nm,18.2s,baz=59,slow=41
H11N2 WAKE ISLAND Hy   35.52 174   T     T     10 26 40.1
      baz=357
H11N3 WAKE ISLAND Hy   35.54 174   T     T     10 26 38.9
      baz=357
H11N1 WAKE ISLAND Hy   35.54 174   T     T     10 26 43.8
      baz=357
ZAK   Zakamensk        35.62 288  eP     P     09 48 56.0 -1.4
ZAK                                pmax  pmax
      comp=Z,5.0nm,1.1s
HHC   Hu-ho-hao-te     36.56 269  eP     P     09 49 06.9 +1.3
HHC                                S     S     09 54 44.6 -1.0
HHC                                pmax  pmax
      comp=Z,11nm,1.0s
HHC                                pmax  pmax
      comp=Z,220nm,5.3s
HHC                                LR    LR
      comp=Z,810nm,15.3s
HHC                                LR    LR
      comp=Z,570nm,14.9s
HHC                                LR    LR
      comp=Z,370nm,14.3s
NJ2   Nanjing          38.72 252  eP     P     09 49 22.6 -1.1
NJ2                                pmax  pmax
      comp=Z,13nm,0.5s
NJ2                                LR    LR
      comp=Z,880nm,15.7s
NJ2                                LR    LR
      comp=Z,780nm,16.5s
NJ2                                LR    LR
      comp=Z,820nm,15.2s
EUNU  Eureka           39.43  15   P     P     09 49 29.9 +0.7
YKA   Yellowknife Ar   40.33  45   P     P     09 49 38.3 +1.5
      comp=Z,1.5nm,0.7s,baz=301,slow=7.7,SNR=22
YKA                                LR    LR    10 07 32.1
      comp=Z,142nm,18.6s,baz=0.0,slow=38
RES   Resolute Bay     40.64  24   P     P     09 49 40.4 +1.2
      comp=Z,1.6nm,0.5s,baz=298,slow=11,SNR=5.9
RES   Resolute Bay     40.64  24   P     P     09 49 39.9 +0.7
RES                                pmax  pmax
      comp=Z,13nm,1.3s
RES   Resolute Bay     40.64  24   P     P     09 49 39.9 +0.7
ZAA0  Zalesovo Array   43.23 302   P     P     09 50 00.2 -0.3
ZALV  Zalesovo Beam    43.23 302   P     P     09 49 59.2 -1.4
      comp=Z,1.0nm,0.5s,baz=58,slow=6.2,SNR=8.4
ZALV                               PP    PP    09 51 43.1 +2.1
      comp=Z,1.8nm,0.8s,baz=54,slow=3.7,SNR=5.5
ZALV                               LR    LR    10 10 17.6
      comp=Z,213nm,18.4s,baz=1.5,slow=39
LZH   Lanzhou          44.23 270  eP     P     09 50 10.0 +0.9
LZH                                pP    sP    09 50 21.9 -1.0
LZH                                sP    pwP   09 50 27.2 +3.4
LZH                                pmax  pmax
      comp=Z,13nm,1.2s
GTA   Gaotai           44.24 276  eP     P     09 50 09.6 +0.5
GTA                                pP    sP    09 50 20.7 -2.2
GTA                                sP    pwP   09 50 25.9 +2.2
GTA                                pmax  pmax
      comp=Z,3.0nm,1.1s
GTA                                pmax  pmax
      comp=Z,100nm,5.4s
GTA                                LR    LR
      comp=Z,970nm,15.3s
GTA                                LR    LR
      comp=Z,940nm,14.5s
GTA                                LR    LR
      comp=Z,2µm,14.2s
NLWA  Neilton Lookou   44.26  68   P     P     09 50 11.8 +2.8
NLWA                               IAmb  IAmb  09 50 17.3
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      comp=Z,22nm,1.2s
DGZ   Jazzator, Alta   44.43 296d iP   P     09 50 09.7 -0.8
DGZ                                pmax  pmax
      comp=Z,10.0nm,0.9s
D03D  Eldon            44.59  68   P     P     09 50 12.8 +1.3
      baz=309
B05A  Bryant           44.66  66   P     P     09 50 13.2 +1.1
      baz=308
TPUB  Ta-pu            44.78 242   P     P     09 50 13.8 +0.3
SPA0  Spitsbergen Ar   45.35 351   P     P     09 50 18.5 +1.2
E04D  Cinebar          45.48  69   P     P     09 50 20.5 +1.9
      baz=310
LTY   Liberty          46.04  67   P     P     09 50 24.1 +0.9
B08A  Colville Reser   46.04  65   IAmb  IAmb  09 50 30.0
      comp=Z,6.1nm,0.8s
J01E  Myrtle Point     46.94  73   P     P     09 50 32.3 +2.1
      baz=312
ZSN   Zaisan           47.17 295  eP     P     09 50 30.6 -1.4
      baz=295
ZSN   Zaisan           47.17 295  eP     P     09 50 30.5 -1.4
NEW   Newport          47.24  64   P     P     09 50 33.9 +1.4
      comp=Z,2.1nm,0.8s,baz=296,slow=8.7,SNR=3.8
F07A  Phinny Hill Vi   47.31  68   IAmb  IAmb  09 50 40.1
      comp=Z,7.7nm,0.7s
J04D  Umpqua Nationa   47.88  72   P     P     09 50 39.9 +2.1
      baz=312
CD2   Chengdu          48.04 265  eP     P     09 50 37.3 -1.6
WMQ   Urumqi           48.04 289  eP     P     09 50 38.7 -0.2
WMQ                                pP    pP    09 50 47.3 -0.7
WMQ                                sP    pwP   09 50 56.8 +2.8
WMQ                                pmax  pmax
      comp=Z,14nm,1.1s
WMQ                                pmax  pmax
      comp=Z,250nm,3.6s
WMQ                                LR    LR
      comp=Z,590nm,10.3s
WMQ                                LR    LR
      comp=Z,520nm,10.3s
WMQ                                LR    LR
      comp=Z,500nm,19.7s
PINE  Pine Mountain    48.15  70   P     P     09 50 41.8 +2.0
PINE                               IAmb  IAmb  09 50 47.3
      comp=Z,10nm,1.1s
KURK  Kurchatov        48.21 302ceP    P     09 50 38.0 -2.0
KURK                               pmax  pmax
      comp=Z,19nm,1.0s
KURK  Kurchatov        48.21 302   P     P     09 50 38.5 -1.5
G08A  Pilot Rock       48.22  68   P     P     09 50 42.0 +1.8
DAG   Danmarks Havn    48.28   1  i P    P     09 50 39.8 -0.3
DAG   Danmarks Havn    48.28   1  i P    P     09 50 39.8 -0.3
J05D  Fort Rock, OR    48.33  71   P     P     09 50 42.9 +1.7
      baz=312
WALA  Waterton Lakes   48.36  61   IAmb  IAmb  09 50 48.0
      comp=Z,8.6nm,0.8s
L04D  Klamath Falls    48.46  73   P     P     09 50 44.3 +2.1
      baz=313
YBH   Yreka Blue Hor   48.57  74   P     P     09 50 45.7 +2.7
YBH                                      sP    09 50 55.3 -0.1
YBH                                IAmb  IAmb  09 50 56.5
      comp=Z,10.0nm,0.9s
F10A  Beach Ranch, E   48.68  66   P     P     09 50 44.7 +0.9
M02C  Callahan         48.72  74   P     P     09 50 46.7 +2.6
      baz=313
K05A  Summer Lake      48.89  71   P     P     09 50 47.2 +1.7
MK31  Makanchi Array   48.93 296   P     P     09 50 44.4 -1.2
MK31                               pmax  pmax
      comp=Z,6.0nm,1.1s
MK31  Makanchi Array   48.93 296   P     P     09 50 44.4 -1.2
MKAR  Makanchi Array   48.93 296   P     P     09 50 44.0 -1.6
      comp=Z,1.8nm,0.5s,baz=55,slow=7.3,SNR=30
MKAR                               LR    LR    10 13 13.1
      comp=Z,407nm,18.0s,baz=41,slow=38
M04C  Macdoel          49.01  73   P     P     09 50 48.4 +2.0
      baz=313
JTMT  Jette            49.03  62   P     P     09 50 48.7 +2.2
MAKZ  Makanchi         49.08 296   P     P     09 50 44.4 -2.3
MAKZ                               pmax  pmax
      comp=Z,13nm,1.3s
MAKZ  Makanchi         49.08 296   P     P     09 50 44.4 -2.3
MAKZ                               IAmb  IAmb  09 50 46.6
      comp=Z,12nm,1.2s
N02D  Trinity Center   49.09  74   P     P     09 50 49.1 +2.1
      baz=314
WDC   Whiskeytown Da   49.45  75   P     P     09 50 51.3 +1.7
WDC                                pmax  pmax
      comp=Z,10.0nm,1.1s
WDC   Whiskeytown Da   49.45  75   P     P     09 50 51.3 +1.7
WDC                                IAmb  IAmb  09 50 57.2
      comp=Z,10.0nm,1.1s
O02D  Mt. Diablo Mer   49.59  75   P     P     09 50 51.9 +1.1
      baz=314
MOD   Modoc Plateau    49.77  72   IAmb  IAmb  09 51 00.3
      comp=Z,11nm,0.8s
MSO   Missoula         49.81  63   P     P     09 50 52.9 +0.5
      baz=312
O03E  Paynes Creek     50.05  74   P     P     09 50 55.8 +1.5
      baz=314
BRVK  Borovoye         50.57 309⇓eP    P     09 50 56.6 -1.3
BRVK                               pmax  pmax
      comp=Z,5.0nm,0.7s
BRVK  Borovoye         50.57 309   P     P     09 50 56.8 -1.1
BRVK                               IAmb  IAmb  09 51 12.1
      comp=Z,8.4nm,0.8s
FCC   Fort Churchill   50.65  41   P     P     09 50 59.6 +1.2
FCC                                pmax  pmax
      comp=Z,13nm,1.0s
FCC   Fort Churchill   50.65  41   P     P     09 50 59.6 +1.2
FCC                                IAmb  IAmb  09 51 10.4
      comp=Z,13nm,0.9s
DBG   Daneborg         50.74   1  i P    P     09 50 58.9  0.0
EGMT  Eagleton         51.11  59   P     P     09 51 03.1 +1.0
      baz=313
BEKR  Beckworth        51.15  74   IAmb  IAmb  09 51 10.4
      comp=Z,7.1nm,0.9s
SUMG  Summit           51.61   8  i P    P     09 51 07.0 +1.0
SUMG  Summit           51.61   8  i P    P     09 51 07.0 +1.0
SUMG  Summit           51.61   8  i P    P     09 51 07.0 +1.0
HLID  Hailey           51.79  66   P     P     09 51 08.5 +1.1
      baz=314
PAHR  Pah Rah Range    51.80  73   P     P     09 51 09.7 +2.2
PAHR                               IAmb  IAmb  09 51 20.0
      comp=Z,8.6nm,1.1s
BOZ   Bozeman (W)      51.83  63   P     P     09 51 08.3 +0.7
      baz=314
ARCES ARCESS Array B   51.85 343   P     P     09 51 06.6 -0.7
      comp=Z,3.7nm,0.9s,baz=53,slow=6.2,SNR=4.2
ARCES                              PcP   PcP   09 52 20.3 +0.6
      comp=Z,5.1nm,1.0s,baz=38,slow=2.2,SNR=4.1
ARCES                              LR    LR    10 14 34.6
      comp=Z,105nm,21.1s,baz=95,slow=38
PNTR  Pine Nut         52.11  74   P     P     09 51 12.1 +2.2
PNTR                               IAmb  IAmb  09 51 23.3
      comp=Z,18nm,1.0s
TDK   Taldyqorghan     52.14 296  eP     P     09 51 08.7 -1.2
      comp=Z,11nm,1.3s,baz=296
TDK                                LR    LR    10 13 39.6
      comp=Z,306nm,16.2s,baz=296
TDK   Taldyqorghan     52.14 296  eP     P     09 51 08.6 -1.2
TDK                                pmax  pmax
      comp=Z,11nm,1.3s
TDK                                MLR   MLR
      comp=Z,306nm,16.0s
WAKR  Walker           52.62  74   P     P     09 51 16.1 +2.5
WAKR                               IAmb  IAmb  09 51 27.6
      comp=Z,8.4nm,0.9s
SHLS  Shalkode         52.88 294  eP     P     09 51 12.2 -3.2
      comp=Z,6.9nm,0.7s,baz=294
SHLS  Shalkode         52.88 294  eP     P     09 51 12.2 -3.2
SHLS                               pmax  pmax
      comp=Z,7.0nm,0.7s
KMI   Kunming          53.03 261⇑eP    P     09 51 18.0 +1.1
KMI                                pP    pP    09 51 26.6 +0.3
KMI                                sP    pwP   09 51 34.1 +2.4
KMI                                pmax  pmax
      comp=Z,10.0nm,0.9s
KMI                                pmax  pmax
      comp=Z,110nm,4.0s
KMI                                LR    LR
      comp=Z,880nm,18.5s
KMI                                LR    LR
      comp=Z,580nm,16.9s
KMI                                LR    LR
      comp=Z,210nm,10.9s
KPKS  Kokpek           53.06 295  eP     P     09 51 15.2 -1.6
      baz=295
KPKS  Kokpek           53.06 295  eP     P     09 51 15.2 -1.6
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ARU	Arti	53.10	318c	iP	P	09 51 15.2	-1.5
ARU						09 53 12.7	
ARU				S	S	09 58 44.8	+0.7
ARU				SS	SS	10 02 23.5	+0.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	53.29	74	P	P	09 51 20.9	+2.3
	comp=Z,3.3nm,0.9s,baz=301,slow=7.8						
FLWY	Flagg Ranch	53.35	64	P	P	09 51 22.6	+3.6
FLWY				IAmb	IAmb	09 51 37.0	
	comp=Z,13nm,1.2s						
RLMT	Red Lodge	53.35	62	P	P	09 51 19.3	+0.3
	baz=315,SNR=7.0						
RLMT	Red Lodge	53.35	62	P	P	09 51 21.4	+2.3
RLMT				IAmb	IAmb	09 51 23.9	
	comp=Z,12nm,1.1s						
MDPB	Devils Postpil	53.43	75	IAmb	IAmb	09 51 28.9	
	comp=Z,18nm,1.0s						
SATY	Saty	53.49	295	eP	P	09 51 18.5	-1.5
	baz=294						
SATY	Saty	53.49	295	eP	P	09 51 18.5	-1.5
CHKK	Chushkaly	53.67	296	eP	P	09 51 18.4	-2.7
	baz=296						
CHKK	Chushkaly	53.67	296	eP	P	09 51 18.4	-2.7
KUU	Kurty	53.97	297	eP	P	09 51 20.6	-2.7
	comp=Z,6.0nm,1.3s,baz=296						
KUU	Kurty	53.97	297	eP	P	09 51 20.6	-2.7
KUU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MDOK	Medeo	54.13	296	eP	P	09 51 23.1	-1.6
	baz=295						
MDOK				LR	LR	10 15 18.3	
	comp=Z,329nm,15.6s,baz=295						
MDOK	Medeo	54.13	296	eP	P	09 51 23.0	-1.6
MDOK				MLR	MLR		
	comp=Z,329nm,16.0s						
AAA	Alma-Ata	54.16	296	eP	P	09 51 22.1	-2.7
	baz=296						
AAA	Alma-Ata	54.16	296	eP	P	09 51 22.9	-1.9
TNSS	Tian-Shan	54.27	296	eP	P	09 51 24.1	-1.8
	baz=295						
TNSS	Tian-Shan	54.27	296	eP	P	09 51 24.1	-1.8
TIN	Tinemaha, Big	54.32	75	P	P	09 51 27.0	+0.9
	baz=317						
BTLS	Baital	54.32	299	eP	P	09 51 23.8	-2.1
	comp=Z,3.7nm,0.9s,baz=299						
BTLS	Baital	54.32	299	eP	P	09 51 23.7	-2.1
BTLS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SMMC	Simmler	54.60	78	P	P	09 51 29.2	+1.2
	baz=317						
VES	Vestal, Richgr	54.72	76	P	P	09 51 30.0	+1.1
	baz=317						
R11A	Troy Canyon, C	54.84	72	P	P	09 51 31.0	+1.1
	baz=316,SNR=5.4						
CWC	Cottonwood Cre	54.85	75	P	P	09 51 31.6	+1.7
	baz=317						
BW06	Boulder Array	54.87	64	P	P	09 51 30.3	+0.1
	baz=316						
PDAR	Pinedale Array	54.87	64	P	P	09 51 32.0	+1.8
	comp=Z,1.9nm,1.0s,baz=316,slow=4.1,SNR=11						
DUG	Dugway, Tooele	55.01	68	P	P	09 51 32.2	+1.2
	baz=316						
TKM2	Tokmak 2	55.05	296	iP	P	09 51 28.7	-2.7
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SGDS	Sogindy	55.16	297	eP	P	09 51 30.5	-1.5
	comp=Z,6.9nm,1.3s,baz=297						
SGDS	Sogindy	55.16	297	eP	P	09 51 30.5	-1.5
SGDS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ISA	Isabella, Lake	55.19	76	P	P	09 51 33.8	+1.5
	baz=317						
USP	Ospenovka	55.36	297	P	P	09 51 32.6	-0.9
	SNR=12						
CHMS	Chumysh	55.42	297	P	P	09 51 32.7	-1.2
	SNR=5.2						
MPMC	Manual Prospec	55.45	75	P	P	09 51 36.0	+1.6
	baz=317						
TPNV	Topopah Spring	55.49	73	P	P	09 51 36.6	+2.0
	baz=317						
FURC	Furnace Creek,	55.50	74	P	P	09 51 36.9	+2.5
	baz=317,SNR=5.1						
KBK	Karagaybulak	55.57	297	P	P	09 51 34.5	-0.6
	SNR=5.4						
LRMC	Laurel Mtn Rad	55.77	76	P	P	09 51 38.0	+1.5
	baz=317						
AAK	Ala-Archa	55.81	297	P	P	09 51 36.0	-0.8
	SNR=7.1						
AAK	Ala-Archa	55.81	297	⇑eP	P	09 51 35.6	-1.2
AAK				pmax	pmax		
	comp=Z,34nm,1.2s						
AAK	Ala-Archa	55.81	297	P	P	09 51 36.0	-0.8
AAK				IAmb	IAmb	09 51 37.0	
	comp=Z,10nm,1.1s						
ULM	Lac du Bonnet	56.00	50	P	P	09 51 38.9	+1.0
	comp=Z,2.9nm,0.7s,baz=314,slow=7.2,SNR=6.0						
ULM	Lac du Bonnet	56.00	50c	eP	P	09 51 39.8	+1.9
ULM	Lac du Bonnet	56.00	50	P	P	09 51 39.3	+1.4
ULM				IAmb	IAmb	09 51 50.2	
	comp=Z,7.1nm,0.9s						
EDW2	Edwards Air Fo	56.03	76	P	P	09 51 39.3	+0.9
	baz=318						
KLMR	Klimovskoe	56.05	331	eP	P	09 51 37.1	-0.9
KLMR				e		09 51 58.3	
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	Klimovskoe	56.05	331	eP	P	09 51 37.1	-0.9
KLMR				AMP		09 51 38.9	
	comp=Z,11nm,1.1s						
KLMR				e		09 51 58.3	
EKS2	Erkin-Say	56.16	297	P	P	09 51 38.9	-0.3
	SNR=10						
GSC	Goldstone, Bar	56.38	75	P	P	09 51 42.9	+2.0
	baz=318						
K22A	Casper	56.51	62	P	P	09 51 43.9	+2.1
	baz=317						
RSSD	Black Hills	56.68	59	P	P	09 51 43.6	+0.5
	baz=317						
HEC	Hector,Ludlow	56.99	75	P	P	09 51 47.1	+1.9
	baz=318						
DZA	Taraz	57.23	299	eP	P	09 51 44.9	-1.9
	baz=299						
DZA	Taraz	57.23	299	eP	P	09 51 44.8	-1.9
KSH	Kashi	57.31	293	P	P	09 51 50.6	+3.1
KSH				S	S	09 59 38.7	-2.5
KSH				sS	sS	10 00 06.2	+6.6
KSH				pmax	pmax		
	comp=Z,23nm,1.2s						
KSH				pmax	pmax		
	comp=Z,310nm,4.2s						
KSH				LR	LR		
	comp=Z,500nm,5.2s						
KSH				LR	LR		
	comp=Z,690nm,4.9s						
KSH				LR	LR		
	comp=Z,630nm,5.7s						
GMRC	Granite Mounta	57.40	75	P	P	09 51 50.0	+1.8
	baz=318						
MURC	Murrieta	57.42	77	P	P	09 51 49.9	+1.7
	baz=318						
AGMN	Agassiz Nation	57.45	51	P	P	09 51 49.2	+1.0
	baz=318						
O20A	White River Ci	57.46	65	P	P	09 51 50.4	+1.8
	baz=318,SNR=9.6						
O20A	White River Ci	57.46	65	IAmb	IAmb	09 51 56.1	
	comp=Z,15nm,0.9s						
KK31	Karatay Array	57.48	300	IAmb	IAmb	09 51 48.9	
	comp=Z,12nm,0.9s						
KKAR	Karatay Array	57.48	300	IAmb	IAmb	09 51 48.9	
	comp=Z,12nm,0.9s						
BELC	Belle Mtn. Jos	57.79	76	P	P	09 51 52.4	+1.5
	baz=318						
PFO	Pinyon Flats O	57.82	76	P	P	09 51 52.9	+1.8
	baz=318						
IRM	Iron Mountain	58.15	75	P	P	09 51 55.4	+2.0
	baz=318						
PV14	Lion Creek, Pa	58.34	67	P	P	09 51 57.5	+2.7
PV14				IAmb	IAmb	09 52 03.0	
	comp=Z,9.2nm,1.0s						
BC3	Big Chuckawall	58.35	76	P	P	09 51 56.7	+1.9
	baz=319						
PV22	Blue Mesa, Par	58.35	67	IAmb	IAmb	09 52 03.2	
	comp=Z,7.4nm,0.7s						
PV04	Paradox Valley	58.39	67	IAmb	IAmb	09 52 02.8	
	comp=Z,12nm,0.9s						
IUG	Iuzhnay	58.43	299	eP	P	09 51 53.9	-1.4
	comp=Z,5.7nm,1.0s,baz=299						
IUG	Iuzhnay	58.43	299	eP	P	09 51 53.8	-1.4
IUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PV16	Nyswonger Mesa	58.45	67	IAmb	IAmb	09 52 03.2	
	comp=Z,12nm,0.9s						
PV18	Skein Mesa, Pa	58.50	67	IAmb	IAmb	09 52 04.1	
	comp=Z,12nm,1.0s						
PV03	Paradox Valley	58.52	67	IAmb	IAmb	09 52 03.7	
	comp=Z,9.3nm,0.9s						
PV15	Paradox Valley	58.65	67	IAmb	IAmb	09 52 04.6	
	comp=Z,11nm,0.8s						
FIA1	FINESS Array S	58.90	338	P	P	09 51 58.5	+0.4
FINES	FINESS Array B	58.90	338	P	P	09 51 58.2	+0.1
	comp=Z,4.6nm,0.7s,baz=33,slow=8.3,SNR=22						
FINES				LR	LR	10 21 38.5	
	comp=Z,214nm,19.0s,baz=26,slow=40						
ISCO	Idaho Springs	59.07	64	IAmb	IAmb	09 52 08.2	
	comp=Z,9.9nm,0.9s						
GLA	Glamis	59.15	76	P	P	09 52 01.9	+1.6
	baz=319						
WUAZ	Wupatki	59.20	71	P	P	09 52 01.6	+0.8
	baz=319						
MVCO	Mesa Verde	59.49	68	P	P	09 52 03.0	+0.1
	baz=319						
EYMN	Ely	59.63	49	P	P	09 52 03.2	-0.2
	baz=320						
EYMN	Ely	59.63	49	P	P	09 52 04.5	+1.1
TAPN	Taplejung	59.91	275	eP	P	09 52 05.0	-0.9
	comp=Z,17nm,0.6s						
S22A	4UR Ranch, Cre	59.97	66	P	P	09 52 08.1	+1.9
	baz=319,SNR=12						
S22A	4UR Ranch, Cre	59.97	66	P	P	09 52 08.9	+2.7
S22A				IAmb	IAmb	09 52 14.4	
	comp=Z,9.0nm,0.9s						
X16A	Lo Mia Camp, P	59.99	72	IAmb	IAmb	09 52 14.4	
	comp=Z,5.2nm,0.8s						
LAMP	Lampang	60.00	259	P	P	09 52 07.2	+1.0
UTTA	Uttaradit	60.10	258	P	P	09 52 09.5	+2.6
CM35	Chiang Mai Arr	60.14	260	P	P	09 52 09.0	+1.8
CM33	Chiang Mai Arr	60.15	260	P	P	09 52 07.0	-0.3
CMMT	Chiang Mai	60.15	260	P	P	09 52 07.0	-0.3
	comp=Z,0.0nmcomp=Z,4.8nm,0.6s						
CHTO	Chiang Mai	60.15	260	P	P	09 52 07.6	+0.3
CHTO				pmax	pmax		
	comp=Z,18nm,1.5s						
CHTO	Chiang Mai	60.15	260	P	P	09 52 07.6	+0.3
CHTO				IAmb	IAmb	09 52 08.4	
	comp=Z,18nm,1.5s						
CM09	Chiang Mai Arr	60.42	260	P	P	09 52 11.1	+1.9
	comp=Z,0.0nmcomp=Z,6.4nm,0.7s						
CMAR	Chiang Mai Arr	60.44	260	P	P	09 52 09.8	+0.5
	comp=Z,2.9nm,0.7s,baz=22,slow=7.5,SNR=17						
CMAR				LR	LR	10 19 06.7	
	comp=Z,165nm,18.1s,baz=106,slow=37						
CM04	Chiang Mai Arr	60.46	260	P	P	09 52 10.0	+0.6
	comp=Z,0.0nmcomp=Z,7.0nm,0.8s						
CM05	Chiang Mai Arr	60.48	260	P	P	09 52 11.0	+1.4
	comp=Z,0.0nmcomp=Z,4.2nm,0.8s						
GUN	Gumba	60.52	277	eP	P	09 52 09.4	-0.8
	comp=Z,34nm,0.5s						
ECSD	EROS Data Cent	60.55	55	P	P	09 52 10.5	+0.7
	baz=320						
ECSD	EROS Data Cent	60.55	55	P	P	09 52 11.7	+2.0
ECSD				IAmb	IAmb	09 52 13.6	
	comp=Z,10nm,1.1s						
SDCO	Great Sand Dun	60.66	65	P	P	09 52 12.6	+1.7
	baz=319,SNR=8.2						
SDCO	Great Sand Dun	60.66	65	IAmb	IAmb	09 52 18.8	
	comp=Z,5.2nm,0.9s						
X18A	Snowflake	60.72	71	IAmb	IAmb	09 52 19.4	
	comp=Z,8.9nm,0.8s						
RAMN	Ramite	60.85	276	eP	P	09 52 11.8	-0.5
	comp=Z,26nm,0.4s						
KKN	Kakani	60.95	278	eP	P	09 52 12.0	-1.0
	comp=Z,26nm,0.6s						
PKI	Pulchoki	61.05	277	eP	P	09 52 12.8	-0.9
	comp=Z,26nm,0.7s						
PKIN	Phulchoki	61.05	277	eP	P	09 52 12.5	-1.2
	comp=Z,26nm,0.7s						
214A	Organ Pipe Nat	61.09	75	P	P	09 52 14.5	+0.9
	baz=320						
SPMN	Marine on St.	61.16	52	P	P	09 52 13.8	0.0
	baz=321						
GKN	Gorkha	61.16	278	eP	P	09 52 13.5	-0.8
KSCO	Kaye Shedlock’	61.19	62	P	P	09 52 16.0	+1.7
	baz=320						
DMN	Daman	61.19	278	eP	P	09 52 14.0	-0.6
	comp=Z,28nm,0.9s						
DANN	Dangsing	61.39	279	eP	P	09 52 15.6	-0.4
	comp=Z,61nm,0.7s						
OBN	Obninsk	61.72	328	⇓eP	P	09 52 17.2	-0.2
OBN				eS	S	10 00 35.7	-1.5
OBN				eSS	SS	10 04 40.6	+2.5
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,239nm,15.0s						
NC204	NORSAR Array S	61.85	345	P	P	09 52 18.9	+0.6
NC405	NORSAR Array S	61.86	345	P	P	09 52 18.9	+0.5
KOLN	Koldanda	61.92	279	eP	P	09 52 18.5	-1.0
	comp=Z,32nm,0.6s						
NB201	NORSAR Array S	61.99	345	P	P	09 52 18.7	-0.5
NB2	NORSAR Subarra	62.01	345	P	P	09 52 19.1	-0.3
	comp=Z,7.7nm,0.7s,baz=19,slow=6.9						
NOA	NORSAR Array B	62.01	345	P	P	09 52 19.5	+0.1
	comp=Z,10nm,0.9s,baz=18,slow=6.9,SNR=19						
NOA				LR	LR	10 23 22.5	
	comp=Z,97nm,18.1s,baz=40,slow=40						
PYUN	Piuthan	62.02	280	eP	P	09 52 19.6	-0.5
	comp=Z,143nm,1.0s						
NC602	NORSAR Array S	62.25	345	P	P	09 52 20.5	-0.5
ANMO	Albuquerque	62.28	68	⇑eP	P	09 52 24.2	+2.5
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANMO	Albuquerque	62.28	68	P	P	09 52 23.5	+1.7
	baz=320						
ANMO	Albuquerque	62.28	68	P	P	09 52 24.3	+2.5
ANMO				IAmb	IAmb	09 52 29.4	
	comp=Z,6.6nm,0.9s						
SRAK	Srakaew	62.31	254	P	P	09 52 21.5	-0.4
	comp=Z,1.3nmcomp=Z,5µmcomp=Z,485nm,0.8s						
UTHA	Uthaitani	62.49	257	P	P	09 52 25.0	+1.9
	comp=Z,0.1nmcomp=Z,30nm,0.9s						
121A	Cookes Peak, D	63.40	71	P	P	09 52 30.9	+1.6
	baz=320						
MRSI	Marisa	64.09	227	P	P	09 52 33.3	-0.3
	comp=Z,22nm,0.9s						
KSU1	Kansas State U	64.12	58	P	P	09 52 34.5	+0.9
	baz=322						
NACGM	Naroch	64.61	334	iP	P	09 52 35.2	-1.4
NACGM				iP	P	09 52 35.2	-1.4
NACGM				iP	P	09 52 35.2	-1.4
NACGM				iPcP	PcP	09 53 13.9	+3.7
NACGM				iPP	PP	09 54 44.5	-14
NACGM				iPPP	PPP	09 56 01.9	
NACGM				iS	S	10 01 01.1	-12
NACGM				iSS	SS	10 04 54.0	-29
NACGM				iSSS	SSS	10 07 38.2	
NACGM				iLQ	LQ	10 14 09.8	
NACGM				iLR	LR	10 20 33.3	
MNK	Minsk	64.69	333	iP	P	09 52 32.6	-4.5
	comp=E,1.0nm,0.9s						
MNK				iP	P	09 52 32.6	-4.5
	comp=N,9.0nm,0.9s						
MNK				iP	P	09 52 32.6	-4.5
	comp=Z,4.0nm,0.9s						
MNK				iPcP	PcP	09 53 06.0	-4.5
MNK				iPP	PP	09 54 54.9	-4.1
MNK				iPPP	PPP	09 56 26.8	
MNK				iS	S	10 01 09.1	-5.3
MNK				iScS	SKSac	10 02 24.3	-3.9
MNK				iSS	SS	10 05 23.1	-1.4
MNK				iSSS	SSS	10 08 26.1	
MNK				iLQ	LQ	10 14 23.6	
MNK				iLR	LR	10 17 23.1	
MNK				iLRM	MLR	10 24 09.1	
	comp=Z,245nm,17.9s						
MNK				iLRM	MLR	10 24 11.7	
	comp=E,12nm,17.9s						
MNK				iLRM	MLR	10 24 17.4	
	comp=N,379nm,17.9s						
MSTX	Muleshoe	64.97	66	P	P	09 52 41.0	+1.5
	baz=321						
MNTX	Cornudas Mount	65.34	70	P	P	09 52 43.8	+2.0
	baz=321,SNR=6.0						
APSI	Ampana	65.46	227	P	P	09 52 41.9	-0.7
	comp=N,654nmcomp=N,16nm,1.2s						
WMOK	Wichita Mounta	66.44	63	P	P	09 52 50.3	+1.5
	baz=322,SNR=6.0						
GEYT	Alibeck	67.48	304	P	P	09 52 55.5	+0.1
	comp=N,9.1nm,0.9s,baz=24,slow=4.0,SNR=20						
GYA0B	ALIBECK ARRAY	67.48	304	P	P	09 52 55.1	-0.3
GYA0B				IAmb	IAmb	09 52 56.1	
	comp=Z,8.4nm,0.8s						
CCM	Cathedral Cave	67.52	55	P	P	09 52 56.7	+1.2
	baz=324						
ABTX	Abilene, Hawle	67.65	65	P	P	09 52 58.2	+1.7
	baz=322						
AKASG	Malin Array Be	67.73	330	P	P	09 52 56.3	-0.4
	comp=Z,3.9nm,0.6s,baz=28,slow=6.5,SNR=12						
AKASG				LR	LR	10 26 32.2	
	comp=Z,225nm,18.4s,baz=5.0,slow=40						
AKBB	Malin Array Si	67.73	330	P	P	09 52 55.8	-0.9
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	Malin Array Si	67.73	330	P	P	09 52 55.8	-0.9
AKBB				IAmb	IAmb	09 53 03.1	
	comp=Z,4.4nm,0.8s						
MGMO	Mountain Grove	67.75	57	P	P	09 52 57.8	+0.7
MGMO				IAmb	IAmb	09 53 02.9	
	comp=Z,6.1nm,0.7s						
FVM	French Village	67.96	55	P	P	09 53 01.0	+2.7
FVM				pmax	pmax		
	comp=Z,13nm,0.8s						
FVM	French Village	67.96	55	P	P	09 53 01.0	+2.7
TX32	Lajitas Array	68.11	70	IAmb	IAmb	09 53 07.0	
	comp=Z,9.4nm,1.1s						
U40A	Yellville	68.11	58	P	P	09 52 59.6	+0.3
	baz=324						
TXAR	Lajitas Array	68.11	70	P	P	09 53 01.6	+2.1
	comp=Z,5.1nm,0.9s,baz=304,slow=4.8,SNR=17						
LPIG	La Paz	68.55	78	LR	LR	10 17 08.7	
	comp=Z,57nm,21.7s,baz=334,slow=31						
KIV	Kislovodsk	69.14	318	iP	P	09 53 05.8	0.0
KIV				i		09 53 31.4	
KIV				iS	S	10 01 57.3	-11
KIV				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MIAR	Mount Ida	69.20	59	P	P	09 53 07.8	+1.7
	baz=324						
KBZ	Khabaz	69.26	318	P	P	09 53 06.8	+0.6
	comp=Z,6.0nm,0.9s,baz=38,slow=2.8,SNR=15						
KBZ				LR	LR	10 28 50.6	
	comp=Z,208nm,18.6s,baz=12,slow=41						
W41B	Gary Mavity, V	69.35	58	P	P	09 53 07.6	+0.6
	baz=324						
ZEI	Tsey	69.66	317	eP	P	09 53 08.3	-0.8
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SOC	Sochi	70.58	320c	iP	P	09 53 24.1	+10
SOC				eS	SKiKP	10 02 45.5	-9.1
SOC				pmax	pmax		
	comp=Z,19nm,1.0s						
SOC				MLR	MLR		
	comp=Z,286nm,14.0s						
WVT	Waverly	70.67	54	P	P	09 53 18.7	+3.5
WVT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WVT	Waverly	70.67	54	P	P	09 53 18.7	+3.5
WVT				IAmb	IAmb	09 53 35.0	
	comp=Z,5.5nm,0.9s						
CLL	Collm	71.01	341	iP	P	09 53 17.2	+0.3
OSTC	Ostas	71.08	339	eP	P	09 53 18.2	+0.8
CHVC	Chvalec	71.09	339	eP	P	09 53 18.0	+0.5
UPC	Upice	71.17	339	eP	P	09 53 18.8	+0.9
UPC	Upice	71.17	339	eP	P	09 53 18.8	+0.9
BRG	Berggiesshubel	71.24	340	iP	P	09 53 19.0	+0.6
BRG				Amp		09 53 20.7	
	comp=Z,18nm,1.4s						
BRG	Berggiesshubel	71.24	340	iP	P	09 53 18.9	+0.6
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
BRG	Berggiesshubel	71.24	340	iP	P	09 53 19.0	+0.6
BRG				Amp		09 53 20.7	
	comp=Z,18nm,1.4s						
DPC	Dobruska-Polom	71.26	338	eP	P	09 53 19.5	+1.0
DPC				epP	pwP	09 53 33.7	-0.1
OKC	Ostrava-Krasne	71.34	337	eP	P	09 53 19.5	+0.5
OKC				e		09 53 33.7	
KRLC	Kraliky	71.42	338	eP	P	09 53 19.9	+0.4
KRLC	Kraliky	71.42	338	eP	P	09 53 19.9	+0.4
KRLC				epP	pP	09 53 29.4	+0.3
MORC	Moravsky Berou	71.53	337	⇑P	P	09 53 21.4	+1.2
MORC	Moravsky Berou	71.53	337	eP	P	09 53 21.0	+0.8
MORC	Moravsky Berou	71.53	337	⇑P	P	09 53 21.4	+1.2
BUR08	Bucovina Ar. S	71.62	332	P	P	09 53 21.4	+0.5
BUR08				IAmb	IAmb	09 53 36.3	
	comp=Z,11nm,1.3s						
BURAR	Bucovina Array	71.65	332	⇓P	P	09 53 21.5	+0.5
BURAR	Bucovina Array	71.65	332	⇓P	P	09 53 21.5	+0.5
LANS	Liptovska Anna	71.68	336	eP	P	09 53 23.2	+2.1
LANS	Liptovska Anna	71.68	336	eP	P	09 53 23.2	+2.1
HKT	Hockley	71.75	64	⇑eP	P	09 53 23.3	+1.7
HKT				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PRU	Pruhonice	71.97	339	eP	P	09 53 23.2	+0.5
PRU				e		09 53 33.4	
PRU	Pruhonice	71.97	339	eP	P	09 53 23.2	+0.5
PRU				epP	pP	09 53 33.4	+1.0
BIZ	Bicaz	72.02	331	⇓P	P	09 53 39.3	+16
NKC	Novy Kostel	72.14	341	eP	P	09 53 24.3	+0.5
NKC	Novy Kostel	72.14	341	eP	P	09 53 24.3	+0.5
VRAC	Vranov	72.18	338	⇑P	P	09 53 25.4	+1.4
VRAC	Vranov	72.18	338	eP	P	09 53 25.0	+0.9
VRAC	Vranov	72.18	338	⇑P	P	09 53 25.4	+1.4
JAVC	Velka Javorina	72.37	337	eP	P	09 53 27.1	+1.9
KRUC	Moravsky	72.46	338	eP	P	09 53 26.5	+0.8
SMOL	Smolenice	72.75	337	eP	P	09 53 29.7	+2.3
SMOL				e		09 53 43.8	
SMOL	Smolenice	72.75	337	eP	P	09 53 29.7	+2.3
SMOL				e		09 53 43.8	
L64A	Middleborough	72.84	39	P	P	09 53 28.0	0.0
	baz=331						
M63A	Gales Ferry	72.86	40	P	P	09 53 28.1	-0.1
	baz=331						
MEM	Membach	72.86	345	dP	P	09 53 28.8	+0.8
	comp=Z,22nm,1.1s						
BTNL	Ternell	72.86	345	dP	P	09 53 28.8	+0.7
GRA1	Grafenberg Arr	72.89	341	IAmb	IAmb	09 53 30.5	
	comp=Z,11nm,0.8s						
GRF	Grafenberg Arr	72.89	341	eP	P	09 53 29.5	+1.3
	comp=Z,14nm,1.1s,baz=15,slow=5.2						
HYB	Hyderabad	72.91	276	iP	P	09 53 28.0	-0.8
BSTI	Sart Tilman	72.95	345	dP	P	09 53 29.4	+0.9
KHC	Kasperske Hory	72.98	340	⇓eP	P	09 53 30.1	+1.3
KHC				pmax	pmax		
	comp=Z,32nm,1.3s						
KHC	Kasperske Hory	72.98	340	eP	P	09 53 28.2	-0.6
DRGR		73.08	333	⇑P	P	09 53 30.1	+0.7
DRGR		73.08	333	⇑P	P	09 53 30.2	+0.7
GEC2	GERESS Array S	73.22	340	IAmb	IAmb	09 53 31.8	
	comp=Z,5.7nm,1.0s						
GERES	GERESS Array B	73.22	340	P	P	09 53 31.4	+1.0
	comp=Z,2.2nm,0.7s,baz=33,slow=5.1,SNR=21						
GERES				LR	LR	10 30 40.2	
	comp=Z,161nm,18.6s,baz=25,slow=40						
S57A	Dark Hollow, R	73.25	47	P	P	09 53 31.5	+0.9
	baz=328						
MLR	Muntele Rosu	73.39	330	⇑P	P	09 53 32.6	+1.2
MLR	Muntele Rosu	73.39	330	⇑P	P	09 53 32.6	+1.2
DOU	Dourbes	73.56	346	dP	P	09 53 32.6	+0.4
CSKK	Cskako	73.64	336	eP	P	09 53 34.7	+2.0
CONA	Conrad Observa	73.65	338	eP	P	09 53 34.1	+1.3
	comp=Z,15nm,1.4s						
ARR	Arges	73.87	331	⇓P	P	09 53 35.6	+1.5
MPLH	Magyarpolny	73.99	336	eP	P	09 53 36.9	+2.2
BZS	Buzias	74.45	333	⇓P	P	09 53 52.3	+15
BZS	Buzias	74.45	333	⇓P	P	09 53 52.3	+15
POO	Poona	74.69	280	ex	P	09 53 35.5	-3.8
KBA	Koelnbreinsper	74.98	339	eP	P	09 53 41.9	+1.1
	comp=Z,26nm,1.3s						
SOKA	Soboth	75.01	338	eP	P	09 53 38.7	-2.1
	comp=Z,9.8nm,1.5s						
WATA	Walderalm	75.08	341	eP	P	09 53 41.8	+0.5
	comp=Z,11nm,1.1s						
RETA	Reutte	75.09	341	eP	P	09 53 42.2	+1.0
	comp=Z,7.0nm,0.9s						
MOTA	Moosalm	75.17	341	eP	P	09 53 39.1	-2.7
	comp=Z,12nm,1.1s						

SQTA	**Sankt Quirin**	**75.27**	**341**	*e*P	**P**	**09 53 42.2**	**-0.1**
	comp=Z,16nm,1.0s						
OBKA	**Obir**	**75.28**	**338**	*e*P	**P**	**09 53 42.4**	**+0.1**
	comp=Z,16nm,1.1s						
MYKA	**Terra Mystica**	**75.35**	**339**	*e*P	**P**	**09 53 41.8**	**-0.9**
	comp=Z,11nm,1.3s						
ABTA	**Abfaltersbach**	**75.47**	**340**	*e*P	**P**	**09 53 43.5**	**+0.1**
	comp=Z,15nm,1.4s						
FETA	**Feichten**	**75.55**	**341**	*e*P	**P**	**09 53 44.4**	**+0.4**
	comp=Z,15nm,1.0s						
BRTR	**Keskin Array B**	**76.14**	**322**	P	**P**	**09 53 47.6**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=204,slow=30,SNR=5.3						
BRTR				LR	LR	10 33 55.6	
	comp=Z,95nm,18.1s,baz=3.0,slow=41						
TUE	**Stuetta**	**76.33**	**342**	P	**P**	**09 53 49.0**	**+0.5**
VTS	**Vitosha**	**76.80**	**331**	⇓P	**P**	**09 53 51.4**	**+0.3**
VTS	**Vitosha**	**76.80**	**331**	⇓P	**P**	**09 53 51.4**	**+0.3**
DZM	**Mont Dzumac**	**77.01**	**177**	LR	LR	10 22 15.7	
	comp=Z,69nm,19.3s,baz=29,slow=31						
WRAB	**Tennant Creek**	**78.80**	**208**	⇑*e*P	**P**	**09 54 02.8**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WRA	**Warramunga Arr**	**78.81**	**208**	P	**P**	**09 54 03.1**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=12,slow=5.8,SNR=9.5						
UOSS	**Minazif**	**79.00**	**298**	P	**P**	**09 54 01.8**	**-1.6**
UOSS				IAmb	IAmb	09 54 03.3	
	comp=Z,18nm,1.1s						
MIB	**Mutribah**	**79.21**	**307**	*e*P		09 54 03.0	
RST	**Umm Al-Ruwaisa**	**79.63**	**307**	*e*P		09 54 06.0	
RDF	**Al-Radifah**	**79.86**	**307**	*e*P		09 54 06.8	
AS31	**Alice Springs**	**82.48**	**207**	P	**P**	**09 54 22.9**	**+1.1**
ASAR	**Alice Springs**	**82.48**	**207**	P	**P**	**09 54 23.4**	**+1.5**
	comp=Z,1.5nm,0.6s,baz=17,slow=4.9,SNR=27						
ESDC	**Sonseca Array**	**84.86**	**350**	P	**P**	**09 54 35.3**	**+1.2**
	comp=Z,11nm,1.1s,baz=360,slow=4.9,SNR=42						
RAYN	**Ar Rayn**	**85.42**	**305**	P	**P**	**09 54 36.4**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
RAYN	**Ar Rayn**	**85.42**	**305**	P	**P**	**09 54 36.4**	**-0.7**
BOSA	**Boshof**	**139.92**	**294**	PKP	**PKPdf**	**10 01 28.8**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=180,slow=5.1,SNR=3.6						

GCMT 01 09:47:43.0±0.3**, 13°.45S**±0°.02×**111°.99W**±0°.02**, h17**km±1km**, MW4.8**/101**, Moment Tensor Solution. s25,c32; s101,c123; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-0.60±.09; $M_{\theta\theta}$0.83±.08; $M_{\phi\phi}$-0.22±.09; $M_{r\theta}$-0.35±.18; $M_{\theta\phi}$2.16±.07; $M_{\phi r}$-0.50±.21; **Best double couple:** $M_0$2.28900×10^{16} **NP1:**ϕ_s277.00000°**,**δ77.00000°**,** λ2.00000°. **NP2:**ϕ_s187.00000°**,**δ88.00000°**,**λ167.00000°. **Principal axes:** T 2.6300**,** Plg10.0000°, Azm141.0000°**;** N -0.6800, Plg77.0000°, Azm360.0000°**;** P -1.9490, Plg8.0000°, Azm233.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea**	**23.82**	**243**	*e*LR	LR	09 58 52.3	
	comp=Z,589nm,25.8s						
TAOE	**Nuku Hiva Isla**	**27.99**	**276**	*e*LR	LR	10 00 30.8	
	comp=Z,326nm,25.0s						
PPT2	**Papeete2**	**36.41**	**259**	*e*LR	LR	10 04 31.0	
	comp=Z,209nm,30.0s						

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*IDC **01** 10:06:50.0±1.6, 13°.63S×111°.50W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/29, mbtmp4.0/6 Error ellipse: s-maj=45.7km s-min=39.9km az=59.0*

*NEIC **01** 10:07:05.8±2.3, 11°.8S±0°.1×111°.05W±0°.05, h10km±2km, mb4.7/60, Error ellipse: s-maj=22.8km s-min=8.1km az=183.0*

ISC 01 10:07:04.4±0.9**, 11°.8S**±0°.1×**111°.1W**±0°.2**, h10**km**, n74, σ1s.48**/57**, mb4.6**/33**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTCN	**Pitcairn Islan**	**22.30**	**231**	P	**P**	**10 12 02.6**	**+0.6**
PAYG	**Puerto Ayora**	**23.43**	**63**	P	**P**	**10 12 14.0**	**0.0**
PAYG				IAmb	IAmb	10 12 19.8	
	comp=Z,32nm,0.9s						
TLIG	**Tlapa**	**31.70**	**23**	P	**P**	**10 13 26.5**	**-2.0**
TLIG				IAmb	IAmb	10 13 35.8	
	comp=Z,22nm,1.5s						
ATAH	**Atahualpa**	**32.57**	**85**	P	P	10 13 29.1	-7.6
	comp=Z,2.0nm,0.5s,baz=31,slow=6.8,SNR=1.9						
PETF	**Flores**	**35.42**	**37**	P	**P**	**10 14 01.0**	**+0.1**
H03N2	**Juan Fernandez**	**36.43**	**131**	T	T	10 52 08.7	
	baz=298,slow=76						
H03N3	**Juan Fernandez**	**36.44**	**131**	T	T	10 52 09.5	
	baz=298,slow=76						
H03N1	**Juan Fernandez**	**36.45**	**131**	T	T	10 52 10.0	
	baz=298,slow=76						
HPIG		**38.87**	**8**	P	**P**	**10 14 31.6**	**+1.3**
833A	**Chaparral WMA,**	**41.47**	**16**	P	**P**	**10 14 53.8**	**+2.2**
TX31	**Lajitas Ar. Si**	**41.53**	**10**	P	**P**	**10 14 53.9**	**+1.7**
TX31				IAmb	IAmb	10 14 57.0	
	comp=Z,29nm,1.4s						
TX32	**Lajitas Array**	**41.53**	**10**	P	**P**	**10 14 53.7**	**+1.6**
TXAR	**Lajitas Array**	**41.53**	**10**	P	**P**	**10 14 55.3**	**+3.1**
	comp=Z,2.7nm,1.1s,baz=193,slow=10,SNR=12						
MT05	**Renca**	**42.64**	**127**	P	**P**	**10 15 02.0**	**+0.7**
JCT	**Junction City**	**43.42**	**14**	P	**P**	**10 15 10.2**	**+2.6**
JCT				IAmb	IAmb	10 15 11.9	
	comp=Z,12nm,0.8s						
MNTX	**Cornudas Mount**	**43.60**	**7**	P	**P**	**10 15 11.7**	**+2.8**
MNTX				IAmb	IAmb	10 15 12.7	
	comp=Z,11nm,1.1s						
435B	**Jarrell**	**44.29**	**17**	P	**P**	**10 15 14.7**	**+0.2**
SDV	**Santo Domingo**	**45.18**	**65**	P	**P**	**10 15 21.7**	**-0.4**
SDV				IAmb	IAmb	10 15 34.8	
	comp=Z,11nm,1.0s						
WHTX	**Lake Whitney,**	**45.47**	**16**	P	**P**	**10 15 26.4**	**+2.5**
WHTX				IAmb	IAmb	10 15 27.5	
	comp=Z,12nm,1.1s						
ABTX	**Abilene, Hawle**	**45.52**	**14**	P	**P**	**10 15 25.8**	**+1.6**
ABTX				IAmb	IAmb	10 15 27.1	
	comp=Z,6.3nm,0.9s						
Y22D	**IRIS PASSCAL I**	**45.80**	**5**	P	**P**	**10 15 28.7**	**+2.1**
BNM	**Barren Site**	**45.90**	**5**	P	**P**	**10 15 29.2**	**+1.7**
X18A	**Snowflake**	**46.09**	**1**	P	**P**	**10 15 31.2**	**+2.3**
X18A				IAmb	IAmb	10 15 32.7	
	comp=Z,8.6nm,1.1s						
MSTX	**Muleshoe**	**46.21**	**10**	P	**P**	**10 15 30.5**	**+0.7**
ANMO	**Albuquerque**	**46.70**	**5**	P	**P**	**10 15 35.1**	**+1.4**
W13A	**Hualapai Mount**	**46.73**	**357**	P	**P**	**10 15 35.3**	**+1.3**
W13A				IAmb	IAmb	10 15 37.0	
	comp=Z,13nm,1.4s						
Z35A	**Perchaven, San**	**46.79**	**16**	P	**P**	**10 15 35.4**	**+1.2**
WUAZ	**Wupatki**	**47.07**	**360**	P	**P**	**10 15 38.2**	**+1.6**
WUAZ				IAmb	IAmb	10 15 40.0	
	comp=Z,12nm,1.5s						
SAML	**Samuel**	**47.17**	**91**	P	**P**	**10 15 37.3**	**-0.2**
SHPR	**Sheep Range**	**48.21**	**356**	P	**P**	**10 15 47.5**	**+2.1**
SHPR				IAmb	IAmb	10 15 54.3	
	comp=Z,8.0nm,1.1s						
X37A	**Clayton**	**48.50**	**17**	P	**P**	**10 15 49.9**	**+2.4**
X37A				IAmb	IAmb	10 15 58.3	
	comp=Z,9.4nm,1.2s						
KNB	**Kanab**	**48.59**	**358**	P	**P**	**10 15 50.4**	**+2.0**
OKCFA	**Oklahoma City**	**48.71**	**15**	P	**P**	**10 15 50.4**	**+1.3**
OK025	**Westminster Rd**	**48.90**	**15**	P	**P**	**10 15 51.7**	**+1.2**
PRN	**Pahroc Range**	**49.09**	**356**	P	**P**	**10 15 53.9**	**+1.7**
CCUT	**Cedar City**	**49.14**	**358**	P	**P**	**10 15 54.4**	**+1.7**
SDCO	**Great Sand Dun**	**49.57**	**6**	P	**P**	**10 15 57.7**	**+1.7**
SDCO				IAmb	IAmb	10 15 59.1	
	comp=Z,14nm,1.4s						
PV05	**Paradox Valley**	**49.66**	**2**	IAmb	IAmb	10 16 00.4	
	comp=Z,15nm,1.5s						
PV04	**Paradox Valley**	**49.98**	**2**	P	**P**	**10 16 00.1**	**+1.1**
PV04				IAmb	IAmb	10 16 16.1	
	comp=Z,8.7nm,1.5s						
W41B	**Gary Mavity, V**	**50.02**	**20**	P	**P**	**10 16 00.9**	**+1.8**
W41B				IAmb	IAmb	10 16 03.1	
	comp=Z,14nm,1.4s						
LHV	**Little Huntoon**	**50.28**	**352**	P	**P**	**10 16 01.8**	**+0.8**
LHV				IAmb	IAmb	10 16 09.3	
	comp=Z,9.6nm,1.2s						
CMB	**Columbia Colle**	**50.34**	**350**	P	**P**	**10 16 01.4**	**-0.1**
CMB				IAmb	IAmb	10 16 03.0	
	comp=Z,10nm,1.4s						
NVAR	**Mina Array Bea**	**50.43**	**353**	P	**P**	**10 16 03.3**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=179,slow=11,SNR=19						
SRU	**San Rafael Swe**	**50.66**	**1**	P	**P**	**10 16 04.0**	**-0.1**
SMCO	**Snowmass**	**50.87**	**4**	P	**P**	**10 16 07.1**	**+1.1**
P17A	**Butcher Ranch,**	**51.02**	**0**	P	**P**	**10 16 07.0**	**+0.2**
PNTR	**Pine Nut**	**51.25**	**352**	P	**P**	**10 16 08.8**	**+0.2**
PNTR				IAmb	IAmb	10 16 16.5	
	comp=Z,7.2nm,1.0s						
NLU	**North Lily Min**	**51.51**	**359**	P	**P**	**10 16 11.5**	**+1.0**
MPU	**Maple Canyon**	**51.56**	**359**	P	**P**	**10 16 11.7**	**+0.8**
ISCO	**Idaho Springs**	**51.59**	**5**	P	**P**	**10 16 11.4**	**+0.1**
DUG	**Dugway, Tooele**	**51.76**	**358**	P	**P**	**10 16 13.3**	**+1.0**
ORV	**Oroville**	**52.01**	**350**	P	**P**	**10 16 13.7**	**-0.3**
ORV				IAmb	IAmb	10 16 16.4	
	comp=Z,10nm,1.5s						
CTU	**Camp Tracy**	**52.24**	**359**	P	**P**	**10 16 16.8**	**+0.9**
ELK	**Elko**	**52.43**	**356**	P	**P**	**10 16 18.3**	**+0.9**
MOD	**Modoc Plateau**	**54.11**	**352**	P	**P**	**10 16 29.7**	**0.0**
PDAR	**Pinedale Array**	**54.33**	**1**	P	**P**	**10 16 30.8**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=165,slow=7.2,SNR=10						
K22A	**Casper**	**54.35**	**4**	IAmb	IAmb	10 16 33.7	
	comp=Z,14nm,1.3s						
MFID	**Camas Ranch**	**55.12**	**356**	P	**P**	**10 16 36.5**	**-0.5**
MFID				IAmb	IAmb	10 16 44.1	
	comp=Z,7.8nm,1.2s						
HLID	**Hailey**	**55.19**	**357**	P	**P**	**10 16 37.9**	**+0.4**
HLID				IAmb	IAmb	10 16 49.9	
	comp=Z,9.5nm,1.5s						
FLWY	**Flagg Ranch**	**55.62**	**0**	IAmb	IAmb	10 16 41.9	
	comp=Z,12nm,1.2s						
MCMT	**McKenzie Canyo**	**56.39**	**359**	P	**P**	**10 16 46.3**	**+0.2**
BMO	**Blue Mountains**	**56.67**	**355**	IAmb	IAmb	10 16 48.8	
	comp=Z,9.9nm,1.4s						
G08A	**Pilot Rock**	**57.27**	**353**	P	**P**	**10 16 51.8**	**-0.5**
G08A				IAmb	IAmb	10 16 59.5	
	comp=Z,8.1nm,1.2s						
YKA	**Yellowknife Ar**	**74.12**	**358**	P	**P**	**10 18 37.8**	**-2.7**
	comp=Z,1.1nm,0.9s,baz=168,slow=5.3,SNR=14						
ILAR	**Eielson Array**	**80.99**	**345**	P	P	10 19 13.9	-5.0
	comp=Z,0.3nm,0.6s,baz=153,slow=4.8,SNR=2.8						
H11S2	**WAKE ISLAND Hy**	**86.44**	**290**	T	T	11 54 49.8	
	baz=116						
H11S1	**WAKE ISLAND Hy**	**86.45**	**290**	T	T	11 54 49.7	
	baz=116						
H11S3	**WAKE ISLAND Hy**	**86.46**	**290**	T	T	11 54 50.2	
	baz=116						
H11N3	**WAKE ISLAND Hy**	**86.55**	**291**	T	T	11 54 53.9	
	baz=106						
H11N2	**WAKE ISLAND Hy**	**86.56**	**291**	T	T	11 55 08.2	
	baz=106						
H11N1	**WAKE ISLAND Hy**	**86.56**	**291**	T	T	11 55 01.5	
	baz=106						
MKAR	**Makanchi Array**	**143.34**	**345**	PKP	PKPab	10 26 27.2	-8.0
	comp=Z,1.6nm,1.0s,baz=7.1,slow=2.9,SNR=8.7						
CMAR	**Chiang Mai Arr**	**150.29**	**287**	PKPbc	PKPdf	10 26 44.9	-6.8
	comp=Z,1.4nm,0.9s,baz=62,slow=0.9,SNR=8.0						
GEYT	**Alibeck**	**152.25**	**19**	PKPbc	**PKPdf**	**10 26 52.8**	**-1.4**
	comp=Z,1.4nm,0.9s,baz=258,slow=6.8,SNR=5.0						

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*NEIC **01** 10:08:27.7±2.4, 13°.7S±0°.1×111°.9W±0°.2, h10km±1km, mb4.8/55, Error ellipse: s-maj=31.8km s-min=15.2km az=67.0*

*GCMT **01** 10:08:27.7±0.4, 13°.40S±0°.02×111°.92W±0°.02, h24km±1km, MW4.9/90, Moment Tensor Solution. s24,c25; s90,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.26±.12; $M_{\theta\theta}$0.40±.11; $M_{\phi\phi}$-0.13±.12; $M_{r\theta}$-0.73±.22; $M_{\theta\phi}$2.23±.08; $M_{\phi r}$-0.76±.23; Best double couple: $M_0$2.43200×10^{16} NP1:ϕ_s275.00000°, δ74.00000°, λ12.00000°. NP2: ϕ_s182.00000°, δ79.00000°, λ164.00000°. Principal axes: T 2.7460, Plg19.0000°, Azm138.0000°; N -0.6270, Plg70.0000°, Azm328.0000°; P -2.1190, Plg3.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 10:08:27.9±1.3, 12°.79S×111°.74W, h0km, mb3.8/6, mb1 4.2/6, mb1mx4.0/28, mbtmp3.8/6, MS3.8/3, Ms1 3.8/3, ms1mx3.5/8 Error ellipse: s-maj=45.7km s-min=38.1km az=58.0*

ISC 01 10:08:27.4±0.9**, 13°.6S**±0°.2×**112°.0W**±0°.2**, h10**km**, n78, σ1s.65**/58**, mb4.8**/29**, MS3.9**/6**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKT	**Rikitea**	**23.75**	**243**	*e*LR	LR	10 19 25.6	
	comp=Z,610nm,26.0s						
PAYG	**Puerto Ayora**	**25.03**	**61**	P	**P**	**10 13 52.5**	**+0.6**
PAYG				IAmb	IAmb	10 14 02.2	
	comp=Z,26nm,1.0s						
ATAH	**Atahualpa**	**33.62**	**82**	P	**P**	**10 15 07.7**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=113,slow=16,SNR=1.4						
H03N2	**Juan Fernandez**	**35.90**	**129**	T	T	10 53 39.3	
	baz=300,slow=76,SNR=32						
H03N3	**Juan Fernandez**	**35.91**	**129**	T	T	10 53 39.8	
	baz=300,slow=76,SNR=30						
H03N1	**Juan Fernandez**	**35.91**	**129**	T	T	10 53 39.4	
	baz=300,slow=76,SNR=38						
PPT	**Papeete**	**36.40**	**259**	LR	LR	10 27 12.5	
	comp=Z,59nm,19.6s,baz=216,slow=31						
PPT2	**Papeete2**	**36.40**	**259**	*e*LR	LR	10 25 07.0	
	comp=Z,218nm,27.2s						
ROSC	**El Rosal**	**41.63**	**66**	LR	LR	10 28 05.3	
	comp=Z,59nm,20.9s,baz=211,slow=29						
833A	**Chaparral WMA,**	**43.46**	**16**		**P**	**10 16 29.0**	**-1.8**
TXAR	**Lajitas Array**	**43.47**	**11**	P	**P**	**10 16 27.0**	**-4.0**
	comp=Z,0.5nm,1.0s,baz=213,slow=6.5,SNR=2.2						
PLCA	**Paso Flores**	**45.06**	**135**	LR	LR	10 31 07.8	
	comp=Z,372nm,18.2s,baz=323,slow=30						
JCT	**Junction City**	**45.40**	**15**	P	**P**	**10 16 46.5**	**+0.1**
MNTX	**Cornudas Mount**	**45.52**	**8**		**P**	**10 16 46.4**	**-0.8**
BAR	**Barrett**	**46.28**	**355**	P	**P**	**10 16 52.0**	**-1.3**
BAR				IAmb	IAmb	10 17 01.3	
	comp=Z,8.7nm,1.1s						
ABTX	**Abilene, Hawle**	**47.49**	**14**		**P**	**10 17 03.4**	**+0.6**
X16A	**Lo Mia Camp, P**	**47.80**	**1**	P	**P**	**10 17 06.5**	**+1.3**
BNM	**Barren Site**	**47.80**	**6**		**P**	**10 17 04.4**	**-0.9**
X18A	**Snowflake**	**47.94**	**2**	P	**P**	**10 17 07.8**	**+1.4**
X18A				IAmb	IAmb	10 17 15.3	
	comp=Z,8.8nm,1.1s						
MWC	**Mount Wilson**	**47.95**	**353**	P	**P**	**10 17 07.8**	**+1.3**
W13A	**Hualapai Mount**	**48.51**	**358**		**P**	**10 17 07.4**	**-3.4**
Z35A	**Perchaven, San**	**48.77**	**16**	P	**P**	**10 17 11.1**	**-1.5**
GSC	**Goldstone, Bar**	**48.89**	**355**		**P**	**10 17 13.6**	**0.0**
GSC				IAmb	IAmb	10 17 16.3	
	comp=Z,9.3nm,1.2s						
WUAZ	**Wupatki**	**48.89**	**1**	P	**P**	**10 17 11.4**	**-2.3**
SHPR	**Sheep Range**	**49.97**	**357**		**P**	**10 17 19.8**	**-2.1**
PRN	**Pahroc Range**	**50.86**	**357**	P	**P**	**10 17 28.8**	**+0.2**
MIAR	**Mount Ida**	**51.01**	**20**	P	**P**	**10 17 30.9**	**+1.3**
MTPU	**Mount Pierson**	**51.41**	**360**	P	**P**	**10 17 34.0**	**+1.0**
SDCO	**Great Sand Dun**	**51.47**	**7**	P	**P**	**10 17 34.2**	**+0.8**
TPH	**Tonopah**	**51.68**	**355**	P	**P**	**10 17 35.9**	**+1.0**
LHV	**Little Huntoon**	**51.98**	**353**	P	**P**	**10 17 38.2**	**+1.5**
LHV				IAmb	IAmb	10 17 45.5	
	comp=Z,14nm,1.3s						
W41B	**Gary Mavity, V**	**52.03**	**21**	P	**P**	**10 17 38.8**	**+1.6**
W41B				IAmb	IAmb	10 17 44.7	
	comp=Z,12nm,1.1s						
NVAR	**Mina Array Bea**	**52.14**	**354**	P	**P**	**10 17 34.1**	**-4.2**
	comp=Z,1.7nm,0.8s,baz=190,slow=8.8,SNR=6.5						
P17A	**Butcher Ranch,**	**52.85**	**1**	P	**P**	**10 17 44.2**	**+0.7**
PNTR	**Pine Nut**	**52.94**	**353**	P	**P**	**10 17 46.5**	**+2.3**
PNTR				IAmb	IAmb	10 17 47.1	
	comp=Z,9.6nm,0.8s						
NLU	**North Lily Min**	**53.32**	**360**	P	**P**	**10 17 48.5**	**+1.5**
MPU	**Maple Canyon**	**53.38**	**0**	P	**P**	**10 17 48.4**	**+0.9**
DUG	**Dugway, Tooele**	**53.57**	**359**	P	**P**	**10 17 51.0**	**+2.3**
DUG				IAmb	IAmb	10 17 56.9	
	comp=Z,12nm,1.2s						
BEKR	**Beckworth**	**53.80**	**352**	P	**P**	**10 17 52.4**	**+1.9**
ELK	**Elko**	**54.20**	**357**		**P**	**10 17 54.3**	**+0.9**
MOD	**Modoc Plateau**	**55.80**	**352**		**P**	**10 18 04.9**	**0.0**
MOD				IAmb	IAmb	10 18 12.2	
	comp=Z,15nm,1.4s						
WVOR	**Wild Horse Val**	**56.13**	**354**	IAmb	IAmb	10 18 15.5	
	comp=Z,9.9nm,1.1s						
PDAR	**Pinedale Array**	**56.17**	**2**	P	P	10 18 02.8	-4.9
	comp=Z,1.6nm,0.8s,baz=141,slow=5.7,SNR=4.0						
K22A	**Casper**	**56.24**	**5**	IAmb	IAmb	10 18 14.9	
	comp=Z,12nm,1.1s						
MCMT	**McKenzie Canyo**	**58.20**	**359**		**P**	**10 18 21.4**	**-0.6**
BMO	**Blue Mountains**	**58.42**	**356**		**P**	**10 18 23.9**	**+0.6**
BMO				IAmb	IAmb	10 18 30.9	
	comp=Z,8.0nm,1.1s						
G08A	**Pilot Rock**	**59.00**	**354**	P	**P**	**10 18 24.1**	**-3.3**
G08A				IAmb	IAmb	10 18 34.7	
	comp=Z,9.2nm,1.3s						
EGMT	**Eagleton**	**61.42**	**2**	P	**P**	**10 18 47.0**	**+3.2**
C09A	**Chrisman Ranch**	**61.42**	**355**		**P**	**10 18 42.9**	**-0.9**
C09A				IAmb	IAmb	10 18 51.4	
	comp=Z,6.2nm,0.8s						
F36A	**Milaca**	**61.52**	**15**		**P**	**10 18 44.9**	**+0.4**
F36A				IAmb	IAmb	10 18 45.9	
	comp=Z,8.1nm,0.9s						
FCC	**Fort Churchill**	**73.61**	**10**		**P**	**10 20 01.0**	**+0.4**
FCC				IAmb	IAmb	10 20 06.8	
	comp=Z,7.6nm,1.1s						
YKA	**Yellowknife Ar**	**75.92**	**359**	P	**P**	**10 20 09.7**	**-4.2**
	comp=Z,0.3nm,0.8s,baz=173,slow=4.2,SNR=3.1						
QSPA	**South Pole Qui**	**76.46**	**180**	P	**P**	**10 20 16.7**	**-0.6**
QSPA				IAmb	IAmb	10 20 23.9	
	comp=Z,7.3nm,1.0s						
HYT	**Haines Junctio**	**76.97**	**347**	P	**P**	**10 20 20.7**	**+0.6**
HYT				IAmb	IAmb	10 20 28.2	
	comp=Z,9.6nm,1.2s						
DZM	**Mont Dzumac**	**77.33**	**250**	*e*LR	LR	10 44 04.0	
	comp=Z,104nm,25.6s						
SKT	**Skwentna**	**81.53**	**342**	P	**P**	**10 20 45.6**	**+0.7**
SKT				IAmb	IAmb	10 20 52.0	
	comp=Z,13nm,1.1s						
EPYK	**Eagle Plains**	**81.87**	**350**	IAmb	IAmb	10 20 48.0	
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	**82.54**	**346**	P	**P**	**10 20 49.0**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=161,slow=4.7,SNR=14						
WRH	**Wood River Hil**	**82.59**	**345**	P	**P**	**10 20 50.7**	**+0.4**
CCB	**Clear Creek Bu**	**82.66**	**345**	IAmb	IAmb	10 20 57.7	
	comp=Z,10.0nm,1.4s						
MDM	**Murphy Dome**	**83.02**	**345**	P	**P**	**10 20 53.7**	**+1.1**
BPAW	**Bear Paw Mtn.**	**83.04**	**344**	P	**P**	**10 20 53.3**	**+0.6**
I23K	**Minto, Yukon-K**	**83.46**	**345**	P	**P**	**10 20 55.3**	**+0.5**
I23K				IAmb	IAmb	10 21 01.7	
	comp=Z,6.9nm,1.1s						
COLD	**Coldfoot**	**85.33**	**346**	P	**P**	**10 21 05.8**	**+1.5**
COLD				IAmb	IAmb	10 21 08.5	
	comp=Z,5.9nm,1.0s						
H11S2	**WAKE ISLAND Hy**	**86.26**	**290**	T	T	11 56 04.3	
	baz=106,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**86.27**	**290**	T	T	11 56 14.1	
	baz=106,slow=74,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**86.28**	**290**	T	T	11 56 06.5	
	baz=106,slow=74,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	**86.41**	**291**	T	T	11 56 22.2	
	baz=107,slow=74,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**86.42**	**291**	T	T	11 56 19.4	
	baz=107,slow=74,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**86.42**	**291**	T	T	11 56 16.5	
	baz=107,slow=74,SNR=3.7						
FINES	**FINESS Array B**	**123.57**	**23**	PKP	**PKiKP**	**10 27 25.9**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=323,slow=5.8,SNR=4.2						
AKASG	**Malin Array Be**	**131.50**	**32**	PKP	**PKPdf**	**10 27 39.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=313,slow=2.1,SNR=2.2						
SONM	**Songino Array**	**133.38**	**325**	PKP	**PKiKP**	**10 27 45.5**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=343,slow=4.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**137.66**	**345**	PKP	**PKPdf**	**10 27 52.5**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=36,slow=2.9,SNR=5.2						
BRTR	**Keskin Array B**	**140.16**	**43**	PKP	**PKPdf**	**10 27 58.3**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=222,slow=3.0,SNR=3.8						
MKAR	**Makanchi Array**	**144.85**	**343**	PKP	**PKPab**	**10 28 04.0**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=28,slow=2.7,SNR=7.4						
CMAR	**Chiang Mai Arr**	**149.94**	**283**	PKPbc	**PKiKP**	**10 28 20.1**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=104,slow=0.5,SNR=6.7						
GEYT	**Alibeck**	**154.25**	**18**	PKPbc	**PKiKP**	**10 28 29.5**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=328,slow=5.3,SNR=5.8						

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*IDC **01** 10:24:14.1±3.6, 9°.75N×123°.91E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/50, mbtmp3.4/3, Error ellipse: s-maj=360.2km s-min=27.8km az=64.0*

*MAN **01** 10:24:18.4, 8°.66N×121°.51E, h33km, mb4.5, ML3.3, MS3.1*

ISC 01 10:24:20.1±1.0**, 8°.64N**±0°.05×**121°.47E**±0°.06**, h35**km**, n10, σ1s.72**/16**, mb3.4**/3**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZCP	**Zamboanga City**	**1.80**	**160**	⇑*i*P	**Pn**	**10 24 47.1**	**-1.5**
ZCP				*i* S	**Sn**	**10 25 08.1**	**-2.2**
CUYO	**Cuyo Island**	**2.24**	**349**	*e*P	**Pn**	**10 24 53.7**	**-1.1**
CUYO				*e*S	**Sn**	**10 25 20.9**	**-0.4**
GUIM	**Jordan**	**2.27**	**29**	*e*P	**Pn**	**10 24 53.7**	**-1.4**
GUIM				*e*S	**Sn**	**10 25 19.6**	**-2.2**
LLP	**Lapu-Lapu**	**2.98**	**56**	⇓*i*P	**Pn**	**10 25 04.6**	**-0.3**
LLP				*e*S	**Sn**	**10 25 38.5**	**-1.0**
CGP	**Cagayan de Oro**	**3.20**	**93**	⇓*e*P	Pn	10 25 19.7	+12
CGP				*e*S	**Sn**	**10 25 43.9**	**-1.0**
ENPP	**El Nido**	**3.25**	**322**	*e*P	**Pn**	**10 25 07.6**	**-1.1**
ENPP				*e*S	**Sn**	**10 25 43.6**	**-2.5**
SKMP	**Bagumbayan, Su**	**3.71**	**124**	*e*P	**Pn**	**10 25 14.8**	**-0.1**
SKMP				*e*S	**Sn**	**10 25 55.7**	**-1.7**
WRA	**Warramunga Arr**	**31.10**	**156**	P	**P**	**10 30 35.5**	**+0.1**
	0.5nm,0.8s,baz=338,slow=9.5,SNR=2.5						
ASAR	**Alice Springs**	**34.33**	**160**	P	**P**	**10 31 05.2**	**+1.6**
	0.3nm,0.7s,baz=348,slow=7.2,SNR=5.4						
MKAR	**Makanchi Array**	**50.58**	**326**	P	**P**	**10 33 18.2**	**+2.8**
	0.5nm,0.7s,baz=123,slow=8.8,SNR=5.8						

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*THE **01** 10:25:34.0, 38°.42N×20°.46E, h12km±1km, ML1.5/3, Error ellipse: s-maj=1.2km s-min=0.3km az=116.0*

ATH 01 10:25:34.2, 38°.42N×20°.47E, h12km±2km**, ML2.0**/2**, Error ellipse: s-maj=2.5km s-min=0.7km az=115.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.08**	**61**	P	Pg	10 25 36.5	-0.3
FSK				S	Sg	10 25 38.4	-0.4
FSK				AML	AML	10 25 38.4	
	comp=N,3058μm,0.2s						
FSK				AML	AML	10 25 38.5	
	comp=E,4478μm,0.1s						
FSK	**Fiskardo**	**0.08**	**61**	P	Pg	10 25 36.5	-0.3
FSK				S	Sg	10 25 38.4	-0.4
FSK				AML	AML	10 25 38.4	
	comp=N,3058μm,0.2s						
FSK				AML	AML	10 25 38.5	
	comp=E,4478μm,0.1s						
FSK	**Fiskardo**	**0.08**	**61**	P	Pg	10 25 36.5	-0.3
FSK				S	Sg	10 25 38.3	-0.5
KEF5	**Kardakata, Kep**	**0.14**	**182**	P	Pg	10 25 37.3	-0.3
KEF5				S	Sg	10 25 40.0	-0.1
KEF5	**Kardakata, Kep**	**0.14**	**182**	P	Pg	10 25 37.3	-0.3
KEF5				S	Sg	10 25 40.0	-0.1
KEF5	**Kardakata, Kep**	**0.14**	**182**	P	Pg	10 25 37.3	-0.4
KEF5				S	Sg	10 25 39.9	-0.2
KEF4	**Livadi, Kephal**	**0.17**	**194**	P	Pg	10 25 37.8	-0.2
KEF4				S	Sg	10 25 40.9	+0.2
KEF4	**Livadi, Kephal**	**0.17**	**194**	P	Pg	10 25 37.8	-0.2
KEF4				S	Sg	10 25 40.9	+0.2
KEF4	**Livadi, Kephal**	**0.17**	**194**	P	Pg	10 25 37.8	-0.2
KEF4				S	Sg	10 25 40.7	0.0
KEF3	**Kipouria, Keph**	**0.24**	**205**	P	Pg	10 25 38.4	-0.8
KEF3				S	Sg	10 25 42.2	-0.4
KEF3	**Kipouria, Keph**	**0.24**	**205**	P	Pg	10 25 38.4	-0.8
KEF3				S	Sg	10 25 42.2	-0.4
KEF3	**Kipouria, Keph**	**0.24**	**205**	P	Pg	10 25 38.5	-0.7
KEF3				S	Sg	10 25 42.2	-0.4
EVGI	**Lefkada island**	**0.24**	**35**	P	Pg	10 25 39.3	0.0
EVGI				S	Sg	10 25 43.1	+0.3
EVGI	**Lefkada island**	**0.24**	**35**	P	Pg	10 25 39.3	0.0
EVGI				S	Sg	10 25 43.1	+0.3
EVGI	**Lefkada island**	**0.24**	**35**	P	Pg	10 25 39.3	-0.1
EVGI				S	Sg	10 25 43.4	+0.5
VLS	**Valsamata**	**0.26**	**160**	P	Pg	10 25 39.2	-0.4
VLS				S	Sg	10 25 43.3	+0.1
VLS				AML	AML	10 25 44.1	
	comp=E,782μm,0.1s						
VLS				AML	AML	10 25 44.3	
	comp=N,542μm,0.1s						
VLS	**Valsamata**	**0.26**	**160**	P	Pg	10 25 39.2	-0.4
VLS				S	Sg	10 25 43.3	+0.1
VLS				AML	AML	10 25 44.1	
	comp=E,782μm,0.1s						
VLS				AML	AML	10 25 44.3	
	comp=N,542μm,0.1s						
VLS	**Valsamata**	**0.26**	**160**	P	Pg	10 25 39.2	-0.4
VLS				S	Sg	10 25 43.4	+0.2
	comp=N,280nm,0.1s						
PSDA	**Pessada-Kefalo**	**0.32**	**164**	P	Pg	10 25 40.3	-0.3
PSDA				S	Sg	10 25 45.3	+0.3

PSDA	**Pessada-Kefalo**	**0.32**	**164**	P	Pg	10 25 40.3	-0.3
PSDA				S	Sg	10 25 45.3	+0.3
PSDA	**Pessada-Kefalo**	**0.32**	**164**	P	Pg	10 25 40.4	-0.2
PSDA				S	Sg	10 25 45.2	+0.2
NYDR	**Nydri-Lefkada**	**0.34**	**31**	P	Pg	10 25 40.8	-0.3
NYDR				S	Sg	10 25 45.9	+0.2
NYDR	**Nydri-Lefkada**	**0.34**	**31**	P	Pg	10 25 40.8	-0.3
NYDR				S	Sg	10 25 45.9	+0.2
NYDR	**Nydri-Lefkada**	**0.34**	**31**	P	Pg	10 25 40.8	-0.3
NYDR				S	Sg	10 25 46.1	+0.4
	comp=N,100nm,0.2s						
LKD2	**Lefkada island**	**0.40**	**21**	P	Pg	10 25 41.6	-0.4
LKD2	**Lefkada island**	**0.40**	**21**	P	Pg	10 25 41.6	-0.4
LKD2	**Lefkada island**	**0.40**	**21**	P	Pg	10 25 41.8	-0.3
TSLK	**Tsoukalades, L**	**0.43**	**19**	P	Pg	10 25 42.5	-0.2
TSLK	**Tsoukalades, L**	**0.43**	**19**	P	Pg	10 25 42.5	-0.2
TSLK	**Tsoukalades, L**	**0.43**	**19**	P	Pg	10 25 42.4	-0.3
TSLK				S	Sg	10 25 49.0	+0.6
	comp=N,55nm,0.6s						
PDO	**Prodromos**	**0.58**	**72**	P	Pg	10 25 44.9	-0.7
PDO	**Prodromos**	**0.58**	**72**	P	Pg	10 25 44.9	-0.7
PDO	**Prodromos**	**0.58**	**72**	P	Pg	10 25 44.9	-0.7

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*IPEC **01** 10:27:44.9±0.1, 48.°04N×19.°45E, h13^{km}±1^{km}, ML1.5/3, Error ellipse: s-maj=1.4km s-min=0.5km az=27.0*

*KRSZO **01** 10:27:44.1±0.9, 48.°02N×19.°44E, h7^{km}±6^{km}, ML2.0/8, Error ellipse: s-maj=3.2km s-min=3.1km az=158.0*

ISC 01 10:27:44.6±1.0**, 48.°03N**±0.°03×**19.°42E**±0.°02**, h10**^{km}±9^{km}**, n38, σ0.^{s}53**/71**, 3C, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.34**	**109**	*e*SG	**Sg**	**10 27 56.2**	**+0.4**
PSZ	**Piszkesteto**	**0.34**	**109**	⇑Pg	**Pg**	**10 27 51.3**	**0.0**
	comp=Z,0.3nm,SNR=3.4						
PSZ				Sg	**Sg**	**10 27 56.2**	**+0.4**
PSZ				Lg	Lg	10 27 56.9	
PSZ	**Piszkesteto**	**0.34**	**109**	⇑*i*PG	**Pg**	**10 27 51.4**	**0.0**
VYHS	**Vyhne**	**0.61**	**320**	*e*PG	**Pb**	**10 27 57.0**	**-0.4**
VYHS				*e*SG	**Sg**	**10 28 04.9**	**+0.5**
VYHS	**Vyhne**	**0.61**	**320**	Pg	**Pb**	**10 27 57.0**	**-0.4**
	SNR=3.2						
VYHS				⇑Pg	**Pb**	**10 27 57.0**	**-0.4**
VYHS				Lg	Lg	10 28 04.9	
BUD	**Budapest**	**0.61**	**206**	Pg	**Pg**	**10 27 55.7**	**-0.8**
	comp=Z,0.2nm,SNR=1.7						
BUD				Lg	Lg	10 28 05.2	
SRO	**Srobarova**	**0.78**	**254**	*e*PG	**Pb**	**10 28 00.8**	**+0.5**
SRO				*e*SG	**Sb**	**10 28 10.8**	**-0.1**
SRO				*e*LG	Lg	10 28 15.1	
SRO	**Srobarova**	**0.78**	**254**	Pg	**Pb**	**10 28 00.8**	**+0.5**
SRO				Pn	**Pn**	**10 28 00.9**	**-0.7**
	comp=Z,0.6nm,SNR=6.9						
SRO				Lg	Lg	10 28 10.8	
SRO				Sn	**Sn**	**10 28 15.1**	**+1.7**
KECS	**Kecovo**	**0.84**	**57**	*e*PG	**Pg**	**10 28 00.5**	**-0.4**
KECS				*e*SG	**Sb**	**10 28 12.8**	**+0.1**
KECS				*e*LG	Lg	10 28 14.5	
KECS	**Kecovo**	**0.84**	**57**	Pb	**Pg**	**10 28 00.4**	**-0.5**
	comp=Z,0.5nm,SNR=4.6						
KECS				Pg	**Pg**	**10 28 00.5**	**-0.4**
KECS				Sg	**Sg**	**10 28 12.0**	**+0.2**
KECS				Lg	Lg	10 28 12.8	
KECS				Sn	**Sn**	**10 28 14.5**	**-0.5**
KOLL	**Kolacno**	**0.88**	**309**	*e*PG	**Pb**	**10 28 02.0**	**+0.1**
KOLL				*e*SG	**Sg**	**10 28 13.1**	**+0.2**
KOLL	**Kolacno**	**0.88**	**309**	Pg	**Pb**	**10 28 02.0**	**+0.1**
KOLL				Lg	Lg	10 28 13.1	
BSZH	**Besenyszg**	**0.93**	**142**	*e*SG	**Sn**	**10 28 17.0**	**-0.1**
BSZH	**Besenyszg**	**0.93**	**142**	Sn	**Sn**	**10 28 16.6**	**-0.4**
BSZH				Lg	Lg	10 28 17.0	
CSKK	**Cskako**	**1.03**	**230**	*e*PN	**Pg**	**10 28 03.9**	**-0.6**
CSKK				*e*SN	**Sn**	**10 28 20.0**	**+0.3**
CSKK	**Cskako**	**1.03**	**230**	Pn	**Pg**	**10 28 03.9**	**-0.6**
	comp=Z,0.2nm,SNR=24						
CSKK				Lg	Lg	10 28 19.8	
CSKK				Sg	**Sn**	**10 28 20.0**	**+0.3**
LANS	**Liptovska Anna**	**1.12**	**1**	*e*PG	**Pn**	**10 28 06.8**	**+0.3**
LANS				*e*SG	**Sn**	**10 28 21.6**	**-0.4**
LANS				*e*LG	Lg	10 28 23.8	
LANS	**Liptovska Anna**	**1.12**	**1**	Pg	**Pn**	**10 28 06.8**	**+0.3**
LANS				Sn	**Sn**	**10 28 21.6**	**-0.4**
LANS				Lg	Lg	10 28 23.8	
JAVC	**Velka Javorina**	**1.43**	**306**	*e*PG	**Pb**	**10 28 11.2**	**-0.3**
JAVC				*e*SG	**Sb**	**10 28 29.9**	**+0.1**
JAVC	**Velka Javorina**	**1.43**	**306**	*e*Pg	**Pb**	**10 28 11.2**	**-0.3**
	baz=124						
JAVC				*e*Sg	**Sb**	**10 28 29.8**	**0.0**
	comp=Z,6.8nm,0.8s,baz=124						
JAVC	**Velka Javorina**	**1.43**	**306**	Pn	**Pb**	**10 28 11.2**	**-0.3**
JAVC				Pn	**Pb**	**10 28 11.2**	**-0.3**
JAVC				Sn	**Sb**	**10 28 29.8**	**0.0**
	comp=Z,6.8nm,0.8s						
JAVC				Lg	Lg	10 28 29.9	
MODS	**Modra-Piesok**	**1.48**	**284**	*e*	**Pn**	**10 28 09.9**	**-1.4**
MODS	**Modra-Piesok**	**1.48**	**284**	*e*PG	**Pg**	**10 28 12.8**	**-0.2**
MODS				*e*		10 28 29.0	
MODS	**Modra-Piesok**	**1.48**	**284**	*e*SG	**Sg**	**10 28 32.1**	**0.0**
MODS	**Modra-Piesok**	**1.48**	**284**	Pn	**Pn**	**10 28 09.9**	**-1.4**
MODS				Pg	**Pg**	**10 28 12.8**	**-0.2**
MODS				Sn	**Sg**	**10 28 32.1**	**0.0**
MPLH	**Magyarpolny**	**1.54**	**237**	*e*PN	**Pg**	**10 28 14.6**	**+0.5**
MPLH				*e*SN	**Sg**	**10 28 34.0**	**-0.1**
MPLH	**Magyarpolny**	**1.54**	**237**	Pg	**Pg**	**10 28 14.6**	**+0.5**
MPLH				Lg	Lg	10 28 34.0	
CRVS	**Cervenica-Dubn**	**1.61**	**56**	*e*PG	**Pg**	**10 28 15.2**	**-0.4**
CRVS	**Cervenica-Dubn**	**1.61**	**56**	Pb	**Pg**	**10 28 15.0**	**-0.6**
	SNR=1.9						
CRVS				Pg	**Pg**	**10 28 15.2**	**-0.4**
CRVS				Pn	**Sg**	**10 28 38.4**	**+2.0**
MORC	**Moravsky Berou**	**2.14**	**325**	*e*PN	**Pn**	**10 28 20.3**	**-0.3**
MORC				*e*SN	**Sn**	**10 28 47.5**	**+0.3**
MORC	**Moravsky Berou**	**2.14**	**325**	*e*Pn	**Pn**	**10 28 20.2**	**-0.3**
	baz=143						
MORC				*e*Sn	**Sn**	**10 28 47.5**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=143						
MORC	**Moravsky Berou**	**2.14**	**325**	Pn	**Pn**	**10 28 20.2**	**-0.3**
MORC				Pn	**Pn**	**10 28 20.3**	**-0.3**
MORC				Sn	**Sn**	**10 28 47.5**	**+0.3**
	comp=Z,3.1nm,0.5s						
KRUC	**Moravsky**	**2.26**	**298**	*e*PN	**Pn**	**10 28 22.1**	**0.0**
KRUC	**Moravsky**	**2.26**	**298**	*e*Pn	**Pn**	**10 28 22.1**	**0.0**
	baz=116						
KRUC	**Moravsky**	**2.26**	**298**	Pn	**Pn**	**10 28 22.1**	**0.0**
KRUC				Pn	**Pn**	**10 28 22.1**	**0.0**
VRAC	**Vranov**	**2.27**	**305**	*e*PN	**Pn**	**10 28 22.5**	**+0.3**
VRAC				*e*SN	**Sn**	**10 28 50.8**	**+0.5**
VRAC	**Vranov**	**2.27**	**305**	*e*Pn	**Pn**	**10 28 22.5**	**+0.3**
	baz=123						
VRAC				*e*Sn	**Sn**	**10 28 50.8**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=123						
VRAC	**Vranov**	**2.27**	**305**	Pn	**Pn**	**10 28 22.5**	**+0.3**
VRAC				Pn	**Pn**	**10 28 22.5**	**+0.3**
VRAC				Sn	**Sn**	**10 28 50.8**	**+0.5**
	comp=Z,1.0nm,0.3s						

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*IDC **01** 10:39:39.3±2.6, 6.°41S×130.°23E, h119^{km}±32^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.4/42, mbtmp4.0/8, MS3.5/2, Ms1 3.5/2, ms1mx2.8/30, Error ellipse: s-maj=56.7km s-min=20.0km az=87.0*

ISC 01 10:39:36.3±0.8**, 6.°51S**±0.°05×**130.°6E**±0.°1**, h100**^{km}**, n10, σ2.^{s}64**/13**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.65**	**7**	P	**Pn**	**10 41 00.6**	**+2.7**
	9.7nm,0.3s,baz=234,slow=22,SNR=64						
SIJI				S	**Sn**	**10 41 58.7**	**-2.8**
	12nm,0.3s,baz=170,slow=24,SNR=14						
BATI	**Baumata**	**7.74**	**241**	P	Pn	10 41 31.3	+5.0
	1.9nm,0.3s,baz=37,slow=18,SNR=1.7						
BATI				S	**Sn**	**10 42 53.5**	**+1.1**
	6.2nm,0.3s,baz=100,slow=23,SNR=8.3						
FITZ	**Fitzroy Crossi**	**12.47**	**202**	P	**Pn**	**10 42 31.6**	**+1.3**
	0.5nm,0.3s,baz=29,slow=7.2,SNR=27						
FITZ				S	**Sn**	**10 44 43.8**	**-3.7**
	0.6nm,0.3s,baz=271,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**13.85**	**165**	P	**P**	**10 42 51.7**	**-1.6**
	0.7nm,0.3s,baz=344,slow=14,SNR=33						
WRA				S	**Sn**	**10 45 20.6**	**-0.4**
	2.1nm,0.3s,baz=334,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.36**	**170**	P	**Pn**	**10 43 37.7**	**+5.3**
	0.9nm,0.3s,baz=345,slow=9.6,SNR=113						
ASAR				S	**Sn**	**10 46 43.8**	**-1.9**
	0.3nm,0.3s,baz=350,slow=25,SNR=5.7						
CMAR	**Chiang Mai Arr**	**39.84**	**309**	P	**P**	**10 46 59.3**	**-1.0**
	0.7nm,0.6s,baz=137,slow=7.1,SNR=6.2						
MJAR	**Matsushiro Arr**	**43.42**	**9**	LR	LR	11 03 15.3	
	comp=Z,29nm,21.2s,baz=100,slow=33						
SONM	**Songino Array**	**58.15**	**341**	P	**P**	**10 49 19.4**	**-0.3**
	0.3nm,0.5s,baz=164,slow=6.0,SNR=4.5						
MKAR	**Makanchi Array**	**68.12**	**326**	P	**P**	**10 50 25.0**	**-0.6**
	1.7nm,0.4s,baz=114,slow=8.2,SNR=42						
ZALV	**Zalesovo Beam**	**71.39**	**333**	P	**P**	**10 50 44.0**	**-1.4**
	0.8nm,0.6s,baz=138,slow=5.0,SNR=4.2						
ZALV				LR	LR	11 26 06.9	
	comp=Z,72nm,18.5s,baz=19,slow=39						

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*BEO **01** 10:45:55.2±0.5, 48.°17N×19.°54E, h0^{km}, ML3.9/13*

*IDC **01** 10:45:56.4±0.9, 47.°95N×19.°37E, h0^{km}, mb3.6/5, mb1 3.7/12, mb1mx3.5/43, mbtmp3.6/12, ML3.6/7, MS2.9/6, Ms1 2.9/6, ms1mx2.5/55, Error ellipse: s-maj=16.4km s-min=7.7km az=10.0*

*KRSZO **01** 10:45:56.9±1.1, 48.°02N×19.°45E, h6^{km}±7^{km}, ML3.9/29, Error ellipse: s-maj=2.9km s-min=2.6km az=127.0*

*MOS **01** 10:45:57.5±1.9, 48.°02N×19.°41E, h19^{km}, mb3.9/4, Error ellipse: s-maj=7.1km s-min=5.6km az=115.9*

*IPEC **01** 10:45:57.3±0.1, 48.°02N×19.°42E, h14^{km}, ML3.4/10, Error ellipse: s-maj=0.7km s-min=0.5km az=24.0*

*PRU **01** 10:45:57.7±0.0, 48.°03N×19.°36E, h8^{km}*

*BGR **01** 10:45:59.1±0.3, 47.°95N×19.°46E, h10^{km}, ML3.7/5, Error ellipse: s-maj=8.9km s-min=3.3km az=9.0*

*LDG **01** 10:45:59.2±0.1, 48.°02N×19.°39E, h4^{km}, Ml3.3/21, Error ellipse: s-maj=3.2km s-min=2.0km az=16.0*

ISC 01 10:45:58.0±0.9**, 48.°04N**±0.°01×**19.°39E**±0.°01**, h12**^{km}±6^{km}**, n482, σ1.^{s}91**/704**, mb3.6**/9**, 39C-28D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.36**	**109**	⇓P	**Pg**	**10 46 04.4**	**-0.7**
PSZ				⇓S	**Sg**	**10 46 09.8**	**-0.1**
PSZ	**Piszkesteto**	**0.36**	**109**	⇑*e*PG	**Pg**	**10 46 04.2**	**-1.0**
PSZ				*e*SG	**Sg**	**10 46 09.7**	**-0.3**
PSZ	**Piszkesteto**	**0.36**	**109**	⇑Pg	**Pg**	**10 46 04.0**	**-1.2**
	comp=Z,26nm,SNR=266						
PSZ				Pg	**Pg**	**10 46 04.2**	**-1.0**
PSZ				Pg	**Pg**	**10 46 04.4**	**-0.7**
PSZ				Lg	Lg	10 46 08.9	
PSZ				SG	**Sg**	**10 46 09.7**	**-0.3**
PSZ				S	**Sg**	**10 46 09.8**	**-0.1**
PSZ	**Piszkesteto**	**0.36**	**109**	*e*Pg	**Pg**	**10 46 04.1**	**-1.0**
PSZ				*e*Sg	**Sg**	**10 46 09.0**	**-1.0**
VYHS	**Vyhne**	**0.59**	**321**	*e*P	**Pg**	**10 46 09.6**	**+0.1**
VYHS				*e*		10 46 17.7	
VYHS	**Vyhne**	**0.59**	**321**	*e*PG	**Pg**	**10 46 09.6**	**+0.1**
VYHS				*e*SG	**Sg**	**10 46 17.7**	**+0.4**
VYHS	**Vyhne**	**0.59**	**321**	Pg	**Pg**	**10 46 09.6**	**+0.1**
	comp=Z,2.8nm,SNR=217						
VYHS				Pb	**Pb**	**10 46 09.7**	**-0.6**
VYHS				SG	**Sg**	**10 46 17.7**	**+0.4**
VYHS				Lg	Lg	10 46 17.8	
BUD	**Budapest**	**0.61**	**204**	⇓*e*PG	**Pg**	**10 46 08.9**	**-1.0**
BUD				*e*SG	**Sg**	**10 46 18.0**	**+0.2**
BUD	**Budapest**	**0.61**	**204**	Pg	**Pg**	**10 46 08.5**	**-1.3**
	comp=Z,12nm,SNR=133						
BUD				⇓Pb	**Pg**	**10 46 08.8**	**-1.0**
BUD				SG	**Sg**	**10 46 18.0**	**+0.2**
BUD				Lg	Lg	10 46 18.5	
BUD	**Budapest**	**0.61**	**204**	*e*Pg	**Pg**	**10 46 08.9**	**-1.0**
SRO	**Srobarova**	**0.76**	**253**	*e*P	**Pg**	**10 46 12.2**	**-0.5**
SRO				*e*		10 46 23.3	
SRO				pmax	pmax		
	comp=N,6µm,0.5s						
SRO	**Srobarova**	**0.76**	**253**	*e*PG	**Pg**	**10 46 12.2**	**-0.5**
SRO				*e*SG	**Sb**	**10 46 23.3**	**-0.2**
SRO				*e*LG	Lg	10 46 28.5	
SRO	**Srobarova**	**0.76**	**253**	Pg	**Pg**	**10 46 12.1**	**-0.6**
	comp=Z,40nm,SNR=422						
SRO				Pg	**Pg**	**10 46 12.2**	**-0.5**
SRO				SG	**Sb**	**10 46 23.3**	**-0.2**
SRO				Lg	Lg	10 46 23.6	
SRO				LG	Lg	10 46 28.5	
KECS	**Kecovo**	**0.85**	**58**	*e*P	**Pg**	**10 46 12.9**	**-1.6**
KECS				*e*		10 46 25.5	
KECS				pmax	pmax		
	comp=N,547nm,0.3s						
KECS	**Kecovo**	**0.85**	**58**	*e*PG	**Pg**	**10 46 12.9**	**-1.6**
KECS				*e*SG	**Sg**	**10 46 25.5**	**-0.2**
KECS				*e*LG	Lg	10 46 27.3	
KECS	**Kecovo**	**0.85**	**58**	⇑Pg	**Pg**	**10 46 12.9**	**-1.6**
	comp=Z,41nm,SNR=433						
KECS				Pg	**Pg**	**10 46 12.9**	**-1.6**
KECS				SG	**Sg**	**10 46 25.5**	**-0.2**
KECS				Lg	Lg	10 46 25.9	
KECS				LG	Lg	10 46 27.3	
KOLL	**Kolacno**	**0.86**	**310**	*e*PG	**Pb**	**10 46 14.7**	**-0.1**
KOLL				*e*SG	**Sb**	**10 46 25.9**	**-0.4**
KOLL	**Kolacno**	**0.86**	**310**	Pg	**Pb**	**10 46 14.7**	**-0.1**
KOLL				SG	**Sb**	**10 46 25.9**	**-0.4**
BSZH	**Besenyszg**	**0.94**	**141**	⇓*e*PG	**Pg**	**10 46 15.8**	**-0.4**
BSZH				*e*SG	**Sn**	**10 46 29.8**	**-0.7**
BSZH	**Besenyszg**	**0.94**	**141**	Pn	**Pg**	**10 46 15.6**	**-0.6**
	comp=Z,5.2nm,SNR=58						
BSZH				Pn	**Pg**	**10 46 15.7**	**-0.6**
BSZH				Pg	**Pg**	**10 46 15.8**	**-0.4**
BSZH				Sn	**Sb**	**10 46 29.2**	**+0.5**
BSZH				SG	**Sn**	**10 46 29.8**	**-0.7**
CSKK	**Cskako**	**1.02**	**229**	*e*PN	**Pb**	**10 46 16.4**	**-1.2**
CSKK				*e*SN	**Sn**	**10 46 32.7**	**+0.3**
CSKK	**Cskako**	**1.02**	**229**	Pn	**Pb**	**10 46 16.3**	**-1.4**
	comp=Z,14nm,SNR=1000						
CSKK				Pn	**Pb**	**10 46 16.3**	**-1.4**
CSKK				Pn	**Pb**	**10 46 16.4**	**-1.2**
CSKK				Lg	Lg	10 46 32.4	
CSKK				SN	**Sn**	**10 46 32.7**	**+0.3**
LANS	**Liptovska Anna**	**1.12**	**2**	*e*P	**Pg**	**10 46 19.3**	**-0.2**
LANS				*e*		10 46 34.3	
LANS				pmax	pmax		
	comp=N,641nm,0.3s						
LANS	**Liptovska Anna**	**1.12**	**2**	*e*PG	**Pg**	**10 46 19.3**	**-0.2**
LANS				*e*SG	**Sn**	**10 46 34.3**	**-0.6**
LANS				*e*LG	Lg	10 46 36.8	
LANS	**Liptovska Anna**	**1.12**	**2**	SG	**Sn**	**10 46 34.3**	**-0.6**
LANS				LG	Lg	10 46 36.8	
SMOL	**Smolenice**	**1.40**	**291**	*e*P	**Pn**	**10 46 22.8**	**-0.6**
SMOL				*e*		10 46 44.6	
SMOL				pmax	pmax		
	comp=N,297nm,0.4s						
SMOL	**Smolenice**	**1.40**	**291**	*e*	**Pn**	**10 46 22.8**	**-0.6**
SMOL	**Smolenice**	**1.40**	**291**	*e*PG	**Pg**	**10 46 25.2**	**+0.4**
SMOL				*e*SG	**Sg**	**10 46 44.5**	**+1.5**
SMOL				*e*LG	Lg	10 46 47.1	
SMOL	**Smolenice**	**1.40**	**291**	Pn	**Pn**	**10 46 22.8**	**-0.6**
SMOL				Pg	**Pg**	**10 46 25.2**	**+0.4**
SMOL				SG	**Sg**	**10 46 44.5**	**+1.5**
SMOL				LG	Lg	10 46 47.1	
JAVC	**Velka Javorina**	**1.41**	**306**	*e*PG	**Pn**	**10 46 23.8**	**+0.2**
JAVC				*e*SG	**Sb**	**10 46 42.4**	**0.0**
JAVC	**Velka Javorina**	**1.41**	**306**	*e*Pg	**Pn**	**10 46 23.8**	**+0.2**
	baz=125						
JAVC				*e*Sg	**Sb**	**10 46 42.4**	**0.0**
	comp=N,661nm,0.8s,baz=125						
JAVC	**Velka Javorina**	**1.41**	**306**	Pg	**Pn**	**10 46 23.8**	**+0.2**
JAVC				Sg	**Sb**	**10 46 42.4**	**0.0**
	comp=N,661nm,0.8s						
MODS	**Modra-Piesok**	**1.46**	**284**	*e*P	**Pn**	**10 46 22.6**	**-1.6**
MODS				*e*		10 46 44.7	
MODS				pmax	pmax		
	comp=N,660nm,0.4s						
MODS	**Modra-Piesok**	**1.46**	**284**	*e*PG	**Pg**	**10 46 26.3**	**+0.3**
MODS				*e*SG	**Sg**	**10 46 44.7**	**-0.1**
MODS				*e*LG	Lg	10 46 45.8	
MODS	**Modra-Piesok**	**1.46**	**284**	P	**Pn**	**10 46 22.6**	**-1.6**
MODS				Pg	**Pg**	**10 46 26.3**	**+0.3**
MODS				SG	**Sg**	**10 46 44.7**	**-0.1**
MODS				LG	Lg	10 46 45.8	
MODS	**Modra-Piesok**	**1.46**	**284**	*e*	**Pn**	**10 46 22.6**	**-1.6**
NIE	**Niedzica**	**1.51**	**23**	*e*Pg	**Pb**	**10 46 25.8**	**-0.2**
NIE				*e*Sg	**Sg**	**10 46 46.2**	**-0.3**
NIE	**Niedzica**	**1.51**	**23**	Pg	**Pn**	**10 46 25.3**	**+0.4**
	comp=Z,0.9nm,SNR=17						
NIE				⇓Pg	**Pn**	**10 46 25.3**	**+0.4**
NIE				Pg	**Pb**	**10 46 25.8**	**-0.2**
NIE				Sn	**Sg**	**10 46 45.8**	**-0.7**
NIE				Sg	**Sg**	**10 46 46.2**	**-0.3**
EGYH	**Egyhazaskeszo**	**1.52**	**247**	⇓*e*PN	**Pn**	**10 46 21.4**	**-3.7**
EGYH				*e*SN	**Sn**	**10 46 44.9**	**0.0**
EGYH	**Egyhazaskeszo**	**1.52**	**247**	Pn	**Pn**	**10 46 21.4**	**-3.7**
EGYH				SN	**Sn**	**10 46 44.9**	**0.0**
MPLH	**Magyarpolny**	**1.52**	**236**	⇓*e*PN	**Pn**	**10 46 25.2**	**+0.1**
MPLH				*e*SN	**Sg**	**10 46 51.2**	**+4.1**
MPLH	**Magyarpolny**	**1.52**	**236**	Pn	**Pn**	**10 46 25.2**	**+0.1**
	comp=Z,3.5nm,SNR=72						
MPLH				⇓Pn	**Pn**	**10 46 25.2**	**+0.1**
MPLH				Lg	Lg	10 46 48.6	
MPLH				SN	**Sg**	**10 46 51.2**	**+4.1**
ZST	**Bratislava**	**1.54**	**277**	*e*P	**Pn**	**10 46 24.7**	**-0.7**
ZST				*e*		10 46 44.3	
ZST				pmax	pmax		
	comp=N,2µm,0.8s						
ZST	**Bratislava**	**1.54**	**277**	*e*	**Pn**	**10 46 24.7**	**-0.7**
ZST	**Bratislava**	**1.54**	**277**	*e*PG	**Pg**	**10 46 27.4**	**-0.2**
ZST				*e*		10 46 44.3	
ZST	**Bratislava**	**1.54**	**277**	⇓Pn	**Pn**	**10 46 24.7**	**-0.7**
ZST				Pn	**Pn**	**10 46 24.8**	**-0.7**
	comp=Z,17nm,SNR=14						
ZST				Pg	**Pg**	**10 46 27.4**	**-0.2**
ZST				Sn	**Sg**	**10 46 47.0**	**-0.7**
ZST				Sg	**Sb**	**10 46 47.6**	**+1.5**
ZST				LG	Lg	10 46 50.0	
CRVS	**Cervenica-Dubn**	**1.63**	**57**	*e*PG	**Pb**	**10 46 28.1**	**+0.1**
CRVS				*e*SG	**Sg**	**10 46 50.4**	**+0.1**
CRVS				*e*LG	Lg	10 46 54.0	
CRVS	**Cervenica-Dubn**	**1.63**	**57**	Pg	**Pb**	**10 46 28.1**	**+0.1**
CRVS				SG	**Sg**	**10 46 50.4**	**+0.1**
CRVS				LG	Lg	10 46 54.0	
CRVS	**Cervenica-Dubn**	**1.63**	**57**	*e*	**Pn**	**10 46 26.5**	**0.0**
LTVH	**Ltavrtes, Hu**	**1.81**	**110**	*e*PN	**Pn**	**10 46 28.4**	**-0.6**
LTVH				*e*SN	**Sg**	**10 46 57.0**	**+0.7**
LTVH	**Ltavrtes, Hu**	**1.81**	**110**	Pn	**Pn**	**10 46 28.4**	**-0.6**
	comp=Z,5.9nm,SNR=24						
LTVH				SN	**Sg**	**10 46 57.0**	**+0.7**
LTVH				Lg	Lg	10 46 57.2	
AMBH	**Ambrzfalva**	**1.92**	**151**	⇑*e*PN	**Pn**	**10 46 29.8**	**-0.7**
AMBH				*e*SN	**Sg**	**10 46 59.9**	**+0.4**
AMBH	**Ambrzfalva**	**1.92**	**151**	Pn	**Pn**	**10 46 29.8**	**-0.7**
	comp=Z,2.3nm,SNR=10						
AMBH				SN	**Sg**	**10 46 59.9**	**+0.4**
SUBS	**Subotica**	**1.93**	**175**	*e*Pn	**Pn**	**10 46 30.8**	**+0.1**
SUBS				*e*Sn	**Sb**	**10 46 58.6**	**+1.3**
SUBS	**Subotica**	**1.93**	**175**	Pn	**Pn**	**10 46 30.8**	**+0.1**
SUBS				Sn	**Sb**	**10 46 58.6**	**+1.3**
SOP	**Sopron**	**1.94**	**261**	⇓*e*PN	**Pn**	**10 46 30.2**	**-0.6**
SOP	**Sopron**	**1.94**	**261**	Pn	**Pn**	**10 46 30.3**	**-0.6**
	comp=Z,1.1nm,SNR=21						
SOP				Sn	**Sn**	**10 46 55.5**	**+0.3**
SOP	**Sopron**	**1.94**	**261**	*e*Pn	**Pn**	**10 46 30.3**	**-0.5**
OKC	**Ostrava-Krasne**	**1.98**	**336**	*e*P	**Pn**	**10 46 31.7**	**+0.3**
OKC				*e*		10 46 56.3	
OKC	**Ostrava-Krasne**	**1.98**	**336**	*e*PN	**Pn**	**10 46 31.7**	**+0.3**
OKC				*e*SN	**Sn**	**10 46 56.3**	**+0.1**
OKC	**Ostrava-Krasne**	**1.98**	**336**	PN	**Pn**	**10 46 31.7**	**+0.3**
OKC				Pn	**Pb**	**10 46 32.2**	**-1.9**
	comp=Z,0.7nm,SNR=9.5						
OKC				Sn	**Sn**	**10 46 55.9**	**-0.3**
OKC				SN	**Sn**	**10 46 56.3**	**+0.1**
UZH	**Uzhgorod**	**2.02**	**72**	*e*P	**Pn**	**10 46 30.0**	**-2.0**
UZH				*e*S	**Sn**	**10 46 54.0**	**-3.2**
UZH				MLR	MLR		
	comp=Z,200nm,1.0s						
UZH	**Uzhgorod**	**2.02**	**72**	P	**Pn**	**10 46 30.0**	**-2.0**
UZH				S	**Sn**	**10 46 54.0**	**-3.2**
LOSC	**Losov**	**2.07**	**321**	*e*Pn	**Pn**	**10 46 32.6**	**-0.1**
	baz=139						
LOSC				*e*Sn	**Sn**	**10 46 58.5**	**0.0**
	comp=Z,282nm,0.5s,baz=139						
LOSC	**Losov**	**2.07**	**321**	Pn	**Pn**	**10 46 32.6**	**-0.1**
LOSC				Sn	**Sn**	**10 46 58.5**	**0.0**
	comp=Z,282nm,0.5s						
CEI	**Carei**	**2.09**	**99**	⇓P	**Pn**	**10 46 33.0**	**+0.1**
CEI	**Carei**	**2.09**	**99**	Pn	**Pn**	**10 46 33.0**	**+0.1**
KOLS	**Kolonicke sedl**	**2.12**	**64**	*e*P	**Pn**	**10 46 32.6**	**-0.7**
KOLS				pmax	pmax		
	comp=N,220nm,0.7s						
KOLS	**Kolonicke sedl**	**2.12**	**64**	*e*	**Pn**	**10 46 32.6**	**-0.7**
KOLS	**Kolonicke sedl**	**2.12**	**64**	*e*PG	**Pg**	**10 46 37.5**	**-1.0**
KOLS				*e*LG	Lg	10 47 17.6	
KOLS	**Kolonicke sedl**	**2.12**	**64**	Pn	**Pn**	**10 46 32.6**	**-0.7**
KOLS				Pn	**Pn**	**10 46 32.9**	**-0.4**
	comp=Z,2.9nm,SNR=10						
KOLS				Pg	**Pg**	**10 46 37.5**	**-1.0**
KOLS				Pg	**Pb**	**10 46 38.1**	**+1.8**
KOLS				LG	Lg	10 47 17.6	
MORC	**Moravsky Berou**	**2.13**	**326**	⇓P	**Pn**	**10 46 33.5**	**+0.1**
MORC				⇑S	**Sn**	**10 46 59.8**	**-0.1**
MORC	**Moravsky Berou**	**2.13**	**326**	*e*PN	**Pn**	**10 46 33.3**	**-0.2**
MORC				*e*SN	**Sn**	**10 46 59.9**	**+0.1**
MORC	**Moravsky Berou**	**2.13**	**326**	*e*Pn	**Pn**	**10 46 33.3**	**-0.2**
	baz=144						
MORC				*e*Sn	**Sn**	**10 46 59.8**	**-0.1**
	comp=Z,241nm,0.5s,baz=144						
MORC	**Moravsky Berou**	**2.13**	**326**	Pn	**Pn**	**10 46 33.3**	**-0.2**
MORC				Pn	**Pn**	**10 46 33.5**	**+0.1**
MORC				S	**Sn**	**10 46 59.8**	**-0.1**
MORC				Sn	**Sn**	**10 46 59.8**	**-0.1**
	comp=Z,241nm,0.5s						
RAC	**Raciborz**	**2.19**	**339**	*e*P	**Pg**	**10 46 41.0**	**+0.9**
RAC				*e*		10 47 08.9	
RAC	**Raciborz**	**2.19**	**339**	P	**Pg**	**10 46 41.0**	**+0.9**
OJC	**Ojcow**	**2.20**	**7**	*e*Pn	**Pn**	**10 46 34.6**	**+0.1**
OJC				*e*Pg	**Pg**	**10 46 39.3**	**-0.9**
OJC				*e*Sn	**Sn**	**10 47 01.0**	**-0.7**
OJC				*e*Sg	**Sg**	**10 47 07.0**	**-1.8**
OJC	**Ojcow**	**2.20**	**7**	Pn	**Pn**	**10 46 34.6**	**+0.1**
OJC				Pn	**Pn**	**10 46 35.7**	**+1.2**
OJC				Pg	**Pg**	**10 46 39.3**	**-0.9**
OJC				Sn	**Sn**	**10 47 00.9**	**-0.7**
OJC				Sg	**Sg**	**10 47 07.0**	**-1.8**
KRUC	**Moravsky**	**2.24**	**298**	*e*PN	**Pn**	**10 46 34.3**	**-0.7**
KRUC				*e*SN	**Sn**	**10 47 02.7**	**+0.1**
KRUC	**Moravsky**	**2.24**	**298**	*e*Pn	**Pn**	**10 46 34.2**	**-0.7**
	baz=116						
KRUC				*e*Sn	**Sn**	**10 47 02.6**	**0.0**
	comp=Z,123nm,0.6s,baz=116						
KRUC	**Moravsky**	**2.24**	**298**	Pn	**Pn**	**10 46 34.3**	**-0.7**
KRUC				Sn	**Sn**	**10 47 02.6**	**0.0**
	comp=Z,123nm,0.6s						
VRAC	**Vranov**	**2.25**	**305**	Pn	**Pn**	**10 46 34.9**	**-0.1**
	comp=Z,41nm,0.3s,baz=125,slow=12,SNR=414						
VRAC				Sn	**Sn**	**10 47 02.7**	**-0.1**
	comp=Z,34nm,0.3s,baz=193,slow=20,SNR=9.9						
VRAC	**Vranov**	**2.25**	**305**	⇑P	**Pn**	**10 46 35.0**	**-0.1**
VRAC				⇑S	**Sn**	**10 47 03.1**	**+0.3**
VRAC	**Vranov**	**2.25**	**305**	*e*PN	**Pn**	**10 46 34.7**	**-0.4**
VRAC				*e*SN	**Sn**	**10 47 03.2**	**+0.3**
VRAC	**Vranov**	**2.25**	**305**	*e*Pn	**Pn**	**10 46 34.7**	**-0.4**
	baz=123						
VRAC				*e*Sn	**Sn**	**10 47 03.1**	**+0.3**
	comp=Z,130nm,0.5s,baz=123						
VRAC	**Vranov**	**2.25**	**305**	Pn	**Pn**	**10 46 34.9**	**-0.1**
	comp=Z,41nm,0.3s						
VRAC				Pn	**Pn**	**10 46 35.0**	**-0.1**
VRAC				Sn	**Sn**	**10 47 02.7**	**-0.1**
	comp=Z,34nm,0.3s						
VRAC				Sn	**Sn**	**10 47 03.1**	**+0.3**
	comp=Z,130nm,0.5s						
SIRR	**Siria**	**2.35**	**138**	⇑P	**Pn**	**10 46 35.2**	**-1.3**
SIRR	**Siria**	**2.35**	**138**	Pn	**Pn**	**10 46 35.2**	**-1.3**
BEHE	**Becsehely**	**2.37**	**230**	⇓*e*PN	**Pb**	**10 46 39.6**	**-1.1**
BEHE				*e*SN	**Sb**	**10 47 09.1**	**-0.9**
BEHE	**Becsehely**	**2.37**	**230**	*e*Pn	**Pb**	**10 46 39.4**	**-1.3**
BEHE	**Becsehely**	**2.37**	**230**	Pn	**Pb**	**10 46 39.4**	**-1.3**
BEHE				Pn	**Pb**	**10 46 39.6**	**-1.1**
BEHE				Sn	**Sb**	**10 47 08.4**	**-1.6**
BEHE				SN	**Sb**	**10 47 09.1**	**-0.9**
CONA	**Conrad Observa**	**2.38**	**269**	Pn	**Pn**	**10 46 36.5**	**-0.4**
	comp=Z,33nm,0.3s,SNR=126						
CONA				*e*Sn	**Sn**	**10 47 05.6**	**-0.4**
	comp=Z,98nm,0.4s						
CONA	**Conrad Observa**	**2.38**	**269**	Pn	**Pn**	**10 46 36.5**	**-0.4**

	comp=Z,33nm,0.3s						
CONA				Sn	Sn	10 47 05.6	-0.4
	comp=Z,98nm,0.4s						
DRGR		2.57	118	⇑P	Pn	10 46 38.7	-1.0
DRGR		2.57	118	*e*Pn	Pn	10 46 38.4	-1.2
DRGR		2.57	118	Pn	Pn	10 46 38.4	-1.2
DRGR				Pn	Pn	10 46 38.6	-1.0
	comp=Z,1.9nm,SNR=12						
DRGR				Sn	Sn	10 47 08.8	-2.1
TIM	**Timisoara**	2.62	151	⇑P	Pn	10 46 39.9	-0.2
TIM				⇑S	Sn	10 47 12.9	+1.0
TIM	**Timisoara**	2.62	151	Pn	Pn	10 46 39.9	-0.2
TIM				S	Sn	10 47 12.9	+1.0
KOGS	**Kog**	2.67	235	*i* Pn	Pn	10 46 41.3	+0.5
KOGS				*i* Sn	Sn	10 47 13.8	+0.8
KOGS	**Kog**	2.67	235	Sn	Sn	10 47 13.8	+0.8
KRLC	**Kraliky**	2.67	321	*e*P	Pn	10 46 41.3	+0.4
KRLC				*e*		10 47 13.3	
KRLC	**Kraliky**	2.67	321	*e*PN	Pn	10 46 41.3	+0.4
KRLC				*e*SN	Sn	10 47 13.3	+0.1
KRLC	**Kraliky**	2.67	321	PN	Pn	10 46 41.3	+0.4
KRLC				SN	Sn	10 47 13.3	+0.1
ARSA	**Arzberg**	2.73	255	*e*Pn	Pn	10 46 41.9	+0.1
ARSA	**Arzberg**	2.73	255	Pn	Pn	10 46 41.8	+0.1
	comp=Z,8.6nm,0.2s,SNR=29						
ARSA				*e*Sn	Sn	10 47 14.2	-0.5
	comp=Z,57nm,0.4s						
ARSA	**Arzberg**	2.73	255	Pn	Pn	10 46 41.8	+0.1
	comp=Z,0.5nm,SNR=5.8						
ARSA				Pg	Pg	10 46 49.7	-0.7
ARSA				Sn	Sn	10 47 14.2	-0.5
	comp=Z,57nm,0.4s						
ARSA				Sn	Sb	10 47 14.5	-5.8
ARSA	**Arzberg**	2.73	255	*e*Pn	Pn	10 46 41.8	+0.1
KALN	**Kalnik**	2.77	228	*e*Pn	Pn	10 46 41.5	-0.8
KALN	**Kalnik**	2.77	228	Pn	Pn	10 46 41.5	-0.8
BMR	**Baia Mare**	2.79	96	⇑P	Pn	10 46 41.4	-1.0
BMR				⇓S	Sn	10 47 14.9	-1.1
BMR	**Baia Mare**	2.79	96	Pn	Pn	10 46 41.4	-1.0
BMR				S	Sn	10 47 14.9	-1.1
BZS	**Buzias**	2.86	147	⇑P	Pn	10 46 42.4	-1.1
BZS	**Buzias**	2.86	147	*e*Pn	Pn	10 46 42.3	-1.2
BZS	**Buzias**	2.86	147	Pn	Pn	10 46 42.4	-1.1
	comp=Z,0.6nm,SNR=9.7						
BZS				Pg	Pg	10 46 53.2	+0.4
TREC	**Trest**	2.88	297	*e*P	Pn	10 46 43.1	-0.7
TREC				*e*		10 47 17.9	
TREC	**Trest**	2.88	297	*e*PN	Pn	10 46 43.1	-0.7
TREC				*e*SN	Sn	10 47 17.9	-0.5
TREC	**Trest**	2.88	297	PN	Pn	10 46 43.1	-0.7
TREC				SN	Sn	10 47 17.9	-0.5
FRGS	**Fruska Gora**	2.89	174	*e*Pn	Pn	10 46 43.3	-0.7
FRGS	**Fruska Gora**	2.89	174	*e*Pn	Pn	10 46 43.1	-0.9
FRGS	**Fruska Gora**	2.89	174	Pn	Pn	10 46 43.1	-0.9
BANR	**Banloc**	2.91	155	⇑P	Pn	10 46 43.8	-0.3
BANR				⇑S	Sn	10 47 18.1	-1.0
BANR	**Banloc**	2.91	155	Pn	Pn	10 46 43.8	-0.3
BANR				S	Sn	10 47 18.1	-1.0
DPC	**Dobruska-Polom**	3.07	320	*e*PN	Pn	10 46 46.6	+0.2
DPC				*e*SG	Sg	10 47 34.8	-1.8
DPC	**Dobruska-Polom**	3.07	320	PN	Pn	10 46 46.6	+0.2
DPC				SG	Sg	10 47 34.8	-1.8
GROS	**Grobnik**	3.08	241	*i* Pn	Pn	10 46 46.5	-0.1
GROS				*i* Sn	Sn	10 47 21.8	-1.7
GROS	**Grobnik**	3.08	241	Pn	Pn	10 46 46.5	-0.1
GROS				Sn	Sn	10 47 21.8	-1.7
CJR	**Cluj-Napoca**	3.15	113	⇑P	Pn	10 46 47.2	-0.3
CJR	**Cluj-Napoca**	3.15	113	Pn	Pn	10 46 47.2	-0.3
PTJ	**Puntijarka**	3.17	229	*e*Pn	Pn	10 46 47.2	-0.6
PTJ	**Puntijarka**	3.17	229	Pn	Pn	10 46 47.2	-0.6
ZAG	**Zagreb**	3.21	228	*e*Pn	Pn	10 46 49.2	+0.9
ZAG	**Zagreb**	3.21	228	*e*Pn	Pn	10 46 49.1	+0.8
ZAG	**Zagreb**	3.21	228	Pn	Pn	10 46 49.1	+0.8
ZAG				Pn	Pn	10 46 49.2	+0.9
DEV	**Deva**	3.23	131	⇓P	Pn	10 46 47.9	-0.6
DEV				⇓S	Sn	10 47 25.8	-1.0
DEV	**Deva**	3.23	131	Pn	Pn	10 46 47.9	-0.6
DEV				S	Sn	10 47 25.8	-1.0
PERS	**Pernice**	3.23	246	*i* Pn	Pn	10 46 49.0	+0.4
PERS				*i* Sn	Sn	10 47 26.3	-0.8
PERS	**Pernice**	3.23	246	Pn	Pn	10 46 49.0	+0.4
PERS				Sn	Sn	10 47 26.3	-0.8
SOKA	**Soboth**	3.26	247	Pn	Pn	10 46 48.8	-0.2
	comp=Z,3.0nm,0.4s,SNR=9.9						
SOKA				*e*Sn	Sn	10 47 27.4	-0.5
	comp=Z,20nm,0.4s						
SOKA	**Soboth**	3.26	247	Pn	Pn	10 46 48.8	-0.2
	comp=Z,3.0nm,0.4s						
SOKA				Sn	Sn	10 47 27.4	-0.5
	comp=Z,20nm,0.4s						
OSTC	**Ostas**	3.27	322	*e*PN	Pn	10 46 49.3	+0.2
OSTC	**Ostas**	3.27	322	PN	Pn	10 46 49.3	+0.2
UPC	**Upice**	3.32	319	*e*P	Pn	10 46 49.3	-0.5
UPC	**Upice**	3.32	319	*e*PN	Pn	10 46 49.3	-0.5
UPC	**Upice**	3.32	319	PN	Pn	10 46 49.3	-0.5
CHVC	**Chvalec**	3.36	321	*e*PN	Pn	10 46 50.9	+0.5
CHVC	**Chvalec**	3.36	321	PN	Pn	10 46 50.9	+0.5
MOA	**Molln**	3.45	269	*e*Pn	Pn	10 46 51.7	+0.1
MOA	**Molln**	3.45	269	Pn	Pn	10 46 51.8	+0.1
	comp=Z,5.6nm,0.3s,SNR=28						
MOA				*e*Sn	Sn	10 47 33.2	+0.7
	comp=Z,0.4nm,0.1s						
MOA	**Molln**	3.45	269	Pn	Pn	10 46 51.8	+0.1
	comp=Z,5.6nm,0.3s						
MOA				Sn	Sn	10 47 33.2	+0.7
	comp=Z,0.4nm,0.1s						
MOA	**Molln**	3.45	269	*e*Pn	Pn	10 46 51.8	+0.2
KSP	**Ksiaz**	3.46	325	*e*Pn	Pn	10 46 52.5	+0.8
KSP				*e*Pg	Pg	10 47 04.6	+0.3
KSP				*e*Sn	Sn	10 47 34.3	+1.6
KSP				*e*Sg	Sg	10 47 50.8	+1.7
KSP	**Ksiaz**	3.46	325	Pn	Pn	10 46 52.6	+0.8
	comp=Z,0.3nm,SNR=6.0						
KSP				Pg	Pg	10 47 04.6	+0.3
KSP				Sn	Sn	10 47 34.3	+1.6
KSP				Sn	Sn	10 47 34.8	+2.1
KSP				Sg	Sg	10 47 50.8	+1.7
CRES	**Cresnjev**	3.49	232	*e*Pn	Pn	10 46 51.9	-0.2
ARCR	**ARCALIA**	3.49	104	⇑P	Pn	10 46 52.5	+0.4
ARCR	**ARCALIA**	3.49	104	Pn	Pn	10 46 52.5	+0.4
TEKS	**Tekeris**	3.49	178	*e*Pn	Pn	10 46 51.9	-0.3
TEKS				*e*Sn	Sn	10 47 35.5	+2.1
TEKS	**Tekeris**	3.49	178	*e*Pn	Pn	10 46 51.0	-1.2
TEKS	**Tekeris**	3.49	178	Pn	Pn	10 46 51.0	-1.2
TEKS				Pn	Pn	10 46 51.9	-0.3
TEKS				Sn	Sn	10 47 35.5	+2.1
GZR	**Gura Zlata**	3.52	137	⇑P	Pn	10 46 52.2	-0.4
GZR	**Gura Zlata**	3.52	137	*e*Pn	Pn	10 46 52.1	-0.5
GZR	**Gura Zlata**	3.52	137	Pn	Pn	10 46 52.1	-0.5
GZR				Pn	Pn	10 46 52.2	-0.4
LVV	**L'vov**	3.54	58	*e*P	Pn	10 46 50.0	-2.8
LVV				*e*S	Sn	10 47 31.5	-3.1
LVV				MLR	MLR		
	comp=N,1µm,5.5s						
LVV				MLR	MLR		
	comp=E,1µm,5.5s						
LVV				MLR	MLR		
	comp=Z,2µm,5.6s						
LVV	**L'vov**	3.54	58	P	Pn	10 46 50.0	-2.8
LVV				S	Sn	10 47 31.5	-3.1
BLY	**Banja Luka**	3.63	206	*e*Pn	Pn	10 46 53.5	-0.5
BLY				*e*Sg	Sg	10 47 54.2	-0.2
BLY	**Banja Luka**	3.63	206	*e*Pn	Pn	10 46 53.5	-0.5
BLY	**Banja Luka**	3.63	206	Pn	Pn	10 46 53.5	-0.5
BLY				Pn	Pn	10 46 53.6	-0.4
	comp=Z,0.3nm,SNR=3.3						
BLY				Pg	Pg	10 47 05.5	-1.9
BLY				Lg	Lg	10 47 53.6	
BLY				Sg	Sg	10 47 54.2	-0.2
MDVR	**Moldovita**	3.63	153	⇑P	Pn	10 46 53.7	-0.4
MDVR				⇑S	Sn	10 47 36.8	-0.1
MDVR	**Moldovita**	3.63	153	*e*Pn	Pn	10 46 52.9	-1.2
MDVR	**Moldovita**	3.63	153	Pn	Pn	10 46 52.9	-1.2
MDVR				Pn	Pn	10 46 53.7	-0.4
MDVR				S	Sn	10 47 36.8	-0.1
OBKA	**Obir**	3.63	247	Pn	Pn	10 46 54.6	+0.4
	comp=Z,9.9nm,0.5s,SNR=11						
OBKA				*e*Sn	Sn	10 47 36.6	-0.5
	comp=Z,28nm,0.4s						
OBKA	**Obir**	3.63	247	Pn	Pn	10 46 54.6	+0.4
	comp=Z,9.9nm,0.5s						
OBKA				Pn	Pn	10 46 54.9	+0.6
	comp=Z,0.3nm,SNR=3.4						
OBKA				Sn	Sn	10 47 36.6	-0.5
	comp=Z,28nm,0.4s						
OBKA				Sn	Sn	10 47 36.7	-0.4
OBKA	**Obir**	3.63	247	*e*Pn	Pn	10 46 54.6	+0.4
PRU	**Pruhonice**	3.74	303	*e*P	Pn	10 46 55.1	-0.5
PRU				*e*		10 47 38.9	
PRU	**Pruhonice**	3.74	303	*e*PN	Pn	10 46 55.1	-0.5
PRU				*e*SN	Sn	10 47 38.9	-0.7
PRU	**Pruhonice**	3.74	303	PN	Pn	10 46 55.1	-0.5
PRU				SN	Sn	10 47 38.9	-0.7
BOJS	**Bojanci**	3.81	230	*e*Pn	Pn	10 46 56.7	+0.2
BOJS	**Bojanci**	3.81	230	Pn	Pn	10 46 56.7	+0.2
PRA	**Prague**	3.84	304	*e*P	Pn	10 46 56.8	-0.2
PRA	**Prague**	3.84	304	*e*PN	Pn	10 46 56.8	-0.2
PRA	**Prague**	3.84	304	PN	Pn	10 46 56.8	-0.2
GEC2	**GERESS Array S**	3.88	284	*e*Pn	Pn	10 46 57.8	+0.3
GERES	**GERESS Array B**	3.88	284	Pn	Pn	10 46 57.8	+0.3
	comp=Z,9.7nm,0.3s,baz=98,slow=14,SNR=464						
GERES				Sn	Sn	10 47 43.1	+0.1
	comp=Z,21nm,0.3s,baz=100,slow=25,SNR=15						
GERES				LR	LR	10 48 08.5	
	comp=Z,37nm,20.6s,baz=47,slow=34						
GERES	**GERESS Array B**	3.88	284	Pn	Pn	10 46 57.8	+0.3
	comp=Z,9.7nm,0.3s						
GERES				Sn	Sn	10 47 43.1	+0.1
	comp=Z,21nm,0.3s						
GERES				LR	LR	10 48 08.5	
	comp=Z,37nm,20.6s						
TRUS	**Trudelj**	3.88	169	*e*Pn	Pn	10 46 57.1	-0.4
TRUS	**Trudelj**	3.88	169	Pn	Pn	10 46 57.1	-0.4
LJU	**Ljubljana**	3.88	241	*e*Pn	Pn	10 46 58.3	+0.8
LJU	**Ljubljana**	3.88	241	*e*Pn	Pn	10 46 58.4	+0.9
LJU	**Ljubljana**	3.88	241	Pn	Pn	10 46 58.4	+0.9
MDB	**Medias**	3.90	117	⇓P	Pn	10 46 57.6	-0.1
MDB	**Medias**	3.90	117	Pn	Pn	10 46 57.6	-0.1
PBCC	**Pribram**	3.93	297	*e*PN	Pn	10 46 58.0	-0.2
PBCC	**Pribram**	3.93	297	PN	Pn	10 46 58.0	-0.2
BURAR	**Bucovina Array**	3.94	94	⇑P	Pn	10 46 58.7	+0.2
BURAR	**Bucovina Array**	3.94	94	Pn	Pn	10 46 58.7	+0.2
KUBS	**Kucevo**	3.96	156	*e*Pn	Pn	10 46 56.9	-1.6
KUBS	**Kucevo**	3.96	156	Pn	Pn	10 46 56.9	-1.6
DIVS	**Divibare**	3.96	174	*e*Pn	Pn	10 46 58.3	-0.4
DIVS	**Divibare**	3.96	174	*e*Pn	Pn	10 46 58.1	-0.6
DIVS	**Divibare**	3.96	174	Pn	Pn	10 46 58.2	-0.6
	comp=Z,0.4nm,SNR=3.1						
DIVS				Pn	Pn	10 46 58.3	-0.4
DIVS				Sn	Sn	10 47 43.4	-1.7
HAPS	**Han Pijesak,BI**	3.96	185	*e*Pn	Pn	10 46 57.7	-1.1
HAPS	**Han Pijesak,BI**	3.96	185	*e*Pn	Pn	10 46 57.3	-1.5
HAPS	**Han Pijesak,BI**	3.96	185	Pn	Pn	10 46 57.3	-1.5
HAPS				Pn	Pn	10 46 57.7	-1.1
LOT	**Lotru**	3.97	129	⇓P	Pn	10 46 58.6	-0.2
LOT				⇓S	Sn	10 47 45.4	+0.1
LOT	**Lotru**	3.97	129	Pn	Pn	10 46 58.6	-0.2
LOT				S	Sn	10 47 45.4	+0.1
KHC	**Kasperske Hory**	4.01	288*c*	*i*P	Pn	10 46 59.5	+0.1
KHC	**Kasperske Hory**	4.01	288	*e*PN	Pn	10 46 59.2	-0.2
KHC				*e*PG	Pb	10 47 10.0	+1.3
KHC				*e*SN	Sn	10 47 45.6	-0.7
KHC	**Kasperske Hory**	4.01	288	PN	Pn	10 46 59.2	-0.2
KHC				PG	Pb	10 47 10.0	+1.3
KHC				SN	Sn	10 47 45.6	-0.7
PVCC	**Panska Ves**	4.02	310	*e*P	Pn	10 46 59.0	-0.5
PVCC	**Panska Ves**	4.02	310	*e*PN	Pn	10 46 59.0	-0.5
PVCC	**Panska Ves**	4.02	310	PN	Pn	10 46 59.0	-0.5
CEY	**Cerknica**	4.11	238	*e*Pn	Pn	10 47 01.2	+0.5
CEY	**Cerknica**	4.11	238	*e*Pn	Pn	10 47 00.9	+0.2
CEY	**Cerknica**	4.11	238	Pn	Pn	10 47 00.9	+0.2
MYKA	**Terra Mystica**	4.16	252	*e*Pn	Pn	10 47 01.7	+0.3
	comp=Z,1.8nm,0.2s						
MYKA	**Terra Mystica**	4.16	252	Pn	Pn	10 47 01.7	+0.3
	comp=Z,1.8nm,0.2s						
BBLS	**Lazići**	4.17	180	*e*Pn	Pn	10 47 01.1	-0.5
BBLS	**Lazići**	4.17	180	*e*Pn	Pn	10 47 01.1	-0.5
BBLS	**Lazići**	4.17	180	Pn	Pn	10 47 01.1	-0.5
BBLS				Pn	Pb	10 47 01.5	-10
	comp=Z,1.6nm,SNR=3.1						
BBLS				Lg	Lg	10 48 10.5	
KBA	**Koelnbreinsper**	4.21	259	Pn	Pn	10 47 02.7	+0.6
	comp=Z,7.4nm,0.4s,SNR=12						
KBA	**Koelnbreinsper**	4.21	259	Pn	Pn	10 47 02.7	+0.6
	comp=Z,7.4nm,0.4s						
KBA	**Koelnbreinsper**	4.21	259	*e*Pn	Pn	10 47 02.7	+0.6
GRUS	**Gruza**	4.25	167	*e*Pn	Pn	10 47 02.5	-0.1
GRUS	**Gruza**	4.25	167	Pn	Pn	10 47 02.5	-0.1
SRE	**Strehaia**	4.28	141	⇑P	Pn	10 47 03.0	-0.1
SRE				⇓S	Sn	10 47 53.0	+0.1
SRE	**Strehaia**	4.28	141	Pn	Pn	10 47 03.0	-0.1
SRE				S	Sn	10 47 53.0	+0.1
UDBI	**Udbina**	4.32	217	*e*Pn	Pn	10 47 04.0	+0.4
UDBI	**Udbina**	4.32	217	Pn	Pn	10 47 04.0	+0.4
RIY	**Rijeka**	4.33	233	*e*Pn	Pn	10 47 04.8	+1.1
RIY	**Rijeka**	4.33	233	Pn	Pn	10 47 04.8	+1.1
RUDO	**Rudo**	4.42	180	*e*Pn	Pn	10 46 56.2	-8.7
RUDO	**Rudo**	4.42	180	Pn	Pn	10 46 56.2	-8.7
SKDS	**Skadanscina**	4.46	238	*e*Pn	Pn	10 47 06.0	+0.6
SKDS	**Skadanscina**	4.46	238	Pn	Pn	10 47 06.0	+0.6
WET	**Wettzell**	4.46	287	*e*Pn	Pn	10 47 05.5	0.0
WET				*e*Sn	Sn	10 47 56.0	-1.5
ARR	**Arges**	4.49	125	⇓P	Pn	10 47 05.3	-0.6
ARR	**Arges**	4.49	125	Pn	Pn	10 47 05.3	-0.6
IVAS	**Ivanjica**	4.49	173	*e*Pn	Pn	10 47 05.0	-1.0
IVAS	**Ivanjica**	4.49	173	Pn	Pn	10 47 05.0	-1.0
KIJV	**Kijevo**	4.54	208	*e*Pn	Pn	10 47 07.3	+0.8
KIJV	**Kijevo**	4.54	208	Pn	Pn	10 47 07.3	+0.8
BRG	**Berggiesshubel**	4.55	311	Pn	Pn	10 47 06.6	-0.1
BRG				Amp		10 47 07.7	
	comp=Z,13nm,0.4s						
BRG	**Berggiesshubel**	4.55	311	Pg	Pg	10 47 25.5	+0.4
BRG				*e*x	x	10 48 06.6	
BRG				Amp		10 48 33.8	
	comp=Z,38nm,0.8s						
BRG	**Berggiesshubel**	4.55	311	P	Pn	10 47 06.6	-0.1
BRG				pmax	pmax		
	comp=Z,13nm,0.4s						
BRG	**Berggiesshubel**	4.55	311	Pn	Pn	10 47 06.6	-0.1
BRG				Amp		10 47 07.7	
	comp=Z,13nm,0.4s						
BRG	**Berggiesshubel**	4.55	311	Pg	Pg	10 47 25.5	+0.4
BRG				*e*x	x	10 48 06.6	
BRG				Amp		10 48 33.8	
	comp=Z,38nm,0.8s						
BRG	**Berggiesshubel**	4.55	311	Pn	Pn	10 47 06.6	-0.1
BRG				Amp		10 47 07.7	
	comp=Z,13nm,0.4s						
BRG				Pg	Pg	10 47 25.5	+0.4
BRG				Amp		10 48 33.8	
	comp=Z,38nm,0.8s						
KW1	**Garching a.d.**	4.56	274	*e*Pn	Pn	10 47 07.4	+0.6
DOPR	**Dopca**	4.59	115	⇑P	Pn	10 47 07.6	+0.3
DOPR	**Dopca**	4.59	115	Pn	Pn	10 47 07.6	+0.3
PRAR	**RASCA**	4.66	96	⇑P	Pn	10 47 08.5	+0.3
PRAR	**RASCA**	4.66	96	Pn	Pn	10 47 08.5	+0.3
ZAGS	**Zajecar**	4.67	154	*e*Pn	Pn	10 47 06.9	-1.4
ZAGS	**Zajecar**	4.67	154	Pn	Pn	10 47 06.9	-1.4
VOIR		4.68	122	⇓P	Pn	10 47 08.2	-0.3
VOIR		4.68	122	Pn	Pn	10 47 08.2	-0.3
NVLJ	**Novalja**	4.68	224	*e*Pn	Pn	10 47 09.8	+1.3
NVLJ				Sn	Sn	10 48 03.4	+0.8
NVLJ	**Novalja**	4.68	224	Pn	Pn	10 47 09.8	+1.3
NVLJ				Sn	Sn	10 48 03.4	+0.8
BIZ	**Bicaz**	4.68	101	⇓P	Pn	10 47 08.7	+0.3
BIZ	**Bicaz**	4.68	101	Pn	Pn	10 47 08.7	+0.3
OZUR		4.78	112	⇓P	Pn	10 47 10.1	+0.2
OZUR		4.78	112	Pn	Pn	10 47 10.1	+0.2
SJES	**Sjenica**	4.79	175	*e*Pn	Pn	10 47 09.9	-0.3
SJES	**Sjenica**	4.79	175	*e*Pn	Pn	10 47 09.8	-0.4
SJES	**Sjenica**	4.79	175	Pn	Pn	10 47 09.8	-0.4
ABTA	**Abfaltersbach**	4.85	257	*i* Pn	Pn	10 47 12.1	+1.2
	comp=Z,2.6nm,0.7s,SNR=4.6						
ABTA	**Abfaltersbach**	4.85	257	Pn	Pn	10 47 12.1	+1.2
	comp=Z,2.6nm,0.7s						
MORI	**Morici**	4.90	213	*e*Pn	Pn	10 47 13.1	+1.6
MORI				Sn	Sn	10 48 07.1	-1.0
MORI	**Morici**	4.90	213	Pn	Pn	10 47 13.1	+1.6
MORI				Sn	Sn	10 48 07.1	-1.0
MAKA	**Makarska**	5.03	200	*e*Pn	Pn	10 47 14.1	+0.8
MAKA	**Makarska**	5.03	200	Pn	Pn	10 47 14.1	+0.8
ROTZ	**Rotzenmuhle**	5.05	293		Pn	10 47 13.5	0.0
	comp=Z,15nm,0.6s						
ROTZ						10 47 14.0	
	comp=Z,15nm,0.6s						
ROTZ	**Rotzenmuhle**	5.05	293	*e*Pn	Pn	10 47 13.3	-0.2
DUGI	**Dugi Otok**	5.05	218	*e*Pn	Pn	10 47 14.7	+1.2
DUGI				Sn	Sn	10 48 12.0	+0.2
DUGI	**Dugi Otok**	5.05	218	Pn	Pn	10 47 14.7	+1.2
DUGI				Sn	Sn	10 48 12.0	+0.2
NKC	**Novy Kostel**	5.06	298	*e*PN	Pn	10 47 13.5	-0.2
NKC	**Novy Kostel**	5.06	298	PN	Pn	10 47 13.5	-0.2
NKC						10 47 14.1	
	comp=Z,9.8nm,0.6s						
ZIRJ	**Zirje**	5.11	212	*e*Pn	Pn	10 47 15.7	+1.4
ZIRJ				Sn	Sn	10 48 12.3	-0.9
ZIRJ	**Zirje**	5.11	212	Pn	Pn	10 47 15.7	+1.4
ZIRJ				Sn	Sn	10 48 12.3	-0.9
TANN	**Tannenbergstha**	5.13	300		Pn	10 47 14.9	+0.2
	comp=Z,35nm,0.7s						
TESR	**Tescani**	5.17	104	⇑P	Pn	10 47 15.7	+0.5
TESR	**Tescani**	5.17	104	Pn	Pn	10 47 15.7	+0.5
TESR						10 47 15.9	
	comp=Z,23nm,0.8s						
MLR	**Muntele Rosu**	5.17	117	Pn	Pn	10 47 14.9	-0.4
	comp=Z,0.7nm,0.3s,baz=192,slow=1.3,SNR=6.7						
MLR				LR	LR	10 50 04.2	
	comp=Z,70nm,19.1s,baz=266,slow=48						
MLR	**Muntele Rosu**	5.17	117	⇓P	Pn	10 47 15.4	0.0
MLR	**Muntele Rosu**	5.17	117	Pn	Pn	10 47 14.9	-0.4
	comp=Z,0.7nm,0.3s						
MLR				Pn	Pn	10 47 15.4	0.0
MLR						10 47 15.6	
	comp=Z,24nm,0.9s						
MLR				LR	LR	10 50 04.2	
	comp=Z,70nm,19.1s						
MLR	**Muntele Rosu**	5.17	117	*e*Pn	Pn	10 47 15.1	-0.2
MANZ	**Manzenberg**	5.18	295	*e*Pn	Pn	10 47 15.2	-0.2
HVAR	**Hvar**	5.28	204	*e*Pn	Pn	10 47 18.0	+1.3
HVAR	**Hvar**	5.28	204	Pn	Pn	10 47 18.0	+1.3
CLL	**Collm**	5.29	311	*i* Pn	Pn	10 47 16.6	-0.2
CLL				*e*		10 47 24.0	
CLL				*e*		10 47 42.0	
CLL				*e*		10 48 16.0	
CLL				*e*		10 48 30.0	
CLL				*e*Sg	Sg	10 48 46.0	-1.6
	comp=Z,44nm,1.0s						
CLL	**Collm**	5.29	311	Pn	Pn	10 47 16.7	-0.1
	comp=Z,39nm,0.5s						
CLL				Sg	Sg	10 48 46.0	-1.6
	comp=Z,44nm,1.0s						
STON	**Ston**	5.30	194	*e*Pn	Pn	10 47 18.3	+1.3
STON	**Ston**	5.30	194	*e*Pn	Pn	10 47 18.0	+1.0
STON	**Ston**	5.30	194	*e*Pn	Pn	10 47 17.8	+0.8
STON	**Ston**	5.30	194	Pn	Pn	10 47 17.8	+0.8
STON				Pn	Pn	10 47 18.0	+1.0
STON				Pn	Pn	10 47 18.3	+1.3
WATA	**Walderalm**	5.33	265	*e*Pn	Pn	10 47 18.5	+1.0
	comp=Z,2.1nm,0.3s						
WATA	**Walderalm**	5.33	265	Pn	Pn	10 47 18.5	+1.0
	comp=Z,2.1nm,0.3s						
TREB	**Trebinje**	5.37	188	*e*Pn	Pn	10 47 19.2	+1.2
TREB	**Trebinje**	5.37	188	*e*Pn	Pn	10 47 18.8	+0.8
TREB	**Trebinje**	5.37	188	Pn	Pn	10 47 18.8	+0.8
TREB				Pn	Pn	10 47 19.2	+1.2
PLOR	**Plostina**	5.43	111	⇑P	Pn	10 47 18.8	0.0
PLOR	**Plostina**	5.43	111	Pn	Pn	10 47 18.8	0.0
VRI	**Vrincioaia**	5.47	111	⇑P	Pn	10 47 19.5	+0.2
VRI	**Vrincioaia**	5.47	111	Pn	Pn	10 47 19.5	+0.2
VRI				*i* AMB	AMB	10 47 19.9	
	comp=Z,31nm,0.9s						
BE1	**Monatshausen**	5.49	272	*e*Pn	Pn	10 47 20.3	+0.6
SQTA	**Sankt Quirin**	5.59	265	*i* Pn	Pn	10 47 22.1	+0.9
	comp=Z,6.2nm,0.3s,SNR=11						
SQTA				*e*Sn	Sn	10 48 26.8	+1.4
	comp=Z,13nm,0.6s						
SQTA	**Sankt Quirin**	5.59	265	Pn	Pn	10 47 22.1	+0.9
	comp=Z,6.2nm,0.3s						
SQTA				Sn	Sn	10 48 26.8	+1.4
	comp=Z,13nm,0.6s						
BISRR	**Bisoca**	5.61	114	⇑P	Pn	10 47 21.0	-0.2
BISRR	**Bisoca**	5.61	114	Pn	Pn	10 47 21.0	-0.2
PDG	**Podgorica**	5.61	181	*e*Pn	Pn	10 47 19.1	-2.1
PDG	**Podgorica**	5.61	181	Pn	Pn	10 47 19.1	-2.1
HCY	**Herceg Novi**	5.63	187	*e*Pn	Pn	10 47 22.2	+0.7
HCY	**Herceg Novi**	5.63	187	Pn	Pn	10 47 22.2	+0.7
MOTA	**Moosalm**	5.64	266	*i* Pn	Pn	10 47 22.0	+0.1
	comp=Z,2.5nm,0.3s,SNR=5.7						
MOTA				*e*Sn	Sn	10 48 27.8	+1.2
	comp=Z,20nm,0.7s						
MOTA	**Moosalm**	5.64	266	Pn	Pn	10 47 22.0	+0.1
	comp=Z,2.5nm,0.3s						
MOTA				Sn	Sn	10 48 27.8	+1.2
	comp=Z,20nm,0.7s						
GRF	**Grafenberg Arr**	5.64	290	*e*Pn	Pn	10 47 21.7	0.0
MOX	**Moxa**	5.71	300	*i* AMB	AMB	10 47 23.5	
	comp=Z,13nm,1.1s						
MOX	**Moxa**	5.71	300	*e*Pn	Pn	10 47 23.2	+0.5
ODBI	**Odobesti**	5.72	111	⇑P	Pn	10 47 22.9	+0.2
ODBI	**Odobesti**	5.72	111	Pn	Pn	10 47 22.9	+0.2
RETA	**Reutte**	5.85	268	*i* Pn	Pn	10 47 24.8	+0.2
	comp=Z,1.9nm,0.4s,SNR=6.5						
RETA				*e*Sn	Sn	10 48 28.5	-3.1
	comp=Z,9.3nm,0.8s						
RETA	**Reutte**	5.85	268	Pn	Pn	10 47 24.8	+0.2
	comp=Z,1.9nm,0.4s						
RETA				Sn	Sn	10 48 28.5	-3.1
	comp=Z,9.3nm,0.8s						
DRME	**Dracevica, Mon**	5.85	182	*e*Pn	Pn	10 47 24.9	+0.3
DRME	**Dracevica, Mon**	5.85	182	Pn	Pn	10 47 24.9	+0.3
NORI	**Noerdlinger Ri**	5.88	280	*e*Pn	Pn	10 47 25.3	+0.3
BOSS	**Bosilegrad**	5.95	157	*e*Pn	Pn	10 47 25.8	-0.2
BOSS	**Bosilegrad**	5.95	157	Pn	Pn	10 47 25.8	-0.2
FETA	**Feichten**	5.96	263	*i* Pn	Pn	10 47 26.6	+0.5
	comp=Z,5.3nm,0.4s,SNR=15						
FETA				*e*Sn	Sn	10 48 34.3	0.0
	comp=Z,12nm,0.9s						
FETA	**Feichten**	5.96	263	Pn	Pn	10 47 26.6	+0.5
	comp=Z,5.3nm,0.4s						
FETA				Sn	Sn	10 48 34.3	0.0
	comp=Z,12nm,0.9s						
VTS	**Vitosha**	6.06	152	⇓P	Pn	10 47 27.6	+0.1
VTS	**Vitosha**	6.06	152	*e*Pn	Pn	10 47 27.6	+0.1
VTS	**Vitosha**	6.06	152	Pn	Pn	10 47 27.6	+0.1
VTS				Pn	Pn	10 47 27.6	+0.1
UBR	**Ueberruh**	6.26	270	*i* AMB	AMB	10 47 30.5	
	comp=Z,88nm,0.6s						
UBR	**Ueberruh**	6.26	270	*e*Pn	Pn	10 47 30.6	+0.3
FUORN	**Ofenpass-Fuorn**	6.37	261	*i* AMB	AMB	10 47 32.9	
	comp=Z,11nm,0.9s						
DAVA	**Damuels**	6.47	267	*i* Pn	Pn	10 47 33.5	+0.3
	comp=Z,10nm,0.3s,SNR=9.0						
DAVA				*e*Sn	Sn	10 48 45.3	-1.7
	comp=Z,9.9nm,0.5s						
DAVA	**Damuels**	6.47	267	Pn	Pn	10 47 33.5	+0.3
	comp=Z,10nm,0.3s						
DAVA				*i* AMB	AMB	10 47 33.7	
	comp=Z,20nm,0.8s						
DAVA				Sn	Sn	10 48 45.3	-1.7
	comp=Z,9.9nm,0.5s						
DAVA	**Damuels**	6.47	267	*e*Pn	Pn	10 47 33.5	+0.3
MILM	**Milestii Mici**	6.48	96	⇑P	Pn	10 47 32.2	-1.0
MILM	**Milestii Mici**	6.48	96	Pn	Pn	10 47 32.2	-1.0
DAVOX	**Davos/Dischmat**	6.58	263	Pn	Pn	10 47 35.5	+0.8
	comp=Z,1.9nm,0.3s,baz=78,slow=11,SNR=17						
DAVOX				LR	LR	10 50 45.2	
	comp=Z,83nm,18.3s,baz=262,slow=44						
DAVOX	**Davos/Dischmat**	6.58	263	P	Pn	10 47 35.5	+0.8
DAVOX				Pn	Pn	10 47 35.5	+0.8
	comp=Z,1.9nm,0.3s						
DAVOX				LR	LR	10 50 45.2	
	comp=Z,83nm,18.3s						
CFR	**Carcaliu**	6.67	112	⇑P	Pn	10 47 34.4	-1.3
CFR	**Carcaliu**	6.67	112	Pn	Pn	10 47 34.4	-1.3
UBBA	**Unterbreizbach**	6.73	298	*i* AMB	AMB	10 47 38.1	
	comp=Z,5.4nm,0.6s						
HARR	**Harsova**	6.79	116	⇓P	Pn	10 47 36.8	-0.6
HARR	**Harsova**	6.79	116	Pn	Pn	10 47 36.8	-0.6
STU	**Stuttgart**	6.83	280	*i* AMB	AMB	10 47 37.9	
	comp=Z,16nm,0.6s						
STU				Pn	Pn	10 47 38.6	+0.6
STU				Pb	Pn	10 47 39.3	+1.3
STU				Sn	Sn	10 48 53.3	-2.4
STU				Pb	Pb		
	comp=Z,16nm,0.6s						
ASSE	**Asse, Remlinge**	6.95	309	*i* AMB	AMB	10 47 40.6	
	comp=Z,8.3nm,2.7s						
AKASG	**Malin Array Be**	6.95	64	Pn	Pn	10 47 37.8	-1.8

	comp=Z,1.6nm,0.3s,baz=247,slow=12,SNR=9.7						
AKASG				Sn	Sn	10 48 53.8	-4.8
	comp=Z,1.4nm,0.3s,baz=243,slow=23,SNR=4.1						
AKASG	Malin Array Be	6.95	64	i P	Pn	10 47 38.2	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	6.95	64	Pn	Pn	10 47 37.8	-1.8
	comp=Z,1.6nm,0.3s						
AKASG				P	Pn	10 47 38.2	-1.4
AKASG				Sn	Sn	10 48 53.8	-4.8
	comp=Z,1.4nm,0.3s						
TUE	Stuetta	7.01	261	i AMB	AMB	10 47 40.9	
	comp=Z,13nm,0.7s						
TIRR	Tirgusor	7.20	116	i AMB	AMB	10 47 43.6	
	comp=Z,119nm,1.7s						
SLE	Schleitheim	7.33	272	i AMB	AMB	10 47 44.5	
	comp=Z,20nm,0.7s						
FNA	Florina	7.39	168	i AMB	AMB	10 47 45.6	
	comp=Z,20nm,2.4s						
BFO	Black Forest	7.40	276	i AMB	AMB	10 47 45.1	
	comp=Z,17nm,1.2s						
BFO	Black Forest	7.40	276	ePn	Pn	10 47 45.1	-0.8
TNS	Taunus Mts	7.51	291	i AMB	AMB	10 47 48.0	
	comp=Z,29nm,0.8s						
TNS	Taunus Mts	7.51	291	ePn	Pn	10 47 47.4	0.0
BNALP	Bannalp	7.53	265	i AMB	AMB	10 47 47.8	
	comp=Z,12nm,1.4s						
BSD	Bornholm Skovb	7.62	340	eP	Pn	10 47 47.9	-0.8
BSD	Bornholm Skovb	7.62	340	i P	Pn	10 47 47.9	-0.8
BSD	Bornholm Skovb	7.62	340	eP	Pn	10 47 47.9	-0.8
BSD	Bornholm Skovb	7.62	340	P	Pn	10 47 47.9	-0.8
BSD				Pn	Pn	10 47 47.9	-0.8
CDF	Champ du Feu	8.10	277	ePn	Pn	10 47 53.6	-2.0
CDF	Champ du Feu	8.10	277	eP	Pn	10 48 00.2	+4.6
CDF	Champ du Feu	8.10	277	Pn	Pn	10 47 53.6	-2.0
CDF				P	Pn	10 48 00.2	+4.6
BOURR	Bourrignon	8.23	270	i AMB	AMB	10 47 56.2	
	comp=Z,18nm,1.2s						
MNK	Minsk	8.38	36	i P	Pn	10 47 59.7	+0.5
	comp=E,1.0nm,1.0s						
MNK				i P	Pn	10 47 59.7	+0.5
	comp=N,5.0nm,1.0s						
MNK				i P	Pn	10 47 59.7	+0.5
	comp=Z,6.0nm,1.0s						
MNK				i S	Sn	10 49 35.1	+1.5
MNK				i LR	LR	10 50 59.5	
MNK				i LRM	MLR	10 51 09.0	
	comp=E,6.0nm,16.1s						
MNK				i LRM	MLR	10 51 13.8	
	comp=Z,64nm,16.1s						
MNK				i LRM	MLR	10 51 15.1	
	comp=N,111nm,16.1s						
MNK	Minsk	8.38	36	Pn	Pn	10 47 59.7	+0.5
	comp=N,1.0nm,1.0s						
MNK				P	Pn	10 47 59.7	+0.5
	comp=N,6.0nm,1.0s						
MNK				P	Pn	10 47 59.7	+0.5
	comp=N,5.0nm,1.0s						
MNK				S	Sn	10 49 35.1	+1.5
MNK				LRM	MLR	10 51 09.0	
	comp=N,6.0nm,16.1s						
MNK				LRM	MLR	10 51 13.8	
	comp=N,64nm,16.1s						
MNK				LRM	MLR	10 51 15.1	
	comp=N,111nm,16.1s						
HINF	Hinteralfeld	8.43	273	ePn	Pn	10 47 58.7	-1.3
HINF	Hinteralfeld	8.43	273	eP	Pn	10 48 03.6	+3.6
HINF				eSn	Sn	10 49 29.1	-5.9
	comp=N,3.0nm,0.3s						
HINF	Hinteralfeld	8.43	273	Pn	Pn	10 47 58.7	-1.3
HINF				P	Pn	10 48 03.6	+3.6
HINF				Sn	Sn	10 49 29.1	-5.9
	comp=N,1.5nm,0.3s						
HAU	Haudompre	8.75	275	ePn	Pn	10 48 03.5	-0.8
HAU	Haudompre	8.75	275	eP	Pn	10 48 09.4	+5.1
HAU				eSn	Sn	10 49 36.6	-6.2
	comp=N,3.4nm,0.4s						
HAU	Haudompre	8.75	275	Pn	Pn	10 48 03.5	-0.8
HAU				P	Pn	10 48 09.4	+5.1
HAU				Sn	Sn	10 49 36.6	-6.2
	comp=N,1.7nm,0.4s						
WLF	Walferdange	8.88	285	i AMB	AMB	10 48 06.6	
	comp=N,14nm,0.9s						
LPG	La Plagne	9.04	258	ePn	Pn	10 48 09.8	+1.2
LPG	La Plagne	9.04	258	Pn	Pn	10 48 09.8	+1.2
TIP	Timpagrande	9.06	193	i AMB	AMB	10 48 09.3	
	comp=N,30nm,2.1s						
PAGF	Fort de Pagny	9.13	278	ePn	Pn	10 48 09.7	+0.2
	baz=99						
PAGF	Fort de Pagny	9.13	278	Pn	Pn	10 48 09.7	+0.2
CABF	La Chapelle	9.15	266	ePn	Pn	10 48 08.6	-1.3
CABF				eSn	Sn	10 49 44.2	-8.7
	comp=N,0.8nm,0.3s						
CABF	La Chapelle	9.15	266	Pn	Pn	10 48 08.6	-1.3
CABF				Sn	Sn	10 49 44.2	-8.7
	comp=N,0.4nm,0.3s						
AGG	Agios Georgios	9.26	166	i AMB	AMB	10 48 13.1	
	comp=N,60nm,2.5s						
SBF	Sospel	9.32	248	ePn	Pn	10 48 10.7	-1.5
SBF	Sospel	9.32	248	eP	Pn	10 48 16.7	+4.5
SBF				eSn	Sn	10 49 49.3	-7.6
	comp=N,0.9nm,0.3s						
SBF	Sospel	9.32	248	Pn	Pn	10 48 10.7	-1.5
SBF				P	Pn	10 48 16.7	+4.5
SBF				Sn	Sn	10 49 49.3	-7.6
	comp=N,0.5nm,0.3s						
MBDF	Montbardon	9.33	254	ePn	Pn	10 48 11.8	-0.6
MBDF	Montbardon	9.33	254	eP	Pn	10 48 16.7	+4.3
MBDF				eSn	Sn	10 49 49.0	-8.4
	comp=N,0.9nm,0.5s						
MBDF	Montbardon	9.33	254	Pn	Pn	10 48 11.8	-0.6
MBDF				P	Pn	10 48 16.7	+4.3
MBDF				Sn	Sn	10 49 49.0	-8.4
	comp=N,0.5nm,0.5s						
MEZF	Maizieres J'vi	9.58	278	ePn	Pn	10 48 16.0	+0.3
MEZF				eSn	Sn	10 49 52.7	-10
	comp=N,2.1nm,0.3s						
MEZF	Maizieres J'vi	9.58	278	Pn	Pn	10 48 16.0	+0.3
MEZF				Sn	Sn	10 49 52.7	-10
	comp=N,1.1nm,0.3s						
OGAG	Argentiere	9.60	253	i AMB	AMB	10 48 15.5	
	comp=N,19nm,0.8s						
OGAG				i AMB	AMB	10 48 16.9	
	comp=N,19nm,0.8s						
SFTF	Sexfontaines	9.61	276	ePn	Pn	10 48 15.8	-0.3
SFTF	Sexfontaines	9.61	276	eP	Pn	10 48 20.2	+4.1
SFTF				eSn	Sn	10 49 56.2	-7.7
	comp=N,2.5nm,0.4s						
SFTF	Sexfontaines	9.61	276	Pn	Pn	10 48 15.8	-0.3
SFTF				P	Pn	10 48 20.2	+4.1
SFTF				Sn	Sn	10 49 56.2	-7.7
	comp=N,1.2nm,0.4s						
CALF	Calern	9.69	248	i AMB	AMB	10 48 17.9	
	comp=N,23nm,2.5s						
GIVF	Givet	9.79	288	ePn	Pn	10 48 16.7	-1.8
GIVF	Givet	9.79	288	Pn	Pn	10 48 16.7	-1.8
ORIF	Oris-en-Rattie	9.83	257	ePn	Pn	10 48 20.7	+1.5
ORIF	Oris-en-Rattie	9.83	257	Pn	Pn	10 48 20.7	+1.5
	comp=N,16nm,0.8s						
FRF	La Foret Royal	9.96	248	ePn	Pn	10 48 21.0	+0.1
FRF				eSn	Sn	10 50 04.8	-7.8
	comp=N,4.7nm,0.6s						
FRF	La Foret Royal	9.96	248	Pn	Pn	10 48 21.0	+0.1
FRF				Sn	Sn	10 50 04.8	-7.8
	comp=N,2.4nm,0.6s						
LMR	La Mourre	10.17	247	ePn	Pn	10 48 22.5	-1.2
LMR	La Mourre	10.17	247	Pn	Pn	10 48 22.5	-1.2
BAIF	Baives	10.18	287	ePn	Pn	10 48 24.9	+1.1
BAIF	Baives	10.18	287	eP	Pn	10 48 28.5	+4.7
BAIF				eSn	Sn	10 50 07.3	-11
	comp=N,0.3nm,0.3s						
BAIF	Baives	10.18	287	Pn	Pn	10 48 24.9	+1.1
BAIF				P	Pn	10 48 28.5	+4.7
BAIF				Sn	Sn	10 50 07.3	-11
	comp=N,0.1nm,0.3s						
SMRF	Simiane la Rot	10.43	252	ePn	Pn	10 48 28.0	+0.6
SMRF				eSn	Sn	10 50 15.6	-8.7
	comp=N,0.4nm,0.3s						
SMRF	Simiane la Rot	10.43	252	Pn	Pn	10 48 28.0	+0.6
SMRF				Sn	Sn	10 50 15.6	-8.7
	comp=N,0.2nm,0.3s						
RUSF	Rustrel	10.51	252	i AMB	AMB	10 48 29.4	
	comp=N,14nm,2.5s						
LOR	Lormes	10.51	272	ePn	Pn	10 48 28.1	-0.4
	baz=91						
LOR	Lormes	10.51	272	eP	Pn	10 48 33.8	+5.3
LOR				eSn	Sn	10 50 17.6	-8.6
	comp=N,1.7nm,0.6s						
LOR	Lormes	10.51	272	Pn	Pn	10 48 28.1	-0.4
LOR				i AMB	AMB	10 48 29.5	
	comp=N,6.9nm,1.9s						
LOR				P	Pn	10 48 33.8	+5.3
LOR				Sn	Sn	10 50 17.6	-8.6
	comp=N,0.8nm,0.6s						
VIVF	Saint-Julien-l	10.65	258	ePn	Pn	10 48 29.2	-1.1
VIVF	Saint-Julien-l	10.65	258	eP	Pn	10 48 35.6	+5.3
VIVF				eSn	Sn	10 50 20.7	-8.7
	comp=N,5.0nm,0.8s						
VIVF	Saint-Julien-l	10.65	258	Pn	Pn	10 48 29.2	-1.1
VIVF				P	Pn	10 48 35.6	+5.3
VIVF				Sn	Sn	10 50 20.7	-8.7
	comp=N,2.5nm,0.8s						
SMF	Signal de Mont	10.65	268	ePn	Pn	10 48 29.9	-0.5
SMF	Signal de Mont	10.65	268	Pn	Pn	10 48 29.9	-0.5
SSF	Saint Saulge	10.79	271	ePn	Pn	10 48 31.8	-0.4
SSF	Saint Saulge	10.79	271	eP	Pn	10 48 37.7	+5.5
SSF				eSn	Sn	10 50 24.2	-8.7
	comp=N,0.6nm,0.4s						
SSF	Saint Saulge	10.79	271	Pn	Pn	10 48 31.8	-0.4
SSF				P	Pn	10 48 37.7	+5.5
SSF				Sn	Sn	10 50 24.2	-8.7
	comp=N,0.3nm,0.4s						
AVF	Avril sur Loir	10.95	269	ePn	Pn	10 48 34.4	0.0
AVF				eSn	Sn	10 50 28.2	-8.5
	comp=N,0.6nm,0.3s						
AVF	Avril sur Loir	10.95	269	Pn	Pn	10 48 34.4	0.0
AVF				Sn	Sn	10 50 28.2	-8.5
	comp=N,0.3nm,0.3s						
VSU	Vasula	11.32	20⇑	eP	Pn	10 48 41.4	+2.0
VSU				pmax	pmax		
	comp=Z,31nm,0.8s						
VSU	Vasula	11.32	20	P	Pn	10 48 41.4	+2.0
BGF	Bois d'Agland	11.34	269	ePn	Pn	10 48 39.3	-0.5
BGF	Bois d'Agland	11.34	269	eP	Pn	10 48 44.5	+4.7
BGF				eSn	Sn	10 50 37.1	-9.2
	comp=Z,1.5nm,0.3s						
BGF	Bois d'Agland	11.34	269	Pn	Pn	10 48 39.3	-0.5
BGF				P	Pn	10 48 44.5	+4.7
BGF				Sn	Sn	10 50 37.1	-9.2
	comp=Z,0.8nm,0.3s						
LASF	Ste Croix	11.50	256	ePn	Pn	10 48 41.2	-0.8
LASF				eSn	Sn	10 50 41.1	-9.2
	comp=Z,1.3nm,0.3s						
LASF	Ste Croix	11.50	256	Pn	Pn	10 48 41.2	-0.8
LASF				Sn	Sn	10 50 41.1	-9.2
	comp=Z,0.7nm,0.3s						
TCF	Toulx Ste Croi	11.83	268	ePn	Pn	10 48 45.1	-1.4
TCF				eSn	Sn	10 50 49.4	-9.0
	comp=Z,0.6nm,0.2s						
TCF	Toulx Ste Croi	11.83	268	Pn	Pn	10 48 45.1	-1.4
TCF				Sn	Sn	10 50 49.4	-9.0
	comp=Z,0.3nm,0.2s						
CAF	Calviac	12.34	262	ePn	Pn	10 48 52.5	-1.0
CAF	Calviac	12.34	262	Pn	Pn	10 48 52.5	-1.0
HFS	Hagfors	12.57	347	Pn	Pn	10 48 57.9	+1.4
	comp=Z,0.1nm,0.3s,baz=162,slow=16,SNR=1.6						
HFS				Sn	Sn	10 51 06.8	-9.4
	comp=Z,0.1nm,0.3s,baz=184,slow=39,SNR=3.6						
HFS	Hagfors	12.57	347	Pn	Pn	10 48 57.9	+1.4
	comp=Z,0.1nm,0.3s						
HFS				Sn	Sn	10 51 06.8	-9.4
	comp=Z,0.1nm,0.3s						
OBN	Obninsk	12.80	50⇑	eP	Pn	10 48 59.2	-0.4
OBN				eS	Sn	10 51 22.0	+0.2
OBN				pmax	pmax		
	comp=Z,48nm,2.6s						
OBN				MLR	MLR		
	comp=Z,93nm,16.0s						
OBN	Obninsk	12.80	50	P	Pn	10 48 59.2	-0.4
OBN				S	Sn	10 51 22.0	+0.2
LDF	La Druitiere	13.00	280	ePn	Pn	10 49 01.3	-1.2
LDF	La Druitiere	13.00	280	Pn	Pn	10 49 01.3	-1.2
FLN	La Foliniere	13.23	281	ePn	Pn	10 49 03.9	-1.7
FLN	La Foliniere	13.23	281	Pn	Pn	10 49 03.9	-1.7
MFF	Saint Martin d	13.34	271	ePn	Pn	10 49 06.7	-0.3
MFF	Saint Martin d	13.34	271	Pn	Pn	10 49 06.7	-0.3
NOA	NORSAR Array B	13.85	343	Pn	Pn	10 49 13.6	-0.5
	comp=Z,0.0nm,0.3s,baz=160,slow=12,SNR=2.2						
NOA	NORSAR Array B	13.85	343	Pn	Pn	10 49 13.6	-0.5
FINES	FINESS Array B	13.97	13	Pn	Pn	10 49 12.5	-3.1
	comp=Z,0.2nm,0.3s,baz=174,slow=14,SNR=9.7						
FINES				Sn	Sn	10 51 39.2	-11
	comp=Z,0.2nm,0.3s,baz=181,slow=22,SNR=2.4						
FINES	FINESS Array B	13.97	13	i P	Pn	10 49 15.6	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	13.97	13	Pn	Pn	10 49 12.5	-3.1
	comp=Z,0.2nm,0.3s						
FINES				P	Pn	10 49 15.6	+0.1
FINES				Sn	Sn	10 51 39.2	-11
	comp=Z,0.2nm,0.3s						
QUIF	Quistinic	15.11	278	ePn	Pn	10 49 31.2	+0.1
QUIF				eSn	Sn	10 52 07.1	-11
	comp=Z,4.9nm,0.6s						
QUIF	Quistinic	15.11	278	Pn	Pn	10 49 31.2	+0.1
QUIF				Sn	Sn	10 52 07.1	-11
	comp=Z,2.5nm,0.6s						
ESDC	Sonseca Array	18.75	252	P	P	10 50 16.0	-0.8
	comp=Z,0.0nm,0.3s,baz=46,slow=9.3,SNR=1.6						
ESDC	Sonseca Array	18.75	252	P	P	10 50 16.0	-0.8
KIRV	Kirov	20.63	48	LR	LR	10 58 21.5	
	comp=Z,93nm,19.4s,baz=17,slow=36						
KIRV	Kirov	20.63	48	LR	LR	10 58 21.5	
	comp=Z,93nm,19.4s						
ARCES	ARCESS Array B	21.77	6	P	P	10 50 50.2	+0.9
	comp=Z,2.5nm,0.9s,baz=180,slow=13,SNR=2.0						
ARCES	ARCESS Array B	21.77	6	P	P	10 50 50.2	+0.9
ARCES				P	P	10 50 50.2	+0.9
	comp=Z,2.5nm,0.9s						
ARU	Arti	25.11	56	P	P	10 51 23.0	+0.5
	comp=Z,0.5nm,0.4s,baz=319,slow=10,SNR=3.5						
ARU	Arti	25.11	56	P	P	10 51 24.0	+1.6
ARU						10 51 59.6	
ARU				SS		10 56 47.3	
ARU	Arti	25.11	56	P	P	10 51 23.0	+0.5
	comp=Z,0.5nm,0.4s						
ARU				P	P	10 51 24.0	+1.6
ARU				SS		10 56 47.3	
AKTO	Aktyubinsk	25.14	70	P	P	10 51 24.9	+2.1
	comp=Z,0.9nm,0.6s,baz=280,slow=11,SNR=6.4						
AKTO	Aktyubinsk	25.14	70	P	P	10 51 24.9	+2.1
	comp=Z,0.9nm,0.6s						
BRVK	Borovoye	32.16	62⇑	eP	P	10 52 28.1	+2.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	32.16	62	P	P	10 52 28.1	+2.8
KURK	Kurchatov	37.76	63⇑	eP	P	10 53 13.6	0.0
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
KURK	Kurchatov	37.76	63	P	P	10 53 13.6	0.0
TORD	Torodi Ar. Bea	37.78	209	LR	LR	11 10 40.9	
	comp=Z,53nm,19.3s,baz=115,slow=39						
TORD	Torodi Ar. Bea	37.78	209	LR	LR	11 10 40.9	
	comp=Z,53nm,19.3s						
AAK	Ala-Archa	38.40	77⇑	eP	P	10 53 18.1	-1.2
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	Ala-Archa	38.40	77	P	P	10 53 18.1	-1.2
MKAR	Makanchi Array	41.52	67	P	P	10 53 47.0	+2.0
	comp=Z,0.3nm,0.8s,baz=283,slow=7.2,SNR=2.7						
MKAR	Makanchi Array	41.52	67	P	P	10 53 47.0	+2.0
MKAR	Makanchi Array	41.52	67	P	P	10 53 47.0	+2.0
	comp=Z,0.3nm,0.8s						
MKAR				P	P	10 53 47.0	+2.0
DGZ	Jazzator, Alta	43.38	61⇑	eP	P	10 54 03.5	+3.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
DGZ	Jazzator, Alta	43.38	61	P	P	10 54 03.5	+3.2
TIXI	Tiksi	50.78	23⇑	eP	P	10 54 58.6	+1.1
TIXI	Tiksi	50.78	23	P	P	10 54 58.6	+1.1
SONM	Songino Array	55.15	55	P	P	10 55 32.4	+2.2
	comp=Z,0.8nm,0.8s,baz=286,slow=7.4,SNR=5.4						
SONM	Songino Array	55.15	55	P	P	10 55 32.4	+2.2
	comp=Z,0.8nm,0.8s						
SONM				P	P	10 55 32.4	+2.2

KRSZO 01 10:46:37.4±1.2**, 48°.01N×19°.43E, h1**^{km}±11^{km}**, ML3.2**/9**, 1C, Error ellipse: s-maj=4.9km s-min=4.3km az=158.0,**

Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.32	107⇑	iPG	Pb	10 46 45.1	-0.9
PSZ				eSG	Sb	10 46 49.9	-1.8
PSZ	Piszkesteto	0.32	107	Pg	Pb	10 46 45.0	-1.0
	comp=Z,8.6nm,SNR=0.6						
PSZ				Lg	Lg	10 46 49.0	
BUD	Budapest	0.60	208	Pg	Pb	10 46 50.3	-0.3
	comp=Z,2.4nm,SNR=0.6						
BUD				Lg	Lg	10 46 58.4	
BUD	Budapest	0.60	208	ePG	Pb	10 46 50.2	-0.3
BUD	Budapest	0.60	208	eSG	Sb	10 46 59.0	-0.5
VYHS	Vyhne	0.63	321	Pg	Pg	10 46 50.2	+0.8
	comp=Z,0.8nm,SNR=0.8						
VYHS				Lg	Lg	10 46 58.5	
VYHS	Vyhne	0.63	321	ePG	Pb	10 46 50.6	-0.5
VYHS	Vyhne	0.63	321	eSG	Sg	10 46 58.6	+1.1
SRO	Srobarova	0.78	256	eSG	Sb	10 47 04.6	-0.1
SRO				eLG	Lg	10 47 08.5	
SRO	Srobarova	0.78	256	Pn	Pb	10 46 53.8	+0.2
	comp=Z,29nm,SNR=1.3						
SRO				Lg	Lg	10 47 04.5	
KECS	Kecovo	0.85	56	ePG	Pb	10 46 54.8	-0.1
KECS				eSG	Sb	10 47 06.5	-0.2
KECS				eLG	Lg	10 47 08.0	
KECS	Kecovo	0.85	56	Pg	Pg	10 46 54.1	+0.5
	comp=Z,12nm,SNR=0.7						
KECS				Lg	Lg	10 47 06.2	
KOLL	Kolacno	0.89	310	ePG	Pb	10 46 55.7	+0.1
KOLL	Kolacno	0.89	310	eSG	Sg	10 47 06.7	+0.7
BSZH	Besenyszg	0.91	141	Pg	Pn	10 46 56.8	-0.4
	comp=Z,1.6nm,SNR=0.9						
BSZH				Lg	Lg	10 47 10.4	
BSZH	Besenyszg	0.91	141	ePG	Pn	10 46 56.8	-0.4
BSZH	Besenyszg	0.91	141	eSG	Sn	10 47 10.9	0.0
CSKK	Cskako	1.02	231	ePN	Pb	10 46 57.6	-0.2
CSKK				eSN	Sn	10 47 13.3	-0.5
CSKK	Cskako	1.02	231	Pn	Pb	10 46 57.6	-0.3
	comp=Z,3.2nm,SNR=0.8						
LANS	Liptovska Anna	1.14	1	eSG	Sb	10 47 15.0	-0.2
LANS				eLG	Lg	10 47 17.5	
JAVC	Velka Javorina	1.45	306	ePG	Pn	10 47 04.5	-0.2
MODS	Modra-Piesok	1.49	285	eSG	Sg	10 47 24.7	-0.4
MODS				eLG	Lg	10 47 28.6	
NIE	Niedzica	1.52	22	Pn	Pn	10 47 05.2	-0.5
	comp=Z,0.4nm,SNR=0.8						
ZST	Bratislava	1.57	278	eSG	Sg	10 47 28.2	+0.3
ZST				eLG	Lg	10 47 32.9	
CRVS	Cervenica-Dubn	1.62	56	eSG	Sg	10 47 32.9	+3.6
MORC	Moravsky Berou	2.16	325	eSN	Sn	10 47 40.6	-1.4
KRUC	Moravsky	2.28	299	eSN	Sn	10 47 43.9	-0.8
VRAC	Vranov	2.29	306	eSN	Sn	10 47 43.9	-1.1

IDC 01 10:47:11.7±1.2**, 86°.07N×24°.60E, h0**^{km}**, mb3.3**/4**, mb1 3.6**/4**, mb1mx3.2**/52**, mbtmp3.3**/4**, Error ellipse: s-maj=61.8km s-min=28.1km az=49.0, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	30.76	324	P	P	10 53 26.4	-1.6
	0.3nm,0.8s,baz=11,slow=7.6,SNR=5.2						
YKA				PcP	PcP	10 56 24.5	-0.5
	0.2nm,0.8s,baz=33,slow=3.7,SNR=4.4						
MKAR	Makanchi Array	41.39	119	P	P	10 54 58.9	-0.1
	0.3nm,0.9s,baz=359,slow=8.6,SNR=2.8						
TXAR	Lajitas Array	63.33	310	P	P	10 57 43.5	+1.4
	0.4nm,0.8s,baz=358,slow=2.7,SNR=5.9						
TORD	Torodi Ar. Bea	73.30	203	P	P	10 58 44.3	-0.2
	0.6nm,0.9s,baz=14,slow=6.5,SNR=1.7						

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*IDC **01** 10:50:55.5±2.0, 7°.48S×128°.89E, h157^{km}±22^{km}, mb3.4/3, mb1 3.3/7, mb1mx3.1/35, mbtmp3.7/7, Error ellipse: s-maj=24.4km s-min=19.3km az=115.0*

ISC 01 10:50:53.6±0.8**, 7°.56S**±0°.06×**129°.10E**±0°.09**, h150**^{km}**, n8, σ3^{s}.05**/13**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.98	244	P	Pn	10 52 21.3	+1.2
	49nm,0.3s,baz=98,slow=4.1,SNR=37						
BATI				S	Sn	10 53 26.1	-1.7
	10nm,0.3s,baz=32,slow=21,SNR=7.6						
SIJI	Sorong	6.99	18	P	Pn	10 52 35.3	+1.6
	0.6nm,0.3s,baz=220,slow=22,SNR=9.9						
SIJI				S	Sn	10 53 47.1	-4.9
	0.9nm,0.3s,baz=248,slow=22,SNR=2.6						
FITZ	Fitzroy Crossi	11.00	198	P	Pn	10 53 28.1	+1.3
	0.2nm,0.3s,baz=17,slow=9.3,SNR=1.7						
FITZ				S	Sn	10 55 23.7	-4.9
	0.9nm,0.3s,baz=182,slow=6.5,SNR=5.3						
WRA	Warramunga Arr	13.31	158	P	Pn	10 53 58.9	+2.0
	0.5nm,0.3s,baz=330,slow=13,SNR=23						
WRA				S	Sn	10 56 20.7	-3.6
	1.5nm,0.3s,baz=334,slow=22,SNR=11						
ASAR	Alice Springs	16.66	164	P	Pn	10 54 42.9	+4.3
	0.3nm,0.3s,baz=340,slow=12,SNR=32						
ASAR				S	S	10 57 43.7	-0.2
	0.4nm,0.3s,baz=346,slow=27,SNR=6.5						
SONM	Songino Array	58.70	342	P	P	11 00 35.9	+0.4
	0.3nm,0.6s,baz=180,slow=4.3,SNR=2.6						
MKAR	Makanchi Array	68.21	327	P	P	11 01 37.9	0.0
	1.3nm,0.5s,baz=122,slow=7.8,SNR=28						
ZALV	Zalesovo Beam	71.69	334	P	P	11 01 58.7	-0.3
	0.3nm,0.3s,baz=122,slow=5.0,SNR=2.9						

IDC 01 10:57:15.0±7.4**, 29°.69N×140°.43E, h67**^{km}±80^{km}**, mb3.0**/3**, mb1 3.3**/4**, mb1mx3.0**/38**, mbtmp3.3**/4**, ML2.3**/1**, Error ellipse: s-maj=228.0km s-min=42.7km az=83.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.08	345	P	Pn	10 58 55.8	-0.2
	0.1nm,0.3s,baz=164,slow=13,SNR=5.9						
KLR	Kul'dur	20.61	344	P	P	11 01 48.6	+0.1
	0.4nm,0.3s,baz=185,slow=12,SNR=1.8						
WRA	Warramunga Arr	49.69	188	P	P	11 05 59.9	-0.4
	0.3nm,0.3s,baz=6.3,slow=7.9,SNR=8.6						
ASAR	Alice Springs	53.42	187	P	P	11 06 28.4	+0.3
	0.1nm,0.5s,baz=358,slow=5.1,SNR=5.8						

IDC 01 11:08:06.4±0.8**, 13°.91N×145°.04E, h175**^{km}±4^{km}**, mb2.9**/4**, mb1 3.3**/4**, mb1mx2.9**/55**, mbtmp3.4**/4**, Error ellipse: s-maj=53.9km s-min=21.3km az=103.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.36	208	P	Pn	11 08 31.7	+1.5
	148nm,0.3s,baz=265,slow=3.0,SNR=154						
GUMO				S	Sn	11 08 49.5	+1.1
	123nm,0.3s,baz=111,slow=22,SNR=33						
WRA	Warramunga Arr	35.25	198	P	P	11 14 44.2	-0.2
	0.8nm,0.5s,baz=20,slow=9.6,SNR=17						
SONM	Songino Array	46.57	325	P	P	11 16 16.6	-0.2
	0.3nm,0.6s,baz=129,slow=5.7,SNR=2.3						
ILAR	Eielson Array	68.21	25	P	P	11 18 47.1	-0.6
	0.3nm,0.7s,baz=262,slow=6.3,SNR=4.3						
YKA	Yellowknife Ar	82.50	27	P	P	11 20 09.1	-0.1
	0.1nm,0.4s,baz=292,slow=3.7,SNR=2.8						

IDC 01 11:12:51.9±3.9**, 30°.78N×140°.54E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.2**/55**, mbtmp3.3**/3**, ML2.0**/1**, Error ellipse: s-maj=228.4km s-min=34.2km az=81.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.07	342	Pn	Pn	11 14 22.6	-0.2
	0.0nm,0.3s,baz=157,slow=13,SNR=4.6						
WRA	Warramunga Arr	50.78	188	P	P	11 21 53.8	-0.2
	0.2nm,0.3s,baz=5.2,slow=7.6,SNR=7.3						
ASAR	Alice Springs	54.51	187	P	P	11 22 21.5	-0.1
	0.2nm,0.4s,baz=358,slow=5.7,SNR=4.1						

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*IDC **01** 11:17:35.9±0.8, 56°.71N×154°.63W, h0^{km}, mb4.0/22, mb1 4.2/24, mb1mx4.0/57, mbtmp4.0/24, ML3.4/2, MS3.6/3,* *Ms1 3.6/3, ms1mx2.8/44, Error ellipse: s-maj=20.4km s-min=11.0km az=165.0*

NEIC ***01*** *11:17:35.9±1.4, 56°.41N±0°.06×154°.0W±0°.1, $h15^{km}\pm3^{km}$, Error ellipse: s-maj=10.4km s-min=7.1km az=139.0*

AEIC ***01*** *11:17:39.5±1.4, 56°.39N±0°.07×153°.93W±0°.07, $h44^{km}\pm9^{km}$, ML3.8/95, mb3.8/3(NEIC), ML4.0/16(NEIC), Error ellipse: s-maj=10.8km s-min=5.5km az=167.0*

ISC 01 11:17:35.0±2.2**, 56°.41N**±0°.07×**154°.03W**±0°.06**,** $h10^{km}\pm13^{km}$**, n138,** $\sigma0\overset{s}{.}66$/129**, mb4.1**/22**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.92	26		Pn	11 17 54.1	+0.2
OHAK					Sb	11 18 05.5	+0.4
OHAK	Old Harbor	0.92	26	IAML		11 18 06.9	
	comp=E,3μm,0.5s						
KDAK	Kodiak Island	1.59	29	Pn	Pb	11 18 03.4	-1.0
	comp=E,46nm,0.3s,baz=237,slow=8.8,SNR=535						
KDAK				Pg	Pg	11 18 06.1	+0.6
	comp=E,70nm,0.3s,baz=230,slow=11,SNR=46						
KDAK				LR	LR	11 18 15.6	
	comp=E,45nm,20.7s,baz=251,slow=26						
KDAK				Lg	Lg	11 18 26.8	
	comp=E,69nm,0.3s,baz=63,slow=13,SNR=26						
PLK3	Peulik 3	1.77	317		Pn	11 18 05.9	+0.2
PLK3					Sn	11 18 29.0	+0.7
CAHL	Cahill	1.79	338		Pn	11 18 05.8	-0.2
KABR	Katmai Barrier	1.80	344		Pn	11 18 05.8	-0.3
KABR					Sn	11 18 28.5	-0.6
PLK2	Peulik 2	1.85	318		Pn	11 18 07.3	+0.6
KJL	Kejulik	1.85	334		Pn	11 18 06.9	+0.1
KJL					Sn	11 18 31.0	+0.7
ANCK	Angle Creek	1.96	337		Pn	11 18 08.2	-0.1
PLK1	Peulik 1	1.98	316		Pn	11 18 09.2	+0.7
KABU	Katmai Buttres	1.99	341		Pn	11 18 09.0	+0.3
KABU					Sn	11 18 33.3	-0.4
KCG	Knife Ck. Glac	2.00	343		Pn	11 18 09.0	+0.3
KAHG	Katmai Hook Gl	2.11	353		Pn	11 18 10.9	+0.6
PLK5	Peulik 5	2.22	317		Pn	11 18 12.7	+0.9
KAHC	Katmai Hardscr	2.31	347		Pn	11 18 13.2	+0.1
CHGN	Chignik	2.44	269		Pn	11 18 15.8	+1.0
CHGN					Sn	11 18 43.9	-0.8
VNHG	Veniaminof 1	2.87	268		Pn	11 18 21.8	+1.0
AUCH	Augustine Cone	2.98	6		Pn	11 18 23.1	+0.7
AU22	Augustine Moun	2.99	7		Pn	11 18 22.6	+0.2
OPT	Oil Point	3.28	7		Pn	11 18 27.2	+0.8
CNPM	China Poot	3.46	24		Pn	11 18 29.5	+0.6
CNPM	China Poot	3.46	24	IAML		11 19 29.3	
	comp=E,257nm,0.7s						
CNPM				IAML		11 19 32.3	
	comp=N,218nm,0.8s						
HOM	Homer	3.50	20		Pn	11 18 30.0	+0.7
CNBA	Chernabura Isl	3.53	246		Pn	11 18 30.4	+0.7
ILS	Iliamna Low So	3.60	8		Pn	11 18 31.2	+0.4
IVE	Iliamna Volcan	3.66	8		Pn	11 18 31.9	+0.2
BRLK	Bradley Lake	3.76	25		Pn	11 18 32.8	-0.1
BRLK	Bradley Lake	3.76	25	IAML		11 19 40.9	
	comp=N,231nm,0.9s						
BRLK				IAML		11 19 42.2	
	comp=E,281nm,1.0s						
BRSE	Bradley Lake S	3.77	26		Pn	11 18 33.2	0.0
SDPT	Sand Point	3.78	256		Pn	11 18 33.9	+0.7
SDPT	Sand Point	3.78	256	IAML		11 19 46.2	
	comp=E,213nm,0.8s						
SDPT				IAML		11 20 08.9	
	comp=N,217nm,1.3s						
RED	Redoubt Volcan	4.08	9		Pn	11 18 37.9	+0.5
RDSO	Redoubt South	4.12	9		Pn	11 18 38.4	+0.4
RSO	Redoubt South	4.12	9		Pn	11 18 38.6	+0.5
NCT	North Crescent	4.21	7		Pn	11 18 39.5	+0.3
DFR	Drift River	4.26	9		Pn	11 18 40.0	+0.2
SEW	Seward	4.43	31		Pn	11 18 41.4	-0.7
SLKM	Skilak Lake	4.57	24		Pn	11 18 43.9	-0.2
O22K	Cooper Landing	4.67	27		Pn	11 18 45.0	-0.4
SPBG	Spurr Blockage	4.94	9		Pn	11 18 49.6	+0.4
SPCG	Spurr Capps Gl	5.01	11		Pn	11 18 50.9	+0.7
RC01	Rabbit Creek A	5.20	24		Pn	11 18 52.5	-0.2
STLK	Strandline Lak	5.23	12		Pn	11 18 53.5	+0.3
SUA	Susitna One	5.35	17		Pn	11 18 55.2	+0.3
SUA	Susitna One	5.35	17	IAML		11 20 22.2	
	comp=E,103nm,1.1s						
PWL	Port Wells	5.37	31		Pn	11 18 54.5	-0.5
HIN	Hinchinbrook I	5.63	42		Pn	11 18 58.4	-0.2
SKT	Skwentna	5.74	12		Pn	11 18 59.7	-0.3
GLI	Glacier Island	5.76	36		Pn	11 18 59.5	-0.9
PMR	Palmer	5.78	24		Pn	11 18 59.8	-0.8
KNK	Knik Glacier	5.79	28		Pn	11 19 00.3	-0.5
GHO	Glory Hole Cre	5.99	24		Pn	11 19 03.4	-0.2
EYAK	Cordova Ski Ar	6.01	43		Pn	11 19 03.6	-0.1
SML	Sawmill	6.16	26		Pn	11 19 05.5	-0.4
KAIM	Kayak Island	6.19	51		Pn	11 19 06.3	0.0
RAGM	Ragged Mountai	6.33	47		Pn	11 19 08.2	-0.1
DIV	Divide	6.39	39		Pn	11 19 08.8	-0.3
SCM	Sheep Creek Mo	6.44	30		Pn	11 19 09.8	0.0
TT01	Tatalina	6.60	352		Pn	11 19 12.5	+0.6
KLU	Klutina	6.60	36		Pn	11 19 12.0	0.0
TTA	Tatalina	6.62	352		Pn	11 19 12.5	+0.2
BMRM	Bremner River	6.71	43		Pn	11 19 13.5	0.0
WAT7	Susitna Watana	6.96	20		Pn	11 19 17.0	0.0
WAT6	Susitna Watana	6.97	25		Pn	11 19 16.5	-0.6
M24K	Tolsona, Glenn	6.99	32		Pn	11 19 17.8	+0.5
WAT1	Susitna Watana	7.01	21		Pn	11 19 17.4	-0.2
WAT2	Susitna Watana	7.13	20		Pn	11 19 19.1	-0.2
N25K	Chitina, Valde	7.13	39		Pn	11 19 19.4	+0.2
PS11	TAPS Pump St11	7.18	34		Pn	11 19 19.8	-0.1
GLB	Gilahina Butte	7.31	42		Pn	11 19 21.8	+0.1
TRF	Thorofare Moun	7.31	13		Pn	11 19 22.3	+0.5
VRDI	Verde Repeater	7.31	44		Pn	11 19 21.7	-0.2
KTH	Kantishna Hill	7.34	11		Pn	11 19 22.1	0.0
RND	Reindeer	7.49	18		Pn	11 19 23.7	-0.4
KIAG	Kiagna River	7.58	49		Pn	11 19 25.0	-0.5
BALM	Baldy	7.65	48		Pn	11 19 26.1	-0.3
PTPK	Patty Peak	7.68	47		Pn	11 19 26.6	-0.3
MCK	McKinley	7.78	17		Pn	11 19 27.6	-0.5
BPAW	Bear Paw Mtn.	7.87	10		Pn	11 19 28.8	-0.5
PAX	Paxson	7.87	30		Pn	11 19 30.2	+0.8
TABL	Table Mountain	7.88	54		Pn	11 19 28.9	-0.7
BARN	Barnard Glacie	7.94	49		Pn	11 19 29.9	-0.6
CTGM	Chitina Glacie	8.03	50		Pn	11 19 32.0	+0.3
PCA	Pinnacle	8.15	57		Pn	11 19 32.7	-0.5
MENT	Mentasta	8.37	34		Pn	11 19 36.9	+0.7
NEA2	Nenana	8.57	15		Pn	11 19 37.9	-1.0
WRH	Wood River Hil	8.60	17		Pn	11 19 38.2	-1.2
YUK2	White River	8.66	46		Pn	11 19 39.8	-0.5
RIDG	Independent Ri	8.66	28		Pn	11 19 40.0	-0.3
HDA	Harding Lake	8.75	21		Pn	11 19 42.2	+0.8
DOT	Dot Lake	8.80	30		Pn	11 19 43.7	+1.6
MLY	Manley	8.80	9		Pn	11 19 41.4	-0.8
YUK3	Moose Creek	8.81	47		Pn	11 19 41.9	-0.5
CCB	Clear Creek Bu	8.81	18		Pn	11 19 41.0	-1.2
COLA	College	9.02	17		Pn	11 19 43.9	-1.1
MDM	Murphy Dome	9.04	16		Pn	11 19 44.3	-1.0
I23K	Minto, Yukon-K	9.06	13		Pn	11 19 45.4	-0.2
IL31		9.09	20		Pn	11 19 44.9	-1.1
ILAR	Eielson Array	9.09	20	Pn	Pn	11 19 44.9	-1.1
	comp=E,1.1nm,0.3s,baz=203,slow=13,SNR=41						
ILAR				LR	LR	11 23 37.3	
	comp=E,155nm,19.4s,baz=206,slow=40						
POKR	Poker Plat Res	9.31	17		Pn	11 19 48.2	-0.9
IM03		9.61	1		Pn	11 19 52.7	-0.4
ANM	Nome	9.90	330		Pn	11 19 57.7	+0.6
EGAK	Eagle	10.49	32	Pn	Pn	11 20 06.3	+1.1
DAWY	Dawson	10.55	37	Pn	Pn	11 20 07.6	+1.5
COLD	Coldfoot	11.01	8	Pn	Pn	11 20 12.2	0.0
DLBC	Dease Lake	13.07	71	Pn	P	11 20 45.6	-5.4
	comp=E,0.1nm,0.3s,baz=351,slow=22,SNR=7.2						
INK	Inuvik	15.15	30	Pn	Pn	11 21 09.4	+0.7
	comp=E,0.1nm,0.3s,baz=208,slow=3.6,SNR=3.7						
INK	Inuvik	15.15	30	IAmb	IAmb	11 21 18.8	
	comp=Z,4.8nm,1.0s						
C36M	Paulatuk	18.55	34	P	Pn	11 21 51.5	-0.1
C36M				IAmb	IAmb	11 21 54.1	
	comp=Z,5.9nm,0.7s						
YKA	Yellowknife Ar	20.68	57	P	Pn	11 22 16.4	-0.5
	comp=Z,3.6nm,0.7s,baz=270,slow=9.6,SNR=32						
BILL	Bilibino	21.39	319	P	P	11 22 21.3	-1.0
WALA	Waterton Lakes	25.08	90	P	P	11 23 01.0	+1.5
WALA				IAmb	IAmb	11 23 02.7	
	comp=Z,4.8nm,1.2s						
PETK	Petropavlovsk-	27.59	284	P	P	11 23 20.9	-1.0
	comp=Z,1.2nm,0.4s,baz=64,slow=13,SNR=1.6						
NVAR	Mina Array Bea	29.66	112	P	P	11 23 46.6	+5.8
	comp=Z,0.3nm,0.6s,baz=305,slow=9.8,SNR=3.1						
PDAR	Pinedale Array	31.30	97	P	P	11 24 02.6	+7.5
	comp=Z,0.4nm,0.6s,baz=68,slow=35,SNR=3.4						
PFO	Pinyon Flats O	34.34	116	LR	LR	11 36 40.0	
	comp=Z,47nm,18.0s,baz=320,slow=33						
YAK	Yakutsk	37.33	311	P	P	11 24 44.7	-2.1
	comp=Z,3.5nm,0.4s,baz=226,slow=4.4,SNR=2.7						
KLR	Kul'dur	43.38	293	P	P	11 25 36.5	-0.5
	comp=Z,1.0nm,0.3s,baz=47,slow=7.1,SNR=11						
TXAR	Lajitas Array	44.37	106	P	P	11 25 51.4	+6.0
	comp=Z,0.5nm,0.9s,baz=292,slow=5.7,SNR=3.5						
NRIK	Noril'sk	46.90	335	P	P	11 26 04.3	-0.5
	comp=Z,5.8nm,0.4s,baz=67,slow=6.0,SNR=12						
H11S1	WAKE ISLAND Hy	47.88	234	T	T	12 17 47.6	
	baz=24						
H11S2	WAKE ISLAND Hy	47.90	234	T	T	12 17 46.3	
	baz=24						
H11S3	WAKE ISLAND Hy	47.90	234	T	T	12 17 49.1	
	baz=24						
KSRS	Korea Array	53.49	284	P	P	11 26 55.3	+0.2
	comp=Z,1.0nm,0.8s,baz=34,slow=9.8,SNR=2.3						
ARCES	ARCESS Array B	54.36	0	P	P	11 27 00.7	-0.4
	comp=Z,1.0nm,0.5s,baz=10,slow=8.6,SNR=9.7						
SONM	Songino Array	56.50	307	P	P	11 27 17.4	+0.4
	comp=Z,3.0nm,0.7s,baz=46,slow=6.7,SNR=21						
ZALV	Zalesovo Beam	59.97	324	P	P	11 27 41.0	+0.1
	comp=Z,3.1nm,0.7s,baz=38,slow=7.3,SNR=15						
NOA	NORSAR Array B	62.32	8	P	P	11 27 57.3	+0.4
	comp=Z,2.0nm,0.9s,baz=352,slow=6.8,SNR=3.3						
FINES	FINESS Array B	62.49	360	P	P	11 27 58.0	+0.2
	comp=Z,1.4nm,0.5s,baz=9.1,slow=8.5,SNR=17						
MKAR	Makanchi Array	66.91	322	P	P	11 28 26.9	-0.1
	comp=Z,1.0nm,0.6s,baz=43,slow=7.0,SNR=14						
AKASG	Malin Array Be	73.22	358	P	P	11 29 04.9	-0.7
	comp=Z,0.8nm,0.4s,baz=7.2,slow=5.7,SNR=7.5						
GERES	GERESS Array B	74.62	8	P	P	11 29 14.1	+0.2
	comp=Z,0.5nm,0.7s,baz=359,slow=5.3,SNR=4.7						
KBZ	Khabaz	79.22	348	P	P	11 29 41.2	+1.4
	comp=Z,2.0nm,0.9s,baz=27,slow=2.0,SNR=3.9						
ESDC	Sonseca Array	80.98	23	P	P	11 29 50.6	+1.1
	comp=Z,0.6nm,0.5s,baz=339,slow=5.2,SNR=7.9						
GEYT	Alibeck	82.15	335	P	P	11 29 56.1	+0.5
	comp=Z,0.7nm,0.6s,baz=20,slow=5.1,SNR=2.3						
CMAR	Chiang Mai Arr	83.85	294	P	P	11 30 04.8	+0.1
	comp=Z,0.9nm,0.6s,baz=16,slow=5.6,SNR=7.8						
BRTR	Keskin Array B	84.02	354	P	P	11 30 06.5	+1.1
	comp=Z,1.3nm,1.0s,baz=32,slow=8.5,SNR=2.4						
PSI	Prapat	97.03	286	LR	LR	12 19 34.2	
	comp=Z,117nm,18.7s,baz=265,slow=38						

ISC 01 11:55:25.5±1.2**, 48°.04N**±0°.07×**19°.45E**±0°.04**,** $h8^{km}\pm14^{km}$**, n8, 1C, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.32	112	⇑ePG	Pg	11 55 31.7	-0.2
PSZ				eSG	Sg	11 55 36.5	+0.3
VYHS	Vyhne	0.61	318	ePG	Pg	11 55 37.4	0.0
VYHS				eSG	Sg	11 55 45.2	-0.2
SRO2	Moca	0.76	249	eSG	Sg	11 55 50.5	+0.4
SRO2				eLG	Lg	11 55 53.0	
SRO	Srobarova	0.80	254	eSG	Sg	11 55 51.3	+0.1
SRO				eLG	Lg	11 55 56.3	
KECS	Kecovo	0.82	57	ePG	Pg	11 55 41.4	+0.1
KECS				eSG	Sb	11 55 53.4	+0.2
KECS				eLG	Lg	11 55 56.9	
KOLL	Kolacno	0.88	308	ePG	Pg	11 55 42.4	-0.1
KOLL				eSG	Sg	11 55 53.6	-0.4
LANS	Liptovska Anna	1.11	1	ePG	Pn	11 55 47.4	0.0
LANS				eSG	Sb	11 56 01.6	0.0
LANS				eLG	Lg	11 56 04.3	
MODS	Modra-Piesok	1.49	284	ePG	Pb	11 55 53.1	-0.3
MODS				eSG	Sg	11 56 14.7	+1.2

IDC 01 11:59:26.2±2.9**, 9°.46N**×**122°.34E,** $h0^{km}$**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/44**, mbtmp3.5**/3**, Error ellipse: s-maj=324.3km s-min=29.0km az=63.0, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.52	158	P	P	12 05 50.2	0.0
	0.6nm,0.5s,baz=337,slow=9.5,SNR=9.5						
ASAR	Alice Springs	34.81	161	P	P	12 06 18.9	-0.1
	0.5nm,0.7s,baz=341,slow=7.4,SNR=8.7						
MKAR	Makanchi Array	50.39	325	P	P	12 08 25.3	-0.1
	0.2nm,0.6s,baz=119,slow=9.4,SNR=2.1						

BJI ***01*** *12:04:43.9±0.0, 46°.94N×152°.54E, $h84^{km}$, mB5.1/31, mb5.0/55, Ms4.5/4, Ms7 4.4/4*

JMA ***01*** *12:04:47.2±0.8, 46°.78N×152°.46E, $h30^{km}$, M5.3*

NIED ***01*** *12:04:47.3, 46°.78N×152°.46E, $h30^{km}$, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}7.00; $M_{\theta\theta}$-1.59; $M_{\phi\phi}$-5.41; $M_{r\theta}$2.27; $M_{\theta\phi}$1.51; $M_{\phi r}$-3.92; Fault plane solution: $M_0 7.89000\times10^{15}$ NP1: ϕ_s155.00000°, δ63.00000°, λ85.00000°. NP2: ϕ_s345.00000°, δ28.00000°, λ99.00000°.*

SKHL ***01*** *12:04:49.6±0.5, 46°.80N×152°.39E, $h113^{km}\pm2^{km}$, mb5.7/4, msh5.6/6*

NEIC ***01*** *12:04:49.5±1.8, 46°.99N±0°.09×152°.1E±0°.1, $h96^{km}\pm6^{km}$, mb4.7/185, Error ellipse: s-maj=16.0km s-min=9.6km az=138.0*

IDC ***01*** *12:04:50.3±0.6, 47°.07N×152°.05E, $h101^{km}\pm4^{km}$, mb4.0/34, mb1 4.1/39, mb1mx4.0/57, mbtmp4.4/39, MS3.4/6, Ms1 3.4/6, ms1mx3.0/60, Error ellipse: s-maj=11.7km s-min=7.5km az=156.0*

MOS ***01*** *12:04:50.1±1.2, 46°.95N×152°.12E, $h121^{km}$, mb4.4/36, Error ellipse: s-maj=6.4km s-min=5.0km az=67.9*

ISC 01 12:04:49.3±0.4**, 46°.85N**±0°.04×**152°.26E**±0°.04**,** $h99^{km}\pm3^{km}$**,** $h99^{km}$**:pP-P, n613,** $\sigma1\overset{s}{.}42$/620**, mb4.6**/168**, 18C-15D, Fault plane solution: NP1:** ϕ_s9.36989°**,** δ55.58165°**,** λ107.83073°. **NP2:** ϕ_s159.72696°**,** δ38.25090°**,** λ65.92036°. **Principal axes:** T Plg72.7413°**,** Azm326.2390°**;** N Plg14.6314°**,** Azm179.0655°**;** P Plg8.9526°**,** Azm86.7084°**; Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.46	244	iP	Pn	12 05 43.0	+1.9
KUR				AMB	AMB	12 05 44.0	
	2μm,0.4s						
KUR				AMB	AMB	12 05 50.0	
	2μm,1.0s						
KUR				iS	Sn	12 06 23.2	+2.1
KUR				A	A	12 06 28.0	
	6μm,2.0s						
KUR				A	A	12 06 28.0	
	4μm,2.0s						
KUR				A	A	12 06 29.0	
	1μm,0.7s						
KUR				A	A	12 06 29.0	
	1μm,0.7s						
KUR	Kuril'sk	3.46	244	d iPN	Pn	12 05 43.5	+2.4
KUR				iS	Sn	12 06 24.7	+3.6
KUR				pmax	pmax		
	comp=Z,2μm,0.9s						
KUR				pmax	pmax		
	comp=N,860nm,0.4s						
KUR				pmax	pmax		
	comp=Z,2μm,0.4s						
KUR				pmax	pmax		
	comp=E,169nm,0.2s						
KUR				smax	smax		
	comp=N,6μm,1.5s						
KUR				smax	smax		
	comp=E,4μm,1.6s						
KUR				smax	smax		
	comp=N,1μm,0.7s						
KUR				smax	smax		
	comp=E,1μm,0.7s						
KUR				MLR	MLR		
	comp=Z,138nm,8.0s						
SKR	Severo-Kuril's	4.61	32	eP	Pn	12 05 56.5	0.0
SKR				AMB	AMB	12 05 59.4	
	comp=Z,150nm,0.3s						
SKR				eS	Sn	12 06 46.2	-2.7
SKR				A	A	12 06 50.4	
	comp=Z,201nm,0.2s						
SKR				A	A	12 06 50.4	
	comp=Z,282nm,0.2s						
SKR				A	A	12 06 53.2	
	comp=Z,1μm,3.0s						
SKR				A	A	12 06 53.2	
	comp=Z,1μm,3.0s						
SKR	Severo-Kuril's	4.61	32	ePN	Pn	12 05 56.6	0.0
SKR				eS	Sn	12 06 45.6	-3.3
SKR				pmax	pmax		
	comp=Z,222nm,0.5s						
SKR				pmax	pmax		
	comp=Z,200nm,4.1s						
SKR				smax	smax		
	comp=E,164nm,0.2s						
SKR				smax	smax		
	comp=N,296nm,0.6s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
YUK	Yuzh-Kuril'sk	5.31	240	iP	Pn	12 06 07.7	+1.7
YUK				AMB	AMB	12 06 08.0	
	comp=Z,1μm,0.4s						
YUK				iS	Sn	12 07 06.7	+0.8
YUK				A	A	12 07 11.0	
	comp=Z,224nm,0.4s						
YUK				A	A	12 07 11.0	
	comp=Z,697nm,0.4s						
YUK				A	A	12 07 12.5	
	comp=Z,3μm,2.0s						
YUK				A	A	12 07 12.5	
	comp=Z,1μm,2.0s						
YUK	Yuzh-Kuril'sk	5.31	240	c iPN	Pn	12 06 07.9	+1.9
YUK				iS	Sn	12 07 07.0	+1.1
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=N,86nm,0.1s						
YUK				pmax	pmax		
	comp=E,103nm,0.1s						
YUK				smax	smax		
	comp=E,697nm,0.4s						
YUK				smax	smax		
	comp=N,224nm,0.2s						
YUK				smax	smax		
	comp=N,981nm,0.8s						
YUK				smax	smax		
	comp=E,1μm,0.8s						
GRPR	Tuman	5.38	240	iP	Pn	12 06 08.0	+0.9
GRPR				AMB	AMB	12 06 10.0	
	comp=E,1μm,0.4s						
GRPR				iS	Sn	12 07 09.0	+1.2
GRPR				A	A	12 07 13.0	
	comp=E,527nm,0.7s						
GRPR				A	A	12 07 13.0	
	comp=E,563nm,0.7s						
GRPR				A	A	12 07 16.0	
	comp=E,713nm,0.4s						
GRPR				A	A	12 07 16.0	
	comp=E,518nm,0.4s						
GRPR	Tuman	5.38	240	⇑iPN	Pn	12 06 08.8	+1.7
GRPR				iS	Sn	12 07 09.5	+1.7
GRPR				pmax	pmax		
	comp=N,323nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,1μm,0.3s						
GRPR				pmax	pmax		
	comp=E,756nm,0.4s						
GRPR				smax	smax		
	comp=N,713nm,0.4s						
GRPR				smax	smax		
	comp=E,518nm,0.4s						
GRPR				smax	smax		
	comp=E,563nm,0.7s						
GRPR				smax	smax		
	comp=N,527nm,0.5s						
PAU	Pauzhetka	5.50	31	eP	Pn	12 06 08.2	-0.5
PAU				AMB	AMB	12 06 09.4	
	comp=N,231nm,0.2s						
PAU				AMB	AMB	12 06 14.6	
	comp=N,2μm,6.0s						
PAU				eS	Sn	12 07 07.2	-3.4
PAU				A	A	12 07 11.0	
	comp=N,788nm,0.5s						
PAU				A	A	12 07 11.0	
	comp=N,567nm,0.5s						
PAU				A	A	12 07 15.4	
	comp=N,2μm,4.0s						
PAU				A	A	12 07 15.4	
	comp=N,3μm,4.0s						
RUSJ	Misakicho	5.64	243	⇓iPN	Pn	12 06 13.1	+2.5
RUSJ				eS	Sn	12 07 18.9	+4.9
NEM2	Nemuro 2	5.78	235	P	Pn	12 06 11.7	-0.7
NEM2				eS	Sn	12 07 13.7	-3.6
NMR	Nemuro--Hokkai	5.78	235	iP	Pn	12 06 11.0	-1.5
NMR				iS	Sn	12 07 15.0	-2.4
NMR	Nemuro--Hokkai	5.78	235	⇓iPN	Pn	12 06 11.7	-0.8
NMR				iS	Sn	12 07 15.5	-1.9
JRA	Rausu	5.81	243	P	Pn	12 06 14.5	+1.7
JNSB	Nemuroshibetsu	5.96	242	P	Pn	12 06 16.7	+1.7
JNK	Nakash	6.24	241	P	Pn	12 06 19.6	+0.8
YSS	Yuzh-Sakhalins	6.51	274	eP	Pn	12 06 25.1	+2.7
YSS				AMB	AMB	12 06 25.9	
	comp=N,800nm,3.0s						
YSS				AMB	AMB	12 06 26.4	
	comp=N,490nm,0.9s						
YSS				eS	Sn	12 07 37.3	+2.1
YSS				A	A	12 07 40.0	
	comp=N,120nm,0.8s						
YSS	Yuzh-Sakhalins	6.51	274	κePN	Pn	12 06 25.4	+3.0
YSS				eS	Sn	12 07 39.9	+4.7
YSS				pmax	pmax		
	comp=Z,800nm,3.0s						
YSS				pmax	pmax		
	comp=Z,490nm,0.9s						
YSS				smax	smax		
	comp=N,120nm,0.8s						
YSS	Yuzh-Sakhalins	6.51	274	Pn	Pn	12 06 24.5	+2.1
JTKR	Abashiri--Toko	6.54	247	P	Pn	12 06 24.5	+1.7
JAK	Akkeshi	6.60	237	P	Pn	12 06 22.7	-1.0
JAK				eS	Sn	12 07 32.8	-4.6
JMP	Maruseppu	6.88	249	P	Pn	12 06 29.4	+2.0
JAR	Ashorobuto	6.98	243	P	Pn	12 06 29.9	+1.1
JAR				eS	Sn	12 07 46.1	-0.5
JSE	Soyaes	7.01	258	P	Pn	12 06 33.1	+3.9
JOB	Onbets	7.16	240	P	Pn	12 06 31.2	-0.1
JOB				eS	Sn	12 07 47.7	-3.4
PEA0B	Petropavlovsk-	7.18	27	PN	Pn	12 06 32.1	+0.6
PEA0B	Petropavlovsk-	7.18	27		Pn	12 06 32.1	+0.6
PETK	Petropavlovsk-	7.18	27	P	Pn	12 06 32.0	+0.5
	comp=N,2.6nm,0.3s,baz=176,slow=11,SNR=108						
PETK	Petropavlovsk-	7.18	27	PN	Pn	12 06 32.0	+0.5
UGL	Uglegorsk	7.20	292	iP	Pn	12 06 34.5	+2.8
UGL				AMB	AMB	12 06 36.0	
	comp=N,587nm,0.9s						
UGL				eS	Sn	12 07 53.7	+1.9
UGL				A	A	12 07 54.5	
	comp=N,3μm,2.0s						
UGL				A	A	12 07 54.9	
	comp=N,173nm,1.1s						
UGL	Uglegorsk	7.20	292	⇑iPN	Pn	12 06 35.1	+3.4
UGL				eS	Sn	12 07 54.4	+2.6
UGL				pmax	pmax		
	comp=Z,587nm,0.9s						
UGL				smax	smax		
	comp=E,174nm,1.1s						
JKA	Kamikawa-asahi	7.32	252	eP	Pn	12 06 35.6	+2.2
JKA	Kamikawa-asahi	7.32	252	Pn	Pn	12 06 35.6	+2.2
ASAJ	Asahikawa	7.32	252	P	Pn	12 06 35.5	+2.1
	comp=E,41nm,0.3s,baz=73,slow=15,SNR=200						
ASAJ	Asahikawa	7.32	252	P	Pn	12 06 36.3	+2.9
JKK2	Kamakawa 2	7.33	250	P	Pn	12 06 35.7	+2.1
JWK2	Keihoku	7.37	262	P	Pn	12 06 38.5	+4.5
PET	Petropavlovsk	7.43	31	eP	Pn	12 06 34.8	-0.1
PET				eS	Sn	12 07 57.8	+0.3
PET	Petropavlovsk	7.43	31	ePN	Pn	12 06 34.3	-0.6
PET				eS	Sn	12 07 57.8	+0.3
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
PET	Petropavlovsk	7.43	31		Pn	12 06 33.0	-1.8
TYV	Tymovskoe	7.50	306	eP	Pn	12 06 37.8	+2.0
TYV				AMB	AMB	12 06 38.0	
	comp=Z,300nm,2.0s						
TYV				AMB	AMB	12 06 38.0	
	comp=Z,120nm,0.9s						
TYV				eS	Sn	12 08 00.6	+1.4
TYV				A	A	12 08 06.0	
	comp=Z,21nm,0.9s						

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TYV                                 A       A        12 08 06.0
      comp=Z,460nm,0.9s
TYV   Tymovskoe         7.50 306  ePN     Pn       12 06 37.8 +2.0
TYV                                 pmax    pmax
      comp=Z,300nm,2.1s
TYV                                 pmax    pmax
      comp=Z,117nm,0.9s
JCH   Churui            7.62 239   P       Pn       12 06 36.7 -0.7
JCH                                eS      Sn       12 07 58.0 -4.1
JSS   Shosan            7.70 255   P       Pn       12 06 43.5 +5.0
JFR   Furan             7.78 245   P       Pn       12 06 41.0 +1.4
JAB   Ashibetsu         7.84 248   P       Pn       12 06 43.0 +2.5
JRBN  Rebuntou          7.91 264   P       Pn       12 06 45.1 +3.8
JHR   Hokuryu           8.05 251   P       Pn       12 06 46.2 +2.9
JEM   Erimo             8.11 237   P       Pn       12 06 44.0 -0.1
ERM   Erimo             8.11 237c iPN      Pn       12 06 44.1  0.0
ERM                                 pmax    pmax
      comp=Z,107nm,0.5s
ERM   Erimo             8.11 237   Pn      Pn       12 06 43.5 -0.6
JBT2  Biratori 2        8.12 244   P       Pn       12 06 44.0 -0.4
JNBK  Urakawa-nobuka    8.18 240   P       Pn       12 06 43.3 -1.8
JEW   Eniwo             8.66 246   P       Pn       12 06 52.7 +1.1
JEW   Eniwo             8.66 246   Pn      Pn       12 06 52.2 +0.6
OKH   Okha              8.98 322  eP       Pn       12 06 58.2 +2.2
OKH                                 AMB     AMB      12 06 58.7
      comp=Z,98nm,0.7s
JNB   Noboribetsu       9.11 245   P       Pn       12 06 56.6 -1.2
JNB                                eS      Sn       12 08 34.3 -4.2
JKB   Kayabe            9.44 242   P       Pn       12 07 00.3 -1.9
JKB                                eS      Sn       12 08 39.4 -7.1
JSH   Shimam            9.65 249   P       Pn       12 07 05.4 +0.3
JYM2  Yakumo 2          9.72 245   P       Pn       12 07 04.9 -1.2
JSR   Shiriuchi        10.02 242   P       Pn       12 07 08.1 -2.1
JSR                                eS      Sn       12 08 51.8 -8.9
JTM   Tenmabayashi     10.10 237   P       Pn       12 07 08.4 -2.8
JTM                                eS      Sn       12 08 52.5  -10
JTM   Tenmabayashi     10.10 237   Pn      Pn       12 07 08.7 -2.5
JTM                                        Sn       12 09 05.9 +3.4
JANG  Nango            10.12 234   P       Pn       12 07 08.0 -3.5
JANG                               eS      Sn       12 08 51.1  -12
OFUJ  Ofunato          10.97 229   P       Pn       12 07 19.1 -3.9
TEY   Ternei           11.05 266  eP       Pn       12 07 24.8 +0.7
TEY                                 AMB     AMB      12 07 27.9
      comp=Z,50nm,1.0s
TEY                                 AMB     AMB      12 07 27.9
      comp=Z,60nm,1.0s
TEY   Ternei           11.05 266⇑ePN      Pn       12 07 26.8 +2.7
TEY                                 pmax    pmax
      comp=E,50nm,1.0s
TEY                                 pmax    pmax
      comp=Z,60nm,1.0s
GRNR  Gornyy           11.16 296  eP       Pn       12 07 26.8 +1.3
GRNR                                AMB     AMB      12 07 28.8
      comp=Z,5.0nm,0.7s
GRNR  Gornyy           11.16 296⇓iPN      Pn       12 07 26.8 +1.3
GRNR                                pmax    pmax
      comp=Z,5.0nm,0.7s
GRNR                                MLR     MLR
      comp=E,170nm,20.0s
GRNR                                MLR     MLR
      comp=N,200nm,17.0s
GRNR                                MLR     MLR
      comp=Z,140nm,20.0s
JRG   Rokugo           11.29 233   P       Pn       12 07 24.2 -3.1
JIO   Ouri             11.60 228   P       Pn       12 07 27.5 -4.0
JMM   Marumori         12.33 227   Pn      Pn       12 07 36.2 -5.0
MA2   Magadan          12.79 357  eP       Pn       12 07 47.7 +0.6
MA2   Magadan          12.79 357⇑ePN      Pn       12 07 47.7 +0.6
MA2                                 pmax    pmax
      comp=Z,8.0nm,0.4s
MA2   Magadan          12.79 357   Pn      Pn       12 07 47.6 +0.5
JSD   Sado             13.56 235           Pn       12 07 54.6 -2.8
JHK   Hiroka           13.72 230   P       Pn       12 07 57.2 -2.3
EKMR  Ekimchan         13.88 304  eP       Pn       12 08 01.5  0.0
EKMR                                AMB     AMB      12 08 14.1
      comp=Z,12nm,0.6s
JYT   Yasato           13.92 225   Pn      Pn       12 07 58.7 -3.3
KLR   Kul'dur          13.93 287   P       Pn       12 08 03.1 +1.1
      comp=Z,0.6nm,0.3s,baz=76,slow=9.2,SNR=20
KLR                                 LR      LR       12 13 10.2
      comp=Z,89nm,20.9s,baz=106,slow=36
JAG   Ashikaga         14.12 227   P       Pn       12 08 02.5 -2.2
USA0B Ussuriysk Arra   14.45 267   P       Pn       12 08 08.2 -0.7
USA0B Ussuriysk Arra   14.45 267   Pn      Pn       12 08 08.2 -0.7
USRK  Ussuriysk Ar.    14.45 267   P       Pn       12 08 09.2 +0.3
      baz=74,slow=9.9,SNR=47
MJB9  Matsu-Tunnel     14.68 231   P       Pn       12 08 09.8 -2.0
MAJO  Matsushiro       14.68 231d iP       Pn       12 08 10.6 -1.3
MAJO  Matsushiro       14.68 231   Pn      Pn       12 08 09.8 -2.0
MAT   Matsushiro       14.68 231   P       Pn       12 08 09.8 -2.1
MAT                                eS      Sn       12 10 50.8 -2.8
MAT   Matsushiro       14.68 231   P       Pn       12 08 11.1 -0.8
MJAR  Matsushiro Arr   14.68 230   P       Pn       12 08 10.8 -1.1
      comp=Z,1.0nm,0.3s,baz=29,slow=13,SNR=159
JRY   Ryogami san      14.72 227   P       Pn       12 08 12.6 +0.2
JNG   Nsakai           14.84 230   P       Pn       12 08 12.3 -1.7
JNT   Takato           15.22 229   P       P        12 08 23.6 +2.0
JOD2  Odawara 2        15.22 225   P       Pn       12 08 18.0 -0.8
JGN   Niukaw           15.39 232   P       Pn       12 08 21.8 +0.8
JNY   Yasuok           15.76 228   P       Pn       12 08 25.3 -0.3
JGF   Kuroka           15.84 230   P       Pn       12 08 26.0 -0.5
JGF   Kuroka           15.84 230   P       Pn       12 08 24.7 -1.9
MDJ   Mudanjiang       15.98 270   P       Pn       12 08 28.2 +0.1
MDJ                                 IAmb    IAmb     12 08 31.6
      comp=Z,84nm,1.1s
SEY   Seymchan         16.12   0   P       Pn       12 08 29.5 -0.2
      comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=4.7
SEY   Seymchan         16.12   0⇓eP       P        12 08 31.6 +0.4
JYTA  Yamagatataniai   16.18 232   P       Pn       12 08 30.3 -0.3
INU   Inuyama          16.21 230   P       Pn       12 08 31.5 +0.4
INU                                 IAmb    IAmb     12 08 36.3
      comp=Z,44nm,0.7s
BMKR  Bomnak           16.71 307  eP       Pn       12 08 36.5 -0.6
BMKR                                AMB     AMB      12 08 40.5
      comp=Z,22nm,0.4s
JWT   Wachi            17.14 234   P       P        12 08 42.3 -0.3
JWT   Wachi            17.14 234   P       P        12 08 42.0 -0.6
JWT                                 IAmb    IAmb     12 08 52.8
      comp=Z,41nm,0.9s
ZEA   Zeya             17.35 303  eP       P        12 08 43.5 -1.2
ZEA                                 AMB     AMB      12 08 47.3
      comp=Z,10.0nm,1.0s
ZEA                                 AMB     AMB      12 08 47.3
      comp=Z,20nm,1.0s
ZEA   Zeya             17.35 303  eP       P        12 08 45.2 +0.5
ZEA                                 pmax    pmax
      comp=E,10.0nm,1.2s
ZEA                                 pmax    pmax
      comp=Z,20nm,0.9s
KROS  Kirovskiy        17.68 305  eP       P        12 08 47.8 -0.6
KROS                                AMB     AMB      12 08 49.6
      comp=Z,3.0nm,0.4s
KROS                                AMB     AMB      12 08 49.6
      comp=Z,7.0nm,0.4s
KROS                                AMB     AMB      12 08 49.6
      comp=Z,9.0nm,0.4s
JHS   Saijyo           18.63 237   Pn      Pn       12 09 00.4 -0.1
JHS                                 IAmb    IAmb     12 09 06.8
      comp=Z,57nm,1.0s
CN2   Changchun        19.06 271  eP       P        12 09 00.8 -2.8
CN2                                 pmax    pmax
      comp=Z,10.0nm,0.6s
JMN   Monobe           19.13 233           Pn       12 09 05.8 -0.5
YAK   Yakutsk          19.93 328   P       P        12 09 12.6 -0.2
      comp=Z,0.1nm,0.3s,baz=90,slow=3.2,SNR=19
YAK   Yakutsk          19.93 328  eP       Pn       12 09 15.3 -0.1
YAK                                 pmax    pmax
      comp=Z,34nm,0.9s
YAK                                 pmax    pmax
      comp=N,6.0nm,0.9s
YAK                                 pmax    pmax
      comp=E,13nm,1.2s
YAK   Yakutsk          19.93 328   P       P        12 09 14.0 +1.2
YAK                                 IAmb    IAmb     12 09 16.7
      comp=Z,36nm,0.8s
KSRS  Korea Array      20.27 251   P       P        12 09 18.0 +1.3
      comp=Z,17nm,0.7s,baz=53,slow=10,SNR=34
KSRS                                LR      LR       12 16 49.6
      comp=Z,68nm,20.6s,baz=52,slow=36
KS19  Wonju Array Si   20.28 251   P       P        12 09 18.1 +1.2
KS19                                IAmb    IAmb     12 09 21.0
      comp=Z,65nm,1.4s
INCN  Inchon           21.09 253   P       P        12 09 26.3 +0.6
INCN                                pmax    pmax
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      comp=Z,46nm,0.8s
INCN  Inchon           21.09 253   P       P        12 09 26.2 +0.6
JTU   Tsushima         21.17 243   P       P        12 09 26.2 -0.3
TJN   Taejon           21.27 250⇓eP       P        12 09 29.5 +2.1
JNU   Nakatsue         21.27 237   P       P        12 09 28.8 +1.2
      comp=Z,12nm,0.8s,baz=91,slow=5.9,SNR=5.5
JNU                                 LR      LR       12 16 55.5
      comp=Z,94nm,19.1s,baz=44,slow=34
JNU   Nakatsue         21.27 237   P       P        12 09 28.2 +0.7
JNU                                 IAmb    IAmb     12 09 44.3
      comp=Z,65nm,1.5s
HIA   Hailar           21.78 288ceP       P        12 09 30.8 -2.1
HIA                                 pmax    pmax
      comp=Z,11nm,1.0s
HIA   Hailar           21.78 288   P       P        12 09 31.6 -1.2
BILL  Bilibino         22.43  14  eP       P        12 09 40.9 +1.4
BILL  Bilibino         22.43  14⇓eP       P        12 09 40.9 +1.4
BILL                               i                 12 10 05.4
BILL                               eS      S        12 13 39.2 +0.5
BILL                                pmax    pmax
      comp=Z,6.0nm,1.0s
BOD   Bodaibo          25.48 310  eP       P        12 10 05.1 -2.7
BOD                                 pmax    pmax
      comp=Z,18nm,1.6s
BJI   Beijing          26.89 269   P       P        12 10 21.2 +0.5
BJI                                 pmax    pmax
      comp=Z,12nm,1.5s
BJT   Baijiatuau       26.91 269   IAmb    IAmb     12 10 24.3
      comp=Z,21nm,0.9s
ANM   Nome             28.96  37   P       P        12 10 40.2 +1.3
ANM                                 pmax    pmax
      comp=Z,9.0nm,0.8s
ANM   Nome             28.96  37   P       P        12 10 40.2 +1.3
NJ2   Nanjing          29.47 252  eP       P        12 10 43.6 -0.1
NJ2                                 pmax    pmax
      comp=Z,6.0nm,0.5s
H11N2 WAKE ISLAND Hy   29.58 151   T       T        12 42 20.2
      baz=340,slow=76,SNR=885
H11N1 WAKE ISLAND Hy   29.59 151   T       T        12 42 20.5
      baz=340,slow=76,SNR=1128
H11N3 WAKE ISLAND Hy   29.60 151   T       T        12 42 21.4
      baz=340,slow=76,SNR=858
HHC   Hu-ho-hao-te     29.70 273  eP       P        12 10 46.0 +0.2
HHC                                 pP      pP       12 11 03.7 -3.4
HHC                                 pmax    pmax
      comp=Z,33nm,1.0s
HHC                                 pmax    pmax
      comp=Z,160nm,5.3s
ULN   Ulaanbaatar      30.31 289ceP       P        12 10 54.8 +3.6
ULN                                 pmax    pmax
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar      30.31 289   P       P        12 10 50.4 -0.8
ULN                                 IAmb    IAmb     12 10 56.6
      comp=Z,18nm,1.1s
H11S1 WAKE ISLAND Hy   30.66 152   T       T        12 43 40.0
      baz=340,slow=76,SNR=727
H11S3 WAKE ISLAND Hy   30.67 152   T       T        12 43 40.5
      baz=340,slow=76,SNR=1109
H11S2 WAKE ISLAND Hy   30.68 152   T       T        12 43 41.2
      baz=340,slow=76,SNR=819
SONM  Songino Array    30.75 289   P       P        12 10 53.4 -1.6
      comp=Z,1.8nm,0.8s,baz=76,slow=8.9,SNR=9.3
SONM                                ScP     ScP      12 17 22.9 -0.6
      comp=Z,1.2nm,0.8s,baz=107,slow=1.7,SNR=7.4
SONM                                LR      LR       12 23 53.8
      comp=Z,65nm,18.2s,baz=86,slow=37
ZAK   Zakamensk        32.11 295  eP       P        12 11 04.2 -2.7
ZAK                                e                 12 11 28.6
ZAK                                 pmax    pmax
      comp=Z,7.0nm,1.1s
ZAK                                 pmax    pmax
      comp=Z,6.0nm,1.2s
TTA   Tatalina         32.74  42   P       P        12 11 12.8 +0.6
TTA                                 pmax    pmax
      comp=Z,8.0nm,0.9s
TTA   Tatalina         32.74  42   P       P        12 11 12.8 +0.6
TTA                                 IAmb    IAmb     12 11 14.4
      comp=Z,8.3nm,0.9s
WHN   Wuhan            33.39 254   P       P        12 11 19.4 +1.3
OHAK  Old Harbor       34.18  52   P       P        12 11 24.2 -0.4
KDAK  Kodiak Island    34.50  51   P       P        12 11 27.1 -0.3
      comp=Z,8.5nm,0.8s,baz=292,slow=5.8,SNR=7.8
KDAK  Kodiak Island    34.50  51   P       P        12 11 27.7 +0.3
TPUB  Ta-pu            34.58 238   P       P        12 11 29.4 +0.9
SKT   Skwentna         34.78  43   P       P        12 11 31.3 +1.4
SKT                                 IAmb    IAmb     12 11 35.9
      comp=Z,11nm,1.2s
XAN   Xi'an            34.94 264   P       P        12 11 31.8 +0.2
XAN                                 pmax    pmax
      comp=Z,31nm,1.1s
CNPM  China Poot       35.04  48   P       P        12 11 32.3 +0.2
BPAW  Bear Paw Mtn.    35.05  40   IAmb    IAmb     12 11 34.0
      comp=Z,8.9nm,0.8s
SUA   Susitna One      35.17  44   P       P        12 11 33.7 +0.4
SUA                                 IAmb    IAmb     12 11 34.6
      comp=Z,5.9nm,0.8s
BRLK  Bradley Lake     35.20  47   P       P        12 11 33.6 +0.1
BRLK                                IAmb    IAmb     12 11 42.9
      comp=Z,19nm,1.2s
MLY   Manley           35.20  38   P       P        12 11 34.3 +0.8
      baz=267,SNR=14
TRF   Thorofare Moun   35.35  41   IAmb    IAmb     12 11 39.1
      comp=Z,10.0nm,0.9s
CUT   Chulitna         35.37  43   P       P        12 11 35.1 +0.2
      baz=271
COLD  Coldfoot         35.58  34   P       P        12 11 37.1 +0.5
      baz=264,SNR=7.3
COLD  Coldfoot         35.58  34   IAmb    IAmb     12 11 37.7
      comp=Z,4.6nm,0.6s
RC01  Rabbit Creek A   35.68  45   P       P        12 11 37.6 +0.1
      baz=274
O22K  Cooper Landing   35.73  46   P       P        12 11 37.4 -0.5
      baz=274
O22K  Cooper Landing   35.73  46   P       P        12 11 38.5 +0.6
I23K  Minto, Yukon-K   35.79  38   P       P        12 11 39.2 +0.8
      baz=268,SNR=7.9
I23K  Minto, Yukon-K   35.79  38   IAmb    IAmb     12 11 40.2
      comp=Z,7.6nm,0.8s
NEA2  Nenana           35.90  39   P       P        12 11 39.9 +0.5
      baz=269,SNR=22
PMR   Palmer           35.94  44   P       P        12 11 40.0 +0.3
PMR                                 pmax    pmax
      comp=Z,8.0nm,1.0s
PMR   Palmer           35.94  44   P       P        12 11 40.0 +0.3
PMR                                 IAmb    IAmb     12 11 41.0
      comp=Z,8.5nm,1.0s
MCK   McKinley         35.96  40   P       P        12 11 40.1 +0.2
      baz=271,SNR=7.2
TOLK  Toolik Lake Re   35.97  32   P       P        12 11 40.6 +0.5
      baz=263,SNR=7.6
TOLK  Toolik Lake Re   35.97  32   IAmb    IAmb     12 11 41.1
      comp=Z,7.0nm,0.8s
RND   Reindeer         36.00  41   P       P        12 11 40.7 +0.3
RND                                 pmax    pmax
      comp=Z,12nm,0.8s
RND   Reindeer         36.00  41   P       P        12 11 40.7 +0.3
RND                                 IAmb    IAmb     12 11 41.3
      comp=Z,12nm,0.8s
MDM   Murphy Dome      36.27  38   P       P        12 11 43.3 +0.7
KNK   Knik Glacier     36.27  44   IAmb    IAmb     12 11 43.8
      comp=Z,11nm,0.8s
WRH   Wood River Hil   36.32  39   IAmb    IAmb     12 11 45.7
      comp=Z,6.0nm,0.8s
TCOL  CIGO, UAF Yank   36.42  38   P       P        12 11 44.6 +0.8
      baz=270,SNR=11
COLA  College          36.43  38c iP       P        12 11 44.7 +0.9
COLA                                pmax    pmax
      comp=Z,20nm,0.8s
COLA  College          36.43  38   P       P        12 11 45.0 +1.2
CCB   Clear Creek Bu   36.45  39   P       P        12 11 44.4 +0.4
CCB                                 IAmb    IAmb     12 11 46.6
      comp=Z,6.6nm,0.6s
POKR  Poker Plat Res   36.60  38   P       P        12 11 46.5 +1.1
      baz=270,SNR=10
SCM   Sheep Creek Mo   36.78  44   P       P        12 11 47.3 +0.3
SCM                                 pmax    pmax
      comp=Z,10.0nm,0.8s
SCM   Sheep Creek Mo   36.78  44   P       P        12 11 47.3 +0.3
SCM                                 IAmb    IAmb     12 11 48.0
      comp=Z,9.5nm,0.8s
HDA   Harding Lake     36.82  39   P       P        12 11 46.9 -0.3
      baz=271,SNR=19
HDA   Harding Lake     36.82  39   P       P        12 11 46.6 -0.6
IL31                   36.84  39   P       P        12 11 46.9 -0.4
IL31                                IAmb    IAmb     12 11 49.2
      comp=Z,7.6nm,0.8s
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ILAR  Eielson Array    36.84  39   P       P        12 11 47.4  0.0
      comp=Z,4.3nm,0.7s,baz=262,slow=7.2,SNR=89
ILAR                                PcP     PcP      12 14 05.5 -1.5
      comp=Z,0.7nm,0.9s,baz=263,slow=2.5,SNR=2.4
LZH   Lanzhou          37.30 271  eP       P        12 11 52.1 +0.3
LZH                                ePP     PnPn     12 13 22.0 +1.7
LZH                                 pmax    pmax
      comp=Z,23nm,1.2s
LZH                                 pmax    pmax
      comp=Z,130nm,4.9s
M24K  Tolsona, Glenn   37.30  43   P       P        12 11 52.3 +0.9
      baz=275
M24K  Tolsona, Glenn   37.30  43   P       P        12 11 51.9 +0.6
HIN   Hinchinbrook I   37.32  46   P       P        12 11 51.2 -0.3
KLU   Klutina          37.48  44   IAmb    IAmb     12 11 55.0
      comp=Z,12nm,1.1s
Q23K  Middleton Isla   37.53  47   P       P        12 11 53.7 +0.5
      baz=278
N25K  Chitina, Valde   38.10  44   P       P        12 11 58.8 +0.7
      baz=277
N25K  Chitina, Valde   38.10  44   P       P        12 11 58.9 +0.8
DOT   Dot Lake         38.13  40   IAmb    IAmb     12 11 59.2
      comp=Z,8.0nm,0.9s
SCRK  Sand Creek       38.14  40   P       P        12 11 58.0 -0.4
      baz=275,SNR=11
MENT  Mentasta         38.35  42   IAmb    IAmb     12 12 02.0
      comp=Z,5.0nm,0.6s
GTA   Gaotai           38.38 278 ⇑P       P        12 12 00.7 -0.1
GTA                                 pP      pP       12 12 17.6 -5.0
GTA                                 sP      pwP      12 12 28.9 +2.3
GTA                                 ScP     ScP      12 17 51.3 +0.3
GTA                                 pmax    pmax
      comp=Z,11nm,1.3s
L26K  Log Cabin Wild   38.51  41   P       P        12 12 02.3 +0.8
      baz=276,SNR=7.5
VRDI  Verde Repeater   38.69  44   IAmb    IAmb     12 12 05.5
      comp=Z,7.7nm,1.0s
K27K  Chicken          38.97  40   P       P        12 12 05.7 +0.4
      baz=276
EGAK  Eagle            39.29  38   IAmb    IAmb     12 12 08.9
      comp=Z,15nm,0.8s
EGAK                                        pP       12 12 30.3 -0.1
DAWY  Dawson           40.14  39   P       P        12 12 15.8 +0.8
CD2   Chengdu          40.30 264   P       P        12 12 16.8  0.0
CD2                                 pmax    pmax
      comp=Z,90nm,0.8s
EPYK  Eagle Plains     40.93  36   P       P        12 12 22.2 +0.6
      baz=278
EPYK  Eagle Plains     40.93  36   IAmb    IAmb     12 12 23.6
      comp=Z,18nm,1.1s
GYA   Guiyang          41.16 257 ⇑P       P        12 12 24.6 +0.6
GYA                                 pmax    pmax
      comp=Z,19nm,0.7s
HYT   Haines Junctio   41.61  44   IAmb    IAmb     12 12 30.1
      comp=Z,20nm,1.2s
INK   Inuvik           41.88  32   P       P        12 12 30.1 +1.0
      comp=Z,9.9nm,0.7s,baz=283,slow=8.1,SNR=41
INK   Inuvik           41.88  32   P       P        12 12 30.1 +1.0
INK                                 pmax    pmax
      comp=Z,9.0nm,0.7s
INK   Inuvik           41.88  32   P       P        12 12 30.1 +1.0
INK                                 IAmb    IAmb     12 12 31.0
      comp=Z,8.7nm,0.7s
DGZ   Jazzator, Alta   42.04 299⇑eP       P        12 12 31.0 +0.1
DGZ                                 pmax    pmax
      comp=Z,2.0nm,1.2s
ZALV  Zalesovo Beam    42.08 305   P       P        12 12 28.5 -2.4
      comp=Z,0.8nm,0.5s,baz=81,slow=9.2,SNR=5.2
ZALV                                pP      pP       12 12 53.7 +0.6
      comp=Z,2.1nm,0.7s,baz=69,slow=7.9,SNR=5.4
ZALV                                PcP     PcP      12 14 24.1 +0.3
      comp=Z,1.2nm,0.6s,baz=80,slow=2.3,SNR=5.9
ZALV                                LR      LR       12 30 19.1
      comp=Z,73nm,18.1s,baz=70,slow=36
WMQ   Urumqi           44.34 291  eP       P        12 12 51.6 +2.2
WMQ                                 pmax    pmax
      comp=Z,8.0nm,0.7s
WMQ                                 pmax    pmax
      comp=Z,120nm,5.1s
KMI   Kunming          44.68 259⇑iP       P        12 12 53.4 +0.9
KMI                                 pmax    pmax
      comp=Z,19nm,0.7s
KMI                                 pmax    pmax
      comp=Z,190nm,4.6s
C36M  Paulatuk         45.03  30   P       P        12 12 55.0 +0.7
      baz=285,SNR=6.9
C36M  Paulatuk         45.03  30   P       P        12 12 55.0 +0.7
C36M                                IAmb    IAmb     12 12 55.4
      comp=Z,7.1nm,0.7s
DLBC  Dease Lake       45.95  46   P       P        12 13 03.8 +1.9
      comp=Z,4.1nm,0.8s,baz=269,slow=4.1,SNR=8.1
DLBC                                pP      pP       12 13 26.5 +1.8
      comp=Z,3.2nm,0.9s,baz=330,slow=3.2,SNR=2.6
MKAR  Makanchi Array   46.38 297   P       P        12 13 03.5 -1.8
      comp=Z,4.4nm,0.9s,baz=67,slow=6.7,SNR=31
MKAR                                PcP     PcP      12 14 39.0 +0.3
      comp=Z,1.2nm,0.6s,baz=66,slow=5.8,SNR=4.1
MKAR                                ScP     ScP      12 18 21.5 -1.3
      comp=Z,1.3nm,0.8s,baz=64,slow=6.6,SNR=6.3
MKAR                                LR      LR       12 33 47.9
      comp=Z,62nm,18.5s,baz=74,slow=38
MAKZ  Makanchi         46.56 297   P       P        12 13 05.0 -1.8
MAKZ                                pmax    pmax
      comp=Z,5.0nm,1.1s
MAKZ  Makanchi         46.56 297   P       P        12 13 05.0 -1.8
KURK  Kurchatov        46.82 303  eP       P        12 13 07.2 -1.5
KURK  Kurchatov        46.82 303   P       P        12 13 07.2 -1.5
KURK                                *PP     pP       12 13 33.9 +2.7
KURK  Kurchatov        46.82 303   P       P        12 13 06.5 -2.2
KURBB Kurchatov Arra   46.91 303   P       P        12 13 07.2 -2.2
      comp=Z,5.8nm,1.0s,baz=70,slow=8.8,SNR=13
KURBB                               pP      pP       12 13 33.9 +1.9
      comp=Z,3.9nm,0.8s,baz=74,slow=7.8,SNR=6.5
KURBB                               ScP     ScP      12 18 23.6 -1.4
      comp=Z,1.1nm,0.8s,baz=64,slow=3.1,SNR=7.2
BBB   Bella Bella      49.52  53   P       P        12 13 28.3 -1.2
      comp=Z,6.7nm,1.0s,baz=274,slow=8.4,SNR=3.1
BBB   Bella Bella      49.52  53   IAmb    IAmb     12 13 33.2
      comp=Z,8.2nm,0.9s
TDK   Taldyqorghan     49.61 297  eP       P        12 13 29.1 -1.2
      comp=Z,14nm,1.0s,baz=297
TDK   Taldyqorghan     49.61 297  eP       P        12 13 29.1 -1.2
TDK                                 pmax    pmax
      comp=Z,14nm,1.0s
LSA   Lhasa            49.68 272   P       P        12 13 33.0 +1.4
LSA                                 pmax    pmax
      comp=Z,9.0nm,0.7s
LSA   Lhasa            49.68 272   P       P        12 13 33.0 +1.4
LSA                                 IAmb    IAmb     12 13 34.5
      comp=Z,8.8nm,0.7s
SHLS  Shalkode         49.90 294  eP       P        12 13 29.5 -3.1
      baz=294
SHLS  Shalkode         49.90 294  eP       P        12 13 29.5 -3.1
KPKS  Kokpek           50.22 295  eP       P        12 13 33.7 -1.3
      comp=Z,3.3nm,1.0s,baz=295
KPKS  Kokpek           50.22 295  eP       P        12 13 33.7 -1.3
KPKS                                pmax    pmax
      comp=Z,3.0nm,1.0s
BRVK  Borovoye         50.38 309  eP       P        12 13 33.9 -2.1
BRVK  Borovoye         50.38 309⇑eP       P        12 13 33.9 -2.1
BRVK                               i *PP    pP       12 13 57.0 -1.8
BRVK                                pmax    pmax
      comp=Z,8.0nm,1.7s
BRVK  Borovoye         50.38 309   P       P        12 13 34.0 -2.0
BRVK                                IAmb    IAmb     12 13 35.9
      comp=Z,9.3nm,1.4s
PAYA  Payao            50.57 256   P       P        12 13 39.0 +1.2
      comp=Z,2µmcomp=Z,196nm,0.6s
SATY  Saty             50.61 294  eP       P        12 13 36.9 -1.1
      baz=294
SATY  Saty             50.61 294  eP       P        12 13 36.8 -1.1
YKA   Yellowknife Ar   51.20  37   P       P        12 13 42.4 +0.5
      comp=Z,4.7nm,0.9s,baz=302,slow=7.1,SNR=55
YKA                                 pP      pP       12 14 05.7 +0.2
      comp=Z,2.2nm,0.8s,baz=301,slow=7.1,SNR=6.3
YKA                                 PcP     PcP      12 14 56.2 +0.4
      comp=Z,1.6nm,0.8s,baz=307,slow=3.1,SNR=9.6
LAMP  Lampang          51.32 255   P       P        12 13 45.9 +2.5
      comp=Z,374nmcomp=Z,15nm,0.6s
MDOK  Medeo            51.40 295  eP       P        12 13 42.5 -1.4
      baz=295
MDOK  Medeo            51.40 295  eP       P        12 13 42.5 -1.4
AAA   Alma-Ata         51.46 295  eP       P        12 13 43.3 -1.0
AAA   Alma-Ata         51.46 295  eP       P        12 13 43.3 -1.0
      baz=295
AAA   Alma-Ata         51.46 295  eP       P        12 13 43.3 -1.0
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TNSS  Tian-Shan          51.53 295  eP    P     12 13 43.8 -1.5
      baz=295
TNSS  Tian-Shan          51.53 295  eP    P     12 13 43.7 -1.5
CMMT  Chiang Mai         51.57 256   P    P     12 13 46.8 +1.5
      comp=Z,8.6nm,0.9s
CHTO  Chiang Mai         51.57 256   P    P     12 13 46.4 +1.1
CHTO                                 pmax  pmax
      comp=Z,13nm,0.6s
CHTO  Chiang Mai         51.57 256   P    P     12 13 46.4 +1.1
CM32  Chiang Mai Arr     51.75 256   P    P     12 13 49.0 +2.4
CM09  Chiang Mai Arr     51.80 255   P    P     12 13 49.9 +2.9
      comp=Z,7.3nm,0.8s
CM31  Chiang Mai Arr     51.82 256   P    P     12 13 49.4 +2.2
      comp=Z,200nm,0.8s
CM31  Chiang Mai Arr     51.82 256   P    P     12 13 48.8 +1.6
CM31                                 IAmb  IAmb  12 13 51.0
      comp=Z,17nm,1.4s
CMAR  Chiang Mai Arr     51.82 256   P    P     12 13 48.5 +1.3
      comp=Z,4.5nm,0.8s,baz=36,slow=7.4,SNR=26
CMAR                                 ScP   ScP   12 18 46.2 -0.2
      comp=Z,1.4nm,1.0s,baz=17,slow=3.3,SNR=4.7
CM02  Chiang Mai Arr     51.84 256   P    P     12 13 50.0 +2.7
      comp=Z,73nmcomp=Z,9.8nm,0.9s
CM01  Chiang Mai Arr     51.84 255   P    P     12 13 51.2 +3.9
      comp=Z,10nm,1.0s
CM15  Chiang Mai Arr     51.84 256   P    P     12 13 49.8 +2.5
      comp=Z,6.5nm,0.9s
CM04  Chiang Mai Arr     51.84 255   P    P     12 13 49.9 +2.6
      comp=Z,6.4nm,0.9s
CM13  Chiang Mai Arr     51.87 256   P    P     12 13 49.9 +2.3
      comp=Z,61nmcomp=Z,7.6nm,0.8s
KBS   Kingsbay           52.31 351⇑eP    P     12 13 48.7 -1.3
KBS                                  pmax  pmax
      comp=Z,16nm,1.4s
MHMT  Maesarieng         52.70 256   P    P     12 13 56.0 +2.4
SGDS  Sogindy            52.74 297  eP    P     12 13 52.5 -1.3
      baz=297
SGDS  Sogindy            52.74 297  eP    P     12 13 52.4 -1.3
AAK   Ala-Archa          53.26 296   P    P     12 13 57.0 -0.7
      comp=Z,2.4nm,0.7s,baz=86,slow=4.5,SNR=7.5
AAK   Ala-Archa          53.26 296  eP    P     12 13 57.2 -0.5
AAK   Ala-Archa          53.26 296⇓eP    P     12 13 57.2 -0.5
AAK                                  pmax  pmax
      comp=Z,11nm,1.0s
AAK   Ala-Archa          53.26 296   P    P     12 13 57.3 -0.4
TAPN  Taplejung          53.51 273  eP    P     12 13 59.4 -0.5
      comp=Z,22nm,0.6s
ODAN  Odare              54.04 272  eP    P     12 14 03.5 -0.2
      comp=Z,14nm,0.4s
KSH   Kashi              54.07 292   P    P     12 14 09.8 +6.2
KSH                                  S    S     12 21 34.2 +1.8
GUN   Gumba              54.41 274  eP    P     12 14 06.7 +0.2
      comp=Z,21nm,0.5s
RAMN  Ramite             54.52 273  eP    P     12 14 07.4 +0.2
      comp=Z,44nm,0.4s
ARU   Arti               54.55 317d iP    P     12 14 04.3 -2.3
ARU                                              12 16 04.7
ARU                                  S    S     12 21 38.5 +0.5
ARU                                  SS   SS    12 25 16.9 -4.2
ARU                                  pmax  pmax
      comp=Z,37nm,3.9s
ARU   Arti               54.55 317   P    P     12 14 04.3 -2.3
ARU                                  IAmb  IAmb  12 14 06.0
      comp=Z,5.4nm,1.0s
D03D  Eldon              54.68  56   P    P     12 14 08.9 +1.2
      baz=303
B05A  Bryant             54.84  55   P    P     12 14 10.0 +1.1
      baz=303
KKN   Kakani             54.90 275  eP    P     12 14 10.3 +0.5
      comp=Z,29nm,0.6s
PKI   Pulchoki           54.95 274  eP    P     12 14 10.4 +0.1
PKIN  Phulchoki          54.95 274  eP    P     12 14 10.4 +0.1
      comp=Z,11nm,0.5s
DZA   Taraz              55.06 298  eP    P     12 14 09.4 -1.3
      baz=298
DZA   Taraz              55.06 298  eP    P     12 14 09.3 -1.3
DMN   Daman              55.13 275  eP    P     12 14 12.1 +0.5
GKN   Gorkha             55.20 275  eP    P     12 14 12.0  0.0
      comp=Z,21nm,0.5s
D05A  Enumclaw           55.49  56   P    P     12 14 14.3 +0.7
E04D  Cinebar            55.52  57   P    P     12 14 14.5 +0.8
      baz=304
DANN  Dangsing           55.58 276  eP    P     12 14 15.3 +0.5
      comp=Z,48nm,0.5s
LON   Longmire           55.84  56   P    P     12 14 17.1 +0.9
LON                                  pmax  pmax
      comp=Z,3.0nm,1.3s
LON   Longmire           55.84  56   P    P     12 14 17.1 +0.9
KOLN  Koldanda           56.06 276  eP    P     12 14 18.4 +0.3
PYUN  Piuthan            56.26 277  eP    P     12 14 20.2 +0.6
      comp=Z,12nm,0.3s
IUG   Iuzhnay            56.27 298  eP    P     12 14 18.4 -1.0
      comp=Z,3.5nm,1.2s,baz=298
IUG   Iuzhnay            56.27 298  eP    P     12 14 18.3 -1.1
IUG                                  pmax  pmax
      comp=Z,3.0nm,1.2s
B08A  Colville Reser     56.32  53   P    P     12 14 20.7 +1.1
B08A                                 IAmb  IAmb  12 14 21.3
      comp=Z,7.5nm,1.4s
I03D  Drain, OR          56.68  60   P    P     12 14 23.9 +1.8
      baz=305
G05D  Wamic, OR          56.98  57   P    P     12 14 25.9 +1.6
      baz=305
I04A  Tendick Farm,      57.18  59   P    P     12 14 27.1 +1.4
      baz=306
I05D  Terrebonne, OR     57.49  58   P    P     12 14 29.4 +1.5
      baz=306
ARCES ARCESS Array B     57.57 340   P    P     12 14 25.9 -2.1
      comp=Z,3.3nm,0.9s,baz=66,slow=5.0,SNR=3.9
NEW   Newport            57.58  52   P    P     12 14 29.2 +0.7
      comp=Z,2.6nm,0.9s,baz=309,slow=9.6,SNR=5.5
AB07  Akbulak array      57.91 309   P    P     12 14 29.1 -1.5
E09A  Wood Farm, Sta     58.04  54   P    P     12 14 32.7 +1.1
E09A                                 IAmb  IAmb  12 14 33.2
      comp=Z,4.2nm,0.8s
PINE  Pine Mountain      58.05  58   P    P     12 14 33.6 +1.6
PINE                                 IAmb  IAmb  12 14 35.1
      comp=Z,8.1nm,0.8s
L04D  Klamath Falls      58.17  61   P    P     12 14 34.4 +1.7
      baz=306
J05D  Fort Rock, OR      58.17  59   P    P     12 14 34.4 +1.6
      baz=306
YBH   Yreka Blue Hor     58.21  61   P    P     12 14 34.8 +1.8
      comp=Z,1.9nm,0.6s,baz=354,slow=4.7,SNR=7.2
G08A  Pilot Rock         58.30  56   P    P     12 14 33.9 +0.2
N02D  Trinity Center     58.67  62   P    P     12 14 37.7 +1.5
      baz=307
K05A  Summer Lake        58.71  59   P    P     12 14 38.0 +1.4
K05A                                 IAmb  IAmb  12 14 39.2
      comp=Z,6.5nm,0.7s
M04C  Macdoel            58.71  61   P    P     12 14 37.9 +1.4
      baz=307
WALA  Waterton Lakes     58.83  50   P    P     12 14 38.1 +0.9
WDC   Whiskeytown Da     59.00  62   P    P     12 14 40.0 +1.6
WDC                                  pmax  pmax
      comp=Z,4.0nm,1.1s
WDC   Whiskeytown Da     59.00  62   P    P     12 14 40.0 +1.6
MOD   Modoc Plateau      59.55  60   P    P     12 14 43.8 +1.4
MOD                                  IAmb  IAmb  12 14 44.4
      comp=Z,4.6nm,0.7s
O03E  Paynes Creek       59.63  62   P    P     12 14 43.9 +1.1
      baz=308
MSO   Missoula           60.17  52   P    P     12 14 47.4 +0.9
      baz=308,SNR=7.6
MSO   Missoula           60.17  52   P    P     12 14 47.5 +1.1
MSO                                  IAmb  IAmb  12 14 48.5
      comp=Z,9.9nm,1.1s
WVOR  Wild Horse Val     60.21  59   IAmb  IAmb  12 14 49.3
      comp=Z,6.3nm,0.9s
KULM  Kulim              60.59 244   P    P     12 14 50.9 +1.4
SUMG  Summit             60.65   4   P    P     12 14 48.5 -1.1
SUMG                                 pmax  pmax
      comp=Z,17nm,1.5s
SUMG  Summit             60.65   4   P    P     12 14 48.5 -1.1
BEKR  Beckworth          60.76  62   P    P     12 14 51.3 +0.7
BEKR                                 IAmb  IAmb  12 14 52.8
      comp=Z,5.2nm,1.0s
FFC   Flin Flon          61.04  40   P    P     12 14 52.8 +0.8
FFC                                  IAmb  IAmb  12 14 53.7
      comp=Z,8.5nm,0.9s
COEN  Coen               61.07 190   P    P     12 14 55.0 +2.3
COEN                                 IAmb  IAmb  12 14 55.9
      comp=Z,16nm,1.4s
HRY   Holter Researc     61.38  51   P    P     12 14 56.1 +1.4
PAHR  Pah Rah Range      61.45  61   IAmb  IAmb  12 14 57.5
      comp=Z,5.5nm,1.0s
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FCC   Fort Churchill     61.50  33   P    P     12 14 54.6 -0.5
FCC                                  pmax  pmax
      comp=Z,8.0nm,0.8s
FCC   Fort Churchill     61.50  33   P    P     12 14 54.6 -0.5
FCC                                  IAmb  IAmb  12 14 55.9
      comp=Z,8.2nm,0.8s
VCNR  Virginia City      61.55  62   IAmb  IAmb  12 14 58.1
      comp=Z,4.1nm,0.8s
LRM   Limekiln Ridge     61.60  52   P    P     12 14 57.5 +1.1
EGMT  Eagleton           61.64  49   P    P     12 14 57.2 +0.8
      baz=310
PNTR  Pine Nut           61.71  62   P    P     12 14 58.0 +0.8
PNTR                                 IAmb  IAmb  12 14 59.7
      comp=Z,6.9nm,0.8s
HLID  Hailey             61.94  55   P    P     12 14 59.2 +0.7
      baz=309
HLID  Hailey             61.94  55   P    P     12 14 59.9 +1.3
MCMT  McKenzie Canyo     62.01  53   P    P     12 15 00.8 +1.7
BCYI  Bear Canyon        62.03  54   P    P     12 15 00.1 +0.9
WAKR  Walker             62.17  62   P    P     12 15 01.4 +1.1
WAKR                                 IAmb  IAmb  12 15 02.9
      comp=Z,4.5nm,0.9s
BOZ   Bozeman (W)        62.19  52   P    P     12 15 01.4 +1.2
      baz=310,SNR=8.1
BOZ   Bozeman (W)        62.19  52   IAmb  IAmb  12 15 01.9
      comp=Z,4.4nm,0.7s
LHV   Little Huntoon     62.90  62   P    P     12 15 05.9 +1.2
LHV                                  IAmb  IAmb  12 15 08.0
      comp=Z,12nm,1.1s
NVAR  Mina Array Bea     62.91  62   P    P     12 15 06.8 +1.7
      comp=Z,3.7nm,0.7s,baz=299,slow=7.2,SNR=30
ELK   Elko               63.25  58   P    P     12 15 08.5 +1.1
      comp=Z,2.1nm,0.8s,baz=282,slow=5.5,SNR=8.4
H17A  Grant Village      63.54  53   P    P     12 15 10.4 +1.2
      baz=311
PSI   Prapat             63.60 243   P    P     12 15 11.0 +1.3
      comp=Z,3.1nm,0.6s,baz=0.0,slow=8.8,SNR=4.0
RPSI  Rantau Prapat      63.68 243   P    P     12 15 11.0 +0.9
FIA1  FINESS Array S     63.70 334   P    P     12 15 08.8 -0.8
FINES FINESS Array B     63.70 334   P    P     12 15 08.9 -0.7
      comp=Z,2.0nm,0.4s,baz=36,slow=6.9,SNR=34
RLMT  Red Lodge          63.77  51   P    P     12 15 11.6 +0.9
      baz=311
RLMT  Red Lodge          63.77  51   P    P     12 15 11.8 +1.1
TPH   Tonopah            63.79  62   P    P     12 15 12.5 +1.6
TPH                                  pmax  pmax
      comp=Z,26nm,0.8s
TPH   Tonopah            63.79  62   P    P     12 15 12.5 +1.6
DGMT  Dagmar             64.16  46   P    P     12 15 13.8 +0.8
CWC   Cottonwood Cre     64.32  63   P    P     12 15 15.7 +1.3
      baz=310
GRAC  Grapevine Rang     64.40  63   P    P     12 15 16.2 +1.5
      baz=311
ISA   Isabella, Lake     64.58  64   P    P     12 15 16.4 +0.4
      baz=311
R11A  Troy Canyon, C     64.59  60   P    P     12 15 17.3 +1.2
      baz=311,SNR=8.8
OBN   Obninsk            64.90 325  eP    P     12 15 18.5 +1.0
OBN   Obninsk            64.90 325⇑eP    P     12 15 18.5 +1.0
OBN                                  pmax  pmax
      comp=Z,5.0nm,1.1s
MPMC  Manual Prospec     64.93  63   P    P     12 15 19.6 +1.2
      baz=311,SNR=6.1
DUG   Dugway, Tooele     65.02  57   P    P     12 15 19.9 +1.1
      baz=311,SNR=7.1
DUG   Dugway, Tooele     65.02  57   IAmb  IAmb  12 15 21.2
      comp=Z,14nm,1.2s
FURC  Furnace Creek,     65.05  63   P    P     12 15 20.2 +1.3
      baz=311,SNR=7.9
TPNV  Topopah Spring     65.11  62   P    P     12 15 20.6 +1.1
      baz=311,SNR=5.4
OSI   Osito Audit: C     65.11  65   P    P     12 15 20.7 +1.4
      baz=311
BW06  Boulder Array      65.16  53   P    P     12 15 20.5 +0.7
      baz=312
PDAR  Pinedale Array     65.16  53   P    P     12 15 20.7 +0.9
      comp=Z,2.1nm,0.7s,baz=304,slow=1.4,SNR=21
PDAR                                 pP    pP    12 15 44.5 +0.4
      comp=Z,2.2nm,0.8s,baz=299,slow=1.9,SNR=6.8
LRMC  Laurel Mtn Rad     65.19  64   P    P     12 15 20.9 +0.9
      baz=311
EDW2  Edwards Air Fo     65.39  65   P    P     12 15 22.3 +1.1
      baz=311
SHOC  Shoshone, Teco     65.78  63   P    P     12 15 25.0 +1.4
      baz=311
GSC   Goldstone, Bar     65.84  64   P    P     12 15 25.2 +1.1
      baz=311
BFSC  Mount Baldy Ra     66.02  65   P    P     12 15 26.6 +1.3
      baz=312
GEYT  Alibeck            66.05 300   P    P     12 15 25.0 -0.4
      comp=Z,1.6nm,0.7s,baz=27,slow=1.0,SNR=5.9
HEC   Hector,Ludlow      66.45  64   P    P     12 15 29.4 +1.4
      baz=312
MURC  Murrieta           66.73  65   P    P     12 15 31.0 +1.3
      baz=312
MTPU  Mount Pierson      66.81  59   P    P     12 15 31.7 +1.0
ULM   Lac du Bonnet      66.83  40   P    P     12 15 29.2 -0.8
      comp=Z,2.0nm,0.6s,baz=1.9,slow=11,SNR=4.0
ULM   Lac du Bonnet      66.83  40⇓eP    P     12 15 29.7 -0.4
GMRC  Granite Mounta     66.89  63   P    P     12 15 31.9 +1.0
      baz=312
K22A  Casper             66.90  52   P    P     12 15 31.5 +0.7
      baz=313
SRU   San Rafael Swe     67.06  57   P    P     12 15 30.9 -1.1
SRU                                  pmax  pmax
      comp=Z,8.0nm,1.0s
SRU   San Rafael Swe     67.06  57   P    P     12 15 30.9 -1.1
PFO   Pinyon Flats O     67.18  65   P    P     12 15 33.4 +0.7
      baz=312
TPFO  Pinon Flats        67.19  65   P    P     12 15 33.8 +1.1
      baz=312
BELC  Belle Mtn. Jos     67.20  64   P    P     12 15 33.5 +0.6
      baz=312
RSSD  Black Hills        67.21  49   P    P     12 15 33.5 +0.6
RSSD                                 pmax  pmax
      comp=Z,7.0nm,0.7s
RSSD  Black Hills        67.21  49   P    P     12 15 33.4 +0.6
      baz=314
RSSD  Black Hills        67.21  49   P    P     12 15 33.5 +0.6
RSSD                                 IAmb  IAmb  12 15 34.2
      comp=Z,7.0nm,0.7s
109C  Camp Elliot, M     67.26  66   P    P     12 15 34.2 +1.1
      baz=312
IRM   Iron Mountain      67.63  64   P    P     12 15 36.8 +1.4
      baz=312
O20A  White River Ci     67.66  55   P    P     12 15 36.3 +0.6
      baz=313
NC303 NORSAR Array S     67.75 341   P    P     12 15 33.5 -2.2
NC405 NORSAR Array S     67.77 341   P    P     12 15 34.8 -1.1
BC3   Big Chuckawall     67.77  64   P    P     12 15 37.6 +1.2
      baz=312
U15A  North Rim          67.83  60   IAmb  IAmb  12 15 39.6
      comp=Z,5.9nm,0.9s
NB201 NORSAR Array S     67.92 341   P    P     12 15 35.0 -1.8
NB2   NORSAR Subarra     67.95 341   P    P     12 15 36.3 -0.7
      comp=Z,0.8nm,0.5s,baz=27,slow=6.5
NOA   NORSAR Array B     67.95 341   P    P     12 15 36.5 -0.5
      comp=Z,0.9nm,0.4s,baz=29,slow=6.5,SNR=11
PDMCI Parker Dam,Lak     68.14  63   P    P     12 15 39.9 +1.3
      baz=313
WB0   Warramunga Arr     68.23 198   P    P     12 15 40.6 +1.5
WB0                                  IAmb  IAmb  12 15 43.1
      comp=Z,13nm,1.5s
PV23  Carpenter Ridg     68.37  57   P    P     12 15 41.6 +1.3
PV23                                 IAmb  IAmb  12 15 42.5
      comp=Z,16nm,1.4s
WR0   Warramunga Arr     68.39 198   P    P     12 15 41.1 +1.0
WRAB  Tennant Creek      68.41 198   P    P     12 15 41.4 +1.2
WRAB                                 pmax  pmax
      comp=Z,9.0nm,1.4s
WRAB  Tennant Creek      68.41 198   P    P     12 15 41.4 +1.2
WB2   Warramunga Arr     68.41 198   P    P     12 15 41.9 +1.6
WB2                                  IAmb  IAmb  12 15 43.8
      comp=Z,12nm,1.4s
N23A  Red Feather La     68.42  53   P    P     12 15 41.6 +1.0
      baz=314
WRA   Warramunga Arr     68.42 198   P    P     12 15 41.4 +1.1
      comp=Z,1.6nm,0.7s,baz=14,slow=6.8,SNR=12
PV14  Lion Creek, Pa     68.42  57   IAmb  IAmb  12 15 42.0
      comp=Z,5.3nm,0.7s
PV19  Morning Glory      68.49  57   P    P     12 15 42.2 +1.2
PV19                                 IAmb  IAmb  12 15 42.4
      comp=Z,5.0nm,0.6s
PV11  David Mesa, Pa     68.56  57   IAmb  IAmb  12 15 44.0
      comp=Z,7.2nm,0.8s
GLA   Glamis             68.56  64   P    P     12 15 42.7 +1.4
      baz=313
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GLA   Glamis             68.56  64   IAmb  IAmb  12 15 43.6
      comp=Z,7.9nm,0.9s
PV18  Skein Mesa, Pa     68.57  57   IAmb  IAmb  12 15 43.5
      comp=Z,14nm,1.3s
PV12  Saucer Basin,      68.58  57   P    P     12 15 42.2 +0.6
MNK   Minsk              68.61 329  i P    P     12 15 40.9 -0.3
      comp=E,1.0nm,0.9s
MNK                                 i P    P     12 15 40.9 -0.3
      comp=N,15nm,0.9s
MNK                                 i P    P     12 15 40.9 -0.3
      comp=Z,4.0nm,0.9s
MNK                                 i pP   PcP   12 16 03.9 -1.6
MNK                                 i PcP  pP    12 16 04.8 -0.5
MNK                                 i sP   sP    12 16 14.1 -1.8
MNK                                 i PP   PP    12 18 13.5 +0.4
MNK                                 i PPP  PPP   12 19 54.1
MNK                                 i S    S     12 24 37.2 +1.6
MNK                                 i sS   sS    12 25 17.7 +1.1
MNK                                 i ScS  ScS   12 25 32.5 +0.9
MNK                                 i SS   SS    12 29 05.1 +4.5
MNK                                 i SSS  SSS   12 32 22.4
MNK                                 i LQ   LQ    12 40 22.0
MNK                                 i LR   LR    12 42 52.1
MNK                                 i LRM  MLR   12 48 34.0
      comp=E,6.0nm,19.1s
MNK                                 i LRM  MLR   12 48 34.0
      comp=N,231nm,19.1s
MNK                                 i LRM  MLR   12 48 34.0
      comp=Z,44nm,19.1s
POO   Poona              68.87 275  ex    P     12 15 41.0 -2.4
FITZ  Fitzroy Crossi     68.95 207   P    P     12 15 45.4 +1.8
      comp=Z,2.1nm,0.5s,baz=24,slow=6.3,SNR=9.8
FITZ  Fitzroy Crossi     68.95 207   P    P     12 15 45.4 +1.8
FITZ                                 IAmb  IAmb  12 15 50.8
      comp=Z,15nm,1.4s
ISCO  Idaho Springs      69.36  54   P    P     12 15 47.4 +1.0
      baz=314
MVCO  Mesa Verde         69.52  57   P    P     12 15 48.2 +0.8
      baz=314
F33A  5 Mile Ranch,      69.85  44   IAmb  IAmb  12 15 49.9
      comp=Z,10nm,0.9s
S22A  4UR Ranch, Cre     70.11  56   P    P     12 15 52.2 +1.1
      baz=314,SNR=5.4
S22A  4UR Ranch, Cre     70.11  56   P    P     12 15 51.3 +0.2
KIV   Kislovodsk         70.31 314  eP    P     12 15 51.1 -0.8
KIV   Kislovodsk         70.31 314  i P    P     12 15 51.1 -0.8
KIV                                 i                12 16 14.5
KIV                                 i                12 18 27.5
KIV                                  pmax  pmax
      comp=Z,3.0nm,0.9s
KBZ   Khabaz             70.37 313   P    P     12 15 51.5 -0.7
      comp=Z,2.1nm,0.7s,baz=77,slow=5.7,SNR=8.6
214A  Organ Pipe Nat     70.56  64   P    P     12 15 54.6 +1.1
      baz=314
SDCO  Great Sand Dun     70.86  55   P    P     12 15 56.3 +0.7
      baz=315
F36A  Milaca             71.13  42   P    P     12 15 56.3 -0.5
AKASG Malin Array Be     71.14 326   P    P     12 15 55.0 -1.7
      comp=Z,2.5nm,0.4s,baz=37,slow=6.2,SNR=20
AKASG Malin Array Be     71.14 326  i P    P     12 15 55.0 -1.7
AKASG                                pmax  pmax
      comp=Z,3.0nm,0.4s
AKBB  Malin Array Si     71.14 326   P    P     12 15 55.3 -1.4
AKBB                                 pmax  pmax
      comp=Z,2.0nm,0.4s
AKBB  Malin Array Si     71.14 326   P    P     12 15 55.3 -1.4
ECSD  EROS Data Cent     71.24  46   P    P     12 15 57.5  0.0
      baz=318,SNR=8.5
ECSD  EROS Data Cent     71.24  46   IAmb  IAmb  12 15 58.4
      comp=Z,9.3nm,0.8s
E38A  The Farm, Brul     71.46  41   P    P     12 15 59.1 +0.4
TUC   Tucson             71.55  62   P    P     12 16 00.9 +1.2
      baz=314
T25A  Trinidad           71.90  55   P    P     12 16 02.6 +0.8
      baz=316
SPMN  Marine on St.      71.94  42   P    P     12 16 02.0 +0.4
      baz=319
ASAR  Alice Springs      72.12 198   P    P     12 16 05.4 +2.6
      comp=Z,3.0nm,0.7s,baz=11,slow=5.5,SNR=35
ANMO  Albuquerque        72.28  58   P    P     12 16 04.6 +0.5
      comp=Z,1.5nm,0.7s,baz=324,slow=7.1,SNR=6.6
ANMO  Albuquerque        72.28  58⇑eP    P     12 16 05.2 +1.1
ANMO                                 pmax  pmax
      comp=Z,3.0nm,1.3s
ANMO  Albuquerque        72.28  58   P    P     12 16 05.5 +1.4
      baz=315
ANMO  Albuquerque        72.28  58   P    P     12 16 05.3 +1.2
319A  Douglas            73.12  62   P    P     12 16 10.2 +1.2
319A                                 IAmb  IAmb  12 16 11.4
      comp=Z,12nm,0.8s
121A  Cookes Peak, D     73.20  60   P    P     12 16 10.9 +1.3
      baz=315
PSAC2 Pilbara Seismi     74.10 211   P    P     12 16 16.4 +1.9
PSAC2                                IAmb  IAmb  12 16 18.3
      comp=Z,16nm,1.1s
SCIA  State Center       74.26  45   P    P     12 16 15.9 +0.5
      baz=320
KSU1  Kansas State U     74.68  49   P    P     12 16 17.0 -0.8
      baz=319
JFWS  Jewell Farm        74.89  42   P    P     12 16 20.1 +1.1
      baz=321
AMTX  Amarillo           75.05  55   P    P     12 16 20.9 +0.7
      baz=317
MSTX  Muleshoe           75.10  56   P    P     12 16 21.3 +0.8
      baz=317
BUR08 Bucovina Ar. S     75.17 326   P    P     12 16 19.6 -1.0
KOLS  Kolonicke sedl     75.18 328  eP    P     12 16 20.9 +0.4
KOLS  Kolonicke sedl     75.18 328  eP    P     12 16 20.9 +0.4
MNTX  Cornudas Mount     75.22  59   P    P     12 16 22.3 +1.2
      baz=316
CRVS  Cervenica-Dubn     75.49 329  eP    P     12 16 22.8 +0.4
CRVS  Cervenica-Dubn     75.49 329  eP    P     12 16 22.8 +0.4
CHGQ  Chibougamau        75.52  29   P    P     12 16 22.2 -0.2
      baz=329
P38A  Dawn               75.84  47   IAmb  IAmb  12 16 25.4
      comp=Z,9.6nm,0.8s
LANS  Liptovska Anna     75.98 330  eP    P     12 16 26.4 +1.3
LANS                                 pmax  pmax
      comp=Z,2.0nm,0.6s
LANS  Liptovska Anna     75.98 330  eP    P     12 16 26.4 +1.3
VLDQ  Val d'Or           75.98  32   P    P     12 16 23.1 -1.9
VLDQ                                 IAmb  IAmb  12 16 24.5
      comp=Z,14nm,0.9s
CLL   Collm              76.13 335  eP    P     12 16 24.0 -1.9
CLL                                 ePcP  PcP   12 16 36.0 -1.6
CLL                                 epP   pP    12 16 50.0 -0.8
UOSS  Minazif            76.16 292   P    P     12 16 26.2 -0.3
UOSS                                 IAmb  IAmb  12 16 26.8
      comp=Z,11nm,0.8s
P40A  Paris              76.65  46   IAmb  IAmb  12 16 30.0
      comp=Z,13nm,0.9s
HDIL  Hopedale           77.18  43   P    P     12 16 32.0  0.0
      baz=322
R40A  Maddies Statio     77.50  47   IAmb  IAmb  12 16 34.4
      comp=Z,5.9nm,0.7s
D55A  Sainte-Anne-du     77.62  31   P    P     12 16 34.6 +0.3
      baz=329
D56A  ZEC Mazanza, M     77.84  31   P    P     12 16 35.7 +0.1
      baz=329
ABTX  Abilene, Hawle     77.86  55   P    P     12 16 36.4 +0.5
      baz=318
TX31  Lajitas Ar. Si     77.95  60        pP    12 17 01.6  0.0
TX32  Lajitas Array      77.95  60   IAmb  IAmb  12 16 38.5
      comp=Z,9.6nm,0.8s
TX32                                 pP   pP    12 17 01.6  0.0
TXAR  Lajitas Array      77.95  60   P    P     12 16 37.6 +0.9
      comp=Z,6.9nm,0.7s,baz=300,slow=4.2,SNR=91
TXAR                                 pP   pP    12 17 01.4 -0.1
      comp=Z,2.0nm,0.6s,baz=301,slow=3.7,SNR=4.7
GERES GERESS Array B     78.11 333   P    P     12 16 36.3 -0.9
      comp=Z,0.2nm,0.4s,baz=39,slow=5.0,SNR=8.4
E56A  St. Veronique      78.18  31   P    P     12 16 36.9 -0.5
      baz=329
CCM   Cathedral Cave     78.19  46   P    P     12 16 37.7  0.0
      baz=321
LATQ  La Tuque           78.23  29   P    P     12 16 36.6 -1.1
      baz=330
E57A  Chemin Saint G     78.61  31   P    P     12 16 39.7 -0.1
      baz=330
U40A  Yellville          78.69  48   P    P     12 16 40.2 -0.3
      baz=321,SNR=10
E58A  La Victoria        78.94  30   P    P     12 16 41.3 -0.3
      baz=330,SNR=5.1
STKA  Stephens Creek     78.95 189   P    P     12 16 43.2 +1.6
      comp=Z,0.5nm,0.4s,baz=340,slow=9.1,SNR=3.2
W39A  Magazine           79.11  50   P    P     12 16 42.4 -0.4
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	baz=320						
N49A	Columbus Grove	79.22	40	P	P	12 16 43.1	-0.2
JCT	Junction City	79.37	57	P	P	12 16 44.7	+0.4
	baz=318,SNR=5.5						
FCAR	Ozark Folk Cen	79.43	48	IAmb	IAmb	12 16 44.9	
	comp=Z,7.6nm,0.6s						
WHTX	Lake Whitney,	79.56	54	P	P	12 16 45.9	+0.6
	baz=319						
MIAR	Mount Ida	79.72	50	P	P	12 16 46.1	+0.1
	baz=321						
WHAR	Wooly Hollow	79.81	49	P	P	12 16 46.5	-0.1
W41B	Gary Mavity, V	79.92	49	P	P	12 16 47.7	+0.5
	baz=321						
W41B	Gary Mavity, V	79.92	49	IAmb	IAmb	12 16 48.1	
	comp=Z,6.4nm,0.8s						
ERPA	Erie	80.02	37	P	P	12 16 47.9	+0.3
	baz=327						
L53A	Girard	80.05	37	P	P	12 16 47.8	+0.1
	baz=327						
WATA	Walderalm	80.10	334	*e*P	P	12 16 47.9	-0.2
	comp=Z,1.8nm,0.6s						
P49A	Miami Univ. Ec	80.11	41	P	P	12 16 48.0	-0.1
	baz=324						
X40A	Basin Creek Fa	80.15	50	P	P	12 16 48.5	+0.1
	baz=321						
WTTA	Wattenberg	80.15	334	*i* P	P	12 16 48.7	+0.3
	comp=Z,1.4nm,0.3s						
RETA	Reutte	80.21	335	*e*P	P	12 16 51.2	+2.6
	comp=Z,1.7nm,0.5s						
MOTA	Moosalm	80.23	334	*e*P	P	12 16 49.3	+0.5
	comp=Z,0.8nm,0.3s						
ACSO	Alum Creek Sta	80.31	40	P	P	12 16 49.1	-0.1
	baz=325						
G60A	Masonville	80.38	30	P	P	12 16 49.7	+0.3
	baz=331						
WCI	Wyandotte Cave	80.44	43	P	P	12 16 50.3	+0.4
WCI				pmax	pmax		
	comp=Z,15nm,1.0s						
WCI	Wyandotte Cave	80.44	43	P	P	12 16 50.2	+0.3
	baz=324						
WCI	Wyandotte Cave	80.44	43	P	P	12 16 50.3	+0.4
WCI				IAmb	IAmb	12 16 51.4	
	comp=Z,15nm,0.9s						
BATG	Bathurst New B	80.45	25	P	P	12 16 49.1	-0.6
BATG				IAmb	IAmb	12 16 54.8	
	comp=Z,25nm,1.4s						
G61A	St-Isidore-de-	80.49	30	P	P	12 16 50.3	+0.2
	baz=331						
M54A	Oil Creek Stat	80.67	37	P	P	12 16 50.9	-0.1
	baz=327						
M54A	Oil Creek Stat	80.67	37	P	P	12 16 51.4	+0.3
J58A	Remsen	80.82	33	P	P	12 16 51.8	-0.1
	baz=329						
G62A	West of Eustis	80.88	29	P	P	12 16 52.5	+0.3
	baz=332						
I59A	Olmsteadville	80.96	32	P	P	12 16 52.2	-0.4
	baz=330						
L56A	Greenwood	80.99	35	P	P	12 16 52.0	-0.8
	baz=328						
L56A	Greenwood	80.99	35	P	P	12 16 52.6	-0.1
L56A				IAmb	IAmb	12 16 53.1	
	comp=Z,9.3nm,0.7s						
N54A	Moraine State	80.99	37	P	P	12 16 52.8	0.0
	baz=327						
J59A	Piesco	81.02	32	P	P	12 16 52.6	-0.3
	baz=330						
J59A	Piesco	81.02	32	P	P	12 16 52.1	-0.8
J59A				IAmb	IAmb	12 17 00.5	
	comp=Z,19nm,1.1s						
O53A	New Philadelph	81.06	39	P	P	12 16 53.1	-0.1
	baz=326						
I60A	Shoreham	81.13	32	P	P	12 16 53.2	-0.3
	baz=330						
P52A	Corning	81.18	39	P	P	12 16 53.4	-0.4
	baz=326						
H62A	Milan	81.24	30	P	P	12 16 54.1	0.0
	baz=332						
NATX	Nacogdoches	81.28	52	P	P	12 16 55.4	+0.9
	baz=320						
M56A	Emporium	81.29	36	P	P	12 16 53.9	-0.5
	baz=328						
WVT	Waverly	81.39	45	P	P	12 16 55.5	+0.6
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WVT	Waverly	81.39	45	P	P	12 16 55.1	+0.1
	baz=323						
WVT	Waverly	81.39	45	P	P	12 16 55.5	+0.6
WVT				IAmb	IAmb	12 16 56.1	
	comp=Z,6.6nm,0.8s						
K59A	Cooperstown	81.48	33	P	P	12 16 55.3	-0.1
	baz=330						
H63A	New Sharon	81.54	29	P	P	12 16 55.5	-0.1
	baz=332						
N56A	West Decatur	81.72	36	P	P	12 16 56.9	+0.2
	baz=328						
L58A	Harry Jones Me	81.73	34	P	P	12 16 56.1	-0.6
	baz=329						
M57A	Sunshine Farm,	81.83	35	P	P	12 16 57.0	-0.2
	baz=328						
G65A	Princeton	81.86	27	P	P	12 16 57.0	-0.3
	baz=334						
OXF	Oxford	81.89	47	P	P	12 16 57.9	+0.3
	baz=323						
L59A	Walton	81.91	33	P	P	12 16 57.4	-0.3
	baz=330						
U49A	Red Boiling Sp	82.06	44	IAmb	IAmb	12 16 59.5	
	comp=Z,8.4nm,0.7s						
M58A	Price’s Panora	82.07	35	P	P	12 16 58.1	-0.4
	baz=329						
Q53A	Leroy	82.08	39	P	P	12 16 58.8	+0.3
	baz=326						
T50A	Nancy	82.09	43	IAmb	IAmb	12 16 59.3	
	comp=Z,7.6nm,0.8s						
SSPA	Standing Stone	82.12	36	P	P	12 16 58.6	-0.1
	baz=328						
SSPA	Standing Stone	82.12	36	P	P	12 16 58.5	-0.2
SSPA				IAmb	IAmb	12 16 59.5	
	comp=Z,8.3nm,0.7s						
MCWV	Mont Chateau	82.14	38	P	P	12 16 58.7	-0.1
	baz=327						
CLTN	Cedars of Leba	82.14	44	IAmb	IAmb	12 17 00.1	
	comp=Z,9.3nm,0.8s						
O56A	Blue Knob Stat	82.16	37	P	P	12 16 58.8	-0.2
	baz=328						
K61A	Williamstown	82.16	32	P	P	12 16 58.4	-0.5
	baz=330						
N57A	Milroy	82.16	36	P	P	12 16 58.7	-0.3
	baz=328,SNR=5.5						
L60A	Shokan	82.40	33	P	P	12 16 60.0	-0.2
	baz=330						
N58A	Sunbury	82.42	35	P	P	12 17 00.3	0.0
	baz=329						
O57A	Amberson	82.59	36	P	P	12 17 00.9	-0.2
	baz=328						
P56A	Dayton Farm, R	82.69	37	P	P	12 17 01.7	0.0
	baz=328						
N59A	State Game Lan	82.73	35	P	P	12 17 01.6	-0.3
	baz=329						
R54A	Victor	82.88	40	P	P	12 17 02.7	0.0
	baz=326						
Q56A	Snyder Ridge,	82.93	38	P	P	12 17 02.3	-0.7
	baz=327						
PAGS	Pennsylvania G	82.94	36	P	P	12 17 02.9	-0.1
O58A	Lewisberry	82.95	36	P	P	12 17 02.2	-0.8
	baz=329						
N60A	Cedar Hill Far	83.03	34	P	P	12 17 03.0	-0.5
	baz=330						
P57A	Homestead Farm	83.05	37	P	P	12 17 03.4	-0.2
	baz=328						
S54A	Dingess, Beckl	83.05	40	P	P	12 17 03.6	-0.1
	baz=326						
TZTN	Tazewell	83.08	42	P	P	12 17 03.8	-0.1
	baz=325						
O59A	Robesonia	83.08	35	P	P	12 17 03.5	-0.2
	baz=329						
R55A	Marlinton	83.17	39	P	P	12 17 04.5	+0.2
	baz=327						
Q57A	Strasburg	83.26	37	P	P	12 17 04.9	+0.2
	baz=328						
P58A	Pank, Wackersv	83.34	36	P	P	12 17 05.0	0.0
	baz=328						
PAL	Palisades	83.36	33	P	P	12 17 05.1	0.0
	baz=330						
R56A	Bull Pasture M	83.37	38	P	P	12 17 05.2	-0.2
	baz=327						
O60A	Telford	83.38	35	P	P	12 17 04.9	-0.3
	baz=329						
N61A	South Mountain	83.44	34	P	P	12 17 05.3	-0.2
	baz=330						
P59A	Jarrettsville	83.58	36	P	P	12 17 06.3	0.0
	baz=329						
P60A	Greenville	83.73	35	P	P	12 17 06.8	-0.2
	baz=329						
P60A	Greenville	83.73	35	P	P	12 17 06.1	-0.9
U54A	Nelsons Funny	83.89	41	P	P	12 17 08.1	+0.1
	baz=326						
Y49A	Blount Mountai	83.90	46	IAmb	IAmb	12 17 08.6	
	comp=Z,7.8nm,0.7s						
O61A	Allentown	83.91	34	P	P	12 17 07.8	-0.1
	baz=330						
BLA	Blacksburg	83.93	40	P	P	12 17 08.5	+0.3
	baz=327						
R58A	Rapidan	84.06	37	P	P	12 17 08.6	-0.1
	baz=328						
T56A	Rocky Mt	84.26	40	P	P	12 17 10.2	+0.4
	baz=327						
LRAL	Lakeview Retre	84.27	47	P	P	12 17 09.1	-0.8
	baz=324						
Q60A	Greensboro	84.34	36	P	P	12 17 09.1	-1.0
	baz=329						
R59A	King George, V	84.51	37	P	P	12 17 10.6	-0.4
	baz=329						
S58A	Poland Farm, P	84.62	38	P	P	12 17 11.0	-0.5
	baz=328						
T57A	Hurt	84.62	39	P	P	12 17 11.1	-0.5
	baz=328						
S59A	Mechanicsville	84.81	37	P	P	12 17 12.4	-0.1
	baz=328						
T58A	Grand View Acr	84.97	39	P	P	12 17 13.3	-0.1
	baz=328						
U57A	Blanch	85.06	39	P	P	12 17 13.3	-0.5
	baz=328						
V56A	Mocksville	85.07	41	P	P	12 17 13.8	0.0
	baz=327						
KMSC	Kings Mountain	85.25	41	P	P	12 17 14.8	0.0
	baz=326						
T59A	Double "B" Far	85.37	38	P	P	12 17 15.3	0.0
	baz=328						
U58A	Oxford	85.43	39	P	P	12 17 15.6	-0.1
	baz=328						
W56A	Indian Trail	85.59	41	P	P	12 17 16.8	+0.3
	baz=327						
GOGA	Godfrey	85.69	44	P	P	12 17 17.1	+0.1
	baz=326						
V58A	Windy Hill, Pi	85.69	40	P	P	12 17 16.9	0.0
	baz=328						
BRAL	Brewton	85.74	48	P	P	12 17 17.6	+0.3
	baz=324						
W57A	Gilead	85.84	41	P	P	12 17 17.7	0.0
	baz=327						
X56A	White Oak	85.93	42	P	P	12 17 18.3	+0.1
	baz=327						
V59A	Middlesex	86.10	39	P	P	12 17 19.2	+0.2
	baz=328						
W58A	Raeford	86.29	40	P	P	12 17 19.8	-0.1
	baz=328						
U61A	Possum Corner	86.38	37	P	P	12 17 19.8	-0.5
	baz=329						
W60A	Pink Hill	86.93	39	P	P	12 17 23.2	+0.2
	baz=328						
TORD	Torodi Ar. Bea	114.71	328	PKP	PKPdf	12 23 17.4	-0.9
	comp=Z,0.3nm,0.3s,baz=25,slow=1.5,SNR=2.6						
VNDA	Vanda	124.23	177	PKP	PKiKP	12 23 35.4	+0.4
	comp=Z,0.9nm,0.7s,baz=301,slow=4.3,SNR=5.3						
H03N2	Juan Fernandez	139.34	90	T	T	14 59 35.8	
	baz=308,slow=77,SNR=29						
H03N1	Juan Fernandez	139.35	90	T	T	14 59 39.4	
	baz=308,slow=77,SNR=32						
H03N3	Juan Fernandez	139.35	90	T	T	14 59 39.2	
	baz=308,slow=77,SNR=26						
BDFB	Brasilia	144.61	35	PKP	PKPdf	12 24 12.9	-1.6
	comp=Z,6.4nm,0.9s,baz=287,slow=3.4,SNR=6.4						
BDFB	Brasilia	144.61	35		PKPdf	12 24 13.8	-0.7
PLCA	Paso Flores	148.80	95	PKPbc	PKPab	12 24 26.2	-2.8
	comp=Z,6.3nm,0.8s,baz=297,slow=3.5,SNR=12						
CPUP	Villa Florida	148.93	59	PKPbc	PKiKP	12 24 25.9	-0.8
	comp=Z,3.2nm,0.6s,baz=321,slow=2.7,SNR=15						
SNAA	Sanae	152.48	197	PKPbc	PKiKP	12 24 33.1	+0.4
VNA2	Neumayer--Watz	153.94	195	PKPbc	PKiKP	12 24 36.4	+0.8
	baz=150,slow=1.8						
VNA3	Neumayer Olymp	154.05	193	PKPbc	PKiKP	12 24 36.4	+0.5

TUL ***01*** *12:05:49.1±0.8, 36°.93N±0°.03×97°.49W±0°.03, h7^{km}±7^{km}, ML3.1, mb_Lg3.0/81(NEIC) Error ellipse: s-maj=4.9km s-min=2.3km az=47.0*

NEIC ***01*** *12:05:49.4±1.0, 36°.90N±0°.03×97°.49W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=7.2km s-min=3.1km az=42.0*

ANF ***01*** *12:05:49.6±0.7, 36°.88N×97°.45W, h1^{km}±5^{km}, ML4.0/8, Error ellipse: s-maj=2.5km s-min=1.9km az=155.0*

ISC 01 12:05:49.4±0.8**, 36°.90N**±0°.03×**97°.50W**±0°.03**, h10**^{km}**, n78, σ1^{s}.00**/62**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	South Haven SW	0.12	9	Pg	Pg	12 05 51.5	-0.8
GC02	Grant County #	0.29	261	Pg	Pg	12 05 55.2	-0.1
GC02				Sg	Sg	12 05 59.5	+0.3
KAN14	Manchester OK	0.38	279	Pg	Pg	12 05 56.7	-0.1
KAN14				Sg	Sg	12 06 02.1	+0.2
KAN08	Anthony NE Sta	0.50	311		Pg	12 05 58.8	-0.4
KAN08					Sg	12 06 05.7	-0.1
KAN10	Anthony SW Sta	0.53	296		Pg	12 05 59.4	-0.3
CROK	Carrier	0.55	225	Pg	Pg	12 06 00.4	+0.3
KAN12	Harper NE Stat	0.56	315		Pg	12 05 59.9	-0.5
T35A	Sooner Cattle	0.79	88	Pg	Pg	12 06 03.9	-0.8
T35B	Sooner Cattle	0.79	88	P		12 06 04.0	
	baz=268,SNR=255						
T35B				S		12 06 14.6	
	baz=268						
QUOK	Quay	0.97	138	Pg	Pg	12 06 07.5	-0.6
OK031	S. Brethren Rd	1.08	150		Pg	12 06 09.8	-0.4
OK030	Cody Creek RV	1.13	149		Pb	12 06 10.6	-0.4
BCOK	Bluff Creek, N	1.24	184		Pn	12 06 12.9	+0.1
U32A	Winter Ranch,	1.31	247		Pn	12 06 13.8	0.0
U32A	Winter Ranch,	1.31	247	P		12 06 13.8	
	baz=67						
U32A				S		12 06 31.7	
	baz=67						
OK025	Westminster Rd	1.32	174		Pn	12 06 14.2	+0.3
OKCFA	Oklahoma City	1.48	178	Pn	Pb	12 06 16.9	-0.2
OKCSW	OKLAHOMA CITY	1.49	178		Pb	12 06 17.0	-0.2
FNO	Franklin	1.64	177		Pb	12 06 19.5	-0.3
R32A	Long Quarter,	1.80	328		Pn	12 06 21.3	+0.7
R32A	Long Quarter,	1.80	328	P		12 06 21.5	
	baz=148,SNR=33						
R32A				S		12 06 45.5	
	baz=148						
W35A	Tecumseh	1.81	164		Pn	12 06 21.9	+1.1
KSU1	Kansas State U	2.31	17	P	Pn	12 06 28.5	+0.9
	baz=198						
KSU1				S	Sb	12 06 59.2	-0.6
	baz=198						
KSU1	Kansas State U	2.31	17	Pn	Pn	12 06 28.8	+1.3
KSU1	Kansas State U	2.31	17	P		12 06 28.5	
	baz=198,SNR=13						
KSU1				S		12 06 59.4	
	baz=198						
WMOK	Wichita Mounta	2.39	206	P	Pn	12 06 29.7	+1.0
	baz=25						
WMOK				S	Sb	12 07 00.7	-1.4
	baz=25						
WMOK	Wichita Mounta	2.39	206	Pn	Pn	12 06 29.7	+1.0
WMOK	Wichita Mounta	2.39	206	P		12 06 29.6	
	baz=25,SNR=63						
WMOK				S		12 07 00.3	
	baz=25						
U38A	Gravette	2.55	99		Pn	12 06 31.9	+1.1
U38A	Gravette	2.55	99	P		12 06 32.0	
	baz=281,SNR=67						
CBKS	Cedar Bluff	2.61	318	Pn	Pn	12 06 32.4	+0.7
CBKS	Cedar Bluff	2.61	318	P		12 06 32.5	
	baz=137						
X37A	Clayton	2.88	142	Pn	Pn	12 06 36.3	+0.9
X37A				IAmb_Lg		12 07 24.5	
	comp=Z,56nm,0.8s						
X37A	Clayton	2.88	142	P		12 06 36.3	
	baz=324						
S39A	Bolivar	3.42	75	Pn	Pn	12 06 43.2	+0.3
S39A	Bolivar	3.42	75	P		12 06 43.2	
	baz=258,SNR=22						
W39A	Magazine	3.46	118	P	Pn	12 06 43.7	+0.3
	baz=300						
W39A				S	Sn	12 07 26.1	+1.8
	baz=300						
W39A	Magazine	3.46	118	Pn	Pn	12 06 43.4	+0.1
W39A				IAmb_Lg		12 07 41.5	
	comp=Z,51nm,0.8s						
W39A	Magazine	3.46	118	P		12 06 43.7	
	baz=300,SNR=5.1						
Z35A	Perchaven, San	3.56	177	Pn	Pn	12 06 45.9	+1.1
Z35A	Perchaven, San	3.56	177	P		12 06 45.8	
	baz=357						
U40A	Yellville	3.78	97	P	Pn	12 06 48.4	+0.7
	baz=279						
U40A	Yellville	3.78	97	Pn	Pn	12 06 48.4	+0.7
U40A	Yellville	3.78	97	P		12 06 48.4	
	baz=279,SNR=32						
U40A				P		12 06 48.4	
	baz=279,SNR=32						
AMTX	Amarillo	3.94	241	Sb	Sg	12 07 53.0	-3.1
	baz=58						
AMTX	Amarillo	3.94	241	Pn	Pn	12 06 52.5	+2.5
MIAR	Mount Ida	3.96	125	S	Sn	12 07 38.1	+1.3
	baz=307						
MIAR	Mount Ida	3.96	125	Pn	Pn	12 06 52.5	+2.3
MIAR	Mount Ida	3.96	125	P		12 06 50.8	
	baz=307						
P38A	Dawn	4.14	48	Pn	Pn	12 06 53.0	+0.3
P38A				IAmb_Lg		12 08 04.6	
	comp=Z,32nm,0.7s						
P38A	Dawn	4.14	48	P		12 06 53.1	
	baz=230,SNR=7.0						
Z38A	Mt. Pleasant	4.17	150	Pn	Pn	12 06 54.0	+0.9
Z38A				IAmb_Lg		12 08 05.1	
	comp=Z,42nm,0.8s						
MGMO	Mountain Grove	4.20	85		Pn	12 06 54.3	+0.8
MGMO				IAmb_Lg		12 08 00.2	
	comp=Z,27nm,0.8s						
N35A	Tabor	4.22	20	P		12 06 54.7	
	baz=201						
R40A	Maddies Statio	4.38	70	Pn	Pn	12 06 55.7	-0.3
R40A	Maddies Statio	4.38	70	P		12 06 56.4	
	baz=253,SNR=20						
FCAR	Ozark Folk Cen	4.45	101	Pn	Pn	12 06 57.5	+0.5
FCAR				IAmb_Lg		12 08 08.8	
	comp=Z,46nm,0.8s						
X40A	Basin Creek Fa	4.50	121	Pn	Pn	12 06 58.2	+0.6
X40A				IAmb_Lg		12 08 20.7	
	comp=Z,28nm,0.8s						
X40A	Basin Creek Fa	4.50	121	P		12 06 57.7	
	baz=304						
X40A				P		12 06 57.7	
	baz=304						
WHAR	Wooly Hollow	4.52	109	Pn	Pn	12 06 58.5	+0.6
WHAR				IAmb_Lg		12 08 20.7	
	comp=Z,34nm,0.8s						
BGNE	Belgrade	4.53	354	Pn	Pn	12 06 57.9	-0.2
KSCO	Kaye Shedlock’	4.57	299	Pn	Pn	12 06 57.8	-0.9
W41B	Gary Mavity, V	4.59	110	P	Pn	12 06 59.5	+0.6
	baz=293						
W41B	Gary Mavity, V	4.59	110	Pn	Pn	12 06 59.4	+0.5
W41B				IAmb_Lg		12 08 14.7	
	comp=Z,34nm,0.7s						
W41B	Gary Mavity, V	4.59	110	P		12 06 59.3	
	baz=293,SNR=9.6						
ABTX	Abilene, Hawle	4.61	203	Pn	Pn	12 06 59.8	+0.6
UALR	University of	4.70	115	IAmb_Lg		12 08 30.0	
	comp=Z,24nm,0.9s						
WLAR	White Oak Lake	4.81	130	IAmb_Lg		12 08 33.4	
	comp=Z,33nm,0.9s						
WHTX	Lake Whitney,	4.89	180	P	Pn	12 07 04.0	+1.0
	baz=360						
WHTX	Lake Whitney,	4.89	180	Pn	Pn	12 07 03.6	+0.5
WHTX	Lake Whitney,	4.89	180	P		12 07 03.8	
	baz=360,SNR=8.3						
P40A	Paris	5.04	57	Pn	Pn	12 07 05.2	+0.2
P40A				IAmb_Lg		12 08 31.1	
	comp=Z,17nm,0.7s						
237A	Washetta, Mont	5.08	164	Pn	Pn	12 07 05.6	0.0
237A	Washetta, Mont	5.08	164	P		12 07 05.9	
	baz=344,SNR=5.0						
CCM	Cathedral Cave	5.11	75	IAmb_Lg		12 08 29.4	
	comp=Z,7.8nm,0.7s						
N38A	Joes South For	5.12	39	IAmb_Lg		12 08 38.8	
	comp=Z,40nm,0.8s						
T42A	Van Buren	5.13	87	P		12 07 06.6	
	baz=270						
T25A	Trinidad	5.53	275	P	Pn	12 07 13.9	+1.8
	baz=91						
T25A	Trinidad	5.53	275	Pn	Pn	12 07 13.8	+1.8
CCAR	Cane Creek	5.54	121	IAmb_Lg		12 08 58.3	
	comp=Z,30nm,0.8s						
PBMO	Poplar Bluff	5.67	89	IAmb_Lg		12 08 46.6	
	comp=Z,18nm,0.7s						
FVM	French Village	5.73	77	Pn	Pn	12 07 16.7	+2.1
FVM				IAmb_Lg		12 08 48.9	
	comp=Z,15nm,0.7s						
X43A	Marvell	5.89	112	IAmb_Lg		12 09 07.1	
	comp=Z,33nm,1.1s						
143A	Socs Landing,	6.53	128	IAmb_Lg		12 09 27.8	
	comp=Z,16nm,0.7s						
S44A	Carbondale	6.62	81	IAmb_Lg		12 09 17.8	
	comp=Z,20nm,0.8s						
SIUC	Southern Illin	6.65	80	IAmb_Lg		12 09 20.4	
	comp=Z,28nm,0.9s						
JCT	Junction City	6.68	197	Pn	Pn	12 07 27.2	-0.5
P43A	Skaggs, Pawnee	6.85	64	IAmb_Lg		12 09 41.0	
	comp=Z,16nm,0.7s						
W45A	Hickory Valley	6.96	102	IAmb_Lg		12 09 29.1	
	comp=Z,24nm,0.7s						
OXF	Oxford	7.00	107	IAmb_Lg		12 09 37.5	
	comp=Z,23nm,1.0s						
L40A	Anamosa	7.08	41	IAmb_Lg		12 09 39.4	
	comp=Z,26nm,1.0s						
T45A	Paducah	7.09	86	IAmb_Lg		12 09 30.5	
	comp=Z,27nm,0.8s						
HDIL	Hopedale	7.38	58	IAmb_Lg		12 09 52.6	
	comp=Z,21nm,0.8s						
ANMO	Albuquerque	7.52	258	IAmb_Lg		12 09 58.4	
	comp=Z,3.0nm,0.9s						
ANMO				IAmb_Lg		12 09 58.4	
	comp=Z,3.0nm,0.9s						
OLIL	Olney	7.67	73	IAmb_Lg		12 09 54.0	
	comp=Z,19nm,1.0s						
O44A	Mansfield	7.79	63	IAmb_Lg		12 09 56.7	
	comp=Z,20nm,1.0s						
WVT	Waverly	7.83	93	IAmb_Lg		12 10 12.4	
	comp=Z,9.6nm,1.1s						
K22A	Casper	9.01	312	IAmb_Lg		12 10 57.5	
	comp=Z,16nm,1.1s						
P48A	Milroy	9.85	71	IAmb_Lg		12 11 03.2	
	comp=Z,8.7nm,0.9s						

IDC ***01*** *12:07:03.6±2.5, 9°.94S×113°.91E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/46, mbtmp3.6/8, ML3.7/1, Error ellipse: s-maj=138.9km s-min=17.0km az=50.0*

DJA ***01*** *12:07:10.9±0.3, 10°S±4°×11°4E±°, h59^{km}±19^{km}, M4.3/20, mB5.5/3, mb4.3/10, MLv4.2/20, Mw(mB)4.9/3*

NOU ***01*** *12:07:17.9, 10°.86S×114°.27E, h29^{km}, mb4.1, South of Bali, Indonesia*

ISC 01 12:07:09.8±1.2**, 10°.21S**±0°.07×**113°.91E**±0°.05**, h52**^{km}±14^{km}**, n33, σ1^{s}.82**/42**, mb3.6**/7**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	Jajag, Banyuwa	1.74	8	P	Pn	12 07 37.6	-0.1
JAGI				S	Sn	12 07 57.3	-1.4
GMJI	Gumukmas	1.97	347	P	Pn	12 07 40.5	-0.3
GMJI				S	Sn	12 08 02.8	-1.6
DNP	Denpasar	1.99	40	P	Pn	12 07 42.9	+1.9
DNP				S	Sn	12 08 06.3	+1.5
ABJI	Asem Bagus	2.42	8	P	Pn	12 07 46.7	-0.2
ABJI				S	Sn	12 08 16.6	+1.3
BLJI	Banyuglugur	2.46	353	P	Pn	12 07 48.5	+0.9
BLJI				S	Sn	12 08 17.5	+1.0
SRBI	Singaraja	2.47	32	P	Pn	12 07 49.4	+1.8
SRBI				S	Sn	12 08 16.6	0.0
PWJI	Pagerwojo	3.00	316	P	Pn	12 07 55.2	+0.2
PWJI				S	Sn	12 08 27.8	-1.9
KMMI	Kalianget	3.14	1	P	Pn	12 07 58.2	+1.4
KMMI				S	Sn	12 08 31.2	-1.8
TWSI	Taliwang, Sumb	3.28	64	P	Pn	12 08 00.0	+1.3
TWSI				S	Sn	12 08 35.1	-1.4
GRJI	Gresik	3.56	337	P	Pn	12 08 02.9	+0.3
GRJI				S	Sn	12 08 42.0	-1.5
UGM	Wanagama	4.04	304	P	Pn	12 08 10.2	+0.9
UGM				S	Sn	12 08 52.8	-2.6

PLAI	Plampang	4.05	71	P	Pn	12 08 11.5	+2.1
PLAI				S	Sn	12 08 53.3	-2.3
SMRI	Semarang	4.65	312	P	Pn	12 08 18.0	+0.5
KPJI	Karang Pucung	5.69	300	P	Pn	12 08 32.7	+0.9
	0.2nm30nm,0.8s						
CMJI	Cimerak	5.91	294	P	Pn	12 08 34.8	0.0
	0.2nm62nm,1.7s						
CISI	Cisompet, Garu	6.57	293	P	Pn	12 08 43.8	-0.2
JCJI	Jatiwangi	6.69	303	P	Pn	12 08 44.8	-0.7
	0.6nm8µm80nm,0.8s						
EDFI	Ende, Flores	7.81	80	P	Pn	12 09 03.7	+2.7
	0.1nm6.2nm,1.0s						
BKSI	Bulukumba	7.84	52	P	Pn	12 09 02.8	+1.5
	0.1nm14nm,1.1s						
CGJI	Cibinong	8.88	293	P	Pn	12 09 16.3	+0.8
	2µm38nm,0.4s						
BATI	Baumata	9.60	91	Sn	Sn	12 11 05.4	-6.6
	4.3nm,0.3s,baz=289,slow=22,SNR=8.5						
KASI	Kota Agung	10.42	296	P	Pn	12 09 37.3	+0.7
	33nm,1.2s						
FITZ	Fitzroy Crossi	13.81	126	Pn	Pn	12 10 21.2	-1.8
	0.3nm,0.3s,baz=296,slow=11,SNR=22						
FITZ				Sn	Sn	12 12 42.9	-12
	0.1nm,0.3s,baz=250,slow=13,SNR=2.7						
WRA	Warramunga Arr	21.95	119	P	P	12 12 01.1	+1.7
	0.4nm,0.4s,baz=292,slow=12,SNR=12						
ASAR	Alice Springs	23.30	128	P	P	12 12 15.7	+2.2
	0.6nm,0.6s,baz=303,slow=9.4,SNR=18						
CMAR	Chiang Mai Arr	32.08	333	P	P	12 13 32.2	+0.1
	0.4nm,0.6s,baz=161,slow=8.5,SNR=4.6						
STKA	Stephens Creek	33.48	134	P	P	12 13 46.0	+1.7
	1.0nm,0.6s,baz=153,slow=7.2,SNR=3.0						
H08S2	Diego Garcia H	40.97	270	T	T	12 58 01.4	
	baz=96,slow=75,SNR=4.5						
H08S3	Diego Garcia H	40.98	270	T	T	12 58 00.5	
	baz=96,slow=75,SNR=3.9						
H08S1	Diego Carcia H	40.99	270	T	T	12 58 05.1	
	baz=96,slow=75,SNR=4.0						
SONM	Songino Array	58.17	354	P	P	12 16 57.7	-0.8
	0.2nm,0.3s,baz=170,slow=10,SNR=4.7						
MKAR	Makanchi Array	63.38	336	P	P	12 17 33.5	-0.4
	0.2nm,0.3s,baz=149,slow=6.8,SNR=6.8						
ZALV	Zalesovo Beam	68.50	342	P	P	12 18 04.2	-2.4
	1.0nm,0.7s,baz=57,slow=5.5,SNR=5.2						

*FUNV **01** 12:08:02.0, 8°.83N×60°.87W, h14^{km}, MW3.5*
*TRN **01** 12:08:08.2, 9°.15N×60°.93W, h102^{km}, MD3.9*
ISC 01 12:08:01.3±1.7**, 8°.82N**±0°.04×**60°.88W**±0°.07**, h107**^{km}±17^{km}**,**
n27, σ2^{s}06/41**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIOV	Rio Grande	1.19	231	*e*P	Pn	12 08 23.5	-0.8
RIOV				*e*S	Sn	12 08 39.6	-2.1
TBH	Brigand Hill	1.66	354	*e*P	Pn	12 08 33.4	+3.5
TRN	Trinidad (W)	1.89	344	*e*P	Pn	12 08 35.0	+2.2
TRN				*e*S	Sn	12 08 54.7	-1.9
TRN	Trinidad (W)	1.89	344	*e*P	Pn	12 08 33.9	+1.1
TRN				*e*S	Sn	12 08 55.8	-0.8
TOSP	Speyside	2.48	8	*e*P	Pn	12 08 43.7	+3.3
TOSP				*e*S	Sn	12 09 08.9	-1.6
TOSP	Speyside	2.48	8	*e*P	Pn	12 08 41.2	+0.8
TOSP				*e*S	Sn	12 09 09.1	-1.4
ORIV	Oritupano	2.51	276	*e*P	Pn	12 08 46.7	+6.0
ORIV				*e*S	Sn	12 09 15.7	+4.7
ORIV	Oritupano	2.51	276	*e*P	Pn	12 08 41.8	+1.0
ORIV				*e*S	Sn	12 09 11.1	+0.1
CRUV	Carupano	2.96	309	*e*P	Pn	12 08 46.8	+0.1
CRUV				*e*S	Sn	12 09 19.7	-2.0
LUEV	Luepa	3.02	191	*e*P	Pn	12 08 48.4	+0.8
LUEV				*e*S	Sn	12 09 23.4	+0.1
GRGR	Grenville	3.38	347	*e*P	Pn	12 08 54.8	+2.5
GRGR				*e*S	Sn	12 09 29.3	-2.3
GRGR	Grenville	3.38	347	*e*P	Pn	12 08 53.0	+0.7
GRGR				*e*S	Sn	12 09 30.9	-0.8
GCMP	Grenada, Carri	3.68	352	*e*P	Pn	12 08 58.8	+2.4
GCMP				*e*S	Sn	12 09 35.9	-3.0
PCRV	Puerto La Cruz	3.94	290	*e*P	Pn	12 09 00.5	+0.7
PCRV				*e*S	Sn	12 09 43.5	-1.7
SVB	Belmont	4.44	355	*e*P	Pn	12 09 08.3	+1.8
SVB	Belmont	4.44	355	*e*S	Sn	12 09 54.3	-2.9
SVV	Soufriere Volc	4.48	356	*e*P	Pn	12 09 09.4	+2.3
BBGH	Gun Hill	4.49	17	*e*P	Pn	12 09 10.4	+3.2
MERV	Las Mercedes	5.36	275	*e*P	Pn	12 09 20.0	+1.0
MERV				*e*S	Sn	12 10 18.0	-1.7
BIRV	Birongo	5.56	288	*e*P	Pn	12 09 22.7	+1.0
FUNV	FUNVISIS	6.07	286	*e*P	Pn	12 09 30.4	+1.7
CARV	Caracas	6.19	286	*e*P	Pn	12 09 31.5	+1.2
TURV	Turiamo	7.05	284	*e*P	Pn	12 09 42.7	+0.8
BAUV	El Baul	7.07	272	*e*P	Pn	12 09 42.8	+0.5
MAPV	Macapo	7.54	278	*e*P	Pn	12 09 49.8	+1.1
MAPV				*e*S	Sn	12 11 08.7	-3.9
MONV	Montecano	9.46	290	*e*P	Pn	12 10 15.5	+0.7
SOCV	Socops	9.88	268	*e*P	Pn	12 10 21.4	+1.1

*BJI **01** 12:16:11.0±0.0, 40°.40N×125°.40W, h8^{km}, mB5.5/20, mb5.0/35, Ms5.2/10, Ms7 4.9/10*

*NEIC **01** 12:16:12.9±3.2, 40°.42N±0°.05×125°.80W±0°.10, h10^{km}±4^{km}, Error ellipse: s-maj=11.0km s-min=7.3km az=68.0*

*NEIC **01** 12:16:14.6, 40°.44N×125°.78W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$0.26; $M_{r\theta}$0.19; $M_{\theta\phi}$-1.29; $M_{\phi r}$-0.13; Fault plane solution: $M_0$1.34000×10^{17} NP1:ϕ_s186.69000°, δ81.03000°, λ4.95000°. NP2:ϕ_s95.91000°, δ85.11000°, λ171.00000°. Principal axes: T 1.3299, Plg10.0000°, Azm51.0000°; N 0.0236, Plg80.0000°, Azm248.0000°; P -1.3534, Plg3.0000°, Azm142.0000°;*

*NCEDC **01** 12:16:14.6±3.4, 40°.44N±0°.05×125°.78W±0°.10, h24^{km}±4^{km}, Mwr5.4/8, mb5.3/321(NEIC), ML4.7/56(NEIC), Mwc5.4(GCMT), Mwr5.2/43(NEIC), Mww5.3(NEIC) Error ellipse: s-maj=11.1km s-min=6.3km az=72.0*

*MOS **01** 12:16:14.6±1.1, 40°.45N×125°.45W, h11^{km}, mb5.4/44, Error ellipse: s-maj=7.0km s-min=5.7km az=94.6*

*IDC **01** 12:16:14.5±0.4, 40°.55N×125°.43W, h0^{km}, mb4.7/37, mb1 4.8/44, mb1mx4.8/64, mbtmp4.7/44, ML4.5/7, MS4.5/44, Ms1 4.5/44, ms1mx4.4/53, Error ellipse: s-maj=10.8km s-min=7.0km az=29.0*

*NEIC **01** 12:16:14.6, 40°.44N×125°.78W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.37; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$0.64; $M_{r\theta}$0.29; $M_{\theta\phi}$-6.57; $M_{\phi r}$-1.49; Fault plane solution: $M_0$6.80000×10^{16} NP1:ϕ_s184.04000°, δ86.08000°, λ12.70000°. NP2:ϕ_s93.16000°, δ77.33000°, λ175.99000°. Principal axes: T 6.7113, Plg12.0000°, Azm49.0000°; N 0.1792, Plg77.0000°, Azm201.0000°; P -6.8905, Plg6.0000°, Azm318.0000°;*

*ANF **01** 12:16:15.5±1.1, 40°.58N×125°.35W, h0^{km}, ML4.9/14 Error ellipse: s-maj=10.4km s-min=4.8km az=64.0*

*GCMT **01** 12:16:17.6±0.1, 40°.45N±0°.01×125°.68W±0°.01, h23^{km}, MW5.4/151, Moment Tensor Solution. s102, c151; s151, c286; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.18±.02; $M_{\theta\theta}$-0.22±.02; $M_{\phi\phi}$0.40±.02; $M_{r\theta}$-0.03±.03; $M_{\theta\phi}$-1.34±.02; $M_{\phi r}$0.19±.03; Best double couple: $M_0$1.38900×10^{17} NP1:ϕ_s277.00000°, δ82.00000°, λ179.00000°. NP2:ϕ_s7.00000°, δ89.00000°, λ8.00000°. Principal axes: T 1.4860, Plg6.0000°, Azm232.0000°; N -0.1930, Plg82.0000°, Azm11.0000°; P -1.2910, Plg5.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 12:16:18, 40°.44N×125°.69W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.16; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.42; $M_{r\theta}$-0.24; $M_{\theta\phi}$-1.40; $M_{\phi r}$0.15; Fault plane solution: $M_0$1.47000×10^{17} NP1:ϕ_s7.00000°, δ81.00000°, λ3.00000°. NP2:ϕ_s277.00000°, δ87.00000°, λ171.00000°. Principal axes: T 1.5627, Plg9.0000°, Azm232.0000°; N -0.1960, Plg80.0000°, Azm79.0000°; P -1.3667, Plg4.0000°, Azm322.0000°;*

*NEIC **01** 12:16:34, 40°.54N×124°.91W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$0.52; $M_{r\theta}$0.29; $M_{\theta\phi}$-1.19; $M_{\phi r}$-0.22; Fault plane solution: $M_0$1.32000×10^{17} NP1:ϕ_s189.00000°, δ76.00000°, λ3.00000°. NP2:ϕ_s99.00000°, δ87.00000°, λ166.00000°. Principal axes: T 1.4532, Plg11.0000°, Azm53.0000°; N -0.3304, Plg76.0000°, Azm268.0000°; P -1.1228, Plg8.0000°, Azm145.0000°;*

ISC 01 12:16:14.7±0.3**, 40°.44N**±0°.03×**125°.57W**±0°.02**, h10**^{km}**,**
n897, σ1^{s}**65**/762**, mb5.2**/249**, MS4.5**/49**, 15C-11D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
G10D	G10D	0.35	1	S	Sg	12 16 27.9	+1.8
FS09D	FS09D	0.58	90	S	Sn	12 16 40.4	+2.2
FS06D	FS06D	0.58	96	S	Sn	12 16 39.0	+0.7
FS13D	FS13D	0.58	84	S	Sg	12 16 27.5	-6.1
G03D7	G03D7	0.59	230	S	Sn	12 16 37.3	-0.8
G03D7				P	Pg	12 16 24.1	-2.0
FS02D	FS02D	0.59	101	S	Sn	12 16 39.9	+1.2
FS16D	FS16D	0.63	81	S	Sn	12 16 42.8	+3.1
FS16D				P	Pn	12 16 28.9	-0.7
FS41D	FS41D	0.66	74	S	Sb	12 16 37.9	+0.5
FS10D	FS10D	0.67	90	S	Sg	12 16 30.2	-6.0
G09D	G09D	0.68	70	S	Sg	12 16 29.8	-6.9
FS07D	FS07D	0.70	98	S	Sb	12 16 39.0	+0.5
FS44D	FS44D	0.73	64	S	Sg	12 16 30.7	-7.7
FS04D	FS04D	0.83	103	S	Sg	12 16 39.0	-2.6
G01D	G01D	0.86	120	S	Sg	12 16 32.5	-10
G04D	G04D	0.97	254	S	Sb	12 16 28.9	-17
JCC	Jacoby Creek,	1.23	72	Pn	Pn	12 16 36.1	-1.9
JCC				IAML		12 16 56.1	
	comp=N,11µm,0.7s						
KCRM	Chalk Rock	1.33	90		Pn	12 16 38.5	-1.0
M16D	M16D	1.35	25	S	Sb	12 16 36.7	-21
G20D	G20D	1.41	316	P	Pn	12 16 34.8	-5.3
G20D				S	Sn	12 16 55.1	-3.5
KMRM	Mail Ridge	1.44	98		Pn	12 16 40.9	+0.1
KHMM	Horse Mountain	1.46	72		Pn	12 16 39.9	-1.4
KHMM				IAML		12 17 01.1	
	comp=N,16µm,0.8s						
G21D	G21D	1.58	296	P	Pn	12 16 38.5	-3.9
G21D				S	Sg	12 17 07.1	+1.4
KBSM	Bell Springs	1.60	108		Pn	12 16 42.0	-1.1
KRMB	Red Mountain	1.66	49	Pn	Pn	12 16 42.3	-1.7
KCPM	Cahto Peak	1.70	116		Pn	12 16 42.8	-1.7
G05D7	G05D7	1.75	261	P	Pn	12 16 41.3	-3.3
G05D7				S	Sn	12 16 59.7	-7.0
KOMM	Orleans Mounta	1.81	62		Pn	12 16 44.5	-1.6
G13D	G13D	1.83	280	P	Pn	12 16 45.4	-0.4
G13D				S	Sn	12 17 04.8	-4.1
GNAM	Navarro Ridge	1.94	129		Pn	12 16 45.8	-2.0
KBO	Bosley Butte	2.04	29	Pn	Pn	12 16 47.5	-1.7
KBO				IAML		12 17 13.7	
	comp=E,4µm,1.0s						
G22D	G22D	2.11	299	P	Pn	12 16 45.0	-4.7
G22D				S	Sn	12 17 11.2	-4.5
O02D	Mt. Diablo Mer	2.14	96	P	Pn	12 16 49.9	-0.7
	baz=278,SNR=1000						
O02D				S	Sn	12 17 17.0	-0.2
	baz=278						
G35D	G35D	2.21	344	S	Sn	12 17 19.9	+1.8
G35D				P	Pn	12 16 49.6	-1.5
N02D	Trinity Center	2.24	75	P	Pn	12 16 51.0	-0.9
	baz=258,SNR=1000						
G36D	G36D	2.26	334	P	Pn	12 16 49.6	-2.0
G36D				S	Sn	12 17 16.7	-2.5
M02C	Callahan	2.27	64	P	Pn	12 16 51.1	-1.2
	baz=248,SNR=1000						
M02C				S	Sn	12 17 19.4	-0.9
	baz=248						
L02E	Cave Junction	2.27	40	P	Pn	12 16 51.1	-1.2
	baz=224,SNR=722						
L02E				S	Sn	12 17 18.5	-1.8
	baz=224						
G33D	G33D	2.30	14	P	Pn	12 16 53.2	+0.7
G33D				S	Sn	12 17 18.5	-2.4
WDC	Whiskeytown Da	2.31	86	P	Pn	12 16 51.5	-1.3
WDC				MLR	MLR		
	comp=Z,5058µm,0.6s						
WDC	Whiskeytown Da	2.31	86		Pn	12 16 51.5	-1.3
WDC	Whiskeytown Da	2.31	86	IAML		12 17 22.7	
	comp=E,5µm,0.6s						
WDC				IAML		12 17 22.9	
	comp=N,5µm,0.6s						
GASB	Alder Springs	2.32	109		Pn	12 16 52.1	-1.1
G29D	G29D	2.35	320	P	Pn	12 16 48.6	-4.3
G29D				S	Sn	12 17 17.6	-4.1
HOPS	Hopland Field	2.40	126		Pn	12 16 51.8	-2.4
HOPS	Hopland Field	2.40	126	IAML		12 17 35.9	
	comp=E,3µm,2.5s						
HOPS				IAML		12 17 53.4	
	comp=N,3µm,3.1s						
YBH	Yreka Blue Hor	2.52	58	Pn	Pn	12 16 55.0	-0.7
	comp=N,229nm,0.3s,baz=253,slow=10.0,SNR=501						
YBH				Sn	Sn	12 17 25.1	-1.4
	comp=N,132nm,0.3s,baz=154,slow=15,SNR=6.6						
YBH				LR	LR	12 17 35.2	
	comp=N,6µm,18.0s,baz=309,slow=34						
YBH	Yreka Blue Hor	2.52	58		Pn	12 16 54.6	-1.1
G37D	G37D	2.55	330	P	Pn	12 16 52.8	-2.9
G37D				S	Sn	12 17 24.5	-2.0
GPMM	Pine Mountain	2.57	127		Pn	12 16 55.5	-1.0
KEBM	Edson Butte	2.60	20	Pn	Pn	12 16 56.3	-0.6
KEBM				IAML		12 17 30.5	
	comp=N,3µm,1.0s						
KEBM				IAML		12 17 31.7	
	comp=E,3µm,1.1s						
LTCM	Tuscan Springs	2.64	94		Pn	12 16 57.3	-0.1
K02D	Willamette Mer	2.67	32	P	Pn	12 16 56.5	-1.4
	baz=216,SNR=636						
FTR	Fort Ross	2.67	135		Pn	12 16 55.2	-2.5
GDXM	Geysers	2.69	126		Pn	12 16 57.8	-0.3
O03E	Paynes Creek	2.88	92	P	Pn	12 16 59.7	-1.0
	baz=274,SNR=1000						
HUMO	Hull Mountain	2.92	41	Pn	Pn	12 17 00.4	-0.9
J01E	Myrtle Point	2.98	24	P	Pn	12 17 00.9	-1.1
	baz=207,SNR=143						
J01E				S	Sn	12 17 35.9	-2.0
	baz=207						
L04D	Klamath Falls	3.03	53	P	Pn	12 17 02.9	0.0
	baz=237,SNR=1000						
MCCM	Marconi Confer	3.10	137	Pn	Pn	12 17 03.2	-0.4
M04C	Macdoel	3.12	63	P	Pn	12 17 04.0	0.0
	baz=247,SNR=1000						
J11D	J11D	3.16	349	S	Sn	12 17 38.8	-2.8
J11D				P	Pn	12 17 04.3	+0.2
ORV	Oroville	3.25	104	P	Pn	12 17 04.2	-1.5
ORV				MLR	MLR		
	comp=Z,796µm,0.7s						
ORV	Oroville	3.25	104	Pn	Pn	12 17 04.2	-1.5
K04D	Chiloquin, OR	3.60	51	P	Pn	12 17 10.8	+0.1
	baz=235,SNR=188						
I03D	Drain, OR	3.65	26	P	Pn	12 17 11.1	-0.1
	baz=210,SNR=1000						
I03D				S	Sn	12 17 53.3	-1.1
	baz=210						
J19D	J19D	3.77	352	P	Pn	12 17 14.4	+1.8
J19D				S	Sn	12 17 57.7	+0.8
J04D	Umpqua Nationa	3.81	42	P	Pn	12 17 14.0	+0.4
	baz=226,SNR=1000						
AFDM	Forest Hills D	3.84	111	IAML		12 18 01.3	
	comp=E,741nm,0.9s						
AFDM				IAML		12 18 04.0	
	comp=N,732nm,1.1s						
I02D	Swisshome	3.88	19	P	Pn	12 17 14.0	-0.4
	baz=202,SNR=24						
I02D				S	Sn	12 17 57.6	-2.4
	baz=202						
BEKR	Beckworth	4.03	96		Pn	12 17 16.6	-0.1
J20D	J20D	4.08	344	P	Pn	12 17 19.0	+2.2
J20D				S	Sn	12 18 05.0	+0.6
I04A	Tendick Farm,	4.09	34	P	Pn	12 17 17.8	+0.4
	baz=218,SNR=1000						
I04A				S	Sn	12 18 04.7	-0.7
	baz=218						
K05A	Summer Lake	4.18	55	Pn	Pn	12 17 19.3	+0.5
K05A				IAML		12 19 06.5	
	comp=N,717nm,2.5s						
MOD	Modoc Plateau	4.23	68	IAML		12 18 35.5	
	comp=N,596nm,1.7s						
MOD				IAML		12 18 58.2	
	comp=E,598nm,1.9s						
J05D	Fort Rock, OR	4.31	47	P	Pn	12 17 21.1	+0.7
	baz=232,SNR=940						
RUBR	Rubicon Trail	4.39	107		Pn	12 17 23.4	+1.7
RUBR				IAML		12 18 30.4	
	comp=E,1µm,1.4s						
J27D	J27D	4.44	353	S	Sb	12 18 29.0	+3.0
J27D				P	Pn	12 17 23.6	+1.9
COR	Corvallis	4.47	21	P	Pn	12 17 23.2	+0.7
COR				MLR	MLR		
	comp=Z,559µm,1.3s						
COR	Corvallis	4.47	21	Pn	Pn	12 17 23.2	+0.7
COR				IAML		12 18 18.5	
	comp=Z,559nm,1.2s						
COR				IAML		12 18 24.2	
	comp=Z,540nm,1.0s						
H04D	Lebanon	4.59	26	P	Pn	12 17 24.3	+0.2
	baz=210,SNR=168						
VCNR	Virginia City	4.69	102	IAML		12 18 31.3	
	comp=E,799nm,0.8s						
VCNR				IAML		12 18 32.9	
	comp=N,607nm,1.5s						
J28D	J28D	4.74	346	P	Pn	12 17 25.9	+0.1
J28D				S	Sb	12 18 31.3	-3.2
PAHR	Pah Rah Range	4.80	97	IAML		12 18 39.3	
	comp=N,991nm,2.2s						
PAHR				IAML		12 18 40.4	
	comp=E,554nm,1.4s						
PINE	Pine Mountain	4.80	44	IAML		12 18 03.2	
	comp=E,376nm,0.9s						
SAO	San Andreas Ge	4.88	137	P	Pn	12 17 26.9	-1.3
SAO	San Andreas Ge	4.88	137	Pn	Pn	12 17 26.9	-1.3
H04A	Detroit Lake	4.92	29	Pn	Pn	12 17 29.5	+0.7
H04A				IAML		12 18 24.8	
	comp=E,457nm,1.1s						
H04A				IAML		12 18 31.9	
	comp=N,626nm,0.9s						
I05D	Terrebonne, OR	5.00	37	P	Pn	12 17 30.6	+0.8
	baz=222,SNR=159						
G03D	McMinnville, O	5.06	19	P	Pn	12 17 31.2	+0.5
	baz=202						
WAKR	Walker	5.12	110	IAML		12 18 44.8	
	comp=E,337nm,1.2s						
WAKR				IAML		12 18 53.5	
	comp=N,285nm,1.2s						
G05D	Wamic, OR	5.73	32	P	Pn	12 17 40.9	+1.1
	baz=216,SNR=356						
LHV	Little Huntoon	5.89	109		Pn	12 17 43.8	+1.8
MLAC	Mammoth, Mammo	5.94	116	P	Pn	12 17 44.2	+1.2
	baz=300,SNR=60						
F04D	Rainier, OR	5.94	17	P	Pn	12 17 42.7	0.0
	baz=201,SNR=12						
NVAR	Mina Array Bea	5.97	107	Pn	Pn	12 17 44.5	+1.2
	comp=N,39nm,0.3s,baz=242,slow=32,SNR=467						
NVAR				Sn	Sn	12 18 55.1	+3.3
	comp=N,5.5nm,0.3s,baz=300,slow=20,SNR=4.2						
F05D	White Salmon	6.22	28	P	Pn	12 17 47.4	+0.9
	baz=212,SNR=74						
VOG	Valley Oaks Go	6.36	128	P	Pn	12 17 49.2	+0.7
	baz=311,SNR=9.5						
E04D	Cinebar	6.49	19	P	Pn	12 17 50.3	0.0
	baz=202,SNR=29						
TIN	Tinemaha, Big	6.65	118	P	Pn	12 17 52.3	-0.4
	baz=302,SNR=21						
SMMC	Simmler	6.75	138	P	Pn	12 17 53.9	+0.1
	baz=320,SNR=15						
VES	Vestal, Richgr	6.87	130	P	Pn	12 17 55.2	-0.2
	baz=313,SNR=60						
D04E	Lakebay	7.03	16	P	Pn	12 17 57.3	-0.4
	baz=199,SNR=20						
NLWA	Neilton Lookou	7.06	9		Pn	12 17 56.7	-1.4
CWC	Cottonwood Cre	7.10	122	P	Pn	12 17 58.6	-0.2
	baz=306						
PKM	Mcpherson Peak	7.17	139	P	Pn	12 17 58.6	-1.2
	baz=321,SNR=23						
D05A	Enumclaw	7.22	20		Pn	12 17 59.9	-0.4
GRAC	Grapevine Rang	7.27	116	P	Pn	12 18 02.8	+1.7
	baz=300						
D03D	Eldon	7.32	13	P	Pn	12 18 01.7	+0.2
	baz=196,SNR=47						
ISA	Isabella, Lake	7.35	128	P	Pn	12 18 02.1	-0.1
	baz=312,SNR=100						
BMO	Blue Mountains	7.52	51	P	Pn	12 18 06.4	+2.0
BMO	Blue Mountains	7.52	51	Pn	Pn	12 18 06.4	+2.0
ARVC	Arvin	7.52	133	P	Pn	12 18 03.8	-0.6
	baz=316,SNR=27						
SBC	Santa Barbara	7.58	140	P	Pn	12 18 07.2	+1.9
	baz=323						
MPMC	Manual Prospec	7.71	122	P	Pn	12 18 08.1	+0.9
	baz=306,SNR=21						
ELK	Elko	7.87	84	Pn	Pn	12 18 10.2	+0.8
	comp=N,1.6nm,0.3s,baz=275,slow=13,SNR=93						
ELK				Sn	Sn	12 19 34.1	-4.4
	comp=N,0.3nm,0.3s,baz=229,slow=16,SNR=1.1						
ELK				LR	LR	12 21 13.6	
	comp=N,2µm,19.9s,baz=265,slow=39						
FURC	Furnace Creek,	7.89	117	P	Pn	12 18 10.8	+1.3
	baz=302						
LRMC	Laurel Mtn Rad	7.95	126	P	Pn	12 18 10.4	-0.1
	baz=310,SNR=15						
OSI	Osito Audit: C	7.96	135	P	Pn	12 18 11.1	+0.6
	baz=318						
SCZ2	Santa Cruz Isl	7.98	142	P	Pn	12 18 10.6	-0.2
	baz=325,SNR=7.8						
R11A	Troy Canyon, C	8.01	102	P	Pn	12 18 11.7	+0.4
	baz=288						
TPNV	Topopah Spring	8.07	113	P	Pn	12 18 12.3	+0.1
	baz=298						
EDW2	Edwards Air Fo	8.17	130	P	Pn	12 18 14.2	+0.7
	baz=314,SNR=23						
C06D	Leavenworth	8.20	23	P	Pn	12 18 13.9	+0.2
	baz=207,SNR=29						
B05A	Bryant	8.21	16	P	Pn	12 18 13.9	+0.1
	baz=200,SNR=74						
DECC	Green Verdugo	8.44	135	P	Pn	12 18 18.2	+1.1
	baz=318						
A04D	Lummi Island	8.53	13	P	Pn	12 18 19.3	+1.2
	baz=196,SNR=12						
GSC	Goldstone, Bar	8.62	124	P	Pn	12 18 20.0	+0.4
	baz=309						
SNCC	San Nicolas Is	8.65	144	P	Pn	12 18 20.8	+0.8
	baz=327						
SNCC	San Nicolas Is	8.65	144	Pn	Pn	12 18 20.0	0.0
RRX	Edison Barstow	8.77	127	P	Pn	12 18 21.5	-0.1
	baz=311						
BFSC	Mount Baldy Ra	8.82	132	P	Pn	12 18 22.7	+0.2
	baz=316						
HLID	Hailey	8.87	66	P	Pn	12 18 23.4	+0.3
	baz=254						
HEC	Hector,Ludlow	9.21	124	P	Pn	12 18 28.3	+0.6
	baz=310						
BBRC	Big Bear Solar	9.24	129	P	Pn	12 18 27.9	-0.3
	baz=314						
SCI2	San Clemente I	9.33	141	P	Pn	12 18 30.0	+0.8
	baz=324						
MURC	Murrieta	9.55	133	P	Pn	12 18 34.1	+1.8
	baz=318						
GMRC	Granite Mounta	9.67	123	P	Pn	12 18 34.6	+0.5
	baz=308						
DUG	Dugway, Tooele	9.74	87	P	Pn	12 18 35.2	+0.2
	baz=276						
NEW	Newport	9.88	35	Pn	Pn	12 18 36.8	0.0
	comp=N,1.2nm,0.3s,baz=201,slow=14,SNR=35						
NEW				LR	LR	12 22 29.4	
	comp=N,4µm,19.3s,baz=226,slow=38						
NEW	Newport	9.88	35		Pn	12 18 36.7	-0.1
PFO	Pinyon Flats O	9.97	130	Pn	Pn	12 18 40.4	+2.3
	comp=N,2.1nm,0.3s,baz=321,slow=11,SNR=25						
PFO				LR	LR	12 22 36.9	
	comp=N,4µm,18.7s,baz=270,slow=38						
PFO	Pinyon Flats O	9.97	130⇓	*e*P	Pn	12 18 39.7	+1.6
PFO				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PFO	Pinyon Flats O	9.97	130	P	Pn	12 18 39.2	+1.1
	baz=315						
PFO	Pinyon Flats O	9.97	130	Pn	Pn	12 18 39.6	+1.6
BELC	Belle Mtn. Jos	9.97	127	P	Pn	12 18 38.1	-0.1
	baz=312						
SPUT	South Promonto	9.97	81		Pn	12 18 39.5	+1.2
SZCU	Shurtz Canyon	10.12	102		Pn	12 18 41.4	+1.2
109C	Camp Elliot, M	10.14	135	P	Pn	12 18 41.0	+0.6
	baz=320						
LCMT	Little Creek M	10.22	106		Pn	12 18 41.1	-0.4
IRM	Iron Mountain	10.40	124	P	Pn	12 18 44.6	+0.7
	baz=310						
MONP2	Monument Peak	10.51	133	P	Pn	12 18 47.3	+1.6
	baz=318						
BAR	Barrett	10.54	135	Pn	Pn	12 18 45.6	-0.2
BC3	Big Chuckawall	10.54	127	P	Pn	12 18 47.2	+1.3
	baz=312						
MSO	Missoula	10.57	49	P	Pn	12 18 47.8	+1.6
	baz=238						
MSO	Missoula	10.57	49	Pn	Pn	12 18 47.2	+0.9
MTPU	Mount Pierson	10.65	99	Pn	Pn	12 18 48.8	+1.2

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MPU    Maple Canyon      10.66  88           Pn      12 18 50.4 +2.7
CBX    Cerro Bola        10.82 136           Pn      12 18 50.3 +0.5
SWSC   Sam W. Stewart    10.83 131   P       Pn      12 18 51.1 +1.3
       baz=316
IKP    In-Ko-Pah, Jac    10.87 133   P       Pn      12 18 51.4 +1.0
       baz=318
PDMCI  Parker Dam,Lak    10.96 120   P       Pn      12 18 53.2 +1.8
       baz=307
TMUT   Trail Mountain    11.10  91           Pn      12 18 57.0 +3.3
GLA    Glamis            11.33 127   P       Pn      12 18 59.0 +2.3
       baz=313
REDW   Red Top Meadow    11.35  70   Pn      Pn      12 18 59.2 +2.1
BOZ    Bozeman (W)       11.43  59   P       Pn      12 18 57.7 -0.3
       baz=248
SRU    San Rafael Swe    11.65  92   P       Pn      12 19 03.3 +2.1
SRU    San Rafael Swe    11.65  92   Pn      Pn      12 19 03.3 +2.1
H17A   Grant Village     11.76  65   P       Pn      12 19 04.9 +2.1
       baz=256
BBB    Bella Bella       11.88 352   Pn      Pn      12 19 07.9 +3.9
       comp=Z,0.7nm,0.3s,baz=192,slow=13,SNR=20
BBB                                  LR      LR      12 22 52.6
       comp=Z,2µm,18.7s,baz=176,slow=34
BBB    Bella Bella       11.88 352   Pn      Pn      12 19 01.9 -2.1
BW06   Boulder Array     12.21  74   P       Pn      12 19 10.5 +1.7
       baz=265
PDAR   Pinedale Array    12.21  74   Pn      Pn      12 19 11.7 +2.9
       comp=Z,0.5nm,0.3s,baz=249,slow=12,SNR=43
PDAR                                 LR      LR      12 24 03.1
       comp=Z,1µm,21.1s,baz=259,slow=39
WUAZ   Wupatki           12.22 109   P       Pn      12 19 11.9 +2.9
       baz=298
RLMT   Red Lodge         12.85  63   P       Pn      12 19 19.7 +2.1
       baz=255
RLMT   Red Lodge         12.85  63   Pn      Pn      12 19 17.8 +0.2
O20A   White River Ci    13.23  86   P       Pn      12 19 25.2 +2.4
       baz=277
214A   Organ Pipe Nat    13.32 125   P       Pn      12 19 26.7 +2.8
       baz=313
W18A   Petrified Fore    13.60 108   P       Pn      12 19 28.1 +0.3
       baz=298
H02S1  DAWSON INLET T    13.61 342   Pn      Pn      12 19 31.3 +3.7
       SNR=5.9
EGMT   Eagleton          13.62  51   P       Pn      12 19 27.9 -0.1
       baz=242
MVCO   Mesa Verde        13.69  98   P       Pn      12 19 30.7 +1.6
       baz=289
MVCO   Mesa Verde        13.69  98   Pn      Pn      12 19 31.5 +2.4
TUC    Tucson            14.39 120   P       Pn      12 19 40.7 +2.1
       baz=308
K22A   Casper            14.43  75   P       Pn      12 19 39.1 -0.1
       baz=268
S22A   4UR Ranch, Cre    14.80  94   P       Pn      12 19 45.4 +1.1
       baz=286
S22A   4UR Ranch, Cre    14.80  94   P       P       12 19 47.7 -2.6
N23A   Red Feather La    14.90  82   P       Pn      12 19 46.0 +0.3
       baz=275
N23A   Red Feather La    14.90  82   IAmb    IAmb    12 20 04.2
       comp=Z,137nm,1.1s
ISCO   Idaho Springs     15.28  86   P       Pn      12 19 52.5 +1.7
ISCO                                 pmax    pmax
       comp=Z,42nm,1.1s
ISCO   Idaho Springs     15.28  86   P       Pn      12 19 51.1 +0.3
       baz=279
ISCO   Idaho Springs     15.28  86   Pn      Pn      12 19 52.5 +1.7
LAO    LASA Array        15.33  60   P       Pn      12 19 50.2 -0.9
       baz=253
LAO    LASA Array        15.33  60   IAmb    IAmb    12 20 00.9
       comp=Z,129nm,0.8s
Q24A   Divide            15.78  89   P       Pn      12 19 58.6 +1.3
       baz=282
SDCO   Great Sand Dun    15.81  93   P       Pn      12 19 59.7 +2.1
       baz=286
SDCO   Great Sand Dun    15.81  93   IAmb    IAmb    12 20 03.1
       comp=Z,349nm,1.2s
319A   Douglas           15.98 119   IAmb    IAmb    12 20 05.6
       comp=Z,348nm,1.4s
ANMO   Albuquerque       16.08 104   Pn      P       12 20 03.3 -1.1
       comp=Z,0.2nm,0.3s,baz=303,slow=13,SNR=57
ANMO                                 LR      LR      12 26 20.5
       comp=Z,1µm,19.6s,baz=295,slow=38
ANMO   Albuquerque       16.08 104⇑eP    P       12 20 03.5 -0.9
ANMO                                 pmax    pmax
       comp=Z,15nm,0.8s
ANMO   Albuquerque       16.08 104   P       Pn      12 20 01.4 +0.4
       baz=296
ANMO   Albuquerque       16.08 104           P       12 20 03.9 -0.5
Y22D   IRIS PASSCAL I    16.13 107   P       Pn      12 20 02.9 +1.2
       baz=299
121A   Cookes Peak, D    16.31 113   P       P       12 20 05.9 -1.1
       baz=304
RSSD   Black Hills       16.34  70   P       Pn      12 20 02.6 -1.8
RSSD                                 pmax    pmax
       comp=Z,157nm,1.7s
RSSD   Black Hills       16.34  70   P       Pn      12 20 02.6 -1.8
       baz=265
RSSD   Black Hills       16.34  70   Pn      Pn      12 20 02.6 -1.8
T25A   Trinidad          16.82  94   P       Pn      12 20 11.3 +0.8
       baz=288
KSCO   Kaye Shedlock’    17.70  87   P       Pn      12 20 21.7 +0.3
       baz=282
KSCO   Kaye Shedlock’    17.70  87   IAmb    IAmb    12 20 27.4
       comp=Z,368nm,1.2s
DLBC   Dease Lake        18.24 352   P       P       12 20 31.9 +3.8
       comp=Z,0.4nm,0.3s,baz=185,slow=11,SNR=35
DLBC                                 LR      LR      12 25 58.3
       comp=Z,1µm,20.8s,baz=168,slow=32
MNTX   Cornudas Mount    18.47 112   P       Pn      12 20 33.2 +2.4
       baz=304
E28A   Huff              19.01  63   IAmb    IAmb    12 21 05.9
       comp=Z,120nm,1.1s
BESE   Bessie Mountai    19.10 345           P       12 20 34.3 -3.1
BESE                                 IAmb    IAmb    12 20 44.5
       comp=Z,188nm,1.3s
MSTX   Muleshoe          19.24 102   P       Pn      12 20 40.9 +0.6
       baz=296
AMTX   Amarillo          19.68  99   P       Pn      12 20 45.4  0.0
       baz=293
AMTX   Amarillo          19.68  99           P       12 20 44.7 +0.7
CBKS   Cedar Bluff       19.94  86   P       P       12 20 47.1 +0.2
       baz=283
CBKS   Cedar Bluff       19.94  86   IAmb    IAmb    12 20 50.3
       comp=Z,274nm,1.1s
MDND   Maddock           19.99  60   P       P       12 20 47.7 +0.5
       baz=258
SUSD   Miller            20.01  70   P       P       12 20 46.4 -1.0
       baz=268
SKAG   Skagway           20.01 345           P       12 20 45.7 -1.6
SKAG                                 IAmb    IAmb    12 21 03.8
       comp=Z,165nm,1.4s
K31A   O'Neill           20.16  75           Pn      12 20 50.5 -0.5
BGNE   Belgrade          20.71  78   P       P       12 20 54.4 -0.8
       baz=277
BGNE   Belgrade          20.71  78   P       P       12 20 54.5 -0.6
LPIG   La Paz            20.73 137   P       P       12 20 56.4 +1.1
       comp=Z,18nm,0.8s,baz=35,slow=0.2,SNR=2.2
LPIG                                 LR      LR      12 27 59.8
       comp=Z,2µm,19.8s,baz=325,slow=34
TX31   Lajitas Ar. Si    21.05 115   IAmb    IAmb    12 21 04.1
       comp=Z,200nm,1.2s
TX32   Lajitas Array     21.05 115   P       P       12 20 58.7 -0.2
TXAR   Lajitas Array     21.05 115   P       P       12 21 01.4 +2.5
       comp=Z,26nm,0.9s,baz=300,slow=8.0,SNR=120
TXAR                                 LR      LR      12 29 41.4
       comp=Z,2µm,20.3s,baz=0.0,slow=38
U32A   Winter Ranch,     21.18  92   IAmb    IAmb    12 21 06.8
       comp=Z,104nm,1.0s
FFC    Flin Flon         21.24  40   P       P       12 21 01.4 +0.7
FFC                                  pmax    pmax
       comp=Z,182nm,1.0s
FFC    Flin Flon         21.24  40   P       P       12 21 01.4 +0.7
FFC                                  IAmb    IAmb    12 21 05.9
       comp=Z,182nm,0.9s
SLBS   Sierra La Lagu    21.26 137   P       P       12 20 59.2 -2.0
SLBS                                 IAmb    IAmb    12 21 11.4
       comp=Z,122nm,1.2s
HPIG                     21.28 123   P       P       12 20 59.7 -1.9
ECSD   EROS Data Cent    21.69  72   P       P       12 21 04.3 -1.3
       baz=271
ECSD   EROS Data Cent    21.69  72   P       P       12 21 03.8 -1.8
ECSD                                 IAmb    IAmb    12 21 11.6
       comp=Z,134nm,1.0s
WMOK   Wichita Mounta    21.93  96   P       P       12 21 08.6 +0.3
       baz=293
F33A   5 Mile Ranch,     21.96  66   IAmb    IAmb    12 21 11.6
       comp=Z,158nm,1.2s
L34A   Svendsen Farm,    21.97  76   P       P       12 21 09.7 +1.0
L34A                                 IAmb    IAmb    12 21 13.9
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       comp=Z,126nm,0.7s
ABTX   Abilene, Hawle    22.19 102   P       P       12 21 11.6 +0.6
       baz=298
ABTX   Abilene, Hawle    22.19 102   P       P       12 21 12.6 +1.5
KSU1   Kansas State U    22.26  84   P       P       12 21 11.8  0.0
       baz=283
KSU1   Kansas State U    22.26  84   P       P       12 21 11.6 -0.1
AGMN   Agassiz Nation    22.54  60   P       P       12 21 14.0 -0.7
       baz=261
OKCFA  Oklahoma City     22.69  94   IAmb    IAmb    12 21 21.6
       comp=Z,168nm,1.2s
OK025  Westminster Rd    22.72  93   IAmb    IAmb    12 21 21.7
       comp=Z,132nm,1.1s
T35A   Sooner Cattle     22.91  89   IAmb    IAmb    12 21 30.4
       comp=Z,121nm,1.1s
ULM    Lac du Bonnet     22.92  55   P       P       12 21 18.9 +0.2
       comp=Z,49nm,0.8s,baz=262,slow=9.3,SNR=62
ULM                                  LR      LR      12 30 43.3
       comp=Z,2µm,20.6s,baz=260,slow=38
ULM    Lac du Bonnet     22.92  55ceP    P       12 21 19.5 +0.8
ULM    Lac du Bonnet     22.92  55   P       P       12 21 18.9 +0.2
OK031  S. Brethren Rd    22.97  92   P       P       12 21 18.1 -1.2
OK031                                IAmb    IAmb    12 21 23.7
       comp=Z,151nm,0.9s
QUOK   Quay              22.99  91   P       P       12 21 18.3 -1.3
QUOK                                 IAmb    IAmb    12 21 23.5
       comp=Z,142nm,1.0s
OK030  Cody Creek RV     23.02  92   P       P       12 21 19.9 +0.1
YKA    Yellowknife Ar    23.05  13   P       P       12 21 20.8 +0.9
       comp=Z,15nm,0.9s,baz=200,slow=9.7,SNR=116
YKA                                  LR      LR      12 30 15.1
       comp=Z,813nm,18.3s,baz=0.0,slow=37
BALM   Baldy             23.06 339   P       P       12 21 16.3 -3.9
JCT    Junction City     23.15 107   P       P       12 21 23.3 +2.0
JCT                                  pmax    pmax
       comp=Z,160nm,1.5s
JCT    Junction City     23.15 107   P       P       12 21 21.9 +0.7
       baz=302
JCT    Junction City     23.15 107   P       P       12 21 23.2 +2.0
JCT                                  IAmb    IAmb    12 21 34.5
       comp=Z,160nm,1.4s
VRDI   Verde Repeater    23.53 338   P       P       12 21 22.1 -2.8
MCARA  McCarthy VSAT     23.53 339   P       P       12 21 21.1 -3.7
MCARA                                IAmb    IAmb    12 21 29.9
       comp=Z,84nm,1.2s
Z35A   Perchaven, San    23.66  98   P       P       12 21 25.1 -1.2
GLB    Gilahina Butte    23.80 338   P       P       12 21 23.6 -3.9
B35A   Bob, Littlefor    23.95  60   IAmb    IAmb    12 21 31.4
       comp=Z,117nm,0.9s
FID    Port Fidalgo      24.08 335   P       P       12 21 26.2 -3.8
WHTX   Lake Whitney,     24.12 102   P       P       12 21 30.8 +0.1
       baz=298
WHTX   Lake Whitney,     24.12 102   IAmb    IAmb    12 21 34.2
       comp=Z,71nm,0.9s
N25K   Chitina, Valde    24.16 338   P       P       12 21 32.8 +1.9
       baz=143
SCIA   State Center      24.32  76   P       P       12 21 33.0 +0.6
       baz=278
SPMN   Marine on St.     24.40  68   P       P       12 21 33.4 +0.3
       baz=270
SPMN   Marine on St.     24.40  68   IAmb    IAmb    12 21 37.1
       comp=Z,139nm,1.1s
N38A   Joes South For    24.47  79   IAmb    IAmb    12 21 38.0
       comp=Z,159nm,1.1s
KDAK   Kodiak Island     24.52 324   P       P       12 21 36.6 +2.6
       comp=Z,18nm,0.8s,baz=124,slow=4.2,SNR=10
KDAK                                 LR      LR      12 28 54.3
       comp=Z,1µm,19.4s,baz=132,slow=31
KDAK   Kodiak Island     24.52 324   P       P       12 21 31.4 -2.7
KDAK                                 pmax    pmax
       comp=Z,44nm,1.0s
KDAK   Kodiak Island     24.52 324   P       P       12 21 31.4 -2.7
OHAK   Old Harbor        24.54 322   P       P       12 21 32.0 -2.2
OHAK                                 IAmb    IAmb    12 21 39.7
       comp=Z,98nm,1.4s
X37A   Clayton           24.58  94   IAmb    IAmb    12 21 38.5
       comp=Z,66nm,1.1s
435B   Jarrell           24.62 104   P       P       12 21 35.4 +0.2
       baz=301
435B   Jarrell           24.62 104   IAmb    IAmb    12 21 40.5
       comp=Z,68nm,0.8s
833A   Chaparral WMA,    24.65 111   P       P       12 21 35.8 +0.2
       baz=306
SEW    Seward            24.66 331   P       P       12 21 31.6 -3.8
L26K   Log Cabin Wild    24.98 341   P       P       12 21 39.8 +1.6
       baz=147
MENT   Mentasta          25.00 340   P       P       12 21 37.5 -1.0
O22K   Cooper Landing    25.02 331   P       P       12 21 40.5 +2.0
       baz=133
M24K   Tolsona, Glenn    25.02 337   P       P       12 21 41.1 +2.5
       baz=141
S39A   Bolivar           25.11  86   IAmb    IAmb    12 21 44.2
       comp=Z,122nm,1.3s
EYMN   Ely               25.40  61   P       P       12 21 42.4 +0.3
       baz=266
Z38A   Mt. Pleasant      25.41  97   IAmb    IAmb    12 21 55.6
       comp=Z,125nm,1.5s
RC01   Rabbit Creek A    25.44 332   P       P       12 21 44.6 +2.2
       baz=134
K27K   Chicken           25.54 343   P       P       12 21 45.1 +1.9
       baz=150
W39A   Magazine          25.56  92   P       P       12 21 44.2 +0.5
       baz=291
R40A   Maddies Statio    25.75  84   IAmb    IAmb    12 21 49.5
       comp=Z,88nm,1.1s
L40A   Anamosa           25.77  75   IAmb    IAmb    12 21 50.0
       comp=Z,137nm,1.1s
U40A   Yellville         25.87  88   P       P       12 21 46.9 +0.3
       baz=289
U40A   Yellville         25.87  88   IAmb    IAmb    12 21 52.0
       comp=Z,126nm,1.2s
SCRK   Sand Creek        25.94 341   P       P       12 21 48.1 +1.1
       baz=147
MIAR   Mount Ida         25.96  93   P       P       12 21 47.7 +0.3
       baz=293
MIAR   Mount Ida         25.96  93   IAmb    IAmb    12 22 00.3
       comp=Z,63nm,1.1s
I40A   Norwalk           26.01  71   IAmb    IAmb    12 21 53.3
       comp=Z,95nm,0.8s
MGMO   Mountain Grove    26.07  86   IAmb    IAmb    12 21 53.9
       comp=Z,77nm,1.1s
ZAIG   Zacatecas         26.22 125   P       P       12 21 50.9 +0.8
G40A   Rib Lake          26.23  68   P       P       12 21 47.8 -1.9
NATX   Nacogdoches       26.32  99   P       P       12 21 51.4 +0.8
       baz=298
NATX   Nacogdoches       26.32  99   IAmb    IAmb    12 21 55.1
       comp=Z,84nm,0.9s
HKT    Hockley           26.34 104   P       P       12 21 52.4 +1.6
HKT                                  pmax    pmax
       comp=Z,217nm,1.5s
HKT    Hockley           26.34 104   P       P       12 21 52.4 +1.6
JFWS   Jewell Farm       26.38  73   P       P       12 21 51.5 +0.5
       baz=277
JFWS   Jewell Farm       26.38  73   IAmb    IAmb    12 21 55.8
       comp=Z,183nm,1.4s
CUT    Chulitna          26.53 334   P       P       12 21 52.8 +0.6
       baz=135
X40A   Basin Creek Fa    26.55  92   P       P       12 21 52.8 +0.1
       baz=293
FCAR   Ozark Folk Cen    26.59  89   IAmb    IAmb    12 21 58.8
       comp=Z,138nm,1.6s
CCM    Cathedral Cave    26.59  84   P       P       12 21 53.8 +0.8
CCM                                  pmax    pmax
       comp=Z,151nm,1.3s
CCM    Cathedral Cave    26.59  84   P       P       12 21 52.7 -0.3
       baz=286
CCM    Cathedral Cave    26.59  84   P       P       12 21 53.8 +0.8
CCM                                  IAmb    IAmb    12 21 56.7
       comp=Z,151nm,1.3s
CHGN   Chignik           26.64 318   P       P       12 21 49.6 -3.7
CHGN                                 IAmb    IAmb    12 21 59.1
       comp=Z,80nm,1.0s
EPYK   Eagle Plains      26.73 350   P       P       12 21 55.2 +1.2
       baz=161
W41B   Gary Mavity, V    26.74  91   P       P       12 21 54.7 +0.2
       baz=291
W41B   Gary Mavity, V    26.74  91   IAmb    IAmb    12 22 00.5
       comp=Z,116nm,1.1s
T42A   Van Buren         27.00  86   IAmb    IAmb    12 21 59.6
       comp=Z,58nm,1.0s
FCC    Fort Churchill    27.04  37   P       P       12 21 57.2 +0.3
FCC                                  pmax    pmax
       comp=Z,55nm,1.0s
FCC    Fort Churchill    27.04  37   P       P       12 21 57.1 +0.3
FCC                                  IAmb    IAmb    12 22 15.1
       comp=Z,55nm,1.0s
HDA    Harding Lake      27.04 340   P       P       12 21 57.9 +1.1
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       baz=143
Z41A   Richland Creek    27.07  95   P       P       12 21 58.2 +0.8
       baz=295
Z41A   Richland Creek    27.07  95   IAmb    IAmb    12 22 02.6
       comp=Z,57nm,1.1s
MCK    McKinley          27.08 337   P       P       12 21 58.5 +1.3
       baz=139
FVM    French Village    27.23  84   IAmb    IAmb    12 22 01.3
       comp=Z,40nm,0.8s
ILAR   Eielson Array     27.32 340   P       P       12 22 01.2 +1.9
       comp=Z,11nm,0.9s,baz=157,slow=7.8,SNR=82
ILAR                                 PcP     PcP     12 25 19.8 +1.4
       comp=Z,1.0nm,0.8s,baz=175,slow=2.7,SNR=6.7
ILAR                                 LR      LR      12 30 57.9
       comp=Z,1µm,21.6s,baz=152,slow=32
HDIL   Hopedale          27.46  78   P       P       12 22 00.2 -0.7
       baz=282
HDIL   Hopedale          27.46  78   IAmb    IAmb    12 22 12.0
       comp=Z,169nm,1.8s
P43A   Skaggs, Pawnee    27.49  80   IAmb    IAmb    12 22 05.3
       comp=Z,76nm,1.1s
PBMO   Poplar Bluff      27.59  86   IAmb    IAmb    12 22 04.7
       comp=Z,72nm,1.1s
COLA   College           27.65 340⇑iP    P       12 22 03.4 +1.1
COLA                                 pmax    pmax
       comp=Z,4.0nm,0.7s
COLA   College           27.65 340   P       P       12 22 00.3 -2.0
TCOL   CIGO, UAF Yank    27.65 340   P       P       12 22 03.5 +1.2
       baz=142
POKR   Poker Plat Res    27.73 340   P       P       12 22 04.2 +1.1
       baz=143
NEA2   Nenana            27.77 338   P       P       12 22 04.2 +0.9
       baz=140
X43A   Marvell           28.03  91   P       P       12 22 06.1 +0.1
       baz=293
X43A   Marvell           28.03  91   IAmb    IAmb    12 22 13.9
       comp=Z,112nm,1.1s
Q44A   Meyer Farm, Va    28.05  81   IAmb    IAmb    12 22 09.6
       comp=Z,48nm,1.0s
O44A   Mansfield         28.17  78   IAmb    IAmb    12 22 18.2
       comp=Z,95nm,1.2s
GNAR   Gosnell           28.17  88   IAmb    IAmb    12 22 10.5
       comp=Z,61nm,1.1s
L44A   Lake County Fo    28.19  74   P       P       12 22 06.9 -0.4
       baz=279
S44A   Carbondale        28.20  84   IAmb    IAmb    12 22 10.7
       comp=Z,52nm,1.1s
SIUC   Southern Illin    28.22  84   IAmb    IAmb    12 22 10.8
       comp=Z,55nm,1.1s
M44A   Midewin, Midew    28.23  76   IAmb    IAmb    12 22 13.0
       comp=Z,126nm,1.2s
PEBM   Pemiscott Bayo    28.24  87   IAmb    IAmb    12 22 14.0
       comp=Z,84nm,1.0s
INK    Inuvik            28.26 354   P       P       12 22 09.1 +1.5
       comp=Z,6.5nm,1.0s,baz=164,slow=9.1,SNR=16
342A   Flagon Creek P    28.27  98   IAmb    IAmb    12 22 12.6
       comp=Z,75nm,0.8s
I23K   Minto, Yukon-K    28.27 339   P       P       12 22 08.8 +1.0
       baz=140
MLY    Manley            28.57 338   P       P       12 22 11.7 +1.1
       baz=138
T45A   Paducah           28.87  85   IAmb    IAmb    12 22 16.1
       comp=Z,74nm,0.8s
C36M   Paulatuk          28.98   1   P       P       12 22 13.8 -0.3
       baz=183
W45A   Hickory Valley    29.09  89   IAmb    IAmb    12 22 19.0
       comp=Z,92nm,1.1s
SFIN   Lafayette         29.14  77   P       P       12 22 15.0 -0.8
       baz=283
SFIN   Lafayette         29.14  77   IAmb    IAmb    12 22 18.6
       comp=Z,59nm,1.1s
OXF    Oxford            29.16  90   P       P       12 22 15.9 -0.1
       baz=292
OXF    Oxford            29.16  90   IAmb    IAmb    12 22 19.4
       comp=Z,75nm,0.9s
P46A   Rosedale          29.23  79   IAmb    IAmb    12 22 19.3
       comp=Z,68nm,0.9s
VBMS   Vicksburg         29.25  95   P       P       12 22 17.0 +0.2
       baz=296
VBMS   Vicksburg         29.25  95   IAmb    IAmb    12 22 21.9
       comp=Z,70nm,1.1s
Y45A   Yeager Farm, C    29.31  91   IAmb    IAmb    12 22 21.0
       comp=Z,63nm,1.4s
USIN   University of     29.33  82   IAmb    IAmb    12 22 20.1
       comp=Z,76nm,0.8s
344A   Westbrook Farm    29.44  97   IAmb    IAmb    12 22 23.1
       comp=Z,38nm,0.9s
WVT    Waverly           29.78  86   P       P       12 22 20.1 -1.4
WVT                                  pmax    pmax
       comp=Z,66nm,1.2s
WVT    Waverly           29.78  86   P       P       12 22 21.6 +0.1
       baz=290
WVT    Waverly           29.78  86   P       P       12 22 20.1 -1.4
WVT                                  IAmb    IAmb    12 22 24.5
       comp=Z,66nm,1.1s
BLO    Bloomington       29.86  80   IAmb    IAmb    12 22 24.9
       comp=Z,72nm,0.9s
COLD   Coldfoot          30.09 341   P       P       12 22 25.2 +1.3
       baz=141
GLMI   Grayling          30.21  68   P       P       12 22 25.4 +0.2
       baz=276
J47A   Sunmer            30.27  71   IAmb    IAmb    12 22 30.6
       comp=Z,102nm,1.4s
WCI    Wyandotte Cave    30.29  81   P       P       12 22 25.4 -0.6
WCI                                  pmax    pmax
       comp=Z,61nm,0.9s
WCI    Wyandotte Cave    30.29  81   P       P       12 22 26.4 +0.4
       baz=287
WCI    Wyandotte Cave    30.29  81   P       P       12 22 25.4 -0.6
WCI                                  IAmb    IAmb    12 22 28.8
       comp=Z,61nm,0.9s
346A   Big Creek Wild    30.43  96   IAmb    IAmb    12 22 31.3
       comp=Z,56nm,0.8s
P48A   Milroy            30.61  79   IAmb    IAmb    12 22 31.0
       comp=Z,39nm,1.0s
Z47A   Carrollton        30.70  92   IAmb    IAmb    12 22 32.9
       comp=Z,64nm,0.8s
L48A   N Adams           30.78  74   IAmb    IAmb    12 22 42.0
       comp=Z,66nm,1.1s
CLTN   Cedars of Leba    30.93  85   IAmb    IAmb    12 22 35.0
       comp=Z,35nm,1.1s
TOLK   Toolik Lake Re    31.06 343   P       P       12 22 33.2 +0.6
       baz=143
P49A   Miami Univ. Ec    31.12  78   P       P       12 22 33.2 -0.1
       baz=285
P49A   Miami Univ. Ec    31.12  78   P       P       12 22 33.2 -0.1
P49A                                 IAmb    IAmb    12 22 35.4
       comp=Z,59nm,1.0s
N49A   Columbus Grove    31.18  75   IAmb    IAmb    12 22 38.1
       comp=Z,60nm,1.2s
U49A   Red Boiling Sp    31.21  84   IAmb    IAmb    12 22 37.5
       comp=Z,44nm,0.9s
O49A   Covington         31.24  77   IAmb    IAmb    12 22 36.4
       comp=Z,49nm,0.9s
AAM    Ann Arbor         31.28  73   P       P       12 22 34.0 -0.7
       baz=281
SWET   Sewanee           31.55  87   IAmb    IAmb    12 22 39.8
       comp=Z,33nm,1.0s
LRAL   Lakeview Retre    31.59  91   P       P       12 22 36.9 -0.6
       baz=295
LRAL   Lakeview Retre    31.59  91   IAmb    IAmb    12 22 40.5
       comp=Z,57nm,1.0s
Y49A   Blount Mountai    31.70  89   IAmb    IAmb    12 22 40.9
       comp=Z,20nm,0.8s
R50A   Paris             31.75  80   IAmb    IAmb    12 22 41.6
       comp=Z,40nm,1.4s
T50A   Nancy             31.76  83   P       P       12 22 39.8 +0.8
T50A                                 IAmb    IAmb    12 22 41.8
       comp=Z,35nm,1.1s
FPAL   Fort Paine        32.04  88   IAmb    IAmb    12 22 44.8
       comp=Z,70nm,1.0s
ACSO   Alum Creek Sta    32.23  76   P       P       12 22 42.3 -0.8
       baz=285
ACSO   Alum Creek Sta    32.23  76   IAmb    IAmb    12 22 45.5
       comp=Z,56nm,0.9s
Q51A   Peebles           32.28  79   IAmb    IAmb    12 22 47.0
       comp=Z,30nm,1.0s
P51A   Williamsport      32.37  78   IAmb    IAmb    12 22 46.7
       comp=Z,64nm,0.9s
S51A   Beattyville       32.50  81   IAmb    IAmb    12 22 48.1
       comp=Z,33nm,0.9s
N51A   Ashland           32.51  75   IAmb    IAmb    12 22 49.7
       comp=Z,80nm,1.2s
V51A   Loudon            32.54  85   P       P       12 22 46.9 +1.1
Z51A   Franklin          32.86  89   IAmb    IAmb    12 22 51.8
       comp=Z,66nm,1.0s
TZTN   Tazewell          32.89  83   P       P       12 22 49.2 +0.2
       baz=290
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TZTN  Tazewell          32.89  83  IAmb   IAmb   12 22 52.0
      comp=Z,72nm,1.1s
P52A  Corning           33.02  77  P      P      12 22 50.1 +0.1
      baz=286
P52A  Corning           33.02  77  IAmb   IAmb   12 23 57.4
      comp=Z,37nm,1.2s
TKL   Tuckaleechee C    33.03  85  IAmb   IAmb   12 22 53.0
      comp=Z,51nm,0.9s
Q52A  Bidwell           33.10  78  IAmb   IAmb   12 22 53.0
      comp=Z,36nm,0.9s
O52A  Adamsville        33.11  76  IAmb   IAmb   12 22 52.7
      comp=Z,28nm,1.0s
ANM   Nome              33.28 330  P      P      12 22 50.1 -1.9
ANM                                pmax   pmax
      comp=Z,22nm,1.1s
ANM   Nome              33.28 330  P      P      12 22 50.1 -1.9
152A  Waverly Hall      33.48  90  IAmb   IAmb   12 22 57.0
      comp=Z,40nm,1.1s
O53A  New Philadelph    33.54  76  P      P      12 22 55.0 +0.5
      baz=285
O53A  New Philadelph    33.54  76  IAmb   IAmb   12 22 56.8
      comp=Z,27nm,0.8s
P53A  Whipple           33.61  77  IAmb   IAmb   12 22 57.4
      comp=Z,28nm,1.1s
451A  Vernon            33.61  94  P      P      12 22 56.7 +1.5
M53A  WI Miller and     33.64  73  P      P      12 22 55.1 -0.3
      baz=284
N53A  Lisbon            33.67  74  P      P      12 22 55.5 -0.2
N53A                               IAmb   IAmb   12 22 59.5
      comp=Z,48nm,1.1s
Q53A  Leroy             33.69  78  P      P      12 22 56.5 +0.6
      baz=287
L53A  Girard            33.82  72  P      P      12 22 57.0  0.0
      baz=283
BG3   Lake Jocassee     33.91  85  IAmb   IAmb   12 23 01.2
      comp=Z,46nm,1.1s
ERPA  Erie              33.98  72  P      P      12 22 58.0 -0.4
      baz=283
GOGA  Godfrey           34.13  88  P      P      12 22 60.0 +0.2
      baz=294
Q54A  Coxs Mills        34.17  78  IAmb   IAmb   12 23 03.1
      comp=Z,79nm,1.5s
S54A  Dingess, Beckl    34.17  80  P      P      12 22 59.9 -0.2
      baz=289
S54A  Dingess, Beckl    34.17  80  P      P      12 23 00.4 +0.3
S54A                               IAmb   IAmb   12 23 02.9
      comp=Z,99nm,1.4s
U54A  Nelsons Funny     34.21  82  P      P      12 23 00.4 -0.1
      baz=290
U54A  Nelsons Funny     34.21  82  IAmb   IAmb   12 23 03.6
      comp=Z,64nm,1.1s
N54A  Moraine State     34.26  74  P      P      12 23 00.2 -0.6
      baz=285
R54A  Victor            34.29  79  P      P      12 23 01.1  0.0
      baz=288
M54A  Oil Creek Stat    34.36  73  P      P      12 23 01.2 -0.5
      baz=284
H53A  Bobcaygeon        34.51  67  P      P      12 23 02.3 -0.6
      baz=280
MATQ  Matagami          34.56  58  P      P      12 23 03.6 +0.2
      baz=273
ALGO  Algonquin Park    34.66  65  P      P      12 23 05.6 +1.4
      baz=278
MCWV  Mont Chateau      34.71  76  P      P      12 23 04.9 +0.2
      baz=286
MCWV  Mont Chateau      34.71  76  IAmb   IAmb   12 23 07.3
      comp=Z,25nm,1.1s
G54A  Lake Saint Pet    34.72  66  P      P      12 23 05.5 +0.8
      baz=279
VLDQ  Val d'Or          34.81  61  IAmb   IAmb   12 23 06.7
      comp=Z,104nm,1.6s
R55A  Marlinton         34.91  78  P      P      12 23 06.5 -0.1
      baz=288
WVNY  West Valley, N    34.92  71  P      P      12 23 07.2 +0.6
M55A  Ridgway           35.03  73  P      P      12 23 07.6 +0.2
BLA   Blacksburg        35.03  80  P      P      12 23 07.8 +0.3
      baz=290
KMSC  Kings Mountain    35.07  84  P      P      12 23 08.4 +0.5
      baz=292
DELO  Deloro Mine       35.20  67  IAmb   IAmb   12 23 11.7
      comp=Z,29nm,0.9s
CMIG  Matias Romero     35.26 122  LR     LR     12 38 39.7
      comp=Z,852nm,18.5s,baz=281,slow=38
U56A  King              35.35  82  P      P      12 23 11.0 +0.7
      baz=291,SNR=6.3
U56A  King              35.35  82  IAmb   IAmb   12 23 13.2
      comp=Z,28nm,0.9s
Q56A  Snyder Ridge,     35.38  77  P      P      12 23 10.5  0.0
      baz=288,SNR=11
Q56A  Snyder Ridge,     35.38  77  IAmb   IAmb   12 23 15.7
      comp=Z,72nm,1.2s
T56A  Rocky Mt          35.38  81  P      P      12 23 10.9 +0.3
      baz=290,SNR=23
R56A  Bull Pasture M    35.41  78  P      P      12 23 10.8  0.0
      baz=288,SNR=7.2
M56A  Emporium          35.45  72  P      P      12 23 10.9 -0.1
      baz=285,SNR=8.3
M56A  Emporium          35.45  72  P      P      12 23 11.3 +0.2
M56A                               IAmb   IAmb   12 23 16.2
      comp=Z,58nm,0.9s
JSC   Jenkinsville      35.46  86  IAmb   IAmb   12 23 14.6
      comp=Z,40nm,1.3s
V56A  Mocksville        35.46  83  P      P      12 23 11.5 +0.3
      baz=292,SNR=9.2
O56A  Blue Knob Stat    35.48  75  P      P      12 23 11.3 -0.2
      baz=286,SNR=8.1
P56A  Dayton Farm, R    35.50  76  P      P      12 23 11.8 +0.3
      baz=287,SNR=12
N56A  West Decatur      35.51  73  P      P      12 23 12.6 +1.0
      baz=285,SNR=15
255A  Hazlehurst        35.51  90  IAmb   IAmb   12 23 14.4
      comp=Z,49nm,0.9s
S56A  Natural Bridge    35.52  79  P      P      12 23 11.0 -0.7
      baz=289
X56A  White Oak         35.55  85  P      P      12 23 12.7 +0.7
      baz=293,SNR=7.1
W56A  Indian Trail      35.65  84  P      P      12 23 13.7 +0.9
      baz=292,SNR=19
L56A  Greenwood         35.74  71  P      P      12 23 13.5 -0.1
      baz=284,SNR=19
K56A  Middlesex         35.78  70  P      P      12 23 13.7 -0.2
      baz=283
SSPA  Standing Stone    35.88  74  P      P      12 23 14.8  0.0
      baz=286
SSPA  Standing Stone    35.88  74  P      P      12 23 13.5 -1.2
BIRD  Birdtown, Kers    35.92  85  IAmb   IAmb   12 23 17.6
      comp=Z,59nm,1.4s
S57A  Dark Hollow, R    35.95  79  P      P      12 23 15.8 +0.4
      baz=289,SNR=7.3
S57A  Dark Hollow, R    35.95  79  P      P      12 23 16.7 +1.3
Q57A  Strasburg         35.95  77  P      P      12 23 15.1 -0.3
      baz=288,SNR=13
E55A  Montcerf-Lytto    35.96  64  P      P      12 23 15.0 -0.3
      baz=279
V57A  Coltrane Farms    35.98  82  P      P      12 23 14.7 -1.0
      baz=292,SNR=7.6
T57A  Hurt              35.98  80  P      P      12 23 14.8 -0.9
      baz=290
J56A  Wolcott           35.98  69  P      P      12 23 14.6 -1.0
      baz=283
W57A  Gilead            36.09  83  P      P      12 23 15.6 -1.0
      baz=292,SNR=11
W57A  Gilead            36.09  83  IAmb   IAmb   12 23 19.0
      comp=Z,68nm,1.3s
N57A  Milroy            36.10  73  P      P      12 23 15.4 -1.2
      baz=286,SNR=14
R57A  Stanardsville     36.10  78  P      P      12 23 16.5 -0.2
      baz=289,SNR=10
P57A  Homestead Farm    36.11  76  P      P      12 23 16.1 -0.7
      baz=287,SNR=13
P57A  Homestead Farm    36.11  76  IAmb   IAmb   12 23 19.9
      comp=Z,53nm,1.0s
U57A  Blanch            36.11  81  P      P      12 23 16.3 -0.5
      baz=291,SNR=14
O57A  Amberson          36.18  74  P      P      12 23 16.9 -0.5
      baz=286,SNR=20
Y57A  Sumter            36.23  85  P      P      12 23 18.0 +0.3
      baz=294
Y57A  Sumter            36.23  85  IAmb   IAmb   12 23 20.1
      comp=Z,49nm,1.2s
M57A  Sunshine Farm,    36.25  72  P      P      12 23 17.3 -0.6
      baz=285,SNR=10
D55A  Sainte-Anne-du    36.27  63  P      P      12 23 17.6 -0.5
      baz=278,SNR=5.9
Z57A  Bowman            36.28  87  P      P      12 23 19.0 +0.8
      baz=295
L57A  Andrews Acres     36.28  71  P      P      12 23 18.7 +0.5
      baz=284
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157A  Early Branch      36.32  88  P      P      12 23 18.4 -0.2
      baz=295,SNR=7.0
K57A  Scipio Center     36.35  70  P      P      12 23 19.3 +0.6
      baz=284
R58A  Rapidan           36.48  78  P      P      12 23 19.6 -0.3
      baz=289,SNR=14
V58A  Windy Hill, Pi    36.51  82  P      P      12 23 18.8 -1.4
      baz=292,SNR=20
V58A  Windy Hill, Pi    36.51  82  IAmb   IAmb   12 23 22.9
      comp=Z,72nm,0.9s
Q58A  Fox Den Farm,     36.52  76  P      P      12 23 20.3  0.0
      baz=288,SNR=9.1
T58A  Grand View Acr    36.54  80  P      P      12 23 19.3 -1.2
      baz=290,SNR=18
P58A  Pank, Wackersv    36.64  75  P      P      12 23 20.8 -0.5
      baz=288,SNR=8.7
E56A  St. Veronique     36.64  63  P      P      12 23 20.5 -0.7
      baz=279,SNR=5.2
CHGQ  Chibougamau       36.66  58  P      P      12 23 20.7 -0.7
      baz=275,SNR=5.9
S58A  Poland Farm, P    36.67  79  P      P      12 23 20.4 -1.2
      baz=290,SNR=8.3
S58A  Poland Farm, P    36.67  79  IAmb   IAmb   12 23 24.1
      comp=Z,34nm,0.8s
N58A  Sunbury           36.68  73  P      P      12 23 21.2 -0.4
      baz=286,SNR=11
N58A  Sunbury           36.68  73  IAmb   IAmb   12 23 26.9
      comp=Z,80nm,1.1s
R58B  Mineral           36.69  78  P      P      12 23 21.7 +0.1
      baz=289,SNR=5.8
R58B  Mineral           36.69  78  P      P      12 23 21.8 +0.1
I57A  Carthage          36.69  68  P      P      12 23 21.9 +0.3
      baz=282
W58A  Raeford           36.71  83  P      P      12 23 21.8 -0.1
      baz=293,SNR=13
U58A  Oxford            36.72  81  P      P      12 23 21.1 -0.9
      baz=291,SNR=11
M58A  Price’s Panora    36.73  72  P      P      12 23 22.2 +0.2
      baz=285,SNR=8.0
O58A  Lewisberry        36.73  74  P      P      12 23 21.8 -0.3
      baz=287,SNR=9.7
D56A  ZEC Mazanza, M    36.75  62  P      P      12 23 22.2 +0.1
      baz=279,SNR=6.9
NHSC  New Hope          36.76  87  P      P      12 23 22.0 -0.3
      baz=295,SNR=11
H57A  Richville         36.77  67  P      P      12 23 22.7 +0.4
      baz=282
X58A  Rowland           36.81  84  P      P      12 23 22.6 -0.2
      baz=293
Y58A  Scranton          36.82  85  P      P      12 23 22.9  0.0
      baz=294
BINY  Binghamton        36.86  71  P      P      12 23 23.8 +0.6
      baz=284,SNR=9.9
BINY  Binghamton        36.86  71  IAmb   IAmb   12 23 26.0
      comp=Z,58nm,0.9s
G57A  Newington         36.93  66  P      P      12 23 23.6  0.0
      baz=281
Z58A  St. Stephen       36.94  86  P      P      12 23 23.6 -0.3
      baz=295,SNR=7.2
K58A  Earlville         36.96  70  P      P      12 23 23.6 -0.5
      baz=284,SNR=6.2
K58A  Earlville         36.96  70  IAmb   IAmb   12 23 28.9
      comp=Z,61nm,0.9s
CBN   Corbin Frederi    36.98  77  P      P      12 23 25.0 +0.8
      baz=289,SNR=6.0
CBN   Corbin Frederi    36.98  77  IAmb   IAmb   12 23 27.5
      comp=Z,87nm,1.1s
L58A  Harry Jones Me    36.99  71  P      P      12 23 24.7 +0.4
      baz=285,SNR=13
TRQ   Mont Tremblant    37.02  64  P      P      12 23 25.1 +0.5
J58A  Remsen            37.08  68  P      P      12 23 25.4 +0.3
      baz=283
RES   Resolute Bay      37.12  13  LR     LR     12 40 14.8
      comp=Z,441nm,18.3s,baz=254,slow=39
RES   Resolute Bay      37.12  13  P      P      12 23 23.2 -1.8
RES                                pmax   pmax
      comp=Z,21nm,0.9s
RES   Resolute Bay      37.12  13  P      P      12 23 23.2 -1.8
R59A  King George, V    37.18  77  P      P      12 23 27.0 +1.1
      baz=289,SNR=7.2
KSPA  Keystone Colle    37.18  72  IAmb   IAmb   12 23 46.8
      comp=Z,78nm,1.6s
V59A  Middlesex         37.18  82  P      P      12 23 25.9  0.0
      baz=292,SNR=11
MVL   Millersville      37.19  74  IAmb   IAmb   12 23 31.4
      comp=Z,35nm,1.2s
S59A  Mechanicsville    37.19  78  P      P      12 23 25.9 -0.1
      baz=290,SNR=5.3
O59A  Robesonia         37.22  74  P      P      12 23 26.1 -0.1
      baz=287,SNR=6.4
I58A  Old Forge         37.23  68  P      P      12 23 26.4 +0.1
      baz=283
P59A  Jarrettsville     37.24  75  P      P      12 23 26.5 +0.1
      baz=288
W59A  Clinton           37.25  83  P      P      12 23 27.1 +0.6
      baz=293
T59A  Double "B" Far    37.27  79  P      P      12 23 27.4 +0.8
      baz=291,SNR=28
E57A  Chemin Saint G    37.27  63  P      P      12 23 26.8 +0.2
      baz=280
LONY  Lake Ozonia       37.30  66  P      P      12 23 27.2 +0.3
      baz=282
U59A  Littleton         37.31  81  P      P      12 23 27.6 +0.7
      baz=291,SNR=6.5
N59A  State Game Lan    37.35  73  P      P      12 23 26.3 -1.0
      baz=286
N59A  State Game Lan    37.35  73  IAmb   IAmb   12 23 33.0
      comp=Z,88nm,1.4s
X59A  McDuffie Farm,    37.36  84  P      P      12 23 27.5  0.0
      baz=293
Y59A  Loris             37.39  85  IAmb   IAmb   12 23 30.3
      comp=Z,48nm,0.7s
M59A  Waymart           37.43  71  P      P      12 23 28.5 +0.5
      baz=286,SNR=6.6
K59A  Cooperstown       37.53  69  P      P      12 23 29.4 +0.6
      baz=284,SNR=8.0
L59A  Walton            37.54  70  P      P      12 23 29.5 +0.6
      baz=285,SNR=7.7
L59A  Walton            37.54  70  IAmb   IAmb   12 23 34.0
      comp=Z,63nm,0.8s
G58A  Ormstown          37.56  65  P      P      12 23 29.5 +0.5
      baz=282,SNR=5.6
F58A  St-Lin Laurent    37.59  64  P      P      12 23 29.2  0.0
      baz=281
TEIG  Tepich            37.60 111  P      P      12 23 29.0 -0.5
TEIG                               IAmb   IAmb   12 23 32.3
      comp=Z,40nm,0.9s
J59A  Piesco            37.61  68  P      P      12 23 29.8 +0.3
      baz=284
H58A  Gabriels          37.63  67  P      P      12 23 30.5 +0.8
      baz=282,SNR=9.9
S60A  Water View        37.69  78  P      P      12 23 31.1 +1.0
      baz=290
LUPA  Lehigh Univers    37.73  73  P      P      12 23 31.0 +0.5
LUPA                               IAmb   IAmb   12 23 33.5
      comp=Z,70nm,1.1s
U60A  Pendleton         37.74  80  P      P      12 23 30.7 +0.1
      baz=291
WUPA  West Chester U    37.75  74  P      P      12 23 31.5 +0.8
P60A  Greenville        37.77  74  P      P      12 23 31.7 +0.8
      baz=288
P60A  Greenville        37.77  74  IAmb   IAmb   12 23 42.1
      comp=Z,32nm,1.0s
O60A  Telford           37.79  73  P      P      12 23 31.8 +0.8
      baz=287
X60A  Albert Glenn T    37.84  83  P      P      12 23 31.5 +0.1
      baz=293
W60A  Pink Hill         37.85  82  P      P      12 23 30.9 -0.7
      baz=293
N60A  Cedar Hill Far    37.85  72  P      P      12 23 31.4 -0.1
      baz=287,SNR=7.8
Q60A  Greensboro        37.87  76  P      P      12 23 31.6  0.0
      baz=289
E58A  La Victoria       37.87  63  P      P      12 23 31.8 +0.2
      baz=280,SNR=6.6
Y60A  Bolivia           37.88  84  P      P      12 23 32.3 +0.4
      baz=294
Y60A  Bolivia           37.88  84  IAmb   IAmb   12 23 45.8
      comp=Z,57nm,1.1s
V60A  Jim Taylor Roa    37.92  81  P      P      12 23 32.2  0.0
      baz=292
V60A  Jim Taylor Roa    37.92  81  IAmb   IAmb   12 23 35.2
      comp=Z,47nm,1.1s
H59A  Cadyville         37.92  66  P      P      12 23 32.1  0.0
      baz=282
FRNY  Flat Rock         37.95  66  IAmb   IAmb   12 23 43.3
      comp=Z,53nm,1.5s
D58A  Chemin du LacG    38.01  62  P      P      12 23 33.1 +0.3
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      baz=280,SNR=5.8
LATQ  La Tuque          38.03  61  P      P      12 23 33.1 +0.2
      baz=280,SNR=5.6
LATQ  La Tuque          38.03  61  P      P      12 23 34.0 +1.0
M60A  Port Jervis       38.07  72  P      P      12 23 33.6 +0.3
      baz=286,SNR=12
DWPF  Disney Wildern    38.12  95  P      P      12 23 33.7 -0.2
      baz=301
ODNJ  Ogdensburg        38.15  72  P      P      12 23 34.5 +0.5
ODNJ                               IAmb   IAmb   12 23 36.9
      comp=Z,52nm,0.9s
L60A  Shokan            38.18  70  P      P      12 23 33.9 -0.4
      baz=286,SNR=7.6
K60A  Five Rivers En    38.26  69  P      P      12 23 34.8 -0.1
      baz=285
F59A  Saint Guilaume    38.30  64  P      P      12 23 35.2  0.0
      baz=281
U61A  Possum Corner     38.33  80  P      P      12 23 35.3 -0.2
      baz=292,SNR=5.6
W61A  Ground Anchor     38.35  82  P      P      12 23 35.4 -0.3
      baz=293
I60A  Shoreham          38.38  67  P      P      12 23 35.3 -0.6
      baz=284,SNR=5.6
TRY   Troy              38.39  69  IAmb   IAmb   12 23 38.9
      comp=Z,37nm,0.9s
J60A  Lant Hill Farm    38.43  68  P      P      12 23 36.5 +0.1
      baz=284,SNR=6.7
N61A  South Mountain    38.47  72  P      P      12 23 36.4 -0.3
      baz=287
O61A  Allentown         38.48  73  P      P      12 23 36.9 +0.1
      baz=288
L61A  Hillsdale 1, H    38.61  70  P      P      12 23 37.9  0.0
      baz=286
H60A  Morristown        38.63  66  P      P      12 23 38.5 +0.4
      baz=283,SNR=5.8
VT1   Waterbury         38.65  66  IAmb   IAmb   12 23 51.8
      comp=Z,44nm,1.1s
PAL   Palisades         38.68  72  P      P      12 23 39.2 +0.7
      baz=287
K61A  Williamstown      38.69  69  P      P      12 23 38.9 +0.3
      baz=285
M61A  Granite Spring    38.69  71  P      P      12 23 38.5 -0.1
      baz=286
G60A  Masonville        38.77  65  P      P      12 23 39.1 -0.1
      baz=283
KSCT  Kent School, K    38.78  71  IAmb   IAmb   12 23 59.8
      comp=Z,173nm,1.9s
F60A  Warwick           38.85  64  P      P      12 23 39.8 -0.1
      baz=282
E60A  Ste Agathe de     39.11  63  P      P      12 23 42.1  0.0
      baz=282,SNR=7.0
I61A  Oroboro, Fairl    39.12  67  P      P      12 23 42.3 +0.1
      baz=284
L61B  Northampton       39.16  69  P      P      12 23 42.9 +0.3
      baz=286
H61A  Lyndonville       39.17  66  P      P      12 23 42.7  0.0
      baz=284,SNR=6.6
LBNH  Lisbon            39.24  66  P      P      12 23 42.1 -1.1
LBNH                               pmax   pmax
      comp=Z,58nm,1.0s
LBNH  Lisbon            39.24  66  P      P      12 23 43.0 -0.2
      baz=284,SNR=7.2
LBNH  Lisbon            39.24  66  P      P      12 23 42.1 -1.1
LBNH                               IAmb   IAmb   12 23 46.8
      comp=Z,58nm,0.9s
G61A  St-Isidore-de-    39.28  64  P      P      12 23 42.1 -1.4
      baz=283
M62A  Hamden            39.29  71  P      P      12 23 43.4 -0.1
      baz=287
D60A  Saint Jean D’O    39.36  62  P      P      12 23 43.1 -1.0
      baz=281
F61A  St Evariste       39.50  63  P      P      12 23 45.5 +0.1
      baz=282,SNR=15
H62A  Milan             39.70  65  P      P      12 23 47.5 +0.5
      baz=284,SNR=5.8
H62A  Milan             39.70  65  P      P      12 23 48.0 +1.0
H62A                               IAmb   IAmb   12 24 00.7
      comp=Z,65nm,1.1s
I62A  Tamworth          39.75  67  P      P      12 23 47.8 +0.4
      baz=285
E61A  Lac Etchemin      39.75  62  P      P      12 23 48.4 +0.9
      baz=282
D61A  St Aubert, Com    39.80  61  P      P      12 23 47.5 -0.3
      baz=281,SNR=8.7
G62A  West of Eustis    39.98  64  P      P      12 23 49.2 -0.1
      baz=283
G62A  West of Eustis    39.98  64  IAmb   IAmb   12 24 12.1
      comp=Z,48nm,1.2s
J63A  Strafford         40.08  67  P      P      12 23 51.0 +0.8
      baz=285
L63A  North Scituate    40.09  70  P      P      12 23 50.1 -0.2
      baz=287
FRB   Frobisher Bay     40.23  35  LR     LR     12 40 50.5
      comp=Z,2µm,18.8s,baz=264,slow=37
G63A  Kingsbury         40.64  64  P      P      12 23 55.5 +0.8
      baz=284
PKME  Peaks-Kenny Pk    40.82  64  P      P      12 23 56.6 +0.3
      baz=284
G64A  Maxfield          41.19  64  P      P      12 24 00.3 +1.0
      baz=284
D63A  Stockholm         41.22  61  P      P      12 23 59.6 +0.1
      baz=283
F64A  Sherman           41.33  63  P      P      12 24 01.0 +0.6
      baz=284
E64A  Bridgewater       41.55  62  P      P      12 24 02.2 -0.1
      baz=284,SNR=5.9
G65A  Princeton         42.02  64  P      P      12 24 07.1 +1.0
      baz=285
TGUH  Tegucigalpa,Un    42.50 117  P      P      12 24 09.3 -1.2
BATG  Bathurst New B    42.53  60  P      P      12 24 09.8 -0.5
BATG                               IAmb   IAmb   12 24 12.9
      comp=Z,47nm,0.9s
TULEG Thule             43.43  17  P      P      12 24 14.4 -2.8
BILL  Bilibino          45.13 330⇑iP      P      12 24 32.0 +1.1
BILL                              eS      S      12 31 22.5  +13
BILL                              eSS     SS     12 34 35.2 +3.5
BILL                               pmax   pmax
      comp=Z,56nm,1.7s
BILL                               MLR    MLR
      comp=Z,695nm,16.0s
BILL  Bilibino          45.13 330  P      P      12 24 27.2 -3.8
JTS   Las Juntas de     46.77 118  P      P      12 24 44.7 +0.2
      comp=Z,11nm,0.8s,baz=58,slow=8.1,SNR=5.3
JTS   Las Juntas de     46.77 118  P      P      12 24 44.7 +0.2
JTS                                pmax   pmax
      comp=Z,15nm,0.9s
DRLN  Deer Lake         47.55  55  P      P      12 24 50.3 +0.2
SFJD  Kangerlussuaq     47.78  31  LR     LR     12 43 54.1
      comp=Z,1µm,19.6s,baz=271,slow=35
SFJD  Kangerlussuaq     47.78  31 i P      P      12 24 52.6 +1.0
SFJD  Kangerlussuaq     47.78  31   P      P      12 24 52.0 +0.3
SFJD  Kangerlussuaq     47.78  31 i P      P      12 24 52.6 +1.0
SFJD  Kangerlussuaq     47.78  31 i P      P      12 24 52.6 +1.0
TAOE  Nuku Hiva Isla    50.86 199 eT      T      13 19 45.0
      comp=Z,751nm,0.4s
PET   Petropavlovsk     51.09 311 eP      P      12 25 26.8  +10
PET                               eS      S      12 32 38.6 +4.1
SUMG  Summit            51.12  23 i P      P      12 25 19.3 +1.7
SUMG                               pmax   pmax
      comp=Z,64nm,0.8s
SUMG  Summit            51.12  23   P      P      12 25 17.8 +0.2
SUMG                               IAmb   IAmb   12 25 36.3
      comp=Z,63nm,1.2s
SUMG  Summit            51.12  23 i P      P      12 25 19.3 +1.7
      comp=Z,64nm,0.8s
SUMG  Summit            51.12  23 i P      P      12 25 19.3 +1.7
SUMG                               IAmb   IAmb   12 25 20.2
      comp=Z,64nm,0.8s
SEY   Seymchan          51.48 325  P      P      12 25 21.3 +1.4
      comp=Z,27nm,0.9s,baz=84,slow=5.9,SNR=39
SEY   Seymchan          51.48 325⇑iP      P      12 25 21.5 +1.6
ICESG Greenland Ices    51.50  27 i P      P      12 25 21.7 +1.3
PETK  Petropavlovsk-    51.61 312  P      P      12 25 22.1 +1.1
      comp=Z,10.0nm,0.8s,baz=74,slow=12,SNR=12
PETK                               LR     LR     12 43 49.7
      comp=Z,212nm,21.9s,baz=80,slow=32
MA2   Magadan           53.20 321  P      P      12 25 34.3 +1.6
      comp=Z,17nm,0.8s,baz=85,slow=7.6,SNR=9.3
MA2   Magadan           53.20 321ceP      P      12 25 34.7 +2.0
MA2                                pmax   pmax
      comp=Z,32nm,1.3s
SKR   Severo-Kuril’s    53.36 309 eP      P      12 25 50.6  +17
SKR                               eS      S      12 33 05.0 -0.6
SKR                                pmax   pmax
      comp=Z,400nm,5.7s
SKR                                pmax   pmax
      comp=Z,900nm,5.5s
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SKR				MLR	MLR		
	comp=Z,200nm,19.0s						
SKR				MLR	MLR		
	comp=Z,600nm,20.0s						
MOTC	Monteria, Cord	54.27	111	*e*P	P	12 25 42.2	+1.1
DAG	Danmarks Havn	54.72	16	*i* P	P	12 25 44.7	+1.2
	comp=Z,9.7nm,0.9s						
DAG	Danmarks Havn	54.72	16	*i* P	P	12 25 44.8	+1.2
DAG				IAmb	IAmb	12 25 45.4	
	comp=Z,9.7nm,0.9s						
SJG	San Juan	55.32	95	P	P	12 25 49.1	+0.4
	comp=Z,15nm,0.9s,baz=48,slow=8.7,SNR=3.2						
SJG	San Juan	55.32	95	P	P	12 25 47.6	-1.1
SJG				IAmb	IAmb	12 26 12.0	
	comp=Z,50nm,1.2s						
SMLC	San Martn de	55.40	110	*e*P	P	12 25 50.4	+1.1
DBG	Daneborg	55.48	19	*i* P	P	12 25 51.1	+2.0
DBG				IAmb	IAmb	12 25 52.1	
	comp=Z,34nm,1.4s						
HUMP	Col San Antoni	55.53	95	IAmb	IAmb	12 26 06.9	
	comp=Z,23nm,0.9s						
ZARC	Zaragoza, Cauc	55.74	112	*e*P	P	12 25 52.7	+0.9
MTP	Monte Pirata	55.78	95	P	P	12 25 52.9	+0.8
CBOC	Ciudad Bolivar	56.07	114	*e*P	P	12 25 56.4	+2.0
HELC	Santa Helena	56.18	113	*e*P	P	12 25 57.1	+1.7
PLMC	San Jos del P	56.57	115	*e*P	P	12 25 58.8	+1.0
PTBC	PUERTO BERRIO,	56.69	112	*e*P	P	12 25 59.3	+0.8
TIXI	Tiksi	56.77	339	*d i*P	P	12 25 59.1	+0.7
TIXI				pmax	pmax		
	comp=Z,52nm,0.8s						
TIXI	Tiksi	56.77	339	P	P	12 25 55.5	-2.9
BRRC	Barranca, Sant	56.82	111	*e*P	P	12 25 57.6	-1.9
NORC	Norcasia	57.08	113	*e*P	P	12 26 03.0	+1.6
YOTC	Yotoco, Valle	57.19	116	*e*P	P	12 26 03.0	+0.8
RREF	El Recreo	57.22	114	*e*P	P	12 26 05.6	+2.6
TOLC	Tolima	57.46	115	*e*P	P	12 26 06.8	+2.4
ANIL	Santa Ana	57.47	115	*e*P	P	12 26 05.3	+0.9
BARC	Barichara	57.55	111	*e*P	P	12 26 05.6	+0.6
SPBC	San Pablo de B	57.58	113	*e*P	P	12 26 05.2	+0.2
SDV	Santo Domingo	57.83	107	P	P	12 26 06.4	-0.5
	comp=Z,7.5nm,0.7s,baz=268,slow=5.5,SNR=7.5						
SDV	Santo Domingo	57.83	107	P	P	12 26 05.4	-1.4
ROSC	El Rosal	57.98	114	P	P	12 26 10.5	+2.4
	comp=Z,8.7nm,0.5s,baz=354,slow=13,SNR=6.3						
ROSC				LR	LR	12 54 49.0	
	comp=Z,289nm,19.3s,baz=2.5,slow=40						
ORTC	Ortega, Tolima	58.00	115	*e*P	P	12 26 09.0	+1.1
BBAC	Balboa, Cauca	58.00	118	*e*P	P	12 26 08.2	+0.2
RUSC	La Rusia	58.11	112	*e*P	P	12 26 10.3	+1.2
MARP	Paez Belalcaza	58.28	117	*e*P	P	12 26 12.5	+2.4
SOTA	Rioblanco	58.35	118	*e*P	P	12 26 19.3	+8.4
PCON	Cinco Dias	58.35	117	*e*P	P	12 26 11.8	+0.8
OTAV	Otavalo	58.53	121	P	P	12 26 12.4	+0.4
OTAV				pmax	pmax		
	comp=Z,25nm,0.9s						
OTAV	Otavalo	58.53	121	P	P	12 26 12.4	+0.4
OTAV				IAmb	IAmb	12 26 15.7	
	comp=Z,25nm,0.9s						
OTAV	Otavalo	58.53	121	*e*P	P	12 26 14.4	+2.4
CHIC	Chingaza	58.54	113	*e*P	P	12 26 12.6	+0.5
VAH	Vaihoa	59.06	205	*e*T	T	13 29 54.3	
	comp=Z,26nm,0.4s						
SPITS	Spitsbergen Ar	59.45	8	LR	LR	12 51 42.7	
	comp=Z,533nm,18.1s,baz=5.0,slow=36						
PUAC	Puerto Asis, P	59.54	119	*e*P	P	12 26 20.5	+1.9
MACC	Macarena, Meta	60.23	115	*e*P	P	12 26 24.2	+0.9
H11N3	WAKE ISLAND Hy	60.56	272	T	T	13 33 16.4	
	baz=53,slow=74,SNR=54						
H11N2	WAKE ISLAND Hy	60.56	272	T	T	13 33 16.5	
	baz=53,slow=74,SNR=39						
H11N1	WAKE ISLAND Hy	60.57	272	T	T	13 33 26.0	
	baz=53,slow=74,SNR=41						
TYV	Tymovskoe	61.00	314	*e*P	P	12 26 29.3	+1.2
TYV				pmax	pmax		
	comp=Z,700nm,5.2s						
TYV				pmax	pmax		
	comp=Z,18nm,1.6s						
H11S1	WAKE ISLAND Hy	61.43	271	T	T	13 35 13.4	
	baz=54,slow=75,SNR=52						
H11S2	WAKE ISLAND Hy	61.43	271	T	T	13 35 13.7	
	baz=54,slow=75,SNR=25						
YAK	Yakutsk	61.44	329	*e*P	P	12 26 32.0	+1.2
YAK				pmax	pmax		
	comp=Z,70nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.1s						
YAK	Yakutsk	61.44	329	P	P	12 26 29.3	-1.5
H11S3	WAKE ISLAND Hy	61.44	271	T	T	13 35 19.2	
	baz=54,slow=75,SNR=22						
MEH	Mehetia	61.68	204	*e*T	T	13 33 10.4	
	comp=E,56nm,0.2s						
TIAR	Tiarei	61.80	206	*e*T	T	13 33 18.2	
	comp=E,19nm,0.3s						
PPT2	Papeete2	61.90	206	*e*S	S	12 35 02.5	+4.0
	comp=E,287nm,28.2s						
PPT2				*e*LR	LR	12 44 41.6	
	comp=E,1µm,28.5s,baz=30						
PPT2	Papeete2	61.90	206	*e*T	T	13 33 25.7	
	comp=E,13nm,0.3s						
PAE	Paea	61.97	206	*e*T	T	13 33 31.1	
	comp=E,6.4nm,0.4s						
TVO	Taravao	61.98	206	*e*T	T	13 33 31.8	
	comp=E,4.6nm,0.3s						
YUK	Yuzh-Kuril'sk	62.53	306	*e*P	P	12 26 36.1	-2.4
YUK				*e*		12 27 13.8	
YUK				*e*S	S	12 35 00.9	-5.0
YUK				*e*		12 36 24.8	
YUK				*e*SSS	SSS	12 41 59.4	
YUK				pmax	pmax		
	comp=N,38nm,0.9s						
YUK				pmax	pmax		
	comp=Z,59nm,0.9s						
YUK				pmax	pmax		
	comp=E,42nm,0.6s						
YUK				pmax	pmax		
	comp=Z,321nm,1.5s						
YSS	Yuzh-Sakhalins	62.91	310	*e*P	P	12 26 41.8	+0.8
YSS				*e*		12 35 20.6	
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
RKT	Rikitea	63.84	190	*e*S	S	12 35 28.1	+5.8
	comp=Z,295nm,24.5s						
RKT				*e*LQ	LQ	12 42 44.8	
	comp=Z,2µm,31.8s						
RKT				*e*LR	LR	12 45 55.6	
	comp=Z,399nm,29.2s						
ATAH	Atahualpa	64.20	126	P	P	12 26 52.4	+2.0
	comp=Z,9.5nm,0.8s,baz=42,slow=12,SNR=4.7						
TEY	Ternei	67.55	311	*e*P	P	12 27 06.5	-4.6
NRIK	Noril'sk	67.84	348	P	P	12 27 13.7	+1.1
	comp=Z,8.8nm,0.9s,baz=15,slow=3.4,SNR=9.1						
NRIK				LR	LR	12 58 34.2	
	comp=Z,238nm,19.6s,baz=41,slow=38						
NRIK	Noril'sk	67.84	348	P	P	12 27 10.8	-1.8
ARCES	ARCESS Array B	68.29	11	P	P	12 27 15.5	+0.1
	comp=Z,6.1nm,0.9s,baz=357,slow=6.8,SNR=3.9						
ARCES				LR	LR	12 57 22.1	
	comp=Z,373nm,20.1s,baz=320,slow=36						
RPN	Rapa Nui	68.89	165	LR	LR	12 49 41.5	
	comp=Z,185nm,21.3s,baz=346,slow=29						
RAR	Rarotonga	69.11	214	LR	LR	12 50 36.0	
	comp=Z,328nm,19.0s,baz=26,slow=30						
BOD	Bodaibo	70.19	331	*e*P	P	12 27 27.2	-0.1
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
USA0B	Ussuriysk Arra	70.70	312	P	P	12 27 28.3	-2.4
USA0B	Ussuriysk Arra	70.70	312	P	P	12 27 28.3	-2.4
USRK	Ussuriysk Ar.	70.70	312	P	P	12 27 31.5	+0.9
	comp=Z,10nm,0.7s,baz=53,slow=5.3,SNR=26						
USRK				LR	LR	12 53 53.1	
	comp=Z,123nm,21.8s,baz=48,slow=32						
MAT	Matsushiro	71.56	302	P	P	12 27 36.0	0.0
MAT				*e*S	S	12 36 50.0	-5.1
MJAR	Matsushiro Arr	71.56	302	P	P	12 27 35.8	-0.2
	comp=Z,4.4nm,0.8s,baz=53,slow=4.9,SNR=10						
MJAR				LR	LR	12 53 15.7	
	comp=Z,181nm,21.0s,baz=60,slow=31						
PTGA	Pitinga	72.11	107	P	P	12 27 40.5	+0.9
	comp=Z,22nm,0.8s,baz=325,slow=5.3,SNR=32						
PTGA	Pitinga	72.11	107	P	P	12 27 37.9	-1.7
PTGA				IAmb	IAmb	12 27 42.2	
	comp=Z,24nm,0.8s						
NB2	NORSAR Subarra	72.92	20	P	P	12 27 44.6	+0.8
	comp=Z,8.0nm,0.8s,baz=327,slow=5.6						
NOA	NORSAR Array B	72.92	20	P	P	12 27 44.5	+0.7
	comp=Z,5.2nm,0.8s,baz=328,slow=5.6,SNR=11						
NOA				LR	LR	12 59 09.4	
	comp=Z,323nm,21.0s,baz=320,slow=35						
HIA	Hailar	73.78	322⇓	*e*P	P	12 27 50.0	+0.9
HIA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	74.34	20	LR	LR	12 59 43.9	
	comp=Z,708nm,20.2s,baz=326,slow=35						
SAML	Samuel	75.54	115	P	P	12 27 57.7	-1.9
SAML				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SAML	Samuel	75.54	115	P	P	12 27 57.7	-1.9
FINES	FINESS Array B	75.88	14	P	P	12 28 01.8	+0.9
	comp=Z,9.5nm,1.0s,baz=258,slow=1.8,SNR=13						
FINES				LR	LR	13 02 00.2	
	comp=Z,409nm,19.2s,baz=342,slow=36						
KSRS	Korea Array	77.37	309	P	P	12 28 10.9	+1.2
	comp=Z,3.7nm,0.8s,baz=60,slow=6.2,SNR=8.2						
KSRS				LR	LR	12 57 45.8	
	comp=Z,146nm,19.6s,baz=69,slow=32						
KSRS	Korea Array	77.37	309	P	P	12 28 11.0	+1.2
PB16	IPOC Station P	78.30	126	P	P	12 28 13.1	-2.6
KLMR	Klimovskoe	78.33	7	*e*P	P	12 28 15.1	+0.4
KLMR				pmax	pmax		
	comp=Z,43nm,1.4s						
KLMR	Klimovskoe	78.33	7	*e*P	P	12 28 15.1	+0.4
KLMR				AMP		12 28 31.4	
	comp=Z,43nm,1.4s						
TLY	Talaya	78.75	331	*e*P	P	12 28 19.3	+2.1
TLY				*e*S	S	12 38 23.0	+8.4
TLY				pmax	pmax		
	comp=Z,49nm,1.6s						
TLY				MLR	MLR		
	comp=Z,770nm,16.0s						
TLY	Talaya	78.75	331	P	P	12 28 13.2	-4.0
TLY				IAmb	IAmb	12 28 31.1	
	comp=Z,32nm,1.4s						
MNMC	Minye Minye	78.85	127	P	P	12 28 15.0	-3.5
GO01	Chusmiza	79.50	127	P	P	12 28 21.8	-0.4
BMRD	Maredsous	79.69	30	*d*PcP	P	12 28 24.1	+1.7
MOY	Mondy	79.71	333	*e*P	P	12 28 24.6	+2.0
MOY				pmax	pmax		
	comp=Z,20nm,2.0s						
BGES	Gesves	79.74	30	*d*PcP	P	12 28 24.1	+1.4
BSTI	Sart Tilman	79.76	29	*d*PcP	P	12 28 23.6	+0.9
BCLA	Clavier	79.80	29	*d*PcP	P	12 28 24.6	+1.7
ZAK	Zakamensk	79.94	331	*e*P	P	12 28 25.1	+1.3
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PGAV	Gavieira, Arco	80.25	42	*e*LR	LR	12 54 37.3	
	comp=Z,329nm,20.0s						
PB01	IPOC Station P	80.37	128	P	P	12 28 23.6	-2.9
ULN	Ulaanbaatar	80.47	327	*ce*P	P	12 28 28.1	+1.3
ULN				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ULN	Ulaanbaatar	80.47	327	P	P	12 28 22.2	-4.7
PCAB	Cabril	80.56	42	*e*P	P	12 28 29.1	+1.8
WLF	Walferdange	80.73	29	*d*P	P	12 28 24.3	-3.7
SONM	Songino Array	80.76	327	P	P	12 28 30.1	+1.8
	comp=Z,3.6nm,0.7s,baz=52,slow=3.3,SNR=28						
SONM				LR	LR	13 03 34.1	
	comp=Z,503nm,20.6s,baz=40,slow=35						
POLO	Lamas de Olo	80.92	42	*e*P	P	12 28 30.6	+1.3
	comp=Z,18nm,1.6s						
GUMO	Guam	81.00	280	LR	LR	12 56 31.4	
	comp=Z,223nm,21.2s,baz=63,slow=30						
PVRL	Vila Real	81.03	42	*e*P	P	12 28 31.3	+1.5
	comp=Z,44nm,1.6s						
PBRG	Braganca	81.14	42	*e*P	P	12 28 31.7	+1.3
	comp=Z,22nm,1.4s						
PVIS	Viseu	81.35	43	*e*P	P	12 28 32.5	+1.0
	comp=Z,25nm,1.4s						
COI	Coimbra	81.45	44	IAmb	IAmb	12 28 48.1	
	comp=Z,19nm,1.0s						
MVO	Moncorvo	81.47	42	*e*P	P	12 28 33.5	+1.3
	comp=Z,17nm,1.4s						
MVO	Moncorvo	81.47	42	*e*LR	LR	12 55 16.9	
	comp=Z,346nm,20.0s						
PCAS	Casmilo, Conde	81.52	44	*e*P	P	12 28 33.6	+1.2
	comp=Z,21nm,1.4s						
PMOZ	Porto Moniz, M	81.60	54	*e*LR	LR	12 55 23.4	
	comp=Z,290nm,18.0s						
CLL	Collm	81.73	25	*i* P	P	12 28 34.9	+1.6
	comp=Z,17nm,1.2s						
CLL				Lm	MLR	13 05 00.0	
	comp=N,400nm,18.6s						
CLL				Lm	MLR	13 05 00.0	
	comp=E,300nm,21.6s						
CLL				Lm	MLR	13 05 00.0	
	comp=Z,500nm,18.8s						
PSBE	So Bento	81.75	44	*e*P	P	12 28 35.1	+1.5
	comp=Z,24nm,1.5s						
MTE	Manteigas	81.76	43	*e*P	P	12 28 35.1	+1.4
	comp=Z,18nm,1.1s						
MTE	Manteigas	81.76	43	*e*LR	LR	12 55 19.9	
	comp=Z,390nm,20.0s						
LVC	Limon Verde	81.91	129	P	P	12 28 36.9	+1.9
	comp=Z,4.6nm,0.8s,baz=286,slow=1.9,SNR=5.0						
LVC	Limon Verde	81.91	129	P	P	12 28 32.0	-2.9
SIV	San Ignacio	82.00	119	P	P	12 28 35.9	+0.8
	comp=Z,14nm,0.7s,baz=312,slow=5.1,SNR=58						
PCBR	Castelo Branco	82.21	43	*e*P	P	12 28 37.1	+1.1
	comp=Z,25nm,2.0s						
BRG	Berggiesshubel	82.41	25⇑	*i*P	P	12 28 38.6	+1.8
BRG				Amp		12 28 39.8	
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	82.41	25⇑	*i*P	P	12 28 38.6	+1.8
BRG				pmax	pmax		
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	82.41	25⇑	*i*P	P	12 28 38.6	+1.8
BRG				Amp		12 28 39.8	
	comp=Z,18nm,0.9s						
ZALV	Zalesovo Beam	82.42	342	P	P	12 28 38.2	+1.4
	comp=Z,5.7nm,0.9s,baz=15,slow=6.2,SNR=27						
ZALV				LR	LR	13 07 12.9	
	comp=Z,125nm,19.5s,baz=6.5,slow=37						
NKC	Novy Kostel	82.48	26	*e*P	P	12 28 38.8	+1.6
NKC	Novy Kostel	82.48	26	*e*P	P	12 28 38.8	+1.6
GRF	Grafenberg Arr	82.53	27	*e*P	P	12 28 39.3	+1.8
	comp=Z,11nm,1.0s,baz=328,slow=4.8						
PMRV	Marv??o	82.55	44	*e*P	P	12 28 39.1	+1.3
	comp=Z,25nm,0.9s						
PMRV	Marv??o	82.55	44	*e*LR	LR	12 55 40.6	
	comp=Z,248nm,20.0s						
MNK	Minsk	82.73	15	*i* P	P	12 28 38.2	-0.2
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	12 28 38.2	-0.2
	comp=N,6.0nm,1.0s						
MNK				*i* P	P	12 28 38.2	-0.2
	comp=Z,8.0nm,1.0s						
MNK				*i* PcP	sP	12 28 42.9	+1.2
MNK				*i* PP	PP	12 31 47.9	+0.5
MNK				*i* PPP	PPP	12 33 39.0	
MNK				*i* S	S	12 38 56.7	+0.8
MNK				*i* SS	SS	12 44 20.0	+3.4
MNK				*i* SSS	SSS	12 47 48.5	
MNK				*i* LQ	LQ	12 55 17.0	
MNK				*i* LR	LR	13 01 03.3	
MNK				*i* LRM	MLR	13 06 20.1	
	comp=N,227nm,17.9s						
MNK				*i* LRM	MLR	13 06 25.2	
	comp=E,19nm,17.9s						
MNK				*i* LRM	MLR	13 06 25.2	
	comp=Z,212nm,17.9s						
PESTR	Estremoz	82.86	44	*e*P	P	12 28 40.4	+1.0
	comp=Z,35nm,1.6s						
PESTR	Estremoz	82.86	44	P	P	12 28 39.5	+0.1
EVO	Evora	82.88	44	*e*P	P	12 28 40.8	+1.3
	comp=Z,27nm,1.8s						
PNCL	Nicolau / Gran	82.91	45	*e*P	P	12 28 41.1	+1.4
	comp=Z,24nm,1.9s						
SVE	Sverdlovsk	82.96	357	*e*P	P	12 28 42.1	+2.5
KSP	Ksiaz	83.16	23	*e*P	P	12 28 42.8	+2.0
CHVC	Chvalec	83.31	23	*e*x	x	12 35 12.1	
PRU	Pruhonice	83.37	25	*e*P	P	12 28 42.6	+0.8
PRU	Pruhonice	83.37	25	*e*P	P	12 28 42.6	+0.8
UPC	Upice	83.37	24	*e*P	P	12 28 42.8	+0.9
UPC	Upice	83.37	24	*e*P	P	12 28 42.8	+0.9
OSTC	Ostas	83.39	23	*e*P	P	12 28 43.3	+1.3
ARU	Arti	83.44	358	P	P	12 28 43.1	+1.0
	comp=Z,0.4nm,0.3s,baz=3.2,slow=8.2,SNR=4.7						
ARU	Arti	83.44	358	*c i*P	P	12 28 44.6	+2.6
ARU						12 31 53.0	
ARU				S	S	12 39 04.9	+1.8
ARU				SS	SS	12 44 27.4	+0.5
ARU				pmax	pmax		
	comp=Z,14nm,1.3s						
PBCC	Pribram	83.46	25	*e*P	P	12 28 43.9	+1.6
PCVE	Castro Verde	83.52	45	*e*P	P	12 28 44.9	+2.0
	comp=Z,44nm,1.8s						
OBN	Obninsk	83.60	10⇑	*e*P	P	12 28 43.7	+0.8
OBN				*e*		12 31 58.7	
OBN				pmax	pmax		
	comp=Z,21nm,1.3s						
OBN				MLR	MLR		
	comp=Z,148nm,13.0s						
DPC	Dobruska-Polom	83.60	23	*e*P	P	12 28 44.8	+1.7
DPC				*e*x	x	12 35 16.0	
KHC	Kasperske Hory	83.80	26⇓	*e*P	P	12 28 46.3	+2.2
KHC				pmax	pmax		
	comp=Z,19nm,1.3s						
KHC	Kasperske Hory	83.80	26	*e*P	P	12 28 45.7	+1.6
KHC				*e*x	x	12 35 13.3	
PVAQ	Vaqueiros	83.86	45	*e*P	P	12 28 46.8	+2.2
	comp=Z,39nm,1.8s						
PVAQ	Vaqueiros	83.86	45	*e*LR	LR	12 56 14.2	
	comp=Z,241nm,16.0s						
HHC	Hu-ho-hao-te	83.87	320	*e*P	P	12 28 47.0	+2.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
KRLC	Kraliky	83.99	23	*e*P	P	12 28 46.3	+1.2
KRLC	Kraliky	83.99	23	*e*P	P	12 28 46.3	+1.2
PAB	San Pablo	84.04	42	P	P	12 28 45.7	+0.1
PAB				pmax	pmax		
	comp=Z,36nm,1.5s						
PAB	San Pablo	84.04	42	P	P	12 28 45.7	+0.1
PAB				IAmb	IAmb	12 28 49.1	
	comp=Z,36nm,1.4s						
DAVA	Damuels	84.09	29	*e*P	P	12 28 48.2	+2.4
	comp=Z,22nm,1.1s						
GERES	GERESS Array B	84.09	26	P	P	12 28 47.0	+1.3
	comp=Z,4.2nm,0.9s,baz=343,slow=4.2,SNR=16						
GERES				LR	LR	13 07 19.6	
	comp=Z,474nm,18.3s,baz=330,slow=36						
GERES	GERESS Array B	84.09	26	P	P	12 28 47.0	+1.3
ESBB	Sonseca Array	84.14	41	IAmb	IAmb	12 28 48.7	
	comp=Z,19nm,1.2s						
ESDC	Sonseca Array	84.14	41	P	P	12 28 47.5	+1.5
	comp=Z,10.0nm,0.9s,baz=311,slow=4.7,SNR=55						
ESDC				LR	LR	13 03 22.0	
	comp=Z,202nm,19.3s,baz=320,slow=34						
RETA	Reutte	84.24	28	*e*P	P	12 28 48.5	+2.1
	comp=Z,8.8nm,1.0s						
MORC	Moravsky Berou	84.48	23	*e*P	P	12 28 48.7	+1.1
MOTA	Moosalm	84.48	28	*i* P	P	12 28 49.9	+2.1
	comp=Z,18nm,1.1s,SNR=5.2						
OKC	Ostrava-Krasne	84.60	23	*e*P	P	12 28 44.8	-3.3
VRAC	Vranov	84.61	24	*e*P	P	12 28 49.8	+1.6
FETA	Feichten	84.62	28	*e*P	P	12 28 51.1	+2.6
	comp=Z,17nm,0.9s						
SQTA	Sankt Quirin	84.63	28	*e*P	P	12 28 50.9	+2.4
	comp=Z,25nm,1.1s,SNR=6.8						
WATA	Walderalm	84.66	28	*i* P	P	12 28 50.8	+2.1
	comp=Z,26nm,1.0s,SNR=6.9						
BNI	Bardonecchia	84.72	32	P	P	12 28 46.1	-2.9
BNI				pmax	pmax		
	comp=Z,26nm,1.0s						
BNI	Bardonecchia	84.72	32	P	P	12 28 46.1	-2.9
BNI				IAmb	IAmb	12 28 52.7	
	comp=Z,26nm,1.0s						
OJC	Ojcow	84.73	22	*e*P	P	12 28 50.1	+1.3
WTTA	Wattenberg	84.74	28	*i* P	P	12 28 51.5	+2.4
	comp=Z,23nm,1.1s,SNR=6.2						
KRUC	Moravsky	84.76	24	*e*P	P	12 28 50.5	+1.5
MOA	Molln	85.14	26	*e*P	P	12 28 52.9	+2.0
	comp=Z,14nm,1.4s						
JAVC	Velka Javorina	85.33	23	*e*P	P	12 28 54.5	+2.6
ABTA	Abfaltersbach	85.49	27	*e*P	P	12 28 55.8	+3.0
	comp=Z,16nm,1.0s						
KBA	Koelnbreinsper	85.50	27	*e*P	P	12 28 55.2	+2.3
	comp=Z,24nm,1.4s						
SMOL	Smolenice	85.57	24	*e*P	P	12 28 56.0	+3.0
SMOL				pmax	pmax		
	comp=Z,11nm,1.2s						
SMOL	Smolenice	85.57	24	*e*P	P	12 28 56.0	+3.0
CONA	Conrad Observa	85.59	25	*i* P	P	12 28 55.8	+2.5
	comp=Z,21nm,1.1s,SNR=13						
LANS	Liptovska Anna	85.60	22	*e*P	P	12 28 56.2	+3.0
LANS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LANS	Liptovska Anna	85.60	22	*e*P	P	12 28 56.2	+3.0
MODS	Modra-Piesok	85.64	24	*e*P	P	12 28 55.2	+1.8
MODS				pmax	pmax		
	comp=Z,39nm,1.1s						
MODS				pmax	pmax		
	comp=N,68nm,0.4s						
MODS	Modra-Piesok	85.64	24	*e*P	P	12 28 55.2	+1.8
DGZ	Jazzator, Alta	85.66	339	*ce*P	P	12 28 55.7	+2.1
DGZ				pmax	pmax		
	comp=Z,17nm,0.9s						
ZST	Bratislava	85.75	24	*e*P	P	12 28 56.7	+2.8
ZST				pmax	pmax		
	comp=Z,48nm,1.1s						
ZST	Bratislava	85.75	24	*e*P	P	12 28 56.7	+2.8
BRVK	Borovoye	85.87	350	P	P	12 28 51.6	-2.8
BRVK				pmax	pmax		
	comp=Z,33nm,1.4s						
BRVK	Borovoye	85.87	350	P	P	12 28 51.6	-2.8
BRVK				IAmb	IAmb	12 29 13.1	
	comp=Z,33nm,1.4s						
BVAR	Borovoye Array	85.89	350	P	P	12 28 55.9	+1.3
	comp=Z,2.5nm,0.8s,baz=238,slow=31,SNR=13						
VYHS	Vyhne	86.01	23	*e*P	P	12 28 57.6	+2.4
VYHS	Vyhne	86.01	23	*e*P	P	12 28 57.6	+2.4
ARSA	Arzberg	86.08	25	*i* P	P	12 28 57.9	+2.3
	comp=Z,14nm,1.1s,SNR=7.1						
SOKA	Soboth	86.42	26	*i* P	P	12 28 59.0	+1.7
	comp=Z,23nm,1.5s,SNR=5.5						
NJ2	Nanjing	86.48	310	*e*P	P	12 28 53.7	-4.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KOLS	Kolonicke sedl	86.58	21	*e*P	P	12 29 03.0	+5.0
KOLS	Kolonicke sedl	86.58	21	*e*P	P	12 29 03.0	+5.0
AKASG	Malin Array Be	86.59	16	P	P	12 28 58.7	+0.7
	comp=Z,2.6nm,0.8s,baz=342,slow=4.3,SNR=12						
AKASG				LR	LR	13 09 10.9	
	comp=Z,366nm,19.1s,baz=310,slow=37						
SEM	Semipalatinsk	86.74	344	*e*P	P	12 28 59.5	+0.5
	baz=344						
SEM	Semipalatinsk	86.74	344	*e*P	P	12 28 59.5	+0.5
KURK	Kurchatov	86.78	345	*c i*P	P	12 29 00.3	+1.4
KURK				pmax	pmax		
	comp=Z,23nm,1.7s						
KURK	Kurchatov	86.78	345	P	P	12 28 56.3	-2.7
KURK				IAmb	IAmb	12 29 09.0	
	comp=Z,13nm,0.9s						
BELG	Belogornoye	87.36	4	P	P	12 29 02.2	+0.6
	comp=Z,8.6nm,0.9s,baz=349,slow=9.0,SNR=3.0						
ZSN	Zaisan	88.40	340	*e*P	P	12 29 07.2	+0.4
	baz=340						
ZSN	Zaisan	88.40	340	*e*P	P	12 29 07.2	+0.4
DZM	Mont Dzumac	88.63	239	*e*S	S	12 39 55.9	+1.0
	comp=Z,139nm,26.0s						
DZM	Mont Dzumac	88.63	239	*e*LR	LR	12 57 13.2	
	comp=Z,1µm,22.8s						
AKTO	Aktyubinsk	89.45	358	P	P	12 29 13.1	+1.4
	comp=Z,4.1nm,1.0s,baz=339,slow=5.4,SNR=8.3						
MKAR	Makanchi Array	89.67	341	P	P	12 29 13.8	+0.9
	comp=Z,1.5nm,0.9s,baz=35,slow=4.4,SNR=11						
MKAR				LR	LR	13 11 55.9	
	comp=Z,142nm,18.4s,baz=7.0,slow=37						
MAKZ	Makanchi	89.73	341	P	P	12 29 10.9	-2.2
MAKZ				pmax	pmax		
	comp=Z,26nm,1.3s						
MAKZ	Makanchi	89.73	341	P	P	12 29 10.9	-2.2
MAKZ				IAmb	IAmb	12 29 23.4	
	comp=Z,26nm,1.3s						
WHN	Wuhan	90.19	312	P	P	12 29 24.3	+8.8
GTA	Gaotai	90.39	327	P	P	12 29 18.1	+1.7
GTA				pP	pwP	12 29 26.0	+3.4
GTA				sS	sS	12 40 17.2	+1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,160nm,5.4s						
GTA				LR	LR		
	comp=Z,280nm,18.9s						
GTA				LR	LR		

	comp=Z,250nm,21.4s						
GTA				LR	LR		
	comp=Z,420nm,23.3s						
XAN	Xi'an	90.47	317	P	P	12 29 17.9	+1.1
XAN				pP	pwP	12 29 22.3	-0.6
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN	Xi'an	90.47	317	P	P	12 29 12.6	-4.2
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN	Xi'an	90.47	317	P	P	12 29 12.6	-4.2
XAN				IAmb	IAmb	12 29 26.4	
	comp=Z,17nm,1.0s						
ABKAR	Akbulak array	90.55	356	P	P	12 29 14.2	-2.6
BDFB	Brasilia	90.84	110	P	P	12 29 20.0	+1.3
	comp=Z,1.9nm,0.6s,baz=251,slow=18,SNR=2.4						
BDFB				LR	LR	13 14 01.6	
	comp=Z,282nm,20.2s,baz=305,slow=38						
WMQ	Urumqi	90.93	337	*e*P	P	12 29 19.6	+0.8
WMQ				pP	pwP	12 29 25.5	+0.6
WMQ				pmax	pmax		
	comp=Z,15nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH	Lanzhou	91.34	322	*e*P	P	12 29 21.8	+0.8
LZH				pP	pwP	12 29 31.2	+4.1
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,71nm,4.3s						
LZH				LR	LR		
	comp=Z,320nm,16.9s						
LZH				LR	LR		
	comp=Z,480nm,17.3s						
CPUP	Villa Florida	91.78	124	P	P	12 29 22.5	-0.2
	comp=Z,2.1nm,0.9s,baz=305,slow=3.8,SNR=4.6						
CPUP				LR	LR	13 12 44.2	
	comp=Z,80nm,21.3s,baz=346,slow=37						
TDK	Taldyqorghan	92.26	343	*e*P	P	12 29 26.6	+1.7
	baz=343						
TDK	Taldyqorghan	92.26	343	*e*P	P	12 29 26.6	+1.7
BTLS	Baital	93.10	346	*e*P	P	12 29 29.9	+1.2
	baz=346						
BTLS	Baital	93.10	346	*e*P	P	12 29 29.9	+1.2
SHLS	Shalkode	93.77	342	*e*P	P	12 29 32.7	+0.6
	baz=342						
SHLS	Shalkode	93.77	342	*e*P	P	12 29 32.6	+0.6
PMG	Port Moresby	93.96	261	LR	LR	13 06 26.1	
	comp=Z,55nm,20.8s,baz=18,slow=32						
SATY	Saty	94.11	343	*e*P	P	12 29 34.5	+0.9
	baz=343						
SATY	Saty	94.11	343	*e*P	P	12 29 34.4	+0.9
PLCA	Paso Flores	95.02	141	LR	LR	13 05 41.6	
	comp=Z,152nm,18.8s,baz=341,slow=31						
KIV	Kislovodsk	95.32	8	*i* P	P	12 29 38.8	-0.3
KIV				*i*		12 29 48.2	
KIV				*i*		12 33 28.8	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,141nm,17.0s						
AAK	Ala-Archa	95.34	345	⇓*e*P	P	12 29 40.7	+1.5
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	Khabaz	95.57	8	P	P	12 29 41.7	+1.6
	comp=Z,1.4nm,0.8s,baz=260,slow=1.6,SNR=4.3						
KBZ				LR	LR	13 13 02.0	
	comp=Z,144nm,20.9s,baz=338,slow=36						
MAK	Makhachkala	96.75	5	*e*P	P	12 29 41.1	-4.3
MAK				*e*		12 33 37.3	
MAK				*e*		12 40 14.9	
MAK				pmax	pmax		
	comp=Z,103nm,1.3s						
MAK				MLR	MLR		
	comp=Z,243nm,19.0s						
BRTR	Keskin Array B	97.99	16	LR	LR	13 14 50.2	
	comp=Z,124nm,21.7s,baz=350,slow=36						
TORD	Torodi Ar. Bea	107.70	54	PP	PP	12 34 59.7	-2.8
	comp=Z,1.5nm,0.8s,baz=315,slow=7.1,SNR=5.3						
QSPA	South Pole Qui	130.25	180	PKPdf	PKPdf	12 35 22.7	-1.4
VNA3	Neumayer Olymp	135.99	155	PKPdf	PKPdf	12 35 35.1	+0.4
VNA2	Neumayer--Watz	136.77	155	PKPdf	PKPdf	12 35 35.4	-0.7
SNAA	Sanae	138.03	157	PKPdf	PKPdf	12 35 35.7	-2.8
SNAA	Sanae	138.03	157	PKIKP	PKPdf	12 35 35.5	-3.0
SNAA	Sanae	138.03	157	PKPdf	PKPdf	12 35 35.5	-3.0
SYO	Syowa Base	150.29	169	⇑*e*PKiKP	PKPbc	12 36 05.0	+0.1
SYO	Syowa Base	150.29	169	⇓*e*X	PKPab	12 36 20.0	+8.8
MAW	Mawson	152.39	187	PKPbc	PKiKP	12 36 10.4	+0.3
	comp=Z,3.4nm,0.8s,baz=267,slow=4.9,SNR=4.3						
MAW				PKKPab		12 43 01.8	
	comp=Z,2.2nm,0.5s,baz=291,slow=6.4,SNR=4.4						
BOSA	Boshof	153.34	73	PKPbc	PKPbc	12 36 13.6	+0.2
	comp=Z,3.5nm,0.9s,baz=317,slow=2.3,SNR=7.9						

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*SOME **01** 12:16:33.0, 41°.70N×81°.18E, h15^{km}*
*NNC **01** 12:16:33.6±1.1, 41°.73N×81°.17E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=7.8km s-min=5.5km az=159.0*
ISC 01 12:16:33.3±3.5**, 41°.6N**±0°.1×**81°.30E**±0°.09**, h11**^{km}±26^{km}**, n39, σ1^{s}41**/61**, 6C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.96	339	*e*P	Pn	12 17 06.7	+0.1
	30nm,0.2s						
KTMS				*e*S	Sn	12 17 31.2	+0.1
	46nm,0.3s						
KTMS	Ketmen	1.96	339	P	Pn	12 17 06.7	+0.1
	30nm,0.2s						
KTMS				S	Sn	12 17 31.2	+0.1
	46nm,0.3s						
SHLS	Shalkode	2.05	319	*e*P	Pn	12 17 05.7	-2.1
	62nm,0.2s						
SHLS				*e*S	Sn	12 17 29.5	-4.0
	41nm,0.4s						
PDGK	Podgornoye	2.17	323	Pg	Pn	12 17 10.1	+0.7
	25nm,0.3s						
PDGK				Lg	Lg	12 17 37.1	
	13nm,0.5s						
PDGK	Podgornoye	2.17	323	⇑Pn	Pn	12 17 09.8	+0.3
	20nm,0.3s						
PDGK				⇑Lg	Lg	12 17 39.4	
	18nm,0.6s						
UZB	Uzynbulak	2.28	313	*e*P	Pn	12 17 12.5	+1.6
	11nm,0.3s						
UZB				*e*S	Sb	12 17 41.2	-1.5
	32nm,0.4s						
UZB	Uzynbulak	2.28	313	Pg	Pn	12 17 12.5	+1.6
	11nm,0.3s						
UZB				Lg	Lg	12 17 41.2	
	23nm,0.4s						
SATY	Saty	2.58	305	*e*P	Pb	12 17 17.8	-1.9
	10nm,0.2s						
SATY				*e*S	Sb	12 17 50.1	-1.3
	31nm,0.4s						
SATY	Saty	2.58	305	Pg	Pb	12 17 17.8	-1.9
	10nm,0.2s						
SATY				Lg	Lg	12 17 50.1	
	31nm,0.4s						
ZHN	Zhinishke	2.63	307	*e*P	Pb	12 17 19.5	-0.9
	48nm,0.2s						
ZHN				*e*S	Sb	12 17 53.1	+0.4
	10nm,0.3s						
ZHN	Zhinishke	2.63	307	Pg	Pb	12 17 19.5	-0.9
	48nm,0.2s						
ZHN				Lg	Lg	12 17 53.1	
	10nm,0.3s						
KPKS	Kokpek	2.67	315	*e*P	Pb	12 17 19.1	-2.0
	18nm,0.1s						
KPKS				*e*S	Sb	12 17 52.5	-1.5
	55nm,0.3s						
DJR	Jarkent	2.93	338	*e*P	Pb	12 17 24.8	-0.7
	3.5nm,0.3s						
DJR				*e*S	Sb	12 18 02.5	+1.1
	16nm,0.7s						
DJR	Jarkent	2.93	338	Pg	Pb	12 17 24.8	-0.7
	3.5nm,0.3s						
DJR				Lg	Lg	12 18 02.5	
	16nm,0.7s						
MNBS	Baschi	3.25	320	*e*P	Pb	12 17 30.0	-1.1
	5.4nm,0.3s						
MNBS				*e*S	Sb	12 18 10.9	+0.1
	25nm,0.6s						
MNBS	Baschi	3.25	320	Pg	Pb	12 17 30.0	-1.1
	5.4nm,0.3s						
MNBS				Lg	Lg	12 18 10.9	
	25nm,0.6s						
KOTS	Kotyrbulak	3.50	299	*e*P	Pb	12 17 35.4	+0.2
	8.9nm,0.3s						
KOTS				*e*S	Sb	12 18 20.3	+2.6
	28nm,0.5s						
KOTS	Kotyrbulak	3.50	299	Pg	Pb	12 17 35.4	+0.2
	8.9nm,0.3s						
KOTS				Lg	Lg	12 18 20.3	
	28nm,0.5s						
MDOK	Medeo	3.51	298	*e*P	Pb	12 17 34.4	-1.1
	2.1nm,0.3s						
MDOK				*e*S	Sb	12 18 18.6	+0.5
	6.7nm,0.4s						
MDOK	Medeo	3.51	298	⇑Pg	Pb	12 17 34.9	-0.6
	1.8nm,0.3s						
MDOK				⇓Lg	Lg	12 18 24.2	
	3.7nm,0.4s						
MDOK	Medeo	3.51	298	Pg	Pb	12 17 34.4	-1.1
	2.1nm,0.3s						
MDOK				Lg	Lg	12 18 18.6	
	6.7nm,0.4s						
TNSS	Tian-Shan	3.52	295	*e*P	Pb	12 17 34.7	-1.2
	2.6nm,0.4s						
TNSS				*e*S	Sb	12 18 18.8	-0.1
	4.7nm,0.5s						
ARXS	Arharly	3.64	317	*e*P	Pb	12 17 37.6	0.0
	5.9nm,0.5s						
ARXS				*e*S	Sb	12 18 24.1	+2.4
	13nm,0.7s						
ARXS	Arharly	3.64	317	Pg	Pb	12 17 37.6	0.0
	5.9nm,0.5s						
ARXS				Lg	Lg	12 18 24.1	
	13nm,0.7s						
IZV	Izvestkoviy	3.75	294	*e*P	Pb	12 17 38.9	-0.7
	2.3nm,0.2s						
IZV				*e*S	Sb	12 18 26.4	+1.2
	12nm,0.4s						
IZV	Izvestkoviy	3.75	294	Pg	Pb	12 17 38.9	-0.7
	2.3nm,0.2s						
IZV				Lg	Lg	12 18 26.3	
	12nm,0.4s						
CHKK	Chushkaly	3.88	307	*e*P	Pb	12 17 41.9	+0.1
	1.5nm,0.1s						
CHKK				*e*S	Sb	12 18 31.3	+2.5
	8.4nm,0.3s						
CHKK	Chushkaly	3.88	307	Pg	Pb	12 17 41.9	+0.1
	1.5nm,0.1s						
CHKK				Lg	Lg	12 18 31.3	
	8.4nm,0.3s						
KAPS	Kapalarasan	3.93	340	*e*P	Pb	12 17 41.8	-0.8
	2.4nm,0.3s						
KAPS				*e*S	Sb	12 18 31.4	+1.3
	6.0nm,0.4s						
KTBS	Karatobe	4.00	303	*e*P	Pb	12 17 43.9	+0.2
	2.8nm,0.3s						
KTBS				*e*S	Sb	12 18 35.1	+3.0
	10nm,0.7s						
KTBS	Karatobe	4.00	303	Pg	Pb	12 17 43.9	+0.2
	2.8nm,0.3s						
KTBS				Lg	Lg	12 18 35.1	
	10nm,0.7s						
KST	Kastek	4.20	292	*e*P	Pb	12 17 46.4	-0.9
	2.4nm,0.3s						
KST				*e*S	Sb	12 18 39.1	+1.0
	9.2nm,0.6s						
KST	Kastek	4.20	292	Pg	Pb	12 17 46.4	-0.9
	2.4nm,0.3s						
KST				Lg	Lg	12 18 39.1	
	9.2nm,0.6s						
KUU	Kurty	4.30	304	*e*P	Pb	12 17 49.7	+0.8
	1.9nm,0.5s						
KUU				*e*S	Sb	12 18 44.6	+3.8
	5.3nm,0.8s						
DGS	Degeres	4.40	293	*e*P	Pb	12 17 50.6	-0.1
	1.2nm,0.5s						
DGS				*e*S	Sb	12 18 46.3	+2.6
	5.0nm,0.6s						
DGS	Degeres	4.40	293	Pg	Pb	12 17 49.5	-1.1
	1.2nm,0.5s						
DGS				Lg	Lg	12 18 44.6	
	5.0nm,0.6s						
TKM2	Tokmak 2	4.43	289	⇑Pn	Pn	12 17 40.6	+0.1
	2.3nm,0.7s						
TKM2				⇓Lg	Lg	12 18 52.2	
	2.4nm,0.5s						
MAKZ	Makanchi	5.21	5	⇓Pn	Pn	12 17 51.5	+0.4
	1.8nm,0.8s						
MAKZ				⇑Sn	Sn	12 18 50.9	-0.3
	0.6nm,0.4s						
MK31	Makanchi Array	5.22	8	⇓Pn	Pn	12 17 51.7	+0.4
	0.1nm,0.2s,baz=183,slow=14,SNR=10						
MK31				⇑Sn	Sn	12 18 51.7	+0.2
	0.3nm,0.4s						
MK31				⇓Lg	Lg	12 19 16.1	
	0.7nm,0.6s,baz=187,slow=27						

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*REY **01** 12:30:10.3, 64°.62N×17°.47W, h9^{km}*
*IDC **01** 12:30:11.4±0.7, 64°.55N×17°.54W, h0^{km}, mb3.6/17, mb1 3.9/20, mb1mx3.8/41, mbtmp3.7/20, ML2.5/2, MS3.6/2, Ms1 3.6/2, ms1mx2.8/49, Error ellipse: s-maj=23.3km s-min=12.6km az=28.0*
*NEIC **01** 12:30:12.7±2.2, 64°.53N±0°.05×17°.7W±0°.2, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=11.7km s-min=9.0km az=259.0*
*BGR **01** 12:30:14.3±0.0, 64°.26N×18°.47W, h33^{km}, mb4.1*
ISC 01 12:30:11.9±0.4**, 64°.62N**±0°.02×**17°.47W**±0°.02**, h10**^{km}**, n76, σ2^{s}61**/86**, mb3.7**/23**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.18	15	P	Pg	12 30 13.9	-1.9
	baz=15						
IDYN				S	Sg	12 30 16.8	-1.8
	baz=15						
IHAM	Hamarinn	0.20	228	P	Pg	12 30 14.6	-1.7
	baz=227						
IHAM				S	Sg	12 30 18.1	-1.1
	baz=227						
IURH	Urdarhals	0.25	34	P	Pg	12 30 15.0	-2.0
	baz=35						
IURH				S	Sg	12 30 19.1	-1.4
	baz=35						
IKVE	Kverkfjoll	0.35	80	P	Pg	12 30 17.3	-1.6
	baz=80						
IKVE				S	Sg	12 30 22.6	-1.0
	baz=80						
ISKR	Skrokkalda	0.40	262	P	Pg	12 30 17.6	-2.1
	baz=262						
ISKR				S	Sg	12 30 23.3	-1.7
	baz=262						
IJOK	Jokulheimar	0.45	227	P	Pg	12 30 18.4	-2.3
	baz=227						
IJOK				S	Sg	12 30 24.7	-1.8
	baz=227						
IKRE	Kreppuhraun	0.50	70	P	Pg	12 30 19.1	-2.5
	baz=70						
IKRE				S	Sg	12 30 26.3	-1.8
	baz=70						
IASK	Askja	0.56	39	P	Pg	12 30 20.4	-2.4
	baz=39						
IASK				S	Sg	12 30 27.9	-2.3
	baz=39						
IIEY	Innrieyrar	0.60	209	P	Pg	12 30 20.9	-2.6
	baz=208						
IIEY				S	Sg	12 30 29.4	-1.9
	baz=208						
IMKO	Mokollar	0.61	53	P	Pg	12 30 21.0	-2.6
	baz=53						
IMKO				S	Sg	12 30 29.4	-2.2
	baz=53						
IKSK	Karasker	0.63	136	P	Pg	12 30 21.0	-3.1
	baz=136						
IKSK				S	Sg	12 30 30.2	-2.2
	baz=136						
IKAL	Kalfafell	0.68	188	P	Pg	12 30 22.3	-2.7
	baz=188						
IKAL				S	Sg	12 30 31.6	-2.3
	baz=188						
ISVA	Svartarkot	0.73	7	P	Pg	12 30 22.9	-3.1
	baz=7.3						
ISVA				S	Sg	12 30 33.0	-2.5
	baz=7.3						
IVSH	V-Sauoahnukur	0.77	75	P	Pg	12 30 23.7	-3.1
	baz=75						
IFAG	Fagurholsmyri	0.83	154	P	Pg	12 30 24.8	-3.0
	baz=154						
IADA	Aoalbol	0.91	63	P	Pg	12 30 25.8	-3.6
	baz=63						
IADA				S	Sg	12 30 38.1	-3.1
	baz=63						
IMEL	Melhnausar	1.02	19	P	Pg	12 30 27.7	-3.8
	baz=20						
ISNB	Snabyli	1.02	210	P	Pg	12 30 28.0	-3.5
	baz=210						
IREN	Reynihlio	1.06	13	P	Pg	12 30 28.5	-3.8
	baz=13						
IKVO	Krokottuvotn	1.13	13	P	Pb	12 30 29.6	-3.9
	baz=13						
IRJU	Rjupnafell	1.13	208	P	Pb	12 30 30.2	-3.4
	baz=208						
IFED	Fedgar	1.14	239	P	Pb	12 30 30.6	-3.0
	baz=239						
IGRS	Grimsstaoir	1.17	28	P	Pb	12 30 30.4	-3.8
	baz=29						
IMJO	Mjoaskard	1.18	235	P	Pb	12 30 31.3	-3.1
	baz=235						
IGYG	Gygjarholskot	1.24	255	P	Pn	12 30 31.6	-3.6
	baz=255						
IGYG				S	Sb	12 30 47.3	-4.0
	baz=255						
IHVO	Lagu-Hvolar	1.25	209	P	Pn	12 30 32.8	-2.6
	baz=209						
ISKI	Skildingahlsh	1.27	8	P	Pn	12 30 32.0	-3.7
	baz=8.3						
BORG	Borgarnes	1.66	276		Pn	12 30 38.7	-2.3
SCO	Scoresbysund	6.13	346		Pn	12 31 41.3	-1.1
SCO	Scoresbysund	6.13	346	*e*	Pn	12 31 36.2	-6.3
	baz=160,slow=6.9						
SCO				*i* P	Pb	12 31 42.0	-17
SCO				*i* S	Sn	12 32 57.5	+5.0
SCO				IAML		12 33 01.7	
	comp=Z,1.2nm,0.5s						
JMIC	Jan Mayen	7.23	24	LR	LR	12 34 05.2	
	comp=Z,276nm,20.2s,baz=20,slow=32						
EKA	Eskdalemuir Ar	11.72	136	Pn	Pn	12 32 57.2	-1.7
	baz=322,slow=13,SNR=3.3						
ESK	Eskdalemuir	11.72	136	Pn	Pn	12 33 00.2	+1.3
DAG	Danmarks Havn	12.22	359	*i* P	Pn	12 33 11.1	+5.4
DAG	Danmarks Havn	12.22	359	*e*P	Pn	12 33 11.1	+5.4
NC204	NORSAR Array S	13.22	92	Pn	Pn	12 33 22.3	+2.9
NOA	NORSAR Array B	13.52	92	Pn	Pn	12 33 21.6	-2.0
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=1.3						
FINES	FINESS Array B	19.70	79	P	Pn	12 34 40.8	-1.6
	comp=Z,0.1nm,0.3s,baz=269,slow=6.4,SNR=1.4						
CLL	Collm	20.67	116	*e*P	Pn	12 34 53.0	-0.9
	comp=Z,14nm,1.3s						
GRF	Grafenberg Arr	21.30	121	*e*P	P	12 34 59.8	+1.5
	comp=Z,13nm,1.4s,baz=323,slow=11						
BRG	Berggiesshubel	21.38	115	*e*P	P	12 35 00.4	+1.2
BRG				Amp		12 35 11.2	
	comp=Z,51nm,1.9s						
BRG	Berggiesshubel	21.38	115	*e*P	P	12 35 00.4	+1.2
BRG				Amp		12 35 11.2	
	comp=Z,51nm,1.9s						
FRB	Frobisher Bay	21.78	291	P	P	12 35 04.1	+0.8
	comp=Z,1.8nm,1.0s,baz=100,slow=16,SNR=1.9						
KHC	Kasperske Hory	22.64	118	P	P	12 35 14.6	+1.8
KHC				IAmb	IAmb	12 35 30.2	
	comp=Z,11nm,1.5s						
GERES	GERESS Array B	22.92	119	P	P	12 35 17.3	+1.5
	comp=Z,1.4nm,0.8s,baz=335,slow=9.3,SNR=6.7						
DAVOX	Davos/Dischmat	23.28	127	P	P	12 35 20.8	+1.2
	comp=Z,2.3nm,0.8s,baz=329,slow=17,SNR=4.3						
VRAC	Vranov	23.66	114	P	P	12 35 24.0	+0.8
	comp=Z,1.3nm,0.6s,baz=10,slow=7.4,SNR=3.1						
EUNU	Eureka	23.72	336	P	P	12 35 26.4	+2.8
CONA	Conrad Observa	24.50	117	*e*P	P	12 35 34.9	+3.9
	comp=Z,2.3nm,0.7s						
SMOL	Smolenice	24.63	114	*e*P	P	12 35 35.9	+3.7
ARSA	Arzberg	24.93	118	*e*P	P	12 35 38.7	+3.8
	comp=Z,1.1nm,0.6s						
LANS	Liptovska Anna	24.94	111	*e*P	P	12 35 39.5	+4.5
TEOL	Teolo	25.13	126		S	12 40 07.6	+6.4
VYHS	Vyhne	25.20	112	*e*P	P	12 35 39.7	+2.3
KLMR	Klimovskoe	25.61	72	*e*	P	12 35 34.8	-6.1
ESDC	Sonseca Array	26.20	156	P	P	12 35 47.4	+0.8
	comp=Z,0.9nm,0.9s,baz=351,slow=8.6,SNR=7.5						
KOLS	Kolonicke sedl	26.25	108	*e*P	P	12 35 49.5	+2.7
AKASG	Malin Array Be	27.82	97	P	P	12 36 01.1	+0.1
	comp=Z,0.2nm,0.3s,baz=323,slow=8.7,SNR=1.6						
BRTR	Keskin Array B	38.46	105	P	P	12 37 35.5	+1.8
	comp=Z,1.1nm,0.7s,baz=90,slow=0.5,SNR=3.8						
KBZ	Khabaz	39.10	92	P	P	12 37 41.0	+2.1
	comp=Z,2.4nm,0.8s,baz=316,slow=12,SNR=5.7						
YKA	Yellowknife Ar	39.26	313	P	P	12 37 40.1	+0.2
	comp=Z,0.9nm,0.9s,baz=42,slow=9.3,SNR=8.7						
TIXI	Tiksi	42.08	15	P	P	12 38 04.0	+0.9
ILAR	Eielson Array	45.73	332	P	P	12 38 34.4	+1.8
	comp=Z,0.8nm,1.0s,baz=19,slow=4.9,SNR=6.6						
ZALV	Zalesovo Beam	47.66	51	P	P	12 38 49.4	+1.7
	comp=Z,0.2nm,0.3s,baz=328,slow=5.1,SNR=2.1						
KURK	Kurchatov	48.13	58	P	P	12 38 52.4	+0.9
KURK				IAmb	IAmb	12 38 56.5	
	comp=Z,2.9nm,1.0s						
MKAR	Makanchi Array	52.74	58	P	P	12 39 28.0	+1.5
	comp=Z,1.0nm,1.0s,baz=319,slow=5.3,SNR=5.7						
TORD	Torodi Ar. Bea	53.09	156	P	P	12 39 29.0	-0.3
	comp=Z,0.6nm,0.7s,baz=353,slow=7.7,SNR=2.1						
BW06	Boulder Array	53.21	293	P	P	12 39 30.5	+0.3
PD31	Pinedale Array	53.21	293	P	P	12 39 31.4	+1.2
PD31				IAmb	IAmb	12 39 35.5	
	comp=Z,3.9nm,1.2s						
PDAR	Pinedale Array	53.21	293	P	P	12 39 31.4	+1.2
	comp=Z,1.1nm,0.7s,baz=53,slow=5.3,SNR=9.1						
KDAK	Kodiak Island	53.25	332	LR	LR	13 03 48.2	
	comp=Z,99nm,19.8s,baz=115,slow=38						
AAK	Ala-Archa	53.27	67	P	P	12 39 30.8	+0.2
AAK				IAmb	IAmb	12 39 37.8	
	comp=Z,3.2nm,1.1s						
PV13	Radium Mtn., P	56.83	290	P	P	12 39 56.6	+0.2
SONM	Songino Array	59.67	40	P	P	12 40 16.8	+0.7
	comp=Z,0.6nm,0.9s,baz=307,slow=2.9,SNR=2.6						
TXAR	Lajitas Array	62.30	280	P	P	12 40 35.1	+1.0
	comp=Z,0.6nm,1.0s,baz=307,slow=50,SNR=4.2						
CMAR	Chiang Mai Arr	84.15	59	P	P	12 42 45.2	+2.1
	comp=Z,0.7nm,0.8s,baz=314,slow=7.0,SNR=6.3						

IDC 01 12:36:39.1±2.8**, 6°.88S**×**130°.50E, h83**^{km}±39^{km}**, mb3.0**/1**, mb1 3.3**/5**, mb1mx3.1**/37**, mbtmp3.4**/5**, Error ellipse: s-maj=71.1km s-min=23.3km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.02	7	P	Pn	12 38 06.0	+0.4
	0.6nm,0.3s,baz=240,slow=20,SNR=7.1						
SIJI				S	Sn	12 39 06.3	-6.9
	1.2nm,0.3s,baz=265,slow=23,SNR=9.6						
FITZ	Fitzroy Crossi	12.12	203	P	Pn	12 39 27.9	-0.8
	0.3nm,0.3s,baz=28,slow=12,SNR=21						
FITZ				S	Sn	12 41 35.1	-6.9
	0.3nm,0.3s,baz=240,slow=20,SNR=2.1						
WRA	Warramunga Arr	13.51	164	P	Pn	12 39 46.4	-1.0
	0.1nm,0.3s,baz=349,slow=14,SNR=9.4						
WRA				S	Sn	12 42 08.5	-7.5
	0.5nm,0.3s,baz=337,slow=22,SNR=12						
ASAR	Alice Springs	17.01	169	P	P	12 40 33.9	+1.3
	0.1nm,0.3s,baz=347,slow=8.9,SNR=11						
ASAR				S	Sn	12 43 32.1	-8.6
	0.1nm,0.3s,baz=352,slow=26,SNR=5.0						
MKAR	Makanchi Array	68.40	327	P	P	12 47 31.9	-0.2
	0.1nm,0.5s,baz=111,slow=6.3,SNR=1.9						

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*IDC **01** 12:51:49.6±1.2, 22°.85N×144°.88E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/48, mbtmp3.7/10, ML2.9/1, Error ellipse: s-maj=32.1km s-min=30.5km az=74.0*
ISC 01 12:51:54.9±1.0**, 22°.9N**±0°.2×**144°.8E**±0°.2**, h35**^{km}**, n10, σ0^{s}74**/10**, mb3.7**/9**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	14.79	339	Pn	Pn	12 55 21.1	-0.4
	0.1nm,0.3s,baz=160,slow=13,SNR=5.0						
SONM	Songino Array	39.44	319	P	P	12 59 21.6	-0.2
	0.6nm,1.0s,baz=93,slow=5.8,SNR=3.1						
WRA	Warramunga Arr	43.76	194	P	P	12 59 56.8	-0.5
	0.6nm,0.4s,baz=17,slow=9.0,SNR=2.4						
MKAR	Makanchi Array	55.05	312	P	P	13 01 24.3	+1.1
	0.2nm,0.6s,baz=86,slow=8.8,SNR=2.6						
KURBB	Kurchatov Arra	57.73	316	P	P	13 01 42.7	+0.5
	0.5nm,0.6s,baz=93,slow=8.1,SNR=2.0						
ILAR	Eielson Array	60.31	27	P	P	13 01 59.1	-0.8
	0.3nm,0.6s,baz=257,slow=6.0,SNR=4.6						

YKA	Yellowknife Ar	74.71	28	P	P	13 03 30.6	-0.2
	0.1nm,0.8s,baz=292,slow=4.6,SNR=4.3						
NVAR	Mina Array Bea	81.23	52	P	P	13 04 08.8	+1.0
	0.5nm,0.6s,baz=289,slow=5.6						
FINES	FINESS Array B	82.78	335	P	P	13 04 15.5	+0.3
	4.5nm,1.0s,baz=83,slow=4.3,SNR=8.4						
AKASG	Malin Array Be	87.44	325	P	P	13 04 38.3	-0.4
	0.4nm,0.5s,baz=50,slow=5.3,SNR=2.9						

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*IDC **01** 12:53:47.5±0.9, 2°.86S×129°.47E, h0^{km}, mb4.0/7, mb1 4.3/11, mb1mx4.0/39, mbtmp4.1/11, ML4.1/4, MS3.4/2, Ms1 3.4/2, ms1mx2.9/32, Error ellipse: s-maj=24.9km s-min=18.5km az=74.0*

*DJA **01** 12:53:51.5±0.7, 3°S±2°×12°9E±°, h21^{km}±6^{km}, M4.4/14, mb4.7/8, mB4.8/1, MLv4.3/14, Mw(mB)4.1/1*

*NEIC **01** 12:53:52.3±2.4, 2°.8S±0°.1×129°.55E±0°.08, h41^{km}±9^{km}, mb4.1/9, Error ellipse: s-maj=15.7km s-min=11.6km az=202.0*

*NOU **01** 12:54:08.5, 3°.79S×129°.62E, h120^{km}, mb4.0, Seram, Indonesia*

ISC 01 12:53:52.6±0.9, **2°.85S**±0°.05×**129°.39E**±0°.04, **h43**^{km}±11^{km}, **n41**, σ**2^{s}.33**/48, **mb4.2**/8, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.68	223	P	Pn	12 54 04.4	-1.5
BNDI	Bandanaira	1.74	163	P	Pn	12 54 23.8	+3.4
BNDI				S	Sn	12 54 48.0	+6.6
NLAI	Namlea	2.32	260	P	Pn	12 54 29.0	+0.6
NLAI				S	Sn	12 54 57.3	+1.5
SIJI	Sorong	2.71	44	Pn	Pn	12 54 33.9	+0.1
	120nm,0.3s,baz=230,slow=13,SNR=271						
SIJI				Sn	Sn	12 55 07.1	+1.7
	31nm,0.3s,baz=230,slow=23,SNR=12						
SWI	Sorong	2.71	43	P	Pn	12 54 33.6	-0.1
SWI				S	Sn	12 55 05.3	-0.1
FAKI	Fak Fak	2.85	91		Pn	12 54 35.8	+0.1
FAKI	Fak Fak	2.85	91	P	Pn	12 54 35.8	+0.1
FAKI				S	Sn	12 55 09.2	+0.4
SANI	Sanana	3.49	283	P	Pn	12 54 42.4	-2.1
SANI				S	Sn	12 55 21.3	-3.3
TNTI	Ternate	4.13	331	P	Pn	12 54 51.9	-1.3
KMSI	Cibinong	6.39	302	P	Pn	12 55 23.1	-1.2
	0.3nm67nm,0.5s						
BAKI	Biak	6.91	76	P	Pn	12 55 32.0	+0.6
	0.3nm85nm,0.8s						
GTOI	Gorontalo	7.26	298	P	Pn	12 55 38.4	+2.2
	0.1nm36nm,0.8s						
SGSI	Sangihe	7.55	329	P	Pn	12 55 38.5	-1.8
	1.7nm269nm,0.5s						
APSI	Ampana	7.98	284	P	Pn	12 55 45.7	-0.4
	0.2nm609nm58nm,0.9s						
MRSI	Marisa	8.15	294	P	Pn	12 55 47.7	-0.7
	36nm,0.9s						
BATI	Baumata	9.26	218	LR	LR	12 59 43.2	
	comp=Z,312nm,19.7s,baz=66,slow=38						
SMPI	Sarmi	9.35	85	P	Pn	12 56 06.0	+1.2
	15nm,0.9s						
TOLI2	Tolitoli	9.47	294	Pn	Pn	12 56 06.0	-0.5
KAPI	Kappang	9.86	257	Pn	Pn	12 56 14.1	+2.2
	0.6nm,0.3s,baz=102,slow=4.2,SNR=4.6						
KAPI				LR	LR	13 00 37.9	
	comp=Z,150nm,21.6s,baz=84,slow=41						
MPSI	Mapaga	10.01	288	P	Pn	12 56 14.5	+0.6
	20nm,0.8s						
MTN	Manton Dam	10.08	170	Pn	Pn	12 56 16.1	+1.2
JAY	Jayapura	11.30	89	Pn	Pn	12 56 27.6	-4.1
	0.6nm,0.3s,baz=43,slow=15,SNR=1.4						
FITZ	Fitzroy Crossi	15.60	193	Pn	Pn	12 57 30.2	+0.6
	0.2nm,0.3s,baz=358,slow=14,SNR=3.0						
FITZ	Fitzroy Crossi	15.60	193		Pn	12 57 30.2	+0.6
FITZ				IAmb	IAmb	12 57 35.5	
	comp=Z,20nm,1.5s						
WB0	Warramunga Arr	17.51	164	P	Pn	12 57 53.4	-0.3
WB0				IAmb	IAmb	12 57 56.0	
	comp=Z,8.2nm,0.7s						
COEN	Coen	17.52	130		Pn	12 57 52.2	-1.7
WRAB	Tennant Creek	17.66	164	P	Pn	12 57 54.4	-1.1
WRAB				IAmb	IAmb	12 57 57.9	
	comp=Z,7.9nm,0.6s						
WRA	Warramunga Arr	17.66	164	P	Pn	12 57 55.0	-0.6
	comp=Z,0.8nm,0.3s,baz=344,slow=12,SNR=38						
WRA				S	Sn	13 01 02.2	-9.3
	comp=Z,0.1nm,0.3s,baz=350,slow=22,SNR=3.5						
WB2	Warramunga Arr	17.67	164	P	Pn	12 57 55.0	-0.6
WB2				IAmb	IAmb	12 57 58.0	
	comp=Z,7.4nm,0.6s						
WR0	Warramunga Arr	17.73	164	P	Pn	12 57 55.5	-1.0
AS31	Alice Springs	21.15	168	P	P	12 58 33.9	-0.3
AS31				IAmb	IAmb	12 58 36.0	
	comp=Z,8.2nm,0.6s						
ASAR	Alice Springs	21.15	168	P	P	12 58 34.1	-0.1
	comp=Z,24nm,0.7s,baz=348,slow=9.7,SNR=305						
ASAR				S	S	13 02 23.4	-3.9
	comp=Z,2.6nm,1.0s,baz=345,slow=20,SNR=7.7						
BBOO	Buckleboo	30.45	169	P	P	13 00 00.8	-0.5
CMAR	Chiang Mai Arr	36.70	306	P	P	13 00 58.1	+2.3
	comp=Z,0.8nm,0.7s,baz=133,slow=7.1,SNR=7.4						
SONM	Songino Array	54.34	341	P	P	13 03 16.2	+1.3
	comp=Z,0.4nm,0.7s,baz=134,slow=6.2,SNR=2.7						
MKAR	Makanchi Array	64.45	326	P	P	13 04 26.1	+1.4
	comp=Z,1.7nm,0.8s,baz=118,slow=8.3,SNR=16						
ZALV	Zalesovo Beam	67.62	333	P	P	13 04 45.3	+0.5
	comp=Z,1.2nm,0.6s,baz=106,slow=5.8,SNR=9.1						
KURBB	Kurchatov Arra	68.69	328	P	P	13 04 53.0	+1.5
	comp=Z,2.6nm,0.7s,baz=126,slow=5.9,SNR=19						
KURK	Kurchatov	68.69	328	P	P	13 04 51.1	-0.4
ILAR	Eielson Array	89.87	25	P	P	13 06 47.4	+0.7
	comp=Z,0.3nm,0.9s,baz=239,slow=4.7,SNR=2.0						
CPUP	Villa Florida	150.27	168	PKPbc	PKiKP	13 13 41.3	+0.7
	comp=Z,1.7nm,0.6s,baz=88,slow=4.0,SNR=6.4						

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*NNC **01** 13:08:08.8±1.6, 43°.79N×86°.11E, h0^{km}, mb3.8, mpv3.3, Error ellipse: s-maj=13.4km s-min=8.3km az=128.0*

*IDC **01** 13:08:16.2±1.7, 44°.51N×85°.98E, h0^{km}, mb3.3/1, mb1 3.2/5, mb1mx3.0/55, mbtmp3.1/5, ML2.3/4, Error ellipse: s-maj=36.7km s-min=16.0km az=49.0*

ISC 01 13:08:16.6±1.1, **44°.37N**±0°.09×**85°.64E**±0°.07, **h10**^{km}, **n13**, σ**2^{s}.05**/17, **4C-5D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	3.38	317	⇓Pn	Pn	13 09 11.9	+2.5
	0.3nm,0.3s,baz=136,slow=14,SNR=17						
MK31				⇑Pg	Pg	13 09 22.1	+0.8
	12nm,0.7s,baz=128,slow=17,SNR=49						
MK31				⇓Lg	Lg	13 10 19.4	
	8.6nm,0.7s,baz=132,slow=28,SNR=4.4						
MKAR	Makanchi Array	3.38	317	Pn	Pn	13 09 12.2	+2.8
	0.3nm,0.3s,baz=134,slow=14,SNR=17						
MKAR				Pg	Pg	13 09 21.0	-0.2
	1.7nm,0.3s,baz=130,slow=15,SNR=92						
MKAR				Sn	Sn	13 09 48.8	-0.8
	0.4nm,0.3s,baz=127,slow=20,SNR=6.1						
MKAR				Lg	Lg	13 10 08.3	
	0.6nm,0.3s,baz=138,slow=28,SNR=3.3						
MAKZ	Makanchi	3.54	315	⇑Pn	Pn	13 09 13.9	+2.2
	0.7nm,0.5s						
MAKZ				⇓Pg	Pg	13 09 23.8	-0.6
	8.1nm,0.9s						
MAKZ				⇑Lg	Lg	13 10 22.0	
	16nm,1.1s						
KTMS	Ketmen	3.93	258	Pg	Pb	13 09 25.5	-0.5
	1.5nm,0.2s						
KTMS				Lg	Lg	13 10 20.4	
	9.6nm,0.8s						
KAPS	Kapalarasan	4.56	284	Pg	Pg	13 09 42.5	-1.4
	4.9nm,0.7s						
KAPS				Lg	Lg	13 10 50.4	
	12nm,0.6s						
PDGK	Podgornoye	4.57	259	Pg	Pb	13 09 35.1	-1.8
	2.5nm,0.7s						
PDGK				Lg	Lg	13 10 37.6	
	8.6nm,0.8s						
PDGK	Podgornoye	4.57	259	⇓Pn	Pn	13 09 23.4	-2.5
	4.3nm,0.8s						
PDGK				⇑Pg	Pb	13 09 35.3	-1.6
	4.5nm,0.7s						
PDGK				⇓Lg	Lg	13 10 41.1	
	21nm,0.8s						
SHLS	Shalkode	4.63	257	Pg	Pb	13 09 32.9	-5.1
	16nm,0.5s						
SHLS				Lg	Lg	13 10 33.3	
	18nm,0.7s						
MNBS	Baschi	5.21	269	Pg	Pb	13 09 50.6	+2.8
	2.5nm,0.6s						
MNBS				Lg	Lg	13 11 04.4	
	8.1nm,0.8s						
KURBB	Kurchatov Arra	7.89	325	Pn	Pn	13 10 11.7	+0.4
	0.0nm,0.3s,baz=135,slow=12,SNR=8.3						
KURBB				Lg	Lg	13 12 31.1	
	0.0nm,0.3s,baz=155,slow=29,SNR=2.5						
ZALV	Zalesovo Beam	9.61	357	Pn	Pn	13 10 32.2	-2.6
	0.2nm,0.3s,baz=173,slow=13,SNR=4.0						
ZALV				Lg	Lg	13 13 20.2	
	0.0nm,0.3s,baz=158,slow=35,SNR=2.0						
SONM	Songino Array	14.80	69	Pn	Pn	13 11 44.1	-1.9
	0.0nm,0.3s,baz=279,slow=9.5,SNR=5.2						
CMAR	Chiang Mai Arr	28.14	152	P	P	13 14 11.2	+2.4
	0.2nm,0.5s,baz=358,slow=9.9,SNR=2.4						

IDC 01 13:08:50.8±1.6, **22°.76N**×**12°.20W**, **h0**^{km}, **mb3.7**/4, **mb1 3.8**/8, **mb1mx3.5**/43, **mbtmp3.7**/8, **ML3.5**/4, **Error ellipse: s-maj=51.4km s-min=24.3km az=75.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	Kowa	11.29	135	Pn	Pn	13 11 32.9	-0.7
	0.7nm,0.3s,baz=316,slow=12,SNR=8.6						
KOWA				Sn	Sn	13 13 34.6	-5.9
	0.5nm,0.3s,baz=113,slow=11,SNR=6.3						
TORD	Torodi Ar. Bea	16.30	124	Pn	Pn	13 12 39.6	-1.6
	0.1nm,0.3s,baz=311,slow=13,SNR=3.0						
TORD				Sn	Sn	13 15 33.3	-10
	0.1nm,0.3s,baz=306,slow=23,SNR=3.2						
DBIC	Dimbokro	17.49	155	P	Pn	13 12 54.4	-1.8
	0.2nm,0.3s,baz=343,slow=15,SNR=2.6						
ESDC	Sonseca Array	18.26	21	P	Pn	13 13 05.2	-0.5
	0.0nm,0.3s,baz=212,slow=11,SNR=5.0						
GERES	GERESS Array B	33.15	32	P	P	13 15 28.6	-0.3
	1.0nm,0.8s,baz=219,slow=10,SNR=6.7						
FINES	FINESS Array B	46.73	24	P	P	13 17 20.9	-0.4
	2.1nm,0.7s,baz=212,slow=6.8,SNR=8.3						
YKA	Yellowknife Ar	75.61	332	P	P	13 20 36.3	-1.0
	0.2nm,0.8s,baz=76,slow=7.7,SNR=2.1						
MKAR	Makanchi Array	76.71	45	P	P	13 20 44.5	+0.5
	0.4nm,0.5s,baz=290,slow=5.8,SNR=5.1						
WRA	Warramunga Arr	148.74	91	PKPbc	PKPbc	13 28 41.2	+0.2
	0.5nm,0.7s,baz=287,slow=2.8,SNR=7.1						
ASAR	Alice Springs	148.87	98	PKPbc	PKPbc	13 28 41.6	+0.4
	0.7nm,0.7s,baz=297,slow=1.7,SNR=15						

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*ISK **01** 13:40:58.8, 35°.77N×34°.02E, h30^{km}, ML2.9/12*

*DDA **01** 13:40:58.8, 35°.82N×34°.02E, h7^{km}±5^{km}, ML2.2*

*NIC **01** 13:40:59.4±0.0, 35°.61N×33°.86E, h24^{km}±2^{km}, Ml2.4/2*

ISC 01 13:40:57.6±1.0, **35°.74N**±0°.02×**33°.99E**±0°.04, **h32**^{km}±9^{km}, **n24**, σ**1^{s}.48**/36, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EREN	Erenkoy	0.26	144	PG	Pn	13 41 06.3	+1.2
EREN				SG	Sn	13 41 11.8	+1.9
EREN	Erenkoy	0.26	144	*i* P	Pn	13 41 06.1	+1.0
EREN				*i* S	Sb	13 41 10.2	+0.7
EREN				IAML		13 41 12.0	
	comp=N,303nm,0.3s						
EREN				IAML		13 41 12.0	
	comp=E,498nm,0.4s						
TISA	Tisan-Mersin	0.49	330	PG	Pn	13 41 09.6	+1.3
KARG	Kargicak-Mersi	0.52	334	PG	Pn	13 41 10.2	+1.5
YESI	Yesilovacik-Me	0.54	329	PG	Pn	13 41 10.2	+1.3
AKKU	Akkuyu-Mersin	0.55	320	PG	Pn	13 41 10.4	+1.3
AKKU				SG	Sn	13 41 19.1	+1.9
IKL	Isikli	0.56	334	PG	Pn	13 41 10.5	+1.3
GULN	MERSIN_Gulnar	0.57	321	*i* P	Pn	13 41 10.4	+0.9
GULN				*i* S	Sb	13 41 16.6	-0.7
TEPK	Tepekoy-MERSIN	0.60	324	PG	Pn	13 41 11.4	+1.5
SILI	Silifke-Mersin	0.63	355	PG	Pn	13 41 11.3	+1.0
OREN	Orenkoy-Mersin	0.64	318	PG	Pn	13 41 11.7	+1.4
KEBE	Keben-Mersin	0.74	343	PG	Pn	13 41 13.7	+1.8
PARAL	Paralimni	0.74	177	P	Pb	13 41 11.7	-0.3
PARAL				S	Sb	13 41 21.8	-0.2
KIZK	Mersin	0.75	10	PG	Pn	13 41 13.0	+1.1
KIZK	Mersin	0.75	10	*i* P	Pb	13 41 11.9	-0.3
KIZK				*i* S	Sb	13 41 20.7	-1.5
MVOU	Mavrovouni	0.78	202	P	Pb	13 41 12.2	-0.5
MVOU				AML	AML	13 41 21.7	
	comp=E,0.4nm,0.2s						
MVOU				AML	AML	13 41 21.7	
	comp=E,0.4nm,0.2s						
MVOU				S	Sb	13 41 22.0	-0.9
TEKE	Tekeli-Mersin	0.81	300	PG	Pn	13 41 14.9	+2.1
CSS	Mathiatis	0.94	215	P	Pb	13 41 14.5	-0.9
CSS				S	Sb	13 41 26.1	-1.5
ASGA	Asgata	1.13	213	P	Pn	13 41 17.3	+0.3
ERMK	Ermenek	1.25	316	*i* P	Pb	13 41 21.9	+1.2
ERMK				*i* S	Sn	13 41 32.3	-2.5
ERMK				IAML		13 41 45.0	
	comp=N,53nm,1.9s						
ERMK				IAML		13 41 46.0	
	comp=E,41nm,1.5s						
ALFC	Alefka	1.27	243	S	Sn	13 41 35.0	-0.1
ALFC				AML	AML	13 41 35.5	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	13 41 36.3	
	comp=E,0.3nm,0.1s						
GULE	Gulek	1.67	22	*i* P	Pn	13 41 26.0	+1.3
GULE				*i* S	Sn	13 41 42.1	-3.0
GULE				IAML		13 41 58.0	
	comp=N,48nm,2.3s						
KERG	Konya-Eregli	1.68	4	*i* P	Pn	13 41 26.6	+1.8
KERG				*i* S	Sn	13 41 43.4	-1.9
KKBE	Karaman, Kazim	1.70	331	*i* P	Pb	13 41 28.5	+0.2
KKBE				*i* S	Sn	13 41 44.0	-1.8

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*AEIC **01** 13:50:22.0±2.9, 51°.25N±0°.08×178°.33W±0°.05, h26^{km}±5^{km}, ML4.2/40, mb4.3/40(NEIC), Error ellipse: s-maj=12.0km s-min=4.3km az=174.0*

*IDC **01** 13:50:22.7±2.7, 51°.55N×178°.38W, h43^{km}±23^{km}, mb3.7/23, mb1 3.9/25, mb1mx3.8/41, mbtmp4.0/25, ML2.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/51, Error ellipse: s-maj=19.8km s-min=11.3km az=166.0*

*NEIC **01** 13:50:23.6±1.7, 51°.42N±0°.10×178°.37W±0°.03, h51^{km}±7^{km}, Error ellipse: s-maj=14.1km s-min=1.8km az=171.0*

ISC 01 13:50:23.2±1.2, **51°.4N**±0°.1×**178°.38W**±0°.03, **h51**^{km}±8^{km}, **n126**, σ**1^{s}.09**/130, **mb4.2**/42, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.44	326		Pn	13 50 34.2	+0.4
GAEA	Gareloi East	0.45	329		Pn	13 50 34.1	+0.2
TASE	Tanaga Southea	0.48	26		Pn	13 50 34.3	-0.1
TASE					Sn	13 50 44.7	+2.3
TAPA	Tanaga Point A	0.55	40		Pn	13 50 34.8	-0.3
TAPA					Sn	13 50 44.4	+0.7
TAFP	Tanaga Falls P	0.56	26		Pn	13 50 35.0	-0.2
KIMD	Kanaga Island	0.80	63		Pn	13 50 37.7	-0.6
KIKV	Kanaga Island	0.89	57		Pn	13 50 39.1	-0.4
KIKV					Sn	13 50 52.0	+0.6
KICM	Kanaga Island	0.90	54		Pn	13 50 39.6	0.0
KICM					Sn	13 50 52.4	+0.7
KINC	Kanaga Island	0.94	55		Pn	13 50 40.0	-0.1
KIRH	Kanaga Island	0.94	58		Pn	13 50 40.1	-0.1
KIRH					Sn	13 50 53.1	+0.4
ADK	Adak	1.16	65		Pn	13 50 42.6	-0.5
ADAG	Mount Adagdak	1.25	62		Pn	13 50 44.5	+0.2
CERAA	Semis’ Rag’d T	1.31	294		Pn	13 50 45.6	+0.5
CERB	Semis’ Cerberu	1.35	294		Pn	13 50 46.3	+0.7
CERB					Sn	13 51 03.9	+1.4
CESW	Semis’ Southwe	1.38	292		Pn	13 50 46.4	+0.4
CEAP	Semis’ Anvil P	1.41	296		Pn	13 50 47.0	+0.5
AMKA	Amchitka	1.45	270		Pn	13 50 46.0	-1.0
GSTD	Great Sitkin T	1.54	64		Pn	13 50 48.6	+0.3
GSMY	Great Sitkin M	1.58	65		Pn	13 50 49.2	+0.4
GSTR	Great Sitkin T	1.60	63		Pn	13 50 49.6	+0.5
LSSE	Little Sitkin	1.97	287		Pn	13 50 55.2	+1.0
LSPA	Little Sitkin	1.98	288		Pn	13 50 55.2	+1.0
LSNW	Little Sitkin	2.01	288		Pn	13 50 55.4	+0.7
ATKA	Atka Island	2.72	71		Pn	13 51 04.2	-0.1
ATKA					Sn	13 51 38.8	+2.8
KOWE	Korovin West	2.73	68		Pn	13 51 06.3	+1.7
KOFP	Korovin Flat P	2.80	70		Pn	13 51 06.3	+0.8
MAPS	Pakushin South	7.37	66		Pn	13 52 10.1	+2.0
MREP	Makushin Rep’t	7.48	67		Pn	13 52 11.9	+2.2
MSW	Makushin Switc	7.49	66		Pn	13 52 12.4	+2.6
MNAT	Makushin Natee	7.54	66		Pn	13 52 13.0	+2.6
UNV	Unalaska Valle	7.63	67		Pn	13 52 14.2	+2.5
PETK	Petropavlovsk-	14.73	286	P	Pn	13 53 47.8	-0.5
	0.1nm,0.3s,baz=95,slow=20,SNR=1.7						
PETK				ScP	ScP	14 02 30.3	+4.0
	baz=288,slow=11,SNR=3.6						
KDAK	Kodiak Island	16.19	57	P	Pn	13 54 04.5	-2.5
	2.1nm,0.3s,baz=285,slow=6.3,SNR=26						
KDAK	Kodiak Island	16.19	57	IAmb	IAmb	13 54 25.8	
	comp=Z,55nm,1.5s						
TTA	Tatalina	16.63	37	P	P	13 54 15.3	+0.8
RSO	Redoubt South	16.88	48	Pn	Pn	13 54 15.3	-0.6
CNPM	China Poot	17.30	51	Pn	Pn	13 54 20.7	-0.2
CNPM				IAmb	IAmb	13 54 29.4	
	comp=Z,75nm,1.8s						
SKT	Skwentna	18.00	44		P	13 54 27.0	-2.5
SKT				IAmb	IAmb	13 54 52.0	
	comp=Z,17nm,1.0s						
BILL	Bilibino	18.29	342	P	Pn	13 54 34.5	+1.6
KTH	Kantishna Hill	18.94	40	P	Pn	13 54 41.9	+1.1
KTH				IAmb	IAmb	13 54 44.9	
	comp=Z,18nm,0.7s						
TRF	Thorofare Moun	19.15	40	P	P	13 54 42.8	+0.7
TRF				IAmb	IAmb	13 54 58.5	
	comp=Z,10.0nm,0.9s						
BPAW	Bear Paw Mtn.	19.17	38	P	Pn	13 54 43.3	-0.2
RND	Reindeer	19.71	41	P	P	13 54 47.3	-0.9
I23K	Minto, Yukon-K	20.29	36	P	P	13 54 55.2	+0.9
I23K				IAmb	IAmb	13 55 42.5	
	comp=Z,22nm,1.6s						
M24K	Tolsona, Glenn	20.42	46		P	13 54 57.2	+1.3
WRH	Wood River Hil	20.46	39	P	P	13 54 56.8	+0.5
WRH				IAmb	IAmb	13 55 42.9	
	comp=Z,32nm,2.0s						
MDM	Murphy Dome	20.62	37	P	P	13 54 59.1	+1.1
MDM				IAmb	IAmb	13 55 03.6	
	comp=Z,7.1nm,0.6s						
CCB	Clear Creek Bu	20.65	38	P	P	13 54 58.8	+0.6
CCB				IAmb	IAmb	13 55 15.0	
	comp=Z,20nm,1.7s						
HDA	Harding Lake	20.89	39	P	P	13 55 00.7	-0.2
HDA				IAmb	IAmb	13 55 41.2	
	comp=Z,29nm,2.0s						
IL31		21.06	39	P	P	13 55 01.8	-0.9
ILAR	Eielson Array	21.06	39	P	P	13 55 02.6	-0.1
	comp=Z,0.7nm,0.5s,baz=238,slow=9.4,SNR=16						
ILAR				PcP	PcP	13 59 06.7	-0.5
	comp=Z,0.9nm,0.6s,baz=286,slow=3.1,SNR=11						
ILAR				ScP	ScP	14 02 40.8	+1.2
	comp=Z,0.2nm,0.5s,baz=276,slow=4.0,SNR=4.9						
COLD	Coldfoot	21.10	31	P	P	13 55 04.1	+1.0
GLB	Gilahina Butte	21.34	49	P	P	13 55 04.5	-1.2
GLB				IAmb	IAmb	13 55 12.3	
	comp=Z,6.2nm,0.6s						
RIDG	Independent Ri	21.50	42	P	P	13 55 06.9	-0.6
RIDG				IAmb	IAmb	13 55 25.9	
	comp=Z,5.4nm,0.6s						
DOT	Dot Lake	21.80	43	P	P	13 55 10.5	-0.2
TOLK	Toolik Lake Re	22.12	28	P	P	13 55 14.3	+0.3
EGAK	Eagle	23.36	41	P	P	13 55 26.7	-0.1
DAWY	Dawson	23.91	43	P	P	13 55 31.3	-0.7
DAWY				IAmb	IAmb	13 55 37.9	
	comp=Z,10nm,1.4s						
INK	Inuvik	27.29	35	P	P	13 56 00.9	-1.5
	comp=Z,0.6nm,0.5s,baz=256,slow=8.9,SNR=1.8						
INK				PcP	PcP	13 59 20.9	+0.3
	comp=Z,1.2nm,0.5s,baz=318,slow=1.0,SNR=4.4						
KLR	Kul'dur	31.43	286	P	P	13 56 39.2	-0.2
	comp=Z,3.4nm,0.4s,baz=70,slow=7.9,SNR=28						
USRK	Ussuriysk Ar.	33.55	277	P	P	13 56 57.7	-0.3
	comp=Z,3.4nm,0.6s,baz=50,slow=8.6,SNR=17						
H11N2	WAKE ISLAND Hy	33.66	206	T	T	14 32 50.0	
	baz=18,slow=74,SNR=343						
H11N3	WAKE ISLAND Hy	33.67	206	T	T	14 32 50.6	
	baz=18,slow=74,SNR=412						
H11N1	WAKE ISLAND Hy	33.68	206	T	T	14 32 48.1	
	baz=18						
MJAR	Matsushiro Arr	34.05	261	P	P	13 57 03.3	+0.9
	comp=Z,1.6nm,0.7s,baz=52,slow=5.4,SNR=4.9						
H11S1	WAKE ISLAND Hy	34.88	205	T	T	14 34 22.1	
	baz=21						
H11S2	WAKE ISLAND Hy	34.90	205	T	T	14 34 24.2	
	baz=21,SNR=417						
H11S3	WAKE ISLAND Hy	34.90	205	T	T	14 34 23.1	
	baz=21						
YKA	Yellowknife Ar	35.02	47	P	P	13 57 09.8	-0.6
	comp=Z,0.5nm,0.7s,baz=316,slow=3.7,SNR=3.9						
YKA				PcP	PcP	13 59 41.9	+0.6
	comp=Z,1.0nm,0.8s,baz=298,slow=2.8,SNR=10						
YKA				LR	LR	14 11 16.6	
	comp=Z,50nm,18.9s,baz=0.0,slow=36						
B08A	Colville Reser	37.28	71	P	P	13 57 29.9	-0.1
B08A				IAmb	IAmb	13 57 31.7	
	comp=Z,5.3nm,0.8s						
HAWA	Hanford	38.10	74	P	P	13 57 36.9	0.0
HAWA				IAmb	IAmb	13 57 49.1	
	comp=Z,16nm,1.6s						
KSRS	Korea Array	39.90	271	P	P	13 57 53.1	+1.1
	comp=Z,3.0nm,0.7s,baz=52,slow=8.3,SNR=8.1						
WVOR	Wild Horse Val	40.74	78	P	P	13 57 58.2	-0.8
WVOR				IAmb	IAmb	13 58 14.1	
	comp=Z,19nm,1.8s						
MSO	Missoula	41.21	70	P	P	13 58 01.3	-1.6
MSO				IAmb	IAmb	13 58 14.7	
	comp=Z,5.2nm,1.1s						
HLID	Hailey	42.68	74	P	P	13 58 14.2	-0.8
HLID				IAmb	IAmb	13 58 18.3	
	comp=Z,7.3nm,1.6s						
BCYI	Bear Canyon	42.87	73	P	P	13 58 16.6	+0.1
MCMT	McKenzie Canyo	42.92	72	P	P	13 58 17.5	+0.5
BOZ	Bozeman (W)	43.23	70	P	P	13 58 19.7	+0.4
BOZ				IAmb	IAmb	13 58 20.3	
	comp=Z,4.9nm,0.7s						
NVAR	Mina Array Bea	43.29	83	P	P	13 58 20.7	+0.7
	comp=Z,0.7nm,0.7s,baz=285,slow=8.1,SNR=3.1						
ELK	Elko	43.79	78	P	P	13 58 24.9	+0.8
RLMT	Red Lodge	44.88	70	P	P	13 58 33.0	+0.3
DUG	Dugway, Tooele	45.61	77	P	P	13 58 39.0	+0.6
DUG				IAmb	IAmb	13 58 40.2	
	comp=Z,9.6nm,1.3s						
BW06	Boulder Array	46.05	73	P	P	13 58 40.6	-1.4
PD31	Pinedale Array	46.05	73	P	P	13 58 40.6	-1.3
PD31				IAmb	IAmb	13 58 45.0	
	comp=Z,12nm,1.5s						
PDAR	Pinedale Array	46.05	73	P	P	13 58 42.1	+0.2
	comp=Z,1.8nm,0.5s,baz=329,slow=2.6,SNR=24						
SONM	Songino Array	46.87	297	P	P	13 58 48.8	+0.6
	comp=Z,0.4nm,0.4s,baz=72,slow=7.2,SNR=9.4						
SONM				PcP	PcP	14 00 20.6	+0.3
	comp=Z,0.6nm,0.5s,baz=96,slow=1.8,SNR=4.6						
TMUT	Trail Mountain	47.13	77	P	P	13 58 49.4	-1.1
ZALV	Zalesovo Beam	54.20	314	P	P	13 59 42.9	-0.3
	comp=Z,0.3nm,0.4s,baz=0.0,slow=7.2,SNR=1.6						
ZALV				PcP	PcP	14 00 47.1	+0.1
	comp=Z,1.2nm,0.6s,baz=29,slow=3.7,SNR=8.4						
ARCES	ARCESS Array B	58.11	350	P	P	14 00 09.2	-1.6
	comp=Z,2.1nm,0.8s,baz=19,slow=5.7,SNR=9.7						
P40A	Paris	58.32	65	P	P	14 00 11.8	-1.0
TXAR	Lajitas Array	58.39	82	P	P	14 00 13.6	+0.1
	comp=Z,0.6nm,0.6s,baz=308,slow=4.7,SNR=14						
MKAR	Makanchi Array	60.23	309	P	P	14 00 25.2	-0.7
	comp=Z,0.4nm,0.4s,baz=49,slow=5.7,SNR=12						
MKAR				PcP	PcP	14 01 10.5	-0.4
	comp=Z,0.3nm,0.4s,baz=46,slow=5.3,SNR=5.4						
FCAR	Ozark Folk Cen	60.78	68	P	P	14 00 28.3	-1.4
H06N1	SOCORRO T-PHAS	61.41	95	T	T	15 07 26.7	
	SNR=3.7						
H06E1	SOCORRO T-PHAS	61.51	95	T	T	15 07 20.8	
	SNR=11						
T50A	Nancy	64.13	63	P	P	14 00 51.9	-0.2
FPAL	Fort Paine	65.48	65	P	P	14 01 00.7	-0.3
FINES	FINESS Array B	65.82	347	P	P	14 01 00.4	-2.2
	comp=Z,0.9nm,0.6s,baz=39,slow=12,SNR=8.4						
BG3	Lake Jocassee	66.66	63	P	P	14 01 08.6	+0.1
NOA	NORSAR Array B	67.65	355	P	P	14 01 13.9	-0.4
	comp=Z,0.6nm,0.8s,baz=4.1,slow=7.4,SNR=5.1						
LSA	Lhasa	67.68	290	P	P	14 01 16.9	+1.3
CMAR	Chiang Mai Arr	71.27	276	P	P	14 01 37.5	+0.2
	comp=Z,0.9nm,0.7s,baz=24,slow=6.1,SNR=9.2						
TAPN	Taplejung	71.44	291	*e*P	P	14 01 39.2	+0.6
	comp=Z,34nm,0.7s						
ODAN	Odare	72.00	290	*e*P	P	14 01 42.8	+0.9
	comp=Z,8.4nm,0.6s						

GUN	Gumba	72.09	292	eP	P	14 01 43.3	+0.8
	comp=Z,94nm,0.6s						
RAMN	Ramite	72.39	291	eP	P	14 01 44.8	+0.6
	comp=Z,58nm,0.5s						
KKN	Kakani	72.53	293	eP	P	14 01 45.7	+0.7
	comp=Z,27nm,0.5s						
PKI	Pulchoki	72.62	292	eP	P	14 01 46.2	+0.5
	comp=Z,24nm,0.7s						
PKIN	Phulchoki	72.62	292	eP	P	14 01 46.1	+0.5
	comp=Z,21nm,0.6s						
GKN	Gorkha	72.74	293	eP	P	14 01 46.7	+0.5
	comp=Z,36nm,0.8s						
DMN	Daman	72.77	293	eP	P	14 01 47.5	+1.0
DANN	Dangsing	72.98	294	eP	P	14 01 48.3	+0.5
	comp=Z,30nm,0.8s						
AKASG	Malin Array Be	75.61	342	P	P	14 02 01.2	-1.0
	comp=Z,0.7nm,0.4s,baz=19,slow=6.0,SNR=6.7						
GERES	GERESS Array B	79.60	352	P	P	14 02 23.6	-1.1
	comp=Z,0.3nm,0.5s,baz=38,slow=6.8,SNR=5.5						
WRA	Warramunga Arr	82.21	224	P	P	14 02 37.8	-1.0
	comp=Z,0.5nm,0.7s,baz=31,slow=6.1,SNR=5.3						
ASAR	Alice Springs	85.68	223	P	P	14 02 56.5	+0.2
	comp=Z,1.2nm,0.8s,baz=24,slow=5.6,SNR=21						
ESDC	Sonseca Array	89.17	4	P	P	14 03 12.0	-1.2
	comp=Z,0.4nm,0.6s,baz=340,slow=3.9,SNR=4.5						
STKA	Stephens Creek	90.09	213	P	P	14 03 17.8	+0.6
	comp=Z,1.6nm,0.7s,baz=5.8,slow=8.3,SNR=3.7						
TORD	Torodi Ar. Bea	115.72	360	PKP	PKiKP	14 08 58.5	-1.5
	comp=Z,0.5nm,0.6s,baz=346,slow=1.8,SNR=3.2						
H03N2	Juan Fernandez	120.90	106	T	T	16 21 42.2	
	baz=317,slow=77,SNR=151						
H03N1	Juan Fernandez	120.91	106	T	T	16 21 33.6	
	baz=317,slow=77,SNR=30						
H03N3	Juan Fernandez	120.91	106	T	T	16 21 35.7	
	baz=317,slow=77,SNR=216						
DBIC	Dimbokro	121.89	8	PKP	PKPdf	14 09 10.9	-1.1
	comp=Z,0.7nm,0.3s,baz=24,slow=3.2,SNR=6.2						
MAW	Mawson	146.66	218	PKPbc	PKPdf	14 09 57.9	+1.9
	comp=Z,4.3nm,0.8s,baz=18,slow=3.2,SNR=3.6						
LBTB	Lobatse	147.90	316	PKPbc	PKPbc	14 10 03.0	+0.4
	comp=Z,12nm,0.6s,baz=22,slow=1.9,SNR=28						
BOSA	Boshof	151.15	313	PKPbc	PKPbc	14 10 10.4	-0.3
	comp=Z,5.5nm,0.6s,baz=36,slow=1.8,SNR=16						
BOSA				PKPab	PKPab	14 10 20.3	+1.8
	comp=Z,2.1nm,0.5s,baz=80,slow=0.2,SNR=6.3						

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*IDC **01** 13:57:13.4±0.6, 42°.63N×141°.92E, h28^{km}±2^{km}, mb3.6/22, mb1 3.8/24, mb1mx3.7/39, mbtmp3.8/24, ML2.5/2, MS3.6/22, Ms1 3.7/22, ms1mx3.5/53, Error ellipse: s-maj=14.3km s-min=9.7km az=133.0*

*NIED **01** 13:57:14.5, 42°.59N×141°.84E, h30^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.27; M$_{\theta\theta}$-0.00; M$_{\phi\phi}$-2.26; M$_{r\theta}$-2.28; M$_{\theta\phi}$4.30; M$_{\phi r}$-0.63; Fault plane solution: M$_0$5.38000×10^{15} NP1: φ$_s$285.00000°, δ69.00000°, λ34.00000°. NP2: φ$_s$181.00000°, δ58.00000°, λ155.00000°.*

*NEIC **01** 13:57:14.7±1.9, 42°.57N±0°.04×141°.80E±0°.06, h36^{km}±6^{km}, mb4.7/14 Error ellipse: s-maj=6.6km s-min=5.4km az=49.0*

*JMA **01** 13:57:14.4, 42°.58N×141°.84E, h30^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: φ$_s$168.00000°, δ44.00000°, λ139.00000°. NP2: φ$_s$290.00000°, δ63.00000°, λ54.00000°. Principal axes: T Plg56.0000°, Azm152.0000°; N Plg32.0000°, Azm308.0000°; P Plg11.0000°, Azm45.0000°;*

JMA Felt IV J1.

*BGR **01** 13:57:15.7±0.0, 42°.03N×145°.19E, h33^{km}, mb4.6*

ISC 01 13:57:13.8±0.4**, 42°.61N**±0°.03×**141°.84E**±0°.03**, h27**^{km}±2^{km}**, n88,** σ**1^{s}34**/95**, mb4.3**/28**, MS3.7**/17**, 4C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	Iburiatsuma	0.06	79	⇑P	Pb	13 57 19.2	+0.7
JIAM				eS	Sb	13 57 23.5	+1.8
JEW	Eniwo	0.37	309	⇑P	Pn	13 57 23.3	0.0
JEW				eS	Sn	13 57 30.0	+0.5
JEW	Eniwo	0.37	309		Pn	13 57 23.2	0.0
JEW					Sn	13 57 30.1	+0.5
JBT2	Biratori 2	0.42	66	⇓P	Pb	13 57 23.5	+0.7
JBT2				eS	Sn	13 57 30.6	-0.3
JSHD	Hidakashinhida	0.51	113	⇓P	Pn	13 57 25.0	-0.1
JNB	Noboribetsu	0.61	257	⇓P	Pb	13 57 25.7	-0.2
JNB				eS	Sb	13 57 34.1	0.0
JISS	Ishikarishitsu	0.73	335	⇑P	Pn	13 57 28.7	+0.4
JNBK	Urakawa-nobuka	0.75	116	⇑P	Pb	13 57 28.0	-0.2
JNBK				eS	Sn	13 57 39.1	+0.1
JFR	Furan	0.78	45	⇓P	Pb	13 57 28.7	-0.1
JFR				eS	Sn	13 57 40.9	+1.1
JAB	Ashibetsu	0.94	17	⇓P	Pb	13 57 31.9	+0.5
JKB	Kayabe	0.94	220	⇓P	Pn	13 57 30.5	-0.6
JKB				eS	Sn	13 57 42.9	-0.7
JCH	Churui	1.12	89	P	Pn	13 57 33.5	-0.2
JCH				eS	Sn	13 57 48.4	+0.2
JHR	Hokuryu	1.13	356	P	Pn	13 57 34.5	+0.7
ERM	Erimo	1.14	121	Pn	Pn	13 57 33.9	-0.1
JEM	Erimo	1.14	121	P	Pn	13 57 33.6	-0.3
JYM2	Yakumo 2	1.20	246	⇓P	Pb	13 57 35.0	-0.7
JYM2				eS	Sb	13 57 51.3	+0.5
ASAJ	Asahikawa	1.60	20	Pg	Pn	13 57 41.7	+1.4
	116nm,0.3s,baz=221,slow=12,SNR=729						
ASAJ				Lg	Lg	13 58 03.6	
	258nm,0.3s,baz=73,slow=20,SNR=5.2						
ASAJ				LR	LR	13 58 22.0	
	comp=Z,661nm,21.1s,baz=175,slow=44						
JKA	Kamikawa-asahi	1.60	20	Pn	Pn	13 57 40.9	+0.7
JTM	Tenmabayashi	1.91	198	Pn	Pn	13 57 44.7	+0.2
YSS	Yuzh-Sakhalins	4.39	8	Pn	Pn	13 58 22.0	+3.4
JMM	Marumori	4.81	190	Pn	Pn	13 58 24.9	+0.6
JSD	Sado	5.33	212	Pn	Pn	13 58 33.5	+2.1
JYT	Yasato	6.50	192		Pn	13 58 46.7	-0.8
MAJO	Matsushiro	6.68	206	Pn	Pn	13 58 52.2	+2.2
MAT	Matsushiro	6.68	206	P	Pn	13 58 53.1	+3.1
MAT				S	Sn	14 00 10.0	+4.8
MJAR	Matsushiro Arr	6.68	206	Pn	Pn	13 58 53.4	+3.4
	0.2nm,0.3s,baz=323,slow=16,SNR=18						
MJAR				LR	LR	14 01 40.9	
	comp=Z,512nm,20.4s,baz=25,slow=40						
USA0B	Ussuriysk Arra	7.35	286	Pn	Pn	13 59 00.7	+1.5
USRK	Ussuriysk Ar.	7.35	286	Pn	Pn	13 58 59.8	+0.6
	baz=92,slow=15,SNR=2.0						
USRK				LR	LR	14 01 50.9	
	comp=Z,389nm,19.0s,baz=96,slow=38						
INU	Inuyama	8.16	209		Pn	13 59 13.3	+2.9
KLR	Kul'dur	9.65	317	Pn	Pn	13 59 32.2	+1.5
	0.2nm,0.3s,baz=157,slow=13,SNR=3.5						
KLR				LR	LR	14 03 17.3	
	comp=Z,229nm,20.9s,baz=175,slow=38						
KSRS	Korea Array	11.84	249	Pn	Pn	14 00 05.0	+4.3
	0.2nm,0.3s,baz=56,slow=13,SNR=6.1						
KSRS				LR	LR	14 04 11.6	
	comp=Z,286nm,18.9s,baz=75,slow=35						
PETK	Petropavlovsk-	14.92	40	Pn	Pn	14 00 44.1	+1.5
	0.2nm,0.3s,baz=216,slow=10,SNR=13						
PETK				LR	LR	14 06 33.2	
	comp=Z,424nm,18.6s,baz=230,slow=38						
PET	Petropavlovsk	15.32	41	Pn	Pn	14 00 50.3	+2.4
PET				IAmb	IAmb	14 01 05.4	
	comp=Z,51nm,1.5s						
YAK	Yakutsk	20.75	344	LR	LR	14 11 22.0	
	comp=Z,106nm,18.3s,baz=94,slow=41						
SEY	Seymchan	21.28	13	P	P	14 01 56.6	-1.1
	comp=Z,3.0nm,0.8s,baz=178,slow=24,SNR=2.5						
SEY				pP	pP	14 02 05.0	-0.2
	comp=Z,6.6nm,0.8s,baz=195,slow=9.8,SNR=7.0						
SONM	Songino Array	25.36	294	P	P	14 02 39.0	+0.5
	comp=Z,1.0nm,0.8s,baz=86,slow=8.6,SNR=4.8						
SONM				pP	sP	14 02 48.4	-1.4
	comp=Z,1.2nm,0.7s,baz=91,slow=7.8,SNR=4.9						
SONM				LR	LR	14 13 24.6	
	comp=Z,204nm,18.0s,baz=78,slow=38						
GUMO	Guam	29.04	174	LR	LR	14 13 47.2	
	comp=Z,35nm,21.4s,baz=52,slow=34						
H11N2	WAKE ISLAND Hy	31.09	129	T	T	14 36 13.7	
	baz=322,slow=75,SNR=23						
H11N1	WAKE ISLAND Hy	31.10	129	T	T	14 36 08.1	
	baz=322,SNR=17						
H11N3	WAKE ISLAND Hy	31.11	129	T	T	14 36 08.8	
	baz=322						
H11S1	WAKE ISLAND Hy	31.96	131	T	T	14 37 16.0	
	baz=313						
H11S3	WAKE ISLAND Hy	31.96	131	T	T	14 37 20.0	
	baz=313						
H11S2	WAKE ISLAND Hy	31.98	131	T	T	14 37 16.7	
	baz=313						
DAV	Davao City (W)	38.20	207	LR	LR	14 19 54.8	
	comp=Z,42nm,18.2s,baz=322,slow=36						
NRIK	Noril'sk	38.41	332	LR	LR	14 21 20.0	
	comp=Z,205nm,19.6s,baz=107,slow=38						
ZALV	Zalesovo Beam	38.59	307	P	P	14 04 33.5	-0.6
	comp=Z,0.9nm,0.6s,baz=86,slow=7.6,SNR=7.1						
ZALV				pP	pP	14 04 42.8	+0.6
	comp=Z,3.1nm,0.7s,baz=87,slow=7.9,SNR=11						
ZALV				PcP	PcP	14 06 45.2	-0.8
	comp=Z,0.5nm,0.4s,baz=56,slow=3.6,SNR=3.2						
ZALV				ScP	ScP	14 10 30.8	-1.3
	comp=Z,0.2nm,0.3s,baz=62,slow=3.5,SNR=4.4						
ZALV				LR	LR	14 21 15.2	
	comp=Z,80nm,19.0s,baz=158,slow=37						
MKAR	Makanchi Array	41.65	297	P	P	14 04 59.3	-0.3
	comp=Z,1.3nm,0.8s,baz=79,slow=8.1,SNR=11						
MKAR				pP	pP	14 05 08.6	+0.8
	comp=Z,1.1nm,0.7s,baz=82,slow=9.1,SNR=7.3						
MKAR				LR	LR	14 23 18.5	
	comp=Z,81nm,19.5s,baz=128,slow=38						
KDAK	Kodiak Island	42.85	46	P	P	14 05 08.7	-0.5
	comp=Z,2.2nm,0.3s,baz=294,slow=4.6,SNR=19						
CMAR	Chiang Mai Arr	43.48	250	P	P	14 05 16.5	+1.8
	comp=Z,0.7nm,0.8s,baz=42,slow=6.7,SNR=8.1						
MDM	Murphy Dome	44.09	35	P	P	14 05 20.4	+1.3
IL31		44.68	35	P	P	14 05 23.8	+0.1
ILAR	Eielson Array	44.68	35	P	P	14 05 22.8	-1.0
	comp=Z,1.0nm,0.8s,baz=276,slow=7.7,SNR=8.0						
ILAR				pP	pP	14 05 32.2	+0.1
	comp=Z,4.4nm,0.9s,baz=274,slow=5.8,SNR=20						
DOT	Dot Lake	46.06	37	P	P	14 05 34.5	-0.3
FAKI	Fak Fak	46.14	193	P	P	14 05 35.5	-0.3
EGAK	Eagle	47.11	35	P	P	14 05 42.1	-0.8
EGAK				IAmb	IAmb	14 05 51.2	
	comp=Z,7.3nm,1.1s						
INK	Inuvik	49.32	29	P	P	14 05 57.4	-2.5
	comp=Z,0.6nm,0.3s,baz=294,slow=10,SNR=6.8						
INK				pP	pP	14 06 08.8	+0.5
	comp=Z,1.2nm,0.5s,baz=285,slow=7.4,SNR=4.5						
HYT	Haines Junctio	49.70	39	P	P	14 06 04.1	+0.9
DLBC	Dease Lake	54.10	40	P	P	14 06 36.7	+0.8
	comp=Z,1.0nm,0.9s,baz=336,slow=10.0,SNR=1.6						
ABKAR	Akbulak array	54.71	307	P	P	14 06 40.0	-0.2
ABKAR				IAmb	IAmb	14 06 50.0	
	comp=Z,6.1nm,0.8s						
RES	Resolute Bay	57.13	15	P	P	14 06 56.6	-0.7
	comp=Z,0.5nm,0.3s,baz=304,slow=4.1,SNR=2.3						
RES	Resolute Bay	57.13	15	P	P	14 06 57.0	-0.3
RES				IAmb	IAmb	14 07 07.0	
	comp=Z,6.6nm,1.0s						
YKA	Yellowknife Ar	58.86	32	P	P	14 07 09.1	-0.5
	comp=Z,0.6nm,0.6s,baz=308,slow=5.8,SNR=14						
YKA				pP	pP	14 07 17.5	-0.5
	comp=Z,2.1nm,0.8s,baz=310,slow=5.8,SNR=14						
ARCES	ARCESS Array B	58.92	338	LR	LR	14 35 58.5	
	comp=Z,68nm,18.7s,baz=320,slow=40						
KNRA	Kununurra	59.23	195	P	P	14 07 14.2	+1.6
GEYT	Alibeck	61.53	297	P	P	14 07 27.6	-0.6
	comp=Z,0.7nm,0.8s,baz=349,slow=1.5,SNR=2.8						
GEYT				pP	pP	14 07 36.4	-0.4
	comp=Z,2.5nm,1.0s,baz=347,slow=2.0,SNR=6.1						
GEYT				LR	LR	14 36 04.5	
	comp=Z,76nm,19.9s,baz=195,slow=38						
PGC	Sidney	62.31	48	P	P	14 07 34.1	+0.8
PGC				IAmb	IAmb	14 07 44.3	
	comp=Z,9.2nm,1.2s						
WB0	Warramunga Arr	62.44	188	P	P	14 07 33.0	-1.4
WB0				IAmb	IAmb	14 07 47.7	
	comp=Z,4.6nm,1.1s						
WR0	Warramunga Arr	62.62	188	P	P	14 07 33.9	-1.6
WR0				IAmb	IAmb	14 07 51.3	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	62.62	188	P	P	14 07 34.4	-1.1
WB2				IAmb	IAmb	14 07 49.2	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	62.62	188	P	P	14 07 34.3	-1.2
	comp=Z,1.3nm,0.7s,baz=6.4,slow=6.7,SNR=12						
FINES	FINESS Array B	64.06	331	P	P	14 07 44.1	-0.6
	comp=Z,0.8nm,0.4s,baz=54,slow=7.8,SNR=19						
FINES				pP	pP	14 07 52.4	-0.9
	comp=Z,5.0nm,0.7s,baz=53,slow=7.0,SNR=5.3						
FINES				LR	LR	14 38 00.0	
	comp=Z,156nm,18.2s,baz=350,slow=38						
ASAR	Alice Springs	66.35	188	P	P	14 07 59.3	-0.6
	comp=Z,0.6nm,0.7s,baz=7.0,slow=3.9,SNR=12						
KBZ	Khabaz	67.58	309	P	P	14 08 07.5	-0.1
	comp=Z,1.5nm,0.8s,baz=350,slow=4.8,SNR=3.9						
KBZ				pP	pP	14 08 14.8	-1.4
	comp=Z,2.9nm,1.0s,baz=124,slow=3.6,SNR=4.7						
KBZ				LR	LR	14 42 16.8	
	comp=Z,42nm,21.0s,baz=33,slow=40						
HFS	Hagfors	69.16	335	LR	LR	14 44 59.3	
	comp=Z,49nm,19.9s,baz=60,slow=41						
NB2	NORSAR Subarra	69.19	337	P	P	14 08 16.4	-1.0
	comp=Z,10nm,1.0s,baz=36,slow=6.2						
NOA	NORSAR Array B	69.19	337	P	P	14 08 16.5	-1.0
	comp=Z,0.8nm,0.8s,baz=43,slow=8.0,SNR=5.8						
NOA				pP	pP	14 08 24.6	-1.5
	comp=Z,3.9nm,0.7s,baz=37,slow=6.2,SNR=9.0						
NOA				LR	LR	14 41 49.4	
	comp=Z,37nm,19.4s,baz=285,slow=39						
AKASG	Malin Array Be	70.12	321	P	P	14 08 22.1	-1.1
	comp=Z,0.3nm,0.4s,baz=44,slow=5.4,SNR=3.0						
AKASG				pP	pP	14 08 30.8	-1.2
	comp=Z,2.4nm,0.6s,baz=45,slow=6.2,SNR=9.6						
PDAR	Pinedale Array	73.56	47	P	P	14 08 43.8	-0.7
	comp=Z,0.4nm,0.5s,baz=224,slow=0.5,SNR=6.0						
STKA	Stephens Creek	74.12	180	P	P	14 08 47.0	-0.2
	comp=Z,1.1nm,0.7s,baz=342,slow=16,SNR=1.8						
BRTR	Keskin Array B	75.43	311	LR	LR	14 49 16.7	
	comp=Z,28nm,18.4s,baz=87,slow=41						
GERES	GERESS Array B	78.16	328	P	P	14 09 10.5	+0.1
	comp=Z,0.1nm,0.4s,baz=39,slow=6.3,SNR=2.5						
GERES				pP	pP	14 09 19.4	+0.2
	comp=Z,1.3nm,0.8s,baz=34,slow=5.0,SNR=8.4						
TXAR	Lajitas Array	86.47	53	P	P	14 09 53.6	-0.6
	comp=Z,0.3nm,0.6s,baz=279,slow=3.0,SNR=8.9						
PPT	Papeete	86.86	117	LR	LR	14 42 13.2	
	comp=Z,52nm,19.6s,baz=278,slow=31						
TKL	Tuckaleechee C	91.66	36	LR	LR	14 54 23.3	
	comp=Z,33nm,18.4s,baz=348,slow=37						
ESDC	Sonseca Array	92.42	334	LR	LR	14 59 29.2	
	comp=Z,34nm,19.1s,baz=75,slow=40						
H03N2	Juan Fernandez	146.87	88	T	T	17 00 24.8	
	baz=300,slow=77,SNR=5.2						
H03N3	Juan Fernandez	146.89	88	T	T	17 00 27.7	
	baz=300,slow=77,SNR=6.1						
H03N1	Juan Fernandez	146.89	88	T	T	17 00 26.9	
	baz=300,slow=77,SNR=8.1						

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*IDC **01** 14:09:49.1±1.2, 13°.50N×120°.87E, h0^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.3/49, mbtmp3.3/6, Error ellipse: s-maj=62.5km s-min=19.4km az=61.0*

*MAN **01** 14:09:50.2, 13°.57N×120°.61E, h13^{km}, mb4.6, ML3.4, MS3.3*

ISC 01 14:09:49.5±1.3**, 13°.52N**±0°.03×**120°.71E**±0°.04**, h3**^{km}±10^{km}**, n17,** σ**1^{s}05**/25**, mb3.3**/6**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.50	296	eP	Pg	14 09 58.7	-0.4
LUBP				eS	Sg	14 10 05.3	-0.3
TGY	Tagaytay City	0.62	21	⇑iP	Pb	14 10 02.5	-0.6
TGY				iS	Sn	14 10 14.4	-1.6
MACP	Maragondon, Ca	0.74	1	eP	Pg	14 10 03.9	+0.1
MACP				eS	Sb	14 10 15.2	-0.6
LQP	Lukban	1.00	54	⇑eP	Pg	14 10 08.2	-0.6
LQP				iS	Sn	14 10 34.2	+8.7
SJMP	San Jose	1.12	159	eP	Pg	14 10 11.2	+0.2
SJMP				eS	Sn	14 10 28.4	+0.3
BUSP	Coron	1.58	198	eP	Pn	14 10 18.0	-0.5
BUSP				eS	Sb	14 10 40.4	+0.5
POLP	Polilio Island	1.70	45	eP	Pg	14 10 21.1	-1.0
POLP				eS	Sg	14 10 46.8	+2.6
OTRP	Odiongan	1.72	132	eP	Pb	14 10 21.4	-0.4
OTRP				eS	Sg	14 10 45.7	+0.9
GQP	Guinayangan	1.73	77	⇓eP	Pb	14 10 21.1	-0.9
GQP				eS	Sg	14 10 45.1	-0.2
ENPP	El Nido	2.62	209	eP	Pn	14 10 32.0	-0.7
SMPP	San Manuel, Pa	2.62	359	eP	Pn	14 10 33.9	+1.0
CMAR	Chiang Mai Arr	21.48	286	P	P	14 14 41.4	+1.7
	0.7nm,0.9s,baz=94,slow=7.6,SNR=4.9						
WRA	Warramunga Arr	35.85	158	P	P	14 16 49.5	-1.3
	0.3nm,0.5s,baz=333,slow=10,SNR=6.8						
SONM	Songino Array	36.24	344	P	P	14 16 54.2	+0.2
	0.3nm,0.6s,baz=155,slow=11,SNR=2.8						
ASAR	Alice Springs	39.14	161	P	P	14 17 18.4	-0.3
	0.7nm,0.6s,baz=337,slow=7.3,SNR=12						
MKAR	Makanchi Array	46.18	324	P	P	14 18 15.5	-0.2
	0.1nm,0.4s,baz=115,slow=5.1,SNR=1.5						
ZALV	Zalesovo Beam	49.22	333	P	P	14 18 40.7	+1.6
	0.2nm,0.3s,baz=156,slow=11,SNR=2.0						

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*SKHL **01** 14:11:15.0±0.3, 44°.63N×148°.78E, h39^{km}±7^{km}, mb4.1/3*

*JMA **01** 14:11:16.5±0.4, 44°.19N×148°.33E, h0^{km}, M3.6*

ISC 01 14:11:14.1±4.1**, 44°.62N**±0°.09×**148°.8E**±0°.2**, h42**^{km}**, n10,** σ**1^{s}33**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.90	313	eP	Pn	14 11 30.0	-0.3
KUR				AMB	AMB	14 11 31.0	
	60nm,0.2s						
KUR				eS	Sn	14 11 41.5	-0.6
KUR				A	A	14 11 41.9	
	489nm,0.2s						
KUR				A	A	14 11 41.9	
	338nm,0.2s						
YUK	Yuzh-Kuril'sk	2.18	256	iP	Pn	14 11 48.5	+0.7
YUK				AMB	AMB	14 11 49.0	
	40nm,0.4s						
YUK				iS	Sn	14 12 13.6	0.0
YUK				A	A	14 12 17.0	
	195nm,0.4s						
YUK				A	A	14 12 17.0	
	165nm,0.4s						
GRPR	Tuman	2.26	255	eP	Pn	14 11 49.5	+0.6
GRPR				AMB	AMB	14 11 53.0	
	40nm,0.4s						
GRPR				eS	Sn	14 12 15.2	-0.2
GRPR				A	A	14 12 17.0	
	174nm,0.4s						
GRPR				A	A	14 12 17.0	
	197nm,0.4s						
NEM2	Nemuro 2	2.53	241	P	Pn	14 11 52.9	+0.3
NEM2				eS	Sn	14 12 19.3	-2.9
NMR	Nemuro--Hokkai	2.54	242	eP	Pn	14 11 52.0	-0.7
NMR				eS	Sn	14 12 22.0	-0.4
JRA	Rausu	2.72	257	P	Pn	14 11 56.8	+1.6
JKHN	Kushirohamanak	3.04	241	P	Pn	14 12 00.3	+0.7
JNK	Nakash	3.11	252	P	Pn	14 12 02.1	+1.5
JNK				eS	Sn	14 12 35.0	-1.5
JAK	Akkeshi	3.38	243	P	Pn	14 12 04.7	+0.4
JAR	Ashorobuto	3.86	252	P	Pn	14 12 13.1	+2.2

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*CRAAG **01** 14:17:10.9, 36°.95N×3°.71E, Ml3.7*

*MDD **01** 14:17:12.6±0.6, 36°.98N×3°.69E, h7^{km}±6^{km}, mb4.5/32, Error ellipse: s-maj=5.5km s-min=4.4km az=167.0, PRXIMO*

*LDG **01** 14:17:15.0±0.3, 36°.93N×3°.78E, h30^{km}, Ml3.5/16, Error ellipse: s-maj=6.1km s-min=2.9km az=150.0*

ISC 01 14:17:10.9±0.5**, 37°.07N**±0°.02×**3°.69E**±0°.02**, h12**^{km}**, n154,** σ**2^{s}23**/202**, 1D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.36	208	P	Pg	14 17 17.2	-0.9
ABMS	Boumerdes	0.36	208	P	Pg	14 17 17.2	-0.9
ABA	Alger-Bouzarea	0.59	243	P	Pg	14 17 23.1	+0.8
ABA	Alger-Bouzarea	0.59	243	P	Pg	14 17 23.1	+0.8
ADJB	Djebel Djouab	0.93	193	P	Pb	14 17 28.3	-0.7
ADJB	Djebel Djouab	0.93	193	P	Pb	14 17 28.3	-0.7
AKET	Djebel Ketaf	1.03	171	P	Pb	14 17 30.0	-0.8
AKET	Djebel Ketaf	1.03	171	P	Pb	14 17 30.0	-0.8
SET	Setif	1.63	122	P	Pg	14 17 45.0	+2.9
SET	Setif	1.63	122	P	Pg	14 17 45.0	+2.9
DFRA	Djebel Bou Aff	1.83	106	P	Pn	14 17 43.0	+0.7
DFRA	Djebel Bou Aff	1.83	106	P	Pn	14 17 43.0	+0.7
EBNR	Beni Rached	1.90	246	P	Pg	14 17 47.5	+0.2
ECHA	Ech Chlef	2.08	244	P	Pb	14 17 50.0	+1.5
ECHF	Ech Chlef	2.10	245	P	Pb	14 17 50.0	+1.2
EANR	'Ain N'Sour	2.37	243	P	Pg	14 17 56.3	+0.1
EANR	'Ain N'Sour	2.37	243	P	Pg	14 17 56.3	+0.1
CASM	Ain Smara	2.39	109	P	Pn	14 17 52.1	+2.2
CASM	Ain Smara	2.39	109	P	Pn	14 17 52.1	+2.2
CAEH	'Ain El Ouahch	2.55	96	P	Pn	14 17 53.3	+1.2
CAEH	'Ain El Ouahch	2.55	96	P	Pn	14 17 53.3	+1.2
OKGL	Djebel Kef Gue	2.66	248	P	Pn	14 17 53.4	-0.1
	26nm,0.3s,SNR=7.9						
OKGL				S	Sn	14 18 23.5	-2.2
	449nm,0.7s,SNR=7.9						
EIBI	Ibiza	2.69	317	P	Pn	14 17 55.9	+2.0
	25nm,0.3s,SNR=10						
EIBI				S	Sn	14 18 26.8	+0.3
	17nm,0.3s						
ETOS	Mallorca	2.78	346	P	Pn	14 17 56.9	+1.7
	67nm,0.3s,SNR=171						
ETOS				S	Sn	14 18 28.1	-0.6
	30nm,0.3s,SNR=5.5						
MAHO	Mahon	2.86	9	P	Pn	14 17 56.6	+0.4
MAHO				S	Sn	14 18 28.8	-1.8
MAHO	Mahon	2.86	9	eP	Pn	14 17 56.6	+0.4
MAHO				eS	Sn	14 18 28.8	-1.8
CMAH	Djebel Manchou	3.03	97	P	Pn	14 17 59.0	+0.3
CMAH	Djebel Manchou	3.03	97	P	Pn	14 17 59.0	+0.3
EBEN2	Beniarda presa	3.46	299	P	Pn	14 18 06.0	+1.4
	19nm,0.4s,SNR=7.9						
EBEN2				S	Sn	14 18 43.7	-1.8
	23nm,0.3s,SNR=7.9						
ETRV	Los Montesinos	3.66	286	S	Sn	14 18 48.7	-1.7
	SNR=7.9						
AFON	Font Roja	3.71	297	P	Pn	14 18 10.9	+2.8
	10nm,0.3s,SNR=13						
AFON				S	Sn	14 18 51.6	-0.1
	6.3nm,0.4s						
CART	Cartagena	3.77	279	P	Pn	14 18 08.8	0.0
CART				S	Sn	14 18 50.5	-2.7
CART	Cartagena	3.77	279	eP	Pn	14 18 08.8	0.0
CART				eS	Sn	14 18 50.5	-2.7
EMUR	La Murta	4.00	283	P	Pn	14 18 12.4	+0.4
	8.8nm,0.4s,SNR=14						
EMUR				S	Sn	14 18 57.8	-0.9
	5.0nm,0.4s						
ETOB	Tobarra	4.43	292	P	Pn	14 18 20.4	+2.4
	12nm,0.3s,SNR=70						
ETOB				S	Sn	14 19 09.5	0.0
	13nm,0.7s						
ECHE	Chera	4.44	306	P	Pn	14 18 20.9	+2.8
	16nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.62	317	P	Pn	14 18 22.1	+1.4
	3.9nm,0.3s,SNR=17						
EMOS				S	Sn	14 19 13.9	-0.5
	26nm,1.1s						
ERTA	Horta de San J	4.68	327	P	Pn	14 18 23.9	+2.6
	2.0nm,0.2s,SNR=7.9						
ERTA				S	Sn	14 19 14.7	-0.9
	3.3nm,0.2s,SNR=7.9						
ENIJ	Nijar	4.72	271	S	Sn	14 19 14.9	-1.6
	6.9nm,0.3s,SNR=7.9						
EPOB	Poblet	4.73	335	P	Pn	14 18 24.0	+1.9
	17nm,0.4s,SNR=42						
EPOB				S	Sn	14 19 15.0	-1.9
	11nm,1.0s						
CFON	Fontmartina	4.79	349	P	Pn	14 18 24.7	+1.9
	45nm,0.1s,SNR=194						
CFON				S	Sn	14 19 17.3	-1.0
	17nm,0.3s,SNR=7.9						
SESP	Santiago Espad	5.06	284	P	Pn	14 18 28.3	+1.6
	6.5nm,0.3s,SNR=7.9						
SESP				S	Sn	14 19 24.4	-0.7
	5.0nm,0.2s,SNR=7.9						
EMIR	Miracle	5.12	342	P	Pn	14 18 30.9	+3.5
	28nm,0.2s,SNR=7.9						
EMIR				S	Sn	14 19 27.0	+0.6
	26nm,0.3s,SNR=7.9						
EBER	Berja	5.27	270	P	Pn	14 18 29.5	0.0
	1.1nm,0.2s,SNR=6.0						
EBER				S	Sn	14 19 27.4	-2.9
	3.8nm,0.4s,SNR=7.9						
EJON	La Jonquera	5.41	354	P	Pn	14 18 34.1	+2.8
	104nm,0.2s,SNR=293						
EJON				S	Sn	14 19 32.4	-1.1
	33nm,0.3s,SNR=4.6						
EQES	Quesada	5.43	280	P	Pn	14 18 33.2	+1.5

	9.1nm,0.4s,SNR=18						
EQES				S	Sn	14 19 34.8	+0.7
	6.9nm,0.7s						
SJAF	**Saint Jean de**	5.44	354	⇓P	Pn	14 18 34.6	+2.8
	61nm,0.2s,SNR=18						
SJAF				S	Sn	14 19 33.7	-0.7
	37nm,0.7s,SNR=7.9						
CLLI	**Llivia**	5.56	347	P	Pn	14 18 36.7	+3.2
	5.2nm,0.2s,SNR=18						
CLLI				S	Sn	14 19 37.5	0.0
	3.8nm,0.3s,SNR=7.2						
CSOR	**Sort**	5.65	340	P	Pn	14 18 38.4	+3.6
	5.8nm,0.2s,SNR=61						
CSOR				S	Sn	14 19 39.7	0.0
	7.9nm,0.6s,SNR=9.6						
EQUE	**Quentar**	5.70	273	P	Pn	14 18 38.0	+2.6
	2.8nm,0.4s,SNR=9.0						
EQUE				S	Sn	14 19 39.9	-0.9
	2.4nm,0.4s,SNR=4.6						
ETOR	**Torete**	5.83	312	P	Pn	14 18 40.8	+3.5
	15nm,0.4s,SNR=18						
ETOR				S	Sn	14 19 44.5	+0.4
	13nm,1.3s						
ELGU	**Los Guajares,**	5.86	270	P	Pn	14 18 38.8	+1.2
	1.0nm,0.2s,SNR=7.9						
ELGU				S	Sn	14 19 43.8	-0.9
	4.9nm,0.4s,SNR=7.9						
ECHI	**Chisagues Biel**	6.20	335	P	Pn	14 18 44.9	+2.6
	2.2nm,0.2s,SNR=7.9						
ECHI				S	Sn	14 19 52.1	-1.1
	2.9nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	6.36	350	P	Pn	14 18 47.9	+3.5
MTLF				S	Sn	14 19 55.1	-1.9
	1.9nm,0.3s						
MTLF	**Montolieu**	6.36	350	*e*Pn	Pn	14 18 47.9	+3.5
MTLF				*e*Sn	Sn	14 19 55.1	-1.9
	3.7nm,0.3s						
EPF	**Esparros**	6.48	338	P	Pn	14 18 49.5	+3.4
EPF				S	Sn	14 19 58.4	-1.6
	2.2nm,0.2s						
EPF	**Esparros**	6.48	338	*e*Pn	Pn	14 18 49.5	+3.4
EPF				*e*Sn	Sn	14 19 58.4	-1.6
	4.4nm,0.2s						
ESDC	**Sonseca Array**	6.55	296	P	Pn	14 18 49.1	+2.1
	0.3nm,0.3s,baz=111,slow=14,SNR=24						
ESDC				S	Sn	14 19 59.2	-2.4
	1.3nm,0.5s,baz=108,slow=24,SNR=3.6						
LMR	**La Mourre**	6.62	18	P	Pn	14 18 49.5	+1.6
LMR				S	Sn	14 20 00.5	-2.8
	6.1nm,0.3s						
LMR	**La Mourre**	6.62	18	*e*Pn	Pn	14 18 49.5	+1.6
LMR				*e*Sn	Sn	14 20 00.5	-2.8
	12nm,0.3s						
EADA	**Adamuz**	6.65	282	P	Pn	14 18 50.0	+1.5
	0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	14 20 00.4	-3.8
	1.1nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	6.67	332	P	Pn	14 18 51.8	+3.1
ETSF				S	Sn	14 20 02.2	-2.5
	1.1nm,0.3s						
ETSF	**Etsaut**	6.67	332	*e*Pn	Pn	14 18 51.8	+3.1
ETSF				*e*Sn	Sn	14 20 02.2	-2.5
	2.2nm,0.3s						
PAB	**San Pablo**	6.79	294	P	Pn	14 18 51.9	+1.6
	1.5nm,0.2s,SNR=7.9						
PAB				S	Sn	14 20 06.0	-1.6
	1.2nm,0.5s,SNR=7.9						
PGF	**Pioggiola**	6.83	35	P	Pn	14 18 52.5	+1.6
PGF				S	Sn	14 20 04.4	-4.2
	0.0nm,0.3s						
PGF	**Pioggiola**	6.83	35	*e*Pn	Pn	14 18 52.5	+1.6
PGF				*e*Sn	Sn	14 20 04.4	-4.2
	10.0nm,0.3s						
FRF	**La Foret Royal**	6.87	18	P	Pn	14 18 52.9	+1.6
FRF				S	Sn	14 20 08.1	-1.3
	6.8nm,0.3s						
FRF	**La Foret Royal**	6.87	18	*e*Pn	Pn	14 18 52.9	+1.6
FRF	**La Foret Royal**	6.87	18	*e*P	Pn	14 18 58.4	+7.1
FRF				*e*Sn	Sn	14 20 08.1	-1.3
	14nm,0.3s						
ATE	**Arette**	6.88	332	P	Pn	14 18 54.8	+3.2
	1.7nm,0.2s,SNR=7.9						
ATE				S	Sn	14 20 09.1	-0.8
	3.4nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	6.96	328	P	Pn	14 18 55.5	+2.7
	2.4nm,0.4s,SNR=9.1						
LASF	**Ste Croix**	7.00	1	P	Pn	14 18 55.3	+2.1
LASF				S	Sn	14 20 10.0	-2.7
	4.1nm,0.3s						
LASF	**Ste Croix**	7.00	1	*e*Pn	Pn	14 18 55.3	+2.1
LASF	**Ste Croix**	7.00	1	*e*P	Pn	14 18 59.8	+6.6
LASF				*e*Sn	Sn	14 20 10.0	-2.7
	8.2nm,0.3s						
SMRF	**Simiane la Rot**	7.05	11	P	Pn	14 18 56.5	+2.7
SMRF				S	Sn	14 20 10.9	-3.0
	3.3nm,0.4s						
SMRF	**Simiane la Rot**	7.05	11	*e*Pn	Pn	14 18 56.5	+2.7
SMRF				*e*Sn	Sn	14 20 10.9	-3.0
	3.3nm,0.4s						
SJPF	**Ste Jean**	7.11	330	P	Pn	14 18 57.7	+3.0
SJPF				S	Sn	14 20 12.3	-3.2
	1.4nm,0.4s						
SJPF	**Ste Jean**	7.11	330	*e*Pn	Pn	14 18 57.7	+3.0
SJPF				*e*Sn	Sn	14 20 12.3	-3.2
	2.7nm,0.4s						
ECAB	**El Cabril**	7.30	281	P	Pn	14 18 58.6	+1.2
	1.0nm,0.2s,SNR=6.9						
ECAB				S	Sn	14 20 16.3	-3.9
	0.6nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	7.32	329	P	Pn	14 19 00.8	+3.2
	2.7nm,0.3s,SNR=8.7						
EALK				S	Sn	14 20 19.6	-1.0
	2.1nm,0.4s,SNR=5.3						
SBF	**Sospel**	7.36	22	P	Pn	14 18 59.0	+0.8
SBF				S	Sn	14 20 18.6	-3.1
	4.3nm,0.3s						
SBF	**Sospel**	7.36	22	*e*Pn	Pn	14 18 59.0	+0.8
SBF	**Sospel**	7.36	22	*e*P	Pn	14 19 05.5	+7.3
SBF				*e*Sn	Sn	14 20 18.6	-3.1
	8.6nm,0.3s						
VIVF	**Saint-Julien-l**	7.81	5	P	Pn	14 19 05.8	+1.4
VIVF				S	Sn	14 20 28.8	-3.9
	4.1nm,0.4s						
VIVF	**Saint-Julien-l**	7.81	5	*e*Pn	Pn	14 19 05.8	+1.4
VIVF				*e*Sn	Sn	14 20 28.8	-3.9
	8.1nm,0.4s						
CAF	**Calviac**	7.94	352	P	Pn	14 19 09.6	+3.5
CAF	**Calviac**	7.94	352	*e*P	Pn	14 19 09.6	+3.5
MBDF	**Montbardon**	8.00	16	P	Pn	14 19 09.9	+2.9
MBDF				S	Sn	14 20 33.9	-3.5
	1.1nm,0.3s						
MBDF	**Montbardon**	8.00	16	*e*Pn	Pn	14 19 09.9	+2.9
MBDF				*e*Sn	Sn	14 20 33.9	-3.5
	2.1nm,0.3s						
ORIF	**Oris-en-Rattie**	8.01	11	P	Pn	14 19 10.4	+3.2
ORIF				S	Sn	14 20 33.9	-3.8
	0.8nm,0.4s						
ORIF	**Oris-en-Rattie**	8.01	11	*e*Pn	Pn	14 19 10.4	+3.2
ORIF				*e*Sn	Sn	14 20 33.9	-3.8
	1.5nm,0.4s						
LFF	**La Frestale**	8.17	345	P	Pn	14 19 13.0	+3.8
LFF	**La Frestale**	8.17	345	*e*P	Pn	14 19 13.0	+3.8
EPLA	**Plasencia**	8.21	294	P	Pn	14 19 10.5	+0.6
	0.3nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	8.22	321	P	Pn	14 19 13.4	+3.5
	3.0nm,0.6s,SNR=7.9						
ELAN				S	Sn	14 20 41.4	-1.4
	0.6nm,0.2s,SNR=7.9						
RJF	**Les Rejaudoux**	8.39	349	P	Pn	14 19 15.6	+3.4
RJF	**Les Rejaudoux**	8.39	349	*e*P	Pn	14 19 15.6	+3.4
LPG	**La Plagne**	8.73	14	P	Pn	14 19 20.1	+2.9
LPG	**La Plagne**	8.73	14	*e*Pn	Pn	14 19 20.1	+2.9
LPL	**La Plagne**	8.74	14	P	Pn	14 19 19.8	+2.5
LPL	**La Plagne**	8.74	14	*e*Pn	Pn	14 19 19.8	+2.5
EARI	**Arriondas**	9.22	315	P	Pn	14 19 26.8	+3.1
	4.2nm,0.5s,SNR=14						
MVO	**Moncorvo**	9.28	299	P	Pn	14 19 26.9	+2.4
	2.8nm,0.4s,SNR=5.7						
TCF	**Toulx Ste Croi**	9.28	354	P	Pn	14 19 26.9	+2.5
TCF	**Toulx Ste Croi**	9.28	354	*e*Pn	Pn	14 19 26.9	+2.5
ECAL	**Calabor**	9.41	304	P	Pn	14 19 29.1	+2.8
	3.4nm,0.3s,SNR=18						
BGF	**Bois d'Agland**	9.50	356	P	Pn	14 19 29.9	+2.4
BGF	**Bois d'Agland**	9.50	356	*e*Pn	Pn	14 19 29.9	+2.4
SMF	**Signal de Mont**	9.57	1	P	Pn	14 19 30.8	+2.4
SMF	**Signal de Mont**	9.57	1	*e*Pn	Pn	14 19 30.8	+2.4
CABF	**La Chapelle**	9.70	10	P	Pn	14 19 32.4	+2.1
CABF	**La Chapelle**	9.70	10	*e*Pn	Pn	14 19 32.4	+2.1
CABF	**La Chapelle**	9.70	10	*e*P	Pn	14 19 36.4	+6.1
AVF	**Avril sur Loir**	9.72	359	P	Pn	14 19 31.5	+1.1
AVF	**Avril sur Loir**	9.72	359	*e*Pn	Pn	14 19 31.5	+1.1
MFF	**Saint Martin d**	9.94	345	P	Pn	14 19 33.0	-0.5
MFF	**Saint Martin d**	9.94	345	*e*Pn	Pn	14 19 33.0	-0.5
MFF	**Saint Martin d**	9.94	345	*e*P	Pn	14 19 38.4	+4.9
SSF	**Saint Saulge**	9.98	359	P	Pn	14 19 36.1	+2.0
SSF	**Saint Saulge**	9.98	359	*e*Pn	Pn	14 19 36.1	+2.0
LOR	**Lormes**	10.19	1	P	Pn	14 19 37.4	+0.5
LOR	**Lormes**	10.19	1	*e*Pn	Pn	14 19 37.4	+0.5
	baz=183						
LOR	**Lormes**	10.19	1	*e*P	Pn	14 19 41.3	+4.4
ELOB	**Lobios**	10.27	301	P	Pn	14 19 40.6	+2.5
	0.7nm,0.3s,SNR=4.9						
EPON	**Pontenova**	10.38	310	P	Pn	14 19 41.4	+2.0
	2.0nm,0.4s,SNR=4.7						
HINF	**Hinteralfeld**	10.99	11	P	Pn	14 19 49.2	+1.3
HINF	**Hinteralfeld**	10.99	11	*e*Pn	Pn	14 19 49.2	+1.3
HINF				*e*Sn	Sn	14 21 45.5	-5.2
	1.0nm,0.2s						
HAU	**Haudompre**	11.10	9	*e*Pn	Pn	14 19 51.0	+1.6
HAU	**Haudompre**	11.10	9	*e*P	Pn	14 19 56.6	+7.2
SFTF	**Sexfontaines**	11.17	5	*e*Pn	Pn	14 19 51.0	+0.7
	baz=166						
SFTF	**Sexfontaines**	11.17	5	*e*P	Pn	14 19 54.4	+4.1
MEZF	**Maizieres J’vi**	11.47	5	*e*Pn	Pn	14 19 55.2	+0.8
	baz=192						
PAGF	**Fort de Pagny**	11.57	7	*e*Pn	Pn	14 19 57.1	+1.3
	baz=189						
PAGF	**Fort de Pagny**	11.57	7	*e*P	Pn	14 20 02.3	+6.5
CDF	**Champ du Feu**	11.64	12	*e*Pn	Pn	14 19 57.4	+0.6
CDF	**Champ du Feu**	11.64	12	*e*P	Pn	14 20 03.6	+6.8
GRR	**Gorron**	11.79	345	*e*Pn	Pn	14 19 58.2	-0.6
GRR	**Gorron**	11.79	345	*e*P	Pn	14 20 02.3	+3.5
LDF	**La Druitiere**	11.85	348	*e*Pn	Pn	14 19 59.9	+0.3
QUIF	**Quistinic**	11.95	337	P	Pn	14 20 03.9	+2.9
QUIF	**Quistinic**	11.95	337	*e*P	Pn	14 20 03.9	+2.9
FLN	**La Foliniere**	12.08	347	P	Pn	14 20 02.8	+0.1
FLN	**La Foliniere**	12.08	347	*e*Pn	Pn	14 20 02.8	+0.1
FLN	**La Foliniere**	12.08	347	*e*P	Pn	14 20 07.3	+4.6
SGMF	**Saint Gilles**	12.08	340	P	Pn	14 20 05.9	+3.2
SGMF	**Saint Gilles**	12.08	340	*e*P	Pn	14 20 05.9	+3.2
ROSF	**Rostrenen**	12.36	338	P	Pn	14 20 07.8	+1.2
ROSF	**Rostrenen**	12.36	338	*e*Pn	Pn	14 20 07.8	+1.2
BAIF	**Baives**	12.99	1	P	Pn	14 20 15.6	+0.5
BAIF	**Baives**	12.99	1	*e*Pn	Pn	14 20 15.6	+0.5
BAIF	**Baives**	12.99	1	*e*P	Pn	14 20 20.4	+5.3
GIVF	**Givet**	13.05	3	P	Pn	14 20 16.6	+0.6
GIVF	**Givet**	13.05	3	*e*Pn	Pn	14 20 16.6	+0.6
GIVF	**Givet**	13.05	3	*e*P	Pn	14 20 21.2	+5.2

VIE ***01*** *14:22:08.7±0.7, 48.°16N×19.°42E, h10km, mb2.4/1, ml2.4/6, Error ellipse: s-maj=6.3km s-min=4.1km az=37.0 78 km NNE of Budapest*

IPEC ***01*** *14:22:09.9±0.1, 48.°01N×19.°42E, h14km, ML2.3/10, Error ellipse: s-maj=0.6km s-min=0.5km az=18.0*

PRU ***01*** *14:22:09.6±0.0, 48.°00N×19.°40E, h0km*

KRSZO ***01*** *14:22:09.2±0.8, 48.°02N×19.°42E, h7km±5km, ML2.9/17, Error ellipse: s-maj=2.2km s-min=1.9km az=1.0*

ISC 01 14:22:10.3±0.9**, 48.°02N**±0.°01×**19.°43E**±0.°01**, h10**km±8km**, n139,** σ1.s09/247**, 12C-20D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	0.33	109	⇑P	Pg	14 22 16.6	-0.3
PSZ				⇓S	Sg	14 22 21.7	+0.4
PSZ	**Piszkesteto**	0.33	109	⇑*e*PG	Pg	14 22 16.6	-0.3
PSZ				*e*SG	Sg	14 22 21.2	-0.1
PSZ	**Piszkesteto**	0.33	109	Pg	Pg	14 22 16.5	-0.4
	comp=Z,3.2nm,SNR=60						
PSZ				Pb	Pg	14 22 16.6	-0.3
PSZ				Sg	Sg	14 22 21.2	-0.1
PSZ				Lg	Lg	14 22 21.3	
PSZ				Sb	Sg	14 22 21.7	+0.4
BUD	**Budapest**	0.61	207	⇓*e*PG	Pg	14 22 21.3	-0.7
BUD				*e*SG	Sg	14 22 30.0	+0.1
BUD	**Budapest**	0.61	207	Pg	Pg	14 22 21.3	-0.7
	comp=Z,1.2nm,SNR=14						
BUD				Lg	Lg	14 22 30.0	
BUD				Sg	Sg	14 22 30.4	+0.4
VYHS	**Vyhne**	0.61	320	*e*PG	Pg	14 22 22.0	-0.2
VYHS				*e*SG	Sg	14 22 30.1	-0.2
VYHS	**Vyhne**	0.61	320	Pg	Pg	14 22 22.1	-0.2
	comp=Z,0.2nm,SNR=12						
VYHS				Lg	Lg	14 22 30.2	
SRO2	**Moca**	0.74	250	*e*PG	Pg	14 22 22.9	-1.7
SRO2				*e*SG	Sg	14 22 34.2	-0.1
SRO2				*e*LG	Lg	14 22 38.2	
SRO2	**Moca**	0.74	250	Pg	Pg	14 22 22.9	-1.7
SRO2				Lg	Lg	14 22 34.2	
SRO2				Sn	Sn	14 22 38.2	0.0
SRO	**Srobarova**	0.78	255	*e*PG	Pg	14 22 24.5	-0.8
SRO				*e*SG	Sb	14 22 36.1	-0.5
SRO				*e*LG	Lg	14 22 40.0	
SRO	**Srobarova**	0.78	255	Pg	Pg	14 22 24.5	-0.8
SRO				Pb	Pb	14 22 25.1	-0.8
	comp=Z,5.0nm,SNR=51						
SRO				Sg	Sg	14 22 35.7	+0.3
SRO				Lg	Lg	14 22 36.1	
SRO				Sn	Sn	14 22 40.0	+0.9
KECS	**Kecovo**	0.84	57	*e*PG	Pg	14 22 25.5	-1.1
KECS				*e*SG	Sb	14 22 38.2	-0.2
KECS				*e*LG	Lg	14 22 41.9	
KECS	**Kecovo**	0.84	57	Pn	Pg	14 22 25.4	-1.1
	comp=Z,5.6nm,SNR=46						
KECS				Lg	Lg	14 22 38.2	
KECS				Sn	Sn	14 22 41.9	+1.2
KOLL	**Kolacno**	0.88	309	*e*PG	Pg	14 22 27.1	-0.2
KOLL				*e*SG	Sg	14 22 38.4	-0.3
KOLL	**Kolacno**	0.88	309	Pn	Pg	14 22 27.1	-0.2
KOLL				Lg	Lg	14 22 38.4	
BSZH	**Besenyszg**	0.92	142	⇓*e*PN	Pb	14 22 28.2	-0.1
BSZH				*e*SN	Sn	14 22 42.3	-0.3
BSZH	**Besenyszg**	0.92	142	Pn	Pb	14 22 28.2	-0.1
	comp=Z,0.8nm,SNR=13						
BSZH				Lg	Lg	14 22 42.3	
CSKK	**Cskako**	1.03	230	⇓*e*PN	Pg	14 22 28.8	-1.2
CSKK				*e*SN	Sn	14 22 45.1	-0.1
CSKK	**Cskako**	1.03	230	Pn	Pg	14 22 28.8	-1.2
	comp=Z,1.4nm,SNR=142						
CSKK				Sn	Sb	14 22 43.8	0.0
CSKK				Lg	Lg	14 22 45.1	
LANS	**Liptovska Anna**	1.13	1	*e*PG	Pn	14 22 32.0	-0.2
LANS				*e*SG	Sg	14 22 46.7	+0.1
LANS				*e*LG	Lg	14 22 52.7	
LANS	**Liptovska Anna**	1.13	1	Lg	Lg	14 22 46.7	
LANS				Sg	Sn	14 22 52.7	+4.9
SMOL	**Smolenice**	1.42	291	*e*PG	Pg	14 22 37.6	0.0
SMOL				*e*SG	Sg	14 22 56.5	+0.5
SMOL				*e*LG	Lg	14 23 00.7	
SMOL	**Smolenice**	1.42	291	Pg	Pg	14 22 37.6	0.0
SMOL				Lg	Lg	14 22 56.5	
SMOL				Sg	Sg	14 23 00.7	+4.7
SMOL	**Smolenice**	1.42	291	*e*	Pn	14 22 35.4	-0.8
JAVC	**Velka Javorina**	1.44	306	*e*PG	Pn	14 22 36.4	-0.1
JAVC				*e*SG	Sb	14 22 55.3	-0.4
JAVC	**Velka Javorina**	1.44	306	*e*Pg	Pn	14 22 36.3	-0.2
	baz=125						
JAVC				*e*Sg	Sb	14 22 55.2	-0.4
	comp=Z,76nm,1.0s,baz=125						
JAVC	**Velka Javorina**	1.44	306	Pn	Pn	14 22 36.3	-0.2
JAVC				Pg	Pn	14 22 36.4	-0.1
JAVC				Sn	Sb	14 22 55.2	-0.4
	comp=Z,76nm,1.0s						
JAVC				Sn	Sb	14 22 55.3	-0.4
MODS	**Modra-Piesok**	1.48	284	*e*	Pn	14 22 35.1	-1.9
MODS	**Modra-Piesok**	1.48	284	*e*PG	Pn	14 22 37.1	+0.1
MODS				*e*		14 22 54.0	
MODS	**Modra-Piesok**	1.48	284	*e*SG	Sb	14 22 56.9	+0.1
MODS				*e*LG	Lg	14 22 58.1	
MODS	**Modra-Piesok**	1.48	284	Pn	Pn	14 22 35.1	-1.9
MODS				Pg	Pn	14 22 37.1	+0.1
MODS				Sn	Sb	14 22 56.9	+0.1
MODS				Lg	Lg	14 22 58.1	
NIE	**Niedzica**	1.51	22	*e*Pg	Pb	14 22 38.3	-0.2
NIE				*e*Sg	Sg	14 22 58.6	-0.3
NIE	**Niedzica**	1.51	22	Pg	Pb	14 22 38.3	-0.2
	comp=Z,0.1nm,SNR=2.0						
NIE				Sn	Sg	14 22 58.6	-0.3
NIE				Sn	Sb	14 22 58.7	+1.0
TIH	**Tihany**	1.53	223	⇓*e*PN	Pb	14 22 38.2	-0.6
TIH				*e*SN	Sg	14 23 01.6	+2.1
TIH	**Tihany**	1.53	223	Pg	Pb	14 22 38.2	-0.6
TIH				Lg	Lg	14 23 01.6	
MPLH	**Magyarpolny**	1.54	237	⇓*e*PN	Pb	14 22 38.5	-0.3
MPLH				*e*SN	Sg	14 23 02.0	+2.3
MPLH	**Magyarpolny**	1.54	237	Pn	Pn	14 22 37.8	0.0
	comp=Z,0.3nm,SNR=6.2						
MPLH				Pg	Pb	14 22 38.5	-0.3
MPLH				Lg	Lg	14 23 00.9	
MPLH				Lg	Lg	14 23 02.0	
ZST	**Bratislava**	1.57	277	*e*	Pn	14 22 37.4	-0.8
ZST	**Bratislava**	1.57	277	*e*PG	Pg	14 22 39.8	-0.6
ZST				*e*		14 22 57.0	
ZST	**Bratislava**	1.57	277	*e*SG	Sg	14 23 00.7	0.0
ZST				*e*LG	Lg	14 23 04.0	
ZST	**Bratislava**	1.57	277	Pn	Pn	14 22 37.4	-0.8
ZST				Pb	Pb	14 22 38.9	-0.5
	comp=Z,2.7nm,SNR=1.5						
ZST				Pg	Pg	14 22 39.8	-0.6
ZST				Sn	Sn	14 22 57.0	-1.6
ZST				Lg	Lg	14 23 00.7	
ZST				Sg	Sg	14 23 04.0	+3.3
CRVS	**Cervenica-Dubn**	1.61	56	*e*	Pn	14 22 38.8	-0.1
CRVS	**Cervenica-Dubn**	1.61	56	*e*PG	Pg	14 22 40.6	-0.6
CRVS				*e*SG	Sg	14 23 03.8	+1.6
CRVS				*e*LG	Lg	14 23 06.5	
CRVS	**Cervenica-Dubn**	1.61	56	Pn	Pn	14 22 38.8	-0.1
CRVS				Pg	Pg	14 22 40.6	-0.6
CRVS				Lg	Lg	14 23 03.8	
CRVS				Sg	Sg	14 23 06.5	+4.3
LTVH	**Ltavrtes, Hu**	1.79	110	*e*PN	Pg	14 22 44.7	+0.2
LTVH				*e*SN	Sg	14 23 09.7	+2.0
LTVH	**Ltavrtes, Hu**	1.79	110	Pn	Pg	14 22 44.7	+0.2
LTVH				Pg	Pb	14 22 44.8	+1.7
	comp=Z,0.6nm,SNR=4.3						
LTVH				Pb	Pn	14 22 46.4	+5.2
LTVH				Lg	Lg	14 23 09.7	
SOP	**Sopron**	1.96	261	*e*PN	Pn	14 22 43.2	-0.4
SOP	**Sopron**	1.96	261	Pn	Pn	14 22 43.2	-0.4
SOP				Pg	Pg	14 22 47.0	-0.9
	comp=Z,0.1nm,SNR=2.7						
SOP				Pb	Pb	14 22 50.0	+3.9
SOP				Sn	Sn	14 23 07.4	-0.9
OKC	**Ostrava-Krasne**	2.00	336	*e*SN	Sn	14 23 09.7	+0.4
OKC	**Ostrava-Krasne**	2.00	336	Sn	Sn	14 23 09.7	+0.4
LOSC	**Losov**	2.10	320	*e*Pn	Pn	14 22 45.1	-0.4
	baz=139						
LOSC				*e*Sn	Sn	14 23 11.1	-0.6
	comp=Z,24nm,0.5s,baz=139						
LOSC	**Losov**	2.10	320	Pn	Pn	14 22 45.1	-0.4
LOSC				Sn	Sn	14 23 11.1	-0.6
	comp=Z,24nm,0.5s						
KOLS	**Kolonicke sedl**	2.10	63	*e*PG	Pg	14 22 50.1	-0.4
KOLS	**Kolonicke sedl**	2.10	63	Pn	Pn	14 22 45.8	+0.2
	comp=Z,0.4nm,SNR=1.6						
KOLS				Pg	Pg	14 22 50.2	-0.4
KOLS	**Kolonicke sedl**	2.10	63	*e*	Pn	14 22 45.9	+0.3
MORC	**Moravsky Berou**	2.15	325	⇓P	Pn	14 22 46.0	-0.3
MORC				⇓S	Sb	14 23 14.7	-1.4
MORC	**Moravsky Berou**	2.15	325	*e*PN	Pn	14 22 45.7	-0.6
MORC				*e*SN	Sn	14 23 12.8	-0.3
MORC	**Moravsky Berou**	2.15	325	*e*Pn	Pn	14 22 45.7	-0.6
	baz=144						
MORC				*e*Sn	Sn	14 23 12.7	-0.3
	comp=Z,23nm,0.7s,baz=144						
MORC	**Moravsky Berou**	2.15	325	Pn	Pn	14 22 45.7	-0.6
MORC				Pn	Pn	14 22 45.7	-0.6
MORC				Pg	Pn	14 22 46.0	-0.3
MORC				Sb	Sn	14 23 12.5	-0.5
MORC				Sn	Sn	14 23 12.7	-0.3
	comp=Z,23nm,0.7s						
MORC				Sn	Sn	14 23 12.8	-0.3
MORC				Sg	Sg	14 23 14.7	-4.6
KRUC	**Moravsky**	2.27	298	*e*PN	Pn	14 22 47.1	-0.8
KRUC				*e*SN	Sn	14 23 15.4	-0.4
KRUC	**Moravsky**	2.27	298	*e*Pn	Pn	14 22 47.0	-0.8
	baz=116						
KRUC				*e*Sn	Sn	14 23 15.4	-0.4
	comp=Z,13nm,0.7s,baz=116						
KRUC	**Moravsky**	2.27	298	Pn	Pn	14 22 47.0	-0.8
KRUC				Pg	Pn	14 22 47.1	-0.8
KRUC				Sn	Sn	14 23 15.4	-0.4
	comp=Z,13nm,0.7s						
VRAC	**Vranov**	2.28	305	⇑P	Pn	14 22 47.4	-0.5
VRAC				⇓S	Sn	14 23 16.3	+0.2
VRAC	**Vranov**	2.28	305	*e*PN	Pn	14 22 47.3	-0.7
VRAC				*e*SN	Sn	14 23 15.8	-0.3
VRAC	**Vranov**	2.28	305	*e*Pn	Pn	14 22 47.3	-0.7
	baz=124						
VRAC				*e*Sn	Sn	14 23 15.8	-0.3
	comp=Z,11nm,0.5s,baz=124						
VRAC	**Vranov**	2.28	305	Pn	Pn	14 22 47.3	-0.7
VRAC				Pn	Pn	14 22 47.3	-0.7
VRAC				Pg	Pn	14 22 47.4	-0.5
VRAC				Sn	Sn	14 23 15.8	-0.3
	comp=Z,11nm,0.5s						
VRAC				Lg	Lg	14 23 16.3	
SIRR	**Siria**	2.33	138	⇑P	Pn	14 22 47.7	-1.0
SIRR	**Siria**	2.33	138	Pn	Pn	14 22 47.7	-1.0
BEHE	**Becsehely**	2.38	230	⇑*e*PN	Pb	14 22 53.0	-0.3
BEHE				*e*SN	Sb	14 23 23.2	+0.4
BEHE	**Becsehely**	2.38	230	Pg	Pb	14 22 53.0	-0.3
BEHE				Lg	Lg	14 23 23.2	
CONA	**Conrad Observa**	2.40	269	*i* Pn	Pn	14 22 49.1	-0.6
	comp=Z,0.8nm,0.1s						
CONA				*e*Sn	Sn	14 23 16.9	-2.3
	comp=Z,15nm,0.6s						
CONA	**Conrad Observa**	2.40	269	Pn	Pn	14 22 49.1	-0.6
	comp=Z,0.8nm,0.1s						
CONA				Sn	Sn	14 23 16.9	-2.3
	comp=Z,15nm,0.6s						
DRGR		2.55	118	⇑P	Pn	14 22 51.0	-0.7
DRGR				⇑S	Sn	14 23 21.1	-1.8
DRGR		2.55	118	Pn	Pn	14 22 51.1	-0.7
	comp=Z,0.1nm,SNR=1.6						
DRGR				Lg	Lg	14 23 21.1	
DRGR				Sn	Sn	14 23 21.2	-1.6
KRLC	**Kraliky**	2.69	321	*e*PN	Pn	14 22 53.0	-0.7
KRLC				*e*SN	Sn	14 23 25.9	-0.5
KRLC	**Kraliky**	2.69	321	Pn	Pn	14 22 53.0	-0.7
KRLC				Sn	Sn	14 23 25.9	-0.5
ARSA	**Arzberg**	2.75	255	*e*Pn	Pn	14 22 55.4	+0.9
	comp=Z,0.8nm,0.2s						
ARSA				Sg	Sg	14 23 40.3	+1.7
	comp=Z,3.8nm,0.4s						
ARSA	**Arzberg**	2.75	255	Pn	Pn	14 22 55.4	+0.9
	comp=Z,0.8nm,0.2s						
ARSA				Lg	Lg	14 23 40.3	
	comp=Z,3.8nm,0.4s						
BMR	**Baia Mare**	2.76	96	⇑P	Pn	14 22 54.2	-0.5
BMR				⇓S	Sn	14 23 26.3	-1.8
BMR	**Baia Mare**	2.76	96	Pn	Pn	14 22 54.2	-0.5
BMR				Sn	Sn	14 23 26.3	-1.8
KALN	**Kalnik**	2.78	228	*e*Pn	Pn	14 22 54.1	-0.7
KALN	**Kalnik**	2.78	228	Pn	Pn	14 22 54.1	-0.7
BZS	**Buzias**	2.84	147	⇑P	Pn	14 22 54.9	-0.8
BZS				⇓S	Sn	14 23 28.8	-1.1
BZS	**Buzias**	2.84	147	Pn	Pn	14 22 54.8	-0.8
	comp=Z,0.1nm,SNR=1.4						
BZS				Sn	Sn	14 23 28.8	-1.1
DPC	**Dobruska-Polom**	3.09	320	*e*PN	Pn	14 22 58.9	-0.3
DPC	**Dobruska-Polom**	3.09	320	Pn	Pn	14 22 58.9	-0.3
CJR	**Cluj-Napoca**	3.12	113	⇑P	Pn	14 22 59.2	-0.4
CJR				⇓S	Sn	14 23 35.8	-1.2
CJR	**Cluj-Napoca**	3.12	113	Pn	Pn	14 22 59.2	-0.4
CJR				Sn	Sn	14 23 35.8	-1.2
PTJ	**Puntijarka**	3.18	229	*e*Pn	Pn	14 23 00.6	+0.2
PTJ	**Puntijarka**	3.18	229	Pn	Pn	14 23 00.6	+0.2
SOKA	**Soboth**	3.28	247	*i* Pn	Pn	14 23 02.5	+0.7
	comp=Z,0.5nm,0.2s						
SOKA				*e*Sn	Sn	14 23 39.9	-1.0
	comp=Z,2.0nm,0.4s						
SOKA	**Soboth**	3.28	247	Pn	Pn	14 23 02.5	+0.7
	comp=Z,0.5nm,0.2s						
SOKA				Sn	Sn	14 23 39.9	-1.0
	comp=Z,2.0nm,0.4s						
OSTC	**Ostas**	3.29	322	*e*PN	Pn	14 23 01.9	-0.1
OSTC	**Ostas**	3.29	322	Pn	Pn	14 23 01.9	-0.1
UPC	**Upice**	3.34	319	*e*PN	Pn	14 23 02.2	-0.4
UPC	**Upice**	3.34	319	Pn	Pn	14 23 02.2	-0.4

CHVC	**Chvalec**	**3.38**	**321**	*e*PN	**Pn**	**14 23 02.7**	**-0.5**
CHVC	**Chvalec**	**3.38**	**321**	Pn	**Pn**	**14 23 02.7**	**-0.5**
MOA	**Molln**	**3.48**	**269**	*i* Pn	**Pn**	**14 23 04.6**	**+0.2**
	comp=Z,0.3nm,0.1s						
MOA				*e*Sn	**Sn**	**14 23 45.6**	**0.0**
	comp=Z,1.4nm,0.2s						
MOA	**Molln**	**3.48**	**269**	Pn	**Pn**	**14 23 04.6**	**+0.2**
	comp=Z,0.3nm,0.1s						
MOA				Sn	**Sn**	**14 23 45.6**	**0.0**
	comp=Z,1.4nm,0.2s						
GZR	**Gura Zlata**	**3.50**	**138**	⇓P	**Pn**	**14 23 04.0**	**-0.8**
GZR				⇓S	**Sn**	**14 23 44.5**	**-1.7**
GZR	**Gura Zlata**	**3.50**	**138**	Pn	**Pn**	**14 23 04.0**	**-0.8**
GZR				Sn	**Sn**	**14 23 44.5**	**-1.7**
MDVR	**Moldovita**	**3.61**	**153**	⇑P	**Pn**	**14 23 05.5**	**-0.8**
MDVR				⇓S	**Sn**	**14 23 47.2**	**-1.8**
MDVR	**Moldovita**	**3.61**	**153**	Pn	**Pn**	**14 23 05.5**	**-0.8**
MDVR				Sn	**Sn**	**14 23 47.2**	**-1.8**
HERR	**Herculane**	**3.76**	**146**	⇓P	**Pn**	**14 23 07.5**	**-0.9**
HERR				⇓S	**Sn**	**14 23 50.8**	**-1.9**
HERR	**Herculane**	**3.76**	**146**	Pn	**Pn**	**14 23 07.5**	**-0.9**
HERR				Sn	**Sn**	**14 23 50.8**	**-1.9**
PRU	**Pruhonice**	**3.77**	**303**	*e*PN	**Pn**	**14 23 07.9**	**-0.6**
PRU				*e*SN	**Sn**	**14 23 51.0**	**-1.9**
PRU	**Pruhonice**	**3.77**	**303**	Pn	**Pn**	**14 23 07.9**	**-0.6**
PRU				Sn	**Sn**	**14 23 51.0**	**-1.9**
BURAR	**Bucovina Array**	**3.92**	**94**	⇓P	**Pn**	**14 23 10.9**	**+0.3**
BURAR	**Bucovina Array**	**3.92**	**94**	Pn	**Pn**	**14 23 10.9**	**+0.3**
KHC	**Kasperske Hory**	**4.04**	**288**	*e*PN	**Pn**	**14 23 11.6**	**-0.6**
KHC				*e*SN	**Sn**	**14 23 57.6**	**-2.0**
KHC	**Kasperske Hory**	**4.04**	**288**	Pn	**Pn**	**14 23 11.6**	**-0.6**
KHC				Sn	**Sn**	**14 23 57.6**	**-2.0**
KIJV	**Kijevo**	**4.54**	**209**	*e*Pn	**Pn**	**14 23 20.0**	**+0.9**
KIJV	**Kijevo**	**4.54**	**209**	Pn	**Pn**	**14 23 20.0**	**+0.9**
DOPR	**Dopca**	**4.57**	**115**	⇓P	**Pn**	**14 23 18.9**	**-0.5**
DOPR	**Dopca**	**4.57**	**115**	Pn	**Pn**	**14 23 18.9**	**-0.5**
BRG	**Berggiesshubel**	**4.58**	**311**	Pn	**Pn**	**14 23 19.1**	**-0.5**
BRG				Amp		14 23 26.9	
	comp=Z,1.1nm,0.8s						
BRG				*e*x	x	14 24 41.4	
BRG				Amp		14 24 44.5	
	comp=Z,3.2nm,0.8s						
BRG	**Berggiesshubel**	**4.58**	**311**	Pn	**Pn**	**14 23 19.1**	**-0.5**
BRG				Amp		14 23 26.9	
	comp=Z,1.1nm,0.8s						
BRG				*e*x	x	14 24 41.4	
BRG				Amp		14 24 44.5	
	comp=Z,3.2nm,0.8s						
BRG	**Berggiesshubel**	**4.58**	**311**	Pn	**Pn**	**14 23 19.1**	**-0.5**
BRG				x	x	14 23 26.9	
	comp=Z,1.1nm,0.8s						
BRG				x	x	14 24 41.4	
BRG				x	x	14 24 44.5	
	comp=Z,3.2nm,0.8s						
VOIR		**4.65**	**122**	⇓P	**Pn**	**14 23 20.7**	**0.0**
VOIR		**4.65**	**122**	Pn	**Pn**	**14 23 20.7**	**0.0**
NVLJ	**Novalja**	**4.69**	**224**	*e*Pn	**Pn**	**14 23 22.5**	**+1.4**
NVLJ	**Novalja**	**4.69**	**224**	Pn	**Pn**	**14 23 22.5**	**+1.4**
MORI	**Morici**	**4.90**	**213**	*e*Pn	**Pn**	**14 23 25.4**	**+1.4**
MORI				Sn	**Sn**	**14 24 21.4**	**+0.6**
MORI	**Morici**	**4.90**	**213**	Pn	**Pn**	**14 23 25.4**	**+1.4**
MORI				Sn	**Sn**	**14 24 21.4**	**+0.6**
DUGI	**Dugi Otok**	**5.05**	**219**	*e*Pn	**Pn**	**14 23 27.7**	**+1.6**
DUGI				Sn	**Sn**	**14 24 25.7**	**+1.2**
DUGI	**Dugi Otok**	**5.05**	**219**	Pn	**Pn**	**14 23 27.7**	**+1.6**
DUGI				Sn	**Sn**	**14 24 25.7**	**+1.2**
NKC	**Novy Kostel**	**5.09**	**298**	*e*PN	**Pn**	**14 23 25.6**	**-1.0**
NKC	**Novy Kostel**	**5.09**	**298**	Pn	**Pn**	**14 23 25.6**	**-1.0**
ZIRJ	**Zirje**	**5.11**	**213**	*e*Pn	**Pn**	**14 23 28.2**	**+1.3**
ZIRJ				Sn	**Sn**	**14 24 26.9**	**+1.1**
ZIRJ	**Zirje**	**5.11**	**213**	Pn	**Pn**	**14 23 28.2**	**+1.3**
ZIRJ				Sn	**Sn**	**14 24 26.9**	**+1.1**
HVAR	**Hvar**	**5.28**	**204**	*e*Pn	**Pn**	**14 23 30.8**	**+1.6**
HVAR				Sn	**Sn**	**14 24 30.6**	**+0.5**
HVAR	**Hvar**	**5.28**	**204**	Pn	**Pn**	**14 23 30.8**	**+1.6**
HVAR				Sn	**Sn**	**14 24 30.6**	**+0.5**
STON	**Ston**	**5.29**	**194**	*e*Pn	**Pn**	**14 23 31.1**	**+1.7**
STON				Sn	**Sn**	**14 24 32.0**	**+1.6**
STON	**Ston**	**5.29**	**194**	Pn	**Pn**	**14 23 31.1**	**+1.7**
STON				Sn	**Sn**	**14 24 32.0**	**+1.6**
CLL	**Collm**	**5.31**	**311**	*i* Pn	**Pn**	**14 23 29.5**	**-0.1**
CLL				*e*Sg	**Sg**	**14 24 59.0**	**-1.7**
CLL	**Collm**	**5.31**	**311**	Pn	**Pn**	**14 23 29.5**	**-0.1**
CLL				Lg	Lg	14 24 59.0	
VRI	**Vrincioaia**	**5.44**	**111**	⇑P	**Pn**	**14 23 31.4**	**-0.1**
VRI	**Vrincioaia**	**5.44**	**111**	Pn	**Pn**	**14 23 31.4**	**-0.1**

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*NIED **01** 14:41:11.7,28°.18N×129°.52E,h33^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.84; M$_{\theta\theta}$1.33; M$_{\phi\phi}$-0.49; M$_{r\theta}$-0.13; M$_{\theta\phi}$-0.63; M$_{\phi r}$0.08; Fault plane solution: M$_0$1.20000×10^{15} NP1: φ$_s$118.00000°,δ50.00000°,λ-75.00000°. NP2: φ$_s$275.00000°,δ43.00000°,λ-107.00000°.*

*JMA **01** 14:41:11.6±0.1,28°.18N×129°.52E,h33^{km}±2^{km},M3.7*

JMA Felt I J1.

*IDC **01** 14:41:13.7±3.3,28°.14N×129°.46E,h51^{km}±31^{km},mb3.2/7,mb1 3.5/10,mb1mx3.3/58,mbtmp3.5/10,ML3.4/3,MS2.9/4,Ms1 2.9/4,ms1mx2.7/25,Error ellipse: s-maj=33.7km s-min=18.7km az=83.0*

ISC 01 14:41:10.9±1.0,**28°.10N**±0°.03×**129°.62E**±0°.04,**h27**^{km}±7^{km},**n33**,σ**0^{s}.92**/48,**mb3.3**/7,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.31**	**358**	P	**Pb**	**14 41 18.3**	**0.0**
JAM				S	**Sb**	**14 41 23.1**	**-0.2**
JZK	**Kikaishima**	**0.38**	**55**	P	**Pn**	**14 41 21.0**	**+0.3**
JZK				S	**Sn**	**14 41 27.4**	**+0.3**
JAMN	**Amaminishikomi**	**0.42**	**290**	P	**Pb**	**14 41 19.4**	**-0.4**
JAMN				S	**Sb**	**14 41 25.6**	**-0.3**
JTK	**Tokunoshima**	**0.67**	**242**	P	**Pb**	**14 41 23.7**	**-0.3**
JTK				S	**Sb**	**14 41 32.6**	**-0.3**
JTAJ	**Takarajima**	**1.11**	**341**	P	**Pn**	**14 41 29.5**	**-1.2**
JTAJ				*e*S	**Sn**	**14 41 43.2**	**-2.0**
JOKE	**Okinoerabujima**	**1.18**	**232**	P	**Pn**	**14 41 31.8**	**+0.1**
JOKE				*e*S	**Sn**	**14 41 46.7**	**-0.2**
JYRO	**Yoronjima**	**1.49**	**224**	P	**Pn**	**14 41 36.9**	**+1.0**
JYRO				*e*S	**Sn**	**14 41 55.1**	**+0.7**
JOW	**Kunigami**	**1.74**	**224**	P	**Pn**	**14 41 40.0**	**+0.7**
JOW				*e*S	**Sn**	**14 42 01.1**	**+0.5**
JNN	**Nakanoshima**	**1.75**	**7**	P	**Pn**	**14 41 39.6**	**0.0**
JNN				*e*S	**Sn**	**14 42 00.7**	**-0.3**
JIH	**Iheya**	**1.81**	**235**	P	**Pn**	**14 41 41.0**	**+0.7**
JIH				*e*S	**Sn**	**14 42 02.4**	**+0.1**
JNTH	**Nagotoyohara**	**2.12**	**222**	P	**Pn**	**14 41 45.6**	**+1.0**
JNTH				*e*S	**Sn**	**14 42 10.9**	**+0.9**
JYAK	**Yakushimahirau**	**2.27**	**20**	P	**Pn**	**14 41 47.1**	**+0.4**
JYAK				S	**Sn**	**14 42 13.7**	**-0.1**
JKC	**Kuchinoerabu**	**2.41**	**12**	P	**Pn**	**14 41 49.1**	**+0.5**
JKC				S	**Sn**	**14 42 16.9**	**-0.3**
JMTN	**Minamitane**	**2.55**	**26**	P	**Pn**	**14 41 50.9**	**+0.4**
JMTN				S	**Sn**	**14 42 21.0**	**+0.3**
JAGN	**Aguni-jima**	**2.59**	**235**	*e*S	**Sn**	**14 42 22.5**	**+0.8**
JKDJ	**Kitadaitoujima**	**2.61**	**145**	P	**Pn**	**14 41 51.8**	**+0.4**
JKDJ				*e*S	**Sn**	**14 42 21.7**	**-0.5**
JMZ	**Minamidaito 2**	**2.68**	**147**	P	**Pn**	**14 41 52.1**	**-0.2**
JMZ				*e*S	**Sn**	**14 42 22.8**	**-1.2**
JTN	**Tanegashima 3**	**2.81**	**25**	P	**Pn**	**14 41 54.6**	**+0.5**
JTN				S	**Sn**	**14 42 27.8**	**+0.6**
JKE	**Kume jima 2**	**3.08**	**236**	P	**Pn**	**14 41 58.5**	**+0.7**
JKE				*e*S	**Sn**	**14 42 34.2**	**+0.5**
JNU	**Nakatsue**	**5.12**	**12**	P	**Pn**	**14 42 28.3**	**+2.4**
	7.0nm,0.3s,baz=192,slow=12,SNR=96						
JNU				S	**Sn**	**14 43 26.1**	**+1.8**
	baz=134,slow=7.6,SNR=1.1						
KSRS	**Korea Array**	**9.44**	**352**	P	**Pn**	**14 43 27.1**	**+2.0**
	0.1nm,0.3s,baz=173,slow=14,SNR=3.2						
KSRS				LR	LR	14 47 27.0	
	comp=Z,70nm,19.6s,baz=180,slow=40						
MJAR	**Matsushiro Arr**	**11.12**	**39**	P	**Pn**	**14 43 49.4**	**+1.3**
	0.0nm,0.3s,baz=245,slow=14,SNR=4.5						
MJAR				LR	LR	14 47 46.6	
	comp=Z,36nm,18.8s,baz=195,slow=35						
DAV	**Davao City (W)**	**21.26**	**191**	LR	LR	14 52 57.3	
	comp=Z,50nm,20.0s,baz=274,slow=33						
SONM	**Songino Array**	**26.72**	**324**	P	**P**	**14 46 48.3**	**+0.2**
	0.3nm,0.8s,baz=158,slow=9.3,SNR=2.5						
SONM				LR	LR	14 59 05.2	
	comp=Z,34nm,19.9s,baz=107,slow=40						
H11N2	**WAKE ISLAND Hy**	**34.97**	**95**	T	T	15 25 12.6	
	baz=291						
H11N1	**WAKE ISLAND Hy**	**34.97**	**96**	T	T	15 25 10.1	
	baz=291						
H11N3	**WAKE ISLAND Hy**	**34.99**	**95**	T	T	15 25 13.1	
	baz=291						
MKAR	**Makanchi Array**	**41.25**	**310**	P	**P**	**14 48 52.6**	**-1.1**
	0.3nm,0.7s,baz=91,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**47.98**	**174**	P	**P**	**14 49 46.8**	**-0.7**
	0.8nm,0.9s,baz=354,slow=8.7,SNR=3.9						
ASAR	**Alice Springs**	**51.63**	**175**	P	**P**	**14 50 16.2**	**+1.0**
	0.5nm,0.6s,baz=4.9,slow=14,SNR=8.9						
ILAR	**Eielson Array**	**62.21**	**29**	P	**P**	**14 51 30.4**	**+0.6**
	0.1nm,0.6s,baz=241,slow=9.1,SNR=1.2						
FINES	**FINESS Array B**	**71.85**	**331**	P	**P**	**14 52 29.1**	**-2.0**
	3.8nm,1.0s,baz=103,slow=2.5,SNR=6.3						
YKA	**Yellowknife Ar**	**76.32**	**25**	P	**P**	**14 52 57.6**	**+0.5**
	0.2nm,0.6s,baz=304,slow=5.6,SNR=5.1						

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*BGR **01** 14:43:09.6±0.0,64°.95N×20°.01W,h33^{km},mb4.3*

*REY **01** 14:43:15.6,64°.66N×17°.37W,h10^{km}*

*NEIC **01** 14:43:16.8±3.0,64°.55N±0°.10×17°.5W±0°.2,h8^{km}±5^{km},mb4.4/9,Error ellipse: s-maj=14.7km s-min=12.9km az=144.0*

*IDC **01** 14:43:16.6±0.9,64°.66N×17°.30W,h0^{km},mb3.7/13,mb1 3.9/16,mb1mx3.7/63,mbtmp3.7/16,ML2.6/2,MS3.4/8,Ms1 3.4/8,ms1mx3.0/43,Error ellipse: s-maj=24.3km s-min=16.4km az=39.0*

ISC 01 14:43:17.1±0.5,**64°.66N**±0°.02×**17°.35W**±0°.03,**h10**^{km},**n70**,σ**2^{s}.35**/69,**mb3.8**/18,**MS3.4**/6,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.14**	**356**	P	**Pg**	**14 43 18.5**	**-1.9**
	baz=0.7						
IDYN				S	**Sg**	**14 43 21.0**	**-1.7**
	baz=0.7						
IDJK	**Dyngjujokull**	**0.16**	**163**	P	**Pg**	**14 43 19.3**	**-1.5**
	baz=160						
IURH	**Urdarhals**	**0.19**	**27**	P	**Pg**	**14 43 19.6**	**-1.5**
	baz=31						
IHAM	**Hamarinn**	**0.27**	**230**	P	**Pg**	**14 43 20.5**	**-2.2**
	baz=227						
IKVE	**Kverkfjoll**	**0.29**	**85**	P	**Pg**	**14 43 21.8**	**-1.2**
	baz=86						
IKVE				S	**Sg**	**14 43 26.2**	**-0.8**
	baz=86						
IHUS	**Husbondi**	**0.39**	**201**	P	**Pg**	**14 43 23.1**	**-1.7**
	baz=199						
IKRE	**Kreppuhraun**	**0.43**	**72**	P	**Pg**	**14 43 23.9**	**-1.7**
	baz=73						
ISKR	**Skrokkalda**	**0.46**	**258**	P	**Pg**	**14 43 23.8**	**-2.3**
	baz=258						
IASK	**Askja**	**0.50**	**37**	P	**Pg**	**14 43 24.8**	**-2.1**
	baz=38						
IJOK	**Jokulheimar**	**0.51**	**228**	P	**Pg**	**14 43 24.6**	**-2.5**
	baz=227						
IMKO	**Mokollar**	**0.54**	**53**	P	**Pg**	**14 43 25.7**	**-1.9**
	baz=54						
IKSK	**Karasker**	**0.62**	**142**	P	**Pg**	**14 43 26.4**	**-2.8**
	baz=142						
IIEY	**Innrieyrar**	**0.66**	**211**	P	**Pg**	**14 43 27.3**	**-2.6**
	baz=210						
ISVA	**Svartarkot**	**0.69**	**3**	P	**Pg**	**14 43 27.7**	**-2.7**
	baz=4.1						
IVSH	**V-Sauoahnukur**	**0.71**	**77**	P	Pg	14 43 25.3	-5.6
	baz=77						
IKAL	**Kalfafell**	**0.73**	**192**	P	**Pg**	**14 43 28.5**	**-2.6**
	baz=191						
IADA	**Aoalbol**	**0.84**	**63**	P	**Pg**	**14 43 30.6**	**-2.7**
	baz=64						
IFAG	**Fagurholsmyri**	**0.84**	**159**	P	**Pg**	**14 43 30.6**	**-2.7**
	baz=158						
IMEL	**Melhnausar**	**0.96**	**17**	P	**Pg**	**14 43 32.3**	**-3.3**
	baz=18						
IREN	**Reynihlio**	**1.01**	**10**	P	**Pg**	**14 43 33.2**	**-3.4**
	baz=11						
IKVO	**Krokottuvotn**	**1.08**	**10**	P	**Pg**	**14 43 34.2**	**-3.7**
	baz=11						
ISNB	**Snabyli**	**1.08**	**212**	P	**Pg**	**14 43 34.8**	**-3.1**
	baz=211						
IGRS	**Grimsstaoir**	**1.11**	**27**	P	**Pb**	**14 43 35.1**	**-3.4**
	baz=28						
IGRS				S	**Sb**	**14 43 51.3**	**-1.7**
	baz=28						
IRJU	**Rjupnafell**	**1.19**	**210**	P	**Pb**	**14 43 37.0**	**-2.9**
	baz=209						
IFED	**Fedgar**	**1.20**	**239**	P	**Pb**	**14 43 37.0**	**-2.9**
	baz=239						
IGHA	**Grjothals**	**1.23**	**13**	P	**Pn**	**14 43 36.9**	**-3.5**
	baz=14						
ISKI	**Skildingahlsh**	**1.23**	**6**	P	**Pn**	**14 43 36.7**	**-3.7**
	baz=6.6						
BORG	**Borgarnes**	**1.71**	**275**		**Pn**	**14 43 45.3**	**-1.7**
SCO	**Scoresbysund**	**6.11**	**345**		**Pn**	**14 44 47.5**	**+0.2**
SCO	**Scoresbysund**	**6.11**	**345**	*e*	**Pn**	**14 44 43.2**	**-4.2**
	baz=159,slow=9.3						
SCO				*i* P	**Pn**	**14 44 49.0**	**+1.7**
SCO				*i* S	**Sn**	**14 46 03.5**	**+6.3**
SCO				IAML		14 46 12.0	
	comp=Z,1.9nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn	**Pn**	**14 46 03.9**	**-0.1**
	baz=324,slow=14,SNR=5.1						
NOA	**NORSAR Array B**	**13.47**	**92**	Pn	**Pn**	**14 46 26.2**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.4						
NOA				LR	LR	14 51 02.6	
	comp=Z,66nm,21.7s,baz=290,slow=35						
ARCES	**ARCESS Array B**	**17.07**	**55**	LR	LR	14 52 26.2	
	comp=Z,96nm,18.6s,baz=280,slow=32						
FINES	**FINESS Array B**	**19.64**	**79**	P	**Pn**	**14 47 47.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=312,slow=17,SNR=2.0						
CLF	**Chambon-Foret**	**19.74**	**138**	P	**P**	**14 47 44.4**	**-2.4**
CLF				IAmb	IAmb	14 47 54.5	
	comp=Z,29nm,1.3s						
CLL	**Collm**	**20.64**	**116**	P	**P**	**14 47 53.8**	**-2.7**
GRF	**Grafenberg Arr**	**21.27**	**121**	*e*P	**P**	**14 48 04.9**	**+1.6**
	comp=Z,13nm,1.4s,baz=324,slow=10						
NKC	**Novy Kostel**	**21.29**	**118**	*e*P	P	14 48 10.0	+6.5
BRG	**Berggiesshubel**	**21.35**	**115**	*e*P	**P**	**14 48 05.3**	**+1.2**
BRG				Amp		14 48 08.1	
	comp=Z,9.7nm,1.1s						
BRG	**Berggiesshubel**	**21.35**	**115**	*e*P	**P**	**14 48 05.3**	**+1.2**
BRG				Amp		14 48 08.1	
	comp=Z,9.7nm,1.1s						
FRB	**Frobisher Bay**	**21.81**	**291**	LR	LR	14 56 12.3	
	comp=Z,114nm,18.5s,baz=44,slow=36						
KHC	**Kasperske Hory**	**22.61**	**119**	*e*P	**P**	**14 48 20.0**	**+2.3**
DPC	**Dobruska-Polom**	**22.70**	**113**	*e*P	**P**	**14 48 20.0**	**+1.4**
GERES	**GERESS Array B**	**22.89**	**119**	P	**P**	**14 48 21.9**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=316,slow=7.6,SNR=7.0						
GERES				LR	LR	14 56 49.7	
	comp=Z,80nm,18.8s,baz=316,slow=36						
DAVOX	**Davos/Dischmat**	**23.26**	**127**	P	**P**	**14 48 26.6**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=309,slow=13,SNR=3.7						
FUORN	**Ofenpass-Fuorn**	**23.53**	**127**	P	**P**	**14 48 27.3**	**-0.1**
MORC	**Moravsky Berou**	**23.63**	**112**	P	**P**	**14 48 26.0**	**-2.1**
ZOU	**Zoufplan**	**24.54**	**123**	P	**P**	**14 48 35.7**	**-1.2**
SMOL	**Smolenice**	**24.60**	**114**	*e*P	**P**	**14 48 40.2**	**+3.1**
LANS	**Liptovska Anna**	**24.90**	**111**	*e*P	**P**	**14 48 43.2**	**+3.3**
MTE	**Manteigas**	**24.96**	**162**	P	**P**	**14 48 40.1**	**-0.3**
MTE				IAmb	IAmb	14 48 53.5	
	comp=Z,14nm,1.3s						
VYHS	**Vyhne**	**25.17**	**113**	*e*P	**P**	**14 48 46.3**	**+4.0**
KOLS	**Kolonicke sedl**	**26.21**	**108**	*e*P	**P**	**14 48 54.9**	**+3.2**
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**14 48 52.8**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=349,slow=8.9,SNR=13						
RES	**Resolute Bay**	**26.51**	**324**	LR	LR	15 00 33.9	
	comp=Z,45nm,18.9s,baz=56,slow=39						
AKASG	**Malin Array Be**	**27.78**	**98**	P	**P**	**14 49 05.0**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=318,slow=11,SNR=2.6						
BRTR	**Keskin Array B**	**38.41**	**105**	P	**P**	**14 50 40.4**	**+1.9**
	comp=Z,1.5nm,0.9s,baz=328,slow=11,SNR=2.8						
KBZ	**Khabaz**	**39.05**	**93**	P	**P**	**14 50 45.1**	**+1.5**
	comp=Z,2.3nm,1.0s,baz=309,slow=7.8,SNR=4.6						
KBZ				LR	LR	15 07 12.7	
	comp=Z,65nm,18.6s,baz=334,slow=37						
YKA	**Yellowknife Ar**	**39.27**	**313**	P	**P**	**14 50 45.6**	**+0.3**
	comp=Z,1.3nm,1.0s,baz=40,slow=9.0,SNR=10						
TIXI	**Tiksi**	**42.02**	**15**	P	**P**	**14 51 09.4**	**+1.5**
TIXI				IAmb	IAmb	14 51 12.7	
	comp=Z,7.1nm,1.1s						
TOLK	**Toolik Lake Re**	**42.78**	**336**	P	**P**	**14 51 16.4**	**+2.1**
TOLK				IAmb	IAmb	14 51 22.9	
	comp=Z,10.0nm,1.2s						
MDM	**Murphy Dome**	**45.82**	**333**	P	**P**	**14 51 39.6**	**+1.0**
MDM				IAmb	IAmb	14 51 43.1	
	comp=Z,4.1nm,1.0s						
ZALV	**Zalesovo Beam**	**47.59**	**52**	P	**P**	**14 51 53.4**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=322,slow=5.9,SNR=2.0						
KURK	**Kurchatov**	**48.06**	**58**	P	**P**	**14 51 57.2**	**+1.0**
MKAR	**Makanchi Array**	**52.67**	**58**	P	**P**	**14 52 31.7**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=335,slow=5.5,SNR=9.0						
TORD	**Torodi Ar. Bea**	**53.11**	**157**	P	**P**	**14 52 34.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=338,slow=8.6,SNR=4.0						
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**14 52 38.1**	**+2.4**
	comp=Z,2.2nm,1.0s,baz=52,slow=8.0,SNR=4.4						
PDAR				LR	LR	15 14 50.5	
	comp=Z,58nm,21.4s,baz=27,slow=36						
SONM	**Songino Array**	**59.61**	**41**	P	**P**	**14 53 22.3**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=324,slow=6.9,SNR=4.7						
TXAR	**Lajitas Array**	**62.35**	**280**	LR	LR	15 19 56.3	
	comp=Z,45nm,21.1s,baz=0.0,slow=35						
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	**P**	**14 55 47.8**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=331,slow=7.8,SNR=5.6						

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*TUL **01** 14:44:08.5±1.3,36°.81N±0°.02×97°.71W±0°.02,h3^{km}±5^{km},ML3.6,mb_Lg3.5/140(NEIC),Error ellipse: s-maj=2.8km s-min=2.1km az=74.0*

*NEIC **01** 14:44:08.9±1.4,36°.80N±0°.02×97°.70W±0°.02,h8^{km}±9^{km},Error ellipse: s-maj=2.9km s-min=2.1km az=219.0*

*IDC **01** 14:44:09.7±1.7,36°.94N×98°.07W,h0^{km},mb1 3.5/4,mb1mx3.3/54,mbtmp3.2/4,ML3.2/4,Error ellipse: s-maj=24.1km s-min=11.6km az=104.0*

*ANF **01** 14:44:10.0±1.6,36°.82N×97°.77W,h13^{km}±12^{km},ML4.4/9,Error ellipse: s-maj=4.1km s-min=3.1km az=57.0*

ISC 01 14:44:08.8±0.9,**36°.82N**±0°.02×**97°.67W**±0°.02,**h9**^{km}±7^{km},**n139**,σ**1^{s}.25**/135,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.16**	**282**		**Pg**	**14 44 11.6**	**-0.6**
GC02				Sg	**Sg**	**14 44 13.7**	**-0.9**
KAN13	**South Haven SW**	**0.25**	**38**		**Pg**	**14 44 14.4**	**+0.5**
KAN13				Sg	**Sg**	**14 44 18.5**	**+1.2**
KAN14	**Manchester OK**	**0.27**	**300**		**Pg**	**14 44 13.9**	**-0.4**
KAN14				Sg	**Sg**	**14 44 17.4**	**-0.6**
CROK	**Carrier**	**0.40**	**219**		**Pg**	**14 44 16.2**	**-0.5**
CROK				Sg	**Sg**	**14 44 21.5**	**-0.5**
KAN10	**Anthony SW Sta**	**0.46**	**312**		**Pg**	**14 44 17.3**	**-0.4**
KAN10				Sg	**Sg**	**14 44 23.4**	**-0.4**
KAN08	**Anthony NE Sta**	**0.47**	**329**		**Pg**	**14 44 17.8**	**-0.3**
KAN08				Sg	**Sg**	**14 44 24.4**	**0.0**
KAN12	**Harper NE Stat**	**0.55**	**331**		**Pg**	**14 44 19.1**	**-0.3**
KAN12				Sg	**Sg**	**14 44 26.6**	**-0.1**
T35A	**Sooner Cattle**	**0.93**	**84**		**Pg**	**14 44 26.8**	**0.0**
T35A				Sg	**Sb**	**14 44 39.8**	**+0.1**
T35B	**Sooner Cattle**	**0.93**	**84**	P		14 44 26.8	
	baz=264,SNR=250						
T35B				S		14 44 39.7	
	baz=264						
QUOK	**Quay**	**1.01**	**130**		**Pg**	**14 44 28.0**	**-0.2**
QUOK				Sg	**Sg**	**14 44 41.6**	**+0.2**
OK031	**S. Brethren Rd**	**1.09**	**142**		**Pg**	**14 44 29.4**	**-0.4**
OK031				Sg	**Sg**	**14 44 44.2**	**+0.1**
OK030	**Cody Creek RV**	**1.14**	**141**		**Pg**	**14 44 30.3**	**-0.4**
OK030				Sg	**Sg**	**14 44 45.6**	**0.0**
U32A	**Winter Ranch,**	**1.16**	**248**		**Pg**	**14 44 29.6**	**-1.5**
U32A				Sg	**Sg**	**14 44 45.0**	**-1.1**
U32A	**Winter Ranch,**	**1.16**	**248**	P		14 44 29.6	
	baz=68						
U32A				S		14 44 45.0	
	baz=68						
BCOK	**Bluff Creek, N**	**1.16**	**178**		**Pg**	**14 44 30.2**	**-0.9**
BCOK				Sg	**Sb**	**14 44 46.7**	**+0.5**
OK025	**Westminster Rd**	**1.26**	**168**		**Pg**	**14 44 32.3**	**-0.8**
OKCFA	**Oklahoma City**	**1.41**	**173**		**Pn**	**14 44 34.7**	**0.0**
OKCSW	**OKLAHOMA CITY**	**1.42**	**172**		**Pn**	**14 44 34.5**	**-0.3**
FNO	**Franklin**	**1.57**	**172**		**Pn**	**14 44 37.1**	**+0.2**
W35A	**Tecumseh**	**1.78**	**159**		**Pn**	**14 44 40.1**	**+0.3**
R32A	**Long Quarter,**	**1.80**	**333**		**Pn**	**14 44 40.9**	**+0.8**
R32A	**Long Quarter,**	**1.80**	**333**	P		14 44 41.1	
	baz=153,SNR=294						
R32A				S		14 45 04.8	
	baz=153						
WMOK	**Wichita Mounta**	**2.27**	**204**	P	**Pn**	**14 44 46.5**	**+0.1**
	baz=23						
WMOK				S	**Sn**	**14 45 15.4**	**+0.9**
	baz=23						
WMOK	**Wichita Mounta**	**2.27**	**204**		**Pn**	**14 44 46.5**	**+0.1**
WMOK	**Wichita Mounta**	**2.27**	**204**	P		14 44 46.7	
	baz=23						
WMOK				S		14 45 16.4	
	baz=23						
KSU1	**Kansas State U**	**2.43**	**20**	P	**Pn**	**14 44 50.0**	**+1.4**
	baz=201						
KSU1				S	**Sb**	**14 45 22.0**	**-0.6**
	baz=201						
KSU1	**Kansas State U**	**2.43**	**20**		**Pn**	**14 44 49.8**	**+1.1**
KSU1				IAmb_Lg		14 45 26.1	
	comp=Z,124nm,0.8s						
KSU1	**Kansas State U**	**2.43**	**20**	P		14 44 50.2	
	baz=201,SNR=37						
CBKS	**Cedar Bluff**	**2.58**	**321**	P	**Pn**	**14 44 51.6**	**+0.8**
	baz=141						
CBKS				Sb	**Sb**	**14 45 27.8**	**+0.8**
	baz=141						
CBKS	**Cedar Bluff**	**2.58**	**321**		**Pn**	**14 44 51.5**	**+0.8**
CBKS	**Cedar Bluff**	**2.58**	**321**	P		14 44 51.6	
	baz=141,SNR=45						
U38A	**Gravette**	**2.67**	**97**		**Pn**	**14 44 53.2**	**+1.2**
U38A	**Gravette**	**2.67**	**97**	P		14 44 54.1	
	baz=279,SNR=95						
X37A	**Clayton**	**2.91**	**139**	Pn	**Pn**	**14 44 56.2**	**+1.0**
X37A				IAmb_Lg		14 45 48.1	
	comp=Z,255nm,0.7s						
Z35A	**Perchaven, San**	**3.50**	**174**		**Pn**	**14 45 03.9**	**+0.5**
W39A	**Magazine**	**3.54**	**116**		**Pn**	**14 45 06.2**	**+2.3**
W39A				IAmb_Lg		14 46 10.1	
	comp=Z,200nm,0.8s						
W39A	**Magazine**	**3.54**	**116**	P		14 45 06.1	
	baz=298,SNR=9.6						
S39A	**Bolivar**	**3.58**	**75**		**Pn**	**14 45 05.1**	**+0.7**
S39A				IAmb_Lg		14 46 05.7	
	comp=Z,135nm,0.7s						
S39A	**Bolivar**	**3.58**	**75**	P		14 45 05.8	
	baz=257,SNR=27						
AMTX	**Amarillo**	**3.79**	**241**		**Pn**	**14 45 07.1**	**-0.4**
AMTX				IAmb_Lg		14 46 16.0	
	comp=Z,139nm,0.9s						
U40A	**Yellville**	**3.90**	**95**	P	**Pn**	**14 45 10.0**	**+1.1**
	baz=278						
U40A				S	**Sn**	**14 45 56.3**	**+1.4**
	baz=278						
U40A	**Yellville**	**3.90**	**95**	Pn	**Pn**	**14 45 10.0**	**+1.1**
U40A				IAmb_Lg		14 46 15.1	
	comp=Z,172nm,0.8s						
U40A	**Yellville**	**3.90**	**95**	P		14 45 10.7	
	baz=278,SNR=44						
U40A				P		14 45 10.7	
	baz=278,SNR=44						
N33A	**J Bar K, Exete**	**3.92**	**2**		**Pn**	**14 45 10.0**	**+0.9**
MIAR	**Mount Ida**	**4.03**	**123**	P	**Pn**	**14 45 12.3**	**+1.6**
	baz=305						
MIAR				Sb	**Sg**	**14 46 15.8**	**-2.5**
	baz=305						
MIAR	**Mount Ida**	**4.03**	**123**		**Pn**	**14 45 12.5**	**+1.8**
MIAR	**Mount Ida**	**4.03**	**123**	P		14 45 12.6	
	baz=305,SNR=24						
Z38A	**Mt. Pleasant**	**4.18**	**147**		**Pn**	**14 45 13.6**	**+0.9**
P38A	**Dawn**	**4.30**	**48**		**Pn**	**14 45 15.7**	**+1.4**
P38A				IAmb_Lg		14 46 36.9	
	comp=Z,81nm,0.7s						
P38A	**Dawn**	**4.30**	**48**	P		14 45 15.8	
	baz=230,SNR=11						
N35A	**Tabor**	**4.33**	**21**		**Pn**	**14 45 16.1**	**+1.3**
MGMO	**Mountain Grove**	**4.34**	**84**		**Pn**	**14 45 16.4**	**+1.5**
MGMO				IAmb_Lg		14 46 26.4	
	comp=Z,164nm,0.7s						
ABTX	**Abilene, Hawle**	**4.49**	**202**		**Pn**	**14 45 16.4**	**-0.7**
ABTX				IAmb_Lg		14 46 31.0	
	comp=Z,56nm,1.0s						
KSCO	**Kaye Shedlock’**	**4.49**	**301**	P	**Pn**	**14 45 17.5**	**+0.3**
	baz=118						
KSCO	**Kaye Shedlock’**	**4.49**	**301**		**Pn**	**14 45 17.3**	**+0.2**
KSCO				IAmb_Lg		14 46 41.9	
	comp=Z,156nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.49**	**301**	P		14 45 17.6	
	baz=118,SNR=12						

R40A	Maddies Statio	4.54	69		Pn	14 45 18.3	+0.7
R40A				IAmb_Lg		14 46 44.1	
	comp=Z,92nm,0.9s						
R40A	Maddies Statio	4.54	69	P		14 45 18.5	
	baz=253,SNR=37						
FCAR	Ozark Folk Cen	4.57	100		Pn	14 45 19.1	+1.0
FCAR				IAmb_Lg		14 46 40.1	
	comp=Z,84nm,0.8s						
X40A	Basin Creek Fa	4.57	119		Pn	14 45 19.2	+1.1
X40A				IAmb_Lg		14 46 37.1	
	comp=Z,100nm,0.7s						
X40A	Basin Creek Fa	4.57	119	P		14 45 20.3	
	baz=302,SNR=8.1						
X40A				P		14 45 20.3	
	baz=302,SNR=8.1						
BGNE	Belgrade	4.60	355	P	Pn	14 45 18.9	+0.4
	baz=176						
BGNE	Belgrade	4.60	355		Pn	14 45 18.6	+0.1
BGNE	Belgrade	4.60	355	P		14 45 19.1	
	baz=176,SNR=12						
WHAR	Wooly Hollow	4.62	108	Pn	Pn	14 45 19.7	+1.0
W41B	Gary Mavity, V	4.69	109	Sb	Sg	14 46 34.7	-4.8
	baz=292						
W41B	Gary Mavity, V	4.69	109		Pn	14 45 20.9	+1.2
W41B				IAmb_Lg		14 46 42.4	
	comp=Z,92nm,0.8s						
W41B	Gary Mavity, V	4.69	109	P		14 45 21.3	
	baz=292,SNR=14						
UALR	University of	4.79	114	IAmb_Lg		14 46 47.8	
	comp=Z,94nm,0.9s						
WHTX	Lake Whitney,	4.82	178	P	Pn	14 45 21.6	+0.1
	baz=358						
WHTX				Sb	Sb	14 46 37.6	+6.1
	baz=358						
WLAR	White Oak Lake	4.87	129		Pn	14 45 23.0	+0.8
WLAR				IAmb_Lg		14 46 56.0	
	comp=Z,86nm,0.8s						
MSTX	Muleshoe	5.04	237		Pn	14 45 23.3	-1.4
MSTX				IAmb_Lg		14 46 60.0	
	comp=Z,59nm,0.8s						
237A	Washetta, Mont	5.05	162		Pn	14 45 24.3	-0.3
P40A	Paris	5.19	57		Pn	14 45 27.9	+1.3
P40A				IAmb_Lg		14 46 55.7	
	comp=Z,117nm,0.9s						
L34A	Svendsen Farm,	5.24	11		Pn	14 45 27.6	+0.4
CCM	Cathedral Cave	5.26	74		Pn	14 45 29.4	+1.9
CCM				IAmb_Lg		14 46 59.8	
	comp=Z,118nm,0.8s						
N38A	Joes South For	5.27	40		Pn	14 45 29.3	+1.6
T42A	Van Buren	5.27	86		Pn	14 45 28.6	+0.9
T42A				IAmb_Lg		14 47 04.2	
	comp=Z,56nm,0.8s						
T42A	Van Buren	5.27	86	P		14 45 29.9	
	baz=270,SNR=14						
LCAR	Lake Charles	5.30	96		Pn	14 45 29.4	+1.2
LCAR				IAmb_Lg		14 47 00.2	
	comp=Z,54nm,0.7s						
Z41A	Richland Creek	5.34	130	Pn	Pn	14 45 29.2	+0.5
Z41A				IAmb_Lg		14 47 09.4	
	comp=Z,132nm,1.0s						
T25A	Trinidad	5.41	275		Pn	14 45 29.5	-0.3
T25A				IAmb_Lg		14 47 04.0	
	comp=Z,62nm,0.7s						
CCAR	Cane Creek	5.62	119	Pn	Pn	14 45 33.5	+1.0
CCAR				IAmb_Lg		14 47 16.9	
	comp=Z,110nm,0.7s						
NATX	Nacogdoches	5.63	153	IAmb_Lg		14 47 21.4	
	comp=Z,89nm,0.9s						
HBAR	Harrisburg	5.81	100	IAmb_Lg		14 47 20.2	
	comp=Z,127nm,0.7s						
PBMO	Poplar Bluff	5.81	88	Pn	Pn	14 45 37.4	+2.3
PBMO				IAmb_Lg		14 47 14.8	
	comp=Z,83nm,0.7s						
K31A	O'Neill	5.86	352		Pn	14 45 36.7	+0.9
K31A	O'Neill	5.86	352	P		14 45 37.2	
	baz=172,SNR=6.3						
FVM	French Village	5.88	76		Pn	14 45 37.0	+0.9
FVM				IAmb_Lg		14 47 13.5	
	comp=Z,106nm,0.9s						
X43A	Marvell	5.98	111		Pn	14 45 37.6	+0.1
X43A				IAmb_Lg		14 47 19.3	
	comp=Z,61nm,0.7s						
435B	Jarrell	6.02	179		Pn	14 45 37.3	-0.8
435B				IAmb_Lg		14 47 24.3	
	comp=Z,88nm,1.1s						
LPAR	Lepanto	6.08	99	IAmb_Lg		14 47 24.8	
	comp=Z,93nm,0.8s						
SCIA	State Center	6.14	33		Pn	14 45 39.5	-0.2
GNAR	Gosnell	6.23	96	Pn	Pn	14 45 41.5	+0.6
Q24A	Divide	6.29	292		Pn	14 45 40.8	-1.2
Q24A				IAmb_Lg		14 47 27.2	
	comp=Z,47nm,0.9s						
SDCO	Great Sand Dun	6.31	281		Pn	14 45 42.3	0.0
SDCO	Great Sand Dun	6.31	281	P		14 45 43.4	
	baz=96,SNR=5.7						
PEBM	Pemiscott Bayo	6.33	94	Pn	Pn	14 45 42.3	+0.1
PARMO	Parma	6.36	89	Pn	Pn	14 45 43.5	+0.8
PVMO	Portageville	6.42	91	IAmb_Lg		14 47 40.7	
	comp=Z,106nm,0.8s						
JCT	Junction City	6.57	196		Pn	14 45 44.0	-1.6
JCT				IAmb_Lg		14 47 45.7	
	comp=Z,73nm,1.1s						
HENM	Henderson Moun	6.58	88	Pn	Pn	14 45 46.7	+1.0
N41A	Harden Midland	6.59	52		Pn	14 45 46.6	+0.8
143A	Socs Landing,	6.59	127	Pn	Pn	14 45 46.1	+0.3
143A				IAmb_Lg		14 47 55.0	
	comp=Z,70nm,0.9s						
LNXT	Lenox	6.63	94	Pn	Pn	14 45 46.6	+0.2
S44A	Carbondale	6.77	80		Pn	14 45 49.3	+1.1
S44A				IAmb_Lg		14 47 50.2	
	comp=Z,86nm,0.8s						
HALT	Halls	6.78	95	IAmb_Lg		14 47 57.3	
	comp=Z,85nm,0.8s						
HICK	Hickman	6.79	90	Pn	Pn	14 45 50.5	+1.9
SIUC	Southern Illin	6.80	80		Pn	14 45 49.6	+1.0
SIUC				IAmb_Lg		14 47 48.0	
	comp=Z,93nm,0.7s						
CLNB	Carlsbad	6.85	230		Pn	14 45 49.7	+0.3
ISCO	Idaho Springs	6.92	298	IAmb_Lg		14 47 48.0	
	comp=Z,53nm,0.9s						
K38A	Parkersburg	6.94	31		Pn	14 45 51.2	+0.6
ECSD	EROS Data Cent	6.95	6	Pn	Pn	14 45 50.1	-0.7
ECSD	EROS Data Cent	6.95	6	P		14 45 51.0	
	baz=187,SNR=9.7						
P43A	Skaggs, Pawnee	7.00	64		Pn	14 45 52.6	+1.1
HKT	Hockley	7.02	167	Pn	Pn	14 45 51.8	+0.1
W45A	Hickory Valley	7.08	101	IAmb_Lg		14 47 56.4	
	comp=Z,99nm,0.7s						
OXF	Oxford	7.11	106	Pn	Pn	14 45 52.5	-0.5
OXF				IAmb_Lg		14 48 08.3	
	comp=Z,73nm,1.1s						
Q44A	Meyer Farm, Va	7.15	70		Pn	14 45 54.2	+0.7
L40A	Anamosa	7.23	42	Pn	Pn	14 45 54.5	-0.1
L40A				IAmb_Lg		14 48 01.9	
	comp=Z,99nm,0.8s						
T45A	Paducah	7.23	86	Pn	Pn	14 45 54.8	+0.1
Y45A	Yeager Farm, C	7.26	112	Pn	Pn	14 45 56.6	+1.5
Y45A				IAmb_Lg		14 48 04.1	
	comp=Z,52nm,0.8s						
S22A	4UR Ranch, Cre	7.36	280	Pn	Pn	14 45 57.0	+0.2
ANMO	Albuquerque	7.37	258	Pn	Pn	14 45 56.9	+0.1
	comp=Z,0.1nm,0.3s,baz=86,slow=15,SNR=1.6						
ANMO				Pg	Pb	14 46 20.8	+3.7
	comp=Z,0.9nm,0.3s,baz=78,slow=14,SNR=13						
ANMO				Lg	Lg	14 47 55.8	
	comp=Z,1.3nm,0.3s,baz=92,slow=12,SNR=2.6						
ANMO	Albuquerque	7.37	258	Pn	Pn	14 45 55.5	-1.3
ANMO				IAmb_Lg		14 48 10.7	
	comp=Z,31nm,1.1s						
VBMS	Vicksburg	7.47	126	IAmb_Lg		14 48 28.2	
	comp=Z,33nm,0.9s						
HDIL	Hopedale	7.54	58		Pn	14 45 58.8	0.0
N23A	Red Feather La	7.63	305		Pn	14 46 00.5	+0.1
N23A				IAmb_Lg		14 48 21.1	
	comp=Z,72nm,0.8s						
SUSD	Miller	7.68	353	IAmb_Lg		14 48 20.6	
	comp=Z,68nm,0.8s						
BNM	Barren Site	7.78	253		Pn	14 46 01.6	-0.7
OLIL	Olney	7.82	73	IAmb_Lg		14 48 24.5	
	comp=Z,77nm,0.9s						
I37A	Lemond, Waseca	7.89	23	IAmb_Lg		14 48 32.6	
	comp=Z,62nm,1.0s						
O44A	Mansfield	7.95	62	Pn	Pn	14 46 04.6	+0.2
WVT	Waverly	7.96	92	Pn	Pn	14 46 05.5	+0.9
WVT				IAmb_Lg		14 48 25.1	
	comp=Z,30nm,0.7s						
PLAL	Pickwick Lake	8.00	100	Pn	Pn	14 46 06.3	+1.2
USIN	University of	8.04	79	IAmb_Lg		14 48 31.5	
	comp=Z,68nm,0.8s						
L42A	Oliver, Polo	8.07	48	Pn	Pn	14 46 08.2	+2.0
MNTX	Cornudas Mount	8.17	234	Pn	Pn	14 46 06.2	-1.4
JFWS	Jewell Farm	8.34	41		Pn	14 46 09.3	-0.6
833A	Chaparral WMA,	8.60	190	Pn	Pn	14 46 12.4	-1.0
833A				IAmb_Lg		14 48 48.0	
	comp=Z,28nm,1.2s						
Z47A	Carrollton	8.66	112	IAmb_Lg		14 49 06.2	
	comp=Z,25nm,0.8s						
MVCO	Mesa Verde	8.67	276	Pn	Pn	14 46 12.4	-2.2
RSSD	Black Hills	8.76	328		Pn	14 46 16.6	+0.9
RSSD				IAmb_Lg		14 48 53.3	
	comp=Z,34nm,1.1s						
M44A	Midewin, Midew	8.76	56	Pn	Pn	14 46 16.8	+1.2
M44A				IAmb_Lg		14 48 48.0	
	comp=Z,66nm,0.7s						
V48A	Smith Brothers	8.83	94	IAmb_Lg		14 48 54.4	
	comp=Z,23nm,0.7s						
RWWY	Rawlins	8.85	306	Pn	Pn	14 46 17.0	-0.1
RWWY				IAmb_Lg		14 49 04.4	
	comp=Z,53nm,1.1s						
I40A	Norwalk	8.88	35	IAmb_Lg		14 48 54.4	
	comp=Z,45nm,0.8s						
K22A	Casper	8.97	313	IAmb_Lg		14 49 04.0	
	comp=Z,38nm,0.8s						
TXAR	Lajitas Array	9.00	216	Pn	Pn	14 46 17.8	-1.2
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=11						
TXAR				Lg	Lg	14 48 43.9	
	comp=Z,0.6nm,0.3s,baz=44,slow=30,SNR=1.9						
F33A	5 Mile Ranch,	9.07	6		Pn	14 46 19.1	-0.7
F33A				IAmb_Lg		14 49 01.9	
	comp=Z,26nm,0.9s						
BLO	Bloomington	9.11	72		Pn	14 46 21.0	+0.6
BLO				IAmb_Lg		14 48 59.3	
	comp=Z,64nm,0.7s						
WCI	Wyandotte Cave	9.15	78	IAmb_Lg		14 49 17.9	
	comp=Z,47nm,0.8s						
CLTN	Cedars of Leba	9.16	91	IAmb_Lg		14 48 59.6	
	comp=Z,20nm,0.9s						
SPMN	Marine on St.	9.16	22	IAmb_Lg		14 49 05.3	
	comp=Z,36nm,1.0s						
U49A	Red Boiling Sp	9.56	88	IAmb_Lg		14 49 11.1	
	comp=Z,24nm,1.1s						
SWET	Sewanee	9.64	96	IAmb_Lg		14 49 16.3	
	comp=Z,33nm,1.1s						
Y49A	Blount Mountai	9.66	104	IAmb_Lg		14 49 22.9	
	comp=Z,27nm,0.9s						
PDAR	Pinedale Array	10.90	307	Pn	Pn	14 46 43.5	-1.7
	comp=Z,0.1nm,0.3s,baz=119,slow=16,SNR=7.6						
PDAR				Lg	Lg	14 49 39.2	
	comp=Z,0.3nm,0.3s,baz=105,slow=35,SNR=3.5						
TKL	Tuckaleechee C	11.28	92	Lg	Lg	14 50 01.5	
	comp=Z,1.2nm,0.3s,baz=191,slow=17,SNR=9.3						
ULM	Lac du Bonnet	13.49	5	Pn	Pn	14 47 17.1	-3.1
	comp=Z,0.3nm,0.3s,baz=175,slow=15,SNR=3.5						
ULM				Sn	Sn	14 49 36.5	-14
	comp=Z,0.2nm,0.3s,baz=108,slow=20,SNR=1.7						
ULM				Lg	Lg	14 51 04.8	
	comp=Z,0.2nm,0.3s,baz=105,slow=20,SNR=1.9						

ARE ***01*** *14:50:12±7.0, 7°.78S±0°.08×73°.87W±0°.09, h195^{km}±6^{km},*
Error ellipse: s-maj=0.0km s-min=0.0km az=219.0
NEIC ***01*** *14:50:16.8±1.4, 7°.80S±0°.04×73°.9W±0°.1, h155^{km}±8^{km},*
mb4.6/68, ML4.7(ARE), Error ellipse: s-maj=16.2km
s-min=4.5km az=74.0
VAO ***01*** *14:50:18.7±0.6, 8°.03S×74°.05W, h170^{km}±5^{km}, mb4.5*
IDC ***01*** *14:50:18.5±0.5, 7°.88S×74°.03W, h176^{km}±5^{km}, mb3.9/25,*
mb1 4.1/30, mb1mx4.0/49, mbtmp4.4/30, MS2.4/1,
Ms1 2.4/1, ms1mx2.2/28, Error ellipse: s-maj=10.1km
s-min=8.0km az=33.0

ISC 01 14:50:17.6±0.3**, 7°.89S**±0°.05×**74°.04W**±0°.05**, h166**^{km}**, n173,**
σ**1^{s}.19**/159**, mb4.5**/56**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	1.33	83	*e*P	Pn	14 50 50.1	+3.4
ATAH	Atahualpa	4.38	280	P	Pn	14 51 24.2	+0.6
	21nm,0.3s,baz=63,slow=1.6,SNR=641						
ATAH				S	Sn	14 52 16.1	+0.9
	20nm,0.3s,baz=108,slow=19,SNR=6.9						
NNA	Nana	4.92	214	P	Pn	14 51 31.9	+1.6
	17nm,0.3s,baz=44,slow=8.3,SNR=41						
NNA				S	Sn	14 52 27.8	+0.6
	62nm,0.3s,baz=138,slow=21,SNR=12						
NNA				LR	LR	14 53 07.9	
	comp=Z,41nm,21.8s,baz=39,slow=34						
NNA	Nana	4.92	214		Pn	14 51 31.6	+1.3
ETMB	Extrema	7.97	105	*e*P	Pn	14 52 09.4	-1.1
PTLC	Puerto Leguiza	8.04	355	*e*P	Pn	14 52 06.2	-5.3
PUAC	Puerto Asis, P	8.75	343	*e*P	Pn	14 52 20.4	-0.5
OTAV	Otavalo	9.19	331	Pn	Pn	14 52 26.2	-1.0
OTAV	Otavalo	9.19	331	*e*P	Pn	14 52 29.1	+1.9
OTAV	Otavalo	9.19	331	*e*P	Pn	14 52 29.2	+2.1
MACC	Macarena, Meta	9.97	1	*e*P	Pn	14 52 35.6	-1.4
GARC	Garzon, Huila	10.11	352	*e*P	Pn	14 52 39.2	+0.1
BBAC	Balboa, Cauca	10.35	342	*e*P	Pn	14 52 42.7	+0.4
PCON	Cinco Dias	10.42	347	*e*P	Pn	14 52 42.2	-1.2
SAML	Samuel	10.79	96	Pn	Pn	14 52 45.4	-2.3
PB16	IPOC Station P	11.28	157	Pn	Pn	14 52 55.5	+0.9
ORTC	Ortega, Tolima	11.78	354	*e*P	Pn	14 53 01.6	+0.9
VILC	Villavicencio,	11.92	2	*e*P	Pn	14 53 04.1	+1.5
MNMC	Minye Minye	11.98	159		Pn	14 53 03.3	-0.2
PSGCX	Pisagua	12.24	162	Pn	Pn	14 53 06.8	+0.1
TOLC	Tolima	12.46	354	*e*P	P	14 53 17.4	+2.5
GO01	Chusmiza	12.62	159		Pn	14 53 10.8	-1.1
RREF	El Recreo	12.77	354	*e*P	P	14 53 21.2	+2.5
PLMC	San Jos del P	12.90	350	*e*P	P	14 53 18.0	-1.6
PB08	IPOC Station P	13.07	159	P	Pn	14 53 17.1	-0.4
TA01	Diego Aracena	13.14	164	Pn	Pn	14 53 17.6	-0.5
NORC	Norcasia	13.39	356	*e*P	Pn	14 53 22.9	+1.6
RUSC	La Rusia	13.72	4	*e*P	P	14 53 31.4	+2.4
PB01	IPOC Station P	13.80	162	P	P	14 53 30.3	+0.8
HELC	Santa Helena	14.06	354	*e*P	Pn	14 53 30.9	+0.9
PB07	IPOC Station P	14.33	164	P	P	14 53 36.0	+0.5
PTBC	PUERTO BERRIO,	14.34	358	*e*P	Pn	14 53 33.9	+0.7
BARC	Barichara	14.41	3	*e*P	P	14 53 38.0	+1.5
SOLC	Bahia Solano	14.42	346	*e*P	P	14 53 39.5	+3.2
VILB	Vilhena	14.51	111	*e*P	P	14 53 35.8	-1.6
PB09	IPOC Station P	14.58	162	P	P	14 53 39.3	+1.0
BRRC	Barranca, Sant	14.90	1	*e*P	P	14 53 41.6	0.0
DBBC	Dabeiba	14.96	352	*e*P	P	14 53 44.8	+2.3
SIV	San Ignacio	15.02	124	P	P	14 53 41.5	-1.6
	2.4nm,0.3s,baz=312,slow=13,SNR=39						
ZARC	Zaragoza, Cauc	15.30	357	*e*P	P	14 53 46.7	+0.6
LVC	Limon Verde	15.45	162	P	P	14 53 49.4	+1.3
	3.4nm,0.3s,baz=5.6,slow=9.0,SNR=19						
UREC	San Jos de Ur	15.61	354	*e*P	P	14 53 49.1	-0.4
PTGA	Pitinga	15.72	64	P	P	14 53 52.3	+1.5
	1.9nm,0.3s,baz=249,slow=17,SNR=8.3						
OCAC	Ocana	16.04	3	*e*P	P	14 53 54.8	+0.4
PTLB	Pontes e Lacer	16.41	119	*e*P	Pn	14 53 57.7	-0.9
SMLC	San Martn de	16.58	360	*e*P	P	14 53 59.6	-0.6
MOTC	Monteria, Cord	16.64	354	*e*P	Pn	14 54 01.6	+0.3
SDV	Santo Domingo	17.00	12	P	Pn	14 54 07.9	+2.0
	5.3nm,0.3s,baz=296,slow=4.7,SNR=17						
SDV	Santo Domingo	17.00	12	*e*P	Pn	14 54 08.0	+2.0
SDV	Santo Domingo	17.00	12	*e*P	Pn	14 54 07.9	+2.0
ARGC	Ariguani, Magd	17.63	359	*e*P	Pn	14 54 13.2	0.0
SJCC	San Jacinto, C	17.70	356	*e*P	Pn	14 54 13.7	-0.5
CLDB	Colider	18.24	101	*e*P	Pn	14 54 19.4	-1.0
ITTB	Itaituba	18.53	80	*e*P	Pn	14 54 22.7	-1.1
NPGB	Novo Progresso	18.54	89	*e*P	P	14 54 22.1	+0.3
SMRC	Santa Marta, M	18.93	359	*e*P	P	14 54 25.4	-0.5
PCRV	Puerto La Cruz	20.24	28	P	P	14 54 39.6	-0.5
	3.9nm,0.4s,baz=210,slow=14,SNR=1.4						
MALB	Monte Alegre	20.59	74	*e*P	Pn	14 54 46.4	-1.9
PP1B	Ponte de Pedra	21.01	119	*e*P	P	14 54 49.2	+0.9
AQDB	Aquidauana	21.71	127	*e*P	P	14 54 55.2	-0.5
ARAG	Araguaiana, MT	23.09	112	*e*P	P	14 55 09.7	+0.9
MCPB	Macapa, AP	23.15	72	*e*P	P	14 55 09.2	-0.3
PRPB	Parauapebas	24.10	88	*e*P	P	14 55 18.5	+0.4
CPUP	Villa Florida	24.27	141	P	P	14 55 17.9	-1.6
	5.8nm,0.6s,baz=320,slow=9.9,SNR=20						
CPUP	Villa Florida	24.27	141	P	P	14 55 16.1	-3.4
TRCB	Terra Rica	25.36	128	*e*P	P	14 55 30.0	+0.5
PEXB	Peixe	25.68	101	*e*P	P	14 55 33.6	+1.1
ITRB	Iturama	25.78	120	*e*P	P	14 55 32.9	-0.4
PCMB	Pacaembu	25.85	124	*e*P	P	14 55 35.1	+1.1
SMTB	Santa Maria do	26.18	94	*e*P	P	14 55 38.6	+1.6
BDFB	Brasilia	26.59	109	P	P	14 55 40.5	-0.3
	4.5nm,0.6s,baz=282,slow=12,SNR=9.6						
BDFB				pP	pP	14 56 18.8	+3.7
	4.0nm,0.6s,baz=258,slow=10,SNR=4.0						
BDFB	Brasilia	26.59	109	P	P	14 55 39.8	-1.0
SJG	San Juan	26.98	17	P	P	14 55 43.2	-0.8
	11nm,0.4s,baz=150,slow=7.6,SNR=10						
IPMB	Ipameri, GO	27.06	114	*e*P	P	14 55 45.3	+0.5
FRTB	Fartura	28.06	126	*e*P	P	14 55 54.5	+0.8
ITAB	Concordia	28.30	136	*e*P	P	14 55 54.3	-1.4
SDBA	SAO DESIDERIO	29.02	101	*e*P	P	14 56 03.0	+0.7
CPSB	Cacapava Do Su	29.56	142	*e*P	P	14 56 05.9	-1.0
JANB	Januaria	29.97	106	*e*P	P	14 56 10.7	0.0
VAO	Valinhos	30.03	123	*e*P	P	14 56 12.1	+1.0
PLTB	Pedras Altas	30.44	144	*e*P	P	14 56 13.2	-1.3
CNLB	Canela	30.49	137	*e*P	P	14 56 15.8	+0.7
BSCB	Bom Sucesso	31.12	118	*e*P	P	14 56 21.0	+0.2
CMIG	Matias Romero	32.26	320	P	P	14 56 31.2	+0.5
	1.0nm,0.3s,baz=112,slow=12,SNR=4.3						
PLCA	Paso Flores	32.85	175	P	P	14 56 36.0	+0.3
	3.1nm,0.9s,baz=348,slow=10,SNR=6.1						
PLCA				PcP	PcP	14 59 16.6	0.0
	2.0nm,1.0s,baz=12,slow=5.7,SNR=3.1						
DUB01	Friburgo-RJ	33.59	118	*e*P	P	14 56 42.6	+0.4
SJMB	Sao Joao De Ma	33.67	112	*e*P	P	14 56 43.1	+0.2
CAM01	Campos-RJ	34.13	118	*e*P	P	14 56 47.3	+0.5
GDU01	Guandu, BA	34.32	103	*e*P	P	14 56 49.5	+0.9
NAN01	Guarapari, ES	34.45	110	*e*P	P	14 56 49.0	-0.7
RIB01	Linhares ES	34.54	113	*e*P	P	14 56 50.8	+0.3
RCBR	Riachuelo	37.91	89	P	P	14 57 19.2	0.0
	5.2nm,0.7s,baz=238,slow=9.6,SNR=4.4						
RCBR	Riachuelo	37.91	89	P	P	14 57 17.6	-1.6
RCBR				IAmb	IAmb	14 57 44.0	
	comp=Z,18nm,1.3s						
BIRD	Birdtown, Kers	42.73	352	P	P	14 57 58.1	-0.3
BIRD				IAmb	IAmb	14 57 59.1	
	comp=Z,7.7nm,0.7s						
W57A	Gilead	43.17	353	P	P	14 58 01.7	-0.2
W57A				IAmb	IAmb	14 58 02.9	
	comp=Z,14nm,1.0s						
KMSC	Kings Mountain	43.35	351	P	P	14 58 03.9	+0.6
KMSC				IAmb	IAmb	14 58 04.4	
	comp=Z,14nm,0.7s						
U54A	Nelsons Funny	44.77	351	IAmb	IAmb	14 58 15.2	
	comp=Z,11nm,0.7s						
T57A	Hurt	44.91	354	IAmb	IAmb	14 58 16.7	
	comp=Z,18nm,1.1s						
V48A	Smith Brothers	45.03	345	IAmb	IAmb	14 58 16.6	
	comp=Z,12nm,0.7s						
WHTX	Lake Whitney,	45.53	332	P	P	14 58 21.2	+0.5
WHTX				IAmb	IAmb	14 58 22.3	
	comp=Z,12nm,1.0s						
S57A	Dark Hollow, R	45.64	355	IAmb	IAmb	14 58 22.6	
	comp=Z,13nm,0.7s						
S54A	Dingess, Beckl	45.95	352	IAmb	IAmb	14 58 24.9	
	comp=Z,16nm,0.8s						
TX31	Lajitas Ar. Si	46.73	324	P	P	14 58 30.9	+0.7
TX31				IAmb	IAmb	14 58 31.6	
	comp=Z,12nm,0.6s						
TXAR	Lajitas Array	46.73	324	P	P	14 58 31.1	+0.8
	comp=Z,3.6nm,0.6s,baz=151,slow=8.9,SNR=66						
TXAR				PcP	PcP	15 00 01.3	+0.3
	comp=Z,0.6nm,0.6s,baz=140,slow=6.5,SNR=4.9						
X37A	Clayton	46.82	336	P	P	14 58 29.2	-1.6
X37A				IAmb	IAmb	14 58 31.8	
	comp=Z,7.7nm,0.7s						
Q54A	Coxs Mills	47.06	353	IAmb	IAmb	14 58 33.2	
	comp=Z,16nm,0.7s						
MGMO	Mountain Grove	47.95	340	IAmb	IAmb	14 58 39.1	
	comp=Z,6.1nm,0.8s						
OK030	Cody Creek RV	48.56	335	IAmb	IAmb	14 58 44.7	
	comp=Z,10nm,0.7s						
121A	Cookes Peak, D	51.47	323	IAmb	IAmb	14 59 08.1	
	comp=Z,5.5nm,0.6s						
319A	Douglas	51.58	321	IAmb	IAmb	14 59 08.7	
	comp=Z,7.2nm,0.6s						
ANMO	Albuquerque	52.46	326	P	P	14 59 14.1	+0.5
	comp=Z,4.1nm,0.9s,baz=129,slow=6.7,SNR=16						
ANMO	Albuquerque	52.46	326	P	P	14 59 13.5	-0.2
SADO	Sadowa	52.61	355	P	P	14 59 13.9	-0.3
	comp=Z,5.6nm,0.6s,baz=211,slow=6.9,SNR=4.2						
T25A	Trinidad	53.05	330	IAmb	IAmb	14 59 20.3	
	comp=Z,16nm,1.5s						
WUAZ	Wupatki	55.69	323	IAmb	IAmb	14 59 38.9	
	comp=Z,7.9nm,0.8s						
PV01	Paradox Valley	55.96	327	IAmb	IAmb	14 59 40.6	
	comp=Z,9.7nm,1.0s						
PV15	Paradox Valley	56.07	328	IAmb	IAmb	14 59 41.5	
	comp=Z,7.2nm,0.8s						
PV02	Paradox Valley	56.10	327	IAmb	IAmb	14 59 41.6	
	comp=Z,14nm,1.2s						
F36A	Milaca	56.28	344	IAmb	IAmb	14 59 40.3	
	comp=Z,7.7nm,0.8s						
PV22	Blue Mesa, Par	56.37	328	IAmb	IAmb	14 59 43.1	
	comp=Z,5.6nm,0.7s						
PFO	Pinyon Flats O	57.64	318	P	P	14 59 51.5	+0.8
	comp=Z,4.2nm,1.0s,baz=122,slow=2.7,SNR=4.5						
AGMN	Agassiz Nation	59.16	343	IAmb	IAmb	15 00 00.5	
	comp=Z,7.7nm,0.7s						
DUG	Dugway, Tooele	59.74	326	IAmb	IAmb	15 00 07.0	
	comp=Z,10nm,0.9s						
PDAR	Pinedale Array	59.90	330	P	P	15 00 06.1	-0.2
	comp=Z,1.0nm,0.6s,baz=127,slow=8.1,SNR=11						
PDAR				PcP	PcP	15 00 50.2	-0.7
	comp=Z,0.9nm,0.5s,baz=124,slow=6.3,SNR=10						
ULM	Lac du Bonnet	60.93	344	P	P	15 00 11.1	-1.8
	comp=Z,6.8nm,0.6s,baz=159,slow=7.4,SNR=13						
ULM	Lac du Bonnet	60.93	344	P	P	15 00 11.3	-1.5
ULM				IAmb	IAmb	15 00 11.9	
	comp=Z,7.2nm,0.8s						
ELK	Elko	61.47	325	P	P	15 00 16.7	-0.2
	comp=Z,1.3nm,0.9s,baz=92,slow=5.6,SNR=5.9						
NVAR	Mina Array Bea	61.78	322	P	P	15 00 20.2	+1.1
	comp=Z,2.3nm,0.7s,baz=126,slow=7.2,SNR=9.1						
PNTR	Pine Nut	62.99	321	P	P	15 00 28.0	+1.0
VCNR	Virginia City	63.14	322	IAmb	IAmb	15 00 30.0	
	comp=Z,9.2nm,0.8s						
PAHR	Pah Rah Range	63.23	322	P	P	15 00 29.8	+1.2
PAHR				IAmb	IAmb	15 00 30.4	
	comp=Z,4.7nm,0.7s						
WVOR	Wild Horse Val	64.50	325	P	P	15 00 36.8	+0.1
F10A	Beach Ranch, E	66.05	329	IAmb	IAmb	15 00 50.6	
	comp=Z,4.9nm,0.9s						
YBH	Yreka Blue Hor	66.47	322	P	P	15 00 48.4	-1.0
	comp=Z,2.0nm,0.5s,baz=95,slow=2.2,SNR=9.6						
FCC	Fort Churchill	68.37	349	P	P	15 01 00.0	-0.7
FCC				IAmb	IAmb	15 01 00.8	
	comp=Z,12nm,1.2s						
DBIC	Dimbokro	70.49	80	P	P	15 01 15.6	+0.8
	comp=Z,3.4nm,0.3s,baz=248,slow=5.1,SNR=15						
DBIC				pP	pP	15 01 57.1	+2.4
	comp=Z,2.7nm,0.5s,baz=193,slow=4.3,SNR=3.0						
FRB	Frobisher Bay	71.55	3	P	P	15 01 19.4	-0.7
	comp=Z,6.8nm,0.7s,baz=195,slow=6.0,SNR=22						
KOWA	Kowa	72.91	72	P	P	15 01 30.1	+0.9
YKA	Yellowknife Ar	76.78	342	P	P	15 01 49.9	-0.6
	comp=Z,2.9nm,0.4s,baz=136,slow=6.9,SNR=109						
TORD	Torodi Ar. Bea	78.05	75	P	P	15 01 56.8	-1.7
	comp=Z,1.1nm,0.4s,baz=268,slow=5.6,SNR=7.7						
TORD				pP	pP	15 02 40.5	+1.2
	comp=Z,1.5nm,0.9s,baz=309,slow=9.4,SNR=3.4						
PAB	San Pablo	79.66	47	P	P	15 02 05.7	-1.2
DLBC	Dease Lake	79.89	334	P	P	15 02 07.7	0.0
	comp=Z,1.6nm,0.9s,baz=167,slow=4.1,SNR=4.1						
ESDC	Sonseca Array	79.99	47	P	P	15 02 08.2	-0.5
	comp=Z,0.5nm,0.6s,baz=257,slow=6.6,SNR=9.3						
ICESG	Greenland Ices	80.43	12	*i* P	P	15 02 10.2	-0.6
QSPA	South Pole Qui	82.22	180	P	P	15 02 21.0	+1.0
RES	Resolute Bay	83.42	355	P	P	15 02 25.7	-0.1
	comp=Z,1.4nm,0.7s,baz=202,slow=9.2,SNR=4.2						
SUMG	Summit	83.53	10	P	P	15 02 26.8	-0.1
SUMG	Summit	83.53	10	*i* P	P	15 02 26.0	-0.9
	comp=Z,36nm,0.8s						
SUMG	Summit	83.53	10	*i* P	P	15 02 26.0	-0.9
SUMG				IAmb	IAmb	15 02 27.4	
	comp=Z,36nm,0.8s						
TULEG	Thule	84.34	1	P	P	15 02 30.0	-0.4
TULEG				IAmb	IAmb	15 02 31.2	
	comp=Z,7.3nm,0.9s						
INK	Inuvik	86.53	341	P	P	15 02 40.5	-0.9
	comp=Z,3.9nm,0.8s,baz=62,slow=5.9,SNR=10						
ILAR	Eielson Array	89.88	336	P	P	15 02 56.9	-0.4
	comp=Z,0.9nm,0.6s,baz=133,slow=4.2,SNR=14						
ILAR				PP	PP	15 06 34.2	+1.8
	comp=Z,0.5nm,0.9s,baz=143,slow=4.8,SNR=5.1						
DAG	Danmarks Havn	90.17	11	*i* P	P	15 02 57.4	-1.0

DAG	Danmarks Havn	90.17	11	*i* P	P	15 02 57.4	-1.0
BPAW	Bear Paw Mtn.	91.39	335	IAmb	IAmb	15 03 04.7	
	comp=Z,5.5nm,0.8s						
STKA	Stephens Creek	127.83	219	PKP	PKiKP	15 09 03.8	-0.9
	comp=Z,1.1nm,0.6s,baz=69,slow=1.1,SNR=5.0						
ZALV	Zalesovo Beam	131.00	16	PKP	PKiKP	15 09 09.4	-0.9
	comp=Z,1.3nm,0.3s,baz=323,slow=2.2,SNR=12						
ZALV				pPKP	pPKPdf	15 09 55.2	+2.0
	comp=Z,1.1nm,0.5s,baz=298,slow=3.2,SNR=4.1						
MKAR	Makanchi Array	136.25	24	PKP	PKPdf	15 09 19.1	-0.4
	comp=Z,0.7nm,0.5s,baz=335,slow=2.2,SNR=7.4						
MKAR				pPKP	pPKPdf	15 10 05.0	+1.7
	comp=Z,0.9nm,0.8s,baz=336,slow=2.7,SNR=4.6						
ASAR	Alice Springs	138.42	220	PKhKP	PKPpre	15 09 18.2	
	comp=Z,0.3nm,0.4s,baz=135,slow=3.2,SNR=4.8						
ASAR				PKP	PKPdf	15 09 23.4	-0.8
	comp=Z,0.7nm,0.5s,baz=124,slow=2.6,SNR=9.5						
SONM	Songino Array	140.19	360	PKhKP	PKPpre	15 09 18.5	
	comp=Z,0.2nm,0.5s,baz=328,slow=1.0,SNR=2.2						
SONM				PKP	PKPdf	15 09 26.5	-0.3
	comp=Z,0.6nm,0.6s,baz=182,slow=1.3,SNR=6.5						
WRA	Warramunga Arr	140.69	225	PKhKP	PKPpre	15 09 22.0	
	comp=Z,0.4nm,0.3s,baz=129,slow=2.5,SNR=22						
WRA				PKP	PKiKP	15 09 29.8	-1.3
	comp=Z,1.4nm,0.5s,baz=129,slow=1.8,SNR=13						
WRA				pPKP	pPKPdf	15 10 14.7	+2.5
	comp=Z,0.5nm,0.4s,baz=125,slow=2.1,SNR=3.0						
KSRS	Korea Array	144.46	329	PKP	PKPbc	15 09 33.0	-0.4
	comp=Z,1.9nm,0.7s,baz=40,slow=3.3,SNR=8.0						
JNU	Nakatsue	145.91	321	PKPbc	PKPdf	15 09 36.5	-0.7
	comp=Z,6.9nm,0.8s,baz=288,slow=2.4,SNR=4.9						
FITZ	Fitzroy Crossi	147.69	217	PKPbc	PKiKP	15 09 43.6	-1.8
	comp=Z,3.2nm,0.4s,baz=82,slow=0.5,SNR=27						
DANN	Dangsing	150.79	43	*e*P	PKiKP	15 09 51.6	-0.4
	comp=Z,48nm,0.6s						
GKN	Gorkha	151.60	43	*e*P	PKiKP	15 09 53.0	-0.5
	comp=Z,42nm,0.4s						
KKN	Kakani	152.17	42	*e*P	PKiKP	15 09 54.3	-0.4
	comp=Z,19nm,0.6s						
DMN	Daman	152.17	43	*e*P	PKiKP	15 09 54.3	-0.5
	comp=Z,13nm,0.5s						
PKIN	Phulchoki	152.39	42	*e*P	PKPbc	15 09 54.3	-0.7
	comp=Z,9.8nm,0.5s						
PKI	Pulchoki	152.40	42	*e*P	PKPbc	15 09 54.5	-0.6
	comp=Z,8.9nm,0.6s						
GUN	Gumba	152.48	41	*e*P	PKiKP	15 09 55.3	-0.3
	comp=Z,8.4nm,0.3s						
RAMN	Ramite	153.60	42	*e*P	PKPbc	15 09 56.5	-1.2
	comp=Z,24nm,0.6s						
CMAR	Chiang Mai Arr	167.47	32	PKP	PKPdf	15 10 04.8	+0.1
	comp=Z,0.7nm,0.7s,baz=294,slow=1.8,SNR=7.8						

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*IDC **01** 14:58:07.1±0.7, 9°.88N×126°.37E, h0^{km}, mb4.1/15, mb1 4.2/15, mb1mx4.0/47, mbtmp4.1/15, Error ellipse: s-maj=36.2km s-min=13.9km az=77.0*

*MAN **01** 14:58:11.2, 9°.75N×126°.45E, h7^{km}, mb4.8, ML3.7, MS3.7*

ISC 01 14:58:10.2±1.2**, 9°.85N**±0°.03×**126°.39E**±0°.05**, h19**^{km}±3^{km}**, n32,** σ1^{s}.**35**/36**, mb4.1**/14**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.27	255	*e*P	Pn	14 58 19.0	-0.1
GLSP				*e*S	Sn	14 58 23.8	-1.0
BUTP	Butuan	1.16	221	*e*P	Pb	14 58 32.0	+0.3
BUTP				*e*S	Sg	14 58 48.1	+0.1
MSLP	Maasin	1.54	281	*e*P	Pg	14 58 39.2	-0.6
MSLP				*e*S	Sg	14 59 03.0	+3.1
BESP	Borongan	1.97	332	*e*P	Pb	14 58 45.0	-0.5
BESP				*e*S	Sg	14 59 13.3	-0.5
OCLP	Ormoc	2.12	304	*e*P	Pb	14 58 49.0	+1.0
OCLP				*e*S	Sg	14 59 18.2	-0.2
CGP	Cagayan de Oro	2.18	230⇑	*i*P	Pb	14 58 47.3	-1.6
CGP				*i* S	Sb	14 59 14.8	-0.8
BUKP	Musuan	2.36	214	*e*P	Pb	14 58 50.9	-1.3
BUKP				*e*S	Sb	14 59 22.4	+1.4
LLP	Lapu-Lapu	2.43	281⇑	*e*P	Pb	14 58 53.0	-0.3
LLP				*e*S	Sb	14 59 23.8	+0.8
MATI	Mati	2.89	183	*e*P	Pn	14 58 57.1	+1.9
MATI				*e*S	Sn	14 59 30.9	+1.4
KCP	Kidapawan	3.10	205⇑	*i*P	Pb	14 59 01.5	-3.3
KCP				*i* S	Sb	14 59 42.7	+0.3
DDMP	Don Marcelino,	3.79	190	*e*P	Pn	14 59 11.1	+3.6
BATI	Baumata	20.11	188	P	Pn	15 02 44.5	-0.5
	11nm,0.4s,baz=54,slow=6.3,SNR=4.2						
FITZ	Fitzroy Crossi	27.78	182	P	P	15 03 57.6	-0.5
	2.8nm,0.7s,baz=57,slow=1.8,SNR=8.1						
CMAR	Chiang Mai Arr	27.92	291	P	P	15 04 00.5	+1.0
	0.6nm,0.8s,baz=92,slow=8.5,SNR=4.5						
WRA	Warramunga Arr	30.62	165	P	P	15 04 23.6	+0.2
	0.3nm,0.6s,baz=345,slow=9.2,SNR=4.9						
ASAR	Alice Springs	34.11	168	P	P	15 04 54.4	+0.4
	0.2nm,0.3s,baz=346,slow=7.0,SNR=7.2						
H11S3	WAKE ISLAND Hy	39.93	73	T	T	15 48 38.9	
	baz=262,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	39.94	73	T	T	15 48 38.5	
	baz=262,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	39.94	73	T	T	15 48 41.6	
	baz=262,slow=75,SNR=10.0						
H11N1	WAKE ISLAND Hy	40.27	71	T	T	15 49 10.8	
	baz=265,slow=74,SNR=31						
H11N2	WAKE ISLAND Hy	40.28	71	T	T	15 49 11.3	
	baz=265,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	40.29	71	T	T	15 49 12.1	
	baz=265,slow=74,SNR=28						
SONM	Songino Array	41.45	340	P	P	15 05 55.9	+0.1
	0.6nm,0.5s,baz=156,slow=9.7,SNR=8.6						
NWAO	Narrogin (SRO)	43.43	191	P	P	15 06 11.6	-0.3
	9.4nm,0.6s,baz=20,slow=7.6,SNR=11						
MKAR	Makanchi Array	52.43	323	P	P	15 07 21.6	0.0
	1.8nm,0.6s,baz=122,slow=8.2,SNR=30						
MKAR				PcP	PcP	15 08 31.7	-0.4
	0.5nm,0.6s,baz=110,slow=5.1,SNR=2.3						
ZALV	Zalesovo Beam	55.05	331	P	P	15 07 39.1	-1.4
	0.7nm,0.4s,baz=120,slow=7.7,SNR=4.2						
GEYT	Alibeck	66.89	307	P	P	15 09 00.5	-0.9
	1.6nm,0.8s,baz=79,slow=2.2,SNR=5.9						
ILAR	Eielson Array	79.76	26	P	P	15 10 16.6	-0.2
	0.3nm,0.6s,baz=236,slow=6.4,SNR=2.6						
ARCES	ARCESS Array B	84.62	340	P	P	15 10 42.5	+0.3
	14nm,1.2s,baz=75,slow=4.6,SNR=15						
FINES	FINESS Array B	86.31	332	P	P	15 10 50.4	-0.3
	2.7nm,0.6s,baz=71,slow=4.0,SNR=31						
AKASG	Malin Array Be	86.96	321	P	P	15 10 52.6	-1.5
	0.3nm,0.4s,baz=60,slow=4.5,SNR=3.7						
YKA	Yellowknife Ar	94.09	24	P	P	15 11 28.2	+1.0
	0.6nm,0.7s,baz=306,slow=3.6,SNR=11						

IDC 01 15:05:40.3±46.0**, 16°.53S**×**172°.41W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/36**, mbtmp3.8**/3**, Error ellipse: s-maj=889.6km s-min=197.1km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.31	241	P	P	15 13 52.4	+0.2
	0.5nm,0.4s,baz=84,slow=13,SNR=2.8						
WRA	Warramunga Arr	50.52	258	P	P	15 14 40.3	-0.5
	0.2nm,0.5s,baz=96,slow=7.0,SNR=6.6						
ASAR	Alice Springs	50.67	253	P	P	15 14 42.0	0.0
	2.7nm,0.6s,baz=89,slow=8.2,SNR=56						

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*IDC **01** 15:06:53.5±45.0, 15°.37S×170°.81W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/37, mbtmp3.9/3, Error ellipse: s-maj=884.5km s-min=194.2km az=79.0*

*NEIC **01** 15:07:11.2±1.8, 15°.7S±0°.3×172°.3W±0°.4, h55^{km}±29^{km}, mb4.7/13, Error ellipse: s-maj=62.2km s-min=19.6km az=57.0*

ISC 01 15:07:09.5±3.2**, 15°.7S**±0°.4×**172°.4W**±0°.3**, h35**^{km}**, n17,** σ0^{s}.**86**/17**, mb4.6**/7**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.13	146	Pn	Pn	15 08 10.4	+0.3
SANVU	Saraoutou	19.68	268	P	Pn	15 11 38.3	+1.0
SANVU				IAmb	IAmb	15 11 50.4	
	comp=Z,48nm,1.0s						
BKZ	Black Stump Fm	25.38	201	P	P	15 12 33.2	-0.4
BKZ				IAmb	IAmb	15 12 52.6	
	comp=Z,37nm,1.7s						
HIZ	Hauiti	25.40	204	P	P	15 12 33.2	-0.4
QRZ	Quartz Range	28.31	205	P	P	15 13 00.3	+0.5
COEN	Coen	42.95	266	P	P	15 15 04.9	-0.6
COEN				IAmb	IAmb	15 15 10.9	
	comp=Z,21nm,1.6s						
TOO	Toolangi	43.08	231	P	P	15 15 06.2	-0.1
STKA	Stephens Creek	44.77	240	P	P	15 15 20.3	+0.4
	comp=Z,1.5nm,0.8s,baz=78,slow=7.0,SNR=4.6						
STKA	Stephens Creek	44.77	240	P	P	15 15 20.7	+0.7
BBOO	Buckleboo	49.55	240	P	P	15 15 55.8	-1.3
WB0	Warramunga Arr	50.72	257		P	15 16 07.3	+1.1
WB0				IAmb	IAmb	15 16 17.5	
	comp=Z,20nm,1.7s						
WB2	Warramunga Arr	50.74	257	P	P	15 16 06.4	0.0
WB2				IAmb	IAmb	15 16 14.6	
	comp=Z,8.5nm,1.3s						
WRA	Warramunga Arr	50.75	257	P	P	15 16 07.2	+0.6
	comp=Z,0.6nm,0.7s,baz=94,slow=6.8,SNR=7.1						
ASAR	Alice Springs	50.98	252	P	P	15 16 08.8	+0.6
	comp=Z,1.4nm,0.5s,baz=87,slow=8.1,SNR=18						
FORT	Forrest	56.19	243	P	P	15 16 44.4	-1.9
SOEI	Soe	61.91	267	P	P	15 17 26.2	-0.1
NWAO	Narrogin (SRO)	65.36	241	P	P	15 17 49.2	+0.6

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*TAP **01** 15:18:40.8, 24°.47N×121°.38E, h6^{km}±1^{km}, ML0.9, C*

*IDC **01** 15:18:56.1±14.0, 21°.35N×118°.91E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.1/41, mbtmp3.2/3, ML3.5/1, Error ellipse: s-maj=370.4km s-min=38.5km az=25.0*

ISC 01 15:18:40.8±1.0**, 24°.45N**±0°.04×**121°.38E**±0°.08**, h11**^{km}±5^{km}**, n11,** σ0^{s}.**90**/15**, mb3.5**/3**, 2C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNS	Nan Shan	0.01	207	*i* P	Pg	15 18 42.8	0.0
	baz=179						
NNS				*i* S	Sg	15 18 43.6	-0.6
	baz=179						
NNSB	Datong	0.02	159⇑	*i*P	Pg	15 18 42.8	0.0
	baz=177						
NNSB				*i* S	Sg	15 18 43.6	-0.7
	baz=177						
NNSH	Datong	0.02	159⇑	*i*P	Pg	15 18 42.8	0.0
	baz=177						
NNSH				*i* S	Sg	15 18 43.5	-0.8
	baz=177						
NDT	Datong Townshi	0.20	38	*e*P	Pg	15 18 45.2	+0.1
	baz=42						
NDT				S	Sg	15 18 48.3	+0.3
	baz=42						
YHNB	Yeheng	0.22	360	S	Sg	15 18 49.0	+0.3
	baz=358						
NSK	Sanguang	0.23	356	S	Sg	15 18 49.5	+0.5
	baz=356						
FUSS	Fushou	0.23	212	*i* P	Pb	15 18 47.0	-0.2
	baz=209						
FUSS				*i* S	Sb	15 18 51.0	+2.0
	baz=209						
NACB	Ninganchiao	0.34	143	*e*S	Sg	15 18 53.0	+1.0
	baz=146						
CMAR	Chiang Mai Arr	21.70	258	P	P	15 23 19.1	-13
	0.1nm,0.3s,baz=68,slow=8.0,SNR=5.4						
WRA	Warramunga Arr	45.89	163	P	P	15 27 02.2	-1.4
	0.3nm,0.6s,baz=339,slow=9.5,SNR=1.9						
ASAR	Alice Springs	49.35	165	P	P	15 27 30.4	0.0
	0.4nm,0.7s,baz=338,slow=7.7,SNR=10						

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*ISK **01** 15:27:28.2, 38°.96N×26°.24E, h12^{km}, ML2.5/6*

*DDA **01** 15:27:29.2, 38°.88N×26°.44E, h7^{km}±4^{km}, ML1.9*

ISC 01 15:27:27.6±1.0**, 38°.95N**±0°.03×**26°.34E**±0°.04**, h15**^{km}±10^{km}**, n13,** σ0^{s}.**66**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.46	37	*i* P	Pb	15 27 38.1	+0.8
AYVA				*i* S	Sg	15 27 42.4	-0.5
AYVA				IAML		15 27 50.0	
	comp=N,69nm,0.4s						
AYVA				IAML		15 27 54.0	
	comp=E,69nm,1.6s						
SIGR	SIGRI	0.46	306	PG	Pg	15 27 36.5	-0.3
SIGR				SG	Sg	15 27 41.9	-1.1
DKL	Dikili	0.46	74	PG	Pn	15 27 39.3	-0.4
DKL				SG	Sn	15 27 46.8	-0.8
KOCA	Canakkale, Ayv	0.58	345	*i* P	Pg	15 27 39.9	+0.8
KOCA				*i* S	Sg	15 27 46.2	-0.5
KOCA				IAML		15 27 51.0	
	comp=N,44nm,0.6s						
KOCA				IAML		15 27 55.0	
	comp=E,137nm,1.2s						
ZEDA	zmir-Bergama	0.58	88	*i* P	Pb	15 27 39.7	+0.3
ZEDA				*i* S	Sg	15 27 46.1	-0.6
ZEDA				IAML		15 28 06.0	
	comp=E,64nm,2.7s						
URLA	Izmir	0.62	161	PG	Pn	15 27 41.8	-0.1
URLA				SG	Sn	15 27 51.0	-0.5
URLA	Izmir	0.62	161	*i* P	Pb	15 27 41.3	+1.2
URLA				*i* S	Sg	15 27 48.0	0.0
URLA				IAML		15 28 07.0	
	comp=N,62nm,1.9s						
ZEYE	Izmir, Urla-Ze	0.72	169	*i* P	Pb	15 27 42.3	+0.5
ZEYE				*i* S	Sb	15 27 51.0	-0.4
ZEYE				IAML		15 28 04.0	
	comp=E,87nm,0.9s						
BUHA	Balikesir, Bur	0.80	46	*i* P	Pn	15 27 44.8	+0.5
BUHA				*i* S	Sb	15 27 53.4	-0.4
BUHA				IAML		15 27 58.0	
	comp=E,73nm,2.7s						
BUHA				IAML		15 28 01.0	
	comp=N,42nm,0.6s						
BAYC	CANAKKALE_Bayr	0.81	12	*i* P	Pn	15 27 45.3	+0.8
BAYC				*i* S	Sb	15 27 53.5	-0.7
BAYC				IAML		15 28 16.0	
	comp=N,31nm,0.0s						
BAYC				IAML		15 28 16.0	
	comp=E,48nm,0.0s						
EZN	Ezine	0.88	359	PG	Pn	15 27 45.6	+0.2
BOZC	Bozcaada	0.92	346	PG	Pg	15 27 46.1	+0.6
BALB	Balikesir	1.38	59	PN	Pg	15 27 54.5	+0.2

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*IDC **01** 15:32:16.8±0.5, 22°.76S×175°.84W, h0^{km}, mb4.5/18, mb1 4.6/19, mb1mx4.5/34, mbtmp4.5/19, ML4.6/1, MS3.9/30, Ms1 3.9/30, ms1mx3.8/42, Error ellipse: s-maj=19.3km s-min=14.9km az=150.0*

*NEIC **01** 15:32:20.0±1.7, 22°.81S±0°.08×175°.80W±0°.06, h18^{km}±3^{km}, mb4.9/94, Error ellipse: s-maj=11.5km s-min=7.9km az=176.0*

*NOU **01** 15:32:24.0, 22°.83S×175°.05W, h90^{km}, mb4.8, Tonga Islands Region*

*GCMT **01** 15:32:26.0±0.3, 22°.86S±0°.03×175°.37W±0°.02, h47^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s58,c74; s81,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.46±.15; $M_{\theta\theta}$-0.31±.12; $M_{\phi\phi}$-2.15±.10; $M_{r\theta}$0.38±.09; $M_{\theta\phi}$-1.25±.07; $M_{\phi r}$1.75±.08; Best double couple: $M_0$3.17800×10^{16} NP1:ϕ_s217.00000°,δ29.00000°,λ107.00000°. NP2: ϕ_s18.00000°,δ62.00000°,λ81.00000°. Principal axes: T 3.0500, Plg71.0000°, Azm268.0000°; N 0.2610, Plg8.0000°, Azm22.0000°; P -3.3070, Plg17.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 15:32:21.7±0.3**, 22°.91S**±0°.05×**175°.62W**±0°.05**, h34**^{km}**, n249,** σ1^{s}.**64**/221**, mb4.8**/55**, MS4.0**/29**, 21C-7D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.54	55	Pn	Pn	15 33 51.8	-3.7
NIUE					Sn	15 34 56.2	-13
NIUE	Niue	6.54	55	P	Pn	15 33 51.7	-3.8
RAO	Raoul Island	6.65	198	Sn	Sn	15 35 11.2	-0.3
	16nm,0.3s,baz=119,slow=21,SNR=1.3						
RAO	Raoul Island	6.65	198	Pn	Pn	15 33 54.9	-2.1
MSVF	Nonsavu	7.86	310	Pn	Pn	15 34 19.2	+5.5
	5.3nm,0.3s,baz=141,slow=12,SNR=62						
MSVF				LR	LR	15 37 05.4	
	comp=Z,3μm,18.8s,baz=89,slow=38						
MSVF	Nonsavu	7.86	310		Pn	15 34 19.0	+5.3
MSVF				Sn	Sn	15 35 44.0	+2.4
MSVF	Nonsavu	7.86	310	P	Pn	15 34 19.5	+5.8
RAR	Rarotonga	14.79	86	Pn	Pn	15 35 46.0	-2.4
	3.9nm,0.3s,baz=276,slow=9.2,SNR=21						
RAR				Sn	Sn	15 38 14.6	-17
	1.9nm,0.3s,baz=279,slow=18,SNR=2.2						
RAR				LR	LR	15 40 04.8	
	comp=Z,766nm,21.2s,baz=268,slow=31						
RAR	Rarotonga	14.79	86		Pn	15 35 44.8	-3.5
RAR	Rarotonga	14.79	86	P	Pn	15 35 43.2	-5.2
MARNC	Mare, Loyalty	15.21	272	P	P	15 36 01.2	+2.6
OUZ	Omahuta	15.46	215		P	15 35 59.3	-2.0
MXZ	Matakaoa Point	15.51	198		P	15 36 03.5	+1.6
MXZ				IAmb	IAmb	15 36 26.6	
	comp=Z,72nm,1.1s						
PINNC	Pines Island,	15.63	268	P	P	15 36 06.4	+3.2
WMGZ	Waiomatatini S	15.72	198	P	P	15 36 10.6	+6.3
TWGZ	Tauwhareparae	16.18	198	P	P	15 36 09.0	-0.4
YATNC	Mamie plateau,	16.19	270	P	P	15 36 14.1	+4.6
MARZ	Manawahe	16.42	202	P	P	15 36 16.5	+4.5
TKGZ	Te Karaka	16.46	198	P	Pn	15 36 09.0	-0.9
URZ	Urewera	16.52	201	Pn	P	15 36 12.2	-0.9
	comp=Z,2.2nm,0.3s,baz=256,slow=4.4,SNR=15						
URZ				Sn	Sn	15 39 01.0	-12
	comp=Z,0.5nm,0.3s,baz=34,slow=17,SNR=1.8						
URZ				LR	LR	15 42 08.1	
	comp=Z,280nm,19.9s,baz=30,slow=36						
URZ	Urewera	16.52	201		P	15 36 12.8	-0.3
URZ	Urewera	16.52	201	P	Pn	15 36 11.3	+0.6
DZM	Mont Dzumac	16.60	269	Pn	Pn	15 36 12.3	+0.4
	comp=Z,0.4nm,0.3s,baz=92,slow=17,SNR=4.9						
DZM				LR	LR	15 40 09.7	
	comp=Z,222nm,19.2s,baz=112,slow=29						
DZM	Mont Dzumac	16.60	269	*e*P	P	15 36 18.3	+4.1
	comp=Z,124nm,1.4s						
DZM				*e*LR	LR	15 40 16.0	
	comp=Z,1μm,24.6s						
DZM	Mont Dzumac	16.60	269	P	P	15 36 16.6	+2.4
DZM	Mont Dzumac	16.60	269	P	P	15 36 18.4	+4.2
RAGZ	Rawiri	16.64	199	P	P	15 36 15.8	+1.3
RIGZ	Rimuhau	16.73	198	P	Pn	15 36 14.2	+0.7
MUGZ	Murupara	16.83	201	P	Pn	15 36 11.9	-2.8
RAHZ	Arahi	17.13	200	P	P	15 36 20.3	+0.5
MTHZ	Maungataniwha	17.15	200	P	Pn	15 36 18.4	-0.3
RATZ	Rangitukua	17.52	203	P	Pn	15 36 20.4	-3.0
BKZ	Black Stump Fm	17.55	201	Pn	Pn	15 36 20.4	-3.3
HIZ	Hauiti	17.56	205		P	15 36 25.5	+0.9
HIZ				IAmb	IAmb	15 36 25.8	
	comp=Z,265nm,1.8s						
HIZ	Hauiti	17.56	205	P	P	15 36 25.9	+1.4
ETVZ	East Tongariro	17.79	203	P	Pn	15 36 26.0	-0.7
OTVZ	Oturere	17.83	203	P	Pn	15 36 26.1	-1.1
SANVU	Saraoutou	17.83	292	P	P	15 36 27.7	0.0
SANVU				IAmb	IAmb	15 36 44.9	
	comp=Z,121nm,1.1s						
SANVU	Saraoutou	17.83	292	P	P	15 36 31.4	+3.7
BHHZ	Black Hill Sta	17.98	201	P	Pn	15 36 27.3	-1.6
WNVZ	Wahianoa	18.00	203	P	Pn	15 36 27.9	-1.4
KAHZ	Kahuranaki	18.00	199	P	P	15 36 29.8	+0.3
VRZ	Vera Road	18.13	205	P	P	15 36 32.4	+1.6
PXZ	Pawanui	18.22	199	P	Pn	15 36 29.8	-2.0
TSZ	Takapari Road	18.53	201	P	P	15 36 32.7	-2.5
BFZ	Birch Farm	19.00	199	P	P	15 36 39.4	-1.0
BFZ				IAmb	IAmb	15 37 11.6	
	comp=Z,84nm,1.5s						
BFZ	Birch Farm	19.00	199	P	Pn	15 36 41.0	-0.4
MRZ	Mangatainoka R	19.20	201	P	P	15 36 40.3	-2.2
MSWZ	Moikau Station	19.98	200	P	P	15 36 49.2	-1.9
SNZO	South Karori	20.07	202	P	P	15 36 52.1	+0.1
SNZO				IAmb	IAmb	15 37 15.6	
	comp=Z,81nm,1.1s						
BHW	Baring Head	20.10	201	P	P	15 36 53.0	+0.6
PLWZ	Palliser	20.12	200	P	P	15 36 51.5	-1.2
TUWZ	Tuamarina	20.44	203	P	P	15 36 53.1	-3.0
NNZ	Nelson	20.47	204	P	P	15 36 54.3	-2.0
NNZ				IAmb	IAmb	15 37 16.8	
	comp=Z,62nm,1.2s						
QRZ	Quartz Range	20.47	206	P	P	15 36 56.1	-0.3
QRZ				IAmb	IAmb	15 37 28.9	
	comp=Z,112nm,1.7s						
CMWZ	Cape Campbell	20.63	202	P	P	15 36 59.1	+0.9
BSWZ	Blackbirch Sta	20.72	203	P	P	15 36 59.7	+0.6
THZ	Tophouse	21.12	204	P	P	15 37 03.3	-0.2
THZ				IAmb	IAmb	15 37 40.3	
	comp=Z,50nm,1.4s						
KHZ	Kahutara	21.45	202	P	P	15 37 04.4	-2.6
LTZ	Lake Taylor	22.23	204	P	P	15 37 16.2	+0.8
OXZ	Oxford	22.79	204	P	P	15 37 20.3	-1.0
OXZ				IAmb	IAmb	15 37 22.2	
	comp=Z,46nm,1.4s						
MQZ	McQueen’s Vall	22.90	202	P	P	15 37 22.1	-0.2
MQZ				IAmb	IAmb	15 37 24.5	
	comp=Z,104nm,1.6s						
RPZ	Rata Peaks	23.49	205	P	P	15 37 27.0	-1.4
	comp=Z,5.7nm,0.6s,baz=27,slow=20,SNR=1.8						
RPZ	Rata Peaks	23.49	205	P	P	15 37 28.7	+0.3
RPZ				IAmb	IAmb	15 37 52.6	
	comp=Z,44nm,1.4s						
FOZ	Fox Glacier	23.84	207	P	P	15 37 32.3	+0.7
FOZ				IAmb	IAmb	15 38 01.0	
	comp=Z,64nm,1.4s						
LHI	Lord Howe Isla	24.05	244	P	P	15 37 32.0	-1.8
LBZ	Lake Benmore	24.40	205	P	P	15 37 37.1	+0.3
LBZ				IAmb	IAmb	15 37 59.7	
	comp=Z,65nm,1.5s						
ODZ	Otahua Downs	24.78	204	P	P	15 37 41.0	+0.8
ODZ				IAmb	IAmb	15 37 41.5	
	comp=Z,49nm,1.4s						
PAE	Paea	24.96	83	*e*T	T	16 03 14.0	
	comp=Z,94nm,0.3s						
PPT2	Papeete2	24.98	83	*e*S	S	15 42 02.6	-1.6
	comp=Z,287nm,28.8s						
PPT2				*e*LR	LR	15 43 51.7	
	comp=Z,2μm,26.2s						
PPT2	Papeete2	24.98	83	*e*T	T	16 03 16.7	
	comp=Z,76nm,0.3s						
PPT	Papeete	24.99	83	P	P	15 37 44.2	+1.8
	comp=Z,40nm,1.0s,baz=26,slow=15,SNR=3.5						
PPT				LR	LR	15 44 56.9	
	comp=Z,341nm,21.5s,baz=233,slow=30						
PPT	Papeete	24.99	83	P	P	15 37 44.6	+2.2
PPTF	Pamatai, Papee	24.99	83	P	P	15 37 44.6	+2.1
TIAR	Tiarei	25.20	83	*e*T	T	16 03 28.4	
	comp=Z,5.4nm,0.3s						
TVO	Taravao	25.22	83	*e*T	T	16 03 27.4	
	comp=Z,6.5nm,0.3s						
WKZ	Wanaka	25.23	206	P	P	15 37 45.2	+0.9
WKZ				IAmb	IAmb	15 37 58.9	
	comp=Z,50nm,1.3s						
MLZ	Mavora Lakes	26.04	207	P	P	15 37 51.8	+0.1
MEH	Mehetia	26.29	84	*e*T	T	16 04 54.8	
	comp=Z,104nm,0.3s						
DCZ	Deep Cove	26.52	208	P	P	15 37 55.5	-0.5
DCZ				IAmb	IAmb	15 38 29.4	
	comp=Z,50nm,1.3s						
WHZ	Wether Hill Ro	26.53	206	P	P	15 37 57.0	+0.8
HNR	Honiara	26.96	296	LR	LR	15 46 57.7	
	comp=Z,219nm,21.3s,baz=168,slow=33						
VAH	Vaihoa	27.50	79	*e*T	T	16 06 22.0	
	comp=Z,10nm,0.3s						
ARMA	Armidale	30.13	249	P	P	15 38 29.7	+1.1
EIDS	Eidsvold	30.45	259	P	P	15 38 30.6	-0.7
XMAS	Kiritimati	30.48	38	P	P	15 38 31.6	0.0
CTAO	Charters Tower	35.52	267	P	P	15 39 15.0	-0.7
CTAO				IAmb	IAmb	15 39 22.9	
	comp=Z,11nm,0.7s						
KRVT	Keravat (AS076	36.33	296	LR	LR	15 52 39.1	
	comp=Z,209nm,21.2s,baz=121,slow=34						
TOO	Toolangi	36.37	237	P	P	15 39 21.0	-1.7
TOO				IAmb	IAmb	15 39 52.2	
	comp=Z,43nm,1.8s						
TAOE	Nuku Hiva Isla	36.74	73	*e*LR	LR	15 49 00.6	
	comp=Z,707nm,28.4s						
TAOE	Nuku Hiva Isla	36.74	73	*e*T	T	16 17 51.5	
	comp=Z,70nm,0.3s						
RKT	Rikitea	37.32	99	*e*LR	LR	15 49 31.5	
	comp=Z,984nm,28.8s						
PMG	Port Moresby	38.06	285	P	P	15 39 36.2	-1.1
	comp=Z,71nm,1.1s,baz=105,slow=3.4,SNR=18						
PMG	Port Moresby	38.06	285	P	P	15 39 36.2	-1.1
PMG	Port Moresby	38.06	285	P	P	15 39 36.8	-0.5
STKA	Stephens Creek	38.82	247	P	P	15 39 43.2	-0.3
	comp=Z,2.2nm,0.5s,baz=98,slow=11,SNR=12						
STKA				LR	LR	15 54 28.9	
	comp=Z,247nm,18.6s,baz=50,slow=34						
STKA	Stephens Creek	38.82	247	P	P	15 39 43.4	-0.2
COEN	Coen	39.98	276	P	P	15 39 53.0	-0.4
BBOO	Buckleboo	43.53	246	P	P	15 40 19.7	-2.5
BBOO				IAmb	IAmb	15 40 27.2	

	comp=Z,24nm,1.6s						
WAKE	Wake Island	45.37	336	P	P	15 40 38.0	+1.1
AS31	Alice Springs	46.17	259	P	P	15 40 42.3	-1.1
ASAR	Alice Springs	46.17	259	P	P	15 40 42.1	-1.3
	comp=Z,3.4nm,0.4s,baz=96,slow=7.6,SNR=100						
ASAR				ScP	ScP	15 46 11.9	+2.0
	comp=Z,0.9nm,1.0s,baz=93,slow=3.7,SNR=4.5						
ASAR				S	S	15 47 22.6	-5.0
	comp=Z,0.4nm,0.8s,baz=92,slow=13,SNR=2.9						
ASAR				LR	LR	15 59 18.6	
	comp=Z,369nm,18.9s,baz=102,slow=35						
WR0	Warramunga Arr	46.31	264	P	P	15 40 42.8	-1.7
WB2	Warramunga Arr	46.49	264	P	P	15 40 44.1	-1.9
WB2				IAmb	IAmb	15 40 59.0	
	comp=Z,12nm,0.7s						
WB0	Warramunga Arr	46.49	264	P	P	15 40 44.0	-1.9
WB0				IAmb	IAmb	15 40 59.6	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	46.50	264	P	P	15 40 43.9	-2.1
WRAB				IAmb	IAmb	15 40 45.7	
	comp=Z,15nm,1.1s						
WRA	Warramunga Arr	46.50	264	P	P	15 40 44.3	-1.8
	comp=Z,4.2nm,0.4s,baz=91,slow=8.4,SNR=94						
WRA				ScP	ScP	15 46 14.4	+3.2
	comp=Z,0.9nm,0.9s,baz=101,slow=4.3,SNR=4.4						
WRA				LR	LR	15 58 48.5	
	comp=Z,287nm,21.7s,baz=125,slow=34						
JAY	Jayapura	46.91	289	P	P	15 40 48.1	-1.2
	comp=Z,26nm,0.9s,baz=135,slow=3.5,SNR=7.2						
JAY				LR	LR	15 59 32.0	
	comp=Z,194nm,19.5s,baz=96,slow=35						
FORT	Forrest	50.42	248	P	P	15 41 14.6	-1.5
FORT				IAmb	IAmb	15 41 44.6	
	comp=Z,16nm,0.8s						
MTN	Manton Dam	51.42	272	P	P	15 41 22.6	-1.2
MTN				IAmb	IAmb	15 41 26.6	
	comp=Z,20nm,1.1s						
SAUI	Saumlaki	52.99	277	P	P	15 41 35.8	+0.4
FAKI	Fak Fak	54.21	284	P	P	15 41 42.5	-1.9
FAKI				IAmb	IAmb	15 41 50.6	
	comp=Z,24nm,1.4s						
FITZ	Fitzroy Crossi	54.93	263	P	P	15 41 47.9	-1.7
FITZ				IAmb	IAmb	15 41 53.1	
	comp=Z,13nm,1.2s						
VNDA	Vanda	55.73	186	P	P	15 41 54.7	+0.2
	comp=Z,0.3nm,0.3s,baz=288,slow=12,SNR=6.3						
VNDA				LR	LR	16 03 49.5	
	comp=Z,35nm,19.6s,baz=16,slow=34						
VNDA	Vanda	55.73	186	P	P	15 41 54.6	+0.2
SWI	Sorong	56.01	285	P	P	15 41 55.9	-1.5
	comp=Z,30nm,1.0s						
SOEI	Soe	58.80	272	P	P	15 42 17.4	+0.2
PSAD2	Pilbara Seismi	59.19	258	P	P	15 42 19.5	-0.2
PSAC2	Pilbara Seismi	59.26	258	P	P	15 42 19.9	-0.3
PSAA3	Pilbara Seismi	59.30	258	P	P	15 42 20.3	-0.2
PSAB2	Pilbara Seismi	59.30	258	P	P	15 42 20.2	-0.3
NWAO	Narrogin (SRO)	59.30	244	P	P	15 42 20.5	+0.2
MORW	Morawa	60.99	248	P	P	15 42 30.1	-1.8
MMRI	Maumere	61.07	273	P	P	15 42 31.4	-1.3
CASY	Casey	62.76	206	P	P	15 42 43.9	+0.7
CASY				IAmb	IAmb	15 43 03.2	
	comp=Z,6.0nm,0.7s						
QSPA	South Pole Qui	67.17	180	P	P	15 43 15.0	+2.9
QSPA				IAmb	IAmb	15 43 19.6	
	comp=Z,13nm,1.1s						
MJAR	Matsushiro Arr	73.45	323	P	P	15 43 49.7	-1.0
	comp=Z,1.9nm,0.9s,baz=160,slow=5.6,SNR=2.2						
MAJO	Matsushiro	73.46	323	P	P	15 43 51.0	+0.3
ADK	Adak	74.47	359	P	P	15 43 57.6	+1.4
H06S1	SOCORRO T	75.50	62	T	T	17 06 39.6	
	SNR=22						
H06E1	SOCORRO T-PHAS	75.55	62	T	T	17 06 24.9	
	SNR=28						
BELA	Belgrano 2	76.89	172	P	P	15 44 11.9	+1.9
LPIG	La Paz	78.77	58	LR	LR	16 14 32.5	
	comp=Z,105nm,18.5s,baz=197,slow=32						
PETK	Petropavlovsk-	79.17	344	P	P	15 44 22.0	-0.7
	comp=Z,5.9nm,1.0s,baz=133,slow=8.8,SNR=4.4						
PETK				LR	LR	16 15 46.5	
	comp=Z,67nm,18.7s,baz=170,slow=33						
PFO	Pinyon Flats O	79.56	47	LR	LR	16 11 11.2	
	comp=Z,60nm,20.3s,baz=272,slow=29						
MAW	Mawson	80.05	199	P	P	15 44 30.0	+2.5
	comp=Z,4.6nm,0.5s,baz=143,slow=5.7,SNR=8.9						
MAW				LR	LR	16 19 47.9	
	comp=Z,73nm,18.5s,baz=60,slow=36						
MAW	Mawson	80.05	199	P	P	15 44 29.7	+2.2
YBH	Yreka Blue Hor	80.82	37	LR	LR	16 12 16.5	
	comp=Z,69nm,19.0s,baz=234,slow=30						
NVAR	Mina Array Bea	81.28	42	P	P	15 44 36.6	+1.8
	comp=Z,2.3nm,0.8s,baz=221,slow=8.5,SNR=12						
TPNV	Topopah Spring	81.68	44	P	P	15 44 38.0	+1.2
TPH	Tonopah	81.74	43	P	P	15 44 39.0	+1.8
USRK	Ussuriysk Ar.	82.19	325	LR	LR	16 18 09.8	
	comp=Z,61nm,18.3s,baz=161,slow=34						
K05A	Summer Lake	82.49	37	P	P	15 44 42.4	+1.4
K05A				IAmb	IAmb	15 45 02.6	
	comp=Z,13nm,1.0s						
KDAK	Kodiak Island	82.66	12	LR	LR	16 13 30.5	
	comp=Z,58nm,21.9s,baz=204,slow=30						
PRN	Pahroc Range	82.72	44	P	P	15 44 43.3	+1.0
PRN				IAmb	IAmb	15 44 59.6	
	comp=Z,8.8nm,1.2s						
TUC	Tucson	82.75	51	P	P	15 44 43.0	+0.6
H03S2	Juan Fernandez	82.81	124	T	T	17 16 26.7	
	baz=246,slow=75,SNR=284						
H03S1	Juan Fernandez	82.83	124	T	T	17 16 25.9	
	baz=246,slow=75,SNR=280						
H03S3	Juan Fernandez	82.83	124	T	T	17 16 27.2	
	baz=246,slow=75,SNR=372						
NJ2	Nanjing	83.11	309	*e*P	P	15 44 44.7	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PINE	Pine Mountain	83.16	37	P	P	15 44 45.5	+1.1
PINE				IAmb	IAmb	15 44 55.4	
	comp=Z,12nm,1.2s						
X16A	Lo Mia Camp, P	83.44	49	P	P	15 44 46.7	+0.6
WVOR	Wild Horse Val	83.58	39	P	P	15 44 47.6	+1.0
WVOR				IAmb	IAmb	15 44 56.4	
	comp=Z,12nm,1.4s						
LCMT	Little Creek M	83.67	46	P	P	15 44 48.9	+1.8
CCUT	Cedar City	83.90	45	P	P	15 44 49.8	+1.4
KNB	Kanab	83.95	46	P	P	15 44 50.6	+2.0
U15A	North Rim	83.97	46	P	P	15 44 50.9	+2.0
U15A				IAmb	IAmb	15 44 59.5	
	comp=Z,7.8nm,1.1s						
SZCU	Shurtz Canyon	84.10	45	P	P	15 44 51.2	+1.8
PSUT	Pine Spring	84.14	44	P	P	15 44 51.0	+1.4
ELK	Elko	84.57	42	LR	LR	16 15 46.4	
	comp=Z,51nm,18.6s,baz=241,slow=31						
ELK	Elko	84.57	42	P	P	15 44 52.1	+0.4
MVU	Marysvale	85.19	45	P	P	15 44 57.1	+2.2
G08A	Pilot Rock	85.20	36	P	P	15 44 55.5	+0.8
G08A				IAmb	IAmb	15 44 56.9	
	comp=Z,8.5nm,1.3s						
BBB	Bella Bella	85.50	27	LR	LR	16 14 16.4	
	comp=Z,65nm,21.7s,baz=228,slow=30						
SNAA	Sanae	85.54	178	P	P	15 44 57.8	+1.8
SNAA	Sanae	85.54	178	P	P	15 44 57.2	+1.2
SNAA				IAmb	IAmb	15 45 11.1	
	comp=Z,8.0nm,1.3s						
VNA3	Neumayer Olymp	85.59	175	P	P	15 44 57.6	+1.3
PLCA	Paso Flores	86.02	133	P	P	15 45 00.6	+1.5
	comp=Z,3.7nm,1.1s,baz=225,slow=5.4,SNR=3.8						
PLCA				LR	LR	16 13 58.2	
	comp=Z,49nm,21.6s,baz=238,slow=29						
VNA2	Neumayer--Watz	86.06	176	P	P	15 45 00.5	+2.0
	baz=197,slow=4.5						
VNA1	Neumayer--Stat	86.27	176	P	P	15 45 02.6	+3.1
TMUT	Trail Mountain	86.28	45	P	P	15 45 01.9	+1.5
MNTX	Cornudas Mount	86.36	53	P	P	15 45 02.3	+1.6
TX31	Lajitas Ar. Si	86.51	56	P	P	15 45 02.2	+0.7
TX32	Lajitas Array	86.51	56	P	P	15 45 02.4	+0.9
TX32				IAmb	IAmb	15 45 16.2	
	comp=Z,7.6nm,1.2s						
TXAR	Lajitas Array	86.51	56	P	P	15 45 03.6	+2.1
	comp=Z,2.3nm,0.9s,baz=215,slow=8.4,SNR=17						
TXAR				LR	LR	16 18 05.5	
	comp=Z,33nm,18.7s,baz=0.0,slow=32						
F10A	Beach Ranch, E	86.58	37	P	P	15 45 02.0	+0.5
SRU	San Rafael Swe	86.62	45	P	P	15 45 02.6	+0.7
TTA	Tatalina	86.95	9	P	P	15 45 02.7	-0.1
TTA				IAmb	IAmb	15 45 19.4	
	comp=Z,6.0nm,1.1s						
ANMO	Albuquerque	87.20	50	LR	LR	16 16 28.3	
	comp=Z,78nm,21.5s,baz=234,slow=30						
ANMO	Albuquerque	87.20	50	P	P	15 45 06.1	+1.2
RND	Reindeer	88.57	12	P	P	15 45 11.5	+0.9
RND				IAmb	IAmb	15 45 26.8	
	comp=Z,8.7nm,0.9s						
PDAR	Pinedale Array	89.22	42	P	P	15 45 14.8	+0.4
	comp=Z,0.7nm,0.8s,baz=194,slow=3.1,SNR=7.0						
PDAR				LR	LR	16 18 27.8	
	comp=Z,40nm,21.0s,baz=314,slow=31						
YHL	Hebgen Lake	89.37	40	P	P	15 45 17.1	+2.0
DLBC	Dease Lake	89.41	22	LR	LR	16 18 53.8	
	comp=Z,46nm,18.1s,baz=266,slow=31						
WRH	Wood River Hil	89.68	12	P	P	15 45 16.0	+0.4
DOT	Dot Lake	89.75	14	P	P	15 45 16.4	+0.3
DOT				IAmb	IAmb	15 45 21.6	
	comp=Z,13nm,1.6s						
CCB	Clear Creek Bu	89.90	12	P	P	15 45 16.8	+0.2
CCB				IAmb	IAmb	15 45 32.3	
	comp=Z,14nm,1.6s						
ILAR	Eielson Array	90.18	12	P	P	15 45 17.8	-0.2
	comp=Z,1.1nm,0.9s,baz=222,slow=5.0,SNR=7.7						
DAWY	Dawson	91.18	15	P	P	15 45 23.6	+0.9
DAWY				IAmb	IAmb	15 45 26.2	
	comp=Z,4.7nm,0.9s						
HHC	Hu-ho-hao-te	92.61	313	*e*P	P	15 45 30.2	+0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
CMAR	Chiang Mai Arr	92.99	289	P	P	15 45 31.2	-1.0
	comp=Z,1.2nm,1.0s,baz=140,slow=3.8,SNR=6.5						
NNA	Nana	93.31	104	LR	LR	16 17 28.2	
	comp=Z,120nm,21.0s,baz=233,slow=29						
RSSD	Black Hills	93.36	43	P	P	15 45 33.7	+0.2
RSSD				IAmb	IAmb	15 45 35.5	
	comp=Z,6.0nm,0.9s						
YAK	Yakutsk	95.17	337	LR	LR	16 25 55.5	
	comp=Z,40nm,18.4s,baz=102,slow=34						
LVC	Limon Verde	95.57	117	LR	LR	16 19 37.9	
	comp=Z,47nm,20.6s,baz=228,slow=30						
YKA	Yellowknife Ar	97.78	24	P	P	15 45 51.5	-1.4
	comp=Z,0.3nm,0.8s,baz=239,slow=4.0,SNR=6.0						
YKA				LR	LR	16 24 19.7	
	comp=Z,50nm,20.4s,baz=0.0,slow=32						
ZALV	Zalesovo Beam	113.75	320	PKiKP	PKiKP	15 50 55.4	-1.0
	comp=Z,0.4nm,0.5s,baz=120,slow=2.1,SNR=4.0						
MKAR	Makanchi Array	114.45	312	PKP	PKPdf	15 50 57.1	-0.9
	comp=Z,0.5nm,0.6s,baz=216,slow=0.7,SNR=8.1						
KURBB	Kurchatov Arra	117.31	316	PKP	PKPdf	15 51 01.2	-2.1
	comp=Z,0.7nm,0.5s,baz=105,slow=1.6,SNR=7.2						
BVAR	Borovoye Array	122.34	319	PKP	PKPdf	15 51 12.0	-1.0
	comp=Z,0.5nm,0.4s,baz=35,slow=7.9,SNR=12						
ARU	Arti	128.43	325	PKP	PKPdf	15 51 24.8	+0.4
	comp=Z,0.6nm,0.4s,baz=190,slow=23,SNR=3.5						
AKTO	Aktyubinsk	130.33	318	PKP	PKPdf	15 51 28.7	+0.4
	comp=Z,0.5nm,0.6s,baz=150,slow=3.9,SNR=2.3						
ARCES	ARCESS Array B	131.67	350	PKP	PKPdf	15 51 30.9	+0.6
	comp=Z,5.3nm,1.1s,baz=29,slow=2.8,SNR=4.6						
GEYT	Alibeck	131.93	301	PKP	PKiKP	15 51 32.6	-0.2
	comp=Z,0.9nm,0.7s,baz=351,slow=2.0,SNR=4.6						
FINES	FINESS Array B	138.69	344	PKhKP	PKPpre	15 51 36.3	
	comp=Z,2.2nm,0.9s,baz=146,slow=3.0,SNR=1.6						
FINES				PKP	PKiKP	15 51 45.2	-0.5
	comp=Z,4.9nm,1.0s,baz=58,slow=5.2,SNR=6.2						
AKASG	Malin Array Be	146.18	331	PKPbc	PKPdf	15 51 57.3	+0.2
	comp=Z,5.1nm,0.8s,baz=42,slow=4.5,SNR=14						
SORM	Soroca	148.40	329	⇑P	PKPbc	15 52 04.3	-0.1
MILM	Milestii Mici	149.01	327	⇓P	PKPbc	15 52 04.6	-1.5
VASR	Vaslui	149.71	327	⇓P	PKPbc	15 52 08.3	+0.5
BRTR	Keskin Array B	150.09	311	PKPbc	PKPbc	15 52 08.6	-0.6
	comp=Z,0.6nm,0.4s,baz=309,slow=25,SNR=6.0						
BURAR	Bucovina Array	150.23	331	⇑P	PKiKP	15 52 10.5	+0.5
BIZ	Bicaz	150.32	329	⇓P	PKiKP	15 52 10.2	+0.1
TESR	Tescani	150.37	328	⇑P	PKPbc	15 52 09.5	+0.1
KOLS	Kolonicke sedl	150.41	336	*e*PKP	PKiKP	15 52 10.1	-0.1
KOLS				*e*		15 52 15.2	
CFR	Carcaliu	150.52	325	⇑P	PKPbc	15 52 09.7	-0.1
TPGR	Topolog	150.57	324	⇑P	PKiKP	15 52 11.5	+0.8
CRVS	Cervenica-Dubn	150.74	337	*e*PKP	PKPab	15 52 17.2	-0.1
VRI	Vrincioaia	150.78	327	⇓P	PKPbc	15 52 10.1	-0.3
PLOR	Plostina	150.83	327	⇑P	PKPbc	15 52 10.6	0.0
CLL	Collm	150.87	349	*e*PKPdf	PKPdf	15 52 06.0	+1.2
CLL				*i* PKPbc	PKPbc	15 52 10.8	+0.4
CLL				*i* PKPab	PKPab	15 52 18.3	+0.6
	comp=Z,7.0nm,0.9s						
CLL				*e*		15 52 34.0	
OSTC	Ostas	150.89	344	⇑*e*PKP	PKiKP	15 52 11.4	+0.2
UPC	Upice	150.99	345	⇑*e*PKP	PKPbc	15 52 11.1	+0.3
ARCR	ARCALIA	151.02	331	⇑P	PKPab	15 52 19.7	+1.2
DPC	Dobruska-Polom	151.06	344	⇑*e*PKP	PKPbc	15 52 11.1	+0.1
KRLC	Kraliky	151.19	343	⇑*e*PKP	PKPbc	15 52 11.5	+0.2
LANS	Liptovska Anna	151.22	339	*e*PKP	PKiKP	15 52 13.2	+1.3
LANS				*e*		15 52 20.7	
MORC	Moravsky Berou	151.25	342	⇓P	PKiKP	15 52 12.2	+0.2
MORC	Moravsky Berou	151.25	342	*e*PKP	PKPbc	15 52 11.7	+0.2
DOPR	Dopca	151.37	329	⇑P	PKiKP	15 52 12.8	+0.4
ISR	Istrita	151.39	326	⇑P	PKPab	15 52 18.1	-2.1
SECR		151.69	326	⇑P	PKPbc	15 52 12.7	+0.1
PRU	Pruhonice	151.82	346	⇑*e*PKP	PKPbc	15 52 13.1	+0.4
VOIR		151.92	328	⇓P	PKiKP	15 52 14.9	+1.4
VRAC	Vranov	151.94	343	*e*PKP	PKiKP	15 52 13.6	+0.2
DRGR		151.96	333	⇑P	PKPbc	15 52 13.4	+0.2
VYHS	Vyhne	152.00	339	*e*PKP	PKiKP	15 52 15.3	+1.8
ARR	Arges	152.17	328	⇓P	PKiKP	15 52 14.3	+0.3
KRUC	Moravsky	152.22	343	*e*PKP	PKPbc	15 52 14.0	+0.4
MODS	Modra-Piesok	152.59	341	*e*PKP	PKiKP	15 52 16.1	+1.3
MODS				*e*		15 52 28.1	
SIRR	Siria	152.82	333	⇑P	PKPbc	15 52 15.2	+0.1
KHC	Kasperske Hory	152.84	347	⇑*e*PKP	PKPbc	15 52 14.9	-0.2
GERES	GERESS Array B	153.08	346	PKPbc	PKPbc	15 52 15.6	-0.1
	comp=Z,0.3nm,0.4s,baz=0.0,slow=2.7,SNR=4.5						
VLAD	Vladila	153.27	327	⇑P	PKPdf	15 52 06.2	-2.4
BZS	Buzias	153.35	332	⇑P	PKPdf	15 52 12.6	+3.9
CONA	Conrad Observa	153.40	343	*e*P	PKPbc	15 52 16.7	+0.3
BANR	Banloc	153.74	333	⇑P	PKPbc	15 52 16.4	-0.7
ABTA	Abfaltersbach	155.32	347	*e*P	PKPab	15 52 27.9	-8.8
	comp=Z,1.6nm,0.6s						
ESDC	Sonseca Array	161.84	21	PKP	PKPdf	15 52 19.1	-0.4
	comp=Z,0.3nm,0.5s,baz=253,slow=1.3,SNR=2.7						
TORD	Torodi Ar. Bea	169.96	165	PKPab	PKPab	15 53 43.1	+1.8
	comp=Z,1.6nm,0.8s,baz=188,slow=3.9,SNR=5.8						

NOU 01 15:41:13.5, 16°.01S×173°.45W, h226^{km}, MLv4.2, Tonga Islands, Tonga Islands

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IDC ***01*** *15:45:43.8±1.6, 9°.28S×113°.25E, h0^{km}, mb3.7/5, mb1 3.9/8, mb1mx3.6/38, mbtmp3.8/8, ML3.6/3, MS3.5/3, Ms1 3.5/3, ms1mx2.9/39, Error ellipse: s-maj=48.9km s-min=19.4km az=50.0*

NEIC ***01*** *15:45:49.5±2.6, 9°.47S±0°.07×113°.39E±0°.06, h52^{km}±5^{km}, mb4.0/7, Error ellipse: s-maj=10.8km s-min=7.6km az=164.0*

DJA ***01*** *15:45:50.4±0.8, 9°S±3°×11°3E±°, h29^{km}±9^{km}, M4.3/18, mb4.5/6, MLv4.2/18*

ISC 01 15:45:48.7±1.5**, 9°.40S**±0°.06×**113°.36E**±0°.04**, h32^{km}**±12^{km}**, n49, σ1^{s}.80**/54**, mb3.8**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.12	4	P	Pn	15 46 08.2	+0.1
GMJI				S	Sn	15 46 21.3	-1.1
JAGI	Jajag, Banyuwa	1.21	40		Pb	15 46 10.6	-0.3
JAGI				Sn	Sn	15 46 25.2	+0.6
JAGI	Jajag, Banyuwa	1.21	40	P	Pn	15 46 10.3	+1.0
JAGI				S	Sn	15 46 24.5	-0.1
BLJI	Banyuglugur	1.66	8	P	Pn	15 46 16.6	+1.1
BLJI				S	Sb	15 46 38.2	-0.9
ABJI	Asem Bagus	1.81	29	P	Pb	15 46 20.7	-0.5
ABJI				S	Sb	15 46 43.3	-0.1
DNP	Denpasar	1.96	69	P	Pn	15 46 22.4	+2.7
DNP				S	Sn	15 46 45.4	+2.2
PWJI	Pagerwojo	2.06	311	P	Pn	15 46 21.7	+0.6
PWJI				S	Sn	15 46 44.1	-1.6
SRBI	Singaraja	2.24	55	P	Pn	15 46 25.8	+2.2
SRBI				S	Sn	15 46 52.2	+1.9
KMMI	Kalianget	2.41	14	P	Pn	15 46 27.4	+1.5
GRJI	Gresik	2.62	340	P	Pn	15 46 30.9	+2.2
GRJI				S	Sn	15 47 01.1	+1.7
UGM	Wanagama	3.17	297		Pn	15 46 38.3	+1.8
UGM				Sn	Sn	15 47 13.8	+0.6
UGM	Wanagama	3.17	297	P	Pn	15 46 38.8	+2.4
TWSI	Taliwang, Sumb	3.54	80	P	Pn	15 46 43.1	+1.7
BWJI	Bawean	3.59	349	P	Pn	15 46 41.5	-0.7
PLAI	Plampang	4.39	83	P	Pn	15 46 55.5	+2.3
KPJI	Karang Pucung	4.84	295	P	Pn	15 47 01.5	+2.1
CMJI	Cimerak	5.12	288	P	Pn	15 47 04.9	+1.7
	0.2nm30nm,0.8s						
CISI	Cisompet, Garu	5.78	288	Pn	Pn	15 47 14.6	+2.1
CISI	Cisompet, Garu	5.78	288	P	Pn	15 47 14.4	+2.0
	0.3nm38nm,0.5s						
JCJI	Jatiwangi	5.81	299	P	Pn	15 47 04.9	-7.8
XMIS	Christmas Isla	7.67	261	Pn	Pn	15 47 38.4	0.0
KAPI	Kappang	7.69	56	Pn	Pn	15 47 38.1	-0.4
	1.0nm,0.3s,baz=233,slow=5.1,SNR=5.1						
KAPI				Sn	Sn	15 49 01.7	-2.8
	1.4nm,0.3s,baz=130,slow=20,SNR=2.0						
KAPI				LR	LR	15 51 13.3	
	comp=Z,63nm,18.9s,baz=246,slow=43						
BKSI	Bulukumba	7.83	59	P	Pn	15 47 42.4	+2.0
	0.1nm30nm,0.8s						
CGJI	Cibinong	8.08	289	P	Pn	15 47 45.8	+1.9
	27nm,0.4s						
EDFI	Ende, Flores	8.25	86	P	Pn	15 47 47.7	+1.4
BNSI	Bone	8.33	54	P	Pn	15 47 48.9	+1.6
BATI	Baumata	10.18	95	Pn	Pn	15 48 12.9	+0.2
	2.6nm,0.3s,baz=292,slow=4.7,SNR=4.3						
BATI				Sn	Sn	15 49 59.2	-6.8
	0.5nm,0.3s,baz=213,slow=22,SNR=1.3						
SOEI	Soe	10.76	93	Pn	Pn	15 48 22.8	+2.0
MNAI	Manna	11.48	295	Pn	Pn	15 48 31.3	+0.8
GIRL	Giralia	13.20	176	Pn	Pn	15 48 53.1	-0.9
PSA00	Pilbara Seismi	13.62	153	Pn	Pn	15 48 59.0	-0.7
FITZ	Fitzroy Crossi	14.72	127	Pn	Pn	15 49 13.8	-1.0
	0.1nm,0.3s,baz=307,slow=10,SNR=1.2						
FITZ				Sn	Sn	15 51 45.8	-11
	0.1nm,0.3s,baz=324,slow=17,SNR=1.2						
MTN	Manton Dam	17.77	103	P	P	15 49 56.6	+2.3
FAKI	Fak Fak	19.84	72		P	15 50 15.4	-1.7
FAKI				IAmb	IAmb	15 50 54.1	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	22.79	119	P	P	15 50 49.0	+0.2
WB0				IAmb	IAmb	15 51 06.0	
	comp=Z,9.4nm,1.2s						
WRA	Warramunga Arr	22.81	120	P	P	15 50 49.7	+0.6
	comp=Z,1.5nm,0.7s,baz=300,slow=12,SNR=23						
WB2	Warramunga Arr	22.82	120	P	P	15 50 49.7	+0.5
WB2				IAmb	IAmb	15 50 52.5	
	comp=Z,14nm,1.6s						
WR0	Warramunga Arr	22.99	120	P	P	15 50 51.2	+0.2
WR0				IAmb	IAmb	15 51 07.1	
	comp=Z,3.6nm,0.9s						
AS31	Alice Springs	24.22	128	P	P	15 51 03.8	+0.9
ASAR	Alice Springs	24.22	128	P	P	15 51 04.1	+1.3
	comp=Z,1.5nm,0.6s,baz=302,slow=8.6,SNR=35						
STKA	Stephens Creek	34.42	135	P	P	15 52 35.3	+1.9
	comp=Z,1.0nm,0.4s,baz=313,slow=9.4,SNR=5.4						
STKA	Stephens Creek	34.42	135	IAmb	IAmb	15 52 39.3	
	comp=Z,0.9nm,1.1s						
H08S2	Diego Garcia H	40.44	269	T	T	16 36 22.8	
	baz=95,slow=76,SNR=6.2						
H08S3	Diego Garcia H	40.45	269	T	T	16 36 20.8	
	baz=95,slow=76,SNR=5.8						
H08S1	Diego Carcia H	40.46	269	T	T	16 36 20.4	
	baz=95,slow=76,SNR=3.4						
SONM	Songino Array	57.31	354	P	P	15 55 32.5	-1.1
	comp=Z,0.5nm,0.5s,baz=176,slow=8.2,SNR=4.6						
MKAR	Makanchi Array	62.43	336	P	P	15 56 07.7	-0.9
	comp=Z,0.2nm,0.5s,baz=149,slow=7.1,SNR=6.9						
NRIK	Noril'sk	80.58	351	LR	LR	16 36 11.4	
	comp=Z,43nm,21.2s,baz=62,slow=38						
FINES	FINESS Array B	96.88	331	LR	LR	16 50 18.5	
	comp=Z,73nm,18.7s,baz=46,slow=40						

MAN 01 16:10:15.4, 17°.99N×120°.17E, h34^{km}, mb4.8, ML3.7, MS3.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.28	103	⇑*e*P	Pb	16 10 24.9	+1.8
SIPP				*e*S	Sb	16 10 30.2	+2.0
APYP	Conner	1.03	97	*e*P	Pn	16 10 33.1	-0.4
APYP				*e*S	Sn	16 10 45.8	-1.0
CVP	Callao Caves	1.60	100	⇓*i*P	Pn	16 10 41.6	+0.3
CVP				*i* S	Sn	16 11 00.1	-0.7
BOLP	Bolinao	1.61	189	*e*P	Pn	16 10 42.3	+0.8
BOLP				*e*S	Sn	16 11 01.4	+0.3
SGCP	Mt. Cagua	1.81	82	*e*P	Pn	16 10 44.8	+0.7
SGCP				*e*S	Sn	16 11 06.8	+0.9
CAUP	Cauayan	1.89	123	*e*P	Pn	16 10 46.9	+1.5
CAUP				*e*S	Sn	16 11 10.2	+2.2
SMPP	San Manuel, Pa	1.89	165	*e*P	Pn	16 10 44.6	-0.7

NEIC ***01*** *16:14:08.2±2.4, 32°.06N±0°.05×131°.80E±0°.06, h39^{km}±6^{km}, mb4.6/52, Mwr4.2/11, Error ellipse: s-maj=8.7km s-min=7.2km az=137.0*

NEIC ***01*** *16:14:08.6, 32°.06N×131°.80E, h37^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.69; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$1.71; $M_{r\theta}$0.73; $M_{\theta\phi}$-0.35; $M_{\phi r}$1.27; Fault plane solution: $M_0$2.27000×10^{15} NP1:ϕ_s192.30000°, δ65.38000°, λ-69.23000°. NP2:ϕ_s329.99000°, δ31.79000°, λ-127.73000°. Principal axes: T 2.1393, Plg18.0000°, Azm267.0000°; N 0.2455, Plg19.0000°, Azm3.0000°; P -2.3847, Plg64.0000°, Azm137.0000°;*

JMA ***01*** *16:14:08.1±0.1, 32°.13N×131°.86E, h33^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s20.00000°, δ26.00000°, λ-88.00000°. NP2:ϕ_s197.00000°, δ64.00000°, λ-91.00000°. Principal axes: T Plg19.0000°, Azm288.0000°; N Plg1.0000°, Azm198.0000°; P Plg71.0000°, Azm105.0000°;*

JMA Felt III J1.

NIED ***01*** *16:14:08.1, 32°.13N×131°.86E, h33^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.19; $M_{\theta\theta}$0.18; $M_{\phi\phi}$1.01; $M_{r\theta}$0.49; $M_{\theta\phi}$0.15; $M_{\phi r}$3.35; Fault plane solution: $M_0$3.56000×10^{15} NP1: ϕ_s188.00000°, δ81.00000°, λ-90.00000°. NP2:ϕ_s11.00000°, δ9.00000°, λ-88.00000°.*

IDC ***01*** *16:14:09.1±0.6, 32°.07N×131°.71E, h53^{km}±5^{km}, mb3.7/15, mb1 3.9/19, mb1mx3.7/41, mbtmp3.9/19, MS3.5/9, Ms1 3.5/9, ms1mx3.2/47 Error ellipse: s-maj=14.9km s-min=6.2km az=64.0*

ISC 01 16:14:06.3±0.4**, 32°.09N**±0°.03×**131°.83E**±0°.04**, h26^{km}, n118, σ1^{s}.52**/126**, mb4.5**/41**, MS3.6**/9**, 6C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSN	Tsuno	0.31	300	⇓P	Pn	16 14 15.6	+0.4
JTSN				S	Sn	16 14 21.6	+0.7
JHHC	Hyugahichiya	0.39	336	⇓P	Pn	16 14 16.5	+0.3
JHHC				S	Sn	16 14 22.9	+0.1
JKIT	Kitakata	0.62	329	⇑P	Pn	16 14 20.3	+0.9
JKIT				S	Sn	16 14 28.8	+0.3
JTZ	Takazaki	0.66	253	⇑P	Pn	16 14 20.9	+1.0
JTZ				S	Sn	16 14 30.6	+1.2
JNAR	Kushima--Naru	0.73	220	⇑P	Pn	16 14 22.7	+1.7
JNAR				S	Sn	16 14 34.2	+2.9
JIU3	Izumi3	0.97	298	⇑P	Pb	16 14 25.7	+1.2
JIU3				S	Sn	16 14 39.5	+2.3
JUS	Usuki	0.97	356	⇑P	Pb	16 14 25.5	+1.0
JUS				S	Sn	16 14 39.0	+1.7
JZO	Okuchi	1.04	273	⇑P	Pb	16 14 26.8	+1.1
JZO				S	Sn	16 14 40.6	+1.6
JTO	Tosashimizu	1.13	47	⇓P	Pn	16 14 26.2	-0.2
JTO				S	Sn	16 14 39.9	-1.1
JNU	Nakatsue	1.30	322	P	Pb	16 14 30.7	+0.5
	505nm,0.3s,baz=196,slow=4.1,SNR=2937						
JNU				S	Sb	16 14 47.0	+0.5
	358nm,0.3s,baz=211,slow=21,SNR=26						
JNU				LR	LR	16 15 19.0	
	comp=Z,1μm,21.2s,baz=174,slow=55						
JSU	Suzuyama	1.30	244	Pn	Pb	16 14 30.3	+0.1
UWA2	Uwa jima 2	1.31	31	⇓P	Pn	16 14 29.1	+0.2
UWA2				S	Sn	16 14 45.1	-0.4
JMN	Monobe	2.38	46		Pn	16 14 44.3	+0.7
JHS	Saijyo	3.10	20		Pn	16 14 55.8	+2.3
JTU	Tsushima	3.17	321		Pn	16 14 55.5	+1.0
JWT	Wachi	4.36	42	Pn	Pn	16 15 12.9	+2.0
INU	Inuyama	5.41	52		Pn	16 15 27.0	+1.7
JGF	Kuroka	5.78	51	Pn	Pn	16 15 31.9	+1.5

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JSG   Sagara              5.91  62  Pn     Pn     16 15 33.0 +0.8
KSRS  Korea Array         6.24 330  P      Pn     16 15 38.6 +2.0
      2.1nm,0.3s,baz=146,slow=15,SNR=34
KS19  Wonju Array Si      6.30 330         Pn     16 15 38.6 +1.1
JHJ   Hachijo jima 2      6.79  79  P      Pn     16 15 45.1 +0.8
      45nm,0.3s,baz=66,slow=24,SNR=4.9
JHJ2  Mitsune             6.82  79  Pn     Pn     16 15 46.1 +1.5
INCN  Inchon              6.87 323  Pn     Pn     16 15 46.0 +0.7
MAJO  Matsushiro          6.90  48  Pn     Pn     16 15 47.8 +2.1
MAT   Matsushiro          6.90  48  P      Pn     16 15 47.5 +1.8
MAT                                 S      Sn     16 17 01.3 -2.1
MJB9  Matsu-Tunnel        6.90  48  Pn     Pn     16 15 47.8 +2.1
MJAR  Matsushiro Arr      6.90  48  P      Pn     16 15 48.1 +2.4
      1.3nm,0.3s,baz=246,slow=14,SNR=140
JSD   Sado                7.94  40  Pn     Pn     16 16 01.5 +1.6
JMM   Marumori            9.34  49  Pn     Pn     16 16 22.2 +3.0
USRK  Ussuriysk Ar.      12.09   1  P      Pn     16 16 59.1 +2.3
      baz=186,slow=12,SNR=2.2
SSLB  Suanglung          12.67 232  Pn     Pn     16 17 02.3 -2.6
YULB  Yu-li              12.72 230  Pn     Pn     16 17 03.3 -2.2
ASAJ  Asahikawa          14.68  32  LR     LR     16 22 47.4
      comp=Z,124nm,19.3s,baz=160,slow=35
BJT   Baijiatuau         14.92 306  P      P      16 17 41.1 +0.3
KLR   Kul'dur            17.12 360  P      Pn     16 18 05.0 +1.4
      0.4nm,0.3s,baz=175,slow=13,SNR=8.7
HHC   Hu-ho-hao-te       18.46 304 eP      Pn     16 18 22.6 +2.2
HHC                                 pmax   pmax
      comp=Z,11nm,1.0s
HHC                                 pmax   pmax
      comp=Z,98nm,4.9s
ENH   Enshi              19.20 270         P      16 18 28.4 +0.2
ENH                                 IAmb   IAmb   16 18 30.1
      comp=Z,37nm,0.9s
XAN   Xi'an              19.29 282  P      P      16 18 28.9 -0.4
HIA   Hailar             19.41 336  P      P      16 18 31.2 +0.8
GUMO  Guam               21.95 144  LR     LR     16 25 46.4
      comp=Z,50nm,20.6s,baz=51,slow=32
CD2   Chengdu            23.94 275  P      P      16 19 17.0 -1.4
CD2                                 pmax   pmax
      comp=Z,30nm,0.6s
ULN   Ulaanbaatar        24.52 317  P      P      16 19 23.0 -0.7
SONM  Songino Array      24.89 317  P      P      16 19 26.5 -0.5
      comp=Z,6.2nm,0.8s,baz=131,slow=8.5,SNR=39
SONM                                LR     LR     16 30 13.1
      comp=Z,175nm,20.9s,baz=170,slow=39
GTA   Gaotai             26.89 295 eP      P      16 19 46.0 +0.8
GTA                                 pP     sP     16 19 55.9 -0.1
GTA                                 sP     pP     16 19 59.7 +7.0
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.0s
GTA                                 pmax   pmax
      comp=Z,100nm,5.5s
GTA                                 LR     LR
      comp=N,130nm,14.5s
GTA                                 LR     LR
      comp=E,110nm,16.7s
GTA                                 LR     LR
      comp=Z,220nm,18.2s
PETK  Petropavlovsk-     28.09  34  LR     LR     16 31 07.1
      comp=Z,43nm,20.1s,baz=218,slow=36
CM31  Chiang Mai Arr     32.54 253  P      P      16 20 34.8 -0.5
CM31                                IAmb   IAmb   16 20 43.4
      comp=Z,13nm,1.6s
CMAR  Chiang Mai Arr     32.54 253  P      P      16 20 34.4 -1.0
      comp=Z,0.6nm,0.5s,baz=54,slow=8.0,SNR=9.8
CMAR                                LR     LR     16 33 45.9
      comp=Z,86nm,18.4s,baz=114,slow=36
H11N2 WAKE ISLAND Hy     33.71 103  T      T      16 56 45.3
      baz=298,slow=74,SNR=13
H11N1 WAKE ISLAND Hy     33.72 103  T      T      16 56 47.4
      baz=298,slow=74,SNR=8.4
H11N3 WAKE ISLAND Hy     33.73 103  T      T      16 56 49.3
      baz=298,slow=74,SNR=11
H11S1 WAKE ISLAND Hy     34.15 105  T      T      16 57 19.5
      SNR=7.3
SBUM  Sibu               34.78 216  P      P      16 20 55.5 +0.7
FAKI  Fak Fak            34.82 179  P      P      16 20 55.2 +0.1
WMQ   Urumqi             36.31 302 eP      P      16 21 09.8 +1.9
KSM   Kuching            36.59 218  P      P      16 21 11.2 +0.8
KAPI  Kappang            38.65 199  P      P      16 21 25.2 -2.5
KULM  Kulim              39.50 234  P      P      16 21 35.1 +0.1
ZALV  Zalesovo Beam      39.77 317  LR     LR     16 39 27.9
      comp=Z,82nm,19.0s,baz=70,slow=38
IPM   Ipoh               39.83 233  P      P      16 21 37.1 -0.6
IPM                                 IAmb   IAmb   16 21 38.3
      comp=Z,8.9nm,0.9s
MK31  Makanchi Array     40.30 306  P      P      16 21 39.7 -1.6
MKAR  Makanchi Array     40.30 306  P      P      16 21 40.0 -1.4
      comp=Z,0.6nm,0.4s,baz=89,slow=10,SNR=25
MKAR                                pP     sP     16 21 52.4 +0.1
      comp=Z,0.7nm,0.6s,baz=87,slow=10,SNR=6.2
MKAR                                PcP    PcP    16 23 41.9 -2.6
      comp=Z,0.2nm,0.5s,baz=72,slow=4.7,SNR=1.9
MKAR                                ScP    ScP    16 27 26.7 -5.4
      comp=Z,0.2nm,0.7s,baz=46,slow=4.2,SNR=2.5
MAKZ  Makanchi           40.52 306  P      P      16 21 41.7 -1.4
PSI   Prapat             42.48 233  P      P      16 21 58.3 -1.3
      comp=Z,3.8nm,0.7s,baz=359,slow=5.9,SNR=5.8
KURK  Kurchatov          43.00 312  P      P      16 22 02.1 -1.2
GSI   Gunungsitoli       44.49 233  P      P      16 22 14.5 -1.2
UGM   Wanagama           44.68 211  P      P      16 22 16.9 -0.3
NRIK  Noril'sk           44.77 339  P      P      16 22 15.5 -1.7
      comp=Z,1.8nm,0.5s,baz=139,slow=8.1,SNR=5.4
NRIK  Noril'sk           44.77 339  P      P      16 22 16.3 -0.9
NRIK                                IAmb   IAmb   16 22 28.1
      comp=Z,5.9nm,1.2s
LEM   Lembang            45.06 215  P      P      16 22 20.9 +0.5
      comp=Z,36nm,0.7s,baz=176,slow=16,SNR=10
AAK   Ala-Archa          45.98 300  P      P      16 22 26.6 -0.9
BRVK  Borovoye           48.27 315         P      16 22 43.8 -1.1
KK31  Karatay Array      48.82 301  P      P      16 22 48.5 -0.9
KK31                                IAmb   IAmb   16 22 49.7
      comp=Z,2.6nm,0.8s
KKAR  Karatay Array      48.82 301  P      P      16 22 48.3 -1.0
KKAR                                IAmb   IAmb   16 22 49.7
      comp=Z,2.6nm,0.8s
TARA  Tarawa             49.31 120  P      P      16 22 54.7 +1.3
FITZ  Fitzroy Crossi     50.25 188  P      P      16 23 00.1 -0.3
FITZ                                IAmb   IAmb   16 23 28.5
      comp=Z,14nm,1.6s
WB0   Warramunga Arr     51.62 177  P      P      16 23 10.6  0.0
WB0                                 IAmb   IAmb   16 23 24.5
      comp=Z,4.4nm,0.8s
WRAB  Tennant Creek      51.78 177  P      P      16 23 11.1 -0.8
WRAB                                IAmb   IAmb   16 23 23.7
      comp=Z,13nm,1.4s
WB2   Warramunga Arr     51.79 177  P      P      16 23 12.0 +0.1
WB2                                 IAmb   IAmb   16 23 42.1
      comp=Z,17nm,1.6s
WRA   Warramunga Arr     51.79 177  P      P      16 23 12.1 +0.2
      comp=Z,1.0nm,0.7s,baz=12,slow=8.4,SNR=12
WRA                                 pP     sP     16 23 24.6 +1.7
      comp=Z,2.1nm,0.6s,baz=354,slow=8.5,SNR=11
WR0   Warramunga Arr     51.82 177  P      P      16 23 12.2 +0.1
WR0                                 IAmb   IAmb   16 23 26.7
      comp=Z,6.7nm,0.9s
ABKAR Akbulak array      55.09 311  P      P      16 23 34.6 -1.2
AS31  Alice Springs      55.48 178  P      P      16 23 40.3 +1.4
ASAR  Alice Springs      55.48 178  P      P      16 23 39.4 +0.5
      comp=Z,0.6nm,0.8s,baz=12,slow=12,SNR=18
ASAR                                pP     sP     16 23 52.9 +3.0
      comp=Z,0.9nm,0.6s,baz=11,slow=14,SNR=7.6
PPLA  Purkeypile         55.66  33  P      P      16 23 42.2 +2.2
KDAK  Kodiak Island      55.97  39  P      P      16 23 43.0 +0.9
RND   Reindeer           57.12  32  P      P      16 23 51.5 +1.2
RND                                 IAmb   IAmb   16 24 06.2
      comp=Z,13nm,1.3s
MDM   Murphy Dome        57.21  30  P      P      16 23 52.2 +1.3
MDM                                 IAmb   IAmb   16 23 53.5
      comp=Z,5.1nm,0.8s
KNK   Knik Glacier       57.56  34  P      P      16 23 54.4 +1.0
KNK                                 IAmb   IAmb   16 24 23.3
      comp=Z,14nm,1.3s
ILAR  Eielson Array      57.81  30  P      P      16 23 55.7 +0.6
      comp=Z,0.8nm,0.9s,baz=264,slow=5.9,SNR=14
SCM   Sheep Creek Mo     58.03  34  P      P      16 23 58.3 +1.6
KLU   Klutina            58.75  34  P      P      16 24 03.5 +1.7
KLU                                 IAmb   IAmb   16 24 37.4
      comp=Z,14nm,1.4s
RIDG  Independent Ri     58.84  31  P      P      16 24 03.1 +0.7
RIDG                                IAmb   IAmb   16 24 42.0
      comp=Z,8.6nm,1.4s
DOT   Dot Lake           59.20  31  P      P      16 24 05.8 +0.9
DOT                                 IAmb   IAmb   16 24 39.9
      comp=Z,4.0nm,1.2s
GEYT  Alibeck            59.21 298  LR     LR     16 52 05.7
      comp=Z,42nm,19.9s,baz=205,slow=38
N25K  Chitina, Valde     59.35  34  P      P      16 24 07.8 +1.9
N25K                                IAmb   IAmb   16 24 31.9
      comp=Z,6.1nm,1.3s
GLB   Gilahina Butte     59.75  34  P      P      16 24 10.7 +2.0
GLB                                 IAmb   IAmb   16 24 12.1
      comp=Z,8.8nm,1.3s
K27K  Chicken            59.99  30  P      P      16 24 10.7 +0.5
K27K                                IAmb   IAmb   16 24 36.2
      comp=Z,9.7nm,1.6s
MCARA McCarthy VSAT      60.14  34  P      P      16 24 12.5 +1.2
EGAK  Eagle              60.22  30  P      P      16 24 12.8 +1.0
EGAK                                IAmb   IAmb   16 24 43.9
      comp=Z,9.7nm,1.6s
BARN  Barnard Glacie     60.85  34  P      P      16 24 17.6 +1.2
CTGM  Chitina Glacie     61.03  34  P      P      16 24 19.0 +1.5
DAWY  Dawson             61.13  30  P      P      16 24 19.8 +1.7
DAWY                                IAmb   IAmb   16 24 22.0
      comp=Z,7.8nm,1.6s
HYT   Haines Junctio     62.87  33  P      P      16 24 32.1 +2.2
HYT                                 IAmb   IAmb   16 24 44.9
      comp=Z,12nm,1.4s
STKA  Stephens Creek     64.29 171  P      P      16 24 39.9 +0.6
      comp=Z,1.6nm,0.7s,baz=326,slow=4.8,SNR=6.6
STKA  Stephens Creek     64.29 171  P      P      16 24 38.2 -1.1
EUNU  Eureka             66.13   7  P      P      16 24 51.7 +0.9
EUNU                                IAmb   IAmb   16 25 25.1
      comp=Z,4.7nm,1.3s
KBZ   Khabaz             67.93 309  P      P      16 25 00.7 -2.0
      comp=Z,1.9nm,0.8s,baz=28,slow=4.3,SNR=5.4
FIA1  FINESS Array S     69.33 330  P      P      16 25 09.3 -1.8
FINES FINESS Array B     69.33 330  P      P      16 25 09.4 -1.8
      comp=Z,1.2nm,0.4s,baz=80,slow=6.3,SNR=21
YKA   Yellowknife Ar     71.90  27  P      P      16 25 26.9 +0.1
      comp=Z,0.3nm,0.7s,baz=290,slow=11,SNR=4.8
YKA                                 pP     sP     16 25 41.5 +3.7
      comp=Z,0.7nm,0.9s,baz=310,slow=5.9,SNR=5.4
AKASG Malin Array Be     73.13 320  P      P      16 25 32.1 -2.2
      comp=Z,1.0nm,0.5s,baz=54,slow=6.5,SNR=9.2
NOA   NORSAR Array B     75.43 334  P      P      16 25 45.9 -1.8
      comp=Z,0.9nm,0.8s,baz=48,slow=5.7,SNR=2.0
NOA                                 LR     LR     17 02 19.5
      comp=Z,39nm,18.4s,baz=285,slow=38
PINE  Pine Mountain      79.48  45  P      P      16 26 12.9 +2.1
PINE                                IAmb   IAmb   16 26 36.8
      comp=Z,13nm,1.6s
CLL   Collm              81.10 326 eP      P      16 26 19.0 -0.1
BKZ   Black Stump Fm     82.14 147  P      P      16 26 25.5 +0.9
RAR   Rarotonga          84.18 119  LR     LR     17 01 39.8
      comp=Z,49nm,18.9s,baz=296,slow=34
NVAR  Mina Array Bea     84.22  48  P      P      16 26 37.2 +1.3
      comp=Z,0.8nm,0.6s,baz=294,slow=5.6,SNR=5.8
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*IDC **01** 16:41:47.1±2.0, 9°.15N×122°.66E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/47, mbtmp3.6/4, MS3.2/9, Ms1 3.2/9, ms1mx3.0/40, Error ellipse: s-maj=104.3km s-min=22.0km az=55.0*

*MAN **01** 16:41:49.9, 8°.72N×121°.44E, h36^{km}, mb5.1, ML4.0, MS4.1*

*NEIC **01** 16:41:57.6±1.9, 8°.0N±0°.1×121°.6E±0°.1, h39^{km}±7^{km}, mb4.5/6, Error ellipse: s-maj=21.6km s-min=12.2km az=222.0*

ISC 01 16:41:51.8±0.8**, 8°.69N**±0°.04×**121°.43E**±0°.04**, h35**^{km}**, n35, σ2**^{s}**18**/37**, mb4.0**/8**, MS3.2**/6**, 3C-2D, Mindanao**

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Code  Station Name        Δ°   AZ°   Phase ID           Time    Res
                                    Op     ISC        h  m  s   ISC
CNOP  Candoni, Negro      1.65  46 eP      Pn     16 42 15.6 -2.6
CNOP                               eS      Sn     16 42 34.7 -3.4
ZCP   Zamboanga City      1.86 160⇑iP      Pn     16 42 19.1 -2.1
ZCP                                i S     Sn     16 42 40.3 -3.1
PAGZ  Pagadian            2.10 113 eP      Pn     16 42 22.8 -1.7
PAGZ                               eS      Sn     16 42 47.9 -1.6
JAP   San Jose, Anti      2.11  14⇓eP      Pn     16 42 23.6 -0.9
JAP                                eS      Sn     16 42 49.2 -0.4
GUIM  Jordan              2.24  31 eP      Pn     16 42 24.6 -1.8
GUIM                               eS      Sn     16 42 55.0 +2.3
LLP   Lapu-Lapu           2.98  57⇑eP      Pn     16 42 35.4 -1.2
LLP                                eS      Sn     16 43 09.2 -1.9
ENPP  El Nido             3.19 322 eP      Pn     16 42 38.3 -1.1
ENPP                               eS      Sn     16 43 14.3 -2.0
CGP   Cagayan de Oro      3.24  94⇓eP      Pn     16 42 39.3 -0.8
CGP                                eS      Sn     16 43 16.4 -1.0
BUSP  Coron               3.51 340 eP      Pn     16 42 42.7 -1.2
BUSP                               eS      Sn     16 43 22.7 -1.5
BUKP  Musuan              3.68 102 eP      Pn     16 42 47.5 +1.2
BUKP                               eS      Sn     16 43 36.7 +8.1
SKMP  Bagumbayan, Su      3.76 125 eP      Pn     16 42 46.6 -0.8
SKMP                               eS      Sn     16 43 28.2 -2.3
OCLP  Ormoc               3.91  53 eP      Pn     16 42 48.2 -1.2
OCLP                               eS      Sn     16 43 36.6 +2.4
KCP   Kidapawan           3.99 114⇑eP      Pn     16 42 51.2 +0.6
KCP                                i S     Sn     16 43 57.6  +21
DAV   Davao City (W)      4.41 111  LR     LR     16 44 23.0
      comp=Z,202nm,21.2s,baz=258,slow=44
MYLDM Lahad Datu          4.54 220         Pn     16 42 59.6 +1.6
KKM   Kota Kinabalu       5.80 243  Pn     Pn     16 43 16.3 +0.8
TOLI2 Tolitoli            7.56 185  Pn     Pn     16 43 38.0 -1.5
LUWI  Luwuk               9.76 172  Pn     Pn     16 44 08.3 -1.5
SIJI  Sorong             13.65 134  LR     LR     16 49 53.0
      comp=Z,66nm,20.5s,baz=288,slow=37
KAPI  Kappang            13.71 187  LR     LR     16 50 14.0
      comp=Z,81nm,20.3s,baz=292,slow=35
FAKI  Fak Fak            15.79 136         P      16 45 34.8 -0.4
LEM   Lembang            20.67 222  LR     LR     16 55 36.4
      comp=Z,184nm,20.5s,baz=242,slow=38
GUMO  Guam               23.50  76  LR     LR     16 54 31.1
      comp=Z,33nm,21.2s,baz=92,slow=34
CMAR  Chiang Mai Arr     23.89 296  P      P      16 47 11.1 +8.7
      0.8nm,0.9s,baz=124,slow=7.5,SNR=7.4
CMAR                                LR     LR     16 55 43.3
      comp=Z,123nm,21.4s,baz=218,slow=34
JNU   Nakatsue           25.84  18  LR     LR     16 57 08.6
      comp=Z,58nm,21.5s,baz=260,slow=37
KSRS  Korea Array        29.23  11  LR     LR     16 59 45.9
      comp=Z,31nm,19.5s,baz=215,slow=38
WRA   Warramunga Arr     31.16 156  P      P      16 48 07.3 -0.3
      1.1nm,0.9s,baz=336,slow=9.5,SNR=5.7
WB2   Warramunga Arr     31.17 156  P      P      16 48 07.2 -0.4
WB2                                 IAmb   IAmb   16 48 30.2
      comp=Z,12nm,1.5s
COEN  Coen               31.18 136  P      P      16 48 08.8 +1.0
COEN                                IAmb   IAmb   16 48 26.4
      comp=Z,14nm,1.2s
WR0   Warramunga Arr     31.26 156  P      P      16 48 07.5 -0.9
WR0                                 IAmb   IAmb   16 48 18.0
      comp=Z,6.4nm,1.3s
MJAR  Matsushiro Arr     31.65  26  LR     LR     16 58 59.7
      comp=Z,67nm,21.9s,baz=215,slow=34
ASAR  Alice Springs      34.39 159  P      P      16 48 36.6 +0.7
      comp=Z,0.8nm,0.8s,baz=342,slow=7.3,SNR=15
FORT  Forrest            39.75 171  P      P      16 49 20.1 -1.1
MKAR  Makanchi Array     50.51 326  P      P      16 50 49.2 +2.6
      comp=Z,0.5nm,0.6s,baz=126,slow=7.9,SNR=6.3
MAKZ  Makanchi           50.70 326  P      P      16 50 58.4  +10
MAKZ                                IAmb   IAmb   16 50 59.8
      comp=Z,9.3nm,1.6s
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*NEIC **01** 16:47:51.0±1.6, 15°.11S±0°.09×173°.6W±0°.1, h10^{km}±4^{km}, mb4.8/27, Error ellipse: s-maj=18.6km s-min=13.3km az=85.0*

*IDC **01** 16:48:03.4±5.0, 15°.05S×173°.76W, h116^{km}±45^{km}, mb3.7/10, mb1 4.0/11, mb1mx3.7/40, mbtmp4.1/11, MS3.6/12, Ms1 3.6/12, ms1mx3.4/30, Error ellipse: s-maj=29.7km s-min=17.3km az=129.0*

*NOU **01** 16:48:06.0, 14°.34S×172°.52W, h70^{km}, MLv4.1, Samoa Islands*

ISC 01 16:47:53.6±0.6**, 15°.0S**±0°.1×**173°.7W**±0°.2**, h30**^{km}**, n55, σ0**^{s}**91**/37**, mb4.7**/22**, MS3.7**/11**, Samoa Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID           Time    Res
                                    Op     ISC        h  m  s   ISC
NIUE  Niue                5.42 139         Pn     16 49 05.8 -6.6
NIUE                                       Sn     16 49 56.4  -17
MSVF  Nonsavu             8.39 250  P      Pn     16 50 01.2 +8.0
      0.2nm,0.3s,baz=195,slow=7.4,SNR=2.3
MSVF                                LR     LR     16 52 56.6
      comp=Z,495nm,19.3s,baz=95,slow=35
KNTN  Kanton             12.30   9  Pn     Pn     16 50 45.8 -1.0
DZM   Mont Dzumac        20.10 247  LR     LR     16 58 59.6
      comp=Z,197nm,21.6s,baz=47,slow=33
DZM   Mont Dzumac        20.10 247 eLR     LR     16 57 31.0
      comp=Z,326nm,25.6s
PAE   Paea               23.28 100 eT      T      17 16 18.5
      2.0nm,0.3s
PPT2  Papeete2           23.28 100 eT      T      17 16 18.8
      2.4nm,0.3s
TVO   Taravao            23.60 100 eT      T      17 16 41.7
      1.6nm,0.4s
URZ   Urewera            24.56 198  P      P      16 53 11.2 +0.4
      5.3nm,0.5s,baz=281,slow=4.9,SNR=6.3
URZ                                 LR     LR     17 01 27.5
      comp=Z,162nm,19.9s,baz=31,slow=33
URZ   Urewera            24.56 198  P      P      16 53 10.6 -0.2
URZ                                 IAmb   IAmb   16 53 37.6
      comp=Z,62nm,1.6s
BKZ   Black Stump Fm     25.58 198  P      P      16 53 18.7 -1.4
BKZ                                 IAmb   IAmb   16 53 38.8
      comp=Z,40nm,1.5s
HNR   Honiara            26.34 279  LR     LR     17 02 15.1
      comp=Z,53nm,20.3s,baz=116,slow=32
QRZ   Quartz Range       28.40 202  P      P      16 53 45.4  0.0
NNZ   Nelson             28.44 201  P      P      16 53 46.4 +0.7
NNZ                                 IAmb   IAmb   16 53 58.2
      comp=Z,39nm,1.1s
KHZ   Kahutara           29.46 199  P      P      16 53 54.1 -0.7
KHZ                                 IAmb   IAmb   16 54 25.7
      comp=Z,48nm,1.6s
LHI   Lord Howe Isla     29.84 232  P      P      16 53 57.9 -0.4
RPZ   Rata Peaks         31.45 201  LR     LR     17 06 29.9
      comp=Z,166nm,19.6s,baz=26,slow=35
WHZ   Wether Hill Ro     34.45 203  P      P      16 54 40.0 +1.3
ARMA  Armidale           35.32 238  P      P      16 54 46.5 +0.1
ARMA                                IAmb   IAmb   16 54 59.9
      comp=Z,21nm,1.5s
H11S2 WAKE ISLAND Hy     38.48 329  T      T      17 36 33.1
      baz=148,slow=76,SNR=20
H11S3 WAKE ISLAND Hy     38.49 329  T      T      17 36 28.0
      baz=148,slow=76,SNR=17
H11S1 WAKE ISLAND Hy     38.49 329  T      T      17 36 30.4
      baz=148,slow=76,SNR=15
H11N3 WAKE ISLAND Hy     39.42 330  T      T      17 37 42.9
      baz=150,slow=76,SNR=11
H11N1 WAKE ISLAND Hy     39.43 330  T      T      17 37 45.9
      baz=150,slow=76,SNR=18
H11N2 WAKE ISLAND Hy     39.44 330  T      T      17 37 45.3
      baz=150,slow=76,SNR=10
TOO   Toolangi           42.51 230  P      P      16 55 45.6 -0.9
TOO                                 IAmb   IAmb   16 56 12.3
      comp=Z,24nm,1.4s
TAU   Tasmania Unive     43.43 222  P      P      16 55 54.4 +0.6
STKA  Stephens Creek     44.00 240  P      P      16 55 58.0 -0.6
      comp=Z,3.4nm,0.7s,baz=98,slow=10,SNR=9.8
STKA                                LR     LR     17 12 08.5
      comp=Z,31nm,20.3s,baz=29,slow=33
MCQ   Macquarie Isla     44.81 202  P      P      16 56 02.8 -1.7
BBOO  Buckleboo          48.78 239  P      P      16 56 35.9 -0.2
BBOO                                IAmb   IAmb   16 57 11.5
      comp=Z,23nm,1.6s
WR0   Warramunga Arr     49.48 256  P      P      16 56 42.5 +0.9
WR0                                 IAmb   IAmb   16 57 16.7
      comp=Z,12nm,1.5s
WB0   Warramunga Arr     49.63 257  P      P      16 56 43.6 +0.8
WB0                                 IAmb   IAmb   16 56 54.9
      comp=Z,5.9nm,1.1s
WB2   Warramunga Arr     49.66 256  P      P      16 56 44.0 +1.0
WRA   Warramunga Arr     49.67 256  P      P      16 56 43.4 +0.3
      comp=Z,1.5nm,0.7s,baz=94,slow=6.9,SNR=28
AS31  Alice Springs      49.97 252  P      P      16 56 46.1 +0.7
ASAR  Alice Springs      49.98 252  P      P      16 56 45.8 +0.3
      comp=Z,4.3nm,0.5s,baz=90,slow=7.7,SNR=158
ASAR                                LR     LR     17 16 02.2
      comp=Z,100nm,21.7s,baz=130,slow=34
FORT  Forrest            55.35 243  P      P      16 57 24.9 -0.2
FORT                                IAmb   IAmb   16 58 06.8
      comp=Z,27nm,1.3s
SIJI  Sorong             56.12 279  LR     LR     17 19 57.9
      comp=Z,29nm,20.0s,baz=228,slow=34
FITZ  Fitzroy Crossi     58.02 258  LR     LR     17 21 29.7
      comp=Z,55nm,20.2s,baz=358,slow=35
JCJ   Chichijima         59.88 314  P      P      16 57 57.4 +0.6
VNDA  Vanda              63.75 186  P      P      16 58 22.2 +0.1
      comp=Z,3.1nm,0.9s,baz=8.4,slow=7.4,SNR=14
VNDA  Vanda              63.75 186  P      P      16 58 22.7 +0.6
VNDA                                IAmb   IAmb   16 58 23.2
      comp=Z,8.7nm,1.4s
DAV   Davao City (W)     64.06 286  LR     LR     17 22 53.5
      comp=Z,97nm,19.2s,baz=338,slow=33
NVAR  Mina Array Bea     74.21  42  P      P      16 59 29.6 +1.6
      comp=Z,0.8nm,0.6s,baz=229,slow=8.2,SNR=5.5
TPH   Tonopah            74.72  43  P      P      16 59 32.2 +1.3
QSPA  South Pole Qui     75.05 180  P      P      16 59 32.5 +0.1
QSPA                                IAmb   IAmb   16 59 33.4
      comp=Z,12nm,0.9s
PINE  Pine Mountain      75.74  36  P      P      16 59 38.0 +1.3
PINE                                IAmb   IAmb   16 59 40.1
      comp=Z,9.3nm,1.2s
TUC   Tucson             76.35  51  P      P      16 59 41.2 +1.0
U15A  North Rim          77.22  47  P      P      16 59 47.0 +1.6
G08A  Pilot Rock         77.77  36  P      P      16 59 49.7 +1.7
G08A                                IAmb   IAmb   16 59 50.3
      comp=Z,6.6nm,1.4s
DUG   Dugway, Tooele     78.75  43         P      16 59 54.0 +0.4
TXAR  Lajitas Array      80.62  56  P      P      17 00 04.1 +0.2
      comp=Z,1.3nm,1.1s,baz=210,slow=5.2,SNR=6.6
ILAR  Eielson Array      82.10  11  P      P      17 00 10.5 -0.3
      comp=Z,0.7nm,0.7s,baz=224,slow=6.7,SNR=12
ILAR                                LR     LR     17 29 46.7
      comp=Z,36nm,19.2s,slow=30
PDAR  Pinedale Array     82.15  42  P      P      17 00 12.0 +0.1
      comp=Z,1.0nm,0.8s,baz=212,slow=4.5,SNR=8.4
PDAR                                LR     LR     17 29 56.3
      comp=Z,43nm,20.2s,baz=319,slow=31
YKA   Yellowknife Ar     89.84  23  P      P      17 00 48.1 -1.0
      comp=Z,0.5nm,0.9s,baz=240,slow=4.5,SNR=6.4
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*IDC **01** 16:57:47.0±1.3, 6°.37N×60°.42E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.3/56, mbtmp3.7/6, MS4.0/1, Ms1 4.0/1, ms1mx3.1/14, Error ellipse: s-maj=40.6km s-min=27.3km az=161.0*

*NEIC **01** 16:57:49.1±2.9, 6°.5N±0°.1×60°.4E±0°.1, h14^{km}±4^{km}, mb4.2/17, Error ellipse: s-maj=19.3km s-min=16.0km az=56.0*

ISC 01 16:57:48.5±0.8**, 6°.5N**±0°.1×**60°.4E**±0°.1**, h10**^{km}**, n24, σ1**^{s}**40**/23**, mb4.1**/14**, Carlsberg Ridge**

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Code  Station Name        Δ°   AZ°   Phase ID           Time    Res
                                    Op     ISC        h  m  s   ISC
DAMY  Dhamar             17.64 298  P      Pn     17 01 55.4 +0.6
DAMY                                IAmb   IAmb   17 02 07.8
      comp=Z,38nm,1.9s
UOSS  Minazif            18.79 348  P      P      17 02 07.0 -1.2
RAYN  Ar Rayn            22.17 321  P      P      17 02 42.5 -2.4
KMBO  Kilima Mbogo       24.28 253  P      P      17 03 07.4 +0.8
      comp=Z,2.6nm,0.9s,baz=49,slow=13,SNR=5.9
HRA   Herat              27.83   3  P      P      17 03 37.5 -0.9
HRA                                 IAmb   IAmb   17 04 01.5
      comp=Z,15nm,1.8s
KBL   Kabul              29.05  15  P      P      17 03 48.2 -1.1
KBL                                 IAmb   IAmb   17 03 53.1
      comp=Z,2.8nm,0.6s
NIL   Nilore             29.56  22  P      P      17 03 52.1 -1.5
MBAR  Mbarara            30.39 258  P      P      17 04 01.9 +0.5
MBAR                                IAmb   IAmb   17 04 08.7
      comp=Z,2.3nm,0.8s
MMAI  Mount Meron Ar     35.15 322  LR     LR     17 20 22.4
      comp=Z,238nm,18.6s,baz=225,slow=38
KK31  Karatay Array      37.56  12  P      P      17 05 04.2 +1.1
KK31                                IAmb   IAmb   17 05 10.3
      comp=Z,5.2nm,1.4s
KKAR  Karatay Array      37.56  12  P      P      17 05 04.7 +1.7
KKAR                                IAmb   IAmb   17 05 10.3
      comp=Z,5.2nm,1.4s
AAK   Ala-Archa          38.12  17  P      P      17 05 09.5 +1.6
ABKAR Akbulak array      42.63 360  P      P      17 05 46.5 +1.5
ABKAR                               IAmb   IAmb   17 06 22.5
      comp=Z,5.7nm,1.4s
MAKZ  Makanchi           44.27  21  P      P      17 05 59.0 +0.6
MAKZ                                IAmb   IAmb   17 06 07.2
      comp=Z,7.4nm,1.7s
MK31  Makanchi Array     44.38  22  P      P      17 05 58.6 -0.6
MK31                                IAmb   IAmb   17 06 01.4
      comp=Z,3.6nm,1.5s
TSUM  Tsumeb             49.26 238  P      P      17 06 37.5 -0.4
ZAA0  Zalesovo Array     51.31  18  P      P      17 06 52.5 -0.3
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ZALV	Zalesovo Beam	51.31	18	P	P	17 06 52.8	0.0
	comp=Z,0.4nm,0.3s,baz=219,slow=6.7,SNR=3.6						
SONM	Songino Array	56.80	35	P	P	17 07 33.8	+0.6
	comp=Z,0.4nm,1.0s,baz=226,slow=7.2,SNR=3.8						
GERES	GERESS Array B	57.68	325	P	P	17 07 41.6	+2.3
	comp=Z,0.7nm,0.7s,baz=93,slow=3.9,SNR=3.7						
TORD	Torodi Ar. Bea	58.09	281	P	P	17 07 41.6	-1.0
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=2.7						
PSA00	Pilbara Seismi	64.61	117	P	P	17 08 27.9	+1.2
ASAR	Alice Springs	77.67	116	P	P	17 09 45.8	-0.1
	comp=Z,0.6nm,1.0s,baz=296,slow=7.0,SNR=3.4						
AS31	Alice Springs	77.67	116	P	P	17 09 43.0	-2.9

IDC 01 16:58:15.0±1.2**, 6°.64N×60°.33E, h0^{km}, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.2**/58**, mbtmp3.6**/5**, Error ellipse: s-maj=39.9km s-min=29.1km az=160.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	24.29	252	P	P	17 03 34.7	0.0
	1.1nm,0.7s,baz=67,slow=9.2,SNR=3.7						
KURBB	Kurchatov Arra	46.40	16	P	P	17 06 42.9	-0.3
	0.4nm,0.8s,baz=215,slow=7.9,SNR=1.7						
ZALV	Zalesovo Beam	51.17	18	P	P	17 07 20.0	+0.1
	0.5nm,0.3s,baz=198,slow=8.8,SNR=1.7						
TORD	Torodi Ar. Bea	58.02	281	P	P	17 08 10.2	-0.1
	1.2nm,0.9s,baz=76,slow=6.1,SNR=3.9						
ASAR	Alice Springs	77.78	116	P	P	17 10 14.8	+0.1
	0.5nm,0.8s,baz=292,slow=5.2,SNR=6.2						

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*IDC **01** 16:59:09.3±0.6, 6°.59N×60°.33E, h0^{km}, mb4.1/20, mb1 4.2/22, mb1mx3.9/64, mbtmp4.1/22, ML3.7/2, MS3.9/9, Ms1 3.9/9, ms1mx3.6/16, Error ellipse: s-maj=16.9km s-min=13.8km az=156.0*

*NEIC **01** 16:59:11.6±1.6, 6°.57N±0°.09×60°.28E±0°.09, h15^{km}±1^{km}, mb4.7/49, Error ellipse: s-maj=14.1km s-min=12.6km az=219.0*

*GCMT **01** 16:59:11.6±0.2, 6°.52N±0°.02×60°.25E±0°.02, h12^{km}, MW4.9/98, Moment Tensor Solution. s23,c23; s98,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.06; $M_{\theta\theta}$1.31±.05; $M_{\phi\phi}$0.87±.06; $M_{r\theta}$0.66±.23; $M_{\theta\phi}$-0.83±.04; $M_{\phi r}$-1.18±.28; Best double couple: $M_0$2.46100×10^{16} NP1:ϕ_s119.00000°, δ30.00000°, λ-108.00000°. NP2: ϕ_s319.00000°, δ61.00000°, λ-80.00000°. Principal axes: T 2.3050, Plg16.0000°, Azm42.0000°; N 0.3130, Plg9.0000°, Azm134.0000°; P -2.6180, Plg72.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 16:59:10.7±0.5**, 6°.57N**±0°.08×**60°.31E**±0°.07**, h10^{km}, n79,** σ**1^{s}11**/74**, mb4.5**/43**, MS3.9**/7**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	8.37	312	Pn	Pn	17 01 14.7	+2.5
WSAR	Wadi Sarin	16.65	355	Pn	P	17 03 05.8	-1.0
	0.1nm,0.3s,baz=171,slow=5.5,SNR=5.0						
WSAR				LR	LR	17 08 18.3	
	comp=Z,315nm,19.5s,baz=203,slow=33						
DAMY	Dhamar	17.54	298	P	Pn	17 03 15.0	-0.8
ATD	Arta Tunnel	17.93	287	P	P	17 03 21.8	+0.7
	0.7nm,0.3s,baz=125,slow=6.7,SNR=4.3						
ATD				LR	LR	17 09 01.4	
	comp=Z,268nm,20.3s,baz=100,slow=33						
UOSS	Minazif	18.69	348	P	P	17 03 29.2	-0.1
UOSS				IAmb	IAmb	17 03 42.0	
	comp=Z,75nm,1.4s						
PALK	Pallekele	20.26	87	P	P	17 03 47.6	+1.0
PALK				IAmb	IAmb	17 04 45.9	
	comp=Z,58nm,1.8s						
FURI	Furi	21.56	278	P	P	17 04 01.3	+0.4
RAYN	Ar Rayn	22.06	321	P	P	17 04 04.8	-1.2
KMBO	Kilima Mbogo	24.25	252	P	P	17 04 28.9	+0.4
	comp=Z,3.9nm,0.8s,baz=58,slow=12,SNR=13						
KMBO				LR	LR	17 13 00.1	
	comp=Z,433nm,21.4s,baz=92,slow=34						
HRA	Herat	27.74	3	P	P	17 04 57.4	-2.4
OPO	Ambohidratompo	28.14	207	LR	LR	17 13 27.9	
	comp=Z,352nm,20.7s,baz=186,slow=30						
ABPO	Ambohimpanom	28.51	207	P	P	17 05 06.3	-0.4
ABPO				IAmb	IAmb	17 05 30.1	
	comp=Z,25nm,1.5s						
KBL	Kabul	28.98	15	P	P	17 05 11.4	+0.5
KBL				IAmb	IAmb	17 05 24.7	
	comp=Z,11nm,1.2s						
NIL	Nilore	29.50	22	P	P	17 05 16.5	+1.3
NIL				IAmb	IAmb	17 05 28.9	
	comp=Z,8.7nm,1.1s						
MBAR	Mbarara	30.36	258	P	P	17 05 23.4	+0.2
	comp=Z,2.0nm,0.3s,baz=46,slow=9.1,SNR=3.5						
MBAR	Mbarara	30.36	258	P	P	17 05 23.1	-0.2
GEYT	Alibeck	31.28	357	LR	LR	17 18 31.8	
	comp=Z,103nm,20.1s,baz=200,slow=37						
GYA0B	ALIBECK ARRAY	31.28	357	P	P	17 05 30.6	-0.3
GEVA	Gevas	35.26	336	P	P	17 06 06.2	+0.3
GEVA				IAmb	IAmb	17 06 09.3	
	comp=Z,10nm,1.1s						
LSA	Lhasa	37.04	48	P	P	17 06 23.2	+1.7
LSA				IAmb	IAmb	17 06 34.7	
	comp=Z,14nm,1.0s						
KK31	Karatay Array	37.48	12	P	P	17 06 26.4	+1.8
KK31				IAmb	IAmb	17 06 37.3	
	comp=Z,12nm,1.3s						
KKAR	Karatay Array	37.48	12	P	P	17 06 26.2	+1.6
KKAR				IAmb	IAmb	17 06 37.3	
	comp=Z,12nm,1.3s						
AAK	Ala-Archa	38.05	17	P	P	17 06 30.7	+1.1
	comp=Z,0.9nm,0.5s,baz=135,slow=2.9,SNR=6.7						
AAK	Ala-Archa	38.05	17	P	P	17 06 31.9	+2.3
AAK				IAmb	IAmb	17 06 42.7	
	comp=Z,22nm,1.4s						
LSZ	Lusaka	38.53	235	P	P	17 06 34.1	+0.3
CM31	Chiang Mai Arr	39.43	69	P	P	17 06 42.0	+0.7
CMAR	Chiang Mai Arr	39.43	69	P	P	17 06 41.0	-0.3
	comp=Z,1.3nm,0.9s,baz=261,slow=9.0,SNR=5.2						
CHTO	Chiang Mai	39.51	68	P	P	17 06 42.8	+0.8
TOKA	Tokat	39.82	331	P	P	17 06 46.2	+2.0
TOKA				IAmb	IAmb	17 07 24.3	
	comp=Z,32nm,1.5s						
KBZ	Khabaz	40.05	340	P	P	17 06 45.0	-1.0
	comp=Z,2.9nm,1.1s,baz=124,slow=5.7,SNR=2.8						
KVAR	Kislovodsk Arr	40.31	340	LR	LR	17 24 22.1	
	comp=Z,213nm,19.1s,baz=98,slow=38						
KIV	Kislovodsk	40.32	340	P	P	17 06 49.7	+1.3
KIV				IAmb	IAmb	17 07 01.7	
	comp=Z,22nm,1.4s						
BRTR	Keskin Array B	40.79	328	P	P	17 06 52.8	+0.3
	comp=Z,0.6nm,0.7s,baz=43,slow=25,SNR=4.5						
MATP	Matopo	41.20	229	P	P	17 06 56.5	+0.4
	comp=Z,1.6nm,0.8s,baz=1.0,slow=21,SNR=3.7						
BR231	Keskin MP Arra	41.34	327	P	P	17 06 57.3	+0.4
ABKAR	Akbulak array	42.54	360	P	P	17 07 06.8	+0.3
SANT	Santorini	43.52	318		P	17 07 16.1	+1.4
AKTO	Aktyubinsk	43.76	358	P	P	17 07 15.7	-0.6
	comp=Z,0.8nm,0.7s,baz=12,slow=10,SNR=2.4						
MAKZ	Makanchi	44.21	21	P	P	17 07 20.5	+0.5
MAKZ				IAmb	IAmb	17 07 31.6	
	comp=Z,12nm,1.4s						
MK31	Makanchi Array	44.31	22	P	P	17 07 20.9	+0.1
MKAR	Makanchi Array	44.31	22	P	P	17 07 21.0	+0.1
	comp=Z,0.3nm,0.6s,baz=205,slow=8.0,SNR=4.5						
SLVN	Son La	44.61	66	P	P	17 07 24.9	+1.2
SLVN				IAmb	IAmb	17 07 27.4	
	comp=Z,10nm,1.3s						
KURBB	Kurchatov Arra	46.47	16	P	P	17 07 37.6	-0.2
	comp=Z,1.3nm,0.9s,baz=217,slow=8.0,SNR=5.7						
KURK	Kurchatov	46.58	16	P	P	17 07 38.6	-0.1
KURK				IAmb	IAmb	17 07 50.5	
	comp=Z,11nm,1.5s						
BOSA	Boshof	48.63	222	P	P	17 07 53.4	-1.7
MLR	Muntele Rosu	48.88	328	P	P	17 07 56.3	-0.6
TSUM	Tsumeb	49.26	238	P	P	17 08 01.4	+1.3
	comp=Z,5.8nm,1.1s,baz=152,slow=7.4,SNR=4.9						
TSUM	Tsumeb	49.26	238	P	P	17 08 01.5	+1.3
TSUM				IAmb	IAmb	17 08 02.8	
	comp=Z,11nm,1.2s						
QIZ	Qiongzhong	49.70	71	P	P	17 07 59.0	-4.4
AKASG	Malin Array Be	51.04	335	P	P	17 08 12.2	-0.8
	comp=Z,0.4nm,0.4s,baz=120,slow=6.9,SNR=7.7						
AKBB	Malin Array Si	51.04	335	P	P	17 08 12.2	-0.8
AKBB				IAmb	IAmb	17 08 13.1	
	comp=Z,16nm,1.4s						
ZAA0	Zalesovo Array	51.24	18	P	P	17 08 13.7	-0.8
ZAA0				IAmb	IAmb	17 08 25.9	
	comp=Z,6.8nm,1.0s						
ZALV	Zalesovo Beam	51.24	18	P	P	17 08 14.6	+0.2
	comp=Z,0.9nm,0.4s,baz=243,slow=6.5,SNR=6.0						
DIVS	Divibare	51.35	323	P	P	17 08 14.6	-1.0
DIVS				IAmb	IAmb	17 08 27.6	
	comp=Z,17nm,1.4s						
RAFF	Raffo Rosso	51.69	313	P	P	17 08 16.9	-1.3
TAM	Tamanrasset	55.08	293	P	P	17 08 43.2	-0.3
TAM				IAmb	IAmb	17 08 48.6	
	comp=Z,10nm,1.5s						
MORC	Moravsky Berou	55.99	328	P	P	17 08 48.5	-0.9
MORC				IAmb	IAmb	17 08 50.4	
	comp=Z,14nm,1.4s						
KLMR	Klimovskoe	56.37	348	*e*	P	17 08 49.5	-2.4
KLMR				AMP		17 09 01.5	
	comp=Z,24nm,1.5s						
SONM	Songino Array	56.75	35	P	P	17 08 55.4	+0.4
	comp=Z,1.3nm,1.1s,baz=242,slow=9.2,SNR=5.2						
SONM				LR	LR	17 33 31.7	
	comp=Z,175nm,21.9s,baz=240,slow=36						
GERES	GERESS Array B	57.57	325	LR	LR	17 34 01.2	
	comp=Z,22nm,20.3s,baz=116,slow=36						
TOA0	Torodi Ar. Sit	58.01	281	P	P	17 09 04.3	0.0
TOA0				IAmb	IAmb	17 09 06.3	
	comp=Z,16nm,1.4s						
TORD	Torodi Ar. Bea	58.01	281	P	P	17 09 04.7	+0.4
	comp=Z,4.8nm,1.1s,baz=92,slow=7.3,SNR=13						
KOWA	Kowa	63.56	283	P	P	17 09 42.3	+0.2
KOWA				IAmb	IAmb	17 09 44.3	
	comp=Z,11nm,1.3s						
KIC	Kosan Boka	64.59	274	*e*P	P	17 09 47.5	-1.5
	comp=Z,39nm,1.3s						
DBIC	Dimbokro	64.68	274	P	P	17 09 50.0	+0.4
	comp=Z,5.3nm,0.9s,baz=270,slow=1.8,SNR=5.7						
DBIC	Dimbokro	64.68	274	P	P	17 09 50.0	+0.4
TIC	Toumodi	64.85	274	*e*P	P	17 09 50.7	+0.1
LIC	Lamto	64.89	274	*e*P	P	17 09 50.9	0.0
	comp=Z,45nm,1.3s						
NB201	NORSAR Array S	65.39	336	P	P	17 09 52.4	-1.0
ESDC	Sonseca Array	66.10	310	P	P	17 09 57.9	-0.5
	comp=Z,2.6nm,1.1s,baz=89,slow=6.0,SNR=7.8						
USRK	Ussuriysk Ar.	72.33	46	LR	LR	17 44 32.6	
	comp=Z,127nm,18.9s,baz=200,slow=38						
WRA	Warramunga Arr	77.37	112	P	P	17 11 06.7	+0.2
	comp=Z,3.2nm,1.1s,baz=285,slow=4.8,SNR=11						
WRAB	Tennant Creek	77.38	112	P	P	17 11 06.7	+0.1
WB2	Warramunga Arr	77.38	112	P	P	17 11 06.8	+0.2
WB2				IAmb	IAmb	17 11 13.0	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	77.39	112	P	P	17 11 06.0	-0.6
WR0	Warramunga Arr	77.56	112	P	P	17 11 07.2	-0.4
WR0				IAmb	IAmb	17 13 25.5	
	comp=Z,16nm,1.6s						
ASAR	Alice Springs	77.77	116	P	P	17 11 08.8	+0.1
	comp=Z,3.0nm,0.8s,baz=282,slow=5.5,SNR=22						
AS31	Alice Springs	77.77	116	P	P	17 11 08.6	-0.1
STKA	Stephens Creek	86.08	123	P	P	17 11 52.4	+0.1
	comp=Z,2.1nm,0.8s,baz=301,slow=4.0,SNR=5.3						

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*IDC **01** 17:10:41.7±0.8, 23°.61N×121°.60E, h0^{km}, mb3.6/10, mb1 3.8/10, mb1mx3.6/55, mbtmp3.7/10, MS3.7/3, Ms1 3.7/3, ms1mx3.0/29, Error ellipse: s-maj=31.9km s-min=16.9km az=66.0*

*NIED **01** 17:10:43.9, 23°.67N×121°.46E, h21^{km}, MW4.4, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.72; $M_{\theta\theta}$3.49; $M_{\phi\phi}$-1.77; $M_{r\theta}$1.09; $M_{\theta\phi}$-0.78; $M_{\phi r}$2.01; Fault plane solution: $M_0$3.87000×10^{15} NP1: ϕ_s242.00000°, δ68.00000°, λ-139.00000°. NP2: ϕ_s134.00000°, δ52.00000°, λ-28.00000°.*

*JMA **01** 17:10:43.8±0.1, 23°.67N×121°.46E, h21^{km}±2^{km}, M4.1*

*NEIC **01** 17:10:44.2±2.0, 23°.67N±0°.05×121°.48E±0°.04, h15^{km}±4^{km}, Error ellipse: s-maj=8.2km s-min=3.9km az=151.0*

*ASIES **01** 17:10:44.7, 23°.69N×121°.50E, h23^{km}, MW4.1*

*TAP **01** 17:10:44.8, 23°.68N×121°.47E, h20^{km}, ML4.5, B*

*BJI **01** 17:10:45.8±0.0, 23°.90N×121°.60E, h10^{km}, mB4.3/5, mb3.9/15, ML3.8/6, Ms3.9/7, Ms7 3.9/7*

ISC 01 17:10:44.8±0.7**, 23°.67N**±0°.01×**121°.50E**±0°.01**, h18^{km}**±3^{km}**, n191,** σ**0^{s}96**/291**, mb3.8**/15**, MS3.9**/3**, 46C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	Guangfu	0.07	266	⇓*i*P	Pg	17 10 48.5	+0.4
	baz=271						
EGFH				S	Sg	17 10 50.5	+0.2
	baz=271						
ESL	Shilin	0.15	337	⇑*i*P	Pg	17 10 49.2	+0.1
	baz=351						
ESL				*i* S	Sg	17 10 51.7	-0.2
	baz=351						
HGSD	Ruisui	0.19	201	⇑*i*P	Pg	17 10 50.7	+1.1
	baz=198						
HGSD				*i* S	Sg	17 10 54.6	+1.7
	baz=198						
EHY	Hungye	0.23	224	⇑*i*P	Pb	17 10 50.0	-0.5
	baz=222						
EHY				S	Sb	17 10 53.6	-0.6
	baz=222						
HWA	Hwalien	0.32	18	⇑*i*P	Pb	17 10 52.5	+0.6
	baz=17						
HWA				*e*S	Sn	17 10 58.3	-2.5
	baz=17						
YULB	Yu-li	0.34	214	⇑*i*P	Pg	17 10 51.5	-0.4
	baz=217						
YULB				*e*S	Sg	17 10 56.2	-0.5
	baz=217						
YULB	Yu-li	0.34	214		Pg	17 10 51.1	-0.9
VWDT	VWDT	0.34	284	⇓*i*P	Pg	17 10 52.0	0.0
	baz=284						
VWDT				*e*S	Sg	17 10 56.8	0.0
	baz=284						
EYUL	Yuli	0.36	207	⇑*i*P	Pg	17 10 52.3	-0.1
	baz=215						
EYUL				*e*S	Sg	17 10 57.8	+0.2
	baz=215						
TWF1	Yuli	0.37	210	⇑*i*P	Pg	17 10 52.1	-0.4
	baz=215						
TWD	Chiawan	0.41	12	⇑*i*P	Pb	17 10 53.4	-0.3
	baz=17						
CHGB	Renai	0.49	322	⇑*i*P	Pb	17 10 54.6	-0.4
	baz=331						
CHGB				*i* S	Sg	17 11 00.3	-1.1
	baz=331						
NACB	Ninganchiao	0.51	10	⇑*i*P	Pb	17 10 54.5	-0.7
	baz=6.0						
NACB				*e*S	Sb	17 11 01.7	-0.6
	baz=6.0						
NACB	Ninganchiao	0.51	10	Pg	Pb	17 10 54.4	-0.7
FULB	Fuli	0.51	202	*i* P	Pb	17 10 55.0	-0.3
	baz=207						
FULB				S	Sb	17 11 01.8	-0.5
	baz=207						
SSLB	Suanglung	0.51	283	⇓*i*P	Pb	17 10 54.4	-1.0
	baz=288						
SSLB				*i* S	Sb	17 11 00.5	-2.0
	baz=288						
SSLB	Suanglung	0.51	283		Pb	17 10 53.9	-1.5
WHF	Hehuan Shan	0.52	336	⇑*i*P	Pb	17 10 54.8	-0.8
	baz=339						
WHF				S	Sg	17 11 01.1	-1.4
	baz=339						
ETLH	Xiulin Townshi	0.53	358	⇑*i*P	Pb	17 10 54.9	-0.7
	baz=2.0						
ETLH				S	Sb	17 11 01.5	-1.5
	baz=2.0						
CHKT	Chengkung	0.58	192	⇑*i*P	Pg	17 10 56.4	0.0
	baz=188						
CHKT				*e*S	Sg	17 11 05.2	+0.9
	baz=188						
SMLT	Sun Moon Lake	0.59	291	⇓*i*P	Pb	17 10 55.9	-0.7
	baz=297						
SMLT				*e*S	Sb	17 11 02.9	-1.7
	baz=297						
WHYT	Xinyi Township	0.59	272	⇓*i*P	Pb	17 10 56.3	-0.3
	baz=266						
WHYT				S	Sb	17 11 03.8	-0.9
	baz=266						
WPL	Puli Township	0.60	304	⇓*i*P	Pb	17 10 56.2	-0.6
	baz=311						
WPL				*e*S	Sb	17 11 03.4	-1.6
	baz=311						
FUSS	Fushou	0.62	338	⇑*i*P	Pb	17 10 56.9	-0.4
	baz=333						
FUSS				*e*S	Sb	17 11 04.7	-1.0
	baz=333						
TYC	Yuchr	0.63	291	⇓*i*P	Pb	17 10 56.6	-0.7
	baz=297						
TYC				*e*S	Sb	17 11 05.0	-0.8
	baz=297						
DPDB	Guoxing	0.64	304	⇓*i*P	Pb	17 10 57.0	-0.4
	baz=311						
DPDB				*e*S	Sb	17 11 05.2	-0.8
	baz=311						
TWT	Tachien	0.65	333	⇑*i*P	Pg	17 10 57.6	-0.1
	baz=334						
TWT				S	Sb	17 11 04.9	-1.6
	baz=334						
ELDTW	Lidau	0.65	223	⇑*i*P	Pb	17 10 56.4	-1.4
	baz=214						
ELDTW				*e*S	Sb	17 11 04.8	-1.8
	baz=214						
TDCB	Techi	0.66	332	⇑*i*P	Pb	17 10 57.6	-0.2
	baz=334						
TDCB				S	Sb	17 11 04.8	-1.9
	baz=334						
ALS	Alishan	0.66	256	⇑*i*P	Pb	17 10 57.7	-0.3
	baz=261						
ALS				S	Sb	17 11 05.7	-1.1
	baz=261						
EDH	Donghe	0.72	194	P	Pb	17 10 57.9	-1.0
	baz=191						
EDH				*e*S	Sn	17 11 09.8	-0.9
	baz=191						
WJS	Zhushan	0.72	282	*i* P	Pg	17 10 59.3	+0.4
	baz=282						
WJS				*i* S	Sg	17 11 09.5	+0.9
	baz=282						
CHN5	Tsauling	0.76	264	⇑*i*P	Pg	17 10 59.6	0.0
	baz=257						
CHN5				S	Sb	17 11 09.1	-0.5
	baz=257						
NNSB	Datong	0.76	352	⇑*i*P	Pb	17 10 59.1	-0.5
	baz=4.0						
NNSB				S	Sb	17 11 08.7	-1.0
	baz=4.0						
NNSH	Datong	0.76	352	⇑*i*P	Pb	17 10 59.0	-0.6
	baz=4.0						
NNSH				S	Sb	17 11 08.9	-0.8
	baz=4.0						
NNS	Nan Shan	0.77	351	⇑*i*P	Pb	17 10 59.3	-0.5
	baz=4.0						
NNS				*e*S	Sb	17 11 09.0	-1.1
	baz=4.0						
WNT	Mingjian	0.77	285	⇓*i*P	Pn	17 11 00.4	-0.4
	baz=285						
WNT				*e*S	Sn	17 11 11.3	-0.8
	baz=285						
ENA	Nanau	0.78	16	⇑*i*P	Pb	17 10 59.0	-0.9
	baz=11						
ENA				*e*S	Sg	17 11 10.7	+0.1
	baz=11						
WHP	Taichung City	0.79	320	*i* P	Pb	17 10 59.8	-0.3
	baz=321						
WHP				S	Sb	17 11 10.2	-0.3
	baz=321						
WNT1	Nantou City	0.79	287	P	Pn	17 11 00.7	-0.3
	baz=287						
WNT1				*e*S	Sn	17 11 11.7	-0.6
	baz=287						
WWF	Wufeng	0.82	297	*e*P	Pn	17 11 01.2	-0.3
	baz=297						
WWF				*e*S	Sn	17 11 12.7	-0.5
	baz=297						
ENAH	Nanao	0.82	20	*i* P	Pb	17 10 59.8	-0.8
	baz=10.0						
ENAH				*e*S	Sg	17 11 12.0	+0.2
	baz=10.0						
LONT	Longtian	0.83	204	*e*P	Pb	17 10 58.8	-2.0
	baz=191						
STYT	Tauyuan	0.85	233	⇑*i*P	Pb	17 11 00.6	-0.5
	baz=230						
STYT				*e*S	Sb	17 11 11.6	-0.6
	baz=230						
WGK	Gukeng	0.86	271	⇑*i*P	Pg	17 11 01.5	0.0
	baz=269						
WGK				*e*S	Sn	17 11 13.7	-0.5
	baz=269						
TPUB	Ta-pu	0.88	245	⇑*i*P	Pb	17 11 01.6	0.0
	baz=243						
TPUB				S	Sb	17 11 12.9	-0.2
	baz=243						
TPUB	Ta-pu	0.88	245		Pb	17 11 01.1	-0.4
WDLH	Douliu	0.88	271	P	Pn	17 11 02.1	-0.3
	baz=269						
WDLH				*e*S	Sn	17 11 14.6	-0.1
	baz=269						
TCU	Taichung	0.89	302	*e*P	Pn	17 11 02.6	+0.1
	baz=305						
TCU				*e*S	Sn	17 11 14.4	-0.5
	baz=305						
CHN4	Tsaushan	0.89	249	⇑*i*P	Pn	17 11 02.1	-0.4
	baz=247						
CHN4				*e*S	Sn	17 11 14.8	-0.1
	baz=247						
WTP	Ta-pu	0.92	243	⇑*i*P	Pb	17 11 02.3	0.0
	baz=240						
WTP				*e*S	Sn	17 11 15.2	-0.5
	baz=240						
NDT	Datong Townshi	0.93	1	P	Pb	17 11 01.6	-0.8
	baz=12						
TWG	Pinlang	0.94	205	⇑*i*P	Pb	17 11 00.0	-2.5
	baz=193						
TWGBT	Beinan	0.94	204	⇑*i*P	Pb	17 10 60.0	-2.5
	baz=193						
TWQ1	Liyutan	0.94	315	⇑*i*P	Pg	17 11 03.4	+0.2
	baz=317						
TWQ1				*e*S	Sn	17 11 15.8	-0.5
	baz=317						
CHN2	Minshiung	0.95	262	*e*P	Pg	17 11 03.1	-0.1
	baz=260						
CHN2				*e*S	Sn	17 11 16.6	+0.3
	baz=260						
WCHH	Zhanghua	0.95	295	*e*P	Pg	17 11 03.3	0.0
	baz=295						
WCHH				*e*S	Sn	17 11 16.3	-0.1
	baz=295						
ENTT	Nioudou	0.96	4	P	Pb	17 11 02.2	-0.8
	baz=5.0						
TTN	Taitung	0.97	200	*e*P	Pb	17 11 01.4	-1.7
	baz=196						
TTN				*e*S	Sb	17 11 14.2	-1.3
	baz=196						
TWC	Suao	0.98	19	P	Pb	17 11 02.3	-1.0
	baz=12						
TWC				*e*S	Sg	17 11 17.3	+0.4
	baz=12						
LDUT	Ludao	1.00	182	P	Pb	17 11 02.1	-1.5
	baz=178						
LDUT				*e*S	Sb	17 11 16.3	0.0
	baz=178						
YHNB	Yeheng	1.00	354	⇑*i*P	Pb	17 11 03.0	-0.7
	baz=357						
YHNB				*e*S	Sb	17 11 16.0	-0.5
	baz=357						
YHNB	Yeheng	1.00	354		Pb	17 11 02.9	-0.7
NSY	Sanyi	1.00	318	⇑*i*P	Pg	17 11 04.7	+0.4
	baz=319						
NSY				*e*S	Sg	17 11 19.0	+1.5
	baz=319						
CHY	Chiayi	1.00	260	P	Pg	17 11 04.0	-0.3
	baz=269						
CHY				*e*S	Sg	17 11 18.3	+0.9
	baz=269						
NSK	Sanguang	1.01	353	⇑P	Pb	17 11 03.1	-0.7
	baz=356						
NSK				*e*S	Sb	17 11 15.8	-0.9
	baz=356						
TWK	Hsinying	1.01	247	⇑*i*P	Pn	17 11 03.8	-0.4
	baz=244						
TWK				*e*S	Sn	17 11 17.6	-0.5
	baz=244						
CHN1	Nanshi	1.02	242	⇑*i*P	Pn	17 11 04.0	-0.2
	baz=238						
CHN1				*e*S	Sg	17 11 18.6	+0.7
	baz=238						
WTK	Tuku	1.02	271	*e*P	Pg	17 11 04.3	-0.3
	baz=269						
WTK				*e*S	Sg	17 11 18.6	+0.7
	baz=269						
SNST	Tainan City	1.02	244	⇑*i*P	Pn	17 11 04.1	-0.3

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          baz=241
SNST                              eS    Sg     17 11 18.2  0.0
          baz=241
SGST    Jiashian         1.03 235⇑iP    Pb     17 11 03.0 -1.0
          baz=232
SGST                              eS    Sg     17 11 18.2 -0.1
          baz=232
WDJ     Dajia District   1.03 311⇑iP    Pg     17 11 05.1 +0.2
          baz=323
WDJ                               eS    Sg     17 11 19.5 +1.0
          baz=323
SLGT    Liugui           1.03 229⇑iP    Pb     17 11 04.1 -0.2
          baz=219
SLGT                              eS    Sn     17 11 18.4 -0.1
          baz=219
TWE     Neicheng         1.05   8  P    Pb     17 11 03.4 -1.2
          baz=13
TWE                               eS    Sg     17 11 19.5 +0.4
          baz=13
NSTT    Nanjuang         1.06 335⇑iP    Pg     17 11 04.9 -0.4
          baz=346
NSTT                              eS    Sb     17 11 17.9 -0.3
          baz=346
LIOB    Emei             1.06 336⇑iP    Pg     17 11 05.1 -0.3
          baz=337
LIOB                              eS    Sn     17 11 18.9 -0.4
          baz=337
RLNB    Erlin            1.07 282 eP    Pn     17 11 05.0 +0.1
          baz=281
RLNB                              eS    Sg     17 11 19.7 +0.2
          baz=281
NMLH    Miaoli           1.08 323⇑iP    Pg     17 11 05.7 +0.1
          baz=324
NMLH                              eS    Sg     17 11 20.6 +0.8
          baz=324
NWLT    Wulai            1.10   0 eP    Pn     17 11 04.6 -0.8
          baz=3.0
NWLT                              eS    Sg     17 11 20.4 -0.1
          baz=3.0
WLGB    Puzi             1.12 260  P    Pn     17 11 04.8 -0.7
          baz=257
WLGB                              eS    Sg     17 11 20.7 -0.4
          baz=257
ICHU    Yijhu            1.16 255  P    Pg     17 11 06.8 -0.5
          baz=252
ICHU                              eS    Sg     17 11 22.8 +0.3
          baz=252
WSF     Szhu             1.17 269  P    Pb     17 11 06.4 -0.2
          baz=266
WSF                               eS    Sn     17 11 21.8 -0.1
          baz=266
ECL     Taimali          1.18 205 eP    Pn     17 11 03.9 -2.6
          baz=190
ECL                               eS    Sb     17 11 19.0 -2.7
          baz=190
HSN1    Hsinchu          1.18 338 eP    Pg     17 11 07.7  0.0
          baz=340
HSN1                              eS    Sg     17 11 23.2  0.0
          baz=340
CHN3    Shinhua          1.20 241⇑iP    Pg     17 11 07.9 -0.1
          baz=237
CHN3                              eS    Sg     17 11 25.4 +1.6
          baz=237
SBCB    Hsinchu          1.21 337 eP    Pg     17 11 07.7 -0.5
          baz=338
SCST    Cishan           1.21 230  P    Pg     17 11 07.7 -0.6
          baz=243
SCST                              eS    Sg     17 11 23.8 -0.3
          baz=243
NTC     Toucheng         1.21  14 eP    Pn     17 11 05.6 -1.4
          baz=15
SSD     Sandimen         1.22 221 eP    Pn     17 11 06.2 -0.8
          baz=217
SSD                               eS    Sg     17 11 24.2 -0.2
          baz=217
HSN     Hsinchu          1.22 337 eP    Pg     17 11 08.2 -0.3
          baz=324
HSN                               eS    Sg     17 11 24.4 -0.1
          baz=324
CHN8    Yiju             1.23 255⇑iP    Pb     17 11 07.3 -0.1
          baz=252
CHN8                              eS    Sg     17 11 24.1 -0.4
          baz=252
TSMG    Majia            1.24 219 eP    Pb     17 11 07.5 -0.3
          baz=215
TSMG                              eS    Sg     17 11 25.1  0.0
          baz=215
NHDH    Xindian Distri   1.28   1 i P   Pn     17 11 07.7 -0.2
          baz=10.0
TATO    Taipei           1.30 360  P    Pn     17 11 08.0 -0.1
          baz=17
TATO                              eS    Sn     17 11 24.1 -0.9
          baz=17
TATO    Taipei           1.30 360       Pn     17 11 07.8 -0.2
SCLT    Jiali            1.30 248 eP    Pb     17 11 08.4 -0.3
          baz=244
SCLT                              eS    Sg     17 11 26.3 -0.5
          baz=244
TWM1    Shoushan         1.30 230⇑iP    Pg     17 11 09.9 -0.1
          baz=220
TWA     Mucha            1.30   3 i P   Pn     17 11 07.9 -0.3
          baz=21
TWA                               eS    Sg     17 11 26.6 -0.4
          baz=21
BACT    New Taipei Cit   1.32 358 eP    Pb     17 11 08.7 -0.3
          baz=15
BACT                              eS    Sg     17 11 26.7 -0.8
          baz=15
NCUH    Zhongli          1.32 348 eP    Pb     17 11 09.2 +0.1
          baz=350
NCUH                              eS    Sg     17 11 26.7 -0.9
          baz=350
NCU     National Centr   1.32 348  P    Pb     17 11 09.2 +0.1
          baz=350
NCU                               eS    Sg     17 11 27.5 -0.1
          baz=350
SGLT    Jiouru           1.32 225 eP    Pg     17 11 09.8 -0.6
          baz=213
SGLT                              eS    Sg     17 11 30.3 +2.6
          baz=213
TAI1    Yung-k'ang       1.33 242 eP    Pb     17 11 09.5 +0.3
          baz=241
TIPB    Shuangxi         1.33  13  P    Pn     17 11 07.7 -0.8
          baz=16
TIPB                              eS    Sn     17 11 24.8 -1.0
          baz=16
NTY     Taoyuan          1.33 352 eP    Pb     17 11 08.9 -0.4
          baz=1.0
NTY                               eS    Sg     17 11 27.9 -0.1
          baz=1.0
TSPT    Pingtung City    1.35 223 eP    Pg     17 11 10.5 -0.4
          baz=209
TAP     Taipei           1.36   0 eP    Pn     17 11 08.7 -0.2
          baz=18
TAP                               eS    Sb     17 11 26.4 -0.4
          baz=18
TAP1    Taipei           1.36   1 eP    Pb     17 11 09.6 -0.2
          baz=18
TAP1                              eS    Sb     17 11 26.2 -0.7
          baz=18
TWB1    Santiao Chiao    1.40  18 eP    Pn     17 11 09.4 -0.1
          baz=9.0
TWB1                              eS    Sn     17 11 26.8 -0.8
          baz=9.0
SNJT    Kaohsiung City   1.41 230 eP    Pb     17 11 10.8 +0.2
          baz=229
NWF     Wu-fen Shan      1.42  10 eP    Pn     17 11 09.0 -0.8
          baz=13
NWF                               eS    Sb     17 11 28.1 -0.4
          baz=13
WFSB    Wu-fen Shan      1.42  10 eP    Pn     17 11 09.4 -0.3
          baz=13
WFSB                              eS    Sn     17 11 27.2 -0.7
          baz=13
EAST    Anshuo           1.42 205 eP    Pn     17 11 07.6 -2.2
          baz=195
TAW     Tawu             1.42 203 eP    Pn     17 11 08.9 -0.9
          baz=193
TWS1    Kuangyinshan     1.42 357 eP    Pn     17 11 09.8  0.0
          baz=18
TWS1                              eS    Sb     17 11 29.3 +0.6
          baz=18
SSPT    Xinbi            1.46 216 eP    Pb     17 11 10.9 -0.6
          baz=210
NTST    Danshui          1.48 358 eP    Pn     17 11 10.4 -0.2
          baz=19
NTST                              eS    Sb     17 11 30.9 +0.5
          baz=19
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TNOU    National Taiwa   1.49  10 eP    Pn     17 11 10.3 -0.4
          baz=9.0
ANP     Anpu             1.51   1 eP    Pn     17 11 10.6 -0.5
          baz=18
SCZT    Fangliau         1.53 212 eP    Pn     17 11 11.2  0.0
          baz=221
SCZT                              eS    Sb     17 11 32.4 +0.7
          baz=221
JYNG    Yonagunijimaku   1.53  59  P    Pb     17 11 11.7 -1.0
JYNG                               S    Sb     17 11 32.0 +0.2
SLIU    Shizi            1.59 204 eP    Pn     17 11 10.2 -1.9
          baz=195
YOJ     Yonaguni jima    1.59  60  P    Pn     17 11 12.5 +0.4
YOJ                                S    Sb     17 11 33.0 -0.4
YOJ     Yonaguni jima    1.59  60 eP    Pb     17 11 12.7 -1.0
          baz=62
YOJ                               eS    Sb     17 11 33.0 -0.4
          baz=62
YOJ     Yonaguni jima    1.59  60  Pn   Pb     17 11 12.7 -1.0
TWY     Chenhua          1.60   3 eP    Pn     17 11 12.3 +0.1
          baz=3.0
LAY     Lan-yu           1.63 178 eP    Pn     17 11 10.9 -1.7
          baz=168
LAY                               eS    Sn     17 11 32.7 -0.5
          baz=168
WLCH    Liuqiu           1.67 218 eP    Pb     17 11 15.7 +0.7
          baz=218
TWP     Hsiaoliuchiu     1.69 219 eP    Pb     17 11 15.7 +0.4
          baz=218
WDGT    Dungji           1.74 257 eP    Pn     17 11 13.9 -0.2
          baz=254
PHUB    P'eng-hu         1.77 265 eP    Pn     17 11 14.1 -0.5
          baz=245
PHUB                              eS    Sn     17 11 35.8 -0.9
          baz=245
PNG     Penghu           1.79 267 eP    Pn     17 11 14.6 -0.1
          baz=264
PNG                               eS    Sn     17 11 37.0 -0.1
          baz=264
HEN     Hengchun         1.80 203 eP    Pb     17 11 16.6 -0.7
          baz=196
TWKBT   Hengchun         1.84 200 eP    Pn     17 11 15.2 -0.3
          baz=188
VCHM    Qimei            1.96 257 eP    Pn     17 11 16.9 -0.2
          baz=254
PCYT    Pengchaiyu       2.02  15 eP    Pb     17 11 19.3 -1.7
          baz=14
IRIF    Iriomote-Funau   2.14  72  P    Pn     17 11 20.3 +0.6
IRIF                              eS    Sn     17 11 46.6 +0.7
HATJ    Hateruma jima    2.15  79  P    Pn     17 11 20.0 +0.3
HATJ                              eS    Sn     17 11 45.7 -0.2
VWUC    VWUC             2.28 305 eP    Pn     17 11 21.0 -0.6
          baz=306
JKRS    Kuro-shima       2.36  76  P    Pn     17 11 23.3 +0.6
JKRS                              eS    Sn     17 11 52.0 +0.7
PTTC    Pingtan          2.41 319 eP    Pn     17 11 22.4 -0.9
          baz=322
JIJ     Ishigaki jima    2.51  74  P    Pn     17 11 24.9 +0.1
JIJ                               eS    Sn     17 11 54.7 -0.3
PTMZ    Houxiangcun      2.56 303 eP    Pn     17 11 24.8 -0.6
          baz=303
JISG    Ishigakijimahi   2.73  70  P    Pn     17 11 27.8 +0.1
JISG                               S    Sn     17 12 00.3 +0.1
MATB    Ma-tsu           2.84 331 eP    Pn     17 11 27.9 -1.4
          baz=334
MSUT    Lienchiang       2.87 330 eP    Pn     17 11 29.2 -0.4
          baz=334
KNM     Kinmen           2.90 285 eP    Pn     17 11 31.3 +1.2
          baz=268
QZH     Quanzhou         2.94 296  Pn   Pn     17 11 30.6  0.0
QZH                                Sn   Sn     17 12 04.0 -1.5
QZH                                smax smax
          comp=N,330nm,0.7s
QZH                                smax smax
          comp=E,210nm,0.7s
KNMB    Chin-men Tao     2.95 286 eP    Pn     17 11 30.6 -0.2
          baz=269
KNMB    Chin-men Tao     2.95 286       Pn     17 11 30.5 -0.3
JTJ     Tarama           3.08  71  P    Pn     17 11 33.2 +0.6
JTJ                               eS    Sn     17 12 09.3 +0.3
LYJJ    Jianjiangzhen    3.27 332 eP    Pn     17 11 34.0 -1.2
          baz=337
MHZQ    Yeshan           3.30 318 eP    Pn     17 11 35.6  0.0
          baz=323
AXDP    Jialang          3.44 291 eP    Pn     17 11 37.7 +0.1
          baz=289
XPSS    Dashiqiu         3.45 340 eP    Pn     17 11 36.7 -1.0
          baz=335
JIRB    Irabujima        3.54  70  P    Pn     17 11 39.7 +0.7
JIRB                              eS    Sn     17 12 21.7 +1.2
JIKM    Ikemajima        3.64  69 eS    Sn     17 12 22.5 -0.3
JMJ     Miyako jima 2    3.65  71 eP    Pn     17 11 41.1 +0.7
          baz=82
JMJ2    Miyako jima3     3.65  72  P    Pn     17 11 41.5 +1.0
JMJ2                              eS    Sn     17 12 23.2 +0.1
SSE     Sheshan          7.40 358  Pn   Pn     17 12 31.4 -0.5
QIZ     Qiongzhong      11.80 249  P    Pn     17 13 37.9 +5.5
QIZ                                S    Sn     17 15 50.0 +6.3
QIZ                                LR   LR
          comp=N,430nm,11.2s
QIZ                                LR   LR
          comp=E,670nm,18.1s
QIZ                                LR   LR
          comp=Z,370nm,21.6s
GYA     Guiyang         13.73 285 eP    P      17 14 05.1 -2.2
GYA                                pmax pmax
          comp=Z,12nm,0.9s
KSRS    Korea Array     14.80  20  Pn   P      17 14 18.3 -0.7
          0.1nm,0.3s,baz=204,slow=12,SNR=4.2
KSRS                               LR   LR     17 20 37.2
          comp=Z,110nm,18.2s,baz=206,slow=40
CD2     Chengdu         17.33 298 eP    P      17 14 56.2 +9.0
LZH     Lanzhou         19.64 313 eP    Pn     17 15 21.4 +7.2
LZH                                pP   sP     17 15 25.0 +4.7
LZH                                sP   pP     17 15 27.8  +10
LZH                                pmax pmax
          comp=Z,14nm,1.3s
CMAR    Chiang Mai Arr  21.67 260  P    P      17 15 36.9 +2.2
          1.7nm,0.8s,baz=61,slow=8.8,SNR=9.7
GTA     Gaotai          24.15 316 eP    P      17 16 02.4 +2.3
GTA                                pP   pP     17 16 05.8 +0.2
GTA                                sP   sP     17 16 08.5 +0.6
GTA                                pmax pmax
          comp=Z,4.0nm,1.2s
GTA                                pmax pmax
          comp=Z,100nm,5.6s
GTA                                LR   LR
          comp=N,250nm,16.4s
GTA                                LR   LR
          comp=Z,350nm,18.5s
ULN     Ulaanbaatar     26.75 338  P    P      17 16 22.4 -1.2
SONM    Songino Array   26.95 337  P    P      17 16 25.5 +0.1
          0.4nm,0.7s,baz=170,slow=8.8,SNR=2.5
PSI     Prapat          30.12 230  LR   LR     17 28 49.7
          comp=Z,224nm,19.9s,baz=91,slow=36
WMQ     Urumqi          34.22 314 eP    P      17 17 32.6 +3.1
MKAR    Makanchi Array  38.90 316  P    P      17 18 09.5 +0.1
          1.6nm,0.9s,baz=112,slow=9.3,SNR=13
MAKZ    Makanchi        39.11 316  P    P      17 18 11.9 +0.8
MAKZ                               IAmb IAmb   17 18 21.2
          comp=Z,5.2nm,1.0s
ZALV    Zalesovo Beam   40.83 327  P    P      17 18 24.6 -0.7
          comp=Z,0.5nm,0.3s,baz=135,slow=5.7,SNR=4.2
H11N1   WAKE ISLAND Hy  42.23  86  T    T      18 03 37.2
          baz=283,slow=75,SNR=48
H11N2   WAKE ISLAND Hy  42.23  86  T    T      18 03 39.1
          baz=283,slow=75,SNR=49
H11N3   WAKE ISLAND Hy  42.25  86  T    T      18 03 39.1
          baz=283,slow=75,SNR=53
H11S3   WAKE ISLAND Hy  42.35  88  T    T      18 03 47.2
          baz=284,slow=74,SNR=115
H11S1   WAKE ISLAND Hy  42.35  88  T    T      18 03 47.8
          baz=284,slow=74,SNR=60
H11S2   WAKE ISLAND Hy  42.36  88  T    T      18 03 48.5
          baz=284,slow=74,SNR=52
KURBB   Kurchatov Arra  42.68 320  P    P      17 18 40.4 -0.1
          comp=Z,0.5nm,0.7s,baz=111,slow=9.6,SNR=4.5
WRA     Warramunga Arr  45.12 163  P    P      17 18 57.9 -2.5
          comp=Z,2.1nm,1.0s,baz=344,slow=8.6,SNR=8.1
WB2     Warramunga Arr  45.13 163  P    P      17 18 58.9 -1.5
WB2                                IAmb IAmb   17 18 59.7
          comp=Z,5.6nm,1.0s
WR0     Warramunga Arr  45.19 163  P    P      17 18 58.9 -2.0
WR0                                IAmb IAmb   17 19 00.5
          comp=Z,3.7nm,0.9s
ASAR    Alice Springs   48.58 165  P    P      17 19 26.5 -0.9
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          comp=Z,0.7nm,0.8s,baz=341,slow=6.9,SNR=10
NWAO    Narrogin (SRO)  56.43 184  P    P      17 20 26.2 +0.8
NWAO                               IAmb IAmb   17 20 40.7
          comp=Z,14nm,1.2s
NWAO    Narrogin (SRO)  56.43 184  P    P      17 20 26.2 +0.8
STKA    Stephens Creek  58.49 160  P    P      17 20 39.3 -0.6
          comp=Z,1.4nm,0.7s,baz=349,slow=5.2,SNR=3.6
ILAR    Eielson Array   69.53  27  P    P      17 21 53.9 +1.7
          comp=Z,0.3nm,0.7s,baz=282,slow=7.1,SNR=4.7
YKA     Yellowknife Ar  83.33  23  P    P      17 23 10.0 -0.4
          comp=Z,0.2nm,0.7s,baz=311,slow=4.0,SNR=3.3
ESDC    Sonseca Array   99.01 320  LR   LR     18 12 23.7
          comp=Z,36nm,19.1s,baz=150,slow=37
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*DJA **01** 17:11:06.0±0.2,2°S±3°×12°1E±°,h10^{km},M4.2/12,mb4.3/2, MLv4.1/12*

*IDC **01** 17:11:06.3±1.3,2.°30S×121.°00E,h0^{km},mb3.3/4, mb1 3.6/6,mb1mx3.3/52,mbtmp3.5/6,ML3.7/2,MS3.5/1, Ms1 3.5/1,ms1mx2.7/20,Error ellipse: s-maj=31.2km s-min=21.5km az=66.0*

ISC 01 17:11:09.1±1.7**,2.°19S**±0.°05×**120.°77E**±0.°06**,h23**^{km}±15^{km}**, n19,**σ**2.^{s}33**/24**,mb3.3**/4**,Sulawesi**

```
Code    Station Name     Δ°   AZ°   Phase ID          Time      Res
                                  Op    ISC       h  m  s     ISC
TTSI    Tana Toraja      1.27 228  P    Pn     17 11 29.6 -1.8
TTSI                               S    Sn     17 11 46.2 -1.5
APSI    Ampana           1.55  35  P    Pn     17 11 34.1 -1.2
APSI                               S    Sb     17 11 55.6 -0.7
SPSI    Sidrap Palu      2.02 209  P    Pn     17 11 40.9 -0.8
SPSI                               S    Sb     17 12 08.4 -1.5
BNSI    Bone             2.29 197  P    Pn     17 11 44.7 -0.7
BNSI                               S    Sb     17 12 14.9 -2.7
LUWI    Luwuk            2.31  60  P    Pn     17 11 43.9 -1.8
LUWI                               S    Sn     17 12 12.0 -1.4
KDI     Kendari          2.55 133  P    Pb     17 11 58.0 +3.8
MPSI    Mapaga           2.66 341  P    Pn     17 11 48.0 -2.5
MRSI    Marisa           2.90  24  P    Pn     17 11 51.7 -2.2
MRSI                               S    Sn     17 12 18.5  -10
KAPI    Kappang          2.98 200  Pn   Pn     17 11 54.4 -0.6
          9.4nm,0.3s,baz=43,slow=7.9,SNR=26
KAPI                               Sn   Sb     17 12 33.5 -4.0
          8.8nm,0.3s,baz=163,slow=20,SNR=6.9
BKSI    Bulukumba        3.17 192  P    Pn     17 11 58.2 +0.6
GTOI    Gorontalo        3.60  39  P    Pn     17 12 01.4 -2.0
KMSI    Cibinong         4.23  50  P    Pn     17 12 10.2 -1.9
SANI    Sanana           5.22  89  P    Pn     17 12 22.1 -3.7
          0.1nm25nm,0.7s
BATI    Baumata          8.47 160  LR   LR     17 16 42.7
          comp=Z,350nm,19.9s,baz=259,slow=41
SIJI    Sorong          10.58  83  Pn   Pn     17 13 38.1 -1.2
          0.7nm,0.3s,baz=253,slow=14,SNR=4.4
WRA     Warramunga Arr  22.07 144  P    P      17 16 00.7 -1.9
          0.7nm,0.9s,baz=325,slow=11,SNR=5.1
ASAR    Alice Springs   24.85 150  P    P      17 16 28.5 -1.5
          0.4nm,0.8s,baz=326,slow=8.4,SNR=8.4
CMAR    Chiang Mai Arr  29.71 315  P    P      17 17 16.7 +3.1
          0.7nm,0.8s,baz=141,slow=8.7,SNR=3.1
MKAR    Makanchi Array  59.34 330  P    P      17 21 11.4 +2.1
          0.3nm,0.6s,baz=119,slow=8.0,SNR=2.5
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*IDC **01** 17:16:32.1±4.0,36.°29N×70.°85E,h191^{km}±35^{km},mb3.2/9, mb1 3.3/13,mb1mx3.0/48,mbtmp3.8/13,Error ellipse: s-maj=28.9km s-min=17.6km az=36.0*

*NNC **01** 17:16:38.1±5.1,37.°04N×70.°89E,h0^{km},mb4.3,mpv4.0, Error ellipse: s-maj=40.5km s-min=38.1km az=135.0*

ISC 01 17:16:34.4±0.6**,36.°65N**±0.°05×**71.°00E**±0.°08**,h188**^{km}**,n37,** σ**2.^{s}37**/43**,mb3.6**/8**,3C-3D,Hindu Kush region**

```
Code    Station Name     Δ°   AZ°   Phase ID          Time      Res
                                  Op    ISC       h  m  s     ISC
CEP     Cherat           2.92 165 ⇓P    Pn     17 17 26.1 +3.4
THW     Thamme Wali      3.90 171  P    Pn     17 17 37.0 +2.4
KSH     Kashi            4.86  52  Pn   Pn     17 17 46.1 -0.7
KSH                                Sn   Sn     17 18 38.5 -5.2
KSH                                smax smax
          comp=N,42nm,0.5s
KSH                                smax smax
          comp=E,46nm,0.5s
SARP    Sargodha         4.92 163  P    Pn     17 17 49.3 +1.8
AML     Almayashu        5.86  20  P    Pn     17 18 03.0 +3.1
          SNR=100
UCH     Uchtor           6.20  25  P    Pn     17 18 07.3 +2.8
          SNR=38
DHRM    DHARAMSHALA      6.20 134 eP    Pn     17 18 06.8 +2.4
DHRM                              eS    Sn     17 19 14.8 -0.5
DHRM                               IAML        17 19 16.0
          comp=E,329nm,0.6s
DHRM                               IAML        17 19 16.1
          comp=N,148nm,0.4s
EKS2    Erkin-Say        6.38  19  P    Pn     17 18 09.8 +3.4
          SNR=23
KK31    Karatay Array    6.46 357  Pn   Pn     17 18 09.5 +2.1
          comp=N,2.2nm,0.3s,baz=186,slow=12,SNR=85
KK31                              ⇓Sn   Sn     17 19 20.0 -0.9
          comp=N,5.6nm,0.5s,baz=187,slow=24,SNR=5.7
AAK     Ala-Archa        6.56  23  P    Pn     17 18 12.1 +3.2
          comp=N,6.7nm,0.3s,baz=172,slow=5.6,SNR=95
AAK                                S    Sn     17 19 21.1 -2.5
          comp=N,1.2nm,0.3s,baz=204,slow=10,SNR=6.1
AAK     Ala-Archa        6.56  23  P    Pn     17 18 12.2 +3.3
          SNR=27
AAK     Ala-Archa        6.56  23 ⇑Pn   Pn     17 18 11.9 +3.0
          comp=N,9.9nm,0.4s
AAK                               ⇑Sn   Sn     17 19 26.2 +2.6
          comp=N,16nm,0.7s
KBK     Karagaybulak     6.73  26  P    Pn     17 18 14.6 +3.5
          SNR=11
ULHL    Ulahol           6.91  34  P    Pn     17 18 16.3 +2.8
          SNR=5.9
CHMS    Chumysh          6.97  23  P    Pn     17 18 17.4 +3.3
          SNR=5.3
TKM2    Tokmak 2         7.19  28  P    Pn     17 18 20.2 +3.0
          SNR=5.6
TKM2    Tokmak 2         7.19  28 ⇓Pn   Pn     17 18 19.8 +2.6
          comp=N,7.5nm,0.8s
TKM2                              ⇑Sn   Sn     17 19 39.6 +0.9
          comp=N,10nm,0.9s
SMLA    Simla            7.53 135 eP    Pn     17 18 22.8 +1.3
SMLA                              eS    Sn     17 19 44.1 -2.2
SMLA                               IAML        17 19 46.0
          comp=N,52nm,0.4s
SMLA                               IAML        17 19 46.2
          comp=E,92nm,0.3s
MKAR    Makanchi Array  13.17  36  P    Pn     17 19 36.0 +1.6
          comp=E,0.1nm,0.3s,baz=206,slow=7.2,SNR=6.7
DANN    Dangsing        13.57 124 eP    Pn     17 19 39.4 -0.4
          comp=E,3.9nm,0.2s
BHPL    Bhopal          14.47 156 eP    P      17 19 54.1 +1.8
KKN     Kakani          14.96 122 eP    Pn     17 19 56.1 -0.8
          comp=E,14nm,0.5s
KURBB   Kurchatov Arra  14.98  19  P    Pn     17 19 57.1 +0.4
          comp=E,0.0nm,0.3s,baz=210,slow=11,SNR=4.5
PKIN    Phulchoki       15.18 123 eP    Pn     17 19 58.8 -0.8
          comp=E,11nm,0.4s
PKI     Pulchoki        15.19 122 eP    Pn     17 19 58.8 -1.0
          comp=E,8.1nm,0.4s
GUN     Gumba           15.30 120 eP    Pn     17 20 01.1  0.0
          comp=E,8.8nm,0.4s
AKTO    Aktyubinsk      16.65 330  P    Pn     17 20 17.5 +0.6
          comp=E,0.2nm,0.3s,baz=145,slow=8.3,SNR=12
TAPN    Taplejung       16.92 118 eP    P      17 20 19.6  0.0
          comp=E,8.2nm,0.5s
ZALV    Zalesovo Beam   19.78  25  P    P      17 20 50.8 +0.8
          comp=E,1.1nm,0.4s,baz=224,slow=10,SNR=4.8
NRIK    Noril'sk        33.98  10  P    P      17 23 00.6 +0.9
          comp=E,1.3nm,0.6s,baz=201,slow=4.8,SNR=3.8
FINES   FINESS Array B  37.36 326  P    P      17 23 28.0 -0.5
          comp=E,4.6nm,1.0s,baz=126,slow=9.8,SNR=6.2
ARCES   ARCESS Array B  41.00 338  P    P      17 23 58.6  0.0
          comp=E,1.0nm,0.4s,baz=113,slow=6.9,SNR=14
NOA     NORSAR Array B  44.26 323  P    P      17 24 22.6 -2.3
          comp=E,0.3nm,0.5s,baz=102,slow=7.7,SNR=1.5
TORD    Torodi Ar. Bea  65.72 269  P    P      17 26 55.5 -3.7
          comp=E,0.6nm,0.4s,baz=44,slow=5.8,SNR=5.9
YKA     Yellowknife Ar  81.09   3  P    P      17 28 27.4 -0.8
          comp=E,0.4nm,0.5s,baz=3.0,slow=5.1,SNR=13
WRA     Warramunga Arr  82.07 122  P    P      17 28 30.8 -3.1
          comp=E,0.2nm,0.4s,baz=323,slow=4.9,SNR=7.5
ASAR    Alice Springs   84.34 125  P    P      17 28 42.6 -2.9
          comp=E,0.2nm,0.5s,baz=316,slow=5.0,SNR=12
```

*NOU **01** 17:21:08.9, 37°.85S×179°.58E, h111km, MLv4.3, Off E. Coast of N. Island, N.Z.*

WEL 01 17:21:12.8±0.9, 38°S±7°×17°9E±°, h12km, M3.5/24, ML3.8/24, MLv3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=18.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	0.49	263	P	Pg	17 21 22.3	-0.1
WMGZ				S	Sg	17 21 29.3	+0.5
MXZ	Matakaoa Point	0.61	289	P	Pb	17 21 25.8	+0.4
PUZ	Puketiti	0.68	243	P	Pb	17 21 26.4	-0.2
PUZ				S	Sb	17 21 36.1	0.0
PKGZ	Pakihiroa	0.76	260	P	Pg	17 21 27.5	-0.1
TWGZ	Tauwhareparae	0.92	243	P	Pg	17 21 30.7	+0.1
TWGZ				S	Sn	17 21 45.1	+0.2
CNGZ	Carnagh Statio	0.97	222	P	Pn	17 21 32.6	+0.4
CNGZ				S	Sn	17 21 47.8	+1.9
HAZ	Te Kaha	0.99	270	P	Pb	17 21 31.6	-0.3
HAZ				S	Sn	17 21 45.9	-0.4
RUGZ	Raukumara Rang	1.09	259	P	Pb	17 21 33.1	-0.6
RUGZ				S	Sg	17 21 47.9	0.0
TKGZ	Te Karaka	1.15	234	P	Pb	17 21 34.3	-0.3
TKGZ				S	Sg	17 21 49.8	-0.1
MWZ	Matawai	1.31	244	P	Pn	17 21 36.2	-0.8
MWZ				S	Sb	17 21 51.9	-2.4
RIGZ	Rimuhau	1.37	226	P	Pn	17 21 37.4	-0.4
PRGZ	Paritu Road	1.47	218	P	Pn	17 21 38.6	-0.5
RAGZ	Rawiri	1.47	240	P	Pn	17 21 38.5	-0.7
URZ	Urewera	1.59	251	P	Pn	17 21 40.6	-0.2
WHRZ	Whale Island	1.63	266	P	Pn	17 21 42.0	+0.7
MHGZ	Mahia Peninsul	1.64	212	P	Pn	17 21 41.3	-0.2
KNZ	Kokohu	1.65	220	P	Pn	17 21 40.6	-1.0
SNGZ	Shannon Statio	1.67	232	P	Pn	17 21 41.2	-0.8
RTZ	Ruatahuna	1.82	242	P	Pn	17 21 43.8	-0.3
EDRZ	Edgecumbe	1.84	259	P	Pn	17 21 44.0	-0.3
MARZ	Manawahe	1.88	263	P	Pb	17 21 46.6	-0.4
RAHZ	Arahi	1.91	232	P	Pn	17 21 45.3	+0.1
MUGZ	Murupara	1.92	247	P	Pn	17 21 45.3	0.0
WHHZ	Waihua	1.92	226	P	Pn	17 21 44.9	-0.5
OPRZ	Ohinepanea	1.96	267	P	Pn	17 21 45.3	-0.6
MTHZ	Maungataniwha	2.03	237	P	Pn	17 21 46.5	-0.5
TARZ	Mount Tarawera	2.05	256	P	Pn	17 21 47.2	0.0
RRRZ	Republican Roa	2.06	253	P	Pg	17 21 51.4	-1.0
OMRZ	Omania	2.13	260	P	Pn	17 21 48.7	+0.5
ARHZ	Aropaoanui	2.19	226	P	Pn	17 21 48.8	-0.2
ALRZ	Allen Road	2.26	249	P	Pn	17 21 50.4	+0.4
HSRZ	Hossack Road	2.26	255	P	Pn	17 21 51.1	+1.1
MRHZ	Matea Rd	2.31	242	P	Pn	17 21 50.8	0.0
CKHZ	Cape Kidnapper	2.43	218	P	Pn	17 21 51.1	-1.2
BKZ	Black Stump Fm	2.43	234	P	Pn	17 21 51.7	-0.7
HATZ	Hinemaiaia	2.57	243	P	Pn	17 21 53.6	-0.6
KUTZ	Kaahu Road	2.63	253	P	Pn	17 21 55.5	+0.4
KAHZ	Kahuranaki	2.63	219	P	Pn	17 21 53.7	-1.5
RITZ	Rihia Road	2.77	243	P	Pn	17 21 57.1	0.0
RATZ	Rangitukua	2.79	246	P	Pn	17 21 57.1	-0.2
TOZ	Tahuroa Road	2.79	270	P	Pn	17 21 57.6	+0.3
TLZ	Tolley Road	2.81	257	P	Pn	17 21 58.2	+0.6
PXZ	Pawanui	2.83	216	P	Pn	17 21 56.0	-1.8
KUZ	Kuaotunu	2.83	290	P	Pn	17 21 57.7	-0.1
KATZ	Kakaramea	2.88	244	P	Pn	17 21 58.3	-0.4
BHHZ	Black Hill Sta	2.89	233	P	Pn	17 21 57.7	-1.1
TMVZ	Te Maari	2.94	242	P	Pn	17 21 58.6	-0.9
ETVZ	East Tongariro	2.94	241	P	Pn	17 21 58.7	-0.8
KRVZ	Karewarewa	2.97	242	P	Pn	17 21 59.1	-0.8
OTVZ	Oturere	2.99	241	P	Pn	17 21 59.3	-0.9
WTVZ	West Tongariro	3.02	242	P	Pn	17 21 60.0	-0.6
NGZ	Ngauruhoe	3.04	241	P	Pn	17 22 00.0	-0.8
MOVZ	Moawhango	3.05	236	P	Pn	17 21 59.8	-1.1
WPHZ	Waipukurau	3.06	220	P	Pn	17 21 59.5	-1.5
FWVZ	Far West T-bar	3.11	240	P	Pn	17 22 01.0	-0.8
TWVZ	Taurewa	3.11	244	P	Pn	17 22 01.0	-0.8
WNVZ	Wahianoa	3.11	239	P	Pn	17 22 00.9	-0.9
PRHZ	Porangahau	3.12	216	P	Pn	17 21 59.9	-1.9
GRZ	Great Barrier	3.23	297	P	Pn	17 22 04.3	+0.9
WIAZ	Waiheke Island	3.25	286	P	Pn	17 22 04.0	+0.4
TSZ	Takapari Road	3.31	225	P	Pn	17 22 02.3	-2.2
ANWZ	Angora Road	3.34	216	P	Pn	17 22 03.2	-1.6
ETAZ	East Tamaki Re	3.37	283	P	Pn	17 22 05.9	+0.7
DVHZ	Dannevirke	3.37	220	P	Pn	17 22 03.1	-2.3
HIZ	Hauiti	3.37	256	P	Pn	17 22 06.2	+0.9
EPAZ	Eden Park BICE	3.53	283	P	Pn	17 22 08.5	+1.1
HBAZ	Herne Bay Bore	3.54	284	P	Pn	17 22 08.8	+1.1
AWAZ	Awhitu Peninsu	3.56	280	P	Pn	17 22 09.0	+1.1
VRZ	Vera Road	3.62	247	P	Pn	17 22 08.6	0.0
BFZ	Birch Farm	3.63	216	P	Pn	17 22 06.1	-2.7
POWZ	Post Office Ro	3.65	223	P	Pn	17 22 06.7	-2.4
PRWZ	Pori Road	3.66	219	P	Pn	17 22 07.3	-2.0
RVAZ	Riverhead Bore	3.68	284	P	Pn	17 22 10.6	+1.0
WAZ	Wanganui	3.73	237	P	Pn	17 22 09.8	-0.5
MRZ	Mangatainoka R	3.94	222	P	Pn	17 22 10.2	-2.9
LREZ	Lake Rotokare	4.00	244	P	Pn	17 22 14.0	+0.1
TMWZ	Te Maipa	4.13	215	P	Pn	17 22 12.4	-3.3
PREZ	Palmer Road	4.13	246	P	Pn	17 22 16.8	+1.0
HOWZ	Holdsworth Sta	4.15	220	P	Pn	17 22 12.8	-3.2
NEZ	North Egmont	4.15	247	P	Pn	17 22 16.8	+0.8
WCZ	Waipu Caves	4.17	294	P	Pn	17 22 17.5	+1.2
PKE	Pukeiti	4.21	249	P	Pn	17 22 17.5	+0.7
KHEZ	Kahui Hut	4.22	247	P	Pn	17 22 17.8	+0.8
OGWZ	Otaki Gorge	4.27	223	P	Pn	17 22 14.5	-3.2
MTW	Mount Morrison	4.35	218	P	Pn	17 22 15.3	-3.5
KIW	Kapiti Island	4.45	225	P	Pn	17 22 16.8	-3.3
PAWZ	Paruwai Farm	4.56	216	P	Pn	17 22 18.2	-3.4
DUWZ	D'Urville Isla	4.99	231	P	Pn	17 22 24.3	-3.2
OUZ	Omahuta	5.06	298	P	Pn	17 22 30.4	+1.9
CTZ	Chatham Island	6.82	152	P	Pn	17 22 54.7	+2.1
LTZ	Lake Taylor	7.20	224	P	Pn	17 22 54.9	-3.0

IDC 01 17:48:55.7±1.2, 6°.52N×60°.16E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/31, mbtmp3.5/6, MS3.3/8, Ms1 3.3/8, ms1mx3.0/39, Error ellipse: s-maj=40.3km s-min=26.5km az=167.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	Kilima Mbogo	24.10	252	P	P	17 54 13.9	+0.3
	0.8nm,0.4s,baz=47,slow=14,SNR=4.2						
KMBO				LR	LR	18 03 07.5	
	comp=Z,76nm,20.6s,baz=90,slow=35						
OPO	Ambohidratompo	28.03	207	LR	LR	18 03 15.5	
	comp=Z,64nm,19.7s,baz=212,slow=31						
AAK	Ala-Archa	38.13	17	LR	LR	18 11 57.6	
	comp=Z,63nm,20.1s,baz=181,slow=36						
CMAR	Chiang Mai Arr	39.58	69	P	P	17 56 29.7	+0.6
	0.4nm,0.8s,baz=255,slow=8.3,SNR=2.8						
CMAR				LR	LR	18 10 39.6	
	comp=Z,30nm,21.3s,baz=255,slow=33						
AKTO	Aktyubinsk	43.80	358	LR	LR	18 16 48.2	
	comp=Z,34nm,20.6s,baz=155,slow=38						
MKAR	Makanchi Array	44.41	22	P	P	17 57 07.6	-0.6
	0.2nm,0.6s,baz=219,slow=6.7,SNR=2.7						
BOSA	Boshof	48.50	222	LR	LR	18 17 10.1	
	comp=Z,50nm,18.1s,baz=27,slow=35						
OBN	Obninsk	52.01	343	LR	LR	18 22 14.0	
	comp=Z,11nm,18.3s,baz=2.0,slow=38						
SONM	Songino Array	56.87	36	P	P	17 58 42.6	+0.1
	0.4nm,0.8s,baz=232,slow=7.1,SNR=2.3						
ESDC	Sonseca Array	66.02	311	P	P	17 59 44.3	-0.1
	0.5nm,0.9s,baz=77,slow=5.8,SNR=3.5						
ARCES	ARCESS Array B	66.85	347	LR	LR	18 30 43.7	
	comp=Z,20nm,18.8s,baz=100,slow=38						
ASAR	Alice Springs	77.88	116	P	P	18 00 55.6	-0.3
	0.6nm,0.8s,baz=293,slow=6.4,SNR=5.8						

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*IDC **01** 18:12:46.2±0.8, 11°.91N×143°.57E, h0km, mb3.9/19, mb1 4.1/20, mb1mx3.9/62, mbtmp3.9/20, ML4.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/51, Error ellipse: s-maj=23.6km s-min=17.0km az=110.0*

*NEIC **01** 18:12:51.6±1.0, 11°.9N±0°.1×143°.7E±0°.2, h36km±9km, mb4.4/18, Error ellipse: s-maj=30.9km s-min=9.8km az=125.0*

ISC 01 18:12:50.3±0.8, 11°.9N±0°.1×143°.6E±0°.1, h25km, n46, σ0s81/40, mb4.3/29, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.06	37	Pn	Pn	18 13 23.4	+0.1
	123nm,0.3s,baz=108,slow=0.5,SNR=69						
GUMO				Sn	Sb	18 13 50.9	-1.2
	174nm,0.3s,baz=339,slow=23,SNR=14						
GUMO				LR	LR	18 14 22.3	
	comp=Z,209nm,20.3s,baz=118,slow=46						
GUMO	Guam	2.06	37		Pn	18 13 23.2	-0.1
H11S3	WAKE ISLAND Hy	23.19	71	T	T	18 42 00.5	
	baz=330,slow=78,SNR=4.6						
H11S1	WAKE ISLAND Hy	23.21	71	T	T	18 42 02.0	
	baz=330,slow=78,SNR=4.1						
H11S2	WAKE ISLAND Hy	23.21	71	T	T	18 42 00.9	
	baz=330,slow=78,SNR=5.3						
H11N1	WAKE ISLAND Hy	23.68	68	T	T	18 42 43.9	
	baz=255,slow=75,SNR=6.3						
H11N2	WAKE ISLAND Hy	23.69	68	T	T	18 42 48.7	
	baz=255,slow=75,SNR=3.5						
H11N3	WAKE ISLAND Hy	23.70	68	T	T	18 42 44.3	
	baz=255,slow=75,SNR=5.0						
JNU	Nakatsue	24.10	333	P	P	18 18 04.8	+0.8
	5.2nm,0.8s,baz=187,slow=8.1,SNR=1.7						
MJAR	Matsushiro Arr	24.98	350	P	P	18 18 12.9	+0.9
	1.2nm,0.7s,baz=164,slow=6.6,SNR=2.3						
MAJO	Matsushiro	24.98	350	P	P	18 18 11.2	-0.9
KSRS	Korea Array	29.04	334	P	P	18 18 47.8	-0.6
	0.8nm,0.6s,baz=155,slow=6.7,SNR=2.6						
WRAB	Tennant Creek	32.95	196	P	P	18 19 23.0	-0.1
WRAB				IAmb	IAmb	18 19 24.3	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	32.96	196	P	P	18 19 22.4	-0.8
WB2				IAmb	IAmb	18 19 27.7	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	32.96	196	P	P	18 19 23.5	+0.3
	comp=Z,1.0nm,0.6s,baz=19,slow=9.7,SNR=14						
ASAR	Alice Springs	36.63	195	P	P	18 19 53.7	-1.2
	comp=Z,0.2nm,0.9s,baz=15,slow=12,SNR=2.1						
KLR	Kul'dur	38.46	347	P	P	18 20 10.7	+0.6
	comp=Z,0.5nm,0.4s,baz=138,slow=16,SNR=2.1						
CMAR	Chiang Mai Arr	43.50	284	P	P	18 20 51.8	-0.2
	comp=Z,0.4nm,0.7s,baz=96,slow=6.1,SNR=3.4						
SONM	Songino Array	47.39	326	P	P	18 21 23.2	+0.6
	comp=Z,0.4nm,0.5s,baz=134,slow=7.4,SNR=5.6						
MK31	Makanchi Array	61.83	317	P	P	18 23 08.2	+0.8
MKAR	Makanchi Array	61.83	317	P	P	18 23 08.0	+0.7
	comp=Z,0.6nm,0.5s,baz=93,slow=8.9,SNR=10						
MAKZ	Makanchi	62.05	317	P	P	18 23 09.6	+0.8
ZALV	Zalesovo Beam	62.26	325	P	P	18 23 09.7	-0.3
	comp=Z,1.1nm,0.4s,baz=109,slow=8.5,SNR=2.2						
ANM	Nome	63.18	22	P	P	18 23 16.4	+0.4
ANM				IAmb	IAmb	18 23 35.1	
	comp=Z,6.0nm,1.5s						
KURK	Kurchatov	65.06	321	P	P	18 23 28.8	+0.2
KURBB	Kurchatov Arra	65.10	320	P	P	18 23 28.4	-0.4
	comp=Z,2.1nm,0.6s,baz=105,slow=6.6,SNR=15						
KTH	Kantishna Hill	68.55	26	P	P	18 23 50.7	0.0
KTH				IAmb	IAmb	18 23 51.8	
	comp=Z,4.6nm,1.0s						
WRH	Wood River Hil	70.00	25	P	P	18 23 58.8	-0.8
MDM	Murphy Dome	70.07	25	P	P	18 23 58.9	-1.1
MDM				IAmb	IAmb	18 24 17.0	
	comp=Z,3.3nm,1.1s						
BVAR	Borovoye Array	70.46	322	P	P	18 24 02.7	+0.1
	comp=Z,1.1nm,0.4s,baz=119,slow=5.1,SNR=19						
BRVK	Borovoye	70.53	322	P	P	18 24 03.1	+0.2
BRVK				IAmb	IAmb	18 24 04.4	
	comp=Z,3.0nm,1.1s						
IL31		70.58	25	P	P	18 24 01.8	-1.2
ILAR	Eielson Array	70.58	25	P	P	18 24 01.8	-1.3
	comp=Z,1.1nm,0.7s,baz=252,slow=5.9,SNR=13						
TOLK	Toolik Lake Re	70.59	21	P	P	18 24 02.7	-0.5
TOLK				IAmb	IAmb	18 24 04.8	
	comp=Z,3.0nm,0.6s						
RIDG	Independent Ri	71.23	26	P	P	18 24 07.1	0.0
RIDG				IAmb	IAmb	18 24 08.1	
	comp=Z,6.3nm,1.2s						
VRDI	Verde Repeater	71.42	29	P	P	18 24 08.0	-0.4
DOT	Dot Lake	71.55	27	P	P	18 24 09.2	+0.1
DOT				IAmb	IAmb	18 24 10.4	
	comp=Z,3.4nm,1.0s						
ISLE	Juniper Island	71.86	30	P	P	18 24 12.0	+0.9
ABKAR	Akbulak array	76.94	318	P	P	18 24 41.0	+0.3
ABKAR				IAmb	IAmb	18 24 41.6	
	comp=Z,1.9nm,0.6s						
ARU	Arti	77.42	325	P	P	18 24 41.9	-1.3
	comp=Z,0.6nm,0.6s,baz=114,slow=6.1,SNR=3.6						
GEYT	Alibeck	79.24	307	P	P	18 24 52.9	-0.9
	comp=Z,1.1nm,0.8s,baz=79,slow=2.2,SNR=3.6						
YKA	Yellowknife Ar	84.89	27	P	P	18 25 23.0	+0.2
	comp=Z,0.4nm,0.5s,baz=288,slow=3.9,SNR=14						
NEW	Newport	87.28	41	LR	LR	19 01 10.6	
	comp=Z,28nm,19.4s,baz=312,slow=33						
ARCES	ARCESS Array B	88.27	342	P	P	18 25 39.5	+0.2
	comp=Z,2.3nm,0.6s,baz=72,slow=7.8,SNR=10						
NVAR	Mina Array Bea	88.91	51	P	P	18 25 45.4	+2.1
	comp=Z,1.2nm,0.7s,baz=270,slow=5.4,SNR=3.9						
FINES	FINESS Array B	92.13	335	P	P	18 25 56.3	-1.1
	comp=Z,1.4nm,0.7s,baz=75,slow=3.3,SNR=8.9						

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*NEIC **01** 18:21:12.6±1.5, 38°.06S±0°.08×179°.00E±0°.10, h10km±2km, mb4.4/10, Error ellipse: s-maj=17.2km s-min=8.4km az=43.0*

*IDC **01** 18:21:13.3±1.6, 37°.69S×178°.77E, h0km, mb4.2/4, mb1 4.4/5, mb1mx4.0/29, mbtmp4.2/5, ML3.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.9/33, Error ellipse: s-maj=42.1km s-min=17.6km az=150.0*

*WEL **01** 18:21:14.1±0.7, 38°S±5°×17°9E±°, h12km, M3.9/24, ML4.2/24, MLv3.9/24, Error ellipse: s-maj=0.0km s-min=0.0km az=20.5*

*NOU **01** 18:21:29.5, 38°.78S×177°.58E, h0km, MLv3.9, North Island, New Zealand*

ISC 01 18:21:11.5±1.9, 37°.91S±0°.04×179°.08E±0°.06, h0km±11km, n151, σ1s45/152, mb4.4/10, MS3.3/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	0.53	280	P	Pb	18 21 23.3	-0.3
PUZ	Puketiti	0.67	256	P	Pn	18 21 27.5	-0.6
PUZ				S	Sn	18 21 37.1	-2.2
MXZ	Matakaoa Point	0.70	300		Pb	18 21 26.8	+0.2
MXZ	Matakaoa Point	0.70	300	P	Pb	18 21 26.8	+0.2
PKGZ	Pakihiroa	0.79	272	P	Pb	18 21 28.2	+0.1
CNGZ	Carnagh Statio	0.89	230	P	Pn	18 21 33.2	+1.9
CNGZ				S	Sn	18 21 48.8	+3.9
TWGZ	Tauwhareparae	0.90	253	P	Pn	18 21 32.0	+0.6
TWGZ				S	Sn	18 21 45.3	0.0
HAZ	Te Kaha	1.04	278	P	Pb	18 21 32.5	+0.3
TKGZ	Te Karaka	1.10	241	P	Pn	18 21 35.3	+1.1
TKGZ				S	Sn	18 21 51.3	+1.3
RUGZ	Raukumara Rang	1.11	267	P	Pn	18 21 34.2	-0.2
RUGZ				S	Sb	18 21 48.0	-0.6
MWZ	Matawai	1.29	251	P	Pn	18 21 37.3	+0.5
MWZ				S	Sn	18 21 53.6	-1.2
RIGZ	Rimuhau	1.30	232	P	Pn	18 21 38.4	+1.5
RIGZ				S	Sn	18 21 56.2	+1.2
PRGZ	Paritu Road	1.38	223	P	Pb	18 21 39.8	+1.7
RAGZ	Rawiri	1.43	246	P	Pb	18 21 39.6	+0.5
MHGZ	Mahia Peninsul	1.54	216	P	Pg	18 21 42.1	+1.2
WIZ	White Island	1.55	284	P	Pg	18 21 40.9	-0.2
KNZ	Kokohu	1.56	224	P	Pb	18 21 41.6	+0.4
KNZ				S	Sg	18 22 02.2	+0.5
URZ	Urewera	1.59	257	Pg	Pb	18 21 41.7	0.0
	65nm,0.3s,baz=125,slow=1.0,SNR=318						
URZ				LR	LR	18 21 46.0	
	comp=Z,40nm,21.7s,baz=34,slow=23						
URZ				Lg	Lg	18 22 01.5	
	100nm,0.3s,baz=143,slow=20,SNR=13						
URZ	Urewera	1.59	257	P	Pb	18 21 41.7	0.0
SNGZ	Shannon Statio	1.62	237	P	Pb	18 21 42.4	+0.2
WHRZ	Whale Island	1.66	271	P	Pg	18 21 43.2	-0.2
RTZ	Ruatahuna	1.79	246	P	Pb	18 21 44.8	-0.4
RTZ				S	Sb	18 22 07.1	-1.2
WHHZ	Waihua	1.85	231	P	Pb	18 21 45.9	-0.3
EDRZ	Edgecumbe	1.86	263	P	Pn	18 21 45.2	+0.6
RAHZ	Arahi	1.86	237	P	Pb	18 21 45.9	-0.4
MARZ	Manawahe	1.90	267	P	Pg	18 21 48.5	+0.6
MUGZ	Murupara	1.90	252	P	Pn	18 21 46.0	+0.8
MTHZ	Maungataniwha	1.99	241	S	Sb	18 22 12.4	-1.5
OPRZ	Ohinepanea	2.00	271	P	Pn	18 21 46.3	-0.1
TARZ	Mount Tarawera	2.05	260	P	Pn	18 21 48.0	+0.6
ARHZ	Aropaoanui	2.12	230	P	Pb	18 21 49.9	-0.8
ARHZ				S	Sb	18 22 16.4	-1.1
OMRZ	Omania	2.15	264	P	Pn	18 21 48.1	-0.4
PRRZ	Plateau Road	2.19	254	P	Pn	18 21 49.5	+0.3
TGRZ	Tauranga	2.24	274	P	Pn	18 21 49.6	-0.2
KARZ	Kaharoa	2.24	266	P	Pn	18 21 50.0	+0.2
ALRZ	Allen Road	2.25	252	P	Pn	18 21 50.9	+1.0
MRHZ	Matea Rd	2.28	245	P	Pn	18 21 51.7	+1.3
CKHZ	Cape Kidnapper	2.34	221	P	Pn	18 21 52.2	+1.0
WPRZ	Whakapapatarin	2.37	254	P	Pn	18 21 53.3	+1.6
BKZ	Black Stump Fm	2.38	238		Pn	18 21 52.8	+1.0
BKZ	Black Stump Fm	2.38	238	P	Pn	18 21 52.8	+1.0
KMRZ	Kaimai	2.48	271	P	Pn	18 21 54.0	+0.9
HATZ	Hinemaiaia	2.54	247	P	Pn	18 21 54.7	+0.8
KAHZ	Kahuranaki	2.54	222	P	Pn	18 21 54.7	+0.7
WHTZ	Whakaora	2.57	252	P	Pn	18 21 56.2	+1.8
KUTZ	Kaahu Road	2.63	256	P	Pn	18 21 56.3	+1.2
PXZ	Pawanui	2.73	219	P	Pn	18 21 57.0	+0.5
RITZ	Rihia Road	2.74	246	P	Pn	18 21 57.8	+1.1
RATZ	Rangitukua	2.77	249	P	Pn	18 21 58.1	+1.0
TLZ	Tolley Road	2.82	260	P	Pn	18 21 59.0	+1.2
BHHZ	Black Hill Sta	2.83	235	P	Pn	18 21 58.7	+0.6
TOZ	Tahuroa Road	2.84	273	P	Pn	18 21 58.0	0.0
KATZ	Kakaramea	2.86	247	P	Pn	18 21 59.4	+1.0
TMVZ	Te Maari	2.91	245	P	Pn	18 21 59.7	+0.6
ETVZ	East Tongariro	2.91	244	P	Pn	18 21 59.7	+0.6
KUZ	Kuaotunu	2.92	293	P	Pn	18 21 58.7	-0.4
KRVZ	Karewarewa	2.94	245	P	Pn	18 22 00.2	+0.7
OTVZ	Oturere	2.95	244	P	Pn	18 22 00.4	+0.6
WPHZ	Waipukurau	2.97	223	P	Pn	18 22 00.2	+0.4
WTVZ	West Tongariro	2.99	245	P	Pn	18 22 01.0	+0.8
MOVZ	Moawhango	3.00	239	P	Pn	18 22 00.9	+0.6
NGZ	Ngauruhoe	3.00	244	P	Pn	18 22 01.1	+0.7
PNHZ	Pukenui	3.00	227	P	Pn	18 22 00.4	+0.1
TUVZ	Tukino	3.00	242	P	Pn	18 22 01.3	+0.9
PRHZ	Porangahau	3.02	218	P	Pn	18 22 01.0	+0.4
WHVZ	Whangaehu Hut	3.06	242	P	Pn	18 22 02.0	+0.7
WNVZ	Wahianoa	3.07	242	P	Pn	18 22 01.9	+0.6
FWVZ	Far West T-bar	3.07	243	P	Pn	18 22 02.0	+0.6
TWVZ	Taurewa	3.08	247	P	Pn	18 22 01.9	+0.5
PKVZ	Pokaka	3.23	244	P	Pn	18 22 04.3	+0.8
TSZ	Takapari Road	3.24	228	P	Pn	18 22 03.4	-0.1
ANWZ	Angora Road	3.25	218	P	Pn	18 22 03.6	0.0
DVHZ	Dannevirke	3.29	223	P	Pn	18 22 04.0	-0.2
WIAZ	Waiheke Island	3.33	288	P	Pn	18 22 05.1	+0.3
GRZ	Great Barrier	3.34	299	P	Pn	18 22 05.2	+0.4
HIZ	Hauiti	3.38	259		Pn	18 22 07.0	+1.5
HIZ	Hauiti	3.38	259	P	Pn	18 22 07.3	+1.8
ETAZ	East Tamaki Re	3.44	285	P	Pn	18 22 06.8	+0.5
MBAZ	Motutapu North	3.52	288	P	Pn	18 22 08.0	+0.6
BFZ	Birch Farm	3.53	218		Pn	18 22 07.2	-0.3
BFZ	Birch Farm	3.53	218	P	Pn	18 22 06.8	-0.7
POWZ	Post Office Ro	3.57	225	P	Pn	18 22 07.9	-0.2
PRWZ	Pori Road	3.57	221	P	Pn	18 22 08.2	0.0
VRZ	Vera Road	3.60	249	P	Pn	18 22 09.5	+1.1
EPAZ	Eden Park BICE	3.60	285	P	Pn	18 22 09.5	+1.0
HBAZ	Herne Bay Bore	3.62	286	P	Pn	18 22 09.9	+1.1
AWAZ	Awhitu Peninsu	3.63	282	P	Pn	18 22 09.9	+1.1
ABAZ	Army Bay	3.63	290	P	Pn	18 22 09.7	+0.8
WAZ	Wanganui	3.69	239	P	Pn	18 22 10.7	+1.1
WTAZ	Waiatarua	3.72	284	P	Pn	18 22 11.0	+0.9
CPWZ	Castlepoint	3.73	216	P	Pn	18 22 10.3	+0.1
RVAZ	Riverhead Bore	3.76	286	P	Pn	18 22 11.7	+1.0
MRZ	Mangatainoka R	3.86	224	P	Pn	18 22 11.2	-0.9
MHEZ	Mangahewa	3.91	251	P	Pn	18 22 13.2	+0.5
LREZ	Lake Rotokare	3.97	246	P	Pn	18 22 15.0	+1.5
DREZ	Durham Road	4.03	250	P	Pn	18 22 16.4	+2.0
PREZ	Palmer Road	4.11	248	P	Pn	18 22 17.8	+2.3
NEZ	North Egmont	4.13	249	P	Pn	18 22 17.9	+2.0
PKE	Pukeiti	4.19	251	P	Pn	18 22 18.3	+1.7
KHEZ	Kahui Hut	4.20	249	P	Pn	18 22 18.8	+2.0
WCZ	Waipu Caves	4.27	296	P	Pn	18 22 18.5	+0.8
NBEZ	Newall Road No	4.30	250	P	Pn	18 22 20.8	+2.7
MSWZ	Moikau Station	4.58	219		Pn	18 22 20.2	-1.8
PLWZ	Palliser	4.69	218	Pn	Pn	18 22 21.4	-2.1
BHW	Baring Head	4.76	222	Pn	Pn	18 22 22.3	-2.2
SNZO	South Karori	4.79	224	Pn	Pn	18 22 22.2	-2.6
OUZ	Omahuta	5.17	300		Pn	18 22 31.1	+1.1
OUZ	Omahuta	5.17	300	P	Pn	18 22 31.5	+1.5
TUWZ	Tuamarina	5.29	227		Pn	18 22 27.9	-3.9
NNZ	Nelson	5.50	231	Pn	Pn	18 22 32.5	-2.1
BSWZ	Blackbirch Sta	5.52	225	Pn	Pn	18 22 32.9	-1.9
QRZ	Quartz Range	5.85	238	Pn	Pn	18 22 37.0	-2.4
THZ	Tophouse	6.11	229	Pn	Pn	18 22 40.6	-2.4
KHZ	Kahutara	6.18	222	Pn	Pn	18 22 41.0	-2.9
CTZ	Chatham Island	6.67	152	P	Pn	18 22 55.4	+4.8
CTZ				S	Sn	18 24 07.0	-0.3
LTZ	Lake Taylor	7.12	225	Pn	Pn	18 22 54.1	-2.7
MQZ	McQueen's Vall	7.56	218	Pn	Pn	18 22 59.2	-3.7
OXZ	Oxford	7.61	223	Pn	Pn	18 22 60.0	-3.6
OXZ	Oxford	7.61	223	P	Pn	18 23 02.7	-0.8
RPZ	Rata Peaks	8.40	224	Pn	Pn	18 23 11.4	-3.0
	1.4nm,0.3s,baz=7.8,slow=5.6,SNR=5.6						
RPZ				Sn	Sn	18 24 40.4	-10
	2.0nm,0.3s,baz=192,slow=23,SNR=7.7						
RPZ	Rata Peaks	8.40	224		Pn	18 23 11.8	-2.6
FOZ	Fox Glacier	8.99	228	Pn	Pn	18 23 20.8	-1.8
LBZ	Lake Benmore	9.31	223	Pn	Pn	18 23 24.5	-2.4
ODZ	Otahua Downs	9.52	219	Pn	Pn	18 23 26.8	-3.0
DZM	Mont Dzumac	19.18	322	P	P	18 25 33.4	-3.4
	0.1nm,0.3s,baz=247,slow=2.2,SNR=3.6						
DZM	Mont Dzumac	19.18	322	*e*LR	LR	18 29 40.4	
	comp=Z,84nm,22.6s						
STKA	Stephens Creek	31.18	270	P	P	18 27 33.8	+1.6
	2.4nm,1.0s,baz=104,slow=8.3,SNR=3.2						
STKA				LR	LR	18 39 23.8	
	comp=Z,57nm,19.2s,baz=10,slow=35						
STKA	Stephens Creek	31.18	270	IAmb	IAmb	18 27 34.6	
	comp=Z,2.5nm,1.4s						
CTAO	Charters Tower	33.52	293	P	P	18 27 54.0	+1.1
CTAO				IAmb	IAmb	18 28 13.1	
	comp=Z,8.7nm,1.1s						
PAE	Paea	34.05	62	*e*T	T	19 03 57.3	
	comp=Z,1.9nm,0.3s						
PPT2	Papeete2	34.10	62	*e*LR	LR	18 37 21.6	
	comp=Z,63nm,21.2s						
TVO	Taravao	34.20	63	*e*T	T	19 04 09.6	
	comp=Z,1.3nm,0.4s						
VAH	Vaihoa	37.06	62	*e*T	T	19 07 41.3	
	comp=Z,4.9nm,0.3s						
COEN	Coen	39.77	297	P	P	18 28 46.3	+0.1
COEN				IAmb	IAmb	18 28 47.3	
	comp=Z,9.6nm,0.9s						
AS31	Alice Springs	40.93	277	P	P	18 28 54.8	-1.1
ASAR	Alice Springs	40.93	277	P	P	18 28 55.1	-0.7
	comp=Z,2.5nm,0.6s,baz=119,slow=7.7,SNR=95						
FORT	Forrest	42.28	264	P	P	18 29 06.2	-0.6
WR0	Warramunga Arr	42.44	282	P	P	18 29 07.0	-1.2
WR0				IAmb	IAmb	18 29 08.2	
	comp=Z,8.4nm,1.3s						
WB2	Warramunga Arr	42.60	282	P	P	18 29 08.7	-0.7
WB2				IAmb	IAmb	18 29 14.2	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	42.60	282	P	P	18 29 08.1	-1.4
WRAB				IAmb	IAmb	18 29 25.5	
	comp=Z,9.9nm,1.4s						
WRA	Warramunga Arr	42.61	282	P	P	18 29 08.7	-0.8
	comp=Z,1.2nm,0.4s,baz=122,slow=7.8,SNR=31						
WB0	Warramunga Arr	42.66	282	P	P	18 29 08.9	-1.1
WB0				IAmb	IAmb	18 29 16.5	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	50.43	278	P	P	18 30 10.1	-0.8
	comp=Z,3.0nm,0.6s,baz=136,slow=4.4,SNR=11						
FITZ	Fitzroy Crossi	50.43	278	P	P	18 30 10.1	-0.8
QSPA	South Pole Qui	52.21	180	LR	LR	18 49 32.3	
	comp=Z,32nm,19.9s,baz=341,slow=32						
H03N3	Juan Fernandez	78.56	123	T	T	19 59 45.2	
	baz=234,slow=72,SNR=41						
H03N2	Juan Fernandez	78.57	123	T	T	19 59 44.0	
	baz=234,slow=72,SNR=29						
H03N1	Juan Fernandez	78.58	123	T	T	19 59 44.3	
	baz=234,slow=72,SNR=24						
ARCES	ARCESS Array B	145.28	344	PKPbc	PKPbc	18 40 50.7	+1.0
	comp=Z,4.9nm,1.0s,baz=51,slow=7.1,SNR=4.3						
FINES	FINESS Array B	151.08	333	PKPbc	PKPbc	18 41 06.3	+0.8
	comp=Z,2.6nm,0.9s,baz=32,slow=5.6,SNR=3.7						
TORD	Torodi Ar. Bea	155.22	186	PKPab	PKPab	18 41 35.1	+3.3
	comp=Z,0.4nm,0.8s,baz=194,slow=0.6,SNR=2.4						

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*IDC **01** 18:34:28.4±0.8, 2°.15S×120°.86E, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.7/50, mbtmp3.8/11, ML3.6/3, MS3.4/10, Ms1 3.5/10, ms1mx3.2/33, Error ellipse: s-maj=27.5km s-min=14.8km az=62.0*

*DJA **01** 18:34:30.5±0.6, 2°S±2°×12°1E±°, h12km±5km, M4.5/24, mb4.4/15, mB4.9/2, MLv4.5/24, Mw(mB)4.1/2, MwMwp5.0/1,* *Mwp5.2/1*

ISC 01 18:34:32.3±1.9,**2°.22S**±0°.04×**120°.86E**±0°.05,**h27^{km}**±16^{km},**n40**,σ**1.40**/46,**mb3.7**/8,**MS3.3**/7,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	1.32	232	P	Pn	18 34 52.5	-2.4
TTSI				S	Sn	18 35 10.2	-1.5
APSI	Ampana	1.52	31	P	Pn	18 34 57.3	-0.4
APSI				S	Sb	18 35 19.2	+0.5
SPSI	Sidrap Palu	2.05	212	P	Pn	18 35 04.5	-0.4
SPSI				S	Sb	18 35 33.0	-0.8
LUWI	Luwuk	2.24	59	P	Pn	18 35 07.1	-0.5
LUWI				S	Sn	18 35 35.7	+1.3
BNSI	Bone	2.29	199	P	Pn	18 35 07.5	-0.8
KDI	Kendari	2.46	134	P	Pn	18 35 11.0	+0.3
MPSI	Mapaga	2.72	339	P	Pn	18 35 14.3	+0.2
MRSI	Marisa	2.89	22	P	Pn	18 35 16.2	-0.3
MRSI				S	Sn	18 35 49.8	-0.6
KAPI	Kappang	2.99	202	Pn	Pn	18 35 18.5	+0.7
	32nm,0.3s,baz=18,slow=5.8,SNR=63						
KAPI				Sn	Sn	18 35 56.7	+3.9
	52nm,0.3s,baz=263,slow=17,SNR=10						
BKSI	Bulukumba	3.17	193	P	Pn	18 35 20.7	+0.4
GTOI	Gorontalo	3.56	37	P	Pn	18 35 26.5	+0.7
GTOI				S	Sn	18 36 09.2	+2.2
BSSI	Bau Bau, Buton	3.91	185	P	Pn	18 35 31.6	+1.0
BKB	Balikpapan	4.07	283	P	Pn	18 35 33.9	+1.1
BKB				S	Sn	18 36 21.8	+2.2
KMSI	Cibinong	4.18	48	P	Pn	18 35 33.4	-0.9
SANI	Sanana	5.13	88	P	Pn	18 35 45.3	-2.0
	0.3nm30nm,0.8s						
SANI				S	Sn	18 36 44.1	-1.6
	0.3nm30nm,0.8s						
MTKI	Muara Teweh, K	6.09	282	P	Pn	18 36 01.3	+0.7
	0.2nm32nm,0.5s						
BBKI	Banjar Baru	6.13	258	P	Pn	18 36 01.7	+0.5
	0.2nm25nm,1.9s						
NLAI	Namlea	6.32	99	P	Pn	18 36 04.9	+1.2
	0.1nm29nm,1.1s						
TNTI	Ternate	7.15	66	P	Pn	18 36 15.7	+0.5
	0.1nm28nm,1.2s						
PLAI	Plampang	7.24	205	P	Pn	18 36 18.1	+1.7
	0.1nm19nm,1.1s						
SRBI	Singaraja	8.10	224	P	Pn	18 36 28.4	+0.3
	39nm,0.9s						
MSAI	Masohi	8.14	98	P	Pn	18 36 29.7	+1.0
	7.5nm,0.8s						
BATI	Baumata	8.41	161	LR	LR	18 40 07.0	
	comp=Z,685nm,21.8s,baz=282,slow=40						
JAGI	Jajag, Banyuwa	9.12	227	P	Pn	18 36 39.9	-2.2
	139nm,0.9s						
SWI	Sorong	10.48	83	P	Pn	18 37 00.6	-0.3
	8.2nm,0.9s						
SIJI	Sorong	10.49	83	Pn	Pn	18 37 01.7	+0.7
	2.1nm,0.3s,baz=244,slow=13,SNR=13						
SIJI				Sn	Sn	18 38 53.5	-4.2
	0.1nm,0.3s,baz=68,slow=23,SNR=1.4						
SIJI				LR	LR	18 41 53.9	
	comp=Z,121nm,19.1s,baz=254,slow=42						
FAKI	Fak Fak	11.40	94	P	Pn	18 37 13.3	-0.2
FITZ	Fitzroy Crossi	16.46	164	Pn	Pn	18 38 21.3	-0.1
	0.0nm,0.3s,baz=107,slow=11,SNR=2.3						
JAY	Jayapura	19.83	91	LR	LR	18 47 12.4	
	comp=Z,107nm,21.4s,baz=234,slow=38						
WRA	Warramunga Arr	22.00	144	P	P	18 39 23.6	-0.9
	1.8nm,1.1s,baz=324,slow=11,SNR=11						
WRA				LR	LR	18 49 02.9	
	comp=Z,102nm,20.1s,baz=195,slow=40						
PSI	Prapat	22.49	283	P	P	18 39 30.1	+0.1
	1.1nm,0.4s,baz=179,slow=7.1,SNR=1.9						
ASAR	Alice Springs	24.78	150	P	P	18 39 52.9	+0.8
	0.5nm,0.5s,baz=326,slow=8.5,SNR=16						
ASAR				PcP	PcP	18 43 28.8	+0.3
	0.2nm,0.4s,baz=340,slow=2.0,SNR=8.5						
ASAR				LR	LR	18 49 53.4	
	comp=Z,96nm,19.2s,baz=318,slow=37						
CMAR	Chiang Mai Arr	29.79	315	P	P	18 40 36.6	-0.4
	1.0nm,0.9s,baz=140,slow=7.4,SNR=6.8						
CMAR				LR	LR	18 53 29.2	
	comp=Z,106nm,19.1s,baz=196,slow=38						
STKA	Stephens Creek	35.38	149	P	P	18 41 27.1	+1.2
	1.8nm,0.9s,baz=345,slow=11,SNR=3.7						
HNR	Honiara	39.51	102	LR	LR	19 00 36.4	
	comp=Z,41nm,18.8s,baz=31,slow=40						
KSRS	Korea Array	40.02	9	LR	LR	19 00 50.9	
	comp=Z,40nm,19.7s,baz=212,slow=40						
SONM	Songino Array	51.43	348	P	P	18 43 34.3	-0.8
	0.8nm,0.7s,baz=169,slow=8.4,SNR=5.8						
MKAR	Makanchi Array	59.41	330	P	P	18 44 32.0	-0.4
	1.4nm,0.9s,baz=134,slow=7.8,SNR=8.0						
MKAR				LR	LR	19 11 52.6	
	comp=Z,41nm,20.4s,baz=140,slow=38						
ZALV	Zalesovo Beam	63.48	337	P	P	18 45 00.3	+0.6
	0.6nm,0.3s,baz=125,slow=14,SNR=1.7						
MAW	Mawson	76.20	200	LR	LR	19 19 32.7	
	comp=Z,26nm,19.7s,baz=72,slow=36						

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*NOU **01** 18:40:37.9,24°.12S×176°.27W,h103^{km},mb4.9,South of Fiji Islands*

*NEIC **01** 18:40:39.0±1.4,23°.99S±0°.09×177°.1W±0°.1,h103^{km}±5^{km}, mb4.7/117,Error ellipse: s-maj=18.7km s-min=11.0km az=114.0*

*IDC **01** 18:40:40.1±1.9,24°.04S×177°.16W,h112^{km}±17^{km}, mb4.1/23,mb1 4.3/26,mb1mx4.2/39,mbtmp4.5/26,MS3.0/3, Ms1 3.0/3,ms1mx2.7/29,Error ellipse: s-maj=14.4km s-min=12.0km az=129.0*

ISC 01 18:40:40.1±0.3,**24°.16S**±0°.05×**176°.87W**±0°.06,**h120^{km}**, **n257**,σ**1.49**/269,**mb4.6**/68,**22C-15D**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.16	190	P	Pn	18 41 55.0	-0.1
	90nm,0.3s,baz=101,slow=22,SNR=2.3						
RAO				S	Sn	18 42 55.2	+1.6
	40nm,0.3s,baz=86,slow=23,SNR=1.3						
RAO	Raoul Island	5.16	190	Pn	Pn	18 41 54.6	-0.6
RAO				Sn	Sn	18 42 54.6	+1.1
MSVF	Nonsavu	7.96	322	P	Pn	18 42 35.3	+2.2
	15nm,0.3s,baz=144,slow=9.7,SNR=103						
MSVF				S	Sn	18 44 04.3	+2.7
	0.8nm,0.3s,baz=40,slow=20,SNR=9.3						
MSVF				LR	LR	18 45 13.1	
	comp=Z,207nm,21.5s,baz=113,slow=36						
MSVF	Nonsavu	7.96	322	P	Pn	18 42 35.4	+2.3
NIUE	Niue	8.20	53		Pn	18 42 34.0	-2.3
URZ	Urewera	14.96	199	P	Pn	18 44 05.5	+0.2
	1.6nm,0.3s,baz=271,slow=3.3,SNR=9.4						
URZ				S	Sn	18 46 40.2	-11
	0.9nm,0.3s,baz=0.0,slow=23,SNR=7.0						
URZ				LR	LR	18 48 54.8	
	comp=Z,92nm,21.4s,baz=31,slow=33						
URZ	Urewera	14.96	199		P	18 44 07.0	-0.9
OUENC	Ouen Island, N	15.06	273	P	P	18 44 12.6	+3.5
YATNC	Mamie plateau,	15.09	275	P	P	18 44 12.4	+3.0
DZM	Mont Dzumac	15.49	274	P	P	18 44 14.9	+1.0
	1.2nm,0.3s,baz=79,slow=17,SNR=13						
DZM	Mont Dzumac	15.49	274	P	P	18 44 13.9	0.0
DZM				IAmb	IAmb	18 44 18.7	
	comp=Z,64nm,1.1s						
DZM	Mont Dzumac	15.49	274	P	P	18 44 17.2	+3.2
NOUC	Port Laguerre	15.61	274	P	P	18 44 18.6	+3.4
BKZ	Black Stump Fm	15.98	199	Pn	Pn	18 44 13.5	-4.6
RAR	Rarotonga	16.05	83	P	P	18 44 23.9	+3.8
	comp=Z,0.8nm,0.3s,baz=200,slow=7.5,SNR=4.1						
RAR				S	Sn	18 47 05.1	-12
	comp=Z,0.9nm,0.3s,baz=36,slow=21,SNR=2.4						
RAR	Rarotonga	16.05	83	Pn	Pn	18 44 18.5	-0.5
RAR				IAmb	IAmb	18 44 26.2	
	comp=Z,39nm,1.1s						
SANVU	Saraoutou	17.30	297		P	18 44 30.3	-3.5
SANVU	Saraoutou	17.30	297	P	Pn	18 44 38.3	+4.1
BFZ	Birch Farm	17.46	198	P	P	18 44 32.5	-3.0
BFZ				IAmb	IAmb	18 44 39.0	
	comp=Z,61nm,1.5s						
MSWZ	Moikau Station	18.43	199	P	P	18 44 43.7	-2.4
QRZ	Quartz Range	18.84	206	P	P	18 44 49.9	-0.8
QRZ				IAmb	IAmb	18 45 14.5	
	comp=Z,48nm,1.4s						
CMWZ	Cape Campbell	19.05	201	P	P	18 44 53.7	+0.9
THZ	Tophouse	19.51	203	P	P	18 44 55.6	-2.3
KHZ	Kahutara	19.87	201	P	P	18 44 57.4	-4.3
KNTN	Kanton	21.83	14	P	P	18 45 20.0	-3.0
KNTN	Kanton	21.83	14	P	P	18 45 20.6	-2.4
RPZ	Rata Peaks	21.88	204	P	P	18 45 21.6	-1.7
	comp=Z,5.6nm,0.5s,baz=240,slow=3.0,SNR=5.6						
RPZ	Rata Peaks	21.88	204	P	P	18 45 20.7	-2.6
RPZ				IAmb	IAmb	18 45 34.3	
	comp=Z,38nm,1.4s						
FOZ	Fox Glacier	22.21	206	P	P	18 45 25.5	-1.1
FOZ				IAmb	IAmb	18 45 48.3	
	comp=Z,45nm,1.3s						
LBZ	Lake Benmore	22.78	205	P	P	18 45 31.1	-1.3
LBZ				IAmb	IAmb	18 45 41.2	
	comp=Z,35nm,1.4s						
WKZ	Wanaka	23.61	206	P	P	18 45 38.5	-1.5
WKZ				IAmb	IAmb	18 46 00.1	
	comp=Z,32nm,1.1s						
MLZ	Mavora Lakes	24.41	206	P	P	18 45 46.2	-1.1
MLZ				IAmb	IAmb	18 45 49.8	
	comp=Z,46nm,1.4s						
WHZ	Wether Hill Ro	24.91	206	P	P	18 45 50.4	-1.4
WHZ				IAmb	IAmb	18 46 13.8	
	comp=Z,40nm,1.3s						
PPT	Papeete	26.31	81	LR	LR	18 55 50.5	
	comp=Z,9.9nm,18.8s,baz=202,slow=34						
CTA	Charters Tower	34.33	269	P	P	18 47 15.2	-0.2
	comp=Z,10nm,0.4s,baz=95,slow=11,SNR=82						
CTAO	Charters Tower	34.33	269	P	P	18 47 14.9	-0.6
CTAO				IAmb	IAmb	18 47 17.0	
	comp=Z,12nm,0.7s						
STKA	Stephens Creek	37.29	249	P	P	18 47 40.1	-0.4
	comp=Z,1.3nm,0.5s,baz=92,slow=11,SNR=8.6						
STKA				PcP	PcP	18 49 58.8	+1.2
	comp=Z,1.4nm,0.6s,baz=38,slow=2.9,SNR=3.2						
PMG	Port Moresby	37.29	287	P	P	18 47 39.5	-1.3
	comp=Z,13nm,0.7s,baz=91,slow=6.1,SNR=9.8						
PMG	Port Moresby	37.29	287	P	P	18 47 39.5	-1.3
PMG				IAmb	IAmb	18 47 41.9	
	comp=Z,15nm,0.8s						
COEN	Coen	38.98	278	P	P	18 47 54.9	0.0
COEN				IAmb	IAmb	18 47 59.7	
	comp=Z,10nm,1.2s						
BBOO	Buckleboo	41.98	247	P	P	18 48 18.1	-1.3
BBOO				IAmb	IAmb	18 48 31.7	
	comp=Z,9.6nm,1.1s						
AS31	Alice Springs	44.81	260	P	P	18 48 40.8	-1.6
ASAR	Alice Springs	44.81	260	P	P	18 48 40.5	-1.9
	comp=Z,0.9nm,0.5s,baz=92,slow=8.3,SNR=24						
ASAR				PcP	PcP	18 50 22.1	-0.3
	comp=Z,1.0nm,0.6s,baz=108,slow=4.0,SNR=6.9						
ASAR				ScP	ScP	18 54 03.4	-0.3
	comp=Z,1.4nm,1.0s,baz=96,slow=4.8,SNR=6.3						
WR0	Warramunga Arr	45.05	265	P	P	18 48 42.0	-2.3
WB2	Warramunga Arr	45.23	265	P	P	18 48 43.4	-2.2
WRAB	Tennant Creek	45.23	265	P	P	18 48 43.2	-2.4
WB0	Warramunga Arr	45.23	266	P	P	18 48 43.9	-1.8
WB0				IAmb	IAmb	18 48 45.4	
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	45.24	265	P	P	18 48 43.5	-2.3
	comp=Z,2.2nm,0.4s,baz=94,slow=8.4,SNR=71						
WRA				PcP	PcP	18 50 23.8	0.0
	comp=Z,0.7nm,0.8s,baz=104,slow=3.2,SNR=4.5						
WRA				ScP	ScP	18 54 05.7	+0.3
	comp=Z,0.9nm,0.9s,baz=107,slow=4.0,SNR=4.1						
FORT	Forrest	48.90	249	P	P	18 49 13.3	-0.6
FORT				IAmb	IAmb	18 49 39.0	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	53.66	265	P	P	18 49 48.9	-0.7
FITZ				IAmb	IAmb	18 50 06.3	
	comp=Z,16nm,1.4s						
VNDA	Vanda	54.38	186	P	P	18 49 55.8	+1.8
	comp=Z,1.1nm,0.8s,baz=24,slow=5.6,SNR=6.7						
VNDA	Vanda	54.38	186	P	P	18 49 55.1	+1.1
CASY	Casey	61.14	206	P	P	18 50 41.6	+0.2
CASY				IAmb	IAmb	18 50 42.5	
	comp=Z,8.4nm,0.8s						
QSPA	South Pole Qui	65.93	180	P	P	18 51 15.1	+2.1
	comp=Z,7.4nm,0.7s,baz=352,slow=1.0,SNR=68						
QSPA	South Pole Qui	65.93	180	P	P	18 51 15.0	+1.9
QSPA				IAmb	IAmb	18 51 16.1	
	comp=Z,7.9nm,0.8s						
KSM	Kuching	74.97	279	P	P	18 52 08.2	-0.5
ADK	Adak	75.71	0	P	P	18 52 11.5	-0.5
BELA	Belgrano 2	75.81	172	P	P	18 52 13.2	+0.8
ATKA	Atka Island	76.07	2	P	P	18 52 13.0	-1.0
YULB	Yu-li	76.38	304	P	P	18 52 12.6	-3.8
TPUB	Ta-pu	76.83	303	P	P	18 52 15.4	-3.6
SSLB	Suanglung	76.86	304	P	P	18 52 16.4	-2.8
AKUT	Akutan	78.56	7	P	P	18 52 28.0	+0.2
PEA0B	Petropavlovsk-	80.06	345	P	P	18 52 35.7	-0.4
PETK	Petropavlovsk-	80.06	345	P	P	18 52 35.2	-0.8
	comp=Z,4.9nm,0.6s,baz=121,slow=6.3,SNR=16						
SDPT	Sand Point	80.42	9	P	P	18 52 37.6	-0.3
YBH	Yreka Blue Hor	82.51	38	P	P	18 52 51.6	+2.2
	comp=Z,3.7nm,1.1s,baz=247,slow=7.7,SNR=2.9						
USRK	Ussuriysk Ar.	82.56	326	P	P	18 52 50.2	+0.8
	comp=Z,1.2nm,0.5s,baz=127,slow=2.7,SNR=9.6						
PNTR	Pine Nut	82.60	41	P	P	18 52 51.6	+1.5
PNTR				IAmb	IAmb	18 52 53.3	
	comp=Z,8.0nm,0.8s						
BEKR	Beckworth	82.64	40	P	P	18 52 51.6	+1.3
NVAR	Mina Array Bea	82.98	42	P	P	18 52 54.2	+2.0
	comp=Z,1.6nm,0.6s,baz=222,slow=7.9,SNR=8.6						
NJ2	Nanjing	83.00	310	*e*P	P	18 52 53.2	+1.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
H03S2	Juan Fernandez	83.08	124	T	T	20 25 12.0	
	baz=245,slow=74,SNR=7.2						
H03S1	Juan Fernandez	83.09	124	T	T	20 25 08.3	
	baz=245,slow=74,SNR=6.1						
H03S3	Juan Fernandez	83.10	124	T	T	20 25 08.6	
	baz=245,slow=74,SNR=4.6						
PAHR	Pah Rah Range	83.12	41	P	P	18 52 54.0	+1.3
PAHR				IAmb	IAmb	18 52 55.2	
	comp=Z,5.3nm,1.0s						
H03N2	Juan Fernandez	83.24	123	T	T	20 25 09.4	
	baz=251,slow=73,SNR=6.9						
H03N3	Juan Fernandez	83.24	124	T	T	20 25 09.7	
	baz=251,slow=73,SNR=9.9						
H03N1	Juan Fernandez	83.26	124	T	T	20 25 11.5	
	baz=251,slow=73,SNR=7.3						
SYO	Syowa Base	83.40	192⇑	*e*P	P	18 52 54.0	+0.5
MOD	Modoc Plateau	83.98	39	P	P	18 52 57.9	+0.9
MOD				IAmb	IAmb	18 52 59.4	
	comp=Z,4.4nm,0.8s						
K05A	Summer Lake	84.18	38	P	P	18 52 59.9	+1.8
K05A				IAmb	IAmb	18 53 02.6	
	comp=Z,19nm,1.5s						
SNAA	Sanae	84.34	178	P	P	18 52 59.0	+0.7
SNAA	Sanae	84.34	178	P	P	18 52 59.1	+0.7
	comp=Z,4.8nm,0.8s,baz=207,slow=5.9,SNR=14						
SNAA	Sanae	84.34	178	P	P	18 52 59.2	+0.8
SNAA				IAmb	IAmb	18 53 00.1	
	comp=Z,5.0nm,0.8s						
TUC	Tucson	84.43	51	P	P	18 53 01.7	+2.2
TUC				IAmb	IAmb	18 53 03.0	
	comp=Z,4.6nm,0.8s						
VNA3	Neumayer Olymp	84.44	176	P	P	18 52 59.5	+0.6
PINE	Pine Mountain	84.84	37	P	P	18 53 02.7	+1.3
PINE				IAmb	IAmb	18 53 04.2	
	comp=Z,8.6nm,1.2s						
VNA2	Neumayer--Watz	84.89	177	P	P	18 53 01.8	+0.7
	baz=170,slow=4.8						
319A	Douglas	85.01	53	P	P	18 53 02.7	+0.3
319A				IAmb	IAmb	18 53 05.5	
	comp=Z,6.5nm,0.7s						
VNA1	Neumayer--Stat	85.11	176	P	P	18 53 02.8	+0.6
X16A	Lo Mia Camp, P	85.12	49	P	P	18 53 05.6	+2.5
WVOR	Wild Horse Val	85.27	39	P	P	18 53 05.0	+1.5
LCMT	Little Creek M	85.36	46	P	P	18 53 05.6	+1.5
HPIG		85.45	58	P	P	18 53 06.5	+1.6
CCUT	Cedar City	85.59	46	P	P	18 53 07.9	+2.5
U15A	North Rim	85.66	47	P	P	18 53 08.1	+2.3
CNPM	China Poot	86.01	13	P	P	18 53 06.9	+0.3
PKCU	Pink Cliffs	86.22	46	P	P	18 53 11.2	+2.7
ELK	Elko	86.27	42	P	P	18 53 09.9	+1.3
	comp=Z,1.1nm,0.8s,baz=227,slow=7.1,SNR=5.4						
ELK	Elko	86.27	42	P	P	18 53 09.7	+1.1
MTPU	Mount Pierson	86.64	46	P	P	18 53 12.9	+2.2
G08A	Pilot Rock	86.89	37	P	P	18 53 12.3	+1.0
E07A	Sunnyside	87.22	35	P	P	18 53 14.6	+1.8
E07A				IAmb	IAmb	18 53 15.2	
	comp=Z,3.8nm,0.9s						
LTY	Liberty	87.24	35	P	P	18 53 14.0	+1.1
HAWA	Hanford	87.28	36	P	P	18 53 13.8	+0.7
MFID	Camas Ranch	87.50	40	P	P	18 53 15.7	+1.4
BMO	Blue Mountains	87.53	38	P	P	18 53 15.4	+1.0
E08A	Dider Farm, El	87.59	36	P	P	18 53 15.7	+1.2
TMUT	Trail Mountain	87.97	45	P	P	18 53 17.9	+0.9
D08A	Wollman Farm,	88.03	35	P	P	18 53 18.0	+1.4
D08A				IAmb	IAmb	18 53 19.0	
	comp=Z,4.6nm,0.8s						
MNTX	Cornudas Mount	88.03	54	P	P	18 53 18.6	+1.6
E09A	Wood Farm, Sta	88.10	36	P	P	18 53 18.1	+1.2
E09A				IAmb	IAmb	18 53 19.0	
	comp=Z,5.8nm,1.0s						
TXAR	Lajitas Array	88.16	57	P	P	18 53 19.9	+2.2
	comp=Z,1.3nm,0.8s,baz=211,slow=7.1,SNR=15						
F10A	Beach Ranch, E	88.27	37	P	P	18 53 18.9	+1.0
F10A				IAmb	IAmb	18 53 19.6	
	comp=Z,5.8nm,0.8s						
KNK	Knik Glacier	88.30	13	P	P	18 53 18.1	+0.5
SRU	San Rafael Swe	88.31	45	P	P	18 53 19.4	+1.0
PMR	Palmer	88.33	13	P	P	18 53 18.1	+0.5
PMR				IAmb	IAmb	18 53 18.3	
	comp=Z,7.1nm,1.0s						
TTA	Tatalina	88.36	9	P	P	18 53 18.6	+0.8
TTA				IAmb	IAmb	18 53 19.6	
	comp=Z,15nm,1.4s						
P17A	Butcher Ranch,	88.37	45	P	P	18 53 20.3	+1.7
HLID	Hailey	88.42	40	P	P	18 53 19.6	+0.9
GHO	Glory Hole Cre	88.53	13	P	P	18 53 18.6	-0.1
B08A	Colville Reser	88.64	34	P	P	18 53 20.1	+0.6
B08A				IAmb	IAmb	18 53 20.6	
	comp=Z,2.7nm,0.8s						
SML	Sawmill	88.69	13	P	P	18 53 20.0	+0.6
SML				IAmb	IAmb	18 53 39.8	
	comp=Z,13nm,1.2s						
C09A	Chrisman Ranch	88.84	35	P	P	18 53 21.1	+0.7
C09A				IAmb	IAmb	18 53 23.2	
	comp=Z,4.2nm,1.1s						
ANMO	Albuquerque	88.89	51	P	P	18 53 23.0	+1.8
SCM	Sheep Creek Mo	88.92	14	P	P	18 53 20.7	+0.2
KLU	Klutina	88.92	14	P	P	18 53 21.0	+0.4
BJI	Beijing	89.21	315	P	P	18 53 23.4	+1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,2.4s						
N25K	Chitina, Valde	89.33	15	P	P	18 53 23.3	+0.8
N25K				IAmb	IAmb	18 53 24.1	
	comp=Z,8.1nm,0.9s						
GLB	Gilahina Butte	89.37	15	P	P	18 53 23.5	+0.9
GLB				IAmb	IAmb	18 53 23.8	
	comp=Z,5.7nm,0.7s						
BALM	Baldy	89.38	16	P	P	18 53 24.0	+1.2
BCYI	Bear Canyon	89.45	40	P	P	18 53 24.6	+1.0
CTGM	Chitina Glacie	89.58	16	P	P	18 53 23.9	+0.2
NEW	Newport	89.73	35	P	P	18 53 25.0	+0.3
	comp=Z,0.7nm,0.6s,baz=350,slow=6.1,SNR=2.2						
KTH	Kantishna Hill	89.78	11	P	P	18 53 24.2	-0.3
TRF	Thorofare Moun	89.80	12	P	P	18 53 24.2	-0.5
RND	Reindeer	90.03	12	P	P	18 53 26.0	+0.3
MCMT	McKenzie Canyo	90.07	40	P	P	18 53 28.1	+1.5
SEY	Seymchan	90.16	346	P	P	18 53 26.2	0.0
	comp=Z,11nm,0.7s,baz=154,slow=7.1,SNR=24						
MENT	Mentasta	90.69	14	P	P	18 53 29.5	+0.8
MENT				IAmb	IAmb	18 53 30.1	
	comp=Z,5.6nm,1.0s						
LOHW	Long Hollow	90.73	42	P	P	18 53 29.7	+0.1
QLMT	Earthquake Lak	90.91	40	P	P	18 53 32.1	+1.7
BW06	Boulder Array	90.91	43	P	P	18 53 31.8	+1.2
BW06				IAmb	IAmb	18 53 33.3	
	comp=Z,8.4nm,1.5s						
PD31	Pinedale Array	90.91	43	P	P	18 53 31.6	+1.1
PD31				IAmb	IAmb	18 53 33.2	
	comp=Z,6.8nm,1.4s						
PDAR	Pinedale Array	90.91	43	P	P	18 53 31.4	+0.9
	comp=Z,1.7nm,0.8s,baz=228,slow=3.2,SNR=15						
FLWY	Flagg Ranch	90.93	41	P	P	18 53 32.4	+1.8
FLWY				IAmb	IAmb	18 53 33.3	
	comp=Z,4.9nm,0.8s						
DLBC	Dease Lake	91.00	23	P	P	18 53 32.0	+1.7
	comp=Z,3.0nm,0.9s,baz=357,slow=17,SNR=3.3						
DLBC	Dease Lake	91.00	23	IAmb	IAmb	18 53 56.4	
	comp=Z,3.7nm,1.1s						
YHL	Hebgen Lake	91.06	40	P	P	18 53 33.5	+2.3
YMR	Madison River	91.09	41	P	P	18 53 32.9	+1.6
WRH	Wood River Hil	91.14	12	P	P	18 53 31.0	+0.3
RIDG	Independent Ri	91.14	14	P	P	18 53 31.5	+0.6
RIDG				IAmb	IAmb	18 53 32.3	
	comp=Z,7.6nm,1.0s						
BOZ	Bozeman (W)	91.22	40	P	P	18 53 33.1	+1.4
BOZ				IAmb	IAmb	18 53 34.1	
	comp=Z,5.6nm,0.8s						
DOT	Dot Lake	91.24	14	P	P	18 53 31.2	0.0
DOT				IAmb	IAmb	18 53 32.7	
	comp=Z,6.0nm,0.8s						
HDA	Harding Lake	91.30	13	P	P	18 53 31.6	+0.1
HDA				IAmb	IAmb	18 53 32.7	
	comp=Z,6.8nm,1.0s						
CCB	Clear Creek Bu	91.35	12	P	P	18 53 31.2	-0.5
CCB				IAmb	IAmb	18 53 32.5	
	comp=Z,12nm,1.4s						
LKWY	Lake	91.37	41	P	P	18 53 35.4	+2.8
LKWY				IAmb	IAmb	18 53 36.4	
	comp=Z,3.6nm,0.9s						
I23K	Minto, Yukon-K	91.52	11	P	P	18 53 32.5	+0.1
I23K				IAmb	IAmb	18 53 38.6	
	comp=Z,2.5nm,1.0s						
TCOL	CIGO, UAF Yank	91.54	12	P	P	18 53 32.1	-0.5
COLA	College	91.55	12	P	P	18 53 32.1	-0.5
MDM	Murphy Dome	91.55	12	P	P	18 53 32.5	-0.2
MDM				IAmb	IAmb	18 53 33.9	
	comp=Z,6.2nm,1.1s						
IL31		91.64	12	P	P	18 53 32.8	-0.2
IL31				IAmb	IAmb	18 53 33.8	
	comp=Z,4.3nm,1.1s						
ILAR	Eielson Array	91.64	12	P	P	18 53 32.9	-0.2
	comp=Z,2.2nm,0.9s,baz=217,slow=5.6,SNR=20						
ILAR				PP	PP	18 57 16.1	+2.6
	comp=Z,0.9nm,1.1s,baz=224,slow=7.0,SNR=4.5						
IL18	Eielson Array	91.65	12	P	P	18 53 33.1	0.0
YNE	Yellowstone No	91.85	41	P	P	18 53 36.6	+1.8
K27K	Chicken	92.01	15	P	P	18 53 35.9	+1.1
K27K				IAmb	IAmb	18 53 37.0	
	comp=Z,7.0nm,1.1s						
CMAR	Chiang Mai Arr	92.30	289	P	P	18 53 37.0	-0.3
	comp=Z,1.1nm,0.8s,baz=105,slow=2.7,SNR=7.1						
HHC	Hu-ho-hao-te	92.64	314	*e*P	P	18 53 38.5	+0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
DAWY	Dawson	92.68	16	P	P	18 53 38.7	+0.8
DAWY				IAmb	IAmb	18 53 39.8	
	comp=Z,3.8nm,1.0s						
BILL	Bilibino	92.77	354	P	P	18 53 37.8	-0.4
EGAK	Eagle	92.86	15	P	P	18 53 39.4	+0.7
YAK	Yakutsk	95.88	338	P	P	18 53 51.3	-1.2
	comp=Z,3.4nm,0.3s,baz=160,slow=3.3,SNR=4.7						
YAK	Yakutsk	95.88	338	P	P	18 53 50.8	-1.8
SONM	Songino Array	99.18	318	P	Pdif	18 54 07.5	-0.4
	comp=Z,0.2nm,0.6s,baz=116,slow=6.6,SNR=1.5						
YKA	Yellowknife Ar	99.39	25	P	Pdif	18 54 07.7	-0.6
	comp=Z,0.4nm,0.9s,baz=252,slow=3.6,SNR=4.7						
MKAR	Makanchi Array	114.44	312	PKP	PKPdf	18 59 04.5	-1.2
	comp=Z,0.7nm,0.7s,baz=140,slow=1.7,SNR=11						
GEYT	Alibeck	131.57	300	PKP	PKPdf	18 59 37.8	-1.0
	comp=Z,0.7nm,0.6s,baz=43,slow=6.7,SNR=3.8						
GEYT				SKPbc	SKPab	19 02 57.4	+3.4
	comp=Z,1.3nm,1.0s,baz=58,slow=5.6,SNR=4.2						
ARCES	ARCESS Array B	132.69	350	PKhKP	PKPpre	18 59 37.4	
	comp=Z,3.5nm,0.8s,baz=281,slow=0.6,SNR=10						
FINES	FINESS Array B	139.56	343	PKhKP	PKPpre	18 59 44.4	
	comp=Z,2.3nm,0.8s,baz=29,slow=3.2,SNR=9.3						
FINES				PKP	PKPdf	18 59 53.3	+0.5
	comp=Z,3.5nm,0.8s,baz=4.6,slow=3.5,SNR=9.2						
NB2	NORSAR Subarra	142.72	354	PKP	PKPdf	18 59 54.3	-4.4
	comp=Z,1.3nm,0.6s,baz=16,slow=3.6						
NOA	NORSAR Array B	142.72	354	PKhKP	PKPpre	18 59 53.8	
	comp=Z,1.9nm,0.7s,baz=16,slow=4.9,SNR=7.9						
ISAL	Salakas	144.34	338	*e*P	PKPdf	19 00 00.9	-0.7
IIGN	Ignalina	144.48	337	*e*P	PKPab	19 00 00.4	-0.1
NACGM	Naroch	144.63	336	*i* P	PKPdf	19 00 01.6	-0.5
NACGM				*i* P	PKPdf	19 00 01.6	-0.5
NACGM				*i* P	PKPdf	19 00 01.6	-0.5
NACGM				*i* PPP	PPP	19 02 03.4	
NACGM				*i* PS		19 07 08.0	
NACGM				*i* SSS	SSS	19 09 34.6	
NACGM				*i* LR	LR	19 17 19.0	
PABE	Paberze	145.12	339	*e*P	PKPbc	19 00 01.4	-1.2
PBUR	Paburge	145.31	341	*e*P	PKPbc	19 00 01.9	-1.4
SUW	Suwalki	146.61	338	*e*P	PKPbc	19 00 07.4	+0.2

AKASG	Malin Array Be	146.69	329	PKPbc	PKPdf	19 00 06.5	+0.7
	comp=Z,16nm,0.5s,baz=42,slow=4.4,SNR=84						
SORM	Soroca	148.84	327	⇓P	PKPbc	19 00 12.8	-0.6
GKP	Gorka Klasztor	149.03	343	*e*P	PKPdf	19 00 00.1	-9.4
BRTR	Keskin Array B	149.99	308	PKPbc	PKPbc	19 00 16.1	-0.6
	comp=Z,1.2nm,0.4s,baz=117,slow=4.0,SNR=7.9						
VASR	Vaslui	150.10	325	⇑P	PKPbc	19 00 16.8	+0.2
MMAI	Mount Meron Ar	150.41	295	PKPbc	PKiKP	19 00 18.7	+0.1
	comp=Z,5.4nm,0.5s,baz=67,slow=6.4,SNR=16						
PRAR	RASCA	150.42	327	⇓P	PKPbc	19 00 17.4	0.0
TLCR		150.44	322	⇑P	PKPbc	19 00 17.3	-0.2
BURAR	Bucovina Array	150.73	329	⇓P	PKiKP	19 00 19.3	+0.4
BIZ	Bicaz	150.77	327	⇑P	PKiKP	19 00 18.8	0.0
TESR	Tescani	150.78	326	⇓P	PKPbc	19 00 18.0	-0.2
CFR	Carcaliu	150.83	322	⇑P	PKPbc	19 00 17.4	-1.0
TPGR	Topolog	150.87	321	⇑P	PKPbc	19 00 18.1	-0.4
KOLS	Kolonicke sedl	151.04	333	*e*PKP	PKiKP	19 00 19.5	+0.2
KOLS				*e*		19 00 26.5	
ODBI	Odobesti	151.06	324	⇑P	PKiKP	19 00 19.9	+0.5
EIL	Elat	151.15	288	PKPbc	PKiKP	19 00 20.3	+0.2
	comp=Z,6.3nm,0.8s,baz=15,slow=11,SNR=4.3						
VRI	Vrincioaia	151.16	325	⇓P	PKPab	19 00 23.7	-3.6
CRVS	Cervenica-Dubn	151.39	334	*e*PKP	PKiKP	19 00 20.1	+0.1
ARCR	ARCALIA	151.52	329	⇑P	PKPbc	19 00 19.9	0.0
NEHR	Nehoiu	151.68	324	⇓P	PKPbc	19 00 18.4	-2.0
OSTC	Ostas	151.76	342	⇑*e*PKP	PKPbc	19 00 19.9	-0.5
OSTC				*e*PKPAB	PKPab	19 00 29.9	+0.3
CHVC	Chvalec	151.77	342	⇑*e*PKP	PKPbc	19 00 20.5	+0.1
CHVC				*e*PKPAB	PKPab	19 00 27.1	-2.6
DOPR	Dopca	151.79	326	⇑P	PKiKP	19 00 21.2	+0.2
MLR	Muntele Rosu	151.82	325	⇓P	PKiKP	19 00 21.5	+0.3
CLL	Collm	151.84	347	⇓*i*PKPbc	PKiKP	19 00 20.6	-0.2
	comp=Z,18nm,0.8s						
CLL				*i*		19 00 27.0	
CLL				⇑*i*PKPab	PKPab	19 00 29.6	-0.3
	comp=Z,15nm,1.2s						
CLL				*e*pPKPab	sPKPdf	19 00 56.0	-2.1
UPC	Upice	151.86	342	⇑*e*PKP	PKPbc	19 00 20.0	-0.6
UPC				*e*PKPAB	PKPab	19 00 27.1	-2.9
DPC	Dobruska-Polom	151.91	342	⇑*e*PKP	PKiKP	19 00 21.1	0.0
DPC				*e*PKPAB	PKPab	19 00 30.5	+0.2
LANS	Liptovska Anna	151.94	337	*e*PKP	PKiKP	19 00 22.1	+0.9
KRLC	Kraliky	152.02	341	⇑*e*PKP	PKiKP	19 00 21.3	0.0
KRLC				*e*PKPAB	PKPab	19 00 30.4	-0.4
BRG	Berggiesshubel	152.05	345	⇓*i*PKP	PKiKP	19 00 21.3	0.0
BRG				Amp		19 00 22.1	
	comp=Z,12nm,0.7s						
BRG				*e*x	x	19 00 30.6	
BRG				Amp		19 00 31.4	
	comp=Z,9.5nm,0.9s						
BRG	Berggiesshubel	152.05	345	⇓*i*PKP	PKiKP	19 00 21.3	0.0
BRG				Amp		19 00 22.1	
	comp=Z,12nm,0.7s						
BRG				*e*x	x	19 00 30.6	
BRG				Amp		19 00 31.4	
	comp=Z,9.5nm,0.9s						
MORC	Moravsky Berou	152.05	340	*e*PKP	PKiKP	19 00 21.4	0.0
MORC				*e*		19 00 31.0	
CJR	Cluj-Napoca	152.15	329	⇑P	PKiKP	19 00 21.8	+0.1
PVCC	Panska Ves	152.22	344	⇑*e*PKP	PKiKP	19 00 21.9	+0.3
PVCC				*e*PKPAB	PKPab	19 00 31.8	+0.3
DRGR		152.50	330	⇓P	PKPbc	19 00 21.9	-0.3
ARR	Arges	152.59	326	⇓P	PKiKP	19 00 23.2	+0.6
PRU	Pruhonice	152.72	344	⇑*e*PKP	PKPbc	19 00 22.2	-0.3
PRU				*e*x	x	19 00 29.3	
VYHS	Vyhne	152.72	337	*e*PKP	PKPbc	19 00 22.1	-0.5
VYHS				*e*		19 00 34.0	
VRAC	Vranov	152.76	341	⇓P	PKPab	19 00 34.3	+0.4
VRAC	Vranov	152.76	341	*e*PKP	PKiKP	19 00 23.2	+0.4
VRAC				*e*		19 00 33.9	
JAVC	Velka Javorina	152.81	339	*e*PKP	PKiKP	19 00 24.1	+1.1
JAVC				*e*		19 00 35.2	
LOT	Lotru	152.97	327	⇑P	PKPdf	19 00 10.1	-5.9
HUMR	Humele	152.97	324	⇑P	PKPbc	19 00 22.3	-1.0
NKC	Novy Kostel	152.98	347	*e*PKPAB	PKPab	19 00 34.0	-0.8
KRUC	Moravsky	153.04	341	*e*PKP	PKiKP	19 00 23.3	-0.1
KRUC				*e*		19 00 35.1	
PBCC	Pribram	153.14	344	⇑*e*PKP	PKPbc	19 00 22.7	-0.8
PBCC				*e*PKPAB	PKPab	19 00 35.0	-0.4
SMOL	Smolenice	153.19	339	*e*PKP	PKPab	19 00 36.4	+0.7
MODS	Modra-Piesok	153.36	339	*e*PKP	PKPab	19 00 36.0	-0.5
SIRR	Siria	153.37	331	⇓P	PKiKP	19 00 24.3	+0.1
GRF	Grafenberg Arr	153.74	348	*e*PKP	PKPab	19 00 38.0	+0.1
	baz=17,slow=4.0						
KHC	Kasperske Hory	153.75	344	⇑*e*PKP	PKPbc	19 00 24.2	-0.7
KHC				*e*x	x	19 00 32.5	
KHC				*e*PKPAB	PKPab	19 00 38.4	+0.3
BZS	Buzias	153.88	330	⇓P	PKPbc	19 00 23.0	-2.2
GERES	GERESS Array B	153.99	344	PKP	PKPdf	19 00 16.7	-0.6
	comp=Z,0.5nm,0.8s,baz=90,slow=1.3,SNR=4.0						
GERES				PKPbc	PKiKP	19 00 25.4	-0.1
	comp=Z,1.0nm,0.7s,baz=38,slow=2.4,SNR=7.5						
GERES				PKPab	PKPab	19 00 39.0	-0.2
	comp=Z,2.1nm,0.8s,baz=18,slow=4.6,SNR=11						
CONA	Conrad Observa	154.21	340	*e*P	PKPab	19 00 40.6	+0.4
	comp=Z,8.8nm,0.8s						
MOA	Molln	154.75	342	*e*P	PKPab	19 00 42.4	0.0
	comp=Z,8.1nm,1.2s						
SOKA	Soboth	155.58	340	*e*P	PKPab	19 00 46.5	+0.5
	comp=Z,17nm,1.8s						
KBA	Koelnbreinsper	155.71	343	*e*P	PKPab	19 00 47.7	+1.0
	comp=Z,7.6nm,0.7s						
OBKA	Obir	155.88	340	*e*P	PKPab	19 00 47.5	+0.1
	comp=Z,11nm,1.1s						
WATA	Walderalm	155.91	346	*e*P	PKPab	19 00 47.2	-0.2
	comp=Z,11nm,1.2s						
RETA	Reutte	155.94	347	*e*P	PKPab	19 00 47.5	0.0
	comp=Z,7.2nm,0.9s						
WTTA	Wattenberg	155.96	346	*i* P	PKPab	19 00 47.8	+0.1
	comp=Z,12nm,0.7s,SNR=9.4						
MOTA	Moosalm	156.00	347	*e*P	PKPab	19 00 47.5	-0.4
	comp=Z,6.6nm,0.7s						
MYKA	Terra Mystica	156.04	342	*e*P	PKPab	19 00 47.3	-0.7
	comp=Z,0.8nm,0.4s						
SQTA	Sankt Quirin	156.10	346	*e*P	PKPab	19 00 48.3	0.0
	comp=Z,5.4nm,0.9s						
ABTA	Abfaltersbach	156.23	344	*e*P	PKPab	19 00 48.2	-0.7
	comp=Z,7.1nm,0.7s						
DAVA	Damuels	156.30	349	*e*P	PKPab	19 00 49.2	0.0
	comp=Z,3.3nm,0.6s						
FETA	Feichten	156.39	347	*e*P	PKPab	19 00 49.7	+0.1
	comp=Z,8.9nm,1.3s						
ESDC	Sonseca Array	163.41	19	PKPab	PKPab	19 01 20.9	+0.7
	comp=Z,2.2nm,0.9s,baz=328,slow=3.9,SNR=12						
TORD	Torodi Ar. Bea	168.97	173	PKPab	PKPab	19 01 46.6	+1.5
	comp=Z,0.4nm,0.7s,baz=184,slow=3.5,SNR=4.1						

IDC 01 18:46:58.7±60.0**,15°.97S**×**175°.24W,h0^{km},mb3.7**/3**, mb1 3.8**/3**,mb1mx3.5**/37**,mbtmp3.7**/3**,Error ellipse: s-maj=1125.0km s-min=188.4km az=78.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.22	240	P	P	18 54 54.5	+0.8
	0.5nm,0.5s,baz=74,slow=7.4,SNR=1.3						
WRA	Warramunga Arr	47.99	257	P	P	18 55 39.2	-0.6
	0.3nm,0.7s,baz=95,slow=8.1,SNR=5.5						
ASAR	Alice Springs	48.25	252	P	P	18 55 41.5	-0.3
	0.8nm,0.4s,baz=89,slow=7.8,SNR=26						

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*ECX **01** 19:15:00.9±0.7, 27°.57N×111°.54W, h20^{km}±17^{km}, MD3.2*
*MEX **01** 19:15:01.6±0.5, 27°.37N×111°.43W, h16^{km}±12^{km}, MD3.8*
ISC 01 19:14:56.7±2.7**,27°.4N**±0°.1×**111°.47W**±0°.09**,h13^{km}**±15^{km}**, n6,σ0^{s}.94**/12**,2C,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.69	260	*e*P	Pn	19 15 13.0	+0.8
SRIG				*e*S	Sn	19 15 22.2	-0.6
SRIG	Santa Rosalia	0.69	260	⇑*i*P	Pn	19 15 12.8	+0.5
SRIG				*i* S	Sn	19 15 22.2	-0.6
GUYB	Guaymas	0.70	49	*e*P	Pn	19 15 13.3	+1.0
GUYB				*e*S	Sn	19 15 21.7	-1.3
GUYB	Guaymas	0.70	49	⇑*e*P	Pn	19 15 13.3	+1.0
GUYB				*e*S	Sn	19 15 21.8	-1.2
HSIG		1.64	16	*e*P	Pg	19 15 27.8	-0.4
HSIG				*e*S	Sb	19 15 47.1	-0.3
HSIG		1.64	16	*e*P	Pb	19 15 26.9	+0.1
HSIG				*e*S	Sn	19 15 46.7	+0.5

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*IDC **01** 19:16:27.3±0.6, 49°.95N×28°.94W, h0^{km}, mb4.0/23, mb1 4.1/24, mb1mx4.0/43, mbtmp4.0/24, ML4.3/1, MS3.6/31, Ms1 3.6/31, ms1mx3.5/46, Error ellipse: s-maj=17.4km s-min=12.6km az=12.0*
*NEIC **01** 19:16:28.6±1.3, 49°.9N±0°.1×28°.9W±0°.2, h10^{km}±1^{km}, mb4.5/36, Error ellipse: s-maj=20.4km s-min=14.7km az=217.0*
*BGR **01** 19:16:51.6±0.0, 49°.93N×25°.55W, h33^{km}, mb4.3*
ISC 01 19:16:28.8±0.5**,49°.9N**±0°.1×**28°.95W**±0°.07**,h10^{km},n84, σ0^{s}.86**/73**,mb4.3**/46**,MS3.6**/31**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	16.51	61	Pn	Pn	19 20 20.1	0.0
	baz=260,slow=12,SNR=4.7						
ESDC	Sonseca Array	20.39	111	P	P	19 21 05.5	-0.2
	5.6nm,1.2s,baz=310,slow=9.3,SNR=15						
ESDC				LR	LR	19 27 36.2	
	comp=Z,220nm,19.2s,baz=310,slow=33						
MDT	Midelt	24.85	124	P	P	19 21 52.0	+0.5
	2.2nm,1.0s,baz=349,slow=10,SNR=3.4						
NOA	NORSAR Array B	24.90	48	LR	LR	19 30 50.7	
	comp=Z,196nm,18.1s,baz=270,slow=35						
FRB	Frobisher Bay	25.18	318	P	P	19 21 54.3	+0.5
	2.5nm,0.9s,baz=89,slow=14,SNR=2.1						
FRB				LR	LR	19 29 16.7	
	comp=Z,145nm,19.9s,baz=106,slow=31						
TUE	Stuetta	25.57	83	P	P	19 21 56.9	-1.0
DAVA	Damuels	25.61	81	*e*P	P	19 22 01.4	+3.2
	10.0nm,1.4s						
GRF	Grafenberg Arr	25.71	75	*e*P	P	19 21 58.9	0.0
	14nm,1.3s,baz=284,slow=9.2						
DAVOX	Davos/Dischmat	25.79	82	P	P	19 22 01.0	+1.0
	2.0nm,0.8s,baz=310,slow=17,SNR=3.2						
DAVOX				LR	LR	19 31 37.7	
	comp=Z,263nm,18.7s,baz=276,slow=35						
HFS	Hagfors	26.02	51	P	P	19 22 01.4	-0.2
	4.9nm,1.0s,baz=251,slow=18,SNR=2.0						
HFS				LR	LR	19 31 16.3	
	comp=Z,262nm,18.4s,baz=264,slow=34						
RETA	Reutte	26.11	80	*e*P	P	19 22 02.0	-0.6
	7.6nm,1.3s						
FETA	Feichten	26.25	81	*e*P	P	19 22 05.4	+1.4
	5.7nm,1.2s						
MOTA	Moosalm	26.37	80	*e*P	P	19 22 06.1	+1.0
	7.7nm,0.9s						
CLL	Collm	26.39	71	*e*P	P	19 22 05.0	-0.1
SQTA	Sankt Quirin	26.48	80	P	P	19 22 07.4	+1.3
	9.0nm,1.4s						
WATA	Walderalm	26.68	80	*e*P	P	19 22 07.6	-0.3
	7.7nm,1.4s						
WTTA	Wattenberg	26.74	80	*e*P	P	19 22 09.7	+1.2
	8.8nm,1.2s						
GERES	GERESS Array B	27.51	76	P	P	19 22 14.6	-0.7
	1.3nm,0.9s,baz=266,slow=4.6,SNR=6.3						
GERES				LR	LR	19 32 51.8	
	comp=Z,187nm,18.2s,baz=290,slow=36						
VRAC	Vranov	29.16	73	LR	LR	19 33 44.0	
	comp=Z,204nm,18.9s,baz=311,slow=36						
FINES	FINESS Array B	32.08	48	P	P	19 22 55.5	+0.1
	5.0nm,0.6s,baz=269,slow=8.6,SNR=20						
FINES				LR	LR	19 35 04.5	
	comp=Z,217nm,18.7s,baz=278,slow=35						
ARCES	ARCESS Array B	32.16	33	P	P	19 22 55.5	-0.6
	5.9nm,1.1s,baz=290,slow=8.9,SNR=4.4						
SPITS	Spitsbergen Ar	32.81	16	LR	LR	19 32 52.7	
	comp=Z,55nm,21.4s,baz=285,slow=30						
AKASG	Malin Array Be	36.32	66	P	P	19 23 31.6	-0.7
	1.6nm,0.7s,baz=293,slow=8.2,SNR=4.2						
AKASG				LR	LR	19 38 54.9	
	comp=Z,151nm,19.3s,baz=290,slow=37						
MLR	Muntele Rosu	36.50	75	LR	LR	19 37 48.9	
	comp=Z,114nm,20.4s,baz=328,slow=35						
OBN	Obninsk	38.87	56	LR	LR	19 39 00.3	
	comp=Z,31nm,20.7s,baz=196,slow=35						
ULM	Lac du Bonnet	41.61	297	P	P	19 24 16.4	-0.2
	1.7nm,0.6s,baz=60,slow=12,SNR=2.0						
ULM				LR	LR	19 39 53.5	
	comp=Z,66nm,19.6s,baz=68,slow=34						
BRTR	Keskin Array B	44.34	78	P	P	19 24 39.6	+0.6
	1.3nm,0.7s,baz=300,slow=6.1,SNR=3.1						
BRTR				LR	LR	19 44 20.3	
	comp=Z,47nm,18.2s,baz=288,slow=38						
TOA0	Torodi Ar. Sit	44.44	135	P	P	19 24 39.0	-0.9
TOA0				IAmb	IAmb	19 24 41.8	
	comp=Z,12nm,1.7s						
TORD	Torodi Ar. Bea	44.44	135	P	P	19 24 39.4	-0.5
	comp=Z,2.0nm,0.7s,baz=336,slow=8.2,SNR=11						
TORD				LR	LR	19 41 50.3	
	comp=Z,59nm,18.8s,baz=100,slow=34						
YKA	Yellowknife Ar	45.68	320	P	P	19 24 49.0	-0.2
	comp=Z,0.4nm,0.8s,baz=56,slow=9.0,SNR=4.9						
YKA				PcP	PcP	19 26 25.9	-1.1
	comp=Z,0.5nm,0.7s,baz=64,slow=4.4,SNR=8.0						
YKA				LR	LR	19 41 39.4	
	comp=Z,40nm,18.9s,baz=0.0,slow=33						
U40A	Yellville	47.16	279	P	P	19 25 01.0	-0.3
U40A				IAmb	IAmb	19 25 02.4	
	comp=Z,6.5nm,0.9s						
DBIC	Dimbokro	47.62	147	P	P	19 25 04.7	-0.3
	comp=Z,2.1nm,0.7s,baz=322,slow=9.6,SNR=2.5						
DBIC				LR	LR	19 43 38.8	
	comp=Z,69nm,18.4s,baz=328,slow=34						
KBZ	Khabaz	47.80	68	LR	LR	19 45 34.9	
	comp=Z,82nm,20.9s,baz=326,slow=37						
ARU	Arti	49.44	47	P	P	19 25 18.3	-0.2
ARU				IAmb	IAmb	19 25 21.0	
	comp=Z,6.7nm,0.8s						
KAN13	South Haven SW	49.70	282	P	P	19 25 18.3	-2.5
GNI	Garni	51.00	71	LR	LR	19 48 11.3	
	comp=Z,48nm,21.2s,baz=300,slow=37						
K22A	Casper	51.85	294	P	P	19 25 35.9	-1.2
K22A				IAmb	IAmb	19 25 38.2	
	comp=Z,6.4nm,1.0s						
AKTO	Aktyubinsk	52.51	54	LR	LR	19 47 11.7	
	comp=Z,48nm,21.9s,baz=305,slow=35						
N23A	Red Feather La	52.56	292	P	P	19 25 43.3	+0.8
N23A				IAmb	IAmb	19 25 44.6	
	comp=Z,8.4nm,0.8s						
BOZ	Bozeman (W)	53.04	299	P	P	19 25 45.9	0.0
PD31	Pinedale Array	53.56	295	P	P	19 25 48.9	-0.9
PDAR	Pinedale Array	53.56	295	P	P	19 25 49.4	-0.5
	comp=Z,1.3nm,0.8s,baz=65,slow=8.1,SNR=13						
PDAR				LR	LR	19 46 14.8	
	comp=Z,51nm,21.4s,baz=98,slow=33						
MOOW	Moose Ponds	53.65	297	P	P	19 25 49.4	-1.1
T25A	Trinidad	53.95	287	P	P	19 25 53.2	+0.4
T25A				IAmb	IAmb	19 25 54.9	
	comp=Z,8.5nm,1.1s						
ABKAR	Akbulak array	54.21	54	P	P	19 25 54.5	+0.3
B08A	Colville Reser	55.55	306	P	P	19 26 03.7	-0.2
B08A				IAmb	IAmb	19 26 04.6	
	comp=Z,3.9nm,1.0s						
HLID	Hailey	55.86	299	P	P	19 26 06.8	+0.3
HLID				IAmb	IAmb	19 26 09.2	
	comp=Z,6.7nm,1.6s						
PV12	Saucer Basin,	55.89	291	P	P	19 26 07.6	+0.8
PV04	Paradox Valley	55.90	291	P	P	19 26 07.8	+1.0
PV04				IAmb	IAmb	19 26 08.6	
	comp=Z,5.9nm,0.8s						
PV11	David Mesa, Pa	55.95	291	P	P	19 26 08.2	+1.0
ILAR	Eielson Array	55.96	333	P	P	19 26 06.7	+0.1
	comp=Z,0.7nm,0.8s,baz=47,slow=5.0,SNR=5.7						
ILAR				PcP	PcP	19 27 04.8	-0.2
	comp=Z,0.8nm,0.9s,baz=19,slow=2.4,SNR=4.4						
ILAR				LR	LR	19 48 00.2	
	comp=Z,61nm,19.0s,slow=34						
PV03	Paradox Valley	55.96	291	P	P	19 26 08.1	+0.8
PV03				IAmb	IAmb	19 26 09.6	
	comp=Z,4.8nm,1.0s						
PV16	Nyswonger Mesa	55.96	291	P	P	19 26 07.9	+0.6
PV20	West Nyswonger	55.98	291	P	P	19 26 08.2	+0.8
PV14	Lion Creek, Pa	55.99	291	P	P	19 26 08.5	+1.0
PV10	Paradox Valley	56.00	291	P	P	19 26 09.1	+1.5
PV13	Radium Mtn., P	56.00	291	P	P	19 26 07.0	-0.6
PV17	East Wray Mesa	56.01	291	P	P	19 26 08.2	+0.6
BRVK	Borovoye	56.91	45	P	P	19 26 13.7	+0.2
BRVK				IAmb	IAmb	19 26 16.3	
	comp=Z,4.1nm,0.9s						
PTGA	Pitinga	57.04	218	LR	LR	19 45 25.1	
	comp=Z,49nm,21.1s,baz=70,slow=30						
MTPU	Mount Pierson	58.10	293	P	P	19 26 23.0	+0.4
TX31	Lajitas Ar. Si	58.62	279	P	P	19 26 26.5	+0.4
TXAR	Lajitas Array	58.62	279	P	P	19 26 26.4	+0.3
	comp=Z,1.0nm,0.7s,baz=61,slow=7.5,SNR=15						
TXAR				LR	LR	19 52 07.7	
	comp=Z,54nm,18.2s,baz=0.0,slow=36						
TX32	Lajitas Array	58.62	279	P	P	19 26 26.1	+0.1
TX32				IAmb	IAmb	19 26 31.5	
	comp=Z,9.5nm,1.8s						
ROSC	El Rosal	58.92	236	LR	LR	19 48 23.6	
	comp=Z,61nm,21.8s,baz=96,slow=32						
CCUT	Cedar City	59.12	293	P	P	19 26 30.2	+0.6
WUAZ	Wupatki	59.28	290	P	P	19 26 30.5	-0.2
WUAZ				IAmb	IAmb	19 26 32.2	
	comp=Z,3.4nm,1.0s						
GEYT	Alibeck	60.44	65	P	P	19 26 38.1	-0.3
	comp=Z,0.7nm,0.7s,baz=310,slow=16,SNR=2.6						
GEYT				LR	LR	19 53 24.6	
	comp=Z,20nm,21.4s,baz=25,slow=37						
KURK	Kurchatov	62.28	43	P	P	19 26 50.2	-0.4
KURK				IAmb	IAmb	19 26 53.1	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	62.50	38	P	P	19 26 53.3	+1.2
	comp=Z,0.5nm,0.3s,baz=309,slow=9.1,SNR=1.6						
KK31	Karatay Array	63.78	54	P	P	19 27 00.3	-0.4
KKAR	Karatay Array	63.78	54	P	P	19 27 00.3	-0.4
MAKZ	Makanchi	66.66	44	P	P	19 27 19.0	-0.3
MAKZ				IAmb	IAmb	19 27 22.5	
	comp=Z,2.7nm,0.9s						
MK31	Makanchi Array	66.81	44	P	P	19 27 19.6	-0.7
MK31				IAmb	IAmb	19 27 21.1	
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	66.81	44	P	P	19 27 20.1	-0.3
	comp=Z,3.1nm,0.8s,baz=325,slow=5.9,SNR=34						
MKAR				LR	LR	19 55 47.0	
	comp=Z,94nm,20.4s,baz=334,slow=35						
BDFB	Brasilia	67.43	200	P	P	19 27 24.9	+0.4
	comp=Z,2.1nm,0.8s,baz=295,slow=3.8,SNR=3.6						
BDFB				LR	LR	19 52 40.1	
	comp=Z,59nm,19.2s,baz=116,slow=32						
SONM	Songino Array	75.27	29	P	P	19 28 12.4	+0.7
	comp=Z,1.7nm,0.9s,baz=332,slow=5.6,SNR=9.7						
CPUP	Villa Florida	80.01	206	LR	LR	20 02 16.7	
	comp=Z,35nm,18.2s,baz=40,slow=34						
USRK	Ussuriysk Ar.	84.78	14	P	P	19 29 04.9	+1.9
	comp=Z,1.3nm,0.8s,baz=0.0,slow=3.0,SNR=2.1						
KSRS	Korea Array	90.61	18	LR	LR	20 13 20.8	
	comp=Z,13nm,18.4s,baz=265,slow=38						
CMAR	Chiang Mai Arr	97.84	49	LR	LR	20 17 43.3	
	comp=Z,28nm,18.4s,baz=255,slow=38						
WRA	Warramunga Arr	147.24	30	PKPbc	PKPbc	19 36 11.5	-0.9
	comp=Z,0.7nm,0.8s,baz=336,slow=3.4,SNR=5.1						
ASAR	Alice Springs	150.54	33	PKPbc	PKPbc	19 36 19.9	-0.8
	comp=Z,0.9nm,0.7s,baz=345,slow=2.0,SNR=11						
VNDA	Vanda	152.01	185	PKPbc	PKiKP	19 36 23.5	+0.7
	comp=Z,2.0nm,0.8s,baz=271,slow=3.2,SNR=10						

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*IDC **01** 19:22:04.2±0.7, 56°.68S×150°.62W, h0^{km}, mb4.1/5, mb1 4.2/5, mb1mx4.0/21, mbtmp4.1/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/19, Error ellipse: s-maj=40.7km s-min=23.4km az=13.0*
*NEIC **01** 19:22:05.1±1.6, 56°.8S±0°.2×150°.4W±0°.2, h10^{km}±1^{km}, mb4.4/4, Error ellipse: s-maj=36.4km s-min=10.8km az=157.0*
ISC 01 19:22:05.4±0.7**,56°.8S**±0°.2×**150°.4W**±0°.2**,h10^{km},n33, σ0^{s}.85**/19**,mb4.4**/5**,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	South Pole Qui	33.40	180	P	P	19 28 44.7	+1.0
	3.9nm,1.1s,baz=86,slow=5.6,SNR=5.2						
QSPA	South Pole Qui	33.40	180	P	P	19 28 42.9	-0.9
QSPA				IAmb	IAmb	19 28 48.8	
	comp=Z,9.3nm,1.4s						
SNAA	Sanae	49.87	167	LR	LR	19 50 50.2	
	comp=Z,34nm,19.1s,baz=158,slow=34						
STKA	Stephens Creek	52.10	268	P	P	19 31 16.3	+0.9
	comp=Z,1.4nm,0.7s,baz=143,slow=13,SNR=3.9						
STKA	Stephens Creek	52.10	268	P	P	19 31 15.2	-0.2
STKA				IAmb	IAmb	19 31 29.9	
	comp=Z,1.8nm,1.4s						
H03S2	Juan Fernandez	52.55	96	T	T	20 28 19.6	
	baz=220						
H03S1	Juan Fernandez	52.55	96	T	T	20 28 27.8	
	baz=220,slow=74						
H03S3	Juan Fernandez	52.56	96	T	T	20 28 30.0	
	baz=220,slow=74						
H03N3	Juan Fernandez	52.84	96	T	T	20 28 40.9	
	baz=222,slow=72,SNR=18						
H03N2	Juan Fernandez	52.84	96	T	T	20 28 41.7	
	baz=222,slow=72,SNR=32						
H03N1	Juan Fernandez	52.85	96	T	T	20 28 39.6	
	baz=222,slow=72,SNR=16						
ASAR	Alice Springs	62.74	268	P	P	19 32 29.9	-0.8
	comp=Z,2.6nm,1.0s,baz=137,slow=6.5,SNR=35						
H01W1	Cape Leeuwin H	64.38	245	T	T	20 42 52.1	
	baz=138						
H01W2	Cape Leeuwin H	64.38	245	T	T	20 42 46.7	
	baz=138						
H01W3	Cape Leeuwin H	64.39	245	T	T	20 42 50.4	
	baz=138						
WRA	Warramunga Arr	65.48	271	P	P	19 32 48.3	-0.3
	comp=Z,0.9nm,0.9s,baz=159,slow=4.9,SNR=3.4						
MNMC	Minye Minye	69.21	93	P	P	19 33 11.5	-1.1
CPUP	Villa Florida	70.03	108	P	P	19 33 18.4	+1.2
	comp=Z,2.8nm,0.9s,baz=224,slow=8.2,SNR=5.6						
CPUP	Villa Florida	70.03	108	P	P	19 33 17.6	+0.4
CPUP				IAmb	IAmb	19 33 19.0	
	comp=Z,4.6nm,1.0s						
H10S3	ASCENSION HYDR	105.12	134	T	T	21 34 32.0	
	baz=204,slow=74,SNR=7.1						
H10S2	ASCENSION HYDR	105.12	134	T	T	21 34 35.7	
	baz=16,slow=74,SNR=3.9						
H10N3	ASCENSION HYDR	106.20	134	T	T	21 35 52.7	
	baz=203,slow=75,SNR=11						
H10N1	ASCENSION HYDR	106.20	134	T	T	21 35 54.2	
	baz=203,slow=75,SNR=12						
H10N2	ASCENSION HYDR	106.22	134	T	T	21 35 53.9	
	baz=203,slow=75,SNR=12						
ILAR	Eielson Array	121.23	2	PKP	PKiKP	19 40 57.5	+0.5
	comp=Z,1.6nm,1.0s,baz=239,slow=1.4,SNR=11						
YKA	Yellowknife Ar	122.13	19	PKP	PKiKP	19 40 59.0	+0.2
	comp=Z,0.2nm,0.7s,baz=184,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	146.69	276	PKPbc	PKPbc	19 41 46.0	-0.4
	comp=Z,4.2nm,0.8s,baz=119,slow=4.6,SNR=47						
ZALV	Zalesovo Beam	149.19	289	PKPbc	PKPbc	19 41 52.0	-0.8
	comp=Z,2.0nm,0.7s,baz=116,slow=2.3,SNR=6.2						
KURBB	Kurchatov Arra	150.90	279	PKPbc	PKPbc	19 41 55.9	-1.1
	comp=Z,1.0nm,0.3s,baz=120,slow=2.1,SNR=6.8						
KURK	Kurchatov	150.90	279		PKPdf	19 41 52.2	+0.9
NRIK	Noril'sk	152.12	320	PKPbc	PKiKP	19 41 59.4	-0.2
	comp=Z,1.2nm,0.4s,baz=198,slow=2.9,SNR=3.8						
NRIK	Noril'sk	152.12	320		PKPdf	19 41 53.8	+1.2
ESDC	Sonseca Array	152.26	114	PKPbc	PKiKP	19 42 01.0	+0.1
	comp=Z,0.4nm,0.8s,baz=219,slow=3.0,SNR=5.9						
ESDC				PKPab	pPKPab	19 42 11.9	-1.0
	comp=Z,0.8nm,0.9s,baz=259,slow=2.3,SNR=4.2						

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*IDC **01** 19:26:33.8±1.2, 57°.41S×26°.12W, h0^{km}, mb3.8/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.8/2, Error ellipse: s-maj=89.2km s-min=34.4km az=96.0*
ISC 01 19:26:42.5±1.2**,57°.6S**±0°.2×**25°.8W**±0°.4**,h65^{km},n9,σ0^{s}.56**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.12	157	P	Pn	19 30 11.4	-0.4
VNA3	Neumayer Olymp	15.32	160	P	Pn	19 30 13.8	-0.6
VNA2	Neumayer--Watz	15.51	157	P	Pn	19 30 16.6	-0.2
SNAA	Sanae	17.06	155	P	Pn	19 30 36.2	-0.1
QSPA	South Pole Qui	32.69	180	P	P	19 33 09.0	+0.8
	0.5nm,0.5s,baz=188,slow=2.0,SNR=8.9						
TORD	Torodi Ar. Bea	74.02	28	P	P	19 38 11.4	+0.4
	0.6nm,0.5s,baz=200,slow=6.5,SNR=2.3						
YKA	Yellowknife Ar	137.78	316	PKP	PKPdf	19 45 57.0	-0.6
	0.1nm,0.5s,baz=113,slow=2.5,SNR=4.7						
SONM	Songino Array	150.05	88	PKPbc	PKPbc	19 46 24.5	-0.2
	0.3nm,0.4s,baz=216,slow=2.7,SNR=2.6						
ILAR	Eielson Array	151.66	309	PKPbc	PKiKP	19 46 27.7	-0.4
	1.0nm,0.8s,baz=119,slow=1.1,SNR=10.0						

IDC 01 19:38:36.6±3.2**,6°.15S**×**147°.29E,h216^{km}**±47^{km}**,mb2.9**/3**, mb1 3.0**/5**,mb1mx2.8**/30**,mbtmp3.4**/5**,Error ellipse: s-maj=96.1km s-min=33.8km az=114.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.24**	**182**	P	Pn	19 39 30.1	+0.2
	2.9nm,0.3s,baz=327,slow=6.0,SNR=14						
PMG				S	S	19 40 12.2	+0.7
	0.8nm,0.3s,baz=12,slow=21,SNR=3.3						
WRA	**Warramunga Arr**	**18.61**	**221**	P	P	19 42 38.2	0.0
	0.3nm,0.3s,baz=48,slow=12,SNR=11						
ASAR	**Alice Springs**	**21.66**	**215**	P	P	19 43 10.8	+0.4
	0.5nm,0.9s,baz=50,slow=8.9,SNR=5.7						
FITZ	**Fitzroy Crossi**	**24.23**	**239**	P	P	19 43 33.8	-0.2
	1.5nm,0.5s,baz=70,slow=14,SNR=14						
MKAR	**Makanchi Array**	**77.79**	**320**	P	P	19 50 10.0	-0.1
	0.3nm,0.9s,baz=125,slow=7.6,SNR=2.4						

ROM ***01*** *19:48:01.8±0.1, 41°.57N±0°.01×14°.44E±0°.02, h335^{km}, ML3.7/49, Error ellipse: s-maj=1.9km s-min=0.1km az=225.0*
LDG ***01*** *19:48:03.8±0.1, 41°.49N×14°.22E, h331^{km}, Ml3.3/11, Error ellipse: s-maj=4.2km s-min=2.3km az=8.0*
IDC ***01*** *19:48:05.0±1.3, 41°.55N×14°.26E, h317^{km}±16^{km}, mb3.5/10, mb1 3.5/22, mb1mx3.3/46, mbtmp4.2/22, Error ellipse: s-maj=12.1km s-min=8.8km az=97.0*
NEIC ***01*** *19:48:04.7±1.4, 41°.51N±0°.06×14°.32E±0°.09, h318^{km}±7^{km}, mb4.2/6, Error ellipse: s-maj=9.9km s-min=7.2km az=122.0*
BGR ***01*** *19:48:10.7±5.7, 41°.73N×14°.03E, h10^{km}, ML4.1, Error ellipse: s-maj=176.8km s-min=35.6km az=169.0*
ISC 01 19:48:04.7±0.5**, 41°.53N**±0°.04×**14°.31E**±0°.04**, h320**^{km}±5^{km}**, n388, σ1^{s}.15**/441**, mb4.1**/18**, 43C-83D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIDA	**Miranda**	**0.12**	**338**	⇓P	**Pn**	**19 48 45.6**	**+0.5**
MIDA				S	**S**	**19 49 16.8**	**-0.5**
MIDA				AML	AML		
	comp=E,414µm,0.9s						
MIDA				AML	AML		
	comp=N,224µm,1.4s						
MIDA				AML	AML		
	comp=N,238µm,0.7s						
MIDA				AML	AML		
	comp=E,414µm,0.9s						
SGG	**Gregorio Mates**	**0.15**	**161**	⇓P	**Pn**	**19 48 45.3**	**+0.1**
SGG				S	**S**	**19 49 16.6**	**-0.9**
SGG				AML	AML		
	comp=E,215µm,0.8s						
SGG				AML	AML		
	comp=N,179µm,0.7s						
RNI2	**Rionero Sannit**	**0.21**	**325**	⇓P	**Pn**	**19 48 45.9**	**+0.8**
RNI2				S	**S**	**19 49 18.6**	**+1.2**
RNI2				AML	AML		
	comp=N,380µm,1.2s						
RNI2				AML	AML		
	comp=E,580µm,1.5s						
RNI2				AML	AML		
	comp=N,396µm,1.4s						
RNI2				AML	AML		
	comp=N,379µm,1.2s						
RNI2				AML	AML		
	comp=E,593µm,1.5s						
BSSO	**Busso**	**0.21**	**87**	⇓P	**Pn**	**19 48 45.6**	**+0.4**
BSSO				S	**S**	**19 49 17.4**	**0.0**
CERA	**Filignano**	**0.23**	**286**	⇓P	**Pn**	**19 48 45.3**	**+0.1**
CERA				S	**S**	**19 49 17.0**	**-0.4**
CERA				AML	AML		
	comp=E,187µm,1.4s						
CERA				AML	AML		
	comp=N,155µm,0.8s						
CERA				AML	AML		
	comp=E,174µm,1.5s						
CERA				AML	AML		
	comp=N,160µm,1.2s						
CERA				AML	AML		
	comp=E,188µm,1.4s						
CERA				AML	AML		
	comp=N,232µm,1.6s						
CERA				AML	AML		
	comp=E,181µm,1.6s						
CERA				AML	AML		
	comp=N,248µm,1.6s						
CERA				AML	AML		
	comp=N,249µm,1.6s						
CERA				AML	AML		
	comp=E,222µm,1.0s						
CERA				AML	AML		
	comp=E,232µm,1.6s						
TRIV	**Trivento**	**0.29**	**37**	⇓P	**Pn**	**19 48 45.4**	**+0.2**
TRIV				S	**S**	**19 49 17.2**	**-0.3**
GATE	**Gambatesa**	**0.45**	**92**	P	**Pn**	**19 48 45.8**	**+0.3**
GATE				S	**S**	**19 49 18.5**	**+0.5**
POFI	**Posta Fibreno**	**0.49**	**292**	⇓P	**Pn**	**19 48 46.0**	**+0.3**
POFI				S	**S**	**19 49 18.1**	**-0.1**
POFI				AML	AML		
	comp=E,141µm,0.6s						
POFI				AML	AML		
	comp=N,166µm,0.5s						
POFI				AML	AML		
	comp=E,356µm,0.7s						
POFI				AML	AML		
	comp=N,283µm,0.8s						
POFI				AML	AML		
	comp=E,396µm,0.8s						
POFI				AML	AML		
	comp=N,274µm,0.8s						
POFI				AML	AML		
	comp=E,395µm,0.8s						
POFI				AML	AML		
	comp=N,273µm,0.8s						
PSB1	**Pescosannita**	**0.49**	**129**	P	**Pn**	**19 48 45.8**	**+0.1**
PSB1				S	**S**	**19 49 17.6**	**-0.6**
MODR	**Mondragone**	**0.51**	**220**	⇓P	**Pn**	**19 48 45.7**	**+0.1**
MODR				S	**S**	**19 49 17.9**	**-0.4**
LPEL	**Lama dei Pelig**	**0.52**	**349**	⇓P	**Pn**	**19 48 45.6**	**0.0**
LPEL				S	**S**	**19 49 17.6**	**-0.6**
LPEL				AML	AML		
	comp=E,526µm,0.3s						
LPEL				AML	AML		
	comp=N,412µm,1.1s						
PAOL	**Paolisi**	**0.54**	**159**	Pn	**Pn**	**19 48 45.7**	**-0.1**
PAOL	**Paolisi**	**0.54**	**159**	P	**Pn**	**19 48 45.7**	**-0.1**
PAOL				S	**S**	**19 49 17.5**	**-1.0**
INTR	**Introdacqua**	**0.57**	**328**	Pn	**Pn**	**19 48 45.7**	**-0.1**
INTR	**Introdacqua**	**0.57**	**328**	⇓P	**Pn**	**19 48 45.9**	**+0.1**
INTR				S	**S**	**19 49 18.3**	**-0.3**
INTR				AML	AML		
	comp=E,243µm,0.8s						
INTR				AML	AML		
	comp=N,362µm,0.7s						
INTR				AML	AML		
	comp=E,354µm,0.6s						
INTR				AML	AML		
	comp=N,415µm,1.0s						
INTR				AML	AML		
	comp=E,354µm,0.6s						
VVLD	**Villa Vallelon**	**0.62**	**303**	⇓P	**Pn**	**19 48 46.1**	**+0.2**
VVLD				S	**S**	**19 49 18.8**	**0.0**
VVLD				AML	AML		
	comp=E,56µm,1.2s						
VVLD				AML	AML		
	comp=N,47µm,0.5s						
VVLD				AML	AML		
	comp=E,56µm,1.2s						
VVLD				AML	AML		
	comp=N,104µm,0.8s						
VVLD				AML	AML		
	comp=E,56µm,0.9s						
VVLD				AML	AML		
	comp=N,104µm,0.8s						
MELA	**Melanico ??? S**	**0.64**	**74**	⇓P	**Pn**	**19 48 45.3**	**-0.6**
MELA				S	**S**	**19 49 16.6**	**-2.0**
MELA				AML	AML		
	comp=E,878µm,0.9s						
MELA				AML	AML		
	comp=N,810µm,0.8s						
MELA				AML	AML		
	comp=N,744µm,0.8s						
MELA				AML	AML		
	comp=N,808µm,0.8s						
MELA				AML	AML		
	comp=E,892µm,0.9s						
MELA				AML	AML		
	comp=E,876µm,0.9s						
MELA				AML	AML		
	comp=N,744µm,0.8s						
GUAR	**Guarcino**	**0.79**	**290**	⇓P	**Pn**	**19 48 46.7**	**+0.2**
GIUL	**Giuliano Di Ro**	**0.79**	**272**	⇓P	**Pn**	**19 48 46.5**	**+0.1**
T0110	**Collepietro**	**0.80**	**330**	P	**Pn**	**19 48 46.7**	**+0.2**
T0110				S	**S**	**19 49 20.3**	**+0.5**
T0110				AML	AML		
	comp=E,482µm,0.4s						
T0110				AML	AML		
	comp=E,482µm,0.4s						
T0110				AML	AML		
	comp=N,416µm,0.6s						
T0110				AML	AML		
	comp=E,486µm,1.0s						
T0110				AML	AML		
	comp=N,416µm,0.6s						
SSB3	**San Sossio Bar**	**0.83**	**123**	P	**Pn**	**19 48 46.9**	**+0.2**
PTQR	**Pietraquaria**	**0.84**	**306**	AML	AML		
	comp=N,134µm,0.7s						
PTQR				AML	AML		
	comp=N,134µm,0.7s						
PTQR				AML	AML		
	comp=E,196µm,0.9s						
CAFE	**Carife**	**0.86**	**126**	⇑P	**Pn**	**19 48 47.0**	**+0.1**
CAFE				S	**S**	**19 49 19.8**	**-0.7**
RSF3	**Rocca San Feli**	**0.86**	**131**	P	**Pn**	**19 48 46.6**	**-0.2**
RSF3				S	**S**	**19 49 18.9**	**-1.5**
SNAL	**S. Angelo Dei**	**0.91**	**132**	⇑P	**Pn**	**19 48 47.0**	**0.0**
SNAL				S	**S**	**19 49 19.7**	**-1.0**
SNAL				AML	AML		
	comp=N,886µm,0.8s						
SNAL				AML	AML		
	comp=E,626µm,0.7s						
SNAL				AML	AML		
	comp=N,970µm,0.8s						
SNAL				AML	AML		
	comp=E,662µm,0.7s						
SNAL				AML	AML		
	comp=N,958µm,0.8s						
FAGN	**Fagnano**	**0.91**	**324**	⇓P	**Pn**	**19 48 47.3**	**+0.5**
FAGN				S	**S**	**19 49 19.6**	**-0.9**
FAGN				AML	AML		
	comp=E,750µm,0.5s						
FAGN				AML	AML		
	comp=N,652µm,0.4s						
LIO3	**Lioni**	**0.91**	**134**	P	**Pn**	**19 48 46.9**	**-0.1**
LIO3				S	**S**	**19 49 19.3**	**-1.4**
MCRV	**Calabrutti - M**	**0.99**	**139**	⇑P	**Pn**	**19 48 47.2**	**-0.3**
MCRV				S	**S**	**19 49 20.1**	**-1.4**
LATB	**Latina**	**1.01**	**268**	⇓P	**Pn**	**19 48 47.3**	**+0.1**
AQU	**L'Aquila**	**1.06**	**321**	⇓*i*Pn	**Pn**	**19 48 48.2**	**+0.7**
AQU	**L'Aquila**	**1.06**	**321**	Pn	**Pn**	**19 48 48.2**	**+0.7**
AQU	**L'Aquila**	**1.06**	**321**	⇓P	**Pn**	**19 48 48.3**	**+0.7**
AQU				AML	AML		
	comp=E,253µm,1.4s						
AQU				AML	AML		
	comp=E,256µm,1.4s						
AQU				AML	AML		
	comp=N,296µm,1.5s						
CERT	**Cerreto**	**1.08**	**293**	⇓P	**Pn**	**19 48 47.8**	**+0.2**
CERT				AML	AML		
	comp=E,200µm,0.5s						
CERT				AML	AML		
	comp=N,88µm,0.4s						
CERT				AML	AML		
	comp=E,200µm,0.5s						
CERT				AML	AML		
	comp=N,88µm,0.4s						
SGRT	**San Giovanni R**	**1.10**	**78**		**Pn**	**19 48 46.8**	**-0.9**
SGRT	**San Giovanni R**	**1.10**	**78**	⇓P	**Pn**	**19 48 47.0**	**-0.8**
SGRT				S	**S**	**19 49 19.4**	**-2.6**
SGRT				AML	AML		
	comp=N,1019µm,0.8s						
SGRT				AML	AML		
	comp=E,1445µm,0.7s						
VULT	**Monte Vulture**	**1.14**	**120**	⇑P	**Pn**	**19 48 47.5**	**-0.6**
VULT				S	**S**	**19 49 21.1**	**-1.5**
COL3	**Colliano**	**1.14**	**137**	P	**Pn**	**19 48 48.0**	**-0.1**
FIAM	**Fiamignano**	**1.16**	**310**	⇓P	**Pn**	**19 48 48.7**	**+0.7**
FIAM				AML	AML		
	comp=E,238µm,0.6s						
FIAM				AML	AML		
	comp=N,152µm,1.4s						
FIAM				AML	AML		
	comp=N,188µm,0.8s						
MRLC	**Muro Lucano**	**1.18**	**131**	⇑P	**Pn**	**19 48 48.1**	**-0.1**
MRLC				S	**S**	**19 49 21.9**	**-1.0**
MRLC				AML	AML		
	comp=E,228µm,0.4s						
MRLC				AML	AML		
	comp=E,240µm,0.8s						
MRLC				AML	AML		
	comp=N,226µm,1.3s						
CAMP	**Campotosto**	**1.21**	**326**	⇓P	**Pn**	**19 48 48.9**	**+0.7**
CAMP				AML	AML		
	comp=E,224µm,1.6s						
CAMP				AML	AML		
	comp=N,315µm,0.7s						
TERO	**Teramo**	**1.21**	**334**	⇓P	**Pn**	**19 48 48.5**	**+0.3**
TERO				S	**S**	**19 49 21.8**	**-1.1**
TERO				AML	AML		
	comp=E,178µm,1.0s						
TERO				AML	AML		
	comp=N,170µm,0.5s						
TERO				AML	AML		
	comp=E,444µm,1.0s						
TERO				AML	AML		
	comp=N,428µm,0.5s						
MSAG	**Monte S. Angel**	**1.21**	**81**	⇓P	**Pn**	**19 48 47.5**	**-0.8**
MSAG				S	**S**	**19 49 20.6**	**-2.4**
MSAG				AML	AML		
	comp=E,776µm,0.6s						
MSAG				AML	AML		
	comp=N,1040µm,0.5s						
MSAG				AML	AML		
	comp=E,780µm,0.6s						
MSAG				AML	AML		
	comp=N,1055µm,0.5s						
MSAG				AML	AML		
	comp=E,780µm,0.6s						
MSAG				AML	AML		
	comp=N,1060µm,0.5s						
MSAG				AML	AML		
	comp=N,1038µm,0.5s						
MSAG				AML	AML		
	comp=E,778µm,0.6s						
RDP	**Rocca di Papa**	**1.22**	**281**	P	**Pn**	**19 48 48.9**	**+0.6**
RMP	**Rome, Mte Porz**	**1.24**	**283**	⇓P	**Pn**	**19 48 49.0**	**+0.7**
MTCE	**Montecelio**	**1.27**	**293**	⇓P	**Pn**	**19 48 48.7**	**+0.2**
CDRU	**Civita di Ruta**	**1.29**	**144**	⇑P	**Pn**	**19 48 48.6**	**-0.2**
PALZ	**Palazzo San Ge**	**1.38**	**115**	⇑P	**Pn**	**19 48 48.9**	**-0.3**
PALZ				S	**S**	**19 49 22.6**	**-2.1**
LNSS	**Leonessa**	**1.43**	**319**	⇓P	**Pn**	**19 48 49.8**	**+0.3**
LNSS				AML	AML		
	comp=N,196µm,0.9s						
LNSS				AML	AML		
	comp=E,210µm,0.2s						
CMPR	**Campora**	**1.43**	**148**	⇑P	**Pn**	**19 48 49.1**	**-0.5**
CMPR				AML	AML		
	comp=E,84µm,0.5s						
CMPR				AML	AML		
	comp=N,96µm,1.5s						
CMPR				AML	AML		
	comp=N,96µm,1.5s						
OFFI	**Offida**	**1.48**	**342**	⇓P	**Pn**	**19 48 50.5**	**+0.9**
OFFI				S	**S**	**19 49 26.1**	**+0.6**
MRVN	**Minervino Murg**	**1.50**	**108**	⇑P	**Pn**	**19 48 49.3**	**-0.6**
MRVN				S	**S**	**19 49 23.9**	**-2.1**
MRVN				AML	AML		
	comp=N,226µm,1.5s						
MRVN				AML	AML		
	comp=E,155µm,1.1s						
SLCN	**Sala Consilina**	**1.52**	**138**	⇑P	**Pn**	**19 48 50.1**	**-0.1**
SLCN				S	**S**	**19 49 26.2**	**-0.1**
SLCN				AML	AML		
	comp=N,906µm,0.7s						
SLCN				AML	AML		
	comp=E,788µm,0.6s						
SLCN				AML	AML		
	comp=N,358µm,1.4s						
SLCN				AML	AML		
	comp=E,282µm,1.3s						
GUMA	**Gualdo di Mace**	**1.55**	**350**	⇓P	**Pn**	**19 48 51.5**	**+1.4**
GUMA				S	**S**	**19 49 27.5**	**+1.1**
GUMA				AML	AML		
	comp=E,989µm,0.9s						
GUMA				AML	AML		
	comp=E,1430µm,0.3s						
GUMA				AML	AML		
	comp=N,1034µm,0.4s						
GUMA				AML	AML		
	comp=N,1265µm,0.5s						
NRCA	**Norcia**	**1.57**	**326**		**Pn**	**19 48 50.9**	**+0.6**
NRCA	**Norcia**	**1.57**	**326**	⇓P	**Pn**	**19 48 51.0**	**+0.6**
NRCA				S	**S**	**19 49 27.1**	**+0.3**
NRCA				AML	AML		
	comp=E,232µm,0.3s						
NRCA				AML	AML		
	comp=N,528µm,0.9s						
MCEL	**Monticello**	**1.65**	**136**	⇑P	**Pn**	**19 48 51.1**	**+0.1**
MCEL				S	**S**	**19 49 27.6**	**-0.3**
MCEL				AML	AML		
	comp=E,354µm,0.4s						
MCEL				AML	AML		
	comp=N,358µm,1.0s						
MTSN	**Montesano sull**	**1.67**	**139**	⇑P	**Pn**	**19 48 50.9**	**-0.2**
MTSN				S	**S**	**19 49 27.6**	**-0.5**
MTSN				AML	AML		
	comp=E,196µm,0.7s						
MTSN				AML	AML		
	comp=N,296µm,0.5s						
MGR	**Morigerati**	**1.68**	**146**	AML	AML		
	comp=N,180µm,0.3s						
MGR				AML	AML		
	comp=N,181µm,0.3s						
MGR				AML	AML		
	comp=E,136µm,0.5s						
AG51	**Grumento Nova**	**1.71**	**136**	P	**Pn**	**19 48 51.5**	**+0.2**
FEMA	**Monte Fema**	**1.71**	**327**	⇓P	**Pn**	**19 48 52.5**	**+1.3**
FDMO	**Fiordimonte**	**1.75**	**329**	⇓P	**Pn**	**19 48 52.0**	**+0.6**
FDMO				S	**S**	**19 49 29.1**	**+0.3**
FDMO				AML	AML		
	comp=E,191µm,1.0s						
FDMO				AML	AML		
	comp=N,137µm,0.7s						
FDMO				AML	AML		
	comp=E,214µm,0.7s						
FDMO				AML	AML		
	comp=N,206µm,1.1s						
SIRI	**Monte Sirino -**	**1.79**	**138**	⇑P	**Pn**	**19 48 51.7**	**-0.3**
SIRI				AML	AML		
	comp=E,362µm,0.3s						
SIRI				AML	AML		
	comp=N,461µm,1.0s						
SIRI				AML	AML		
	comp=E,361µm,0.3s						
SIRI				AML	AML		
	comp=N,470µm,1.0s						
SIRI				AML	AML		
	comp=E,371µm,0.3s						
CESI	**CESI - Serrava**	**1.80**	**325**	⇓P	**Pn**	**19 48 53.0**	**+1.1**
CESI				AML	AML		
	comp=E,142µm,0.3s						
CESI				AML	AML		
	comp=N,94µm,0.3s						
TOLF	**Tolfa**	**1.81**	**288**	S	S	19 49 49.0	+20
MOMA	**Monte Martano**	**1.81**	**315**	⇓P	**Pn**	**19 48 52.5**	**+0.6**
MOMA				AML	AML		
	comp=N,172µm,1.1s						
MOMA				AML	AML		
	comp=E,178µm,0.8s						
AMUR	**Altamura**	**1.84**	**109**	⇑P	**Pn**	**19 48 51.8**	**-0.4**
MIGL	**Miglionico**	**1.86**	**119**	⇑P	**Pn**	**19 48 52.2**	**-0.1**
MDAR	**Monte D'Aria**	**1.87**	**333**	⇑P	**Pn**	**19 48 52.6**	**+0.3**
SCHR	**S. Chirico Rap**	**1.89**	**134**	⇑P	**Pn**	**19 48 52.7**	**+0.1**
SCHR				S	**S**	**19 49 29.8**	**-1.0**
SCHR				AML	AML		
	comp=E,283µm,0.6s						
SCHR				AML	AML		
	comp=N,240µm,0.4s						
SSM1	**San Severino M**	**1.89**	**334**	P	**Pn**	**19 48 52.6**	**+0.2**
CUC	**Castrocucco**	**1.92**	**143**	⇑P	**Pn**	**19 48 52.3**	**-0.5**
CUC				S	**S**	**19 49 28.9**	**-2.3**
GAG1	**Gagliole**	**1.94**	**332**	P	**Pn**	**19 48 53.1**	**+0.4**
ASSB	**Assisi San Ben**	**1.94**	**321**	⇓P	**Pn**	**19 48 52.6**	**-0.2**
CRAC	**Craco**	**1.99**	**125**	⇑P	**Pn**	**19 48 53.2**	**0.0**
SNTG	**Esanatoglia**	**2.00**	**330**	⇓P	**Pn**	**19 48 53.5**	**+0.4**
SNTG				AML	AML		
	comp=N,290µm,0.2s						
SNTG				AML	AML		
	comp=E,188µm,0.7s						
EL6	**Elcito**	**2.01**	**334**	⇓P	**Pn**	**19 48 53.4**	**+0.1**
MATE	**Matera**	**2.01**	**115**	⇑P	**Pn**	**19 48 53.2**	**-0.2**
MATE				S	**S**	**19 49 30.3**	**-1.9**
CING	**Cingoli**	**2.02**	**336**	⇓P	**Pn**	**19 48 53.1**	**-0.2**
ATCC	**AVT- Casa Cast**	**2.06**	**324**	P	**Pn**	**19 48 54.1**	**+0.4**
AOI	**Ancona**	**2.08**	**346**	P	**Pn**	**19 48 53.7**	**-0.1**
FOSV	**Fossato di Vic**	**2.10**	**327**	⇓P	**Pn**	**19 48 54.4**	**+0.4**
MGAB	**Montegabbione**	**2.14**	**311**	⇓P	**Pn**	**19 48 54.9**	**+0.6**
MGAB				AML	AML		
	comp=N,138µm,1.1s						
MGAB				AML	AML		
	comp=E,157µm,1.6s						
MURB	**Monte Urbino**	**2.18**	**323**		**Pn**	**19 48 54.8**	**+0.2**
MURB	**Monte Urbino**	**2.18**	**323**	P	**Pn**	**19 48 55.0**	**+0.4**
MURB				S	**S**	**19 49 34.5**	**0.0**
ORI	**Oriolo Calabro**	**2.19**	**131**	⇓P	**Pn**	**19 48 55.9**	**+1.1**
ORI				AML	AML		
	comp=E,868µm,0.4s						
ORI				AML	AML		
	comp=N,938µm,0.5s						
ATTE	**AVT- Monte Tez**	**2.21**	**320**	⇑P	**Pn**	**19 48 54.0**	**-0.9**
NOCI	**Noci**	**2.21**	**109**	⇑P	**Pn**	**19 48 54.7**	**-0.2**
NOCI				S	**S**	**19 49 33.2**	**-1.8**
ARVD	**Arcevia**	**2.21**	**333**	⇓P	**Pn**	**19 48 54.9**	**+0.1**
ARVD				AML	AML		
	comp=N,173µm,0.9s						
ARVD				AML	AML		
	comp=E,210µm,0.9s						
SSFR	**Montelago di S**	**2.21**	**330**	⇑P	**Pn**	**19 48 55.2**	**+0.3**
SSFR				AML	AML		
	comp=E,376µm,0.6s						
SSFR				AML	AML		
	comp=N,438µm,0.5s						
SACS	**San Casciano d**	**2.22**	**307**	P	**Pn**	**19 48 55.4**	**+0.5**
SACS				P		19 49 08.1	
ATSC	**Scheggia e Pas**	**2.24**	**328**	P	**Pn**	**19 48 55.3**	**+0.2**
ATSC				S	**S**	**19 49 34.3**	**-1.1**
FRON	**Frontone**	**2.30**	**330**	⇓P	**Pn**	**19 48 55.7**	**+0.1**
FRON				AML	AML		
	comp=E,194µm,1.6s						
FRON				AML	AML		
	comp=N,210µm,0.6s						
ATVO	**AVT- Monte Val**	**2.32**	**323**	⇑P	**Pn**	**19 48 55.9**	**+0.2**
ATPI	**Pietralunga -**	**2.38**	**324**	⇑P	**Pn**	**19 48 56.5**	**+0.2**
MPAG	**Monte Paganucc**	**2.39**	**332**	⇓P	**Pn**	**19 48 56.5**	**+0.1**
PIEI	**Pieia**	**2.39**	**327**	P	**Pn**	**19 48 56.4**	**+0.1**
PIEI				AML	AML		
	comp=E,150µm,1.6s						
PIEI				AML	AML		
	comp=N,125µm,1.5s						
NARO	**Abbazia di Nar**	**2.44**	**329**	⇓P	**Pn**	**19 48 56.8**	**+0.1**
NARO				S	**S**	**19 49 37.0**	**-1.3**
NARO				AML	AML		
	comp=E,164µm,1.6s						
NARO				AML	AML		
	comp=N,215µm,0.4s						
ARCI	**Arcidosso**	**2.48**	**303**	S	S	19 50 01.0	+22
BADI	**Badiali**	**2.50**	**323**	⇑P	**Pn**	**19 48 57.4**	**+0.2**
BADI				AML	AML		
	comp=E,128µm,1.5s						
BADI				AML	AML		
	comp=N,174µm,0.6s						
PARC	**Parchiule**	**2.61**	**325**	⇓P	**Pn**	**19 48 58.7**	**+0.5**
PARC				AML	AML		
	comp=N,210µm,1.1s						
PARC				AML	AML		
	comp=E,159µm,1.6s						
CPGN	**Carpegna, Ital**	**2.70**	**328**	⇑P	**Pn**	**19 49 00.3**	**+1.1**
CPGN				AML	AML		
	comp=E,371µm,1.1s						
CPGN				AML	AML		
	comp=N,406µm,0.6s						
STON	**Ston**	**2.85**	**61**	⇓*i*Pn	**Pn**	**19 48 59.4**	**-0.9**
CASP	**Castiglione de**	**2.85**	**297**	Pn	**Pn**	**19 49 01.1**	**+0.6**
TIP	**Timpagrande**	**3.00**	**141**	Pn	**Pn**	**19 49 01.6**	**-0.5**
TIP	**Timpagrande**	**3.00**	**141**	⇑P	**Pn**	**19 49 01.7**	**-0.3**
TIP				AML	AML		
	comp=N,94µm,1.6s						
TIP				AML	AML		

	comp=E,99µm,1.6s						
OSSC	**Osservatorio P**	3.02	312		Pn	19 49 02.1	+0.1
OSSC	**Osservatorio P**	3.02	312	S	S	19 49 54.0	+6.2
SERS	**Sersale**	3.09	143	⇓P	Pn	19 49 02.8	-0.1
SERS				AML	AML		
	comp=N,142µm,1.6s						
SERS				AML	AML		
	comp=E,143µm,1.0s						
GRI	**Girifalco**	3.15	149	⇓P	Pn	19 49 05.5	+2.1
GRI				AML	AML		
	comp=N,307µm,0.4s						
GRI				AML	AML		
	comp=E,222µm,0.5s						
LMD	**Lutirano**	3.18	324	⇑P	Pn	19 49 04.0	+0.4
LMD				AML	AML		
	comp=N,115µm,0.3s						
LMD				AML	AML		
	comp=E,146µm,0.7s						
TREB	**Trebinje**	3.23	67	*e*Pn	Pn	19 49 03.8	-0.2
HCY	**Herceg Novi**	3.25	72	*e*Pn	Pn	19 49 03.7	-0.5
BRIS	**BRISIGHELLA**	3.33	323	P	Pn	19 49 04.5	-0.4
BRIS				AML	AML		
	comp=N,150µm,0.4s						
BRIS				AML	AML		
	comp=E,104µm,1.5s						
BRY	**Bratogost**	3.42	65	⇓*i*Pn	Pn	19 49 06.1	0.0
SCTE	**Santa Cesarea**	3.48	113	Pn	Pn	19 49 06.5	0.0
CEL	**Celeste**	3.49	159		Pn	19 49 06.1	-0.8
MAIM	**Mastiano**	3.69	311	P	Pn	19 49 08.1	-0.5
DRME	**Dracevica, Mon**	3.70	78	*e*Pn	Pn	19 49 09.6	+0.8
ZCCA	**Zocca**	3.73	320	Pn	Pn	19 49 10.3	+1.2
CARD	**Cardoso**	3.76	313	P	Pn	19 49 08.8	-0.6
CARD	**Cardoso**	3.76	313	⇑P	Pn	19 49 12.0	+2.6
UPM	**Unac-Piva**	3.79	62	*e*Pn	Pn	19 49 10.6	+0.7
PDG	**Podgorica**	3.79	75	*e*Pn	Pn	19 49 09.8	+0.1
RIY	**Rijeka**	3.79	2	⇓*i*Pn	Pn	19 49 10.0	+0.4
MTGR	**Montagna Grand**	3.83	199	⇑P	Pn	19 49 18.0	+7.7
BLY	**Banja Luka**	3.84	32	⇓*i*Pn	Pn	19 49 10.6	+0.4
BLY	**Banja Luka**	3.84	32	⇑P	Pn	19 49 10.4	+0.2
BLY				AML	AML		
	comp=E,159µm,1.6s						
BLY				AML	AML		
	comp=N,170µm,1.3s						
BLY				AML	AML		
	comp=N,188µm,1.3s						
BLY				AML	AML		
	comp=E,152µm,1.3s						
PRIJ	**Prijedor**	3.86	26	*e*Pn	Pn	19 49 11.9	+1.5
VLC	**Villacollemand**	3.90	314		Pn	19 49 10.2	-0.7
BOJS	**Bojanci**	4.03	9	*i* P	Pn	19 49 12.9	+0.7
BOJS	**Bojanci**	4.03	9	⇓P	Pn	19 49 11.2	-1.0
BOJS				AML	AML		
	comp=N,184µm,0.7s						
BOJS				AML	AML		
	comp=E,78µm,1.5s						
EQUI	**Equi**	4.03	312	P	Pn	19 49 11.5	-0.7
CLTB	**Caltabellotta**	4.04	192	Pn	Pn	19 49 13.7	+1.0
VAE	**Valguarnera**	4.05	179	P	Pn	19 49 20.3	+7.6
	comp=E,1.1nm,0.3s,baz=0.0,slow=12,SNR=3.6						
VLO	**Vlora**	4.06	103	P	Pn	19 49 24.4	+12
PGF	**Pioggiola**	4.08	286	*e*P	Pn	19 49 12.6	-0.4
CAVE	**Cavezzo**	4.12	325	⇑P	Pn	19 49 22.6	+10
TRI	**Trieste**	4.19	355	Pn	Pn	19 49 13.8	-0.1
TRI	**Trieste**	4.19	355	⇓P	Pn	19 49 14.2	+0.3
CEY	**Cerknica**	4.20	1	⇓*i*Pn	Pn	19 49 14.3	+0.2
HAPS	**Han Pijesak,Bl**	4.26	52	*e*Pn	Pn	19 49 14.0	-0.8
RUDO	**Rudo**	4.28	59	*e*Pn	Pn	19 49 12.3	-2.6
TEOL	**Teolo**	4.28	334		Pn	19 49 14.8	-0.1
GRAM	**Graiana**	4.29	315	P	Pn	19 49 15.3	+0.2
CRES	**Cresnjev**	4.37	11	⇓*i*Pn	Pn	19 49 16.2	+0.3
BBLS	**Lazići**	4.42	56	⇓*i*Pn	Pn	19 49 16.5	0.0
ZAG	**Zagreb**	4.46	15	*e*Pn	Pn	19 49 16.9	+0.1
MSSA	**Maissana**	4.49	310		Pn	19 49 16.6	-0.7
LJU	**Ljubljana**	4.51	2	*i* P	Pn	19 49 18.3	+0.9
LJU				*i*		19 49 24.2	
LJU				*i* S	S	19 50 15.1	-0.8
LJU	**Ljubljana**	4.51	2	⇓*i*Pn	Pn	19 49 18.2	+0.8
LJU	**Ljubljana**	4.51	2	⇓P	Pn	19 49 18.4	+0.9
LJU				AML	AML		
	comp=E,224µm,0.3s						
LJU				AML	AML		
	comp=N,349µm,1.4s						
SJES	**Sjenica**	4.53	66	*e*Pn	Pn	19 49 18.4	+0.6
GORR	**Gorreto**	4.79	312	P	Pn	19 49 20.7	+0.1
STAL	**STALIGIAL**	4.86	347		Pn	19 49 21.5	+0.1
TEKS	**Tekeris**	4.87	50	⇓*i*Pn	Pn	19 49 21.6	+0.1
DIVS	**Divibare**	4.90	57	⇓*i*Pn	Pn	19 49 21.9	0.0
DIVS	**Divibare**	4.90	57	Pn	Pn	19 49 21.9	0.0
OHR	**Ohrid**	4.90	93	*i* P	Pn	19 49 23.0	+1.1
CTI	**Castel Tesino**	4.91	338	Pn	Pn	19 49 22.0	0.0
PTCC	**Patocco-Chiusa**	4.92	352	⇓P	Pn	19 49 22.2	+0.2
PTCC				AML	AML		
	comp=N,54µm,0.4s						
PTCC				AML	AML		
	comp=E,38µm,1.6s						
SALO	**Salr**	4.92	327	Pn	Pn	19 49 22.3	+0.2
OBKA	**Obir**	4.98	2	*i* Pn	Pn	19 49 23.4	+0.6
	comp=E,26nm,0.3s,SNR=14						
OBKA				*e*S	S	19 50 24.7	-0.9
	comp=E,22nm,0.8s						
OBKA	**Obir**	4.98	2	*e*Pn	Pn	19 49 23.2	+0.5
ACOM	**Acomizza, Ital**	5.05	354	⇓P	Pn	19 49 24.6	+1.0
KOGS	**Kog**	5.11	15	⇓P	Pn	19 49 24.5	+0.4
KOGS				AML	AML		
	comp=E,122µm,1.3s						
KOGS				AML	AML		
	comp=N,102µm,1.5s						
ZOU	**Zoufplan**	5.11	350		Pn	19 49 25.0	+0.6
MYKA	**Terra Mystica**	5.12	355	*i* Pn	Pn	19 49 25.3	+1.0
	comp=N,12nm,0.3s,SNR=6.3						
PERS	**Pernice**	5.13	6	*i* P	Pn	19 49 25.2	+0.7
SOKA	**Soboth**	5.17	6	*i* P	Pn	19 49 25.8	+0.9
	comp=N,26nm,0.3s,SNR=13						
SOKA				*e*S	S	19 50 29.6	+0.1
	comp=N,1.1nm,0.2s						
PCP	**Piancastagn**	5.19	307	P	Pn	19 49 24.1	-1.0
BEHE	**Becsehely**	5.25	19	⇓*e*PN	Pn	19 49 29.4	+3.7
BEHE	**Becsehely**	5.25	19	⇓*i*Pn	Pn	19 49 29.2	+3.5
ABTA	**Abfaltersbach**	5.37	347	*i* P	Pn	19 49 28.6	+1.4
	comp=N,40nm,0.5s,SNR=17						
FNA	**Florina**	5.38	96	Pn	Pn	19 49 27.9	+0.4
FRGS	**Fruska Gora**	5.40	46	⇓*i*Pn	Pn	19 49 27.8	+0.3
ROTM	**Rocchetta Tana**	5.47	309	P	Pn	19 49 29.9	+1.6
SBF	**Sospel**	5.58	297	*e*P	Pn	19 49 29.6	0.0
KBA	**Koelnbreinsper**	5.59	353	*i* P	Pn	19 49 30.8	+1.0
	comp=N,6.4nm,0.4s,SNR=6.0						
KBA				*e*S	S	19 50 36.2	-2.2
	comp=N,5.8nm,0.7s						
KBA	**Koelnbreinsper**	5.59	353	*e*Pn	Pn	19 49 30.6	+0.8
RISI	**Rein**	5.64	344	⇓P	Pn	19 49 32.0	+1.5
ARSA	**Arzberg**	5.78	8	*i* Pn	Pn	19 49 32.8	+0.9
	comp=N,33nm,0.5s,SNR=19						
ARSA	**Arzberg**	5.78	8	*e*Pn	Pn	19 49 32.8	+0.9
ARSA	**Arzberg**	5.78	8	⇓P	Pn	19 49 28.6	-3.3
FUORN	**Ofenpass-Fuorn**	5.86	332	Pn	Pn	19 49 33.9	+0.8
TIH	**Tihany**	5.95	24	*e*PN	Pn	19 49 34.6	+0.8
FRF	**La Foret Royal**	6.01	292	*e*P	Pn	19 49 33.8	-0.9
WTTA	**Wattenberg**	6.04	342	*e*Pn	Pn	19 49 37.6	+2.5
	comp=N,6.3nm,0.4s						
WTTA	**Wattenberg**	6.04	342	*e*Pn	Pn	19 49 37.4	+2.3
LMR	**La Mourre**	6.05	290	*e*P	Pn	19 49 35.3	+0.3
FETA	**Feichten**	6.06	336	*i* Pn	Pn	19 49 37.6	+2.3
	comp=N,27nm,0.7s,SNR=13						
FETA				*e*S	S	19 50 52.5	+4.1
	comp=N,5.9nm,1.0s						
MPLH	**Magyarpolny**	6.09	21	*e*PN	Pn	19 49 36.5	+1.0
TUE	**Stuetta**	6.10	326	Pn	Pn	19 49 36.5	+0.6
SQTA	**Sankt Quirin**	6.10	340	*i* Pn	Pn	19 49 38.0	+2.2
	comp=N,12nm,0.4s,SNR=9.4						
WATA	**Walderalm**	6.12	342	*i* Pn	Pn	19 49 38.0	+2.0
	comp=N,11nm,0.5s,SNR=6.3						
DAVOX	**Davos/Dischmat**	6.14	330	P	Pn	19 49 39.1	+2.9
	comp=N,6.6nm,0.3s,baz=150,slow=5.8,SNR=135						
DAVOX				S	S	19 50 50.8	+0.5
	baz=90,slow=20,SNR=2.0						
VAY	**Valandovo**	6.21	89	*i* P	Pn	19 49 37.2	+0.1
MOTA	**Moosalm**	6.25	340	*e*Pn	Pn	19 49 39.1	+1.6
	comp=N,10nm,0.7s						
MDVR	**Moldovita**	6.31	57	⇓P	Pn	19 49 38.6	+0.4
MOA	**Molln**	6.32	360	*e*Pn	Pn	19 49 39.1	+1.0
	comp=N,6.2nm,0.4s						
MOA	**Molln**	6.32	360	*e*Pn	Pn	19 49 39.0	+0.8
ZUGS	**Zugspitze, Sch**	6.35	339	*e*Pn	Pn	19 49 40.2	+1.4
SOP	**Sopron**	6.35	14	*e*PN	Pn	19 49 39.5	+1.0
LIT	**Litokhoron**	6.37	100		Pn	19 49 38.6	-0.3
MBDF	**Montbardon**	6.37	303	*e*P	Pn	19 49 39.5	+0.5
MBDF				*e*Sn	S	19 50 53.9	-1.4
	comp=N,1.1nm,0.2s						
PART	**Garmisch-Parte**	6.38	340	*e*Pn	Pn	19 49 40.5	+1.4
RETA	**Reutte**	6.47	338	*e*Pn	Pn	19 49 41.3	+1.2
	comp=N,6.1nm,0.4s						
CSKK	**Cskako**	6.48	25	⇓*e*PN	Pn	19 49 41.5	+1.4
CONA	**Conrad Observa**	6.49	9	*e*Pn	Pn	19 49 41.1	+0.8
	comp=N,5.3nm,0.3s						
OBER	**Oberstdorf**	6.54	335	*e*Pn	Pn	19 49 42.0	+1.1
DAVA	**Damuels**	6.57	333	*i* Pn	Pn	19 49 42.4	+1.0
	comp=N,10nm,0.3s,SNR=7.4						
DAVA	**Damuels**	6.57	333	*e*Pn	Pn	19 49 42.3	+1.0
BNI	**Bardonecchia**	6.59	305	Pn	Pn	19 49 42.0	+0.5
AGG	**Agios Georgios**	6.62	110	Pn	Pn	19 49 42.6	+0.6
AMBH	**Ambrzfalva**	6.68	42	*e*PN	Pn	19 49 43.5	+1.1
BZS	**Buzias**	6.69	50	⇓P	Pn	19 49 41.3	-1.4
KW1	**Garching a.d.**	6.70	350	*e*Pn	Pn	19 49 44.0	+1.3
VTS	**Vitosha**	6.73	78	⇓P	Pn	19 49 41.3	-2.0
BE1	**Monatshausen**	6.75	342	*e*Pn	Pn	19 49 44.4	+1.1
LPG	**La Plagne**	6.77	308	*e*P	Pn	19 49 43.4	-0.5
LPG				*e*Sn	S	19 51 00.8	-3.4
	comp=N,9.0nm,0.4s						
LPL	**La Plagne**	6.79	308	*e*P	Pn	19 49 43.2	-0.9
LPL				*e*Sn	S	19 51 00.9	-3.7
	comp=N,22nm,0.6s						
BUD	**Budapest**	6.83	28	⇓*e*PN	Pn	19 49 44.9	+0.6
UBR	**Ueberruh**	6.84	335	*e*Pn	Pn	19 49 45.1	+0.6
SMRF	**Simiane la Rot**	6.88	294	*e*P	Pn	19 49 45.6	+0.7
SRO	**Srobarova**	6.89	23	*e*P	Pn	19 49 46.6	+1.6
ZST	**Bratislava**	6.95	16	*e*P	Pn	19 49 46.7	+1.0
SENIN	**Lac Senin/Sane**	6.99	316	Pn	Pn	19 49 46.6	+0.2
ORIF	**Oris-en-Rattie**	7.03	302	*e*P	Pn	19 49 46.4	-0.4
ORIF				*e*Sn	S	19 51 05.4	-4.0
	comp=N,6.4nm,0.6s						
SIRR	**Siria**	7.11	46	⇑P	Pn	19 49 47.5	-0.1
MODS	**Modra-Piesok**	7.16	16	*e*P	Pn	19 49 48.1	-0.1
GZR	**Gura Zlata**	7.26	55	⇑P	Pn	19 49 49.0	-0.6
SMOL	**Smolenice**	7.32	16	*e*P	Pn	19 49 51.1	+1.0
GEC2	**GERESS Array S**	7.32	357	Pn	Pn	19 49 50.7	+0.5
GEC2	**GERESS Array S**	7.32	357	*e*Pn	Pn	19 49 50.5	+0.3
GEC2B	**GERESS ARRAY S**	7.32	357	Pn	Pn	19 49 50.4	+0.1
GERES	**GERESS Array B**	7.32	357	P	Pn	19 49 50.5	+0.3
	comp=N,1.4nm,0.3s,baz=171,slow=13,SNR=64						
GERES				S	S	19 51 13.9	-1.9
	comp=N,0.3nm,0.3s,baz=210,slow=6.7,SNR=4.6						
ITM	**Ithomi**	7.33	124	Pn	Pn	19 49 50.5	+0.1
PSZ	**Piszkesteto**	7.52	30	⇑P	Pn	19 49 53.4	+0.8
PSZ	**Piszkesteto**	7.52	30	*e*PN	Pn	19 49 53.1	+0.5
PSZ	**Piszkesteto**	7.52	30	Pn	Pn	19 49 53.1	+0.5
KHC	**Kasperske Hory**	7.62	356	*e*PN	Pn	19 49 54.0	+0.3
KHC	**Kasperske Hory**	7.62	356	Pn	Pn	19 49 54.0	+0.3
NORI	**Noerdlinger Ri**	7.64	341	*e*Pn	Pn	19 49 54.3	+0.2
VYHS	**Vyhne**	7.66	23	*e*P	Pn	19 49 54.8	+0.6
KRUC	**Moravsky**	7.67	10	*e*PN	Pn	19 49 55.2	+0.9
WET	**Wettzell**	7.68	353	*e*Pn	Pn	19 49 54.7	+0.3
JAVC	**Velka Javorina**	7.70	17	*e*PN	Pn	19 49 56.4	+1.7
VIVF	**Saint-Julien-l**	7.79	298	*e*P	Pn	19 49 55.9	+0.1
CABF	**La Chapelle**	7.80	313	*e*P	Pn	19 49 55.6	-0.4
CABF	**La Chapelle**	7.80	313	*e*Pn	Pn	19 49 59.8	+3.8
CABF				*e*Sn	S	19 51 25.4	-1.0
	comp=N,0.8nm,0.3s						
VRAC	**Vranov**	7.94	11	P	Pn	19 49 58.7	+1.2
	comp=N,1.7nm,0.3s,baz=194,slow=12,SNR=26						
VRAC	**Vranov**	7.94	11	⇓P	Pn	19 49 58.7	+1.2
VRAC	**Vranov**	7.94	11	*e*PN	Pn	19 49 58.3	+0.7
DRGR		8.00	46	⇑P	Pn	19 49 59.1	+0.7
BFO	**Black Forest**	8.01	330	Pn	Pn	19 49 57.8	-0.6
BFO	**Black Forest**	8.01	330	*e*Pn	Pn	19 49 57.8	-0.6
SSB	**Saint Sauveur**	8.04	301		Pn	19 49 58.6	-0.3
STU	**Stuttgart**	8.09	335	Pn	Pn	19 49 59.7	+0.3
LASF	**Ste Croix**	8.10	292	*e*P	Pn	19 49 59.7	+0.1
PBCC	**Pribram**	8.16	359	*e*PN	Pn	19 50 00.4	+0.2
KECS	**Kecovo**	8.21	30	*e*P	Pn	19 50 02.2	+1.4
HINF	**Hinteralfeld**	8.22	322	*e*P	Pn	19 50 00.5	-0.6
HINF				*e*Sn	S	19 51 33.8	-2.0
	comp=N,3.6nm,0.4s						
ROTZ	**Rotzenmuhle**	8.37	351	*e*Pn	Pn	19 50 03.4	+0.7
ARR	**Arges**	8.43	60	⇑P	Pn	19 50 04.9	+1.2
LANS	**Liptovska Anna**	8.44	24	*e*P	Pn	19 50 05.4	+1.8
PRU	**Pruhonice**	8.46	1	*e*PN	Pn	19 50 04.7	+0.9
CDF	**Champ du Feu**	8.49	326	*e*P	Pn	19 50 04.9	+0.5
CDF	**Champ du Feu**	8.49	326	*e*Pn	P	19 50 08.7	+0.3
CDF				*e*Sn	S	19 51 40.0	-1.8
	comp=N,3.4nm,0.4s						
MORC	**Moravsky Berou**	8.55	14	⇑P	Pn	19 50 06.3	+1.3
MORC	**Moravsky Berou**	8.55	14	*e*PN	Pn	19 50 06.3	+1.3
MORC	**Moravsky Berou**	8.55	14	Pn	Pn	19 50 05.4	+0.4
HAU	**Haudompre**	8.60	322	*e*P	Pn	19 50 05.0	-0.6
HAU	**Haudompre**	8.60	322	*e*Pn	P	19 50 10.2	+0.4
HAU				*e*Sn	S	19 51 44.2	+0.2
	comp=N,10nm,0.6s						
KRLC	**Kraliky**	8.71	11	*e*PN	Pn	19 50 08.3	+1.3
VOIR		8.73	60	⇓P	Pn	19 50 08.7	+1.5
CRVS	**Cervenica-Dubn**	8.93	32	*e*P	P	19 50 11.5	-1.9
DPC	**Dobruska-Polom**	8.93	8	*e*PN	Pn	19 50 10.7	+1.1
NIE	**Niedzica**	8.93	26	*e*P	P	19 50 12.1	-1.4
PVCC	**Panska Ves**	9.00	1	*e*PN	Pn	19 50 11.5	+1.1
UPC	**Upice**	9.05	7	*e*PN	Pn	19 50 12.4	+1.3
SMF	**Signal de Mont**	9.10	308	*e*P	Pn	19 50 10.6	-1.1
SMF	**Signal de Mont**	9.10	308	*e*Pn	P	19 50 15.6	+0.2
OSTC	**Ostas**	9.12	8	*e*PN	Pn	19 50 13.4	+1.5
MTLF	**Montolieu**	9.12	285	*e*P	Pn	19 50 12.5	+0.5
CHVC	**Chvalec**	9.14	7	*e*PN	Pn	19 50 13.3	+1.2
DOPR	**Dopca**	9.16	57	⇑P	Pn	19 50 13.2	+0.8
PAGF	**Fort de Pagny**	9.28	322	*e*P	Pn	19 50 13.3	-0.6
PAGF	**Fort de Pagny**	9.28	322	*e*Pn	P	19 50 18.8	+1.5
	baz=147						
KOLS	**Kolonicke sedl**	9.28	34	*e*P	P	19 50 16.0	-1.4
MLR	**Muntele Rosu**	9.33	61	P	P	19 50 16.7	-1.3
	comp=N,1.2nm,0.3s,baz=279,slow=5.0,SNR=15						
MLR	**Muntele Rosu**	9.33	61	⇑P	P	19 50 16.8	-1.2
MLR	**Muntele Rosu**	9.33	61	Pn	P	19 50 16.4	-1.6
BRG	**Berggiesshubel**	9.35	359	*i* P	Pn	19 50 15.7	+1.1
BRG				Amp		19 50 16.9	
	comp=Z,7.1nm,0.8s						
BRG	**Berggiesshubel**	9.35	359	*i* P	Pn	19 50 15.7	+1.1
BRG				Amp		19 50 16.9	
	comp=Z,7.1nm,0.8s						
SFTF	**Sexfontaines**	9.37	319	*e*P	Pn	19 50 14.6	-0.3
	baz=144						
SFTF	**Sexfontaines**	9.37	319	*e*Pn	P	19 50 19.6	+1.3
	baz=139						
LOR	**Lormes**	9.42	311	*e*P	Pn	19 50 14.4	-1.2
	baz=129						
LOR	**Lormes**	9.42	311	*e*Pn	P	19 50 20.0	+1.1
LOR				*e*Sn	S	19 52 01.3	-1.2
	comp=Z,1.1nm,0.3s						
AVF	**Avril sur Loir**	9.46	307	*e*P	Pn	19 50 14.8	-1.3
AVF	**Avril sur Loir**	9.46	307	*e*Pn	P	19 50 20.2	+0.8
OJC	**Ojcow**	9.49	22		Pn	19 50 17.3	+0.9
SSF	**Saint Saulge**	9.51	309	*e*P	Pn	19 50 15.8	-0.9
SSF	**Saint Saulge**	9.51	309	*e*Pn	P	19 50 20.7	+0.8
CAF	**Calviac**	9.56	295	*e*Pn	Pn	19 50 17.8	+0.5
MEZF	**Maizieres J'vi**	9.56	320	*e*P	Pn	19 50 17.1	-0.1
	baz=141						
MEZF	**Maizieres J'vi**	9.56	320	*e*Pn	P	19 50 22.6	+2.2
	baz=137						
TNS	**Taunus Mts**	9.60	337	*e*Pn	P	19 50 23.9	+3.0
ISR	**Istrita**	9.61	64	⇓P	P	19 50 20.5	-0.6
BGF	**Bois d'Agland**	9.66	305	*e*P	Pn	19 50 18.1	-0.4
BGF	**Bois d'Agland**	9.66	305	*e*Pn	P	19 50 22.9	+1.3
BGF				*e*Sn	S	19 52 07.1	-0.7
	comp=Z,1.6nm,0.4s						
APE	**Apeiranthos**	9.77	113	⇓P	Pn	19 50 20.1	+0.1
CLL	**Collm**	9.82	355	*e*P	Pn	19 50 21.0	+0.7
	comp=Z,10.0nm,0.7s						
CLL	**Collm**	9.82	355	P	Pn	19 50 21.5	+1.2
BISRR	**Bisoca**	9.86	62	⇑P	P	19 50 23.5	-0.3
BUR08	**Bucovina Ar. S**	9.88	48		P	19 50 23.2	-0.9
WLF	**Walferdange**	9.93	328	*d*x	P	19 50 27.2	+2.7
WLF	**Walferdange**	9.93	328	P	P	19 50 23.6	-1.0
TCF	**Toulx Ste Croi**	9.94	303	*e*P	Pn	19 50 21.4	-0.5
TCF	**Toulx Ste Croi**	9.94	303	*e*Pn	P	19 50 27.3	+2.6
KWP	**Kalwaria Pacla**	10.00	33	P	P	19 50 25.0	-0.3
BIZ	**Bicaz**	10.04	53	⇑P	P	19 50 26.4	+0.6
RJF	**Les Rejaudoux**	10.04	296	*e*P	Pn	19 50 22.9	-0.3
HYF	**Humbligny**	10.13	308	*e*P	Pn	19 50 23.2	-0.9
HYF	**Humbligny**	10.13	308	*e*Pn	P	19 50 29.3	+2.6
IDI	**Anoyia**	10.38	124	P	Pn	19 50 27.3	-0.1
	comp=Z,3.2nm,0.3s,baz=321,slow=13,SNR=13						
IDI				S	S	19 52 26.6	+2.3
	comp=Z,1.2nm,0.3s,baz=267,slow=21,SNR=6.2						
IDI	**Anoyia**	10.38	124	Pn	Pn	19 50 25.6	-1.8
EPF	**Esparros**	10.46	283	*e*P	Pn	19 50 27.7	-0.6
LFF	**La Frestale**	10.47	294	*e*P	Pn	19 50 27.5	-0.8
BTNL	**Ternell**	10.68	331	*d*x	Pn	19 50 35.3	+4.5
GIVF	**Givet**	10.82	326	*e*P	Pn	19 50 32.8	+0.3
DOU	**Dourbes**	10.91	325	*d*x	P	19 50 37.4	+2.0
BMRD	**Maredsous**	10.99	326	*d*x	P	19 50 38.2	+1.8
BAIF	**Baives**	11.06	324	*e*P	P	19 50 36.4	-0.6
ETSF	**Etsaut**	11.12	282	*e*P	Pn	19 50 36.4	+0.1
SNF	**Seneffe**	11.36	326	*d*x	P	19 50 42.0	+1.7
UCC	**Uccle**	11.54	327	P	Pn	19 50 40.7	-0.5
MFF	**Saint Martin d**	11.56	301	*e*P	P	19 50 42.8	+0.1
SJPF	**Ste Jean**	11.61	283	*e*P	Pn	19 50 41.6	-0.6
KARP	**Karpathos**	11.70	117	Pn	Pn	19 50 41.6	-1.7
LDF	**La Druitiere**	12.40	310	*e*P	P	19 50 51.7	-0.2
FLN	**La Foliniere**	12.69	310	*e*P	P	19 50 55.5	+0.4
	baz=132						
GRR	**Gorron**	12.73	308	*e*P	Pn	19 50 55.4	-0.1
SGMF	**Saint Gilles**	13.70	305	*e*P	P	19 51 06.4	+0.1
AKASG	**Malin Array Be**	13.80	43	P	P	19 51 07.0	-0.3
	comp=Z,6.0nm,0.3s,baz=236,slow=10,SNR=46						
AKBB	**Malin Array Si**	13.80	43		P	19 51 07.5	+0.1
SUW	**Suwalki**	13.82	22	P	P	19 51 06.7	-0.8
QUIF	**Quistinic**	13.95	303	*e*P	Pn	19 51 09.6	-0.4
ESDC	**Sonseca Array**	14.01	268	P	Pn	19 51 10.6	-0.3
	comp=Z,0.2nm,0.3s,baz=74,slow=11,SNR=29						
ROSF	**Rostrenen**	14.18	305	*e*P	P	19 51 11.8	+0.3
BR131	**Keskin Array S**	14.79	91	P	P	19 51 18.1	-0.5
BRTR	**Keskin Array B**	14.79	91	P	Pn	19 51 20.4	+0.2
	comp=Z,0.2nm,0.3s,baz=276,slow=12,SNR=9.4						
PBRG	**Braganca**	15.74	278	*e*P	Pn	19 51 30.7	-0.3
	comp=Z,21nm,1.4s						
MVO	**Moncorvo**	16.03	276	*e*P	Pn	19 51 34.0	-0.5
PVRL	**Vila Real**	16.53	276	*e*P	Pn	19 51 39.4	-0.8
POLO	**Lamas de Olo**	16.57	277	*e*P	P	19 51 39.1	+1.2
PCBR	**Castelo Branco**	16.61	271	*e*P	Pn	19 51 40.0	-1.2
PVIS	**Viseu**	16.75	275	*e*P	Pn	19 51 41.9	-1.0
PGAV	**Gavieira, Arco**	16.85	279	*e*P	Pn	19 51 43.1	-1.0
PCAS	**Casmilo, Conde**	17.33	273	*e*P	Pn	19 51 47.9	-1.6
MDT	**Midelt**	17.38	246	P	P	19 51 46.7	-0.1
	comp=Z,0.2nm,0.3s,baz=291,slow=8.5,SNR=5.0						
PSBE	**So Bento**	17.68	271	*e*P	P	19 51 51.5	+1.7
EKA	**Eskdalemuir Ar**	17.95	326	P	P	19 51 53.1	+0.6
	baz=130,slow=13,SNR=9.1						
HFS	**Hagfors**	18.63	359	P	P	19 51 59.2	-0.4
	comp=Z,1.4nm,0.3s,baz=179,slow=9.8,SNR=40						
MMAI	**Mount Meron Ar**	18.78	110	P	P	19 52 02.5	+0.8
	comp=Z,0.7nm,0.3s,baz=316,slow=9.6,SNR=6.0						
NB2	**NORSAR Subarra**	19.62	356	P	P	19 52 08.6	-1.7
	comp=Z,1.7nm,0.6s,baz=173,slow=11						
NOA	**NORSAR Array B**	19.62	356	P	P	19 52 09.8	-0.5
	comp=Z,0.1nm,0.3s,baz=178,slow=10,SNR=12						
TAM	**Tamanrasset**	20.09	204	P	P	19 52 15.0	-0.7
TAM				IAmb	IAmb	19 52 19.4	
	comp=Z,8.1nm,1.0s						
FINES	**FINESS Array B**	21.18	16	P	P	19 52 25.4	+0.1
	comp=Z,1.3nm,0.5s,baz=191,slow=9.4,SNR=14						
ARCES	**ARCESS Array B**	28.67	8	P	P	19 53 31.8	-0.7
	comp=Z,7.5nm,1.1s,baz=352,slow=4.9,SNR=13						
TOA0	**Torodi Ar. Sit**	30.35	205	P	P	19 53 47.6	-0.1
TORD	**Torodi Ar. Bea**	30.35	205	P	P	19 53 47.8	0.0
	comp=Z,13nm,0.4s,baz=8.3,slow=9.4,SNR=105						
KOWA	**Kowa**	31.29	216	P	P	19 53 56.6	+0.7
	comp=Z,1.4nm,0.4s,baz=31,slow=12						
GEYT	**Alibeck**	33.61	81	P	P	19 54 17.2	+1.3
	comp=Z,0.6nm,0.5s,baz=266,slow=6.6,SNR=2.1						
DBIC	**Dimbokro**	38.68	211	P	P	19 54 58.5	-0.2
	comp=Z,7.6nm,0.5s,baz=3.7,slow=9.4,SNR=40						
DBIC	**Dimbokro**	38.68	211	P	P	19 54 58.4	-0.2
DBIC				IAmb	IAmb	19 55 00.1	
	comp=Z,8.6nm,0.6s						
TIC	**Toumodi**	38.77	212	*e*P	P	19 55 01.0	+1.6
KIC	**Kosan Boka**	38.92	211	*e*P	P	19 55 00.4	-0.2
	comp=Z,7.7nm,0.3s						
LIC	**Lamto**	39.16	211	*e*P	P	19 55 02.4	-0.1
	comp=Z,54nm,0.3s						
MKAR	**Makanchi Array**	47.67	59	P	P	19 56 10.1	+0.4
	comp=Z,0.4nm,0.5s,baz=292,slow=6.6,SNR=8.9						
WMQ	**Urumqi**	52.33	61	*e*P	P	19 56 46.3	+1.9
GTA	**Gaotai**	62.40	61	*e*P	P	19 57 52.2	-2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
LZH	**Lanzhou**	66.90	62	*e*P	P	19 58 20.4	-3.0
LZH				pP	pP	19 59 29.2	-5.1
LZH				sP	sP	19 59 58.3	-10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
YKA	**Yellowknife Ar**	68.53	337	P	P	19 58 33.9	+1.1
	comp=Z,0.7nm,0.4s,baz=49,slow=6.5,SNR=27						
HHC	**Hu-ho-hao-te**	68.99	54	*e*P	P	19 58 37.6	+1.4
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
FFC	**Flin Flon**	69.81	326	P	P	19 58 40.0	-0.7
FFC				IAmb	IAmb	19 59 01.3	
	comp=Z,4.3nm,1.4s						
BOSA	**Boshof**	70.53	170	P	P	19 58 46.2	+0.8
	comp=Z,3.0nm,0.5s,baz=352,slow=6.1,SNR=17						
W50A	**Signal Mountai**	73.96	303	P	P	19 59 04.6	-1.1
W50A				IAmb	IAmb	19 59 08.3	
	comp=Z,11nm,1.4s						
NJ2	**Nanjing**	79.12	57	*e*P	P	19 59 34.2	-0.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PDAR	**Pinedale Array**	82.02	322	P	P	19 59 51.1	+1.3
	comp=Z,0.5nm,0.6s,baz=64,slow=2.8,SNR=5.1						

IDC 01 19:48:08.9±12.0**, 16°.00S**×**176°.26W, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.6**/23**, mbtmp3.7**/3**, Error ellipse: s-maj=397.3km s-min=67.1km az=128.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	47.03	257	P	P	19 56 42.1	-0.4
	0.1nm,0.4s,baz=91,slow=8.1,SNR=5.1						
ASAR	**Alice Springs**	47.31	252	P	P	19 56 44.8	+0.1
	1.8nm,0.6s,baz=88,slow=8.4,SNR=25						
SONM	**Songino Array**	93.47	319	P	P	20 01 26.5	-0.1
	0.6nm,1.1s,baz=127,slow=6.2,SNR=2.5						

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*IGIL **01** 20:18:29.4, 37°.29N×8°.50W, h11^{km}, ML1.2*

*MDD **01** 20:18:29.8±0.4, 37°.31N×8°.49W, h0^{km}, mbLg1.3/1, Error ellipse: s-maj=5.7km s-min=2.8km az=162.0, PRXIMO*

INMG 01 20:18:29.6±0.5**, 37°.31N**×**8°.51W, h11^{km}**±4^{km}**, ML0.9, Error ellipse: s-maj=2.2km s-min=2.0km az=165.0, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORF	**Marmelete**	0.11	267	*e*P	Pg	20 18 32.2	-0.3
MORF				*e*S	Sg	20 18 34.5	-0.2
MORF				AML	AML	20 18 35.1	
	comp=E,70nm,0.1s						
MORF	**Marmelete**	0.11	267	Pg	Pg	20 18 32.2	-0.3
MORF				Lg	Lg	20 18 34.6	
	comp=E,41nm,0.1s						
MORF	**Marmelete**	0.11	267	*e*Pg	Pg	20 18 32.2	-0.3
MORF				*e*Sg	Sg	20 18 34.6	0.0
MORF				A	A	20 18 35.0	
	comp=E,41nm,0.1s						
PTEO	**Sao Teotonio**	0.29	324	Pg	Pg	20 18 34.9	-0.6
PTEO	**Sao Teotonio**	0.29	324	*i* Pg	Pg	20 18 34.9	-0.6
PFVI	**Vila Bisbo**	0.31	235	Pg	Pg	20 18 35.6	-0.3
	SNR=7.9						
PFVI	**Vila Bisbo**	0.31	235	*e*Pg	Pg	20 18 35.6	-0.3
PBDV	**Barranco-do-Ve**	0.47	98	Pg	Pg	20 18 38.3	-0.5
PBDV	**Barranco-do-Ve**	0.47	98	*e*Pg	Pg	20 18 38.3	-0.5
PBDV				*e*Sg	Sg	20 18 45.0	0.0
PCVE	**Castro Verde**	0.49	50	Pg	Pg	20 18 38.8	-0.4
PCVE	**Castro Verde**	0.49	50	*e*Pg	Pg	20 18 38.8	-0.4
MESJ	**Messejana**	0.57	24	*e*P	Pg	20 18 40.0	-0.8
MESJ	**Messejana**	0.57	24	Pg	Pg	20 18 40.0	-0.8
PVAQ	**Vaqueiros**	0.64	82	Pg	Pg	20 18 41.2	-0.8
PVAQ	**Vaqueiros**	0.64	82	*e*Pg	Pg	20 18 41.2	-0.8
PNCL	**Nicolau / Gran**	0.80	359	Pg	Pg	20 18 44.4	-0.6
PNCL	**Nicolau / Gran**	0.80	359	*e*Pg	Pg	20 18 44.4	-0.6
EGRO	**El Granado**	0.85	75	Pg	Pg	20 18 45.0	-0.9
	comp=E,1.3nm,0.3s,SNR=13						

*INMG **01** 20:18:33.5±0.7, 37°.33N×8°.54W, h13^{km}±6^{km}, ML1.2, Error ellipse: s-maj=2.7km s-min=2.0km az=64.0*

MDD 01 20:18:33.4±0.5**, 37°.33N×8°.52W, h12**^{km}±5^{km}**, mbLg1.2**/1**, Error ellipse: s-maj=5.6km s-min=4.2km az=28.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	0.11	258	Pg	Pg	20 18 36.0	-0.4
MORF				Lg	Lg	20 18 38.5	
	127nm,0.2s						
MORF	Marmelete	0.11	258	ePg	Pg	20 18 36.0	-0.4
MORF				eSg	Sg	20 18 38.5	0.0
MORF				A	A	20 18 38.8	
	127nm,0.2s						
PTEO	Sao Teotonio	0.27	323	Pg	Pg	20 18 38.6	-0.4
PTEO				Lg	Lg	20 18 42.5	
	2.7nm,0.1s						
PTEO	Sao Teotonio	0.27	323	ePg	Pg	20 18 38.6	-0.4
PTEO				eSg	Sg	20 18 42.5	-0.2
PTEO				A	A	20 18 44.0	
	5.4nm,0.1s						
PFVI	Vila Bisbo	0.31	231	Lg	Lg	20 18 44.0	
	SNR=7.9						
PFVI	Vila Bisbo	0.31	231	ePg	Pg	20 18 39.5	-0.3
PFVI				A	A	20 18 45.2	
	9.9nm,0.2s						
PBDV	Barranco-do-Ve	0.48	100	Lg	Lg	20 18 49.3	
	7.9nm,0.3s						
PBDV	Barranco-do-Ve	0.48	100	eSg	Sg	20 18 49.3	+0.1
PBDV				A	A	20 18 50.4	
	7.9nm,0.3s						
PCVE	Castro Verde	0.49	52	Pg	Pg	20 18 42.7	-0.3
PCVE	Castro Verde	0.49	52	ePg	Pg	20 18 42.7	-0.3
PVAQ	Vaqueiros	0.65	83	Pg	Pg	20 18 45.5	-0.5
PVAQ				Lg	Lg	20 18 53.5	
	6.1nm,0.1s						
PVAQ	Vaqueiros	0.65	83	ePg	Pg	20 18 45.5	-0.5
PVAQ				eSg	Sg	20 18 53.5	-0.9
PVAQ				A	A	20 18 55.3	
	6.1nm,0.1s						
PNCL	Nicolau / Gran	0.78	360	Lg	Lg	20 18 58.2	
	9.6nm,0.4s						
PNCL	Nicolau / Gran	0.78	360	eS	Sg	20 18 58.2	-0.6
PNCL				A	A	20 19 00.0	
	9.6nm,0.4s						
EGRO	El Granado	0.85	76	Lg	Lg	20 18 59.1	
	3.4nm,0.3s,SNR=12						
PBEJ	Beja	0.87	37	Lg	Lg	20 19 01.5	
	2.6nm,0.2s						
PBEJ	Beja	0.87	37	eS	Sg	20 19 01.5	-0.1
PBEJ				A	A	20 19 03.5	
	5.1nm,0.2s						
EVO	Evora	1.27	18	Lg	Lg	20 19 13.1	
	5.8nm,0.1s						
EVO	Evora	1.27	18	eS	Sb	20 19 13.1	-0.4
EVO				A	A	20 19 14.8	
	5.8nm,0.1s						
EMIN	Mina Concepcio	1.53	73	Lg	Lg	20 19 18.4	
	0.6nm,0.2s,SNR=7.6						
PESTR	Estremoz	1.70	25	eSn	Sn	20 19 23.3	-1.4
PESTR				A	A	20 19 27.4	
	1.3nm,0.2s						
PMTG	Montargil	1.75	8	Sn	Sn	20 19 25.2	-0.7
PMTG	Montargil	1.75	8	eSn	Sn	20 19 25.2	-0.7
PMRV	Marv??o	2.28	23	Sn	Sn	20 19 36.6	-2.3
PMRV	Marv??o	2.28	23	eSn	Sn	20 19 36.6	-2.3

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*MDD **01** 20:59:44.5±2.4, 36°.94N×3°.84E, h0^{km}, mb4.2/2, Error ellipse: s-maj=31.4km s-min=8.8km az=120.0, PRXIMO*

*CRAAG **01** 20:59:45.1, 36°.92N×3°.69E, Ml2.5*

ISC 01 20:59:44.5±2.0**, 37°.00N**±0°.09×**3°.8E**±0°.1**, h13**^{km}**, n10,** σ**1^{s}.54**/12**, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.35	225	P	Pg	20 59 50.7	-0.9
ABMS	Boumerdes	0.35	225	P	Pg	20 59 50.7	-0.9
ABA	Alger-Bouzarea	0.64	252	P	Pg	20 59 56.5	-0.4
ABA	Alger-Bouzarea	0.64	252	P	Pg	20 59 56.5	-0.4
EIBI	Ibiza	2.79	317	S	Sn	21 01 00.9	-1.6
	2.7nm,0.2s,SNR=7.9						
ETOS	Mallorca	2.87	345	P	Pn	21 00 30.7	+0.8
	0.4nm,0.1s,SNR=7.9						
ETOS				S	Sn	21 01 01.9	-2.4
	0.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.53	293	P	Pn	21 00 54.7	+1.9
	0.3nm,0.2s,SNR=7.9						
ETOB				S	Sn	21 01 45.1	-0.3
	0.2nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.87	348	P	Pn	21 00 58.7	+1.3
	1.9nm,0.1s,SNR=7.9						
EJON	La Jonquera	5.48	353	P	Pn	21 01 07.1	+1.2
	2.9nm,0.2s,SNR=7.9						
SJAF	Saint Jean de	5.52	353	P	Pn	21 01 08.3	+2.0
	1.0nm,0.2s,SNR=7.9						

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*NEIC **01** 21:08:22.5, 31°.09S×71°.47W, h52^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.23; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$-4.48; $M_{r\theta}$1.05; $M_{\theta\phi}$3.30; $M_{\phi r}$3.80; Fault plane solution: $M_0$7.10000×10^{15} NP1:ϕ_s353.32000°, δ62.46000°, λ116.32000°. NP2:ϕ_s126.38000°, δ37.37000°, λ49.62000°. Principal axes: T 7.1226, Plg63.0000°, Azm307.0000°; N -0.0487, Plg23.0000°, Azm160.0000°; P -7.0739, Plg14.0000°, Azm65.0000°;*

*IDC **01** 21:08:22.9±0.5, 31°.13S×71°.38W, h48^{km}±4^{km}, mb4.2/10, mb1 4.3/14, mb1mx4.1/28, mbtmp4.4/14, MS3.6/19, Ms1 3.6/19, ms1mx3.5/31 Error ellipse: s-maj=16.2km s-min=14.3km az=124.0*

*NEIC **01** 21:08:22.6±2.9, 31°.09S±0°.04×71°.48W±0°.06, h48^{km}±5^{km}, Error ellipse: s-maj=7.2km s-min=5.5km az=105.0*

*GUC **01** 21:08:22.4±0.6, 31°.08S×71°.32W, h65^{km}±4^{km}, ML4.9*

*SJA **01** 21:08:23.7±0.6, 31°.09S×71°.19W, h7^{km}±5^{km}, ML4.4, MW4.2*

*VAO **01** 21:08:30.2±0.5, 30°.23S×70°.55W, h10^{km}, mb4.7*

ISC 01 21:08:20.6±0.4**, 31°.12S**±0°.02×**71°.66W**±0°.03**, h33**^{km}±2^{km}**, n293,** σ**1^{s}.78**/324**, mb4.9**/61**, MS3.6**/14**, 5C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.57	98	Pn	Pn	21 08 33.5	+0.8
CO02				Sn	Sn	21 08 41.1	+0.1
CO03	El Pedregal	0.88	72	⇓iP	Pb	21 08 37.1	-0.4
CO03				i S	Sn	21 08 47.5	-1.1
CO03				IAML		21 08 48.5	
	comp=E,80μm,0.2s						
CO03	El Pedregal	0.88	72		Pb	21 08 37.2	-0.4
CO03				Sn	Sn	21 08 47.0	-1.6
GO04	Tololo Observa	1.20	38	eP	Pb	21 08 42.3	-0.8
GO04				i S	Sn	21 08 54.1	-2.7
GO04				IAML		21 08 59.3	
	comp=E,97μm,0.6s						
GO04	Tololo Observa	1.20	38		Pb	21 08 42.5	-0.5
GO04				Sn	Sn	21 08 57.0	+0.2
GO04	Tololo Observa	1.20	38	eP	Pb	21 08 42.6	-0.4
GO04				eS	Sn	21 08 57.1	+0.4
CO01	Juntas del Tor	1.77	50	⇓iP	Pb	21 08 50.9	-1.7
CO01				eS	Sn	21 09 10.5	-0.2
CO01				IAML		21 09 12.1	
	comp=N,12μm,0.4s						
CO01	Juntas del Tor	1.77	50		Pb	21 08 50.9	-1.7
CO01				Sn	Sn	21 09 11.1	+0.3
VA03	San Esteban	1.89	150	⇑iP	Pb	21 08 52.9	-1.6
VA03				i S	Sb	21 09 16.3	-1.5
VA03				IAML		21 09 23.8	
	comp=N,10μm,0.3s						
VA03	San Esteban	1.89	150		Pb	21 08 53.1	-1.5
VA03				Sn	Sb	21 09 16.4	-1.5
AROD	Rodeo	2.11	64	eP	Pb	21 08 57.1	-1.3
AROD				eS	Sb	21 09 22.2	-2.3
RTLS	Leoncito	2.13	109	eP	Pb	21 08 57.5	-1.3
RTLS				eS	Sn	21 09 22.2	+2.5
RTLS				IAML		21 09 26.2	
	comp=Z,2μm,1.0s						
MT02	Curacav	2.18	168	⇑iP	Pn	21 08 56.9	+2.3
MT02				eS	Sb	21 09 24.8	-1.2
MT02	Curacav	2.18	168		Pn	21 08 56.6	+2.0
AUSP	Uspallata	2.23	120	eP	Pb	21 08 59.1	-1.3
LCO	Las Campanas	2.26	22		Pn	21 08 58.1	+2.0
ACCO	Cerro Coronel	2.29	77	eP	Pb	21 08 59.5	-2.1
ACDV	Cuesta del Vie	2.39	67	eP	Pb	21 09 01.6	-1.4
ACDV				eS	Sb	21 09 31.3	-0.8
ACDV				IAML		21 09 34.4	
	comp=Z,3μm,0.6s						
MT05	Renca	2.39	161	eP	Pb	21 09 00.6	-2.5
MT05				i S	Sn	21 09 29.5	+3.6
MT05				IAML		21 09 41.0	
	comp=E,7μm,0.5s						
MT05	Renca	2.39	161		Pb	21 09 00.7	-2.5
VA05	Santo Domingo	2.53	179	eP	Pn	21 09 01.8	+2.4
VA05				i S	Sn	21 09 32.6	+3.5
VA05				IAML		21 09 46.3	
	comp=N,4μm,0.3s						
FSR	Penalolen	2.54	158	eP	Pb	21 09 03.9	-1.7
FSR				eS	Sb	21 09 34.2	-2.2
MT03	Universidad Ad	2.56	158	eP	Pn	21 09 02.9	+2.9
MT03				eS	Sn	21 09 33.8	+3.8
MT03				IAML		21 09 47.1	
	comp=N,6μm,0.5s						
AC05	El Transito	2.58	28	⇓iP	Pn	21 09 02.6	+2.4
AC05				eS	Sn	21 09 31.0	+0.5
AC05				IAML		21 09 47.0	
	comp=E,10μm,0.6s						
AC05	El Transito	2.58	28	Pn	Pn	21 09 02.7	+2.5
MT09	Talagante	2.71	168	⇓iP	Pn	21 09 05.2	+3.1
MT09				i S	Sn	21 09 37.6	+3.9
MT09				IAML		21 09 49.6	
	comp=N,3μm,0.1s						
RTLL	Cerro Villicun	2.74	95	eP	Pn	21 09 04.9	+2.6
RTLL				IAML		21 09 56.5	
	comp=Z,4μm,0.6s						
RTCV	Cerro Valdivia	2.77	106	eP	Pn	21 09 05.8	+3.1
RTCV				IAML		21 10 06.9	
	comp=Z,1μm,1.3s						
ASAL	Salagasta	2.81	122	eP	Pb	21 09 07.7	-2.6
ASAL				eS	Sn	21 09 21.2	-15
ASAL				IAML		21 09 26.5	
	comp=Z,2μm,1.5s						
ARCO	CERRO ARCO	2.88	127	eP	Pb	21 09 09.4	-2.1
ARCO				IAML		21 09 53.4	
	comp=Z,2μm,1.1s						
AC04	Llanos de Chal	2.95	10	⇑iP	Pn	21 09 07.2	+1.9
AC04				i S	Sn	21 09 41.4	+1.8
AC04				IAML		21 09 53.8	
	comp=E,5μm,0.5s						
AC04	Llanos de Chal	2.95	10		Pn	21 09 07.3	+2.0
LMEL	Las Melosas	2.98	156	⇑eP	Pn	21 09 09.5	+3.7
LMEL				eS	Sn	21 09 43.3	+2.7
LMEL				IAML		21 09 51.9	
	comp=N,3μm,0.3s						
AAGR	Agrelo	3.10	130	eP	Pb	21 09 12.2	-2.9
BO03	Pichilemu	3.37	184	eP	Pn	21 09 12.8	+1.7
BO03				eS	Sn	21 09 48.6	-1.3
BO03				IAML		21 10 15.3	
	comp=E,615nm,0.6s						
GO03	Copiap	3.73	20	⇑eP	Pn	21 09 17.7	+1.7
GO03				eS	Sn	21 10 00.0	+1.1
GO03				IAML		21 10 13.4	
	comp=N,5μm,0.5s						
GO03	Copiap	3.73	20		Pn	21 09 17.8	+1.7
GO03	Copiap	3.73	20	eP	Pn	21 09 18.4	+2.4
GO03				eS	Sn	21 10 04.0	+5.1
BO02	Sierra Bellavi	3.73	169	eP	Pn	21 09 18.7	+2.6
BO02	Sierra Bellavi	3.73	169		Pn	21 09 18.7	+2.6
VCA	Vinchina	3.83	52	eP	Pn	21 09 21.6	+4.2
VCA				eS	Sn	21 10 06.1	+4.7
VCA	Vinchina	3.83	52	eP	Pn	21 09 21.7	+4.2
VCA				eS	Sb	21 10 14.4	+0.9
RFA	San Rafael	4.52	144	eP	Pn	21 09 30.0	+3.1
RFA				IAML		21 10 48.5	
	comp=Z,701nm,1.1s						
AC02	Maricunga	4.81	28	eP	Pn	21 09 33.2	+1.9
AC02	Maricunga	4.81	28		Pn	21 09 33.0	+1.7
AC01	Pan de Azucar	5.04	11	eP	Pn	21 09 33.8	-0.2
AC01	Pan de Azucar	5.04	11	Pn	Pn	21 09 33.9	-0.2
CYA	Choya	5.75	64	eP	Pn	21 09 44.7	+1.0
CYA				eS	Sn	21 10 48.7	0.0
BI03	Tigo	5.82	191		Pn	21 09 45.9	+1.3
GO02	Mina Guanaco	6.21	18	Pn	Pn	21 09 49.8	-0.6
H03N1	Juan Fernandez	6.56	247	P	Pn	21 09 59.1	+4.5
	baz=118,slow=19,SNR=649						
H03N1				S	Sn	21 11 06.3	-1.9
	baz=49,slow=26,SNR=4.5						
H03N1				T	T	21 16 49.4	
	baz=75,slow=72,SNR=2459						
VA04	Juan Fernndez	6.56	246		Pn	21 09 58.0	+3.2
PB14	IPOC Station P	6.57	10	Pn	Pn	21 09 54.3	-0.9
H03N3	Juan Fernandez	6.58	247	P	Pn	21 09 58.8	+4.0
	baz=118,slow=19,SNR=316						
H03N3				S	Sn	21 11 06.0	-2.5
	baz=49,slow=26,SNR=2.9						
H03N3				T	T	21 16 47.1	
	baz=75,slow=72,SNR=1937						
H03N2	Juan Fernandez	6.58	248	P	Pn	21 09 59.1	+4.3
	baz=118,slow=19,SNR=324						
H03N2				S	Sn	21 11 06.5	-2.0
	baz=49,slow=26,SNR=3.7						
H03N2				T	T	21 16 50.0	
	baz=75,slow=72,SNR=2092						
H03S3	Juan Fernandez	6.69	244	P	Pn	21 09 59.1	+2.7
	baz=283,slow=22,SNR=16						
H03S3				S	Sn	21 11 08.8	-2.6
	baz=352,slow=3.4,SNR=7.3						
H03S3				T	T	21 16 53.7	
	baz=83,slow=75,SNR=12						
H03S1	Juan Fernandez	6.70	244	P	Pn	21 09 59.2	+2.8
	baz=283,slow=22,SNR=14						
H03S1				S	Sn	21 11 08.3	-3.1
	baz=352,slow=3.4,SNR=6.9						
H03S1				T	T	21 16 59.0	
	baz=83,slow=75,SNR=12						
H03S2	Juan Fernandez	6.71	244	P	Pn	21 09 59.6	+3.0
	baz=283,slow=22,SNR=20						
H03S2				S	Sn	21 11 08.3	-3.5
	baz=352,slow=3.4,SNR=5.2						
H03S2				T	T	21 16 57.9	
	baz=83,slow=75,SNR=20						
AHML	Horco Molle	7.03	54	eP	Pn	21 10 01.6	+0.3
AHML				eS	Sn	21 11 21.9	+1.7
FSA	Cafayete	7.06	46	eP	Pn	21 10 03.1	+1.2
FSA				eS	Sb	21 11 33.5	-13
PB10	IPOC Station P	7.64	8	Pn	Pn	21 10 10.1	+0.4
PB10	IPOC Station P	7.64	8	eP	Pn	21 10 10.9	+1.2
LC01	Cunco	7.76	181	Pn	Pn	21 10 12.2	+0.9
LVC	Limon Verde	8.83	17	P	Pn	21 10 24.5	-1.8
	comp=Z,0.6nm,0.3s,baz=185,slow=11,SNR=17						
LVC				S	Sn	21 12 01.8	-3.0
	comp=Z,5.2nm,0.3s,baz=170,slow=14,SNR=3.3						
LVC				LR	LR	21 14 14.6	
	comp=Z,235nm,19.5s,baz=207,slow=40						
LVC	Limon Verde	8.83	17		Pn	21 10 26.1	-0.2
LVC	Limon Verde	8.83	17	eP	Pn	21 10 24.0	-2.3
PB04	IPOC Station P	8.86	9		Pn	21 10 24.8	-1.8
PB07	IPOC Station P	9.49	10	Pn	Pn	21 10 33.6	-1.7
PB09	IPOC Station P	9.54	14	Pn	Pn	21 10 35.3	-0.6
PLCA	Paso Flores	9.63	175	P	Pn	21 10 39.4	+2.3
	comp=Z,0.5nm,0.3s,baz=338,slow=12,SNR=21						
PLCA				LR	LR	21 14 20.1	
	comp=Z,210nm,19.5s,baz=347,slow=37						
PLCA	Paso Flores	9.63	175	Pn	Pn	21 10 38.8	+1.8
PB01	IPOC Station P	10.22	12		Pn	21 10 45.6	+0.4
LL01	San Ignacio de	11.25	183	Pn	Pn	21 11 00.3	+1.2
PSGCX	Pisagua	11.56	7	Pn	Pn	21 11 01.7	-1.8
GO01	Chusmiza	11.62	12	Pn	Pn	21 11 10.2	+5.5
MNMC	Minye Minye	12.09	9		Pn	21 11 10.8	0.0
PB16	IPOC Station P	12.88	9		Pn	21 11 21.8	-0.2
ITQB	Itaqui	13.06	87	eP	Pn	21 11 21.6	-2.3
CPUP	Villa Florida	13.45	73	P	Pn	21 11 26.2	-3.0
	comp=Z,1.0nm,0.3s,baz=238,slow=13,SNR=16						
CPUP				S	Sn	21 13 52.7	-4.9
	comp=Z,0.9nm,0.3s,baz=226,slow=11,SNR=3.1						
CPUP				Lg	Lg	21 14 57.5	
	comp=Z,0.9nm,0.3s,baz=345,slow=15,SNR=1.3						
CPUP				LR	LR	21 17 10.1	
	comp=Z,510nm,19.1s,baz=232,slow=40						
CPUP	Villa Florida	13.45	73		Pn	21 11 26.9	-2.3
CPUP	Villa Florida	13.45	73	eP	Pn	21 11 25.5	-3.7
PLTB	Pedras Altas	15.43	97	eP	Pn	21 11 56.5	+0.5
CPSB	Cacapava Do Su	15.68	92	eP	Pn	21 11 59.0	-0.2
ITAB	Concordia	17.49	82	eP	Pn	21 12 20.2	-1.8
SIV	San Ignacio	17.90	35	P	Pn	21 12 26.3	-0.9
	comp=Z,0.7nm,0.3s,baz=223,slow=10,SNR=40						
SIV				LR	LR	21 20 37.8	
	comp=Z,59nm,18.8s,baz=240,slow=41						
CNLB	Canela	18.07	90	eP	P	21 12 30.9	+1.4
TRCB	Terra Rica	18.86	69	eP	P	21 12 37.3	-0.8
PTLB	Pontes e Lacer	19.36	39	eP	P	21 12 41.6	-2.0
NNA	Nana	19.64	345	P	Pn	21 12 49.1	+0.9
	comp=Z,0.8nm,0.3s,baz=144,slow=12,SNR=1.7						
NNA				LR	LR	21 18 45.6	
	comp=Z,100nm,21.6s,baz=160,slow=32						
NNA	Nana	19.64	345	P	P	21 12 46.3	-0.4
GO09	Cerro Castillo	20.14	181		P	21 12 51.8	0.0
PP1B	Ponte de Pedra	20.33	52	eP	P	21 12 53.4	-0.8
PCMB	Pacaembu	20.56	67	eP	P	21 12 55.9	-0.8
VILB	Vilhena	20.94	33	eP	P	21 12 60.0	-0.9
FRTB	Fartura	21.10	74	eP	P	21 13 01.4	-1.1
ETMB	Extrema	21.80	15	eP	P	21 13 11.3	+1.3
ITRB	Iturama	22.31	64	eP	P	21 13 13.6	-1.9
PET01	Itanhaem-SP	22.61	79	eP	P	21 13 20.6	+1.9
SPB	Sao Paulo	22.76	77	P	P	21 13 15.8	-4.4
SPB	Sao Paulo	22.76	77	eP	P	21 13 20.6	+0.3
EFI	East Falkland	22.86	158	P	P	21 13 19.0	-2.0
EFI				IAmb	IAmb	21 13 22.7	
	comp=Z,77nm,1.4s						
CZSB	Cruzeiro do Su	23.29	357	eP	P	21 13 28.2	+2.5
VAO	Valinhos	23.40	76	eP	P	21 13 27.0	+0.2
SAML	Samuel	23.43	21	P	P	21 13 25.8	-1.3
SAML	Samuel	23.43	21	eP	P	21 13 28.5	+1.4
ARAG	Araguaiana, MT	23.75	54	eP	P	21 13 29.2	-1.0
ATAH	Atahualpa	24.68	344	LR	LR	21 22 29.1	
	comp=Z,59nm,18.2s,baz=230,slow=34						
CLDB	Colider	24.95	40	eP	P	21 13 42.6	+1.5
BDFB	Brasilia	26.53	60	P	P	21 13 54.3	-1.4
	comp=Z,10nm,0.9s,baz=248,slow=7.8,SNR=10						
BDFB				LR	LR	21 25 29.7	
	comp=Z,391nm,18.3s,baz=248,slow=39						
BDFB	Brasilia	26.53	60	P	P	21 13 52.8	-2.8
SNDB	Serra Nova Dou	26.78	49	eP	P	21 13 59.7	+2.0
NPGB	Novo Progresso	28.40	36	eP	P	21 14 14.5	+2.3
PEXB	Peixe	28.70	54	eP	P	21 14 14.5	-0.4
JANB	Januaria	29.69	64	eP	P	21 14 22.9	-0.9
SJMB	Sao Joao De Ma	30.18	73	eP	P	21 14 29.4	+1.4
RIB01	Linhares ES	30.53	75	eP	P	21 14 34.8	+3.7
SMTB	Santa Maria do	31.52	50	eP	P	21 14 39.1	-0.7
OTAV	Otavalo	31.85	347	P	P	21 14 43.5	+0.3
OTAV				IAmb	IAmb	21 14 48.3	
	comp=Z,15nm,1.4s						
OTAV	Otavalo	31.85	347	eP	P	21 14 49.0	+5.8
PRPB	Parauapebas	32.18	44	eP	P	21 14 46.1	+0.5
PTGA	Pitinga	32.19	22	LR	LR	21 28 04.5	
	comp=Z,86nm,20.9s,baz=151,slow=37						
PTGA	Pitinga	32.19	22	P	P	21 14 42.8	-2.9
PTGA				IAmb	IAmb	21 14 48.1	
	comp=Z,8.7nm,0.9s						
GDU01	Guandu, BA	34.17	67	eP	P	21 15 05.5	+2.4
ORTC	Ortega, Tolima	35.00	354	eP	P	21 15 13.4	+3.2
PAYG	Puerto Ayora	35.05	326	P	P	21 15 10.6	-0.1
VILC	Villavicencio,	35.09	356	eP	P	21 15 13.8	+2.7
CHIC	Chingaza	35.61	356	eP	P	21 15 17.6	+1.8
MCPB	Macapa, AP	35.80	35	eP	P	21 15 17.4	+0.4
RREF	El Recreo	35.99	354	eP	P	21 15 23.1	+3.7
PLMC	San Jos del P	36.10	352	eP	P	21 15 21.7	+2.0
NORC	Norcasia	36.61	355	eP	P	21 15 26.2	+2.2
RUSC	La Rusia	36.83	358	eP	P	21 15 28.6	+2.3
CBOC	Ciudad Bolivar	37.01	353	eP	P	21 15 29.7	+2.1
HELC	Santa Helena	37.29	354	eP	P	21 15 31.7	+1.6
BARC	Barichara	37.53	358	eP	P	21 15 33.5	+1.5
PTBC	PUERTO BERRIO,	37.54	355	eP	P	21 15 32.0	+0.1
DBBC	Dabeiba	38.17	353	eP	P	21 15 40.3	+3.0
ZARC	Zaragoza, Cauc	38.52	355	eP	P	21 15 41.0	+0.9
SMLC	San Martn de	39.76	356	eP	P	21 15 50.0	-0.5
SDV	Santo Domingo	39.79	2	P	P	21 15 49.0	-2.0
SDV				IAmb	IAmb	21 15 52.3	
	comp=Z,11nm,1.0s						
SDV	Santo Domingo	39.79	2	eP	P	21 15 50.6	-0.3
MOTC	Monteria, Cord	39.86	354	eP	P	21 15 52.8	+1.5
MDP	Montagnes des	40.34	30	LR	LR	21 33 39.6	
	comp=Z,88nm,20.0s,baz=204,slow=38						
SJCC	San Jacinto, C	40.92	355	eP	P	21 16 00.1	-0.1
RCBR	Riachuelo	41.91	61	P	P	21 16 02.6	-5.7
RCBR				IAmb	IAmb	21 16 11.9	
	comp=Z,9.9nm,0.9s						
RCBR	Riachuelo	41.91	61	eP	P	21 16 11.6	+3.3
JTS	Las Juntas de	43.11	341	LR	LR	21 31 25.6	
	comp=Z,35nm,18.6s,baz=64,slow=32						
MLPR	Magueyes Islan	49.01	6	P	P	21 17 03.8	-0.6
OBIP	Obispado Ponce	49.12	6	P	P	21 17 03.1	-2.1
PDPR	Patillas Dam,	49.16	7	P	P	21 17 02.5	-2.9
BELA	Belgrano 2	49.65	170	P	P	21 17 08.7	+0.1
DR12	Loma Pena Alta	49.67	3	P	P	21 17 07.0	-2.5
VNA3	Neumayer Olymp	51.91	159	P	P	21 17 26.7	+1.0
VNA3	Neumayer Olymp	51.91	159	pP	pP	21 17 40.1	+4.5
VNA2	Neumayer--Watz	52.55	158	P	P	21 17 31.2	+0.7
	baz=284,slow=7.5						
VNA2	Neumayer--Watz	52.55	158	pP	pP	21 17 45.7	+5.3
CMIG	Matias Romero	52.88	332	LR	LR	21 34 50.6	
	comp=Z,34nm,19.1s,baz=188,slow=30						
TEIG	Tepich	53.49	340	P	P	21 17 37.7	-0.3
SNAA	Sanae	54.13	159	P	P	21 17 42.8	+0.7
SNAA	Sanae	54.13	159	pP	pP	21 17 57.2	+5.1
SNAA	Sanae	54.13	159	P	P	21 17 42.2	+0.1
QSPA	South Pole Qui	59.11	180	P	P	21 18 17.7	0.0
QSPA				IAmb	IAmb	21 18 20.2	
	comp=Z,8.0nm,0.8s						
H06E1	SOCORRO T-PHAS	62.32	317	T	T	22 26 34.0	
	SNR=7.6						
Y52A	Lilburn	65.69	349	P	P	21 19 02.8	+1.0
Y52A				IAmb	IAmb	21 19 04.4	
	comp=Z,7.2nm,0.8s						
HPIG		66.24	327	P	P	21 19 08.0	+2.3
HPIG				IAmb	IAmb	21 19 09.1	
	comp=Z,17nm,1.5s						
Y45A	Yeager Farm, C	66.81	344	P	P	21 19 08.6	-0.3
X48A	Hartselle	66.82	346	P	P	21 19 07.3	-1.6
X48A				IAmb	IAmb	21 19 10.9	
	comp=Z,9.9nm,0.9s						
JCT	Junction City	66.84	334	P	P	21 19 08.4	-0.9
JCT				IAmb	IAmb	21 19 14.1	
	comp=Z,8.1nm,1.1s						
W52A	Murphy	66.87	349	P	P	21 19 08.3	-1.1
W52A				IAmb	IAmb	21 19 10.7	
	comp=Z,11nm,0.9s						
VNDA	Vanda	66.98	191	P	P	21 19 10.7	+1.1
	comp=Z,1.5nm,0.8s,baz=126,slow=4.3,SNR=7.7						
VNDA				LR	LR	21 46 12.7	
	comp=Z,40nm,18.6s,baz=332,slow=34						
W50A	Signal Mountai	67.21	348	P	P	21 19 09.9	-1.6
W50A				IAmb	IAmb	21 19 12.8	
	comp=Z,8.6nm,0.8s						
V53A	Saluda	67.26	350	P	P	21 19 10.2	-1.7
V53A				IAmb	IAmb	21 19 13.4	
	comp=Z,7.0nm,0.8s						
SWET	Sewanee	67.34	347	P	P	21 19 09.9	-2.4
SWET				IAmb	IAmb	21 19 14.1	
	comp=Z,14nm,1.0s						
OXF	Oxford	67.39	344	P	P	21 19 10.0	-2.7
TKL	Tuckaleechee C	67.40	349	P	P	21 19 13.0	+0.3
	comp=Z,4.9nm,0.6s,baz=165,slow=6.8,SNR=7.0						
TKL	Tuckaleechee C	67.40	349	P	P	21 19 10.4	-2.3
TKL				IAmb	IAmb	21 19 17.8	
	comp=Z,22nm,1.4s						
TXAR	Lajitas Array	67.40	330	P	P	21 19 14.9	+2.0
	comp=Z,2.3nm,0.8s,baz=153,slow=8.0,SNR=20						
TXAR				pP	sP	21 19 28.8	+2.1
	comp=Z,0.8nm,0.7s,baz=161,slow=8.7,SNR=4.5						
TXAR				LR	LR	21 44 03.5	
	comp=Z,42nm,19.8s,baz=0.0,slow=32						
TX31	Lajitas Ar. Si	67.40	330	P	P	21 19 12.3	-0.6
TX31				IAmb	IAmb	21 19 15.9	
	comp=Z,12nm,1.1s						
TX32	Lajitas Array	67.40	330	P	P	21 19 11.9	-1.0
CCAR	Cane Creek	67.42	342	P	P	21 19 09.6	-3.2
V48A	Smith Brothers	68.02	347	P	P	21 19 14.9	-1.7
V48A				IAmb	IAmb	21 19 18.5	
	comp=Z,19nm,1.2s						
CLTN	Cedars of Leba	68.26	347	P	P	21 19 17.0	-1.1
CLTN				IAmb	IAmb	21 19 19.9	
	comp=Z,8.9nm,0.8s						
MIAR	Mount Ida	68.50	341	P	P	21 19 21.1	+1.5
MIAR				IAmb	IAmb	21 19 22.0	
	comp=Z,8.8nm,1.2s						
U49A	Red Boiling Sp	68.57	348	P	P	21 19 21.0	+1.0
WVT	Waverly	68.60	346	P	P	21 19 20.6	+0.5
W41B	Gary Mavity, V	68.73	342	P	P	21 19 21.5	+0.5

W41B				IAmb	IAmb	21 19 35.5	
	comp=Z,9.6nm,1.3s						
WHAR	Wooly Hollow	68.85	342	P	P	21 19 22.4	+0.6
GNAR	Gosnell	68.92	344	P	P	21 19 23.1	+0.9
R58B	Mineral	68.97	355	P	P	21 19 23.5	+1.0
R58B				IAmb	IAmb	21 19 25.1	
	comp=Z,9.9nm,1.1s						
UTMT	University of	69.02	345	P	P	21 19 23.5	+0.6
W39A	Magazine	69.17	341	P	P	21 19 25.0	+1.2
T47A	Sharon Grove	69.28	347	P	P	21 19 24.2	-0.3
T47A				IAmb	IAmb	21 19 26.1	
	comp=Z,15nm,1.1s						
LCAR	Lake Charles	69.30	343	P	P	21 19 25.8	+1.2
LCAR				IAmb	IAmb	21 19 26.3	
	comp=Z,14nm,0.8s						
FCAR	Ozark Folk Cen	69.38	342	P	P	21 19 25.5	+0.5
PBMO	Poplar Bluff	69.80	344	P	P	21 19 27.9	+0.3
PBMO				IAmb	IAmb	21 19 29.4	
	comp=Z,10nm,0.9s						
U40A	Yellville	70.01	342	P	P	21 19 29.3	+0.3
U40A				IAmb	IAmb	21 19 30.4	
	comp=Z,7.9nm,0.8s						
MNTX	Cornudas Mount	70.18	330	P	P	21 19 29.1	-1.1
MNTX				IAmb	IAmb	21 19 31.9	
	comp=Z,6.4nm,0.8s						
USIN	University of	70.34	347	P	P	21 19 30.9	0.0
S44A	Carbondale	70.41	345	P	P	21 19 31.9	+0.6
S44A				IAmb	IAmb	21 19 48.3	
	comp=Z,5.2nm,0.7s						
SIUC	Southern Illin	70.42	345	P	P	21 19 31.4	+0.1
SIUC				IAmb	IAmb	21 19 33.1	
	comp=Z,12nm,0.9s						
HSIG		70.54	324	P	P	21 19 33.1	+0.7
MGMO	Mountain Grove	70.61	343	P	P	21 19 33.8	+1.2
Q51A	Peebles	70.63	350	P	P	21 19 32.8	+0.1
Q51A				IAmb	IAmb	21 19 34.1	
	comp=Z,8.0nm,0.8s						
OK030	Cody Creek RV	70.75	339	P	P	21 19 33.6	+0.1
OK030				IAmb	IAmb	21 19 34.8	
	comp=Z,7.7nm,0.8s						
OK031	S. Brethren Rd	70.79	339	P	P	21 19 34.1	+0.4
OK031				IAmb	IAmb	21 19 36.2	
	comp=Z,20nm,1.3s						
FVM	French Village	70.95	344	P	P	21 19 34.8	+0.2
FVM				IAmb	IAmb	21 19 36.6	
	comp=Z,13nm,0.9s						
QUOK	Quay	70.95	339	P	P	21 19 35.2	+0.5
QUOK				IAmb	IAmb	21 19 38.6	
	comp=Z,26nm,1.5s						
MSTX	Muleshoe	71.09	333	P	P	21 19 37.4	+1.7
MSTX				IAmb	IAmb	21 19 38.1	
	comp=Z,16nm,0.9s						
CCM	Cathedral Cave	71.21	344	P	P	21 19 36.8	+0.6
CCM				IAmb	IAmb	21 19 38.2	
	comp=Z,14nm,0.9s						
S39A	Bolivar	71.39	342	P	P	21 19 38.4	+1.1
S39A				IAmb	IAmb	21 19 39.4	
	comp=Z,21nm,1.2s						
AMTX	Amarillo	71.48	334	P	P	21 19 38.9	+0.9
AMTX				IAmb	IAmb	21 19 40.7	
	comp=Z,13nm,1.1s						
319A	Douglas	71.67	327	P	P	21 19 39.3	0.0
319A				IAmb	IAmb	21 19 43.0	
	comp=Z,11nm,1.1s						
R40A	Maddies Statio	71.68	343	P	P	21 19 40.1	+1.0
121A	Cookes Peak, D	71.95	328	P	P	21 19 42.2	+1.2
121A				IAmb	IAmb	21 19 44.8	
	comp=Z,11nm,0.9s						
KAN13	South Haven SW	71.96	338	P	P	21 19 41.7	+0.9
N53A	Lisbon	72.07	353	P	P	21 19 42.0	+0.6
P40A	Paris	72.80	344	P	P	21 19 45.9	+0.2
BNM	Barren Site	72.82	330	P	P	21 19 47.1	+0.8
P38A	Dawn	73.26	343	P	P	21 19 49.4	+1.0
P38A				IAmb	IAmb	21 19 50.2	
	comp=Z,10nm,0.8s						
ANMO	Albuquerque	73.43	331	P	P	21 19 51.4	+1.7
LIC	Lamto	73.58	72	*e*P	P	21 19 50.0	-0.9
	comp=Z,11nm,0.8s						
R32A	Long Quarter,	73.64	338	P	P	21 19 51.1	+0.3
R32A				IAmb	IAmb	21 19 53.2	
	comp=Z,9.2nm,1.1s						
TIC	Toumodi	73.82	72	*e*P	P	21 19 51.1	-1.3
214A	Organ Pipe Nat	73.86	324	P	P	21 19 52.6	+0.4
KIC	Kosan Boka	73.89	72	*e*P	P	21 19 51.9	-0.8
	comp=Z,16nm,1.0s						
DBIC	Dimbokro	73.97	72	P	P	21 19 52.6	-0.5
	comp=Z,5.5nm,0.9s,baz=196,slow=7.6,SNR=9.5						
DBIC				pP	sP	21 20 05.8	-1.4
	comp=Z,4.8nm,0.8s,baz=186,slow=8.0,SNR=5.4						
DBIC				LR	LR	21 49 09.5	
	comp=Z,87nm,21.1s,baz=201,slow=33						
DBIC	Dimbokro	73.97	72	P	P	21 19 52.7	-0.5
DBIC				IAmb	IAmb	21 19 53.5	
	comp=Z,15nm,1.1s						
J57A	Williamstown	74.28	357	P	P	21 19 54.2	-0.1
N38A	Joes South For	74.29	343	P	P	21 19 53.8	-0.6
CBKS	Cedar Bluff	74.33	338	P	P	21 19 55.2	+0.4
CBKS				IAmb	IAmb	21 19 57.5	
	comp=Z,15nm,1.0s						
T25A	Trinidad	74.50	333	P	P	21 19 57.4	+1.3
T25A				IAmb	IAmb	21 19 59.6	
	comp=Z,16nm,0.9s						
X18A	Snowflake	74.60	328	P	P	21 19 57.2	+0.6
N35A	Tabor	74.98	341	P	P	21 19 58.8	+0.3
W18A	Petrified Fore	75.00	328	P	P	21 20 00.7	+1.8
W18A				IAmb	IAmb	21 20 02.5	
	comp=Z,19nm,1.4s						
X16A	Lo Mia Camp, P	75.20	327	P	P	21 20 02.1	+1.9
X16A				IAmb	IAmb	21 20 03.8	
	comp=Z,11nm,1.2s						
SDCO	Great Sand Dun	75.45	333	P	P	21 20 03.9	+2.2
MAW	Mawson	75.84	164	P	P	21 20 03.9	+0.8
	comp=Z,5.4nm,1.1s,baz=245,slow=16,SNR=4.2						
MAW				pP	sP	21 20 17.9	+0.6
	comp=Z,4.7nm,0.9s,baz=222,slow=8.9,SNR=4.3						
MAW				LR	LR	21 53 52.6	
	comp=Z,42nm,19.2s,baz=248,slow=36						
MAW	Mawson	75.84	164	IAmb	IAmb	21 20 04.4	
	comp=Z,2.3nm,1.2s						
S22A	4UR Ranch, Cre	75.98	332	P	P	21 20 07.3	+2.6
MVCO	Mesa Verde	76.22	330	P	P	21 20 08.2	+2.3
W13A	Hualapai Mount	76.92	326	P	P	21 20 12.6	+2.7
ISCO	Idaho Springs	77.28	334	P	P	21 20 14.2	+2.2
I37A	Lemond, Waseca	77.37	344	P	P	21 20 12.6	+0.6
ECSD	EROS Data Cent	77.92	342	P	P	21 20 16.2	+1.2
MTPU	Mount Pierson	78.52	328	P	P	21 20 21.5	+2.6
SZCU	Shurtz Canyon	78.56	328	P	P	21 20 18.3	-0.7
O20A	White River Ci	78.59	332	P	P	21 20 18.4	-0.8
SHPR	Sheep Range	78.66	326	P	P	21 20 18.5	-1.1
SRU	San Rafael Swe	78.67	330	P	P	21 20 18.4	-1.1
F36A	Milaca	79.15	345	P	P	21 20 21.1	-0.7
F36A				IAmb	IAmb	21 20 23.1	
	comp=Z,16nm,1.2s						
KOWA	Kowa	79.16	66	P	P	21 20 20.3	-2.3
KOWA				IAmb	IAmb	21 20 36.8	
	comp=Z,7.4nm,0.8s						
PRN	Pahroc Range	79.33	326	P	P	21 20 22.2	-0.9
PRN				IAmb	IAmb	21 20 27.1	
	comp=Z,9.6nm,1.1s						
RDMU	Red Mountain	79.50	332	P	P	21 20 22.6	-1.5
TSUM	Tsumeb	79.70	106	P	P	21 20 23.4	-2.3
MPU	Maple Canyon	79.90	330	P	P	21 20 27.7	+1.4
DUG	Dugway, Tooele	80.56	329	P	P	21 20 30.3	+0.5
BOSA	Boshof	81.13	118	pP	pP	21 20 46.0	+2.3
	comp=Z,7.2nm,0.8s,baz=220,slow=3.7,SNR=8.0						
BOSA				LR	LR	21 54 18.4	
	comp=Z,27nm,18.1s,baz=202,slow=34						
BOSA	Boshof	81.13	118	P	P	21 20 33.3	+0.1
BOSA				IAmb	IAmb	21 20 48.3	
	comp=Z,10nm,0.9s						
PDAR	Pinedale Array	81.35	333	P	P	21 20 35.3	+1.3
	comp=Z,1.2nm,0.6s,baz=131,slow=6.1,SNR=4.7						
PDAR				LR	LR	21 53 02.8	
	comp=Z,25nm,21.9s,baz=77,slow=33						
ELK	Elko	82.09	328	P	P	21 20 38.4	+0.4
CASY	Casey	82.90	181	P	P	21 20 42.7	+1.1
CASY				IAmb	IAmb	21 20 44.1	
	comp=Z,13nm,1.0s						
TOA0	Torodi Ar. Sit	82.93	70	P	P	21 20 41.9	-0.7
TOA0				IAmb	IAmb	21 20 56.9	
	comp=Z,8.7nm,0.8s						
TORD	Torodi Ar. Bea	82.93	70	P	P	21 20 42.4	-0.3
	comp=Z,6.6nm,0.9s,baz=271,slow=5.2,SNR=24						
TORD				pP	sP	21 20 56.0	-0.9
	comp=Z,7.7nm,0.8s,baz=270,slow=4.5,SNR=16						
TORD				LR	LR	21 55 15.3	
	comp=Z,75nm,20.2s,baz=245,slow=34						
LBTB	Lobatse	83.22	115	P	P	21 20 43.5	-0.8
ULM	Lac du Bonnet	83.81	345	P	P	21 20 46.6	+0.3
	comp=Z,6.1nm,0.9s,baz=150,slow=4.9,SNR=6.5						
ULM				pP	sP	21 21 00.8	+0.6
	comp=Z,2.2nm,0.8s,baz=128,slow=6.6,SNR=2.7						
HLID	Hailey	84.00	330	P	P	21 20 48.5	+0.8
LSZ	Lusaka	90.40	108	P	P	21 21 20.1	+0.7
ESDC	Sonseca Array	94.35	46	LR	LR	22 03 53.5	
	comp=Z,28nm,18.2s,baz=330,slow=35						
YKA	Yellowknife Ar	99.44	341	P	Pdif	21 21 59.4	+0.1
	comp=Z,0.4nm,0.7s,baz=138,slow=5.4,SNR=8.3						
AKASG	Malin Array Be	120.00	46	PKP	PKPdf	21 27 06.0	-1.3
	comp=Z,0.4nm,0.5s,baz=262,slow=2.9,SNR=4.2						
ASAR	Alice Springs	120.27	207	PKP	PKPdf	21 27 08.4	-0.6
	comp=Z,0.3nm,0.5s,baz=128,slow=1.7,SNR=6.3						
ASAR				pPKP	sPKPdf	21 27 22.8	-0.4
	comp=Z,0.6nm,0.8s,baz=116,slow=2.9,SNR=3.2						
WRA	Warramunga Arr	123.42	210	PKP	PKPdf	21 27 14.9	-0.2
	comp=Z,1.0nm,0.5s,baz=161,slow=1.6,SNR=25						
WRA				pPKP	sPKPdf	21 27 29.4	+0.1
	comp=Z,0.9nm,0.7s,baz=165,slow=1.7,SNR=4.1						
H11S2	WAKE ISLAND Hy	126.09	271	T	T	23 46 20.0	
	baz=116,slow=75,SNR=138						
H11S1	WAKE ISLAND Hy	126.10	271	T	T	23 46 20.3	
	baz=116,slow=75,SNR=49						
H11S3	WAKE ISLAND Hy	126.10	271	T	T	23 46 18.6	
	baz=116,slow=75,SNR=58						
H11N3	WAKE ISLAND Hy	126.43	272	T	T	23 46 41.4	
	baz=116,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	126.44	272	T	T	23 46 45.0	
	baz=116,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	126.44	272	T	T	23 46 44.9	
	baz=116,slow=75,SNR=31						
HYB	Hyderabad	149.72	110	*i* PKP	PKPbc	21 28 08.0	+0.3
EKS2	Erkin-Say	150.25	57	P	PKiKP	21 28 09.4	+0.2
	SNR=7.4						
USP	Ospenovka	150.64	56	P	PKiKP	21 28 09.6	-0.3
	SNR=11						
AAK	Ala-Archa	150.78	57	P	PKiKP	21 28 10.6	+0.2
	SNR=11						
UCH	Uchtor	150.87	58	P	PKiKP	21 28 11.2	+0.3
	SNR=10						
CHMS	Chumysh	150.88	57	P	PKiKP	21 28 10.3	-0.1
	SNR=6.0						
TKM2	Tokmak 2	151.50	56	P	PKiKP	21 28 12.0	+0.1
	SNR=6.8						
ZALV	Zalesovo Beam	151.60	30	PKP	PKPdf	21 28 05.1	+0.4
	comp=Z,0.6nm,0.3s,baz=298,slow=3.2,SNR=7.7						
ZALV				PKPbc	PKiKP	21 28 11.2	-0.3
	comp=Z,11nm,0.9s,baz=320,slow=4.4,SNR=4.9						
ZALV				PKPab	PKPab	21 28 20.3	+0.6
	comp=Z,2.4nm,0.5s,baz=306,slow=4.4,SNR=4.4						
ZALV				pPKPbc	sPKPbc	21 28 25.7	+0.1
	comp=Z,5.7nm,0.5s,baz=299,slow=3.8,SNR=7.6						
KSH	Kashi	152.41	63	PKPbc	PKiKP	21 28 13.8	0.0
KSH				sPKP		21 28 23.1	
KSH				LR	LR		
	comp=N,620nm,5.3s						
KSH				LR	LR		
	comp=E,630nm,5.6s						
KSH				LR	LR		
	comp=Z,530nm,6.5s						
MKAR	Makanchi Array	154.57	45	PKP	PKPdf	21 28 08.9	-0.4
	comp=Z,0.5nm,0.8s,baz=277,slow=2.0,SNR=4.5						
MKAR				PKPbc	PKPbc	21 28 17.6	-0.3
	comp=Z,1.9nm,0.9s,baz=299,slow=1.6,SNR=14						
MKAR				pPKPbc	sPKPbc	21 28 32.3	-0.1
	comp=Z,3.0nm,0.8s,baz=300,slow=3.4,SNR=15						
MKAR				pPKPab	sPKPab	21 28 45.8	-1.1
	comp=Z,2.0nm,0.6s,baz=292,slow=4.2,SNR=8.4						
WMQ	Urumqi	159.35	46	*e*P	PKPdf	21 28 15.2	-0.4
CMAR	Chiang Mai Arr	164.79	144	PKP	PKPdf	21 28 19.4	-2.4
	comp=Z,0.4nm,0.7s,baz=198,slow=2.7,SNR=3.0						
GTA	Gaotai	169.19	38	PKP	PKPdf	21 28 25.3	+0.7
GTA				pPKP	pPKPdf	21 28 36.3	+0.7
GTA				sPKP		21 28 41.8	
GTA				PKPab	PKPab	21 29 36.8	+0.1
HHC	Hu-ho-hao-te	169.95	346	*e*P	PKPdf	21 28 25.8	+0.8
NJ2	Nanjing	170.98	279	*e*P	PKPdf	21 28 25.9	+0.2

IDC 01 21:12:33.2±7.9,**5°.80S**×**146°.43E**,**h92**^{km}±71^{km},**mb3.1**/2, **mb1 3.3**/4,**mb1mx3.1**/26,**mbtmp3.5**/4,**ML2.8**/2,**Error ellipse: s-maj=63.5km s-min=60.8km az=118.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	169	P	Pn	21 13 27.9	+0.2
	5.9nm,0.3s,baz=354,slow=9.2,SNR=15						
PMG				S	Sn	21 14 10.3	+0.5
	2.4nm,0.3s,baz=342,slow=20,SNR=5.5						
WRA	Warramunga Arr	18.32	219	P	P	21 16 40.4	0.0
	0.1nm,0.3s,baz=44,slow=12,SNR=13						
ASAR	Alice Springs	21.47	213	P	P	21 17 14.8	+0.3
	0.7nm,0.6s,baz=46,slow=9.6,SNR=13						
FITZ	Fitzroy Crossi	23.69	237	P	P	21 17 36.4	-0.4
	1.6nm,0.8s,baz=58,slow=9.5,SNR=1.4						
TORD	Torodi Ar. Bea	144.49	284	PKP	PKPbc	21 31 59.1	+0.4
	0.2nm,0.4s,baz=88,slow=1.9,SNR=1.9						

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*NEIC **01** 21:18:15.7±1.7,38°.31N±0°.02×122°.66W±0°.03,h17^{km}±1^{km}, Error ellipse: s-maj=3.9km s-min=2.4km az=52.0*

NCEDC 01 21:18:15.7±2.3,**38°.37N**±0°.02×**122°.61W**±0°.02,**h7**^{km}±4^{km}, **ML3.0**/55,**ML2.7**/46(NEIC),**Error ellipse: s-maj=3.1km s-min=1.6km az=55.0,Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCCM	Marconi Confer	0.31	225		Sg	21 18 22.3	-3.5
MCCM	Marconi Confer	0.31	225	Pg	Pg	21 18 22.1	+0.3
GCRM	Castle Rock Sp	0.42	348		Pg	21 18 23.9	0.0
HERB	Hercules	0.44	142		Pg	21 18 24.9	+0.6
FTR	Fort Ross	0.46	290		Pg	21 18 25.2	+0.5
GDXM	Geysers	0.47	342		Pg	21 18 25.0	+0.2
GDXM				IAML		21 18 31.7	
	comp=E,643nm,0.4s						
GDXM				IAML		21 18 32.9	
	comp=N,490nm,0.2s						
RFSB	Richmond Field	0.50	154		Pg	21 18 25.6	+0.3
GSGM	Seigler Mounta	0.51	351		Pg	21 18 26.2	+0.6
MNRC	McLaughlin Min	0.53	14		Pg	21 18 26.5	+0.6
GPMM	Pine Mountain	0.55	331		Pg	21 18 26.9	+0.5
BRK	Berkeley--Havi	0.56	151		Pg	21 18 26.9	+0.3
VAK	Adit at Lawren	0.56	150		Pg	21 18 26.8	+0.3
BKS	Berkeley--Byer	0.57	149		Pg	21 18 27.0	+0.3
CMCM	Mills College	0.67	150		Pg	21 18 28.9	+0.3
BDM	Black Diamond	0.71	125		Pg	21 18 29.7	+0.3
HOPS	Hopland Field	0.73	330		Pb	21 18 30.2	-0.5
HOPS	Hopland Field	0.73	330	Pg	Pg	21 18 30.0	+0.3
FARB	Farallon Islan	0.73	205		Pg	21 18 29.9	0.0
WENL	Wente Vineyard	1.00	138		Pg	21 18 35.0	0.0
JRSC	Jasper Ridge	1.00	163		Pg	21 18 33.9	-1.1
SUTB	Sutter Butte	1.07	36		Pg	21 18 34.1	-2.3
GNAM	Navarro Ridge	1.15	316		Pg	21 18 36.0	-1.9
MHC	Mount Hamilton	1.27	143		Pn	21 18 38.6	-1.4
GASB	Alder Springs	1.29	356		Pn	21 18 39.4	-0.9
AFDM	Forest Hills D	1.41	65	Pn	Pn	21 18 39.7	-2.1
AFDM				IAML		21 18 59.2	
	comp=N,133nm,0.5s						
ORV	Oroville	1.47	36		Pn	21 18 40.0	-2.6
ORV	Oroville	1.47	36		Pn	21 18 40.1	-2.5
ORV				IAML		21 19 00.0	
	comp=E,25nm,0.4s						
ORV				IAML		21 19 05.3	
	comp=N,24nm,0.6s						
KCPM	Cahto Peak	1.52	330	Pn	Pn	21 18 43.2	-0.3
GHS	Gilroy Hot Spr	1.56	144		Pn	21 18 42.5	-1.4
HCOM	Corn Cob Canyo	1.64	154		Pn	21 18 43.0	-1.9
HFEM	San Felipe	1.68	145		Pn	21 18 44.0	-1.5
PACP	Pacheco Peak	1.71	142		Pn	21 18 45.0	-1.0
CMB	Columbia Colle	1.78	100		Pn	21 18 45.9	-1.1
CMB	Columbia Colle	1.78	100		Pn	21 18 46.0	-0.9
CMB				IAML		21 19 15.6	
	comp=N,50nm,0.5s						
CMB				IAML		21 19 18.2	
	comp=E,43nm,0.5s						
SAO	San Andreas Ge	1.84	150		Pn	21 18 45.8	-1.9
SAO	San Andreas Ge	1.84	150		Pn	21 18 46.0	-1.7
SCZ	Santa Cruz	2.01	151		Pn	21 18 47.8	-2.1
RUBR	Rubicon Trail	2.04	70		Pn	21 18 49.6	-1.0
BJCM	Johnson Can.	2.06	152		Pn	21 18 48.5	-2.1
HAST	Hastings Reser	2.14	157		Pn	21 18 49.7	-2.2
BSMM	Soledad Missio	2.19	154		Pn	21 18 50.6	-2.0
WDC	Whiskeytown Da	2.21	1	Pn	Pn	21 18 52.3	-0.5
BEKR	Beckworth	2.30	49		Pn	21 18 54.3	+0.1
BEKR				IAML		21 19 24.1	
	comp=N,39nm,0.8s						
BEKR				IAML		21 19 25.0	
	comp=E,47nm,0.7s						
LRV	Little Rabbit	2.31	146		Pn	21 18 53.5	-0.8
PNTR	Pine Nut	2.46	72		Pn	21 18 57.7	+1.3
VCNR	Virginia City	2.49	67		Pn	21 18 57.7	+0.9
VCNR				IAML		21 19 35.3	
	comp=N,45nm,0.7s						
VCNR				IAML		21 19 35.9	
	comp=E,51nm,0.9s						
WAKR	Walker	2.49	86		Pn	21 18 57.9	+1.0
WAKR				IAML		21 19 35.3	
	comp=E,53nm,0.6s						
WAKR				IAML		21 19 36.9	
	comp=N,26nm,0.9s						
PMPB	Monarch Peak	2.58	146		Pn	21 18 56.8	-1.1
KHMM	Horse Mountain	2.65	341	Pn	Pn	21 18 59.3	+0.3
KHMM				IAML		21 19 40.0	
	comp=N,26nm,3.9s						
KHMM				IAML		21 20 42.1	
	comp=E,25nm,2.7s						
JCC	Jacoby Creek,	2.69	336	Pn	Pn	21 18 57.9	-1.3
JCC				IAML		21 20 30.6	
	comp=E,29nm,3.8s						
JCC				IAML		21 20 42.5	
	comp=N,25nm,3.7s						
PAHR	Pah Rah Range	2.84	61		Pn	21 19 01.7	0.0
PAHR				IAML		21 19 55.5	
	comp=N,19nm,1.3s						
LHV	Little Huntoon	3.23	91		Pn	21 19 07.2	+0.5
LHV				IAML		21 20 05.0	
	comp=N,24nm,1.1s						
PAGB	Antelope Grade	3.23	144	Pn	Pn	21 19 05.5	-1.4
PAGB				IAML		21 20 20.1	
	comp=N,26nm,3.6s						
PAGB				IAML		21 20 36.6	
	comp=E,26nm,5.0s						
KRMB	Red Mountain	3.31	343	Pn	Pn	21 19 09.0	+1.0
KRMB				IAML		21 20 19.0	
	comp=E,19nm,5.0s						
KRMB				IAML		21 20 51.6	
	comp=N,17nm,1.8s						
YBH	Yreka Blue Hor	3.36	359	Pn	Pn	21 19 09.5	+0.8
ISA	Isabella, Lake	4.27	128	Pn	Pn	21 19 21.3	+0.1
ISA				IAML		21 20 26.4	
	comp=N,6.4nm,1.9s						
ISA				IAML		21 20 35.7	
	comp=E,7.1nm,3.2s						
GSC	Goldstone, Bar	5.57	122	Pn	Pn	21 19 37.1	-1.9

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*IDC **01** 21:25:49.7±2.0,1°.38S×77°.65W,h167^{km}±20^{km},mb3.8/19, mb1 3.9/24,mb1mx3.8/42,mbtmp4.3/24,Error ellipse: s-maj=17.0km s-min=10.1km az=49.0*

*NEIC **01** 21:25:50.5±2.2,1°.40S±0°.07×77°.6W±0°.1,h172^{km}±5^{km}, mb4.4/85,Error ellipse: s-maj=14.9km s-min=9.3km az=80.0*

*VAO **01** 21:25:57.1±0.3,1°.76S×77°.23W,h194^{km},mb4.6*

ISC 01 21:25:49.4±0.4,**1°.48S**±0°.05×**77°.74W**±0°.06,**h167**^{km},**n205**, σ**1^{s}.07**/198,**mb4.4**/63,**Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	1.85	337	Pn	Pn	21 26 25.2	+0.8
OTAV	Otavalo	1.85	337	*e*P	Pn	21 26 25.1	+0.8
CUSE	Cuicocha Este	1.89	340	*e*P	Pn	21 26 26.5	+1.6
PAC1	Pacto, Paraso	2.02	329	*e*P	Pn	21 26 26.5	+0.5
PUAC	Puerto Asis, P	2.33	30	*e*P	Pn	21 26 32.0	+2.6
PTLC	Puerto Leguiza	3.37	61	*e*P	Pn	21 26 42.6	+0.5
BBAC	Balboa, Cauca	3.51	8	*e*P	Pn	21 26 45.3	+1.2
PCON	Cinco Dias	4.01	20	*e*P	Pn	21 26 53.6	+2.8
MACC	Macarena, Meta	5.30	47	*e*P	Pn	21 27 09.2	+2.1
YOTC	Yotoco, Valle	5.60	14	*e*P	Pn	21 27 10.2	-1.0
ATAH	Atahualpa	5.66	187	P	Pn	21 27 13.1	+0.9
	5.2nm,0.3s,baz=18,slow=8.7,SNR=21						
ATAH				S	Sn	21 28 12.6	-4.4
	11nm,0.3s,baz=300,slow=20,SNR=18						
TOLC	Tolima	6.49	22	*e*P	Pn	21 27 24.2	+1.1
PLMC	San Jos del P	6.51	13	*e*P	Pn	21 27 20.9	-2.2
RREF	El Recreo	6.78	21	*e*P	Pn	21 27 28.1	+0.9
VILC	Villavicencio,	6.87	36	*e*P	Pn	21 27 31.4	+3.5
ROSC	El Rosal	7.15	29	Pn	Pn	21 27 32.0	+0.2
CHIC	Chingaza	7.27	33	*e*P	Pn	21 27 39.2	+5.7
CBOC	Ciudad Bolivar	7.50	13	*e*P	Pn	21 27 34.2	-2.1
NORC	Norcasia	7.56	22	*e*P	Pn	21 27 37.5	+0.4
SOLC	Bahia Solano	7.66	3	*e*P	Pn	21 27 37.7	-0.6
CZSB	Cruzeiro do Su	7.99	141	*e*P	Pn	21 27 43.1	+0.5
DBBC	Dabeiba	8.58	10	*e*P	Pn	21 27 54.6	+4.1
PTBC	PUERTO BERRIO,	8.62	22	*e*P	Pn	21 27 49.8	-1.1
RUSC	La Rusia	8.68	32	*e*P	Pn	21 27 54.8	+2.6
ZARC	Zaragoza, Cauc	9.37	18	*e*P	Pn	21 28 01.5	+0.7
NNA	Nana	10.48	175	P	Pn	21 28 16.0	+0.4
	0.7nm,0.3s,baz=314,slow=15,SNR=2.2						
NNA				S	Sn	21 30 02.4	-9.5
	4.9nm,0.3s,baz=281,slow=14,SNR=7.3						
NNA	Nana	10.48	175	Pn	Pn	21 28 15.8	+0.3
SMLC	San Martn de	10.85	20	*e*P	Pn	21 28 20.7	+0.4
SDV	Santo Domingo	12.50	34	P	Pn	21 28 39.9	-1.9
	0.4nm,0.3s,baz=310,slow=15,SNR=1.4						
SDV	Santo Domingo	12.50	34	*e*P	P	21 28 48.7	+1.7
PAYG	Puerto Ayora	12.56	274	Pn	Pn	21 28 44.4	+1.8
ETMB	Extrema	14.14	126	*e*P	Pn	21 29 00.7	-1.9
SAML	Samuel	16.28	118		P	21 29 27.8	-0.9
SAML	Samuel	16.28	118	*e*P	P	21 29 27.9	-0.8
PCRV	Puerto La Cruz	17.45	48	P	Pn	21 29 42.5	-0.4
	1.1nm,0.3s,baz=151,slow=10,SNR=2.2						
PTGA	Pitinga	17.79	88	P	Pn	21 29 46.4	-0.5
	0.9nm,0.3s,baz=321,slow=22,SNR=5.7						
PTGA	Pitinga	17.79	88	IAmb	IAmb	21 29 54.3	
	comp=Z,6.7nm,1.0s						
PB16	IPOC Station P	18.60	155	P	Pn	21 29 56.8	-0.2
PB16				IAmb	IAmb	21 29 57.7	
	comp=Z,12nm,0.7s						
MNMC	Minye Minye	19.27	156	P	P	21 30 03.6	+1.9
MNMC				IAmb	IAmb	21 30 07.4	
	comp=Z,17nm,0.7s						
PSGCX	Pisagua	19.49	158	P	Pn	21 30 07.7	+0.8
PSGCX				IAmb	IAmb	21 30 12.1	
	comp=Z,9.1nm,0.7s						
MTDJ	Mount Denham	19.58	1	P	P	21 30 04.6	-0.2
GO01	Chusmiza	19.92	156	P	P	21 30 10.9	+2.0
TA01	Diego Aracena	20.36	159	P	Pn	21 30 16.4	-0.8
TA01				IAmb	IAmb	21 30 27.2	
	comp=Z,16nm,0.9s						
PB08	IPOC Station P	20.36	156	P	Pn	21 30 17.0	-0.6
VILB	Vilhena	20.78	124	*e*P	P	21 30 16.4	-1.2
GTBY	Guantanamo Bay	21.43	7	P	P	21 30 24.0	-0.4
PB09	IPOC Station P	21.83	158	P	P	21 30 30.3	+1.4
PB09				IAmb	IAmb	21 30 43.2	
	comp=Z,7.8nm,0.7s						
SIV	San Ignacio	21.86	132	P	P	21 30 30.0	+0.9
	comp=Z,12nm,0.7s,baz=309,slow=8.1,SNR=46						
ITTB	Itaituba	22.16	98	*e*P	P	21 30 32.1	0.0
MPR	Mayaguez	22.18	28	P	P	21 30 31.7	-0.4
OBIP	Obispado Ponce	22.28	29	P	P	21 30 31.9	-1.3
OBIP				IAmb	IAmb	21 30 46.9	
	comp=Z,20nm,1.1s						
LVC	Limon Verde	22.69	158	P	P	21 30 38.7	+1.3
	comp=Z,3.2nm,0.4s,baz=2.1,slow=5.6,SNR=6.9						
LVC	Limon Verde	22.69	158	P	P	21 30 39.5	+2.2
LVC				IAmb	IAmb	21 30 41.9	
	comp=Z,8.9nm,1.1s						
LVC	Limon Verde	22.69	158	*e*P	P	21 30 40.0	+2.6
NPGB	Novo Progresso	22.99	105	*e*P	P	21 30 39.4	-0.4
PTLB	Pontes e Lacer	23.02	128	*e*P	P	21 30 41.2	+1.3
MALB	Monte Alegre	23.47	91	*e*P	P	21 30 44.9	+0.7
CLDB	Colider	23.71	114	*e*P	P	21 30 47.0	+0.6
CMIG	Matias Romero	25.02	318	P	P	21 30 58.8	+0.6
	comp=Z,2.2nm,0.6s,baz=104,slow=9.6,SNR=2.2						
MCPB	Macapa, AP	25.71	88	*e*P	P	21 31 04.6	+0.1
MDP	Montagnes des	25.91	75	P	P	21 31 04.4	-1.9
	comp=Z,13nm,0.9s,baz=270,slow=7.8,SNR=5.6						
PP1B	Ponte de Pedra	27.59	127	*e*P	P	21 31 22.6	+1.3
SNDB	Serra Nova Dou	28.23	113	*e*P	P	21 31 27.7	+0.8
PRPB	Parauapebas	28.25	100	*e*P	P	21 31 27.0	-0.1
AQDB	Aquidauana	28.64	133	*e*P	P	21 31 32.3	+1.8
ARAG	Araguaiana, MT	29.22	120	*e*P	P	21 31 36.7	+1.0

CO01	Juntas del Tor	29.26	166	P	P	21 31 37.0	+0.8
CO01				IAmb	IAmb	21 31 43.1	
	comp=Z,5.7nm,1.1s						
SMTB	Santa Maria do	30.89	105	*e*P	P	21 31 51.1	+0.6
PEXB	Peixe	31.04	111	*e*P	P	21 31 52.2	+0.4
CPUP	Villa Florida	31.56	143	P	P	21 31 55.7	-0.5
	comp=Z,2.2nm,0.8s,baz=338,slow=8.8,SNR=4.4						
CPUP	Villa Florida	31.56	143	*e*P	P	21 31 56.1	-0.1
VA03	San Esteban	31.85	168	P	P	21 32 00.0	+1.3
VA03				IAmb	IAmb	21 32 03.8	
	comp=Z,9.1nm,0.9s						
ITRB	Iturama	32.34	126	*e*P	P	21 32 04.0	+0.8
BDFB	Brasilia	32.52	117	P	P	21 32 05.6	+0.8
	comp=Z,11nm,0.4s,baz=291,slow=9.7,SNR=3.2						
BDFB	Brasilia	32.52	117	P	P	21 32 05.5	+0.7
PCMB	Pacaembu	32.64	130	*e*P	P	21 32 06.1	+0.3
IPMB	Ipameri, GO	33.31	121	*e*P	P	21 32 12.1	+0.5
ROSB	Rosrio	33.62	93	*e*P	P	21 32 14.5	+0.1
PTGB	Pitanga	33.90	135	*e*P	P	21 32 15.2	-1.5
SDBA	SAO DESIDERIO	34.31	110	*e*P	P	21 32 20.5	+0.2
BB19B	Bebedouro	34.51	126	*e*P	P	21 32 21.9	0.0
ITAB	Concordia	35.48	138	*e*P	P	21 32 30.2	+0.1
JANB	Januaria	35.65	114	*e*P	P	21 32 31.6	-0.2
HODGE	Hodges	35.77	354	P	P	21 32 32.9	+0.4
HODGE				IAmb	IAmb	21 32 42.3	
	comp=Z,5.8nm,1.1s						
Y49A	Blount Mountai	36.08	348	P	P	21 32 35.6	+0.5
W57A	Gilead	36.50	357	P	P	21 32 38.4	-0.2
W57A				IAmb	IAmb	21 32 39.9	
	comp=Z,5.5nm,0.7s						
CPSB	Cacapava Do Su	36.87	144	*e*P	P	21 32 41.0	-0.9
BSCB	Bom Sucesso	37.55	123	*e*P	P	21 32 47.6	-0.3
PARB	Paraibuna	37.98	127	*e*P	P	21 32 50.6	-0.8
V48A	Smith Brothers	37.99	348	P	P	21 32 50.6	-0.5
V48A				IAmb	IAmb	21 32 51.5	
	comp=Z,9.1nm,0.8s						
TZTN	Tazewell	38.21	352	P	P	21 32 52.5	-0.6
T59A	Double "B" Far	38.26	0	P	P	21 32 53.0	-0.4
T59A				IAmb	IAmb	21 32 54.7	
	comp=Z,3.9nm,0.7s						
T57A	Hurt	38.31	358	P	P	21 32 53.7	-0.2
BLA	Blacksburg	38.58	357	P	P	21 32 56.0	-0.1
BLA				IAmb	IAmb	21 33 01.2	
	comp=Z,5.9nm,0.9s						
WVT	Waverly	38.58	347	P	P	21 32 54.7	-1.4
ESAR	Angra dos Reis	38.77	126	*e*P	P	21 32 58.3	+0.5
TX32	Lajitas Array	39.41	323	P	P	21 33 04.7	+1.4
TXAR	Lajitas Array	39.41	323	P	P	21 33 04.4	+1.1
	comp=Z,0.3nm,0.6s,baz=142,slow=7.5,SNR=9.1						
TX31	Lajitas Ar. Si	39.42	323	P	P	21 33 04.7	+1.3
X37A	Clayton	39.51	337	P	P	21 33 03.5	-0.4
FCAR	Ozark Folk Cen	39.52	342	P	P	21 33 03.1	-0.9
PLCA	Paso Flores	39.61	171	P	P	21 33 05.5	+0.8
	comp=Z,1.0nm,0.7s,baz=291,slow=0.4,SNR=3.3						
R55A	Marlinton	39.63	357	P	P	21 33 05.5	+0.6
R55A				IAmb	IAmb	21 33 06.7	
	comp=Z,7.8nm,0.8s						
GDU01	Guandu, BA	39.66	110	*e*P	P	21 33 05.8	+0.3
SJMB	Sao Joao De Ma	39.71	118	*e*P	P	21 33 05.6	-0.2
DUB01	Friburgo-RJ	40.03	123	*e*P	P	21 33 08.9	+0.5
T42A	Van Buren	40.27	343	P	P	21 33 09.1	-1.0
T42A				IAmb	IAmb	21 33 09.2	
	comp=Z,4.6nm,0.6s						
CAM01	Campos-RJ	40.52	123	*e*P	P	21 33 12.7	+0.2
RIB01	Linhares ES	40.63	118	*e*P	P	21 33 13.1	-0.3
MGMO	Mountain Grove	40.73	342	P	P	21 33 13.2	-0.7
ALF01	Guarapari-ES	40.83	120	*e*P	P	21 33 15.4	+0.5
MVL	Millersville	41.30	2	P	P	21 33 19.9	+1.5
MVL				IAmb	IAmb	21 33 20.6	
	comp=Z,8.0nm,0.8s						
O56A	Blue Knob Stat	41.55	359	P	P	21 33 21.6	+1.0
O56A				IAmb	IAmb	21 33 22.8	
	comp=Z,6.6nm,0.8s						
SSPA	Standing Stone	41.91	360	P	P	21 33 24.4	+0.9
SSPA				IAmb	IAmb	21 33 25.2	
	comp=Z,13nm,0.9s						
RCBR	Riachuelo	41.97	97	*e*P	P	21 33 24.8	+0.4
N59A	State Game Lan	42.23	2	P	P	21 33 27.3	+1.2
N59A				IAmb	IAmb	21 33 28.3	
	comp=Z,8.1nm,0.9s						
M57A	Sunshine Farm,	42.62	1	P	P	21 33 30.3	+1.2
M57A				IAmb	IAmb	21 33 36.3	
	comp=Z,6.5nm,0.9s						
M55A	Ridgway	42.76	359	P	P	21 33 30.9	+0.6
M55A				IAmb	IAmb	21 33 31.1	
	comp=Z,5.7nm,0.6s						
M56A	Emporium	42.76	360	P	P	21 33 30.8	+0.5
M56A				IAmb	IAmb	21 33 31.7	
	comp=Z,12nm,0.8s						
M54A	Oil Creek Stat	42.82	358	P	P	21 33 31.3	+0.5
BINY	Binghamton	43.51	2	P	P	21 33 36.2	-0.1
BINY				IAmb	IAmb	21 33 56.2	
	comp=Z,9.0nm,1.1s						
K58A	Earlville	44.08	2	P	P	21 33 41.0	+0.1
J58A	Remsen	44.69	3	P	P	21 33 46.6	+0.9
J59A	Piesco	44.84	3	P	P	21 33 47.4	+0.5
J59A				IAmb	IAmb	21 33 48.1	
	comp=Z,12nm,0.9s						
ANMO	Albuquerque	45.12	326	P	P	21 33 50.6	+1.1
	comp=Z,2.2nm,0.6s,baz=144,slow=7.7,SNR=14						
ANMO	Albuquerque	45.12	326	P	P	21 33 50.8	+1.3
NCB	Newcomb	45.36	4	P	P	21 33 50.9	0.0
I63A	Otisfield	45.78	7	P	P	21 33 53.3	-0.9
I63A				IAmb	IAmb	21 33 54.8	
	comp=Z,13nm,1.1s						
LBNH	Lisbon	45.81	6	P	P	21 33 55.4	+0.9
LBNH				IAmb	IAmb	21 34 12.6	
	comp=Z,9.8nm,1.0s						
SADO	Sadowa	46.06	359	P	P	21 33 54.9	-1.5
	comp=Z,12nm,1.0s,baz=180,slow=8.1,SNR=1.9						
I42A	Draeger Farm,	46.26	349	P	P	21 33 56.9	-1.1
SDCO	Great Sand Dun	46.71	330	P	P	21 34 03.5	+1.5
G62A	West of Eustis	46.94	7	P	P	21 34 04.5	+1.2
G62A				IAmb	IAmb	21 34 04.8	
	comp=Z,9.5nm,0.8s						
PKME	Peaks-Kenny Pk	47.14	8	P	P	21 34 05.6	+0.8
PKME				IAmb	IAmb	21 34 20.5	
	comp=Z,15nm,1.1s						
F64A	Sherman	47.87	9	P	P	21 34 11.3	+0.9
F64A				IAmb	IAmb	21 34 11.8	
	comp=Z,8.7nm,0.9s						
LMN	Caledonia Moun	48.50	12	P	P	21 34 14.1	-1.1
LMN				IAmb	IAmb	21 34 28.0	
	comp=Z,17nm,1.1s						
LATQ	La Tuque	48.85	4	P	P	21 34 18.3	+0.4
LATQ				IAmb	IAmb	21 34 19.3	
	comp=Z,6.6nm,0.6s						
PV11	David Mesa, Pa	48.89	327	P	P	21 34 20.0	+1.3
D62A	Allapoint, All	48.96	8	P	P	21 34 18.4	-0.3
D62A				IAmb	IAmb	21 34 20.4	
	comp=Z,13nm,1.1s						
PV19	Morning Glory	48.96	327	P	P	21 34 18.5	-0.7
PV04	Paradox Valley	48.98	327	P	P	21 34 19.5	+0.2
PV14	Lion Creek, Pa	49.03	327	P	P	21 34 15.9	-3.9
BATG	Bathurst New B	49.62	10	P	P	21 34 23.9	+0.1
BATG				IAmb	IAmb	21 34 30.1	
	comp=Z,7.8nm,1.0s						
RWWY	Rawlins	50.59	332	P	P	21 34 29.4	-2.0
EYMN	Ely	50.67	348	P	P	21 34 30.2	-1.4
EYMN				IAmb	IAmb	21 34 47.0	
	comp=Z,13nm,1.1s						
AGMN	Agassiz Nation	52.02	345	P	P	21 34 41.1	-0.6
AGMN				IAmb	IAmb	21 34 41.4	
	comp=Z,4.5nm,0.6s						
ULM	Lac du Bonnet	53.83	346	P	P	21 34 53.4	-1.5
	comp=Z,2.6nm,0.5s,baz=152,slow=7.6,SNR=10.0						
HOPE	Hope Point	62.52	154	P	P	21 35 53.9	-1.2
NRS	Narsarsuaq	67.22	16	P	P	21 36 26.0	+0.7
YKA	Yellowknife Ar	69.59	343	P	P	21 36 39.3	-0.8
	comp=Z,0.6nm,0.6s,baz=135,slow=7.0,SNR=19						
LIC	Lamto	72.99	83	*e*P	P	21 37 00.9	-0.6
	comp=Z,16nm,0.5s						
TIC	Toumodi	73.03	83	*e*P	P	21 37 01.1	-0.6
DBIC	Dimbokro	73.19	83	P	P	21 37 02.2	-0.4
	comp=Z,8.3nm,0.7s,baz=253,slow=4.1,SNR=22						
DBIC	Dimbokro	73.19	83	P	P	21 37 02.1	-0.5
DBIC				IAmb	IAmb	21 37 03.0	
	comp=Z,10nm,0.9s						
KIC	Kosan Boka	73.28	83	*e*P	P	21 37 02.8	-0.4
	comp=Z,25nm,0.6s						
KOWA	Kowa	74.64	75	P	P	21 37 10.9	-0.1
	comp=Z,8.3nm,0.6s,baz=262,slow=5.2,SNR=33						
ICESG	Greenland Ices	75.02	13	*i* P	P	21 37 12.0	-0.5
ICESG				IAmb	IAmb	21 37 13.0	
	comp=Z,22nm,0.7s						
SUMG	Summit	77.96	11	P	P	21 37 29.2	+0.1
SUMG	Summit	77.96	11	*i* P	P	21 37 28.9	-0.2
	comp=Z,23nm,0.6s						
SUMG	Summit	77.96	11	*i* P	P	21 37 29.0	-0.2
SUMG				IAmb	IAmb	21 37 29.9	
	comp=Z,23nm,0.6s						
ESDC	Sonseca Array	78.51	49	P	P	21 37 33.0	+0.6
	comp=Z,0.5nm,0.6s,baz=266,slow=4.6,SNR=9.2						
YAH	Yahtse	78.72	333	P	P	21 37 34.1	+0.8
INK	Inuvik	79.33	342	P	P	21 37 36.5	+0.3
	comp=Z,3.5nm,0.8s,baz=74,slow=5.3,SNR=9.1						
INK	Inuvik	79.33	342	IAmb	IAmb	21 37 37.4	
	comp=Z,3.9nm,0.8s						
TOA0	Torodi Ar. Sit	80.06	76	P	P	21 37 40.3	-0.9
TOA0				IAmb	IAmb	21 37 40.6	
	comp=Z,3.5nm,0.5s						
TORD	Torodi Ar. Bea	80.06	76	P	P	21 37 40.2	-1.0
	comp=Z,2.2nm,0.4s,baz=282,slow=5.6,SNR=41						
EGAK	Eagle	80.30	337	P	P	21 37 42.1	+0.7
K27K	Chicken	80.35	336	P	P	21 37 42.1	+0.4
RIDG	Independent Ri	81.37	336	P	P	21 37 48.4	+1.1
EKB4	Eskdalemuir Ar	82.48	34	P	P	21 37 53.2	0.0
IL18	Eielson Array	82.52	336	P	P	21 37 54.4	+1.2
ILAR	Eielson Array	82.57	336	P	P	21 37 52.6	-0.7
	comp=Z,0.5nm,0.5s,baz=155,slow=4.8,SNR=8.2						
DBG	Daneborg	83.03	13	*i* P	P	21 37 55.3	-0.2
MDM	Murphy Dome	83.17	336	P	P	21 37 56.8	+0.2
TRF	Thorofare Moun	83.58	334	P	P	21 37 59.3	+0.4
TAM	Tamanrasset	84.36	67	P	P	21 38 04.2	+0.5
TAM				IAmb	IAmb	21 38 05.7	
	comp=Z,5.5nm,0.9s						
DAG	Danmarks Havn	84.65	11	*i* P	P	21 38 02.6	-1.1
DAG	Danmarks Havn	84.65	11	*i* P	P	21 38 02.6	-1.1
QSPA	South Pole Qui	88.58	180	P	P	21 38 24.5	+1.3
TUE	Stuetta	89.05	44	P	P	21 38 26.7	+0.7
TUE				IAmb	IAmb	21 38 29.4	
	comp=Z,3.1nm,0.7s						
FETA	Feichten	90.03	43	*e*P	P	21 38 30.8	+0.4
	comp=Z,0.6nm,0.4s						
MOTA	Moosalm	90.29	43	*e*P	P	21 38 31.8	+0.2
	comp=Z,0.4nm,0.3s						
SQTA	Sankt Quirin	90.36	43	*e*P	P	21 38 32.0	+0.1
	comp=Z,1.3nm,0.4s						
WATA	Walderalm	90.61	43	*e*P	P	21 38 34.3	+1.2
	comp=Z,0.6nm,0.4s						
CTI	Castel Tesino	90.63	44	P	P	21 38 33.5	+0.3
CTI				IAmb	IAmb	21 38 34.1	
	comp=Z,3.6nm,0.8s						
GERES	GERESS Array B	92.06	41	P	P	21 38 39.5	-0.2
	comp=Z,0.1nm,0.4s,baz=316,slow=4.1,SNR=1.6						
TSUM	Tsumeb	94.55	109	P	P	21 38 50.8	-1.1
ARCES	ARCESS Array B	96.00	20	P	P	21 38 56.3	-0.9
	comp=Z,13nm,1.2s,baz=12,slow=6.7,SNR=3.6						
GEYT	Alibeck	125.66	43	PKP	PKPdf	21 44 31.8	+0.2
	comp=Z,0.8nm,0.5s,baz=259,slow=3.0,SNR=4.6						
ZALV	Zalesovo Beam	125.76	13	PKP	PKPdf	21 44 30.4	-0.8
	comp=Z,0.5nm,0.3s,baz=302,slow=2.7,SNR=2.0						
KURK	Kurchatov	127.01	19		PKPdf	21 44 33.9	+0.2
KURBB	Kurchatov Arra	127.06	19	PKP	PKPdf	21 44 33.9	+0.1
	comp=Z,0.7nm,0.5s,baz=320,slow=2.5,SNR=7.9						
MKAR	Makanchi Array	131.62	18	PKP	PKPdf	21 44 42.2	-0.4
	comp=Z,0.4nm,0.4s,baz=294,slow=2.6,SNR=19						
SONM	Songino Array	133.69	356	PKP	PKPdf	21 44 46.6	-0.1
	comp=Z,0.4nm,0.5s,baz=290,slow=0.8,SNR=6.4						
ASAR	Alice Springs	140.36	229	PKhKP	PKPpre	21 44 53.3	
	comp=Z,0.2nm,0.5s,baz=118,slow=4.1,SNR=5.1						
WRA	Warramunga Arr	142.01	234	PKhKP	PKPpre	21 44 58.8	
	comp=Z,0.4nm,0.8s,baz=111,slow=4.3,SNR=2.2						
WRA				PKP	PKPdf	21 45 04.2	+1.7
	comp=Z,0.2nm,0.4s,baz=112,slow=2.9,SNR=7.1						
DANN	Dangsing	147.96	32	*e*P	PKPbc	21 45 15.5	-0.7
	comp=Z,18nm,0.6s						
KKN	Kakani	149.20	30	*e*P	PKPbc	21 45 19.0	-0.2
	comp=Z,16nm,0.5s						
DMN	Daman	149.26	31	*e*P	PKPbc	21 45 19.1	-0.3
	comp=Z,13nm,0.4s						
GUN	Gumba	149.40	29	*e*P	PKPbc	21 45 19.9	0.0
	comp=Z,13nm,0.4s						
PKIN	Phulchoki	149.43	30	*e*P	PKPbc	21 45 19.2	-0.7
	comp=Z,8.0nm,0.5s						
PKI	Pulchoki	149.44	30	*e*P	PKPbc	21 45 19.4	-0.6
	comp=Z,8.9nm,0.6s						
TAPN	Taplejung	150.74	27	*e*P	PKPbc	21 45 22.1	-1.0
	comp=Z,11nm,0.5s						
ODAN	Odare	151.01	28	*e*P	PKPbc	21 45 21.7	-1.9
	comp=Z,14nm,0.6s						
CMAR	Chiang Mai Arr	162.82	11	PKPab	PKPab	21 46 21.4	-0.7
	comp=Z,1.3nm,0.7s,baz=332,slow=5.0,SNR=8.8						

DDA ***01*** *21:37:42.9, 39°.26N×26°.23E, h7^{km}±2^{km}, ML2.1*

ISK ***01*** *21:37:42.7, 39°.28N×26°.21E, h11^{km}, ML2.6/15*

THE ***01*** *21:37:43.6, 39°.31N×26°.19E, h9^{km}±1^{km}, ML2.1/3, Error ellipse: s-maj=1.9km s-min=0.6km az=149.0*

ATH ***01*** *21:37:44.1, 39°.34N×26°.20E, h2^{km}±3^{km}, ML2.3/2, Error ellipse: s-maj=3.9km s-min=1.2km az=212.0*

ISC 01 21:37:43.4±0.8**, 39°.29N**±0°.02×**26°.22E**±0°.02**, h15**^{km}±5^{km}**,
n47, σ0^{s}.51**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.06	135	P	Pg	21 37 46.2	-0.1
PRK				S	Sg	21 37 47.6	-0.5
PRK				AML	AML	21 37 47.7	
	comp=N,4478µm,0.2s						
PRK				AML	AML	21 37 48.1	
	comp=E,8883µm,0.2s						
PRK	Paraskevi	0.06	135	P	Pg	21 37 46.2	-0.1
PRK				S	Sg	21 37 47.6	-0.5
PRK				AML	AML	21 37 47.7	
	comp=N,4478µm,0.2s						
PRK				AML	AML	21 37 48.1	
	comp=E,8883µm,0.2s						
PRK	Paraskevi	0.06	135	P	Pg	21 37 46.0	-0.2
PRK				S	Sg	21 37 47.5	-0.6
	comp=E,4µm,0.4s						
KOCA	Canakkale, Ayv	0.22	344	*i* P	Pg	21 37 48.4	0.0
KOCA				*i* S	Sg	21 37 51.7	-0.1
KOCA				IAML		21 37 52.0	
	comp=N,330nm,0.2s						
KOCA				IAML		21 37 52.0	
	comp=E,458nm,0.7s						
SIGR	SIGRI	0.29	255	P	Pg	21 37 49.2	-0.4
SIGR				S	Sg	21 37 53.6	-0.1
SIGR				AML	AML	21 37 53.7	
	comp=N,2130µm,0.3s						
SIGR				AML	AML	21 37 53.8	
	comp=E,1136µm,0.2s						
SIGR	SIGRI	0.29	255	P	Pg	21 37 49.2	-0.4
SIGR				S	Sg	21 37 53.6	-0.1
SIGR				AML	AML	21 37 53.7	
	comp=N,2130µm,0.3s						
SIGR				AML	AML	21 37 53.8	
	comp=E,1136µm,0.2s						
SIGR	SIGRI	0.29	255	P	Pg	21 37 49.1	-0.4
SIGR				S	Sg	21 37 53.5	-0.2
	comp=E,815nm,0.2s						
SIGR	SIGRI	0.29	255	PG	Pg	21 37 49.2	-0.4
SIGR				SG	Sg	21 37 53.5	-0.2
AYVA	Ayvalik	0.37	87	*i* P	Pg	21 37 50.4	-0.4
AYVA				*i* S	Sg	21 37 55.9	-0.1
AYVA				IAML		21 37 56.0	
	comp=N,305nm,0.6s						
BAYC	CANAKKALE_Bayr	0.52	29	*i* P	Pb	21 37 54.5	+0.2
BAYC				IAML		21 38 04.0	
	comp=E,164nm,0.2s						
BAYC				IAML		21 38 04.0	
	comp=N,77nm,0.1s						
EZN	Ezine	0.54	9	P	Pg	21 37 54.0	-0.2
EZN				S	Sb	21 38 01.8	-0.4
	comp=N,125nm,0.1s						
EZN	Ezine	0.54	9	PG	Pg	21 37 53.9	-0.2
BOZC	Bozcaada	0.57	347	PG	Pg	21 37 54.3	-0.2
BOZC	Bozcaada	0.57	347	*i* P	Pg	21 37 54.4	-0.2
BOZC				IAML		21 38 03.0	
	comp=N,72nm,0.5s						
DKL	Dikili	0.58	112	PG	Pg	21 37 54.6	-0.1
DKL				SG	Sg	21 38 02.9	+0.5
BUHA	Balikesir, Bur	0.70	72	*i* P	Pg	21 37 56.3	-0.7
BUHA				*i* S	Sg	21 38 06.3	0.0
BUHA				IAML		21 38 11.0	
	comp=E,53nm,0.3s						
FOCM	Foa	0.70	145	PG	Pg	21 37 56.6	-0.4
ZEDA	zmir-Bergama	0.74	115	*i* P	Pg	21 37 56.9	-0.9
ZEDA				*i* S	Sg	21 38 07.1	-0.5
ZEDA				IAML		21 38 10.0	
	comp=E,85nm,0.3s						
ZEDA				IAML		21 38 11.0	
	comp=N,74nm,0.2s						
ECEA	Canakkale, Ece	0.76	357	*i* P	Pg	21 37 58.2	+0.1
ECEA				*i* S	Sb	21 38 09.3	+0.9
ECEA				IAML		21 38 12.0	
	comp=E,102nm,0.5s						
ECEA				IAML		21 38 12.0	
	comp=N,168nm,0.3s						
GOKA	anakkale-Gk	0.93	345	*i* P	Pb	21 38 01.4	+0.2
GOKA				*i* S	Sb	21 38 13.8	+0.3
GOKA				IAML		21 38 15.0	
	comp=N,143nm,0.6s						
GOKA				IAML		21 38 16.0	
	comp=E,145nm,0.2s						
GADA	Gvkgeada	0.94	345	P	Pg	21 38 00.2	-1.2
GADA	Gvkgeada	0.94	345	PG	Pg	21 38 00.3	-1.2
URLA	Izmir	0.97	162	PG	Pg	21 38 01.2	-1.0
URLA	Izmir	0.97	162	*i* P	Pg	21 38 01.6	-0.6
URLA				*i* S	Sg	21 38 14.5	-0.4
URLA				IAML		21 38 16.0	
	comp=E,37nm,0.6s						
LIA	Limnos Island	1.00	308	P	Pg	21 38 02.1	-0.7
LIA	Limnos Island	1.00	308	P	Pg	21 38 02.1	-0.7
LIA	Limnos Island	1.00	308	P	Pg	21 38 02.5	-0.3
LIA				S	Sb	21 38 16.1	+0.6
ZEYE	Izmir, Urla-Ze	1.07	168	*i* P	Pg	21 38 03.1	-1.0
ZEYE				IAML		21 38 21.0	
	comp=N,47nm,0.2s						
GELI	Tayfur-Gelibol	1.13	10	PN	Pg	21 38 04.8	-0.3
LPK	Lapseki	1.16	21	PN	Pb	21 38 05.1	0.0
BALY	Balya	1.17	67	*i* P	Pb	21 38 05.4	0.0
BALY				*i* S	Sg	21 38 20.4	-0.9
BALY				IAML		21 38 22.0	
	comp=N,68nm,0.3s						
SMTH	Samothraki Isl	1.29	336	P	Pn	21 38 07.0	0.0
SMTH	Samothraki Isl	1.29	336	P	Pn	21 38 07.0	0.0
SMTH	Samothraki Isl	1.29	336	P	Pn	21 38 06.7	-0.3
SMTH				S	Sb	21 38 23.9	0.0
BALB	Balikesir	1.33	74	PN	Pn	21 38 07.8	+0.4
GONE	Gonen-Balikesi	1.36	56	PN	Pn	21 38 08.7	+0.8
ERIK	Erikli-Kesan	1.40	9	PN	Pn	21 38 08.7	+0.3
ENEZ	Enez	1.45	358	PN	Pn	21 38 09.5	+0.5
RKY	Sarkoy-Tekirda	1.58	28	PN	Pn	21 38 10.9	0.0
ALN	Alexandroupoli	1.61	355	P	Pn	21 38 11.6	+0.3
ALN	Alexandroupoli	1.61	355	P	Pn	21 38 11.6	+0.3
ALN	Alexandroupoli	1.61	355	PN	Pn	21 38 11.4	+0.1
EDC	Edincik	1.65	50	PN	Pn	21 38 12.4	+0.6
SMG	Samos	1.65	163	P	Pb	21 38 14.2	+0.7
SMG	Samos	1.65	163	P	Pb	21 38 14.2	+0.7
MRMT	Marmara Adasi	1.69	38	PN	Pn	21 38 12.6	+0.2
RDO	Rodhopi	1.93	345	PN	Pn	21 38 16.2	+0.6

JMA ***01*** *22:02:46.5±0.3, 32°.48N×140°.96E, h44^{km}, M3.7*

IDC ***01*** *22:02:55.2±3.1, 32°.48N×139°.73E, h143^{km}±33^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.0/37, mbtmp3.4/5, Error ellipse: s-maj=47.7km s-min=24.9km az=85.0*

ISC 01 22:02:49.1±1.1**, 32°.42N**±0°.07×**140°.6E**±0°.1**, h97**^{km}**, n22,
σ2^{s}.19**/23**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	0.67	274	P	Pn	22 03 04.7	-1.2
JHCJ	Hachijojimakas	0.91	316	P	Pn	22 03 06.6	-1.7
JHCJ				*e*S	Sn	22 03 20.5	-2.2
JHJ2	Mitsune	0.93	318	P	Pn	22 03 06.7	-1.8
BSO1	Boso 1	2.26	9	P	Pn	22 03 20.7	-3.6
BSO3	Boso 3	2.38	359	P	Pn	22 03 24.0	-2.2
BSO3				*e*S	Sn	22 03 50.8	-3.9
JIM2	Oshima 3	2.47	338	P	Pn	22 03 26.9	-0.9
JIM2				*e*S	Sn	22 03 55.6	-1.8
JIZS	Izushimoda	2.68	329	P	Pn	22 03 31.2	+0.7
JOD2	Odawara 2	3.08	337	P	Pn	22 03 35.5	-0.4
JOD2				S	Sn	22 04 10.3	-1.7
JRY	Ryogami san	3.84	340	P	Pn	22 03 46.3	+0.3
JRY				*e*S	Sn	22 04 30.5	+0.4
MJAR	Matsushiro Arr	4.54	335	P	Pn	22 03 57.5	+2.0
	0.4nm,0.3s,baz=160,slow=13,SNR=8.0						
MJAR				S	Sn	22 04 48.0	+0.8
	0.2nm,0.3s,baz=171,slow=18,SNR=4.2						
MAT	Matsushiro	4.54	335	P	Pn	22 03 57.7	+2.1
MAT				S	Sn	22 04 50.5	+3.3
MAT	Matsushiro	4.54	335	P	Pn	22 03 57.7	+2.1
MAT				*e*S	Sn	22 04 50.5	+3.3
H11N2	WAKE ISLAND Hy	26.75	112	T	T	22 37 17.5	
	baz=314						
H11N1	WAKE ISLAND Hy	26.75	112	T	T	22 37 17.5	
	baz=314						
H11N3	WAKE ISLAND Hy	26.76	112	T	T	22 37 16.9	
	baz=314						
H11S3	WAKE ISLAND Hy	27.28	114	T	T	22 37 48.2	
	baz=316						
H11S1	WAKE ISLAND Hy	27.28	114	T	T	22 37 44.9	
	baz=316						
H11S2	WAKE ISLAND Hy	27.30	114	T	T	22 37 44.9	
	baz=316						
MKAR	Makanchi Array	46.10	306	P	P	22 11 00.2	-3.3
	0.1nm,0.4s,baz=82,slow=8.4,SNR=1.6						
WRA	Warramunga Arr	52.41	187	P	P	22 11 52.3	+0.8
	0.5nm,0.4s,baz=5.3,slow=7.4,SNR=17						
ASAR	Alice Springs	56.13	187	P	P	22 12 20.1	+1.5
	0.2nm,0.5s,baz=5.5,slow=7.1,SNR=8.4						
TXAR	Lajitas Array	93.51	52	P	P	22 15 57.1	+2.7
	0.3nm,0.7s,baz=276,slow=3.5,SNR=4.3						

**JMA 01 22:14:10.9, 37°.89N×141°.66E, h55^{km}±1^{km}, M3.6, Near
east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.45	340	P	Pn	22 14 22.0	+0.1
JIKH				S	Sn	22 14 29.7	-0.1
JIO	Ouri	0.61	337	P	Pn	22 14 23.9	+0.1
JIO				S	Sn	22 14 33.0	-0.2
JMST	Minamisoumatoc	0.63	255	P	Pn	22 14 24.1	+0.1
JMST				S	Sn	22 14 33.6	0.0
JMM	Marumori	0.69	268	P	Pn	22 14 24.8	+0.1
JMM				S	Sn	22 14 34.9	+0.2
JFK	Kawauchi	0.81	230	P	Pn	22 14 26.2	-0.2
JFK				S	Sn	22 14 37.1	-0.6
JOU	Okura	0.92	301	P	Pn	22 14 27.8	+0.1
JKMT	Kesennumamotoy	0.93	351	P	Pn	22 14 27.8	0.0
JKMT				S	Sn	22 14 40.0	-0.3
JFT	Otama	1.11	251	P	Pn	22 14 30.8	+0.5
JFT				S	Sn	22 14 45.7	+1.0
JMK	Ichinoseki	1.11	342	P	Pn	22 14 30.6	+0.3
JMK				S	Sn	22 14 44.8	+0.1
JYS	Shirataka	1.30	285	P	Pn	22 14 33.3	+0.5
JYS				*e*S	Sn	22 14 50.2	+1.0
JYK	Kaneyama	1.45	316	P	Pn	22 14 35.3	+0.5
JOM	Ohasama	1.61	350	P	Pn	22 14 37.6	+0.7
JOM				S	Sn	22 14 57.3	+0.7
JFY	Yanaizu	1.62	253	P	Pn	22 14 37.8	+0.6
JFY				S	Sn	22 14 58.0	+1.0
JRG	Rokugo	1.71	332	P	Pn	22 14 39.2	+0.9
JRG				S	Sn	22 15 00.6	+1.6
MAT	Matsushiro	3.07	245	P	Pn	22 14 58.5	+1.6
MAT				*e*S	Sn	22 15 36.5	+4.1

IDC ***01*** *22:20:01.1±0.7, 2°.13S×120°.93E, h0^{km}, mb4.0/9, mb1 4.2/11, mb1mx4.0/39, mbtmp4.1/11, ML4.2/2, MS3.7/22, Ms1 3.7/22, ms1mx3.6/34, Error ellipse: s-maj=23.4km s-min=14.2km az=62.0*

GCMT ***01*** *22:20:02.2±0.3, 2°.09S±0°.02×120°.95E±0°.02, h20^{km}±1^{km}, MW4.7/71, Moment Tensor Solution. s11,c11; s71,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.08; $M_{\theta\theta}$1.49±.07; $M_{\phi\phi}$-1.39±.07; $M_{r\theta}$0.62±.13; $M_{\theta\phi}$0.25±.05; $M_{\phi r}$-0.15±.14; Best double couple: $M_0$1.58100×10^{16} NP1:ϕ_s39.00000°, δ70.00000°, λ173.00000°. NP2: ϕ_s131.00000°, δ84.00000°, λ20.00000°. Principal axes: T 1.7170, Plg19.0000°, Azm356.0000°; N -0.2740, Plg69.0000°, Azm147.0000°; P -1.4460, Plg10.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **01** 22:20:04.8±0.6, 2°S±1°×12°1E±°, h17^{km}±5^{km}, M4.7/26, mb4.7/18, mB5.2/7, MLv4.8/26, Mw(mB)4.6/7, MwMwp6.5/1, Mwp6.4/1*

*NEIC **01** 22:20:06.2±2.0, 2°.23S±0°.05×120°.91E±0°.05, h35^{km}±2^{km}, mb4.6/32, Error ellipse: s-maj=9.0km s-min=8.3km az=133.0*

ISC 01 22:20:06.6±0.6**, 2°.21S**±0°.03×**120°.89E**±0°.04**, h38**^{km}±1^{km}**, n100,** σ**1^{s}.54**/98**, mb4.5**/26**, MS3.9**/17**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	1.35	232	P	Pn	22 20 25.9	-3.1
TTSI				S	Sn	22 20 42.4	-3.3
APSI	**Ampana**	1.50	31	P	Pn	22 20 30.2	-0.8
APSI				S	Sn	22 20 52.7	+3.4
SPSI	**Sidrap Palu**	2.07	213	P	Pn	22 20 37.3	-1.6
SPSI				S	Sn	22 21 05.2	+1.8
LUWI	**Luwuk**	2.21	58		Pn	22 20 40.1	-0.7
LUWI				Sn	Sn	22 21 08.8	+1.9
LUWI	**Luwuk**	2.21	58	P	Pn	22 20 39.9	-0.9
LUWI				S	Sn	22 21 10.5	+3.6
BNSI	**Bone**	2.31	200	P	Pn	22 20 40.0	-2.2
BNSI				S	Sn	22 21 11.7	+2.3
KDI	**Kendari**	2.45	135	P	Pn	22 20 40.7	-3.4
MPSI	**Mapaga**	2.71	339	P	Pn	22 20 47.0	-0.7
MPSI				S	Sn	22 21 19.8	+0.5
MRSI	**Marisa**	2.87	22	P	Pn	22 20 49.2	-0.6
MRSI				S	Sn	22 21 21.7	-1.4
KAPI	**Kappang**	3.01	202	Pn	Pn	22 20 50.9	-0.9
	51nm,0.3s,baz=16,slow=5.4,SNR=66						
KAPI				Sn	Sn	22 21 30.3	+3.8
	39nm,0.3s,baz=19,slow=23,SNR=12						
BKSI	**Bulukumba**	3.19	194	P	Pn	22 20 53.4	-0.8
TOLI2	**Tolitoli**	3.30	358	Pn	Pn	22 20 56.5	+0.7
TOLI2				Sn	Sn	22 21 29.6	-4.2
GTOI	**Gorontalo**	3.54	37	P	Pn	22 20 59.9	+0.9
GTOI				S	Sn	22 21 39.3	-0.3
BKB	**Balikpapan**	4.10	283	Pn	Pn	22 21 05.6	-1.2
BKB	**Balikpapan**	4.10	283	P	Pn	22 21 06.9	+0.2
KMSI	**Cibinong**	4.15	48	P	Pn	22 21 09.1	+1.6
KMSI				S	Sn	22 21 58.0	+3.3
KBKI	**Kotabaru**	4.84	257	P	Pn	22 21 16.3	-0.6
SANI	**Sanana**	5.10	88	P	Pn	22 21 17.8	-2.8
	0.4nm1μm140nm,0.7s						
MTKI	**Muara Teweh, K**	6.12	282	P	Pn	22 21 35.4	+0.9
	2.9nm2μm49nm,0.9s						
BBKI	**Banjar Baru**	6.16	258	P	Pn	22 21 36.4	+1.2
	0.5nm41nm,0.9s						
NLAI	**Namlea**	6.29	100	P	Pn	22 21 38.0	+1.1
	0.3nm387μm5μm68nm,0.9s						
MMRI	**Maumere**	6.53	168	Pn	Pn	22 21 39.4	-0.7
EDFI	**Ende, Flores**	6.55	173	P	Pn	22 21 41.8	+1.3
	0.0nm11nm,0.8s						
TNTI	**Ternate**	7.12	66	Pn	Pn	22 21 46.9	-1.5
PLAI	**Plampang**	7.27	205	P	Pn	22 21 50.4	+0.1
	0.2nm32nm,0.9s						
TWSI	**Taliwang, Sumb**	7.61	211	P	Pn	22 21 56.7	+1.6
	0.1nm15nm,1.0s						
MYLDM	**Lahad Datu**	7.72	342	Pn	Pn	22 21 57.8	+1.3
MSAI	**Masohi**	8.11	98	P	Pn	22 22 06.1	+4.2
	969nm15nm,0.7s						
SRBI	**Singaraja**	8.12	224	P	Pn	22 22 01.4	-0.7
	59nm,0.8s						
SOEI	**Soe**	8.22	156	Pn	Pn	22 22 03.7	+0.2
SOEI	**Soe**	8.22	156	P	Pn	22 22 07.5	+4.0
	100nm,1.1s						
BATI	**Baumata**	8.41	161	LR	LR	22 25 41.3	
	comp=Z,2μm,21.9s,baz=332,slow=40						
DAV	**Davao City (W)**	10.34	27	LR	LR	22 26 54.7	
	comp=Z,327nm,18.2s,baz=66,slow=40						
SWI	**Sorong**	10.46	83	P	Pn	22 22 34.5	+0.4
	21nm,0.7s						
SIJI	**Sorong**	10.46	83	Pn	Pn	22 22 31.9	-2.3
	1.0nm,0.3s,baz=241,slow=23,SNR=2.1						
SIJI				Sn	Sn	22 24 30.3	+0.1
	0.4nm,0.3s,baz=270,slow=20,SNR=1.6						
SIJI				LR	LR	22 26 57.0	
	comp=Z,428nm,19.9s,baz=234,slow=40						
FAKI	**Fak Fak**	11.37	94	Pn	Pn	22 22 45.1	-1.6
FAKI	**Fak Fak**	11.37	94	P	Pn	22 22 46.4	-0.3
SAUI	**Saumlaki**	11.85	119	Pn	Pn	22 22 49.8	-3.4
LEM	**Lembang**	14.00	250	LR	LR	22 29 32.9	
	comp=Z,665nm,18.8s,baz=68,slow=41						
CISI	**Cisompet, Garu**	14.06	247	Pn	Pn	22 23 22.6	-0.9
FITZ	**Fitzroy Crossi**	16.47	164	LR	LR	22 30 51.6	
	comp=Z,361nm,21.7s,baz=350,slow=39						
XMIS	**Christmas Isla**	17.22	241	Pn	Pn	22 24 02.8	-1.6
XMIS				IAmb	IAmb	22 24 13.4	
	comp=Z,105nm,1.4s						
JAY	**Jayapura**	19.80	91	LR	LR	22 35 03.7	
	comp=Z,114nm,19.2s,baz=202,slow=46						
BKNI	**Bangkinang**	20.00	277		P	22 24 37.0	+0.8
IPM	**Ipoh**	20.93	289	P	P	22 24 46.5	+0.1
IPM				IAmb	IAmb	22 24 49.5	
	comp=Z,16nm,0.9s						
KULM	**Kulim**	21.54	290	P	P	22 24 52.6	-0.3
KULM				IAmb	IAmb	22 25 00.1	
	comp=Z,44nm,1.3s						
WB0	**Warramunga Arr**	21.88	144	P	P	22 24 56.2	-0.3
WRAB	**Tennant Creek**	21.99	144	P	P	22 24 57.5	-0.1
WRA	**Warramunga Arr**	21.99	144	P	P	22 24 57.7	+0.1
	comp=Z,5.3nm,0.9s,baz=318,slow=12,SNR=20						
WRA				PcP	PcP	22 28 55.6	+0.2
	comp=Z,0.4nm,0.9s,baz=313,slow=2.1,SNR=1.7						
WB2	**Warramunga Arr**	22.00	144	P	P	22 24 57.1	-0.6
WR0	**Warramunga Arr**	22.12	144	P	P	22 24 59.6	+0.6
WR0				IAmb	IAmb	22 25 05.1	
	comp=Z,25nm,1.1s						
RPSI	**Rantau Prapat**	22.49	282	P	P	22 25 03.6	+0.5
PSI	**Prapat**	22.51	283	P	P	22 25 03.6	+0.1
	comp=Z,19nm,1.1s,baz=180,slow=3.2,SNR=6.7						
PSI				LR	LR	22 35 23.2	
	comp=Z,661nm,18.5s,baz=90,slow=41						
GSI	**Gunungsitoli**	23.57	278	P	P	22 25 13.8	-0.3
AS31	**Alice Springs**	24.78	150	P	P	22 25 24.9	-0.2
ASAR	**Alice Springs**	24.78	150	P	P	22 25 25.7	+0.6
	comp=Z,3.6nm,0.9s,baz=326,slow=7.3,SNR=25						
ASAR				PcP	PcP	22 29 00.3	-0.9
	comp=Z,0.8nm,0.5s,baz=341,slow=1.8,SNR=8.6						
ASAR				LR	LR	22 35 27.4	
	comp=Z,198nm,21.3s,baz=314,slow=37						
COEN	**Coen**	24.93	119	P	P	22 25 25.6	-1.0
SLVN	**Son La**	28.70	325	P	P	22 25 58.8	-1.7
SLVN				IAmb	IAmb	22 26 06.6	
	comp=Z,15nm,1.5s						
FORT	**Forrest**	29.22	167	P	P	22 26 02.1	-2.8
FORT				IAmb	IAmb	22 26 03.5	
	comp=Z,26nm,1.1s						
CMAR	**Chiang Mai Arr**	29.80	314	P	P	22 26 10.2	-0.1
	comp=Z,1.5nm,0.8s,baz=138,slow=7.1,SNR=8.9						
CMAR				LR	LR	22 40 37.3	
	comp=Z,147nm,19.4s,baz=169,slow=42						
CHTO	**Chiang Mai**	30.04	315	P	P	22 26 13.0	+0.7
CHTO				IAmb	IAmb	22 26 21.6	
	comp=Z,12nm,1.4s						
NWAO	**Narrogin (SRO)**	30.75	186	P	P	22 26 19.3	+0.8
PBA	**Port Blair**	31.18	297	P	P	22 26 20.4	-2.1
NJ2	**Nanjing**	34.13	357	*e*P	P	22 26 50.2	+2.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STKA	**Stephens Creek**	35.38	149	P	P	22 26 58.9	0.0
	comp=Z,4.4nm,0.7s,baz=322,slow=8.4,SNR=9.5						
STKA				LR	LR	22 43 08.7	
	comp=Z,150nm,18.2s,baz=332,slow=39						
STKA	**Stephens Creek**	35.38	149	P	P	22 26 59.1	+0.3
KSRS	**Korea Array**	40.00	9	LR	LR	22 43 08.1	
	comp=Z,49nm,20.5s,baz=210,slow=35						
LSA	**Lhasa**	42.60	320	P	P	22 27 59.6	-0.3
JSD	**Sado**	43.15	20	P	P	22 28 03.6	0.0
HHC	**Hu-ho-hao-te**	43.69	350	*e*P	P	22 28 09.2	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,5.7s						
GTA	**Gaotai**	45.72	337	*e*P	P	22 28 27.0	+2.7
GTA				pP	pP	22 28 31.4	-4.1
GTA				sP	sP	22 28 34.3	-5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,4.1s						
GTA				LR	LR		
	comp=N,150nm,16.4s						
GTA				LR	LR		
	comp=E,96nm,15.3s						
GTA				LR	LR		
	comp=Z,110nm,14.5s						
HYB	**Hyderabad**	46.06	297	*i* P	P	22 28 29.0	+1.7
USRK	**Ussuriysk Ar.**	47.26	11	P	P	22 28 36.3	+0.2
	comp=Z,1.5nm,0.8s,baz=177,slow=12,SNR=2.1						
USRK				LR	LR	22 47 13.3	
	comp=Z,46nm,21.6s,baz=192,slow=35						
ULN	**Ulaanbaatar**	51.31	348	P	P	22 29 07.3	0.0
ULN				IAmb	IAmb	22 29 13.1	
	comp=Z,15nm,1.4s						
SONM	**Songino Array**	51.42	348	P	P	22 29 07.6	-0.5
	comp=Z,1.1nm,0.6s,baz=161,slow=8.6,SNR=9.6						
SONM				LR	LR	22 53 33.3	
	comp=Z,52nm,18.0s,baz=131,slow=39						
AIS	**Amsterdam Isla**	53.18	223	P	P	22 29 19.4	-1.7
WMQ	**Urumqi**	54.63	331	*e*P	P	22 29 33.9	+2.2
WMQ	**Urumqi**	54.63	331	P	P	22 29 30.7	-1.0
WMQ				IAmb	IAmb	22 29 33.3	
	comp=Z,5.3nm,0.7s						
FUNA	**Funafuti**	58.34	99	P	P	22 29 57.1	-1.5
KSH	**Kashi**	58.46	320	P	P	22 30 00.7	+1.6
KSH				pmax	pmax		
	comp=Z,13nm,1.4s						
KSH				pmax	pmax		
	comp=Z,350nm,6.4s						
MK31	**Makanchi Array**	59.42	330	P	P	22 30 05.1	-0.4
MKAR	**Makanchi Array**	59.42	330	P	P	22 30 05.0	-0.4
	comp=Z,1.6nm,0.8s,baz=128,slow=7.6,SNR=10						
MKAR				LR	LR	22 56 40.6	
	comp=Z,88nm,21.5s,baz=133,slow=37						
MAKZ	**Makanchi**	59.58	330	P	P	22 30 07.0	+0.3
MAKZ				IAmb	IAmb	22 30 25.4	
	comp=Z,4.6nm,1.4s						
KBL	**Kabul**	60.79	312	P	P	22 30 15.4	0.0
KBL				IAmb	IAmb	22 30 24.2	
	comp=Z,4.5nm,0.8s						
PETK	**Petropavlovsk-**	63.14	24	LR	LR	22 55 49.9	
	comp=Z,28nm,21.6s,baz=259,slow=34						
MXZ	**Matakaoa Point**	63.20	131	P	P	22 30 31.3	0.0
ZALV	**Zalesovo Beam**	63.48	337	P	P	22 30 31.2	-1.5
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=1.7						
KK31	**Karatay Array**	63.85	321	P	P	22 30 35.4	-0.1
KK31				IAmb	IAmb	22 30 40.4	
	comp=Z,4.4nm,1.3s						
KKAR	**Karatay Array**	63.85	321	P	P	22 30 36.2	+0.7
KKAR				IAmb	IAmb	22 30 40.3	
	comp=Z,4.4nm,1.3s						
KURK	**Kurchatov**	63.86	332	P	P	22 30 35.4	+0.1
KURK				IAmb	IAmb	22 30 42.7	
	comp=Z,4.3nm,1.0s						
GEYT	**Alibeck**	70.24	312	LR	LR	23 06 36.2	
	comp=Z,62nm,18.8s,baz=85,slow=40						
GYA0B	**ALIBECK ARRAY**	70.24	312	P	P	22 31 16.6	+0.5
GYA0B				IAmb	IAmb	22 31 22.5	
	comp=Z,5.0nm,1.2s						
NRIK	**Noril'sk**	74.90	348	LR	LR	23 07 05.1	
	comp=Z,63nm,19.0s,baz=228,slow=38						
VNDA	**Vanda**	78.38	172	LR	LR	23 06 36.0	
	comp=Z,79nm,19.8s,baz=343,slow=36						
BRTR	**Keskin Array B**	89.28	310	LR	LR	23 20 58.7	
	comp=Z,10nm,18.8s,baz=125,slow=41						
A21K	**Barrow**	89.67	19	P	P	22 33 00.8	+0.5
TRF	**Thorofare Moun**	91.43	27	P	P	22 33 09.7	+0.8
AKASG	**Malin Array Be**	92.75	320	LR	LR	23 19 53.2	
	comp=Z,38nm,19.2s,baz=85,slow=39						
BOSA	**Boshof**	93.90	241	LR	LR	23 10 56.8	
	comp=Z,40nm,18.6s,baz=118,slow=32						
ARCES	**ARCESS Array B**	93.94	339	LR	LR	23 20 25.8	
	comp=Z,41nm,18.0s,baz=95,slow=39						

IDC 01 22:47:12.6±1.1**, 13°.22N**×**144°.46E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/42**, mbtmp3.5**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/35**, Error ellipse: s-maj=37.7km s-min=16.1km az=127.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	0.55	47	LR	LR	22 47 13.0	
	comp=Z,26nm,20.2s,baz=118,slow=0.7						
GUMO				Pn	Pn	22 47 27.7	0.0
	374nm,0.3s,baz=192,slow=11,SNR=113						
GUMO				Sn	Sb	22 47 34.3	+0.9
	1μm,0.3s,baz=304,slow=23,SNR=46						
H11S3	**WAKE ISLAND Hy**	22.01	73	T	T	23 14 40.6	
	baz=259,slow=79,SNR=9.6						
H11S1	**WAKE ISLAND Hy**	22.03	73	T	T	23 14 42.7	
	baz=259,slow=79,SNR=8.6						
H11S2	**WAKE ISLAND Hy**	22.03	73	T	T	23 14 41.9	
	baz=259,slow=79,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	22.45	70	T	T	23 15 13.9	
	baz=255,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	22.46	70	T	T	23 15 12.5	
	baz=255,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	22.47	70	T	T	23 15 15.2	
	baz=255,slow=76,SNR=14						
WRA	**Warramunga Arr**	34.42	197	P	P	22 54 02.2	+0.3
	0.9nm,0.8s,baz=20,slow=9.6,SNR=9.0						
ASAR	**Alice Springs**	38.08	196	P	P	22 54 32.9	-0.4
	0.5nm,0.5s,baz=18,slow=13,SNR=8.6						
MKAR	**Makanchi Array**	61.48	316	P	P	22 57 31.1	-0.1
	0.2nm,0.4s,baz=93,slow=8.3,SNR=6.5						
RPZ	**Rata Peaks**	61.64	158	LR	LR	23 22 04.1	
	comp=Z,19nm,21.5s,baz=266,slow=34						

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*IDC **01** 23:11:04.7±1.8, 0°.15N×123°.77E, h145^{km}±16^{km}, mb3.6/11, mb1 3.7/14, mb1mx3.5/42, mbtmp4.0/14, Error ellipse: s-maj=20.0km s-min=10.9km az=63.0*

*NEIC **01** 23:11:04.8±1.3, 0°.01N±0°.08×123°.47E±0°.08, h141^{km}±8^{km}, mb4.4/15, Error ellipse: s-maj=12.1km s-min=10.9km az=186.0*

*DJA **01** 23:11:06.4±0.3, 0°S±3°×12°3E±°, h117^{km}±5^{km}, M4.2/17, mb4.3/6, mB5.9/1, MLv4.2/17, Mw(mB)5.4/1*

ISC 01 23:11:05.6±0.4**, 0°.03S**±0°.05×**123°.53E**±0°.05**, h157**^{km}**, n54,** σ**2^{s}.01**/65**, mb4.2**/21**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	0.75	37	P	Pn	23 11 27.9	-1.3
KMSI				S	Sn	23 11 45.0	-2.2
GTOI	**Gorontalo**	0.84	322	P	Pn	23 11 29.1	-0.7
GTOI				S	Sn	23 11 46.4	-2.0
LUWI	**Luwuk**	1.26	217		Pn	23 11 30.9	-2.4
LUWI	**Luwuk**	1.26	217	P	Pn	23 11 30.8	-2.6
MRSI	**Marisa**	1.67	288	P	Pn	23 11 34.5	-3.0
MRSI				S	Sn	23 11 55.9	-6.0
APSI	**Ampana**	2.08	245	P	Pn	23 11 40.0	-2.0
APSI				S	Sn	23 12 05.7	-4.4
TOLI2	**Tolitoli**	2.97	292		Pn	23 11 50.6	-2.3
SANI	**Sanana**	3.17	129	P	Pn	23 11 53.2	-2.2
SANI				S	Sn	23 12 27.6	-6.5
MPSI	**Mapaga**	3.65	276	P	Pn	23 12 00.6	-0.9
TNTI	**Ternate**	3.92	78	Pn	Pn	23 12 05.5	+0.5
TNTI	**Ternate**	3.92	78	P	Pn	23 12 05.8	+0.8
KDI	**Kendari**	4.01	193	P	Pn	23 12 03.7	-2.5
TTSI	**Tana Toraja**	4.77	231	P	Pn	23 12 15.6	-0.5
NLAI	**Namlea**	4.79	132	P	Pn	23 12 16.7	+0.4
SPSI	**Sidrap Palu**	5.42	224	P	Pn	23 12 25.2	+0.4
	0.2nm21nm,1.2s						
BNSI	**Bone**	5.53	218	P	Pn	23 12 27.1	+0.9
	0.2nm30nm,1.3s						
KAPI	**Kappang**	6.23	217	P	Pn	23 12 37.3	+1.9
	1.2nm,0.3s,baz=95,slow=6.9,SNR=1.6						
KAPI				S	Sn	23 13 44.3	-1.6
	1.4nm,0.3s,baz=39,slow=22,SNR=1.5						
KAPI	**Kappang**	6.23	217		Pn	23 12 35.1	-0.3
MSAI	**Masohi**	6.32	121	P	Pn	23 12 40.6	+3.9
	0.1nm6.8nm,0.4s						
BKB	**Balikpapan**	6.75	260	P	Pn	23 12 41.2	-1.1
	0.7nm105nm,1.5s						
MYLDM	**Lahad Datu**	7.21	316		Pn	23 12 51.8	+3.2
BNDI	**Bandanaira**	7.78	125	P	Pn	23 12 56.5	+0.4
	0.7nm10μm71nm,1.7s						
SIJI	**Sorong**	7.78	96	P	Pn	23 12 52.0	-4.1
	0.5nm,0.3s,baz=270,slow=20,SNR=1.3						
FAKI	**Fak Fak**	9.18	108	Pn	Pn	23 13 15.0	+0.3
FAKI	**Fak Fak**	9.18	108	P	Pn	23 13 14.4	-0.3
	12nm,0.9s						
KKM	**Kota Kinabalu**	9.47	310	Pn	Pn	23 13 22.3	+3.6
MTN	**Manton Dam**	14.80	150		P	23 14 30.1	+0.9
FITZ	**Fitzroy Crossi**	18.08	174	P	P	23 15 06.9	+1.6
	1.5nm,0.3s,baz=1.9,slow=7.6,SNR=39						
PSA00	**Pilbara Seismi**	21.71	189	P	P	23 15 45.6	+1.2
PSA00				IAmb	IAmb	23 16 43.7	
	comp=Z,38nm,1.5s						
WB0	**Warramunga Arr**	22.32	152	P	P	23 15 51.5	+1.0
WB0				IAmb	IAmb	23 16 27.9	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	22.45	152	P	P	23 15 52.8	+1.0
	comp=Z,2.7nm,0.5s,baz=334,slow=10,SNR=59						
WRA				PcP	PcP	23 19 40.9	+0.3
	comp=Z,0.5nm,1.0s,baz=351,slow=2.1,SNR=1.8						
WRA				ScP	ScP	23 23 04.8	+1.1
	comp=Z,0.3nm,0.7s,baz=336,slow=2.9,SNR=2.4						
WB2	**Warramunga Arr**	22.45	152	P	P	23 15 53.0	+1.2
WR0	**Warramunga Arr**	22.55	152	P	P	23 15 53.5	+0.8
WR0				IAmb	IAmb	23 16 21.5	
	comp=Z,14nm,1.4s						
COEN	**Coen**	23.87	126	P	P	23 16 07.0	+2.1
COEN				IAmb	IAmb	23 16 58.9	
	comp=Z,45nm,1.9s						
ASAR	**Alice Springs**	25.57	158	P	P	23 16 21.5	+1.3
	comp=Z,0.5nm,0.5s,baz=342,slow=13,SNR=10						
ASAR				PcP	PcP	23 19 48.4	+1.0
	comp=Z,0.4nm,0.5s,baz=353,slow=2.2,SNR=4.5						
ASAR				ScP	ScP	23 23 13.9	+1.7
	comp=Z,0.8nm,1.0s,baz=354,slow=2.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	30.35	309	P	P	23 17 04.2	+1.5
	comp=Z,1.1nm,0.8s,baz=144,slow=6.8,SNR=7.4						
FORT	**Forrest**	30.88	172	P	P	23 17 08.7	+1.4
STKA	**Stephens Creek**	35.99	153	P	P	23 17 53.4	+1.8
	comp=Z,1.7nm,0.5s,baz=313,slow=8.4,SNR=5.3						
JWT	**Wachi**	36.84	16	P	P	23 17 59.2	+0.5
HNR	**Honiara**	37.43	105	P	P	23 18 00.9	-3.1
	comp=Z,93nm,0.7s,baz=292,slow=19,SNR=8.0						
MJAR	**Matsushiro Arr**	38.85	19	P	P	23 18 13.7	-1.9
	comp=Z,3.2nm,0.9s,baz=180,slow=10,SNR=4.4						
USRK	**Ussuriysk Ar.**	44.68	9	P	P	23 19 02.2	-0.5
	comp=Z,1.1nm,0.6s,baz=200,slow=4.8,SNR=2.3						
SONM	**Songino Array**	49.95	345	P	P	23 19 43.7	+0.1
	comp=Z,1.6nm,0.7s,baz=158,slow=8.4,SNR=11						
SONM				PcP	PcP	23 21 00.5	-1.0
	comp=Z,0.3nm,0.5s,baz=161,slow=4.3,SNR=1.9						
MSVF	**Nonsavu**	56.40	111	P	P	23 20 30.1	-1.1
	comp=Z,2.0nm,0.5s,baz=270,slow=20,SNR=2.0						
MK31	**Makanchi Array**	58.92	328	P	P	23 20 48.2	-0.1
MK31				IAmb	IAmb	23 21 18.9	
	comp=Z,7.1nm,1.9s						
MKAR	**Makanchi Array**	58.92	328	P	P	23 20 47.9	-0.4
	comp=Z,1.2nm,0.5s,baz=118,slow=8.6,SNR=27						
MKAR				PcP	PcP	23 21 34.2	-1.6
	comp=Z,0.3nm,0.5s,baz=130,slow=4.3,SNR=5.7						
MAKZ	**Makanchi**	59.09	328	P	P	23 20 50.0	+0.6
MAKZ				IAmb	IAmb	23 21 34.1	
	comp=Z,12nm,2.0s						
PETK	**Petropavlovsk-**	60.10	23	P	P	23 20 56.8	+0.6
	comp=Z,4.0nm,1.0s,baz=177,slow=1.9,SNR=2.1						
KBL	**Kabul**	61.37	310	P	P	23 21 05.8	+0.4
KBL				IAmb	IAmb	23 21 06.8	
	comp=Z,5.2nm,1.4s						
ZALV	**Zalesovo Beam**	62.56	335	P	P	23 21 12.1	-0.6
	comp=Z,1.3nm,0.5s,baz=110,slow=6.3,SNR=4.7						
KURK	**Kurchatov**	63.27	330	P	P	23 21 17.8	+0.4
KURK				IAmb	IAmb	23 21 18.6	
	comp=Z,2.9nm,0.6s						
TIXI	**Tiksi**	71.64	2	P	P	23 22 08.3	-1.4
ANM	**Nome**	81.98	24	P	P	23 23 08.9	+1.2
ANM				IAmb	IAmb	23 24 11.0	
	comp=Z,23nm,1.9s						
SDPT	**Sand Point**	82.08	34	P	P	23 23 08.9	+0.6

IDC 01 23:17:31.1±2.0**, 20°.22S**×**175°.64W, h0**^{km}**, mb4.1**/5**, mb1 4.3**/5**, mb1mx3.8**/38**, mbtmp4.1**/5**, Error ellipse: s-maj=162.3km s-min=30.6km az=158.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.90	244	P	P	23 25 05.4	-1.5
	2.3nm,0.6s,baz=95,slow=11,SNR=6.2						
ASAR	**Alice Springs**	46.73	256	P	P	23 26 02.1	-0.2
	2.6nm,0.7s,baz=93,slow=6.5,SNR=28						
WRA	**Warramunga Arr**	46.83	261	P	P	23 26 03.9	+0.8
	2.8nm,0.6s,baz=92,slow=8.3,SNR=63						
FITZ	**Fitzroy Crossi**	55.26	262	P	P	23 27 06.7	+0.2
	1.8nm,0.6s,baz=93,slow=7.9,SNR=7.4						
TXAR	**Lajitas Array**	85.05	56	P	P	23 30 09.1	0.0
	0.2nm,0.4s,baz=234,slow=6.1,SNR=4.8						

IDC 01 23:24:19.4±2.0**, 2°.01N**×**125°.29E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.3**/35**, mbtmp3.4**/4**, ML3.7**/1**, Error ellipse: s-maj=123.0km s-min=27.0km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	19.99	179	P	P	23 28 53.4	-0.2
	0.2nm,0.3s,baz=4.3,slow=8.8,SNR=1.2						
WRA	**Warramunga Arr**	23.56	158	P	P	23 29 32.4	+0.7
	0.6nm,0.4s,baz=337,slow=10,SNR=12						
ASAR	**Alice Springs**	26.87	162	P	P	23 30 01.0	-1.0
	0.2nm,0.7s,baz=353,slow=15,SNR=1.5						
MKAR	**Makanchi Array**	58.16	327	P	P	23 34 15.3	+0.2
	0.1nm,0.3s,baz=117,slow=5.2,SNR=1.8						

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*NEIC **01** 23:39:46.8, 19°.90S×71°.03W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.15; M$_{\theta\theta}$0.03; M$_{\phi\phi}$-2.18; M$_{r\theta}$0.68; M$_{\theta\phi}$0.61; M$_{\phi r}$-1.46; Fault plane solution: M$_{0}$2.77000×10^{15} NP1:ϕ_s159.19000°, δ62.91000°, λ83.88000°. NP2:ϕ_s352.43000°, δ27.72000°, λ101.76000°. Principal axes: T 2.6839, Plg71.0000°, Azm56.0000°; N 0.1573, Plg5.0000°, Azm162.0000°; P -2.8412, Plg18.0000°, Azm254.0000°;*

*NEIC **01** 23:39:47.4±2.6, 19°.95S±0°.04×70°.99W±0°.05, h14^{km}±1^{km}, mb4.4/10, Mwr4.2/32, ML4.2(GUC) Error ellipse: s-maj=6.7km s-min=6.1km az=84.0*

*SJA **01** 23:39:47.0±0.7, 19°.95S×70°.99W, h27^{km}±4^{km}, ML4.3, MW4.4*

*VAO **01** 23:39:48.8±0.4, 19°.90S×70°.86W, h10^{km}, mb4.0*

*GUC **01** 23:39:48.8±0.6, 19°.90S×71°.07W, h35^{km}±2^{km}, ML4.3*

*IDC **01** 23:39:50.8±0.8, 19°.82S×70°.64W, h30^{km}±4^{km}, mb3.8/10, mb1 4.0/14, mb1mx3.9/26, mbtmp4.0/14, ML3.9/4, MS3.4/3, Ms1 3.3/3, ms1mx3.0/19, Error ellipse: s-maj=21.8km s-min=16.5km az=64.0*

ISC 01 23:39:48.7±0.8**, 19°.93S**±0°.03×**71°.03W**±0°.05**, h25**^{km}±5^{km}**, n138,** σ**1^{s}.58**/160**, mb4.3**/12**, 13C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	0.91	112	*e*P	Pn	23 40 05.1	-0.8
TA02				*i* S	Sn	23 40 17.8	-0.4
TA02				IAML		23 40 20.5	
	comp=N,16μm,0.8s						
PSGC	**Pisagua**	0.91	69⇓	*i*P	Pb	23 40 04.4	-1.5
PSGC				*i* S	Sb	23 40 16.8	-0.9
PSGCX	**Pisagua**	0.91	69	Pg	Pb	23 40 04.4	-1.5
PSGCX				Sg	Sb	23 40 16.4	-1.4
PSGCX	**Pisagua**	0.91	69	*e*P	Pb	23 40 04.4	-1.5
PSGCX				*e*P	Pn	23 40 04.5	-1.5
TA01	**Diego Aracena**	1.01	129⇑	*i*P	Pn	23 40 07.1	-0.2
TA01				*i* S	Sb	23 40 20.5	0.0
TA01	**Diego Aracena**	1.01	129		Pn	23 40 06.6	-0.7
TA01					Sb	23 40 20.4	-0.1
MNMC	**Minye Minye**	1.57	60⇑	*i*P	Pn	23 40 15.2	0.0
MNMC				*i* S	Sb	23 40 36.1	-0.6
MNMC				IAML		23 40 49.1	
	comp=N,4μm,0.4s						
MNMC	**Minye Minye**	1.57	60		Pn	23 40 15.1	-0.1
MNMCX	**Minye Minye**	1.57	60	*e*P	Pn	23 40 15.3	0.0
MNMCX				*e*P	Pn	23 40 15.3	0.0
MNMCX				*e*S	Sb	23 40 36.2	-0.5
AP01	**Chacalluta**	1.68	23	*e*P	Pn	23 40 16.1	-0.5
AP01				*i* S	Sn	23 40 36.8	-0.5
AP01				IAML		23 40 52.0	
	comp=E,9μm,0.8s						
AP01	**Chacalluta**	1.68	23		Pn	23 40 16.7	+0.2
PB02	**IPOC Station P**	1.74	143⇑	*i*P	Pn	23 40 17.6	+0.1
PB02				*e*S	Sn	23 40 38.4	-0.5
PB02				IAML		23 40 50.6	
	comp=E,13μm,0.5s						
PB02	**IPOC Station P**	1.74	143	*e*P	Pn	23 40 17.6	+0.1
PB02				*e*S	Sn	23 40 38.8	-0.1
PB02				IAML		23 40 50.7	

	comp=Z,12µm,0.4s						
GO01	Chusmiza	1.74	82	⇑*i*P	Pn	23 40 18.1	+0.2
GO01				*e*S	Sb	23 40 41.0	-1.0
GO01				IAML		23 40 43.3	
	comp=N,4µm,0.1s						
GO01	Chusmiza	1.74	82		Pn	23 40 18.1	+0.2
PB08	IPOC Station P	1.77	97	⇑*i*P	Pn	23 40 18.4	+0.2
PB08				*e*S	Sb	23 40 41.8	-0.9
PB08				IAML		23 40 50.0	
	comp=N,2µm,0.5s						
PB08	IPOC Station P	1.77	97		Pn	23 40 18.1	-0.1
PB08	IPOC Station P	1.77	97	*e*P	Pn	23 40 18.5	+0.3
PB08				*e*S	Sb	23 40 42.4	-0.4
PB08				IAML		23 40 44.0	
	comp=Z,2µm,1.2s						
PB01	IPOC Station P	1.82	128	⇑*i*P	Pn	23 40 18.9	+0.3
PB01				*i* S	Sn	23 40 41.9	+1.1
PB01	IPOC Station P	1.82	128		Pn	23 40 18.8	+0.3
PB01	IPOC Station P	1.82	128	*e*P	Pn	23 40 19.0	+0.5
PB01				IAML		23 40 51.2	
	comp=Z,3µm,0.7s						
PB07	IPOC Station P	2.08	149	⇑*i*P	Pn	23 40 22.2	-0.1
PB07				*e*S	Sn	23 40 46.3	-1.1
PB07				IAML		23 41 05.0	
	comp=E,2µm,0.5s						
PB07	IPOC Station P	2.08	149		Pn	23 40 22.1	-0.1
PB07	IPOC Station P	2.08	149	*e*P	Pn	23 40 22.1	-0.1
PB07				IAML		23 41 01.2	
	comp=Z,2µm,0.9s						
PB16	IPOC Station P	2.14	42	⇑*i*P	Pn	23 40 23.5	+0.1
PB16				*e*S	Sn	23 40 49.7	+0.2
PB16				IAML		23 41 05.7	
	comp=E,2µm,0.7s						
PB16	IPOC Station P	2.14	42	Pn	Pn	23 40 23.5	+0.1
PB16	IPOC Station P	2.14	42	*e*P	Pn	23 40 23.7	+0.3
PB16				*e*S	Sb	23 40 52.5	-1.0
PB16				IAML		23 40 59.5	
	comp=Z,2µm,1.1s						
PB03	IPOC Station P	2.42	151	⇑*i*P	Pn	23 40 26.8	0.0
PB03				*e*S	Sn	23 40 54.4	-1.4
PB03				IAML		23 41 14.9	
	comp=E,2µm,0.7s						
PB03	IPOC Station P	2.42	151	*e*P	Pn	23 40 26.8	0.0
PB03				*e*S	Sn	23 40 54.6	-1.2
PB03				IAML		23 41 10.9	
	comp=Z,2µm,0.7s						
PB09	IPOC Station P	2.50	138	⇑*i*P	Pn	23 40 29.2	+1.3
PB09				*e*S	Sn	23 40 59.8	+2.1
PB09				IAML		23 41 15.5	
	comp=E,3µm,0.5s						
PB09	IPOC Station P	2.50	138		Pn	23 40 28.8	+0.9
PB09	IPOC Station P	2.50	138	*e*P	Pn	23 40 29.2	+1.3
PB09				*e*S	Sb	23 41 08.8	+5.5
PB09				IAML		23 41 11.3	
	comp=Z,2µm,0.9s						
PB04	IPOC Station P	2.53	161	⇑*i*P	Pn	23 40 27.9	-0.5
PB04				*e*S	Sn	23 40 55.8	-2.6
PB04				IAML		23 41 18.9	
	comp=E,2µm,0.5s						
PB04	IPOC Station P	2.53	161		Pn	23 40 27.9	-0.5
PB04	IPOC Station P	2.53	161	*e*P	Pn	23 40 28.0	-0.3
PB04				*e*S	Sn	23 40 56.4	-2.1
PB04				IAML		23 41 27.1	
	comp=Z,1µm,0.7s						
PB05	IPOC Station P	3.01	165	⇑*e*P	Pn	23 40 34.1	-0.8
PB05				*e*S	Sn	23 41 06.4	-3.8
PB05				IAML		23 41 33.9	
	comp=E,617nm,0.4s						
PB05	IPOC Station P	3.01	165	*e*P	Pn	23 40 34.1	-0.8
PB05				*e*S	Sn	23 41 07.1	-3.1
PB05				IAML		23 41 38.7	
	comp=Z,617nm,0.7s						
LVC	Limon Verde	3.32	144	Pn	Pn	23 40 40.8	+1.4
	comp=Z,19nm,0.3s,baz=325,slow=8.5,SNR=153						
LVC				Sn	Sn	23 41 18.6	+0.4
	comp=Z,64nm,0.3s,baz=238,slow=12,SNR=12						
LVC	Limon Verde	3.32	144	*e*P	Pn	23 40 40.8	+1.4
LVC				*e*S	Sn	23 41 19.3	+1.1
LVC	Limon Verde	3.32	144	*e*P	Pn	23 40 40.8	+1.4
LVC				*e*S	Sn	23 41 19.1	+0.9
LVC	Limon Verde	3.32	144	*e*P	Pn	23 40 40.7	+1.3
PB10	IPOC Station P	3.59	173	⇑*i*P	Pn	23 40 41.9	-0.9
PB10				*i* S	Sn	23 41 20.7	-3.8
PB10	IPOC Station P	3.59	173	Pn	Pn	23 40 41.8	-1.1
PB10	IPOC Station P	3.59	173	*e*P	Pn	23 40 41.9	-0.9
PB10				*e*S	Sn	23 41 21.6	-2.9
PB14	IPOC Station P	4.71	173	Pn	Pn	23 40 57.2	-1.3
PB14	IPOC Station P	4.71	173	*e*P	Pn	23 41 00.7	+2.2
PB14				*e*S	Sn	23 41 49.9	-2.6
PB14				IAML		23 41 53.5	
	comp=Z,252nm,0.6s						
GO02	Mina Guanaco	5.37	166	Pn	Pn	23 41 07.2	-0.4
YJA	Yavi	5.61	114	*e*P	Pn	23 41 17.0	+6.0
YJA				*e*S	Sb	23 42 34.9	+1.7
HJA	Humahuaca	6.16	123	*e*P	Pn	23 41 24.5	+6.0
AC01	Pan de Azucar	6.20	176	Pn	Pn	23 41 16.8	-1.9
AC02	Maricunga	7.09	166	Pn	Pn	23 41 30.6	-0.7
ASTB	Santa Barbara	7.29	124	*e*P	Pn	23 41 38.3	+4.4
GO03	Copiap	7.66	175	Pn	Pn	23 41 38.8	0.0
AC04	Llanos de Chal	8.24	180	Pn	Pn	23 41 44.6	-2.1
AC05	El Transito	8.89	176	Pn	Pn	23 41 53.8	-2.0
LCO	Las Campanas	9.04	178	Pn	Pn	23 41 57.4	-0.6
NNA	Nana	9.68	324	Pn	Pn	23 42 10.5	+4.0
	comp=Z,0.8nm,0.3s,baz=53,slow=15,SNR=1.7						
NNA				Sn	Sn	23 43 52.3	-2.2
	comp=Z,0.6nm,0.3s,baz=224,slow=15,SNR=1.8						
NNA				LR	LR	23 46 02.8	
	comp=Z,81nm,18.6s,baz=162,slow=38						
NNA	Nana	9.68	324	Pn	Pn	23 42 06.2	-0.3
CO01	Juntas del Tor	10.04	175	Pn	Pn	23 42 11.3	-0.2
GO04	Tololo Observa	10.20	179	Pn	Pn	23 42 12.1	-1.7
SIV	San Ignacio	10.25	69	Pn	Pn	23 42 12.1	-2.3
	comp=Z,3.0nm,0.3s,baz=267,slow=9.9,SNR=43						
CO03	El Pedregal	10.87	178	Pn	Pn	23 42 22.5	-0.3
ETMB	Extrema	11.08	25	*e*P	Pn	23 42 26.2	+0.5
CO02	Combarbal	11.22	180	Pn	Pn	23 42 29.0	+1.3
PTLB	Pontes e Lacer	12.17	70	*e*P	Pn	23 42 40.9	+0.2
VA03	San Esteban	12.79	178	Pn	Pn	23 42 46.5	-2.6
MT02	Curacav	13.27	180	Pn	Pn	23 42 55.5	-0.1
SAML	Samuel	13.29	36	Pn	Pn	23 42 53.2	-2.7
SAML	Samuel	13.29	36	*e*P	Pn	23 42 57.1	+1.1
CPUP	Villa Florida	14.11	119	Pn	Pn	23 43 06.2	-0.9
	comp=Z,0.1nm,0.3s,baz=252,slow=14,SNR=2.4						
CPUP	Villa Florida	14.11	119	Pn	Pn	23 43 07.3	+0.2
CPUP	Villa Florida	14.11	119	*e*P	Pn	23 43 07.8	+0.7
AQDB	Aquidauana	14.40	95	*e*P	Pn	23 43 11.0	-0.1
BO02	Sierra Bellavi	14.80	179	Pn	Pn	23 43 18.0	+1.4
H03N1	Juan Fernandez	15.18	206	T	T	23 59 01.4	
	baz=32,slow=72,SNR=29						
H03N2	Juan Fernandez	15.19	206	T	T	23 59 01.2	
	baz=32,slow=72,SNR=40						
H03N3	Juan Fernandez	15.20	206	T	T	23 58 59.1	
	baz=32,slow=72,SNR=33						
PP1B	Ponte de Pedra	15.47	84	*e*P	Pn	23 43 24.4	-0.9
ITQB	Itaqui	16.26	129	*e*P	Pn	23 43 36.4	+0.8
CLDB	Colider	17.21	61	*e*P	Pn	23 43 47.5	-0.1
PCMB	Pacaembu	18.56	99	*e*P	Pn	23 44 04.2	0.0
ARAG	Araguaiana, MT	18.77	80	*e*P	Pn	23 44 06.5	-0.3
ITAB	Concordia	18.77	116	*e*P	Pn	23 44 07.5	+0.8
LC01	Cunco	18.91	182	P	P	23 44 07.3	-0.3
CPSB	Cacapava Do Su	19.00	127	*e*P	Pn	23 44 09.0	-0.5
NPGB	Novo Progresso	19.88	52	*e*P	P	23 44 18.2	-0.1
FRTB	Fartura	20.23	104	*e*P	Pn	23 44 23.0	-1.2
PLCA	Paso Flores	20.74	179	P	Pn	23 44 30.5	+0.5
	comp=Z,3.1nm,0.7s,baz=297,slow=6.8,SNR=3.3						
PLCA	Paso Flores	20.74	179	P	Pn	23 44 29.1	-1.0
PLCA	Paso Flores	20.74	179	*e*P	P	23 44 29.0	+1.5
BB19B	Bebedouro	21.10	97	*e*P	P	23 44 31.1	-0.5
OTAV	Otavalo	21.32	339	*e*P	P	23 44 36.4	+2.0
IPMB	Ipameri, GO	21.66	89	*e*P	P	23 44 36.9	-0.8
PTGA	Pitinga	21.94	31	P	P	23 44 38.6	-2.0
	comp=Z,7.1nm,0.5s,baz=211,slow=11,SNR=13						
PTGA	Pitinga	21.94	31	P	P	23 44 39.3	-1.3
PTGA				IAmb	IAmb	23 44 42.5	
	comp=Z,9.4nm,0.6s						
BDFB	Brasilia	22.32	83	P	P	23 44 41.5	-3.2
	comp=Z,3.0nm,0.7s,baz=204,slow=14,SNR=3.4						
BDFB				LR	LR	23 54 18.5	
	comp=Z,124nm,21.4s,baz=286,slow=40						
BDFB	Brasilia	22.32	83	P	P	23 44 41.6	-3.2
BDFB				IAmb	IAmb	23 44 49.4	
	comp=Z,7.1nm,0.9s						
BBAC	Balboa, Cauca	22.66	344	*e*P	P	23 44 50.4	+2.0
PCON	Cinco Dias	22.74	346	*e*P	P	23 44 54.0	+4.3
MARP	Paez Belalcaza	23.14	347	*e*P	P	23 44 58.9	+5.2
PEXB	Peixe	23.17	74	*e*P	P	23 44 53.8	+0.2
ORTC	Ortega, Tolima	24.05	350	*e*P	P	23 45 03.3	+1.1
YOTC	Yotoco, Valle	24.33	347	*e*P	P	23 45 08.7	+3.9
TOLC	Tolima	24.73	350	*e*P	P	23 45 11.5	+2.9
RREF	El Recreo	25.04	350	*e*P	P	23 45 13.5	+1.7
SMTB	Santa Maria do	25.19	67	*e*P	P	23 45 12.0	-0.5
PLMC	San Jos del P	25.22	348	*e*P	P	23 45 15.0	+2.2
NORC	Norcasia	25.62	351	*e*P	P	23 45 16.9	+0.5
RUSC	La Rusia	25.74	355	*e*P	P	23 45 17.8	-0.2
CBOC	Ciudad Bolivar	26.10	349	*e*P	P	23 45 22.4	+1.5
SDBA	SAO DESIDERIO	26.16	77	*e*P	P	23 45 22.2	+0.9
ZARC	Zaragoza, Cauc	27.51	352	*e*P	P	23 45 33.2	-0.2
TMAB	Tom-Au,PA,Br	28.40	55	*e*P	P	23 45 42.3	+0.9
SMLC	San Martn de	28.71	354	*e*P	P	23 45 42.9	-1.2
RCBR	Riachuelo	36.89	72	P	P	23 46 55.2	-0.5
RCBR				IAmb	IAmb	23 46 56.6	
	comp=Z,11nm,1.1s						
MLPR	Magueyes Islan	37.87	6	P	P	23 47 02.0	-1.8
MLPR				IAmb	IAmb	23 47 16.2	
	comp=Z,23nm,0.9s						
MTO3	Montecristo	38.59	331	P	P	23 47 09.4	-0.7
PMSA	Palmer Station	45.06	176	P	P	23 48 03.3	+1.1
	comp=Z,13nm,1.0s,baz=53,slow=6.0,SNR=3.8						
PMSA	Palmer Station	45.06	176	IAmb	IAmb	23 48 05.9	
	comp=Z,19nm,1.0s						
TXAR	Lajitas Array	58.22	326	P	P	23 49 43.8	+2.6
	comp=Z,0.5nm,0.8s,baz=134,slow=7.2,SNR=4.1						
DBIC	Dimbokro	70.22	75	P	P	23 50 58.9	-1.2
	comp=Z,1.8nm,0.7s,baz=206,slow=4.5,SNR=3.8						
DBIC	Dimbokro	70.22	75	P	P	23 50 58.8	-1.3
DBIC				IAmb	IAmb	23 51 10.3	
	comp=Z,3.3nm,1.0s						
PDAR	Pinedale Array	71.78	331	P	P	23 51 11.5	+2.2
	comp=Z,0.3nm,0.8s,baz=141,slow=7.8,SNR=2.1						
KOWA	Kowa	74.24	68	P	P	23 51 23.2	-1.0
KOWA				IAmb	IAmb	23 51 24.5	
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	78.72	72	P	P	23 51 49.0	-0.6
	comp=Z,4.2nm,0.6s,baz=253,slow=5.3,SNR=23						
TORD				pP	pP	23 51 57.4	+0.9
	comp=Z,4.2nm,0.6s,baz=254,slow=5.4,SNR=14						
TORD				LR	LR	00 24 57.4	
	comp=Z,40nm,20.4s,baz=320,slow=34						
ESDC	Sonseca Array	86.13	45	P	P	23 52 27.0	-0.8
	comp=Z,1.0nm,1.1s,baz=249,slow=4.7,SNR=5.5						
YKA	Yellowknife Ar	89.07	341	P	P	23 52 42.1	+0.9
	comp=Z,0.5nm,0.6s,baz=132,slow=5.4,SNR=8.3						
H11S2	WAKE ISLAND Hy	125.70	279	T	T	02 18 12.8	
	baz=101,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	125.71	279	T	T	02 18 13.3	
	baz=101,slow=74,SNR=6.8						
H11S3	WAKE ISLAND Hy	125.72	279	T	T	02 18 14.1	
	baz=101,slow=74,SNR=6.8						
H11N3	WAKE ISLAND Hy	125.75	280	T	T	02 18 15.2	
	baz=102						
H11N2	WAKE ISLAND Hy	125.76	280	T	T	02 18 17.6	
	baz=102						
H11N1	WAKE ISLAND Hy	125.76	280	T	T	02 18 17.1	
	baz=102						
ASAR	Alice Springs	130.31	210	PKP	PKiKP	23 58 58.1	-0.5
	comp=Z,0.6nm,0.9s,baz=132,slow=1.8,SNR=3.8						
WRA	Warramunga Arr	133.22	214	PKP	PKiKP	23 59 04.4	0.0
	comp=Z,0.3nm,0.7s,baz=96,slow=1.7,SNR=1.5						
ZALV	Zalesovo Beam	141.33	23	PKP	PKPdf	23 59 15.8	-1.3
	comp=Z,0.8nm,0.5s,baz=316,slow=4.0,SNR=1.8						
MKAR	Makanchi Array	145.47	33	PKPbc	PKPab	23 59 25.8	+0.9
	comp=Z,1.2nm,0.7s,baz=343,slow=3.8,SNR=7.0						
MKAR				pPKPbc	sPKPab	23 59 34.9	+0.8
	comp=Z,2.1nm,0.7s,baz=328,slow=4.0,SNR=14						
SONM	Songino Array	152.09	4	PKPbc	PKiKP	23 59 43.5	+1.1
	comp=Z,1.4nm,0.7s,baz=318,slow=0.9,SNR=10						
SONM				pPKPbc	sPKPbc	23 59 52.3	+0.8
	comp=Z,0.6nm,0.6s,baz=352,slow=2.8,SNR=4.9						

IDC 01 23:41:26.1±2.9**,9°.56S**×**110°.12E,h0^{km},mb3.7**/5**,**
mb1 3.7/5**,mb1mx3.5**/26**,mbtmp3.7**/5**,Error ellipse:**
s-maj=132.2km s-min=23.5km az=50.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.56	117	P	P	23 46 57.6	+0.7
	0.6nm,0.6s,baz=289,slow=12,SNR=3.9						
ASAR	Alice Springs	26.70	125	P	P	23 47 06.7	-0.7
	0.5nm,1.0s,baz=298,slow=9.1,SNR=2.1						
H08S2	Diego Garcia H	37.24	270	T	T	00 28 01.9	
	baz=96,slow=75,SNR=8.9						
H08S3	Diego Garcia H	37.25	270	T	T	00 28 03.3	
	baz=96,slow=75,SNR=10						
H08S1	Diego Carcia H	37.26	270	T	T	00 28 03.8	
	baz=96,slow=75,SNR=10						
SONM	Songino Array	57.23	357	P	P	23 51 15.1	-0.2
	0.4nm,0.5s,baz=172,slow=7.7,SNR=6.3						
MKAR	Makanchi Array	61.35	339	P	P	23 51 44.1	+0.4
	0.9nm,0.4s,baz=152,slow=7.6,SNR=33						
ZALV	Zalesovo Beam	66.80	344	P	P	23 52 18.7	-0.6
	0.6nm,0.3s,baz=141,slow=7.3,SNR=1.9						

IDC 01 23:53:23.6±5.0**,9°.66S**×**110°.08E,h0^{km},mb3.5**/3**,**
mb1 3.6/3**,mb1mx3.3**/28**,mbtmp3.5**/3**,MS3.4**/1**,Ms1 3.4**/1**,**
ms1mx2.8/21**,Error ellipse: s-maj=210.9km**
s-min=32.6km az=47.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.55	116	P	P	23 58 54.4	0.0
	0.2nm,0.6s,baz=286,slow=10.0,SNR=1.8						
H08S2	Diego Garcia H	37.20	270	T	T	00 39 59.6	
	baz=96,slow=75,SNR=4.2						
H08S3	Diego Garcia H	37.22	270	T	T	00 40 01.4	
	baz=96,slow=75,SNR=4.5						
H08S1	Diego Carcia H	37.22	270	T	T	00 40 04.1	
	baz=96,slow=75,SNR=3.4						
HNR	Honiara	49.14	94	LR	LR	00 24 54.9	
	comp=Z,34nm,19.1s,baz=300,slow=38						
SONM	Songino Array	57.33	357	P	P	00 03 13.3	-0.2
	0.2nm,0.5s,baz=175,slow=5.4,SNR=4.4						
MKAR	Makanchi Array	61.43	339	P	P	00 03 41.9	+0.1
	0.6nm,0.4s,baz=153,slow=7.6,SNR=26						

PGC 02 00:01:47.7±0.3**,50°.75N**×**130°.48W,h10^{km},MLSn2.9**/11**,**
Mw3.5/11**,216km west of Pt. Hardy, Bc Vancouver**
Island, Canada Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HG4B	Hotspring	1.61	344	Pn	Pn	00 02 13.7	-2.4
HG4B				Sn	Sn	00 02 32.6	-4.2
PHC	Port Hardy	1.94	90	Pn	Pn	00 02 19.1	-1.6
PHC				Sn	Sn	00 02 41.6	-3.4
BBB	Bella Bella	2.06	45	Pn	Pn	00 02 20.8	-1.5
BBB				Sn	Sn	00 02 43.7	-4.3
FHRB	Fair Harbour	2.26	107	Pn	Pn	00 02 23.4	-1.7
EDB	Eliza Dome	2.33	111	Pn	Pn	00 02 24.4	-1.6
TLCB	Telegraph Cove	2.33	94	Pn	Pn	00 02 24.0	-2.1
MOBC	Moresby Island	2.57	340	Sn	Sn	00 02 57.8	-2.8
WOSB	Woss	2.57	102	Pn	Pn	00 02 28.2	-1.2
BUTB	Butedale	2.63	28	Pn	Pn	00 02 29.1	-1.1
BUTB				Sn	Sn	00 03 00.0	-2.3
NCRB	Newcastle Ridg	2.84	95	Pn	Pn	00 02 31.8	-1.4
GDR	Gold River	3.02	107	Pn	Pn	00 02 34.0	-1.5
BTB	Buttle Lake	3.44	110	Pn	Pn	00 02 40.2	-1.3
OZB	Mount Ozzard	3.69	117	Pn	Pn	00 02 44.1	-0.7
TXB	Texada	4.02	103	Pn	Pn	00 02 48.5	-0.9
MGB	Mount Grey	4.14	113	Pn	Pn	00 02 50.0	-1.0
SHB	Sechelt	4.40	103	Pn	Pn	00 02 54.3	-0.3
FSB	Fort Saint Jam	5.29	43	Pn	Pn	00 03 06.8	0.0

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*IDC **02** 00:17:17.4±1.4, 5°.22S×150°.11E, h0^{km}, mb3.5/3,*
mb1 4.0/4, mb1mx3.6/26, mbtmp3.7/4, ML4.4/1, MS2.8/2,
Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=71.1km
s-min=19.3km az=141.0

*NEIC **02** 00:17:21.0±2.8, 6°.30S±0°.06×151°.17E±0°.07, h35^{km}±2^{km},*
mb4.1/6, Error ellipse: s-maj=11.6km s-min=10.2km
az=49.0

ISC 02 00:17:21.0±0.8**,6°.32S**±0°.10×**151°.2E**±0°.1**,h35^{km},n15,**
σ**1^{s}.69**/15**,mb3.8**/7**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.18	24	Pn	Pn	00 17 54.5	-0.3
	114nm,0.3s,baz=57,slow=0.9,SNR=25						
KRVT				Sn	Sn	00 18 24.0	+3.3
	97nm,0.3s,baz=12,slow=22,SNR=8.5						
KRVT				LR	LR	00 18 25.1	
	comp=Z,89nm,21.9s,baz=251,slow=32						
RABL	Rabaul	2.34	26	Pn	Pn	00 17 57.0	-0.1
PMG	Port Moresby	5.00	232	Pn	Pn	00 18 34.0	+0.3
HNR	Honiara	9.24	110		Pn	00 19 31.7	-0.2
COEN	Coen	10.92	225	Pn	Pn	00 19 55.2	+0.4
WB0	Warramunga Arr	21.07	229	P	P	00 22 04.1	+1.7
WR0	Warramunga Arr	21.07	228	P	P	00 22 03.5	+1.0
WR0				IAmb	IAmb	00 22 10.5	
	comp=Z,6.1nm,1.1s						
WB2	Warramunga Arr	21.20	229	P	P	00 22 04.2	+0.3
WB2				IAmb	IAmb	00 22 07.4	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	21.21	229	P	P	00 22 06.0	+2.0
	comp=Z,1.4nm,0.8s,baz=53,slow=11,SNR=12						
ASAR	Alice Springs	23.93	222	P	P	00 22 34.6	+2.6
	comp=Z,1.6nm,0.7s,baz=54,slow=9.2,SNR=20						
SOEI	Soe	26.83	261	P	P	00 22 57.6	-1.0
FITZ	Fitzroy Crossi	27.50	243	P	P	00 23 03.3	-1.1
FITZ				IAmb	IAmb	00 23 15.8	
	comp=Z,4.9nm,1.1s						
SBUM	Sibu	39.84	281	P	P	00 24 50.3	-1.2
SBUM				IAmb	IAmb	00 25 04.8	
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	59.46	5	LR	LR	00 51 07.1	
	comp=Z,19nm,18.4s,baz=158,slow=35						
ILAR	Eielson Array	84.18	22	P	P	00 29 46.4	-2.0
	comp=Z,0.2nm,0.6s,baz=242,slow=5.2,SNR=5.1						

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*ISK **02** 00:17:57.2, 36°.33N×30°.32E, h43^{km}, ML2.6/18*

*DDA **02** 00:17:59.2, 36°.32N×30°.30E, h23^{km}±3^{km}, ML1.8*

ISC 02 00:17:58.3±1.1**,36°.33N**±0°.05×**30°.31E**±0°.03**,h33^{km}**±4^{km}**,**
n26,σ**0^{s}.61**/35**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.03	110	*i* P	Pb	00 18 03.4	-0.3
AKUM				*i* S	Sb	00 18 08.8	+1.4
AKUM				IAML		00 18 09.0	
	comp=E,235nm,0.2s						
AKUM				IAML		00 18 10.0	
	comp=N,128nm,0.7s						
KEMT	Kemer-ANTALYA	0.34	37	PG	Pb	00 18 06.5	0.0
KEMT				SG	Sn	00 18 13.2	+0.8
DEMR	Demre-Antalya	0.34	254	PG	Pn	00 18 06.7	-0.2
DEMR				SG	Sn	00 18 13.6	+1.2
ELL	Elmali	0.52	322	PG	Pb	00 18 08.6	-0.8
ELL				SG	Sn	00 18 17.5	+0.1
AKAS	Kas	0.57	260	PG	Pb	00 18 09.5	-0.7
AKAS				SG	Sn	00 18 18.9	+0.2
AKAS	Kas	0.57	260	*i* P	Pb	00 18 08.8	-1.3
AKAS				*i* S	Sn	00 18 18.6	-0.1
AKAS				IAML		00 18 20.0	
	comp=E,52nm,0.5s						
AKAS				IAML		00 18 21.0	
	comp=N,46nm,0.4s						
ANTB	Antalya	0.63	26	PG	Pn	00 18 10.4	-0.5
KORT	Korkueli	0.67	3	PG	Pn	00 18 10.7	-0.9
KORT	Korkueli	0.67	3	*i* P	Pn	00 18 10.9	-0.7
KORT				*i* S	Sn	00 18 21.5	+0.5
BUCA	Burdur, Bucak-	1.01	11	*i* P	Pb	00 18 17.0	-0.4
FETY	Fethiye	1.03	287	PG	Pn	00 18 15.8	-0.7
FETY	Fethiye	1.03	287	*i* P	Pb	00 18 17.9	+0.2
FETY				*i* S	Sb	00 18 31.2	+0.3
FETY				IAML		00 18 34.0	
	comp=E,23nm,0.6s						
GOLH	Golhisar	1.08	327	*i* P	Pb	00 18 19.1	+0.5
GOLH				IAML		00 18 39.0	
	comp=E,49nm,1.3s						
DALY	Dalyan (Mula)	1.42	290	PN	Pn	00 18 21.5	-0.2
TAVA	DENIZLI_Tavas	1.59	316	*i* P	Pb	00 18 26.6	-0.5
TAVA				IAML		00 18 49.0	
	comp=E,25nm,0.7s						
BASM	Basmaki-Afyon	1.60	353	PN	Pn	00 18 24.0	-0.3
SEDI	Konya, Seydise	1.61	46	*i* P	Pb	00 18 26.4	-1.1
SEDI				*i* S	Sb	00 18 47.7	+0.2
SEDI				IAML		00 18 50.0	
	comp=N,23nm,1.0s						
SEDI				IAML		00 18 51.0	
	comp=E,11nm,0.2s						
GAZI	Gazipasa	1.63	93	PN	Pn	00 18 24.2	-0.5
SEYD	Seydisehir-KON	1.63	48	PN	Pn	00 18 24.4	-0.4
TURN	Turunc	1.72	285	PN	Pn	00 18 25.7	-0.2
YER	Yerkesik	1.81	297	PN	Pn	00 18 27.4	+0.2
SHUT	Suhut-Afyon	2.22	5	PN	Pn	00 18 32.9	-0.1
TEKE	Tekeli-Mersin	2.28	94	PN	Pn	00 18 33.5	-0.1
KONT	Konya--Tatoy	2.30	45	PN	Pn	00 18 34.0	+0.1
BERE	Bereket-Mersin	2.35	89	PN	Pn	00 18 34.8	0.0
LADK	Ladik-KONYA	2.48	41	PN	Pn	00 18 36.4	-0.1

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*HEL **02** 00:34:37.0, 67°.79N×20°.04E, h0^{km}, ML1.6, Explosion*

UPP 02 00:34:37.4±0.0**,67°.82N**×**20°.20E,h0^{km},ML2.7,**
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	00 34 40.4	+0.2
KUA	Kurravaara	0.14	22	*i* P	Pg	00 34 40.4	+0.2
RATU	Laukkuluspa	0.23	271	P	Pg	00 34 42.0	+0.2
RATU				S	Sg	00 34 45.4	+0.6
RATU	Laukkuluspa	0.23	271	*i* P	Pg	00 34 42.0	+0.2
RATU				*i* S	Sg	00 34 45.4	+0.6
KOVU	Salmi	0.40	358	P	Pg	00 34 45.1	0.0
KOVU				S	Sg	00 34 50.7	+0.4
KOVU	Salmi	0.40	358	*i* P	Pg	00 34 45.1	0.0
KOVU				*i* S	Sg	00 34 50.7	+0.4
LANU	Lannavaara	0.71	71	P	Pg	00 34 50.9	-0.1
LANU	Lannavaara	0.71	71	*i* P	Pg	00 34 50.9	-0.1
DUNU	Dundret	0.72	168	P	Pg	00 34 50.8	-0.3
DUNU	Dundret	0.72	168	*i* P	Pg	00 34 50.8	-0.3
SALU	Saltoluokta	0.79	236	P	Pg	00 34 52.4	-0.1
SALU	Saltoluokta	0.79	236	*i* P	Pg	00 34 52.4	-0.1
KIF	Kilpisjarvi	1.21	10	*e*P	Pg	00 35 00.4	-0.1
	baz=192						
KIF				MSG		00 35 15.9	
	comp=Z,4.2nm,0.2s						
KIF				*e*SB	Sg	00 35 16.7	+0.5
PAJU	Pajala	1.38	124	P	Pg	00 35 02.7	-1.1
PAJU	Pajala	1.38	124	*e*P	Pg	00 35 02.5	-1.3
	baz=305						
KALU	Kalix	2.33	146	*e*PB	Pb	00 35 18.8	-1.4
	baz=333						
KALU				*e*SG	Sb	00 35 50.6	+1.1
TOF	Tornio	2.39	135	*e*PB	Pn	00 35 19.1	+1.4
	baz=310						
TOF				MSG		00 35 48.3	
	comp=Z,2.2nm,0.2s						
TOF				*e*SG	Sb	00 35 51.0	-0.1
SGF	Sodankyl	2.45	96	*e*PB	Pb	00 35 21.1	-1.1
	baz=280						
SGF				*e*SG	Sb	00 35 53.9	+1.0
RNF	Rovaniemi	2.57	116	*e*PB	Pn	00 35 22.2	+2.0
	baz=306						
RNF				*e*SG	Sb	00 35 57.1	+0.7
ARA0	ARCESS Array S	2.59	46	*e*P	Pn	00 35 21.7	+1.2
	baz=223						
ARA0				*e*SG	Sg	00 35 58.9	-1.7

UPP 02 00:34:40.0±0.1**,67°.84N**×**20°.16E,h0^{km},ML2.9,**
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	29	P	Pg	00 34 42.9	+0.3
KUA				S	Sg	00 34 44.6	+0.3
KUA	Kurravaara	0.13	29	*i* S	Pg	00 34 42.4	-0.1
KUA	Kurravaara	0.13	29	S	Pg	00 34 42.4	-0.1
RATU	Laukkuluspa	0.22	266	P	Pg	00 34 44.4	+0.3
KOVU	Salmi	0.39	360	P	Pg	00 34 47.3	-0.1
PAJU	Pajala	1.40	124	P	Pn	00 35 04.8	-2.0

IDC 02 01:17:49.4±5.9**,6°.72S**×**147°.28E,h78^{km}**±47^{km}**,mb3.4**/3**,**
mb1 3.6/5**,mb1mx3.3**/32**,mbtmp3.7**/5**,ML3.6**/1**,MS3.2**/1**,**
Ms1 3.2/1**,ms1mx2.6**/15**,Error ellipse: s-maj=53.0km**
s-min=45.5km az=88.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.67	183	P	Pn	01 18 29.7	-0.6
	20nm,0.3s,baz=20,slow=11,SNR=18						
PMG				S	Sn	01 19 02.8	+1.1
	11nm,0.3s,baz=6.9,slow=10,SNR=3.5						
WRA	Warramunga Arr	18.18	222	P	P	01 21 55.2	-0.8
	0.2nm,0.3s,baz=52,slow=11,SNR=9.9						
ASAR	Alice Springs	21.19	216	P	P	01 22 28.8	0.0
	0.9nm,0.6s,baz=50,slow=8.5,SNR=18						
FITZ	Fitzroy Crossi	23.93	240	P	P	01 22 55.8	-0.7
	1.5nm,0.4s,baz=66,slow=8.1,SNR=18						
DZM	Mont Dzumac	23.98	131	LR	LR	01 30 25.8	
	comp=Z,56nm,18.1s,baz=100,slow=32						
STKA	Stephens Creek	25.59	191	P	P	01 23 11.9	+0.6
	0.6nm,0.3s,baz=22,slow=11,SNR=4.0						
TORD	Torodi Ar. Bea	145.53	283	PKPbc	PKPdf	01 37 19.6	-0.1
	0.1nm,0.3s,baz=71,slow=4.1,SNR=1.4						

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*OSPL **02** 01:23:49.7±0.9, 18°.80N×66°.04W, h13^{km}±5^{km}, ML3.1*
*NEIC **02** 01:23:49.4±0.3, 18°.97N±0°.08×66°.100W±0°.007, h32^{km}±15^{km}, Error ellipse: s-maj=11.6km s-min=0.9km az=181.0*
*RSPR **02** 01:23:50.5, 18°.95N×66°.09W, h51^{km}±2^{km}, MD2.9/15*
ISC 02 01:23:48.8±1.3, **18°.98N**±0°.06×**66°.11W**±0°.03, **h28**^{km}, **n61**, σ**0^{s}44**/70, **11C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCPR	Guaynabo City	0.67	178	⇑eP	Pn	01 24 02.7	+0.4
GCPR	Guaynabo City	0.67	178	eS	Sn	01 24 12.3	+0.4
GCPR	Guaynabo City	0.67	178		Pn	01 24 02.7	+0.4
GCPR					Sn	01 24 12.3	+0.4
CBYP	Canovanas	0.74	161	⇑eP	Pn	01 24 03.5	0.0
CBYP	Canovanas	0.74	161	eS	Sn	01 24 14.1	+0.2
CBYP	Canovanas	0.74	161		Pn	01 24 03.5	0.0
CBYP					Sn	01 24 14.1	+0.2
SJG	San Juan	0.86	183		Pb	01 24 05.5	+0.3
SJG				IAML		01 24 18.6	
	670nm,0.3s						
SJG				IAML		01 24 19.6	
	584nm,0.2s						
HUMP	Col San Antoni	0.87	164	⇑eP	Pn	01 24 05.1	0.0
HUMP	Col San Antoni	0.87	164	eS	Sn	01 24 16.6	-0.2
HUMP	Col San Antoni	0.87	164		Pn	01 24 05.1	0.0
HUMP					Sn	01 24 16.6	-0.2
HUMP	Col San Antoni	0.87	164	IAML		01 24 18.3	
	comp=E,594nm,0.2s						
AOPR	Arecibo Observ	0.88	224	⇑eP	Pn	01 24 05.4	+0.1
AOPR	Arecibo Observ	0.88	224	eS	Sn	01 24 17.4	+0.2
AOPR	Arecibo Observ	0.88	224		Pn	01 24 05.4	+0.1
AOPR					Sn	01 24 17.4	+0.2
AOPR	Arecibo Observ	0.88	224	IAML		01 24 20.1	
	comp=N,1μm,0.3s						
PDPR	Patillas Dam,	0.96	175	⇑eP	Pn	01 24 06.5	+0.1
PDPR	Patillas Dam,	0.96	175	eS	Sb	01 24 18.6	-0.5
PDPR	Patillas Dam,	0.96	175		Pn	01 24 06.5	+0.1
PDPR				IAML		01 24 21.1	
	comp=E,628nm,0.1s						
PDPR	Patillas Dam,	0.96	175		Sb	01 24 18.6	-0.5
PDPR	Patillas Dam,	0.96	175	IAML		01 24 17.4	
	comp=N,4μm,1.6s						
CELP	Cerrillos	1.00	206	⇑eP	Pn	01 24 07.1	0.0
CELP	Cerrillos	1.00	206	eS	Sn	01 24 20.1	-0.2
CELP	Cerrillos	1.00	206		Pn	01 24 07.1	0.0
CELP					Sn	01 24 20.1	-0.2
IGPR	InterUniversit	1.01	180	⇓eP	Pn	01 24 07.1	+0.1
IGPR	InterUniversit	1.01	180	eS	Sn	01 24 19.6	-0.7
IGPR	InterUniversit	1.01	180		Pn	01 24 07.2	+0.1
IGPR				IAML		01 24 21.2	
	comp=E,544nm,0.3s						
MTP	Monte Pirata	1.02	149	⇓eP	Pn	01 24 07.4	+0.1
MTP	Monte Pirata	1.02	149	eS	Sb	01 24 20.5	-0.5
MTP	Monte Pirata	1.02	149		Pn	01 24 07.4	+0.1
MTP					Sb	01 24 20.5	-0.5
MTP	Monte Pirata	1.02	149	IAML		01 24 22.2	
	comp=E,691nm,0.3s						
MTP				IAML		01 24 23.0	
	comp=N,537nm,0.3s						
OBIP	Obispado Ponce	1.04	207	⇑eP	Pn	01 24 07.7	+0.1
OBIP	Obispado Ponce	1.04	207	eS	Sn	01 24 20.8	-0.4
OBIP	Obispado Ponce	1.04	207		Pn	01 24 07.7	+0.1
OBIP					Sn	01 24 20.8	-0.4
OBIP	Obispado Ponce	1.04	207	IAML		01 24 21.4	
	comp=E,727nm,0.5s						
OBIP				IAML		01 24 21.7	
	comp=N,829nm,0.4s						
AGPR	Aguadilla, PR	1.08	242	⇓eP	Pn	01 24 08.3	+0.2
AGPR	Aguadilla, PR	1.08	242		Pn	01 24 08.3	+0.2
AGPR					Sn	01 24 22.2	+0.2
AGPR	Aguadilla, PR	1.08	242	IAML		01 24 23.2	
	comp=E,938nm,0.4s						
AGPR				IAML		01 24 26.0	
	comp=N,688nm,0.3s						
AGPR	Aguadilla, PR	1.08	242	i P	Pn	01 24 08.2	+0.2
AGPR				eS	Sn	01 24 22.2	+0.2
AGPR				IAML		01 24 22.4	
	comp=Z,255nm,0.2s						
ICMP	Isla Caja de M	1.16	200	⇑eP	Pn	01 24 09.7	+0.6
ICMP	Isla Caja de M	1.16	200	eS	Sn	01 24 23.8	-0.2
ICMP	Isla Caja de M	1.16	200		Pn	01 24 09.7	+0.6
ICMP					Sn	01 24 23.8	-0.2
LSP	Las Mesas	1.22	229	⇓eP	Pn	01 24 10.4	+0.3
LSP	Las Mesas	1.22	229	eS	Sn	01 24 25.8	+0.1
LSP	Las Mesas	1.22	229		Pn	01 24 10.4	+0.3
LSP					Sn	01 24 25.8	+0.1
GBPR	Guanica, Bosqu	1.24	216	⇑eP	Pn	01 24 10.6	+0.4
GBPR	Guanica, Bosqu	1.24	216	eS	Sn	01 24 26.2	+0.3
GBPR	Guanica, Bosqu	1.24	216		Pn	01 24 10.6	+0.4
GBPR					Sn	01 24 26.2	+0.3
MPR	Mayaguez	1.24	232		Pn	01 24 10.3	+0.1
MPR	Mayaguez	1.24	232	i P	Pn	01 24 10.4	+0.2
MPR				eS	Sn	01 24 25.6	-0.4
MLPR	Magueyes Islan	1.34	222	⇑eP	Pn	01 24 11.7	+0.1
MLPR	Magueyes Islan	1.34	222	eS	Sn	01 24 28.2	-0.3
MLPR	Magueyes Islan	1.34	222		Pn	01 24 11.7	+0.1
MLPR					Sn	01 24 28.2	-0.3
MLPR	Magueyes Islan	1.34	222	IAML		01 24 28.8	
	comp=N,286nm,0.2s						
TBVI	Tortola	1.52	111	⇑eP	Pn	01 24 14.2	+0.1
TBVI	Tortola	1.52	111	eS	Sn	01 24 32.3	-0.7
TBVI	Tortola	1.52	111		Pn	01 24 14.2	+0.1
TBVI					Sn	01 24 32.3	-0.7
CDVI	St. Croix	1.77	134	Pn	Pn	01 24 18.7	+1.3
CDVI					Sn	01 24 40.1	+1.1
CDVI				IAML		01 24 47.6	
	comp=E,423nm,0.5s						
DR12	Loma Pena Alta	3.10	267	Pn	Pn	01 24 37.0	+1.0
SC01	Santiago de lo	4.39	277	eS	Sn	01 25 44.6	+0.8
SC01				IAML		01 25 49.0	
	comp=Z,31nm,0.7s						
SDDR	Presa de Saban	4.90	271	Pn	Pn	01 25 00.0	-0.7
SDDR				IAML		01 26 16.0	
	comp=Z,32nm,2.0s						
SDDR	Presa de Saban	4.90	271	eS	Sn	01 25 55.1	-1.4
SDDR				IAML		01 25 58.2	
	comp=Z,12nm,0.2s						

ISC 02 01:33:28.6±1.3, **44°.42N**±0°.04×**17°.21E**±0°.05, **h6**^{km}±14^{km}, **n9**, σ**1^{s}10**/17, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	Banja Luka	0.33	357	ePg	Pg	01 33 35.0	+0.1
BLY				eSg	Sg	01 33 39.5	+0.3
KIJV	Kijevo	0.71	234	ePg	Pg	01 33 42.0	-0.2
KIJV				Sg	Sg	01 33 51.3	-0.2
UDBI	Udbina	1.04	276	ePg	Pg	01 33 47.4	-1.1
UDBI				Sg	Sg	01 34 02.3	+0.4
MAKA	Makarska	1.14	187	ePg	Pb	01 33 49.7	-1.0
MAKA				Sg	Sb	01 34 06.2	+0.4
MORI	Morici	1.21	243	ePg	Pb	01 33 50.5	-1.4
MORI				Sg	Sb	01 34 07.7	-0.2
ZIRJ	Zirje	1.36	236	Sn	Sg	01 34 15.4	+3.0
STON	Ston	1.59	167	ePn	Pn	01 33 57.9	+0.6
STON				Sn	Sg	01 34 20.0	+0.3
DUGI	Dugi Otok	1.60	255	ePn	Pn	01 33 58.2	+0.7
DUGI				Sn	Sg	01 34 20.9	+0.8
NVLJ	Novalja	1.68	276	ePn	Pb	01 33 59.5	-0.3
NVLJ				Sn	Sg	01 34 22.6	+0.2

MEX 02 01:37:02.3±0.4, **25°.68N**×**110°.05W**, **h13**^{km}±11^{km}, **MD4.1**, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	Topolobambo	0.91	95	eP	Pb	01 37 16.6	-3.4
TSIG				eS	Sg	01 37 28.2	-3.8
CSIG	Choix	1.89	52	eP	Pn	01 37 31.0	-3.3
CSIG				eS	Sn	01 37 53.0	-5.0
HSIG		3.42	347	eP	Pn	01 37 52.5	-2.9
HSIG				eS	Sn	01 38 32.2	-3.5
HPIG		4.13	71	eP	Pn	01 38 03.2	-2.1
HPIG				i S	Sn	01 38 50.4	-3.0
CGIG		5.01	21	eP	Pn	01 38 15.4	-2.0
CGIG				i S	Sn	01 39 11.7	-3.5

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*IDC **02** 01:51:41.9±0.8, 35°.73N×140°.65E, h0^{km}, mb3.8/11, mb1 3.9/15, mb1mx3.7/38, mbtmp3.7/15, ML3.3/4, MS3.0/5, Ms1 3.0/5, ms1mx2.6/48, Error ellipse: s-maj=19.3km s-min=16.1km az=87.0*
*NEIC **02** 01:51:44.9±1.5, 35°.78N±0°.03×140°.65E±0°.06, h17^{km}±4^{km}, mb4.2/14, Error ellipse: s-maj=7.7km s-min=2.9km az=58.0*
*JMA **02** 01:51:46.5±0.1, 35°.85N×140°.52E, h36^{km}±1^{km}, M3.6*
JMA Felt II J1.
*NIED **02** 01:51:46.5, 35°.85N×140°.52E, h36^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.45; M$_{\theta\theta}$0.31; M$_{\phi\phi}$2.14; M$_{r\theta}$0.09; M$_{\theta\phi}$-1.44; M$_{\phi r}$4.85; Fault plane solution: M$_0$5.56000×10^{14} NP1: φ$_s$177.00000°, δ77.00000°, λ-76.00000°. NP2: φ$_s$308.00000°, δ19.00000°, λ-137.00000°.*
ISC 02 01:51:47.1±0.8, **35°.84N**±0°.03×**140°.52E**±0°.04, **h32**^{km}±5^{km}, **n54**, σ**1^{s}20**/59, **mb3.9**/17, **1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.13	1	⇓P	Pn	01 51 53.3	+0.3
JIHU				eS	Sb	01 51 58.1	+1.0
JSMT	Sammumatsuo	0.20	198	⇓P	Pn	01 51 53.9	0.0
JSMT				eS	Sb	01 51 58.8	+0.7
CHOJ	Chosi	0.30	116	⇑P	Pb	01 51 54.3	-0.6
CHOJ				S	Sb	01 51 59.7	-0.4
JYT	Yasato	0.47	326	⇓P	Pb	01 51 56.6	-0.7
JYT				S	Sb	01 52 03.3	-1.0
JYT	Yasato	0.47	326		Pb	01 51 56.6	-0.7
JYT				Sg	Sb	01 52 03.1	-1.2
JHO	Hitachi	0.78	3	⇓P	Pb	01 52 00.4	-1.8
JHO				S	Sb	01 52 10.2	-2.3
BSO4	Boso 4	0.86	190	P	Pn	01 52 02.9	+0.1
BSO3	Boso 3	1.03	181	P	Pn	01 52 04.9	-0.2
JAG	Ashikaga	1.05	305	P	Pn	01 52 04.4	-1.2
JAG				eS	Sn	01 52 17.1	-2.0
BSO1	Boso 1	1.24	162	P	Pn	01 52 07.0	-0.6
MJAR	Matsushiro Arr	2.00	291	Pn	Pn	01 52 18.5	-0.2
	1.6nm,0.3s,baz=15,slow=8.2,SNR=61						
MJAR				Sn	Sb	01 52 45.4	-2.0
	2.3nm,0.3s,baz=231,slow=44,SNR=4.5						
MJAR				LR	LR	01 53 20.4	
	comp=Z,168nm,19.7s,baz=125,slow=47						
MAJO	Matsushiro	2.00	291		Pn	01 52 19.5	+0.8
MAT	Matsushiro	2.00	291	P	Pn	01 52 19.3	+0.6
MAT				S	Sn	01 52 42.1	-0.6
MJB9	Matsu-Tunnel	2.01	291	Pn	Pn	01 52 19.2	+0.5
JMM	Marumori	2.04	6		Pn	01 52 18.7	-0.5
JSG	Sagara	2.24	239	Pn	Pn	01 52 19.7	-2.2
JGF	Kuroka	2.59	266		Pn	01 52 29.2	+2.4
JHJ	Hachijo jima 2	2.78	193	Pn	Pn	01 52 27.8	-1.6
	49nm,0.3s,baz=90,slow=22,SNR=9.4						
JHJ				Sn	Sn	01 52 59.0	-2.8
	46nm,0.3s,baz=9.0,slow=23,SNR=7.4						
JHJ2	Mitsune	2.78	192	Pn	Pn	01 52 28.1	-1.2
JSD	Sado	2.85	321	Pn	Pn	01 52 31.1	+0.8
INU	Inuyama	2.90	261		Pn	01 52 31.4	+0.4
JTM	Tenmabayashi	4.96	5	Pn	Pn	01 53 00.1	+0.8
JNU	Nakatsue	8.41	254	LR	LR	01 57 27.8	
	comp=Z,142nm,19.0s,baz=164,slow=41						
ASAJ	Asahikawa	8.42	10	Pn	Pn	01 53 46.9	+0.1
	0.6nm,0.3s,baz=162,slow=19,SNR=1.5						
JKA	Kamikawa-asahi	8.42	10		Pn	01 53 46.9	+0.1
KSRS	Korea Array	10.25	283	Pn	Pn	01 54 14.4	+2.5
	0.2nm,0.3s,baz=94,slow=11,SNR=1.1						
KSRS				LR	LR	01 58 16.8	
	comp=Z,54nm,18.5s,baz=200,slow=38						
YOJ	Yonaguni jima	18.88	238	P	Pn	01 56 05.5	-0.1
HIA	Hailar	20.27	318	P	P	01 56 20.4	+0.6
YAK	Yakutsk	27.09	349	LR	LR	02 07 16.2	
	comp=Z,40nm,20.1s,baz=92,slow=34						
SONM	Songino Array	27.88	306	P	P	01 57 34.4	+0.3
	0.5nm,0.5s,baz=108,slow=9.4,SNR=3.1						
SONM				LR	LR	02 08 19.7	
	comp=Z,34nm,18.5s,baz=60,slow=36						
H11S3	WAKE ISLAND Hy	28.85	120	T	T	02 27 32.4	
	baz=312,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	28.85	120	T	T	02 27 36.4	
	baz=312,slow=75,SNR=28						
H11S2	WAKE ISLAND Hy	28.86	120	T	T	02 27 36.3	
	baz=312,slow=75,SNR=25						
LSA	Lhasa	41.61	276	P	P	01 59 34.1	+1.4
LSA				IAmb	IAmb	01 59 35.9	
	comp=Z,4.6nm,1.0s						
ZAA0	Zalesovo Array	42.20	313	P	P	01 59 36.6	-0.1
ZAA0				IAmb	IAmb	01 59 39.6	
	comp=Z,5.4nm,1.1s						
ZALV	Zalesovo Beam	42.20	313	P	P	01 59 38.5	+1.8
	comp=Z,0.8nm,0.3s,baz=132,slow=2.2,SNR=5.2						
SBUM	Sibu	42.31	225	P	P	01 59 39.3	+1.3
MK31	Makanchi Array	44.16	303	P	P	01 59 53.1	+0.4
MKAR	Makanchi Array	44.16	303	P	P	01 59 53.5	+0.8
	comp=Z,1.7nm,0.9s,baz=93,slow=8.4,SNR=11						
MAKZ	Makanchi	44.37	303	P	P	01 59 55.1	+0.7
MAKZ				IAmb	IAmb	01 59 56.9	
	comp=Z,3.5nm,1.1s						
KURK	Kurchatov	46.12	309	P	P	02 00 09.2	+1.1
SKT	Skwentna	48.86	36	P	P	02 00 28.1	-1.3
ILAR	Eielson Array	50.89	32	P	P	02 00 45.3	+0.6
	comp=Z,0.6nm,0.7s,baz=274,slow=6.3,SNR=6.8						
BRVK	Borovoye	50.91	313	P	P	02 00 45.9	+0.9
BRVK				IAmb	IAmb	02 00 54.4	
	comp=Z,2.7nm,0.8s						
KNRA	Kununurra	52.43	194	P	P	02 00 56.3	-0.3
KK31	Karatay Array	53.11	301	P	P	02 01 03.5	+2.0
KK31				IAmb	IAmb	02 01 12.1	
	comp=Z,4.2nm,1.4s						
KKAR	Karatay Array	53.11	301	P	P	02 01 03.1	+1.5
KKAR				IAmb	IAmb	02 01 12.1	
	comp=Z,4.2nm,1.4s						
INK	Inuvik	55.78	27	P	P	02 01 19.4	-1.0
	comp=Z,1.3nm,0.5s,baz=10,slow=12,SNR=3.9						
WRA	Warramunga Arr	55.78	187	P	P	02 01 19.8	-1.2
	comp=Z,0.8nm,0.6s,baz=1.9,slow=7.5,SNR=14						
ASAR	Alice Springs	59.51	187	P	P	02 01 46.0	-1.2
	comp=Z,0.3nm,0.6s,baz=16,slow=8.4,SNR=2.1						
AKASG	Malin Array Be	74.80	322	P	P	02 03 23.1	-0.8
	comp=Z,0.4nm,0.5s,baz=47,slow=5.8,SNR=2.7						
NOA	NORSAR Array B	75.01	337	P	P	02 03 24.9	-0.2
	comp=Z,0.9nm,0.8s,baz=40,slow=8.2,SNR=3.2						
PDAR	Pinedale Array	79.02	45	P	P	02 03 48.4	+0.2
	comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=2.3						
TXAR	Lajitas Array	91.42	52	P	P	02 04 50.8	+0.4
	comp=Z,0.5nm,0.8s,baz=308,slow=4.1,SNR=5.0						

IDC 02 02:01:34.4±2.3, **6°.51S**×**130°.13E**, **h0**^{km}, **mb3.5**/1, **mb1 3.5**/3, **mb1mx3.3**/30, **mbtmp3.3**/3, **ML3.4**/2, **MS4.0**/1, **Ms1 4.0**/1, **ms1mx2.8**/19, **Error ellipse: s-maj=144.6km s-min=32.0km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.97	163	Pn	Pn	02 04 53.3	-0.4
	0.2nm,0.3s,baz=346,slow=13,SNR=11						
WRA				Sn	Sn	02 07 17.7	-12
	0.5nm,0.3s,baz=332,slow=23,SNR=8.8						
ASAR	Alice Springs	17.44	168	P	Pn	02 05 39.6	+0.4
	0.1nm,0.3s,baz=345,slow=9.3,SNR=5.3						
ASAR				S	Sn	02 08 43.5	-11
	0.1nm,0.3s,baz=321,slow=22,SNR=4.2						
JHJ	Hachijo jima 2	40.46	13	LR	LR	02 23 03.4	
	comp=Z,180nm,19.7s,baz=78,slow=32						
MKAR	Makanchi Array	67.89	327	P	P	02 12 34.8	0.0
	0.2nm,0.4s,baz=109,slow=7.7,SNR=6.2						

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*IDC **02** 02:14:28.2±2.3, 37°.79N×142°.20E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.2/42, mbtmp3.3/4, ML1.9/1, Error ellipse: s-maj=47.1km s-min=34.8km az=45.0*
*JMA **02** 02:14:36.6, 37°.63N×141°.75E, h46^{km}±1^{km}, M3.5*
ISC 02 02:14:34.7±1.9, **37°.62N**±0°.05×**141°.82E**±0°.09, **h31**^{km}±12^{km}, **n18**, σ**1^{s}07**/29, **mb3.6**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.74	338	P	Pn	02 14 50.4	+1.4
JIKH				S	Sn	02 15 00.1	+0.8
JMST	Minamisoumatoc	0.74	278	P	Pn	02 14 50.1	+1.0
JMST				S	Sn	02 14 59.8	+0.5
JFK	Kawauchi	0.79	252	P	Pn	02 14 50.8	+1.0
JFK				S	Sb	02 15 00.9	+0.5
JMM	Marumori	0.85	287	P	Pn	02 14 51.6	+1.1
JMM				S	Sb	02 15 02.3	+0.3
JIO	Ouri	0.91	336	P	Pn	02 14 52.7	+1.3
JIO				S	Sn	02 15 04.0	+0.6
ONAJ	Iwakimizuishiy	0.96	238	P	Pn	02 14 53.2	+1.1
ONAJ				S	Sb	02 15 05.4	+0.1
JOU	Okura	1.18	310	P	Pb	02 14 56.4	0.0
JOU				S	Sb	02 15 11.0	-0.3
JFT	Otama	1.18	265	P	Pb	02 14 56.8	+0.3
JFT				eS	Sb	02 15 11.5	0.0
JKMT	Kesennumamotoy	1.22	347	P	Pb	02 14 57.2	+0.1
JMK	Ichinoseki	1.41	341	P	Pb	02 15 00.1	-0.3
JMK				S	Sb	02 15 16.8	-1.2
JYS	Shirataka	1.51	294	P	Pb	02 15 01.5	-0.6
JFY	Yanaizu	1.69	263	P	Pb	02 15 03.9	-1.3
JYK	Kaneyama	1.73	319	P	Pb	02 15 04.3	-1.5
MJAR	Matsushiro Arr	3.08	251	Pn	Pn	02 15 22.9	+1.7
	0.1nm,0.3s,baz=73,slow=15,SNR=4.3						
MJAR				Sn	Sb	02 16 04.6	-1.3
	0.2nm,0.3s,baz=91,slow=33,SNR=4.1						
MAT	Matsushiro	3.08	251	P	Pn	02 15 23.8	+2.6
MAT				eS	Sn	02 15 56.4	-0.6
KURBB	Kurchatov Arra	45.90	308	P	P	02 22 53.1	-1.0
	0.3nm,0.4s,baz=80,slow=8.1,SNR=2.4						
WRA	Warramunga Arr	57.69	188	P	P	02 24 21.8	-0.6
	0.3nm,0.9s,baz=6.3,slow=7.5,SNR=5.3						
ASAR	Alice Springs	61.41	188	P	P	02 24 47.7	-0.2
	1.1nm,1.1s,baz=1.7,slow=9.3,SNR=4.4						

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*IDC **02** 02:29:34.2±2.7, 31°.91S×69°.76W, h81^{km}±23^{km}, mb3.6/6, mb1 3.6/10, mb1mx3.5/33, mbtmp3.8/10, Error ellipse: s-maj=27.4km s-min=19.0km az=93.0*
*SJA **02** 02:29:35.9±0.7, 31°.91S×69°.87W, h105^{km}±4^{km}, ML4.0, MW4.0*
*NEIC **02** 02:29:36.7±2.0, 31°.91S±0°.05×69°.87W±0°.07, h113^{km}±6^{km}, Error ellipse: s-maj=9.1km s-min=7.4km az=97.0*
ISC 02 02:29:36.4±0.7, **31°.93S**±0°.04×**69°.85W**±0°.05, **h108**^{km}±6^{km}, **n62**, σ**1^{s}26**/68, **mb3.9**/7, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.49	75	eP	Pn	02 29 53.6	+0.2
RTLS				eS	Sn	02 30 06.9	+0.8
RTLS				IAML		02 30 07.3	
	comp=Z,3μm,0.2s						
AUSP	Uspallata	0.50	127	eP	Pn	02 29 53.8	+0.4
AUSP				eS	Sn	02 30 06.8	+0.7
VA03	San Esteban	1.02	215		Pn	02 29 58.6	+0.8
ZON	Zonda	1.07	70		Pn	02 29 58.6	+0.4
ASAL	Salagasta	1.09	128	eP	Pn	02 29 58.9	+0.4
ASAL				IAML		02 30 24.7	
	comp=Z,1μm,0.6s						
RTCV	Cerro Valdivia	1.12	87	eP	Pn	02 29 58.9	+0.2
RTCV				eS	Sn	02 30 15.8	+0.2
ARCO	CERRO ARCO	1.20	140	eP	Pn	02 30 00.7	+0.9
ARCO				eS	Sn	02 30 18.9	+1.4
ARCO				IAML		02 30 20.6	
	comp=Z,2μm,0.6s						
CO02	Combarbal	1.21	306		Pn	02 30 00.6	+0.7
CO03	El Pedregal	1.30	326		Pn	02 30 01.7	+0.9
RTLL	Cerro Villicun	1.32	64	eP	Pn	02 30 01.4	+0.5
RTLL				IAML		02 30 21.6	
	comp=Z,3μm,0.3s						
AAGR	Agrelo	1.45	143	eP	Pn	02 30 03.5	+1.0
AAGR				eS	Pn	02 30 03.8	+1.3
AAGR				IAML		02 30 28.4	
	comp=Z,1μm,0.6s						
ACCO	Cerro Coronel	1.49	27	eP	Pn	02 30 04.3	+0.9
ACCO				eS	Sn	02 30 25.3	+1.5
ACCO				IAML		02 30 27.1	
	comp=Z,1μm,0.5s						
MT05	Renca	1.64	207		Pn	02 30 05.6	+0.7
MT02	Curacav	1.72	219		Pn	02 30 05.8	+0.1
AROD	Rodeo	1.78	11	eP	Pn	02 30 08.6	+1.7
ACDV	Cuesta del Vie	1.86	20	eP	Pn	02 30 07.8	+0.1
ACDV				eS	Sn	02 30 34.3	+2.8
ACDV				IAML		02 30 36.3	
	comp=Z,551nm,0.5s						
GO04	Tololo Observa	1.93	335	Pn	Pn	02 30 09.2	+0.6
GO04	Tololo Observa	1.93	335	eP	Pn	02 30 08.8	+0.2
CO01	Juntas del Tor	1.95	354		Pn	02 30 10.7	+1.7
BO02	Sierra Bellavi	2.96	195	Pn	Pn	02 30 22.3	+0.4
LCO	Las Campanas	3.00	346	Pn	Pn	02 30 22.9	+0.3
LAMA	Las Malvinas	3.05	170	eP	Pn	02 30 23.6	+0.7
RFA	San Rafael	3.07	158	eP	Pn	02 30 23.1	-0.2
AC05	El Transito	3.10	353	Pn	Pn	02 30 25.0	+1.2
COIS	El Sosneado	3.18	176	eP	Pn	02 30 23.9	-0.9
VCA	Vinchina	3.48	25	eP	Pn	02 30 30.0	+1.1
VCA				IAML		02 31 17.3	
	comp=Z,446nm,0.3s						
PUMA	Malargue	3.58	175	eP	Pn	02 30 31.1	+1.1
AC04	Llanos de Chal	3.85	344	Pn	Pn	02 30 33.8	0.0
GO03	Copiap	4.33	356	Pn	Pn	02 30 40.2	0.0
CYA	Choya	4.94	46	eP	Pn	02 30 47.1	-1.2
CYA				IAML		02 32 32.7	
	comp=Z,70nm,0.9s						
AC02	Maricunga	5.11	7		Pn	02 30 51.5	+0.3
BI03	Tigo	5.56	207	Pn	Pn	02 30 55.5	-1.2
AC01	Pan de Azucar	5.79	353	Pn	Pn	02 30 58.4	-1.6
AHML	Horco Molle	6.46	39	eP	Pn	02 31 07.8	-1.3
AHML				IAML		02 32 21.8	
	comp=Z,28nm,0.8s						
FSA	Cafayete	6.71	31	eP	Pn	02 31 12.9	+0.3
GO02	Mina Guanaco	6.74	2	Pn	Pn	02 31 11.2	-1.9
PB14	IPOC Station P	7.29	356		Pn	02 31 17.3	-3.2
PB14	IPOC Station P	7.29	356	eP	Pn	02 31 17.4	-3.1
PB14				IAML		02 33 01.2	
	comp=Z,25nm,1.7s						
PLCA	Paso Flores	8.81	183	P	Pn	02 31 39.5	-1.3
	comp=Z,0.2nm,0.3s,baz=23,slow=17,SNR=6.3						
LVC	Limon Verde	9.32	5	P	Pn	02 31 44.9	-3.2
	comp=Z,0.6nm,0.3s,baz=191,slow=10,SNR=2.2						
LVC	Limon Verde	9.32	5	Pn	Pn	02 31 46.7	-1.4
CPUP	Villa Florida	12.28	66	P	Pn	02 32 24.5	-3.0
	comp=Z,0.3nm,0.3s,baz=236,slow=12,SNR=6.6						
CPUP	Villa Florida	12.28	66	Pn	Pn	02 32 26.9	-0.6
SIV	San Ignacio	17.76	29	P	P	02 33 35.7	-0.4
	comp=Z,0.2nm,0.3s,baz=231,slow=11,SNR=7.3						
BDFB	Brasilia	25.65	56	P	P	02 34 56.1	-0.2
	comp=Z,1.4nm,0.5s,baz=227,slow=5.8,SNR=3.6						
HOPE	Hope Point	32.57	143	P	P	02 35 56.1	-1.0
SNET	Serv Nac Est T	49.01	335	P	P	02 38 10.1	-2.2
SNAA	Sanae	52.82	159	P	P	02 38 40.8	+0.5
	comp=Z,1.5nm,0.7s,baz=265,slow=8.4,SNR=12						
SNAA	Sanae	52.82	159	P	P	02 38 40.3	+0.1
SNAA				IAmb	IAmb	02 38 42.5	
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	58.31	180	P	P	02 39 21.2	+1.5
Z56A	Williston	65.80	349	P	P	02 40 09.8	-0.1
TXAR	Lajitas Array	68.87	329	P	P	02 40 30.7	+1.3
	comp=Z,0.5nm,0.6s,baz=158,slow=8.6,SNR=7.7						
WVT	Waverly	69.77	345	P	P	02 40 35.5	+0.9
DBIC	Dimbokro	72.77	70	P	P	02 40 53.6	+0.4
	comp=Z,1.1nm,0.4s,baz=216,slow=7.5,SNR=3.7						
DBIC	Dimbokro	72.77	70	IAmb	IAmb	02 41 12.6	
	comp=Z,3.7nm,1.2s						
TOA0	Torodi Ar. Sit	81.77	69	P	P	02 41 43.2	-0.2
TOA0				IAmb	IAmb	02 41 44.9	
	comp=Z,2.1nm,0.8s						
TORD	Torodi Ar. Bea	81.77	69	P	P	02 41 44.2	+0.7
	comp=Z,1.5nm,0.7s,baz=268,slow=5.0,SNR=6.8						
PDAR	Pinedale Array	82.78	332	P	P	02 41 49.6	+1.2

	comp=Z,0.2nm,0.7s,baz=128,slow=7.4,SNR=2.9						
FINES	FINESS Array B	120.25	34	PKP	PKiKP	02 48 13.9	0.0
	comp=Z,6.0nm,1.0s,baz=101,slow=2.8,SNR=4.7						
WRA	Warramunga Arr	123.45	208	PKP	PKiKP	02 48 21.7	0.0
	comp=Z,0.3nm,0.4s,baz=158,slow=1.7,SNR=14						
ZALV	Zalesovo Beam	151.50	32	PKPbc	PKiKP	02 49 18.6	+1.0
	comp=Z,11nm,0.5s,baz=301,slow=3.1,SNR=28						
MKAR	Makanchi Array	154.01	47	PKPbc	PKiKP	02 49 23.9	+0.9
	comp=Z,0.6nm,0.7s,baz=308,slow=2.6,SNR=6.0						

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*IDC **02** 02:46:57.0±1.0, 8°.61N×126°.20E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.7/35, mbtmp3.8/8, ML4.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/48, Error ellipse: s-maj=45.5km s-min=17.0km az=89.0*

*NEIC **02** 02:46:57.9±2.9, 8°.69N±0°.06×126°.1E±0°.1, h16^{km}±6^{km}, mb4.3/7, Error ellipse: s-maj=16.3km s-min=6.4km az=111.0*

*MAN **02** 02:46:58.4, 8°.50N×125°.88E, h7^{km}, mb5.2, ML4.1, MS4.2*

ISC 02 02:46:59.0±1.1, **8°.53N**±0°.02×**125°.85E**±0°.03, **h17**^{km}±8^{km}, **n36**, σ**2ˢ.07**/50, **mb3.8**/8, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.49	333	eP	Pb	02 47 08.4	-0.9
BUTP				eS	Sb	02 47 21.4	+5.2
BUTP	Butuan	0.49	333	eP	Pb	02 47 08.8	-0.5
BUTP				eS	Sb	02 47 21.2	+5.0
BIP	Bislig	0.50	127	⇓iP	Pb	02 47 08.8	-0.7
BIP				i S	Sn	02 47 18.9	-0.8
BUKP	Musuan	1.01	230	eP	Pg	02 47 16.4	-2.2
BUKP				eS	Sn	02 47 34.8	+2.4
BUKP	Musuan	1.01	230	eP	Pg	02 47 16.6	-2.0
BUKP				eS	Sn	02 47 34.7	+2.4
CGP	Cagayan de Oro	1.14	266	⇑eP	Pb	02 47 19.5	-0.9
CGP				i S	Sn	02 47 37.4	+1.8
GLSP	General Luna,	1.28	12	eP	Pn	02 47 21.8	-0.4
GLSP				eS	Sn	02 47 41.9	+2.8
GLSP	General Luna,	1.28	12	eP	Pn	02 47 21.8	-0.4
GLSP				eS	Sn	02 47 41.1	+2.1
DAV	Davao City (W)	1.47	190	Pn	Pg	02 47 26.8	-0.6
	52nm,0.3s,baz=331,slow=4.1,SNR=1.9						
DAV				Sn	Sg	02 47 47.8	+1.2
	75nm,0.3s,baz=239,slow=23,SNR=7.6						
MATI	Mati	1.62	165	eP	Pn	02 47 26.2	-0.7
MATI				eS	Sg	02 47 53.2	+1.8
MATI	Mati	1.62	165	eP	Pn	02 47 26.2	-0.7
MATI				eS	Sg	02 47 53.6	+2.2
KCP	Kidapawan	1.68	206	⇓iP	Pb	02 47 29.2	-0.4
KCP				i S	Sg	02 47 59.4	+6.0
MSLP	Maasin	1.87	329	eP	Pg	02 47 33.3	-1.7
MSLP				eS	Sg	02 48 00.0	+0.6
MSLP	Maasin	1.87	329	eP	Pg	02 47 34.2	-0.8
MSLP				eS	Sg	02 48 00.5	+1.1
SKMP	Bagumbayan, Su	2.38	213	eP	Pn	02 47 37.5	+0.2
SKMP				eS	Sn	02 47 56.3	-10
SKMP	Bagumbayan, Su	2.38	213	eP	Pn	02 47 38.1	+0.8
DDMP	Don Marcelino,	2.41	183	eP	Pn	02 47 38.7	+1.0
DDMP				eS	Sn	02 48 06.2	-0.8
DDMP	Don Marcelino,	2.41	183	eP	Pb	02 47 42.2	+0.2
PAGZ	Pagadian	2.53	255	eP	Pb	02 47 41.5	-2.6
PAGZ				eS	Sb	02 48 14.9	-0.1
PAGZ	Pagadian	2.53	255	eP	Pb	02 47 41.5	-2.6
PAGZ				eS	Sb	02 48 14.2	-0.8
SIJI	Sorong	10.78	150	Pn	Pn	02 49 33.5	+0.6
	2.3nm,0.3s,baz=77,slow=16,SNR=3.8						
NACB	Ninganchiao	16.08	346	Pn	Pn	02 50 41.3	-3.2
NACB				IAmb	IAmb	02 50 48.0	
	comp=Z,58nm,1.5s						
FITZ	Fitzroy Crossi	26.46	180	P	P	02 52 38.2	+2.8
	comp=Z,1.6nm,0.5s,baz=12,slow=19,SNR=1.9						
KS19	Wonju Array Si	28.90	3	P	P	02 52 51.9	-5.3
WRA	Warramunga Arr	29.50	164	P	P	02 53 01.6	-1.1
	comp=Z,0.2nm,0.6s,baz=316,slow=15,SNR=1.4						
ASAR	Alice Springs	32.95	166	P	P	02 53 33.2	+0.2
	comp=Z,0.3nm,0.6s,baz=342,slow=7.4,SNR=4.5						
USRK	Ussuriysk Ar.	35.94	8	P	P	02 53 59.1	+0.4
	comp=Z,3.5nm,0.8s,baz=165,slow=6.0,SNR=4.6						
SONM	Songino Array	42.51	341	LR	LR	03 14 18.8	
	comp=Z,59nm,18.9s,baz=76,slow=39						
DZM	Mont Dzumac	50.09	128	LR	LR	03 17 02.8	
	comp=Z,41nm,21.7s,baz=282,slow=36						
PETK	Petropavlovsk-	51.39	24	P	P	02 56 01.7	-1.2
	comp=Z,3.4nm,1.0s,baz=224,slow=6.0,SNR=2.3						
MK31	Makanchi Array	53.16	324	P	P	02 56 15.7	-0.5
MK31				IAmb	IAmb	02 57 42.7	
	comp=Z,4.5nm,1.7s						
MKAR	Makanchi Array	53.16	324	P	P	02 56 17.8	+1.5
	comp=Z,0.2nm,0.5s,baz=131,slow=7.3,SNR=4.8						
NIL	Nilore	54.38	305	P	P	02 56 24.9	-0.5
ABKAR	Akbulak array	67.92	320	P	P	02 57 57.7	+0.8
SKT	Skwentna	79.06	28	P	P	02 58 59.0	-3.3
ILAR	Eielson Array	81.18	26	P	P	02 59 12.0	-1.7
	comp=Z,1.0nm,1.2s,baz=230,slow=4.2,SNR=2.7						

MAN 02 03:14:45.8, 8°.64N×126°.33E, h33^{km}, mb4.3, ML3.1, MS2.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.78	295	eP	Pb	03 15 01.1	+0.1
BUTP				eS	Sb	03 15 11.7	+0.4
BUKP	Musuan	1.47	239	eP	Pn	03 15 09.9	-0.2
BUKP				eS	Sn	03 15 28.5	+0.4
CGP	Cagayan de Oro	1.63	264	⇓eP	Pn	03 15 12.6	+0.4

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*TAP **02** 03:37:03.0, 24°.86N×122°.51E, h3^{km}±1^{km}, ML2.8, D*

*JMA **02** 03:37:04.4±0.2, 24°.71N×122°.49E, h25^{km}, M2.0*

ISC 02 03:37:02.8±1.0, **24°.85N**±0°.03×**122°.51E**±0°.02, **h13**^{km}±9^{km}, **n40**, σ**0ˢ.72**/76, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.50	288	eP	Pg	03 37 12.4	-0.3
	baz=286						
TWB1				eS	Sg	03 37 18.3	-1.1
	baz=286						
JYNG	Yonagunijimaku	0.56	135	P	Pg	03 37 14.3	+0.5
JYNG				S	Sg	03 37 20.7	-0.5
YOJ	Yonaguni jima	0.60	130	P	Pg	03 37 14.7	+0.3
YOJ				eS	Sg	03 37 22.3	-0.1
YOJ	Yonaguni jima	0.60	130	eP	Pg	03 37 14.8	+0.3
	baz=131						
YOJ				eS	Sg	03 37 22.6	+0.2
	baz=131						
NTC	Toucheng	0.62	270	eP	Pg	03 37 15.4	+0.5
	baz=269						
NTC				eS	Sb	03 37 26.1	+2.0
	baz=269						
TIPB	Shuangxi	0.64	281	P	Pg	03 37 14.9	-0.3
	baz=279						
TIPB				eS	Sg	03 37 23.9	+0.3
	baz=279						
TWC	Suao	0.65	248	P	Pg	03 37 15.2	-0.2
	baz=246						
TWC				eS	Sb	03 37 25.6	+0.6
	baz=246						
NWF	Wu-fen Shan	0.70	288	eP	Pg	03 37 16.0	-0.4
	baz=287						
NWF				eS	Sg	03 37 25.7	0.0
	baz=287						
WFSB	Wu-fen Shan	0.70	288	eP	Pg	03 37 16.3	-0.1
	baz=287						
WFSB				eS	Sb	03 37 28.4	+2.0
	baz=287						
TNOU	National Taiwa	0.73	294	eP	Pg	03 37 14.2	-2.8
	baz=292						
TNOU				eS	Sg	03 37 27.9	+1.2
	baz=292						
ENAH	Nanao	0.75	238	eP	Pg	03 37 17.3	-0.2
	baz=237						
ENAH				eS	Sb	03 37 28.2	+0.2
	baz=237						
TWE	Neicheng	0.78	261	eP	Pg	03 37 18.2	+0.3
	baz=259						
TWE				eS	Sb	03 37 29.5	+0.8
	baz=259						
ENA	Nanau	0.82	239	eP	Pg	03 37 18.8	+0.1
	baz=237						
ENA				eS	Sb	03 37 29.8	0.0
	baz=237						
TWA	Mucha	0.85	279	eP	Pg	03 37 19.3	-0.1
	baz=277						
TWA				eS	Sg	03 37 31.0	+0.5
	baz=277						
PCYT	Pengchaiyu	0.87	333	eP	Pb	03 37 19.3	-0.5
	baz=332						
PCYT				eS	Sb	03 37 32.1	+0.7
	baz=332						
ENTT	Nioudou	0.89	256	eP	Pb	03 37 20.7	+0.6
	baz=255						
ENTT				eS	Sn	03 37 33.0	-0.7
	baz=255						
NHDH	Xindian Distri	0.90	277	eP	Pb	03 37 19.8	-0.5
	baz=276						
NWLT	Wulai	0.92	266	eP	Pb	03 37 20.0	-0.6
	baz=264						
NWLT				eS	Sg	03 37 33.3	+0.6
	baz=264						
TWY	Chenhua	0.93	297	eP	Pb	03 37 20.5	-0.3
	baz=296						
TWY				eS	Sb	03 37 32.7	-0.3
	baz=296						
NDT	Datong Townshi	0.94	255	eP	Pb	03 37 21.2	+0.2
	baz=254						
NDT				eS	Sn	03 37 34.5	-0.6
	baz=254						
YHNB	Yeheng	1.05	260	eP	Pb	03 37 22.5	-0.4
	baz=259						
YHNB				eS	Sg	03 37 37.4	+0.7
	baz=259						
NSK	Sanguang	1.06	261	eP	Pb	03 37 22.8	-0.3
	baz=259						
NSK				eS	Sg	03 37 37.7	+0.5
	baz=259						
NACB	Ninganchiao	1.07	231	eP	Pb	03 37 22.6	-0.7
	baz=230						
NACB				eS	Sb	03 37 36.7	-0.5
	baz=230						
NNSB	Datong	1.11	248	eP	Pb	03 37 23.7	-0.3
	baz=247						
NNSB				eS	Sn	03 37 39.5	+0.1
	baz=247						
NNSH	Datong	1.11	248	eP	Pb	03 37 23.9	0.0
	baz=247						
NNSH				eS	Sn	03 37 39.5	+0.1
	baz=247						
NNS	Nan Shan	1.11	249	eP	Pb	03 37 24.1	+0.1
	baz=247						
NNS				eS	Sn	03 37 39.1	-0.4
	baz=247						
ETLH	Xiulin Townshi	1.14	236	eP	Pb	03 37 24.3	-0.1
	baz=235						
ETLH				eS	Sg	03 37 39.1	-0.5
	baz=235						
IRIF	Iriomote-Funau	1.22	115	P	Pn	03 37 25.8	+0.2
FUSS	Fushou	1.30	243	eP	Pb	03 37 27.3	0.0
	baz=242						
FUSS				eS	Sg	03 37 45.3	+0.4
	baz=242						
WHF	Hehuan Shan	1.34	239	eP	Pn	03 37 27.8	+0.2
	baz=237						
WHF				eS	Sn	03 37 45.0	-0.4
	baz=237						
TWT	Tachien	1.36	244	eP	Pb	03 37 28.3	+0.1
	baz=243						
TWT				eS	Sn	03 37 45.3	-0.2
	baz=243						
TDCB	Techi	1.37	245	eP	Pb	03 37 28.5	+0.1
	baz=243						
TDCB				eS	Sb	03 37 45.2	-0.6
	baz=243						
LIOB	Emei	1.38	262	eP	Pg	03 37 30.5	+1.2
	baz=260						
LIOB				eS	Sb	03 37 46.5	+0.6
	baz=260						
NSTT	Nanjuang	1.39	261	eP	Pg	03 37 31.1	+1.6
	baz=260						
NSTT				eS	Sn	03 37 46.5	+0.3
	baz=260						
CHGB	Renai	1.45	237	eP	Pb	03 37 30.2	+0.4
	baz=236						
CHGB				eS	Sg	03 37 49.2	-0.5
	baz=236						
WHP	Taichung City	1.54	249	eP	Pg	03 37 32.3	0.0
	baz=247						
WHP				eS	Sg	03 37 51.4	-0.9
	baz=247						
EHY	Hungye	1.73	219	eP	Pn	03 37 32.6	0.0
	baz=218						
SSLB	Suanglung	1.77	234	eP	Pb	03 37 35.3	+0.1
	baz=232						
SSLB				eS	Sb	03 37 56.4	-1.0
	baz=232						
TYC	Yuchr	1.78	238	eP	Pg	03 37 37.2	+0.3
	baz=237						
YULB	Yu-li	1.83	218	eP	Pn	03 37 33.5	-0.5
	baz=217						
YULB				eS	Sb	03 37 57.2	-1.7
	baz=217						

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*IDC **02** 04:22:54.2±0.8, 32°.99S×71°.04W, h49^{km}±6^{km}, mb3.7/5, mb1 3.7/8, mb1mx3.5/28, mbtmp3.7/8, MS3.1/2, Ms1 3.1/2, ms1mx2.6/20, Error ellipse: s-maj=30.8km s-min=17.2km az=100.0*

*GUC **02** 04:22:54.2±0.5, 33°.01S×71°.22W, h54^{km}±1^{km}, ML4.0*

ISC 02 04:22:53.8±0.6, **33°.01S**±0°.03×**71°.28W**±0°.05, **h49**^{km}±5^{km}, **n41**, σ**1ˢ.10**/47, **mb4.1**/5, **2C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT02	Curacav	0.28	154	⇑iP	Pn	04 23 03.0	+0.3
MT02				i S	Sn	04 23 09.4	+0.4
MT05	Renca	0.60	130	⇓iP	Pn	04 23 06.7	+0.4
MT05				eS	Sn	04 23 15.5	+0.2
MT05				IAML		04 23 17.0	
	comp=N,9µm,0.4s						
VA03	San Esteban	0.66	69	⇑iP	Pn	04 23 07.1	0.0
VA03				eS	Sn	04 23 16.6	-0.2
VA03				IAML		04 23 17.2	
	comp=E,24µm,0.2s						
VA05	Santo Domingo	0.70	203	eP	Pn	04 23 08.4	+0.9
VA05				eS	Sn	04 23 19.2	+1.7
VA05				IAML		04 23 21.5	
	comp=N,10µm,0.4s						
FSR	Penalolen	0.79	127	eP	Pn	04 23 10.2	+1.4
FSR				eS	Sn	04 23 21.0	+1.4
MT09	Talagante	0.81	162	⇓eP	Pn	04 23 09.4	+0.4
MT09				eS	Sn	04 23 20.6	+0.4
MT09				IAML		04 23 23.1	
	comp=E,8µm,0.3s						
MT03	Universidad Ad	0.81	127	⇓iP	Pn	04 23 09.4	+0.4
MT03				i S	Sn	04 23 20.6	+0.4
MT03				IAML		04 23 21.4	
	comp=E,12µm,0.2s						
LMEL	Las Melosas	1.23	133	⇓iP	Pn	04 23 15.3	+0.5
LMEL				eS	Sn	04 23 31.2	+0.8
LMEL				IAML		04 23 33.7	
	comp=N,5µm,0.4s						
BO03	Pichilemu	1.59	201	eP	Pn	04 23 19.4	-0.1
BO03				eS	Sn	04 23 35.7	-3.1
CO02	Combarbal	1.81	8	eP	Pn	04 23 23.2	+0.5
CO02				eS	Sn	04 23 46.3	+1.7
CO02				IAML		04 23 49.0	
	comp=E,4µm,0.2s						
BO02	Sierra Bellavi	1.83	167	⇓iP	Pn	04 23 23.9	+1.0
BO02				eS	Sn	04 23 46.3	+1.4
CO03	El Pedregal	2.22	13	eP	Pn	04 23 29.4	+1.1
CO03				eS	Sn	04 23 55.7	+1.1
CO03				IAML		04 24 01.6	
	comp=E,1µm,0.2s						
AC05	El Transito	4.25	12	eP	Pn	04 23 57.5	+1.4
AC05				eS	Sn	04 24 44.7	+0.2
H03N1	Juan Fernandez	6.41	264	T	T	04 30 58.2	
	baz=89,slow=74,SNR=213						
H03N3	Juan Fernandez	6.42	264	T	T	04 30 57.8	
	baz=89,slow=74,SNR=365						
H03N2	Juan Fernandez	6.42	264	T	T	04 30 59.4	
	baz=89,slow=74,SNR=239						
H03S1	Juan Fernandez	6.43	260	T	T	04 30 47.1	
	baz=82,slow=75,SNR=42						
H03S3	Juan Fernandez	6.43	261	T	T	04 30 48.4	
	baz=82,slow=75,SNR=36						
H03S2	Juan Fernandez	6.44	261	T	T	04 30 43.2	
	baz=82,slow=75,SNR=61						
PLCA	Paso Flores	7.73	176	P	Pn	04 24 44.2	+0.4
	comp=E,0.2nm,0.3s,baz=355,slow=12,SNR=9.2						
CPUP	Villa Florida	13.83	65	P	Pn	04 26 06.3	-0.8
	comp=E,0.1nm,0.3s,baz=245,slow=13,SNR=3.7						
CPUP				LR	LR	04 31 49.1	
	comp=E,27nm,19.8s,baz=226,slow=39						
SIV	San Ignacio	19.30	31	P	P	04 27 13.7	-1.1
	comp=E,0.2nm,0.3s,baz=110,slow=7.6,SNR=4.9						
BDFB	Brasilia	27.26	56	P	P	04 28 32.2	-1.5
	comp=E,0.7nm,0.4s,baz=225,slow=4.3,SNR=1.7						
VNA3	Neumayer Olymp	50.04	158	P	P	04 31 43.6	+0.6
VNA2	Neumayer--Watz	50.68	158	P	P	04 31 48.5	+0.7
	baz=283,slow=7.9						
SNAA	Sanae	52.27	158	P	P	04 32 00.9	+1.1
SNAA	Sanae	52.27	158	P	P	04 31 59.5	-0.3
	comp=E,1.4nm,0.7s,baz=245,slow=11,SNR=7.2						
SNAA				pP	pP	04 32 13.9	+0.5
	comp=E,1.1nm,0.7s,baz=271,slow=5.1,SNR=2.9						
QSPA	South Pole Qui	57.23	180	P	P	04 32 36.1	+0.3
	comp=E,1.2nm,0.8s,baz=81,slow=4.7,SNR=5.6						
QSPA				pP	pP	04 32 50.9	+1.3
	comp=E,1.8nm,0.9s,baz=142,slow=4.5,SNR=4.4						
TXAR	Lajitas Array	69.19	330	P	P	04 33 56.5	+1.2
	comp=E,0.4nm,0.5s,baz=155,slow=8.1,SNR=14						
PDAR	Pinedale Array	83.17	333	LR	LR	05 07 35.0	
	comp=E,35nm,21.6s,baz=356,slow=32						
TORD	Torodi Ar. Bea	83.28	70	P	P	04 35 14.7	-0.9
	comp=E,1.5nm,0.8s,baz=261,slow=3.9,SNR=5.1						
TORD				pP	pP	04 35 27.5	-2.6
	comp=E,0.8nm,0.7s,baz=274,slow=4.6,SNR=2.4						
WRA	Warramunga Arr	121.93	209	PKP	PKPdf	04 41 42.0	-1.3
	comp=E,0.3nm,0.5s,baz=159,slow=1.7,SNR=9.5						
H11S2	WAKE ISLAND Hy	126.41	269	T	T	07 01 00.8	
	baz=118,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	126.43	269	T	T	07 01 01.5	
	baz=118,slow=75,SNR=57						
H11S3	WAKE ISLAND Hy	126.43	269	T	T	07 01 02.1	
	baz=118,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	126.80	271	T	T	07 01 25.4	
	baz=150,slow=74,SNR=6.9						
H11N2	WAKE ISLAND Hy	126.82	271	T	T	07 01 27.1	
	baz=124,slow=74,SNR=9.5						
BVAR	Borovoye Array	146.12	42	PKPbc	PKPdf	04 42 28.1	+1.2
	comp=E,0.7nm,0.5s,baz=276,slow=2.8,SNR=7.8						
KURBB	Kurchatov Arra	151.72	43	PKPbc	PKPbc	04 42 42.8	+0.4
	comp=E,1.6nm,0.6s,baz=304,slow=3.1,SNR=17						
KURBB				pPKPbc	sPKPdf	04 42 57.0	+0.6
	comp=E,0.5nm,0.5s,baz=302,slow=2.8,SNR=4.1						
ZALV	Zalesovo Beam	153.05	32	PKPbc	PKPbc	04 42 45.3	+0.1
	comp=E,1.7nm,0.4s,baz=327,slow=3.6,SNR=7.1						
MKAR	Makanchi Array	155.63	48	PKPab	PKPab	04 43 07.8	-0.4
	comp=E,0.5nm,0.6s,baz=291,slow=4.4,SNR=6.4						
MKAR				pPKPab	pPKPab	04 43 21.9	-0.9
	comp=E,0.4nm,0.7s,baz=285,slow=2.4,SNR=3.3						

MAN 02 04:28:30.3, 9°.41N×123°.20E, h1^{km}, mb4.2, ML3.1, MS2.8, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	0.69	307	eP	Pg	04 28 43.9	+0.3
CNOP				eS	Sb	04 28 54.8	-0.4
LLP	Lapu-Lapu	1.18	40	⇑eP	Pg	04 28 52.8	-0.1
LLP				i S	Sn	04 29 10.8	+0.2
GUIM	Jordan	1.35	334	eP	Pg	04 28 55.9	-0.4
GUIM				eS	Sn	04 29 15.2	+0.3
MSLP	Maasin	1.79	66	eP	Pn	04 29 02.9	+0.5
MSLP				eS	Sg	04 29 29.5	+1.6

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*IDC **02** 04:30:09.3±1.5, 32°.45N×48°.98E, h0^{km}, mb3.8/8, mb1 3.9/12, mb1mx3.6/42, mbtmp3.8/12, ML3.5/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/48, Error ellipse: s-maj=30.4km s-min=22.4km az=164.0*

*TEH **02** 04:30:12.3, 32°.43N×49°.00E, h10^{km}, ML3.8*

*NEIC **02** 04:30:13.4±2.2, 32°.41N±0°.05×48°.93E±0°.08, h26^{km}±6^{km}, Error ellipse: s-maj=10.8km s-min=6.1km az=112.0*

ISC 02 04:30:12.9±0.6, **32°.34N**±0°.04×**48°.97E**±0°.05, **h23**^{km}, **n86**, σ**1ˢ.79**/87, **mb3.8**/12, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.27	212	Pg	Pb	04 30 19.8	+0.5
SHGR	Shooshtar-Gavs	0.27	212	ePg	Pb	04 30 19.9	+0.6
AHWZ	Ahwaz	1.04	195	Pg	Pn	04 30 34.7	+2.6
AHWZ	Ahwaz	1.04	195	ePg	Pn	04 30 34.7	+2.6
IKMR	Kamar-syah	1.28	337	ePg	Pn	04 30 34.8	-0.5
IKMR				e		04 31 00.9	
	comp=Z,99nm,0.6s						
IKFM	Kafar-mosalman	1.51	322	ePg	Pb	04 30 40.2	-0.1
SHK1	Shahrekord	1.62	90	ePg	Pn	04 30 42.8	+2.5
SHK1				e		04 31 08.3	
	comp=Z,99nm,0.6s						
KHMZ	Khomeyn	1.63	31	Pn	Pn	04 30 42.1	+1.7
KHMZ	Khomeyn	1.63	31	ePn	Pn	04 30 42.2	+1.8
IPIR	Pirpir	1.66	77	ePg	Pn	04 30 42.8	+1.9
IPIR				eSg	Sb	04 31 07.0	+3.3
IPIR				e		04 31 08.1	
	comp=Z,99nm,0.8s						
IKOM	Komasi	2.20	327	ePn	Pn	04 30 50.1	+1.9
IKOM				e		04 31 29.2	
	comp=Z,99nm,0.8s						
ASAO	Ashtian	2.38	22	Pn	Pn	04 30 52.6	+1.9
ASAO	Ashtian	2.38	22	ePn	Pn	04 30 52.7	+2.0
IKLH	Kolahrood	2.41	65	ePn	Pn	04 30 53.8	+2.7
IKLH				e		04 31 34.1	
	comp=Z,99nm,0.4s						
QAM	Ghamsar	2.52	55	ePn	Pn	04 30 55.5	+2.9
KCHF	Cheshme Sefid,	2.52	321	ePn	Pn	04 30 53.2	+0.6
KER	Kermanshah	2.56	324	ePn	Pn	04 30 55.1	+2.0
IGAR	Gharneh	2.60	88	ePn	Pn	04 30 56.3	+2.5
IGAR				e		04 31 37.2	
	comp=Z,99nm,0.2s						
IALM	Almabolaq	2.60	345	ePn	Pn	04 30 55.1	+1.2
IVIS	Veis	2.81	322	ePn	Pn	04 30 59.1	+2.5
IGHG	Ghaleghazi	2.83	315	ePn	Pn	04 30 58.6	+1.7
IGHG				e		04 31 56.6	
	comp=Z,99nm,0.7s						
MIB	Mutribah	2.88	209	eP		04 30 60.0	
GHVR	GHOM	2.89	42	Pn	Pn	04 30 59.2	+1.6
GHVR	GHOM	2.89	42	ePn	Pn	04 30 59.3	+1.6
IZEF	Zefreh	2.89	78	ePn	Pn	04 30 59.8	+2.0
IZEF				e		04 31 48.0	
	comp=Z,99nm,0.4s						
IRAM	Ramesheh	2.95	99	ePn	Pn	04 31 00.6	+2.1
HSRG	Sareghieh	2.95	349	ePn	Pn	04 31 00.5	+1.8
IQOM	Qom	3.06	35	ePn	Pn	04 31 01.5	+1.5
ILIN	Lien	3.07	328	ePn	Pn	04 31 01.9	+1.7
ILIN				e		04 31 49.3	
	comp=Z,99nm,0.7s						
KRSH	Karshahi	3.12	58	ePn	Pn	04 31 02.9	+2.1
IRAZ	Razeghan	3.16	14	ePn	Pn	04 31 03.5	+2.0
IDHR	Dehrash	3.19	318	ePn	Pn	04 31 02.7	+0.8
IDHR				e		04 32 13.8	
	comp=Z,99nm,0.7s						
RST	Umm Al-Ruwaisa	3.29	211	eP		04 31 05.8	
QABG	Abgarm-Qazvin	3.40	8	ePn	Pn	04 31 04.8	0.0
IVRN	Varamin	3.51	40	ePn	Pn	04 31 07.9	+1.7
RDF	Al-Radifah	3.61	200	eP		04 31 10.7	
IMHD	Mahdasht	3.63	22	ePn	Pn	04 31 09.4	+1.6
IHSB	Hasanabad	3.64	31	ePn	Pn	04 31 10.1	+2.1
QRN	Al-Qurain	3.69	194	eP		04 31 11.7	
AHBU	AHRAM	4.00	149	ePn	Pn	04 31 15.8	+3.0
ISAD	Sadrabad	4.03	95	ePn	Pn	04 31 15.5	+2.1
ANAR	Anarak	4.10	77	Pn	Pn	04 31 16.0	+1.7
ANAR	Anarak	4.10	77	ePn	Pn	04 31 16.0	+1.7
IDMV	Damavand	4.12	37	ePn	Pn	04 31 15.9	+1.2
QSDN	Sirdan	4.16	2	ePn	Pn	04 31 16.3	+1.1
IGZV	Ghazvin	4.17	14	ePn	Pn	04 31 16.3	+0.9
QALM	Alamut, Qazvin	4.32	18	ePn	Pn	04 31 18.2	+0.8
ILAS	Lasjerd	4.50	46	ePn	Pn	04 31 22.0	+2.1
IFIR	Firoozkooh	4.56	43	ePn	Pn	04 31 21.9	+1.2
IPRN	Peran	4.79	35	ePn	Pn	04 31 26.3	+2.5
ISHM	Shahmirzad	4.99	45	ePn	Pn	04 31 28.7	+2.1
IANJ	Anjilo	5.17	51	ePn	Pn	04 31 29.8	+0.8
IGLO	Ghaloghah	5.78	43	ePn	Pn	04 31 39.5	+2.0
IHRS	Heris	6.17	346	ePn	Pn	04 31 43.6	+0.8
TPRV	Parvadeh(Tabas	6.54	82	ePn	Pn	04 31 49.5	+1.6
TNSJ	Nastanj	6.61	74	ePn	Pn	04 31 50.0	+1.2
TKDS	Koohdasht(Taba	6.97	77	ePn	Pn	04 31 55.2	+1.5
GEVA	Gevas	7.67	323	Pn	Pn	04 32 02.3	-1.0
SBZV	Sabzevar	8.21	58	ePn	Pn	04 32 11.8	+1.0
MARD	Mardin	8.36	309	Pn	Pn	04 32 13.3	+0.5

AFRZ	Afriz	8.52	80	*e*Pn	Pn	04 32 16.3	+1.3
ISFR	Sfrayin	8.80	55	*e*Pn	Pn	04 32 21.0	+2.0
RAYN	Ar Rayn	9.30	200		Pn	04 32 25.4	-0.2
GEYT	Alibeck	9.34	51	Pn	Pn	04 32 26.3	+0.1
	comp=Z,0.2nm,0.3s,baz=245,slow=14,SNR=3.6						
GYB1	ALIBECK ARRAY	9.34	51	Pn	Pn	04 32 26.1	-0.1
UOSS	Minazif	9.72	137	Pn	Pn	04 32 31.4	-0.1
EIL	Elat	12.31	261	LR	LR	04 37 31.5	
	comp=Z,26nm,20.1s,baz=64,slow=36						
WSAR	Wadi Sarin	12.46	134	Pn	Pn	04 33 07.5	-1.3
	comp=Z,0.5nm,0.3s,baz=5.5,slow=6.6,SNR=7.6						
WSAR				Sn	Sn	04 35 19.6	-7.3
	comp=Z,0.8nm,0.3s,baz=328,slow=20,SNR=4.5						
KIV	Kislovodsk	12.60	339	Pn	Pn	04 33 10.1	-0.7
BR231	Keskin MP Arra	15.07	304	Pn	Pn	04 33 44.5	+0.1
AB07	Akbulak array	18.79	23	P	P	04 34 30.0	-0.6
ABKAR	Akbulak array	18.80	23	P	P	04 34 30.3	-0.3
AKTO	Aktyubinsk	19.29	18	P	P	04 34 34.4	-1.6
	comp=Z,0.1nm,0.3s,baz=233,slow=8.6,SNR=3.9						
BELG	Belogornoye	20.07	358	P	P	04 34 43.5	-0.9
	comp=Z,0.2nm,0.3s,baz=140,slow=3.1,SNR=4.9						
KK31	Karatay Array	20.09	52	P	P	04 34 44.5	-0.3
KK31				IAmb	IAmb	04 34 49.2	
	comp=Z,2.1nm,1.0s						
KKAR	Karatay Array	20.09	52	P	P	04 34 45.6	+0.7
BVAR	Borovoye Array	25.81	30	P	P	04 35 41.0	-1.1
	comp=Z,0.8nm,0.5s,baz=316,slow=4.1,SNR=11						
KOLS	Kolonicke sedl	25.98	317	*e*P	P	04 35 44.9	+1.1
KURBB	Kurchatov Arra	28.43	41	P	P	04 36 04.7	-1.0
	comp=Z,1.0nm,0.7s,baz=244,slow=9.4,SNR=5.2						
KURK	Kurchatov	28.53	41	P	P	04 36 06.6	0.0
KURK				IAmb	IAmb	04 36 22.4	
	comp=Z,4.6nm,1.3s						
MK31	Makanchi Array	29.22	51	P	P	04 36 12.3	-0.5
MK31				IAmb	IAmb	04 36 13.9	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	29.22	51	P	P	04 36 12.7	-0.1
	comp=Z,0.7nm,0.7s,baz=239,slow=6.9,SNR=4.9						
FINES	FINESS Array B	32.69	340	P	P	04 36 41.6	-1.6
	comp=Z,2.4nm,0.9s,baz=211,slow=6.0,SNR=4.6						
ZAA0	Zalesovo Array	33.39	39	P	P	04 36 49.0	-0.4
ZAA0				IAmb	IAmb	04 36 49.2	
	comp=Z,2.4nm,0.9s						
ZALV	Zalesovo Beam	33.39	39	P	P	04 36 47.2	-2.1
	comp=Z,0.9nm,0.4s,baz=231,slow=6.9,SNR=4.7						
NOA	NORSAR Array B	37.74	331	P	P	04 37 25.4	-1.3
	comp=Z,0.6nm,0.6s,baz=123,slow=8.4,SNR=3.6						
SONM	Songino Array	45.54	53	P	P	04 38 30.5	-0.4
	comp=Z,0.4nm,0.7s,baz=186,slow=3.0,SNR=3.6						
ULN	Ulaanbaatar	45.98	53	P	P	04 38 35.1	+0.8
ULN				IAmb	IAmb	04 38 35.5	
	comp=Z,5.4nm,1.2s						
TORD	Torodi Ar. Bea	47.17	257	P	P	04 38 44.6	+0.7
	comp=Z,0.6nm,0.5s,baz=50,slow=7.3,SNR=4.7						
LBTB	Lobatse	61.24	204	P	P	04 40 28.4	+2.1

MAN 02 04:32:17.6, 8°.60N × 121°.47E, h50^{km}, mb4.7, ML3.5, MS3.4, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	Candoni, Negro	1.68	43	*e*P	Pn	04 32 44.9	+0.3
CNOP				*e*S	Sn	04 33 03.7	-1.3
ZCP	Zamboanga City	1.77	160	⇑*i*P	Pn	04 32 45.9	+0.1
ZCP				*i* S	Sn	04 33 15.0	+7.9
PAGZ	Pagadian	2.04	111	*e*P	Pn	04 32 49.3	-0.2
PAGZ				*e*S	Sn	04 33 14.7	+0.9
CUYO	Cuyo Island	2.28	349	*e*P	Pn	04 32 54.2	+1.3
CUYO				*e*S	Sn	04 33 20.2	+0.5
LLP	Lapu-Lapu	3.00	55	⇓*e*P	Pn	04 33 04.5	+1.8
LLP				*e*S	Sn	04 33 38.6	+1.2
ENPP	El Nido	3.28	322	*e*P	Pn	04 33 07.9	+1.4
MSLP	Maasin	3.68	65	*e*P	Pn	04 33 14.8	+2.8
SKMP	Bagumbayan, Su	3.69	124	*e*P	Pn	04 33 13.8	+1.6

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*IDC **02** 04:46:17.6±1.7, 6°.07S × 152°.33E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.6/38, mbtmp3.9/5, Error ellipse: s-maj=43.5km s-min=19.5km az=109.0*

ISC 02 04:46:22.8±1.6, **6°.1S**±0°.1 × **152°.3E**±0°.3, **h38^{km}, n7, σ1^{s}.16**/8, **mb3.6**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.76	350	Pn	Pn	04 46 49.7	-1.1
	82nm,0.3s,baz=106,slow=1.6,SNR=20						
KRVT				Sn	Sn	04 47 12.4	+0.3
	61nm,0.3s,baz=88,slow=23,SNR=11						
SIJI	Sorong	21.63	283	P	P	04 51 11.6	+1.6
	29nm,0.9s,baz=135,slow=20,SNR=4.6						
WRA	Warramunga Arr	22.27	230	P	P	04 51 15.8	-1.0
	0.6nm,0.5s,baz=53,slow=9.9,SNR=7.8						
ASAR	Alice Springs	24.91	223	P	P	04 51 42.8	+0.3
	1.0nm,0.9s,baz=55,slow=9.2,SNR=9.2						
FITZ	Fitzroy Crossi	28.65	243	P	P	04 52 15.2	-1.0
	4.3nm,1.1s,baz=66,slow=12,SNR=1.8						
ILAR	Eielson Array	83.50	22	P	P	04 58 47.2	+0.8
	0.3nm,0.6s,baz=249,slow=4.3,SNR=5.8						
TORD	Torodi Ar. Bea	150.21	286	PKPbc	PKiKP	05 06 11.5	-0.2
	0.6nm,0.9s,baz=106,slow=3.1,SNR=2.2						

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*VIE **02** 05:00:32.0±1.0, 51°.47N × 16°.11E, h0^{km}, mb2.0/1, ml2.5/4, Error ellipse: s-maj=11.1km s-min=5.3km az=28.0 75 km NW of Wroclaw Suspected Mining induced.*

*PRU **02** 05:00:31.8±0.0, 51°.54N × 16°.16E, h0^{km}*

ISC 02 05:00:31.3±1.5, **51°.55N**±0°.07 × **16°.16E**±0°.04, **h0^{km}, n24, σ0^{s}.72**/49, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.71	173	*e*Pg	Pg	05 00 45.5	+0.6
KSP				*e*Sg	Sg	05 00 54.9	+0.8
CHVC	Chvalec	0.96	184	*e*PG	Pb	05 00 50.5	-0.4
CHVC				*e*SG	Sg	05 01 02.8	+0.5
	comp=Z,91nm,1.5s						
OSTC	Ostas	0.99	178	*e*PG	Pg	05 00 50.9	+0.5
OSTC				*e*SG	Sb	05 01 04.2	-0.9
	comp=Z,27nm,0.9s						
UPC	Upice	1.05	185	*e*PG	Pg	05 00 51.4	0.0
UPC				*e*SG	Sg	05 01 05.5	+0.6
	comp=Z,24nm,0.3s						
DPC	Dobruska-Polom	1.21	175	*e*PG	Pg	05 00 54.1	-0.3
DPC				*e*SG	Sg	05 01 09.9	-0.1
	comp=Z,14nm,0.6s						
PVCC	Panska Ves	1.43	225	*e*PG	Pn	05 00 58.6	+0.1
PVCC				*e*SG	Sb	05 01 17.9	+0.3
	comp=Z,52nm,0.2s						
KRLC	Kraliky	1.53	165	*e*PG	Pn	05 00 59.7	-0.2
KRLC				*e*SG	Sg	05 01 19.9	-0.5
	comp=Z,13nm,0.6s						
BRG	Berggiesshubel	1.55	245	Pg	Pn	05 01 00.5	+0.3
BRG				Sg	Sn	05 01 20.8	-0.1
BRG				Amp		05 01 21.7	
	comp=Z,24nm,0.4s						
BRG	Berggiesshubel	1.55	245	Pg	Pn	05 01 00.5	+0.3
BRG				Sg	Sn	05 01 20.8	-0.1
BRG				Amp		05 01 21.7	
	comp=Z,24nm,0.4s						
PRU	Pruhonice	1.87	214	*e*PG	Pb	05 01 05.7	-0.6
PRU				*e*SG	Sb	05 01 30.4	+0.2
	comp=Z,15nm,0.7s						
MORC	Moravsky Berou	1.98	153	*e*PN	Pn	05 01 05.7	-0.4
MORC				*e*SG	Sb	05 01 33.6	+0.1
CLL	Collm	1.99	264	*e*Pn	Pn	05 01 05.0	-1.2
CLL				*e*Pg	Pb	05 01 08.0	-0.4
CLL				*e*		05 01 12.0	
CLL				*e*Sg	Sg	05 01 35.0	-0.2
	comp=Z,13nm,0.7s						
OKC	Ostrava-Krasne	2.13	143	*e*PG	Pb	05 01 10.9	+0.2
OKC				*e*SG	Sg	05 01 39.5	-0.2
	comp=Z,11nm,0.4s						
VRAC	Vranov	2.26	173	*e*PN	Pn	05 01 10.0	+0.1
VRAC				*e*SG	Sg	05 01 42.8	-1.1
PBCC	Pribram	2.32	217	*e*PG	Pb	05 01 13.4	-0.6
PBCC				*e*SG	Sg	05 01 45.6	-0.2
KRUC	Moravsky	2.50	176	*e*PN	Pn	05 01 13.2	+0.1
KRUC				*e*SG	Sg	05 01 51.0	-0.4
NKC	Novy Kostel	2.69	242	*e*PN	Pn	05 01 16.3	+0.4
NKC				*e*PG	Pb	05 01 21.1	+0.7
NKC				*e*SG	Sg	05 01 57.9	+0.1
	comp=Z,20nm,0.4s						
KHC	Kasperske Hory	2.93	215	*e*PN	Pn	05 01 19.1	-0.1
KHC				*e*PG	Pb	05 01 24.6	+0.2
KHC				*e*SG	Sg	05 02 04.3	-1.1
SMOL	Smolenice	3.15	164	*e*PN	Pn	05 01 17.4	-4.7
SMOL				*e*PG	Pg	05 01 32.9	+1.3
SMOL				*e*SG	Sb	05 02 07.6	+0.6
LANS	Liptovska Anna	3.20	137	*e*SG	Sg	05 02 15.7	+1.5
MODS	Modra-Piesok	3.26	167	*e*SG	Sg	05 02 14.0	-2.0
VYHS	Vyhne	3.51	150	*e*PN	Pn	05 01 26.8	-0.3
VYHS				*e*SG	Sg	05 02 21.9	-2.2
CONA	Conrad Observa	3.63	183	*e*Pn	Pn	05 01 29.0	+0.1
	comp=Z,0.6nm,0.3s						
CONA				Sg	Sg	05 02 27.9	0.0
	comp=Z,3.4nm,0.6s						
MOA	Molln	3.90	199	*i* Pn	Pn	05 01 32.3	-0.2
	comp=Z,1.4nm,0.2s						
MOA				Sg	Sg	05 02 37.5	+0.9
	comp=Z,6.4nm,0.7s						

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*BEO **02** 05:50:52.1±0.7, 41°.09N × 24°.07E, h0^{km}, ML3.0/8*

*SOF **02** 05:50:53.7, 41°.21N × 23°.98E, h9^{km}, MD3.3*

*ISK **02** 05:50:53.9, 41°.21N × 23°.93E, h14^{km}, ML3.0/14*

*THE **02** 05:50:54.7, 41°.21N × 23°.95E, h9^{km}, ML2.7/8, Error ellipse: s-maj=0.9km s-min=0.4km az=332.0*

*ATH **02** 05:50:54.9, 41°.22N × 23°.97E, h9^{km}±1^{km}, ML3.1/3, Error ellipse: s-maj=1.6km s-min=0.8km az=10.0*

*SKO **02** 05:50:56.0, 41°.15N × 23°.93E, h10^{km}*

*DDA **02** 05:50:57.3, 40°.70N × 23°.77E, h4^{km}±5^{km}, ML2.6*

ISC 02 05:50:54.7±0.9, **41°.20N**±0°.02 × **23°.95E**±0°.01, **h8^{km}**±7^{km}, **n125, σ0^{s}.79**/166, **10C-7D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVR	Nevrokopi	0.16	336	P	Pg	05 50 58.0	-0.1
NVR				S	Sg	05 51 00.3	-0.1
NVR				AML	AML	05 51 00.5	
	comp=N,39237μm,0.1s						
NVR				AML	AML	05 51 00.5	
	comp=E,53879μm,0.1s						
NVR	Nevrokopi	0.16	336	P	Pg	05 50 58.0	-0.1
NVR				S	Sg	05 51 00.3	-0.1
NVR				AML	AML	05 51 00.5	
	comp=N,39237μm,0.1s						
NVR				AML	AML	05 51 00.5	
	comp=E,53879μm,0.1s						
NVR	Nevrokopi	0.16	336	P	Pg	05 50 58.0	-0.1
NVR				S	Sg	05 51 00.1	-0.4
	comp=E,24μm,0.1s						
SRS	Serrai	0.28	253	P	Pg	05 51 00.7	+0.5
SRS				S	Sg	05 51 05.1	+1.0
SRS				AML	AML	05 51 05.8	
	comp=E,6821μm,0.3s						
SRS				AML	AML	05 51 06.2	
	comp=N,7048μm,0.3s						
SRS	Serrai	0.28	253	P	Pg	05 51 00.7	+0.5
SRS				S	Sg	05 51 05.1	+1.0
SRS				AML	AML	05 51 05.8	
	comp=E,6821μm,0.3s						
SRS				AML	AML	05 51 06.2	
	comp=N,7048μm,0.3s						
SRS	Serrai	0.28	253	P	Pg	05 51 00.7	+0.5
SRS				S	Sg	05 51 04.7	+0.7
	comp=N,4μm,0.3s						
SRS	Serrai	0.28	253	⇑*i*Pg	Pg	05 51 00.7	+0.5
SRS				*i* Sg	Sg	05 51 05.2	+1.2
KVLA	Kavala	0.42	128	P	Pg	05 51 02.8	-0.1
KVLA				S	Sg	05 51 08.9	+0.5
KVLA				AML	AML	05 51 09.8	
	comp=E,3395μm,0.1s						
KVLA				AML	AML	05 51 10.2	
	comp=N,6800μm,0.2s						
KVLA	Kavala	0.42	128	P	Pg	05 51 02.8	-0.1
KVLA				S	Sg	05 51 08.9	+0.5
KVLA				AML	AML	05 51 09.8	
	comp=E,3395μm,0.1s						
KVLA				AML	AML	05 51 10.2	
	comp=N,6800μm,0.2s						
MMB	Musomiste	0.42	337	Pg	Pg	05 51 01.9	-1.0
KAVA	Kavala	0.47	115	P	Pg	05 51 03.7	-0.2
KAVA				S	Sg	05 51 10.5	+0.5
KAVA	Kavala	0.47	115	P	Pg	05 51 03.7	-0.2
KAVA				S	Sg	05 51 10.5	+0.5
KAVA	Kavala	0.47	115	P	Pg	05 51 03.7	-0.2
KAVA				S	Sg	05 51 10.8	+0.8
	comp=N,1μm,0.1s						
SOH	Sokhos	0.59	230	P	Pg	05 51 06.3	+0.2
SOH	Sokhos	0.59	230	P	Pg	05 51 06.3	+0.2
SOH	Sokhos	0.59	230	P	Pg	05 51 06.3	+0.2
SOH				S	Sg	05 51 14.5	+0.8
	comp=N,900nm,0.3s						
SOH	Sokhos	0.59	230	⇑*i*Pg	Pg	05 51 06.3	+0.2
SOH				*i* Sg	Sb	05 51 15.0	-0.8
RZN	Rozhen	0.76	50	Pg	Pg	05 51 09.1	-0.1
KNT	Kendrikon	0.79	268	P	Pg	05 51 09.7	-0.3
KNT	Kendrikon	0.79	268	P	Pg	05 51 09.7	-0.3
KNT	Kendrikon	0.79	268	P	Pg	05 51 09.7	-0.3
KNT				S	Sb	05 51 21.2	-0.5
	comp=N,595nm,0.2s						
KNT	Kendrikon	0.79	268	PG	Pg	05 51 09.5	-0.5
KNT				SG	Sg	05 51 20.8	+0.5
KNT	Kendrikon	0.79	268	⇓*i*Pg	Pg	05 51 09.7	-0.3
KNT				*i* Sg	Sg	05 51 20.4	+0.1
THAS	Thassos island	0.83	135	P	Pg	05 51 10.8	+0.1
THAS	Thassos island	0.83	135	P	Pg	05 51 10.8	+0.1
THAS	Thassos island	0.83	135	P	Pg	05 51 10.6	-0.1
OUR	Ouranopolis	0.87	178	P	Pg	05 51 11.6	+0.3
OUR	Ouranopolis	0.87	178	P	Pg	05 51 11.6	+0.3
OUR	Ouranopolis	0.87	178	P	Pg	05 51 11.7	+0.3
OUR	Ouranopolis	0.87	178	PG	Pg	05 51 11.5	+0.2
OUR				SG	Sb	05 51 24.1	+0.4
HORT	Hortiatis	0.88	227	P	Pg	05 51 11.5	-0.1
HORT	Hortiatis	0.88	227	P	Pg	05 51 11.5	-0.1
HORT	Hortiatis	0.88	227	P	Pg	05 51 11.6	-0.1
HORT				S	Sb	05 51 23.9	-0.4
	comp=N,385nm,0.2s						
HORT	Hortiatis	0.88	227	PG	Pg	05 51 11.4	-0.2
HORT				SG	Sb	05 51 23.9	-0.4
PLG	Polygyros	0.91	205	P	Pg	05 51 12.3	+0.1
PLG	Polygyros	0.91	205	P	Pg	05 51 12.3	+0.1
PLG	Polygyros	0.91	205	P	Pg	05 51 12.3	+0.1
KKB	Krupnik	0.93	316	Pg	Pg	05 51 11.4	-1.2
THE	Thessaloniki	0.94	233	P	Pg	05 51 12.4	-0.2
THE	Thessaloniki	0.94	233	P	Pg	05 51 12.4	-0.2
THE	Thessaloniki	0.94	233	P	Pg	05 51 12.4	-0.2
THE				S	Sb	05 51 26.0	+0.2
	comp=N,360nm,0.3s						
THE	Thessaloniki	0.94	233	⇑*i*Pg	Pg	05 51 12.5	-0.2
THE				*i* Sg	Sb	05 51 25.5	-0.3
VAY	Valandovo	1.05	277	*e*Pg	Pg	05 51 12.9	-1.9
VAY				*e*Sg	Sg	05 51 28.0	-0.4
VAY	Valandovo	1.05	277	⇓*i*Pg	Pg	05 51 14.8	+0.1
VAY				*i* Sg	Sn	05 51 30.7	+0.2
VAY				*e*Lg	Lg	05 51 32.9	
	comp=N,131nm,0.3s						
PLD	Plovdiv	1.07	32	PG	Pg	05 51 14.9	-0.2
PLD				SG	Sn	05 51 30.1	-0.9
PLD	Plovdiv	1.07	32	Pg	Pg	05 51 14.9	-0.2
PLD	Plovdiv	1.07	32	⇑*i*Pg	Pg	05 51 14.9	-0.2
PLD				*i* Sg	Sn	05 51 33.5	+2.5
KDZ	Kurdzhali	1.19	67	PN	Pb	05 51 15.6	-2.0
KDZ	Kurdzhali	1.19	67	Pg	Pb	05 51 15.8	-1.8
GRG	Griva	1.20	259	P	Pb	05 51 17.1	-0.5
GRG				S	Sn	05 51 33.6	-0.6
	comp=N,252nm,0.4s						
GRG	Griva	1.20	259	PN	Pb	05 51 16.7	-0.9
GRG	Griva	1.20	259	*i* Pg	Pn	05 51 17.6	-0.2
GRG				*i* Sg	Sn	05 51 33.6	-0.6
RDO	Rodhopi	1.20	92	P	Pb	05 51 16.3	-1.4
RDO	Rodhopi	1.20	92	P	Pb	05 51 16.3	-1.4
RDO	Rodhopi	1.20	92	P	Pb	05 51 16.6	-1.1
RDO	Rodhopi	1.20	92	PN	Pb	05 51 17.1	-0.6
PAIG	Paliouri	1.29	189	P	Pn	05 51 18.3	-0.7
PAIG	Paliouri	1.29	189	P	Pn	05 51 18.3	-0.7
PAIG	Paliouri	1.29	189	P	Pn	05 51 18.3	-0.7
PGB	Panagyurishte	1.36	7	P	Pn	05 51 18.8	-1.3
SMTH	Samothraki Isl	1.40	121	P	Pn	05 51 19.6	-1.1
SMTH	Samothraki Isl	1.40	121	P	Pn	05 51 19.6	-1.1
SMTH	Samothraki Isl	1.40	121	P	Pn	05 51 19.5	-1.1
DIM	Dimitrovgrad	1.46	54	P	Pb	05 51 22.2	+0.1
VTS	Vitosha	1.51	340	⇑P	Pn	05 51 21.9	-0.4
VTS	Vitosha	1.51	340	P	Pb	05 51 22.5	-0.6
VTS	Vitosha	1.51	340	*i* Pn	Pn	05 51 22.2	-0.1
LIT	Litokhoron	1.56	226	P	Pn	05 51 22.5	-0.3
LIT	Litokhoron	1.56	226	P	Pn	05 51 22.5	-0.3
LIT	Litokhoron	1.56	226	P	Pn	05 51 22.5	-0.3
LIT	Litokhoron	1.56	226	*i* Pn	Pn	05 51 22.5	-0.3
LIA	Limnos Island	1.60	144	P	Pn	05 51 22.4	-1.0
LIA	Limnos Island	1.60	144	P	Pn	05 51 22.4	-1.0
LIA	Limnos Island	1.60	144	P	Pn	05 51 22.3	-1.0
ALN	Alexandroupoli	1.61	100	P	Pn	05 51 23.0	-0.5
ALN	Alexandroupoli	1.61	100	P	Pn	05 51 23.0	-0.5
ALN	Alexandroupoli	1.61	100	P	Pn	05 51 23.1	-0.4
ALN	Alexandroupoli	1.61	100	PN	Pn	05 51 23.1	-0.4
ALN				SN	Sn	05 51 44.3	-0.2
BOSS	Bosilegrad	1.70	320	*e*Pn	Pn	05 51 25.1	+0.4
BOSS				*e*Sn	Sg	05 51 48.7	-0.5
ENEZ	Enez	1.73	105	PN	Pn	05 51 24.8	-0.3
ENEZ				SN	Sn	05 51 47.2	-0.2
GADA	Gvkgeada	1.79	124	PN	Pn	05 51 25.6	-0.3
GADA				SN	Sn	05 51 48.7	-0.2
KZN	Kozani	1.88	242	P	Pn	05 51 27.2	-0.1
KZN	Kozani	1.88	242	P	Pn	05 51 27.2	-0.1
FNA	Florina	1.99	259	PN	Pn	05 51 27.9	-0.8
FNA	Florina	1.99	259	*i* Pn	Pn	05 51 29.1	+0.4
ERIK	Erikli-Kesan	2.01	104	PN	Pn	05 51 28.8	-0.2
GELI	Tayfur-Gelibol	2.08	112	PN	Pn	05 51 29.7	-0.2
BOZC	Bozcaada	2.10	130	PN	Pn	05 51 29.9	-0.3
BOZC	Bozcaada	2.10	130	*i* P	Pn	05 51 28.7	-1.5
MPEP	Malo Peshtene	2.16	356	P	Pn	05 51 31.7	+0.7
EDRB	Edirne	2.20	72	PN	Pn	05 51 31.6	+0.1
EZN	Ezine	2.27	126	PN	Pn	05 51 32.0	-0.5
LPK	Lapseki	2.29	110	PN	Pn	05 51 32.5	-0.3
ZAPS	Zavoj	2.29	335	*e*Pn	Pn	05 51 33.7	+0.9
ZAPS				*e*Sn	Sb	05 52 04.1	-0.7
KPRO	Kipourio	2.33	239	P	Pn	05 51 33.4	0.0
KPRO	Kipourio	2.33	239	P	Pn	05 51 33.4	0.0
NEST	Nestorio	2.34	251	P	Pn	05 51 33.3	-0.2
NEST	Nestorio	2.34	251	P	Pn	05 51 33.3	-0.2
KOCA	Canakkale, Ayv	2.38	135	*i* P	Pn	05 51 34.3	+0.3
KOCA				IAML		05 52 13.0	
	comp=E,40nm,0.5s						
KOCA				IAML		05 52 16.0	
	comp=N,43nm,0.8s						
KIRK	Kırklareli	2.44	75	*i* P	Pb	05 51 38.9	+0.1
KIRK				*i* S	Sb	05 52 09.1	+0.2
BAYC	CANAKKALE_Bayr	2.46	125	*i* P	Pn	05 51 36.7	+1.6
BAYC				*i* S	Sn	05 52 05.4	0.0
SIGR	SIGRI	2.46	143	PN	Pn	05 51 34.9	-0.3
AGG	Agios Georgios	2.50	210	PN	Pn	05 51 35.7	-0.1
ARMN	Kirklareli, Me	2.69	75	*i* P	Pg	05 51 45.1	-1.2
ARMN				*i* S	Sb	05 52 17.1	+0.7
ARMN				IAML		05 52 24.0	
	comp=E,18nm,0.5s						
ARMN				IAML		05 52 25.0	
	comp=N,16nm,0.5s						
VLAD	Vladila	2.82	7	⇓P	Pn	05 51 42.0	+2.0
MRMT	Marmara Adasi	2.83	101	PN	Pn	05 51 40.2	0.0
CRLT	Corlu	2.86	90	PN	Pn	05 51 40.7	+0.1
ZAGS	Zajecar	2.90	335	*e*Pn	Pn	05 51 40.7	-0.5
VIZE	Kirklareli, Vi	2.95	81	*i* P	Pg	05 51 51.0	-0.2
VIZE				*i* S	Sb	05 52 25.6	+1.8
VIZE				IAML		05 52 33.0	
	comp=N,27nm,1.3s						
VIZE				IAML		05 52 35.0	
	comp=E,24nm,0.5s						
SRE	Strehaia	3.50	351	⇓P	Pn	05 51 49.9	+0.4
GRUS	Gruza	3.59	319	*e*Pn	Pn	05 51 50.1	-0.6
GRUS				*e*Sn	Sn	05 52 35.5	+2.1
SJES	Sjenica	3.60	306	*e*Pn	Pn	05 51 51.6	+0.7
SJES				*e*Sn	Sn	05 52 35.2	+1.5
IVAS	Ivanjica	3.68	311	*e*Pn	Pn	05 51 51.0	-1.0
IVAS				*e*Sn	Sn	05 52 37.9	+2.3
PDG	Podgorica	3.72	291	⇑P	Pn	05 51 53.6	+1.3
MDVR	Moldovita	3.94	336	⇓P	Pn	05 51 55.3	-0.2
TRUS	Trudelj	3.99	320	*e*Pn	Pn	05 51 55.5	-0.7
DIVS	Divibare	4.11	316	*e*Pn	Pn	05 51 57.5	-0.4
DIVS				*e*Sn	Sn	05 52 46.8	+0.6
ARR	Arges	4.20	7	⇓P	Pn	05 51 60.0	+0.9
GZR	Gura Zlata	4.28	349	⇓P	Pn	05 52 02.2	+2.0
BBLS	Lazići	4.29	310	*e*Pn	Pn	05 52 00.1	-0.2
VOIR		4.31	10	⇑P	Pn	05 52 01.2	+0.6
MLR	Muntele Rosu	4.53	18	⇑P	Pn	05 52 05.1	+1.4
BZS	Buzias	4.73	340	⇑P	Pn	05 52 06.2	-0.1
BZS	Buzias	4.73	340	*e*Pn	Pn	05 52 05.5	-0.8
VRI	Vrincioaia	5.08	22	⇑P	Pn	05 52 14.1	+2.9

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*IDC **02** 06:03:07.6±0.8, 34°.31N × 23°.55E, h0^{km}, mb4.0/15, mb1 4.0/23, mb1mx3.9/47, mbtmp4.0/23, ML4.1/8, MS2.9/2, Ms1 2.9/2, ms1mx2.3/49, Error ellipse: s-maj=18.7km s-min=14.0km az=157.0*

*THE **02** 06:03:11.6, 34°.22N × 23°.44E, h9^{km}±1^{km}, ML3.6/7, Error ellipse: s-maj=2.5km s-min=1.5km az=114.0*

*ISK **02** 06:03:11.3, 34°.31N × 23°.51E, h69^{km}, ML4.2/15*

*NEIC **02** 06:03:12.4±2.2, 34°.29N±0°.09 × 23°.54E±0°.07, h32^{km}±8^{km}, mb4.0/18, ML3.7(ATH), Error ellipse: s-maj=13.3km s-min=8.8km az=176.0*

*HLW **02** 06:03:12.7, 34°.38N × 23°.80E, h25^{km}±56^{km}, Md4.5, Ml4.7*

*MED_RC **02** 06:03:13.0±1.3, 34°.27N × 23°.48E, h33^{km}±2^{km}, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c9; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.13±.42; $M_{\theta\theta}$1.65±.75; $M_{\phi\phi}$-0.52±.83; $M_{r\theta}$0.36±.17; $M_{\theta\phi}$3.64±.52; $M_{\phi r}$-0.40±.33; Best double couple: $M_0$3.86000×10^{15} NP1:ϕ_s9.00000°,δ80.00000°,λ-171.00000°. NP2: ϕ_s277.00000°,δ81.00000°,λ-10.00000°. Principal axes: T 4.3600, Plg0.0000°, Azm323.0000°; N -1.0000, Plg76.0000°, Azm55.0000°; P -3.3600, Plg13.0000°, Azm233.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **02** 06:03:14.0, 34°.35N × 23°.48E, h24^{km}±1^{km}, ML3.7/6 Error ellipse: s-maj=2.7km s-min=1.4km az=17.0*

*PDG **02** 06:03:16.5±0.1, 34°.93N × 23°.15E, h14^{km}±12^{km}, ML4.5/13, Error ellipse: s-maj=14.2km s-min=4.0km az=90.0*

*DDA **02** 06:03:17.8, 34°.63N × 24°.05E, h7^{km}±4^{km}, MW4.4*

ISC 02 06:03:12.4±0.7, **34°.22N**±0°.04 × **23°.51E**±0°.04, **h35^{km}**±1^{km}, **n283, σ1^{s}.99**/326, **mb4.0**/22, **3C-5D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.78	38	P	Pn	06 03 27.5	+0.6
GVD				S	Sn	06 03 36.7	-0.7
GVD				AML	AML	06 03 44.7	
	comp=N,18992μm,0.8s						
GVD				AML	AML	06 03 53.6	
	comp=E,14289μm,0.5s						
GVD	Gavdhos	0.78	38	P	Pn	06 03 27.5	+0.6
GVD				S	Sn	06 03 36.7	-0.7
GVD				AML	AML	06 03 44.7	
	comp=N,18992μm,0.8s						
GVD				AML	AML	06 03 53.6	
	comp=E,14289μm,0.5s						
GVD	Gavdhos	0.78	38	P	Pn	06 03 27.5	+0.6
GVD				S	Sn	06 03 39.2	+1.8
	comp=E,10μm,0.5s						
GVD	Gavdhos	0.78	38	PG	Pn	06 03 27.8	+0.9
GVD				SG	Sn	06 03 38.4	+1.0
IMMV	Iera Moni Meta	1.29	17	P	Pn	06 03 34.4	+0.4
IMMV				AML	AML	06 04 01.9	
	comp=N,6665μm,0.5s						
IMMV				AML	AML	06 04 03.6	
	comp=E,7755μm,1.0s						
IMMV	Iera Moni Meta	1.29	17	P	Pn	06 03 34.4	+0.4
IMMV				AML	AML	06 04 01.9	
	comp=N,6665μm,0.5s						
IMMV				AML	AML	06 04 03.6	
	comp=E,7755μm,1.0s						
IMMV	Iera Moni Meta	1.29	17	P	Pn	06 03 34.6	+0.6
IMMV				S	Sn	06 03 54.2	+4.1
	comp=E,3μm,1.0s						
IMMV	Iera Moni Meta	1.29	17	PN	Pn	06 03 33.9	-0.1
VAM	Vamos	1.31	25	P	Pn	06 03 34.8	+0.5
VAM				S	Sn	06 03 50.2	-0.3
VAM				AML	AML	06 04 06.1	
	comp=E,7528μm,0.6s						
VAM				AML	AML	06 04 10.5	
	comp=N,5982μm,0.6s						
VAM	Vamos	1.31	25	P	Pn	06 03 34.8	+0.5
VAM				S	Sn	06 03 50.2	-0.3
VAM				AML	AML	06 04 06.1	
	comp=E,7528μm,0.6s						

VAM				AML	AML	06 04 10.5	
	comp=N,5982µm,0.6s						
VAM	Vamos	1.31	25	P	Pn	06 03 34.9	+0.7
VAM				S	Sn	06 03 53.4	+2.9
	comp=N,2µm,0.6s						
SIVA	Sivas	1.33	53	P	Pn	06 03 35.8	+1.2
SIVA				S	Sn	06 03 52.2	+1.1
SIVA				AML	AML	06 04 04.2	
	comp=N,9610µm,0.6s						
SIVA				AML	AML	06 04 05.4	
	comp=E,13114µm,0.6s						
SIVA	Sivas	1.33	53	P	Pn	06 03 35.8	+1.2
SIVA				S	Sn	06 03 52.2	+1.1
SIVA				AML	AML	06 04 04.2	
	comp=N,9610µm,0.6s						
SIVA				AML	AML	06 04 05.4	
	comp=E,13114µm,0.6s						
SIVA	Sivas	1.33	53	P	Pn	06 03 35.9	+1.4
SIVA				S	Sn	06 03 54.8	+3.8
	comp=E,8µm,0.6s						
TMBK	Timbaki Herakl	1.34	50	P	Pn	06 03 36.0	+1.4
TMBK				S	Sn	06 03 55.1	+4.0
	comp=E,1µm,0.9s						
IDI	Anoyia	1.56	47	Pn	Pn	06 03 39.0	+1.3
	comp=E,24nm,0.3s,baz=239,slow=12,SNR=86						
IDI				Sn	Sn	06 04 00.9	+4.3
	comp=E,76nm,0.3s,baz=300,slow=20,SNR=7.3						
IDI	Anoyia	1.56	47	P	Pn	06 03 38.7	+1.1
IDI				S	Sn	06 03 55.9	-0.8
IDI				AML	AML	06 04 03.6	
	comp=E,1772µm,0.5s						
IDI				AML	AML	06 04 04.4	
	comp=N,1693µm,0.7s						
IDI	Anoyia	1.56	47	P	Pn	06 03 38.7	+1.1
IDI				S	Sn	06 03 55.9	-0.8
IDI				AML	AML	06 04 03.6	
	comp=E,1772µm,0.5s						
IDI				AML	AML	06 04 04.4	
	comp=N,1693µm,0.7s						
IDI	Anoyia	1.56	47	P	Pn	06 03 39.0	+1.3
IDI				S	Sn	06 04 00.3	+3.6
	comp=N,868nm,0.6s						
IDI	Anoyia	1.56	47	PN	Pn	06 03 38.7	+1.1
IDI	Anoyia	1.56	47	Pn	Pn	06 03 38.3	+0.6
IDI				Sn	Sn	06 03 55.8	-0.8
ANKY	Antikythira Is	1.65	354	P	Pn	06 03 39.5	+0.6
ANKY				S	Sn	06 03 57.7	-1.2
ANKY				AML	AML	06 04 11.8	
	comp=E,2144µm,1.0s						
ANKY				AML	AML	06 04 28.5	
	comp=N,1416µm,1.2s						
ANKY	Antikythira Is	1.65	354	P	Pn	06 03 39.5	+0.6
ANKY				S	Sn	06 03 57.7	-1.2
ANKY				AML	AML	06 04 11.8	
	comp=E,2144µm,1.0s						
ANKY				AML	AML	06 04 28.5	
	comp=N,1416µm,1.2s						
HRKL	Herakleio	1.70	50	PN	Pn	06 03 39.4	-0.2
LAST	Lasithi	1.87	59	P	Pn	06 03 43.7	+1.7
LAST	Lasithi	1.87	59	P	Pn	06 03 43.7	+1.7
LAST	Lasithi	1.87	59	P	Pn	06 03 43.9	+1.9
LAST				S	Sn	06 04 08.0	+3.5
NPS	Neapolis	2.02	58	P	Pn	06 03 46.3	+2.3
NPS	Neapolis	2.02	58	P	Pn	06 03 46.3	+2.3
NPS	Neapolis	2.02	58	P	Pn	06 03 46.2	+2.3
KTHA	Kythira Island	2.06	350	P	Pn	06 03 44.6	0.0
KTHA	Kythira Island	2.06	350	P	Pn	06 03 44.6	0.0
KTHA	Kythira Island	2.06	350	PN	Pn	06 03 44.0	-0.6
STIA	Sitia Lasithi	2.34	65	P	Pn	06 03 50.6	+2.2
STIA				S	Sn	06 04 20.1	+4.2
ZKR	Zakros	2.40	68	P	Pn	06 03 51.4	+2.2
ZKR	Zakros	2.40	68	P	Pn	06 03 51.4	+2.2
ZKR	Zakros	2.40	68	P	Pn	06 03 51.4	+2.2
ZKR				S	Sn	06 04 21.0	+3.6
	comp=N,410nm,0.5s						
ZKR	Zakros	2.40	68	PN	Pn	06 03 49.5	+0.3
VLI	Veliai	2.53	350	P	Pn	06 03 52.7	+1.6
VLI	Veliai	2.53	350	P	Pn	06 03 52.7	+1.6
MHLO	Agia Marina, M	2.57	16	P	Pn	06 03 52.4	+0.9
THR5	Thira Island,	2.66	34	P	Pn	06 03 53.0	+0.3
THR5	Thira Island,	2.66	34	P	Pn	06 03 53.0	+0.3
SANT	Santorini	2.67	36	PN	Pn	06 03 52.8	-0.2
SANT	Santorini	2.67	36	Pn	Pn	06 03 51.3	-1.7
THR3	Thira Island,	2.67	35	P	Pn	06 03 53.2	+0.2
THR3	Thira Island,	2.67	35	P	Pn	06 03 53.2	+0.2
THR7	Fira-Santorini	2.70	35	P	Pn	06 03 53.9	+0.6
THR7	Fira-Santorini	2.70	35	P	Pn	06 03 53.9	+0.6
PYL	PYLOS	3.03	332	P	Pn	06 03 57.5	-0.4
PYL	PYLOS	3.03	332	P	Pn	06 03 57.5	-0.4
SLUM	Salum	3.08	152	P	Pn	06 03 58.5	-0.1
	baz=157						
SLUM				S	Sn	06 04 31.0	-3.1
	baz=157						
ITM	Ithomi	3.22	337	P	Pn	06 04 01.3	+0.8
ITM	Ithomi	3.22	337	P	Pn	06 04 01.3	+0.8
ITM	Ithomi	3.22	337	PN	Pn	06 04 00.3	-0.2
ITM	Ithomi	3.22	337	Pn	Pn	06 04 01.7	+1.2
KARP	Karpathos	3.28	65	P	Pn	06 04 02.9	+1.6
KARP	Karpathos	3.28	65	P	Pn	06 04 02.9	+1.6
KARP	Karpathos	3.28	65	PN	Pn	06 04 01.9	+0.6
KARP	Karpathos	3.28	65	Pn	Pn	06 04 02.4	+1.1
APE	Apeiranthos	3.28	30	P	Pn	06 04 01.1	-0.3
APE	Apeiranthos	3.28	30	P	Pn	06 04 01.1	-0.3
APE	Apeiranthos	3.28	30	PN	Pn	06 04 01.5	+0.1
EPID	Epidavros	3.40	355	P	Pn	06 04 04.0	+1.0
EPID	Epidavros	3.40	355	P	Pn	06 04 04.0	+1.0
AMT	Artemida-Makis	3.61	337	P	Pn	06 04 07.2	+1.3
AMT	Artemida-Makis	3.61	337	P	Pn	06 04 07.2	+1.3
ATHU	Athens Univers	3.74	3	P	Pn	06 04 08.1	+0.5
ATHU	Athens Univers	3.74	3	P	Pn	06 04 08.1	+0.5
LOUT	Loutraki	3.78	354	P	Pn	06 04 09.7	+1.5
LOUT	Loutraki	3.78	354	P	Pn	06 04 09.7	+1.5
KOSK	Kos Island	3.79	47	PN	Pn	06 04 08.7	+0.4
DION	Dionisos Attik	3.86	5	P	Pn	06 04 09.6	+0.3
DION	Dionisos Attik	3.86	5	P	Pn	06 04 09.6	+0.3
DION	Dionisos Attik	3.86	5	P	Pn	06 04 09.2	-0.1
KLV	Kalavryta, Ach	3.97	344	P	Pn	06 04 11.6	+0.7
KLV	Kalavryta, Ach	3.97	344	P	Pn	06 04 11.6	+0.7
DRO	Drossia	4.00	339	P	Pn	06 04 12.0	+0.8
DRO	Drossia	4.00	339	P	Pn	06 04 12.0	+0.8
BODT	Bodrum	4.20	46	PN	Pn	06 04 14.1	+0.2
MATC	Matruh	4.25	131	P	Pn	06 04 14.1	-0.5
	baz=135						
DSF	Desfina	4.25	350	P	Pn	06 04 15.2	+0.4
DSF	Desfina	4.25	350	P	Pn	06 04 15.2	+0.4
ARG	Arkhangelos	4.27	61	P	Pn	06 04 16.1	+1.2
ARG	Arkhangelos	4.27	61	P	Pn	06 04 16.1	+1.2
ARG	Arkhangelos	4.27	61	PN	Pn	06 04 15.4	+0.5
BDRM	Kayabasi	4.28	47	*i* P	Pn	06 04 15.0	0.0
BDRM				*i* S	Sn	06 04 50.5	-13
KALE	Kalithea	4.30	345	P	Pn	06 04 15.9	+0.4
KALE	Kalithea	4.30	345	P	Pn	06 04 15.9	+0.4
ATAL	Atalanti	4.48	355	P	Pn	06 04 17.7	-0.1
ATAL	Atalanti	4.48	355	P	Pn	06 04 17.7	-0.1
AXAR	Agios Charalam	4.59	352	P	Pn	06 04 19.5	+0.2
GCAM	G?zelcaml?	4.60	40	PN	Pn	06 04 19.6	+0.2
GCAM	G?zelcaml?	4.60	40	*i* P	Pn	06 04 20.4	+1.0
GCAM				*i* S	Sn	06 05 04.8	-6.8
TURN	Turunc	4.63	55	PN	Pn	06 04 20.1	+0.3
TURN	Turunc	4.63	55	*i* P	Pn	06 04 20.5	+0.7
TURN				*i* S	Sn	06 05 06.8	-5.4
SMIA	Simia	4.65	357	P	Pn	06 04 20.4	+0.2
SMIA	Simia	4.65	357	P	Pn	06 04 20.4	+0.2
KEF5	Kardakata, Kep	4.73	330	P	Pn	06 04 21.2	-0.1
KEF5	Kardakata, Kep	4.73	330	P	Pn	06 04 21.2	-0.1
URLA	Izmir	4.82	30	PN	Pn	06 04 22.2	-0.3
YER	Yerkesik	4.85	52	PN	Pn	06 04 22.7	-0.3
AGG	Agios Georgios	4.88	349	P	Pn	06 04 23.5	+0.1
AGG	Agios Georgios	4.88	349	P	Pn	06 04 23.5	+0.1
AGG	Agios Georgios	4.88	349	Pn	Pn	06 04 24.0	+0.6
MAKR	Makrakomi, Fth	4.91	347	P	Pn	06 04 25.0	+1.3
MAKR	Makrakomi, Fth	4.91	347	P	Pn	06 04 25.0	+1.3
DALY	Dalyan (Mula)	4.93	57	PN	Pn	06 04 24.1	+0.2
DALY	Dalyan (Mula)	4.93	57	*i* P	Pn	06 04 25.1	+1.1
DALY				*i* S	Sn	06 05 15.2	-4.5
MULA	Mugla, Merkez-	4.95	51	*i* P	Pn	06 04 25.3	+1.0
MULA				*i* S	Sn	06 05 17.2	-3.1
EVGI	Lefkada island	4.96	333	P	Pn	06 04 24.7	+0.3
EVGI	Lefkada island	4.96	333	P	Pn	06 04 24.7	+0.3
FETY	Fethiye	5.15	61	PN	Pn	06 04 27.1	+0.1
FETY	Fethiye	5.15	61	*i* P	Pn	06 04 26.1	-0.9
FETY				*i* S	Sn	06 05 18.8	-6.4
SWA2		5.23	161	P	Pn	06 04 27.8	-0.3
	baz=164						
AKAS	Kas	5.38	66	PN	Pn	06 04 30.3	+0.1
AKAS	Kas	5.38	66	*i* P	Pn	06 04 30.3	+0.1
AKAS				*i* S	Sn	06 05 24.9	-6.1
AKAS	Kas	5.38	66	Pn	Pn	06 04 30.9	+0.7
TAVA	DENIZLI_Tavas	5.45	52	*i* P	Pn	06 04 31.8	+0.6
TAVA				*i* S	Sn	06 05 22.9	-10
CAEL	Denizli, Camel	5.54	57	*i* P	Pn	06 04 32.8	+0.2
CAEL				*i* S	Sn	06 05 28.4	-6.7
DEMR	Demre-Antalya	5.61	67	PN	Pn	06 04 33.3	0.0
GOLH	Golhisar	5.77	57	*i* P	Pn	06 04 36.1	+0.5
GOLH				*i* S	Sn	06 05 31.3	-9.2
ELL	Elmali	5.80	62	PN	Pn	06 04 35.9	-0.1
ELL	Elmali	5.80	62	Pn	Pn	06 04 36.9	+0.9
MANT	Manisa	5.89	42	*i* P	Pn	06 04 37.5	+0.1
LIT	Litokhoron	5.92	352	Pn	Pn	06 04 37.7	+0.1
KULA	Kula-Manisa	5.97	43	PN	Pn	06 04 37.9	-0.4
AKUM	Antalya-Kumluc	5.97	68	*i* P	Pn	06 04 36.6	-1.7
AKUM				*i* S	Sn	06 05 37.3	-8.0
KORT	Korkueli	6.22	62	PN	Pn	06 04 40.7	-1.2
KORT	Korkueli	6.22	62	*i* P	Pn	06 04 42.3	+0.4
KORT				*i* S	Sn	06 05 46.4	-5.4
BRDR	BURDUR-Merkez	6.34	55	*i* P	Pn	06 04 43.0	-0.5
BRDR				*i* S	Sn	06 05 47.8	-6.9
KHAL	Karahalli	6.36	48	*i* P	Pn	06 04 43.1	-0.7
KHAL				*i* S	Sn	06 05 49.4	-5.8
ANTB	Antalya	6.41	63	PN	Pn	06 04 43.5	-0.7
BASM	Basmaki-Afyon	6.45	53	PN	Pn	06 04 44.4	-0.6
BCK	Bucak	6.59	59	PN	Pn	06 04 45.8	-1.1
FNA	Florina	6.76	346	Pn	Pn	06 04 48.8	-0.4
SCTE	Santa Cesarea	7.09	327	Pn	Pn	06 04 52.6	-1.1
SHUT	Suhut-Afyon	7.13	51	PN	Pn	06 04 53.6	-0.8
TIP	Timpagrande	7.34	314	Pn	Pn	06 04 56.0	-1.1
ALAN	Alanya-ANTALYA	7.34	69	PN	Pn	06 04 56.5	-0.6
CEL	Celeste	7.35	305		Pn	06 04 57.4	+0.1
SEYD	Seydisehir-KON	7.47	62	PN	Pn	06 04 57.6	-1.4
HNAT	Natroun	7.58	125	P	Pn	06 04 59.4	-1.0
	baz=127						
HMYD	Mayadein	7.60	124	P	Pn	06 04 60.0	-0.8
	baz=125						
TIR	Tirane	7.67	339	Pn	Pn	06 05 01.2	-0.4
LEF	Lefka	7.78	81	PN	Pn	06 05 01.9	-1.2
RAFF	Raffo Rosso	8.02	295		Pn	06 05 05.8	-0.6
KONT	Konya--Tatoy	8.07	60	PN	Pn	06 05 06.2	-0.9
VAE	Valguarnera	8.07	296	Sn	Sn	06 06 31.4	-5.7
	comp=N,6.0nm,0.3s,baz=188,slow=6.4,SNR=4.2						
TEKE	Tekeli-Mersin	8.09	74	PN	Pn	06 05 06.2	-1.2
CSS	Mathiatis	8.13	82	PN	Pn	06 05 07.5	-0.5
CSS	Mathiatis	8.13	82	Pn	Pn	06 05 06.5	-1.4
LADK	Ladik-KONYA	8.18	58	PN	Pn	06 05 07.9	-0.8
BERE	Bereket-Mersin	8.22	72	PN	Pn	06 05 08.8	-0.5
HSAF	As Saff	8.23	122	P	Pn	06 05 07.3	-2.1
	baz=123						
KOT	Kottamia	8.26	119	P	Pn	06 05 08.1	-1.6
	baz=120						
GLL	Jalalah	8.37	121	P	Pn	06 05 09.9	-1.3
	baz=123						
TEVE	Tevekalti-Mers	8.41	72	PN	Pn	06 05 11.0	-0.9
ULC	Ulcinj	8.43	338	⇑ *i* Pn	Pn	06 05 09.9	-2.1
ULC				*i* Sn	Sn	06 06 34.4	-11
HHAG	Hagoal	8.44	118	P	Pn	06 05 10.8	-1.4
	baz=119						
HHAG				AMP		06 06 00.0	
	baz=119						
AKKU	Akkuyu-Mersin	8.44	74	PN	Pn	06 05 11.6	-0.6
IKL	Isikli	8.56	74	PN	Pn	06 05 12.8	-1.1
DRME	Dracevica, Mon	8.65	338	*e* Pn	Pn	06 05 12.8	-2.2
DRME	Dracevica, Mon	8.65	338	⇓ *i* Pn	Pn	06 05 12.8	-2.2
DRME				*i* Sn	Sn	06 06 39.7	-12
NBNS	Bani Suef	8.68	128	P	Pn	06 05 14.8	-0.8
	baz=129						
PVY	Plav	8.81	343	*e* Pn	Pn	06 05 15.1	-2.2
PVY				*i* Sn	Sn	06 06 43.6	-12
BUM	Brajici-Budva	8.84	337	⇑ *i* Pn	Pn	06 05 15.5	-2.2
BUM				*i* Sn	Sn	06 06 44.3	-12
PDG	Podgorica	8.85	339	*e* Pn	Pn	06 05 14.4	-3.3
PDG	Podgorica	8.85	339		Pn	06 05 16.0	-1.7
TTG	Podgorica	8.85	339	*e* Pn	Pn	06 05 15.7	-2.0
TTG				*i* Sn	Sn	06 06 44.4	-12
KIZK	Mersin	8.97	72	PN	Pn	06 05 18.1	-1.4
SUZ	Suez	9.04	116	P	Pn	06 05 18.4	-2.1
	baz=118						
CORL	Corleone	9.04	297	Pn	Pn	06 05 20.7	+0.2
CEME	Cevo	9.06	338	⇑ *i* Pn	Pn	06 05 18.2	-2.5
CEME				*i* Sn	Sn	06 06 49.5	-12
IVA	Berane	9.09	343	⇓ *i* Pn	Pn	06 05 18.9	-2.2
IVA				*i* Sn	Sn	06 06 50.2	-12
HCY	Herceg Novi	9.11	336	*e* Pn	Pn	06 05 18.2	-3.1
HCY	Herceg Novi	9.11	336	*e* Pn	Pn	06 05 18.9	-2.4
HCY				*i* Sn	Sn	06 06 50.7	-12
TAMRE	El Minia	9.11	134	P	Pn	06 05 20.2	-1.2
	baz=135						
KOME	Kolasin	9.16	341	⇓ *i* Pn	Pn	06 05 19.8	-2.4
KOME				*i* Sn	Sn	06 06 52.1	-12
NKME	Niksic	9.25	339	⇓ *i* Pn	Pn	06 05 21.1	-2.2
NKME				*i* Sn	Sn	06 06 54.0	-12
NKY	Niksic	9.28	339	*e* Pn	Pn	06 05 21.4	-2.3
NKY				*i* Sn	Sn	06 06 54.7	-12
TREB	Trebinje	9.39	336	*e* Pn	Pn	06 05 22.2	-3.0
SJES	Sjenica	9.44	344	*e* Pn	Pn	06 05 23.1	-2.8
BRY	Bratogost	9.50	337	*e* Pn	Pn	06 05 23.8	-3.0
BRY	Bratogost	9.50	337	⇓ *i* Pn	Pn	06 05 24.4	-2.4
BRY				*i* Sn	Sn	06 06 59.9	-12
PLE	Pljevlja	9.64	342	*e* Pn	Pn	06 05 26.4	-2.4
PLE				*i* Sn	Sn	06 07 03.5	-12
UPM	Unac-Piva	9.66	340	*e* Pn	Pn	06 05 26.6	-2.4
UPM				*i* Sn	Sn	06 07 03.8	-13
SGRT	San Giovanni R	9.70	323	Pn	Pn	06 05 27.0	-2.5
ASUT		9.70	132	P	Pn	06 05 28.8	-0.8
	baz=134						
STON	Ston	9.76	334	*e* Pn	Pn	06 05 26.9	-3.3
STON				Sn	Sn	06 07 07.0	-11
STON	Ston	9.76	334	*e* Pn	Pn	06 05 26.3	-3.9
BRTR	Keskin Array B	9.79	53	Pn	Pn	06 05 30.9	+0.1
	comp=N,0.3nm,0.3s,baz=354,slow=25,SNR=5.3						
BRTR				LR	LR	06 10 32.7	
	comp=N,32nm,18.1s,baz=262,slow=46						
PAOL	Paolisi	9.82	316	Pn	Pn	06 05 30.6	-0.6
GRB	Gharib	9.91	124	P	Pn	06 05 31.0	-1.4
	baz=126						
MMAI	Mount Meron Ar	9.99	94	Pn	Pn	06 05 32.9	-0.7
	comp=N,5.2nm,0.3s,baz=262,slow=12,SNR=14						
MMAI				Sn	Sn	06 07 16.9	-7.5
	comp=N,12nm,0.3s,baz=261,slow=22,SNR=12						
BBLS	Lazići	10.14	343	*e* Pn	Pn	06 05 31.6	-4.0
DIVS	Divibare	10.23	346	*e* Pn	Pn	06 05 32.1	-4.7
DIVS	Divibare	10.23	346		Pn	06 05 33.4	-3.4
MAKA	Makarska	10.37	333	*e* Pn	Pn	06 05 35.5	-3.1
MAKA				Sn	Sn	06 07 20.7	-13
HAPS	Han Pijesak,Bl	10.46	342	*e* Pn	Pn	06 05 36.1	-3.9
TR2	Tor 2	10.49	121	P	Pn	06 05 38.2	-2.1
	baz=122						
HVAR	Hvar	10.50	330	*e* Pn	Pn	06 05 37.3	-3.1
HKAT	Jabal Katrina	10.61	120	P	Pn	06 05 39.7	-2.4
	baz=121						
EIL	Elat	10.72	112	Pn	Pn	06 05 42.7	-0.8
	comp=N,0.8nm,0.3s,baz=66,slow=1.5,SNR=9.2						
EIL				Sn	Sn	06 07 33.5	-8.8
	comp=N,4.5nm,0.3s,baz=53,slow=6.6,SNR=12						
INTR	Introdacqua	10.84	319	Pn	Pn	06 05 45.7	+0.5
KIJV	Kijevo	11.21	333	*e* Pn	Pn	06 05 47.8	-2.4
KIJV				Sn	Sn	06 07 41.8	-12
ZIRJ	Zirje	11.23	329	*e* Pn	Pn	06 05 47.0	-3.3
ZIRJ				Sn	Sn	06 07 42.5	-12
FRGS	Fruska Gora	11.29	347	*e* Pn	Pn	06 05 48.4	-2.7
MORI	Morici	11.37	330	*e* Pn	Pn	06 05 49.9	-2.4
MORI				Sn	Sn	06 07 46.7	-11
BLY	Banja Luka	11.59	337	*e* Pn	Pn	06 05 51.0	-4.2
DUGI	Dugi Otok	11.75	329	*e* Pn	Pn	06 05 54.8	-2.7
NRCA	Norcia	11.83	320	Pn	Pn	06 05 58.5	-0.1
UDBI	Udbina	11.90	332	*e* Pn	Pn	06 05 57.5	-2.1
MURB	Monte Urbino	12.44	320	Pn	Pn	06 06 08.4	+1.4
VSL	Villasalto	12.48	299	Pn	Pn	06 06 07.3	-0.1
OZLJ	Ozalj	12.94	334	*e* Pn	Pn	06 06 11.3	-2.4
PTJ	Puntijarka	13.01	336	*e* Pn	Pn	06 06 12.3	-2.5
KALN	Kalnik	13.05	338	*e* Pn	Pn	06 06 11.6	-3.7
CRES	Cresnjev	13.12	334	*e* Pn	Pn	06 06 12.2	-4.0
CEY	Cerknica	13.43	332	*e* Pn	Pn	06 06 17.7	-2.8
LJU	Ljubljana	13.65	333	*e* Pn	Pn	06 06 19.3	-4.1
OBKA	Obir	14.03	334	*e* Pn	Pn	06 06 26.5	-2.2
	comp=N,2.2nm,0.4s						
ARSA	Arzberg	14.34	338	*e* Pn	Pn	06 06 30.3	-2.6
	comp=N,0.9nm,0.3s						
VYHS	Vyhne	14.68	348	*e* P	P	06 06 40.9	-2.3
ZOU	Zoufplan	14.69	330		Pn	06 06 36.0	-1.7
CONA	Conrad Observa	14.85	340	*e* Pn	Pn	06 06 38.4	-1.3
	comp=N,1.0nm,0.5s						
CTI	Castel Tesino	14.87	326	Pn	Pn	06 06 38.7	-1.4
MODS	Modra-Piesok	14.88	344	*e* P	Pn	06 06 42.6	+2.4
SMOL	Smolenice	14.98	344	*e* P	Pn	06 06 43.8	+2.3
SMOL				*e*		06 19 16.1	
ABTA	Abfaltersbach	15.03	330	*e* Pn	Pn	06 06 39.7	-2.5
	comp=N,2.4nm,0.6s						
SALO	Salr	15.10	323	Pn	Pn	06 06 43.2	+0.1
MOA	Molln	15.28	336	*e* Pn	Pn	06 06 44.1	-1.3
	comp=N,1.7nm,0.4s						
WTTA	Wattenberg	15.81	329	*e* Pn	Pn	06 06 51.7	-0.7
	comp=N,2.3nm,0.6s						
VRAC	Vranov	15.92	343	Pn	Pn	06 06 54.5	+0.8
	comp=N,0.9nm,0.3s,baz=154,slow=8.6,SNR=10						
VRAC	Vranov	15.92	343	*e* P	P	06 06 57.1	+0.1
FETA	Feichten	16.02	327	*e* Pn	Pn	06 06 56.0	+0.8
	comp=N,1.3nm,0.5s						
MORC	Moravsky Berou	16.15	346	Pn	Pn	06 06 57.1	+0.4
DAVOX	Davos/Dischmat	16.24	325	Pn	Pn	06 06 58.1	+0.2
	comp=N,0.5nm,0.3s,baz=169,slow=20,SNR=6.2						
TUE	Stuetta	16.29	323	Pn	Pn	06 06 58.9	+0.4
TUE				IAmb	IAmb	06 07 14.1	
	comp=Z,16nm,1.4s						
GEC2	GERESS Array S	16.33	336		Pn	06 06 57.7	-1.3
GERES	GERESS Array B	16.33	336	Pn	Pn	06 06 58.4	-0.5
	comp=Z,0.3nm,0.3s,baz=155,slow=14,SNR=7.0						
GERES				LR	LR	06 15 08.8	
	comp=Z,71nm,19.2s,baz=84,slow=44						
KRLC	Kraliky	16.60	345	*e* P	P	06 07 04.7	+0.2
DAVA	Damuels	16.61	326	*e* Pn	Pn	06 07 02.0	-0.6
	comp=Z,4.1nm,0.7s						
KHC	Kasperske Hory	16.62	337	*e* P	P	06 07 05.4	+0.7
KHC	Kasperske Hory	16.62	337		Pn	06 07 01.6	-1.0
KHC				IAmb	IAmb	06 07 09.8	
	comp=Z,9.5nm,1.0s						
BNI	Bardonecchia	16.85	315	Pn	Pn	06 07 04.4	-1.2
DPC	Dobruska-Polom	16.96	344	*e* P	Pn	06 07 07.3	+0.5
AKASG	Malin Array Be	16.99	13	Pn	Pn	06 07 05.0	-2.1
	comp=Z,2.5nm,0.3s,baz=207,slow=10.0,SNR=20						
AKASG				Sn	Sn	06 10 14.2	-0.6
	comp=Z,0.4nm,0.3s,baz=200,slow=23,SNR=4.7						
AKBB	Malin Array Si	16.99	13		Pn	06 07 05.5	-1.7
PRU	Pruhonice	17.08	340	*e* P	P	06 07 10.7	+0.9
OSTC	Ostas	17.17	344	*e* P	P	06 07 11.9	+1.1
SENIN	Lac Senin/Sane	17.28	319	P	P	06 07 11.9	-0.3
SENIN				IAmb	IAmb	06 07 35.8	
	comp=Z,11nm,1.4s						
KBZ	Khabaz	17.78	52	P	P	06 07 17.4	-0.1
	comp=Z,0.2nm,0.3s,baz=206,slow=6.2,SNR=8.9						
CLL	Collm	18.70	339	*e* P	Pn	06 07 29.0	+0.8
CLL				*e* sP	pwP	06 07 39.0	-0.6
CLL	Collm	18.70	339	P	P	06 07 26.2	-1.5
CLL				IAmb	IAmb	06 07 29.9	
	comp=Z,7.2nm,0.8s						
WLF	Walferdange	20.04	326	P	P	06 07 41.8	-0.5
NACGM	Naroch	20.80	5	*i* P	P	06 07 48.0	-2.5
NACGM				*i* P	P	06 07 48.0	-2.5
NACGM				*i* P	P	06 07 48.0	-2.5
NACGM				*i* Pb	pP	06 07 58.3	-0.6
	comp=Z,23nm,0.9s						
NACGM				*i* sP	pwP	06 08 01.9	-0.7
NACGM				*i* PP	PnPn	06 08 11.4	+2.1
NACGM				*i* S	S	06 11 37.5	-3.0
NACGM				*i* SS	SnSn	06 12 03.0	+1.2
NACGM				*i* sS	sS	06 12 07.1	+13
ESDC	Sonseca Array	22.58	292	P	P	06 08 10.5	+0.7
	comp=Z,0.5nm,0.7s,baz=84,slow=10,SNR=3.1						
BELG	Belogornoye	25.06	36	P	P	06 08 32.3	-1.0
	comp=Z,6.3nm,0.4s,baz=274,slow=23,SNR=6.2						
FINES	FINESS Array B	27.29	3	P	P	06 08 51.8	-1.5
	comp=Z,2.6nm,0.7s,baz=183,slow=8.7,SNR=6.9						
NOA	NORSAR Array B	27.98	347	P	P	06 08 59.0	-0.6
	comp=Z,0.2nm,0.4s,baz=151,slow=8.8,SNR=1.8						
EKA	Eskdalemuir Ar	28.05	327	P	P	06 09 01.1	+0.8
	comp=Z,1.1nm,0.3s,baz=123,slow=8.1,SNR=18						
GEYT	Alibeck	28.12	72	P	P	06 09 00.8	-0.3
	comp=Z,0.5nm,0.4s,baz=241,slow=18,SNR=2.6						
TORD	Torodi Ar. Bea	28.85	229	P	P	06 09 08.8	+1.1
	comp=Z,0.5nm,0.6s,baz=31,slow=9.1,SNR=2.5						
AKTO	Aktyubinsk	29.88	47	P	P	06 09 16.8	+0.2
	comp=Z,1.0nm,0.5s,baz=270,slow=12,SNR=3.2						
ABKAR	Akbulak array	30.71	50	P	P	06 09 25.1	+1.2
ABKAR				IAmb	IAmb	06 09 50.3	
	comp=Z,2.4nm,1.2s						
KOWA	Kowa	31.68	238	P	P	06 09 33.5	+0.7
	comp=Z,1.4nm,0.7s,baz=52,slow=8.3,SNR=4.8						
KOWA	Kowa	31.68	238	P	P	06 09 34.1	+1.4
ARU	Arti	32.61	36	P	P	06 09 38.9	-1.6
	comp=Z,0.6nm,0.4s,baz=252,slow=18,SNR=2.6						
ARU	Arti	32.61	36	P	P	06 09 40.6	+0.1
ARU				IAmb	IAmb	06 09 44.7	
	comp=Z,4.5nm,1.1s						
ARCES	ARCESS Array B	35.38	1	P	P	06 10 02.7	-1.7
	comp=Z,2.7nm,0.9s,baz=183,slow=9.8,SNR=1.6						
KK31	Karatay Array	37.34	62	P	P	06 10 21.5	0.0
KK31				IAmb	IAmb	06 10 40.6	
	comp=Z,7.3nm,1.4s						
KKAR	Karatay Array	37.34	62	P	P	06 10 21.5	0.0
KKAR				IAmb	IAmb	06 10 40.6	
	comp=Z,7.3nm,1.4s						
BRVK	Borovoye	37.92	46	P	P	06 10 26.3	+0.1
BRVK				IAmb	IAmb	06 10 49.1	
	comp=Z,2.1nm,1.0s						
DBIC	Dimbokro	37.92	230	P	P	06 10 26.6	0.0
	comp=Z,1.8nm,0.8s,baz=6.3,slow=9.2,SNR=2.0						
KURK	Kurchatov	42.82	50	P	P	06 11 06.0	-0.8
KURK				IAmb	IAmb	06 11 20.0	
	comp=Z,1.9nm,0.8s						
MK31	Makanchi Array	45.42	56	P	P	06 11 27.9	+0.1
MKAR	Makanchi Array	45.42	56	P	P	06 11 27.9	+0.2
	comp=Z,3.1nm,0.4s,baz=271,slow=7.5,SNR=64						
ZALV	Zalesovo Beam	46.63	46	P	P	06 11 36.4	-0.7
	comp=Z,1.4nm,0.3s,baz=274,slow=8.4,SNR=4.5						
WMQ	Urumqi	49.65	59	*e* P	P	06 12 03.3	+2.7
GTA	Gaotai	59.60	61	*e* P	P	06 13 13.5	+0.5
GTA				pP	pwP	06 13 24.7	-1.5
GTA				sP	sP	06 13 29.8	+3.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	Songino Array	61.13	50	P	P	06 13 23.4	+0.2
	comp=Z,0.4nm,0.6s,baz=285,slow=7.4,SNR=5.9						
HHC	Hu-ho-hao-te	67.29	55	*e* P	P	06 14 04.5	+0.8
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.3s						

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*MOS **02** 06:16:27.8±1.3, 37°.54N×20°.51E, h11^{km}, mb4.6/14, Error ellipse: s-maj=7.5km s-min=3.9km az=76.6*

*IDC **02** 06:16:27.7±0.5, 37°.56N×20°.63E, h0^{km}, mb4.2/28, mb1 4.3/39, mb1mx4.2/62, mbtmp4.2/39, ML4.2/10, MS3.7/18, Ms1 3.7/18, ms1mx3.5/37, Error ellipse: s-maj=12.6km s-min=10.6km az=143.0*

*NEIC **02** 06:16:28.1, 37°.38N×20°.32E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.05; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$1.19; $M_{r\theta}$3.18; $M_{\theta\phi}$-0.65; $M_{\phi r}$-2.99; Fault plane solution: $M_0$4.56000×10^{15} NP1:ϕ_s314.01000°, δ82.94000°, λ-98.66000°. NP2:ϕ_s185.09000°, δ11.16000°, λ-39.45000°. Principal axes: T 4.6110, Plg37.0000°, Azm52.0000°; N -0.1105, Plg9.0000°, Azm315.0000°; P -4.5005, Plg51.0000°, Azm214.0000°;*

*ATH **02** 06:16:28.1, 37°.38N×20°.32E, h5^{km}±1^{km}, ML4.7/4 Error ellipse: s-maj=3.0km s-min=1.0km az=36.0*

*NEIC **02** 06:16:28.8±2.4, 37°.43N±0°.06×20°.39E±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=10.7km s-min=7.9km az=195.0*

*MED_RC **02** 06:16:30.0±1.5, 37°.51N×20°.60E, h18^{km}±3^{km}, MW4.5/15, Moment Tensor Solution. Mantle waves: s15,c17; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.92±.64; $M_{\theta\theta}$0.06±.37; $M_{\phi\phi}$0.86±.47; $M_{r\theta}$4.62±.84; $M_{\theta\phi}$0.43±.21; $M_{\phi r}$-4.42±.75; Best double couple: $M_0$6.42000×10^{15} NP1:ϕ_s315.00000°, δ88.00000°, λ-94.00000°. NP2:ϕ_s194.00000°, δ4.00000°, λ-31.00000°. Principal axes: T 5.9700, Plg43.0000°, Azm48.0000°; N 0.9000, Plg4.0000°, Azm315.0000°; P -6.8700, Plg47.0000°, Azm221.0000°; nsta1 refers to body waves.*

nsta2 refers to surface waves, cutoff=35s.

PDG ***02*** *06:16:31.7±0.6, 37°.63N×20°.46E, h25^{km}±1^{km}, ML4.4/14*
Error ellipse: s-maj=1.3km s-min=1.0km az=90.0

THE ***02*** *06:16:31.3, 37°.54N×20°.53E, h9^{km}, ML4.6/5, Error ellipse: s-maj=1.3km s-min=0.6km az=44.0*

HLW ***02*** *06:16:37.7, 37°.27N×21°.34E, h10^{km}±33^{km}, Md4.8, Ml4.4*

ISC 02 06:16:30.6±0.5**, 37°.56N**±0°.03×**20°.48E**±0°.03**, h19**^{km}±3^{km}**, n438,** σ1^{s}96/498**, mb4.4**/62**, MS3.7**/16**, 21C-38D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI1	kERI	0.29	70	P	Pb	06 16 37.1	0.0
KRI1				S	Sb	06 16 40.4	-1.0
VLMS	Volimes, Zakyn	0.35	25	P	Pb	06 16 38.6	+0.3
VLMS				S	Sn	06 16 45.9	-1.1
VLMS				AML	AML	06 16 47.2	
VLMS				AML	AML	06 16 50.5	
VLMS	Volimes, Zakyn	0.35	25	P	Pb	06 16 38.6	+0.3
VLMS				S	Sn	06 16 45.9	-1.1
VLMS				AML	AML	06 16 47.2	
VLMS				AML	AML	06 16 50.5	
VLMS	Volimes, Zakyn	0.35	25	P	Pb	06 16 38.5	+0.3
VLMS				S	Sb	06 16 43.3	-0.1
	239µm,0.4s						
ZAK2	Zakynthos	0.40	56	P	Pg	06 16 38.6	-0.4
ZAK2				S	Sg	06 16 44.8	+0.1
PSDA	Pessada-Kefalo	0.56	9	P	Pg	06 16 42.1	+0.4
PSDA	Pessada-Kefalo	0.56	9	P	Pg	06 16 42.1	+0.4
PSDA	Pessada-Kefalo	0.56	9	P	Pg	06 16 42.2	+0.4
ARGA	Argostoli. Kep	0.61	0	P	Pg	06 16 43.2	+0.4
ARGA	Argostoli. Kep	0.61	0	P	Pg	06 16 43.2	+0.4
VLS	Valsamata	0.62	8	P	Pg	06 16 43.1	+0.2
VLS				S	Sn	06 16 54.2	+0.4
VLS				AML	AML	06 16 56.8	
VLS				AML	AML	06 16 57.3	
	comp=E,60685µm,0.4s						
VLS	Valsamata	0.62	8	P	Pg	06 16 43.1	+0.2
VLS				S	Sn	06 16 54.2	+0.4
VLS				AML	AML	06 16 56.8	
VLS				AML	AML	06 16 57.3	
	comp=E,60685µm,0.4s						
VLS	Valsamata	0.62	8	P	Pg	06 16 43.2	+0.2
VLS				S	Sg	06 16 52.4	+1.1
	comp=E,51µm,0.6s						
LXR1	Lixouri, Cepha	0.64	357	P	Pn	06 16 44.4	-0.2
LXRA	Lixouri, Kepha	0.64	357	P	Pg	06 16 43.8	+0.5
LXRA	Lixouri, Kepha	0.64	357	P	Pg	06 16 43.8	+0.5
KEF3	Kipouria, Keph	0.65	351	P	Pn	06 16 44.1	-0.6
KEF3				S	Sn	06 16 55.3	+0.9
KEF3	Kipouria, Keph	0.65	351	P	Pn	06 16 44.1	-0.6
KEF3				S	Sn	06 16 55.3	+0.9
KEF3	Kipouria, Keph	0.65	351	P	Pn	06 16 44.5	-0.2
KEF3				S	Sn	06 16 54.1	-0.4
	comp=E,337µm,0.5s						
KEF4	Livadi, Kephal	0.69	357	P	Pg	06 16 44.8	+0.4
KEF4	Livadi, Kephal	0.69	357	P	Pg	06 16 44.8	+0.4
KEF4	Livadi, Kephal	0.69	357	P	Pn	06 16 45.1	-0.3
KEF5	Kardakata, Kep	0.71	359	P	Pg	06 16 44.9	+0.2
KEF5	Kardakata, Kep	0.71	359	P	Pg	06 16 44.9	+0.2
KEF5	Kardakata, Kep	0.71	359	P	Pg	06 16 44.9	+0.2
KEF5				S	Sn	06 16 55.8	-0.3
VSK1	VASILIKIADES	0.85	5	P	Pn	06 16 47.4	-0.1
RLS	Riolos of Patr	0.93	57	P	Pn	06 16 48.3	-0.2
RLS	Riolos of Patr	0.93	57	P	Pn	06 16 48.3	-0.2
RLS	Riolos of Patr	0.93	57	P	Pb	06 16 48.1	+0.1
RLS				S	Sn	06 17 01.4	+0.1
	comp=E,24µm,0.6s						
AMT	Artemida-Makis	0.98	91	P	Pb	06 16 48.7	-0.2
AMT				S	Sn	06 17 04.5	+1.9
AMT				AML	AML	06 17 09.7	
	comp=E,89494µm,0.5s						
AMT				AML	AML	06 17 10.3	
	comp=N,77658µm,0.5s						
AMT	Artemida-Makis	0.98	91	P	Pb	06 16 48.7	-0.2
AMT				S	Sn	06 17 04.5	+1.9
AMT				AML	AML	06 17 09.7	
	comp=E,89494µm,0.5s						
AMT				AML	AML	06 17 10.3	
	comp=N,77658µm,0.5s						
AMT	Artemida-Makis	0.98	91	P	Pb	06 16 48.8	-0.2
AMT				S	Sg	06 17 02.3	-0.3
	comp=N,38µm,0.8s						
DRO	Drossia	1.05	68	P	Pg	06 16 50.8	-0.2
DRO				S	Sg	06 17 08.4	+3.6
DRO				AML	AML	06 17 11.2	
	comp=E,25152µm,0.3s						
DRO				AML	AML	06 17 11.7	
	comp=N,53267µm,0.5s						
DRO	Drossia	1.05	68	P	Pg	06 16 50.8	-0.2
DRO				S	Sg	06 17 08.4	+3.6
DRO				AML	AML	06 17 11.2	
	comp=E,25152µm,0.3s						
DRO				AML	AML	06 17 11.7	
	comp=N,53267µm,0.5s						
DRO	Drossia	1.05	68	P	Pb	06 16 50.0	-0.2
EVGI	Lefkada island	1.07	8	P	Pg	06 16 51.3	-0.1
EVGI	Lefkada island	1.07	8	P	Pg	06 16 51.3	-0.1
EVGI	Lefkada island	1.07	8	P	Pn	06 16 50.9	+0.4
EVGI				S	Sg	06 17 07.6	+2.3
AST1	Astakos	1.09	26	P	Pg	06 16 51.4	-0.4
NYDR	Nydri-Lefkada	1.16	9	P	Pb	06 16 52.6	+0.5
NYDR	Nydri-Lefkada	1.16	9	P	Pb	06 16 52.6	+0.5
NYDR	Nydri-Lefkada	1.16	9	P	Pb	06 16 52.5	+0.5
PDO	Prodromos	1.17	28	P	Pb	06 16 52.8	+0.5
PDO	Prodromos	1.17	28	P	Pb	06 16 52.8	+0.5
PDO	Prodromos	1.17	28	P	Pg	06 16 53.0	-0.4
PYL	PYLOS	1.21	123	P	Pn	06 16 52.2	-0.3
ITM	Ithomi	1.22	108	P	Pn	06 16 52.2	-0.4
ITM	Ithomi	1.22	108	P	Pn	06 16 52.2	-0.4
ITM	Ithomi	1.22	108	P	Pn	06 16 52.7	+0.1
ITM	Ithomi	1.22	108		Pb	06 16 53.0	0.0
ITM				Sn	Sg	06 17 09.6	-0.5
LKD2	Lefkada island	1.23	7	P	Pb	06 16 53.8	+0.5
LKD2	Lefkada island	1.23	7	P	Pb	06 16 53.8	+0.5
LKD2	Lefkada island	1.23	7	P	Pg	06 16 54.0	-0.5
TSLK	Tsoukalades, L	1.27	6	P	Pg	06 16 54.8	-0.4
TSLK	Tsoukalades, L	1.27	6	P	Pg	06 16 54.8	-0.4
TSLK	Tsoukalades, L	1.27	6	P	Pg	06 16 54.7	-0.4
TSLK				S	Sg	06 17 12.6	+0.9
KLV	Kalavryta, Ach	1.41	70	P	Pb	06 16 56.2	-0.1
KLV	Kalavryta, Ach	1.41	70	P	Pb	06 16 56.2	-0.1
KLV	Kalavryta, Ach	1.41	70	P	Pb	06 16 56.5	+0.2
EFP	Efpalio	1.42	52	P	Pb	06 16 56.3	-0.2
EFP	Efpalio	1.42	52	P	Pb	06 16 56.3	-0.2
EFP	Efpalio	1.42	52	P	Pb	06 16 56.2	-0.2
TRIZ	Trizonia	1.49	57	P	Pb	06 16 57.5	-0.2
TRIZ	Trizonia	1.49	57	P	Pb	06 16 57.5	-0.2
TRIZ	Trizonia	1.49	57	P	Pb	06 16 57.5	-0.2
KALE	Kalithea	1.55	57	P	Pb	06 16 58.5	-0.2
KALE	Kalithea	1.55	57	P	Pb	06 16 58.5	-0.2
KALE	Kalithea	1.55	57	P	Pb	06 16 58.6	-0.2
EVR	Evrytania	1.71	37	P	Pb	06 17 01.3	-0.1
EVR	Evrytania	1.71	37	P	Pb	06 17 01.3	-0.1
DSF	Desfina	1.83	62	P	Pb	06 17 02.5	-1.0
DSF	Desfina	1.83	62	P	Pb	06 17 02.5	-1.0
DLFA	Delphi	1.84	60	P	Pb	06 17 02.7	-0.9
DLFA	Delphi	1.84	60	P	Pb	06 17 02.7	-0.9
AGG	Agios Georgios	2.06	44	P	Pb	06 17 06.8	-0.6
AGG	Agios Georgios	2.06	44		Pb	06 17 06.8	-0.6
AXAR	Agios Charalam	2.10	54	P	Pb	06 17 06.7	-1.3
AXAR	Agios Charalam	2.10	54	P	Pb	06 17 06.7	-1.3
EPID	Epidavros	2.10	88	P	Pn	06 17 05.6	+0.9
EPID	Epidavros	2.10	88	P	Pn	06 17 05.6	+0.9
EPID	Epidavros	2.10	88	P	Pn	06 17 05.6	+0.9
JAN	Janina	2.11	8	P	Pn	06 17 06.4	+1.5
JAN	Janina	2.11	8	P	Pn	06 17 06.4	+1.5
JAN	Janina	2.11	8	P	Pb	06 17 07.1	-1.2
KEK	Kerkira	2.21	346	P	Pn	06 17 07.3	+1.1
KEK	Kerkira	2.21	346	P	Pn	06 17 07.3	+1.1
KASA	Kassiopi	2.22	349	P	Pn	06 17 07.3	+0.9
KASA	Kassiopi	2.22	349	P	Pn	06 17 07.3	+0.9
LKR	Lokris	2.27	61	P	Pn	06 17 08.5	+1.5
LKR	Lokris	2.27	61	P	Pn	06 17 08.5	+1.5
ATAL	Atalanti	2.30	60	P	Pn	06 17 09.2	+1.7
ATAL	Atalanti	2.30	60	P	Pn	06 17 09.2	+1.7
SMIA	Simia	2.52	58	P	Pn	06 17 12.2	+1.7
SMIA	Simia	2.52	58	P	Pn	06 17 12.2	+1.7
ATH	Athens Observa	2.60	80	P	Pn	06 17 12.1	+0.6
ATH	Athens Observa	2.60	80	P	Pn	06 17 12.1	+0.6
ATHU	Athens Univers	2.65	80	P	Pn	06 17 12.9	+0.6
ATHU	Athens Univers	2.65	80	P	Pn	06 17 12.9	+0.6
PTL	Penteli	2.73	79	P	Pn	06 17 13.8	+0.4
PTL	Penteli	2.73	79	P	Pn	06 17 13.8	+0.4
NEO	Neokhori	2.77	50	P	Pn	06 17 15.4	+1.4
NEO	Neokhori	2.77	50	P	Pn	06 17 15.4	+1.4
DION	Dionisos Attik	2.78	78	P	Pn	06 17 15.0	+0.9
DION	Dionisos Attik	2.78	78	P	Pn	06 17 15.0	+0.9
DION	Dionisos Attik	2.78	78	P	Pn	06 17 14.6	+0.5
EREA	Eretria	2.86	72	P	Pn	06 17 16.4	+1.2
EREA	Eretria	2.86	72	P	Pn	06 17 16.4	+1.2
KZN	Kozani	2.92	20	P	Pn	06 17 18.5	+2.5
KZN	Kozani	2.92	20	P	Pn	06 17 18.5	+2.5
SCTE	Santa Cesarea	2.96	329	Pn	Pn	06 17 17.8	+1.3
LIT	Litokhoron	2.98	31	P	Pn	06 17 18.7	+1.8
LIT	Litokhoron	2.98	31	Pn	Pn	06 17 18.7	+1.8
KYMI	Kymi, Euboea I	3.05	68	P	Pn	06 17 18.9	+1.1
KYMI	Kymi, Euboea I	3.05	68	P	Pn	06 17 18.9	+1.1
KARY	Karystos	3.17	80	P	Pn	06 17 20.0	+0.6
KARY	Karystos	3.17	80	P	Pn	06 17 20.0	+0.6
FNA	Florina	3.29	12	P	Pn	06 17 23.7	+2.6
FNA	Florina	3.29	12	Pn	Pn	06 17 23.7	+2.6
TIP	Timpagrande	3.34	300	Pn	Pn	06 17 21.5	-0.4
OHR	Ohrid	3.55	4	iPn	Pn	06 17 27.5	+2.7
CEL	Celeste	3.69	282		Pn	06 17 25.0	-1.7
TIR	Tirane	3.81	353	P	Pn	06 17 30.7	+2.5
TIR	Tirane	3.81	353	Pn	Pn	06 17 30.7	+2.5
APE	Apeiranthos	4.06	95	⇑P	Pn	06 17 31.7	0.0
APE	Apeiranthos	4.06	95	⇑eP	Pn	06 17 31.3	-0.4
VAY	Valandovo	4.09	23	iPn	Pn	06 17 33.6	+1.6
IDI	Anoyia	4.22	121	Pn	Pn	06 17 35.3	+1.4
	comp=N,1.4nm,0.3s,baz=257,slow=9.8,SNR=17						
IDI				Sn	Sn	06 18 20.3	-2.4
	comp=N,15nm,0.3s,baz=300,slow=14,SNR=4.2						
IDI	Anoyia	4.22	121	⇑P	Pn	06 17 34.2	+0.3
IDI	Anoyia	4.22	121		Pn	06 17 33.3	-0.7
SKO	Skopje	4.46	9	iPn	Pn	06 17 39.0	+1.8
ULC	Ulcinj	4.50	348	⇑iPn	Pn	06 17 39.1	+1.4
ULC				iSn	Sn	06 18 29.4	-0.1
LAST	Lasithi	4.69	119	P	Pn	06 17 40.8	+0.3
LAST	Lasithi	4.69	119	P	Pn	06 17 40.8	+0.3
DRME	Dracevica, Mon	4.72	348	ePn	Pn	06 17 40.5	-0.3
DRME	Dracevica, Mon	4.72	348	ePn	Pn	06 17 42.3	+1.5
DRME				iSn	Sn	06 18 34.9	-0.1
VAE	Valguarnera	4.82	271	Pn	Pn	06 17 44.1	+1.9
	comp=N,14nm,0.3s,baz=355,slow=8.1,SNR=11						
VAE				Sn	Sn	06 18 40.9	+3.3
	comp=N,22nm,0.3s,baz=353,slow=23,SNR=4.4						
RAFF	Raffo Rosso	4.88	268		Pn	06 17 40.6	-2.4
BUM	Brajici-Budva	4.89	346	⇓iPn	Pn	06 17 44.3	+1.2
BUM				iSn	Sn	06 18 38.7	-0.4
PDG	Podgorica	4.95	349	⇑P	Pn	06 17 44.5	+0.6
PDG	Podgorica	4.95	349	ePn	Pn	06 17 42.0	-1.9
PDG	Podgorica	4.95	349	Pn	Pn	06 17 44.7	+0.8
TTG	Podgorica	4.95	349	ePn	Pn	06 17 44.5	+0.6
TTG				iSn	Sn	06 18 40.2	-0.4
PVY	Plav	5.04	356	ePn	Pn	06 17 46.7	+1.4
PVY				iSn	Sn	06 18 42.4	-0.6
HCY	Herceg Novi	5.11	343	ePn	Pn	06 17 45.2	-0.9
HCY	Herceg Novi	5.11	343	⇓iPn	Pn	06 17 47.1	+1.0
HCY				iSn	Sn	06 18 43.9	-0.7
CEME	Cevo	5.12	347	ePn	Pn	06 17 46.8	+0.5
CEME				iSn	Sn	06 18 44.1	-0.8
IVA	Berane	5.32	355	⇑iPn	Pn	06 17 50.5	+1.4
IVA				iSn	Sn	06 18 49.1	-0.8
NKME	Niksic	5.33	348	⇓iPn	Pn	06 17 50.5	+1.4
NKME				iSn	Sn	06 18 49.1	-0.9
KOME	Kolasin	5.33	352	⇑iPn	Pn	06 17 50.6	+1.4
KOME				iSn	Sn	06 18 49.3	-0.9
NKY	Niksic	5.37	348	ePn	Pn	06 17 50.9	+1.2
NKY				iSn	Sn	06 18 49.9	-1.1
TREB	Trebinje	5.40	343	ePn	Pn	06 17 49.2	-0.9
ALN	Alexandroupoli	5.46	51	P	Pn	06 17 51.6	+0.8
ALN	Alexandroupoli	5.46	51		Pn	06 17 51.6	+0.8
VTS	Vitosha	5.47	22	⇑P	Pn	06 17 52.9	+1.7
BRY	Bratogost	5.54	345	ePn	Pn	06 17 51.6	-0.5
BRY	Bratogost	5.54	345	⇓iPn	Pn	06 17 53.2	+1.1
BRY				iSn	Sn	06 18 53.9	-1.3
SGRT	San Giovanni R	5.55	320		Pn	06 17 53.9	+1.6
CORL	Corleone	5.70	276		Pn	06 17 52.3	-1.9
SJES	Sjenica	5.71	356	ePn	Pn	06 17 55.5	+1.1
STON	Ston	5.71	339	ePn	Pn	06 17 54.0	-0.4
STON				Sn	Sn	06 18 49.9	-9.4
STON	Ston	5.71	339	ePn	Pn	06 17 53.4	-0.9
PAOL	Paolisi	5.75	309	Pn	Pn	06 17 52.2	-2.6
UPM	Unac-Piva	5.76	348	ePn	Pn	06 17 56.3	+1.1
UPM	Unac-Piva	5.76	348	ePn	Pn	06 17 56.4	+1.2
UPM				iSn	Sn	06 18 59.4	-1.4
CLTB	Caltabellotta	5.77	272	Pn	Pn	06 17 53.7	-1.6
PLE	Pljevlja	5.82	352	ePn	Pn	06 17 57.2	+1.2
PLE				iSn	Sn	06 19 00.9	-1.3
RUDO	Rudo	6.11	352	ePn	Pn	06 18 00.9	+1.1
MAKA	Makarska	6.30	336	ePn	Pn	06 18 02.7	+0.4
MAKA				Sn	Sn	06 19 05.9	-7.8
BBLS	Lazići	6.35	353	ePn	Pn	06 18 03.8	+0.6
HVAR	Hvar	6.40	333	ePn	Pn	06 18 05.0	+1.3
HVAR				Sn	Sn	06 19 08.6	-7.6
DIVS	Divibare	6.54	357	ePn	Pn	06 18 04.1	-1.7
DIVS	Divibare	6.54	357		Pn	06 18 05.9	+0.1
HAPS	Han Pijesak,Bl	6.62	350	ePn	Pn	06 18 05.8	-1.1
INTR	Introdacqua	6.73	313	Pn	Pn	06 18 08.3	-0.2
TEKS	Tekeris	7.02	354	ePn	Pn	06 18 11.6	-0.7
VLAD	Vladila	7.08	24	⇓P	Pn	06 18 14.9	+1.7
ZIRJ	Zirje	7.11	330	ePn	Pn	06 18 13.1	-0.4
ZIRJ				Sn	Sn	06 19 25.8	-7.9
KIJV	Kijevo	7.14	336	ePn	Pn	06 18 14.3	+0.3
SLUM	Salum	7.21	146	P	Pn	06 18 12.3	-2.6
	baz=149						
SLUM				AMP		06 19 00.0	
	baz=149						
MORI	Morici	7.26	332	ePn	Pn	06 18 16.3	+0.7
MORI				Sn	Sn	06 19 30.2	-7.4
MDVR	Moldovita	7.27	7	⇓P	Pn	06 18 15.7	-0.1
SRE	Strehaia	7.38	15	⇑P	Pn	06 18 18.6	+1.3
BLY	Banja Luka	7.60	342	ePn	Pn	06 18 22.3	+2.1
FRGS	Fruska Gora	7.61	356	ePn	Pn	06 18 18.5	-1.9
DUGI	Dugi Otok	7.62	329	ePn	Pn	06 18 21.9	+1.4
NRCA	Norcia	7.71	315		Pn	06 18 21.9	0.0
HUMR	Humele	7.74	25	⇓P	Pn	06 18 23.8	+1.5
UDBI	Udbina	7.81	334	ePn	Pn	06 18 24.8	+1.5
PRIJ	Prijedor	7.93	340	ePn	Pn	06 18 28.6	+3.8
GZR	Gura Zlata	8.01	12	⇑P	Pn	06 18 26.3	+0.3
BZS	Buzias	8.09	6	⇑P	Pn	06 18 26.6	-0.4
LOT	Lotru	8.26	16	⇓P	Pn	06 18 30.3	+0.9
SULR		8.34	30	⇓P	Pn	06 18 32.4	+2.1
ARR	Arges	8.40	20	⇓P	Pn	06 18 33.0	+1.7
DEV	Deva	8.51	12	⇓P	Pn	06 18 34.5	+1.8
VOIR		8.58	22	⇓P	Pn	06 18 35.5	+1.8
SIRR	Siria	8.74	5	⇓P	Pn	06 18 36.9	+1.0
ISR	Istrita	8.82	29	⇑P	Pn	06 18 38.9	+1.9
OZLJ	Ozalj	8.88	337	ePn	Pn	06 18 38.5	+0.7
ZAG	Zagreb	8.91	339	ePn	Pn	06 18 38.9	+0.6
MLR	Muntele Rosu	8.92	26	Pn	Pn	06 18 40.0	+1.6
	comp=N,3.7nm,0.3s,baz=178,slow=8.5,SNR=30						
MLR	Muntele Rosu	8.92	26	⇓P	Pn	06 18 41.0	+2.5
MLR	Muntele Rosu	8.92	26	P	Pn	06 18 41.1	+2.7
MLR	Muntele Rosu	8.92	26	Pn	Pn	06 18 41.1	+2.7
RIY	Rijeka	8.96	332	ePn	Pn	06 18 40.8	+1.8
RIY	Rijeka	8.96	332	ePn	Pn	06 18 39.9	+0.9
PTJ	Puntijarka	8.99	339	ePn	Pn	06 18 40.0	+0.5
PTJ				Sn	Sn	06 20 10.7	-9.4
CRES	Cresnjev	9.07	337	ePn	Pn	06 18 40.0	-0.4
KALN	Kalnik	9.07	342	ePn	Pn	06 18 40.2	-0.3
KALN				Sn	Sn	06 20 12.8	-9.2
TIRR	Tirgusor	9.13	39	⇓P	Pn	06 18 41.8	+0.6
KEST	Kesra	9.13	262	Pn	Pn	06 18 42.5	+1.1
	comp=N,1.1nm,0.3s,baz=259,slow=8.5,SNR=13						
KEST				LR	LR	06 22 44.3	
	comp=N,291nm,20.3s,baz=40,slow=41						
DOPR	Dopca	9.16	22	⇑P	Pn	06 18 43.3	+1.6
BISRR	Bisoca	9.24	28	⇑P	Pn	06 18 45.6	+2.8
SWA2		9.28	152	P	Pn	06 18 41.5	-1.9
	baz=155						
SWA2				S	Sn	06 20 12.1	-15
	baz=155						
CEY	Cerknica	9.34	333	ePn	Pn	06 18 44.4	+0.3
DRGR		9.37	9	⇓P	Pn	06 18 45.4	+0.8
OZUR		9.40	23	⇓P	Pn	06 18 47.1	+2.2
TPGR	Topolog	9.42	37	⇓P	Pn	06 18 45.6	+0.3
CJR	Cluj-Napoca	9.43	13	⇓P	Pn	06 18 46.6	+1.2
PLOR	Plostina	9.48	27	⇑P	Pn	06 18 48.3	+2.3
VRI	Vrincioaia	9.52	27	⇑P	Pn	06 18 49.0	+2.4
CFR	Carcaliu	9.54	35	⇓P	Pn	06 18 47.0	+0.2
TRI	Trieste	9.56	330	P	Pn	06 18 48.0	+0.8
TRI	Trieste	9.56	330		Pn	06 18 48.0	+0.8
LJU	Ljubljana	9.56	334	ePn	Pn	06 18 48.6	+1.4
VOJS	Vojsko	9.79	332	ePn	Pn	06 18 51.4	+1.0
MPLH	Magyarpolny	9.84	348	ePN	Pn	06 18 53.9	+2.8
MPLH				eSN	Sn	06 20 39.0	-2.0
ARCR	ARCALIA	9.94	16	⇓P	Pn	06 18 54.6	+2.3
SOKA	Soboth	9.96	338	ePn	Pn	06 18 51.8	-1.0
	comp=N,9.0nm,0.4s,SNR=6.7						
SOKA				eSn	Sn	06 20 36.5	-7.5
	comp=N,11nm,0.6s						
OBKA	Obir	9.96	336	ePn	Pn	06 18 53.9	+1.1
	comp=N,6.7nm,0.3s,SNR=14						
OBKA				eSn	Sn	06 20 39.4	-4.7
	comp=N,47nm,0.6s						
OBKA	Obir	9.96	336	ePn	Pn	06 18 53.9	+1.1
OBKA				eSn	Sn	06 20 38.5	-5.5
TESR	Tescani	10.05	25	⇓P	Pn	06 18 56.9	+3.1
TEOL	Teolo	10.21	322		Pn	06 18 57.9	+1.8
ARSA	Arzberg	10.35	341	ePn	Pn	06 18 58.0	+0.1
	comp=N,4.0nm,0.4s,SNR=11						
ARSA	Arzberg	10.35	341	ePn	Pn	06 18 58.7	+0.8
PSZ	Piszkesteto	10.36	358	ePN	Pn	06 19 00.0	+1.9
PSZ	Piszkesteto	10.36	358	P	Pn	06 18 58.2	+0.1
PSZ	Piszkesteto	10.36	358		Pn	06 18 58.2	+0.1
MYKA	Terra Mystica	10.38	333	ePn	Pn	06 18 58.6	+0.2
	comp=N,2.6nm,0.3s						
MYKA				Sn	Sn	06 20 52.6	-1.7
	comp=N,6.6nm,0.4s						
STAL	STALIGIAL	10.44	329		Pn	06 19 00.7	+1.6
BRTR	Keskin Array B	10.52	74	Pn	Pn	06 19 01.3	+0.9
	comp=N,0.2nm,0.3s,baz=266,slow=14,SNR=1.6						
BRTR				LR	LR	06 23 26.2	
	comp=N,189nm,18.3s,baz=268,slow=40						
ZOU	Zoufplan	10.57	331		Pn	06 19 03.6	+2.4
BURAR	Bucovina Array	10.63	18	⇑P	Pn	06 19 04.1	+2.1
BUR08	Bucovina Ar. S	10.66	18		Pn	06 19 04.1	+1.9
CTI	Castel Tesino	10.73	325	P	Pn	06 19 04.4	+1.1
CTI	Castel Tesino	10.73	325	Pn	Pn	06 19 04.4	+1.1
KBA	Koelnbreinsper	10.87	333	ePn	Pn	06 19 06.0	+0.8
	comp=N,8.4nm,0.5s						
KBA				eSn	Sn	06 21 00.1	-6.3
	comp=N,17nm,0.7s						
KBA	Koelnbreinsper	10.87	333	ePn	Pn	06 19 08.4	+3.2
CONA	Conrad Observa	10.90	343	ePn	Pn	06 19 06.5	+1.0
	comp=N,0.9nm,0.3s						
ABTA	Abfaltersbach	10.91	330	ePn	Pn	06 19 08.1	+2.4
	comp=N,4.3nm,0.5s,SNR=4.5						
ABTA				eSn	Sn	06 21 01.4	-5.8
	comp=N,19nm,0.6s						
ZST	Bratislava	10.91	348	eSN	Sn	06 20 55.8	-11
SALO	Salr	10.96	320		Pn	06 19 06.9	+0.6
VYHS	Vyhne	10.99	354	eP	Pn	06 19 08.2	+1.5
VYHS				e		06 21 05.4	
VYHS	Vyhne	10.99	354	ePN	Pn	06 19 08.2	+1.5
VYHS				eSN	Sn	06 21 05.4	-3.7
MODS	Modra-Piesok	11.05	349	eP	Pn	06 19 09.2	+1.6
MODS	Modra-Piesok	11.05	349	ePN	Pn	06 19 09.2	+1.6
MODS				eSN	Sn	06 21 02.9	-7.8
KOLL	Kolacno	11.11	353	ePN	Pn	06 19 10.7	+2.3
SMOL	Smolenice	11.17	349	eSN	Sn	06 21 10.9	-2.5
MOA	Molln	11.24	338	Pn	Pn	06 19 10.8	+0.6
	comp=N,5.8nm,0.4s,SNR=20						
MOA				eSn	Sn	06 21 11.2	-4.1
	comp=N,7.7nm,0.6s						
MOA	Molln	11.24	338	ePn	Pn	06 19 10.4	+0.1
CRVS	Cervenica-Dubn	11.36	3	eP	Pn	06 19 15.7	+4.0
CRVS	Cervenica-Dubn	11.36	3	e	Pn	06 19 15.7	+4.0
KOLS	Kolonicke sedl	11.44	6	eP	Pn	06 19 14.4	+1.5
KOLS	Kolonicke sedl	11.44	6	ePN	Pn	06 19 14.4	+1.5
LANS	Liptovska Anna	11.61	357	eP	Pn	06 19 22.1	+6.9
LANS	Liptovska Anna	11.61	357	e	Pn	06 19 22.1	+6.9
WTTA	Wattenberg	11.68	329	ePn	Pn	06 19 20.0	+3.7
	comp=N,6.7nm,0.5s						
WTTA				Sn	Sn	06 21 23.2	-3.1
	comp=N,40nm,0.8s						
WTTA	Wattenberg	11.68	329	ePn	Pn	06 19 20.3	+4.0
WTTA				eSn	Sn	06 21 22.1	-4.2
WATA	Walderalm	11.76	329	ePn	Pn	06 19 21.2	+3.7
	comp=N,6.0nm,0.4s						
WATA				Sn	Sn	06 21 25.1	-3.1
	comp=N,23nm,0.6s						
SQTA	Sankt Quirin	11.83	328	ePn	Pn	06 19 22.3	+4.1
	comp=N,5.8nm,0.5s						
FETA	Feichten	11.88	326	Sn	Sn	06 21 25.6	-5.6
	comp=N,8.6nm,0.6s						
MOTA	Moosalm	11.97	328	ePn	Pn	06 19 23.4	+3.2
	comp=N,12nm,0.8s						
MOTA				Sn	Sn	06 21 29.4	-3.8
	comp=N,7.9nm,0.5s						
SORM	Soroca	12.03	26	⇑P	Pn	06 19 22.5	+1.6
DAVOX	Davos/Dischmat	12.10	323	Pn	Pn	06 19 24.5	+2.4
	comp=N,0.6nm,0.3s,baz=154,slow=15,SNR=4.2						
KOT	Kottamia	12.13	126	P	Pn	06 19 20.2	-2.2
	baz=127						
TUE	Stuetta	12.14	321	Pn	Pn	06 19 23.9	+1.2
RETA	Reutte	12.22	327	ePn	Pn	06 19 27.8	+4.2
	comp=N,3.4nm,0.7s						
GLL	Jalalah	12.29	127	P	Pn	06 19 21.1	-3.5
	baz=128						
GEC2	GERESS Array S	12.30	339		Pn	06 19 25.0	+0.2
GERES	GERESS Array B	12.30	339	Pn	Pn	06 19 25.6	+0.8
	comp=N,1.1nm,0.3s,baz=161,slow=15,SNR=25						
GERES				Sn	Sn	06 21 34.9	-6.4
	comp=N,1.1nm,0.3s,baz=154,slow=24,SNR=6.1						
GERES				LR	LR	06 25 16.2	
	comp=N,233nm,18.5s,baz=136,slow=43						
OKC	Ostrava-Krasne	12.38	353	eP	P	06 19 38.3	+0.6
MORC	Moravsky Berou	12.39	351	⇑P	Pn	06 19 26.4	+0.5
DAVA	Damuels	12.47	325	ePn	P	06 19 33.0	-5.8
	comp=N,1.5nm,0.3s						
DAVA	Damuels	12.47	325	ePn	Pn	06 19 32.6	+5.6
KHC	Kasperske Hory	12.60	339	⇓eP	Pn	06 19 29.2	+0.4
KHC	Kasperske Hory	12.60	339	ePN	Pn	06 19 30.5	+1.8
KHC				eSN	Sn	06 21 41.2	-7.2
KHC	Kasperske Hory	12.60	339	Pn	Pn	06 19 29.1	+0.4
KRLC	Kraliky	12.79	349	eP	Pn	06 19 32.9	+1.6
KRLC	Kraliky	12.79	349	ePN	Pn	06 19 32.9	+1.6
MMAI	Mount Meron Ar	13.01	106	Pn	Pn	06 19 34.1	-0.3
	comp=N,1.7nm,0.3s,baz=310,slow=12,SNR=4.1						
DPC	Dobruska-Polom	13.13	348	ePN	Pn	06 19 38.3	+2.4
PRU	Pruhonice	13.13	343	eP	Pn	06 19 37.5	+1.5
PRU	Pruhonice	13.13	343	ePN	Pn	06 19 37.5	+1.5
BRG	Berggiesshubel	14.10	343	iP	P	06 20 00.1	+3.3
BRG				Amp		06 20 03.0	
	comp=Z,3.4nm,0.7s						
BRG	Berggiesshubel	14.10	343	iP	P	06 20 00.0	+3.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRG	Berggiesshubel	14.10	343	iP	P	06 20 00.1	+3.3
BRG				Amp		06 20 03.0	
	comp=Z,3.4nm,0.7s						
EIL	Elat	14.39	119	Pn	Pn	06 19 52.4	-0.9
	comp=Z,0.7nm,0.3s,baz=328,slow=8.0,SNR=4.3						
EIL				Sn	Sn	06 22 16.6	-16
	comp=Z,1.9nm,0.3s,baz=302,slow=17,SNR=5.3						
AKASG	Malin Array Be	14.54	23	Pn	Pn	06 19 53.9	-1.3
	comp=Z,1.8nm,0.3s,baz=214,slow=12,SNR=15						
AKASG				LR	LR	06 26 49.5	
	comp=Z,733nm,18.3s,baz=200,slow=43						
AKBB	Malin Array Si	14.54	23	P	Pn	06 19 55.5	+0.3
AKBB	Malin Array Si	14.54	23		Pn	06 19 55.5	+0.3
ANN	Anapa	14.66	55	eP	P	06 19 59.9	-3.0
ANN				eS	Sn	06 22 39.4	+0.8
ANN				pmax	pmax		
	comp=Z,59nm,1.0s						
ANN				MLR	MLR		
	comp=Z,195nm,6.0s						
CLL	Collm	14.73	341	ePP	P	06 20 06.0	+2.3
WLF	Walferdange	15.90	324	dx	P	06 20 26.6	+10
GUZR	Guzeripl'	16.19	60	d iP	P	06 20 20.4	+0.3
SUW	Suwalki	16.56	6	eP	Pn	06 20 21.9	+0.5
SUW	Suwalki	16.56	6	P	Pn	06 20 22.0	+0.5
SUW				pmax	pmax		
	comp=Z,120nm,1.0s						
SUW	Suwalki	16.56	6		Pn	06 20 22.0	+0.5
BTNL	Ternell	16.57	326	dx	P	06 20 49.8	+26
MEM	Membach	16.64	326	dPnPn	P	06 20 33.1	+8.2
DOU	Dourbes	16.93	323	dPnPn	P	06 20 36.4	+8.2
RGN	Rugen	17.68	346	Pn	Pn	06 20 35.3	-0.3
MNK	Minsk	17.69	14	iP	Pn	06 20 29.9	-5.7
	comp=E,5.0nm,1.4s						

MNK				*i* P	**Pn**	**06 20 29.9**	**-5.7**
	comp=N,41nm,1.2s						
MNK				*i* P	**Pn**	**06 20 29.9**	**-5.7**
	comp=Z,14nm,0.8s						
MNK				*i* PP	**pP**	**06 20 39.9**	**-1.6**
MNK				*i* S	**Sn**	**06 23 42.4**	**-10**
MNK				*i* SS	**S**	**06 23 58.6**	**-0.6**
MNK				*i* PcP	**PcP**	**06 25 11.6**	**-1.8**
MNK				*i* LQ	LQ	06 25 38.6	
MNK				*i* LR	LR	06 26 57.8	
MNK				*i* LRM	MLR	06 28 12.4	
	comp=E,29nm,29.9s						
MNK				*i* LRM	MLR	06 28 12.4	
	comp=N,498nm,26.7s						
MNK				*i* LRM	MLR	06 28 12.4	
	comp=Z,218nm,17.3s						
GEVA	**Gevas**	**17.83**	**81**		**P**	**06 20 38.6**	**+0.3**
NACGM	**Naroch**	**17.87**	**12**	*i* P	**Pn**	**06 20 34.6**	**-3.3**
NACGM				*i* P	**Pn**	**06 20 34.6**	**-3.3**
NACGM				*i* P	**Pn**	**06 20 34.6**	**-3.3**
NACGM				*i* Pb	**sP**	**06 20 44.7**	**-0.2**
	comp=Z,29nm,1.1s						
NACGM				*i* PP	**pP**	**06 20 46.7**	**+3.1**
NACGM				*i* S	**Sn**	**06 23 58.3**	**+1.8**
NACGM				*i* SS	**SnSn**	**06 24 13.6**	**+3.5**
NACGM				*i* LQ	LQ	06 25 24.5	
NACGM				*i* LR	LR	06 27 28.0	
KIV	**Kislovodsk**	**17.97**	**62**	⇓*e*P	**P**	**06 20 41.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ	**Khabaz**	**18.07**	**63**	P	**Pn**	**06 20 40.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=112,slow=1.9,SNR=12						
KBZ				LR	LR	06 29 24.4	
	comp=Z,76nm,21.0s,baz=235,slow=43						
PABE	**Paberze**	**18.10**	**6**	*e*P	**Pn**	**06 20 40.0**	**-0.7**
IIGN	**Ignalina**	**18.21**	**11**	*e*P	**Pn**	**06 20 40.9**	**-1.2**
IIGN				IAmb	IAmb	06 21 10.7	
	comp=Z,15nm,1.0s						
ISAL	**Salakas**	**18.42**	**10**	*e*P	**P**	**06 20 43.1**	**-1.3**
ISAL				IAmb	IAmb	06 20 53.1	
	comp=Z,10nm,0.6s						
NCK	**Nalchik**	**18.52**	**64**	⇓*e*P	**Pn**	**06 20 48.3**	**+2.3**
NCK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZEI	**Tsey**	**18.62**	**66**	*e*P	**Pn**	**06 20 49.1**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VORD	**Divnogorie**	**18.93**	**39**	*e*P	**P**	**06 20 49.9**	**-0.2**
VORD				pmax	pmax		
	comp=Z,8.0nm,0.4s						
VSR	**Storozhevoye**	**19.02**	**38**	*e*P	**P**	**06 20 50.4**	**-0.8**
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
ESBB	**Sonseca Array**	**19.20**	**284**	P	**P**	**06 20 53.5**	**+0.2**
ESDC	**Sonseca Array**	**19.20**	**284**	P	**Pn**	**06 20 54.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=25						
LPSR	**Galich'ya Gora**	**19.81**	**35**	*e*P	**P**	**06 20 59.1**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,30nm,0.6s						
SLIT	**Slitere, Latvi**	**20.11**	**3**	*e*P	**P**	**06 21 03.0**	**0.0**
VRH	**Novokhopyorsk**	**20.31**	**41**	*e*P	**P**	**06 21 05.7**	**+0.5**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
OBN	**Obninsk**	**20.68**	**27**	P	**P**	**06 21 09.0**	**-0.3**
	comp=Z,5.9nm,0.4s,baz=353,slow=22,SNR=6.8						
OBN	**Obninsk**	**20.68**	**27**	*e*P	**P**	**06 21 08.4**	**-0.8**
OBN				*e*		06 21 16.2	
OBN				*e*PPP	PPP	06 21 32.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,280nm,14.0s						
OBN	**Obninsk**	**20.68**	**27**	P	**P**	**06 21 08.9**	**-0.3**
DBC	**Dubki**	**20.79**	**67**	*de*P	Pn	06 21 14.0	+1.0
DBC				pmax	pmax		
	comp=Z,35nm,0.4s						
MDT	**Midelt**	**21.02**	**264**	P	**P**	**06 21 14.9**	**+1.7**
	comp=Z,9.1nm,0.9s,baz=62,slow=5.8,SNR=22						
MTSE	**Matsula**	**21.28**	**5**	*e*P	**P**	**06 21 15.6**	**0.0**
VSU	**Vasula**	**21.31**	**9**	*e*P	**P**	**06 21 16.1**	**+0.2**
VSU	**Vasula**	**21.31**	**9**	*d i*P	**P**	**06 21 16.1**	**+0.2**
VSU				pmax	pmax		
	comp=Z,116nm,0.7s						
PBRG	**Braganca**	**21.33**	**290**	*e*P	**P**	**06 21 21.2**	**+4.7**
AKT	**Akhty**	**21.35**	**71**	*e*P	**P**	**06 21 16.1**	**-0.6**
AKT				*e*		06 21 36.9	
AKT				*e*		06 25 21.0	
AKT				pmax	pmax		
	comp=Z,28nm,1.2s						
MVO	**Moncorvo**	**21.53**	**288**	*e*P	**P**	**06 21 19.0**	**+0.4**
	comp=Z,22nm,1.4s						
MOS	**Moscow**	**21.55**	**27**	*e*P	**P**	**06 21 17.9**	**-0.7**
MOS				*e*S	**S**	**06 25 16.6**	**+0.2**
MOS				pmax	pmax		
	comp=Z,71nm,0.8s						
MOS				MLR	MLR		
	comp=Z,600nm,16.0s						
MTE	**Manteigas**	**21.93**	**286**	*e*P	**P**	**06 21 22.9**	**0.0**
PESTR	**Estremoz**	**22.06**	**282**	P	**P**	**06 21 24.0**	**-0.2**
POLO	**Lamas de Olo**	**22.11**	**289**	*e*P	**P**	**06 21 25.6**	**+0.7**
PVIS	**Viseu**	**22.19**	**287**	*e*P	**P**	**06 21 26.3**	**+0.6**
PCAB	**Cabril**	**22.29**	**290**	*e*P	**P**	**06 21 26.4**	**-0.3**
PVAQ	**Vaqueiros**	**22.35**	**278**	P	**P**	**06 21 25.1**	**-2.2**
PVAQ				IAmb	IAmb	06 22 08.9	
	comp=Z,32nm,1.3s						
UPP	**Uppsala**	**22.39**	**356**	*e*P	**P**	**06 21 26.0**	**-1.5**
PGAV	**Gavieira, Arco**	**22.48**	**290**	*e*P	**P**	**06 21 26.9**	**-1.9**
PMTG	**Montargil**	**22.54**	**283**	*e*P	**P**	**06 21 29.1**	**-0.2**
	comp=Z,19nm,1.4s						
AAL	**Aland**	**22.64**	**359**	*e*P	**P**	**06 21 29.2**	**-0.9**
KONO	**Kongsberg**	**23.18**	**346**	P	**P**	**06 21 37.1**	**+1.2**
KONO				pmax	pmax		
	comp=Z,46nm,1.2s						
KONO	**Kongsberg**	**23.18**	**346**	P	**P**	**06 21 37.0**	**+1.2**
KONO				IAmb	IAmb	06 22 05.7	
	comp=Z,46nm,1.2s						
NC602	**NORSAR Array S**	**23.87**	**349**	P	**P**	**06 21 42.3**	**-0.3**
EKA	**Eskdalemuir Ar**	**23.91**	**326**	P	**P**	**06 21 43.7**	**+0.7**
	comp=Z,4.1nm,0.6s,baz=127,slow=8.2,SNR=11						
FINES	**FINESS Array B**	**24.16**	**7**	P	**P**	**06 21 44.4**	**-0.9**
	comp=Z,10nm,0.5s,baz=179,slow=11,SNR=74						
FINES				S	**S**	**06 26 06.9**	**+4.8**
	comp=Z,7.7nm,1.0s,baz=156,slow=19,SNR=3.8						
FINES				LR	LR	06 34 14.5	
	comp=Z,126nm,18.2s,baz=209,slow=44						
FINES	**FINESS Array B**	**24.16**	**7**	*i* P	**P**	**06 21 44.4**	**-0.9**
FINES				pmax	pmax		
	comp=Z,11nm,0.5s						
NC405	**NORSAR Array S**	**24.21**	**350**	P	**P**	**06 21 46.5**	**+0.7**
NB2	**NORSAR Subarra**	**24.21**	**349**	P	**P**	**06 21 45.7**	**-0.1**
	comp=Z,5.2nm,0.7s,baz=162,slow=9.3						
NOA	**NORSAR Array B**	**24.21**	**349**	P	**P**	**06 21 46.7**	**+0.9**
	comp=Z,1.9nm,0.5s,baz=221,slow=14,SNR=13						
NOA				LR	LR	06 33 35.3	
	comp=Z,85nm,19.3s,baz=5.0,slow=42						
VALR	**Valaam**	**24.70**	**12**	⇓*e*P	**P**	**06 21 49.7**	**-0.4**
VALR				pmax	pmax		
	comp=Z,55nm,0.8s						
RAYN	**Ar Rayn**	**25.60**	**116**	P	**P**	**06 21 59.8**	**+1.1**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RAYN	**Ar Rayn**	**25.60**	**116**	P	**P**	**06 21 59.8**	**+1.1**
KLMR	**Klimovskoe**	**26.22**	**21**	*e*P	**P**	**06 21 57.8**	**-6.2**
KLMR				pmax	pmax		
	comp=Z,28nm,1.2s						
KLMR	**Klimovskoe**	**26.22**	**21**	*e*P	**P**	**06 21 57.9**	**-6.1**
KLMR				AMP		06 22 11.5	
	comp=Z,28nm,1.2s						
TOA0	**Torodi Ar. Sit**	**29.53**	**220**	P	**P**	**06 22 32.4**	**-1.6**
TOA0				IAmb	IAmb	06 22 35.6	
	comp=Z,10nm,0.9s						
TORD	**Torodi Ar. Bea**	**29.53**	**220**	P	**P**	**06 22 33.9**	**0.0**
	comp=Z,7.1nm,0.5s,baz=31,slow=9.2,SNR=40						
TORD				LR	LR	06 35 38.2	
	comp=Z,132nm,18.2s,baz=30,slow=39						
AKTO	**Aktyubinsk**	**29.58**	**52**	P	**P**	**06 22 32.8**	**-1.3**
	comp=Z,3.1nm,0.4s,baz=252,slow=7.2,SNR=7.2						
GEYT	**Alibeck**	**29.64**	**78**	P	**P**	**06 22 33.0**	**-1.8**
	comp=Z,1.3nm,0.4s,baz=266,slow=8.4,SNR=6.5						
ABKAR	**Akbulak array**	**30.62**	**55**	P	**P**	**06 22 42.5**	**-0.8**
ABKAR				IAmb	IAmb	06 23 22.5	
	comp=Z,3.8nm,0.8s						
ARU	**Arti**	**31.54**	**41**	P	**P**	**06 22 49.4**	**-1.9**
	comp=Z,2.4nm,0.4s,baz=227,slow=7.8,SNR=10						
ARU	**Arti**	**31.54**	**41**	*d i*P	**P**	**06 22 50.0**	**-1.4**
ARU				S	**S**	**06 27 58.6**	**-0.1**
ARU				pmax	pmax		
	comp=Z,51nm,4.6s						
ARU	**Arti**	**31.54**	**41**	P	**P**	**06 22 50.8**	**-0.6**
ARU				IAmb	IAmb	06 22 54.9	
	comp=Z,7.3nm,0.5s						
KOWA	**Kowa**	**31.63**	**230**	P	**P**	**06 22 50.9**	**-1.6**
KOWA				IAmb	IAmb	06 23 12.9	
	comp=Z,11nm,1.5s						
ARCES	**ARCESS Array B**	**32.15**	**3**	P	**P**	**06 22 55.0**	**-1.6**
	comp=Z,2.4nm,0.8s,baz=188,slow=2.8,SNR=20						
ARCES				LR	LR	06 35 58.4	
	comp=Z,47nm,19.0s,baz=215,slow=36						
ARCES	**ARCESS Array B**	**32.15**	**3**	P	**P**	**06 22 55.0**	**-1.6**
KEV	**Kevo**	**32.45**	**4**	P	**P**	**06 22 59.3**	**+0.2**
KEV				pmax	pmax		
	comp=Z,46nm,1.4s						
KEV	**Kevo**	**32.45**	**4**	P	**P**	**06 22 59.3**	**+0.2**
SVE	**Sverdlovsk**	**32.76**	**41**	*e*P	**P**	**06 23 01.6**	**-0.4**
UOSS	**Minazif**	**32.83**	**102**	P	**P**	**06 23 02.7**	**-0.4**
UOSS				IAmb	IAmb	06 23 15.5	
	comp=Z,6.8nm,0.7s						
BRVK	**Borovoye**	**37.48**	**49**	⇓*e*P	**P**	**06 23 43.4**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**37.48**	**49**	P	**P**	**06 23 43.2**	**+0.4**
KK31	**Karatay Array**	**38.08**	**66**	P	**P**	**06 23 47.4**	**-0.6**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	**Karatay Array**	**38.08**	**66**	P	**P**	**06 23 47.4**	**-0.6**
KK31				IAmb	IAmb	06 24 24.0	
	comp=Z,4.7nm,0.7s						
KKAR	**Karatay Array**	**38.08**	**66**	P	**P**	**06 23 47.7**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR	**Karatay Array**	**38.08**	**66**	P	**P**	**06 23 47.7**	**-0.3**
KKAR				IAmb	IAmb	06 24 24.0	
	comp=Z,4.7nm,0.7s						
DBIC	**Dimbokro**	**38.42**	**223**	P	**P**	**06 23 51.6**	**+0.6**
	comp=Z,9.2nm,0.7s,baz=11,slow=10,SNR=18						
DBIC				LR	LR	06 40 41.0	
	comp=Z,94nm,18.5s,baz=22,slow=38						
DBIC	**Dimbokro**	**38.42**	**223**	P	**P**	**06 23 48.5**	**-2.5**
DBIC				IAmb	IAmb	06 23 52.6	
	comp=Z,8.4nm,0.8s						
TIC	**Toumodi**	**38.53**	**223**	*e*P	**P**	**06 23 52.4**	**+0.4**
KIC	**Kosan Boka**	**38.62**	**223**	*e*P	**P**	**06 23 53.3**	**+0.6**
	comp=Z,16nm,0.7s						
LIC	**Lamto**	**38.88**	**223**	*e*P	**P**	**06 23 55.3**	**+0.4**
	comp=Z,51nm,0.8s						
SPA0	**Spitsbergen Ar**	**40.76**	**359**	P	**P**	**06 24 11.7**	**+1.8**
SPITS	**Spitsbergen Ar**	**40.76**	**359**	P	**P**	**06 24 10.3**	**+0.5**
	comp=Z,9.5nm,1.0s,baz=150,slow=10,SNR=11						
AAK	**Ala-Archa**	**41.04**	**65**	⇓*e*P	**P**	**06 24 14.9**	**+2.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**42.67**	**53**	⇑*e*P	**P**	**06 24 24.8**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**42.67**	**53**	P	**P**	**06 24 26.3**	**+0.5**
KSH	**Kashi**	**42.87**	**70**	P	**P**	**06 24 25.7**	**-2.0**
KSH				PcP	**PcP**	**06 26 19.5**	**+1.0**
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,380nm,5.5s						
MAKZ	**Makanchi**	**45.44**	**58**	P	**P**	**06 24 48.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	**Makanchi**	**45.44**	**58**	P	**P**	**06 24 48.0**	**-0.2**
MK31	**Makanchi Array**	**45.65**	**58**	P	**P**	**06 24 48.9**	**-1.0**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**45.65**	**58**	P	**P**	**06 24 48.9**	**-1.0**
MK31				IAmb	IAmb	06 25 02.0	
	comp=Z,3.8nm,0.6s						
MKAR	**Makanchi Array**	**45.65**	**58**	P	**P**	**06 24 48.5**	**-1.4**
	comp=Z,2.8nm,0.4s,baz=275,slow=7.3,SNR=89						
MKAR				LR	LR	06 46 23.8	
	comp=Z,73nm,21.4s,baz=282,slow=39						
ZALV	**Zalesovo Beam**	**46.13**	**48**	P	**P**	**06 24 52.4**	**-1.0**
	comp=Z,8.5nm,0.4s,baz=274,slow=8.7,SNR=20						
ZALV				LR	LR	06 46 26.4	
	comp=Z,69nm,19.3s,baz=28,slow=39						
NRIK	**Noril'sk**	**47.36**	**26**	LR	LR	06 47 11.3	
	comp=Z,131nm,20.2s,baz=256,slow=39						
DGZ	**Jazzator, Alta**	**48.42**	**53**	⇓*e*P	**P**	**06 25 10.6**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	**Urumqi**	**50.09**	**60**	*e*P	**P**	**06 25 27.3**	**+3.0**
TSUM	**Tsumeb**	**56.53**	**183**	P	**P**	**06 26 10.9**	**-0.9**
TSUM				IAmb	IAmb	06 26 12.9	
	comp=Z,2.8nm,0.9s						
GTA	**Gaotai**	**60.15**	**61**	*e*P	P	06 26 31.0	-6.1
GTA				pP	pP	06 26 35.3	-7.3
GTA				sP	sP	06 26 38.2	-5.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TIXI	**Tiksi**	**60.24**	**20**	⇓*e*P	**P**	**06 26 37.6**	**+0.6**
TIXI	**Tiksi**	**60.24**	**20**	P	**P**	**06 26 37.5**	**+0.5**
TIXI				IAmb	IAmb	06 26 47.0	
	comp=Z,9.8nm,1.5s						
RES	**Resolute Bay**	**60.35**	**344**	P	**P**	**06 26 39.8**	**+2.1**
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	**Resolute Bay**	**60.35**	**344**	P	**P**	**06 26 39.8**	**+2.1**
RES				IAmb	IAmb	06 27 17.6	
	comp=Z,8.0nm,1.5s						
SONM	**Songino Array**	**60.88**	**50**	P	**P**	**06 26 41.1**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=281,slow=9.3,SNR=7.8						
SONM				LR	LR	06 55 12.3	
	comp=Z,51nm,18.5s,baz=42,slow=38						
BOD	**Bodaibo**	**60.88**	**38**	*e*P	**P**	**06 26 39.1**	**-2.5**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.8s						
OPO	**Ambohidratompo**	**61.24**	**151**	P	**P**	**06 26 45.7**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=324,slow=7.7,SNR=3.0						
LZH	**Lanzhou**	**64.51**	**63**	*e*P	**P**	**06 27 05.1**	**-1.3**
LZH				pP	pP	06 27 10.4	-1.6
LZH				sP	pwP	06 27 13.9	-0.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
YAK	**Yakutsk**	**65.66**	**29**	⇑*e*P	**P**	**06 27 13.6**	**+0.5**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOSA	**Boshof**	**65.98**	**175**	P	**P**	**06 27 15.8**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=356,slow=7.8,SNR=4.5						
BOSA				LR	LR	06 57 38.5	
	comp=Z,96nm,19.9s,baz=14,slow=38						
BOSA	**Boshof**	**65.98**	**175**	P	**P**	**06 27 16.1**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,13nm,1.4s						
BOSA	**Boshof**	**65.98**	**175**	P	**P**	**06 27 16.1**	**+0.4**
BOSA				IAmb	IAmb	06 28 39.4	
	comp=Z,13nm,1.4s						
HHC	**Hu-ho-hao-te**	**67.41**	**55**	*e*P	**P**	**06 27 24.2**	**-0.7**
HHC				S	**S**	**06 36 20.4**	**+0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,4.9s						
HHC				LR	LR		
	comp=N,160nm,17.4s						
HHC				LR	LR		
	comp=E,280nm,17.1s						
HHC				LR	LR		
	comp=Z,160nm,17.0s						
CMAR	**Chiang Mai Arr**	**70.01**	**82**	P	**P**	**06 27 41.1**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=302,slow=7.3,SNR=9.1						
SEY	**Seymchan**	**72.72**	**21**	P	**P**	**06 27 57.0**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=53,slow=5.1,SNR=2.4						
YKA	**Yellowknife Ar**	**73.95**	**340**	P	**P**	**06 28 04.8**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=45,slow=5.8,SNR=18						
KLR	**Kul'dur**	**74.37**	**39**	P	**P**	**06 28 06.6**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=300,slow=7.5,SNR=5.8						
NJ2	**Nanjing**	**77.16**	**60**	*e*P	**P**	**06 28 22.4**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ILAR	**Eielson Array**	**77.52**	**354**	P	**P**	**06 28 26.4**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=347,slow=3.3,SNR=9.7						
USRK	**Ussuriysk Ar.**	**77.75**	**43**	P	**P**	**06 28 25.3**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=300,slow=3.5,SNR=5.5						
KSRS	**Korea Array**	**79.75**	**50**	P	**P**	**06 28 37.4**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=309,slow=4.9,SNR=5.7						
PETK	**Petropavlovsk-**	**82.38**	**24**	LR	LR	07 10 38.3	
	comp=Z,61nm,19.0s,baz=317,slow=40						
BDFB	**Brasilia**	**83.22**	**245**	LR	LR	07 07 11.4	
	comp=Z,98nm,18.2s,baz=103,slow=36						
MJAR	**Matsushiro Arr**	**86.44**	**46**	P	**P**	**06 29 12.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=306,slow=6.3,SNR=1.4						
NEW	**Newport**	**86.59**	**333**	P	**P**	**06 29 12.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=292,slow=5.4,SNR=1.8						
PDAR	**Pinedale Array**	**88.04**	**326**	P	**P**	**06 29 19.8**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=35,slow=3.3,SNR=1.7						
TXAR	**Lajitas Array**	**95.37**	**313**	P	**P**	**06 29 55.8**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=64,slow=4.1,SNR=1.9						
CPUP	**Villa Florida**	**96.73**	**242**	LR	LR	07 15 08.2	
	comp=Z,67nm,18.0s,baz=54,slow=36						
WRA	**Warramunga Arr**	**120.55**	**93**	PKP	**PKPdf**	**06 35 20.3**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=314,slow=2.3,SNR=2.1						
ASAR	**Alice Springs**	**122.14**	**97**	PKP	**PKPdf**	**06 35 23.9**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=313,slow=2.1,SNR=4.1						
ASAR	**Alice Springs**	**122.14**	**97**	PKIKP	**PKPdf**	**06 35 24.0**	**-0.3**

IDC 02 06:20:25.1±2.5,**9°.75S**×**112°.42E,h0**^{km}**,mb3.6**/5,
mb1 3.7/5,**mb1mx3.5**/46,**mbtmp3.6**/5,**Error ellipse:**
s-maj=122.6km s-min=22.6km az=49.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.45**	**118**	P	P	06 25 36.8	+0.4
	0.5nm,0.9s,baz=292,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**24.74**	**127**	P	P	06 25 48.1	-0.4
	0.5nm,0.6s,baz=302,slow=8.9,SNR=6.8						
SONM	**Songino Array**	**57.58**	**355**	P	P	06 30 16.1	-0.6
	0.3nm,0.5s,baz=168,slow=8.5,SNR=4.1						
MKAR	**Makanchi Array**	**62.39**	**337**	P	P	06 30 50.4	+0.7
	0.6nm,0.4s,baz=152,slow=7.4,SNR=15						
ZALV	**Zalesovo Beam**	**67.63**	**343**	P	P	06 31 23.0	-0.5
	0.7nm,0.4s,baz=160,slow=4.8,SNR=2.5						

UPA ***02*** *07:02:25.6±1.9, 9°.14N×77°.88W, h60*^{km}*±28*^{km}*, MW4.1*
RSNC ***02*** *07:02:26.5±1.1, 8°.93N×77°.82W, h77*^{km}*±8*^{km}*, ML2.1*
ISC 02 07:02:24.8±1.4,**9°.09N**±0°.09×**77°.87W**±0°.03,**h74**^{km}±13^{km},
n15,σ1^{s}.02/26,**4C,Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD2	**Meteti**	**0.56**	**195**	⇑*i*P	**Pn**	**07 02 39.1**	**+0.6**
	baz=17,slow=3.2						
UPD2				*e*S	**Sn**	**07 02 48.1**	**-0.5**
UPD2	**Meteti**	**0.56**	**195**	⇑*i*P	**Pn**	**07 02 39.1**	**+0.6**
UPD2				*e*S	**Sn**	**07 02 48.3**	**-0.3**
UPD2				*i*		07 02 54.2	
	comp=Z,57nm,0.3s						
CAP2	**Capurgana**	**0.67**	**131**	⇑*i*P	**Pn**	**07 02 40.3**	**+0.6**
	baz=327,slow=5.3						
CAP2				*e*S	**Sn**	**07 02 50.4**	**-0.3**
CAPC	**Capurgana**	**0.69**	**131**	*e*P	**Pn**	**07 02 40.2**	**+0.4**
CAPC				*e*S	**Sn**	**07 02 50.5**	**-0.4**
CAPC				*i*		07 02 53.9	
	comp=Z,83nm,0.1s						
CNTA3	**Canitas, Panam**	**1.01**	**277**	*e*P	**Pn**	**07 02 44.3**	**+0.7**
CHPO	**Chepo, Panama**	**1.23**	**274**	*e*P	**Pn**	**07 02 46.7**	**+0.3**
CHPO				*e*S	**Sn**	**07 03 01.3**	**-1.2**
UPA	**Univ. de Panam**	**1.65**	**266**	*e*P	**Pn**	**07 02 50.4**	**-1.3**
UPA				*e*S	**Sn**	**07 03 11.1**	**-1.1**
CHOR3	**La Chorrera**	**1.88**	**264**	*e*P	**Pn**	**07 02 55.9**	**+1.0**
ZANG	**Zanguenga, Cho**	**1.98**	**266**	*i* P	**Pn**	**07 02 58.0**	**+1.9**
MOTC	**Monteria, Cord**	**2.20**	**98**	*e*P	**Pn**	**07 02 59.1**	**-0.1**
MOTC				*e*S	**Sn**	**07 03 24.6**	**-1.1**
MOTC				*i*		07 03 26.7	
	comp=Z,3.9nm,0.4s						
MONA	**Monteria**	**2.21**	**98**	*e*P	**Pn**	**07 03 00.2**	**+0.8**
MONA				*e*S	**Sn**	**07 03 25.5**	**-0.3**
VTON	**El Valle, Cocl**	**2.27**	**258**	*e*P	**Pn**	**07 03 00.0**	**-0.1**
AZU	**Azuero**	**2.71**	**242**	*e*P	**Pn**	**07 03 07.4**	**+1.4**
AZU				*e*S	**Sn**	**07 03 37.7**	**-0.1**
SJCC	**San Jacinto, C**	**2.77**	**73**	⇑*i*P	**Pn**	**07 03 08.7**	**+1.6**
SJCC				*e*S	**Sn**	**07 03 38.5**	**-1.0**
ZARC	**Zaragoza, Cauc**	**3.38**	**118**	*e*P	**Pn**	**07 03 15.8**	**+0.6**
ZARC				*e*S	**Sn**	**07 03 52.3**	**-1.9**
ZARC				*i*		07 03 55.0	
	comp=Z,11nm,0.3s						

IDC ***02*** *07:08:37.7±1.5, 40°.78N×79°.45E, h0*^{km}*, mb3.5/3,*
mb1 3.4/8, mb1mx3.2/53, mbtmp3.3/8, ML2.8/5, Error
ellipse: s-maj=26.1km s-min=19.2km az=74.0
BJI ***02*** *07:08:38.2±0.0, 40°.89N×79°.34E, h7*^{km}*, mb3.7/2, ML3.7/9*
SOME ***02*** *07:08:38.4, 40°.95N×79°.20E, h5*^{km}
KRNET ***02*** *07:08:38.5±0.1, 40°.97N×79°.48E, mb3.9*
NNC ***02*** *07:08:40.2±0.8, 41°.00N×79°.19E, h0*^{km}*, mb4.4, mpv4.1,*
Error ellipse: s-maj=5.9km s-min=3.8km az=163.0
ISC 02 07:08:43.5±1.0,**41°.14N**±0°.05×**79°.31E**±0°.03,**h10**^{km}**,n76,**
σ1^{s}.57/114,**26C-23D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.50**	**334**	⇓*e*P	**Pn**	**07 09 10.1**	**-0.6**
	baz=32						
PRZ				⇓*i*S	**Sg**	**07 09 33.4**	**+1.5**
	baz=32						
KDJ	**Kajisay**	**1.88**	**303**	⇑*i*P	**Pn**	**07 09 15.2**	**-0.6**
	baz=5.0						
KDJ				⇑*i*S	**Sb**	**07 09 42.0**	**+0.5**
	baz=5.0						
SHLS	**Shalkode**	**2.02**	**3**	*e*P	**Pb**	**07 09 20.5**	**+0.1**
	184nm,0.2s						
SHLS				*e*S	**Sg**	**07 09 51.0**	**+2.6**
	456nm,0.5s						
SHLS	**Shalkode**	**2.02**	**3**	Pg	**Pb**	**07 09 20.5**	**+0.1**
	184nm,0.2s						
SHLS				Lg	Lg	07 09 51.0	
	456nm,0.5s						
SATY	**Saty**	**2.03**	**341**	*e*P	**Pb**	**07 09 20.1**	**-0.5**
	181nm,0.4s						
SATY				*e*S	**Sg**	**07 09 50.4**	**+1.6**
	401nm,0.6s						
SATY	**Saty**	**2.03**	**341**	Pg	**Pb**	**07 09 20.1**	**-0.5**
	181nm,0.4s						
SATY				Lg	Lg	07 09 50.4	
	401nm,0.6s						
ANVS	**Anan'yevo**	**2.05**	**324**	⇓*i*P	**Pn**	**07 09 18.2**	**0.0**
	baz=24						
ANVS				⇓*i*S	**Sb**	**07 09 46.6**	**+0.1**
	baz=24						
ZHN	**Zhinishke**	**2.13**	**343**	*e*P	**Pb**	**07 09 22.0**	**-0.2**
	97nm,0.3s						
ZHN				*e*S	**Sg**	**07 09 53.4**	**+1.5**
	191nm,0.2s						
ZHN	**Zhinishke**	**2.13**	**343**	Pg	**Pb**	**07 09 22.0**	**-0.2**
	97nm,0.3s						
ZHN				Lg	Lg	07 09 53.4	
	191nm,0.2s						
PDGK	**Podgornoye**	**2.19**	**4**	Pg	**Pb**	**07 09 22.4**	**-0.9**
	44nm,0.5s						
PDGK				Lg	Lg	07 09 54.3	
	248nm,0.6s						
PDGK	**Podgornoye**	**2.19**	**4**	⇑Pn	**Pn**	**07 09 21.0**	**+0.9**
	67nm,0.5s						
PDGK				⇑Lg	Lg	07 09 53.8	
	376nm,0.7s						
KTMS	**Ketmen**	**2.43**	**18**	*e*P	**Pb**	**07 09 26.6**	**-0.8**
	49nm,0.2s						
KTMS				*e*S	**Sg**	**07 10 01.1**	**-0.6**
	348nm,0.4s						
KTMS	**Ketmen**	**2.43**	**18**	Pg	**Pb**	**07 09 26.7**	**-0.8**
	49nm,0.2s						
KTMS				Lg	Lg	07 10 01.1	
	348nm,0.4s						
KURS	**Kuram**	**2.49**	**341**	*e*P	**Pb**	**07 09 27.7**	**-0.7**
	96nm,0.6s						
KURS				*e*S	**Sg**	**07 10 03.0**	**-0.6**
	115nm,0.5s						
KURS	**Kuram**	**2.49**	**341**	Pg	**Pb**	**07 09 27.7**	**-0.7**
	96nm,0.6s						
KURS				Lg	Lg	07 10 03.0	
	115nm,0.5s						
ULHL	**Ulahol**	**2.55**	**297**	⇑*i*P	**Pn**	**07 09 24.7**	**-0.4**
	baz=99						
ULHL				⇑*i*S	**Sn**	**07 09 58.4**	**+2.2**
	baz=99						
MDOK	**Medeo**	**2.63**	**321**	*e*P	**Pb**	**07 09 29.3**	**-1.5**
	35nm,0.5s						
MDOK				*e*S	**Sg**	**07 10 05.9**	**-2.0**
	171nm,0.5s						
MDOK	**Medeo**	**2.63**	**321**	⇑Pg	**Pb**	**07 09 29.2**	**-1.5**
	40nm,0.4s						
MDOK				⇑Lg	Lg	07 10 04.8	

	164nm,0.8s						
MDOK	**Medeo**	**2.63**	**321**	Pg	**Pb**	**07 09 29.3**	**-1.5**
	35nm,0.5s						
MDOK				Lg	Lg	07 10 05.9	
	171nm,0.5s						
KOTS	**Kotyrbulak**	**2.65**	**323**	*e*P	**Pb**	**07 09 31.0**	**-0.2**
	89nm,0.3s						
KOTS				*e*S	**Sg**	**07 10 08.5**	**-0.2**
	212nm,0.4s						
KOTS	**Kotyrbulak**	**2.65**	**323**	Pg	**Pb**	**07 09 31.0**	**-0.2**
	89nm,0.3s						
KOTS				Lg	Lg	07 10 08.5	
	212nm,0.4s						
KNDC	**Almaty**	**2.71**	**321**	⇓Pg	**Pb**	**07 09 31.0**	**-1.1**
	35nm,0.5s						
KNDC				⇑Lg	Lg	07 10 08.0	
	203nm,0.6s						
IZV	**Izvestkoviy**	**2.76**	**314**	*e*P	**Pb**	**07 09 32.3**	**-0.7**
	41nm,0.5s						
IZV				*e*S	**Sg**	**07 10 10.7**	**-1.4**
	222nm,0.7s						
IZV	**Izvestkoviy**	**2.76**	**314**	Pg	**Pb**	**07 09 32.3**	**-0.7**
	41nm,0.5s						
IZV				Lg	Lg	07 10 10.7	
	222nm,0.7s						
BOOM	**Boomskoye usch**	**2.85**	**299**	⇓*e*P	**Pn**	**07 09 29.2**	**-0.1**
	baz=1.0						
BOOM				⇓*i*S	**Sn**	**07 10 05.5**	**+1.7**
	baz=1.0						
MTBS	**Maitube**	**2.92**	**314**	*e*P	**Pb**	**07 09 34.2**	**-1.5**
	26nm,0.3s						
MTBS				*e*S	**Sb**	**07 10 14.3**	**+2.8**
	59nm,0.3s						
MTBS	**Maitube**	**2.92**	**314**	Pg	**Pb**	**07 09 34.2**	**-1.5**
	26nm,0.3s						
MTBS				Lg	Lg	07 10 14.3	
	59nm,0.3s						
MNBS	**Baschi**	**3.01**	**348**	*e*P	**Pb**	**07 09 36.9**	**-0.4**
	75nm,0.5s						
MNBS				*e*S	**Sg**	**07 10 19.3**	**-1.0**
	112nm,0.3s						
MNBS	**Baschi**	**3.01**	**348**	Pg	**Pb**	**07 09 36.9**	**-0.4**
	75nm,0.5s						
MNBS				Lg	Lg	07 10 19.3	
	112nm,0.3s						
KSH	**Kashi**	**3.02**	**239**	Pn	**Pn**	**07 09 33.7**	**+2.2**
KSH				Sn	**Sg**	**07 10 20.8**	**+0.3**
KSH				smax	smax		
	comp=N,96nm,0.6s						
KSH				smax	smax		
	comp=E,92nm,0.7s						
KST	**Kastek**	**3.13**	**309**	*e*P	**Pb**	**07 09 37.9**	**-1.4**
	44nm,0.5s						
KST				*e*S	**Sb**	**07 10 20.7**	**+3.1**
	92nm,0.9s						
KST	**Kastek**	**3.13**	**309**	Pg	**Pb**	**07 09 37.9**	**-1.4**
	44nm,0.5s						
KST				Lg	Lg	07 10 20.7	
	92nm,0.9s						
CHKK	**Chushkaly**	**3.21**	**328**	*e*P	**Pb**	**07 09 39.5**	**-1.1**
	23nm,0.4s						
CHKK				*e*S	**Sg**	**07 10 23.4**	**-3.1**
	180nm,0.4s						
CHKK	**Chushkaly**	**3.21**	**328**	Pg	**Pb**	**07 09 39.5**	**-1.1**
	23nm,0.4s						
CHKK				Lg	Lg	07 10 23.4	
	180nm,0.4s						
DJR	**Jarkent**	**3.21**	**6**	*e*P	**Pb**	**07 09 40.4**	**-0.2**
	18nm,0.3s						
DJR				*e*S	**Sg**	**07 10 24.9**	**-1.7**
	86nm,0.6s						
DJR	**Jarkent**	**3.21**	**6**	Pg	**Pb**	**07 09 40.4**	**-0.2**
	18nm,0.3s						
DJR				Lg	Lg	07 10 24.9	
	86nm,0.6s						
KTBS	**Karatobe**	**3.22**	**324**	*e*P	**Pb**	**07 09 39.6**	**-1.2**
	27nm,0.4s						
KTBS				*e*S	**Sb**	**07 10 23.3**	**+3.2**
	150nm,0.5s						
KTBS	**Karatobe**	**3.22**	**324**	Pg	**Pb**	**07 09 39.6**	**-1.2**
	27nm,0.4s						
KTBS				Lg	Lg	07 10 23.3	
	150nm,0.5s						
ARXS	**Arharly**	**3.26**	**341**	*e*P	**Pb**	**07 09 41.9**	**+0.5**
	50nm,0.5s						
ARXS				*e*S	**Sg**	**07 10 27.7**	**-0.5**
	116nm,0.5s						
ARXS	**Arharly**	**3.26**	**341**	Pg	**Pb**	**07 09 41.9**	**+0.5**
	50nm,0.5s						
ARXS				Lg	Lg	07 10 27.7	
	116nm,0.5s						
TKM2	**Tokmak 2**	**3.29**	**304**	⇑*i*P	**Pn**	**07 09 35.3**	**+0.1**
	baz=5.0						
TKM2				⇑*i*S	**Sn**	**07 10 16.2**	**+1.7**
	baz=5.0						
TKM2	**Tokmak 2**	**3.29**	**304**	⇓Pg	**Pb**	**07 09 39.4**	**-2.6**
	12nm,0.5s						
TKM2				⇑Lg	Lg	07 10 24.9	
	57nm,0.6s						
DGS	**Degeres**	**3.36**	**310**	*e*P	**Pb**	**07 09 40.8**	**-2.4**
	26nm,0.5s						
DGS				*e*S	**Sb**	**07 10 25.4**	**+1.1**
	69nm,0.6s						
DGS	**Degeres**	**3.36**	**310**	Pg	**Pb**	**07 09 40.8**	**-2.4**
	26nm,0.5s						
DGS				Lg	Lg	07 10 25.4	
	69nm,0.6s						
KUU	**Kurty**	**3.52**	**322**	*e*P	**Pb**	**07 09 44.2**	**-1.7**
	8.6nm,0.4s						
KUU				*e*S	**Sb**	**07 10 31.7**	**+3.0**
	81nm,0.4s						
KUU	**Kurty**	**3.52**	**322**	Pg	**Pb**	**07 09 44.2**	**-1.7**
	8.6nm,0.4s						
KUU				Lg	Lg	07 10 31.7	
	81nm,0.4s						
KBK	**Karagaybulak**	**3.59**	**296**	⇑*e*P	**Pn**	**07 09 39.0**	**-0.4**
	baz=98						
KBK				⇑*i*S	**Sn**	**07 10 23.5**	**+1.6**
	baz=98						
UCH	**Uchtor**	**3.75**	**288**	⇑*i*P	**Pn**	**07 09 41.6**	**-0.2**
	baz=90						
UCH				⇑*i*S	**Sn**	**07 10 27.0**	**+0.7**
	baz=90						
ARLS	**Aral**	**3.81**	**283**	⇓*i*P	**Pn**	**07 09 42.0**	**-0.4**
	baz=85						
ARLS				⇓*i*S	**Sn**	**07 10 27.8**	**+0.5**
	baz=85						
FRU1	**Bishkek**	**3.87**	**297**	⇑*i*P	**Pn**	**07 09 43.3**	**+0.3**
	baz=99						
FRU1				⇑*i*S	**Sn**	**07 10 29.9**	**+1.4**
	baz=99						
CHMS	**Chumysh**	**3.87**	**300**	⇑*e*P	**Pn**	**07 09 43.3**	**+0.3**
	baz=1.0						
CHMS				⇑*e*S	**Sn**	**07 10 29.9**	**+1.4**
	baz=1.0						
AAK	**Ala-Archa**	**3.89**	**294**	Pn	**Pn**	**07 09 44.1**	**+0.6**
	0.9nm,0.3s,baz=118,slow=9.2,SNR=12						
AAK				Lg	Lg	07 10 42.6	
	2.8nm,0.3s,baz=260,slow=23,SNR=9.7						
AAK	**Ala-Archa**	**3.89**	**294**	⇓*i*P	**Pn**	**07 09 43.5**	**0.0**
	baz=96						
AAK				⇓*i*S	**Sn**	**07 10 30.6**	**+1.3**
	baz=96						
AAK	**Ala-Archa**	**3.89**	**294**	⇓Pg	**Pb**	**07 09 50.3**	**-2.0**
	14nm,0.8s						
AAK				⇑Lg	Lg	07 10 42.4	
	38nm,0.8s						
TDK	**Taldyqorghan**	**3.92**	**351**	*e*P	**Pb**	**07 09 55.0**	**+2.3**
	134nm,0.6s						
TDK				*e*S	**Sg**	**07 10 50.0**	**+0.8**
	143nm,1.0s						
TDK	**Taldyqorghan**	**3.92**	**351**	Pg	**Pb**	**07 09 54.9**	**+2.3**
	134nm,0.6s						
TDK				Lg	Lg	07 10 50.0	
	143nm,1.0s						
KAPS	**Kapalarasan**	**4.14**	**1**	*e*P	**Pg**	**07 10 00.3**	**-2.6**
	27nm,0.5s						
KAPS				*e*S	**Sg**	**07 10 59.2**	**+2.6**
	74nm,0.8s						
KAPS	**Kapalarasan**	**4.14**	**1**	Pg	**Pg**	**07 10 00.3**	**-2.6**
	27nm,0.5s						
KAPS				Lg	Lg	07 10 59.2	
	74nm,0.8s						
USP	**Ospenovka**	**4.16**	**302**	⇓*i*P	**Pn**	**07 09 47.3**	**+0.3**
	baz=3.0						
USP				⇓*i*S	**Sn**	**07 10 36.8**	**+1.1**
	baz=3.0						
SGDS	**Sogindy**	**4.17**	**305**	Pg	**Pb**	**07 09 55.6**	**-1.4**
	8.8nm,0.7s						
SGDS				Lg	Lg	07 10 51.4	
	27nm,0.9s						
AML	**Almayashu**	**4.32**	**285**	⇓*e*P	**Pn**	**07 09 49.1**	**-0.5**
	baz=87						
AML				⇓*i*S	**Sn**	**07 10 39.9**	**-0.3**
	baz=87						
EKS2	**Erkin-Say**	**4.40**	**292**	⇓*i*P	**Pn**	**07 09 50.4**	**0.0**
	baz=94						
EKS2				⇓*i*S	**Sn**	**07 10 42.6**	**+0.8**
	baz=94						
MRKS	**Merke**	**4.81**	**291**	*e*P	**Pb**	**07 10 08.1**	**+0.2**
	11nm,0.6s						
MRKS				*e*S	**Sb**	**07 11 12.2**	**+6.3**
	12nm,0.7s						
MRKS	**Merke**	**4.81**	**291**	Pg	**Pb**	**07 10 08.1**	**+0.2**
	11nm,0.6s						
MRKS				Lg	Lg	07 11 12.2	
	12nm,0.7s						
MAKZ	**Makanchi**	**5.99**	**18**	⇑Pn	**Pn**	**07 10 12.5**	**+0.3**
	1.9nm,0.3s						
MAKZ				⇑Sn	**Sn**	**07 11 23.7**	**+3.0**
	4.8nm,0.8s						
MAKZ				⇓Lg	Lg	07 11 55.3	
	6.3nm,0.6s						
MK31	**Makanchi Array**	**6.05**	**20**	Pn	**Pn**	**07 10 13.1**	**+0.1**
	0.7nm,0.3s,baz=200,slow=12,SNR=112						
MK31				⇑Sn	**Sn**	**07 11 25.2**	**+2.9**
	6.5nm,0.7s,baz=187,slow=26,SNR=5.7						
MK31				⇓Lg	Lg	07 11 56.9	
	9.7nm,0.6s						
MKAR	**Makanchi Array**	**6.05**	**20**	Pn	**Pn**	**07 10 12.7**	**-0.3**
	0.6nm,0.3s,baz=200,slow=13,SNR=61						
MKAR				Sn	**Sn**	**07 11 23.0**	**+0.7**
	2.0nm,0.3s,baz=197,slow=20,SNR=6.8						
MKAR				Lg	Lg	07 12 00.2	
	1.2nm,0.3s,baz=195,slow=28,SNR=3.5						
WMQ	**Urumqi**	**6.76**	**64**	*e*Pn	**Pn**	**07 10 22.1**	**-0.7**
WMQ				Sn	**Sn**	**07 11 41.0**	**+1.2**
WMQ				smax	smax		
	comp=N,38nm,0.7s						
WMQ				smax	smax		
	comp=E,35nm,0.7s						
KK31	**Karatay Array**	**6.83**	**290**	⇑Pg	**Pb**	**07 10 45.3**	**+3.1**
	2.5nm,0.6s,baz=112,slow=16,SNR=22						
KK31				⇑Lg	Lg	07 12 16.8	
	3.8nm,0.6s,baz=103,slow=27,SNR=7.2						
KURBB	**Kurchatov Arra**	**9.50**	**357**	Pn	**Pn**	**07 10 58.9**	**-1.4**
	0.0nm,0.3s,baz=181,slow=12,SNR=2.6						
KURBB				Lg	Lg	07 13 49.2	
	0.1nm,0.3s,baz=176,slow=29,SNR=6.9						
KURK	**Kurchatov**	**9.59**	**357**	⇓Pg	Pn	07 11 37.3	+36
	3.5nm,1.1s						
KURK				⇓Lg	Lg	07 13 49.1	
	24nm,1.1s						
BVAR	**Borovoye Array**	**13.34**	**336**	Pn	**Pn**	**07 11 52.8**	**+0.1**
	0.1nm,0.3s,baz=159,slow=13,SNR=1.8						
ZALV	**Zalesovo Beam**	**13.34**	**14**	Pn	**Pn**	**07 11 50.7**	**-2.1**
	0.1nm,0.3s,baz=206,slow=16,SNR=1.8						
SONM	**Songino Array**	**20.39**	**62**	P	**P**	**07 13 18.4**	**-2.1**
	2.4nm,0.8s,baz=252,slow=11,SNR=16						
YKA	**Yellowknife Ar**	**76.11**	**7**	P	**P**	**07 20 30.0**	**-1.0**
	0.1nm,0.4s,baz=348,slow=5.9,SNR=2.0						
ASAR	**Alice Springs**	**81.98**	**131**	P	P	07 20 57.1	-6.5
	0.2nm,0.4s,baz=324,slow=5.3,SNR=6.7						

IDC 02 07:08:57.9±29.0**, 23°.70S**×**70°.09E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/53**, mbtmp3.5**/3**, Error ellipse: s-maj=946.0km s-min=44.8km az=52.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.13**	**9**	T	T	07 29 47.6	
	baz=191,slow=76,SNR=30						
H08S2	**Diego Garcia H**	**16.13**	**9**	T	T	07 29 41.0	
	baz=191,slow=76,SNR=29						
H08S3	**Diego Garcia H**	**16.15**	**9**	T	T	07 29 54.6	
	baz=191,slow=76,SNR=31						
ASAR	**Alice Springs**	**57.96**	**104**	P	P	07 18 53.1	+0.5
	0.3nm,0.7s,baz=252,slow=6.3,SNR=5.2						
WRA	**Warramunga Arr**	**59.32**	**100**	P	P	07 19 01.3	-0.8
	0.6nm,1.0s,baz=252,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**71.03**	**9**	P	P	07 20 17.5	0.0
	0.1nm,0.5s,baz=180,slow=7.3,SNR=3.9						

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*IDC **02** 07:23:32.6±4.1, 23°.95N×94°.10E, h66^{km}±40^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.3/50, mbtmp3.7/9, ML4.1/1, MS4.0/1, Ms1 4.0/1, ms1mx2.7/34, Error ellipse: s-maj=55.7km s-min=14.1km az=61.0*

*NDI **02** 07:23:33.0±3.8, 24°.09N×94°.08E, h84^{km}±38^{km}, ML3.8*

ISC 02 07:23:33.8±1.0**, 24°.08N**±0°.05×**93°.92E**±0°.06**, h86^{km}**±10^{km}**, n29, σ2^{s}.21**/42**, mb3.8**/8**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	**0.74**	**2**	*e*P	**Pn**	**07 23 49.6**	**-1.0**
IMP				*e*S	**Sn**	**07 24 01.4**	**-1.6**
IMP				IAML		07 24 02.3	
	comp=E,759nm,0.3s						
IMP				IAML		07 24 02.6	
	comp=N,903nm,0.3s						
KOHI	**KOHIMA**	**1.64**	**6**	*e*P	**Pn**	**07 24 00.4**	**-1.0**
KOHI				*e*S	**Sn**	**07 24 23.4**	**+1.2**
KOHI				IAML		07 24 27.6	
	comp=N,631nm,0.4s						
KOHI				IAML		07 24 28.0	
	comp=E,968nm,0.4s						
SAIH	**SAIHA**	**1.80**	**208**	*e*P	**Pn**	**07 24 02.3**	**-1.2**
SAIH				*e*S	**Sn**	**07 24 25.2**	**-0.8**
SAIH				IAML		07 24 30.8	
	comp=E,2µm,0.3s						
SAIH				IAML		07 24 31.1	
	comp=N,645nm,0.3s						
MOKO	**MOKOCHONG**	**2.29**	**14**	*e*P	**Pn**	**07 24 07.7**	**-2.2**
MOKO				IAML		07 24 45.1	
	comp=N,493nm,0.5s						
MOKO				IAML		07 24 45.7	
	comp=E,642nm,0.4s						
SHL	**Shillong**	**2.37**	**309**	*e*P	**Pn**	**07 24 14.6**	**+3.7**
SHL				*e*S	**Sn**	**07 24 38.6**	**-0.7**
SHL				IAML		07 24 39.6	
	comp=E,3µm,0.2s						
SHL				IAML		07 24 39.7	
	comp=N,6µm,0.2s						
BELO	**BELONIA**	**2.41**	**250**	*e*S	**Sn**	**07 24 42.5**	**+2.3**
AGT	**Agartala**	**2.45**	**266**	*e*P	**Pn**	**07 24 12.5**	**+0.6**
AGT				*e*S	**Sn**	**07 24 43.5**	**+2.5**
AGT				IAML		07 24 44.6	
	comp=N,363nm,0.6s						
AGT				IAML		07 24 45.6	
	comp=E,520nm,0.3s						
GUWA	**GUWAHATI**	**2.91**	**317**	*e*S	**Sn**	**07 24 49.7**	**-2.5**
DIBR	**DIBRUGARH**	**3.49**	**15**	IAML		07 25 22.8	
	comp=E,342nm,0.2s						
DIBR				IAML		07 25 22.9	
	comp=N,327nm,0.2s						
TAPN	**Taplejung**	**6.47**	**301**	*e*Pn	**Pn**	**07 25 07.7**	**+0.9**
TAPN				*e*Sn	**Sn**	**07 26 17.7**	**-1.7**
	comp=N,52nm,0.4s						
ODAN	**Odare**	**6.51**	**296**	*e*Pn	**Pn**	**07 25 07.9**	**+0.6**
ODAN				*e*Sn	**Sn**	**07 26 18.1**	**-2.2**
	comp=N,78nm,0.3s						
RAMN	**Ramite**	**7.20**	**295**	*e*Pn	**Pn**	**07 25 17.2**	**+0.6**
RAMN				*e*Sn	**Sn**	**07 26 34.1**	**-2.9**
	comp=N,60nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.30**	**139**	P	**Pn**	**07 25 13.7**	**-4.1**
	comp=N,0.8nm,0.3s,baz=317,slow=13,SNR=13						
GUN	**Gumba**	**8.17**	**299**	*e*Pn	**Pn**	**07 25 30.7**	**+0.7**
GUN				*e*Sn	**Sn**	**07 26 58.4**	**-2.5**
	comp=N,50nm,0.3s						
PKI	**Pulchoki**	**8.41**	**296**	*e*Pn	**Pn**	**07 25 33.3**	**0.0**
PKI				*e*Sn	**Sn**	**07 27 04.0**	**-2.8**
	comp=N,33nm,0.5s						
PKIN	**Phulchoki**	**8.43**	**296**	*e*Pn	**Pn**	**07 25 33.4**	**0.0**
PKIN				*e*Sn	**Sn**	**07 27 04.1**	**-2.9**
	comp=N,30nm,0.3s						
KKN	**Kakani**	**8.61**	**297**	*e*Pn	**Pn**	**07 25 35.5**	**-0.3**
KKN				*e*Sn	**Sn**	**07 27 09.0**	**-2.3**
	comp=N,25nm,0.3s						
DMN	**Daman**	**8.68**	**296**	*e*Pn	**Pn**	**07 25 37.7**	**+0.9**
DMN				*e*Sn	**Sn**	**07 27 09.8**	**-3.3**
	comp=N,24nm,0.3s						
GKN	**Gorkha**	**9.21**	**297**	*e*Pn	**Pn**	**07 25 43.7**	**-0.3**
GKN				*e*Sn	**Sn**	**07 27 22.7**	**-3.3**
	comp=N,72nm,0.3s						
DANN	**Dangsing**	**10.06**	**297**	*e*Pn	**Pn**	**07 25 55.4**	**-0.3**
DANN				*e*Sn	**Sn**	**07 27 42.7**	**-4.2**
	comp=N,32nm,0.4s						
AAK	**Ala-Archa**	**24.51**	**324**	P	**P**	**07 28 48.6**	**+3.4**
	comp=N,0.7nm,0.5s,baz=175,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**24.51**	**340**	P	**P**	**07 28 48.0**	**+2.9**
	comp=N,1.0nm,0.5s,baz=152,slow=11,SNR=36						
SONM	**Songino Array**	**25.70**	**20**	P	**P**	**07 28 57.8**	**+1.9**
	comp=N,1.3nm,0.5s,baz=202,slow=8.9,SNR=12						
KURBB	**Kurchatov Arra**	**29.06**	**340**	P	**P**	**07 29 28.6**	**+2.9**
	comp=N,0.8nm,0.3s,baz=153,slow=8.6,SNR=5.0						
ZALV	**Zalesovo Beam**	**30.60**	**349**	P	**P**	**07 29 39.7**	**+0.3**
	comp=N,0.8nm,0.4s,baz=154,slow=7.9,SNR=3.9						
BVAR	**Borovoye Array**	**33.95**	**334**	P	**P**	**07 30 10.4**	**+1.7**
	comp=N,0.2nm,0.4s,baz=120,slow=10,SNR=2.1						
JHJ	**Hachijo jima 2**	**40.99**	**67**	LR	LR	07 49 00.3	
	comp=N,176nm,19.4s,baz=78,slow=37						
WRA	**Warramunga Arr**	**58.87**	**135**	P	**P**	**07 33 23.1**	**-0.8**
	comp=N,0.6nm,0.6s,baz=321,slow=7.5,SNR=17						
ASAR	**Alice Springs**	**61.31**	**138**	P	**P**	**07 33 40.3**	**-0.2**
	comp=N,0.4nm,0.3s,baz=315,slow=6.5,SNR=14						

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*TEH **02** 07:56:29.8, 30°.81N×51°.61E, h9^{km}, ML3.4*

*KISR **02** 07:56:33.0±0.8, 30°.75N×51°.24E, h175^{km}±140^{km}, ML4.2, Hypocentre not reviewed by the ISC*

*DSN **02** 07:56:37.1±2.0, 30°.14N×51°.53E, h10^{km}, ML3.7/8, Error ellipse: s-maj=32.5km s-min=10.6km az=22.0*

ISC 02 07:56:30.5±1.1**, 30°.69N**±0°.06×**51°.55E**±0°.07**, h10^{km}, n33, σ1^{s}.44**/35**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**1.06**	**176**	*e*Pg	**Pn**	**07 56 52.8**	**+1.3**
KAZ1				*e*		07 56 56.0	
	comp=Z,99nm,0.2s						
IRAM	**Ramesheh**	**1.33**	**32**	*e*Pg	**Pn**	**07 56 52.3**	**-3.0**
IRAM				*e*		07 57 10.8	
	comp=Z,99nm,0.5s						
SHI	**Shiraz**	**1.33**	**141**	*e*Pg	**Pg**	**07 56 57.3**	**+1.2**
SHI				*e*		07 57 32.7	
	comp=Z,99nm,0.6s						
SHK1	**Shahrekord**	**1.73**	**341**	*e*Pg	**Pn**	**07 57 02.2**	**+1.3**
IGAR	**Gharneh**	**1.76**	**14**	*e*		07 57 03.9	
	comp=Z,99nm,0.3s						
IGAR				*e*Pg	**Pn**	**07 57 01.7**	**+0.4**
AHBU	**AHRAM**	**1.83**	**187**	*e*Pn	**Pg**	**07 57 05.7**	**+0.1**
IPIR	**Pirpir**	**2.07**	**344**	*e*		07 57 40.5	
	comp=Z,99nm,0.4s						
IPIR				*e*Pn	**Pn**	**07 57 05.9**	**+0.3**
ISAD	**Sadrabad**	**2.20**	**56**	*e*		07 57 51.0	
	comp=Z,99nm,1.0s						
ISAD				*e*Pn	**Pn**	**07 57 08.1**	**+0.8**
IZEF	**Zefreh**	**2.30**	**16**	*e*Pn	**Pn**	**07 57 09.8**	**+1.1**
NASN	**Na'in**	**2.36**	**27**	*e*Pn	**Pn**	**07 57 10.6**	**+0.9**
IKLH	**Kolahrood**	**2.63**	**0**	*e*Pn	**Pn**	**07 57 14.9**	**+1.7**
IKLH				*e*		07 57 19.4	
	comp=Z,99nm,0.6s						
GHIR	**Ghir-Karzin**	**2.70**	**152**	*e*Pn	**Pb**	**07 57 17.6**	**-1.4**
IMEH	**Mehriz**	**2.72**	**74**	*e*Pn	**Pn**	**07 57 15.3**	**+0.8**
IMEH				*e*		07 57 59.8	
	comp=Z,99nm,0.7s						
SHGR	**Shooshtar-Gavs**	**2.75**	**302**	*e*Pn	**Pn**	**07 57 15.4**	**+0.8**
ICHK	**Chekchek**	**2.89**	**57**	*e*Pn	**Pn**	**07 57 16.3**	**-0.5**
QAM	**Ghamsar**	**3.07**	**358**	*e*Pn	**Pn**	**07 57 21.0**	**+1.8**
YZKH	**Yazd**	**3.10**	**56**	*e*Pn	**Pn**	**07 57 21.4**	**+1.8**
KRSH	**Karshahi**	**3.31**	**8**	*e*Pn	**Pn**	**07 57 23.8**	**+1.2**
UMR	**Umm Al-Rimmam**	**3.51**	**252**	*e*P		07 57 28.1	
QRN	**Al-Qurain**	**3.71**	**239**	*e*P		07 57 30.6	
QRN				*e*S		07 58 14.3	
QRN				IAML		07 58 19.8	
	comp=Z,447nm,0.3s						
RDF	**Al-Radifah**	**3.90**	**244**	*e*P		07 57 33.3	
RDF				*e*S		07 58 19.1	
RDF				IAML		07 58 22.4	
	comp=Z,364nm,0.5s						
RST	**Umm Al-Ruwaisa**	**4.12**	**254**	*e*P		07 57 36.2	
RST				*e*S		07 58 22.7	
RST				IAML		07 58 30.4	
	comp=Z,186nm,0.9s						
IQOM	**Qom**	**4.17**	**355**	*e*Pn	**Pn**	**07 57 34.7**	**+0.3**
KHGB	**Koh Gabri**	**4.26**	**93**	*e*Pn	**Pn**	**07 57 37.9**	**+2.3**
KHGB				*e*		07 59 00.6	
	comp=Z,99nm,1.1s						
IVRN	**Varamin**	**4.30**	**2**	*e*Pn	**Pn**	**07 57 37.1**	**+1.0**
IKOM	**Komasi**	**4.88**	**317**	*e*Pn	**Pn**	**07 57 45.8**	**+1.7**
BANOM	**Banah**	**6.33**	**137**	*i* P	**Pn**	**07 58 04.3**	**+0.5**
	SNR=8.4						
BANOM				S	**Sn**	**07 59 13.8**	**-2.4**
MSFE	**Esma-Masafi**	**6.69**	**141**	*i* P	**Pn**	**07 58 09.4**	**+0.5**
	SNR=9.0						
MSFE				S	**Sn**	**07 59 23.4**	**-1.7**
NAZ	**Nazwa, Dubai**	**6.74**	**146**	*i* P	**Pn**	**07 58 12.0**	**+2.4**
	SNR=6.0						
MDH	**Madha**	**6.81**	**141**	P	**Pn**	**07 58 11.0**	**+0.5**
ASUD	**Al Ashush, Dub**	**6.90**	**150**	P	**Pn**	**07 58 14.2**	**+2.4**
FAQ	**Al Faqa, Dubai**	**6.92**	**148**	P	**Pn**	**07 58 13.6**	**+1.7**
UOSS	**Minazif**	**7.05**	**143**	*i* P	**Pn**	**07 58 13.5**	**-0.3**
	SNR=6.1						
HATD	**Hatta, Dubai**	**7.11**	**144**	P	**Pn**	**07 58 15.7**	**+1.1**
ASHO	**Ashiyiah**	**7.19**	**145**	*i* P	**Pn**	**07 58 16.1**	**+0.4**
	SNR=14						
ALNE	**Al Ain**	**7.58**	**150**	P	**Pn**	**07 58 21.7**	**+0.6**
RAYN	**Ar Rayn**	**8.94**	**219**	*i* P	**Pn**	**07 58 39.4**	**-0.4**
	SNR=6.6						

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*IDC **02** 07:56:47.9±0.6, 6°.41N×60°.30E, h0^{km}, mb4.0/18, mb1 4.1/18, mb1mx3.9/43, mbtmp4.0/18, MS4.2/13, Ms1 4.2/13, ms1mx3.9/46, Error ellipse: s-maj=18.6km s-min=15.7km az=149.0*

*NEIC **02** 07:56:49.9±0.8, 6°.54N±0°.05×60°.2E±0°.1, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=19.0km s-min=8.5km az=94.0*

*GCMT **02** 07:56:50.9±0.2, 6°.60N±0°.01×60°.11E±0°.01, h12^{km}, MW5.1/124, Moment Tensor Solution. s60,c72; s124,c203; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.42±.09; M$_{\theta\theta}$3.34±.09; M$_{\phi\phi}$1.08±.10; M$_{r\theta}$2.75±.25; M$_{\theta\phi}$-2.21±.07; M$_{\phi r}$-0.14±.28; Best double couple: M$_0$5.32900×10^{16} NP1:φ$_s$136.00000°, δ33.00000°, λ-66.00000°. NP2:φ$_s$287.00000°, δ61.00000°, λ-105.00000°. Principal axes: T 5.3140, Plg14.0000°, Azm28.0000°; N 0.0300, Plg13.0000°, Azm295.0000°; P -5.3440, Plg71.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 07:56:51.7±0.6**, 6°.5N**±0°.1×**60°.24E**±0°.08**, h23^{km}, n46, σ0^{s}.88**/41**, mb4.3**/26**, MS4.1**/11**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**16.71**	**355**	LR	LR	08 05 47.9	
	comp=Z,879nm,21.9s,baz=200,slow=32						
DAMY	**Dhamar**	**17.52**	**299**	P	**Pn**	**08 00 54.5**	**-0.4**
DAMY				IAmb	IAmb	08 01 07.6	
	comp=Z,39nm,1.5s						
ATD	**Arta Tunnel**	**17.89**	**287**	LR	LR	08 06 40.3	
	comp=Z,520nm,20.0s,baz=73,slow=33						
UOSS	**Minazif**	**18.74**	**349**	P	**P**	**08 01 07.3**	**-1.8**
UOSS				IAmb	IAmb	08 01 22.0	
	comp=Z,25nm,1.1s						
PALK	**Pallekele**	**20.32**	**87**	P	**P**	**08 01 26.8**	**+0.2**
HYB	**Hyderabad**	**20.92**	**57**	*i* P	**P**	**08 01 34.0**	**+1.1**
RAYN	**Ar Rayn**	**22.08**	**322**	P	**P**	**08 01 45.7**	**+0.3**
RAYN				IAmb	IAmb	08 02 00.7	
	comp=Z,16nm,1.1s						
KMBO	**Kilima Mbogo**	**24.17**	**253**	P	**P**	**08 02 06.5**	**-0.3**
	comp=Z,9.2nm,0.9s,baz=47,slow=12,SNR=12						
KMBO				LR	LR	08 10 49.7	
	comp=Z,980nm,20.9s,baz=91,slow=35						
OPO	**Ambohidratompo**	**28.04**	**207**	LR	LR	08 11 07.9	
	comp=Z,787nm,20.8s,baz=195,slow=31						
KBL	**Kabul**	**29.06**	**15**	P	**P**	**08 02 51.2**	**+0.5**
KBL				IAmb	IAmb	08 03 05.1	
	comp=Z,12nm,1.4s						
GEYT	**Alibeck**	**31.34**	**357**	LR	LR	08 16 42.4	
	comp=Z,236nm,19.1s,baz=150,slow=38						
LSA	**Lhasa**	**37.13**	**48**	P	**P**	**08 04 01.5**	**+0.1**
KK31	**Karatay Array**	**37.56**	**12**	P	**P**	**08 04 04.0**	**-0.3**
KK31				IAmb	IAmb	08 04 19.9	

	comp=Z,7.3nm,1.4s						
KKAR	Karatay Array	37.56	12	P	P	08 04 04.5	+0.1
AAK	Ala-Archa	38.13	17	P	P	08 04 11.0	+1.6
	comp=Z,1.8nm,0.9s,baz=183,slow=8.2,SNR=4.8						
AAK	Ala-Archa	38.13	17	P	P	08 04 09.5	+0.2
AAK				IAmb	IAmb	08 04 23.1	
	comp=Z,9.0nm,1.1s						
CMAR	Chiang Mai Arr	39.51	69	P	P	08 04 21.6	+0.5
	comp=Z,1.4nm,1.0s,baz=249,slow=7.6,SNR=2.2						
CMAR				LR	LR	08 18 54.7	
	comp=Z,269nm,21.2s,baz=274,slow=34						
KBZ	Khabaz	40.09	340	P	P	08 04 25.6	+0.2
	comp=Z,1.5nm,0.9s,baz=90,slow=11,SNR=2.3						
KBZ				LR	LR	08 23 45.5	
	comp=Z,231nm,18.4s,baz=150,slow=40						
KIV	Kislovodsk	40.36	340	P	P	08 04 27.6	-0.3
KIV				IAmb	IAmb	08 04 45.1	
	comp=Z,11nm,1.1s						
BRTR	Keskin Array B	40.82	328	P	P	08 04 31.5	-0.2
	comp=Z,0.8nm,0.7s,baz=134,slow=8.3,SNR=1.9						
BRTR				LR	LR	08 21 57.5	
	comp=Z,157nm,20.2s,baz=128,slow=37						
MATP	Matopo	41.11	229	P	P	08 04 34.8	+0.5
	comp=Z,1.6nm,0.3s,baz=270,slow=9.4,SNR=4.2						
ABKAR	Akbulak array	42.61	360	P	P	08 04 46.1	+0.1
MAKZ	Makanchi	44.30	21	P	P	08 04 59.7	-0.1
MK31	Makanchi Array	44.40	22	P	P	08 05 00.7	+0.1
MKAR	Makanchi Array	44.40	22	P	P	08 05 00.3	-0.2
	comp=Z,0.6nm,0.9s,baz=196,slow=7.6,SNR=5.6						
MKAR				LR	LR	08 24 43.6	
	comp=Z,304nm,20.8s,baz=213,slow=38						
KURBB	Kurchatov Arra	46.55	16	P	P	08 05 17.8	+0.2
	comp=Z,0.5nm,0.3s,baz=215,slow=8.9,SNR=3.1						
BOSA	Boshof	48.53	222	P	P	08 05 31.0	-2.5
	comp=Z,1.1nm,0.4s,baz=28,slow=17,SNR=1.1						
BOSA				LR	LR	08 24 26.3	
	comp=Z,692nm,19.3s,baz=60,slow=34						
BOSA	Boshof	48.53	222	P	P	08 05 34.2	+0.8
TSUM	Tsumeb	49.17	238	P	P	08 05 38.9	+0.4
AKASG	Malin Array Be	51.07	335	P	P	08 05 51.5	-0.8
	comp=Z,0.1nm,0.3s,baz=123,slow=6.8,SNR=1.2						
AKASG				LR	LR	08 29 45.4	
	comp=Z,187nm,21.7s,baz=140,slow=39						
ZAA0	Zalesovo Array	51.33	18	P	P	08 05 54.0	-0.1
ZAA0				IAmb	IAmb	08 06 06.3	
	comp=Z,8.3nm,1.2s						
ZALV	Zalesovo Beam	51.33	18	P	P	08 05 54.0	-0.2
	comp=Z,1.5nm,0.7s,baz=230,slow=6.9,SNR=6.6						
ZALV				LR	LR	08 27 48.8	
	comp=Z,290nm,20.7s,baz=192,slow=36						
SONM	Songino Array	56.84	35	P	P	08 06 34.7	0.0
	comp=Z,2.0nm,1.2s,baz=226,slow=6.0,SNR=6.6						
TOA0	Torodi Ar. Sit	57.96	281	P	P	08 06 42.9	-0.1
TOA0				IAmb	IAmb	08 06 47.8	
	comp=Z,3.7nm,1.1s						
TORD	Torodi Ar. Bea	57.96	281	P	P	08 06 44.2	+1.3
	comp=Z,2.3nm,1.1s,baz=85,slow=5.9,SNR=5.0						
DAVOX	Davos/Dischmat	58.85	322	LR	LR	08 33 47.6	
	comp=Z,88nm,18.8s,baz=86,slow=38						
KIC	Kosan Boka	64.53	274	eP	P	08 07 28.9	+1.4
	comp=Z,22nm,1.2s						
DBIC	Dimbokro	64.62	274	P	P	08 07 29.7	+1.6
	comp=Z,4.5nm,1.1s,baz=73,slow=6.1,SNR=3.9						
DBIC	Dimbokro	64.62	274	P	P	08 07 28.0	-0.1
TIC	Toumodi	64.79	274	eP	P	08 07 30.7	+1.5
LIC	Lamto	64.83	274	eP	P	08 07 30.9	+1.4
	comp=Z,38nm,1.3s						
ESDC	Sonseca Array	66.10	311	P	P	08 07 37.0	-0.4
	comp=Z,1.0nm,1.0s,baz=73,slow=6.2,SNR=4.6						
WRA	Warramunga Arr	77.41	112	P	P	08 08 45.3	-0.3
	comp=Z,4.1nm,1.1s,baz=295,slow=4.1,SNR=8.8						
WB2	Warramunga Arr	77.42	112	P	P	08 08 46.0	+0.4
ASAR	Alice Springs	77.79	116	P	P	08 08 47.0	-0.7
	comp=Z,3.5nm,1.1s,baz=290,slow=5.4,SNR=13						
STKA	Stephens Creek	86.10	123	P	P	08 09 29.8	-1.4
	comp=Z,1.4nm,0.7s,baz=295,slow=11,SNR=3.6						

IDC 02 07:57:25.7±1.2**, 57°.26S**×**26°.19W, h0^{km}, mb3.9**/2**, mb1 4.1**/2**, mb1mx3.7**/18**, mbtmp3.9**/2**, Error ellipse: s-maj=102.0km s-min=33.8km az=98.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	45.38	182	P	P	08 05 45.0	-0.1
	0.9nm,0.5s,baz=192,slow=7.8,SNR=11						
TORD	Torodi Ar. Bea	73.85	28	P	P	08 09 02.1	+0.1
	0.9nm,0.6s,baz=197,slow=6.0,SNR=3.8						
YKA	Yellowknife Ar	137.44	317	PKP	PKPdf	08 16 49.3	-0.4
	0.5nm,0.4s,baz=116,slow=3.3,SNR=10						
ILAR	Eielson Array	151.33	310	PKPbc	PKPbc	08 17 19.3	-0.3
	1.3nm,0.5s,baz=132,slow=2.3,SNR=28						

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*KRNET **02** 08:06:00.8±0.1, 43°.57N×79°.14E, mb1.9*
*SOME **02** 08:06:03.4, 42°.95N×79°.35E, h15^{km}*
*NNC **02** 08:06:03.1±1.0, 42°.95N×79°.36E, h6^{km}±4^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=8.4km s-min=3.8km az=164.0*
ISC 02 08:06:05.9±1.0**, 43°.04N**±0°.04×**79°.17E**±0°.03**, h17^{km}**±8^{km}**, n30, σ1^{s}91**/56**, 6C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UZB	Uzynbulak	0.15	314	eP	Pb	08 06 10.7	+0.4
	10nm,0.0s						
UZB				eS	Sb	08 06 15.6	+2.3
	30nm,0.1s						
UZB	Uzynbulak	0.15	314	P	Pb	08 06 10.7	+0.4
	10nm,0.0s						
UZB				S	Sb	08 06 15.6	+2.3
	30nm,0.1s						
SHLS	Shalkode	0.24	61	eP	Pb	08 06 12.5	+0.6
	73nm,0.1s						
SHLS				eS	Sg	08 06 18.8	+3.4
	65nm,0.2s						
SHLS	Shalkode	0.24	61	P	Pb	08 06 12.5	+0.6
	73nm,0.1s						
SHLS				S	Sg	08 06 18.8	+3.4
	65nm,0.2s						
PDGK	Podgornoye	0.37	39	P	Pg	08 06 11.3	-2.4
	0.7nm,0.1s						
PDGK				S	Sg	08 06 16.8	-2.2
	15nm,0.3s						
ZHN	Zhinishke	0.55	284	eP	Pb	08 06 17.5	+0.3
	77nm,0.3s						
ZHN				eS	Sb	08 06 27.2	+2.4
	12nm,0.2s						
ZHN	Zhinishke	0.55	284	P	Pb	08 06 17.5	+0.3
	77nm,0.3s						
ZHN				S	Sb	08 06 27.2	+2.4
	12nm,0.2s						
SATY	Saty	0.56	272	eP	Pb	08 06 17.5	+0.2
	1.4nm,0.2s						
SATY				eS	Sb	08 06 27.0	+2.0
	37nm,0.2s						
SATY	Saty	0.56	272	P	Pb	08 06 17.5	+0.2
	1.4nm,0.2s						
SATY				S	Sb	08 06 27.0	+2.0
	37nm,0.2s						
PRZ	Przheval'sk	0.80	226	⇓iP	Pn	08 06 23.2	+0.8
	baz=7.0						
PRZ				⇓iS	Sn	08 06 39.4	+5.4
	baz=7.0						
ANVS	Anan'yevo	1.13	257	⇓iP	Pn	08 06 24.7	-2.4
	baz=34						
ANVS				⇓iS	Sb	08 06 42.3	+0.7
	baz=34						
MNBS	Baschi	1.18	332	eP	Pn	08 06 27.8	+0.1
	2.9nm,0.1s						
MNBS				eS	Sb	08 06 45.0	+2.2
	10nm,0.1s						
MNBS	Baschi	1.18	332	P	Pn	08 06 27.8	+0.1
	2.9nm,0.1s						
MNBS				S	Sb	08 06 45.0	+2.2
	10nm,0.1s						
DJR	Jarkent	1.37	19	eP	Pn	08 06 29.2	-1.0
	0.9nm,0.2s						
DJR				eS	Sn	08 06 47.2	-0.8
	4.3nm,0.3s						
DJR	Jarkent	1.37	19	P	Pn	08 06 29.2	-1.0
	0.9nm,0.2s						
DJR				S	Sn	08 06 47.2	-0.8
	4.3nm,0.3s						
KOTS	Kotyrbulak	1.52	278	eP	Pb	08 06 34.0	+0.3
	6.6nm,0.2s						
KOTS				eS	Sg	08 06 55.8	+0.9
	24nm,0.3s						
KOTS	Kotyrbulak	1.52	278	P	Pb	08 06 34.0	+0.3
	6.6nm,0.2s						
KOTS				S	Sg	08 06 55.8	+0.9
	24nm,0.3s						
ARXS	Arharly	1.52	321	eP	Pb	08 06 33.6	-0.1
	1.3nm,0.3s						
ARXS				eS	Sb	08 06 55.2	+2.4
	4.4nm,0.2s						
ARXS	Arharly	1.52	321	P	Pb	08 06 33.6	-0.1
	1.3nm,0.3s						
ARXS				S	Sb	08 06 55.2	+2.4
	4.4nm,0.2s						
KDJ	Kajisay	1.73	239	⇑eP	Pb	08 06 35.5	-1.8
	baz=25						
KDJ				⇑iS	Sg	08 07 00.3	-1.3
	baz=25						
KTBS	Karatobe	1.93	291	eP	Pb	08 06 41.3	+0.6
	0.5nm,0.2s						
KTBS				eS	Sb	08 07 08.0	+3.5
	10nm,0.3s						
KTBS	Karatobe	1.93	291	Pg	Pb	08 06 41.3	+0.6
	0.5nm,0.2s						
KTBS				Lg	Lg	08 07 08.0	
	10nm,0.3s						
KUU	Kurty	2.23	293	eP	Pb	08 06 46.3	+0.6
	0.8nm,0.5s						
KUU				eS	Sb	08 07 16.5	+3.5
	5.7nm,0.4s						
KUU	Kurty	2.23	293	Pg	Pb	08 06 46.3	+0.6
	0.8nm,0.5s						
KUU				Lg	Lg	08 07 16.5	
	5.7nm,0.4s						
KAPS	Kapalarasan	2.25	3	eP	Pb	08 06 45.0	-1.0
	0.6nm,0.2s						
KAPS				eS	Sb	08 07 14.8	+1.2
	1.8nm,0.3s						
KAPS	Kapalarasan	2.25	3	Pg	Pb	08 06 45.0	-1.0
	0.6nm,0.2s						
KAPS				Lg	Lg	08 07 14.7	
	1.8nm,0.3s						
ULHL	Ulahol	2.30	251	⇓eP	Pn	08 06 41.9	-1.3
	baz=39						
ULHL				⇓iS	Sn	08 07 12.4	+1.2
	baz=39						
BOOM	Boomskoye usch	2.44	258	⇑eP	Pn	08 06 42.9	-2.2
	baz=46						
BOOM				⇑iS	Sn	08 07 13.6	-1.0
	baz=46						
TKM2	Tokmak 2	2.62	269	⇑eP	Pn	08 06 44.1	-3.5
	baz=57						
TKM2				⇑iS	Sn	08 07 16.5	-2.7
	baz=57						
TKM2	Tokmak 2	2.62	269	⇓Pg	Pb	08 06 51.7	-0.9
	1.7nm,0.9s						
TKM2				⇓Lg	Lg	08 07 30.3	
	2.3nm,0.8s						

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*BJI **02** 08:21:51.6±0.0, 6°.28N×59°.89E, h8^{km}, mB5.4/39, mb4.6/45, Ms5.2/39, Ms7 5.1/37*
*MOS **02** 08:21:54.5±1.1, 6°.49N×60°.37E, h13^{km}, mb5.1/31, MS4.8/17, Error ellipse: s-maj=9.5km s-min=5.7km az=90.0*
*IDC **02** 08:21:54.1±0.5, 6°.48N×60°.43E, h0^{km}, mb4.3/32, mb1 4.4/34, mb1mx4.3/48, mbtmp4.3/34, ML3.7/2, MS4.8/27, Ms1 4.8/27, ms1mx4.6/52, Error ellipse: s-maj=13.2km s-min=11.9km az=119.0*
*NEIC **02** 08:21:55.9±1.8, 6°.57N±0°.08×60°.37E±0°.05, h10^{km}±1^{km}, mb5.0/40, Ms_20 5.2/221, Mwc5.5(GCMT), Error ellipse: s-maj=15.2km s-min=5.1km az=153.0*
*GCMT **02** 08:21:56.9±0.1, 6°.60N±0°.01×60°.12E±0°.01, h12^{km}, MW5.5/154, Moment Tensor Solution. s101,c160; s154,c305; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.67±.02; M$_{\theta\theta}$1.18±.02; M$_{\phi\phi}$0.49±.02; M$_{r\theta}$1.18±.05; M$_{\theta\phi}$-0.78±.02; M$_{\phi r}$-0.04±.06; Best double couple: M$_0$2.04800×10^{17} NP1:φ$_s$138.00000°, δ31.00000°, λ-63.00000°. NP2:φ$_s$287.00000°, δ63.00000°, λ-105.00000°. Principal axes: T 1.9810, Plg16.0000°, Azm28.0000°; N 0.1340, Plg14.0000°, Azm294.0000°; P -2.1150, Plg69.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **02** 08:21:58, 6°.59N×60°.15E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.74; M$_{\theta\theta}$1.26; M$_{\phi\phi}$0.48; M$_{r\theta}$0.89; M$_{\theta\phi}$-0.81; M$_{\phi r}$-0.43; Fault plane solution: M$_0$2.01000×10^{17} NP1:φ$_s$125.00000°, δ30.00000°, λ-85.00000°. NP2:φ$_s$299.00000°, δ60.00000°, λ-93.00000°. Principal axes: T 2.0231, Plg15.0000°, Azm31.0000°; N -0.0195, Plg3.0000°, Azm301.0000°; P -2.0036, Plg75.0000°, Azm200.0000°;*
ISC 02 08:21:56.3±0.4**, 6°.50N**±0°.04×**60°.44E**±0°.04**, h10^{km}, n394, σ2^{s}44**/332**, mb4.7**/99**, MS5.1**/161**, 10C-6D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	8.51	312	Pn	Pn	08 24 00.1	+0.3
DMTO	DMTO	12.37	335	P	Pn	08 24 53.9	+1.4
DMTO				P	Pn	08 24 53.9	+1.4
DMTO				P	Pn	08 24 53.9	+1.4
DMTO				S	Sn	08 27 18.1	+7.5
DMTO				S	Sn	08 27 18.1	+7.5
DMTO				S	Sn	08 27 18.1	+7.5
SHAO	Shalim	12.38	338	P	Pn	08 24 52.9	+0.2
SHAO	Shalim	12.38	338	P	Pn	08 24 52.7	0.0
SHAO				P	Pn	08 24 52.7	0.0
SHAO				S	Sn	08 27 18.4	+7.5
SHAO				S	Sn	08 27 18.4	+7.5
ABTO	Aybut	12.85	328	P	Pn	08 25 01.4	+2.3
	SNR=6.7						
ABTO				P	Pn	08 25 01.4	+2.3
	SNR=6.7						
ABTO				P	Pn	08 25 01.4	+2.3
	SNR=6.7						
ABTO				S	Sn	08 27 29.8	+7.4
ABTO				S	Sn	08 27 29.8	+7.4
ABTO				S	Sn	08 27 29.8	+7.4
WHFO	Wadi Hawf	13.08	331	P	Pn	08 25 04.5	+2.1
	SNR=13						
WHFO				P	Pn	08 25 04.5	+2.1
	SNR=13						
WHFO				P	Pn	08 25 04.5	+2.1
	SNR=13						
WHFO				S	Sn	08 27 36.7	+8.6
WHFO				S	Sn	08 27 36.7	+8.6
WHFO				S	Sn	08 27 36.7	+8.6
DOK	Doka	13.52	334	P	Pn	08 25 09.2	+0.8
DOK				P	Pn	08 25 09.2	+0.8
DOK				S	Sn	08 27 48.0	+9.2
DOK				S	Sn	08 27 48.0	+9.2
DQM	DQM	13.64	348	P	Pn	08 25 09.3	-0.7
DQM				P	Pn	08 25 09.3	-0.7
DQM				P	Pn	08 25 09.3	-0.7
DQM				S	Sn	08 27 45.3	+3.6
DQM				S	Sn	08 27 45.3	+3.6
DQM				S	Sn	08 27 45.3	+3.6
MHTO	MHTO	14.60	351	P	Pn	08 25 21.4	-1.6
	SNR=10.0						
MHTO				P	Pn	08 25 21.4	-1.6
	SNR=10.0						
MHTO				P	Pn	08 25 21.4	-1.6
	SNR=10.0						
JLN	Jalan Bani Buh	15.59	356	P	Pn	08 25 33.8	-2.5
	SNR=6.4						
JLN				P	Pn	08 25 33.8	-2.5
	SNR=6.4						
GOA	Goa	15.88	55	eP	Pn	08 25 41.1	+1.1
JMDO	Jabal Madar	15.94	352	P	Pn	08 25 39.4	-1.4
	SNR=10						
JMDO				P	Pn	08 25 39.4	-1.4
	SNR=10						
JMDO				P	Pn	08 25 39.4	-1.4
	SNR=10						
WBK	Wadi Bani Khal	16.08	355	P	Pn	08 25 40.9	-1.7
WBK				P	Pn	08 25 40.9	-1.7
BSY	Bisya	16.45	349	P	Pn	08 25 46.1	-1.2
	SNR=19						
BSY				P	Pn	08 25 46.1	-1.2
	SNR=19						
BSY				P	Pn	08 25 46.1	-1.2
	SNR=19						
TRD	Trivandrum	16.50	82	eP	Pn	08 25 45.4	-2.6
SMDO	Samad	16.62	352	P	Pn	08 25 47.8	-1.9
	SNR=13						
SMDO				P	Pn	08 25 47.8	-1.9
	SNR=13						
SMDO				P	Pn	08 25 47.8	-1.9
	SNR=13						
WSAR	Wadi Sarin	16.73	354	Pn	Pn	08 25 48.6	-2.3
	0.1nm,0.3s,baz=204,slow=11,SNR=4.3						
WSAR				LR	LR	08 31 03.8	
	comp=Z,3µm,19.7s,baz=202,slow=33						
BIDO	Bidbid	17.07	353	P	Pn	08 25 53.2	-1.9
	SNR=23						
BIDO				P	Pn	08 25 53.2	-1.9
	SNR=23						
ARQ	Araqi	17.16	348	P	Pn	08 25 55.2	-1.1
	SNR=47						
ARQ				P	Pn	08 25 55.2	-1.1
	SNR=47						
ARQ				P	Pn	08 25 55.2	-1.1
	SNR=47						
HOQ	Hoqain	17.25	350	P	Pn	08 25 55.9	-1.5
	SNR=24						
HOQ				P	Pn	08 25 55.9	-1.5
	SNR=24						
HOQ				P	Pn	08 25 55.9	-1.5
	SNR=24						
DAMY	Dhamar	17.69	298	P	Pn	08 26 02.2	-1.0
DAMY				IAmb	IAmb	08 26 23.4	
	comp=Z,310nm,1.7s						
POO	Poona	17.71	46	eP	P	08 26 04.5	+0.3
SOHO	SOHO	17.93	348	iP	Pn	08 26 02.9	-3.0
	SNR=13						
SOHO	SOHO	17.93	348	P	Pn	08 26 03.3	-2.6
SOHO				P	Pn	08 26 03.3	-2.6
SOHO				P	Pn	08 26 03.3	-2.6
ALNE	Al Ain	18.03	346	iP	Pn	08 26 04.9	-2.2
	SNR=9.2						
ALNE	Al Ain	18.03	346	P	Pn	08 26 06.1	-1.0
	SNR=11						
ALNE				P	Pn	08 26 06.1	-1.0
	SNR=11						
ATD	Arta Tunnel	18.07	287	P	Pn	08 26 07.2	-0.6
	comp=Z,0.6nm,0.3s,baz=106,slow=12,SNR=9.6						
ATD				LR	LR	08 31 46.6	
	comp=Z,3µm,20.1s,baz=96,slow=33						
ASHO	Ashiyiah	18.56	347	iP	P	08 26 10.5	-3.0
	SNR=35						
ASUD	Al Ashush, Dub	18.68	345	iP	P	08 26 11.9	-2.8
	SNR=7.8						
ASUD	Al Ashush, Dub	18.68	345	P	P	08 26 13.0	-1.7
	SNR=6.3						
ASUD				P	P	08 26 13.0	-1.7
	SNR=6.3						
ASUD				P	P	08 26 13.0	-1.7
	SNR=6.3						
HATD	Hatta, Dubai	18.68	348	iP	P	08 26 11.7	-3.0
	SNR=26						
AJN	Ajban	18.71	344	iP	P	08 26 12.0	-3.0
	SNR=9.5						
FAQ	Al Faqa, Dubai	18.73	346	iP	P	08 26 12.3	-3.0
	SNR=19						
FAQ	Al Faqa, Dubai	18.73	346	P	P	08 26 13.2	-2.0
	SNR=17						
FAQ				P	P	08 26 13.2	-2.0
	SNR=17						
UOSS	Minazif	18.79	348	iP	P	08 26 12.7	-3.1
	SNR=22						
UOSS	Minazif	18.79	348	P	P	08 26 12.8	-3.1
UOSS				IAmb	IAmb	08 26 33.6	
	comp=Z,92nm,1.1s						
UOSS	Minazif	18.79	348	P	P	08 26 13.6	-2.3
UOSS				P	P	08 26 13.6	-2.3
UOSS				P	P	08 26 13.6	-2.3
UOSS				S	S	08 29 50.6	+0.8
UOSS				S	S	08 29 50.6	+0.8
UOSS				S	S	08 29 50.6	+0.8
BHUJ	Bhuj	18.88	27	eP	Pn	08 26 19.3	+1.9
NAZ	Nazwa, Dubai	18.95	347	iP	P	08 26 14.7	-2.9
	SNR=17						
NAZ	Nazwa, Dubai	18.95	347	P	P	08 26 15.7	-1.9
	SNR=12						
NAZ				P	P	08 26 15.7	-1.9
	SNR=12						
NAZ				P	P	08 26 15.7	-1.9
	SNR=12						
MDH	Madha	19.11	348	iP	P	08 26 15.8	-3.7
	SNR=13						
MSFE	Esma-Masafi	19.20	348	iP	P	08 26 17.6	-2.8
	SNR=24						
MASF	Masafi	19.21	348	P	P	08 26 19.2	-1.3
	SNR=18						
MASF				P	P	08 26 19.2	-1.3
	SNR=18						
SLWR	Sila	19.39	335	P	P	08 26 21.5	-0.9
BANOM	Banah	19.72	349	iP	P	08 26 23.5	-2.6
	SNR=7.1						
BANOM	Banah	19.72	349	P	P	08 26 24.3	-1.8
	SNR=12						
BANOM				P	P	08 26 24.3	-1.8
	SNR=12						
SHME	Shamm	19.87	349	iP	P	08 26 25.4	-2.3
	SNR=5.8						
SHME	Shamm	19.87	349	P	P	08 26 25.7	-2.0
	SNR=8.5						
PALK	Pallekele	20.13	87	P	P	08 26 31.3	+0.5
PALK				pmax	pmax		
	comp=Z,39nm,1.4s						
PALK	Pallekele	20.13	87	P	P	08 26 31.3	+0.5
MDRS	Chennai	20.57	70	eP	Pn	08 26 36.8	-0.9
MDRS				IAmb	IAmb	08 26 41.8	
	comp=Z,33nm,1.3s						
MDRS				eS	Sn	08 30 33.1	+3.2
HYB	Hyderabad	20.76	57	iP	P	08 26 37.0	-0.5
HYB	Hyderabad	20.76	57	eP	Pn	08 26 39.1	-0.8
HYB				IAmb	IAmb	08 26 54.5	
	comp=Z,13µm,9.3s						
FURI	Furi	21.69	278	P	P	08 26 48.6	+0.7
RAYN	Ar Rayn	22.20	321	iP	P	08 26 49.8	-3.2
	SNR=17						
RAYN	Ar Rayn	22.20	321	P	P	08 26 50.3	-2.7
RAYN				pmax	pmax		
	comp=Z,111nm,1.6s						
RAYN				MLR	MLR		
	comp=Z,4µm,18.0s						
RAYN	Ar Rayn	22.20	321	P	P	08 26 50.3	-2.7
RAYN				IAmb	IAmb	08 27 04.9	
	comp=Z,111nm,1.6s						
BHPL	Bhopal	23.33	43	eP	P	08 27 07.1	+2.3
BHPL				IAmb	IAmb	08 27 29.9	
	comp=Z,89nm,1.5s						
KIBK	Kibwezi	24.02	249	P	P	08 27 13.0	+1.3
	SNR=8.6						
KMBO	Kilima Mbogo	24.35	253	P	P	08 27 13.8	-1.2
	comp=Z,14nm,0.8s,baz=54,slow=14,SNR=15						
KMBO				LR	LR	08 35 35.0	
	comp=Z,4µm,21.5s,baz=72,slow=34						
QRN	Al-Qurain	25.09	333	eP		08 27 18.6	
LODK	Lodwar	25.16	264	P	P	08 27 23.1	+1.0
	SNR=38						
RDF	Al-Radifah	25.42	333	eP		08 27 21.0	
RST	Umm Al-Ruwaisa	26.16	333	eP		08 27 28.3	
MIB	Mutribah	26.26	334	eP		08 27 29.4	
HRA	Herat	27.80	3	P	P	08 27 44.9	-1.0
HRA				IAMs_20	IAMs_20	08 38 25.1	
	comp=Z,5µm,20.0s						
OPO	Ambohidratompo	28.13	207	P	P	08 27 51.3	+2.4
	comp=Z,2.5nm,0.7s,baz=339,slow=14,SNR=2.2						
OPO				LR	LR	08 36 14.3	
	comp=Z,3µm,21.0s,baz=200,slow=31						
KBL	Kabul	29.02	15	P	P	08 27 56.3	-0.4
KBL				pmax	pmax		
	comp=Z,58nm,1.8s						
KBL				MLR	MLR		
	comp=Z,2µm,22.0s						
KBL	Kabul	29.02	15	P	P	08 27 56.3	-0.4
KBL				IAmb	IAmb	08 28 20.6	
	comp=Z,58nm,1.8s						
KBL	Kabul	29.02	15	P	P	08 27 50.6	-6.2
	SNR=8.7						
SMLA	Simla	29.09	31	eP	P	08 27 56.5	-0.6
SMLA				IAmb	IAmb	08 28 08.5	
	comp=Z,32nm,1.6s						
SMLA				eS	S	08 32 58.8	+10
NIL	Nilore	29.52	22	IAMs_20	IAMs_20	08 42 00.9	
	comp=Z,4µm,20.0s						

DHRM	**DHARAMSHALA**	**29.59**	**28**	*e*P	**P**	**08 28 04.7**	**+2.9**
DHRM				IAmb	IAmb	08 28 15.4	
	comp=Z,94nm,1.9s						
MBAR	**Mbarara**	**30.47**	**258**	LR	LR	08 40 55.3	
	comp=Z,2µm,18.8s,baz=72,slow=38						
MBAR	**Mbarara**	**30.47**	**258**	P	**P**	**08 28 10.3**	**+0.5**
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MBAR				MLR	MLR		
	comp=Z,3µm,22.0s						
MBAR	**Mbarara**	**30.47**	**258**	P	**P**	**08 28 10.2**	**+0.5**
MBAR	**Mbarara**	**30.47**	**258**	P	**P**	**08 28 10.5**	**+0.7**
MBAR				P	**P**	**08 28 10.5**	**+0.7**
GEYT	**Alibeck**	**31.36**	**356**	P	**P**	**08 28 18.3**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=182,slow=7.2,SNR=2.1						
GEYT				LR	LR	08 41 47.8	
	comp=Z,782nm,19.0s,baz=85,slow=38						
MARD	**Mardin**	**35.52**	**333**	P	**P**	**08 28 52.3**	**-1.3**
MARD				IAMs_20	IAMs_20	08 44 19.8	
	comp=Z,3µm,20.0s						
KSH	**Kashi**	**35.73**	**21**	P	**P**	**08 28 51.4**	**-4.0**
KSH				PP	**PnPn**	**08 30 14.0**	**-1.1**
KSH				S	**S**	**08 34 27.9**	**-4.5**
KSH				pmax	pmax		
	comp=Z,18nm,1.0s						
KSH				pmax	pmax		
	comp=Z,920nm,5.4s						
KSH				LR	LR		
	comp=Z,1µm,12.5s						
KSH				LR	LR		
	comp=Z,2µm,15.0s						
KSH				LR	LR		
	comp=Z,5µm,20.9s						
GNI	**Garni**	**36.35**	**340**	P	**P**	**08 29 01.7**	**+1.0**
	comp=Z,8.2nm,0.9s,baz=252,slow=8.4,SNR=3.8						
GNI	**Garni**	**36.35**	**340**	*i* P	**P**	**08 28 59.4**	**-1.3**
GNI	**Garni**	**36.35**	**340**	P	**P**	**08 28 57.2**	**-3.5**
IUG	**Iuzhnay**	**36.51**	**12**	*e*P	**P**	**08 29 02.3**	**+0.3**
	baz=12						
IUG	**Iuzhnay**	**36.51**	**12**	*e*P	**P**	**08 29 02.3**	**+0.3**
AKT	**Akhty**	**36.63**	**344**	*e*P	**P**	**08 29 05.1**	**+2.1**
AKT				*e*		08 30 32.1	
AKT				*e*		08 31 26.0	
AKT				pmax	pmax		
	comp=Z,33nm,1.7s						
LSA	**Lhasa**	**36.99**	**48**	P	**P**	**08 29 07.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,38nm,1.1s						
LSA				LR	LR		
	comp=Z,7µm,21.4s						
LSA				LR	LR		
	comp=Z,5µm,17.8s						
LSA				LR	LR		
	comp=Z,10µm,26.3s						
LSA	**Lhasa**	**36.99**	**48**	IAMs_20	IAMs_20	08 43 54.3	
	comp=Z,2µm,20.0s						
GAZ	**Gaziantep**	**37.15**	**329**	P	**P**	**08 29 06.0**	**-1.5**
GAZ				IAmb	IAmb	08 30 10.6	
	comp=Z,84nm,2.0s						
GAZ				IAMs_20	IAMs_20	08 44 29.1	
	comp=Z,3µm,19.0s						
DZA	**Taraz**	**37.50**	**13**	*e*P	**P**	**08 29 10.4**	**0.0**
	baz=13						
DZA	**Taraz**	**37.50**	**13**	*e*P	**P**	**08 29 10.3**	**0.0**
KK31	**Karatay Array**	**37.52**	**12**	P	**P**	**08 29 10.2**	**-0.3**
KK31				pmax	pmax		
	comp=Z,19nm,1.3s						
KK31	**Karatay Array**	**37.52**	**12**	P	**P**	**08 29 10.2**	**-0.3**
KKAR	**Karatay Array**	**37.52**	**12**	P	**P**	**08 29 09.7**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,19nm,1.3s						
KKAR	**Karatay Array**	**37.52**	**12**	P	**P**	**08 29 09.7**	**-0.8**
KOPT	**Kop Dagi**	**37.88**	**335**	IAMs_20	IAMs_20	08 45 58.1	
	comp=Z,3µm,20.0s						
MAK	**Makhachkala**	**38.07**	**345**	*e*P	P	08 29 08.5	-6.5
MAK				*e*		08 30 38.5	
MAK				pmax	pmax		
	comp=Z,61nm,1.1s						
MAK				MLR	MLR		
	comp=Z,1µm,20.0s						
AAK	**Ala-Archa**	**38.08**	**17**	P	**P**	**08 29 15.6**	**+0.2**
	comp=Z,7.5nm,0.9s,baz=206,slow=8.0,SNR=12						
AAK	**Ala-Archa**	**38.08**	**17**	*i* P	**P**	**08 29 15.8**	**+0.4**
AAK				pmax	pmax		
	comp=Z,91nm,2.2s						
AAK	**Ala-Archa**	**38.08**	**17**	P	**P**	**08 29 15.6**	**+0.2**
AAK				IAmb	IAmb	08 29 39.5	
	comp=Z,67nm,1.7s						
AAK	**Ala-Archa**	**38.08**	**17**	IAMs_20	IAMs_20	08 46 08.6	
	comp=Z,2µm,20.0s						
MHMT	**Maesarieng**	**38.34**	**69**	P	P	08 29 25.8	+8.2
LSZ	**Lusaka**	**38.59**	**236**	IAMs_20	IAMs_20	08 43 11.8	
	comp=Z,4µm,20.0s						
GROC	**Groznyy**	**38.77**	**343**	*e*P	**P**	**08 29 18.5**	**-2.4**
GROC				*e*		08 30 47.5	
GROC				*e*S	**S**	**08 35 11.9**	**-6.4**
GROC				pmax	pmax		
	comp=Z,15nm,0.5s						
SGDS	**Sogindy**	**38.87**	**17**	*e*P	**P**	**08 29 21.9**	**0.0**
	baz=17						
SGDS	**Sogindy**	**38.87**	**17**	*e*P	**P**	**08 29 21.9**	**0.0**
ZEI	**Tsey**	**38.98**	**341**	*e*P	**P**	**08 29 25.6**	**+2.6**
ZEI				pmax	pmax		
	comp=Z,29nm,2.1s						
TNSS	**Tian-Shan**	**39.20**	**19**	*e*P	**P**	**08 29 25.0**	**-0.1**
	baz=19						
TNSS	**Tian-Shan**	**39.20**	**19**	*e*P	**P**	**08 29 24.9**	**-0.1**
CM13	**Chiang Mai Arr**	**39.29**	**69**	P	P	08 29 33.0	+7.3
CM15	**Chiang Mai Arr**	**39.32**	**69**	P	P	08 29 34.2	+8.3
CM05	**Chiang Mai Arr**	**39.32**	**69**	P	P	08 29 40.5	+15
CM02	**Chiang Mai Arr**	**39.33**	**69**	P	P	08 29 33.8	+7.7
CM31	**Chiang Mai Arr**	**39.33**	**69**	P	**P**	**08 29 27.8**	**+1.7**
CM31				IAmb	IAmb	08 29 51.9	
	comp=Z,36nm,1.5s						
CMAR	**Chiang Mai Arr**	**39.33**	**69**	P	**P**	**08 29 26.2**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=263,slow=9.6,SNR=14						
CMAR				PcP	**PcP**	**08 31 34.7**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=248,slow=4.8,SNR=1.6						
CMAR				LR	LR	08 44 54.6	
	comp=Z,702nm,19.8s,baz=286,slow=35						
AAA	**Alma-Ata**	**39.34**	**19**	*e*P	**P**	**08 29 26.9**	**+1.0**
	baz=19						
AAA				LR	LR	08 44 50.0	
	comp=Z,783nm,17.9s,baz=19						
AAA	**Alma-Ata**	**39.34**	**19**	*e*P	**P**	**08 29 26.8**	**+0.9**
AAA				MLR	MLR		
	comp=Z,783nm,18.0s						
MDOK	**Medeo**	**39.34**	**19**	*e*S	**S**	**08 35 28.5**	**+1.2**
	baz=19						
MDOK				LR	LR	08 43 33.3	
	comp=Z,1µm,18.4s,baz=19						
MDOK	**Medeo**	**39.34**	**19**	*e*S	**S**	**08 35 28.5**	**+1.2**
MDOK				MLR	MLR		
	comp=Z,1µm,18.0s						
CM04	**Chiang Mai Arr**	**39.35**	**69**	P	**P**	**08 29 30.4**	**+4.2**
CM09	**Chiang Mai Arr**	**39.38**	**69**	P	P	08 29 36.0	+10
CHTO	**Chiang Mai**	**39.41**	**68**	P	**P**	**08 29 26.4**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,23nm,1.6s						
CHTO				MLR	MLR		
	comp=Z,1µm,20.0s						
CHTO	**Chiang Mai**	**39.41**	**68**	P	**P**	**08 29 26.4**	**-0.3**
CM33	**Chiang Mai Arr**	**39.42**	**68**	P	**P**	**08 29 29.0**	**+2.2**
CM36	**Chiang Mai Arr**	**39.49**	**69**	P	**P**	**08 29 29.0**	**+1.6**
CM35	**Chiang Mai Arr**	**39.58**	**69**	P	**P**	**08 29 30.0**	**+1.9**
CM34	**Chiang Mai Arr**	**39.61**	**68**	P	P	08 29 34.0	+5.6
SATY	**Saty**	**39.71**	**21**	*e*P	**P**	**08 29 29.0**	**0.0**
	baz=21						
SATY	**Saty**	**39.71**	**21**	*e*P	**P**	**08 29 29.0**	**0.0**
NCK	**Nalchik**	**39.72**	**341**	*i* P	**P**	**08 29 28.0**	**-0.9**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KUU	**Kurty**	**39.77**	**18**	*e*P	**P**	**08 29 29.2**	**-0.2**
	baz=18						
KUU	**Kurty**	**39.77**	**18**	*e*P	**P**	**08 29 29.2**	**-0.2**
TOKA	**Tokat**	**39.94**	**331**	IAMs_20	IAMs_20	08 46 55.8	
	comp=Z,2µm,21.0s						
KBZ	**Khabaz**	**40.16**	**340**	P	**P**	**08 29 33.1**	**+0.6**
	comp=Z,9.5nm,1.0s,baz=145,slow=5.6,SNR=13						
KBZ				LR	LR	08 48 51.6	
	comp=Z,1µm,18.1s,baz=148,slow=40						
BTLS	**Baital**	**40.18**	**15**	*e*P	**P**	**08 29 32.3**	**-0.5**
	baz=15						
BTLS	**Baital**	**40.18**	**15**	*e*P	**P**	**08 29 32.2**	**-0.5**
PAYA	**Payao**	**40.39**	**68**	P	P	08 29 42.0	+7.1
KIV	**Kislovodsk**	**40.43**	**340**	*e*P	**P**	**08 29 33.1**	**-1.8**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,749nm,21.0s						
KIV	**Kislovodsk**	**40.43**	**340**	P	**P**	**08 29 34.2**	**-0.7**
KIV				IAmb	IAmb	08 29 51.9	
	comp=Z,47nm,1.5s						
BRTR	**Keskin Array B**	**40.92**	**328**	P	**P**	**08 29 40.4**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=270,slow=33,SNR=3.7						
BRTR				LR	LR	08 47 03.8	
	comp=Z,721nm,19.7s,baz=130,slow=37						
BRTR	**Keskin Array B**	**40.92**	**328**	*i* P	**P**	**08 29 38.4**	**-0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SOC	**Sochi**	**41.18**	**337**	*e*P	**P**	**08 29 40.1**	**-0.9**
SOC				*e*PPP	PPP	08 31 40.2	
SOC				*e*S	**S**	**08 35 53.6**	**-0.9**
SOC				MLR	MLR		
	comp=Z,970nm,17.0s						
MATP	**Matopo**	**41.25**	**229**	P	**P**	**08 29 42.4**	**+0.3**
	comp=Z,6.2nm,0.9s,baz=23,slow=8.8,SNR=12						
GOF	**Gofitskoye**	**41.29**	**341**	⇑*e*P	P	08 29 52.8	+11
GOF				pmax	pmax		
	comp=Z,22nm,0.9s						
TDK	**Taldyqorghan**	**41.43**	**19**	*e*P	**P**	**08 29 42.6**	**-0.4**
	baz=20						
TDK				*e*S	**S**	**08 35 58.7**	**+0.5**
	baz=20						
TDK				LR	LR	08 46 41.1	
	comp=Z,1µm,17.8s,baz=20						
TDK	**Taldyqorghan**	**41.43**	**19**	*e*P	**P**	**08 29 42.6**	**-0.4**
TDK				*e*S	**S**	**08 35 58.6**	**+0.5**
TDK				MLR	MLR		
	comp=Z,1µm,18.0s						
ILGA	**Ilgaz**	**41.86**	**329**	IAMs_20	IAMs_20	08 47 36.6	
	comp=Z,2µm,18.0s						
ABKAR	**Akbulak array**	**42.61**	**360**	P	**P**	**08 29 51.7**	**-0.9**
ABKAR				IAmb	IAmb	08 30 10.2	
	comp=Z,27nm,1.4s						
MANT	**Manisa**	**42.96**	**323**	IAMs_20	IAMs_20	08 49 44.8	
	comp=Z,2µm,22.0s						
AKTO	**Aktyubinsk**	**43.84**	**358**	P	**P**	**08 30 02.5**	**0.0**
	comp=Z,5.5nm,1.0s,baz=192,slow=6.5,SNR=8.0						
WMQ	**Urumqi**	**44.20**	**28**	*e*P	**P**	**08 30 08.3**	**+2.7**
WMQ				S	**S**	**08 36 45.1**	**+6.1**
WMQ				pmax	pmax		
	comp=Z,17nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,510nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,21.9s						
WMQ				LR	LR		
	comp=Z,1µm,13.1s						
MAKZ	**Makanchi**	**44.23**	**21**	P	**P**	**08 30 05.0**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.5s						
MAKZ				MLR	MLR		
	comp=Z,2µm,19.0s						
MAKZ	**Makanchi**	**44.23**	**21**	P	**P**	**08 30 05.0**	**-0.8**
MAKZ				IAmb	IAmb	08 30 27.7	
	comp=Z,28nm,1.5s						
MK31	**Makanchi Array**	**44.33**	**21**	P	**P**	**08 30 06.7**	**+0.1**
MK31				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MK31	**Makanchi Array**	**44.33**	**21**	P	**P**	**08 30 06.7**	**+0.1**
MKAR	**Makanchi Array**	**44.33**	**21**	P	**P**	**08 30 05.8**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=205,slow=8.5,SNR=11						
MKAR				LR	LR	08 49 49.6	
	comp=Z,1µm,20.8s,baz=210,slow=38						
KMI	**Kunming**	**44.47**	**61**	⇑*e*P	P	08 30 17.4	+9.2
KMI				S	**S**	**08 36 47.4**	**+3.6**
KMI				SS	**ScS**	**08 40 12.4**	**+5.0**
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,360nm,6.3s						
KMI				LR	LR		
	comp=N,1µm,18.8s						
KMI				LR	LR		
	comp=E,1µm,21.1s						
KMI				LR	LR		
	comp=Z,2µm,24.0s						
LBTB	**Lobatse**	**46.16**	**226**	P	**P**	**08 30 21.7**	**+0.2**
	comp=Z,13nm,1.0s,baz=55,slow=7.4,SNR=11						
KURK	**Kurchatov**	**46.61**	**16**	P	**P**	**08 30 23.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,36nm,1.7s						
KURK				MLR	MLR		
	comp=Z,2µm,20.0s						
KURK	**Kurchatov**	**46.61**	**16**	P	**P**	**08 30 23.9**	**-0.6**
KURK				IAmb	IAmb	08 30 46.2	
	comp=Z,36nm,1.7s						
KURK	**Kurchatov**	**46.61**	**16**	IAMs_20	IAMs_20	08 53 29.3	
	comp=Z,2µm,20.0s						
SEM	**Semipalatinsk**	**46.80**	**17**	*e*P	**P**	**08 30 25.8**	**-0.6**
	baz=17						
SEM				*e*S	**S**	**08 37 16.7**	**0.0**
	baz=17						
SEM	**Semipalatinsk**	**46.80**	**17**	*e*P	**P**	**08 30 25.7**	**-0.6**
SEM				*e*S	**S**	**08 37 16.7**	**0.0**
TIRR	**Tirgusor**	**47.02**	**329**	IAMs_20	IAMs_20	08 53 50.2	
	comp=Z,3µm,22.0s						
BRVK	**Borovoye**	**47.11**	**8**	P	**P**	**08 30 28.7**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,27nm,1.9s						
BRVK				MLR	MLR		
	comp=Z,3µm,21.0s						
BRVK	**Borovoye**	**47.11**	**8**	P	**P**	**08 30 28.7**	**+0.3**
BRVK				IAmb	IAmb	08 30 56.0	
	comp=Z,27nm,1.9s						
BRVK	**Borovoye**	**47.11**	**8**	IAMs_20	IAMs_20	08 51 07.2	
	comp=Z,3µm,21.0s						
VRH	**Novokhopyorsk**	**47.20**	**344**	*e*P	**P**	**08 30 30.7**	**+1.6**
VRH				pmax	pmax		
	comp=Z,30nm,1.6s						
CD2	**Chengdu**	**47.25**	**53**	*e*P	**P**	**08 30 29.6**	**-0.3**
CD2				S	**S**	**08 37 23.9**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				pmax	pmax		
	comp=Z,280nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,21.5s						
CD2				LR	LR		
	comp=Z,690nm,14.1s						
CD2				LR	LR		
	comp=Z,1µm,20.0s						
VORD	**Divnogorie**	**47.69**	**342**	*e*P	P	08 30 38.6	+5.7
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VSR	**Storozhevoye**	**47.95**	**342**	*e*P	**P**	**08 30 38.4**	**+3.5**
VSR				pmax	pmax		
	comp=Z,20nm,1.7s						
GTA	**Gaotai**	**48.23**	**41**	*e*P	**P**	**08 30 39.1**	**+1.6**
GTA				pP	pwP	08 30 42.6	-1.2
GTA				sP	sP	08 30 45.2	+4.6
GTA				S	**S**	**08 37 40.6**	**+3.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,2.1s						
GTA				pmax	pmax		
	comp=Z,220nm,4.9s						
GTA				LR	LR		
	comp=Z,2µm,20.4s						
GTA				LR	LR		
	comp=Z,2µm,20.4s						
GTA				LR	LR		
	comp=Z,3µm,23.6s						
GYA	**Guiyang**	**48.24**	**60**	⇑P	**P**	**08 30 42.5**	**+4.7**
GYA				S	**S**	**08 37 43.5**	**+5.8**
GYA				pmax	pmax		
	comp=Z,11nm,1.0s						
GYA				LR	LR		
	comp=Z,430nm,12.8s						
GYA				LR	LR		
	comp=Z,800nm,20.2s						
GYA				LR	LR		
	comp=Z,1µm,25.2s						
BOSA	**Boshof**	**48.66**	**222**	P	**P**	**08 30 40.0**	**-1.0**
	comp=Z,6.4nm,0.9s,baz=54,slow=12,SNR=8.5						
BOSA				LR	LR	08 49 32.3	
	comp=Z,3µm,19.1s,baz=55,slow=34						
BOSA	**Boshof**	**48.66**	**222**	P	**P**	**08 30 40.5**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,42nm,1.5s						
BOSA	**Boshof**	**48.66**	**222**	P	**P**	**08 30 40.5**	**-0.5**
DGZ	**Jazzator, Alta**	**48.67**	**23**	*i* P	**P**	**08 30 42.7**	**+1.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VTS	**Vitosha**	**48.70**	**324**	⇑P	**P**	**08 30 40.0**	**-1.1**
VRI	**Vrincioaia**	**48.85**	**329**	⇑P	**P**	**08 30 40.7**	**-1.4**
PLOR	**Plostina**	**48.88**	**329**	⇓P	**P**	**08 30 40.0**	**-2.3**
LEM	**Lembang**	**48.90**	**105**	LR	LR	08 47 48.5	
	comp=Z,657nm,21.2s,baz=255,slow=32						
MLR	**Muntele Rosu**	**49.01**	**328**	⇓P	**P**	**08 30 40.1**	**-3.3**
MLR	**Muntele Rosu**	**49.01**	**328**	P	**P**	**08 30 41.0**	**-2.4**
MLR				pmax	pmax		
	comp=Z,42nm,1.5s						
MLR	**Muntele Rosu**	**49.01**	**328**	P	**P**	**08 30 41.0**	**-2.4**
LPSR	**Galich'ya Gora**	**49.24**	**343**	*e*P	**P**	**08 30 46.7**	**+1.9**
LPSR				pmax	pmax		
	comp=Z,20nm,1.7s						
TSUM	**Tsumeb**	**49.33**	**238**	P	**P**	**08 30 46.2**	**0.0**
TSUM				IAmb	IAmb	08 30 51.2	
	comp=Z,20nm,1.1s						
TSUM	**Tsumeb**	**49.33**	**238**	IAMs_20	IAMs_20	08 50 39.3	
	comp=Z,2µm,22.0s						
LZH	**Lanzhou**	**49.41**	**47**	*e*P	**P**	**08 30 49.9**	**+3.2**
LZH				pP	pwP	08 30 57.3	+4.4
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,4.7s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
VOIR		**49.44**	**328**	⇑P	**P**	**08 30 44.8**	**-1.9**
QIZ	**Qiongzhong**	**49.60**	**71**	P	**P**	**08 30 46.7**	**-1.5**
QIZ				S	**S**	**08 37 58.7**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,33nm,1.2s						
QIZ				LR	LR		
	comp=Z,900nm,11.8s						
QIZ				LR	LR		
	comp=Z,890nm,20.6s						
QIZ				LR	LR		
	comp=Z,920nm,44.1s						
DOPR	**Dopca**	**49.61**	**328**	⇑P	**P**	**08 30 45.4**	**-2.5**
ARU	**Arti**	**49.82**	**359***c*	*i*P	**P**	**08 30 47.2**	**-2.0**
ARU						08 32 37.7	
ARU				S	**S**	**08 37 55.7**	**-3.0**
ARU				SS	**SS**	**08 41 21.8**	**-10**
ARU				pmax	pmax		
	comp=Z,18nm,2.5s						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
SVE	**Sverdlovsk**	**50.20**	**0**	*e*P	P	08 30 57.3	+5.2
MDVR	**Moldovita**	**50.88**	**325**	⇓P	**P**	**08 30 54.0**	**-3.6**
AKASG	**Malin Array Be**	**51.16**	**335**	P	**P**	**08 30 58.9**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=131,slow=6.7,SNR=8.9						
AKASG				LR	LR	08 54 51.6	
	comp=Z,727nm,21.8s,baz=140,slow=39						
AKASG	**Malin Array Be**	**51.16**	**335**	*i* P	**P**	**08 30 59.9**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	**Malin Array Si**	**51.16**	**335**	P	**P**	**08 30 59.6**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,12nm,1.0s						
AKBB	**Malin Array Si**	**51.16**	**335**	P	**P**	**08 30 59.6**	**+0.2**
AKBB				IAmb	IAmb	08 31 12.9	
	comp=Z,12nm,1.0s						
ZAA0	**Zalesovo Array**	**51.27**	**18**	P	**P**	**08 30 59.4**	**-0.8**
ZAA0				IAmb	IAmb	08 31 22.1	
	comp=Z,27nm,1.4s						
ZALV	**Zalesovo Beam**	**51.27**	**18**	P	**P**	**08 30 58.1**	**-2.1**
	comp=Z,7.6nm,1.0s,baz=232,slow=7.3,SNR=9.5						
ZALV				LR	LR	08 52 54.9	
	comp=Z,1µm,20.5s,baz=202,slow=36						
ZALV	**Zalesovo Beam**	**51.27**	**18**	*i* P	**P**	**08 30 59.2**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DIVS	**Divibare**	**51.48**	**323**	P	**P**	**08 31 01.1**	**-1.1**
DIVS				IAmb	IAmb	08 31 11.8	
	comp=Z,25nm,1.5s						
DRGR		**51.56**	**328**	⇑P	**P**	**08 31 01.6**	**-1.1**
SIRR	**Siria**	**51.80**	**326**	⇓P	**P**	**08 31 02.5**	**-1.9**
OBN	**Obninsk**	**52.12**	**343**	*e*P	**P**	**08 31 06.7**	**+0.2**
OBN				*e*		08 33 04.8	
OBN				*e*PPP	PPP	08 34 04.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,1µm,22.0s						
MOS	**Moscow**	**52.36**	**344**	*e*P	P	08 31 15.8	+7.5
MOS				pmax	pmax		
	comp=Z,74nm,1.5s						
MOS				MLR	MLR		
	comp=Z,800nm,17.0s						
XAN	**Xi'an**	**52.44**	**52**	P	P	08 31 17.2	+7.8
XAN				S	**S**	**08 38 38.4**	**+2.5**
UZH	**Uzhgorod**	**52.95**	**329**	*e*P	P	08 31 27.0	+14
KOLS	**Kolonicke sedl**	**53.15**	**329**	*e*P	**P**	**08 31 13.8**	**-0.6**
KOLS				*e*		08 31 19.5	
KOLS	**Kolonicke sedl**	**53.15**	**329**	*e*P	**P**	**08 31 13.8**	**-0.6**
KOLS				*e*		08 31 19.5	
CRVS	**Cervenica-Dubn**	**53.55**	**329**	*e*P	P	08 31 23.8	+6.5
CRVS	**Cervenica-Dubn**	**53.55**	**329**	*e*	P	08 31 23.8	+6.5
VYHS	**Vyhne**	**54.67**	**327**	*e*P	**P**	**08 31 25.1**	**-0.4**
VYHS				*e*		08 31 30.4	
LANS	**Liptovska Anna**	**54.73**	**328**	*e*P	P	08 31 34.2	+8.3
LANS	**Liptovska Anna**	**54.73**	**328**	*e*	P	08 31 34.2	+8.3
TAM	**Tamanrasset**	**55.22**	**293**	P	**P**	**08 31 30.4**	**+0.3**
TAM				pmax	pmax		
	comp=Z,14nm,1.3s						
TAM				MLR	MLR		
	comp=Z,600nm,19.0s						
TAM	**Tamanrasset**	**55.22**	**293**	P	**P**	**08 31 30.4**	**+0.3**
TAM				IAmb	IAmb	08 31 48.9	
	comp=Z,14nm,1.3s						
MODS	**Modra-Piesok**	**55.45**	**326**	*e*P	**P**	**08 31 30.9**	**-0.3**
MODS	**Modra-Piesok**	**55.45**	**326**	*e*P	**P**	**08 31 30.9**	**-0.3**
BTO	**Baotou**	**55.71**	**45**	*e*P	**P**	**08 31 37.8**	**+4.5**
SOKA	**Soboth**	**55.81**	**324**	P	**P**	**08 31 35.3**	**+1.4**
	comp=Z,4.7nm,1.2s						
OKC	**Ostrava-Krasne**	**55.83**	**328**	*e*P	P	08 31 45.6	+12
CONA	**Conrad Observa**	**56.00**	**325**	*e*P	**P**	**08 31 35.2**	**+0.1**
	comp=Z,7.9nm,1.3s						
OBKA	**Obir**	**56.01**	**323**	*e*P	**P**	**08 31 35.5**	**+0.2**
	comp=Z,11nm,1.4s						
MORC	**Moravsky Berou**	**56.12**	**328**	*e*P	**P**	**08 31 33.6**	**-2.3**
MORC	**Moravsky Berou**	**56.12**	**328**	P	**P**	**08 31 33.9**	**-2.0**
MORC				pmax	pmax		
	comp=Z,23nm,1.4s						
MORC	**Moravsky Berou**	**56.12**	**328**	P	**P**	**08 31 33.9**	**-2.0**
MORC				IAmb	IAmb	08 31 57.7	
	comp=Z,23nm,1.4s						
KRUC	**Moravsky**	**56.32**	**327**	*e*P	**P**	**08 31 36.1**	**-1.3**
VRAC	**Vranov**	**56.35**	**327**	P	**P**	**08 31 38.4**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=115,slow=3.0,SNR=3.2						
VRAC	**Vranov**	**56.35**	**327**	*e*P	**P**	**08 31 37.6**	**0.0**
KLMR	**Klimovskoe**	**56.47**	**348**	*e*P	**P**	**08 31 34.3**	**-3.8**
KLMR				*e*		08 32 28.5	
KLMR				pmax	pmax		
	comp=Z,47nm,1.4s						
KLMR	**Klimovskoe**	**56.47**	**348**	*e*P	**P**	**08 31 34.3**	**-3.8**
KLMR				*e*P	**P**	**08 31 34.3**	**-3.8**
KLMR				*e*P	**P**	**08 31 34.3**	**-3.8**
KLMR				AMP		08 31 49.9	
	comp=Z,47nm,1.4s						
KLMR				*e*PcP	**PcP**	**08 32 28.6**	**-6.3**
KLMR				LQ	LQ	08 52 14.9	
KLMR				LQ	LQ	08 52 14.9	
KLMR				LR	LR	08 53 51.5	
KRLC	**Kraliky**	**56.69**	**328**	*e*P	**P**	**08 31 42.7**	**+2.7**
KRLC	**Kraliky**	**56.69**	**328**	*e*P	**P**	**08 31 42.7**	**+2.7**
SONM	**Songino Array**	**56.74**	**35**	P	**P**	**08 31 39.3**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=235,slow=6.9,SNR=9.2						
MOA	**Molln**	**56.87**	**325**	*e*P	**P**	**08 31 42.4**	**+1.2**
	comp=Z,13nm,1.8s						
HHC	**Hu-ho-hao-te**	**56.88**	**45**	*e*P	**P**	**08 31 38.8**	**-2.8**
HHC				sP	pwP	08 31 53.0	+5.1
HHC				S	**S**	**08 39 39.1**	**+3.5**
HHC				ScS	**ScS**	**08 41 26.1**	**-5.4**
HHC	**Hu-ho-hao-te**	**56.88**	**45**	pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,530nm,5.7s						

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HHC                                    LR        LR
       comp=N,1µm,16.4s
HHC                                    LR        LR
       comp=E,2µm,18.6s
HHC                                    LR        LR
       comp=Z,2µm,19.6s
KBA    Koelnbreinsper     57.02 323   eP        P         08 31 43.2 +0.7
       comp=Z,11nm,1.3s
DPC    Dobruska-Polom     57.09 328   eP        P         08 31 45.6 +2.8
OSTC   Ostas              57.26 328   eP        P         08 31 47.2 +3.2
ABTA   Abfaltersbach      57.35 323   eP        P         08 31 45.3 +0.5
       comp=Z,2.4nm,2.7s
CHVC   Chvalec            57.36 328   eP        P         08 31 53.3 +8.6
CHVC                                  ex        x         08 31 58.5
TLY    Talaya             57.39  30    IAMs_20  IAMs_20   08 59 16.8
       comp=Z,1µm,19.0s
GERES  GERESS Array B     57.70 325    P        P         08 31 46.0 -1.3
       comp=Z,0.5nm,0.8s,baz=165,slow=4.1,SNR=2.1
PRU    Pruhonice          57.84 327   eP        P         08 31 46.7 -1.4
PRU                                   e                   08 31 54.0
PRU    Pruhonice          57.84 327   eP        P         08 31 53.8 +5.7
KHC    Kasperske Hory     57.92 326   i P       P         08 31 46.2 -2.5
KHC                                    pmax     pmax
       comp=Z,7.0nm,1.2s
KHC    Kasperske Hory     57.92 326   eP        P         08 31 46.7 -2.0
KHC                                   ex        x         08 31 54.0
SALO   Salr               58.05 321    IAMs_20  IAMs_20   08 49 58.3
       comp=Z,1µm,19.0s
WTTA   Wattenberg         58.12 323    P        P         08 31 50.9 +0.5
       comp=Z,9.9nm,0.9s
TOC3   Torodi Ar. Sit     58.13 281    IAMs_20  IAMs_20   08 57 08.2
       comp=Z,2µm,20.0s
TOC2   Torodi Ar. Sit     58.13 281    IAMs_20  IAMs_20   08 57 08.2
       comp=Z,2µm,20.0s
TOB3   Torodi Ar. Sit     58.14 281    IAMs_20  IAMs_20   08 57 09.6
       comp=Z,2µm,19.0s
TOC1   Torodi Ar. Sit     58.15 281    IAMs_20  IAMs_20   08 57 08.7
       comp=Z,2µm,19.0s
TOA2   Torodi Ar. Sit     58.15 281    IAMs_20  IAMs_20   08 57 09.7
       comp=Z,2µm,19.0s
TOC4   Torodi Ar. Sit     58.15 281    IAMs_20  IAMs_20   08 57 09.8
       comp=Z,2µm,19.0s
TOA0   Torodi Ar. Sit     58.15 281    P        P         08 31 48.5 -2.4
TOA0                                   IAMs_20  IAMs_20   08 57 09.9
       comp=Z,2µm,20.0s
TORD   Torodi Ar. Bea     58.15 281    P        P         08 31 49.4 -1.5
       comp=Z,5.6nm,1.1s,baz=92,slow=5.9,SNR=14
TORD                                   LR       LR        08 57 21.0
       comp=Z,1µm,19.2s,baz=80,slow=37
TOA3   Torodi Ar. Sit     58.15 281    IAMs_20  IAMs_20   08 57 09.9
       comp=Z,2µm,19.0s
TOB1   Torodi Ar. Sit     58.15 281    IAMs_20  IAMs_20   08 57 09.9
       comp=Z,2µm,20.0s
TOB4   Torodi Ar. Sit     58.16 281    IAMs_20  IAMs_20   08 57 10.2
       comp=Z,2µm,20.0s
TOB5   Torodi Ar. Sit     58.17 281    IAMs_20  IAMs_20   08 57 19.2
       comp=Z,2µm,20.0s
TOC7   Torodi Ar. Sit     58.17 281    IAMs_20  IAMs_20   08 57 19.3
       comp=Z,2µm,20.0s
TOC5   Torodi Ar. Sit     58.17 281    IAMs_20  IAMs_20   08 57 09.4
       comp=Z,2µm,20.0s
WATA   Walderalm          58.19 323   eP        P         08 31 52.4 +1.6
       comp=Z,4.8nm,0.8s
SQTA   Sankt Quirin       58.36 323   eP        P         08 31 51.0 -0.9
       comp=Z,6.4nm,0.9s
MOTA   Moosalm            58.48 323    P        P         08 31 52.2 -0.7
       comp=Z,8.0nm,1.3s
DAVOX  Davos/Dischmat     58.97 322    P        P         08 31 56.3  0.0
       comp=Z,1.1nm,0.5s,baz=169,slow=16,SNR=2.4
NKC    Novy Kostel        59.12 326   eP        P         08 31 58.8 +1.8
NKC    Novy Kostel        59.12 326   eP        P         08 31 58.8 +1.8
CLL    Collm              59.38 328   e(P)      P         08 32 02.0 +3.3
CLL                                   e                   08 32 11.0
       comp=Z,48nm,1.9s
CLL                                   ePPPP               08 35 54.0
CLL                                   eS        S         08 40 04.0 -3.5
CLL                                   eSSS      SSS       08 46 36.0
CLL                                    LmV                09 01 00.0
       comp=Z,500nm,19.6s
GRF    Grafenberg Arr     59.53 325   eP        P         08 32 08.8 +8.9
       comp=Z,32nm,2.1s,baz=119,slow=8.0
BJT    Baijiatuau         59.89  47    IAMs_20  IAMs_20   08 58 24.8
       comp=Z,2µm,21.0s
NJ2    Nanjing            59.91  57   eP        P         08 32 03.6 +0.8
NJ2                                    pmax     pmax
       comp=Z,16nm,0.5s
SENIN  Lac Senin/Sane     60.40 320    P        P         08 32 04.3 -1.9
TWG    Pinlang            60.47  68    IAMs_20  IAMs_20   09 02 13.0
       comp=Z,2µm,20.0s
FINES  FINESS Array B     60.48 342    P        P         08 32 04.3 -1.8
       comp=Z,3.1nm,0.9s,baz=144,slow=14,SNR=4.0
FINES                                  LR       LR        09 01 55.2
       comp=Z,497nm,18.4s,baz=144,slow=40
SSE    Sheshan            61.69  58    IAMs_20  IAMs_20   08 59 32.5
       comp=Z,1µm,22.0s
APA    Apatity            63.67 349⇓iP          P         08 32 18.2 -9.3
APA                                    pmax     pmax
       comp=Z,9.0nm,1.1s
KOWA   Kowa               63.70 283    P        P         08 32 27.8 -0.9
KIC    Kosan Boka         64.72 274   eP        P         08 32 34.1 -1.3
       comp=Z,42nm,1.1s
DBIC   Dimbokro           64.82 274    P        P         08 32 34.2 -1.7
       comp=Z,8.8nm,1.0s,baz=72,slow=3.2,SNR=8.6
DBIC                                   LR       LR        09 01 35.3
       comp=Z,1µm,18.7s,baz=72,slow=37
DBIC   Dimbokro           64.82 274    P        P         08 32 34.0 -2.0
DBIC                                   pmax     pmax
       comp=Z,28nm,1.4s
DBIC   Dimbokro           64.82 274    P        P         08 32 34.0 -2.0
TIC    Toumodi            64.98 274   eP        P         08 32 36.1 -1.0
LIC    Lamto              65.02 274   eP        P         08 32 36.3 -1.0
       comp=Z,76nm,1.3s
NRIK   Noril'sk           65.23  10    P        P         08 32 36.4 -1.3
       comp=Z,1.1nm,0.3s,baz=198,slow=3.7,SNR=3.7
NRIK                                   LR       LR        09 03 42.5
       comp=Z,1µm,21.9s,baz=219,slow=38
HIA    Hailar             65.34  38    IAMs_20  IAMs_20   09 05 36.3
       comp=Z,2µm,19.0s
NOA    NORSAR Array B     65.54 336    P        P         08 32 38.5 -1.3
       comp=Z,0.7nm,0.7s,baz=116,slow=7.3,SNR=1.4
MDT    Midelt             65.56 303    P        P         08 32 39.9 -0.8
       comp=Z,2.1nm,0.9s,baz=222,slow=7.4,SNR=3.8
ESBB   Sonseca Array      66.24 310             P         08 32 45.4 +0.6
ESDC   Sonseca Array      66.24 310    P        P         08 32 42.9 -1.9
       comp=Z,1.3nm,0.8s,baz=85,slow=5.1,SNR=8.7
ARCES  ARCESS Array B     66.94 347    P        P         08 32 47.5 -1.2
       comp=Z,3.4nm,0.8s,baz=166,slow=4.2,SNR=2.2
ARCES                                  LR       LR        09 04 30.0
       comp=Z,1µm,21.8s,baz=135,slow=38
CN2    Changchun          67.57  45   eP        P         08 32 54.2 +1.0
KSRS   Korea Array        68.23  52    P        P         08 32 56.4 -1.0
       comp=Z,0.9nm,0.6s,baz=257,slow=6.9,SNR=2.5
EKA    Eskdalemuir Ar     69.83 327    P        P         08 33 08.3 +1.3
       comp=Z,2.2nm,0.8s,baz=108,slow=4.6,SNR=3.8
MDJ    Mudanjiang         70.66  45    IAMs_20  IAMs_20   09 05 20.6
       comp=Z,1µm,19.0s
USA0B  Ussuriysk Arra     72.28  46    IAMs_20  IAMs_20   09 06 15.7
       comp=Z,1µm,19.0s
MAW    Mawson             73.94 179    P        P         08 33 30.9 -0.5
       comp=Z,2.2nm,0.4s,baz=61,slow=20,SNR=6.1
MAW                                    LR       LR        08 59 35.2
       comp=Z,606nm,19.9s,baz=12,slow=31
MAW    Mawson             73.94 179    P        P         08 33 31.5 +0.2
MAW                                    pmax     pmax
       comp=Z,2.0nm,0.9s
MAW    Mawson             73.94 179    P        P         08 33 31.5 +0.2
FORT   Forrest            74.43 124    IAMs_20  IAMs_20   09 03 50.2
       comp=Z,1µm,20.0s
YAK    Yakutsk            74.62  27    IAMs_20  IAMs_20   09 07 41.7
       comp=Z,1µm,20.0s
ASCN   Ascension          75.95 260    IAMs_20  IAMs_20   09 06 35.8
       comp=Z,1µm,19.0s
MJAR   Matsushiro Arr     76.34  54    LR       LR        09 10 47.0
       comp=Z,473nm,18.4s,baz=255,slow=38
SYO    Syowa Base         76.72 188⇑epP         pP        08 33 52.2 +2.7
SYO    Syowa Base         76.72 188⇓ePcP        PcP       08 33 58.2 -0.4
TIXI   Tiksi              77.15  18   i P       P         08 33 49.5 -0.3
TIXI   Tiksi              77.15  18    IAMs_20  IAMs_20   09 08 40.7
       comp=Z,1µm,22.0s
WRA    Warramunga Arr     77.23 112    P        P         08 33 51.1 -0.1
       comp=Z,4.2nm,1.0s,baz=288,slow=4.9,SNR=10
WRAB   Tennant Creek      77.23 112    P        P         08 33 50.0 -1.3
WRAB                                   pmax     pmax
       comp=Z,43nm,1.9s
WRAB   Tennant Creek      77.23 112    P        P         08 33 50.0 -1.3
WRAB                                   IAmb     IAmb      08 33 58.6
       comp=Z,43nm,1.9s
WB2    Warramunga Arr     77.24 112    P        P         08 33 51.0 -0.3
ASAR   Alice Springs      77.62 116    P        P         08 33 52.2 -1.2
       comp=Z,3.6nm,0.9s,baz=282,slow=5.7,SNR=26
ASAR                                   LR       LR        09 03 34.1
       comp=Z,217nm,21.8s,baz=294,slow=32
AS31   Alice Springs      77.62 116    P        P         08 33 53.2 -0.2
ASAJ   Asahikawa          79.89  46    LR       LR        09 11 00.9
       comp=Z,1µm,19.0s,baz=326,slow=37
YSS    Yuzh-Sakhalins     80.04  44   eP        P         08 34 06.7 +0.5
YSS    Yuzh-Sakhalins     80.04  44    IAMs_20  IAMs_20   09 12 38.9
       comp=Z,1µm,22.0s
CASY   Casey              81.08 162    IAMs_20  IAMs_20   09 07 04.7
       comp=Z,1µm,19.0s
YUK    Yuzh-Kuril'sk      82.24  47   eP        P         08 34 17.8 -0.2
YUK                                   e                   08 34 22.6
YUK                                   e                   08 37 25.4
YUK                                   ePPP      PPP       08 39 17.7
YUK                                   eS        S         08 44 32.2 -1.4
YUK                                   eSS       SS        08 49 53.1 -0.3
YUK                                   eSSS      SSS       08 53 22.3
YUK                                    MLR      MLR
       comp=Z,742nm,19.0s
YUK                                    MLR      MLR
       comp=N,396nm,18.0s
YUK                                    MLR      MLR
       comp=E,800nm,17.0s
SACV   Santiago Islan     82.62 284    IAMs_20  IAMs_20   09 12 29.0
       comp=Z,874nm,20.0s
GUMO   Guam               83.11  77    LR       LR        09 08 05.2
       comp=Z,167nm,21.2s,baz=288,slow=33
NVL    N'lazarevskaya     83.59 194   eP        P         08 34 29.0 +4.7
NVL                                   eS        S         08 44 46.8 +0.6
NVL                                    pmax     pmax
       comp=Z,18nm,1.2s
MA2    Magadan            84.61  31    IAMs_20  IAMs_20   09 14 33.2
       comp=Z,964nm,19.0s
STKA   Stephens Creek     85.94 123    P        P         08 34 36.5 -0.6
       comp=Z,1.9nm,0.8s,baz=319,slow=6.5,SNR=5.2
STKA                                   LR       LR        09 10 15.9
       comp=Z,630nm,18.7s,baz=266,slow=34
STKA   Stephens Creek     85.94 123    P        P         08 34 36.5 -0.6
STKA                                   pmax     pmax
       comp=Z,7.0nm,2.0s
SNAA   Sanae              88.01 196    IAMs_20  IAMs_20   09 07 22.7
       comp=Z,1µm,21.0s
PETK   Petropavlovsk-     89.20  37    LR       LR        09 17 12.9
       comp=Z,919nm,19.8s,baz=272,slow=37
ARMA   Armidale           94.27 120    IAMs_20  IAMs_20   09 18 03.6
       comp=Z,682nm,19.0s
QSPA   South Pole Qui     96.45 180    IAMs_20  IAMs_20   09 15 04.9
       comp=Z,1µm,21.0s
A21K   Barrow             98.57  11    IAMs_20  IAMs_20   09 29 05.3
       comp=Z,877nm,20.0s
VNDA   Vanda              98.77 168    LR       LR        09 15 11.5
       comp=Z,655nm,19.3s,baz=246,slow=32
HOPE   Hope Point         99.28 216    IAMs_20  IAMs_20   09 16 05.9
       comp=Z,641nm,21.0s
ANM    Nome              101.40  18    IAMs_20  IAMs_20   09 29 17.7
       comp=Z,842nm,19.0s
TTA    Tatalina          105.41  16    IAMs_20  IAMs_20   09 28 48.4
       comp=Z,877nm,22.0s
DZM    Mont Dzumac       107.23 111   eLR       LR        09 11 50.1
       comp=Z,308nm,23.4s
PAX    Paxson            107.96  12    IAMs_20  IAMs_20   09 33 38.5
       comp=Z,876nm,20.0s
HAL    Halifax           108.56 321    IAMs_20  IAMs_20   09 29 33.3
       comp=Z,508nm,19.0s
SJG    San Juan          121.91 296    IAMs_20  IAMs_20   09 32 57.9
       comp=Z,468nm,21.0s
G40A   Rib Lake          122.14 336    IAMs_20  IAMs_20   09 44 30.3
       comp=Z,616nm,22.0s
OBIP   Obispado Ponce    122.34 296    IAMs_20  IAMs_20   09 43 02.3
       comp=Z,407nm,22.0s
ACSO   Alum Creek Sta    122.58 327    IAMs_20  IAMs_20   09 34 37.9
       comp=Z,344nm,20.0s
Y60A   Bolivia           123.86 319    IAMs_20  IAMs_20   09 35 20.6
       comp=Z,401nm,20.0s
P48A   Milroy            124.44 328    IAMs_20  IAMs_20   09 30 57.9
       comp=Z,472nm,21.0s
LL01   San Ignacio de    125.19 222    IAMs_20  IAMs_20   09 41 40.3
       comp=Z,598nm,19.0s
TZTN   Tazewell          125.49 324    IAMs_20  IAMs_20   09 39 00.2
       comp=Z,433nm,20.0s
TKL    Tuckaleechee C    126.24 324    IAMs_20  IAMs_20   09 41 40.0
       comp=Z,491nm,20.0s
OLIL   Olney             126.36 330    IAMs_20  IAMs_20   09 45 57.9
       comp=Z,504nm,21.0s
U49A   Red Boiling Sp    126.78 326    IAMs_20  IAMs_20   09 47 02.1
       comp=Z,427nm,20.0s
SLM    Saint Louis       127.49 331    IAMs_20  IAMs_20   09 33 14.2
       comp=Z,380nm,19.0s
K31A   O'Neill           127.57 341    IAMs_20  IAMs_20   09 43 38.7
       comp=Z,465nm,20.0s
T45A   Paducah           127.94 329    IAMs_20  IAMs_20   09 45 30.7
       comp=Z,656nm,21.0s
N33A   J Bar K, Exete    128.79 338    IAMs_20  IAMs_20   09 45 26.1
       comp=Z,603nm,22.0s
BMO    Blue Mountains    128.84 358    IAMs_20  IAMs_20   09 42 06.0
       comp=Z,710nm,22.0s
SDV    Santo Domingo     128.89 287    IAMs_20  IAMs_20   09 47 01.1
       comp=Z,435nm,18.0s
FLWY   Flagg Ranch       129.02 352    IAMs_20  IAMs_20   09 42 23.7
       comp=Z,537nm,21.0s
LNXT   Lenox             129.08 328    IAMs_20  IAMs_20   09 39 55.8
       comp=Z,329nm,21.0s
HALT   Halls             129.15 328    IAMs_20  IAMs_20   09 47 49.6
       comp=Z,570nm,20.0s
PINE   Pine Mountain     129.93   1    IAMs_20  IAMs_20   09 42 28.8
       comp=Z,576nm,22.0s
LCAR   Lake Charles      129.96 330    IAMs_20  IAMs_20   09 47 47.7
       comp=Z,457nm,19.0s
250A   Grady             130.28 322    IAMs_20  IAMs_20   09 49 49.3
       comp=Z,475nm,19.0s
U40A   Yellville         130.56 331    IAMs_20  IAMs_20   09 49 36.4
       comp=Z,518nm,20.0s
FCAR   Ozark Folk Cen    130.58 330    IAMs_20  IAMs_20   09 50 01.1
       comp=Z,438nm,20.0s
CBKS   Cedar Bluff       131.31 339    IAMs_20  IAMs_20   09 45 17.7
       comp=Z,491nm,20.0s
KS21   Milan North St    131.88 336    IAMs_20  IAMs_20   09 49 57.9
       comp=Z,304nm,18.0s
ISCO   Idaho Springs     132.16 345    IAMs_20  IAMs_20   09 47 11.0
       comp=Z,462nm,22.0s
OK030  Cody Creek RV     132.68 335    IAMs_20  IAMs_20   09 47 51.4
       comp=Z,493nm,20.0s
DUG    Dugway, Tooele    133.12 353    IAMs_20  IAMs_20   09 45 40.3
       comp=Z,640nm,22.0s
OKCFA  Oklahoma City     133.40 335    IAMs_20  IAMs_20   09 48 20.4
       comp=Z,496nm,21.0s
KCPM   Cahto Peak        133.90   4    IAMs_20  IAMs_20   09 44 02.0
       comp=Z,332nm,19.0s
SDCO   Great Sand Dun    134.07 344    IAMs_20  IAMs_20   09 43 54.6
       comp=Z,579nm,22.0s
PV15   Paradox Valley    134.21 348    IAMs_20  IAMs_20   09 49 01.2
       comp=Z,384nm,19.0s
PV03   Paradox Valley    134.37 348    IAMs_20  IAMs_20   09 44 43.4
       comp=Z,402nm,20.0s
S22A   4UR Ranch, Cre    134.41 346    IAMs_20  IAMs_20   09 47 47.5
       comp=Z,616nm,21.0s
NATX   Nacogdoches       135.14 329    IAMs_20  IAMs_20   09 52 42.1
       comp=Z,407nm,20.0s
AMTX   Amarillo          135.51 339    IAMs_20  IAMs_20   09 51 12.1
       comp=Z,502nm,21.0s
ABTX   Abilene, Hawle    136.72 335    IAMs_20  IAMs_20   09 52 22.4
       comp=Z,515nm,21.0s
MSTX   Muleshoe          136.72 340    IAMs_20  IAMs_20   09 49 29.1
       comp=Z,587nm,21.0s
U15A   North Rim         136.76 351    IAMs_20  IAMs_20   09 47 26.5
       comp=Z,605nm,22.0s
HKT    Hockley           137.19 329    IAMs_20  IAMs_20   09 51 38.3
       comp=Z,467nm,20.0s
435B   Jarrell           137.37 332    IAMs_20  IAMs_20   09 51 14.9
       comp=Z,608nm,22.0s
W18A   Petrified Fore    137.58 348    IAMs_20  IAMs_20   09 51 05.4
       comp=Z,586nm,22.0s
JCT    Junction City     138.64 334    IAMs_20  IAMs_20   09 55 41.3
       comp=Z,443nm,20.0s
EPT    El Paso           139.96 343    IAMs_20  IAMs_20   09 52 37.4
       comp=Z,489nm,20.0s
ESPN   Las Esperanzas    140.32 298    IAMs_20  IAMs_20   09 55 17.7
       comp=Z,360nm,22.0s
TUC    Tucson            140.51 348    IAMs_20  IAMs_20   09 51 00.9
       comp=Z,414nm,19.0s
UABX   UABC, Campus M140.89 354        IAMs_20  IAMs_20   09 39 20.9
       comp=Z,517nm,21.0s
CPBX   Cerro Prieto      141.09 354    IAMs_20  IAMs_20   09 49 19.1
       comp=Z,477nm,22.0s
TXAR   Lajitas Array     141.23 338    PKP      PKPdf     08 41 28.5 +0.3
       comp=Z,0.3nm,0.8s,baz=74,slow=3.3,SNR=2.4
JTS    Las Juntas de     141.71 296    IAMs_20  IAMs_20   09 52 38.7
       comp=Z,528nm,21.0s
CCX    Cicese            141.75 356    IAMs_20  IAMs_20   09 38 54.6
       comp=Z,343nm,21.0s
SFX    San Felipe        142.41 353    IAMs_20  IAMs_20   09 52 39.0
       comp=Z,391nm,22.0s
SPX    San Pedro Mart    142.47 354    IAMs_20  IAMs_20   09 50 26.5
       comp=Z,494nm,22.0s
HPIG                     144.14 339    IAMs_20  IAMs_20   09 54 29.5
       comp=Z,588nm,22.0s
PPT2   Papeete2          148.70 113   eLR       LR        09 31 01.8
       comp=Z,576nm,29.8s
RKT    Rikitea           157.79 140   eLR       LR        09 35 10.4
       comp=Z,862nm,33.5s
TAOE   Nuku Hiva Isla    159.47  98   eLR       LR        09 35 55.2
       comp=Z,590nm,25.8s
```

IDC ***02*** *08:25:51.3±0.5, 6°.33N×60°.33E, h0^{km}, mb4.3/21, mb1 4.4/23, mb1mx4.1/58, mbtmp4.3/23, ML3.7/2, MS4.7/3, Ms1 4.7/3, ms1mx4.0/51, Error ellipse: s-maj=15.2km s-min=13.2km az=131.0*

NEIC ***02*** *08:25:52.7±2.1, 6°.45N±0°.10×60°.30E±0°.10, h10^{km}±1^{km}, mb4.8/41, Mwc5.4(GCMT), Error ellipse: s-maj=17.4km s-min=15.9km az=217.0*

GCMT ***02*** *08:25:53.7±0.2, 6°.57N±0°.01×60°.15E±0°.01, h12^{km}, MW5.4/147, Moment Tensor Solution. s75,c98; s147,c273; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.38±.02; M$_{θθ}$0.97±.02; M$_{φφ}$0.40±.03; M$_{rθ}$0.98±.07; M$_{θφ}$-0.61±.02; M$_{φr}$-0.11±.07; Best double couple: M$_0$1.68800×10^{17} NP1:φ$_s$135.00000°, δ30.00000°, λ-66.00000°. NP2:φ$_s$288.00000°, δ63.00000°, λ-103.00000°. Principal axes: T 1.6350, Plg17.0000°, Azm28.0000°; N 0.1050, Plg11.0000°, Azm294.0000°; P -1.7420, Plg69.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *08:25:54, 6°.56N×60°.15E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.43; M$_{θθ}$1.00; M$_{φφ}$0.43; M$_{rθ}$0.67; M$_{θφ}$-0.66; M$_{φr}$-0.24; Fault plane solution: M$_0$1.60000×10^{17} NP1:φ$_s$129.00000°, δ32.00000°, λ-80.00000°. NP2:φ$_s$297.00000°, δ58.00000°, λ-96.00000°. Principal axes: T 1.5889, Plg13.0000°, Azm32.0000°; N 0.0169, Plg5.0000°, Azm301.0000°; P -1.6058, Plg76.0000°, Azm189.0000°;*

ISC 02 08:25:53.0±0.4**, 6°.47N**±0°.07×**60°.35E**±0°.06**, h10**^{km}**, n92, σ1^s.48**/95**, mb4.7**/49**, MS5.0**/7**, Carlsberg Ridge**

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Code   Station Name           Δ°  AZ°    Phase ID            Time      Res
                                        Op       ISC         h  m  s   ISC
SOCY   Socotra             8.47 313    Pn       Pn        08 27 58.9 +3.0
WSAR   Wadi Sarin         16.75 354    Pn       P         08 29 50.0 -0.1
       0.1nm,0.3s,baz=178,slow=18,SNR=3.0
DAMY   Dhamar             17.63 298    P        Pn        08 29 58.6 -0.7
DAMY                                   IAmb     IAmb      08 30 20.7
       comp=Z,94nm,1.4s
ATD    Arta Tunnel        18.00 287    P        P         08 30 04.7 +0.6
       comp=Z,0.8nm,0.3s,baz=252,slow=20,SNR=1.8
UOSS   Minazif            18.79 348    P        P         08 30 11.3 -1.5
HYB    Hyderabad          20.84  57   i P       Pn        08 30 38.0 +0.4
FURI   Furi               21.61 278    P        P         08 30 44.7 +0.8
RAYN   Ar Rayn            22.17 321    P        P         08 30 47.6 -1.8
RAYN                                   IAmb     IAmb      08 30 59.0
       comp=Z,49nm,1.4s
KMBO   Kilima Mbogo       24.26 253    P        P         08 31 11.4 +0.4
       comp=Z,5.3nm,0.8s,baz=64,slow=9.2,SNR=9.0
KBL    Kabul              29.06  15    P        P         08 31 56.1 +2.2
KBL                                    IAmb     IAmb      08 32 07.2
       comp=Z,26nm,1.4s
NIL    Nilore             29.57  22    P        P         08 31 60.0 +1.8
NIL                                    IAmb     IAmb      08 32 15.4
       comp=Z,18nm,1.3s
MBAR   Mbarara            30.38 258    P        P         08 32 04.5 -1.3
GEYT   Alibeck            31.38 357    P        P         08 32 16.5 +2.3
       comp=Z,0.4nm,0.3s,baz=182,slow=4.3,SNR=2.2
GYA0B  ALIBECK ARRAY      31.38 357    P        P         08 32 13.3 -0.9
GYA0B                                  IAmb     IAmb      08 32 35.2
       comp=Z,13nm,1.4s
MARD   Mardin             35.50 333    P        P         08 32 50.3 +0.1
KSH    Kashi              35.78  21    P        P         08 32 50.0 -2.6
KSH                                    PP       PnPn      08 34 08.8 -3.8
KSH                                    S        S         08 38 26.2 -3.8
KSH                                    pmax     pmax
       comp=Z,76nm,1.9s
KSH                                    pmax     pmax
       comp=Z,560nm,5.9s
KSH                                    LR       LR
       comp=Z,5µm,17.7s
KSH                                    LR       LR
       comp=Z,1µm,11.5s
KSH                                    LR       LR
       comp=Z,3µm,15.7s
LSA    Lhasa              37.07  48    P        P         08 33 05.2 +1.0
LSA                                    IAmb     IAmb      08 33 21.3
       comp=Z,20nm,1.0s
KK31   Karatay Array      37.57  12    P        P         08 33 08.0 +0.4
KK31                                   IAmb     IAmb      08 33 17.1
       comp=Z,18nm,1.3s
KKAR   Karatay Array      37.57  12    P        P         08 33 07.5 -0.1
KKAR                                   IAmb     IAmb      08 33 17.1
       comp=Z,18nm,1.3s
AAK    Ala-Archa          38.13  17    P        P         08 33 14.5 +2.0
       comp=Z,4.1nm,0.7s,baz=183,slow=4.1,SNR=7.3
AAK    Ala-Archa          38.13  17    P        P         08 33 13.7 +1.1
LSZ    Lusaka             38.51 236    P        P         08 33 16.3 +0.2
PSI    Prapat             38.61  94    LR       LR        08 47 13.2
       comp=Z,726nm,18.5s,baz=270,slow=33
CMAR   Chiang Mai Arr     39.42  69    P        P         08 33 24.6 +1.0
       comp=Z,2.9nm,0.8s,baz=265,slow=8.7,SNR=10
CMAR                                   PcP      PcP       08 35 31.8 -0.1
       comp=Z,0.6nm,0.4s,baz=267,slow=4.8,SNR=4.9
TOKA   Tokat              39.92 331    P        P         08 33 27.2 -0.3
KBZ    Khabaz             40.15 340    P        P         08 33 30.4 +1.2
       comp=Z,8.5nm,1.1s,baz=155,slow=6.1,SNR=5.6
KIV    Kislovodsk         40.42 340    P        P         08 33 30.2 -1.4
KIV                                    IAmb     IAmb      08 33 40.2
       comp=Z,31nm,1.2s
BRTR   Keskin Array B     40.90 328    P        P         08 33 36.5 +0.7
       comp=Z,1.7nm,0.7s,baz=150,slow=6.7,SNR=2.6
MATP   Matopo             41.17 229    P        P         08 33 36.5 -1.6
       comp=Z,3.6nm,1.0s,baz=18,slow=2.9,SNR=4.3
ABKAR  Akbulak array      42.64 360    P        P         08 33 49.1 -0.5
ABKAR                                  IAmb     IAmb      08 34 07.5
       comp=Z,27nm,1.4s
AKTO   Aktyubinsk         43.86 358    P        P         08 34 01.9 +2.5
       comp=Z,6.4nm,1.1s,baz=204,slow=4.2,SNR=5.0
WMQ    Urumqi             44.26  28   eP        P         08 34 04.8 +1.9
WMQ                                    sP       pwP       08 34 11.4 +2.1
WMQ                                    PcS      PcS       08 39 40.3 -0.2
WMQ                                    S        S         08 40 36.7  0.0
WMQ                                    ScS      ScS       08 44 00.6 -1.2
WMQ                                    pmax     pmax
       comp=Z,17nm,0.9s
WMQ                                    pmax     pmax
       comp=Z,340nm,5.5s
WMQ                                    LR       LR
       comp=Z,1µm,14.7s
WMQ                                    LR       LR
       comp=Z,3µm,16.7s
MAKZ   Makanchi           44.28  21    P        P         08 34 03.4 +0.4
MK31   Makanchi Array     44.38  22    P        P         08 34 04.0 +0.2
MKAR   Makanchi Array     44.38  22    P        P         08 34 03.8  0.0
       comp=Z,2.2nm,0.9s,baz=212,slow=8.8,SNR=9.2
LBTB   Lobatse            46.08 226    P        P         08 34 15.6 -2.1
       comp=Z,2.8nm,0.9s,baz=97,slow=5.6,SNR=3.1
LBTB   Lobatse            46.08 226    P        P         08 34 17.3 -0.3
KURK   Kurchatov          46.66  16    P        P         08 34 21.3 -0.4
BELG   Belogornoye        46.96 349    P        P         08 34 25.9 +2.0
       comp=Z,16nm,1.0s,baz=160,slow=12,SNR=2.4
CD2    Chengdu            47.33  53   eP        P         08 34 28.5 +1.1
CD2                                    S        S         08 41 21.5 +0.2
CD2                                    pmax     pmax
       comp=Z,10.0nm,1.3s
CD2                                    pmax     pmax
       comp=Z,230nm,5.9s
GTA    Gaotai             48.30  41    P        P         08 34 35.5 +0.6
GTA                                    pP       sP        08 34 39.2 +1.4
GTA                                    sP       pwP       08 34 41.3 -0.1
GTA                                    S        S         08 41 34.4 -0.7
GTA                                    pmax     pmax
       comp=Z,4.0nm,1.5s
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GTA				pmax	pmax		
	comp=Z,170nm,4.8s						
GTA				LR	LR		
	comp=Z,2µm,18.9s						
GTA				LR	LR		
	comp=Z,1µm,20.0s						
GTA				LR	LR		
	comp=Z,2µm,24.0s						
GYA	**Guiyang**	**48.32**	**60**	*e*P	**P**	**08 34 39.2**	**+4.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BOSA	**Boshof**	**48.59**	**222**	P	**P**	**08 34 36.0**	**-1.2**
	comp=Z,4.8nm,1.0s,baz=46,slow=9.4,SNR=7.2						
BOSA	**Boshof**	**48.59**	**222**	P	**P**	**08 34 36.9**	**-0.3**
BOSA				IAmb	IAmb	08 35 01.4	
	comp=Z,19nm,1.4s						
TSUM	**Tsumeb**	**49.25**	**238**	P	**P**	**08 34 42.8**	**+0.4**
TSUM				IAmb	IAmb	08 34 51.5	
	comp=Z,13nm,1.2s						
TIP	**Timpagrande**	**50.96**	**316**	P	**P**	**08 34 54.7**	**-0.4**
ZAA0	**Zalesovo Array**	**51.32**	**18**	P	**P**	**08 34 57.0**	**-0.3**
ZALV	**Zalesovo Beam**	**51.32**	**18**	P	**P**	**08 34 56.8**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=228,slow=7.8,SNR=9.0						
KOLS	**Kolonicke sedl**	**53.13**	**329**	*e*P	**P**	**08 35 11.0**	**0.0**
CRVS	**Cervenica-Dubn**	**53.52**	**329**	*e*P	**P**	**08 35 13.4**	**-0.5**
VYHS	**Vyhne**	**54.65**	**327**	*e*P	**P**	**08 35 20.9**	**-1.2**
TAM	**Tamanrasset**	**55.16**	**293**	P	**P**	**08 35 26.7**	**+0.4**
MODS	**Modra-Piesok**	**55.43**	**326**	*e*P	**P**	**08 35 26.5**	**-1.2**
MORC	**Moravsky Berou**	**56.09**	**328**	*e*P	**P**	**08 35 32.9**	**+0.4**
MORC	**Moravsky Berou**	**56.09**	**328**	P	**P**	**08 35 31.0**	**-1.5**
MORC				IAmb	IAmb	08 35 43.2	
	comp=Z,13nm,1.3s						
KRUC	**Moravsky**	**56.30**	**327**	*e*P	**P**	**08 35 32.9**	**-1.0**
VRAC	**Vranov**	**56.33**	**327**	*e*P	**P**	**08 35 33.4**	**-0.8**
KLMR	**Klimovskoe**	**56.48**	**348**	*e*	P	08 35 24.2	-11
KLMR				AMP		08 35 43.9	
	comp=Z,48nm,1.6s						
SONM	**Songino Array**	**56.80**	**35**	P	**P**	**08 35 37.5**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=236,slow=6.9,SNR=13						
HHC	**Hu-ho-hao-te**	**56.96**	**45**	*e*P	**P**	**08 35 40.4**	**+1.4**
HHC				sP	pwP	08 35 54.3	+8.7
HHC				S	**S**	**08 43 28.1**	**-5.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
HHC				LR	LR		
	comp=Z,1µm,17.0s						
HHC				LR	LR		
	comp=Z,1µm,16.7s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
TEOL	**Teolo**	**57.18**	**321**	P	**P**	**08 35 40.3**	**0.0**
ULN	**Ulaanbaatar**	**57.20**	**36**	P	**P**	**08 35 40.1**	**-0.4**
CTI	**Castel Tesino**	**57.51**	**322**	P	**P**	**08 35 42.4**	**-0.3**
CTI				IAmb	IAmb	08 36 05.9	
	comp=Z,13nm,1.2s						
TOA0	**Torodi Ar. Sit**	**58.08**	**281**	P	**P**	**08 35 44.3**	**-2.8**
TOA0				IAmb	IAmb	08 36 03.1	
	comp=Z,18nm,1.5s						
TORD	**Torodi Ar. Bea**	**58.08**	**281**	P	**P**	**08 35 46.3**	**-0.8**
	comp=Z,3.7nm,1.1s,baz=88,slow=5.4,SNR=11						
CLL	**Collm**	**59.35**	**328**	*i*	P	08 36 05.4	+10
	comp=Z,64nm,1.9s						
CLL				*e*PP	**PP**	**08 38 08.0**	**+1.6**
CLL	**Collm**	**59.35**	**328**	*e*	P	08 36 06.0	+11
NJ2	**Nanjing**	**60.00**	**57**	*e*P	**P**	**08 35 59.4**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KOWA	**Kowa**	**63.63**	**283**	P	**P**	**08 36 22.6**	**-2.4**
KOWA				IAmb	IAmb	08 36 27.9	
	comp=Z,7.9nm,0.9s						
KIC	**Kosan Boka**	**64.64**	**274**	*e*P	**P**	**08 36 31.1**	**-0.5**
	comp=Z,25nm,0.9s						
DBIC	**Dimbokro**	**64.73**	**274**	P	**P**	**08 36 32.3**	**+0.1**
	comp=Z,6.0nm,0.8s,baz=63,slow=6.3,SNR=9.4						
DBIC	**Dimbokro**	**64.73**	**274**	P	**P**	**08 36 30.1**	**-2.1**
TIC	**Toumodi**	**64.90**	**274**	*e*P	**P**	**08 36 35.0**	**+1.7**
LIC	**Lamto**	**64.94**	**274**	*e*P	**P**	**08 36 33.1**	**-0.4**
	comp=Z,44nm,1.0s						
NRIK	**Noril'sk**	**65.27**	**10**	P	**P**	**08 36 34.8**	**+0.1**
NRIK				IAmb	IAmb	08 37 02.5	
	comp=Z,11nm,1.5s						
ESDC	**Sonseca Array**	**66.20**	**311**	P	**P**	**08 36 40.1**	**-1.2**
	comp=Z,3.2nm,1.0s,baz=90,slow=5.7,SNR=6.6						
PAB	**San Pablo**	**66.46**	**310**	P	**P**	**08 36 42.4**	**-0.7**
PAB				IAmb	IAmb	08 37 03.3	
	comp=Z,12nm,1.3s						
KSRS	**Korea Array**	**68.31**	**52**	LR	LR	09 04 59.6	
	comp=Z,517nm,21.2s,baz=260,slow=34						
JNU	**Nakatsue**	**70.19**	**57**	LR	LR	09 07 60.0	
	comp=Z,691nm,19.4s,baz=270,slow=36						
MAW	**Mawson**	**73.92**	**179**	P	**P**	**08 37 28.7**	**+0.8**
	comp=Z,7.3nm,1.1s,baz=344,slow=13,SNR=4.3						
MAW	**Mawson**	**73.92**	**179**	P	**P**	**08 37 28.3**	**+0.3**
WRA	**Warramunga Arr**	**77.30**	**112**	P	**P**	**08 37 47.9**	**-0.5**
	comp=Z,4.8nm,1.0s,baz=291,slow=4.3,SNR=16						
WRAB	**Tennant Creek**	**77.30**	**112**	P	**P**	**08 37 46.8**	**-1.6**
WRAB				IAmb	IAmb	08 37 49.6	
	comp=Z,9.7nm,1.1s						
WB2	**Warramunga Arr**	**77.31**	**112**	P	**P**	**08 37 47.3**	**-1.2**
WB2				IAmb	IAmb	08 37 49.6	
	comp=Z,9.0nm,1.1s						
ASAR	**Alice Springs**	**77.68**	**116**	P	**P**	**08 37 50.3**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=285,slow=5.7,SNR=30						
AS31	**Alice Springs**	**77.69**	**116**	P	**P**	**08 37 49.6**	**-0.9**
STKA	**Stephens Creek**	**85.99**	**123**	P	**P**	**08 38 33.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=299,slow=9.7,SNR=6.6						
STKA	**Stephens Creek**	**85.99**	**123**	P	**P**	**08 38 33.1**	**-1.1**
VNA2	**Neumayer--Watz**	**88.97**	**198**	P	**P**	**08 38 48.5**	**+0.9**
VNA1	**Neumayer--Stat**	**89.13**	**198**	P	**P**	**08 38 50.7**	**+2.4**
VNA3	**Neumayer Olymp**	**89.78**	**198**	P	**P**	**08 38 52.1**	**+0.7**
TXAR	**Lajitas Array**	**141.22**	**337**	PKhKP	PKPpre	08 45 17.7	
	comp=Z,0.8nm,1.0s,baz=93,slow=2.5,SNR=3.0						
TXAR				PKP	**PKPdf**	**08 45 23.4**	**-1.4**
	comp=Z,1.3nm,1.1s,baz=93,slow=2.5,SNR=4.6						

SOME ***02*** *08:28:53.9, 42°.02N×78°.77E, h10^{km}*

KRNET ***02*** *08:28:53.4±0.1, 42°.00N×78°.78E, h13^{km}, mb2.6*

NNC ***02*** *08:28:54.3±0.9, 42°.03N×78°.83E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=6.7km s-min=3.0km az=158.0*

ISC 02 08:28:54.4±1.8**, 42°.01N**±0°.07×**78°.69E**±0°.04**, h10**^{km}±10^{km}**, n48, σ1^{s}18**/80**, 14C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.52**	**335**	⇓*i*P	**Pg**	**08 29 04.3**	**-0.2**
	baz=30						
PRZ				⇓*i*S	**Sg**	**08 29 12.3**	**+0.9**
	baz=30						
SATY	**Saty**	**1.07**	**349**	*e*P	**Pn**	**08 29 15.7**	**+0.1**
	1.4nm,0.1s						
SATY				*e*S	**Sn**	**08 29 31.1**	**+0.6**
	9.7nm,0.1s						
SATY	**Saty**	**1.07**	**349**	P	**Pn**	**08 29 15.7**	**+0.1**
	1.4nm,0.1s						
SATY				S	**Sn**	**08 29 31.1**	**+0.6**
	9.7nm,0.1s						
ANVS	**Anan'yevo**	**1.08**	**316**	⇑*i*P	**Pn**	**08 29 15.3**	**-0.5**
	baz=14						
ANVS				⇑*i*S	**Sn**	**08 29 30.7**	**-0.3**
	baz=14						
KDJ	**Kajisay**	**1.13**	**276**	⇑*i*P	**Pn**	**08 29 15.5**	**-1.0**
	baz=77						
KDJ				⇑*i*S	**Sb**	**08 29 31.7**	**+0.7**
	baz=77						
UZB	**Uzynbulak**	**1.16**	**12**	*e*P	**Pb**	**08 29 15.4**	**-1.2**
	baz=9.0						
UZB				*e*S	**Sg**	**08 29 30.9**	**-0.9**
	baz=9.0						
UZB	**Uzynbulak**	**1.16**	**12**	*e*P	**Pb**	**08 29 15.4**	**-1.2**
	3.2nm,0.2s						
UZB				*e*S	**Sg**	**08 29 30.9**	**-0.9**
	7.0nm,0.2s						
UZB	**Uzynbulak**	**1.16**	**12**	P	**Pb**	**08 29 15.4**	**-1.2**
	3.2nm,0.2s						
UZB				S	**Sg**	**08 29 30.9**	**-0.9**
	7.0nm,0.2s						
SHLS	**Shalkode**	**1.28**	**26**	*e*P	**Pg**	**08 29 20.0**	**+1.1**
	baz=35						
SHLS				*e*S	**Sg**	**08 29 38.6**	**+3.1**
	baz=35						
SHLS	**Shalkode**	**1.28**	**26**	*e*P	**Pg**	**08 29 20.0**	**+1.1**
	4.2nm,0.2s						
SHLS				*e*S	**Sg**	**08 29 38.6**	**+3.1**
	12nm,0.5s						
SHLS	**Shalkode**	**1.28**	**26**	P	**Pg**	**08 29 20.0**	**+1.1**
	4.2nm,0.2s						
SHLS				S	**Sg**	**08 29 38.6**	**+3.1**
	12nm,0.5s						
PDGK	**Podgornoye**	**1.44**	**24**	P	**Pb**	**08 29 20.2**	**-1.2**
	1.0nm,0.2s						
PDGK				S	**Sg**	**08 29 38.9**	**-1.9**
	2.0nm,0.4s						
PDGK	**Podgornoye**	**1.44**	**24**	⇑P	**Pb**	**08 29 19.9**	**-1.5**
	0.6nm,0.3s						
PDGK				⇑S	**Sg**	**08 29 38.9**	**-1.9**
	5.8nm,0.3s						
MDOK	**Medeo**	**1.67**	**314**	*e*P	**Pg**	**08 29 26.3**	**-0.2**
	baz=13						
MDOK				*e*S	**Sg**	**08 29 49.2**	**+1.0**
	baz=13						
MDOK	**Medeo**	**1.67**	**314**	*e*P	**Pg**	**08 29 26.3**	**-0.2**
	3.7nm,0.4s						
MDOK				*e*S	**Sg**	**08 29 49.2**	**+1.0**
	6.7nm,0.3s						
MDOK	**Medeo**	**1.67**	**314**	⇑P	**Pg**	**08 29 26.0**	**-0.4**
	0.6nm,0.3s						
MDOK				S	**Sg**	**08 29 48.2**	**0.0**
	4.8nm,0.4s						
MDOK	**Medeo**	**1.67**	**314**	Pg	**Pg**	**08 29 26.3**	**-0.2**
	3.7nm,0.4s						
MDOK				Lg	Lg	08 29 49.2	
	6.7nm,0.3s						
MDOK	**Medeo**	**1.67**	**314**	*e*P	**Pg**	**08 29 26.1**	**-0.4**
MDOK	**Medeo**	**1.67**	**314**	*e*P	**Pg**	**08 29 26.1**	**-0.3**
	baz=19						
KOTS	**Kotyrbulak**	**1.69**	**317**	*e*P	**Pg**	**08 29 26.8**	**0.0**
	baz=16						
KOTS				*e*S	**Sg**	**08 29 50.0**	**+1.3**
	baz=16						
KOTS	**Kotyrbulak**	**1.69**	**317**	*e*P	**Pg**	**08 29 26.8**	**0.0**
	5.7nm,0.2s						
KOTS				*e*S	**Sg**	**08 29 50.0**	**+1.3**
	12nm,0.4s						
KOTS	**Kotyrbulak**	**1.69**	**317**	P	**Pg**	**08 29 26.8**	**0.0**
	5.7nm,0.2s						
KOTS				S	**Sg**	**08 29 50.0**	**+1.3**
	12nm,0.4s						
ULHL	**Ulahol**	**1.84**	**278**	⇑*i*P	**Pb**	**08 29 28.2**	**0.0**
	baz=78						
ULHL				⇑*i*S	**Sg**	**08 29 53.9**	**+0.4**
	baz=78						
MTBS	**Maitube**	**2.01**	**304**	*e*P	**Pg**	**08 29 32.3**	**-0.6**
	3.0nm,0.1s						
MTBS				*e*S	**Sg**	**08 29 59.5**	**+0.5**
	8.7nm,0.3s						
MTBS	**Maitube**	**2.01**	**304**	Pg	**Pg**	**08 29 32.3**	**-0.6**
	3.0nm,0.1s						
MTBS				Lg	Lg	08 29 59.5	
	8.7nm,0.3s						
MNBS	**Baschi**	**2.08**	**354**	*e*P	**Pg**	**08 29 32.9**	**-1.3**
	7.3nm,0.2s						
MNBS				*e*S	**Sg**	**08 30 00.9**	**-0.2**
	17nm,0.2s						
MNBS	**Baschi**	**2.08**	**354**	Pg	**Pg**	**08 29 32.9**	**-1.3**
	7.3nm,0.2s						
MNBS				Lg	Lg	08 30 00.9	
	17nm,0.2s						
BOOM	**Boomskoye usch**	**2.10**	**284**	⇑*i*P	**Pb**	**08 29 32.4**	**-0.2**
	baz=84						
BOOM				⇑*e*S	**Sb**	**08 30 00.5**	**+1.7**
	baz=84						
CHKK	**Chushkaly**	**2.23**	**326**	*e*P	**Pg**	**08 29 36.0**	**-1.1**
	4.4nm,0.2s						
CHKK				*e*S	**Sg**	**08 30 06.2**	**+0.3**
	27nm,0.6s						
CHKK	**Chushkaly**	**2.23**	**326**	Pg	**Pg**	**08 29 36.0**	**-1.1**
	4.4nm,0.2s						
CHKK				Lg	Lg	08 30 06.2	
	27nm,0.6s						
KTBS	**Karatobe**	**2.25**	**320**	*e*P	**Pg**	**08 29 36.5**	**-1.0**
	3.2nm,0.4s						
KTBS				*e*S	**Sg**	**08 30 07.1**	**+0.4**
	17nm,0.5s						
KTBS	**Karatobe**	**2.25**	**320**	Pg	**Pg**	**08 29 36.5**	**-1.0**
	3.2nm,0.4s						
KTBS				Lg	Lg	08 30 07.1	
	17nm,0.5s						
KST	**Kastek**	**2.26**	**298**	*e*P	**Pg**	**08 29 37.3**	**-0.5**
	14nm,0.8s						
KST				*e*S	**Sg**	**08 30 08.2**	**+1.0**
	7.7nm,0.5s						
KST	**Kastek**	**2.26**	**298**	Pg	**Pg**	**08 29 37.3**	**-0.5**
	14nm,0.8s						
KST				Lg	Lg	08 30 08.2	
	7.7nm,0.5s						
ARXS	**Arharly**	**2.29**	**344**	*e*P	**Pg**	**08 29 36.9**	**-1.4**
	4.6nm,0.4s						
ARXS				*e*S	**Sg**	**08 30 07.6**	**-0.3**
	15nm,0.2s						
DJR	**Jarkent**	**2.45**	**19**	*e*P	**Pb**	**08 29 38.3**	**-0.3**
	2.8nm,0.2s						
DJR				*e*S	**Sg**	**08 30 10.2**	**-3.0**
	18nm,0.4s						
DJR	**Jarkent**	**2.45**	**19**	Pg	**Pb**	**08 29 38.3**	**-0.3**
	2.8nm,0.2s						
DJR				Lg	Lg	08 30 10.2	
	18nm,0.4s						
TKM2	**Tokmak 2**	**2.46**	**293**	⇓*i*P	**Pb**	**08 29 37.3**	**-1.6**
	baz=92						
TKM2				⇓*i*S	**Sb**	**08 30 09.6**	**+0.2**
	baz=92						
TKM2	**Tokmak 2**	**2.46**	**293**	⇑Pg	**Pb**	**08 29 39.9**	**+1.0**
	1.5nm,0.6s						
TKM2				⇑Lg	Lg	08 30 14.5	
	4.3nm,0.5s						
DGS	**Degeres**	**2.48**	**301**	*e*P	**Pg**	**08 29 40.8**	**-1.1**
	3.4nm,0.5s						
DGS				*e*S	**Sg**	**08 30 14.1**	**0.0**
	3.0nm,0.5s						
DGS	**Degeres**	**2.48**	**301**	Pg	**Pg**	**08 29 40.8**	**-1.1**
	3.4nm,0.5s						
DGS				Lg	Lg	08 30 14.1	
	3.0nm,0.5s						
KUU	**Kurty**	**2.55**	**318**	*e*P	**Pb**	**08 29 41.5**	**+1.2**
	3.2nm,0.5s						
KUU				*e*S	**Sg**	**08 30 15.8**	**-0.5**
	14nm,0.5s						
KUU	**Kurty**	**2.55**	**318**	Pg	**Pb**	**08 29 41.5**	**+1.2**
	3.2nm,0.5s						
KUU				Lg	Lg	08 30 15.8	
	14nm,0.5s						
KRBS	**Karabastau**	**2.78**	**308**	*e*P	**Pg**	**08 29 46.1**	**-1.6**
	0.8nm,0.3s						
KRBS				*e*S	**Sg**	**08 30 23.1**	**-0.6**
	7.6nm,0.3s						
KRBS	**Karabastau**	**2.78**	**308**	Pg	**Pg**	**08 29 46.1**	**-1.6**
	0.8nm,0.3s						
KRBS				Lg	Lg	08 30 23.1	
	7.6nm,0.3s						
AAK	**Ala-Archa**	**3.17**	**283**	⇑Lg	Lg	08 30 36.0	
	1.4nm,0.5s						
KAPS	**Kapalarasan**	**3.31**	**8**	*e*P	**Pb**	**08 29 53.2**	**+0.1**
	1.5nm,0.4s						
KAPS				*e*S	**Sb**	**08 30 35.5**	**+2.0**
	1.3nm,0.2s						
KAPS	**Kapalarasan**	**3.31**	**8**	Pg	**Pb**	**08 29 53.3**	**+0.1**
	1.5nm,0.4s						
KAPS				Lg	Lg	08 30 35.5	
	1.3nm,0.2s						

ZUR 02 08:31:29.6, 46°.91N×9°.23E, h6^{km}±3^{km}, MLh0.8/7, 4C, Error ellipse: s-maj=7.2km s-min=1.0km az=270.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANIX	**Pigniu (Panix)**	**0.12**	**223**	⇑Pg	Pg	08 31 32.5	+0.3
PANIX				⇑Pg	Pg	08 31 32.5	+0.3
	SNR=0.4						
PANIX				Sg	Sg	08 31 34.5	+0.4
SLTM2	**Linthal, Matt**	**0.16**	**273**	Sg	Sg	08 31 35.5	+0.5
LLS	**Linth-Limmern**	**0.17**	**246**	⇑Pg	Pg	08 31 33.2	+0.1
LLS				⇑Pg	Pg	08 31 33.2	+0.1
	SNR=0.8						
LLS				Sg	Sg	08 31 35.8	+0.4
PLONS	**Plons/SG**	**0.17**	**37**	Pg	Pg	08 31 33.3	+0.3
PLONS				Pg	Pg	08 31 33.3	+0.3
	SNR=0.5						
PLONS				Sg	Sg	08 31 35.7	+0.3

BGR ***02*** *08:31:31.9±9.4, 39°.68N×15°.16E, h10^{km}, Ms3.2, Error ellipse: s-maj=231.3km s-min=44.5km az=166.0*

ROM ***02*** *08:31:32.4±0.2, 39°.869N±0°.008×15°.52E±0°.02, h296^{km}±1^{km}, ML3.9/2, Error ellipse: s-maj=1.4km s-min=0.8km az=78.0*

LDG ***02*** *08:31:33.6, 39°.86N×15°.34E, h291^{km}*

IDC ***02*** *08:31:35.0±0.6, 39°.97N×15°.38E, h283^{km}±7^{km}, mb3.4/16, mb1 3.6/28, mb1mx3.4/64, mbtmp4.1/28, Error ellipse: s-maj=11.7km s-min=9.1km az=118.0*

NEIC ***02*** *08:31:34.3±3.0, 39°.86N±0°.07×15°.51E±0°.09, h282^{km}±7^{km}, mb4.2/8, ML3.9(ROM), Error ellipse: s-maj=10.3km s-min=9.6km az=151.0*

MOS ***02*** *08:31:34.2±1.0, 39°.93N×15°.39E, h290^{km}, mb4.3/5, Error ellipse: s-maj=9.2km s-min=4.6km az=83.8*

PDG ***02*** *08:31:36.5±2.5, 40°.20N×15°.30E, h0^{km}±11^{km}, ML3.8/12, Error ellipse: s-maj=4.2km s-min=4.5km az=0.0*

PRU ***02*** *08:31:38.2±0.0, 40°.47N×15°.71E, h200^{km}, M4.2*

ISC 02 08:31:34.5±0.5**, 39°.93N**±0°.04×**15°.48E**±0°.04**, h285**^{km}±4^{km}**, n422, σ1^{s}30**/465**, mb3.9**/25**, 42C-41D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGR	**Morigerati**	**0.21**	**15**	⇓*i*P	**Pn**	**08 32 11.2**	**+0.5**
MGR				S	**S**	**08 32 39.2**	**-0.4**
MGR				AML	AML		
	comp=E,1128µm,0.3s						
MGR				AML	AML		
	comp=N,1215µm,0.4s						
MGR				AML	AML		
	comp=E,1076µm,0.8s						
MGR				AML	AML		
	comp=N,1197µm,0.4s						
MGR				AML	AML		
	comp=E,1130µm,0.3s						
MGR				AML	AML		
	comp=N,1210µm,0.4s						
MGR				AML	AML		
	comp=E,1074µm,0.8s						
MGR				AML	AML		
	comp=N,1202µm,0.4s						
SIRI	**Monte Sirino -**	**0.39**	**50**	⇓P	**Pn**	**08 32 11.4**	**+0.2**
SIRI				AML	AML		
	comp=E,876µm,0.3s						
SIRI				AML	AML		
	comp=E,885µm,0.2s						
SIRI				AML	AML		
	comp=E,873µm,0.3s						
SIRI				AML	AML		
	comp=N,782µm,0.3s						
SIRI				AML	AML		
	comp=N,781µm,0.3s						
SIRI				AML	AML		
	comp=N,759µm,0.3s						
SIRI				AML	AML		
	comp=E,872µm,0.3s						
SIRI				AML	AML		
	comp=E,884µm,0.2s						
MTSN	**Montesano sull**	**0.39**	**32**	⇓P	**Pn**	**08 32 11.3**	**+0.1**
MTSN				AML	AML		
	comp=N,802µm,0.9s						
MTSN				AML	AML		
	comp=E,718µm,0.3s						
MTSN				AML	AML		
	comp=E,718µm,0.3s						
CMPR	**Campora**	**0.41**	**341**	⇓*i*P	**Pn**	**08 32 11.6**	**+0.4**
CMPR				S	**S**	**08 32 39.8**	**-0.5**
CMPR				AML	AML		
	comp=E,365µm,0.8s						
CMPR				AML	AML		
	comp=N,415µm,1.1s						
CMPR				AML	AML		
	comp=E,364µm,0.8s						
AG51	**Grumento Nova**	**0.46**	**39**	P	**Pn**	**08 32 12.2**	**+0.9**
MCEL	**Monticello**	**0.46**	**32**	P	**Pn**	**08 32 12.3**	**+1.0**
MCEL				S	**S**	**08 32 41.5**	**+1.0**
MCEL				AML	AML		
	comp=N,1285µm,0.7s						
MCEL				AML	AML		
	comp=E,1605µm,0.5s						
MCEL				AML	AML		
	comp=N,1315µm,0.7s						
MCEL				AML	AML		
	comp=E,1605µm,0.5s						
MCEL				AML	AML		
	comp=N,1289µm,0.7s						
SLCN	**Sala Consilina**	**0.47**	**14**	⇓P	**Pn**	**08 32 11.9**	**+0.5**
SLCN				AML	AML		
	comp=N,1152µm,0.3s						
SLCN				AML	AML		
	comp=N,1153µm,0.3s						
SLCN				AML	AML		
	comp=E,2035µm,0.4s						
T0702	**Acquaformosa (**	**0.51**	**114**	⇓*i*P	**Pn**	**08 32 11.4**	**-0.1**
T0702				S	**S**	**08 32 40.5**	**-0.4**
SCHR	**S. Chirico Rap**	**0.53**	**60**	⇓*i*P	**Pn**	**08 32 12.0**	**+0.5**
SCHR				S	**S**	**08 32 39.8**	**-1.1**
SCHR				AML	AML		
	comp=E,480µm,0.5s						
SCHR				AML	AML		
	comp=N,488µm,0.6s						
CET2	**Cetraro**	**0.54**	**138**	⇓*i*P	**Pn**	**08 32 11.4**	**-0.2**
CET2				AML	AML		
	comp=N,2800µm,0.7s						
CET2				AML	AML		
	comp=E,2030µm,0.6s						
CET2				AML	AML		
	comp=N,2795µm,0.7s						
CDRU	**Civita di Ruta**	**0.57**	**346**	⇓*i*P	**Pn**	**08 32 12.1**	**+0.5**
CDRU				S	**S**	**08 32 40.8**	**-0.3**
CDRU				AML	AML		
	comp=N,258µm,1.0s						
CDRU				AML	AML		
	comp=E,392µm,0.4s						
CDRU				AML	AML		
	comp=E,391µm,0.4s						
SALB	**San Lorenzo Be**	**0.67**	**94**	⇓P	**Pn**	**08 32 12.2**	**+0.1**
SALB				AML	AML		
	comp=N,908µm,1.5s						
SALB				AML	AML		
	comp=E,1230µm,1.1s						
SALB				AML	AML		
	comp=N,908µm,1.5s						
SALB				AML	AML		
	comp=N,898µm,1.5s						
SALB				AML	AML		
	comp=E,1155µm,0.5s						
TDS	**Terranova Siba**	**0.71**	**112**	⇓P	**Pn**	**08 32 12.9**	**+0.9**
TDS				S	**S**	**08 32 41.9**	**+0.1**
TDS				AML	AML		
	comp=N,418µm,1.1s						
TDS				AML	AML		
	comp=E,364µm,0.5s						
ORI	**Oriolo Calabro**	**0.76**	**80**	⇓P	**Pn**	**08 32 12.8**	**+0.6**
ORI				AML	AML		
	comp=E,2560µm,0.4s						
ORI				AML	AML		
	comp=N,3220µm,0.3s						
MRLC	**Muro Lucano**	**0.82**	**0**	⇓*i*P	**Pn**	**08 32 13.1**	**+0.7**
MRLC				S	**S**	**08 32 41.9**	**-0.7**
MRLC				AML	AML		
	comp=E,244µm,0.5s						
MRLC				AML	AML		
	comp=N,272µm,0.9s						
MRLC				AML	AML		
	comp=E,244µm,0.5s						
CRAC	**Craco**	**0.85**	**59**	⇓*i*P	**Pn**	**08 32 12.8**	**+0.3**
CRAC				AML	AML		
	comp=E,762µm,1.5s						
CRAC				AML	AML		
	comp=N,598µm,0.3s						
CELI	**Celico**	**0.95**	**123**	⇓*i*P	**Pn**	**08 32 13.9**	**+0.7**
CELI				S	**S**	**08 32 43.9**	**0.0**
CELI				AML	AML		
	comp=E,3960µm,0.5s						
CELI				AML	AML		
	comp=E,3965µm,0.5s						
CELI				AML	AML		
	comp=N,4845µm,1.3s						
MIGL	**Miglionico**	**0.99**	**47**	P	**Pn**	**08 32 13.0**	**-0.1**
SNAL	**S. Angelo Dei**	**1.01**	**348**	P	**Pn**	**08 32 14.1**	**+0.8**
SNAL				AML	AML		
	comp=E,394µm,1.6s						
SNAL				AML	AML		

	comp=N,569µm,1.1s						
SNAL				AML	AML		
	comp=N,568µm,1.0s						
SNAL				AML	AML		
	comp=E,366µm,1.6s						
PALZ	**Palazzo San Ge**	**1.07**	**20**	P	**Pn**	**08 32 13.7**	**+0.1**
PALZ				AML	AML		
	comp=N,700µm,1.6s						
PALZ				AML	AML		
	comp=E,693µm,1.6s						
PIPA	**Pietrapaola**	**1.12**	**113**	⇓*i*P	**Pn**	**08 32 14.2**	**+0.3**
PIPA				AML	AML		
	comp=N,1645µm,0.2s						
PIPA				AML	AML		
	comp=E,1815µm,0.2s						
IST3	**Stromboli F**	**1.15**	**190**	⇓*i*P	**Pn**	**08 32 14.2**	**+0.1**
IST3				AML	AML		
	comp=N,1105µm,0.6s						
IST3				AML	AML		
	comp=E,775µm,0.8s						
MATE	**Matera**	**1.18**	**52**	⇓*i*P	**Pn**	**08 32 14.1**	**0.0**
MATE				S	**S**	**08 32 44.3**	**-1.2**
MATE				AML	AML		
	comp=N,896µm,1.1s						
MATE				AML	AML		
	comp=N,896µm,1.1s						
MATE				AML	AML		
	comp=E,983µm,0.4s						
TIP	**Timpagrande**	**1.24**	**127**	Pn	**Pn**	**08 32 14.9**	**+0.2**
TIP				S	**S**	**08 32 44.4**	**-2.1**
TIP	**Timpagrande**	**1.24**	**127**	⇓*i*P	**Pn**	**08 32 14.8**	**+0.2**
TIP				S	**S**	**08 32 45.0**	**-1.5**
TIP				AML	AML		
	comp=E,726µm,0.6s						
TIP				AML	AML		
	comp=N,859µm,0.7s						
TIP				AML	AML		
	comp=E,861µm,0.3s						
TIP				AML	AML		
	comp=E,1225µm,0.3s						
TIP				AML	AML		
	comp=N,1226µm,0.7s						
TIP				AML	AML		
	comp=E,1455µm,0.3s						
TIP				AML	AML		
	comp=N,976µm,0.7s						
MRVN	**Minervino Murg**	**1.25**	**26**	P	**Pn**	**08 32 14.7**	**+0.1**
MRVN				S	**S**	**08 32 45.2**	**-1.2**
MRVN				AML	AML		
	comp=E,618µm,1.4s						
MRVN				AML	AML		
	comp=N,235µm,1.6s						
MRVN				AML	AML		
	comp=E,619µm,1.4s						
MRVN				AML	AML		
	comp=N,234µm,1.6s						
SERS	**Sersale**	**1.29**	**133**	⇓*i*P	**Pn**	**08 32 15.1**	**+0.1**
SERS				S	**S**	**08 32 45.4**	**-1.8**
SERS				AML	AML		
	comp=E,2270µm,0.2s						
SERS				AML	AML		
	comp=N,1705µm,1.5s						
SERS				AML	AML		
	comp=E,1810µm,0.4s						
SERS				AML	AML		
	comp=N,2295µm,0.4s						
SERS				AML	AML		
	comp=E,2275µm,0.2s						
AMUR	**Altamura**	**1.30**	**41**	⇓*i*P	**Pn**	**08 32 15.2**	**+0.4**
AMUR				S	**S**	**08 32 45.6**	**-1.3**
AMUR				AML	AML		
	comp=E,974µm,0.7s						
AMUR				AML	AML		
	comp=N,452µm,0.8s						
PAOL	**Paolisi**	**1.30**	**328**	Pn	**Pn**	**08 32 15.5**	**+0.6**
PAOL				S	**S**	**08 32 47.1**	**+0.1**
GRI	**Girifalco**	**1.33**	**146**	P	**Pn**	**08 32 14.9**	**-0.2**
GRI				S	**S**	**08 32 45.7**	**-1.7**
GRI				AML	AML		
	comp=E,4275µm,0.4s						
GRI				AML	AML		
	comp=N,3905µm,0.3s						
LADO	**San Nicola del**	**1.33**	**119**	⇓*i*P	**Pn**	**08 32 15.2**	**+0.1**
LADO				AML	AML		
	comp=E,172µm,0.4s						
LADO				AML	AML		
	comp=N,139µm,0.2s						
JOPP	**Joppolo**	**1.36**	**167**	P	**Pn**	**08 32 14.4**	**-1.0**
JOPP				S	**S**	**08 32 45.1**	**-2.7**
JOPP				AML	AML		
	comp=E,3990µm,0.4s						
JOPP				AML	AML		
	comp=N,3895µm,0.3s						
NOCI	**Noci**	**1.48**	**54**	⇓P	**Pn**	**08 32 16.5**	**+0.5**
NOCI				S	**S**	**08 32 47.9**	**-1.1**
NOCI				AML	AML		
	comp=E,892µm,0.9s						
NOCI				AML	AML		
	comp=N,1230µm,0.2s						
IFIL	**Filicudi I Eol**	**1.54**	**208**	⇓*i*P	**Pn**	**08 32 16.9**	**+0.4**
IFIL				AML	AML		
	comp=E,1510µm,0.4s						
IFIL				AML	AML		
	comp=N,460µm,1.6s						
LLI	**Lipari**	**1.54**	**196**	P	**Pn**	**08 32 16.9**	**+0.3**
VPL	**Vulcano Piano**	**1.60**	**194**	P	**Pn**	**08 32 17.4**	**+0.5**
VPL				AML	AML		
	comp=E,1910µm,1.4s						
VPL				AML	AML		
	comp=N,1955µm,0.7s						
IACL	**Alicudi**	**1.65**	**212**	P	**Pn**	**08 32 17.2**	**-0.1**
PLAC	**Placanica**	**1.66**	**153**	P	**Pn**	**08 32 16.7**	**-0.7**
PLAC				S	**S**	**08 32 48.9**	**-2.5**
PLAC				AML	AML		
	comp=E,4605µm,1.5s						
PLAC				AML	AML		
	comp=N,3430µm,0.3s						
PLAC				AML	AML		
	comp=E,3550µm,0.3s						
PLAC				AML	AML		
	comp=N,4725µm,1.5s						
MSRU	**Castanea**	**1.67**	**179**	P	**Pn**	**08 32 16.6**	**-0.8**
SGG	**Gregorio Mates**	**1.68**	**330**	⇑*i*P	**Pn**	**08 32 18.5**	**+1.1**
SGG				S	**S**	**08 32 52.1**	**+0.5**
SGG				AML	AML		
	comp=E,288µm,1.5s						
SGG				AML	AML		
	comp=N,289µm,0.4s						
CEL	**Celeste**	**1.70**	**169**		**Pn**	**08 32 16.3**	**-1.4**
CEL				S	**S**	**08 32 48.5**	**-3.6**
CEL	**Celeste**	**1.70**	**169**	P	**Pn**	**08 32 16.5**	**-1.3**
CEL				AML	AML		
	comp=E,1320µm,0.6s						
CEL				AML	AML		
	comp=N,1200µm,1.4s						
CEL				AML	AML		
	comp=E,1620µm,0.6s						
CEL				AML	AML		
	comp=N,1360µm,1.0s						
CEL				AML	AML		
	comp=E,1445µm,1.6s						
CEL				AML	AML		
	comp=E,1740µm,1.6s						
CEL				AML	AML		
	comp=N,1495µm,1.4s						
CEL				AML	AML		
	comp=N,1205µm,1.4s						
MSCL	**Scilla**	**1.71**	**172**	P	**Pn**	**08 32 16.5**	**-1.3**
MSCL				AML	AML		
	comp=E,1795µm,1.1s						
MSCL				AML	AML		
	comp=N,2655µm,0.7s						
MSCL				AML	AML		
	comp=E,2470µm,0.9s						
MSCL				AML	AML		
	comp=N,2670µm,0.7s						
BSSO	**Busso**	**1.75**	**338**	P	**Pn**	**08 32 19.0**	**+1.1**
BSSO				AML	AML		
	comp=E,220µm,1.6s						
BSSO				AML	AML		
	comp=N,72µm,1.2s						
BSSO				AML	AML		
	comp=N,177µm,1.6s						
BSSO				AML	AML		
	comp=E,84µm,1.6s						
CIGN	**Sant’Elia a Pi**	**1.77**	**346**	P	**Pn**	**08 32 18.7**	**+0.7**
GMB	**Gambarie**	**1.78**	**171**	P	**Pn**	**08 32 17.8**	**-0.6**
GMB				S	**S**	**08 32 50.5**	**-2.9**
GMB				AML	AML		
	comp=N,5980µm,0.9s						
GMB				AML	AML		
	comp=E,8500µm,0.5s						
MPNC	**Port Mandanici**	**1.79**	**183**	P	**Pn**	**08 32 17.5**	**-0.9**
MPNC				S	**S**	**08 32 50.7**	**-2.5**
MPNC				AML	AML		
	comp=N,2460µm,0.9s						
MPNC				AML	AML		
	comp=E,1910µm,0.6s						
SGRT	**San Giovanni R**	**1.83**	**6**	Pn	**Pn**	**08 32 18.8**	**+0.2**
MCSR	**Castroreale**	**1.88**	**186**	P	**Pn**	**08 32 18.7**	**-0.4**
MCSR				AML	AML		
	comp=E,678µm,0.3s						
MCSR				AML	AML		
	comp=N,879µm,0.2s						
MCSR				AML	AML		
	comp=N,1580µm,0.9s						
MCSR				AML	AML		
	comp=E,1375µm,1.0s						
SOI	**Samo**	**1.91**	**166**	P	**Pn**	**08 32 18.3**	**-1.0**
SOI				AML	AML		
	comp=E,199µm,1.6s						
SOI				AML	AML		
	comp=N,168µm,0.7s						
SOI				AML	AML		
	comp=E,843µm,0.5s						
SOI				AML	AML		
	comp=N,736µm,1.2s						
NOV	**Novara**	**1.92**	**188**	⇓P	**Pn**	**08 32 19.6**	**+0.1**
NOV				AML	AML		
	comp=N,1745µm,0.8s						
NOV				AML	AML		
	comp=E,1256µm,0.5s						
MESG	**Mesagne**	**1.93**	**69**	⇓P	**Pn**	**08 32 19.9**	**+0.7**
MESG				AML	AML		
	comp=N,1070µm,0.3s						
MESG				AML	AML		
	comp=E,1650µm,0.8s						
MTTG	**Motta San Giov**	**1.94**	**175**	P	**Pn**	**08 32 18.8**	**-0.7**
MIDA	**Miranda**	**1.94**	**332**	P	**Pn**	**08 32 20.5**	**+1.0**
MIDA				AML	AML		
	comp=E,372µm,0.7s						
MIDA				AML	AML		
	comp=N,304µm,0.3s						
MIDA				AML	AML		
	comp=E,368µm,0.7s						
MIDA				AML	AML		
	comp=N,318µm,0.4s						
MUCR	**Ucria**	**1.95**	**194**	P	**Pn**	**08 32 19.5**	**-0.2**
MUCR				AML	AML		
	comp=E,642µm,0.6s						
MUCR				AML	AML		
	comp=N,530µm,0.4s						
AIO	**Antillo**	**1.97**	**186**	P	**Pn**	**08 32 19.8**	**0.0**
CERA	**Filignano**	**2.00**	**327**	⇑*i*P	**Pn**	**08 32 20.8**	**+0.9**
CERA				AML	AML		
	comp=E,274µm,1.1s						
CERA				AML	AML		
	comp=N,341µm,0.9s						
MPAZ	**Palizzi**	**2.02**	**168**	P	**Pn**	**08 32 19.4**	**-0.8**
MPAZ				AML	AML		
	comp=N,2020µm,0.3s						
MPAZ				AML	AML		
	comp=E,1275µm,0.3s						
RNI2	**Rionero Sannit**	**2.04**	**331**	P	**Pn**	**08 32 21.9**	**+1.7**
RNI2				S	**S**	**08 32 58.0**	**+1.4**
RNI2				AML	AML		
	comp=N,376µm,0.6s						
RNI2				AML	AML		
	comp=E,366µm,0.5s						
RNI2				AML	AML		
	comp=N,396µm,0.6s						
RNI2				AML	AML		
	comp=E,366µm,0.5s						
EPZF	**Pizzo Felice**	**2.16**	**193**	P	**Pn**	**08 32 22.4**	**+0.9**
POFI	**Posta Fibreno**	**2.23**	**324**	⇑*i*P	**Pn**	**08 32 23.0**	**+1.1**
POFI				S	**S**	**08 33 00.6**	**+1.0**
POFI				AML	AML		
	comp=E,191µm,0.9s						
POFI				AML	AML		
	comp=N,228µm,0.6s						
SCTE	**Santa Cesarea**	**2.30**	**86**	Pn	**Pn**	**08 32 23.1**	**+0.6**
SCTE	**Santa Cesarea**	**2.30**	**86**	⇓P	**Pn**	**08 32 23.2**	**+0.8**
SCTE				AML	AML		
	comp=N,1520µm,1.0s						
SCTE				AML	AML		
	comp=E,1515µm,0.7s						
GIUL	**Giuliano Di Ro**	**2.34**	**315**	⇑*i*P	**Pn**	**08 32 23.6**	**+0.7**
GIUL				AML	AML		
	comp=N,85µm,0.8s						
GIUL				AML	AML		
	comp=E,76µm,1.3s						
INTR	**Introdacqua**	**2.40**	**331**	Pn	**Pn**	**08 32 23.6**	**+0.3**
INTR	**Introdacqua**	**2.40**	**331**	⇑*i*P	**Pn**	**08 32 24.5**	**+1.1**
INTR				S	**S**	**08 33 03.4**	**+1.1**
INTR				AML	AML		
	comp=E,340µm,1.0s						
INTR				AML	AML		
	comp=N,425µm,0.9s						
MPG	**Monte Pellegri**	**2.42**	**224**	P	**Pn**	**08 32 24.4**	**+0.7**
LATB	**Latina**	**2.47**	**310**	⇑*i*P	**Pn**	**08 32 24.5**	**+0.6**
ALJA	**Alia**	**2.56**	**212**	AML	AML		
	comp=N,340µm,0.6s						
ALJA				AML	AML		
	comp=E,295µm,1.6s						
VAE	**Valguarnera**	**2.59**	**199**	P	**Pn**	**08 32 26.2**	**+0.9**
	comp=E,7.8nm,0.3s,baz=182,slow=20,SNR=12						
PTQR	**Pietraquaria**	**2.62**	**324**	⇑*i*P	**Pn**	**08 32 26.9**	**+1.5**
PTQR				AML	AML		
	comp=E,196µm,0.8s						
PTQR				AML	AML		
	comp=N,227µm,0.5s						
HLNI	**Lentini**	**2.62**	**191**	P	**Pn**	**08 32 25.1**	**-0.4**
HLNI				AML	AML		
	comp=E,356µm,0.8s						
HLNI				AML	AML		
	comp=N,252µm,1.3s						
T0110	**Collepietro**	**2.63**	**331**	P	**Pn**	**08 32 26.6**	**+1.0**
T0110				AML	AML		
	comp=N,280µm,1.4s						
T0110				AML	AML		
	comp=E,316µm,1.5s						
CORL	**Corleone**	**2.65**	**221**		**Pn**	**08 32 25.9**	**+0.1**
HAGA	**Augusta**	**2.66**	**186**	P	**Pn**	**08 32 25.1**	**-0.8**
HAGA				AML	AML		
	comp=E,337µm,0.7s						
HAGA				AML	AML		
	comp=N,386µm,1.1s						
HCRL	**Carlentini**	**2.67**	**188**	⇓P	**Pn**	**08 32 25.8**	**-0.2**
HCRL				AML	AML		
	comp=N,532µm,1.1s						
HCRL				AML	AML		
	comp=E,497µm,1.0s						
FAGN	**Fagnano**	**2.74**	**329**	P	**Pn**	**08 32 27.9**	**+1.4**
FAGN				AML	AML		
	comp=N,577µm,0.4s						
FAGN				AML	AML		
	comp=E,498µm,0.6s						
CERT	**Cerreto**	**2.76**	**318**	⇑*i*P	**Pn**	**08 32 27.8**	**+0.9**
CERT				AML	AML		
	comp=E,216µm,0.6s						
CERT				AML	AML		
	comp=N,173µm,0.5s						
RAFF	**Raffo Rosso**	**2.84**	**198**		**Pn**	**08 32 28.0**	**+0.3**
RAFF	**Raffo Rosso**	**2.84**	**198**	P	**Pn**	**08 32 27.8**	**0.0**
RAFF				AML	AML		
	comp=E,262µm,0.7s						
RAFF				AML	AML		
	comp=N,293µm,1.5s						
MEU	**Monte Lauro**	**2.86**	**189**	⇑P	**Pn**	**08 32 27.6**	**-0.4**
MEU				AML	AML		
	comp=N,504µm,0.6s						
MEU				AML	AML		
	comp=E,461µm,1.6s						
AQU	**L'Aquila**	**2.88**	**328**	P	**Pn**	**08 32 30.0**	**+2.0**
AQU	**L'Aquila**	**2.88**	**328**	⇑*i*Pn	**Pn**	**08 32 29.3**	**+1.3**
AQU	**L'Aquila**	**2.88**	**328**	Pn	**Pn**	**08 32 30.0**	**+2.0**
FIAM	**Fiamignano**	**2.94**	**323**	⇑*i*P	**Pn**	**08 32 30.3**	**+1.7**
FIAM				AML	AML		
	comp=E,414µm,0.6s						
FIAM				AML	AML		
	comp=N,366µm,0.5s						
CLTB	**Caltabellotta**	**2.94**	**218**	Pn	**Pn**	**08 32 29.0**	**+0.2**
HAVL	**Avola**	**2.98**	**185**	P	**Pn**	**08 32 28.3**	**-0.8**
HAVL				AML	AML		
	comp=E,400µm,1.3s						
HAVL				AML	AML		
	comp=N,493µm,0.3s						
CLTA	**Licata**	**3.02**	**204**	⇑P	**Pn**	**08 32 29.8**	**+0.4**
CAMP	**Campotosto**	**3.03**	**330**	⇑P	**Pn**	**08 32 30.7**	**+1.1**
CAMP				AML	AML		
	comp=E,138µm,0.5s						
CAMP				AML	AML		
	comp=N,134µm,0.5s						
TERO	**Teramo**	**3.04**	**333**	⇑P	**Pn**	**08 32 30.2**	**+0.7**
TERO				AML	AML		
	comp=E,50µm,1.6s						
TERO				AML	AML		
	comp=N,60µm,0.5s						
RM33	**Pellescritta (**	**3.09**	**327**	P	**Pn**	**08 32 31.2**	**+1.1**
RM33				AML	AML		
	comp=N,151µm,1.3s						
RM33				AML	AML		
	comp=E,210µm,1.5s						
LNSS	**Leonessa**	**3.24**	**326**	⇑P	**Pn**	**08 32 32.8**	**+1.1**
LNSS				AML	AML		
	comp=E,168µm,1.6s						
LNSS				AML	AML		
	comp=N,196µm,1.0s						
HVAR	**Hvar**	**3.32**	**12**	P	**Pn**	**08 32 33.0**	**+0.6**
KEK	**Kerkira**	**3.33**	**92**	P	**Pn**	**08 32 33.6**	**+1.0**
KEK	**Kerkira**	**3.33**	**92**	AML	AML		
	comp=N,57µm,0.6s						
KEK				AML	AML		
	comp=E,71µm,1.4s						
STON	**Ston**	**3.38**	**29**	P	**Pn**	**08 32 34.0**	**+1.0**
STON	**Ston**	**3.38**	**29**	*e*Pn	**Pn**	**08 32 34.1**	**+1.1**
HCY	**Herceg Novi**	**3.39**	**41**	*e*Pn	**Pn**	**08 32 34.1**	**+1.0**
HCY	**Herceg Novi**	**3.39**	**41**	⇓*i*Pn	**Pn**	**08 32 33.4**	**+0.3**
HCY				*i* Sn	**S**	**08 33 17.9**	**-2.1**
NRCA	**Norcia**	**3.40**	**329**		**Pn**	**08 32 34.4**	**+1.1**
NRCA	**Norcia**	**3.40**	**329**	⇑P	**Pn**	**08 32 34.6**	**+1.2**
NRCA				AML	AML		
	comp=N,112µm,1.4s						
NRCA				AML	AML		
	comp=E,144µm,1.4s						
CESX	**Cesi**	**3.45**	**322**	⇑P	**Pn**	**08 32 35.2**	**+1.3**
CESX				AML	AML		
	comp=E,184µm,0.4s						
CESX				AML	AML		
	comp=N,188µm,0.4s						
SRN	**Sarande**	**3.48**	**89**	P	**Pn**	**08 32 34.9**	**+0.8**
ULC	**Ulcinj**	**3.50**	**53**	⇑*i*Pn	**Pn**	**08 32 34.7**	**+0.4**
ULC				*i* Sn	**S**	**08 33 20.3**	**-1.9**
BUM	**Brajici-Budva**	**3.50**	**46**	*e*Pn	**Pn**	**08 32 34.6**	**+0.2**
BUM				*i* Sn	**S**	**08 33 20.1**	**-2.1**
TREB	**Trebinje**	**3.52**	**37**	⇑*i*Pn	**Pn**	**08 32 35.6**	**+1.1**
FDMO	**Fiordimonte**	**3.58**	**331**	P	**Pn**	**08 32 36.1**	**+0.8**
FDMO				AML	AML		
	comp=E,110µm,0.3s						
FDMO				AML	AML		
	comp=N,96µm,0.8s						
CSP1	**Cessapalombo**	**3.59**	**332**	⇑P	**Pn**	**08 32 36.0**	**+0.6**
CSP1				AML	AML		
	comp=E,200µm,0.5s						
CSP1				AML	AML		
	comp=N,215µm,1.3s						
DRME	**Dracevica, Mon**	**3.59**	**50**	⇓*i*Pn	**Pn**	**08 32 36.8**	**+1.5**
TIR	**Tirane**	**3.62**	**66**	P	**Pn**	**08 32 37.4**	**+1.7**
TIR	**Tirane**	**3.62**	**66**	⇓P	**Pn**	**08 32 37.1**	**+1.5**
TIR	**Tirane**	**3.62**	**66**	P	**Pn**	**08 32 37.3**	**+1.7**
TIR	**Tirane**	**3.62**	**66**	Pn	**Pn**	**08 32 37.3**	**+1.7**
CESI	**CESI - Serrava**	**3.63**	**329**	⇑P	**Pn**	**08 32 36.8**	**+1.1**
CESI				AML	AML		
	comp=E,118µm,0.4s						
CESI				AML	AML		
	comp=N,81µm,1.4s						
CEME	**Cevo**	**3.68**	**44**	⇓*i*Pn	**Pn**	**08 32 36.5**	**+0.2**
CEME				*i* Sn	**S**	**08 33 23.6**	**-2.2**
ZIRJ	**Zirje**	**3.72**	**2**	P	**Pn**	**08 32 36.8**	**+0.1**
BRY	**Bratogost**	**3.75**	**37**	*e*Pn	**Pn**	**08 32 38.4**	**+1.2**
BRY	**Bratogost**	**3.75**	**37**	⇑*i*Pn	**Pn**	**08 32 37.4**	**+0.2**
BRY				*i* Sn	**S**	**08 33 25.0**	**-2.4**
PDG	**Podgorica**	**3.79**	**48**	⇓P	**Pn**	**08 32 38.9**	**+1.5**
PDG	**Podgorica**	**3.79**	**48**	⇓*i*Pn	**Pn**	**08 32 38.5**	**+1.1**
PDG	**Podgorica**	**3.79**	**48**	Pn	**Pn**	**08 32 39.1**	**+1.7**
TTG	**Podgorica**	**3.79**	**48**	⇑*i*Pn	**Pn**	**08 32 37.9**	**+0.5**
TTG				*i* Sn	**S**	**08 33 25.8**	**-1.9**
CING	**Cingoli**	**3.84**	**334**	⇑P	**Pn**	**08 32 37.9**	**-0.2**
NKME	**Niksic**	**3.85**	**42**	*e*Pn	**Pn**	**08 32 38.6**	**+0.4**
NKME				*i* Sn	**S**	**08 33 27.1**	**-2.1**
LATE	**Laterza**	**3.85**	**315**		**Pn**	**08 32 39.7**	**+1.5**
NKY	**Niksic**	**3.91**	**41**	⇓*i*Pn	**Pn**	**08 32 39.2**	**+0.3**
NKY				*i* Sn	**S**	**08 33 28.0**	**-2.4**
MGAB	**Montegabbione**	**3.91**	**321**	⇑P	**Pn**	**08 32 40.3**	**+1.5**
MGAB				AML	AML		
	comp=E,230µm,0.4s						
MGAB				AML	AML		
	comp=E,274µm,0.5s						
MGAB				AML	AML		
	comp=N,254µm,0.5s						
MGAB				AML	AML		
	comp=N,184µm,0.5s						
MORI	**Morici**	**3.93**	**2**	P	**Pn**	**08 32 39.2**	**+0.2**
LSK	**Leskovik**	**3.94**	**85**	P	**Pn**	**08 32 40.4**	**+1.2**
MURB	**Monte Urbino**	**4.00**	**327**		**Pn**	**08 32 40.9**	**+1.0**
ARVD	**Arcevia**	**4.04**	**333**	AML	AML		
	comp=E,96µm,0.5s						
ARVD				AML	AML		
	comp=N,85µm,1.1s						
SSFR	**Montelago di S**	**4.04**	**331**	AML	AML		
	comp=N,368µm,0.3s						
SSFR				AML	AML		
	comp=E,191µm,0.6s						
ATFO	**Monte Foce - G**	**4.07**	**329**	AML	AML		
	comp=E,186µm,1.5s						
ATFO				AML	AML		
	comp=N,271µm,0.5s						
DUGI	**Dugi Otok**	**4.07**	**356**	P	**Pn**	**08 32 40.7**	**+0.2**
KIJV	**Kijevo**	**4.13**	**9**	P	**Pn**	**08 32 41.9**	**+0.6**
FRON	**Frontone**	**4.13**	**331**	⇑P	**Pn**	**08 32 42.0**	**+0.7**
FRON				AML	AML		
	comp=E,142µm,0.6s						
FRON				AML	AML		
	comp=N,228µm,0.7s						
ATVO	**AVT- Monte Val**	**4.14**	**327**	AML	AML		
	comp=N,185µm,0.8s						
ATVO				AML	AML		
	comp=E,214µm,0.7s						
JAN	**Janina**	**4.15**	**92**	P	**Pn**	**08 32 43.3**	**+1.8**
UPM	**Unac-Piva**	**4.16**	**37**	*e*Pn	**Pn**	**08 32 43.6**	**+1.8**
UPM	**Unac-Piva**	**4.16**	**37**	⇑*i*Pn	**Pn**	**08 32 42.0**	**+0.2**
UPM				*i* Sn	**S**	**08 33 33.1**	**-2.5**
TSLK	**Tsoukalades, L**	**4.16**	**104**	P	**Pn**	**08 32 42.7**	**+1.0**
KEF3	**Kipouria, Keph**	**4.16**	**113**	P	**Pn**	**08 32 42.6**	**+0.9**
LKD2	**Lefkada island**	**4.17**	**104**	P	**Pn**	**08 32 42.8**	**+0.9**
KEF4	**Livadi, Kephal**	**4.19**	**112**	P	**Pn**	**08 32 42.8**	**+0.7**
ATPI	**Pietralunga -**	**4.20**	**328**	AML	AML		
	comp=E,135µm,1.4s						
ATPI				AML	AML		
	comp=N,109µm,0.7s						
KEF5	**Kardakata, Kep**	**4.22**	**111**	P	**Pn**	**08 32 43.0**	**+0.6**
OHR	**Ohrid**	**4.22**	**72**	*i* P	**Pn**	**08 32 44.4**	**+2.1**
PIEI	**Pieia**	**4.22**	**329**	AML	AML		
	comp=E,220µm,0.2s						
PIEI				AML	AML		
	comp=N,104µm,0.8s						
EVGI	**Lefkada island**	**4.22**	**106**	P	**Pn**	**08 32 43.3**	**+0.9**
NYDR	**Nydri-Lefkada**	**4.22**	**105**	P	**Pn**	**08 32 43.2**	**+0.8**
NARO	**Abbazia di Nar**	**4.27**	**330**	AML	AML		
	comp=N,150µm,0.7s						
NARO				AML	AML		
	comp=E,151µm,0.5s						
CAFI	**Castiglion Fio**	**4.30**	**323**	AML	AML		
	comp=E,81µm,1.5s						
CAFI				AML	AML		
	comp=N,63µm,0.7s						
PVY	**Plav**	**4.30**	**50**	*e*Pn	**Pn**	**08 32 43.8**	**+0.5**
PVY				*i* Sn	**S**	**08 33 36.2**	**-2.2**
PSDA	**Pessada-Kefalo**	**4.37**	**113**	P	**Pn**	**08 32 44.7**	**+0.6**
IVA	**Berane**	**4.43**	**47**	*e*Pn	**Pn**	**08 32 45.3**	**+0.5**
IVA				*i* Sn	**S**	**08 33 38.9**	**-2.2**
PARC	**Parchiule**	**4.43**	**328**	AML	AML		
	comp=E,108µm,1.5s						
PARC				AML	AML		
	comp=N,86µm,1.0s						
PLE	**Pljevlja**	**4.48**	**40**	⇑*i*Pn	**Pn**	**08 32 45.9**	**+0.5**

PLE				*i* Sn	S	08 33 39.8	-2.4
CASP	Castiglione de	4.50	311	Pn	Pn	08 32 46.5	+1.1
KPRO	Kipourio	4.52	88	P	Pn	08 32 48.1	+2.2
FNA	Florina	4.58	77	P	Pn	08 32 48.0	+1.4
FNA	Florina	4.58	77	P	Pn	08 32 48.3	+1.7
FNA	Florina	4.58	77	Pn	Pn	08 32 48.2	+1.7
UDBI	Udbina	4.60	3	P	Pn	08 32 47.9	+1.2
PDO	Prodromos	4.62	105	P	Pn	08 32 48.3	+1.3
NVLJ	Novalja	4.65	355	P	Pn	08 32 48.2	+1.0
RUDO	Rudo	4.69	37	*e*Pn	Pn	08 32 48.5	+0.8
VSL	Villasalto	4.73	267	Pn	Pn	08 32 48.8	+0.6
SJES	Sjenica	4.73	44	*e*Pn	Pn	08 32 50.4	+2.1
OSSC	Osservatorio P	4.79	320		Pn	08 32 50.4	+1.6
HAPS	Han Pijesak,Bl	4.89	31	⇓*i*Pn	Pn	08 32 50.4	+0.3
BBLS	Lazići	4.90	35	⇑*i*Pn	Pn	08 32 51.5	+1.3
SKO	Skopje	4.95	64	*i* P	Pn	08 32 52.2	+1.5
BLY	Banja Luka	4.97	14	⇑*i*Pn	Pn	08 32 52.0	+1.0
BLY	Banja Luka	4.97	14	AML	AML		
	comp=N,162µm,0.6s						
BLY				AML	AML		
	comp=N,169µm,0.6s						
BLY				AML	AML		
	comp=E,128µm,0.8s						
BLY				AML	AML		
	comp=E,125µm,0.4s						
EVR	Evrytania	5.00	100	P	Pn	08 32 53.9	+2.4
MAKR	Makrakomi, Fth	5.23	98	P	Pn	08 32 56.8	+2.7
DRO	Drossia	5.24	110	P	Pn	08 32 56.4	+2.1
DIVS	Divibare	5.35	37	⇑*i*Pn	Pn	08 32 56.5	+1.0
DIVS	Divibare	5.35	37	Pn	Pn	08 32 55.6	+0.1
TRIZ	Trizonia	5.36	105	P	Pn	08 32 57.8	+2.2
AGG	Agios Georgios	5.38	98	P	Pn	08 32 58.1	+2.2
AGG	Agios Georgios	5.38	98	Pn	Pn	08 32 58.0	+2.2
LIT	Litokhoron	5.38	86	P	Pn	08 32 56.7	+0.8
LIT	Litokhoron	5.38	86	P	Pn	08 32 56.0	0.0
LIT	Litokhoron	5.38	86		Pn	08 32 56.0	0.0
KALE	Kalithea	5.40	104	P	Pn	08 32 58.8	+2.6
AMT	Artemida-Makis	5.43	114	P	Pn	08 32 58.0	+1.5
RIY	Rijeka	5.44	353	P	Pn	08 32 57.3	+0.8
RIY	Rijeka	5.44	353	⇑*i*Pn	Pn	08 32 57.3	+0.8
TEKS	Tekeris	5.50	32	*e*Pn	Pn	08 32 58.4	+1.1
PGF	Pioggiola	5.54	300	*e*Pn	Pn	08 32 57.0	-0.9
PGF				*e*Sn	S	08 34 00.4	-4.4
	comp=E,1.1nm,0.3s						
VAY	Valandovo	5.57	73	*i* P	Pn	08 32 59.5	+1.4
BOJS	Bojanci	5.57	358	*i* P	Pn	08 32 59.5	+1.4
GBRS	Gornja Briga	5.62	355	*i* P	Pn	08 32 60.0	+1.3
KNDS	Knezji Dol	5.65	352	*i* P	Pn	08 32 59.9	+0.8
VLC	Villacollemand	5.68	320		Pn	08 32 59.4	0.0
OZLJ	Ozalj	5.68	360	P	Pn	08 33 00.2	+0.9
DSF	Desfina	5.68	103	P	Pn	08 33 01.3	+1.7
AXAR	Agios Charalam	5.68	100	P	Pn	08 33 01.7	+2.1
SKDS	Skadanscina	5.71	350	*i* P	Pn	08 33 00.3	+0.5
ITM	Ithomi	5.75	117	P	Pn	08 33 01.7	+1.3
ITM	Ithomi	5.75	117	Pn	Pn	08 33 00.8	+0.4
KNT	Kendrikon	5.78	75	P	Pn	08 33 02.2	+1.5
CEY	Cerknica	5.85	353	⇑*i*Pn	Pn	08 33 01.9	+0.4
HORT	Hortiatis	5.87	81	P	Pn	08 33 02.8	+1.0
VISS	Visnje	5.89	356	*i* P	Pn	08 33 03.0	+1.1
CRES	Cresnjev	5.89	360	⇑*i*Pn	Pn	08 33 02.1	+0.2
ZAG	Zagreb	5.90	3	*e*Pn	Pn	08 33 02.7	+0.7
TRI	Trieste	5.91	348	P	Pn	08 33 00.9	-1.2
TRI	Trieste	5.91	348	Pn	Pn	08 33 00.9	-1.2
GCIS	Gornji Cirnik	5.93	1	*i* P	Pn	08 33 03.4	+1.0
PTJ	Puntijarka	5.98	3	P	Pn	08 33 03.7	+0.6
TEOL	Teolo	6.11	334		Pn	08 33 03.0	-1.6
FRGS	Fruska Gora	6.12	30	⇑*i*Pn	Pn	08 33 05.1	+0.4
PDKS	Podkum	6.14	357	*i* P	Pn	08 33 05.9	+1.0
LJU	Ljubljana	6.15	354	*i* P	Pn	08 33 06.1	+1.1
LJU	Ljubljana	6.15	354	⇑*i*Pn	Pn	08 33 05.6	+0.6
VOJS	Vojsko	6.21	350	*i* P	Pn	08 33 06.4	+0.5
MSSA	Maissana	6.23	317		Pn	08 33 05.8	-0.4
KALN	Kalnik	6.24	6	P	Pn	08 33 06.5	+0.4
KEST	Kesra	6.42	231	P	Pn	08 33 09.5	+0.9
	comp=E,0.4nm,0.3s,baz=226,slow=1.4,SNR=6.1						
VTS	Vitosha	6.43	63	⇑P	Pn	08 33 09.6	+1.0
OBKA	Obir	6.61	354	*i* P	Pn	08 33 12.1	+1.4
	comp=E,15nm,0.4s,SNR=8.1						
OBKA	Obir	6.61	354	*e*Pn	Pn	08 33 11.7	+1.0
STAL	STALIGIAL	6.64	343		Pn	08 33 10.9	-0.2
MDVR	Moldovita	6.69	42	⇓P	Pn	08 33 13.9	+2.2
CTI	Castel Tesino	6.73	337	P	Pn	08 33 11.4	-0.8
CTI	Castel Tesino	6.73	337	Pn	Pn	08 33 11.4	-0.8
SALO	Salr	6.75	329		Pn	08 33 11.0	-1.4
SOKA	Soboth	6.75	357	*i* P	Pn	08 33 13.3	+0.9
	comp=E,27nm,0.9s,SNR=7.9						
MYKA	Terra Mystica	6.83	349	*i* P	Pn	08 33 14.6	+1.3
	comp=E,9.5nm,0.4s,SNR=6.9						
ZOU	Zoufplan	6.87	345		Pn	08 33 12.5	-1.5
ABTA	Abfaltersbach	7.15	343	*i* P	Pn	08 33 18.3	+1.0
	comp=E,58nm,0.5s,SNR=20						
SBF	Sospel	7.17	306	*e*P	Pn	08 33 17.5	-0.1
SBF				*e*Sn	S	08 34 37.1	-3.9
	comp=E,1.5nm,0.2s						
TIH	Tihany	7.18	13	*e*PN	Pn	08 33 19.1	+1.5
BZS	Buzias	7.25	36	⇑P	Pn	08 33 20.4	+1.8
KBA	Koelnbreinsper	7.31	348	*e*P	Pn	08 33 20.1	+0.7
	comp=E,15nm,0.8s						
KBA	Koelnbreinsper	7.31	348	*e*Pn	Pn	08 33 20.1	+0.7
ARSA	Arzberg	7.32	0	*e*P	Pn	08 33 20.0	+0.7
	comp=E,11nm,0.8s						
ARSA	Arzberg	7.32	0	*e*Pn	Pn	08 33 20.1	+0.7
MPLH	Magyarpolny	7.39	11	*e*PN	Pn	08 33 22.0	+1.8
LMR	La Mourre	7.53	300	*e*P	Pn	08 33 21.7	-0.3
FRF	La Foret Royal	7.53	302	*e*P	Pn	08 33 21.6	-0.4
FRF				*e*Sn	S	08 34 44.8	-4.2
	comp=E,1.3nm,0.4s						
CSKK	Cskako	7.70	14	*e*PN	Pn	08 33 25.7	+1.7
SIRR	Siria	7.78	33	⇓P	Pn	08 33 26.7	+1.7
SOP	Sopron	7.79	5	*e*PN	Pn	08 33 26.5	+1.4
WTTA	Wattenberg	7.84	340	*e*P	Pn	08 33 27.8	+1.9
	comp=E,11nm,0.5s						
WTTA	Wattenberg	7.84	340	*e*Pn	Pn	08 33 26.8	+0.9
FETA	Feichten	7.88	336	*i* P	Pn	08 33 27.0	+0.5
	comp=E,17nm,0.7s,SNR=5.2						
SQTA	Sankt Quirin	7.92	338	*e*P	Pn	08 33 29.1	+2.3
	comp=E,11nm,0.4s						
TUE	Stuetta	7.92	328	Pn	Pn	08 33 26.3	-0.7
WATA	Walderalm	7.92	340	*i* P	Pn	08 33 27.8	+0.8
	comp=E,15nm,0.5s,SNR=7.4						
MOA	Molln	7.96	354	*e*P	Pn	08 33 28.6	+1.2
	comp=E,5.2nm,0.5s						
MOA	Molln	7.96	354	*e*Pn	Pn	08 33 28.5	+1.2
DAVOX	Davos/Dischmat	7.97	331	P	Pn	08 33 28.0	+0.5
	comp=E,3.6nm,0.3s,baz=131,slow=5.5,SNR=37						
DAVOX	Davos/Dischmat	7.97	331	P	Pn	08 33 28.0	+0.5
CONA	Conrad Observa	8.00	2	*e*P	Pn	08 33 29.1	+1.3
	comp=E,14nm,1.1s						
MBDF	Montbardon	8.03	309	*e*P	Pn	08 33 28.7	+0.3
MOTA	Moosalm	8.06	338	*e*P	Pn	08 33 29.7	+1.0
	comp=E,11nm,0.7s						
SRO	Srobarova	8.14	14	*e*P	Pn	08 33 31.5	+2.1
SRO	Srobarova	8.14	14	*e*P	Pn	08 33 31.5	+2.1
BNI	Bardonecchia	8.27	311	P	Pn	08 33 28.6	-2.7
BNI	Bardonecchia	8.27	311	Pn	Pn	08 33 28.6	-2.7
RETA	Reutte	8.29	337	*i* P	Pn	08 33 32.4	+1.0
	comp=E,12nm,0.7s,SNR=5.1						
ZST	Bratislava	8.34	7	*e*P	Pn	08 33 33.4	+1.4
ZST	Bratislava	8.34	7	*e*P	Pn	08 33 33.4	+1.4
APE	Apeiranthos	8.38	107	⇓P	Pn	08 33 31.8	-0.8
APE	Apeiranthos	8.38	107	*i* P	Pn	08 33 34.8	+2.1
DAVA	Damuels	8.40	333	*i* P	Pn	08 33 33.7	+0.9
	comp=E,19nm,0.6s,SNR=6.7						
DAVA	Damuels	8.40	333	*e*Pn	Pn	08 33 33.5	+0.7
LPG	La Plagne	8.50	314	*e*P	Pn	08 33 35.0	+0.8
LPL	La Plagne	8.52	314	*e*P	Pn	08 33 36.6	+2.2
MODS	Modra-Piesok	8.54	8	*e*P	Pn	08 33 34.6	+0.2
MODS	Modra-Piesok	8.54	8	*e*P	Pn	08 33 34.6	+0.2
PSZ	Piszkesteto	8.59	20	⇓P	Pn	08 33 36.4	+1.2
PSZ	Piszkesteto	8.59	20	*e*PN	Pn	08 33 36.3	+1.2
PSZ	Piszkesteto	8.59	20	P	Pn	08 33 35.3	+0.2
PSZ	Piszkesteto	8.59	20	Pn	Pn	08 33 35.3	+0.2
DRGR		8.64	35	⇓P	Pn	08 33 37.2	+1.4
UBR	Ueberruh	8.66	335	*e*Pn	Pn	08 33 36.4	+0.4
ORIF	Oris-en-Rattie	8.67	308	*e*P	Pn	08 33 36.9	+0.7
SMOL	Smolenice	8.69	9	*e*P	Pn	08 33 37.5	+1.2
SMOL	Smolenice	8.69	9	*e*P	Pn	08 33 37.5	+1.2
SENIN	Lac Senin/Sane	8.78	320	Pn	Pn	08 33 36.0	-1.6
IDI	Anoyia	8.79	119	P	Pn	08 33 39.8	+2.0
	comp=E,1.3nm,0.3s,baz=311,slow=15,SNR=6.2						
VYHS	Vyhne	8.89	15	*e*P	Pn	08 33 39.8	+1.0
VYHS	Vyhne	8.89	15	*e*P	Pn	08 33 39.8	+1.0
VOIR		8.94	49	⇑P	Pn	08 33 41.0	+1.6
CJR	Cluj-Napoca	8.99	38	⇑P	Pn	08 33 42.1	+2.0
GEC2	GERESS Array S	9.00	352	Pn	Pn	08 33 39.4	-0.8
GEC2	GERESS Array S	9.00	352	*e*Pn	Pn	08 33 40.4	+0.2
GEC2				*e*L	L	08 58 33.2	
	comp=E,549nm,23.4s						
GERES	GERESS Array B	9.00	352	P	Pn	08 33 40.4	+0.2
	comp=E,1.4nm,0.3s,baz=167,slow=12,SNR=41						
JAVC	Velka Javorina	9.06	9	*e*PN	Pn	08 33 43.1	+2.2
KRUC	Moravsky	9.15	4	*e*PN	Pn	08 33 42.9	+0.9
KHC	Kasperske Hory	9.30	352	*i* P	Pn	08 33 44.3	+0.4
KHC				pmax	pmax		
	comp=Z,65nm,3.4s						
KHC	Kasperske Hory	9.30	352	*e*PN	Pn	08 33 44.2	+0.4
KHC	Kasperske Hory	9.30	352		Pn	08 33 43.8	-0.1
VIVF	Saint-Julien-l	9.39	305	*e*P	Pn	08 33 45.6	+0.6
WET	Wettzell	9.39	349	*e*Pn	Pn	08 33 44.7	-0.3
VRAC	Vranov	9.41	4	P	Pn	08 33 46.5	+1.3
	comp=Z,1.5nm,0.3s,baz=189,slow=12,SNR=20						
VRAC	Vranov	9.41	4	⇑P	Pn	08 33 46.4	+1.3
VRAC	Vranov	9.41	4	*e*PN	Pn	08 33 46.2	+1.0
MLR	Muntele Rosu	9.49	51	P	Pn	08 33 48.6	+2.3
	comp=Z,0.4nm,0.3s,baz=253,slow=6.4,SNR=7.1						
CABF	La Chapelle	9.56	317	*e*P	Pn	08 33 45.7	-1.5
LASF	Ste Croix	9.59	299	*e*P	Pn	08 33 47.8	+0.3
LANS	Liptovska Anna	9.64	16	*e*P	P	08 33 50.6	-2.2
LANS	Liptovska Anna	9.64	16	*e*P	P	08 33 50.6	-2.2
BFO	Black Forest	9.84	331	*e*P	Pn	08 33 51.1	+0.6
BFO	Black Forest	9.84	331	Pn	Pn	08 33 49.6	-0.9
BFO	Black Forest	9.84	331	*e*Pn	Pn	08 33 50.8	+0.3
BFO				*e*L	L	08 54 07.7	
	comp=Z,456nm,36.2s						
MORC	Moravsky Berou	9.95	8	⇑P	Pn	08 33 53.6	+1.7
MORC	Moravsky Berou	9.95	8	*e*PN	Pn	08 33 52.7	+0.8
HINF	Hinteralfeld	10.04	325	*e*P	Pn	08 33 51.7	-1.3
PRU	Pruhonice	10.08	357	*e*P	P	08 33 55.8	-1.7
PRU	Pruhonice	10.08	357	*e*PN	P	08 33 55.8	-1.7
OKC	Ostrava-Krasne	10.08	10	*e*P	P	08 34 00.4	+2.8
KRLC	Kraliky	10.18	5	*e*P	Pn	08 33 55.9	+1.1
KRLC	Kraliky	10.18	5	*e*PN	Pn	08 33 55.9	+1.1
KOLS	Kolonicke sedl	10.22	26	*e*P	P	08 33 58.4	-0.8
KOLS	Kolonicke sedl	10.22	26	*e*P	P	08 33 58.4	-0.8
CDF	Champ du Feu	10.32	328	*e*P	Pn	08 33 56.1	-0.4
HAU	Haudompre	10.41	324	*e*P	Pn	08 33 56.9	-0.7
DPC	Dobruska-Polom	10.43	3	*e*PN	P	08 34 00.4	-1.2
MTLF	Montolieu	10.49	293	*e*P	Pn	08 34 00.2	+1.5
UPC	Upice	10.58	2	*e*P	P	08 34 02.1	-1.1
UPC	Upice	10.58	2	*e*PN	P	08 34 02.1	-1.1
OSTC	Ostas	10.64	3	*e*PN	P	08 34 03.2	-0.6
CHVC	Chvalec	10.66	2	*e*PN	P	08 34 02.8	-1.3
SMF	Signal de Mont	10.81	312	*e*P	Pn	08 34 00.5	-2.0
BRG	Berggiesshubel	10.99	355	*i* P	Pn	08 34 05.9	+1.2
BRG				Amp		08 34 06.5	
	comp=Z,7.7nm,0.5s						
BRG				*i* x	x	08 34 10.4	
BRG				Amp		08 34 11.2	
	comp=Z,19nm,0.9s						
BRG	Berggiesshubel	10.99	355	*i* P	Pn	08 34 05.9	+1.2
BRG				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BRG				pmax	pmax		
	comp=Z,19nm,0.9s						
BRG	Berggiesshubel	10.99	355	*i* P	Pn	08 34 05.9	+1.2
BRG				Amp		08 34 06.5	
	comp=Z,7.7nm,0.5s						
BRG				*i* x	x	08 34 10.4	
BRG				Amp		08 34 11.2	
	comp=Z,19nm,0.9s						
CAF	Calviac	11.10	301	*e*P	P	08 34 07.8	-1.2
SFTF	Sexfontaines	11.16	321	*e*P	Pn	08 34 05.8	-1.0
AVF	Avril sur Loir	11.17	312	*e*P	Pn	08 34 05.3	-1.6
SSF	Saint Saulge	11.23	313	*e*P	Pn	08 34 05.9	-1.8
CLL	Collm	11.51	352	*i* P	P	08 34 12.5	-0.9
	comp=Z,11nm,0.7s						
CLL				*i*		08 34 15.7	
	comp=Z,15nm,1.1s						
TCF	Toulx Ste Croi	11.59	308	*e*P	Pn	08 34 08.9	-3.2
EPF	Esparros	11.77	290	*e*P	P	08 34 16.6	+0.1
HYF	Humbligny	11.84	312	*e*P	Pn	08 34 15.9	+0.7
ETSF	Etsaut	12.40	289	*e*P	Pn	08 34 21.1	-1.0
BAIF	Baives	12.87	326	*e*P	Pn	08 34 27.9	+0.2
SJPF	Ste Jean	12.92	290	*e*P	Pn	08 34 27.4	-0.9
MFF	Saint Martin d	13.18	305	*e*P	Pn	08 34 31.4	-0.1
LDF	La Druitiere	14.12	313	*e*P	P	08 34 41.6	-0.8
LDF				*e*Sn			
	comp=Z,1.3nm,0.4s						
FLN	La Foliniere	14.41	313	*e*P	P	08 34 44.3	-1.3
FLN				*e*Sn			
	comp=Z,3.8nm,0.4s						
GRR	Gorron	14.43	311	*e*P	P	08 34 43.2	-2.7
AKASG	Malin Array Be	14.44	37	P	Pn	08 34 46.9	+0.4
	comp=Z,7.2nm,0.3s,baz=229,slow=10,SNR=47						
AKASG				S	S	08 37 20.6	-4.2
	comp=Z,0.5nm,0.3s,baz=222,slow=20,SNR=5.5						
AKBB	Malin Array Si	14.44	37	P	P	08 34 46.2	+0.3
AKBB	Malin Array Si	14.44	37	P	P	08 34 46.2	+0.3
ESBB	Sonseca Array	14.95	275	P	Pn	08 34 52.8	0.0
ESDC	Sonseca Array	14.95	275	P	P	08 34 51.7	-0.1
	comp=Z,0.6nm,0.3s,baz=74,slow=11,SNR=18						
PAB	San Pablo	15.26	275	P	P	08 34 55.6	+0.4
PAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PAB	San Pablo	15.26	275	P	P	08 34 55.6	+0.4
PAB				IAmb	IAmb	08 34 56.5	
	comp=Z,5.9nm,0.9s						
SGMF	Saint Gilles	15.37	309	*e*P	P	08 34 55.0	-1.2
QUIF	Quistinic	15.60	307	*e*P	P	08 34 58.1	-0.6
PABE	Paberze	16.57	17	*e*P	Pn	08 35 10.3	-1.1
PBUR	Paburge	16.66	13	*e*P	P	08 35 10.4	+0.4
NACGM	Naroch	16.78	23	*i* P	Pn	08 35 12.8	-1.1
NACGM				*i* P	Pn	08 35 12.8	-1.1
NACGM				*i* P	Pn	08 35 12.8	-1.1
NACGM				*i* Pb	P	08 35 13.9	+2.5
	comp=Z,25nm,0.9s						
NACGM				*i* S	S	08 38 08.1	-3.6
NACGM				*i* LQ	LQ	08 52 26.3	
NACGM				*i* LR	LR	08 54 08.9	
MNK	Minsk	16.80	26	*i* P	P	08 35 08.7	-2.9
	comp=E,8.0nm,1.6s						
MNK				*i* P	P	08 35 08.7	-2.9
	comp=N,31nm,1.4s						
MNK				*i* P	P	08 35 08.7	-2.9
	comp=Z,33nm,0.9s						
MNK				*i* S	S	08 38 06.7	-5.3
MNK				*i* PcP	PcP	08 39 42.8	-0.2
MNK				*i* LQ	LQ	08 41 18.8	
MNK				*i* LR	LR	08 42 00.7	
MNK				*i* LRM	MLR	08 42 42.1	
	comp=E,35nm,16.5s						
MNK				*i* LRM	MLR	08 42 42.1	
	comp=N,188nm,13.4s						
MNK				*i* LRM	MLR	08 42 42.1	
	comp=Z,77nm,13.4s						
PBRG	Braganca	16.91	284	*e*P	P	08 35 13.3	+0.2
	comp=Z,19nm,1.0s						
IIGN	Ignalina	17.00	21	*e*P	Pn	08 35 15.3	-1.3
IIGN				IAmb	IAmb	08 35 19.6	
	comp=Z,9.5nm,0.6s						
IDID	Didziasalis	17.12	22	*e*P	P	08 35 16.0	+0.8
MVO	Moncorvo	17.15	281	*e*P	P	08 35 15.6	-0.1
ISAL	Salakas	17.17	21	*e*P	P	08 35 16.8	+1.1
ISAL				IAmb	IAmb	08 35 17.9	
	comp=Z,12nm,0.6s						
PMRV	Marv??o	17.61	276	*e*P	P	08 35 20.9	+0.2
	comp=Z,24nm,1.6s						
PCBR	Castelo Branco	17.62	277	*e*P	P	08 35 21.0	+0.3
MDT	Midelt	17.65	253	P	P	08 35 20.4	-0.9
	comp=Z,0.3nm,0.3s,baz=85,slow=9.5,SNR=8.6						
POLO	Lamas de Olo	17.71	282	*e*P	P	08 35 22.9	+1.0
PVIS	Viseu	17.84	280	*e*P	P	08 35 23.5	+0.3
PESTR	Estremoz	17.86	274	P	P	08 35 23.0	-0.4
PGAV	Gavieira, Arco	18.05	284	*e*P	P	08 35 26.8	+1.3
SLIT	Slitere, Latvi	18.25	12	*e*P	P	08 35 27.4	+0.1
PVAQ	Vaqueiros	18.28	269	*e*P	P	08 35 26.9	-1.0
PMTG	Montargil	18.31	275	*e*P	P	08 35 26.9	-1.3
PCVE	Castro Verde	18.47	270	*e*P	P	08 35 29.7	-0.2
PBDV	Barranco-do-Ve	18.49	269	*e*P	P	08 35 30.5	+0.3
PNCL	Nicolau / Gran	18.73	272	*e*P	P	08 35 32.4	-0.3
EIL	Elat	18.95	117	P	P	08 35 36.2	+1.1
	comp=Z,0.5nm,0.3s,baz=339,slow=8.5,SNR=4.1						
PFVI	Vila Bisbo	19.21	269	*e*P	Pn	08 35 40.6	-1.8
EKA	Eskdalemuir Ar	19.78	327	P	P	08 35 42.8	-0.8
	baz=140,slow=11,SNR=11						
VSU	Vasula	19.90	18	*e*P	P	08 35 45.0	+0.2
VSU	Vasula	19.90	18	*i* P	P	08 35 44.7	-0.1
VSU				pmax	pmax		
	comp=Z,37nm,0.6s						
KONO	Kongsberg	20.08	351	*i* P	P	08 35 46.0	-0.8
KONO				pmax	pmax		
	comp=Z,13nm,0.9s						
KIV	Kislovodsk	20.59	70	*e*P	P	08 35 52.0	-0.3
KIV				pmax	pmax		
	comp=Z,13nm,1.3s						
OBN	Obninsk	20.69	36	*e*P	P	08 35 51.2	-1.9
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NC602	NORSAR Array S	20.97	355	P	P	08 35 55.0	-0.8
NB2	NORSAR Subarra	21.30	354	P	P	08 35 58.0	-0.9
	comp=Z,5.9nm,0.7s,baz=171,slow=11						
NOA	NORSAR Array B	21.30	354	P	P	08 35 57.6	-1.3
	comp=Z,1.7nm,0.5s,baz=135,slow=13,SNR=21						
GNI	Garni	22.36	80	*i* P	P	08 36 08.8	-0.2
GNI				pmax	pmax		
	comp=Z,27nm,1.6s						
FINES	FINESS Array B	22.50	13	P	P	08 36 10.3	+0.6
	comp=Z,3.6nm,0.3s,baz=196,slow=7.5,SNR=32						
VALR	Valaam	23.45	19	*i* P	P	08 36 18.9	+0.5
VALR				pmax	pmax		
	comp=Z,22nm,0.7s						
TOA0	Torodi Ar. Sit	29.32	208	P	P	08 37 12.0	+0.9
TORD	Torodi Ar. Bea	29.32	208	P	P	08 37 11.5	+0.3
	comp=Z,0.6nm,0.4s,baz=14,slow=9.6,SNR=6.2						
ARCES	ARCESS Array B	30.14	7	P	P	08 37 17.6	-0.2
	comp=Z,1.6nm,0.7s,baz=189,slow=9.8,SNR=20						
ARCES				pP	pP	08 38 15.1	+2.1
	comp=Z,3.8nm,0.9s,baz=188,slow=12,SNR=1.9						
ARU	Arti	32.48	45	P	P	08 37 40.1	+1.7
ARU				IAmb	IAmb	08 37 48.7	
	comp=Z,16nm,1.5s						
DBIC	Dimbokro	37.82	214	P	P	08 38 24.0	-0.2
	comp=Z,2.0nm,0.5s,baz=15,slow=11,SNR=7.9						
DBIC	Dimbokro	37.82	214	P	P	08 38 24.0	-0.2
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DBIC	Dimbokro	37.82	214	P	P	08 38 24.0	-0.2
DBIC				IAmb	IAmb	08 38 25.5	
	comp=Z,6.3nm,1.1s						
TIC	Toumodi	37.91	214	*e*P	P	08 38 24.3	-0.7
KIC	Kosan Boka	38.05	214	*e*P	P	08 38 25.8	-0.3
	comp=Z,3.2nm,0.4s						
LIC	Lamto	38.29	214	*e*P	P	08 38 27.5	-0.6
	comp=Z,6.8nm,0.5s						
BRVK	Borovoye	38.99	52	*i* P	P	08 38 34.9	+1.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	43.65	66	*i* P	P	08 39 12.6	+1.2
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	44.41	54	*i* P	P	08 39 17.5	+0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	Zalesovo Beam	47.46	49	P	P	08 39 42.3	+1.5
	comp=Z,0.7nm,0.4s,baz=302,slow=5.8,SNR=1.4						
ZALV				pP	pP	08 40 40.2	-0.1
	comp=Z,0.9nm,0.5s,baz=289,slow=10,SNR=3.1						
MKAR	Makanchi Array	47.73	59	P	P	08 39 44.3	+1.3
	comp=Z,0.4nm,0.4s,baz=282,slow=7.2,SNR=14						
MKAR				pP	pP	08 40 42.5	-0.1
	comp=Z,1.4nm,0.5s,baz=285,slow=6.9,SNR=9.6						
WMQ	Urumqi	52.33	61	*e*P	P	08 40 20.5	+3.1
BATG	Bathurst New B	56.96	307	P	P	08 40 49.9	-0.5
TIXI	Tiksi	59.35	20	*i* P	P	08 41 06.3	-0.1
SONM	Songino Array	62.34	50	P	P	08 41 27.0	-0.1
	comp=Z,0.1nm,0.4s,baz=335,slow=6.4,SNR=1.8						
SONM				pP	pP	08 42 30.6	+0.3
	comp=Z,0.4nm,0.7s,baz=266,slow=4.5,SNR=3.3						
R58B	Mineral	69.14	302	P	P	08 42 10.5	+0.3
R58B				IAmb	IAmb	08 42 12.8	
	comp=Z,12nm,1.2s						
HHC	Hu-ho-hao-te	69.22	54	*e*P	P	08 42 09.8	-1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.9s						
YKA	Yellowknife Ar	70.34	338	P	P	08 42 17.8	+0.8
	comp=Z,0.4nm,0.5s,baz=46,slow=5.6,SNR=9.8						
ULM	Lac du Bonnet	71.91	321	P	P	08 42 27.2	+0.6
	comp=Z,4.9nm,0.4s,baz=50,slow=5.6,SNR=15						
ILAR	Eielson Array	74.72	352	P	P	08 42 43.5	+0.8
	comp=Z,0.2nm,0.6s,baz=350,slow=3.7,SNR=4.4						
ECSD	EROS Data Cent	76.66	316	P	P	08 42 55.0	+1.0
BDFB	Brasilia	80.83	241	P	P	08 43 18.0	+1.0
	comp=Z,2.1nm,0.5s,baz=341,slow=5.8,SNR=4.2						
SDV	Santo Domingo	81.40	274	P	P	08 43 20.3	0.0
	comp=Z,4.4nm,0.5s,baz=40,slow=7.7,SNR=6.6						
PDAR	Pinedale Array	83.83	323	P	P	08 43 33.2	+0.8
	comp=Z,1.0nm,0.7s,baz=57,slow=4.6,SNR=8.9						
ANMO	Albuquerque	88.26	316	P	P	08 43 54.9	+0.9
	comp=Z,0.3nm,0.4s,baz=57,slow=9.7,SNR=4.1						
TXAR	Lajitas Array	90.88	310	P	P	08 44 07.7	+1.5
	comp=Z,0.5nm,0.5s,baz=60,slow=4.9,SNR=14						

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*IDC **02** 08:31:46.9±5.4, 19.°45N×109.°13W, h0^{km}, mb3.2/3, mb1 3.8/4, mb1mx3.6/41, mbtmp3.4/4, ML3.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/24, Error ellipse: s-maj=114.5km s-min=22.4km az=137.0*

ISC 02 08:31:51.1±2.8**, 19.°7N**±0.°3×**109.°5W**±0.°4**, h10^{km}, n13, σ1.^{s}05**/10**, mb3.5**/3**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H06E1	SOCORRO T-PHAS	1.66	237	Pn	Pn	08 32 20.7	+0.4
H06E1				Sn	Sn	08 32 42.5	+0.8
H06E1				T	T	08 34 27.6	
	SNR=1169						
H06N1	SOCORRO T-PHAS	1.67	241	Pn	Pn	08 32 20.6	+0.2
	SNR=32						
H06N1				T	T	08 34 29.2	
	SNR=13						
H06S1	SOCORRO T	1.71	237	Pn	Pn	08 32 21.4	+0.4
H06S1				Sn	Sn	08 32 41.9	-1.0
	SNR=101						
H06S1				T	T	08 34 29.4	
	SNR=16						
LPIG	La Paz	4.47	350	LR	LR	08 34 20.4	
	comp=Z,59nm,19.8s,baz=217,slow=32						
TXAR	Lajitas Array	10.95	28	Pn	Pn	08 34 28.8	+0.8
	0.2nm,0.3s,baz=199,slow=15,SNR=28						
ANMO	Albuquerque	15.43	9	LR	LR	08 40 55.6	
	comp=Z,52nm,18.3s,baz=230,slow=35						
NVAR	Mina Array Bea	20.20	339	P	P	08 36 27.0	+0.7
	0.6nm,0.8s,baz=188,slow=6.0,SNR=1.8						
YKA	Yellowknife Ar	42.92	356	P	P	08 39 49.1	-0.7
	0.3nm,0.8s,baz=164,slow=7.1,SNR=4.5						
INK	Inuvik	50.90	349	P	P	08 40 50.1	-1.9
	2.6nm,0.4s,baz=159,slow=8.6,SNR=19						
ILAR	Eielson Array	51.45	341	P	P	08 40 56.8	+0.5
	0.4nm,0.7s,baz=149,slow=6.3,SNR=8.1						
H03N2	Juan Fernandez	60.32	151	T	T	09 47 31.3	
	baz=329,slow=77,SNR=16						
H03N1	Juan Fernandez	60.33	151	T	T	09 47 33.5	
	baz=329,slow=77,SNR=10						
H03N3	Juan Fernandez	60.34	151	T	T	09 47 28.2	
	baz=329,slow=77,SNR=20						

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*IDC **02** 08:41:45.3±0.7, 2.°55N×128.°69E, h37^{km}±4^{km}, mb4.3/24, mb1 4.4/26, mb1mx4.2/48, mbtmp4.5/26, ML4.5/2, MS3.8/2, Ms1 3.8/2, ms1mx3.3/39, Error ellipse: s-maj=18.6km s-min=9.7km az=81.0*

*BJI **02** 08:41:45.4±0.0, 2.°43N×128.°82E, h58^{km}, mB5.4/22, mb4.6/35, Ms4.8/14, Ms7 4.5/13*

*DJA **02** 08:41:46.0±1.0, 2°N±3°×12°9E±°, h20^{km}±9^{km}, M4.9/12, mb5.1/10, mB5.3/6, MLv4.9/12, Mw(mB)4.7/6*

*NEIC **02** 08:41:47.4±1.4, 2.°51N±0.°09×128.°69E±0.°08, h58^{km}±8^{km}, mb4.8/38, Error ellipse: s-maj=12.8km s-min=10.5km az=205.0*

ISC 02 08:41:46.2±0.6**, 2.°51N**±0.°04×**128.°70E**±0.°06**, h45^{km}**±5^{km}**, n140, σ1.^{s}37**/149**, mb4.8**/46**, MS4.5**/4**, 1C-3D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.17	218		Pn	08 42 20.9	+1.0
TNTI	Ternate	2.17	218	P	Pn	08 42 20.0	+0.1
TNTI				S	Sn	08 42 46.6	+0.9
SGSI	Sangihe	3.37	290	P	Pn	08 42 36.7	+0.3

SGSI				S	**Sn**	**08 43 17.4**	**+2.2**
SWI	**Sorong**	**4.22**	**143**	P	**Pn**	**08 42 48.9**	**+0.9**
SIJI	**Sorong**	**4.22**	**142**	Pn	**Pn**	**08 42 48.6**	**+0.5**
	31nm,0.3s,baz=115,slow=18,SNR=76						
SIJI				LR	LR	08 44 44.2	
	comp=Z,1µm,19.7s,baz=310,slow=42						
DDMP	**Don Marcelino,**	**4.65**	**320**	*e*P	**Pn**	**08 42 57.8**	**+3.9**
DDMP				*e*S	**Sn**	**08 43 51.3**	**+4.6**
MATI	**Mati**	**5.04**	**331**	*e*P	Pn	08 43 08.1	+8.8
KMSI	**Cibinong**	**5.09**	**248**	P	**Pn**	**08 43 01.5**	**+1.6**
	3.0nm7µm934nm,1.0s						
SANI	**Sanana**	**5.27**	**211**	P	**Pn**	**08 43 03.4**	**+0.9**
	0.2nm58nm,1.1s						
KCP	**Kidapawan**	**5.74**	**321**	⇑*i*P	**Pn**	**08 43 11.3**	**+2.4**
SKMP	**Bagumbayan, Su**	**5.75**	**314**	*e*P	**Pn**	**08 43 09.7**	**+0.7**
SKMP				*e*S	**Sn**	**08 44 14.3**	**+0.6**
GTOI	**Gorontalo**	**5.98**	**252**	P	**Pn**	**08 43 13.9**	**+1.7**
	0.3nm896nm92nm,0.8s						
BUKP	**Musuan**	**6.45**	**326**	*e*P	**Pn**	**08 43 20.9**	**+2.2**
BUKP				*e*S	**Sn**	**08 44 35.2**	**+4.2**
FAKI	**Fak Fak**	**6.46**	**147**	Pn	**Pn**	**08 43 20.5**	**+1.8**
FAKI	**Fak Fak**	**6.46**	**147**	P	**Pn**	**08 43 19.9**	**+1.2**
	0.2nm47nm,0.6s						
LUWI	**Luwuk**	**6.89**	**239**	Pn	**Pn**	**08 43 26.3**	**+1.6**
LUWI	**Luwuk**	**6.89**	**239**	P	**Pn**	**08 43 27.4**	**+2.7**
MRSI	**Marisa**	**7.05**	**253**	P	**Pn**	**08 43 28.6**	**+1.8**
	0.7nm2µm139nm,0.6s						
BNDI	**Bandanaira**	**7.09**	**170**	P	**Pn**	**08 43 28.3**	**+0.9**
	1.4nm213nm,1.5s						
BUTP	**Butuan**	**7.11**	**335**	*e*P	Pn	08 43 40.6	+13
BUTP				*e*S	Sn	08 44 28.0	-19
PAGZ	**Pagadian**	**7.49**	**315**	*e*P	**Pn**	**08 43 32.7**	**-0.2**
PAGZ				*e*S	**Sn**	**08 44 57.0**	**+0.3**
APSI	**Ampana**	**7.82**	**244**	P	**Pn**	**08 43 38.4**	**+0.9**
	0.3nm932nm87nm,1.0s						
TOLI2	**Tolitoli**	**8.03**	**260**	Pn	**Pn**	**08 43 40.2**	**-0.2**
MPSI	**Mapaga**	**9.05**	**256**	P	**Pn**	**08 43 54.6**	**+0.2**
	838nm49nm,1.1s						
LLP	**Lapu-Lapu**	**9.07**	**329**	⇓*e*P	Pn	08 44 01.2	+6.6
LLP				*i* S	Pn	08 44 04.4	+10
TTSI	**Tana Toraja**	**10.45**	**238**	P	**Pn**	**08 44 13.4**	**-0.1**
	2µm257nm,0.8s						
MYLDM	**Lahad Datu**	**10.51**	**285**	Pn	**Pn**	**08 44 17.6**	**+3.3**
BNSI	**Bone**	**10.99**	**231**	P	**Pn**	**08 44 21.2**	**+0.3**
	61nm,0.7s						
SPSI	**Sidrap Palu**	**10.99**	**234**	P	**Pn**	**08 44 21.2**	**+0.2**
BKSI	**Bulukumba**	**11.57**	**228**	P	**Pn**	**08 44 31.7**	**+2.9**
KAPI	**Kappang**	**11.65**	**230**	Pn	**Pn**	**08 44 31.0**	**+1.1**
	2.2nm,0.3s,baz=90,slow=7.1,SNR=6.3						
KAPI	**Kappang**	**11.65**	**230**		**Pn**	**08 44 30.3**	**+0.4**
KKM	**Kota Kinabalu**	**12.93**	**286**	Pn	**Pn**	**08 44 48.0**	**+0.4**
JAY	**Jayapura**	**13.00**	**112**	LR	LR	08 49 08.5	
	comp=Z,387nm,20.6s,baz=302,slow=34						
KDU	**Kakadu**	**15.55**	**166**	P	**P**	**08 45 26.6**	**+0.4**
	baz=16,SNR=3.6						
SBUM	**Sibu**	**16.46**	**270**	P	**P**	**08 45 35.7**	**-0.6**
SBUM				IAmb	IAmb	08 45 54.0	
	comp=Z,88nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.70**	**188**	P	**P**	**08 46 22.6**	**-0.1**
	baz=21,SNR=4.5						
FITZ	**Fitzroy Crossi**	**20.70**	**188**	P	**P**	**08 46 23.4**	**+0.6**
	comp=Z,4.2nm,0.7s,baz=16,slow=12,SNR=7.2						
FITZ	**Fitzroy Crossi**	**20.70**	**188**	P	**P**	**08 46 21.6**	**-1.1**
TPUB	**Ta-pu**	**22.10**	**340**	P	**P**	**08 46 37.0**	**-0.8**
TPUB				IAmb	IAmb	08 46 48.1	
	comp=Z,50nm,1.1s						
WB0	**Warramunga Arr**	**22.83**	**166**	P	**P**	**08 46 45.8**	**+0.1**
WRAB	**Tennant Creek**	**22.98**	**166**	P	**P**	**08 46 47.8**	**+0.7**
WRAB				IAmb	IAmb	08 46 49.0	
	comp=Z,44nm,0.8s						
WRA	**Warramunga Arr**	**22.99**	**166**	P	**P**	**08 46 47.3**	**+0.1**
	comp=Z,38nm,0.8s,baz=347,slow=9.7,SNR=138						
WRA				ScP	**ScP**	**08 54 08.8**	**-1.8**
	comp=Z,2.9nm,0.7s,baz=340,slow=3.0,SNR=24						
WB2	**Warramunga Arr**	**22.99**	**166**	P	**P**	**08 46 47.4**	**+0.2**
LEM	**Lembang**	**22.99**	**246**	P	**P**	**08 46 48.5**	**+1.0**
	comp=Z,65nm,0.9s,baz=197,slow=19,SNR=4.1						
YHNB	**Yeheng**	**23.14**	**343**	P	**P**	**08 46 49.3**	**+0.5**
YHNB				IAmb	IAmb	08 47 08.9	
	comp=Z,34nm,0.9s						
RABL	**Rabaul**	**24.38**	**106**	P	**P**	**08 47 04.0**	**+3.5**
QIS	**Mount Isa**	**25.30**	**155**	P	**P**	**08 47 10.0**	**+1.3**
	baz=26,SNR=73						
PSA00	**Pilbara Seismi**	**25.45**	**199**	P	**P**	**08 47 09.8**	**-0.3**
MTSU	**Mount Surprise**	**25.64**	**144**	P	**P**	**08 47 13.7**	**+1.8**
	baz=26,SNR=8.7						
AS31	**Alice Springs**	**26.50**	**169**	P	**P**	**08 47 20.2**	**+0.6**
ASAR	**Alice Springs**	**26.50**	**169**	P	**P**	**08 47 20.0**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=354,slow=7.9,SNR=62						
ASAR				PcP	**PcP**	**08 50 43.5**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=357,slow=2.2,SNR=6.1						
ASAR				ScP	**ScP**	**08 54 18.3**	**-2.1**
	comp=Z,3.3nm,0.8s,baz=343,slow=2.8,SNR=26						
WRKA	**Warakurna**	**27.38**	**181**	P	**P**	**08 47 27.6**	**0.0**
	baz=28,SNR=14						
CTA	**Charters Tower**	**28.30**	**143**	P	**P**	**08 47 37.5**	**+1.7**
	comp=Z,5.8nm,0.7s,baz=322,slow=10,SNR=7.2						
CTAO	**Charters Tower**	**28.30**	**143**	P	**P**	**08 47 36.2**	**+0.4**
CTAO				IAmb	IAmb	08 47 39.8	
	comp=Z,19nm,1.1s						
WHN	**Wuhan**	**31.02**	**335**	⇓P	P	08 47 52.5	-7.2
GSI	**Gunungsitoli**	**31.12**	**268**	P	**P**	**08 48 01.1**	**+0.2**
GSI				IAmb	IAmb	08 48 03.8	
	comp=Z,24nm,1.2s						
FORT	**Forrest**	**33.10**	**181**	P	**P**	**08 48 17.6**	**-0.4**
FORT				IAmb	IAmb	08 48 18.6	
	comp=Z,17nm,0.8s						
CMAR	**Chiang Mai Arr**	**33.18**	**301**	P	**P**	**08 48 18.6**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=118,slow=7.3,SNR=11						
CMAR				PcP	**PcP**	**08 51 02.5**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=80,slow=1.1,SNR=5.1						
CMAR				ScP	**ScP**	**08 54 41.2**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=147,slow=2.3,SNR=8.1						
CMMT	**Chiang Mai**	**33.33**	**301**	P	P	08 48 31.0	+11
INU	**Inuyama**	**33.58**	**12**	P	**P**	**08 48 22.2**	**+0.1**
KMI	**Kunming**	**33.63**	**314**	⇓*e*P	**P**	**08 48 23.6**	**+0.6**
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI				LR	LR		
	comp=Z,350nm,15.2s						
KMI				LR	LR		
	comp=Z,470nm,14.7s						
KMI				LR	LR		
	comp=Z,550nm,12.4s						
RMQ	**Roma**	**34.74**	**147**	P	**P**	**08 48 33.3**	**+1.1**
	baz=35,SNR=4.4						
KSRS	**Korea Array**	**34.79**	**359**	P	**P**	**08 48 32.3**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=176,slow=9.7,SNR=8.5						
MAT	**Matsushiro**	**34.99**	**13**	P	**P**	**08 48 33.3**	**-1.1**
MAT				*e*S	**S**	**08 54 03.6**	**+0.3**
MJAR	**Matsushiro Arr**	**34.99**	**13**	P	**P**	**08 48 33.4**	**-1.0**
	comp=Z,5.1nm,0.7s,baz=185,slow=9.2,SNR=23						
EIDS	**Eidsvold**	**35.20**	**143**	P	**P**	**08 48 37.3**	**+1.1**
	baz=35,SNR=5.9						
EIDS	**Eidsvold**	**35.20**	**143**	P	**P**	**08 48 36.7**	**+0.5**
EIDS				IAmb	IAmb	08 48 38.1	
	comp=Z,18nm,0.9s						
BBOO	**Buckleboo**	**35.81**	**169**	P	**P**	**08 48 42.0**	**+0.6**
	baz=36,SNR=9.3						
BBOO	**Buckleboo**	**35.81**	**169**	P	**P**	**08 48 41.4**	**0.0**
BBOO				IAmb	IAmb	08 48 56.9	
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**08 48 46.4**	**+0.6**
	baz=36,SNR=50						
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**08 48 45.4**	**-0.4**
	comp=Z,16nm,0.7s,baz=337,slow=8.1,SNR=54						
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**08 48 45.8**	**0.0**
CD2	**Chengdu**	**36.79**	**323**	*e*P	**P**	**08 48 51.2**	**+1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
JMM	**Marumori**	**36.90**	**16**	P	**P**	**08 48 50.2**	**-0.4**
HTT	**Hallett**	**37.03**	**166**	P	**P**	**08 48 53.0**	**+1.1**
	baz=37,SNR=3.5						
BJI	**Beijing**	**39.05**	**345**	P	**P**	**08 49 09.2**	**+0.5**
BJI				S	**S**	**08 55 04.9**	**0.0**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BJI				LR	LR		
	comp=Z,660nm,13.4s						
BJI				LR	LR		
	comp=Z,770nm,19.9s						
BJI				LR	LR		
	comp=Z,870nm,21.6s						
ARMA	**Armidale**	**39.38**	**148**	P	**P**	**08 49 13.3**	**+1.5**
	baz=40,SNR=11						
ARMA	**Armidale**	**39.38**	**148**	P	**P**	**08 49 12.3**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**40.46**	**64**	T	T	09 32 41.1	
	baz=251,slow=75,SNR=35						
H11S2	**WAKE ISLAND Hy**	**40.47**	**64**	T	T	09 32 39.3	
	baz=251,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**40.47**	**64**	T	T	09 32 42.2	
	baz=251,slow=75,SNR=29						
LZH	**Lanzhou**	**40.55**	**328**	*e*P	**P**	**08 49 23.3**	**+1.7**
LZH				pP	pP	08 49 34.4	+0.7
LZH				sP	sP	08 49 41.9	+3.0
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,80nm,4.9s						
LZH				LR	LR		
	comp=Z,700nm,15.2s						
LZH				LR	LR		
	comp=Z,820nm,17.9s						
LZH				LR	LR		
	comp=Z,960nm,18.4s						
ARPS	**Mount Arapiles**	**40.95**	**164**	P	**P**	**08 49 26.0**	**+1.4**
	baz=41,SNR=7.0						
H11N1	**WAKE ISLAND Hy**	**41.04**	**63**	T	T	09 33 16.7	
	baz=250,slow=75,SNR=43						
H11N2	**WAKE ISLAND Hy**	**41.05**	**63**	T	T	09 33 17.5	
	baz=250,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**41.06**	**63**	T	T	09 33 18.5	
	baz=250,slow=75,SNR=47						
HHC	**Hu-ho-hao-te**	**41.19**	**340**	*e*P	**P**	**08 49 28.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
HHC				LR	LR		
	comp=Z,400nm,14.6s						
HHC				LR	LR		
	comp=Z,350nm,15.0s						
HHC				LR	LR		
	comp=Z,380nm,14.9s						
CN2	**Changchun**	**41.22**	**356**	*e*P	**P**	**08 49 30.0**	**+3.3**
USRK	**Ussuriysk Ar.**	**41.62**	**4**	P	**P**	**08 49 30.1**	**+0.1**
	comp=Z,12nm,0.7s,baz=186,slow=7.6,SNR=23						
LSA	**Lhasa**	**44.72**	**311**	P	**P**	**08 49 53.6**	**-2.2**
LSA				IAmb	IAmb	08 50 08.0	
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**45.16**	**328**	P	**P**	**08 49 59.4**	**+0.7**
GTA				pP	sP	08 50 17.8	+1.6
GTA				PcP	**PcP**	**08 51 39.7**	**+1.1**
GTA				ScP	**ScP**	**08 55 25.5**	**-2.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	**Kul'dur**	**46.62**	**3**	P	**P**	**08 50 09.6**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=199,slow=4.5,SNR=13						
ULN	**Ulaanbaatar**	**48.90**	**341**	P	**P**	**08 50 27.5**	**-0.3**
ULN				IAmb	IAmb	08 50 40.4	
	comp=Z,10.0nm,1.1s						
SONM	**Songino Array**	**49.09**	**340**	P	**P**	**08 50 29.3**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=150,slow=8.4,SNR=15						
SONM				PcP	**PcP**	**08 51 52.8**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=157,slow=4.0,SNR=3.6						
HYB	**Hyderabad**	**51.38**	**290**	*i* P	**P**	**08 50 47.0**	**+0.1**
HYB				*e*		08 50 57.0	
WMQ	**Urumqi**	**54.85**	**324**	*e*P	**P**	**08 51 13.8**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				LR	LR		
	comp=Z,510nm,8.3s						
WMQ				LR	LR		
	comp=Z,300nm,5.1s						
PETK	**Petropavlovsk-**	**55.84**	**21**	P	**P**	**08 51 19.4**	**+0.3**
	comp=Z,8.8nm,0.7s,baz=189,slow=4.0,SNR=20						
ZSN	**Zaisan**	**58.60**	**327**	*e*P	**P**	**08 51 38.7**	**+0.1**
	baz=326						
YAK	**Yakutsk**	**59.39**	**1**	P	**P**	**08 51 44.6**	**+0.8**
	comp=Z,15nm,0.6s,baz=149,slow=0.4,SNR=12						
YAK	**Yakutsk**	**59.39**	**1**	P	**P**	**08 51 43.6**	**-0.1**
SHLS	**Shalkode**	**59.54**	**320**	*e*P	**P**	**08 51 43.1**	**-2.2**
	baz=320						
MK31	**Makanchi Array**	**59.68**	**325**	P	**P**	**08 51 45.6**	**-0.6**
MK31				IAmb	IAmb	08 51 57.1	
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	**59.68**	**325**	P	**P**	**08 51 46.0**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=116,slow=8.1,SNR=83						
MKAR				pP	**pP**	**08 51 56.5**	**-2.4**
	comp=Z,8.7nm,0.7s,baz=122,slow=8.0,SNR=21						
MKAR				PcP	**PcP**	**08 52 32.4**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=123,slow=4.5,SNR=4.9						
MKAR				ScP	**ScP**	**08 56 28.3**	**-2.0**
	comp=Z,1.5nm,0.9s,baz=118,slow=4.3,SNR=7.0						
MAKZ	**Makanchi**	**59.87**	**325**	P	**P**	**08 51 47.1**	**-0.3**
SATY	**Saty**	**60.17**	**319**	*e*P	**P**	**08 51 49.4**	**-0.3**
	baz=319						
KSH	**Kashi**	**60.29**	**315**	P	**P**	**08 51 52.3**	**+1.7**
MDOK	**Medeo**	**61.10**	**319**	*e*P	**P**	**08 51 55.9**	**-0.2**
	baz=319						
TNSS	**Tian-Shan**	**61.12**	**319**	*e*P	**P**	**08 51 56.4**	**-0.1**
	baz=319						
AAA	**Alma-Ata**	**61.21**	**319**	*e*P	**P**	**08 51 56.2**	**-0.5**
	baz=319						
CHKK	**Chushkaly**	**61.45**	**320**	*e*P	**P**	**08 51 57.1**	**-1.2**
	baz=320						
KUU	**Kurty**	**61.89**	**320**	*e*P	**P**	**08 52 00.6**	**-0.6**
	baz=319						
ZALV	**Zalesovo Beam**	**62.57**	**333**	P	**P**	**08 52 04.0**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=126,slow=7.5,SNR=7.0						
ZALV				pP	**pP**	**08 52 15.1**	**-3.2**
	comp=Z,2.9nm,0.8s,baz=113,slow=6.7,SNR=6.2						
SEY	**Seymchan**	**62.80**	**12**	P	**P**	**08 52 06.5**	**-0.3**
	comp=Z,4.2nm,0.8s,baz=236,slow=8.9,SNR=11						
SEY				pP	**pP**	**08 52 18.2**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=189,slow=6.7,SNR=4.5						
KURK	**Kurchatov**	**63.82**	**327**	P	**P**	**08 52 13.7**	**-0.1**
BTLS	**Baital**	**63.87**	**320**	*e*P	**P**	**08 52 12.8**	**-1.6**
	baz=320						
IUG	**Iuzhnay**	**65.45**	**316**	*e*P	**P**	**08 52 24.2**	**-0.6**
	baz=316						
KK31	**Karatay Array**	**65.46**	**317**	P	**P**	**08 52 23.9**	**-0.8**
KKAR	**Karatay Array**	**65.46**	**317**	P	**P**	**08 52 23.7**	**-1.1**
TIXI	**Tiksi**	**69.04**	**0**	P	**P**	**08 52 46.1**	**-0.7**
TIXI				IAmb	IAmb	08 52 47.4	
	comp=Z,7.3nm,0.9s						
BRVK	**Borovoye**	**69.48**	**327**	P	**P**	**08 52 48.4**	**-1.5**
BRVK				IAmb	IAmb	08 53 00.6	
	comp=Z,8.7nm,0.8s						
NRIK	**Noril'sk**	**72.08**	**346**	P	**P**	**08 53 05.2**	**-0.2**
	comp=Z,8.6nm,0.8s,baz=117,slow=7.7,SNR=17						
NRIK	**Noril'sk**	**72.08**	**346**	P	**P**	**08 53 04.9**	**-0.5**
NRIK				IAmb	IAmb	08 53 16.5	
	comp=Z,9.1nm,0.8s						
GEYT	**Alibeck**	**73.19**	**309**	P	**P**	**08 53 12.7**	**0.0**
	comp=Z,1.8nm,0.8s,baz=106,slow=3.7,SNR=5.2						
GYA0B	**ALIBECK ARRAY**	**73.19**	**309**	P	**P**	**08 53 12.6**	**-0.1**
ABKAR	**Akbulak array**	**74.33**	**321**	P	**P**	**08 53 17.7**	**-1.4**
VNDA	**Vanda**	**81.98**	**173**	P	**P**	**08 54 00.0**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=266,slow=4.2,SNR=3.7						
RAYN	**Ar Rayn**	**82.77**	**293**	P	**P**	**08 54 06.2**	**0.0**
KTH	**Kantishna Hill**	**83.48**	**26**	P	**P**	**08 54 10.2**	**+1.1**
KTH				IAmb	IAmb	08 54 11.4	
	comp=Z,10nm,1.0s						
COLD	**Coldfoot**	**84.25**	**23**	P	**P**	**08 54 14.6**	**+1.8**
COLD				IAmb	IAmb	08 54 15.6	
	comp=Z,8.9nm,0.7s						
RND	**Reindeer**	**84.38**	**27**	P	**P**	**08 54 13.9**	**+0.2**
RND				IAmb	IAmb	08 54 14.6	
	comp=Z,12nm,0.9s						
SML	**Sawmill**	**84.47**	**28**	P	**P**	**08 54 14.6**	**+0.4**
TOLK	**Toolik Lake Re**	**84.66**	**21**	P	**P**	**08 54 16.1**	**+1.1**
TOLK				IAmb	IAmb	08 54 17.5	
	comp=Z,8.3nm,0.9s						
ILAR	**Eielson Array**	**85.36**	**25**	P	**P**	**08 54 17.9**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=245,slow=5.8,SNR=11						
ARCES	**ARCESS Array B**	**92.26**	**340**	P	**P**	**08 54 50.0**	**-1.2**
	comp=Z,2.0nm,0.5s,baz=77,slow=5.2,SNR=17						
RES	**Resolute Bay**	**98.65**	**11**	P	**P**	**08 55 18.8**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=314,slow=5.0,SNR=7.5						
RES	**Resolute Bay**	**98.65**	**11**	P	Pdif	08 55 20.6	+0.4
RES				IAmb	IAmb	08 55 20.8	
	comp=Z,1.7nm,0.7s						
YKA	**Yellowknife Ar**	**99.78**	**25**	P	**Pdif**	**08 55 23.3**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=304,slow=5.0,SNR=4.1						
YKA				pP	**pP**	**08 55 35.3**	**-3.4**
	comp=Z,0.6nm,0.9s,baz=304,slow=5.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**125.16**	**288**	PKP	**PKPdf**	**09 00 41.9**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=7.3,slow=2.2,SNR=10						
DBIC	**Dimbokro**	**132.75**	**281**	PKP	**PKPdf**	**09 00 57.3**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=86,slow=2.5,SNR=3.5						

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*IDC **02** 08:49:17.5±0.8, 35°.63N×34°.49W, h0^{km}, mb3.9/13, mb1 4.0/13, mb1mx3.8/48, mbtmp3.9/13, Error ellipse: s-maj=23.4km s-min=17.2km az=16.0*

ISC 02 08:49:20.1±0.7, **35°.6N**±0°.1×**34°.47W**±0°.09, **h17**^{km}, **n19**, σ**1**^{s}.**12**/19, **mb3.9**/13, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRON	**Grota Negra**	**7.50**	**70**	A	A	08 51 11.6	
	19nm,0.2s						
GRON				*e*S	**Pn**	**08 51 10.7**	**+1.9**
CMLA	**Cha da Macela**	**7.51**	**71**	A	A	08 51 11.1	
	30nm,0.2s						
CMLA				*e*S	**Pn**	**08 51 09.3**	**+0.5**
PSMA	**Santa Maria**	**7.67**	**77**	A	A	08 51 10.2	
	82nm,0.2s						
PSMA				*e*S	**Pn**	**08 51 09.3**	**-1.8**
PSMN	**Pico do Norte,**	**7.73**	**77**	A	A	08 51 10.8	
	66nm,0.3s						
PSMN				*e*S	**Pn**	**08 51 09.9**	**-1.9**
BART	**Pico Bartolome**	**7.79**	**71**	*e*S	**Pn**	**08 51 12.4**	**-0.3**
ESDC	**Sonseca Array**	**24.44**	**71**	P	**P**	**08 54 39.0**	**+0.9**
	3.1nm,1.0s,baz=273,slow=9.8,SNR=12						
TORD	**Torodi Ar. Bea**	**39.47**	**115**	P	**P**	**08 56 50.1**	**+0.4**
	2.2nm,1.1s,baz=316,slow=8.3,SNR=4.2						
DBIC	**Dimbokro**	**39.58**	**130**	P	**P**	**08 56 51.1**	**+0.5**
	2.0nm,0.7s,baz=278,slow=5.7,SNR=3.7						
PTGA	**Pitinga**	**43.25**	**219**	P	**P**	**08 57 21.1**	**+0.4**
	3.4nm,0.3s,baz=14,slow=10,SNR=10.0						
ULM	**Lac du Bonnet**	**46.00**	**308**	P	**P**	**08 57 42.7**	**+0.3**
	2.3nm,0.9s,baz=92,slow=6.6,SNR=3.4						
AKASG	**Malin Array Be**	**47.41**	**51**	P	**P**	**08 57 53.8**	**+0.5**
	0.4nm,0.4s,baz=276,slow=7.3,SNR=4.9						
RES	**Resolute Bay**	**48.29**	**342**	P	**P**	**08 58 00.6**	**+0.7**
	1.4nm,1.0s,baz=74,slow=7.4,SNR=3.1						
YKA	**Yellowknife Ar**	**54.70**	**326**	P	**P**	**08 58 48.0**	**0.0**
	2.2nm,1.0s,baz=74,slow=7.4,SNR=11						
PDAR	**Pinedale Array**	**56.88**	**302**	P	**P**	**08 59 03.2**	**-1.0**
	0.4nm,0.7s,baz=64,slow=6.8,SNR=4.0						
TXAR	**Lajitas Array**	**57.65**	**285**	P	**P**	**08 59 09.2**	**-0.4**
	0.9nm,0.8s,baz=92,slow=7.4,SNR=9.6						
ILAR	**Eielson Array**	**67.03**	**335**	P	**P**	**09 00 12.5**	**+0.6**
	0.6nm,1.0s,baz=37,slow=4.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**76.61**	**32**	P	**P**	**09 01 07.7**	**-1.8**
	0.5nm,0.5s,baz=327,slow=12,SNR=1.5						
MKAR	**Makanchi Array**	**80.28**	**38**	P	**P**	**09 01 28.9**	**-1.1**
	0.7nm,0.9s,baz=289,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**80.28**	**38**	P	**P**	**09 01 28.9**	**-1.1**

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*IDC **02** 08:53:17.9±0.9, 6°.31N×60°.36E, h0^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.6/45, mbtmp3.7/8, Error ellipse: s-maj=35.2km s-min=21.8km az=159.0*

*NEIC **02** 08:53:18.1±1.0, 6°.4N±0°.1×60°.11E±0°.05, h10^{km}±2^{km}, mb4.1/12, Error ellipse: s-maj=18.9km s-min=6.1km az=163.0*

ISC 02 08:53:18.6±0.7, **6°.4N**±0°.1×**60°.31E**±0°.09, **h10**^{km}, **n21**, σ**1**^{s}.**17**/21, **mb4.0**/14, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**8.46**	**313**	Pn	**Pn**	**08 55 22.0**	**+0.7**
DAMY	**Dhamar**	**17.60**	**299**	P	**Pn**	**08 57 23.5**	**-1.0**
UOSS	**Minazif**	**18.82**	**348**	P	**P**	**08 57 38.3**	**-0.3**
RAYN	**Ar Rayn**	**22.17**	**322**	P	**P**	**08 58 13.5**	**-1.5**
KMBO	**Kilima Mbogo**	**24.21**	**253**	P	**P**	**08 58 37.5**	**+1.5**
	1.7nm,0.8s,baz=84,slow=6.8,SNR=3.8						
LSA	**Lhasa**	**37.13**	**48**	P	**P**	**09 00 29.1**	**-1.1**
LSA				IAmb	IAmb	09 00 44.8	
	comp=Z,7.0nm,1.2s						
GSI	**Gunungsitoli**	**37.52**	**96**	P	**P**	**09 00 32.4**	**-0.7**
KK31	**Karatay Array**	**37.61**	**12**	P	**P**	**09 00 34.7**	**+1.1**
KK31				IAmb	IAmb	09 00 37.1	
	comp=Z,4.6nm,1.3s						
KKAR	**Karatay Array**	**37.61**	**12**	P	**P**	**09 00 34.7**	**+1.1**
KKAR				IAmb	IAmb	09 00 37.1	
	comp=Z,4.6nm,1.3s						
AAK	**Ala-Archa**	**38.17**	**17**	P	**P**	**09 00 38.7**	**+0.2**
AAK				IAmb	IAmb	09 00 47.8	
	comp=Z,3.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**39.47**	**69**	P	**P**	**09 00 50.8**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=242,slow=9.1,SNR=2.1						
KIV	**Kislovodsk**	**40.44**	**340**	P	**P**	**09 00 56.4**	**-1.0**
KIV				IAmb	IAmb	09 01 10.6	
	comp=Z,6.2nm,1.1s						
BOSA	**Boshof**	**48.53**	**222**	P	**P**	**09 02 02.4**	**0.0**
	comp=Z,2.7nm,1.0s,baz=49,slow=8.3,SNR=3.7						
BOSA	**Boshof**	**48.53**	**222**	P	**P**	**09 02 00.3**	**-2.0**
ZAA0	**Zalesovo Array**	**51.37**	**18**	P	**P**	**09 02 23.1**	**-0.2**
ZAA0				IAmb	IAmb	09 02 29.3	
	comp=Z,2.5nm,1.1s						
ZALV	**Zalesovo Beam**	**51.37**	**18**	P	**P**	**09 02 24.8**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=246,slow=7.2,SNR=1.7						
XAN	**Xi'an**	**52.58**	**52**	P	**P**	**09 02 31.3**	**-1.5**
SONM	**Songino Array**	**56.86**	**35**	P	**P**	**09 03 05.0**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=272,slow=8.0,SNR=2.0						
TORD	**Torodi Ar. Bea**	**58.04**	**281**	P	**P**	**09 03 13.5**	**+1.1**
	comp=Z,1.2nm,1.0s,baz=77,slow=3.3,SNR=3.5						
WRA	**Warramunga Arr**	**77.32**	**112**	P	**P**	**09 05 14.7**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=284,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**77.71**	**116**	P	**P**	**09 05 16.6**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=288,slow=5.7,SNR=7.5						

IDC 02 09:04:26.0±1.9, **16°.80S**×**178°.13W**, **h0**^{km}, **mb3.8**/5, **mb1 4.1**/5, **mb1mx3.8**/36, **mbtmp3.8**/5, **Error ellipse: s-maj=118.0km s-min=24.2km az=153.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.10**	**258**	P	P	09 12 44.5	0.0
	0.4nm,0.5s,baz=96,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**45.35**	**253**	P	P	09 12 46.2	-0.2
	2.4nm,0.7s,baz=86,slow=8.8,SNR=45						
ILAR	**Eielson Array**	**84.75**	**13**	P	P	09 17 01.3	-0.3
	0.3nm,0.4s,baz=218,slow=5.4,SNR=8.6						
TXAR	**Lajitas Array**	**85.18**	**58**	P	P	09 17 05.1	+0.3
	0.5nm,0.7s,baz=227,slow=5.8,SNR=8.2						
PDAR	**Pinedale Array**	**86.37**	**43**	P	P	09 17 10.4	-0.1
	0.3nm,0.6s,baz=242,slow=3.8,SNR=4.1						

TAP 02 09:18:04.2, 22°.56N×120°.62E, h21^{km}±1^{km}, **ML2.1, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASBT	**Mashibuluo**	**0.05**	**13**	P	Pb	09 18 08.4	+0.3
	baz=13						
MASBT				S	Sb	09 18 11.4	+0.7
	baz=13						
SSPT	**Xinbi**	**0.09**	**212**	P	Pb	09 18 08.7	+0.4
	baz=212						
SSPT				*e*S	Sb	09 18 12.1	+1.0
	baz=212						
TSMG	**Majia**	**0.15**	**9**	P	Pb	09 18 09.4	-1.0
	baz=9.0						
TSMG				*e*S	Sb	09 18 12.7	-1.9
	baz=9.0						
SSD	**Sandimen**	**0.18**	**3**	P	Pb	09 18 09.7	-0.4
	baz=5.0						
SSD				S	Sb	09 18 13.6	-0.7
	baz=5.0						
SCZT	**Fangliau**	**0.19**	**180**	*e*P	Pb	09 18 09.3	-0.9
	baz=177						
SCZT				*e*S	Sb	09 18 13.3	-0.9
	baz=177						
EAST	**Anshuo**	**0.28**	**130**	P	Pb	09 18 11.4	+0.7
	baz=128						
EAST				*e*S	Sn	09 18 17.4	-1.2
	baz=128						
TWM1	**Shoushan**	**0.32**	**325**	*e*P	Pn	09 18 13.2	-0.5
	baz=326						
SLIU	**Shizi**	**0.38**	**154**	*e*P	Pb	09 18 12.8	+0.6
	baz=154						
TWG	**Pinlang**	**0.49**	**58**	*e*P	Pb	09 18 14.5	+0.3
	baz=58						
TWGBT	**Beinan**	**0.50**	**59**	*e*P	Pb	09 18 14.0	-0.3
	baz=58						
CHN1	**Nanshi**	**0.63**	**352**	*e*P	Pn	09 18 18.4	+0.5
	baz=352						
CHN1				*e*S	Sn	09 18 28.7	+1.4
	baz=352						
TPUB	**Ta-pu**	**0.74**	**1**	*e*P	Pb	09 18 17.4	-1.0

TAP 02 09:18:11.0,22°.54N×120°.70E,h19^{km}±1^{km},ML2.1,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASBT	**Mashibuluo**	**0.09**	**321**	P	Pg	09 18 15.1	+0.4
	baz=321						
MASBT				S	Sg	09 18 18.2	+1.0
	baz=321						
SSPT	**Xinbi**	**0.13**	**244**	*e*S	Sg	09 18 18.8	+1.0
	baz=244						
TSMG	**Majia**	**0.17**	**344**	P	Pg	09 18 16.0	+0.3
	baz=344						
TSMG				S	Sg	09 18 19.7	+1.0
	baz=344						
SCZT	**Fangliau**	**0.18**	**203**	*e*S	Sg	09 18 19.8	+0.8
	baz=199						
EAST	**Anshuo**	**0.21**	**138**	*e*P	Pb	09 18 15.8	0.0
	baz=136						
SSD	**Sandimen**	**0.21**	**344**	P	Pg	09 18 16.7	+0.4
	baz=346						
SSD				S	Sg	09 18 20.9	+1.1
	baz=346						
SGLT	**Jiouru**	**0.26**	**314**	*e*P	Pb	09 18 17.7	+0.6
	baz=315						
SGLT				*e*S	Sg	09 18 22.6	+1.5
	baz=315						
SLIU	**Shizi**	**0.34**	**163**	*e*P	Pb	09 18 19.1	+0.5
	baz=163						
SLIU				*e*S	Sb	09 18 24.2	+0.7
	baz=163						
SLIU	**Shizi**	**0.34**	**163**	*e*S	Pb	09 18 19.0	+0.5
	baz=154						

IDC 02 09:27:43.0±2.4,5°.11S×130°.10E,h176^{km}±31^{km},mb2.8/1, mb1 3.3/5,mb1mx3.0/40,mbtmp3.8/5,Error ellipse: s-maj=63.9km s-min=16.2km az=79.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.37**	**15**	P	Pn	09 28 48.5	-0.3
	12nm,0.3s,baz=72,slow=7.6,SNR=82						
SIJI				S	Sn	09 29 36.0	-4.3
	5.7nm,0.3s,baz=243,slow=23,SNR=10.0						
FITZ	**Fitzroy Crossi**	**13.63**	**198**	P	Pn	09 30 48.1	-1.1
	0.3nm,0.3s,baz=12,slow=7.8,SNR=8.1						
WRA	**Warramunga Arr**	**15.31**	**165**	P	Pn	09 31 08.9	-1.3
	0.2nm,0.3s,baz=351,slow=12,SNR=10						
WRA				S	Sn	09 33 51.5	-10
	0.2nm,0.3s,baz=336,slow=22,SNR=6.6						
ASAR	**Alice Springs**	**18.81**	**169**	P	Pn	09 31 51.2	-0.7
	0.3nm,0.3s,baz=345,slow=10,SNR=28						
ASAR				S	S	09 35 14.1	0.0
	0.0nm,0.3s,baz=345,slow=17,SNR=3.7						
MKAR	**Makanchi Array**	**66.71**	**326**	P	P	09 38 15.0	-0.1
	0.1nm,0.3s,baz=114,slow=8.7,SNR=2.3						

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*MAN **02** 09:33:55.2,8°.52N×125°.84E,h0^{km},mb5.3,ML4.2,MS4.4*
*IDC **02** 09:33:58.1±3.5,8°.22N×125°.91E,h0^{km},mb3.4/3, mb1 3.6/3,mb1mx3.3/42,mbtmp3.4/3,MS3.5/1,Ms1 3.5/1, ms1mx2.7/28,Error ellipse: s-maj=305.0km s-min=28.1km az=65.0*
ISC 02 09:33:56.0±1.0,8°.55N±0°.04×125°.83E±0°.07,h10^{km},n16, σ1^{s}.03/16,mb3.4/3,1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.46**	**334**	*e*P	**Pb**	**09 34 05.9**	**-0.4**
BUKP	**Musuan**	**1.01**	**229**	*e*P	**Pg**	**09 34 13.9**	**-1.5**
BUKP				*e*S	**Sn**	**09 34 32.1**	**+1.6**
CGP	**Cagayan de Oro**	**1.12**	**265**	⇓*i*P	**Pb**	**09 34 17.1**	**-0.5**
GLSP	**General Luna,**	**1.26**	**14**	*e*P	**Pn**	**09 34 19.7**	**-0.1**
GLSP				*e*S	**Sn**	**09 34 38.5**	**+1.7**
MATI	**Mati**	**1.65**	**165**	*e*P	**Pn**	**09 34 24.2**	**-0.9**
KCP	**Kidapawan**	**1.69**	**206**	⇓*i*P	**Pn**	**09 34 26.2**	**+0.4**
MSLP	**Maasin**	**1.84**	**329**	*e*P	**Pn**	**09 34 27.4**	**-0.4**
SKMP	**Bagumbayan, Su**	**2.38**	**212**	*e*P	**Pn**	**09 34 35.3**	**+0.1**
DDMP	**Don Marcelino,**	**2.43**	**183**	*e*P	**Pn**	**09 34 37.1**	**+1.3**
LLP	**Lapu-Lapu**	**2.54**	**314**	*e*P	**Pn**	**09 34 38.2**	**+0.9**
LLP				*e*S	**Sb**	**09 35 13.4**	**+0.3**
OCLP	**Ormoc**	**2.76**	**334**	*e*P	**Pb**	**09 34 44.3**	**-1.2**
LQP	**Lukban**	**6.95**	**323**	⇑*e*P	Pn	09 35 47.0	+8.9
BATI	**Baumata**	**18.76**	**187**	LR	LR	09 45 40.9	
	comp=Z,169nm,20.6s,baz=240,slow=38						
WRA	**Warramunga Arr**	**29.53**	**164**	P	**P**	**09 40 01.2**	**+0.3**
	0.4nm,0.8s,baz=345,slow=8.9,SNR=1.8						
ASAR	**Alice Springs**	**32.98**	**166**	P	**P**	**09 40 32.0**	**+0.7**
	0.4nm,0.8s,baz=342,slow=7.2,SNR=5.8						
MKAR	**Makanchi Array**	**53.13**	**324**	P	P	09 43 20.0	+5.9
	0.6nm,0.9s,baz=114,slow=8.8,SNR=5.4						

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*IDC **02** 09:38:19.1±2.4,37°.40N×142°.52E,h0^{km},mb3.4/2, mb1 3.6/5,mb1mx3.4/41,mbtmp3.5/5,ML2.0/2,Error ellipse: s-maj=41.1km s-min=26.0km az=72.0*
*JMA **02** 09:38:22.9±0.1,37°.70N×142°.11E,h32^{km}±2^{km},M3.5*
ISC 02 09:38:20.3±1.9,37°.69N±0°.04×142°.25E±0°.07,h13^{km}±11^{km}, n19,σ1^{s}.63/29,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.88**	**315**	P	**Pg**	**09 38 37.8**	**+0.5**
JIKH				S	**Sg**	**09 38 48.0**	**-0.8**
JIO	**Ouri**	**1.04**	**317**	P	**Pb**	**09 38 40.4**	**+0.2**
JIO				S	**Sb**	**09 38 52.6**	**-1.2**
JMST	**Minamisoumatoc**	**1.08**	**272**	P	**Pb**	**09 38 40.3**	**-0.5**
JMST				S	**Sb**	**09 38 52.8**	**-2.0**
JFK	**Kawauchi**	**1.14**	**254**	P	Pn	09 38 41.2	-0.7
JFK				*e*S	**Sb**	**09 38 54.9**	**-1.7**
JMM	**Marumori**	**1.17**	**279**	P	Pn	09 38 41.8	-0.5
JMM				S	**Sb**	**09 38 55.3**	**-2.0**
JOU	**Okura**	**1.42**	**299**	P	Pn	09 38 46.2	+0.3
JOU				S	**Sn**	**09 39 03.4**	**-1.0**
JMK	**Ichinoseki**	**1.50**	**328**	P	**Pn**	**09 38 47.2**	**+0.3**
JMK				S	**Sn**	**09 39 04.8**	**-1.5**
JFT	**Otama**	**1.53**	**264**	P	**Pn**	**09 38 47.8**	**+0.5**
JFT				S	**Sn**	**09 39 06.0**	**-1.0**
JYS	**Shirataka**	**1.81**	**288**	P	**Pn**	**09 38 52.1**	**+1.0**
JYS				*e*S	**Sn**	**09 39 13.8**	**-0.1**
JYK	**Kaneyama**	**1.93**	**310**	P	**Pn**	**09 38 53.7**	**+0.9**
JYK				*e*S	**Sn**	**09 39 16.6**	**-0.3**
JOM	**Ohasama**	**1.94**	**337**	P	**Pn**	**09 38 53.7**	**+0.8**
JOM				*e*S	**Sn**	**09 39 16.0**	**-1.0**
JRG	**Rokugo**	**2.13**	**324**	P	**Pn**	**09 38 57.0**	**+1.5**
JYA	**Atsumi**	**2.19**	**295**	P	Pn	09 38 56.6	+0.2
JYA				*e*S	**Sn**	**09 39 21.9**	**-1.5**
MJAR	**Matsushiro Arr**	**3.43**	**252**	Pn	**Pn**	**09 39 15.2**	**+1.8**
	0.2nm,0.3s,baz=76,slow=14,SNR=21						
MJAR				Sn	**Sn**	**09 39 58.4**	**+4.5**
	0.2nm,0.3s,baz=79,slow=30,SNR=2.4						
MAT	**Matsushiro**	**3.43**	**252**	P	**Pn**	**09 39 15.0**	**+1.6**
MAT				*e*S	**Sn**	**09 39 54.8**	**+0.9**
JHJ	**Hachijo jima 2**	**4.98**	**205**	Pn	**Pn**	**09 39 34.8**	**0.0**
	7.5nm,0.3s,baz=242,slow=20,SNR=1.3						
JHJ				Sn	**Sn**	**09 40 29.4**	**-2.8**
	8.1nm,0.3s,baz=77,slow=17,SNR=1.7						
USRK	**Ussuriysk Ar.**	**10.12**	**313**	Pn	Pn	09 40 52.5	+7.3
	baz=151,slow=9.9,SNR=1.8						
MKAR	**Makanchi Array**	**44.34**	**302**	P	**P**	**09 46 32.0**	**+2.0**
	0.2nm,0.6s,baz=86,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**57.80**	**189**	P	**P**	**09 48 10.6**	**-0.7**
	0.4nm,0.4s,baz=6.3,slow=7.3,SNR=7.3						

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*JMA **02** 09:46:57.4±0.2,32°.92N×137°.79E,h398^{km},M3.6*
*IDC **02** 09:47:02.0±0.8,33°.08N×137°.62E,h373^{km}±9^{km},mb2.7/6, mb1 2.9/9,mb1mx2.8/35,mbtmp3.5/9,Error ellipse: s-maj=21.2km s-min=15.9km az=62.0*
ISC 02 09:47:01.0±1.0,33°.20N±0°.09×137°.90E±0°.09,h400^{km},n28, σ2^{s}.46/32,mb2.9/6,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	**0.78**	**328**	P	**Pn**	**09 47 49.4**	**-1.8**
TTO2	**TONANKAI O.B.S**	**0.90**	**306**	P	**Pn**	**09 47 49.1**	**-2.2**
TTO1	**TONANKAI O.B.S**	**1.02**	**295**	P	**Pn**	**09 47 49.1**	**-2.7**
JIE	**Ise**	**1.55**	**320**	P	**Pn**	**09 47 51.8**	**-2.5**
JHJ	**Hachijo jima 2**	**1.58**	**92**	P	**Pn**	**09 47 52.7**	**-1.9**
	14nm,0.3s,baz=94,slow=24,SNR=9.6						
JHJ				S	**S**	**09 48 38.1**	**+0.2**
	9.0nm,0.3s,baz=30,slow=16,SNR=1.9						
JKN2	**Miekihoku**	**1.70**	**308**	P	**Pn**	**09 47 52.1**	**-3.1**
JTNC	**Tanabenakahech**	**2.01**	**289**	P	**Pn**	**09 47 53.3**	**-3.7**
JWY	**Kouya**	**2.17**	**298**	P	**Pn**	**09 47 55.1**	**-3.0**
JOD2	**Odawara 2**	**2.28**	**25**	P	**Pn**	**09 47 58.0**	**-0.8**
BSO3	**Boso 3**	**2.69**	**53**	P	**Pn**	**09 47 59.9**	**-1.5**
BSO3				*e*S	**S**	**09 48 48.0**	**-2.4**
JHU	**Hanno**	**2.88**	**23**	P	**Pn**	**09 48 02.6**	**-0.6**
JRY	**Ryogami san**	**2.93**	**16**	P	**Pn**	**09 48 03.4**	**-0.2**
JRY				*e*S	**S**	**09 48 54.7**	**+0.4**
JWT	**Wachi**	**2.93**	**316**	P	**Pn**	**09 48 01.2**	**-2.4**
JAI	**Aioi**	**2.94**	**283**	P	**Pn**	**09 48 00.0**	**-3.7**
BSO1	**Boso 1**	**2.94**	**60**	P	**Pn**	**09 48 01.9**	**-1.1**
BSO1				*e*S	**S**	**09 48 50.2**	**-3.2**
MJAR	**Matsushiro Arr**	**3.34**	**4**	P	**Pn**	**09 48 06.1**	**-0.9**
	0.1nm,0.3s,baz=178,slow=9.7,SNR=12						
MAT	**Matsushiro**	**3.34**	**4**	P	**Pn**	**09 48 06.7**	**-0.3**
JAG	**Ashikaga**	**3.46**	**21**	P	**Pn**	**09 48 06.8**	**-1.3**
JAG				S	**S**	**09 48 58.3**	**-4.2**
JYT	**Yasato**	**3.56**	**31**	P	**Pn**	**09 48 07.7**	**-1.2**
JYT				S	**S**	**09 48 59.8**	**-4.3**
JHO	**Hitachi**	**4.05**	**32**	P	**Pn**	**09 48 12.5**	**-1.0**
JHO				S	**S**	**09 49 07.9**	**-4.4**
KSRS	**Korea Array**	**9.19**	**300**	P	**Pn**	**09 49 08.9**	**-0.6**
	0.3nm,0.3s,baz=116,slow=9.2,SNR=6.6						
USRK	**Ussuriysk Ar.**	**11.91**	**339**	P	**Pn**	**09 49 42.3**	**+1.3**
	baz=143,slow=10,SNR=9.7						
SONM	**Songino Array**	**27.82**	**311**	P	**P**	**09 52 19.1**	**+3.5**
	0.4nm,0.6s,baz=122,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**43.83**	**305**	P	**P**	**09 54 31.0**	**+1.6**
	0.4nm,0.4s,baz=87,slow=9.9,SNR=11						
WRA	**Warramunga Arr**	**52.95**	**184**	P	**P**	**09 55 39.6**	**+1.3**
	0.2nm,0.3s,baz=359,slow=7.6,SNR=2.5						
ILAR	**Eielson Array**	**54.26**	**31**	P	P	09 55 51.7	+4.6
	0.4nm,0.8s,baz=259,slow=5.4,SNR=5.7						
ASAR	**Alice Springs**	**56.68**	**184**	P	P	09 56 07.8	+3.2
	0.1nm,0.5s,baz=19,slow=11,SNR=4.3						
YKA	**Yellowknife Ar**	**68.55**	**28**	P	P	09 57 26.6	+5.0
	0.2nm,0.4s,baz=305,slow=5.1,SNR=5.0						

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*PRU **02** 09:56:39.1±0.0,44°.60N×16°.74E,h0^{km}*
*RHSSO **02** 09:56:40.8±0.3,44°.62N×16°.69E,h4^{km}±2^{km},ML2.7/13*
*BEO **02** 09:56:40.6±0.2,44°.66N×16°.67E,h0^{km},ML2.6/13*
ISC 02 09:56:39.7±1.0,44°.58N±0°.02×16°.75E±0°.02,h8^{km}±9^{km}, n72,σ1^{s}.27/121,2C-1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.35**	**62**	*e*Pg	**Pg**	**09 56 46.7**	**+0.1**
BLY				*e*Sg	**Sb**	**09 56 52.5**	**-1.5**
BLY	**Banja Luka**	**0.35**	**62**	⇓*i*Pg	**Pg**	**09 56 46.6**	**0.0**
BLY				*e*Sg	**Sb**	**09 56 52.7**	**-1.3**
PRIJ	**Prijedor**	**0.39**	**357**	*e*Pg	**Pg**	**09 56 47.6**	**+0.2**
PRIJ				*e*Sg	**Sg**	**09 56 52.9**	**+0.3**
KIJV	**Kijevo**	**0.63**	**203**	*e*Pg	**Pg**	**09 56 50.4**	**-1.5**
KIJV				Sg	**Sg**	**09 56 59.5**	**-0.5**
UDBI	**Udbina**	**0.71**	**266**	*e*Pg	**Pg**	**09 56 51.6**	**-1.7**
UDBI				Sg	**Sg**	**09 57 01.5**	**-1.0**
MORI	**Morici**	**1.04**	**227**	*e*Pg	**Pg**	**09 56 58.1**	**-1.5**
MORI				Sg	**Sg**	**09 57 12.6**	**-0.4**
ZIRJ	**Zirje**	**1.22**	**221**	*e*Pg	**Pn**	**09 57 01.0**	**-2.1**
ZIRJ				Sg	**Sb**	**09 57 19.2**	**+0.2**
MAKA	**Makarska**	**1.31**	**171**	*e*Pn	**Pn**	**09 57 02.6**	**-1.7**
MAKA				Sg	**Sn**	**09 57 22.6**	**+0.7**
NVLJ	**Novalja**	**1.34**	**270**	*e*Pn	**Pn**	**09 57 03.1**	**-1.6**
NVLJ				Sg	**Sb**	**09 57 22.9**	**+0.4**
DUGI	**Dugi Otok**	**1.35**	**245**	*e*Pn	**Pn**	**09 57 03.6**	**-1.3**
DUGI				Sg	**Sb**	**09 57 23.4**	**+0.7**
ZAG	**Zagreb**	**1.35**	**337**	*e*Pn	**Pn**	**09 57 05.1**	**+0.1**
ZAG				Sg	**Sg**	**09 57 24.3**	**+1.0**
ZAG	**Zagreb**	**1.35**	**337**	⇑*i*Pg	**Pn**	**09 57 05.0**	**+0.1**
ZAG				*e*Sg	**Sb**	**09 57 22.1**	**-0.7**
OZLJ	**Ozalj**	**1.37**	**319**	*e*Pn	**Pn**	**09 57 04.9**	**-0.3**
OZLJ				Sg	**Sg**	**09 57 24.0**	**+0.2**
BOJS	**Bojanci**	**1.40**	**311**	*e*Pg	**Pn**	**09 57 04.7**	**-0.9**
BOJS				*e*Sg	**Sn**	**09 57 22.6**	**-1.7**
BOJS	**Bojanci**	**1.40**	**311**	*i* Pn	**Pn**	**09 57 04.5**	**-1.2**
BOJS				*i*		09 57 05.6	
BOJS				IAML		09 57 26.0	
	comp=Z,88nm,0.5s						
HVAR	**Hvar**	**1.42**	**189**	*e*Pn	**Pn**	**09 57 06.5**	**+0.7**
HVAR				Sg	**Sg**	**09 57 26.9**	**+1.5**
PTJ	**Puntijarka**	**1.43**	**338**	*e*Pn	**Pb**	**09 57 06.6**	**-0.1**
PTJ				Sg	**Sg**	**09 57 26.3**	**+0.5**
GCIS	**Gornji Cirnik**	**1.51**	**329**	*i* Pn	**Pn**	**09 57 06.5**	**-0.6**
GCIS				*e*Sn	**Sb**	**09 57 27.5**	**+0.3**
CRES	**Cresnjev**	**1.54**	**324**	*e*Pn	**Pn**	**09 57 07.2**	**-0.3**
CRES	**Cresnjev**	**1.54**	**324**	*e*Pg	**Pn**	**09 57 07.1**	**-0.4**
CRES				*e*Sg	**Sb**	**09 57 28.5**	**+0.3**
KALN	**Kalnik**	**1.56**	**353**	*e*Pn	**Pn**	**09 57 07.0**	**-0.8**
KALN				Sn	**Sg**	**09 57 29.6**	**-0.3**
HAPS	**Han Pijesak,Bl**	**1.66**	**107**	*e*Pn	**Pg**	**09 57 11.2**	**-0.3**
HAPS	**Han Pijesak,Bl**	**1.66**	**107**	*e*Pn	**Pb**	**09 57 11.0**	**+0.4**
HAPS				*e*Sn	**Sg**	**09 57 33.6**	**+0.6**
LEGS	**Legarje**	**1.70**	**324**	*i* Pn	**Pn**	**09 57 09.2**	**-0.4**
RIY	**Rijeka**	**1.77**	**296**	*e*Pn	**Pn**	**09 57 11.5**	**+0.8**
RIY				*e*Sg	**Sn**	**09 57 34.3**	**+0.9**
RIY	**Rijeka**	**1.77**	**296**	*e*Pn	**Pn**	**09 57 11.5**	**+0.8**
RIY				*e*Sn	**Sn**	**09 57 33.3**	**-0.1**
VISS	**Visnje**	**1.82**	**313**	*i* Pn	**Pn**	**09 57 11.3**	**0.0**
VISS				*i*		09 57 12.8	
VISS				IAML		09 57 41.8	
	comp=Z,43nm,0.5s						
STON	**Ston**	**1.85**	**158**	*e*Pn	**Pb**	**09 57 13.7**	**0.0**
STON				*e*Sn	**Sg**	**09 57 39.7**	**+0.7**
STON	**Ston**	**1.85**	**158**	*e*Pn	**Pb**	**09 57 13.7**	**0.0**
STON				Sn	**Sg**	**09 57 39.5**	**+0.5**
STON	**Ston**	**1.85**	**158**	*e*Pn	**Pb**	**09 57 13.6**	**-0.1**
STON				*e*Sn	**Sb**	**09 57 38.0**	**+1.1**
BEHE	**Becsehely**	**1.89**	**1**	*e*PN	**Pb**	**09 57 14.6**	**+0.2**
BEHE				*e*SN	**Sg**	**09 57 46.0**	**+5.6**
BEHE	**Becsehely**	**1.89**	**1**	*e*Pn	**Pn**	**09 57 12.5**	**+0.2**
BEHE				*e*Sn	**Sb**	**09 57 37.4**	**-0.8**
PDKS	**Podkum**	**1.93**	**321**	*i* Pn	**Pn**	**09 57 12.6**	**-0.2**
TEKS	**Tekeris**	**1.99**	**90**	*e*Pn	**Pb**	**09 57 15.5**	**-0.6**
TEKS				*e*Sn	**Sb**	**09 57 41.8**	**+0.7**
CEY	**Cerknica**	**2.01**	**306**	*e*Pn	**Pn**	**09 57 14.0**	**0.0**
CEY				*e*Sg	**Sb**	**09 57 41.1**	**-0.6**
CEY	**Cerknica**	**2.01**	**306**	⇑*i*Pn	**Pn**	**09 57 13.9**	**0.0**
CEY				*e*Sn	**Sn**	**09 57 39.6**	**+0.3**
BBLS	**Lazići**	**2.04**	**110**	*e*Pn	**Pb**	**09 57 17.3**	**+0.2**
BBLS				*e*Sn	**Sg**	**09 57 45.8**	**+0.5**
BBLS	**Lazići**	**2.04**	**110**	*e*Pn	**Pb**	**09 57 15.9**	**-1.2**
BBLS				*e*Sn	**Sb**	**09 57 43.3**	**+0.7**
BRY	**Bratogost**	**2.12**	**142**	*e*Pn	**Pb**	**09 57 18.6**	**+0.1**
BRY				*e*Sn	**Sb**	**09 57 44.6**	**-0.5**
LJU	**Ljubljana**	**2.14**	**314**	*e*Pn	**Pn**	**09 57 15.6**	**-0.2**
LJU	**Ljubljana**	**2.14**	**314**	*e*Pn	**Pn**	**09 57 16.8**	**+1.0**
LJU				*e*Sn	**Sn**	**09 57 42.4**	**-0.2**
SKDS	**Skadanscina**	**2.16**	**297**	*e*Pn	**Pn**	**09 57 17.6**	**+1.5**
TREB	**Trebinje**	**2.20**	**148**	*e*Pn	**Pb**	**09 57 19.6**	**-0.1**
TREB				*e*Sn	**Sb**	**09 57 48.3**	**+1.2**
TREB	**Trebinje**	**2.20**	**148**	*e*Pn	**Pb**	**09 57 19.6**	**-0.1**
TREB				*e*Sn	**Sb**	**09 57 47.1**	**0.0**
FRGS	**Fruska Gora**	**2.25**	**74**	*e*Pn	**Pb**	**09 57 19.9**	**-0.7**
FRGS				*e*Sn	**Sb**	**09 57 47.6**	**-1.1**
DIVS	**Divibare**	**2.38**	**101**	*e*Pn	**Pb**	**09 57 21.7**	**-1.1**
DIVS				*e*Sn	**Sg**	**09 57 54.2**	**-1.9**
DIVS	**Divibare**	**2.38**	**101**	*e*Pn	**Pb**	**09 57 21.6**	**-1.2**
DIVS				*e*Sn	**Sb**	**09 57 51.3**	**-1.0**
SOKA	**Soboth**	**2.42**	**331**	*e*Pn	**Pn**	**09 57 19.3**	**-0.3**
	comp=Z,1.7nm,0.2s,SNR=6.9						
OBKA	**Obir**	**2.47**	**322**	*e*Pn	**Pb**	**09 57 25.4**	**+1.0**
	comp=Z,6.6nm,0.3s						
OBKA				*e*Sn	**Sg**	**09 57 58.2**	**-0.8**
	comp=Z,18nm,0.6s						
IVAS	**Ivanjica**	**2.65**	**111**	*e*Pn	**Pb**	**09 57 26.4**	**-1.1**
SJES	**Sjenica**	**2.68**	**118**	*e*Pn	**Pn**	**09 57 25.7**	**+2.4**
SJES	**Sjenica**	**2.68**	**118**	*e*Pn	**Pn**	**09 57 25.5**	**+2.2**
ARSA	**Arzberg**	**2.80**	**343**	*e*Pn	**Pn**	**09 57 24.5**	**-0.4**
ARSA	**Arzberg**	**2.80**	**343**	*i* Pn	**Pn**	**09 57 24.9**	**0.0**
	comp=Z,4.9nm,0.4s,SNR=7.9						
PDG	**Podgorica**	**2.82**	**139**	*e*Pn	**Pn**	**09 57 27.1**	**+2.0**
PDG				*e*Sn	**Sb**	**09 58 03.7**	**-1.3**
GRUS	**Gruza**	**2.94**	**102**	*e*Pn	**Pb**	**09 57 29.8**	**-2.5**
DRME	**Dracevica, Mon**	**2.98**	**143**	*e*Pn	**Pn**	**09 57 30.3**	**+3.0**
DRME				*e*Sn	**Sn**	**09 58 05.6**	**+2.3**
MYKA	**Terra Mystica**	**2.99**	**314**	*e*Pn	**Pn**	**09 57 30.3**	**+2.8**
	comp=Z,2.7nm,0.4s						
CONA	**Conrad Observa**	**3.40**	**350**	*i* Pn	**Pn**	**09 57 33.4**	**+0.3**
	comp=Z,6.2nm,0.6s,SNR=9.3						
ZST	**Bratislava**	**3.62**	**4**	*e*PN	**Pn**	**09 57 35.7**	**-0.4**
ZST				*e*SN	**Sn**	**09 58 18.0**	**-1.0**
ABTA	**Abfaltersbach**	**3.67**	**308**	*e*Pn	**Pn**	**09 57 38.6**	**+1.7**
	comp=Z,0.4nm,0.2s						
ABTA				*e*Sn	**Sn**	**09 58 21.1**	**+0.7**
	comp=Z,2.6nm,0.5s						
MOA	**Molln**	**3.69**	**333**	*i* Pn	**Pn**	**09 57 38.0**	**+0.9**
	comp=Z,2.8nm,0.2s,SNR=9.4						
MOA				*i* Sn	**Sn**	**09 58 21.3**	**+0.5**
	comp=Z,1.9nm,0.3s						
MODS	**Modra-Piesok**	**3.81**	**5**	*e*PN	**Pn**	**09 57 37.9**	**-0.8**
MODS				*e*SN	**Sn**	**09 58 20.0**	**-3.7**
SMOL	**Smolenice**	**3.96**	**7**	*e*PN	**Pn**	**09 57 40.7**	**-0.1**
SMOL				*e*SN	**Sn**	**09 58 26.9**	**-0.5**
VYHS	**Vyhne**	**4.17**	**19**	*e*PN	**Pn**	**09 57 43.7**	**+0.1**
VYHS				*e*SN	**Sn**	**09 58 30.5**	**-2.0**
WTTA	**Wattenberg**	**4.46**	**309**	*e*Pn	**Pn**	**09 57 50.2**	**+2.4**
	comp=Z,1.4nm,0.2s						
KRUC	**Moravsky**	**4.49**	**357**	*e*PN	**Pn**	**09 57 47.8**	**-0.2**
WATA	**Walderalm**	**4.54**	**309**	*i* Pn	**Pn**	**09 57 50.2**	**+1.4**
	comp=Z,0.8nm,0.2s						
SQTA	**Sankt Quirin**	**4.68**	**306**	*e*Pn	**Pn**	**09 57 53.0**	**+2.3**
	comp=Z,0.7nm,0.2s						
VRAC	**Vranov**	**4.73**	**359**	*e*PN	**Pn**	**09 57 51.2**	**-0.1**
FETA	**Feichten**	**4.86**	**302**	*e*Pg	**Pb**	**09 58 08.0**	**+2.8**
	comp=Z,2.4nm,0.5s						
KHC	**Kasperske Hory**	**5.04**	**336**	*e*PN	**Pn**	**09 57 55.5**	**-0.1**
KHC				*e*SN	**Sn**	**09 58 52.3**	**-1.8**

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*IDC **02** 10:06:18.3±0.5,40°.89S×91°.82W,h0^{km},mb4.2/11, mb1 4.4/12,mb1mx4.2/34,mbtmp4.2/12,ML3.7/1,MS4.3/11, Ms1 4.3/11,ms1mx4.0/26,Error ellipse: s-maj=24.2km s-min=18.4km az=83.0*
*NEIC **02** 10:06:20.6±1.3,40°.90S±0°.10×91°.8W±0°.1,h10^{km}±1^{km}, mb4.6/32,Error ellipse: s-maj=21.1km s-min=11.3km az=311.0*
*GCMT **02** 10:06:21.6±0.3,40°.75S±0°.03×91°.72W±0°.02,h15^{km}±1^{km}, MW5.0/92,Moment Tensor Solution. s39,c44; s92,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.33±.21; $M_{\theta\theta}$-0.61±.12; $M_{\phi\phi}$3.94±.15; $M_{r\theta}$2.06±.35; $M_{\theta\phi}$-0.18±.09; $M_{\phi r}$0.04±.23; Best double couple: $M_0$4.19400×10^{16} NP1:ϕ_s203.00000°,δ51.00000°,λ-52.00000°. NP2: ϕ_s332.00000°,δ52.00000°,λ-127.00000°. Principal axes: T 3.9470, Plg0.0000°, Azm88.0000°; N 0.4940, Plg28.0000°, Azm357.0000°; P -4.4400, Plg62.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 10:06:20.2±0.5,40°.85S±0°.08×91°.79W±0°.09,h10^{km},n84, σ0^{s}.99/68,mb4.4/19,MS4.4/12,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**12.39**	**60**	T	T	10 22 08.4	
	baz=231,slow=73,SNR=538						
H03S1	**Juan Fernandez**	**12.40**	**60**	T	T	10 22 11.1	
	baz=231,slow=73,SNR=477						
H03S3	**Juan Fernandez**	**12.41**	**60**	T	T	10 22 10.0	
	baz=231,slow=73,SNR=533						
H03N3	**Juan Fernandez**	**12.63**	**58**	T	T	10 22 25.5	
	baz=232,slow=71,SNR=1977						
H03N2	**Juan Fernandez**	**12.64**	**58**	T	T	10 22 28.9	
	baz=232,slow=71,SNR=2085						
H03N1	**Juan Fernandez**	**12.65**	**58**	T	T	10 22 29.9	
	baz=232,slow=71,SNR=1713						
LL01	**San Ignacio de**	**14.58**	**102**		**Pn**	**10 09 47.1**	**+0.5**
BI03	**Tigo**	**15.16**	**81**		**Pn**	**10 09 54.6**	**+0.2**
LC01	**Cunco**	**15.42**	**89**	Pn	**Pn**	**10 09 58.7**	**+0.9**
LC01				IAmb	IAmb	10 10 12.6	
	comp=Z,34nm,1.3s						
PLCA	**Paso Flores**	**16.09**	**97**	Pn	**Pn**	**10 10 07.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=280,slow=13,SNR=7.4						
PLCA				LR	LR	10 14 51.0	
	comp=Z,2µm,20.3s,baz=276,slow=32						
PLCA	**Paso Flores**	**16.09**	**97**		**Pn**	**10 10 06.2**	**-0.4**
PLCA				IAmb	IAmb	10 10 14.1	
	comp=Z,33nm,1.3s						
GO09	**Cerro Castillo**	**17.00**	**134**		**P**	**10 10 21.1**	**+1.2**
GO09				IAmb	IAmb	10 10 25.4	
	comp=Z,48nm,1.2s						
MT05	**Renca**	**18.34**	**73**	P	**P**	**10 10 35.5**	**+0.7**
MT05				IAmb	IAmb	10 10 40.0	
	comp=Z,88nm,1.2s						
VA03	**San Esteban**	**18.80**	**71**	P	**P**	**10 10 40.1**	**+0.2**
VA03				IAmb	IAmb	10 10 48.5	
	comp=Z,57nm,1.2s						
CO02	**Combarbal**	**19.34**	**67**	P	**Pn**	**10 10 46.9**	**0.0**
CO02				IAmb	IAmb	10 10 50.2	
	comp=Z,68nm,1.2s						
RPN	**Rapa Nui**	**19.92**	**308**	LR	LR	10 16 24.5	
	comp=Z,986nm,19.2s,baz=123,slow=30						
CO01	**Juntas del Tor**	**20.69**	**65**	P	**P**	**10 11 01.7**	**+0.9**
ZON	**Zonda**	**20.79**	**71**	P	**P**	**10 11 02.3**	**+0.7**
ZON				IAmb	IAmb	10 11 12.7	
	comp=Z,48nm,1.2s						
LCO	**Las Campanas**	**20.88**	**62**	P	**P**	**10 11 03.0**	**+0.2**
LCO				IAmb	IAmb	10 11 09.3	
	comp=Z,34nm,1.1s						
AC05	**El Transito**	**21.28**	**62**	P	**P**	**10 11 06.8**	**-0.2**
GO03	**Copiap**	**22.12**	**60**	P	**P**	**10 11 16.1**	**+0.2**
GO03				IAmb	IAmb	10 11 26.1	
	comp=Z,32nm,1.1s						
AC02	**Maricunga**	**23.36**	**60**	P	**P**	**10 11 29.5**	**+0.1**
AC02				IAmb	IAmb	10 11 46.3	
	comp=Z,12nm,1.2s						
GO02	**Mina Guanaco**	**24.22**	**57**		**P**	**10 11 37.6**	**+0.1**
GO02				IAmb	IAmb	10 11 48.8	
	comp=Z,17nm,1.1s						
LVC	**Limon Verde**	**26.51**	**54**	LR	LR	10 19 50.0	
	comp=Z,690nm,19.0s,baz=218,slow=31						
GO01	**Chusmiza**	**28.60**	**49**	P	**P**	**10 12 16.8**	**-0.4**
PMSA	**Palmer Station**	**28.79**	**156**	LR	LR	10 20 34.7	
	comp=Z,373nm,19.4s,baz=314,slow=30						
PB16	**IPOC Station P**	**29.49**	**47**	P	**P**	**10 12 24.6**	**-0.6**
PB16				IAmb	IAmb	10 12 39.4	
	comp=Z,11nm,1.2s						
CPUP	**Villa Florida**	**31.93**	**74**	P	**P**	**10 12 46.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=246,slow=16,SNR=4.2						
CPUP				LR	LR	10 24 11.2	
	comp=Z,528nm,20.9s,baz=247,slow=34						
SIV	**San Ignacio**	**36.33**	**56**	P	**P**	**10 13 25.6**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=270,slow=10,SNR=4.8						
SIV				PcP	**PcP**	**10 15 48.5**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=268,slow=4.3,SNR=5.3						
HOPE	**Hope Point**	**38.65**	**129**	P	**P**	**10 13 43.2**	**-0.3**
RKT	**Rikitea**	**40.21**	**283**	*e*LR	LR	10 24 57.8	
	comp=Z,855nm,25.8s						
SAML	**Samuel**	**40.65**	**47**	P	**P**	**10 14 01.0**	**+0.3**
OTAV	**Otavalo**	**42.66**	**20**	P	**P**	**10 14 18.7**	**+1.2**
OTAV				IAmb	IAmb	10 14 30.8	
	comp=Z,10.0nm,1.3s						
BELA	**Belgrano 2**	**43.63**	**165**	P	**P**	**10 14 24.5**	**+0.2**
BDFB	**Brasilia**	**45.39**	**69**	LR	LR	10 33 02.5	
	comp=Z,756nm,18.2s,baz=254,slow=35						
QSPA	**South Pole Qui**	**49.38**	**180**	P	**P**	**10 15 10.0**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=124,slow=0.7,SNR=14						
QSPA	**South Pole Qui**	**49.38**	**180**	P	**P**	**10 15 10.5**	**+0.8**
QSPA				IAmb	IAmb	10 15 12.9	
	comp=Z,9.3nm,1.2s						
VNA3	**Neumayer Olymp**	**49.45**	**155**	P	**P**	**10 15 10.3**	**+0.3**
VNA1	**Neumayer--Stat**	**50.00**	**154**	P	**P**	**10 15 14.8**	**+0.7**
VNA2	**Neumayer--Watz**	**50.23**	**155**	P	**P**	**10 15 16.3**	**+0.4**
	baz=274,slow=6.7						
SNAA	**Sanae**	**51.50**	**156**	P	**P**	**10 15 25.6**	**0.0**
SNAA	**Sanae**	**51.50**	**156**	P	**P**	**10 15 25.2**	**-0.4**
SDV	**Santo Domingo**	**53.20**	**26**	P	**P**	**10 15 38.6**	**-0.3**
TAOE	**Nuku Hiva Isla**	**53.29**	**293**	*e*LR	LR	10 30 59.6	
	comp=Z,548nm,25.9s						
VNDA	**Vanda**	**53.88**	**195**	P	**P**	**10 15 43.8**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=126,slow=7.6,SNR=3.7						
VNDA				LR	LR	10 34 28.5	
	comp=Z,104nm,20.0s,baz=123,slow=31						
VNDA	**Vanda**	**53.88**	**195**	P	**P**	**10 15 43.2**	**+0.3**
PPT2	**Papeete2**	**54.45**	**277**	*e*S	**S**	**10 23 28.7**	**+1.8**
	comp=Z,261nm,26.0s						
PPT2				*e*LR	LR	10 31 30.2	
	comp=Z,816nm,28.0s						
URZ	**Urewera**	**67.02**	**239**	LR	LR	10 39 00.1	
	comp=Z,312nm,21.4s,baz=210,slow=29						
RPZ	**Rata Peaks**	**67.66**	**231**	LR	LR	10 39 46.6	
	comp=Z,152nm,19.3s,baz=180,slow=30						
MAW	**Mawson**	**70.18**	**170**	P	**P**	**10 17 32.1**	**-0.5**

	comp=Z,2.6nm,0.9s,baz=242,slow=10,SNR=3.2						
MAW	Mawson	70.18	170	P	P	10 17 32.2	-0.3
TXAR	Lajitas Array	70.69	349	P	P	10 17 37.4	+1.1
	comp=Z,2.4nm,1.0s,baz=161,slow=8.0,SNR=13						
CASY	Casey	71.82	189	P	P	10 17 42.8	+0.2
CASY				IAmb	IAmb	10 17 52.2	
	comp=Z,7.1nm,1.3s						
ABTX	Abilene, Hawle	73.47	353	P	P	10 17 53.1	+0.5
MSTX	Muleshoe	75.14	351	P	P	10 18 02.7	+0.2
ANMO	Albuquerque	76.62	348	P	P	10 18 12.1	+1.1
	comp=Z,1.6nm,0.8s,baz=190,slow=7.4,SNR=7.5						
ANMO	Albuquerque	76.62	348	P	P	10 18 12.1	+1.1
X18A	Snowflake	76.85	345	P	P	10 18 14.0	+1.6
X18A				IAmb	IAmb	10 18 25.8	
	comp=Z,8.7nm,1.3s						
X16A	Lo Mia Camp, P	77.05	343	P	P	10 18 15.2	+1.7
X16A				IAmb	IAmb	10 18 24.3	
	comp=Z,5.2nm,0.9s						
PFO	Pinyon Flats O	77.51	339	P	P	10 18 17.8	+1.8
	comp=Z,1.0nm,0.8s,baz=108,slow=3.0,SNR=4.1						
MSVF	Nonsavu	78.74	256	LR	LR	10 47 53.6	
	comp=Z,144nm,18.1s,baz=144,slow=32						
NVAR	Mina Array Bea	82.54	339	P	P	10 18 41.4	-1.8
	comp=Z,2.0nm,0.9s,baz=166,slow=9.2,SNR=7.3						
ELK	Elko	83.96	342	P	P	10 18 50.8	+0.2
	comp=Z,1.8nm,0.9s,baz=192,slow=3.6,SNR=7.0						
DZM	Mont Dzumac	84.26	246	LR	LR	10 47 40.0	
	comp=Z,123nm,20.9s,baz=190,slow=30						
DZM	Mont Dzumac	84.26	246	*e*LR	LR	10 45 32.6	
	comp=Z,357nm,29.0s						
PDAR	Pinedale Array	84.77	347	P	P	10 18 54.9	+0.4
	comp=Z,4.3nm,0.9s,baz=163,slow=6.3,SNR=35						
DAVOX	Davos/Dischmat	125.36	56	PKP	PKPdf	10 25 20.6	-0.5
	comp=Z,2.4nm,0.8s,baz=355,slow=9.7,SNR=6.0						
GERES	GERESS Array B	128.54	54	PKP	PKPdf	10 25 24.9	-2.0
	comp=Z,1.4nm,0.8s,baz=140,slow=4.5,SNR=4.2						
KOPT	Kop Dagi	144.03	75	PKPdf	PKPbc	10 25 54.7	+0.7
GEVA	Gevas	145.40	79		PKPbc	10 25 57.5	-0.8
KBZ	Khabaz	146.67	70	PKPbc	PKPdf	10 25 59.5	-0.6
	comp=Z,4.2nm,0.8s,baz=230,slow=2.0,SNR=8.6						
YAK	Yakutsk	147.41	325	PKPbc	PKPdf	10 26 00.6	-0.1
	comp=Z,6.9nm,0.5s,baz=34,slow=2.0,SNR=6.2						
YAK	Yakutsk	147.41	325	PKPdf	PKPdf	10 26 02.2	+1.5
KLR	Kul'dur	148.48	300	PKPbc	PKPdf	10 26 04.5	+1.5
	comp=Z,4.2nm,1.1s,baz=35,slow=4.7,SNR=4.5						
KSRS	Korea Array	149.20	277	PKPbc	PKPbc	10 26 08.4	-0.3
	comp=Z,3.0nm,0.9s,baz=132,slow=1.9,SNR=5.3						
KIRV	Kirov	149.85	41	PKPbc	PKPbc	10 26 08.8	-0.8
	comp=Z,11nm,0.8s,baz=71,slow=5.3,SNR=5.5						
BELG	Belogornoye	150.22	53	PKPbc	PKPbc	10 26 10.1	-0.6
	comp=Z,66nm,0.9s,baz=175,slow=0.8,SNR=16						
CMAR	Chiang Mai Arr	155.85	206	PKP	PKPdf	10 26 14.8	0.0
	comp=Z,0.5nm,0.4s,baz=261,slow=3.3,SNR=6.5						
GEYT	Alibeck	156.62	87	PKP	PKPdf	10 26 14.4	-0.9
	comp=Z,0.4nm,0.3s,baz=3.9,slow=6.5,SNR=3.8						
GEYT				PKPab	PKPab	10 26 43.0	-1.5
	comp=Z,2.0nm,0.8s,baz=221,slow=8.2,SNR=4.9						
AKTO	Aktyubinsk	156.96	55	PKPab	PKPab	10 26 45.0	-0.6
	comp=Z,2.2nm,0.9s,baz=303,slow=6.7,SNR=4.4						
SONM	Songino Array	165.25	304	PKP	PKPdf	10 26 22.5	-1.9
	comp=Z,0.3nm,0.5s,baz=116,slow=3.4,SNR=3.6						
ZALV	Zalesovo Beam	166.70	9	PKP	PKPdf	10 26 22.6	-2.6
	comp=Z,1.9nm,1.0s,baz=336,slow=3.3,SNR=6.1						
KURBB	Kurchatov Arra	168.13	31	PKP	PKPdf	10 26 23.7	-2.6
	comp=Z,0.2nm,0.6s,baz=45,slow=4.7,SNR=4.1						
MKAR	Makanchi Array	172.68	34	PKP	PKPdf	10 26 27.9	-1.1
	comp=Z,0.5nm,1.1s,baz=282,slow=1.3,SNR=2.1						

IDC ***02*** *10:10:01.0±0.7, 6°.61N×60°.30E, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.7/61, mbtmp3.9/14, MS3.5/7, Ms1 3.5/7, ms1mx3.2/41, Error ellipse: s-maj=22.5km s-min=16.0km az=152.0*

NEIC ***02*** *10:10:01.9±1.8, 6°.58N±0°.04×60°.2E±0°.1, h10km±1km, mb4.2/16, Error ellipse: s-maj=20.2km s-min=7.7km az=95.0*

ISC 02 10:10:02.1±0.7**, 6°.6N**±0°.1×**60°.3E**±0°.1**, h10**km**, n35, σ1^{s}22**/30**, mb4.2**/21**, MS3.4**/5**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	8.37	312	Pn	Pn	10 12 07.1	+3.4
WSAR	Wadi Sarin	16.65	355	LR	LR	10 18 50.7	
	comp=Z,114nm,21.4s,baz=150,slow=32						
ATD	Arta Tunnel	17.93	287	LR	LR	10 19 43.4	
	comp=Z,99nm,19.7s,baz=66,slow=32						
UOSS	Minazif	18.69	348	P	P	10 14 19.9	-0.8
UOSS				IAmb	IAmb	10 14 23.8	
	comp=Z,30nm,1.3s						
RAYN	Ar Rayn	22.07	321	P	P	10 14 56.8	-0.6
RAYN				IAmb	IAmb	10 15 10.0	
	comp=Z,13nm,1.1s						
KMBO	Kilima Mbogo	24.25	252	P	P	10 15 21.7	+1.8
	comp=Z,3.0nm,0.5s,baz=48,slow=13,SNR=10						
OPO	Ambohidratompo	28.13	207	LR	LR	10 24 08.4	
	comp=Z,116nm,21.4s,baz=198,slow=30						
KBL	Kabul	28.98	15	P	P	10 16 02.9	+0.6
KBL				IAmb	IAmb	10 16 13.8	
	comp=Z,5.5nm,1.2s						
MBAR	Mbarara	30.36	258	P	P	10 16 14.1	-0.6
MBAR				IAmb	IAmb	10 16 37.1	
	comp=Z,2.6nm,0.7s						
GYA0B	ALIBECK ARRAY	31.28	357	P	P	10 16 20.5	-1.8
GYA0B				IAmb	IAmb	10 16 29.8	
	comp=Z,2.9nm,0.9s						
GNI	Garni	36.24	340	LR	LR	10 31 57.5	
	comp=Z,34nm,20.6s,baz=228,slow=36						
KK31	Karatay Array	37.48	12	P	P	10 17 16.6	+0.6
KKAR	Karatay Array	37.48	12	P	P	10 17 15.9	0.0
AAK	Ala-Archa	38.05	17	P	P	10 17 20.8	-0.2
AAK				IAmb	IAmb	10 17 31.2	
	comp=Z,4.7nm,0.9s						
PSI	Prapat	38.66	94	LR	LR	10 31 56.2	
	comp=Z,196nm,18.1s,baz=200,slow=34						
CMAR	Chiang Mai Arr	39.43	69	P	P	10 17 34.8	+2.1
	comp=Z,0.2nm,0.4s,baz=262,slow=9.0,SNR=5.5						
CMAR				LR	LR	10 32 14.5	
	comp=Z,38nm,20.5s,baz=270,slow=34						
MATP	Matopo	41.20	229	P	P	10 17 47.4	0.0
	comp=Z,2.4nm,0.9s,baz=27,slow=5.6,SNR=5.2						
ABKAR	Akbulak array	42.54	360	P	P	10 17 56.7	-1.2
MK31	Makanchi Array	44.31	22	P	P	10 18 13.0	+0.7
MKAR	Makanchi Array	44.31	22	P	P	10 18 11.6	-0.6
	comp=Z,0.9nm,0.9s,baz=188,slow=7.4,SNR=6.3						
KURBB	Kurchatov Arra	46.47	16	P	P	10 18 29.6	+0.4
	comp=Z,1.0nm,0.9s,baz=218,slow=8.1,SNR=3.0						
KURK	Kurchatov	46.58	16	P	P	10 18 30.0	-0.1
KURK				IAmb	IAmb	10 18 34.6	
	comp=Z,4.5nm,1.4s						
BOSA	Boshof	48.63	222	P	P	10 18 45.7	-0.8
	comp=Z,2.2nm,0.8s,baz=97,slow=9.8,SNR=3.6						
BOSA				LR	LR	10 37 27.9	
	comp=Z,81nm,20.1s,baz=28,slow=34						
TSUM	Tsumeb	49.26	238	P	P	10 18 49.8	-1.7
AKASG	Malin Array Be	51.04	335	P	P	10 19 03.2	-1.2
	comp=Z,0.4nm,0.5s,baz=120,slow=6.7,SNR=4.2						
ZAA0	Zalesovo Array	51.24	18	P	P	10 19 05.5	-0.3
ZAA0				IAmb	IAmb	10 19 14.3	
	comp=Z,3.7nm,1.1s						
ZALV	Zalesovo Beam	51.24	18	P	P	10 19 05.5	-0.3
	comp=Z,0.4nm,0.4s,baz=248,slow=7.4,SNR=4.9						
SUW	Suwalki	56.00	335	P	P	10 19 39.1	-1.6
SONM	Songino Array	56.75	35	P	P	10 19 46.9	+0.4
	comp=Z,1.0nm,0.8s,baz=239,slow=8.3,SNR=5.4						
TORD	Torodi Ar. Bea	58.01	281	P	P	10 19 57.0	+1.3
	comp=Z,0.8nm,0.8s,baz=100,slow=6.1,SNR=4.6						
SENIN	Lac Senin/Sane	60.27	320	P	P	10 20 09.7	-1.4
DBIC	Dimbokro	64.68	274	P	P	10 20 41.6	+0.7
	comp=Z,3.4nm,0.9s,baz=66,slow=9.7,SNR=4.5						
ESDC	Sonseca Array	66.10	310	P	P	10 20 50.0	+0.2
	comp=Z,1.0nm,0.8s,baz=87,slow=5.5,SNR=6.0						
WRA	Warramunga Arr	77.37	112	P	P	10 21 58.1	+0.2
	comp=Z,1.2nm,0.9s,baz=292,slow=5.0,SNR=5.3						
ASAR	Alice Springs	77.77	116	P	P	10 22 00.7	+0.6
	comp=Z,2.0nm,1.0s,baz=283,slow=5.2,SNR=11						

BJI ***02*** *10:15:32.0±0.0, 50°.90N×130°.20W, h10km, mB5.4/37, mb4.8/43, Ms5.4/35, Ms7 5.1/34*

IDC ***02*** *10:15:33.9±0.5, 50°.83N×130°.40W, h0km, mb4.5/33, mb1 4.7/41, mb1mx4.6/74, mbtmp4.6/41, ML4.2/6, MS4.7/33, Ms1 4.7/33, ms1mx4.6/36, Error ellipse: s-maj=13.1km s-min=7.9km az=43.0*

NEIC ***02*** *10:15:33.2, 50°.73N×130°.50W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.43; $M_{\theta\theta}$-6.21; $M_{\phi\phi}$8.98; $M_{r\theta}$-6.61; $M_{\theta\phi}$6.67; $M_{\phi r}$-4.95; Fault plane solution: $M_0$1.30000×10^{17} NP1:ϕ_s244.00000°, δ89.00000°, λ39.00000°. NP2:ϕ_s154.00000°, δ51.00000°, λ179.00000°. Principal axes: T 13.9525, Plg27.0000°, Azm116.0000°; N -2.0066, Plg51.0000°, Azm245.0000°; P -11.9460, Plg26.0000°, Azm12.0000°;*

MOS ***02*** *10:15:33.9±1.2, 50°.80N×130°.36W, h13km, mb5.3/47, MS5.0/18 Error ellipse: s-maj=9.1km s-min=4.4km az=110.1*

PGC ***02*** *10:15:33.2±0.4, 50°.73N×130°.50W, h10km, MLSn4.8/34, Mw5.4, 217km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

NEIC ***02*** *10:15:34.4±2.7, 50°.86N±0°.06×130°.37W±0°.09, h10km±1km, mb5.2/148, Ms_20 5.0/323, Mwc5.3(GCMT), Mwr5.4(OTT), Error ellipse: s-maj=13.0km s-min=6.4km az=221.0*

ANF ***02*** *10:15:35.4±0.2, 50°.93N×130°.19W, h0km, ML5.4/1, Error ellipse: s-maj=3.1km s-min=1.6km az=65.0*

GCMT ***02*** *10:15:36.2±0.1, 50°.73N±0°.01×130°.55W±0°.01, h12km, MW5.3/147, Moment Tensor Solution. s96,c160; s147,c279; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20±.01; $M_{\theta\theta}$-0.68±.01; $M_{\phi\phi}$0.87±.01; $M_{r\theta}$0.03±.04; $M_{\theta\phi}$0.80±.01; $M_{\phi r}$-0.35±.03; Best double couple: $M_0$1.16400×10^{17} NP1:ϕ_s248.00000°, δ73.00000°, λ0.00000°. NP2:ϕ_s158.00000°, δ90.00000°, λ163.00000°. Principal axes: T 1.2790, Plg12.0000°, Azm112.0000°; N -0.2300, Plg73.0000°, Azm338.0000°; P -1.0480, Plg12.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *10:15:37, 50°.76N×130°.57W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$1.00; $M_{r\theta}$0.22; $M_{\theta\phi}$0.90; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.30000×10^{17} NP1:ϕ_s338.00000°, δ80.00000°, λ-173.00000°. NP2:ϕ_s247.00000°, δ83.00000°, λ-10.00000°. Principal axes: T 1.3779, Plg2.0000°, Azm293.0000°; N -0.1783, Plg77.0000°, Azm33.0000°; P -1.1996, Plg12.0000°, Azm202.0000°;*

ISC 02 10:15:34.6±0.6**, 50°.97N**±0°.03×**130°.27W**±0°.03**, h1**km±3km**, n1071, σ1^{s}60**/951**, mb5.0**/150**, MS5.0**/208**, 22C-13D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	Hotspring	1.45	337	Pn	Pn	10 15 59.5	-2.4
HG4B				Sn	Sb	10 16 18.4	-2.8
HG4B	Hotspring	1.45	337	Pn	Pn	10 15 59.5	-2.4
HG4B				Sn	Sb	10 16 18.4	-2.8
BBB	Bella Bella	1.81	47	Pn	Pn	10 16 06.3	-0.5
	518nm,0.3s,baz=237,slow=11,SNR=908						
BBB				Sn	Sn	10 16 30.2	-0.3
	2μm,0.3s,baz=293,slow=22,SNR=19						
BBB				LR	LR	10 17 00.1	
	comp=Z,10μm,21.7s,baz=233,slow=44						
BBB	Bella Bella	1.81	47	Pn	Pn	10 16 06.4	-0.5
BBB				Sn	Sn	10 16 29.8	-0.7
BBB	Bella Bella	1.81	47		Pn	10 16 07.2	+0.4
PHC	Port Hardy	1.82	97	Pn	Pn	10 16 04.3	-2.6
PHC				Sn	Sn	10 16 27.4	-3.1
PHC	Port Hardy	1.82	97	Pn	Pn	10 16 04.3	-2.6
PHC				Sn	Sn	10 16 27.4	-3.1
FHRB	Fair Harbour	2.21	113	Pn	Pn	10 16 08.6	-3.8
FHRB	Fair Harbour	2.21	113	Pn	Pn	10 16 08.6	-3.8
TLCB	Telegraph Cove	2.22	100	Pn	Pn	10 16 10.4	-2.1
HG1B	Mitchell Dam	2.28	330	Pn	Pn	10 16 11.3	-2.0
HG1B				Sn	Sn	10 16 39.3	-2.7
EDB	Eliza Dome	2.29	117	Pn	Pn	10 16 09.9	-3.6
BUTB	Butedale	2.38	27	Pn	Pn	10 16 14.6	-0.1
BUTB				Sn	Sn	10 16 45.7	+1.2
MOBC	Moresby Island	2.42	335	Pn	Pn	10 16 13.4	-1.9
MOBC				Sn	Sn	10 16 43.7	-1.8
WOSB	Woss	2.49	108	Pn	Pn	10 16 13.4	-2.9
BNAB	Bonilla	2.54	355	Pn	Pn	10 16 15.8	-1.0
DIB	Dawson Inlet,	2.62	330	Pn	Pn	10 16 15.7	-2.2
DIB				Sn	Sn	10 16 47.9	-2.4
DIB	Dawson Inlet,	2.62	330	Pn	Pn	10 16 15.6	-2.3
NCRB	Newcastle Ridg	2.74	100	Pn	Pn	10 16 17.1	-2.6
ETB	Estevan Point	2.88	122	Pn	Pn	10 16 18.2	-3.3
GRNB	Grenville Isla	2.89	4	Pn	Pn	10 16 21.1	-0.6
GRNB				Sn	Sn	10 16 56.5	-0.5
GDR	Gold River	2.96	112	Pn	Pn	10 16 19.5	-3.2
CBB	Campbell River	3.27	105	Pn	Pn	10 16 25.0	-1.9
CBB				Sn	Sb	10 17 15.9	+2.3
TOFB	Tofino	3.35	121	Pn	Pn	10 16 24.3	-3.6
RUBB	Prince Rupert	3.36	0	Pn	Pn	10 16 28.4	+0.3
BTB	Buttle Lake	3.40	114	Pn	Pn	10 16 26.1	-2.8
BTB				Sn	Sg	10 17 21.6	-2.2
B012	Ucluelet	3.68	122	Pn	Pn	10 16 29.4	-3.1
OZB	Mount Ozzard	3.68	121	Pn	Pn	10 16 29.4	-3.2
B927	Port Alberni	3.93	114	Pn	Pn	10 16 33.8	-2.0
TXB	Texada	3.95	107	Pn	Pn	10 16 34.1	-2.1
MGB	Mount Grey	4.10	117	Pn	Pn	10 16 35.8	-2.7
MGB				Sn	Sg	10 17 47.5	+1.2
GHNB	Nanoose	4.22	111	Pn	Pn	10 16 37.8	-2.2
SHB	Sechelt	4.33	106	Pn	Pn	10 16 39.8	-1.7
SHB				Sn	Sb	10 17 47.5	+3.4
NLLB	Nanaimo Lost L	4.40	111	Pn	Pn	10 16 40.3	-2.2
NLLB				Sn	Sb	10 17 48.2	+1.9
B926	Mesachie Lake	4.51	116	Pn	Pn	10 16 42.0	-2.0
OCP	Olym-Cheeka Pk	4.54	124	Pn	Pn	10 16 42.7	-1.7
WPB	Watts Point	4.71	103	Pn	Pn	10 16 45.7	-1.0
BIB	Bowen Island	4.74	107	Pn	Pn	10 16 45.6	-1.5
WSLR	Whistler	4.76	97	Pn	Pn	10 16 46.9	-0.6
WSLR				Sn	Sb	10 17 56.9	+0.3
GOBB	Galiano Island	4.81	112	Pn	Pn	10 16 47.0	-1.0
CRAG	Craig	4.82	340	Pn	Pn	10 16 47.8	-0.4
B010	North Saanich	4.99	115	Pn	Pn	10 16 48.5	-2.0
PA02	PA02 Ocean	4.99	115	Pn	Pn	10 16 49.4	-1.1
PGC	Sidney	4.99	115	Pn	Pn	10 16 49.0	-1.4
PGC				Sn	Sg	10 18 09.1	-5.6
PGC	Sidney	4.99	115	Pn	Pn	10 16 48.2	-2.3
B009	North Saanich	4.99	115	Pn	Pn	10 16 49.0	-1.5
PA01	PA01 North	4.99	115	Pn	Pn	10 16 49.6	-0.9
B011	North Saanich	4.99	115	Pn	Pn	10 16 48.2	-2.3
OBC	Olympics--Boni	4.99	124	Pn	Pn	10 16 49.3	-1.4
PA12	PA12 Sannich	4.99	115	Pn	Pn	10 16 49.0	-1.5
SOKB	Sooke	5.00	118	Pn	Pn	10 16 48.4	-2.2
FSB	Fort Saint Jam	5.04	43	Pn	Pn	10 16 52.5	+1.3
STW	Striped Peak	5.14	121	Pn	Pn	10 16 51.1	-1.5
VGZ	Gonzales	5.18	117	Pn	Pn	10 16 51.5	-1.7
MCW	Mount Constitu	5.33	113	Pn	Pn	10 16 54.4	-0.9
LLLB	Lillooet	5.33	91	Pn	Pn	10 16 55.5	+0.2
LLLB				Sn	Sb	10 18 16.4	+3.3
A04D	Lummi Island	5.39	112	P	Pn	10 16 54.7	-1.2
	baz=298,SNR=49						
NLWA	Neilton Lookou	5.52	128		Pn	10 16 56.3	-1.5
WRAK	Wrangell Islan	5.60	348		Pn	10 16 59.4	+0.5
BLN	Blyn Mountain	5.60	119	Pn	Pn	10 16 57.5	-1.5
A05A	Maple Falls	5.64	107	Pn	Pn	10 16 59.3	-0.1
WISH	Wishkah	5.75	130	Pn	Pn	10 17 00.2	-0.9
HDW	Hoodsport	5.77	122	Pn	Pn	10 17 00.9	-0.5
D03D	Eldon	5.82	123	P	Pn	10 17 00.7	-1.3
	baz=309,SNR=53						
MBW	Mount Baker	5.84	109	Pn	Pn	10 17 02.0	-0.3
CMW	Cultus Mountai	5.87	113	Pn	Pn	10 17 02.6	-0.1
HOPB	Hope	5.90	102	Pn	Pn	10 17 02.3	-0.7
GNW	Green Mountain	5.95	122	Pn	Pn	10 17 02.4	-1.2
B05A	Bryant	5.96	114	P	Pn	10 17 02.4	-1.5
	baz=300,SNR=76						
JCW	Jim Creek	6.09	114	Pn	Pn	10 17 05.0	-0.7
CPW	Capitol Peak	6.17	128	Pn	Pn	10 17 05.8	-1.0
B06A	Marblemount	6.20	110	Pn	Pn	10 17 06.8	-0.4
B06A	Marblemount	6.20	110		Pn	10 17 06.5	-0.6
RPW	Rockport	6.21	111	Pn	Pn	10 17 06.9	-0.5
D04E	Lakebay	6.22	125	P	Pn	10 17 06.0	-1.4
	baz=311,SNR=19						
E03A	Lebam	6.26	132	Pn	Pn	10 17 06.7	-1.4
E03A	Lebam	6.26	132	Pn	Pn	10 17 06.8	-1.2
J28D	J28D	6.30	159	S	Sn	10 18 26.5	+6.0
J28D				P	Pn	10 17 13.1	+4.9
C05A	Tolt Reservoir	6.49	117	Pn	Pn	10 17 11.1	-0.1
GPW	Glacier Peak	6.59	112	Pn	Pn	10 17 12.8	0.0
D05A	Enumclaw	6.62	122	Pn	Pn	10 17 12.9	-0.1
D05A	Enumclaw	6.62	122	Pn	Pn	10 17 12.5	-0.5
J27D	J27D	6.68	155	S	Sn	10 18 32.9	+3.1
J27D				P	Pn	10 17 19.5	+6.1
E04D	Cinebar	6.74	128	P	Pn	10 17 13.8	-0.8
	baz=314,SNR=63						
SIT	Sitka	6.79	336	P	Pn	10 17 15.2	+0.1
SIT	Sitka	6.79	336	Pn	Pn	10 17 15.2	+0.1
C06D	Leavenworth	6.83	113	P	Pn	10 17 14.5	-1.3
	baz=300,SNR=7.7						
F04D	Rainier, OR	6.87	133	P	Pn	10 17 15.4	-0.8
	baz=318,SNR=20						
J20D	J20D	6.95	161	S	Sn	10 18 36.8	+0.4
J20D				P	Pn	10 17 21.9	+4.8
FMW	Mount Fremont	6.95	122	Pn	Pn	10 17 17.3	-0.4
BLBC	Blue River	6.97	77	Pn	Pn	10 17 19.6	+1.7
LON	Longmire	7.00	124	Pn	Pn	10 17 17.8	-0.4
LON	Longmire	7.00	124	P	Pn	10 17 17.6	-0.6
LON	Longmire	7.00	124		Pn	10 17 17.6	-0.6
BMBC	Bull Mountain	7.03	40	Pn	Pn	10 17 20.8	+2.2
PNT	Penticton	7.04	99	Pn	Pn	10 17 19.0	+0.2
J19D	J19D	7.31	157	S	Sn	10 18 47.8	+2.4
J19D				P	Pn	10 17 26.7	+4.6
LTY	Liberty	7.31	117	Pn	Pn	10 17 21.9	-0.6
LTY	Liberty	7.31	117		Pn	10 17 22.1	-0.4
G03D	McMinnville, O	7.43	138	P	Pn	10 17 23.8	-0.2
	baz=324,SNR=65						
G03D				S	Sn	10 18 49.0	+0.1
	baz=324						
NBC4	NorthernBC 4	7.44	47	Pn	Pn	10 17 26.1	+1.9
DLBC	Dease Lake	7.49	1	Pn	Pn	10 17 27.3	+2.5
	7.5nm,0.3s,baz=190,slow=12,SNR=61						
DLBC				Sn	Sn	10 18 54.0	+3.7
	7.9nm,0.3s,baz=328,slow=22,SNR=3.8						
DLBC				LR	LR	10 20 16.3	
	comp=Z,11μm,20.2s,baz=188,slow=37						
DLBC	Dease Lake	7.49	1	Pn	Pn	10 17 27.4	+2.6
DLBC	Dease Lake	7.49	1	Pn	Pn	10 17 27.7	+2.8
MNB	Mounoet Dainar	7.51	76	Pn	Pn	10 17 26.6	+1.3
B08A	Colville Reser	7.56	106	Pn	Pn	10 17 25.5	-0.4
B08A	Colville Reser	7.56	106	Pn	Pn	10 17 25.6	-0.4
SLEB	Sale Mountain	7.65	84	Pn	Pn	10 17 29.1	+1.9
JIS	Juneau Island	7.70	344		Pn	10 17 28.9	+1.2
F05D	White Salmon	7.76	128	P	Pn	10 17 28.1	-0.5
	baz=314,SNR=54						
J11D	J11D	7.89	159	S	Sn	10 18 59.7	+0.1
J11D				P	Pn	10 17 35.5	+5.5
COR	Corvallis	7.92	141	P	Pn	10 17 31.0	+0.2
COR	Corvallis	7.92	141	Pn	Pn	10 17 31.0	+0.2
NBC5	NorthernBC 5	7.92	31	Pn	Pn	10 17 33.5	+2.6
BESE	Bessie Mountai	8.07	343	Pn	Pn	10 17 34.2	+1.3
I02D	Swisshome	8.12	145	P	Pn	10 17 33.6	0.0
	baz=330						
I02D				S	Sn	10 19 06.5	+0.6
	baz=330						
E07A	Sunnyside	8.17	119		Pn	10 17 33.7	-0.5
H04D	Lebanon	8.20	139	P	Pn	10 17 34.1	-0.5
	baz=325,SNR=22						
H04D				S	Sn	10 19 10.8	+2.8
	baz=325						
G05D	Wamic, OR	8.29	130	P	Pn	10 17 35.9	+0.1
	baz=317,SNR=66						
H04A	Detroit Lake	8.31	136	Pn	Pn	10 17 35.5	-0.7
D08A	Wollman Farm,	8.42	113	Pn	Pn	10 17 36.6	-1.1
C09A	Chrisman Ranch	8.44	107	Pn	Pn	10 17 38.1	+0.1
C09A	Chrisman Ranch	8.44	107	Pn	Pn	10 17 37.7	-0.3
HAWA	Hanford	8.45	119	Pn	Pn	10 17 36.5	-1.5
F07A	Phinny Hill Vi	8.54	122	Pn	Pn	10 17 39.2	-0.1
G37D	G37D	8.59	165	S	Sn	10 19 21.4	+4.6
E08A	Dider Farm, El	8.66	117		Pn	10 17 39.4	-1.5
I03D	Drain, OR	8.66	145	P	Pn	10 17 41.0	+0.1
	baz=330,SNR=32						
I03D				S	Sn	10 19 16.4	-2.6
	baz=330						
G36D	G36D	8.82	164	S	Sn	10 19 32.0	+10
G35D	G35D	8.82	161	S	Sn	10 19 25.9	+3.2
G35D				P	Pn	10 17 45.8	+3.0
J01E	Myrtle Point	8.93	149	P	Pn	10 17 45.1	+0.6
	baz=334,SNR=8.7						
J01E				S	Sn	10 19 23.1	-2.5
	baz=334						
I04A	Tendick Farm,	8.94	140	P	Pn	10 17 44.4	-0.3
	baz=327,SNR=12						
I04A				S	Sn	10 19 25.1	-0.9
	baz=327						
G29D	G29D	8.95	167	S	Sn	10 19 33.6	+8.0
NEW	Newport	8.96	103	Pn	Pn	10 17 44.5	-0.5
	1.3nm,0.3s,baz=286,slow=9.4,SNR=20						
NEW				LR	LR	10 21 09.2	
	comp=Z,16μm,18.7s,baz=294,slow=37						
NEW	Newport	8.96	103	P	Pn	10 17 44.9	-0.1
NEW	Newport	8.96	103		Pn	10 17 44.9	-0.1
I05D	Terrebonne, OR	8.96	134	P	Pn	10 17 44.6	-0.5
	baz=321,SNR=16						
FNBB	Fort Nelson	8.96	25	Pn	Pn	10 17 47.0	+1.9
SKAG	Skagway	8.98	343		Pn	10 17 46.6	+1.3
KEBM	Edson Butte	9.06	151		Pn	10 17 44.9	-1.6
G33D	G33D	9.11	154	S	Sn	10 20 03.1	+33
E09A	Wood Farm, Sta	9.16	114		Pn	10 17 46.7	-1.1
PLBC	Pleasant Camp	9.19	340	Pn	Pn	10 17 49.1	+1.0
K02D	Willamette Mer	9.43	149	P	Pn	10 17 52.2	+0.7
	baz=334,SNR=23						
K02D				S	Sn	10 19 36.3	-1.9
	baz=334						
G08A	Pilot Rock	9.45	123		Pn	10 17 52.0	+0.1
J04D	Umpqua Nationa	9.52	141	P	Pn	10 17 53.4	+0.5
	baz=328,SNR=46						
PINE	Pine Mountain	9.56	135		Pn	10 17 52.8	-0.7
G22D	G22D	9.66	170	S	Sn	10 19 48.4	+5.2
KBO	Bosley Butte	9.69	152		Pn	10 17 54.0	-1.2
HUMO	Hull Mountain	9.75	146		Pn	10 17 56.0	+0.2
G20D	G20D	9.81	165	S	Sn	10 19 56.7	+10
J05D	Fort Rock, OR	9.84	138	P	Pn	10 17 57.5	+0.2
	baz=325,SNR=41						
NBC2	NorthernBC 2	9.87	24	Pn	Pn	10 18 00.7	+3.3
L02E	Cave Junction	9.93	150	P	Pn	10 17 59.5	+1.1
	baz=335,SNR=35						
L02E				S	Sn	10 19 49.5	-1.0
	baz=335						
F10A	Beach Ranch, E	10.00	115	Pn	Pn	10 17 57.8	-1.6
G21D	G21D	10.04	168	S	Sn	10 20 04.7	+12
M16D	M16D	10.04	156	S	Sn	10 20 10.3	+17
WHY	Whitehorse	10.05	347	Pn	Pn	10 18 01.4	+1.4
WHY	Whitehorse	10.05	347		Pn	10 18 02.4	+2.4
PRDA	Priddis	10.09	84	Pn	Pn	10 18 03.2	+2.6
K04D	Chiloquin, OR	10.18	142	P	Pn	10 18 02.6	+0.7
	baz=328,SNR=17						
L04D	Klamath Falls	10.32	145	P	Pn	10 18 04.8	+1.0
	baz=331,SNR=35						
G13D	G13D	10.35	170	S	Sn	10 20 08.1	+8.1
G13D				P	Pn	10 18 18.6	+15
KRMB	Red Mountain	10.42	153		Pn	10 18 06.0	+0.9
K05A	Summer Lake	10.44	139		Pn	10 18 04.7	-0.8
YUK7	Dusty Glacier	10.55	338	Pn	Pn	10 18 09.6	+2.7
YBH	Yreka Blue Hor	10.61	148	Pn	Pn	10 18 08.4	+0.7
	0.4nm,0.3s,baz=333,slow=12,SNR=44						
YBH				LR	LR	10 21 36.8	
	comp=Z,7μm,19.7s,baz=331,slow=34						
BMO	Blue Mountains	10.63	120	P	Pn	10 18 06.8	-1.2
BMO	Blue Mountains	10.63	120	Pn	Pn	10 18 06.8	-1.2
EDM	Edmonton	10.65	71	Pn	Pn	10 18 11.8	+3.6
HYT	Haines Junctio	10.67	341		Pn	10 18 09.4	+0.9
G10D	G10D	10.70	160	S	Sn	10 20 20.5	+12
G10D				P	Pn	10 18 22.5	+14
WALA	Waterton Lakes	10.70	94	Pn	Pn	10 18 07.4	-1.6
PCA	Pinnacle	10.74	332	Pn	Pn	10 18 11.1	+1.7
M02C	Callahan	10.87	149	P	Pn	10 18 13.0	+1.8
	baz=335,SNR=21						
M02C				S	Sn	10 20 14.1	+0.7
	baz=335						
M04C	Macdoel	10.87	144	P	Pn	10 18 12.0	+0.7
	baz=331,SNR=16						
JTMT	Jette	10.91	101	Pn	Pn	10 18 12.9	+1.0
JTMT	Jette	10.91	101		Pn	10 18 11.0	-0.9
FS44D	FS44D	10.92	157	S	Sn	10 20 25.0	+11
G05D7	G05D7	10.96	170	S	Sn	10 20 30.9	+16
G09D	G09D	11.00	157	S	Sn	10 20 25.5	+9.0
YUK5	Granite Creek	11.02	340	Pn	Pn	10 18 14.7	+1.3
JCC	Jacoby Creek,	11.04	154		Pn	10 18 12.9	-0.6
KHMM	Horse Mountain	11.07	153		Pn	10 18 14.8	+0.7
G04D	G04D	11.08	166	S	Sn	10 20 35.9	+18
FS16D	FS16D	11.12	158	S	Sn	10 20 33.9	+15
FS13D	FS13D	11.15	158	S	Sn	10 20 33.4	+14
FS09D	FS09D	11.20	158	S	Sn	10 20 35.4	+14
FS09D				P	Pn	10 18 27.3	+12
FS10D	FS10D	11.23	158	S	Sn	10 20 35.4	+13
RKAV	Rock Avalanche	11.23	331	Pn	Pn	10 18 18.3	+2.1

G03D7	G03D7	11.28	164	S	Sn	10 20 37.9	+15
N02D	Trinity Center	11.29	149	P	Pn	10 18 19.2	+2.2
	baz=335,SNR=26						
FS02D	FS02D	11.31	158	S	Sn	10 20 33.4	+10
MOD	Modoc Plateau	11.37	139	Pn	Pn	10 18 18.7	+0.5
YUK4	Talbot Arm	11.39	339	Pn	Pn	10 18 20.9	+2.5
MSO	Missoula	11.52	105	P	Pn	10 18 19.0	-1.1
	baz=297,SNR=105						
MSO	Missoula	11.52	105	Pn	Pn	10 18 19.9	-0.2
LOGN	Logan Glacier	11.55	333	Pn	Pn	10 18 22.1	+1.6
G01D	G01D	11.66	158	S	Sn	10 20 44.6	+12
WDC	Whiskeytown Da	11.70	150	P	Pn	10 18 23.5	+0.9
WDC	Whiskeytown Da	11.70	150	Pn	Pn	10 18 23.4	+0.9
CTGM	Chitina Glacie	11.76	333	Pn	Pn	10 18 25.1	+1.7
CTGM	Chitina Glacie	11.76	333	Pn	Pn	10 18 25.1	+1.7
ISLE	Juniper Island	11.78	330		Pn	10 18 24.6	+0.9
BARN	Barnard Glacie	11.93	332		Pn	10 18 27.6	+1.8
O02D	Mt. Diablo Mer	11.99	151	P	Pn	10 18 27.9	+1.3
	baz=337,SNR=32						
KIAG	Kiagna River	12.03	331	Pn	Pn	10 18 28.2	+1.0
BALM	Baldy	12.12	331	Pn	Pn	10 18 29.6	+1.4
BALM	Baldy	12.12	331		Pn	10 18 29.9	+1.6
YUK3	Moose Creek	12.19	337	Pn	Pn	10 18 30.4	+0.9
O03E	Paynes Creek	12.20	148	P	Pn	10 18 29.9	+0.5
	baz=334,SNR=14						
MFID	Camas Ranch	12.38	122	Pn	Pn	10 18 31.6	-0.4
MCARA	McCarthy VSAT	12.60	331		Pn	10 18 36.5	+1.9
VRDI	Verde Repeater	12.61	330		Pn	10 18 36.6	+1.5
HRY	Holter Researc	12.87	102	Pn	Pn	10 18 38.7	+0.2
HRY	Holter Researc	12.87	102		Pn	10 18 38.9	+0.4
GLB	Gilahina Butte	12.89	330	Pn	Pn	10 18 39.8	+1.1
LRM	Limekiln Ridge	12.90	107	Pn	Pn	10 18 39.3	+0.1
LRM	Limekiln Ridge	12.90	107	Pn	Pn	10 18 39.0	-0.2
DLMT	Dillon	13.05	109		Pn	10 18 40.7	-0.5
BCYI	Bear Canyon	13.16	114		Pn	10 18 42.6	-0.1
MCMT	McKenzie Canyo	13.19	111	Pn	Pn	10 18 43.3	+0.2
N25K	Chitina, Valde	13.26	329	P	Pn	10 18 45.4	+1.6
	baz=137,SNR=7.6						
N25K	Chitina, Valde	13.26	329		Pn	10 18 45.6	+1.7
DIV	Divide	13.32	326	Pn	Pn	10 18 45.9	+1.2
BOZ	Bozeman (W)	13.51	106	P	Pn	10 18 47.7	+0.3
BOZ	Bozeman (W)	13.51	106	P	Pn	10 18 47.1	-0.4
	baz=300,SNR=96						
BOZ	Bozeman (W)	13.51	106		Pn	10 18 47.7	+0.3
KLU	Klutina	13.63	327		Pn	10 18 50.0	+1.1
EGMT	Eagleton	13.65	94	P	Pn	10 18 49.6	+0.4
	baz=290,SNR=188						
EGMT	Eagleton	13.65	94	Pn	Pn	10 18 49.7	+0.4
VCNR	Virginia City	13.85	143		Pn	10 18 51.2	-1.0
RUBR	Rubicon Trail	13.88	145	Pn	Pn	10 18 51.2	-1.3
L26K	Log Cabin Wild	13.99	335	P	Pn	10 18 55.1	+1.4
	baz=144						
DAWY	Dawson	13.99	343	Pn	Pn	10 18 53.7	0.0
DAWY	Dawson	13.99	343		Pn	10 18 56.9	+3.2
PNTR	Pine Nut	14.05	144		Pn	10 18 55.0	+0.1
M24K	Tolsona, Glenn	14.14	328	P	Pn	10 18 56.7	+0.9
	baz=135						
YHL	Hebgen Lake	14.17	108		Pn	10 18 56.2	-0.4
YHB	Horse Butte	14.22	109		Pn	10 18 56.7	-0.4
YKA	Yellowknife Ar	14.34	30	Pn	Pn	10 18 58.1	-0.4
	2.2nm,0.3s,baz=216,slow=12,SNR=99						
YKA				LR	LR	10 24 51.1	
	comp=Z,5µm,20.9s,baz=0.0,slow=38						
SCM	Sheep Creek Mo	14.35	326	P	Pn	10 18 58.8	0.0
SCM	Sheep Creek Mo	14.35	326		Pn	10 18 58.8	0.0
YMR	Madison River	14.40	108		Pn	10 18 59.0	-0.7
YHH	Holmes Hill	14.40	108	Pn	Pn	10 18 58.6	-1.2
O22K	Cooper Landing	14.46	319	P	Pn	10 19 01.5	+1.3
	baz=122						
KNK	Knik Glacier	14.50	323		Pn	10 19 00.7	0.0
K27K	Chicken	14.51	339	P	Pn	10 19 03.2	+2.4
YNR	Norris Junctio	14.55	108		Pn	10 19 01.8	+0.1
ELK	Elko	14.61	129	Pn	Pn	10 19 03.0	+0.5
	0.1nm,0.3s,baz=155,slow=5.6,SNR=5.7						
ELK				LR	LR	10 25 20.0	
	comp=Z,2µm,19.9s,baz=324,slow=40						
GCMT	Greycliff	14.62	103		Pn	10 19 02.4	-0.2
KDAK	Kodiak Island	14.64	306	Pn	Pn	10 19 04.4	+1.8
	0.4nm,0.3s,baz=41,slow=6.4,SNR=4.0						
KDAK				LR	LR	10 23 17.8	
	comp=Z,9µm,20.2s,baz=167,slow=32						
YUF	Upper Falls	14.65	108		Pn	10 19 00.8	-2.2
SML	Sawmill	14.70	325		Pn	10 19 02.5	-0.9
YPP	Pitchstone Pla	14.71	110		Pn	10 19 02.6	-1.4
H17A	Grant Village	14.78	109	P	Pn	10 19 05.5	+0.6
	baz=304,SNR=56						
H17A	Grant Village	14.78	109		Pn	10 19 05.3	+0.4
LKWY	Lake	14.79	108	P	Pn	10 19 05.0	-0.1
LKWY	Lake	14.79	108		Pn	10 19 05.0	-0.1
YNE	Yellowstone No	14.80	106		Pn	10 19 03.8	-1.3
RC01	Rabbit Creek A	14.80	321	P	Pn	10 19 07.1	+2.3
	baz=124,SNR=6.3						
OHAK	Old Harbor	14.84	304	Pn	Pn	10 19 02.1	-3.2
YMP	Mirror Lake Pl	14.85	107		Pn	10 19 04.9	-0.9
PMR	Palmer	14.86	323	P	Pn	10 19 05.7	+0.1
PMR	Palmer	14.86	323	Pn	Pn	10 19 05.7	+0.1
RYN	Ryan	14.87	142		Pn	10 19 02.6	-3.4
FLWY	Flagg Ranch	14.88	110		Pn	10 19 03.4	-2.8
GHO	Glory Hole Cre	14.89	324		Pn	10 19 04.2	-1.9
SCRK	Sand Creek	14.93	336	P	Pn	10 19 07.6	+1.0
	baz=144,SNR=12						
EGAK	Eagle	14.97	342	Pn	Pn	10 19 08.4	+1.4
MOOW	Moose Ponds	15.05	111	Pn	Pn	10 19 08.3	-0.1
NVAR	Mina Array Bea	15.13	141	Pn	Pn	10 19 10.4	+0.9
	0.2nm,0.3s,baz=335,slow=10.0,SNR=17						
RLMT	Red Lodge	15.19	104	P	Pn	10 19 10.6	+0.2
	baz=300,SNR=62						
LHV	Little Huntoon	15.20	142		Pn	10 19 10.9	+0.7
MLAC	Mammoth, Mammo	15.62	144	P	Pn	10 19 15.9	-0.1
	baz=332,SNR=20						
CUT	Chulitna	15.78	324	P	Pn	10 19 17.7	0.0
	baz=127						
RND	Reindeer	15.94	329	P	Pn	10 19 21.1	+1.3
RND				pmax	pmax		
	comp=Z,118nm,1.1s						
RND	Reindeer	15.94	329	P	Pn	10 19 21.1	+1.3
HDA	Harding Lake	16.07	333	P	Pn	10 19 22.5	+1.0
	baz=139,SNR=12						
MCK	McKinley	16.19	329	P	Pn	10 19 24.8	+1.8
	baz=133,SNR=42						
DUG	Dugway, Tooele	16.25	125	P	Pn	10 19 23.5	-0.5
	baz=318,SNR=88						
BW06	Boulder Array	16.33	112	P	P	10 19 27.0	-1.2
	baz=308,SNR=104						
PDAR	Pinedale Array	16.33	112	Pn	P	10 19 27.0	-1.2
	comp=Z,2.7nm,0.3s,baz=313,slow=9.1,SNR=344						
IL31		16.33	334	P	Pn	10 19 25.5	+0.7
ILAR	Eielson Array	16.33	334	Pn	Pn	10 19 25.8	+0.9
	comp=Z,0.0nm,0.3s,baz=146,slow=11,SNR=32						
ILAR				LR	LR	10 25 56.9	
	comp=Z,3µm,18.0s,baz=144,slow=38						
R11A	Troy Canyon, C	16.34	135	P	Pn	10 19 24.8	-0.5
	baz=326,SNR=66						
TIN	Tinemaha, Big	16.35	144	P	Pn	10 19 25.9	+0.5
	baz=332,SNR=51						
LAO	LASA Array	16.38	96	P	Pn	10 19 26.1	+0.5
	baz=294,SNR=74						
TRF	Thorofare Moun	16.45	327		Pn	10 19 26.9	+0.4
TRF				IAmb	IAmb	10 19 35.8	
	comp=Z,226nm,1.3s						
WRH	Wood River Hil	16.45	332		Pn	10 19 26.3	-0.1
CCB	Clear Creek Bu	16.50	333	P	P	10 19 28.7	-1.0
VOG	Valley Oaks Go	16.60	148	P	Pn	10 19 28.1	-0.3
	baz=336,SNR=6.2						
BWN	Browne	16.66	330	P	Pn	10 19 30.5	+1.5
BWN				IAmb	IAmb	10 19 35.6	
	comp=Z,368nm,1.4s						
COLA	College	16.68	333	*i* P	P	10 19 31.3	-0.4
COLA	College	16.68	333	P	Pn	10 19 30.1	+0.8
TCOL	CIGO, UAF Yank	16.68	333	P	Pn	10 19 30.2	+0.9
	baz=138,SNR=11						
TCOL	CIGO, UAF Yank	16.68	333	P	Pn	10 19 29.8	+0.6
KTH	Kantishna Hill	16.73	327	P	Pn	10 19 29.6	-0.4
KTH				IAmb	IAmb	10 19 37.1	
	comp=Z,394nm,1.4s						
GRAC	Grapevine Rang	16.74	142	P	Pn	10 19 30.7	+0.5
	baz=331,SNR=7.4						
POKR	Poker Plat Res	16.75	334	P	Pn	10 19 31.3	+1.2
	baz=140,SNR=21						
POKR	Poker Plat Res	16.75	334	P	P	10 19 32.2	-0.3
PPLA	Purkeypile	16.79	324	P	Pn	10 19 31.5	+0.7
PPLA				IAmb	IAmb	10 19 48.6	
	comp=Z,238nm,1.5s						
NEA2	Nenana	16.83	331	P	Pn	10 19 32.1	+0.9
	baz=135,SNR=37						
PAGB	Antelope Grade	16.86	151	P	Pn	10 19 30.0	-1.7
PAGB				IAmb	IAmb	10 19 36.4	
	comp=Z,380nm,1.4s						
CWC	Cottonwood Cre	16.95	144	P	Pn	10 19 33.7	+0.7
	baz=333						
PSUT	Pine Spring	17.00	131	P	Pn	10 19 32.1	-1.5
MPU	Maple Canyon	17.00	123	P	Pn	10 19 32.6	-1.1
BPAW	Bear Paw Mtn.	17.11	328		Pn	10 19 35.4	+0.8
VES	Vestal, Richgr	17.14	148	P	Pn	10 19 35.4	+0.2
	baz=336,SNR=21						
TPNV	Topopah Spring	17.23	139	P	Pn	10 19 36.1	-0.4
TPNV				pmax	pmax		
	comp=Z,207nm,1.4s						
TPNV	Topopah Spring	17.23	139	P	Pn	10 19 37.2	+0.6
	baz=329,SNR=120						
TPNV	Topopah Spring	17.23	139		Pn	10 19 36.1	-0.4
TPNV				IAmb	IAmb	10 19 38.6	
	comp=Z,207nm,1.4s						
I23K	Minto, Yukon-K	17.32	332	P	P	10 19 38.3	-0.4
	baz=136,SNR=28						
I23K	Minto, Yukon-K	17.32	332	P	P	10 19 38.9	+0.1
SMMC	Simmler	17.32	151	P	Pn	10 19 37.6	0.0
	baz=338,SNR=18						
FURC	Furnace Creek,	17.39	141	P	P	10 19 39.3	-0.5
	baz=331,SNR=63						
FFC	Flin Flon	17.44	67	P	Pn	10 19 37.3	-1.6
FFC				pmax	pmax		
	comp=Z,168nm,1.2s						
FFC	Flin Flon	17.44	67		Pn	10 19 37.2	-1.6
FFC				IAmb	IAmb	10 19 44.9	
	comp=Z,168nm,1.2s						
CHGN	Chignik	17.45	299		Pn	10 19 37.5	-1.5
CHGN				IAmb	IAmb	10 19 39.0	
	comp=Z,170nm,1.2s						
INK	Inuvik	17.46	356	P	P	10 19 40.9	+0.6
	comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=16						
INK				LR	LR	10 27 05.9	
	comp=Z,325nm,20.1s,baz=172,slow=39						
INK	Inuvik	17.46	356	Pn	P	10 19 41.0	+0.6
INK	Inuvik	17.46	356	P	P	10 19 40.8	+0.4
INK				pmax	pmax		
	comp=Z,99nm,1.4s						
INK	Inuvik	17.46	356	P	P	10 19 40.8	+0.4
ISA	Isabella, Lake	17.51	146	P	Pn	10 19 40.0	+0.1
	baz=335,SNR=76						
MPMC	Manual Prospec	17.51	143	P	Pn	10 19 40.1	0.0
	baz=333,SNR=55						
MLY	Manley	17.65	331	P	P	10 19 42.4	-0.1
	baz=133,SNR=55						
RDMU	Red Mountain	17.73	118	P	Pn	10 19 41.9	-1.0
TMUT	Trail Mountain	17.75	124	P	Pn	10 19 42.1	-1.0
PKM	Mcpherson Peak	17.77	151	P	Pn	10 19 43.4	+0.1
	baz=338,SNR=17						
MVU	Marysvale	17.82	127	P	Pn	10 19 43.3	-0.7
MSU	Marysvale	17.84	127	P	Pn	10 19 43.4	-0.7
MSU	Marysvale	17.84	127		Pn	10 19 43.4	-0.7
P17A	Butcher Ranch,	17.87	122	P	Pn	10 19 43.6	-0.9
ARVC	Arvin	17.87	148	P	Pn	10 19 43.8	-0.6
	baz=336,SNR=17						
LRMC	Laurel Mtn Rad	17.95	145	P	Pn	10 19 45.5	0.0
	baz=334,SNR=63						
CCUT	Cedar City	18.01	132		Pn	10 19 45.1	-1.2
SHPR	Sheep Range	18.06	137		Pn	10 19 45.4	-1.4
SZCU	Shurtz Canyon	18.11	131	P	Pn	10 19 46.0	-1.5
SHOC	Shoshone, Teco	18.12	141	P	P	10 19 47.8	0.0
	baz=331,SNR=63						
MTPU	Mount Pierson	18.20	128	P	Pn	10 19 47.6	-1.1
K22A	Casper	18.20	108	P	Pn	10 19 48.1	-0.4
	baz=306,SNR=116						
SBC	Santa Barbara	18.22	151	P	P	10 19 48.9	0.0
	baz=338						
SRU	San Rafael Swe	18.24	123	P	Pn	10 19 48.2	-0.9
SRU				pmax	pmax		
	comp=Z,72nm,0.8s						
SRU	San Rafael Swe	18.24	123	P	Pn	10 19 48.2	-0.9
TTA	Tatalina	18.29	321	P	P	10 19 50.2	+0.6
TTA				pmax	pmax		
	comp=Z,90nm,1.3s						
TTA	Tatalina	18.29	321	P	P	10 19 50.2	+0.6
OSI	Osito Audit: C	18.37	148	P	Pn	10 19 50.5	0.0
	baz=337						
EDW2	Edwards Air Fo	18.38	146	P	Pn	10 19 50.5	-0.2
	baz=335,SNR=25						
GSC	Goldstone, Bar	18.44	143	P	P	10 19 52.1	+0.7
	baz=332,SNR=64						
SDPT	Sand Point	18.55	295	P	P	10 19 50.8	-1.6
SDPT				IAmb	IAmb	10 20 01.8	
	comp=Z,364nm,1.5s						
SCZ2	Santa Cruz Isl	18.66	151	P	Pn	10 19 53.9	-0.1
	baz=339,SNR=15						
C36M	Paulatuk	18.67	7	P	Pn	10 19 54.4	+0.5
	baz=192,SNR=43						
C36M	Paulatuk	18.67	7		Pn	10 19 54.6	+0.7
RRX	Edison Barstow	18.75	144	P	Pn	10 19 55.7	+0.7
	baz=333						
O20A	White River Ci	18.78	117	P	Pn	10 19 55.6	0.0
	baz=313,SNR=124						
DECC	Green Verdugo	18.83	148	P	Pn	10 19 56.2	+0.1
	baz=336,SNR=12						
RSSD	Black Hills	18.92	101	P	P	10 19 55.6	-1.2
RSSD				pmax	pmax		
	comp=Z,106nm,0.9s						
RSSD	Black Hills	18.92	101	P	P	10 19 56.4	-0.4
	baz=301						
RSSD	Black Hills	18.92	101	P	P	10 19 55.6	-1.2
RSSD				IAmb	IAmb	10 20 00.1	
	comp=Z,106nm,0.9s						
HEC	Hector,Ludlow	19.04	143	P	Pn	10 19 58.5	-0.2
	baz=332,SNR=70						
BFSC	Mount Baldy Ra	19.08	146	P	Pn	10 19 59.2	0.0
	baz=335,SNR=28						
COLD	Coldfoot	19.09	336	P	Pn	10 20 00.9	+1.9
	baz=139,SNR=62						
COLD	Coldfoot	19.09	336		Pn	10 19 59.9	+1.0
COLD				IAmb	IAmb	10 20 03.3	
	comp=Z,177nm,1.4s						
BBRC	Big Bear Solar	19.32	145	P	P	10 20 01.6	+0.4
	baz=334,SNR=27						
GMRC	Granite Mounta	19.34	141	P	Pn	10 20 02.1	-0.3
	baz=332,SNR=54						
FMP	Fort Macarthur	19.34	149	P	P	10 20 01.1	-0.1
	baz=337						
SNCC	San Nicolas Is	19.38	152	P	P	10 20 01.9	+0.2
	baz=339						
N23A	Red Feather La	19.61	111	P	P	10 20 04.5	+0.1
	baz=309,SNR=88						
NEE2	Needles Airpor	19.78	139	P	P	10 20 06.3	+0.3
	baz=330,SNR=24						
W13A	Hualapai Mount	19.80	137	P	P	10 20 05.9	-0.6
W13A				IAmb	IAmb	10 20 09.5	
	comp=Z,184nm,1.4s						
MURC	Murrieta	19.82	146	P	P	10 20 06.2	-0.3
	baz=335,SNR=40						
BELC	Belle Mtn. Jos	19.90	143	P	P	10 20 07.9	+0.4
	baz=333,SNR=63						
SCI2	San Clemente I	19.93	150	P	P	10 20 08.1	+0.4
	baz=338,SNR=29						
TOLK	Toolik Lake Re	20.03	339	P	Pn	10 20 11.2	+0.8
	baz=142,SNR=78						
PFO	Pinyon Flats O	20.07	145	P	P	10 20 09.1	-0.2
	comp=Z,42nm,1.0s,baz=327,slow=12,SNR=24						
PFO				LR	LR	10 27 23.5	
	comp=Z,1µm,19.7s,baz=318,slow=36						
PFO	Pinyon Flats O	20.07	145	P	P	10 20 09.3	-0.1
	baz=334,SNR=39						
TPFO	Pinon Flats	20.08	145	P	P	10 20 09.3	-0.1
	baz=334,SNR=40						
IRM	Iron Mountain	20.09	141	P	P	10 20 09.9	+0.4
	baz=332,SNR=64						
MDND	Maddock	20.12	87	P	P	10 20 10.3	+0.6
	baz=290,SNR=95						
SMCO	Snowmass	20.14	117	IAMs_20	IAMs_20	10 28 01.8	
	comp=Z,7µm,19.0s						
PDMCI	Parker Dam,Lak	20.38	139	P	P	10 20 13.2	+0.7
	baz=330,SNR=77						
BC3	Big Chuckawall	20.41	142	P	P	10 20 13.3	+0.2
	baz=333,SNR=41						
109C	Camp Elliot, M	20.49	147	P	P	10 20 14.3	+0.5
	baz=336,SNR=23						
ISCO	Idaho Springs	20.50	113	P	P	10 20 14.4	+0.2
	baz=311						
ISCO	Idaho Springs	20.50	113	IAMs_20	IAMs_20	10 28 06.4	
	comp=Z,7µm,22.0s						
WUAZ	Wupatki	20.60	131	P	P	10 20 15.6	+0.5
	baz=325,SNR=109						
MVCO	Mesa Verde	20.72	123	P	P	10 20 16.6	+0.1
	baz=319,SNR=96						
MONP2	Monument Peak	20.73	145	P	P	10 20 17.2	+0.5
	baz=335,SNR=87						
SWSC	Sam W. Stewart	20.91	144	P	P	10 20 18.3	0.0
	baz=334,SNR=59						
IKP	In-Ko-Pah, Jac	21.06	145	P	P	10 20 20.5	+0.4
	baz=335,SNR=100						
GLA	Glamis	21.19	142	P	P	10 20 21.7	+0.3
	baz=332,SNR=46						
S22A	4UR Ranch, Cre	21.23	119	P	P	10 20 22.6	+0.6
	baz=316,SNR=192						
S22A	4UR Ranch, Cre	21.23	119	IAMs_20	IAMs_20	10 28 38.4	
	comp=Z,7µm,20.0s						
Q24A	Divide	21.33	115	P	P	10 20 23.3	+0.1
	baz=313						
Q24A	Divide	21.33	115	IAMs_20	IAMs_20	10 28 42.2	
	comp=Z,7µm,18.0s						
W18A	Petrified Fore	21.71	129	P	P	10 20 27.2	+0.1
	baz=323,SNR=121						
W18A	Petrified Fore	21.71	129	P	P	10 20 27.0	-0.2
ULM	Lac du Bonnet	21.73	78	P	P	10 20 26.4	-0.7
	comp=Z,52nm,0.6s,baz=287,slow=9.7,SNR=96						
ULM				LR	LR	10 28 22.3	
	comp=Z,2µm,18.6s,baz=284,slow=35						
ULM	Lac du Bonnet	21.73	78	Pn	P	10 20 26.3	-0.7
ULM	Lac du Bonnet	21.73	78	P	P	10 20 25.2	-1.8
ULM				pmax	pmax		
	comp=Z,244nm,1.4s						
ULM	Lac du Bonnet	21.73	78	P	P	10 20 25.2	-1.8
ULM				IAmb	IAmb	10 20 27.6	
	comp=Z,244nm,1.4s						
SUSD	Miller	21.95	95	P	P	10 20 29.2	-0.2
	baz=298,SNR=14						
SUSD	Miller	21.95	95	P	P	10 20 28.2	-1.2
SUSD				IAMs_20	IAMs_20	10 28 53.2	
	comp=Z,5µm,21.0s						
SDCO	Great Sand Dun	21.97	117	P	P	10 20 30.4	+0.4
	baz=315,SNR=83						
SDCO	Great Sand Dun	21.97	117	P	P	10 20 29.2	-0.8
SDCO				IAmb	IAmb	10 20 41.1	
	comp=Z,122nm,1.4s						
SDCO				IAMs_20	IAMs_20	10 29 14.2	
	comp=Z,7µm,18.0s						
FCC	Fort Churchill	22.00	55	Pn	P	10 20 31.3	+1.5
FCC	Fort Churchill	22.00	55	P	P	10 20 31.1	+1.3
FCC				pmax	pmax		
	comp=Z,188nm,1.3s						
FCC	Fort Churchill	22.00	55	P	P	10 20 31.1	+1.3
FCC				IAmb	IAmb	10 20 35.3	
	comp=Z,188nm,1.2s						
D32A	Dogwood Acres,	22.02	87	P	P	10 20 28.6	-1.5
D32A				IAmb	IAmb	10 20 31.1	
	comp=Z,106nm,1.0s						
X18A	Snowflake	22.08	130	P	P	10 20 30.9	-0.2
AGMN	Agassiz Nation	22.32	83	P	P	10 20 32.7	-0.7
	baz=290						
AGMN	Agassiz Nation	22.32	83	P	P	10 20 32.1	-1.4
AGMN				IAmb	IAmb	10 20 38.8	
	comp=Z,127nm,0.9s						
ANM	Nome	22.76	320	P	P	10 20 35.7	-2.2
ANM				pmax	pmax		
	comp=Z,38nm,1.1s						
ANM				MLR	MLR		
	comp=Z,3µm,18.0s						
ANM	Nome	22.76	320	P	P	10 20 35.7	-2.2
KSCO	Kaye Shedlock’	22.77	111	P	P	10 20 38.5	+0.1
	baz=311,SNR=52						
214A	Organ Pipe Nat	22.96	139	P	P	10 20 40.0	-0.3
	baz=331,SNR=67						
K31A	O'Neill	22.99	99	P	P	10 20 39.6	-1.0
F33A	5 Mile Ranch,	23.00	90	P	P	10 20 39.4	-1.2
T25A	Trinidad	23.01	117	P	P	10 20 40.8	-0.2
	baz=315,SNR=47						
T25A	Trinidad	23.01	117	P	P	10 20 40.1	-1.0
T25A				IAmb	IAmb	10 20 43.0	
	comp=Z,162nm,1.4s						
T25A				IAMs_20	IAMs_20	10 29 49.8	
	comp=Z,7µm,18.0s						
PIX	Pinacate	23.05	141	P	P	10 20 40.1	-1.0
PIX				IAmb	IAmb	10 20 42.9	
	comp=Z,104nm,1.2s						
EPLO	Experimental L	23.22	79	Pn	P	10 20 42.0	-0.9
RDOG	Red Dog Mine	23.36	329	P	P	10 20 44.3	+0.3
RDOG				IAmb	IAmb	10 20 57.7	
	comp=Z,60nm,1.4s						
ANMO	Albuquerque	23.51	124	P	P	10 20 45.9	-0.3
	comp=Z,54nm,1.1s,baz=319,slow=10,SNR=122						
ANMO				LR	LR	10 30 09.5	
	comp=Z,1µm,18.7s,baz=316,slow=37						
ANMO	Albuquerque	23.51	124	*ce*P	P	10 20 45.8	-0.3
ANMO				pmax	pmax		
	comp=Z,193nm,1.7s						
ANMO	Albuquerque	23.51	124	P	P	10 20 45.9	-0.3
	baz=320						
ANMO	Albuquerque	23.51	124	P	P	10 20 45.5	-0.7
ANMO				IAmb	IAmb	10 20 47.4	
	comp=Z,172nm,1.4s						
TUC	Tucson	23.53	135	P	P	10 20 44.6	-1.6
TUC				pmax	pmax		
	comp=Z,50nm,1.0s						
TUC				MLR	MLR		
	comp=Z,2µm,18.0s						
TUC	Tucson	23.53	135	P	P	10 20 46.1	0.0
	baz=328						
TUC	Tucson	23.53	135	P	P	10 20 44.6	-1.6
TUC				IAmb	IAmb	10 20 47.6	
	comp=Z,50nm,1.0s						
B35A	Bob, Littlefor	23.64	82	P	P	10 20 45.0	-2.1
A21K	Barrow	23.66	339	P	P	10 20 49.1	+2.1
	baz=136						
ECSD	EROS Data Cent	23.77	95	P	P	10 20 48.0	-0.4
	baz=300,SNR=68						
ECSD	EROS Data Cent	23.77	95	P	P	10 20 47.5	-0.9
ECSD				IAmb	IAmb	10 20 52.7	
	comp=Z,128nm,1.2s						
ECSD	EROS Data Cent	23.77	95	IAMs_20	IAMs_20	10 29 59.5	
	comp=Z,6µm,19.0s						
LENM	Lemitar	23.85	126	P	P	10 20 49.1	-0.3
BGNE	Belgrade	24.03	101	P	P	10 20 50.7	-0.2
	baz=304,SNR=20						
BGNE	Belgrade	24.03	101	P	P	10 20 50.3	-0.6
BGNE				IAMs_20	IAMs_20	10 30 17.8	
	comp=Z,7µm,19.0s						
BNM	Barren Site	24.04	125	P	P	10 20 50.6	-0.7
SOLO	Sioux Lookout	24.14	77	Pn	P	10 20 51.2	-0.5
CBKS	Cedar Bluff	24.62	108	P	P	10 20 55.9	-0.5
CBKS				pmax	pmax		
	comp=Z,212nm,1.3s						
CBKS				MLR	MLR		
	comp=Z,4µm,19.0s						
CBKS	Cedar Bluff	24.62	108	P	P	10 20 56.4	+0.1
	baz=310,SNR=37						
CBKS	Cedar Bluff	24.62	108	P	P	10 20 55.9	-0.5
CBKS				IAMs_20	IAMs_20	10 30 49.3	
	comp=Z,4µm,19.0s						
F36A	Milaca	24.74	87	P	P	10 20 57.3	0.0
121A	Cookes Peak, D	24.75	130	P	P	10 20 57.7	0.0
	baz=325,SNR=84						
121A	Cookes Peak, D	24.75	130	P	P	10 20 56.8	-0.9
PKLO	Pickle Lake	24.79	73	Pn	P	10 20 58.0	+0.3
ATKO	Atikokan Iron	24.81	80	Pn	P	10 20 58.2	+0.2
L34A	Svendsen Farm,	24.83	98	P	P	10 20 57.7	-0.5
L34A				IAMs_20	IAMs_20	10 30 50.2	
	comp=Z,6µm,19.0s						
N33A	J Bar K, Exete	24.85	101	P	P	10 20 57.8	-0.6
N33A				IAMs_20	IAMs_20	10 30 44.3	
	comp=Z,6µm,21.0s						
EYMN	Ely	25.19	82	P	P	10 21 01.6	+0.2
	baz=292,SNR=35						
EYMN	Ely	25.19	82	P	P	10 21 01.6	+0.2
EYMN	Ely	25.19	82	IAMs_20	IAMs_20	10 30 54.0	
	comp=Z,3µm,19.0s						
SPMN	Marine on St.	25.47	88	P	P	10 21 04.7	+0.8
	baz=297,SNR=10						
SPMN	Marine on St.	25.47	88	P	P	10 21 03.9	0.0
SPMN				IAmb	IAmb	10 21 08.4	
	comp=Z,58nm,1.1s						
R32A	Long Quarter,	25.49	107	IAMs_20	IAMs_20	10 31 16.5	
	comp=Z,4µm,19.0s						
EPT	El Paso	26.00	128	IAMs_20	IAMs_20	10 32 11.4	
	comp=Z,4µm,20.0s						
AMTX	Amarillo	26.17	117	P	P	10 21 10.2	-0.2
	baz=317						
AMTX	Amarillo	26.17	117	IAMs_20	IAMs_20	10 31 41.3	
	comp=Z,7µm,21.0s						
MSTX	Muleshoe	26.23	120	P	P	10 21 10.8	-0.3

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      baz=319,SNR=22
KSU1  Kansas State U   26.34 104 P        P        10 21 12.0 +0.1
      baz=308,SNR=35
KSU1  Kansas State U   26.34 104 IAMs_20  IAMs_20  10 31 42.6
      comp=Z,5µm,21.0s
MNTX  Cornudas Mount   26.62 127 P        P        10 21 14.6 +0.2
      baz=324,SNR=92
MNTX  Cornudas Mount   26.62 127 IAMs_20  IAMs_20  10 32 18.1
      comp=Z,4µm,19.0s
U32A  Winter Ranch,    26.66 111 P        P        10 21 13.8 -1.1
KAN10 Anthony SW Sta   26.70 109 P        P        10 21 13.8 -1.4
K38A  Parkersburg      26.74  93 P        P        10 21 13.1 -2.3
K38A                             IAmb     IAmb     10 21 20.2
      comp=Z,107nm,1.1s
GDL2  Guadalupe Moun   26.74 125 P        P        10 21 14.8 -0.9
SCIA  State Center     26.85  95 P        P        10 21 16.6 +0.2
      baz=303
SCIA  State Center     26.85  95 P        P        10 21 16.1 -0.3
SCIA                             IAmb     IAmb     10 21 21.3
      comp=Z,51nm,1.1s
SCIA                             IAMs_20  IAMs_20  10 31 54.9
      comp=Z,5µm,18.0s
KS21  Milan North St   26.86 108 IAMs_20  IAMs_20  10 32 16.5
      comp=Z,4µm,18.0s
G40A  Rib Lake         27.10  86 P        P        10 21 18.7  0.0
G40A                             IAmb     IAmb     10 21 20.1
      comp=Z,47nm,1.1s
KAN13 South Haven SW   27.15 108 P        P        10 21 16.2 -3.0
N38A  Joes South For   27.45  97 P        P        10 21 20.0 -1.8
N38A                             IAmb     IAmb     10 21 32.6
      comp=Z,71nm,0.9s
N38A                             IAMs_20  IAMs_20  10 32 23.6
      comp=Z,5µm,19.0s
I40A  Norwalk          27.48  89 P        P        10 21 20.6 -1.5
I40A                             IAmb     IAmb     10 21 24.1
      comp=Z,45nm,0.8s
T35A  Sooner Cattle    27.79 107 P        P        10 21 22.9 -2.0
T35A                             IAMs_20  IAMs_20  10 32 55.5
      comp=Z,4µm,18.0s
RES   Resolute Bay     27.88  19 P        P        10 21 26.9 +1.5
      comp=Z,5.7nm,0.8s,baz=229,slow=9.8,SNR=17
RES                              LR       LR       10 33 01.1
      comp=Z,4µm,19.1s,baz=242,slow=37
RES   Resolute Bay     27.88  19 P        P        10 21 24.6 -0.8
RES                              pmax     pmax
      comp=Z,45nm,1.4s
RES   Resolute Bay     27.88  19 P        P        10 21 24.6 -0.8
RES                              IAmb     IAmb     10 21 53.2
      comp=Z,45nm,1.4s
WMOK  Wichita Mounta   27.93 113 P        P        10 21 25.1 -1.2
WMOK                             pmax     pmax
      comp=Z,92nm,1.1s
WMOK                             MLR      MLR
      comp=Z,5µm,18.0s
WMOK  Wichita Mounta   27.93 113 P        P        10 21 26.5 +0.2
      baz=315,SNR=70
WMOK  Wichita Mounta   27.93 113 P        P        10 21 25.1 -1.2
WMOK                             IAmb     IAmb     10 21 27.7
      comp=Z,92nm,1.1s
WMOK  Wichita Mounta   27.93 113 IAMs_20  IAMs_20  10 32 53.0
      comp=Z,5µm,18.0s
P38A  Dawn             27.94 100 P        P        10 21 24.3 -1.9
P38A                             IAmb     IAmb     10 21 28.4
      comp=Z,93nm,1.3s
L40A  Anamosa          28.02  93 P        P        10 21 25.5 -1.4
L40A                             IAmb     IAmb     10 21 31.3
      comp=Z,68nm,1.2s
QUOK  Quay             28.17 109 P        P        10 21 26.7 -1.6
F42A  Maple Grove Fa   28.18  84 P        P        10 21 26.1 -2.2
OK025 Westminster Rd   28.19 110 P        P        10 21 26.8 -1.7
JFWS  Jewell Farm      28.20  91 P        P        10 21 28.7 +0.2
      baz=301
JFWS  Jewell Farm      28.20  91 IAMs_20  IAMs_20  10 32 46.9
      comp=Z,4µm,22.0s
OK031 S. Brethren Rd   28.24 109 P        P        10 21 28.6 -0.3
OKCFA Oklahoma City    28.24 111 P        P        10 21 27.2 -1.7
OK030 Cody Creek RV    28.29 109 P        P        10 21 28.2 -1.2
W35A  Tecumseh         28.76 110 P        P        10 21 30.5 -3.1
P40A  Paris            28.92  98 P        P        10 21 32.6 -2.3
P40A                             IAmb     IAmb     10 21 36.3
      comp=Z,52nm,1.3s
ABTX  Abilene, Hawle   28.98 117 P        P        10 21 35.1 -0.5
      baz=318,SNR=17
ABTX  Abilene, Hawle   28.98 117 P        P        10 21 32.1 -3.5
ABTX                             IAmb     IAmb     10 21 35.8
      comp=Z,44nm,1.1s
N41A  Harden Midland   28.99  95 IAMs_20  IAMs_20  10 33 11.6
      comp=Z,5µm,20.0s
L42A  Oliver, Polo     29.04  92 P        P        10 21 33.7 -2.3
U38A  Gravette         29.39 106 P        P        10 21 36.5 -2.7
TX32  Lajitas Array    29.39 127 P        P        10 21 37.7 -1.7
TX32                             IAmb     IAmb     10 21 41.0
      comp=Z,76nm,1.2s
TXAR  Lajitas Array    29.40 127 P        P        10 21 39.5 +0.1
      comp=Z,40nm,1.1s,baz=330,slow=7.2,SNR=120
TXAR                             LR       LR       10 33 59.8
      comp=Z,2µm,19.5s,baz=0.0,slow=38
R40A  Maddies Statio   29.52 101 P        P        10 21 37.0 -3.4
Z35A  Perchaven, San   29.82 113 IAMs_20  IAMs_20  10 34 03.1
      comp=Z,3µm,19.0s
X37A  Clayton          30.04 109 P        P        10 21 43.3 -1.7
X37A                             IAmb     IAmb     10 21 47.0
      comp=Z,93nm,1.4s
L44A  Lake County Fo   30.05  90 P        P        10 21 44.9 -0.1
      baz=302
L44A  Lake County Fo   30.05  90 IAMs_20  IAMs_20  10 34 02.1
      comp=Z,4µm,20.0s
HDIL  Hopedale         30.06  94 P        P        10 21 44.7 -0.4
      baz=304
HDIL  Hopedale         30.06  94 IAMs_20  IAMs_20  10 33 54.1
      comp=Z,5µm,18.0s
MGMO  Mountain Grove   30.23 102 P        P        10 21 44.8 -1.9
MGMO                             IAmb     IAmb     10 21 48.5
      comp=Z,45nm,1.4s
MGMO                             IAMs_20  IAMs_20  10 34 01.7
      comp=Z,5µm,20.0s
HQIL  Hanson Quary C   30.29  91 IAMs_20  IAMs_20  10 34 02.3
      comp=Z,4µm,22.0s
CCM   Cathedral Cave   30.31 100 P        P        10 21 45.8 -1.5
CCM                              pmax     pmax
      comp=Z,71nm,1.5s
CCM                              MLR      MLR
      comp=Z,8µm,18.0s
CCM   Cathedral Cave   30.31 100 P        P        10 21 46.1 -1.1
      baz=308
CCM   Cathedral Cave   30.31 100 P        P        10 21 45.8 -1.5
CCM                              IAmb     IAmb     10 21 47.9
      comp=Z,71nm,1.5s
U40A  Yellville        30.38 104 P        P        10 21 47.6 -0.4
      baz=311,SNR=32
U40A  Yellville        30.38 104 P        P        10 21 46.5 -1.5
P43A  Skaggs, Pawnee   30.44  96 IAMs_20  IAMs_20  10 34 14.9
      comp=Z,4µm,19.0s
JCT   Junction City    30.52 120 P        P        10 21 47.0 -2.2
JCT                              pmax     pmax
      comp=Z,86nm,1.3s
JCT                              MLR      MLR
      comp=Z,4µm,20.0s
JCT   Junction City    30.52 120 P        P        10 21 48.6 -0.6
      baz=321,SNR=22
JCT   Junction City    30.52 120 P        P        10 21 47.0 -2.2
JCT                              IAmb     IAmb     10 21 49.8
      comp=Z,86nm,1.3s
JCT                              IAMs_20  IAMs_20  10 34 27.5
      comp=Z,4µm,20.0s
SLM   Saint Louis      30.58  98 IAMs_20  IAMs_20  10 34 22.4
      comp=Z,5µm,20.0s
W39A  Magazine         30.58 107 P        P        10 21 49.9 +0.1
      baz=312,SNR=6.5
W39A  Magazine         30.58 107 IAMs_20  IAMs_20  10 34 39.5
      comp=Z,4µm,18.0s
WHTX  Lake Whitney,    30.68 116 P        P        10 21 50.3 -0.4
      baz=318
WHTX  Lake Whitney,    30.68 116 P        P        10 21 49.6 -1.0
WHTX                             IAMs_20  IAMs_20  10 34 32.9
      comp=Z,5µm,20.0s
O44A  Mansfield        30.81  94 P        P        10 21 49.5 -2.2
FVM   French Village   30.86  99 P        P        10 21 50.5 -1.7
FVM                              pmax     pmax
      comp=Z,50nm,1.5s
FVM                              MLR      MLR
      comp=Z,6µm,19.0s
FVM   French Village   30.86  99 P        P        10 21 50.5 -1.7
FVM                              IAmb     IAmb     10 21 52.8
      comp=Z,50nm,1.5s
T42A  Van Buren        31.04 101 IAMs_20  IAMs_20  10 34 27.1
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      comp=Z,5µm,22.0s
FCAR  Ozark Folk Cen   31.14 104 P        P        10 21 52.5 -2.1
FCAR                             IAmb     IAmb     10 21 55.4
      comp=Z,71nm,1.3s
MIAR  Mount Ida        31.15 108 P        P        10 21 53.1 -1.6
MIAR                             pmax     pmax
      comp=Z,74nm,1.3s
MIAR                             MLR      MLR
      comp=Z,4µm,19.0s
MIAR  Mount Ida        31.15 108 P        P        10 21 54.8  0.0
      baz=313,SNR=17
MIAR  Mount Ida        31.15 108 P        P        10 21 53.1 -1.6
MIAR                             IAmb     IAmb     10 21 56.6
      comp=Z,74nm,1.3s
MIAR                             IAMs_20  IAMs_20  10 35 10.2
      comp=Z,4µm,19.0s
Q44A  Meyer Farm, Va   31.19  97 IAMs_20  IAMs_20  10 34 39.6
      comp=Z,5µm,20.0s
Z38A  Mt. Pleasant     31.20 111 P        P        10 21 52.8 -2.4
Z38A                             IAMs_20  IAMs_20  10 35 05.6
      comp=Z,2µm,19.0s
435B  Jarrell          31.51 117 P        P        10 21 57.5 -0.4
      baz=319,SNR=10
W41B  Gary Mavity, V   31.53 105 P        P        10 21 57.6 -0.5
      baz=312,SNR=13
SFIN  Lafayette        31.55  93 P        P        10 21 57.6 -0.6
      baz=304,SNR=5.3
PBMO  Poplar Bluff     31.61 101 IAMs_20  IAMs_20  10 34 46.3
      comp=Z,4µm,22.0s
LCAR  Lake Charles     31.61 103 IAMs_20  IAMs_20  10 34 55.2
      comp=Z,5µm,19.0s
237A  Washetta, Mont   31.62 114 IAMs_20  IAMs_20  10 35 20.7
      comp=Z,3µm,18.0s
X40A  Basin Creek Fa   31.64 107 P        P        10 21 58.8 -0.2
      baz=313,SNR=8.2
X40A  Basin Creek Fa   31.64 107 IAMs_20  IAMs_20  10 35 23.4
      comp=Z,5µm,18.0s
WLAR  White Oak Lake   32.02 108 IAMs_20  IAMs_20  10 35 58.2
      comp=Z,4µm,18.0s
HBAR  Harrisburg       32.26 103 IAMs_20  IAMs_20  10 35 16.2
      comp=Z,4µm,22.0s
GNAR  Gosnell          32.38 102 IAMs_20  IAMs_20  10 35 18.7
      comp=Z,5µm,21.0s
PEBM  Pemiscott Bayo   32.38 101 IAMs_20  IAMs_20  10 35 18.8
      comp=Z,5µm,22.0s
833A  Chaparral WMA,   32.42 122 P        P        10 22 05.8 -0.2
      baz=323,SNR=23
LPAR  Lepanto          32.45 103 IAMs_20  IAMs_20  10 35 46.2
      comp=Z,4µm,18.0s
NATX  Nacogdoches      32.47 112 P        P        10 22 06.8 +0.5
      baz=317
NATX  Nacogdoches      32.47 112 IAMs_20  IAMs_20  10 35 56.1
      comp=Z,2µm,20.0s
Z41A  Richland Creek   32.50 108 P        P        10 22 06.8 +0.2
      baz=314
Z41A  Richland Creek   32.50 108 P        P        10 22 05.2 -1.4
Z41A                             IAmb     IAmb     10 22 08.6
      comp=Z,82nm,1.4s
Z41A                             IAMs_20  IAMs_20  10 36 11.0
      comp=Z,3µm,18.0s
AAM   Ann Arbor        32.68  87 P        P        10 22 07.4 -0.7
      baz=302
X43A  Marvell          32.80 105 P        P        10 22 09.2  0.0
      baz=312,SNR=5.3
MET   Memphis--Engin   32.99 103 IAMs_20  IAMs_20  10 35 37.5
      comp=Z,3µm,22.0s
MATQ  Matagami         33.01  71 P        P        10 22 11.3 +0.4
      baz=293
HKT   Hockley          33.13 116 i P      P        10 22 12.2 +0.1
HKT                              pmax     pmax
      comp=Z,93nm,1.6s
WCI   Wyandotte Cave   33.30  95 P        P        10 22 13.1 -0.5
      baz=307
WCI   Wyandotte Cave   33.30  95 IAMs_20  IAMs_20  10 35 47.7
      comp=Z,4µm,21.0s
P49A  Miami Univ. Ec   33.53  92 P        P        10 22 14.8 -0.8
      baz=305
P49A  Miami Univ. Ec   33.53  92 IAMs_20  IAMs_20  10 36 23.1
      comp=Z,4µm,21.0s
WVT   Waverly          33.64 100 P        P        10 22 15.9 -0.6
      baz=310
LSQQ  Lebel-sur-Quev   33.68  72 P        P        10 22 16.4 -0.4
      baz=294
143A  Socs Landing,    33.73 108 P        P        10 22 13.9 -3.4
VLDQ  Val d'Or         33.79  74 P        P        10 22 15.1 -2.6
VLDQ                             IAmb     IAmb     10 22 17.7
      comp=Z,22nm,1.0s
Y45A  Yeager Farm, C   34.06 104 P        P        10 22 18.5 -1.7
Y45A                             IAmb     IAmb     10 22 22.3
      comp=Z,73nm,1.5s
Y45A                             IAMs_20  IAMs_20  10 36 21.9
      comp=Z,3µm,21.0s
342A  Flagon Creek P   34.12 110 P        P        10 22 19.7 -1.0
342A                             IAMs_20  IAMs_20  10 37 17.8
      comp=Z,3µm,20.0s
FRB   Frobisher Bay    34.20  44 P        P        10 22 23.1 +2.1
      comp=Z,13nm,1.0s,baz=271,slow=8.9,SNR=18
PLAL  Pickwick Lake    34.23 101 P        P        10 22 19.6 -2.0
PLAL                             IAmb     IAmb     10 22 22.1
      comp=Z,60nm,1.5s
ACSO  Alum Creek Sta   34.23  90 P        P        10 22 21.5 -0.1
      baz=304
ACSO  Alum Creek Sta   34.23  90 IAMs_20  IAMs_20  10 36 39.7
      comp=Z,3µm,18.0s
ALGO  Algonquin Park   34.38  78 P        P        10 22 22.6 -0.2
      baz=298
R50A  Paris            34.51  93 P        P        10 22 21.9 -2.2
R50A                             IAmb     IAmb     10 22 42.0
      comp=Z,38nm,1.2s
TULEG Thule            34.51  21 IAMs_20  IAMs_20  10 36 33.0
      comp=Z,3µm,20.0s
VBMS  Vicksburg        34.60 107 P        P        10 22 25.7 +0.8
      baz=315
VBMS  Vicksburg        34.60 107 P        P        10 22 22.4 -2.5
VBMS                             IAMs_20  IAMs_20  10 37 34.6
      comp=Z,3µm,18.0s
G54A  Lake Saint Pet   34.62  78 P        P        10 22 25.2 +0.2
      baz=298
Q51A  Peebles          34.69  92 P        P        10 22 24.5 -1.2
Q51A                             IAmb     IAmb     10 22 29.0
      comp=Z,55nm,1.3s
H53A  Bobcaygeon       34.71  80 P        P        10 22 25.2 -0.6
      baz=300
CHGQ  Chibougamau      34.89  69 P        P        10 22 27.2 -0.1
      baz=294,SNR=8.6
344A  Westbrook Farm   35.01 109 IAMs_20  IAMs_20  10 37 37.5
      comp=Z,3µm,18.0s
M53A  WI Miller and    35.02  86 P        P        10 22 29.0 +0.5
      baz=303
M53A  WI Miller and    35.02  86 IAMs_20  IAMs_20  10 36 35.0
      comp=Z,2µm,21.0s
P52A  Corning          35.11  90 P        P        10 22 29.7 +0.4
      baz=305
P52A  Corning          35.11  90 IAMs_20  IAMs_20  10 37 06.9
      comp=Z,3µm,19.0s
146A  Union            35.20 105 P        P        10 22 27.6 -2.5
146A                             IAmb     IAmb     10 22 31.3
      comp=Z,69nm,1.4s
146A                             IAMs_20  IAMs_20  10 37 18.8
      comp=Z,3µm,18.0s
O53A  New Philadelph   35.34  88 P        P        10 22 31.4 +0.2
      baz=304
O53A  New Philadelph   35.34  88 P        P        10 22 28.3 -2.9
O53A                             IAmb     IAmb     10 22 41.2
      comp=Z,34nm,1.2s
E55A  Montcerf-Lytto   35.37  76 P        P        10 22 31.6 +0.2
      baz=298
Q52A  Bidwell          35.41  91 P        P        10 22 30.2 -1.6
Q52A                             IAmb     IAmb     10 22 34.7
      comp=Z,22nm,1.1s
Z47A  Carrollton       35.42 104 IAMs_20  IAMs_20  10 37 12.8
      comp=Z,4µm,21.0s
D55A  Sainte-Anne-du   35.47  74 P        P        10 22 32.2 -0.1
      baz=297
M54A  Oil Creek Stat   35.62  85 IAMs_20  IAMs_20  10 37 46.9
      comp=Z,3µm,20.0s
N54A  Moraine State    35.72  86 P        P        10 22 34.9 +0.5
      baz=304
N54A  Moraine State    35.72  86 IAMs_20  IAMs_20  10 36 01.4
      comp=Z,2µm,19.0s
D56A  ZEC Mazanza, M   35.89  74 P        P        10 22 36.2 +0.2
      baz=297
Q53A  Leroy            35.94  90 P        P        10 22 35.7 -0.7
      baz=306
E56A  St. Veronique    35.96  75 P        P        10 22 36.4 -0.1
      baz=298
Y49A  Blount Mountai   36.00 101 IAMs_20  IAMs_20  10 37 07.5
      comp=Z,2µm,19.0s
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TZTN  Tazewell         36.06  95 P        P        10 22 36.8 -0.7
      baz=309
LRAL  Lakeview Retre   36.19 103 P        P        10 22 37.2 -1.4
      baz=313,SNR=5.2
LRAL  Lakeview Retre   36.19 103 P        P        10 22 36.9 -1.7
J56A  Wolcott          36.44  81 P        P        10 22 39.8 -0.8
      baz=301
J56A  Wolcott          36.44  81 IAMs_20  IAMs_20  10 36 45.8
      comp=Z,2µm,19.0s
K56A  Middlesex        36.45  82 P        P        10 22 39.9 -0.9
      baz=302
TKL   Tuckaleechee C   36.48  97 P        P        10 22 39.7 -1.3
      comp=Z,5.3nm,1.0s,baz=284,slow=14,SNR=4.3
X51A  Calhoun          36.50  99 P        P        10 22 39.3 -2.0
X51A                             IAmb     IAmb     10 23 01.5
      comp=Z,69nm,1.5s
F57A  Harrington       36.51  76 P        P        10 22 41.4 +0.2
      baz=299
MCWV  Mont Chateau     36.54  88 P        P        10 22 41.0 -0.5
      baz=305
E57A  Chemin Saint G   36.56  75 P        P        10 22 41.8 +0.1
      baz=298
M56A  Emporium         36.57  84 P        P        10 22 41.0 -0.7
      baz=303
M56A  Emporium         36.57  84 IAMs_20  IAMs_20  10 36 27.0
      comp=Z,2µm,19.0s
L56A  Greenwood        36.60  83 P        P        10 22 41.3 -0.8
      baz=303
L56A  Greenwood        36.60  83 IAMs_20  IAMs_20  10 36 56.0
      comp=Z,2µm,19.0s
G57A  Newington        36.68  77 P        P        10 22 42.3 -0.3
      baz=300
R54A  Victor           36.68  91 P        P        10 22 42.0 -0.8
      baz=307,SNR=7.9
S54A  Dingess, Beckl   36.70  92 P        P        10 22 42.6 -0.4
      baz=307
S54A  Dingess, Beckl   36.70  92 IAMs_20  IAMs_20  10 38 00.1
      comp=Z,4µm,20.0s
H57A  Richville        36.75  78 P        P        10 22 43.1 -0.2
      baz=300
N56A  West Decatur     36.81  85 P        P        10 22 43.0 -0.9
      baz=304
I57A  Carthage         36.85  79 P        P        10 22 44.0 -0.1
      baz=301
LATQ  La Tuque         36.94  72 P        P        10 22 44.7 -0.1
      baz=298
K57A  Scipio Center    36.94  81 P        P        10 22 44.8 -0.1
      baz=302
ALE   Alert            36.94  12 IAMs_20  IAMs_20  10 38 05.9
      comp=Z,4µm,20.0s
O56A  Blue Knob Stat   37.00  86 P        P        10 22 43.7 -1.8
O56A                             IAmb     IAmb     10 23 06.3
      comp=Z,39nm,1.5s
O56A                             IAMs_20  IAMs_20  10 37 45.4
      comp=Z,2µm,21.0s
D58A  Chemin du LacG   37.01  73 P        P        10 22 45.1 -0.4
      baz=298
V53A  Saluda           37.07  96 P        P        10 22 45.0 -1.2
V53A                             IAMs_20  IAMs_20  10 38 14.5
      comp=Z,4µm,21.0s
E58A  La Victoria      37.11  74 P        P        10 22 46.5 +0.2
      baz=299
Z51A  Franklin         37.13 101 P        P        10 22 43.1 -3.4
U54A  Nelsons Funny    37.17  94 P        P        10 22 46.2 -0.8
      baz=309
U54A  Nelsons Funny    37.17  94 P        P        10 22 44.6 -2.3
LONY  Lake Ozonia      37.17  78 P        P        10 22 46.7 -0.1
      baz=300
LONY  Lake Ozonia      37.17  78 IAMs_20  IAMs_20  10 35 57.1
      comp=Z,2µm,19.0s
SSPA  Standing Stone   37.22  85 P        P        10 22 46.3 -1.0
      baz=304
G58A  Ormstown         37.23  76 P        P        10 22 46.4 -0.9
      baz=300
P56A  Dayton Farm, R   37.26  87 P        P        10 22 46.7 -1.0
      baz=305
M57A  Sunshine Farm,   37.31  84 P        P        10 22 47.0 -1.1
      baz=304
M57A  Sunshine Farm,   37.31  84 IAMs_20  IAMs_20  10 36 58.7
      comp=Z,3µm,18.0s
Q56A  Snyder Ridge,    37.31  88 P        P        10 22 47.6 -0.6
      baz=306
Q56A  Snyder Ridge,    37.31  88 IAMs_20  IAMs_20  10 37 44.3
      comp=Z,2µm,21.0s
250A  Grady            37.36 103 P        P        10 22 46.6 -1.9
250A                             IAmb     IAmb     10 23 09.1
      comp=Z,62nm,1.1s
250A                             IAMs_20  IAMs_20  10 38 24.3
      comp=Z,4µm,22.0s
N57A  Milroy           37.37  85 P        P        10 22 47.3 -1.3
      baz=304
I58A  Old Forge        37.40  79 P        P        10 22 48.1 -0.7
      baz=301
BG3   Lake Jocassee    37.43  97 IAMs_20  IAMs_20  10 38 26.9
      comp=Z,3µm,20.0s
BRAL  Brewton          37.44 105 P        P        10 22 49.5 +0.3
      baz=315
BRAL  Brewton          37.44 105 IAMs_20  IAMs_20  10 38 40.3
      comp=Z,3µm,22.0s
Y52A  Lilburn          37.46  99 P        P        10 22 46.2 -3.2
K58A  Earlville        37.47  81 P        P        10 22 49.1 -0.3
      baz=302
K58A  Earlville        37.47  81 IAMs_20  IAMs_20  10 37 26.9
      comp=Z,2µm,18.0s
BINY  Binghamton       37.56  82 P        P        10 22 48.6 -1.6
      baz=303
BINY  Binghamton       37.56  82 IAMs_20  IAMs_20  10 37 32.3
      comp=Z,3µm,18.0s
O57A  Amberson         37.62  86 P        P        10 22 49.6 -1.1
      baz=305
BLA   Blacksburg       37.62  92 P        P        10 22 51.1 +0.3
BLA                              pmax     pmax
      comp=Z,63nm,1.2s
BLA                              MLR      MLR
      comp=Z,3µm,20.0s
BLA   Blacksburg       37.62  92 P        P        10 22 50.0 -0.8
      baz=308,SNR=6.3
BLA   Blacksburg       37.62  92 P        P        10 22 51.1 +0.3
BLA                              IAmb     IAmb     10 22 55.8
      comp=Z,63nm,1.1s
BLA                              IAMs_20  IAMs_20  10 38 38.4
      comp=Z,3µm,20.0s
F59A  Saint Guilaume   37.66  75 P        P        10 22 50.5 -0.4
      baz=299
FRNY  Flat Rock        37.67  77 P        P        10 22 50.0 -1.0
H59A  Cadyville        37.71  77 P        P        10 22 51.1 -0.2
      baz=300
M58A  Price’s Panora   37.71  83 P        P        10 22 50.9 -0.5
      baz=304
P57A  Homestead Farm   37.80  87 P        P        10 22 51.4 -0.8
      baz=305
P57A  Homestead Farm   37.80  87 P        P        10 22 51.5 -0.6
P57A                             IAmb     IAmb     10 22 54.6
      comp=Z,46nm,1.5s
P57A                             IAMs_20  IAMs_20  10 37 45.5
      comp=Z,2µm,21.0s
Q57A  Strasburg        37.81  88 P        P        10 22 51.7 -0.6
      baz=306
J59A  Piesco           37.81  79 P        P        10 22 51.4 -0.9
      baz=302
J59A  Piesco           37.81  79 IAMs_20  IAMs_20  10 37 58.0
      comp=Z,2µm,19.0s
N58A  Sunbury          37.84  84 P        P        10 22 51.5 -1.1
      baz=304
N58A  Sunbury          37.84  84 IAMs_20  IAMs_20  10 37 16.8
      comp=Z,3µm,19.0s
152A  Waverly Hall     37.85 101 P        P        10 22 50.6 -2.1
152A                             IAmb     IAmb     10 23 12.5
      comp=Z,30nm,1.1s
S56A  Natural Bridge   37.88  90 P        P        10 22 52.2 -0.8
      baz=307
K59A  Cooperstown      37.96  80 P        P        10 22 52.9 -0.7
      baz=302
T56A  Rocky Mt         37.98  92 P        P        10 22 53.4 -0.4
      baz=308
I59A  Olmsteadville    38.03  78 P        P        10 22 54.1  0.0
      baz=301
F60A  Warwick          38.11  74 P        P        10 22 54.6 -0.1
      baz=299
O58A  Lewisberry       38.12  85 P        P        10 22 54.6 -0.3
      baz=305
GOGA  Godfrey          38.13  99 P        P        10 22 54.4 -0.7
      baz=312
L59A  Walton           38.15  81 P        P        10 22 54.7 -0.5
      baz=303
L59A  Walton           38.15  81 IAMs_20  IAMs_20  10 37 56.0
      comp=Z,2µm,22.0s
R57A  Stanardsville    38.17  89 P        P        10 22 55.0 -0.3
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	baz=307						
U56A	King	38.18	93	P	P	10 22 54.8	-0.7
	baz=309						
U56A	King	38.18	93	IAMs_20	IAMs_20	10 38 37.1	
	comp=Z,3µm,20.0s						
D60A	Saint Jean D'O	38.28	72	P	P	10 22 56.1	0.0
	baz=299						
G60A	Masonville	38.31	76	P	P	10 22 56.8	+0.3
	baz=300						
Q58A	Fox Den Farm,	38.32	87	P	P	10 22 57.3	+0.7
	baz=306						
KMSC	Kings Mountain	38.34	95	P	P	10 22 56.3	-0.6
	baz=310						
H60A	Morristown	38.36	76	P	P	10 22 55.8	-1.1
	baz=301						
I60A	Shoreham	38.36	78	P	P	10 22 55.4	-1.5
	baz=301						
N59A	State Game Lan	38.40	83	P	P	10 22 56.8	-0.4
	baz=304						
N59A	State Game Lan	38.40	83	IAMs_20	IAMs_20	10 38 29.4	
	comp=Z,2µm,19.0s						
V56A	Mocksville	38.45	94	P	P	10 22 57.9	+0.2
	baz=309						
T57A	Hurt	38.49	91	P	P	10 22 59.2	+1.1
	baz=308						
R58A	Rapidan	38.50	88	P	P	10 22 58.5	+0.4
	baz=307						
352A	Blakely	38.53	103	P	P	10 22 55.6	-2.8
352A				IAmb	IAmb	10 23 00.1	
	comp=Z,70nm,1.4s						
352A				IAMs_20	IAMs_20	10 39 00.3	
	comp=Z,3µm,22.0s						
D61A	St Aubert, Com	38.58	71	P	P	10 22 59.2	+0.6
	baz=299						
J60A	Lant Hill Farm	38.60	79	P	P	10 22 59.5	+0.6
	baz=302						
K60A	Five Rivers En	38.64	80	P	P	10 22 59.9	+0.6
	baz=303						
F61A	St Evariste	38.69	74	P	P	10 23 00.1	+0.4
	baz=300						
G61A	St-Isidore-de-	38.71	75	P	P	10 23 00.3	+0.4
	baz=300						
TRY	Troy	38.72	80	IAMs_20	IAMs_20	10 38 39.1	
	comp=Z,2µm,19.0s						
P59A	Jarrettsville	38.72	86	P	P	10 22 59.5	-0.5
	baz=305						
E61A	Lac Etchemin	38.77	73	P	P	10 23 00.5	+0.2
	baz=299						
L60A	Shokan	38.77	81	P	P	10 23 01.0	+0.6
	baz=303						
R58B	Mineral	38.78	89	P	P	10 23 00.7	+0.3
	baz=307						
R58B	Mineral	38.78	89	P	P	10 22 58.6	-1.8
R58B				IAMs_20	IAMs_20	10 38 44.0	
	comp=Z,2µm,21.0s						
U57A	Blanch	38.79	92	P	P	10 23 01.0	+0.4
	baz=308						
W56A	Indian Trail	38.82	94	P	P	10 23 01.1	+0.2
	baz=310						
N60A	Cedar Hill Far	38.84	83	P	P	10 23 01.1	+0.2
	baz=304						
V57A	Coltrane Farms	38.85	93	P	P	10 23 01.3	+0.2
	baz=309						
S58A	Poland Farm, P	38.88	89	P	P	10 23 01.2	-0.1
	baz=307						
S58A	Poland Farm, P	38.88	89	IAMs_20	IAMs_20	10 39 25.7	
	comp=Z,3µm,18.0s						
M60A	Port Jervis	38.89	82	P	P	10 23 01.5	+0.1
	baz=304						
JSC	Jenkinsville	38.94	96	P	P	10 23 00.7	-1.2
JSC				pmax	pmax		
	comp=Z,17nm,1.4s						
JSC				MLR	MLR		
	comp=Z,3µm,18.0s						
JSC	Jenkinsville	38.94	96	P	P	10 23 00.7	-1.2
JSC				IAMs_20	IAMs_20	10 39 12.9	
	comp=Z,3µm,18.0s						
X56A	White Oak	38.95	96	P	P	10 23 00.7	-1.2
	baz=310						
CBN	Corbin Frederi	38.95	88	IAMs_20	IAMs_20	10 38 47.0	
	comp=Z,2µm,21.0s						
K61A	Williamstown	39.00	79	P	P	10 23 01.2	-1.1
	baz=303						
LBNH	Lisbon	39.00	76	IAMs_20	IAMs_20	10 37 36.6	
	comp=Z,3µm,18.0s						
HNH	Hanover	39.06	77	IAMs_20	IAMs_20	10 38 18.1	
	comp=Z,2µm,18.0s						
P60A	Greenville	39.11	85	IAMs_20	IAMs_20	10 38 07.2	
	comp=Z,2µm,20.0s						
U58A	Oxford	39.31	91	P	P	10 23 04.8	-0.1
	baz=308						
D62A	Allapoint, All	39.32	71	P	P	10 23 04.9	0.0
	baz=299						
D62A	Allapoint, All	39.32	71	P	P	10 23 02.3	-2.6
D62A				IAmb	IAmb	10 23 13.6	
	comp=Z,63nm,1.4s						
D62A				IAMs_20	IAMs_20	10 38 04.2	
	comp=Z,2µm,21.0s						
V58A	Windy Hill, Pi	39.33	92	P	P	10 23 04.6	-0.5
	baz=309						
V58A	Windy Hill, Pi	39.33	92	IAMs_20	IAMs_20	10 39 33.5	
	comp=Z,2µm,20.0s						
G62A	West of Eustis	39.35	74	P	P	10 23 05.2	0.0
	baz=301						
Q60A	Greensboro	39.45	86	IAMs_20	IAMs_20	10 38 18.2	
	comp=Z,2µm,18.0s						
PAL	Palisades	39.51	82	IAMs_20	IAMs_20	10 38 41.1	
	comp=Z,3µm,19.0s						
I62A	Tamworth	39.55	77	IAMs_20	IAMs_20	10 38 03.2	
	comp=Z,3µm,20.0s						
FFD	Franklin Falls	39.57	77	IAMs_20	IAMs_20	10 38 33.7	
	comp=Z,2µm,19.0s						
T59A	Double "B" Far	39.58	90	P	P	10 23 07.0	-0.2
	baz=308						
T59A	Double "B" Far	39.58	90	IAMs_20	IAMs_20	10 39 16.4	
	comp=Z,2µm,22.0s						
J62A	Henniker	39.60	78	P	P	10 23 05.8	-1.5
	baz=302						
K62A	Royalston	39.64	79	IAMs_20	IAMs_20	10 39 14.6	
	comp=Z,2µm,18.0s						
P61A	Hammonton	39.72	84	IAMs_20	IAMs_20	10 36 56.4	
	comp=Z,1µm,18.0s						
W58A	Raeford	39.74	93	P	P	10 23 08.1	-0.5
	baz=310						
255A	Hazlehurst	39.74	100	IAMs_20	IAMs_20	10 39 36.8	
	comp=Z,4µm,22.0s						
QUA2	Belchertown	39.78	79	IAMs_20	IAMs_20	10 39 08.2	
	comp=Z,2µm,18.0s						
U59A	Littleton	39.81	91	P	P	10 23 09.8	+0.6
	baz=309						
U59A	Littleton	39.81	91	IAMs_20	IAMs_20	10 39 55.4	
	comp=Z,3µm,20.0s						
V59A	Middlesex	39.90	92	P	P	10 23 09.3	-0.5
	baz=309						
D63A	Stockholm	39.90	71	P	P	10 23 08.9	-0.9
	baz=299,SNR=5.8						
M62A	Hamden	39.90	81	P	P	10 23 09.5	-0.3
	baz=304						
I63A	Otisfield	39.92	76	P	P	10 23 09.6	-0.3
	baz=302						
I63A	Otisfield	39.92	76	IAMs_20	IAMs_20	10 38 15.1	
	comp=Z,3µm,19.0s						
H63A	New Sharon	39.94	75	P	P	10 23 10.1	+0.1
	baz=301						
YLE	Yale	39.95	81	IAMs_20	IAMs_20	10 39 31.6	
	comp=Z,1µm,18.0s						
G63A	Kingsbury	39.96	74	P	P	10 23 09.5	-0.8
	baz=301						
X58A	Rowland	39.97	94	P	P	10 23 09.2	-1.2
	baz=310						
T60A	Surry	40.00	89	IAMs_20	IAMs_20	10 38 51.4	
	comp=Z,2µm,21.0s						
E63A	Oxbow	40.02	72	P	P	10 23 08.8	-1.9
	baz=300						
E63A	Oxbow	40.02	72	IAMs_20	IAMs_20	10 37 23.7	
	comp=Z,2µm,20.0s						
J63A	Strafford	40.03	77	P	P	10 23 11.7	+0.8
	baz=302						
PKME	Peaks-Kenny Pk	40.08	74	P	P	10 23 12.4	+1.2
	baz=301						
PQI	Presque Isle	40.14	71	IAMs_20	IAMs_20	10 38 20.8	
	comp=Z,2µm,18.0s						
HRV	Adam Dziewonsk	40.15	79	IAMs_20	IAMs_20	10 39 06.9	
	comp=Z,2µm,18.0s						
S61A	Accomac	40.34	87	IAMs_20	IAMs_20	10 39 24.8	
	comp=Z,2µm,20.0s						
F64A	Sherman	40.34	72	P	P	10 23 14.2	+0.8
	baz=300						
WES	Weston	40.36	79	IAMs_20	IAMs_20	10 37 46.6	
	comp=Z,2µm,21.0s						
E64A	Bridgewater	40.38	71	P	P	10 23 13.7	0.0
	baz=300						
G64A	Maxfield	40.41	73	P	P	10 23 14.0	0.0
	baz=301						
X59A	McDuffie Farm,	40.43	93	P	P	10 23 14.1	-0.1
	baz=310						
CNNC	Cliffs of the	40.45	92	IAMs_20	IAMs_20	10 40 17.3	
	comp=Z,2µm,20.0s						
L63A	North Scituate	40.47	79	P	P	10 23 11.9	-2.6
	baz=304						
BCX	Boston College	40.48	79	IAMs_20	IAMs_20	10 39 27.8	
	comp=Z,2µm,19.0s						
BRYW	Bryant College	40.48	79	IAMs_20	IAMs_20	10 39 37.8	
	comp=Z,2µm,19.0s						
V60A	Jim Taylor Roa	40.52	91	P	P	10 23 15.2	+0.3
	baz=309						
V60A	Jim Taylor Roa	40.52	91	P	P	10 23 13.5	-1.4
I64A	Boothbay	40.57	76	P	P	10 23 14.6	-0.7
	baz=302						
U61A	Possum Corner	40.68	90	IAMs_20	IAMs_20	10 40 31.3	
	comp=Z,3µm,19.0s						
W60A	Pink Hill	40.68	92	P	P	10 23 16.2	-0.1
	baz=310						
X60A	Albert Glenn T	40.82	93	P	P	10 23 18.1	+0.7
	baz=310						
Z59A	Georgetown, SC	40.87	96	P	P	10 23 18.6	+0.7
	baz=312						
V61A	Roper	40.93	90	IAMs_20	IAMs_20	10 40 37.1	
	comp=Z,2µm,19.0s						
Y60A	Bolivia	41.04	94	IAMs_20	IAMs_20	10 40 24.7	
	comp=Z,3µm,20.0s						
W61A	Ground Anchor	41.06	91	P	P	10 23 20.1	+0.7
	baz=310						
SEY	Seymchan	41.21	317	P	P	10 23 20.6	+0.3
	comp=Z,12nm,0.9s,baz=90,slow=6.9,SNR=17						
SEY	Seymchan	41.21	317	*i* P	P	10 23 21.5	+1.1
656A	Willston	41.48	103	IAMs_20	IAMs_20	10 40 52.4	
	comp=Z,3µm,22.0s						
TLIG	Tlapa	41.80	131	P	P	10 23 21.8	-4.0
PET	Petropavlovsk	42.16	302	*e*P	P	10 23 38.4	+10
PET				*e*		10 25 17.9	
PET				*e*S	S	10 29 53.8	+5.2
PET				pmax	pmax		
	comp=Z,700nm,12.1s						
PETK	Petropavlovsk-	42.63	302	P	P	10 23 32.0	-0.1
	comp=Z,8.8nm,0.9s,baz=86,slow=11,SNR=5.9						
PETK				LR	LR	10 39 59.6	
	comp=Z,902nm,19.9s,baz=52,slow=34						
SUMG	Summit	42.89	26	*i* P	P	10 23 36.1	+1.7
SUMG				pmax	pmax		
	comp=Z,45nm,1.0s						
SUMG	Summit	42.89	26	*i* P	P	10 23 36.1	+1.7
	comp=Z,45nm,1.0s						
SUMG	Summit	42.89	26	*i* P	P	10 23 36.2	+1.7
SUMG				IAmb	IAmb	10 23 38.4	
	comp=Z,45nm,1.0s						
MA2	Magadan	43.24	313	*ce*P	P	10 23 38.0	+1.1
MA2				pmax	pmax		
	comp=Z,43nm,2.5s						
MA2	Magadan	43.24	313	IAMs_20	IAMs_20	10 42 24.9	
	comp=Z,2µm,18.0s						
ICESG	Greenland Ices	43.89	31	*i* P	P	10 23 44.2	+1.7
ICESG				IAmb	IAmb	10 23 45.4	
	comp=Z,8.1nm,0.6s						
060A	Indiantown	44.48	103	IAMs_20	IAMs_20	10 42 45.9	
	comp=Z,3µm,22.0s						
DAG	Danmarks Havn	45.55	17	*i* P	P	10 23 56.0	+0.8
	comp=Z,8.2nm,0.9s						
DAG	Danmarks Havn	45.55	17	*i* P	P	10 23 56.0	+0.8
DAG				IAmb	IAmb	10 23 57.3	
	comp=Z,8.2nm,0.9s						
TIXI	Tiksi	45.80	334	*ce*P	P	10 23 58.1	+0.8
TIXI	Tiksi	45.80	334	P	P	10 23 56.1	-1.2
CCIG	Comitan	46.09	125	P	P	10 23 57.7	-2.7
DBG	Daneborg	46.65	21	*i* P	P	10 24 05.4	+1.6
DBG				IAmb	IAmb	10 24 06.0	
	comp=Z,24nm,0.9s						
PETF	Flores	46.77	122	P	P	10 24 02.0	-3.5
ESQI	Esquipulas	49.00	123	P	P	10 24 20.6	-2.3
MTO3	Montecristo	49.12	123	P	P	10 24 20.6	-3.4
MTO3				IAmb	IAmb	10 24 25.3	
	comp=Z,46nm,1.4s						
SPITS	Spitsbergen Ar	49.52	9	P	P	10 24 26.9	+0.8
	comp=Z,19nm,1.0s,baz=40,slow=6.6,SNR=8.9						
SNET	Serv Nac Est T	49.78	123	IAMs_20	IAMs_20	10 48 21.9	
	comp=Z,1µm,18.0s						
BBSR	BB Station	50.65	85	IAMs_20	IAMs_20	10 46 06.8	
	comp=Z,2µm,19.0s						
YAK	Yakutsk	50.86	323	*e*P	P	10 24 33.5	-2.9
YAK				*e**PP	pwP	10 24 40.6	+1.6
YAK				*e*		10 26 29.7	
YAK				*e*S	S	10 31 48.6	-4.4
YAK				*e**SS	sS	10 32 06.2	+14
YAK				*e*		10 34 27.1	
YAK				*e*SS	SS	10 35 28.2	+1.4
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,17nm,1.5s						
YAK				pmax	pmax		
	comp=Z,58nm,2.8s						
YAK				pmax	pmax		
	comp=N,65nm,2.3s						
YAK				pmax	pmax		
	comp=E,55nm,2.3s						
YAK				smax	smax		
	comp=N,77nm,3.7s						
YAK				smax	smax		
	comp=E,132nm,3.9s						
YAK	Yakutsk	50.86	323	P	P	10 24 34.2	-2.2
YAK				IAmb	IAmb	10 24 41.5	
	comp=Z,18nm,0.7s						
YAK				IAMs_20	IAMs_20	10 46 05.0	
	comp=Z,1µm,20.0s						
TYV	Tymovskoe	51.70	306	*e*P	P	10 24 42.0	-0.8
TYV				*e*S	S	10 32 04.5	-0.4
TYV				pmax	pmax		
	comp=Z,11nm,1.1s						
TYV				pmax	pmax		
	comp=Z,300nm,5.4s						
TYV				smax	smax		
	comp=E,600nm,6.9s						
TYV				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS	Yuzh-Sakhalins	54.04	302⇓	*e*P	P	10 24 59.4	-0.7
YSS				*e*		10 26 59.5	
YSS				*e*S	S	10 32 31.6	-5.3
YSS				*e*		10 34 48.0	
YSS				*e*SS	SS	10 36 17.0	-0.6
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,5.6s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YUK	Yuzh-Kuril'sk	54.17	298	*e*P	P	10 25 01.8	+0.6
YUK				*e*		10 26 06.0	
YUK				*e*		10 27 03.8	
YUK				*e*PPP	PPP	10 28 12.2	
YUK				*e*S	S	10 32 39.4	+0.6
YUK				*e*		10 34 51.1	
YUK				*e*SS	SS	10 36 23.4	+3.6
YUK				pmax	pmax		
	comp=Z,61nm,0.9s						
YUK				pmax	pmax		
	comp=E,54nm,0.8s						
YUK				pmax	pmax		
	comp=N,39nm,0.9s						
YUK				pmax	pmax		
	comp=Z,260nm,2.2s						
YUK				MLR	MLR		
	comp=Z,317nm,16.0s						
YUK				MLR	MLR		
	comp=N,249nm,14.0s						
YUK				MLR	MLR		
	comp=E,299nm,16.0s						
GRTK	Grand Turk	54.23	100	IAMs_20	IAMs_20	10 48 22.6	
	comp=Z,1µm,18.0s						
GRNR	Gornyy	54.88	309⇑	*i*P	P	10 25 05.6	-0.7
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SDDR	Presa de Saban	56.03	102	IAMs_20	IAMs_20	10 50 35.8	
	comp=Z,1µm,19.0s						
NRIK	Noril'sk	56.84	345	P	P	10 25 20.3	+0.3
	comp=Z,5.5nm,0.9s,baz=48,slow=6.7,SNR=7.5						
ZEA	Zeya	57.18	316	*e*P	P	10 25 22.0	-0.6
ZEA				*e*S	S	10 33 19.5	+0.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				smax	smax		
	comp=E,200nm,16.9s						
H11N2	WAKE ISLAND Hy	57.86	262	T	T	11 27 59.9	
	baz=42,slow=76,SNR=2335						
H11N3	WAKE ISLAND Hy	57.87	262	T	T	11 28 00.0	
	baz=42,slow=76,SNR=4702						
H11N1	WAKE ISLAND Hy	57.88	262	T	T	11 28 01.1	
	baz=42,slow=76,SNR=1696						
KLR	Kul'dur	58.16	310	P	P	10 25 28.8	-0.8
	comp=E,2.7nm,1.0s,baz=21,slow=6.6,SNR=5.1						
ARCES	ARCESS Array B	58.50	10	P	P	10 25 31.6	-0.1
	comp=E,3.8nm,0.8s,baz=14,slow=1.8,SNR=4.5						
H11S1	WAKE ISLAND Hy	58.90	261	T	T	11 29 18.7	
	baz=39,slow=74,SNR=87						
H11S2	WAKE ISLAND Hy	58.91	261	T	T	11 29 22.6	
	baz=39,slow=74,SNR=103						
H11S3	WAKE ISLAND Hy	58.92	261	T	T	11 29 20.1	
	baz=39,slow=74,SNR=57						
BOD	Bodaibo	59.50	326	*e*P	P	10 25 37.7	-1.1
BOD				pmax	pmax		
	comp=Z,21nm,1.4s						
SJG	San Juan	59.88	98	IAMs_20	IAMs_20	10 53 49.2	
	comp=Z,873nm,19.0s						
TAOE	Nuku Hiva Isla	60.19	191	*e*T	T	11 30 18.2	
	comp=Z,52nm,0.2s						
USA0B	Ussuriysk Arra	61.51	306	IAMs_20	IAMs_20	10 52 19.5	
	comp=Z,824nm,20.0s						
USRK	Ussuriysk Ar.	61.51	306	P	P	10 25 52.0	-0.7
	comp=Z,8.1nm,0.9s,baz=44,slow=7.1,SNR=17						
USRK				LR	LR	10 52 50.7	
	comp=Z,687nm,19.6s,baz=38,slow=36						
SEUS	St. Eustatius	62.33	96	IAMs_20	IAMs_20	10 51 38.3	
	comp=Z,2µm,22.0s						
MDJ	Mudanjiang	62.43	308	P	P	10 26 06.4	+7.5
MDJ				pP	pwP	10 26 09.6	+8.1
MDJ				sP	sP	10 26 10.9	+12
MDJ				PP	PP	10 28 20.3	+4.6
MDJ				PcS	PcS	10 30 54.0	+12
MDJ				S	S	10 34 24.2	-2.4
MDJ	Mudanjiang	62.43	308	SS	SS	10 38 24.2	-5.2
MDJ				pmax	pmax		
	comp=Z,17nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.4s						
MDJ				LR	LR		
	comp=N,780nm,22.8s						
MDJ				LR	LR		
	comp=E,950nm,22.8s						
MDJ				LR	LR		
	comp=Z,1µm,21.4s						
MDJ	Mudanjiang	62.43	308	IAMs_20	IAMs_20	10 52 38.0	
	comp=Z,1µm,20.0s						
DBBC	Dabeiba	62.46	115	*e*P	P	10 25 58.1	-1.4
ANWB	Willy Bob	62.95	95	IAMs_20	IAMs_20	10 55 32.8	
	comp=Z,1µm,19.0s						
OCAC	Ocana	63.15	112	*e*P	P	10 26 03.6	-0.6
MAJO	Matsushiro	63.53	296	*i* P	P	10 26 04.5	-1.9
MAJO				pmax	pmax		
	comp=Z,12nm,1.1s						
MAT	Matsushiro	63.53	296	P	P	10 26 04.2	-2.2
MAT				*e*S	S	10 34 46.2	+5.6
MJAR	Matsushiro Arr	63.53	296	P	P	10 26 04.3	-2.1
	comp=Z,3.9nm,0.9s,baz=22,slow=6.4,SNR=6.4						
MJAR				LR	LR	10 49 35.6	
	comp=Z,305nm,21.8s,baz=30,slow=32						
HIA	Hailar	63.65	317	IAMs_20	IAMs_20	10 54 13.1	
	comp=Z,943nm,19.0s						
BRRC	Barranca, Sant	63.83	113	*e*P	P	10 26 06.9	-1.7
PLMC	San Jos del P	64.14	116	*e*P	P	10 26 08.6	-2.1
NB2	NORSAR Subarra	64.15	20	P	P	10 26 10.9	+0.8
	comp=Z,36nm,1.7s,baz=338,slow=6.9						
NB2	NORSAR Subarra	64.15	20	P	P	10 26 10.9	+0.8
	baz=338,slow=6.9						
NOA	NORSAR Array B	64.15	20	P	P	10 26 10.1	-0.1
	comp=Z,5.0nm,0.9s,baz=337,slow=6.4,SNR=6.8						
NOA				LR	LR	10 54 24.2	
	comp=Z,906nm,20.1s,baz=340,slow=36						
SDV	Santo Domingo	64.23	109	P	P	10 26 08.5	-3.0
SDV				IAmb	IAmb	10 26 11.2	
	comp=Z,17nm,1.1s						
PAMC	Pamplona, Colo	64.24	112	*e*P	P	10 26 11.3	-0.5
BARC	Barichara	64.55	113	*e*P	P	10 26 12.0	-1.6
SPBC	San Pablo de B	64.80	114	*e*P	P	10 26 13.9	-1.1
YOTC	Yotoco, Valle	64.86	117	*e*P	P	10 26 14.7	-0.8
TOLC	Tolima	64.94	116	*e*P	P	10 26 16.4	+0.1
ANIL	Santa Ana	64.97	116	*e*P	P	10 26 14.2	-2.3
CN2	Changchun	65.08	309	*e*P	P	10 26 17.0	+0.6
CN2				*e*S	S	10 34 56.4	-3.1
CN2				LR	LR		
	comp=Z,620nm,20.0s						
CN2				LR	LR		
	comp=Z,790nm,20.0s						
CN2				LR	LR		
	comp=Z,650nm,22.0s						
RUSC	La Rusia	65.17	113	*e*P	P	10 26 16.3	-1.6
EKA	Eskdalemuir Ar	65.30	30	P	P	10 26 17.9	+0.2
	comp=Z,2.8nm,0.7s,baz=318,slow=4.9,SNR=6.9						
ROSC	El Rosal	65.31	115	P	P	10 26 18.7	0.0
	comp=Z,8.7nm,0.3s,baz=50,slow=3.5,SNR=11						
ROSC				LR	LR	10 58 21.5	
	comp=Z,319nm,20.5s,baz=240,slow=39						
ROSC	El Rosal	65.31	115	P	P	10 26 15.8	-2.9
ROSC				MLR	MLR		
	comp=Z,600nm,19.0s						
ROSC	El Rosal	65.31	115	P	P	10 26 15.8	-2.9
ROSC	El Rosal	65.31	115	*e*P	P	10 26 18.9	+0.2
TAMC	Tame, Arauca	65.50	111	*e*P	P	10 26 16.3	-3.2
ORTC	Ortega, Tolima	65.54	116	*e*P	P	10 26 19.0	-0.7
FDF	Fort de France	65.55	97	IAMs_20	IAMs_20	10 54 24.8	
	comp=Z,1µm,22.0s						
CHIC	Chingaza	65.82	114	*e*P	P	10 26 20.4	-1.6
BBAC	Balboa, Cauca	65.97	119	*e*P	P	10 26 21.6	-1.2
MARP	Paez Belalcaza	66.01	117	*e*P	P	10 26 22.5	-0.6
PCON	Cinco Dias	66.19	118	*e*P	P	10 26 25.1	+0.5
FINES	FINESS Array B	66.35	12	P	P	10 26 24.9	+0.6
	comp=Z,8.2nm,0.8s,baz=359,slow=9.5,SNR=9.6						
BETC	Betania	66.43	117	*e*P	P	10 26 22.7	-2.8
PAC1	Pacto, Paraso	66.59	122	*e*P	P	10 26 24.1	-2.6
CUSE	Cuicocha Este	66.77	121	*e*P	P	10 26 25.7	-2.4
OTAV	Otavalo	66.79	121	*e*P	P	10 26 25.3	-3.0
GARC	Garzon, Huila	66.81	117	*e*P	P	10 26 28.0	-0.2
VALR	Valaam	67.01	10	*i* P	P	10 26 30.9	+2.4
VALR				pmax	pmax		
	comp=Z,28nm,0.7s						
GRGR	Grenville	67.22	99	IAMs_20	IAMs_20	10 53 33.6	
	comp=Z,831nm,19.0s						
IRK	Irkutsk	67.33	327	*e*P	P	10 26 29.2	-1.5
IRK				*e*		10 27 01.0	
IRK				pmax	pmax		
	comp=Z,49nm,1.8s						
VAH	Vaihoa	67.65	198	*e*T	T	11 39 32.5	
	comp=Z,14nm,0.3s						
TLY	Talaya	68.01	327	*e*P	P	10 26 36.5	+1.4
TLY				*e*S	S	10 35 38.5	+3.6
TLY				*e*SSS	SSS	10 42 57.6	
TLY				pmax	pmax		
	comp=Z,71nm,2.0s						
TLY				MLR	MLR		
	comp=Z,3µm,19.0s						
TLY	Talaya	68.01	327	IAMs_20	IAMs_20	10 57 24.4	
	comp=Z,1µm,20.0s						
GUVC	San Jose del G	68.15	115	*e*P	P	10 26 35.3	-1.1
KLMR	Klimovskoe	68.23	5	*e*P	P	10 26 37.2	+1.0
KLMR				pmax	pmax		
	comp=Z,38nm,1.3s						
KLMR	Klimovskoe	68.23	5	*e*P	P	10 26 37.2	+1.0
KLMR				AMP		10 26 56.1	
	comp=Z,38nm,1.3s						
KLMR				LR	LR	10 52 10.7	
KSRS	Korea Array	68.52	303	LR	LR	10 53 41.9	
	comp=Z,173nm,21.4s,baz=31,slow=33						
MOY	Mondy	68.92	329	*e*P	P	10 26 41.3	+0.5
MOY				pmax	pmax		
	comp=Z,42nm,1.6s						

ZAK	Zakamensk	69.23	327	eP	P	10 26 41.8	-1.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ULN	Ulaanbaatar	69.94	323	c eP	P	10 26 46.8	-0.5
ULN				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SONM	Songino Array	70.22	323	P	P	10 26 49.2	+0.2
	comp=Z,1.0nm,0.9s,baz=34,slow=5.6,SNR=6.8						
SONM				LR	LR	10 58 03.6	
	comp=Z,1µm,19.9s,baz=28,slow=36						
TIAR	Tiarei	70.26	199	eT	T	11 42 55.0	
	comp=Z,6.6nm,0.3s						
PPT	Papeete	70.32	200	LR	LR	10 49 06.0	
	comp=Z,422nm,20.4s,baz=31,slow=29						
PPT2	Papeete2	70.34	200	eS	S	10 36 05.1	+2.1
	comp=Z,850nm,26.8s						
PPT2	Papeete2	70.34	200	eLR	LR	10 48 11.8	
	comp=Z,1µm,27.2s,baz=11						
PPT2	Papeete2	70.34	200	eT	T	11 42 58.5	
	comp=Z,15nm,0.3s						
PAE	Paea	70.41	200	eT	T	11 42 58.0	
	comp=Z,4.2nm,0.3s						
TVO	Taravao	70.46	199	eT	T	11 43 11.8	
	comp=Z,4.4nm,0.3s						
ZALV	Zalesovo Beam	71.39	339	P	P	10 26 55.7	-0.1
	comp=Z,2.7nm,0.8s,baz=28,slow=4.9,SNR=8.2						
ZALV				LR	LR	11 00 15.7	
	comp=Z,388nm,19.7s,baz=348,slow=38						
BMRD	Maredsous	72.09	28	dx	x	10 27 01.0	
BMRD				dPcP	PcP	10 27 17.5	-0.9
SVE	Sverdlovsk	72.19	354	eP	P	10 27 01.8	+1.2
SVE				pmax	pmax		
	comp=Z,20nm,1.4s						
BJT	Baijiatuau	72.42	312	IAMs_20	IAMs_20	10 59 53.6	
	comp=Z,724nm,20.0s						
ARU	Arti	72.72	355	P	P	10 27 03.9	+0.2
	comp=Z,1.9nm,0.7s,baz=338,slow=4.0,SNR=6.9						
ARU	Arti	72.72	355	d iP	P	10 27 04.3	+0.6
ARU						10 29 45.4	
ARU				S	S	10 36 31.6	+2.0
ARU				pmax	pmax		
	comp=Z,29nm,2.0s						
ARU	Arti	72.72	355	P	P	10 27 02.5	-1.2
ARU				IAmb	IAmb	10 27 09.7	
	comp=Z,13nm,1.0s						
NACGM	Naroch	72.77	14	i P	P	10 27 05.2	+1.2
NACGM				i P	P	10 27 05.2	+1.2
NACGM				i P	P	10 27 05.2	+1.2
NACGM				i Pb	sP	10 27 05.7	+2.1
	comp=E,23nm,1.1s						
NACGM				i Pb	pP	10 27 06.4	+2.7
	comp=Z,21nm,0.6s						
NACGM				i Pb	pwP	10 27 07.1	+0.5
	comp=N,33nm,1.4s						
NACGM				i PcP	PcP	10 27 25.1	+3.8
NACGM				i PP	PP	10 29 43.5	-1.5
NACGM				i PPP	PPP	10 31 06.2	
NACGM				i S	SKiKP	10 37 03.0	+25
NACGM				i PS	PnS	10 37 36.3	+37
NACGM				i SS	SS	10 41 23.7	+15
NACGM				i SSS	SSS	10 44 46.8	
NACGM				i LQ	LQ	10 53 24.6	
NACGM				i LR	LR	10 58 57.1	
NACGM				i Sb		11 04 21.1	
	comp=Z,335nm,19.8s						
NACGM				i Sb		11 04 32.8	
	comp=E,2µm,27.9s						
NACGM				i Sb		11 04 33.7	
	comp=N,857nm,19.8s						
MNK	Minsk	73.32	13	i P	P	10 27 06.7	-0.6
	comp=E,4.0nm,1.5s						
MNK				i P	P	10 27 06.7	-0.6
	comp=N,29nm,1.4s						
MNK				i P	P	10 27 06.7	-0.6
	comp=Z,29nm,1.0s						
MNK				i PP	PP	10 29 50.8	+1.0
MNK				i PPP	PPP	10 31 35.6	
MNK				i S	S	10 36 37.0	+0.4
MNK				i SS	SS	10 41 22.5	+5.7
MNK				i SSS	SSS	10 44 43.8	
MNK				i LQ	LQ	10 54 34.2	
MNK				i LR	LR	10 58 35.8	
MNK				i LRM	MLR	10 59 21.6	
	comp=E,33nm,19.5s						
MNK				i LRM	MLR	10 59 50.8	
	comp=Z,479nm,17.5s						
MNK				i LRM	MLR	11 00 01.6	
	comp=N,430nm,21.6s						
CLL	Collm	73.44	23	eP	P	10 27 08.0	-0.1
CLL				Lm	MLR	10 59 00.0	
	comp=Z,600nm,20.3s						
OBN	Obninsk	73.72	8	eP	P	10 27 09.9	+0.3
OBN				e		10 27 24.7	
OBN				e		10 29 55.7	
OBN				ePPP	PPP	10 31 38.3	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,314nm,19.0s						
HHC	Hu-ho-hao-te	73.84	316	eP	P	10 27 10.0	-0.7
HHC				S	S	10 36 42.9	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,250nm,6.0s						
HHC				LR	LR		
	comp=Z,550nm,17.9s						
HHC				LR	LR		
	comp=Z,850nm,18.6s						
HHC				LR	LR		
	comp=Z,1µm,17.3s						
RKT	Rikitea	73.88	185	eLR	LR	10 49 49.0	
	comp=Z,1µm,28.2s						
BRG	Berggiesshubel	74.07	23	eP	P	10 27 13.1	+1.3
BRG				Amp		10 27 14.9	
	comp=Z,20nm,1.4s						
BRG	Berggiesshubel	74.07	23	eP	P	10 27 13.0	+1.3
BRG				pmax	pmax		
	comp=Z,20nm,1.4s						
BRG	Berggiesshubel	74.07	23	eP	P	10 27 13.1	+1.3
BRG				Amp		10 27 14.9	
	comp=Z,20nm,1.4s						
PGAV	Gavieira, Arco	74.56	41	eP	P	10 27 15.3	+0.4
	comp=Z,26nm,1.6s						
PGAV				eS	S	10 37 02.4	+11
PGAV	Gavieira, Arco	74.56	41	eLR	LR	10 51 43.8	
	comp=Z,506nm,20.0s						
DGZ	Jazzator, Alta	74.67	336	i P	P	10 27 15.0	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	74.91	347	i P	P	10 27 16.6	0.0
BRVK				pmax	pmax		
	comp=Z,19nm,1.4s						
BVAR	Borovoye Array	74.93	347	P	P	10 27 16.8	0.0
	comp=Z,0.9nm,0.7s,baz=18,slow=20,SNR=5.9						
PRU	Pruhonice	75.04	23	eP	P	10 27 21.8	+4.4
DPC	Dobruska-Polom	75.12	21	eP	P	10 27 18.9	+0.9
POLO	Lamas de Olo	75.25	41	eP	P	10 27 19.5	+0.6
	comp=Z,11nm,1.4s						
PBRG	Braganca	75.32	40	eP	P	10 27 20.4	+1.1
	comp=Z,16nm,1.8s						
KRLC	Kraliky	75.48	21	eP	P	10 27 21.3	+1.2
KRLC	Kraliky	75.48	21	eP	P	10 27 21.3	+1.2
KHC	Kasperske Hory	75.59	24	c eP	P	10 27 21.7	+1.1
KHC				pmax	pmax		
	comp=Z,38nm,2.5s						
KHC	Kasperske Hory	75.59	24	eP	P	10 27 21.8	+1.1
SEM	Semipalatinsk	75.71	340	eP	P	10 27 20.4	-1.2
	baz=340						
SEM	Semipalatinsk	75.71	340	eP	P	10 27 20.3	-1.2
MVO	Moncorvo	75.74	41	eP	P	10 27 22.5	+0.8
	comp=Z,16nm,1.5s						
MVO	Moncorvo	75.74	41	eLR	LR	10 51 56.6	
	comp=Z,410nm,20.0s						
KURK	Kurchatov	75.75	342	c eP	P	10 27 21.1	-0.4
KURK				pmax	pmax		
	comp=Z,22nm,2.5s						
KURK	Kurchatov	75.75	342	P	P	10 27 19.9	-1.6
KURK				IAmb	IAmb	10 27 27.5	
	comp=Z,20nm,1.3s						
KURBB	Kurchatov Arra	75.86	342	P	P	10 27 21.8	-0.3
	comp=Z,2.6nm,0.8s,baz=17,slow=5.4,SNR=10						
GERES	GERESS Array B	75.89	24	P	P	10 27 22.7	+0.2
	comp=Z,1.5nm,0.7s,baz=20,slow=4.3,SNR=4.0						
GERES				LR	LR	11 02 31.2	
	comp=Z,443nm,18.4s,baz=326,slow=37						
MORC	Moravsky Berou	75.94	21	⇑P	P	10 27 23.3	+0.7
MORC	Moravsky Berou	75.94	21	eP	P	10 27 23.4	+0.7
MORC	Moravsky Berou	75.94	21	⇑P	P	10 27 23.3	+0.7
OKC	Ostrava-Krasne	76.02	20	eP	P	10 27 18.9	-4.1
OKC				e		10 45 12.7	
PCAS	Casmilo, Conde	76.05	42	eP	P	10 27 24.4	+1.0
	comp=Z,36nm,2.1s						
VRAC	Vranov	76.16	22	P	P	10 27 25.2	+1.3
	comp=Z,5.4nm,0.8s,baz=332,slow=6.8,SNR=7.2						
VRAC	Vranov	76.16	22	⇑P	P	10 27 25.2	+1.3
VRAC	Vranov	76.16	22	eP	P	10 27 25.0	+1.1
MTE	Manteigas	76.17	41	eS	S	10 37 11.1	+2.2
MTE	Manteigas	76.17	41	eLR	LR	10 52 26.8	
	comp=Z,388nm,18.0s						
KRUC	Moravsky	76.34	22	eP	P	10 27 25.8	+0.9
PSBE	So Bento	76.37	43	eS	S	10 37 18.6	+7.4
RAR	Rarotonga	76.42	208	LR	LR	10 54 15.0	
	comp=Z,328nm,18.4s,baz=28,slow=30						
WATA	Walderalm	76.72	26	eP	P	10 27 28.3	+1.0
	comp=Z,12nm,1.2s						
SQTA	Sankt Quirin	76.72	26	eP	P	10 27 29.1	+1.9
	comp=Z,5.5nm,0.9s						
DAVOX	Davos/Dischmat	76.75	27	P	P	10 27 29.2	+1.7
	comp=Z,3.0nm,0.8s,baz=331,slow=12,SNR=4.4						
FETA	Feichten	76.77	26	eP	P	10 27 29.7	+2.1
	comp=Z,14nm,1.1s						
WTTA	Wattenberg	76.80	26	P	P	10 27 30.6	+2.8
	comp=Z,10nm,1.0s						
LANS	Liptovska Anna	76.95	20	eP	P	10 27 30.9	+2.5
LANS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LANS	Liptovska Anna	76.95	20	eP	P	10 27 30.9	+2.5
PMRV	Marv??o	77.04	42	eLR	LR	10 52 39.5	
	comp=Z,459nm,18.0s						
MODS	Modra-Piesok	77.19	22	eP	P	10 27 31.0	+1.2
MODS				pmax	pmax		
	comp=Z,32nm,1.6s						
MODS	Modra-Piesok	77.19	22	eP	P	10 27 31.0	+1.2
AKASG	Malin Array Be	77.21	13	P	P	10 27 29.9	+0.2
	comp=Z,8.1nm,0.8s,baz=350,slow=5.3,SNR=30						
AKASG				LR	LR	11 02 21.7	
	comp=Z,630nm,19.1s,baz=340,slow=36						
AKASG	Malin Array Be	77.21	13	i P	P	10 27 29.8	0.0
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	Malin Array Si	77.21	13	P	P	10 27 28.6	-1.2
AKBB	Malin Array Si	77.21	13	P	P	10 27 28.6	-1.2
CONA	Conrad Observa	77.27	23	eP	P	10 27 32.1	+1.8
	comp=Z,9.3nm,1.6s						
ZSN	Zaisan	77.41	336	eP	P	10 27 30.1	-0.9
	comp=Z,27nm,2.0s,baz=336						
ZSN	Zaisan	77.41	336	eP	P	10 27 30.0	-0.9
ZSN				pmax	pmax		
	comp=Z,27nm,2.0s						
NJ2	Nanjing	77.42	306	eP	P	10 27 30.3	-0.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KBA	Koelnbreinsper	77.43	25	P	P	10 27 33.5	+2.2
	comp=Z,9.7nm,1.0s						
PESTR	Estremoz	77.43	42	P	P	10 27 30.1	-1.2
VYHS	Vyhne	77.43	20	eP	P	10 27 32.9	+1.8
VYHS	Vyhne	77.43	20	eP	P	10 27 32.9	+1.8
ABTA	Abfaltersbach	77.51	25	eP	P	10 27 33.2	+1.6
	comp=Z,13nm,1.8s						
PNCL	Nicolau / Gran	77.66	43	eP	P	10 27 29.6	-2.9
	comp=Z,49nm,1.5s						
KOLS	Kolonicke sedl	77.73	18	eP	P	10 27 34.7	+1.9
KOLS	Kolonicke sedl	77.73	18	eP	P	10 27 34.7	+1.9
ARSA	Arzberg	77.82	23	eP	P	10 27 35.2	+1.9
	comp=Z,8.3nm,1.5s						
PMOZ	Porto Moniz, M	77.92	52	eLR	LR	10 53 10.8	
	comp=Z,409nm,18.0s						
UZH	Uzhgorod	78.03	18	eP	P	10 27 48.8	+14
UZH				e		10 27 56.1	
PAB	San Pablo	78.20	40	IAMs_20	IAMs_20	11 04 14.6	
	comp=Z,556nm,19.0s						
SOKA	Soboth	78.23	24	eP	P	10 27 38.0	+2.4
	comp=Z,13nm,1.2s						
ESDC	Sonseca Array	78.25	39	P	P	10 27 37.0	+1.1
	comp=Z,5.7nm,1.1s,baz=316,slow=5.7,SNR=16						
OBKA	Obir	78.27	24	eP	P	10 27 36.9	+1.0
	comp=Z,5.3nm,0.8s						
PTGA	Pitinga	78.27	106	P	P	10 27 33.9	-2.3
PTGA				IAmb	IAmb	10 27 36.0	
	comp=Z,14nm,1.0s						
PVAQ	Vaqueiros	78.60	43	eLR	LR	10 53 08.0	
	comp=Z,439nm,18.0s						
MK31	Makanchi Array	78.65	338	P	P	10 27 36.0	-1.9
MK31	Makanchi Array	78.65	338	P	P	10 27 36.0	-1.9
MKAR	Makanchi Array	78.65	338	P	P	10 27 37.4	-0.5
	comp=Z,1.9nm,0.8s,baz=28,slow=4.7,SNR=13						
MKAR				LR	LR	11 07 03.0	
	comp=Z,743nm,18.7s,baz=9.5,slow=39						
MAKZ	Makanchi	78.71	338	P	P	10 27 36.6	-1.7
MAKZ				pmax	pmax		
	comp=Z,45nm,1.5s						
MAKZ				MLR	MLR		
	comp=Z,700nm,19.0s						
MAKZ	Makanchi	78.71	338	P	P	10 27 36.6	-1.7
MAKZ				IAmb	IAmb	10 27 44.9	
	comp=Z,45nm,1.4s						
MAKZ				IAMs_20	IAMs_20	11 07 12.8	
	comp=Z,723nm,19.0s						
AKTO	Aktyubinsk	78.73	355	P	P	10 27 37.8	-0.5
	comp=Z,3.8nm,0.7s,baz=6.8,slow=5.2,SNR=9.1						
BUR08	Bucovina Ar. S	79.53	17	P	P	10 27 40.2	-2.6
BURAR	Bucovina Array	79.56	17	⇓P	P	10 27 44.2	+1.3
BURAR	Bucovina Array	79.56	17	⇓P	P	10 27 44.3	+1.3
SORM	Soroca	79.58	14	⇑P	P	10 27 43.2	+0.3
SORM	Soroca	79.58	14	⇑P	P	10 27 43.2	+0.3
ABKAR	Akbulak array	79.77	353	P	P	10 27 41.0	-2.9
GTA	Gaotai	79.89	323	P	P	10 27 47.1	+2.2
GTA				pP	PcP	10 27 51.4	-1.1
GTA				sP	pwP	10 27 54.1	+6.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,95nm,5.0s						
GTA				LR	LR		
	comp=Z,540nm,16.7s						
GTA				LR	LR		
	comp=Z,580nm,20.0s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
WMQ	Urumqi	79.99	333	eP	P	10 27 48.7	+3.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,430nm,11.8s						
WMQ				LR	LR		
	comp=Z,960nm,29.1s						
WMQ				LR	LR		
	comp=Z,3µm,29.2s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ	Urumqi	79.99	333	IAMs_20	IAMs_20	11 05 58.8	
	comp=Z,883nm,18.0s						
BIZ	Bicaz	80.37	16	⇑P	P	10 27 48.8	+1.6
XAN	Xi'an	80.63	314	IAMs_20	IAMs_20	11 03 56.4	
	comp=Z,604nm,20.0s						
BZS	Buzias	80.77	20	⇓P	P	10 27 50.5	+1.1
BZS	Buzias	80.77	20	⇓P	P	10 27 50.5	+1.1
LZH	Lanzhou	81.13	318	eP	P	10 27 51.9	+0.2
LZH				pP	pwP	10 27 56.8	+2.5
LZH				sP	PcP	10 28 00.6	+2.5
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,75nm,4.2s						
LZH				LR	LR		
	comp=Z,700nm,16.3s						
LZH				LR	LR		
	comp=Z,720nm,16.8s						
LZH				LR	LR		
	comp=Z,840nm,17.0s						
GZR	Gura Zlata	81.22	19	⇑P	P	10 27 50.5	-1.4
GZR	Gura Zlata	81.22	19	⇑P	P	10 27 50.5	-1.4
TDK	Taldyqorghan	81.23	340	eP	P	10 27 51.2	-0.8
	baz=340						
TDK	Taldyqorghan	81.23	340	eP	P	10 27 51.1	-0.8
VRI	Vrincioaia	81.51	16	⇑P	P	10 27 54.3	+0.9
VRI	Vrincioaia	81.51	16	⇑P	P	10 27 54.3	+0.9
PLOR	Plostina	81.52	16	⇓P	P	10 27 54.5	+1.1
PLOR	Plostina	81.52	16	⇓P	P	10 27 54.5	+1.1
AQU	L'Aquila	81.81	26	IAMs_20	IAMs_20	11 08 18.6	
	comp=Z,729nm,20.0s						
BTLS	Baital	82.08	343	eP	P	10 27 55.0	-1.3
	baz=343						
BTLS	Baital	82.08	343	eP	P	10 27 55.0	-1.3
CFR	Carcaliu	82.42	15	⇓P	P	10 27 59.0	+0.9
CFR	Carcaliu	82.42	15	⇓P	P	10 27 59.0	+0.9
CHKK	Chushkaly	82.63	340	eP	P	10 27 58.6	-0.8
	baz=340						
CHKK	Chushkaly	82.63	340	eP	P	10 27 58.5	-0.8
SHLS	Shalkode	82.75	339	eP	P	10 27 59.0	-1.1
	baz=338						
SHLS	Shalkode	82.75	339	eP	P	10 27 58.9	-1.1
SAML	Samuel	82.91	114	P	P	10 27 58.1	-2.9
SAML				pmax	pmax		
	comp=Z,18nm,1.4s						
SAML				MLR	MLR		
	comp=Z,500nm,18.0s						
SAML	Samuel	82.91	114	P	P	10 27 58.1	-2.9
SAML				IAmb	IAmb	10 27 59.9	
	comp=Z,18nm,1.4s						
SAML	Samuel	82.91	114	IAMs_20	IAMs_20	11 08 34.6	
	comp=Z,491nm,18.0s						
SATY	Saty	83.08	339	eP	P	10 28 01.2	-0.6
	baz=339						
SATY	Saty	83.08	339	eP	P	10 28 01.1	-0.6
VSL	Villasalto	83.23	30	IAMs_20	IAMs_20	11 05 35.2	
	comp=Z,995nm,20.0s						
PDG	Podgorica	83.26	22	⇓P	P	10 28 02.2	-0.3
PDG	Podgorica	83.26	22	IAMs_20	IAMs_20	11 07 09.8	
	comp=Z,879nm,20.0s						
AAA	Alma-Ata	83.26	340	eP	P	10 28 01.6	-1.1
	baz=340						
AAA	Alma-Ata	83.26	340	eP	P	10 28 01.5	-1.1
MDOK	Medeo	83.28	340	eP	P	10 28 01.3	-1.5
	baz=340						
MDOK	Medeo	83.28	340	eP	P	10 28 01.3	-1.5
ENH	Enshi	83.51	311	IAMs_20	IAMs_20	11 05 03.0	
	comp=Z,667nm,20.0s						
VTS	Vitosha	83.97	19	⇑P	P	10 28 07.3	+0.9
VTS	Vitosha	83.97	19	⇑P	P	10 28 07.3	+0.9
ANN	Anapa	84.02	9	eP	P	10 28 05.6	-0.7
ANN				eS	S	10 38 28.4	-2.8
ANN				pmax	pmax		
	comp=Z,48nm,1.3s						
ANN				MLR	MLR		
	comp=Z,503nm,14.0s						
AAK	Ala-Archa	84.31	342	P	P	10 28 09.2	+1.1
	comp=Z,1.4nm,0.7s,baz=105,slow=3.5,SNR=3.5						
AAK	Ala-Archa	84.31	342	P	P	10 28 03.9	-4.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AAK	Ala-Archa	84.31	342	P	P	10 28 03.9	-4.2
KK31	Karatay Array	84.58	345	P	P	10 28 05.5	-3.8
KK31				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KK31	Karatay Array	84.58	345	P	P	10 28 05.5	-3.8
KKAR	Karatay Array	84.58	345	P	P	10 28 06.0	-3.3
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KKAR	Karatay Array	84.58	345	P	P	10 28 06.0	-3.3
HNR	Honiara	84.87	248	LR	LR	10 58 17.7	
	comp=Z,136nm,19.9s,baz=40,slow=30						
KIV	Kislovodsk	85.26	5	eP	P	10 28 12.7	-0.1
KIV				e		10 31 30.9	
KIV				ePPP	PPP	10 33 22.8	
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,315nm,18.0s						
SOC	Sochi	85.42	7	eP	P	10 28 11.7	-1.8
SOC				e		10 31 31.4	
SOC				eS	S	10 38 36.1	-9.2
SOC				eSS	SS	10 44 22.3	+3.9
SOC				eSSS	SSS	10 47 55.2	
SOC				pmax	pmax		
	comp=Z,29nm,1.1s						
SOC				MLR	MLR		
	comp=Z,234nm,14.0s						
KBZ	Khabaz	85.50	5	P	P	10 28 14.6	+0.8
	comp=Z,3.2nm,0.9s,baz=312,slow=14,SNR=4.7						
KBZ				LR	LR	11 07 59.9	
	comp=Z,324nm,20.8s,baz=344,slow=37						
IUG	Iuzhnay	85.59	345	eP	P	10 28 13.4	-1.1
	baz=345						
IUG	Iuzhnay	85.59	345	eP	P	10 28 13.3	-1.2
CD2	Chengdu	85.59	316	eP	P	10 28 14.7	+0.1
CD2				S	S	10 38 44.6	-3.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,250nm,5.0s						
CD2				LR	LR		
	comp=Z,420nm,18.8s						
CD2				LR	LR		
	comp=Z,650nm,15.3s						
CD2				LR	LR		
	comp=Z,640nm,19.1s						
TIP	Timpagrande	85.69	25	IAMs_20	IAMs_20	11 12 26.1	
	comp=Z,569nm,20.0s						
KEST	Kesra	86.64	32	LR	LR	11 08 11.1	
	comp=Z,499nm,18.2s,baz=300,slow=36						
KSH	Kashi	87.00	340	P	P	10 28 24.2	+2.7
KSH				pP	pwP	10 28 28.5	+4.4
KSH				S	S	10 39 01.3	+0.1
KSH				sS	ScS	10 39 09.4	+0.5
KSH				pmax	pmax		
	comp=Z,26nm,1.1s						
KSH				pmax	pmax		
	comp=Z,450nm,4.7s						
KSH				LR	LR		
	comp=Z,840nm,7.0s						
KSH				LR	LR		
	comp=Z,480nm,5.0s						
KSH				LR	LR		
	comp=Z,960nm,5.5s						
PB16	IPOC Station P	87.07	124	P	P	10 28 18.7	-3.8
PB16				IAmb	IAmb	10 28 21.9	
	comp=Z,15nm,1.5s						
BRTR	Keskin Array B	88.59	12	LR	LR	11 11 12.8	
	comp=Z,129nm,19.1s,baz=347,slow=38						
SACV	Santiago Islan	88.64	68	IAMs_20	IAMs_20	11 05 01.2	
	comp=Z,647nm,21.0s						
GNI	Garni	89.15	4	i P	P	10 28 32.7	+0.9
GNI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI	Kunming	91.02	314	⇑eP	P	10 28 40.4	-0.4
KMI				pP	sP	10 28 43.5	+3.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,140nm,4.1s						
KMI				LR	LR		
	comp=Z,470nm,16.5s						
KMI				LR	LR		
	comp=Z,550nm,17.0s						
KMI				LR	LR		
	comp=Z,430nm,18.7s						
KMI	Kunming	91.02	314	IAMs_20	IAMs_20	11 10 13.2	
	comp=Z,533nm,19.0s						
GEYT	Alibeck	91.17	353	P	P	10 28 42.1	+1.1
	comp=Z,0.9nm,0.6s,baz=304,slow=11,SNR=4.1						
GEYT				LR	LR	11 13 09.0	
	comp=Z,158nm,19.9s,baz=5.0,slow=38						
DZM	Mont Dzumac	91.48	236	eLR	LR	10 58 00.0	
	comp=Z,174nm,22.8s						
LSA	Lhasa	91.75	325	IAMs_20	IAMs_20	11 11 48.0	
	comp=Z,569nm,20.0s						
SLVN	Son La	93.72	311	IAMs_20	IAMs_20	11 16 18.8	
	comp=Z,507nm,20.0s						
SHL	Shillong	95.21	323	IAMs_20	IAMs_20	11 14 02.9	
	comp=Z,756nm,20.0s						
TAM	Tamanrasset	96.88	40	IAMs_20	IAMs_20	11 16 43.4	
	comp=Z,431nm,18.0s						
FAKI	Fak Fak	96.97	274	IAMs_20	IAMs_20	11 07 21.1	
	comp=Z,484nm,20.0s						
BDFB	Brasilia	97.21	106	LR	LR	11 15 57.7	
	comp=Z,436nm,20.9s,baz=305,slow=37						
BDFB	Brasilia	97.21	106	IAMs_20	IAMs_20	11 15 02.9	
	comp=Z,534nm,21.0s						
RCBR	Riachuelo	97.24	90	IAMs_20	IAMs_20	11 09 49.9	
	comp=Z,626nm,20.0s						
CHTO	Chiang Mai	98.22	314	IAMs_20	IAMs_20	11 13 34.9	
	comp=Z,347nm,20.0s						
CMAR	Chiang Mai Arr	98.53	313	LR	LR	11 17 04.3	
	comp=Z,244nm,18.9s,baz=66,slow=37						
SPB	Sao Paulo	103.65	110	IAMs_20	IAMs_20	11 20 03.3	

	comp=Z,492nm,21.0s						
KULM	Kulim	109.02	305	IAMs_20	IAMs_20	11 27 54.9	
	comp=Z,354nm,20.0s						
CASY	Casey	146.44	220	PKPdf	PKPdf	10 35 12.5	-2.0
VNA3	Neumayer Olymp	146.85	149	PKPdf	PKPdf	10 35 15.6	+0.5
VNA1	Neumayer--Stat	147.37	148	PKPdf	PKPdf	10 35 16.5	+0.6
VNA2	Neumayer--Watz	147.62	149	PKPdf	PKPdf	10 35 17.2	+0.8
SNAA	Sanae	148.93	151	PKPdf	PKPdf	10 35 20.4	+1.7
SNAA	Sanae	148.93	151	PKIKP	PKPdf	10 35 16.1	-2.5
SNAA	Sanae	148.93	151	PKPdf	PKPdf	10 35 16.1	-2.5
BOSA	Boshof	151.05	49	PKPbc	PKiKP	10 35 29.4	-0.3
	comp=Z,2.2nm,0.8s,baz=250,slow=5.1,SNR=4.0						
SYO	Syowa Base	161.26	169	⇑*e*PKPab	PKPab	10 36 17.5	-1.6
SYO	Syowa Base	161.26	169	⇑*e*pPKPab	pPKPab	10 36 21.4	+2.6

*IDC **02** 10:24:14.7±2.4, 6°.91S×155°.37E, h81^{km}±21^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/41, mbtmp4.0/11, MS4.4/1, Ms1 4.4/1, ms1mx3.0/30, Error ellipse: s-maj=24.6km s-min=20.6km az=141.0*

ISC 02 10:24:16.7±0.7**, 6°.8S**±0°.1×**155°.31E**±0°.07**, h100^{km}, n16, σ1^s.75**/16**, mb3.6**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.12	307	P	Pn	10 25 16.1	-1.4
	8.7nm,0.3s,baz=221,slow=19,SNR=1.6						
HNR	Honiara	5.27	120	P	Pn	10 25 30.4	-2.7
	4.8nm,0.3s,baz=354,slow=9.6,SNR=2.3						
HNR				S	Sn	10 26 36.1	+3.5
	15nm,0.3s,baz=104,slow=15,SNR=4.7						
PMG	Port Moresby	8.47	252	P	Pn	10 26 15.0	-1.6
	1.1nm,0.3s,baz=331,slow=23,SNR=1.6						
PMG				S	Sn	10 27 52.8	+2.3
	0.5nm,0.3s,baz=96,slow=8.9,SNR=3.3						
DZM	Mont Dzumac	18.58	146	LR	LR	10 34 21.5	
	comp=Z,1µm,21.6s,baz=17,slow=33						
WRA	Warramunga Arr	24.17	235	P	P	10 29 23.9	0.0
	1.4nm,0.4s,baz=60,slow=9.5,SNR=5.3						
WRA				PcP	PcP	10 33 02.9	+0.5
	0.3nm,0.4s,baz=65,slow=2.8,SNR=4.6						
ASAR	Alice Springs	26.52	229	P	P	10 29 43.5	-1.7
	0.6nm,0.5s,baz=59,slow=9.3,SNR=5.1						
ASAR				PcP	PcP	10 33 08.7	+1.0
	0.3nm,0.5s,baz=64,slow=2.3,SNR=5.7						
H11S3	WAKE ISLAND Hy	27.55	24	T	T	10 58 18.7	
	baz=204,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	27.55	24	T	T	10 58 13.6	
	baz=204,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	27.57	24	T	T	10 58 12.5	
	baz=204,slow=76,SNR=9.2						
PETK	Petropavlovsk-	59.74	2	P	P	10 34 12.3	+1.4
	3.2nm,0.9s,baz=121,slow=7.1,SNR=4.7						
CMAR	Chiang Mai Arr	60.99	295	P	P	10 34 21.7	+1.6
	2.6nm,0.7s,baz=126,slow=5.2,SNR=18						
SONM	Songino Array	69.36	327	P	P	10 35 14.3	+0.5
	0.6nm,0.7s,baz=143,slow=6.3,SNR=3.9						
ILAR	Eielson Array	83.10	21	P	P	10 36 30.2	-0.9
	0.3nm,0.5s,baz=252,slow=5.1,SNR=8.4						
MKAR	Makanchi Array	83.49	319	P	P	10 36 32.5	-0.9
	0.4nm,0.7s,baz=97,slow=4.5,SNR=4.3						
YKA	Yellowknife Ar	96.04	28	P	P	10 37 32.9	+0.3
	0.3nm,0.5s,baz=260,slow=3.5,SNR=7.5						
TORD	Torodi Ar. Bea	153.28	286	PKPbc	PKPbc	10 44 04.0	-0.2
	0.5nm,0.6s,baz=82,slow=2.4,SNR=3.0						

IDC 02 10:35:46.1±3.4**, 14°.70S**×**175°.25W, h0^{km}, mb3.8**/4**, mb1 4.2**/4**, mb1mx3.7**/30**, mbtmp3.8**/4**, Error ellipse: s-maj=178.3km s-min=29.0km az=144.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.27	256	P	P	10 44 29.4	0.0
	0.2nm,0.6s,baz=84,slow=7.7,SNR=1.7						
ASAR	Alice Springs	48.64	251	P	P	10 44 32.1	-0.2
	3.6nm,0.5s,baz=88,slow=7.7,SNR=76						
ILAR	Eielson Array	82.12	12	P	P	10 48 08.2	-0.1
	0.5nm,0.5s,baz=223,slow=5.3,SNR=14						
PDAR	Pinedale Array	82.95	43	P	P	10 48 13.7	+0.2
	0.3nm,0.7s,baz=234,slow=6.1,SNR=2.4						

*IDC **02** 10:40:25.6±12.0, 25°.17S×179°.87E, h484^{km}±143^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.0/27, mbtmp4.2/4, Error ellipse: s-maj=69.8km s-min=34.6km az=39.0*

ISC 02 10:40:27.0±1.7**, 25°.4S**±0°.2×**179°.9E**±0°.3**, h500^{km}, n20, σ0^s.98**/19**, mb3.8**/3**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIZ	Hauiti	13.79	197	P	P	10 43 30.5	+6.3
BKZ	Black Stump Fm	14.06	191	P	P	10 43 28.1	+0.9
ETVZ	East Tongariro	14.18	193	P	P	10 43 29.7	+1.1
OTVZ	Oturere	14.22	193	P	P	10 43 28.7	-0.2
WNVZ	Wahianoa	14.39	193	P	P	10 43 31.0	+0.2
BHHZ	Black Hill Sta	14.46	192	P	P	10 43 31.3	-0.1
KAHZ	Kahuranaki	14.62	189	P	P	10 43 34.4	+1.3
PXZ	Pawanui	14.85	189	P	P	10 43 33.6	-1.8
BFZ	Birch Farm	15.58	190	P	P	10 43 42.5	-0.5
MRZ	Mangatainoka R	15.68	192	P	P	10 43 41.7	-2.3
OGWZ	Otaki Gorge	15.91	193	P	P	10 43 46.9	+0.4
CAW	Cannon Point	16.21	193	P	P	10 43 49.2	-0.4
TCW	Tory Channel	16.48	195	P	P	10 43 52.2	-0.3
BHW	Baring Head	16.54	193	P	P	10 43 52.5	-0.6
PLWZ	Palliser	16.62	192	P	P	10 43 53.4	-0.6
RPZ	Rata Peaks	19.68	199	P	P	10 44 23.5	+1.0
	0.9nm,0.3s,baz=300,slow=3.5,SNR=6.7						
ASAR	Alice Springs	41.70	262	P	P	10 47 31.6	0.0
	0.6nm,0.4s,baz=96,slow=7.1,SNR=26						
WRA	Warramunga Arr	42.20	268	P	P	10 47 35.4	-0.3
	1.3nm,0.4s,baz=103,slow=7.8,SNR=17						
PETK	Petropavlovsk-	80.48	347	P	P	10 51 45.6	-0.3
	3.2nm,0.9s,baz=99,slow=9.6,SNR=5.4						
AKASG	Malin Array Be	146.11	326	PKPbc	PKPdf	10 59 09.2	+0.7
	0.9nm,0.4s,baz=46,slow=4.4,SNR=6.8						

*GCG **02** 10:41:05.4±0.6, 13°.80N×89°.76W, h5^{km}±14^{km}, MD3.5*

*SNET **02** 10:41:06.1±0.9, 13°.94N×89°.79W, h6^{km}±5^{km}, ML2.6*

ISC 02 10:41:07.0±1.2**, 13°.90N**±0°.04×**89°.75W**±0°.04**, h14**^{km}±7^{km}**, n16, σ0^s.81**/23**, 1C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.14	115	*e*P	Pg	10 41 10.9	+0.1
CEVE	Cerro Verde	0.14	119	*e*P	Pg	10 41 11.1	+0.2
CEVE				IAML		10 41 21.6	
	comp=Z,5µm,0.4s						
SNJE	San Jose	0.14	102	*e*P	Pg	10 41 10.7	-0.2
UNIC	Universidad Ca	0.21	67	*e*P	Pg	10 41 11.4	-0.5
UNIC				*e*S	Sg	10 41 15.3	+0.3
UNIC				IAML		10 41 18.6	
	comp=Z,919nm,0.5s						
JAYA	Jayaque - finc	0.38	129	*e*P	Pb	10 41 15.1	-0.6
JAYA				IAML		10 41 22.7	
	comp=Z,615nm,0.2s						
TACO	Tacachico	0.39	79	⇑*i*P	Pb	10 41 14.8	-1.0
TACO				*e*S	Sb	10 41 21.4	-0.4
TACO				IAML		10 41 22.7	
	comp=Z,338nm,0.3s						
PMON	Piamonte	0.46	113	*e*P	Pb	10 41 16.7	-0.3
SNET	Serv Nac Est T	0.55	112	*e*P	Pb	10 41 18.1	-0.4
SNET				IAML		10 41 29.9	
	comp=Z,212nm,0.3s						
LALI	Alcalda de L	0.58	134	*e*P	Pb	10 41 18.5	-0.5
MTO3	Montecristo	0.63	37	*e*P	Pg	10 41 18.8	-0.5
MTO3				*e*S	Sg	10 41 27.8	+0.1
MTO3				IAML		10 41 30.0	
	comp=Z,453nm,0.3s						
LFRS	El Faro	0.72	112	*e*P	Pb	10 41 21.4	-0.1
ESQI	Esquipulas	0.77	31	*e*P	Pg	10 41 21.1	-0.9
ESQI				*e*S	Sg	10 41 32.5	+0.4
LLGN	La Laguna	0.83	71	*e*S	Sb	10 41 34.6	+0.3
NBG	Las Nubes	0.90	320	*e*P	Pb	10 41 24.4	-0.2
NBG				*e*S	Sn	10 41 38.1	-0.4
MRL	Marmol	1.18	3	*e*P	Pb	10 41 29.3	-0.1
MRL				*e*S	Sn	10 41 48.1	+2.8
FUG	Fuego 3	1.19	297	*e*P	Pb	10 41 28.9	-0.7
FUG				*e*S	Sn	10 41 46.3	+0.7

PRU 02 10:44:40.4±0.0**, 50°.26N**×**18°.95E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.55	94	*e*Pg	Pg	10 44 50.4	-0.5
OJC				*e*Sg	Sg	10 44 57.5	-0.4
MORC	Moravsky Berou	1.03	242	*e*PG	Pb	10 45 00.6	-0.5
MORC				*e*SG	Sg	10 45 14.2	+0.8
LANS	Liptovska Anna	1.16	163	*e*PG	Pg	10 45 02.5	-0.1
LANS				*e*SG	Sg	10 45 18.2	+0.6
LANS				*e*LG	Lg	10 45 19.6	
KRLC	Kraliky	1.41	263	*e*PG	Pn	10 45 05.8	-1.5
KRLC				*e*SG	Sg	10 45 25.2	-0.4
DPC	Dobruska-Polom	1.69	274	*e*PG	Pg	10 45 12.7	0.0
DPC				*e*SG	Sg	10 45 35.6	+1.0
VYHS	Vyhne	1.77	182	*e*PN	Pn	10 45 11.4	-0.9
VYHS				*e*SN	Sn	10 45 35.1	-0.4
VRAC	Vranov	1.80	239	*e*PN	Pn	10 45 13.4	+0.7
VRAC				*e*SG	Sb	10 45 36.8	-0.5
KRUC	Moravsky	2.05	235	*e*SG	Sb	10 45 44.6	+0.2
KHC	Kasperske Hory	3.67	254	*e*SG	Sg	10 46 36.4	-1.7

*IDC **02** 10:59:08.7±3.1, 36°.57N×71°.21E, h204^{km}±26^{km}, mb3.2/7, mb1 3.2/13, mb1mx3.0/46, mbtmp3.7/13, Error ellipse: s-maj=25.6km s-min=19.6km az=18.0*

*NNC **02** 10:59:16.4±2.1, 37°.12N×71°.13E, h224^{km}±27^{km}, mb2.7, mpv3.7, Error ellipse: s-maj=21.2km s-min=11.3km az=10.0*

ISC 02 10:59:08.7±1.1**, 36°.6N**±0°.1×**71°.14E**±0°.09**, h200^{km}, n28, σ1^s.73**/32**, mb3.5**/7**, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.86	19	P	Pn	11 00 36.5	+2.0
	SNR=24						
UCH	Uchtor	6.19	24	P	Pn	11 00 41.0	+2.2
	SNR=31						
EKS2	Erkin-Say	6.38	18	P	Pn	11 00 43.4	+2.5
	SNR=7.5						
KK31	Karatay Array	6.51	356	P	Pn	11 00 43.8	+1.3
	1.1nm,0.3s,baz=179,slow=12,SNR=34						
KK31				S	Sn	11 01 53.5	-3.3
	20nm,0.8s,baz=182,slow=21,SNR=21						
AAK	Ala-Archa	6.56	22	P	Pn	11 00 44.4	+1.2
	1.2nm,0.3s,baz=191,slow=5.1,SNR=17						
AAK				S	Sn	11 01 56.6	-1.6
	0.3nm,0.3s,baz=209,slow=12,SNR=4.4						
AAK	Ala-Archa	6.56	22	P	Pn	11 00 45.4	+2.2
	SNR=6.8						
AAK	Ala-Archa	6.56	22	⇓P	Pn	11 00 45.7	+2.5
	2.6nm,0.5s						
AAK				⇓S	Sn	11 01 57.0	-1.2
	25nm,1.1s						
KBK	Karagaybulak	6.72	25	P	Pn	11 00 48.8	+3.4
	SNR=8.7						
TKM2	Tokmak 2	7.18	27	P	Pn	11 00 53.5	+2.2
	SNR=23						
TKM2	Tokmak 2	7.18	27	⇑P	Pn	11 00 53.4	+2.0
	15nm,0.8s						
TKM2				⇑S	Sn	11 02 10.7	-2.2
	11nm,1.1s						
PDGK	Podgornoye	9.28	41	⇑P	Pn	11 01 20.0	+1.4
	4.3nm,1.1s						
GEYT	Alibeck	10.46	281	P	Pn	11 01 33.0	-0.9
	0.4nm,0.3s,baz=79,slow=15,SNR=2.7						
MAKZ	Makanchi	13.00	35	⇓P	Pn	11 02 07.3	+1.2
	1.7nm,0.8s						
MK31	Makanchi Array	13.14	36	⇓P	P	11 02 10.5	-0.3
	1.7nm,0.8s,baz=221,slow=14,SNR=13						
MKAR	Makanchi Array	13.14	36	P	Pn	11 02 08.7	+0.8
	0.1nm,0.3s,baz=218,slow=9.2,SNR=14						
AB31	Akbulak array	15.05	331	⇑P	P	11 02 33.0	+1.1
	1.1nm,0.7s,baz=136,slow=11,SNR=15						
BVAR	Borovoye Array	16.43	358	P	P	11 02 48.2	+1.1
	0.3nm,0.3s,baz=128,slow=9.6,SNR=8.3						
AKTO	Aktyubinsk	16.75	330	P	Pn	11 02 52.2	+0.4
	0.3nm,0.3s,baz=134,slow=9.6,SNR=9.1						
AKTO	Aktyubinsk	16.75	330	⇑P	P	11 02 51.9	+1.2
	5.1nm,1.1s						
ZALV	Zalesovo Beam	19.77	24	P	P	11 03 23.5	+0.1
	0.3nm,0.3s,baz=222,slow=10.0,SNR=7.4						
ARU	Arti	21.57	341	P	P	11 03 43.7	+1.4
	0.4nm,0.3s,baz=134,slow=8.5,SNR=3.9						
FINES	FINESS Array B	37.46	326	P	P	11 06 03.9	+1.4
	2.2nm,0.9s,baz=99,slow=8.9,SNR=1.0						
ARCES	ARCESS Array B	41.09	338	P	P	11 06 31.4	-1.0
	2.9nm,0.8s,baz=95,slow=8.6,SNR=5.8						
NB2	NORSAR Subarra	44.36	323	P	P	11 06 59.6	+0.7
	comp=Z,3.1nm,0.7s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.36	323	P	P	11 06 58.6	-0.3
	comp=Z,1.0nm,0.6s,baz=96,slow=7.7,SNR=4.3						
YKA	Yellowknife Ar	81.13	3	P	P	11 11 00.1	-1.3
	comp=Z,0.4nm,0.7s,baz=356,slow=4.9,SNR=7.1						
WRA	Warramunga Arr	81.95	122	P	P	11 11 05.0	-1.2
	comp=Z,0.4nm,0.9s,baz=320,slow=5.3,SNR=2.1						
ASAR	Alice Springs	84.22	125	P	P	11 11 17.8	-0.1
	comp=Z,0.2nm,0.7s,baz=315,slow=5.5,SNR=5.2						

*NEIC **02** 11:01:22.9±1.4, 4°.1S±0°.1×104°.3W±0°.1, h10^{km}±1^{km}, mb4.8/120, Ms_20 4.9/314, Mwc5.3(GCMT), Error ellipse: s-maj=22.2km s-min=16.0km az=248.0*

*IDC **02** 11:01:22.1±0.8, 3°.93S×104°.24W, h0^{km}, mb4.3/15, mb1 4.6/15, mb1mx4.5/28, mbtmp4.3/15, MS4.8/20, Ms1 4.8/20, ms1mx4.7/24, Error ellipse: s-maj=28.4km s-min=13.9km az=58.0*

*GCMT **02** 11:01:25.9±0.1, 3°.94S±0°.01×104°.17W±0°.01, h15^{km}, MW5.3/144, Moment Tensor Solution. s97,c157; s144,c254; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.16±.02; M$_{\theta\theta}$0.33±.02; M$_{\phi\phi}$-0.16±.02; M$_{r\theta}$0.11±.05; M$_{\theta\phi}$1.07±.01; M$_{\phi r}$-0.12±.05; Best double couple: M$_0$1.11300×10^{17} NP1:φ$_s$7.00000°, δ82.00000°, λ-173.00000°. NP2:φ$_s$276.00000°, δ83.00000°, λ-8.00000°. Principal axes: T 1.1790, Plg0.0000°, Azm321.0000°; N -0.1340, Plg79.0000°, Azm54.0000°; P -1.0460, Plg11.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 11:01:26, 4°.00S×104°.22W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-0.17; M$_{r\theta}$0.42; M$_{\theta\phi}$1.16; M$_{\phi r}$-0.14; Fault plane solution: M$_0$1.28000×10^{17} NP1:φ$_s$7.00000°, δ69.00000°, λ-173.00000°. NP2:φ$_s$275.00000°, δ83.00000°, λ-21.00000°. Principal axes: T 1.3169, Plg10.0000°, Azm323.0000°; N -0.0827, Plg68.0000°, Azm77.0000°; P -1.2342, Plg20.0000°, Azm229.0000°;*

ISC 02 11:01:24.5±0.5**, 4°.03S**±0°.08×**104°.24W**±0°.09**, h18^{km}, n353, σ0^s.84**/202**, mb4.8**/66**, MS4.9**/176**, 1D, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	14.34	77	Pn	Pn	11 04 47.6	+0.9
TLIG	Tlapa	22.17	14	P	P	11 06 18.4	-1.4
RTAL	Retalhuleu	22.23	34	P	P	11 06 20.8	+0.4
CMIG	Matias Romero	22.93	24	P	P	11 06 28.2	+0.5
	8.4nm,1.0s,baz=242,slow=5.6,SNR=6.6						
CMIG				LR	LR	11 13 21.2	
	comp=Z,3µm,20.0s,baz=198,slow=32						
HUEH	Huehuetenango	22.99	33	P	P	11 06 29.5	+0.9
HUEH				IAmb	IAmb	11 06 41.7	
	comp=Z,42nm,1.0s						
HUEH				IAMs_20	IAMs_20	11 13 09.8	
	comp=Z,3µm,20.0s						
SNET	Serv Nac Est T	23.06	40	IAMs_20	IAMs_20	11 13 06.6	
	comp=Z,3µm,18.0s						
CCIG	Comitan	23.46	30	P	P	11 06 33.8	+0.4
RPN	Rapa Nui	23.48	191	LR	LR	11 13 13.7	
	comp=Z,972nm,18.3s,baz=12,slow=30						
MTO3	Montecristo	23.51	39	P	P	11 06 34.6	+0.7
MTO3				IAMs_20	IAMs_20	11 13 21.6	
	comp=Z,4µm,18.0s						
H06S1	SOCORRO T	23.56	344	T	T	11 30 59.5	
	SNR=89						
H06E1	SOCORRO T-PHAS	23.60	344	T	T	11 30 58.3	
	SNR=214						
ESQI	Esquipulas	23.65	38	IAMs_20	IAMs_20	11 13 27.2	
	comp=Z,4µm,20.0s						
CRIN	San Cristobal	23.83	46	P	P	11 06 38.2	+1.3
JTS	Las Juntas de	23.90	53	P	P	11 06 38.1	+0.6
	comp=Z,12nm,0.8s,baz=347,slow=6.9,SNR=4.7						
JTS				LR	LR	11 13 25.7	
	comp=Z,5µm,20.7s,baz=306,slow=30						
JTS	Las Juntas de	23.90	53	P	P	11 06 39.0	+1.5
JTS				IAmb	IAmb	11 06 40.6	
	comp=Z,28nm,1.1s						
JTS	Las Juntas de	23.90	53	IAMs_20	IAMs_20	11 13 12.9	
	comp=Z,4µm,19.0s						
HDC	Heredia	24.42	55	P	P	11 06 44.7	+2.3
HDC				IAMs_20	IAMs_20	11 13 32.6	
	comp=Z,4µm,21.0s						
ACON	Acoyapa	24.74	50	P	P	11 06 46.7	+1.6
PETF	Flores	25.19	34	P	P	11 06 50.3	+1.1
PETF				IAmb	IAmb	11 06 52.2	
	comp=Z,36nm,1.3s						
PETF				IAMs_20	IAMs_20	11 14 32.2	
	comp=Z,4µm,20.0s						
ESPN	Las Esperanzas	25.55	51	P	P	11 06 52.3	-0.1
ATAH	Atahualpa	25.91	98	P	P	11 06 57.1	+0.8
	comp=Z,8.3nm,0.9s,baz=272,slow=12,SNR=10						
ATAH				LR	LR	11 14 36.5	
	comp=Z,1µm,19.8s,baz=276,slow=31						
OTAV	Otavalo	26.12	81	P	P	11 06 59.8	+1.6
OTAV	Otavalo	26.12	81	*e*P	P	11 06 58.3	+0.1
ZAIG	Zacatecas	26.68	3	P	P	11 07 01.4	-1.6
ZAIG				IAMs_20	IAMs_20	11 15 35.1	
	comp=Z,3µm,18.0s						
SLBS	Sierra La Lagu	28.10	349	IAMs_20	IAMs_20	11 15 13.2	
	comp=Z,3µm,21.0s						
NNA	Nana	28.24	108	LR	LR	11 15 25.1	
	comp=Z,2µm,21.1s,baz=286,slow=30						
NNA	Nana	28.24	108	P	P	11 07 15.9	-0.9
NNA				IAmb	IAmb	11 07 19.7	
	comp=Z,23nm,1.2s						
NNA	Nana	28.24	108	IAMs_20	IAMs_20	11 15 01.3	
	comp=Z,3µm,22.0s						
LPIG	La Paz	28.57	348	LR	LR	11 15 47.7	
	comp=Z,2µm,20.8s,baz=166,slow=30						
TEIG	Tepich	28.75	32	IAMs_20	IAMs_20	11 16 55.5	
	comp=Z,3µm,19.0s						
HPIG		30.81	358	P	P	11 07 39.0	-0.6
HPIG				IAmb	IAmb	11 07 50.5	
	comp=Z,7.5nm,0.8s						
ROSC	El Rosal	31.16	74	LR	LR	11 16 50.4	
	comp=Z,1µm,20.5s,baz=228,slow=30						
CZSB	Cruzeiro do Su	31.58	98	*e*P	P	11 07 45.1	-1.3
FSCY	Frank Sound, G	32.44	44	P	P	11 07 55.0	+1.1
833A	Chaparral WMA,	32.50	8	P	P	11 07 54.8	+0.6
833A				IAmb	IAmb	11 08 22.6	
	comp=Z,15nm,1.1s						
TX32	Lajitas Array	33.17	1	P	P	11 08 01.0	+0.7
TXAR	Lajitas Array	33.17	1	P	P	11 08 00.8	+0.6
	comp=Z,0.5nm,0.7s,baz=186,slow=10,SNR=5.6						
TXAR				PcP	PcP	11 10 43.8	+0.7
	comp=Z,0.7nm,0.9s,baz=183,slow=4.9,SNR=3.8						
TXAR				LR	LR	11 19 27.1	
	comp=Z,1µm,20.9s,baz=0.0,slow=33						
TX31	Lajitas Ar. Si	33.17	1	P	P	11 08 00.8	+0.6
TX31				IAmb	IAmb	11 08 08.6	
	comp=Z,16nm,1.1s						
735A	Kenedy	33.27	10	P	P	11 08 01.8	+0.8
HSIG		33.48	349	IAMs_20	IAMs_20	11 18 04.8	
	comp=Z,2µm,21.0s						
JCT	Junction City	34.57	7	P	P	11 08 12.2	-0.2
JCT				IAmb	IAmb	11 08 23.4	
	comp=Z,14nm,1.1s						
435B	Jarrell	35.19	10	P	P	11 08 18.7	+1.1
RKT	Rikitea	35.25	235	*e*LR	LR	11 17 54.1	
	comp=Z,4µm,27.5s						
319A	Douglas	35.53	353	P	P	11 08 22.0	+1.3
319A				IAmb	IAmb	11 08 29.1	
	comp=Z,9.2nm,1.0s						
MNTX	Cornudas Mount	35.54	358	P	P	11 08 20.4	-0.2
SDV	Santo Domingo	35.88	69	P	P	11 08 23.4	-0.6
SDV				IAmb	IAmb	11 08 26.6	
	comp=Z,11nm,0.8s						
SDV	Santo Domingo	35.88	69	*e*P	P	11 08 23.5	-0.6
TAOE	Nuku Hiva Isla	35.98	261	*e*LR	LR	11 18 07.4	
	comp=Z,2µm,24.3s						
GDL2	Guadalupe Moun	36.02	360	P	P	11 08 24.9	0.0
WHTX	Lake Whitney,	36.39	10	P	P	11 08 29.0	+1.1
WHTX				IAmb	IAmb	11 08 42.1	
	comp=Z,12nm,0.9s						
SPX	San Pedro Mart	36.47	344	IAMs_20	IAMs_20	11 19 28.1	
	comp=Z,2µm,20.0s						
121A	Cookes Peak, D	36.51	355	P	P	11 08 30.0	+0.9
121A				IAmb	IAmb	11 08 47.2	
	comp=Z,17nm,1.2s						
TUC	Tucson	36.66	351	P	P	11 08 31.2	+0.9
TUC	Tucson	36.66	351	IAMs_20	IAMs_20	11 20 16.2	
	comp=Z,1µm,19.0s						
PSGCX	Pisagua	36.69	118	IAMs_20	IAMs_20	11 19 21.8	
	comp=Z,2µm,21.0s						
ABTX	Abilene, Hawle	36.71	6	P	P	11 08 31.0	+0.4
ABTX				IAmb	IAmb	11 08 35.4	
	comp=Z,16nm,1.2s						
237A	Washetta, Mont	36.71	12	P	P	11 08 31.6	+1.0
237A				IAmb	IAmb	11 08 42.1	
	comp=Z,17nm,1.0s						
NATX	Nacogdoches	36.74	14	P	P	11 08 30.1	-0.8
NATX				IAmb	IAmb	11 08 41.4	
	comp=Z,29nm,1.4s						
PB16	IPOC Station P	36.82	115	P	P	11 08 31.3	-1.2
PB16				IAMs_20	IAMs_20	11 19 46.3	
	comp=Z,2µm,20.0s						
TA01	Diego Aracena	36.99	119	IAMs_20	IAMs_20	11 19 29.6	
	comp=Z,3µm,20.0s						
MNMC	Minye Minye	37.00	117	P	P	11 08 33.9	+0.3
MNMC				IAmb	IAmb	11 08 35.4	
	comp=Z,30nm,1.3s						
GTBY	Guantanamo Bay	37.23	49	IAMs_20	IAMs_20	11 21 24.1	
	comp=Z,1µm,19.0s						
GO01	Chusmiza	37.54	117	P	P	11 08 38.1	-0.4
GO01				IAmb	IAmb	11 08 50.1	
	comp=Z,18nm,1.4s						
GO01				IAMs_20	IAMs_20	11 20 00.2	
	comp=Z,2µm,20.0s						
H03N2	Juan Fernandez	37.60	144	T	T	11 48 30.3	
	baz=317,slow=77,SNR=58						
H03N1	Juan Fernandez	37.61	144	T	T	11 48 29.5	
	baz=317,slow=77,SNR=99						
H03N3	Juan Fernandez	37.62	144	T	T	11 48 25.7	
	baz=317,slow=77,SNR=67						
PB07	IPOC Station P	37.68	121	P	P	11 08 39.7	+0.4
PB07				IAmb	IAmb	11 08 41.5	
	comp=Z,27nm,1.4s						
PB07				IAMs_20	IAMs_20	11 19 38.9	
	comp=Z,2µm,19.0s						
PB04	IPOC Station P	37.70	122	IAMs_20	IAMs_20	11 19 28.2	
	comp=Z,2µm,22.0s						
PB08	IPOC Station P	37.74	118	P	P	11 08 40.0	0.0
PB08				IAmb	IAmb	11 08 42.0	
	comp=Z,20nm,1.1s						
PB08				IAMs_20	IAMs_20	11 19 44.4	
	comp=Z,2µm,21.0s						
Z35A	Perchaven, San	37.74	10	P	P	11 08 38.6	-0.8
Z35A				IAmb	IAmb	11 08 50.1	
	comp=Z,20nm,0.9s						
PB01	IPOC Station P	37.77	120	P	P	11 08 39.8	-0.1
PB01				IAMs_20	IAMs_20	11 20 20.2	
	comp=Z,2µm,20.0s						
VA04	Juan Fernndez	37.80	144	IAMs_20	IAMs_20	11 19 50.8	
	comp=Z,2µm,19.0s						
MSTX	Muleshoe	37.81	2	P	P	11 08 40.4	+0.3
MSTX				IAmb	IAmb	11 08 51.5	
	comp=Z,16nm,1.1s						
PB10	IPOC Station P	37.85	124	IAMs_20	IAMs_20	11 19 53.2	
	comp=Z,2µm,20.0s						
UABX	UABC, Campus M	37.97	345	IAMs_20	IAMs_20	11 21 11.7	
	comp=Z,2µm,18.0s						
BNM	Barren Site	38.04	357	P	P	11 08 41.4	-0.8
ETMB	Extrema	38.16	101	*e*P	P	11 08 42.5	-0.8
PB09	IPOC Station P	38.26	121	P	P	11 08 43.5	-0.7
PB09				IAMs_20	IAMs_20	11 20 16.2	
	comp=Z,3µm,21.0s						
TJX	Tijuana	38.32	342	IAMs_20	IAMs_20	11 20 16.5	
	comp=Z,1µm,19.0s						
BAR	Barrett	38.36	343	IAMs_20	IAMs_20	11 20 20.9	
	comp=Z,2µm,22.0s						
143A	Socs Landing,	38.51	18	P	P	11 08 46.5	+0.7
143A				IAmb	IAmb	11 08 49.5	
	comp=Z,32nm,1.4s						
109C	Camp Elliot, M	38.69	343	IAMs_20	IAMs_20	11 20 27.4	
	comp=Z,1µm,19.0s						
DWPF	Disney Wildern	38.77	33	IAMs_20	IAMs_20	11 22 26.0	
	comp=Z,1µm,22.0s						
AMTX	Amarillo	38.78	3	P	P	11 08 48.0	-0.2

AMTX				IAmb	IAmb	11 08 58.6	
	comp=Z,15nm,1.1s						
AMTX				IAMs_20	IAMs_20	11 23 01.5	
	comp=Z,2µm,21.0s						
ANMO	Albuquerque	38.82	357	P	P	11 08 49.0	+0.4
LVC	Limon Verde	38.86	122	P	P	11 08 49.9	+0.5
	comp=Z,7.6nm,0.9s,baz=280,slow=4.9,SNR=9.5						
LVC				LR	LR	11 20 36.8	
	comp=Z,2µm,19.5s,baz=288,slow=30						
LVC	Limon Verde	38.86	122	P	P	11 08 48.8	-0.6
LVC				IAmb	IAmb	11 08 52.3	
	comp=Z,28nm,1.2s						
LVC	Limon Verde	38.86	122	IAMs_20	IAMs_20	11 20 36.0	
	comp=Z,2µm,19.0s						
LVC	Limon Verde	38.86	122	*e*P	P	11 08 50.2	+0.7
WLAR	White Oak Lake	38.96	15	P	P	11 08 50.8	+1.2
WLAR				IAmb	IAmb	11 08 52.6	
	comp=Z,27nm,1.3s						
XPFO	Pion Flat	39.17	344	IAMs_20	IAMs_20	11 21 15.4	
	comp=Z,2µm,19.0s						
PFO	Pinyon Flats O	39.17	344	IAMs_20	IAMs_20	11 20 56.4	
	comp=Z,2µm,20.0s						
656A	Willston	39.20	31	IAMs_20	IAMs_20	11 23 13.1	
	comp=Z,2µm,20.0s						
W18A	Petrified Fore	39.28	353	P	P	11 08 52.7	+0.2
X37A	Clayton	39.31	12	P	P	11 08 53.0	+0.5
X37A				IAmb	IAmb	11 09 04.5	
	comp=Z,21nm,1.2s						
GO02	Mina Guanaco	39.37	126	P	P	11 08 53.0	-0.6
GO02				IAmb	IAmb	11 08 56.1	
	comp=Z,30nm,1.2s						
GO02				IAMs_20	IAMs_20	11 20 29.1	
	comp=Z,2µm,20.0s						
W35A	Tecumseh	39.58	9	P	P	11 08 54.9	+0.1
MIAR	Mount Ida	39.66	14	P	P	11 08 55.8	+0.4
MIAR				IAmb	IAmb	11 09 07.3	
	comp=Z,29nm,1.3s						
WUAZ	Wupatki	39.90	351	P	P	11 08 57.9	+0.3
WUAZ				IAMs_20	IAMs_20	11 22 07.8	
	comp=Z,1µm,19.0s						
OK025	Westminster Rd	39.93	9	P	P	11 08 57.2	-0.5
W13A	Hualapai Mount	39.96	348	IAMs_20	IAMs_20	11 21 56.3	
	comp=Z,1µm,19.0s						
PASC	Pasadena Art C	40.20	342	IAMs_20	IAMs_20	11 21 34.6	
	comp=Z,1µm,20.0s						
MWC	Mount Wilson	40.21	342	IAMs_20	IAMs_20	11 21 36.9	
	comp=Z,1µm,19.0s						
OK030	Cody Creek RV	40.35	9	P	P	11 09 01.7	+0.5
OK030				IAmb	IAmb	11 09 12.4	
	comp=Z,34nm,1.3s						
LCO	Las Campanas	40.37	132	IAMs_20	IAMs_20	11 20 46.3	
	comp=Z,3µm,22.0s						
OK031	S. Brethren Rd	40.37	9	P	P	11 09 01.2	-0.1
OK031				IAmb	IAmb	11 09 11.9	
	comp=Z,21nm,1.2s						
AC02	Maricunga	40.50	128	P	P	11 09 02.4	-0.8
OSI	Osito Audit: C	40.78	342	IAMs_20	IAMs_20	11 21 52.9	
	comp=Z,2µm,19.0s						
GSC	Goldstone, Bar	40.86	344	P	P	11 09 06.1	+0.6
GSC				IAMs_20	IAMs_20	11 21 52.1	
	comp=Z,2µm,19.0s						
152A	Waverly Hall	40.92	25	P	P	11 09 06.7	+0.7
152A				IAmb	IAmb	11 09 08.3	
	comp=Z,13nm,0.9s						
SAML	Samuel	41.07	99	P	P	11 09 06.0	-1.4
SAML				IAmb	IAmb	11 09 08.0	
	comp=Z,20nm,1.1s						
SAML	Samuel	41.07	99	IAMs_20	IAMs_20	11 25 00.6	
	comp=Z,1µm,18.0s						
SAML	Samuel	41.07	99	*e*P	P	11 09 06.8	-0.7
GRTK	Grand Turk	41.18	51	IAMs_20	IAMs_20	11 23 55.7	
	comp=Z,2µm,20.0s						
MVCO	Mesa Verde	41.21	355	P	P	11 09 08.1	-0.5
MVCO				IAmb	IAmb	11 09 19.4	
	comp=Z,12nm,0.9s						
KAN13	South Haven SW	41.31	8	P	P	11 09 09.0	-0.1
255A	Hazlehurst	41.32	29	IAMs_20	IAMs_20	11 24 45.2	
	comp=Z,2µm,20.0s						
SDCO	Great Sand Dun	41.57	358	P	P	11 09 12.2	+0.6
SHPR	Sheep Range	41.59	347	P	P	11 09 11.9	+0.3
SHPR				IAMs_20	IAMs_20	11 22 54.4	
	comp=Z,2µm,19.0s						
KNB	Kanab	41.61	350	P	P	11 09 12.5	+0.7
PLAL	Pickwick Lake	41.67	20	P	P	11 09 12.8	+0.8
ISA	Isabella, Lake	41.67	342	P	P	11 09 13.1	+0.9
ISA				IAMs_20	IAMs_20	11 22 50.6	
	comp=Z,1µm,19.0s						
LCAR	Lake Charles	41.73	16	P	P	11 09 12.8	+0.4
LCAR				IAmb	IAmb	11 09 24.0	
	comp=Z,16nm,1.2s						
PV01	Paradox Valley	42.14	355	P	P	11 09 16.5	+0.4
SZCU	Shurtz Canyon	42.22	350	P	P	11 09 17.4	+0.7
CCUT	Cedar City	42.22	349	P	P	11 09 17.1	+0.2
PV02	Paradox Valley	42.23	355	P	P	11 09 16.1	-0.7
PV03	Paradox Valley	42.28	355	P	P	11 09 17.0	-0.2
PV17	East Wray Mesa	42.32	354	P	P	11 09 17.3	-0.2
PV12	Saucer Basin,	42.34	355	P	P	11 09 17.3	-0.5
PV12				IAmb	IAmb	11 09 32.8	
	comp=Z,18nm,1.1s						
PV14	Lion Creek, Pa	42.42	354	P	P	11 09 17.7	-0.7
PRN	Pahroc Range	42.43	347	P	P	11 09 19.0	+0.6
PRN				IAMs_20	IAMs_20	11 23 41.7	
	comp=Z,2µm,18.0s						
R32A	Long Quarter,	42.54	6	IAMs_20	IAMs_20	11 25 28.3	
	comp=Z,990nm,18.0s						
PBMO	Poplar Bluff	42.59	16	P	P	11 09 19.9	+0.4
PBMO				IAmb	IAmb	11 09 22.1	
	comp=Z,34nm,1.4s						
S39A	Bolivar	42.73	13	P	P	11 09 20.3	-0.3
S39A				IAmb	IAmb	11 09 32.1	
	comp=Z,15nm,1.2s						
MT05	Renca	42.77	137	IAMs_20	IAMs_20	11 22 15.6	
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	42.83	5	P	P	11 09 22.6	+1.1
CBKS				IAmb	IAmb	11 09 32.3	
	comp=Z,21nm,1.0s						
KSCO	Kaye Shedlock'	42.85	2	IAMs_20	IAMs_20	11 25 42.0	
	comp=Z,1µm,19.0s						
Z56A	Williston	42.99	29	IAMs_20	IAMs_20	11 25 25.7	
	comp=Z,2µm,20.0s						
SMCO	Snowmass	43.06	357	IAMs_20	IAMs_20	11 24 48.7	
	comp=Z,1µm,19.0s						
ZON	Zonda	43.19	133	P	P	11 09 24.4	-0.2
ZON				IAmb	IAmb	11 09 32.2	
	comp=Z,27nm,1.5s						
PSUT	Pine Spring	43.27	349	P	P	11 09 25.5	+0.2
SRU	San Rafael Swe	43.31	353	P	P	11 09 25.9	+0.3
HODGE	Hodges	43.33	27	IAMs_20	IAMs_20	11 26 40.6	
	comp=Z,1µm,18.0s						
W52A	Murphy	43.34	25	P	P	11 09 25.9	+0.2
W52A				IAmb	IAmb	11 09 28.5	
	comp=Z,23nm,1.1s						
NHSC	New Hope	43.40	30	IAMs_20	IAMs_20	11 25 54.3	
	comp=Z,2µm,20.0s						
R11A	Troy Canyon, C	43.45	347	P	P	11 09 26.3	-0.4
R11A				IAMs_20	IAMs_20	11 24 14.7	
	comp=Z,2µm,19.0s						
MACA	Manacapuru-AM	43.48	90	*e*P	P	11 09 27.3	+0.2
BO02	Sierra Bellavi	43.57	139	IAMs_20	IAMs_20	11 22 38.7	
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	43.63	358	P	P	11 09 28.6	+0.3
ISCO				IAmb	IAmb	11 09 45.5	
	comp=Z,17nm,1.4s						
OMMB	Old Mammoth Mi	43.64	343	IAMs_20	IAMs_20	11 24 19.6	
	comp=Z,1µm,18.0s						
BG3	Lake Jocassee	43.68	26	P	P	11 09 28.6	+0.2
BG3				IAmb	IAmb	11 09 31.0	
	comp=Z,8.9nm,0.9s						
MDPB	Devils Postpil	43.68	343	P	P	11 09 29.3	+0.7
MDPB				IAMs_20	IAMs_20	11 24 03.7	
	comp=Z,934nm,18.0s						
PAULI	Pauline	44.03	27	IAMs_20	IAMs_20	11 26 60.0	
	comp=Z,1µm,19.0s						
Y57A	Sumter	44.03	29	IAMs_20	IAMs_20	11 26 16.0	
	comp=Z,2µm,20.0s						
SIV	San Ignacio	44.04	109	P	P	11 09 31.9	+0.2
	comp=Z,3.8nm,0.9s,baz=278,slow=9.1,SNR=3.8						
SIV				LR	LR	11 25 40.9	
	comp=Z,2µm,19.0s,baz=309,slow=33						
LHV	Little Huntoon	44.09	344	IAMs_20	IAMs_20	11 23 51.6	
	comp=Z,1µm,19.0s						
O20A	White River Ci	44.10	356	P	P	11 09 31.7	-0.2
O20A				IAmb	IAmb	11 09 50.6	
	comp=Z,12nm,1.0s						
NVAR	Mina Array Bea	44.20	344	P	P	11 09 32.8	0.0
	comp=Z,1.7nm,0.9s,baz=142,slow=7.5,SNR=7.5						
Y58A	Scranton	44.29	30	IAMs_20	IAMs_20	11 25 50.0	
	comp=Z,2µm,21.0s						
V53A	Saluda	44.30	25	P	P	11 09 33.4	-0.1
V53A				IAmb	IAmb	11 09 35.8	
	comp=Z,17nm,1.1s						
MPU	Maple Canyon	44.35	352	P	P	11 09 34.2	+0.3
PTGA	Pitinga	44.35	87	P	P	11 09 33.6	-0.5
VILB	Vilhena	44.39	104	*e*P	P	11 09 34.4	-0.1
RYN	Ryan	44.45	344	IAMs_20	IAMs_20	11 24 14.1	
	comp=Z,1µm,19.0s						
KMSC	Kings Mountain	44.51	27	IAMs_20	IAMs_20	11 27 14.8	
	comp=Z,1µm,20.0s						
WAKR	Walker	44.59	343	P	P	11 09 36.2	+0.3
WAKR				IAmb	IAmb	11 09 38.5	
	comp=Z,14nm,1.3s						
N23A	Red Feather La	44.73	358	P	P	11 09 37.2	+0.2
N23A				IAmb	IAmb	11 09 56.9	
	comp=Z,17nm,1.3s						
N23A				IAMs_20	IAMs_20	11 26 07.9	
	comp=Z,1µm,19.0s						
Y59A	Loris	44.76	30	IAMs_20	IAMs_20	11 26 23.3	
	comp=Z,2µm,20.0s						
P40A	Paris	44.77	13	P	P	11 09 37.0	-0.1
X58A	Rowland	44.97	29	IAMs_20	IAMs_20	11 26 21.1	
	comp=Z,2µm,21.0s						
N33A	J Bar K, Exete	44.98	7	IAMs_20	IAMs_20	11 27 06.7	
	comp=Z,1µm,19.0s						
CTU	Camp Tracy	45.03	352	P	P	11 09 39.9	+0.5
Y60A	Bolivia	45.10	31	IAMs_20	IAMs_20	11 26 22.5	
	comp=Z,2µm,21.0s						
W57A	Gilead	45.14	28	IAMs_20	IAMs_20	11 26 49.5	
	comp=Z,2µm,21.0s						
PNTR	Pine Nut	45.18	343	P	P	11 09 40.9	+0.2
PNTR				IAMs_20	IAMs_20	11 25 33.5	
	comp=Z,1µm,19.0s						
RUBR	Rubicon Trail	45.31	343	IAMs_20	IAMs_20	11 24 19.9	
	comp=Z,1µm,21.0s						
VCNR	Virginia City	45.39	343	P	P	11 09 42.8	+0.5
VCNR				IAmb	IAmb	11 09 47.1	
	comp=Z,9.7nm,0.9s						
AFDM	Forest Hills D	45.47	342	P	P	11 09 43.1	+0.5
LC01	Cunco	45.48	144	P	P	11 09 42.6	-0.2
LC01				IAMs_20	IAMs_20	11 23 19.1	
	comp=Z,2µm,21.0s						
BGNE	Belgrade	45.56	6	IAMs_20	IAMs_20	11 27 22.0	
	comp=Z,2µm,18.0s						
ELK	Elko	45.68	348	IAMs_20	IAMs_20	11 25 57.7	
	comp=Z,1µm,19.0s						
PAHR	Pah Rah Range	45.70	344	P	P	11 09 45.2	+0.6
PAHR				IAmb	IAmb	11 09 51.1	
	comp=Z,8.1nm,1.1s						
PTLB	Pontes e Lacer	45.78	108	*e*P	P	11 09 45.2	-0.2
U56A	King	45.94	27	IAMs_20	IAMs_20	11 27 58.6	
	comp=Z,1µm,19.0s						
V58A	Windy Hill, Pi	46.08	29	IAMs_20	IAMs_20	11 27 28.4	
	comp=Z,2µm,20.0s						
BEKR	Beckworth	46.12	343	IAMs_20	IAMs_20	11 25 24.4	
	comp=Z,1µm,18.0s						
ORV	Oroville	46.19	341	P	P	11 09 48.8	+0.5
ORV				IAmb	IAmb	11 10 00.5	
	comp=Z,18nm,1.4s						
CNNC	Cliffs of the	46.24	30	IAMs_20	IAMs_20	11 27 07.6	
	comp=Z,1µm,21.0s						
HVU	Hansel Valley	46.24	351	P	P	11 09 48.8	-0.1
PPT	Papeete	46.38	250	LR	LR	11 24 44.0	
	comp=Z,806nm,18.4s,baz=76,slow=30						
PPT2	Papeete2	46.38	250	*e*S	S	11 16 49.8	+12
	comp=Z,415nm,25.5s						
PPT2				*e*LQ	LQ	11 20 45.0	
	comp=Z,2µm,31.5s						
PPT2				*e*LR	LR	11 22 54.0	
	comp=Z,2µm,26.5s,baz=72						
K22A	Casper	46.50	358	IAMs_20	IAMs_20	11 27 02.6	
	comp=Z,1µm,19.0s						
BLA	Blacksburg	46.64	26	IAMs_20	IAMs_20	11 28 23.1	
	comp=Z,1µm,19.0s						
K31A	O'Neill	46.70	6	P	P	11 09 52.7	+0.4
PDAR	Pinedale Array	46.82	355	P	P	11 09 53.0	-0.5
	comp=Z,2.5nm,0.9s,baz=167,slow=7.1,SNR=18						
PDAR				LR	LR	11 27 12.7	
	comp=Z,668nm,18.1s,baz=182,slow=33						
V60A	Jim Taylor Roa	46.97	30	IAMs_20	IAMs_20	11 27 39.8	
	comp=Z,1µm,20.0s						
AHID	Auburn Hatcher	46.98	353	IAMs_20	IAMs_20	11 26 52.4	
	comp=Z,1µm,18.0s						
T57A	Hurt	46.99	28	IAMs_20	IAMs_20	11 28 18.5	
	comp=Z,2µm,20.0s						
ECR	Eagle Creek	47.30	353	P	P	11 09 57.5	+0.3
V61A	Roper	47.33	31	IAMs_20	IAMs_20	11 27 50.6	
	comp=Z,1µm,21.0s						
WDC	Whiskeytown Da	47.45	341	IAMs_20	IAMs_20	11 24 57.5	
	comp=Z,2µm,22.0s						
PLCA	Paso Flores	47.46	145	P	P	11 09 59.9	+1.5
	comp=Z,14nm,1.2s,baz=318,slow=8.7,SNR=6.7						
PLCA				LR	LR	11 25 01.8	
	comp=Z,2µm,19.4s,baz=333,slow=30						
PLCA	Paso Flores	47.46	145	P	P	11 09 58.1	-0.3
PLCA	Paso Flores	47.46	145	*e*P	P	11 09 59.4	+1.0
V62A	Hyde County Ai	47.48	32	IAMs_20	IAMs_20	11 28 04.4	
	comp=Z,1µm,20.0s						
LL01	San Ignacio de	47.56	148	P	P	11 09 58.4	-0.6
S57A	Dark Hollow, R	47.75	27	IAMs_20	IAMs_20	11 28 33.6	
	comp=Z,2µm,21.0s						
U61A	Possum Corner	47.82	31	IAMs_20	IAMs_20	11 28 26.5	
	comp=Z,1µm,20.0s						
MOD	Modoc Plateau	47.99	344	P	P	11 10 02.9	+0.4
ECSD	EROS Data Cent	48.03	7	P	P	11 10 02.2	-0.5
ECSD				IAmb	IAmb	11 10 25.7	
	comp=Z,15nm,1.4s						
S58A	Poland Farm, P	48.05	28	IAMs_20	IAMs_20	11 28 38.5	
	comp=Z,1µm,21.0s						
WVOR	Wild Horse Val	48.05	346	P	P	11 10 02.9	-0.1
WVOR				IAmb	IAmb	11 10 17.4	
	comp=Z,12nm,1.4s						
WVOR				IAMs_20	IAMs_20	11 26 05.5	
	comp=Z,1µm,21.0s						
FLWY	Flagg Ranch	48.24	354	P	P	11 10 04.1	-0.4
T60A	Surry	48.31	30	IAMs_20	IAMs_20	11 28 22.3	
	comp=Z,2µm,21.0s						
MFID	Camas Ranch	48.37	349	P	P	11 10 05.1	-0.3
MFID				IAMs_20	IAMs_20	11 27 17.9	
	comp=Z,1µm,20.0s						
ITTB	Itaituba	48.37	92	*e*P	P	11 10 04.9	-0.9
R58B	Mineral	48.41	28	IAMs_20	IAMs_20	11 28 49.1	
	comp=Z,1µm,20.0s						
YBH	Yreka Blue Hor	48.55	342	IAMs_20	IAMs_20	11 25 49.5	
	comp=Z,1µm,21.0s						
LKWY	Lake	48.69	354	P	P	11 10 07.3	-0.7
LKWY				IAmb	IAmb	11 10 22.0	
	comp=Z,14nm,1.2s						
LKWY				IAMs_20	IAMs_20	11 30 00.5	
	comp=Z,1µm,18.0s						
Q56A	Snyder Ridge,	48.70	26	IAMs_20	IAMs_20	11 29 08.6	
	comp=Z,1µm,20.0s						
NPGB	Novo Progresso	48.73	96	*e*P	P	11 10 06.6	-1.9
KRMB	Red Mountain	48.75	340	IAMs_20	IAMs_20	11 26 29.8	
	comp=Z,2µm,21.0s						
BCYI	Bear Canyon	48.82	351	P	P	11 10 09.2	+0.3
CBN	Corbin Frederi	48.84	28	IAMs_20	IAMs_20	11 29 21.5	
	comp=Z,2µm,20.0s						
YMR	Madison River	48.85	354	P	P	11 10 09.4	+0.3
YHB	Horse Butte	48.95	353	P	P	11 10 09.1	-0.9
YNE	Yellowstone No	49.09	355	P	P	11 10 10.3	-0.7
MCMT	McKenzie Canyo	49.24	352	P	P	11 10 12.0	-0.2
S61A	Accomac	49.26	30	IAMs_20	IAMs_20	11 29 11.5	
	comp=Z,1µm,20.0s						
P57A	Homestead Farm	49.58	27	IAMs_20	IAMs_20	11 29 41.0	
	comp=Z,1µm,20.0s						
AQDB	Aquidauana	49.95	113	*e*P	P	11 10 16.5	-1.2
MALB	Monte Alegre	49.95	89	*e*P	P	11 10 18.0	+0.1
O56A	Blue Knob Stat	49.98	26	IAMs_20	IAMs_20	11 30 28.6	
	comp=Z,1µm,20.0s						
CPUP	Villa Florida	50.04	121	P	P	11 10 19.1	+0.7
	comp=Z,9.0nm,0.9s,baz=303,slow=7.8,SNR=13						
CPUP				LR	LR	11 28 06.9	
	comp=Z,938nm,20.5s,baz=289,slow=32						
CPUP	Villa Florida	50.04	121	P	P	11 10 18.4	0.0
CPUP	Villa Florida	50.04	121	*e*P	P	11 10 19.1	+0.7
BMO	Blue Mountains	50.05	348	IAMs_20	IAMs_20	11 27 58.3	
	comp=Z,1µm,21.0s						
PP1B	Ponte de Pedra	50.16	110	*e*P	P	11 10 19.5	0.0
E28A	Huff	50.48	3	IAMs_20	IAMs_20	11 30 22.2	
	comp=Z,1µm,19.0s						
LAO	LASA Array	50.52	358	P	P	11 10 21.7	0.0
SSPA	Standing Stone	50.58	26	IAMs_20	IAMs_20	11 30 25.4	
	comp=Z,1µm,20.0s						
PAGS	Pennsylvania G	50.77	27	IAMs_20	IAMs_20	11 30 13.4	
	comp=Z,1µm,21.0s						
G08A	Pilot Rock	50.83	347	P	P	11 10 23.6	-0.5
P60A	Greenville	50.94	28	IAMs_20	IAMs_20	11 30 05.0	
	comp=Z,2µm,21.0s						
HRY	Holter Researc	50.96	353	P	P	11 10 24.6	-0.5
WUPA	West Chester U	51.05	28	IAMs_20	IAMs_20	11 30 48.9	
	comp=Z,901nm,18.0s						
F10A	Beach Ranch, E	51.10	348	IAMs_20	IAMs_20	11 28 43.2	
	comp=Z,1µm,20.0s						
PSUB	Penn St. - Bra	51.12	28	IAMs_20	IAMs_20	11 30 19.7	
	comp=Z,2µm,20.0s						
M56A	Emporium	51.15	25	IAMs_20	IAMs_20	11 31 15.4	
	comp=Z,1µm,19.0s						
N58A	Sunbury	51.26	27	IAMs_20	IAMs_20	11 30 51.5	
	comp=Z,1µm,20.0s						
D32A	Dogwood Acres,	51.34	6	IAMs_20	IAMs_20	11 30 48.0	
	comp=Z,1µm,18.0s						
M57A	Sunshine Farm,	51.48	26	IAMs_20	IAMs_20	11 31 13.3	
	comp=Z,1µm,20.0s						
LUPA	Lehigh Univers	51.69	28	IAMs_20	IAMs_20	11 30 48.7	
	comp=Z,1µm,20.0s						
N59A	State Game Lan	51.75	27	IAMs_20	IAMs_20	11 30 42.5	
	comp=Z,1µm,21.0s						
E09A	Wood Farm, Sta	51.81	348	IAMs_20	IAMs_20	11 29 31.9	
	comp=Z,1µm,19.0s						
E08A	Dider Farm, El	51.98	347	IAMs_20	IAMs_20	11 29 13.5	
	comp=Z,1µm,19.0s						
HAWA	Hanford	52.00	347	P	P	11 10 32.8	+0.1
HAWA				IAmb	IAmb	11 10 46.8	
	comp=Z,19nm,1.4s						
E07A	Sunnyside	52.23	346	IAMs_20	IAMs_20	11 30 01.0	
	comp=Z,1µm,18.0s						
KSPA	Keystone Colle	52.26	27	IAMs_20	IAMs_20	11 31 32.0	
	comp=Z,1µm,20.0s						
ODNJ	Ogdensburg	52.42	28	IAMs_20	IAMs_20	11 30 59.3	
	comp=Z,1µm,20.0s						
MEDO	Medina	52.43	24	IAMs_20	IAMs_20	11 32 13.4	
	comp=Z,944nm,20.0s						
AGMN	Agassiz Nation	52.62	7	IAMs_20	IAMs_20	11 31 38.9	
	comp=Z,1µm,19.0s						
ARAG	Araguaiana, MT	52.80	107	*e*P	P	11 10 39.1	-0.1
SNDB	Serra Nova Dou	52.95	102	*e*P	P	11 10 39.9	-0.4
L59A	Walton	53.09	27	IAMs_20	IAMs_20	11 31 46.0	
	comp=Z,1µm,20.0s						
J56A	Wolcott	53.18	25	IAMs_20	IAMs_20	11 32 11.2	
	comp=Z,1µm,20.0s						
E03A	Lebam	53.18	343	IAMs_20	IAMs_20	11 28 55.1	
	comp=Z,2µm,22.0s						
TRCB	Terra Rica	53.23	115	*e*P	P	11 10 42.6	+0.3
NEW	Newport	53.28	349	IAMs_20	IAMs_20	11 30 22.9	
	comp=Z,1µm,20.0s						
K58A	Earlville	53.28	26	IAMs_20	IAMs_20	11 31 57.0	
	comp=Z,1µm,20.0s						
J57A	Williamstown	53.65	25	IAMs_20	IAMs_20	11 32 11.7	
	comp=Z,1µm,20.0s						
B08A	Colville Reser	53.81	348	IAMs_20	IAMs_20	11 30 19.9	
	comp=Z,1µm,19.0s						
J58A	Remsen	53.92	26	IAMs_20	IAMs_20	11 32 26.8	
	comp=Z,1µm,20.0s						
NLWA	Neilton Lookou	54.04	344	IAMs_20	IAMs_20	11 29 44.8	
	comp=Z,1µm,20.0s						
TRY	Troy	54.15	28	IAMs_20	IAMs_20	11 32 36.9	
	comp=Z,1µm,20.0s						
PCMB	Pacaembu	54.24	114	*e*P	P	11 10 50.8	+1.1
PRPB	Parauapebas	54.24	95	*e*P	P	11 10 49.8	0.0
J59A	Piesco	54.35	26	IAMs_20	IAMs_20	11 32 46.1	
	comp=Z,1µm,20.0s						
ULM	Lac du Bonnet	54.54	7	P	P	11 10 51.0	-0.3
	comp=Z,7.7nm,1.0s,baz=196,slow=8.7,SNR=9.2						
ULM				LR	LR	11 32 55.4	
	comp=Z,1µm,19.2s,baz=192,slow=35						
CPSB	Cacapava Do Su	54.56	125	*e*P	P	11 10 51.6	-0.3
ITRB	Iturama	54.73	111	*e*P	P	11 10 53.3	-0.1
NCB	Newcomb	54.87	26	IAMs_20	IAMs_20	11 32 43.1	
	comp=Z,908nm,20.0s						
HRV	Adam Dziewonsk	54.98	29	IAMs_20	IAMs_20	11 32 24.8	
	comp=Z,1µm,20.0s						
WES	Weston	55.00	29	IAMs_20	IAMs_20	11 32 56.5	
	comp=Z,1µm,20.0s						
LONY	Lake Ozonia	55.23	25	IAMs_20	IAMs_20	11 32 57.5	
	comp=Z,1µm,20.0s						
HNH	Hanover	55.54	28	IAMs_20	IAMs_20	11 33 16.8	
	comp=Z,1µm,22.0s						
VT1	Waterbury	55.81	27	IAMs_20	IAMs_20	11 33 07.7	
	comp=Z,1µm,20.0s						
FRNY	Flat Rock	55.83	26	IAMs_20	IAMs_20	11 33 23.5	
	comp=Z,1µm,22.0s						
BDFB	Brasilia	56.43	106	P	P	11 11 04.8	-0.9
	comp=Z,4.5nm,0.8s,baz=229,slow=8.7,SNR=5.1						
BDFB				LR	LR	11 33 33.6	
	comp=Z,764nm,18.7s,baz=292,slow=34						
BDFB	Brasilia	56.43	106	IAMs_20	IAMs_20	11 33 03.4	
	comp=Z,779nm,20.0s						
SMTB	Santa Maria do	56.46	98	*e*P	P	11 11 07.0	+1.2
IPMB	Ipameri, GO	56.50	109	*e*P	P	11 11 05.6	-0.6
BB19B	Bebedouro	56.65	113	*e*P	P	11 11 06.2	-0.9
G62A	West of Eustis	57.51	28	IAMs_20	IAMs_20	11 34 16.8	
	comp=Z,941nm,21.0s						
SPB	Sao Paulo	58.08	115	IAMs_20	IAMs_20	11 34 27.7	
	comp=Z,848nm,20.0s						
PET01	Itanhaem-SP	58.35	116	*e*P	P	11 11 20.0	+1.0
VAO	Valinhos	58.40	114	*e*P	P	11 11 18.7	-0.8
D62A	Allapoint, All	59.59	27	IAMs_20	IAMs_20	11 35 41.8	
	comp=Z,941nm,20.0s						
JANB	Januaria	59.94	105	*e*P	P	11 11 30.8	+0.6
BSCB	Bom Sucesso	60.11	112	*e*P	P	11 11 32.5	+1.1
HAL	Halifax	60.56	32	IAMs_20	IAMs_20	11 36 21.7	
	comp=Z,573nm,19.0s						
GDU01	Guandu, BA	64.45	103	*e*P	P	11 12 00.7	+0.2
YKA	Yellowknife Ar	66.81	355	P	P	11 12 13.7	-1.0
	comp=Z,4.9nm,0.9s,baz=161,slow=6.0,SNR=25						
YKA				LR	LR	11 38 45.9	
	comp=Z,851nm,21.8s,baz=0.0,slow=34						
RCBR	Riachuelo	68.08	95	*e*P	P	11 12 25.2	+1.3
ILAR	Eielson Array	75.43	343	P	P	11 13 06.3	-0.7
	comp=Z,3.6nm,0.8s,baz=154,slow=5.2,SNR=28						
BELA	Belgrano 2	81.86	168	P	P	11 13 41.0	-1.2
RDOG	Red Dog Mine	82.51	341	IAMs_20	IAMs_20	11 44 05.5	
	comp=Z,534nm,21.0s						
QSPA	South Pole Qui	86.03	180	P	P	11 14 03.7	-0.1
VNDA	Vanda	86.95	193	P	P	11 14 09.4	+1.4
	comp=Z,1.9nm,1.2s,baz=89,slow=3.7,SNR=3.1						
VNDA	Vanda	86.95	193	P	P	11 14 08.0	0.0
VNDA				IAmb	IAmb	11 14 33.8	
	comp=Z,6.7nm,1.3s						
DZM	Mont Dzumac	87.87	248	LR	LR	11 45 22.6	
	comp=Z,164nm,18.0s,baz=168,slow=30						
DZM	Mont Dzumac	87.87	248	*e*LR	LR	11 42 15.0	
	comp=Z,414nm,28.6s						
ASCN	Ascension	89.34	98	P	P	11 14 18.2	-2.5
H11N3	WAKE ISLAND Hy	90.26	290	T	T	12 54 23.7	
	baz=95,slow=74,SNR=37						
H11N2	WAKE ISLAND Hy	90.27	290	T	T	12 54 27.8	
	baz=95,slow=74,SNR=44						
H11N1	WAKE ISLAND Hy	90.27	290	T	T	12 54 24.6	
	baz=95,slow=74,SNR=17						
H11S2	WAKE ISLAND Hy	90.36	288	T	T	12 54 32.9	
	baz=94,slow=74,SNR=47						
H11S1	WAKE ISLAND Hy	90.37	288	T	T	12 54 30.6	
	baz=94,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	90.38	288	T	T	12 54 32.1	
	baz=94,slow=74,SNR=13						
PETK	Petropavlovsk-	98.04	323	LR	LR	11 50 51.3	
	comp=Z,581nm,20.8s,baz=84,slow=30						
DBIC	Dimbokro	99.77	84	LR	LR	11 59 06.8	
	comp=Z,178nm,18.2s,baz=240,slow=35						
ES06	SONSECA Array	100.48	51	IAMs_20	IAMs_20	11 46 50.8	
	comp=Z,264nm,19.0s						
SYO	Syowa Base	103.01	167⇓	*e*pPdiff	Pdif	11 15 22.6	+1.0
TOC5	Torodi Ar. Sit	106.39	78	IAMs_20	IAMs_20	12 08 08.7	
	comp=Z,261nm,19.0s						
TOA3	Torodi Ar. Sit	106.41	78	IAMs_20	IAMs_20	12 08 10.2	
	comp=Z,229nm,19.0s						
TOC1	Torodi Ar. Sit	106.42	78	IAMs_20	IAMs_20	12 07 57.4	
	comp=Z,278nm,19.0s						
SGRT	San Giovanni R	114.79	46	IAMs_20	IAMs_20	12 03 00.2	
	comp=Z,398nm,21.0s						
FNA	Florina	119.11	45	IAMs_20	IAMs_20	12 06 25.7	
	comp=Z,308nm,20.0s						
FAKI	Fak Fak	123.13	264	IAMs_20	IAMs_20	12 07 15.4	
	comp=Z,364nm,21.0s						
BRTR	Keskin Array B	127.96	41	PKP	PKiKP	11 20 30.7	+0.2
	comp=Z,1.8nm,0.9s,baz=228,slow=1.7,SNR=2.8						
SONM	Songino Array	129.04	334	PKP	PKiKP	11 20 32.8	+0.4
	comp=Z,0.9nm,0.9s,baz=279,slow=1.5,SNR=5.5						
ZALV	Zalesovo Beam	129.68	353	PKP	PKPdf	11 20 32.6	+0.1

	comp=Z,0.6nm,0.4s,baz=354,slow=1.5,SNR=4.6						
NJ2	**Nanjing**	**130.95**	**310**	*e*P	**PKPdf**	**11 20 34.3**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	**Hu-ho-hao-te**	**131.24**	**324**	*e*P	**PKPdf**	**11 20 35.6**	**-0.5**
HHC				SKS	**SKSdf**	**11 27 47.5**	**+0.5**
HHC				LR	LR		
	comp=N,470nm,19.4s						
HHC				LR	LR		
	comp=E,440nm,21.4s						
HHC				LR	LR		
	comp=Z,320nm,19.5s						
MKAR	**Makanchi Array**	**137.02**	**353**	PKP	**PKPdf**	**11 20 47.2**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=325,slow=1.5,SNR=8.9						
MKAR				PP	**PP**	**11 23 26.4**	**-2.7**
	comp=Z,1.3nm,1.1s,baz=28,slow=5.5,SNR=4.4						
WMQ	**Urumqi**	**138.99**	**347**	*e*P	**PKPdf**	**11 20 50.1**	**-0.3**
GEYT	**Alibeck**	**142.60**	**23**	PKP	**PKPdf**	**11 20 58.4**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=205,slow=3.1,SNR=4.6						
KSH	**Kashi**	**144.67**	**360**	PKPbc	**PKPdf**	**11 21 02.4**	**+1.6**
RAYN	**Ar Rayn**	**144.94**	**54**		**PKPab**	**11 21 00.4**	**-0.4**
HRA	**Herat**	**147.28**	**21**		**PKPbc**	**11 21 07.5**	**-0.2**
NIL	**Nilore**	**150.43**	**4**	PKPab	**PKPab**	**11 21 21.8**	**-0.2**
PAYA	**Payao**	**151.96**	**305**	P	**PKPbc**	**11 21 19.2**	**-0.4**
	comp=Z,80µmcomp=Z,1µm,0.6s						
CM34	**Chiang Mai Arr**	**152.81**	**305**	P	**PKPbc**	**11 21 22.0**	**+0.6**
CM35	**Chiang Mai Arr**	**152.89**	**304**	P	**PKPbc**	**11 21 21.0**	**-0.6**
CMMT	**Chiang Mai**	**152.99**	**305**	P	**PKiKP**	**11 21 23.1**	**+1.1**
CM36	**Chiang Mai Arr**	**153.01**	**304**	P	**PKiKP**	**11 21 23.0**	**+0.9**
CM32	**Chiang Mai Arr**	**153.15**	**305**	P	**PKiKP**	**11 21 24.0**	**+1.7**
CM04	**Chiang Mai Arr**	**153.17**	**304**	P	**PKiKP**	**11 21 24.0**	**+1.6**
	comp=Z,3.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**153.17**	**304**	PKP	**PKPdf**	**11 21 16.1**	**+1.2**
	comp=Z,1.2nm,1.0s,baz=25,slow=0.9,SNR=6.0						
CM02	**Chiang Mai Arr**	**153.18**	**304**	P	**PKiKP**	**11 21 25.0**	**+2.6**
	comp=Z,3.4nm,1.1s						
CM05	**Chiang Mai Arr**	**153.20**	**304**	P	**PKiKP**	**11 21 24.8**	**+2.3**
	comp=Z,3.3nm,1.3s						
CM13	**Chiang Mai Arr**	**153.22**	**304**	P	**PKiKP**	**11 21 25.0**	**+2.5**
	comp=Z,3.9nm,1.2s						

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*IDC **02** 11:07:13.8±2.0,4.°06S×103.°99W,h0^{km},mb4.0/9,*
mb1 4.3/9,mb1mx4.1/29,mbtmp4.0/9,Error ellipse:
s-maj=62.8km s-min=25.7km az=46.0
*NEIC **02** 11:07:15.0±1.3,4.°15S±0.°09×103.°9W±0.°2,h10^{km}±1^{km},*
mb4.4/20,Error ellipse: s-maj=29.5km s-min=13.9km
az=253.0
ISC 02 11:07:16.4±0.7,4.°1S±0.°1×103.°9W±0.°1,h18^{km},n38,
σ0^{s}.70/33,mb4.3/19,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H06S1	**SOCORRO T**	**23.73**	**343**	T	T	11 36 51.4	
	SNR=25						
H06E1	**SOCORRO T-PHAS**	**23.76**	**343**	T	T	11 36 56.8	
	SNR=36						
ESPN	**Las Esperanzas**	**25.36**	**50**	P	**P**	**11 12 42.6**	**-0.1**
OTAV	**Otavalo**	**25.82**	**81**	P	**P**	**11 12 47.9**	**+0.3**
833A	**Chaparral WMA,**	**32.53**	**7**	P	**P**	**11 13 46.8**	**+0.3**
833A				IAmb	IAmb	11 14 15.8	
	comp=Z,3.4nm,0.7s						
TXAR	**Lajitas Array**	**33.25**	**0**	P	**P**	**11 13 52.2**	**-0.6**
	comp=Z,0.9nm,1.1s,baz=181,slow=11,SNR=4.7						
JCT	**Junction City**	**34.61**	**6**	P	**P**	**11 14 05.0**	**+0.3**
JCT				IAmb	IAmb	11 14 07.3	
	comp=Z,5.5nm,1.2s						
HKT	**Hockley**	**34.74**	**12**	P	**P**	**11 14 06.2**	**+0.6**
HKT				IAmb	IAmb	11 14 09.3	
	comp=Z,13nm,1.4s						
SDV	**Santo Domingo**	**35.62**	**69**	P	**P**	**11 14 13.9**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=240,slow=7.0,SNR=5.5						
H03N2	**Juan Fernandez**	**37.35**	**144**	T	T	11 54 22.3	
	baz=318,slow=78,SNR=19						
H03N1	**Juan Fernandez**	**37.37**	**144**	T	T	11 54 20.2	
	baz=318,slow=78,SNR=24						
H03N3	**Juan Fernandez**	**37.37**	**144**	T	T	11 54 20.4	
	baz=318,slow=78,SNR=22						
PB08	**IPOC Station P**	**37.42**	**118**	P	**P**	**11 14 28.2**	**-1.2**
Z35A	**Perchaven, San**	**37.76**	**9**	P	**P**	**11 14 32.1**	**+0.6**
Z35A				IAmb	IAmb	11 14 34.5	
	comp=Z,8.6nm,1.0s						
GO02	**Mina Guanaco**	**39.06**	**126**	P	**P**	**11 14 42.2**	**-0.8**
GO02				IAmb	IAmb	11 14 42.5	
	comp=Z,13nm,1.4s						
SAML	**Samuel**	**40.75**	**99**	P	**P**	**11 14 57.5**	**+0.7**
SAML				IAmb	IAmb	11 15 05.9	
	comp=Z,11nm,1.5s						
MVCO	**Mesa Verde**	**41.32**	**354**	P	**P**	**11 15 01.6**	**+0.1**
MVCO				IAmb	IAmb	11 15 21.2	
	comp=Z,13nm,1.5s						
SHPR	**Sheep Range**	**41.74**	**346**	P	**P**	**11 15 04.3**	**-0.5**
VA03	**San Esteban**	**42.26**	**136**	P	**P**	**11 15 08.4**	**-0.6**
VA03				IAmb	IAmb	11 15 23.4	
	comp=Z,16nm,1.1s						
SRU	**San Rafael Swe**	**43.43**	**353**	P	**P**	**11 15 18.4**	**-0.2**
CBYP	**Canovanas**	**43.62**	**58**	P	**P**	**11 15 19.5**	**-0.7**
NVAR	**Mina Array Bea**	**44.37**	**344**	P	**P**	**11 15 26.3**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=182,slow=5.4,SNR=2.6						
WAKR	**Walker**	**44.76**	**343**	P	**P**	**11 15 30.3**	**+1.0**
WAKR				IAmb	IAmb	11 15 32.5	
	comp=Z,10nm,1.5s						
PNTR	**Pine Nut**	**45.35**	**343**	P	**P**	**11 15 34.5**	**+0.5**
BEKR	**Beckworth**	**46.29**	**342**	P	**P**	**11 15 41.7**	**+0.4**
PDAR	**Pinedale Array**	**46.93**	**354**	P	**P**	**11 15 45.6**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=174,slow=8.2,SNR=7.3						
RLMT	**Red Lodge**	**49.24**	**355**	P	**P**	**11 16 04.2**	**+0.1**
RLMT				IAmb	IAmb	11 16 04.3	
	comp=Z,2.3nm,0.8s						
CPUP	**Villa Florida**	**49.73**	**121**	P	**P**	**11 16 08.8**	**+0.8**
	comp=Z,2.7nm,0.9s,baz=203,slow=15,SNR=4.5						
ULM	**Lac du Bonnet**	**54.58**	**6**	P	**P**	**11 16 44.6**	**+1.0**
	comp=Z,2.7nm,1.0s,baz=225,slow=1.4,SNR=3.0						
YKA	**Yellowknife Ar**	**66.91**	**355**	P	**P**	**11 18 06.8**	**-0.6**
	comp=Z,2.7nm,1.0s,baz=161,slow=6.1,SNR=15						
INK	**Inuvik**	**75.14**	**349**	P	**P**	**11 18 57.1**	**-0.1**
	comp=Z,2.6nm,1.1s,baz=115,slow=8.5,SNR=3.4						
ILAR	**Eielson Array**	**75.60**	**342**	P	**P**	**11 19 00.3**	**+0.3**
	comp=Z,2.4nm,1.1s,baz=145,slow=4.7,SNR=11						
BELA	**Belgrano 2**	**81.72**	**168**	P	**P**	**11 19 33.7**	**+0.2**
QSPA	**South Pole Qui**	**85.95**	**180**	P	**P**	**11 19 56.6**	**+1.2**
MKAR	**Makanchi Array**	**137.13**	**354**	PKP	**PKPdf**	**11 26 37.7**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=42,slow=2.3,SNR=1.6						
UGM	**Wanagama**	**143.62**	**251**	PKPdf	**PKPdf**	**11 26 51.0**	**-0.5**
RAYN	**Ar Rayn**	**144.74**	**54**	PKPdf	**PKPdf**	**11 26 52.0**	**-1.2**
XMIS	**Christmas Isla**	**147.17**	**244**	PKPdf	**PKPdf**	**11 26 56.6**	**-0.9**

IDC 02 11:13:27.3±11.0,4.°84S×103.°66W,h0^{km},mb3.7/4,
mb1 4.0/4,mb1mx3.7/25,mbtmp3.7/4,MS3.8/2,Ms1 3.8/2,
ms1mx3.3/18,Error ellipse: s-maj=308.6km
s-min=153.0km az=134.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**23.45**	**22**	LR	LR	11 25 34.5	
	comp=Z,162nm,21.8s,baz=162,slow=31						
JTS	**Las Juntas de**	**23.94**	**51**	LR	LR	11 25 38.4	
	comp=Z,288nm,19.9s,baz=202,slow=30						
PDAR	**Pinedale Array**	**47.69**	**354**	P	P	11 22 05.5	-0.4
	0.9nm,0.9s,baz=142,slow=5.1,SNR=5.7						
ULM	**Lac du Bonnet**	**55.28**	**6**	P	P	11 23 03.5	+1.0
	0.7nm,0.6s,baz=182,slow=15,SNR=1.5						
YKA	**Yellowknife Ar**	**67.67**	**355**	P	P	11 24 25.9	-0.1
	0.7nm,0.9s,baz=159,slow=6.8,SNR=7.9						
ILAR	**Eielson Array**	**76.38**	**342**	P	P	11 25 17.9	-0.4
	0.3nm,0.6s,baz=155,slow=4.7,SNR=5.0						

WEL 02 12:14:31.3±0.9,38°S±7°×18°0E±°,h33^{km},M3.4/24,
ML3.8/24,MLv3.4/24,Error ellipse: s-maj=0.0km
s-min=0.0km az=27.5,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.08**	**266**	P	Pn	12 14 50.0	-0.2
MXZ	**Matakaoa Point**	**1.18**	**279**	P	Pn	12 14 50.1	-1.4
MXZ				S	Sn	12 15 04.5	-2.0
PUZ	**Puketiti**	**1.24**	**255**	P	Pn	12 14 52.5	+0.1
PUZ				S	Sn	12 15 08.4	+0.3
PKGZ	**Pakihiroa**	**1.35**	**264**	P	Pn	12 14 53.6	-0.3
PKGZ				S	Sn	12 15 10.1	-0.7
CNGZ	**Carnagh Statio**	**1.44**	**239**	P	Pn	12 14 56.2	+1.2
CNGZ				S	Sb	12 15 17.2	+1.8
TWGZ	**Tauwhareparae**	**1.48**	**253**	P	Pn	12 14 56.3	+0.6
TWGZ				S	Sn	12 15 15.1	+1.2
HAZ	**Te Kaha**	**1.58**	**269**	P	Pn	12 14 56.6	-0.4
HAZ				S	Sn	12 15 14.9	-1.4
TKGZ	**Te Karaka**	**1.67**	**245**	P	Pn	12 14 58.7	+0.5
TKGZ				S	Sn	12 15 19.6	+1.1
RUGZ	**Raukumara Rang**	**1.68**	**262**	P	Pn	12 14 58.1	-0.3
RIGZ	**Rimuhau**	**1.85**	**239**	P	Pn	12 15 01.4	+0.6
RIGZ				S	Sn	12 15 24.9	+1.9
MWZ	**Matawai**	**1.87**	**251**	P	Pn	12 15 01.0	-0.1
MWZ				S	Sn	12 15 22.5	-1.0
PRGZ	**Paritu Road**	**1.89**	**231**	P	Pn	12 15 02.1	+0.7
MHGZ	**Mahia Peninsul**	**2.03**	**226**	P	Pn	12 15 03.9	+0.8
KNZ	**Kokohu**	**2.08**	**232**	P	Pn	12 15 04.2	+0.3
URZ	**Urewera**	**2.17**	**256**	P	Pn	12 15 05.5	+0.5
SNGZ	**Shannon Statio**	**2.18**	**241**	P	Pn	12 15 05.5	+0.3
WHRZ	**Whale Island**	**2.22**	**267**	P	Pn	12 15 06.3	+0.4
RTZ	**Ruatahuna**	**2.37**	**248**	P	Pn	12 15 08.7	+0.8
WHHZ	**Waihua**	**2.40**	**236**	P	Pn	12 15 08.9	+0.7
RAHZ	**Arahi**	**2.41**	**240**	P	Pn	12 15 09.0	+0.5
EDRZ	**Edgecumbe**	**2.43**	**261**	P	Pn	12 15 09.5	+0.7
MARZ	**Manawahe**	**2.47**	**264**	P	Pn	12 15 10.4	+1.2
MUGZ	**Murupara**	**2.48**	**252**	P	Pn	12 15 09.6	+0.2
OPRZ	**Ohinepanea**	**2.56**	**267**	P	Pn	12 15 09.4	-1.0
MTHZ	**Maungataniwha**	**2.56**	**244**	P	Pn	12 15 10.9	+0.4
TARZ	**Mount Tarawera**	**2.63**	**258**	P	Pn	12 15 12.8	+1.3
ARHZ	**Aropaoanui**	**2.65**	**235**	P	Pn	12 15 12.4	+0.7
KARZ	**Kaharoa**	**2.81**	**264**	P	Pn	12 15 14.5	+0.6
MRHZ	**Matea Rd**	**2.85**	**247**	P	Pn	12 15 14.7	+0.2
BKZ	**Black Stump Fm**	**2.94**	**240**	P	Pn	12 15 16.2	+0.4
KAHZ	**Kahuranaki**	**3.05**	**227**	P	Pn	12 15 17.4	+0.1
PXZ	**Pawanui**	**3.22**	**224**	P	Pn	12 15 19.0	-0.5
BHHZ	**Black Hill Sta**	**3.39**	**238**	P	Pn	12 15 22.2	+0.3
TOZ	**Tahuroa Road**	**3.39**	**269**	P	Pn	12 15 20.9	-1.0
KUZ	**Kuaotunu**	**3.39**	**286**	P	Pn	12 15 19.7	-2.2
TMVZ	**Te Maari**	**3.48**	**246**	P	Pn	12 15 23.4	+0.3
WPHZ	**Waipukurau**	**3.48**	**227**	P	Pn	12 15 22.8	-0.3
ETVZ	**East Tongariro**	**3.48**	**245**	P	Pn	12 15 23.3	0.0
OTVZ	**Oturere**	**3.52**	**245**	P	Pn	12 15 23.7	-0.1
PNHZ	**Pukenui**	**3.53**	**231**	P	Pn	12 15 23.1	-0.8
DVHZ	**Dannevirke**	**3.79**	**227**	P	Pn	12 15 26.8	-0.6
ETAZ	**East Tamaki Re**	**3.95**	**280**	P	Pn	12 15 28.5	-1.0
HIZ	**Hauiti**	**3.96**	**257**	P	Pn	12 15 28.9	-0.8
BFZ	**Birch Farm**	**4.01**	**222**	P	Pn	12 15 28.9	-1.5
MBAZ	**Motutapu North**	**4.02**	**283**	P	Pn	12 15 29.2	-1.3
PRWZ	**Pori Road**	**4.07**	**225**	P	Pn	12 15 30.8	-0.5
POWZ	**Post Office Ro**	**4.08**	**229**	P	Pn	12 15 31.5	+0.1
RVAZ	**Riverhead Bore**	**4.26**	**282**	P	Pn	12 15 33.0	-0.8
MRZ	**Mangatainoka R**	**4.37**	**227**	P	Pn	12 15 34.0	-1.3
HOWZ	**Holdsworth Sta**	**4.56**	**225**	P	Pn	12 15 36.6	-1.4
WCZ	**Waipu Caves**	**4.72**	**291**	P	Pn	12 15 38.9	-1.3
CAW	**Cannon Point**	**4.95**	**226**	P	Pn	12 15 41.4	-2.0
OUZ	**Omahuta**	**5.59**	**295**	P	Pn	12 15 51.0	-1.1
CTZ	**Chatham Island**	**6.57**	**157**	P	Pn	12 16 07.0	+1.4
CTZ				S	Sn	12 17 15.6	-3.7

WEL 02 12:30:34.8±0.7,33°S±8°×18°0E±1°1,h339^{km}±10^{km},
M3.8/51,mB4.5/24,MLv4.5/51,Mw(mB)3.7/24,Error
ellipse: s-maj=0.0km s-min=0.0km az=111.5,South of
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.25**	**197**	P	Pn	12 31 45.8	+0.2
MXZ				S	S	12 32 41.3	-1.4
WMGZ	**Waiomatatini S**	**4.47**	**195**	P	Pn	12 31 47.3	-0.7
WMGZ				S	S	12 32 48.9	+1.9
HAZ	**Te Kaha**	**4.57**	**201**	P	Pn	12 31 47.8	-1.2
HAZ				S	S	12 32 49.5	+0.5
PKGZ	**Pakihiroa**	**4.62**	**198**	P	Pn	12 31 52.1	+2.5
PKGZ				S	S	12 32 51.1	+1.1
KUZ	**Kuaotunu**	**4.68**	**225**	P	Pn	12 31 50.5	+0.3
PUZ	**Puketiti**	**4.75**	**195**	P	Pn	12 31 50.0	-1.0
PUZ				S	S	12 32 53.9	+1.3
RUGZ	**Raukumara Rang**	**4.80**	**201**	P	Pn	12 31 50.7	-0.9
RUGZ				S	S	12 32 54.2	+0.5
TWGZ	**Tauwhareparae**	**4.91**	**197**	P	Pn	12 31 55.1	+2.2
TWGZ				S	S	12 32 58.8	+2.8
CNGZ	**Carnagh Statio**	**5.15**	**194**	P	Pn	12 31 54.9	-0.6
MWZ	**Matawai**	**5.18**	**200**	P	Pn	12 31 54.8	-1.0
MWZ				S	S	12 33 02.4	+1.0
TKGZ	**Te Karaka**	**5.19**	**197**	P	Pn	12 31 54.4	-1.5
TKGZ				S	S	12 33 03.0	+1.4
URZ	**Urewera**	**5.25**	**204**	P	Pn	12 31 55.9	-0.6
URZ				S	S	12 33 02.7	+0.1
ETAZ	**East Tamaki Re**	**5.30**	**228**	P	Pn	12 31 57.9	+0.8
OUZ	**Omahuta**	**5.44**	**250**	P	Pn	12 31 55.3	-3.4
TARZ	**Mount Tarawera**	**5.45**	**209**	P	Pn	12 32 01.6	+2.6
TARZ				S	S	12 33 06.9	-0.2
RIGZ	**Rimuhau**	**5.47**	**197**	P	Pn	12 31 56.0	-3.0
RIGZ				S	S	12 33 07.2	0.0
TOZ	**Tahuroa Road**	**5.51**	**219**	P	Pn	12 32 00.0	+0.6
MUGZ	**Murupara**	**5.56**	**206**	P	Pn	12 31 59.6	-0.5
MUGZ				S	S	12 33 09.3	+0.2
RTZ	**Ruatahuna**	**5.61**	**203**	S	S	12 33 07.3	-3.0
PRGZ	**Paritu Road**	**5.65**	**196**	P	Pn	12 32 00.7	-0.4
PRGZ				S	S	12 33 08.0	-2.9
SNGZ	**Shannon Statio**	**5.65**	**200**	P	Pn	12 31 59.9	-1.2
SNGZ				S	S	12 33 12.1	+1.0
KNZ	**Kokohu**	**5.79**	**197**	P	Pn	12 32 01.7	-0.9
KNZ				S	S	12 33 16.3	+2.5
ALRZ	**Allen Road**	**5.80**	**208**	P	Pn	12 32 03.6	+0.8
RAHZ	**Arahi**	**5.85**	**202**	P	Pn	12 32 02.0	-1.4
MHGZ	**Mahia Peninsul**	**5.86**	**195**	P	Pn	12 32 02.9	-0.6
MHGZ				S	S	12 33 17.9	+2.6
MTHZ	**Maungataniwha**	**5.87**	**203**	P	Pn	12 32 02.2	-1.4
MTHZ				S	S	12 33 14.9	-0.8
KUTZ	**Kaahu Road**	**5.95**	**212**	P	Pn	12 32 05.8	+1.2
TLZ	**Tolley Road**	**5.96**	**215**	P	Pn	12 32 06.4	+1.7
WHHZ	**Waihua**	**5.96**	**200**	P	Pn	12 32 04.0	-0.6
WHHZ				S	S	12 33 18.1	+0.7
MRHZ	**Matea Rd**	**6.00**	**206**	P	Pn	12 32 06.6	+1.4
MRHZ				S	S	12 33 17.8	-0.7
NMHZ	**Naumai**	**6.11**	**203**	P	Pn	12 32 05.1	-1.3
NMHZ				S	S	12 33 21.6	+1.0
ARHZ	**Aropaoanui**	**6.20**	**201**	P	Pn	12 32 07.0	-0.4
ARHZ				S	S	12 33 24.5	+2.0
WTVZ	**West Tongariro**	**6.58**	**210**	P	Pn	12 32 13.5	+1.6
OTVZ	**Oturere**	**6.58**	**210**	P	Pn	12 32 13.3	+1.2
OTVZ				S	S	12 33 33.3	+2.3
NGZ	**Ngauruhoe**	**6.62**	**210**	P	Pn	12 32 14.5	+2.0
TUVZ	**Tukino**	**6.68**	**209**	P	Pn	12 32 14.3	+1.2
TUVZ				S	S	12 33 34.8	+1.9
FWVZ	**Far West T-bar**	**6.71**	**210**	P	Pn	12 32 14.8	+1.2
BHHZ	**Black Hill Sta**	**6.71**	**206**	P	Pn	12 32 13.7	+0.2
BHHZ				S	S	12 33 32.5	-1.1
MOVZ	**Moawhango**	**6.76**	**208**	P	Pn	12 32 14.6	+0.6
MOVZ				S	S	12 33 32.2	-2.3
PKVZ	**Pokaka**	**6.82**	**211**	P	Pn	12 32 16.0	+1.2
VRZ	**Vera Road**	**6.96**	**215**	P	Pn	12 32 18.1	+1.9
PNHZ	**Pukenui**	**7.04**	**203**	P	Pn	12 32 17.3	0.0
WPHZ	**Waipukurau**	**7.10**	**202**	P	Pn	12 32 19.2	+1.2
PRHZ	**Porangahau**	**7.23**	**200**	P	Pn	12 32 20.3	+0.8
WAZ	**Wanganui**	**7.37**	**211**	P	Pn	12 32 22.2	+1.1
LREZ	**Lake Rotokare**	**7.39**	**215**	P	Pn	12 32 23.6	+2.2
NEZ	**North Egmont**	**7.39**	**217**	P	Pn	12 32 25.1	+3.6
DVHZ	**Dannevirke**	**7.40**	**202**	P	Pn	12 32 22.0	+0.5
ANWZ	**Angora Road**	**7.46**	**200**	P	Pn	12 32 23.9	+1.7
POWZ	**Post Office Ro**	**7.62**	**204**	P	Pn	12 32 24.4	+0.3
PRWZ	**Pori Road**	**7.70**	**203**	P	Pn	12 32 26.0	+1.0
BFZ	**Birch Farm**	**7.73**	**201**	P	Pn	12 32 25.9	+0.5
MRZ	**Mangatainoka R**	**7.92**	**204**	P	Pn	12 32 26.0	-1.7
CPWZ	**Castlepoint**	**7.95**	**200**	P	Pn	12 32 29.9	+1.8
HOWZ	**Holdsworth Sta**	**8.15**	**204**	P	Pn	12 32 30.5	0.0
OGWZ	**Otaki Gorge**	**8.20**	**206**	P	Pn	12 32 29.7	-1.4
TMWZ	**Te Maipa**	**8.22**	**201**	P	Pn	12 32 31.8	+0.5
KIW	**Kapiti Island**	**8.34**	**207**	P	Pn	12 32 32.0	-0.7
MTW	**Mount Morrison**	**8.39**	**203**	P	Pn	12 32 33.0	-0.4
CAW	**Cannon Point**	**8.50**	**205**	P	Pn	12 32 32.7	-1.9
TRWZ	**Traveller**	**8.55**	**201**	P	Pn	12 32 36.1	+0.9
PAWZ	**Paruwai Farm**	**8.62**	**203**	P	Pn	12 32 36.4	+0.3
DUWZ	**D'Urville Isla**	**8.69**	**211**	P	Pn	12 32 36.1	-0.8
MSWZ	**Moikau Station**	**8.71**	**203**	P	Pn	12 32 37.0	-0.1
WEL	**Wellington**	**8.76**	**206**	P	Pn	12 32 37.2	-0.5
BHW	**Baring Head**	**8.83**	**205**	P	Pn	12 32 37.4	-1.2
PLWZ	**Palliser**	**8.85**	**203**	P	Pn	12 32 38.3	-0.5
TCW	**Tory Channel**	**8.88**	**208**	P	Pn	12 32 38.4	-0.7
TUWZ	**Tuamarina**	**9.20**	**209**	P	Pn	12 32 42.0	-1.0
NNZ	**Nelson**	**9.26**	**212**	P	Pn	12 32 42.4	-1.3
QRZ	**Quartz Range**	**9.36**	**216**	P	Pn	12 32 43.7	-1.2
BSWZ	**Blackbirch Sta**	**9.47**	**208**	P	Pn	12 32 46.2	0.0
THZ	**Tophouse**	**9.91**	**212**	P	Pn	12 32 50.4	-1.2
KHZ	**Kahutara**	**10.20**	**207**	P	Pn	12 32 54.6	-0.3
DSZ	**Denniston Nort**	**10.41**	**215**	P	Pn	12 32 56.2	-1.3
GVZ	**Greta Valley S**	**10.86**	**207**	P	Pn	12 32 58.3	-4.7
LTZ	**Lake Taylor**	**11.02**	**210**	P	Pn	12 33 04.2	-0.6
AMCZ	**Amberley**	**11.19**	**208**	P	Pn	12 33 06.8	-0.1
INZ	**Inchbonnie**	**11.34**	**213**	P	Pn	12 33 07.3	-1.3
OXZ	**Oxford**	**11.56**	**210**	P	Pn	12 33 10.2	-1.1
MQZ	**McQueen's Vall**	**11.64**	**207**	P	Pn	12 33 11.4	-0.7
RACZ	**Rakaia**	**11.85**	**208**	P	Pn	12 33 14.1	-0.6
WVZ	**Waitaha Valley**	**11.93**	**214**	P	Pn	12 33 15.1	-0.6
WACZ	**Wakanui South**	**12.15**	**208**	P	P	12 33 18.6	+0.2
RPZ	**Rata Peaks**	**12.29**	**211**	P	P	12 33 19.1	-0.8
ARCZ	**Arundel**	**12.43**	**210**	P	P	12 33 21.3	-0.2
FOZ	**Fox Glacier**	**12.72**	**215**	P	P	12 33 24.7	0.0
TMZ	**Timaru**	**12.86**	**210**	P	Pn	12 33 26.5	-0.1

IDC 02 12:42:50.9±9.4,2.°08S×128.°01E,h0^{km},mb3.9/2,
mb1 4.2/3,mb1mx3.6/38,mbtmp4.1/3,ML4.3/1,Error
ellipse: s-maj=148.3km s-min=127.2km az=102.0,
Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.80**	**161**	P	P	12 47 10.9	-1.2
	1.0nm,0.3s,baz=340,slow=12,SNR=55						
ASAR	**Alice Springs**	**22.20**	**166**	P	P	12 47 49.3	+0.2
	5.0nm,0.6s,baz=344,slow=11,SNR=102						
STKA	**Stephens Creek**	**32.28**	**158**	P	P	12 49 22.1	+0.5
	0.4nm,0.3s,baz=326,slow=11,SNR=4.6						

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*IDC **02** 12:55:30.6±3.1,22.°67N×12.°05W,h0^{km},mb3.6/1,*
mb1 3.8/3,mb1mx3.4/34,mbtmp3.8/3,ML3.9/2,Error
ellipse: s-maj=111.8km s-min=42.9km az=77.0
ISC 02 12:55:29.9±2.6,22.°5N±0.°2×12.°2W±0.°5,h10^{km},n8,σ0^{s}.82/8,
Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**16.10**	**123**	Pn	**P**	**12 59 20.0**	**+0.2**
	0.3nm,0.3s,baz=310,slow=12,SNR=9.8						
TIC	**Toumodi**	**17.15**	**155**	*e*P	**P**	**12 59 32.3**	**+0.8**
DBIC	**Dimbokro**	**17.20**	**155**	P	**P**	**12 59 32.4**	**+0.5**
	0.6nm,0.3s,baz=318,slow=13,SNR=11						
KIC	**Kosan Boka**	**17.52**	**155**	*e*P	**P**	**12 59 36.1**	**+0.5**
	1.8nm,0.6s						
LIC	**Lamto**	**17.54**	**156**	*e*P	**Pn**	**12 59 33.9**	**-0.7**
	8.3nm,0.6s						
MKAR	**Makanchi Array**	**76.90**	**45**	P	**P**	**13 07 22.8**	**+0.3**
	0.4nm,0.7s,baz=292,slow=4.5,SNR=5.1						
WRA	**Warramunga Arr**	**148.70**	**92**	PKPbc	**PKiKP**	**13 15 20.1**	**+0.4**
	0.4nm,0.7s,baz=292,slow=2.0,SNR=4.9						
ASAR	**Alice Springs**	**148.79**	**99**	PKPbc	**PKPab**	**13 15 21.0**	**-1.2**
	0.7nm,0.8s,baz=277,slow=1.3,SNR=7.6						

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*IDC **02** 13:01:12.7±9.0,33.°16N×138.°58E,h227^{km}±191^{km},*
mb2.6/2,mb1 2.7/3,mb1mx2.5/33,mbtmp3.0/3,ML1.8/1,
Error ellipse: s-maj=196.3km s-min=65.7km az=176.0
*JMA **02** 13:01:12.8±0.4,33.°06N×139.°49E,h200^{km}±4^{km},M3.1*
ISC 02 13:01:12.4±1.3,33.°3N±0.°2×139.°6E±0.°1,h236^{km}±19^{km},
n12,σ1^{s}.15/18,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.27**	**125**	P	Pn	13 01 39.4	-3.8
BSO3	**Boso 3**	**1.72**	**27**	P	**Pn**	**13 01 51.0**	**+0.1**
BSO3				*e*S	**S**	**13 02 20.7**	**-0.5**
BSO1	**Boso 1**	**1.82**	**40**	P	**Pn**	**13 01 51.7**	**+0.3**
JOD2	**Odawara 2**	**2.03**	**349**	P	**Pn**	**13 01 54.4**	**+0.5**
JOD2				*e*S	**S**	**13 02 27.2**	**+0.5**
JNY	**Yasuok**	**2.51**	**327**	P	**Pn**	**13 01 59.0**	**+0.2**
JHU	**Hanno**	**2.59**	**355**	P	**Pn**	**13 02 00.6**	**+1.1**
JHU				*e*S	**S**	**13 02 34.8**	**-1.9**
JRY	**Ryogami san**	**2.79**	**349**	P	**Pn**	**13 02 03.6**	**+1.8**
JRY				*e*S	**S**	**13 02 42.1**	**+1.4**
JYT	**Yasato**	**3.00**	**10**	P	**Pn**	**13 02 04.4**	**+0.5**
JYT				*e*S	**S**	**13 02 44.0**	**-0.6**
JAG	**Ashikaga**	**3.15**	**359**	P	**Pn**	**13 02 06.5**	**+0.8**
JAG				*e*S	**S**	**13 02 47.5**	**-0.2**
MJAR	**Matsushiro Arr**	**3.45**	**342**	P	**Pn**	**13 02 09.1**	**0.0**
	0.1nm,0.3s,baz=157,slow=12,SNR=11						
MJAR				S	**S**	**13 02 51.5**	**-2.4**
	0.0nm,0.3s,baz=176,slow=31,SNR=1.7						
WRA	**Warramunga Arr**	**53.15**	**186**	P	**P**	**13 10 05.5**	**-0.6**
	0.2nm,0.6s,baz=1.4,slow=8.0,SNR=4.6						
ASAR	**Alice Springs**	**56.87**	**186**	P	**P**	**13 10 33.1**	**+0.4**
	0.2nm,0.9s,baz=7.8,slow=3.5,SNR=1.4						

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*WEL **02** 13:02:00,44.°41S×169.°43E,h7^{km},ML3.9,Mw3.5,*
Moment Tensor Solution. s5 Moment tensor: Scale 10^{14}
Nm; M_{rr}0.40; $M_{\theta\theta}$1.56; $M_{\phi\phi}$-1.96; $M_{r\theta}$0.04; $M_{\theta\phi}$-0.98;
$M_{\phi r}$-0.73; Fault plane solution: $M_0$2.12000×10^{14} NP1:
ϕ_s61.00000°,δ73.00000°,λ-177.00000°. NP2:
ϕ_s330.00000°,δ87.00000°,λ-17.00000°. Principal axes:
T -23.9200, Plg10.0000°, Azm17.0000°; N 18.5500,
Plg73.0000°, Azm140.0000°; P 5.3700, Plg14.0000°,
Azm285.0000°;
*IDC **02** 13:02:52.5±3.7,42.°37S×170.°95E,h0^{km},mb3.2/2,*
mb1 3.5/2,mb1mx3.3/25,mbtmp3.2/2 Error ellipse:
s-maj=101.6km s-min=21.1km az=66.0
*WEL **02** 13:02:53.5±0.4,44°S±3°×16°9E±°,h5^{km},M3.9/14,*
ML4.0/14,MLv3.9/14,Error ellipse: s-maj=0.0km
s-min=0.0km az=165.9
ISC 02 13:02:54.2±0.8,44.°36S±0.°03×169.°42E±0.°03,h10^{km},n36,
σ1^{s}.05/42,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.54**	**302**	P	**Pg**	**13 03 04.2**	**-0.5**
JCZ				S	**Sg**	**13 03 10.8**	**-1.0**
LBZ	**Lake Benmore**	**0.55**	**93**	P	**Pb**	**13 03 05.5**	**-0.5**
LBZ				S	**Sb**	**13 03 13.2**	**-0.6**
WKZ	**Wanaka**	**0.55**	**211**	P	**Pg**	**13 03 04.5**	**-0.4**
WKZ				S	**Sg**	**13 03 12.3**	**+0.1**
FOZ	**Fox Glacier**	**0.87**	**19**	P	**Pg**	**13 03 09.6**	**-1.4**
EAZ	**Earnscleugh**	**0.88**	**185**	P	**Pg**	**13 03 10.5**	**-0.6**
ODZ	**Otahua Downs**	**1.11**	**129**	P	**Pg**	**13 03 15.2**	**-0.4**
ODZ				S	**Sg**	**13 03 28.9**	**-1.1**
MSZ	**Milford Sound**	**1.11**	**253**	P	**Pb**	**13 03 14.6**	**-1.0**
MSZ				S	**Sg**	**13 03 28.2**	**-2.0**
GCSZ	**Gaunt Creek Bo**	**1.23**	**32**	P	**Pn**	**13 03 15.7**	**-1.7**
RPZ	**Rata Peaks**	**1.34**	**62**	Pn	**Pb**	**13 03 19.2**	**-0.2**
	78nm,0.3s,baz=254,slow=3.0,SNR=166						
RPZ				Sn	**Sg**	**13 03 36.9**	**-0.5**
	300nm,0.3s,baz=147,slow=16,SNR=23						
RPZ	**Rata Peaks**	**1.34**	**62**	P	**Pb**	**13 03 19.2**	**-0.2**
MLZ	**Mavora Lakes**	**1.37**	**222**	P	**Pn**	**13 03 19.1**	**-0.3**
WVZ	**Waitaha Valley**	**1.60**	**37**	P	**Pn**	**13 03 22.6**	**+0.1**
TUZ	**Tuapeka**	**1.60**	**175**	P	**Pn**	**13 03 22.1**	**-0.5**
HHSZ	**Highcliff Hill**	**1.74**	**152**	P	**Pb**	**13 03 25.2**	**-1.1**
WACZ	**Wakanui South**	**1.79**	**77**	P	**Pn**	**13 03 25.3**	**+0.1**
WHZ	**Wether Hill Ro**	**1.86**	**214**	P	**Pn**	**13 03 25.6**	**-0.5**
DCZ	**Deep Cove**	**1.96**	**235**	P	**Pn**	**13 03 28.0**	**+0.6**
RACZ	**Rakaia**	**2.06**	**73**	P	**Pn**	**13 03 29.1**	**+0.2**
OXZ	**Oxford**	**2.16**	**62**	P	**Pn**	**13 03 29.7**	**-0.5**
SYZ	**Scrubby Hill**	**2.19**	**185**	P	**Pn**	**13 03 29.8**	**-0.8**
INZ	**Inchbonnie**	**2.20**	**43**	P	**Pn**	**13 03 31.2**	**+0.4**
MQZ	**McQueen's Vall**	**2.42**	**76**	P	**Pn**	**13 03 33.5**	**-0.3**
AKCZ	**Akaroa Harbour**	**2.56**	**80**	P	**Pn**	**13 03 35.4**	**-0.3**
LTZ	**Lake Taylor**	**2.60**	**54**	P	**Pn**	**13 03 36.2**	**-0.2**
AMCZ	**Amberley**	**2.62**	**64**	P	**Pn**	**13 03 36.6**	**0.0**
PYZ	**Puysegur Point**	**2.65**	**226**	P	**Pn**	**13 03 37.5**	**+0.5**
GVZ	**Greta Valley S**	**2.97**	**63**	P	**Pn**	**13 03 41.1**	**-0.3**
DSZ	**Denniston Nort**	**3.14**	**35**	P	**Pn**	**13 03 43.6**	**-0.2**
KHZ	**Kahutara**	**3.57**	**59**	P	**Pn**	**13 03 49.7**	**+0.1**
THZ	**Tophouse**	**3.64**	**46**	P	**Pn**	**13 03 50.2**	**-0.5**
QRZ	**Quartz Range**	**4.21**	**34**	P	**Pn**	**13 03 58.6**	**+0.2**
NNZ	**Nelson**	**4.28**	**44**	P	**Pn**	**13 03 58.8**	**-0.6**
HIZ	**Hauiti**	**7.12**	**37**	P	**Pn**	**13 04 39.2**	**+0.8**
ASAR	**Alice Springs**	**35.57**	**294**	P	**P**	**13 09 55.5**	**+3.8**
	0.3nm,0.8s,baz=126,slow=7.4,SNR=4.4						
WRA	**Warramunga Arr**	**37.96**	**298**	P	**P**	**13 10 11.2**	**-0.9**
	0.3nm,0.9s,baz=136,slow=7.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**147.17**	**202**	PKPbc	**PKiKP**	**13 22 43.3**	**+3.1**
	0.5nm,0.7s,baz=166,slow=3.4,SNR=2.6						

*IDC **02** 13:03:50.5±0.8, 56°.61S×150°.57W, h0^{km}, mb4.2/6, mb1 4.4/6, mb1mx4.1/22, mbtmp4.2/6, MS3.5/4, Ms1 3.4/4, ms1mx3.2/18, Error ellipse: s-maj=44.2km s-min=21.1km az=13.0*

ISC 02 13:03:51.9±0.9, **56°.6S**±0°.3×**150°.6W**±0°.2, **h10**^{km}**, n23,** σ**0^{s}.85**/10**, mb4.3**/6**, MS3.5**/4**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**26.59**	**201**	LR	LR	13 16 35.3	
	comp=Z,59nm,18.8s,baz=228,slow=29						
QSPA	**South Pole Qui**	**33.56**	**180**	P	**P**	**13 10 31.5**	**-0.3**
	3.8nm,1.1s,baz=82,slow=3.5,SNR=5.2						
PPT	**Papeete**	**38.96**	**2**	LR	LR	13 22 28.4	
	comp=Z,91nm,20.6s,baz=187,slow=29						
STKA	**Stephens Creek**	**52.02**	**268**	P	**P**	**13 13 02.7**	**+1.3**
	3.9nm,1.1s,baz=107,slow=5.6,SNR=3.5						
PLCA	**Paso Flores**	**52.10**	**108**	P	**P**	**13 13 03.1**	**+1.2**
	3.8nm,1.0s,baz=152,slow=0.9,SNR=4.6						
H03S2	**Juan Fernandez**	**52.65**	**96**	T	T	14 10 02.6	
	baz=219,slow=74,SNR=13						
H03S1	**Juan Fernandez**	**52.66**	**96**	T	T	14 10 03.4	
	baz=219,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**52.67**	**96**	T	T	14 10 03.1	
	baz=219,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**52.94**	**96**	T	T	14 10 20.7	
	baz=222,slow=72,SNR=41						
H03N2	**Juan Fernandez**	**52.95**	**96**	T	T	14 10 20.0	
	baz=222,slow=72,SNR=52						
H03N1	**Juan Fernandez**	**52.95**	**96**	T	T	14 10 19.4	
	baz=222,slow=72,SNR=36						
MAW	**Mawson**	**53.67**	**195**	LR	LR	13 32 09.4	
	comp=Z,48nm,21.3s,baz=337,slow=32						
ASAR	**Alice Springs**	**62.66**	**268**	P	**P**	**13 14 16.3**	**-0.3**
	2.9nm,0.9s,baz=138,slow=6.5,SNR=41						
WRA	**Warramunga Arr**	**65.39**	**271**	P	**P**	**13 14 34.5**	**-0.2**
	1.3nm,1.0s,baz=150,slow=5.3,SNR=7.1						
CPUP	**Villa Florida**	**70.16**	**108**	P	**P**	**13 15 04.0**	**-0.6**
	3.8nm,0.9s,baz=235,slow=6.6,SNR=5.2						
BOSA	**Boshof**	**95.07**	**176**	LR	LR	13 57 58.0	
	comp=Z,19nm,18.1s,baz=190,slow=34						
H10N3	**ASCENSION HYDR**	**106.38**	**134**	T	T	15 17 31.6	
	baz=203,slow=75,SNR=7.0						
H10N1	**ASCENSION HYDR**	**106.38**	**134**	T	T	15 17 32.3	
	baz=203,slow=75,SNR=10.0						
H10N2	**ASCENSION HYDR**	**106.39**	**134**	T	T	15 17 31.6	
	baz=203,slow=75,SNR=8.1						
ILAR	**Eielson Array**	**121.06**	**2**	PKP	**PKiKP**	**13 22 43.3**	**0.0**
	2.1nm,1.0s,baz=253,slow=1.9,SNR=15						
MKAR	**Makanchi Array**	**146.59**	**276**	PKPbc	**PKPab**	**13 23 32.9**	**-0.9**
	5.2nm,0.7s,baz=120,slow=4.6,SNR=57						
ZALV	**Zalesovo Beam**	**149.05**	**289**	PKPbc	**PKPbc**	**13 23 38.2**	**-0.8**
	2.2nm,0.7s,baz=110,slow=4.8,SNR=11						
ESDC	**Sonseca Array**	**152.40**	**114**	PKPbc	**PKPbc**	**13 23 47.0**	**-0.4**
	0.9nm,0.8s,baz=267,slow=2.6,SNR=6.2						

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*JMA **02** 13:25:59.3±0.2, 46°.23N×142°.99E, h0^{km}, M2.6*

*SKHL **02** 13:25:59.6±0.4, 46°.31N×142°.83E, h12^{km}±1^{km}, mb3.6/2*

ISC 02 13:25:59.8±2.7**, 46°.36N**±0°.05×**143°.2E**±0°.2**, h35**^{km}**, n4,** σ**0^{s}.86**/7**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.65**	**335**	*e*Pg	**Pn**	**13 26 12.3**	**-0.2**
YSS				AMB	AMB	13 26 12.4	
	20nm,0.4s						
YSS				*e*Sg	**Sn**	**13 26 20.9**	**-0.7**
YSS				A	A	13 26 23.1	
	40nm,0.2s						
KHLM	**Kholmsk**	**1.03**	**313**	*e*Pg	**Pn**	**13 26 18.8**	**+1.1**
KHLM				*e*Sg	**Sn**	**13 26 30.5**	**-0.3**
KHLM				A	A	13 26 33.1	
	100nm,0.4s						
KHLM				A	A	13 26 33.1	
	100nm,0.4s						
JWK2	**Keihoku**	**1.37**	**220**	P	**Pn**	**13 26 22.3**	**0.0**
JWK2				*e*S	**Sn**	**13 26 38.3**	**-0.9**
JSE	**Soyaes**	**1.46**	**196**	*e*S	**Sn**	**13 26 42.0**	**+0.5**

IDC 02 13:53:55.5±2.3**, 1°.80N×126°.53E, h0**^{km}**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.1**/49**, mbtmp3.2**/3**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.6**/22**, Error ellipse: s-maj=182.8km s-min=28.7km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**20.73**	**245**	LR	LR	14 07 02.3	
	comp=Z,84nm,20.1s,baz=222,slow=38						
WRA	**Warramunga Arr**	**22.92**	**161**	P	P	13 59 00.7	-0.6
	0.6nm,0.7s,baz=339,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**26.31**	**165**	P	P	13 59 33.8	+0.7
	0.2nm,0.5s,baz=346,slow=12,SNR=1.6						
KLR	**Kul'dur**	**47.47**	**5**	LR	LR	14 25 19.4	
	comp=Z,24nm,18.0s,baz=274,slow=40						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	14 03 57.1	-0.1
	0.2nm,0.6s,baz=126,slow=7.3,SNR=1.9						

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*IDC **02** 14:06:13.2±2.0, 37°.38N×78°.52E, h0^{km}, mb3.1/2, mb1 3.3/8, mb1mx3.2/66, mbtmp3.2/8, ML2.9/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/25, Error ellipse: s-maj=34.3km s-min=19.9km az=58.0*

*BJI **02** 14:06:14.9±0.0, 37°.34N×78°.47E, h5^{km}, ML3.4/7*

*SOME **02** 14:06:22.1, 37°.88N×79°.08E, h0^{km}*

*NNC **02** 14:06:25.4±2.2, 37°.90N×79°.13E, h23^{km}±12^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=16.4km s-min=14.8km az=79.0*

ISC 02 14:06:19.5±1.9**, 37°.77N**±0°.10×**78°.80E**±0°.07**, h10**^{km}**, n40,** σ**1^{s}.93**/51**, 7C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.82**	**309**	Pn	**Pn**	**14 07 05.1**	**+0.3**
KSH				Sn	**Sn**	**14 07 36.1**	**-2.8**
KSH				smax	smax		
	comp=N,68nm,0.7s						
KSH				smax	smax		
	comp=E,160nm,1.1s						
SATY	**Saty**	**5.30**	**357**	*e*P	**Pg**	**14 07 58.4**	**-2.5**
	5.6nm,0.8s						
SATY				*e*S	**Sg**	**14 09 07.7**	**-1.8**
	40nm,1.0s						
SATY	**Saty**	**5.30**	**357**	Pg	**Pg**	**14 07 58.4**	**-2.5**
	5.6nm,0.8s						
SATY				Lg	Lg	14 09 07.7	
	40nm,1.0s						
UZB	**Uzynbulak**	**5.38**	**2**	*e*P	**Pg**	**14 08 00.5**	**-2.0**
	3.7nm,0.6s						
UZB				*e*S	**Sg**	**14 09 11.1**	**-1.0**
	12nm,0.8s						
UZB	**Uzynbulak**	**5.38**	**2**	Pg	**Pg**	**14 08 00.5**	**-2.0**
	3.7nm,0.6s						
UZB				Lg	Lg	14 09 11.1	
	12nm,0.8s						
MDOK	**Medeo**	**5.55**	**347**	*e*P	**Pg**	**14 08 05.4**	**-0.5**
	3.4nm,0.8s						
MDOK				*e*S	**Sg**	**14 09 19.4**	**+1.6**
	18nm,0.9s						
MDOK	**Medeo**	**5.55**	**347**	Pg	**Pg**	**14 08 06.0**	**+0.1**
	8.5nm,0.6s						
MDOK				⇓Lg	Lg	14 09 20.4	
	28nm,1.0s						
MDOK	**Medeo**	**5.55**	**347**	Pg	**Pg**	**14 08 05.4**	**-0.5**
	3.4nm,0.8s						
MDOK				Lg	Lg	14 09 19.4	
	18nm,0.9s						
PDGK	**Podgornoye**	**5.58**	**5**	Pg	**Pg**	**14 08 03.5**	**-2.9**
	2.3nm,1.2s						
PDGK				Lg	Lg	14 09 16.5	
	7.0nm,1.4s						
PDGK	**Podgornoye**	**5.58**	**5**	⇑Pn	**Pn**	**14 07 45.4**	**+2.7**
	2.3nm,0.6s						
PDGK				⇑Pg	**Pg**	**14 08 04.6**	**-1.8**
	4.2nm,0.6s						
PDGK				⇓Lg	Lg	14 09 18.7	
	17nm,0.8s						
KOTS	**Kotyrbulak**	**5.61**	**347**	*e*P	**Pg**	**14 08 05.8**	**-1.2**
	8.9nm,0.6s						
KOTS				*e*S	**Sg**	**14 09 20.4**	**+0.7**
	51nm,0.7s						
KOTS	**Kotyrbulak**	**5.61**	**347**	Pg	**Pg**	**14 08 05.8**	**-1.2**
	8.9nm,0.6s						
KOTS				Lg	Lg	14 09 20.4	
	51nm,0.7s						
KST	**Kastek**	**5.70**	**339**	*e*P	**Pg**	**14 08 07.8**	**-0.8**
	6.0nm,0.4s						
KST				*e*S	**Sg**	**14 09 23.9**	**+1.5**
	11nm,0.5s						
KST	**Kastek**	**5.70**	**339**	Pg	Pg	14 08 12.6	+3.9
	6.0nm,0.6s						
KST				Lg	Lg	14 09 31.6	
	11nm,0.9s						
TKM2	**Tokmak 2**	**5.70**	**336**	⇓Pn	**Pn**	**14 07 48.2**	**+3.8**
	2.3nm,0.8s						
TKM2				⇑Pg	**Pg**	**14 08 08.8**	**+0.1**
	2.5nm,0.7s						
TKM2				⇑Lg	Lg	14 09 25.3	
	12nm,0.9s						
AAK	**Ala-Archa**	**5.88**	**327**	Pn	**Pn**	**14 07 47.0**	**+0.2**
	0.2nm,0.3s,baz=176,slow=7.4,SNR=4.3						
AAK				Lg	Lg	14 09 27.4	
	0.3nm,0.3s,baz=6.4,slow=23,SNR=2.5						
AAK	**Ala-Archa**	**5.88**	**327**	⇑Pg	**Pg**	**14 08 11.8**	**-0.3**
	3.9nm,0.7s,baz=161						
AAK				⇓Lg	Lg	14 09 32.3	
	24nm,0.8s						
KTBS	**Karatobe**	**6.15**	**346**	*e*P	**Pg**	**14 08 15.4**	**-1.9**
	2.3nm,1.1s						
KTBS				*e*S	**Sg**	**14 09 37.1**	**+0.1**
	8.6nm,1.0s						
KTBS	**Karatobe**	**6.15**	**346**	Pg	**Pg**	**14 08 15.4**	**-1.9**
	2.3nm,1.1s						
KTBS				Lg	Lg	14 09 37.1	
	8.6nm,1.0s						
CHKK	**Chushkaly**	**6.24**	**348**	*e*P	**Pg**	**14 08 17.6**	**-1.3**
CHKK				*e*S	**Sg**	**14 09 41.0**	**+1.4**
CHKK	**Chushkaly**	**6.24**	**348**	Pg	**Pg**	**14 08 17.6**	**-1.3**
CHKK				Lg	Lg	14 09 41.0	
MNBS	**Baschi**	**6.31**	**357**	*e*P	**Pg**	**14 08 19.2**	**-1.2**
	2.7nm,0.7s						
MNBS				*e*S	**Sg**	**14 09 43.2**	**+1.0**
	8.7nm,0.7s						
MNBS	**Baschi**	**6.31**	**357**	Pg	**Pg**	**14 08 19.2**	**-1.2**
	2.7nm,0.7s						
MNBS				Lg	Lg	14 09 43.2	
	8.7nm,0.7s						
KUU	**Kurty**	**6.40**	**344**	*e*P	**Pg**	**14 08 19.9**	**-2.1**
KUU				*e*S	**Sg**	**14 09 44.8**	**-0.1**
KUU	**Kurty**	**6.40**	**344**	Pg	**Pg**	**14 08 19.9**	**-2.1**
KUU				Lg	Lg	14 09 44.8	
ARXS	**Arharly**	**6.48**	**354**	*e*P	**Pg**	**14 08 20.4**	**-3.2**
	9.9nm,1.2s						
ARXS				*e*S	**Sg**	**14 09 45.4**	**-2.1**
	10nm,1.0s						
ARXS	**Arharly**	**6.48**	**354**	Pg	**Pg**	**14 08 23.5**	**-0.2**
	9.9nm,1.2s						
ARXS				Lg	Lg	14 09 50.9	
	10nm,1.0s						
DJR	**Jarkent**	**6.60**	**6**	*e*P	**Pg**	**14 08 23.4**	**-2.6**
	3.3nm,0.5s						
DJR				*e*S	**Sg**	**14 09 50.0**	**-1.4**
	6.0nm,1.0s						
DJR	**Jarkent**	**6.60**	**6**	Pg	**Pg**	**14 08 23.3**	**-2.6**
	3.3nm,0.5s						
DJR				Lg	Lg	14 09 50.0	
	6.0nm,1.0s						
WMQ	**Urumqi**	**9.06**	**45**	*e*P	**Pn**	**14 08 33.5**	**+3.2**
WMQ				smax	smax		
	comp=N,8.0nm,0.9s						
WMQ				smax	smax		
	comp=E,11nm,0.7s						
MAKZ	**Makanchi**	**9.34**	**14**	⇑P	**Pn**	**14 08 35.3**	**+1.2**
	6.6nm,0.7s						
MK31	**Makanchi Array**	**9.38**	**15**	⇑P	**Pn**	**14 08 36.0**	**+1.3**
	1.3nm,0.5s,baz=195,slow=13,SNR=21						
MKAR	**Makanchi Array**	**9.38**	**15**	Pn	**Pn**	**14 08 36.1**	**+1.3**
	0.3nm,0.3s,baz=193,slow=14,SNR=19						
MKAR				Sn	**Sn**	**14 10 25.5**	**+5.2**
	0.2nm,0.3s,baz=200,slow=25,SNR=3.3						
KURBB	**Kurchatov Arra**	**12.86**	**359**	Pn	**Pn**	**14 09 22.5**	**+0.3**
	0.0nm,0.3s,baz=184,slow=14,SNR=1.9						
GEYT	**Alibeck**	**16.34**	**277**	Pn	Pn	14 10 02.0	-7.0
	0.1nm,0.3s,baz=107,slow=7.7,SNR=1.5						
BVAR	**Borovoye Array**	**16.34**	**342**	Pn	**Pn**	**14 10 06.7**	**-2.3**
	0.0nm,0.3s,baz=158,slow=16,SNR=2.7						
ZALV	**Zalesovo Beam**	**16.71**	**12**	P	**Pn**	**14 10 14.2**	**+0.7**
	0.3nm,0.3s,baz=206,slow=9.9,SNR=4.6						
SONM	**Songino Array**	**22.50**	**55**	P	**P**	**14 11 18.9**	**-0.3**
	0.2nm,0.4s,baz=254,slow=8.9,SNR=3.4						
CMAR	**Chiang Mai Arr**	**26.08**	**132**	P	P	14 11 47.8	-5.6
	0.2nm,0.4s,baz=310,slow=10,SNR=2.2						
KIRV	**Kirov**	**28.21**	**327**	LR	LR	14 24 06.7	
	comp=Z,78nm,20.6s,baz=207,slow=38						

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*ATH **02** 14:20:26.6, 33°.89N×25°.01E, h10^{km}±31^{km}, ML3.1/2, Error ellipse: s-maj=31.6km s-min=6.0km az=0.0*

*IDC **02** 14:20:28.6±1.5, 34°.31N×24°.99E, h0^{km}, mb3.6/4, mb1 3.6/4, mb1mx3.4/36, mbtmp3.6/4, Error ellipse: s-maj=26.8km s-min=22.3km az=107.0*

*THE **02** 14:20:29.8, 34°.21N×25°.09E, h0^{km}±3^{km}, ML3.1/1, Error ellipse: s-maj=5.4km s-min=1.0km az=156.0*

ISC 02 14:20:30.5±1.8**, 34°.23N**±0°.08×**25°.03E**±0°.05**, h12**^{km}±10^{km}**, n28,** σ**1^{s}.47**/37**, mb3.6**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.81**	**347**	P	**Pn**	**14 20 46.2**	**-1.5**
SIVA				S	**Sn**	**14 21 02.9**	**+3.3**
SIVA				AML	AML	14 21 07.1	
	comp=E,3726µm,0.5s						
SIVA				AML	AML	14 21 07.8	
	comp=N,2418µm,0.6s						
SIVA	**Sivas**	**0.81**	**347**	P	**Pn**	**14 20 46.2**	**-1.5**
SIVA				S	**Sn**	**14 21 02.9**	**+3.3**
SIVA				AML	AML	14 21 07.1	
	comp=E,3726µm,0.5s						
SIVA				AML	AML	14 21 07.8	
	comp=N,2418µm,0.6s						
SIVA	**Sivas**	**0.81**	**347**	P	**Pn**	**14 20 46.2**	**-1.5**
SIVA				S	**Sn**	**14 20 58.9**	**-0.7**
SIVA				AML	AML	14 21 07.1	
	comp=E,3726µm,0.5s						
SIVA				AML	AML	14 21 07.8	
	comp=N,2418µm,0.6s						
SIVA	**Sivas**	**0.81**	**347**	P	**Pn**	**14 20 46.2**	**-1.5**
SIVA				S	**Sn**	**14 20 59.2**	**-0.4**
	comp=N,1µm,0.5s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pn**	**14 20 49.4**	**-0.8**
GVD				S	**Sn**	**14 21 06.5**	**+2.3**
GVD				AML	AML	14 21 14.4	
	comp=N,1107µm,0.4s						
GVD				AML	AML	14 21 19.8	
	comp=E,769µm,0.4s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pn**	**14 20 49.4**	**-0.8**
GVD				S	**Sn**	**14 21 06.5**	**+2.3**
GVD				AML	AML	14 21 14.4	
	comp=N,1107µm,0.4s						
GVD				AML	AML	14 21 19.8	
	comp=E,769µm,0.4s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pn**	**14 20 49.6**	**-0.6**
GVD				AML	AML	14 21 10.1	
	comp=N,1199µm,0.5s						
GVD				AML	AML	14 21 12.0	
	comp=E,1168µm,0.5s						
GVD	**Gavdhos**	**0.99**	**308**	P	**Pn**	**14 20 49.6**	**-0.6**
GVDS	**Gavdos**	**0.99**	**308**	P	**Pn**	**14 20 49.9**	**-0.3**
LAST	**Lasithi**	**1.00**	**21**	P	**Pn**	**14 20 49.2**	**-1.2**
LAST	**Lasithi**	**1.00**	**21**	P	**Pn**	**14 20 49.2**	**-1.2**
LAST	**Lasithi**	**1.00**	**21**	P	**Pn**	**14 20 49.2**	**-1.2**
LAST				AML	AML	14 21 17.9	
	comp=N,555µm,0.5s						
LAST				AML	AML	14 21 18.1	
	comp=E,495µm,0.5s						
LAST	**Lasithi**	**1.00**	**21**	P	**Pn**	**14 20 49.1**	**-1.3**
IDI	**Anoyia**	**1.06**	**354**	Pn	**Pn**	**14 20 49.9**	**-1.4**
	comp=E,5.4nm,0.3s,baz=176,slow=22,SNR=24						
IDI				Sn	**Sn**	**14 21 05.2**	**-0.8**
	comp=E,12nm,0.3s,baz=357,slow=23,SNR=10						
IDI	**Anoyia**	**1.06**	**354**	P	**Pn**	**14 20 50.1**	**-1.1**
IDI	**Anoyia**	**1.06**	**354**	P	**Pn**	**14 20 50.1**	**-1.1**
IDI	**Anoyia**	**1.06**	**354**	P	**Pn**	**14 20 50.3**	**-1.0**
IDI	**Anoyia**	**1.06**	**354**	P	**Pn**	**14 20 50.2**	**-1.1**
ZKR	**Zakros**	**1.31**	**48**	P	**Pg**	**14 20 55.4**	**-0.3**
ZKR				S	**Sg**	**14 21 14.9**	**+2.0**
ZKR	**Zakros**	**1.31**	**48**	P	**Pg**	**14 20 55.4**	**-0.3**
ZKR				S	**Sg**	**14 21 14.9**	**+2.0**
VAM	**Vamos**	**1.36**	**330**	P	**Pg**	**14 20 55.7**	**-0.9**
VAM	**Vamos**	**1.36**	**330**	P	**Pg**	**14 20 55.7**	**-0.9**
VAM	**Vamos**	**1.36**	**330**	P	**Pg**	**14 20 55.7**	**-0.9**
VAM	**Vamos**	**1.36**	**330**	P	**Pg**	**14 20 55.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**29.82**	**231**	P	**P**	**14 26 37.7**	**+0.1**
	comp=E,0.3nm,0.4s,baz=37,slow=8.7,SNR=1.7						
MKAR	**Makanchi Array**	**44.38**	**56**	P	**P**	**14 28 40.6**	**-0.2**
	comp=E,0.7nm,0.6s,baz=276,slow=7.0,SNR=8.8						
ZALV	**Zalesovo Beam**	**45.73**	**46**	P	**P**	**14 28 50.1**	**-1.2**
	comp=E,0.9nm,0.5s,baz=253,slow=10,SNR=2.8						
SONM	**Songino Array**	**60.16**	**50**	P	**P**	**14 30 38.3**	**+0.2**
	comp=E,0.2nm,0.5s,baz=277,slow=8.1,SNR=2.1						

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*IDC **02** 14:23:34.0±1.1, 36°.88N×142°.33E, h0^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.4/39, mbtmp3.4/8, ML3.0/2, MS2.5/2, Ms1 2.5/2, ms1mx2.3/41, Error ellipse: s-maj=31.3km s-min=21.9km az=91.0*

*JMA **02** 14:23:38.8±0.1, 36°.86N×142°.07E, h47^{km}, M3.4*

ISC 02 14:23:36.9±1.3**, 36°.81N**±0°.04×**142°.03E**±0°.05**, h19**^{km}±4^{km}**, n25,** σ**1^{s}.30**/39**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.03**	**287**	P	**Pg**	**14 23 57.2**	**+0.2**
ONAJ				S	**Sg**	**14 24 10.7**	**+0.1**
JFK	**Kawauchi**	**1.08**	**301**	P	**Pg**	**14 23 57.7**	**-0.2**
JFK				*e*S	**Sg**	**14 24 11.2**	**-0.9**
JHO	**Hitachi**	**1.19**	**261**	P	**Pg**	**14 24 00.0**	**-0.1**
JHO				*e*S	**Sg**	**14 24 15.5**	**-0.2**
JFFD	**Fukushimafurud**	**1.21**	**284**	P	**Pg**	**14 23 59.8**	**-0.6**
JFFD				*e*S	**Sg**	**14 24 15.2**	**-1.1**
JMST	**Minamisoumatoc**	**1.29**	**315**	P	**Pb**	**14 24 00.6**	**0.0**
JMST				S	**Sb**	**14 24 16.7**	**0.0**
JMM	**Marumori**	**1.44**	**317**	P	**Pb**	**14 24 02.7**	**-0.5**
JFT	**Otama**	**1.53**	**298**	P	**Pb**	**14 24 05.0**	**+0.4**
JFT				S	**Sb**	**14 24 24.3**	**+0.7**
JIO	**Ouri**	**1.73**	**342**	P	**Pb**	**14 24 06.4**	**-1.6**
JOU	**Okura**	**1.89**	**325**	P	**Pb**	**14 24 10.2**	**-0.7**
JOU				S	**Sb**	**14 24 33.6**	**-0.5**
JFY	**Yanaizu**	**1.95**	**288**	P	**Pb**	**14 24 11.6**	**-0.3**
JFY				*e*S	**Sb**	**14 24 36.3**	**+0.4**
JYS	**Shirataka**	**2.10**	**313**	P	**Pb**	**14 24 13.1**	**-1.3**
JYS				*e*S	**Sb**	**14 24 39.3**	**-0.9**
JAG	**Ashikaga**	**2.11**	**260**	P	**Pb**	**14 24 13.4**	**-1.2**
JMK	**Ichinoseki**	**2.23**	**343**	P	**Pn**	**14 24 13.9**	**+1.1**
JMK				*e*S	**Sn**	**14 24 39.9**	**+0.1**
BSO1	**Boso 1**	**2.32**	**202**	P	**Pb**	**14 24 15.9**	**-1.9**
BSO1				*e*S	**Sn**	**14 24 43.7**	**+2.5**
JYK	**Kaneyama**	**2.48**	**328**	P	**Pn**	**14 24 17.9**	**+1.6**
JYK				*e*S	**Sn**	**14 24 47.0**	**+0.9**
MJAR	**Matsushiro Arr**	**3.09**	**266**	Pn	**Pb**	**14 24 28.0**	**-3.2**
	0.4nm,0.3s,baz=88,slow=15,SNR=43						
MJAR				Sn	**Sb**	**14 25 07.5**	**-0.9**
	0.3nm,0.3s,baz=128,slow=6.5,SNR=5.6						
MJAR				LR	LR	14 25 56.0	
	comp=Z,68nm,19.0s,baz=315,slow=43						
MAT	**Matsushiro**	**3.09**	**266**	P	**Pb**	**14 24 28.3**	**-2.9**
MAT				*e*S	**Sb**	**14 25 06.9**	**-1.6**
ASAJ	**Asahikawa**	**7.31**	**3**	Pn	**Pn**	**14 25 21.3**	**-1.3**
	0.4nm,0.3s,baz=192,slow=14,SNR=6.4						
ASAJ				Sn	**Sn**	**14 26 43.0**	**-2.0**
	0.3nm,0.3s,baz=9.3,slow=19,SNR=1.6						
KSRS	**Korea Array**	**11.28**	**277**	LR	LR	14 30 25.6	
	comp=Z,21nm,21.3s,baz=230,slow=36						
SONM	**Songino Array**	**28.32**	**304**	P	**P**	**14 29 30.1**	**+0.6**
	0.5nm,0.8s,baz=99,slow=9.2,SNR=4.5						
MKAR	**Makanchi Array**	**44.66**	**302**	P	**P**	**14 31 49.4**	**+1.2**
	0.1nm,0.5s,baz=86,slow=9.9,SNR=2.4						
ILAR	**Eielson Array**	**49.42**	**32**	P	**P**	**14 32 23.9**	**-1.2**
	0.4nm,0.8s,baz=253,slow=6.1,SNR=5.4						
FITZ	**Fitzroy Crossi**	**56.77**	**199**	P	**P**	**14 33 20.9**	**+1.3**
	2.2nm,0.9s,baz=18,slow=9.6,SNR=1.6						
WRA	**Warramunga Arr**	**56.91**	**189**	P	**P**	**14 33 21.1**	**+0.4**
	0.5nm,0.9s,baz=7.5,slow=7.1,SNR=5.0						
ASAR	**Alice Springs**	**60.64**	**189**	P	**P**	**14 33 47.6**	**+1.0**
	0.3nm,0.8s,baz=8.7,slow=6.7,SNR=2.6						

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*IDC **02** 14:31:13.4±5.0, 6°.17N×127°.23E, h85^{km}±41^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.3/43, mbtmp3.9/5, MS3.6/1, Ms1 3.6/1, ms1mx2.4/49, Error ellipse: s-maj=78.3km s-min=16.5km az=62.0*

*MAN **02** 14:31:15.4, 6°.06N×126°.84E, h100^{km}, mb4.9, ML3.8, MS3.7*

ISC 02 14:31:15.1±1.4**, 5°.95N**±0°.07×**126°.9E**±0°.1**, h93**^{km}±13^{km}**, n17,** σ**1^{s}.47**/25**, mb3.7**/5**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.16**	**278**	*e*P	**Pn**	**14 31 37.3**	**+0.4**
DDMP				*e*S	**Sn**	**14 31 54.1**	**+0.8**
MATI	**Mati**	**1.16**	**329**	*e*P	**Pn**	**14 31 36.0**	**-1.0**
MATI				*e*S	**Sn**	**14 31 51.9**	**-1.4**
DAV	**Davao City (W)**	**1.70**	**311**	P	**Pn**	**14 31 41.9**	**-1.6**
	115nm,0.3s,baz=61,slow=4.9,SNR=4.1						
DAV				S	**Sn**	**14 32 07.6**	**+2.5**
	92nm,0.3s,baz=147,slow=8.8,SNR=5.7						
DAV				LR	LR	14 32 23.2	
	comp=Z,134nm,19.0s,baz=176,slow=37						
KCP	**Kidapawan**	**2.06**	**301**	⇑*e*P	**Pn**	**14 31 49.0**	**+0.7**
KCP				*i* S	**Sn**	**14 32 13.4**	**-0.2**
SKMP	**Bagumbayan, Su**	**2.38**	**284**	*e*P	**Pn**	**14 31 52.1**	**-0.4**
SKMP				*e*S	**Sn**	**14 32 20.1**	**-0.9**
BUKP	**Musuan**	**2.63**	**317**	*e*P	**Pn**	**14 31 56.0**	**+0.3**
BUKP				*e*S	**Sn**	**14 32 26.6**	**-0.4**
BUTP	**Butuan**	**3.25**	**338**	*e*P	**Pn**	**14 32 07.3**	**+3.2**
BUTP				*e*S	**Sn**	**14 32 44.2**	**+2.4**
CGP	**Cagayan de Oro**	**3.29**	**319**	⇓*e*P	**Pn**	**14 32 06.4**	**+1.8**
CGP				*e*S	**Sn**	**14 32 43.0**	**+0.1**
GLSP	**General Luna,**	**3.88**	**349**	*e*P	**Pn**	**14 32 12.4**	**-0.2**
MSLP	**Maasin**	**4.61**	**335**	*e*P	**Pn**	**14 32 19.4**	**-3.1**
FITZ	**Fitzroy Crossi**	**23.92**	**183**	P	**P**	**14 36 21.4**	**+0.8**
	2.8nm,0.9s,baz=18,slow=8.8,SNR=6.3						
WRA	**Warramunga Arr**	**26.76**	**164**	P	**P**	**14 36 46.6**	**+0.2**
	1.0nm,0.7s,baz=345,slow=11,SNR=26						
ASAR	**Alice Springs**	**30.22**	**167**	P	**P**	**14 37 17.6**	**+0.4**
	0.6nm,0.3s,baz=341,slow=7.1,SNR=41						
ASAR				PcP	**PcP**	**14 40 15.6**	**-0.4**
	0.3nm,0.5s,baz=352,slow=2.9,SNR=6.6						
STKA	**Stephens Creek**	**40.15**	**160**	P	**P**	**14 38 42.3**	**+0.2**
	2.1nm,0.4s,baz=330,slow=10,SNR=9.0						
MKAR	**Makanchi Array**	**55.84**	**324**	P	**P**	**14 40 42.2**	**-0.7**
	0.3nm,0.4s,baz=115,slow=7.5,SNR=7.3						
EIL	**Elat**	**88.75**	**300**	LR	LR	15 29 45.2	
	comp=Z,27nm,18.8s,baz=281,slow=40						
TORD	**Torodi Ar. Bea**	**122.34**	**290**	PKP	**PKiKP**	**14 49 59.8**	**-0.8**
	0.7nm,0.9s,baz=48,slow=2.1,SNR=2.2						

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*IDC **02** 14:34:40.3±0.8, 55°.24S×28°.42W, h0^{km}, mb4.2/7, mb1 4.2/8, mb1mx4.0/26, mbtmp4.1/8, ML3.8/1, MS3.5/8, Ms1 3.5/8, ms1mx3.4/19, Error ellipse: s-maj=28.9km s-min=20.0km az=91.0*

*NEIC **02** 14:34:41.7±0.9, 55°.2S±0°.1×28°.4W±0°.2, h10^{km}±2^{km}, mb4.4/7, Error ellipse: s-maj=27.1km s-min=12.5km az=37.0*

ISC 02 14:34:41.8±0.6**, 55°.25S**±0°.10×**28°.4W**±0°.1**, h10**^{km}**, n31,** σ**0^{s}.70**/24**, mb4.3**/7**, MS3.7**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**4.76**	**278**	Pn	**Pn**	**14 35 54.0**	**+0.5**
VNA1	**Neumayer--Stat**	**17.81**	**158**	P	Pn	14 38 39.0	-10
VNA3	**Neumayer Olymp**	**17.99**	**160**	P	**P**	**14 38 52.5**	**+0.3**
VNA2	**Neumayer--Watz**	**18.21**	**158**	P	**P**	**14 38 55.2**	**+0.7**
	baz=314,slow=12						
SNAA	**Sanae**	**19.77**	**156**	P	**Pn**	**14 39 13.0**	**-0.1**
SNAA	**Sanae**	**19.77**	**156**	P	**P**	**14 39 10.8**	**-0.8**
	0.3nm,0.3s,baz=301,slow=10,SNR=12						
SNAA	**Sanae**	**19.77**	**156**	P	**P**	**14 39 11.3**	**-0.4**
PMSA	**Palmer Station**	**19.91**	**227**	LR	LR	14 45 47.6	
	comp=Z,132nm,18.8s,baz=107,slow=34						
BELA	**Belgrano 2**	**22.84**	**183**	P	**P**	**14 39 43.4**	**-1.2**
PLCA	**Paso Flores**	**31.16**	**280**	LR	LR	14 53 42.4	
	comp=Z,76nm,18.6s,baz=148,slow=37						
QSPA	**South Pole Qui**	**35.01**	**180**	P	**P**	**14 41 34.0**	**-0.1**
	1.2nm,0.4s,baz=39,slow=2.2,SNR=28						
QSPA	**South Pole Qui**	**35.01**	**180**	P	**P**	**14 41 34.9**	**+0.8**
QSPA				IAmb	IAmb	14 41 42.3	
	comp=Z,3.4nm,0.8s						
CPUP	**Villa Florida**	**35.75**	**312**	P	**P**	**14 41 40.2**	**-0.4**

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      comp=Z,4.6nm,0.9s,baz=188,slow=5.7,SNR=6.2
CPUP                                 LR      LR       14 57 55.7
      comp=Z,25nm,18.1s,baz=182,slow=39
CPUP  Villa Florida      35.75 312   P       P        14 41 40.3  -0.3
CPUP                                 IAmb    IAmb     14 41 41.5
      comp=Z,11nm,1.2s
BOSA  Boshof             46.47  78   LR      LR       14 59 25.3
      comp=Z,76nm,19.0s,baz=202,slow=32
VNDA  Vanda              47.34 183   P       P        14 43 15.7  +0.7
      comp=Z,1.3nm,0.6s,baz=178,slow=6.4,SNR=9.7
VNDA  Vanda              47.34 183   P       P        14 43 15.3  +0.2
VNDA                                 IAmb    IAmb     14 43 16.7
      comp=Z,3.2nm,1.0s
MNMC  Minye Minye        47.57 303   P       P        14 43 17.5  -0.3
LBTB  Lobatse            49.47  75   P       P        14 43 33.1  +0.9
      comp=Z,2.1nm,0.8s,baz=118,slow=1.9,SNR=3.5
TSUM  Tsumeb             49.92  63   P       P        14 43 35.5  -0.2
      comp=Z,1.2nm,0.6s,baz=198,slow=10,SNR=4.4
DBIC  Dimbokro           64.74  26   LR      LR       15 07 32.1
      comp=Z,30nm,19.9s,baz=158,slow=30
TOA0  Torodi Ar. Sit     72.71  31   P       P        14 46 09.6  -0.2
TOA0                                 IAmb    IAmb     14 46 11.6
      comp=Z,2.3nm,0.7s
TORD  Torodi Ar. Bea     72.71  31   P       P        14 46 09.2  -0.6
      comp=Z,2.2nm,0.6s,baz=202,slow=6.3,SNR=11
TORD                                 LR      LR       15 12 53.3
      comp=Z,42nm,18.5s,baz=170,slow=32
ATD   Arta Tunnel        89.01  68   LR      LR       15 26 42.8
      comp=Z,29nm,18.2s,baz=23,slow=35
KEST  Kesra              96.22  30   LR      LR       15 26 21.0
      comp=Z,50nm,18.1s,baz=288,slow=32
ASAR  Alice Springs      99.97 164   P       Pdif     14 48 25.0  -2.0
      comp=Z,0.4nm,0.9s,baz=239,slow=5.3,SNR=2.4
YKA   Yellowknife Ar    135.10 319   PKP     PKPdf    14 54 00.2  +0.5
      comp=Z,0.3nm,0.6s,baz=120,slow=2.9,SNR=5.8
MKAR  Makanchi Array    137.30  71   PKP     PKiKP    14 54 05.9  -0.4
      comp=Z,0.2nm,0.8s,baz=276,slow=1.3,SNR=1.5
KURBB Kurchatov Arra    137.60  65   PKP     PKPdf    14 54 05.2  +0.4
      comp=Z,0.2nm,0.5s,baz=228,slow=3.6,SNR=2.3
ILAR  Eielson Array     149.05 313   PKPbc   PKPbc    14 54 28.9  +0.3
      comp=Z,3.8nm,0.8s,baz=132,slow=2.1,SNR=43
SONM  Songino Array     151.38  86   PKPbc   PKPbc    14 54 34.8  -0.1
      comp=Z,0.8nm,0.6s,baz=224,slow=3.3,SNR=9.2
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*MAN **02** 14:48:52.3, 4°.35N×124°.98E, h290km, mb5.2, ML4.1, MS4.2*

*NEIC **02** 14:48:54.4±1.3, 4°.76N±0°.06×125°.13E±0°.10, h296km±10km, mb4.6/13, Error ellipse: s-maj=15.0km s-min=6.7km az=68.0*

*DJA **02** 14:48:55.0±0.3, 5°N±3°×12°5E±°, h292km±2km, M4.4/43, mB5.0/18, mb4.7/43, MLv4.7/12, Mw(mB)4.3/18*

*IDC **02** 14:48:56.1±0.8, 4°.69N×125°.01E, h307km±7km, mb3.5/14, mb1 3.7/18, mb1mx3.4/50, mbtmp4.3/18, Error ellipse: s-maj=17.5km s-min=7.6km az=79.0*

ISC 02 14:48:55.2±0.4**, 4°.66N**±0°.04×**125°.08E**±0°.06**, h300**km**, n98,** σ1s.**27**/109**, mb4.2**/26**, 1C-1D, Talaud Islands**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
DDMP  Don Marcelino,      1.56  24  eP       Pn       14 49 37.5  -1.3
DDMP                                eS       S        14 50 10.1  -3.4
SKMP  Bagumbayan, Su      1.92 344  eP       Pn       14 49 39.6  -1.8
SKMP                                eS       S        14 50 17.6  -0.6
KCP   Kidapawan           2.33   0⇑iP       Pn       14 49 45.1  +0.2
DAV   Davao City (W)      2.44  12   P       Pn       14 49 46.2  +0.5
      255nm,0.3s,baz=87,slow=1.5,SNR=38
DAV                                  S       S        14 50 27.9  +1.8
      123nm,0.3s,baz=70,slow=16,SNR=1.8
DAV   Davao City (W)      2.44  12   Pn      Pn       14 49 43.7  -2.1
MATI  Mati                2.55  27  eP       Pn       14 49 46.1  -0.6
MATI                                eS       S        14 50 28.7  +0.9
BUKP  Musuan              3.20 360  eP       Pn       14 49 53.3  +0.3
BUKP                                eS       S        14 50 41.1  +1.9
PAGZ  Pagadian            3.59 332  eP       Pn       14 49 56.2  -0.8
CGP   Cagayan de Oro      3.79 354⇓eP       Pn       14 49 59.7  +0.6
KMSI  Cibinong            4.21 195   P       Pn       14 50 04.4  +0.7
BUTP  Butuan              4.31   7  eP       Pn       14 50 05.3  +0.4
TNTI  Ternate             4.49 149           Pn       14 50 06.4  -0.5
TNTI  Ternate             4.49 149   P       Pn       14 50 06.4  -0.5
TNTI                                 S       S        14 51 01.5  -2.9
GTOI  Gorontalo           4.50 207   P       Pn       14 50 06.5  -0.6
MRSI  Marisa              5.21 217   P       Pn       14 50 16.2  +1.0
      0.3nm962nm77nm,0.6s
MSLP  Maasin              5.44 358  eP       Pn       14 50 17.3  -0.6
TOLI2 Tolitoli            5.56 231   Pn      Pn       14 50 18.4  -0.9
LUWI  Luwuk               6.12 202   Pn      Pn       14 50 26.3  +0.4
LUWI  Luwuk               6.12 202   P       Pn       14 50 26.4  +0.4
      1.0nm4μm235nm,0.9s
APSI  Ampana              6.51 212   P       Pn       14 50 30.6  -0.1
      0.5nm2μm88nm,0.7s
MYLDM Lahad Datu          6.58 275   Pn      Pn       14 50 32.8  +1.3
SANI  Sanana              6.73 172   P       Pn       14 50 30.9  -2.4
      1.5nm5μm192nm,0.6s
MPSI  Mapaga              6.73 230   P       Pn       14 50 33.8  +0.5
      0.1nm793nm17nm,0.8s
NLAI  Namlea              8.10 166   P       Pn       14 50 47.8  -2.3
      2μm44nm,0.6s
SIJI  Sorong              8.27 131   P       Pn       14 50 54.0  +1.9
      1.5nm,0.3s,baz=336,slow=16,SNR=5.4
MSAI  Masohi              8.83 154   P       Pn       14 51 00.8  +1.7
      11nm,0.7s
KKM   Kota Kinabalu       8.94 279   Pn      Pn       14 50 59.8  -0.6
TTSI  Tana Toraja         9.29 215   P       Pn       14 51 05.9  +1.3
      2μm175nm,0.8s
SPSI  Sidrap Palu        10.08 212   P       Pn       14 51 15.4  +1.0
      60nm,1.0s
BNSI  Bone               10.28 209   P       P        14 51 18.8  -1.3
      137nm,1.0s
FAKI  Fak Fak            10.39 136   Pn      Pn       14 51 17.0  -1.2
FAKI  Fak Fak            10.39 136   P       Pn       14 51 16.1  -2.1
      30nm,0.7s
KAPI  Kappang            10.99 209   P       Pn       14 51 26.8  +1.3
      3.3nm,0.3s,baz=349,slow=4.5,SNR=9.4
KAPI  Kappang            10.99 209   Pn      Pn       14 51 23.8  -1.7
BKSI  Bulukumba          11.09 207   P       Pn       14 51 26.3  -0.4
      63nm,0.8s
MTKI  Muara Teweh, K     11.60 242   P       Pn       14 51 31.5  -1.5
KBKI  Kotabaru           11.91 229   P       P        14 51 40.2  +2.0
BAKI  Biak               12.45 118   P       Pn       14 51 44.0  +0.7
      73nm,0.7s
SBUM  Sibu               13.03 261           P        14 51 51.2  +0.6
BBKI  Banjar Baru        13.03 232   P       P        14 51 52.5  +1.8
      83nm,0.7s
EDFI  Ende, Flores       13.74 194   P       Pn       14 51 59.7  +0.8
      398nm40nm,0.7s
SOEI  Soe                14.34 183           P        14 52 05.9  +0.6
SOEI  Soe                14.34 183   P       Pn       14 52 06.6  +0.5
      2μm192nm,0.8s
BATI  Baumata            14.84 185   P       Pn       14 52 12.7  +0.8
      46nm,0.3s,baz=338,slow=0.9,SNR=37
BATI  Baumata            14.84 185   P       Pn       14 52 12.4  +0.6
      2μm209nm,0.8s
SMPI  Sarmi              15.13 116   P       Pn       14 52 16.2  +0.9
      23nm,0.5s
PLAI  Plampang           15.25 209   P       P        14 52 15.7  +0.6
      2μm116nm,0.7s
BASI  Baing, Sumba       15.45 197   P       P        14 52 16.2  -1.1
      135nm,1.3s
TWSI  Taliwang, Sumb     15.62 212   P       P        14 52 19.0  -0.2
      55nm,0.7s
KMMI  Kalianget          16.08 224   P       P        14 52 22.7  -1.5
      190nm,1.2s
GENI  Genyem             16.70 115   P       Pn       14 52 34.2  +0.5
BLJI  Banyuglugur        16.83 223   P       Pn       14 52 34.1  -1.0
      90nm,0.6s
JAGI  Jajag, Banyuwa     17.00 220   P       P        14 52 34.7  +0.5
      84nm,0.9s
JAY   Jayapura           17.16 114   P       Pn       14 52 38.4  -0.6
      3.4nm,0.3s,baz=253,slow=7.4,SNR=16
JAY   Jayapura           17.16 114   P       P        14 52 38.0  +2.0
      8.3nm,0.9s
TBJI  Tambak Boyo        17.45 229   P       P        14 52 38.8  -0.3
      293nm,1.2s
PWJI  Pagerwojo          18.28 226   P       P        14 52 45.3  -2.7
      46nm,0.8s
MTN   Manton Dam         18.40 161   P       P        14 52 50.2  +1.0
MTN                                  IAmb    IAmb     14 52 51.5
      comp=Z,32nm,0.8s
TPI   Tanjungpandan      18.91 247   P       P        14 52 54.1  -0.6
      comp=Z,64nm,1.1s
TPUB  Ta-pu              19.02 347   P       P        14 52 54.5  -1.4
TPUB                                 IAmb    IAmb     14 53 00.6
      comp=Z,30nm,0.9s
UGM   Wanagama           19.16 229   P       P        14 52 58.4  +1.0
KPJI  Karang Pucung      20.04 234   P       P        14 53 05.6  -1.1
      comp=Z,32nm,0.9s
KLSI                     22.35 246   P       P        14 53 28.7  +0.1
      comp=Z,8.6nm,0.8s
CGJI  Cibinong           22.36 240   P       P        14 53 25.6  -3.1
FITZ  Fitzroy Crossi     22.62 179   P       P        14 53 31.6  +0.7
      comp=Z,22nm,0.3s,baz=353,slow=6.5,SNR=237
FITZ  Fitzroy Crossi     22.62 179   P       P        14 53 31.8  +0.9
WRAB  Tennant Creek      26.08 160   P       P        14 54 02.0  -0.2
WRAB                                 IAmb    IAmb     14 54 03.2
      comp=Z,9.6nm,0.7s
WRA   Warramunga Arr     26.09 160   P       P        14 54 02.5  +0.2
      comp=Z,7.0nm,0.7s,baz=335,slow=10,SNR=95
WRA                                  ScP     ScP      15 00 31.5  -0.7
      comp=Z,0.5nm,0.4s,baz=343,slow=3.0,SNR=4.8
PSA00 Pilbara Seismi     26.57 191   P       P        14 54 06.4  -0.1
NJ2   Nanjing            27.87 349  eP       P        14 54 19.8  +2.0
NJ2                                  pmax    pmax
      comp=Z,19nm,0.5s
CMAR  Chiang Mai Arr     28.99 300   P       P        14 54 28.4  +0.4
      comp=Z,0.5nm,0.7s,baz=105,slow=6.5,SNR=5.5
CMAR                                 ScP     ScP      15 00 40.2  -0.9
      comp=Z,1.5nm,0.9s,baz=156,slow=2.0,SNR=11
AS31  Alice Springs      29.44 163   P       P        14 54 32.5  +0.7
ASAR  Alice Springs      29.44 163   P       P        14 54 32.5  +0.7
      comp=Z,4.1nm,0.3s,baz=341,slow=7.4,SNR=440
ASAR                                 S       S        14 59 03.8  +0.1
      comp=Z,0.8nm,0.7s,baz=332,slow=12,SNR=4.5
ASAR                                 ScP     ScP      15 00 42.2  -0.3
      comp=Z,1.7nm,0.8s,baz=351,slow=3.7,SNR=8.0
MAT   Matsushiro         33.94  19   P       P        14 55 09.1  -1.8
MJAR  Matsushiro Arr     33.94  19   P       P        14 55 10.5  -0.3
      comp=Z,2.6nm,0.8s,baz=187,slow=9.0,SNR=7.4
BJI   Beijing            36.13 348   P       P        14 55 28.3  -1.0
BJI                                  pmax    pmax
      comp=Z,4.0nm,1.2s
LZH   Lanzhou            36.88 331  eP       P        14 55 36.8  +0.8
LZH                                  pP      pP       14 56 28.9  -6.3
LZH                                  sP      PP       14 56 57.7   -10
LZH                                  pmax    pmax
      comp=Z,14nm,1.3s
SHL   Shillong           38.01 307   P       P        14 55 44.8  -0.7
SHL                                  IAmb    IAmb     14 55 45.4
      comp=Z,9.9nm,0.6s
HHC   Hu-ho-hao-te       38.02 343  eP       P        14 55 44.4  -0.9
HHC                                  pmax    pmax
      comp=Z,11nm,0.8s
HHC                                  pmax    pmax
      comp=Z,130nm,5.2s
NWAO  Narrogin (SRO)     38.12 191   P       P        14 55 46.5  +0.5
NWAO                                 IAmb    IAmb     14 55 47.4
      comp=Z,26nm,0.8s
NWAO  Narrogin (SRO)     38.12 191   P       P        14 55 46.4  +0.3
NWAO                                 IAmb    IAmb     14 55 47.4
      comp=Z,21nm,0.8s
BBOO  Buckleboo          38.69 165   P       P        14 55 52.1  +1.3
BBOO                                 IAmb    IAmb     14 55 52.8
      comp=Z,36nm,0.7s
STKA  Stephens Creek     39.59 158   P       P        14 55 60.0  +1.7
      comp=Z,14nm,0.6s,baz=335,slow=8.7,SNR=42
STKA  Stephens Creek     39.59 158   P       P        14 55 59.9  +1.7
GTA   Gaotai             41.47 330   pmax    pmax
      comp=Z,2.0nm,1.2s
ASAJ  Asahikawa          42.22  19   P       P        14 56 20.3  +1.0
      comp=Z,20nm,1.3s,baz=224,slow=15,SNR=6.0
KLR   Kul'dur            44.77   6   P       P        14 56 39.6  +0.1
      comp=Z,0.7nm,0.4s,baz=198,slow=9.6,SNR=2.2
SONM  Songino Array      45.91 343   P       P        14 56 49.2  +0.6
      comp=Z,0.4nm,0.7s,baz=150,slow=8.4,SNR=2.6
SONM                                 ScP     ScP      15 01 42.9  -1.3
      comp=Z,0.5nm,0.7s,baz=161,slow=5.5,SNR=4.0
WMQ   Urumqi             51.03 326  eP       P        14 57 29.4  +2.0
PETK  Petropavlovsk-     55.21  23   P       P        14 57 58.5  +1.1
      comp=Z,4.2nm,0.8s,baz=198,slow=3.3,SNR=6.4
MK31  Makanchi Array     55.86 326   P       P        14 58 02.2   0.0
MKAR  Makanchi Array     55.86 326   P       P        14 58 01.6  -0.6
      comp=Z,0.4nm,0.3s,baz=122,slow=7.8,SNR=13
MKAR                                 ScP     ScP      15 02 25.0  -2.0
      comp=Z,0.2nm,0.5s,baz=131,slow=5.5,SNR=4.1
KSH   Kashi              56.23 315   P       P        14 58 08.0  +3.0
KSH                                  pmax    pmax
      comp=Z,16nm,1.4s
KSH                                  pmax    pmax
      comp=Z,310nm,5.4s
ZALV  Zalesovo Beam      59.02 334   P       P        14 58 24.4  +0.5
      comp=Z,0.5nm,0.5s,baz=72,slow=6.2,SNR=1.8
MAW   Mawson             84.06 200   P       P        15 00 52.0  -0.1
      comp=Z,2.0nm,0.6s,baz=85,slow=9.3,SNR=2.8
VNDA  Vanda              84.55 172   P       P        15 00 53.9  -0.5
      comp=Z,0.9nm,0.6s,baz=305,slow=5.3,SNR=7.0
ILAR  Eielson Array      84.97  25   P       P        15 00 55.4  -1.4
      comp=Z,0.3nm,0.5s,baz=261,slow=5.3,SNR=6.6
TORD  Torodi Ar. Bea    121.07 288   PKP     PKPdf    15 07 12.4  -0.9
      comp=Z,0.5nm,0.4s,baz=76,slow=2.0,SNR=4.5
```

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*IDC **02** 15:12:35.4±1.6, 6°.40S×128°.09E, h339km±19km, mb2.9/1, mb1 2.9/6, mb1mx2.6/50, mbtmp3.6/6, Error ellipse: s-maj=24.7km s-min=13.6km az=80.0*

ISC 02 15:12:35.6±1.0**, 6°.34S**±0°.10×**128°.1E**±0°.1**, h353**km**, n6,** σ1s.**58**/8**, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
BATI  Baumata             5.81 228   P       Pn       15 14 05.2  +0.9
      2.5nm,0.3s,baz=288,slow=22,SNR=1.5
BATI                                 S       S        15 15 13.8  -2.5
      4.8nm,0.3s,baz=259,slow=22,SNR=9.0
SIJI  Sorong              6.31  31   P       Pn       15 14 08.5  -1.6
      0.1nm,0.3s,baz=288,slow=20,SNR=0.8
FITZ  Fitzroy Crossi     11.92 191   P       P        15 15 16.2   0.0
      0.1nm,0.3s,baz=5.9,slow=9.1,SNR=8.0
WRA   Warramunga Arr     14.83 156   P       P        15 15 48.6  +0.4
      0.2nm,0.3s,baz=333,slow=11,SNR=15
ASAR  Alice Springs      18.12 163   P       P        15 16 24.5  +0.8
      0.4nm,0.3s,baz=344,slow=12,SNR=37
ASAR                                 S       S        15 19 32.6  -0.3
      0.1nm,0.3s,baz=340,slow=18,SNR=5.2
MKAR  Makanchi Array     66.63 328   P       P        15 22 50.6  +1.5
      0.3nm,0.5s,baz=121,slow=8.1,SNR=6.7
```

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*IDC **02** 15:15:41.2±3.5, 29°.13N×64°.29E, h80km±44km, mb3.2/7, mb1 3.4/9, mb1mx3.1/52, mbtmp3.7/9, ML3.9/2, Error ellipse: s-maj=46.1km s-min=28.2km az=141.0*

*OMAN **02** 15:15:54.9±0.5, 28°.38N×63°.69E, h35km, mb5.6/20, ms2.4/1, Error ellipse: s-maj=11.3km s-min=6.4km az=226.0*

*DSN **02** 15:15:55.3±2.7, 28°.20N×63°.53E, h10km, ML4.1/9, Error ellipse: s-maj=75.2km s-min=18.1km az=171.0*

ISC 02 15:15:41.1±0.6**, 28°.86N**±0°.07×**64°.32E**±0°.07**, h80**km**, n45,** σ2s.**95**/49**, mb3.5**/9**, Southwestern Pakistan**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
THW   Thamme Wali         7.49  57   P       Pn       15 17 23.2  -4.4
WSAR  Wadi Sarin          7.59 224   P       Pn       15 17 31.5  +2.5
      3.0nm,0.3s,baz=82,slow=4.0,SNR=53
BIDO  Bidbid              7.70 228   P       Pn       15 17 34.9  +4.3
BIDO                                 S       Sn       15 18 53.3  -3.0
BANOM Banah               7.71 250 i P       Pn       15 17 34.8  +4.1
      SNR=53
BANOM                                S       Sn       15 18 54.5  -2.0
BANOM Banah               7.71 250   P       Pn       15 17 35.1  +4.3
      SNR=15
BANOM                                S       Sn       15 18 54.0  -2.6
SHME  Shamm               7.79 251 i P       Pn       15 17 36.9  +5.1
      SNR=18
SHME  Shamm               7.79 251   P       Pn       15 17 36.9  +5.1
      SNR=18
SHME                                 S       Sn       15 18 56.6  -1.8
WBK   Wadi Bani Khal      7.88 219   P       Pn       15 17 35.2  +2.2
      SNR=76
WBK                                  S       Sn       15 18 57.0  -3.7
MDH   Madha               7.99 245 i P       Pn       15 17 38.0  +3.6
      SNR=14
MDH   Madha               7.99 245   P       Pn       15 17 38.1  +3.7
      SNR=23
MDH                                  S       Sn       15 19 00.9  -2.3
JLN   Jalan Bani Buh      8.02 215   P       Pn       15 17 37.7  +2.8
      SNR=8.4
JLN                                  S       Sn       15 19 01.1  -3.0
      SNR=12
MASF  Masafi              8.06 246   P       Pn       15 17 39.0  +3.5
      SNR=16
MASF                                 S       Sn       15 19 03.5  -1.7
MSFE  Esma-Masafi         8.07 246 i P       Pn       15 17 39.0  +3.4
      SNR=16
SMDO  Samad               8.08 226   P       Pn       15 17 40.1  +4.2
      SNR=40
SMDO                                 S       Sn       15 19 03.6  -2.0
CEP   Cherat              8.15  51   P       Pn       15 17 33.1  -3.7
HOQ   Hoqain              8.20 232   P       Pn       15 17 40.6  +3.1
      SNR=24
HOQ                                  S       Sn       15 19 05.7  -2.9
UOSS  Minazif             8.23 244 i P       Pn       15 17 40.9  +3.1
      SNR=45
UOSS  Minazif             8.23 244   P       Pn       15 17 40.9  +3.1
UOSS                                 S       Sn       15 19 06.7  -2.5
HATD  Hatta, Dubai        8.35 243 i P       Pn       15 17 42.8  +3.4
      SNR=7.9
HATD  Hatta, Dubai        8.35 243   P       Pn       15 17 42.6  +3.2
      SNR=5.9
HATD                                 S       Sn       15 19 09.4  -2.7
SOHO  SOHO                8.42 238   P       Pn       15 17 43.5  +3.2
SOHO  SOHO                8.42 238   P       Pn       15 17 43.5  +3.2
SOHO                                 S       Sn       15 19 10.7  -3.1
ASHO  Ashiyiah            8.48 243 i P       Pn       15 17 45.0  +3.8
      SNR=39
ASHO  Ashiyiah            8.48 243   P       Pn       15 17 45.0  +3.8
      SNR=9.1
ASHO                                 S       Sn       15 19 12.6  -2.7
JMDO  Jabal Madar         8.56 222   P       Pn       15 17 46.9  +4.5
      SNR=72
JMDO                                 S       Sn       15 19 15.9  -1.4
FAQ   Al Faqa, Dubai      8.81 244   P       Pn       15 17 51.7  +6.0
FAQ   Al Faqa, Dubai      8.81 244   P       Pn       15 17 52.3  +6.6
      SNR=12
BSY   Bisya               8.85 228   P       Pn       15 17 52.0  +5.7
ARQ   Araqi               8.91 234   P       Pn       15 17 53.5  +6.3
      SNR=6.7
ARQ                                  P       Pn       15 17 53.5  +6.3
      SNR=6.7
ALNE  Al Ain              9.05 240 i P       Pn       15 17 54.8  +5.8
      SNR=8.9
ALNE  Al Ain              9.05 240   P       Pn       15 17 54.8  +5.8
      SNR=6.6
ASUD  Al Ashush, Dub      9.08 244   P       Pn       15 17 55.2  +5.8
ASUD  Al Ashush, Dub      9.08 244   P       Pn       15 17 56.0  +6.7
      SNR=43
DOK   Doka               13.82 225   P       P        15 18 58.7  -0.5
      SNR=5.1
WHFO  Wadi Hawf          14.57 224   P       P        15 19 08.3  +0.7
      SNR=26
AAK   Ala-Archa          16.01  28   P       Pn       15 19 19.9  -1.7
      0.3nm,0.3s,baz=178,slow=12,SNR=7.0
AKTO  Aktyubinsk         22.07 349   P       P        15 20 26.1  -3.2
      0.9nm,0.5s,baz=155,slow=8.0,SNR=4.1
MKAR  Makanchi Array     22.75  33   P       P        15 20 33.6  -3.0
      0.2nm,0.5s,baz=218,slow=11,SNR=5.9
MKAR                                 pP      pP       15 20 53.9  +0.7
      0.5nm,0.8s,baz=220,slow=5.5,SNR=5.5
KURBB Kurchatov Arra     24.24  22   P       P        15 20 49.5  -0.9
      0.6nm,0.5s,baz=218,slow=8.4,SNR=4.7
KURBB                                pP      pP       15 21 08.8   0.0
      0.7nm,0.8s,baz=217,slow=9.6,SNR=3.1
BVAR  Borovoye Array     24.55   9   P       P        15 20 51.2  -2.0
      0.9nm,0.6s,baz=152,slow=7.5,SNR=9.6
BELG  Belogornoye        26.57 337   P       P        15 21 09.1  -2.4
      8.5nm,0.7s,baz=101,slow=5.6,SNR=3.9
ZALV  Zalesovo Beam      29.19  25   P       P        15 21 32.9  -1.9
      0.7nm,0.4s,baz=235,slow=11,SNR=3.8
FINES FINESS Array B     41.22 333   P       P        15 23 15.8  -2.0
      2.4nm,0.8s,baz=112,slow=8.5,SNR=7.4
ILAR  Eielson Array      83.55  13   P       P        15 27 58.6  -1.4
      0.3nm,0.6s,baz=315,slow=4.8,SNR=5.6
ASAR  Alice Springs      84.90 120   pP      pP       15 28 28.4  -0.9
      0.3nm,0.9s,baz=303,slow=5.4,SNR=6.2
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*SOF **02** 15:20:51.6, 42°.64N×23°.33E, h10km, MD2.6*

*BEO **02** 15:20:52.9±0.3, 42°.63N×23°.29E, h0km, ML2.1/8*

*THE **02** 15:20:54.0, 42°.52N×23°.10E, h0km±1km, ML2.1/5, Error ellipse: s-maj=2.7km s-min=1.4km az=348.0*

ISC 02 15:20:52.1±0.9**, 42°.66N**±0°.02×**23°.27E**±0°.03**, h5**km±6km**, n32,** σ1s.**24**/48**, 6C-11D, Bulgaria**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
VTS   Vitosha             0.05 212  ⇓P       Pg       15 20 53.8  +0.2
VTS                                 ⇓S       Sg       15 20 55.1  +0.6
VTS   Vitosha             0.05 212   Pg      Pg       15 20 53.9  +0.3
BOSS  Bosilegrad          0.60 255  ePg      Pg       15 21 04.0  +0.3
BOSS                                eSg      Sg       15 21 12.0  +0.4
PGB   Panagyurishte       0.67  99   Pg      Pg       15 21 04.1  -0.9
ZAPS  Zavoj               0.77 323  ePg      Pb       15 21 07.8  -0.3
ZAPS                                eSg      Sb       15 21 18.9   0.0
KKB   Krupnik             0.80 190   Pg      Pg       15 21 07.7  +0.2
MMB   Musomiste           1.12 162   Pg      Pb       15 21 13.6  -0.4
PLD   Plovdiv             1.20 117  ePg      Pn       15 21 14.6  -0.9
PLD                                 eSg      Sb       15 21 28.9  -2.1
NVR   Nevrokopi           1.38 161   P       Pb       15 21 18.1  -0.3
NVR                                  S       Sg       15 21 37.5  +1.1
      82nm,0.2s
ZAGS  Zajecar             1.38 327  ePg      Pb       15 21 17.6  -0.8
ZAGS                                eSg      Sg       15 21 36.7  +0.2
VAY   Valandovo           1.43 202  ePg      Pb       15 21 18.4  -0.9
VAY                                 eSg      Sg       15 21 38.1  -0.1
VAY   Valandovo           1.43 202 i Pn      Pg       15 21 19.7  +0.1
RZN   Rozhen              1.45 132   P       Pn       15 21 18.4  -0.7
KNT   Kendrikon           1.52 191   P       Pb       15 21 20.0  -0.8
KNT                                  S       Sb       15 21 39.5  -0.8
      42nm,0.1s
SRS   Serrai              1.56 171   P       Pb       15 21 20.6  -0.8
SRS                                  S       Sg       15 21 41.7  -0.5
      60nm,0.3s
VLAD  Vladila             1.57  31  ⇓P       Pg       15 21 22.2  -0.2
PUNG  Punghina            1.64 352  ⇓S       Sg       15 21 43.9  -0.8
PUNG  Punghina            1.64 352  eSg      Sg       15 21 46.7  +1.9
KAVA  Kavala              1.90 150   P       Pb       15 21 25.9  -1.4
KAVA                                 S       Sb       15 21 51.8  +0.5
      35nm,0.6s
SRE   Strehaia            2.00 359  ⇑P       Pn       15 21 26.9  +0.3
SRE                                 ⇓S       Sb       15 21 53.0  -1.3
COPA  Copaceanca          2.05  43  ⇓S       Sg       15 21 57.1  -0.8
SZH   Strazhica           2.05  72   P       Pb       15 21 28.5  -1.3
RDO   Rodhopi             2.27 131   P       Pb       15 21 32.7  -0.8
RDO                                  S       Sb       15 22 02.5  +0.6
      38nm,0.3s
MDVR  Moldovita           2.40 333  ⇓P       Pn       15 21 32.0  -0.1
MDVR                                ⇑S       Sn       15 22 02.3  +0.3
MDVR  Moldovita           2.40 333  ePn      Pb       15 21 34.5  -1.4
MDVR                                eSg      Sg       15 22 09.7  +0.4
IVAS  Ivanjica            2.46 293  ePn      Pb       15 21 35.8  -1.0
GZR   Gura Zlata          2.76 353  ⇑P       Pn       15 21 36.0  -1.0
VOIR                      3.06  24  ⇓P       Pn       15 21 41.4  +0.2
VOIR                                ⇑S       Sn       15 22 20.3  +2.0
BZS   Buzias              3.19 339  ⇑P       Pn       15 21 41.8  -1.1
BZS                                 ⇓S       Sn       15 22 20.7  -0.5
DOPR  Dopca               3.64  24  ⇓P       Pn       15 21 50.3  +1.2
TIRR  Tirgusor            4.15  63  ⇓S       Sn       15 22 48.8  +3.9
CFR   Carcaliu            4.33  53  ⇑S       Sn       15 22 53.4  +4.1
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*IDC **02** 15:36:57.9±2.5, 6°.56N×92°.83E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/32, mbtmp3.4/6, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/30, Error ellipse: s-maj=88.7km s-min=23.7km az=64.0*

ISC 02 15:37:02.2±2.0**, 6°.6N**±0°.2×**93°.0E**±0°.3**, h25**km**, n10,** σ0s.**78**/6**, mb3.6**/5**, Nicobar Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
CMAR  Chiang Mai Arr     13.11  26   Pn      Pn       15 40 06.8  -0.2
      0.1nm,0.3s,baz=229,slow=14,SNR=4.4
H08S3 Diego Garcia H     24.87 236   T       T        16 09 27.9
      baz=55,slow=75,SNR=27
H08S2 Diego Garcia H     24.88 236   T       T        16 09 28.8
      baz=55,slow=75,SNR=29
H08S1 Diego Carcia H     24.89 236   T       T        16 09 29.6
      baz=55,slow=75,SNR=7.5
MKAR  Makanchi Array     41.06 349   P       P        15 44 43.5  -0.2
      0.7nm,0.5s,baz=164,slow=7.7,SNR=12
SONM  Songino Array      42.62  13   P       P        15 44 57.5  +0.9
      0.4nm,0.8s,baz=184,slow=7.3,SNR=2.4
GEYT  Alibeck            44.38 320   LR      LR       16 04 48.7
      comp=Z,20nm,18.4s,baz=225,slow=38
ZALV  Zalesovo Beam      47.64 353   P       P        15 45 35.5  -0.6
      0.5nm,0.3s,baz=178,slow=8.6,SNR=3.9
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.50	124	P	P	15 45 42.9	-0.6
	0.8nm,1.1s,baz=301,slow=9.8,SNR=2.6						
ASAR	Alice Springs	50.03	128	P	P	15 45 55.5	+0.4
	0.2nm,0.9s,baz=302,slow=7.9,SNR=5.0						

IDC 02 15:48:57.4±3.7**,30°.96N×140°.95E,h0^{km},mb3.2**/3**,**
mb1 3.5/4**,mb1mx3.2**/43**,mbtmp3.2**/4**,ML2.5**/1**,Error**
ellipse: s-maj=152.3km s-min=26.7km az=73.0,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.02	338	Pn	Pn	15 50 27.2	-0.5
	0.1nm,0.3s,baz=160,slow=12,SNR=2.8						
MKAR	Makanchi Array	47.24	307	P	P	15 57 32.1	0.0
	0.1nm,0.5s,baz=82,slow=9.3,SNR=1.8						
WRA	Warramunga Arr	51.00	188	P	P	15 58 00.8	-0.4
	0.2nm,0.3s,baz=6.6,slow=7.8,SNR=12						
ASAR	Alice Springs	54.73	188	P	P	15 58 28.8	+0.2
	0.2nm,0.8s,baz=6.3,slow=5.4,SNR=7.6						

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*IDC **02** 15:57:43.5±6.0, 14°.12N×92°.60W, h0^{km}, mb3.5/2,*
mb1 3.7/4, mb1mx3.5/36, mbtmp3.3/4, ML2.9/2, Error
ellipse: s-maj=193.4km s-min=54.5km az=41.0
*MEX **02** 15:57:45.2±0.4, 13°.78N×92°.72W, h22^{km}±21^{km}, MD4.0*
ISC 02 15:57:49.2±2.2**,14°.1N**±0°.2×**92°.69W**±0°.09**,h46^{km},n8,**
σ**2^{s}10**/13**,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.94	26	*i* P	Pn	15 58 04.3	-1.8
THIG				*i* S	Sn	15 58 17.2	-1.2
PCIG		1.72	343	*e*P	Pn	15 58 14.6	-2.0
PCIG				*i* S	Sn	15 58 37.7	+0.4
CCIG	Comitan	2.28	14	*i* P	Pn	15 58 23.4	-1.2
CCIG				*i* S	Sn	15 58 52.6	+1.1
CMIG	Matias Romero	3.68	325	Pn	Pn	15 58 40.0	-3.6
	0.8nm,0.3s,baz=145,slow=9.0,SNR=8.6						
CMIG				Sn	Sn	15 59 28.4	+2.6
	1.2nm,0.3s,baz=133,slow=14,SNR=4.5						
CMIG	Matias Romero	3.68	325	*i* P	Pn	15 58 41.0	-2.6
CMIG				*i* S	Sn	15 59 25.6	-0.2
TXAR	Lajitas Array	18.29	328	Pn	Pn	16 02 01.8	+2.2
	0.0nm,0.3s,baz=147,slow=8.6,SNR=4.1						
YKA	Yellowknife Ar	50.82	347	P	P	16 06 44.9	+0.1
	0.8nm,0.7s,baz=149,slow=7.8,SNR=14						
ILAR	Eielson Array	62.52	337	P	P	16 08 09.1	+1.2
	0.3nm,0.8s,baz=148,slow=4.1,SNR=2.8						

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*IDC **02** 16:20:49.9±3.1, 14°.55N×92°.20W, h0^{km}, mb3.9/7,*
mb1 4.2/9, mb1mx3.9/34, mbtmp3.9/9, ML3.2/2, MS3.0/1,
Ms1 3.0/1, ms1mx2.6/26, Error ellipse: s-maj=87.6km
s-min=33.6km az=29.0
*MEX **02** 16:20:51.2±0.6, 13°.85N×92°.81W, h16^{km}±30^{km}, MD4.0*
ISC 02 16:20:51.5±1.4**,13°.9N**±0°.1×**92°.79W**±0°.07**,h35^{km},n15,**
σ**1^{s}66**/21**,mb4.0**/7**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.14	27	*e*P	Pn	16 21 09.5	-1.4
THIG				*i* S	Sn	16 21 22.9	-2.4
PCIG		1.85	347	*e*P	Pn	16 21 19.0	-1.8
PCIG				*e*S	Sn	16 21 42.1	-0.9
CCIG	Comitan	2.46	15	*e*P	Pn	16 21 31.4	+2.0
CCIG				*i* S	Sn	16 21 59.6	+1.2
HUIG	Huatulco	3.71	301	*e*P	Pn	16 21 44.9	-1.5
HUIG				*i* S	Sn	16 22 28.2	-0.8
CMIG	Matias Romero	3.77	328	Pn	Pn	16 21 45.6	-1.6
	1.7nm,0.3s,baz=147,slow=10.0,SNR=10						
CMIG				Sn	Sn	16 22 33.2	+2.8
	7.9nm,0.3s,baz=100,slow=19,SNR=4.5						
CMIG	Matias Romero	3.77	328	*i* P	Pn	16 21 46.7	-0.5
CMIG				*i* S	Sn	16 22 29.5	-0.9
TXAR	Lajitas Array	18.38	329	Pn	Pn	16 25 03.7	0.0
	0.0nm,0.3s,baz=138,slow=12,SNR=6.3						
TXAR				LR	LR	16 33 02.8	
	comp=Z,43nm,18.1s,baz=0.0,slow=40						
ANMO	Albuquerque	24.33	332	P	P	16 26 06.0	-0.3
	0.6nm,0.5s,baz=129,slow=6.2,SNR=2.7						
PDAR	Pinedale Array	32.21	337	P	P	16 27 15.8	-0.8
	1.2nm,1.1s,baz=142,slow=7.4,SNR=5.3						
NVAR	Mina Array Bea	33.28	322	P	P	16 27 28.8	+2.8
	1.6nm,0.8s,baz=90,slow=13,SNR=8.1						
ULM	Lac du Bonnet	36.35	357	P	P	16 27 50.3	-1.8
	1.7nm,0.7s,baz=184,slow=14,SNR=2.0						
YKA	Yellowknife Ar	50.96	347	P	P	16 29 50.1	+0.8
	4.7nm,0.8s,baz=147,slow=8.1,SNR=70						
ILAR	Eielson Array	62.64	337	P	P	16 31 13.5	+1.3
	1.9nm,1.1s,baz=131,slow=4.0,SNR=9.9						
ESDC	Sonseca Array	80.39	52	P	P	16 32 58.2	-1.5
	0.4nm,0.7s,baz=288,slow=6.0,SNR=4.1						
CMAR	Chiang Mai Arr	145.84	340	PKPbc	PKPab	16 40 29.8	+1.4
	1.9nm,0.8s,baz=339,slow=4.0,SNR=15						

IDC 02 16:22:07.2±3.9**,1°.33S×129°.55E,h228^{km}**±54^{km}**,mb2.6**/2**,**
mb1 2.7/3**,mb1mx2.6**/37**,mbtmp3.1**/3**,Error ellipse:**
s-maj=106.9km s-min=21.7km az=75.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.78	75	P	Pn	16 22 47.1	+1.3
	0.6nm,0.3s,baz=242,slow=22,SNR=8.6						
SIJI				S	S	16 23 16.1	+0.2
	1.0nm,0.3s,baz=240,slow=22,SNR=9.7						
WRA	Warramunga Arr	19.08	166	P	P	16 26 11.2	-1.7
	0.1nm,0.3s,baz=346,slow=11,SNR=4.9						
ASAR	Alice Springs	22.60	170	P	P	16 26 49.8	+1.1
	0.3nm,0.3s,baz=348,slow=11,SNR=13						
MKAR	Makanchi Array	63.29	326	P	P	16 32 11.4	-0.4
	0.1nm,0.4s,baz=124,slow=8.4,SNR=2.3						

IDC 02 16:38:08.6±2.2**,9°.02S×129°.96E,h0^{km},mb3.1**/1**,**
mb1 3.2/3**,mb1mx3.0**/38**,mbtmp3.0**/3**,ML2.9**/2**,Error**
ellipse: s-maj=97.8km s-min=33.5km az=67.0,Timor
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	11.66	159	Pn	Pn	16 40 56.8	+0.4
	0.1nm,0.3s,baz=338,slow=13,SNR=8.2						
WRA				Sn	Sn	16 43 01.6	-5.8
	0.2nm,0.3s,baz=343,slow=22,SNR=6.7						
ASAR	Alice Springs	15.05	166	Pn	Pn	16 41 42.1	-0.7
	0.1nm,0.3s,baz=340,slow=8.8,SNR=7.8						
ASAR				Sn	Sn	16 44 27.1	-3.2
	0.1nm,0.3s,baz=352,slow=25,SNR=4.4						
MKAR	Makanchi Array	69.89	327	P	P	16 49 21.5	0.0
	0.1nm,0.5s,baz=127,slow=6.4,SNR=1.8						

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*IDC **02** 16:51:37.6±4.1, 36°.46N×71°.19E, h218^{km}±31^{km}, mb3.4/3,*
mb1 3.2/10, mb1mx2.8/48, mbtmp3.9/10, Error ellipse:
s-maj=49.9km s-min=21.4km az=146.0
*NNC **02** 16:51:46.6±4.4, 37°.12N×71°.04E, h242^{km}±50^{km}, mb2.8,*
mpv3.9, Error ellipse: s-maj=44.0km s-min=25.9km
az=23.0
ISC 02 16:51:40.4±0.6**,36°.66N**±0°.05×**71°.16E**±0°.07**,h250^{km},n43,**
σ**1^{s}61**/47**,mb3.7**/3**,7C-6D,Afghanistan-Tajikistan border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.89	168	P	Pn	16 52 32.2	+0.3
CEP				S	S	16 53 11.0	-1.7
THW	Thamme Wali	3.88	173	P	Pn	16 52 43.1	+0.2
SARP	Sargodha	4.89	165	P	Pn	16 52 54.8	0.0
AML	Almayashu	5.81	19	P	Pn	16 53 06.4	0.0
	SNR=62						
DHRM	DHARAMSHALA	6.11	135	*e*P	Pn	16 53 10.5	+0.4
DHRM				*e*S	S	16 54 19.5	-2.4
DHRM				IAML		16 54 21.2	
	comp=N,204nm,0.4s						
DHRM				IAML		16 54 23.5	
	comp=E,230nm,0.6s						
UCH	Uchtor	6.14	24	P	Pn	16 53 10.7	+0.1
	SNR=89						
DZA	Taraz	6.23	1	Lg	Lg	16 54 20.0	
	comp=E,166nm,0.2s						
EKS2	Erkin-Say	6.33	18	P	Pn	16 53 13.1	+0.5
	SNR=8.8						
KK31	Karatay Array	6.46	356	⇑P	Pn	16 53 13.7	-0.4
	comp=E,12nm,0.6s,baz=177,slow=12,SNR=195						
KK31				S	S	16 54 24.8	-4.5
	comp=E,11nm,0.3s,baz=183,slow=16,SNR=22						
AAK	Ala-Archa	6.50	22	P	Pn	16 53 15.2	+0.4
	comp=E,5.2nm,0.3s,baz=204,slow=6.5,SNR=72						
AAK				S	S	16 54 28.2	-2.3
	comp=E,2.5nm,0.3s,baz=147,slow=23,SNR=18						
AAK	Ala-Archa	6.50	22	P	Pn	16 53 15.5	+0.6
	SNR=32						
AAK	Ala-Archa	6.50	22	⇓P	Pn	16 53 15.3	+0.5
	comp=E,5.9nm,0.3s						
AAK				⇓S	S	16 54 28.5	-2.0
	comp=E,36nm,0.9s						
ULHL	Ulahol	6.82	34	P	Pn	16 53 19.3	+0.4
	SNR=17						
CHMS	Chumysh	6.91	22	P	Pn	16 53 20.6	+0.8
	SNR=8.9						
TKM2	Tokmak 2	7.13	27	P	Pn	16 53 23.9	+1.2
	SNR=17						
TKM2	Tokmak 2	7.13	27	⇑P	Pn	16 53 23.5	+0.8
	comp=E,3.6nm,0.5s						
TKM2				⇓S	S	16 54 42.5	-2.4
	comp=E,33nm,0.8s						
SMLA	Simla	7.44	136	⇑*e*P	Pn	16 53 27.1	+0.5
SMLA				*e*S	S	16 54 46.1	-5.8
SMLA				IAML		16 54 52.0	
	comp=E,49nm,0.2s						
SMLA				IAML		16 54 52.3	
	comp=N,47nm,0.3s						
KRBS	Karabastau	7.83	25	P	Pn	16 53 37.2	+5.7
	comp=N,4.6nm,0.3s						
MDOK	Medeo	7.92	33	⇑P	Pn	16 53 33.5	+0.9
	comp=N,3.3nm,0.6s						
KOTS	Kotyrbulak	8.00	33	Lg	Lg	16 55 01.4	
	comp=N,15nm,0.7s						
KTBS	Karatobe	8.21	29	P	Pn	16 53 41.9	+5.6
	comp=N,2.1nm,0.3s						
PDGK	Podgornoye	9.23	41	⇑P	Pn	16 53 51.4	+2.2
	comp=N,0.6nm,0.5s						
GEYT	Alibeck	10.47	281	P	Pn	16 54 03.7	-1.2
	comp=N,0.2nm,0.3s,baz=115,slow=10,SNR=3.6						
MAKZ	Makanchi	12.95	35	⇑P	Pn	16 54 36.2	+0.7
	comp=N,2.4nm,0.7s						
MK31	Makanchi Array	13.09	36	⇓P	Pn	16 54 38.5	+1.3
	comp=N,0.4nm,0.5s,baz=217,slow=9.3,SNR=14						
MKAR	Makanchi Array	13.09	36	P	Pn	16 54 38.3	+1.0
	comp=N,0.1nm,0.3s,baz=207,slow=9.5,SNR=12						
KKN	Kakani	14.85	123	*e*P	P	16 54 59.4	+0.6
	comp=N,7.8nm,0.5s						
KURBB	Kurchatov Arra	14.93	18	P	P	16 54 59.1	-0.1
	comp=N,0.2nm,0.3s,baz=208,slow=11,SNR=6.4						
AB31	Akbulak array	15.01	331	⇑P	Pn	16 55 00.4	-0.1
	comp=N,0.7nm,0.3s,baz=140,slow=13,SNR=49						
AB31				S	S	16 57 45.3	-0.6
	comp=N,0.5nm,0.6s,baz=247,slow=22,SNR=4.1						
PKIN	Phulchoki	15.06	123	*e*P	P	16 55 01.9	+0.6
	comp=N,7.6nm,0.4s						
PKI	Pulchoki	15.08	123	*e*P	P	16 55 02.2	+0.7
	comp=N,7.5nm,0.4s						
GUN	Gumba	15.18	121	*e*P	Pn	16 55 04.7	+1.5
	comp=N,4.0nm,0.3s						
RAMN	Ramite	16.29	122	*e*P	P	16 55 16.0	+1.4
	comp=N,3.9nm,0.4s						
BVAR	Borovoye Array	16.38	358	P	P	16 55 15.9	+0.8
	comp=N,1.2nm,0.3s,baz=147,slow=17,SNR=18						
BRVK	Borovoye	16.41	358	⇓P	Pn	16 55 17.6	+0.5
	comp=N,2.0nm,0.4s						
AKTO	Aktyubinsk	16.71	330	P	Pn	16 55 20.8	+0.2
	comp=N,1.5nm,0.3s,baz=121,slow=7.1,SNR=17						
AKTO	Aktyubinsk	16.71	330	⇓P	Pn	16 55 20.7	+0.2
	comp=N,6.1nm,0.7s						
TAPN	Taplejung	16.80	119	*e*P	Pn	16 55 24.1	+1.8
	comp=N,1.9nm,0.3s						
ODAN	Odare	16.89	121	*e*P	Pn	16 55 23.7	+0.5
	comp=N,2.9nm,0.5s						
ZALV	Zalesovo Beam	19.72	24	P	P	16 55 52.8	+1.7
	comp=N,0.5nm,0.3s,baz=215,slow=11,SNR=5.9						
ARU	Arti	21.53	341	P	P	16 56 11.8	+2.1
	comp=N,0.3nm,0.3s,baz=114,slow=19,SNR=2.0						
FINES	FINESS Array B	37.43	326	P	P	16 58 31.1	+1.7
	comp=N,7.1nm,1.0s,baz=119,slow=14,SNR=2.2						
TORD	Torodi Ar. Bea	65.85	269	P	P	17 01 59.5	-0.1
	comp=N,0.9nm,0.6s,baz=40,slow=5.9,SNR=5.5						

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*IDC **02** 17:17:19.1±7.5, 0°.23N×123°.65E, h135^{km}±72^{km}, mb3.2/5,*
mb1 3.5/6, mb1mx3.1/49, mbtmp3.7/6, Error ellipse:
s-maj=72.6km s-min=16.7km az=60.0
ISC 02 17:17:21.3±1.1**,0°.1N**±0°.2×**123°.5E**±0°.4**,h157^{km},n6,**
σ**1^{s}24**/8**,mb3.5**/5**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.23	174	P	P	17 21 21.7	-0.9
	0.5nm,0.3s,baz=0.6,slow=11,SNR=10						
WRA	Warramunga Arr	22.58	153	P	P	17 22 09.3	+0.7
	1.3nm,0.5s,baz=329,slow=11,SNR=38						
ASAR	Alice Springs	25.70	158	P	P	17 22 37.8	+0.7
	0.8nm,0.8s,baz=346,slow=14,SNR=6.4						
ASAR				PcP	PcP	17 26 04.0	+0.6
	0.2nm,0.3s,baz=348,slow=2.1,SNR=7.0						
CMAR	Chiang Mai Arr	30.26	308	P	P	17 23 19.0	+1.3
	0.5nm,0.5s,baz=132,slow=7.3,SNR=6.7						
SONM	Songino Array	49.80	345	P	P	17 25 58.6	+0.4
	0.4nm,0.5s,baz=158,slow=8.9,SNR=5.4						
MKAR	Makanchi Array	58.79	328	P	P	17 27 01.8	-1.3
	0.3nm,0.4s,baz=117,slow=8.4,SNR=8.3						
MKAR				PcP	PcP	17 27 49.6	-1.4
	0.4nm,0.7s,baz=119,slow=4.3,SNR=3.9						

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*INET **02** 17:18:13.4, 12°.48N×88°.24W, h23^{km}, ML3.5, MW3.2*
SNET 02 17:18:15.5±0.9**,12°.63N×88°.30W,h28^{km}**±5^{km}**,ML3.0,Off**
coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	0.62	4	*e*P	Pb	17 18 27.9	0.0
JUCU				*e*S	Sn	17 18 37.6	0.0
JUCU				IAML		17 18 43.0	
	comp=Z,1μm,0.2s						
LCND	La Caada	0.78	30	*e*P	Pb	17 18 30.5	0.0
LCND				*e*S	Sn	17 18 41.3	-0.2
LCND				IAML		17 18 44.3	
	comp=Z,991nm,0.3s						
LCY	Lacayo	0.79	0	*e*P	Pb	17 18 30.6	-0.2
LCY				*e*S	Sn	17 18 42.6	+0.8
VSM	San Miguel	0.79	2	*e*P	Pb	17 18 30.7	-0.2
VSM				*e*S	Sn	17 18 42.8	+0.6
PACA	Pacayal	0.83	358	*e*P	Pn	17 18 31.6	+0.1
PACA				*e*S	Sn	17 18 44.1	+1.1
PACA				IAML		17 18 46.6	
	comp=Z,461nm,0.2s						
TECA	Tecapa	0.88	347	*e*P	Pn	17 18 32.0	-0.3
TECA				*e*S	Sn	17 18 45.1	+0.9
COEB	Comit de Eme	0.89	345	*e*P	Pn	17 18 31.9	-0.4
FAGO	Alcalda de S	1.07	10	*e*P	Pn	17 18 34.5	-0.2
FAGO				IAML		17 18 52.8	
	comp=Z,196nm,0.3s						
COEG	Centro de Oper	1.14	330	*e*P	Pn	17 18 35.7	+0.1
LFRS	El Faro	1.23	323	*e*P	Pn	17 18 37.1	0.0
PAVA	Las Pavas	1.24	330	*e*P	Pn	17 18 37.7	+0.5
LBRS	Las Brisas	1.32	327	*e*P	Pn	17 18 38.7	+0.6
JAYA	Jayaque - finc	1.51	312	*e*P	Pn	17 18 40.6	-0.3
TGUH	Tegucigalpa,Un	1.73	35	*e*P	Pn	17 18 43.3	-0.6

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*IDC **02** 17:22:23.4±1.0, 37°.23N×141°.65E, h0^{km}, mb3.6/8,*
mb1 3.6/10, mb1mx3.5/56, mbtmp3.6/10, ML2.7/2, MS2.7/1,
Ms1 2.7/1, ms1mx2.3/42, Error ellipse: s-maj=28.5km
s-min=18.1km az=80.0
*JMA **02** 17:22:25.2±0.1, 37°.25N×141°.63E, h28^{km}±1^{km}, M3.4*
ISC 02 17:22:24.6±1.9**,37°.26N**±0°.05×**141°.63E**±0°.07**,h8^{km}**±11^{km}**,**
n29,σ**1^{s}04**/30**,mb3.7**/8**,Near east coast of eastern**
Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.61	280	P	Pg	17 22 37.2	+0.8
ONAJ	Iwakimizuishiy	0.68	257	P	Pg	17 22 38.3	+0.6
JMST	Minamisoumatoc	0.75	308	P	Pg	17 22 39.3	+0.3
JMST				S	Sg	17 22 49.3	+0.6
JFFD	Fukushimafurud	0.87	259	P	Pb	17 22 41.1	-0.8
JFFD				*e*S	Sb	17 22 52.1	-1.6
JMM	Marumori	0.90	312	P	Pb	17 22 41.5	-0.8
JMM				*e*S	Sb	17 22 53.1	-1.4
JFT	Otama	1.06	284	P	Pb	17 22 45.1	-0.1
JFT				*e*S	Sg	17 22 58.6	-0.1
JHO	Hitachi	1.07	233	P	Pb	17 22 43.8	-1.5
JIO	Ouri	1.21	349	P	Pn	17 22 46.4	-1.3
JIO				S	Sb	17 23 02.2	-1.3
JOU	Okura	1.34	325	P	Pn	17 22 49.2	-0.4
JOU				S	Sb	17 23 06.9	-0.3
JYS	Shirataka	1.56	308	P	Pb	17 22 53.2	-0.6
MJAR	Matsushiro Arr	2.83	256	Pn	Pn	17 23 10.8	+0.7
	0.2nm,0.3s,baz=109,slow=15,SNR=16						
MJAR				Sn	Sb	17 23 47.9	-2.4
	0.3nm,0.3s,baz=47,slow=13,SNR=6.0						
MAT	Matsushiro	2.84	256	P	Pn	17 23 10.8	+0.6
MAT				*e*S	Sn	17 23 46.1	+1.6
ASAJ	Asahikawa	6.88	6	Pn	Pn	17 24 05.9	+0.2
	0.3nm,0.3s,baz=200,slow=17,SNR=5.7						
KSRS	Korea Array	10.91	275	LR	LR	17 29 02.8	
	comp=Z,38nm,18.8s,baz=48,slow=36						
YAK	Yakutsk	25.88	347	P	P	17 27 55.7	-0.8
	1.7nm,0.5s,baz=104,slow=3.5,SNR=2.2						
H11N2	WAKE ISLAND Hy	28.12	121	T	T	17 57 49.3	
	baz=314,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	28.13	121	T	T	17 57 51.4	
	baz=314,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	28.14	121	T	T	17 57 45.2	
	baz=314,slow=75,SNR=31						
ZALV	Zalesovo Beam	41.89	312	P	P	17 30 16.0	+0.9
	1.6nm,0.8s,baz=90,slow=7.4,SNR=7.1						
KRVT	Keravat (AS076	42.48	165	P	P	17 30 20.8	+0.6
	130nm,0.5s,baz=260,slow=4.7,SNR=4.7						
MKAR	Makanchi Array	44.14	302	P	P	17 30 33.7	+0.2
	1.1nm,1.0s,baz=84,slow=11,SNR=5.9						
KURBB	Kurchatov Arra	46.00	308	P	P	17 30 47.7	-0.4
	1.0nm,0.8s,baz=83,slow=8.5,SNR=4.5						
ILAR	Eielson Array	49.21	32	P	P	17 31 13.8	+0.8
	0.4nm,0.7s,baz=271,slow=7.1,SNR=4.7						
WRA	Warramunga Arr	57.31	188	P	P	17 32 12.2	-0.8
	0.4nm,0.6s,baz=5.8,slow=7.5,SNR=4.9						
ASAR	Alice Springs	61.04	188	P	P	17 32 38.1	-0.7
	0.3nm,0.8s,baz=7.0,slow=8.4,SNR=1.9						
AKASG	Malin Array Be	74.22	322	P	P	17 34 02.8	+1.1
	0.3nm,0.4s,baz=49,slow=5.8,SNR=2.2						
H03N2	Juan Fernandez	146.88	96	T	T	20 26 15.3	
	baz=291,slow=76,SNR=9.9						
H03N3	Juan Fernandez	146.89	96	T	T	20 26 15.0	
	baz=291,slow=76,SNR=8.4						
H03N1	Juan Fernandez	146.89	96	T	T	20 26 16.4	
	baz=291,slow=76,SNR=10.0						

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*IDC **02** 17:34:50.2±0.8, 15°.67N×147°.31E, h0^{km}, mb4.0/20,*
mb1 4.1/21, mb1mx4.0/57, mbtmp4.1/21, ML3.5/1, MS3.5/14,
Ms1 3.5/14, ms1mx3.3/38, Error ellipse: s-maj=24.6km
s-min=14.5km az=115.0
*NEIC **02** 17:34:53.4±2.8, 15°.6N±0°.1×147°.49E±0°.10, h28^{km}±5^{km},*
mb4.6/28, Error ellipse: s-maj=14.9km s-min=13.3km
az=156.0
ISC 02 17:34:54.8±0.7**,15°.66N**±0°.09×**147°.3E**±0°.1**,h29^{km},n62,**
σ**1^{s}09**/52**,mb4.4**/32**,MS3.5**/12**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.10	229	Pn	Pn	17 35 40.7	-1.2
	6.0nm,0.3s,baz=212,slow=0.3,SNR=6.4						
GUMO				Sn	Sn	17 36 19.1	+1.1
	18nm,0.3s,baz=174,slow=22,SNR=5.7						
GUMO				LR	LR	17 37 04.1	
	comp=Z,729nm,21.0s,baz=124,slow=43						
PATS	Pohnpei	13.93	128	Pn	Pn	17 38 01.6	-8.7
JAY	Jayapura	19.19	200	LR	LR	17 47 52.8	
	comp=Z,126nm,18.2s,baz=360,slow=41						
KRVT	Keravat (AS076	20.39	166	LR	LR	17 47 25.2	
	comp=Z,103nm,18.6s,baz=5.1,slow=37						
JGF	Kuroka	21.75	338		P	17 39 45.5	+1.5
JGF				IAmb	IAmb	17 40 15.3	
	comp=Z,44nm,1.4s						
MJAR	Matsushiro Arr	22.31	340	P	P	17 39 50.0	0.0
	comp=Z,2.8nm,1.0s,baz=173,slow=9.4,SNR=5.1						
MAJO	Matsushiro	22.31	340		P	17 39 52.0	+1.9
MAJO				IAmb	IAmb	17 40 30.6	
	comp=Z,22nm,1.4s						
SIJI	Sorong	22.80	225	P	P	17 39 56.8	+1.3
	comp=Z,11nm,0.8s,baz=36,slow=10,SNR=4.6						
SIJI				LR	LR	17 49 12.0	
	comp=Z,79nm,18.5s,baz=59,slow=38						
JMM	Marumori	22.85	347	P	P	17 39 55.9	+0.2
FAKI	Fak Fak	23.70	220	P	P	17 40 05.9	+1.5
PMG	Port Moresby	24.91	180	LR	LR	17 49 47.0	
	comp=Z,46nm,18.9s,baz=320,slow=36						
HNR	Honiara	27.91	152	LR	LR	17 50 20.1	
	comp=Z,99nm,20.7s,baz=336,slow=33						
ASAJ	Asahikawa	28.64	353	LR	LR	17 51 39.3	
	comp=Z,66nm,20.7s,baz=209,slow=35						
KLR	Kul'dur	35.80	343	P	P	17 41 49.8	-1.7
	comp=Z,2.0nm,0.7s,baz=67,slow=4.8,SNR=8.7						
WB0	Warramunga Arr	37.41	200	P	P	17 42 05.6	+0.1
WB0				IAmb	IAmb	17 42 33.0	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	37.59	200	P	P	17 42 06.3	-0.7
	comp=Z,0.5nm,0.9s,baz=25,slow=9.2,SNR=2.7						
PETK	Petropavlovsk-	38.26	10	LR	LR	17 54 36.2	
	comp=Z,89nm,20.7s,baz=191,slow=31						
ASAR	Alice Springs	41.21	199	P	P	17 42 36.4	-0.8
	comp=Z,0.3nm,0.6s,baz=22,slow=8.7,SNR=7.6						
ULN	Ulaanbaatar	46.08	323	P	P	17 43 16.1	-0.3
ULN				IAmb	IAmb	17 43 45.0	
	comp=Z,11nm,1.8s						
CHTO	Chiang Mai	46.15	281	P	P	17 43 16.9	-0.2
CM31	Chiang Mai Arr	46.18	281	P	P	17 43 17.7	+0.3
CM31				IAmb	IAmb	17 43 18.6	
	comp=Z,5.8nm,1.1s						
CMAR	Chiang Mai Arr	46.18	281	P	P	17 43 17.8	+0.4
	comp=Z,3.0nm,0.9s,baz=72,slow=6.9,SNR=22						
SONM	Songino Array	46.45	323	P	P	17 43 19.1	-0.1
	comp=Z,0.9nm,0.8s,baz=140,slow=9.5,SNR=5.9						
YAK	Yakutsk	47.97	349	P	P	17 43 30.9	+0.3
	comp=Z,7.3nm,0.8s,baz=143,slow=3.1,SNR=5.9						
YAK	Yakutsk	47.97	349	P	P	17 43 30.4	-0.2
PBA	Port Blair	53.02	273	P	P	17 44 09.7	+0.1
LSA	Lhasa	53.17	296	P	P	17 44 11.7	+0.6
LSA				IAmb	IAmb	17 44 23.5	
	comp=Z,22nm,1.8s						
WMQ	Urumqi	57.44	312	P	P	17 44 42.5	+1.4
ZAA0	Zalesovo Array	61.33	323	P	P	17 45 07.5	-0.2
ZALV	Zalesovo Beam	61.33	323	P	P	17 45 06.9	-0.8
	comp=Z,0.5nm,0.3s,baz=124,slow=7.4,SNR=4.6						
ZALV				LR	LR	18 11 35.7	
	comp=Z,40nm,20.9s,baz=116,slow=36						
MK31	Makanchi Array	61.65	315	P	P	17 45 09.7	-0.4
MKAR	Makanchi Array	61.65	315	P	P	17 45 10.4	+0.4
	comp=Z,1.1nm,0.7s,baz=90,slow=8.5,SNR=12						
MAKZ	Makanchi	61.86	315	P	P	17 45 11.3	-0.2
MAKZ				IAmb	IAmb	17 45 12.7	
	comp=Z,4.0nm,1.1s						
KTH	Kantishna Hill	63.66	26	P	P	17 45 23.7	+0.5
KTH				IAmb	IAmb	17 45 25.9	
	comp=Z,5.0nm,0.9s						
KURK	Kurchatov	64.53	319	P	P	17 45 28.5	-0.5
NRIK	Noril'sk	64.96	340	P	P	17 45 31.2	-0.3
	comp=Z,1.4nm,0.3s,baz=70,slow=6.6,SNR=4.5						
NRIK	Noril'sk	64.96	340	P	P	17 45 32.5	+1.0
NRIK				IAmb	IAmb	17 45 47.0	
	comp=Z,15nm,1.8s						
WRH	Wood River Hil	65.13	26	P	P	17 45 33.6	+0.9
COLD	Coldfoot	65.16	22	P	P	17 45 34.4	+1.5
COLD				IAmb	IAmb	17 45 36.7	
	comp=Z,3.2nm,1.0s						
MDM	Murphy Dome	65.21	25	P	P	17 45 35.4	+2.1
MDM				IAmb	IAmb	17 45 45.6	
	comp=Z,9.2nm,1.5s						
ILAR	Eielson Array	65.71	25	P	P	17 45 35.8	-0.7
	comp=Z,0.8nm,0.8s,baz=270,slow=4.8,SNR=6.0						
ILAR				LR	LR	18 10 57.2	
	comp=Z,28nm,21.9s,baz=300,slow=33						
HYT	Haines Junctio	69.25	30	P	P	17 45 59.7	+0.6
HYT				IAmb	IAmb	17 46 14.7	
	comp=Z,11nm,1.4s						
BRVK	Borovoye	69.83	321	P	P	17 46 01.7	-0.9
BRVK				IAmb	IAmb	17 46 05.4	
	comp=Z,4.6nm,1.0s						
KK31	Karatay Array	69.86	311	P	P	17 46 02.4	-0.7
KKAR	Karatay Array	69.86	311	P	P	17 46 02.5	-0.5
INK	Inuvik	71.57	23	P	P	17 46 13.9	+1.0

	comp=Z,1.0nm,0.6s,baz=249,slow=8.3,SNR=3.6						
INK	**Inuvik**	**71.57**	**23**	P	**P**	**17 46 13.2**	**+0.3**
INK				IAmb	IAmb	17 46 54.9	
	comp=Z,8.0nm,1.6s						
AB06	**Akbulak array**	**76.56**	**318**	P	**P**	**17 46 39.9**	**-2.5**
ABKAR	**Akbulak array**	**76.58**	**318**	P	**P**	**17 46 40.3**	**-2.2**
AB09	**Akbulak array**	**76.59**	**318**	P	**P**	**17 46 40.5**	**-2.1**
GEYT	**Alibeck**	**79.89**	**307**	P	**P**	**17 47 00.8**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=29,slow=3.4,SNR=4.1						
YKA	**Yellowknife Ar**	**79.96**	**28**	P	**P**	**17 47 00.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=285,slow=4.9,SNR=11						
RES	**Resolute Bay**	**82.00**	**14**	P	**P**	**17 47 11.7**	**0.0**
	comp=Z,0.9nm,0.7s,baz=7.2,slow=7.9,SNR=2.4						
WSAR	**Wadi Sarin**	**82.74**	**292**	P	**P**	**17 47 18.0**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=114,slow=8.3,SNR=3.6						
ELK	**Elko**	**85.47**	**49**	P	**P**	**17 47 32.1**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=235,slow=5.8,SNR=3.6						
ARCES	**ARCESS Array B**	**85.83**	**343**	P	**P**	**17 47 32.1**	**+0.8**
	comp=Z,4.5nm,1.0s,baz=46,slow=8.7,SNR=4.7						
ARCES				LR	LR	18 33 50.6	
	comp=Z,19nm,18.4s,baz=255,slow=41						
FINES	**FINESS Array B**	**90.26**	**336**	P	**P**	**17 47 51.9**	**-0.7**
	comp=Z,6.2nm,1.0s,baz=13,slow=3.1,SNR=1.8						
ULM	**Lac du Bonnet**	**94.23**	**35**	LR	LR	18 32 30.0	
	comp=Z,25nm,19.0s,baz=323,slow=37						
NOA	**NORSAR Array B**	**95.92**	**340**	LR	LR	18 35 18.8	
	comp=Z,16nm,19.3s,baz=290,slow=38						
BRTR	**Keskin Array B**	**97.30**	**315**	LR	LR	18 36 05.1	
	comp=Z,40nm,18.5s,baz=292,slow=38						
PLCA	**Paso Flores**	**138.82**	**135**	PKP	**PKPdf**	**17 54 17.6**	**-1.0**
	comp=Z,3.2nm,1.1s,baz=340,slow=4.1,SNR=3.0						
DBIC	**Dimbokro**	**144.58**	**307**	PKP	**PKPdf**	**17 54 28.6**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=39,slow=3.6,SNR=3.5						

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*NEIC **02** 17:36:05.0±1.7, 52°.0N±0°.1×178°.21E±0°.08, h119^{km}±8^{km}, mb4.2/58, ML3.3/21(AEIC), Error ellipse: s-maj=19.3km s-min=7.6km az=182.0*

*IDC **02** 17:36:05.9±4.3, 52°.13N×178°.26E, h127^{km}±39^{km}, mb3.7/16, mb1 3.8/18, mb1mx3.5/66, mbtmp4.1/18, Error ellipse: s-maj=19.7km s-min=12.1km az=163.0*

*AEIC **02** 17:36:05.2±4.3, 52°.8N±0°.1×178°.46E±0°.04, h32^{km}±6^{km}, Error ellipse: s-maj=17.0km s-min=2.1km az=187.0*

ISC 02 17:36:03.4±0.6, **52°.1N**±0°.1×**178°.15E**±0°.04, **h100**^{km}, **n108**, σ**1^{s}28**/112, **mb4.1**/43, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**1.94**	**100**		**Pn**	**17 36 36.6**	**+1.4**
GALAA					**Sn**	**17 37 03.3**	**+3.8**
GAEA	**Gareloi East**	**1.95**	**99**		**Pn**	**17 36 37.1**	**+1.7**
TASE	**Tanaga Southea**	**2.38**	**96**		**Pn**	**17 36 42.9**	**+2.0**
TASE					**Sn**	**17 37 11.9**	**+2.2**
TAFP	**Tanaga Falls P**	**2.40**	**94**		**Pn**	**17 36 42.9**	**+1.7**
TAFP					**Sn**	**17 37 11.8**	**+1.6**
SMY	**Shemya**	**2.55**	**285**		**Pn**	**17 36 45.6**	**+2.5**
SMY	**Shemya**	**2.55**	**285**		**Sn**	**17 37 18.8**	**+5.2**
KIMD	**Kanaga Island**	**2.88**	**96**		**Pn**	**17 36 48.8**	**+1.3**
KIKV	**Kanaga Island**	**2.91**	**93**		**Pn**	**17 36 49.6**	**+1.8**
ADK	**Adak**	**3.20**	**92**	Pn	**Pn**	**17 36 52.7**	**+0.9**
GSTD	**Great Sitkin T**	**3.52**	**89**		**Pn**	**17 36 57.4**	**+1.2**
GSTD					**Sn**	**17 37 38.7**	**+1.7**
ATKA	**Atka Island**	**4.71**	**86**	Pn	**Pn**	**17 37 11.7**	**-0.4**
NIKH	**Nikolski High**	**7.97**	**79**	Pn	**Pn**	**17 37 58.8**	**+2.5**
SPIA	**Saint Paul Isl**	**8.41**	**48**	Pn	Pn	17 38 07.2	+4.8
OKTU	**Okmok Mt. Tuli**	**8.47**	**76**		**Pn**	**17 38 04.6**	**+1.4**
MAPS	**Pakushin South**	**9.16**	**74**		**Pn**	**17 38 12.8**	**+0.3**
MGOD	**Makushin Gods**	**9.20**	**74**		**Pn**	**17 38 14.3**	**+1.3**
UNV	**Unalaska Valle**	**9.42**	**73**	Pn	**Pn**	**17 38 18.3**	**+2.3**
AKBBA	**Akutan Broad B**	**9.78**	**72**		**Pn**	**17 38 21.7**	**+0.8**
AKUT	**Akutan**	**9.87**	**72**	Pn	**Pn**	**17 38 25.4**	**+3.3**
FALS	**False Pass**	**11.31**	**69**	Pn	**Pn**	**17 38 44.5**	**+2.9**
PETK	**Petropavlovsk-**	**12.46**	**283**	P	**P**	**17 39 01.4**	**-3.4**
	0.2nm,0.3s,baz=92,slow=18,SNR=1.9						
SDPT	**Sand Point**	**13.04**	**67**	Pn	**Pn**	**17 39 04.4**	**-0.2**
CNBA	**Chernabura Isl**	**13.52**	**70**	Pn	**Pn**	**17 39 10.6**	**-0.2**
CHGN	**Chignik**	**14.31**	**64**	Pn	**Pn**	**17 39 21.5**	**+0.5**
OHAK	**Old Harbor**	**17.21**	**62**	P	**Pn**	**17 39 55.5**	**-1.8**
OHAK				IAmb	IAmb	17 40 01.3	
	comp=Z,18nm,1.1s						
TTA	**Tatalina**	**17.45**	**42**	P	**Pn**	**17 40 01.2**	**+1.0**
KDAK	**Kodiak Island**	**17.64**	**60**	P	**P**	**17 40 01.3**	**-0.8**
	comp=Z,2.6nm,0.3s,baz=188,slow=2.6,SNR=37						
KDAK	**Kodiak Island**	**17.64**	**60**	P	**P**	**17 40 00.3**	**-1.7**
RSO	**Redoubt South**	**18.04**	**51**	P	**Pn**	**17 40 08.8**	**+1.3**
RDOG	**Red Dog Mine**	**18.41**	**23**	P	**Pn**	**17 40 11.7**	**+0.1**
CNPM	**China Poot**	**18.59**	**55**	P	**P**	**17 40 12.4**	**0.0**
BRLK	**Bradley Lake**	**18.80**	**54**	P	**P**	**17 40 15.0**	**+0.2**
SKT	**Skwentna**	**19.03**	**47**	P	**Pn**	**17 40 19.3**	**+0.3**
SKT				IAmb	IAmb	17 40 25.3	
	comp=Z,10nm,0.8s						
PPLA	**Purkeypile**	**19.04**	**44**	P	**Pn**	**17 40 19.8**	**+0.5**
PPLA				IAmb	IAmb	17 40 24.5	
	comp=Z,11nm,1.0s						
SUA	**Susitna One**	**19.24**	**49**	P	**Pn**	**17 40 21.3**	**-0.3**
SUA				IAmb	IAmb	17 40 25.1	
	comp=Z,12nm,0.9s						
O22K	**Cooper Landing**	**19.51**	**52**	P	**P**	**17 40 23.4**	**+1.0**
SEW	**Seward**	**19.57**	**53**	P	**P**	**17 40 22.7**	**-0.4**
KTH	**Kantishna Hill**	**19.81**	**43**	P	**Pn**	**17 40 27.5**	**-0.7**
KTH				IAmb	IAmb	17 40 28.6	
	comp=Z,20nm,1.4s						
BPAW	**Bear Paw Mtn.**	**19.98**	**41**	P	**P**	**17 40 28.8**	**+1.2**
BPAW				IAmb	IAmb	17 40 32.4	
	comp=Z,8.8nm,1.1s						
TRF	**Thorofare Moun**	**20.04**	**43**	P	**P**	**17 40 29.5**	**+1.1**
TRF				IAmb	IAmb	17 40 32.5	
	comp=Z,9.2nm,1.1s						
KNK	**Knik Glacier**	**20.30**	**50**	P	**P**	**17 40 31.6**	**+0.6**
KNK				IAmb	IAmb	17 40 35.8	
	comp=Z,15nm,1.1s						
SML	**Sawmill**	**20.45**	**49**	P	**P**	**17 40 33.8**	**+1.2**
SML				IAmb	IAmb	17 40 35.6	
	comp=Z,6.9nm,0.6s						
RND	**Reindeer**	**20.64**	**44**	P	**P**	**17 40 36.2**	**+1.5**
GLI	**Glacier Island**	**20.85**	**52**	P	**P**	**17 40 36.9**	**0.0**
SCM	**Sheep Creek Mo**	**20.92**	**49**	P	**P**	**17 40 37.8**	**+0.2**
I23K	**Minto, Yukon-K**	**21.04**	**39**	P	**P**	**17 40 40.5**	**+1.8**
HIN	**Hinchinbrook I**	**21.07**	**53**	P	**P**	**17 40 38.8**	**-0.5**
FID	**Port Fidalgo**	**21.13**	**52**	P	**P**	**17 40 39.4**	**-0.5**
WRH	**Wood River Hil**	**21.30**	**42**	P	**P**	**17 40 41.3**	**-0.4**
MDM	**Murphy Dome**	**21.41**	**40**	P	**P**	**17 40 43.1**	**+0.2**
MDM				IAmb	IAmb	17 40 53.3	
	comp=Z,7.7nm,1.2s						
CCB	**Clear Creek Bu**	**21.47**	**41**	P	**P**	**17 40 44.3**	**+0.8**
M24K	**Tolsona, Glenn**	**21.51**	**48**	P	**P**	**17 40 45.2**	**+1.2**
KLU	**Klutina**	**21.51**	**50**	P	**P**	**17 40 44.6**	**+0.6**
KLU				IAmb	IAmb	17 40 54.6	
	comp=Z,19nm,1.4s						
COLD	**Coldfoot**	**21.63**	**34**	P	**P**	**17 40 45.5**	**+0.3**
HDA	**Harding Lake**	**21.75**	**42**	P	**P**	**17 40 46.8**	**+0.3**
IL31		**21.89**	**41**	P	**P**	**17 40 47.7**	**-0.1**
IL31				IAmb	IAmb	17 40 50.7	
	comp=Z,9.4nm,1.5s						
ILAR	**Eielson Array**	**21.89**	**41**	P	**P**	**17 40 47.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=247,slow=8.3,SNR=17						
RAGM	**Ragged Mountai**	**21.97**	**53**	P	**P**	**17 40 49.8**	**+0.9**
N25K	**Chitina, Valde**	**22.16**	**50**	P	**P**	**17 40 50.9**	**+0.1**
A21K	**Barrow**	**22.32**	**21**	P	**P**	**17 40 51.9**	**-0.5**
RIDG	**Independent Ri**	**22.45**	**45**	P	**P**	**17 40 52.3**	**-1.6**
RIDG				IAmb	IAmb	17 41 05.6	
	comp=Z,11nm,1.3s						
GLB	**Gilahina Butte**	**22.51**	**51**	P	**P**	**17 40 54.0**	**-0.5**
TOLK	**Toolik Lake Re**	**22.55**	**31**	P	**P**	**17 40 55.0**	**+0.2**
VRDI	**Verde Repeater**	**22.66**	**51**	P	**P**	**17 40 55.8**	**-0.3**
VRDI				IAmb	IAmb	17 40 59.0	
	comp=Z,14nm,1.4s						
DOT	**Dot Lake**	**22.77**	**45**	P	**P**	**17 40 56.1**	**-1.0**
DOT				IAmb	IAmb	17 41 15.6	
	comp=Z,5.6nm,0.9s						
MCARA	**McCarthy VSAT**	**22.88**	**51**	P	**P**	**17 40 58.8**	**+0.7**
MCARA				IAmb	IAmb	17 41 08.2	
	comp=Z,9.5nm,0.9s						
ISLE	**Juniper Island**	**23.14**	**53**	P	**P**	**17 41 00.9**	**0.0**
ISLE				IAmb	IAmb	17 41 25.5	
	comp=Z,13nm,1.1s						
BALM	**Baldy**	**23.17**	**52**	P	**P**	**17 41 01.1**	**0.0**
BALM				IAmb	IAmb	17 41 13.5	
	comp=Z,12nm,1.2s						
MESA	**MESA**	**23.31**	**54**	P	**P**	**17 41 02.3**	**-0.2**
YAH	**Yahtse**	**23.42**	**54**	P	**P**	**17 41 04.7**	**+1.2**
YAH				IAmb	IAmb	17 41 14.7	
	comp=Z,22nm,1.2s						
BARN	**Barnard Glacie**	**23.51**	**52**	P	**P**	**17 41 05.4**	**+1.1**
BARN				IAmb	IAmb	17 41 22.9	
	comp=Z,6.5nm,1.1s						
CTGM	**Chitina Glacie**	**23.66**	**52**	P	**P**	**17 41 06.4**	**+0.8**
CTGM				IAmb	IAmb	17 41 35.0	
	comp=Z,22nm,1.4s						
K27K	**Chicken**	**23.71**	**44**	P	**P**	**17 41 05.5**	**-0.3**
TABL	**Table Mountain**	**23.73**	**53**	P	**P**	**17 41 06.2**	**-0.1**
TABL				IAmb	IAmb	17 41 35.0	
	comp=Z,12nm,1.0s						
PCA	**Pinnacle**	**24.16**	**54**	P	**P**	**17 41 09.7**	**-0.2**
DAWY	**Dawson**	**24.89**	**45**	P	**P**	**17 41 16.9**	**+0.4**
DAWY				IAmb	IAmb	17 41 19.5	
	comp=Z,5.5nm,0.8s						
HYT	**Haines Junctio**	**25.53**	**53**	P	**P**	**17 41 23.8**	**+1.4**
HYT				IAmb	IAmb	17 41 26.1	
	comp=Z,12nm,1.1s						
INK	**Inuvik**	**27.95**	**36**	P	**P**	**17 41 43.9**	**0.0**
INK				IAmb	IAmb	17 42 04.1	
	comp=Z,4.6nm,1.3s						
USRK	**Ussuriysk Ar.**	**31.33**	**274**	P	**P**	**17 42 13.4**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=61,slow=12,SNR=6.6						
YKA	**Yellowknife Ar**	**36.09**	**47**	P	**P**	**17 42 55.3**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=282,slow=6.5,SNR=20						
WAKR	**Walker**	**44.59**	**82**	P	**P**	**17 44 05.3**	**-0.3**
SONM	**Songino Array**	**44.61**	**294**	P	**P**	**17 44 06.5**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=65,slow=8.0,SNR=9.5						
SONM				PcP	**PcP**	**17 45 46.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=98,slow=2.2,SNR=2.8						
RYN	**Ryan**	**45.07**	**81**	P	**P**	**17 44 07.8**	**-1.5**
RYN				IAmb	IAmb	17 44 17.6	
	comp=Z,4.6nm,1.4s						
LHV	**Little Huntoon**	**45.32**	**82**	P	**P**	**17 44 11.3**	**+0.2**
LHV				IAmb	IAmb	17 44 15.7	
	comp=Z,4.9nm,1.3s						
NVAR	**Mina Array Bea**	**45.33**	**81**	P	**P**	**17 44 11.0**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=323,slow=5.9,SNR=4.8						
PDAR	**Pinedale Array**	**47.87**	**71**	P	**P**	**17 44 29.6**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=343,slow=4.6,SNR=4.8						
SPITS	**Spitsbergen Ar**	**49.48**	**355**	P	**P**	**17 44 42.3**	**-0.6**
	comp=Z,2.8nm,0.5s,baz=43,slow=8.6,SNR=9.5						
FRB	**Frobisher Bay**	**53.36**	**31**	P	**P**	**17 45 10.9**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=302,slow=7.6,SNR=6.4						
GTA	**Gaotai**	**53.52**	**289**	P	**P**	**17 45 14.2**	**+0.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**57.01**	**349**	P	**P**	**17 45 37.5**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=20,slow=11,SNR=2.3						
WMQ	**Urumqi**	**57.33**	**301**	*e*P	**P**	**17 45 42.2**	**+1.4**
MKAR	**Makanchi Array**	**58.07**	**306**	P	**P**	**17 45 45.3**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=52,slow=6.2,SNR=8.1						
TXAR	**Lajitas Array**	**60.40**	**79**	P	**P**	**17 46 01.1**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=307,slow=5.9,SNR=8.0						
FINES	**FINESS Array B**	**64.61**	**346**	P	**P**	**17 46 28.4**	**-1.2**
	comp=Z,12nm,1.2s,baz=228,slow=4.9,SNR=3.7						
SIJI	**Sorong**	**65.83**	**233**	P	**P**	**17 46 38.3**	**+0.2**
	comp=Z,8.1nm,0.6s,baz=330,slow=23,SNR=4.2						
GUN	**Gumba**	**69.81**	**290**	*e*P	**P**	**17 47 03.9**	**+0.4**
	comp=Z,14nm,0.4s						
RAMN	**Ramite**	**70.12**	**288**	*e*P	**P**	**17 47 05.4**	**+0.2**
	comp=Z,12nm,0.6s						
KKN	**Kakani**	**70.25**	**290**	*e*P	**P**	**17 47 06.5**	**+0.5**
	comp=Z,8.5nm,0.6s						
PKI	**Pulchoki**	**70.34**	**290**	*e*P	**P**	**17 47 07.1**	**+0.4**
	comp=Z,9.3nm,0.6s						
PKIN	**Phulchoki**	**70.35**	**290**	*e*P	**P**	**17 47 07.0**	**+0.4**
	comp=Z,10.0nm,0.5s						
AKASG	**Malin Array Be**	**74.22**	**340**	P	**P**	**17 47 28.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=22,slow=6.5,SNR=11						
WB0	**Warramunga Arr**	**81.10**	**221**	P	**P**	**17 48 06.7**	**-0.8**
WB0				IAmb	IAmb	17 48 15.1	
	comp=Z,8.9nm,1.3s						
WR0	**Warramunga Arr**	**81.22**	**221**	P	**P**	**17 48 06.7**	**-1.3**
WR0				IAmb	IAmb	17 48 12.9	
	comp=Z,7.8nm,1.4s						
WB2	**Warramunga Arr**	**81.28**	**221**	P	**P**	**17 48 07.4**	**-0.9**
WB2				IAmb	IAmb	17 48 22.6	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**81.28**	**221**	P	**P**	**17 48 07.6**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=32,slow=6.1,SNR=11						
AS31	**Alice Springs**	**84.80**	**220**	P	**P**	**17 48 25.8**	**-0.7**
ASAR	**Alice Springs**	**84.80**	**220**	P	**P**	**17 48 26.0**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=23,slow=5.1,SNR=13						
BOSA	**Boshof**	**149.05**	**309**	PKPbc	**PKPbc**	**17 55 39.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=65,slow=2.9,SNR=7.4						

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*REY **02** 17:39:06.2, 64°.66N×17°.48W, h0^{km}*

*IDC **02** 17:39:08.4±0.7, 64°.71N×17°.62W, h0^{km}, mb3.8/13, mb1 4.0/16, mb1mx3.7/47, mbtmp3.8/16, ML2.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/38, Error ellipse: s-maj=26.6km s-min=13.2km az=34.0*

*NEIC **02** 17:39:09.7±1.6, 64°.61N±0°.08×17°.87W±0°.09, h10^{km}±5^{km}, mb4.5/27, Error ellipse: s-maj=12.0km s-min=4.4km az=161.0*

ISC 02 17:39:09.4±0.4, **64°.60N**±0°.03×**17°.81W**±0°.04, **h10**^{km}, **n108**, σ**1^{s}80**/93, **mb4.3**/26, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	**Hamarinn**	**0.12**	**183**	P	**Pg**	**17 39 11.6**	**-0.8**
	baz=219						
BARD	**Bardarbunga**	**0.16**	**74**	P	Pg	17 39 06.8	-6.3
	baz=151						
ISKR	**Skrokkalda**	**0.25**	**262**	P	**Pg**	**17 39 14.1**	**-0.5**
	baz=256						
IDJK	**Dyngjujokull**	**0.26**	**110**	P	Pg	17 39 11.1	-3.8
	baz=147						
IJOK	**Jokulheimar**	**0.34**	**213**	P	**Pg**	**17 39 15.6**	**-0.5**
	baz=223						
IJOK				S	**Sg**	**17 39 21.9**	**+1.3**
	baz=223						
IURH	**Urdarhals**	**0.36**	**51**	P	Pg	17 39 11.0	-5.6
	baz=42						
IIEY	**Innrieyrar**	**0.52**	**195**	P	**Pg**	**17 39 17.9**	**-1.7**
	baz=207						
IIEY				S	**Sb**	**17 39 27.2**	**-1.1**
	baz=207						
THOR	**Thorvaldshraun**	**0.59**	**55**	P	Pg	17 39 14.9	-6.0
	baz=51						
THOR				S	Sg	17 39 22.0	-6.7
	baz=51						
IKRE	**Kreppuhraun**	**0.64**	**72**	P	Pg	17 39 15.5	-6.3
	baz=75						
IKRE				S	Sg	17 39 22.8	-7.5
	baz=75						
IKAL	**Kalfafell**	**0.65**	**175**	P	**Pg**	**17 39 19.8**	**-2.3**
	baz=187						
IKAL				S	**Sb**	**17 39 31.1**	**-0.9**
	baz=187						
IASK	**Askja**	**0.68**	**47**	P	Pg	17 39 16.4	-6.1
	baz=42						
IKSK	**Karasker**	**0.73**	**126**	P	Pg	17 39 18.4	-5.1
	baz=139						
IMKO	**Mokollar**	**0.74**	**58**	P	Pg	17 39 17.3	-6.4
	baz=56						
ISVA	**Svartarkot**	**0.78**	**17**	P	Pg	17 39 18.9	-5.6
	baz=7.8						
ISVA				S	Sg	17 39 28.9	-5.8
	baz=7.8						
IHVE	**Hveravellir**	**0.80**	**291**	P	**Pg**	**17 39 22.4**	**-2.5**
	baz=284						
IFAG	**Fagurholsmyri**	**0.88**	**145**	P	**Pg**	**17 39 22.5**	**-3.9**
	baz=155						
IVSH	**V-Sauoahnukur**	**0.92**	**76**	P	Pg	17 39 20.4	-6.7
	baz=78						
IVSH				S	Sg	17 39 31.2	-7.9
	baz=78						
ISNB	**Snabyli**	**0.94**	**203**	P	**Pg**	**17 39 25.4**	**-2.1**
	baz=209						
ISNB				S	**Sn**	**17 39 40.3**	**-1.8**
	baz=209						
IFED	**Fedgar**	**1.00**	**236**	P	**Pb**	**17 39 27.2**	**-1.7**
	baz=237						
IADA	**Aoalbol**	**1.04**	**65**	P	Pb	17 39 22.2	-7.4
	baz=65						
IMJO	**Mjoaskard**	**1.05**	**232**	P	**Pb**	**17 39 28.2**	**-1.6**
	baz=234						
IRJU	**Rjupnafell**	**1.05**	**202**	P	**Pg**	**17 39 27.1**	**-2.5**
	baz=207						
IGYG	**Gygjarholskot**	**1.09**	**254**	P	**Pg**	**17 39 28.0**	**-2.3**
	baz=253						
IMEL	**Melhnausar**	**1.09**	**26**	P	Pb	17 39 23.6	-6.8
	baz=20						
IREN	**Reynihlio**	**1.12**	**19**	P	Pn	17 39 24.4	-6.8
	baz=13						
IHAU	**Haukadalur**	**1.13**	**237**	P	**Pg**	**17 39 28.8**	**-2.4**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.17**	**204**	P	**Pg**	**17 39 29.4**	**-2.4**
	baz=208						
IKVO	**Krokottuvotn**	**1.19**	**19**	P	Pn	17 39 25.6	-6.6
	baz=13						
IGRS	**Grimsstaoir**	**1.27**	**33**	P	Pn	17 39 26.4	-6.8
	baz=30						
IGRS				S	Sb	17 39 43.1	-6.6
	baz=30						
ISAU	**Saurbar**	**1.29**	**243**	P	**Pb**	**17 39 31.1**	**-2.6**
	baz=244						
IESK	**Eystri-Skogar**	**1.30**	**215**	P	**Pn**	**17 39 32.1**	**-1.5**
	baz=218						
ISKI	**Skildingahlsh**	**1.32**	**14**	P	Pn	17 39 27.8	-6.1
	baz=8.7						
ISKI				S	**Sn**	**17 39 45.5**	**-6.0**
	baz=8.7						
IGRA	**Granastaoir**	**1.33**	**4**	P	Pn	17 39 28.4	-5.6
	baz=358						
IGRA				S	**Sn**	**17 39 46.0**	**-5.8**
	baz=358						
IGHA	**Grjothals**	**1.34**	**21**	P	Pn	17 39 27.8	-6.4
	baz=16						
IDIM	**Dimmadalss**	**1.42**	**15**	P	Pn	17 39 29.4	-5.8
	baz=9.7						
IASM	**Asmuli**	**1.45**	**239**	P	**Pn**	**17 39 34.1**	**-1.5**
	baz=240						
IHED	**Heoinshofoi**	**1.51**	**8**	P	Pn	17 39 30.9	-5.5
	baz=2.7						
IHED				S	**Sn**	**17 39 50.4**	**-5.7**
	baz=2.7						
BORG	**Borgarnes**	**1.52**	**277**		**Pn**	**17 39 34.4**	**-2.2**
BORG				Sn	**Sg**	**17 39 57.0**	**-1.2**
ISOL	**Solvholt**	**1.52**	**245**	P	**Pn**	**17 39 35.0**	**-1.7**
	baz=246						
IKRO	**Krokur**	**1.53**	**252**	P	**Pn**	**17 39 34.9**	**-1.8**
	baz=252						
IBRE	**Brettingsstaoi**	**1.53**	**358**	P	Pn	17 39 31.6	-5.2
	baz=353						
IHEI	**Heioarbar**	**1.54**	**257**	P	**Pn**	**17 39 35.3**	**-1.6**
	baz=256						
IGIL	**Gilhagi**	**1.61**	**22**	P	Pn	17 39 31.9	-5.9
	baz=18						
ISIG	**Siglufjorour**	**1.61**	**344**	P	Pn	17 39 33.5	-4.4
	baz=338						
IBJA	**Bjarnastaoir**	**1.66**	**248**	P	**Pn**	**17 39 37.6**	**-0.9**
	baz=248						
ISAN	**Sandskeio**	**1.73**	**253**	P	**Pn**	**17 39 38.7**	**-0.8**
	baz=253						
ILEI	**Leirhofn**	**1.90**	**16**	P	Pn	17 39 36.6	-5.2
	baz=13						
SCO	**Scoresbysund**	**6.12**	**347**	Pn	**Pn**	**17 40 38.1**	**-1.6**
SCO				Sn	**Sn**	**17 41 51.4**	**+1.7**
SCO	**Scoresbysund**	**6.12**	**347**	*e*	Pn	17 40 33.8	-6.0
	baz=165,slow=7.9						
SCO				*i* P	**Pn**	**17 40 38.0**	**-1.8**
SCO				*i* S	**Sn**	**17 41 51.8**	**+2.0**
EKA	**Eskdalemuir Ar**	**11.80**	**135**	Pn	**Pn**	**17 41 56.1**	**-1.5**
	baz=321,slow=13,SNR=13						
ESK	**Eskdalemuir**	**11.80**	**135**	Pn	**Pn**	**17 41 56.2**	**-1.4**
DAG	**Danmarks Havn**	**12.24**	**359**	*i* P	**Pn**	**17 42 05.0**	**+1.6**
DAG	**Danmarks Havn**	**12.24**	**359**	*e*P	**Pn**	**17 42 05.1**	**+1.6**
DSB	**Dublin**	**12.79**	**147**	Pn	**Pn**	**17 42 10.5**	**-0.6**
NOA	**NORSAR Array B**	**13.66**	**92**	Pn	Pn	17 42 19.1	-3.9
	0.0nm,0.3s,baz=298,slow=12,SNR=1.5						
NOA				LR	LR	17 47 31.9	
	comp=Z,51nm,21.3s,baz=270,slow=37						
FINES	**FINESS Array B**	**19.85**	**79**	P	**P**	**17 43 40.0**	**0.0**
	0.1nm,0.3s,baz=284,slow=11,SNR=1.9						
CLL	**Collm**	**20.80**	**115**	*e*P	**P**	**17 43 52.0**	**+1.6**
CLL				*e*		17 44 02.0	
BRG	**Berggiesshubel**	**21.50**	**115**	*e*P	**P**	**17 43 59.9**	**+1.9**
BRG				Amp		17 44 00.8	
	comp=Z,28nm,1.9s						
BRG	**Berggiesshubel**	**21.50**	**115**	*e*P	**P**	**17 43 59.9**	**+1.9**
BRG				Amp		17 44 00.8	
	comp=Z,28nm,1.9s						
FRB	**Frobisher Bay**	**21.65**	**291**	P	**P**	**17 44 00.0**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=78,slow=9.3,SNR=4.0						
KHC	**Kasperske Hory**	**22.76**	**118**	*e*P	**P**	**17 44 10.5**	**-1.1**
KHC	**Kasperske Hory**	**22.76**	**118**	P	**P**	**17 44 12.2**	**+0.6**
DPC	**Dobruska-Polom**	**22.86**	**112**	*e*P	**P**	**17 44 12.5**	**-0.1**
GERES	**GERESS Array B**	**23.04**	**118**	P	**P**	**17 44 14.4**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=338,slow=10,SNR=4.6						
DAVOX	**Davos/Dischmat**	**23.38**	**126**	P	**P**	**17 44 19.6**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=317,slow=14,SNR=5.0						
TUE	**Stuetta**	**23.47**	**128**	P	**P**	**17 44 20.1**	**+1.1**
TUE				IAmb	IAmb	17 44 49.8	
	comp=Z,26nm,1.9s						
VRAC	**Vranov**	**23.79**	**114**	P	**P**	**17 44 21.7**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=324,slow=9.1,SNR=3.6						
VRAC				LR	LR	17 54 55.8	
	comp=Z,98nm,18.7s,baz=339,slow=40						
OJC	**Ojcow**	**24.36**	**108**	P	**P**	**17 44 28.1**	**+0.8**
CTI	**Castel Tesino**	**24.64**	**125**	P	**P**	**17 44 30.9**	**+1.0**
SMOL	**Smolenice**	**24.75**	**114**	*e*P	**P**	**17 44 30.9**	**+0.1**
MODS	**Modra-Piesok**	**24.81**	**114**	*e*P	**P**	**17 44 32.9**	**+1.6**
VYHS	**Vyhne**	**25.33**	**112**	*e*P	**P**	**17 44 35.9**	**-0.1**
ESDC	**Sonseca Array**	**26.24**	**155**	P	**P**	**17 44 44.0**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=346,slow=9.6,SNR=7.0						
KOLS	**Kolonicke sedl**	**26.38**	**107**	*e*P	**P**	**17 44 45.5**	**0.0**
BRTR	**Keskin Array B**	**38.59**	**105**	P	**P**	**17 46 32.5**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=12,slow=9.3,SNR=4.8						
YKA	**Yellowknife Ar**	**39.16**	**313**	P	**P**	**17 46 37.0**	**+0.3**
	comp=Z,1.6nm,1.1s,baz=39,slow=9.1,SNR=10						
KBZ	**Khabaz**	**39.24**	**92**	P	**P**	**17 46 39.3**	**+1.7**
	comp=Z,3.0nm,0.9s,baz=184,slow=0.5,SNR=3.8						
FFC	**Flin Flon**	**40.51**	**297**	P	**P**	**17 46 47.9**	**-0.1**
TIXI	**Tiksi**	**42.13**	**15**	P	**P**	**17 47 01.2**	**0.0**
TOLK	**Toolik Lake Re**	**42.76**	**336**	P	**P**	**17 47 07.6**	**+1.2**
GNI	**Garni**	**42.96**	**94**	P	**P**	**17 47 09.3**	**+0.9**
GNI				IAmb	IAmb	17 47 21.5	
	comp=Z,13nm,1.4s						
G40A	**Rib Lake**	**43.04**	**280**	P	**P**	**17 47 09.0**	**+0.1**
COLD	**Coldfoot**	**44.13**	**336**	P	**P**	**17 47 17.7**	**+0.4**
COLD				IAmb	IAmb	17 47 29.4	
	comp=Z,17nm,1.8s						
Q54A	**Coxs Mills**	**44.13**	**266**	P	**P**	**17 47 19.1**	**+1.4**
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**17 47 30.4**	**+0.7**
	comp=Z,1.9nm,1.1s,baz=19,slow=6.4,SNR=10.0						
P48A	**Milroy**	**45.72**	**271**	P	**P**	**17 47 29.2**	**-1.0**
MDM	**Murphy Dome**	**45.78**	**333**	P	**P**	**17 47 30.1**	**-0.5**
MDM				IAmb	IAmb	17 47 33.7	
	comp=Z,11nm,1.4s						
EGMT	**Eagleton**	**48.79**	**297**	P	**P**	**17 47 54.9**	**+0.6**
RLMT	**Red Lodge**	**51.00**	**294**	P	**P**	**17 48 11.5**	**+0.3**
RLMT				IAmb	IAmb	17 48 16.1	
	comp=Z,15nm,1.6s						
YNE	**Yellowstone No**	**51.38**	**295**	P	**P**	**17 48 13.8**	**-0.3**
BOZ	**Bozeman (W)**	**51.52**	**297**	P	**P**	**17 48 15.6**	**+0.5**
BOZ				IAmb	IAmb	17 48 19.3	
	comp=Z,8.1nm,1.2s						
MKAR	**Makanchi Array**	**52.87**	**58**	P	**P**	**17 48 22.8**	**-2.2**
	comp=Z,0.7nm,0.9s,baz=305,slow=6.7,SNR=3.8						
BW06	**Boulder Array**	**53.08**	**293**	P	**P**	**17 48 26.4**	**-0.4**
BW06				IAmb	IAmb	17 48 29.5	
	comp=Z,5.6nm,1.1s						
PD31	**Pinedale Array**	**53.08**	**293**	P	**P**	**17 48 26.3**	**-0.5**
PD31				IAmb	IAmb	17 48 29.5	
	comp=Z,5.8nm,1.1s						
PDAR	**Pinedale Array**	**53.08**	**293**	P	**P**	**17 48 26.9**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=52,slow=7.7,SNR=12						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**17 48 28.6**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=337,slow=8.3,SNR=3.7						
AAK	**Ala-Archa**	**53.41**	**67**	P	**P**	**17 48 29.1**	**0.0**
AAK				IAmb	IAmb	17 48 32.1	
	comp=Z,14nm,1.8s						
RDMU	**Red Mountain**	**54.94**	**292**	P	**P**	**17 48 40.5**	**+0.1**
TCUT	**Toone Canyon**	**55.21**	**293**	P	**P**	**17 48 43.3**	**+1.0**
WMOK	**Wichita Mounta**	**55.42**	**279**	P	**P**	**17 48 43.7**	**+0.1**
KSH	**Kashi**	**56.65**	**68**	P	**P**	**17 48 54.3**	**+1.8**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,200nm,7.3s						
PV13	**Radium Mtn., P**	**56.70**	**289**	P	**P**	**17 48 53.8**	**+0.8**
PV13				IAmb	IAmb	17 48 54.5	
	comp=Z,6.7nm,1.0s						
WMQ	**Urumqi**	**57.38**	**56**	*e*P	**P**	**17 49 01.2**	**+3.6**
MVU	**Marysvale**	**57.77**	**292**	P	**P**	**17 49 01.5**	**+0.9**
DBIC	**Dimbokro**	**58.56**	**165**	P	**P**	**17 49 08.8**	**+2.9**
	comp=Z,1.1nm,0.6s,baz=331,slow=9.8,SNR=3.1						
R11A	**Troy Canyon, C**	**59.23**	**295**	P	**P**	**17 49 11.8**	**+1.0**
R11A				IAmb	IAmb	17 49 14.4	
	comp=Z,5.8nm,1.5s						

HHC	**Hu-ho-hao-te**	**67.65**	**39**	*e*P	**P**	**17 50 07.6**	**+1.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.8s						
NJ2	**Nanjing**	**77.87**	**37**	*e*P	**P**	**17 51 08.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						

IDC ***02*** *17:41:58.8±0.7, 1°.10N×97°.01E, h0^{km}, mb4.4/20, mb1 4.5/22, mb1mx4.2/51, mbtmp4.4/22, ML4.1/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/34, Error ellipse: s-maj=24.6km s-min=13.3km az=49.0*

BJI ***02*** *17:41:58.4±0.0, 0°.55N×97°.05E, h37^{km}, mB5.1/32, mb4.7/49, Ms4.6/14, Ms7 4.2/10*

NEIC ***02*** *17:42:02.1±1.7, 1°.13N±0°.07×97°.06E±0°.07, h20^{km}±4^{km}, mb4.7/46, Error ellipse: s-maj=11.1km s-min=9.0km az=219.0*

KLM ***02*** *17:42:04, 1°.28N×97°.09E, h35^{km}, mb4.7*

DJA ***02*** *17:42:04.5±0.7, 1°N±3°×9°7E±°, h25^{km}±4^{km}, M4.6/14, mb4.7/14, mB5.2/5, MLv4.6/14, Mw(mB)4.5/5*

ISC 02 17:42:03.5±0.5**, 1°.19N**±0°.05×**97°.15E**±0°.05**, h25**^{km}**, n151,** σ1^{s}.**35**/148**, mb4.6**/64**, MS3.9**/10**, 2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.44**	**75**		**Pb**	**17 42 13.4**	**+0.7**
GSI					**Sn**	**17 42 23.4**	**+2.0**
GSI	**Gunungsitoli**	**0.44**	**75**	P	**Pb**	**17 42 13.6**	**+0.9**
GSI				S	**Sn**	**17 42 23.2**	**+1.8**
SNSI	**Sinabang, Aceh**	**1.46**	**326**	P	**Pn**	**17 42 29.6**	**+1.2**
TPTI		**2.05**	**1**	P	**Pn**	**17 42 35.3**	**-1.2**
TPTI				S	**Sn**	**17 43 02.5**	**+1.2**
RPSI	**Rantau Prapat**	**2.31**	**50**		**Pn**	**17 42 41.1**	**+1.0**
RPSI	**Rantau Prapat**	**2.31**	**50**		**Pn**	**17 42 40.8**	**+0.7**
PSI	**Prapat**	**2.38**	**48**	Pn	**Pn**	**17 42 40.8**	**-0.4**
	9.5nm,0.3s,baz=180,slow=7.2,SNR=74						
PSI				Sn	**Sn**	**17 43 08.4**	**-1.3**
	16nm,0.3s,baz=360,slow=0.5,SNR=7.2						
PSI				LR	LR	17 43 30.4	
	comp=Z,786nm,19.9s,baz=270,slow=37						
KCSI	**Kotacane, Aceh**	**2.39**	**15**	P	**Pn**	**17 42 41.1**	**-0.1**
MNSI	**Mandailing Nat**	**2.46**	**99**	P	**Pn**	**17 42 42.2**	**+0.1**
TSI	**Tuntungan**	**2.69**	**32**	P	**Pn**	**17 42 46.7**	**+1.4**
MLSI	**Meulaboh, Aceh**	**3.14**	**346**	P	**Pn**	**17 42 53.4**	**+1.9**
PDSI	**Padang**	**3.91**	**122**	P	**Pn**	**17 43 05.1**	**+3.0**
BKNI	**Bangkinang**	**3.98**	**102**	Pn	**Pn**	**17 43 03.0**	**0.0**
BKNI	**Bangkinang**	**3.98**	**102**	P	**Pn**	**17 43 04.2**	**+1.2**
LHMI	**Lhok Sumawe**	**4.01**	**357**	Pn	**Pn**	**17 43 03.9**	**+0.4**
LHMI	**Lhok Sumawe**	**4.01**	**357**	P	**Pn**	**17 43 04.3**	**+0.8**
IPM	**Ipoh**	**5.06**	**50**		**Pn**	**17 43 19.2**	**+1.3**
IPM	**Ipoh**	**5.06**	**50**	P	**Pn**	**17 43 19.0**	**+1.1**
KULM	**Kulim**	**5.36**	**41**		**Pn**	**17 43 22.3**	**+0.3**
KULM	**Kulim**	**5.36**	**41**	P	**Pn**	**17 43 23.0**	**+1.0**
KRJI	**Kerinci**	**5.40**	**127**	P	**Pn**	**17 43 24.3**	**+1.6**
	1.5nm2µm270nm,0.8s						
MYKOM	**Kota Tinggi**	**6.72**	**85**	Pn	**Pn**	**17 43 41.7**	**+1.0**
MYKOM	**Kota Tinggi**	**6.72**	**85**	P	**Pn**	**17 43 42.0**	**+1.3**
KSI	**Kapahiang**	**7.26**	**132**	P	Pn	17 43 59.1	+11
MNAI	**Manna**	**8.00**	**134**	Pn	**Pn**	**17 43 57.6**	**-0.7**
LHSI	**Lahat**	**8.09**	**128**	P	**Pn**	**17 44 00.2**	**+0.7**
	41nm,0.9s						
MDSI	**Maura Dua**	**9.01**	**129**	P	**Pn**	**17 44 12.4**	**+0.3**
	1µm26nm,0.8s						
SRAK	**Srakaew**	**13.62**	**21**	P	**P**	**17 45 27.5**	**+3.5**
	224nm,1.1s						
CISI	**Cisompet, Garu**	**13.73**	**129**	Pn	**Pn**	**17 45 14.9**	**-2.0**
UTHA	**Uthaitani**	**14.45**	**9**	P	**P**	**17 45 35.1**	**+1.9**
	19nm,0.9s						
SBUM	**Sibu**	**15.11**	**85**	Pn	**Pn**	**17 45 38.1**	**+2.5**
CHAI	**Chaiyaphum**	**15.37**	**18**	P	**P**	**17 45 43.0**	**-0.4**
	28nm,0.9s						
PHIT	**Phitsanulok**	**16.22**	**11**	P	**P**	**17 45 53.9**	**+1.1**
	86nm,0.9s						
SUKH	**Sukhothai**	**16.37**	**8**	P	**P**	**17 45 55.0**	**+0.5**
	34nm,0.7s						
UTTA	**Uttaradit**	**16.78**	**11**	P	**P**	**17 46 00.5**	**+1.5**
	13nm,0.8s						
MHMT	**Maesarieng**	**16.89**	**3**	P	**P**	**17 46 04.3**	**+4.0**
	14nm,1.3s						
CM05	**Chiang Mai Arr**	**17.19**	**6**	P	**P**	**17 46 05.0**	**+1.4**
	7.7nm,0.9s						
CM04	**Chiang Mai Arr**	**17.19**	**6**	P	**Pn**	**17 46 04.0**	**+1.8**
	78nm10nm,0.8s						
CM13	**Chiang Mai Arr**	**17.21**	**6**	P	**P**	**17 46 05.1**	**+1.3**
	66nm8.3nm,0.8s						
CM01	**Chiang Mai Arr**	**17.21**	**6**	P	**P**	**17 46 05.4**	**+1.6**
	8.7nm,0.9s						
CM02	**Chiang Mai Arr**	**17.22**	**6**	P	**P**	**17 46 05.5**	**+1.5**
	64nm10nm,0.9s						
CM09	**Chiang Mai Arr**	**17.24**	**6**	P	**Pn**	**17 46 04.6**	**+1.8**
	91nm11nm,0.8s						
CM15	**Chiang Mai Arr**	**17.24**	**6**	P	**Pn**	**17 46 04.0**	**+1.2**
	76nm9.1nm,0.7s						
CM31	**Chiang Mai Arr**	**17.25**	**6**	P	**P**	**17 46 05.0**	**+0.8**
	282nm,0.8s						
CM31	**Chiang Mai Arr**	**17.25**	**6**		**Pn**	**17 46 02.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**17.25**	**6**	P	**Pn**	**17 46 01.5**	**-1.4**
	0.6nm,0.3s,baz=195,slow=11,SNR=28						
CMAR				PcP	**PcP**	**17 50 46.9**	**+1.2**
	0.1nm,0.3s,baz=222,slow=4.1,SNR=4.3						
CMAR				LR	LR	17 54 13.3	
	comp=Z,186nm,19.2s,baz=238,slow=42						
CM36	**Chiang Mai Arr**	**17.32**	**6**	P	**P**	**17 46 06.0**	**+0.9**
LAMP	**Lampang**	**17.39**	**8**	P	**P**	**17 46 09.0**	**+3.2**
	13nm,0.8s						
CM32	**Chiang Mai Arr**	**17.43**	**5**	P	P	17 46 14.0	+7.7
CM35	**Chiang Mai Arr**	**17.49**	**6**	P	**Pn**	**17 46 06.0**	**+0.1**
CHTO	**Chiang Mai**	**17.60**	**6**	Pn	**Pn**	**17 46 05.4**	**-1.8**
CMMT	**Chiang Mai**	**17.60**	**6**	P	**Pn**	**17 46 08.4**	**+1.1**
	3.3nm,1.0s						
CM33	**Chiang Mai Arr**	**17.60**	**6**	P	**Pn**	**17 46 07.0**	**-0.3**
CM34	**Chiang Mai Arr**	**17.66**	**6**	P	**P**	**17 46 15.0**	**+6.2**
NONG	**Nongkai**	**17.77**	**19**	P	**P**	**17 46 11.1**	**+1.2**
	32nm,0.8s						
KKM	**Kota Kinabalu**	**19.62**	**75**	P	**P**	**17 46 29.5**	**-1.0**
KKM				IAmb	IAmb	17 46 36.5	
	comp=Z,45nm,1.2s						
SLVN	**Son La**	**21.07**	**18**	P	**P**	**17 46 45.7**	**-0.5**
SLVN				IAmb	IAmb	17 46 47.6	
	comp=Z,38nm,0.9s						
QIZ	**Qiongzhong**	**21.66**	**34**	P	**P**	**17 46 51.6**	**-0.7**
MYLDM	**Lahad Datu**	**21.68**	**79**	P	**P**	**17 46 51.3**	**-1.3**
MYLDM				IAmb	IAmb	17 47 20.2	
	comp=Z,62nm,1.2s						
KAPI	**Kappang**	**23.40**	**105**	P	**P**	**17 47 11.0**	**+0.2**
TOLI2	**Tolitoli**	**23.62**	**90**	P	**P**	**17 47 11.8**	**-1.1**
TOLI2				IAmb	IAmb	17 47 12.8	
	comp=Z,29nm,0.7s						
HYB	**Hyderabad**	**24.38**	**312**	*i* P	**P**	**17 47 22.0**	**+1.9**
KMI	**Kunming**	**24.39**	**12**	⇓*e*P	**P**	**17 47 22.0**	**+1.7**
KMI				pP	pP	17 47 27.9	+0.1
KMI				sP	sP	17 47 32.6	+1.8
KMI				pmax	pmax		
	comp=Z,47nm,1.0s						
KMI				pmax	pmax		
	comp=Z,290nm,5.8s						
KMI	**Kunming**	**24.39**	**12**	P	**P**	**17 47 20.8**	**+0.5**
SHL	**Shillong**	**24.76**	**349**	*e*P	**P**	**17 47 23.0**	**-0.6**
SHL				IAmb	IAmb	17 47 25.8	
	comp=Z,31nm,0.8s						
SHL	**Shillong**	**24.76**	**349**	P	**P**	**17 47 23.0**	**-0.6**
MRSI	**Marisa**	**24.80**	**91**	P	**P**	**17 47 25.9**	**+2.1**
BOK	**Bokaro**	**24.98**	**335**	*e*P	**P**	**17 47 27.4**	**+2.0**
BOK				IAmb	IAmb	17 47 27.9	
	comp=Z,26nm,0.9s						
LUWI	**Luwuk**	**25.71**	**95**	P	**P**	**17 47 31.2**	**-1.0**
LUWI	**Luwuk**	**25.71**	**95**	P	P	17 47 45.4	+13
H08S2	**Diego Garcia H**	**26.12**	**250**	T	T	18 14 29.2	
	baz=71,slow=76,SNR=4749						
H08S3	**Diego Garcia H**	**26.12**	**250**	T	T	18 14 36.9	
	baz=71,slow=76,SNR=1981						
H08S1	**Diego Carcia H**	**26.13**	**250**	T	T	18 14 30.6	
	baz=71,slow=76,SNR=3590						
ZIRO	**ZIRO**	**26.38**	**353**	*e*P	**P**	**17 47 38.5**	**+0.3**
GYA	**Guiyang**	**26.73**	**19**	⇓P	**P**	**17 47 43.5**	**+2.1**
GYA				pmax	pmax		
	comp=Z,16nm,1.1s						
GYA				LR	LR		
	comp=Z,400nm,14.0s						
GYA				LR	LR		
	comp=Z,340nm,10.6s						
ODAN	**Odare**	**27.19**	**341**	*e*P	**P**	**17 47 46.5**	**+0.9**
	comp=Z,41nm,0.8s						
TAPN	**Taplejung**	**27.54**	**342**	*e*P	**P**	**17 47 49.9**	**+1.1**
	comp=Z,69nm,0.8s						
RAMN	**Ramite**	**27.54**	**339**	*e*P	**P**	**17 47 50.1**	**+1.3**
	comp=Z,11nm,0.7s						
PKI	**Pulchoki**	**28.54**	**338**	*e*P	**P**	**17 47 58.8**	**+1.0**
	comp=Z,34nm,1.3s						
PKIN	**Phulchoki**	**28.55**	**338**	*e*P	**P**	**17 47 58.7**	**+0.9**
	comp=Z,16nm,1.0s						
GUN	**Gumba**	**28.68**	**339**	*e*P	**P**	**17 48 00.4**	**+1.4**
	comp=Z,42nm,0.8s						
BATI	**Baumata**	**28.71**	**114**	P	**P**	**17 48 00.1**	**+0.9**
	comp=Z,16nm,0.6s,baz=14,slow=4.2,SNR=1.5						
BATI				LR	LR	18 01 24.9	
	comp=Z,344nm,19.4s,baz=275,slow=40						
KKN	**Kakani**	**28.79**	**338**	*e*P	**P**	**17 48 01.0**	**+1.1**
	comp=Z,21nm,0.8s						
LSA	**Lhasa**	**28.92**	**349**	P	**P**	**17 48 01.4**	**+0.1**
DANN	**Dangsing**	**29.89**	**336**	*e*P	**P**	**17 48 10.0**	**+0.3**
	comp=Z,17nm,0.8s						
CD2	**Chengdu**	**30.21**	**11**	*e*P	**P**	**17 48 15.5**	**+3.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
ENH	**Enshi**	**31.20**	**21**	P	**P**	**17 48 19.2**	**-1.8**
ENH				IAmb	IAmb	17 48 27.5	
	comp=Z,24nm,1.0s						
FITZ	**Fitzroy Crossi**	**33.96**	**126**	P	**P**	**17 48 43.5**	**-1.7**
	comp=Z,3.4nm,0.8s,baz=284,slow=8.3,SNR=2.3						
XAN	**Xi'an**	**34.48**	**17**	P	**P**	**17 48 48.6**	**-1.1**
XAN				pP	pP	17 48 55.9	-1.3
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	**Xi'an**	**34.48**	**17**	P	**P**	**17 48 47.8**	**-1.9**
XAN				IAmb	IAmb	17 48 56.8	
	comp=Z,11nm,0.7s						
LZH	**Lanzhou**	**35.27**	**9**	*e*P	**P**	**17 48 57.0**	**+0.4**
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,79nm,5.4s						
LZH				LR	LR		
	comp=Z,400nm,15.0s						
LZH				LR	LR		
	comp=Z,410nm,14.2s						
LZH				LR	LR		
	comp=Z,490nm,15.2s						
SMLA	**Simla**	**35.28**	**330**	*e*P	**P**	**17 48 56.9**	**+0.5**
SMLA				IAmb	IAmb	17 48 59.8	
	comp=Z,4.9nm,0.7s						
DHRM	**DHARAMSHALA**	**36.62**	**330**	*e*P	**P**	**17 49 08.5**	**+0.3**
DHRM				IAmb	IAmb	17 49 14.6	
	comp=Z,10nm,0.7s						
NJ2	**Nanjing**	**36.90**	**32**	*e*P	**P**	**17 49 11.7**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GTA	**Gaotai**	**38.11**	**3**	*e*P	**P**	**17 49 19.5**	**-1.2**
GTA				pP	pP	17 49 27.3	-0.9
GTA				sP	sP	17 49 31.9	+0.6
GTA				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,5.9s						
GTA				LR	LR		
	comp=Z,160nm,12.7s						
GTA				LR	LR		
	comp=Z,160nm,13.1s						
GTA				LR	LR		
	comp=Z,160nm,13.8s						
NIL	**Nilore**	**39.30**	**328**	P	**P**	**17 49 30.0**	**-0.6**
NIL				IAmb	IAmb	17 49 38.0	
	comp=Z,10nm,0.9s						
HHC	**Hu-ho-hao-te**	**41.58**	**17**	*e*P	**P**	**17 49 51.1**	**+1.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
WRA	**Warramunga Arr**	**42.07**	**122**	P	**P**	**17 49 52.9**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=300,slow=9.1,SNR=35						
BJT	**Baijiatuau**	**42.34**	**22**	P	**P**	**17 49 55.8**	**+0.2**
BJT				IAmb	IAmb	17 49 58.2	
	comp=Z,9.2nm,0.7s						
BJI	**Beijing**	**42.36**	**22**	P	**P**	**17 49 56.4**	**+0.7**
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH	**Kashi**	**42.76**	**336**	P	**P**	**17 49 58.1**	**-1.0**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,420nm,4.9s						
WMQ	**Urumqi**	**43.27**	**350**	*e*P	**P**	**17 50 04.0**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.7s						
WMQ				LR	LR		
	comp=Z,720nm,29.0s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
WMQ	**Urumqi**	**43.27**	**350**	P	**P**	**17 50 03.8**	**+0.6**
WMQ				IAmb	IAmb	17 50 05.3	
	comp=Z,18nm,1.2s						
ASAR	**Alice Springs**	**43.43**	**127**	P	**P**	**17 50 04.2**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=297,slow=8.1,SNR=25						
AS31	**Alice Springs**	**43.43**	**127**	P	**P**	**17 50 04.0**	**-0.7**
JNU	**Nakatsue**	**44.84**	**41**	P	**P**	**17 50 16.0**	**+0.1**
KSRS	**Korea Array**	**45.88**	**35**	P	**P**	**17 50 23.9**	**0.0**
	comp=Z,12nm,0.8s,baz=222,slow=9.0,SNR=29						
KSRS				LR	LR	18 10 10.7	
	comp=Z,67nm,18.4s,baz=234,slow=37						
KS19	**Wonju Array Si**	**45.88**	**34**	P	**P**	**17 50 23.6**	**-0.5**
AAK	**Ala-Archa**	**45.99**	**337**	P	**P**	**17 50 25.4**	**+0.4**
SONM	**Songino Array**	**47.15**	**8**	P	**P**	**17 50 34.2**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=189,slow=9.5,SNR=34						
SONM				PcP	**PcP**	**17 52 05.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=205,slow=3.8,SNR=5.1						
MK31	**Makanchi Array**	**47.24**	**346**	P	**P**	**17 50 34.6**	**0.0**
MK31				IAmb	IAmb	17 50 49.0	
	comp=Z,6.3nm,1.0s						
MKAR	**Makanchi Array**	**47.24**	**346**	P	**P**	**17 50 34.9**	**+0.3**
	comp=Z,4.5nm,0.6s,baz=161,slow=9.0,SNR=61						
ULN	**Ulaanbaatar**	**47.27**	**9**	P	**P**	**17 50 34.6**	**-0.4**
ULN				IAmb	IAmb	17 50 38.0	
	comp=Z,5.8nm,1.1s						
MAKZ	**Makanchi**	**47.33**	**346**	P	**P**	**17 50 34.9**	**-0.4**
MAKZ				PcP	**PcP**	**17 52 06.1**	**+0.2**
COEN	**Coen**	**48.01**	**110**	P	**P**	**17 50 39.3**	**-1.7**
COEN				IAmb	IAmb	17 50 40.9	
	comp=Z,6.6nm,1.1s						
KK31	**Karatay Array**	**48.04**	**334**	P	**P**	**17 50 40.7**	**-0.2**
KK31				IAmb	IAmb	17 50 42.3	
	comp=Z,6.3nm,1.2s						
KKAR	**Karatay Array**	**48.04**	**334**	P	**P**	**17 50 40.5**	**-0.3**
KKAR				IAmb	IAmb	17 50 42.3	
	comp=Z,6.3nm,1.2s						
BBOO	**Buckleboo**	**49.91**	**136**	P	**P**	**17 50 55.3**	**0.0**
GEYT	**Alibeck**	**51.19**	**320**	P	**P**	**17 51 05.5**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=170,slow=11,SNR=4.7						
GEYT				LR	LR	18 14 54.1	
	comp=Z,22nm,18.8s,baz=40,slow=39						
GYA0B	**ALIBECK ARRAY**	**51.19**	**320**	P	**P**	**17 51 04.1**	**-0.9**
HIA	**Hailar**	**51.66**	**19**	P	**P**	**17 51 07.4**	**-0.8**
HIA				IAmb	IAmb	17 51 09.6	
	comp=Z,6.8nm,0.9s						
MAJO	**Matsushiro**	**51.73**	**42**	P	**P**	**17 51 08.9**	**-0.1**
MJAR	**Matsushiro Arr**	**51.73**	**42**	P	**P**	**17 51 08.4**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=216,slow=6.8,SNR=4.7						
MJAR				LR	LR	18 15 52.3	
	comp=Z,41nm,18.3s,baz=115,slow=39						
KURK	**Kurchatov**	**51.79**	**345**	P	**P**	**17 51 08.8**	**-0.4**
KURK				IAmb	IAmb	17 51 10.4	
	comp=Z,5.9nm,0.9s						
MDJ	**Mudanjiang**	**51.90**	**29**	P	P	17 50 56.2	-14
MDJ				pmax	pmax		
	comp=Z,20nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,18nm,2.5s						
USA0B	**Ussuriysk Arra**	**52.80**	**31**	P	**P**	**17 51 16.9**	**+0.1**
USA0B				IAmb	IAmb	17 51 18.6	
	comp=Z,16nm,0.9s						
USRK	**Ussuriysk Ar.**	**52.80**	**31**	P	**P**	**17 51 17.3**	**+0.5**
	comp=Z,13nm,0.9s,baz=235,slow=5.0,SNR=23						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**17 51 21.4**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=315,slow=5.5,SNR=6.2						
STKA				LR	LR	18 16 03.4	
	comp=Z,101nm,21.3s,baz=357,slow=38						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**17 51 21.5**	**+0.1**
ZAA0	**Zalesovo Array**	**53.56**	**351**	P	**P**	**17 51 21.9**	**-0.2**
ZAA0				IAmb	IAmb	17 51 23.2	
	comp=Z,15nm,0.9s						
ZALV	**Zalesovo Beam**	**53.56**	**351**	P	**P**	**17 51 22.3**	**+0.1**
	comp=Z,13nm,0.8s,baz=180,slow=5.5,SNR=53						
RAYN	**Ar Rayn**	**54.72**	**298**	P	**P**	**17 51 32.5**	**+1.2**
BRVK	**Borovoye**	**56.30**	**341**	P	**P**	**17 51 41.1**	**-1.0**
BRVK				IAmb	IAmb	17 51 42.4	
	comp=Z,5.1nm,0.9s						
ABKAR	**Akbulak array**	**57.50**	**332**	P	**P**	**17 51 49.7**	**-0.9**
ABKAR				IAmb	IAmb	17 51 51.0	
	comp=Z,7.5nm,0.8s						
EIDS	**Eidsvold**	**58.42**	**121**	P	**P**	**17 51 57.7**	**+0.2**
EIDS				IAmb	IAmb	17 51 58.8	
	comp=Z,7.6nm,0.7s						
ARMA	**Armidale**	**60.57**	**126**		P	17 52 19.8	+7.4
ARMA				IAmb	IAmb	17 52 32.1	
	comp=Z,11nm,1.2s						
KBZ	**Khabaz**	**64.05**	**319**	P	**P**	**17 52 34.9**	**-0.4**
	comp=Z,3.7nm,1.0s,baz=111,slow=4.5,SNR=5.1						
YAK	**Yakutsk**	**65.44**	**16**	P	**P**	**17 52 42.8**	**-1.3**
NRIK	**Noril'sk**	**68.33**	**356**	P	**P**	**17 53 01.4**	**-1.0**
	comp=Z,4.1nm,0.8s,baz=165,slow=8.3,SNR=7.7						
NRIK	**Noril'sk**	**68.33**	**356**	P	**P**	**17 53 01.4**	**-1.0**
NRIK				IAmb	IAmb	17 53 02.9	
	comp=Z,7.9nm,1.1s						
TIXI	**Tiksi**	**73.20**	**10**	P	**P**	**17 53 30.6**	**-1.3**
TIXI				IAmb	IAmb	17 53 31.8	
	comp=Z,4.3nm,0.8s						
BOSA	**Boshof**	**74.73**	**240**	LR	LR	18 21 34.4	
	comp=Z,44nm,21.9s,baz=24,slow=32						
MCQ	**Macquarie Isla**	**75.00**	**148**	P	**P**	**17 53 42.9**	**+0.2**
AKASG	**Malin Array Be**	**75.23**	**322**	P	**P**	**17 53 42.0**	**-2.2**
	comp=Z,0.6nm,0.4s,baz=88,slow=5.5,SNR=4.5						
KOLS	**Kolonicke sedl**	**79.19**	**320**	*e*P	**P**	**17 54 07.6**	**+1.1**
FINES	**FINESS Array B**	**79.98**	**333**	P	**P**	**17 54 09.4**	**-1.0**
	comp=Z,4.5nm,0.9s,baz=187,slow=9.2,SNR=5.0						
ARCES	**ARCESS Array B**	**82.53**	**340**	P	**P**	**17 54 22.6**	**-1.2**
	comp=Z,4.9nm,1.0s,baz=17,slow=1.6,SNR=4.0						
GERES	**GERESS Array B**	**84.79**	**319**	P	**P**	**17 54 35.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=172,slow=2.7,SNR=3.7						
NOA	**NORSAR Array B**	**86.99**	**331**	P	**P**	**17 54 45.5**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=68,slow=19,SNR=1.1						
DAVOX	**Davos/Dischmat**	**87.27**	**317**	P	**P**	**17 54 46.2**	**-2.2**
	comp=Z,0.7nm,0.4s,baz=102,slow=6.4,SNR=3.7						
TXAR	**Lajitas Array**	**143.70**	**32**	PKP	PKPab	18 01 35.7	+1.7
	comp=Z,0.5nm,0.8s,baz=2.0,slow=4.1,SNR=3.5						

IDC ***02*** *18:29:24.3±1.0, 34°.16N×25°.07E, h0^{km}, mb4.2/9, mb1 4.2/16, mb1mx3.9/48, mbtmp4.1/16, ML4.2/6, Error ellipse: s-maj=19.8km s-min=17.5km az=178.0*

ISK ***02*** *18:29:24.6, 34°.11N×25°.09E, h12^{km}, ML3.7/14*

THE ***02*** *18:29:27.0, 34°.22N×25°.07E, h0^{km}±2^{km}, ML3.5/4, Error ellipse: s-maj=3.4km s-min=0.8km az=151.0*

ATH ***02*** *18:29:27.8, 34°.21N×25°.08E, h10^{km}±31^{km}, ML3.6/3, Error ellipse: s-maj=31.6km s-min=2.5km az=0.0*

NEIC ***02*** *18:29:28.8±2.1, 34°.28N±0°.06×24°.87E±0°.05, h25^{km}±7^{km}, mb4.0/16, ML3.5(THE), Error ellipse: s-maj=8.4km s-min=5.8km az=168.0*

ISC 02 18:29:26.1±1.5**, 34°.16N**±0°.05×**25°.08E**±0°.03**, h12**^{km}±8^{km}**, n121,** σ1^{s}.**14**/145**, mb4.2**/15**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.88**	**346**	P	**Pg**	**18 29 43.0**	**-0.3**
SIVA				S	**Sb**	**18 29 55.2**	**0.0**
SIVA				AML	AML	18 30 00.7	
	comp=N,12479µm,0.7s						
SIVA				AML	AML	18 30 01.5	
	comp=E,15282µm,0.4s						
SIVA	**Sivas**	**0.88**	**346**	P	**Pg**	**18 29 43.0**	**-0.3**
SIVA				S	**Sb**	**18 29 55.2**	**0.0**
SIVA				AML	AML	18 30 00.7	
	comp=N,12479µm,0.7s						
SIVA				AML	AML	18 30 01.5	
	comp=E,15282µm,0.4s						
SIVA	**Sivas**	**0.88**	**346**	P	**Pg**	**18 29 42.9**	**-0.3**
SIVA				S	**Sb**	**18 29 56.0**	**+0.8**
	comp=E,8µm,0.8s						
TMBK	**Timbaki Herakl**	**0.95**	**344**	P	**Pg**	**18 29 44.4**	**0.0**
TMBK				S	**Sn**	**18 29 58.4**	**-0.3**
	comp=E,2µm,0.4s						
LAST	**Lasithi**	**1.05**	**18**	P	**Pg**	**18 29 46.1**	**-0.3**
LAST				S	**Sn**	**18 30 01.2**	**-0.3**
LAST	**Lasithi**	**1.05**	**18**	P	**Pg**	**18 29 46.1**	**-0.3**
LAST				S	**Sn**	**18 30 01.2**	**-0.3**
LAST	**Lasithi**	**1.05**	**18**	P	**Pg**	**18 29 46.1**	**-0.3**
GVD	**Gavdhos**	**1.06**	**310**	P	**Pg**	**18 29 46.5**	**-0.1**
GVD				S	**Sn**	**18 30 02.0**	**+0.4**
GVD				AML	AML	18 30 08.0	
	comp=E,9425µm,0.4s						
GVD				AML	AML	18 30 08.2	
	comp=N,6663µm,0.3s						
GVD	**Gavdhos**	**1.06**	**310**	P	**Pg**	**18 29 46.5**	**-0.1**
GVD				S	**Sn**	**18 30 02.0**	**+0.4**
GVD				AML	AML	18 30 08.0	
	comp=E,9425µm,0.4s						
GVD				AML	AML	18 30 08.2	
	comp=N,6663µm,0.3s						
GVD	**Gavdhos**	**1.06**	**310**	P	**Pg**	**18 29 46.5**	**-0.1**
GVD				S	**Sn**	**18 30 02.1**	**+0.5**
	comp=N,3µm,0.3s						
GVD	**Gavdhos**	**1.06**	**310**	PN	**Pg**	**18 29 46.3**	**-0.3**
GVD				SN	**Sn**	**18 30 01.9**	**+0.4**
GVDS	**Gavdos**	**1.06**	**310**	P	**Pg**	**18 29 46.8**	**+0.2**
GVDS				S	**Sn**	**18 30 02.6**	**+1.0**
	comp=N,2µm,0.2s						
GVDS	**Gavdos**	**1.06**	**310**	PN	**Pg**	**18 29 46.5**	**-0.1**
GVDS				SN	**Sn**	**18 30 02.3**	**+0.7**
IDI	**Anoyia**	**1.14**	**352**	Pn	**Pg**	**18 29 47.0**	**-1.0**
	comp=N,28nm,0.3s,baz=211,slow=11,SNR=141						
IDI				Sn	**Sg**	**18 30 00.8**	**-2.1**
	comp=N,55nm,0.3s,baz=119,slow=21,SNR=8.0						
IDI	**Anoyia**	**1.14**	**352**	P	**Pg**	**18 29 47.1**	**-1.0**
IDI				S	**Sg**	**18 30 02.1**	**-0.7**
IDI				AML	AML	18 30 07.5	
	comp=E,2386µm,0.6s						
IDI				AML	AML	18 30 09.7	
	comp=N,2185µm,0.5s						
IDI	**Anoyia**	**1.14**	**352**	P	**Pg**	**18 29 47.1**	**-1.0**
IDI				S	**Sg**	**18 30 02.1**	**-0.7**
IDI				AML	AML	18 30 07.5	
	comp=E,2386µm,0.6s						
IDI				AML	AML	18 30 09.7	
	comp=N,2185µm,0.5s						
IDI	**Anoyia**	**1.14**	**352**	P	**Pg**	**18 29 46.9**	**-1.1**
IDI	**Anoyia**	**1.14**	**352**	PN	**Pg**	**18 29 47.0**	**-1.0**
IDI				SN	**Sn**	**18 30 04.2**	**+0.7**
IDI	**Anoyia**	**1.14**	**352**		**Pg**	**18 29 46.9**	**-1.1**
HRKL	**Herakleio**	**1.15**	**1**	PN	**Pb**	**18 29 47.8**	**-0.1**
HRKL				SN	**Sn**	**18 30 04.7**	**+1.0**
NPS	**Neapolis**	**1.19**	**22**	P	**Pb**	**18 29 48.5**	**-0.1**
NPS				S	**Sg**	**18 30 04.1**	**-0.3**
NPS	**Neapolis**	**1.19**	**22**	P	**Pb**	**18 29 48.5**	**-0.1**
NPS				S	**Sg**	**18 30 04.1**	**-0.3**
NPS	**Neapolis**	**1.19**	**22**	P	**Pb**	**18 29 48.3**	**-0.3**
ZKR	**Zakros**	**1.34**	**44**	P	**Pg**	**18 29 52.0**	**+0.1**
ZKR	**Zakros**	**1.34**	**44**	P	**Pg**	**18 29 52.0**	**+0.1**
ZKR	**Zakros**	**1.34**	**44**	P	**Pb**	**18 29 51.8**	**+0.6**
ZKR	**Zakros**	**1.34**	**44**	PN	**Pb**	**18 29 51.8**	**+0.6**
ZKR				SN	**Sg**	**18 30 09.0**	**-0.3**
VAM	**Vamos**	**1.44**	**330**	P	**Pn**	**18 29 52.8**	**+0.7**
VAM	**Vamos**	**1.44**	**330**	P	**Pn**	**18 29 52.8**	**+0.7**
VAM	**Vamos**	**1.44**	**330**	P	**Pn**	**18 29 52.5**	**+0.5**
IMMV	**Iera Moni Meta**	**1.58**	**326**	P	**Pn**	**18 29 55.0**	**+1.0**
IMMV	**Iera Moni Meta**	**1.58**	**326**	P	**Pn**	**18 29 55.0**	**+1.0**
IMMV	**Iera Moni Meta**	**1.58**	**326**	P	**Pn**	**18 29 54.5**	**+0.5**
IMMV	**Iera Moni Meta**	**1.58**	**326**	PN	**Pn**	**18 29 53.9**	**-0.1**
IMMV				SN	**Sb**	**18 30 15.5**	**+0.2**
KARP	**Karpathos**	**2.20**	**50**		**Pb**	**18 30 06.4**	**+0.4**
KARP				Sn	**Sb**	**18 30 32.7**	**-0.5**
SANT	**Santorini**	**2.23**	**8**	PN	**Pn**	**18 30 03.2**	**+0.3**
SANT	**Santorini**	**2.23**	**8**	Pn	**Pn**	**18 30 02.1**	**-0.8**
KTHA	**Kythira Island**	**2.67**	**322**	PN	**Pn**	**18 30 09.5**	**+0.6**
APE	**Apeiranthos**	**2.93**	**7**	PN	**Pn**	**18 30 13.0**	**+0.5**
KOSK	**Kos Island**	**3.02**	**30**	PN	**Pn**	**18 30 14.2**	**+0.5**
ARG	**Arkhangelos**	**3.23**	**50**	PN	**Pn**	**18 30 17.3**	**+0.6**
BODT	**Bodrum**	**3.42**	**31**	PN	**Pn**	**18 30 20.3**	**+1.0**
TURN	**Turunc**	**3.67**	**44**	PN	**Pn**	**18 30 23.6**	**+0.9**
DALY	**Dalyan (Mula)**	**3.94**	**47**	PN	**Pn**	**18 30 27.5**	**+1.1**

YER	Yerkesik	3.95	40	PN	Pn	18 30 27.8	+1.1
ITM	Ithomi	3.96	320	PN	Pn	18 30 27.9	+1.2
ITM	Ithomi	3.96	320	Pn	Pn	18 30 25.9	-0.8
FETY	Fethiye	4.10	52	PN	Pn	18 30 29.6	+1.0
AKAS	Kas	4.25	60	PN	Pn	18 30 31.7	+1.0
AKAS	Kas	4.25	60	Pn	Pn	18 30 32.1	+1.3
ELL	Elmali	4.71	55	PN	Pn	18 30 38.5	+1.3
ELL	Elmali	4.71	55		Pn	18 30 39.5	+2.4
ELL				Sn	Sn	18 31 33.5	+1.7
KORT	Korkueli	5.15	55	PN	Pn	18 30 44.7	+1.6
KULA	Kula-Manisa	5.22	33	PN	Pn	18 30 45.9	+1.8
AGG	Agios Georgios	5.33	336	Pn	Pn	18 30 45.7	+0.1
GAZI	Gazipasa	6.28	69	PN	Pn	18 30 59.7	+1.1
LIT	Litokhoron	6.28	342	Pn	Pn	18 30 58.2	-0.4
SEYD	Seydisehir-KON	6.38	58	PN	Pn	18 31 02.0	+2.0
LEF	Lefka	6.51	79	PN	Pn	18 31 02.6	+0.9
CSS	Mathiatis	6.86	81	PN	Pn	18 31 08.2	+1.7
CSS	Mathiatis	6.86	81	Pn	Pn	18 31 07.3	+0.8
TEKE	Tekeli-Mersin	6.87	71	PN	Pn	18 31 08.2	+1.5
KONT	Konya--Tatoy	7.00	55	PN	Pn	18 31 10.3	+1.7
BERE	Bereket-Mersin	7.01	70	PN	Pn	18 31 10.1	+1.3
AKKU	Akkuyu-Mersin	7.22	72	PN	Pn	18 31 12.7	+1.2
FNA	Florina	7.24	337	Pn	Pn	18 31 09.7	-2.0
IKL	Isikli	7.34	71	PN	Pn	18 31 14.2	+1.0
SCTE	Santa Cesarea	7.92	320	Pn	Pn	18 31 20.1	-1.0
TIP	Timpagrande	8.35	309	Pn	Pn	18 31 24.7	-2.4
MMAI	Mount Meron Ar	8.69	95	Pn	Pn	18 31 31.5	-0.3
	comp=N,2.0nm,0.3s,baz=278,slow=12,SNR=18						
MMAI				Sn	Sn	18 33 05.7	-4.1
	comp=N,1.7nm,0.3s,baz=319,slow=20,SNR=1.6						
BRTR	Keskin Array B	8.82	48	Pn	Pn	18 31 36.2	+2.7
	comp=N,0.1nm,0.3s,baz=307,slow=37,SNR=2.2						
RAFF	Raffo Rosso	9.24	292	Pn	Pn	18 31 38.3	-0.8
PDG	Podgorica	9.44	333	Pn	Pn	18 31 40.4	-1.4
EIL	Elat	9.51	115	Pn	Pn	18 31 42.1	-0.8
	comp=N,1.4nm,0.3s,baz=242,slow=9.8,SNR=12						
EIL				Sn	Sn	18 33 26.6	-3.1
	comp=N,0.5nm,0.3s,baz=64,slow=18,SNR=2.4						
ILGA	Ilgaz	9.71	42	Pn	Pn	18 31 46.5	+0.7
CORL	Corleone	10.24	295	Pn	Pn	18 31 54.4	+1.5
SGRT	San Giovanni R	10.57	319	Pn	Pn	18 31 57.9	+0.5
AQU	L'Aquila	12.28	315	Pn	Pn	18 32 23.9	+3.0
NRCA	Norcia	12.75	316	Pn	Pn	18 32 29.2	+2.0
VSL	Villasalto	13.65	297	Pn	Pn	18 32 43.2	+3.6
CASP	Castiglione de	14.06	312	Pn	P	18 32 51.1	-1.9
STAL	STALIGIAL	15.32	326	P	P	18 33 06.1	-0.8
ZOU	Zoufplan	15.42	327	P	P	18 33 07.6	-0.6
ZOU				IAmb	IAmb	18 33 09.1	
	comp=Z,14nm,1.4s						
CTI	Castel Tesino	15.68	323		Pn	18 33 07.7	+0.8
ABTA	Abfaltersbach	15.77	327	*e*Pn	P	18 33 13.2	+1.2
	comp=Z,4.5nm,0.6s						
MOA	Molln	15.90	333	*e*Pn	Pn	18 33 10.9	+1.2
	comp=Z,1.5nm,0.5s						
VRAC	Vranov	16.39	340	Pn	P	18 33 19.0	+0.2
	comp=Z,0.3nm,0.3s,baz=158,slow=16,SNR=3.3						
KIV	Kislovodsk	16.78	49	P	P	18 33 25.2	+1.9
KIV				IAmb	IAmb	18 33 27.0	
	comp=Z,8.0nm,0.9s						
AKASG	Malin Array Be	16.81	9	Pn	Pn	18 33 21.6	+0.4
	comp=Z,1.1nm,0.3s,baz=199,slow=10,SNR=11						
AKBB	Malin Array Si	16.81	9		Pn	18 33 22.1	+0.9
AKBB				IAmb	IAmb	18 33 37.1	
	comp=Z,9.7nm,1.1s						
KBZ	Khabaz	16.81	50	Pn	P	18 33 23.6	+0.2
	comp=Z,0.3nm,0.3s,baz=227,slow=10.0,SNR=13						
GEC2	GERESS Array S	16.94	333		Pn	18 33 23.6	+0.7
GEC2B	GERESS ARRAY S	16.94	333		Pn	18 33 23.8	+0.8
GERES	GERESS Array B	16.94	333	Pn	P	18 33 25.2	+0.3
	comp=Z,0.6nm,0.3s,baz=146,slow=12,SNR=17						
KHC	Kasperske Hory	17.22	334	*e*P	P	18 33 28.6	+0.6
DPC	Dobruska-Polom	17.41	341	*e*P	Pn	18 33 28.8	0.0
RAYN	Ar Rayn	20.76	115	P	Pn	18 34 10.4	+1.1
ESDC	Sonseca Array	23.80	292	P	P	18 34 38.8	-0.1
	comp=Z,0.8nm,0.8s,baz=78,slow=9.4,SNR=7.1						
BELG	Belogornoye	24.36	35	P	P	18 34 42.4	-1.4
	comp=Z,5.5nm,0.7s,baz=229,slow=19,SNR=3.9						
NB2	NORSAR Subarra	28.35	346	P	P	18 35 18.7	-1.1
	comp=Z,0.9nm,0.8s,baz=156,slow=9.3						
TORD	Torodi Ar. Bea	29.80	231	P	P	18 35 33.4	+0.3
	comp=Z,1.2nm,0.4s,baz=33,slow=8.3,SNR=8.7						
ARCES	ARCESS Array B	35.43	0	P	P	18 36 19.9	-1.8
	comp=Z,4.3nm,1.0s,baz=178,slow=8.0,SNR=4.4						
KK08	Karatay Array	36.20	62	P	P	18 36 29.4	+0.6
KK09	Karatay Array	36.21	62	P	P	18 36 29.9	+1.0
KK03	Karatay Array	36.22	62	P	P	18 36 30.0	+1.2
KK31	Karatay Array	36.22	62	P	P	18 36 29.7	+0.8
KK31				IAmb	IAmb	18 36 31.3	
	comp=Z,2.8nm,0.8s						
KKAR	Karatay Array	36.22	62	P	P	18 36 29.6	+0.8
KKAR				IAmb	IAmb	18 36 31.3	
	comp=Z,2.8nm,0.8s						
AAK	Ala-Archa	39.17	63	P	P	18 36 55.5	+1.5
AAK				IAmb	IAmb	18 36 56.5	
	comp=Z,2.4nm,1.0s						
KURK	Kurchatov	41.87	50	P	P	18 37 16.5	+0.5
KURK				IAmb	IAmb	18 37 17.0	
	comp=Z,2.3nm,0.8s						
MAKZ	Makanchi	44.17	56	P	P	18 37 36.0	+1.2
MAKZ				IAmb	IAmb	18 37 36.5	
	comp=Z,2.0nm,0.7s						
SPB2	Spitsbergen Ar	44.28	357	P	P	18 37 35.3	+0.2
SPA2	Spitsbergen Ar	44.28	357	P	P	18 37 35.0	-0.2
MK31	Makanchi Array	44.39	56	P	P	18 37 37.4	+0.9
MKAR	Makanchi Array	44.39	56	P	P	18 37 37.5	+1.0
	comp=Z,3.7nm,0.6s,baz=277,slow=6.7,SNR=40						
KBS	Kingsbay	45.21	356	P	P	18 37 42.4	-0.1
ZAA0	Zalesovo Array	45.75	45	P	P	18 37 47.2	+0.1
ZALV	Zalesovo Beam	45.75	45	P	P	18 37 47.1	0.0
	comp=Z,4.3nm,0.5s,baz=270,slow=8.4,SNR=23						
SONM	Songino Array	60.17	50	P	P	18 39 35.2	+1.3
	comp=Z,1.6nm,0.7s,baz=288,slow=7.3,SNR=17						
USRK	Ussuriysk Ar.	77.59	45	P	P	18 41 20.4	-1.7
	comp=Z,2.4nm,0.7s,baz=307,slow=4.0,SNR=5.0						
KSRS	Korea Array	78.95	52	P	P	18 41 29.9	+0.2
	comp=Z,1.2nm,0.5s,baz=308,slow=4.3,SNR=5.9						
WRA	Warramunga Arr	116.54	97	PKP	PKPdf	18 48 09.5	-0.9
	comp=Z,0.2nm,0.8s,baz=319,slow=2.1,SNR=1.4						

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*IDC **02** 18:37:40.3±2.4, 0°.07S×98°.51E, h0^{km}, mb3.7/5, mb1 3.7/7, mb1mx3.5/35, mbtmp3.6/7, ML3.6/2, MS3.3/1, Ms1 3.2/1, ms1mx2.5/32, Error ellipse: s-maj=84.5km s-min=21.0km az=63.0*

*DJA **02** 18:37:48.0±2.3, 0°N±5°×9°9E±°, h16^{km}±22^{km}, M3.8/8, mb4.0/1, MLv3.6/8*

ISC 02 18:37:47.4±1.3**, 0°.1N**±0°.1×**98°.63E**±0°.07**, h48^{km}, n17, σ0^{s}.85**/14**, mb4.1**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	1.17	54	P	Pn	18 38 07.5	+0.1
MNSI				S	Sn	18 38 23.6	+1.3
SBSI	Sibolga	1.47	10	P	Pn	18 38 11.5	0.0
GSI	Gunungsitoli	1.60	319	P	Pn	18 38 14.0	+0.7
GSI				S	Sn	18 38 32.5	-0.2
PDSI	Padang	2.08	119	P	Pn	18 38 29.8	+10
PSI	Prapat	2.70	6	Pn	Pn	18 38 26.9	-1.6
	6.4nm,0.3s,baz=180,slow=23,SNR=17						
TPTI		3.46	335	P	Pn	18 38 38.5	-0.3
KCSI	Kotacane, Aceh	3.51	346	P	Pn	18 38 39.1	-0.4
CMAR	Chiang Mai Arr	18.25	1	P	P	18 41 56.2	-0.8
	0.1nm,0.3s,baz=192,slow=11,SNR=8.2						
H08S2	Diego Garcia H	27.17	253	T	T	19 11 07.2	
	baz=74,slow=76,SNR=14						
H08S3	Diego Garcia H	27.18	253	T	T	19 11 05.6	
	baz=74,slow=76,SNR=10						
H08S1	Diego Carcia H	27.19	253	T	T	19 11 14.0	
	baz=74,slow=76,SNR=7.9						
WRA	Warramunga Arr	40.24	122	P	P	18 45 19.2	-0.7
	0.5nm,1.0s,baz=231,slow=13,SNR=2.0						
ASAR	Alice Springs	41.59	127	P	P	18 45 30.2	-0.7
	0.2nm,0.6s,baz=294,slow=7.4,SNR=5.0						
SONM	Songino Array	48.02	7	P	P	18 46 22.7	+0.8
	1.1nm,0.6s,baz=192,slow=8.8,SNR=9.6						
MKAR	Makanchi Array	48.66	345	P	P	18 46 27.6	+0.9
	1.1nm,0.6s,baz=160,slow=8.2,SNR=19						
STKA	Stephens Creek	51.56	132	LR	LR	19 11 06.9	
	comp=Z,28nm,19.0s,baz=16,slow=39						
ZALV	Zalesovo Beam	54.88	350	P	P	18 47 12.9	+0.1
	1.2nm,0.5s,baz=172,slow=7.0,SNR=5.9						

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*NEIC **02** 18:54:37.2±2.0, 20°.3S±0°.1×177°.6W±0°.1, h422^{km}±4^{km}, mb4.3/46, Error ellipse: s-maj=17.7km s-min=15.2km az=167.0*

*IDC **02** 18:54:37.3±1.3, 20°.31S×177°.75W, h422^{km}±12^{km}, mb3.6/11, mb1 3.8/13, mb1mx3.6/23, mbtmp4.3/13, Error ellipse: s-maj=14.4km s-min=10.9km az=131.0*

ISC 02 18:54:34.8±0.5**, 20°.35S**±0°.07×**177°.54W**±0°.07**, h400^{km}, n78, σ1^{s}.27**/83**, mb4.2**/30**, 3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.92	301	P	Pn	18 55 57.5	+1.4
	3.7nm,0.3s,baz=124,slow=23,SNR=28						
MSVF				S	S	18 57 02.4	+0.2
	baz=263,slow=21,SNR=0.6						
NIUE	Niue	7.28	81		Pn	18 56 20.9	-0.7
RAO	Raoul Island	8.87	182	P	Pn	18 56 37.8	-1.8
DZM	Mont Dzumac	15.04	261	P	P	18 57 50.5	+2.6
OUZ	Omahuta	16.75	206	P	P	18 58 10.3	+4.4
OUZ				IAmb	IAmb	18 58 30.5	
	comp=Z,27nm,1.6s						
URZ	Urewera	18.44	193	P	P	18 58 23.2	-0.6
	comp=Z,1.3nm,0.3s,baz=316,slow=4.0,SNR=9.2						
URZ				S	S	19 01 31.9	-0.7
	comp=Z,0.4nm,0.3s,baz=56,slow=23,SNR=6.4						
URZ	Urewera	18.44	193	P	P	18 58 23.5	-0.3
URZ				IAmb	IAmb	18 58 30.8	
	comp=Z,14nm,1.1s						
BKZ	Black Stump Fm	19.44	194	P	P	18 58 32.5	-1.5
BKZ				IAmb	IAmb	18 58 40.2	
	comp=Z,15nm,1.1s						
BFZ	Birch Farm	20.95	193	P	P	18 58 47.0	-0.7
BHW	Baring Head	21.96	195	P	P	18 58 57.4	+0.5
PLWZ	Palliser	22.02	195	P	P	18 58 57.8	+0.3
QRZ	Quartz Range	22.10	200	P	P	18 58 59.3	+1.2
TUWZ	Tuamarina	22.22	197	P	P	18 58 59.9	+0.7
DCZ	Deep Cove	28.05	203	P	P	18 59 52.3	+1.1
DCZ				IAmb	IAmb	19 00 29.6	
	comp=Z,20nm,1.1s						
EIDS	Eidsvold	29.31	254	P	P	19 00 03.1	+0.6
EIDS				IAmb	IAmb	19 00 04.3	
	comp=Z,17nm,1.1s						
ARMA	Armidale	29.52	244	P	P	19 00 05.8	+1.3
ARMA				IAmb	IAmb	19 00 15.4	
	comp=Z,16nm,1.5s						
CTAO	Charters Tower	33.94	264	P	P	19 00 43.1	+0.5
TOO	Toolangi	36.34	234	P	P	19 01 03.6	+0.9
TOO				IAmb	IAmb	19 01 04.8	
	comp=Z,11nm,0.8s						
COEN	Coen	38.01	273	P	P	19 01 17.1	+0.3
STKA	Stephens Creek	38.24	244	P	P	19 01 19.2	+0.7
	comp=Z,7.3nm,0.8s,baz=88,slow=11,SNR=9.3						
STKA	Stephens Creek	38.24	244	P	P	19 01 19.1	+0.6
BBOO	Buckleboo	43.00	243	P	P	19 01 56.8	-0.1
BBOO				IAmb	IAmb	19 01 57.9	
	comp=Z,19nm,1.1s						
WR0	Warramunga Arr	44.86	262	P	P	19 02 10.0	-1.7
AS31	Alice Springs	44.98	257	P	P	19 02 12.0	-0.5
ASAR	Alice Springs	44.98	257	P	P	19 02 12.3	-0.3
	comp=Z,21nm,0.7s,baz=94,slow=8.3,SNR=280						
ASAR				PcP	PcP	19 03 45.8	-0.1
	comp=Z,3.0nm,0.8s,baz=104,slow=3.8,SNR=9.4						
ASAR				S	S	19 08 17.4	-3.2
	comp=Z,1.7nm,0.8s,baz=93,slow=16,SNR=10						
WB0	Warramunga Arr	45.03	262	P	P	19 02 12.2	-0.8
WB0				IAmb	IAmb	19 02 12.8	
	comp=Z,14nm,0.6s						
WB2	Warramunga Arr	45.04	262	P	P	19 02 12.3	-0.8
WB2				IAmb	IAmb	19 02 12.6	
	comp=Z,9.5nm,0.8s						
WRAB	Tennant Creek	45.04	262	P	P	19 02 12.1	-1.0
WRAB				IAmb	IAmb	19 02 12.6	
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	45.05	262	P	P	19 02 12.2	-0.9
	comp=Z,3.9nm,0.3s,baz=96,slow=7.4,SNR=313						
WRA				PcP	PcP	19 03 46.1	0.0
	comp=Z,1.7nm,0.9s,baz=91,slow=4.2,SNR=4.9						
WRA				S	S	19 08 16.6	-5.1
	comp=Z,0.4nm,0.8s,baz=161,slow=36,SNR=3.1						
MTN	Manton Dam	49.60	270	P	P	19 02 47.2	-0.5
FORT	Forrest	49.75	246	P	P	19 02 48.6	0.0
FAKI	Fak Fak	51.89	283	P	P	19 03 04.0	-0.6
FAKI				IAmb	IAmb	19 03 14.7	
	comp=Z,22nm,1.0s						
FITZ	Fitzroy Crossi	53.48	262	P	P	19 03 16.1	0.0
SOEI	Soe	56.93	271	P	P	19 03 41.8	+1.2
VNDA	Vanda	58.09	185	P	P	19 03 49.4	+2.0
	comp=Z,0.7nm,0.7s,baz=358,slow=7.3,SNR=5.4						
VNDA	Vanda	58.09	185	P	P	19 03 49.1	+1.7
PSA00	Pilbara Seismi	58.13	257	P	P	19 03 48.0	-0.6
PSA00				IAmb	IAmb	19 03 49.2	
	comp=Z,18nm,0.9s						
MBWA	Marble Bar	58.31	257	P	P	19 03 48.9	-1.0
NWAO	Narrogin (SRO)	58.82	243	P	P	19 03 52.9	-0.3
NWAO	Narrogin (SRO)	58.82	243	P	P	19 03 52.9	-0.3
NWAO				IAmb	IAmb	19 04 25.0	
	comp=Z,35nm,1.4s						
MORW	Morawa	60.29	247	P	P	19 04 02.6	-0.5
MORW				IAmb	IAmb	19 04 04.3	
	comp=Z,9.1nm,0.8s						
QSPA	South Pole Qui	69.72	180	P	P	19 05 03.2	+0.6
QSPA				IAmb	IAmb	19 05 04.4	
	comp=Z,5.3nm,0.8s						
KKM	Kota Kinabalu	70.14	285	P	P	19 05 06.1	+0.1
MJAR	Matsushiro Arr	70.35	323	P	P	19 05 05.3	-1.4
	comp=Z,1.6nm,0.8s,baz=142,slow=7.4,SNR=4.1						
PETK	Petropavlovsk-	76.24	345	P	P	19 05 40.0	-0.2
	comp=Z,6.3nm,0.8s,baz=82,slow=11,SNR=4.0						
NVAR	Mina Array Bea	80.62	43	P	P	19 06 05.5	+1.0
	comp=Z,0.9nm,0.7s,baz=70,slow=1.7,SNR=5.8						
K05A	Summer Lake	81.58	38	P	P	19 06 10.5	+1.2
PRN	Pahroc Range	82.18	45	P	P	19 06 13.7	+1.1
PINE	Pine Mountain	82.20	38	P	P	19 06 13.2	+0.6
PINE				IAmb	IAmb	19 06 14.8	
	comp=Z,5.9nm,1.0s						
TUC	Tucson	82.55	52	P	P	19 06 16.5	+2.0
TUC				IAmb	IAmb	19 06 17.5	
	comp=Z,4.7nm,1.0s						
LCMT	Little Creek M	83.19	47	P	P	19 06 18.9	+1.2
CCUT	Cedar City	83.39	46	P	P	19 06 20.0	+1.2
U15A	North Rim	83.54	47	P	P	19 06 21.0	+1.4
U15A				IAmb	IAmb	19 06 22.1	
	comp=Z,5.0nm,0.9s						
IPM	Ipoh	83.55	277	P	P	19 06 20.2	+0.4
PSUT	Pine Spring	83.58	45	P	P	19 06 20.9	+1.1
PKCU	Pink Cliffs	84.05	47	P	P	19 06 23.4	+1.2
X18A	Snowflake	84.24	50	P	P	19 06 24.3	+1.2
X18A				IAmb	IAmb	19 06 26.3	
	comp=Z,2.8nm,0.6s						
TTA	Tatalina	84.73	10	P	P	19 06 24.9	+0.2
F10A	Beach Ranch, E	85.62	37	P	P	19 06 29.8	+0.3
F10A				IAmb	IAmb	19 06 30.7	
	comp=Z,5.1nm,1.0s						
MNTX	Cornudas Mount	86.31	54	P	P	19 06 31.4	-1.6
TX31	Lajitas Ar. Si	86.61	57	P	P	19 06 35.5	+0.8
TX31				IAmb	IAmb	19 06 38.1	
	comp=Z,7.0nm,1.1s						
TX32	Lajitas Array	86.61	57	P	P	19 06 35.4	+0.7
TXAR	Lajitas Array	86.61	57	P	P	19 06 35.7	+1.0
	comp=Z,1.3nm,0.8s,baz=217,slow=6.1,SNR=12						
ILAR	Eielson Array	88.08	13	P	P	19 06 39.0	-1.6
	comp=Z,0.9nm,0.9s,baz=213,slow=5.2,SNR=4.5						
PDAR	Pinedale Array	88.56	43	P	P	19 06 44.0	+0.4
	comp=Z,0.7nm,0.7s,baz=204,slow=4.5,SNR=6.9						
YHL	Hebgen Lake	88.58	41	P	P	19 06 44.4	+0.6
HHC	Hu-ho-hao-te	89.56	314	*e*P	P	19 06 48.3	+0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,130nm,6.7s						
CMAR	Chiang Mai Arr	90.48	289	P	P	19 06 52.5	-0.3
	comp=Z,0.8nm,0.4s,baz=122,slow=3.9,SNR=6.2						
MKAR	Makanchi Array	111.41	313	PKiKP	PKiKP	19 12 20.1	-2.0
	comp=Z,0.2nm,0.7s,baz=232,slow=7.1,SNR=4.2						
AKASG	Malin Array Be	143.09	332	PKhKP	PKPpre	19 13 17.7	
	comp=Z,2.8nm,0.7s,baz=43,slow=4.8,SNR=14						
BRTR	Keskin Array B	147.06	313	PKPbc	PKPbc	19 13 31.1	-0.7
	comp=Z,2.2nm,0.8s,baz=164,slow=5.0,SNR=6.5						
KOLS	Kolonicke sedl	147.36	336	*e*PKP	PKiKP	19 13 33.9	0.0
CRVS	Cervenica-Dubn	147.70	336	*e*PKP	PKiKP	19 13 34.6	0.0
CLL	Collm	148.02	347	⇓*i*PKPbc	PKPbc	19 13 33.4	-0.3
	comp=Z,7.0nm,0.8s						
DPC	Dobruska-Polom	148.12	343	⇑*e*PKP	PKPbc	19 13 33.9	-0.1
PRU	Pruhonice	148.91	345	⇑*e*PKP	PKPbc	19 13 35.8	-0.2
KHC	Kasperske Hory	149.94	345	⇑*e*PKP	PKPbc	19 13 38.0	-0.5
GERES	GERESS Array B	150.18	345	PKPbc	PKPbc	19 13 39.0	-0.2
	comp=Z,1.5nm,0.8s,baz=46,slow=3.9,SNR=6.9						

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*NEIC **02** 19:11:44.9±2.0, 19°.72N±0°.06×70°.91W±0°.05, h26^{km}±4^{km}, mb4.6/193, Mwr4.5/18, Error ellipse: s-maj=8.3km s-min=6.6km az=182.0*

*NEIC **02** 19:11:44.9, 19°.71N×70°.96W, h25^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.16; M$_{\theta\theta}$2.41; M$_{\phi\phi}$-0.26; M$_{r\theta}$-5.84; M$_{\theta\phi}$-0.58; M$_{\phi r}$3.38; Fault plane solution: M$_0$7.16000×10^{15} NP1:φ$_s$119.09000°, δ80.91000°, λ-83.28000°. NP2:φ$_s$262.37000°, δ11.28000°, λ-126.18000°. Principal axes: T 7.2133, Plg36.0000°, Azm203.0000°; N -0.1173, Plg7.0000°, Azm298.0000°; P -7.0960, Plg54.0000°, Azm37.0000°;*

*IDC **02** 19:11:47.7±2.2, 19°.62N×70°.91W, h58^{km}±21^{km}, mb3.9/19, mb1 4.1/25, mb1mx4.0/42, mbtmp4.2/25, ML3.8/6, MS3.9/24, Ms1 3.9/24, ms1mx3.8/34 Error ellipse: s-maj=14.5km s-min=11.9km az=47.0*

ISC 02 19:11:43.8±0.3**, 19°.74N**±0°.03×**70°.95W**±0°.03**, h19^{km}, n500, σ1^{s}.29**/473**, mb4.6**/93**, MS3.9**/20**, 10C-5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SC01	Santiago de lo	0.37	146		Pb	19 11 52.3	+0.3
SC01					Sn	19 11 59.1	-1.8
SC01	Santiago de lo	0.37	146	ASPG		19 11 51.9	
	comp=Z,12μm,0.3s						
SC01				⇓*i*P	Pb	19 11 52.3	+0.3
SC01				ATPG		19 11 53.6	
	comp=Z,44μm,0.4s						
SC01				ASSG		19 11 58.3	
	comp=Z,27μm,0.3s						
SC01				*e*S	Sn	19 11 58.7	-2.2
SC01				ATSG		19 11 59.0	
	comp=Z,78μm,0.3s						
SC01				IAML		19 12 11.9	
	comp=Z,33μm,0.5s						
SDDR	Presa de Saban	0.82	203		Pb	19 11 59.2	-0.3
SDDR				Sn	Sg	19 12 11.7	+1.0
SDDR	Presa de Saban	0.82	203	⇓*i*P	Pb	19 11 59.2	-0.3
SDDR				*e*S	Sg	19 12 11.8	+1.0
SDDR				IAML		19 12 12.9	
	comp=Z,29μm,0.5s						
BON1	Bonao	0.95	147	⇑*i*P	Pn	19 12 01.8	-0.3
BON1				*e*S	Sn	19 12 15.3	+0.2
BON1				IAML		19 12 16.1	
	comp=Z,11μm,0.5s						
SJM1	San Juan de la	0.96	196	⇓*i*P	Pn	19 12 02.8	+0.3
BANI	BANI	1.45	157		Pb	19 12 10.1	-0.2
LOSC1	San Cristbal	1.54	149	*e*S	Sb	19 12 30.1	-0.9
LOSC1				IAML		19 12 38.9	
	comp=Z,8μm,0.7s						
SDD	Santo Domingo	1.60	142		Pn	19 12 11.3	+0.1
SDD	Santo Domingo	1.60	142	⇑*i*P	Pn	19 12 11.2	+0.1
SDD				IAML		19 12 43.9	
	comp=Z,1μm,0.6s						
NQUSE	US Embassy, Po	1.70	227		Pn	19 12 13.6	+1.1
DR12	Loma Pena Alta	1.75	122		Pb	19 12 14.2	-1.2
GRTK	Grand Turk	1.77	354		Pn	19 12 13.5	0.0
GRTK	Grand Turk	1.77	354	⇓*i*P	Pn	19 12 13.2	-0.3
GRTK				IAML		19 12 40.0	
	comp=Z,10μm,0.8s						
NQWLB	Fermate	1.79	227	Pn	Pn	19 12 15.6	+1.7
LGNH	Logne	1.99	232		Pn	19 12 18.4	+1.9
LGNH	Logne	1.99	232	⇑*i*P	Pn	19 12 18.6	+2.1
LGNH				IAML		19 13 02.1	
	comp=Z,2μm,0.6s						
JAKH	Jacmel	2.11	225		Pn	19 12 20.4	+2.3
JAKH	Jacmel	2.11	225	⇑*i*P	Pn	19 12 20.4	+2.3
AGPR	Aguadilla, PR	3.84	109		Pn	19 12 43.0	+1.0
AGPR	Aguadilla, PR	3.84	109	*i* P	Pn	19 12 42.6	+0.7
MPR	Mayaguez	3.91	112		Pn	19 12 41.7	-1.2
GTBY	Guantanamo Bay	3.93	273	Pn	Pn	19 12 41.4	-1.7
GTBY	Guantanamo Bay	3.93	273	⇓*i*P	Pn	19 12 41.5	-1.6
GTBY				*e*S	Sn	19 13 25.1	-3.5
GTBY				IAML		19 14 00.2	
	comp=Z,596nm,0.7s						
MLPR	Magueyes Islan	4.09	115		Pn	19 12 45.9	+0.5
AOPR	Arecibo Observ	4.20	109		Pn	19 12 47.2	+0.2
OBIP	Obispado Ponce	4.44	112		Pn	19 12 49.5	-0.7
ICMP	Isla Caja de M	4.57	113		Pn	19 12 53.0	+0.9
GCPR	Guaynabo City	4.81	106		Pn	19 12 55.3	-0.1
SJG	San Juan	4.82	109	P	Pn	19 12 55.9	+0.5
	comp=Z,11nm,0.3s,baz=319,slow=13,SNR=8.1						
SJG				S	Sn	19 13 47.2	-3.5
	comp=Z,58nm,0.3s,baz=307,slow=22,SNR=8.0						
SJG				LR	LR	19 14 56.8	
	comp=Z,954nm,21.2s,baz=252,slow=40						
SJG	San Juan	4.82	109		Pn	19 12 56.0	+0.5
SJG	San Juan	4.82	109	*e*P	Pn	19 12 55.9	+0.5
IGPR	InterUniversit	4.91	110		Pn	19 12 57.5	+0.8
PDPR	Patillas Dam,	4.96	109		Pn	19 12 57.9	+0.5
CBYP	Canovanas	5.03	106		Pn	19 12 58.0	-0.4
HUMP	Col San Antoni	5.08	107	Pn	Pn	19 12 59.1	+0.2
MTP	Monte Pirata	5.36	107	Pn	Pn	19 13 02.0	-0.9
CMJ	Castle Mountai	5.38	254	*i* P	Pb	19 13 15.7	-1.6
CMJ				*i* S	Sb	19 14 15.7	-5.8
CUPR	Culebra, Puert	5.54	104	Pn	Pn	19 13 04.0	-1.3
HOJ	Hope	5.76	254	*i* P	Pn	19 13 10.6	+2.2
STH	Stony Hill	5.79	254	*i* P	Pn	19 13 09.6	+0.8
BBJ	Bamboo Saint A	6.13	258	*i* P	Pn	19 13 13.7	+0.2
CDVI	St. Croix	6.18	108		Pn	19 13 14.3	+0.2
PCJ	Portland Cotta	6.21	252	*i* P	Pn	19 13 16.9	+2.4
MTDJ	Mount Denham	6.41	258	Pn	Pn	19 13 17.3	-0.1
MCJ	Malvern	6.63	255	*i* P	Pn	19 13 22.2	+1.7
MCJ				*i* S	Sn	19 14 37.5	+1.9
SEUS	St. Eustatius	7.88	105	Pn	Pn	19 13 38.6	+1.2
SKI	Saint Kitts	8.14	106	Pn	Pn	19 13 40.5	-0.6
CBCY	The Bluff, Cay	8.30	271	Pn	Pn	19 13 40.4	-2.8
LCCY	Blossom Villag	8.61	271	Pn	Pn	19 13 45.2	-2.3
FSCY	Frank Sound, G	9.66	269	Pn	Pn	19 13 59.7	-2.3
SDV	Santo Domingo	10.79	178	P	Pn	19 14 18.4	+0.8
	comp=Z,5.5nm,0.3s,baz=359,slow=6.6,SNR=54						
SDV				S	Sn	19 16 15.3	-2.8
	comp=Z,2.4nm,0.3s,baz=324,slow=22,SNR=2.0						
SDV				LR	LR	19 19 01.9	
	comp=Z,683nm,18.0s,baz=328,slow=41						
SDV	Santo Domingo	10.79	178	*e*P	Pn	19 14 20.8	+3.2
061Z	Ochoppi	11.03	305	Pn	Pn	19 14 19.0	-1.6
SMLC	San Martn de	11.29	196	*e*P	Pn	19 14 27.5	+3.3
PCRV	Puerto La Cruz	11.29	146	P	Pn	19 14 26.1	+1.8
	comp=Z,1.4nm,0.3s,baz=288,slow=4.7,SNR=6.9						
SVB	Belmont	11.30	123	Pn	Pn	19 14 26.6	+2.2
UREC	San Jos de Ur	12.72	201	*e*P	Pn	19 14 47.2	+3.3
ZARC	Zaragoza, Cauc	12.75	198	*e*P	Pn	19 14 48.6	+4.3
BARC	Barichara	13.25	190	*e*P	Pn	19 14 53.0	+1.7
PTBC	PUERTO BERRIO,	13.56	195	*e*P	Pn	19 14 58.8	+3.5
DBBC	Dabeiba	13.64	203	*e*P	Pn	19 15 00.2	+3.7
RUSC	La Rusia	13.92	189	*e*P	Pn	19 15 02.5	+1.8
HELC	Santa Helena	14.18	199	*e*P	P	19 15 08.8	-2.8
656A	Willston	14.24	315	Pn	Pn	19 15 02.1	-2.5
NORC	Norcasia	14.60	196	*e*P	Pn	19 15 11.8	+2.2
CBOC	Ciudad Bolivar	14.64	200	*e*P	Pn	19 15 09.8	-0.5
ESPN	Las Esperanzas	14.86	242	P	Pn	19 15 11.9	-1.2
ROSC	El Rosal	15.17	193	P	Pn	19 15 18.1	+0.5
	comp=Z,3.4nm,0.3s,baz=11,slow=16,SNR=7.7						
ROSC	El Rosal	15.17	193	P	Pn	19 15 18.2	+0.7
ROSC				IAmb	IAmb	19 15 36.7	
	comp=Z,59nm,1.1s						
CHIC	Chingaza	15.26	191	*e*P	P	19 15 21.4	-2.2
RREF	El Recreo	15.36	197	*e*P	P	19 15 23.7	-1.2
Z59A	Georgetown, SC	15.37	333	P	Pn	19 15 17.7	-2.0
	baz=149						
Y60A	Bolivia	15.61	337	P	Pn	19 15 20.9	-1.9
Y60A				IAmb	IAmb	19 15 32.5	
	comp=Z,35nm,0.8s						
PLMC	San Jos del P	15.63	200	*e*P	P	19 15 28.1	+0.7
TOLC	Tolima	15.65	196	*e*P	P	19 15 27.1	-0.7
Z58A	St. Stephen	15.68	331	P	Pn	19 15 21.4	-2.4
	baz=148						
ACON	Acoyapa	15.71	243	P	Pn	19 15 21.9	-2.4
ACON				IAmb	IAmb	19 15 42.3	
	comp=Z,46nm,1.1s						
157A	Early Branch	15.72	327	P	Pn	19 15 22.5	-1.8
	baz=143						
VILC	Villavicencio,	15.76	190	*e*P	Pn	19 15 26.6	+1.6
X60A	Albert Glenn T	16.04	339	P	Pn	19 15 26.7	-1.7
	baz=155						

Z57A	Bowman	16.07	329	P	Pn	19 15 29.1	+0.3
	baz=145						
ORTC	Ortega, Tolima	16.28	195	eP	P	19 15 34.0	-0.6
TIGA	Tifton	16.29	318	P	P	19 15 34.5	0.0
TIGA				IAmb	IAmb	19 15 42.5	
	comp=Z,53nm,0.8s						
TEIG	Tepich	16.30	275	P	Pn	19 15 33.6	+1.8
V62A	Hyde County Ai	16.37	345	P	Pn	19 15 33.6	+1.0
	baz=163						
V62A	Hyde County Ai	16.37	345		Pn	19 15 33.0	+0.4
JTS	Las Juntas de	16.46	237	P	Pn	19 15 34.7	+0.8
	comp=Z,0.3nm,0.3s,baz=25,slow=22,SNR=2.4						
JTS				LR	LR	19 22 17.7	
	comp=Z,460nm,18.5s,baz=134,slow=38						
JTS	Las Juntas de	16.46	237		P	19 15 36.8	+0.3
JTS				IAmb	IAmb	19 15 52.0	
	comp=Z,103nm,1.2s						
X58A	Rowland	16.53	335	P	Pn	19 15 35.4	+0.7
TGUH	Tegucigalpa,Un	16.61	253	P	P	19 15 38.4	+0.1
TGUH				IAmb	IAmb	19 15 53.6	
	comp=Z,56nm,1.1s						
CNNC	Cliffs of the	16.62	340	P	Pn	19 15 36.7	+1.0
V61A	Roper	16.75	344	P	Pn	19 15 36.8	-0.6
	baz=161						
154A	Montrose	16.82	322	P	Pn	19 15 39.6	+1.2
W58A	Raeford	16.90	336	P	Pn	19 15 39.1	-0.2
	baz=152						
V60A	Jim Taylor Roa	16.91	342	P	P	19 15 40.8	-0.6
V60A				IAmb	IAmb	19 16 07.8	
	comp=Z,42nm,0.9s						
X56A	White Oak	17.20	331	P	Pn	19 15 42.5	-0.7
	baz=146						
V59A	Middlesex	17.21	340	P	Pn	19 15 42.7	-0.5
	baz=156						
W57A	Gilead	17.31	334	P	Pn	19 15 45.2	+0.7
	baz=150						
W57A	Gilead	17.31	334	P	Pn	19 15 44.6	+0.1
MARP	Paez Belalcaza	17.49	197	eP	P	19 15 52.1	+3.9
BETC	Betania	17.51	195	eP	P	19 15 48.6	+0.4
V58A	Windy Hill, Pi	17.54	337	P	Pn	19 15 48.1	+0.7
	baz=154						
U60A	Pendleton	17.54	343	P	Pn	19 15 47.5	+0.2
	baz=160						
W56A	Indian Trail	17.54	333	P	Pn	19 15 47.6	+0.2
	baz=148						
HODGE	Hodges	17.59	327	P	P	19 15 49.7	+0.8
GOGA	Godfrey	17.61	323	P	Pn	19 15 47.5	-0.7
	baz=138						
GOGA	Godfrey	17.61	323		P	19 15 51.5	+2.3
U59A	Littleton	17.61	341	P	Pn	19 15 47.4	-0.8
	baz=158						
U59A	Littleton	17.61	341	P	Pn	19 15 46.1	-2.1
U59A				IAmb	IAmb	19 16 22.8	
	comp=Z,66nm,1.6s						
152A	Waverly Hall	17.82	319	P	P	19 15 54.4	+2.8
PAULI	Pauline	17.84	330	P	P	19 15 52.9	+1.2
V57A	Coltrane Farms	17.87	336	P	Pn	19 15 50.3	-1.0
	baz=152						
KMSC	Kings Mountain	17.88	331	P	Pn	19 15 50.5	-1.0
	baz=146						
KMSC	Kings Mountain	17.88	331	P	Pn	19 15 52.2	+0.7
U58A	Oxford	17.89	340	P	Pn	19 15 51.1	-0.5
	baz=156						
T60A	Surry	18.06	345	P	Pn	19 15 53.8	0.0
	baz=162						
T60A	Surry	18.06	345	P	Pn	19 15 53.1	-0.6
T60A				IAmb	IAmb	19 16 17.1	
	comp=Z,54nm,0.8s						
V56A	Mocksville	18.09	334	P	Pn	19 15 54.1	+0.1
	baz=150						
T59A	Double "B" Far	18.12	343	P	Pn	19 15 54.1	-0.3
	baz=160						
T59A	Double "B" Far	18.12	343		Pn	19 15 53.5	-1.0
U57A	Blanch	18.19	338	P	Pn	19 15 55.2	-0.2
	baz=154						
Y52A	Lilburn	18.28	323	P	P	19 15 59.5	+3.0
ESQI	Esquipulas	18.31	257	P	Pn	19 16 00.2	+3.1
ESQI				IAmb	IAmb	19 16 21.4	
	comp=Z,60nm,1.0s						
S61A	Accomac	18.35	348	P	P	19 15 57.4	+0.2
	baz=166						
MTO3	Montecristo	18.38	256	P	Pn	19 16 01.1	+3.1
MTO3				IAmb	IAmb	19 16 13.3	
	comp=Z,51nm,0.9s						
T58A	Grand View Acr	18.39	340	P	P	19 15 57.8	+0.1
	baz=157						
U56A	King	18.51	335	P	P	19 15 59.3	+0.3
	baz=151						
U56A	King	18.51	335	P	P	19 15 58.5	-0.5
BG3	Lake Jocassee	18.53	328	P	P	19 15 59.1	-0.2
Z51A	Franklin	18.55	320	P	Pn	19 16 00.5	+0.8
S60A	Water View	18.58	346	P	P	19 15 59.7	-0.1
	baz=163						
BBAC	Balboa, Cauca	18.66	200	eP	Pn	19 16 03.3	+1.9
T57A	Hurt	18.67	339	P	P	19 16 00.9	+0.1
	baz=155						
S58A	Poland Farm, P	18.86	342	P	P	19 16 02.8	+0.1
	baz=159						
S58A	Poland Farm, P	18.86	342	P	P	19 16 02.9	+0.1
JSRW	J. Sargeant Re	18.89	343	P	P	19 16 02.8	-0.3
T56A	Rocky Mt	18.97	337	P	P	19 16 04.4	+0.3
	baz=153						
V53A	Saluda	19.01	329	P	Pn	19 16 06.1	+0.8
W52A	Murphy	19.12	326	P	Pn	19 16 10.2	+3.5
R58B	Mineral	19.14	343	P	Pn	19 16 06.9	+0.1
	baz=160						
R58B	Mineral	19.14	343	P	Pn	19 16 07.6	+0.8
R59A	King George, V	19.16	345	P	P	19 16 06.6	+0.4
	baz=162						
CBN	Corbin Frederi	19.23	344	P	P	19 16 06.9	0.0
	baz=161						
X51A	Calhoun	19.24	323	P	Pn	19 16 11.8	+3.7
U54A	Nelsons Funny	19.25	333	P	P	19 16 07.5	+0.2
	baz=147						
U54A	Nelsons Funny	19.25	333	P	P	19 16 08.1	+0.8
S57A	Dark Hollow, R	19.27	340	P	Pn	19 16 08.3	0.0
	baz=157						
S57A	Dark Hollow, R	19.27	340	P	Pn	19 16 08.4	0.0
BLA	Blacksburg	19.28	337	P	P	19 16 08.1	+0.6
	baz=152						
BLA	Blacksburg	19.28	337	P	Pn	19 16 09.2	+0.6
BLA				IAmb	IAmb	19 16 22.8	
	comp=Z,63nm,1.4s						
S56A	Natural Bridge	19.39	339	P	P	19 16 09.4	+0.6
	baz=155						
TKL	Tuckaleechee C	19.48	327	P	Pn	19 16 12.4	+1.5
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=6.0						
TKL				S	S	19 19 33.9	-15
	comp=Z,0.4nm,0.3s,baz=280,slow=12,SNR=2.4						
TKL				LR	LR	19 23 25.5	
	comp=Z,296nm,19.6s,baz=145,slow=36						
TKL	Tuckaleechee C	19.48	327	P	P	19 16 10.5	+0.8
R58A	Rapidan	19.48	343	P	P	19 16 09.9	+0.2
	baz=160						
LRAL	Lakeview Retre	19.52	316	P	Pn	19 16 11.9	+0.5
	baz=129,SNR=5.8						
LRAL	Lakeview Retre	19.52	316		Pn	19 16 11.9	+0.5
R57A	Stanardsville	19.63	342	P	Pn	19 16 12.7	0.0
	baz=158						
FPAL	Fort Paine	19.66	322	P	Pn	19 16 13.7	+0.6
Y49A	Blount Mountai	19.67	319		Pn	19 16 14.8	+1.6
V51A	Loudon	19.89	326	P	Pn	19 16 15.6	-0.2
V51A				IAmb	IAmb	19 16 26.3	
	comp=Z,33nm,1.1s						
Q58A	Fox Den Farm,	20.00	344	P	P	19 16 16.2	+0.8
	baz=161						
TZTN	Tazewell	20.06	329	P	P	19 16 16.8	+0.7
	baz=143,SNR=5.8						
TZTN	Tazewell	20.06	329	P	P	19 16 15.7	-0.3
TZTN				IAmb	IAmb	19 16 24.8	
	comp=Z,43nm,1.2s						
S54A	Dingess, Beckl	20.13	336	P	P	19 16 17.1	+0.3
	baz=150						
SDMD	Soldier's Deli	20.25	347	P	P	19 16 17.2	-0.9
Q57A	Strasburg	20.29	343	P	P	19 16 19.3	+0.8
	baz=159						
Z47A	Carrollton	20.32	315	P	Pn	19 16 21.5	+0.5
Z47A				IAmb	IAmb	19 16 30.6	
	comp=Z,30nm,0.9s						
R54A	Victor	20.34	337	P	P	19 16 19.3	+0.2
	baz=152						
P59A	Jarrettsville	20.36	348	P	P	19 16 19.9	+0.7
	baz=165						
P58A	Pank, Wackersv	20.43	346	P	P	19 16 20.0	0.0
	baz=163						
CCIG	Comitan	20.44	264	P	P	19 16 21.2	+0.7
X48A	Hartselle	20.46	319	P	Pn	19 16 23.3	+0.7
X48A				IAmb	IAmb	19 16 33.9	
	comp=Z,30nm,1.4s						
PSUB	Penn St. - Bra	20.49	350	P	P	19 16 20.6	0.0
PSUB				IAmb	IAmb	19 16 33.2	
	comp=Z,51nm,1.4s						
Q56A	Snyder Ridge,	20.51	341	P	P	19 16 22.0	+1.0
	baz=157						
Q56A	Snyder Ridge,	20.51	341	P	P	19 16 19.6	-1.3
WUPA	West Chester U	20.52	350	P	P	19 16 21.4	+0.4
P57A	Homestead Farm	20.60	344	P	Pn	19 16 23.4	-0.8
	baz=161						
146A	Union	20.68	312	P	P	19 16 24.4	+1.6
146A				IAmb	IAmb	19 16 53.2	
	comp=Z,32nm,1.0s						
MVL	Millersville	20.72	348	P	P	19 16 23.6	+0.5
MVL				IAmb	IAmb	19 16 33.5	
	comp=Z,18nm,0.8s						
OTAV	Otavalo	20.73	202		Pn	19 16 25.4	-0.9
OTAV	Otavalo	20.73	202	eP	Pn	19 16 26.3	0.0
P56A	Dayton Farm, R	20.84	343	P	P	19 16 25.9	+1.4
	baz=159						
R53A	Hurricane	20.85	335	P	P	19 16 24.7	+0.1
R53A				IAmb	IAmb	19 16 37.7	
	comp=Z,23nm,1.0s						
O60A	Telford	20.87	350	P	P	19 16 24.3	-0.4
	baz=168						
O58A	Lewisberry	20.96	347	P	P	19 16 25.9	+0.2
	baz=164						
S51A	Beattyville	20.97	331	P	P	19 16 26.2	+0.4
Q54A	Coxs Mills	21.00	338	P	P	19 16 27.1	+1.0
Q54A				IAmb	IAmb	19 16 49.5	
	comp=Z,26nm,1.1s						
PAGS	Pennsylvania G	21.02	348	P	P	19 16 26.7	+0.4
PAGS				IAmb	IAmb	19 16 56.7	
	comp=Z,34nm,1.0s						
T50A	Nancy	21.07	328	P	P	19 16 26.8	-0.2
T50A				IAmb	IAmb	19 16 39.4	
	comp=Z,15nm,0.8s						
BRNJ	Basking Ridge	21.11	352	P	P	19 16 27.8	+0.5
Q53A	Leroy	21.14	337	P	P	19 16 28.1	+0.4
	baz=151						
CPNY	Central Park	21.14	354	P	P	19 16 29.8	+2.1
CPNY				IAmb	IAmb	19 16 48.3	
	comp=Z,26nm,0.8s						
CLTN	Cedars of Leba	21.17	323	P	P	19 16 29.1	+1.0
CLTN				IAmb	IAmb	19 16 35.5	
	comp=Z,24nm,1.1s						
U49A	Red Boiling Sp	21.18	325	P	P	19 16 28.8	+0.6
U49A				IAmb	IAmb	19 16 35.4	
	comp=Z,21nm,1.1s						
O57A	Amberson	21.20	346	P	P	19 16 28.5	+0.2
	baz=162						
V48A	Smith Brothers	21.20	322	P	P	19 16 29.1	+0.7
344A	Westbrook Farm	21.28	307	P	P	19 16 30.2	+0.9
MCWV	Mont Chateau	21.28	341	P	P	19 16 29.9	+0.7
	baz=156						
MCWV	Mont Chateau	21.28	341	P	P	19 16 29.5	+0.3
MCWV				IAmb	IAmb	19 16 37.2	
	comp=Z,37nm,1.7s						
PAL	Palisades	21.35	354	P	P	19 16 29.7	-0.2
	baz=172						
PAL	Palisades	21.35	354	P	P	19 16 29.5	-0.4
PAL				IAmb	IAmb	19 17 08.4	
	comp=Z,28nm,0.9s						
N60A	Cedar Hill Far	21.36	351	P	P	19 16 30.7	+0.7
	baz=169						
PLAL	Pickwick Lake	21.45	319	P	P	19 16 31.9	+0.9
PLAL				IAmb	IAmb	19 16 38.0	
	comp=Z,31nm,0.9s						
WSPT	Westport, CT	21.46	355	P	P	19 16 31.1	0.0
WSPT				IAmb	IAmb	19 16 38.3	
	comp=Z,40nm,1.1s						
O56A	Blue Knob Stat	21.48	344	P	P	19 16 31.6	+0.1
	baz=160						
O56A	Blue Knob Stat	21.48	344	P	P	19 16 31.7	+0.3
O56A				IAmb	IAmb	19 16 55.1	
	comp=Z,20nm,1.0s						
VBMS	Vicksburg	21.50	309	P	P	19 16 32.8	+1.2
ODNJ	Ogdensburg	21.50	352	P	P	19 16 31.7	+0.1
ODNJ				IAmb	IAmb	19 16 38.8	
	comp=Z,37nm,0.9s						
N59A	State Game Lan	21.51	350	P	P	19 16 32.5	+0.9
	baz=168						
N59A	State Game Lan	21.51	350	P	P	19 16 32.1	+0.5
N59A				IAmb	IAmb	19 16 33.7	
	comp=Z,38nm,1.1s						
Q52A	Bidwell	21.52	335	P	P	19 16 31.7	0.0
TRNY	Table Rock, Ra	21.52	353	P	P	19 16 31.7	0.0
TRNY				IAmb	IAmb	19 16 37.9	
	comp=Z,29nm,0.9s						
N58A	Sunbury	21.60	348	P	P	19 16 33.7	+1.0
	baz=165						
N58A	Sunbury	21.60	348	P	P	19 16 32.1	-0.6
N58A				IAmb	IAmb	19 16 39.2	
	comp=Z,22nm,1.1s						
M63A	Gales Ferry	21.62	358	P	P	19 16 32.8	+0.1
	baz=177						
M61A	Granite Spring	21.64	354	P	P	19 16 33.0	0.0
	baz=173						
P53A	Whipple	21.64	338	P	P	19 16 33.4	+0.3
P53A				IAmb	IAmb	19 16 40.8	
	comp=Z,28nm,0.9s						
SSPA	Standing Stone	21.66	346	P	P	19 16 33.7	+0.4
	baz=162						
SSPA	Standing Stone	21.66	346	P	P	19 16 34.4	+1.2
SSPA				IAmb	IAmb	19 16 37.3	
	comp=Z,28nm,1.2s						
N57A	Milroy	21.70	346	P	P	19 16 34.8	+1.1
	baz=163						
M62A	Hamden	21.70	356	P	P	19 16 34.2	+0.5
	baz=175						
Y45A	Yeager Farm, C	21.71	314	P	P	19 16 35.6	+1.8
M60A	Port Jervis	21.75	353	P	P	19 16 34.3	+0.1
	baz=171,SNR=7.3						
R50A	Paris	21.83	331	P	P	19 16 35.7	+0.7
Q51A	Peebles	22.01	333	P	P	19 16 37.5	+0.5
N56A	West Decatur	22.02	345	P	P	19 16 36.9	-0.3
	baz=161						
P52A	Corning	22.05	336	P	P	19 16 36.9	-0.5
	baz=151						
P52A	Corning	22.05	336	P	P	19 16 37.4	0.0
P52A				IAmb	IAmb	19 17 07.9	
	comp=Z,43nm,1.3s						
WVT	Waverly	22.06	321	P	P	19 16 37.8	+0.2
	baz=133						
WVT	Waverly	22.06	321	P	P	19 16 38.1	+0.5
WVT				IAmb	IAmb	19 16 46.4	
	comp=Z,28nm,1.1s						
L63A	North Scituate	22.06	359	P	P	19 16 36.3	-1.3
	baz=178						
M59A	Waymart	22.07	351	P	P	19 16 37.0	-0.7
	baz=169						
M58A	Price's Panora	22.07	349	P	P	19 16 36.6	-1.1
	baz=166						
BRYW	Bryant College	22.12	359	P	P	19 16 39.0	+0.9
KSPA	Keystone Colle	22.13	350	P	P	19 16 38.8	+0.5
M57A	Sunshine Farm,	22.17	348	P	P	19 16 39.3	+0.7
	baz=164						
M57A	Sunshine Farm,	22.17	348	P	P	19 16 39.4	+0.7
M57A				IAmb	IAmb	19 16 46.6	
	comp=Z,30nm,0.9s						
W45A	Hickory Valley	22.26	317	P	P	19 16 40.3	+0.5
O53A	New Philadelph	22.26	339	P	P	19 16 39.4	-0.3
	baz=154						
O53A	New Philadelph	22.26	339	P	P	19 16 39.9	+0.2
P51A	Williamsport	22.28	335	P	P	19 16 39.6	-0.3
P51A				IAmb	IAmb	19 16 49.2	
	comp=Z,28nm,1.1s						
L60A	Shokan	22.36	354	P	P	19 16 40.9	+0.2
	baz=172						
O52A	Adamsville	22.36	338	P	P	19 16 41.2	+0.4
143A	Socs Landing,	22.39	309	P	P	19 16 42.4	+1.3
143A				IAmb	IAmb	19 16 51.5	
	comp=Z,28nm,0.8s						
342A	Flagon Creek P	22.46	305	P	P	19 16 43.0	+1.1
342A				IAmb	IAmb	19 16 44.4	
	comp=Z,31nm,0.8s						
L61A	Hillsdale 1, H	22.50	355	P	P	19 16 42.2	0.0
	baz=174						
QUA2	Belchertown	22.50	357	P	P	19 16 42.8	+0.5
QUA2				IAmb	IAmb	19 16 51.2	
	comp=Z,46nm,1.2s						
N54A	Moraine State	22.52	342	P	P	19 16 42.4	-0.1
	baz=157						
N54A	Moraine State	22.52	342	P	P	19 16 45.2	+2.7
N54A				IAmb	IAmb	19 16 50.2	
	comp=Z,27nm,0.9s						
M56A	Emporium	22.54	346	P	P	19 16 41.5	-1.2
	baz=162						
M56A	Emporium	22.54	346	P	P	19 16 43.8	+1.1
M56A				IAmb	IAmb	19 17 18.2	
	comp=Z,22nm,1.1s						
N53A	Lisbon	22.64	340	P	P	19 16 44.4	+0.7
L59A	Walton	22.65	352	P	P	19 16 43.1	-0.8
	baz=170						
WCI	Wyandotte Cave	22.74	327	P	P	19 16 44.3	-0.6
	baz=140						
WCI	Wyandotte Cave	22.74	327	P	P	19 16 45.7	+0.9
WCI				IAmb	IAmb	19 16 52.4	
	comp=Z,18nm,0.9s						
L57A	Andrews Acres	22.75	349	P	P	19 16 45.1	+0.2
	baz=166						
BINY	Binghamton	22.80	350	P	P	19 16 45.4	0.0
	baz=168						
UTMT	University of	22.82	320	P	P	19 16 48.8	+3.1
HALT	Halls	22.83	319	P	P	19 16 50.3	+4.5
CMIG	Matias Romero	22.86	267	P	P	19 16 46.0	-0.3
	comp=Z,3.9nm,1.0s,baz=350,slow=6.8,SNR=2.6						
441A	DeRidder	22.87	303	P	P	19 16 48.0	+1.8
ACSO	Alum Creek Sta	22.89	336	P	P	19 16 46.5	+0.1
	baz=150						
ACSO	Alum Creek Sta	22.89	336	P	P	19 16 47.0	+0.7
M54A	Oil Creek Stat	22.93	343	P	P	19 16 47.0	+0.2
	baz=158						
M54A	Oil Creek Stat	22.93	343	P	P	19 16 48.8	+1.9
M54A				IAmb	IAmb	19 16 54.7	
	comp=Z,19nm,0.8s						
X43A	Marvell	22.99	314	P	P	19 16 48.6	+1.1
	baz=125						
X43A	Marvell	22.99	314	P	P	19 16 49.8	+2.3
PTGA	Pitinga	23.02	151	P	P	19 16 47.7	-0.2
	comp=Z,1.8nm,0.3s,baz=340,slow=13,SNR=5.0						
PTGA				LR	LR	19 26 21.6	
	comp=Z,213nm,18.2s,baz=350,slow=38						
L56A	Greenwood	23.02	347	P	P	19 16 47.5	-0.3
	baz=164						
P49A	Miami Univ. Ec	23.02	332	P	P	19 16 48.6	+0.8
	baz=145						
P49A	Miami Univ. Ec	23.02	332	P	P	19 16 48.9	+1.1
LNXT	Lenox	23.05	319	P	P	19 16 50.6	+2.5
M53A	WI Miller and	23.16	341	P	P	19 16 49.9	+0.7
	baz=156						
M53A	WI Miller and	23.16	341	P	P	19 16 51.1	+1.9
M53A				IAmb	IAmb	19 17 28.4	
	comp=Z,22nm,0.9s						
HICK	Hickman	23.17	320	P	P	19 16 53.3	+3.9
K59A	Cooperstown	23.20	353	P	P	19 16 50.1	+0.5
	baz=171						
K58A	Earlville	23.30	351	P	P	19 16 51.1	+0.6
	baz=169						
O49A	Covington	23.40	333	P	P	19 16 52.4	+0.8
O49A				IAmb	IAmb	19 16 59.6	
	comp=Z,32nm,1.2s						
J61A	Chester	23.58	357	P	P	19 16 54.6	+1.4
	baz=176						
ERPA	Erie	23.59	343	P	P	19 16 54.5	+1.1
	baz=158						
J58A	Remsen	23.83	352	P	P	19 16 57.2	+1.4
	baz=170						
I59A	Olmsteadville	24.11	355	P	P	19 16 59.3	+0.9
	baz=173						
I60A	Shoreham	24.12	356	P	P	19 16 58.8	+0.4
	baz=174						
I58A	Old Forge	24.12	353	P	P	19 16 58.7	+0.2
	baz=171						
W41B	Gary Mavity, V	24.29	314	P	P	19 17 00.7	+0.6
	baz=124						
W41B	Gary Mavity, V	24.29	314	P	P	19 17 01.3	+1.2
X40A	Basin Creek Fa	24.33	312	P	P	19 17 00.8	+0.4
	baz=122,SNR=14						
X40A	Basin Creek Fa	24.33	312	P	P	19 17 01.3	+0.8
X40A				IAmb	IAmb	19 17 08.5	
	comp=Z,20nm,0.9s						
WHAR	Wooly Hollow	24.38	314	P	P	19 17 01.6	+0.7
NATX	Nacogdoches	24.43	304	P	P	19 17 02.0	+0.6
	baz=114						
NATX	Nacogdoches	24.43	304	P	P	19 17 02.3	+0.9
LBNH	Lisbon	24.45	358	P	P	19 17 02.6	+1.1
	baz=178						
I57A	Carthage	24.45	352	P	P	19 17 02.2	+0.7
	baz=169						
FCAR	Ozark Folk Cen	24.61	315	P	P	19 17 03.0	0.0
FCAR				IAmb	IAmb	19 17 10.1	
	comp=Z,26nm,0.9s						
H61A	Lyndonville	24.74	358	P	P	19 17 04.2	0.0
	baz=178						
H58A	Gabriels	24.76	354	P	P	19 17 03.9	-0.4
	baz=173						
FVM	French Village	24.84	321	P	P	19 17 04.9	-0.2
FVM				IAmb	IAmb	19 17 15.4	
	comp=Z,25nm,1.4s						
MIAR	Mount Ida	24.88	311	P	P	19 17 04.8	-0.7
	baz=121						
H57A	Richville	24.93	352	P	P	19 17 04.8	-1.0
	baz=170						
LONY	Lake Ozonia	25.00	354	P	P	19 17 04.7	-1.7
	baz=172						
G60A	Masonville	25.32	358	P	P	19 17 09.2	-0.1
	baz=177						
G63A	Kingsbury	25.33	2	P	P	19 17 09.5	+0.1
	baz=183						
G59A	Clarenceville	25.34	356	P	P	19 17 11.2	+1.7
	baz=175						
U40A	Yellville	25.36	315	P	P	19 17 10.7	+0.9
	baz=125,SNR=8.5						
U40A	Yellville	25.36	315	P	P	19 17 10.5	+0.7
U40A				IAmb	IAmb	19 17 18.9	
	comp=Z,28nm,1.1s						
W39A	Magazine	25.36	312	P	P	19 17 10.6	+0.8
	baz=122,SNR=7.8						
W39A	Magazine	25.36	312	P	P	19 17 11.5	+1.7
W39A				IAmb	IAmb	19 17 22.4	
	comp=Z,27nm,1.1s						
CCM	Cathedral Cave	25.38	320	P	P	19 17 10.7	+0.7
	baz=130						
CCM	Cathedral Cave	25.38	320	P	P	19 17 10.6	+0.7
CCM				IAmb	IAmb	19 17 17.1	
	comp=Z,19nm,0.9s						
G62A	West of Eustis	25.41	1	P	P	19 17 11.2	+1.0
	baz=181						
237A	Washetta, Mont	25.42	304	P	P	19 17 11.6	+1.2
P43A	Skaggs, Pawnee	25.48	325	P	P	19 17 11.6	+0.8
G61A	St-Isidore-de-	25.48	359	P	P	19 17 11.5	+0.8
	baz=179						
G64A	Maxfield	25.51	4	P	P	19 17 12.3	+1.2
	baz=185						
G65A	Princeton	25.55	6	P	P	19 17 11.9	+0.6
	baz=187						
H53A	Bobcaygeon	25.57	347	P	P	19 17 12.8	+1.2
	baz=163						
SADO	Sadowa	25.88	347	LR	LR	19 26 48.6	
	comp=Z,262nm,20.0s,baz=164,slow=35						
R40A	Maddies Statio	26.15	320	IAmb	IAmb	19 17 26.0	
	comp=Z,25nm,0.9s						
F60A	Warwick	26.17	358	P	P	19 17 17.2	+0.1
	baz=178						
X37A	Clayton	26.20	309	P	P	19 17 17.9	+0.5
X37A				IAmb	IAmb	19 17 27.5	
	comp=Z,16nm,1.2s						
TLIG	Tlapa	26.25	270	P	P	19 17 18.5	+0.3
G54A	Lake Saint Pet	26.27	349	P	P	19 17 18.6	+0.7
	baz=165						
435B	Jarrell	26.42	300	P	P	19 17 18.9	-0.6
	baz=108						
S39A	Bolivar	26.44	317	IAmb	IAmb	19 17 29.2	
	comp=Z,24nm,0.9s						
E57A	Chemin Saint G	26.73	355	P	P	19 17 22.7	+0.5
	baz=173						
D55A	Sainte-Anne-du	27.46	353	P	P	19 17 29.2	+0.5
	baz=171						
ATAH	Atahualpa	27.69	196	LR	LR	19 30 06.9	
	comp=Z,195nm,21.2s,baz=346,slow=40						
T35A	Sooner Cattle	28.14	313	IAmb	IAmb	19 17 41.9	
	comp=Z,8.5nm,0.8s						
JCT	Junction City	28.16	298	P	P	19 17 36.1	+0.9
	baz=106						
JCT	Junction City	28.16	298	P	P	19 17 34.8	-0.4
JCT				IAmb	IAmb	19 17 45.5	
	comp=Z,7.7nm,0.8s						
JFWS	Jewell Farm	28.25	329	P	P	19 17 36.1	+0.3
	baz=139						
ABTX	Abilene, Hawle	28.67	302	P	P	19 17 40.4	+0.7

	baz=110,SNR=5.4						
ABTX	**Abilene, Hawle**	**28.67**	**302**	P	**P**	**19 17 40.6**	**+0.9**
ABTX				IAmb	IAmb	19 17 50.4	
	comp=Z,11nm,0.9s						
WMOK	**Wichita Mounta**	**28.79**	**307**	P	**P**	**19 17 40.4**	**-0.3**
	baz=114,SNR=7.8						
WMOK	**Wichita Mounta**	**28.79**	**307**	P	**P**	**19 17 40.8**	**+0.1**
SAML	**Samuel**	**29.51**	**164**	P	**P**	**19 17 46.5**	**-0.7**
SAML				IAmb	IAmb	19 17 54.9	
	comp=Z,8.4nm,0.9s						
LSQQ	**Lebel-sur-Quev**	**29.65**	**352**	P	**P**	**19 17 49.6**	**+1.4**
	baz=168						
CHGQ	**Chibougamau**	**30.23**	**356**	P	**P**	**19 17 54.2**	**+1.0**
	baz=174						
MATQ	**Matagami**	**30.43**	**351**	P	**P**	**19 17 54.9**	**-0.1**
	baz=168						
AMTX	**Amarillo**	**31.05**	**305**	P	**P**	**19 18 00.7**	**0.0**
	baz=111						
TXAR	**Lajitas Array**	**31.17**	**294**	P	**P**	**19 18 01.6**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=104,slow=11,SNR=18						
TXAR				PcP	**PcP**	**19 20 56.6**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=130,slow=4.4,SNR=4.5						
TXAR				LR	LR	19 33 28.6	
	comp=Z,109nm,20.7s,baz=0.0,slow=42						
TX31	**Lajitas Ar. Si**	**31.17**	**294**	P	**P**	**19 18 02.2**	**+0.2**
CBKS	**Cedar Bluff**	**31.30**	**314**	P	**P**	**19 18 03.0**	**+0.1**
	baz=119						
MSTX	**Muleshoe**	**31.59**	**303**	P	**P**	**19 18 05.0**	**-0.5**
	baz=108						
MSTX	**Muleshoe**	**31.59**	**303**	IAmb	IAmb	19 18 21.4	
	comp=Z,7.1nm,0.9s						
ECSD	**EROS Data Cent**	**32.15**	**324**	P	**P**	**19 18 10.2**	**0.0**
	baz=130						
ECSD	**EROS Data Cent**	**32.15**	**324**	IAmb	IAmb	19 18 16.3	
	comp=Z,8.3nm,1.1s						
EYMN	**Ely**	**32.70**	**334**	P	**P**	**19 18 15.8**	**+0.8**
	baz=142						
MNTX	**Cornudas Mount**	**33.10**	**298**	P	**P**	**19 18 19.4**	**+0.7**
	baz=103,SNR=21						
T25A	**Trinidad**	**33.92**	**308**	P	**P**	**19 18 26.5**	**+0.4**
	baz=112						
T25A	**Trinidad**	**33.92**	**308**	IAmb	IAmb	19 18 34.3	
	comp=Z,6.3nm,0.9s						
ANMO	**Albuquerque**	**34.78**	**303**	P	**P**	**19 18 34.2**	**+0.6**
	baz=106						
ANMO	**Albuquerque**	**34.78**	**303**	P	**P**	**19 18 34.6**	**+1.1**
SDCO	**Great Sand Dun**	**34.95**	**308**	P	**P**	**19 18 35.5**	**+0.4**
	baz=111,SNR=9.7						
121A	**Cookes Peak, D**	**35.27**	**299**	P	**P**	**19 18 38.5**	**+0.8**
	baz=102						
ISCO	**Idaho Springs**	**35.82**	**312**	P	**P**	**19 18 42.8**	**+0.3**
	baz=114						
ISCO	**Idaho Springs**	**35.82**	**312**	IAmb	IAmb	19 18 54.5	
	comp=Z,12nm,1.2s						
S22A	**4UR Ranch, Cre**	**35.94**	**308**	P	**P**	**19 18 43.6**	**0.0**
	baz=110						
S22A	**4UR Ranch, Cre**	**35.94**	**308**	IAmb	IAmb	19 18 57.6	
	comp=Z,9.5nm,1.6s						
ULM	**Lac du Bonnet**	**36.31**	**333**	P	**P**	**19 18 47.0**	**+0.7**
	comp=Z,5.4nm,0.8s,baz=131,slow=7.9,SNR=7.0						
PHWY	**Pilot Hill**	**36.34**	**314**	P	**P**	**19 18 47.8**	**+0.8**
PHWY				IAmb	IAmb	19 18 54.3	
	comp=Z,7.2nm,0.8s						
MDND	**Maddock**	**36.40**	**327**	P	**P**	**19 18 47.4**	**+0.4**
	baz=130						
N23A	**Red Feather La**	**36.50**	**313**	P	**P**	**19 18 48.2**	**-0.1**
	baz=115						
MVCO	**Mesa Verde**	**37.03**	**306**	P	**P**	**19 18 53.1**	**+0.3**
	baz=108						
K22A	**Casper**	**37.64**	**315**	P	**P**	**19 18 57.7**	**-0.2**
	baz=116						
TUC	**Tucson**	**37.72**	**298**	P	**P**	**19 18 58.5**	**0.0**
	baz=100						
O20A	**White River Ci**	**37.81**	**311**	P	**P**	**19 19 00.4**	**+1.0**
	baz=112						
O20A	**White River Ci**	**37.81**	**311**	IAmb	IAmb	19 19 08.8	
	comp=Z,13nm,1.0s						
MNMC	**Minye Minye**	**38.65**	**178**	P	**P**	**19 19 03.6**	**-3.0**
MNMC				IAmb	IAmb	19 19 16.1	
	comp=Z,13nm,0.9s						
WUAZ	**Wupatki**	**38.82**	**302**	P	**P**	**19 19 08.7**	**+0.7**
	baz=103						
SRU	**San Rafael Swe**	**39.13**	**308**	P	**P**	**19 19 11.3**	**+0.8**
PDAR	**Pinedale Array**	**39.72**	**314**	P	**P**	**19 19 15.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=117,slow=10,SNR=4.8						
PDAR				PcP	**PcP**	**19 21 20.3**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=129,slow=5.8,SNR=2.5						
PDAR				LR	LR	19 36 41.9	
	comp=Z,124nm,18.3s,baz=118,slow=38						
BW06	**Boulder Array**	**39.72**	**314**	P	**P**	**19 19 15.3**	**-0.1**
	baz=113						
MTPU	**Mount Pierson**	**40.07**	**306**	P	**P**	**19 19 18.7**	**+0.2**
RLMT	**Red Lodge**	**40.51**	**317**	P	**P**	**19 19 21.8**	**-0.1**
	baz=116						
RLMT	**Red Lodge**	**40.51**	**317**	IAmb	IAmb	19 19 32.7	
	comp=Z,18nm,1.4s						
LOHW	**Long Hollow**	**40.76**	**315**	IAmb	IAmb	19 19 31.3	
	comp=Z,11nm,0.9s						
REDW	**Red Top Meadow**	**40.83**	**314**	IAmb	IAmb	19 19 31.9	
	comp=Z,14nm,0.9s						
MOOW	**Moose Ponds**	**40.91**	**315**	IAmb	IAmb	19 19 32.9	
	comp=Z,10.0nm,0.8s						
DUG	**Dugway, Tooele**	**41.14**	**309**	P	**P**	**19 19 28.0**	**+0.9**
	baz=107,SNR=9.6						
DUG	**Dugway, Tooele**	**41.14**	**309**	P	**P**	**19 19 27.7**	**+0.6**
DUG				IAmb	IAmb	19 19 34.9	
	comp=Z,7.5nm,0.8s						
PSUT	**Pine Spring**	**41.46**	**306**	P	**P**	**19 19 31.1**	**+1.3**
BGU	**Big Grassy Mou**	**41.51**	**310**	P	**P**	**19 19 30.5**	**+0.3**
IRM	**Iron Mountain**	**41.62**	**299**	P	**P**	**19 19 32.2**	**+1.3**
	baz=99,SNR=5.1						
BDFB	**Brasilia**	**41.77**	**146**	LR	LR	19 38 16.5	
	comp=Z,133nm,18.1s,baz=22,slow=38						
BC3	**Big Chuckawall**	**41.80**	**299**	P	**P**	**19 19 33.3**	**+0.7**
	baz=98						
FFC	**Flin Flon**	**42.13**	**334**	P	**P**	**19 19 36.6**	**+1.8**
GMRC	**Granite Mounta**	**42.13**	**300**	P	**P**	**19 19 36.9**	**+1.6**
	baz=99						
EGMT	**Eagleton**	**42.13**	**321**	P	**P**	**19 19 37.6**	**+2.6**
	baz=118						
LVC	**Limon Verde**	**42.14**	**177**	P	**P**	**19 19 32.9**	**-2.6**
	comp=Z,4.9nm,0.8s,baz=352,slow=4.6,SNR=5.1						
LVC	**Limon Verde**	**42.14**	**177**	IAmb	IAmb	19 19 34.2	
	comp=Z,4.8nm,0.8s						
BOZ	**Bozeman (W)**	**42.22**	**317**	P	**P**	**19 19 38.9**	**+3.0**
	baz=114						
MONP2	**Monument Peak**	**42.51**	**297**	P	**P**	**19 19 39.0**	**+0.5**
	baz=96						
HEC	**Hector,Ludlow**	**42.69**	**300**	P	**P**	**19 19 39.6**	**-0.1**
	baz=98						
R11A	**Troy Canyon, C**	**42.74**	**306**	P	**P**	**19 19 39.8**	**-0.4**
	baz=103						
BCYI	**Bear Canyon**	**42.90**	**315**	P	**P**	**19 19 41.8**	**+0.4**
TPNV	**Topopah Spring**	**42.97**	**303**	P	**P**	**19 19 43.4**	**+1.2**
	baz=101,SNR=5.4						
GSC	**Goldstone, Bar**	**43.14**	**301**	P	**P**	**19 19 43.9**	**+0.5**
	baz=99						
MURC	**Murrieta**	**43.23**	**298**	P	**P**	**19 19 44.3**	**+0.1**
	baz=97						
HLID	**Hailey**	**43.32**	**313**	P	**P**	**19 19 45.1**	**+0.2**
	baz=109						
BFSC	**Mount Baldy Ra**	**43.69**	**299**	P	**P**	**19 19 48.2**	**+0.2**
	baz=97						
MPMC	**Manual Prospec**	**43.80**	**302**	P	**P**	**19 19 49.5**	**+0.6**
	baz=99						
GRAC	**Grapevine Rang**	**43.86**	**303**	P	**P**	**19 19 50.5**	**+1.4**
	baz=100						
LRMC	**Laurel Mtn Rad**	**43.87**	**301**	P	**P**	**19 19 49.4**	**0.0**
	baz=98						
EDW2	**Edwards Air Fo**	**44.05**	**300**	P	**P**	**19 19 51.1**	**+0.4**
	baz=97						
MSO	**Missoula**	**44.18**	**318**	P	**P**	**19 19 54.2**	**+2.6**
	baz=113						
CWC	**Cottonwood Cre**	**44.34**	**302**	P	**P**	**19 19 52.9**	**-0.2**
	baz=99						
ISA	**Isabella, Lake**	**44.54**	**301**	P	**P**	**19 19 54.3**	**-0.4**
	baz=98						
NVAR	**Mina Array Bea**	**44.85**	**305**	P	**P**	**19 19 58.2**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=70,slow=13,SNR=17						
LHV	**Little Huntoon**	**44.97**	**305**	IAmb	IAmb	19 20 01.9	
	comp=Z,5.3nm,0.9s						
VES	**Vestal, Richgr**	**45.05**	**301**	P	**P**	**19 19 59.3**	**+0.6**
	baz=98						
OMMB	**Old Mammoth Mi**	**45.25**	**304**	IAmb	IAmb	19 20 03.3	
	comp=Z,7.3nm,1.0s						
SCZ2	**Santa Cruz Isl**	**45.29**	**299**	P	**P**	**19 20 00.4**	**-0.2**
	baz=95						
PKM	**Mcpherson Peak**	**45.53**	**300**	P	**P**	**19 20 02.3**	**-0.4**
	baz=96						
WAKR	**Walker**	**45.74**	**305**	P	**P**	**19 20 05.7**	**+1.4**
WAKR				IAmb	IAmb	19 20 14.8	
	comp=Z,7.9nm,1.1s						
WVOR	**Wild Horse Val**	**45.97**	**310**	IAmb	IAmb	19 20 19.0	
	comp=Z,8.8nm,1.2s						
G08A	**Pilot Rock**	**46.95**	**314**	IAmb	IAmb	19 20 20.8	
	comp=Z,5.6nm,0.9s						
AFDM	**Forest Hills D**	**46.99**	**305**	IAmb	IAmb	19 20 21.2	
	comp=Z,3.9nm,0.9s						
CPUP	**Villa Florida**	**47.66**	**163**	LR	LR	19 41 45.5	
	comp=Z,120nm,18.8s,baz=358,slow=38						
O03E	**Paynes Creek**	**47.85**	**307**	P	**P**	**19 20 21.1**	**+0.4**
	baz=100						
E07A	**Sunnyside**	**47.92**	**316**	IAmb	IAmb	19 20 28.7	
	comp=Z,7.5nm,0.9s						
L04D	**Klamath Falls**	**48.57**	**309**	P	**P**	**19 20 26.9**	**+0.7**
	baz=101						
O02D	**Mt. Diablo Mer**	**48.58**	**307**	P	**P**	**19 20 26.5**	**+0.3**
	baz=99						
J04D	**Umpqua Nationa**	**48.64**	**311**	P	**P**	**19 20 26.8**	**-0.1**
	baz=102						
N02D	**Trinity Center**	**48.64**	**308**	P	**P**	**19 20 25.9**	**-0.8**
	baz=100						
YBH	**Yreka Blue Hor**	**48.78**	**309**	P	**P**	**19 20 27.3**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=57,slow=4.7,SNR=1.9						
YBH	**Yreka Blue Hor**	**48.78**	**309**	IAmb	IAmb	19 20 41.1	
	comp=Z,6.4nm,1.3s						
F05D	**White Salmon**	**48.80**	**314**	P	**P**	**19 20 28.6**	**+0.8**
	baz=105						
M02C	**Callahan**	**48.82**	**308**	P	**P**	**19 20 28.6**	**+0.4**
	baz=100						
SFJD	**Kangerlussuaq**	**49.02**	**10**	P	**P**	**19 20 28.9**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=143,slow=13,SNR=1.9						
HUMO	**Hull Mountain**	**49.12**	**310**	IAmb	IAmb	19 20 36.3	
	comp=Z,5.4nm,0.8s						
CO01	**Juntas del Tor**	**49.43**	**179**	P	**P**	**19 20 32.1**	**-0.9**
L02E	**Cave Junction**	**49.51**	**309**	P	**P**	**19 20 33.8**	**+0.5**
	baz=100						
K02D	**Willamette Mer**	**49.65**	**310**	P	**P**	**19 20 34.6**	**+0.2**
	baz=100						
E04D	**Cinebar**	**49.72**	**315**	P	**P**	**19 20 35.3**	**+0.5**
	baz=105						
ZON	**Zonda**	**51.04**	**178**	P	**P**	**19 20 43.8**	**-1.0**
YKA	**Yellowknife Ar**	**52.14**	**336**	P	**P**	**19 20 52.0**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=115,slow=7.2,SNR=15						
YKA				LR	LR	19 43 00.9	
	comp=Z,193nm,19.7s,baz=0.0,slow=36						
ICESG	**Greenland Ices**	**52.97**	**14**	*i* P	**P**	**19 21 02.2**	**+3.0**
SUMG	**Summit**	**55.98**	**11**	*i* P	**P**	**19 21 25.5**	**+4.4**
	comp=Z,33nm,0.9s						
SUMG	**Summit**	**55.98**	**11**	*i* P	**P**	**19 21 25.6**	**+4.4**
SUMG				IAmb	IAmb	19 21 27.3	
	comp=Z,33nm,0.9s						
PGAV	**Gavieira, Arco**	**56.90**	**52**	*e*P	**P**	**19 21 29.1**	**+1.3**
POLO	**Lamas de Olo**	**57.23**	**53**	*e*P	**P**	**19 21 31.0**	**+0.8**
PVRL	**Vila Real**	**57.29**	**53**	*e*P	**P**	**19 21 31.6**	**+1.1**
MTE	**Manteigas**	**57.40**	**54**	*e*P	**P**	**19 21 32.2**	**+0.9**
PCBR	**Castelo Branco**	**57.44**	**55**	*e*P	**P**	**19 21 32.7**	**+1.2**
PMRV	**Marv??o**	**57.50**	**55**	*e*P	**P**	**19 21 32.9**	**+0.9**
MVO	**Moncorvo**	**57.80**	**53**	*e*P	**P**	**19 21 34.9**	**+0.7**
LC01	**Cunco**	**58.33**	**181**	P	**P**	**19 21 35.5**	**-2.2**
C36M	**Paulatuk**	**59.04**	**341**	P	**P**	**19 21 41.5**	**-0.7**
	baz=118						
ESDC	**Sonseca Array**	**60.15**	**55**	P	**P**	**19 21 50.0**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=278,slow=7.2,SNR=46						
ESDC				LR	LR	19 43 24.2	
	comp=Z,139nm,20.5s,baz=305,slow=32						
ESBB	**Sonseca Array**	**60.15**	**55**	P	**P**	**19 21 50.9**	**+0.4**
ESBB				IAmb	IAmb	19 21 59.2	
	comp=Z,6.5nm,0.8s						
PLCA	**Paso Flores**	**60.16**	**180**	P	**P**	**19 21 48.5**	**-1.8**
	comp=Z,3.2nm,0.8s,baz=342,slow=5.3,SNR=6.1						
PLCA				LR	LR	19 50 52.3	
	comp=Z,118nm,18.1s,baz=344,slow=39						
PLCA	**Paso Flores**	**60.16**	**180**	IAmb	IAmb	19 21 55.8	
	comp=Z,22nm,1.6s						
DAG	**Danmarks Havn**	**62.65**	**12**	*i* P	**P**	**19 22 08.6**	**+1.9**
	comp=Z,5.5nm,1.1s						
DAG	**Danmarks Havn**	**62.65**	**12**	*e*P	**P**	**19 22 08.6**	**+1.9**
DAG				IAmb	IAmb	19 22 13.4	
	comp=Z,5.5nm,1.1s						
L26K	**Log Cabin Wild**	**64.62**	**331**	P	**P**	**19 22 20.0**	**+0.1**
	baz=96						
SCRK	**Sand Creek**	**65.01**	**332**	P	**P**	**19 22 23.3**	**+0.7**
	baz=96,SNR=5.1						
N25K	**Chitina, Valde**	**65.06**	**330**	P	**P**	**19 22 23.3**	**+0.3**
	baz=95						
DBIC	**Dimbokro**	**65.29**	**92**	P	**P**	**19 22 23.8**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=147,slow=5.0,SNR=1.5						
DBIC				LR	LR	19 46 13.6	
	comp=Z,37nm,21.9s,baz=268,slow=32						
DBIC	**Dimbokro**	**65.29**	**92**	IAmb	IAmb	19 22 49.5	
	comp=Z,8.5nm,1.4s						
IL31		**66.33**	**333**	P	**P**	**19 22 30.9**	**0.0**
IL31				IAmb	IAmb	19 22 37.5	
	comp=Z,11nm,1.2s						
ILAR	**Eielson Array**	**66.33**	**333**	P	**P**	**19 22 30.5**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=98,slow=5.3,SNR=10						
ILAR				LR	LR	19 52 26.2	
	comp=Z,142nm,18.7s,baz=97,slow=37						
HDA	**Harding Lake**	**66.34**	**333**	P	**P**	**19 22 30.8**	**-0.2**
	baz=94						
POKR	**Poker Plat Res**	**66.59**	**333**	P	**P**	**19 22 32.2**	**-0.4**
	baz=94						
I23K	**Minto, Yukon-K**	**67.41**	**333**	P	**P**	**19 22 37.7**	**-0.1**
	baz=92,SNR=6.9						
TOLK	**Toolik Lake Re**	**67.64**	**337**	P	**P**	**19 22 38.8**	**-0.5**
	baz=93						
COLD	**Coldfoot**	**67.82**	**336**	P	**P**	**19 22 40.6**	**+0.3**
	baz=92,SNR=6.6						
SENIN	**Lac Senin/Sane**	**67.97**	**47**	P	**P**	**19 22 42.3**	**+0.3**
SENIN				IAmb	IAmb	19 22 43.5	
	comp=Z,6.9nm,0.9s						
NOA	**NORSAR Array B**	**69.16**	**31**	LR	LR	19 50 57.5	
	comp=Z,58nm,18.6s,baz=275,slow=34						
TUE	**Stuetta**	**69.37**	**47**	P	**P**	**19 22 51.0**	**+0.3**
TUE				IAmb	IAmb	19 23 01.5	
	comp=Z,4.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.53**	**83**	P	**P**	**19 22 51.5**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=299,slow=5.6,SNR=3.3						
TORD				LR	LR	19 49 47.8	
	comp=Z,110nm,20.1s,baz=30,slow=33						
RETA	**Reutte**	**70.19**	**46**	*e*P	**P**	**19 22 56.3**	**+0.7**
	comp=Z,1.6nm,0.5s						
FETA	**Feichten**	**70.24**	**46**	*e*P	**P**	**19 22 56.5**	**+0.6**
	comp=Z,3.3nm,0.8s						
KEST	**Kesra**	**71.07**	**58**	LR	LR	19 48 47.0	
	comp=Z,94nm,21.7s,baz=218,slow=31						
CLL	**Collm**	**71.11**	**41**	*e*P	**P**	**19 23 02.0**	**+1.0**
	comp=Z,22nm,1.8s						
ABTA	**Abfaltersbach**	**71.49**	**46**	*e*P	P	19 23 10.9	+7.4
	comp=Z,1.9nm,0.6s						
KHC	**Kasperske Hory**	**71.81**	**43**	*e*P	**P**	**19 23 05.3**	**0.0**
GEC2	**GERESS Array S**	**71.94**	**44**	IAmb	IAmb	19 23 13.9	
	comp=Z,7.1nm,1.1s						
GERES	**GERESS Array B**	**71.94**	**44**	P	**P**	**19 23 05.6**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=258,slow=6.7,SNR=6.7						
GERES				LR	LR	19 52 24.2	
	comp=Z,145nm,18.6s,baz=290,slow=34						
OBKA	**Obir**	**72.91**	**46**	*e*P	**P**	**19 23 12.8**	**+0.8**
	comp=Z,3.5nm,0.7s						
DPC	**Dobruska-Polom**	**73.35**	**42**	*e*P	**P**	**19 23 14.7**	**+0.2**
ARCES	**ARCESS Array B**	**73.92**	**21**	P	**P**	**19 23 15.3**	**-2.1**
	comp=Z,7.9nm,1.2s,baz=270,slow=4.5,SNR=1.9						
MODS	**Modra-Piesok**	**74.36**	**44**	*e*P	P	19 23 27.0	+6.6
VYHS	**Vyhne**	**75.34**	**43**	*e*P	P	19 23 33.6	+7.5
FINES	**FINESS Array B**	**76.17**	**29**	P	**P**	**19 23 29.4**	**-1.1**
	comp=Z,6.4nm,1.0s,baz=270,slow=5.7,SNR=5.1						
FINES				LR	LR	19 53 02.4	
	comp=Z,54nm,20.5s,baz=229,slow=32						
KOLS	**Kolonicke sedl**	**77.44**	**42**	*e*P	P	19 23 46.8	+8.9
BZS	**Buzias**	**77.90**	**46**	⇑P	**P**	**19 23 41.8**	**+1.2**
MDVR	**Moldovita**	**78.20**	**47**	⇑P	**P**	**19 23 43.1**	**+0.8**
DRGR		**78.31**	**44**	⇑P	**P**	**19 23 43.6**	**+0.7**
VOIR		**80.26**	**45**	⇑P	**P**	**19 23 54.5**	**+0.9**
BIZ	**Bicaz**	**80.49**	**44**	⇑P	**P**	**19 23 54.2**	**-0.5**
SORM	**Soroca**	**81.53**	**42**	⇑P	**P**	**19 23 59.6**	**-0.6**
PPT	**Papeete**	**85.62**	**250**	LR	LR	19 58 06.2	
	comp=Z,75nm,20.8s,baz=262,slow=32						
BRTR	**Keskin Array B**	**88.24**	**48**	P	**P**	**19 24 33.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=306,slow=37,SNR=3.8						
BRTR				LR	LR	20 03 25.0	
	comp=Z,21nm,18.1s,baz=306,slow=35						
NRIK	**Noril'sk**	**89.84**	**7**	LR	LR	20 03 50.5	
	comp=Z,52nm,21.9s,baz=352,slow=35						
CMAR	**Chiang Mai Arr**	**140.77**	**15**	PKP	**PKPdf**	**19 31 12.6**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=320,slow=4.0,SNR=5.9						
STKA	**Stephens Creek**	**148.43**	**241**	PKPbc	**PKPdf**	**19 31 26.2**	**+0.1**
	comp=Z,5.2nm,1.0s,baz=135,slow=3.7,SNR=10						
WRA	**Warramunga Arr**	**156.22**	**265**	PKP	**PKPdf**	**19 31 36.2**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=82,slow=1.4,SNR=8.2						
WRA				PKPab	**PKPab**	**19 32 03.7**	**-2.3**
	comp=Z,2.1nm,0.8s,baz=87,slow=3.7,SNR=6.5						
ASAR	**Alice Springs**	**156.59**	**256**	PKP	**PKPdf**	**19 31 37.9**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=89,slow=1.7,SNR=6.5						
ASAR				PKPbc	**sPKPdf**	**19 31 50.8**	**+3.4**
	comp=Z,0.6nm,0.6s,baz=114,slow=3.2,SNR=13						
ASAR				PKPab	**PKPab**	**19 32 06.8**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=102,slow=4.4,SNR=12						

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*THE **02** 19:22:33.8, 37°.27N×20°.56E, h0^{km}±1^{km}, ML3.3/3, Error ellipse: s-maj=2.1km s-min=0.4km az=230.0*

*ATH **02** 19:22:33.4, 37°.22N×20°.49E, h6^{km}±2^{km}, ML3.5/5, Error ellipse: s-maj=3.7km s-min=1.1km az=52.0*

ISC 02 19:22:33.9±1.5**, 37°.27N**±0°.07×**20°.51E**±0°.06**, h22**^{km}±7^{km}**,**
n71,σ**1§34**/101**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRI1	**kERI**	**0.46**	**32**	P	**Pb**	**19 22 42.7**	**-0.7**
KRI1				S	**Sb**	**19 22 48.8**	**-1.0**
ZAK2	**Zakynthos**	**0.60**	**31**	P	**Pb**	**19 22 44.7**	**-1.2**
ZAK2				S	**Sb**	**19 22 53.7**	**-0.3**
VLMS	**Volimes, Zakyn**	**0.62**	**11**	P	**Pb**	**19 22 45.7**	**-0.5**
VLMS				S	**Sb**	**19 22 54.4**	**-0.1**
VLMS				AML	AML	19 22 56.3	
	comp=N,17226µm,0.2s						
VLMS				AML	AML	19 22 58.0	
	comp=E,18359µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.62**	**11**	P	**Pb**	**19 22 45.7**	**-0.5**
VLMS				S	**Sb**	**19 22 54.4**	**-0.1**
VLMS				AML	AML	19 22 56.3	
	comp=N,17226µm,0.2s						
VLMS				AML	AML	19 22 58.0	
	comp=E,18359µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.62**	**11**	P	**Pb**	**19 22 45.6**	**-0.5**
VLMS				S	**Sb**	**19 22 54.3**	**-0.2**
	comp=E,9µm,0.2s						
PSDA	**Pessada-Kefalo**	**0.85**	**4**	P	**Pb**	**19 22 50.2**	**+0.3**
PSDA				S	**Sn**	**19 23 02.7**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.85**	**4**	P	**Pb**	**19 22 50.2**	**+0.3**
PSDA				S	**Sn**	**19 23 02.7**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.85**	**4**	P	**Pb**	**19 22 49.9**	**0.0**
PSDA				S	**Sn**	**19 23 02.5**	**+0.2**
VLS	**Valsamata**	**0.91**	**4**	P	**Pb**	**19 22 51.1**	**+0.1**
VLS				S	**Sn**	**19 23 04.0**	**+0.1**
VLS				AML	AML	19 23 05.7	
	comp=E,4448µm,0.2s						
VLS				AML	AML	19 23 06.0	
	comp=N,3954µm,0.3s						
VLS	**Valsamata**	**0.91**	**4**	P	**Pb**	**19 22 51.1**	**+0.1**
VLS				S	**Sn**	**19 23 04.0**	**+0.1**
VLS				AML	AML	19 23 05.7	
	comp=E,4448µm,0.2s						
VLS				AML	AML	19 23 06.0	
	comp=N,3954µm,0.3s						
VLS	**Valsamata**	**0.91**	**4**	P	**Pb**	**19 22 51.1**	**+0.1**
VLS				S	**Sn**	**19 23 04.4**	**+0.5**
	comp=N,2µm,0.2s						
KEF3	**Kipouria, Keph**	**0.94**	**352**	P	**Pb**	**19 22 51.9**	**+0.3**
KEF3				S	**Sn**	**19 23 05.8**	**+1.1**
KEF3	**Kipouria, Keph**	**0.94**	**352**	P	**Pb**	**19 22 51.9**	**+0.3**
KEF3				S	**Sn**	**19 23 05.8**	**+1.1**
KEF3	**Kipouria, Keph**	**0.94**	**352**	P	**Pb**	**19 22 51.8**	**+0.2**
KEF3				S	**Sn**	**19 23 05.6**	**+0.9**
DMLN	**Damoulianata-K**	**0.98**	**354**	P	**Pb**	**19 22 52.3**	**+0.1**
DMLN				S	**Sn**	**19 23 06.6**	**+1.0**
DMLN	**Damoulianata-K**	**0.98**	**354**	P	**Pb**	**19 22 52.3**	**+0.1**
DMLN				S	**Sn**	**19 23 06.6**	**+1.0**
DMLN	**Damoulianata-K**	**0.98**	**354**	P	**Pb**	**19 22 52.2**	**+0.1**
AMT	**Artemida-Makis**	**0.99**	**74**	P	**Pb**	**19 22 51.8**	**-0.5**
AMT	**Artemida-Makis**	**0.99**	**74**	P	**Pb**	**19 22 51.8**	**-0.5**
KEF4	**Livadi, Kephal**	**0.99**	**356**	P	**Pn**	**19 22 52.6**	**+0.1**
KEF4				S	**Sn**	**19 23 07.8**	**+1.9**
KEF4	**Livadi, Kephal**	**0.99**	**356**	P	**Pn**	**19 22 52.6**	**+0.1**
KEF4				S	**Sn**	**19 23 07.8**	**+1.9**
KEF4	**Livadi, Kephal**	**0.99**	**356**	P	**Pn**	**19 22 52.5**	**0.0**
KEF5	**Kardakata, Kep**	**1.01**	**358**	P	**Pn**	**19 22 52.7**	**-0.1**
KEF5				S	**Sn**	**19 23 07.3**	**+0.9**
KEF5	**Kardakata, Kep**	**1.01**	**358**	P	**Pn**	**19 22 52.7**	**-0.1**
KEF5				S	**Sn**	**19 23 07.3**	**+0.9**
KEF5	**Kardakata, Kep**	**1.01**	**358**	P	**Pn**	**19 22 52.7**	**-0.1**
KEF5				S	**Sn**	**19 23 07.8**	**+1.4**
PYL	**PYLOS**	**1.05**	**110**	P	**Pn**	**19 22 53.2**	**-0.2**
PYL	**PYLOS**	**1.05**	**110**	P	**Pn**	**19 22 53.2**	**-0.2**
PYL	**PYLOS**	**1.05**	**110**	P	**Pn**	**19 22 53.1**	**-0.2**
PYL				S	**Sn**	**19 23 08.3**	**+1.0**
	comp=N,458nm,0.4s						
RLS	**Riolos of Patr**	**1.09**	**44**	P	**Pn**	**19 22 53.5**	**-0.4**
RLS				AML	AML	19 23 12.8	
	comp=E,916µm,0.5s						
RLS				AML	AML	19 23 18.9	
	comp=N,988µm,0.5s						
RLS	**Riolos of Patr**	**1.09**	**44**	P	**Pn**	**19 22 53.5**	**-0.4**
RLS				AML	AML	19 23 12.8	
	comp=E,916µm,0.5s						
RLS				AML	AML	19 23 18.9	
	comp=N,988µm,0.5s						
RLS	**Riolos of Patr**	**1.09**	**44**	P	**Pn**	**19 22 53.5**	**-0.4**
ITM	**Ithomi**	**1.13**	**94**	P	**Pb**	**19 22 54.7**	**-0.1**
ITM				S	**Sn**	**19 23 11.1**	**+1.7**
ITM	**Ithomi**	**1.13**	**94**	P	**Pb**	**19 22 54.7**	**-0.1**
ITM				S	**Sn**	**19 23 11.1**	**+1.7**
ITM	**Ithomi**	**1.13**	**94**	P	**Pn**	**19 22 54.3**	**-0.2**
VSK1	**VASILIKIADES**	**1.14**	**2**	P	**Pn**	**19 22 54.9**	**+0.3**
DRO	**Drossia**	**1.17**	**54**	P	**Pn**	**19 22 55.0**	**0.0**
DRO	**Drossia**	**1.17**	**54**	P	**Pn**	**19 22 55.0**	**0.0**
DRO	**Drossia**	**1.17**	**54**	P	**Pn**	**19 22 54.9**	**-0.1**
FSK	**Fiskardo**	**1.19**	**2**	P	**Pb**	**19 22 55.9**	**+0.1**
FSK	**Fiskardo**	**1.19**	**2**	P	**Pb**	**19 22 55.9**	**+0.1**
FSK	**Fiskardo**	**1.19**	**2**	P	**Pn**	**19 22 55.7**	**+0.4**
FSK				S	**Sb**	**19 23 13.8**	**+3.0**
EVGI	**Lefkada island**	**1.36**	**5**	P	**Pb**	**19 22 58.7**	**+0.1**
PDO	**Prodromos**	**1.43**	**22**	P	**Pb**	**19 22 59.8**	**-0.1**
PDO				AML	AML	19 23 24.4	
	comp=N,2398µm,0.3s						
PDO				AML	AML	19 23 26.6	
	comp=E,2192µm,0.4s						
PDO	**Prodromos**	**1.43**	**22**	P	**Pb**	**19 22 59.8**	**-0.1**
PDO				AML	AML	19 23 24.4	
	comp=N,2398µm,0.3s						
PDO				AML	AML	19 23 26.6	
	comp=E,2192µm,0.4s						
PDO	**Prodromos**	**1.43**	**22**	P	**Pb**	**19 22 59.7**	**-0.2**
NYDR	**Nydri-Lefkada**	**1.45**	**6**	P	**Pb**	**19 23 00.2**	**0.0**
VLX	**Vlachokerasia**	**1.49**	**85**	P	**Pb**	**19 23 01.0**	**0.0**
KLV	**Kalavryta, Ach**	**1.52**	**59**	P	**Pn**	**19 23 00.6**	**+0.8**
KLV	**Kalavryta, Ach**	**1.52**	**59**	P	**Pn**	**19 23 00.6**	**+0.8**
KLV	**Kalavryta, Ach**	**1.52**	**59**	P	**Pn**	**19 23 00.5**	**+0.7**
LKD2	**Lefkada island**	**1.52**	**4**	P	**Pb**	**19 23 01.7**	**+0.2**
TSLK	**Tsoukalades, L**	**1.56**	**4**	P	**Pb**	**19 23 02.3**	**+0.2**
EFP	**Efpalio**	**1.60**	**43**	P	**Pb**	**19 23 02.4**	**-0.4**
EFP	**Efpalio**	**1.60**	**43**	P	**Pb**	**19 23 02.4**	**-0.4**
EFP	**Efpalio**	**1.60**	**43**	P	**Pb**	**19 23 02.4**	**-0.4**
TRIZ	**Trizonia**	**1.65**	**48**	P	**Pb**	**19 23 02.8**	**-0.9**
SERG	**Sergoula**	**1.68**	**46**	P	**Pn**	**19 23 03.2**	**+1.2**
SERG	**Sergoula**	**1.68**	**46**	P	**Pn**	**19 23 03.2**	**+1.2**
SERG	**Sergoula**	**1.68**	**46**	P	**Pn**	**19 23 03.0**	**+1.0**
KALE	**Kalithea**	**1.71**	**48**	P	**Pb**	**19 23 04.0**	**-0.7**
KALE	**Kalithea**	**1.71**	**48**	P	**Pb**	**19 23 04.0**	**-0.7**
KALE	**Kalithea**	**1.71**	**48**	P	**Pb**	**19 23 04.0**	**-0.7**
ANX	**Ano Chora**	**1.73**	**40**	P	**Pb**	**19 23 04.5**	**-0.6**
STON	**Ston**	**6.00**	**340**	*e*Pn	**Pn**	**19 24 03.3**	**+2.0**
STON				Sn	**Sn**	**19 25 06.4**	**-2.9**
MAKA	**Makarska**	**6.58**	**337**	*e*Pn	**Pn**	**19 24 11.1**	**+1.8**
MAKA				Sn	**Sn**	**19 25 21.0**	**-2.6**
ZIRJ	**Zirje**	**7.38**	**331**	*e*Pn	**Pn**	**19 24 22.3**	**+2.0**
ZIRJ				Sn	**Sn**	**19 25 38.4**	**-4.9**
KIJV	**Kijevo**	**7.42**	**336**	*e*Pn	**Pn**	**19 24 22.4**	**+1.5**
KIJV				Sn	**Sn**	**19 25 40.9**	**-3.4**
MORI	**Morici**	**7.54**	**332**	*e*Pn	**Pn**	**19 24 24.4**	**+2.0**
MORI				Sn	**Sn**	**19 25 42.7**	**-4.4**
DUGI	**Dugi Otok**	**7.89**	**330**	Sn	Sn	19 25 49.9	-6.0
UDBI	**Udbina**	**8.09**	**335**	Sn	**Sn**	**19 25 57.4**	**-3.6**
NVLJ	**Novalja**	**8.45**	**331**	*e*Pn	**Pn**	**19 24 37.5**	**+2.6**
NVLJ				Sn	**Sn**	**19 26 05.1**	**-4.3**

IDC ***02*** *19:55:22.9±1.6, 36°.56N×140°.73E, h46^{km}±15^{km}, mb3.5/11, mb1 3.6/14, mb1mx3.5/46, mbtmp3.7/14, ML3.5/3, MS3.6/1, Ms1 3.6/1, ms1mx2.7/25, Error ellipse: s-maj=21.2km s-min=10.8km az=91.0*

JMA ***02*** *19:55:24.8±0.1, 36°.52N×140°.57E, h58^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s175.00000°, δ32.00000°, λ68.00000°. NP2:ϕ_s21.00000°, δ61.00000°, λ103.00000°. Principal axes: T Plg71.0000°, Azm320.0000°; N Plg11.0000°, Azm194.0000°; P Plg15.0000°, Azm101.0000°;*

JMA Felt III J1.

NIED ***02*** *19:55:24.8, 36°.52N×140°.57E, h58^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.47; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-4.20; $M_{r\theta}$3.40; $M_{\theta\phi}$-2.46; $M_{\phi r}$4.10; Fault plane solution: $M_0$7.28000×10^{14} NP1:ϕ_s37.00000°, δ69.00000°, λ100.00000°. NP2:ϕ_s192.00000°, δ23.00000°, λ67.00000°.*

ISC 02 19:55:24.6±0.7**, 36°.55N**±0°.05×**140°.58E**±0°.06**, h59**^{km}±6^{km}**, n35, σ1^{s}60**/39**, mb3.5**/11**, 5C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.06	351	⇑P	Pn	19 55 33.5	0.0
JHO				S	Sn	19 55 39.4	-0.5
JHYU	Hitachinakayam	0.21	179	⇑P	Pn	19 55 34.0	0.0
JHYU				S	Sn	19 55 40.5	-0.3
JYT	Yasato	0.45	225	⇑P	Pn	19 55 35.8	-0.1
JYT				S	Sn	19 55 43.6	-0.5
ONAJ	Iwakimizuishiy	0.58	17	⇑P	Pn	19 55 37.4	-0.1
ONAJ				S	Sn	19 55 46.7	-0.1
JFK	Kawauchi	0.85	16	⇑P	Pn	19 55 40.6	-0.2
JFK				S	Sn	19 55 52.1	-0.5
JAG	Ashikaga	0.92	263	⇓P	Pn	19 55 41.7	+0.2
JAG				S	Sn	19 55 53.5	-0.5
JFT	Otama	0.99	349	⇓P	Pn	19 55 42.9	+0.4
JFT				S	Sn	19 55 56.2	+0.5
JKT	Katashina	1.09	282	⇓P	Pn	19 55 44.3	+0.4
JKT				S	Sn	19 55 59.1	+0.8
JFY	Yanaizu	1.11	321	⇓P	Pn	19 55 44.7	+0.6
MJAR	Matsushiro Arr	1.91	271	P	Pn	19 55 55.4	+0.6
	8.3nm,0.3s,baz=75,slow=18,SNR=374						
MJAR				S	Sn	19 56 11.0	-6.9
	6.4nm,0.3s,baz=85,slow=16,SNR=8.5						
MJAR				LR	LR	19 57 00.2	
	comp=Z,81nm,18.3s,baz=5.0,slow=49						
MAT	Matsushiro	1.91	271	P	Pn	19 55 56.1	+1.2
MAT				S	Sn	19 56 19.5	+1.6
JHJ	Hachijo jima 2	3.48	191	P	Pn	19 56 14.5	-1.8
	18nm,0.3s,baz=39,slow=10,SNR=1.1						
JHJ				S	Sn	19 56 55.8	-0.5
	49nm,0.3s,baz=65,slow=22,SNR=6.6						
ASAJ	Asahikawa	7.72	11	P	Pn	19 57 11.8	-2.4
	0.9nm,0.3s,baz=210,slow=14,SNR=11						
ASAJ				S	Sn	19 58 36.8	-3.3
	0.2nm,0.3s,baz=255,slow=15,SNR=1.2						
USRK	Ussuriysk Ar.	10.06	322	P	Pn	19 57 49.9	+3.6
	baz=142,slow=14,SNR=5.7						
KSRS	Korea Array	10.17	279	P	Pn	19 57 48.5	+0.8
	0.2nm,0.3s,baz=94,slow=14,SNR=4.9						
KSRS				LR	LR	20 01 34.9	
	comp=Z,22nm,20.0s,baz=15,slow=36						
SONM	Songino Array	27.51	305	P	P	20 01 05.2	-0.4
	0.7nm,0.6s,baz=106,slow=8.3,SNR=7.7						
H11N2	WAKE ISLAND Hy	28.49	119	T	T	20 31 17.0	
	baz=313,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	28.49	119	T	T	20 31 19.0	
	baz=313,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	28.50	119	T	T	20 31 19.8	
	baz=313,slow=75,SNR=24						
H11S1	WAKE ISLAND Hy	29.17	121	T	T	20 32 06.5	
	baz=314,slow=76,SNR=51						
H11S3	WAKE ISLAND Hy	29.17	121	T	T	20 32 11.7	
	baz=314,slow=76,SNR=31						
H11S2	WAKE ISLAND Hy	29.18	121	T	T	20 32 06.0	
	baz=314,slow=76,SNR=37						
CMAR	Chiang Mai Arr	40.73	255	P	P	20 03 00.0	+0.3
	0.2nm,0.6s,baz=41,slow=7.9,SNR=2.3						
ZALV	Zalesovo Beam	41.75	313	P	P	20 03 08.1	+0.3
	2.3nm,0.5s,baz=82,slow=7.6,SNR=13						
MKAR	Makanchi Array	43.81	302	P	P	20 03 24.9	+0.3
	1.0nm,0.6s,baz=89,slow=9.4,SNR=16						
MKAR				PcP	PcP	20 05 10.5	+0.3
	0.1nm,0.4s,baz=256,slow=39,SNR=2.5						
ILAR	Eielson Array	50.26	32	P	P	20 04 14.3	-0.2
	0.3nm,0.8s,baz=287,slow=6.4,SNR=2.4						
WRA	Warramunga Arr	56.49	187	P	P	20 05 00.0	-0.6
	0.7nm,0.6s,baz=1.1,slow=7.6,SNR=14						
ASAR	Alice Springs	60.22	187	P	P	20 05 26.7	+0.1
	0.3nm,0.8s,baz=15,slow=9.4,SNR=1.8						
ASAR				LR	LR	20 30 48.6	
	comp=Z,59nm,21.4s,baz=340,slow=35						
FINES	FINESS Array B	68.93	332	P	P	20 06 23.0	0.0
	11nm,1.2s,baz=27,slow=9.4,SNR=2.2						
AKASG	Malin Array Be	74.27	322	P	P	20 06 54.6	-0.6
	0.8nm,0.4s,baz=49,slow=5.9,SNR=5.8						
PDAR	Pinedale Array	78.48	45	P	P	20 07 19.7	+0.1
	0.1nm,0.5s,baz=334,slow=6.0,SNR=1.6						
GERES	GERESS Array B	82.77	328	P	P	20 07 41.9	-0.3
	0.2nm,0.3s,baz=33,slow=5.9,SNR=1.8						
H03N2	Juan Fernandez	147.64	96	T	T	23 00 13.2	
	baz=291,slow=76,SNR=3.7						
H03N3	Juan Fernandez	147.65	96	T	T	23 00 15.6	
	baz=291,slow=76,SNR=6.6						
H03N1	Juan Fernandez	147.65	96	T	T	23 00 13.2	
	baz=291,slow=76,SNR=7.8						

RSNC ***02*** *20:08:39.3±0.8, 7°.30N×78°.23W, h7^{km}±3^{km}, ML3.1, Mw3.6*

UPA ***02*** *20:08:40.5±1.7, 7°.35N×78°.28W, h17^{km}±8^{km}, MW4.3*

ISC 02 20:08:37.9±1.3**, 7°.33N**±0°.03×**78°.27W**±0°.02**, h9**^{km}±10^{km}**, n45, σ1^{s}34**/74**, 13C-5D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.49	111	*e*P	Pg	20 08 47.6	0.0
PTAC				*e*S	Sg	20 08 53.5	-0.6
UPD2	Meteti	1.24	12	⇑*i*P	Pn	20 09 01.4	0.0
	baz=209,slow=3.8						
UPD2				*i* S	Sb	20 09 17.9	+0.3
UPD2	Meteti	1.24	12	⇑*e*P	Pn	20 09 01.4	0.0
UPD2				*e*S	Sb	20 09 17.9	+0.3
SOLC	Bahia Solano	1.39	142	*e*P	Pn	20 09 02.5	-1.0
SOLC				*e*S	Sg	20 09 23.1	+0.4
SOLC				*i*		20 09 28.9	
	comp=Z,330nm,0.3s						
CAPC	Capurgana	1.59	35	*e*P	Pn	20 09 05.9	-0.4
CAPC				*e*S	Sn	20 09 25.5	-1.5
CAPC				*i*		20 09 26.9	
	comp=Z,468nm,0.5s						
CAP2	Capurgana	1.60	34	⇓*e*P	Pn	20 09 06.1	-0.3
CAP2				*e*S	Sn	20 09 26.5	-0.7
CHPO	Chepo, Panama	2.01	336	*e*P	Pb	20 09 14.3	-0.4
CHPO				*e*S	Sb	20 09 39.3	-0.6
FLAM	Flamenco Islan	2.01	322	⇓*i*P	Pn	20 09 12.1	0.0
FLAM				*e*S	Sn	20 09 37.1	-0.3
AZU	Azuero	2.04	283	⇑*i*P	Pn	20 09 12.8	+0.5
AZU				*i* S	Sn	20 09 37.2	-0.7
AZU	Azuero	2.04	283	*e*P	Pn	20 09 12.9	+0.5
AZU				*e*S	Sn	20 09 36.9	-1.0
AZU				*i*		20 09 48.4	
	comp=Z,205nm,0.4s						
UPA	Univ. de Panam	2.06	323	⇑*e*P	Pn	20 09 13.7	+0.9
UPA				*i* S	Sn	20 09 40.2	+1.6
UPA	Univ. de Panam	2.06	323	*e*P	Pn	20 09 13.6	+0.9
UPA				*e*S	Sb	20 09 40.4	-1.0
UPA				*i*		20 09 46.8	
	comp=Z,116nm,0.4s						
DBBC	Dabeiba	2.07	98	*e*P	Pn	20 09 13.2	+0.3
DBBC				*e*S	Sn	20 09 38.2	-0.8
ARRA3	Arraijan, Pana	2.13	320	⇑*i*P	Pn	20 09 14.1	+0.4
CHOR3	La Chorrera	2.15	317	⇑*e*P	Pn	20 09 14.7	+0.7
CHOR3				*e*S	Sn	20 09 39.8	-1.0
CHIT3	Chitre	2.21	287	*e*P	Pn	20 09 15.9	+1.1
VTON	El Valle, Cocl	2.23	305	⇓*e*P	Pb	20 09 18.1	-0.2
VTON				*i* S	Sn	20 09 43.6	+0.9
ZANG	Zanguenga, Cho	2.26	316	⇑*e*P	Pn	20 09 16.8	+1.3
ZANG				*e*S	Sn	20 09 45.4	+1.8
PNME	Penonome	2.34	300	*e*P	Pn	20 09 17.5	+0.9
FRIJ	El Hiral	2.37	323	⇑*i*P	Pn	20 09 17.2	+0.2
MLIR	Monte Lirio	2.46	321	⇑*e*P	Pn	20 09 18.6	+0.3
MLIR				*e*S	Sn	20 09 48.4	-0.1
OCU3	Ocu, Herrera	2.56	284	*e*P	Pn	20 09 20.6	+1.1
CACAO	El Cacao, Vera	2.57	271	⇑*e*P	Pn	20 09 22.1	+2.4
CACAO				*e*S	Sn	20 09 47.6	-3.5
CBOC	Ciudad Bolivar	2.67	123	*e*P	Pn	20 09 21.2	-0.2
MARI3	Mariato, Verag	2.71	277	⇑*e*P	Pn	20 09 23.4	+1.7
PONU3	Ponuga, Veragu	2.74	282	⇑*e*P	Pn	20 09 23.8	+1.7
UREC	San Jos de Ur	2.75	81	*e*P	Pn	20 09 23.0	+0.7
UREC				*e*S	Sn	20 09 54.4	-1.3
UREC				*i*		20 10 03.0	
	comp=Z,46nm,0.5s						
HELC	Santa Helena	2.95	112	*e*P	Pn	20 09 28.0	+2.7
HELC				*e*S	Sn	20 10 01.6	+0.5
HELC	Santa Helena	2.95	112	*e*P	Pn	20 09 26.6	+1.3
HELC				*e*S	Sn	20 10 01.4	+0.4
MOTC	Monteria, Cord	2.96	61	*e*P	Pn	20 09 26.1	+1.0
MOTC				*e*S	Sn	20 10 00.9	+0.1
MOTC				*i*		20 10 07.7	
	comp=Z,46nm,0.5s						
MONA	Monteria	2.96	61	⇑*i*P	Pn	20 09 26.3	+1.1
GMAL	Guarumal, Vera	2.97	279	⇓*i*P	Pn	20 09 25.9	+0.7
GMAL				*e*S	Sn	20 10 00.3	-0.7
ZARC	Zaragoza, Cauc	3.39	87	*e*P	Pn	20 09 32.2	+1.1
ZARC				*e*S	Sn	20 10 10.8	-0.7
ZARC				*i*		20 10 16.0	
	comp=Z,78nm,0.6s						
RREF	El Recreo	3.78	129	*e*P	Pn	20 09 39.3	+2.4
RREF				*e*S	Sb	20 10 27.9	-3.4
NORC	Norcasia	3.81	117	*e*P	Pn	20 09 37.9	+1.0
YOTC	Yotoco, Valle	3.83	150	*e*P	Pn	20 09 36.3	-1.0
PTBC	PUERTO BERRIO,	3.87	101	*e*P	Pn	20 09 40.2	+2.6
PTBC				*e*S	Sn	20 10 27.0	+3.7
PTBC				*i*		20 10 44.0	
	comp=Z,25nm,0.6s						
SJCC	San Jacinto, C	3.99	50	⇓*e*P	Pn	20 09 40.5	+1.2
SJCC	San Jacinto, C	3.99	50	*e*P	Pn	20 09 40.2	+0.9
SJCC				*e*S	Sn	20 10 26.6	+0.4
SJCC				*i*		20 10 31.5	
	comp=Z,16nm,0.5s						
SMLC	San Martn de	4.41	70	*e*P	Pn	20 09 46.3	+1.1
SMLC				*e*S	Sn	20 10 35.5	-1.1
SMLC				*i*		20 10 45.5	
	comp=Z,16nm,0.7s						
BCO2	Palmira	4.43	288	*e*P	Pn	20 09 47.1	+1.5
BRU2	Volcan	4.61	289	*e*P	Pn	20 09 49.2	+1.2
OCAC	Ocana	4.99	79	*e*P	Pn	20 09 55.1	+1.8
OCAC				*e*S	Sn	20 10 50.4	-0.8
OCAC				*i*		20 10 57.9	
	comp=Z,26nm,0.4s						
MARP	Paez Belalcaza	5.02	152	*e*P	Pn	20 09 56.4	+2.7
BARC	Barichara	5.11	98	*e*P	Pn	20 09 56.9	+2.0

NOU ***02*** *20:09:32.8, 1°.31N×123°.35E, h21^{km}, mb4.6, Minahassa Peninsula, Sulawesi*

DJA ***02*** *20:09:32.7±0.2, 1°N±2°×12°3E±°, h10^{km}, M4.7/17, mB5.2/6, mb4.8/17, MLv4.8/17, Mw(mB)4.5/6*

NEIC ***02*** *20:09:35.6±2.1, 1°.11N±0°.05×123°.34E±0°.03, h50^{km}±8^{km}, mb4.7/41, Error ellipse: s-maj=8.1km s-min=3.5km az=154.0*

IDC ***02*** *20:09:37.7±2.6, 1°.13N×123°.44E, h69^{km}±27^{km}, mb3.9/11, mb1 4.1/14, mb1mx3.8/35, mbtmp4.3/14, MS3.6/3, Ms1 3.5/3, ms1mx3.1/20, Error ellipse: s-maj=23.6km s-min=11.7km az=77.0*

ISC 02 20:09:34.1±0.4**, 1°.14N**±0°.04×**123°.38E**±0°.05**, h32**^{km}**, n97, σ1^{s}48**/96**, mb4.5**/39**, 2C-1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.62	216	P	Pn	20 09 46.4	-0.3
GTOI				S	Sb	20 09 54.5	-0.6
KMSI	Cibinong	0.82	133	P	Pb	20 09 51.1	+1.1
MRSI	Marisa	1.58	245	P	Pn	20 10 00.7	+0.8
MRSI				S	Sn	20 10 19.6	+0.3
LUWI	Luwuk	2.25	196		Pn	20 10 10.9	+1.7
LUWI	Luwuk	2.25	196	P	Pn	20 10 11.7	+2.6
LUWI				S	Sb	20 10 41.8	+0.2
TOLI2	Tolitoli	2.60	269	Pn	Pn	20 10 12.8	-1.1
APSI	Ampana	2.67	220	P	Pn	20 10 17.6	+2.7
SGSI	Sangihe	3.32	40	P	Pn	20 10 24.6	+0.7
MPSI	Mapaga	3.57	257	P	Pn	20 10 29.4	+2.1
TNTI	Ternate	4.00	95	Pn	Pn	20 10 33.6	+0.3
SANI	Sanana	4.10	141	P	Pn	20 10 35.7	+1.0
KDI	Kendari	5.12	189	P	Pn	20 10 52.0	+3.4
	0.5nm5μm158nm,0.8s						
TTSI	Tana Toraja	5.47	221	P	Pn	20 10 56.0	+2.5
	1.3nm5μm441nm,0.7s						
NLAI	Namlea	5.72	139	P	Pn	20 10 59.2	+2.3
	0.4nm1μm57nm,0.4s						
KCP	Kidapawan	6.08	16	⇑*e*P	Pn	20 11 04.8	+3.0
KCP				*i* S	Sn	20 12 12.1	+1.8
SPSI	Sidrap Palu	6.22	215	P	Pn	20 11 06.2	+2.4
	0.4nm2μm110nm,0.7s						
DAV	Davao City (W)	6.29	20	P	Pn	20 11 08.6	+3.9
	63nm,0.3s,baz=112,slow=2.8,SNR=15						
DAV				S	Sn	20 12 15.4	-0.1
	80nm,0.3s,baz=94,slow=6.3,SNR=2.3						
MYLDM	Lahad Datu	6.31	310		Pn	20 11 06.8	+1.8
BNSI	Bone	6.40	211	P	Pn	20 11 09.8	+3.6
	0.9nm2μm276nm,0.7s						
BKB	Balikpapan	6.91	250	Pn	Pn	20 11 13.2	0.0
KAPI	Kappang	7.11	211	P	Pn	20 11 17.7	+1.8
	11nm,0.3s,baz=110,slow=2.4,SNR=9.4						
KAPI				LR	LR	20 14 35.6	
	comp=Z,612nm,20.4s,baz=54,slow=42						
KAPI	Kappang	7.11	211	Pn	Pn	20 11 17.1	+1.2
MSAI	Masohi	7.12	129	P	Pn	20 11 19.9	+3.8
	0.1nm498nm39nm,0.8s						
BKSI	Bulukumba	7.20	207	P	Pn	20 11 28.4	+11
KKM	Kota Kinabalu	8.65	304	Pn	Pn	20 11 37.6	+0.3
FAKI	Fak Fak	9.74	114	Pn	Pn	20 11 54.0	+1.9
MMRI	Maumere	9.78	187	Pn	Pn	20 11 53.9	+1.3
EDFI	Ende, Flores	9.97	190	P	Pn	20 12 10.5	+15
SOEI	Soe	10.86	175	Pn	Pn	20 12 09.2	+1.7
BATI	Baumata	11.28	179	LR	LR	20 16 51.8	
	comp=Z,165nm,19.9s,baz=342,slow=39						
MTN	Manton Dam	15.88	151	Pn	Pn	20 13 16.9	+1.4
MTN				IAmb	IAmb	20 13 40.5	
	comp=Z,117nm,1.6s						
FITZ	Fitzroy Crossi	19.25	173	P	P	20 13 56.5	+0.5
	comp=Z,2.1nm,0.3s,baz=2.7,slow=7.4,SNR=61						
TWG	Pinlang	21.67	354	P	P	20 14 21.6	-0.5
TWG				IAmb	IAmb	20 14 31.2	
	comp=Z,115nm,1.8s						
TPUB	Ta-pu	22.19	353	P	P	20 14 26.8	-1.0
TPUB				IAmb	IAmb	20 14 31.6	
	comp=Z,77nm,1.0s						
YULB	Yu-li	22.21	355	P	P	20 14 27.6	-0.5
YULB				IAmb	IAmb	20 14 33.5	
	comp=Z,32nm,1.2s						
IPM	Ipoh	22.57	279	P	P	20 14 34.1	+2.1
IPM				IAmb	IAmb	20 14 55.3	
	comp=Z,45nm,1.7s						
SSLB	Suanglung	22.64	354	P	P	20 14 32.7	+0.1
SSLB				IAmb	IAmb	20 14 36.5	
	comp=Z,47nm,1.1s						
PSA00	Pilbara Seismi	22.84	188	P	P	20 14 32.9	-1.8
PDSI	Padang	23.00	265	P	P	20 14 37.3	+0.7
	comp=Z,21nm,0.6s						
KULM	Kulim	23.06	281	P	P	20 14 39.2	+2.2
KULM				IAmb	IAmb	20 15 05.5	
	comp=Z,36nm,1.5s						
WB0	Warramunga Arr	23.42	153	P	P	20 14 39.8	-0.8
YHNB	Yeheng	23.47	355	P	P	20 14 42.0	+0.9
YHNB				IAmb	IAmb	20 14 53.5	
	comp=Z,70nm,1.5s						
WRAB	Tennant Creek	23.55	153	P	P	20 14 41.0	-0.8
WRA	Warramunga Arr	23.55	153	P	P	20 14 41.4	-0.5
	comp=Z,6.6nm,0.7s,baz=336,slow=9.9,SNR=45						
WB2	Warramunga Arr	23.55	153	P	P	20 14 41.2	-0.7
WB2				IAmb	IAmb	20 14 43.9	
	comp=Z,7.9nm,0.6s						
WR0	Warramunga Arr	23.65	153	P	P	20 14 42.5	-0.3
MNSI	Mandailing Nat	23.80	269	P	P	20 14 46.8	+2.5
RPSI	Rantau Prapat	24.49	274	P	P	20 14 52.7	+2.0
RPSI				IAmb	IAmb	20 14 57.0	
	comp=Z,16nm,1.0s						
RPSI	Rantau Prapat	24.49	274	P	P	20 14 51.6	+1.0
PSI	Prapat	24.49	274	P	P	20 14 51.6	+0.8
	comp=Z,12nm,0.9s,baz=5.3,slow=0.9,SNR=4.9						
COEN	Coen	24.69	128	P	P	20 14 52.0	-0.5
GIRL	Giralia	25.26	200	P	P	20 14 57.3	-0.2
GSI	Gunungsitoli	25.80	271	P	P	20 15 01.8	-0.8
GSI				IAmb	IAmb	20 15 31.6	
	comp=Z,44nm,1.1s						
AS31	Alice Springs	26.70	158	P	P	20 15 08.1	-2.5
ASAR	Alice Springs	26.70	158	P	P	20 15 11.4	+0.8
	comp=Z,1.2nm,0.4s,baz=344,slow=13,SNR=29						
CMAR	Chiang Mai Arr	29.52	307	P	P	20 15 37.6	+1.7
	comp=Z,0.3nm,0.9s,baz=133,slow=6.7,SNR=2.8						
MORW	Morawa	30.85	193	P	P	20 15 45.8	-1.7
MORW				IAmb	IAmb	20 15 47.4	
	comp=Z,27nm,1.2s						
FORT	Forrest	32.05	172	P	P	20 15 57.5	-0.5
JNU	Nakatsue	32.59	12	P	P	20 16 02.9	+0.1
JMN	Monobe	33.88	16	P	P	20 16 13.5	-0.6
NWAO	Narrogin (SRO)	34.38	189	P	P	20 16 16.8	-1.5
NWAO	Narrogin (SRO)	34.38	189	P	P	20 16 17.0	-1.3
NWAO				IAmb	IAmb	20 16 49.2	
	comp=Z,29nm,1.3s						
BBOO	Buckleboo	35.83	162	P	P	20 16 30.6	-0.3
BBOO				IAmb	IAmb	20 16 31.6	
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	37.10	154	P	P	20 16 41.3	-0.4
	comp=Z,2.6nm,0.5s,baz=326,slow=7.5,SNR=8.1						
STKA	Stephens Creek	37.10	154	P	P	20 16 41.3	-0.4
MAJO	Matsushiro	37.81	20	P	P	20 16 46.9	-0.8
MJAR	Matsushiro Arr	37.81	20	P	P	20 16 47.2	-0.5
	comp=Z,8.2nm,0.8s,baz=190,slow=9.3,SNR=15						
BJI	Beijing	39.27	351	P	P	20 16 59.9	+0.1
BJI				pmax	pmax		
	comp=Z,4.0nm,1.6s						
JMM	Marumori	39.91	22	P	P	20 17 06.4	+1.2
ARMA	Armidale	41.34	142	P	P	20 17 18.1	+0.8
ARMA				IAmb	IAmb	20 17 19.4	
	comp=Z,9.4nm,1.1s						
LSA	Lhasa	41.79	316	P	P	20 17 24.1	+2.6
JTM	Tenmabayashi	42.60	20	P	P	20 17 27.9	+0.6
ODAN	Odare	42.98	310	*e*P	P	20 17 32.0	+1.1
	comp=Z,3.3nm,0.6s						
TAPN	Taplejung	42.99	310	*e*P	P	20 17 30.8	-0.2
	comp=Z,2.9nm,0.5s						
USRK	Ussuriysk Ar.	43.55	9	P	P	20 17 34.1	-0.8
	comp=Z,1.0nm,0.6s,baz=160,slow=6.1,SNR=5.0						
RAMN	Ramite	43.64	309	*e*P	P	20 17 36.7	+0.5
	comp=Z,5.6nm,0.6s						
GTA	Gaotai	43.74	333	P	P	20 17 38.0	+1.3
GTA				pP	sP	20 17 51.9	+2.6
GTA				sP	pwP	20 17 58.5	+11
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,78nm,4.5s						
GTA				LR	LR		
	comp=N,97nm,13.8s						
GTA				LR	LR		
	comp=E,85nm,14.9s						
GTA				LR	LR		
	comp=Z,120nm,17.4s						
GUN	Gumba	44.67	310	*e*P	P	20 17 43.2	-1.4
	comp=Z,7.9nm,0.7s						
DANN	Dangsing	46.52	309	*e*P	P	20 17 56.5	-2.7
	comp=Z,5.2nm,0.6s						
ULN	Ulaanbaatar	48.65	345	P	P	20 18 14.9	-0.3
ULN				IAmb	IAmb	20 18 17.2	
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	48.79	345	P	P	20 18 16.4	+0.1
	comp=Z,3.8nm,0.9s,baz=158,slow=8.0,SNR=28						
WMQ	Urumqi	53.03	328	*e*P	P	20 18 48.9	+0.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.5s						
MK31	Makanchi Array	57.85	328	P	P	20 19 22.2	-0.6
MKAR	Makanchi Array	57.85	328	P	P	20 19 23.1	+0.3
	comp=Z,1.2nm,0.5s,baz=123,slow=8.4,SNR=35						
MAKZ	Makanchi	58.03	328	P	P	20 19 23.8	-0.2
MAKZ				IAmb	IAmb	20 19 44.8	
	comp=Z,7.7nm,1.7s						
KBL	Kabul	60.50	310	P	P	20 19 41.3	-0.3
KBL				IAmb	IAmb	20 20 02.0	
	comp=Z,4.2nm,0.7s						
YAK	Yakutsk	60.93	3		P	20 19 43.0	-0.6
ZALV	Zalesovo Beam	61.44	335	P	P	20 19 45.7	-1.6
	comp=Z,0.8nm,0.7s,baz=114,slow=6.6,SNR=5.7						
KURK	Kurchatov	62.19	330		P	20 19 51.2	-1.2
KURK				IAmb	IAmb	20 19 53.1	
	comp=Z,5.1nm,0.9s						
TUWZ	Tuamarina	62.32	139	P	P	20 19 53.2	-0.3
TIXI	Tiksi	70.49	2	P	P	20 20 43.8	-1.4
TIXI				IAmb	IAmb	20 20 45.5	
	comp=Z,6.0nm,1.1s						
ADK	Adak	70.98	35	P	P	20 20 47.6	-0.9
MAW	Mawson	80.19	200	LR	LR	20 50 34.4	
	comp=Z,38nm,21.0s,baz=60,slow=31						
VNDA	Vanda	81.32	172	P	P	20 21 45.6	-1.3
	comp=Z,1.6nm,0.8s,baz=316,slow=7.7,SNR=9.5						
VNDA	Vanda	81.32	172	P	P	20 21 46.4	-0.5
SYO	Syowa Base	88.82	201	⇑*e*X	P	20 22 21.4	-3.2
SYO	Syowa Base	88.82	201	⇓*e*pP	pP	20 22 39.3	+4.5

IDC ***02*** *20:11:07.8±2.8, 2°.51N×126°.37E, h40^{km}±24^{km}, mb4.3/24, mb1 4.4/24, mb1mx4.4/33, mbtmp4.5/24, MS3.7/6, Ms1 3.7/6, ms1mx3.4/18, Error ellipse: s-maj=22.2km s-min=9.0km az=73.0*

BJI ***02*** *20:11:07.0±0.0, 2°.70N×126°.70E, h40^{km}, mB5.1/37, mb4.7/51, Ms4.5/16, Ms7 4.2/17*

NEIC ***02*** *20:11:08.4±1.8, 2°.49N±0°.07×126°.45E±0°.06, h48^{km}±5^{km}, mb5.1/105, Error ellipse: s-maj=11.4km s-min=7.3km az=209.0*

MOS ***02*** *20:11:08.7±1.1, 2°.53N×126°.41E, h65^{km}, mb5.0/31, Error ellipse: s-maj=12.6km s-min=5.4km az=118.7*

DJA ***02*** *20:11:09.0±0.5, 3°N±3°×12°7E±°, h39^{km}±5^{km}, M4.7/20, mB5.0/3, mb4.9/20, MLv4.7/7, Mw(mB)4.3/3*

ISC 02 20:11:08.6±0.9**, 2°.55N**±0°.04×**126°.46E**±0°.05**, h48**^{km}±8^{km}**, n302, σ1^{s}38**/307**, mb4.8**/132**, MS4.0**/12**, 18C-7D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.46	321	P	Pn	20 11 33.9	+1.3
SGSI				S	Sn	20 11 53.7	+3.1
TNTI	Ternate	1.98	153		Pn	20 11 39.3	-0.5
TNTI				Sn	Sn	20 12 05.3	+1.9
TNTI	Ternate	1.98	153	P	Pn	20 11 40.1	+0.3
TNTI				S	Sn	20 12 05.6	+2.2
KMSI	Cibinong	3.16	232	P	Pn	20 12 01.9	+6.0
DAV	Davao City (W)	4.58	349	Sn	Sn	20 13 09.6	+2.3
	63nm,0.3s,baz=50,slow=13,SNR=1.9						
TOLI2	Tolitoli	5.85	256	Pn	Pn	20 12 35.6	+2.7
TOLI2				Sn	Sn	20 13 35.9	-2.8
SWI	Sorong	5.87	125	P	Pn	20 12 32.4	-0.8
	0.2nm69nm,0.9s						
SIJI	Sorong	5.88	125	Sn	Sn	20 13 36.9	-2.6
	baz=320,slow=20,SNR=0.8						
CGP	Cagayan de Oro	6.12	343	⇓*e*P	Pn	20 12 46.1	+9.5
FAKI	Fak Fak	7.94	133	Pn	Pn	20 13 02.8	+1.3
MYLDM	Lahad Datu	8.36	288	Pn	Pn	20 13 12.5	+5.2
SOEI	Soe	12.42	190	Pn	Pn	20 14 06.0	+3.1
LQP	Lukban	12.47	337	⇑*e*P	P	20 14 11.4	-2.9
SBUM	Sibu	14.23	270		P	20 14 34.1	+0.4
PLAI	Plampang	14.24	217	P	P	20 14 37.1	+3.3
GENI	Genyem	14.62	110	P	Pn	20 14 24.2	-8.5
TWSI	Taliwang, Sumb	14.73	220	P	P	20 14 41.4	+2.2
	56nm,0.8s						
JAY	Jayapura	15.10	109	P	Pn	20 14 36.5	-2.6
	23nm,0.8s						
MTN	Manton Dam	15.98	163	P	Pn	20 14 48.4	-1.9
UGM	Wanagama	18.99	237	P	Pn	20 15 26.8	-0.7
FITZ	Fitzroy Crossi	20.53	182	P	P	20 15 43.7	+0.5
	12nm,0.5s,baz=8.4,slow=9.7,SNR=13						
FITZ	Fitzroy Crossi	20.53	182		P	20 15 43.4	+0.2
CISI	Cisompet, Garu	21.14	242	P	P	20 15 46.8	-3.1
CISI				IAmb	IAmb	20 16 07.0	
	comp=Z,62nm,1.2s						
YULB	Yu-li	21.32	347	P	P	20 15 47.8	-3.8
TPUB	Ta-pu	21.39	345	P	P	20 15 49.6	-2.7
TPUB				IAmb	IAmb	20 15 50.7	
	comp=Z,53nm,0.9s						
SSLB	Suanglung	21.77	346	P	P	20 15 54.3	-2.2
YHNB	Yeheng	22.53	348	P	P	20 16 03.5	-1.2
YHNB				IAmb	IAmb	20 16 11.4	
	comp=Z,32nm,0.9s						

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BLSI  Bandar Lampung    22.61 250    P        P         20 16 11.1 +5.6
      comp=Z,64nm,0.6s
CGJI  Cibinong          22.64 246    P        P         20 16 11.8 +5.9
      comp=Z,1µmcomp=Z,109nm,0.6s
QIZ   Qiongzhong        23.08 316    P        P         20 16 08.9 -1.5
QIZ                                  IAmb     IAmb      20 16 57.7
      comp=Z,178nm,1.6s
COEN  Coen              23.32 135    P        P         20 16 11.2 -1.5
MDSI  Maura Dua         23.34 253    P        P         20 16 17.3 +4.4
      comp=Z,15nm,0.8s
KASI  Kota Agung        23.36 250    P        P         20 16 19.8 +6.7
      comp=Z,41nm,0.9s
WB0   Warramunga Arr    23.51 161    P        P         20 16 13.4 -1.1
WB0                                  IAmb     IAmb      20 16 25.3
      comp=Z,32nm,0.8s
LWLI  Liwa              23.61 251    P        P         20 16 20.7 +5.1
WRAB  Tennant Creek     23.65 161 ceP         P         20 16 14.3 -1.5
WRAB                                 pmax     pmax
      comp=Z,33nm,1.0s
WRAB  Tennant Creek     23.65 161    P        P         20 16 14.6 -1.2
WRAB                                 IAmb     IAmb      20 16 19.2
      comp=Z,26nm,0.7s
WRA   Warramunga Arr    23.65 161    P        P         20 16 14.6 -1.2
      comp=Z,13nm,0.4s,baz=337,slow=11,SNR=39
WRA                                  S        S         20 20 28.0 +0.7
      comp=Z,3.5nm,0.9s,baz=343,slow=16,SNR=7.0
WRA   Warramunga Arr    23.65 161  i P        P         20 16 14.6 -1.2
WRA                                  pmax     pmax
      comp=Z,15nm,0.3s
WB2   Warramunga Arr    23.66 161    P        P         20 16 14.2 -1.7
WB2                                  IAmb     IAmb      20 16 19.3
      comp=Z,32nm,0.7s
WR0   Warramunga Arr    23.73 161    P        P         20 16 14.9 -1.7
XMIS  Christmas Isla    24.43 238    P        P         20 16 22.9 -0.2
XMIS                                 IAmb     IAmb      20 16 43.3
      comp=Z,71nm,1.3s
KSI   Kapahiang         24.64 256    P        P         20 16 30.5 +5.5
      comp=Z,26nm,0.6s
PSA00 Pilbara Seismi    24.83 195    P        P         20 16 26.4 -0.3
AS31  Alice Springs     27.05 165    P        P         20 16 45.2 -1.4
ASAR  Alice Springs     27.05 165    P        P         20 16 46.0 -0.7
      comp=Z,6.7nm,0.6s,baz=344,slow=7.9,SNR=18
ASAR                                 PcP      PcP       20 20 07.7 +0.5
      comp=Z,2.2nm,0.7s,baz=345,slow=1.6,SNR=6.3
ASAR                                 S        S         20 21 23.1 +1.7
      comp=Z,1.8nm,0.9s,baz=351,slow=21,SNR=5.1
GSI   Gunungsitoli      28.89 268    P        P         20 17 02.9 -0.4
GSI                                  IAmb     IAmb      20 17 04.2
      comp=Z,35nm,1.0s
JSU   Suzuyama          29.05   7    P        P         20 17 04.4  0.0
JSU                                  IAmb     IAmb      20 17 35.2
      comp=Z,123nm,1.5s
CTA   Charters Tower    29.72 140    P        P         20 17 12.1 +1.5
      comp=Z,5.2nm,0.8s,baz=318,slow=11,SNR=6.1
CTAO  Charters Tower    29.72 140    P        P         20 17 11.7 +1.1
CTAO                                 pmax     pmax
      comp=Z,14nm,1.2s
CTAO  Charters Tower    29.72 140    P        P         20 17 11.7 +1.1
NJ2   Nanjing           30.21 347  eP         P         20 17 17.9 +3.3
NJ2                                  pmax     pmax
      comp=Z,20nm,0.5s
JNU   Nakatsue          30.69   7    P        P         20 17 18.6 -0.4
JNU                                  IAmb     IAmb      20 17 22.1
      comp=Z,22nm,0.8s
CM31  Chiang Mai Arr    31.25 302    P        P         20 17 25.9 +1.9
CMAR  Chiang Mai Arr    31.25 302    P        P         20 17 23.5 -0.6
      comp=Z,2.7nm,0.9s,baz=118,slow=7.2,SNR=14
CMAR                                 PcP      PcP       20 20 18.6 +0.7
      comp=Z,0.8nm,0.6s,baz=356,slow=2.0,SNR=5.5
CMAR                                 LR       LR        20 29 57.6
      comp=Z,116nm,21.7s,baz=173,slow=36
CMAR  Chiang Mai Arr    31.25 302  i P        P         20 17 25.2 +1.1
CMAR                                 pmax     pmax
      comp=Z,3.0nm,0.9s
CHTO  Chiang Mai        31.41 303    P        P         20 17 25.6 +0.1
CHTO                                 pmax     pmax
      comp=Z,5.0nm,0.6s
CHTO  Chiang Mai        31.41 303    P        P         20 17 25.6 +0.1
ENH   Enshi             31.92 331    P        P         20 17 31.8 +1.9
KMI   Kunming           32.03 317⇓eP         P         20 17 33.6 +2.5
KMI                                  pmax     pmax
      comp=Z,9.0nm,0.8s
KMI                                  pmax     pmax
      comp=Z,160nm,5.5s
JHS   Saijyo            32.87  10    P        P         20 17 39.8 +1.7
MORW  Morawa            32.99 197    P        P         20 17 39.7 +0.6
MORW                                 IAmb     IAmb      20 18 16.8
      comp=Z,83nm,1.9s
FORT  Forrest           33.18 177    P        P         20 17 40.9 +0.1
FORT                                 IAmb     IAmb      20 17 45.9
      comp=Z,37nm,0.6s
JWT   Wachi             33.61  13    P        P         20 17 45.2 +0.7
INU   Inuyama           34.08  16    P        P         20 17 48.8 +0.2
INU                                  IAmb     IAmb      20 17 53.2
      comp=Z,27nm,1.0s
JGF   Kuroka            34.40  16    P        P         20 17 51.2 -0.2
JGF                                  IAmb     IAmb      20 17 51.7
      comp=Z,49nm,1.3s
KSRS  Korea Array       34.76   2    P        P         20 17 55.1 +0.7
      comp=Z,4.4nm,0.8s,baz=180,slow=9.6,SNR=14
KS19  Wonju Array Si    34.81   2    P        P         20 17 55.8 +0.9
XAN   Xi'an             35.35 334    P        P         20 17 58.6 -1.1
XAN                                  pP       pP        20 18 09.3 -2.6
XAN                                  pmax     pmax
      comp=Z,9.0nm,1.8s
XAN   Xi'an             35.35 334    P        P         20 17 58.5 -1.1
XAN                                  pmax     pmax
      comp=Z,12nm,1.2s
XAN   Xi'an             35.35 334    P        P         20 17 58.5 -1.1
CD2   Chengdu           35.44 325    P        P         20 17 59.6 -0.9
CD2                                  pmax     pmax
      comp=Z,10.0nm,1.0s
MAJO  Matsushiro        35.52  16  i P        P         20 18 00.1 -1.0
MAJO                                 pmax     pmax
      comp=Z,15nm,1.2s
MAJO  Matsushiro        35.52  16    P        P         20 17 59.8 -1.2
MAJO                                 IAmb     IAmb      20 18 06.4
      comp=Z,17nm,1.1s
MJAR  Matsushiro Arr    35.52  16    P        P         20 18 00.1 -0.9
      comp=Z,5.2nm,1.0s,baz=188,slow=9.0,SNR=5.3
BBOO  Buckleboo         36.32 166    P        P         20 18 07.5 -0.5
BBOO                                 IAmb     IAmb      20 18 12.9
      comp=Z,28nm,1.1s
NWAO  Narrogin (SRO)    36.35 193    P        P         20 18 06.6 -1.6
NWAO                                 pmax     pmax
      comp=Z,62nm,1.6s
NWAO  Narrogin (SRO)    36.35 193    P        P         20 18 06.6 -1.6
NWAO                                 IAmb     IAmb      20 18 28.4
      comp=Z,62nm,1.6s
NWAO  Narrogin (SRO)    36.35 193    P        P         20 18 06.5 -1.6
NWAO                                 IAmb     IAmb      20 18 28.4
      comp=Z,50nm,1.6s
DL2   Dalian            36.45 354    P        P         20 18 10.0 +1.1
DL2                                  pmax     pmax
      comp=Z,43nm,0.9s
EIDS  Eidsvold          36.60 141    P        P         20 18 09.4 -1.0
EIDS                                 IAmb     IAmb      20 18 12.8
      comp=Z,7.9nm,0.8s
STKA  Stephens Creek    37.13 158    P        P         20 18 13.7 -1.2
      comp=Z,5.3nm,0.4s,baz=340,slow=9.0,SNR=12
STKA  Stephens Creek    37.13 158    P        P         20 18 14.0 -0.8
STKA                                 pmax     pmax
      comp=Z,2.0nm,0.8s
STKA  Stephens Creek    37.13 158    P        P         20 18 14.0 -0.8
JMM   Marumori          37.53  19    P        P         20 18 19.0 +0.9
JMM                                  IAmb     IAmb      20 18 30.5
      comp=Z,37nm,1.0s
BJT   Baijiatuau        38.45 347    P        P         20 18 25.5 -0.3
BJT                                  pmax     pmax
      comp=Z,10.0nm,0.7s
BJT   Baijiatuau        38.45 347    P        P         20 18 25.5 -0.3
BJT                                  IAmb     IAmb      20 18 26.9
      comp=Z,10nm,0.7s
BJI   Beijing           38.47 347    P        P         20 18 25.6 -0.4
BJI                                  pmax     pmax
      comp=Z,9.0nm,0.9s
LZH   Lanzhou           39.39 331  eP         P         20 18 34.6 +0.7
LZH                                  pP       pwP       20 18 45.0 -1.3
LZH                                  sP       sP        20 18 50.4 -1.4
LZH                                  pmax     pmax
      comp=Z,18nm,1.1s
LZH                                  pmax     pmax
      comp=Z,54nm,5.4s
LZH                                  LR       LR
      comp=Z,280nm,15.2s
LZH                                  LR       LR
      comp=Z,290nm,17.3s
LZH                                  LR       LR
      comp=Z,320nm,16.8s
MSHR  Mys Shultsa       40.08   5  i P        P         20 18 40.8 +1.5
MSHR                                 pmax     pmax
      comp=Z,35nm,1.0s
SHL   Shillong          40.37 308    P        P         20 18 41.9 -0.4
SHL                                  pmax     pmax
      comp=Z,12nm,0.6s
SHL   Shillong          40.37 308    P        P         20 18 41.9 -0.4
SHL                                  IAmb     IAmb      20 18 45.9
      comp=Z,12nm,0.6s
HHC   Hu-ho-hao-te      40.43 342  eP         P         20 18 42.3 -0.2
HHC                                  PP       PnPn      20 20 18.2 -2.2
HHC                                  S        S         20 24 45.3 -2.4
HHC                                  pmax     pmax
      comp=Z,12nm,0.8s
HHC                                  pmax     pmax
      comp=Z,180nm,5.1s
HHC                                  LR       LR
      comp=Z,200nm,12.3s
HHC                                  LR       LR
      comp=Z,210nm,13.1s
HHC                                  LR       LR
      comp=Z,260nm,15.8s
ARMA  Armidale          40.64 146    P        P         20 18 44.2 -0.1
CN2   Changchun         41.09 359  eP         P         20 18 50.0 +2.3
KWAJ  Kwajalein Atol    41.39  80    P        P         20 18 50.2 -0.4
KWAJ                                 pmax     pmax
      comp=Z,376nm,1.1s
KWAJ  Kwajalein Atol    41.39  80    P        P         20 18 50.2 -0.4
USA0B Ussuriysk Arra    41.76   6    P        P         20 18 53.8 +0.6
USA0B                                pmax     pmax
      comp=Z,20nm,1.0s
USA0B Ussuriysk Arra    41.76   6    P        P         20 18 53.8 +0.6
USA0B                                IAmb     IAmb      20 18 55.2
      comp=Z,20nm,0.9s
USRK  Ussuriysk Ar.     41.76   6    P        P         20 18 54.1 +0.9
      comp=Z,14nm,0.9s,baz=188,slow=8.2,SNR=18
MDJ   Mudanjiang        41.98   3    P        P         20 18 56.8 +1.8
MDJ                                  pmax     pmax
      comp=Z,12nm,0.9s
MDJ                                  pmax     pmax
      comp=Z,94nm,3.2s
MDJ   Mudanjiang        41.98   3    P        P         20 18 55.6 +0.6
LSA   Lhasa             43.02 313    P        P         20 19 05.1 +0.8
LSA   Lhasa             43.02 313    P        P         20 19 04.3  0.0
LSA                                  pmax     pmax
      comp=Z,9.0nm,0.7s
LSA   Lhasa             43.02 313    P        P         20 19 04.3  0.0
TEY   Ternei            43.24  10⇓eP         P         20 19 00.7 -4.5
TEY                                  pmax     pmax
      comp=Z,20nm,1.7s
TOO   Toolangi          43.65 158    P        P         20 19 07.5 -1.2
TOO                                  pmax     pmax
      comp=Z,61nm,1.7s
TOO   Toolangi          43.65 158    P        P         20 19 07.5 -1.2
TOO                                  IAmb     IAmb      20 19 22.3
      comp=Z,61nm,1.6s
ASAJ  Asahikawa         43.79  17    P        P         20 19 11.8 +2.1
      comp=Z,6.3nm,0.7s,baz=307,slow=16,SNR=1.7
ASAJ  Asahikawa         43.79  17    P        P         20 19 13.2 +3.5
ASAJ                                 pmax     pmax
      comp=Z,73nm,1.5s
JKA   Kamikawa-asahi    43.79  17    P        P         20 19 13.2 +3.5
JKA                                  IAmb     IAmb      20 19 29.8
      comp=Z,73nm,1.5s
GTA   Gaotai            43.97 330    P        P         20 19 11.2 -0.2
GTA                                  pP       pP        20 19 22.2 -1.7
GTA                                  sP       sP        20 19 27.4 -1.9
GTA                                  PcP      PcP       20 20 58.2 +1.6
GTA                                  pmax     pmax
      comp=Z,6.0nm,1.2s
GTA                                  pmax     pmax
      comp=Z,120nm,4.7s
GTA                                  LR       LR
      comp=Z,240nm,17.5s
GTA                                  LR       LR
      comp=Z,210nm,18.2s
GTA                                  LR       LR
      comp=Z,280nm,18.5s
TAPN  Taplejung         44.51 307  eP         P         20 19 15.9 -0.2
      comp=Z,9.3nm,0.4s
ODAN  Odare             44.54 307  eP         P         20 19 16.4 +0.1
      comp=Z,13nm,0.5s
RAMN  Ramite            45.22 306  eP         P         20 19 21.7  0.0
      comp=Z,16nm,0.6s
GUN   Gumba             46.21 307  eP         P         20 19 29.7 +0.1
      comp=Z,19nm,0.5s
PKI   Pulchoki          46.44 306  eP         P         20 19 31.0 -0.4
      comp=Z,5.6nm,0.4s
PKIN  Phulchoki         46.45 306  eP         P         20 19 30.9 -0.5
      comp=Z,8.3nm,0.4s
KKN   Kakani            46.64 307  eP         P         20 19 32.5 -0.3
      comp=Z,14nm,0.6s
DMN   Daman             46.70 306  eP         P         20 19 33.2 -0.2
HIA   Hailar            46.90 354  i P        P         20 19 34.9 +0.7
HIA                                  pmax     pmax
      comp=Z,11nm,1.1s
DANN  Dangsing          48.09 307  eP         P         20 19 43.8 -0.4
      comp=Z,47nm,0.6s
ULN   Ulaanbaatar       48.15 343ceP          P         20 19 43.8 -0.4
ULN                                  pmax     pmax
      comp=Z,8.0nm,0.8s
ULN   Ulaanbaatar       48.15 343    P        P         20 19 44.0 -0.2
ULN                                  IAmb     IAmb      20 19 46.0
      comp=Z,10nm,1.1s
SONM  Songino Array     48.33 342    P        P         20 19 45.5  0.0
      comp=Z,5.6nm,0.8s,baz=154,slow=8.5,SNR=20
SONM                                 PcP      PcP       20 21 12.0 +0.3
      comp=Z,2.1nm,0.8s,baz=163,slow=4.6,SNR=4.1
SONM                                 LR       LR        20 41 09.8
      comp=Z,139nm,21.7s,baz=194,slow=37
GRNR  Gornyy            48.78   8⇑iP         P         20 19 49.8 +1.0
GRNR                                 pmax     pmax
      comp=Z,9.0nm,1.1s
GRNR                                 MLR      MLR
      comp=E,240nm,19.0s
GRNR                                 MLR      MLR
      comp=N,140nm,16.0s
GRNR                                 MLR      MLR
      comp=Z,70nm,20.0s
HYB   Hyderabad         49.27 291  i P        P         20 19 52.0 -1.1
ZEA   Zeya              51.03   1  eP         P         20 20 11.6 +5.9
ZAK   Zakamensk         51.55 341  eP         P         20 20 08.7 -1.1
ZAK                                  pmax     pmax
      comp=Z,2.0nm,0.9s
TLY   Talaya            52.56 342  eP         P         20 20 18.4 +1.1
TLY                                  pmax     pmax
      comp=Z,23nm,0.8s
TLY                                  MLR      MLR
      comp=Z,140nm,6.0s
MOY   Mondy             53.40 341  eP         P         20 20 25.8 +2.3
WMQ   Urumqi            53.54 326  eP         P         20 20 25.3 +0.6
WMQ                                  sP       sP        20 20 38.8 -4.0
WMQ                                  pmax     pmax
      comp=Z,14nm,1.1s
WMQ                                  pmax     pmax
      comp=Z,78nm,4.7s
WMQ                                  LR       LR
      comp=Z,360nm,29.3s
WMQ                                  LR       LR
      comp=Z,2µm,28.9s
WMQ                                  LR       LR
      comp=Z,460nm,29.3s
BOD   Bodaibo           55.99 352  eP         P         20 20 42.6 +0.6
BOD                                  pmax     pmax
      comp=Z,8.0nm,1.4s
PETK  Petropavlovsk-    56.62  22    P        P         20 20 46.7  0.0
      comp=Z,3.6nm,0.7s,baz=177,slow=2.5,SNR=6.3
ZSN   Zaisan            57.35 328  eP         P         20 20 51.7 -0.3
      baz=328
ZSN   Zaisan            57.35 328  eP         P         20 20 51.6 -0.3
DGZ   Jazzator, Alta    57.49 331  i P        P         20 20 52.7 -0.3
DGZ                                  pmax     pmax
      comp=Z,7.0nm,1.7s
SHLS  Shalkode          58.08 321  eP         P         20 20 54.9 -2.4
      comp=Z,4.9nm,1.0s,baz=321
SHLS  Shalkode          58.08 321  eP         P         20 20 54.9 -2.4
SHLS                                 pmax     pmax
      comp=Z,5.0nm,1.0s
MK31  Makanchi Array    58.37 326    P        P         20 20 59.2 +0.1
MK31                                 pmax     pmax
      comp=Z,4.0nm,0.7s
MK31  Makanchi Array    58.37 326    P        P         20 20 59.2 +0.1
MKAR  Makanchi Array    58.37 326    P        P         20 20 59.0 -0.1
      comp=Z,4.6nm,0.5s,baz=120,slow=7.0,SNR=34
MKAR                                 PcP      PcP       20 21 48.6 -1.1
      comp=Z,2.1nm,0.7s,baz=112,slow=5.4,SNR=4.6
MKAR                                 LR       LR        20 48 40.1
      comp=Z,64nm,18.8s,baz=100,slow=39
NIL   Nilore            58.44 308    P        P         20 20 59.7 -0.2
NIL                                  pmax     pmax
      comp=Z,8.0nm,0.9s
NIL   Nilore            58.44 308    P        P         20 20 59.7 -0.2
NIL                                  IAmb     IAmb      20 21 20.3
      comp=Z,8.3nm,0.8s
MAKZ  Makanchi          58.55 326    P        P         20 21 00.3 -0.1
MAKZ                                 pmax     pmax
      comp=Z,5.0nm,0.7s
MAKZ  Makanchi          58.55 326    P        P         20 21 00.3 -0.1
MAKZ                                 IAmb     IAmb      20 21 01.8
      comp=Z,5.4nm,0.7s
KSH   Kashi             58.69 316    P        P         20 21 03.4 +1.8
KSH                                  sP       sP        20 21 24.4 +4.5
KSH                                  PcP      PcP       20 21 53.8 +2.6
KSH                                  pmax     pmax
      comp=Z,19nm,1.1s
KSH                                  pmax     pmax
      comp=Z,260nm,5.5s
SATY  Saty              58.70 320  eP         P         20 21 01.4 -0.2
      comp=Z,4.6nm,0.8s,baz=320
SATY  Saty              58.70 320  eP         P         20 21 01.4 -0.2
SATY                                 pmax     pmax
      comp=Z,5.0nm,0.8s
YAK   Yakutsk           59.39   2  eP         P         20 21 06.0 +0.2
YAK                                  pmax     pmax
      comp=Z,20nm,0.9s
YAK                                  pmax     pmax
      comp=N,5.0nm,0.9s
YAK                                  pmax     pmax
      comp=E,2.0nm,1.0s
YAK   Yakutsk           59.39   2    P        P         20 21 06.1 +0.3
YAK                                  IAmb     IAmb      20 21 13.2
      comp=Z,26nm,0.9s
MDOK  Medeo             59.62 320  eP         P         20 21 07.5 -0.5
      baz=320
MDOK  Medeo             59.62 320  eP         P         20 21 07.5 -0.5
TNSS  Tian-Shan         59.63 320  eP         P         20 21 08.6 +0.1
      baz=320
TNSS  Tian-Shan         59.63 320  eP         P         20 21 08.5 +0.1
TDK   Taldyqorghan      59.68 322  eP         P         20 21 08.2  0.0
      comp=Z,5.5nm,0.7s,baz=322
TDK   Taldyqorghan      59.68 322  eP         P         20 21 08.2  0.0
TDK                                  pmax     pmax
      comp=Z,5.0nm,0.7s
AAA   Alma-Ata          59.73 320  eP         P         20 21 09.3 +0.6
      baz=320
AAA   Alma-Ata          59.73 320  eP         P         20 21 09.2 +0.6
MA2   Magadan           59.91  14ceP          P         20 21 10.5 +1.0
MA2                                  pmax     pmax
      comp=Z,25nm,1.7s
CHKK  Chushkaly         59.99 321  eP         P         20 21 10.4 -0.1
      baz=320
CHKK  Chushkaly         59.99 321  eP         P         20 21 10.3 -0.1
QRZ   Quartz Range      60.18 141    P        P         20 21 12.7 +0.9
MLZ   Mavora Lakes      60.34 147    P        P         20 21 12.5 -0.3
KUU   Kurty             60.42 320  eP         P         20 21 12.9 -0.5
      comp=Z,14nm,0.8s,baz=320
KUU   Kurty             60.42 320  eP         P         20 21 12.9 -0.5
KUU                                  pmax     pmax
      comp=Z,14nm,0.8s
TKM2  Tokmak 2          60.45 319    P        P         20 21 15.0 +1.2
      SNR=9.4
TKM2  Tokmak 2          60.45 319  i P        P         20 21 13.7 -0.1
TKM2                                 pmax     pmax
      comp=Z,7.0nm,0.6s
UCH   Uchtor            60.86 318    P        P         20 21 18.6 +1.7
      SNR=12
LBZ   Lake Benmore      60.87 145    P        P         20 21 16.0 -0.3
THZ   Tophouse          60.94 142    P        P         20 21 16.4 -0.6
RPZ   Rata Peaks        60.96 144    P        P         20 21 17.3 +0.4
AAK   Ala-Archa         61.05 318    P        P         20 21 18.4 +0.6
AAK                                  pmax     pmax
      comp=Z,15nm,1.7s
AAK   Ala-Archa         61.05 318    P        P         20 21 18.4 +0.6
AAK                                  IAmb     IAmb      20 21 19.3
      comp=Z,15nm,1.6s
LTZ   Lake Taylor       61.13 143    P        P         20 21 18.2  0.0
OXZ   Oxford            61.31 144    P        P         20 21 19.5 +0.2
SGDS  Sogindy           61.32 319  eP         P         20 21 19.2 -0.3
      baz=319
SGDS  Sogindy           61.32 319  eP         P         20 21 19.2 -0.3
USP   Ospenovka         61.33 319    P        P         20 21 19.8 +0.2
      SNR=15
AML   Almayashu         61.37 318    P        P         20 21 21.0 +0.7
      SNR=10
TUWZ  Tuamarina         61.41 141    P        P         20 21 19.2 -0.8
ZAA0  Zalesovo Array    61.51 333    P        P         20 21 20.2 -0.3
ZALV  Zalesovo Beam     61.51 333    P        P         20 21 19.9 -0.6
      comp=Z,2.9nm,0.5s,baz=127,slow=6.2,SNR=12
ZALV                                 LR       LR        20 48 44.6
      comp=Z,66nm,19.7s,baz=148,slow=37
ZALV  Zalesovo Beam     61.51 333  i P        P         20 21 20.2 -0.3
ZALV                                 pmax     pmax
      comp=Z,3.0nm,0.5s
ODZ   Otahua Downs      61.53 146    P        P         20 21 20.1 -0.6
ODZ                                  IAmb     IAmb      20 21 38.8
      comp=Z,18nm,1.3s
EKS2  Erkin-Say         61.54 318    P        P         20 21 21.8 +0.7
      SNR=9.1
SEM   Semipalatinsk     61.55 328  eP         P         20 21 20.6 -0.6
      baz=328
SEM   Semipalatinsk     61.55 328  eP         P         20 21 20.5 -0.6
KHZ   Kahutara          61.70 142    P        P         20 21 21.0 -0.9
URZ   Urewera           61.87 136    P        P         20 21 21.8 -1.4
URZ                                  IAmb     IAmb      20 22 01.5
      comp=Z,41nm,1.9s
MQZ   McQueen’s Vall    61.89 144    P        P         20 21 23.6 +0.4
BKZ   Black Stump Fm    61.90 138    P        P         20 21 23.0 -0.4
BKZ                                  IAmb     IAmb      20 21 48.9
      comp=Z,56nm,1.8s
KBL   Kabul             62.03 308    P        P         20 21 23.8 -0.9
KBL                                  pmax     pmax
      comp=Z,5.0nm,0.7s
KBL   Kabul             62.03 308    P        P         20 21 23.8 -0.9
KBL                                  IAmb     IAmb      20 21 31.3
      comp=Z,4.9nm,0.7s
BTLS  Baital            62.41 321  eP         P         20 21 25.8 -1.0
      baz=321
BTLS  Baital            62.41 321  eP         P         20 21 25.7 -1.0
BFZ   Birch Farm        62.49 139    P        P         20 21 27.4 +0.1
KURK  Kurchatov         62.59 328ceP          P         20 21 27.4 -0.4
KURK                                 pmax     pmax
      comp=Z,19nm,0.8s
KURK  Kurchatov         62.59 328    P        P         20 21 27.1 -0.6
KURK                                 IAmb     IAmb      20 21 31.9
      comp=Z,17nm,0.7s
SEY   Seymchan          63.23  13  i P        P         20 21 32.9 +1.1
DZA   Taraz             63.27 318  eP         P         20 21 31.1 -1.6
      baz=318
DZA   Taraz             63.27 318  eP         P         20 21 31.0 -1.6
IUG   Iuzhnay           63.87 316  eP         P         20 21 36.4 -0.2
      comp=Z,3.8nm,0.9s,baz=316
IUG   Iuzhnay           63.87 316  eP         P         20 21 36.4 -0.2
IUG                                  pmax     pmax
      comp=Z,4.0nm,0.9s
KK31  Karatay Array     63.91 317    P        P         20 21 35.8 -1.0
KK31                                 pmax     pmax
      comp=Z,7.0nm,1.0s
KK31  Karatay Array     63.91 317    P        P         20 21 35.8 -1.0
KKAR  Karatay Array     63.91 317    P        P         20 21 35.9 -0.8
KKAR                                 pmax     pmax
      comp=Z,7.0nm,1.0s
KKAR  Karatay Array     63.91 317    P        P         20 21 35.9 -0.8
BRVK  Borovoye          68.23 327    P        P         20 22 03.5 -0.7
BRVK                                 pmax     pmax
      comp=Z,6.0nm,0.9s
BRVK  Borovoye          68.23 327    P        P         20 22 03.5 -0.7
ATKA  Atka Island       69.61  34    P        P         20 22 13.6 +0.8
GEYT  Alibeck           71.42 309    P        P         20 22 24.0 -0.3
      comp=Z,1.7nm,0.7s,baz=149,slow=6.6,SNR=6.1
NRIK  Noril'sk          71.50 346    P        P         20 22 24.4 +0.4
      comp=Z,6.2nm,0.5s,baz=131,slow=3.9,SNR=11
NRIK  Noril'sk          71.50 346    P        P         20 22 23.8 -0.2
NRIK                                 pmax     pmax
      comp=Z,8.0nm,0.8s
NRIK  Noril'sk          71.50 346    P        P         20 22 23.8 -0.2
SOCY  Socotra           72.34 282    P        P         20 22 28.2 -2.0
SOCY                                 IAmb     IAmb      20 22 59.9
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	comp=Z,49nm,1.3s						
ABKAR	Akbulak array	72.89	321	P	P	20 22 32.3	-0.4
UNV	Unalaska Valle	74.54	34	P	P	20 22 42.2	-0.1
SVE	Sverdlovsk	74.82	329	⇑eP	P	20 22 44.3	+0.5
SVE				pmax	pmax		
	comp=Z,22nm,1.2s						
AKUT	Akutan	75.04	34	P	P	20 22 45.6	+0.4
ARU	Arti	75.79	328	c iP	P	20 22 48.2	-1.2
ARU				S	S	20 32 25.0	-2.8
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	75.79	328	P	P	20 22 48.9	-0.5
ARU				IAmb	IAmb	20 22 52.7	
	comp=Z,9.2nm,0.8s						
AKT	Akhty	79.87	312	eP	P	20 23 12.5	-0.1
AKT				e		20 23 18.7	
AKT				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ABPO	Ambohimpanom	80.66	250	P	P	20 23 18.5	+1.2
ABPO				pmax	pmax		
	comp=Z,33nm,1.7s						
ABPO	Ambohimpanom	80.66	250	P	P	20 23 18.5	+1.2
ABPO				IAmb	IAmb	20 23 39.3	
	comp=Z,33nm,1.6s						
RAYN	Ar Rayn	80.70	293	P	P	20 23 17.0	-0.4
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	Ar Rayn	80.70	293	P	P	20 23 16.9	-0.4
TTA	Tatalina	82.07	27	P	P	20 23 24.1	+0.3
TTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TTA	Tatalina	82.07	27	P	P	20 23 24.1	+0.3
VNDA	Vanda	82.30	173	P	P	20 23 25.0	+0.4
	comp=Z,1.7nm,0.3s,baz=323,slow=7.1,SNR=17						
VNDA	Vanda	82.30	173	P	P	20 23 25.2	+0.6
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VNDA	Vanda	82.30	173	P	P	20 23 25.2	+0.6
OHAK	Old Harbor	82.58	33	P	P	20 23 27.1	+0.6
ZEI	Tsey	82.81	313	eP	P	20 23 28.0	-0.3
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KDAK	Kodiak Island	83.03	32	P	P	20 23 30.2	+1.5
KDAK				pmax	pmax		
	comp=Z,137nm,1.9s						
KDAK	Kodiak Island	83.03	32	P	P	20 23 30.2	+1.5
RSO	Redoubt South	83.24	30	P	P	20 23 31.6	+1.5
GEVA	Gevas	83.25	308	P	P	20 23 30.6	0.0
GEVA				IAmb	IAmb	20 23 33.0	
	comp=Z,10nm,0.6s						
A21K	Barrow	83.42	18	P	P	20 23 32.7	+2.2
	baz=258						
A21K	Barrow	83.42	18	P	P	20 23 32.4	+1.9
A21K				IAmb	IAmb	20 23 34.1	
	comp=Z,27nm,1.1s						
KBZ	Khabaz	83.59	314	P	P	20 23 31.3	-0.7
	comp=Z,1.4nm,0.5s,baz=284,slow=1.7,SNR=8.3						
KBZ				LR	LR	21 06 57.8	
	comp=Z,58nm,18.7s,baz=53,slow=40						
KIV	Kislovodsk	83.75	314	eP	P	20 23 31.6	-1.4
KIV				e		20 26 43.6	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PPLA	Purkeypile	83.79	27	P	P	20 23 33.4	+0.6
CNPM	China Poot	83.90	31	P	P	20 23 34.1	+0.8
SKT	Skwentna	84.00	28	P	P	20 23 33.6	-0.1
SKT				IAmb	IAmb	20 23 36.8	
	comp=Z,56nm,1.7s						
BRLK	Bradley Lake	84.10	30	P	P	20 23 35.0	+0.7
SUA	Susitna One	84.32	29	P	P	20 23 35.6	+0.1
VRH	Novokhopyorsk	84.72	321	eP	P	20 23 37.1	-0.5
VRH				pmax	pmax		
	comp=Z,80nm,1.6s						
RC01	Rabbit Creek A	84.78	29	P	P	20 23 38.6	+0.9
	baz=266						
COLD	Coldfoot	85.08	23	P	P	20 23 41.1	+2.1
	baz=265						
COLD	Coldfoot	85.08	23	P	P	20 23 40.4	+1.4
COLD				IAmb	IAmb	20 23 42.6	
	comp=Z,15nm,1.3s						
PMR	Palmer	85.10	29	P	P	20 23 39.4	+0.1
PMR				pmax	pmax		
	comp=Z,22nm,1.1s						
PMR	Palmer	85.10	29	P	P	20 23 39.4	+0.1
PMR				IAmb	IAmb	20 23 40.5	
	comp=Z,22nm,1.1s						
I23K	Minto, Yukon-K	85.25	25	P	P	20 23 41.3	+1.4
	baz=266						
I23K	Minto, Yukon-K	85.25	25	P	P	20 23 40.6	+0.7
I23K				IAmb	IAmb	20 23 43.0	
	comp=Z,14nm,1.2s						
KOPT	Kop Dagi	85.28	310	P	P	20 23 41.7	+0.7
RND	Reindeer	85.35	27	P	P	20 23 40.8	+0.2
RND				pmax	pmax		
	comp=Z,42nm,1.9s						
RND	Reindeer	85.35	27	P	P	20 23 40.8	+0.2
RND				IAmb	IAmb	20 23 46.6	
	comp=Z,42nm,1.9s						
KNK	Knik Glacier	85.41	29	P	P	20 23 41.9	+1.0
KNK				IAmb	IAmb	20 23 42.9	
	comp=Z,27nm,1.0s						
TOLK	Toolik Lake Re	85.44	21	P	P	20 23 43.0	+2.2
	baz=265						
TOLK	Toolik Lake Re	85.44	21	P	P	20 23 42.2	+1.3
TOLK				IAmb	IAmb	20 23 44.3	
	comp=Z,9.3nm,1.2s						
SML	Sawmill	85.50	28	P	P	20 23 42.1	+0.8
SML				IAmb	IAmb	20 23 43.1	
	comp=Z,14nm,0.8s						
ILAR	Eielson Array	86.28	25	P	P	20 23 44.2	-0.8
	comp=Z,0.9nm,0.6s,baz=238,slow=5.2,SNR=15						
KLMR	Klimovskoe	86.30	331	eP	P	20 23 43.3	-1.9
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
KLMR	Klimovskoe	86.30	331	eP	P	20 23 43.4	-1.8
KLMR				AMP		20 23 56.3	
	comp=Z,29nm,1.5s						
VSR	Storozhevoye	86.33	321	eP	P	20 23 44.8	-0.8
VSR				pmax	pmax		
	comp=Z,40nm,1.2s						
LPSR	Galich'ya Gora	86.49	322	eP	P	20 23 45.9	-0.4
LPSR				pmax	pmax		
	comp=Z,40nm,1.3s						
MOS	Moscow	87.25	326	eP	P	20 23 50.2	+0.2
SCRK	Sand Creek	87.53	26	P	P	20 23 52.3	+1.0
	baz=271						
L26K	Log Cabin Wild	87.83	27	P	P	20 23 53.8	+1.1
	baz=271						
OBN	Obninsk	87.87	325	⇑P	P	20 23 53.1	+0.2
OBN	Obninsk	87.87	325	eP	P	20 23 52.2	-0.7
OBN				ePPP	PPP	20 29 13.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.7s						
OBN				MLR	MLR		
	comp=Z,114nm,15.0s						
OBN	Obninsk	87.87	325	P	P	20 23 52.0	-0.9
GAZ	Gaziantep	87.88	307	P	P	20 23 52.8	-0.7
GAZ				IAmb	IAmb	20 23 55.4	
	comp=Z,14nm,0.9s						
K27K	Chicken	88.37	26	P	P	20 23 56.7	+1.6
	baz=272						
KMBO	Kilima Mbogo	89.26	269	P	P	20 24 00.8	+0.1
	comp=Z,2.7nm,0.6s,baz=45,slow=6.6,SNR=6.2						
BRTR	Keskin Array B	90.56	310	P	P	20 24 05.9	-0.3
	comp=Z,2.8nm,0.8s,baz=107,slow=4.3,SNR=9.7						
BRTR				LR	LR	21 09 39.9	
	comp=Z,14nm,21.4s,baz=42,slow=39						
INK	Inuvik	91.35	21	P	P	20 24 08.6	-0.3
INK				pmax	pmax		
	comp=Z,22nm,1.9s						
INK	Inuvik	91.35	21	P	P	20 24 08.6	-0.3
INK				IAmb	IAmb	20 24 11.4	
	comp=Z,22nm,1.9s						
ARCES	ARCESS Array B	91.46	340	P	P	20 24 09.8	+0.4
	comp=Z,4.8nm,0.9s,baz=76,slow=2.0,SNR=8.9						
AKASG	Malin Array Be	92.63	321	P	P	20 24 14.7	-0.6
	comp=Z,1.0nm,0.5s,baz=68,slow=4.8,SNR=7.1						
FINES	FINESS Array B	92.74	332	P	P	20 24 15.4	-0.1
	comp=Z,2.8nm,0.8s,baz=43,slow=3.6,SNR=9.3						
FINES	FINESS Array B	92.74	332	i P	P	20 24 16.5	+1.0
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SORM	Soroca	93.53	318	⇓P	P	20 24 18.7	-0.8
SORM	Soroca	93.53	318	⇓P	P	20 24 18.7	-0.8
C36M	Paulatuk	94.41	20	P	P	20 24 23.4	+0.4
	baz=289						
TESR	Tescani	94.91	317	⇑P	P	20 24 25.9	0.0
VRI	Vrincioaia	94.96	316	⇑P	P	20 24 26.3	+0.2
VRI	Vrincioaia	94.96	316	⇑P	P	20 24 26.3	+0.2
BIZ	Bicaz	95.22	317	⇑P	P	20 24 30.7	+3.4
BURAR	Bucovina Array	95.70	318	⇑P	P	20 24 30.5	+0.9
BURAR	Bucovina Array	95.70	318	⇑P	P	20 24 30.5	+0.9
BUR08	Bucovina Ar. S	95.70	318	P	P	20 24 29.2	-0.4
BUR08				IAmb	IAmb	20 24 30.8	
	comp=Z,4.8nm,0.8s						
DOPR	Dopca	95.86	317	⇑P	P	20 24 30.1	-0.2
DRGR		97.53	318	⇓P	Pdif	20 24 38.3	+0.3
DRGR		97.53	318	⇓P	Pdif	20 24 38.3	+0.3
VTS	Vitosha	97.98	313	⇑P	P	20 24 39.6	-0.5
VTS	Vitosha	97.98	313	⇑P	P	20 24 39.6	-0.5
YKA	Yellowknife Ar	100.68	24	P	Pdif	20 24 51.4	-0.1
	comp=Z,0.5nm,0.7s,baz=301,slow=4.1,SNR=9.1						
TXAR	Lajitas Array	122.53	53	PKP	PKiKP	20 30 01.3	+1.4
	comp=Z,0.2nm,0.3s,baz=246,slow=30,SNR=2.6						
TORD	Torodi Ar. Bea	123.02	287	PKP	PKPdf	20 30 01.1	+0.2
	comp=Z,2.2nm,0.8s,baz=50,slow=1.8,SNR=8.0						
S39A	Bolivar	125.60	39		PKPdf	20 30 05.3	0.0

IDC 02 20:20:27.5±3.8, 14°.25N×92°.69W, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.4/35, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=180.0km s-min=29.8km az=49.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	3.52	323	Pn	Pn	20 21 24.6	+1.0
	0.6nm,0.3s,baz=128,slow=10,SNR=7.6						
CMIG				Sn	Sn	20 22 04.1	-1.9
	1.8nm,0.3s,baz=113,slow=16,SNR=4.2						
CMIG				Lg	Lg	20 22 18.3	
	3.4nm,0.3s,baz=46,slow=11,SNR=4.6						
TXAR	Lajitas Array	18.12	328	P	P	20 24 41.3	0.0
	0.1nm,0.3s,baz=128,slow=12,SNR=2.3						
YKA	Yellowknife Ar	50.63	347	P	P	20 29 28.2	+0.1
	0.8nm,0.7s,baz=148,slow=7.9,SNR=17						
CMAR	Chiang Mai Arr	145.53	340	PKPbc	PKPbc	20 40 07.1	-1.6
	0.3nm,0.6s,baz=356,slow=3.6,SNR=3.3						

TAP 02 20:41:45.6, 24°.34N×121°.98E, h28^{km}, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENAH	Nanao	0.19	306	S	Sb	20 41 56.2	+0.8
	baz=312						
ENA	Nanau	0.23	293	eP	Pb	20 41 52.1	+0.1
	baz=299						
ENA				S	Sb	20 41 56.7	+0.4
	baz=299						
NACB	Ninganchiao	0.39	245	P	Pb	20 41 54.1	-0.1
	baz=252						
NACB				S	Sn	20 42 01.4	-0.4
	baz=252						
TWD	Chiawan	0.43	234	eP	Pb	20 41 55.0	+0.1
	baz=233						
TWD				eS	Sn	20 42 03.5	+0.5
	baz=233						
ETLH	Xiulin Townshi	0.47	254	P	Pb	20 41 55.9	+0.3
	baz=254						
ETLH				S	Sn	20 42 04.3	+0.3
	baz=254						
ETLH	Xiulin Townshi	0.47	254	eP	Pb	20 41 55.8	+0.2
	baz=191						
TWE	Neicheng	0.47	324	eP	Pn	20 41 56.2	-0.4
	baz=325						
TWE				eS	Sn	20 42 04.0	-0.1
	baz=325						
ENTT	Nioudou	0.48	309	eP	Pb	20 41 56.1	+0.4
	baz=310						
ENTT				eS	Sn	20 42 04.0	-0.3
	baz=310						
NNSB	Datong	0.55	280	P	Pb	20 41 57.3	+0.4
	baz=285						
NNSB				S	Sn	20 42 05.6	-0.5
	baz=285						
NNSH	Datong	0.55	280	eP	Pn	20 41 57.6	-0.2
	baz=282						
NNSH				eS	Sn	20 42 05.5	-0.6
	baz=282						
NNS	Nan Shan	0.56	281	eP	Pb	20 41 57.4	+0.3
	baz=286						
NNS				eS	Sn	20 42 06.0	-0.4
	baz=286						
NWLT	Wulai	0.61	315	eP	Pn	20 41 58.6	0.0
	baz=316						
NWLT				S	Sn	20 42 07.1	-0.5
	baz=316						
YHNB	Yeheng	0.64	301	eP	Pn	20 41 59.1	+0.1
	baz=301						
YHNB				S	Sn	20 42 08.3	+0.1
	baz=301						
TIPB	Shuangxi	0.65	348	P	Pn	20 41 59.2	+0.1
	baz=348						
TIPB				eS	Sb	20 42 07.3	+0.1
	baz=348						
NSK	Sanguang	0.66	301	eP	Pn	20 41 59.2	0.0
	baz=301						
NSK				eS	Sn	20 42 08.6	-0.1
	baz=301						
FUSS	Fushou	0.68	262	P	Pb	20 41 59.2	+0.2
	baz=262						
FUSS				S	Sn	20 42 09.4	+0.1
	baz=262						
ESL	Shilin	0.72	224	eP	Pb	20 41 59.7	0.0
	baz=223						
ESL				eS	Sn	20 42 10.0	-0.1
	baz=223						
CHGB	Renai	0.78	249	eP	Pn	20 42 01.2	+0.1
	baz=239						
CHGB				eS	Sn	20 42 12.2	+0.2
	baz=239						
EGFH	Guangfu	0.83	217	eP	Pb	20 42 01.7	+0.1
	baz=205						
LIOB	Emei	0.93	289	eP	Pb	20 42 04.4	+1.2
	baz=290						
WHP	Taichung City	0.94	267	eP	Pb	20 42 04.9	+1.4
	baz=258						
HGSD	Ruisui	0.98	211	eP	Pb	20 42 04.1	0.0
	baz=200						
SSLB	Suanglung	1.08	240	eP	Pb	20 42 05.8	0.0
	baz=228						
YULB	Yu-li	1.13	214	eP	Pn	20 42 05.8	+0.2
	baz=225						

TAP 02 20:41:46.5, 24°.62N×121°.57E, h9^{km}, ML0.7, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENTT	Nioudou	0.02	349	⇓iP	Pg	20 41 48.6	+0.3
	baz=6.0						
ENTT				i S	Sg	20 41 50.1	+0.7
	baz=6.0						
NDT	Datong Townshi	0.06	256	i P	Pg	20 41 49.0	+0.6
	baz=255						
NDT				S	Sg	20 41 50.4	+0.5
	baz=255						
TWE	Neicheng	0.14	40	eP	Pg	20 41 50.2	+0.7
	baz=45						
TWE				eS	Sg	20 41 52.9	+1.2
	baz=45						
NWLT	Wulai	0.17	339	eP	Pg	20 41 51.4	+1.1
	baz=338						
NWLT				eS	Sg	20 41 54.6	+1.9
	baz=338						
YHNB	Yeheng	0.19	287	P	Pg	20 41 51.6	+1.1
	baz=286						
YHNB				S	Sg	20 41 54.7	+1.6
	baz=286						
NSK	Sanguang	0.20	287	eP	Pg	20 41 51.8	+1.1
	baz=287						
NSK				eS	Sg	20 41 54.8	+1.1
	baz=287						
NNSH	Datong	0.25	223	eS	Sb	20 41 57.0	-0.9
	baz=222						

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*JMA **02** 20:47:23.3, 39°.53N×141°.05E, h99^{km}±1^{km}, M3.4*

*IDC **02** 20:47:24.3±1.8, 39°.57N×140°.95E, h110^{km}±18^{km}, mb3.1/8, mb1 3.4/12, mb1mx3.2/38, mbtmp3.6/12, MS2.6/1, Ms1 2.6/1, ms1mx2.2/19, Error ellipse: s-maj=24.1km s-min=15.4km az=107.0*

ISC 02 20:47:23.2±0.8, 39°.55N±0°.04×141°.12E±0°.07, h100^{km}±5^{km}, n30, σ0^{s}.78/37, mb3.4/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOM	Ohasama	0.15	119	P	Pn	20 47 37.3	0.0
JOM				S	Sn	20 47 47.6	-0.2
JSZI	Iwateshizukuis	0.24	326	P	Pn	20 47 37.7	+0.1
JSZI				S	Sn	20 47 48.5	+0.2
JRG	Rokugo	0.41	249	P	Pn	20 47 38.1	-0.3
JRG				S	Sn	20 47 49.4	-0.3
JMK	Ichinoseki	0.60	173	P	Pn	20 47 39.6	-0.2
JMK				eS	Sn	20 47 51.7	-0.4
JAH	Hinai	0.74	330	P	Pn	20 47 41.1	0.0
JAH				S	Sn	20 47 54.2	-0.2
JYK	Kaneyama	0.86	224	P	Pn	20 47 41.9	-0.3
JYK				S	Sn	20 47 55.9	-0.6
JANG	Nango	0.88	20	P	Pn	20 47 42.8	+0.4
JANG				S	Sn	20 47 57.2	+0.4
JIO	Ouri	1.10	171	P	Pn	20 47 44.8	0.0
JIO				eS	Sn	20 48 00.8	-0.2
JOU	Okura	1.23	197	P	Pn	20 47 46.6	+0.3
JOU				eS	Sn	20 48 04.3	+0.6
JTM	Tenmabayashi	1.24	358	P	Pn	20 47 46.8	+0.4
JTM				eS	Sn	20 48 04.5	+0.7
JIW	Iwasaki	1.35	321	P	Pn	20 47 47.8	+0.1
JIW				eS	Sn	20 48 06.6	+0.4
MJAR	Matsushiro Arr	3.78	218	P	Pn	20 48 20.6	+1.1
	0.7nm,0.3s,baz=24,slow=14,SNR=56						
MAT	Matsushiro	3.78	218	P	Pn	20 48 20.4	+0.9
MAT				S	Sn	20 49 02.2	-0.8
ASAJ	Asahikawa	4.70	13	P	Pn	20 48 31.5	-0.3
	1.8nm,0.3s,baz=195,slow=14,SNR=17						
ASAJ				S	Sn	20 49 22.8	-2.4
	0.7nm,0.3s,baz=164,slow=18,SNR=1.8						
ASAJ				LR	LR	20 51 05.1	
	comp=Z,56nm,18.6s,baz=258,slow=47						
JHJ	Hachijo jima 2	6.50	190	P	Pn	20 48 57.2	+0.8
	26nm,0.3s,baz=211,slow=22,SNR=1.9						
USRK	Ussuriysk Ar.	8.25	307	P	Pn	20 49 21.0	+1.1
	baz=113,slow=15,SNR=7.2						
H11N2	WAKE ISLAND Hy	29.69	124	T	T	21 24 08.4	
	baz=318,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	29.70	124	T	T	21 24 11.7	
	baz=318,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	29.71	124	T	T	21 24 12.4	
	baz=318,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	30.47	126	T	T	21 25 08.4	
	baz=318,slow=75,SNR=5.6						
H11S3	WAKE ISLAND Hy	30.47	126	T	T	21 25 08.2	
	baz=318,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	30.49	126	T	T	21 25 09.8	
	baz=318,slow=75,SNR=6.5						
MKAR	Makanchi Array	42.63	300	P	P	20 55 08.5	-1.1
	0.2nm,0.7s,baz=88,slow=10,SNR=2.5						
KURBB	Kurchatov Arra	44.31	306	P	P	20 55 21.4	-1.6
	0.5nm,0.5s,baz=81,slow=8.5,SNR=7.1						
ILAR	Eielson Array	47.52	34	P	P	20 55 48.9	+1.0
	1.1nm,0.6s,baz=267,slow=6.2,SNR=15						
INK	Inuvik	52.27	28	P	P	20 56 24.6	+0.8
	0.7nm,0.4s,baz=352,slow=8.6,SNR=4.1						
WRA	Warramunga Arr	59.52	187	P	P	20 57 15.0	-1.0
	0.3nm,0.7s,baz=6.0,slow=7.6,SNR=1.6						
YKA	Yellowknife Ar	61.76	31	P	P	20 57 30.6	-0.1
	0.1nm,0.5s,baz=306,slow=4.6,SNR=2.8						
ASAR	Alice Springs	63.24	187	P	P	20 57 42.0	+1.0
	0.1nm,0.6s,baz=26,slow=13,SNR=1.4						
PDAR	Pinedale Array	76.08	46	P	P	20 59 00.6	+0.5
	0.3nm,0.6s,baz=242,slow=3.2,SNR=4.3						

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*IDC **02** 21:09:03.6±1.2, 2°.66N×126°.89E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.5/42, mbtmp3.7/6, MS3.1/3, Ms1 3.1/3, ms1mx2.7/41, Error ellipse: s-maj=97.3km s-min=17.9km az=70.0*

*NEIC **02** 21:09:08.7±1.9, 2°.54N±0°.09×126°.8E±0°.1, h35^{km}±2^{km}, mb4.3/9, Error ellipse: s-maj=26.5km s-min=8.7km az=241.0*

ISC 02 21:09:09.4±0.8, 2°.53N±0°.08×126°.7E±0°.1, h35^{km}, n21, σ1^{s}.51/20, mb4.0/10, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.86	160	Pn	Pn	21 09 42.1	+3.3
KCP	Kidapawan	4.74	340	⇑eP	Pn	21 10 20.2	+1.7
TOLI2	Tolitoli	6.11	257	Pn	Pn	21 10 37.1	-0.1
MYLDM	Lahad Datu	8.62	288	Pn	Pn	21 11 14.0	+2.3
KAPI	Kappang	10.23	223	LR	LR	21 16 16.5	
	comp=Z,72nm,20.2s,baz=109,slow=42						
KKM	Kota Kinabalu	11.05	289	Pn	Pn	21 11 47.4	+2.3
MTN	Manton Dam	15.89	164	Pn	Pn	21 12 50.5	-0.1
FITZ	Fitzroy Crossi	20.53	183	P	P	21 13 46.5	+1.7
	1.6nm,0.6s,baz=13,slow=13,SNR=1.4						
FITZ				LR	LR	21 20 55.8	
	comp=Z,38nm,22.0s,baz=352,slow=34						
FITZ	Fitzroy Crossi	20.53	183	P	P	21 13 44.3	-0.5
YULB	Yu-li	21.39	346	P	P	21 13 52.9	-1.3
YULB				IAmb	IAmb	21 14 02.8	
	comp=Z,25nm,1.4s						
TPUB	Ta-pu	21.48	345	P	P	21 13 53.8	-1.3
SSLB	Suanglung	21.86	346	P	P	21 13 57.6	-1.6
SSLB				IAmb	IAmb	21 14 02.6	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	23.40	162	P	P	21 14 14.7	-0.7
WB0				IAmb	IAmb	21 14 16.5	
	comp=Z,14nm,1.5s						
WRAB	Tennant Creek	23.55	162	P	P	21 14 15.9	-0.8
WRAB				IAmb	IAmb	21 14 33.8	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	23.55	162	P	P	21 14 15.7	-1.1
	comp=Z,1.2nm,0.4s,baz=340,slow=11,SNR=36						
WB2	Warramunga Arr	23.55	162	P	P	21 14 15.9	-1.0
WR0	Warramunga Arr	23.63	161	P	P	21 14 17.4	-0.2
WR0				IAmb	IAmb	21 14 33.2	
	comp=Z,8.9nm,1.4s						
ASAR	Alice Springs	26.96	165	P	P	21 14 47.5	-0.5
	comp=Z,0.5nm,0.5s,baz=348,slow=7.6,SNR=14						
STKA	Stephens Creek	37.02	159	P	P	21 16 16.4	+0.5
	comp=Z,0.9nm,0.4s,baz=352,slow=8.5,SNR=3.6						
SONM	Songino Array	48.43	342	P	P	21 17 48.1	-0.3
	comp=Z,0.5nm,0.6s,baz=152,slow=9.1,SNR=5.6						
SONM				LR	LR	21 38 41.8	
	comp=Z,44nm,19.4s,baz=346,slow=37						
MKAR	Makanchi Array	58.53	326	P	P	21 19 01.1	-1.3
	comp=Z,0.6nm,0.5s,baz=116,slow=7.3,SNR=15						

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*IDC **02** 21:10:30.7±1.4, 8°.09S×68°.19E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.6/54, mbtmp3.8/8, MS3.7/4, Ms1 3.7/4, ms1mx3.0/48, Error ellipse: s-maj=45.3km s-min=25.1km az=47.0*

ISC 02 21:10:32.8±1.4, 8°.0S±0°.3×68°.36E±0°.10, h10^{km}, n14, σ0^{s}.81/16, mb3.9/8, MS3.8/4, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	4.10	85	Pn	Pn	21 11 35.6	+0.4
H08S1				Sn	Sn	21 12 22.5	-0.6
	baz=338,slow=72,SNR=6.4						
H08S1				T	T	21 16 17.1	
	baz=203,slow=72,SNR=8.7						
H08S3	Diego Garcia H	4.11	85	Pn	Pn	21 11 35.8	+0.4
H08S3				Sn	Sn	21 12 22.7	-0.8
	baz=338,slow=72,SNR=11						
H08S3				T	T	21 16 19.7	
	baz=203,slow=72,SNR=11						
H08S2	Diego Garcia H	4.11	85	Pn	Pn	21 11 35.9	+0.4
H08S2				Sn	Sn	21 12 22.8	-0.8
	baz=338,slow=72,SNR=14						
H08S2				T	T	21 16 17.9	
	baz=203,slow=72,SNR=7.2						
PSI	Prapat	32.33	72	LR	LR	21 28 23.4	
	comp=Z,231nm,18.2s,baz=269,slow=33						
CMAR	Chiang Mai Arr	40.03	49	P	P	21 18 08.3	0.0
	0.6nm,0.8s,baz=237,slow=8.3,SNR=4.3						
SUR	Sutherland	50.25	234	LR	LR	21 37 52.8	
	comp=Z,82nm,18.3s,baz=104,slow=33						
MKAR	Makanchi Array	55.95	12	P	P	21 20 10.7	-0.5
	0.4nm,0.6s,baz=202,slow=8.7,SNR=4.2						
MKAR				PcP	PcP	21 21 08.7	-1.0
	0.5nm,0.8s,baz=228,slow=5.0,SNR=2.5						
KURBB	Kurchatov Arra	59.05	8	P	P	21 20 33.3	+0.4
	0.9nm,0.3s,baz=207,slow=8.3,SNR=4.5						

ASAR	**Alice Springs**	**64.46**	**112**	P	**P**	**21 21 10.7**	**+0.6**
	1.3nm,1.1s,baz=275,slow=5.9,SNR=6.1						
ASAR				LR	LR	21 46 56.6	
	comp=Z,15nm,19.5s,baz=328,slow=34						
WRA	**Warramunga Arr**	**64.78**	**108**	P	**P**	**21 21 12.5**	**+0.3**
	0.1nm,0.3s,baz=98,slow=6.9,SNR=13						
SONM	**Songino Array**	**64.96**	**27**	P	**P**	**21 21 14.5**	**+1.6**
	1.2nm,0.8s,baz=214,slow=7.2,SNR=9.8						
ESDC	**Sonseca Array**	**81.71**	**312**	P	**P**	**21 22 51.0**	**-0.9**
	1.0nm,1.0s,baz=96,slow=4.4,SNR=5.7						
ARCES	**ARCESS Array B**	**82.77**	**346**	P	**P**	**21 22 57.0**	**+0.3**
	1.7nm,0.7s,baz=142,slow=4.6,SNR=1.4						
ARCES				LR	LR	22 01 50.1	
	comp=Z,47nm,18.3s,baz=250,slow=37						
PDAR	**Pinedale Array**	**145.33**	**357**	PKPbc	**PKPbc**	**21 30 10.2**	**-1.1**
	0.6nm,0.6s,baz=79,slow=2.1,SNR=6.8						

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*IDC **02** 21:22:33.6±0.8, 11°.61N×143°.08E, h0^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.7/50, mbtmp3.8/10, ML3.8/1, MS2.5/1, Ms1 2.5/1, ms1mx2.4/34, Error ellipse: s-maj=29.1km s-min=17.7km az=116.0*

*NEIC **02** 21:22:37.2±2.1, 11°.6N±0°.1×143°.0E±0°.1, h25^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=28.1km s-min=10.4km az=135.0*

ISC 02 21:22:38.4±0.8**, 11°.6N**±0°.1×**142°.9E**±0°.1**, h32**^{km}**, n21,** σ**1^{s}.35**/22**, mb4.0**/13**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.70**	**44**	Pn	**Pn**	**21 23 19.4**	**-0.2**
	19nm,0.3s,baz=144,slow=20,SNR=9.3						
GUMO				Sn	**Sn**	**21 23 51.3**	**+0.1**
	16nm,0.3s,baz=9.9,slow=23,SNR=4.0						
GUMO				LR	LR	21 24 13.1	
	comp=Z,80nm,18.9s,baz=140,slow=38						
GUMO	**Guam**	**2.70**	**44**		**Pn**	**21 23 20.0**	**+0.4**
FAKI	**Fak Fak**	**17.95**	**217**		**P**	**21 26 45.7**	**-0.3**
FAKI				IAmb	IAmb	21 26 59.4	
	comp=Z,25nm,1.1s						
SSLB	**Suanglung**	**24.14**	**303**	P	**P**	**21 27 47.9**	**-3.8**
WB0	**Warramunga Arr**	**32.32**	**195**	P	**P**	**21 29 04.0**	**-0.8**
WB0				IAmb	IAmb	21 29 07.1	
	comp=Z,4.2nm,1.0s						
WR0	**Warramunga Arr**	**32.47**	**195**	P	**P**	**21 29 06.1**	**0.0**
WB2	**Warramunga Arr**	**32.50**	**195**	P	**P**	**21 29 06.6**	**+0.2**
WB2				IAmb	IAmb	21 29 07.0	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**32.50**	**195**	P	**P**	**21 29 05.8**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=18,slow=9.7,SNR=11						
ASAR	**Alice Springs**	**36.18**	**194**	P	**P**	**21 29 38.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=16,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	**42.94**	**285**	P	**P**	**21 30 36.8**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=81,slow=7.0,SNR=5.3						
MKAR	**Makanchi Array**	**61.61**	**317**	P	**P**	**21 32 54.1**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=93,slow=11,SNR=5.1						
PPLA	**Purkeypile**	**68.36**	**26**	P	**P**	**21 33 35.6**	**-1.1**
PPLA				IAmb	IAmb	21 33 47.0	
	comp=Z,2.9nm,1.0s						
KTH	**Kantishna Hill**	**69.10**	**26**	P	**P**	**21 33 42.2**	**+1.0**
BVAR	**Borovoye Array**	**70.30**	**322**	P	**P**	**21 33 49.5**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=253,slow=31,SNR=5.4						
IL31		**71.12**	**25**	P	**P**	**21 33 52.9**	**-0.6**
ILAR	**Eielson Array**	**71.12**	**25**	P	**P**	**21 33 52.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=250,slow=5.4,SNR=8.0						
IL18	**Eielson Array**	**71.17**	**25**	P	**P**	**21 33 50.9**	**-2.9**
YKA	**Yellowknife Ar**	**85.44**	**27**	P	**P**	**21 35 12.7**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=289,slow=3.9,SNR=5.9						
ARCES	**ARCESS Array B**	**88.35**	**342**	P	**P**	**21 35 26.6**	**0.0**
	comp=Z,6.3nm,1.1s,baz=52,slow=2.0,SNR=3.5						
NVAR	**Mina Array Bea**	**89.60**	**51**	P	**P**	**21 35 34.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=255,slow=4.1,SNR=4.3						
FINES	**FINESS Array B**	**92.12**	**335**	P	**P**	**21 35 43.8**	**-0.6**
	comp=Z,10nm,1.2s,baz=35,slow=5.1,SNR=1.6						

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*JMA **02** 21:32:33.6±0.1, 42°.89N×146°.38E, h41^{km}±2^{km}, M3.1*

*SKHL **02** 21:32:34.0±0.5, 42°.83N×146°.21E, h42^{km}±4^{km}, mb3.6/2*

ISC 02 21:32:31.8±2.3**, 42°.91N**±0°.08×**146°.28E**±0°.07**, h2**^{km}±12^{km}**, n15,** σ**0^{s}.68**/27**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.60**	**320**	P	**Pn**	**21 32 46.6**	**-0.8**
NEM2				*e*S	**Sn**	**21 32 56.0**	**-1.7**
NMR	**Nemuro--Hokkai**	**0.61**	**319**	*i* P	**Pb**	**21 32 46.0**	**+0.8**
NMR				*i* S	**Sb**	**21 32 55.4**	**+1.1**
JKHN	**Kushirohamanak**	**0.84**	**283**	P	**Pn**	**21 32 50.2**	**-0.4**
GRPR	**Tuman**	**1.15**	**341**	*i* P	**Pg**	**21 32 53.9**	**+0.1**
GRPR				AMB	AMB	21 32 55.0	
	15nm,0.2s						
GRPR				*e*S	**Sg**	**21 33 08.3**	**-0.4**
GRPR				A	A	21 33 08.9	
	143nm,0.2s						
GRPR				A	A	21 33 08.9	
	342nm,0.2s						
JAK	**Akkeshi**	**1.16**	**275**	P	**Pb**	**21 32 54.6**	**0.0**
JAK				*e*S	**Sb**	**21 33 10.6**	**+0.5**
YUK	**Yuzh-Kuril'sk**	**1.17**	**345**	*e*P	**Pg**	**21 32 54.0**	**-0.2**
YUK				AMB	AMB	21 32 57.0	
	17nm,0.3s						
YUK				*e*S	**Sg**	**21 33 09.2**	**-0.2**
YUK				A	A	21 33 09.8	
	410nm,0.3s						
YUK				A	A	21 33 09.8	
	560nm,0.3s						
JNSB	**Nemuroshibetsu**	**1.27**	**314**	P	**Pg**	**21 32 56.2**	**0.0**
JNSB				*e*S	**Sb**	**21 33 13.0**	**-0.3**
JNK	**Nakash**	**1.33**	**301**	P	**Pg**	**21 32 57.1**	**-0.1**
JNK				*e*S	**Sg**	**21 33 13.7**	**-0.7**
JRA	**Rausu**	**1.33**	**321**	P	**Pn**	**21 32 57.4**	**0.0**
JRA				*e*S	**Sg**	**21 33 14.5**	**-0.1**
JOB	**Onbets**	**1.79**	**271**	P	**Pn**	**21 33 03.8**	**+0.1**
JOB				*e*S	**Sn**	**21 33 26.3**	**-0.8**
JAR	**Ashorobuto**	**1.88**	**283**	P	**Pn**	**21 33 05.1**	**+0.2**
JAR				*e*S	**Sn**	**21 33 28.8**	**-0.3**
JTKR	**Abashiri--Toko**	**2.03**	**302**	P	**Pn**	**21 33 07.9**	**+1.0**
JTKR				*e*S	**Sn**	**21 33 33.4**	**+0.6**
JCH	**Churui**	**2.17**	**263**	P	**Pn**	**21 33 09.0**	**+0.1**
JMP	**Maruseppu**	**2.39**	**298**	P	**Pn**	**21 33 13.3**	**+1.3**
KUR	**Kuril'sk**	**2.59**	**26**	*e*P	**Pn**	**21 33 15.0**	**+0.3**
KUR				*e*S	**Sn**	**21 33 46.0**	**-0.8**
KUR				A	A	21 33 47.0	
	35nm,0.2s						
KUR				A	A	21 33 47.0	
	46nm,0.2s						

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*IDC **02** 22:07:28.5±0.4, 56°.82S×150°.67W, h0^{km}, mb4.9/14, mb1 5.0/14, mb1mx4.8/25, mbtmp4.9/14, MS3.9/13, Ms1 3.9/13, ms1mx3.9/18, Error ellipse: s-maj=20.7km s-min=12.7km az=5.0*

*NEIC **02** 22:07:30.4±1.6, 56°.9S±0°.1×150°.6W±0°.2, h10^{km}, mb5.3/75, Error ellipse: s-maj=20.3km s-min=16.0km az=13.0*

*GCMT **02** 22:07:39.4±0.2, 57°.01S±0°.01×150°.82W±0°.04, h13^{km}, MW5.0/90, Moment Tensor Solution. s47,c57; s90,c125; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.82±.18; $M_{\theta\theta}$3.52±.14; $M_{\phi\phi}$0.30±.11; $M_{r\theta}$1.18±.29; $M_{\theta\phi}$-1.50±.09; $M_{\phi r}$0.17±.27; Best double couple: $M_0$4.14500×10^{16} NP1:ϕ_s120.00000°,δ38.00000°,λ-76.00000°. NP2: ϕ_s283.00000°,δ53.00000°,λ-101.00000°. Principal axes: T 4.2450, Plg7.0000°, Azm21.0000°; N -0.2000, Plg9.0000°, Azm289.0000°; P -4.0440, Plg79.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 22:07:30.6±0.3**, 56°.96S**±0°.08×**150°.60W**±0°.06**, h10**^{km}**, n309,** σ**0^{s}.99**/278**, mb5.3**/48**, MS4.0**/19**, 4C-2D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**26.23**	**201**	P	**P**	**22 13 06.6**	**+1.4**
	2.9nm,1.0s,baz=58,slow=8.4,SNR=4.6						
VNDA				LR	LR	22 21 07.8	
	comp=Z,236nm,18.4s,baz=102,slow=31						
VNDA	**Vanda**	**26.23**	**201**	P	**P**	**22 13 06.6**	**+1.4**
MSWZ	**Moikau Station**	**26.84**	**291**	P	**P**	**22 13 10.0**	**-1.1**
RPZ	**Rata Peaks**	**27.43**	**282**	LR	LR	22 22 32.0	
	comp=Z,310nm,18.4s,baz=130,slow=33						
WHZ	**Wether Hill Ro**	**27.69**	**276**	P	**P**	**22 13 17.7**	**-0.9**
URZ	**Urewera**	**28.31**	**298**	LR	LR	22 22 42.6	
	comp=Z,395nm,18.9s,baz=206,slow=32						
QSPA	**South Pole Qui**	**33.18**	**180**	P	**P**	**22 14 08.2**	**+1.1**
	38nm,1.0s,baz=74,slow=3.6,SNR=38						
QSPA				PcP	**PcP**	**22 16 49.2**	**-0.3**
	14nm,1.1s,baz=32,slow=0.9,SNR=6.5						
QSPA	**South Pole Qui**	**33.18**	**180**	P	**P**	**22 14 09.1**	**+2.0**
QSPA					**PcP**	**22 16 50.2**	**+0.8**
TBI	**Tubuai**	**33.59**	**2**	*e*S	**S**	**22 19 34.4**	**+1.4**
	202nm,37.8s						
TBI				*e*LR	LR	22 22 50.9	
	comp=Z,910nm,29.5s						
TBI	**Tubuai**	**33.59**	**2**	*e*T	T	22 49 11.9	
	153nm,0.4s						
RKT	**Rikitea**	**35.68**	**25**	*e*LR	LR	22 24 03.9	
	comp=Z,1µm,30.2s						
MEH	**Mehetia**	**39.07**	**4**	*e*T	T	22 56 03.8	
	20nm,0.2s						
TVO	**Taravao**	**39.13**	**2**	*e*T	T	22 56 07.8	
	5.3nm,0.4s						
PAE	**Paea**	**39.24**	**2**	*e*T	T	22 56 15.9	
	4.0nm,0.4s						
PPT2	**Papeete2**	**39.32**	**2**	*e*S	**S**	**22 21 02.3**	**+1.6**
	200nm,24.5s						
PPT2				*e*LR	LR	22 25 38.9	
	comp=Z,941nm,26.2s,baz=191						
PPT2	**Papeete2**	**39.32**	**2**	*e*T	T	22 56 20.3	
	7.8nm,0.3s						
TIAR	**Tiarei**	**39.35**	**2**	*e*T	T	22 56 24.2	
	2.4nm,0.3s						
BELA	**Belgrano 2**	**39.91**	**163**	P	**P**	**22 15 04.5**	**+0.4**
VAH	**Vaihoa**	**41.71**	**4**	*e*T	T	22 59 21.0	
	215nm,0.3s						
CASY	**Casey**	**43.03**	**216**	P	**P**	**22 15 30.9**	**+1.1**
GO09	**Cerro Castillo**	**43.86**	**117**	P	**P**	**22 15 37.4**	**+0.7**
TOO	**Toolangi**	**45.62**	**267**	P	**P**	**22 15 51.6**	**+0.7**
TOO				IAmb	IAmb	22 15 53.8	
	comp=Z,30nm,1.1s						
DZM	**Mont Dzumac**	**46.81**	**300**	*e*LR	LR	22 29 09.4	
	comp=Z,201nm,28.7s						
DZM	**Mont Dzumac**	**46.81**	**300**	P	**P**	**22 16 00.2**	**-0.3**
DZM				IAmb	IAmb	22 16 05.8	
	comp=Z,16nm,0.9s						
ARMA	**Armidale**	**47.64**	**279**	P	**P**	**22 16 06.6**	**-0.3**
VNA3	**Neumayer Olymp**	**49.15**	**164**	P	**P**	**22 16 17.7**	**-0.2**
SNAA	**Sanae**	**49.68**	**167**	P	**P**	**22 16 21.8**	**-0.2**
SNAA	**Sanae**	**49.68**	**167**	P	**P**	**22 16 21.6**	**-0.4**
SNAA				IAmb	IAmb	22 16 23.1	
	comp=Z,27nm,1.2s						
VNA2	**Neumayer--Watz**	**49.76**	**165**	P	**P**	**22 16 22.5**	**-0.1**
	baz=200,slow=8.1						
VNA1	**Neumayer--Stat**	**49.89**	**165**	P	**P**	**22 16 23.4**	**-0.1**
EIDS	**Eidsvold**	**51.92**	**282**	P	**P**	**22 16 39.8**	**+0.4**
PLCA	**Paso Flores**	**51.99**	**108**	P	**P**	**22 16 40.9**	**+1.0**
	comp=Z,22nm,1.0s,baz=228,slow=7.6,SNR=29						
PLCA				LR	LR	22 33 57.3	
	comp=Z,114nm,18.6s,baz=178,slow=30						
PLCA	**Paso Flores**	**51.99**	**108**	P	**P**	**22 16 40.5**	**+0.7**
PLCA				IAmb	IAmb	22 16 42.2	
	comp=Z,36nm,1.1s						
PLCA	**Paso Flores**	**51.99**	**108**	*e*P	**P**	**22 16 40.9**	**+1.0**
STKA	**Stephens Creek**	**52.00**	**269**	P	**P**	**22 16 40.6**	**+0.7**
	comp=Z,14nm,0.8s,baz=137,slow=9.4,SNR=25						
STKA				LR	LR	22 36 04.7	
	comp=Z,106nm,18.1s,baz=155,slow=33						
STKA	**Stephens Creek**	**52.00**	**269**	P	**P**	**22 16 41.0**	**+1.1**
SANVU	**Saraoutou**	**52.21**	**305**	P	**P**	**22 16 40.4**	**-1.2**
H03S2	**Juan Fernandez**	**52.62**	**96**	T	T	23 13 50.8	
	baz=219,slow=74,SNR=119						
H03S1	**Juan Fernandez**	**52.63**	**96**	T	T	23 13 51.2	
	baz=219,slow=74,SNR=110						
H03S3	**Juan Fernandez**	**52.64**	**96**	T	T	23 13 50.5	
	baz=219,slow=74,SNR=102						
LC01	**Cunco**	**52.64**	**106**	P	**P**	**22 16 45.2**	**+0.6**
LC01				IAmb	IAmb	22 16 46.2	
	comp=Z,52nm,0.9s						
H03N3	**Juan Fernandez**	**52.91**	**96**	T	T	23 14 09.7	
	baz=222,slow=72,SNR=257						
H03N2	**Juan Fernandez**	**52.92**	**96**	T	T	23 14 05.9	
	baz=222,slow=72,SNR=284						
H03N1	**Juan Fernandez**	**52.93**	**96**	T	T	23 14 02.9	
	baz=222,slow=72,SNR=231						
MAW	**Mawson**	**53.30**	**195**	P	**P**	**22 16 49.9**	**+0.9**
	comp=Z,13nm,0.9s,baz=172,slow=8.6,SNR=16						
MAW				LR	LR	22 37 05.8	
	comp=Z,128nm,19.9s,baz=218,slow=33						
MAW	**Mawson**	**53.30**	**195**	P	**P**	**22 16 49.5**	**+0.5**
BBOO	**Buckleboo**	**54.31**	**263**	P	**P**	**22 16 56.8**	**-0.1**
BBOO				IAmb	IAmb	22 17 01.0	
	comp=Z,19nm,1.0s						
BO02	**Sierra Bellavi**	**56.29**	**103**	P	**P**	**22 17 11.2**	**-0.1**
MT02	**Curacav**	**57.27**	**102**	P	**P**	**22 17 18.6**	**+0.4**
MT02				IAmb	IAmb	22 17 33.4	
	comp=Z,57nm,1.4s						
MT05	**Renca**	**57.38**	**102**	P	**P**	**22 17 19.0**	**0.0**
VA03	**San Esteban**	**57.97**	**102**	P	**P**	**22 17 23.1**	**-0.1**
VA03				IAmb	IAmb	22 17 24.2	
	comp=Z,28nm,0.9s						
CTAO	**Charters Tower**	**58.79**	**281**	P	**P**	**22 17 29.3**	**+0.3**
CTAO				IAmb	IAmb	22 17 33.6	
	comp=Z,23nm,1.1s						
CO02	**Combarbal**	**58.93**	**100**	P	**P**	**22 17 29.5**	**-0.5**
CO03	**El Pedregal**	**59.38**	**100**	P	**P**	**22 17 33.3**	**+0.3**
CO03				IAmb	IAmb	22 17 34.1	
	comp=Z,44nm,1.1s						
GO04	**Tololo Observa**	**59.84**	**100**	P	**P**	**22 17 36.2**	**-0.1**
GO04				IAmb	IAmb	22 17 37.0	
	comp=Z,35nm,0.9s						
ZON	**Zonda**	**59.91**	**102**	IAmb	IAmb	22 17 37.2	
	comp=Z,14nm,1.0s						
FORT	**Forrest**	**60.20**	**259**	P	**P**	**22 17 38.7**	**+0.1**
LCO	**Las Campanas**	**60.80**	**99**	P	**P**	**22 17 43.1**	**+0.1**
AC05	**El Transito**	**61.17**	**99**	P	**P**	**22 17 45.8**	**+0.4**
AC05				IAmb	IAmb	22 17 46.4	
	comp=Z,32nm,0.8s						
GO03	**Copiap**	**62.17**	**98**	IAmb	IAmb	22 17 52.9	
	comp=Z,23nm,0.8s						
AS31	**Alice Springs**	**62.63**	**268**	P	**P**	**22 17 54.5**	**-0.7**
ASAR	**Alice Springs**	**62.63**	**268**	P	**P**	**22 17 54.4**	**-0.8**
	comp=Z,25nm,0.9s,baz=140,slow=6.5,SNR=217						
ASAR				LR	LR	22 41 53.7	
	comp=Z,72nm,19.6s,baz=140,slow=33						
AC01	**Pan de Azucar**	**63.11**	**97**	P	**P**	**22 17 57.3**	**-1.0**
AC01				IAmb	IAmb	22 18 10.2	
	comp=Z,32nm,1.1s						
AC02	**Maricunga**	**63.37**	**99**	P	**P**	**22 18 00.6**	**+0.1**
AC02				IAmb	IAmb	22 18 02.3	
	comp=Z,32nm,0.9s						
H01W1	**Cape Leeuwin H**	**64.20**	**245**	T	T	23 28 09.4	
	baz=141,slow=75,SNR=44						
NWAO	**Narrogin (SRO)**	**64.20**	**249**	P	**P**	**22 18 05.0**	**-0.4**
NWAO				IAmb	IAmb	22 18 14.9	
	comp=Z,27nm,1.2s						
H01W2	**Cape Leeuwin H**	**64.21**	**245**	T	T	23 28 12.6	
	baz=141,slow=75,SNR=78						
H01W3	**Cape Leeuwin H**	**64.22**	**245**	T	T	23 28 14.6	
	baz=141,slow=75,SNR=46						
PB14	**IPOC Station P**	**64.43**	**96**	P	**P**	**22 18 07.0**	**-0.3**
GO02	**Mina Guanaco**	**64.44**	**97**	P	**P**	**22 18 07.4**	**-0.1**
GO02				IAmb	IAmb	22 18 08.4	
	comp=Z,29nm,0.8s						
WR0	**Warramunga Arr**	**65.26**	**271**	IAmb	IAmb	22 18 15.7	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**65.39**	**271**	P	**P**	**22 18 12.6**	**-0.7**
	comp=Z,11nm,1.0s,baz=147,slow=5.5,SNR=53						
WRA				PcP	**PcP**	**22 18 43.8**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=151,slow=4.5,SNR=7.7						
WRAB	**Tennant Creek**	**65.39**	**271**	P	**P**	**22 18 12.7**	**-0.6**
WRAB				IAmb	IAmb	22 18 16.3	
	comp=Z,13nm,0.9s						
COEN	**Coen**	**65.49**	**282**	P	**P**	**22 18 13.8**	**-0.2**
COEN				IAmb	IAmb	22 18 15.6	
	comp=Z,21nm,1.2s						
WB0	**Warramunga Arr**	**65.50**	**271**	P	**P**	**22 18 12.8**	**-1.2**
PB04	**IPOC Station P**	**66.40**	**95**	P	**P**	**22 18 19.9**	**-0.1**
LVC	**Limon Verde**	**66.86**	**96**	P	**P**	**22 18 23.9**	**+0.8**
	comp=Z,35nm,0.7s,baz=227,slow=4.6,SNR=29						
LVC	**Limon Verde**	**66.86**	**96**	P	**P**	**22 18 23.5**	**+0.4**
LVC	**Limon Verde**	**66.86**	**96**	*e*P	**P**	**22 18 23.3**	**+0.2**
PB09	**IPOC Station P**	**67.33**	**95**	IAmb	IAmb	22 18 28.0	
	comp=Z,35nm,1.2s						
PLTB	**Pedras Altas**	**67.57**	**114**	*e*P	**P**	**22 18 26.9**	**-0.2**
ITQB	**Itaqui**	**67.72**	**110**	*e*P	**P**	**22 18 28.5**	**+0.5**
PB01	**IPOC Station P**	**67.81**	**95**	IAmb	IAmb	22 18 30.3	
	comp=Z,20nm,0.8s						
MORW	**Morawa**	**67.90**	**251**	P	**P**	**22 18 28.7**	**-0.5**
MORW				IAmb	IAmb	22 18 33.2	
	comp=Z,22nm,1.0s						
PB08	**IPOC Station P**	**68.72**	**94**	IAmb	IAmb	22 18 35.9	
	comp=Z,12nm,0.8s						
CPSB	**Cacapava Do Su**	**68.75**	**113**	*e*P	**P**	**22 18 34.9**	**+0.4**
GO01	**Chusmiza**	**69.08**	**94**	IAmb	IAmb	22 18 39.9	
	comp=Z,31nm,1.5s						
KRVT	**Keravat (AS076**	**69.09**	**296**	LR	LR	22 44 52.6	
	comp=Z,34nm,18.5s,baz=194,slow=32						
PB16	**IPOC Station P**	**69.99**	**93**	IAmb	IAmb	22 18 45.0	
	comp=Z,34nm,1.1s						
CPUP	**Villa Florida**	**70.06**	**108**	P	**P**	**22 18 42.6**	**0.0**
	comp=Z,27nm,0.9s,baz=232,slow=6.4,SNR=36						
CPUP				LR	LR	22 44 50.0	
	comp=Z,48nm,19.4s,baz=212,slow=32						
CPUP	**Villa Florida**	**70.06**	**108**	P	**P**	**22 18 42.4**	**-0.2**
CPUP	**Villa Florida**	**70.06**	**108**	*e*P	**P**	**22 18 42.7**	**0.0**
NNA	**Nana**	**71.18**	**83**	P	**P**	**22 18 49.4**	**-0.2**
	comp=Z,19nm,0.8s,baz=220,slow=8.5,SNR=9.9						
NNA	**Nana**	**71.18**	**83**	P	**P**	**22 18 48.7**	**-0.9**
NNA				IAmb	IAmb	22 18 50.6	
	comp=Z,29nm,0.8s						
FITZ	**Fitzroy Crossi**	**71.64**	**265**	LR	LR	22 50 28.5	
	comp=Z,80nm,18.0s,baz=169,slow=36						
FITZ	**Fitzroy Crossi**	**71.64**	**265**	P	**P**	**22 18 52.0**	**-0.4**
PSA00	**Pilbara Seismi**	**71.95**	**258**	P	**P**	**22 18 53.9**	**-0.3**
PSA00				IAmb	IAmb	22 18 57.7	
	comp=Z,40nm,0.9s						
TRCB	**Terra Rica**	**75.39**	**109**	*e*P	**P**	**22 19 14.0**	**-0.4**
AQDB	**Aquidauana**	**75.69**	**105**	*e*P	**P**	**22 19 15.9**	**-0.2**
SIV	**San Ignacio**	**76.50**	**98**	P	**P**	**22 19 20.8**	**0.0**
	comp=Z,12nm,0.8s,baz=229,slow=5.3,SNR=51						
FRTB	**Fartura**	**76.51**	**112**	*e*P	**P**	**22 19 21.3**	**+0.5**
CZSB	**Cruzeiro do Su**	**76.96**	**84**	*e*P	**P**	**22 19 24.1**	**+0.8**
PCMB	**Pacaembu**	**77.08**	**110**	*e*P	**P**	**22 19 24.3**	**+0.3**
SPB	**Sao Paulo**	**77.38**	**114**	*e*P	**P**	**22 19 25.7**	**+0.1**
PTLB	**Pontes e Lacer**	**77.99**	**100**	*e*P	**P**	**22 19 28.9**	**-0.2**
PP1B	**Ponte de Pedra**	**78.50**	**104**	*e*P	**P**	**22 19 32.3**	**+0.4**
ETMB	**Extrema**	**78.78**	**91**	*e*P	**P**	**22 19 33.7**	**+0.2**
BB19B	**Bebedouro**	**78.93**	**111**	*e*P	**P**	**22 19 34.5**	**+0.2**
ITRB	**Iturama**	**79.12**	**109**	*e*P	**P**	**22 19 35.5**	**+0.1**
SOEI	**Soe**	**79.25**	**269**	P	**P**	**22 19 35.3**	**-0.9**
ESAR	**Angra dos Reis**	**79.34**	**116**	*e*P	**P**	**22 19 37.1**	**+0.6**
VILB	**Vilhena**	**79.47**	**97**	*e*P	**P**	**22 19 37.7**	**+0.3**
VAS01	**Vassouras-RJ**	**80.46**	**116**	*e*P	**P**	**22 19 43.1**	**+0.5**
OTAV	**Otavalo**	**80.53**	**75**	P	**P**	**22 19 44.0**	**+0.5**
OTAV				IAmb	IAmb	22 19 46.2	
	comp=Z,34nm,1.5s						
OTAV	**Otavalo**	**80.53**	**75**	*e*P	**P**	**22 19 43.4**	**-0.1**
BSCB	**Bom Sucesso**	**80.88**	**114**	*e*P	**P**	**22 19 45.0**	**+0.1**
DUB01	**Friburgo-RJ**	**81.15**	**117**	*e*P	**P**	**22 19 47.2**	**+0.9**
SAML	**Samuel**	**81.16**	**93**	P	**P**	**22 19 46.0**	**-0.3**
SAML				IAmb	IAmb	22 19 47.4	
	comp=Z,24nm,0.9s						
SAML	**Samuel**	**81.16**	**93**	*e*P	**P**	**22 19 45.8**	**-0.6**
SAML	**Samuel**	**81.16**	**93**	*e*P	**P**	**22 19 46.6**	**+0.3**
IPMB	**Ipameri, GO**	**81.67**	**110**	*e*P	**P**	**22 19 48.8**	**-0.3**
ARAG	**Araguaiana, MT**	**81.69**	**106**	*e*P	**P**	**22 19 49.0**	**-0.1**
PUAC	**Puerto Asis, P**	**81.79**	**76**	*e*P	**P**	**22 19 49.3**	**-0.4**
H06S1	**SOCORRO T**	**82.38**	**38**	T	T	23 50 35.9	
	SNR=8.6						
PTLC	**Puerto Leguiza**	**82.42**	**78**	*e*P	**P**	**22 19 51.7**	**-1.3**
H06E1	**SOCORRO T-PHAS**	**82.43**	**38**	T	T	23 50 37.8	
	SNR=16						
CLDB	**Colider**	**83.58**	**100**	*e*P	**P**	**22 19 59.2**	**+0.1**
BDFB	**Brasilia**	**83.73**	**109**	P	**P**	**22 19 59.0**	**-0.9**
	comp=Z,7.9nm,0.8s,baz=215,slow=3.5,SNR=13						
BDFB				LR	LR	22 54 11.9	
	comp=Z,130nm,18.3s,baz=253,slow=33						
BDFB	**Brasilia**	**83.73**	**109**	P	**P**	**22 19 59.3**	**-0.7**
BDFB				IAmb	IAmb	22 20 00.5	
	comp=Z,14nm,1.0s						
RIB01	**Linhares ES**	**84.47**	**117**	*e*P	**P**	**22 20 03.2**	**-0.3**
MACC	**Macarena, Meta**	**84.58**	**78**	*e*P	**P**	**22 20 04.4**	**+0.3**
SJMB	**Sao Joao De Ma**	**84.60**	**116**	*e*P	**P**	**22 20 03.8**	**-0.4**
YOTC	**Yotoco, Valle**	**84.80**	**75**	*e*P	**P**	**22 20 05.4**	**0.0**
SNDB	**Serra Nova Dou**	**85.08**	**104**	*e*P	**P**	**22 20 06.4**	**-0.3**
ORTC	**Ortega, Tolima**	**85.32**	**76**	*e*P	**P**	**22 20 08.5**	**+0.7**
PLMC	**San Jos del P**	**85.61**	**74**	*e*P	**P**	**22 20 08.8**	**-0.5**
TOLC	**Tolima**	**85.85**	**75**	*e*P	**P**	**22 20 11.9**	**+1.1**
HDC	**Heredia**	**85.93**	**65**	P	**P**	**22 20 10.8**	**-0.1**
TLIG	**Tlapa**	**85.95**	**49**	P	**P**	**22 20 11.7**	**+0.8**
TLIG				IAmb	IAmb	22 20 14.7	
	comp=Z,34nm,1.5s						
RREF	**El Recreo**	**86.10**	**75**	*e*P	**P**	**22 20 12.7**	**+0.2**
JANB	**Januaria**	**86.12**	**112**	*e*P	**P**	**22 20 11.6**	**-0.3**
PEXB	**Peixe**	**86.55**	**107**	*e*P	**P**	**22 20 13.6**	**-0.4**
ROSC	**El Rosal**	**86.60**	**76**	LR	LR	22 52 07.4	
	comp=Z,66nm,19.7s,baz=208,slow=31						
ROSC	**El Rosal**	**86.60**	**76**	P	**P**	**22 20 14.9**	**+0.3**
ROSC				IAmb	IAmb	22 20 19.6	
	comp=Z,25nm,1.2s						
CHIC	**Chingaza**	**86.73**	**76**	*e*P	**P**	**22 20 13.8**	**-1.5**
NORC	**Norcasia**	**86.91**	**75**	*e*P	**P**	**22 20 15.5**	**-0.2**
NPGB	**Novo Progresso**	**87.00**	**98**	*e*P	**P**	**22 20 15.9**	**-0.2**
HELC	**Santa Helena**	**87.09**	**74**	*e*P	**P**	**22 20 17.9**	**+0.9**
MACA	**Manacapuru-AM**	**87.32**	**92**	*e*P	**P**	**22 20 17.9**	**+0.2**
DBBC	**Dabeiba**	**87.43**	**73**	*e*P	**P**	**22 20 19.4**	**+1.2**
TGUH	**Tegucigalpa,Un**	**87.89**	**60**	P	**P**	**22 20 21.7**	**+1.3**
PTBC	**PUERTO BERRIO,**	**87.95**	**75**	*e*P	**P**	**22 20 19.6**	**-1.1**
SDBA	**SAO DESIDERIO**	**88.06**	**110**	*e*P	**P**	**22 20 20.7**	**-0.6**
RUSC	**La Rusia**	**88.14**	**76**	*e*P	**P**	**22 20 18.2**	**-3.9**
UREC	**San Jos de Ur**	**88.41**	**73**	*e*P	**P**	**22 20 23.1**	**+0.3**
ZARC	**Zaragoza, Cauc**	**88.54**	**74**	*e*P	**P**	**22 20 23.8**	**+0.3**
ITTB	**Itaituba**	**89.03**	**96**	*e*P	**P**	**22 20 25.9**	**+0.1**
ZAIG	**Zacatecas**	**89.07**	**43**	P	**P**	**22 20 27.6**	**+1.6**
ZAIG				IAmb	IAmb	22 20 29.9	
	comp=Z,18nm,1.3s						
PETF	**Flores**	**89.17**	**57**	P	**P**	**22 20 27.0**	**+0.8**
PETF				IAmb	IAmb	22 20 28.2	
	comp=Z,25nm,1.1s						
MOTC	**Monteria, Cord**	**89.20**	**73**	*e*P	**P**	**22 20 25.2**	**-1.3**
GDU01	**Guandu, BA**	**89.64**	**115**	*e*P	**P**	**22 20 28.1**	**-0.6**
SMTB	**Santa Maria do**	**89.64**	**106**	*e*P	**P**	**22 20 28.7**	**0.0**
PTGA	**Pitinga**	**89.74**	**91**	P	**P**	**22 20 29.8**	**+0.7**
PTGA				IAmb	IAmb	22 20 30.7	
	comp=Z,28nm,1.2s						
LEM	**Lembang**	**90.71**	**256**	LR	LR	22 55 41.2	
	comp=Z,92nm,18.2s,baz=275,slow=32						
PRPB	**Parauapebas**	**90.72**	**102**	*e*P	**P**	**22 20 34.3**	**+0.6**
MALB	**Monte Alegre**	**91.92**	**96**	*e*P	**P**	**22 20 39.1**	**-0.2**
214A	**Organ Pipe Nat**	**94.17**	**31**	P	**P**	**22 20 51.0**	**+1.8**
	baz=200						
214A	**Organ Pipe Nat**	**94.17**	**31**	P	**P**	**22 20 50.1**	**+0.9**
MCPB	**Macapa, AP**	**94.36**	**97**	*e*P	**P**	**22 20 51.0**	**+0.5**
BOSA	**Boshof**	**94.69**	**176**	P	**P**	**22 20 50.3**	**-1.8**
	comp=Z,4.3nm,1.0s,baz=90,slow=1.9,SNR=4.6						
BOSA	**Boshof**	**94.69**	**176**	IAmb	IAmb	22 20 51.5	
	comp=Z,22nm,1.4s						
PFO	**Pinyon Flats O**	**94.74**	**28**	P	**P**	**22 20 51.6**	**-0.2**
MWC	**Mount Wilson**	**94.92**	**27**	P	**P**	**22 20 52.5**	**-0.3**
TUC	**Tucson**	**95.09**	**33**	P	**P**	**22 20 55.7**	**+2.2**
	baz=201						
TUC	**Tucson**	**95.09**	**33**	P	**P**	**22 20 54.2**	**+0.8**
EDW2	**Edwards Air Fo**	**95.56**	**26**	P	**P**	**22 20 57.2**	**+1.7**
	baz=197						
IRM	**Iron Mountain**	**95.60**	**29**	P	**P**	**22 20 57.9**	**+2.2**
	baz=199						
MNTX	**Cornudas Mount**	**96.23**	**37**	P	**P**	**22 21 00.6**	**+2.1**
	baz=203						
MNTX	**Cornudas Mount**	**96.23**	**37**	P	**P**	**22 20 59.3**	**+0.8**
GSC	**Goldstone, Bar**	**96.26**	**27**	P	**P**	**22 21 00.8**	**+2.2**
	baz=198						
GSC	**Goldstone, Bar**	**96.26**	**27**	P	**P**	**22 20 59.9**	**+1.2**
NVAR	**Mina Array Bea**	**98.87**	**25**	P	**P**	**22 21 08.5**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=218,slow=8.0,SNR=3.2						
H10N3	**ASCENSION HYDR**	**106.12**	**134**	T	T	00 21 22.1	
	baz=203,slow=75,SNR=61						
H10N1	**ASCENSION HYDR**	**106.12**	**134**	T	T	00 21 17.9	
	baz=203,slow=75,SNR=75						
H10N2	**ASCENSION HYDR**	**106.14**	**134**	T	T	00 21 20.7	
	baz=203,slow=75,SNR=59						
H08S2	**Diego Garcia H**	**106.61**	**225**	T	T	00 21 38.5	
	baz=154,slow=76,SNR=13						
H08S1	**Diego Carcia H**	**106.62**	**225**	T	T	00 21 40.3	
	baz=154,slow=76,SNR=6.7						
H08S3	**Diego Garcia H**	**106.64**	**225**	T	T	00 21 42.4	
	baz=154,slow=76,SNR=14						
KSRS	**Korea Array**	**116.24**	**299**	PKP	**PKPdf**	**22 26 11.8**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=182,slow=40,SNR=3.7						
CMAR	**Chiang Mai Arr**	**116.43**	**263**	PKP	**PKPdf**	**22 26 13.8**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=214,slow=2.3,SNR=13						
NJ2	**Nanjing**	**116.51**	**288**	*e*PKP	**PKiKP**	**22 26 15.1**	**+1.0**
PPLA	**Purkeypile**	**119.53**	**359**		**PKPdf**	**22 26 18.6**	**-0.5**
TTA	**Tatalina**	**119.64**	**357**		**PKiKP**	**22 26 19.8**	**+0.5**

RND	Reindeer	120.05	1		PKPdf	22 26 19.5	-0.5
MCK	McKinley	120.37	1	P	PKiKP	22 26 20.8	+0.1
	baz=181						
K27K	Chicken	120.84	4	P	PKiKP	22 26 21.9	+0.3
	baz=185						
HDA	Harding Lake	121.08	2	P	PKPdf	22 26 21.7	-0.2
	baz=182						
ILAR	Eielson Array	121.44	2	PKP	PKPdf	22 26 21.9	-0.7
	comp=Z,9.6nm,0.8s,baz=245,slow=1.9,SNR=86						
TCOL	CIGO, UAF Yank	121.53	1	P	PKPdf	22 26 22.6	-0.1
	baz=182						
MDM	Murphy Dome	121.61	1		PKPdf	22 26 22.2	-0.7
ANM	Nome	121.73	353		PKiKP	22 26 24.0	+0.7
YKA	Yellowknife Ar	122.36	19	PKP	PKPdf	22 26 23.3	-1.1
	comp=Z,4.0nm,1.0s,baz=187,slow=2.0,SNR=27						
YKA				PKKPbc	PKKPbc	22 36 19.5	0.0
	comp=Z,0.7nm,0.9s,baz=28,slow=4.9,SNR=7.4						
CN2	Changchun	122.36	302	ePKP	PKPdf	22 26 22.4	-2.6
DBIC	Dimbokro	123.11	138	PKP	PKPdf	22 26 26.4	-1.0
	comp=Z,2.6nm,1.1s,baz=109,slow=3.9,SNR=4.0						
XAN	Xi'an	123.29	282	PKP	PKPdf	22 26 26.9	-0.3
EPYK	Eagle Plains	123.46	7	P	PKPdf	22 26 25.9	-0.5
	baz=189						
CD2	Chengdu	123.69	276	ePKP	PKiKP	22 26 28.5	+0.2
CD2				PP	PP	22 28 16.4	+5.5
CD2				SKKS		22 35 06.9	
CD2				SS	SS	22 45 01.3	+2.2
CD2				AMB	AMB		
	comp=Z,320nm,7.5s						
KLR	Kul'dur	123.71	310	PKP	PKPdf	22 26 26.9	-0.5
	comp=Z,7.5nm,0.7s,baz=104,slow=1.4,SNR=23						
TOLK	Toolik Lake Re	125.30	0	P	PKPdf	22 26 30.0	+0.1
	baz=181						
HHC	Hu-ho-hao-te	127.00	290	ePKP	PKPdf	22 26 34.1	0.0
HHC				LR	LR		
	comp=Z,210nm,19.6s						
HHC				LR	LR		
	comp=Z,200nm,20.1s						
LZH	Lanzhou	127.56	280	ePKP	PKiKP	22 26 36.0	0.0
LZH				sPKP		22 26 50.6	
LZH				LR	LR		
	comp=Z,320nm,15.2s						
LZH				LR	LR		
	comp=Z,260nm,18.4s						
LZH				LR	LR		
	comp=Z,310nm,17.6s						
A21K	Barrow	128.06	358	P	PKPdf	22 26 34.8	-0.2
	baz=176						
LSA	Lhasa	129.65	264		PKPdf	22 26 39.9	-0.1
TOA0	Torodi Ar. Sit	131.41	143		PKPdf	22 26 42.5	-0.7
TORD	Torodi Ar. Bea	131.41	143	PKP	PKPdf	22 26 41.6	-1.6
	comp=Z,1.8nm,0.7s,baz=241,slow=0.9,SNR=8.4						
GTA	Gaotai	132.17	280	PKP	PKPdf	22 26 43.9	-0.1
GTA				PP	PP	22 29 09.3	+2.5
YAK	Yakutsk	133.77	320		PKPdf	22 26 45.5	-0.6
ULN	Ulaanbaatar	134.22	293	PKPdf	PKPdf	22 26 47.5	-0.2
SONM	Songino Array	134.53	293	PKP	PKPdf	22 26 47.4	-0.8
	comp=Z,1.0nm,0.8s,baz=144,slow=2.3,SNR=6.9						
TIXI	Tiksi	139.91	331	PKPdf	PKPdf	22 26 52.3	-4.9
WMQ	Urumqi	141.78	276	ePKP	PKPdf	22 27 03.1	+1.5
WMQ				AMB	AMB		
	comp=Z,340nm,4.9s						
NIL	Nilore	142.28	251		PKPpre	22 26 58.5	
SFJD	Kangerlussuaq	143.76	41	PKP	PKPdf	22 27 03.2	-1.0
	comp=Z,13nm,0.9s,baz=4.9,slow=2.3,SNR=3.6						
ILULI	Ilulissat	144.46	37		PKPbc	22 27 04.3	+0.3
ILULI	Ilulissat	144.46	37	i P	PKPbc	22 27 04.1	+0.1
	comp=Z,108nm,1.1s						
ILULI	Ilulissat	144.46	37	i P	PKPbc	22 27 04.1	+0.1
ILULI				IAmb	IAmb	22 27 04.7	
	comp=Z,108nm,1.1s						
RAYN	Ar Rayn	144.60	206	PKPdf	PKPab	22 27 05.8	+0.1
NUUG	Nuugaatsiaq	144.64	33	i P	PKPab	22 27 04.5	+0.2
NUUG				IAmb	IAmb	22 27 05.3	
	comp=Z,59nm,1.3s						
KBL	Kabul	145.13	247		PKPbc	22 27 07.4	-0.1
KSH	Kashi	145.24	260	PKPbc	PKPbc	22 27 07.7	+0.1
MKAR	Makanchi Array	146.62	275	PKPbc	PKPdf	22 27 10.7	+0.9
	comp=Z,50nm,0.8s,baz=119,slow=4.6,SNR=394						
MKAR				PP	PP	22 30 38.5	+2.7
	comp=Z,1.3nm,0.9s,baz=126,slow=6.2,SNR=3.7						
MAKZ	Makanchi	146.79	275		PKPdf	22 27 10.6	+0.4
ULHL	Ulahol	147.00	264	P	PKPbc	22 27 13.3	+0.3
	SNR=24						
ISOG	Isortoq, Green	147.64	46	i P	PKPbc	22 27 13.0	-0.7
ISOG				IAmb	IAmb	22 27 13.8	
	comp=Z,21nm,0.8s						
TKM2	Tokmak 2	147.80	264	P	PKPbc	22 27 14.4	-0.7
	SNR=16						
UCH	Uchtor	147.92	262	P	PKPbc	22 27 15.8	0.0
	SNR=24						
KBK	Karagaybulak	147.98	263	P	PKPbc	22 27 15.4	-0.1
	SNR=10						
ANGG	Ammassalik, Gr	148.19	46	i P	PKPbc	22 27 14.3	-0.8
ANGG				IAmb	IAmb	22 27 15.4	
	comp=Z,32nm,0.9s						
AAK	Ala-Archa	148.21	263	PKPbc	PKPbc	22 27 15.5	-0.6
	comp=Z,7.9nm,0.9s,baz=151,slow=3.2,SNR=29						
AAK	Ala-Archa	148.21	263	P	PKPbc	22 27 15.8	-0.3
	SNR=12						
AAK	Ala-Archa	148.21	263		PKPdf	22 27 13.4	+0.6
PTEO	Sao Teotonio	148.23	111	ePKP	PKPbc	22 27 16.2	+0.1
AML	Almayashu	148.30	261	P	PKPdf	22 27 10.0	-3.3
	SNR=15						
CHMS	Chumysh	148.32	264	P	PKPbc	22 27 15.8	-0.4
	SNR=13						
HRA	Herat	148.32	239	PKPdf	PKPdf	22 27 13.1	-0.3
ICESG	Greenland Ices	148.34	40	i P	PKPbc	22 27 14.5	-1.4
ICESG				IAmb	IAmb	22 27 20.3	
	comp=Z,41nm,1.0s						
EKS2	Erkin-Say	148.62	262	P	PKPbc	22 27 17.2	+0.1
	SNR=17						
USP	Ospenovka	148.63	264	P	PKPbc	22 27 16.7	-0.4
	SNR=13						
QRN	Al-Qurain	148.91	213	eP		22 27 17.0	
ZAA0	Zalesovo Array	149.16	288		PKPdf	22 27 15.5	+1.8
ZALV	Zalesovo Beam	149.16	288	PKPbc	PKPdf	22 27 15.8	+2.1
	comp=Z,17nm,0.7s,baz=156,slow=2.7,SNR=82						
RDF	Al-Radifah	149.19	212	eP		22 27 17.6	
SUMG	Summit	149.31	33		PKPbc	22 27 18.1	-0.2
SUMG	Summit	149.31	33	i P	PKPbc	22 27 18.5	+0.2
	comp=Z,124nm,0.8s						
SUMG	Summit	149.31	33	i P	PKPbc	22 27 18.5	+0.2
SUMG				IAmb	IAmb	22 27 19.7	
	comp=Z,125nm,0.8s						
EVO	Evora	149.34	111	ePKP	PKPbc	22 27 19.4	+0.5
KBD	Kabd	149.38	213	eP		22 27 17.6	
PMTG	Montargil	149.64	110	ePKP	PKPbc	22 27 19.6	0.0
PSBE	So Bento	149.68	109	ePKP	PKPbc	22 27 20.4	+0.6
UMR	Umm Al-Rimmam	149.73	213	eP		22 27 18.9	
PESTR	Estremoz	149.81	111		PKPbc	22 27 19.8	-0.4
MIB	Mutribah	150.08	212	eP		22 27 18.7	
PMRV	Marv??o	150.34	110	ePKP	PKPbc	22 27 21.8	+0.5
PCBR	Castelo Branco	150.60	110	ePKP	PKPbc	22 27 22.1	+0.2
KURBB	Kurchatov Arra	150.84	279	PKP	PKPdf	22 27 14.8	-1.7
	comp=Z,3.1nm,1.0s,baz=124,slow=1.4,SNR=13						
KURBB				PKPbc	PKPbc	22 27 21.0	-1.1
	comp=Z,29nm,0.8s,baz=114,slow=2.3,SNR=91						
KURK	Kurchatov	150.84	279		PKPbc	22 27 21.0	-1.1
KURK	Kurchatov	150.84	279		PKPdf	22 27 15.1	-1.3
MTE	Manteigas	150.98	109	ePKP	PKPbc	22 27 23.1	+0.2
MTE	Manteigas	150.98	109		PKPbc	22 27 22.6	-0.3
PVIS	Viseu	151.03	108	ePKP	PKPbc	22 27 22.6	-0.4
POLO	Lamas de Olo	151.55	107	ePKP	PKPbc	22 27 24.0	-0.2
PGAV	Gavieira, Arco	151.73	106	ePKP	PKPbc	22 27 24.8	+0.2
MVO	Moncorvo	151.80	108	ePKP	PKPbc	22 27 25.0	+0.2
PAB	San Pablo	151.97	114		PKiKP	22 27 25.6	+0.1
NRIK	Noril'sk	152.22	320	PKPbc	PKPbc	22 27 24.1	-0.6
	comp=Z,12nm,0.8s,baz=91,slow=3.0,SNR=18						
NRIK	Noril'sk	152.22	320		PKPbc	22 27 24.9	+0.2
ESDC	Sonseca Array	152.26	114	PKP	PKPdf	22 27 18.2	-0.9
	comp=Z,0.8nm,0.8s,baz=254,slow=1.3,SNR=7.4						
ESDC				PKPbc	PKPbc	22 27 25.5	-0.4
	comp=Z,8.5nm,1.0s,baz=250,slow=1.7,SNR=41						
ESDC				PKPab	PKPab	22 27 35.5	-0.3
	comp=Z,6.0nm,0.9s,baz=251,slow=2.2,SNR=7.2						
PBRG	Braganca	152.41	108	ePKP	PKPbc	22 27 26.3	+0.2
GEYT	Alibeck	153.13	237	PKPbc	PKPbc	22 27 27.7	-0.1
	comp=Z,5.7nm,1.0s,baz=242,slow=3.2,SNR=17						
GEYT				PKPab	PKPab	22 27 39.0	-0.5
	comp=Z,6.8nm,1.0s,baz=25,slow=28,SNR=4.0						
GYA0B	ALIBECK ARRAY	153.13	237		PKiKP	22 27 28.1	+0.1
BRVK	Borovoye	156.50	278		PKPdf	22 27 34.1	+10
GAZ	Gaziantep	159.53	198		PKPab	22 28 07.4	+0.4
AKTO	Aktyubinsk	161.94	261	PKPab	PKPab	22 28 16.0	-1.1
	comp=Z,6.8nm,0.8s,baz=125,slow=4.1,SNR=13						
BRTR	Keskin Array B	162.53	191	PKP	PKPdf	22 27 31.4	-0.6
	comp=Z,0.5nm,0.4s,baz=306,slow=37,SNR=2.7						
TOKA	Tokat	162.72	198		PKPab	22 28 20.6	-0.2
ARU	Arti	164.03	280	PKPab	PKPab	22 28 24.3	-1.8
	comp=Z,2.5nm,0.9s,baz=131,slow=4.0,SNR=7.7						
KBZ	Khabaz	164.24	219	PKPab	PKPab	22 28 26.4	-1.0
	comp=Z,3.4nm,0.9s,baz=209,slow=5.1,SNR=5.0						
DAVOX	Davos/Dischmat	164.27	122	PKP	PKPdf	22 27 32.4	-1.2
	comp=Z,2.4nm,1.0s,baz=190,slow=5.6,SNR=4.1						
DAVOX				PKPab	PKPab	22 28 26.7	-1.0
	comp=Z,1.5nm,0.7s,baz=160,slow=22,SNR=6.0						
DAVA	Damuels	164.64	121	eP	PKPab	22 28 29.0	-0.3
	comp=Z,15nm,1.4s						
FETA	Feichten	164.84	123	eP	PKPdf	22 27 34.0	0.0
	comp=Z,6.5nm,1.4s						
FETA				eP	PKPab	22 28 30.1	-0.1
	comp=Z,8.7nm,1.3s						
RETA	Reutte	165.20	122	eP	PKPdf	22 27 34.7	+0.5
	comp=Z,6.4nm,1.8s						
RETA				eP	PKPab	22 28 32.0	+0.4
	comp=Z,12nm,1.7s						
SQTA	Sankt Quirin	165.21	124	eP	PKPab	22 28 31.2	-0.5
	comp=Z,10nm,1.6s						
MOTA	Moosalm	165.25	123	eP	PKPdf	22 27 34.4	+0.1
	comp=Z,9.4nm,1.5s						
MOTA				eP	PKPab	22 28 30.6	-1.3
	comp=Z,9.6nm,1.7s						
ABTA	Abfaltersbach	165.43	127	eP	PKPdf	22 27 33.8	-0.6
	comp=Z,8.4nm,1.4s						
ABTA				eP	PKPab	22 28 32.5	-0.1
	comp=Z,13nm,1.6s						
WTTA	Wattenberg	165.44	124	eP	PKPab	22 28 33.0	+0.2
	comp=Z,20nm,2.1s						
WATA	Walderalm	165.46	124	eP	PKPab	22 28 32.9	0.0
	comp=Z,7.7nm,1.3s						
ZOU	Zoufplan	165.48	129		PKPab	22 28 33.4	+0.3
OBKA	Obir	166.10	133	eP	PKPdf	22 27 34.7	-0.2
	comp=Z,6.2nm,1.4s						
SOKA	Soboth	166.43	133	eP	PKPab	22 28 37.1	0.0
	comp=Z,8.1nm,1.3s						
MOA	Molln	167.04	128	eP	PKPab	22 28 39.0	-0.7
	comp=Z,8.6nm,1.6s						
ARSA	Arzberg	167.09	133	eP	PKPab	22 28 39.9	0.0
	comp=Z,7.4nm,1.2s						
GERES	GERESS Array B	167.54	124	PKP	PKPdf	22 27 36.6	+0.6
	comp=Z,0.2nm,0.3s,baz=263,slow=1.6,SNR=1.9						
CONA	Conrad Observa	167.77	132	eP	PKPab	22 28 43.2	+0.2
	comp=Z,8.8nm,1.2s						
ARR	Arges	168.01	164	⇑P	PKPab	22 28 44.0	0.0
VOIR		168.14	165	⇑P	PKPab	22 28 44.3	-0.3
CFR	Carcaliu	168.17	176	⇑P	PKPab	22 28 43.5	-1.1
MLR	Muntele Rosu	168.31	168	PKPab	PKPab	22 28 44.4	-1.0
	comp=Z,8.1nm,0.8s,baz=329,slow=9.6,SNR=5.0						
MLR	Muntele Rosu	168.31	168	⇓P	PKPab	22 28 44.9	-0.5
MLR	Muntele Rosu	168.31	168		PKPab	22 28 44.9	-0.5
BELG	Belogornoye	168.52	254	PKPab	PKPab	22 28 44.5	-1.5
	comp=Z,12nm,0.9s,baz=157,slow=21,SNR=5.6						
VRI	Vrincioaia	168.76	170	⇑P	PKPab	22 28 46.1	-1.2
VYHS	Vyhne	169.38	139	ePKP	PKPdf	22 27 46.5	+9.4
BURAR	Bucovina Array	170.29	163	⇓P	PKPab	22 28 44.1	-10
AKASG	Malin Array Be	173.72	179	PKPab	PKPab	22 29 06.4	-2.6
	comp=Z,0.8nm,0.5s,baz=173,slow=4.4,SNR=7.8						

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*IDC **02** 22:07:35.9±1.7, 43.°55N×105.°30W, h0^{km}, mb4.2/1, mb1 3.8/5, mb1mx3.4/59, mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=43.5km s-min=7.7km az=151.0*

*NEIC **02** 22:07:38.2±1.3, 43.°68N±0.°05×105.°31W±0.°07, h0^{km}±2^{km}, ML3.4/70, Error ellipse: s-maj=9.1km s-min=8.3km az=171.0*

ISC 02 22:07:37.2±0.9, **43.°68N**±0.°05×**105.°33W**±0.°05, **h0**^{km}**, n72,** σ1.^{s}**22**/73**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.03	64	Pg	Pg	22 07 57.1	+0.2
K22A	Casper	1.35	221		Pg	22 08 02.3	-0.8
PHWY	Pilot Hill	2.38	182		Pn	22 08 17.9	+0.1
PHWY				IAML		22 08 52.3	
	111nm,0.5s						
RWWY	Rawlins	2.43	215		Pn	22 08 19.8	+1.3
RWWY				IAML		22 08 55.7	
	248nm,1.1s						
N23A	Red Feather La	2.83	190	Pn	Pn	22 08 24.7	+0.8
N23A				IAML		22 09 07.1	
	comp=N,104nm,0.3s						
N23A				IAML		22 09 10.7	
	comp=E,121nm,0.7s						
LAO	LASA Array	3.07	348		Pn	22 08 28.1	+1.0
LAO				IAML		22 09 13.6	
	comp=E,129nm,0.4s						
LAO				IAML		22 09 14.4	
	comp=E,171nm,0.4s						
RLMT	Red Lodge	3.17	298	Pn	Pn	22 08 29.5	+1.0
RLMT				IAML		22 09 19.3	
	comp=E,80nm,0.3s						
RLMT				IAML		22 09 20.3	
	comp=E,68nm,0.3s						
BW06	Boulder Array	3.23	255		Pn	22 08 30.3	+0.9
BW06				IAML		22 09 18.6	
	comp=E,69nm,0.4s						
BW06				IAML		22 09 18.9	
	comp=E,88nm,0.4s						
PD31	Pinedale Array	3.23	255		Pn	22 08 30.3	+0.9
PDAR	Pinedale Array	3.23	255	Pn	Pn	22 08 29.6	+0.2
	comp=E,8.0nm,0.3s,baz=69,slow=15,SNR=119						
PDAR				Pg	Pg	22 08 38.9	-0.1
	comp=E,25nm,0.3s,baz=71,slow=19,SNR=26						
PDAR				Lg	Lg	22 09 14.9	
	comp=E,42nm,0.3s,baz=78,slow=32,SNR=9.6						
YNE	Yellowstone No	3.61	293		Pn	22 08 35.2	+0.6
YMP	Mirror Lake Pl	3.63	289		Pn	22 08 36.3	+1.4
OGNE	Ogallala	3.67	137	Pn	Pn	22 08 36.1	+0.8
OGNE				IAML		22 09 41.3	
	comp=E,96nm,1.1s						
GCMT	Greycliff	3.74	306		Pn	22 08 37.2	+0.9
LKWY	Lake	3.76	285		Pn	22 08 39.5	+2.8
LKWY				IAML		22 09 41.0	
	comp=E,42nm,0.9s						
H17A	Grant Village	3.85	282		Pn	22 08 40.6	+2.7
H17A				IAML		22 09 43.1	
	comp=N,34nm,0.7s						
FLWY	Flagg Ranch	3.91	278		Pn	22 08 40.8	+2.1
FLWY				IAML		22 09 47.8	
	comp=N,85nm,1.2s						
FLWY				IAML		22 09 52.2	
	comp=N,52nm,1.1s						
YNR	Norris Junctio	3.98	287		Pn	22 08 40.2	+0.5
YPP	Pitchstone Pla	4.00	280		Pn	22 08 40.9	+0.9
REDW	Red Top Meadow	4.03	267	Pn	Pn	22 08 42.8	+2.3
REDW				IAML		22 09 51.5	
	comp=N,48nm,1.2s						
REDW				IAML		22 09 55.5	
	comp=N,59nm,1.2s						
YHH	Holmes Hill	4.12	287		Pn	22 08 42.9	+1.2
O20A	White River Ci	4.16	213	Pn	Pn	22 08 43.6	+1.5
O20A				IAML		22 09 52.4	
	comp=E,44nm,0.6s						
O20A				IAML		22 10 06.1	
	comp=N,45nm,1.2s						
YMR	Madison River	4.17	286		Pn	22 08 43.5	+1.2
AHID	Auburn Hatcher	4.32	260		Pn	22 08 45.1	+0.8
AHID				IAML		22 10 00.0	
	comp=N,52nm,0.9s						
AHID				IAML		22 10 05.9	
	comp=E,45nm,1.0s						
YHB	Horse Butte	4.35	286		Pn	22 08 45.0	+0.2
YHL	Hebgen Lake	4.37	288		Pn	22 08 46.2	+1.1
E28A	Huff	4.37	47		Pn	22 08 45.6	+0.7
RDMU	Red Mountain	4.43	227		Pn	22 08 47.9	+2.0
ECR	Eagle Creek	4.45	264		Pn	22 08 46.9	+0.7
SMCO	Snowmass	4.67	196		Pn	22 08 49.9	+0.5
SMCO				IAML		22 10 09.7	
	comp=E,29nm,0.7s						
SMCO				IAML		22 10 15.3	
	comp=E,36nm,1.2s						
Q24A	Divide	4.72	178		Pn	22 08 50.0	0.0
Q24A				IAML		22 10 07.4	
	comp=E,26nm,0.9s						
Q24A				IAML		22 10 09.1	
	comp=N,17nm,0.8s						
DGMT	Dagmar	4.85	9		Pn	22 08 53.0	+1.6
BOZ	Bozeman (W)	4.89	295		Pn	22 08 52.5	+0.4
BOZ				IAML		22 10 15.1	
	comp=N,15nm,0.6s						
K31A	O'Neill	4.92	100	Pn	Pn	22 08 53.6	+1.2
KSCO	Kaye Shedlock'	5.09	156		Pn	22 08 55.6	+0.7
TCUT	Toone Canyon	5.18	242		Pn	22 08 57.9	+1.6
DLMT	Dillon	5.46	290		Pn	22 09 00.8	+0.8
LRM	Limekiln Ridge	5.51	295		Pn	22 09 01.1	+0.4
MCMT	McKenzie Canyo	5.52	285	Pn	Pn	22 09 01.7	+0.8
CTU	Camp Tracy	5.63	240	Pn	Pn	22 09 02.9	+0.6
MDND	Maddock	5.78	42		Pn	22 09 04.6	+0.4
SPUT	South Promonto	5.78	248		Pn	22 09 05.6	+1.3
HVU	Hansel Valley	5.81	253	Pn	Pn	22 09 05.0	+0.3
PV07	Paradox Valley	5.81	207	Pn	Pn	22 09 06.1	+1.3
P17A	Butcher Ranch,	5.85	226		Pn	22 09 05.2	0.0
PV15	Paradox Valley	5.85	205	Pn	Pn	22 09 06.8	+1.5
BCYI	Bear Canyon	5.86	279		Pn	22 09 06.5	+0.9
SDCO	Great Sand Dun	5.93	181	Pn	Pn	22 09 08.2	+1.6
PV04	Paradox Valley	5.94	208		Pn	22 09 08.0	+1.4
MPU	Maple Canyon	5.97	234	Pn	Pn	22 09 07.5	+0.5
PV10	Paradox Valley	6.00	209	Pn	Pn	22 09 09.7	+2.3
SRU	San Rafael Swe	6.01	222	Pn	Pn	22 09 08.9	+1.3
PV19	Morning Glory	6.04	208	Pn	Pn	22 09 09.1	+1.1
S22A	4UR Ranch, Cre	6.04	191		Pn	22 09 09.0	+0.9
PV02	Paradox Valley	6.05	206		Pn	22 09 08.9	+0.8
PV17	East Wray Mesa	6.06	208		Pn	22 09 09.8	+1.6
PV18	Skein Mesa, Pa	6.07	208	Pn	Pn	22 09 09.9	+1.5
TMUT	Trail Mountain	6.22	227		Pn	22 09 12.0	+1.4
NLU	North Lily Min	6.27	236	Pn	Pn	22 09 12.6	+1.4
PV05	Paradox Valley	6.29	208		Pn	22 09 10.7	-0.7
ECSD	EROS Data Cent	6.32	87	Pn	Pn	22 09 12.5	+0.9
BGU	Big Grassy Mou	6.34	247	Pn	Pn	22 09 12.9	+0.8
DUG	Dugway, Tooele	6.58	241	Pn	Pn	22 09 16.3	+0.9
F33A	5 Mile Ranch,	6.78	68		Pn	22 09 18.9	+0.9
MSO	Missoula	6.84	300	Pn	Pn	22 09 19.2	+0.3
MVCO	Mesa Verde	6.90	202	Pn	Pn	22 09 20.9	+1.1
MVU	Marysvale	7.33	227	Pn	Pn	22 09 26.9	+1.1
JTMT	Jette	7.47	306	Pn	Pn	22 09 27.3	-0.2
ULM	Lac du Bonnet	9.21	41	Pn	Pn	22 09 49.0	-2.2
	comp=N,1.9nm,0.3s,baz=226,slow=12,SNR=24						
ULM				Lg	Lg	22 12 22.9	
	comp=N,0.5nm,0.3s,baz=154,slow=21,SNR=2.2						
NVAR	Mina Array Bea	11.11	246	Pn	Pn	22 10 19.4	+1.9
	comp=N,0.2nm,0.3s,baz=66,slow=12,SNR=2.0						
YKA	Yellowknife Ar	19.61	347	P	P	22 12 07.7	+0.8
	comp=N,0.1nm,0.3s,baz=152,slow=12,SNR=5.4						
ARCES	ARCESS Array B	61.48	18	P	P	22 17 53.7	-1.4
	comp=N,4.3nm,1.1s,baz=332,slow=6.7,SNR=5.7						

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*DDA **02** 22:27:08.4, 40.°78N×27.°76E, h7^{km}±3^{km}, ML1.3*

ISK 02 22:27:07.5, 40.°80N×27.°81E, h9^{km}**, ML2.0**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRMT	Marmara Adasi	0.25	220	PG	Pb	22 27 13.5	-0.8
MRMT				SG	Sg	22 27 17.0	+1.0
TKR	Tekirdag	0.28	313	PG	Pg	22 27 13.7	+0.5
TKR				SG	Sg	22 27 18.2	+1.2
CRLT	Corlu	0.34	350	PG	Pg	22 27 14.7	+0.5
MAR4	Marsite Statio	0.39	269	PG	Pb	22 27 16.1	-0.5
MAR4				SG	Sb	22 27 21.7	-1.1
EDC	Edincik	0.45	175	PG	Pb	22 27 17.5	-0.2
EDC				SG	Sb	22 27 23.8	-0.7
SART	Tekirdag	0.49	258	i P	Pg	22 27 17.6	+0.5
SART				i S	Sg	22 27 24.5	+1.0
SART				IAML		22 27 26.0	
	comp=N,8.5nm,0.4s						
SART				IAML		22 27 26.0	
	comp=E,8.4nm,0.1s						
RKY	Sarkoy-Tekirda	0.49	257	PG	Pg	22 27 17.7	+0.6
RKY				SG	Sb	22 27 25.0	-0.8
SLVT	Silivri	0.53	35	PG	Pg	22 27 18.3	+0.6
SLVT				SG	Sb	22 27 26.1	-0.6
KRBG	Karabiga-Canak	0.56	224	PG	Pg	22 27 18.9	+0.5
KRBG				SG	Sb	22 27 27.1	-0.5
ELBA	Catalca	0.59	53	i P	Pb	22 27 20.2	+0.2
ELBA				IAML		22 27 28.0	
	comp=N,21nm,0.2s						
ELBA				IAML		22 27 28.0	
	comp=E,8.5nm,0.2s						
ELBA				i S	Sb	22 27 28.1	-0.3
CTKS	Kestanelik-??a	0.69	50	PG	Pb	22 27 21.3	-0.4
CTKS				SG	Sb	22 27 30.9	-0.4
CTYL	Yalikoy Yolu	0.77	28	PG	Pb	22 27 22.8	-0.3
CTYL				SG	Sb	22 27 33.9	+0.3
VIZE	Kirklareli, Vi	0.78	2	i P	Pb	22 27 23.8	+0.5
VIZE				i S	Sb	22 27 34.4	+0.3
VIZE				IAML		22 27 36.0	
	comp=N,21nm,0.3s						
VIZE				IAML		22 27 36.0	
	comp=E,16nm,0.3s						
BGKT	Bogazkoy	0.82	62	PG	Pb	22 27 23.8	-0.2
ARMT	Armutlu	0.83	106	PG	Pb	22 27 24.2	0.0
LPK	Lapseki	0.91	242	PG	Pg	22 27 24.7	-0.2
MDNY	Mudanya-Bursa	0.92	117	PG	Pg	22 27 25.4	+0.2
ISK	Istanbul-Kandi	0.98	74	PG	Pb	22 27 26.6	-0.1
KAVV	Kandilli-Istan	0.98	74	PG	Pb	22 27 26.8	+0.1
ERIK	Erikli-Kesan	0.99	263	PG	Pg	22 27 26.4	-0.2
KLYT	Kilyos	1.04	64	PG	Pb	22 27 27.9	+0.3
TRML	Termal-Yalova	1.05	100	PG	Pn	22 27 28.3	-0.2
GELI	Tayfur-Gelibol	1.09	249	PN	Pg	22 27 28.2	-0.3
ARMN	Kirklareli, Me	1.10	345	i P	Pn	22 27 29.1	-0.1
ARMN				IAML		22 27 46.0	
	comp=N,4.3nm,0.2s						
ARMN				IAML		22 27 46.0	
	comp=E,9.9nm,1.4s						
KIRK	Kırklareli	1.12	332	i P	Pn	22 27 29.6	+0.2
KIRK				i S	Sb	22 27 43.9	+0.1
KIRK				IAML		22 27 45.0	
	comp=E,4.3nm,0.4s						
KIRK				IAML		22 27 45.0	
	comp=N,3.7nm,0.4s						
BALB	Balikesir	1.16	177	PN	Pn	22 27 29.9	0.0
IGD	Bursa	1.19	116	i P	Pn	22 27 30.3	0.0
IGD				IAML		22 27 48.0	
	comp=N,5.8nm,0.3s						
IGD				IAML		22 27 48.0	
	comp=E,13nm,1.3s						
ENEZ	Enez	1.26	268	PN	Pb	22 27 31.5	+0.1
EDRB	Edirne	1.32	323	PN	Pb	22 27 32.6	+0.1
HRT	Hereke	1.41	88	PN	Pb	22 27 33.9	-0.1
EZN	Ezine	1.49	230	PN	Pb	22 27 35.0	-0.4
ADVT	Abdulvahap	1.51	103	PN	Pb	22 27 35.4	-0.3
BOZC	Bozcaada	1.65	235	PN	Pn	22 27 37.2	+0.5
RDO	Rodhopi	1.76	282	PN	Pn	22 27 38.7	+0.6
KDZ	Kurdzhali	2.00	296	PN	Pb	22 27 42.9	-1.1

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*IDC **02** 22:29:38.3±0.6, 6.°63N×60.°17E, h0^{km}, mb4.3/19, mb1 4.4/19, mb1mx4.2/46, mbtmp4.3/19, MS3.7/10, Ms1 3.7/10, ms1mx3.4/34, Error ellipse: s-maj=16.0km s-min=14.2km az=141.0*

*NEIC **02** 22:29:40.0±2.5, 6.°8N±0.°1×60.°16E±0.°08, h10^{km}±1^{km}, mb4.7/64, Error ellipse: s-maj=17.5km s-min=14.2km az=183.0*

ISC 02 22:29:42.1±0.5**, 6.°66N**±0.°07×**60.°12E**±0.°06**, h23**^{km}**, n148,** σ1.^{s}**39**/147**, mb4.7**/68**, MS3.8**/13**, 3C-5D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	8.17	313	Pn	Pn	22 31 40.7	+1.2
SOHO	SOHO	17.71	349	i P	Pn	22 33 46.9	-0.5
	SNR=6.0						
ALNE	Al Ain	17.80	347	P	P	22 33 48.9	-0.2
ASHO	Ashiyiah	18.34	348	i P	P	22 33 54.2	-0.9
	SNR=19						
ASUD	Al Ashush, Dub	18.45	346	P	P	22 33 56.2	-0.1
HATD	Hatta, Dubai	18.46	348	i P	Pn	22 33 57.0	+0.3
	SNR=10						
FAQ	Al Faqa, Dubai	18.50	347	i P	P	22 33 56.1	-0.7
	SNR=9.1						
UOSS	Minazif	18.57	349	i P	P	22 33 56.4	-1.2
	SNR=12						
UOSS	Minazif	18.57	349		P	22 33 54.7	-2.9
NAZ	Nazwa, Dubai	18.72	347	i P	P	22 33 58.5	-0.8
	SNR=8.5						
MSFE	Esma-Masafi	18.98	349	i P	P	22 34 01.7	-0.4
	SNR=8.9						
BANOM	Banah	19.50	350	P	Pn	22 34 09.2	0.0
SHME	Shamm	19.66	349	P	Pn	22 34 10.3	-0.6
PALK	Pallekele	20.44	87	P	P	22 34 18.0	-0.2
HYB	Hyderabad	20.94	58	i P	P	22 34 23.0	-0.5
FURI	Furi	21.36	277	P	P	22 34 32.0	+3.6

RAYN	**Ar Rayn**	**21.88**	**322**	P	**P**	**22 34 32.7**	**-1.0**
RAYN	**Ar Rayn**	**21.88**	**322**	P	**P**	**22 34 32.2**	**-1.4**
KMBO	**Kilima Mbogo**	**24.10**	**252**	LR	LR	22 43 39.2	
	comp=Z,222nm,21.9s,baz=92,slow=35						
KBL	**Kabul**	**28.95**	**15**	P	**P**	**22 35 41.3**	**+1.2**
KBL				IAmb	IAmb	22 35 43.4	
	comp=Z,11nm,1.1s						
NIL	**Nilore**	**29.49**	**23**	P	**P**	**22 35 45.9**	**+1.3**
NIL				IAmb	IAmb	22 35 47.8	
	comp=Z,23nm,1.4s						
DANN	**Dangsing**	**31.08**	**43**	*e*P	**P**	**22 36 00.1**	**+1.0**
	comp=Z,35nm,0.9s						
GEYT	**Alibeck**	**31.18**	**357**	P	**P**	**22 35 59.0**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=188,slow=19,SNR=5.3						
GEYT				LR	LR	22 49 08.8	
	comp=Z,79nm,18.1s,baz=5.0,slow=38						
GYA0B	**ALIBECK ARRAY**	**31.18**	**357**	P	**P**	**22 35 58.0**	**-1.5**
DMN	**Daman**	**31.56**	**46**	*e*P	**P**	**22 36 04.7**	**+1.4**
PKIN	**Phulchoki**	**31.75**	**46**	*e*P	**P**	**22 36 06.0**	**+1.0**
	comp=Z,63nm,1.4s						
PKI	**Pulchoki**	**31.75**	**46**	*e*P	**P**	**22 36 06.3**	**+1.2**
	comp=Z,54nm,1.3s						
KKN	**Kakani**	**31.79**	**46**	*e*P	**P**	**22 36 06.6**	**+1.3**
	comp=Z,50nm,1.3s						
RAMN	**Ramite**	**32.27**	**48**	*e*P	**P**	**22 36 10.8**	**+1.3**
	comp=Z,17nm,0.9s						
GUN	**Gumba**	**32.29**	**46**	*e*P	**P**	**22 36 11.5**	**+1.7**
	comp=Z,119nm,1.1s						
ODAN	**Odare**	**32.80**	**49**	*e*P	**P**	**22 36 15.7**	**+1.5**
	comp=Z,25nm,1.1s						
GEVA	**Gevas**	**35.10**	**336**	P	**P**	**22 36 33.8**	**-0.2**
GEVA				IAmb	IAmb	22 36 36.9	
	comp=Z,16nm,1.3s						
MARD	**Mardin**	**35.23**	**333**	P	**P**	**22 36 36.4**	**+1.3**
KSH	**Kashi**	**35.69**	**21**	P	**P**	**22 36 35.8**	**-3.2**
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
KSH				pmax	pmax		
	comp=Z,460nm,4.9s						
GNI	**Garni**	**36.09**	**340**	P	**P**	**22 36 43.1**	**+0.6**
GAZ	**Gaziantep**	**36.85**	**329**	P	**P**	**22 36 49.6**	**+0.7**
LSA	**Lhasa**	**37.12**	**48**	P	**P**	**22 36 53.0**	**+1.3**
LSA				pmax	pmax		
	comp=Z,120nm,1.1s						
LSA	**Lhasa**	**37.12**	**48**	P	**P**	**22 36 52.6**	**+0.8**
LSA	**Lhasa**	**37.12**	**48**	P	**P**	**22 36 52.9**	**+1.1**
KK31	**Karatay Array**	**37.44**	**13**	P	**P**	**22 36 54.5**	**+0.8**
KK31				IAmb	IAmb	22 36 55.9	
	comp=Z,12nm,1.1s						
KKAR	**Karatay Array**	**37.44**	**13**	P	**P**	**22 36 54.2**	**+0.5**
KKAR				IAmb	IAmb	22 36 55.9	
	comp=Z,12nm,1.1s						
KOPT	**Kop Dagi**	**37.60**	**335**	P	**P**	**22 36 53.7**	**-1.7**
KOPT				IAmb	IAmb	22 37 12.3	
	comp=Z,13nm,1.2s						
AKH	**Akhalkalaki**	**37.64**	**339**	P	**P**	**22 36 53.2**	**-2.5**
AKH				IAmb	IAmb	22 36 58.0	
	comp=Z,28nm,1.2s						
UCH	**Uchtor**	**37.65**	**18**	P	**P**	**22 36 56.8**	**+0.7**
	SNR=5.9						
EKS2	**Erkin-Say**	**37.84**	**16**	P	**P**	**22 36 58.7**	**+1.5**
	SNR=38						
AAK	**Ala-Archa**	**38.02**	**17**	P	**P**	**22 36 59.9**	**+1.1**
	comp=Z,9.6nm,1.0s,baz=197,slow=8.3,SNR=27						
AAK	**Ala-Archa**	**38.02**	**17**	P	**P**	**22 37 00.5**	**+1.6**
	SNR=11						
AAK	**Ala-Archa**	**38.02**	**17**	P	**P**	**22 37 00.4**	**+1.6**
AAK	**Ala-Archa**	**38.02**	**17**	P	**P**	**22 36 59.7**	**+0.9**
AAK				IAmb	IAmb	22 37 01.5	
	comp=Z,18nm,1.1s						
KBK	**Karagaybulak**	**38.17**	**18**	P	**P**	**22 37 01.9**	**+1.8**
	SNR=15						
LSZ	**Lusaka**	**38.42**	**235**	P	**P**	**22 37 02.2**	**-0.3**
CHMS	**Chumysh**	**38.43**	**17**	P	**P**	**22 37 03.4**	**+1.3**
	SNR=9.7						
USP	**Ospenovka**	**38.60**	**17**	P	**P**	**22 37 04.5**	**+1.0**
	SNR=8.7						
TKM2	**Tokmak 2**	**38.61**	**18**	P	**P**	**22 37 05.1**	**+1.2**
	SNR=6.8						
CM31	**Chiang Mai Arr**	**39.57**	**69**	P	**P**	**22 37 12.0**	**0.0**
CMAR	**Chiang Mai Arr**	**39.57**	**69**	P	**P**	**22 37 13.0**	**+1.0**
	comp=Z,3.9nm,1.0s,baz=254,slow=8.9,SNR=23						
CMAR				PcP	**PcP**	**22 39 19.5**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=253,slow=4.7,SNR=6.1						
CMAR				LR	LR	22 52 55.2	
	comp=Z,81nm,18.5s,baz=282,slow=35						
CHTO	**Chiang Mai**	**39.65**	**69**	P	**P**	**22 37 12.0**	**-0.6**
TOKA	**Tokat**	**39.65**	**331**	P	**P**	**22 37 11.5**	**-0.9**
KBZ	**Khabaz**	**39.90**	**340**	P	**P**	**22 37 14.7**	**+0.4**
	comp=Z,5.0nm,1.0s,baz=177,slow=4.9,SNR=6.1						
KBZ				LR	LR	22 53 49.8	
	comp=Z,126nm,18.4s,baz=168,slow=36						
KIV	**Kislovodsk**	**40.17**	**340**	P	**P**	**22 37 17.1**	**+0.4**
KIV	**Kislovodsk**	**40.17**	**340**	P	**P**	**22 37 17.1**	**+0.4**
KIV				IAmb	IAmb	22 37 19.4	
	comp=Z,21nm,1.2s						
BRTR	**Keskin Array B**	**40.62**	**328**	P	**P**	**22 37 21.1**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=140,slow=9.7,SNR=8.6						
BR131	**Keskin Array S**	**40.62**	**328**	P	**P**	**22 37 20.5**	**0.0**
MATP	**Matopo**	**41.12**	**228**	P	**P**	**22 37 26.0**	**+1.1**
	comp=Z,2.5nm,0.9s,baz=62,slow=8.7,SNR=4.7						
BR231	**Keskin MP Arra**	**41.16**	**327**	P	**P**	**22 37 25.1**	**+0.1**
BR231				IAmb	IAmb	22 37 26.8	
	comp=Z,23nm,1.6s						
ABKAR	**Akbulak array**	**42.45**	**360**	P	**P**	**22 37 34.8**	**-0.4**
MAKZ	**Makanchi**	**44.19**	**22**	P	**P**	**22 37 48.9**	**-0.5**
MAKZ				IAmb	IAmb	22 37 50.4	
	comp=Z,12nm,1.2s						
WMQ	**Urumqi**	**44.21**	**29**	*e*P	**P**	**22 37 50.0**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,380nm,5.3s						
WMQ				LR	LR		
	comp=N,760nm,29.1s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,460nm,29.2s						
WMQ	**Urumqi**	**44.21**	**29**	P	**P**	**22 37 49.5**	**-0.1**
WMQ				IAmb	IAmb	22 37 52.4	
	comp=Z,17nm,1.4s						
MK31	**Makanchi Array**	**44.30**	**22**	P	**P**	**22 37 49.8**	**-0.4**
MKAR	**Makanchi Array**	**44.30**	**22**	P	**P**	**22 37 49.9**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=204,slow=8.6,SNR=24						
MKAR				LR	LR	22 56 40.1	
	comp=Z,73nm,21.8s,baz=212,slow=37						
KMI	**Kunming**	**44.66**	**61**	P	**P**	**22 37 52.3**	**-1.4**
KMI				IAmb	IAmb	22 37 54.9	
	comp=Z,11nm,1.1s						
SLVN	**Son La**	**44.74**	**66**	P	**P**	**22 37 52.2**	**-2.0**
LBTB	**Lobatse**	**46.05**	**226**	P	**P**	**22 38 04.4**	**-0.1**
LBTB				IAmb	IAmb	22 38 07.3	
	comp=Z,12nm,1.1s						
ITM	**Ithomi**	**46.15**	**317**	P	**P**	**22 38 04.1**	**-0.9**
KURBB	**Kurchatov Arra**	**46.44**	**16**	P	**P**	**22 38 06.7**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=213,slow=8.4,SNR=19						
KURK	**Kurchatov**	**46.55**	**16**	P	**P**	**22 38 07.7**	**-0.2**
KURK				IAmb	IAmb	22 38 09.1	
	comp=Z,12nm,1.1s						
TIRR	**Tirgusor**	**46.72**	**329**	P	**P**	**22 38 08.0**	**-1.3**
AGG	**Agios Georgios**	**46.87**	**319**	P	**P**	**22 38 10.0**	**-0.7**
BRVK	**Borovoye**	**47.00**	**8**	P	**P**	**22 38 10.6**	**-0.9**
GTA	**Gaotai**	**48.32**	**41**	*e*P	**P**	**22 38 22.2**	**+0.1**
GTA				pP	pP	22 38 25.5	-2.7
GTA				sP	sP	22 38 28.3	-2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,89nm,4.8s						
GTA				LR	LR		
	comp=N,190nm,16.0s						
GTA				LR	LR		
	comp=E,170nm,14.5s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
VTS	**Vitosha**	**48.38**	**324**	⇓P	**P**	**22 38 22.5**	**0.0**
BOSA	**Boshof**	**48.57**	**222**	P	**P**	**22 38 24.8**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=67,slow=12,SNR=4.3						
TESR	**Tescani**	**49.04**	**330**	⇑P	**P**	**22 38 27.4**	**0.0**
VOIR		**49.14**	**328**	⇓P	**P**	**22 38 28.0**	**-0.2**
TSUM	**Tsumeb**	**49.15**	**238**	P	**P**	**22 38 29.8**	**+1.0**
	comp=Z,4.5nm,1.0s,baz=83,slow=6.4,SNR=6.5						
TSUM	**Tsumeb**	**49.15**	**238**	P	**P**	**22 38 29.9**	**+1.1**
TSUM				IAmb	IAmb	22 38 32.5	
	comp=Z,7.7nm,1.1s						
DOPR	**Dopca**	**49.31**	**328**	⇓P	**P**	**22 38 29.1**	**-0.4**
ARR	**Arges**	**49.32**	**327**	⇓P	**P**	**22 38 29.4**	**-0.2**
LZH	**Lanzhou**	**49.53**	**47**	*e*P	**P**	**22 38 31.4**	**-0.1**
LZH				pP	pP	22 38 36.5	-1.1
LZH				sP	sP	22 38 39.8	-0.4
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
BURAR	**Bucovina Array**	**50.51**	**330**	⇓P	P	22 38 31.3	-7.3
MDVR	**Moldovita**	**50.56**	**325**	⇑P	**P**	**22 38 38.0**	**-1.0**
AKASG	**Malin Array Be**	**50.88**	**335**	P	**P**	**22 38 40.5**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=137,slow=6.7,SNR=12						
AKBB	**Malin Array Si**	**50.88**	**335**	P	**P**	**22 38 40.6**	**-0.6**
AKBB				IAmb	IAmb	22 38 41.6	
	comp=Z,15nm,1.2s						
BZS	**Buzias**	**51.12**	**326**	⇑P	**P**	**22 38 42.9**	**-0.3**
DIVS	**Divibare**	**51.16**	**323**	P	**P**	**22 38 41.9**	**-1.8**
DIVS				IAmb	IAmb	22 38 44.2	
	comp=Z,12nm,1.4s						
ZAA0	**Zalesovo Array**	**51.22**	**18**	P	**P**	**22 38 42.6**	**-1.1**
ZAA0				IAmb	IAmb	22 38 44.0	
	comp=Z,15nm,1.1s						
ZALV	**Zalesovo Beam**	**51.22**	**18**	P	**P**	**22 38 43.2**	**-0.5**
	comp=Z,8.8nm,1.0s,baz=232,slow=7.2,SNR=27						
ZALV				LR	LR	23 00 36.2	
	comp=Z,61nm,19.0s,baz=201,slow=36						
KIRV	**Kirov**	**52.46**	**353**	LR	LR	23 03 04.0	
	comp=Z,79nm,18.8s,baz=155,slow=38						
XAN	**Xi'an**	**52.59**	**52**	P	**P**	**22 38 52.1**	**-2.3**
XAN				IAmb	IAmb	22 38 54.7	
	comp=Z,14nm,1.3s						
KOLS	**Kolonicke sedl**	**52.85**	**329**	*e*P	**P**	**22 38 57.0**	**+1.0**
CRVS	**Cervenica-Dubn**	**53.25**	**329**	*e*P	**P**	**22 39 00.4**	**+1.5**
VYHS	**Vyhne**	**54.37**	**327**	*e*P	**P**	**22 39 05.9**	**-1.3**
AQU	**L'Aquila**	**54.40**	**318**	P	**P**	**22 39 04.9**	**-2.6**
AQU				IAmb	IAmb	22 39 06.5	
	comp=Z,13nm,1.0s						
LANS	**Liptovska Anna**	**54.43**	**328**	*e*P	**P**	**22 39 08.2**	**+0.6**
NRCA	**Norcia**	**54.81**	**319**	P	**P**	**22 39 10.7**	**+0.1**
NRCA				IAmb	IAmb	22 39 25.6	
	comp=Z,18nm,1.6s						
TAM	**Tamanrasset**	**54.87**	**293**	P	**P**	**22 39 12.1**	**+0.7**
TAM				IAmb	IAmb	22 39 14.9	
	comp=Z,16nm,1.7s						
OJC	**Ojcow**	**54.92**	**329**	P	**P**	**22 39 09.1**	**-2.0**
OJC				IAmb	IAmb	22 39 12.8	
	comp=Z,14nm,1.2s						
TRI	**Trieste**	**55.77**	**322**	P	**P**	**22 39 16.6**	**-0.7**
MORC	**Moravsky Berou**	**55.81**	**328**	P	**P**	**22 39 17.0**	**-0.6**
MORC				IAmb	IAmb	22 39 18.1	
	comp=Z,13nm,1.3s						
KLMR	**Klimovskoe**	**56.25**	**348**	*e*P	**P**	**22 39 18.6**	**-1.8**
KLMR				AMP		22 39 20.8	
	comp=Z,41nm,1.5s						
MOA	**Molln**	**56.56**	**325**	*e*P	**P**	**22 39 22.4**	**-0.5**
	comp=Z,1.3nm,0.6s						
SONM	**Songino Array**	**56.79**	**36**	P	**P**	**22 39 25.0**	**+0.3**
	comp=Z,3.5nm,1.0s,baz=244,slow=6.8,SNR=18						
SONM				LR	LR	23 03 45.8	
	comp=Z,111nm,19.0s,baz=318,slow=36						
TEOL	**Teolo**	**56.89**	**321**	P	**P**	**22 39 24.9**	**-0.4**
TEOL				IAmb	IAmb	22 39 26.1	
	comp=Z,11nm,1.0s						
HHC	**Hu-ho-hao-te**	**56.99**	**45**	*e*P	**P**	**22 39 27.0**	**+0.7**
HHC				S	**S**	**22 47 26.6**	**+7.0**
HHC				ScS	**ScS**	**22 49 18.7**	**+4.1**
HHC	**Hu-ho-hao-te**	**56.99**	**45**	SS	**SS**	**22 51 13.3**	**+5.0**
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
HHC				LR	LR		
	comp=N,170nm,15.3s						
HHC				LR	LR		
	comp=E,230nm,16.7s						
HHC				LR	LR		
	comp=Z,170nm,16.5s						
ULN	**Ulaanbaatar**	**57.19**	**36**	P	**P**	**22 39 26.5**	**-1.0**
WTTA	**Wattenberg**	**57.81**	**323**	*e*P	**P**	**22 39 31.1**	**-0.9**
	comp=Z,1.8nm,0.8s						
TOA0	**Torodi Ar. Sit**	**57.81**	**281**	P	**P**	**22 39 32.5**	**+0.2**
TOA0				IAmb	IAmb	22 39 34.8	
	comp=Z,15nm,1.4s						
TORD	**Torodi Ar. Bea**	**57.81**	**281**	P	**P**	**22 39 32.1**	**-0.3**
	comp=Z,4.9nm,1.1s,baz=32,slow=5.9,SNR=12						
SQTA	**Sankt Quirin**	**58.04**	**323**	*e*P	**P**	**22 39 32.6**	**-1.0**
	comp=Z,2.1nm,0.7s						
MOTA	**Moosalm**	**58.16**	**323**	*e*P	**P**	**22 39 33.2**	**-1.3**
	comp=Z,1.1nm,0.5s						
FETA	**Feichten**	**58.24**	**322**	P	**P**	**22 39 33.2**	**-1.8**
	comp=Z,0.7nm,0.5s						
CLL	**Collm**	**59.07**	**328**	*e*P	**P**	**22 39 38.0**	**-2.5**
SENIN	**Lac Senin/Sane**	**60.08**	**320**	P	**P**	**22 39 47.5**	**-0.4**
SENIN				IAmb	IAmb	22 39 48.0	
	comp=Z,9.2nm,1.1s						
NJ2	**Nanjing**	**60.09**	**57**	*e*P	**P**	**22 39 47.3**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KOWA	**Kowa**	**63.36**	**283**	P	**P**	**22 40 11.2**	**+1.0**
KIC	**Kosan Boka**	**64.40**	**274**	*e*P	**P**	**22 40 17.6**	**+0.5**
	comp=Z,38nm,1.2s						
DBIC	**Dimbokro**	**64.49**	**274**	P	**P**	**22 40 18.4**	**+0.7**
	comp=Z,9.5nm,1.2s,baz=61,slow=7.7,SNR=7.3						
DBIC				LR	LR	23 09 26.9	
	comp=Z,85nm,19.1s,baz=118,slow=37						
DBIC	**Dimbokro**	**64.49**	**274**	P	**P**	**22 40 17.5**	**-0.2**
TIC	**Toumodi**	**64.66**	**274**	*e*P	**P**	**22 40 19.3**	**+0.5**
LIC	**Lamto**	**64.69**	**274**	*e*P	**P**	**22 40 19.7**	**+0.7**
	comp=Z,41nm,1.1s						
HIA	**Hailar**	**65.41**	**38**	P	**P**	**22 40 22.7**	**-0.4**
HIA				IAmb	IAmb	22 40 23.6	
	comp=Z,7.6nm,1.0s						
ESBB	**Sonseca Array**	**65.90**	**310**	P	**P**	**22 40 25.1**	**-1.4**
ESBB				IAmb	IAmb	22 40 28.1	
	comp=Z,10nm,1.4s						
ESDC	**Sonseca Array**	**65.90**	**310**	P	**P**	**22 40 25.0**	**-1.5**
	comp=Z,3.7nm,1.0s,baz=88,slow=4.9,SNR=20						
SOEI	**Soe**	**65.95**	**104**	P	**P**	**22 40 26.3**	**-1.0**
PAB	**San Pablo**	**66.17**	**310**	P	**P**	**22 40 26.8**	**-1.4**
PAB				IAmb	IAmb	22 40 29.2	
	comp=Z,10nm,1.3s						
KSRS	**Korea Array**	**68.38**	**52**	LR	LR	23 13 06.6	
	comp=Z,29nm,18.4s,baz=190,slow=38						
WRA	**Warramunga Arr**	**77.58**	**112**	P	**P**	**22 41 36.2**	**-0.8**
	comp=Z,4.6nm,1.1s,baz=293,slow=4.8,SNR=12						
WRAB	**Tennant Creek**	**77.59**	**112**	P	**P**	**22 41 35.8**	**-1.2**
WB2	**Warramunga Arr**	**77.59**	**112**	P	**P**	**22 41 36.2**	**-0.8**
WB0	**Warramunga Arr**	**77.59**	**112**	P	**P**	**22 41 36.1**	**-1.0**
ASAR	**Alice Springs**	**77.97**	**116**	P	**P**	**22 41 37.9**	**-1.2**
	comp=Z,4.8nm,0.9s,baz=282,slow=5.2,SNR=24						
AS31	**Alice Springs**	**77.97**	**116**	P	**P**	**22 41 38.2**	**-0.9**
STKA	**Stephens Creek**	**86.29**	**123**	P	**P**	**22 42 20.3**	**-2.3**
	comp=Z,3.3nm,0.8s,baz=313,slow=8.4,SNR=6.5						
STKA	**Stephens Creek**	**86.29**	**123**	P	**P**	**22 42 20.9**	**-1.7**
VNA2	**Neumayer--Watz**	**89.08**	**198**	P	**P**	**22 42 36.5**	**+1.4**
	baz=70,slow=4.8						
VNA3	**Neumayer Olymp**	**89.88**	**198**	P	**P**	**22 42 40.2**	**+1.3**

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*NEIC **02** 22:37:38.9±1.2, 51°.32N±0°.05×178°.29W±0°.04, h28^{km}±12^{km}, Error ellipse: s-maj=7.9km s-min=3.1km az=169.0*

AEIC 02 22:37:39±1.3**, 51°.32N**±0°.05×**178°.28W**±0°.04**, h26**^{km}±7^{km}**, ML3.6**/13**, Error ellipse: s-maj=7.4km s-min=3.1km az=169.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**0.54**	**16**		Pb	22 37 50.2	+0.3
GALAA	**Gareloi Lava P**	**0.54**	**325**		Pb	22 37 50.0	+0.2
TAFP	**Tanaga Falls P**	**0.61**	**18**		Pb	22 37 50.9	-0.1
TAFP					Sn	22 38 00.6	-0.4
KIMD	**Kanaga Island**	**0.79**	**56**		Pb	22 37 53.6	-0.4
KIMD					Sn	22 38 05.1	-0.3
KIKV	**Kanaga Island**	**0.89**	**51**		Pb	22 37 55.1	-0.6
ADK	**Adak**	**1.14**	**60**		Pn	22 37 58.6	-0.8
ADK	**Adak**	**1.14**	**60**	Sn	Sn	22 38 13.8	-0.3
GSTD	**Great Sitkin T**	**1.52**	**60**		Pn	22 38 04.8	+0.2
GSTD					Sb	22 38 25.4	+0.1
GSMY	**Great Sitkin M**	**1.56**	**62**		Pn	22 38 05.2	0.0
GSTR	**Great Sitkin T**	**1.58**	**60**	Pn	Pn	22 38 04.9	-0.5
ATKA	**Atka Island**	**2.69**	**69**	Pn	Pn	22 38 20.4	-0.2
MAPS	**Pakushin South**	**7.35**	**66**		Pn	22 39 27.1	+2.6

IDC 02 22:42:23.7±1.8**, 1°.28S×137°.09E, h0**^{km}**, mb3.5**/2**, mb1 3.6**/4**, mb1mx3.3**/32**, mbtmp3.4**/4**, ML3.3**/2**, Error ellipse: s-maj=43.2km s-min=29.8km az=71.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.82**	**109**	Pn	Pn	22 43 23.6	-0.3
	1.0nm,0.3s,baz=212,slow=13,SNR=5.6						
JAY				Sn	Sn	22 44 04.6	-5.0
	3.1nm,0.3s,baz=286,slow=24,SNR=5.1						
WRA	**Warramunga Arr**	**18.74**	**188**	P	P	22 46 44.3	-0.1
	0.1nm,0.3s,baz=9.3,slow=12,SNR=6.1						
ASAR	**Alice Springs**	**22.47**	**188**	P	P	22 47 24.9	+0.1
	1.5nm,0.7s,baz=19,slow=11,SNR=13						
MKAR	**Makanchi Array**	**67.67**	**323**	P	P	22 53 22.8	0.0
	0.3nm,0.7s,baz=110,slow=7.8,SNR=2.7						

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*IDC **02** 22:57:22.4±1.0, 17°.24S×177°.16W, h0^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.0/26, mbtmp4.0/8, ML5.1/1, MS3.8/15, Ms1 3.8/15, ms1mx3.6/32, Error ellipse: s-maj=43.8km s-min=18.9km az=146.0*

ISC 02 22:57:27.3±1.0**, 17°.3S**±0°.2×**177°.2W**±0°.1**, h35**^{km}**, n20, σ0^{s}.65**/11**, mb4.1**/7**, MS3.9**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.59**	**263**	Pn	**Pn**	**22 58 33.9**	**-0.5**
	3.1nm,0.3s,baz=163,slow=23,SNR=8.4						
MSVF				Sn	**Sn**	**22 59 27.1**	**+0.6**
	3.4nm,0.3s,baz=169,slow=22,SNR=6.5						
MSVF				LR	LR	23 00 22.1	
	comp=Z,2μm,19.1s,baz=77,slow=39						
DZM	**Mont Dzumac**	**16.16**	**250**	LR	LR	23 06 33.1	
	comp=Z,569nm,19.3s,baz=82,slow=34						
RAR	**Rarotonga**	**16.89**	**106**	LR	LR	23 06 11.1	
	comp=Z,95nm,18.2s,baz=266,slow=31						
URZ	**Urewera**	**21.52**	**192**	P	**P**	**23 02 12.9**	**-0.4**
	5.5nm,0.9s,baz=114,slow=17,SNR=2.2						
URZ				LR	LR	23 09 32.3	
	comp=Z,332nm,18.3s,baz=33,slow=34						
PPT	**Papeete**	**26.32**	**95**	LR	LR	23 10 27.8	
	comp=Z,65nm,21.8s,baz=236,slow=30						
STKA	**Stephens Creek**	**39.98**	**241**	P	**P**	**23 04 59.6**	**+0.8**
	2.4nm,0.7s,baz=52,slow=10.0,SNR=3.6						
STKA				LR	LR	23 19 00.3	
	comp=Z,145nm,21.9s,baz=28,slow=32						
WRA	**Warramunga Arr**	**45.92**	**259**	P	**P**	**23 05 46.1**	**-0.9**
	0.7nm,0.9s,baz=97,slow=6.2,SNR=3.8						
ASAR	**Alice Springs**	**46.11**	**254**	P	**P**	**23 05 48.3**	**-0.2**
	6.4nm,0.7s,baz=86,slow=8.3,SNR=56						
ASAR				LR	LR	23 24 31.4	
	comp=Z,164nm,18.7s,baz=94,slow=35						
JHJ	**Hachijo jima 2**	**64.81**	**321**	LR	LR	23 32 30.7	
	comp=Z,131nm,19.8s,baz=309,slow=32						
ASAJ	**Asahikawa**	**71.29**	**331**	LR	LR	23 33 30.7	
	comp=Z,50nm,21.1s,baz=133,slow=30						
LEM	**Lembang**	**73.92**	**268**	LR	LR	23 42 21.9	
	comp=Z,92nm,18.5s,baz=178,slow=36						
NVAR	**Mina Array Bea**	**78.14**	**43**	P	**P**	**23 09 23.1**	**-0.2**
	1.8nm,0.9s,baz=229,slow=8.4,SNR=7.2						
KLR	**Kul'dur**	**80.17**	**329**	LR	LR	23 41 03.5	
	comp=Z,38nm,18.9s,baz=126,slow=33						
MAW	**Mawson**	**84.87**	**199**	LR	LR	23 45 32.4	
	comp=Z,77nm,18.4s,baz=242,slow=34						
ILAR	**Eielson Array**	**85.00**	**13**	P	**P**	**23 09 58.3**	**-0.3**
	1.3nm,0.7s,baz=228,slow=6.0,SNR=11						
ILAR				LR	LR	23 42 04.9	
	comp=Z,35nm,18.9s,baz=270,slow=32						
PDAR	**Pinedale Array**	**86.07**	**43**	P	**P**	**23 10 05.7**	**+0.9**
	0.6nm,0.8s,baz=208,slow=2.9,SNR=5.2						
YKA	**Yellowknife Ar**	**93.25**	**24**	LR	LR	23 44 40.8	
	comp=Z,55nm,21.5s,baz=0.0,slow=30						
ULM	**Lac du Bonnet**	**97.65**	**40**	LR	LR	23 48 39.6	
	comp=Z,75nm,19.0s,baz=334,slow=32						
BRTR	**Keskin Array B**	**145.15**	**316**	PKPbc	**PKPdf**	**23 17 02.1**	**+0.4**
	2.5nm,0.8s,baz=101,slow=2.5,SNR=7.4						
GERES	**GERESS Array B**	**147.28**	**347**	PKPbc	**PKPab**	**23 17 08.9**	**-0.1**
	0.8nm,0.8s,baz=36,slow=5.2,SNR=3.2						

ASRS 02 23:02:05.3±0.7**, 47°N**±3°×**9°7E**±°**, h10**^{km}**, MLh3.8**/4**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERNS	**Erzin**	**3.68**	**340**	Pg	Pb	23 03 12.0	+1.6
ERNS				Sg	Sg	23 04 02.4	-1.0
KNGR	**Kungurtug, Tuv**	**3.80**	**4**	Pg	Pb	23 03 15.1	+2.7
KNGR				Sg	Sg	23 04 08.4	+1.2
ZAK	**Zakamensk**	**5.43**	**47**	Pg	Pb	23 03 43.4	+3.0
ZAK				Sg	Sg	23 04 57.9	-1.8
MOY	**Mondy**	**5.48**	**26**	Pg	Pb	23 03 45.2	+4.0
MOY				Sg	Sg	23 05 00.3	-0.9
TDJR	**Todzha**	**5.62**	**354**	Pg	Pg	23 03 51.1	-1.8
TDJR				Sg	Sg	23 05 05.4	-0.3
TEL	**Teeli**	**6.19**	**315**	Sg	Sg	23 05 19.8	-4.1
ARDR	**Aradan**	**6.24**	**339**	Pn	Pn	23 03 39.2	+1.8
ARDR				Pg	Pg	23 04 01.0	-3.7
ARDR				Sg	Sg	23 05 21.1	-4.3
TLY	**Talaya**	**6.48**	**39**	Sg	Sg	23 05 29.5	-3.8
CUR	**Chagan-Uzun**	**6.67**	**303**	Pg	Pb	23 04 05.3	+3.7
CUR				Sg	Sg	23 05 33.0	-6.5
ULN	**Ulaanbaatar**	**6.85**	**78**	Sg	Sg	23 05 37.1	-7.9
BLRR	**Bol'shaya Rech**	**6.91**	**336**	Sg	Sg	23 05 41.5	-5.5

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*NDI **02** 23:23:14.9±4.9, 22°.31N×96°.34E, h10^{km}, ML3.5, mb4.1(NEIC)*

*IDC **02** 23:23:18.4±0.9, 22°.78N×96°.00E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.6/60, mbtmp3.9/9, ML4.3/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/40, Error ellipse: s-maj=40.8km s-min=13.3km az=61.0*

*NEIC **02** 23:23:20.4±1.4, 22°.77N±0°.10×96°.0E±0°.1, h16^{km}±5^{km}, mb4.1/13, Error ellipse: s-maj=20.4km s-min=3.4km az=48.0*

ISC 02 23:23:22.7±0.6**, 22°.68N**±0°.07×**95°.95E**±0°.09**, h35**^{km}**, n60, σ1^{s}.20**/59**, mb3.9**/11**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**2.74**	**267**	*e*P	**Pn**	**23 24 06.6**	**+2.3**
KOHI	**KOHIMA**	**3.46**	**331**	*e*P	**Pn**	**23 24 14.0**	**-0.3**
KOHI				*e*S	**Sn**	**23 24 57.8**	**+3.6**
KOHI				IAML		23 25 02.6	
	comp=E,185nm,0.7s						
KOHI				IAML		23 25 02.7	
	comp=N,206nm,0.8s						
MOKO	**MOKOCHONG**	**3.85**	**340**	*e*P	**Pn**	**23 24 20.4**	**+0.8**
MOKO				*e*S	Sn	23 25 13.1	+9.3
MOKO				IAML		23 25 14.4	
	comp=E,125nm,0.6s						
MOKO				IAML		23 25 14.8	
	comp=N,115nm,0.6s						
LKP	**Lekhapani**	**4.64**	**359**	*e*P	**Pn**	**23 24 31.4**	**+1.2**
SHL	**Shillong**	**4.70**	**309**	*e*P	**Pn**	**23 24 31.5**	**+0.2**
CM33	**Chiang Mai Arr**	**4.75**	**143**	P	**Pn**	**23 24 31.0**	**-0.9**
CHTO	**Chiang Mai**	**4.76**	**143**		**Pn**	**23 24 31.7**	**-0.2**
CMMT	**Chiang Mai**	**4.76**	**143**	P	**Pn**	**23 24 31.5**	**-0.5**
CM32	**Chiang Mai Arr**	**4.84**	**145**	P	**Pn**	**23 24 33.0**	**0.0**
CM34	**Chiang Mai Arr**	**4.84**	**141**	P	**Pn**	**23 24 32.0**	**-1.1**
MHMT	**Maesarieng**	**4.85**	**157**	P	**Pn**	**23 24 34.3**	**+1.1**
CM35	**Chiang Mai Arr**	**4.98**	**142**	P	**Pn**	**23 24 34.5**	**-0.6**
CM15	**Chiang Mai Arr**	**5.04**	**146**	P	**Pn**	**23 24 36.2**	**+0.4**
CM31	**Chiang Mai Arr**	**5.05**	**146**	P	**Pn**	**23 24 36.4**	**+0.4**
CM31	**Chiang Mai Arr**	**5.05**	**146**	Pn	**Pn**	**23 24 35.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**5.05**	**146**	Pn	**Pn**	**23 24 35.9**	**-0.1**
	comp=N,3.0nm,0.3s,baz=321,slow=13,SNR=72						
CMAR				Pg		23 24 52.5	
	comp=N,28nm,0.3s,baz=319,slow=18,SNR=24						
CMAR				Lg	Lg	23 25 58.5	
	comp=N,13nm,0.3s,baz=156,slow=13,SNR=4.3						
CMAR				LR	LR	23 26 53.3	
	comp=N,226nm,21.8s,baz=26,slow=42						
CM13	**Chiang Mai Arr**	**5.06**	**146**	P	**Pn**	**23 24 36.0**	**-0.1**
CM02	**Chiang Mai Arr**	**5.07**	**146**	P	**Pn**	**23 24 36.0**	**-0.3**
CM36	**Chiang Mai Arr**	**5.08**	**144**	P	**Pn**	**23 24 36.0**	**-0.4**
CM09	**Chiang Mai Arr**	**5.08**	**145**	P	**Pn**	**23 24 36.8**	**+0.3**
CM01	**Chiang Mai Arr**	**5.09**	**146**	P	**Pn**	**23 24 36.8**	**+0.3**
CM05	**Chiang Mai Arr**	**5.10**	**146**	P	**Pn**	**23 24 36.9**	**+0.2**
CM04	**Chiang Mai Arr**	**5.12**	**146**	P	**Pn**	**23 24 37.2**	**+0.4**

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ZIRO  ZIRO             5.19 339 eP    Pn     23 24 38.0 -0.1
LAMP  Lampang          5.38 139 P     Pn     23 24 40.0 -0.6
UTTA  Uttaradit        6.54 138 P     Pn     23 24 56.3 -0.2
      comp=N,0.5nmcomp=N,624nmcomp=N,31nm,0.6s
PHIT  Phitsanulok      6.89 142 P     Pn     23 25 01.9 +0.7
      comp=N,2.1nmcomp=N,3µmcomp=N,164nm,0.5s
UTHA  Uthaitani        7.81 154 P     Pn     23 25 16.0 +2.1
      comp=N,0.9nmcomp=N,520nmcomp=N,29nm,0.5s
LSA   Lhasa            8.21 329 Pn    Pn     23 25 19.3 -0.5
TAPN  Taplejung        8.80 304 eP    Pn     23 25 26.4 -1.3
      comp=N,13nm,0.4s
ODAN  Odare            8.82 300 eP    Pn     23 25 26.8 -1.2
      comp=N,20nm,0.4s
RAMN  Ramite           9.50 298 eP    Pn     23 25 36.0 -1.2
      comp=N,18nm,0.5s
GUN   Gumba           10.49 302 eP    Pn     23 25 49.1 -1.9
      comp=N,10.0nm,0.4s
PKI   Pulchoki        10.72 299 eP    Pn     23 25 51.5 -2.6
      comp=N,8.6nm,0.7s
PKIN  Phulchoki       10.73 299 eP    Pn     23 25 51.9 -2.3
      comp=N,7.8nm,0.3s
KKN   Kakani          10.91 300 eP    Pn     23 25 54.3 -2.3
      comp=N,5.4nm,0.3s
KRAB  Krabi           14.71 167 P     Pn     23 26 49.0 +0.7
XAN   Xi'an           16.06  42 Pn    Pn     23 27 04.2 -1.8
SMLA  Simla           18.73 301 eP    Pn     23 27 40.1 +1.1
DHRM  DHARAMSHALA     19.85 303 eP    Pn     23 27 50.7 -1.9
PSI   Prapat          19.97 171 P     Pn     23 27 55.0 +1.0
      comp=N,9.5nm,0.9s,baz=360,slow=4.9,SNR=5.9
PSI                             LR    LR     23 35 18.5
      comp=N,120nm,18.8s,baz=270,slow=36
RPSI  Rantau Prapat   20.07 171 P     Pn     23 27 55.0 -0.1
RPSI  Rantau Prapat   20.07 171 P     P      23 27 52.0 -1.1
RPSI                            IAmb  IAmb   23 27 57.5
      comp=Z,15nm,1.1s
WMQ   Urumqi          22.16 344 P     P      23 28 14.9 -0.8
NIL   Nilore          22.75 304 P     P      23 28 22.6 +0.6
NIL                             IAmb  IAmb   23 28 23.5
      comp=Z,8.1nm,0.8s
KBL   Kabul           26.33 303 P     P      23 28 55.4 -0.2
KBL                             IAmb  IAmb   23 28 59.8
      comp=Z,4.4nm,0.9s
SONM  Songino Array   26.46  16 P     P      23 28 56.8 +0.3
      comp=Z,0.5nm,0.7s,baz=199,slow=9.6,SNR=6.7
SONM                            LR    LR     23 41 12.7
      comp=Z,98nm,19.0s,baz=145,slow=41
MK31  Makanchi Array  26.47 339 P     P      23 28 56.1 -0.4
MKAR  Makanchi Array  26.47 339 P     P      23 28 56.0 -0.5
      comp=Z,1.4nm,0.5s,baz=144,slow=11,SNR=21
MAKZ  Makanchi        26.59 338 P     P      23 28 58.0 +0.4
MAKZ                            IAmb  IAmb   23 29 02.2
      comp=Z,2.7nm,0.9s
ULN   Ulaanbaatar     26.66  17 P     P      23 28 56.6 -1.7
ULN                             IAmb  IAmb   23 29 23.8
      comp=Z,12nm,1.9s
AAK   Ala-Archa       26.74 323 P     P      23 28 59.5 +0.4
      comp=Z,2.4nm,0.6s,baz=137,slow=7.0,SNR=14
AAK   Ala-Archa       26.74 323 P     P      23 28 58.1 -1.1
AAK                             IAmb  IAmb   23 29 02.4
      comp=Z,4.1nm,0.9s
GEYT  Alibeck         35.76 304 P     P      23 30 19.1 +0.7
      comp=Z,0.6nm,0.6s,baz=118,slow=12,SNR=3.9
BRVK  Borovoye        36.09 334 P     P      23 30 19.1 -1.9
ABKAR Akbulak array   38.82 322 P     P      23 30 43.9 -0.2
MJAR  Matsushiro Arr  38.95  59 LR    LR     23 47 50.4
      comp=Z,20nm,21.6s,baz=330,slow=38
WRA   Warramunga Arr  56.56 136 P     P      23 33 03.4 +1.4
      comp=Z,2.0nm,0.9s,baz=322,slow=7.6,SNR=7.3
ASAR  Alice Springs   59.02 139 P     P      23 33 20.7 +1.4
      comp=Z,0.9nm,0.9s,baz=320,slow=7.3,SNR=7.3
ILAR  Eielson Array   80.47  23 P     P      23 35 31.1 +0.4
      comp=Z,0.7nm,1.1s,baz=295,slow=4.9,SNR=2.3
```

IDC ***02*** *23:27:41.1±3.6, 13.°28N×142.°83E, h59^{km}±35^{km}, mb3.6/11, mb1 3.9/12, mb1mx3.6/50, mbtmp3.9/12, ML3.5/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/32, Error ellipse: s-maj=28.9km s-min=20.6km az=107.0*

ISC 02 23:27:38.8±0.8**, 13.°3N**±0.°2×**142.°55E**±0.°09**, h35**^{km}**, n13, σ1**^{s}**62**/13**, mb4.0**/11**, South of Mariana Islands**

```
Code  Station Name      Δ°  AZ°  Phase ID      Time       Res
                                 Op    ISC     h  m  s    ISC
GUMO  Guam             2.27  83 P     Pn     23 28 12.3 -1.5
      19nm,0.3s,baz=12,slow=17,SNR=3.2
GUMO                            S     Sn     23 28 43.7 +3.2
      31nm,0.3s,baz=11,slow=23,SNR=6.5
GUMO                            LR    LR     23 29 11.7
      comp=Z,171nm,21.0s,baz=190,slow=45
KSRS  Korea Array     27.35 334 LR    LR     23 44 10.2
      comp=Z,31nm,19.1s,baz=80,slow=36
WRA   Warramunga Arr  34.03 194 P     P      23 34 20.6 +0.9
      1.7nm,0.8s,baz=334,slow=10,SNR=1.3
ASAR  Alice Springs   37.73 193 P     P      23 34 51.2 -0.2
      2.5nm,0.6s,baz=330,slow=8.6,SNR=5.4
SONM  Songino Array   45.67 326 P     P      23 35 56.3  0.0
      0.3nm,0.8s,baz=116,slow=6.6,SNR=2.0
MKAR  Makanchi Array  60.12 317 P     P      23 37 45.0 +2.1
      0.5nm,0.5s,baz=92,slow=7.9,SNR=8.7
ZALV  Zalesovo Beam   60.53 325 P     P      23 37 47.3 +1.8
      0.6nm,0.4s,baz=119,slow=7.1,SNR=4.7
ILAR  Eielson Array   69.77  26 P     P      23 38 45.2  0.0
      0.8nm,0.6s,baz=250,slow=5.9,SNR=14
GEYT  Alibeck         77.59 306 P     P      23 39 32.1 +0.4
      0.8nm,0.9s,baz=103,slow=4.6,SNR=2.7
YKA   Yellowknife Ar  84.12  27 P     P      23 40 04.9 -1.1
      0.5nm,0.6s,baz=283,slow=4.2,SNR=9.9
YKA                             LR    LR     00 17 51.3
      comp=Z,20nm,19.1s,baz=0.0,slow=36
ARCES ARCESS Array B  86.63 342 P     P      23 40 17.7 -0.7
      1.5nm,0.7s,baz=46,slow=5.2,SNR=3.9
NVAR  Mina Array Bea  88.84  51 P     P      23 40 28.2 -1.7
      0.6nm,0.6s,baz=263,slow=4.6,SNR=6.4
FINES FINESS Array B  90.44 335 P     P      23 40 35.7 -0.9
      3.0nm,0.8s,baz=40,slow=3.2,SNR=3.9
```

NEIC ***02*** *23:28:55.7±1.9, 0.°16S±0.°05×122.°86E±0.°07, h128^{km}±5^{km}, mb4.5/67, Error ellipse: s-maj=10.7km s-min=7.5km az=70.0*

IDC ***02*** *23:28:57.0±0.7, 0.°11S×122.°87E, h140^{km}±6^{km}, mb3.9/22, mb1 4.1/28, mb1mx4.0/53, mbtmp4.5/28, MS3.1/3, Ms1 3.2/3, ms1mx2.7/37, Error ellipse: s-maj=14.0km s-min=8.0km az=85.0*

DJA ***02*** *23:28:57.0±0.2, 0°S±2°×12°3E±°, h119^{km}±2^{km}, M4.7/23, mB5.2/8, mb4.8/23, MLv4.9/20, Mw(mB)4.6/8*

NOU ***02*** *23:28:58.4, 0.°22S×122.°99E, h135^{km}, mb4.5, Minahassa Peninsula, Sulawesi*

ISC 02 23:28:56.6±0.5**, 0.°18S**±0.°04×**122.°89E**±0.°05**, h134**^{km}±4^{km}**, n170, σ1**^{s}**36**/182**, mb4.5**/75**, 1D, Minahassa Peninsula, Sulawesi**

```
Code  Station Name      Δ°  AZ°  Phase ID      Time       Res
                                 Op    ISC     h  m  s    ISC
GTOI  Gorontalo        0.82   9 P     Pn     23 29 17.8 -0.5
GTOI                            S     Sn     23 29 33.9 -0.9
LUWI  Luwuk            0.86 188 Pn    Pn     23 29 18.0 -0.7
LUWI                            Sn    Sn     23 29 32.6 -2.8
LUWI  Luwuk            0.86 188 P     Pn     23 29 17.7 -1.0
LUWI                            S     Sn     23 29 33.9 -1.6
MRSI  Marisa           1.15 305 P     Pn     23 29 19.8 -1.4
MRSI                            S     Sn     23 29 36.9 -3.1
KMSI  Cibinong         1.32  56 P     Pn     23 29 22.9 -0.1
KMSI                            S     Sn     23 29 43.2  0.0
APSI  Ampana           1.44 240 P     Pn     23 29 24.2  0.0
APSI                            S     Sn     23 29 44.6 -0.7
TOLI2 Tolitoli         2.46 301 Pn    Pn     23 29 35.5 -1.0
MPSI  Mapaga           3.03 280 P     Pn     23 29 44.7 +0.9
SANI  Sanana           3.61 121 P     Pn     23 29 49.1 -2.3
KDI   Kendari          3.76 184 P     Pn     23 29 56.0 +2.7
TTSI  Tana Toraja      4.18 227 P     Pn     23 29 59.9 +1.0
TNTI  Ternate          4.58  78 Pn    Pn     23 30 03.4 -0.7
SPSI  Sidrap Palu      4.88 220 P     Pn     23 30 10.0 +1.8
BNSI  Bone             5.03 213 P     Pn     23 30 12.1 +1.9
      0.5nm2µm77nm,0.5s
NLAI  Namlea           5.19 126 P     Pn     23 30 12.7 +0.4
      3.9nm10µm392nm,0.5s
SGKI  Sangatta, Kali   5.29 266 P     Pn     23 30 14.7 +1.0
      0.8nm82nm,1.2s
KAPI  Kappang          5.73 213 P     Pn     23 30 21.1 +1.5
      9.6nm,0.3s,baz=21,slow=4.6,SNR=9.5
KAPI                            S     Sn     23 31 24.6 +0.2
      8.4nm,0.3s,baz=191,slow=20,SNR=8.3
KAPI                            LR    LR     23 32 53.3
      comp=Z,83nm,21.3s,baz=57,slow=41
KAPI  Kappang          5.73 213 Pn    Pn     23 30 20.3 +0.7
KAPI  Kappang          5.73 213       Pn     23 30 20.3 +0.7
BKSI  Bulukumba        5.81 208 P     Pn     23 30 22.8 +2.2
      0.3nm37nm,0.5s
BKB   Balikpapan       6.09 260 Pn    Pn     23 30 22.8 -1.5
MSAI  Masohi           6.81 118 P     Pn     23 30 35.5 +1.5
      0.4nm2µm26nm,0.7s
MYLDM Lahad Datu       6.89 321 Pn    Pn     23 30 36.4 +1.2
KCP   Kidapawan        7.47  17⇓iP    Pn     23 30 44.1 +1.1
KCP                             iS    Sn     23 32 07.7 +1.3
DAV   Davao City (W)   7.69  20 P     Pn     23 30 47.2 +1.4
      42nm,0.3s,baz=128,slow=3.1,SNR=10
BNDI  Bandanaira       8.23 122 P     Pn     23 30 54.5 +1.3
      1.0nm364nm,0.8s
SWI   Sorong           8.40  95 P     Pn     23 30 57.2 +1.8
      1µm133nm,0.6s
SIJI  Sorong           8.41  95 P     Pn     23 30 55.2 -0.4
      5.7nm,0.3s,baz=239,slow=9.3,SNR=11
EDFI  Ende, Flores     8.60 188 P     Pn     23 31 00.1 +1.9
      20nm,0.8s
KKM   Kota Kinabalu    9.09 313 Pn    Pn     23 31 06.2 +1.4
SOEI  Soe              9.61 172 Pn    Pn     23 31 12.8 +1.0
FAKI  Fak Fak          9.74 106 Pn    Pn     23 31 12.0 -1.5
FAKI  Fak Fak          9.74 106 P     Pn     23 31 12.2 -1.3
      40nm,0.5s
WSI   Waingapu         9.77 195 P     Pn     23 31 27.3  +13
BATI  Baumata          9.99 176 P     Pn     23 31 19.0 +2.2
      3.2nm,0.3s,baz=342,slow=10,SNR=4.0
MTN   Manton Dam      15.01 147       Pn     23 32 22.5 +0.6
MTN                             IAmb  IAmb   23 32 26.4
      comp=Z,60nm,1.1s
LEM   Lembang         16.60 246 P     Pn     23 32 41.4 -0.4
      comp=Z,2.3nm,0.3s,baz=41,slow=9.8,SNR=8.1
CISI  Cisompet, Garu  16.72 244 P     P      23 32 41.9 -1.2
CISI  Cisompet, Garu  16.72 244 P     Pn     23 32 45.0 +1.9
      comp=Z,3µmcomp=Z,128nm,1.0s
CBJI  Citeko          17.16 249 P     Pn     23 32 50.0 +1.6
FITZ  Fitzroy Crossi  18.01 172 P     Pn     23 32 58.5  0.0
      comp=Z,2.9nm,0.3s,baz=5.2,slow=8.2,SNR=63
FITZ  Fitzroy Crossi  18.01 172 P     Pn     23 32 58.4 -0.1
FITZ                            IAmb  IAmb   23 33 00.2
      comp=Z,14nm,0.8s
CGJI  Cibinong        18.31 249 P     P      23 33 01.2 +0.7
      comp=Z,36nm,0.8s
DLV   T  Lat          18.69 311 P     Pn     23 33 06.8 -0.1
DLV                             IAmb  IAmb   23 33 15.4
      comp=Z,43nm,1.1s
MDSI  Maura Dua       19.17 257 P     Pn     23 33 11.9 -0.4
      comp=Z,12nm,0.9s
XMIS  Christmas Isla  19.96 239 P     P      23 33 16.2 -2.3
PSAB2 Pilbara Seismi  21.45 188 P     P      23 33 35.0 +0.6
PSAC2 Pilbara Seismi  21.45 188 P     P      23 33 35.0 +0.5
PSAB1 Pilbara Seismi  21.47 188 P     P      23 33 34.0 -0.5
PSAB3 Pilbara Seismi  21.49 188 P     P      23 33 33.9 -0.9
BKNI  Bangkinang      21.85 271 P     P      23 33 41.0 +2.2
PDSI  Padang          22.44 268 P     P      23 33 45.6 +0.9
WB0   Warramunga Arr  22.50 151 P     P      23 33 45.5 +0.4
WB0                             IAmb  IAmb   23 33 45.6
      comp=Z,12nm,0.6s
WRAB  Tennant Creek   22.62 151 P     P      23 33 45.9 -0.4
WRAB                            IAmb  IAmb   23 34 01.8
      comp=Z,11nm,0.9s
WRA   Warramunga Arr  22.62 151 P     P      23 33 46.4  0.0
      comp=Z,8.3nm,0.6s,baz=329,slow=11,SNR=117
WB2   Warramunga Arr  22.62 151 P     P      23 33 46.8 +0.4
WR0   Warramunga Arr  22.73 151 P     P      23 33 48.0 +0.6
WR0                             IAmb  IAmb   23 33 49.1
      comp=Z,22nm,0.9s
KULM  Kulim           22.86 284 P     P      23 33 47.8 -0.9
MNSI  Mandailing Nat  23.33 272 P     P      23 33 54.2 +1.2
TPUB  Ta-pu           23.44 355 P     P      23 33 52.8 -1.1
TPUB                            IAmb  IAmb   23 34 01.9
      comp=Z,19nm,0.8s
YULB  Yu-li           23.48 356 P     P      23 33 53.9 -0.4
YULB                            IAmb  IAmb   23 34 12.1
      comp=Z,18nm,1.1s
SSLB  Suanglung       23.90 356 P     P      23 33 57.9 -0.2
SSLB                            IAmb  IAmb   23 34 02.5
      comp=Z,22nm,1.1s
COEN  Coen            24.31 125 P     P      23 34 01.9  0.0
KRAB  Krabi           25.04 290 P     P      23 34 13.0 +4.4
      comp=Z,98µmcomp=Z,7µm,0.9s
GSI   Gunungsitoli    25.35 273 P     P      23 34 09.0 -2.5
GSI                             IAmb  IAmb   23 34 25.1
      comp=Z,25nm,0.8s
AS31  Alice Springs   25.68 156 P     P      23 34 15.9 +1.6
ASAR  Alice Springs   25.68 156 P     P      23 34 15.1 +0.8
      comp=Z,3.2nm,0.5s,baz=346,slow=14,SNR=44
ASAR                            PcP   PcP    23 37 41.6 +0.2
      comp=Z,1.3nm,0.3s,baz=341,slow=2.0,SNR=13
CHAI  Chaiyaphum      26.10 309 P     P      23 34 19.6 +1.5
      comp=Z,51nm,0.8s
UTHA  Uthaitani       27.94 305 P     P      23 34 36.7 +2.1
      comp=Z,28nm,0.7s
LAMP  Lampang         29.45 310 P     P      23 34 52.0 +4.0
      comp=Z,19nm,0.8s
CM04  Chiang Mai Arr  29.88 309 P     P      23 34 54.0 +2.2
      comp=Z,74nmcomp=Z,10nm,0.8s
CM05  Chiang Mai Arr  29.91 309 P     P      23 34 54.0 +2.0
      comp=Z,69nmcomp=Z,9.1nm,0.9s
CM01  Chiang Mai Arr  29.91 309 P     P      23 34 55.8 +3.7
      comp=Z,11nm,0.7s
CM02  Chiang Mai Arr  29.93 309 P     P      23 34 54.8 +2.6
      comp=Z,60nmcomp=Z,9.3nm,0.8s
CM31  Chiang Mai Arr  29.94 309 P     P      23 34 55.0 +2.7
      comp=Z,209nm,0.8s
CMAR  Chiang Mai Arr  29.94 309 P     P      23 34 53.6 +1.3
      comp=Z,5.5nm,0.8s,baz=133,slow=7.1,SNR=41
CMAR                            LR    LR     23 47 33.8
      comp=Z,57nm,18.0s,baz=167,slow=37
CM13  Chiang Mai Arr  29.95 309 P     P      23 34 54.0 +1.6
      comp=Z,134nmcomp=Z,11nm,0.8s
CM15  Chiang Mai Arr  29.95 309 P     P      23 34 54.6 +2.2
      comp=Z,11nm,0.7s
CMMT  Chiang Mai      30.14 310 P     P      23 34 56.0 +1.8
CHTO  Chiang Mai      30.15 310 P     P      23 34 55.9 +1.7
CHTO                            IAmb  IAmb   23 34 56.6
      comp=Z,13nm,0.8s
FORT  Forrest         30.83 171 P     P      23 35 00.6 +0.7
NJ2   Nanjing         32.28 354 eP    P      23 35 14.2 +1.5
NJ2                             pmax  pmax
      comp=Z,5.0nm,0.5s
ENH   Enshi           32.86 338 P     P      23 35 18.6 +0.8
BBOO  Buckleboo       34.75 160 P     P      23 35 35.4 +1.3
BBOO                            IAmb  IAmb   23 35 52.9
      comp=Z,7.7nm,1.1s
CD2   Chengdu         35.86 331 P     P      23 35 43.7  0.0
CD2                             pmax  pmax
      comp=Z,20nm,0.6s
STKA  Stephens Creek  36.15 152 P     P      23 35 47.1 +1.0
      comp=Z,2.5nm,0.6s,baz=331,slow=7.3,SNR=4.8
STKA  Stephens Creek  36.15 152 P     P      23 35 47.6 +1.5
EIDS  Eidsvold        37.00 135 P     P      23 35 53.1 -0.3
EIDS                            IAmb  IAmb   23 36 04.2
      comp=Z,6.3nm,1.1s
JWT   Wachi           37.16  17 P     P      23 35 54.5 -0.1
KSRS  Korea Array     37.73   7 P     P      23 35 59.5 +0.1
      comp=Z,1.1nm,0.5s,baz=192,slow=9.2,SNR=4.8
JGF   Kuroka          38.07  19 P     P      23 36 00.8 -1.5
JGF                             IAmb  IAmb   23 36 06.1
      comp=Z,4.2nm,0.8s
MJAR  Matsushiro Arr  39.21  20 P     P      23 36 10.3 -1.5
      comp=Z,4.7nm,0.6s,baz=192,slow=9.1,SNR=18
ARMA  Armidale        40.63 140 P     P      23 36 25.6 +1.9
JMM   Marumori        41.30  22 P     P      23 36 29.5 +0.5
JMM                             IAmb  IAmb   23 36 33.4
      comp=Z,24nm,1.1s
HHC   Hu-ho-hao-te    42.11 347 eP    P      23 36 35.8 +0.1
HHC                             pmax  pmax
      comp=Z,12nm,1.0s
HHC                             pmax  pmax
      comp=Z,200nm,5.5s
LSA   Lhasa           42.40 317 P     P      23 36 40.4 +1.8
LSA                             IAmb  IAmb   23 36 43.5
      comp=Z,9.3nm,0.6s
ODAN  Odare           43.46 311 eP    P      23 36 47.4 +0.5
      comp=Z,22nm,0.6s
TAPN  Taplejung       43.48 312 eP    P      23 36 47.3 +0.2
      comp=Z,13nm,0.4s
JTM   Tenmabayashi    44.00  20 P     P      23 36 50.4 -0.3
RAMN  Ramite          44.10 311 eP    P      23 36 52.9 +0.9
      comp=Z,26nm,0.5s
GTA   Gaotai          44.70 334 eP    P      23 36 57.3 +0.8
GTA                             pP    pP     23 37 27.8 +1.0
GTA                             sP    sP     23 37 42.7 +0.8
GTA                             pmax  pmax
      comp=Z,2.0nm,1.0s
GTA                             pmax  pmax
      comp=Z,28nm,4.3s
GTA                             LR    LR
      comp=N,70nm,13.8s
GTA                             LR    LR
      comp=E,130nm,14.5s
GTA                             LR    LR
      comp=Z,93nm,18.2s
USA0B Ussuriysk Arra  44.92   9 P     P      23 36 57.3 -0.6
USA0B                           IAmb  IAmb   23 36 58.3
      comp=Z,4.0nm,0.7s
USRK  Ussuriysk Ar.   44.92   9 P     P      23 36 57.3 -0.7
      comp=Z,3.5nm,0.6s,baz=195,slow=5.7,SNR=16
GUN   Gumba           45.15 311 eP    P      23 37 00.9 +0.4
      comp=Z,28nm,0.5s
PKI   Pulchoki        45.33 311 eP    P      23 37 01.5 -0.4
      comp=Z,7.9nm,0.5s
PKIN  Phulchoki       45.34 311 eP    P      23 37 01.7 -0.2
      comp=Z,12nm,0.4s
KKN   Kakani          45.54 311 eP    P      23 37 03.6 +0.2
      comp=Z,5.2nm,0.2s
DANN  Dangsing        46.98 310 eP    P      23 37 14.9 +0.2
      comp=Z,46nm,0.7s
ASAJ  Asahikawa       47.48  19 P     P      23 37 17.8 -0.2
      comp=Z,9.7nm,0.8s,baz=216,slow=6.4,SNR=5.9
JKA   Kamikawa-asahi  47.48  19 P     P      23 37 17.7 -0.2
ULN   Ulaanbaatar     49.80 346 P     P      23 37 36.0 +0.1
ULN                             IAmb  IAmb   23 37 37.3
      comp=Z,4.3nm,0.9s
SONM  Songino Array   49.93 346 P     P      23 37 36.4 -0.4
      comp=Z,2.9nm,0.6s,baz=162,slow=9.1,SNR=29
SONM                            pP    pP     23 38 07.8 +0.1
      comp=Z,2.3nm,0.8s,baz=158,slow=7.9,SNR=3.3
SONM                            PcP   PcP    23 38 53.5 -1.6
      comp=Z,0.6nm,0.7s,baz=167,slow=4.3,SNR=4.8
WMQ   Urumqi          53.89 329 eP    P      23 38 08.4 +2.3
MSVF  Nonsavu         56.95 111 LR    LR     00 02 20.1
      comp=Z,28nm,19.8s,baz=218,slow=35
KSH   Kashi           58.24 318 P     P      23 38 38.3 +1.1
KSH                             pP    pP     23 39 10.6 +2.1
KSH                             pmax  pmax
      comp=Z,7.0nm,0.6s
KSH                             pmax  pmax
      comp=Z,310nm,5.9s
MK31  Makanchi Array  58.70 328 P     P      23 38 39.8 -0.4
MK31                            IAmb  IAmb   23 38 40.8
      comp=Z,2.1nm,0.7s
MKAR  Makanchi Array  58.70 328 P     P      23 38 39.6 -0.6
      comp=Z,2.2nm,0.5s,baz=123,slow=8.6,SNR=30
MKAR                            pP    pP     23 39 12.6 +0.9
      comp=Z,1.5nm,0.8s,baz=134,slow=7.0,SNR=5.0
MKAR                            PcP   sP     23 39 27.2 +1.0
      comp=Z,1.6nm,0.7s,baz=127,slow=6.6,SNR=6.3
MAKZ  Makanchi        58.88 328 P     P      23 38 40.5 -0.9
PEA0B Petropavlovsk-  60.49  23 P     P      23 38 50.5 -1.8
PETK  Petropavlovsk-  60.49  23 P     P      23 38 52.0 -0.3
      comp=Z,3.5nm,0.6s,baz=268,slow=1.4,SNR=8.0
AAK   Ala-Archa       60.80 321 P     P      23 38 54.1 -0.6
      comp=Z,1.0nm,0.6s,baz=158,slow=7.9,SNR=6.1
RPZ   Rata Peaks      60.94 142 P     P      23 38 56.6 +1.1
      comp=Z,5.5nm,0.6s,baz=178,slow=11,SNR=3.5
BKZ   Black Stump Fm  62.41 135 P     P      23 39 06.8 +1.3
BKZ                             IAmb  IAmb   23 39 15.4
      comp=Z,4.5nm,0.8s
ZALV  Zalesovo Beam   62.43 336 P     P      23 39 03.6 -1.7
      comp=Z,0.8nm,0.4s,baz=131,slow=6.1,SNR=7.4
ZALV                            pP    pP     23 39 37.6 +0.6
      comp=Z,0.6nm,0.4s,baz=114,slow=6.6,SNR=4.7
KURK  Kurchatov       63.07 330 P     P      23 39 08.7 -0.9
KURK                            IAmb  IAmb   23 39 09.6
      comp=Z,5.9nm,0.8s
CASY  Casey           66.55 185 P     P      23 39 30.9 -0.9
GEYT  Alibeck         70.42 311 P     P      23 39 56.6 +0.1
      comp=Z,0.7nm,0.5s,baz=194,slow=12,SNR=3.9
NRIK  Noril'sk        73.34 348 P     P      23 40 11.9 -1.4
      comp=Z,3.8nm,0.5s,baz=118,slow=4.4,SNR=10
NRIK  Noril'sk        73.34 348 P     P      23 40 12.7 -0.6
NRIK                            IAmb  IAmb   23 40 13.5
      comp=Z,3.8nm,0.6s
VNDA  Vanda           80.09 172 P     P      23 40 51.9 +0.9
      comp=Z,1.5nm,0.6s,baz=328,slow=7.0,SNR=11
VNDA  Vanda           80.09 172 P     P      23 40 51.8 +0.9
SVW2  Sparrevohn      86.05  29 P     P      23 41 22.1 +0.1
SVW2                            IAmb  IAmb   23 41 29.4
      comp=Z,5.3nm,1.1s
TTA   Tatalina        86.10  27 P     P      23 41 22.4 +0.1
OHAK  Old Harbor      86.80  33 P     P      23 41 24.7 -1.0
OHAK                            IAmb  IAmb   23 41 26.6
      comp=Z,7.2nm,0.6s
A21K  Barrow          87.12  19 P     P      23 41 23.3 -3.6
KDAK  Kodiak Island   87.22  32 P     P      23 41 27.6 -0.1
      comp=Z,8.2nm,1.0s,baz=328,slow=8.0,SNR=5.7
KDAK  Kodiak Island   87.22  32 P     P      23 41 26.7 -1.0
KDAK                            IAmb  IAmb   23 41 32.7
      comp=Z,8.9nm,1.1s
PPLA  Purkeypile      87.83  27 P     P      23 41 30.4 -0.4
PPLA                            IAmb  IAmb   23 41 41.5
      comp=Z,7.0nm,1.2s
CNPM  China Poot      88.05  31 P     P      23 41 30.7 -0.9
TOLK  Toolik Lake Re  89.26  21 P     P      23 41 37.5 +0.2
QSPA  South Pole Qui  89.75 180 P     P      23 41 39.6  0.0
      comp=Z,1.4nm,0.7s,baz=129,slow=0.8,SNR=8.6
QSPA  South Pole Qui  89.75 180 P     P      23 41 40.2 +0.5
QSPA                            IAmb  IAmb   23 41 46.0
      comp=Z,2.8nm,1.1s
CCB   Clear Creek Bu  89.86  26 P     P      23 41 38.4 -1.6
CCB                             IAmb  IAmb   23 41 39.7
      comp=Z,2.2nm,0.7s
SCM   Sheep Creek Mo  90.05  28 P     P      23 41 40.3 -0.8
SCM                             IAmb  IAmb   23 41 53.5
      comp=Z,11nm,1.2s
IL31                  90.26  25 P     P      23 41 40.3 -1.5
ILAR  Eielson Array   90.26  25 P     P      23 41 40.3 -1.6
      comp=Z,0.6nm,0.5s,baz=248,slow=4.9,SNR=12
IL18  Eielson Array   90.30  25 P     P      23 41 40.9 -1.2
M24K  Tolsona, Glenn  90.60  28 P     P      23 41 43.2 -0.4
M24K                            IAmb  IAmb   23 41 51.2
      comp=Z,2.4nm,1.1s
KLU   Klutina         90.73  29 P     P      23 41 44.0 -0.2
KLU                             IAmb  IAmb   23 41 51.7
      comp=Z,1.9nm,0.8s
N25K  Chitina, Valde  91.36  29 P     P      23 41 46.8 -0.4
HMT   Hamilton        91.57  30 P     P      23 41 44.2 -3.9
GLB   Gilahina Butte  91.74  29 P     P      23 41 48.6 -0.3
GLB                             IAmb  IAmb   23 41 57.4
      comp=Z,5.8nm,1.1s
K27K  Chicken         92.38  26 P     P      23 41 52.3 +0.6
AKASG Malin Array Be  92.47 321 P     P      23 41 50.7 -1.7
      comp=Z,0.4nm,0.5s,baz=74,slow=4.6,SNR=3.3
BALM  Baldy           92.47  29 P     P      23 41 52.0 -0.4
BALM                            IAmb  IAmb   23 41 52.7
      comp=Z,6.1nm,1.0s
BARN  Barnard Glacie  92.80  29 P     P      23 41 54.3 +0.3
SPB2  Spitsbergen Ar  93.53 349 P     P      23 41 55.1 -1.7
SPA0  Spitsbergen Ar  93.53 349 P     P      23 41 55.1 -1.8
SPA3  Spitsbergen Ar  93.54 349 P     P      23 41 55.1 -1.7
DAWY  Dawson          93.55  26 P     P      23 41 57.3 +0.1
EPYK  Eagle Plains    94.33  23 P     P      23 42 00.2 -0.5
EPYK                            IAmb  IAmb   23 42 08.3
      comp=Z,1.9nm,1.1s
HYT   Haines Junctio  94.85  29 P     P      23 42 03.6 +0.3
HYT                             IAmb  IAmb   23 42 10.7
      comp=Z,3.3nm,1.0s
INK   Inuvik          95.18  21 P     P      23 42 03.4 -1.1
      comp=Z,1.0nm,0.5s,baz=272,slow=5.2,SNR=7.9
YKA   Yellowknife Ar 104.61  24 PKiKP PKiKP  23 47 00.7 -1.2
      comp=Z,0.2nm,0.4s,baz=337,slow=1.3,SNR=5.2
NVAR  Mina Array Bea 112.36  48 PKiKP PKiKP  23 47 17.9 +0.5
      comp=Z,0.7nm,0.6s,baz=259,slow=2.1,SNR=9.3
PDAR  Pinedale Array 116.80  41 PKP   PKPdf  23 47 25.3 -0.6
      comp=Z,0.4nm,0.5s,baz=99,slow=1.7,SNR=7.2
ULM   Lac du Bonnet  120.20  28 PKP   PKPdf  23 47 30.2 -1.6
      comp=Z,3.1nm,0.7s,baz=316,slow=1.5,SNR=11
TORD  Torodi Ar. Bea 120.34 285 PKP   PKPdf  23 47 31.7 -1.4
      comp=Z,2.0nm,0.6s,baz=64,slow=1.8,SNR=15
DBIC  Dimbokro       127.47 278 PKP   PKPdf  23 47 46.2 -0.5
      comp=Z,2.0nm,0.8s,baz=357,slow=4.9,SNR=5.0
CPUP  Villa Florida  153.64 180 PKPbc PKPbc  23 48 40.3 -0.1
      comp=Z,1.0nm,0.5s,baz=252,slow=2.9,SNR=4.9
```

NNC 02 23:45:47.6±7.4**, 36.°93N**×**70.°84E, h0**^{km}**, mb3.5, mpv3.5,**

2C-1D,Error ellipse: s-maj=65.4km s-min=54.2km az=140.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.17**	**358**	P	Pn	23 47 20.5	+0.6
	2.4nm,0.3s,baz=174,slow=12,SNR=160						
KK31				S	Sn	23 48 32.6	+1.4
	0.6nm,0.3s,baz=184,slow=23,SNR=7.4						
AAK	**Ala-Archa**	**6.36**	**25**	⇑P	Pn	23 47 23.2	+0.6
	1.3nm,0.7s						
AAK				⇓S	Sn	23 48 36.7	+0.7
	3.0nm,1.1s						
AB31	**Akbulak array**	**14.64**	**331**	⇑P	Pn	23 49 13.1	-2.8
	0.1nm,0.5s,baz=165,slow=11,SNR=7.7						

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*RSPR **02** 23:55:02.4, 17°.92N×68°.51W, h102^{km}±2^{km}, MD3.6/10*
*NEIC **02** 23:55:03.3±1.8, 18°.1N±0°.2×68°.53W±0°.04, h69^{km}±29^{km}, Error ellipse: s-maj=30.4km s-min=3.9km az=187.0*
ISC 02 23:55:02.3±1.7**, 18°.1N**±0°.2×**68°.53W**±0°.06**, h95^{km}, n46, σ$0^{s}.81$**/51**, 10C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.08**	**312**		**Pn**	**23 55 22.1**	**-1.2**
DR12				Sn	**Sn**	**23 55 37.1**	**-2.0**
MPR	**Mayaguez**	**1.33**	**84**	Pn	**Pn**	**23 55 25.6**	**-0.6**
LSP	**Las Mesas**	**1.38**	**85**	⇑*e*P	**Pn**	**23 55 27.0**	**+0.1**
LSP	**Las Mesas**	**1.38**	**85**	*e*S	**Sn**	**23 55 45.6**	**+0.1**
LSP	**Las Mesas**	**1.38**	**85**		**Pn**	**23 55 27.0**	**+0.1**
LSP					**Sn**	**23 55 45.6**	**+0.1**
AGPR	**Aguadilla, PR**	**1.41**	**74**	⇑*e*P	**Pn**	**23 55 27.8**	**+0.6**
AGPR	**Aguadilla, PR**	**1.41**	**74**	*e*S	**Sn**	**23 55 46.8**	**+0.8**
AGPR	**Aguadilla, PR**	**1.41**	**74**		**Pn**	**23 55 27.8**	**+0.6**
AGPR	**Aguadilla, PR**	**1.41**	**74**		**Sn**	**23 55 47.2**	**+1.3**
AGPR				IAML		23 55 49.3	
	comp=E,124nm,0.5s						
AGPR				IAML		23 55 50.4	
	comp=N,115nm,1.1s						
MLPR	**Magueyes Islan**	**1.42**	**94**	⇑*i*P	**Pn**	**23 55 27.0**	**-0.3**
MLPR	**Magueyes Islan**	**1.42**	**94**	*e*S	**Sn**	**23 55 46.1**	**-0.1**
MLPR	**Magueyes Islan**	**1.42**	**94**		**Pn**	**23 55 27.1**	**-0.2**
MLPR					**Sn**	**23 55 45.0**	**-1.2**
AOPR	**Arecibo Observ**	**1.71**	**81**	⇑*e*P	**Pn**	**23 55 31.4**	**+0.3**
AOPR	**Arecibo Observ**	**1.71**	**81**	*e*S	**Sn**	**23 55 53.7**	**+0.8**
AOPR	**Arecibo Observ**	**1.71**	**81**		**Pn**	**23 55 31.4**	**+0.3**
AOPR					**Sn**	**23 55 53.7**	**+0.8**
OBIP	**Obispado Ponce**	**1.83**	**91**	⇑*e*P	**Pn**	**23 55 32.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.83**	**91**	*e*S	**Sn**	**23 55 55.8**	**+0.2**
OBIP	**Obispado Ponce**	**1.83**	**91**		**Pn**	**23 55 32.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.83**	**91**		**Sn**	**23 55 55.3**	**-0.3**
OBIP				IAML		23 56 00.9	
	comp=N,44nm,3.3s						
CELP	**Cerrillos**	**1.86**	**90**	⇑*e*P	**Pn**	**23 55 32.5**	**-0.4**
CELP	**Cerrillos**	**1.86**	**90**	*e*S	**Sn**	**23 55 56.2**	**+0.1**
CELP	**Cerrillos**	**1.86**	**90**		**Pn**	**23 55 32.5**	**-0.4**
CELP					**Sn**	**23 55 56.2**	**+0.1**
SJG	**San Juan**	**2.27**	**89**	Pn	**Pn**	**23 55 38.9**	**+0.7**
SJG				IAML		23 56 33.9	
	comp=N,31nm,2.8s						
IGPR	**InterUniversit**	**2.31**	**92**	⇑*e*P	**Pn**	**23 55 38.5**	**-0.2**
IGPR	**InterUniversit**	**2.31**	**92**	*e*S	**Sn**	**23 56 06.6**	**-0.1**
IGPR	**InterUniversit**	**2.31**	**92**		**Sn**	**23 56 04.7**	**-2.0**
GCPR	**Guaynabo City**	**2.34**	**84**		**Pn**	**23 55 38.6**	**-0.5**
GCPR	**Guaynabo City**	**2.34**	**84**		**Sn**	**23 56 05.1**	**-2.3**
PDPR	**Patillas Dam,**	**2.39**	**91**	Pn	**Pn**	**23 55 40.5**	**+0.7**
PDPR				IAML		23 56 39.5	
	comp=E,42nm,1.9s						
CBYP	**Canovanas**	**2.55**	**85**	⇑*e*P	**Pn**	**23 55 41.3**	**-0.7**
CBYP	**Canovanas**	**2.55**	**85**	*e*S	**Sn**	**23 56 13.1**	**+0.6**
CBYP	**Canovanas**	**2.55**	**85**		**Pn**	**23 55 41.5**	**-0.6**
CBYP					**Sn**	**23 56 13.2**	**+0.7**
HUMP	**Col San Antoni**	**2.55**	**88**	⇑*e*P	**Pn**	**23 55 41.9**	**-0.1**
HUMP	**Col San Antoni**	**2.55**	**88**	*e*S	**Sn**	**23 56 12.7**	**+0.2**
HUMP	**Col San Antoni**	**2.55**	**88**		**Pn**	**23 55 41.9**	**-0.1**
HUMP	**Col San Antoni**	**2.55**	**88**		**Sn**	**23 56 13.2**	**+0.7**
HUMP				IAML		23 56 15.6	
	comp=E,34nm,0.2s						
HUMP				IAML		23 56 16.2	
	comp=N,36nm,0.4s						
SDDR	**Presa de Saban**	**2.77**	**290**	Pn	**Pn**	**23 55 47.1**	**+2.2**
SDDR				IAML		23 57 33.6	
	comp=N,27nm,2.3s						
MTP	**Monte Pirata**	**2.83**	**89**	⇑*e*P	**Pn**	**23 55 45.4**	**-0.4**
MTP	**Monte Pirata**	**2.83**	**89**	*e*S	**Sn**	**23 56 18.9**	**-0.2**
MTP	**Monte Pirata**	**2.83**	**89**		**Sn**	**23 56 18.9**	**-0.2**
MTP	**Monte Pirata**	**2.83**	**89**		**Pn**	**23 55 45.6**	**-0.1**
MTP	**Monte Pirata**	**2.83**	**89**	IAML		23 56 58.0	
	comp=E,26nm,3.8s						
MTP				IAML		23 57 41.8	
	comp=N,30nm,3.2s						
CUPR	**Culebra, Puert**	**3.10**	**85**	⇑*e*P	**Pn**	**23 55 48.8**	**-0.4**
CUPR	**Culebra, Puert**	**3.10**	**85**	*e*S	**Sn**	**23 56 25.9**	**+0.4**
CUPR	**Culebra, Puert**	**3.10**	**85**		**Pn**	**23 55 48.8**	**-0.4**
CUPR					**Sn**	**23 56 25.9**	**+0.4**
CUPR	**Culebra, Puert**	**3.10**	**85**	IAML		23 56 51.9	
	comp=E,25nm,3.0s						
CUPR				IAML		23 57 18.9	
	comp=N,23nm,2.6s						

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*SKHL **02** 23:56:07.5±0.4, 45°.28N×141°.83E, h15^{km}±5^{km}, mb5.0/3*
*JMA **02** 23:56:09.7±0.1, 45°.20N×141°.76E, h10^{km}±3^{km}, M3.5 JMA Felt II J1.*
*NIED **02** 23:56:09.7, 45°.20N×141°.76E, h10^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.73; M$_{\theta\theta}$1.34; M$_{\phi\phi}$-2.07; M$_{r\theta}$-0.90; M$_{\theta\phi}$0.21; M$_{\phi r}$-0.53; Fault plane solution: M$_{0}$2.11000×10^{14} NP1: φ$_{s}$215.00000°, δ73.00000°, λ145.00000°. NP2: φ$_{s}$317.00000°, δ57.00000°, λ21.00000°.*
ISC 02 23:56:08.7±1.2**, 45°.22N**±0°.04×**141°.79E**±0°.04**, h11^{km}**±16^{km}**, n7, σ$0^{s}.55$**/13**, 2C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.12**	**39**	⇓P	**Pb**	**23 56 13.1**	**0.0**
JRR	**Rishiri**	**0.35**	**256**	⇓P	**Pb**	**23 56 16.3**	**-0.6**
JRR				*e*S	**Sb**	**23 56 23.0**	**+0.6**
JRBN	**Rebuntou**	**0.55**	**292**	⇓P	**Pg**	**23 56 19.2**	**-0.2**
JRBN				*e*S	**Sg**	**23 56 27.1**	**+0.5**
JSE	**Soyaes**	**0.62**	**115**	⇑P	**Pb**	**23 56 21.1**	**-0.4**
JSE				*e*S	**Sb**	**23 56 30.4**	**+0.2**
JSS	**Shosan**	**0.82**	**177**	⇑P	**Pg**	**23 56 24.4**	**-0.1**
JSS				S	**Sb**	**23 56 36.7**	**+0.7**
KHLM	**Kholmsk**	**1.84**	**6**	*e*Pg	**Pg**	**23 56 44.0**	**0.0**
KHLM				*e*Sg	**Sg**	**23 57 08.0**	**+0.1**
KHLM				A	A	23 57 09.3	
	300nm,0.4s						
KHLM				A	A	23 57 09.3	
	300nm,0.4s						
YSS	**Yuzh-Sakhalins**	**1.86**	**21**	*e*Pg	**Pb**	**23 56 41.8**	**-0.9**
YSS				AMB	AMB	23 56 44.0	
	40nm,0.7s						
YSS				*e*Sg	**Sg**	**23 57 09.0**	**+0.6**
YSS				A	A	23 57 10.2	
	170nm,0.5s						
YSS				A	A	23 57 10.2	
	50nm,0.5s						

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*IDC **03** 00:16:21.6±0.8, 28°.47N×103°.77E, h0^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.6/43, mbtmp3.6/11, ML3.5/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/33, Error ellipse: s-maj=31.0km s-min=16.3km az=62.0*
*NEIC **03** 00:16:22.9±2.0, 28°.51N±0°.09×103°.8E±0°.1, h10^{km}±1^{km}, mb4.3/5, Error ellipse: s-maj=20.4km s-min=12.1km az=298.0*
*BJI **03** 00:16:22.9±0.0, 28°.47N×103°.77E, h12^{km}, mb3.8/2, ML3.7/16*
ISC 03 00:16:22.9±0.6**, 28°.60N**±0°.04×**103°.84E**±0°.06**, h10^{km}, n27, σ$1^{s}.43$**/32**, mb3.8**/12**, 1C-3D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.31**	**358**	⇓Pg	**Pn**	**00 17 03.5**	**+2.5**
CD2				Sg	**Sb**	**00 17 34.2**	**+1.0**
CD2				smax	smax		
	comp=N,2μm,0.6s						
CD2				smax	smax		
	comp=E,3μm,0.6s						
GYA	**Guiyang**	**3.29**	**130**	⇓Pn	**Pn**	**00 17 15.5**	**+0.9**
GYA				Pg	**Pg**	**00 17 25.4**	**-0.6**
GYA				Sn	**Sn**	**00 17 55.8**	**+1.9**
GYA				Sg	**Sg**	**00 18 08.0**	**-0.7**
GYA				smax	smax		
	comp=N,160nm,0.8s						
GYA				smax	smax		
	comp=E,160nm,1.4s						
KMI	**Kunming**	**3.59**	**196**	⇓Pg	**Pb**	**00 17 26.2**	**-0.5**
KMI				Sg	**Sb**	**00 18 10.8**	**+0.4**
KMI	**Kunming**	**3.59**	**196**	Pn	**Pn**	**00 17 18.4**	**-0.5**
ENH	**Enshi**	**5.21**	**70**		**Pn**	**00 17 42.6**	**+1.8**
XAN	**Xi'an**	**6.96**	**37**	Pn	**Pn**	**00 18 05.5**	**+0.6**
XAN				Pg	Pb	00 18 30.6	+6.8
XAN				Sn	**Sn**	**00 19 24.4**	**+0.3**
XAN				Sg	**Sg**	**00 20 02.4**	**-3.7**
XAN				smax	smax		
	comp=N,96nm,1.1s						
XAN				smax	smax		
	comp=E,140nm,1.2s						
XAN	**Xi'an**	**6.96**	**37**		**Pn**	**00 18 05.4**	**+0.6**
WHN	**Wuhan**	**9.36**	**75**	⇑P	**Pn**	**00 18 39.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**11.04**	**205**	Pn	**Pn**	**00 19 00.4**	**-0.5**
	0.2nm,0.3s,baz=19,slow=12,SNR=2.6						
CMAR				LR	LR	00 23 09.9	
	comp=Z,51nm,21.5s,baz=340,slow=37						
SONM	**Songino Array**	**19.31**	**5**	P	**Pn**	**00 20 50.3**	**+1.1**
	0.1nm,0.3s,baz=189,slow=11,SNR=5.6						
WMQ	**Urumqi**	**19.96**	**324**	*e*P	**P**	**00 20 54.8**	**-0.4**
KSRS	**Korea Array**	**22.00**	**60**	P	**P**	**00 21 18.3**	**+1.1**
	2.2nm,0.7s,baz=245,slow=10.0,SNR=5.8						
MK31	**Makanchi Array**	**24.78**	**323**	P	**P**	**00 21 45.7**	**+0.9**
MKAR	**Makanchi Array**	**24.78**	**323**	P	**P**	**00 21 45.1**	**+0.3**
	1.0nm,0.6s,baz=124,slow=12,SNR=18						
MAKZ	**Makanchi**	**24.95**	**323**	P	**P**	**00 21 47.4**	**+1.0**
MAKZ				IAmb	IAmb	00 21 49.9	
	comp=Z,4.1nm,1.2s						
ZALV	**Zalesovo Beam**	**28.90**	**337**	P	**P**	**00 22 22.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=8.6,SNR=5.5						
ZALV				LR	LR	00 34 00.1	
	comp=Z,36nm,18.9s,baz=168,slow=36						
KURBB	**Kurchatov Arra**	**29.14**	**326**	P	**P**	**00 22 24.4**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=130,slow=10,SNR=5.1						
KURK	**Kurchatov**	**29.16**	**326**	P	**P**	**00 22 22.0**	**-2.0**
KURK				IAmb	IAmb	00 22 35.1	
	comp=Z,2.4nm,1.4s						
MAJO	**Matsushiro**	**29.91**	**66**	P	**P**	**00 22 29.2**	**-1.8**
OBN	**Obninsk**	**54.20**	**319**	LR	LR	00 51 01.9	
	comp=Z,29nm,18.1s,baz=46,slow=38						
WRA	**Warramunga Arr**	**56.54**	**145**	P	**P**	**00 26 04.9**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=337,slow=8.1,SNR=24						
AKASG	**Malin Array Be**	**58.95**	**314**	P	**P**	**00 26 23.2**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=65,slow=6.5,SNR=2.1						
ASAR	**Alice Springs**	**59.49**	**148**	P	**P**	**00 26 26.3**	**0.0**
	comp=Z,0.6nm,0.4s,baz=326,slow=6.7,SNR=21						
FIA1	**FINESS Array S**	**59.52**	**327**	P	**P**	**00 26 23.2**	**-2.9**
FIA1				IAmb	IAmb	00 26 38.3	
	comp=Z,17nm,1.1s						
FINES	**FINESS Array B**	**59.52**	**327**	P	**P**	**00 26 26.9**	**+0.9**
	comp=Z,3.8nm,0.9s,baz=96,slow=8.5,SNR=1.7						
NWAO	**Narrogin (SRO)**	**62.49**	**167**	P	P	00 26 41.8	-4.7
YKA	**Yellowknife Ar**	**84.15**	**17**	P	**P**	**00 28 55.4**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=332,slow=4.8,SNR=3.3						

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*REY **03** 00:29:09.7, 64°.66N×17°.39W, h0^{km}*
*NEIC **03** 00:29:12.7±2.6, 64°.44N±0°.08×17°.8W±0°.1, h11^{km}±4^{km}, mb4.4/49, Error ellipse: s-maj=12.0km s-min=9.0km az=197.0*
*IDC **03** 00:29:12.3±0.7, 64°.61N×17°.49W, h0^{km}, mb3.7/16, mb1 4.0/18, mb1mx3.8/44, mbtmp3.8/18, ML3.6/2, Error ellipse: s-maj=22.0km s-min=13.6km az=39.0*
ISC 03 00:29:12.7±0.4**, 64°.48N**±0°.04×**17°.77W**±0°.04**, h10^{km}, n133, σ$1^{s}.62$**/109**, mb4.1**/50**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHAM	**Hamarinn**	**0.02**	**282**	P	**Pg**	**00 29 15.2**	**+0.4**
	baz=226						
IJOK	**Jokulheimar**	**0.25**	**231**	P	**Pg**	**00 29 19.5**	**+1.6**
	baz=227						
ISKR	**Skrokkalda**	**0.28**	**288**	P	**Pg**	**00 29 18.3**	**0.0**
	baz=257						
IDYN	**Dyngjuhals**	**0.36**	**29**	P	Pg	00 29 12.9	-7.0
	baz=4.4						
IIEY	**Innrieyrar**	**0.41**	**202**	P	**Pb**	**00 29 22.2**	**+0.1**
	baz=210						
IURH	**Urdarhals**	**0.44**	**38**	P	Pg	00 29 14.1	-7.2
	baz=33						
IKVE	**Kverkfjoll**	**0.52**	**66**	P	Pg	00 29 16.6	-6.2
	baz=86						
IKAL	**Kalfafell**	**0.53**	**176**	P	**Pg**	**00 29 23.2**	**+0.2**
	baz=190						
IKSK	**Karasker**	**0.65**	**119**	P	Pg	00 29 21.0	-4.2
	baz=141						
THOR	**Thorvaldshraun**	**0.66**	**45**	P	Pg	00 29 18.1	-7.4
	baz=48						
THOR				S	Sg	00 29 25.4	-8.7
	baz=48						
IKRE	**Kreppuhraun**	**0.67**	**62**	P	Pg	00 29 18.5	-7.3
	baz=74						
IASK	**Askja**	**0.75**	**39**	P	Pg	00 29 19.6	-7.7
	baz=38						
IFAG	**Fagurholsmyri**	**0.78**	**140**	P	**Pg**	**00 29 25.5**	**-2.1**
	baz=158						
IMKO	**Mokollar**	**0.80**	**50**	P	Pg	00 29 20.0	-8.0
	baz=54						
ISVA	**Svartarkot**	**0.89**	**14**	P	Pg	00 29 22.3	-7.6
	baz=4.8						
IVSH	**V-Sauoahnukur**	**0.94**	**68**	P	Pg	00 29 22.9	-7.9
	baz=78						
IVSH				S	Sg	00 29 33.6	-9.4
	baz=78						
IRJU	**Rjupnafell**	**0.95**	**205**	P	**Pg**	**00 29 31.4**	**+0.5**
	baz=209						
IFED	**Fedgar**	**0.95**	**242**	P	**Pb**	**00 29 31.1**	**-0.1**
	baz=238						
IMJO	**Mjoaskard**	**0.99**	**238**	P	**Pb**	**00 29 32.2**	**+0.2**
	baz=235						
IHVO	**Lagu-Hvolar**	**1.06**	**207**	P	**Pb**	**00 29 33.8**	**+0.6**
	baz=210						
IGYG	**Gygjarholskot**	**1.08**	**261**	P	**Pg**	**00 29 32.8**	**-0.6**
	baz=254						
IHAU	**Haukadalur**	**1.08**	**243**	P	**Pb**	**00 29 33.4**	**-0.1**
	baz=239						
IADA	**Aoalbol**	**1.09**	**59**	P	Pb	00 29 24.9	-8.7
	baz=64						
IMEL	**Melhnausar**	**1.20**	**23**	P	Pb	00 29 26.7	-8.7
	baz=18						
IREN	**Reynihlio**	**1.23**	**17**	P	Pn	00 29 27.6	-8.3
	baz=11						
ISAU	**Saurbar**	**1.25**	**248**	P	**Pn**	**00 29 35.6**	**-0.7**
	baz=244						
IKVO	**Krokottuvotn**	**1.30**	**16**	P	Pn	00 29 29.4	-7.5
	baz=11						
IGRS	**Grimsstaoir**	**1.36**	**30**	P	Pn	00 29 29.8	-8.0
	baz=28						
ISKI	**Skildingahlsh**	**1.44**	**12**	P	Pn	00 29 31.1	-7.6
	baz=7.0						
IGRA	**Granastaoir**	**1.45**	**3**	P	Pn	00 29 31.8	-7.2
	baz=356						
IGHA	**Grjothals**	**1.45**	**18**	P	Pn	00 29 31.7	-7.3
	baz=14						
ISOL	**Solvholt**	**1.49**	**250**	P	**Pn**	**00 29 39.6**	**+0.1**
	baz=246						
IDIM	**Dimmadalss**	**1.53**	**13**	P	Pn	00 29 32.9	-7.2
	baz=8.2						
BORG	**Borgarnes**	**1.56**	**282**	Pn	**Pn**	**00 29 40.0**	**-0.4**
IHED	**Heoinshofoi**	**1.62**	**7**	P	Pn	00 29 34.5	-6.9
	baz=1.3						
IBRE	**Brettingsstaoi**	**1.66**	**358**	P	Pn	00 29 35.7	-6.1
	baz=352						
IGIL	**Gilhagi**	**1.72**	**20**	P	Pn	00 29 35.6	-7.0
	baz=16						
ISIG	**Siglufjorour**	**1.73**	**344**	P	Pn	00 29 37.5	-5.3
	baz=337						
ILEI	**Leirhofn**	**2.01**	**15**	P	Pn	00 29 40.2	-6.4
	baz=12						
SCO	**Scoresbysund**	**6.24**	**347**		**Pn**	**00 30 44.8**	**+0.1**
SCO	**Scoresbysund**	**6.24**	**347**	*e*	Pn	00 30 36.2	-8.5
	baz=160,slow=12						
SCO				*i* P	**Pn**	**00 30 43.2**	**-1.5**
SCO				*e*S	**Sn**	**00 31 54.6**	**-1.3**
SCO				IAML		00 32 07.0	
	comp=Z,1.9nm,0.5s						
SUMG	**Summit**	**11.03**	**326**	Pn	**Pn**	**00 31 53.0**	**+2.3**
ESK	**Eskdalemuir**	**11.71**	**135**	Pn	**Pn**	**00 32 00.5**	**+1.0**
EKA	**Eskdalemuir Ar**	**11.71**	**135**	Pn	**Pn**	**00 31 59.7**	**+0.1**
	baz=323,slow=13,SNR=12						
DSB	**Dublin**	**12.68**	**147**	Pn	**Pn**	**00 32 10.5**	**-2.4**
NRS	**Narsarsuaq**	**13.01**	**268**	Pn	**Pn**	**00 32 16.2**	**-1.1**
NC204	**NORSAR Array S**	**13.34**	**91**	Pn	**Pn**	**00 32 25.1**	**+3.2**
FINES	**FINESS Array B**	**19.86**	**79**	P	**P**	**00 33 42.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=303,slow=7.6,SNR=2.2						
TULEG	**Thule**	**19.95**	**328**	P	**P**	**00 33 45.1**	**+0.8**
TULEG				IAmb	IAmb	00 33 51.4	
	comp=Z,20nm,1.4s						
CLL	**Collm**	**20.73**	**115**	P	**P**	**00 33 49.9**	**-3.1**
GRF	**Grafenberg Arr**	**21.34**	**120**	*e*P	**P**	**00 34 00.9**	**+1.3**
	comp=Z,11nm,1.3s,baz=324,slow=9.7						
NKC	**Novy Kostel**	**21.36**	**117**	*e*P	**P**	**00 34 03.2**	**+3.3**
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**00 34 01.2**	**+0.6**
BFO				IAmb	IAmb	00 34 05.1	
	comp=Z,23nm,1.3s						
BRG	**Berggiesshubel**	**21.44**	**114**	*i* P	**P**	**00 34 00.4**	**-0.2**
BRG				Amp		00 34 04.7	
	comp=Z,30nm,1.6s						
BRG	**Berggiesshubel**	**21.44**	**114**	*i* P	**P**	**00 34 00.4**	**-0.2**
BRG				Amp		00 34 04.7	
	comp=Z,30nm,1.6s						
PRU	**Pruhonice**	**22.37**	**115**	*e*P	**P**	**00 34 10.1**	**-0.6**
KHC	**Kasperske Hory**	**22.69**	**118**	*e*P	**P**	**00 34 16.0**	**+1.9**
KHC	**Kasperske Hory**	**22.69**	**118**	P	**P**	**00 34 13.9**	**-0.2**
KHC				IAmb	IAmb	00 34 26.0	
	comp=Z,12nm,1.3s						
DPC	**Dobruska-Polom**	**22.80**	**112**	*e*P	**P**	**00 34 14.2**	**-1.0**
DAVA	**Damuels**	**22.86**	**126**	*e*P	**P**	**00 34 19.9**	**+3.8**
	comp=Z,7.3nm,1.1s						
GEC2	**GERESS Array S**	**22.97**	**118**	P	**P**	**00 34 17.1**	**0.0**
GEC2				IAmb	IAmb	00 34 34.5	
	comp=Z,13nm,1.5s						
GERES	**GERESS Array B**	**22.97**	**118**	P	**P**	**00 34 17.5**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=342,slow=9.3,SNR=2.7						
RETA	**Reutte**	**23.01**	**124**	*e*P	**P**	**00 34 19.5**	**+2.0**
	comp=Z,7.6nm,1.1s						
MOTA	**Moosalm**	**23.25**	**124**	*e*P	**P**	**00 34 21.8**	**+1.7**
	comp=Z,7.3nm,1.3s						
DAVOX	**Davos/Dischmat**	**23.30**	**126**	P	**P**	**00 34 21.5**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=321,slow=11,SNR=6.3						
TUE	**Stuetta**	**23.38**	**127**	P	**P**	**00 34 21.1**	**-0.3**
FETA	**Feichten**	**23.39**	**125**	*e*P	**P**	**00 34 25.8**	**+4.3**
	comp=Z,5.7nm,1.4s						
SQTA	**Sankt Quirin**	**23.39**	**124**	*e*P	**P**	**00 34 24.1**	**+2.6**
	comp=Z,9.1nm,1.4s						
WATA	**Walderalm**	**23.43**	**123**	*e*P	**P**	**00 34 22.8**	**+1.0**
	comp=Z,12nm,1.8s						
WTTA	**Wattenberg**	**23.51**	**123**	*e*P	**P**	**00 34 25.3**	**+2.6**
	comp=Z,6.2nm,1.2s						
VRAC	**Vranov**	**23.73**	**113**	P	**P**	**00 34 26.7**	**+2.1**
	comp=Z,1.0nm,0.6s,baz=308,slow=12,SNR=2.4						
MORC	**Moravsky Berou**	**23.74**	**111**	P	**P**	**00 34 22.2**	**-2.6**
EUNU	**Eureka**	**23.80**	**336**	P	**P**	**00 34 26.2**	**+1.1**
MOA	**Molln**	**24.00**	**119**	*e*P	**P**	**00 34 29.5**	**+2.3**
	comp=Z,4.6nm,1.3s						
ABTA	**Abfaltersbach**	**24.27**	**122**	*e*P	**P**	**00 34 34.0**	**+4.2**
	comp=Z,4.2nm,1.3s						
KBA	**Koelnbreinsper**	**24.30**	**121**	*e*P	**P**	**00 34 35.1**	**+5.0**
	comp=Z,2.0nm,0.7s						
OJC	**Ojcow**	**24.31**	**108**	P	**P**	**00 34 28.1**	**-1.9**
OJC				IAmb	IAmb	00 34 31.1	
	comp=Z,17nm,1.4s						
SALO	**Salr**	**24.53**	**127**	P	**P**	**00 34 30.7**	**-1.4**
CTI	**Castel Tesino**	**24.55**	**125**	P	**P**	**00 34 33.5**	**+1.0**
MTE	**Manteigas**	**24.84**	**161**	P	**P**	**00 34 35.2**	**+0.2**
MTE				IAmb	IAmb	00 34 47.8	
	comp=Z,27nm,1.5s						
ARSA	**Arzberg**	**24.98**	**118**	*e*P	**P**	**00 34 36.7**	**+0.6**
	comp=Z,2.7nm,1.1s						
OBKA	**Obir**	**25.23**	**120**	*e*P	**P**	**00 34 40.4**	**+2.0**
	comp=Z,5.2nm,1.3s						
KWP	**Kalwaria Pacla**	**25.97**	**105**	P	**P**	**00 34 46.7**	**+1.6**
ESBB	**Sonseca Array**	**26.13**	**155**	P	**P**	**00 34 45.5**	**-1.1**
ESDC	**Sonseca Array**	**26.13**	**155**	P	**P**	**00 34 48.6**	**+1.9**
	comp=Z,1.3nm,0.8s,baz=344,slow=9.2,SNR=12						
PSZ	**Piszkesteto**	**26.16**	**111**	P	**P**	**00 34 46.5**	**-0.4**
PSZ				IAmb	IAmb	00 34 53.0	
	comp=Z,17nm,1.4s						
PAB	**San Pablo**	**26.18**	**156**	P	**P**	**00 34 47.4**	**+0.2**
PAB				IAmb	IAmb	00 35 01.2	
	comp=Z,10nm,1.4s						
PVAQ	**Vaqueiros**	**27.77**	**163**	P	**P**	**00 35 01.4**	**+0.1**
NRCA	**Norcia**	**27.87**	**126**	P	**P**	**00 35 02.0**	**-0.3**
NRCA				IAmb	IAmb	00 35 14.1	
	comp=Z,14nm,1.4s						
AKASG	**Malin Array Be**	**27.94**	**97**	P	**P**	**00 35 02.7**	**0.0**
	comp=Z,1.1nm,0.7s,baz=320,slow=9.0,SNR=2.8						
BUR08	**Bucovina Ar. S**	**28.56**	**105**	P	**P**	**00 35 07.9**	**-0.6**
MLR	**Muntele Rosu**	**30.59**	**107**	P	**P**	**00 35 27.7**	**+1.2**
MLR				IAmb	IAmb	00 35 34.5	
	comp=Z,16nm,1.5s						
GBN	**Guysborough**	**30.66**	**253**	P	**P**	**00 35 27.6**	**+0.7**
G65A	**Princeton**	**33.37**	**259**	P	**P**	**00 35 50.5**	**-0.2**
BRTR	**Keskin Array B**	**38.55**	**105**	P	**P**	**00 36 36.1**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=324,slow=7.1,SNR=3.4						
KBZ	**Khabaz**	**39.23**	**92**	P	**P**	**00 36 41.5**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=329,slow=8.5,SNR=4.7						
YKA	**Yellowknife Ar**	**39.26**	**313**	P	**P**	**00 36 41.8**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=43,slow=8.8,SNR=5.9						
YKA				PcP	**PcP**	**00 38 50.1**	**+0.7**
	comp=Z,0.8nm,1.1s,baz=32,slow=4.8,SNR=4.4						
TIXI	**Tiksi**	**42.25**	**15**	P	**P**	**00 37 05.5**	**+0.1**
TIXI				IAmb	IAmb	00 37 08.3	
	comp=Z,5.7nm,1.1s						
TOLK	**Toolik Lake Re**	**42.88**	**336**	P	**P**	**00 37 13.2**	**+2.6**
TOLK				IAmb	IAmb	00 37 14.7	
	comp=Z,12nm,1.4s						
R53A	**Hurricane**	**45.16**	**267**	P	**P**	**00 37 25.1**	**-4.1**
ILAR	**Eielson Array**	**45.80**	**332**	P	**P**	**00 37 34.9**	**+1.0**
	comp=Z,1.3nm,1.0s,baz=23,slow=6.3,SNR=9.2						
ILAR				PcP	**PcP**	**00 39 12.5**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=5.3,slow=3.8,SNR=6.0						
ZAA0	**Zalesovo Array**	**47.85**	**51**	P	**P**	**00 37 50.9**	**+0.9**
ZAA0				IAmb	IAmb	00 38 01.5	
	comp=Z,3.3nm,1.4s						
ZALV	**Zalesovo Beam**	**47.85**	**51**	P	**P**	**00 37 49.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=316,slow=8.1,SNR=2.2						
BCPM	**Bancas Point**	**48.41**	**325**	P	**P**	**00 37 55.1**	**+0.7**
EGMT	**Eagleton**	**48.86**	**297**	P	**P**	**00 37 58.8**	**+0.8**
EYAK	**Cordova Ski Ar**	**49.33**	**329**	P	**P**	**00 37 59.3**	**-2.0**
FPAL	**Fort Paine**	**49.94**	**267**	P	**P**	**00 38 02.6**	**-3.8**
FPAL				IAmb	IAmb	00 38 06.2	
	comp=Z,14nm,1.4s						
GEYT	**Alibeck**	**50.56**	**83**	P	**P**	**00 38 11.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=335,slow=6.4,SNR=3.9						
MK31	**Makanchi Array**	**52.93**	**58**	P	**P**	**00 38 27.8**	**-0.9**
MKAR	**Makanchi Array**	**52.93**	**58**	P	**P**	**00 38 27.9**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=328,slow=5.1,SNR=8.2						
TOA0	**Torodi Ar. Sit**	**53.01**	**156**	P	**P**	**00 38 28.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**53.01**	**156**	P	**P**	**00 38 30.6**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=339,slow=8.3,SNR=4.6						
BW06	**Boulder Array**	**53.14**	**293**	P	**P**	**00 38 31.6**	**+1.1**
BW06				IAmb	IAmb	00 38 33.9	
	comp=Z,4.1nm,1.0s						
PD31	**Pinedale Array**	**53.14**	**293**	P	**P**	**00 38 31.9**	**+1.3**
PD31				IAmb	IAmb	00 38 34.0	
	comp=Z,3.5nm,0.9s						
PDAR	**Pinedale Array**	**53.14**	**293**	P	**P**	**00 38 31.8**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=54,slow=6.4,SNR=12						
REDW	**Red Top Meadow**	**53.16**	**294**	IAmb	IAmb	00 38 34.5	
	comp=Z,7.4nm,1.4s						
RDMU	**Red Mountain**	**55.00**	**292**	P	**P**	**00 38 45.3**	**+1.2**
HRA	**Herat**	**55.33**	**82**	P	**P**	**00 38 45.3**	**-1.2**
PV14	**Lion Creek, Pa**	**56.65**	**290**	IAmb	IAmb	00 38 59.9	
	comp=Z,4.6nm,1.0s						
PV13	**Radium Mtn., P**	**56.75**	**290**	IAmb	IAmb	00 39 00.9	
	comp=Z,5.3nm,1.0s						
MLPR	**Magueyes Islan**	**56.95**	**239**	P	**P**	**00 38 55.9**	**-2.0**
DBIC	**Dimbokro**	**58.44**	**165**	P	**P**	**00 39 10.1**	**+1.7**
	comp=Z,2.8nm,0.9s,baz=342,slow=7.5,SNR=4.5						
DBIC	**Dimbokro**	**58.44**	**165**	P	**P**	**00 39 08.6**	**+0.2**
DBIC				IAmb	IAmb	00 39 11.2	
	comp=Z,6.4nm,1.1s						
TIC	**Toumodi**	**58.44**	**165**	*e*PKP2	**P**	**00 39 10.4**	**+1.9**
KIC	**Kosan Boka**	**58.75**	**165**	*e*PKP2	**P**	**00 39 11.7**	**+1.1**
	comp=Z,8.7nm,0.9s						
LIC	**Lamto**	**58.86**	**165**	*e*PKP2	**P**	**00 39 12.2**	**+0.9**
	comp=Z,11nm,0.8s						
R11A	**Troy Canyon, C**	**59.30**	**295**	P	**P**	**00 39 14.9**	**+0.4**
LCMT	**Little Creek M**	**59.52**	**292**	P	**P**	**00 39 16.0**	**0.0**
SONM	**Songino Array**	**59.86**	**40**	P	**P**	**00 39 17.5**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=336,slow=5.7,SNR=3.7						
WUAZ	**Wupatki**	**60.06**	**290**	P	**P**	**00 39 19.7**	**-0.1**

WUAZ				IAmb	IAmb	00 39 24.3	
	comp=Z,3.1nm,1.1s						
NIL	**Nilore**	**60.62**	**73**	P	**P**	**00 39 22.0**	**-1.4**
NIL				IAmb	IAmb	00 39 25.2	
	comp=Z,3.8nm,1.0s						
SHPR	**Sheep Range**	**60.73**	**294**	P	**P**	**00 39 24.2**	**0.0**
X16A	**Lo Mia Camp, P**	**61.04**	**289**	P	**P**	**00 39 25.6**	**-0.8**
X16A				IAmb	IAmb	00 39 31.7	
	comp=Z,2.8nm,1.1s						

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*REY **03** 00:32:28.1, 64°.63N×17°.36W, h7^{km}*

*MOS **03** 00:32:29.0±1.3, 64°.46N×17°.64W, h10^{km}, mb4.6/31, Error ellipse: s-maj=12.9km s-min=7.0km az=108.9*

*BGR **03** 00:32:30.9±0.0, 64°.41N×18°.04W, h33^{km}, mb4.3*

*NEIC **03** 00:32:30.4±1.9, 64°.46N±0°.08×17°.6W±0°.1, h7^{km}±4^{km}, mb4.6/81, Error ellipse: s-maj=12.1km s-min=7.8km az=194.0*

*IDC **03** 00:32:30.1±0.6, 64°.47N×17°.61W, h0^{km}, mb4.0/21, mb1 4.2/23, mb1mx4.0/45, mbtmp4.0/23, ML3.6/2, MS3.5/22, Ms1 3.5/22, ms1mx3.4/42, Error ellipse: s-maj=18.5km s-min=11.1km az=34.0*

ISC 03 00:32:30.7±0.3**, 64°.48N**±0°.04×**17°.56W**±0°.03**, h10**^{km}**, n263,** σ1^{s}.**59**/233**, mb4.4**/101**, MS3.5**/22**, 4C-1D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHAM	**Hamarinn**	**0.11**	**273**	P	**Pg**	**00 32 32.8**	**-0.8**
	baz=234						
IDYN	**Dyngjuhals**	**0.33**	**15**	P	Pg	00 32 31.5	-5.8
	baz=359						
IJOK	**Jokulheimar**	**0.33**	**241**	P	**Pg**	**00 32 37.2**	**-0.1**
	baz=230						
ISKR	**Skrokkalda**	**0.37**	**284**	P	**Pg**	**00 32 36.6**	**-1.4**
	baz=262						
IURH	**Urdarhals**	**0.39**	**27**	P	Pg	00 32 32.5	-6.0
	baz=25						
IKVE	**Kverkfjoll**	**0.43**	**61**	P	Pg	00 32 34.3	-4.9
	baz=80						
IIEY	**Innrieyrar**	**0.45**	**213**	P	**Pb**	**00 32 39.5**	**-1.4**
	baz=212						
IKAL	**Kalfafell**	**0.53**	**186**	P	**Pg**	**00 32 40.8**	**-0.3**
	baz=192						
IKSK	**Karasker**	**0.57**	**123**	P	**Pg**	**00 32 38.6**	**-3.2**
	baz=140						
IKRE	**Kreppuhraun**	**0.59**	**58**	P	Pg	00 32 36.5	-5.8
	baz=69						
THOR	**Thorvaldshraun**	**0.60**	**39**	P	Pg	00 32 36.1	-6.2
	baz=43						
IASK	**Askja**	**0.70**	**34**	P	Pg	00 32 37.6	-6.6
	baz=35						
IFAG	**Fagurholsmyri**	**0.72**	**146**	P	**Pg**	**00 32 42.6**	**-2.1**
	baz=157						
IMKO	**Mokollar**	**0.73**	**46**	P	Pg	00 32 38.4	-6.4
	baz=51						
IVSH	**V-Sauoahnukur**	**0.86**	**66**	P	Pg	00 32 41.0	-6.3
	baz=75						
ISVA	**Svartarkot**	**0.88**	**8**	P	Pg	00 32 41.0	-6.6
	baz=3.6						
ISNB	**Snabyli**	**0.88**	**213**	S	**Sn**	**00 33 01.5**	**-0.4**
	baz=212						
ISNB				P	**Pb**	**00 32 46.8**	**-1.3**
	baz=212						
IHVE	**Hveravellir**	**0.95**	**296**	P	**Pg**	**00 32 45.2**	**-3.8**
	baz=285						
IRJU	**Rjupnafell**	**0.99**	**210**	P	**Pb**	**00 32 49.0**	**-1.0**
	baz=210						
IADA	**Aoalbol**	**1.01**	**56**	P	Pb	00 32 43.1	-7.2
	baz=62						
IFED	**Fedgar**	**1.03**	**245**	P	**Pb**	**00 32 48.9**	**-1.8**
	baz=240						
IMJO	**Mjoaskard**	**1.07**	**240**	P	**Pb**	**00 32 49.6**	**-1.8**
	baz=236						
IHVO	**Lagu-Hvolar**	**1.11**	**211**	P	**Pb**	**00 32 51.0**	**-1.0**
	baz=211						
IMEL	**Melhnausar**	**1.16**	**19**	P	Pn	00 32 45.5	-7.6
	baz=17						
IHAU	**Haukadalur**	**1.17**	**245**	P	**Pg**	**00 32 50.9**	**-2.2**
	baz=241						
IGYG	**Gygjarholskot**	**1.17**	**262**	P	**Pg**	**00 32 50.5**	**-2.7**
	baz=256						
IREN	**Reynihlio**	**1.21**	**13**	P	Pn	00 32 46.5	-7.2
	baz=10						
IALF	**Alftagrof**	**1.22**	**217**	P	**Pb**	**00 32 52.4**	**-1.4**
	baz=216						
IESK	**Eystri-Skogar**	**1.27**	**222**	P	**Pg**	**00 32 53.4**	**-1.7**
	baz=221						
IKVO	**Krokottuvotn**	**1.28**	**13**	P	Pn	00 32 47.5	-7.2
	baz=10						
IMID	**Miomork**	**1.31**	**232**	P	**Pb**	**00 32 53.9**	**-1.5**
	baz=230						
IGRS	**Grimsstaoir**	**1.32**	**27**	P	Pn	00 32 48.0	-7.1
	baz=27						
ISAU	**Saurbar**	**1.34**	**250**	P	**Pn**	**00 32 53.3**	**-2.1**
	baz=246						
ISKI	**Skildingahlsh**	**1.42**	**9**	P	Pn	00 32 50.0	-6.6
	baz=6.3						
IGHA	**Grjothals**	**1.43**	**15**	P	Pn	00 32 49.9	-6.8
	baz=13						
IGRA	**Granastaoir**	**1.45**	**360**	P	Pn	00 32 50.2	-6.7
	baz=356						
IDIM	**Dimmadalss**	**1.52**	**10**	P	Pn	00 32 51.2	-6.7
	baz=7.5						
IHED	**Heoinshofoi**	**1.62**	**4**	P	Pn	00 32 53.0	-6.2
	baz=0.8						
BORG	**Borgarnes**	**1.65**	**281**	P	**Pn**	**00 32 57.4**	**-2.2**
BORG						00 33 21.4	
BORG	**Borgarnes**	**1.65**	**281**	Pn	**Pn**	**00 32 57.4**	**-2.2**
BORG				Sn	**Sg**	**00 33 21.4**	**-2.2**
IBRE	**Brettingsstaoi**	**1.66**	**355**	P	Pn	00 32 54.0	-5.8
	baz=352						
IGIL	**Gilhagi**	**1.69**	**17**	P	Pn	00 32 53.9	-6.3
	baz=16						
ISIG	**Siglufjorour**	**1.76**	**342**	P	Pn	00 32 55.9	-5.3
	baz=337						
SCO	**Scoresbysund**	**6.26**	**346**	*e*	**Pn**	**00 33 59.7**	**-3.4**
	baz=154,slow=7.4						
SCO				*i* P	**Pn**	**00 34 01.4**	**-1.6**
SCO				*i* S	**Sn**	**00 35 16.8**	**+2.3**
SCO				IAML		00 35 26.2	
	comp=Z,1.8nm,0.5s						
JMIC	**Jan Mayen**	**7.38**	**24**	LR	LR	00 36 35.4	
	comp=Z,587nm,19.0s,baz=292,slow=33						
ANGG	**Ammassalik, Gr**	**8.56**	**287**	Pn	**Pn**	**00 34 33.9**	**-0.6**
DBG	**Daneborg**	**9.92**	**356**	*e*P	Pn	00 35 00.1	+6.9
SUMG	**Summit**	**11.09**	**326**	P	**Pn**	**00 35 09.2**	**-0.2**
SUMG	**Summit**	**11.09**	**326**	Pn	**Pn**	**00 35 09.2**	**-0.2**
SUMG	**Summit**	**11.09**	**326**	*i* P	Pn	00 35 14.9	+5.5
SUMG	**Summit**	**11.09**	**326**	*i* P	Pn	00 35 15.0	+5.5
EKA	**Eskdalemuir Ar**	**11.64**	**135**	Pn	**Pn**	**00 35 16.8**	**+0.1**
	baz=319,slow=13,SNR=7.6						
ESK	**Eskdalemuir**	**11.64**	**135**	P	**Pn**	**00 35 15.4**	**-1.3**
ESK	**Eskdalemuir**	**11.64**	**135**	Pn	**Pn**	**00 35 15.4**	**-1.3**
DAG	**Danmarks Havn**	**12.37**	**359**	*i* P	Pn	00 35 31.9	+5.4
DAG	**Danmarks Havn**	**12.37**	**359**	*i* P	Pn	00 35 31.9	+5.4
NC204	**NORSAR Array S**	**13.25**	**91**	Pn	**Pn**	**00 35 36.4**	**-2.4**
NOA	**NORSAR Array B**	**13.55**	**91**	LR	LR	00 40 17.6	
	comp=Z,144nm,18.7s,baz=300,slow=34						
SPITS	**Spitsbergen Ar**	**17.05**	**23**	LR	LR	00 41 21.8	
	comp=Z,149nm,21.0s,baz=225,slow=31						
ARCES	**ARCESS Array B**	**17.25**	**54**	LR	LR	00 41 52.0	
	comp=Z,198nm,20.4s,baz=265,slow=32						
MEM	**Membach**	**18.62**	**127**	*d*x	x	00 36 50.2	
FINES	**FINESS Array B**	**19.77**	**79**	P	**Pn**	**00 37 02.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=294,slow=15,SNR=4.8						
FINES				LR	LR	00 44 08.2	
	comp=Z,160nm,19.2s,baz=264,slow=35						
TULEG	**Thule**	**20.00**	**328**	P	**P**	**00 37 01.9**	**-1.0**
TULEG				IAmb	IAmb	00 37 11.2	
	comp=Z,64nm,1.6s						
CLL	**Collm**	**20.65**	**115**	*i* P	**P**	**00 37 11.0**	**+0.9**
	comp=Z,18nm,1.2s						
CLL				*i* PP	**PnPn**	**00 37 27.5**	**-0.1**
CLL				*e*S	**S**	**00 40 56.0**	**-4.5**
CLL				*e*SSS	SSS	00 41 30.0	
CLL				Lm	MLR	00 44 00.0	
	comp=Z,200nm,21.7s						
CLL	**Collm**	**20.65**	**115**	P	**P**	**00 37 08.5**	**-1.6**
CLL				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL	**Collm**	**20.65**	**115**	P	**P**	**00 37 08.5**	**-1.6**
GRA1	**Grafenberg Arr**	**21.26**	**120**	P	P	00 37 09.4	-7.4
GRA1				IAmb	IAmb	00 37 10.5	
	comp=Z,65nm,1.8s						
GRF	**Grafenberg Arr**	**21.26**	**120**	P	P	00 37 09.4	-7.4
GRF				pmax	pmax		
	comp=Z,65nm,1.8s						
GRF	**Grafenberg Arr**	**21.26**	**120**	*e*P	**P**	**00 37 15.5**	**-1.3**
	comp=Z,19nm,1.2s,baz=323,slow=11						
NKC	**Novy Kostel**	**21.28**	**118**	*e*P	**P**	**00 37 20.9**	**+3.9**
NKC	**Novy Kostel**	**21.28**	**118**	*e*P	**P**	**00 37 20.9**	**+3.9**
STU	**Stuttgart**	**21.28**	**125**	P	**P**	**00 37 15.7**	**-1.3**
STU				pmax	pmax		
	comp=Z,22nm,1.0s						
STU	**Stuttgart**	**21.28**	**125**	P	**P**	**00 37 15.7**	**-1.3**
STU				IAmb	IAmb	00 37 25.4	
	comp=Z,22nm,1.0s						
BFO	**Black Forest**	**21.36**	**127**	P	**P**	**00 37 17.3**	**-0.5**
BFO				pmax	pmax		
	comp=Z,18nm,1.1s						
BFO	**Black Forest**	**21.36**	**127**	P	**P**	**00 37 17.3**	**-0.5**
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**00 37 18.6**	**+0.8**
BRG				Amp		00 37 31.0	
	comp=Z,26nm,1.3s						
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**00 37 18.6**	**+0.8**
BRG				pmax	pmax		
	comp=Z,27nm,1.3s						
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**00 37 18.6**	**+0.8**
BRG				Amp		00 37 31.0	
	comp=Z,26nm,1.3s						
FRB	**Frobisher Bay**	**21.79**	**291**	P	**P**	**00 37 24.3**	**+1.9**
	comp=Z,4.3nm,0.9s,baz=55,slow=11,SNR=7.5						
PRU	**Pruhonice**	**22.29**	**115**	*e*P	**P**	**00 37 29.8**	**+2.0**
PRU	**Pruhonice**	**22.29**	**115**	*e*P	**P**	**00 37 29.8**	**+2.0**
CHVC	**Chvalec**	**22.42**	**112**	*e*P	**P**	**00 37 32.0**	**+2.8**
OSTC	**Ostas**	**22.51**	**112**	*e*P	**P**	**00 37 32.1**	**+1.9**
KHC	**Kasperske Hory**	**22.61**	**118**	*ce*P	**P**	**00 37 31.1**	**-0.2**
KHC				pmax	pmax		
	comp=Z,28nm,1.3s						
KHC	**Kasperske Hory**	**22.61**	**118**	*e*P	**P**	**00 37 31.4**	**+0.1**
KHC	**Kasperske Hory**	**22.61**	**118**	P	**P**	**00 37 29.8**	**-1.5**
KHC				IAmb	IAmb	00 37 40.4	
	comp=Z,28nm,1.6s						
DPC	**Dobruska-Polom**	**22.71**	**112**	*e*P	**P**	**00 37 33.3**	**+0.9**
DAVA	**Damuels**	**22.79**	**126**	*e*P	**P**	**00 37 33.9**	**+0.6**
	comp=Z,7.8nm,1.1s						
SSB	**Saint Sauveur**	**22.83**	**137**	P	**P**	**00 37 34.1**	**+0.5**
SSB				pmax	pmax		
	comp=Z,19nm,1.3s						
SSB	**Saint Sauveur**	**22.83**	**137**	P	**P**	**00 37 34.1**	**+0.5**
SSB				IAmb	IAmb	00 37 46.9	
	comp=Z,19nm,1.3s						
GEC2	**GERESS Array S**	**22.89**	**118**	P	**P**	**00 37 32.8**	**-1.5**
GERES	**GERESS Array B**	**22.89**	**118**	P	**P**	**00 37 35.2**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=322,slow=11,SNR=8.0						
GERES				LR	LR	00 46 16.7	
	comp=Z,226nm,18.5s,baz=307,slow=36						
RETA	**Reutte**	**22.93**	**124**	*e*P	**P**	**00 37 35.8**	**+1.1**
	comp=Z,4.5nm,1.0s						
MOTA	**Moosalm**	**23.17**	**124**	*e*P	**P**	**00 37 38.3**	**+1.0**
	comp=Z,14nm,1.1s						
DAVOX	**Davos/Dischmat**	**23.22**	**127**	P	**P**	**00 37 38.7**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=320,slow=9.7,SNR=5.3						
DAVOX				LR	LR	00 46 36.6	
	comp=Z,127nm,20.5s,baz=336,slow=36						
TUE	**Stuetta**	**23.31**	**128**	P	**P**	**00 37 39.4**	**+0.6**
FETA	**Feichten**	**23.32**	**125**	*e*P	**P**	**00 37 39.3**	**+0.6**
	comp=Z,6.1nm,1.2s						
SQTA	**Sankt Quirin**	**23.32**	**124**	*e*P	**P**	**00 37 39.5**	**+0.8**
	comp=Z,6.3nm,0.9s						
WATA	**Walderalm**	**23.35**	**123**	*e*P	**P**	**00 37 40.5**	**+1.4**
	comp=Z,8.7nm,1.2s						
WTTA	**Wattenberg**	**23.43**	**123**	*e*P	**P**	**00 37 42.4**	**+2.4**
	comp=Z,12nm,1.3s						
TMCR	**Tamitsa**	**23.45**	**65**	*e*P	**P**	**00 37 35.8**	**-3.9**
TMCR				pmax	pmax		
	comp=Z,27nm,1.2s						
PBRG	**Braganca**	**23.55**	**159**	*e*P	**P**	**00 37 45.5**	**+4.5**
	comp=Z,22nm,2.0s						
VRAC	**Vranov**	**23.64**	**114**	P	**P**	**00 37 43.0**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=307,slow=10,SNR=3.7						
VRAC				LR	LR	00 48 21.4	
	comp=Z,165nm,18.1s,baz=329,slow=40						
VRAC	**Vranov**	**23.64**	**114**	*e*P	**P**	**00 37 43.2**	**+1.4**
VRAC	**Vranov**	**23.64**	**114**	P	**P**	**00 37 43.0**	**+1.2**
MORC	**Moravsky Berou**	**23.65**	**112**	*e*P	**P**	**00 37 43.2**	**+1.3**
KRUC	**Moravsky**	**23.76**	**114**	*e*P	**P**	**00 37 43.9**	**+1.0**
POLO	**Lamas de Olo**	**23.82**	**162**	*e*P	**P**	**00 37 48.9**	**+5.2**
EUNU	**Eureka**	**23.84**	**336**	P	**P**	**00 37 43.9**	**+0.4**
EUNU				IAmb	IAmb	00 37 49.8	
	comp=Z,41nm,1.6s						
MOA	**Molln**	**23.92**	**119**	*e*P	**P**	**00 37 45.1**	**+0.6**
	comp=Z,6.9nm,1.2s						
MVO	**Moncorvo**	**24.14**	**160**	*e*P	**P**	**00 37 48.7**	**+2.1**
	comp=Z,21nm,1.8s						
ABTA	**Abfaltersbach**	**24.19**	**123**	*e*P	**P**	**00 37 48.8**	**+1.7**
	comp=Z,4.4nm,1.2s						
KBA	**Koelnbreinsper**	**24.22**	**121**	*e*P	**P**	**00 37 48.2**	**+0.7**
	comp=Z,13nm,1.6s						
OJC	**Ojcow**	**24.23**	**108**	P	**P**	**00 37 46.5**	**-0.8**
OJC				pmax	pmax		
	comp=Z,13nm,1.4s						
OJC	**Ojcow**	**24.23**	**108**	P	**P**	**00 37 46.5**	**-0.8**
PVIS	**Viseu**	**24.45**	**162**	*e*P	**P**	**00 37 54.0**	**+4.5**
CONA	**Conrad Observa**	**24.47**	**117**	*e*P	**P**	**00 37 48.9**	**-0.7**
	comp=Z,6.1nm,0.9s						
CTI	**Castel Tesino**	**24.48**	**125**	P	**P**	**00 37 47.6**	**-2.2**
CTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTI	**Castel Tesino**	**24.48**	**125**	P	**P**	**00 37 47.5**	**-2.2**
ZOU	**Zoufplan**	**24.52**	**122**	P	**P**	**00 37 47.2**	**-3.0**
MODS	**Modra-Piesok**	**24.66**	**114**	*e*P	**P**	**00 37 53.0**	**+1.7**
MODS				pmax	pmax		
	comp=Z,11nm,1.2s						
MODS	**Modra-Piesok**	**24.66**	**114**	*e*P	**P**	**00 37 52.9**	**+1.7**
MYKA	**Terra Mystica**	**24.70**	**121**	*e*P	**P**	**00 37 54.4**	**+2.6**
	comp=Z,6.5nm,1.0s						
MTE	**Manteigas**	**24.81**	**162**	*e*P	**P**	**00 37 55.1**	**+2.3**
ARSA	**Arzberg**	**24.89**	**118**	*e*P	**P**	**00 37 51.9**	**-1.5**
	comp=Z,3.7nm,1.1s						
LANS	**Liptovska Anna**	**24.92**	**110**	*e*P	**P**	**00 37 54.8**	**+1.1**
LANS				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LANS	**Liptovska Anna**	**24.92**	**110**	*e*P	**P**	**00 37 54.8**	**+1.1**
TEOL	**Teolo**	**25.08**	**126**	P	**P**	**00 37 55.2**	**+0.1**
TEOL				IAmb	IAmb	00 37 59.5	
	comp=Z,10nm,1.0s						
OBKA	**Obir**	**25.14**	**120**	*e*P	**P**	**00 37 55.9**	**+0.2**
	comp=Z,7.8nm,1.4s						
SOKA	**Soboth**	**25.18**	**119**	*e*P	**P**	**00 37 57.5**	**+1.4**
	comp=Z,7.5nm,1.3s						
VYHS	**Vyhne**	**25.18**	**112**	*e*P	**P**	**00 37 57.2**	**+1.2**
VYHS				pmax	pmax		
	comp=Z,19nm,1.5s						
VYHS	**Vyhne**	**25.18**	**112**	*e*P	**P**	**00 37 57.2**	**+1.2**
PCBR	**Castelo Branco**	**25.37**	**162**	*e*P	**P**	**00 38 03.0**	**+5.3**
KLMR	**Klimovskoe**	**25.69**	**71**	*e*P	**P**	**00 38 00.3**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s						
KLMR	**Klimovskoe**	**25.69**	**71**	*e*P	**P**	**00 38 00.3**	**-0.1**
KLMR				AMP		00 38 05.1	
	comp=Z,23nm,1.4s						
ZCCA	**Zocca**	**25.72**	**128**	P	**P**	**00 38 01.5**	**+0.5**
ZCCA				IAmb	IAmb	00 38 13.3	
	comp=Z,14nm,1.1s						
PMRV	**Marv??o**	**25.79**	**162**	*e*P	**P**	**00 38 06.8**	**+5.2**
KWP	**Kalwaria Pacla**	**25.88**	**106**	P	**P**	**00 38 01.6**	**-0.7**
KWP				pmax	pmax		
	comp=Z,71nm,1.5s						
KWP	**Kalwaria Pacla**	**25.88**	**106**	P	**P**	**00 38 01.6**	**-0.7**
PSZ	**Piszkesteto**	**26.07**	**111**	P	**P**	**00 38 02.9**	**-1.2**
PSZ				pmax	pmax		
	comp=Z,12nm,1.2s						
PSZ	**Piszkesteto**	**26.07**	**111**	P	**P**	**00 38 02.9**	**-1.2**
PSZ				IAmb	IAmb	00 38 06.7	
	comp=Z,12nm,1.2s						
ESBB	**Sonseca Array**	**26.09**	**156**	P	**P**	**00 38 04.4**	**+0.1**
ESDC	**Sonseca Array**	**26.09**	**156**	P	**P**	**00 38 05.6**	**+1.3**
	comp=Z,2.5nm,0.8s,baz=348,slow=9.2,SNR=19						
ESDC				LR	LR	00 48 14.5	
	comp=Z,119nm,18.2s,baz=340,slow=36						
PAB	**San Pablo**	**26.15**	**156**	P	**P**	**00 38 05.5**	**+0.6**
PAB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PAB	**San Pablo**	**26.15**	**156**	P	**P**	**00 38 05.5**	**+0.6**
KOLS	**Kolonicke sedl**	**26.24**	**107**	*e*P	**P**	**00 38 08.4**	**+2.8**
KOLS	**Kolonicke sedl**	**26.24**	**107**	*e*P	**P**	**00 38 08.4**	**+2.8**
UZH	**Uzhgorod**	**26.49**	**108**	*e*P	**P**	**00 38 08.5**	**+0.7**
OSSC	**Osservatorio P**	**26.54**	**128**	P	**P**	**00 38 08.1**	**-0.3**
OSSC				IAmb	IAmb	00 38 22.2	
	comp=Z,14nm,1.0s						
RES	**Resolute Bay**	**26.61**	**325**	P	**P**	**00 38 12.2**	**+3.6**
	comp=Z,1.5nm,0.9s,baz=80,slow=6.1,SNR=3.9						
RES				LR	LR	00 48 29.6	
	comp=Z,92nm,19.9s,baz=204,slow=36						
RES	**Resolute Bay**	**26.61**	**325**	P	**P**	**00 38 10.2**	**+1.5**
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	**Resolute Bay**	**26.61**	**325**	P	**P**	**00 38 10.2**	**+1.5**
AKASG	**Malin Array Be**	**27.84**	**97**	P	**P**	**00 38 21.1**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=323,slow=9.4,SNR=7.3						
OBN	**Obninsk**	**27.93**	**84**⇑	*e*P	**P**	**00 38 20.2**	**-0.4**
OBN				*e*		00 39 05.5	
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
OBN				MLR	MLR		
	comp=Z,153nm,18.0s						
CEL	**Celeste**	**32.82**	**127**	P	**P**	**00 39 01.1**	**-3.0**
KEST	**Kesra**	**33.03**	**138**	LR	LR	00 51 46.6	
	comp=Z,111nm,19.4s,baz=211,slow=35						
AGG	**Agios Georgios**	**34.50**	**118**	P	**P**	**00 39 18.8**	**+0.1**
AGG				pmax	pmax		
	comp=Z,36nm,1.5s						
AGG	**Agios Georgios**	**34.50**	**118**	P	**P**	**00 39 18.8**	**+0.1**
NRIK	**Noril'sk**	**36.63**	**35**	P	**P**	**00 39 37.4**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=285,slow=8.1,SNR=3.5						
NRIK				LR	LR	00 56 30.0	
	comp=Z,53nm,19.5s,baz=329,slow=39						
NRIK	**Noril'sk**	**36.63**	**35**	P	**P**	**00 39 36.7**	**+0.1**
C36M	**Paulatuk**	**36.97**	**326**	P	**P**	**00 39 40.5**	**+1.1**
SOC	**Sochi**	**37.88**	**95**	*e*P	**P**	**00 39 46.1**	**-1.3**
SOC				*e*PPP	PPP	00 41 37.8	
SOC				*e*S	**S**	**00 45 37.1**	**-1.3**
SOC				*e*SS	**SnSn**	**00 48 16.2**	**-2.8**
SOC				*e*SSS	SSS	00 48 43.6	
SOC				MLR	MLR		
	comp=Z,81nm,19.0s						
BR131	**Keskin Array S**	**38.45**	**105**	P	**P**	**00 39 53.3**	**+0.8**
BR131				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BR131	**Keskin Array S**	**38.45**	**105**	P	**P**	**00 39 53.3**	**+0.8**
BRTR	**Keskin Array B**	**38.45**	**105**	P	**P**	**00 39 53.5**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=288,slow=5.5,SNR=7.5						
J57A	**Williamstown**	**38.52**	**266**	P	**P**	**00 39 51.3**	**-1.5**
KBZ	**Khabaz**	**39.13**	**92**	P	**P**	**00 39 59.2**	**+1.3**
	comp=Z,2.9nm,0.9s,baz=317,slow=9.9,SNR=5.9						
YKA	**Yellowknife Ar**	**39.33**	**313**	P	**P**	**00 39 59.8**	**+0.5**
	comp=Z,1.8nm,1.0s,baz=43,slow=8.4,SNR=10						
YKA				PcP	**PcP**	**00 42 08.5**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=36,slow=3.8,SNR=6.5						
INK	**Inuvik**	**39.99**	**329**	P	**P**	**00 40 05.7**	**+0.9**
	comp=Z,3.5nm,1.2s,baz=31,slow=9.6,SNR=4.2						
INK	**Inuvik**	**39.99**	**329**	P	**P**	**00 40 04.2**	**-0.7**
KOPT	**Kop Dagi**	**41.12**	**98**	P	**P**	**00 40 14.2**	**-0.7**
KOPT				IAmb	IAmb	00 40 31.1	
	comp=Z,14nm,1.2s						
A21K	**Barrow**	**41.60**	**341**	P	**P**	**00 40 18.5**	**+0.4**
ABKAR	**Akbulak array**	**42.07**	**73**	P	**P**	**00 40 21.7**	**-0.5**
TIXI	**Tiksi**	**42.22**	**15**	*ce*P	**P**	**00 40 23.0**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,58nm,1.3s						
TIXI	**Tiksi**	**42.22**	**15**	P	**P**	**00 40 23.9**	**+0.7**
TIXI				IAmb	IAmb	00 40 29.5	
	comp=Z,23nm,1.5s						
TOLK	**Toolik Lake Re**	**42.91**	**336**	P	**P**	**00 40 29.1**	**+0.2**
TOLK				IAmb	IAmb	00 40 35.6	
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**43.24**	**62**	P	**P**	**00 40 31.4**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRVK	**Borovoye**	**43.24**	**62**	P	**P**	**00 40 31.4**	**-0.3**
MARD	**Mardin**	**43.50**	**100**	P	**P**	**00 40 35.1**	**+1.0**
MARD				IAmb	IAmb	00 40 42.0	
	comp=Z,9.2nm,1.0s						
I42A	**Draeger Farm,**	**43.71**	**278**	P	**P**	**00 40 34.5**	**-1.1**
I42A				IAmb	IAmb	00 40 48.3	
	comp=Z,21nm,1.4s						
N49A	**Columbus Grove**	**44.08**	**271**	P	**P**	**00 40 39.0**	**+0.5**
N49A				IAmb	IAmb	00 40 43.9	
	comp=Z,14nm,0.9s						
P52A	**Corning**	**44.25**	**268**	P	**P**	**00 40 40.3**	**+0.3**
SPMN	**Marine on St.**	**44.30**	**282**	P	**P**	**00 40 40.8**	**+0.5**
SPMN				IAmb	IAmb	00 40 45.3	
	comp=Z,14nm,1.4s						
IL31		**45.84**	**332**	P	**P**	**00 40 53.2**	**+1.0**
IL31				IAmb	IAmb	00 41 03.5	
	comp=Z,13nm,1.5s						
ILAR	**Eielson Array**	**45.84**	**332**	P	**P**	**00 40 53.1**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=22,slow=7.1,SNR=8.3						
ILAR				PcP	**PcP**	**00 42 30.4**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=353,slow=3.2,SNR=8.7						
MDM	**Murphy Dome**	**45.94**	**333**	P	**P**	**00 40 53.5**	**+0.3**
HDIL	**Hopedale**	**46.59**	**275**	P	**P**	**00 40 58.6**	**+0.1**
ZAA0	**Zalesovo Array**	**47.77**	**51**	P	**P**	**00 41 08.1**	**+0.6**
ZAA0				IAmb	IAmb	00 41 12.1	
	comp=Z,12nm,1.8s						
ZALV	**Zalesovo Beam**	**47.77**	**51**	P	**P**	**00 41 08.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=330,slow=8.6,SNR=4.7						
ZALV				LR	LR	01 00 19.8	
	comp=Z,18nm,19.3s,baz=344,slow=35						
ZALV	**Zalesovo Beam**	**47.77**	**51**	*i* P	**P**	**00 41 08.8**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**48.24**	**58**	P	**P**	**00 41 10.2**	**-0.9**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**48.24**	**58**	P	**P**	**00 41 10.2**	**-0.9**
KURK				IAmb	IAmb	00 41 16.3	
	comp=Z,5.3nm,0.9s						
GEYT	**Alibeck**	**50.47**	**83**	P	**P**	**00 41 29.9**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=282,slow=7.1,SNR=3.8						
KOWA	**Kowa**	**50.79**	**163**	P	**P**	**00 41 31.1**	**+0.2**
HRY	**Holter Researc**	**50.82**	**298**	P	**P**	**00 41 30.2**	**-0.8**
RLMT	**Red Lodge**	**51.14**	**295**	P	**P**	**00 41 34.1**	**+0.5**
RLMT				IAmb	IAmb	00 41 38.5	
	comp=Z,8.9nm,1.3s						
KK31	**Karatay Array**	**51.37**	**70**	P	**P**	**00 41 35.7**	**+0.6**
KK31				pmax	pmax		
	comp=Z,16nm,1.8s						
KK31	**Karatay Array**	**51.37**	**70**	P	**P**	**00 41 35.7**	**+0.6**
KK31				IAmb	IAmb	00 41 40.6	
	comp=Z,16nm,1.8s						
KKAR	**Karatay Array**	**51.37**	**70**	P	**P**	**00 41 35.8**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,16nm,1.8s						
KKAR	**Karatay Array**	**51.37**	**70**	P	**P**	**00 41 35.8**	**+0.7**
KKAR				IAmb	IAmb	00 41 40.6	
	comp=Z,16nm,1.8s						
MAKZ	**Makanchi**	**52.72**	**58**	P	**P**	**00 41 45.4**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,14nm,1.8s						
MAKZ	**Makanchi**	**52.72**	**58**	P	**P**	**00 41 45.4**	**+0.3**
MAKZ				IAmb	IAmb	00 41 50.7	
	comp=Z,14nm,1.8s						
MCMT	**McKenzie Canyo**	**52.79**	**297**	P	**P**	**00 41 46.3**	**+0.4**
MK31	**Makanchi Array**	**52.85**	**58**	P	**P**	**00 41 46.2**	**+0.1**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK31	**Makanchi Array**	**52.85**	**58**	P	**P**	**00 41 46.2**	**+0.1**
MKAR	**Makanchi Array**	**52.85**	**58**	P	**P**	**00 41 46.8**	**+0.7**
	comp=Z,2.1nm,1.1s,baz=335,slow=6.4,SNR=9.7						
MKAR				LR	LR	01 05 40.6	
	comp=Z,45nm,19.4s,baz=328,slow=38						
TOA0	**Torodi Ar. Sit**	**52.98**	**156**	P	**P**	**00 41 47.0**	**-0.2**
TOA0				IAmb	IAmb	00 41 50.5	
	comp=Z,6.5nm,1.2s						
TORD	**Torodi Ar. Bea**	**52.98**	**156**	P	**P**	**00 41 47.4**	**+0.2**
	comp=Z,4.0nm,1.1s,baz=342,slow=8.7,SNR=9.5						
TORD				LR	LR	01 05 35.3	
	comp=Z,27nm,18.5s,baz=330,slow=38						
BW06	**Boulder Array**	**53.23**	**293**	P	**P**	**00 41 48.9**	**-0.3**
BW06				IAmb	IAmb	00 41 53.0	
	comp=Z,6.1nm,0.9s						
PD31	**Pinedale Array**	**53.23**	**293**	IAmb	IAmb	00 41 53.0	
	comp=Z,5.9nm,0.9s						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**00 41 49.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=53,slow=5.9,SNR=15						
AAK	**Ala-Archa**	**53.36**	**67**	P	**P**	**00 41 50.2**	**+0.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	**Ala-Archa**	**53.36**	**67**	P	**P**	**00 41 50.2**	**+0.2**
AAK				IAmb	IAmb	00 41 56.8	
	comp=Z,5.3nm,1.1s						
BMO	**Blue Mountains**	**54.46**	**301**	P	**P**	**00 41 57.9**	**-0.1**
BMO				pmax	pmax		

	comp=Z,6.0nm,1.5s						
BMO	**Blue Mountains**	**54.46**	**301**	P	**P**	**00 41 57.9**	**-0.1**
HLID	**Hailey**	**54.46**	**298**	P	**P**	**00 41 56.9**	**-1.2**
HLID				IAmb	IAmb	00 42 11.5	
	comp=Z,8.0nm,1.6s						
MOY	**Mondy**	**54.82**	**42**	*e*P	**P**	**00 42 03.0**	**+2.5**
RDMU	**Red Mountain**	**55.09**	**292**	P	**P**	**00 42 02.1**	**-0.6**
P17A	**Butcher Ranch,**	**56.49**	**292**	P	**P**	**00 42 12.6**	**-0.1**
KSH	**Kashi**	**56.60**	**68**	P	**P**	**00 42 17.3**	**+3.9**
KSH				S	**S**	**00 50 04.5**	**-0.6**
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,480nm,6.5s						
KSH				LR	LR		
	comp=N,660nm,5.5s						
KSH				LR	LR		
	comp=E,620nm,5.7s						
KSH				LR	LR		
	comp=Z,500nm,7.7s						
ZAK	**Zakamensk**	**56.62**	**41**	*e*P	**P**	**00 42 11.9**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PV23	**Carpenter Ridg**	**56.66**	**290**	IAmb	IAmb	00 42 18.5	
	comp=Z,5.5nm,0.8s						
SRU	**San Rafael Swe**	**56.72**	**292**	P	**P**	**00 42 13.9**	**-0.5**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SRU	**San Rafael Swe**	**56.72**	**292**	P	**P**	**00 42 13.9**	**-0.5**
PV10	**Paradox Valley**	**56.74**	**290**	P	**P**	**00 42 15.1**	**+0.4**
PV16	**Nyswonger Mesa**	**56.75**	**290**	P	**P**	**00 42 14.8**	**+0.2**
PV16				IAmb	IAmb	00 42 21.0	
	comp=Z,4.2nm,1.0s						
PV17	**East Wray Mesa**	**56.79**	**290**	P	**P**	**00 42 15.8**	**+0.8**
PV17				IAmb	IAmb	00 42 19.5	
	comp=Z,9.1nm,1.1s						
PV18	**Skein Mesa, Pa**	**56.80**	**290**	P	**P**	**00 42 15.4**	**+0.4**
PV18				IAmb	IAmb	00 42 21.3	
	comp=Z,7.9nm,1.0s						
COR	**Corvallis**	**56.87**	**305**	P	**P**	**00 42 13.6**	**-1.5**
COR				pmax	pmax		
	comp=Z,29nm,1.3s						
COR	**Corvallis**	**56.87**	**305**	P	**P**	**00 42 13.6**	**-1.5**
ICMP	**Isla Caja de M**	**56.91**	**239**	P	**P**	**00 42 15.1**	**-0.6**
WMQ	**Urumqi**	**57.36**	**56**	*e*P	**P**	**00 42 21.8**	**+3.1**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,63nm,3.7s						
DBIC	**Dimbokro**	**58.41**	**165**	P	**P**	**00 42 27.1**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=346,slow=7.2,SNR=8.5						
DBIC				LR	LR	01 08 23.2	
	comp=Z,47nm,18.7s,baz=57,slow=37						
DBIC	**Dimbokro**	**58.41**	**165**	P	**P**	**00 42 26.5**	**+0.3**
DBIC				IAmb	IAmb	00 42 29.8	
	comp=Z,6.6nm,0.9s						
TIC	**Toumodi**	**58.42**	**165**	*e*P	**P**	**00 42 26.5**	**+0.2**
PSUT	**Pine Spring**	**58.54**	**294**	P	**P**	**00 42 27.2**	**0.0**
KIC	**Kosan Boka**	**58.73**	**165**	*e*P	**P**	**00 42 28.1**	**-0.4**
	comp=Z,20nm,1.0s						
KEBM	**Edson Butte**	**58.73**	**305**	P	**P**	**00 42 27.1**	**-1.3**
LIC	**Lamto**	**58.83**	**165**	*e*P	**P**	**00 42 28.7**	**-0.5**
	comp=Z,24nm,0.9s						
SZCU	**Shurtz Canyon**	**59.04**	**293**	P	**P**	**00 42 31.4**	**+0.6**
CCUT	**Cedar City**	**59.19**	**293**	P	**P**	**00 42 34.0**	**+2.1**
U15A	**North Rim**	**59.73**	**291**	P	**P**	**00 42 36.6**	**+1.0**
U15A				IAmb	IAmb	00 42 39.7	
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**59.80**	**40**	P	**P**	**00 42 35.6**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=321,slow=6.3,SNR=6.0						
SONM				LR	LR	01 10 52.8	
	comp=Z,92nm,18.2s,baz=350,slow=38						
ULN	**Ulaanbaatar**	**59.96**	**40**	*ce*P	**P**	**00 42 37.9**	**+1.0**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
ULN	**Ulaanbaatar**	**59.96**	**40**	P	**P**	**00 42 38.2**	**+1.3**
ULN				IAmb	IAmb	00 42 39.1	
	comp=Z,6.6nm,1.4s						
WUAZ	**Wupatki**	**60.15**	**290**	P	**P**	**00 42 38.3**	**-0.1**
NVAR	**Mina Array Bea**	**60.37**	**297**	P	**P**	**00 42 40.8**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=62,slow=3.2,SNR=5.7						
NIL	**Nilore**	**60.53**	**73**	P	**P**	**00 42 40.7**	**-0.1**
NIL				pmax	pmax		
	comp=Z,12nm,1.3s						
NIL	**Nilore**	**60.53**	**73**	P	**P**	**00 42 40.7**	**-0.1**
TX31	**Lajitas Ar. Si**	**62.29**	**280**	P	**P**	**00 42 52.8**	**-0.1**
PETK	**Petropavlovsk-**	**62.69**	**3**	LR	LR	01 09 43.1	
	comp=Z,42nm,19.6s,baz=58,slow=36						
GTA	**Gaotai**	**65.44**	**49**	P	**P**	**00 43 15.8**	**+2.3**
GTA				pP	sP	00 43 21.2	+2.6
GTA				sP	pP	00 43 24.1	+6.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,84nm,4.2s						
GTA				LR	LR		
	comp=N,100nm,14.9s						
GTA				LR	LR		
	comp=E,93nm,15.6s						
GTA				LR	LR		
	comp=Z,81nm,14.9s						
HHC	**Hu-ho-hao-te**	**67.68**	**40**	*e*P	**P**	**00 43 30.3**	**+2.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
LZH	**Lanzhou**	**69.78**	**47**	*e*P	**P**	**00 43 39.2**	**-1.8**
LZH				pP	pP	00 43 41.3	-3.4
LZH				sP	sP	00 43 42.1	-4.0
LZH				*e*PP	**PP**	**00 46 15.4**	**+0.7**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.2s						
LZH				LR	LR		
	comp=N,140nm,16.0s						
LZH				LR	LR		
	comp=E,150nm,16.5s						
LZH				LR	LR		
	comp=Z,200nm,18.3s						
ROSC	**El Rosal**	**71.81**	**241**	LR	LR	01 11 44.4	
	comp=Z,29nm,21.7s,baz=52,slow=33						
KSRS	**Korea Array**	**74.83**	**28**	LR	LR	01 21 38.5	
	comp=Z,35nm,18.2s,baz=323,slow=39						
NJ2	**Nanjing**	**77.91**	**37**	*e*P	**P**	**00 44 27.9**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
SAML	**Samuel**	**80.79**	**226**	P	**P**	**00 44 43.4**	**-0.8**
SAML				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SAML	**Samuel**	**80.79**	**226**	P	**P**	**00 44 43.4**	**-0.8**
SAML				IAmb	IAmb	00 44 43.6	
	comp=Z,4.9nm,0.6s						
BDFB	**Brasilia**	**83.20**	**209**	LR	LR	01 15 17.4	
	comp=Z,39nm,20.4s,baz=134,slow=31						
CMAR	**Chiang Mai Arr**	**84.25**	**59**	P	**P**	**00 45 03.9**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=320,slow=6.3,SNR=4.9						
BOSA	**Boshof**	**98.62**	**143**	LR	LR	01 33 53.3	
	comp=Z,14nm,18.4s,baz=185,slow=37						
ASAR	**Alice Springs**	**135.13**	**38**	PKP	**PKiKP**	**00 51 51.4**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=3.7,slow=2.9,SNR=1.1						

HEL ***03*** *00:36:52.4, 67°.81N×20°.45E, h0^{km}, ML1.5, Explosion*

UPP 03 00:36:52.3±0.3**, 67°.84N×20°.18E, h2**^{km}±7^{km}**, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**27**	P	Pg	00 36 54.8	0.0
KUA				S	Sg	00 36 56.6	+0.2
KUA	**Kurravaara**	**0.13**	**27**	*i* P	Pg	00 36 54.8	0.0
KUA				*i* S	Sg	00 36 56.6	+0.2
RATU	**Laukkuluspa**	**0.23**	**266**	P	Pg	00 36 56.7	+0.1
RATU				S	Sg	00 36 59.9	+0.3
RATU	**Laukkuluspa**	**0.23**	**266**	*i* P	Pg	00 36 56.7	+0.1
RATU				*i* S	Sg	00 36 59.9	+0.3
KOVU	**Salmi**	**0.38**	**359**	P	Pg	00 36 59.6	-0.1
KOVU				S	Sg	00 37 05.0	+0.4
KOVU	**Salmi**	**0.38**	**359**	*i* P	Pg	00 36 59.6	-0.1
KOVU				*i* S	Sg	00 37 05.0	+0.4
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	00 37 05.7	-0.2
LANU	**Lannavaara**	**0.71**	**72**	*i* P	Pg	00 37 05.7	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	P	Pg	00 37 07.0	-0.4
SALU	**Saltoluokta**	**0.79**	**235**	*i* P	Pg	00 37 07.0	-0.4
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*P	Pn	00 37 16.8	+0.9
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*PB	Pg	00 37 14.9	-0.2
KIF				MSG		00 37 30.2	
	comp=Z,4.5nm,0.2s						
KIF				*e*S	Sg	00 37 30.8	+0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pn	00 37 17.5	-1.3
PAJU	**Pajala**	**1.40**	**125**	*e*PN	Pn	00 37 17.4	-1.4
	baz=310						
PAJU				*e*SN	Sg	00 37 35.9	-1.2
KTK1	**Kautokeino**	**1.63**	**42**	*e*P	Pn	00 37 21.9	-0.2
KALU	**Kalix**	**2.35**	**146**	*e*SB	Sn	00 38 00.9	-0.4
TOF	**Tornio**	**2.41**	**135**	*e*PG	Pn	00 37 34.0	+1.4
TOF				MSG		00 38 00.8	
	comp=Z,1.4nm,0.2s						
TOF				*e*SB	Sn	00 38 01.9	-0.7
SGF	**Sodankyl**	**2.46**	**96**	*e*PG	Pb	00 37 35.3	-1.8
	baz=279						
SGF				*e*SB	Sn	00 38 04.5	+0.5
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*PB	Pn	00 37 37.2	+2.1
	baz=225						
ARA0				*e*S	Sn	00 38 05.2	-1.9
RNF	**Rovaniemi**	**2.58**	**116**	*e*PG	Pb	00 37 37.2	-2.1
RNF				*e*S	Sn	00 38 05.0	-2.1

UPP 03 00:37:20.3±0.2**, 67°.84N×20°.18E, h0**^{km}**, ML1.5, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**27**	P	Pg	00 37 23.0	+0.2
KUA				S	Sg	00 37 24.9	+0.5
RATU	**Laukkuluspa**	**0.22**	**266**	P	Pg	00 37 24.8	+0.2
KOVU	**Salmi**	**0.39**	**359**	S	Sg	00 37 33.1	+0.5

IDC ***03*** *00:55:59.5±5.0, 39°.45N×69°.09E, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.2/35, mbtmp3.6/3, ML3.1/2, Error ellipse: s-maj=215.4km s-min=24.8km az=148.0*

NNC ***03*** *00:56:09.2±7.9, 37°.88N×71°.91E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=61.4km s-min=45.2km az=170.0*

ISC 03 00:55:55.2±1.7**, 38°.2N**±0°.1×**70°.7E**±0°.1**, h10**^{km}**, n6, σ2^{s}.74**/8**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.94**	**358**	Pn	**Pg**	**00 57 31.4**	**+1.6**
	0.5nm,0.2s,baz=165,slow=13,SNR=50						
KK31				Sn	**Sg**	**00 58 33.8**	**+0.1**
	6.3nm,0.4s,baz=174,slow=23,SNR=19						
AAK	**Ala-Archa**	**5.32**	**32**	⇓Pn	**Pb**	**00 57 28.1**	**-0.3**
	1.4nm,0.5s						
AAK				⇑Sn	**Sb**	**00 58 28.4**	**-3.8**
	7.7nm,0.7s						
TKM2	**Tokmak 2**	**6.03**	**36**	⇑Pn	Pb	00 57 35.1	-5.4
	3.1nm,0.7s						
TKM2				⇓Sn	**Sn**	**00 58 32.7**	**-1.2**
	2.2nm,0.7s						
MKAR	**Makanchi Array**	**12.13**	**41**	Pn	**Pn**	**00 58 51.8**	**+3.8**
	0.1nm,0.3s,baz=230,slow=11,SNR=2.8						
ZALV	**Zalesovo Beam**	**18.52**	**27**	P	**P**	**01 00 10.8**	**-0.7**
	0.6nm,0.3s,baz=224,slow=9.8,SNR=20						
TORD	**Torodi Ar. Bea**	**65.55**	**268**	P	**P**	**01 06 37.3**	**-2.0**
	0.3nm,0.4s,baz=48,slow=5.7,SNR=5.0						

IDC 03 01:13:06.5±1.5**, 5°.60S×150°.51E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.2**/31**, mbtmp3.5**/2**, Error ellipse: s-maj=103.8km s-min=21.1km az=137.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.98**	**50**	Pn	Pn	01 13 41.5	+0.2
	14nm,0.3s,baz=41,slow=19,SNR=1.2						
KRVT				Sn	Sn	01 14 07.3	+0.3
	36nm,0.3s,baz=37,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**21.23**	**226**	P	P	01 17 54.5	+0.3
	1.2nm,0.8s,baz=52,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**24.05**	**220**	P	P	01 18 23.3	-0.3
	1.1nm,0.7s,baz=53,slow=9.2,SNR=13						
TORD	**Torodi Ar. Bea**	**148.36**	**286**	PKPbc	PKPbc	01 32 55.6	-0.5
	0.4nm,0.7s,baz=65,slow=3.0,SNR=2.1						

ARE ***03*** *01:21:57±1.7, 15°.3S±0°.1×75°.0W±0°.2, h43^{km}±6^{km}, Error ellipse: s-maj=23.9km s-min=9.4km az=58.0*

NEIC ***03*** *01:21:59.1±1.2, 15°.30S±0°.06×75°.16W±0°.07, h40^{km}±9^{km}, mb4.0/6, ML4.2(ARE), Error ellipse: s-maj=9.8km s-min=8.6km az=134.0*

IDC ***03*** *01:22:02.0±2.9, 15°.29S×75°.04W, h63^{km}±27^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/29, mbtmp3.8/5, ML3.6/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/19, Error ellipse: s-maj=53.4km s-min=23.8km az=66.0*

ISC 03 01:21:56.9±0.7**, 15°.3S**±0°.1×**75°.2W**±0°.2**, h26**^{km}**, n32, σ2^{s}.24**/26**, mb3.8**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.71**	**334**	P	**Pb**	**01 22 57.5**	**-4.3**
	2.2nm,0.3s,baz=136,slow=11,SNR=3.2						
NNA				S	**Sn**	**01 23 36.9**	**+1.3**
	4.0nm,0.3s,baz=176,slow=11,SNR=3.6						
NNA				LR	LR	01 24 32.7	
	comp=Z,47nm,18.7s,baz=74,slow=40						
NNA	**Nana**	**3.71**	**334**		**Pn**	**01 22 53.2**	**+0.5**
PB16	**IPOC Station P**	**6.18**	**120**	Pn	**Pn**	**01 23 30.4**	**+3.4**
PSGCX	**Pisagua**	**6.41**	**132**		**Pn**	**01 23 31.0**	**+1.2**
MNMC	**Minye Minye**	**6.52**	**126**		**Pn**	**01 23 33.3**	**+1.8**
TA01	**Diego Aracena**	**7.03**	**138**		**Pn**	**01 23 39.5**	**+1.2**
GO01	**Chusmiza**	**7.14**	**128**		**Pn**	**01 23 42.6**	**+2.4**
PB08	**IPOC Station P**	**7.45**	**131**	Pn	**Pn**	**01 23 44.8**	**+0.4**
PB01	**IPOC Station P**	**7.83**	**137**		**Pn**	**01 23 50.8**	**+1.5**
PB07	**IPOC Station P**	**8.09**	**143**	Pn	**Pn**	**01 23 54.5**	**+1.6**
PB09	**IPOC Station P**	**8.53**	**140**		**Pn**	**01 24 00.1**	**+1.2**
LVC	**Limon Verde**	**9.34**	**142**	P	**Pn**	**01 24 13.2**	**+2.9**
	2.3nm,0.3s,baz=319,slow=11,SNR=18						
LVC				S	**Sn**	**01 25 48.2**	**-6.5**
	0.1nm,0.3s,baz=257,slow=20,SNR=1.0						
LVC	**Limon Verde**	**9.34**	**142**		**Pn**	**01 24 12.4**	**+2.1**
AC04	**Llanos de Chal**	**13.36**	**164**	Pn	**Pn**	**01 25 06.7**	**+1.8**
H03N1	**Juan Fernandez**	**18.35**	**190**	T	T	01 45 00.5	
	baz=12,slow=74,SNR=160						
H03N2	**Juan Fernandez**	**18.35**	**190**	T	T	01 44 59.9	
	baz=12,slow=74,SNR=121						
H03N3	**Juan Fernandez**	**18.36**	**190**	T	T	01 44 59.2	
	baz=12,slow=74,SNR=211						
TRQA	**Tornquist**	**25.45**	**155**	P	**P**	**01 27 23.2**	**+0.4**
PLCA	**Paso Flores**	**25.62**	**172**	P	**P**	**01 27 26.0**	**+1.6**
	1.4nm,0.9s,baz=337,slow=18,SNR=1.6						
PLCA	**Paso Flores**	**25.62**	**172**	IAmb	IAmb	01 27 35.7	
	comp=Z,5.6nm,1.3s						
HDC	**Heredia**	**26.69**	**340**	P	**P**	**01 27 34.6**	**+0.3**
SC01	**Santiago de lo**	**34.82**	**7**	P	**P**	**01 28 45.8**	**0.0**
RCBR	**Riachuelo**	**39.66**	**81**	LR	LR	01 45 49.0	
	comp=Z,46nm,21.5s,baz=134,slow=36						
NATX	**Nacogdoches**	**50.43**	**338**	P	**P**	**01 30 54.0**	**+1.7**
T60A	**Surry**	**52.21**	**358**	P	**P**	**01 31 05.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**81.12**	**74**	P	**P**	**01 34 11.1**	**+0.4**
	comp=Z,1.1nm,1.1s,baz=261,slow=5.6,SNR=4.2						
YKA	**Yellowknife Ar**	**83.50**	**343**	P	**P**	**01 34 22.1**	**0.0**
	comp=Z,0.2nm,0.6s,baz=129,slow=6.4,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**120.97**	**283**	T	T	03 53 10.5	
	baz=97						
H11S1	**WAKE ISLAND Hy**	**120.98**	**283**	T	T	03 53 08.8	
	baz=97						
H11S3	**WAKE ISLAND Hy**	**120.99**	**283**	T	T	03 53 15.7	
	baz=97						
ASAR	**Alice Springs**	**131.94**	**217**	PKP	**PKPdf**	**01 41 08.7**	**-0.3**
	comp=Z,0.5nm,1.0s,baz=116,slow=2.2,SNR=2.4						
WRA	**Warramunga Arr**	**134.50**	**220**	PKP	**PKPdf**	**01 41 14.0**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=139,slow=2.1,SNR=8.7						

IDC ***03*** *01:39:22.5±1.2, 21°.60S×68°.28W, h105^{km}±15^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.4/24, mbtmp3.9/6, Error ellipse: s-maj=38.8km s-min=17.3km az=146.0*

NEIC ***03*** *01:39:23.2±1.5, 21°.75S±0°.06×68°.4W±0°.1, h122^{km}±7^{km}, Error ellipse: s-maj=16.9km s-min=8.1km az=85.0*

VAO ***03*** *01:39:24.0±0.3, 21°.64S×68°.45W, h130^{km}, mb4.2*

GUC ***03*** *01:39:24.1±0.6, 21°.75S×68°.51W, h131^{km}±4^{km}, ML3.8*

ISC 03 01:39:23.0±0.6**, 21°.73S**±0°.03×**68°.54W**±0°.07**, h138**^{km}±6^{km}**, n70, σ1^{s}.39**/84**, mb3.8**/5**, 6C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.66**	**264**	⇑*i*P	**Pn**	**01 39 44.6**	**+0.4**
PB09				*e*S	**Sn**	**01 40 00.5**	**+0.3**
PB09	**IPOC Station P**	**0.66**	**264**		**Pn**	**01 39 44.5**	**+0.4**
LVC	**Limon Verde**	**0.94**	**201**	P	**Pn**	**01 39 46.6**	**+0.1**
	71nm,0.3s,baz=31,slow=7.3,SNR=327						
LVC				S	**Sn**	**01 40 02.6**	**-1.8**
	109nm,0.3s,baz=258,slow=20,SNR=15						
LVC	**Limon Verde**	**0.94**	**201**	*e*P	**Pn**	**01 39 46.5**	**-0.1**
LVC				*i* S	**Sn**	**01 40 03.3**	**-1.1**
LVC	**Limon Verde**	**0.94**	**201**	*e*P	**Pn**	**01 39 46.6**	**+0.1**
PB01	**IPOC Station P**	**1.12**	**308**	⇑*i*P	**Pn**	**01 39 48.1**	**+0.2**
PB01				*e*S	**Sn**	**01 40 06.0**	**-0.7**
PB01				IAML		01 40 07.2	
	comp=N,2µm,0.3s						
PB01	**IPOC Station P**	**1.12**	**308**		**Pn**	**01 39 48.1**	**+0.2**
PB03	**IPOC Station P**	**1.17**	**254**	⇑*i*P	**Pn**	**01 39 48.9**	**+0.5**
PB03				*i* S	**Sn**	**01 40 07.4**	**-0.4**
PB03				IAML		01 40 08.4	
	comp=E,2µm,0.3s						
PB07	**IPOC Station P**	**1.25**	**270**	⇑*i*P	**Pn**	**01 39 49.7**	**+0.4**
PB07				*e*S	**Sn**	**01 40 08.8**	**-0.4**
PB07				IAML		01 40 10.6	
	comp=N,2µm,0.2s						
PB07	**IPOC Station P**	**1.25**	**270**		**Pn**	**01 39 49.7**	**+0.4**
PB04	**IPOC Station P**	**1.61**	**248**	⇑*i*P	**Pn**	**01 39 53.6**	**+0.5**
PB04				*i* S	**Sn**	**01 40 15.6**	**-0.4**
PB04				IAML		01 40 23.9	
	comp=E,737nm,0.4s						
PB04	**IPOC Station P**	**1.61**	**248**		**Pn**	**01 39 53.6**	**+0.5**
PB08	**IPOC Station P**	**1.68**	**340**	⇓*i*P	**Pn**	**01 39 55.3**	**+1.2**
PB08				*e*S	**Sn**	**01 40 18.5**	**+0.6**
PB08				IAML		01 40 20.2	
	comp=E,828nm,0.3s						
PB08	**IPOC Station P**	**1.68**	**340**		**Pn**	**01 39 55.2**	**+1.1**
PB05	**IPOC Station P**	**1.90**	**234**	⇑*i*P	**Pn**	**01 39 56.8**	**+0.4**
PB05				*e*S	**Sn**	**01 40 21.4**	**-0.5**
PB05				IAML		01 40 26.2	
	comp=E,564nm,0.4s						
TA01	**Diego Aracena**	**1.92**	**307**	*e*P	**Pn**	**01 39 56.6**	**+0.1**
TA01				*e*S	**Sn**	**01 40 21.4**	**-0.7**
TA01				IAML		01 40 24.8	
	comp=E,872nm,0.2s						
TA01	**Diego Aracena**	**1.92**	**307**		**Pn**	**01 39 56.8**	**+0.3**
TA02	**Huaiquique**	**2.08**	**314**	*e*P	**Pn**	**01 39 58.3**	**-0.1**
TA02				*e*S	**Sn**	**01 40 24.4**	**-1.1**
TA02				IAML		01 40 27.3	
	comp=N,2µm,0.1s						
GO01	**Chusmiza**	**2.14**	**343**	⇓*i*P	**Pn**	**01 40 00.3**	**+0.6**
GO01				*e*S	**Sn**	**01 40 27.7**	**0.0**
GO01	**Chusmiza**	**2.14**	**343**		**Pn**	**01 40 00.2**	**+0.6**
PB10	**IPOC Station P**	**2.57**	**226**	*e*P	**Pn**	**01 40 04.6**	**+0.2**
PB10				*e*S	**Sn**	**01 40 33.5**	**-2.9**
PB10	**IPOC Station P**	**2.57**	**226**		**Pn**	**01 40 04.7**	**+0.2**
PSGC	**Pisagua**	**2.59**	**325**	*e*P	**Pn**	**01 40 04.3**	**-0.6**
PSGC				*e*S	**Sn**	**01 40 35.3**	**-1.7**
PSGC				IAML		01 40 39.0	
	comp=N,411nm,0.4s						
PSGCX	**Pisagua**	**2.59**	**325**		**Pn**	**01 40 04.2**	**-0.6**
MNMC	**Minye Minye**	**2.77**	**339**	*e*P	**Pn**	**01 40 07.9**	**+0.6**
MNMC				*e*S	**Sn**	**01 40 41.0**	**-0.3**
MNMC	**Minye Minye**	**2.77**	**339**		**Pn**	**01 40 06.9**	**-0.3**
PB14	**IPOC Station P**	**3.35**	**210**	*e*P	**Pn**	**01 40 14.8**	**+0.1**
PB14				*e*S	**Sn**	**01 40 48.3**	**-6.5**
PB14	**IPOC Station P**	**3.35**	**210**		**Pn**	**01 40 15.6**	**+0.9**
PB16	**IPOC Station P**	**3.50**	**345**	*e*P	**Pn**	**01 40 17.8**	**+0.9**
PB16				*e*S	**Sn**	**01 40 52.4**	**-6.2**
PB16	**IPOC Station P**	**3.50**	**345**		**Pn**	**01 40 17.8**	**+0.9**
GO02	**Mina Guanaco**	**3.55**	**196**	*e*P	**Pn**	**01 40 17.4**	**+0.1**
GO02				*e*S	**Sn**	**01 40 58.4**	**-0.9**
GO02	**Mina Guanaco**	**3.55**	**196**		**Pn**	**01 40 17.4**	**+0.1**
AP01	**Chacalluta**	**3.75**	**333**	*e*S	**Sn**	**01 41 01.6**	**-1.9**
AC02	**Maricunga**	**5.11**	**186**		**Pn**	**01 40 38.3**	**+0.2**
SIV	**San Ignacio**	**9.09**	**52**	P	**Pn**	**01 41 28.3**	**-2.8**
	comp=N,2.2nm,0.3s,baz=249,slow=11,SNR=54						
SIV				S	Sn	01 43 02.8	-9.1
	comp=N,0.3nm,0.3s,baz=325,slow=19,SNR=2.1						
PTLB	**Pontes e Lacer**	**10.88**	**57**	*e*P	**Pn**	**01 41 53.3**	**-1.7**
VILB	**Vilhena**	**11.81**	**44**	*e*P	**Pn**	**01 42 07.5**	**+0.2**
TRCB	**Terra Rica**	**14.76**	**97**	*e*P	**P**	**01 42 46.8**	**-0.7**
PCMB	**Pacaembu**	**16.06**	**93**	*e*P	**P**	**01 43 02.9**	**+1.0**
CPSB	**Cacapava Do Su**	**16.07**	**126**	*e*P	**P**	**01 43 02.6**	**+0.7**
ARAG	**Araguaiana, MT**	**16.93**	**72**	*e*P	**Pn**	**01 43 11.9**	**+0.1**
ITRB	**Iturama**	**17.13**	**87**	*e*P	**Pn**	**01 43 14.4**	**+0.3**
FRTB	**Fartura**	**17.60**	**99**	*e*P	**Pn**	**01 43 20.3**	**+0.4**
BB19B	**Bebedouro**	**18.65**	**92**	*e*P	**P**	**01 43 30.7**	**+0.4**
PLCA	**Paso Flores**	**19.02**	**185**	*e*P	**Pn**	**01 43 37.2**	**+0.7**
SNDB	**Serra Nova Dou**	**19.13**	**62**	*e*P	**P**	**01 43 35.3**	**-0.2**
NPGB	**Novo Progresso**	**19.37**	**43**	*e*P	**P**	**01 43 38.0**	**-0.2**
IPMB	**Ipameri, GO**	**19.48**	**83**	*e*P	**P**	**01 43 39.3**	**-0.1**
PET01	**Itanhaem-SP**	**19.74**	**101**	*e*P	**P**	**01 43 42.5**	**+0.4**
MACA	**Manacapuru-AM**	**19.98**	**24**	*e*P	**Pn**	**01 43 45.8**	**-2.0**
VAO	**Valinhos**	**19.99**	**98**	*e*P	**P**	**01 43 45.2**	**+0.3**
BDFB	**Brasilia**	**20.36**	**76**	P	**P**	**01 43 49.0**	**+0.1**
	comp=N,1.3nm,0.4s,baz=238,slow=12,SNR=3.5						
BDFB	**Brasilia**	**20.36**	**76**	IAmb	IAmb	01 43 54.1	
	comp=Z,31nm,1.8s						
ITTB	**Itaituba**	**21.27**	**38**	*e*P	**P**	**01 43 58.0**	**-0.5**
BSCB	**Bom Sucesso**	**22.14**	**92**	*e*P	**P**	**01 44 08.8**	**+1.0**
SMTB	**Santa Maria do**	**23.88**	**61**	*e*P	**P**	**01 44 25.1**	**+1.0**
JANB	**Januaria**	**23.91**	**78**	*e*P	**P**	**01 44 23.8**	**-0.6**
MALB	**Monte Alegre**	**24.16**	**37**	*e*P	**P**	**01 44 28.0**	**+1.4**
SDBA	**SAO DESIDERIO**	**24.39**	**72**	*e*P	**P**	**01 44 30.0**	**+1.2**
GDU01	**Guandu, BA**	**28.68**	**79**	*e*P	**P**	**01 45 07.2**	**+0.1**
MG01	**Puerto William**	**33.16**	**179**	P	**P**	**01 45 47.3**	**+1.2**
CSGN	**Cosiguina Volc**	**39.22**	**330**	P	P	01 46 41.1	+3.0
SKI	**Saint Kitts**	**39.24**	**9**	P	**P**	**01 46 38.6**	**+0.5**
DBIC	**Dimbokro**	**68.47**	**73**	P	**P**	**01 50 12.1**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=233,slow=5.2,SNR=5.3						
PDAR	**Pinedale Array**	**74.48**	**330**	P	P	01 50 49.6	+3.1
	comp=Z,0.3nm,0.8s,baz=132,slow=4.0,SNR=2.3						
TOA0	**Torodi Ar. Sit**	**77.11**	**70**	P	**P**	**01 51 02.7**	**+1.0**
TOA0				IAmb	IAmb	01 51 03.7	
	comp=Z,2.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**01 51 02.9**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=256,slow=4.5,SNR=9.6						
YKA	**Yellowknife Ar**	**91.52**	**340**	P	P	01 52 16.1	+2.7
	comp=Z,0.2nm,0.7s,baz=132,slow=4.9,SNR=6.1						
MK31	**Makanchi Array**	**145.62**	**36**		**PKiKP**	**01 58 45.9**	**-3.2**
MKAR	**Makanchi Array**	**145.62**	**36**	PKPbc	**PKiKP**	**01 58 48.3**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=310,slow=4.0,SNR=2.3						

SOME ***03*** *02:30:12.0, 39°.85N×69°.00E, h5^{km}*

IDC ***03*** *02:30:14.7±3.4, 40°.36N×68°.42E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.2/32, mbtmp3.5/4, ML3.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/37, Error ellipse: s-maj=145.1km s-min=17.7km az=152.0*

NNC ***03*** *02:30:14.8±1.4, 40°.00N×68°.86E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=11.2km s-min=8.3km az=7.0*

ISU ***03*** *02:30:15, 39°.93N×68°.78E, h5^{km}, Hypocentre not reviewed by the ISC*

KRNET ***03*** *02:30:15.6±0.1, 39°.92N×69°.03E, mb3.5*

ISC 03 02:30:13.7±0.8**, 39°.80N**±0°.05×**68°.74E**±0°.04**, h10**^{km}**, n41, σ2^{s}.08**/60**, 16C-14D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZI	**Dzhizak**	**0.78**	**295**	*e*P		02 30 30.0	
YNGY	**Yangiyul**	**1.33**	**10**	*e*P		02 30 36.0	
YNGY				*e*S		02 30 57.0	
TAS	**Tashkent**	**1.58**	**15**	⇑*i*P	**Pn**	**02 30 42.4**	**+0.5**
	baz=8.0						
TAS				⇑*i*S	**Sn**	**02 31 02.4**	**0.0**
	baz=8.0						
TAS	**Tashkent**	**1.58**	**15**	*e*P		02 30 41.0	
TAS				*e*S		02 31 01.0	
BTK	**Batken**	**1.62**	**80**	⇓*i*P	**Pn**	**02 30 42.1**	**-0.3**
	baz=84						
BTK				⇓*i*S	**Sn**	**02 31 01.2**	**-2.1**
	baz=84						
TGS	**TashGRES**	**1.73**	**20**	*e*P		02 30 09.0	
TGS				*e*S		02 30 30.0	
CHMG	**Chimgan**	**2.00**	**28**	*e*P		02 30 49.0	
CHMG				*e*S		02 31 12.0	
PKMR	**Pachkamar**	**2.22**	**236**	*e*P		02 30 56.0	
PKMR				*e*S		02 31 32.0	
SHAK	**Shakhimardan**	**2.31**	**85**	*e*P		02 30 52.0	

SHAK				eS		02 31 22.0	
DRK	Karamyk	2.38	97	⇑iP	Pb	02 30 55.7	-1.2
	baz=1.0						
DRK				⇑iS	Sb	02 31 24.7	-1.7
	baz=1.0						
TRKS	Terek-Say	2.51	46	⇑iP	Pn	02 30 56.5	+1.7
	baz=46						
TRKS				⇑iS	Sn	02 31 26.3	+0.7
	baz=46						
IUG	Iuzhnay	2.54	22	eP	Pn	02 30 57.1	+2.0
	73nm,0.3s						
IUG				eS	Sb	02 31 29.8	-1.0
	426nm,0.5s						
IUG	Iuzhnay	2.54	22	Pg	Pn	02 30 57.5	+2.4
	73nm,0.3s						
IUG				Lg	Lg	02 31 29.6	
	426nm,0.5s						
OHH	Osh	3.18	76	⇑iP	Pn	02 31 05.9	+2.0
	baz=77						
OHH				⇑iS	Sn	02 31 42.7	+0.8
	baz=77						
BRLS	Borolday	3.33	14	eP	Pn	02 31 06.8	+0.9
	28nm,0.2s						
BRLS				eS	Sn	02 31 46.2	+0.6
	70nm,0.2s						
BRLS	Borolday	3.33	14	Pg	Pn	02 31 06.8	+0.9
	47nm,0.5s						
BRLS				Lg	Lg	02 31 45.8	
	70nm,0.2s						
KK31	Karatay Array	3.56	21	⇑Pn	Pn	02 31 08.9	-0.1
	0.8nm,0.2s,baz=203,slow=13,SNR=291						
KK31				⇓Pg	Pb	02 31 16.7	-0.1
	3.2nm,0.2s,baz=203,slow=18,SNR=100						
KK31				⇑Lg	Lg	02 32 00.2	
	26nm,0.4s,baz=206,slow=30,SNR=7.1						
ARSB	Arslanbob	3.57	63	⇓iP	Pn	02 31 11.4	+2.1
	baz=64						
ARSB				⇓iS	Sn	02 31 51.8	+0.2
	baz=64						
DZA	Taraz	3.66	31	eP	Pb	02 31 16.7	-1.7
	87nm,0.1s						
DZA				eS	Sb	02 32 03.0	+0.2
	184nm,0.3s						
SFK	Sufi-Kurgan	3.67	85	⇓iP	Pn	02 31 12.5	+1.8
	baz=87						
SFK				⇓iS	Sn	02 31 54.5	+0.4
	baz=87						
SFK	Sufi-Kurgan	3.67	85	eP		02 31 16.0	
SFK				eS		02 31 59.0	
MNAS	Manas	3.91	45	⇓iP	Pn	02 31 16.5	+2.5
	baz=45						
MNAS				⇓iS	Sn	02 32 00.2	+0.2
	baz=45						
AML	Almayashu	4.41	57	P	Pn	02 31 20.4	-0.7
	SNR=24						
MRKS	Merke	4.48	47	eP	Pb	02 31 31.6	-1.0
	12nm,0.4s						
MRKS				eS	Sb	02 32 28.7	+2.0
	15nm,0.7s						
MRKS	Merke	4.48	47	Pg	Pb	02 31 31.6	-1.0
	12nm,0.4s						
MRKS				Lg	Lg	02 32 27.8	
	15nm,0.7s						
ARLS	Aral	4.71	62	⇑iP	Pn	02 31 27.2	+2.3
	baz=63						
ARLS				⇑iS	Sn	02 32 19.4	-0.3
	baz=63						
UCH	Uchtor	5.00	59	P	Pn	02 31 28.5	-0.6
	SNR=14						
AAK	Ala-Archa	5.18	55	P	Pn	02 31 31.5	0.0
	SNR=11						
AAK	Ala-Archa	5.18	55	⇓Pn	Pn	02 31 32.5	+1.0
	5.5nm,0.6s						
AAK				⇓Pg	Pb	02 31 45.5	+1.0
	5.0nm,0.4s						
AAK				⇑Sn	Sn	02 32 31.7	+0.3
	5.9nm,0.6s						
KBK	Karagaybulak	5.48	57	P	Pn	02 31 35.5	0.0
	SNR=17						
SGDS	Sogindy	5.73	48	Pg	Pb	02 31 54.6	+0.9
	5.0nm,0.5s						
SGDS				Lg	Lg	02 33 06.7	
	13nm,0.7s						
TKM2	Tokmak 2	6.03	57	P	Pn	02 31 42.6	-0.5
	SNR=9.3						
TKM2	Tokmak 2	6.03	57	⇓Pn	Pn	02 31 42.9	-0.2
	3.4nm,0.6s						
TKM2				⇓Pg	Pb	02 31 59.4	+0.5
	2.6nm,0.5s						
TKM2				⇑Sn	Sn	02 32 52.9	+0.6
	2.5nm,0.6s						
TKM2				⇓Lg	Lg	02 33 18.9	
	6.4nm,0.7s						
KST	Kastek	6.32	57	eP	Pb	02 32 07.1	+3.2
	5.9nm,0.7s						
KST				eS	Sg	02 33 29.8	-6.8
	11nm,0.8s						
KST	Kastek	6.32	57	Pg	Pb	02 32 08.0	+4.1
	5.9nm,0.7s						
KST				Lg	Lg	02 33 29.8	
	11nm,0.8s						
KRBS	Karabastau	6.48	51	eP	Pb	02 32 07.8	+1.2
	0.9nm,0.3s						
KRBS				eS	Sb	02 33 31.1	+6.9
KRBS	Karabastau	6.48	51	Pg	Pb	02 32 08.7	+2.1
	5.3nm,0.8s						
KRBS				Lg	Lg	02 33 31.0	
TNSS	Tian-Shan	6.96	60	Pg	Pb	02 32 19.0	+4.0
	1.7nm,0.2s						
TNSS				Lg	Lg	02 33 49.4	
	7.4nm,0.7s						
KUU	Kurty	6.99	52	Pg	Pb	02 32 17.3	+2.1
	3.0nm,0.6s						
KUU				Lg	Lg	02 33 46.0	
	7.7nm,0.6s						
MDOK	Medeo	7.08	59	Pg	Pb	02 32 21.8	+4.9
	5.9nm,0.7s						
MDOK				Lg	Lg	02 33 53.2	
	7.0nm,0.8s						
KTBS	Karatobe	7.11	54	Pg	Pb	02 32 19.9	+2.6
	2.3nm,0.7s						
KTBS				Lg	Lg	02 33 49.9	
	10nm,0.5s						
ARXS	Arharly	8.07	54	Pg	Pb	02 32 37.8	+4.1
	4.7nm,0.7s						
ARXS				Lg	Lg	02 34 21.1	
	6.2nm,0.8s						
GEYT	Alibeck	8.50	261	Pn	Pn	02 32 16.9	+0.1
	0.3nm,0.3s,baz=122,slow=47,SNR=2.6						
GEYT				Sn	Sn	02 33 53.4	+0.6
	0.3nm,0.3s,baz=244,slow=44,SNR=1.7						
AB31	Akbulak array	11.34	329	⇑P	Pn	02 32 53.4	-2.4
	0.6nm,0.4s,baz=145,slow=11,SNR=52						
MKAR	Makanchi Array	12.09	50	Pn	Pn	02 33 04.2	-1.8
	0.1nm,0.3s,baz=237,slow=16,SNR=4.7						
MKAR				Lg	Lg	02 36 29.7	
	baz=243,slow=29,SNR=2.8						
AKTO	Aktyubinsk	13.04	328	⇑P	Pn	02 33 18.0	-0.9
	1.0nm,0.8s						
ZALV	Zalesovo Beam	17.86	32	P	Pn	02 34 20.9	-1.2
	0.6nm,0.3s,baz=228,slow=12,SNR=9.5						
BRDH	Bariadhala	25.86	125	LR	LR	02 46 44.4	
	comp=Z,93nm,21.9s,baz=315,slow=38						
TORD	Torodi Ar. Bea	64.10	266	P	P	02 40 49.4	+1.1
	0.4nm,0.6s,baz=52,slow=6.2,SNR=5.0						

KRSC 03 02:38:47.2±2.4**,48.°76N**×**156.°86E,h7**^{km}±41^{km}**,ML4.2,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.98	346	eP	Pn	02 39 21.0	-0.2
SKR				eS	Sn	02 39 45.4	-0.8
KDTR	Khodutka, Kamc	3.15	14	eP	Pb	02 39 40.7	-2.8
KDTR				eS	Sb	02 40 20.4	-1.6
ASAK	Asacha	3.69	10	eP	Pb	02 39 49.0	-3.7
MTVR	Mutnovka	3.82	12	eP	Pn	02 39 50.4	+3.8
MTVR				eS	Sb	02 40 37.9	-3.6
RUS	Russkaya	3.82	15	eP	Pn	02 39 49.9	+3.4
RUS				eS	Sn	02 40 35.8	+4.2
GRL	Gorelyy	3.87	11	eP	Pn	02 39 51.4	+4.1
GRL				eS	Sb	02 40 39.2	-3.8
DALK	Dalny	4.44	15	eP	Pn	02 39 58.8	+3.9
UGLR	Uglovaya	4.62	15	eP	Pn	02 40 02.5	+4.9
AVH	Avacha	4.66	14	eP	Pn	02 40 03.4	+5.3
SDLR	Sedlovina	4.70	15	eP	Pn	02 40 02.7	+4.1
KRER	Koryakskii	4.70	14	eP	Pn	02 40 02.9	+4.2
KRX	Arik	4.74	13	eP	Pn	02 40 03.7	+4.5
GNL	Ganaly	4.99	7	eP	Pn	02 40 07.1	+4.5
MKZ	Mys Kozlova	6.54	26	eP	Pn	02 40 27.5	+3.7

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*IDC **03** 02:47:04.4±2.8,7.°37S×130.°06E,h65^{km}±37^{km},mb3.5/2,*
mb1 3.6/6,mb1mx3.3/34,mbtmp3.7/6,ML3.6/4,Error
ellipse: s-maj=70.0km s-min=24.3km az=92.0

ISC 03 02:47:02.4±0.9**,7.°43S**±0.°06×**130.°2E**±0.°2**,h50**^{km}**,n6,**
σ**2^{s}.51**/10**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.61	9	P	Pn	02 48 38.4	+1.4
	0.9nm,0.3s,baz=246,slow=20,SNR=8.7						
SIJI				S	Sn	02 49 48.1	-2.9
	0.9nm,0.3s,baz=248,slow=23,SNR=2.3						
FITZ	Fitzroy Crossi	11.50	202	P	Pn	02 49 46.4	+2.4
	0.4nm,0.3s,baz=28,slow=14,SNR=30						
FITZ				S	Sn	02 51 48.1	-2.9
	1.5nm,0.3s,baz=158,slow=16,SNR=7.2						
WRA	Warramunga Arr	13.06	163	P	Pn	02 50 07.5	+2.1
	0.3nm,0.3s,baz=343,slow=13,SNR=17						
WRA				S	Sn	02 52 26.8	-2.5
	0.8nm,0.3s,baz=336,slow=21,SNR=13						
ASAR	Alice Springs	16.52	168	P	P	02 50 54.0	+1.2
	0.2nm,0.3s,baz=353,slow=7.7,SNR=12						
ASAR				S	Sn	02 53 50.8	-2.7
	0.3nm,0.3s,baz=348,slow=25,SNR=7.7						
MKAR	Makanchi Array	68.70	327	P	P	02 58 00.1	-0.7
	0.4nm,0.4s,baz=126,slow=7.9,SNR=9.9						
ZALV	Zalesovo Beam	72.06	334	P	P	02 58 20.8	-0.3
	0.4nm,0.4s,baz=116,slow=6.6,SNR=2.1						

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*NEIC **03** 03:02:28.7±1.4,27.°41S±0.°04×71.°47W±0.°08,h4^{km}±5^{km},*
Error ellipse: s-maj=11.5km s-min=3.2km az=68.0
*IDC **03** 03:02:29.7±1.9,27.°50S×70.°94W,h0^{km},mb4.1/3,*
mb1 4.1/3,mb1mx3.6/23,mbtmp4.1/3,MS3.4/1,Ms1 3.3/1,
ms1mx2.8/17,Error ellipse: s-maj=94.7km s-min=33.6km
az=98.0
*GUC **03** 03:02:31.8±0.7,27.°46S×71.°25W,h25^{km}±15^{km},ML3.8*

ISC 03 03:02:29.6±3.0**,27.°43S**±0.°03×**71.°30W**±0.°07**,h10**^{km}±20^{km}**,**
n51,σ**0^{s}.99**/55**,mb4.1**/3**,3C-1D,Near coast of northern**
Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC04	Llanos de Chal	0.79	166	⇓iP	Pb	03 02 45.9	+0.3
AC04				i S	Sb	03 02 55.4	-1.0
AC04	Llanos de Chal	0.79	166		Pb	03 02 45.3	-0.2
GO03	Copiap	0.96	100	eP	Pb	03 02 48.7	+0.4
GO03				eS	Sb	03 03 00.2	-0.9
GO03				IAML		03 03 01.5	
	comp=E,4µm,0.2s						
GO03	Copiap	0.96	100		Pb	03 02 48.8	+0.4
AC01	Pan de Azucar	1.42	26	⇑iP	Pb	03 02 56.8	+0.5
AC01				i S	Sb	03 03 14.3	-0.2
AC01	Pan de Azucar	1.42	26	Pn	Pn	03 02 56.2	+0.7
LCO	Las Campanas	1.66	162	eS	Sn	03 03 19.5	-1.0
LCO	Las Campanas	1.66	162	Pn	Pn	03 02 59.9	+0.8
AC05	El Transito	1.67	147	⇑iP	Pb	03 03 00.3	-0.1
AC05				eS	Sb	03 03 21.3	-0.3
AC05				IAML		03 03 25.4	
	comp=N,2µm,0.3s						
AC05	El Transito	1.67	147	Pn	Pb	03 02 60.0	-0.5
AC02	Maricunga	2.02	73	⇑iP	Pb	03 03 06.9	+0.1
AC02				eS	Sb	03 03 31.6	-0.5
AC02				IAML		03 03 35.3	
	comp=E,3µm,0.2s						
AC02	Maricunga	2.02	73	Pn	Pb	03 03 06.8	+0.1
GO02	Mina Guanaco	2.73	34	eP	Pn	03 03 15.7	+1.9
GO02				IAML		03 03 59.9	
	comp=N,657nm,0.5s						
GO02	Mina Guanaco	2.73	34		Pn	03 03 15.5	+1.7
CO01	Juntas del Tor	2.75	158	eP	Pn	03 03 16.1	+2.1
CO01				eS	Sn	03 03 47.8	+0.3
CO01				IAML		03 03 59.8	
	comp=E,293nm,0.3s						
CO01	Juntas del Tor	2.75	158		Pn	03 03 15.2	+1.2
GO04	Tololo Observa	2.77	171	eP	Pn	03 03 15.3	+1.1
GO04				eS	Sn	03 03 48.0	+0.1
GO04	Tololo Observa	2.77	171		Pn	03 03 15.1	+0.8
PB14	IPOC Station P	2.91	16	i P	Pn	03 03 17.1	+0.9
PB14				IAML		03 04 09.7	
	comp=E,168nm,0.8s						
PB14	IPOC Station P	2.91	16		Pn	03 03 17.0	+0.8
VCA	Vinchina	3.02	116	eP	Pb	03 03 22.6	-1.1
CO03	El Pedregal	3.44	171	eP	Pn	03 03 24.5	+1.1
CO03				eS	Sn	03 04 01.7	-2.5
CO03				IAML		03 04 26.0	
	comp=E,467nm,0.4s						
CO03	El Pedregal	3.44	171	Pn	Pn	03 03 24.0	+0.7
CO02	Combarbal	3.77	176		Pn	03 03 28.3	+0.4
PB10	IPOC Station P	3.96	10	Pn	Pn	03 03 30.7	+0.2
ZON	Zonda	4.69	152	Pn	Pn	03 03 41.2	+0.7
PB04	IPOC Station P	5.18	12	Pn	Pn	03 03 47.0	-0.4
LVC	Limon Verde	5.27	25	Pn	Pn	03 03 49.7	+0.9
VA03	San Esteban	5.35	173		Pn	03 03 50.7	+1.0
MT02	Curacav	5.81	179	Pn	Pn	03 03 56.2	+0.4
PB07	IPOC Station P	5.82	13		Pn	03 03 55.8	-0.4
PB09	IPOC Station P	5.91	19		Pn	03 03 58.2	+0.7
MT05	Renca	5.96	176	Pn	Pn	03 03 58.1	+0.1
PB01	IPOC Station P	6.57	15		Pn	03 04 06.0	-0.5
TA01	Diego Aracena	6.91	9	Pn	Pn	03 04 09.9	-1.2
BO02	Sierra Bellavi	7.35	177	Pn	Pn	03 04 16.8	-0.3
BO02					Sb	03 06 06.9	+1.7
PB08	IPOC Station P	7.52	16	Pn	Pn	03 04 19.2	-0.5
PB08					LR	03 06 27.1	
PSGCX	Pisagua	7.87	8	Pn	Pn	03 04 23.2	-1.1
GO01	Chusmiza	7.96	14	Pn	Pn	03 04 26.2	+0.3
H03N1	Juan Fernandez	8.89	226	T	T	03 14 12.6	
	baz=53,slow=71,SNR=327						
H03N2	Juan Fernandez	8.90	226	T	T	03 14 13.9	
	baz=53,slow=71,SNR=290						
H03N3	Juan Fernandez	8.91	226	T	T	03 14 12.1	
	baz=53,slow=71,SNR=245						
PB16	IPOC Station P	9.20	11	Pn	Pn	03 04 42.8	-0.2
BDFB	Brasilia	24.58	66	LR	LR	03 18 38.3	
	comp=E,83nm,20.4s,baz=158,slow=40						
BANI	BANI	45.56	1	P	P	03 10 47.6	-2.4
SNAA	Sanae	57.45	160	P	P	03 12 18.6	+0.2
	comp=E,1.8nm,0.5s,baz=293,slow=13,SNR=14						
SNAA	Sanae	57.45	160	IAmb	IAmb	03 12 19.5	
	comp=Z,2.2nm,0.7s						
QSPA	South Pole Qui	62.78	180	P	P	03 12 56.6	+1.5
	comp=Z,1.7nm,1.1s,baz=236,slow=5.2,SNR=1.9						
TORD	Torodi Ar. Bea	81.39	70	P	P	03 14 47.6	+0.5
	comp=Z,1.1nm,0.6s,baz=251,slow=4.4,SNR=6.2						
ZALV	Zalesovo Beam	148.21	27	PKPbc	PKPbc	03 22 16.5	+1.1
	comp=Z,1.3nm,0.5s,baz=311,slow=2.9,SNR=9.2						
MKAR	Makanchi Array	151.63	40	PKPbc	PKPbc	03 22 25.1	+0.9
	comp=Z,0.7nm,0.7s,baz=326,slow=2.1,SNR=9.3						

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*NEIC **03** 03:33:48.0±1.3,2.°48N±0.°09×128.°1E±0.°1,h156^{km}±6^{km},*
mb4.3/14,Error ellipse: s-maj=17.0km s-min=11.5km
az=55.0
*DJA **03** 03:33:48.7±0.8,3°N±4°×12°8E±°,h125^{km}±10^{km},M4.5/10,*
mb4.5/5,mB4.8/2,MLv4.5/10,Mw(mB)4.1/2
*IDC **03** 03:33:48.2±0.9,2.°58N×128.°39E,h156^{km}±9^{km},mb3.5/9,*
mb1 3.6/10,mb1mx3.3/51,mbtmp3.9/10,MS3.4/1,
Ms1 3.6/1,ms1mx2.5/27,Error ellipse: s-maj=31.2km
s-min=9.9km az=67.0

ISC 03 03:33:47.3±0.6**,2.°56N**±0.°06×**128.°21E**±0.°06**,h150**^{km}**,n40,**
σ**0^{s}.88**/44**,mb4.0**/14**,1C,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.96	205		Pn	03 34 21.8	-0.2
TNTI	Ternate	1.96	205	P	Pn	03 34 22.2	+0.2
SGSI	Sangihe	2.90	293	P	Pn	03 34 33.0	-0.4
SGSI				S	Sn	03 35 07.0	-2.1
SIJI	Sorong	4.57	138	P	Pn	03 34 56.1	+0.9
	1.7nm,0.3s,baz=323,slow=20,SNR=7.4						
SIJI				S	Sn	03 35 46.5	-1.5
	2.9nm,0.3s,baz=166,slow=22,SNR=7.4						
KMSI	Cibinong	4.66	245	P	Pn	03 34 56.5	+0.2
KMSI				S	Sn	03 35 50.0	0.0
SANI	Sanana	5.08	206	P	Pn	03 35 01.9	0.0
	0.1nm16nm,1.2s						
KCP	Kidapawan	5.41	325	⇑iP	Pn	03 35 07.9	+1.7
GTOI	Gorontalo	5.53	250	P	Pn	03 35 08.6	+0.8
	0.4nm1µm89nm,0.7s						
GTOI				S	Sn	03 36 11.9	+1.2
	0.4nm1µm89nm,0.7s						
LUWI	Luwuk	6.50	237	Pn	Pn	03 35 19.5	-1.3
MRSI	Marisa	6.60	252	P	Pn	03 35 23.0	+1.0
	0.4nm1µm90nm,0.6s						
MRSI				S	Sn	03 36 35.6	-0.6
	0.4nm1µm90nm,0.6s						
FAKI	Fak Fak	6.77	143	Pn	Pn	03 35 25.1	+0.6
APSI	Ampana	7.41	242	P	Pn	03 35 32.2	-0.6
TOLI2	Tolitoli	7.56	259		Pn	03 35 33.6	-1.3
MTN	Manton Dam	15.57	169		P	03 37 19.1	-0.9
FITZ	Fitzroy Crossi	20.68	187	P	P	03 38 15.0	-0.6
	4.0nm,1.1s,baz=14,slow=12,SNR=6.4						
WB0	Warramunga Arr	23.00	165	P	P	03 38 39.1	-0.1
WB0				IAmb	IAmb	03 39 03.6	
	comp=Z,20nm,1.4s						
WRA	Warramunga Arr	23.15	165	P	P	03 38 40.9	+0.3
	comp=Z,1.2nm,0.4s,baz=343,slow=10,SNR=34						
WRA				pP	pP	03 39 10.2	+1.0
	comp=Z,1.0nm,0.8s,baz=348,slow=12,SNR=2.9						
WRA				PcP	PcP	03 42 25.5	+0.9
	comp=Z,0.7nm,1.1s,baz=342,slow=2.2,SNR=1.5						
WR0	Warramunga Arr	23.22	165	P	P	03 38 40.9	-0.4
WR0				IAmb	IAmb	03 38 46.7	
	comp=Z,30nm,1.8s						
ASAR	Alice Springs	26.65	168	P	P	03 39 12.3	+0.1
	comp=Z,0.3nm,0.5s,baz=352,slow=7.9,SNR=10						
ASAR				pP	pP	03 39 45.8	+2.0
	comp=Z,0.5nm,0.8s,baz=343,slow=8.7,SNR=3.1						
ASAR				PcP	PcP	03 42 32.8	+0.4
	comp=Z,0.6nm,0.4s,baz=355,slow=2.1,SNR=18						
CMAR	Chiang Mai Arr	32.74	301	LR	LR	03 55 46.9	
	comp=Z,56nm,18.1s,baz=262,slow=40						
MJAR	Matsushiro Arr	35.06	14	P	P	03 40 24.8	-1.1
	comp=Z,1.0nm,0.4s,baz=189,slow=9.6,SNR=5.1						
STKA	Stephens Creek	36.53	161	P	P	03 40 38.7	+0.2
	comp=Z,3.2nm,0.3s,baz=348,slow=7.4,SNR=16						
STKA	Stephens Creek	36.53	161	IAmb	IAmb	03 40 39.7	
	comp=Z,0.8nm,0.5s						
H11S3	WAKE ISLAND Hy	40.88	64	T	T	04 25 02.1	
	baz=251,SNR=4.0						
H11S2	WAKE ISLAND Hy	40.89	64	T	T	04 25 01.7	
	baz=251						
H11S1	WAKE ISLAND Hy	40.89	64	T	T	04 25 11.6	
	baz=251						
ULN	Ulaanbaatar	48.69	341	P	P	03 42 16.5	-0.1
ULN				IAmb	IAmb	03 42 18.4	
	comp=Z,2.8nm,0.8s						
SONM	Songino Array	48.88	341	P	P	03 42 18.5	+0.5
	comp=Z,0.9nm,0.6s,baz=150,slow=8.3,SNR=7.7						
YAK	Yakutsk	59.34	1	P	P	03 43 34.3	+1.0
MK31	Makanchi Array	59.36	325	P	P	03 43 34.1	+0.4
MKAR	Makanchi Array	59.36	325	P	P	03 43 34.6	+0.9
	comp=Z,1.7nm,0.4s,baz=115,slow=8.1,SNR=35						
MKAR				pP	pwP	03 44 11.2	-0.8
	comp=Z,0.6nm,0.5s,baz=123,slow=8.6,SNR=3.5						
ZALV	Zalesovo Beam	62.30	333	P	P	03 43 53.3	-0.1
	comp=Z,0.6nm,0.4s,baz=148,slow=6.7,SNR=3.4						
KURK	Kurchatov	63.52	327	P	P	03 44 01.9	+0.4
KURK				IAmb	IAmb	03 44 02.9	
	comp=Z,3.2nm,0.7s						
KK31	Karatay Array	65.09	317	P	P	03 44 11.4	-0.6
KK31				IAmb	IAmb	03 46 03.0	
	comp=Z,13nm,2.0s						
KKAR	Karatay Array	65.09	317	P	P	03 44 11.2	-0.7
BRVK	Borovoye	69.17	327	P	P	03 44 36.9	-0.6
ABKAR	Akbulak array	73.99	321	P	P	03 45 06.6	+0.2
ABKAR				IAmb	IAmb	03 45 53.4	
	comp=Z,4.0nm,1.3s						
VNDA	Vanda	82.09	173	P	P	03 45 49.7	-0.8
	comp=Z,0.2nm,0.4s,baz=315,slow=10.0,SNR=1.6						
VNDA	Vanda	82.09	173	IAmb	IAmb	03 48 15.7	
	comp=Z,7.4nm,1.6s						
TORD	Torodi Ar. Bea	124.68	288	PKP	PKiKP	03 52 30.7	+0.2
	comp=Z,0.2nm,0.3s,baz=87,slow=2.2,SNR=1.8						

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*SIGU **03** 03:39:33.9,45.°82N×26.°66E,h84^{km}*
*MOS **03** 03:39:33.6±0.8,45.°78N×26.°72E,h80^{km},mb4.5/4,Error*
ellipse: s-maj=7.5km s-min=5.0km az=114.9
*BUC **03** 03:39:34.6±0.2,45.°78N×26.°69E,h79^{km}±2^{km},ml4.1/62,*
Error ellipse: s-maj=1.6km s-min=1.3km az=27.0
*IDC **03** 03:39:34.4±0.6,45.°79N×26.°57E,h75^{km}±6^{km},mb3.5/8,*
mb1 3.5/12,mb1mx3.3/38,mbtmp3.7/12,Error ellipse:
s-maj=22.0km s-min=12.2km az=145.0
*IASPEI **03** 03:39:34.9±1.3,45.°81N±0.°02×26.°68E±0.°02,h80^{km}±6^{km},*
mb4.1/15,Error ellipse: s-maj=3.6km s-min=3.4km
az=37.9,GT5 selection from ISC bulletin GT5 identified by
Bondr and McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
*NEIC **03** 03:39:35.0±1.0,45.°79N±0.°03×26.°68E±0.°03,h79^{km}±5^{km},*
Error ellipse: s-maj=4.6km s-min=2.7km az=141.0
*SOF **03** 03:39:35.8,45.°73N×26.°59E,h51^{km},MD4.5*

ISC 03 03:39:34.7±0.6**,45.°79N**±0.°02×**26.°68E**±0.°02**,h82**^{km}±4^{km}**,**
n398,σ**1^{s}.23**/561**,mb4.1**/15**,115C-151D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.06	344	⇑P	Pn	03 39 46.0	-0.5
PLOR				⇓S	Sn	03 39 54.4	-0.6
PLOR	Plostina	0.06	344	⇑P	Pn	03 39 46.0	-0.5
PLOR				⇓S	Sn	03 39 54.4	-0.6
PLOR	Plostina	0.06	344	P	Pn	03 39 46.0	-0.5
PLOR						03 39 54.4	
PLOR	Plostina	0.06	344		Pn	03 39 46.0	-0.5
PLOR					Sn	03 39 54.4	-0.6
VRI	Vrincioaia	0.09	26	⇑P	Pn	03 39 46.1	-0.3
VRI				⇑S	Sn	03 39 54.3	-0.8
VRI	Vrincioaia	0.09	26	⇑P	Pn	03 39 46.1	-0.3
VRI				⇑S	Sn	03 39 54.3	-0.8
VRI	Vrincioaia	0.09	26	eP	Pn	03 39 46.2	-0.3
VRI	Vrincioaia	0.09	26	eP	Pn	03 39 46.1	-0.3
VRI				e		03 39 54.3	
VRI	Vrincioaia	0.09	26		Pn	03 39 46.1	-0.3
VRI					Sn	03 39 54.3	-0.8
BISRR	Bisoca	0.24	174	⇓P	Pn	03 39 47.1	+0.1
BISRR				⇓S	Sn	03 39 55.9	-0.1
BISRR	Bisoca	0.24	174	⇓P	Pn	03 39 47.1	+0.1
BISRR				⇓S	Sn	03 39 55.9	-0.1
BISRR	Bisoca	0.24	174		Pn	03 39 47.1	+0.1
ODBI	Odobesti	0.27	95	⇑P	Pn	03 39 47.7	+0.7
ODBI				⇑S	Sn	03 39 56.8	+0.7
ODBI	Odobesti	0.27	95	⇑P	Pn	03 39 47.7	+0.7
ODBI				⇑S	Sn	03 39 56.8	+0.7
ODBI	Odobesti	0.27	95		Pn	03 39 47.7	+0.7
NEHR	Nehoiu	0.45	216	⇑P	Pn	03 39 48.8	+0.6
NEHR	Nehoiu	0.45	216	⇑P	Pn	03 39 48.8	+0.6
NEHR	Nehoiu	0.45	216		Pn	03 39 48.8	+0.6
GRER		0.46	153	⇓P	Pn	03 39 49.4	+1.1
GRER		0.46	153	⇓P	Pn	03 39 49.4	+1.1
GRER		0.46	153		Pn	03 39 49.4	+1.1
MLR	Muntele Rosu	0.59	240	⇓P	Pn	03 39 49.7	+0.1
MLR				⇓S	Sn	03 40 00.1	-0.5
MLR	Muntele Rosu	0.59	240	P	Pn	03 39 49.6	0.0
	304nm,0.3s,baz=354,slow=11,SNR=915						
MLR				S	Sn	03 40 00.2	-0.4
	412nm,0.3s,baz=288,slow=20,SNR=18						
MLR	Muntele Rosu	0.59	240	⇓P	Pn	03 39 49.7	+0.1
MLR				⇓S	Sn	03 40 00.1	-0.5
MLR	Muntele Rosu	0.59	240	eP	Pn	03 39 49.7	+0.1
MLR	Muntele Rosu	0.59	240		Pn	03 39 49.7	+0.1
MLR					Sn	03 40 00.1	-0.5
ISR	Istrita	0.68	188	⇓P	Pn	03 39 51.0	+0.6
ISR	Istrita	0.68	188	⇓P	Pn	03 39 51.0	+0.6
OZUR		0.69	297	⇑P	Pn	03 39 50.1	-0.3
OZUR				⇓S	Sn	03 40 00.9	-1.2
OZUR		0.69	297	⇑P	Pn	03 39 50.1	-0.3
OZUR				⇓S	Sn	03 40 00.9	-1.2
OZUR		0.69	297		Pn	03 39 50.1	-0.3
TESR	Tescani	0.72	359	⇑P	Pn	03 39 50.6	-0.1
TESR				⇓S	Sn	03 40 01.9	-0.8
TESR	Tescani	0.72	359	⇑P	Pn	03 39 50.6	-0.1
TESR				⇓S	Sn	03 40 01.9	-0.8
TESR	Tescani	0.72	359		Pn	03 39 50.6	-0.1
TESR					Sn	03 40 01.9	-0.8
TUDR		0.72	105	⇑P	Pn	03 39 50.3	-0.3

TUDR				⇓S	Sn	03 40 02.1	-0.5
TUDR		0.72	105	⇑P	Pn	03 39 50.3	-0.3
TUDR				⇓S	Sn	03 40 02.1	-0.5
TUDR		0.72	105		Pn	03 39 50.4	-0.3
BIR	Birlad	0.82	54	⇑P	Pn	03 39 52.0	+0.2
BIR				⇓S	Sn	03 40 04.5	+0.1
BIR	Birlad	0.82	54	⇑P	Pn	03 39 52.0	+0.2
BIR				⇓S	Sn	03 40 04.5	+0.1
BIR	Birlad	0.82	54		Pn	03 39 52.0	+0.2
BIR					Sn	03 40 04.5	+0.1
VARL	Varlezi	0.83	82	⇑P	Pn	03 39 52.3	+0.4
VARL				⇑S	Sn	03 40 04.8	+0.2
VARL	Varlezi	0.83	82	⇑P	Pn	03 39 52.3	+0.4
VARL				⇑S	Sn	03 40 04.8	+0.2
VARL	Varlezi	0.83	82		Pn	03 39 52.2	+0.4
SCHL	Schela	0.86	109	⇓P	Pn	03 39 51.7	-0.5
SCHL				⇑S	Sn	03 40 04.0	-1.3
SCHL	Schela	0.86	109	⇓P	Pn	03 39 51.7	-0.5
SCHL				⇑S	Sn	03 40 04.0	-1.3
SCHL	Schela	0.86	109		Pn	03 39 51.7	-0.5
SECR		0.87	210	⇓P	Pn	03 39 53.2	+0.9
SECR				⇓S	Sn	03 40 07.0	+1.6
SECR		0.87	210	⇓P	Pn	03 39 53.2	+0.9
SECR				⇓S	Sn	03 40 07.0	+1.6
SECR		0.87	210		Pn	03 39 53.2	+0.9
PGOR	Pogoanele	0.91	166	⇓P	Pn	03 39 53.1	+0.3
PGOR				⇓S	Sn	03 40 07.7	+1.5
PGOR	Pogoanele	0.91	166	⇓P	Pn	03 39 53.1	+0.3
PGOR				⇓S	Sn	03 40 07.7	+1.5
PGOR	Pogoanele	0.91	166		Pn	03 39 53.1	+0.3
DOPR	Dopca	0.92	282	⇑P	Pn	03 39 53.0	+0.1
DOPR				⇓S	Sn	03 40 06.2	-0.3
DOPR	Dopca	0.92	282	⇑P	Pn	03 39 53.0	+0.1
DOPR				⇓S	Sn	03 40 06.2	-0.3
DOPR	Dopca	0.92	282		Pn	03 39 53.0	+0.1
PLAR	PLOIESTI	0.99	208	⇓P	Pn	03 39 54.6	+1.0
PLAR	PLOIESTI	0.99	208	⇓P	Pn	03 39 54.6	+1.0
GISR	Galati	1.03	109	⇓P	Pn	03 39 54.9	+0.8
GISR				⇓S	Sn	03 40 07.7	-1.0
GISR	Galati	1.03	109	⇓P	Pn	03 39 54.9	+0.8
GISR				⇓S	Sn	03 40 07.7	-1.0
GISR	Galati	1.03	109		Pn	03 39 54.9	+0.8
GIUM	Giurgiulesti	1.12	105	⇓P	Pn	03 39 55.9	+0.7
GIUM				⇑S	Sn	03 40 10.8	+0.1
GIUM	Giurgiulesti	1.12	105	⇓P	Pn	03 39 55.9	+0.7
GIUM				⇑S	Sn	03 40 10.8	+0.1
GIUM	Giurgiulesti	1.12	105	P	Pn	03 39 55.8	+0.6
SULR		1.15	195	⇓P	Pn	03 39 56.3	+0.6
SULR				⇓S	Sn	03 40 12.5	+1.2
SULR		1.15	195	⇓P	Pn	03 39 56.3	+0.6
SULR				⇓S	Sn	03 40 12.5	+1.2
SULR		1.15	195		Pn	03 39 56.3	+0.6
VASR	Vaslui	1.15	42	⇑P	Pn	03 39 55.9	+0.3
VASR				⇓S	Sn	03 40 11.1	-0.3
VASR	Vaslui	1.15	42	⇑P	Pn	03 39 55.9	+0.3
VASR				⇓S	Sn	03 40 11.1	-0.3
VASR	Vaslui	1.15	42		Pn	03 39 55.9	+0.3
GIRR	Girov	1.17	354	⇓P	Pn	03 39 56.1	+0.2
GIRR	Girov	1.17	354	⇓P	Pn	03 39 56.1	+0.2
GIRR	Girov	1.17	354		Pn	03 39 56.1	+0.2
VOIR		1.19	253	⇑P	Pn	03 39 56.1	-0.2
VOIR				⇑S	Sn	03 40 11.8	-0.7
VOIR		1.19	253	⇑P	Pn	03 39 56.1	-0.2
VOIR				⇑S	Sn	03 40 11.8	-0.7
VOIR		1.19	253	P	Pn	03 39 56.1	-0.2
VOIR						03 40 11.8	
VOIR		1.19	253		Pn	03 39 56.1	-0.2
VOIR					Sn	03 40 11.8	-0.7
CFR	Carcaliu	1.20	120	⇓P	Pn	03 39 55.7	-0.5
CFR				⇓S	Sn	03 40 10.9	-1.4
CFR	Carcaliu	1.20	120	⇓P	Pn	03 39 55.7	-0.5
CFR				⇓S	Sn	03 40 10.9	-1.4
CFR	Carcaliu	1.20	120	P	Pn	03 39 55.7	-0.5
CFR						03 40 10.9	
CFR	Carcaliu	1.20	120		Pn	03 39 55.6	-0.5
CFR					Sn	03 40 10.9	-1.4
BIZ	Bicaz	1.22	341	⇓P	Pn	03 39 57.3	+0.8
BIZ				⇓S	Sn	03 40 12.4	-0.4
BIZ	Bicaz	1.22	341	⇓P	Pn	03 39 57.3	+0.8
BIZ				⇓S	Sn	03 40 12.4	-0.4
BIZ	Bicaz	1.22	341		Pn	03 39 57.3	+0.8
BIZ					Sn	03 40 12.4	-0.4
JOSR	Joseni	1.22	319	⇑P	Pn	03 39 56.4	-0.2
JOSR				⇑S	Sn	03 40 12.8	-0.2
JOSR	Joseni	1.22	319	⇑P	Pn	03 39 56.4	-0.2
JOSR				⇑S	Sn	03 40 12.8	-0.2
JOSR	Joseni	1.22	319		Pn	03 39 56.4	-0.2
MTUR	Matau	1.27	244	⇓P	Pn	03 39 58.3	+1.2
MTUR	Matau	1.27	244	⇓P	Pn	03 39 58.3	+1.2
AMRR	Amara	1.27	158	⇑P	Pn	03 39 57.3	+0.2
AMRR				⇓S	Sn	03 40 13.8	-0.1
AMRR	Amara	1.27	158	⇑P	Pn	03 39 57.3	+0.2
AMRR				⇓S	Sn	03 40 13.8	-0.1
AMRR	Amara	1.27	158		Pn	03 39 57.3	+0.2
AMRR					Sn	03 40 13.8	-0.1
LEHL	Lehliu	1.32	175	⇓P	Pn	03 39 58.0	+0.3
LEHL				⇑S	Sn	03 40 15.6	+0.5
LEHL	Lehliu	1.32	175	⇓P	Pn	03 39 58.0	+0.3
LEHL				⇑S	Sn	03 40 15.6	+0.5
LEHL	Lehliu	1.32	175		Pn	03 39 58.0	+0.3
INCR	INCERC-Sediu C	1.40	195	⇓P	Pn	03 39 58.9	+0.2
INCR				⇓S	Sn	03 40 16.7	-0.1
INCR	INCERC-Sediu C	1.40	195	⇓P	Pn	03 39 58.9	+0.2
INCR				⇓S	Sn	03 40 16.7	-0.1
INCR	INCERC-Sediu C	1.40	195		Pn	03 39 58.9	+0.2
HARR	Harsova	1.41	141	⇑P	Pn	03 39 58.8	-0.1
HARR	Harsova	1.41	141	⇑P	Pn	03 39 58.8	-0.1
HARR	Harsova	1.41	141	P	Pn	03 39 58.8	-0.1
HARR	Harsova	1.41	141		Pn	03 39 58.8	-0.1
ARR	Arges	1.49	254	⇑P	Pn	03 40 00.4	+0.3
ARR				⇓S	Sn	03 40 18.4	-0.8
ARR	Arges	1.49	254	⇑P	Pn	03 40 00.4	+0.3
ARR				⇓S	Sn	03 40 18.4	-0.8
ARR	Arges	1.49	254		Pn	03 40 00.4	+0.3
ARR					Sn	03 40 18.4	-0.8
BUC1	Bucharest	1.51	198	⇓P	Pn	03 40 00.3	+0.1
BUC1				⇓S	Sn	03 40 19.1	-0.4
BUC1	Bucharest	1.51	198	⇓P	Pn	03 40 00.3	+0.1
BUC1				⇓S	Sn	03 40 19.1	-0.4
BUC1	Bucharest	1.51	198	*e*P	Pn	03 40 00.3	+0.1
BUC1	Bucharest	1.51	198	P	Pn	03 40 00.3	+0.1
BUC1						03 40 19.1	
BUC1	Bucharest	1.51	198		Pn	03 40 00.3	+0.1
BUC1					Sn	03 40 19.1	-0.4
STFAR	Stefanesti-Arg	1.52	233	⇑P	Pn	03 40 00.9	+0.5
STFAR	Stefanesti-Arg	1.52	233	⇑P	Pn	03 40 00.9	+0.5
IAS	Iasi	1.53	23	⇑P	Pn	03 40 00.5	+0.1
IAS				⇑S	Sn	03 40 19.1	-0.8
IAS	Iasi	1.53	23	⇑P	Pn	03 40 00.5	+0.1
IAS				⇑S	Sn	03 40 19.1	-0.8
TPGR	Topolog	1.54	127	⇑P	Pn	03 40 00.4	-0.3
TPGR				⇓S	Sn	03 40 19.0	-1.3
TPGR	Topolog	1.54	127	⇑P	Pn	03 40 00.4	-0.3
TPGR				⇓S	Sn	03 40 19.0	-1.3
TPGR	Topolog	1.54	127		Pn	03 40 00.4	-0.3
TLBR	Topalu	1.58	142	⇓P	Pn	03 40 01.0	-0.1
TLBR				⇑S	Sn	03 40 20.0	-1.0
TLBR	Topalu	1.58	142	⇓P	Pn	03 40 01.0	-0.1
TLBR				⇑S	Sn	03 40 20.0	-1.0
TLBR	Topalu	1.58	142		Pn	03 40 00.9	-0.1
PRAR	RASCA	1.60	349	⇓P	Pn	03 40 01.8	+0.4
PRAR	RASCA	1.60	349	⇓P	Pn	03 40 01.8	+0.4
RASA	Rasa	1.61	168	⇓P	Pn	03 40 01.4	-0.1
RASA				⇑S	Sn	03 40 21.3	-0.4
RASA	Rasa	1.61	168	⇓P	Pn	03 40 01.4	-0.1
RASA				⇑S	Sn	03 40 21.3	-0.4
TLCR		1.62	111	⇓P	Pn	03 40 02.0	+0.4
TLCR				⇓S	Sn	03 40 22.3	+0.3
TLCR		1.62	111	⇓P	Pn	03 40 02.0	+0.4
TLCR				⇓S	Sn	03 40 22.3	+0.3
TLCR		1.62	111	P	Pn	03 40 02.0	+0.4
TLCR		1.62	111		Pn	03 40 02.0	+0.4
MDB	Medias	1.64	283	⇑P	Pn	03 40 02.4	+0.6
MDB	Medias	1.64	283	⇑P	Pn	03 40 02.4	+0.6
MDB	Medias	1.64	283	P	Pn	03 40 02.4	+0.6
MDB	Medias	1.64	283		Pn	03 40 02.4	+0.6
SGRR	Singureni	1.64	198	⇓P	Pn	03 40 01.8	-0.1
SGRR				⇓S	Sn	03 40 21.7	-0.8
SGRR	Singureni	1.64	198	⇓P	Pn	03 40 01.8	-0.1
SGRR				⇓S	Sn	03 40 21.7	-0.8
SGRR	Singureni	1.64	198		Pn	03 40 01.8	-0.1
HUMR	Humele	1.74	224	⇑P	Pn	03 40 03.1	-0.1
HUMR				⇓S	Sn	03 40 23.9	-0.9
HUMR	Humele	1.74	224	⇑P	Pn	03 40 03.1	-0.1
HUMR				⇓S	Sn	03 40 23.9	-0.9
HUMR	Humele	1.74	224		Pn	03 40 03.1	-0.1
CVDA	Cernavoda	1.75	146	⇓P	Pn	03 40 03.2	0.0
CVDA				⇑S	Sn	03 40 23.7	-1.2
CVDA	Cernavoda	1.75	146	⇓P	Pn	03 40 03.2	0.0
CVDA				⇑S	Sn	03 40 23.7	-1.2
CVDA	Cernavoda	1.75	146		Pn	03 40 03.2	0.0
TIRR	Tirgusor	1.81	137	⇓P	Pn	03 40 04.0	-0.1
TIRR				⇑S	Sn	03 40 24.6	-1.9
TIRR	Tirgusor	1.81	137	⇓P	Pn	03 40 04.0	-0.1
TIRR				⇑S	Sn	03 40 24.6	-1.9
TIRR	Tirgusor	1.81	137	P	Pn	03 40 04.0	-0.1
TIRR	Tirgusor	1.81	137		Pn	03 40 04.0	-0.1
TIRR	Tirgusor	1.81	137		Pn	03 40 03.6	-0.5
ICOR	Ion Corvin	1.85	154	⇓P	Pn	03 40 04.9	+0.2
ICOR				⇑S	Sn	03 40 27.5	0.0
ICOR	Ion Corvin	1.85	154	⇓P	Pn	03 40 04.9	+0.2
ICOR				⇑S	Sn	03 40 27.5	0.0
JURR	Jurilovca	1.86	123	⇑P	Pn	03 40 05.2	+0.4
JURR	Jurilovca	1.86	123	⇑P	Pn	03 40 05.2	+0.4
MILM	Milestii Mici	1.86	52	⇑P	Pn	03 40 04.9	+0.2
MILM				⇑S	Sn	03 40 26.4	-1.2
MILM	Milestii Mici	1.86	52	⇑P	Pn	03 40 04.9	+0.2
MILM				⇑S	Sn	03 40 26.4	-1.2
MILM	Milestii Mici	1.86	52		Pn	03 40 05.0	+0.2
MILM	Milestii Mici	1.86	52	P	Pn	03 40 04.9	+0.2
KIS	Kishinev	1.91	50	⇑*i*P	Pn	03 40 05.7	+0.3
	100nm,0.2s						
KIS				*i* S	Sn	03 40 27.8	-1.1
	270nm,0.1s						
KIS	Kishinev	1.91	50	⇑P	Pn	03 40 05.7	+0.3
KIS				⇑S	Sn	03 40 28.2	-0.7
KIS	Kishinev	1.91	50	⇑P	Pn	03 40 05.7	+0.3
KIS				⇑S	Sn	03 40 28.2	-0.7
KIS	Kishinev	1.91	50*c*	*i*P	Pn	03 40 05.7	+0.3
KIS				*i* S	Sn	03 40 27.8	-1.1
KIS				pmax	pmax		
	comp=Z,100nm,0.2s						
KIS				smax	smax		
	comp=N,800nm,0.3s						
KIS				smax	smax		
	comp=E,850nm,0.3s						
KIS	Kishinev	1.91	50		Pn	03 40 05.8	+0.3
KIS	Kishinev	1.91	50	P	Pn	03 40 05.7	+0.3
KIS				Pm		03 40 06.6	
KIS				S	Sn	03 40 27.8	-1.1
KIS				Sm		03 40 27.9	
KIS				m		03 40 30.0	
COPA	Copaceanca	1.95	213	⇓P	Pn	03 40 05.6	-0.4
COPA				⇓S	Sn	03 40 28.3	-1.5
COPA	Copaceanca	1.95	213	⇓P	Pn	03 40 05.6	-0.4
COPA				⇓S	Sn	03 40 28.3	-1.5
COPA	Copaceanca	1.95	213		Pn	03 40 05.6	-0.4
MFTR	Murfatlar	2.03	142	⇓P	Pn	03 40 07.0	-0.1
MFTR				⇓S	Sn	03 40 30.3	-1.4
MFTR	Murfatlar	2.03	142	⇓P	Pn	03 40 07.0	-0.1
MFTR				⇓S	Sn	03 40 30.3	-1.4
ARCR	ARCALIA	2.06	310	⇓P	Pn	03 40 07.4	0.0
ARCR				⇑S	Sn	03 40 31.8	-0.7
ARCR	ARCALIA	2.06	310	⇓P	Pn	03 40 07.4	0.0
ARCR				⇑S	Sn	03 40 31.8	-0.7
ARCR	ARCALIA	2.06	310		Pn	03 40 07.4	0.0
LOT	Lotru	2.07	262	⇑P	Pn	03 40 07.4	-0.2
LOT				⇓S	Sn	03 40 31.5	-1.2
LOT	Lotru	2.07	262	⇑P	Pn	03 40 07.4	-0.2
LOT				⇓S	Sn	03 40 31.5	-1.2
LOT	Lotru	2.07	262	*e*P	Pn	03 40 07.2	-0.4
BURAR	Bucovina Array	2.08	332	⇓P	Pn	03 40 09.0	+1.1
BURAR				⇑S	Sn	03 40 34.7	+1.7
BURAR	Bucovina Array	2.08	332	⇓P	Pn	03 40 09.0	+1.1
BURAR				⇑S	Sn	03 40 34.7	+1.7
BURAR	Bucovina Array	2.08	332		Pn	03 40 09.0	+1.1
BURAR					Sn	03 40 34.7	+1.7
BUR08	Bucovina Ar. S	2.11	332		Pn	03 40 08.8	+0.6
TSCT	Constanta Port	2.15	138	⇑P	Pn	03 40 08.6	0.0
TSCT				⇓S	Sn	03 40 33.2	-1.3
TSCT	Constanta Port	2.15	138	⇑P	Pn	03 40 08.6	0.0
TSCT				⇓S	Sn	03 40 33.2	-1.3
TSCT	Constanta Port	2.15	138		Pn	03 40 08.6	0.0
EFOR	EFORIE	2.20	140	⇓P	Pn	03 40 09.4	+0.1
EFOR				⇓S	Sn	03 40 34.5	-1.3
EFOR	EFORIE	2.20	140	⇓P	Pn	03 40 09.4	+0.1
EFOR				⇓S	Sn	03 40 34.5	-1.3
TSSL	Sulina	2.24	105	⇓S	Sn	03 40 36.6	+0.1
TSSL	Sulina	2.24	105	⇓S	Sn	03 40 36.6	+0.1
CJR	Cluj-Napoca	2.33	295	⇑P	Pn	03 40 11.3	+0.3
CJR	Cluj-Napoca	2.33	295	⇑P	Pn	03 40 11.3	+0.3
CJR	Cluj-Napoca	2.33	295	P	Pn	03 40 11.3	+0.3
CJR	Cluj-Napoca	2.33	295		Pn	03 40 11.3	+0.3
ZIMR		2.33	204	⇓P	Pn	03 40 10.6	-0.4
ZIMR		2.33	204	⇓P	Pn	03 40 10.6	-0.4
PSN	Preselentsi	2.37	152	*i* P	Pn	03 40 12.0	+0.5
MANR	Mangalia	2.40	145	⇓P	Pn	03 40 11.9	0.0
MANR				⇓S	Sn	03 40 39.3	-1.1
MANR	Mangalia	2.40	145	⇓P	Pn	03 40 11.9	0.0
MANR				⇓S	Sn	03 40 39.3	-1.1
MANR	Mangalia	2.40	145		Pn	03 40 11.9	0.0
VLAD	Vladila	2.41	223	⇓P	Pn	03 40 11.3	-0.8
VLAD	Vladila	2.41	223	⇓P	Pn	03 40 11.3	-0.8
VLAD	Vladila	2.41	223		Pn	03 40 11.3	-0.8
TSMN	Mangalia Port-	2.41	145	⇓P	Pn	03 40 12.2	+0.1
TSMN				⇑S	Sn	03 40 39.4	-1.3
TSMN	Mangalia Port-	2.41	145	⇓P	Pn	03 40 12.2	+0.1
TSMN				⇑S	Sn	03 40 39.4	-1.3
SZH	Strazhica	2.58	192	*i* P	Pn	03 40 14.1	-0.3
SORM	Soroca	2.61	25	⇓P	Pn	03 40 14.3	-0.5
SORM	Soroca	2.61	25	⇓P	Pn	03 40 14.3	-0.5
SORM	Soroca	2.61	25	P	Pn	03 40 14.3	-0.5
SORM	Soroca	2.61	25		Pn	03 40 14.3	-0.5
SORM	Soroca	2.61	25	P	Pn	03 40 14.3	-0.5
DEV	Deva	2.64	273	⇓P	Pn	03 40 16.6	+1.5
DEV	Deva	2.64	273	⇓P	Pn	03 40 16.6	+1.5
PRD	Provadia	2.64	168	*i* P	Pn	03 40 15.9	+0.7
SRE	Strehaia	2.70	247	⇓P	Pn	03 40 16.1	+0.1
SRE				⇑S	Sn	03 40 47.4	-0.3
SRE	Strehaia	2.70	247	⇓P	Pn	03 40 16.1	+0.1
SRE				⇑S	Sn	03 40 47.4	-0.3
ROIA	ROIAK	2.74	169	*i* P	Pn	03 40 16.9	+0.3
PVL	Pavlikeni	2.75	201	*i* P	Pn	03 40 17.8	+1.2
KSV	Kosov	2.75	337	⇓*i*P	Pn	03 40 17.4	+0.7
KSV				Pm		03 40 22.8	
KSV				*e*S	Sn	03 40 49.3	+0.2
KSV				Sm		03 40 59.2	
GZR	Gura Zlata	2.77	263	⇑P	Pn	03 40 17.4	+0.4
GZR				⇑S	Sn	03 40 49.5	+0.1
GZR	Gura Zlata	2.77	263	⇑P	Pn	03 40 17.4	+0.4
GZR				⇑S	Sn	03 40 49.5	+0.1
GZR	Gura Zlata	2.77	263		Pn	03 40 17.4	+0.4
KMPD	K-Podol'skiy	2.78	357	⇑*i*P	Pn	03 40 16.3	-0.7
KMPD				*i* S	Sn	03 40 46.8	-2.8
RAKU	Rahkiv	2.82	323	⇓*i*P	Pn	03 40 18.1	+0.5
RAKU				Pm		03 40 18.9	
RAKU				*i* S	Sn	03 40 50.0	-0.7
RAKU				Sm		03 40 51.9	
NDNU	Novodnistrovsk	2.85	9	*i* P	Pn	03 40 17.3	-0.6
NDNU				Pm		03 40 18.4	
NDNU				*i* S	Sn	03 40 48.3	-2.9
NDNU				Sm		03 40 49.1	
NSLU	Nyzhne Selyshc	2.85	329	*i* P	Pn	03 40 24.2	+6.2
NSLU				Pm		03 40 26.0	
NSLU				*e*S	Sn	03 41 02.1	+11
NSLU				Sm		03 41 05.2	
BMR	Baia Mare	2.89	312	⇑P	Pn	03 40 19.0	+0.5
BMR	Baia Mare	2.89	312	⇑P	Pn	03 40 19.0	+0.5
BMR	Baia Mare	2.89	312	P	Pn	03 40 19.0	+0.5
BMR	Baia Mare	2.89	312		Pn	03 40 19.0	+0.5
DRGR		2.92	291	⇑P	Pn	03 40 19.2	+0.1
DRGR		2.92	291	⇑P	Pn	03 40 19.2	+0.1
BAIL	Bailesti	2.95	234	⇑P	Pn	03 40 19.0	-0.4
BAIL	Bailesti	2.95	234	⇑P	Pn	03 40 19.0	-0.4
RMGR	Halanga-Turnu	3.03	250	⇓P	Pn	03 40 20.5	+0.1
RMGR				⇑S	Sn	03 40 55.4	-0.3
RMGR	Halanga-Turnu	3.03	250	⇓P	Pn	03 40 20.5	+0.1
RMGR				⇑S	Sn	03 40 55.4	-0.3
STNU	Starunia	3.28	334	*e*P	Pn	03 40 24.7	+0.9
STNU				*i* S	Sn	03 41 01.5	-0.2
KORU	Korolevo	3.39	316	⇓*i*P	Pn	03 40 25.7	+0.4
KORU				Pm		03 40 31.0	
KORU				*e*S	Sn	03 41 04.3	-0.1
KORU				Sm		03 41 21.6	
HORU	Horodok	3.43	357	⇑*i*P	Pn	03 40 25.5	-0.4
HORU				Pm		03 40 26.0	
HORU				*i* S	Sn	03 41 02.9	-2.5
HORU				Sm		03 41 04.4	
TRSU	Trosnyk	3.44	314	*e*S	Sn	03 41 05.3	-0.2
TRSU				Sm		03 41 22.6	
MEZ	Mezhgor'ye	3.48	323	*e*P	Pn	03 40 27.7	+1.2
MEZ				Pm		03 40 28.3	
MEZ				*e*S	Sn	03 41 06.9	+0.4
MEZ				Sm		03 41 10.4	
BZS	Buzias	3.55	269	⇓P	Pn	03 40 27.3	-0.2
BZS	Buzias	3.55	269	⇓P	Pn	03 40 27.3	-0.2
BZS	Buzias	3.55	269	*e*P	Pn	03 40 27.2	-0.2
BRIU	Brid	3.57	317	⇑*i*P	Pn	03 40 28.2	+0.5
BRIU				Pm		03 40 41.7	
BRIU				*e*S	Sn	03 41 08.4	-0.3
BRIU				Sm		03 41 15.4	
MDVR	Moldovita	3.64	256	⇓P	Pn	03 40 28.8	0.0
MDVR				⇑S	Sn	03 41 09.1	-1.6
MDVR	Moldovita	3.64	256	⇓P	Pn	03 40 28.8	0.0
MDVR				⇑S	Sn	03 41 09.1	-1.6
LTVH	Ltavrtes, Hu	3.66	298	*e*PN	Pn	03 40 29.3	+0.4
BERU	Beregovo	3.68	313	⇑*i*P	Pn	03 40 29.2	-0.1
BERU				Pm		03 40 30.9	
BERU				*e*S	Sn	03 41 10.0	-1.5
BERU				Sm		03 41 30.7	
PGB	Panagyurishte	3.71	210	*i* P	Pn	03 40 30.3	+0.6
MUKU	Mukachevo	3.81	316	P	Pn	03 40 31.0	0.0
MUKU				Pm		03 40 31.5	
MUKU				*e*S	Sn	03 41 14.3	-0.3
MUKU				Sm		03 41 15.0	
MORS	Morshin	3.84	332	*e*P	Pn	03 40 32.8	+1.4
MORS				*e*S	Sn	03 41 16.8	+1.5
EDRB	Edirne	3.94	179	P	Pn	03 40 32.6	-0.2
EDRB				S	Sn	03 41 13.7	-4.2
EDRB	Edirne	3.94	179	*e*P	Pn	03 40 32.6	-0.2
PLD	Plovdiv	3.95	202	*e*P	Pn	03 40 31.4	-1.5
VTS	Vitosha	4.02	219	⇓P	Pn	03 40 33.8	-0.2
VTS	Vitosha	4.02	219	⇓P	Pn	03 40 33.8	-0.2
VTS	Vitosha	4.02	219	*i* P	Pn	03 40 33.9	-0.2
UZH	Uzhgorod	4.12	315	*e*P	Pn	03 40 35.8	+0.6
UZH				*e*S	Sn	03 41 22.8	+0.6
UZH				smax	smax		
	comp=N,5.0nm,0.8s						
UZH				smax	smax		
	comp=E,6.0nm,0.8s						
UZH				MLR	MLR		
	comp=Z,3.0nm,1.2s						
UZH	Uzhgorod	4.12	315	*e*P	Pn	03 40 36.5	+1.3
UZH				*e*S	Sn	03 41 21.4	-0.8
PHSR	Pinarhisar	4.20	171	*e*P	Pn	03 40 36.0	-0.4
KDZ	Kurdzhali	4.24	193	*e*P	Pn	03 40 36.8	-0.1
RZN	Rozhen	4.34	200	*i* P	Pn	03 40 38.3	-0.1
KOLS	Kolonicke sedl	4.34	318	*e*P	Pn	03 40 39.0	+0.8
KOLS				*e*S	Sn	03 41 28.0	+0.4
KOLS	Kolonicke sedl	4.34	318	*e*P	Pn	03 40 39.0	+0.8
KOLS				*e*S	Sn	03 41 28.0	+0.4
LVV	L'vov	4.41	337	*e*P	Pn	03 40 39.6	+0.5
LVV				*i* S	Sn	03 41 29.4	+0.2
LVV				pmax	pmax		
	comp=Z,30nm,1.0s						
LVV				smax	smax		
	comp=E,80nm,1.3s						
LVV				smax	smax		
	comp=N,90nm,1.4s						
LVV				MLR	MLR		
	comp=E,2µm,5.2s						
LVV				MLR	MLR		
	comp=N,1µm,4.7s						
LVV				MLR	MLR		
	comp=Z,2µm,4.7s						
LVV	L'vov	4.41	337	*e*P	Pn	03 40 40.4	+1.3
LVV				Pm		03 40 43.0	
LVV				*e*S	Sn	03 41 28.0	-1.2
LVV				Sm		03 41 29.9	
CTYL	Yalikoy Yolu	4.47	164	*e*P	Pn	03 40 39.6	-0.4
KWP	Kalwaria Pacla	4.68	327	P	Pn	03 40 43.7	+0.8
KWP	Kalwaria Pacla	4.68	327		Pn	03 40 43.7	+0.8
SLVT	Silivri	4.69	166	*e*P	Pn	03 40 42.8	-0.2
KKB	Krupnik	4.70	215	*i* P	Pn	03 40 43.7	+0.5
RDO	Rodhopi	4.71	191	P	Pn	03 40 42.6	-0.7
RDO	Rodhopi	4.71	191	*e*P	Pn	03 40 42.7	-0.6
CRVS	Cervenica-Dubn	4.72	313	*e*P	Pn	03 40 43.6	+0.2
CRVS	Cervenica-Dubn	4.72	313	*e*P	Pn	03 40 43.6	+0.2
CTKS	Kestanelik-??a	4.74	163	*e*P	Pn	03 40 42.9	-0.8
TKR	Tekirdag	4.84	172	*e*P	Pn	03 40 44.6	-0.4
KLYT	Kilyos	4.85	158	*e*P	Pn	03 40 44.4	-0.8
BGKT	Bogazkoy	4.85	161	*e*P	Pn	03 40 44.6	-0.6
NVR	Nevrokopi	4.88	206	P	Pn	03 40 45.6	-0.1
KECS	Kecovo	5.01	305	*e*P	Pn	03 40 49.3	+2.0
KECS				*e*S	Sn	03 41 43.1	-0.8
KECS	Kecovo	5.01	305	*e*P	Pn	03 40 49.3	+2.0
KECS				*e*S	Sn	03 41 43.1	-0.8
ISK	Istanbul-Kandi	5.03	159	P	Pn	03 40 47.2	-0.4
ISK				S	Sn	03 41 40.8	-3.6
ISK	Istanbul-Kandi	5.03	159	*e*P	Pn	03 40 47.4	-0.2
KAVV	Kandilli-Istan	5.03	159	*e*P	Pn	03 40 47.2	-0.5
DIVS	Divibare	5.04	253		Pn	03 40 47.3	-0.5
KAVA	Kavala	5.04	199	P	Pn	03 40 48.0	+0.2
KAVA				S	Sn	03 41 40.6	-4.1
ENEZ	Enez	5.07	184	P	Pn	03 40 47.7	-0.4
ENEZ				S	Sn	03 41 41.2	-4.1
ENEZ	Enez	5.07	184	*e*P	Pn	03 40 47.7	-0.4
SEV	Sevastopol'	5.10	102	⇓*i*P	Pn	03 40 49.1	+0.6
SEV				*i* S	Sn	03 41 43.7	-2.4
SEV	Sevastopol'	5.10	102	P	Pn	03 40 49.1	+0.6
SEV				Pm		03 40 49.5	
SEV				S	Sn	03 41 43.7	-2.4
SEV				Sm		03 41 47.5	
RKY	Sarkoy-Tekirda	5.11	176	*e*P	Pn	03 40 48.7	-0.1
SILT	Sile	5.11	154	*e*P	Pn	03 40 48.1	-0.7
PSZ	Piszkesteto	5.12	297	P	Pn	03 40 49.4	+0.5
PSZ	Piszkesteto	5.12	297	Pn	Pn	03 40 49.4	+0.5
ERIK	Erikli-Kesan	5.12	181	*e*P	Pn	03 40 48.5	-0.3
SRS	Serrai	5.18	207	P	Pn	03 40 49.7	0.0
AKASG	Malin Array Be	5.20	18	P	Pn	03 40 49.1	-0.8
	comp=Z,7.5nm,0.3s,baz=207,slow=12,SNR=45						
AKASG				S	Sn	03 41 43.9	-4.6
	comp=Z,82nm,0.3s,baz=200,slow=22,SNR=18						
AKBB	Malin Array Si	5.20	18	P	Pn	03 40 49.2	-0.7
AKBB	Malin Array Si	5.20	18		Pn	03 40 49.1	-0.7
MRMT	Marmara Adasi	5.23	172	*e*P	Pn	03 40 49.4	-1.0
SIM	Simferopol'	5.31	96	*e*P	Pn	03 40 50.5	-0.9
SIM				*e*S	Sn	03 41 46.6	-4.7
SIM	Simferopol'	5.31	96	P	Pn	03 40 50.5	-0.9
SIM				Pm		03 40 54.2	
SIM				S	Sn	03 41 46.6	-4.7
SIM				Sm		03 41 50.6	
VAY	Valandovo	5.37	215	*i* Pn	Pn	03 40 52.7	+0.4
THAS	Thassos island	5.37	196	P	Pn	03 40 52.1	-0.2
KNT	Kendrikon	5.38	212	P	Pn	03 40 52.7	+0.3
KNT				S	Sn	03 41 50.1	-2.9
KNT	Kendrikon	5.38	212	*e*P	Pn	03 40 52.5	+0.1
SMTH	Samothraki Isl	5.38	189	P	Pn	03 40 51.4	-1.1
GELI	Tayfur-Gelibol	5.39	182	*e*P	Pn	03 40 52.0	-0.6
KRBG	Karabiga-Canak	5.41	175	*e*P	Pn	03 40 51.6	-1.3
LPK	Lapseki	5.42	179	*e*P	Pn	03 40 52.7	-0.2
HRT	Hereke	5.42	155	*e*P	Pn	03 40 52.9	-0.2
YAL	Yalta	5.45	101	*e*P	Pn	03 40 53.4	+0.1
YAL				*e*S	Sn	03 41 50.7	-3.9
YAL	Yalta	5.45	101	P	Pn	03 40 53.4	+0.1
YAL				S	Sn	03 41 50.7	-3.9
TRML	Termal-Yalova	5.49	160	*e*P	Pn	03 40 53.5	-0.4
EDC	Edincik	5.51	170	*e*P	Pn	03 40 53.8	-0.4
SOH	Sokhos	5.52	207	P	Pn	03 40 54.4	0.0
ALU	Alushta	5.57	99	S	Sn	03 41 55.7	-1.8
ALU				Sm		03 42 02.0	
GADA	Gvkgeada	5.62	186	P	Pn	03 40 55.4	-0.3
GADA				S	Sn	03 41 54.7	-4.2
GADA	Gvkgeada	5.62	186	*e*P	Pn	03 40 55.4	-0.3
KDZE	Karadeniz Ereo	5.66	141	⇓P	Pn	03 40 56.1	-0.1
KDZE	Karadeniz Ereo	5.66	141	⇓P	Pn	03 40 56.1	-0.1
KDZE	Karadeniz Ereo	5.66	141	*e*P	Pn	03 40 55.6	-0.6
SAUV	Serdivan-Sakar	5.71	151	*e*P	Pn	03 40 55.7	-1.2
GRG	Griva	5.75	214	*e*P	Pn	03 40 57.2	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SPNC	Sapanca-Adapaz	5.75	151	eP	Pn	03 40 58.4	+0.9
OUR	Ouranopolis	5.80	201	P	Pn	03 40 57.8	-0.3
OUR	Ouranopolis	5.80	201	eP	Pn	03 40 57.6	-0.5
ADVT	Abdulvahap	5.80	156	eP	Pn	03 40 58.3	+0.1
PLG	Polygyros	5.91	205	P	Pn	03 40 59.9	+0.3
LANS	Liptovska Anna	5.93	307	eP	Pn	03 41 03.5	+3.6
LANS	Liptovska Anna	5.93	307	eP	Pn	03 41 03.5	+3.6
SUDU	Sudak	5.94	96	eP	Pn	03 41 00.3	+0.3
SUDU				eS	Sn	03 42 03.3	-3.2
SUDU	Sudak	5.94	96	P	Pn	03 41 00.3	+0.3
SUDU				Pm		03 41 02.2	
SUDU				S	Sn	03 42 03.3	-3.2
SUDU				Sm		03 42 06.4	
BOZC	Bozcaada	5.96	185	eP	Pn	03 41 00.5	+0.1
LIA	Limnos Island	5.99	191	P	Pn	03 41 00.1	-0.6
VYHS	Vyhne	5.99	300	eP	Pn	03 41 04.0	+3.3
VYHS				eS	Sn	03 42 09.6	+1.7
VYHS	Vyhne	5.99	300	eP	Pn	03 41 04.0	+3.3
VYHS				eS	Sn	03 42 09.6	+1.7
GULT	Gulveren	6.05	151	eP	Pn	03 41 01.9	+0.3
FEO	Feodosiya	6.18	94	S	Sn	03 42 09.0	-3.6
FEO				Sm		03 42 14.8	
BALB	Balikesir	6.21	171	eP	Pn	03 41 02.8	-0.9
PAIG	Paliouri	6.26	202	P	Pn	03 41 03.9	-0.5
MDUB	Mudurnu	6.26	147	eP	Pn	03 41 03.8	-0.7
MDUB	Mudurnu	6.26	147	Pn	Pn	03 41 05.4	+0.9
FNA	Florina	6.32	220	P	Pn	03 41 05.5	+0.2
FNA	Florina	6.32	220	Pn	Pn	03 41 05.5	+0.2
OJC	Ojcow	6.40	316	P	Pn	03 41 06.5	+0.3
OJC	Ojcow	6.40	316		Pn	03 41 06.5	+0.3
SRCK	Saricakaya, Es	6.43	152	eP	Pn	03 41 06.6	-0.2
LIT	Litokhoron	6.46	210	P	Pn	03 41 07.6	+0.4
LIT	Litokhoron	6.46	210	Pn	Pn	03 41 07.6	+0.4
YUVA	Yuva-Kibriscik	6.52	144	eP	Pn	03 41 08.9	+0.8
BORA	Eskisehir	6.53	153	eP	Pn	03 41 08.1	0.0
BZK	Bozkurt	6.53	123	eP	Pn	03 41 06.6	-1.5
SIGR	SIGRI	6.60	186	P	Pn	03 41 09.0	-0.1
SIGR	SIGRI	6.60	186	eP	Pn	03 41 08.9	-0.1
XOR	Xorichti	6.91	203	P	Pn	03 41 13.0	-0.4
NEO	Neokhori	6.96	203	P	Pn	03 41 13.6	-0.4
STON	Ston	7.07	249	ePn	Pn	03 41 16.6	+1.3
STON				Sn	Sn	03 42 32.8	-1.3
MAKA	Makarska	7.34	254	ePn	Pn	03 41 19.8	+0.8
MAKA				Sn	Sn	03 42 41.3	+0.6
HVAR	Hvar	7.76	254	Sn	Sn	03 42 50.3	-0.9
BR131	Keskin Array S	7.93	137	P	Pn	03 41 27.2	-0.2
BR131	Keskin Array S	7.93	137	Pn	Pn	03 41 27.2	-0.2
BRTR	Keskin Array B	7.93	137	P	Pn	03 41 26.6	-0.8
	comp=Z,0.2nm,0.3s,baz=327,slow=13,SNR=9.8						
BRTR				S	Sn	03 42 52.0	-3.6
	comp=Z,0.2nm,0.3s,baz=316,slow=16,SNR=3.2						
MORI	Morici	8.03	260	ePn	Pn	03 41 30.2	+1.7
MORI				Sn	Sn	03 42 59.5	+1.8
ZIRJ	Zirje	8.14	259	ePn	Pn	03 41 31.8	+1.8
ZIRJ				Sn	Sn	03 43 00.9	+0.5
SUW	Suwalki	8.53	346	P	Pn	03 41 36.0	+0.7
SUW	Suwalki	8.53	346	Pn	Pn	03 41 36.0	+0.7
IDID	Didziasalis	9.54	0	eS	Sn	03 43 30.9	-3.4
IIGN	Ignalina	9.58	358	eP	Pn	03 41 47.6	-1.9
IIGN				eS	Sn	03 43 28.0	-7.3
ISAL	Salakas	9.80	358	eP	Pn	03 41 50.9	-1.7
ISAL				eS	Sn	03 43 30.9	-10
PABE	Paberze	9.88	351	eP	Pn	03 41 50.8	-2.8
PABE				eS	Sn	03 43 35.2	-7.3
CLL	Collm	10.61	306	eP	Pn	03 42 02.0	-1.6
OBN	Obninsk	11.25	30	S	Sn	03 44 04.5	-12
	comp=Z,1.1nm,0.3s,baz=160,slow=23,SNR=6.2						
KIV	Kislovodsk	11.51	93	⇓eP	Pn	03 42 08.6	-7.5
KIV				eS	Sn	03 44 22.0	-0.7
KIV				pmax	pmax		
	comp=Z,12nm,2.7s						
KIV				MLR	MLR		
	comp=Z,36nm,15.0s						
KVAR	Kislovodsk Arr	11.52	93	S	Sn	03 44 18.0	-4.9
	baz=180,slow=20,SNR=2.1						
DAVOX	Davos/Dischmat	11.67	281	P	Pn	03 42 31.6	+13
	comp=Z,0.4nm,0.3s,baz=83,slow=6.5,SNR=11						
KBZ	Khabaz	11.72	94	P	Pn	03 42 19.6	+0.9
	comp=Z,0.1nm,0.3s,baz=274,slow=11,SNR=5.6						
VSU	Vasula	12.69	0	eP	Pn	03 42 27.7	-4.1
FINES	FINESS Array B	15.69	359	P	Pn	03 43 04.4	-6.2
	comp=Z,0.3nm,0.3s,baz=169,slow=12,SNR=9.2						
FINES				S	Sn	03 45 47.7	-16
	comp=Z,0.4nm,0.3s,baz=186,slow=25,SNR=1.3						
NB2	NORSAR Subarra	17.76	335	P	P	03 43 35.5	-0.5
	comp=Z,0.2nm,0.3s,baz=141,slow=12						
NOA	NORSAR Array B	17.76	335	P	P	03 43 36.0	-0.1
	comp=Z,0.0nm,0.3s,baz=141,slow=11,SNR=5.3						
NOA	NORSAR Array B	17.76	335	P	P	03 43 36.0	-0.1
AKTO	Aktyubinsk	21.34	66	P	P	03 44 16.0	+1.0
	comp=Z,1.5nm,0.6s,baz=277,slow=8.6,SNR=6.9						
AKTO	Aktyubinsk	21.34	66	P	P	03 44 16.0	+1.0
ARU	Arti	22.47	50	P	P	03 44 27.0	+0.1
	comp=Z,2.1nm,0.5s,baz=247,slow=11,SNR=9.9						
ARU	Arti	22.47	50c	iP	P	03 44 24.3	-2.6
ARU						03 44 46.0	
ARU				S	S	03 48 31.8	+4.2
ARU				SS	SnSn	03 49 01.3	-2.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARU	Arti	22.47	50	P	P	03 44 26.7	-0.2
ARU				IAmb	IAmb	03 44 27.7	
	comp=Z,8.4nm,0.7s						
ABKAR	Akbulak array	22.63	69	P	P	03 44 30.0	+1.4
ABKAR				IAmb	IAmb	03 44 48.0	
	comp=Z,13nm,1.9s						
ESDC	Sonseca Array	23.23	266	P	P	03 44 34.0	-0.8
	comp=Z,0.4nm,0.7s,baz=61,slow=9.5,SNR=4.8						
ARCES	ARCESS Array B	23.82	359	P	P	03 44 40.1	+0.4
	comp=Z,1.9nm,0.7s,baz=181,slow=11,SNR=6.2						
KKAR	Karatay Array	31.12	79	P	P	03 45 46.8	+1.4
KKAR				pmax	pmax		
	comp=Z,13nm,2.0s						
KKAR	Karatay Array	31.12	79	P	P	03 45 46.8	+1.4
KBS	Kingsbay	33.72	355	iP	P	03 46 10.7	+3.1
KBS				pmax	pmax		
	comp=Z,19nm,1.2s						
NIL	Nilore	37.32	92	P	P	03 46 39.5	+0.5
NIL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NIL	Nilore	37.32	92	P	P	03 46 39.5	+0.5
ZALV	Zalesovo Beam	37.39	56	P	P	03 46 40.3	+1.0
	comp=Z,0.6nm,0.3s,baz=290,slow=9.3,SNR=4.1						
ZALV	Zalesovo Beam	37.39	56	eP	P	03 46 41.6	+2.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	37.76	68	P	P	03 46 44.2	+1.7
	comp=Z,0.3nm,0.4s,baz=269,slow=8.3,SNR=8.7						
TORD	Torodi Ar. Bea	38.80	221	P	P	03 46 51.8	+0.3
	comp=Z,1.2nm,0.5s,baz=32,slow=8.9,SNR=10						
DGZ	Jazzator, Alta	40.07	62	iP	P	03 47 00.1	-1.8
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	42.41	70	eP	P	03 47 23.2	+2.1
DBIC	Dimbokro	47.56	225	P	P	03 48 01.4	-0.7
	comp=Z,1.1nm,0.3s,baz=19,slow=8.3,SNR=16						
LSA	Lhasa	52.08	84	P	P	03 48 37.4	+0.5
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	Lhasa	52.08	84	P	P	03 48 37.4	+0.5
HHC	Hu-ho-hao-te	59.15	62	eP	P	03 49 29.5	+2.6
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						

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*IDC **03** 03:51:27.4±0.8, 54°.16S×147°.01W, h0^{km}, mb4.2/5, mb1 4.3/5, mb1mx4.1/30, mbtmp4.2/5, MS3.6/2, Ms1 3.6/2, ms1mx3.2/15, Error ellipse: s-maj=34.4km s-min=26.6km az=38.0*

*NEIC **03** 03:51:29.2±1.0, 54°.2S±0°.1×147°.1W±0°.3, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=27.8km s-min=21.0km az=54.0*

ISC 03 03:51:29.0±0.6**, 54°.2S**±0°.1×**147°.0W**±0°.2**, h10**^{km}**, n37,** σ**0**^{s}**.51**/35**, mb4.3**/8**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	29.56	200	LR	LR	04 06 33.3	
	comp=Z,108nm,18.9s,baz=194,slow=31						
QSPA	South Pole Qui	35.97	180	P	P	03 58 30.5	+0.9
	3.1nm,1.0s,baz=91,slow=3.4,SNR=5.5						
QSPA				LR	LR	04 09 54.5	
	comp=Z,92nm,19.2s,baz=240,slow=31						
QSPA	South Pole Qui	35.97	180	IAmb	IAmb	03 58 34.6	
	comp=Z,5.1nm,1.1s						
NIUE	Niue	39.22	324	P	P	03 58 57.0	-0.2
PMSA	Palmer Station	40.36	139	P	P	03 59 05.7	-0.6
BELA	Belgrano 2	41.97	163	P	P	03 59 19.2	-0.2
SNAA	Sanae	51.92	166	P	P	04 00 36.7	-0.5
	comp=Z,3.1nm,0.9s,baz=210,slow=7.9,SNR=7.0						
SNAA	Sanae	51.92	166	P	P	04 00 36.8	-0.5
SNAA				IAmb	IAmb	04 00 37.2	
	comp=Z,4.1nm,1.0s						
STKA	Stephens Creek	54.23	264	P	P	04 00 54.3	-0.4
	comp=Z,2.6nm,0.9s,baz=165,slow=7.8,SNR=4.6						
STKA	Stephens Creek	54.23	264	IAmb	IAmb	04 00 57.7	
	comp=Z,1.2nm,1.1s						
MAW	Mawson	56.50	193	P	P	04 01 11.2	+0.6
MAW				IAmb	IAmb	04 01 14.0	
	comp=Z,1.9nm,0.8s						
AS31	Alice Springs	64.87	264	P	P	04 02 08.4	+0.1
AS31				IAmb	IAmb	04 02 28.3	
	comp=Z,3.2nm,1.6s						
ASAR	Alice Springs	64.87	264	P	P	04 02 08.3	0.0
	comp=Z,3.7nm,0.9s,baz=137,slow=6.6,SNR=26						
WRA	Warramunga Arr	67.49	267	P	P	04 02 25.2	+0.1
	comp=Z,2.1nm,0.9s,baz=147,slow=5.1,SNR=11						
CCX	Cicese	89.62	25	P	P	04 04 26.8	+0.4
CCX				IAmb	IAmb	04 05 29.6	
	comp=Z,17nm,1.0s						
IL31		118.62	0		PKiKP	04 10 15.8	+0.3
ILAR	Eielson Array	118.62	0	PKP	PKiKP	04 10 15.7	+0.1
	comp=Z,2.8nm,1.0s,baz=199,slow=2.5,SNR=16						
YKA	Yellowknife Ar	119.08	17	PKP	PKPdf	04 10 16.0	-0.5
	comp=Z,0.3nm,0.9s,baz=172,slow=1.8,SNR=4.8						
COLD	Coldfoot	121.11	359		PKiKP	04 10 21.2	+0.8
TOLK	Toolik Lake Re	122.52	359		PKiKP	04 10 24.2	+1.0
INK	Inuvik	122.58	6		PKiKP	04 10 23.4	+0.2
NRS	Narsarsuaq	139.88	47	PKPdf	PKiKP	04 10 57.6	-0.6
NIL	Nilore	145.14	250	PKPbc	PKPbc	04 11 04.5	-1.2
SUMG	Summit	145.86	31	PKPbc	PKPab	04 11 08.3	+0.5
KBL	Kabul	148.11	247		PKPbc	04 11 15.1	+0.5
MK31	Makanchi Array	148.36	277		PKPbc	04 11 14.7	0.0
MKAR	Makanchi Array	148.36	277	PKPbc	PKPbc	04 11 14.6	-0.1
	comp=Z,3.9nm,0.9s,baz=115,slow=4.1,SNR=27						
MAKZ	Makanchi	148.55	277		PKPbc	04 11 14.7	-0.4
PESTR	Estremoz	148.64	102	PKPbc	PKPbc	04 11 15.9	+0.3
ZAA0	Zalesovo Array	150.16	291	PKPbc	PKPbc	04 11 18.6	-0.2
ZAA0					PKPab	04 11 25.2	+0.3
ZALV	Zalesovo Beam	150.16	291	PKPbc	PKPbc	04 11 18.1	-0.7
	comp=Z,1.1nm,0.8s,baz=128,slow=2.4,SNR=4.6						
ESDC	Sonseca Array	151.26	105	PKPbc	PKPbc	04 11 22.1	+0.1
	comp=Z,3.2nm,1.1s,baz=230,slow=1.8,SNR=15						
NRIK	Noril'sk	151.33	323	PKPbc	PKiKP	04 11 21.4	-0.2
	comp=Z,0.6nm,0.3s,baz=152,slow=2.1,SNR=4.2						
KURK	Kurchatov	152.37	282		PKPbc	04 11 23.8	-0.2
KURBB	Kurchatov Arra	152.38	281	PKPbc	PKPbc	04 11 23.8	-0.3
	comp=Z,2.0nm,0.7s,baz=117,slow=2.4,SNR=12						
KK31	Karatay Array	153.18	261		PKiKP	04 11 26.4	+0.1
KKAR	Karatay Array	153.18	261		PKiKP	04 11 26.4	+0.1

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*IDC **03** 03:52:15.4±1.8, 1°.74N×127°.00E, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.5/35, mbtmp3.9/4, ML3.2/1, Error ellipse: s-maj=110.3km s-min=23.6km az=68.0*

ISC 03 03:52:21.1±1.3**, 1°.5N**±0°.2×**126°.8E**±0°.6**, h35**^{km}**, n5,** σ**0**^{s}**.88**/5**, mb3.9**/3**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	5.69	343	⇑iP	Pn	03 53 49.4	+6.1
KCP				iS	Sn	03 54 48.2	+0.7
FITZ	Fitzroy Crossi	19.55	183	P	Pn	03 56 47.9	+0.5
	0.1nm,0.3s,baz=8.1,slow=14,SNR=1.9						
WRA	Warramunga Arr	22.59	161	P	P	03 57 19.2	+0.4
	1.5nm,0.5s,baz=340,slow=11,SNR=24						
STKA	Stephens Creek	36.08	158	P	P	03 59 19.3	-0.2
	0.9nm,0.4s,baz=336,slow=8.8,SNR=3.7						
MKAR	Makanchi Array	59.39	326	P	P	04 02 19.3	-0.8
	0.4nm,0.4s,baz=114,slow=7.3,SNR=9.4						

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*CNRM **03** 04:17:13.4, 36°.38N×9°.50W, h30^{km}, ml3.2, Hypocentre not reviewed by the ISC*

*SFS **03** 04:17:14.0, 36°.46N×9°.37W, h14^{km}, ML2.8, SW CABO DE SAN VICENTE*

*IGIL **03** 04:17:14.9, 36°.40N×9°.27W, h9^{km}, ML3.3*

*MDD **03** 04:17:15.1±1.1, 36°.45N×9°.32W, h14^{km}±5^{km}, mbLg2.7/21, Error ellipse: s-maj=9.2km s-min=6.3km az=63.0, PRXIMO*

*INMG **03** 04:17:15.3±1.1, 36°.41N×9°.28W, h10^{km}±4^{km}, MD2.7, ML2.6, Error ellipse: s-maj=4.9km s-min=2.8km az=65.0*

ISC 03 04:17:14.9±2.2**, 36°.45N**±0°.07×**9°.30W**±0°.07**, h33**^{km}±12^{km}**, n73,** σ**1**^{s}**.49**/133**, 1C-2D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.78	29	⇓P	Pn	04 17 29.9	+0.4
	8.5nm,0.1s,SNR=18						
PFVI				S	Sb	04 17 39.5	-0.9
	308nm,0.1s,SNR=30						
PFVI	Vila Bisbo	0.78	29	⇓iP	Pn	04 17 30.0	+0.4
PFVI				eS	Sn	04 17 41.0	+0.9
PFVI				A	A	04 17 43.1	
	180nm,0.2s						
PFVI	Vila Bisbo	0.78	29	P		04 17 30.0	
MORF	Marmelete	1.00	31	eP	Pb	04 17 33.3	-0.5
MORF				eS	Sb	04 17 46.3	-0.4
MORF				AML	AML	04 17 48.5	
	comp=E,522nm,0.2s						
MORF	Marmelete	1.00	31	P	Pb	04 17 33.4	-0.5
MORF				S	Sb	04 17 46.3	-0.4
	comp=E,522nm,0.2s						
MORF	Marmelete	1.00	31	eP	Pb	04 17 33.4	-0.5
MORF				eS	Sn	04 17 47.8	+2.1
MORF				A	A	04 17 48.7	
	comp=E,202nm,0.3s						
PTEO	Sao Teotonio	1.19	23	P	Pb	04 17 36.3	-0.6
PTEO				S	Sb	04 17 53.0	+1.1
	comp=E,65nm,0.4s						
PTEO	Sao Teotonio	1.19	23	eP	Pb	04 17 36.3	-0.6
PTEO				eS	Sb	04 17 53.0	+1.1
PTEO				A	A	04 17 54.5	
	comp=E,129nm,0.4s						
PBDV	Barranco-do-Ve	1.35	54	P	Pn	04 17 38.3	+0.7
PBDV				S	Sb	04 17 57.3	+0.5
	comp=E,56nm,0.1s						
PBDV	Barranco-do-Ve	1.35	54	eP	Pn	04 17 38.3	+0.7
PBDV				eS	Sb	04 17 57.3	+0.5
PBDV				A	A	04 18 00.6	
	comp=E,56nm,0.1s						
PCVE	Castro Verde	1.55	40	P	Pn	04 17 41.2	+1.0
PCVE	Castro Verde	1.55	40	eP	Pn	04 17 41.2	+1.0
PCVE				A	A	04 18 06.2	
	comp=E,49nm,0.2s						
PVAQ	Vaqueiros	1.59	53	P	Pn	04 17 41.4	+0.7
PVAQ				S	Sn	04 18 00.9	+0.8
	comp=E,70nm,0.2s						
PVAQ	Vaqueiros	1.59	53	eP	Pn	04 17 41.4	+0.7
PVAQ				eS	Sn	04 18 00.9	+0.8
PVAQ				A	A	04 18 07.3	
	comp=E,70nm,0.2s						
PVAQ	Vaqueiros	1.59	53	P		04 17 41.3	
MESJ	Messejana	1.63	32	eP	Pn	04 17 42.3	+0.9
MESJ	Messejana	1.63	32	P	Pn	04 17 42.3	+0.9
PNCL	Nicolau / Gran	1.77	20	P	Pn	04 17 44.6	+1.4
PNCL				S	Sn	04 18 06.6	+2.1
	comp=E,52nm,0.4s						
PNCL	Nicolau / Gran	1.77	20	ePn	Pn	04 17 44.6	+1.4
PNCL				eSn	Sn	04 18 06.6	+2.1
PNCL				A	A	04 18 13.4	
	comp=E,52nm,0.4s						
EGRO	El Granado	1.81	53	P	Pn	04 17 44.8	+1.0
	comp=E,0.6nm,0.1s,SNR=22						
EGRO				S	Sb	04 18 09.4	-0.4
	comp=E,64nm,0.2s						
EVO	Evora	2.31	26	P	Pn	04 17 52.4	+1.7
EVO				S	Sn	04 18 19.5	+1.4
	comp=E,26nm,0.1s						
EVO	Evora	2.31	26	eP	Pn	04 17 51.3	+0.6
EVO				eS	Sn	04 18 18.6	+0.5
EVO	Evora	2.31	26	ePn	Pn	04 17 52.4	+1.7
EVO				eSn	Sn	04 18 19.5	+1.4
EVO				A	A	04 18 28.7	
	comp=E,26nm,0.1s						
EMIN	Mina Concepcio	2.48	57	P	Pn	04 17 54.1	+1.1
	comp=E,2.2nm,0.1s,SNR=36						
EMIN				S	Sn	04 18 24.2	+2.1
	comp=E,12nm,0.1s,SNR=13						
PMAFR	Mafra	2.50	0	P	Pn	04 17 54.5	+1.2
	comp=E,2.3nm,0.2s,SNR=6.1						
PMAFR				S	Sn	04 18 23.4	+0.8
	comp=E,41nm,0.2s,SNR=20						
PMAFR	Mafra	2.50	0	ePn	Pn	04 17 54.8	+1.5
PMAFR				eSn	Sn	04 18 23.2	+0.6
PMAFR				A	A	04 18 24.8	
	comp=E,26nm,0.2s						
PMTG	Montargil	2.75	18	P	Pn	04 17 57.3	+0.6
PMTG				S	Sn	04 18 29.8	+1.1
	comp=E,20nm,0.4s						
PMTG	Montargil	2.75	18	ePn	Pn	04 17 57.3	+0.6
PMTG				eSn	Sn	04 18 29.8	+1.1
PMTG				A	A	04 18 45.6	
	comp=E,20nm,0.4s						
PESTR	Estremoz	2.77	29	eSn	Sn	04 18 30.5	+1.3
PESTR				A	A	04 18 46.6	
	comp=E,11nm,0.2s						
ESPR	Espera	2.80	80	⇑P	Pn	04 17 58.2	+0.8
	comp=E,12nm,0.2s,SNR=18						
ESPR				S	Sn	04 18 30.3	+0.2
	comp=E,19nm,0.3s						
PSBE	So Bento	3.08	7	ePn	Pn	04 18 02.9	+1.6
PSBE				eSn	Sn	04 18 38.1	+1.1
PSBE				A	A	04 19 00.8	
	comp=E,11nm,0.4s						
EJIF	Jimena Fronter	3.09	89	P	Pn	04 18 03.1	+1.7
	SNR=7.9						
PMRV	Marv??o	3.33	26	P	Pn	04 18 05.4	+0.7
PMRV				S	Sn	04 18 43.5	+0.3
	comp=E,12nm,0.7s						
PMRV	Marv??o	3.33	26	ePn	Pn	04 18 05.4	+0.7
PMRV				eSn	Sn	04 18 43.5	+0.3
PMRV				A	A	04 19 05.3	
	comp=E,12nm,0.7s						
ECAB	El Cabril	3.50	61	P	Pn	04 18 07.8	+0.7
	comp=E,4.8nm,0.3s,SNR=64						
ECAB				S	Sn	04 18 47.0	-0.2
	comp=E,18nm,0.4s,SNR=5.7						
HORN	Hornachuelos	3.52	66	P		04 18 08.0	
PCAS	Casmilo, Conde	3.65	10	P	Pn	04 18 10.6	+1.5
PCAS				S	Sn	04 18 50.6	-0.4
	comp=E,6.7nm,0.6s						
PCAS	Casmilo, Conde	3.65	10	ePn	Pn	04 18 10.6	+1.5
PCAS				eSn	Sn	04 18 50.6	-0.4
PCAS				A	A	04 19 23.1	
	comp=E,6.7nm,0.6s						
PCBR	Castelo Branco	3.67	23	P	Pn	04 18 11.3	+1.9
PCBR				S	Sn	04 18 52.1	+0.5
	comp=E,5.0nm,0.6s						
PCBR	Castelo Branco	3.67	23	ePn	Pn	04 18 11.3	+1.9
PCBR				eSn	Sn	04 18 52.1	+0.5
PCBR				A	A	04 18 53.6	
	comp=E,10.0nm,0.6s						
ZHG	ZHG	3.71	143	P		04 18 11.0	
ZHG				S		04 18 54.0	
EADA	Adamuz	4.14	64	P	Pn	04 18 16.5	+0.7
	comp=E,2.7nm,0.2s,SNR=39						
EADA				S	Sn	04 19 03.5	+0.4
	comp=E,2.1nm,0.2s						
SRHM	Skhour des Reh	4.14	163	P		04 18 17.0	
MTE	Manteigas	4.17	19	P	Pn	04 18 18.0	+1.6
MTE				S	Sn	04 19 03.8	-0.2
	comp=E,5.1nm,0.7s						
MTE	Manteigas	4.17	19	ePn	Pn	04 18 18.0	+1.6
MTE				eSn	Sn	04 19 03.8	-0.2
MTE				A	A	04 19 33.2	
	comp=E,10nm,0.7s						
EGOR	Sierra Gorda,	4.22	80	P	Pn	04 18 19.2	+2.1
	comp=E,0.7nm,0.1s,SNR=7.9						
EGOR				S	Sn	04 19 07.2	+1.9
	comp=E,5.1nm,0.4s,SNR=7.9						
PVIS	Viseu	4.40	14	P	Pn	04 18 20.4	+1.0
PVIS				S	Sn	04 19 09.0	-0.5
	comp=E,1.8nm,0.3s						
PVIS	Viseu	4.40	14	ePn	Pn	04 18 20.4	+1.0
PVIS				eSn	Sn	04 19 09.0	-0.5
PVIS				A	A	04 19 12.1	
	comp=E,3.6nm,0.3s						
EPLA	Plasencia	4.41	34	P	Pn	04 18 20.8	+1.2
	comp=E,0.4nm,0.1s,SNR=5.5						
EPLA				S	Sn	04 19 09.0	-0.8
	comp=E,2.5nm,0.2s,SNR=7.4						
IFR	Ifrane	4.51	129	eP	Pn	04 18 21.1	0.0
IFR				eS	Sn	04 19 07.8	-4.7
ELGU	Los Guajares,	4.58	83	P	Pn	04 18 23.0	+1.0
	comp=E,1.0nm,0.3s,SNR=7.9						
ELGU				S	Sn	04 19 12.1	-2.1
	comp=E,5.3nm,0.4s,SNR=7.9						
EQUE	Quentar	4.76	79	P	Pn	04 18 26.4	+1.9
	comp=E,1.5nm,0.3s,SNR=7.7						
EQUE				S	Sn	04 19 20.2	+1.6
	comp=E,1.8nm,0.3s						
PVRL	Vila Real	4.97	14	S	Sn	04 19 21.4	-2.2
	comp=E,3.1nm,0.3s						
PVRL	Vila Real	4.97	14	eSn	Sn	04 19 21.4	-2.2
PVRL				A	A	04 19 24.1	
	comp=E,6.1nm,0.3s						
PAB	San Pablo	4.98	50	P	Pn	04 18 28.0	+0.5
	comp=E,0.5nm,0.2s,SNR=7.9						
PAB				S	Sn	04 19 21.5	-2.5
	comp=E,4.2nm,0.5s,SNR=7.9						
MVO	Moncorvo	5.03	20	P	Pn	04 18 29.1	+1.0
	comp=E,1.8nm,0.3s,SNR=7.9						
MVO				S	Sn	04 19 23.2	-1.8
	comp=E,6.7nm,0.4s,SNR=7.9						
MVO	Moncorvo	5.03	20	ePn	Pn	04 18 29.2	+1.1
MVO				eSn	Sn	04 19 23.6	-1.5
MVO				A	A	04 20 01.4	
	comp=E,3.9nm,0.4s						
POLO	Lamas de Olo	5.05	13	P	Pn	04 18 29.6	+1.2
POLO				S	Sn	04 19 23.6	-2.1
	comp=E,1.5nm,0.3s						
POLO	Lamas de Olo	5.05	13	ePn	Pn	04 18 29.6	+1.2
POLO				eSn	Sn	04 19 23.6	-2.1
POLO				A	A	04 19 25.4	
	comp=E,1.5nm,0.3s						
EQES	Quesada	5.16	73	P	Pn	04 18 30.1	+0.1
	comp=E,1.0nm,0.2s,SNR=12						
EQES				S	Sn	04 19 28.5	+0.1
	comp=E,1.4nm,0.3s						
EBER	Berja	5.17	83	P	Pn	04 18 31.5	+1.2
	comp=E,1.4nm,0.3s,SNR=7.9						
EBER				S	Sn	04 19 28.6	-0.3
	comp=E,2.4nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	5.30	51	P	Pn	04 18 32.2	+0.4
	comp=E,0.4nm,0.4s,baz=236,slow=13,SNR=103						
ESDC				S	Sn	04 19 30.2	-1.5
	comp=E,1.4nm,0.4s,baz=238,slow=24,SNR=187						
MDT	Midelt	5.31	132	P		04 18 31.9	
ELOB	Lobios	5.49	10	P	Pn	04 18 35.4	+0.9
	comp=E,0.1nm,0.1s,SNR=7.9						
ELOB				S	Sn	04 19 33.4	-3.1
	SNR=7.9						
PGAV	Gavieira, Arco	5.56	8	P	Pn	04 18 36.8	+1.3
PGAV				S	Sn	04 19 34.9	-3.4
	comp=E,2.7nm,0.6s						
PGAV	Gavieira, Arco	5.56	8	ePn	Pn	04 18 36.8	+1.3
PGAV				eSn	Sn	04 19 34.9	-3.4
PGAV				A	A	04 19 38.0	
	comp=E,2.7nm,0.6s						
SESP	Santiago Espad	5.64	71	P	Pn	04 18 36.6	0.0
	comp=E,0.2nm,0.2s,SNR=7.9						
SESP				S	Sn	04 19 38.6	-1.7
	comp=E,1.9nm,0.3s,SNR=7.9						
PBRG	Braganca	5.70	20	S	Sn	04 19 41.0	-0.7
	comp=E,1.5nm,0.8s						
PBRG	Braganca	5.70	20	eSn	Sn	04 19 41.0	-0.7
PBRG				A	A	04 19 41.7	
	comp=E,3.0nm,0.8s						
EZAM	Zamans	5.71	5	S	Sn	04 19 39.3	-2.4
	comp=E,4.0nm,0.5s,SNR=7.9						
GUD	Guadarrama	5.81	42	S	Sn	04 19 42.3	-2.2
	comp=E,2.1nm,0.5s,SNR=7.9						
ECAL	Calabor	5.83	19	P	Pn	04 18 39.9	+0.7
	comp=E,1.6nm,0.3s,SNR=7.9						
ECAL				S	Sn	04 19 43.2	-1.7
	comp=E,12nm,0.5s,SNR=5.7						
UCM	Universidad Co	6.12	49	P	Pn	04 18 44.5	+1.5
UCM				S	Sn	04 19 50.0	-2.0
UCM	Universidad Co	6.12	49	eP	Pn	04 18 44.5	+1.5
UCM				eS	Sn	04 19 50.0	-2.0

EAGO	Agolada(Pontev	6.41	8	P	Pn	04 18 48.1	+1.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EAGO				S	Sn	04 19 55.3	-3.7
	comp=E,2.4nm,0.4s,SNR=7.9						
EMAZ	Mazaricos	6.49	2	P	Pn	04 18 48.7	+0.6
	comp=E,0.5nm,0.1s,SNR=7.9						
EMAZ				S	Sn	04 19 56.2	-4.8
	comp=E,3.2nm,0.3s,SNR=7.9						
ETOB	Tobarra	6.54	68	P	Pn	04 18 48.8	0.0
	comp=E,0.2nm,0.1s,SNR=10						
ETOB				S	Sn	04 19 59.8	-2.5
	comp=E,0.7nm,0.4s,SNR=7.9						
ETOR	Torete	7.15	50	P	Pn	04 18 58.7	+1.5
	comp=E,8.6nm,0.5s,SNR=7.7						
ETOR				S	Sn	04 20 15.3	-2.1
	comp=E,2.1nm,0.3s,SNR=7.9						
EARI	Arriondas	7.53	23	S	Sn	04 20 25.9	-0.6
	comp=E,0.1nm,0.2s,SNR=7.9						

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*CRAAG **03** 04:33:17.8, 35°.59N×1°.45W, Ml3.3*

*CNRM **03** 04:33:19.7, 35°.60N×1°.73W, h5^{km}, ml3.0, Hypocentre not reviewed by the ISC*

*INMG **03** 04:33:19.8±1.4, 35°.65N×1°.46W, h24^{km}±8^{km}, ML2.3, Error ellipse: s-maj=3.5km s-min=2.9km az=133.0*

*MDD **03** 04:33:19.8±0.8, 35°.53N×1°.42W, h29^{km}±15^{km}, mbLg2.7/26, Error ellipse: s-maj=8.3km s-min=4.4km az=160.0, PRXIMO*

ISC 03 04:33:17.4±1.1, **35°.66N**±0°.04×**1°.52W**±0°.02, **h16**^{km}±10^{km}, **n60**, σ**1^{s}.78**/107, **1C-3D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OLHC	Oulhaca	0.41	169	P	Pb	04 33 26.2	-0.1
OTSS	Djebel Tessala	0.70	122	P	Pg	04 33 31.3	+0.2
OTSS	Djebel Tessala	0.70	122	P	Pg	04 33 31.3	+0.2
USTO	Oran	0.79	84	P	Pg	04 33 33.0	+0.2
USTO	Oran	0.79	84	P	Pg	04 33 33.0	+0.2
ODJA	Bouhanifia	1.16	106	P	Pg	04 33 40.6	+0.8
ODJA	Bouhanifia	1.16	106	P	Pg	04 33 40.6	+0.8
MELI	Melilla	1.21	253	P	Pg	04 33 40.3	-0.4
	16nm,0.1s,SNR=7.9						
MELI				S	Sn	04 33 55.7	+0.1
	92nm,0.1s,SNR=7.9						
MELI	Melilla	1.21	253	*e*P	Pg	04 33 40.4	-0.4
MELI				*e*S	Sn	04 33 55.3	-0.4
EMEL	Melilla	1.23	254	⇓P	Pg	04 33 40.5	-0.6
	49nm,0.1s,SNR=18						
EMEL				S	Sg	04 33 56.0	-1.1
	531nm,0.2s,SNR=13						
EALB	Alboran	1.27	283	P	Pg	04 33 41.0	-0.7
	22nm,0.2s,SNR=12						
EALB				S	Sg	04 33 57.7	-0.6
	50nm,0.2s,SNR=5.0						
GOG	Mont Gurugu	1.28	251	P		04 33 40.8	
ENIJ	Nijar	1.43	337	⇓P	Pn	04 33 43.4	+0.8
	13nm,0.1s,SNR=18						
ENIJ				S	Sn	04 34 00.9	-0.1
	134nm,0.2s,SNR=7.9						
JBK	JBK	1.58	213	S		04 34 09.0	
EBER	Berja	1.66	319	⇓P	Pn	04 33 47.1	+1.1
	4.1nm,0.2s,SNR=18						
EBER				S	Sb	04 34 09.4	+0.9
	49nm,0.3s,SNR=8.9						
OKGL	Djebel Kef Gue	1.79	77	P	Pg	04 33 54.0	+2.1
OKGL	Djebel Kef Gue	1.79	77	P	Pn	04 33 47.4	-0.3
	6.8nm,0.1s,SNR=7.9						
OKGL				S	Sn	04 34 08.7	-1.5
	302nm,0.4s,SNR=7.9						
CART	Cartagena	1.97	12	P	Pn	04 33 50.2	+0.2
CART				S	Sn	04 34 11.3	-3.0
CART	Cartagena	1.97	12	*e*P	Pn	04 33 50.2	+0.2
CART				*e*S	Sn	04 34 11.3	-3.0
CART				*e*Cod		04 35 36.3	
ELGU	Los Guajares,	2.09	306	P	Pn	04 33 52.2	+0.4
	2.0nm,0.1s,SNR=7.9						
ELGU				S	Sn	04 34 17.1	-0.3
	56nm,0.3s,SNR=7.9						
EQUE	Quentar	2.19	315	P	Pb	04 33 55.8	-0.8
	7.0nm,0.3s,SNR=43						
EQUE				S	Sb	04 34 22.3	-1.2
	18nm,0.3s,SNR=5.0						
EMUR	La Murta	2.19	6	⇑P	Pn	04 33 53.9	+0.8
	4.4nm,0.2s,SNR=18						
EMUR				S	Sn	04 34 18.4	-1.6
	16nm,0.2s,SNR=5.0						
GORA	Gorafe	2.19	326	P	Pb	04 33 56.9	+0.2
	2.4nm,0.1s,SNR=7.9						
GORA				S	Sn	04 34 21.7	+1.7
	16nm,0.2s,SNR=7.9						
AKLM	AKL	2.24	240	P		04 33 55.4	
ETRV	Los Montesinos	2.43	14	S	Sn	04 34 24.2	-1.7
	58nm,0.3s,SNR=7.9						
EQES	Quesada	2.48	330	P	Pb	04 34 00.9	-0.7
	5.4nm,0.1s,SNR=82						
EQES				S	Sb	04 34 31.3	-0.6
	25nm,0.2s,SNR=7.5						
EGOR	Sierra Gorda,	2.54	305	P	Pb	04 34 00.7	-2.0
	1.0nm,0.2s,SNR=7.9						
EGOR				S	Sb	04 34 32.3	-1.6
	9.2nm,0.3s,SNR=7.9						
SESP	Santiago Espad	2.59	342	P	Pn	04 34 01.6	+2.8
	16nm,0.1s,SNR=7.9						
SESP				S	Sn	04 34 32.9	+2.9
	46nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.59	342	P		04 34 01.8	
EMAL	Malaga-Limoner	2.60	296	P	Pn	04 33 59.9	+1.2
EMAL				S	Sn	04 34 29.7	-0.3
EMAL	Malaga-Limoner	2.60	296	*e*P	Pn	04 33 59.9	+1.2
EMAL				*e*S	Sn	04 34 29.7	-0.3
ETOB	Tobarra	2.98	360	P	Pn	04 34 06.4	+2.4
	7.1nm,0.1s,SNR=130						
ETOB				S	Sn	04 34 40.5	+1.1
	12nm,0.2s,SNR=7.9						
AFON	Font Roja	3.10	14	P	Pn	04 34 08.5	+2.8
	0.5nm,0.1s,SNR=7.4						
AFON				S	Sn	04 34 42.0	-0.5
	11nm,0.3s,SNR=7.9						
EBEN2	Beniarda presa	3.19	19	P	Pn	04 34 10.0	+3.1
	0.6nm,0.1s,SNR=7.9						
EBEN2				S	Sn	04 34 43.5	-1.1
	4.0nm,0.1s,SNR=7.9						
EADA	Adamuz	3.50	317	P	Pn	04 34 13.6	+2.4
	0.1nm,0.2s,SNR=12						
EADA				S	Sn	04 34 53.2	+0.9
	4.7nm,0.3s,SNR=7.9						
ESPR	Espera	3.71	290	P	Pn	04 34 16.7	+2.8
	0.3nm,0.1s,SNR=5.2						
HORN	Hornachuelos	3.71	307	P		04 34 15.8	
MDT	Midelt	3.82	223	P		04 34 17.0	
ECHE	Chera	3.95	6	P	Pn	04 34 19.9	+2.5
	0.1nm,0.2s,SNR=7.9						
ECHE				S	Sn	04 35 03.6	+0.2
	2.0nm,0.3s,SNR=7.9						
ECAB	El Cabril	3.95	309	P	Pn	04 34 19.0	+1.7
	0.3nm,0.2s,SNR=6.8						
ECAB				S	Sn	04 35 04.5	+1.1
	2.2nm,0.3s						
EIBI	Ibiza	4.06	33	P	Pn	04 34 19.8	+1.0
	1.6nm,0.1s,SNR=40						
EIBI				S	Sn	04 35 03.6	-2.4
	8.7nm,0.2s,SNR=8.6						
ESDC	Sonseca Array	4.45	335	P	Pn	04 34 27.2	+2.9
	0.2nm,0.3s,baz=150,slow=13,SNR=11						
ESDC				S	Sn	04 35 15.1	-0.7
	0.4nm,0.4s,baz=152,slow=23,SNR=3.8						
PAB	San Pablo	4.49	331	P	Pn	04 34 28.0	+3.2
	0.2nm,0.2s,SNR=7.9						
PAB				S	Sn	04 35 16.7	+0.1
	2.2nm,0.3s,SNR=7.9						
PAB	San Pablo	4.49	331	P		04 34 28.7	
EMIN	Mina Concepcio	4.65	298	P	Pn	04 34 28.3	+1.5
	0.7nm,0.1s,SNR=10.0						
EMIN				S	Sn	04 35 19.9	-0.5
	1.8nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.77	10	P	Pn	04 34 31.9	+3.2
	0.3nm,0.2s,SNR=7.1						
EMOS				S	Sn	04 35 21.7	-2.0
	2.2nm,0.3s,SNR=7.9						
UCM	Universidad Co	4.84	344	P	Pn	04 34 32.9	+3.4
UCM				S	Sn	04 35 23.7	-1.5
UCM	Universidad Co	4.84	344	*e*P	Pn	04 34 32.9	+3.4
UCM				*e*S	Sn	04 35 23.7	-1.5
EGRO	El Granado	5.15	293	P	Pn	04 34 35.4	+1.7
	0.7nm,0.1s,SNR=6.3						
EGRO				S	Sn	04 35 31.5	-1.4
	4.6nm,0.4s,SNR=7.9						
ETOR	Torete	5.17	355	P	Pn	04 34 36.4	+2.2
	11nm,0.4s,SNR=8.0						
ETOR				S	Sn	04 35 30.8	-2.6
	1.6nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	5.29	291	P	Pn	04 34 37.7	+2.0
PVAQ				S	Sn	04 35 36.0	-0.2
	2.2nm,0.3s						
PVAQ	Vaqueiros	5.29	291	*e*Pn	Pn	04 34 37.7	+2.0
PVAQ				*e*Sn	Sn	04 35 36.0	-0.2
PVAQ				A	A	04 35 41.3	
	2.2nm,0.3s						
PVAQ	Vaqueiros	5.29	291	P		04 34 37.4	
ETOS	Mallorca	5.35	39	P	Pn	04 34 38.1	+1.6
	0.1nm,0.0s,SNR=7.9						
ETOS				S	Sn	04 35 36.2	-1.6
	1.7nm,0.3s,SNR=7.9						
PBDV	Barranco-do-Ve	5.41	289	P	Pn	04 34 38.9	+1.6
PBDV				S	Sn	04 35 38.8	-0.4
	4.4nm,0.6s						
PBDV	Barranco-do-Ve	5.41	289	*e*Pn	Pn	04 34 38.9	+1.6
PBDV				*e*Sn	Sn	04 35 38.8	-0.4
PBDV				A	A	04 35 46.1	
	4.4nm,0.6s						
PCVE	Castro Verde	5.60	293	P	Pn	04 34 41.9	+1.9
PCVE				S	Sn	04 35 42.9	-1.1
	2.0nm,0.7s						
PCVE	Castro Verde	5.60	293	*e*Pn	Pn	04 34 41.9	+1.9
PCVE				*e*Sn	Sn	04 35 42.9	-1.1
PCVE				A	A	04 35 46.2	
	2.0nm,0.7s						
PESTR	Estremoz	5.81	305	*e*Pn	Pn	04 34 45.5	+2.7
PESTR				*e*Sn	Sn	04 35 48.5	-0.6
PESTR				A	A	04 35 50.4	
	1.3nm,0.8s						
EVO	Evora	5.93	301	P	Pn	04 34 47.7	+3.2
EVO	Evora	5.93	301	*e*P	Pn	04 34 46.4	+1.9
EVO				*e*S	Sn	04 35 51.5	-0.6
EVO	Evora	5.93	301	*e*Pn	Pn	04 34 47.7	+3.2
EVO				A	A	04 35 53.6	
	2.0nm,0.3s						
MORF	Marmelete	5.98	288	P	Pn	04 34 47.7	+2.5
MORF				S	Sn	04 35 53.5	+0.2
MORF	Marmelete	5.98	288	*e*Pn	Pn	04 34 47.7	+2.5
MORF				*e*Sn	Sn	04 35 53.5	+0.2
PFVI	Vila Bisbo	6.08	286	*e*Pn	Pn	04 34 49.8	+3.3
PMTG	Montargil	6.33	304	P	Pn	04 34 51.4	+1.4
PMTG				S	Sn	04 36 00.6	-1.4
	1.2nm,0.6s						
PMTG	Montargil	6.33	304	*e*Pn	Pn	04 34 51.4	+1.4
PMTG				*e*Sn	Sn	04 36 00.6	-1.4
PMTG				A	A	04 36 01.7	
	1.2nm,0.6s						
CFON	Fontmartina	6.83	26	P	Pn	04 34 58.1	+1.2
	1.3nm,0.2s,SNR=7.9						
CFON				S	Sn	04 36 09.7	-4.8
	2.2nm,0.3s,SNR=7.9						

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*BGR **03** 04:46:37.9±0.0, 66°.76N×21°.89W, h33^{km}, mb4.1*

*MOS **03** 04:46:55.6±1.2, 64°.53N×17°.95W, h10^{km}, mb4.4/16, Error ellipse: s-maj=16.3km s-min=9.6km az=99.2*

*NEIC **03** 04:46:56.8±2.6, 64°.54N±0°.09×18°.0W±0°.1, h8^{km}, mb4.3/25, Error ellipse: s-maj=12.9km s-min=7.7km az=190.0*

*IDC **03** 04:46:57.3±0.8, 64°.63N×17°.58W, h0^{km}, mb3.7/13, mb1 3.9/16, mb1mx3.7/45, mbtmp3.7/16, ML2.6/2, Error ellipse: s-maj=23.8km s-min=14.2km az=39.0*

ISC 03 04:46:57.4±0.4, **64°.58N**±0°.07×**18°.03W**±0°.05, **h10**^{km}, **n92**, σ**1^{s}.62**/91, **mb4.0**/46, **7C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	1.43	278	P	Pn	04 47 22.5	-0.9
BORG						04 47 41.3	
BORG	Borgarnes	1.43	278		Pn	04 47 22.5	-0.9
BORG				Sn	Sn	04 47 41.3	-0.9
SCO	Scoresbysund	6.12	348	P	Pn	04 48 26.7	-1.1
SCO	Scoresbysund	6.12	348	Pn	Pn	04 48 26.7	-1.1
SCO	Scoresbysund	6.12	348	*i* P	Pn	04 48 16.0	-12
SCO				*e*S		04 48 29.8	
SCO	Scoresbysund	6.12	348	*e*P	Pn	04 48 16.0	-12
SCO				*e*S		04 48 29.8	
SCO				IAML		04 48 36.5	
	comp=Z,4.5nm,0.4s						
EKA	Eskdalemuir Ar	11.85	134	Pn	Pn	04 49 46.7	+0.4
	baz=321,slow=13,SNR=11						
NRS	Narsarsuaq	12.90	267	P	Pn	04 50 00.1	-0.5
NRS	Narsarsuaq	12.90	267		Pn	04 50 00.1	-0.5
NOA	NORSAR Array B	13.76	91	Pn	Pn	04 50 10.8	-1.5
	comp=Z,0.0nm,0.3s,baz=297,slow=14,SNR=1.2						
TULEG	Thule	19.81	328	P	P	04 51 25.2	-2.4
FINES	FINESS Array B	19.95	79	P	P	04 51 28.5	-0.6
	comp=Z,0.1nm,0.3s,baz=278,slow=9.6,SNR=4.7						
CLL	Collm	20.87	115	*e*P	P	04 51 37.0	-2.3
	comp=Z,21nm,1.6s						
CLL	Collm	20.87	115	P	P	04 51 37.9	-1.4
CLL				pmax	pmax		
	comp=Z,20nm,1.5s						
CLL	Collm	20.87	115	P	P	04 51 37.9	-1.4
CLL				IAmb	IAmb	04 51 41.3	
	comp=Z,20nm,1.5s						
GRF	Grafenberg Arr	21.48	120	*e*P	P	04 51 48.9	+3.0
	comp=Z,6.7nm,1.2s,baz=326,slow=9.1						
STU	Stuttgart	21.51	124	P	P	04 51 45.6	-0.5
STU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
STU	Stuttgart	21.51	124	P	P	04 51 45.6	-0.5
BRG	Berggiesshubel	21.58	114	*e*P	P	04 51 47.8	+0.8
BRG				Amp		04 51 54.9	
	comp=Z,19nm,1.4s						
BRG	Berggiesshubel	21.58	114	Sg	Sn	04 56 32.2	+38
BRG				Amp		04 56 33.8	
	comp=Z,2.2nm,0.7s						
BRG	Berggiesshubel	21.58	114	*e*P	P	04 51 47.7	+0.8
BRG						04 56 32.2	
BRG				pmax	pmax		
	comp=Z,19nm,1.4s						
BRG				smax	smax		
	comp=Z,2.0nm,0.7s						
BRG	Berggiesshubel	21.58	114	*e*P	P	04 51 47.8	+0.8
BRG				Amp		04 51 54.9	
	comp=Z,19nm,1.4s						
BRG	Berggiesshubel	21.58	114	Sg	Sn	04 56 32.2	+38
BRG				Amp		04 56 33.8	
	comp=Z,2.2nm,0.7s						
KHC	Kasperske Hory	22.83	117	*ce*P	P	04 52 01.6	+1.3
KHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GERES	GERESS Array B	23.11	118	P	P	04 52 01.5	-1.9
	comp=Z,0.8nm,0.8s,baz=344,slow=8.9,SNR=4.5						
RETA	Reutte	23.15	124	*e*P	P	04 52 05.5	+1.8
	comp=Z,13nm,1.4s						
MOTA	Moosalm	23.40	124	*e*P	P	04 52 08.8	+2.5
	comp=Z,8.7nm,1.5s						
DAVOX	Davos/Dischmat	23.45	126	P	P	04 52 06.1	-0.7
	comp=Z,1.4nm,0.8s,baz=295,slow=10,SNR=4.0						
TUE	Stuetta	23.53	127	P	P	04 52 05.5	-2.2
TUE				IAmb	IAmb	04 52 18.5	
	comp=Z,15nm,1.4s						
FETA	Feichten	23.54	125	*e*P	P	04 52 10.7	+3.0
	comp=Z,8.1nm,2.3s						
SQTA	Sankt Quirin	23.54	124	*e*P	P	04 52 10.1	+2.4
	comp=Z,2.8nm,1.0s						
WATA	Walderalm	23.58	123	*e*P	P	04 52 09.8	+1.7
	comp=Z,6.4nm,1.3s						
WTTA	Wattenberg	23.66	123	*e*P	P	04 52 08.0	-0.9
	comp=Z,6.9nm,1.1s						
MOA	Molln	24.14	118	*e*P	P	04 52 13.2	-0.1
	comp=Z,6.1nm,1.5s						
ABTA	Abfaltersbach	24.41	122	*e*P	P	04 52 14.6	-1.3
	comp=Z,1.5nm,0.6s						
KBA	Koelnbreinsper	24.44	121	*e*P	P	04 52 14.6	-1.7
	comp=Z,3.4nm,0.7s						
MYKA	Terra Mystica	24.93	121	*e*P	P	04 52 19.9	-0.6
	comp=Z,4.5nm,1.2s						
OBKA	Obir	25.37	120	*e*P	P	04 52 25.8	+1.3
	comp=Z,7.2nm,2.1s						
SOKA	Soboth	25.41	119	*e*P	P	04 52 23.5	-1.4
	comp=Z,4.6nm,1.7s						
VYHS	Vyhne	25.41	112	*e*P	P	04 52 27.6	+2.8
VYHS	Vyhne	25.41	112	*e*P	P	04 52 27.6	+2.8
ESDC	Sonseca Array	26.27	155	P	P	04 52 34.1	+1.5
	comp=Z,0.8nm,0.8s,baz=344,slow=9.6,SNR=7.3						
PSZ	Piszkesteto	26.30	111	P	P	04 52 31.9	-1.0
PSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PSZ	Piszkesteto	26.30	111	P	P	04 52 31.9	-1.0
PSZ				IAmb	IAmb	04 52 43.1	
	comp=Z,8.2nm,1.1s						
KOLS	Kolonicke sedl	26.46	107	*e*P	P	04 52 37.9	+3.6
KOLS	Kolonicke sedl	26.46	107	*e*P	P	04 52 37.9	+3.6
AKASG	Malin Array Be	28.06	97	P	P	04 52 48.3	-0.3
	comp=Z,0.1nm,0.3s,baz=323,slow=10,SNR=2.1						
NRIK	Noril'sk	36.66	35	*ce*P	P	04 54 03.5	-0.1
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRTR	Keskin Array B	38.68	105	P	P	04 54 21.9	+0.8
	comp=Z,0.9nm,0.8s,baz=306,slow=7.0,SNR=4.0						
BRTR	Keskin Array B	38.68	105	*ce*P	P	04 54 22.6	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	39.11	313	P	P	04 54 26.5	+2.2
	comp=Z,0.7nm,1.1s,baz=35,slow=9.8,SNR=4.9						
YKA				PcP	PcP	04 56 36.6	+3.0
	comp=Z,0.2nm,0.8s,baz=56,slow=3.9,SNR=3.2						
KOPT	Kop Dagi	41.34	97	P	P	04 54 42.8	-0.6
KOPT				IAmb	IAmb	04 54 46.2	
	comp=Z,4.1nm,0.5s						
TIXI	Tiksi	42.18	15	*ce*P	P	04 54 50.7	+1.2
TIXI				pmax	pmax		
	comp=Z,27nm,1.3s						
TIXI	Tiksi	42.18	15	P	P	04 54 51.0	+1.5
TIXI				IAmb	IAmb	04 54 53.6	
	comp=Z,10nm,1.4s						
AB05	Akbulak array	42.22	72	P	P	04 54 50.8	+0.7
BRVK	Borovoye	43.38	61	*ce*P	P	04 54 57.8	-1.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
BRVK	Borovoye	43.38	61	P	P	04 54 59.4	0.0
BRVK				IAmb	IAmb	04 55 01.1	
	comp=Z,7.5nm,1.5s						
MARD	Mardin	43.72	99	P	P	04 55 02.1	-0.4
IL31		45.66	332	P	P	04 55 16.8	-0.7
ILAR	Eielson Array	45.66	332	P	P	04 55 18.9	+1.4
	comp=Z,1.8nm,1.1s,baz=32,slow=5.7,SNR=9.4						
ILAR				PcP	PcP	04 56 56.8	+1.5
	comp=Z,0.8nm,1.1s,baz=28,slow=4.1,SNR=4.0						
COLA	College	45.76	333	*i* P	P	04 55 20.6	+2.3
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PAX	Paxson	46.96	330	P	P	04 55 28.8	+0.8
PAX				pmax	pmax		
	comp=Z,43nm,1.4s						
PAX	Paxson	46.96	330	P	P	04 55 28.8	+0.8
ZAA0	Zalesovo Array	47.87	51	P	P	04 55 35.5	+0.6
ZALV	Zalesovo Beam	47.87	51	P	P	04 55 34.8	-0.1
	comp=Z,0.5nm,0.4s,baz=308,slow=7.4,SNR=4.1						
KURK	Kurchatov	48.35	58	*ce*P	P	04 55 38.0	-0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KURK	Kurchatov	48.35	58	P	P	04 55 38.5	-0.2
KKAR	Karatay Array	51.52	69	P	P	04 56 03.4	+0.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KKAR	Karatay Array	51.52	69	P	P	04 56 03.4	+0.5
DGZ	Jazzator, Alta	52.32	52	*i* P	P	04 56 09.6	+0.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
B06A	Marblemount	52.63	306	P	P	04 56 10.3	-0.7
MK31	Makanchi Array	52.97	58	P	P	04 56 14.0	+0.3
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	52.97	58	P	P	04 56 13.9	+0.3
MKAR	Makanchi Array	52.97	58	P	P	04 56 13.8	+0.1
	comp=Z,0.9nm,0.9s,baz=335,slow=5.5,SNR=7.8						
BW06	Boulder Array	53.00	293	P	P	04 56 13.3	-0.9
BW06				IAmb	IAmb	04 56 18.3	
	comp=Z,4.9nm,1.2s						
PD31	Pinedale Array	53.00	293	P	P	04 56 14.6	+0.4
PD31				IAmb	IAmb	04 56 18.3	
	comp=Z,4.9nm,1.3s						
PDAR	Pinedale Array	53.00	293	P	P	04 56 16.6	+2.4
	comp=Z,1.7nm,1.1s,baz=46,slow=6.4,SNR=8.5						
TORD	Torodi Ar. Bea	53.15	156	P	P	04 56 16.3	+1.1
	comp=Z,1.1nm,0.9s,baz=338,slow=8.6,SNR=4.1						
AAK	Ala-Archa	53.50	66	*i* P	P	04 56 18.0	+0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ETX02	Prairie Street	55.88	273	P	P	04 56 33.8	-1.1
PV23	Carpenter Ridg	56.44	290	P	P	04 56 38.3	-1.0
PV12	Saucer Basin,	56.47	289	P	P	04 56 39.7	+0.3
ZAK	Zakamensk	56.68	41	*e*P	P	04 56 39.2	-1.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MLPR	Magueyes Islan	56.90	239	P	P	04 56 43.1	+0.7
SDD	Santo Domingo	57.54	242	P	P	04 56 46.9	+0.1
KBL	Kabul	58.17	76	P	P	04 56 46.7	-4.7
KBL				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KBL	Kabul	58.17	76	P	P	04 56 46.7	-4.7
DBIC	Dimbokro	58.56	165	P	P	04 56 52.2	-1.8
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DBIC	Dimbokro	58.56	165	P	P	04 56 52.2	-1.8
SONM	Songino Array	59.86	40	P	P	04 57 03.6	+0.8
	comp=Z,0.6nm,0.9s,baz=337,slow=9.4,SNR=4.4						
ULN	Ulaanbaatar	60.01	40	*ce*P	P	04 57 04.7	+0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
MJAR	Matsushiro Arr	77.49	19	P	P	04 58 53.0	+0.2
	comp=Z,2.1nm,0.3s,baz=354,slow=5.0,SNR=13						

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*IDC **03** 04:50:24.8±0.7, 12°.21N×123°.82E, h0^{km}, mb3.9/17, mb1 4.1/17, mb1mx3.9/50, mbtmp3.9/17, MS3.6/11, Ms1 3.6/11, ms1mx3.3/39, Error ellipse: s-maj=28.0km s-min=15.0km az=72.0*

*MAN **03** 04:50:27.8, 12°.35N×123°.84E, h18^{km}, mb5.4, ML4.3, MS4.5*

*NEIC **03** 04:50:36.0±1.9, 12°.1N±0°.1×123°.4E±0°.1, h71^{km}±8^{km}, mb4.4/29, Error ellipse: s-maj=19.8km s-min=15.2km az=84.0*

ISC 03 04:50:26.9±1.3, **12°.25N**±0°.03×**123°.78E**±0°.03, **h4**^{km}±8^{km}, **n89**, σ**1^{s}.68**/86, **mb4.3**/31, **MS3.5**/13, **6C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.90	73	*e*P	Pg	04 50 43.8	-0.4
CNP				*e*S	Sb	04 50 57.1	-0.3
OCLP	Ormoc	1.45	146	*e*P	Pn	04 50 53.0	-0.7
OCLP				*e*S	Sg	04 51 15.8	+2.4
OTRP	Odiongan	1.72	274	*e*P	Pn	04 50 55.9	-1.6
OTRP				*e*S	Sg	04 51 23.3	+1.2
BESP	Borongan	1.75	112	*e*P	Pn	04 50 57.1	-0.9
LLP	Lapu-Lapu	1.93	174	⇑*e*P	Pn	04 50 60.0	-0.5
LLP				*e*S	Sb	04 51 26.5	-0.6
GUIM	Jordan	1.99	216	*e*P	Pn	04 51 01.4	+0.1
GUIM				*e*S	Sg	04 51 29.9	-1.0
GQP	Guinayangan	2.09	322	⇓*e*P	Pn	04 51 01.1	-1.5
GQP				*i* S	Sg	04 51 34.8	+0.6
JCNP	Jose Panganiba	2.28	333	*e*P	Pn	04 51 03.0	-2.3
JCNP				*e*S	Sb	04 51 38.5	+1.4
JAP	San Jose, Anti	2.34	230	⇑*e*P	Pb	04 51 08.8	-0.7
JAP				*e*S	Sg	04 51 40.4	-1.5
MSLP	Maasin	2.36	153	*e*P	Pn	04 51 06.7	+0.3
MSLP				*e*S	Sg	04 51 44.1	+1.4
SJMP	San Jose	2.60	275	*e*P	Pn	04 51 09.5	-0.3
SJMP				*e*S	Sn	04 51 43.2	+1.4
CNOP	Candoni, Negro	2.66	205	*e*P	Pn	04 51 11.2	+0.8
CNOP				*e*S	Sb	04 51 48.7	+0.8
LQP	Lukban	2.86	311	⇑*i*P	Pn	04 51 13.5	+0.1
LQP				*i* S	Sg	04 51 59.0	+0.3
POLP	Polilio Island	3.04	324	*e*P	Pn	04 51 15.2	-0.5
TGY	Tagaytay City	3.32	304	⇑*i*P	Pn	04 51 16.0	-3.6
GLSP	General Luna,	3.37	137	*e*P	Pb	04 51 24.2	-3.0
BUSP	Coron	3.51	266	*e*P	Pn	04 51 21.7	-0.5
MACP	Maragondon, Ca	3.58	304	*e*P	Pn	04 51 24.7	+1.5
CGP	Cagayan de Oro	3.88	166	⇓*e*P	Pb	04 51 33.5	-2.4
ENPP	El Nido	4.39	257	*e*P	Pn	04 51 31.4	-2.9
CAUP	Cauayan	5.03	338	*e*P	Pn	04 51 41.7	-1.4
KCP	Kidapawan	5.37	166	⇑*e*P	Pb	04 51 56.3	-5.0
MYLDM	Lahad Datu	8.75	217	Pn	Pn	04 52 36.2	+2.0
LUWI	Luwuk	13.25	184	Pn	Pn	04 53 39.9	+4.1
JSU	Suzuyama	20.13	17	P	Pn	04 55 06.5	+2.8
JNU	Nakatsue	21.77	16	LR	LR	05 04 14.3	
	comp=Z,92nm,19.0s,baz=206,slow=38						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ENH	Enshi	22.29	326	P	P	04 55 27.0	+1.7
ENH				IAmb	IAmb	04 55 37.7	
	comp=Z,9.1nm,0.8s						
JAY	Jayapura	22.32	130	LR	LR	05 05 41.0	
	comp=Z,191nm,18.5s,baz=148,slow=41						
KMI	Kunming	23.64	306	⇑P	P	04 55 40.1	+0.5
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
CM31	Chiang Mai Arr	24.71	288	P	P	04 55 48.3	-1.1
CMAR	Chiang Mai Arr	24.71	288	P	P	04 55 47.7	-1.7
	comp=Z,3.7nm,0.9s,baz=96,slow=8.0,SNR=18						
CMAR				LR	LR	05 06 06.5	
	comp=Z,54nm,19.4s,baz=115,slow=38						
CHTO	Chiang Mai	24.78	288	P	P	04 55 47.7	-2.3
KSRS	Korea Array	25.37	8	P	P	04 55 53.8	-1.2
	comp=Z,1.6nm,0.9s,baz=193,slow=10,SNR=4.3						
KSRS				LR	LR	05 06 48.6	
	comp=Z,55nm,19.6s,baz=185,slow=39						
XAN	Xi'an	25.57	330	P	P	04 55 58.9	+1.9
XAN				IAmb	IAmb	04 56 01.9	
	comp=Z,11nm,1.0s						
PSI	Prapat	26.34	251	LR	LR	05 08 54.5	
	comp=Z,132nm,18.5s,baz=91,slow=42						
LZH	Lanzhou	29.77	326	*e*P	P	04 56 37.1	+2.3
LZH				PP	PnPn	04 57 33.8	+3.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,4.9s						
LZH				LR	LR		
	comp=N,630nm,13.0s						
LZH				LR	LR		
	comp=E,490nm,13.2s						
LZH				LR	LR		
	comp=Z,190nm,17.3s						
HHC	Hu-ho-hao-te	30.44	342	*e*P	P	04 56 45.6	+5.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
USRK	Ussuriysk Ar.	32.61	11	P	P	04 56 59.3	-0.2
	comp=Z,1.5nm,0.6s,baz=226,slow=10,SNR=3.9						
MDJ	Mudanjiang	32.63	8	P	P	04 57 04.6	+4.9
WRA	Warramunga Arr	33.64	162	P	P	04 57 06.4	-2.3
	comp=Z,1.2nm,1.0s,baz=344,slow=9.1,SNR=8.7						
GTA	Gaotai	34.38	326	P	P	04 57 20.7	+5.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,63nm,4.8s						
GTA				LR	LR		
	comp=N,320nm,18.2s						
GTA				LR	LR		
	comp=E,280nm,19.6s						
GTA				LR	LR		
	comp=Z,290nm,16.7s						
LSA	Lhasa	34.89	305	P	P	04 57 19.6	-0.6
AS31	Alice Springs	37.05	164	P	P	04 57 39.7	+1.6
ASAR	Alice Springs	37.05	164	P	P	04 57 36.8	-1.3
	comp=Z,3.5nm,1.0s,baz=340,slow=6.4,SNR=13						
KLR	Kul'dur	37.45	9	P	P	04 57 39.5	-1.8
	comp=Z,0.8nm,0.6s,baz=251,slow=4.9,SNR=2.3						
ULN	Ulaanbaatar	38.16	342	P	P	04 57 49.7	+2.2
ULN				IAmb	IAmb	04 57 53.6	
	comp=Z,6.6nm,0.9s						
SONM	Songino Array	38.34	341	P	P	04 57 48.1	-0.8
	comp=Z,1.3nm,1.0s,baz=164,slow=10,SNR=7.6						
SONM				LR	LR	05 15 36.6	
	comp=Z,68nm,19.2s,baz=167,slow=39						
H11S3	WAKE ISLAND Hy	41.76	76	T	T	05 42 23.5	
	baz=269						
H11S1	WAKE ISLAND Hy	41.77	76	T	T	05 41 57.8	
	baz=269						
H11S2	WAKE ISLAND Hy	41.78	76	T	T	05 42 16.9	
	baz=269						
HNR	Honiara	41.91	119	LR	LR	05 16 14.4	
	comp=Z,43nm,19.2s,baz=294,slow=37						
H11N1	WAKE ISLAND Hy	42.02	74	T	T	05 42 27.3	
	baz=267,slow=74,SNR=4.8						
H11N2	WAKE ISLAND Hy	42.02	74	T	T	05 42 44.9	
	baz=267,slow=74,SNR=4.9						
H11N3	WAKE ISLAND Hy	42.03	74	T	T	05 42 34.9	
	baz=267,slow=74,SNR=6.8						
WMQ	Urumqi	44.17	322	*e*P	P	04 58 38.5	+1.6
STKA	Stephens Creek	47.09	159	P	P	04 58 58.5	-1.5
	comp=Z,0.9nm,0.5s,baz=358,slow=17,SNR=3.6						
STKA				LR	LR	05 22 56.2	
	comp=Z,73nm,19.2s,baz=341,slow=42						
STKA	Stephens Creek	47.09	159	P	P	04 59 03.4	+3.5
MK31	Makanchi Array	48.98	323	P	P	04 59 14.5	0.0
MK31				IAmb	IAmb	04 59 22.3	
	comp=Z,4.0nm,1.0s						
MKAR	Makanchi Array	48.98	323	P	P	04 59 14.0	-0.5
	comp=Z,1.0nm,0.7s,baz=134,slow=8.2,SNR=10						
MKAR				PcP	PcP	05 00 37.6	-1.0
	comp=Z,0.4nm,0.7s,baz=125,slow=3.8,SNR=0.7						
MAKZ	Makanchi	49.17	323	P	P	04 59 16.5	+0.5
MAKZ				IAmb	IAmb	04 59 23.8	
	comp=Z,4.6nm,1.1s						
YAK	Yakutsk	49.88	4	P	P	04 59 24.3	+3.2
KSH	Kashi	50.09	312	P	P	04 59 25.6	+2.3
KSH				pmax	pmax		
	comp=Z,380nm,5.5s						
KSH				pmax	pmax		
	comp=Z,400nm,5.7s						
NIL	Nilore	50.60	304	P	P	04 59 25.9	-1.3
ZAA0	Zalesovo Array	51.73	332	P	P	04 59 36.6	+1.4
ZAA0				IAmb	IAmb	04 59 41.6	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	51.73	332	P	P	04 59 35.2	0.0
	comp=Z,1.3nm,0.8s,baz=117,slow=8.3,SNR=2.5						
ZALV				PcP	PcP	05 00 46.4	-2.1
	comp=Z,0.6nm,0.7s,baz=121,slow=5.6,SNR=0.9						
KURK	Kurchatov	53.06	326	P	P	04 59 45.5	+0.4
KBL	Kabul	54.20	304	P	P	04 59 53.3	-0.8
KK31	Karatay Array	55.12	314	P	P	04 59 59.7	-0.7
KK31				IAmb	IAmb	05 00 00.6	
	comp=Z,3.1nm,0.8s						
KKAR	Karatay Array	55.12	314	P	P	04 59 59.7	-0.7
KKAR				IAmb	IAmb	05 00 00.6	
	comp=Z,3.1nm,0.8s						
TIXI	Tiksi	59.44	2	P	P	05 00 32.8	+2.4
HRA	Herat	59.74	303	P	P	05 00 31.8	-1.6
HRA				IAmb	IAmb	05 00 34.4	
	comp=Z,3.5nm,0.8s						
NRIK	Noril'sk	61.51	346	P	P	05 00 44.6	+0.1
	comp=Z,1.2nm,0.5s,baz=108,slow=9.1,SNR=1.7						
NRIK	Noril'sk	61.51	346	P	P	05 00 46.7	+2.2
GSTR	Great Sitkin T	62.23	37	P	P	05 00 54.5	+4.8
GEYT	Alibeck	63.41	306	P	P	05 00 57.6	-0.3
	comp=Z,3.8nm,0.9s,baz=43,slow=8.9,SNR=6.5						
GEYT				LR	LR	05 30 23.8	
	comp=Z,78nm,18.6s,baz=250,slow=38						
GYA0B	ALIBECK ARRAY	63.41	306	P	P	05 00 57.5	-0.3
ABKAR	Akbulak array	63.78	319	P	P	05 00 59.4	-0.7
RAYN	Ar Rayn	74.57	291	P	P	05 02 06.3	-1.3
RAYN				IAmb	IAmb	05 02 08.1	
	comp=Z,7.8nm,1.2s						
AKH	Akhalkalaki	74.75	310	P	P	05 02 08.3	-0.1
KBZ	Khabaz	75.07	312	P	P	05 02 08.1	-1.9
	comp=Z,2.5nm,0.9s,baz=72,slow=3.5,SNR=4.3						
KIV	Kislovodsk	75.21	312	P	P	05 02 10.7	-0.3
ILAR	Eielson Array	78.73	26	P	P	05 02 28.4	-1.9
	comp=Z,0.3nm,0.8s,baz=267,slow=5.1,SNR=2.2						
BRTR	Keskin Array B	82.39	309	P	P	05 02 49.6	-1.0
	comp=Z,0.5nm,0.8s,baz=74,slow=7.7,SNR=2.2						
FINES	FINESS Array B	82.99	331	P	P	05 02 51.8	-1.3
	comp=Z,3.8nm,0.9s,baz=96,slow=4.2,SNR=1.5						
C36M	Paulatuk	86.19	19	P	P	05 03 12.0	+2.9
BUR08	Bucovina Ar. S	86.75	318	P	P	05 03 12.1	-0.4
NOA	NORSAR Array B	89.90	333	LR	LR	05 49 42.5	
	comp=Z,65nm,18.4s,baz=290,slow=40						
YKA	Yellowknife Ar	92.93	23	P	P	05 03 39.1	-1.9
	comp=Z,2.0nm,1.1s,baz=302,slow=3.9,SNR=6.2						
GERES	GERESS Array B	93.63	322	LR	LR	05 47 59.5	
	comp=Z,93nm,18.4s,baz=333,slow=37						

IDC ***03*** *04:55:20.9±0.8, 2°.62N×126°.92E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/39, mbtmp3.9/9, ML3.3/1, Error ellipse: s-maj=50.9km s-min=15.6km az=71.0*

NEIC ***03*** *04:55:25.9±0.8, 2°.6N±0°.1×126°.91E±0°.08, h35^{km}±2^{km}, mb4.2/13, Error ellipse: s-maj=21.6km s-min=5.7km az=217.0*

ISC 03 04:55:27.5±0.6**, 2°.56N**±0°.07×**126°.95E**±0°.10**, h53**^{km}**, n26, σ0^{s}95**/27**, mb4.1**/13**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.83	167	Pn	Pn	04 55 55.0	-1.6
KCP	Kidapawan	4.79	337	⇑*e*P	Pn	04 56 36.4	-0.9
LUWI	Luwuk	5.50	229	Pn	Pn	04 56 45.1	-1.8
SIJI	Sorong	5.50	128	Pn	Pn	04 56 45.1	-1.8
	0.9nm,0.3s,baz=222,slow=22,SNR=1.4						
TOLI2	Tolitoli	6.33	257	Pn	Pn	04 56 57.8	-0.5
FITZ	Fitzroy Crossi	20.57	184	P	P	05 00 01.6	-0.5
	0.8nm,0.5s,baz=12,slow=9.5,SNR=1.7						
WB0	Warramunga Arr	23.36	162	P	P	05 00 31.8	+0.2
WB0				IAmb	IAmb	05 00 32.9	
	comp=Z,5.6nm,0.8s						
WRAB	Tennant Creek	23.51	162	P	P	05 00 33.7	+0.8
WRAB				IAmb	IAmb	05 00 47.5	
	comp=Z,5.5nm,0.6s						
WRA	Warramunga Arr	23.51	162	P	P	05 00 33.6	+0.6
	comp=Z,2.8nm,0.6s,baz=342,slow=10,SNR=17						
JOW	Kunigami	24.17	3	P	P	05 00 38.8	-0.2
JOW				IAmb	IAmb	05 00 51.0	
	comp=Z,6.9nm,1.3s						
PSA00	Pilbara Seismi	24.97	196	P	P	05 00 46.8	+0.4
PSA00				IAmb	IAmb	05 00 53.4	
	comp=Z,25nm,1.1s						
ASAR	Alice Springs	26.94	166	P	P	05 01 04.8	+0.7
	comp=Z,0.4nm,0.5s,baz=356,slow=8.2,SNR=6.5						
ASAR				PcP	PcP	05 04 26.5	+1.3
	comp=Z,0.7nm,0.7s,baz=354,slow=2.1,SNR=5.3						
STKA	Stephens Creek	36.97	159	P	P	05 02 32.5	+0.7
	comp=Z,5.9nm,0.7s,baz=338,slow=7.8,SNR=11						
STKA	Stephens Creek	36.97	159	P	P	05 02 33.4	+1.6
STKA				IAmb	IAmb	05 02 34.3	
	comp=Z,1.5nm,0.8s						
ULN	Ulaanbaatar	48.29	342	P	P	05 04 03.7	+0.1
ULN				IAmb	IAmb	05 04 19.3	
	comp=Z,6.1nm,1.2s						
SONM	Songino Array	48.47	342	P	P	05 04 04.8	-0.1
	comp=Z,0.6nm,0.7s,baz=152,slow=8.8,SNR=5.4						
PETK	Petropavlovsk-	56.43	22	P	P	05 05 03.5	-0.2
	comp=Z,9.0nm,1.0s,baz=210,slow=8.3,SNR=3.4						
MK31	Makanchi Array	58.63	326	P	P	05 05 19.1	-0.2
MKAR	Makanchi Array	58.63	326	P	P	05 05 19.0	-0.4
	comp=Z,0.7nm,0.6s,baz=122,slow=8.4,SNR=10.0						
NIL	Nilore	58.81	308	P	P	05 05 20.8	0.0
ZALV	Zalesovo Beam	61.72	333	P	P	05 05 41.5	+1.2
	comp=Z,0.4nm,0.5s,baz=116,slow=9.8,SNR=2.0						
KURK	Kurchatov	62.84	328	P	P	05 05 49.2	+1.4
KURK				IAmb	IAmb	05 05 50.2	
	comp=Z,1.9nm,0.8s						
KK31	Karatay Array	64.23	317	P	P	05 05 57.3	+0.1
KKAR	Karatay Array	64.23	317	P	P	05 05 57.0	-0.2
ABKAR	Akbulak array	73.19	321	P	P	05 06 52.9	+0.1
KIV	Kislovodsk	84.09	314	P	P	05 07 52.0	-1.0

IDC ***03*** *04:55:41.6±0.8, 2°.65N×126°.79E, h0^{km}, mb4.2/9, mb1 4.3/10, mb1mx4.0/39, mbtmp4.2/10, ML3.7/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/35, Error ellipse: s-maj=48.6km s-min=15.3km az=71.0*

NEIC ***03*** *04:55:46.2±2.1, 2°.56N±0°.08×126°.72E±0°.09, h35^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=19.5km s-min=7.6km az=228.0*

ISC 03 04:55:45.9±0.6**, 2°.56N**±0°.08×**126°.74E**±0°.09**, h35**^{km}**, n34, σ1^{s}14**/30**, mb4.4**/18**, MS3.4**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.88	161	Pn	Pn	04 56 13.5	-2.1
LUWI	Luwuk	5.34	228	Pn	Pn	04 57 03.8	+0.6
SIJI	Sorong	5.66	127	Pn	Pn	04 57 06.8	-0.8
	2.3nm,0.3s,baz=158,slow=23,SNR=2.6						
TOLI2	Tolitoli	6.13	257	Pn	Pn	04 57 13.3	-0.8
SBUM	Sibu	14.51	270	Pn	Pn	04 59 07.0	-1.9
KNRA	Kununurra	18.23	174		Pn	04 59 54.7	-1.5
GUMO	Guam	21.01	58	LR	LR	05 07 08.7	
	comp=Z,137nm,20.4s,baz=188,slow=33						
WB0	Warramunga Arr	23.42	162	P	P	05 00 52.8	+0.7
WB0				IAmb	IAmb	05 00 56.5	
	comp=Z,11nm,1.1s						
PMG	Port Moresby	23.56	121	P	P	05 00 55.0	+1.5
WRAB	Tennant Creek	23.57	162	P	P	05 00 54.8	+1.3
WRA	Warramunga Arr	23.57	162	P	P	05 00 55.1	+1.6
	comp=Z,5.1nm,0.5s,baz=334,slow=11,SNR=15						
WB2	Warramunga Arr	23.57	162	P	P	05 00 54.5	+0.9
WB2				IAmb	IAmb	05 00 55.7	
	comp=Z,9.5nm,0.8s						
KRVT	Keravat (AS076	26.17	105	LR	LR	05 09 29.2	
	comp=Z,115nm,21.1s,baz=260,slow=32						
ASAR	Alice Springs	26.98	165	P	P	05 01 25.9	+1.2
	comp=Z,1.2nm,0.6s,baz=343,slow=7.8,SNR=9.1						
GSI	Gunungsitoli	29.18	268	P	P	05 01 44.3	0.0
KSRS	Korea Array	34.75	2	P	P	05 02 32.9	+0.1
	comp=Z,1.0nm,0.6s,baz=173,slow=10,SNR=2.4						
MJAR	Matsushiro Arr	35.44	16	LR	LR	05 14 47.5	
	comp=Z,65nm,21.7s,baz=155,slow=32						
STKA	Stephens Creek	37.04	159	P	P	05 02 54.0	+1.4
	comp=Z,8.7nm,0.8s,baz=342,slow=9.1,SNR=9.5						
STKA	Stephens Creek	37.04	159	P	P	05 02 53.4	+0.8
BJT	Baijiatuau	38.51	347	P	P	05 03 04.4	-0.5
BJT				IAmb	IAmb	05 03 22.4	
	comp=Z,6.1nm,0.8s						
DZM	Mont Dzumac	45.86	124	LR	LR	05 23 15.8	
	comp=Z,84nm,18.6s,baz=312,slow=36						
SONM	Songino Array	48.41	342	P	P	05 04 25.2	+0.4
	comp=Z,0.9nm,0.5s,baz=150,slow=7.0,SNR=4.2						
PETK	Petropavlovsk-	56.51	22	P	P	05 05 24.6	+0.1
	comp=Z,2.8nm,0.6s,baz=186,slow=4.2,SNR=6.5						
MK31	Makanchi Array	58.52	326	P	P	05 05 39.7	+0.8
MKAR	Makanchi Array	58.52	326	P	P	05 05 39.2	+0.3
	comp=Z,1.4nm,0.6s,baz=118,slow=8.6,SNR=8.4						
MAKZ	Makanchi	58.71	326	P	P	05 05 39.5	-0.7
MAKZ				IAmb	IAmb	05 05 44.0	
	comp=Z,7.0nm,1.6s						
ZALV	Zalesovo Beam	61.63	333	P	P	05 06 00.7	+0.7
	comp=Z,0.6nm,0.5s,baz=125,slow=7.6,SNR=2.9						
KURK	Kurchatov	62.73	328	P	P	05 06 08.1	+0.7
KURK				IAmb	IAmb	05 06 12.3	
	comp=Z,3.1nm,0.7s						
KK31	Karatay Array	64.10	317	P	P	05 06 15.3	-1.4
KK31				IAmb	IAmb	05 07 25.7	
	comp=Z,9.1nm,1.6s						
KKAR	Karatay Array	64.10	317	P	P	05 06 14.7	-2.0
KKAR				IAmb	IAmb	05 07 25.7	
	comp=Z,9.1nm,1.6s						
BRVK	Borovoye	68.38	327	P	P	05 06 45.0	+1.1
BRVK				IAmb	IAmb	05 06 46.1	
	comp=Z,2.9nm,0.8s						
ABKAR	Akbulak array	73.06	321	P	P	05 07 12.1	-0.5
ABKAR				IAmb	IAmb	05 07 41.7	
	comp=Z,12nm,1.8s						
ARCES	ARCESS Array B	91.55	340	P	P	05 08 49.0	+0.3
	comp=Z,6.4nm,1.1s,baz=87,slow=6.4,SNR=5.1						
TORD	Torodi Ar. Bea	123.29	287	PKP	PKiKP	05 14 41.7	+1.2
	comp=Z,0.4nm,0.8s,baz=87,slow=1.3,SNR=1.6						

ANF ***03*** *05:04:53.0±0.6, 61°.08N×145°.65W, h6^{km}±5^{km}, ML3.6/13, ML3.6/13, Error ellipse: s-maj=4.5km s-min=3.5km az=96.0*

IASPEI ***03*** *05:04:54.6±0.9, 61°.12N±0°.03×145°.67W±0°.03, h31^{km}±7^{km}, Error ellipse: s-maj=3.9km s-min=3.8km az=136.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***03*** *05:04:54.9±1.4, 61°.11N±0°.02×145°.67W±0°.04, h27^{km}±8^{km}, Error ellipse: s-maj=3.2km s-min=2.3km az=115.0*

AEIC ***03*** *05:04:55±1.6, 61°.12N±0°.02×145°.69W±0°.03, h17^{km}±4^{km}, ML3.3, ML3.5/111(NEIC), Error ellipse: s-maj=2.9km s-min=1.9km az=162.0*

ISC 03 05:04:55.1±0.9**, 61°.10N**±0°.02×**145°.68W**±0°.02**, h27**^{km}±7^{km}**, n137, σ0^{s}82**/156**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIV	Divide	0.05	302		Pb	05 05 00.1	+0.2
VMT	TAPS TI Valdez	0.34	267		Pb	05 05 02.3	-0.5
VMT					Sb	05 05 08.0	0.0
KLU	Klutina	0.41	343		Pb	05 05 03.4	-0.7
KLU					Sb	05 05 09.7	-0.4
KLU				IAML		05 05 10.2	
	comp=E,3μm,0.6s						
JPK	Jack Peak	0.45	264		Pb	05 05 03.9	-0.7
JPK					Sb	05 05 10.9	-0.2
PS12	TAPS Pump St12	0.46	34		Pb	05 05 04.0	-0.7
PS12					Sb	05 05 10.8	-0.4
FID	Port Fidalgo	0.53	228		Pb	05 05 06.4	+0.6
BMRM	Bremner River	0.54	104		Pb	05 05 05.2	-0.9
BMRM					Sb	05 05 13.1	-0.4
EYAK	Cordova Ski Ar	0.56	184		Sn	05 05 15.3	-0.1
EYAK	Cordova Ski Ar	0.56	184		Pb	05 05 06.3	0.0
GOAT	Goat Mountain	0.70	138		Pb	05 05 08.3	-0.5
GLI	Glacier Island	0.72	253		Pb	05 05 07.9	-1.2
GLI				IAML		05 05 19.5	
	comp=E,3μm,0.3s						
N25K	Chitina, Valde	0.73	45	P	Pb	05 05 07.8	-1.4
	baz=227,SNR=66						
N25K				S	Sb	05 05 17.6	-1.3
	baz=227						
N25K	Chitina, Valde	0.73	45		Pb	05 05 08.0	-1.2
N25K					Sb	05 05 17.8	-1.1
N25K				IAML		05 05 18.6	
	comp=N,3μm,0.3s						
N25K				IAML		05 05 19.2	
	comp=E,2μm,0.3s						
HIN	Hinchinbrook I	0.81	210		Pb	05 05 10.1	-0.6
HIN				IAML		05 05 23.7	
	comp=N,1μm,0.2s						
HIN				IAML		05 05 27.3	
	comp=E,1μm,0.8s						
RAGM	Ragged Mountai	0.87	145		Pb	05 05 11.3	-0.3
GLB	Gilahina Butte	0.97	68		Pb	05 05 11.4	-1.8
GLB				IAML		05 05 27.2	
	comp=E,2μm,0.3s						
PS11	TAPS Pump St11	0.99	6		Pb	05 05 12.7	-0.9
PS11					Sb	05 05 25.8	-0.4
M24K	Tolsona, Glenn	1.04	347	P	Pn	05 05 13.1	-0.8
	baz=166,SNR=39						
M24K				S	Sb	05 05 27.2	-0.5
	baz=166						
M24K	Tolsona, Glenn	1.04	347		Pn	05 05 12.9	-0.9
HMT	Hamilton	1.04	137		Pn	05 05 13.5	-0.3
SCM	Sheep Creek Mo	1.08	314		Pn	05 05 13.1	-1.4
SCM				IAML		05 05 30.2	
	comp=N,829nm,0.8s						
SCM				IAML		05 05 32.4	
	comp=E,789nm,0.3s						
VRDI	Verde Repeater	1.09	82		Pn	05 05 13.2	-1.4
VRDI				IAML		05 05 28.1	
	comp=N,1μm,0.5s						
BERG	Berg Lake	1.20	125		Pn	05 05 15.6	-0.5
BERG					Sb	05 05 32.3	-0.1
NICHA	Nichawak Mount	1.21	135		Pn	05 05 16.0	-0.2
CRQM	Cirque	1.29	104		Pn	05 05 17.0	-0.4
MCARA	McCarthy VSAT	1.31	76		Pn	05 05 16.9	-0.7
PWL	Port Wells	1.32	261		Pn	05 05 17.2	-0.5
KAIM	Kayak Island	1.33	152		Pb	05 05 18.9	-0.5
KAIM				IAML		05 05 39.4	
	comp=N,556nm,0.7s						
KAIM				IAML		05 05 40.4	
	comp=E,545nm,0.8s						
KHIT	Khitrov Hills	1.36	118		Pn	05 05 18.3	-0.1
KNK	Knik Glacier	1.38	284		Pn	05 05 18.6	0.0
KNK				IAML		05 05 38.4	
	comp=N,1μm,0.4s						
KNK				IAML		05 05 39.2	
	comp=E,1μm,0.3s						
SUCK	Suckling Hills	1.40	137		Pn	05 05 19.4	+0.6
SUCK				IAML		05 05 41.0	
	comp=E,478nm,0.6s						
GRIN	Grindle Hills	1.42	124		Pn	05 05 18.9	-0.2
TGL	Tana Glacier	1.43	103		Pn	05 05 19.1	-0.2
SML	Sawmill	1.46	300		Pn	05 05 18.8	-0.9
BGLC	Bering Glacier	1.54	129		Pn	05 05 21.2	+0.6
PTPK	Patty Peak	1.56	85		Pn	05 05 20.8	-0.4
BALM	Baldy	1.62	91		Pn	05 05 21.5	-0.4
BALM					Sn	05 05 42.6	+0.7
BALM				IAML		05 05 45.0	
	comp=E,636nm,0.3s						
KIAG	Kiagna River	1.63	95		Pn	05 05 21.4	-0.7
SNH	Sunshine Point	1.68	122		Pn	05 05 22.4	-0.2
KULT	Kultieth River	1.69	119		Pn	05 05 22.5	-0.3
GHO	Glory Hole Cre	1.70	295		Pn	05 05 22.8	-0.2
ISLE	Juniper Island	1.71	106		Pn	05 05 23.6	+0.4
ISLE					Sb	05 05 46.8	-0.2
Q23K	Middleton Isla	1.71	192	P	Pn	05 05 22.9	-0.1
	baz=11						
Q23K				S	Sn	05 05 44.7	+0.8
	baz=11						
Q23K	Middleton Isla	1.71	192		Pn	05 05 23.4	+0.3
Q23K				IAML		05 05 48.7	
	comp=E,459nm,2.7s						
Q23K				IAML		05 06 24.4	
	comp=N,488nm,3.7s						
MID	Middleton Isla	1.71	191		Pn	05 05 23.4	+0.4
MID				IAML		05 06 15.4	
	comp=E,510nm,3.3s						
MID				IAML		05 06 24.4	
	comp=N,420nm,3.7s						
PMR	Palmer	1.73	288		Pn	05 05 23.7	+0.4
WAT6	Susitna Watana	1.78	328		Pn	05 05 23.3	-0.8
WAT6					Sn	05 05 46.6	+0.7
PAX	Paxson	1.88	3		Pn	05 05 25.9	+0.4
CYK	Cape Yakataga	1.88	122		Pn	05 05 25.6	+0.3
BARN	Barnard Glacie	1.95	89		Pn	05 05 27.0	+0.4
BARN				IAML		05 05 53.5	
	comp=E,482nm,0.5s						
BARN				IAML		05 05 54.9	
	comp=N,472nm,0.6s						
RC01	Rabbit Creek A	1.97	271	P	Pn	05 05 26.7	+0.1
	baz=87,SNR=40						
RC01				S	Sn	05 05 52.7	+2.3
	baz=87						
RC01	Rabbit Creek A	1.97	271		Pn	05 05 26.7	+0.1
MESA	MESA	2.06	115		Pn	05 05 27.6	-0.3
MENT	Mentasta	2.06	26		Pn	05 05 28.6	+0.6
MENT				IAML		05 05 56.9	
	comp=N,292nm,0.3s						
MENT				IAML		05 05 57.7	
	comp=E,333nm,0.4s						
YAH	Yahtse	2.07	109		Pn	05 05 27.9	-0.3
YAH				IAML		05 05 58.6	
	comp=E,255nm,0.3s						
YAH				IAML		05 06 01.8	
	comp=N,334nm,0.7s						
O22K	Cooper Landing	2.08	254	P	Pn	05 05 28.0	0.0
	baz=70,SNR=17						
O22K				S	Sb	05 05 55.8	-1.6
	baz=70						
O22K	Cooper Landing	2.08	254		Pn	05 05 28.3	+0.2
SEW	Seward	2.11	243		Pn	05 05 27.7	-0.8
CTGM	Chitina Glacie	2.12	92		Pn	05 05 29.0	+0.2
CTGM				IAML		05 06 00.7	
	comp=N,272nm,0.6s						
WAT1	Susitna Watana	2.20	323		Pn	05 05 30.0	+0.2
L26K	Log Cabin Wild	2.22	29	P	Pn	05 05 30.8	+0.7
	baz=211,SNR=15						
L26K	Log Cabin Wild	2.22	29		Pn	05 05 30.8	+0.7
RKAV	Rock Avalanche	2.28	109		Pn	05 05 31.0	0.0
WAT7	Susitna Watana	2.29	321		Pn	05 05 31.0	-0.1
LOGN	Logan Glacier	2.30	95		Pn	05 05 31.4	+0.1
SLKM	Skilak Lake	2.30	257		Pn	05 05 31.1	-0.2
WAT2	Susitna Watana	2.32	325		Pn	05 05 31.5	0.0
WAT2					Sn	05 06 00.1	+1.0
TABL	Table Mountain	2.32	105		Pn	05 05 32.6	+1.0
TABL				IAML		05 06 05.8	
	comp=E,201nm,0.3s						
TABL				IAML		05 06 06.2	
	comp=N,186nm,0.6s						
YUK2	White River	2.42	71		Pn	05 05 33.4	+0.5
SUA	Susitna One	2.47	281		Pn	05 05 33.4	-0.2
CHX	Chaix Hills	2.48	113		Pn	05 05 33.6	-0.1
CUT	Chulitna	2.54	303	P	Pn	05 05 35.3	+0.8
	baz=119,SNR=31						
CUT				S	Sb	05 06 08.7	-2.1
	baz=119						
CUT	Chulitna	2.54	303		Pn	05 05 34.9	+0.4
YUK3	Moose Creek	2.60	73		Pn	05 05 35.9	+0.4
SAMH	Samovar Hills	2.60	110		Pn	05 05 36.0	+0.6
BVCY	Beaver Creek	2.64	58		Pn	05 05 36.5	+0.6
HUR	Hurricane	2.65	317		Pn	05 05 36.5	+0.6
DOT	Dot Lake	2.67	16		Pn	05 05 37.5	+1.3
RIDG	Independent Ri	2.68	8		Pn	05 05 37.3	+0.9
RIDG				IAML		05 06 12.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,128nm,0.6s						
BC03		2.69	41		Pn	05 05 36.8	+0.3
CAPN	Captain Cook N	2.69	265	P	Pn	05 05 37.8	+1.3
	baz=80						
RND	Reindeer	2.75	329		Pn	05 05 38.0	+0.6
RND				IAML		05 06 16.9	
	comp=E,160nm,1.0s						
RND				IAML		05 06 18.2	
	comp=N,172nm,0.4s						
BRSE	Bradley Lake S	2.86	244		Pn	05 05 38.3	-0.5
PCA	Pinnacle	2.86	108		Pn	05 05 39.2	+0.3
BRLK	Bradley Lake	2.91	245		Pn	05 05 39.2	-0.3
BRLK				IAML		05 06 27.8	
	comp=N,224nm,1.0s						
BRLK				IAML		05 06 28.1	
	comp=E,223nm,0.9s						
SKT	Skwentna	2.94	290		Pn	05 05 39.6	-0.4
SCRK	Sand Creek	2.99	14	P	Pn	05 05 41.3	+0.6
	baz=196						
STLK	Strandline Lak	3.00	280		Pn	05 05 40.6	-0.2
MCK	McKinley	3.04	332	P	Pn	05 05 42.0	+0.6
	baz=149,SNR=38						
MCK	McKinley	3.04	332		Pn	05 05 42.1	+0.8
SPCG	Spurr Capps Gl	3.08	276		Pn	05 05 41.7	-0.2
SPCP	Crater Peak Br	3.14	276		Pn	05 05 42.4	-0.4
SPCN	Chakachatna No	3.15	275		Pn	05 05 42.9	-0.1
CNPM	China Poot	3.18	243		Pn	05 05 43.2	-0.1
CNPM				IAML		05 06 30.4	
	comp=E,99nm,1.0s						
CNPM				IAML		05 06 30.6	
	comp=N,120nm,0.6s						
TRF	Thorofare Moun	3.19	320		Pn	05 05 44.6	+1.0
TRF				IAML		05 06 32.0	
	comp=N,115nm,0.9s						
TRF				IAML		05 06 37.7	
	comp=E,101nm,0.8s						
BCPM	Bancas Point	3.20	108		Pn	05 05 44.4	+0.9
BCPM				IAML		05 06 42.3	
	comp=E,227nm,3.5s						
SPBG	Spurr Blockage	3.24	276		Pn	05 05 44.3	+0.1
HDA	Harding Lake	3.37	351		Pn	05 05 45.8	-0.1
HDA				IAML		05 06 33.2	
	comp=E,158nm,0.7s						
HDA				IAML		05 06 34.3	
	comp=N,194nm,0.4s						
K27K	Chicken	3.38	28	P	Pn	05 05 46.2	+0.3
	baz=211						
K27K	Chicken	3.38	28		Pn	05 05 46.6	+0.7
YUK4	Talbot Arm	3.41	83		Pn	05 05 47.5	+1.0
DFR	Drift River	3.47	265		Pn	05 05 46.5	-0.7
KTH	Kantishna Hill	3.47	317		Pn	05 05 47.8	+0.5
KTH				IAML		05 06 37.1	
	comp=N,86nm,0.6s						
KTH				IAML		05 06 40.2	
	comp=E,94nm,0.8s						
RSO	Redoubt South	3.53	263		Pn	05 05 47.5	-0.7
RED	Redoubt Volcan	3.55	262		Pn	05 05 47.5	-0.9
PPLA	Purkeypile	3.56	303		Pn	05 05 48.4	-0.1
WRH	Wood River Hil	3.56	343		Pn	05 05 48.9	+0.5
WRH				IAML		05 06 45.2	
	comp=E,86nm,0.7s						
YUK6	Outpost Mounta	3.56	89		Pn	05 05 49.2	+0.5
NCT	North Crescent	3.59	265		Pn	05 05 48.3	-0.7
CCB	Clear Creek Bu	3.69	346		Pn	05 05 49.7	-0.5
CCB				IAML		05 06 40.4	
	comp=N,76nm,0.4s						
CCB				IAML		05 06 40.5	
	comp=E,100nm,0.4s						
IL31		3.73	352		Pn	05 05 50.1	-0.6
IVE	Iliamna Volcan	3.78	256		Pn	05 05 50.7	-0.9
BPAW	Bear Paw Mtn.	3.88	323		Pn	05 05 53.2	+0.3
BPAW				IAML		05 06 54.0	
	comp=N,79nm,1.1s						
COLA	College	3.91	346		Pn	05 05 53.4	+0.1
TCOL	CIGO, UAF Yank	3.92	346	P	Pn	05 05 53.0	-0.3
	baz=164,SNR=14						
TCOL	CIGO, UAF Yank	3.92	346		Pn	05 05 54.1	+0.8
HYT	Haines Junctio	4.00	90		Pn	05 05 55.0	+0.4
HYT				IAML		05 06 55.2	
	comp=N,50nm,3.3s						
MDM	Murphy Dome	4.04	344		Pn	05 05 54.7	-0.4
MDM				IAML		05 06 48.6	
	comp=N,49nm,1.1s						
MDM				IAML		05 06 57.9	
	comp=E,52nm,0.4s						
POKR	Poker Plat Res	4.11	350	P	Pn	05 05 55.1	-0.8
	baz=168						
POKR				S	Sn	05 06 45.7	+2.6
	baz=168						
POKR	Poker Plat Res	4.11	350		Pn	05 05 55.5	-0.5
POKR				IAML		05 06 51.6	
	comp=N,40nm,0.6s						
POKR				IAML		05 07 02.0	
	comp=E,46nm,0.7s						
DAWY	Dawson	4.16	42		Pn	05 05 57.3	+0.6
EGAK	Eagle	4.23	27		Pn	05 05 58.8	+1.2
I23K	Minto, Yukon-K	4.39	339	P	Pn	05 05 59.4	-0.4
	baz=156						
I23K				S	Sn	05 06 54.7	+4.7
	baz=156						
MLY	Manley	4.56	332	P	Pn	05 06 03.2	+0.8
	baz=147						
MLY	Manley	4.56	332		Pn	05 06 03.1	+0.8
SVW2	Sparrevohn	4.80	274		Pn	05 06 04.2	-1.4
KDAK	Kodiak Island	4.85	230		Pn	05 06 05.9	-0.2
KDAK	Kodiak Island	4.85	230	IAML		05 06 45.5	
	comp=E,38nm,3.1s						
KDAK				IAML		05 07 11.9	
	comp=E,30nm,3.3s						
TT01	Tatalina	5.20	295		Pn	05 06 09.5	-1.5
TTA	Tatalina	5.20	295		Pn	05 06 10.5	-0.5
TTA				IAML		05 07 48.5	
	comp=E,18nm,4.5s						
OHAK	Old Harbor	5.52	229		Pn	05 06 15.5	+0.2
KABU	Katmai Buttres	5.63	244		Pn	05 06 16.8	-0.1
IM03		6.08	327		Pn	05 06 22.4	-0.5
BM03	Burnt Mountain	6.36	4		Pn	05 06 26.9	-0.1
COLD	Coldfoot	6.46	344	Pn	Pn	05 06 28.7	+0.5
TOLK	Toolik Lake Re	7.75	349	Pn	Pn	05 06 46.8	+0.9
INK	Inuvik	8.89	30	Pn	Pn	05 07 01.8	+0.4

IDC 03 05:13:14.7±2.0**, 1°.43N**×**124°.40E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/33**, mbtmp3.3**/3**, Error ellipse: s-maj=196.9km s-min=28.3km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.37	156	P	P	05 18 25.3	+0.1
	0.5nm,0.5s,baz=334,slow=11,SNR=8.9						
ASAR	Alice Springs	26.60	160	P	P	05 18 55.0	0.0
	0.2nm,0.6s,baz=338,slow=7.0,SNR=1.7						
MKAR	Makanchi Array	58.16	327	P	P	05 23 10.3	-0.2
	0.5nm,0.9s,baz=124,slow=7.5,SNR=2.6						

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*DJA **03** 05:20:22.9±0.5, 3°N±3°×12°7E±°, h10^{km}, M4.4/7, mb5.0/1, mB5.0/1, MLv4.1/7, Mw(mB)4.2/1*

*NEIC **03** 05:20:22.9±2.2, 2°.87N±0°.08×127°.02E±0°.09, h35^{km}±2^{km}, mb4.5/24, Error ellipse: s-maj=17.6km s-min=11.2km az=233.0*

*IDC **03** 05:20:24.5±3.1, 2°.73N×126°.98E, h52^{km}±30^{km}, mb4.0/22, mb1 4.1/23, mb1mx4.0/39, mbtmp4.3/23, ML4.0/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/36, Error ellipse: s-maj=23.8km s-min=10.6km az=77.0*

ISC 03 05:20:23.7±0.4**, 2°.78N**±0°.05×**127°.08E**±0°.07**, h44^{km}, n70, σ1^s.25**/69**, mb4.4**/35**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.79	300	P	Pn	05 20 53.6	+1.4
SGSI				S	Sn	05 21 18.9	+5.1
TNTI	Ternate	2.02	172		Pn	05 20 56.9	+1.6
TNTI	Ternate	2.02	172	P	Pn	05 20 59.3	+4.0
GTOI	Gorontalo	4.59	242	P	Pn	05 21 36.1	+5.4
KCP	Kidapawan	4.64	335	⇑eP	Pn	05 21 33.1	+1.6
SIJI	Sorong	5.54	131	P	Pn	05 21 46.4	+2.7
	4.2nm,0.3s,baz=321,slow=16,SNR=7.4						
SIJI				S	Sn	05 22 48.1	+2.0
	baz=185,slow=22,SNR=1.1						
SIJI				LR	LR	05 24 17.0	
	comp=Z,665nm,20.8s,baz=54,slow=42						
MRSI	Marisa	5.63	246	P	Pn	05 21 49.6	+4.7
LUWI	Luwuk	5.75	229	Pn	Pn	05 21 47.1	+0.6
TOLI2	Tolitoli	6.51	255	Pn	Pn	05 21 56.5	-0.6
FAKI	Fak Fak	7.67	138	Pn	Pn	05 22 14.1	+1.2
KAPI	Kappang	10.66	223	LR	LR	05 26 55.5	
	comp=Z,56nm,21.8s,baz=68,slow=37						
SBUM	Sibu	14.85	269	Pn	Pn	05 23 50.4	-0.6
MTN	Manton Dam	16.04	166	Pn	Pn	05 24 06.1	-0.2
MTN				IAmb	IAmb	05 24 27.9	
	comp=Z,41nm,1.3s						
FITZ	Fitzroy Crossi	20.80	184	P	P	05 25 00.8	-0.7
	comp=Z,3.9nm,0.6s,baz=15,slow=8.9,SNR=10						
FITZ	Fitzroy Crossi	20.80	184	P	P	05 25 01.4	0.0
FITZ				IAmb	IAmb	05 25 19.7	
	comp=Z,22nm,1.4s						
YULB	Yu-li	21.24	345	P	P	05 25 03.6	-2.5
YULB				IAmb	IAmb	05 25 16.1	
	comp=Z,27nm,1.3s						
TPUB	Ta-pu	21.33	343	P	P	05 25 05.4	-1.8
WB0	Warramunga Arr	23.53	163	P	P	05 25 29.1	-1.0
WB0				IAmb	IAmb	05 25 33.2	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	23.68	163	P	P	05 25 30.6	-0.9
WRAB				IAmb	IAmb	05 25 31.4	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	23.68	163	P	P	05 25 30.5	-1.1
	comp=Z,5.5nm,0.4s,baz=343,slow=10.0,SNR=95						
WRA				PcP	PcP	05 29 16.1	+0.9
	comp=Z,0.5nm,0.9s,baz=339,slow=2.5,SNR=2.4						
AS31	Alice Springs	27.11	166	P	P	05 26 02.3	-0.5
ASAR	Alice Springs	27.12	166	P	P	05 26 01.9	-0.8
	comp=Z,1.3nm,0.5s,baz=353,slow=8.0,SNR=39						
ASAR				PcP	PcP	05 29 22.6	-0.3
	comp=Z,1.4nm,0.7s,baz=1.3,slow=2.5,SNR=8.3						
CMAR	Chiang Mai Arr	31.66	301	P	P	05 26 43.1	0.0
	comp=Z,1.0nm,0.7s,baz=114,slow=7.0,SNR=6.5						
FORT	Forrest	33.39	178	P	P	05 26 57.6	-0.5
KSRS	Korea Array	34.51	1	P	P	05 27 08.0	+0.2
	comp=Z,1.5nm,0.7s,baz=176,slow=9.8,SNR=5.0						
MJAR	Matsushiro Arr	35.13	16	P	P	05 27 12.0	-1.2
	comp=Z,2.1nm,0.9s,baz=202,slow=7.8,SNR=6.4						
BBOO	Buckleboo	36.41	167	P	P	05 27 23.7	-0.5
BBOO				IAmb	IAmb	05 27 41.2	
	comp=Z,13nm,1.2s						
NWAO	Narrogin (SRO)	36.72	194	P	P	05 27 27.4	+0.6
STKA	Stephens Creek	37.12	159	P	P	05 27 29.8	-0.4
	comp=Z,17nm,0.8s,baz=332,slow=8.7,SNR=28						
STKA				PcP	PcP	05 29 50.9	+0.9
	comp=Z,2.6nm,0.5s,baz=346,slow=5.3,SNR=4.1						
STKA	Stephens Creek	37.12	159	P	P	05 27 30.5	+0.3
BJT	Baijiatuau	38.37	346	P	P	05 27 40.7	+0.1
ARMA	Armidale	40.49	146	P	P	05 27 58.1	-0.4
ARMA				IAmb	IAmb	05 28 03.4	
	comp=Z,22nm,1.5s						
USRK	Ussuriysk Ar.	41.47	5	P	P	05 28 07.1	+0.8
	comp=Z,1.6nm,0.7s,baz=199,slow=6.2,SNR=5.4						
H11S3	WAKE ISLAND Hy	41.80	65	T	T	06 12 47.9	
	baz=253,slow=74						
H11S1	WAKE ISLAND Hy	41.81	65	T	T	06 12 48.0	
	baz=253						
H11S2	WAKE ISLAND Hy	41.81	65	T	T	06 12 51.1	
	baz=253,slow=74						
ASAJ	Asahikawa	43.39	16	P	P	05 28 23.0	+1.1
	comp=Z,10nm,0.9s,baz=214,slow=11,SNR=5.6						
TAPN	Taplejung	44.86	307	eP	P	05 28 34.2	-0.2
ODAN	Odare	44.91	306	eP	P	05 28 34.5	-0.2
	comp=Z,10nm,0.6s						
RAMN	Ramite	45.58	306	eP	P	05 28 40.3	+0.2
KLR	Kul'dur	46.45	4	P	P	05 28 46.7	+0.5
	comp=Z,1.5nm,0.4s,baz=163,slow=7.1,SNR=5.2						
GUN	Gumba	46.57	307	eP	P	05 28 47.6	-0.3
	comp=Z,12nm,0.5s						
PKI	Pulchoki	46.80	306	eP	P	05 28 49.1	-0.7
DMN	Daman	47.06	306	eP	P	05 28 51.3	-0.4
	comp=Z,15nm,0.8s						
GKN	Gorkha	47.60	306	eP	P	05 28 55.3	-0.5
	comp=Z,12nm,0.7s						
SONM	Songino Array	48.30	341	P	P	05 29 01.3	+0.4
	comp=Z,1.9nm,0.7s,baz=156,slow=8.3,SNR=7.1						
SONM				LR	LR	05 50 15.5	
	comp=Z,93nm,19.0s,baz=8.5,slow=37						
KOLN	Koldanda	48.35	305	eP	P	05 29 01.7	+0.1
	comp=Z,32nm,0.6s						
DANN	Dangsing	48.45	306	eP	P	05 29 02.3	-0.2
	comp=Z,39nm,0.7s						
PEA0B	Petropavlovsk-	56.17	22	P	P	05 30 00.3	+1.3
PETK	Petropavlovsk-	56.17	22	P	P	05 30 00.4	+1.4
	comp=Z,5.2nm,0.6s,baz=180,slow=3.9,SNR=13						
MK31	Makanchi Array	58.53	325	P	P	05 30 15.9	+0.1
MKAR	Makanchi Array	58.53	325	P	P	05 30 15.7	-0.1
	comp=Z,2.3nm,0.7s,baz=122,slow=8.7,SNR=29						
MAKZ	Makanchi	58.72	325	P	P	05 30 17.2	+0.1
MAKZ				IAmb	IAmb	05 30 21.6	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	61.59	333	P	P	05 30 35.8	-0.7
	comp=Z,0.7nm,0.5s,baz=103,slow=6.4,SNR=4.1						
KURBB	Kurchatov Arra	62.72	328	P	P	05 30 44.5	+0.3
	comp=Z,1.4nm,0.4s,baz=129,slow=6.0,SNR=13						
KURK	Kurchatov	62.72	328	P	P	05 30 44.0	-0.2
KURK				IAmb	IAmb	05 31 01.2	
	comp=Z,3.8nm,0.7s						
KK31	Karatay Array	64.16	317	P	P	05 30 52.2	-1.7
BVAR	Borovoye Array	68.30	327	P	P	05 31 19.4	-0.9
	comp=Z,1.4nm,1.0s,baz=227,slow=46,SNR=3.8						
BRVK	Borovoye	68.37	327	P	P	05 31 20.2	-0.5
BRVK				IAmb	IAmb	05 31 38.0	
	comp=Z,3.5nm,0.8s						
TIXI	Tiksi	68.78	1	P	P	05 31 22.0	-0.8
NRIK	Noril'sk	71.43	346	P	P	05 31 39.0	-0.1
	comp=Z,2.5nm,0.6s,baz=120,slow=4.4,SNR=5.0						
NRIK	Noril'sk	71.43	346	P	P	05 31 38.7	-0.4
NRIK				IAmb	IAmb	05 31 47.6	
	comp=Z,4.2nm,0.8s						
ABKAR	Akbulak array	73.10	321	P	P	05 31 48.6	-0.9
VNDA	Vanda	82.45	173	P	P	05 32 41.2	+0.3
	comp=Z,1.0nm,0.4s,baz=320,slow=6.2,SNR=11						
VNDA	Vanda	82.45	173	P	P	05 32 41.7	+0.8
ILAR	Eielson Array	85.80	25	P	P	05 32 57.8	-0.5
	comp=Z,0.2nm,0.5s,baz=238,slow=5.6,SNR=7.6						
BRTR	Keskin Array B	90.89	310	P	P	05 33 23.0	-0.2
	comp=Z,1.3nm,0.9s,baz=112,slow=8.1,SNR=5.7						
ARCES	ARCESS Array B	91.45	340	P	P	05 33 23.6	-1.5
	comp=Z,2.8nm,0.6s,baz=71,slow=4.4,SNR=9.7						
FINES	FINESS Array B	92.83	332	P	P	05 33 30.8	-0.7
	comp=Z,4.1nm,1.0s,baz=35,slow=7.0,SNR=4.6						
TORD	Torodi Ar. Bea	123.54	288	PKP	PKPdf	05 39 15.3	-2.2
	comp=Z,0.8nm,0.8s,baz=48,slow=2.2,SNR=4.7						

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*IDC **03** 05:42:51.9±1.1, 33°.53N×131°.65E, h92^{km}±10^{km}, mb3.0/4, mb1 3.3/6, mb1mx3.1/32, mbtmp3.4/6, Error ellipse: s-maj=24.3km s-min=13.8km az=79.0*

*JMA **03** 05:42:51.7, 33°.58N×131°.83E, h85^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s327.00000°, δ22.00000°, λ-147.00000°. NP2: ϕ_s206.00000°, δ78.00000°, λ-72.00000°. Principal axes: T Plg31.0000°, Azm281.0000°; N Plg18.0000°, Azm22.0000°; P Plg53.0000°, Azm138.0000°;*

ISC 03 05:42:51.5±0.9**, 33°.55N**±0°.04×**131°.82E**±0°.04**, h86^{km}**±6^{km}**, n19, σ0^s.58**/32**, mb3.4**/4**, 6C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKI	Kunimi	0.23	291	⇓P	Pn	05 43 04.2	+0.1
JKI				eS	Sn	05 43 13.3	-0.1
JBEP	Beppuamama	0.41	238	⇓P	Pn	05 43 05.4	+0.3
JBEP				eS	Sn	05 43 15.9	+0.6
JUS	Usuki	0.49	187	⇑P	Pn	05 43 06.2	+0.5
JUS				eS	Sn	05 43 16.7	+0.4
JNA	Nagahama	0.55	89	⇑P	Pn	05 43 06.3	+0.1
JNA				eS	Sn	05 43 17.4	+0.2
UWA2	Uwa jima 2	0.75	116	⇑P	Pn	05 43 08.1	-0.1
UWA2				eS	Sn	05 43 20.5	-0.1
JHM	Kurahashi	0.83	45	P	Pn	05 43 09.0	0.0
JHM				eS	Sn	05 43 21.8	-0.3
JNU	Nakatsue	0.90	242	P	Pn	05 43 10.2	+0.5
	51nm,0.3s,baz=45,slow=7.1,SNR=340						
JNU				S	Sn	05 43 23.3	-0.2
	99nm,0.3s,baz=180,slow=21,SNR=43						
JET	Tanbara	1.05	77	⇑P	Pn	05 43 11.5	0.0
JET				eS	Sn	05 43 26.1	-0.4
JKU	Kubokawa	1.07	103	⇑P	Pn	05 43 11.6	-0.1
JKU				eS	Sn	05 43 26.9	+0.1
JTO	Tosashimizu	1.07	130	⇑P	Pn	05 43 11.6	-0.1
JTO				S	Sn	05 43 26.9	0.0
JHT	Toyohira	1.22	24	⇓P	Pn	05 43 13.8	+0.3
JHT				S	Sn	05 43 29.7	-0.4
JIU3	Izumi3	1.31	221	P	Pn	05 43 15.3	+0.7
JGT2	ShimaneMisato	1.61	20	⇓P	Pn	05 43 18.7	+0.2
JGT2				S	Sn	05 43 38.9	0.0
KSRS	Korea Array	5.03	322	P	Pn	05 44 05.0	+0.7
	0.5nm,0.3s,baz=143,slow=14,SNR=5.1						
KSRS				S	Sn	05 45 00.2	-1.0
	0.4nm,0.3s,baz=140,slow=25,SNR=4.9						
MJAR	Matsushiro Arr	6.03	59	P	Pn	05 44 20.2	+2.2
	0.3nm,0.3s,baz=242,slow=14,SNR=24						
SONM	Songino Array	23.84	314	P	P	05 47 56.1	-0.6
	0.5nm,0.6s,baz=136,slow=10,SNR=4.1						
WRA	Warramunga Arr	53.25	177	P	P	05 52 00.5	-0.8
	0.4nm,0.6s,baz=355,slow=8.4,SNR=4.5						
ILAR	Eielson Array	56.55	31	P	P	05 52 25.0	+0.4
	0.3nm,0.7s,baz=274,slow=8.3,SNR=2.0						
ASAR	Alice Springs	56.93	178	P	P	05 52 27.4	-0.4
	0.2nm,0.6s,baz=9.9,slow=13,SNR=5.5						

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*IDC **03** 06:07:01.9±1.2, 1°.73N×126°.39E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.7/44, mbtmp3.9/7, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/38, Error ellipse: s-maj=122.7km s-min=16.8km az=70.0*

*NEIC **03** 06:07:08.5±1.6, 1°.89N±0°.09×126°.82E±0°.10, h51^{km}±11^{km}, mb4.2/11, Error ellipse: s-maj=17.2km s-min=8.7km az=49.0*

*DJA **03** 06:07:08.5±1.6, 2°N±4°×12°7E±°, h24^{km}±15^{km}, M4.1/6, MLv4.1/6*

ISC 03 06:07:08.4±0.8**, 1°.88N**±0°.07×**126°.8E**±0°.1**, h50^{km}, n30, σ1^s.16**/31**, mb4.1**/11**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.24	152		Pn	06 07 29.6	+0.1
TNTI				Sn	Sn	06 07 47.1	+2.0
TNTI	Ternate	1.24	152	P	Pn	06 07 30.2	+0.8
SGSI	Sangihe	2.19	325	P	Pn	06 07 42.7	+0.3
SGSI				S	Sn	06 08 07.9	-0.5
KMSI	Cibinong	3.09	245	P	Pn	06 07 53.4	-1.3
GTOI	Gorontalo	3.97	252	P	Pn	06 08 06.1	-0.8
LUWI	Luwuk	4.95	234	Pn	Pn	06 08 20.9	+0.6
MRSI	Marisa	5.04	254	P	Pn	06 08 21.5	0.0
KCP	Kidapawan	5.37	342	⇑eP	Pn	06 08 34.2	+8.1
TOLI2	Tolitoli	6.05	263	Pn	Pn	06 08 33.1	-2.3
MYLDM	Lahad Datu	8.90	292	Pn	Pn	06 09 17.9	+3.4
BKB	Balikpapan	10.37	253	Pn	Pn	06 09 35.0	+0.4
KKM	Kota Kinabalu	11.33	292	Pn	Pn	06 09 48.4	+0.6
MTN	Manton Dam	15.25	164	Pn	Pn	06 10 40.3	-0.3
MTN				IAmb	IAmb	06 10 53.2	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	19.88	183	P	P	06 11 33.5	-2.2
	comp=Z,0.1nm,0.3s,baz=21,slow=10,SNR=2.0						
FITZ	Fitzroy Crossi	19.88	183	P	P	06 11 35.9	+0.2
FITZ				IAmb	IAmb	06 11 57.9	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	22.77	161	P	P	06 12 06.1	-0.7
WB0				IAmb	IAmb	06 12 14.7	
	comp=Z,7.0nm,0.9s						
WRA	Warramunga Arr	22.91	161	P	P	06 12 07.3	-1.0
	comp=Z,2.0nm,0.4s,baz=339,slow=11,SNR=18						
WB2	Warramunga Arr	22.92	161	P	P	06 12 07.3	-1.0
WB2				IAmb	IAmb	06 12 16.4	
	comp=Z,7.3nm,0.8s						
WR0	Warramunga Arr	23.00	161	P	P	06 12 09.5	+0.4
AS31	Alice Springs	26.32	165	P	P	06 12 39.6	-0.1
ASAR	Alice Springs	26.32	165	P	P	06 12 39.3	-0.4
	comp=Z,1.2nm,0.4s,baz=346,slow=12,SNR=23						
ASAR				LR	LR	06 23 46.2	
	comp=Z,46nm,20.1s,baz=239,slow=38						
BBOO	Buckleboo	35.60	167	P	P	06 14 02.6	+1.3
STKA	Stephens Creek	36.39	159	P	P	06 14 08.4	+0.3
	comp=Z,0.7nm,0.4s,baz=348,slow=9.3,SNR=1.7						
USA0B	Ussuriysk Arra	42.40	6	P	P	06 14 57.0	-0.9
SONM	Songino Array	49.06	342	P	P	06 15 51.5	+0.7
	comp=Z,0.5nm,0.5s,baz=146,slow=7.6,SNR=5.4						
MK31	Makanchi Array	59.11	326	P	P	06 17 03.6	-0.2
MK31				IAmb	IAmb	06 17 07.8	
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	59.11	326	P	P	06 17 03.5	-0.3
	comp=Z,1.3nm,0.5s,baz=118,slow=7.6,SNR=18						
MAKZ	Makanchi	59.29	326	P	P	06 17 05.9	+0.8
MAKZ				IAmb	IAmb	06 17 07.9	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	62.26	333	P	P	06 17 24.5	-0.5
	comp=Z,0.4nm,0.3s,baz=131,slow=5.9,SNR=2.6						
KURK	Kurchatov	63.33	328	P	P	06 17 32.1	-0.2
KURK				IAmb	IAmb	06 17 32.7	
	comp=Z,3.1nm,0.8s						

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*TRN **03** 06:07:36.4, 17°.56N×60°.70W, h20^{km}, MD4.2*

ISC 03 06:07:39.2±3.1**, 17°.6N**±0°.1×**60°.7W**±0°.1**, h58^{km}**±24^{km}**, n50, σ0^s.87**/68**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANBD	Bethesda, Anti	1.18	243	eP	Pn	06 07 58.1	-1.4
ANBD				eS	Sn	06 08 15.0	+0.4
ABD	La Joyeuse, An	1.35	215	eP	Pn	06 08 01.0	-0.9
ABD				eS	Sn	06 08 18.9	0.0
MLYT	Lee's Yard	1.69	240	eP	Pn	06 08 06.6	+0.1
MLYT				eS	Sn	06 08 27.7	+0.6
MAGL	Barre de l'ile	1.73	200	eP	Pn	06 08 06.4	-0.7
MAGL				eS	Sn	06 08 28.9	+0.8
CBE	Ff, Capester	1.76	211	eP	Pn	06 08 07.5	+0.1
CBE				eS	Sn	06 08 29.1	+0.4
TDBA	Terre de Bas,	1.96	208	eP	Pn	06 08 10.2	0.0
TDBA				eS	Sn	06 08 35.0	+1.3
TBG	Guadaloupe-3	1.96	209	eP	Pn	06 08 10.4	+0.2
TBG				eS	Sn	06 08 35.2	+1.5
SKOC	St. Kitts, UWI	1.99	262	eP	Pn	06 08 10.8	+0.2
SKOC				eS	Sn	06 08 35.4	+1.1
SKI	Saint Kitts	1.99	263	eP	Pn	06 08 10.9	+0.3
SKI				eS	Sn	06 08 35.6	+1.2
SEUS	St. Eustatius	2.21	268	eP	Pn	06 08 13.8	+0.3
DSLB	Salisbury	2.26	199	eP	Pn	06 08 14.0	-0.2
DSLB				eS	Sn	06 08 43.0	+2.1
MDN	Morne-Daniel	2.36	197	eP	Pn	06 08 15.9	+0.3
MDN				eS	Sn	06 08 42.9	-0.5
SVN	Savane Anatole	2.77	190	eP	Pn	06 08 21.3	0.0
BAMF	Morne Balai	2.79	190	eP	Pn	06 08 21.2	-0.4
ILAM	Ilet Lapin Mar	2.80	184	e	Pn	06 08 22.8	+1.1
PCM	Pelee Case Pet	2.81	191	eP	Pn	06 08 21.6	-0.2
GBMF	Grand Be	2.81	190	eP	Pn	06 08 21.9	-0.1
PML	Morne Lenard	2.83	190	eP	Pn	06 08 22.1	-0.1
FDF	Fort de France	2.88	189	eP	Pn	06 08 21.9	-0.8
FDF				eS	Sn	06 08 55.9	-0.3
LPMF	Morne Lapointe	3.01	185	eP	Pn	06 08 23.8	-0.7
ZAM	Aeronautique	3.02	187	eP	Pn	06 08 24.1	-0.5
MVM	Montagne Vaucl	3.02	184	eP	Pn	06 08 24.7	0.0
TRMF	Trois Ilets	3.06	187	eP	Pn	06 08 25.0	-0.1
BIM	Bigot	3.08	187	eP	Pn	06 08 25.4	-0.1
BIM				eS	Sn	06 09 01.7	+0.6
MPOM	Morne Pois Mar	3.13	183	eP	Pn	06 08 26.1	-0.1
MPOM				eS	Sn	06 09 01.6	-0.7
SLBI	Saint Lucia, B	3.56	185	eP	Pn	06 08 32.0	0.0
SLBI				eS	Sn	06 09 13.7	+0.9
SLW	Petit Monier	3.56	184	eP	Pn	06 08 33.1	+1.1
SLW				eS	Sn	06 09 14.4	+1.5
SLCP	Castries, St.	3.57	185	eP	Pn	06 08 32.6	+0.4
SLCP				eS	Sn	06 09 12.5	-0.6
SLPA	Patience	3.72	184	eP	Pn	06 08 35.0	+0.8
SLPA				eS	Sn	06 09 17.6	+0.7
SLB	Belfond	3.76	185	eS	Sn	06 09 18.1	+0.3
MCLT	Moule a Chique	3.87	184	eP	Pn	06 08 36.2	-0.1
MCLT				eS	Sn	06 09 20.2	-0.3
CDVI	St. Croix	3.91	273	eP	Pn	06 08 37.2	+0.4
SVB	Belmont	4.33	188	eP	Pn	06 08 43.0	+0.4
SVB	Belmont	4.33	188	eS	Sn	06 09 32.3	+0.5
SVOC	Richmond Hill,	4.44	187	eS	Sn	06 09 35.5	+0.9
BBSP	Saint Philip	4.61	165	e	Pn	06 09 04.8	+18
SJG	San Juan	5.24	277	eP	Pn	06 08 55.7	+0.6
GRGR	Grenville	5.51	190	e	Pn	06 08 59.2	+0.5
AOPR	Arecibo Observ	5.84	278	eP	Pn	06 09 04.6	+1.4
AOPR	Arecibo Observ	5.84	278	eS	Sn	06 10 06.9	-2.0
OCAC	Ocana	15.43	235	eP	Pn	06 11 13.8	+0.2
SMLC	San Martn de	15.69	238	eP	Pn	06 11 15.7	-1.1
BARC	Barichara	16.39	230	eP	P	06 11 28.2	+0.4
BRRC	Barranca, Sant	16.44	232	eP	Pn	06 11 26.3	0.0
RUSC	La Rusia	16.80	228	eP	P	06 11 33.0	+0.4

PTBC	**PUERTO BERRIO,**	**17.37**	**232**	*e*P	**Pn**	**06 11 35.9**	**-2.0**
SPBC	**San Pablo de B**	**17.68**	**229**	*e*P	**Pn**	**06 11 39.8**	**-1.9**
CHIC	**Chingaza**	**18.15**	**226**	*e*P	**Pn**	**06 11 48.4**	**+0.6**
HELC	**Santa Helena**	**18.41**	**234**	*e*P	**P**	**06 11 48.4**	**-1.9**
CBOC	**Ciudad Bolivar**	**18.99**	**234**	*e*P	**Pn**	**06 11 59.0**	**+1.3**

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*PGC **03** 06:09:17.4±1.6, 50°.75N×130°.46W, h10^{km}, MLSn3.0/27, Mw3.6/27, 214km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **03** 06:09:19.7±1.9, 50°.90N×130°.02W, h0^{km}, mb3.5/1, mb1 3.6/6, mb1mx3.3/58, mbtmp3.3/6, ML3.2/5, MS3.2/2, Ms1 3.2/2, ms1mx2.7/29, Error ellipse: s-maj=23.1km s-min=14.1km az=70.0*

ISC 03 06:09:18.2±2.9**, 50°.84N**±0°.06×**130°.29W**±0°.06**, h7**^{km}±20^{km}**, n68, σ1^{s}85**/62**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.39**	**97**	Pn	Pn	06 09 42.2	-1.8
HOLB				Sn	**Sg**	**06 09 59.7**	**-3.1**
HG4B	**Hotspring**	**1.56**	**339**	Pn	Pn	06 09 43.1	-3.2
HG4B				Sn	**Sn**	**06 10 03.0**	**-3.8**
PHC	**Port Hardy**	**1.82**	**93**	Pn	**Pn**	**06 09 48.5**	**-1.4**
PHC				Sn	**Sn**	**06 10 10.6**	**-2.6**
BBB	**Bella Bella**	**1.92**	**44**	Pn	**Pn**	**06 09 50.4**	**-0.8**
	9.7nm,0.3s,baz=230,slow=17,SNR=90						
BBB				Sn	**Sn**	**06 10 12.6**	**-2.9**
	48nm,0.3s,baz=127,slow=17,SNR=27						
BBB	**Bella Bella**	**1.92**	**44**	Pn	**Pn**	**06 09 50.3**	**-0.9**
BBB				Sn	**Sn**	**06 10 12.6**	**-2.9**
MAYB	**Maynard**	**2.04**	**101**	Pn	**Pn**	**06 09 51.4**	**-1.6**
FHRB	**Fair Harbour**	**2.18**	**110**	Pn	Pn	06 09 52.7	-2.1
TLCB	**Telegraph Cove**	**2.22**	**96**	Pn	**Pn**	**06 09 54.4**	**-1.0**
EDB	**Eliza Dome**	**2.25**	**114**	Pn	Pn	06 09 53.5	-2.4
HG1B	**Mitchell Dam**	**2.39**	**332**	Sn	**Sn**	**06 10 24.1**	**-3.0**
WOSB	**Woss**	**2.47**	**105**	Pn	**Pn**	**06 09 57.7**	**-1.3**
MOBC	**Moresby Island**	**2.53**	**337**	Pn	Pn	06 09 57.2	-2.5
MOBC				Sn	**Sn**	**06 10 27.7**	**-3.1**
BNAB	**Bonilla**	**2.67**	**356**	Pn	Pn	06 09 59.8	-1.7
BNAB				Sn	**Sn**	**06 10 31.9**	**-2.2**
DIB	**Dawson Inlet,**	**2.72**	**331**	Pn	Pn	06 09 59.6	-2.7
DIB				Sn	**Sn**	**06 10 31.7**	**-3.8**
H02S1	**DAWSON INLET T**	**2.72**	**331**	Pn	Pn	06 09 59.2	-3.1
	SNR=69						
H02S1				Sn	**Sn**	**06 10 31.6**	**-3.9**
NCRB	**Newcastle Ridg**	**2.73**	**98**	Pn	**Pn**	**06 10 01.4**	**-1.2**
ETB	**Estevan Point**	**2.83**	**120**	Pn	**Pn**	**06 10 01.9**	**-1.8**
GDR	**Gold River**	**2.93**	**110**	Pn	**Pn**	**06 10 03.7**	**-1.5**
GRNB	**Grenville Isla**	**3.02**	**4**	Pn	**Pn**	**06 10 04.9**	**-1.5**
GRNB				Sn	**Sn**	**06 10 40.0**	**-2.9**
CBB	**Campbell River**	**3.25**	**102**	Pn	**Pn**	**06 10 08.7**	**-0.9**
TOFB	**Tofino**	**3.29**	**119**	Pn	Pn	06 10 08.1	-2.1
BTB	**Buttle Lake**	**3.36**	**112**	Pn	**Pn**	**06 10 09.7**	**-1.5**
RUBB	**Prince Rupert**	**3.49**	**0**	Pn	**Pn**	**06 10 11.4**	**-1.4**
RUBB				Sn	**Sn**	**06 10 53.1**	**-1.3**
OZB	**Mount Ozzard**	**3.63**	**119**	Pn	**Pn**	**06 10 13.1**	**-1.8**
B927	**Port Alberni**	**3.89**	**113**	Pn	**Pn**	**06 10 17.2**	**-1.1**
TXB	**Texada**	**3.93**	**105**	Pn	**Pn**	**06 10 18.1**	**-0.8**
MGB	**Mount Grey**	**4.06**	**115**	Pn	**Pn**	**06 10 19.3**	**-1.5**
GHNB	**Nanoose**	**4.19**	**109**	Pn	**Pn**	**06 10 21.4**	**-1.1**
SHB	**Sechelt**	**4.31**	**104**	Pn	**Pn**	**06 10 23.6**	**-0.6**
UBRB	**Upper Baezaeko**	**4.36**	**59**	Pn	**Pn**	**06 10 26.1**	**+1.1**
NLLB	**Nanaimo Lost L**	**4.37**	**109**	Pn	**Pn**	**06 10 24.7**	**-0.3**
WPB	**Watts Point**	**4.70**	**102**	Pn	**Pn**	**06 10 29.5**	**0.0**
BIB	**Bowen Island**	**4.72**	**105**	Pn	**Pn**	**06 10 28.9**	**-0.8**
WSLR	**Whistler**	**4.76**	**96**	Pn	**Pn**	**06 10 30.3**	**-0.1**
GOBB	**Galiano Island**	**4.78**	**111**	Pn	**Pn**	**06 10 30.3**	**-0.2**
B010	**North Saanich**	**4.95**	**114**	Pn	**Pn**	**06 10 33.0**	**+0.2**
PGC	**Sidney**	**4.95**	**114**	Pn	**Pn**	**06 10 33.1**	**+0.3**
B009	**North Saanich**	**4.95**	**114**	Pn	**Pn**	**06 10 33.1**	**+0.3**
B011	**North Saanich**	**4.95**	**114**	Pn	**Pn**	**06 10 33.4**	**+0.5**
SNB	**Saturna Island**	**5.05**	**111**	Pn	**Pn**	**06 10 35.0**	**+0.6**
FSB	**Fort Saint Jam**	**5.14**	**43**	Pn	**Pn**	**06 10 36.4**	**+0.8**
MCW	**Mount Constitu**	**5.30**	**111**	Pn	**Pn**	**06 10 38.3**	**+0.5**
LLLB	**Lillooet**	**5.35**	**89**	Pn	**Pn**	**06 10 39.4**	**+0.9**
MBW	**Mount Baker**	**5.81**	**107**	Pn	**Pn**	**06 10 46.1**	**+1.2**
CMW	**Cultus Mountai**	**5.84**	**111**	Pn	**Pn**	**06 10 46.3**	**+1.1**
JCW	**Jim Creek**	**6.06**	**113**	Pn	**Pn**	**06 10 49.2**	**+1.1**
RPW	**Rockport**	**6.18**	**109**	Pn	**Pn**	**06 10 50.8**	**+0.8**
FMW	**Mount Fremont**	**6.90**	**121**	Pn	**Pn**	**06 11 01.6**	**+1.7**
LON	**Longmire**	**6.94**	**123**	Pn	**Pn**	**06 11 01.6**	**+1.4**
LTY	**Liberty**	**7.27**	**116**	Pn	**Pn**	**06 11 06.6**	**+1.8**
NBC4	**NorthernBC 4**	**7.54**	**46**	Pn	**Pn**	**06 11 10.1**	**+1.5**
DLBC	**Dease Lake**	**7.62**	**1**	Pn	**Pn**	**06 11 10.8**	**+1.3**
	0.2nm,0.3s,baz=177,slow=7.1,SNR=6.7						
DLBC				Sn	**Sn**	**06 12 36.2**	**+0.2**
	0.2nm,0.3s,baz=144,slow=23,SNR=1.8						
DLBC	**Dease Lake**	**7.62**	**1**	Pn	**Pn**	**06 11 11.3**	**+1.8**
NBC5	**NorthernBC 5**	**8.04**	**31**	Pn	**Pn**	**06 11 17.3**	**+1.8**
WHY	**Whitehorse**	**10.17**	**347**	Pn	**Pn**	**06 11 46.3**	**+1.7**
YKA	**Yellowknife Ar**	**14.46**	**30**	Pn	Pn	06 12 40.3	-2.7
	0.0nm,0.3s,baz=225,slow=10,SNR=1.8						
ELK	**Elko**	**14.54**	**128**	LR	LR	06 18 42.8	
	comp=Z,64nm,18.9s,baz=311,slow=39						
KDAK	**Kodiak Island**	**14.70**	**307**	LR	LR	06 16 51.0	
	comp=Z,119nm,19.3s,baz=158,slow=30						
NVAR	**Mina Array Bea**	**15.03**	**141**	Pn	**Pn**	**06 12 53.7**	**+2.6**
	0.1nm,0.3s,baz=351,slow=11,SNR=2.0						
PDAR	**Pinedale Array**	**16.29**	**112**	Pn	**Pn**	**06 13 11.2**	**+3.6**
	0.1nm,0.3s,baz=316,slow=9.9,SNR=15						
ILAR	**Eielson Array**	**16.44**	**334**	Pn	**P**	**06 13 14.1**	**+2.2**
	0.1nm,0.3s,baz=147,slow=10,SNR=6.4						
ULM	**Lac du Bonnet**	**21.77**	**78**	P	**P**	**06 14 09.9**	**-0.3**
	1.1nm,0.6s,baz=290,slow=12,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**57.83**	**262**	T	T	07 21 45.8	
	baz=42,slow=76,SNR=121						
H11N3	**WAKE ISLAND Hy**	**57.83**	**262**	T	T	07 21 35.0	
	baz=42,slow=76,SNR=64						
H11N1	**WAKE ISLAND Hy**	**57.85**	**262**	T	T	07 21 44.0	
	baz=42,slow=76,SNR=106						
H11S1	**WAKE ISLAND Hy**	**58.86**	**261**	T	T	07 23 05.7	
	baz=47						
H11S2	**WAKE ISLAND Hy**	**58.87**	**261**	T	T	07 23 05.1	
	baz=47						
H11S3	**WAKE ISLAND Hy**	**58.88**	**261**	T	T	07 23 05.6	
	baz=47						

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*NOU **03** 06:10:51.2, 40°.40S×174°.55E, h62^{km}, MLv3.6, Cook Strait, New Zealand*

WEL 03 06:10:49.9, 40°S±1°×**17°5E**±°**, h92**^{km}±2^{km}**, M3.5**/24**, ML3.9**/22**, MLv3.5**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=36.4, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIW	**Kapiti Island**	**0.49**	**148**	P	Pn	06 11 05.4	+0.6
KIW				S	Sn	06 11 16.2	+0.3
OGWZ	**Otaki Gorge**	**0.59**	**129**	P	Pn	06 11 06.2	+0.6
OGWZ				S	Sn	06 11 17.8	+0.5
DUWZ	**D'Urville Isla**	**0.61**	**234**	P	Pn	06 11 06.1	+0.4
DUWZ				S	Sn	06 11 18.0	+0.4
OHWZ	**Ohakea**	**0.62**	**68**	P	Pn	06 11 06.3	+0.5
OHWZ				S	Sn	06 11 18.2	+0.5
WAZ	**Wanganui**	**0.76**	**25**	P	Pn	06 11 07.6	+0.4
WAZ				S	Sn	06 11 20.5	+0.5
CAW	**Cannon Point**	**0.76**	**150**	P	Pn	06 11 08.0	+0.8
CAW				S	Sn	06 11 21.2	+1.1
TCW	**Tory Channel**	**0.80**	**196**	P	Pn	06 11 08.5	+1.0
TCW				S	Sn	06 11 21.1	+0.4
MRZ	**Mangatainoka R**	**0.80**	**106**	P	Pn	06 11 07.8	+0.3
MRZ				S	Sn	06 11 20.5	-0.3
HOWZ	**Holdsworth Sta**	**0.85**	**123**	P	Pn	06 11 08.5	+0.4
HOWZ				S	Sn	06 11 21.4	-0.3
WEL	**Wellington**	**0.85**	**170**	P	Pn	06 11 08.9	+0.8
WEL				S	Sn	06 11 22.7	+1.0
POWZ	**Post Office Ro**	**0.92**	**87**	P	Pn	06 11 08.8	0.0
LREZ	**Lake Rotokare**	**0.99**	**353**	P	Pn	06 11 09.9	+0.3
BHW	**Baring Head**	**0.99**	**167**	P	Pn	06 11 10.2	+0.6
BHW				S	Sn	06 11 24.5	+0.2
MTW	**Mount Morrison**	**1.01**	**136**	P	Pn	06 11 10.2	+0.4
MTW				S	Sn	06 11 24.7	-0.1
PRWZ	**Pori Road**	**1.08**	**96**	P	Pn	06 11 10.9	+0.4
PRWZ				S	Sn	06 11 25.7	-0.4
TUWZ	**Tuamarina**	**1.09**	**205**	P	Pn	06 11 11.4	+0.7
TUWZ				S	Sn	06 11 26.7	+0.3
MSWZ	**Moikau Station**	**1.10**	**152**	P	Pn	06 11 11.5	+0.6
MSWZ				S	Sn	06 11 26.4	-0.3
TSZ	**Takapari Road**	**1.13**	**71**	P	Pn	06 11 11.0	-0.2
PAWZ	**Paruwai Farm**	**1.14**	**146**	P	Pn	06 11 12.0	+0.6
PREZ	**Palmer Road**	**1.14**	**344**	P	Pn	06 11 11.9	+0.4
NMEZ	**Namu Road**	**1.16**	**332**	P	Pn	06 11 11.7	+0.2
NNZ	**Nelson**	**1.19**	**229**	P	Pn	06 11 12.1	+0.3
TMWZ	**Te Maipa**	**1.20**	**124**	P	Pn	06 11 12.5	+0.4
KHEZ	**Kahui Hut**	**1.22**	**339**	P	Pn	06 11 12.5	+0.1
NEZ	**North Egmont**	**1.23**	**343**	P	Pn	06 11 12.6	+0.1
DVHZ	**Dannevirke**	**1.23**	**84**	P	Pn	06 11 12.0	-0.4
PLWZ	**Palliser**	**1.24**	**155**	P	Pn	06 11 13.0	+0.4
TRWZ	**Traveller**	**1.28**	**139**	P	Pn	06 11 13.3	+0.3
DREZ	**Durham Road**	**1.28**	**347**	P	Pn	06 11 13.3	+0.3
NBEZ	**Newall Road No**	**1.29**	**335**	P	Pn	06 11 13.3	+0.1
PKVZ	**Pokaka**	**1.30**	**28**	P	Pn	06 11 13.0	-0.3
BFZ	**Birch Farm**	**1.30**	**101**	P	Pn	06 11 13.2	-0.1
VRZ	**Vera Road**	**1.32**	**6**	P	Pn	06 11 13.6	0.0
PKE	**Pukeiti**	**1.33**	**340**	P	Pn	06 11 13.5	-0.1
CPWZ	**Castlepoint**	**1.33**	**111**	P	Pn	06 11 14.2	+0.6
CMWZ	**Cape Campbell**	**1.33**	**191**	P	Pn	06 11 17.9	+4.3
PNHZ	**Pukenui**	**1.36**	**68**	P	Pn	06 11 13.4	-0.6
WNVZ	**Wahianoa**	**1.37**	**36**	P	Pn	06 11 14.0	-0.2
BSWZ	**Blackbirch Sta**	**1.37**	**202**	P	Pn	06 11 14.9	+0.8
MOVZ	**Moawhango**	**1.38**	**42**	P	Pn	06 11 13.6	-0.7
WHVZ	**Whangaehu Hut**	**1.40**	**34**	P	Pn	06 11 14.5	-0.2
FWVZ	**Far West T-bar**	**1.41**	**33**	P	Pn	06 11 14.5	-0.3
TUVZ	**Tukino**	**1.44**	**36**	P	Pn	06 11 15.0	-0.1
ANWZ	**Angora Road**	**1.46**	**91**	P	Pn	06 11 15.1	-0.1
WPHZ	**Waipukurau**	**1.48**	**76**	P	Pn	06 11 15.1	-0.3
BHHZ	**Black Hill Sta**	**1.49**	**51**	P	Pn	06 11 15.0	-0.7
NGZ	**Ngauruhoe**	**1.50**	**32**	P	Pn	06 11 15.5	-0.3
TWVZ	**Taurewa**	**1.53**	**26**	P	Pn	06 11 15.7	-0.4
OTVZ	**Oturere**	**1.53**	**34**	P	Pn	06 11 15.9	-0.4
WTVZ	**West Tongariro**	**1.54**	**31**	P	Pn	06 11 16.0	-0.4
ETVZ	**East Tongariro**	**1.57**	**34**	P	Pn	06 11 16.3	-0.5
KRVZ	**Karewarewa**	**1.58**	**32**	P	Pn	06 11 16.4	-0.4
TMVZ	**Te Maari**	**1.59**	**34**	P	Pn	06 11 16.6	-0.4
QRZ	**Quartz Range**	**1.60**	**256**	P	Pn	06 11 16.5	-0.5
KATZ	**Kakaramea**	**1.70**	**31**	P	Pn	06 11 19.2	+0.7
PXZ	**Pawanui**	**1.80**	**78**	P	Pn	06 11 18.9	-0.7
THZ	**Tophouse**	**1.82**	**223**	P	Pn	06 11 20.5	+0.6
RATZ	**Rangitukua**	**1.83**	**31**	P	Pn	06 11 24.7	+4.8
KAHZ	**Kahuranaki**	**1.89**	**71**	P	Pn	06 11 20.0	-0.7
HIZ	**Hauiti**	**1.94**	**7**	P	Pn	06 11 21.3	-0.1
BKZ	**Black Stump Fm**	**1.96**	**50**	P	Pn	06 11 20.5	-1.1
KHZ	**Kahutara**	**2.12**	**201**	P	Pn	06 11 24.1	+0.5
TLZ	**Tolley Road**	**2.24**	**20**	P	Pn	06 11 25.3	0.0
DSZ	**Denniston Nort**	**2.46**	**237**	P	Pn	06 11 27.8	-0.4
RAHZ	**Arahi**	**2.47**	**53**	P	Pn	06 11 34.3	+5.9
GVZ	**Greta Valley S**	**2.77**	**204**	P	Pn	06 11 31.9	-0.5
TOZ	**Tahuroa Road**	**2.80**	**15**	P	Pn	06 11 32.3	-0.5
LTZ	**Lake Taylor**	**2.90**	**216**	P	Pn	06 11 33.6	-0.6
URZ	**Urewera**	**2.94**	**43**	P	Pn	06 11 32.0	-2.6
PRGZ	**Paritu Road**	**2.98**	**60**	P	Pn	06 11 33.0	-2.2
MWZ	**Matawai**	**3.11**	**48**	P	Pn	06 11 42.2	+5.2
INZ	**Inchbonnie**	**3.27**	**225**	P	Pn	06 11 39.6	+0.5
AWAZ	**Awhitu Peninsu**	**3.38**	**1**	P	Pn	06 11 40.2	-0.3
OXZ	**Oxford**	**3.44**	**212**	P	Pn	06 11 40.1	-1.3
RUGZ	**Raukumara Rang**	**3.46**	**45**	P	Pn	06 11 39.7	-2.0
TWGZ	**Tauwhareparae**	**3.48**	**51**	P	Pn	06 11 47.3	+5.3
ETAZ	**East Tamaki Re**	**3.50**	**5**	P	Pn	06 11 42.4	+0.2
WTAZ	**Waiatarua**	**3.50**	**0**	P	Pn	06 11 42.6	+0.3
MQZ	**McQueen's Vall**	**3.56**	**203**	P	Pn	06 11 41.3	-1.6
RVAZ	**Riverhead Bore**	**3.67**	**0**	P	Pn	06 11 44.2	-0.2
HAZ	**Te Kaha**	**3.67**	**44**	P	Pn	06 11 42.8	-1.7
WIAZ	**Waiheke Island**	**3.67**	**7**	P	Pn	06 11 44.2	-0.3
KUZ	**Kuaotunu**	**3.80**	**14**	P	Pn	06 11 45.0	-1.3
WVZ	**Waitaha Valley**	**3.89**	**226**	P	Pn	06 11 54.0	+6.7
RPZ	**Rata Peaks**	**4.19**	**218**	P	Pn	06 11 53.7	+2.3
WCZ	**Waipu Caves**	**4.50**	**358**	P	Pn	06 11 55.6	-0.1
TMZ	**Timaru**	**4.74**	**213**	P	Pn	06 11 58.2	-0.7
JCZ	**Jackson Bay**	**5.62**	**228**	P	Pn	06 12 10.5	-0.5
CTZ	**Chatham Island**	**7.33**	**120**	P	Pn	06 12 33.3	-1.0

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*IDC **03** 06:11:51.0±1.1, 3°.42S×130°.14E, h0^{km}, mb3.8/5, mb1 4.0/8, mb1mx3.7/45, mbtmp3.8/8, ML3.8/3, Error ellipse: s-maj=42.3km s-min=17.6km az=83.0*

*DJA **03** 06:11:53.8±1.1, 3°S±3°×13°0E±°, h19^{km}±11^{km}, M3.6/8, MLv3.6/8*

ISC 03 06:11:55.4±0.8**, 3°.49S**±0°.05×**130°.13E**±0°.05**, h35**^{km}**, n14, σ2^{s}40**/20**, mb3.9**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.05**	**192**	P	**Pn**	**06 12 13.2**	**-0.4**
BNDI				S	**Sn**	**06 12 28.8**	**+1.9**
MSAI	**Masohi**	**1.21**	**277**	P	**Pn**	**06 12 13.4**	**-2.4**
MSAI				S	**Sn**	**06 12 31.4**	**+0.5**
FAKI	**Fak Fak**	**2.19**	**75**	P	**Pn**	**06 12 30.0**	**+0.7**
SIJI	**Sorong**	**2.84**	**24**	Pn	**Pn**	**06 12 37.2**	**-1.1**
	15nm,0.3s,baz=231,slow=22,SNR=17						
SIJI				Sn	**Sn**	**06 13 11.1**	**-0.3**
	12nm,0.3s,baz=245,slow=23,SNR=3.5						
SWI	**Sorong**	**2.85**	**23**	P	**Pn**	**06 12 37.7**	**-0.6**
NLAI	**Namlea**	**3.04**	**275**	P	**Pn**	**06 12 43.9**	**+3.0**
SANI	**Sanana**	**4.38**	**289**	P	**Pn**	**06 12 58.4**	**-1.0**
SANI				S	**Sn**	**06 13 47.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**15.17**	**197**	Pn	**Pn**	**06 15 28.1**	**+1.1**
	0.1nm,0.3s,baz=22,slow=16,SNR=1.7						
WRA	**Warramunga Arr**	**16.86**	**166**	Pn	**Pn**	**06 15 48.9**	**+0.1**
	0.5nm,0.3s,baz=349,slow=12,SNR=19						
WRA				Sn	**Sn**	**06 18 46.9**	**-8.2**
	0.1nm,0.3s,baz=337,slow=21,SNR=2.4						
ASAR	**Alice Springs**	**20.38**	**170**	P	**P**	**06 16 30.6**	**+1.3**
	3.4nm,0.6s,baz=350,slow=11,SNR=32						
ASAR				S	**S**	**06 20 15.3**	**-0.6**
	0.6nm,0.9s,baz=353,slow=22,SNR=3.6						
STKA	**Stephens Creek**	**30.22**	**160**	P	**P**	**06 18 03.8**	**+0.9**
	1.1nm,0.5s,baz=338,slow=11,SNR=4.5						
SONM	**Songino Array**	**55.19**	**341**	P	**P**	**06 21 25.7**	**+1.0**
	0.2nm,0.5s,baz=134,slow=6.2,SNR=1.5						
MKAR	**Makanchi Array**	**65.40**	**326**	P	**P**	**06 22 35.5**	**+1.0**
	0.9nm,0.7s,baz=121,slow=7.4,SNR=10						
KURBB	**Kurchatov Arra**	**69.62**	**328**	P	**P**	**06 23 00.7**	**-0.3**
	0.4nm,0.5s,baz=131,slow=5.7,SNR=3.8						

IDC 03 06:28:41.1±2.2**, 1°.78N**×**126°.04E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/35**, mbtmp3.2**/3**, Error ellipse: s-maj=186.4km s-min=28.4km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.07**	**160**	P	P	06 33 48.2	-0.3
	0.4nm,0.4s,baz=338,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.42**	**164**	P	P	06 34 20.1	+0.3
	0.2nm,0.6s,baz=346,slow=11,SNR=1.3						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	06 38 41.1	0.0
	0.1nm,0.5s,baz=115,slow=8.6,SNR=1.6						

IDC 03 06:30:05.4±2.6**, 54°.11N**×**86°.58E, h0**^{km}**, mb1 3.4**/1**, mb1mx3.0**/41**, mbtmp3.4**/1**, ML3.4**/1**, Error ellipse: s-maj=21.9km s-min=12.2km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**262**	*i*		06 38 06.1	
	baz=78,slow=341,SNR=0.2						
ZALV	**Zalesovo Beam**	**1.05**	**262**	Pg	Pg	06 30 24.1	-1.5
	2.5nm,0.3s,baz=79,slow=17,SNR=25						
ZALV				Lg	Lg	06 30 41.1	
	4.1nm,0.3s,baz=80,slow=31,SNR=12						
KURBB	**Kurchatov Arra**	**6.04**	**238**	Pn	Pn	06 31 37.2	+1.2
	baz=54,slow=13						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	06 32 01.9	+1.5
	0.5nm,0.3s,baz=23,slow=12,SNR=28						
MKAR				Sn	Sn	06 33 26.6	-3.0
	0.0nm,0.3s,baz=21,slow=26,SNR=2.4						
MKAR				Lg	Lg	06 34 12.4	
	0.0nm,0.3s,baz=21,slow=25,SNR=1.7						

IDC 03 06:35:20.4±3.8**, 5°.84S**×**153°.62E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.3**/29**, mbtmp3.3**/2**, Error ellipse: s-maj=168.2km s-min=53.5km az=125.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.40**	**231**	P	P	06 40 31.1	-0.1
	1.1nm,0.7s,baz=56,slow=10.0,SNR=7.8						
ASAR	**Alice Springs**	**25.96**	**225**	P	P	06 40 54.9	0.0
	0.2nm,0.7s,baz=58,slow=8.3,SNR=1.3						
TORD	**Torodi Ar. Bea**	**151.39**	**287**	PKPbc	PKPbc	06 55 17.2	-0.1
	0.7nm,0.8s,baz=80,slow=3.3,SNR=2.3						

ISC 03 07:33:11.2±1.3**, 44°.57N**±0°.06×**16°.70E**±0°.05**, h3**^{km}±13^{km}**, n7, σ0^{s}52**/12**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.39**	**62**	*e*Pg	**Pg**	**07 33 18.7**	**+0.1**
BLY				*e*Sg	**Sg**	**07 33 23.5**	**-0.2**
KIJV	**Kijevo**	**0.60**	**201**	*e*Pg	**Pg**	**07 33 22.6**	**-0.2**
KIJV				Sg	**Sg**	**07 33 31.3**	**+0.7**
UDBI	**Udbina**	**0.67**	**267**	*e*Pg	**Pg**	**07 33 23.7**	**-0.4**
UDBI				Sg	**Sg**	**07 33 33.2**	**+0.4**
MORI	**Morici**	**1.00**	**226**	*e*Pg	**Pg**	**07 33 30.3**	**-0.1**
MORI				Sg	**Sb**	**07 33 44.5**	**-0.3**
ZIRJ	**Zirje**	**1.19**	**220**	*e*Pg	**Pg**	**07 33 33.7**	**-0.4**
ZIRJ				Sg	**Sn**	**07 33 50.9**	**-0.6**
NVLJ	**Novalja**	**1.31**	**270**	Sg	**Sn**	**07 33 54.6**	**+0.2**
DUGI	**Dugi Otok**	**1.32**	**245**	Sg	**Sn**	**07 33 55.4**	**+0.8**

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*TAP **03** 07:59:22.4, 24°.78N×122°.84E, h7^{km}±1^{km}, ML2.9, D*

*JMA **03** 07:59:24.5±0.1, 24°.64N×122°.92E, h28^{km}±2^{km}, M1.8*

ISC 03 07:59:21.6±1.2**, 24°.75N**±0°.04×**122°.90E**±0°.03**, h5**^{km}±10^{km}**, n35, σ0^{s}41**/63**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.30**	**172**	P	**Pb**	**07 59 30.3**	**+0.8**
JYNG				*e*S	**Sb**	**07 59 34.3**	**-0.5**
YOJ	**Yonaguni jima**	**0.31**	**161**	P	**Pb**	**07 59 30.3**	**+0.7**
YOJ				*e*S	**Sb**	**07 59 34.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.31**	**161**	⇑P	**Pb**	**07 59 30.3**	**+0.7**
	baz=154						
YOJ				S	**Sb**	**07 59 35.6**	**+0.7**
	baz=154						
IRIF	**Iriomote-Funau**	**0.86**	**119**	P	**Pb**	**07 59 39.5**	**+0.4**
IRIF				*e*S	**Sg**	**07 59 49.7**	**+0.4**
TWB1	**Santiao Chiao**	**0.87**	**287**	*i* P	**Pg**	**07 59 38.7**	**+0.5**
	baz=286						
TWB1				S	**Sg**	**07 59 49.5**	**0.0**
	baz=286						
TWC	**Suao**	**0.97**	**262**	P	**Pg**	**07 59 40.2**	**+0.1**
	baz=259						
TWC				*i* S	**Sb**	**07 59 53.9**	**-0.1**
	baz=259						
NTC	**Toucheng**	**0.98**	**276**	*e*P	**Pb**	**07 59 41.5**	**+0.5**
	baz=274						
TIPB	**Shuangxi**	**1.00**	**283**	*i* P	**Pg**	**07 59 41.1**	**+0.3**
	baz=281						
TIPB				*e*S	**Sb**	**07 59 55.0**	**0.0**
	baz=281						
ENAH	**Nanao**	**1.04**	**253**	P	**Pb**	**07 59 42.1**	**+0.1**
	baz=250						
ENAH				S	**Sb**	**07 59 56.7**	**+0.7**
	baz=250						
NWF	**Wu-fen Shan**	**1.06**	**288**	P	**Pg**	**07 59 42.3**	**+0.3**
	baz=286						
NWF				S	**Sb**	**07 59 56.7**	**-0.1**
	baz=286						
ENA	**Nanau**	**1.10**	**253**	P	**Pg**	**07 59 42.9**	**+0.1**
	baz=250						
ENA				S	**Sb**	**07 59 58.0**	**+0.1**
	baz=250						
TWE	**Neicheng**	**1.12**	**269**	*i* P	**Pg**	**07 59 43.1**	**-0.1**
	baz=266						
TWE				S	**Sb**	**07 59 58.2**	**-0.2**
	baz=266						
JKRS	**Kuro-shima**	**1.13**	**117**	P	**Pn**	**07 59 43.9**	**-0.2**
PCYT	**Pengchaiyu**	**1.15**	**319**	P	**Pg**	**07 59 43.6**	**-0.1**
	baz=320						
PCYT				*e*S	**Sb**	**08 00 00.3**	**+1.0**
	baz=320						
JIJ	**Ishigaki jima**	**1.20**	**109**	P	**Pb**	**07 59 44.6**	**-0.2**
ENTT	**Nioudou**	**1.22**	**265**	*i* P	**Pb**	**07 59 45.3**	**+0.2**
	baz=263						
ENTT				*i* S	**Sb**	**08 00 01.3**	**0.0**
	baz=263						
NDT	**Datong Townshi**	**1.27**	**264**	P	**Pn**	**07 59 46.5**	**+0.4**
	baz=261						
NDT				S	**Sn**	**08 00 03.7**	**+0.2**
	baz=261						
NWLT	**Wulai**	**1.27**	**271**	*e*P	**Pg**	**07 59 45.9**	**-0.1**
	baz=270						
NWLT				*e*S	**Sg**	**08 00 02.2**	**-0.3**
	baz=270						
NACB	**Ninganchiao**	**1.32**	**244**	P	**Pb**	**07 59 47.0**	**+0.1**
	baz=242						
NACB				*e*S	**Sn**	**08 00 05.1**	**+0.3**
	baz=242						
TWD	**Chiawan**	**1.36**	**241**	S	**Sb**	**08 00 05.8**	**+0.4**
	baz=238						
YHNB	**Yeheng**	**1.39**	**267**	P	**Pn**	**07 59 47.6**	**-0.1**
	baz=265						
YHNB				S	**Sg**	**08 00 06.0**	**-0.3**
	baz=265						
ETLH	**Xiulin Townshi**	**1.40**	**247**	P	**Pn**	**07 59 48.0**	**0.0**
	baz=245						
ETLH				S	**Sn**	**08 00 07.3**	**+0.4**
	baz=245						
NSK	**Sanguang**	**1.41**	**267**	*i* P	**Pn**	**07 59 47.8**	**-0.2**
	baz=265						
NSK				S	**Sg**	**08 00 06.4**	**-0.4**
	baz=265						
HWA	**Hwalien**	**1.41**	**237**	*e*P	**Pn**	**07 59 47.8**	**-0.2**
	baz=234						
NNSB	**Datong**	**1.42**	**257**	P	**Pb**	**07 59 48.8**	**+0.1**
	baz=255						
NNSB				S	**Sg**	**08 00 06.4**	**-0.8**
	baz=255						
NNSH	**Datong**	**1.42**	**257**	*e*P	**Pg**	**07 59 48.6**	**-0.3**
	baz=255						
NNSH				*e*S	**Sg**	**08 00 06.6**	**-0.6**
	baz=255						
NNS	**Nan Shan**	**1.43**	**258**	P	**Pb**	**07 59 48.9**	**+0.2**
	baz=255						
NNS				S	**Sg**	**08 00 07.2**	**-0.3**
	baz=255						
WHF	**Hehuan Shan**	**1.61**	**248**	*e*P	**Pn**	**07 59 50.5**	**-0.6**
	baz=246						
WHF				*e*S	**Sn**	**08 00 12.1**	**-0.4**
	baz=246						
JTJ	**Tarama**	**1.64**	**94**	P	**Pb**	**07 59 51.9**	**-0.5**
TWT	**Tachien**	**1.65**	**253**	P	**Pn**	**07 59 51.8**	**+0.4**
	baz=251						
TWT				S	**Sn**	**08 00 12.7**	**-0.4**
	baz=251						
TDCB	**Techi**	**1.66**	**253**	*e*P	**Pn**	**07 59 51.8**	**+0.2**
	baz=251						
TDCB				S	**Sb**	**08 00 14.2**	**0.0**
	baz=251						
CHGB	**Renai**	**1.72**	**247**	P	**Pn**	**07 59 52.4**	**-0.1**
	baz=244						
CHGB				*e*S	**Sn**	**08 00 14.4**	**-0.5**
	baz=244						
NSTT	**Nanjuang**	**1.73**	**266**	P	**Pn**	**07 59 52.0**	**-0.4**
	baz=264						
NSTT				*e*S	**Sn**	**08 00 14.7**	**-0.2**
	baz=264						
WHP	**Taichung City**	**1.84**	**256**	*e*P	**Pn**	**07 59 53.9**	**-0.1**
	baz=253						
WHP				*e*S	**Sn**	**08 00 17.6**	**-0.2**
	baz=253						
SSLB	**Suanglung**	**2.02**	**242**	*e*P	**Pn**	**07 59 56.5**	**+0.1**
	baz=240						

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*NEIC **03** 08:03:31.4±2.1, 0°.01N±0°.07×123°.79E±0°.06, h118^{km}±5^{km}, mb5.0/71, Error ellipse: s-maj=9.6km s-min=8.9km az=149.0*

*IDC **03** 08:03:31.7±1.2, 0°.03N×123°.60E, h128^{km}±11^{km}, mb4.5/34, mb1 4.6/38, mb1mx4.4/51, mbtmp4.9/38, MS3.5/7, Ms1 3.5/7, ms1mx3.1/42, Error ellipse: s-maj=11.4km s-min=7.8km az=76.0*

*BJI **03** 08:03:32.0±0.0, 0°.00N×123°.80E, h137^{km}, mB5.1/35, mb4.9/60*

*GCMT **03** 08:03:33.4±0.3, 0°.02S±0°.02×123°.92E±0°.04, h127^{km}±5^{km}, MW4.8/84, Moment Tensor Solution. s16,c18; s84,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.36±.10; M$_{\theta\theta}$0.02±.18; M$_{\phi\phi}$-1.38±.20; M$_{r\theta}$1.30±.06; M$_{\theta\phi}$0.39±.15; M$_{\phi r}$-0.05±.09; Best double couple: M$_{0}$1.85600×10^{16}*

NP1:ϕ_s9.00000°,δ43.00000°,λ136.00000°. NP2: ϕ_s134.00000°,δ62.00000°,λ56.00000°. Principal axes: T 2.1590, Plg58.0000°, Azm355.0000°; N -0.6080, Plg30.0000°, Azm151.0000°; P -1.5520, Plg11.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*MOS **03** 08:03:33.2±1.0, 0°.05N×123°.63E, h156km, mb4.9/37 Error ellipse: s-maj=9.5km s-min=5.1km az=109.9*

*KLM **03** 08:03:33, 0°.06S×123°.82E, h148km, mb4.9*

*DJA **03** 08:03:34.2±0.2, 0°S±3°×12°4E±°, h101km±4km, M4.9/25, mb5.1/15, mB5.2/10, MLv5.3/25, Mw(mB)4.6/10*

*NOU **03** 08:03:38.5, 0°.03S×123°.77E, h185km, mb5.0, Minahassa Peninsula, Sulawesi*

ISC 03 08:03:32.3±0.5**, 0°.05S**±0°.03×**123°.75E**±0°.04**, h131**km±4km**, n394, σ1^{s}32**/434**, mb4.9**/135**, 17C-9D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.66	20	P	Pn	08 03 53.1	+0.6
KMSI				S	Sn	08 04 08.9	+1.1
LUWI	Luwuk	1.39	225	Pn	Pn	08 03 59.0	-0.2
LUWI				Sn	Sn	08 04 17.8	-2.0
LUWI	Luwuk	1.39	225	P	Pn	08 03 58.8	-0.5
LUWI				S	Sn	08 04 18.1	-1.7
MRSI	Marisa	1.89	286	P	Pn	08 04 05.4	+0.4
APSI	Ampana	2.27	248	P	Pn	08 04 10.3	+0.6
SANI	Sanana	2.99	132	P	Pn	08 04 16.4	-2.5
SANI				S	Sn	08 04 48.7	-6.1
TOLI2	Tolitoli	3.19	291	Pn	Pn	08 04 22.3	+0.9
TNTI	Ternate	3.71	77	Pn	Pn	08 04 27.1	-1.1
TNTI	Ternate	3.71	77	P	Pn	08 04 27.3	-0.9
MPSI	Mapaga	3.87	276	P	Pn	08 04 32.3	+1.9
KDI	Kendari	4.04	196	P	Pn	08 04 33.9	+1.2
SGSI	Sangihe	4.11	26	P	Pn	08 04 35.5	+1.8
NLAI	Namlea	4.61	133	P	Pn	08 04 39.9	-0.3
TTSI	Tana Toraja	4.93	233	P	Pn	08 04 45.4	+0.9
SPSI	Sidrap Palu	5.56	226	P	Pn	08 04 54.5	+1.5
	4.1nm5µm417nm,0.6s						
BNSI	Bone	5.65	220	P	Pn	08 04 55.4	+1.2
	3.4nm5µm310nm,0.7s						
MSAI	Masohi	6.12	122	P	Pn	08 05 03.9	+3.3
	0.7nm1µm53nm,0.7s						
KAPI	Kappang	6.35	219	P	Pn	08 05 04.4	+0.8
	37nm,0.3s,baz=34,slow=8.2,SNR=26						
KAPI				S	Sn	08 06 14.2	-0.6
	54nm,0.3s,baz=198,slow=23,SNR=8.9						
KAPI	Kappang	6.35	219	Pn	Pn	08 05 04.5	+1.0
BKSI	Bulukumba	6.37	215	P	Pn	08 05 05.2	+1.3
	1.7nm2µm143nm,0.8s						
BSSI	Bau Bau, Buton	6.87	208	P	Pn	08 05 13.6	+2.9
	2.3nm5µm326nm,0.5s						
BKB	Balikpapan	6.96	260	Pn	Pn	08 05 12.0	+0.2
BKB	Balikpapan	6.96	260	P	Pn	08 05 15.0	+3.2
	0.9nm5µm126nm,0.5s						
KCP	Kidapawan	7.14	11	⇓*e*P	Pn	08 05 17.6	+3.3
DAV	Davao City (W)	7.30	14	P	Pn	08 05 21.7	+5.2
	97nm,0.3s,baz=203,slow=2.5,SNR=13						
DAV				S	Sn	08 06 37.4	-0.6
	baz=124,slow=7.3,SNR=1.0						
MYLDM	Lahad Datu	7.38	315		Pn	08 05 20.6	+3.1
SWI	Sorong	7.55	96	P	Pn	08 05 19.9	+0.1
	0.4nm1µm103nm,0.9s						
SIJI	Sorong	7.56	96	P	Pn	08 05 19.7	-0.2
	5.6nm,0.3s,baz=278,slow=9.6,SNR=21						
SIJI				S	Sn	08 06 46.2	+2.0
	baz=197,slow=19,SNR=1.1						
KBKI	Kotabaru	8.24	247	P	Pn	08 05 31.9	+2.8
	0.6nm2µm152nm,0.7s						
SPMM	Sapulut	8.68	303	P	Pn	08 05 39.0	+4.0
EDFI	Ende, Flores	8.88	193	P	Pn	08 05 45.4	+7.6
FAKI	Fak Fak	8.96	109	Pn	Pn	08 05 37.2	-1.5
BBKI	Banjar Baru	9.53	249	P	Pn	08 05 50.4	+4.0
	92nm,1.9s						
SOEI	Soe	9.65	177	Pn	Pn	08 05 49.4	+1.2
SOEI	Soe	9.65	177	P	Pn	08 05 54.6	+6.4
KKM	Kota Kinabalu	9.66	309		Pn	08 05 47.6	-0.6
BATI	Baumata	10.09	180	P	Pn	08 05 55.5	+1.5
	4.5nm,0.3s,baz=104,slow=3.0,SNR=4.1						
PLAI	Plampang	10.56	214	P	Pn	08 06 18.5	+18
KSM	Kuching	13.53	276		Pn	08 06 41.1	+1.9
LQP	Lukban	14.24	351	⇓*e*P	P	08 06 51.8	+0.1
PWJI	Pagerwojo	14.30	236	P	Pn	08 06 51.7	+2.7
	95nm,0.9s						
MTN	Manton Dam	14.67	150	P	Pn	08 06 53.2	-0.4
	baz=15,SNR=16						
MTN	Manton Dam	14.67	150	Pn	Pn	08 06 54.2	+0.6
KDU	Kakadu	15.25	146	P	Pn	08 07 00.5	-0.3
	baz=15,SNR=18						
UGM	Wanagama	15.33	239		P	08 07 05.5	+1.8
UGM				IAmb	IAmb	08 07 17.2	
	comp=Z,223nm,1.3s						
KPJI	Karang Pucung	16.46	244	P	P	08 07 18.5	+2.4
LEM	Lembang	17.45	247	P	Pn	08 07 28.9	+1.0
	comp=Z,1.3nm,0.3s,baz=116,slow=13,SNR=9.6						
LEM	Lembang	17.45	247	P	Pn	08 07 29.0	+1.0
CISI	Cisompet, Garu	17.55	245	P	Pn	08 07 29.9	+0.8
CISI				IAmb	IAmb	08 07 32.3	
	comp=Z,110nm,0.7s						
CVP	Callao Caves	17.74	354	⇑*i*P	Pn	08 07 33.0	+1.7
FITZ	Fitzroy Crossi	18.03	174	P	P	08 07 34.2	+0.8
	baz=18,SNR=58						
FITZ	Fitzroy Crossi	18.03	174	P	P	08 07 33.8	+0.4
	comp=Z,3.7nm,0.3s,baz=5.8,slow=7.3,SNR=84						
FITZ	Fitzroy Crossi	18.03	174	P	P	08 07 34.2	+0.8
FITZ				IAmb	IAmb	08 07 35.8	
	comp=Z,48nm,0.8s						
KLSI		19.55	256	P	Pn	08 07 55.0	+2.3
XMIS	Christmas Isla	20.77	240	P	P	08 08 02.5	-0.6
XMIS				IAmb	IAmb	08 08 05.7	
	comp=Z,41nm,0.7s						
PSA00	Pilbara Seismi	21.73	190	P	P	08 08 13.6	+0.3
PSA00				IAmb	IAmb	08 08 14.4	
	comp=Z,39nm,0.7s						
WB0	Warramunga Arr	22.20	153	P	P	08 08 17.9	-0.3
WB0				IAmb	IAmb	08 08 21.0	
	comp=Z,69nm,0.8s						
WRAB	Tennant Creek	22.32	153	⇓*e*P	P	08 08 18.8	-0.7
WRAB				pmax	pmax		
	comp=Z,65nm,0.8s						
WRAB	Tennant Creek	22.32	153	P	P	08 08 19.0	-0.5
WRAB				IAmb	IAmb	08 08 22.3	
	comp=Z,57nm,0.8s						
WRA	Warramunga Arr	22.32	153	P	P	08 08 18.8	-0.7
	comp=Z,59nm,0.7s,baz=331,slow=9.9,SNR=139						
WRA				S	S	08 12 13.4	-2.4
	comp=Z,6.9nm,0.9s,baz=336,slow=15,SNR=5.9						
WRA				ScP	ScP	08 15 35.6	-0.4
	comp=Z,2.1nm,0.7s,baz=330,slow=2.6,SNR=9.9						
WRA				PKiKP	PKiKP	08 19 55.0	-1.1
	comp=Z,0.5nm,0.6s,baz=310,slow=1.1,SNR=6.1						
IPM	Ipoh	23.14	282	P	P	08 08 28.4	+0.9
IPM	Ipoh	23.14	282	P	P	08 08 29.0	+1.5
TPUB	Ta-pu	23.41	353	P	P	08 08 28.9	-0.8
YULB	Yu-li	23.42	354	P	P	08 08 29.2	-0.7
YULB				IAmb	IAmb	08 08 35.1	
	comp=Z,23nm,0.8s						
KULM	Kulim	23.67	283	P	P	08 08 33.0	+0.8
KULM	Kulim	23.67	283	P	P	08 08 33.0	+0.8
COEN	Coen	23.68	126	P	P	08 08 32.7	+0.4
SSLB	Suanglung	23.85	354	P	P	08 08 34.1	+0.4
SSLB				IAmb	IAmb	08 08 40.6	
	comp=Z,35nm,0.8s						
GIRL	Giralia	24.29	202	P	P	08 08 38.9	+1.2
	baz=24,SNR=4.1						
GIRL	Giralia	24.29	202	P	P	08 08 38.3	+0.6
YHNB	Yeheng	24.68	355	P	P	08 08 41.5	+0.2
YHNB				IAmb	IAmb	08 08 42.0	
	comp=Z,39nm,1.2s						
RPSI	Rantau Prapat	24.97	276	P	P	08 08 45.1	+1.1
PSI	Prapat	24.98	277	P	P	08 08 42.7	-1.6
	comp=Z,9.2nm,0.8s,baz=180,slow=3.5,SNR=6.7						
PSI	Prapat	24.98	277	P	P	08 08 45.1	+0.8
PSI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PMG	Port Moresby	25.09	112	P	P	08 08 45.8	+0.7
	comp=Z,12nm,0.7s,baz=321,slow=8.0,SNR=5.8						
PMG	Port Moresby	25.09	112	*c i*P	P	08 08 45.8	+0.7
PMG				pmax	pmax		
	comp=Z,19nm,1.0s						
PMG	Port Moresby	25.09	112	P	P	08 08 45.0	-0.1
WRKA	Warakurna	25.23	170	P	P	08 08 46.9	+0.7
	baz=25,SNR=32						
AS31	Alice Springs	25.46	158	P	P	08 08 49.0	+0.6
ASAR	Alice Springs	25.46	158	P	P	08 08 48.9	+0.5
	comp=Z,18nm,0.8s,baz=319,slow=6.4,SNR=108						
ASAR				PcP	PcP	08 12 17.8	+0.7
	comp=Z,5.2nm,0.6s,baz=348,slow=2.2,SNR=12						
ASAR				ScP	ScP	08 15 44.4	-0.2
	comp=Z,4.7nm,0.8s,baz=346,slow=2.7,SNR=17						
ASAR				PKiKP	PKiKP	08 19 56.6	-1.1
	comp=Z,0.2nm,0.5s,baz=331,slow=1.0,SNR=4.3						
ASPA	Alice Springs	25.46	158	P	P	08 08 49.1	+0.8
	baz=26						
QIS	Mount Isa	25.61	144	P	P	08 08 51.2	+1.4
	baz=26,SNR=57						
SRAK	Srakaew	25.64	304	P	P	08 08 48.7	-1.3
	comp=Z,6µmcomp=Z,379nm,0.9s						
CHAI	Chaiyaphum	26.70	307	P	P	08 09 00.4	+0.8
	comp=Z,40nm,0.9s						
JMZ	Minamidaito 2	26.71	15	P	P	08 09 00.1	+0.5
MEEK	Meekatharra	26.89	190	P	P	08 09 01.0	-0.2
	baz=27,SNR=12						
NONG	Nongkai	27.10	313	P	P	08 09 05.0	+1.9
	comp=Z,34nm,0.8s						
PHET	Kaeng Krachan	27.16	299	P	P	08 09 06.5	+2.7
	comp=Z,707nmcomp=Z,36nm,1.1s						
UTHA	Uthaitani	28.58	304	P	P	08 09 18.3	+2.0
	comp=Z,603nmcomp=Z,86nm,0.7s						
UTTA	Uttaradit	28.87	309	P	P	08 09 20.0	+1.1
	comp=Z,34nm,0.9s						
SUKH	Sukhothai	29.45	308	P	P	08 09 25.0	+1.0
	comp=Z,83nm,0.7s						
MORW	Morawa	29.78	194	P	P	08 09 27.0	+0.2
	baz=30,SNR=4.3						
MORW	Morawa	29.78	194	P	P	08 09 26.8	-0.1
MORW				IAmb	IAmb	08 09 35.9	
	comp=Z,39nm,1.5s						
LAMP	Lampang	30.04	309	P	P	08 09 31.0	+1.8
	comp=Z,686nmcomp=Z,32nm,0.8s						
CM36	Chiang Mai Arr	30.45	309	P	P	08 09 34.0	+1.1
CM04	Chiang Mai Arr	30.47	308	P	P	08 09 34.0	+0.9
	comp=Z,154nmcomp=Z,21nm,1.0s						
CM09	Chiang Mai Arr	30.49	308	P	P	08 09 35.0	+1.8
	comp=Z,148nmcomp=Z,14nm,0.9s						
CM35	Chiang Mai Arr	30.50	309	P	P	08 09 34.0	+0.7
CM01	Chiang Mai Arr	30.50	308	P	P	08 09 35.6	+2.3
	comp=Z,2µmcomp=Z,20nm,0.9s						
CM05	Chiang Mai Arr	30.50	308	P	P	08 09 34.8	+1.4
	comp=Z,123nmcomp=Z,17nm,1.0s						
CM02	Chiang Mai Arr	30.52	308	P	P	08 09 35.8	+2.3
	comp=Z,146nmcomp=Z,20nm,0.9s						
CM31	Chiang Mai Arr	30.54	308	P	P	08 09 35.0	+1.4
	comp=Z,398nm,1.2s						
CM31	Chiang Mai Arr	30.54	308	P	P	08 09 34.4	+0.8
CM31				IAmb	IAmb	08 09 36.8	
	comp=Z,28nm,1.1s						
CMAR	Chiang Mai Arr	30.54	308	P	P	08 09 32.6	-1.0
	comp=Z,10nm,0.8s,baz=139,slow=7.5,SNR=50						
CMAR				PcP	PcP	08 12 30.2	+0.6
	comp=Z,4.0nm,0.6s,baz=160,slow=2.0,SNR=12						
CMAR				ScP	ScP	08 15 59.6	-0.6
	comp=Z,0.9nm,0.3s,baz=168,slow=3.6,SNR=4.9						
CMAR				LR	LR	08 22 33.0	
	comp=Z,64nm,18.9s,baz=184,slow=38						
CM13	Chiang Mai Arr	30.54	308	P	P	08 09 35.2	+1.5
	comp=Z,20nm,1.0s						
CM15	Chiang Mai Arr	30.55	308	P	P	08 09 35.9	+2.2
	comp=Z,627nmcomp=Z,20nm,0.9s						
CM34	Chiang Mai Arr	30.60	309	P	P	08 09 35.0	+0.8
CM32	Chiang Mai Arr	30.72	309	P	P	08 09 36.0	+0.7
CMMT	Chiang Mai	30.73	309	P	P	08 09 36.4	+1.0
	comp=Z,18nm,1.1s						
CHTO	Chiang Mai	30.73	309	P	P	08 09 36.7	+1.3
CHTO				pmax	pmax		
	comp=Z,27nm,0.9s						
CHTO	Chiang Mai	30.73	309	P	P	08 09 36.7	+1.3
CHTO				IAmb	IAmb	08 09 38.3	
	comp=Z,27nm,0.9s						
CM33	Chiang Mai Arr	30.73	309	P	P	08 09 36.0	+0.6
FORT	Forrest	30.83	173	P	P	08 09 36.6	+0.5
	baz=31,SNR=9.3						
FORT	Forrest	30.83	173	P	P	08 09 36.5	+0.5
GYA	Guiyang	31.08	329	*e*P	P	08 09 40.2	+1.8
GYA				pmax	pmax		
	comp=Z,15nm,1.1s						
BLDU	Ballidu	31.12	192	P	P	08 09 38.7	0.0
	baz=31,SNR=20						
MHMT	Maesarieng	31.18	307	P	P	08 09 41.5	+2.2
KMBL	Kambalda	31.20	183	P	P	08 09 39.5	+0.2
	baz=31,SNR=8.3						
WHN	Wuhan	31.71	344	⇑P	P	08 09 46.0	+2.2
KLBR	Kellerberrin	31.88	190	P	P	08 09 45.4	+0.2
	baz=32,SNR=5.4						
NJ2	Nanjing	32.26	352	*e*P	P	08 09 48.7	+0.1
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
MUN	Mundaring	32.55	192	P	P	08 09 52.2	+1.1
	baz=33,SNR=7.0						
ENH	Enshi	33.07	337	P	P	08 09 55.9	+0.2
ENH				IAmb	IAmb	08 09 57.6	
	comp=Z,52nm,1.3s						
JNU	Nakatsue	33.67	11	P	P	08 09 59.2	-1.7
	comp=Z,6.3nm,0.6s,baz=174,slow=10,SNR=2.1						
JNU	Nakatsue	33.67	11	P	P	08 10 00.5	-0.4
JNU				IAmb	IAmb	08 10 01.5	
	comp=Z,37nm,1.4s						
BBOO	Buckleboo	34.59	162	P	P	08 10 09.1	+0.3
	baz=35,SNR=7.7						
BBOO	Buckleboo	34.59	162	P	P	08 10 09.4	+0.6
BBOO				IAmb	IAmb	08 10 09.8	
	comp=Z,11nm,1.0s						
JMN	Monobe	34.92	15	P	P	08 10 12.2	+0.6
RKGY	Rocky Gully	34.96	190	P	P	08 10 13.0	+1.1
	baz=35,SNR=13						
STKA	Stephens Creek	35.88	154	P	P	08 10 20.9	+1.0
	baz=36,SNR=7.8						
STKA	Stephens Creek	35.88	154	P	P	08 10 20.4	+0.6
	comp=Z,4.7nm,0.8s,baz=332,slow=7.9,SNR=18						
STKA				PcP	PcP	08 12 44.8	+0.4
	comp=Z,4.2nm,0.6s,baz=345,slow=3.2,SNR=4.9						
STKA				ScP	ScP	08 16 18.7	+0.1
	comp=Z,5.6nm,1.0s,baz=340,slow=13,SNR=5.6						
STKA	Stephens Creek	35.88	154	P	P	08 10 20.8	+1.0
JHS	Saijyo	35.95	13	P	P	08 10 20.7	+0.3
JHS				IAmb	IAmb	08 10 24.3	
	comp=Z,36nm,1.0s						
HTT	Hallett	36.14	158	P	P	08 10 23.3	+1.2
	baz=36,SNR=5.5						
CD2	Chengdu	36.17	330	P	P	08 10 23.8	+1.4
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
TIA	Tai'an	36.60	351	P	P	08 10 25.2	-0.7
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	Xi'an	36.66	339	P	P	08 10 26.1	-0.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
JWT	Wachi	36.80	16	P	P	08 10 28.0	+0.5
INU	Inuyama	37.33	18	P	P	08 10 32.1	0.0
INU				IAmb	IAmb	08 10 32.8	
	comp=Z,51nm,1.1s						
KSRS	Korea Array	37.52	5	P	P	08 10 33.0	-0.5
	comp=Z,7.3nm,0.9s,baz=182,slow=9.8,SNR=18						
KSRS				PcP	PcP	08 12 49.5	+0.4
	comp=Z,2.1nm,0.7s,baz=174,slow=3.4,SNR=5.3						
KSRS				LR	LR	08 25 18.0	
	comp=Z,47nm,21.9s,baz=242,slow=35						
JGF	Kuroka	37.67	18	P	P	08 10 34.7	-0.3
MAJO	Matsushiro	38.80	19	*c i*P	P	08 10 43.4	-1.1
MAJO				pmax	pmax		
	comp=Z,45nm,0.8s						
MAJO	Matsushiro	38.80	19	P	P	08 10 43.6	-0.8
MAJO				IAmb	IAmb	08 10 44.7	
	comp=Z,42nm,0.8s						
MAT	Matsushiro	38.80	19	P	P	08 10 43.2	-1.3
MJAR	Matsushiro Arr	38.80	19	P	P	08 10 43.5	-0.9
	comp=Z,41nm,0.7s,baz=192,slow=9.0,SNR=106						
MJAR				PcP	PcP	08 12 53.5	+0.3
	comp=Z,1.1nm,0.7s,baz=176,slow=3.2,SNR=4.4						
TIY	Taiyuan	39.00	346	*e*P	P	08 10 47.1	+0.9
TIY				pmax	pmax		
	comp=Z,37nm,0.9s						
ARMA	Armidale	40.18	141	P	P	08 10 58.4	+2.3
ARPS	Mount Arapiles	40.20	157	P	P	08 10 57.2	+1.2
	baz=40,SNR=6.7						
LZH	Lanzhou	40.44	335	⇓P	P	08 10 59.8	+1.6
LZH				pP	pP	08 11 27.2	-0.5
LZH				sP	sP	08 11 42.0	-0.6
LZH				PP	PnPn	08 12 38.5	-0.6
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
BJI	Beijing	40.50	351	P	P	08 10 57.5	-0.9
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
JMM	Marumori	40.87	21	P	P	08 11 01.8	+0.3
HHC	Hu-ho-hao-te	42.19	346	*e*P	P	08 11 13.0	+0.7
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,5.8s						
MSHR	Mys Shultsa	42.96	8	*de*P	P	08 11 18.9	+0.5
MSHR				pmax	pmax		
	comp=Z,32nm,1.3s						
JTM	Tenmabayashi	43.59	19	P	P	08 11 23.3	-0.2
CN2	Changchun	43.69	2	*e*P	P	08 11 26.3	+2.1
CN2				*e*sP	sP	08 12 13.0	+4.4
CN2				*e*S	S	08 17 45.7	+1.4
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
ODAN	Odare	44.03	310	*e*P	P	08 11 27.8	+0.3
	comp=Z,46nm,0.7s						
USA0B	Ussuriysk Arra	44.66	8	P	P	08 11 32.0	0.0
USA0B				pmax	pmax		
	comp=Z,33nm,0.8s						
USA0B	Ussuriysk Arra	44.66	8	P	P	08 11 31.9	0.0
USA0B				IAmb	IAmb	08 11 32.8	
	comp=Z,33nm,0.8s						
USRK	Ussuriysk Ar.	44.66	8	P	P	08 11 31.8	-0.2
	comp=Z,32nm,0.7s,baz=191,slow=7.2,SNR=85						
USRK				LR	LR	08 29 35.6	
	comp=Z,31nm,20.4s,baz=218,slow=35						
RAMN	Ramite	44.68	310	*e*P	P	08 11 33.1	+0.4
	comp=Z,77nm,0.7s						
MDJ	Mudanjiang	44.78	6	P	P	08 11 32.8	-0.1
MDJ				pmax	pmax		
	comp=Z,20nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,7.1s						
MDJ	Mudanjiang	44.78	6	P	P	08 11 32.4	-0.5
MDJ				IAmb	IAmb	08 11 36.8	
	comp=Z,33nm,0.6s						
GTA	Gaotai	44.97	334	⇓P	P	08 11 35.0	+0.3
GTA				pP	pP	08 12 04.7	+0.1
GTA				sP	sP	08 12 21.3	+1.9
GTA				PcP	PcP	08 13 14.4	+0.7
GTA				pmax	pmax		
	comp=Z,16nm,0.7s						
GTA				pmax	pmax		
	comp=Z,170nm,5.1s						
GTA				LR	LR		
	comp=Z,160nm,14.9s						
GTA				LR	LR		
	comp=Z,230nm,16.0s						
GTA				LR	LR		
	comp=Z,140nm,16.0s						
GUN	Gumba	45.72	311	*e*P	P	08 11 40.9	-0.2
	comp=Z,65nm,0.6s						
PKI	Pulchoki	45.91	310	*e*P	P	08 11 42.0	-0.5
	comp=Z,22nm,0.7s						
PKIN	Phulchoki	45.92	310	*e*P	P	08 11 42.0	-0.5
	comp=Z,12nm,0.4s						
DMN	Daman	46.16	310	*e*P	P	08 11 44.2	-0.2
	comp=Z,51nm,0.9s						
TEY	Ternei	46.32	13	⇑*e*P	P	08 11 44.9	-0.1
TEY				pmax	pmax		
	comp=N,50nm,0.8s						
TEY				pmax	pmax		
	comp=Z,90nm,0.8s						
GKN	Gorkha	46.71	310	*e*P	P	08 11 48.5	-0.1
	comp=Z,89nm,1.0s						
DZM	Mont Dzumac	46.99	121	P	P	08 11 51.6	+0.8
	comp=Z,7.2nm,0.9s,baz=307,slow=20,SNR=1.9						
ASAJ	Asahikawa	47.07	19	P	P	08 11 51.1	+0.2
	comp=Z,46nm,0.7s,baz=236,slow=12,SNR=26						
ASAJ				LR	LR	08 29 46.2	
	comp=Z,31nm,19.9s,baz=290,slow=34						
ASAJ	Asahikawa	47.07	19	P	P	08 11 51.2	+0.2
ASAJ				pmax	pmax		
	comp=Z,50nm,0.8s						
JKA	Kamikawa-asahi	47.08	19	P	P	08 11 51.2	+0.3
JKA				IAmb	IAmb	08 11 52.3	
	comp=Z,50nm,0.8s						
KOLN	Koldanda	47.40	309	*e*P	P	08 11 54.1	+0.1
	comp=Z,97nm,0.8s						
DANN	Dangsing	47.56	310	*e*P	P	08 11 55.3	0.0
	comp=Z,91nm,0.7s						
HYB	Hyderabad	47.74	294	*i* P	P	08 11 55.0	-1.6
PYUN	Piuthan	48.03	309	*e*P	P	08 11 59.2	+0.3
	comp=Z,72nm,0.5s						
HIA	Hailar	49.25	357	P	P	08 12 05.3	-2.3
HIA				pmax	pmax		
	comp=Z,11nm,0.7s						
HIA	Hailar	49.25	357	P	P	08 12 05.3	-2.3
HIA				IAmb	IAmb	08 12 07.6	
	comp=Z,11nm,0.7s						
KLR	Kul'dur	49.57	7	P	P	08 12 08.9	-1.1
	comp=Z,15nm,0.7s,baz=195,slow=4.3,SNR=64						
KLR				LR	LR	08 33 10.8	
	comp=Z,34nm,21.3s,baz=186,slow=36						
YSS	Yuzh-Sakhalins	49.68	17	*e*P	P	08 12 10.1	-0.7
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS	Yuzh-Sakhalins	49.68	17	P	P	08 12 10.8	0.0
YSS				IAmb	IAmb	08 12 12.8	
	comp=Z,32nm,0.9s						
ULN	Ulaanbaatar	49.89	345	*c i*P	P	08 12 11.8	-0.8
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	Ulaanbaatar	49.89	345	P	P	08 12 11.9	-0.7
ULN				IAmb	IAmb	08 12 12.9	
	comp=Z,9.2nm,0.8s						
SONM	Songino Array	50.03	345	P	P	08 12 12.9	-0.8
	comp=Z,8.0nm,0.7s,baz=158,slow=8.8,SNR=62						
SONM				PcP	PcP	08 13 31.0	-0.7
	comp=Z,3.4nm,0.9s,baz=159,slow=5.1,SNR=5.2						
GRNR	Gornyy	51.77	10	⇑*i*P	P	08 12 26.6	+0.2
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.9s						
GRNR				MLR	MLR		
	comp=E,180nm,16.0s						
GRNR				MLR	MLR		
	comp=N,110nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,60nm,11.0s						
ZAK	Zakamensk	53.19	344	*e*P	P	08 12 34.1	-3.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TYV	Tymovskoe	53.21	15	*e*P	P	08 12 37.6	+0.6
TYV				*e*S	S	08 19 59.8	+1.9
TYV				pmax	pmax		
	comp=Z,12nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,5.4s						
TYV				smax	smax		
	comp=N,200nm,5.7s						
WMQ	Urumqi	54.23	328	*e*P	P	08 12 46.2	+1.5
WMQ				pmax	pmax		
	comp=N,35nm,0.9s						
WMQ				pmax	pmax		
	comp=N,470nm,5.5s						
WMQ	Urumqi	54.23	328	P	P	08 12 43.6	-1.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s						
WMQ	Urumqi	54.23	328	P	P	08 12 43.6	-1.1
WMQ				IAmb	IAmb	08 12 46.9	
	comp=Z,24nm,1.0s						
TLY	Talaya	54.27	345	*e*P	P	08 12 44.3	-0.5
TLY				pmax	pmax		
	comp=Z,14nm,0.8s						
TLY	Talaya	54.27	345	P	P	08 12 44.1	-0.7
MOY	Mondy	55.00	343	*e*P	P	08 12 49.8	-0.4
SKR	Severo-Kuril’s	57.54	24	⇓*i*P	P	08 13 08.4	+0.4
ZSN	Zaisan	58.15	330	*e*P	P	08 13 11.1	-1.4
	comp=Z,7.6nm,0.9s,baz=330						
ZSN	Zaisan	58.15	330	*e*P	P	08 13 11.1	-1.4
ZSN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOD	Bodaibo	58.22	354	*e*P	P	08 13 12.1	-0.5
BOD				pmax	pmax		

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           comp=Z,14nm,1.0s
SHLS   Shalkode           58.45 323  eP       P        08 13 12.3 -2.4
           comp=Z,9.9nm,1.0s,baz=324
SHLS   Shalkode           58.45 323  eP       P        08 13 12.3 -2.4
SHLS                                  pmax     pmax
           comp=Z,10.0nm,1.0s
DGZ    Jazzator, Alta     58.50 333 deP       P        08 13 14.6 -0.4
DGZ                                   pmax     pmax
           comp=Z,22nm,0.9s
KSH    Kashi              58.72 318   P       P        08 13 16.8 +0.1
KSH                                   PcP      PcP     08 14 05.8 +0.6
KSH                                   S        S       08 21 14.7 +3.2
KSH                                   pmax     pmax
           comp=Z,12nm,0.8s
KSH                                   pmax     pmax
           comp=Z,380nm,9.2s
KSH                                   LR       LR
           comp=Z,690nm,6.1s
KSH                                   LR       LR
           comp=Z,570nm,5.6s
KSH                                   LR       LR
           comp=Z,680nm,6.6s
SATY   Saty               59.03 323  eP       P        08 13 18.1 -0.7
           comp=Z,7.1nm,0.6s,baz=323
SATY   Saty               59.03 323  eP       P        08 13 18.1 -0.7
SATY                                  pmax     pmax
           comp=Z,7.0nm,0.6s
MK31   Makanchi Array     59.05 328   P       P        08 13 18.3 -0.4
MK31                                                   08 14 05.1
MK31                                  pmax     pmax
           comp=Z,12nm,0.7s
MK31   Makanchi Array     59.05 328   P       P        08 13 18.2 -0.4
MK31                                  IAmb     IAmb    08 13 19.7
           comp=Z,12nm,0.7s
MK31                                  PcP      PcP     08 14 05.1 -1.1
MKAR   Makanchi Array     59.05 328   P       P        08 13 17.9 -0.8
           comp=Z,16nm,0.6s,baz=123,slow=7.6,SNR=125
MKAR                                  PcP      PcP     08 14 05.3 -0.9
           comp=Z,12nm,0.6s,baz=135,slow=4.7,SNR=16
KPKS   Kokpek             59.09 323  eP       P        08 13 18.2 -1.0
           comp=Z,11nm,0.7s,baz=323
KPKS   Kokpek             59.09 323  eP       P        08 13 18.1 -1.0
KPKS                                  pmax     pmax
           comp=Z,11nm,0.7s
MAKZ   Makanchi           59.23 328   P       P        08 13 19.3 -0.6
MAKZ                                  IAmb     IAmb    08 13 20.8
           comp=Z,11nm,0.6s
MAKZ                                  PcP      PcP     08 14 05.9 -1.0
TNSS   Tian-Shan          59.92 322  eP       P        08 13 24.1 -1.2
           baz=322
TNSS   Tian-Shan          59.92 322  eP       P        08 13 24.0 -1.2
MDOK   Medeo              59.92 322  eP       P        08 13 24.3 -0.7
           baz=322
MDOK   Medeo              59.92 322  eP       P        08 13 24.2 -0.7
PEA0B  Petropavlovsk-     60.04  23   P       P        08 13 26.4 +1.1
PEA0B                                 pmax     pmax
           comp=Z,30nm,0.9s
PEA0B  Petropavlovsk-     60.04  23   P       P        08 13 26.4 +1.1
PETK   Petropavlovsk-     60.04  23   P       P        08 13 26.1 +0.8
           comp=Z,22nm,0.8s,baz=203,slow=2.9,SNR=23
PETK                                  PcP      PcP     08 14 09.6 -0.3
           comp=Z,3.9nm,0.6s,baz=220,slow=2.4,SNR=6.1
TDK    Taldyqorghan       60.13 324  eP       P        08 13 25.2 -1.0
           comp=Z,7.1nm,0.5s,baz=324
TDK    Taldyqorghan       60.13 324  eP       P        08 13 25.1 -1.0
TDK                                   pmax     pmax
           comp=Z,7.0nm,0.5s
MTBS   Maitube            60.29 322  eP       P        08 13 26.4 -1.0
           baz=322
MTBS   Maitube            60.29 322  eP       P        08 13 26.3 -1.0
CHKK   Chushkaly          60.33 323  eP       P        08 13 26.2 -1.3
           baz=323
CHKK   Chushkaly          60.33 323  eP       P        08 13 26.2 -1.3
TKM2   Tokmak 2           60.70 321   P       P        08 13 29.8 -0.5
           SNR=11
TKM2   Tokmak 2           60.70 321 i P       P        08 13 29.6 -0.7
TKM2                                  pmax     pmax
           comp=Z,6.0nm,0.5s
KUU    Kurty              60.75 322  eP       P        08 13 29.3 -1.1
           comp=Z,20nm,0.7s,baz=322
KUU    Kurty              60.75 322  eP       P        08 13 29.3 -1.1
KUU                                   pmax     pmax
           comp=Z,20nm,0.7s
UCH    Uchtor             61.03 320   P       P        08 13 32.8  0.0
           SNR=5.8
TUWZ   Tuamarina          61.18 139   P       P        08 13 34.1 +0.8
AAK    Ala-Archa          61.25 320   P       P        08 13 34.0 +0.1
           SNR=5.8
AAK    Ala-Archa          61.25 320ceP       P        08 13 33.5 -0.4
AAK                                   pmax     pmax
           comp=Z,34nm,1.7s
AAK    Ala-Archa          61.25 320   P       P        08 13 34.3 +0.3
AML    Almayashu          61.51 320   P       P        08 13 35.8 -0.3
           SNR=6.7
USP    Ospenovka          61.56 321   P       P        08 13 35.6 -0.3
           SNR=6.2
SGDS   Sogindy            61.58 321  eP       P        08 13 34.9 -1.2
           baz=321
SGDS   Sogindy            61.58 321  eP       P        08 13 34.8 -1.2
EKS2   Erkin-Say          61.72 320   P       P        08 13 36.9 -0.1
           SNR=6.8
YAK    Yakutsk            62.09   3c iP       P        08 13 38.1 -0.8
YAK                                  e                 08 14 17.5
YAK                                  e                 08 15 56.1
YAK                                  eS       S        08 21 56.4 +3.1
YAK                                   pmax     pmax
           comp=Z,118nm,0.9s
YAK                                   pmax     pmax
           comp=N,14nm,0.9s
YAK                                   pmax     pmax
           comp=E,6.0nm,1.0s
YAK                                   pmax     pmax
           comp=Z,178nm,4.5s
YAK                                   pmax     pmax
           comp=N,114nm,4.3s
YAK                                   pmax     pmax
           comp=E,174nm,4.2s
YAK                                   smax     smax
           comp=E,170nm,4.8s
YAK                                   smax     smax
           comp=N,74nm,3.9s
YAK    Yakutsk            62.09   3   P       P        08 13 39.0 +0.1
SEM    Semipalatinsk      62.39 330  eP       P        08 13 40.0 -1.5
           baz=330
SEM    Semipalatinsk      62.39 330  eP       P        08 13 40.0 -1.5
ZAA0   Zalesovo Array     62.67 335   P       P        08 13 41.0 -2.0
ZAA0                                  IAmb     IAmb    08 13 43.5
           comp=Z,11nm,0.9s
ZALV   Zalesovo Beam      62.67 335   P       P        08 13 40.9 -2.1
           comp=Z,5.4nm,0.5s,baz=129,slow=6.0,SNR=33
BTLS   Baital             62.75 323  eP       P        08 13 42.0 -1.8
           baz=323
BTLS   Baital             62.75 323  eP       P        08 13 41.9 -1.8
MA2    Magadan            63.09  15c iP       P        08 13 46.3 +0.7
MA2                                   pmax     pmax
           comp=Z,49nm,0.7s
MA2    Magadan            63.09  15   P       P        08 13 46.5 +0.8
KURK   Kurchatov          63.40 330c iP       P        08 13 46.4 -1.4
KURK                                  pmax     pmax
           comp=Z,52nm,0.8s
KURK   Kurchatov          63.40 330   P       P        08 13 46.9 -0.9
IUG    Iuzhnay            63.93 318  eP       P        08 13 50.5 -1.3
           baz=318
IUG    Iuzhnay            63.93 318  eP       P        08 13 50.4 -1.3
KK31   Karatay Array      64.04 319   P       P        08 13 50.8 -1.5
KK31                                  pmax     pmax
           comp=Z,5.0nm,1.1s
KK31   Karatay Array      64.04 319   P       P        08 13 50.8 -1.5
SEY    Seymchan           66.37  14⇑eP       P        08 14 07.7 +0.8
CASY   Casey              66.76 186   P       P        08 14 11.1 +1.9
CASY                                  IAmb     IAmb    08 14 11.3
           comp=Z,8.0nm,0.8s
BRVK   Borovoye           68.99 329ceP       P        08 14 22.0 -1.5
BRVK                                  pmax     pmax
           comp=Z,10.0nm,1.0s
BRVK   Borovoye           68.99 329   P       P        08 14 22.3 -1.2
BRVK                                  IAmb     IAmb    08 14 23.0
           comp=Z,12nm,1.1s
GEYT   Alibeck            70.99 310   P       P        08 14 34.5 -1.6
           comp=Z,4.0nm,0.6s,baz=164,slow=6.0,SNR=7.2
TIXI   Tiksi              71.66   2⇑eP       P        08 14 37.9 -1.5
TIXI                                  pmax     pmax
           comp=Z,182nm,0.8s
TIXI   Tiksi              71.66   2   P       P        08 14 38.7 -0.7
ABKAR  Akbulak array      73.23 322   P       P        08 14 47.8 -1.3
NRIK   Noril'sk           73.41 347   P       P        08 14 48.4 -1.4
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           comp=Z,10.0nm,0.7s,baz=130,slow=6.3,SNR=26
NRIK   Noril'sk           73.41 347c iP       P        08 14 48.6 -1.2
NRIK                                  pmax     pmax
           comp=Z,12nm,0.8s
NRIK   Noril'sk           73.41 347   P       P        08 14 49.2 -0.6
NRIK                                  IAmb     IAmb    08 14 49.8
           comp=Z,13nm,0.8s
AKTO   Aktyubinsk         74.80 323   P       P        08 14 56.8 -1.5
           comp=Z,11nm,0.6s,baz=107,slow=7.8,SNR=51
SVE    Sverdlovsk         75.65 330  eP       P        08 15 01.2 -1.8
SVE                                   pmax     pmax
           comp=Z,25nm,0.7s
ARU    Arti               76.56 329   P       P        08 15 06.2 -1.9
           comp=Z,5.7nm,0.6s,baz=122,slow=3.1,SNR=32
ARU                                   LR       LR      08 52 03.6
           comp=Z,48nm,18.3s,baz=186,slow=38
ARU    Arti               76.56 329d iP       P        08 15 06.2 -1.9
ARU                                                    08 17 56.8
ARU                                   S        S       08 24 43.4 -0.1
ARU                                   SS       SS      08 29 38.2 -3.2
ARU                                   pmax     pmax
           comp=Z,20nm,0.7s
MAW    Mawson             79.21 200   P       P        08 15 22.0 -0.5
           baz=79,SNR=29
RAYN   Ar Rayn            79.25 294   P       P        08 15 23.5 -0.3
RAYN                                  pmax     pmax
           comp=Z,9.0nm,0.8s
RAYN   Ar Rayn            79.25 294   P       P        08 15 23.5 -0.3
AKT    Akhty              79.58 312  eP       P        08 15 24.3 -1.0
AKT                                  e                 08 15 31.3
AKT                                   pmax     pmax
           comp=Z,13nm,0.6s
VNDA   Vanda              80.09 172   P       P        08 15 27.9 +0.7
           comp=Z,2.0nm,0.7s,baz=316,slow=6.7,SNR=13
VNDA   Vanda              80.09 172   P       P        08 15 28.4 +1.2
VNDA                                  pmax     pmax
           comp=Z,2.0nm,0.8s
VNDA   Vanda              80.09 172   P       P        08 15 28.4 +1.2
FALS   False Pass         80.21  34   P       P        08 15 28.8 +0.6
BELG   Belogornoye        81.59 323   P       P        08 15 33.9 -1.6
           comp=Z,32nm,0.7s,baz=135,slow=5.7,SNR=5.8
GNI    Garni              81.63 310   P       P        08 15 34.5 -1.8
           comp=Z,11nm,1.1s,baz=132,slow=15,SNR=1.9
KIRV   Kirov              81.91 329   P       P        08 15 35.5 -1.6
           comp=Z,36nm,0.5s,baz=100,slow=0.8,SNR=12
KIRV                                  LR       LR      08 54 14.3
           comp=Z,64nm,18.0s,baz=279,slow=37
SDPT   Sand Point         81.97  34   P       P        08 15 37.4 -0.1
ZEI    Tsey               82.58 313  eP       P        08 15 39.9 -1.4
ZEI                                   pmax     pmax
           comp=Z,14nm,1.4s
KBZ    Khabaz             83.42 314   P       P        08 15 43.8 -1.5
           comp=Z,5.2nm,0.9s,baz=120,slow=5.7,SNR=9.9
KIV    Kislovodsk         83.59 314⇑eP       P        08 15 43.2 -3.1
KIV                                  e*PP     pP       08 16 19.5 +0.1
KIV                                  e                 08 18 57.0
KIV                                   pmax     pmax
           comp=Z,9.0nm,1.4s
RDOG   Red Dog Mine       83.86  21   P       P        08 15 48.1 +1.0
RDOG                                  IAmb     IAmb    08 15 49.4
           comp=Z,32nm,1.1s
VRH    Novokhopyorsk      85.03 321  eP       P        08 15 51.0 -2.3
VRH                                   pmax     pmax
           comp=Z,30nm,1.0s
KMBO   Kilima Mbogo       86.50 269   P       P        08 16 00.1 -1.6
           comp=Z,1.9nm,0.7s,baz=44,slow=4.1,SNR=6.3
VORD   Divnogorie         86.54 321  eP       P        08 15 58.7 -2.0
VORD                                  pmax     pmax
           comp=Z,40nm,0.6s
VSR    Storozhevoye       86.64 321  eP       P        08 15 59.4 -1.8
VSR                                   pmax     pmax
           comp=Z,30nm,0.6s
KDAK   Kodiak Island      86.65  32   P       P        08 16 01.7 +0.6
KDAK                                  pmax     pmax
           comp=Z,21nm,1.0s
KDAK   Kodiak Island      86.65  32   P       P        08 16 01.7 +0.6
KDAK                                  IAmb     IAmb    08 16 03.4
           comp=Z,21nm,1.0s
A21K   Barrow             86.72  19   P       P        08 16 02.0 +0.8
           baz=260
LPSR   Galich'ya Gora     86.89 323  eP       P        08 16 00.8 -1.6
LPSR                                  pmax     pmax
           comp=Z,20nm,0.7s
KLMR   Klimovskoe         87.22 331  eP       P        08 16 00.8 -3.0
KLMR                                  pmax     pmax
           comp=Z,28nm,0.6s
KLMR   Klimovskoe         87.22 331  eP       P        08 16 00.8 -3.0
KLMR                                  AMP              08 16 03.3
           comp=Z,28nm,0.6s
MLY    Manley             88.14  25   P       P        08 16 08.6 +0.4
           baz=266
OBN    Obninsk            88.42 325⇑eP       P        08 16 07.7 -1.9
OBN                                  e*PP     pP       08 16 43.0 +0.1
OBN                                  e                 08 19 39.4
OBN                                  eSS      SS       08 32 29.9 -7.1
OBN                                   pmax     pmax
           comp=Z,41nm,1.7s
COLD   Coldfoot           88.51  23   P       P        08 16 10.8 +1.0
           baz=266
COLD   Coldfoot           88.51  23   P       P        08 16 10.8 +1.0
COLD                                  IAmb     IAmb    08 16 11.4
           comp=Z,21nm,1.3s
MMAI   Mount Meron Ar     88.64 303   P       P        08 16 10.4 -0.9
           comp=Z,3.6nm,0.6s,baz=84,slow=7.6,SNR=9.3
I23K   Minto, Yukon-K     88.73  25   P       P        08 16 11.5 +0.7
           baz=267
I23K   Minto, Yukon-K     88.73  25   P       P        08 16 10.4 -0.5
I23K                                  IAmb     IAmb    08 16 12.1
           comp=Z,28nm,1.4s
TOLK   Toolik Lake Re     88.83  21   P       P        08 16 12.2 +0.8
           baz=267
MCK    McKinley           88.85  26   P       P        08 16 11.1 -0.4
           baz=268
MDM    Murphy Dome        89.20  25   P       P        08 16 12.7 -0.5
HDA    Harding Lake       89.74  26   P       P        08 16 14.8 -0.9
           baz=269
IL31                      89.77  25   P       P        08 16 14.8 -0.9
ILAR   Eielson Array      89.77  25   P       P        08 16 14.2 -1.6
           comp=Z,1.7nm,0.5s,baz=244,slow=5.0,SNR=37
QSPA   South Pole Qui     89.88 180   P       P        08 16 16.9 +0.5
M24K   Tolsona, Glenn     90.08  28   P       P        08 16 17.9 +0.6
           baz=270
BRTR   Keskin Array B     90.12 310   P       P        08 16 16.1 -2.1
           comp=Z,2.4nm,0.8s,baz=112,slow=5.6,SNR=13
BRTR   Keskin Array B     90.12 310 i P       P        08 16 16.2 -1.9
BRTR                                  pmax     pmax
           comp=Z,2.0nm,0.8s
N25K   Chitina, Valde     90.83  29   P       P        08 16 21.4 +0.5
           baz=271
K27K   Chicken            91.88  26   P       P        08 16 27.0 +1.4
           baz=274
K27K   Chicken            91.88  26   P       P        08 16 26.8 +1.2
K27K                                  IAmb     IAmb    08 16 28.6
           comp=Z,11nm,1.1s
AKASG  Malin Array Be     92.92 321   P       P        08 16 28.2 -2.4
           comp=Z,3.0nm,0.5s,baz=66,slow=4.9,SNR=9.4
ARCES  ARCESS Array B     92.94 340   P       P        08 16 28.0 -2.3
           comp=Z,6.1nm,0.6s,baz=81,slow=7.9,SNR=18
SPITS  Spitsbergen Ar     93.58 349   P       P        08 16 31.6 -1.6
           comp=Z,28nm,0.9s,baz=80,slow=11,SNR=11
FINES  FINESS Array B     93.72 331   P       P        08 16 31.7 -2.4
           comp=Z,3.0nm,0.5s,baz=77,slow=3.7,SNR=21
EPYK   Eagle Plains       93.87  23   P       P        08 16 35.0 +0.3
           baz=279
IDID   Didziasalis        94.04 325  eP       P        08 16 34.6 -1.1
NACGM  Naroch             94.06 325 i P       P        08 16 34.6 -1.2
NACGM                               i P       P        08 16 34.6 -1.2
NACGM                               i P       P        08 16 34.6 -1.2
NACGM                               i Pb      PcP      08 16 36.2 +0.1
           comp=Z,23nm,0.9s
NACGM                               i pP      pP       08 17 07.4 -1.8
NACGM                               i PP      PP       08 20 24.9 +1.3
NACGM                               i PPP     PPP      08 22 27.4
NACGM                               i S       S        08 27 11.6  -24
NACGM                               i sS      ScS      08 27 47.9  +12
NACGM                               i SS      SS       08 34 30.1  +32
NACGM                               i SSS     SSS      08 37 24.6
IIGN   Ignalina           94.33 325  eP       P        08 16 36.2 -0.8
PABE   Paberze            95.59 326  eP       P        08 16 40.6 -2.1
SLIT   Slitere, Latvi     96.18 328  eP       P        08 16 44.5 -0.9
SLIT                                 epP      pP       08 17 17.1 -1.7
KOLS   Kolonicke sedl     97.58 319  eP       P        08 16 51.4 -0.6
KOLS   Kolonicke sedl     97.58 319  ePDIFF   P        08 16 51.4 -0.6
C36M   Paulatuk           97.74  19   P       P        08 16 51.8 -0.3
           baz=291
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C36M   Paulatuk           97.74  19   P       Pdif     08 16 52.1 -0.1
CRVS   Cervenica-Dubn     98.11 319  eP       P        08 16 54.1 -0.3
CRVS   Cervenica-Dubn     98.11 319  ePDIFF   P        08 16 54.1 -0.3
VYHS   Vyhne              99.90 319  eP       Pdif     08 17 05.6 +3.3
VYHS   Vyhne              99.90 319  ePDIFF   Pdif     08 17 05.6 +3.3
NOA    NORSAR Array B    100.80 333   P       Pdif     08 17 03.2 -2.9
           comp=Z,0.8nm,0.8s,baz=78,slow=20,SNR=3.4
MODS   Modra-Piesok      100.94 319  eP       Pdif     08 17 08.8 +1.8
MODS   Modra-Piesok      100.94 319  ePDIFF   Pdif     08 17 08.8 +1.8
YKA    Yellowknife Ar    104.14  24   Pdiff   Pdif     08 17 20.2 -0.6
           comp=Z,0.4nm,0.7s,baz=300,slow=4.0,SNR=8.3
YKA                                   PKiKP    PKiKP   08 21 37.0 -0.1
           comp=Z,0.5nm,0.7s,baz=343,slow=0.7,SNR=9.7
YKA                                   PKKPbc   PKKPbc  08 33 07.9 -3.6
           comp=Z,0.2nm,0.6s,baz=114,slow=3.2,SNR=8.3
J05D   Fort Rock, OR     108.02  44   P       PKiKP    08 21 46.5 +1.3
           baz=288
NVAR   Mina Array Bea    111.63  48   PKiKP   PKiKP    08 21 53.2 +1.0
           comp=Z,0.6nm,0.6s,baz=272,slow=1.6,SNR=8.4
HLID   Hailey            112.58  42   P       PKiKP    08 21 55.3 +1.5
           baz=293
ELK    Elko              113.08  45   PKiKP   PKiKP    08 21 55.5 +0.5
           comp=Z,1.6nm,0.5s,baz=296,slow=2.4,SNR=9.5
DUG    Dugway, Tooele    115.00  45   P       PKPdf    08 21 59.7 +1.2
           baz=293
PDAR   Pinedale Array    116.14  41   PKP     PKiKP    08 22 00.7  0.0
           comp=Z,0.5nm,0.6s,baz=160,slow=2.1,SNR=7.4
PDAR                                  PKKPab   PKKPab  08 32 35.6 -0.9
           comp=Z,0.5nm,0.6s,baz=118,slow=5.8,SNR=6.8
WUAZ   Wupatki           117.84  49   P       PKiKP    08 22 05.7 +1.5
           baz=292
O20A   White River Ci    118.20  43   P       PKiKP    08 22 06.0 +1.2
           baz=297
ESDC   Sonseca Array     118.21 316   PKP     PKPdf    08 22 04.1 -0.5
           comp=Z,0.3nm,0.6s,baz=20,slow=4.7,SNR=4.2
RSSD   Black Hills       118.98  38   P       PKPdf    08 22 05.9 -0.2
           baz=302
W18A   Petrified Fore    119.23  49   P       PKiKP    08 22 08.5 +1.6
           baz=293
MVCO   Mesa Verde        119.29  46   P       PKiKP    08 22 08.5 +1.5
           baz=295
TUC    Tucson            119.45  52   P       PKiKP    08 22 08.7 +1.4
           baz=291
ULM    Lac du Bonnet     119.68  28   PKP     PKPdf    08 22 06.3 -0.7
           comp=Z,3.3nm,0.7s,baz=259,slow=2.6,SNR=7.2
POLO   Lamas de Olo      119.98 319  ePKPdf   PKiKP    08 22 08.8 +0.7
PGAV   Gavieira, Arco    119.99 320  ePKPdf   PKiKP    08 22 08.5 +0.4
ISCO   Idaho Springs     120.15  43   P       PKiKP    08 22 09.7 +0.9
           baz=299
S22A   4UR Ranch, Cre    120.26  45   P       PKiKP    08 22 10.5 +1.5
           baz=297
MTE    Manteigas         120.30 318  ePKPdf   PKiKP    08 22 09.2 +0.5
PCBR   Castelo Branco    120.53 318  ePKPdf   PKiKP    08 22 09.6 +0.6
TORD   Torodi Ar. Bea    121.15 285   PKP     PKPdf    08 22 09.8 -1.0
           comp=Z,4.0nm,0.6s,baz=66,slow=1.8,SNR=24
TORD                                  PKKPab   PKKPab  08 32 14.6  0.0
           comp=Z,1.8nm,0.8s,baz=273,slow=4.2,SNR=7.8
SDCO   Great Sand Dun    121.19  45   P       PKiKP    08 22 12.0 +1.1
           baz=298
EVO    Evora             121.53 317  ePKPdf   PKiKP    08 22 11.6 +0.5
ANMO   Albuquerque       121.75  48   PKP     PKPdf    08 22 11.5 -0.2
           comp=Z,3.8nm,0.9s,baz=195,slow=1.6,SNR=16
ANMO   Albuquerque       121.75  48   P       PKiKP    08 22 12.9 +1.1
           baz=296
PCVE   Castro Verde      121.98 316  ePKPdf   PKiKP    08 22 12.7 +0.7
PNCL   Nicolau / Gran    122.09 316  ePKPdf   PKiKP    08 22 12.8 +0.6
T25A   Trinidad          122.25  45   P       PKiKP    08 22 13.8 +1.0
           baz=298
ECSD   EROS Data Cent    123.57  34   P       PKiKP    08 22 15.0  0.0
           baz=309
MNTX   Cornudas Mount    123.93  51   P       PKiKP    08 22 17.2 +1.1
           baz=294
CBKS   Cedar Bluff       124.56  41   P       PKiKP    08 22 17.3 +0.2
           baz=303
MSTX   Muleshoe          124.91  47   P       PKiKP    08 22 18.4 +0.4
           baz=298
WMOK   Wichita Mounta    127.40  44   P       PKiKP    08 22 23.3 +0.4
           baz=302
JFWS   Jewell Farm       127.56  31   P       PKPdf    08 22 22.4 +0.1
           baz=315
CHGQ   Chibougamau       127.96  15   P       PKiKP    08 22 23.2 -0.2
           baz=337
JCT    Junction City     128.76  50   P       PKiKP    08 22 25.6 -0.1
           baz=298
U40A   Yellville         130.43  39   P       PKiKP    08 22 28.5 -0.4
           baz=309
W39A   Magazine          130.54  41   P       PKiKP    08 22 28.9 -0.2
           baz=307
MIAR   Mount Ida         131.06  42   P       PKiKP    08 22 30.9 +0.7
           baz=307
VA03   San Esteban       144.68 159           PKPdf    08 22 55.1 +0.7
TGUH   Tegucigalpa,Un    146.29  64  eP       PKPbc    08 22 59.1 +0.1
CO03   El Pedregal       146.36 157           PKPbc    08 22 59.3 +0.6
JTS    Las Juntas de     149.69  69   PKP2    PKPbc    08 23 08.0 +0.1
JTS    Las Juntas de     149.69  69           PKPbc    08 23 08.0 +0.1
JTS    Las Juntas de     149.69  69  eP       PKPbc    08 23 07.5 -0.4
CPUP   Villa Florida     153.75 178   PKP     PKPdf    08 23 08.0 -0.9
           comp=Z,2.5nm,0.9s,baz=191,slow=4.6,SNR=3.9
CPUP                                  PKPbc    PKiKP   08 23 17.5 +0.6
           comp=Z,2.6nm,0.9s,baz=129,slow=4.8,SNR=4.8
SJCC   San Jacinto, C    158.77  62  eP       PKPdf    08 23 15.4 -0.4
UREC   San Jos de Ur     159.31  68  eP       PKPdf    08 23 16.9 +0.5
CBOC   Ciudad Bolivar    159.44  73  eP       PKPdf    08 23 16.8 +0.1
ZARC   Zaragoza, Cauc    160.02  68  eP       PKPdf    08 23 16.8 -0.5
TOLC   Tolima            160.42  76  eP       PKPdf    08 23 18.3 +0.2
ORTC   Ortega, Tolima    160.63  78  eP       PKPdf    08 23 18.3 +0.4
PTBC   PUERTO BERRIO,    160.72  70  eP       PKPdf    08 23 16.4 -1.6
ROSC   El Rosal          161.33  75   PKP     PKPdf    08 23 18.5 -0.6
           comp=Z,6.7nm,0.5s,baz=34,slow=22,SNR=4.4
SPBC   San Pablo de B    161.35  72  eP       PKPdf    08 23 18.3 -0.4
BARC   Barichara         161.90  69  eP       PKPdf    08 23 23.3 +3.8
CHIC   Chingaza          161.95  75  eP       PKPdf    08 23 19.3 -0.5
MACC   Macarena, Meta    162.28  83  eP       PKPdf    08 23 20.3 +0.7
```

IASPEI ***03*** *08:16:14.9±0.8, 37°.07N±0°.03×27°.49E±0°.03, h14^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=3.3km az=33.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

DDA ***03*** *08:16:14.8, 37°.09N×27°.54E, h6^{km}±1^{km}, ML2.8*

ISK ***03*** *08:16:14.1, 37°.10N×27°.46E, h3^{km}, ML2.8/7*

ATH ***03*** *08:16:16.8, 37°.12N×27°.44E, h25^{km}±11^{km}, ML3.1/2, Error ellipse: s-maj=14.7km s-min=1.5km az=264.0*

THE ***03*** *08:16:16.4, 37°.10N×27°.46E, h12^{km}±3^{km}, ML3.1/3, Error ellipse: s-maj=4.1km s-min=0.8km az=253.0*

ISC 03 08:16:15.0±0.8**, 37°.05N**±0°.02×**27°.47E**±0°.02**, h13**^{km}±4^{km}**, n33, σ0^{s}.73**/58**, Turkey**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
BDRM   Kayabasi           0.02 306 i P       Pg        08 16 17.4 -0.1
BDRM                               i P       Pg        08 16 17.4 -0.1
BDRM                               i S       Sg        08 16 19.0 -0.1
BDRM                                 IAML              08 16 19.0
           comp=N,34µm,0.3s
BDRM                                 IAML              08 16 19.0
           comp=E,16µm,0.4s
BDRM                                 IAML              08 16 19.0
           comp=E,17µm,0.4s
BDRM                               i S       Sg        08 16 19.1  0.0
DATC   Datca-Mugla        0.33 152   PG      Pg        08 16 21.8  0.0
DATC                                 SG      Sb        08 16 28.1 +0.2
DDIM   Aydin, Didim       0.44 336 i P       Pg        08 16 23.7 -0.1
DDIM                               i S       Sg        08 16 30.0 +0.2
DDIM                                 IAML              08 16 33.0
           comp=N,1µm,0.5s
DDIM                                 IAML              08 16 33.0
           comp=E,1µm,0.6s
KOSK   Kos Island         0.49 233   P       Pb        08 16 26.3 +0.8
KOSK                                 S       Sn        08 16 34.6 -1.5
           comp=E,3µm,0.4s
NISR   Nisiros            0.52 212   P       Pn        08 16 27.5 -0.5
NISR                                 S       Sn        08 16 35.8 -0.8
NISR   Nisiros            0.52 212   P       Pn        08 16 27.5 -0.5
NISR                                 S       Sn        08 16 35.8 -0.8
NISR   Nisiros            0.52 212   P       Pn        08 16 27.6 -0.5
GCAM   G?zelcaml?         0.67 344 i P       Pg        08 16 27.7 -0.5
GCAM                               i S       Sb        08 16 37.6 -0.2
GCAM                                 IAML              08 16 41.0
           comp=N,463nm,0.4s
MRSB   Marmaris-Mugla     0.67 120   PG      Pb        08 16 28.6  0.0
```

MRSB				SG	**Sb**	**08 16 39.0**	**+1.1**
TURN	**Turunc**	**0.68**	**114**	*i* P	**Pb**	**08 16 28.7**	**0.0**
TURN				*i* S	**Sg**	**08 16 37.2**	**-0.1**
TURN				IAML		08 16 41.0	
	comp=N,467nm,0.5s						
TURN				IAML		08 16 41.0	
	comp=E,385nm,0.7s						
MULA	**Mugla, Merkez-**	**0.71**	**73**	*i* P	**Pg**	**08 16 27.4**	**-1.5**
MULA				*i* S	**Sg**	**08 16 36.6**	**-1.7**
MULA				IAML		08 16 40.0	
	comp=E,516nm,0.5s						
SMG	**Samos**	**0.83**	**323**	P	**Pg**	**08 16 30.7**	**-0.3**
SMG				S	**Sg**	**08 16 41.8**	**-0.1**
SMG				AML	AML	08 16 45.5	
	comp=E,2396µm,0.4s						
SMG				AML	AML	08 16 45.6	
	comp=N,2790µm,0.5s						
SMG	**Samos**	**0.83**	**323**	P	**Pg**	**08 16 30.7**	**-0.3**
SMG				S	**Sg**	**08 16 41.8**	**-0.1**
SMG				AML	AML	08 16 45.5	
	comp=E,2396µm,0.4s						
SMG				AML	AML	08 16 45.6	
	comp=N,2790µm,0.5s						
SMG	**Samos**	**0.83**	**323**	P	**Pg**	**08 16 30.9**	**-0.1**
SMG				S	**Sb**	**08 16 43.3**	**+1.0**
	comp=N,1µm,0.4s						
DALY	**Dalyan (Mula)**	**0.98**	**103**	*i* P	**Pn**	**08 16 34.4**	**0.0**
DALY				*i* S	**Sg**	**08 16 47.4**	**+0.7**
ARG	**Arkhangelos**	**0.99**	**147**	P	**Pn**	**08 16 35.2**	**+0.7**
ARG				S	**Sn**	**08 16 48.9**	**+0.6**
ARG				AML	AML	08 16 51.4	
	comp=N,2302µm,1.1s						
ARG				AML	AML	08 16 53.6	
	comp=E,2168µm,0.5s						
ARG	**Arkhangelos**	**0.99**	**147**	P	**Pn**	**08 16 35.2**	**+0.7**
ARG				S	**Sn**	**08 16 48.9**	**+0.6**
ARG				AML	AML	08 16 51.4	
	comp=N,2302µm,1.1s						
ARG				AML	AML	08 16 53.6	
	comp=E,2168µm,0.5s						
ARG	**Arkhangelos**	**0.99**	**147**	P	**Pn**	**08 16 35.4**	**+0.9**
ARG				S	**Sn**	**08 16 49.4**	**+1.1**
	comp=E,1µm,0.7s						
ARG	**Arkhangelos**	**0.99**	**147**	PG	**Pn**	**08 16 34.9**	**+0.4**
ARG				SG	**Sn**	**08 16 49.7**	**+1.4**
TAVA	**DENIZLI_Tavas**	**1.23**	**70**	*i* P	**Pn**	**08 16 36.9**	**-1.0**
TAVA				*i* S	**Sb**	**08 16 52.1**	**-1.7**
TAVA				IAML		08 16 55.0	
	comp=N,99nm,0.7s						
FETY	**Fethiye**	**1.36**	**107**	*i* P	**Pg**	**08 16 41.3**	**+0.1**
FETY				*i* S	**Sn**	**08 16 57.8**	**+0.2**
ZEYE	**Izmir, Urla-Ze**	**1.41**	**327**	*i* P	**Pb**	**08 16 41.4**	**+0.2**
ZEYE				*i* S	**Sn**	**08 16 58.0**	**-0.7**
ZEYE				IAML		08 17 03.0	
	comp=E,69nm,0.5s						
ZEYE				IAML		08 17 03.0	
	comp=N,141nm,0.6s						
URLA	**Izmir**	**1.48**	**332**	*i* P	**Pg**	**08 16 44.2**	**+0.8**
URLA				*i* S	**Sg**	**08 17 03.4**	**+0.7**
KARP	**Karpathos**	**1.52**	**189**	P	**Pn**	**08 16 41.6**	**-0.3**
KARP	**Karpathos**	**1.52**	**189**	P	**Pn**	**08 16 41.6**	**-0.3**
KARP	**Karpathos**	**1.52**	**189**	P	**Pn**	**08 16 42.5**	**+0.6**
KARP	**Karpathos**	**1.52**	**189**	PN	**Pg**	**08 16 43.8**	**-0.5**
APE	**Apeiranthos**	**1.55**	**271**	PN	**Pb**	**08 16 43.3**	**-0.3**
GOLH	**Golhisar**	**1.68**	**83**	*i* P	**Pn**	**08 16 45.2**	**+1.0**
GOLH				*i* S	**Sb**	**08 17 07.6**	**+0.6**
GOLH				IAML		08 17 15.0	
	comp=E,71nm,0.5s						
GOMA	**Golmarmara-Man**	**1.69**	**12**	PN	**Pn**	**08 16 44.6**	**+0.4**
SANT	**Santorini**	**1.75**	**248**	PN	**Pb**	**08 16 47.2**	**+0.2**
ZKR	**Zakros**	**2.18**	**208**	PN	**Pb**	**08 16 53.4**	**-0.9**
SIGR	**SIGRI**	**2.50**	**330**	PN	**Pn**	**08 16 56.1**	**+0.7**

ASRS ***03*** *08:17:57.8±0.2, 52°N±2°×9°4E±°, h10^{km}, MLh3.8/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***03*** *08:18:10.4±44.0, 51°.61N×92°.95E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=336.1km s-min=173.8km az=50.0*

ISC 03 08:18:00.3±0.9**, 51°.59N**±0°.03×**94°.21E**±0°.02**, h15**^{km}±8^{km}**, n33,** σ2^{s}79/71**, 3C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.19**	**53**	Pg	**Pg**	**08 18 06.8**	**+2.0**
KZLR				Sg	**Sg**	**08 18 10.2**	**+2.4**
ARDR	**Aradan**	**1.10**	**334**	Pg	**Pb**	**08 18 22.0**	**+0.9**
ARDR				Sg	**Sb**	**08 18 36.4**	**+1.1**
TDJR	**Todzha**	**1.42**	**55**	Pg	**Pn**	**08 18 26.8**	**+1.1**
TDJR				Sg	**Sg**	**08 18 44.7**	**-1.4**
ERNS	**Erzin**	**1.46**	**155**	Pg	**Pn**	**08 18 26.7**	**+0.5**
ERNS				Sg	**Sg**	**08 18 45.1**	**-2.1**
BLRR	**Bol’shaya Rech**	**1.82**	**324**	Pg	**Pg**	**08 18 34.7**	**-0.4**
BLRR				Sg	**Sg**	**08 18 57.9**	**-0.7**
DJOS	**Djoyskaya Sosn**	**2.11**	**306**	Pg	**Pb**	**08 18 39.0**	**+0.8**
DJOS				Sg	**Sb**	**08 19 06.5**	**+2.3**
CERR	**Cheremushki**	**2.13**	**307**	Pg	**Pb**	**08 18 39.6**	**+1.0**
CERR				Sg	**Sb**	**08 19 06.9**	**+2.0**
DJO	**Djoy, Khakassi**	**2.19**	**304**	Pg	**Pb**	**08 18 40.5**	**+0.9**
DJO				Sg	**Sb**	**08 19 08.6**	**+2.0**
KNGR	**Kungurtug, Tuv**	**2.31**	**114**	Pg	**Pb**	**08 18 41.1**	**-0.6**
KNGR				Sg	**Sb**	**08 19 11.7**	**+1.7**
TBTR	**Tabat**	**2.53**	**303**	P	**Pn**	**08 18 42.8**	**+2.0**
TBTR				Pg	**Pb**	**08 18 47.3**	**+2.0**
TBTR				Sg	**Sg**	**08 19 20.0**	**-1.5**
TEL	**Teeli**	**2.58**	**259**	Pg	**Pb**	**08 18 46.8**	**+0.5**
TEL				Sg	**Sb**	**08 19 20.1**	**+2.3**
ABNR	**Abakan**	**2.73**	**323**	Sg	**Sg**	**08 19 25.8**	**-1.9**
VEH	**Verkhnyaya Baz**	**2.91**	**306**	Pg	**Pn**	**08 18 49.0**	**+2.9**
VEH				Sg	**Sg**	**08 19 31.5**	**-2.1**
KTRR	**Kuturchin**	**3.35**	**0**	Pg	**Pb**	**08 19 01.2**	**+1.8**
KTRR				Sg	**Sg**	**08 19 44.4**	**-3.5**
ORY	**Orie**	**3.46**	**9**	Pg	**Pb**	**08 19 03.6**	**+2.4**
ORY				Sg	**Sb**	**08 19 46.2**	**+3.1**
SHRR	**Shira**	**3.80**	**322**	P	**Pn**	**08 19 00.4**	**+2.1**
SHRR				Pg	**Pb**	**08 19 10.1**	**+3.2**
SHRR				S	**Sn**	**08 19 41.1**	**-1.5**
SHRR				Sg	**Sg**	**08 19 59.7**	**-2.4**
LUZB	**Luzhba, Kemero**	**3.84**	**305**	P	**Pn**	**08 19 01.3**	**+2.5**
LUZB				Pg	**Pb**	**08 19 10.4**	**+2.7**
LUZB				Sg	**Sg**	**08 19 60.0**	**-3.5**
CUR	**Chagan-Uzun**	**4.00**	**250**	P	**Pn**	**08 19 03.9**	**+2.7**
CUR				Pg	**Pb**	**08 19 13.6**	**+3.1**
CUR				Sg	**Sb**	**08 20 04.0**	**+5.2**
ULGR	**Ulagan, Altay**	**4.05**	**259**	P	**Pn**	**08 19 04.9**	**+3.0**
ULGR				Pg	**Pb**	**08 19 13.7**	**+2.3**
ULGR				S	**Sn**	**08 19 45.8**	**-3.3**
ULGR				Sg	**Sb**	**08 20 05.5**	**+5.2**
TASR	**Tashtagol**	**4.07**	**289**	P	**Pn**	**08 19 05.1**	**+3.1**
TASR				Pg	**Pg**	**08 19 15.7**	**-2.4**
TASR				Sg	**Sg**	**08 20 09.7**	**-1.1**
MOY	**Mondy**	**4.23**	**86**	Pg	**Pb**	**08 19 15.9**	**+1.5**
MOY				Sg	**Sg**	**08 20 12.4**	**-3.6**
ARTR	**Artybash**	**4.32**	**275**	Pg	**Pb**	**08 19 19.6**	**+3.8**
ARTR				Sg	**Sg**	**08 20 16.7**	**-2.0**
CHBI	**Chibit, Altay**	**4.43**	**256**	P	**Pn**	**08 19 09.7**	**+2.8**
CHBI				Pg	**Pg**	**08 19 22.4**	**-2.6**
CHBI				Sg	**Sg**	**08 20 19.1**	**-3.3**
DGZ	**Jazzator, Alta**	**4.71**	**249**	P	**Pn**	**08 19 14.1**	**+3.2**
DGZ				Pg	**Pg**	**08 19 29.2**	**-1.2**
DGZ				Sg	**Sb**	**08 20 26.0**	**+6.9**
GALT	**Gorno-Altaysk,**	**5.14**	**277**	Pg	**Pb**	**08 19 34.0**	**+4.1**
GALT				Sg	**Sg**	**08 20 42.7**	**-2.6**
ELT	**Eltsovka**	**5.16**	**292**	P	**Pn**	**08 19 18.3**	**+1.4**
ELT				Pg	**Pb**	**08 19 32.9**	**+2.8**
ELT				Sg	**Sg**	**08 20 43.4**	**-2.2**
ZAK	**Zakamensk**	**5.86**	**98**	Pg	**Pb**	**08 19 44.7**	**+2.5**
ZAK				Sg	**Sg**	**08 21 06.7**	**-1.4**
SALR	**Pechorkino, Sa**	**5.86**	**302**	Sg	**Sg**	**08 21 04.5**	**-3.8**
TLY	**Talaya**	**5.88**	**85**	Pg	**Pb**	**08 19 45.0**	**+2.6**
TLY				Sg	**Sg**	**08 21 02.1**	**-6.6**
UKR	**Ust'-Kan**	**5.96**	**267**	Pg	**Pb**	**08 19 48.1**	**+4.3**
UKR				Sg	**Sg**	**08 21 10.8**	**-0.6**
MK31	**Makanchi Array**	**9.16**	**243**	⇑Pn	**Pn**	**08 20 14.3**	**+2.5**
	0.2nm,0.4s,baz=48,slow=17,SNR=14						
MK31				⇓Sn	**Sn**	**08 21 53.1**	**-1.5**
	0.9nm,0.6s,baz=60,slow=33,SNR=3.8						
MK31				⇑Lg	Lg	08 22 39.1	
	3.0nm,0.8s,baz=43,slow=30,SNR=4.3						
KURK	**Kurchatov**	**9.84**	**271**	⇓Lg	Lg	08 22 55.6	
	6.5nm,1.0s						
KURBB	**Kurchatov Arra**	**9.91**	**271**	⇑Lg	Lg	08 23 00.5	
	6.6nm,0.6s						

IDC 03 08:20:04.1±8.3**, 21°.79N**×**142°.70E, h698**^{km}±128^{km}**, mb2.3**/6**, mb1 2.5**/6**, mb1mx2.3**/44**, mbtmp3.4**/6**, Error ellipse: s-maj=42.6km s-min=22.4km az=72.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**38.98**	**321**	P	P	08 26 35.7	+0.6
	1.1nm,0.7s,baz=139,slow=44,SNR=7.8						
WRA	**Warramunga Arr**	**42.27**	**192**	P	P	08 27 00.9	-0.1
	0.1nm,0.4s,baz=17,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**54.30**	**313**	P	P	08 28 28.2	-0.5
	0.1nm,0.5s,baz=92,slow=8.7,SNR=1.9						
KURBB	**Kurchatov Arra**	**57.15**	**317**	P	P	08 28 47.2	-0.8
	0.5nm,0.6s,baz=95,slow=7.6,SNR=5.4						
ILAR	**Eielson Array**	**62.16**	**27**	P	P	08 29 19.1	-1.7
	0.2nm,0.4s,baz=262,slow=5.0,SNR=5.8						
YKA	**Yellowknife Ar**	**76.59**	**28**	P	P	08 30 47.8	+2.0
	0.2nm,0.4s,baz=294,slow=4.7,SNR=5.7						

IDC 03 08:27:19.2±7.8**, 13°.85N**×**143°.97E, h0**^{km}**, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.4**/43**, mbtmp3.7**/4**, Error ellipse: s-maj=314.5km s-min=32.1km az=82.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.89**	**196**	P	P	08 34 12.5	-0.2
	0.8nm,0.8s,baz=17,slow=9.5,SNR=3.8						
MKAR	**Makanchi Array**	**60.70**	**316**	P	P	08 37 33.4	+0.9
	0.3nm,0.6s,baz=111,slow=7.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**60.91**	**324**	P	P	08 37 32.4	-1.3
	0.3nm,0.4s,baz=113,slow=6.9,SNR=1.8						
KURBB	**Kurchatov Arra**	**63.86**	**320**	P	P	08 37 53.6	0.0
	0.8nm,0.4s,baz=102,slow=7.0,SNR=8.9						

ROM 03 08:29:21.8±0.2**, 35°.98N**±0°.02×**13°.93E**±0°.02**, h19**^{km}±1^{km}**, ML2.4**/1**, 1C, Error ellipse: s-maj=2.1km s-min=0.9km az=310.0, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLTA	**Licata**	**1.18**	**1**	P	Pb	08 29 43.4	-0.1
HPAC	**Pachino**	**1.19**	**53**	P	Pn	08 29 43.0	-0.5
HPAC				S	Sn	08 29 59.0	-0.1
HMDC	**Modica**	**1.20**	**35**	⇑P	Pn	08 29 43.5	0.0
HMDC				S	Sg	08 30 00.2	-0.4
RAFF	**Raffo Rosso**	**1.29**	**15**	P	Pn	08 29 44.5	-0.2
RAFF				S	Sb	08 30 02.6	+1.0
HAVL	**Avola**	**1.37**	**44**	P	Pn	08 29 46.4	+0.4
HAVL				S	Sb	08 30 04.8	+0.7
MEU	**Monte Lauro**	**1.38**	**35**	P	Pn	08 29 46.0	-0.1
MEU				S	Sb	08 30 04.2	-0.1
HLNI	**Lentini**	**1.56**	**29**	P	Pn	08 29 49.0	+0.5
HLNI				S	Sb	08 30 10.0	+0.5
HLNI				AML	AML		
	comp=E,97µm,0.8s						
HLNI				AML	AML		
	comp=N,115µm,1.6s						
HCRL	**Carlentini**	**1.57**	**34**	P	Pn	08 29 49.1	+0.4

BJI ***03*** *08:41:49.8±0.0, 50°.90N×178°.36W, h14^{km}, mB5.1/23, mb4.8/34, Ms4.6/7, Ms7 4.4/4*

AEIC ***03*** *08:41:51±1.8, 51°.59N±0°.08×178°.15W±0°.06, h16^{km}±3^{km}, ML4.7, mb4.8/182(NEIC), Error ellipse: s-maj=12.3km s-min=4.6km az=169.0*

NEIC ***03*** *08:41:52.5±1.7, 51°.68N±0°.06×178°.20W±0°.05, h21^{km}±3^{km}, Error ellipse: s-maj=9.1km s-min=3.8km az=166.0*

MOS ***03*** *08:41:52.6±1.1, 51°.71N×178°.14W, h34^{km}, mb5.0/34, Error ellipse: s-maj=9.3km s-min=7.2km az=69.2*

GCMT ***03*** *08:41:53.0±0.4, 51°.96N±0°.04×178°.06W±0°.04, h24^{km}±1km, MW4.8/68, Moment Tensor Solution. s21,c26; s68,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.96±.14; M$_{\theta\theta}$0.66±.10; M$_{\phi\phi}$1.30±.09; M$_{r\theta}$1.14±.15; M$_{\theta\phi}$0.37±.05; M$_{\phi r}$0.19±.10; Best double couple: M$_0$2.00400×10^{16} NP1:ϕ_s16.00000°, δ35.00000°, λ-118.00000°. NP2: ϕ_s229.00000°, δ60.00000°, λ-72.00000°. Principal axes: T 1.6210, Plg13.0000°, Azm306.0000°; N 0.7620, Plg16.0000°, Azm39.0000°; P -2.3880, Plg70.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***03*** *08:41:55.1±2.5, 51°.83N×178°.17W, h46^{km}±22^{km}, mb4.0/25, mb1 4.2/28, mb1mx4.0/60, mbtmp4.3/28, ML4.3/2, MS3.6/17, Ms1 3.6/17, ms1mx3.4/37 Error ellipse: s-maj=17.4km s-min=10.9km az=163.0*

ISC 03 08:41:52.0±0.4**, 51°.62N**±0°.07×**178°.13W**±0°.03**, h21**^{km}±2^{km}**, n512,** σ1^{s}**24**/501**, mb4.8**/117**, MS3.7**/19**, 6C-12D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.23**	**15**		**Pb**	**08 41 57.6**	**-0.4**
TAFP	**Tanaga Falls P**	**0.30**	**18**		**Pb**	**08 41 58.6**	**-0.1**
GAEA	**Gareloi East**	**0.42**	**294**		**Pb**	**08 41 59.8**	**-0.8**
GALAA	**Gareloi Lava P**	**0.42**	**291**		**Pb**	**08 41 59.9**	**-0.8**
KIMD	**Kanaga Island**	**0.58**	**75**		**Pb**	**08 42 02.6**	**-0.9**
KIKV	**Kanaga Island**	**0.66**	**66**		**Pb**	**08 42 04.2**	**-0.6**
KICM	**Kanaga Island**	**0.66**	**62**		**Pb**	**08 42 04.4**	**-0.4**
KIRH	**Kanaga Island**	**0.71**	**66**		**Pb**	**08 42 05.0**	**-0.6**
ADK	**Adak**	**0.94**	**73**	Pg	**Pn**	**08 42 08.4**	**-1.7**
ADK				Sg	**Sb**	**08 42 21.5**	**-0.1**
ADAG	**Mount Adagdak**	**1.02**	**68**		**Pn**	**08 42 10.3**	**-0.8**
ETKA	**Kagalaska Isla**	**1.10**	**76**		**Pn**	**08 42 11.1**	**-1.1**
GSTD	**Great Sitkin T**	**1.31**	**70**		**Pn**	**08 42 14.7**	**-0.5**
GSMY	**Great Sitkin M**	**1.36**	**71**		**Pn**	**08 42 15.4**	**-0.4**
GSTR	**Great Sitkin T**	**1.37**	**69**		**Pn**	**08 42 16.0**	**0.0**
CERAA	**Semis’ Rag’d T**	**1.39**	**283**		**Pn**	**08 42 15.3**	**-0.9**
CERB	**Semis’ Cerberu**	**1.43**	**284**		**Pn**	**08 42 15.8**	**-0.9**
CEAP	**Semis’ Anvil P**	**1.47**	**286**		**Pn**	**08 42 16.8**	**-0.6**
AMKA	**Amchitka**	**1.62**	**263**	Pn	**Pn**	**08 42 18.1**	**-1.3**
AMKA				Sn	**Sn**	**08 42 38.2**	**-1.4**
LSPA	**Little Sitkin**	**2.07**	**281**		**Pn**	**08 42 25.3**	**-0.3**
LSSA	**Little Sitkin**	**2.11**	**280**		**Pn**	**08 42 25.7**	**-0.5**
LSNW	**Little Sitkin**	**2.11**	**281**		**Pn**	**08 42 25.5**	**-0.6**
ATKA	**Atka Island**	**2.51**	**75**		**Pn**	**08 42 32.4**	**+0.8**
SMY	**Shemya**	**4.91**	**286**	P	**Pn**	**08 43 02.1**	**-2.4**
SMY	**Shemya**	**4.91**	**286**	Pn	**Pn**	**08 43 02.1**	**-2.4**
NIKH	**Nikolski High**	**5.85**	**73**	Pn	**Pn**	**08 43 17.4**	**-0.1**
OKSO	**Okmok South**	**6.34**	**70**		**Pn**	**08 43 26.0**	**+1.8**
MAPS	**Pakushin South**	**7.15**	**68**		**Pn**	**08 43 37.5**	**+2.2**
MGOD	**Makushin Gods**	**7.18**	**68**		**Pn**	**08 43 37.9**	**+2.1**
SPIA	**Saint Paul Isl**	**7.22**	**36**	Pn	**Pn**	**08 43 36.8**	**+0.5**
MREP	**Makushin Rep’t**	**7.26**	**68**		**Pn**	**08 43 39.2**	**+2.3**
MSW	**Makushin Switc**	**7.26**	**67**		**Pn**	**08 43 38.8**	**+1.9**
MNAT	**Makushin Natee**	**7.31**	**67**		**Pn**	**08 43 39.8**	**+2.3**
UNV	**Unalaska Valle**	**7.41**	**68**	Pn	**Pn**	**08 43 41.3**	**+2.5**
AKGG	**Akutan Green G**	**7.79**	**66**		**Pn**	**08 43 45.7**	**+1.6**
AKUT	**Akutan**	**7.89**	**67**	Pn	**Pn**	**08 43 48.5**	**+3.0**
WTUG	**Tugumak**	**8.86**	**63**		**Pn**	**08 44 00.3**	**+1.6**
FALS	**False Pass**	**9.40**	**64**		**Pn**	**08 44 06.1**	**0.0**
DT1	**Dutton Round H**	**10.10**	**64**		**Pn**	**08 44 17.7**	**+2.0**
SDPT	**Sand Point**	**11.16**	**64**		**Pn**	**08 44 30.1**	**-0.1**
CNBA	**Chernabura Isl**	**11.57**	**67**	Pn	**Pn**	**08 44 36.2**	**+0.4**
CHGN	**Chignik**	**12.51**	**60**	Pn	**Pn**	**08 44 49.6**	**+1.0**
ANM	**Nome**	**14.59**	**22**	P	**Pn**	**08 45 16.9**	**-0.1**
ANM	**Nome**	**14.59**	**22**	Pn	**Pn**	**08 45 16.9**	**-0.1**
PEA0B	**Petropavlovsk-**	**14.82**	**285**	P	**Pn**	**08 45 19.8**	**-0.5**
PEA0B	**Petropavlovsk-**	**14.82**	**285**	Pn	**Pn**	**08 45 19.8**	**-0.5**
PETK	**Petropavlovsk-**	**14.82**	**285**	P	**Pn**	**08 45 18.7**	**-1.5**
	0.2nm,0.3s,baz=96,slow=13,SNR=4.9						
PETK				LR	LR	08 50 47.1	
	comp=Z,177nm,21.2s,baz=86,slow=36						
OHAK	**Old Harbor**	**15.46**	**59**	Pn	**Pn**	**08 45 26.5**	**-2.2**
OHAK				IAmb	IAmb	08 45 36.8	
	comp=Z,42nm,0.7s						
SVW2	**Sparrevohn**	**15.61**	**44**	Pn	**Pn**	**08 45 32.1**	**+1.4**
SVW2				IAmb	IAmb	08 45 37.8	
	comp=Z,75nm,1.4s						
KDAK	**Kodiak Island**	**15.95**	**57**	P	**Pn**	**08 45 33.6**	**-1.3**
	comp=Z,2.0nm,0.3s,baz=194,slow=4.0,SNR=38						
KDAK				S	Sn	08 48 18.4	-12
	comp=Z,0.4nm,0.3s,baz=311,slow=20,SNR=1.4						
KDAK	**Kodiak Island**	**15.95**	**57**	P	**Pn**	**08 45 33.0**	**-1.9**
KDAK				pmax	pmax		
	comp=Z,126nm,1.5s						
KDAK	**Kodiak Island**	**15.95**	**57**	Pn	**Pn**	**08 45 33.0**	**-1.9**
KDAK				IAmb	IAmb	08 45 44.4	
	comp=Z,126nm,1.5s						
TTA	**Tatalina**	**16.37**	**38**	P	**P**	**08 45 43.2**	**+0.1**
TTA				pmax	pmax		
	comp=Z,100nm,1.5s						
TTA	**Tatalina**	**16.37**	**38**		**P**	**08 45 43.2**	**+0.1**
TTA				IAmb	IAmb	08 45 47.3	
	comp=Z,100nm,1.5s						
RSO	**Redoubt South**	**16.62**	**48**	P	**P**	**08 45 48.4**	**+2.3**
CNPM	**China Poot**	**17.05**	**52**	P	**P**	**08 45 50.5**	**-0.1**
SKT	**Skwentna**	**17.75**	**44**	P	**P**	**08 45 59.8**	**+1.5**
SKT				IAmb	IAmb	08 46 10.8	
	comp=Z,59nm,1.0s						
PPLA	**Purkeypile**	**17.86**	**41**	P	**P**	**08 46 00.5**	**+0.8**
PPLA				IAmb	IAmb	08 46 13.6	
	comp=Z,62nm,1.0s						
SUA	**Susitna One**	**17.89**	**46**	P	**P**	**08 46 00.3**	**+0.3**
O22K	**Cooper Landing**	**18.05**	**50**	P	**P**	**08 46 02.5**	**+1.0**
	baz=253,SNR=7.8						
O22K	**Cooper Landing**	**18.05**	**50**	P	**Pn**	**08 46 00.6**	**-0.6**
SEW	**Seward**	**18.07**	**51**	P	**Pn**	**08 46 01.5**	**0.0**
RDOG	**Red Dog Mine**	**18.08**	**19**	P	**P**	**08 46 02.0**	**+0.1**
BILL	**Bilibino**	**18.14**	**341**	⇓*e*P	**P**	**08 46 03.6**	**+1.1**
RC01	**Rabbit Creek A**	**18.23**	**48**	P	**P**	**08 46 04.9**	**+1.4**
	baz=251						
CUT	**Chulitna**	**18.46**	**43**	P	**Pn**	**08 46 07.4**	**+1.2**
	baz=247						
PMR	**Palmer**	**18.66**	**46**	P	**Pn**	**08 46 09.4**	**+0.7**
PMR				pmax	pmax		
	comp=Z,28nm,1.2s						
PMR	**Palmer**	**18.66**	**46**		**Pn**	**08 46 09.4**	**+0.7**
KTH	**Kantishna Hill**	**18.68**	**40**	P	**Pn**	**08 46 10.5**	**+1.5**
KTH				IAmb	IAmb	08 46 11.4	
	comp=Z,77nm,0.8s						
GHO	**Glory Hole Cre**	**18.82**	**46**	P	**Pn**	**08 46 11.2**	**+0.5**
TRF	**Thorofare Moun**	**18.88**	**40**	P	**Pn**	**08 46 12.2**	**+0.7**
TRF				IAmb	IAmb	08 46 26.1	
	comp=Z,51nm,1.0s						
BPAW	**Bear Paw Mtn.**	**18.91**	**38**	P	**Pn**	**08 46 12.8**	**+1.1**
BPAW				IAmb	IAmb	08 46 20.0	
	comp=Z,41nm,0.8s						
KNK	**Knik Glacier**	**18.91**	**47**	P	**Pn**	**08 46 12.1**	**+0.3**
SML	**Sawmill**	**19.09**	**46**	P	**Pn**	**08 46 15.0**	**+1.0**
MA2	**Magadan**	**19.14**	**307**	⇓*e*P	**Pn**	**08 46 16.1**	**+1.6**
MA2				pmax	pmax		
	comp=Z,22nm,1.0s						
SEY	**Seymchan**	**19.35**	**317**	P	**P**	**08 46 16.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=112,slow=10,SNR=19						
SEY				ScP	ScP	08 53 59.6	-12
	comp=Z,0.8nm,0.3s,baz=59,slow=0.9,SNR=17						
SEY	**Seymchan**	**19.35**	**317**	⇓*e*P	**Pn**	**08 46 19.3**	**+2.3**
GLI	**Glacier Island**	**19.40**	**49**	P	**P**	**08 46 17.1**	**+0.6**
GLI				IAmb	IAmb	08 46 26.6	
	comp=Z,69nm,1.4s						
RND	**Reindeer**	**19.45**	**41**	P	**P**	**08 46 17.4**	**+0.3**
RND				pmax	pmax		
	comp=Z,26nm,0.7s						
RND	**Reindeer**	**19.45**	**41**	P	**P**	**08 46 17.4**	**+0.3**
RND				IAmb	IAmb	08 46 26.8	
	comp=Z,26nm,0.7s						
MLY	**Manley**	**19.46**	**36**	P	**Pn**	**08 46 19.4**	**+1.0**
	baz=239,SNR=15						
BWN	**Browne**	**19.53**	**39**	P	**Pn**	**08 46 19.6**	**+0.4**
MCK	**McKinley**	**19.55**	**40**	P	**P**	**08 46 18.2**	**+0.1**
	baz=245,SNR=14						
SCM	**Sheep Creek Mo**	**19.56**	**47**	P	**P**	**08 46 17.2**	**-1.0**
SCM				pmax	pmax		
	comp=Z,43nm,1.0s						
SCM	**Sheep Creek Mo**	**19.56**	**47**	P	**P**	**08 46 17.2**	**-1.0**
SCM				IAmb	IAmb	08 46 29.0	
	comp=Z,43nm,1.0s						
FID	**Port Fidalgo**	**19.66**	**50**	P	**P**	**08 46 20.0**	**+0.7**
FID				IAmb	IAmb	08 46 21.4	
	comp=Z,71nm,1.1s						
NEA2	**Nenana**	**19.88**	**38**	P	**Pn**	**08 46 23.4**	**+0.1**
	baz=243						
I23K	**Minto, Yukon-K**	**20.03**	**36**	P	**Pn**	**08 46 24.9**	**-0.1**
	baz=241,SNR=17						
I23K	**Minto, Yukon-K**	**20.03**	**36**	P	**P**	**08 46 24.0**	**+0.8**
I23K				IAmb	IAmb	08 46 38.4	
	comp=Z,34nm,0.8s						
KLU	**Klutina**	**20.11**	**48**	P	Pn	08 46 25.6	-0.5
KLU				IAmb	IAmb	08 46 28.9	
	comp=Z,81nm,1.4s						
M24K	**Tolsona, Glenn**	**20.16**	**46**	P	**P**	**08 46 25.5**	**+0.8**
	baz=253,SNR=6.9						
M24K	**Tolsona, Glenn**	**20.16**	**46**	P	**P**	**08 46 25.2**	**+0.4**
WRH	**Wood River Hil**	**20.20**	**39**	P	**P**	**08 46 25.4**	**+0.3**
MDM	**Murphy Dome**	**20.36**	**38**	P	**P**	**08 46 27.8**	**+0.9**
MDM				IAmb	IAmb	08 46 43.8	
	comp=Z,59nm,1.1s						
CCB	**Clear Creek Bu**	**20.39**	**39**	P	**P**	**08 46 26.6**	**-0.5**
TCOL	**CIGO, UAF Yank**	**20.46**	**38**	P	Pn	08 46 29.3	-0.8
	baz=244,SNR=11						
TCOL	**CIGO, UAF Yank**	**20.46**	**38**	P	**P**	**08 46 28.6**	**+0.6**
TCOL				IAmb	IAmb	08 46 43.6	
	comp=Z,42nm,0.9s						
COLA	**College**	**20.47**	**38**	*ce*P	Pn	08 46 29.3	-0.9
COLA				pmax	pmax		
	comp=Z,24nm,0.8s						
COLA	**College**	**20.47**	**38**	P	**P**	**08 46 28.1**	**+0.2**
COLA				IAmb	IAmb	08 46 43.6	
	comp=Z,39nm,0.8s						
HDA	**Harding Lake**	**20.63**	**40**	P	**P**	**08 46 30.3**	**+0.5**
	baz=246						
HDA	**Harding Lake**	**20.63**	**40**	P	**P**	**08 46 29.7**	**0.0**
PAX	**Paxson**	**20.73**	**44**	P	**P**	**08 46 31.9**	**+1.0**
PAX				pmax	pmax		
	comp=Z,34nm,0.8s						
PAX	**Paxson**	**20.73**	**44**	P	**P**	**08 46 31.9**	**+1.0**
PAX				IAmb	IAmb	08 46 36.8	
	comp=Z,34nm,0.8s						
POKR	**Poker Plat Res**	**20.74**	**38**	P	**P**	**08 46 31.4**	**+0.5**
	baz=244,SNR=16						
POKR	**Poker Plat Res**	**20.74**	**38**	P	**P**	**08 46 31.6**	**+0.7**
POKR				IAmb	IAmb	08 46 34.2	
	comp=Z,48nm,0.8s						
N25K	**Chitina, Valde**	**20.75**	**48**	P	**P**	**08 46 32.6**	**+1.4**
	baz=256,SNR=10						
N25K	**Chitina, Valde**	**20.75**	**48**	P	**P**	**08 46 32.5**	**+1.3**
IL31		**20.80**	**39**	P	**P**	**08 46 31.2**	**-0.3**
ILAR	**Eielson Array**	**20.80**	**39**	P	**P**	**08 46 30.5**	**-1.1**
	comp=Z,8.7nm,1.0s,baz=240,slow=10.0,SNR=34						
ILAR				PcP	**PcP**	**08 50 37.5**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=276,slow=3.0,SNR=6.7						
COLD	**Coldfoot**	**20.84**	**31**	P	Pn	08 46 33.5	-1.0
	baz=235,SNR=25						
COLD	**Coldfoot**	**20.84**	**31**	P	Pn	08 46 33.6	-0.9
COLD				IAmb	IAmb	08 46 43.8	
	comp=Z,37nm,1.0s						
GLB	**Gilahina Butte**	**21.08**	**49**	P	**P**	**08 46 35.5**	**+0.7**
GLB				IAmb	IAmb	08 46 40.0	
	comp=Z,25nm,0.7s						
VRDI	**Verde Repeater**	**21.21**	**50**	P	**P**	**08 46 35.2**	**-1.0**
RIDG	**Independent Ri**	**21.24**	**42**	P	**P**	**08 46 36.7**	**+0.3**
RIDG				IAmb	IAmb	08 46 49.7	
	comp=Z,40nm,0.8s						
MCARA	**McCarthy VSAT**	**21.44**	**49**	P	**P**	**08 46 38.2**	**-0.3**
MCARA				IAmb	IAmb	08 46 57.4	
	comp=Z,41nm,0.9s						
MENT	**Mentasta**	**21.48**	**45**	P	**P**	**08 46 37.3**	**-1.7**
MENT				IAmb	IAmb	08 46 56.7	
	comp=Z,44nm,1.2s						
DOT	**Dot Lake**	**21.54**	**43**	P	**P**	**08 46 40.0**	**+0.3**
L26K	**Log Cabin Wild**	**21.67**	**45**	P	**P**	**08 46 41.5**	**+0.5**
	baz=254,SNR=19						
SCRK	**Sand Creek**	**21.68**	**42**	P	**P**	**08 46 40.8**	**-0.4**
	baz=251,SNR=5.8						
TOLK	**Toolik Lake Re**	**21.86**	**28**	P	**P**	**08 46 44.2**	**+1.2**
	baz=233,SNR=34						
TOLK	**Toolik Lake Re**	**21.86**	**28**	P	**P**	**08 46 43.9**	**+0.9**
TOLK				IAmb	IAmb	08 46 52.1	
	comp=Z,44nm,1.1s						
A21K	**Barrow**	**22.03**	**18**	P	**P**	**08 46 45.4**	**+0.7**
	baz=218,SNR=21						
A21K	**Barrow**	**22.03**	**18**	P	**P**	**08 46 44.5**	**-0.2**
A21K				IAmb	IAmb	08 46 46.2	
	comp=Z,41nm,0.9s						
K27K	**Chicken**	**22.50**	**43**	P	**P**	**08 46 50.2**	**+0.3**
	baz=254						
K27K	**Chicken**	**22.50**	**43**	P	**P**	**08 46 50.0**	**+0.2**

EGAK	**Eagle**	**23.10**	**41**	P	**P**	**08 46 55.1**	**-1.0**
EGAK				IAmb	IAmb	08 47 22.8	
	comp=Z,28nm,0.9s						
DAWY	**Dawson**	**23.65**	**43**	P	**P**	**08 47 01.1**	**-0.5**
EPYK	**Eagle Plains**	**25.32**	**39**	P	**P**	**08 47 15.6**	**-1.4**
	baz=255						
EPYK	**Eagle Plains**	**25.32**	**39**	P	**P**	**08 47 15.5**	**-1.4**
EPYK				IAmb	IAmb	08 47 26.7	
	comp=Z,22nm,1.1s						
YSS	**Yuzh-Sakhalins**	**25.71**	**275**	*e*P	**P**	**08 47 25.9**	**+5.3**
YSS				*e*		08 47 44.1	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	**25.71**	**275**	P	**P**	**08 47 20.8**	**+0.2**
YSS				IAmb	IAmb	08 47 28.8	
	comp=Z,27nm,0.9s						
INK	**Inuvik**	**27.02**	**35**	P	**P**	**08 47 31.7**	**-0.5**
	comp=Z,10nm,1.0s,baz=271,slow=5.0,SNR=17						
INK				PcP	**PcP**	**08 50 51.6**	**-1.2**
	comp=Z,3.0nm,1.0s,baz=193,slow=7.3,SNR=3.0						
INK	**Inuvik**	**27.02**	**35**	P	**P**	**08 47 32.4**	**+0.2**
INK				pmax	pmax		
	comp=Z,12nm,0.9s						
INK	**Inuvik**	**27.02**	**35**	P	**P**	**08 47 32.4**	**+0.2**
ASAJ	**Asahikawa**	**27.12**	**270**	P	**P**	**08 47 34.5**	**+1.1**
	comp=Z,13nm,1.0s,baz=63,slow=14,SNR=3.0						
ASAJ				LR	LR	08 57 38.1	
	comp=Z,39nm,20.9s,baz=162,slow=35						
DLBC	**Dease Lake**	**27.88**	**57**	P	**P**	**08 47 38.4**	**-1.8**
	comp=Z,1.6nm,1.1s,baz=300,slow=20,SNR=0.9						
DLBC				PcP	**PcP**	**08 50 54.7**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=309,slow=5.3,SNR=5.3						
DLBC				LR	LR	08 58 51.6	
	comp=Z,221nm,19.8s,baz=270,slow=37						
YAK	**Yakutsk**	**29.57**	**311**	LR	LR	08 59 43.8	
	comp=Z,84nm,18.2s,baz=91,slow=36						
C36M	**Paulatuk**	**30.59**	**34**	P	**P**	**08 48 03.3**	**-0.7**
	baz=263						
C36M	**Paulatuk**	**30.59**	**34**	P	**P**	**08 48 04.5**	**+0.6**
TIXI	**Tiksi**	**30.64**	**330**⇑	*e*P	**P**	**08 48 07.5**	**+3.2**
TIXI				pmax	pmax		
	comp=Z,35nm,1.0s						
TIXI	**Tiksi**	**30.64**	**330**	P	**P**	**08 48 04.3**	**0.0**
ZEA	**Zeya**	**32.50**	**296**	*e*P	**P**	**08 48 17.4**	**-3.5**
USA0B	**Ussuriysk Arra**	**33.68**	**277**	P	**P**	**08 48 33.1**	**+1.8**
USA0B				pmax	pmax		
	comp=Z,7.0nm,1.0s						
USA0B	**Ussuriysk Arra**	**33.68**	**277**	P	**P**	**08 48 33.1**	**+1.8**
USRK	**Ussuriysk Ar.**	**33.68**	**277**	P	**P**	**08 48 30.5**	**-0.8**
	comp=Z,4.6nm,0.7s,baz=55,slow=9.1,SNR=8.5						
USRK				LR	LR	09 02 48.0	
	comp=Z,50nm,20.9s,baz=20,slow=37						
H11N2	**WAKE ISLAND Hy**	**33.92**	**206**	T	T	09 24 14.5	
	baz=17,slow=76,SNR=832						
H11N3	**WAKE ISLAND Hy**	**33.93**	**206**	T	T	09 24 14.0	
	baz=17,slow=76,SNR=727						
H11N1	**WAKE ISLAND Hy**	**33.94**	**206**	T	T	09 24 14.8	
	baz=17,slow=76,SNR=455						
MJAR	**Matsushiro Arr**	**34.23**	**261**	P	**P**	**08 48 36.9**	**+0.7**
	comp=Z,3.9nm,0.7s,baz=46,slow=6.7,SNR=3.9						
MJAR				LR	LR	09 00 49.9	
	comp=Z,68nm,21.2s,baz=85,slow=33						
MAJO	**Matsushiro**	**34.23**	**261**⇓	*e*P	**P**	**08 48 37.5**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,29nm,1.8s						
MAJO	**Matsushiro**	**34.23**	**261**	P	**P**	**08 48 37.0**	**+0.8**
MAJO				IAmb	IAmb	08 48 43.7	
	comp=Z,22nm,1.3s						
MAT	**Matsushiro**	**34.23**	**261**	P	**P**	**08 48 36.7**	**+0.5**
MAT				*e*S	**S**	**08 54 08.0**	**+6.2**
YKA	**Yellowknife Ar**	**34.77**	**47**	P	**P**	**08 48 39.2**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=270,slow=12,SNR=66						
YKA				PcP	**PcP**	**08 51 12.7**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=291,slow=2.0,SNR=18						
YKA				ScP	**ScP**	**08 54 55.5**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=291,slow=2.8,SNR=18						
YKA				LR	LR	09 05 08.9	
	comp=Z,223nm,18.6s,baz=0.0,slow=40						
NLWA	**Neilton Lookou**	**34.81**	**75**	P	**P**	**08 48 41.4**	**+0.3**
A04D	**Lummi Island**	**34.90**	**72**	P	**P**	**08 48 43.2**	**+1.4**
	baz=296						
H11S1	**WAKE ISLAND Hy**	**35.14**	**206**	T	T	09 25 45.0	
	baz=17,slow=76,SNR=386						
H11S2	**WAKE ISLAND Hy**	**35.16**	**206**	T	T	09 25 46.2	
	baz=17,slow=76,SNR=214						
H11S3	**WAKE ISLAND Hy**	**35.16**	**206**	T	T	09 25 46.3	
	baz=17,slow=76,SNR=204						
D03D	**Eldon**	**35.21**	**74**	P	**P**	**08 48 46.4**	**+1.9**
	baz=298,SNR=17						
JGF	**Kuroka**	**35.37**	**261**	P	**P**	**08 48 47.1**	**+1.1**
JGF				IAmb	IAmb	08 48 59.5	
	comp=Z,17nm,1.1s						
E03A	**Lebam**	**35.39**	**76**	P	**P**	**08 48 47.4**	**+1.3**
B05A	**Bryant**	**35.47**	**73**	P	**P**	**08 48 47.9**	**+1.2**
	baz=297,SNR=6.7						
D04E	**Lakebay**	**35.57**	**75**	P	**P**	**08 48 49.8**	**+2.2**
	baz=298						
F04D	**Rainier, OR**	**35.95**	**77**	P	**P**	**08 48 52.4**	**+1.5**
	baz=299						
E04D	**Cinebar**	**35.99**	**76**	P	**P**	**08 48 53.2**	**+2.0**
	baz=299,SNR=14						
D05A	**Enumclaw**	**36.03**	**74**	P	**P**	**08 48 53.4**	**+1.8**
G03D	**McMinnville, O**	**36.23**	**78**	P	**P**	**08 48 55.1**	**+1.9**
	baz=300						
LON	**Longmire**	**36.35**	**75**	P	**P**	**08 48 55.6**	**+1.2**
LON				pmax	pmax		
	comp=Z,16nm,0.7s						
LON	**Longmire**	**36.35**	**75**	P	**P**	**08 48 55.6**	**+1.2**
LON				IAmb	IAmb	08 48 56.7	
	comp=Z,16nm,0.7s						
I02D	**Swisshome**	**36.44**	**80**	P	**P**	**08 48 57.1**	**+2.0**
	baz=302						
JWT	**Wachi**	**36.78**	**262**	P	**P**	**08 48 59.6**	**+1.5**
LTY	**Liberty**	**36.79**	**74**	P	**P**	**08 48 59.0**	**+0.8**
LTY				IAmb	IAmb	08 49 05.7	
	comp=Z,11nm,0.8s						
H04D	**Lebanon**	**36.91**	**79**	P	**P**	**08 49 01.2**	**+2.1**
	baz=301,SNR=9.4						
I03D	**Drain, OR**	**36.97**	**80**	P	**P**	**08 49 00.7**	**+1.1**
	baz=302						
F05D	**White Salmon**	**36.99**	**76**	P	**P**	**08 49 01.2**	**+1.5**
	baz=300						
B08A	**Colville Reser**	**37.07**	**71**	P	**P**	**08 49 01.3**	**+0.8**
B08A				IAmb	IAmb	08 49 08.5	
	comp=Z,13nm,0.9s						
H04A	**Detroit Lake**	**37.16**	**78**	P	**P**	**08 49 03.1**	**+1.8**
K02D	**Willamette Mer**	**37.31**	**82**	P	**P**	**08 49 04.4**	**+1.8**
	baz=303						
G05D	**Wamic, OR**	**37.40**	**77**	P	**P**	**08 49 05.0**	**+1.7**
	baz=301,SNR=14						
I04A	**Tendick Farm,**	**37.49**	**79**	P	**P**	**08 49 05.8**	**+1.8**
	baz=302,SNR=19						
E07A	**Sunnyside**	**37.62**	**74**	P	**P**	**08 49 06.3**	**+1.1**
E07A				IAmb	IAmb	08 49 13.1	
	comp=Z,16nm,0.8s						
L02E	**Cave Junction**	**37.65**	**83**	P	**P**	**08 49 07.1**	**+1.7**
	baz=304						
HUMO	**Hull Mountain**	**37.80**	**81**	P	**P**	**08 49 08.2**	**+1.5**
I05D	**Terrebonne, OR**	**37.86**	**78**	P	**P**	**08 49 08.7**	**+1.5**
	baz=302,SNR=17						
HAWA	**Hanford**	**37.90**	**74**	P	**P**	**08 49 08.7**	**+1.3**
F07A	**Phinny Hill Vi**	**37.91**	**75**	P	**P**	**08 49 08.5**	**+1.0**
D08A	**Wollman Farm,**	**37.93**	**73**	P	**P**	**08 49 08.4**	**+0.7**
D08A				IAmb	IAmb	08 49 09.1	
	comp=Z,13nm,0.7s						
C09A	**Chrisman Ranch**	**37.95**	**71**	P	**P**	**08 49 08.0**	**+0.1**
C09A				IAmb	IAmb	08 49 15.2	
	comp=Z,13nm,0.8s						
J04D	**Umpqua Nationa**	**37.97**	**80**	P	**P**	**08 49 10.0**	**+1.7**
	baz=303,SNR=13						
E08A	**Dider Farm, El**	**38.13**	**74**	P	**P**	**08 49 10.3**	**+1.0**
E08A				IAmb	IAmb	08 49 11.0	
	comp=Z,17nm,0.8s						
PINE	**Pine Mountain**	**38.39**	**79**	P	**P**	**08 49 12.9**	**+1.1**
PINE				IAmb	IAmb	08 49 14.9	
	comp=Z,35nm,1.2s						
L04D	**Klamath Falls**	**38.41**	**82**	P	**P**	**08 49 13.8**	**+1.8**
	baz=304,SNR=10						
J05D	**Fort Rock, OR**	**38.48**	**79**	P	**P**	**08 49 14.8**	**+2.2**
	baz=303,SNR=22						
K04D	**Chiloquin, OR**	**38.53**	**81**	P	**P**	**08 49 14.7**	**+1.7**
	baz=304,SNR=8.5						
M02C	**Callahan**	**38.54**	**83**	P	**P**	**08 49 15.1**	**+2.2**
	baz=305,SNR=5.8						
HIA	**Hailar**	**38.58**	**292**⇑	*e*P	**P**	**08 49 14.5**	**+1.3**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
E09A	**Wood Farm, Sta**	**38.66**	**73**	P	**P**	**08 49 14.6**	**+0.7**
E09A				IAmb	IAmb	08 49 15.3	
	comp=Z,21nm,1.1s						
KMRM	**Mail Ridge**	**38.68**	**85**	P	**P**	**08 49 14.4**	**+0.2**
KMRM				IAmb	IAmb	08 49 17.6	
	comp=Z,15nm,0.7s						
G08A	**Pilot Rock**	**38.80**	**75**	P	**P**	**08 49 15.7**	**+0.5**
N02D	**Trinity Center**	**38.87**	**83**	P	**P**	**08 49 17.3**	**+1.6**
	baz=305,SNR=5.8						
M04C	**Macdoel**	**38.95**	**82**	P	**P**	**08 49 18.3**	**+1.9**
	baz=304,SNR=15						
K05A	**Summer Lake**	**39.00**	**80**	P	**P**	**08 49 18.9**	**+1.9**
K05A				IAmb	IAmb	08 49 26.3	
	comp=Z,31nm,0.8s						
WDC	**Whiskeytown Da**	**39.20**	**84**	P	**P**	**08 49 19.5**	**+1.1**
WDC				pmax	pmax		
	comp=Z,11nm,0.9s						
WDC	**Whiskeytown Da**	**39.20**	**84**	P	**P**	**08 49 19.5**	**+1.1**
O02D	**Mt. Diablo Mer**	**39.28**	**85**	P	**P**	**08 49 21.4**	**+2.2**
	baz=306,SNR=9.8						
F10A	**Beach Ranch, E**	**39.49**	**73**	P	**P**	**08 49 21.0**	**+0.1**
O03E	**Paynes Creek**	**39.82**	**84**	P	**P**	**08 49 24.9**	**+1.1**
	baz=306,SNR=14						
MOD	**Modoc Plateau**	**39.82**	**81**	P	**P**	**08 49 25.1**	**+1.2**
MOD				IAmb	IAmb	08 49 26.4	
	comp=Z,17nm,0.6s						
BMO	**Blue Mountains**	**40.03**	**75**	P	**P**	**08 49 26.0**	**+0.6**
BMO				pmax	pmax		
	comp=Z,17nm,1.0s						
BMO	**Blue Mountains**	**40.03**	**75**	P	**P**	**08 49 26.0**	**+0.6**
BMO				IAmb	IAmb	08 49 27.1	
	comp=Z,17nm,1.0s						
KSRS	**Korea Array**	**40.05**	**271**	P	**P**	**08 49 27.1**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=62,slow=9.3,SNR=5.1						
KSRS				LR	LR	09 03 37.3	
	comp=Z,44nm,21.8s,baz=16,slow=32						
KS19	**Wonju Array Si**	**40.05**	**271**	P	**P**	**08 49 26.6**	**+1.0**
KS19				IAmb	IAmb	08 49 28.6	
	comp=Z,27nm,1.4s						
GDXM	**Geysers**	**40.09**	**86**	P	**P**	**08 49 25.2**	**-0.7**
GDXM				IAmb	IAmb	08 49 29.0	
	comp=Z,16nm,1.1s						
JTMT	**Jette**	**40.33**	**69**	P	**P**	**08 49 27.8**	**-0.1**
ORV	**Oroville**	**40.45**	**84**	P	**P**	**08 49 29.3**	**+0.5**
ORV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ORV	**Oroville**	**40.45**	**84**	P	**P**	**08 49 29.3**	**+0.5**
WVOR	**Wild Horse Val**	**40.55**	**79**	P	**P**	**08 49 31.0**	**+1.3**
WVOR				pmax	pmax		
	comp=Z,28nm,0.8s						
WVOR	**Wild Horse Val**	**40.55**	**79**	P	**P**	**08 49 31.0**	**+1.3**
WVOR				IAmb	IAmb	08 49 32.0	
	comp=Z,28nm,0.8s						
BEKR	**Beckworth**	**40.97**	**83**	P	**P**	**08 49 34.6**	**+1.2**
MSO	**Missoula**	**40.99**	**70**	P	**P**	**08 49 33.2**	**-0.2**
	baz=301,SNR=5.7						
MSO	**Missoula**	**40.99**	**70**	P	**P**	**08 49 33.7**	**+0.3**
AFDM	**Forest Hills D**	**41.14**	**85**	P	**P**	**08 49 35.7**	**+1.2**
RUBR	**Rubicon Trail**	**41.58**	**84**	P	**P**	**08 49 37.7**	**-0.8**
RUBR				IAmb	IAmb	08 49 46.9	
	comp=Z,20nm,0.8s						
PAHR	**Pah Rah Range**	**41.67**	**83**	P	**P**	**08 49 40.0**	**+0.9**
PAHR				IAmb	IAmb	08 49 47.6	
	comp=Z,21nm,0.8s						
MFID	**Camas Ranch**	**41.70**	**76**	P	**P**	**08 49 39.4**	**+0.2**
VCNR	**Virginia City**	**41.75**	**83**	P	**P**	**08 49 41.1**	**+1.3**
VCNR				IAmb	IAmb	08 49 48.6	
	comp=Z,19nm,0.8s						
PNTR	**Pine Nut**	**41.91**	**84**	P	**P**	**08 49 42.2**	**+1.2**
CMB	**Columbia Colle**	**42.06**	**85**	P	**P**	**08 49 43.3**	**+1.1**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMB	**Columbia Colle**	**42.06**	**85**	P	**P**	**08 49 43.2**	**+1.1**
HRY	**Holter Researc**	**42.29**	**69**	P	**P**	**08 49 43.5**	**-0.5**
WAKR	**Walker**	**42.36**	**84**	P	**P**	**08 49 45.8**	**+1.1**
WAKR				IAmb	IAmb	08 49 53.6	
	comp=Z,15nm,0.9s						
LRM	**Limekiln Ridge**	**42.40**	**71**	P	**P**	**08 49 45.0**	**-0.1**
HLID	**Hailey**	**42.48**	**75**	P	**P**	**08 49 46.2**	**+0.5**
	baz=304,SNR=41						
HLID	**Hailey**	**42.48**	**75**	P	**P**	**08 49 45.9**	**+0.3**
HLID				IAmb	IAmb	08 49 47.3	
	comp=Z,20nm,0.9s						
BCYI	**Bear Canyon**	**42.66**	**73**	P	**P**	**08 49 47.4**	**+0.2**
MCMT	**McKenzie Canyo**	**42.71**	**72**	P	**P**	**08 49 47.5**	**-0.1**
EGMT	**Eagleton**	**42.80**	**67**	P	**P**	**08 49 48.6**	**+0.5**
	baz=302						
EGMT	**Eagleton**	**42.80**	**67**	P	**P**	**08 49 48.3**	**+0.2**
EGMT				IAmb	IAmb	08 49 57.6	
	comp=Z,11nm,0.7s						
RYN	**Ryan**	**42.85**	**83**	P	**P**	**08 49 50.0**	**+1.2**
RYN				IAmb	IAmb	08 49 57.2	
	comp=Z,14nm,0.8s						
PMPB	**Monarch Peak**	**42.94**	**88**	P	**P**	**08 49 49.3**	**0.0**
PMPB				IAmb	IAmb	08 49 57.3	
	comp=Z,27nm,1.2s						
BOZ	**Bozeman (W)**	**43.01**	**71**	P	**P**	**08 49 49.8**	**-0.1**
	baz=303,SNR=15						
LHV	**Little Huntoon**	**43.10**	**84**	P	**P**	**08 49 52.3**	**+1.9**
LHV				IAmb	IAmb	08 49 53.6	
	comp=Z,38nm,1.4s						
NVAR	**Mina Array Bea**	**43.11**	**84**	P	**P**	**08 49 51.9**	**+1.0**
	comp=Z,6.5nm,0.8s,baz=294,slow=7.2,SNR=61						
NVAR				PcP	**PcP**	**08 51 40.7**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=276,slow=2.3,SNR=6.3						
MDPB	**Devils Postpil**	**43.12**	**85**	P	**P**	**08 49 52.5**	**+1.5**
MDPB				IAmb	IAmb	08 49 59.9	
	comp=Z,13nm,0.9s						
OMMB	**Old Mammoth Mi**	**43.18**	**85**	P	**P**	**08 49 52.8**	**+1.2**
PAGB	**Antelope Grade**	**43.59**	**88**	P	**P**	**08 49 55.1**	**+0.6**
PAGB				IAmb	IAmb	08 49 57.0	
	comp=Z,19nm,1.0s						
ELK	**Elko**	**43.60**	**79**	P	**P**	**08 49 55.7**	**+0.9**
ELK				pmax	pmax		
	comp=Z,17nm,0.9s						
ELK	**Elko**	**43.60**	**79**	P	**P**	**08 49 55.7**	**+0.9**
ELK				IAmb	IAmb	08 49 56.8	
	comp=Z,17nm,0.8s						
YHL	**Hebgen Lake**	**43.68**	**71**	P	**P**	**08 49 55.6**	**+0.1**
YHB	**Horse Butte**	**43.73**	**72**	P	**P**	**08 49 56.0**	**+0.2**
YMR	**Madison River**	**43.91**	**71**	P	**P**	**08 49 57.3**	**0.0**
YHH	**Holmes Hill**	**43.91**	**71**	P	**P**	**08 49 57.2**	**-0.2**
TPH	**Tonopah**	**44.00**	**83**	P	**P**	**08 49 58.9**	**+0.9**
TPH				pmax	pmax		
	comp=Z,83nm,0.9s						
TPH	**Tonopah**	**44.00**	**83**	P	**P**	**08 49 58.9**	**+0.9**
TIN	**Tinemaha, Big**	**44.01**	**85**	P	**P**	**08 49 59.9**	**+1.9**
	baz=309,SNR=6.7						
SMMC	**Simmler**	**44.02**	**88**	P	**P**	**08 49 59.2**	**+1.2**
	baz=310						
YNR	**Norris Junctio**	**44.06**	**71**	P	**P**	**08 49 59.1**	**+0.7**
VES	**Vestal, Richgr**	**44.25**	**87**	P	**P**	**08 50 00.6**	**+0.8**
	baz=310,SNR=8.8						
YNE	**Yellowstone No**	**44.29**	**71**	P	**P**	**08 49 59.8**	**-0.6**
H17A	**Grant Village**	**44.30**	**72**	P	**P**	**08 50 01.9**	**+1.5**
	baz=304,SNR=11						
H17A	**Grant Village**	**44.30**	**72**	P	**P**	**08 50 00.8**	**+0.4**
H17A				IAmb	IAmb	08 50 02.8	
	comp=Z,21nm,1.3s						
LKWY	**Lake**	**44.31**	**71**	P	**P**	**08 50 01.3**	**+0.8**
LKWY				pmax	pmax		
	comp=Z,12nm,0.9s						
LKWY	**Lake**	**44.31**	**71**	P	**P**	**08 50 01.3**	**+0.8**
LKWY				IAmb	IAmb	08 50 22.4	
	comp=Z,12nm,0.9s						
FLWY	**Flagg Ranch**	**44.40**	**72**	P	**P**	**08 50 01.8**	**+0.6**
FLWY				IAmb	IAmb	08 50 02.9	
	comp=Z,15nm,1.1s						
PKM	**Mcpherson Peak**	**44.41**	**89**	P	**P**	**08 50 02.5**	**+1.2**
	baz=311,SNR=5.3						
NRIK	**Noril'sk**	**44.41**	**330**	P	**P**	**08 49 59.8**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=79,slow=12,SNR=3.5						
NRIK	**Noril'sk**	**44.41**	**330**⇓	*e*P	**P**	**08 50 00.8**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,10.0nm,2.0s						
HVU	**Hansel Valley**	**44.49**	**76**	P	**P**	**08 50 02.5**	**+0.7**
HVU				pmax	pmax		
	comp=Z,28nm,0.7s						
HVU	**Hansel Valley**	**44.49**	**76**	P	**P**	**08 50 02.5**	**+0.7**
CWC	**Cottonwood Cre**	**44.49**	**86**	P	**P**	**08 50 03.0**	**+1.0**
	baz=310						
GRAC	**Grapevine Rang**	**44.58**	**84**	P	**P**	**08 50 03.7**	**+1.2**
	baz=309,SNR=7.2						
ECR	**Eagle Creek**	**44.59**	**74**	P	**P**	**08 50 02.6**	**-0.1**
RLMT	**Red Lodge**	**44.66**	**70**	P	**P**	**08 50 03.0**	**-0.3**
	baz=304,SNR=12						
ISA	**Isabella, Lake**	**44.74**	**87**	P	**P**	**08 50 03.9**	**+0.1**
	baz=310,SNR=13						
R11A	**Troy Canyon, C**	**44.84**	**82**	P	**P**	**08 50 05.6**	**+0.8**
	baz=308,SNR=30						
ARVC	**Arvin**	**44.87**	**88**	P	**P**	**08 50 05.1**	**+0.4**
	baz=311						
MPMC	**Manual Prospec**	**45.10**	**86**	P	**P**	**08 50 07.5**	**+0.7**
	baz=310,SNR=15						
FURC	**Furnace Creek,**	**45.23**	**85**	P	**P**	**08 50 08.3**	**+0.7**
	baz=310,SNR=11						
TPNV	**Topopah Spring**	**45.31**	**84**	P	**P**	**08 50 09.4**	**+1.0**
	baz=309,SNR=24						
LRMC	**Laurel Mtn Rad**	**45.35**	**86**	P	**P**	**08 50 09.3**	**+0.5**
	baz=310,SNR=8.0						
DUG	**Dugway, Tooele**	**45.41**	**78**	P	**P**	**08 50 10.2**	**+1.0**
	baz=307,SNR=52						
EDW2	**Edwards Air Fo**	**45.55**	**87**	P	**P**	**08 50 10.7**	**+0.5**
	baz=311,SNR=8.5						
DECC	**Green Verdugo**	**45.75**	**88**	P	**P**	**08 50 12.8**	**+1.1**
	baz=311						
BW06	**Boulder Array**	**45.84**	**73**	P	**P**	**08 50 12.6**	**-0.1**
	baz=306,SNR=22						
PDAR	**Pinedale Array**	**45.84**	**73**	P	**P**	**08 50 12.6**	**-0.1**
	comp=Z,12nm,0.8s,baz=310,slow=4.0,SNR=107						
PDAR				PcP	**PcP**	**08 51 49.0**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=203,slow=0.7,SNR=1.8						
PDAR				LR	LR	09 06 50.3	
	comp=Z,71nm,18.8s,baz=331,slow=33						
SHOC	**Shoshone, Teco**	**45.96**	**85**	P	**P**	**08 50 14.4**	**+1.0**
	baz=310,SNR=14						
GSC	**Goldstone, Bar**	**46.02**	**86**	P	**P**	**08 50 15.0**	**+1.1**
	baz=311,SNR=29						
BFSC	**Mount Baldy Ra**	**46.18**	**88**	P	**P**	**08 50 16.2**	**+0.9**
	baz=311,SNR=11						
MPU	**Maple Canyon**	**46.24**	**77**	P	**P**	**08 50 16.2**	**+0.5**
SHPR	**Sheep Range**	**46.26**	**83**	P	**P**	**08 50 16.2**	**+0.2**
ULN	**Ulaanbaatar**	**46.53**	**296**⇓	*e*P	**P**	**08 50 22.6**	**+4.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.8s						
HEC	**Hector,Ludlow**	**46.62**	**86**	P	**P**	**08 50 19.5**	**+0.8**
	baz=311						
BBRC	**Big Bear Solar**	**46.62**	**87**	P	**P**	**08 50 19.6**	**+0.7**
	baz=311						
CCUT	**Cedar City**	**46.71**	**81**	P	**P**	**08 50 20.4**	**+0.8**
MVU	**Marysvale**	**46.82**	**79**	P	**P**	**08 50 21.5**	**+1.1**
MURC	**Murrieta**	**46.89**	**88**	P	**P**	**08 50 20.8**	**+0.1**
	baz=312						
SONM	**Songino Array**	**46.91**	**297**	P	**P**	**08 50 20.8**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=40,slow=5.6,SNR=4.9						
SONM				PcP	**PcP**	**08 51 52.5**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=98,slow=1.9,SNR=4.9						
SONM				LR	LR	09 10 14.9	
	comp=Z,73nm,18.1s,baz=206,slow=36						
TMUT	**Trail Mountain**	**46.94**	**78**	P	**P**	**08 50 22.4**	**+1.0**
GMRC	**Granite Mounta**	**47.06**	**86**	P	**P**	**08 50 22.9**	**+0.7**
	baz=311,SNR=8.1						
P17A	**Butcher Ranch,**	**47.12**	**77**	P	**P**	**08 50 23.7**	**+1.0**
MTPU	**Mount Pierson**	**47.12**	**80**	P	**P**	**08 50 24.1**	**+1.2**
RDMU	**Red Mountain**	**47.15**	**75**	P	**P**	**08 50 23.7**	**+0.7**
PFO	**Pinyon Flats O**	**47.34**	**87**	P	**P**	**08 50 24.9**	**+0.5**
	baz=312						
BELC	**Belle Mtn. Jos**	**47.37**	**87**	P	**P**	**08 50 24.7**	**+0.1**
	baz=312						
KNB	**Kanab**	**47.38**	**81**	P	**P**	**08 50 25.7**	**+1.0**
KNB				pmax	pmax		
	comp=Z,15nm,0.7s						
KNB	**Kanab**	**47.38**	**81**	P	**P**	**08 50 25.7**	**+1.0**
109C	**Camp Elliot, M**	**47.42**	**89**	P	**P**	**08 50 25.6**	**+0.7**
	baz=312						
PKCU	**Pink Cliffs**	**47.42**	**80**	P	**P**	**08 50 26.5**	**+1.2**
SRU	**San Rafael Swe**	**47.47**	**77**	P	**P**	**08 50 26.4**	**+1.0**
SRU				pmax	pmax		
	comp=Z,38nm,1.0s						
SRU	**San Rafael Swe**	**47.47**	**77**	P	**P**	**08 50 26.4**	**+1.0**
K22A	**Casper**	**47.71**	**71**	P	**P**	**08 50 26.8**	**-0.4**
	baz=307						
IRM	**Iron Mountain**	**47.80**	**86**	P	**P**	**08 50 28.2**	**+0.4**
	baz=312,SNR=9.0						
BAR	**Barrett**	**47.83**	**88**	P	**P**	**08 50 28.5**	**+0.4**
BAR				IAmb	IAmb	08 50 29.9	
	comp=Z,14nm,0.9s						
MONP2	**Monument Peak**	**47.84**	**88**	P	**P**	**08 50 28.6**	**+0.2**
	baz=312,SNR=9.0						
BC3	**Big Chuckawall**	**47.94**	**87**	P	**P**	**08 50 29.1**	**+0.1**
	baz=312,SNR=5.8						
HHC	**Hu-ho-hao-te**	**48.02**	**286**	*e*P	**P**	**08 50 31.6**	**+2.0**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
CBX	**Cerro Bola**	**48.08**	**89**	P	**P**	**08 50 31.0**	**+0.8**
CBX				IAmb	IAmb	08 50 32.4	
	comp=Z,7.9nm,0.9s						
U15A	**North Rim**	**48.09**	**81**	P	**P**	**08 50 31.0**	**+0.7**
SWSC	**Sam W. Stewart**	**48.20**	**88**	P	**P**	**08 50 31.1**	**+0.3**
	baz=312						
IKP	**In-Ko-Pah, Jac**	**48.20**	**88**	P	**P**	**08 50 31.6**	**+0.6**
	baz=312						
O20A	**White River Ci**	**48.22**	**75**	P	**P**	**08 50 31.4**	**+0.2**
	baz=308,SNR=50						
PDMCI	**Parker Dam,Lak**	**48.32**	**85**	P	**P**	**08 50 32.5**	**+0.6**
	baz=312,SNR=5.1						
GLA	**Glamis**	**48.73**	**87**	P	**P**	**08 50 35.3**	**+0.3**
	baz=312						
PV20	**West Nyswonger**	**48.90**	**77**	P	**P**	**08 50 37.2**	**+0.7**
PV04	**Paradox Valley**	**48.91**	**77**	P	**P**	**08 50 37.1**	**+0.6**
N23A	**Red Feather La**	**49.12**	**73**	P	**P**	**08 50 38.0**	**-0.2**
	baz=308						
ULM	**Lac du Bonnet**	**49.20**	**57**	LR	LR	09 12 55.1	
	comp=Z,69nm,18.1s,baz=272,slow=38						
NJ2	**Nanjing**	**49.22**	**272**	*e*P	**P**	**08 50 37.9**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
WUAZ	**Wupatki**	**49.24**	**82**	P	**P**	**08 50 40.1**	**+1.0**
	baz=311,SNR=21						
WUAZ	**Wupatki**	**49.24**	**82**	P	**P**	**08 50 40.2**	**+1.1**
SMCO	**Snowmass**	**49.58**	**75**	P	**P**	**08 50 42.0**	**0.0**
SMCO				IAmb	IAmb	08 50 43.0	
	comp=Z,9.6nm,0.6s						
KBS	**Kingsbay**	**49.58**	**357**	P	**P**	**08 50 41.2**	**+0.3**
KBS				pmax	pmax		
	comp=Z,20nm,1.1s						
KBS	**Kingsbay**	**49.58**	**357**	P	**P**	**08 50 41.2**	**+0.3**
KBS				IAmb	IAmb	08 50 49.2	
	comp=Z,20nm,1.1s						
SPX	**San Pedro Mart**	**49.70**	**89**	P	**P**	**08 50 43.9**	**+1.1**
SPX				IAmb	IAmb	08 50 44.6	
	comp=Z,12nm,1.0s						
MVCO	**Mesa Verde**	**49.91**	**78**	P	**P**	**08 50 44.5**	**+0.3**
	baz=310,SNR=11						
MVCO	**Mesa Verde**	**49.91**	**78**	P	**P**	**08 50 44.9**	**+0.6**
MVCO				IAmb	IAmb	08 50 45.7	
	comp=Z,20nm,1.1s						
ISCO	**Idaho Springs**	**50.00**	**74**	P	**P**	**08 50 46.0**	**+1.0**
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ISCO	**Idaho Springs**	**50.00**	**74**	P	**P**	**08 50 45.5**	**+0.5**
	baz=309,SNR=9.4						
ISCO	**Idaho Springs**	**50.00**	**74**	P	**P**	**08 50 46.0**	**+1.0**
ISCO				IAmb	IAmb	08 50 46.5	
	comp=Z,9.0nm,1.0s						
SPA0	**Spitsbergen Ar**	**50.17**	**356**	P	**P**	**08 50 45.0**	**-0.4**
SPITS	**Spitsbergen Ar**	**50.17**	**356**	P	**P**	**08 50 43.5**	**-1.8**
	comp=Z,7.5nm,0.8s,baz=51,slow=6.6,SNR=15						
W18A	**Petrified Fore**	**50.51**	**81**	P	**P**	**08 50 49.8**	**+1.0**
	baz=311,SNR=8.5						
S22A	**4UR Ranch, Cre**	**50.58**	**76**	P	**P**	**08 50 50.4**	**+1.0**
	baz=310,SNR=24						
S22A	**4UR Ranch, Cre**	**50.58**	**76**	P	**P**	**08 50 50.4**	**+1.0**
S22A				IAmb	IAmb	08 50 51.4	
	comp=Z,19nm,1.1s						
214A	**Organ Pipe Nat**	**50.72**	**86**	P	**P**	**08 50 50.6**	**+0.4**
	baz=313,SNR=6.3						
SDCO	**Great Sand Dun**	**51.38**	**76**	P	**P**	**08 50 56.0**	**+0.6**
	baz=310,SNR=28						
SDCO	**Great Sand Dun**	**51.38**	**76**	P	**P**	**08 50 56.2**	**+0.8**
SDCO				IAmb	IAmb	08 50 57.0	
	comp=Z,17nm,0.9s						
OGNE	**Ogallala**	**51.40**	**70**	P	**P**	**08 50 55.9**	**+0.6**
	baz=309						
TUC	**Tucson**	**51.74**	**84**	P	**P**	**08 50 58.5**	**+0.6**
	baz=313						
KSCO	**Kaye Shedlock’**	**52.29**	**72**	P	**P**	**08 51 02.3**	**+0.3**

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      baz=310,SNR=6.5
T25A  Trinidad          52.44  75    P      P      08 51 03.9 +0.7
      baz=311,SNR=30
T25A  Trinidad          52.44  75    P      P      08 51 03.9 +0.7
ANMO  Albuquerque       52.64  79    P      P      08 51 05.4 +0.7
ANMO                                 pmax   pmax
      comp=Z,8.0nm,1.1s
ANMO  Albuquerque       52.64  79    P      P      08 51 05.3 +0.6
      baz=312
ANMO  Albuquerque       52.64  79    P      P      08 51 05.4 +0.7
SUMG  Summit            52.97  14  i P      P      08 51 07.0 +0.2
SUMG                                 pmax   pmax
      comp=Z,49nm,1.0s
SUMG  Summit            52.97  14  i P      P      08 51 07.0 +0.2
      comp=Z,48nm,1.0s
SUMG  Summit            52.97  14  i P      P      08 51 07.0 +0.2
SUMG                                 IAmb   IAmb   08 51 14.3
      comp=Z,48nm,1.0s
BNM   Barren Site       53.07  80    P      P      08 51 09.1 +1.2
121A  Cookes Peak, D    53.45  82    P      P      08 51 11.1 +0.5
      baz=313,SNR=8.9
121A  Cookes Peak, D    53.45  82    P      P      08 51 11.3 +0.7
XAN   Xi'an             54.02 281    P      P      08 51 18.3 +3.6
XAN                                  pP     pP     08 51 24.5 +3.4
XAN                                  pmax   pmax
      comp=Z,13nm,0.9s
CBKS  Cedar Bluff       54.12  71    P      P      08 51 15.5 +0.1
      baz=311,SNR=8.4
ZALV  Zalesovo Beam     54.17 314    LR     LR     09 14 51.4
      comp=Z,69nm,18.7s,baz=60,slow=37
N35A  Tabor             55.16  66    P      P      08 51 22.6 -0.2
MNTX  Cornudas Mount    55.50  81    P      P      08 51 26.1 +0.7
      baz=314,SNR=28
MNTX  Cornudas Mount    55.50  81    P      P      08 51 25.4  0.0
MNTX                                 IAmb   IAmb   08 51 27.0
      comp=Z,14nm,0.8s
MSTX  Muleshoe          55.54  77    P      P      08 51 25.8  0.0
      baz=313
AMTX  Amarillo          55.59  76    P      P      08 51 26.1 +0.1
      baz=313
AMTX  Amarillo          55.59  76    P      P      08 51 26.4 +0.4
DGZ   Jazzator, Alta    55.72 308⇓eP     P      08 51 29.0 +2.1
DGZ                                  pmax   pmax
      comp=Z,5.0nm,1.6s
GTA   Gaotai            55.86 292  eP     P      08 51 34.6 +6.6
GTA                                  pP     sP     08 51 38.9 +2.1
GTA                                  sP     pP     08 51 41.7 +7.2
GTA                                  pmax   pmax
      comp=Z,3.0nm,1.0s
GTA                                  pmax   pmax
      comp=Z,49nm,5.9s
GTA                                  LR     LR
      comp=Z,110nm,14.9s
GTA                                  LR     LR
      comp=Z,160nm,14.5s
GTA                                  LR     LR
      comp=Z,160nm,15.3s
E43A  Lone Tree Farm    56.25  56    P      P      08 51 29.7 -0.8
WMOK  Wichita Mounta    57.43  74    P      P      08 51 39.3 +0.2
WMOK                                 pmax   pmax
      comp=Z,19nm,0.7s
WMOK  Wichita Mounta    57.43  74    P      P      08 51 39.1  0.0
      baz=314,SNR=23
WMOK  Wichita Mounta    57.43  74    P      P      08 51 39.3 +0.2
ARCES ARCESS Array B    57.93 350    P      P      08 51 40.0 -2.1
      comp=Z,4.4nm,0.8s,baz=11,slow=5.7,SNR=8.8
ARCES ARCESS Array B    57.93 350    P      P      08 51 40.0 -2.1
TX31  Lajitas Ar. Si    58.21  82    P      P      08 51 44.7  0.0
LVZ   Lovozero          58.31 346⇓eP     P      08 51 46.2 +1.4
LVZ                                  pmax   pmax
      comp=Z,175nm,2.3s
LVZ   Lovozero          58.31 346    P      P      08 51 45.4 +0.6
SLBS  Sierra La Lagu    58.35  91    P      P      08 51 45.2 -0.6
ABTX  Abilene, Hawle    58.37  76    P      P      08 51 45.6 -0.1
      baz=314,SNR=14
ABTX  Abilene, Hawle    58.37  76    P      P      08 51 45.5 -0.2
HDIL  Hopedale          58.94  63    P      P      08 51 48.4 -1.1
      baz=313
HDIL  Hopedale          58.94  63    P      P      08 51 49.0 -0.5
HDIL                                 IAmb   IAmb   08 51 53.1
      comp=Z,12nm,0.8s
KURK  Kurchatov         59.16 314    P      P      08 51 51.5 +0.7
KURK                                 pmax   pmax
      comp=Z,3.0nm,1.1s
KURK  Kurchatov         59.16 314    P      P      08 51 51.5 +0.7
CCM   Cathedral Cave    59.56  66    P      P      08 51 53.2 -0.7
      baz=314
WMQ   Urumqi            59.56 303  eP     P      08 51 56.7 +2.8
WMQ                                  pmax   pmax
      comp=Z,16nm,0.7s
WMQ                                  pmax   pmax
      comp=Z,160nm,6.3s
X37A  Clayton           59.56  72    P      P      08 51 54.5 +0.5
JCT   Junction City     59.77  78    P      P      08 51 54.8 -0.7
      baz=315,SNR=10
U40A  Yellville         59.81  69    P      P      08 51 54.4 -1.2
      baz=314,SNR=6.2
W39A  Magazine          60.07  70    P      P      08 51 56.9 -0.5
      baz=314
WHTX  Lake Whitney,     60.13  75    P      P      08 51 58.1 +0.2
      baz=315
MK31  Makanchi Array    60.21 309    P      P      08 51 58.9 +0.6
MK31                                 pmax   pmax
      comp=Z,3.0nm,1.5s
MK31  Makanchi Array    60.21 309    P      P      08 51 58.9 +0.6
MKAR  Makanchi Array    60.21 309    P      P      08 51 55.8 -2.5
      comp=Z,0.2nm,0.5s,baz=47,slow=5.3,SNR=2.6
MKAR                                 LR     LR     09 19 50.8
      comp=Z,38nm,19.1s,baz=342,slow=38
SFIN  Lafayette         60.27  62    P      P      08 51 58.5 -0.2
      baz=314
MIAR  Mount Ida         60.65  71    P      P      08 52 01.5 +0.1
MIAR                                 pmax   pmax
      comp=Z,18nm,0.9s
MIAR  Mount Ida         60.65  71    P      P      08 52 01.6 +0.3
      baz=315,SNR=14
MIAR  Mount Ida         60.65  71    P      P      08 52 01.5 +0.1
435B  Jarrell           60.91  76    P      P      08 52 03.5 +0.4
      baz=315,SNR=5.1
W41B  Gary Mavity, V    60.99  69    P      P      08 52 02.7 -1.0
      baz=315,SNR=5.2
BRVK  Borovoye          60.99 320⇓eP     P      08 52 07.3 +3.9
BRVK                                 pmax   pmax
      comp=Z,14nm,4.6s
X40A  Basin Creek Fa    61.13  70    P      P      08 52 04.7 +0.1
      baz=315
WLAR  White Oak Lake    61.53  71    P      P      08 52 07.6 +0.3
P48A  Milroy            61.83  61    P      P      08 52 08.3 -1.0
NATX  Nacogdoches       61.97  73    P      P      08 52 10.4  0.0
      baz=316
P49A  Miami Univ. Ec    62.16  61    P      P      08 52 10.5 -1.0
      baz=315
WCI   Wyandotte Cave    62.22  63    P      P      08 52 12.0 +0.1
WCI                                  pmax   pmax
      comp=Z,7.0nm,0.7s
WCI   Wyandotte Cave    62.22  63    P      P      08 52 11.6 -0.3
      baz=315
WCI   Wyandotte Cave    62.22  63    P      P      08 52 12.0 +0.1
WCI                                  IAmb   IAmb   08 52 12.6
      comp=Z,7.3nm,0.7s
HKT   Hockley           62.56  76d iP     P      08 52 14.2  0.0
HKT                                  pmax   pmax
      comp=Z,44nm,1.9s
ARU   Arti              62.62 328d iP     P      08 52 18.6 +4.3
ARU                                                08 54 32.0
ARU                                  SS     SS     09 04 47.0 +2.7
ARU                                  pmax   pmax
      comp=Z,13nm,1.7s
OXF   Oxford            63.10  68    P      P      08 52 17.6 -0.2
      baz=316
O52A  Adamsville        63.30  59    P      P      08 52 18.8 -0.3
T50A  Nancy             63.89  63    P      P      08 52 22.6 -0.5
T50A                                 IAmb   IAmb   08 52 23.6
      comp=Z,6.7nm,0.8s
VBMS  Vicksburg         64.10  70    P      P      08 52 24.6 +0.2
      baz=316
KMI   Kunming           64.10 278  ⇑P     P      08 52 24.5 -0.4
KMI                                  pmax   pmax
      comp=Z,14nm,0.9s
Q53A  Leroy             64.37  59    P      P      08 52 25.5 -0.7
      baz=317
Z47A  Carrollton        64.82  68    P      P      08 52 28.6 -0.5
W50A  Signal Mountai    64.94  65    P      P      08 52 30.0  0.0
W50A                                 IAmb   IAmb   08 52 36.1
      comp=Z,7.7nm,0.8s
R54A  Victor            65.16  60    P      P      08 52 31.7 +0.4
```

```
      baz=317
LRAL  Lakeview Retre    65.56  67    P      P      08 52 33.2 -0.7
      baz=317
LRAL  Lakeview Retre    65.56  67    P      P      08 52 33.0 -1.0
LRAL                                 IAmb   IAmb   08 52 33.7
      comp=Z,5.7nm,0.8s
FINES FINESS Array B    65.64 348    P      P      08 52 31.8 -2.2
      comp=Z,13nm,1.2s,baz=41,slow=4.4,SNR=1.6
FINES FINESS Array B    65.64 348  i P      P      08 52 36.2 +2.1
FINES                                pmax   pmax
      comp=Z,6.0nm,1.0s
KMSC  Kings Mountain    67.20  62    P      P      08 52 44.1 -0.3
      baz=318,SNR=5.1
KMSC  Kings Mountain    67.20  62    P      P      08 52 44.6 +0.2
GOGA  Godfrey           67.29  65    P      P      08 52 44.4 -0.7
      baz=318
NOA   NORSAR Array B    67.45 355    P      P      08 52 43.4 -2.2
      comp=Z,0.5nm,0.5s,baz=9.7,slow=3.1,SNR=1.9
AKTO  Aktyubinsk        67.73 325    P      P      08 52 46.1 -1.5
      comp=Z,1.1nm,0.5s,baz=50,slow=8.8,SNR=5.7
X56A  White Oak         67.85  62    P      P      08 52 48.5  0.0
      baz=318
ABKAR Akbulak array     68.00 323    P      P      08 52 48.5 -0.8
Z56A  Williston         68.53  63    P      P      08 52 53.3 +0.5
      baz=318
Z57A  Bowman            68.92  63    P      P      08 52 55.9 +0.7
      baz=319
OBN   Obninsk           69.79 340⇑eP     P      08 53 04.8 +4.5
OBN                                e                   08 53 21.7
OBN                                e                   08 55 38.3
OBN                                  pmax   pmax
      comp=Z,93nm,4.2s
OBN                                  MLR    MLR
      comp=Z,218nm,18.0s
SHL   Shillong          70.38 286    P      P      08 53 05.3 +0.6
SHL                                  pmax   pmax
      comp=Z,18nm,1.1s
SHL   Shillong          70.38 286    P      P      08 53 05.3 +0.6
CMAR  Chiang Mai Arr    71.40 276    P      P      08 53 10.3 -0.4
      comp=Z,2.4nm,0.6s,baz=22,slow=6.7,SNR=6.6
CMAR                                 LR     LR     09 25 55.9
      comp=Z,19nm,21.7s,baz=210,slow=37
CMAR  Chiang Mai Arr    71.40 276ceP     P      08 53 14.8 +4.1
CMAR                                 pmax   pmax
      comp=Z,2.0nm,0.6s
TAPN  Taplejung         71.51 291  eP     P      08 53 10.3 -1.3
      comp=Z,10nm,0.6s
ODAN  Odare             72.07 291  eP     P      08 53 14.3 -0.6
      comp=Z,6.6nm,0.5s
GUN   Gumba             72.15 292  eP     P      08 53 14.8 -0.7
      comp=Z,16nm,0.5s
RAMN  Ramite            72.46 291  eP     P      08 53 15.8 -1.5
      comp=Z,15nm,0.5s
DANN  Dangsing          73.03 294  eP     P      08 53 19.2 -1.5
      comp=Z,11nm,0.8s
PPT   Papeete           73.27 152    LR     LR     09 21 40.8
      comp=Z,25nm,19.4s,baz=192,slow=32
KOLN  Koldanda          73.56 294  eP     P      08 53 24.6 +0.9
DZM   Mont Dzumac       74.61 195    P      P      08 53 28.9 -0.5
CCIG  Comitan           74.95  83    P      P      08 53 33.0 +1.1
CCIG                                 IAmb   IAmb   08 53 34.9
      comp=Z,12nm,1.0s
AKASG Malin Array Be    75.45 342    P      P      08 53 32.5 -1.5
      comp=Z,1.3nm,0.5s,baz=21,slow=5.7,SNR=5.0
AKASG Malin Array Be    75.45 342  i P      P      08 53 33.5 -0.5
AKASG                                pmax   pmax
      comp=Z,1.0nm,0.5s
GEYT  Alibeck           78.19 318    LR     LR     09 32 20.0
      comp=Z,59nm,18.7s,baz=10.0,slow=39
KBZ   Khabaz            78.61 331    LR     LR     09 34 52.5
      comp=Z,51nm,18.2s,baz=10,slow=40
BUR08 Bucovina Ar. S    79.11 344    P      P      08 53 53.9 -0.9
VYHS  Vyhne             79.22 349  eP     P      08 53 53.8 -1.4
VYHS  Vyhne             79.22 349  eP     P      08 53 53.8 -1.4
GERES GERESS Array B    79.41 352    P      P      08 53 54.9 -1.4
      comp=Z,0.3nm,0.5s,baz=46,slow=8.4,SNR=1.6
TGUH  Tegucigalpa,Un    79.65  81    P      P      08 53 58.9 +0.7
TGUH  Tegucigalpa,Un    79.65  81  eP     P      08 53 59.0 +0.9
WRAB  Tennant Creek     82.46 224⇓eP     P      08 54 12.0 -0.7
WRAB                                 pmax   pmax
      comp=Z,13nm,2.2s
WRA   Warramunga Arr    82.47 224    P      P      08 54 11.9 -0.9
      comp=Z,1.7nm,0.8s,baz=34,slow=6.1,SNR=12
TEOL  Teolo             83.03 353    P      P      08 54 15.2 -0.4
PSI   Prapat            83.43 266    P      P      08 54 17.7 -0.4
RPSI  Rantau Prapat     83.51 266    P      P      08 54 17.7 -0.7
RPSI                                 IAmb   IAmb   08 54 23.1
      comp=Z,10nm,0.9s
BRTR  Keskin Array B    84.90 336    P      P      08 54 23.1 -2.3
      comp=Z,0.7nm,0.7s,baz=35,slow=4.2,SNR=2.1
FITZ  Fitzroy Crossi    84.94 233    P      P      08 54 25.9 +0.5
NRCA  Norcia            85.42 352    P      P      08 54 27.4 -0.5
NRCA                                 IAmb   IAmb   08 54 49.2
      comp=Z,14nm,1.5s
ARMA  Armidale          85.90 206    P      P      08 54 30.8 +0.7
AS31  Alice Springs     85.94 223    P      P      08 54 31.0 +0.6
ASAR  Alice Springs     85.94 223    P      P      08 54 30.1 -0.4
      comp=Z,3.8nm,0.8s,baz=24,slow=5.7,SNR=35
ESDC  Sonseca Array     88.94   4    P      P      08 54 42.3 -2.7
      comp=Z,0.5nm,0.8s,baz=354,slow=3.1,SNR=3.2
SMRC  Santa Marta, M    89.81  72  eP     P      08 54 49.8 +0.6
STKA  Stephens Creek    90.35 213    P      P      08 54 52.0 +0.8
      comp=Z,7.2nm,0.7s,baz=341,slow=6.6,SNR=17
STKA  Stephens Creek    90.35 213    P      P      08 54 52.2 +1.0
STKA                                 pmax   pmax
      comp=Z,2.0nm,0.8s
STKA  Stephens Creek    90.35 213    P      P      08 54 52.2 +1.0
MOTC  Monteria, Cord    90.83  75  eP     P      08 54 53.8 -0.2
SMLC  San Martn de      91.77  74  eP     P      08 54 57.2 -1.2
SOLC  Bahia Solano      91.78  78  eP     P      08 54 59.1 +0.7
ZARC  Zaragoza, Cauc    92.33  75  eP     P      08 54 57.3 -3.7
OCAC  Ocana             92.67  73  eP     P      08 55 01.7 -1.0
CBOC  Ciudad Bolivar    92.92  77  eP     P      08 55 03.7 -0.2
BRRC  Barranca, Sant    93.33  74  eP     P      08 55 05.7 +0.1
PTBC  PUERTO BERRIO,    93.33  75  eP     P      08 55 04.2 -1.3
PLMC  San Jos del P     93.51  78  eP     P      08 55 05.1 -1.4
NORC  Norcasia          93.85  76  eP     P      08 55 07.9 -0.1
BARC  Barichara         94.05  74  eP     P      08 55 09.4 +0.2
SOCV  Socops            94.09  71  eP     P      08 55 08.2 -0.9
SPBC  San Pablo de B    94.26  75  eP     P      08 55 10.2 +0.3
TOLC  Tolima            94.34  77  eP     P      08 55 10.5 -0.1
RUSC  La Rusia          94.67  75  eP     P      08 55 12.2 -0.1
ORTC  Ortega, Tolima    94.92  77  eP     P      08 55 11.6 -1.3
CBOG1 Bogota, SGC       95.05  76  eP     P      08 55 08.2 -5.7
CHIC  Chingaza          95.27  76  eP     P      08 55 13.3 -1.7
OTAV  Otavalo           95.83  82  eP     P      08 55 15.3 -2.3
TORD  Torodi Ar. Bea   115.51   0    PKP    PKiKP  09 00 29.9 -2.6
      comp=Z,0.6nm,0.5s,baz=345,slow=2.3,SNR=5.8
H03N2 Juan Fernandez   120.81 106    T      T      11 13 16.2
      baz=317,slow=77
H03N1 Juan Fernandez   120.82 106    T      T      11 13 17.6
      baz=317,slow=77
H03N3 Juan Fernandez   120.83 106    T      T      11 13 16.9
      baz=317,slow=77
DBIC  Dimbokro         121.66   8    PKP    PKPdf  09 00 42.6 -1.8
      comp=Z,1.3nm,0.4s,baz=306,slow=1.2,SNR=6.4
BDFB  Brasilia         126.62  67    PKP    PKPdf  09 00 52.5 -1.5
      comp=Z,1.4nm,0.4s,baz=196,slow=2.8,SNR=6.8
CPUP  Villa Florida    129.16  84    PKP    PKPdf  09 00 56.9 -1.4
      comp=Z,2.5nm,0.8s,baz=254,slow=4.0,SNR=4.3
PLCA  Paso Flores      130.64 107    PKP    PKPdf  09 00 59.8 -1.0
      comp=Z,1.1nm,0.9s,baz=287,slow=0.6,SNR=3.1
TSUM  Tsumeb           145.37 333           PKPbc  09 01 26.9 -1.4
MAW   Mawson           146.93 218    PKPbc  PKPdf  09 01 31.2 +1.8
      comp=Z,14nm,0.9s,baz=70,slow=3.9,SNR=12
MAW   Mawson           146.93 218    PKPdf  PKPdf  09 01 31.6 +2.3
LBTB  Lobatse          147.85 317    PKP2   PKPdf  09 01 34.7 +2.2
LBTB  Lobatse          147.85 317           PKPdf  09 01 34.6 +2.2
BELA  Belgrano 2       150.47 165           PKPbc  09 01 39.8 -0.5
BOSA  Boshof           151.12 314    PKPbc  PKPbc  09 01 42.0 -1.4
      comp=Z,2.7nm,0.5s,baz=25,slow=3.4,SNR=16
BOSA  Boshof           151.12 314           PKPbc  09 01 42.4 -1.0
VNA2  Neumayer--Watz   160.16 171    PKPab  PKPab  09 02 28.5  0.0
```

NEIC ***03*** *08:50:40.7±1.5, 10°.3S±0°.1×161°.2E±0°.1, h80^{km}±9^{km}, mb4.5/8, Error ellipse: s-maj=21.0km s-min=11.1km az=220.0*

IDC ***03*** *08:50:41.4±2.2, 10°.25S×161°.09E, h84^{km}±18^{km}, mb3.6/8, mb1 3.9/9, mb1mx3.6/29, mbtmp3.9/9, MS3.1/4, Ms1 3.1/4, ms1mx2.9/20, Error ellipse: s-maj=25.1km s-min=19.1km az=89.0*

ISC 03 08:50:39.2±0.6**, 10°.31S**±0°.08×**161°.22E**±0°.09**, h62**^{km}**, n26, σ1s.33**/26**, mb3.8**/11**, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s  ISC
HNR   Honiara            1.53 305    P      Pn     08 51 05.0 +0.7
      120nm,0.3s,baz=175,slow=8.4,SNR=28
HNR                                  S      Sn     08 51 23.6 +0.2
      635nm,0.3s,baz=0.0,slow=20,SNR=14
HNR                                  LR     LR     08 51 51.7
      comp=Z,100nm,19.3s,baz=130,slow=51
HNR   Honiara            1.53 305           Pn     08 51 05.3 +0.9
HNR                                  Sn     Sn     08 51 25.2 +1.9
SANVU Saraoutou          7.75 132    Pn     Pn     08 52 30.9 +1.5
KRVT  Keravat (AS076    10.90 303    P      Pn     08 53 12.0 -0.5
      4.7nm,0.3s,baz=75,slow=20,SNR=1.5
KRVT                                 LR     LR     08 57 21.4
      comp=Z,48nm,21.1s,baz=40,slow=37
DZM   Mont Dzumac       12.72 157    P      Pn     08 53 41.0 +3.6
      2.0nm,0.3s,baz=24,slow=8.3,SNR=44
DZM                                  S      Sn     08 55 56.0 -1.5
      0.4nm,0.3s,baz=300,slow=20,SNR=2.1
DZM   Mont Dzumac       12.72 157           Pn     08 53 38.9 +1.4
PATS  Pohnpei           17.28 350    P      P      08 54 37.8 +0.8
EIDS  Eidsvold          17.80 211    P      Pn     08 54 43.9 +1.1
WRAB  Tennant Creek     27.61 247    P      P      08 56 21.0  0.0
WRA   Warramunga Arr    27.62 247    P      P      08 56 20.9 -0.2
      1.3nm,0.5s,baz=76,slow=9.0,SNR=11
STKA  Stephens Creek    28.11 217    P      P      08 56 26.2 +0.8
      1.9nm,0.9s,baz=42,slow=11,SNR=2.1
ASAR  Alice Springs     29.24 239    P      P      08 56 34.8 -0.8
      1.0nm,0.9s,baz=63,slow=10,SNR=6.4
URZ   Urewera           31.27 155    LR     LR     09 06 43.3
      comp=Z,116nm,21.9s,baz=211,slow=31
BBOO  Buckleboo         32.23 222    P      P      08 57 02.4 +0.7
BBOO                                 IAmb   IAmb   08 57 03.2
      comp=Z,12nm,1.0s
FITZ  Fitzroy Crossi    35.30 253    P      P      08 57 28.0 -0.6
FITZ                                 IAmb   IAmb   08 57 35.2
      comp=Z,16nm,1.3s
MJAR  Matsushiro Arr    51.39 336    LR     LR     09 26 09.7
      comp=Z,12nm,18.0s,baz=315,slow=42
KSRS  Korea Array       56.85 329    LR     LR     09 24 33.6
      comp=Z,12nm,18.2s,baz=320,slow=36
CASY  Casey             65.49 200    P      P      09 01 13.3 -2.3
VNDA  Vanda             67.19 180    P      P      09 01 25.6 -0.7
      comp=Z,1.5nm,0.8s,baz=352,slow=7.8,SNR=4.0
VNDA  Vanda             67.19 180    P      P      09 01 26.1 -0.2
VNDA                                 IAmb   IAmb   09 01 28.1
      comp=Z,4.0nm,1.1s
SONM  Songino Array     75.49 325    P      P      09 02 16.1 -0.9
      comp=Z,0.8nm,0.6s,baz=139,slow=4.7,SNR=1.0
QSPA  South Pole Qui    79.69 180    P      P      09 02 40.3 +0.2
QSPA                                 IAmb   IAmb   09 02 42.1
      comp=Z,7.3nm,1.3s
ILAR  Eielson Array     84.28  20    P      P      09 03 03.7 -0.2
      comp=Z,0.3nm,0.7s,baz=248,slow=4.8,SNR=2.0
NVAR  Mina Array Bea    88.98  51    P      P      09 03 28.8 +1.1
      comp=Z,0.3nm,0.7s,baz=252,slow=7.3,SNR=2.6
YKA   Yellowknife Ar    96.38  28    P      P      09 03 59.9 -1.1
      comp=Z,0.2nm,0.7s,baz=252,slow=5.0,SNR=2.3
TORD  Torodi Ar. Bea   159.76 280    PKPab  PKPab  09 11 09.5 -1.7
      comp=Z,0.9nm,0.8s,baz=173,slow=1.2,SNR=5.2
```

IDC 03 09:34:18.7±2.5**, 9°.48S**×**112°.76E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.4**/43**, mbtmp3.4**/4**, Error ellipse: s-maj=117.0km s-min=23.7km az=50.0, South of Jawa**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s  ISC
WRA   Warramunga Arr    23.29 119    P      P      09 39 28.0 -0.3
      0.3nm,0.5s,baz=293,slow=11,SNR=1.7
ASAR  Alice Springs     24.64 128    P      P      09 39 41.1 -0.1
      0.7nm,0.7s,baz=305,slow=8.6,SNR=7.6
SONM  Songino Array     57.34 355    P      P      09 44 08.6  0.0
      0.2nm,0.3s,baz=172,slow=7.9,SNR=4.1
MKAR  Makanchi Array    62.27 337    P      P      09 44 42.6 +0.1
      0.5nm,0.4s,baz=148,slow=7.4,SNR=9.7
```

IDC ***03*** *09:35:30.1±1.0, 2°.20S×28°.56E, h0^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.5/37, mbtmp3.6/9, ML3.7/3, Error ellipse: s-maj=20.2km s-min=11.7km az=106.0*

ECGS ***03*** *09:35:32.3, 2°.35S±0°.02×28°.60E±0°.03, h0^{km}±5^{km}, ML3.7, Error ellipse: s-maj=5.4km s-min=3.4km az=121.4, smi:local/1eb5cae4-8d23-4d64-8b3a-eae0ae0d376b Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX -43.7167 Y -98.8315 Z 7.34615 CovXX 10.6768 XY -3.47574 XZ 5.26683 YY 7.09705 YZ -6.63491 ZZ 26.6461 EllAz1 200.733 Dip1 -11.0395 Len1 3.93985 Az2 286.228 Dip2 21.9302 Len2 5.78485 Len3 1.038343e+01*

ISC 03 09:35:31.6±0.8**, 2°.27S**±0°.05×**28°.60E**±0°.06**, h10**^{km}**, n18, σ2s.17**/22**, mb3.6**/5**, Lake Tanganyika region**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s  ISC
LWI   Lwiro              0.20  81  i P      Pg     09 35 37.2 +1.2
LWI                                i S      Sg     09 35 40.7 +1.7
BOBN  Bobandana          0.70  36  i S      Sb     09 35 56.9 +1.2
BOBN  Bobandana          0.70  36  i P      Pg     09 35 46.4 +1.3
GOM   Goma               0.86  47  i S      Sb     09 36 01.7 +1.4
GOM   Goma               0.86  47  i P      Pb     09 35 49.5 +0.8
KTSH  Kitshanga          1.12  24  eP     Pg     09 35 53.8 +0.6
KTSH  Kitshanga          1.12  24  eS     Sn     09 36 10.0 +0.8
RGB   Rumangabo          1.20  40  i S      Sg     09 36 11.6 +1.4
RGB   Rumangabo          1.20  40  i P      Pb     09 35 54.2 -0.3
MBAR  Mbarara            2.70  52    Pn     Pn     09 36 16.3 +1.0
      50nm,0.3s,baz=360,slow=1.2,SNR=64
MBAR                                 Sn     Sn     09 36 42.1 -6.1
      116nm,0.3s,baz=26,slow=22,SNR=5.2
MBAR                                 Lg     Lg     09 36 55.0
      154nm,0.3s,baz=300,slow=20,SNR=6.4
KMBO  Kilima Mbogo       8.72  83    Pn     Pn     09 37 38.0 -0.2
      0.4nm,0.3s,baz=247,slow=12,SNR=3.9
KMBO                                 Sn     Sn     09 39 12.6 -4.1
      0.4nm,0.3s,baz=106,slow=23,SNR=1.9
KMBO                                 Lg     Lg     09 40 01.6
      2.1nm,0.3s,baz=346,slow=20,SNR=11
MATP  Matopo            18.04 180    P      Pn     09 39 41.5 -1.2
      0.1nm,0.3s,baz=3.6,slow=19,SNR=1.9
MATP                                 S      Sn     09 43 08.0 +3.7
      0.1nm,0.3s,baz=242,slow=20,SNR=3.8
MATP                                 Lg     Lg     09 44 51.2
      0.1nm,0.3s,baz=108,slow=22,SNR=4.2
TSUM  Tsumeb            19.98 212    P      P      09 40 05.6 +1.1
      1.1nm,0.5s,baz=24,slow=13,SNR=4.0
TORD  Torodi Ar. Bea    30.79 301    P      P      09 41 46.2 -1.5
      0.9nm,0.7s,baz=111,slow=8.8,SNR=3.0
BRTR  Keskin Array B    42.05   6    P      P      09 43 24.3 +0.6
      0.5nm,0.5s,baz=187,slow=10,SNR=2.2
ESDC  Sonseca Array     51.33 328    P      P      09 44 36.1 -0.2
      1.0nm,1.2s,baz=132,slow=8.8,SNR=2.4
GERES GERESS Array B    52.53 348    P      P      09 44 44.5 -0.7
      0.2nm,0.3s,baz=148,slow=9.3,SNR=2.3
MKAR  Makanchi Array    67.79  37    P      P      09 46 28.8 -1.0
      0.2nm,0.4s,baz=235,slow=4.1,SNR=2.3
```

IDC 03 09:47:23.4±47.0**, 15°.16S**×**172°.60W, h0**^{km}**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.6**/43**, mbtmp3.8**/3**, Error ellipse: s-maj=905.8km s-min=189.5km az=78.0, Samoa Islands region**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                     Op     ISC        h  m  s  ISC
STKA  Stephens Creek    44.83 240    P      P      09 55 39.2 -0.3
      1.1nm,0.6s,baz=87,slow=12,SNR=3.5
WRA   Warramunga Arr    50.65 256    P      P      09 56 25.0  0.0
      0.2nm,0.5s,baz=92,slow=7.2,SNR=7.7
ASAR  Alice Springs     50.92 252    P      P      09 56 26.8 -0.2
      1.2nm,0.5s,baz=87,slow=8.0,SNR=42
```

BJI ***03*** *09:57:31.3±0.0, 56°.32N×113°.97E, h10^{km}, mB4.7/13, mb4.2/20, Ms4.3/10, Ms7 4.0/7*

MOS ***03*** *09:57:32.8±1.1, 56°.03N×113°.75E, h1^{km}, mb4.4/9, Error ellipse: s-maj=8.7km s-min=6.1km az=65.0*

IDC ***03*** *09:57:33.8±0.5, 56.°05N×113.°64E, h0km, mb3.9/21, mb1 4.1/26, mb1mx3.9/52, mbtmp3.9/26, ML3.3/4, MS3.6/18, Ms1 3.6/18, ms1mx3.4/42, Error ellipse: s-maj=13.8km s-min=10.1km az=144.0*

BYKL ***03*** *09:57:34.5±0.2, 56.°05N×113.°67E, h6km±3km*

NEIC ***03*** *09:57:35.9±2.0, 56.°09N±0.°09×113.°8E±0.°2, h10km±2km, mb4.1/18, Error ellipse: s-maj=16.8km s-min=13.1km az=140.0*

ISC 03 09:57:35.7±0.6**, 56.°15N**±0.°02×**113.°75E**±0.°02**, h13km**±4km**, n140, σ2.s58**/204**, mb4.0**/29**, MS3.5**/15**, 8C-13D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.11**	**254**	⇑*i*Pg	**Pg**	**09 57 36.7**	**-2.1**
SVKR				*e*Sg	**Sg**	**09 57 38.1**	**-3.0**
SVKR				Pmax		09 57 40.0	
	18µm,0.2s						
SVKR				Smax		09 57 46.2	
	212µm,0.8s						
SVKR	**Severomuysk**	**0.11**	**254**	⇑*i*PG	**Pg**	**09 57 36.7**	**-2.1**
SVKR				*e*S	**Sg**	**09 57 39.2**	**-1.9**
UKT	**Uakit**	**0.66**	**186**	*e*Pg	**Pg**	**09 57 44.6**	**-4.0**
UKT				Pmax		09 57 48.3	
	1µm,0.5s						
UKT				*e*Sg	**Sg**	**09 57 52.6**	**-4.7**
UKT				Smax		09 58 02.3	
	6µm,0.5s						
YOA	**Uoyan**	**1.13**	**270**	⇑*i*Pg	**Pb**	**09 57 54.8**	**-2.3**
YOA				Pmax		09 58 02.3	
	4µm,0.6s						
YOA				*e*Sg	**Sb**	**09 58 09.0**	**-2.8**
YOA				Smax		09 58 26.1	
	16µm,0.7s						
YOA	**Uoyan**	**1.13**	**270**	⇑*i*PG	**Pb**	**09 57 54.8**	**-2.3**
YOA				*i*		09 58 10.8	
YOA				pmax	pmax		
	comp=Z,2µm,0.3s						
YOA				smax	smax		
	comp=N,17µm,0.6s						
NLYR	**Nelyaty**	**1.14**	**72**	*e*Pg	**Pb**	**09 57 56.2**	**-1.1**
NLYR				*e*Pb	**Pg**	**09 57 57.7**	**+0.1**
NLYR				max		09 58 02.7	
	comp=N,2µm,0.6s						
NLYR				*e*Sg	**Sn**	**09 58 12.7**	**-0.2**
NLYR				*e*		09 58 16.7	
NLYR				max		09 58 17.1	
	comp=N,11µm,0.9s						
NLYR	**Nelyaty**	**1.14**	**72**	*e*PG	**Pb**	**09 57 56.2**	**-1.1**
NLYR				*e*		09 58 12.1	
NLYR				pmax	pmax		
	comp=Z,2µm,0.6s						
NLYR				smax	smax		
	comp=N,11µm,1.2s						
KMO	**Kumora**	**1.46**	**261**	*e*Pg	**Pn**	**09 58 00.0**	**-1.7**
KMO				*e*		09 58 01.8	
KMO				max		09 58 03.3	
	comp=N,1µm,0.5s						
KMO				*e*Sg	**Sn**	**09 58 19.3**	**-1.3**
KMO				*e*		09 58 22.5	
KMO				max		09 58 23.2	
	comp=N,16µm,1.0s						
KMO	**Kumora**	**1.46**	**261**	⇑*i*PG	**Pn**	**09 58 00.0**	**-1.7**
KMO				*e*		09 58 19.9	
KMO				pmax	pmax		
	comp=Z,654nm,0.4s						
KMO				smax	smax		
	comp=N,16µm,1.1s						
BOD	**Bodaibo**	**1.68**	**5**	*e*Pg	**Pb**	**09 58 06.2**	**-0.2**
BOD				Pmax		09 58 08.5	
	comp=N,2µm,0.9s						
BOD				*e*Sg	**Sg**	**09 58 29.2**	**-0.5**
BOD				Smax		09 58 32.2	
	comp=N,5µm,0.7s						
BOD				*e*		09 58 45.2	
BOD	**Bodaibo**	**1.68**	**5**	⇑*i*PN	**Pb**	**09 58 06.4**	**0.0**
BOD				*e*		09 58 29.4	
BOD				pmax	pmax		
	comp=Z,2µm,1.1s						
BOD				smax	smax		
	comp=E,5µm,1.0s						
YLYR	**Ulyunkhan**	**1.95**	**230**	⇓*i*Pn	**Pn**	**09 58 08.1**	**-0.3**
YLYR				*e*Pg	**Pb**	**09 58 08.9**	**-2.1**
YLYR				*e*		09 58 09.8	
YLYR				max		09 58 10.3	
	comp=E,1µm,0.5s						
YLYR				*e*Sg	**Sn**	**09 58 33.1**	**+0.4**
YLYR				Smax		09 58 35.8	
	comp=E,7µm,0.6s						
YLYR	**Ulyunkhan**	**1.95**	**230**	⇓*i*PN	**Pn**	**09 58 08.1**	**-0.3**
YLYR				*e*		09 58 08.5	
YLYR				*e*S	**Sn**	**09 58 32.3**	**-0.4**
YLYR				*e*		09 58 33.5	
YLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
YLYR				smax	smax		
	comp=E,7µm,0.5s						
NIZ	**Nizh Angarsk**	**2.40**	**263**	*e*Pn	**Pn**	**09 58 15.0**	**+0.4**
NIZ				*e*Pg	**Pb**	**09 58 16.5**	**-2.1**
NIZ				Pmax		09 58 38.7	
	comp=E,292nm,0.7s						
NIZ				*e*		09 58 45.4	
NIZ				*e*Sg	**Sb**	**09 58 48.3**	**+0.3**
NIZ				Smax		09 58 49.9	
	comp=E,4µm,0.5s						
NIZ	**Nizh Angarsk**	**2.40**	**263**	*e*PN	**Pn**	**09 58 15.2**	**+0.6**
NIZ				*e*		09 58 16.5	
NIZ				*e*		09 58 48.0	
NIZ				pmax	pmax		
	comp=Z,374nm,0.8s						
NIZ				smax	smax		
	comp=E,5µm,0.9s						
CRS	**Chara**	**2.62**	**71**	⇓*i*Pn	**Pn**	**09 58 18.9**	**+1.3**
CRS				⇑*i*Pg	**Pb**	**09 58 23.4**	**+1.0**
CRS				Pmax		09 58 25.0	
	comp=E,2µm,0.9s						
CRS				*e*Sg	**Sg**	**09 58 58.6**	**-1.0**
CRS				Smax		09 59 00.7	
	comp=E,6µm,1.7s						
CRS				*e*SgSg	**SnSn**	**09 59 06.7**	**+6.8**
CRS	**Chara**	**2.62**	**71**	*e*PN	**Pn**	**09 58 18.8**	**+1.2**
CRS				*e*P	**Pb**	**09 58 23.2**	**+0.8**
CRS				*e*S	**Sb**	**09 58 56.6**	**+2.2**
SYVR	**Suvo**	**3.30**	**223**	⇓*i*Pn	**Pn**	**09 58 26.2**	**-0.8**
SYVR				*e*Pg	**Pb**	**09 58 31.7**	**-2.4**
SYVR				*e*PgPg	**PnPn**	**09 58 35.0**	**+0.8**
SYVR				max		09 58 36.1	
	comp=E,413nm,1.1s						
SYVR				*e*		09 58 56.5	
SYVR				*e*Sg	**Sb**	**09 59 14.2**	**0.0**
SYVR				*e*		09 59 25.2	
SYVR				max		09 59 26.3	
	comp=E,3µm,1.8s						
SYVR	**Suvo**	**3.30**	**223**	⇓*i*PN	**Pn**	**09 58 26.2**	**-0.8**
SYVR				*e*		09 58 32.4	
SYVR				*e*		09 59 14.2	
SYVR				pmax	pmax		
	comp=Z,424nm,1.0s						
SYVR				smax	smax		
	comp=N,3µm,1.4s						
VTMR	**Vitim**	**3.36**	**349**	*e*Pn	**Pn**	**09 58 28.5**	**+0.7**
VTMR				*e*Pg	**Pb**	**09 58 35.8**	**+0.7**
VTMR				*e*PgPg	**PbPb**	**09 58 37.5**	**-0.7**
VTMR				*e*Sn	**Sn**	**09 59 08.8**	**+1.2**
VTMR				*e*Sg	**Sg**	**09 59 20.2**	**-3.4**
KHNR	**Khani**	**3.54**	**75**	*e*Pn	**Pn**	**09 58 31.7**	**+1.4**
KHNR				*e*Pg	**Pb**	**09 58 39.6**	**+1.5**
KHNR				Sn	**Sn**	**09 59 12.9**	**+1.0**
KHNR				*e*Sg	**Sg**	**09 59 26.0**	**-3.1**
TUP	**Tupik**	**3.94**	**113**	⇓*i*Pn	**Pn**	**09 58 35.8**	**-0.1**
TUP				*e*Pg	**Pb**	**09 58 44.7**	**-0.3**
TUP				*e*		09 58 47.8	
TUP				max		09 58 49.4	
	comp=N,230nm,0.5s						
TUP				*e*		09 59 07.2	
TUP				*e*Sn	**Sn**	**09 59 21.2**	**-0.8**
TUP				*e*Sg	**Sb**	**09 59 36.7**	**+4.1**
TUP				*e*		09 59 42.1	
TUP				max		09 59 46.5	
	comp=N,2µm,1.1s						
TUP				*e*		10 00 05.4	
TUP	**Tupik**	**3.94**	**113**	⇓*i*PN	**Pn**	**09 58 35.8**	**-0.1**
TUP				*e*		09 58 45.5	
TUP				*e*S	**Sn**	**09 59 21.8**	**-0.2**
TUP				*e*		09 59 36.6	
TUP				pmax	pmax		
	comp=Z,231nm,0.6s						
TUP				smax	smax		
	comp=N,2µm,0.9s						
MXMB	**Maximikha**	**4.10**	**227**	*e*Pn	**Pn**	**09 58 37.0**	**-0.9**
MXMB				*e*Pg	**Pb**	**09 58 46.9**	**-0.7**
MXMB				*e*PgPg	**PnPn**	**09 58 47.8**	**+2.7**
MXMB				*e*		09 58 49.5	
MXMB				*e*Sg	**Sb**	**09 59 39.7**	**+2.7**
MXMB				*e*		09 59 45.8	
CIT	**Chita**	**4.14**	**182**	*e*Pg	**Pb**	**09 58 46.9**	**-1.4**
CIT				Pmax		09 58 49.9	
	comp=N,259nm,0.4s						
CIT				*e*Sg	**Sb**	**09 59 39.3**	**+1.1**
CIT				*e*		09 59 46.4	
CIT				max		09 59 50.5	
	comp=N,2µm,0.5s						
OGRR	**Ongureny**	**4.35**	**237**	⇓*i*Pn	**Pn**	**09 58 41.7**	**+0.3**
OGRR				*e*		09 58 43.2	
OGRR				*e*Pg	**Pb**	**09 58 50.4**	**-1.5**
OGRR				*e*		09 58 52.3	
OGRR				max		09 58 55.6	
	comp=N,149nm,0.9s						
OGRR				*e*Sg	**Sb**	**09 59 46.7**	**+2.5**
OGRR				Smax		09 59 57.0	
	comp=N,981nm,0.9s						
OGRR	**Ongureny**	**4.35**	**237**	⇓*i*PN	**Pn**	**09 58 41.7**	**+0.3**
OGRR				*e*		09 58 52.4	
OGRR				*e*		09 59 46.7	
OGRR				pmax	pmax		
	comp=Z,184nm,1.9s						
OGRR				smax	smax		
	comp=N,979nm,2.0s						
YKLR	**Yuktali**	**4.42**	**81**	*e*Pn	**Pn**	**09 58 43.1**	**+0.7**
YKLR				*e*Pg	**Pb**	**09 58 54.1**	**+1.0**
YKLR				*e*Sg	**Sg**	**09 59 52.9**	**-4.5**
ZRHB	**Zarechye**	**5.28**	**230**	*e*Pg	**Pb**	**09 59 07.8**	**+0.1**
ZRHB				*e*		09 59 09.4	
ZRHB				max		09 59 14.3	
	comp=N,219nm,1.0s						
ZRHB				*e*Sg	**Sb**	**10 00 15.5**	**+4.6**
ZRHB				Smax		10 00 35.5	
	comp=N,2µm,1.2s						
TRG	**Tyrgan**	**5.49**	**235**	*e*Pn	**Pn**	**09 58 56.4**	**-0.7**
TRG				*e*		09 59 06.6	
TRG				*e*Pg	**Pb**	**09 59 10.8**	**-0.6**
TRG				*e*		09 59 17.0	
TRG				*e*		09 59 37.2	
TRG				max		09 59 45.4	
	comp=N,60nm,0.8s						
TRG				*e*Sg	**Sb**	**10 00 20.4**	**+3.3**
TRG				*e*		10 00 31.4	
TRG				max		10 00 35.7	
	comp=N,413nm,1.1s						
TRG	**Tyrgan**	**5.49**	**235**	*e*PN	**Pn**	**09 58 56.4**	**-0.7**
TRG				*e*		09 59 11.1	
TRG				*e*S	**Sn**	**09 59 56.8**	**-3.3**
TRG				*e*		10 00 21.9	
TRG				pmax	pmax		
	comp=Z,54nm,1.3s						
TRG				smax	smax		
	comp=N,415nm,1.0s						
FFNB	**Fofonovo**	**5.81**	**228**	*e*Pn	**Pn**	**09 59 00.4**	**-1.1**
FFNB				*e*Pg	**Pb**	**09 59 17.3**	**+0.5**
FFNB				*e*		09 59 20.4	
FFNB				*e*		09 59 49.1	
FFNB				*e*Sn	**Sn**	**10 00 03.2**	**-4.7**
FFNB				*e*Sg	**Sb**	**10 00 31.0**	**+4.8**
KAB	**Kabansk**	**5.85**	**228**	*e*Pg	**Pb**	**09 59 18.9**	**+1.4**
KAB				Pmax		09 59 43.3	
	comp=N,198nm,0.4s						
KAB				*e*Sg	**Sb**	**10 00 34.2**	**+6.7**
KAB				Smax		10 01 04.8	
	comp=N,964nm,1.3s						
STDB	**Stepnoy Dvoret**	**5.89**	**230**	*e*Pn	**Pn**	**09 59 01.3**	**-1.3**
STDB				*e*		09 59 16.4	
STDB				*e*Sg	**Sb**	**10 00 32.7**	**+4.2**
HRMR	**Khuramsha**	**6.05**	**224**	*e*Pn	**Pn**	**09 59 02.9**	**-1.9**
HRMR				*e*		09 59 08.9	
HRMR				*e*		09 59 15.4	
HRMR				*e*Pg	**Pb**	**09 59 22.3**	**+1.4**
HRMR				Pmax		09 59 30.9	
	comp=N,96nm,0.7s						
HRMR				*e*Sg	**Sb**	**10 00 39.9**	**+6.7**
HRMR				Smax		10 00 56.0	
	comp=N,2µm,1.0s						
IENR	**Iengra**	**6.20**	**85**	*e*Pn	**Pn**	**09 59 07.3**	**+0.4**
IENR				*e*Pg	**Pb**	**09 59 27.5**	**+4.0**
IENR				*e*Sn	**Sn**	**10 00 16.9**	**-0.8**
IENR				*e*Sg	**Sg**	**10 00 47.9**	**-6.7**
BGT	**Bolshoye Golou**	**6.40**	**234**	*e*Pn	**Pn**	**09 59 08.5**	**-1.1**
BGT				*e*		09 59 16.5	
BGT				*e*Pg	**Pb**	**09 59 28.2**	**+1.4**
BGT				Pmax		09 59 31.5	
	comp=N,38nm,0.6s						
BGT				*e*Sn	**Sn**	**10 00 19.5**	**-2.9**
BGT				*e*Sg	**Sb**	**10 00 50.2**	**+7.1**
BGT				Smax		10 01 00.3	
	comp=N,325nm,1.2s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*Pn	**Pn**	**09 59 08.7**	**-2.4**
KPC				*e*		09 59 16.5	
KPC				*e*Pg	**Pb**	**09 59 30.4**	**+1.7**
KPC				*e*		09 59 54.5	
KPC				max		09 59 59.2	
	comp=N,36nm,0.8s						
KPC				*e*Sn	**Sn**	**10 00 20.8**	**-4.4**
KPC				*e*		10 00 38.6	
KPC				*e*Sg	**Sb**	**10 00 53.0**	**+6.6**
KPC				*e*		10 01 07.3	
KPC				max		10 01 11.0	
	comp=N,1µm,1.3s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*PN	**Pn**	**09 59 09.0**	**-2.1**
KPC				*e*		09 59 29.3	
KPC				*e*		10 00 51.6	
KPC				pmax	pmax		
	comp=Z,27nm,0.9s						
KPC				smax	smax		
	comp=E,1µm,1.3s						
LSTR	**Listvyanka**	**6.78**	**234**	*e*Pn	**Pn**	**09 59 13.3**	**-1.5**
LSTR				*e*		09 59 32.2	
LSTR				Pg	**Pb**	**09 59 35.1**	**+1.8**
LSTR				*e*		09 59 44.6	
LSTR				max		09 59 52.8	
	comp=E,43nm,1.2s						
LSTR				max		10 00 00.0	
LSTR				*e*Sg	**Sb**	**10 01 00.0**	**+5.9**
LSTR				Smax		10 01 09.6	
	comp=E,458nm,1.9s						
IRK	**Irkutsk**	**6.80**	**239**	*e*Sg	**Sb**	**10 01 02.3**	**+7.7**
IRK				Smax		10 01 06.4	
	comp=E,624nm,0.4s						
IRK	**Irkutsk**	**6.80**	**239**	*e*PN	**Pn**	**09 59 15.9**	**+0.9**
IRK				*e*		09 59 36.7	
IRK				*e*		10 01 02.9	
IRK				pmax	pmax		
	comp=Z,123nm,0.1s						
IRK				smax	smax		
	comp=N,630nm,0.4s						
TLY	**Talaya**	**7.46**	**237**	*e*Pn	**Pn**	**09 59 23.2**	**-0.9**
TLY				*e*		09 59 33.9	
TLY				*e*Pg	**Pb**	**09 59 46.5**	**+1.7**
TLY				Pmax		09 59 53.0	
	comp=N,22nm,1.0s						
TLY				*e*Sg	**Sb**	**10 01 20.6**	**+7.1**
TLY				Smax		10 01 39.2	
	comp=N,243nm,1.4s						
TLY	**Talaya**	**7.46**	**237**	*e*PG	**Pb**	**09 59 47.8**	**+3.0**
TLY				*e*		10 01 22.8	
TLY				pmax	pmax		
	comp=Z,28nm,0.6s						
TLY	**Talaya**	**7.46**	**237**	Pn	**Pn**	**09 59 24.2**	**+0.1**
HIA	**Hailar**	**7.79**	**150**	PN	**Pn**	**09 59 25.5**	**-3.2**
HIA	**Hailar**	**7.79**	**150**	Pn	**Pn**	**09 59 25.5**	**-3.2**
ARS	**Arshan**	**7.90**	**242**	*e*Pn	**Pn**	**09 59 28.6**	**-1.5**
ARS				*e*		09 59 37.7	
ARS				*e*Pg	**Pb**	**09 59 55.5**	**+3.2**
ARS				Pmax		10 00 11.5	
	comp=Z,52nm,0.6s						
ARS				*e*Sn	**Sn**	**10 00 54.0**	**-5.3**
ARS				*e*Sg	**Sb**	**10 01 34.7**	**+8.5**
ARS				Smax		10 01 39.0	
	comp=Z,743nm,0.9s						
ARS	**Arshan**	**7.90**	**242**	*e*PG	**Pb**	**09 59 56.2**	**+3.9**
ARS				*e*		10 01 34.3	
ARS				pmax	pmax		
	comp=Z,51nm,0.5s						
ARS				smax	smax		
	comp=E,744nm,0.9s						
ZEA	**Zeya**	**8.14**	**102**	*e*PN	**Pn**	**09 59 34.9**	**+1.5**
ZEA				*e*		10 01 05.1	
ZEA				*e*		10 01 49.2	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				smax	smax		
	comp=E,30nm,0.6s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*Pn	**Pn**	**09 59 39.2**	**+0.4**
ZAK				*e*Pg	Pg	10 00 05.6	-13
ZAK				Pmax		10 00 47.7	
	comp=E,15nm,0.8s						
ZAK				*e*Sn	**Sn**	**10 01 09.3**	**-5.5**
ZAK				*e*Sg	Sg	10 01 54.3	-15
ZAK				Smax		10 02 09.0	
	comp=E,264nm,1.8s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*PG	Pg	10 00 08.0	-11
ZAK				*e*		10 01 54.2	
ZAK				pmax	pmax		
	comp=Z,14nm,0.6s						
ZAK				smax	smax		
	comp=N,264nm,1.8s						
MOY	**Mondy**	**8.76**	**245**	*e*Pn	**Pn**	**09 59 41.5**	**-0.6**
MOY				*e*Pg	Pg	10 00 11.2	-12
MOY				Pmax		10 00 31.2	
	comp=N,49nm,1.1s						
MOY				*e*Sn	**Sn**	**10 01 16.2**	**-4.5**
MOY				*e*Sg	Sg	10 02 03.2	-13
MOY				Smax		10 02 17.7	
	comp=N,374nm,1.6s						
MOY	**Mondy**	**8.76**	**245**	*e*PN	**Pn**	**09 59 41.5**	**-0.6**
MOY				*e*S	Sg	10 02 03.1	-13
MOY				smax	smax		
	comp=E,385nm,1.1s						
ORL	**Orlik**	**8.91**	**252**	*e*Pn	**Pn**	**09 59 43.7**	**-0.3**
ORL				max		10 00 12.9	
	comp=E,36nm,1.0s						
ORL				*e*Sn	**Sn**	**10 01 19.1**	**-5.1**
ORL				*e*		10 01 42.7	
ORL				*e*Sg	Sg	10 02 07.7	-13
ORL				Smax		10 02 18.5	
	comp=E,251nm,1.0s						
ORL	**Orlik**	**8.91**	**252**	*e*PG	Pg	10 00 13.2	-13
ORL				*e*S	**Sn**	**10 01 19.1**	**-5.1**
ORL				*e*		10 02 06.7	
ORL				pmax	pmax		
	comp=Z,37nm,0.7s						
ORL				smax	smax		
	comp=N,315nm,2.0s						
ULN	**Ulaanbaatar**	**9.26**	**209**	P	**Pn**	**09 59 49.2**	**+0.3**
ULN	**Ulaanbaatar**	**9.26**	**209**		**Pn**	**09 59 49.2**	**+0.3**
SONM	**Songino Array**	**9.47**	**212**	Pn	**Pn**	**09 59 51.1**	**-0.8**
	comp=N,0.6nm,0.3s,baz=21,slow=14,SNR=14						
SONM				Pg		10 00 26.2	
	comp=N,1.0nm,0.3s,baz=13,slow=15,SNR=5.2						
SONM				Sn	**Sn**	**10 01 39.4**	**+1.2**
	comp=N,1.7nm,0.3s,baz=29,slow=21,SNR=3.7						
SONM				Lg	Lg	10 02 30.4	
	comp=N,8.2nm,0.3s,baz=22,slow=32,SNR=20						
SONM				LR	LR	10 04 06.6	
	comp=N,63nm,19.9s,baz=316,slow=42						
SONM	**Songino Array**	**9.47**	**212**	*e*P	**Pn**	**09 59 51.5**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	**Yakutsk**	**10.08**	**48**	Pn	**Pn**	**09 59 58.7**	**-1.2**
	baz=223,slow=0.3,SNR=1.3						
YAK				Sn	**Sn**	**10 01 47.7**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=121,slow=20,SNR=1.1						
YAK				Lg	Lg	10 02 46.3	
	comp=Z,0.1nm,0.3s,baz=150,slow=22,SNR=10						
YAK	**Yakutsk**	**10.08**	**48**	*e*P	**Pn**	**10 00 01.4**	**+1.5**
YAK				*e*S	**Sn**	**10 01 56.3**	**+3.6**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK				smax	smax		
	comp=N,10.0nm,1.0s						
YAK				smax	smax		
	comp=E,14nm,1.0s						
YAK				MLR	MLR		
	comp=Z,89nm,6.0s						
YAK	**Yakutsk**	**10.08**	**48**	Pn	**Pn**	**10 00 00.5**	**+0.6**
KLR	**Kul'dur**	**12.91**	**115**	Pn	**Pn**	**10 00 38.0**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=310,slow=13,SNR=15						
KLR				Sn	**Sn**	**10 02 57.7**	**-4.2**
	comp=Z,0.4nm,0.3s,baz=267,slow=10,SNR=4.0						
KLR				Lg	Lg	10 04 08.6	
	comp=Z,0.4nm,0.3s,baz=336,slow=12,SNR=4.7						
KLR				LR	LR	10 06 13.9	
	comp=Z,148nm,18.0s,baz=307,slow=40						
KLR	**Kul'dur**	**12.91**	**115**	P	**Pn**	**10 00 38.0**	**-0.6**
HHC	**Hu-ho-hao-te**	**15.38**	**186**	*e*P	**Pn**	**10 01 13.6**	**+1.3**
HHC				PP	**sP**	**10 01 26.7**	**+4.0**
HHC				S	**Sn**	**10 04 02.7**	**+0.3**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.1s						
HHC				LR	LR		
	comp=Z,380nm,12.2s						
HHC				LR	LR		
	comp=Z,490nm,8.0s						
BJT	**Baijiatuau**	**16.22**	**173**	P	**P**	**10 01 26.7**	**+0.5**
BJT				pmax	pmax		
	comp=Z,21nm,1.4s						
BJT	**Baijiatuau**	**16.22**	**173**		**P**	**10 01 26.7**	**+0.5**
BJT				IAmb	IAmb	10 01 30.4	
	comp=Z,21nm,1.4s						
USRK	**Ussuriysk Ar.**	**16.65**	**128**	Pn	**Pn**	**10 01 28.7**	**+0.2**
	baz=319,slow=10,SNR=5.7						
USRK				Lg	Lg	10 06 17.6	
	baz=321,slow=27,SNR=4.3						
ZAA0	**Zalesovo Array**	**16.67**	**275**		**Pn**	**10 01 28.2**	**-0.5**
ZALV	**Zalesovo Beam**	**16.67**	**275**	Pn	**Pn**	**10 01 28.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=72,slow=9.9,SNR=7.2						
ZALV				Lg	Lg	10 06 11.9	
	comp=Z,0.1nm,0.3s,baz=92,slow=25,SNR=3.5						
ZALV				LR	LR	10 08 16.7	
	comp=Z,153nm,20.4s,baz=71,slow=39						
ZALV	**Zalesovo Beam**	**16.67**	**275**	*i* P	**P**	**10 01 31.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**16.82**	**17**		**Pn**	**10 01 25.5**	**-5.1**
TIXI				IAmb	IAmb	10 01 33.2	
	comp=Z,12nm,0.6s						
NRIK	**Noril'sk**	**17.63**	**329**	P	**Pn**	**10 01 37.5**	**-3.1**
	comp=Z,1.7nm,0.3s,baz=125,slow=9.6,SNR=16						
NRIK				S	Sn	10 04 44.0	-13
	comp=Z,1.0nm,0.3s,baz=81,slow=11,SNR=7.8						
NRIK				Lg	Lg	10 06 47.4	
	comp=Z,0.6nm,0.3s,baz=37,slow=20,SNR=2.7						
NRIK				LR	LR	10 09 07.1	
	comp=Z,188nm,21.4s,baz=114,slow=39						
NRIK	**Noril'sk**	**17.63**	**329**	P	**Pn**	**10 01 37.0**	**-3.7**
NRIK				pmax	pmax		
	comp=Z,13nm,0.9s						
NRIK	**Noril'sk**	**17.63**	**329**		**Pn**	**10 01 37.0**	**-3.7**
NRIK				IAmb	IAmb	10 01 44.0	
	comp=Z,13nm,0.8s						
GTA	**Gaotai**	**19.12**	**215**	*e*P	**Pn**	**10 01 59.6**	**+0.4**
GTA				pP	sP	10 02 04.1	-0.1
GTA				sP	pP	10 02 06.9	+4.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MA2	**Magadan**	**19.82**	**65**	⇓*e*P	**Pn**	**10 02 09.6**	**+2.4**
MA2				pmax	pmax		
	comp=Z,45nm,2.8s						
SEY	**Seymchan**	**20.46**	**55**	P	Pn	10 02 14.5	-0.2
	comp=Z,5.7nm,0.9s,baz=281,slow=12,SNR=12						
SEY				Lg	Lg	10 08 17.3	
	comp=Z,4.2nm,0.9s,baz=282,slow=13,SNR=3.3						
SEY	**Seymchan**	**20.46**	**55**	⇓*i*P	Pn	10 02 15.7	+1.0
WMQ	**Urumqi**	**20.65**	**244**	*e*P	Pn	10 02 17.9	+0.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.9s						
KSRS	**Korea Array**	**20.99**	**147**	P	**P**	**10 02 19.6**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=344,slow=11,SNR=6.2						
KSRS				Lg	Lg	10 08 36.7	
	comp=Z,1.7nm,0.9s,baz=176,slow=16,SNR=3.8						

KSRS				LR	LR	10 11 10.2	
	comp=Z,199nm,18.5s,baz=344,slow=39						
KSRS	**Korea Array**	**20.99**	**147**	*e*P	Pn	10 02 21.6	+0.5
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	**Lanzhou**	**21.16**	**203**	*e*P	**P**	**10 02 21.5**	**+0.9**
LZH				pP	pP	10 02 24.3	-0.3
LZH				sP	sP	10 02 26.4	0.0
LZH				*e*PP	**PnPn**	**10 02 44.3**	**+4.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,4.7s						
LZH				LR	LR		
	comp=Z,200nm,11.5s						
LZH				LR	LR		
	comp=Z,200nm,12.0s						
LZH				LR	LR		
	comp=Z,300nm,14.5s						
KURK	**Kurchatov**	**21.46**	**270**	⇓*i*P	**P**	**10 02 25.6**	**+2.2**
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	**21.46**	**270**	P	**P**	**10 02 24.0**	**+0.6**
KURK				IAmb	IAmb	10 02 29.2	
	comp=Z,12nm,0.8s						
MK31	**Makanchi Array**	**21.54**	**258**	P	**P**	**10 02 25.1**	**+0.7**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**21.54**	**258**	P	**P**	**10 02 25.1**	**+0.7**
MKAR	**Makanchi Array**	**21.54**	**258**	P	**P**	**10 02 24.2**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=60,slow=11,SNR=26						
MKAR				Lg	Lg	10 08 56.2	
	comp=Z,0.1nm,0.3s,baz=194,slow=14,SNR=1.0						
MKAR				LR	LR	10 11 12.5	
	comp=Z,90nm,19.5s,baz=28,slow=38						
KURBB	**Kurchatov Arra**	**21.55**	**270**	P	**P**	**10 02 24.6**	**+0.2**
	comp=Z,7.1nm,0.7s,baz=66,slow=12,SNR=30						
KURBB				Lg	Lg	10 08 54.9	
	comp=Z,3.5nm,1.1s,baz=69,slow=32,SNR=6.9						
MAKZ	**Makanchi**	**21.70**	**258**	P	**P**	**10 02 26.7**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**21.70**	**258**	P	**P**	**10 02 26.7**	**+0.5**
MAKZ				IAmb	IAmb	10 02 29.5	
	comp=Z,5.4nm,0.9s						
ASAJ	**Asahikawa**	**21.88**	**111**	LR	LR	10 11 10.4	
	comp=Z,126nm,19.6s,baz=336,slow=37						
BVAR	**Borovoye Array**	**25.01**	**281**	P	**P**	**10 02 59.9**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=56,slow=7.7,SNR=11						
BRVK	**Borovoye**	**25.05**	**281**	⇑*e*P	**P**	**10 03 00.2**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,14nm,2.2s						
BRVK	**Borovoye**	**25.05**	**281**	P	**P**	**10 02 59.3**	**0.0**
PETK	**Petropavlovsk-**	**25.30**	**78**	LR	LR	10 13 04.8	
	comp=Z,114nm,19.1s,baz=24,slow=37						
MJAR	**Matsushiro Arr**	**25.64**	**130**	LR	LR	10 13 24.6	
	comp=Z,106nm,18.3s,baz=335,slow=37						
JNU	**Nakatsue**	**25.91**	**146**	LR	LR	10 13 52.2	
	comp=Z,151nm,19.0s,baz=350,slow=38						
AAK	**Ala-Archa**	**28.47**	**258**	⇓*e*P	**P**	**10 03 32.2**	**+1.8**
AAK				pmax	pmax		
	comp=Z,37nm,3.2s						
ARU	**Arti**	**29.94**	**294**	LR	LR	10 17 33.5	
	comp=Z,269nm,20.0s,baz=64,slow=40						
KK31	**Karatay Array**	**30.36**	**263**	P	**P**	**10 03 49.0**	**+2.0**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**30.36**	**263**	P	**P**	**10 03 49.0**	**+2.0**
KK31				IAmb	IAmb	10 03 49.4	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	**30.36**	**263**	P	**P**	**10 03 49.0**	**+2.0**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**30.36**	**263**	P	**P**	**10 03 49.0**	**+2.0**
AKTO	**Aktyubinsk**	**33.00**	**284**	LR	LR	10 18 51.2	
	comp=Z,66nm,20.7s,baz=3.7,slow=39						
ARCES	**ARCESS Array B**	**38.57**	**326**	P	**P**	**10 04 57.8**	**+0.2**
	comp=Z,14nm,1.2s,baz=76,slow=9.6,SNR=3.9						
ARCES				LR	LR	10 26 55.3	
	comp=Z,109nm,18.1s,baz=250,slow=46						
CMAR	**Chiang Mai Arr**	**39.25**	**203**	P	**P**	**10 05 03.0**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=6.8,slow=9.1,SNR=1.3						
CMAR	**Chiang Mai Arr**	**39.25**	**203**	P	**P**	**10 05 03.0**	**-0.8**
TOLK	**Toolik Lake Re**	**41.64**	**33**	P	**P**	**10 05 25.4**	**+2.2**
TOLK				IAmb	IAmb	10 05 36.8	
	comp=Z,4.2nm,1.1s						
COLD	**Coldfoot**	**42.23**	**35**	P	**P**	**10 05 30.0**	**+2.1**
FIA1	**FINESS Array S**	**42.46**	**315**	P	**P**	**10 05 30.3**	**+0.5**
FINES	**FINESS Array B**	**42.46**	**315**	P	**P**	**10 05 30.0**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=60,slow=8.2,SNR=11						
FINES	**FINESS Array B**	**42.46**	**315**	*i* P	**P**	**10 05 30.7**	**+0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TTA	**Tatalina**	**42.62**	**43**	P	**P**	**10 05 32.8**	**+1.6**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TTA	**Tatalina**	**42.62**	**43**	P	**P**	**10 05 32.8**	**+1.6**
TTA				IAmb	IAmb	10 05 51.6	
	comp=Z,8.9nm,1.4s						
TRF	**Thorofare Moun**	**44.42**	**40**	P	**P**	**10 05 48.1**	**+2.4**
IL31		**44.79**	**37**	P	**P**	**10 05 50.7**	**+2.2**
IL31				IAmb	IAmb	10 06 18.7	
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**44.79**	**37**	P	**P**	**10 05 49.2**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=305,slow=11,SNR=16						
ILAR	**Eielson Array**	**44.79**	**37**	*e*P	**P**	**10 05 50.6**	**+2.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**45.26**	**285**	LR	LR	10 27 02.4	
	comp=Z,98nm,19.4s,baz=16,slow=39						
INK	**Inuvik**	**46.45**	**28**	P	**P**	**10 06 02.5**	**+1.0**
	comp=Z,3.0nm,1.0s,baz=340,slow=4.8,SNR=5.7						
INK	**Inuvik**	**46.45**	**28**	P	**P**	**10 06 03.0**	**+1.4**
INK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
INK	**Inuvik**	**46.45**	**28**	P	**P**	**10 06 03.0**	**+1.4**
INK				IAmb	IAmb	10 06 20.5	
	comp=Z,3.7nm,1.4s						
AKASG	**Malin Array Be**	**47.66**	**301**	P	**P**	**10 06 11.1**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=45,slow=9.0,SNR=2.9						
C36M	**Paulatuk**	**48.00**	**24**	P	**P**	**10 06 14.0**	**+0.4**
NOA	**NORSAR Array B**	**48.33**	**321**	P	**P**	**10 06 16.8**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=49,slow=7.5,SNR=1.5						
GUMO	**Guam**	**48.75**	**138**	LR	LR	10 26 08.6	
	comp=Z,29nm,18.9s,baz=96,slow=35						
BRTR	**Keskin Array B**	**53.01**	**288**	P	**P**	**10 06 51.0**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=57,slow=10,SNR=1.6						
BRTR				LR	LR	10 33 34.2	
	comp=Z,36nm,18.3s,baz=312,slow=41						
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**10 07 12.1**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=335,slow=6.6,SNR=33						
YKA	**Yellowknife Ar**	**55.85**	**25**	*e*P	**P**	**10 07 12.3**	**+0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**56.10**	**308**	P	**P**	**10 07 14.0**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=45,slow=9.9,SNR=1.9						
GERES				LR	LR	10 33 48.0	
	comp=Z,155nm,19.9s,baz=69,slow=39						
GERES	**GERESS Array B**	**56.10**	**308**	P	**P**	**10 07 14.0**	**-0.4**
ESDC	**Sonseca Array**	**70.97**	**314**	P	**P**	**10 08 53.4**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=24,slow=6.0,SNR=14						
ESDC				LR	LR	10 44 37.2	
	comp=Z,86nm,19.2s,baz=345,slow=40						
PDAR	**Pinedale Array**	**74.88**	**32**	P	**P**	**10 09 15.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=13,slow=1.9,SNR=5.0						
NVAR	**Mina Array Bea**	**75.95**	**40**	P	**P**	**10 09 23.6**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=316,slow=4.2,SNR=8.2						
WRA	**Warramunga Arr**	**77.77**	**160**	P	**P**	**10 09 31.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=351,slow=6.5,SNR=12						
ASAR	**Alice Springs**	**81.32**	**161**	P	**P**	**10 09 50.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=356,slow=5.2,SNR=6.9						
TORD	**Torodi Ar. Bea**	**91.00**	**295**	P	**P**	**10 10 39.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=30,slow=4.4,SNR=4.9						
CPUP	**Villa Florida**	**149.51**	**344**	PKPbc	**PKPbc**	**10 17 23.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=356,slow=8.8,SNR=2.9						

BYKL 03 09:58:06.8±1.2**,56°.10N×113°.73E,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**280**	*e*Pg	Pg	09 58 08.4	-0.2
SVKR				*e*Sg	Sg	09 58 11.0	+1.1
SVKR				Pmax			
	6μm,0.3s						
SVKR				Smax			
	30μm,0.8s						
UKT	**Uakit**	**0.61**	**185**	*e*Sg	Sg	09 58 25.1	-1.4
UKT				Smax			
	1μm,0.5s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Sg	Sn	09 59 00.9	0.0
BOD				Smax			
	847nm,1.1s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Sg	Sb	09 59 06.4	-0.4
YLYR				Smax			
	2μm,1.1s						
TRG	**Tyrgan**	**5.46**	**235**	*e*Sg	Sb	10 00 55.1	+6.3
TRG				Smax			
	280nm,1.3s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Sg	Sg	10 01 27.2	-6.9
KPC				Smax			
	297nm,1.3s						

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*BUC **03** 10:08:44.9±0.3,45°.48N×26°.37E,h138^{km}±2^{km},ml3.9/43,*
Error ellipse: s-maj=2.2km s-min=1.8km az=171.0

ISC 03 10:08:43.9±1.3**,45°.50N**±0°.03×**26°.36E**±0°.02**,h148**^{km}±6^{km}**,**
n110,σ**0^{s}.77**/173**,92C-80D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.08**	**212**	⇑P	**Pn**	**10 09 04.2**	**+0.4**
NEHR				⇑S	**Sn**	**10 09 18.2**	**-0.7**
NEHR	**Nehoiu**	**0.08**	**212**	⇑P	**Pn**	**10 09 04.2**	**+0.4**
NEHR				⇑S	**Sn**	**10 09 18.2**	**-0.7**
BISRR	**Bisoca**	**0.26**	**78**	⇑P	**Pn**	**10 09 04.8**	**+0.7**
BISRR				⇑S	**Sn**	**10 09 19.7**	**+0.1**
BISRR	**Bisoca**	**0.26**	**78**	⇑P	**Pn**	**10 09 04.8**	**+0.7**
BISRR				⇑S	**Sn**	**10 09 19.7**	**+0.1**
MLR	**Muntele Rosu**	**0.29**	**269**	⇑P	**Pn**	**10 09 04.5**	**+0.2**
MLR				⇓S	**Sn**	**10 09 19.0**	**-0.8**
MLR	**Muntele Rosu**	**0.29**	**269**	⇑P	**Pn**	**10 09 04.5**	**+0.2**
MLR				⇓S	**Sn**	**10 09 19.0**	**-0.8**
ISR	**Istrita**	**0.40**	**161**	⇑P	**Pn**	**10 09 05.2**	**+0.5**
ISR	**Istrita**	**0.40**	**161**	⇑P	**Pn**	**10 09 05.2**	**+0.5**
PLOR	**Plostina**	**0.41**	**30**	⇑P	**Pn**	**10 09 04.7**	**+0.1**
PLOR				⇑S	**Sn**	**10 09 19.6**	**-1.0**
PLOR	**Plostina**	**0.41**	**30**	⇑P	**Pn**	**10 09 04.7**	**+0.1**
PLOR				⇑S	**Sn**	**10 09 19.6**	**-1.0**
GRER		**0.45**	**105**	⇓P	**Pn**	**10 09 06.2**	**+1.5**
GRER				⇓S	**Sn**	**10 09 20.1**	**-0.6**
GRER		**0.45**	**105**	⇓P	**Pn**	**10 09 06.2**	**+1.5**
GRER				⇓S	**Sn**	**10 09 20.1**	**-0.6**
VRI	**Vrincioaia**	**0.45**	**35**	⇑P	**Pn**	**10 09 05.1**	**+0.3**
VRI				⇓S	**Sn**	**10 09 20.0**	**-0.8**
VRI	**Vrincioaia**	**0.45**	**35**	⇑P	**Pn**	**10 09 05.1**	**+0.3**
VRI				⇓S	**Sn**	**10 09 20.0**	**-0.8**
SECR		**0.50**	**204**	⇑P	**Pn**	**10 09 05.7**	**+0.7**
SECR				⇓S	**Sn**	**10 09 21.3**	**+0.2**
SECR		**0.50**	**204**	⇑P	**Pn**	**10 09 05.7**	**+0.7**
SECR				⇓S	**Sn**	**10 09 21.3**	**+0.2**
ODBI	**Odobesti**	**0.56**	**61**	⇓P	**Pn**	**10 09 06.6**	**+1.3**
ODBI				⇓S	**Sn**	**10 09 22.5**	**+0.9**
ODBI	**Odobesti**	**0.56**	**61**	⇓P	**Pn**	**10 09 06.6**	**+1.3**
ODBI				⇓S	**Sn**	**10 09 22.5**	**+0.9**
PLAR	**PLOIESTI**	**0.63**	**202**	⇑P	**Pn**	**10 09 06.5**	**+0.8**
PLAR				⇓S	**Sn**	**10 09 22.9**	**+0.6**
PLAR	**PLOIESTI**	**0.63**	**202**	⇑P	**Pn**	**10 09 06.5**	**+0.8**
PLAR				⇓S	**Sn**	**10 09 22.9**	**+0.6**
OZUR		**0.72**	**327**	⇑P	**Pn**	**10 09 06.2**	**-0.2**
OZUR		**0.72**	**327**	⇑P	**Pn**	**10 09 06.2**	**-0.2**
PGOR	**Pogoanele**	**0.74**	**143**	⇑S	**Sn**	**10 09 22.4**	**-1.1**
PGOR	**Pogoanele**	**0.74**	**143**	⇑S	**Sn**	**10 09 22.4**	**-1.1**
SULR		**0.82**	**185**	⇑P	**Pn**	**10 09 07.8**	**+0.8**
SULR				⇓S	**Sn**	**10 09 25.1**	**+0.5**
SULR		**0.82**	**185**	⇑P	**Pn**	**10 09 07.8**	**+0.8**
SULR				⇓S	**Sn**	**10 09 25.1**	**+0.5**
DOPR	**Dopca**	**0.82**	**305**	⇑P	**Pn**	**10 09 07.0**	**-0.1**
DOPR	**Dopca**	**0.82**	**305**	⇑P	**Pn**	**10 09 07.0**	**-0.1**
VOIR		**0.92**	**267**	⇑P	**Pn**	**10 09 07.8**	**-0.1**
VOIR				⇑S	**Sn**	**10 09 24.5**	**-1.7**
VOIR		**0.92**	**267**	⇑P	**Pn**	**10 09 07.8**	**-0.1**
VOIR				⇑S	**Sn**	**10 09 24.5**	**-1.7**
TUDR		**0.93**	**83**	⇑P	**Pn**	**10 09 08.1**	**+0.3**
TUDR				⇓S	**Sn**	**10 09 25.3**	**-0.8**
TUDR		**0.93**	**83**	⇑P	**Pn**	**10 09 08.1**	**+0.3**
TUDR				⇓S	**Sn**	**10 09 25.3**	**-0.8**
MTUR	**Matau**	**0.95**	**254**	⇑P	**Pn**	**10 09 08.5**	**+0.3**
MTUR	**Matau**	**0.95**	**254**	⇑P	**Pn**	**10 09 08.5**	**+0.3**
SCHL	**Schela**	**1.04**	**89**	⇑S	**Sn**	**10 09 26.3**	**-1.4**
SCHL	**Schela**	**1.04**	**89**	⇑S	**Sn**	**10 09 26.3**	**-1.4**
TESR	**Tescani**	**1.04**	**11**	⇓P	**Pn**	**10 09 09.0**	**+0.3**
TESR				⇑S	**Sn**	**10 09 26.1**	**-1.8**
TESR	**Tescani**	**1.04**	**11**	⇓P	**Pn**	**10 09 09.0**	**+0.3**
TESR				⇑S	**Sn**	**10 09 26.1**	**-1.8**
INCR	**INCERC-Sediu C**	**1.06**	**188**	⇑S	**Sn**	**10 09 27.8**	**-0.3**
INCR	**INCERC-Sediu C**	**1.06**	**188**	⇑S	**Sn**	**10 09 27.8**	**-0.3**
LEHL	**Lehliu**	**1.07**	**162**	⇑P	**Pn**	**10 09 09.9**	**+0.8**
LEHL				⇑S	**Sn**	**10 09 28.6**	**+0.4**
LEHL	**Lehliu**	**1.07**	**162**	⇑P	**Pn**	**10 09 09.9**	**+0.8**
LEHL				⇑S	**Sn**	**10 09 28.6**	**+0.4**
VARL	**Varlezi**	**1.12**	**68**	⇑P	**Pn**	**10 09 10.5**	**+1.0**
VARL				⇓S	**Sn**	**10 09 28.6**	**-0.5**
VARL	**Varlezi**	**1.12**	**68**	⇑P	**Pn**	**10 09 10.5**	**+1.0**
VARL				⇓S	**Sn**	**10 09 28.6**	**-0.5**
AMRR	**Amara**	**1.12**	**142**	⇑P	**Pn**	**10 09 10.0**	**+0.4**
AMRR				⇑S	**Sn**	**10 09 29.2**	**+0.1**
AMRR	**Amara**	**1.12**	**142**	⇑P	**Pn**	**10 09 10.0**	**+0.4**
AMRR				⇑S	**Sn**	**10 09 29.2**	**+0.1**
BUC1	**Bucharest**	**1.17**	**192**	⇑P	**Pn**	**10 09 10.4**	**+0.4**
BUC1				⇓S	**Sn**	**10 09 29.3**	**-0.5**
BUC1	**Bucharest**	**1.17**	**192**	⇑P	**Pn**	**10 09 10.4**	**+0.4**
BUC1				⇓S	**Sn**	**10 09 29.3**	**-0.5**
STFAR	**Stefanesti-Arg**	**1.17**	**238**	⇓S	**Sn**	**10 09 30.0**	**+0.1**
STFAR	**Stefanesti-Arg**	**1.17**	**238**	⇓S	**Sn**	**10 09 30.0**	**+0.1**
BIR	**Birlad**	**1.18**	**49**	⇓P	**Pn**	**10 09 10.8**	**+0.8**
BIR				⇓S	**Sn**	**10 09 29.3**	**-0.7**
BIR	**Birlad**	**1.18**	**49**	⇓P	**Pn**	**10 09 10.8**	**+0.8**
BIR				⇓S	**Sn**	**10 09 29.3**	**-0.7**
GISR	**Galati**	**1.20**	**92**	⇓S	**Sn**	**10 09 29.9**	**-0.4**
GISR	**Galati**	**1.20**	**92**	⇓S	**Sn**	**10 09 29.9**	**-0.4**
ARR	**Arges**	**1.22**	**265**	⇓P	**Pn**	**10 09 11.2**	**+0.7**
ARR				⇓S	**Sn**	**10 09 30.2**	**-0.6**
ARR	**Arges**	**1.22**	**265**	⇓P	**Pn**	**10 09 11.2**	**+0.7**
ARR				⇓S	**Sn**	**10 09 30.2**	**-0.6**
CFR	**Carcaliu**	**1.30**	**104**	⇑P	**Pn**	**10 09 11.6**	**+0.5**
CFR				⇓S	**Sn**	**10 09 30.6**	**-1.4**
CFR	**Carcaliu**	**1.30**	**104**	⇑P	**Pn**	**10 09 11.6**	**+0.5**
CFR				⇓S	**Sn**	**10 09 30.6**	**-1.4**
SGRR	**Singureni**	**1.30**	**192**	⇑P	**Pn**	**10 09 11.7**	**+0.5**
SGRR				⇑S	**Sn**	**10 09 31.4**	**-0.8**
SGRR	**Singureni**	**1.30**	**192**	⇑P	**Pn**	**10 09 11.7**	**+0.5**
SGRR				⇑S	**Sn**	**10 09 31.4**	**-0.8**
GIUM	**Giurgiulesti**	**1.30**	**90**	⇑P	**Pn**	**10 09 11.3**	**+0.1**
GIUM				⇓S	**Sn**	**10 09 32.2**	**+0.1**
GIUM	**Giurgiulesti**	**1.30**	**90**	⇑P	**Pn**	**10 09 11.3**	**+0.1**
GIUM				⇓S	**Sn**	**10 09 32.2**	**+0.1**
HUMR	**Humele**	**1.37**	**226**	⇓P	**Pn**	**10 09 12.4**	**+0.4**
HUMR				⇓S	**Sn**	**10 09 32.4**	**-1.0**
HUMR	**Humele**	**1.37**	**226**	⇓P	**Pn**	**10 09 12.4**	**+0.4**
HUMR				⇓S	**Sn**	**10 09 32.4**	**-1.0**
HARR	**Harsova**	**1.38**	**125**	⇑P	**Pn**	**10 09 12.8**	**+0.8**
HARR	**Harsova**	**1.38**	**125**	⇑P	**Pn**	**10 09 12.8**	**+0.8**
BIZ	**Bicaz**	**1.45**	**353**	⇓P	**Pn**	**10 09 14.0**	**+1.2**
BIZ				⇓S	**Sn**	**10 09 35.3**	**+0.3**
BIZ	**Bicaz**	**1.45**	**353**	⇓P	**Pn**	**10 09 14.0**	**+1.2**
BIZ				⇓S	**Sn**	**10 09 35.3**	**+0.3**
VASR	**Vaslui**	**1.52**	**41**	⇓P	**Pn**	**10 09 14.1**	**+0.7**
VASR				⇑S	**Sn**	**10 09 35.3**	**-0.9**
VASR	**Vaslui**	**1.52**	**41**	⇓P	**Pn**	**10 09 14.1**	**+0.7**
VASR				⇑S	**Sn**	**10 09 35.3**	**-0.9**
TLBR	**Topalu**	**1.53**	**128**	⇑S	**Sn**	**10 09 34.9**	**-1.4**
TLBR	**Topalu**	**1.53**	**128**	⇑S	**Sn**	**10 09 34.9**	**-1.4**
RMVG	**GOVORA**	**1.53**	**253**	⇑S	**Sn**	**10 09 37.2**	**+0.8**
RMVG	**GOVORA**	**1.53**	**253**	⇑S	**Sn**	**10 09 37.2**	**+0.8**
TPGR	**Topolog**	**1.59**	**113**	⇓P	**Pn**	**10 09 14.7**	**+0.4**
TPGR				⇑S	**Sn**	**10 09 36.7**	**-0.9**
TPGR	**Topolog**	**1.59**	**113**	⇓P	**Pn**	**10 09 14.7**	**+0.4**
TPGR				⇑S	**Sn**	**10 09 36.7**	**-0.9**
CVDA	**Cernavoda**	**1.67**	**134**	⇓S	**Sn**	**10 09 38.1**	**-0.8**
CVDA	**Cernavoda**	**1.67**	**134**	⇓S	**Sn**	**10 09 38.1**	**-0.8**
ICOR	**Ion Corvin**	**1.72**	**143**	⇓S	**Sn**	**10 09 39.4**	**-0.6**
ICOR	**Ion Corvin**	**1.72**	**143**	⇓S	**Sn**	**10 09 39.4**	**-0.6**
TLCR		**1.76**	**99**	⇑P	**Pn**	**10 09 16.9**	**+0.8**
TLCR				⇑S	**Sn**	**10 09 40.8**	**0.0**
TLCR		**1.76**	**99**	⇑P	**Pn**	**10 09 16.9**	**+0.8**
TLCR				⇑S	**Sn**	**10 09 40.8**	**0.0**
TIRR	**Tirgusor**	**1.79**	**125**	⇓P	**Pn**	**10 09 17.2**	**+0.8**
TIRR				⇑S	**Sn**	**10 09 40.0**	**-1.3**
TIRR	**Tirgusor**	**1.79**	**125**	⇓P	**Pn**	**10 09 17.2**	**+0.8**
TIRR				⇑S	**Sn**	**10 09 40.0**	**-1.3**
LOT	**Lotru**	**1.82**	**269**	⇓P	**Pn**	**10 09 17.6**	**+0.7**
LOT				⇓S	**Sn**	**10 09 41.6**	**-0.6**
LOT	**Lotru**	**1.82**	**269**	⇓P	**Pn**	**10 09 17.6**	**+0.7**
LOT				⇓S	**Sn**	**10 09 41.6**	**-0.6**
ZIMR		**1.97**	**201**	⇑S	**Sn**	**10 09 43.8**	**-1.3**
ZIMR		**1.97**	**201**	⇑S	**Sn**	**10 09 43.8**	**-1.3**
MFTR	**Murfatlar**	**1.98**	**131**	⇑S	**Sn**	**10 09 44.5**	**-0.6**
MFTR	**Murfatlar**	**1.98**	**131**	⇑S	**Sn**	**10 09 44.5**	**-0.6**
EFOR	**EFORIE**	**2.15**	**130**	⇓S	**Sn**	**10 09 48.6**	**-0.3**
EFOR	**EFORIE**	**2.15**	**130**	⇓S	**Sn**	**10 09 48.6**	**-0.3**
BURAR	**Bucovina Array**	**2.26**	**340**	⇓P	**Pn**	**10 09 23.7**	**+1.7**
BURAR	**Bucovina Array**	**2.26**	**340**	⇓P	**Pn**	**10 09 23.7**	**+1.7**
KIS	**Kishinev**	**2.27**	**48**	⇓*i*P	**Pn**	**10 09 22.9**	**+0.8**
	80nm,0.1s						
KIS				*i* S	**Sn**	**10 09 50.1**	**-1.5**
	130nm,0.3s						
KIS	**Kishinev**	**2.27**	**48**	⇑P	**Pn**	**10 09 23.1**	**+1.0**
KIS				⇓S	**Sn**	**10 09 50.8**	**-0.8**
KIS	**Kishinev**	**2.27**	**48**	⇑P	**Pn**	**10 09 23.1**	**+1.0**
KIS				⇓S	**Sn**	**10 09 50.8**	**-0.8**
SRE	**Strehaia**	**2.38**	**251**	⇓P	**Pn**	**10 09 23.4**	**0.0**
GZR	**Gura Zlata**	**2.52**	**269**	⇑P	**Pn**	**10 09 25.9**	**+0.7**
GZR				⇑S	**Sn**	**10 09 57.3**	**+0.3**
GZR	**Gura Zlata**	**2.52**	**269**	⇑P	**Pn**	**10 09 25.9**	**+0.7**
GZR				⇑S	**Sn**	**10 09 57.3**	**+0.3**
DRGR		**2.85**	**298**	⇓P	**Pn**	**10 09 29.5**	**+0.3**
DRGR		**2.85**	**298**	⇓P	**Pn**	**10 09 29.5**	**+0.3**
HERR	**Herculane**	**2.85**	**259**	⇓P	**Pn**	**10 09 29.1**	**-0.2**
HERR	**Herculane**	**2.85**	**259**	⇓P	**Pn**	**10 09 29.1**	**-0.2**
SORM	**Soroca**	**2.98**	**27**	⇓P	**Pn**	**10 09 31.0**	**+0.3**
SORM	**Soroca**	**2.98**	**27**	⇓P	**Pn**	**10 09 31.0**	**+0.3**
BZS	**Buzias**	**3.33**	**274**	⇑P	**Pn**	**10 09 35.3**	**0.0**
BZS	**Buzias**	**3.33**	**274**	⇑P	**Pn**	**10 09 35.3**	**0.0**
MDVR	**Moldovita**	**3.36**	**259**	⇓P	**Pn**	**10 09 35.8**	**0.0**
MDVR	**Moldovita**	**3.36**	**259**	⇓P	**Pn**	**10 09 35.8**	**0.0**

IDC 03 10:36:19.6±2.3**,27°.24N×98°.07E,h0^{km},mb2.9**/2**,**
mb1 3.3/3**,mb1mx3.1**/30**,mbtmp3.2**/3**,ML4.0**/1**,Error ellipse: s-maj=76.1km s-min=31.5km az=84.0,**
Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.78**	**175**	Pn	Pn	10 38 27.9	0.0
	0.5nm,0.3s,baz=351,slow=16,SNR=12						
CMAR				Sn	Sn	10 40 02.2	-5.5
	0.6nm,0.3s,baz=353,slow=27,SNR=8.1						
SONM	**Songino Array**	**21.56**	**15**	P	P	10 41 11.0	+0.2
	0.7nm,1.1s,baz=196,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**23.14**	**332**	P	P	10 41 27.3	-0.2
	0.4nm,0.7s,baz=151,slow=9.7,SNR=3.1						

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*DJA **03** 10:59:58.4±1.4,3°N±7°×9°4E±°,h10^{km},M4.1/5,MLv4.1/5*
*IDC **03** 11:00:08.8±1.5,2°.65N×95°.25E,h0^{km},mb4.2/7,mb1 4.3/9, mb1mx3.8/52,mbtmp4.2/9,ML4.1/2,MS3.2/1,Ms1 3.4/1, ms1mx2.8/40,Error ellipse: s-maj=52.6km s-min=18.4km az=54.0*

ISC 03 11:00:09.9±1.0**,2°.66N**±0°.08×**95°.00E**±0°.08**,h18**^{km}**,n29,**
σ**3^{s}.07**/26**,mb4.2**/7**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**1.35**	**101**	P	**Pn**	**11 00 31.2**	**-2.6**
SNSI				S	**Sg**	**11 00 55.8**	**+2.3**
MLSI	**Meulaboh, Aceh**	**2.12**	**41**	P	**Pn**	**11 00 41.3**	**-3.2**
MLSI				S	**Sb**	**11 01 14.2**	**+0.3**
TPTI		**2.25**	**75**	P	**Pn**	**11 00 42.3**	**-4.0**
KCSI	**Kotacane, Aceh**	**2.89**	**73**	P	**Pn**	**11 00 53.1**	**-2.0**
GSI	**Gunungsitoli**	**2.90**	**118**	P	**Pg**	**11 01 05.1**	**-0.5**
TSI	**Tuntungan**	**3.65**	**77**	P	**Pg**	**11 01 23.4**	**+3.4**
PSI	**Prapat**	**3.92**	**88**	Pn	**Pn**	**11 01 07.5**	**-1.9**
	4.3nm,0.3s,baz=356,slow=1.4,SNR=17						
CM05	**Chiang Mai Arr**	**16.11**	**14**	P	**Pn**	**11 03 52.0**	**-3.7**
	0.0nm80nm11nm,0.9s						
CM04	**Chiang Mai Arr**	**16.12**	**14**	P	**Pn**	**11 03 51.0**	**-4.7**
	0.1nm174nm22nm,0.8s						
CM13	**Chiang Mai Arr**	**16.12**	**13**	P	**Pn**	**11 03 54.0**	**-1.8**
CM01	**Chiang Mai Arr**	**16.13**	**14**	P	**Pn**	**11 03 51.1**	**-4.8**
	0.1nm165nm19nm,0.8s						
CM02	**Chiang Mai Arr**	**16.14**	**14**	P	**Pn**	**11 03 51.0**	**-5.1**
	0.0nm90nm10nm,0.7s						
CM15	**Chiang Mai Arr**	**16.16**	**13**	P	**Pn**	**11 03 52.1**	**-4.1**
	0.0nm132nm10nm,0.8s						
CM09	**Chiang Mai Arr**	**16.16**	**14**	P	**Pn**	**11 03 51.0**	**-5.3**
	0.0nm130nm16nm,0.8s						
CM31	**Chiang Mai Arr**	**16.17**	**14**	P	**Pn**	**11 03 57.0**	**+0.7**
	1.2nm256nm,0.4s						
CMAR	**Chiang Mai Arr**	**16.17**	**14**	Pn	**P**	**11 03 58.5**	**-1.0**
	0.5nm,0.3s,baz=204,slow=11,SNR=11						
CMAR				LR	LR	11 10 44.1	
	comp=Z,78nm,18.4s,baz=254,slow=39						
H08S2	**Diego Garcia H**	**24.68**	**245**	T	T	11 31 41.8	
	baz=66,slow=76,SNR=484						
H08S3	**Diego Garcia H**	**24.68**	**245**	T	T	11 31 41.9	
	baz=66,slow=76,SNR=475						
H08S1	**Diego Carcia H**	**24.70**	**245**	T	T	11 31 43.2	
	baz=66,slow=76,SNR=342						
FITZ	**Fitzroy Crossi**	**36.56**	**126**	P	**P**	**11 07 13.6**	**-1.4**
	3.1nm,1.0s,baz=293,slow=7.7,SNR=1.7						
H01W3	**Cape Leeuwin H**	**41.44**	**156**	T	T	11 52 02.0	
	baz=332,slow=76,SNR=32						
H01W2	**Cape Leeuwin H**	**41.45**	**156**	T	T	11 52 02.9	
	baz=332,slow=76,SNR=40						
H01W1	**Cape Leeuwin H**	**41.46**	**156**	T	T	11 52 03.2	
	baz=332,slow=76,SNR=36						
WRA	**Warramunga Arr**	**44.67**	**122**	P	**P**	**11 08 22.2**	**+0.2**
	0.8nm,0.8s,baz=301,slow=9.1,SNR=5.2						
MKAR	**Makanchi Array**	**45.33**	**348**	P	**P**	**11 08 29.1**	**+2.2**
	3.2nm,0.6s,baz=165,slow=7.7,SNR=59						
ASAR	**Alice Springs**	**46.02**	**127**	P	**P**	**11 08 33.3**	**+0.5**
	0.6nm,0.9s,baz=292,slow=6.8,SNR=3.4						
SONM	**Songino Array**	**46.06**	**11**	P	**P**	**11 08 33.3**	**+0.5**
	2.1nm,0.7s,baz=188,slow=9.2,SNR=17						
SONM				PcP	**PcP**	**11 10 11.3**	**+2.2**
	0.4nm,0.7s,baz=186,slow=4.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.80**	**352**	P	**P**	**11 09 18.6**	**+2.0**
	7.3nm,0.5s,baz=182,slow=7.0,SNR=42						
FINES	**FINESS Array B**	**77.70**	**333**	P	**P**	**11 12 08.0**	**+2.7**
	8.7nm,1.1s,baz=142,slow=7.2,SNR=4.5						

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*JMA **03** 11:05:08.1,32°.85N×132°.50E,h29^{km},M3.4*
JMA Felt I J1.
*IDC **03** 11:05:11.3±1.7,33°.24N×132°.35E,h92^{km}±18^{km},mb3.0/3, mb1 3.2/4,mb1mx2.9/43,mbtmp3.3/4,Error ellipse: s-maj=30.7km s-min=21.8km az=152.0*

ISC 03 11:05:06.9±1.2**,32°.83N**±0°.05×**132°.47E**±0°.03**,h17**^{km}±11^{km}**,**
n13,σ**1^{s}.12**/20**,mb3.5**/3**,3C-3D,Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTO	**Tosashimizu**	**0.28**	**84**	⇓P	**Pb**	**11 05 14.7**	**+1.2**
JTO				*e*S	**Sb**	**11 05 19.5**	**+1.6**
UWA2	**Uwa jima 2**	**0.40**	**19**	⇓P	**Pb**	**11 05 16.3**	**+0.7**
UWA2				*e*S	**Sb**	**11 05 22.3**	**+0.8**
JSKE	**Saikikamae**	**0.48**	**266**	⇑P	**Pn**	**11 05 18.4**	**-0.6**
JSKE				*e*S	**Sb**	**11 05 25.8**	**+2.1**
JUS	**Usuki**	**0.65**	**291**	⇑P	**Pb**	**11 05 20.8**	**+1.0**
JUS				*e*S	**Sb**	**11 05 30.2**	**+1.6**
JKU	**Kubokawa**	**0.69**	**46**	⇑P	**Pb**	**11 05 20.8**	**+0.3**
JKU				*e*S	**Sg**	**11 05 29.8**	**+0.2**
JNA	**Nagahama**	**0.72**	**0**	⇓P	**Pb**	**11 05 21.4**	**+0.3**
JNA				*e*S	**Sb**	**11 05 30.9**	**+0.2**
JTSN	**Tsuno**	**1.01**	**235**	P	**Pg**	**11 05 26.0**	**-0.4**
JTSN				*e*S	**Sb**	**11 05 39.2**	**+0.4**
JET	**Tanbara**	**1.06**	**27**	P	**Pg**	**11 05 26.4**	**-1.1**
JNU	**Nakatsue**	**1.37**	**283**	P	**Pg**	**11 05 33.1**	**-0.2**
	19nm,0.3s,baz=83,slow=8.1,SNR=112						
JNU				S	**Sg**	**11 05 51.2**	**-0.1**
	52nm,0.3s,baz=3.6,slow=1.5,SNR=17						
MJAR	**Matsushiro Arr**	**6.00**	**50**	P	**Pn**	**11 06 35.7**	**+0.7**
	0.1nm,0.3s,baz=242,slow=14,SNR=10						
SONM	**Songino Array**	**24.74**	**315**	P	P	11 10 20.9	-6.6
	0.1nm,0.3s,baz=123,slow=7.6,SNR=2.1						
WRA	**Warramunga Arr**	**52.51**	**178**	P	**P**	**11 14 17.4**	**-1.8**
	0.6nm,0.9s,baz=354,slow=8.3,SNR=2.6						
ASAR	**Alice Springs**	**56.20**	**178**	P	**P**	**11 14 45.0**	**-1.0**

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      0.5nm,0.7s,baz=13,slow=8.7,SNR=6.4
```

IDC 03 11:06:17.1±2.8**, 18°.56S×177°.96W, h534km**±22km**, mb2.8**/3**, mb1 3.0**/4**, mb1mx2.7**/35**, mbtmp3.7**/4**, Error ellipse: s-maj=44.1km s-min=35.4km az=74.0, Fiji Islands region**

```
Code   Station Name          Δ°   AZ°   Phase ID              Time      Res
                                        Op       ISC        h  m  s     ISC
MSVF   Nonsavu             3.88  282    P        P          11 07 37.0  -0.1
       1.9nm,0.3s,baz=112,slow=11,SNR=9.7
URZ    Urewera            20.09  191    P        P          11 10 14.6   0.0
       0.9nm,0.3s,baz=17,slow=9.8,SNR=1.1
WRA    Warramunga Arr     44.93  260    P        P          11 13 44.0  -0.7
       0.3nm,0.5s,baz=99,slow=6.7,SNR=8.2
ASAR   Alice Springs      45.03  255    P        P          11 13 45.6  +0.3
       1.2nm,0.5s,baz=90,slow=8.9,SNR=43
GERES  GERESS Array B    148.35  345    PKPbc    PKPbc      11 25 02.7  -0.6
       0.3nm,0.4s,baz=73,slow=4.3,SNR=1.9
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*BGR **03** 12:01:00.7±0.0, 65°.41N×20°.88W, h33km, mb4.5*
*REY **03** 12:01:11.7, 64°.67N×17°.49W, h8km*
*IDC **03** 12:01:12.8±0.7, 64°.61N×17°.68W, h0km, mb3.7/15, mb1 4.0/16, mb1mx3.7/59, mbtmp3.8/16, ML4.2/1, MS3.6/10, Ms1 3.6/10, ms1mx3.2/57, Error ellipse: s-maj=24.2km s-min=13.5km az=30.0*
*NEIC **03** 12:01:13.7±2.6, 64°.65N±0°.05×17°.8W±0°.2, h7km±5km, mb4.3/17, Error ellipse: s-maj=10.8km s-min=6.8km az=101.0*
ISC 03 12:01:13.7±0.5**, 64°.58N**±0°.04×**17°.76W**±0°.04**, h10km, n112, σ1s.54**/85**, mb4.1**/36**, MS3.5**/8**, Iceland**

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Code   Station Name          Δ°   AZ°   Phase ID              Time      Res
                                        Op       ISC        h  m  s     ISC
IHAM   Hamarinn            0.10  196    P        Pg         12 01 16.5   0.0
       baz=217
ISKR   Skrokkalda          0.27  267    P        Pg         12 01 19.1  -0.1
       baz=254
IDYN   Dyngjuhals          0.27   38    P        Pg         12 01 14.7  -4.6
       baz=24
IJOK   Jokulheimar         0.33  218    P        Pg         12 01 20.5  +0.2
       baz=222
IURH   Urdarhals           0.36   47    P        Pg         12 01 16.0  -4.8
       baz=44
IKVE   Kverkfjoll          0.48   77    P        Pg         12 01 19.0  -4.1
       baz=88
IIEY   Innrieyrar          0.51  198    P        Pb         12 01 23.1  -1.6
       baz=206
THOR   Thorvaldshraun      0.59   52    P        Pg         12 01 19.8  -5.3
       baz=52
IKRE   Kreppuhraun         0.63   70    P        Pg         12 01 20.4  -5.4
       baz=76
IKAL   Kalfafell           0.63  177    P        Pg         12 01 24.6  -1.3
       baz=187
IASK   Askja               0.67   44    P        Pg         12 01 21.6  -5.1
       baz=43
IKSK   Karasker            0.70  126    P        Pg         12 01 23.6  -3.6
       baz=139
IMKO   Mokollar            0.73   56    P        Pg         12 01 22.1  -5.6
       baz=57
ISVA   Svartarkot          0.79   15    P        Pg         12 01 23.8  -5.2
       baz=8.5
IHVE   Hveravellir         0.83  292    P        Pg         12 01 27.8  -1.9
       baz=284
IFAG   Fagurholsmyri       0.85  145    P        Pg         12 01 27.3  -2.8
       baz=155
IVSH   V-Sauoahnukur       0.90   74    P        Pg         12 01 25.1  -6.0
       baz=79
ISNB   Snabyli             0.93  205    P        Pb         12 01 30.6  -1.3
       baz=208
IFED   Fedgar              1.01  237    P        Pn         12 01 32.3  -1.6
       baz=237
IADA   Aoalbol             1.03   64    P        Pb         12 01 27.6  -6.1
       baz=66
IRJU   Rjupnafell          1.04  203    P        Pb         12 01 32.6  -1.2
       baz=207
IMJO   Mjoaskard           1.06  233    P        Pn         12 01 33.1  -1.5
       baz=233
IMEL   Melhnausar          1.10   25    P        Pn         12 01 28.7  -6.5
       baz=21
IGYG   Gygjarholskot       1.11  255    P        Pb         12 01 33.5  -1.4
       baz=253
IREN   Reynihlio           1.13   18    P        Pn         12 01 29.9  -5.8
       baz=14
IHAU   Haukadalur          1.14  239    P        Pn         12 01 34.2  -1.4
       baz=238
IHVO   Lagu-Hvolar         1.16  205    P        Pb         12 01 34.5  -1.3
       baz=208
IKVO   Krokottuvotn        1.20   18    P        Pn         12 01 30.9  -5.6
       baz=14
IALF   Alftagrof           1.26  211    P        Pn         12 01 36.2  -1.1
       baz=213
IGRS   Grimsstaoir         1.27   32    P        Pn         12 01 31.4  -6.1
       baz=30
IESK   Eystri-Skogar       1.29  216    P        Pn         12 01 37.0  -0.8
       baz=218
ISAU   Saurbar             1.30  244    P        Pn         12 01 36.6  -1.3
       baz=243
IMID   Miomork             1.31  226    P        Pg         12 01 37.6  -1.2
       baz=227
ISKI   Skildingahlsh       1.33   13    P        Pn         12 01 32.8  -5.5
       baz=9.0
IGRA   Granastaoir         1.35    3    P        Pn         12 01 33.9  -4.7
       baz=358
IGHA   Grjothals           1.35   19    P        Pn         12 01 32.9  -5.7
       baz=16
IDIM   Dimmadalss          1.43   14    P        Pn         12 01 34.6  -5.1
       baz=10
IASM   Asmuli              1.46  240    P        Pg         12 01 39.5  -2.1
       baz=240
IHED   Heoinshofoi         1.52    7    P        Pn         12 01 36.1  -4.8
       baz=3.0
IHED                                    S        Sn         12 01 55.9  -4.8
       baz=3.0
ISOL   Solvholt            1.54  246    P        Pb         12 01 40.4  -1.8
       baz=245
IKRO   Krokur              1.54  253    P        Pn         12 01 40.0  -1.1
       baz=252
BORG   Borgarnes           1.54  278             Pn         12 01 40.0  -1.2
IBRE   Brettingsstaoi      1.55  358    P        Pn         12 01 37.2  -4.2
       baz=353
IHEI   Heioarbar           1.56  257    P        Pn         12 01 40.2  -1.2
       baz=256
IGIL   Gilhagi             1.62   21    P        Pn         12 01 37.1  -5.1
       baz=18
ISIG   Siglufjorour        1.64  343    P        Pn         12 01 38.7  -3.7
       baz=339
ISAN   Sandskeio           1.74  254    P        Pn         12 01 43.0  -0.9
       baz=253
ILEI   Leirhofn            1.91   15    P        Pn         12 01 41.8  -4.4
       baz=13
SCO    Scoresbysund        6.14  347    Pn       Pn         12 02 42.0  -2.4
SCO    Scoresbysund        6.14  347    e        Pn         12 02 38.6  -5.8
       baz=166,slow=9.3
SCO                                     i P      Pn         12 02 42.0  -2.4
SCO                                     eS       Sn         12 03 55.0  +0.5
SCO                                     IAML                12 04 03.5
       comp=Z,2.0nm,0.4s
EKA    Eskdalemuir Ar     11.77  135    Pn       Pn         12 04 01.1  -0.4
       baz=322,slow=13,SNR=11
ESK    Eskdalemuir        11.77  135    Pn       Pn         12 04 02.0  +0.5
DAG    Danmarks Havn      12.26  359    i P      Pn         12 04 10.1  +2.1
DAG    Danmarks Havn      12.26  359    i P      Pn         12 04 10.2  +2.1
SFJD   Kangerlussuaq      13.60  295    LR       LR         12 09 23.5
       comp=Z,262nm,18.8s,baz=84,slow=36
NOA    NORSAR Array B     13.64   92    LR       LR         12 09 01.5
       comp=Z,113nm,18.9s,baz=315,slow=34
CLL    Collm              20.77  115    i P      P          12 05 56.1  +1.7
       comp=Z,33nm,1.6s
GRF    Grafenberg Arr     21.38  120    eP       P          12 06 01.7  +0.6
       comp=Z,26nm,1.6s,baz=324,slow=10
BRG    Berggiesshubel     21.48  115    e(P)     P          12 06 03.9  +1.8
BRG                                     Amp                 12 06 05.7
       comp=Z,12nm,1.2s
BRG    Berggiesshubel     21.48  115    e(P)     P          12 06 03.9  +1.8
BRG                                     Amp                 12 06 05.7
       comp=Z,12nm,1.2s
FRB    Frobisher Bay      21.68  291    P        P          12 06 04.8  +0.7
       comp=Z,2.0nm,0.9s,baz=37,slow=10.0,SNR=3.5
KHC    Kasperske Hory     22.73  118    eP       P          12 06 15.6  +0.1
DPC    Dobruska-Polom     22.83  112    eP       P          12 06 17.2  +0.6
DAVA   Damuels            22.92  126    eP       P          12 06 22.2  +4.5
       comp=Z,14nm,1.4s
GERES  GERESS Array B     23.01  118    P        P          12 06 18.9  +0.4
       comp=Z,0.8nm,0.8s,baz=325,slow=8.4,SNR=4.9
GERES                                   LR       LR         12 15 54.4
       comp=Z,172nm,20.7s,baz=328,slow=38
RETA   Reutte             23.06  124    eP       P          12 06 19.1  +0.1
       comp=Z,2.6nm,0.9s
MOTA   Moosalm            23.30  124    eP       P          12 06 23.6  +2.1
       comp=Z,23nm,1.8s
DAVOX  Davos/Dischmat     23.36  126    LR       LR         12 16 32.1
       comp=Z,148nm,19.4s,baz=276,slow=39
FETA   Feichten           23.45  125    eP       P          12 06 24.6  +1.6
       comp=Z,5.4nm,1.4s
SQTA   Sankt Quirin       23.45  124    eP       P          12 06 25.8  +2.8
       comp=Z,17nm,1.5s
WATA   Walderalm          23.48  123    eP       P          12 06 24.9  +1.6
       comp=Z,10nm,1.2s
WTTA   Wattenberg         23.56  123    eP       P          12 06 25.5  +1.3
       comp=Z,14nm,1.2s
EUNU   Eureka             23.71  336    P        P          12 06 25.9  +0.7
VRAC   Vranov             23.76  114    P        P          12 06 27.3  +1.4
       comp=Z,1.4nm,0.6s,baz=342,slow=12,SNR=3.3
VRAC                                    LR       LR         12 17 27.4
       comp=Z,170nm,18.6s,baz=328,slow=41
MOA    Molln              24.05  119    eP       P          12 06 31.4  +2.7
       comp=Z,7.9nm,1.6s
ABTA   Abfaltersbach      24.32  123    eP       P          12 06 32.7  +1.4
       comp=Z,5.6nm,1.2s
KBA    Koelnbreinsper     24.34  121    eP       P          12 06 32.2  +0.6
       comp=Z,7.3nm,1.6s
CONA   Conrad Observa     24.59  117    eP       P          12 06 33.8  +0.1
       comp=Z,8.2nm,1.3s
CTI    Castel Tesino      24.61  125    P        P          12 06 34.6  +0.7
CTI                                     IAmb     IAmb       12 06 43.9
       comp=Z,6.3nm,1.1s
ZOU    Zoufplan           24.65  122             P          12 06 34.8  +0.4
ZOU                                     IAmb     IAmb       12 06 39.5
       comp=Z,6.4nm,1.3s
ARSA   Arzberg            25.02  118    eP       P          12 06 38.4  +0.9
       comp=Z,1.2nm,0.5s
OBKA   Obir               25.27  120    eP       P          12 06 43.5  +3.7
       comp=Z,4.6nm,1.4s
ESDC   Sonseca Array      26.22  155    P        P          12 06 49.5  +1.0
       comp=Z,1.4nm,0.9s,baz=348,slow=8.6,SNR=8.6
ESDC                                    LR       LR         12 17 05.8
       comp=Z,109nm,18.1s,baz=330,slow=36
KOLS   Kolonicke sedl     26.36  107    eP       P          12 06 47.5  -2.1
BELG   Belogornoye        34.61   79    LR       LR         12 21 08.8
       comp=Z,90nm,19.6s,baz=176,slow=35
ARU    Arti               36.22   66    P        P          12 08 15.7  -0.5
       comp=Z,0.4nm,0.3s,baz=233,slow=10,SNR=3.1
ARU    Arti               36.22   66    P        P          12 08 15.1  -1.1
NRIK   Noril'sk           36.60   35    P        P          12 08 18.1  -1.2
BRTR   Keskin Array B     38.56  105    P        P          12 08 37.6  +1.2
       comp=Z,0.7nm,0.6s,baz=321,slow=6.2,SNR=2.3
YKA    Yellowknife Ar     39.19  313    P        P          12 08 41.7  +0.4
       comp=Z,1.0nm,1.0s,baz=40,slow=8.9,SNR=8.9
YKA                                     LR       LR         12 23 45.7
       comp=Z,81nm,20.9s,baz=0.0,slow=34
KBZ    Khabaz             39.22   92    LR       LR         12 25 57.0
       comp=Z,71nm,20.2s,baz=335,slow=38
INK    Inuvik             39.86  329    LR       LR         12 24 19.4
       comp=Z,77nm,19.8s,baz=36,slow=35
AKTO   Aktyubinsk         40.42   73    P        P          12 08 52.2  +0.6
       comp=Z,1.7nm,0.9s,baz=281,slow=9.8,SNR=4.1
A21K   Barrow             41.48  341    P        P          12 09 01.2  +1.2
ABKAR  Akbulak array      42.12   73    P        P          12 09 05.2  -0.4
TIXI   Tiksi              42.15   15    P        P          12 09 06.3  +0.8
TIXI                                    IAmb     IAmb       12 09 07.8
       comp=Z,6.1nm,1.1s
TOLK   Toolik Lake Re     42.78  336    P        P          12 09 11.2  +0.4
ILAR   Eielson Array      45.71  332    P        P          12 09 35.5  +1.3
       comp=Z,2.8nm,1.2s,baz=36,slow=4.8,SNR=10
ILAR                                    PcP      PcP        12 11 12.1  +0.2
       comp=Z,0.9nm,0.9s,baz=1.6,slow=2.7,SNR=5.3
ZALV   Zalesovo Beam      47.78   51    P        P          12 09 50.0  -0.5
       comp=Z,0.9nm,0.8s,baz=311,slow=9.4,SNR=2.5
BOZ    Bozeman (W)        51.55  297    P        P          12 10 20.6  +1.0
BOZ                                     IAmb     IAmb       12 10 22.2
       comp=Z,7.4nm,1.3s
H17A   Grant Village      52.14  295    P        P          12 10 25.5  +1.4
H17A                                    IAmb     IAmb       12 10 29.8
       comp=Z,6.2nm,1.2s
MK31   Makanchi Array     52.87   58    P        P          12 10 28.2  -1.0
MKAR   Makanchi Array     52.87   58    P        P          12 10 28.8  -0.3
       comp=Z,0.6nm,0.8s,baz=332,slow=6.9,SNR=5.7
TORD   Torodi Ar. Bea     53.10  156    P        P          12 10 31.1   0.0
       comp=Z,1.4nm,0.9s,baz=337,slow=6.8,SNR=4.8
PD31   Pinedale Array     53.11  293    P        P          12 10 31.4  +0.2
PD31                                    IAmb     IAmb       12 10 32.9
       comp=Z,6.4nm,1.1s
PDAR   Pinedale Array     53.11  293    P        P          12 10 32.0  +0.7
       comp=Z,1.9nm,0.9s,baz=59,slow=7.1,SNR=12
BW06   Boulder Array      53.11  293    P        P          12 10 31.3   0.0
DUG    Dugway, Tooele     56.58  294    P        P          12 10 57.6  +1.3
DUG                                     IAmb     IAmb       12 10 59.4
       comp=Z,4.8nm,1.3s
MSU    Marysvale          57.77  292    P        P          12 11 05.5  +0.6
NVAR   Mina Array Bea     60.24  297    P        P          12 11 22.3  +0.3
       comp=Z,0.1nm,0.4s,baz=37,slow=6.1,SNR=3.5
SHPR   Sheep Range        60.69  294    P        P          12 11 27.0  +2.0
SHPR                                    IAmb     IAmb       12 11 28.3
       comp=Z,4.4nm,1.3s
CMAR   Chiang Mai Arr     84.27   58    P        P          12 13 46.0  +0.6
       comp=Z,0.4nm,0.3s,baz=334,slow=6.0,SNR=4.8
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*IDC **03** 12:10:58.6±0.6, 17°.47N×83°.69W, h0km, mb4.2/20, mb1 4.3/24, mb1mx4.3/41, mbtmp4.2/24, ML3.8/4, MS3.4/8, Ms1 3.4/8, ms1mx3.1/46, Error ellipse: s-maj=21.2km s-min=12.7km az=58.0*
*NEIC **03** 12:10:59.5±2.4, 17°.52N±0°.06×83°.73W±0°.07, h10km±1km, mb4.3/71, Error ellipse: s-maj=11.2km s-min=10.3km az=302.0*
ISC 03 12:11:00.6±0.4**, 17°.46N**±0°.05×**83°.74W**±0°.05**, h18km, n161, σ1s.91**/156**, mb4.3**/33**, MS3.6**/4**, North of Honduras**

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Code   Station Name          Δ°   AZ°   Phase ID              Time      Res
                                        Op       ISC        h  m  s     ISC
FSCY   Frank Sound, G      3.05   52    Pn       Pn         12 11 48.4  +0.5
FSCY                                    Sn       Sn         12 12 23.0  -0.9
LCCY   Blossom Villag      4.10   57    Pn       Pn         12 12 00.9  -1.5
LCCY                                    Sn       Sn         12 12 46.9  -3.1
CBCY   The Bluff, Cay      4.40   58    Pn       Pn         12 12 06.8  +0.3
PRVC   Isla de Provid      4.66  150    eP       Pn         12 12 09.2  -0.9
TGUH   Tegucigalpa,Un      4.80  226    Pn       Pn         12 12 13.0  +0.9
TEIG   Tepich              5.10  303    Pn       Pn         12 12 15.4  -0.7
ESPN   Las Esperanzas      5.26  186             Pn         12 12 19.4  +1.0
ACON   Acoyapa             5.63  194             Pn         12 12 24.6  +1.1
PETF   Flores              5.88  266             Pn         12 12 26.6  -0.3
MTDJ   Mount Denham        5.96   82    Pn       Pn         12 12 27.8  -0.2
ESQI   Esquipulas          6.11  243    Pn       Pn         12 12 31.4  +1.3
MTO3   Montecristo         6.21  241             Pn         12 12 32.7  +1.2
JTS    Las Juntas de       7.22  190    Pn       Pn         12 12 46.2  +0.8
       2.4nm,0.3s,baz=340,slow=22,SNR=6.6
JTS                                     Lg       Lg         12 14 47.1
       2.1nm,0.3s,baz=257,slow=21,SNR=4.4
JTS    Las Juntas de       7.22  190             Pn         12 12 46.0  +0.6
CCIG   Comitan             8.13  263             Pn         12 12 59.2  +1.3
GTBY   Guantanamo Bay      8.54   72    Pn       Pn         12 13 04.2  +0.9
061Z   Ochoppi             8.77   17             Pn         12 13 06.4  -0.1
060A   Indiantown         10.03   18    Pn       Pn         12 13 24.9  +1.1
CMIG   Matias Romero      10.65  270    Pn       Pn         12 13 31.9  -0.5
       0.5nm,0.3s,baz=62,slow=8.1,SNR=6.4
CMIG                                    Sn       Sn         12 15 23.5  -7.8
       0.3nm,0.3s,baz=348,slow=22,SNR=1.4
CMIG                                    LR       LR         12 17 41.5
       comp=Z,159nm,18.8s,baz=86,slow=38
SJCC   San Jacinto, C     11.21  131    eP       Pn         12 13 38.5  -1.6
656A   Willston           11.90    5    Pn       Pn         12 13 49.0  -0.4
UREC   San Jos de Ur      12.54  139    eP       Pn         12 13 54.8  -3.4
SMLC   San Martn de       12.75  131    eP       Pn         12 13 58.8  -2.3
ZARC   Zaragoza, Cauc     13.16  138    eP       Pn         12 14 03.4  -3.3
451A   Vernon             13.22  352    Pn       Pn         12 14 07.0  -0.5
OCAC   Ocana              13.68  131    eP       Pn         12 14 11.2  -2.7
352A   Blakely            14.00  356    Pn       Pn         12 14 17.9  -0.2
PTBC   PUERTO BERRIO,     14.14  139    eP       Pn         12 14 18.0  -2.1
TLIG   Tlapa              14.15  273    Pn       Pn         12 14 20.0  -0.3
255A   Hazlehurst         14.45    4             Pn         12 14 24.4  +0.2
PLMC   San Jos del P      14.46  149    eP       P          12 14 32.6  +1.4
250A   Grady              14.63  351             Pn         12 14 25.2  -1.6
NORC   Norcasia           14.67  143    eP       P          12 14 36.3  +2.8
BARC   Barichara          14.93  135    eP       Pn         12 14 29.3  -1.8
RREF   El Recreo          14.94  146    eP       P          12 14 39.9  +2.7
152A   Waverly Hall       15.17  357             Pn         12 14 32.0  -1.9
TOLC   Tolima             15.22  146    eP       P          12 14 43.9  +3.9
344A   Westbrook Farm     15.31  337    Pn       Pn         12 14 36.5  +0.7
344A                                    IAmb     IAmb       12 14 49.2
       comp=Z,27nm,0.9s
SDV    Santo Domingo      15.34  122    Pn       Pn         12 14 34.4  -2.0
       comp=Z,2.2nm,0.3s,baz=332,slow=7.5,SNR=11
SDV                                     Sn       Sn         12 17 15.6  -10
       comp=Z,0.5nm,0.3s,baz=326,slow=23,SNR=1.7
SDV                                     LR       LR         12 21 25.9
       comp=Z,112nm,19.1s,baz=76,slow=41
SDV    Santo Domingo      15.34  122    Pn       Pn         12 14 34.4  -2.0
SDV                                     IAmb     IAmb       12 14 46.0
       comp=Z,12nm,0.7s
SDV    Santo Domingo      15.34  122    eP       Pn         12 14 32.9  -3.5
RUSC   La Rusia           15.52  137    eP       Pn         12 14 38.9  -0.2
ROSC   El Rosal           15.57  143    LR       LR         12 21 25.4
       comp=Z,103nm,19.3s,baz=219,slow=40
LRAL   Lakeview Retre     15.78  350    Pn       Pn         12 14 39.0  -3.0
LRAL                                    IAmb     IAmb       12 14 49.4
       comp=Z,20nm,1.0s
Z51A   Franklin           15.84  356             Pn         12 14 40.9  -1.8
Z51A                                    IAmb     IAmb       12 14 45.9
       comp=Z,13nm,0.7s
GOGA   Godfrey            15.88    1    Pn       Pn         12 14 42.7  -0.6
CHIC   Chingaza           16.08  141    eP       P          12 14 49.7  +0.1
Z47A   Carrollton         16.15  347             Pn         12 14 46.2  -0.5
Z47A                                    IAmb     IAmb       12 14 56.4
       comp=Z,16nm,0.7s
Y52A   Lilburn            16.34  359             Pn         12 14 48.7  -0.4
Y49A   Blount Mountai     16.50  352             P          12 14 52.1  -1.7
143A   Socs Landing,      16.68  337             Pn         12 14 52.1  -1.3
143A                                    IAmb     IAmb       12 14 54.7
       comp=Z,34nm,1.0s
HODGE  Hodges             16.75    4             Pn         12 14 54.2  -0.1
SJG    San Juan           16.77   85    LR       LR         12 20 40.4
       comp=Z,42nm,18.9s,baz=264,slow=35
FPAL   Fort Paine         17.09  355             Pn         12 14 58.2  -0.5
FPAL                                    IAmb     IAmb       12 15 13.9
       comp=Z,16nm,0.9s
X48A   Hartselle          17.18  351    P        Pn         12 14 59.6   0.0
BIRD   Birdtown, Kers     17.36    9    Pn       Pn         12 15 01.3  -0.7
BG3    Lake Jocassee      17.48    2             Pn         12 15 02.3  -1.1
W52A   Murphy             17.56  359             Pn         12 15 01.8  -2.7
W52A                                    IAmb     IAmb       12 15 07.4
       comp=Z,13nm,0.7s
Z41A   Richland Creek     17.72  334    P        Pn         12 15 05.8  -0.6
Z41A                                    IAmb     IAmb       12 15 14.1
       comp=Z,30nm,1.2s
OXF    Oxford             17.72  344             Pn         12 15 05.0  -1.5
W50A   Signal Mountai     17.72  356             Pn         12 15 05.3  -1.2
W50A                                    IAmb     IAmb       12 15 10.1
       comp=Z,30nm,1.2s
SWET   Sewanee            17.79  354             Pn         12 15 04.2  -3.2
SWET                                    IAmb     IAmb       12 15 09.8
       comp=Z,27nm,1.4s
OTAV   Otavalo            17.89  163             Pn         12 15 06.8  -2.2
OTAV   Otavalo            17.89  163    eP       P          12 15 13.2  +3.5
OTAV   Otavalo            17.89  163    eP       P          12 15 13.1  +3.5
833A   Chaparral WMA,     18.00  310             Pn         12 15 08.3  -1.7
833A                                    IAmb     IAmb       12 15 13.9
       comp=Z,19nm,0.8s
TKL    Tuckaleechee C     18.12  360    P        P          12 15 12.7  +1.0
       comp=Z,0.6nm,0.3s,baz=177,slow=14,SNR=7.5
TKL    Tuckaleechee C     18.12  360             Pn         12 15 08.6  -2.8
X43A   Marvell            18.15  341    P        Pn         12 15 10.4  -1.3
X43A                                    IAmb     IAmb       12 15 16.1
       comp=Z,30nm,1.0s
V53A   Saluda             18.15    2             Pn         12 15 09.2  -2.7
V48A   Smith Brothers     18.41  352             P          12 15 12.3  -2.5
V48A                                    IAmb     IAmb       12 15 16.9
       comp=Z,16nm,0.8s
ZAIG   Zacatecas          18.45  290    P        P          12 15 13.4  -2.2
X40A   Basin Creek Fa     18.81  336    P        P          12 15 16.8  -2.4
WVT    Waverly            18.95  350             P          12 15 16.5  -4.2
WVT                                     IAmb     IAmb       12 15 23.2
       comp=Z,44nm,1.4s
U49A   Red Boiling Sp     19.06  355    P        P          12 15 20.4  -1.6
WHTX   Lake Whitney,      19.06  322    P        P          12 15 21.0  -1.0
WHTX                                    IAmb     IAmb       12 15 31.5
       comp=Z,18nm,0.6s
MIAR   Mount Ida          19.15  335             P          12 15 22.3  -0.6
MIAR                                    IAmb     IAmb       12 15 30.1
       comp=Z,22nm,1.3s
W41B   Gary Mavity, V     19.20  338    P        P          12 15 21.9  -1.6
JCT    Junction City      19.55  314             P          12 15 27.2  -0.2
JCT                                     IAmb     IAmb       12 15 45.4
       comp=Z,10.0nm,0.6s
LCAR   Lake Charles       19.67  342    P        P          12 15 28.4  -0.2
W39A   Magazine           19.80  335    P        P          12 15 29.4  -0.6
T45A   Paducah            19.96  348    P        P          12 15 30.9  -0.9
X37A   Clayton            19.98  331    P        Pn         12 15 32.8  -0.9
X37A                                    IAmb     IAmb       12 15 42.0
       comp=Z,13nm,1.1s
PBMO   Poplar Bluff       20.13  344    P        Pn         12 15 34.9  -0.7
PBMO                                    IAmb     IAmb       12 15 39.4
       comp=Z,13nm,0.9s
T59A   Double "B" Far     20.19   14    P        P          12 15 34.2   0.0
T59A                                    IAmb     IAmb       12 15 41.5
       comp=Z,7.9nm,0.7s
U40A   Yellville          20.48  339    P        P          12 15 32.7  -4.8
U40A                                    IAmb     IAmb       12 15 47.2
       comp=Z,9.6nm,0.8s
T42A   Van Buren          20.55  343    P        Pn         12 15 39.2  -1.1
T42A                                    IAmb     IAmb       12 15 45.2
       comp=Z,20nm,1.1s
USIN   University of      20.72  351    P        Pn         12 15 40.9  -1.5
S44A   Carbondale         20.73  348    P        P          12 15 40.7  +0.5
SIUC   Southern Illin     20.74  348    P        P          12 15 40.5  +0.2
R49A   Shelbyville        20.79  357    P        Pn         12 15 42.2  -1.0
R49A                                    IAmb     IAmb       12 15 51.1
       comp=Z,11nm,0.9s
WCI    Wyandotte Cave     20.81  354             P          12 15 40.7  -0.3
WCI                                     IAmb     IAmb       12 15 45.7
       comp=Z,24nm,0.9s
ABTX   Abilene, Hawle     20.83  319    P        P          12 15 41.7  +0.4
ABTX                                    IAmb     IAmb       12 15 48.2
       comp=Z,12nm,0.9s
MGMO   Mountain Grove     21.01  341             P          12 15 42.8  -0.4
MGMO                                    IAmb     IAmb       12 15 58.8
       comp=Z,16nm,1.3s
U38A   Gravette           21.12  336    P        P          12 15 44.3  -0.1
FVM    French Village     21.27  345    P        P          12 15 43.5  -2.5
FVM                                     IAmb     IAmb       12 15 53.8
       comp=Z,24nm,1.1s
Q51A   Peebles            21.49    1    P        P          12 15 46.0  -2.4
Q51A                                    IAmb     IAmb       12 15 55.6
       comp=Z,29nm,1.4s
OLIL   Olney              21.53  351    P        P          12 15 48.6  -0.2
CCM    Cathedral Cave     21.55  344    P        P          12 15 50.0  +1.1
CCM                                     IAmb     IAmb       12 15 56.8
       comp=Z,12nm,0.9s
BLO    Bloomington        21.77  354    P        P          12 15 50.3  -1.0
BLO                                     IAmb     IAmb       12 15 53.9
       comp=Z,22nm,0.9s
Q44A   Meyer Farm, Va     21.86  349    P        P          12 15 50.9  -1.4
QUOK   Quay               21.90  331    P        P          12 15 50.9  -1.8
QUOK                                    IAmb     IAmb       12 15 58.3
       comp=Z,34nm,1.3s
R40A   Maddies Statio     22.06  342    P        P          12 15 55.3  +0.9
R40A                                    IAmb     IAmb       12 16 00.9
       comp=Z,11nm,1.1s
P43A   Skaggs, Pawnee     22.66  348    P        P          12 15 58.7  -2.2
P40A   Paris              23.15  343    P        P          12 16 04.7  -1.3
AMTX   Amarillo           23.61  321    P        P          12 16 10.3  -0.3
MSTX   Muleshoe           23.69  318    P        P          12 16 12.2  +0.7
MSTX                                    IAmb     IAmb       12 16 25.2
       comp=Z,10.0nm,1.1s
KSU1   Kansas State U     24.30  335    P        P          12 16 13.7  -3.4
KSU1                                    IAmb     IAmb       12 16 22.8
       comp=Z,12nm,1.0s
ATAH   Atahualpa          25.00  167    P        P          12 16 26.0  +2.0
       comp=Z,13nm,1.0s,baz=327,slow=5.7,SNR=6.3
ATAH                                    LR       LR         12 25 32.7
       comp=Z,66nm,21.2s,baz=3.6,slow=35
ANMO   Albuquerque        26.70  315    P        P          12 16 40.9  +1.8
       comp=Z,0.7nm,0.6s,baz=151,slow=10,SNR=2.7
CZSB   Cruzeiro do Su     27.30  156    eP       P          12 16 46.9  +2.5
SADO   Sadowa             27.50    7    P        P          12 16 46.9  +1.1
       comp=Z,10nm,0.9s,baz=270,slow=8.1,SNR=2.0
SADO                                    LR       LR         12 27 27.3
       comp=Z,119nm,21.9s,baz=183,slow=36
PTGA   Pitinga            29.58  125    P        P          12 17 06.2  +1.5
       comp=Z,1.9nm,0.6s,baz=323,slow=11,SNR=4.7
ETMB   Extrema            32.16  146    eP       P          12 17 26.2  -1.3
SAML   Samuel             33.19  141    P        P          12 17 35.4  -1.1
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SAML				IAmb	IAmb	12 17 37.1	
	comp=Z,9.4nm,1.2s						
SAML	Samuel	33.19	141	*e*P	P	12 17 34.7	-1.8
PDAR	Pinedale Array	33.44	324	P	P	12 17 40.0	+1.3
	comp=Z,0.5nm,0.9s,baz=138,slow=5.6,SNR=3.7						
ULM	Lac du Bonnet	34.13	346	P	P	12 17 44.7	+0.3
	comp=Z,3.7nm,0.8s,baz=152,slow=10,SNR=6.2						
MALB	Monte Alegre	34.82	121	*e*P	P	12 17 51.5	+0.8
ITTB	Itaituba	35.14	126	*e*P	P	12 17 54.7	+1.2
GCMT	Greycliff	35.54	328	P	P	12 17 57.6	+0.8
MCPB	Macapa, AP	35.87	116	*e*P	P	12 18 01.5	+1.7
BCYI	Bear Canyon	36.58	323	P	P	12 18 06.4	+0.6
MCMT	McKenzie Canyo	36.59	324	P	P	12 18 06.0	+0.2
NVAR	Mina Array Bea	36.69	312	P	P	12 18 08.0	+1.2
	comp=Z,0.9nm,1.0s,baz=92,slow=10,SNR=5.4						
NVAR				PcP	PcP	12 20 30.5	+1.1
	comp=Z,0.3nm,0.8s,baz=126,slow=2.7,SNR=4.5						
NPGB	Novo Progresso	37.14	129	*e*P	P	12 18 11.5	+0.9
VILB	Vilhena	38.12	141	*e*P	P	12 18 16.6	-2.3
PB16	IPOC Station P	38.23	158	P	P	12 18 20.9	+0.5
WVOR	Wild Horse Val	38.74	317	P	P	12 18 23.8	-0.1
WVOR				IAmb	IAmb	12 18 34.2	
	comp=Z,8.6nm,1.1s						
MNMC	Minye Minye	38.93	158	P	P	12 18 26.2	+0.3
GO01	Chusmiza	39.57	158	P	P	12 18 32.8	+1.3
PTLB	Pontes e Lacer	40.72	142	*e*P	P	12 18 40.0	-0.5
PB01	IPOC Station P	40.74	159	P	P	12 18 40.7	0.0
PRPB	Parauapebas	40.92	122	*e*P	P	12 18 43.9	+1.7
SNDB	Serra Nova Dou	43.39	130	*e*P	P	12 19 03.8	+1.4
SMTB	Santa Maria do	44.27	123	*e*P	P	12 19 11.1	+1.6
PP1B	Ponte de Pedra	44.95	139	*e*P	P	12 19 15.4	+0.6
AC02	Maricunga	46.26	162	P	P	12 19 26.2	+0.6
FRB	Frobisher Bay	47.41	9	LR	LR	12 40 47.9	
	comp=Z,87nm,18.9s,baz=155,slow=38						
BDFB	Brasilia	48.19	131	P	P	12 19 41.5	+1.0
	comp=Z,10nm,0.9s,baz=310,slow=8.4,SNR=11						
SDBA	SAO DESIDERIO	48.49	125	*e*P	P	12 19 43.0	+0.3
CO03	El Pedregal	49.63	165	P	P	12 19 50.6	-0.7
YKA	Yellowknife Ar	49.87	342	P	P	12 19 53.0	+0.5
	comp=Z,0.6nm,0.8s,baz=130,slow=9.1,SNR=9.1						
PLCA	Paso Flores	59.18	168	P	P	12 21 00.1	-0.3
	comp=Z,2.2nm,1.0s,baz=293,slow=7.7,SNR=2.4						
PLCA	Paso Flores	59.18	168	*e*P	P	12 21 10.0	+10
INK	Inuvik	59.60	341	P	P	12 21 04.1	+1.1
	comp=Z,2.6nm,1.1s,baz=124,slow=4.4,SNR=4.3						
ILAR	Eielson Array	62.98	335	P	P	12 21 27.3	+1.3
	comp=Z,2.2nm,0.8s,baz=111,slow=4.8,SNR=27						
ESDC	Sonseca Array	71.31	53	P	P	12 22 20.2	+0.8
	comp=Z,1.9nm,0.8s,baz=289,slow=5.6,SNR=16						
NOA	NORSAR Array B	77.27	30	P	P	12 22 54.8	+1.1
	comp=Z,2.2nm,0.8s,baz=287,slow=5.5,SNR=4.1						
TIC	Toumodi	77.30	87	*e*P	P	12 22 55.2	+0.5
LIC	Lamto	77.42	87	*e*P	P	12 22 56.0	+0.7
	comp=Z,22nm,0.9s						
DBIC	Dimbokro	77.45	87	P	P	12 22 56.4	+0.9
	comp=Z,0.5nm,0.5s,baz=276,slow=3.0,SNR=5.0						
KIC	Kosan Boka	77.65	87	*e*P	P	12 22 57.3	+0.7
	comp=Z,14nm,0.9s						
ARCES	ARCESS Array B	80.30	20	P	P	12 23 09.7	-0.4
	comp=Z,4.3nm,0.9s,baz=298,slow=3.8,SNR=4.7						
GERES	GERESS Array B	81.82	41	P	P	12 23 19.7	+0.9
	comp=Z,0.4nm,0.7s,baz=336,slow=4.6,SNR=3.6						
TORD	Torodi Ar. Bea	81.87	79	P	P	12 23 19.4	-0.1
	comp=Z,0.5nm,0.9s,baz=279,slow=5.6,SNR=4.1						
TORD				LR	LR	12 57 38.7	
	comp=Z,44nm,19.5s,baz=290,slow=34						
FINES	FINESS Array B	83.91	27	P	P	12 23 29.7	+0.5
	comp=Z,8.4nm,1.1s,baz=274,slow=2.9,SNR=7.5						
SEY	Seymchan	88.75	338	P	P	12 23 54.7	+1.8
	comp=Z,1.6nm,0.6s,baz=76,slow=23,SNR=6.8						
LZH	Lanzhou	126.26	352	*e*PKP	PKPdf	12 30 02.7	-0.1
LZH				pPKP	pPKPdf	12 30 05.8	-2.5
LZH				sPKP		12 30 07.3	
WRA	Warramunga Arr	143.90	260	PKP	PKPbc	12 30 33.8	+0.3
	comp=Z,2.5nm,0.7s,baz=87,slow=3.5,SNR=19						
ASAR	Alice Springs	144.29	254	PKP	PKPbc	12 30 34.9	+0.3
	comp=Z,4.5nm,0.7s,baz=106,slow=3.9,SNR=41						

*TUL **03** 12:16:30.6±1.2, 36°.85N±0°.03×97°.81W±0°.04, h6^{km}±7^{km}, ML3.4, mb_Lg3.4/122(NEIC), Error ellipse: s-maj=5.6km s-min=2.6km az=52.0*

*NEIC **03** 12:16:30.5±0.9, 36°.81N±0°.03×97°.82W±0°.04, h4^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=0.9km az=46.0*

*ANF **03** 12:16:30.3±1.1, 36°.80N×97°.76W, h2^{km}±7^{km}, ML4.3/8, Error ellipse: s-maj=4.7km s-min=2.7km az=116.0*

ISC 03 12:16:30.4±1.2**, 36°.80N**±0°.02×**97°.83W**±0°.03**, h2**^{km}±11^{km}**, n89, σ0ˢ67**/58**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.19	326		Pg	12 16 34.3	+0.3
KAN13	South Haven SW	0.35	53		Pg	12 16 37.1	-0.1
KAN13				Sg	Sg	12 16 41.6	-0.1
KAN10	Anthony SW Sta	0.39	327		Pg	12 16 37.9	+0.1
KAN10				Sg	Sg	12 16 43.0	+0.2
KAN08	Anthony NE Sta	0.44	345		Pg	12 16 38.8	0.0
KAN08				Sg	Sg	12 16 44.6	+0.1
KAN12	Harper NE Stat	0.51	345	Pg	Pg	12 16 40.0	-0.2
KAN12				Sg	Sg	12 16 46.7	-0.2
T35A	Sooner Cattle	1.06	83	Pg	Pg	12 16 50.3	-0.5
T35A				Sg	Sg	12 17 04.2	-0.4
T35B	Sooner Cattle	1.06	83	P		12 16 50.1	
	baz=267,SNR=396						
T35B				S		12 17 04.2	
	baz=267						
QUOK	Quay	1.10	124		Pg	12 16 51.4	-0.1
QUOK				Sg	Sg	12 17 05.8	+0.1
OK031	S. Brethren Rd	1.17	136		Pg	12 16 52.6	-0.1
OK030	Cody Creek RV	1.21	136		Pg	12 16 53.4	-0.2
OK025	Westminster Rd	1.28	162		Pg	12 16 54.8	-0.1
OKCFA	Oklahoma City	1.42	167		Pn	12 16 57.1	0.0
OKCFA				IAmb_Lg		12 17 19.6	
	comp=Z,242nm,0.8s						
R32A	Long Quarter,	1.76	337		Pn	12 17 01.9	0.0
R32A	Long Quarter,	1.76	337	P		12 17 02.1	
	baz=155,SNR=26						
R32A				S		12 17 25.0	
	baz=155						
W35A	Tecumseh	1.82	154		Pn	12 17 02.9	+0.3
WMOK	Wichita Mounta	2.20	201	P	Pn	12 17 08.3	+0.4
	baz=20						
WMOK				S	Sb	12 17 37.3	-1.2
	baz=20						
WMOK	Wichita Mounta	2.20	201	Pn	Pn	12 17 08.2	+0.4
WMOK	Wichita Mounta	2.20	201	P		12 17 08.2	
	baz=20,SNR=111						
WMOK				S		12 17 37.3	
	baz=20						
KSU1	Kansas State U	2.49	22	P	Pn	12 17 11.8	-0.1
	baz=203						
KSU1				S	Sn	12 17 43.0	+0.1
	baz=203						
KSU1	Kansas State U	2.49	22	Pn	Pn	12 17 11.6	-0.3
KSU1				IAmb_Lg		12 17 52.8	
	comp=Z,162nm,0.9s						
KSU1	Kansas State U	2.49	22	P		12 17 11.8	
	baz=203,SNR=12						
KSU1				S		12 17 41.7	
	baz=203						
CBKS	Cedar Bluff	2.51	324	P	Pn	12 17 12.5	+0.2
	baz=142						
CBKS				S	Sb	12 17 47.4	-0.2
	baz=142						
CBKS	Cedar Bluff	2.51	324	Pn	Pn	12 17 12.3	+0.1
CBKS	Cedar Bluff	2.51	324	P		12 17 12.4	
	baz=142,SNR=20						
CBKS				S		12 17 43.0	
	baz=142						
U38A	Gravette	2.80	96		Pn	12 17 15.6	-0.5
U38A	Gravette	2.80	96	P		12 17 16.5	
	baz=279,SNR=21						
U38A				S		12 17 50.3	
	baz=279						
X37A	Clayton	2.98	137	Pn	Pn	12 17 18.9	+0.3
X37A				IAmb_Lg		12 18 11.6	
	comp=Z,90nm,0.7s						
X37A	Clayton	2.98	137	P		12 17 19.2	
	baz=319						
Z35A	Perchaven, San	3.49	172		Pn	12 17 26.2	+0.5
Z35A	Perchaven, San	3.49	172	P		12 17 26.2	
	baz=353						
Z35A				S		12 18 09.5	
	baz=353						
AMTX	Amarillo	3.67	240	Pb	Pb	12 17 37.2	+1.3
	baz=57						
AMTX				Sb	Sg	12 18 25.6	-2.5
	baz=57						
AMTX	Amarillo	3.67	240	IAmb_Lg		12 18 34.9	
	comp=Z,66nm,0.8s						
S39A	Bolivar	3.71	75	Pn	Pn	12 17 28.6	0.0
S39A	Bolivar	3.71	75	P		12 17 28.1	
	baz=258,SNR=61						
N33B	J Bar K, Exete	3.94	4	P		12 17 30.8	
	baz=184						
N33A	J Bar K, Exete	3.94	4	IAmb_Lg		12 18 40.1	
	comp=Z,66nm,0.7s						
U40A	Yellville	4.03	95	P	Pn	12 17 33.1	0.0
	baz=278						
U40A	Yellville	4.03	95	Pn	Pn	12 17 33.1	0.0
U40A	Yellville	4.03	95	P		12 17 32.6	
	baz=278,SNR=37						
U40A				P		12 17 32.6	
	baz=278,SNR=37						
MIAR	Mount Ida	4.13	122	IAmb_Lg		12 18 49.7	
	comp=Z,75nm,0.8s						
Z38A	Mt. Pleasant	4.23	146		Pn	12 17 36.5	+0.7
Z38A				IAmb_Lg		12 18 48.1	
	comp=Z,102nm,0.8s						
KSCO	Kaye Shedlock’	4.39	302		Pn	12 17 37.8	-0.3
KSCO				IAmb_Lg		12 18 59.1	
	comp=Z,107nm,0.9s						
N35A	Tabor	4.40	22		Pn	12 17 38.5	+0.3
N35A	Tabor	4.40	22	P		12 17 37.2	
	baz=204						
P38A	Dawn	4.41	49		Pn	12 17 38.3	+0.1
ABTX	Abilene, Hawle	4.42	200		Pn	12 17 39.7	+1.2
ABTX	Abilene, Hawle	4.42	200	P		12 17 39.2	
	baz=19						
MGMO	Mountain Grove	4.47	84	Pn	Pn	12 17 39.1	0.0
MGMO				IAmb_Lg		12 18 53.0	
	comp=Z,70nm,1.0s						
BGNE	Belgrade	4.61	357	P	Pn	12 17 40.3	-0.8
	baz=177						
BGNE	Belgrade	4.61	357		Pn	12 17 40.3	-0.8
BGNE				IAmb_Lg		12 19 07.6	
	comp=Z,71nm,0.7s						
BGNE	Belgrade	4.61	357	P		12 17 40.2	
	baz=177,SNR=15						
R40A	Maddies Statio	4.67	70		Pn	12 17 41.2	-0.6
R40A	Maddies Statio	4.67	70	P		12 17 41.1	
	baz=254,SNR=33						
X40A	Basin Creek Fa	4.68	118	IAmb_Lg		12 19 08.1	
	comp=Z,57nm,0.7s						
FCAR	Ozark Folk Cen	4.70	99	IAmb_Lg		12 19 08.2	
	comp=Z,61nm,0.8s						
WHTX	Lake Whitney,	4.81	176	P	Pn	12 17 43.9	+0.1
	baz=357						
WHTX	Lake Whitney,	4.81	176		Pn	12 17 43.9	+0.1
WHTX	Lake Whitney,	4.81	176	P		12 17 43.9	
	baz=357,SNR=29						
W41B	Gary Mavity, V	4.81	108		Pn	12 17 44.9	+1.1
W41B				IAmb_Lg		12 19 08.4	
	comp=Z,73nm,0.9s						
MSTX	Muleshoe	4.92	236	P	Pn	12 17 45.7	+0.2
	baz=53						
MSTX	Muleshoe	4.92	236		Pn	12 17 45.8	+0.3
WLAR	White Oak Lake	4.96	127	IAmb_Lg		12 19 11.7	
	comp=Z,49nm,0.9s						
OGNE	Ogallala	5.28	323	IAmb_Lg		12 19 24.7	
	comp=Z,42nm,0.8s						
T25A	Trinidad	5.28	276		Pn	12 17 49.9	-0.6
T25A				IAmb_Lg		12 19 18.1	
	comp=Z,62nm,0.9s						
L34A	Svendsen Farm,	5.28	12		Pn	12 17 51.2	+0.9
P40A	Paris	5.31	57	IAmb_Lg		12 19 24.6	
	comp=Z,59nm,0.8s						
N38A	Joes South For	5.37	41	Pn	Pn	12 17 50.8	-0.6
N38A	Joes South For	5.37	41	P		12 17 50.5	
	baz=224						
CCM	Cathedral Cave	5.39	75	IAmb_Lg		12 19 26.7	
	comp=Z,47nm,0.9s						
CCM	Cathedral Cave	5.39	75	P		12 17 51.0	
	baz=259						
T42A	Van Buren	5.41	86	Pn	Pn	12 17 53.6	+1.7
Z41A	Richland Creek	5.43	129	IAmb_Lg		12 19 33.8	
	comp=Z,69nm,0.9s						
LCAR	Lake Charles	5.43	96	Pn	Pn	12 17 52.7	+0.4
LCAR				IAmb_Lg		12 19 28.0	
	comp=Z,36nm,0.8s						
435B	Jarrell	6.01	178	IAmb_Lg		12 19 59.1	
	comp=Z,48nm,0.9s						
FVM	French Village	6.01	76	Pn	Pn	12 17 59.2	-1.1
SDCO	Great Sand Dun	6.19	281		Pn	12 18 01.6	-1.4
JCT	Junction City	6.51	195	IAmb_Lg		12 20 01.8	
	comp=Z,55nm,1.0s						
PENMO	Penman	6.61	91	IAmb_Lg		12 20 11.6	
	comp=Z,62nm,0.7s						
143A	Socs Landing,	6.69	126	IAmb_Lg		12 20 18.6	
	comp=Z,37nm,0.8s						
S44A	Carbondale	6.90	80	IAmb_Lg		12 20 07.6	
	comp=Z,48nm,0.9s						
HALT	Halls	6.91	95	IAmb_Lg		12 20 12.3	
	comp=Z,55nm,0.7s						
SIUC	Southern Illin	6.93	80	IAmb_Lg		12 20 15.1	
	comp=Z,31nm,0.8s						
P43A	Skaggs, Pawnee	7.13	64	Pn	Pn	12 18 16.2	+0.5
P43A				IAmb_Lg		12 20 22.0	
	comp=Z,54nm,0.8s						
W45A	Hickory Valley	7.20	101	IAmb_Lg		12 20 31.1	
	comp=Z,54nm,0.8s						
OXF	Oxford	7.23	106	IAmb_Lg		12 20 29.5	
	comp=Z,36nm,0.7s						
ANMO	Albuquerque	7.24	258	IAmb_Lg		12 20 30.0	
	comp=Z,7.0nm,0.8s						
L40A	Anamosa	7.33	42	IAmb_Lg		12 20 28.3	
	comp=Z,39nm,0.8s						
T45A	Paducah	7.36	86	IAmb_Lg		12 20 40.0	
	comp=Z,42nm,0.8s						
Y45A	Yeager Farm, C	7.38	111	IAmb_Lg		12 20 37.6	
	comp=Z,44nm,0.9s						
N23A	Red Feather La	7.53	305	IAmb_Lg		12 20 34.6	
	comp=Z,52nm,0.7s						
SUSD	Miller	7.68	354	IAmb_Lg		12 20 47.8	
	comp=Z,26nm,0.7s						
Y22D	IRIS PASSCAL I	7.90	253	IAmb_Lg		12 21 01.1	
	comp=Z,36nm,1.0s						
OLIL	Olney	7.95	73	IAmb_Lg		12 20 55.4	
	comp=Z,47nm,1.1s						
I37A	Lemond, Waseca	7.96	24	IAmb_Lg		12 20 48.9	
	comp=Z,39nm,0.9s						
O44A	Mansfield	8.07	63	IAmb_Lg		12 20 56.7	
	comp=Z,28nm,0.8s						
PLAL	Pickwick Lake	8.12	100	IAmb_Lg		12 20 49.5	
	comp=Z,21nm,0.8s						
USIN	University of	8.18	79	IAmb_Lg		12 20 55.2	
	comp=Z,27nm,0.9s						
JFWS	Jewell Farm	8.44	41	IAmb_Lg		12 20 55.6	
	comp=Z,27nm,0.7s						
RSSD	Black Hills	8.71	329	IAmb_Lg		12 21 17.8	
	comp=Z,12nm,0.8s						
P46A	Rosedale	8.82	68	IAmb_Lg		12 21 06.2	
	comp=Z,28nm,0.9s						
M44A	Midewin, Midew	8.88	56	IAmb_Lg		12 21 12.4	
	comp=Z,25nm,0.8s						
K22A	Casper	8.88	314	IAmb_Lg		12 21 23.1	
	comp=Z,29nm,0.9s						
I40A	Norwalk	8.97	36	IAmb_Lg		12 21 29.4	
	comp=Z,20nm,0.8s						
SFIN	Lafayette	9.13	64	IAmb_Lg		12 21 21.2	
	comp=Z,30nm,0.8s						
SPMN	Marine on St.	9.23	23	IAmb_Lg		12 21 24.6	
	comp=Z,34nm,1.1s						
BLO	Bloomington	9.24	72	IAmb_Lg		12 21 26.8	
	comp=Z,37nm,0.8s						
CLTN	Cedars of Leba	9.29	91	IAmb_Lg		12 21 31.1	
	comp=Z,16nm,0.8s						

*KRNET **03** 12:16:56.3±0.1, 42°.08N×78°.89E, h35^{km}, mb2.1*

*NNC **03** 12:16:59.0±3.0, 41°.17N×78°.19E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=22.1km s-min=12.3km az=167.0*

SOME 03 12:16:57.0, 41°.17N×78°.15E, h10^{km}**, 9C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	1.21	323	⇑*i*P	Pb	12 17 19.2	-0.9
	baz=73						
KDJ				⇑*i*S	Sb	12 17 35.8	0.0
	baz=73						
ULHL	Ulahol	1.79	308	⇑*i*P	Pb	12 17 29.2	-0.8
	baz=76						
ULHL				⇑*i*S	Sb	12 17 53.5	+0.9
	baz=76						
SATY	Saty	1.90	6	*e*P	Pg	12 17 33.1	-0.4
	2.0nm,0.2s						
SATY				*e*S	Sg	12 17 59.0	+0.9
	3.6nm,0.2s						
UZB	Uzynbulak	2.08	18	*e*P	Pb	12 17 35.2	+0.2
	1.9nm,0.3s						
UZB				*e*S	Sg	12 18 02.5	-1.5
	7.9nm,0.5s						
UZB	Uzynbulak	2.08	18	Pg	Pg	12 17 37.1	+0.2
	1.9nm,0.3s						
UZB				Lg	Lg	12 18 06.1	
	7.9nm,0.5s						
BOOM	Boomskoye usch	2.12	309	⇑*i*P	Pn	12 17 32.3	-0.3
	baz=82						
BOOM				⇑*i*S	Sn	12 17 59.1	0.0
	baz=82						
MDOK	Medeo	2.16	338	*e*P	Pb	12 17 36.8	+0.6
	2.6nm,0.2s						
MDOK				*e*S	Sg	12 18 05.3	-1.0
	5.8nm,0.4s						
KOTS	Kotyrbulak	2.21	340	*e*P	Pb	12 17 38.0	+1.0
	5.5nm,0.2s						
KOTS				*e*S	Sg	12 18 07.4	-0.5
	11nm,0.3s						
KPKS	Kokpek	2.33	10	*e*P	Pb	12 17 39.2	+0.1
	7.7nm,0.2s						
KPKS				*e*S	Sb	12 18 09.7	+1.6
	15nm,0.4s						
PDGK	Podgornoye	2.38	24	Pg	Pb	12 17 40.7	+0.7
	1.5nm,0.2s						
PDGK				Lg	Lg	12 18 12.2	
	2.8nm,0.6s						
PDGK	Podgornoye	2.38	24	⇑Pn	Pb	12 17 40.1	+0.1
	1.6nm,0.5s						
PDGK				⇑Sn	Sg	12 18 13.1	-0.3
	4.2nm,0.7s						
KST	Kastek	2.48	320	*e*P	Pg	12 17 43.5	-1.1
	2.0nm,0.2s						
KST				*e*S	Sg	12 18 16.6	-0.2
	3.7nm,0.3s						
KST	Kastek	2.48	320	Pg	Pb	12 17 43.1	+1.3
	2.0nm,0.2s						
KST				Lg	Lg	12 18 16.3	
	3.7nm,0.3s						
TKM2	Tokmak 2	2.59	314	⇓Pn	Pb	12 17 42.5	-1.1
	0.2nm,0.3s						
TKM2				⇑Sn	Sg	12 18 19.2	-0.9
	3.2nm,0.9s						
KTBS	Karatobe	2.77	337	*e*P	Pg	12 17 48.7	-1.3
	0.7nm,0.3s						
KTBS				*e*S	Sg	12 18 25.5	-0.4
	12nm,0.3s						
KTBS	Karatobe	2.77	337	Pg	Pg	12 17 48.4	-1.6
	0.7nm,0.3s						
KTBS				Lg	Lg	12 18 25.4	
	12nm,0.3s						
KTMS	Ketmen	2.80	35	Pg	Pb	12 17 48.3	+1.0
	0.6nm,0.1s						
KTMS				Lg	Lg	12 18 25.7	
	2.4nm,0.5s						
CHKK	Chushkaly	2.82	343	*e*P	Pg	12 17 49.4	-1.6
	0.7nm,0.1s						
CHKK				*e*S	Sg	12 18 27.1	-0.5
	5.7nm,0.3s						
CHKK	Chushkaly	2.82	343	Pg	Pg	12 17 49.3	-1.8
	0.7nm,0.1s						
CHKK				Lg	Lg	12 18 27.0	
	5.7nm,0.3s						
MNBS	Baschi	2.92	4	*e*P	Pg	12 17 51.0	-1.8
	1.2nm,0.2s						
MNBS				*e*S	Sg	12 18 29.9	-0.7
	6.3nm,0.5s						
MNBS	Baschi	2.92	4	Pg	Pg	12 17 51.2	-1.7
	1.2nm,0.2s						
MNBS				Lg	Lg	12 18 30.5	
	6.3nm,0.5s						
ARXS	Arharly	3.05	356	*e*P	Pg	12 17 53.6	-1.9
	2.1nm,0.4s						
ARXS				*e*S	Sg	12 18 34.4	-0.6
	3.1nm,0.4s						
ARXS	Arharly	3.05	356	Pg	Pb	12 17 52.9	+1.4
	2.1nm,0.4s						
ARXS				Lg	Lg	12 18 33.3	
	3.1nm,0.4s						
DJR	Jarkent	3.39	20	*e*P	Pg	12 17 59.8	-2.1
	1.0nm,0.3s						
DJR				*e*S	Sg	12 18 44.5	-1.2
	1.0nm,0.3s						

BYKL 03 12:19:42.7±0.2**, 56°.08N×113°.71E, h2**^{km}±6^{km}**, 1C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.09	294	⇑*i*Pg	Pg	12 19 44.7	+0.2
SVKR				*e*Sg	Sg	12 19 46.7	+0.9
SVKR				Pmax			
	2µm,0.3s						
SVKR				Smax			
	7µm,0.5s						
UKT	Uakit	0.59	185	*e*Pg	Pg	12 19 53.2	-0.9
UKT				*e*Sg	Sg	12 20 01.2	-0.6
UKT				Pmax			
	70nm,0.6s						
UKT				Smax			
	699nm,0.4s						
YOA	Uoyan	1.11	274	*e*Pg	Pg	12 20 03.0	-1.0
YOA				*e*Sg	Sg	12 20 17.8	-0.6
NLYR	Nelyaty	1.19	69	*e*Pg	Pg	12 20 03.4	-2.0
NLYR				*e*Pb	Pb	12 20 05.4	-0.5
NLYR				*e*Sg	Sg	12 20 18.7	-2.0
KMO	Kumora	1.42	263	*e*Pg	Pn	12 20 08.4	-1.2
KMO				*e*Sg	Sg	12 20 27.1	-1.3
KMO				Pmax			
	57nm,0.4s						
KMO				Smax			
	505nm,0.5s						
BOD	Bodaibo	1.75	5	*e*Pg	Pn	12 20 14.3	+0.2
BOD				*e*Sg	Sb	12 20 37.6	-0.3
BOD				Pmax			
	23nm,0.3s						
BOD				Smax			
	190nm,0.6s						
YLYR	Ulyunkhan	1.89	231	*e*Pg	Pn	12 20 16.7	+0.8
YLYR				*e*Sg	Sb	12 20 41.7	-0.2
YLYR				Pmax			
	38nm,0.4s						
YLYR				Smax			
	238nm,0.2s						
NIZ	Nizh Angarsk	2.37	264	*e*Pg	Pb	12 20 24.4	-1.6
NIZ				*e*Sg	Sb	12 20 55.1	-0.5
NIZ				Pmax			
	11nm,0.3s						
NIZ				Smax			
	230nm,0.5s						
CRS	Chara	2.66	70	*e*Pn	Pn	12 20 26.9	+0.3
CRS				*e*Pg	Pb	12 20 31.3	+0.3
CRS				*e*Sg	Sb	12 21 06.0	+1.9
CRS				Pmax			
	62nm,0.7s						
CRS				Smax			
	224nm,0.7s						
TUP	Tupik	3.94	112	*e*Pn	Pn	12 20 44.1	-0.1
TUP				*e*Sn	Sn	12 21 28.5	-2.4
TUP				*e*Sg	Sb	12 21 43.6	+2.7
TUP				Smax			
	180nm,0.9s						

*BJI **03** 12:19:48.4±0.0, 56°.50N×114°.00E, h13^{km}, mb3.9/11, Ms4.4/2*

*MOS **03** 12:19:51.9±1.1, 56°.08N×113°.73E, h7^{km}, mb4.1/4, Error ellipse: s-maj=9.0km s-min=6.0km az=72.9*

MOS Felt (II-III) at Severomuysk.

*IDC **03** 12:19:53.0±0.7, 56°.00N×113°.65E, h0^{km}, mb3.7/14, mb1 3.9/19, mb1mx3.7/68, mbtmp3.8/19, ML3.3/3, MS3.5/3, Ms1 3.5/3, ms1mx2.8/69, Error ellipse: s-maj=18.0km s-min=11.8km az=144.0*

*BYKL **03** 12:19:53.3±0.2, 56°.08N×113°.68E, h8^{km}±2^{km}, FELT I=II-III MSK at Severomuisk*

ISC 03 12:19:54.1±0.4**, 56°.08N**±0°.02×**113°.58E**±0°.02**, h10^{km}, n77, σ2^{s}.72**/128**, mb3.8**/15**, 1C-5D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.04**	**343**	*e*Pg	**Pg**	**12 19 55.3**	**-0.8**
SVKR				Pmax		12 19 55.6	
	22µm,0.2s						
SVKR				*e*Sg	**Sg**	**12 19 57.3**	**-0.2**
SVKR				Smax		12 20 05.1	
	110µm,0.7s						
SVKR	**Severomuysk**	**0.04**	**343**	*e*PG	**Pg**	**12 19 55.3**	**-0.8**
SVKR				*e*S	**Sg**	**12 19 57.2**	**-0.2**
UKT	**Uakit**	**0.60**	**177**	*e*Pg	**Pg**	**12 20 03.9**	**-1.7**
UKT				Pmax		12 20 07.3	
	966nm,0.6s						
UKT				*e*Sg	**Sg**	**12 20 11.6**	**-1.9**
UKT				Smax		12 20 17.4	
	3µm,0.7s						
YOA	**Uoyan**	**1.04**	**273**	*e*Pg	**Pg**	**12 20 13.5**	**-0.5**
YOA				Pmax		12 20 15.3	
	1µm,0.3s						
YOA				*e*Sg	**Sg**	**12 20 27.6**	**+0.1**
YOA				*e*Sb	**Sn**	**12 20 31.9**	**+2.6**
YOA				*e*		12 20 34.8	
YOA				max		12 20 39.5	
	10µm,0.3s						
YOA	**Uoyan**	**1.04**	**273**	*e*PG	**Pg**	**12 20 13.5**	**-0.5**
YOA				*e*		12 20 27.7	
YOA				pmax	pmax		
	comp=Z,914nm,0.2s						
YOA				smax	smax		
	comp=E,10µm,0.6s						
NLYR	**Nelyaty**	**1.25**	**70**	*e*Pg	**Pn**	**12 20 15.1**	**-2.6**
NLYR				*e*Pb	**Pb**	**12 20 16.6**	**-1.2**
NLYR				*e*Sg	**Sb**	**12 20 31.1**	**-2.9**
NLYR				*e*Sb	**Sg**	**12 20 34.9**	**+0.5**
NLYR				max		12 20 35.9	
	comp=E,5µm,1.1s						
NLYR	**Nelyaty**	**1.25**	**70**	*e*PG	**Pn**	**12 20 15.7**	**-2.0**
NLYR				*e*		12 20 31.4	
NLYR				pmax	pmax		
	comp=Z,15µm,0.2s						
NLYR				smax	smax		
	comp=N,39µm,0.2s						
KMO	**Kumora**	**1.35**	**263**	*e*Pg	**Pn**	**12 20 19.0**	**0.0**
KMO				*e*		12 20 21.1	
KMO				max		12 20 21.8	
	comp=N,705nm,0.2s						
KMO				*e*Sg	**Sg**	**12 20 37.7**	**+0.2**
KMO				*e*		12 20 41.1	
KMO				max		12 20 42.4	
	comp=N,11µm,0.9s						
KMO	**Kumora**	**1.35**	**263**	*e*PG	**Pn**	**12 20 18.9**	**0.0**
KMO				*e*		12 20 38.0	
KMO				pmax	pmax		
	comp=Z,491nm,0.2s						
KMO				smax	smax		
	comp=N,11µm,1.0s						
BOD	**Bodaibo**	**1.76**	**7**	*e*Pg	**Pn**	**12 20 24.6**	**0.0**
BOD				Pmax		12 20 25.2	
	comp=N,344nm,0.2s						
BOD				*e*		12 20 27.0	
BOD				*e*Sg	**Sn**	**12 20 47.8**	**+0.9**
BOD				Smax		12 20 51.1	
	comp=N,3µm,0.6s						
BOD	**Bodaibo**	**1.76**	**7**	*e*PN	**Pn**	**12 20 24.5**	**0.0**
BOD				*e*		12 20 48.0	
BOD				pmax	pmax		
	comp=Z,1µm,1.3s						
BOD				smax	smax		
	comp=E,3µm,0.7s						
YLYR	**Ulyunkhan**	**1.83**	**230**	*e*Pn	**Pn**	**12 20 26.5**	**+0.9**
YLYR				*e*Pg	**Pb**	**12 20 27.5**	**-0.1**
YLYR				Pmax		12 20 29.4	
	comp=E,568nm,0.3s						
YLYR				*e*Sg	**Sg**	**12 20 52.4**	**-0.5**
YLYR				Smax		12 20 54.7	
	comp=E,3µm,0.4s						
YLYR	**Ulyunkhan**	**1.83**	**230**	*e*PN	**Pb**	**12 20 27.3**	**-0.3**
YLYR				*e*		12 20 28.4	
YLYR				*e*S	**Sb**	**12 20 51.3**	**+0.7**
YLYR				*e*		12 20 52.4	
YLYR				pmax	pmax		
	comp=Z,615nm,0.4s						
YLYR				smax	smax		
	comp=E,3µm,0.4s						
NIZ	**Nizh Angarsk**	**2.29**	**264**	*e*Pn	**Pn**	**12 20 31.1**	**-0.8**
NIZ				*e*Pg	**Pb**	**12 20 34.4**	**-1.1**
NIZ				*e*		12 20 38.0	
NIZ				max		12 20 39.2	
	comp=E,166nm,0.6s						
NIZ				*e*Sg	**Sb**	**12 21 04.9**	**+1.1**
NIZ				Smax		12 21 08.8	
	comp=E,3µm,0.5s						
NIZ	**Nizh Angarsk**	**2.29**	**264**	*e*PN	**Pb**	**12 20 34.4**	**-1.1**
NIZ				*e*		12 20 37.0	
NIZ				*e*S	**Sb**	**12 21 02.7**	**-1.1**
NIZ				*e*		12 21 07.2	
NIZ				pmax	pmax		
	comp=Z,181nm,0.8s						
NIZ				smax	smax		
	comp=N,332nm,0.9s						
CRS	**Chara**	**2.73**	**71**	*e*Pn	**Pn**	**12 20 37.6**	**-0.3**
CRS				*e*Pg	**Pb**	**12 20 42.2**	**-0.7**
CRS				Pmax		12 20 44.1	
	comp=N,958nm,1.1s						
CRS				*e*Sg	**Sb**	**12 21 16.6**	**+0.2**
CRS				Smax		12 21 19.9	
	comp=N,3µm,1.5s						
CRS	**Chara**	**2.73**	**71**	*e*PN	**Pn**	**12 20 37.3**	**-0.6**
CRS				*e*		12 20 41.8	
CRS				*e*		12 21 15.9	
CRS				pmax	pmax		
	comp=Z,957nm,0.6s						
CRS				smax	smax		
	comp=E,3µm,1.5s						
SYVR	**Suvo**	**3.19**	**222**	max		12 12 45.3	
	comp=E,2µm,1.4s						
SYVR				*e*Pn	**Pn**	**12 20 45.1**	**+0.8**
SYVR				*e*Pg	**Pb**	**12 20 50.6**	**-0.2**
SYVR				*e*PgPg	**PbPb**	**12 20 54.0**	**+0.1**
SYVR				max		12 20 56.8	
	comp=E,276nm,1.2s						
SYVR				*e*Sg	**Sb**	**12 21 33.5**	**+3.8**
SYVR				*e*		12 21 44.2	
SYVR	**Suvo**	**3.19**	**222**	*e*PN	**Pn**	**12 20 44.0**	**-0.3**
SYVR				*e*		12 20 50.4	
SYVR				*e*		12 21 33.6	
SYVR				pmax	pmax		
	comp=Z,283nm,0.7s						
SYVR				smax	smax		
	comp=N,2µm,1.0s						
VTMR	**Vitim**	**3.41**	**351**	*e*Pn	**Pn**	**12 20 47.2**	**0.0**
VTMR				*e*Pg	**Pb**	**12 20 55.0**	**+0.5**
VTMR				*e*Sn	**Sn**	**12 21 26.1**	**-1.6**
VTMR				*e*Sg	**Sb**	**12 21 38.3**	**+2.3**
MXMB	**Maximikha**	**3.98**	**227**	*e*Pg	**Pb**	**12 21 06.1**	**+1.8**
MXMB				*e*Sg	**Sg**	**12 21 58.0**	**-3.8**
TUP	**Tupik**	**4.01**	**112**	*e*Pn	**Pn**	**12 20 54.6**	**-0.9**
TUP				*e*Pg	**Pb**	**12 21 03.6**	**-1.2**
TUP				Pmax		12 21 07.4	
	comp=N,220nm,0.5s						
TUP				*e*Sg	**Sb**	**12 21 55.4**	**+2.1**
TUP				*e*		12 22 01.4	
TUP				max		12 22 05.5	
	comp=N,1µm,0.9s						
TUP	**Tupik**	**4.01**	**112**	*e*PN	**Pn**	**12 20 54.6**	**-0.9**
TUP				*e*		12 21 04.6	
TUP				*e*S	**Sn**	**12 21 40.8**	**-1.7**
TUP				*e*		12 21 56.1	
TUP				pmax	pmax		
	comp=Z,221nm,0.6s						
TUP				smax	smax		
	comp=N,1µm,0.9s						
CIT	**Chita**	**4.07**	**180**	*e*Pg	**Pb**	**12 21 06.5**	**+0.7**
CIT				Pmax		12 21 08.6	
	comp=N,85nm,0.1s						
CIT				*e*Sg	**Sb**	**12 21 59.3**	**+4.3**
CIT				Smax		12 22 06.8	
	comp=N,850nm,0.4s						
CIT	**Chita**	**4.07**	**180**	*e*PN	**Pn**	**12 20 57.0**	**+0.6**
CIT				*e*		12 21 06.8	
OGRR	**Ongureny**	**4.23**	**237**	*e*Pn	**Pn**	**12 21 00.4**	**+1.8**
OGRR				*e*Pg	**Pb**	**12 21 10.4**	**+1.8**
OGRR				Pmax		12 21 17.8	
	comp=N,83nm,0.5s						
OGRR				*e*Sg	**Sg**	**12 22 06.2**	**-3.7**
OGRR				Smax		12 22 15.8	
	comp=N,566nm,1.0s						
OGRR	**Ongureny**	**4.23**	**237**	*e*PN	**Pn**	**12 21 00.2**	**+1.6**
OGRR				*e*		12 21 11.0	
OGRR				*e*		12 22 04.9	
OGRR				pmax	pmax		
	comp=Z,114nm,2.2s						
OGRR				smax	smax		
	comp=N,563nm,1.5s						
YKLR	**Yuktali**	**4.52**	**80**	*e*Pn	**Pn**	**12 21 01.6**	**-1.0**
YKLR				*e*Pg	**Pb**	**12 21 13.0**	**-0.5**
YKLR				*e*Sg	**Sb**	**12 22 10.8**	**+2.8**
TRG	**Tyrgan**	**5.38**	**235**	*e*Pn	**Pn**	**12 21 15.3**	**+1.0**
TRG				*e*Pg	**Pb**	**12 21 31.0**	**+3.0**
TRG				Pmax		12 21 33.7	
	comp=N,194nm,0.3s						
TRG				*e*Sg	**Sg**	**12 22 40.9**	**-5.6**
TRG				Smax		12 22 54.4	
	comp=N,2µm,0.5s						
TRG	**Tyrgan**	**5.38**	**235**	*e*PN	**Pn**	**12 21 15.3**	**+1.0**
TRG				*e*		12 21 29.2	
TRG				*e*S	**Sn**	**12 22 13.4**	**-2.8**
TRG				*e*		12 22 39.2	
TRG				pmax	pmax		
	comp=Z,41nm,0.9s						
TRG				smax	smax		
	comp=N,233nm,1.0s						
FFNB	**Fofonovo**	**5.70**	**228**	*e*Pn	**Pn**	**12 21 19.7**	**+1.0**
FFNB				*e*Pg	**Pb**	**12 21 36.6**	**+3.2**
FFNB				*e*Sg	**Sg**	**12 22 50.7**	**-6.0**
KAB	**Kabansk**	**5.74**	**228**	*e*Pg	**Pb**	**12 21 38.1**	**+3.9**
KAB				Pmax		12 21 42.1	
	comp=N,105nm,0.3s						
KAB				*e*Sg	**Sg**	**12 22 52.7**	**-5.4**
KAB				Smax		12 23 19.2	
	comp=N,1µm,1.4s						
HRMR	**Khuramsha**	**5.94**	**224**	*e*Pn	**Pn**	**12 21 22.9**	**+0.9**
HRMR				*e*Pg	**Pb**	**12 21 40.8**	**+3.2**
HRMR				Pmax		12 21 50.9	
	comp=N,112nm,0.5s						
HRMR				*e*Sg	**Sg**	**12 22 59.5**	**-5.0**
HRMR				*e*		12 23 08.0	
HRMR				max		12 23 15.3	
	comp=N,2µm,1.2s						
BGT	**Bolshoye Golou**	**6.28**	**233**	*e*	Pb	12 21 38.6	-4.9
BGT				max		12 21 42.1	
	comp=N,9.0nm,0.1s						
BGT				*e*Sg	**Sg**	**12 23 09.4**	**-6.2**
BGT				Smax		12 23 24.3	
	comp=N,201nm,1.0s						
KPC	**Khapcheranga**	**6.43**	**187**	*e*Pn	**Pn**	**12 21 27.8**	**-1.0**
KPC				*e*Pg	**Pb**	**12 21 48.9**	**+2.9**
KPC				Pmax		12 21 57.7	
	comp=N,19nm,0.5s						
KPC				*e*Sg	**Sb**	**12 23 11.9**	**+8.9**
KPC				*e*		12 23 24.9	
KPC				max		12 23 29.9	
	comp=N,805nm,1.0s						
KPC	**Khapcheranga**	**6.43**	**187**	*e*PN	**Pn**	**12 21 27.8**	**-1.0**
KPC				*e*		12 21 50.5	
KPC				*e*		12 23 12.0	
KPC				pmax	pmax		
	comp=Z,19nm,0.5s						
KPC				smax	smax		
	comp=E,803nm,1.2s						
LSTR	**Listvyanka**	**6.66**	**234**	*e*Pn	**Pn**	**12 21 33.4**	**+1.4**
LSTR				*e*Pg	**Pb**	**12 21 53.2**	**+3.3**
LSTR				Pmax		12 21 56.7	
	comp=E,33nm,1.2s						
LSTR				*e*		12 23 17.2	
LSTR				*e*Sg	**Sg**	**12 23 20.3**	**-7.5**
LSTR				Smax		12 23 28.5	
	comp=E,289nm,1.5s						
IRK	**Irkutsk**	**6.68**	**239**	*e*PG	Pb	12 21 55.9	+5.7
IRK				*e*S	**Sg**	**12 23 23.2**	**-5.1**
IRK				pmax	pmax		
	comp=Z,129nm,0.1s						
IRK				smax	smax		
	comp=N,422nm,1.1s						
TLY	**Talaya**	**7.34**	**237**	*e*PG	**Pb**	**12 22 05.0**	**+3.6**
TLY				*e*		12 23 40.6	
TLY				pmax	pmax		
	comp=Z,29nm,0.6s						
ARS	**Arshan**	**7.78**	**242**	*e*Pg	Pb	12 22 14.7	+5.7
ARS				Pmax		12 22 16.9	
	comp=Z,30nm,0.8s						
ARS				*e*		12 23 32.3	
ARS				*e*Sg	**Sg**	**12 23 55.6**	**-8.0**
ARS				Smax		12 24 01.3	
	comp=Z,479nm,0.9s						
HIA	**Hailar**	**7.79**	**149**	⇓*e*PN	**Pn**	**12 21 47.2**	**-0.2**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZEA	**Zeya**	**8.22**	**101**	*e*PN	**Pn**	**12 21 53.8**	**+0.5**
ZEA				*e*		12 23 19.7	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				smax	smax		
	comp=E,10.0nm,0.5s						
ZEA				smax	smax		
	comp=N,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,300nm,6.0s						
ZAK	**Zakamensk**	**8.41**	**232**	*e*Pn	**Pn**	**12 21 57.6**	**+1.7**
ZAK				*e*Pg	Pb	12 22 26.0	+6.4
ZAK				Pmax		12 22 35.4	
	comp=Z,9.0nm,0.9s						
ZAK				*e*Sg	**Sg**	**12 24 15.5**	**-8.1**
ZAK				Smax		12 24 28.9	
	comp=Z,168nm,1.9s						
ZAK	**Zakamensk**	**8.41**	**232**	*e*PN	**Pn**	**12 22 00.0**	**+4.1**
ZAK				*e*S	**Sg**	**12 24 15.1**	**-8.5**
ZAK				smax	smax		
	comp=N,168nm,1.8s						
MOY	**Mondy**	**8.65**	**244**	*e*Pn	**Pn**	**12 21 59.3**	**+0.1**
MOY				max		12 22 28.8	
	comp=N,28nm,1.2s						
MOY				*e*Sg	**Sg**	**12 24 22.7**	**-8.6**
MOY				Smax		12 24 44.2	
	comp=N,236nm,1.4s						
MOY	**Mondy**	**8.65**	**244**	*e*PN	**Pn**	**12 21 59.5**	**+0.3**
MOY				*e*		12 22 27.4	
MOY				*e*		12 24 22.3	
MOY				pmax	pmax		
	comp=Z,29nm,1.0s						
MOY				smax	smax		
	comp=N,233nm,2.0s						
ORL	**Orlik**	**8.79**	**252**	*e*Pn	**Pn**	**12 22 02.6**	**+1.3**
ORL				max		12 22 28.8	
	comp=N,30nm,0.9s						
ORL				*e*Sn	**Sn**	**12 23 38.2**	**-2.2**
ORL				*e*Sg	Sg	12 24 26.4	-10
ORL				Smax		12 24 45.1	
	comp=N,165nm,1.5s						
ORL	**Orlik**	**8.79**	**252**	*e*PN	**Pn**	**12 22 02.3**	**+1.0**
ORL				*e*		12 22 32.7	
ORL				*e*S	**Sn**	**12 23 39.9**	**-0.5**
ORL				*e*		12 24 26.1	
ORL				pmax	pmax		
	comp=Z,32nm,0.8s						
ORL				smax	smax		
	comp=N,165nm,1.5s						
ULN	**Ulaanbaatar**	**9.16**	**209**	⇓*e*P	**Pn**	**12 22 08.0**	**+1.7**
SONM	**Songino Array**	**9.37**	**211**	Pn	**Pn**	**12 22 09.7**	**+0.5**
	comp=N,0.4nm,0.3s,baz=20,slow=13,SNR=15						
SONM				Pg		12 22 44.6	
	comp=N,0.6nm,0.3s,baz=14,slow=16,SNR=7.1						
SONM				Sn	**Sn**	**12 23 53.6**	**-1.0**
	comp=N,0.7nm,0.3s,baz=21,slow=25,SNR=3.6						
SONM				Lg	Lg	12 24 46.1	
	comp=N,2.7nm,0.3s,baz=21,slow=38,SNR=5.7						
YAK	**Yakutsk**	**10.20**	**48**	Pn	**Pn**	**12 22 18.2**	**-2.0**
	comp=N,0.2nm,0.3s,baz=265,slow=3.3,SNR=5.2						
YAK				Lg	Lg	12 25 06.8	
	baz=158,slow=20,SNR=6.8						
YAK	**Yakutsk**	**10.20**	**48**	*e*P	**Pn**	**12 22 19.5**	**-0.7**
YAK				*e*S	**Sn**	**12 24 12.1**	**-2.3**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,15nm,0.9s						
YAK				smax	smax		
	comp=E,6.0nm,0.9s						
KLR	**Kul'dur**	**12.97**	**114**	Pn	**Pn**	**12 22 58.3**	**+0.1**
	comp=E,0.4nm,0.3s,baz=310,slow=14,SNR=7.8						
KLR				Lg	Lg	12 26 34.2	
	comp=E,0.1nm,0.3s,baz=256,slow=17,SNR=3.9						
KLR				LR	LR	12 28 13.9	
	comp=E,124nm,19.0s,baz=278,slow=39						
ZALV	**Zalesovo Beam**	**16.58**	**275**	Pn	**Pn**	**12 23 47.8**	**+1.5**
	comp=E,0.1nm,0.3s,baz=73,slow=9.9,SNR=4.4						
ZALV				Lg	Lg	12 28 38.9	
	comp=E,0.0nm,0.3s,baz=70,slow=26,SNR=7.1						
USRK	**Ussuriysk Ar.**	**16.69**	**128**	Pn	**Pn**	**12 23 47.1**	**-0.7**
	baz=322,slow=11,SNR=3.4						
USRK				Lg	Lg	12 28 34.3	
	baz=319,slow=26,SNR=6.4						
USRK				LR	LR	12 30 31.8	
	comp=E,119nm,18.4s,baz=320,slow=38						
TIXI	**Tiksi**	**16.91**	**17**	⇑*e*P	**Pn**	**12 23 48.2**	**-2.2**
NRIK	**Noril'sk**	**17.64**	**329**	Pn	**Pn**	**12 23 56.1**	**-3.4**
	comp=E,1.1nm,0.3s,baz=117,slow=10,SNR=11						
NRIK	**Noril'sk**	**17.64**	**329**	*e*P	**Pn**	**12 23 58.9**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GTA	**Gaotai**	**19.01**	**214**	P	**P**	**12 24 16.8**	**+0.8**
GTA				pP	sP	12 24 21.9	+1.1
GTA				sP	pP	12 24 25.2	+6.0
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SEY	**Seymchan**	**20.57**	**55**	P	**P**	**12 24 34.1**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=279,slow=16,SNR=7.4						
SEY	**Seymchan**	**20.57**	**55**	⇓*e*P	**P**	**12 24 32.2**	**-0.4**
KURK	**Kurchatov**	**21.36**	**270**	⇓*e*P	**P**	**12 24 43.4**	**+2.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**21.43**	**258**	P	**P**	**12 24 43.3**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=55,slow=8.1,SNR=12						
KURBB	**Kurchatov Arra**	**21.45**	**270**	P	**P**	**12 24 43.9**	**+1.7**
	comp=Z,2.2nm,0.5s,baz=65,slow=11,SNR=16						
BVAR	**Borovoye Array**	**24.93**	**281**	P	**P**	**12 25 18.6**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=49,slow=14,SNR=8.0						
BRVK	**Borovoye**	**24.97**	**281**	⇓*e*P	**P**	**12 25 19.3**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,17nm,3.0s						
CMAR	**Chiang Mai Arr**	**39.16**	**202**	P	**P**	**12 27 23.2**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=359,slow=8.1,SNR=2.5						
FINES	**FINESS Array B**	**42.44**	**315**	P	**P**	**12 27 49.8**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=42,slow=5.9,SNR=8.3						
ILAR	**Eielson Array**	**44.90**	**37**	P	**P**	**12 28 09.0**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=303,slow=9.7,SNR=9.1						
INK	**Inuvik**	**46.55**	**28**	P	**P**	**12 28 21.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=161,slow=8.9,SNR=2.2						
DAV	**Davao City (W)**	**49.80**	**164**	LR	LR	12 52 21.5	
	comp=Z,85nm,19.0s,baz=298,slow=39						
YKA	**Yellowknife Ar**	**55.95**	**25**	P	**P**	**12 29 31.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=334,slow=6.8,SNR=17						
GERES	**GERESS Array B**	**56.07**	**308**	P	**P**	**12 29 33.7**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=46,slow=8.2,SNR=3.6						
ESDC	**Sonseca Array**	**70.94**	**314**	P	**P**	**12 31 12.6**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=24,slow=6.1,SNR=13						
NVAR	**Mina Array Bea**	**76.07**	**40**	P	**P**	**12 31 42.1**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=345,slow=5.6,SNR=3.8						
WRA	**Warramunga Arr**	**77.74**	**160**	P	**P**	**12 31 50.1**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=350,slow=6.0,SNR=7.8						
TORD	**Torodi Ar. Bea**	**90.94**	**295**	P	**P**	**12 32 57.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=45,slow=4.9,SNR=3.7						

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*CRAAG **03** 12:22:42.9, 36°.82N×3°.20E, Ml2.9*

*MDD **03** 12:22:43.2±0.6, 36°.93N×3°.18E, h9^{km}±8^{km}, mb3.9/8, mbLg2.0/2, Error ellipse: s-maj=8.0km s-min=6.7km az=24.0, PRXIMO*

ISC 03 12:22:42.4±1.5**, 36°.95N**±0°.06×**3°.18E**±0°.09**, h18^{km}**±6^{km}**, n17, σ1^{s}.44**/21**, 1C-1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.19**	**218**	P	**Pb**	**12 22 46.7**	**0.0**
ABA	**Alger-Bouzarea**	**0.19**	**218**	P	**Pb**	**12 22 46.7**	**0.0**
ABMS	**Boumerdes**	**0.31**	**130**	P	**Pg**	**12 22 48.7**	**-0.5**
ABMS	**Boumerdes**	**0.31**	**130**	P	**Pg**	**12 22 48.7**	**-0.5**
EMHD	**Djebel Mahouad**	**0.77**	**194**	P	**Pb**	**12 22 57.0**	**-0.3**
EMHD	**Djebel Mahouad**	**0.77**	**194**	P	**Pb**	**12 22 57.0**	**-0.3**
ADJB	**Djebel Djouab**	**0.82**	**165**	P	**Pb**	**12 22 58.0**	**-0.1**
ADJB	**Djebel Djouab**	**0.82**	**165**	P	**Pb**	**12 22 58.0**	**-0.1**
EIBI	**Ibiza**	**2.53**	**326**	⇓P	**Pn**	**12 23 23.6**	**+1.0**
	7.1nm,0.2s,SNR=18						
EIBI				S	**Sn**	**12 23 51.7**	**-1.2**
	7.3nm,0.3s,SNR=6.9						
ETOS	**Mallorca**	**2.83**	**354**	⇑P	**Pn**	**12 23 27.6**	**+0.9**
	8.0nm,0.3s,SNR=18						
ETOS				S	**Sn**	**12 23 59.0**	**-1.3**
	1.8nm,0.4s,SNR=7.3						
ETOB	**Tobarra**	**4.11**	**296**	P	**Pn**	**12 23 46.4**	**+2.0**
	1.2nm,0.3s,SNR=7.9						
ETOB				S	**Sn**	**12 24 30.5**	**-1.5**
	0.1nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**4.45**	**321**	P	**Pn**	**12 23 50.4**	**+1.3**
	0.6nm,0.2s,SNR=6.7						
EMOS				S	**Sn**	**12 24 38.0**	**-2.5**
	0.6nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**4.69**	**340**	P	**Pn**	**12 23 53.6**	**+1.3**
	0.5nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**4.84**	**353**	P	**Pn**	**12 23 55.2**	**+0.9**
	2.5nm,0.1s,SNR=14						
EMIR	**Miracle**	**5.12**	**346**	P	**Pn**	**12 24 00.8**	**+2.6**
	13nm,0.2s,SNR=18						
EJON	**La Jonquera**	**5.50**	**358**	P	**Pn**	**12 24 05.3**	**+2.0**
	2.5nm,0.1s,SNR=7.9						
SJAF	**Saint Jean de**	**5.53**	**358**	P	**Pn**	**12 24 05.5**	**+1.7**
	1.9nm,0.2s,SNR=7.9						

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*BJI **03** 12:27:14.1±0.0, 56°.30N×113°.99E, h5^{km}, mB4.6/3, mb4.2/12, Ms4.5/1, Ms7 4.3/1*

*MOS **03** 12:27:17.0±1.0, 56°.03N×113°.74E, h7^{km}, mb4.5/15, Error ellipse: s-maj=8.7km s-min=6.1km az=75.6*

MOS Felt (II-III) at Severomuysk.

*IDC **03** 12:27:17.4±0.5, 56°.06N×113°.71E, h0^{km}, mb4.0/23, mb1 4.1/28, mb1mx4.0/60, mbtmp4.0/28, ML3.7/4, MS4.0/1, Ms1 4.0/1, ms1mx2.9/51, Error ellipse: s-maj=13.7km s-min=11.0km az=159.0*

*BYKL **03** 12:27:18.0±0.2, 56°.08N×113°.70E, h5^{km}±2^{km}, FELT I=II-III MSK at Severomuisk*

*NEIC **03** 12:27:19.3±1.7, 56°.1N±0°.1×113°.83E±0°.08, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=17.5km s-min=7.5km az=173.0*

ISC 03 12:27:19.0±0.4**, 56°.09N**±0°.02×**113°.71E**±0°.02**, h10^{km}, n116, σ2^{s}.42**/177**, mb4.2**/35**, 11C-8D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**286**	⇑*i*Pg	**Pg**	**12 27 20.0**	**-1.5**
SVKR				Pmax		12 27 20.3	
	33µm,0.2s						
SVKR				*e*		12 27 21.4	
SVKR				*e*Sg	**Sg**	**12 27 22.3**	**-1.0**
SVKR				Smax		12 27 26.5	
	257µm,0.7s						
UKT	**Uakit**	**0.61**	**184**	*e*Pg	**Pg**	**12 27 28.5**	**-2.3**
UKT				*e*Pb	**Pb**	**12 27 30.8**	**-1.0**
UKT				max		12 27 31.0	
	802nm,0.4s						
UKT				*e*Sg	**Sg**	**12 27 36.4**	**-2.4**
UKT				*e*Sb	**Sb**	**12 27 40.0**	**-0.4**
UKT				max		12 27 44.4	
	5µm,1.3s						
UKT	**Uakit**	**0.61**	**184**	*e*PG	**Pg**	**12 27 28.5**	**-2.3**
UKT				*e*		12 27 36.5	
UKT				pmax	pmax		
	comp=Z,442nm,0.2s						
UKT				smax	smax		
	comp=E,3µm,0.4s						
YOA	**Uoyan**	**1.11**	**273**	⇑*i*Pg	**Pb**	**12 27 38.1**	**-2.2**
YOA				Pmax		12 27 43.4	
	comp=E,3µm,0.3s						
YOA				*e*Sg	**Sg**	**12 27 53.1**	**-1.7**
YOA				*e*Sb	**Sn**	**12 27 56.5**	**+0.5**
YOA				max		12 28 04.8	
	comp=E,19µm,0.6s						
YOA	**Uoyan**	**1.11**	**273**	⇑*i*PG	**Pb**	**12 27 38.2**	**-2.1**
YOA				*i*		12 27 54.0	
YOA				pmax	pmax		
	comp=Z,3µm,0.3s						

YOA				smax	smax		
	comp=N,19µm,0.6s						
NLYR	**Nelyaty**	**1.18**	**69**	⇑*i*Pg	**Pb**	**12 27 39.7**	**-1.8**
NLYR				*e*Pb	**Pn**	**12 27 41.8**	**+0.2**
NLYR				*e*		12 27 43.3	
NLYR				max		12 27 44.9	
	comp=N,2µm,0.4s						
NLYR				*e*Sg	**Sb**	**12 27 56.0**	**-0.9**
NLYR				*e*Sb	**Sn**	**12 27 59.9**	**+2.1**
NLYR				max		12 28 00.7	
	comp=N,16µm,0.8s						
NLYR	**Nelyaty**	**1.18**	**69**	*e*PG	**Pb**	**12 27 39.5**	**-2.0**
NLYR				*e*		12 27 55.4	
NLYR				pmax	pmax		
	comp=Z,2µm,0.4s						
NLYR				smax	smax		
	comp=N,16µm,0.9s						
KMO	**Kumora**	**1.42**	**263**	⇑*i*Pg	**Pn**	**12 27 43.5**	**-1.5**
KMO				*e*		12 27 45.2	
KMO				*e*		12 27 47.2	
KMO				max		12 27 47.8	
	comp=N,2µm,0.4s						
KMO				*e*Sg	**Sn**	**12 28 02.5**	**-1.2**
KMO				*e*		12 28 06.0	
KMO				max		12 28 07.0	
	comp=N,22µm,0.9s						
KMO	**Kumora**	**1.42**	**263**	*e*PG	**Pn**	**12 27 43.4**	**-1.5**
KMO				*e*		12 28 03.3	
KMO				pmax	pmax		
	comp=Z,351nm,0.2s						
KMO				smax	smax		
	comp=N,2µm,1.0s						
BOD	**Bodaibo**	**1.74**	**5**	⇑*i*Pg	**Pn**	**12 27 49.5**	**+0.3**
BOD				Pmax		12 27 51.5	
	comp=N,652nm,0.3s						
BOD				*e*Sg	**Sn**	**12 28 12.1**	**+0.7**
BOD				Smax		12 28 14.4	
	comp=N,6µm,0.6s						
BOD				*e*		12 28 14.7	
BOD	**Bodaibo**	**1.74**	**5**	*e*PN	**Pn**	**12 27 49.3**	**+0.1**
BOD				*e*		12 28 12.5	
BOD				pmax	pmax		
	comp=Z,649nm,0.3s						
BOD				smax	smax		
	comp=E,6µm,0.6s						
YLYR	**Ulyunkhan**	**1.89**	**231**	⇓*i*Pn	**Pn**	**12 27 51.5**	**+0.1**
YLYR				*e*Pg	**Pb**	**12 27 52.2**	**-1.4**
YLYR				Pmax		12 27 55.4	
	comp=E,683nm,0.4s						
YLYR				*e*Sg	**Sb**	**12 28 16.9**	**-0.4**
YLYR				Smax		12 28 19.3	
	comp=E,6µm,0.4s						
YLYR	**Ulyunkhan**	**1.89**	**231**	*e*PN	**Pn**	**12 27 51.7**	**+0.3**
YLYR				*e*		12 27 52.8	
YLYR				*e*S	**Sn**	**12 28 15.6**	**+0.3**
YLYR				*e*		12 28 16.6	
YLYR				pmax	pmax		
	comp=Z,686nm,0.4s						
YLYR				smax	smax		
	comp=E,6µm,0.4s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	⇓*i*Pn	**Pn**	**12 27 58.4**	**+0.5**
NIZ				*e*Pg	**Pb**	**12 28 00.3**	**-1.4**
NIZ				Pmax		12 28 03.1	
	comp=E,394nm,0.5s						
NIZ				*e*		12 28 06.0	
NIZ				*e*		12 28 28.9	
NIZ				*e*Sg	**Sb**	**12 28 31.6**	**+0.7**
NIZ				Smax		12 28 33.4	
	comp=E,5µm,0.5s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*PN	**Pn**	**12 27 58.4**	**+0.5**
NIZ				*e*		12 28 00.2	
NIZ				*e*		12 28 29.1	
NIZ				pmax	pmax		
	comp=Z,403nm,1.0s						
NIZ				smax	smax		
	comp=N,6µm,1.0s						
CRS	**Chara**	**2.66**	**70**	⇓*i*Pn	**Pn**	**12 28 02.3**	**+0.4**
CRS				*e*Pg	**Pb**	**12 28 06.7**	**+0.1**
CRS				Pmax		12 28 09.3	
	comp=N,2µm,1.1s						
CRS				*e*Sg	**Sb**	**12 28 41.1**	**+1.8**
CRS				Smax		12 28 43.2	
	comp=N,5µm,1.0s						
CRS				*e*		12 28 50.1	
CRS	**Chara**	**2.66**	**70**	*e*PN	**Pn**	**12 28 02.0**	**+0.1**
CRS				*e*		12 28 06.4	
CRS				*e*		12 28 40.8	
CRS				pmax	pmax		
	comp=Z,2µm,0.8s						
CRS				smax	smax		
	comp=E,5µm,1.0s						
SYVR	**Suvo**	**3.25**	**223**	⇓*i*Pn	**Pn**	**12 28 09.7**	**-0.2**
SYVR				*e*Pg	**Pb**	**12 28 16.5**	**-0.2**
SYVR				*e*PgPg	**Pg**	**12 28 20.9**	**-0.3**
SYVR				max		12 28 21.6	
	comp=E,410nm,1.0s						
SYVR				*e*Sg	**Sb**	**12 28 58.1**	**+1.8**
SYVR				*e*SgSg	**Sg**	**12 29 06.9**	**+3.7**
SYVR				max		12 29 07.7	
	comp=E,2µm,1.4s						
SYVR	**Suvo**	**3.25**	**223**	*e*PN	**Pn**	**12 28 09.8**	**-0.2**
SYVR				*e*		12 28 17.7	
SYVR				*e*		12 28 58.2	
SYVR				pmax	pmax		
	comp=Z,415nm,0.6s						
SYVR				smax	smax		
	comp=N,2µm,1.4s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pn	**Pn**	**12 28 11.8**	**-0.4**
VTMR				*e*Pg	**Pb**	**12 28 19.7**	**+0.2**
VTMR				*e*Sn	**Sn**	**12 28 52.6**	**-0.1**
VTMR				*e*Sg	**Sb**	**12 29 03.2**	**+2.2**
VTMR				*e*		12 29 11.7	
TUP	**Tupik**	**3.95**	**112**	⇓*i*Pn	**Pn**	**12 28 19.2**	**-0.4**
TUP				*e*Pg	**Pb**	**12 28 29.9**	**+1.3**
TUP				Pmax		12 28 31.3	
	comp=N,227nm,0.6s						
TUP				*e*Sn	**Sn**	**12 29 04.6**	**-1.3**
TUP				*e*Sg	**Sb**	**12 29 20.2**	**+3.8**
TUP				*e*		12 29 27.4	
TUP				max		12 29 29.9	
	comp=N,3µm,1.0s						
TUP				*e*		12 29 34.6	
TUP	**Tupik**	**3.95**	**112**	*e*PN	**Pn**	**12 28 19.4**	**-0.2**
TUP				*e*		12 28 29.2	
TUP				*e*S	**Sn**	**12 29 04.7**	**-1.2**
TUP				*e*		12 29 20.1	
TUP				pmax	pmax		
	comp=Z,226nm,0.5s						
TUP				smax	smax		
	comp=N,3µm,0.8s						
MXMB	**Maximikha**	**4.04**	**227**	*e*Pn	**Pn**	**12 28 20.8**	**-0.1**
MXMB				*e*Pg	**Pb**	**12 28 30.7**	**+0.5**
MXMB				*e*Sn	**Sn**	**12 29 06.8**	**-1.4**
MXMB				*e*Sg	**Sb**	**12 29 23.3**	**+4.2**
MXMB				*e*		12 29 31.0	
CIT	**Chita**	**4.08**	**181**	*e*Pn	**Pn**	**12 28 21.1**	**-0.4**
CIT				*e*Pg	**Pb**	**12 28 30.8**	**-0.1**
CIT				Pmax		12 28 34.3	
	comp=N,194nm,0.3s						
CIT				*e*Sn	**Sn**	**12 29 06.6**	**-2.7**
CIT				*e*Sg	**Sb**	**12 29 23.5**	**+3.2**
CIT				Smax		12 29 30.1	
	comp=N,2µm,1.3s						
OGRR	**Ongureny**	**4.30**	**238**	*e*Pn	**Pn**	**12 28 25.2**	**+0.8**
OGRR				*e*Pg	**Pb**	**12 28 35.2**	**+0.6**
OGRR				*e*		12 28 37.5	
OGRR				max		12 28 40.0	
	comp=N,155nm,0.8s						
OGRR				*e*Sn	**Sn**	**12 29 13.1**	**-1.5**
OGRR				*e*Sg	**Sb**	**12 29 31.0**	**+4.5**
OGRR				Smax		12 29 40.3	
	comp=N,933nm,1.4s						
OGRR	**Ongureny**	**4.30**	**238**	⇑*i*PN	**Pn**	**12 28 25.2**	**+0.8**
OGRR				*e*		12 28 36.3	
OGRR				*e*		12 29 31.1	
OGRR				pmax	pmax		
	comp=Z,175nm,1.7s						
OGRR				smax	smax		
	comp=N,973nm,2.3s						
YKLR	**Yuktali**	**4.45**	**80**	*e*Pn	**Pn**	**12 28 26.8**	**+0.3**
YKLR				*e*Pg	**Pb**	**12 28 37.3**	**+0.1**
YKLR				*e*Sg	**Sb**	**12 29 34.5**	**+3.7**
ZRHB	**Zarechye**	**5.22**	**230**	*e*Pn	**Pn**	**12 28 37.9**	**+0.8**
ZRHB				*e*		12 28 54.3	
ZRHB				max		12 29 05.9	
	comp=N,189nm,0.6s						
ZRHB				*e*Sg	**Sb**	**12 29 59.7**	**+6.6**
ZRHB				Smax		12 30 37.1	
	comp=N,2µm,0.9s						
TRG	**Tyrgan**	**5.44**	**235**	*e*Pn	**Pn**	**12 28 39.7**	**-0.4**
TRG				*e*		12 28 50.5	
TRG				*e*Pg	**Pb**	**12 28 54.4**	**+0.3**
TRG				Pmax		12 29 00.1	
	comp=N,51nm,1.2s						
TRG				*e*Sn	**Sn**	**12 29 38.8**	**-3.9**
TRG				*e*Sg	**Sb**	**12 30 04.1**	**+4.8**
TRG				Smax		12 30 08.2	
	comp=N,470nm,1.1s						
TRG	**Tyrgan**	**5.44**	**235**	*e*PN	**Pn**	**12 28 39.9**	**-0.2**
TRG				*e*		12 28 54.3	
TRG				*e*S	**Sn**	**12 29 36.7**	**-6.0**
TRG				*e*		12 30 04.0	
TRG				pmax	pmax		
	comp=Z,51nm,1.0s						
TRG				smax	smax		
	comp=N,468nm,1.1s						
FFNB	**Fofonovo**	**5.75**	**228**	*e*Pn	**Pn**	**12 28 43.8**	**-0.6**
FFNB				*e*		12 29 03.8	
FFNB				*e*Sg	**Sb**	**12 30 15.9**	**+7.5**
HRMR	**Khuramsha**	**6.00**	**225**	*e*Pn	**Pn**	**12 28 48.2**	**+0.5**
HRMR				*e*Pg	**Pb**	**12 29 06.4**	**+2.9**
HRMR				Pmax		12 29 13.9	
	comp=N,213nm,0.6s						
HRMR				*e*Sg	**Sg**	**12 30 24.1**	**-7.2**
HRMR				*e*		12 30 36.5	
HRMR				max		12 30 40.1	
	comp=N,2µm,1.1s						
IENR	**Iengra**	**6.23**	**84**	*e*Pn	**Pn**	**12 28 50.9**	**-0.1**
IENR				*e*Pg	**Pb**	**12 29 10.4**	**+2.8**
IENR				*e*Sg	**Sb**	**12 30 30.2**	**+8.1**
BGT	**Bolshoye Golou**	**6.35**	**234**	*e*Pn	**Pn**	**12 28 53.0**	**+0.5**
BGT				*e*Pg	**Pb**	**12 29 12.2**	**+2.7**
BGT				Pmax		12 29 16.9	
	comp=N,34nm,0.7s						
BGT				*e*		12 30 27.5	
BGT				*e*Sg	**Sg**	**12 30 34.8**	**-7.8**
BGT				Smax		12 30 46.2	
	comp=N,390nm,1.2s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*Pn	**Pn**	**12 28 52.5**	**-1.5**
KPC				*e*Pg	**Pb**	**12 29 13.1**	**+1.8**
KPC				Pmax		12 29 28.1	
	comp=N,31nm,0.8s						
KPC				*e*Sn	**Sn**	**12 30 03.2**	**-4.5**
KPC				*e*Sg	**Sb**	**12 30 36.6**	**+8.2**
KPC				*e*		12 30 53.0	
KPC				max		12 30 54.6	
	comp=N,1µm,1.1s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*PN	**Pn**	**12 28 52.3**	**-1.7**
KPC				*e*		12 29 13.1	
KPC				*e*		12 30 36.3	
KPC				pmax	pmax		
	comp=Z,18nm,0.6s						
KPC				smax	smax		
	comp=E,661nm,1.1s						
LSTR	**Listvyanka**	**6.73**	**235**	*e*Pn	**Pn**	**12 28 57.8**	**0.0**
LSTR				*e*Pg	**Pb**	**12 29 18.0**	**+2.0**
LSTR				Pmax		12 29 29.0	
	comp=E,28nm,1.0s						
LSTR				*e*		12 30 27.2	
LSTR				*e*Sg	**Sb**	**12 30 45.0**	**+8.6**
LSTR				*e*		12 30 50.6	
LSTR				max		12 30 52.9	
	comp=E,440nm,1.6s						
IRK	**Irkutsk**	**6.75**	**239**	*e*Sg	**Sb**	**12 30 45.5**	**+8.6**
IRK				Smax		12 30 55.5	
	comp=E,810nm,1.3s						
IRK	**Irkutsk**	**6.75**	**239**	*e*PG	**Pb**	**12 29 19.7**	**+3.4**
IRK				*e*		12 30 45.3	
IRK				pmax	pmax		
	comp=Z,174nm,0.2s						
IRK				smax	smax		
	comp=E,810nm,0.9s						
TLY	**Talaya**	**7.41**	**238**	*e*PN	Pb	12 29 18.2	-9.3
TLY				*e*		12 29 33.5	
TLY				*e*		12 31 03.8	
TLY				pmax	pmax		
	comp=Z,22nm,1.0s						
TLY				smax	smax		
	comp=E,243nm,1.1s						
TLY	**Talaya**	**7.41**	**238**		**Pn**	**12 29 08.8**	**+1.7**
HIA	**Hailar**	**7.76**	**149**	PN	**Pn**	**12 29 09.8**	**-2.1**
HIA	**Hailar**	**7.76**	**149**		**Pn**	**12 29 09.8**	**-2.1**
ARS	**Arshan**	**7.85**	**243**	*e*Pn	**Pn**	**12 29 12.6**	**-0.6**
ARS				*e*Pg	**Pb**	**12 29 38.7**	**+3.6**
ARS				Pmax		12 29 42.6	
	comp=E,76nm,1.0s						
ARS				*e*Sg	Sg	12 31 20.4	-10
ARS				Smax		12 31 22.2	
	comp=E,810nm,1.0s						
ZEA	**Zeya**	**8.15**	**101**	*e*PN	**Pn**	**12 29 14.0**	**-3.3**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				MLR	MLR		
	comp=E,600nm,3.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,5.0s						
ZAK	**Zakamensk**	**8.47**	**232**	*e*Pn	**Pn**	**12 29 23.4**	**+1.7**
ZAK				*e*Pg	Pb	12 29 51.3	+5.6
ZAK				Pmax		12 30 01.4	
	comp=Z,19nm,1.3s						
ZAK				*e*Sn	**Sn**	**12 30 53.3**	**-4.1**
ZAK				*e*Sg	Sg	12 31 40.2	-10
ZAK				Smax		12 31 51.7	
	comp=Z,290nm,1.9s						
MOY	**Mondy**	**8.72**	**245**	*e*Pn	**Pn**	**12 29 25.1**	**0.0**
MOY				Pg	Pg	12 29 56.1	-10
MOY				Pmax		12 30 05.8	
	comp=Z,46nm,0.9s						
MOY				*e*Sn	**Sn**	**12 30 59.9**	**-3.5**
MOY				*e*Sg	Sg	12 31 47.5	-11
MOY				Smax		12 32 06.2	
	comp=Z,472nm,1.7s						
MOY	**Mondy**	**8.72**	**245**	*e*PN	**Pn**	**12 29 25.3**	**+0.2**
MOY				*e*		12 29 52.4	
MOY				*e*		12 31 47.1	
MOY				pmax	pmax		
	comp=Z,47nm,1.0s						
MOY				smax	smax		
	comp=N,474nm,1.7s						
ORL	**Orlik**	**8.87**	**252**	*e*Pn	**Pn**	**12 29 27.5**	**+0.3**
ORL				*e*		12 29 37.3	
ORL				*e*		12 30 10.8	
ORL				max		12 30 14.3	
	comp=N,79nm,1.3s						
ORL				*e*Sn	**Sn**	**12 31 02.8**	**-4.3**
ORL				*e*Sg	Sg	12 31 51.8	-11
ORL				Smax		12 32 04.1	
	comp=N,321nm,1.8s						
ORL	**Orlik**	**8.87**	**252**	*e*PN	**Pn**	**12 29 29.5**	**+2.3**
ORL				*e*		12 29 59.0	
ORL				*e*S	**Sn**	**12 31 04.9**	**-2.2**
ORL				pmax	pmax		
	comp=Z,80nm,0.9s						
ORL				smax	smax		
	comp=N,319nm,1.3s						
SONM	**Songino Array**	**9.42**	**212**	Pn	**Pn**	**12 29 35.0**	**+0.3**
	comp=N,0.6nm,0.3s,baz=19,slow=13,SNR=11						
SONM				Lg	Lg	12 32 13.1	
	comp=N,3.9nm,0.3s,baz=19,slow=27,SNR=8.6						
YAK	**Yakutsk**	**10.13**	**48**	Pn	**Pn**	**12 29 40.9**	**-3.4**
	comp=N,0.1nm,0.3s,baz=39,slow=4.0,SNR=2.1						
YAK				Lg	Lg	12 32 33.2	
	comp=N,0.5nm,0.3s,baz=310,slow=19,SNR=7.7						
YAK	**Yakutsk**	**10.13**	**48**	⇑*e*P	**Pn**	**12 29 42.8**	**-1.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
KLR	**Kul'dur**	**12.90**	**115**	Pn	**Pn**	**12 30 22.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=344,slow=12,SNR=3.8						
KLR				Lg	Lg	12 34 06.5	
	comp=Z,1.9nm,0.3s,baz=58,slow=10,SNR=5.4						
USRK	**Ussuriysk Ar.**	**16.64**	**128**	Pn	**P**	**12 31 13.5**	**-1.0**
	baz=323,slow=9.3,SNR=3.6						
USRK				Lg	Lg	12 36 01.2	
	baz=324,slow=27,SNR=6.1						
ZALV	**Zalesovo Beam**	**16.65**	**275**	Pn	**Pn**	**12 31 12.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=65,slow=10,SNR=5.3						
TIXI	**Tiksi**	**16.88**	**17**	⇓*e*P	**Pn**	**12 31 11.5**	**-3.5**
TIXI	**Tiksi**	**16.88**	**17**	Pn	**Pn**	**12 31 12.5**	**-2.5**
NRIK	**Noril'sk**	**17.67**	**329**	P	**Pn**	**12 31 20.5**	**-4.3**
	comp=Z,1.4nm,0.3s,baz=129,slow=9.1,SNR=8.2						
NRIK	**Noril'sk**	**17.67**	**329**	P	**Pn**	**12 31 24.1**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,17nm,0.9s						
NRIK	**Noril'sk**	**17.67**	**329**	Pn	**Pn**	**12 31 24.1**	**-0.7**
SEY	**Seymchan**	**20.51**	**55**	P	**P**	**12 31 58.2**	**+1.4**
	comp=Z,3.6nm,0.8s,baz=260,slow=12,SNR=7.9						
KSRS	**Korea Array**	**20.96**	**147**	P	**P**	**12 32 03.0**	**+1.1**
	comp=Z,2.2nm,1.0s,baz=347,slow=9.0,SNR=5.5						
KSRS	**Korea Array**	**20.96**	**147**	*e*P	**P**	**12 32 03.2**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**21.43**	**270**	⇑*e*P	**P**	**12 32 09.7**	**+2.8**
KURK				pmax	pmax		
	comp=Z,21nm,1.1s						
KURK	**Kurchatov**	**21.43**	**270**	P	**P**	**12 32 09.4**	**+2.4**
KURK				IAmb	IAmb	12 32 11.1	
	comp=Z,19nm,1.1s						
MK31	**Makanchi Array**	**21.51**	**258**	P	**P**	**12 32 08.5**	**+0.7**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	**21.51**	**258**		**P**	**12 32 08.5**	**+0.7**
MKAR	**Makanchi Array**	**21.51**	**258**	P	**P**	**12 32 08.1**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=50,slow=7.7,SNR=17						
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**12 32 08.3**	**+0.3**
	comp=Z,14nm,0.9s,baz=66,slow=12,SNR=24						
MAKZ	**Makanchi**	**21.67**	**258**	P	**P**	**12 32 09.6**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAKZ	**Makanchi**	**21.67**	**258**	P	**P**	**12 32 09.6**	**0.0**
XAN	**Xi'an**	**22.30**	**191**	P	**P**	**12 32 16.6**	**+0.2**
XAN				pP	sP	12 32 21.6	+0.4
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BVAR	**Borovoye Array**	**25.00**	**281**	P	**P**	**12 32 43.0**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=32,slow=26,SNR=16						
BVAR	**Borovoye Array**	**25.00**	**281**	P	**P**	**12 32 43.0**	**+0.4**
BRVK	**Borovoye**	**25.04**	**281**	⇑*e*P	**P**	**12 32 43.5**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	**Borovoye**	**25.04**	**281**	P	**P**	**12 32 43.7**	**+0.7**
AAK	**Ala-Archa**	**28.43**	**258**	P	**P**	**12 33 15.2**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=93,slow=9.6,SNR=5.0						
KK31	**Karatay Array**	**30.33**	**263**	P	**P**	**12 33 30.6**	**+0.1**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KK31	**Karatay Array**	**30.33**	**263**	P	**P**	**12 33 30.6**	**+0.1**
KK31				IAmb	IAmb	12 33 33.4	
	comp=Z,5.0nm,1.2s						
KKAR	**Karatay Array**	**30.33**	**263**	P	**P**	**12 33 31.3**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KKAR	**Karatay Array**	**30.33**	**263**	P	**P**	**12 33 31.3**	**+0.8**
KKAR				IAmb	IAmb	12 33 33.3	
	comp=Z,5.0nm,1.2s						
ARCES	**ARCESS Array B**	**38.60**	**326**	P	**P**	**12 34 40.4**	**-1.2**
	comp=Z,9.0nm,1.2s,baz=68,slow=7.1,SNR=1.4						
CMAR	**Chiang Mai Arr**	**39.19**	**203**	P	**P**	**12 34 46.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=4.9,slow=7.3,SNR=4.5						
GEYT	**Alibeck**	**40.76**	**268**	P	**P**	**12 34 59.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=56,slow=3.6,SNR=2.2						
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**12 35 13.7**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=52,slow=8.5,SNR=9.2						
FINES	**FINESS Array B**	**42.48**	**315**	*e*P	**P**	**12 35 13.0**	**-0.8**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
COLA	**College**	**44.45**	**37**	⇓*e*P	**P**	**12 35 30.6**	**+1.0**
ILAR	**Eielson Array**	**44.84**	**37**	P	**P**	**12 35 33.8**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=300,slow=8.7,SNR=16						
KIV	**Kislovodsk**	**45.21**	**286**	⇑*e*P	**P**	**12 35 36.8**	**+0.8**
KIV				*e*		12 37 18.4	
KIV				*e*S	**S**	**12 42 17.9**	**+2.2**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,256nm,19.0s						
INK	**Inuvik**	**46.51**	**28**	P	**P**	**12 35 46.1**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=329,slow=9.0,SNR=6.6						
INK	**Inuvik**	**46.51**	**28**	P	**P**	**12 35 46.6**	**+0.7**
INK				IAmb	IAmb	12 35 51.6	
	comp=Z,6.7nm,1.4s						
KDAK	**Kodiak Island**	**47.16**	**47**	LR	LR	12 56 45.5	
	comp=Z,142nm,18.6s,baz=348,slow=38						
AKASG	**Malin Array Be**	**47.67**	**301**	P	**P**	**12 35 56.0**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=43,slow=8.8,SNR=7.4						
NOA	**NORSAR Array B**	**48.36**	**321**	P	**P**	**12 36 00.5**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=51,slow=7.4,SNR=3.3						
BRTR	**Keskin Array B**	**53.00**	**288**	P	**P**	**12 36 36.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=64,slow=2.9,SNR=2.7						
YKA	**Yellowknife Ar**	**55.91**	**25**	P	**P**	**12 36 55.6**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=334,slow=6.8,SNR=25						
KHC	**Kasperske Hory**	**55.96**	**309**	⇓*e*P	**P**	**12 36 58.9**	**+1.8**
KHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES	**GERESS Array B**	**56.12**	**308**	P	**P**	**12 36 58.3**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=46,slow=12,SNR=7.5						
BMO	**Blue Mountains**	**70.65**	**36**	P	**P**	**12 38 35.2**	**+0.7**
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMO	**Blue Mountains**	**70.65**	**36**	P	**P**	**12 38 35.2**	**+0.7**
BMO				IAmb	IAmb	12 38 38.6	
	comp=Z,2.7nm,0.9s						
ESDC	**Sonseca Array**	**70.99**	**314**	P	**P**	**12 38 36.9**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=21,slow=6.1,SNR=18						
DLMT	**Dillon**	**71.67**	**32**	P	**P**	**12 38 40.4**	**-0.4**
RLMT	**Red Lodge**	**72.87**	**30**	P	**P**	**12 38 48.6**	**+0.6**
RLMT				IAmb	IAmb	12 38 55.4	
	comp=Z,4.4nm,1.1s						
PDAR	**Pinedale Array**	**74.94**	**32**	P	**P**	**12 38 59.7**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=312,slow=2.0,SNR=5.1						
NVAR	**Mina Array Bea**	**76.01**	**40**	P	**P**	**12 39 07.0**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=324,slow=5.0,SNR=9.4						
WRA	**Warramunga Arr**	**77.72**	**160**	P	**P**	**12 39 14.7**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=349,slow=6.0,SNR=11						
O20A	**White River Ci**	**77.75**	**32**	P	**P**	**12 39 16.5**	**+0.4**
SMCO	**Snowmass**	**79.00**	**31**	P	**P**	**12 39 23.9**	**+0.6**
SMCO				IAmb	IAmb	12 39 26.6	
	comp=Z,3.1nm,0.9s						
KNB	**Kanab**	**79.17**	**36**	P	**P**	**12 39 25.1**	**+1.1**
KNB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KNB	**Kanab**	**79.17**	**36**	P	**P**	**12 39 25.1**	**+1.1**
ASAR	**Alice Springs**	**81.28**	**161**	P	**P**	**12 39 34.1**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=350,slow=6.5,SNR=5.2						
WMOK	**Wichita Mounta**	**85.38**	**26**	P	**P**	**12 39 56.8**	**+0.5**
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WMOK	**Wichita Mounta**	**85.38**	**26**	P	**P**	**12 39 56.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**91.00**	**295**	P	**P**	**12 40 21.8**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=34,slow=5.4,SNR=3.7						
CPUP	**Villa Florida**	**149.56**	**344**	PKPbc	**PKPdf**	**12 47 05.8**	**+2.1**
	comp=Z,2.7nm,0.9s,baz=248,slow=5.4,SNR=2.8						

GCMT ***03*** *12:29:35.7±0.3, 56°.25N±0°.03×113°.90E±0°.06, h12^{km}, MW4.8/75, Moment Tensor Solution. s25,c29; s75,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.32±.07; $M_{\theta\theta}$0.52±.07; $M_{\phi\phi}$0.80±.07; $M_{r\theta}$1.06±.25; $M_{\theta\phi}$0.98±.05; $M_{\phi r}$-1.35±.28; Best double couple: $M_0$2.15500×10^{16} NP1:ϕ_s247.00000°,δ45.00000°,λ-37.00000°. NP2: ϕ_s5.00000°,δ64.00000°,λ-129.00000°. Principal axes: T 1.7130, Plg11.0000°, Azm122.0000°; N 0.8840, Plg35.0000°, Azm24.0000°; P -2.5970, Plg53.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***03*** *12:29:40.4±0.0, 56°.14N×113°.85E, h5^{km}, mB5.0/41, mb4.5/55, Ms5.0/53, Ms7 4.6/46*

MOS ***03*** *12:29:40.7±0.9, 56°.08N×113°.74E, h2^{km}, mb4.9/59, MS4.3/7, Error ellipse: s-maj=6.5km s-min=4.7km az=84.3*

MOS Felt (IV-V) at Severomuysk.

IDC ***03*** *12:29:42.1±0.4, 56°.10N×113°.72E, h0^{km}, mb4.4/34, mb1 4.6/39, mb1mx4.5/57, mbtmp4.5/39, ML4.4/4, MS4.3/1, Ms1 4.3/1, ms1mx3.5/13, Error ellipse: s-maj=11.6km s-min=9.0km az=166.0*

BYKL ***03*** *12:29:42.7±0.2, 56°.11N×113°.71E, h7^{km}±4^{km}, Mw5.0/13(IEC), #STATIONS HRV ERM MAJO INCN TATO ENH KMI WMQ AAK KURK BRVK ARU LVZ FELT*

I=IV-V MSK at Severomuisk
NEIC ***03*** *12:29:43.7±1.3, 56°.11N±0°.09×113°.6E±0°.2, h10km±1km, mb4.8/212, Error ellipse: s-maj=15.1km s-min=14.7km az=25.0*
BGR ***03*** *12:29:46.2±0.0, 56°.43N×115°.07E, h33km, mb4.7*
ISC 03 12:29:42.9±0.6**, 56°.06N**±0°.02×**113°.65E**±0°.02**, h8**km±3km**, n632, σ1.66**/684**, mb4.8**/182**, MS4.7**/18**, 13C-9D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.07**	**318**	⇑*i*Pg	**Pg**	**12 29 44.5**	**-0.4**
SVKR				*e*Sg	**Sg**	**12 29 46.9**	**+0.4**
SVKR	**Severomuysk**	**0.07**	**318**	⇑*i*PG	**Pg**	**12 29 44.6**	**-0.4**
SVKR				*e*S	**Sg**	**12 29 46.1**	**-0.4**
UKT	**Uakit**	**0.57**	**181**	⇓*i*Pg	**Pg**	**12 29 53.1**	**-0.9**
UKT				Pmax		12 29 57.0	
	5μm,0.8s						
UKT				*e*Sg	**Sg**	**12 30 01.2**	**-0.3**
UKT				*e*Sb	**Sn**	**12 30 06.2**	**-0.9**
UKT				max		12 30 09.0	
	24μm,1.4s						
UKT	**Uakit**	**0.57**	**181**	*e*PG	**Pg**	**12 29 53.1**	**-0.9**
UKT				*e*		12 30 01.0	
UKT				pmax	pmax		
	comp=Z,3μm,0.7s						
UKT				smax	smax		
	comp=N,34μm,1.9s						
YOA	**Uoyan**	**1.08**	**275**	⇑*i*Pg	**Pg**	**12 30 02.8**	**-0.8**
YOA				*e*		12 30 07.6	
YOA				max		12 30 09.1	
	comp=N,12μm,0.7s						
YOA				*e*Sg	**Sg**	**12 30 17.9**	**+0.3**
YOA				*e*Sb	**Sn**	**12 30 20.6**	**+1.1**
YOA				max		12 30 33.0	
	comp=N,60μm,1.1s						
YOA	**Uoyan**	**1.08**	**275**	⇑*i*PG	**Pg**	**12 30 02.9**	**-0.7**
YOA				*i*		12 30 19.5	
YOA				pmax	pmax		
	comp=Z,8μm,0.3s						
YOA				smax	smax		
	comp=N,39μm,0.4s						
NLYR	**Nelyaty**	**1.22**	**69**	*e*Pg	**Pg**	**12 30 04.3**	**-2.1**
NLYR				*e*Pb	**Pn**	**12 30 06.4**	**+0.1**
NLYR				*e*		12 30 08.0	
NLYR				max		12 30 09.0	
	comp=N,11μm,0.4s						
NLYR				*e*Sg	**Sg**	**12 30 20.5**	**-1.7**
NLYR				*e*Sb	**Sn**	**12 30 24.4**	**+1.3**
NLYR				max		12 30 25.3	
	comp=N,78μm,0.9s						
NLYR	**Nelyaty**	**1.22**	**69**	*e*PG	**Pg**	**12 30 04.3**	**-2.1**
NLYR				*e*		12 30 19.8	
NLYR				pmax	pmax		
	comp=Z,11μm,0.5s						
NLYR				smax	smax		
	comp=N,78μm,0.9s						
KMO	**Kumora**	**1.39**	**264**	*e*Pg	**Pn**	**12 30 08.4**	**-0.1**
KMO				Pmax		12 30 16.2	
	comp=N,3μm,0.9s						
KMO				*e*Sg	**Sn**	**12 30 28.4**	**+1.3**
KMO				*e*Sb	**Sg**	**12 30 31.0**	**+3.6**
KMO				max		12 30 32.3	
	comp=N,52μm,1.3s						
BOD	**Bodaibo**	**1.77**	**6**	*e*Pg	**Pn**	**12 30 13.6**	**-0.3**
BOD				Pmax		12 30 16.5	
	comp=N,10μm,1.3s						
BOD				*e*Sg	**Sn**	**12 30 36.9**	**+0.4**
BOD				Smax		12 30 40.0	
	comp=N,26μm,0.9s						
BOD	**Bodaibo**	**1.77**	**6**	*e*PG	**Pn**	**12 30 13.5**	**-0.3**
BOD				*e*		12 30 36.4	
BOD				pmax	pmax		
	comp=Z,10μm,1.3s						
BOD				smax	smax		
	comp=N,26μm,0.8s						
YLYR	**Ulyunkhan**	**1.85**	**231**	*e*Pg	**Pb**	**12 30 16.3**	**-0.6**
YLYR				Pmax		12 30 19.6	
	comp=N,3μm,0.4s						
YLYR				*e*		12 30 28.9	
YLYR				*e*Sg	**Sg**	**12 30 42.0**	**-0.2**
YLYR				*e*		12 30 44.8	
YLYR				max		12 30 46.9	
	comp=N,14μm,0.8s						
NIZ	**Nizh Angarsk**	**2.33**	**265**	*e*Pn	**Pn**	**12 30 23.2**	**+1.7**
NIZ				*e*Pg	**Pb**	**12 30 25.3**	**+0.2**
NIZ				*e*		12 30 28.0	
NIZ				max		12 30 30.6	
	comp=N,2μm,0.5s						
NIZ				*e*		12 30 54.1	
NIZ				*e*Sg	**Sb**	**12 30 56.2**	**+2.2**
NIZ				Smax		12 30 58.4	
	comp=N,14μm,0.8s						
NIZ	**Nizh Angarsk**	**2.33**	**265**	*e*PN	**Pb**	**12 30 23.8**	**-1.3**
NIZ				*e*		12 30 25.7	
NIZ				*e*		12 30 57.5	
NIZ				pmax	pmax		
	comp=Z,2μm,0.8s						
NIZ				smax	smax		
	comp=N,4μm,1.6s						
CRS	**Chara**	**2.70**	**70**	*e*Pn	**Pn**	**12 30 26.4**	**-0.2**
CRS				*e*Pg	**Pb**	**12 30 30.8**	**-0.6**
CRS				Pmax		12 30 33.0	
	comp=N,8μm,0.7s						
CRS				*e*PgPg	**PbPb**	**12 30 35.6**	**+1.1**
CRS				*e*		12 30 44.4	
CRS				*e*Sg	**Sb**	**12 31 06.1**	**+1.5**
CRS				Smax		12 31 08.3	
	comp=N,30μm,1.5s						
SYVR	**Suvo**	**3.20**	**223**	⇓*i*Pn	**Pn**	**12 30 34.4**	**+1.0**
SYVR				*e*Pg	**Pb**	**12 30 41.5**	**+1.5**
SYVR				Pmax		12 30 46.4	
	comp=N,2μm,0.9s						
SYVR				*e*		12 31 05.8	
SYVR				*e*Sg	**Sg**	**12 31 22.8**	**-2.8**
SYVR				Smax		12 31 36.2	
	comp=N,9μm,1.7s						
SYVR	**Suvo**	**3.20**	**223**	*e*PN	**Pn**	**12 30 34.5**	**+1.0**
SYVR				*e*		12 30 41.5	
SYVR				*e*		12 31 23.1	
SYVR				pmax	pmax		
	comp=Z,2μm,1.0s						
SYVR				smax	smax		
	comp=E,10μm,1.2s						
VTMR	**Vitim**	**3.44**	**351**	*e*Pn	**Pn**	**12 30 36.9**	**+0.2**
VTMR				*e*		12 30 44.9	
VTMR				*e*		12 31 17.6	
VTMR				*e*Sg	**Sb**	**12 31 27.3**	**+1.4**
TUP	**Tupik**	**3.96**	**112**	*e*Pn	**Pn**	**12 30 43.7**	**-0.2**
TUP				*e*Pg	**Pb**	**12 30 53.3**	**+0.3**
TUP				Pmax		12 30 56.5	
	comp=E,1μm,0.5s						
TUP				*e*Sn	**Sn**	**12 31 28.9**	**-1.7**
TUP				*e*Sg	**Sg**	**12 31 45.4**	**-4.7**
TUP				*e*		12 31 50.1	
TUP				*e*		12 31 59.8	
TUP				max		12 32 01.2	
	comp=E,8μm,1.1s						
TUP	**Tupik**	**3.96**	**112**	*e*PN	**Pn**	**12 30 43.8**	**-0.2**
TUP				*e*		12 30 53.5	
TUP				*e*S	**Sn**	**12 31 29.2**	**-1.4**
TUP				*e*		12 31 44.5	
TUP				pmax	pmax		
	comp=Z,1μm,0.6s						
TUP				smax	smax		
	comp=N,8μm,1.1s						
MXMB	**Maximikha**	**4.00**	**227**	*e*Pg	**Pb**	**12 30 55.7**	**+2.2**
MXMB				*e*		12 31 23.3	
MXMB				*e*Sg	**Sg**	**12 31 49.1**	**-2.0**
CIT	**Chita**	**4.05**	**181**	*e*Pn	**Pn**	**12 30 45.4**	**+0.2**
CIT				*e*Pg	**Pb**	**12 30 55.9**	**+1.5**
CIT				Pmax		12 31 04.4	
	comp=N,668nm,0.8s						
CIT				*e*		12 31 47.6	
CIT				*e*Sg	**Sg**	**12 31 49.2**	**-3.6**
CIT				Smax		12 32 05.8	
	comp=N,5μm,0.7s						
CIT	**Chita**	**4.05**	**181**	*e*PN	**Pn**	**12 30 44.1**	**-1.1**
CIT				*e*P	**Pb**	**12 30 56.5**	**+2.1**
CIT				*e*S	**Sg**	**12 31 49.5**	**-3.3**
OGRR	**Ongureny**	**4.26**	**238**	*e*Pn	**Pn**	**12 30 49.7**	**+1.7**
OGRR				*e*Pg	**Pb**	**12 31 00.1**	**+2.2**
OGRR				*e*		12 31 01.9	
OGRR				max		12 31 03.3	
	comp=N,833nm,1.0s						
OGRR				*e*		12 31 07.6	
OGRR				*e*		12 31 43.1	
OGRR				*e*Sg	**Sg**	**12 31 56.1**	**-3.3**
OGRR				Smax		12 32 02.2	
	comp=N,5μm,1.8s						
OGRR	**Ongureny**	**4.26**	**238**	*e*PN	**Pn**	**12 30 50.0**	**+2.0**
OGRR				*e*		12 31 01.1	
OGRR				*e*		12 31 55.9	
OGRR				pmax	pmax		
	comp=Z,836nm,1.3s						
OGRR				smax	smax		
	comp=N,5μm,2.6s						
YKLR	**Yuktali**	**4.49**	**80**	*e*	**Pb**	**12 30 57.1**	**-4.8**
YKLR				*e*Pg	Pg	12 31 02.5	-6.3
YKLR				*e*Sg	**Sb**	**12 32 00.1**	**+4.0**
ZRHB	**Zarechye**	**5.18**	**230**	*e*Pg	**Pb**	**12 31 17.6**	**+4.0**
ZRHB				Pmax		12 31 22.7	
	comp=N,877nm,1.0s						
ZRHB				*e*Sg	**Sg**	**12 32 26.3**	**-2.7**
ZRHB				Smax		12 32 50.4	
	comp=N,7μm,1.1s						
TRG	**Tyrgan**	**5.39**	**235**	*e*	Pn	12 31 09.1	+5.5
TRG				*e*		12 31 14.5	
TRG				*e*Pg	**Pb**	**12 31 20.0**	**+2.6**
TRG				Pmax		12 31 26.7	
	comp=N,234nm,1.0s						
TRG				*e*Sg	**Sg**	**12 32 30.0**	**-6.0**
TRG				*e*		12 32 43.9	
TRG				max		12 32 46.9	
	comp=N,2μm,1.7s						
FFNB	**Fofonovo**	**5.71**	**228**	*e*	**Pg**	**12 31 28.1**	**-4.1**
FFNB				*e*		12 32 08.6	
FFNB				*e*Sg	**Sg**	**12 32 41.6**	**-4.5**
FFNB				*e*		12 32 47.2	
KAB	**Kabansk**	**5.75**	**229**	*e*	**Pb**	**12 31 23.2**	**-0.2**
KAB				*e*		12 31 30.8	
KAB				max		12 31 51.3	
	comp=N,1μm,1.1s						
KAB				*e*Sg	**Sg**	**12 32 41.4**	**-6.1**
KAB				*e*		12 32 49.8	
KAB				max		12 33 23.7	
	comp=N,7μm,1.7s						
STDB	**Stepnoy Dvoret**	**5.79**	**231**	*e*	**Pg**	**12 31 31.6**	**-2.1**
STDB				*e*Sg	**Sg**	**12 32 44.6**	**-4.1**
STDB				*e*		12 33 00.7	
HRMR	**Khuramsha**	**5.95**	**224**	*e*Pg	**Pg**	**12 31 32.4**	**-4.4**
HRMR				Pmax		12 31 35.1	
	comp=N,692nm,0.7s						
HRMR				*e*Sg	**Sg**	**12 32 50.0**	**-3.8**
HRMR				Smax		12 33 09.6	
	comp=N,5μm,1.0s						
IENR	**Iengra**	**6.27**	**84**	*e*Pg	**Pb**	**12 31 33.3**	**+1.1**
IENR				*e*		12 31 36.7	
IENR				*e*Sg	**Sg**	**12 32 55.0**	**-9.0**
BGT	**Bolshoye Golou**	**6.30**	**234**	*e*Pg	Pb	12 31 37.5	+4.7
BGT				Pmax		12 31 40.4	
	comp=N,154nm,1.0s						
BGT				*e*		12 32 47.7	
BGT				*e*		12 32 58.5	
BGT				*e*Sg	**Sg**	**12 33 01.0**	**-4.1**
BGT				Smax		12 33 07.6	
	comp=N,1μm,1.4s						
KPC	**Khapcheranga**	**6.42**	**187**	*e*	**Pg**	**12 31 45.2**	**-0.5**
KPC				max		12 31 56.2	
	comp=N,223nm,1.2s						
KPC				*e*Sg	**Sg**	**12 33 04.0**	**-4.7**
KPC				*e*		12 33 18.3	
KPC				max		12 33 19.4	
	comp=N,3μm,1.1s						
LSTR	**Listvyanka**	**6.69**	**235**	*e*	**Pb**	**12 31 40.0**	**+0.7**
LSTR				max		12 31 46.9	
	comp=N,152nm,1.4s						
LSTR				*e*Sg	**Sg**	**12 33 11.3**	**-6.0**
LSTR				*e*		12 33 14.9	
LSTR				max		12 33 18.1	
	comp=N,2μm,1.9s						
IRK	**Irkutsk**	**6.71**	**239**	*e*	**Pb**	**12 31 44.1**	**+4.5**
IRK				max		12 31 50.6	
	comp=N,255nm,0.1s						
IRK				*e*Sg	**Sg**	**12 33 10.0**	**-7.9**
IRK				*e*		12 33 14.5	
IRK				max		12 33 37.3	
	comp=N,2μm,1.2s						
IRK	**Irkutsk**	**6.71**	**239**	*e*PG	**Pb**	**12 31 44.1**	**+4.5**
IRK				*e*		12 33 12.8	
IRK				pmax	pmax		
	comp=Z,297nm,0.1s						
IRK				smax	smax		
	comp=N,2μm,1.3s						
TLY	**Talaya**	**7.36**	**238**	*e*Pg	Pb	12 31 56.2	+5.4
TLY				Pmax		12 32 01.2	
	comp=N,120nm,1.1s						
TLY				*e*		12 33 26.5	
TLY				*e*Sg	**Sg**	**12 33 32.9**	**-6.1**
TLY				Smax		12 33 48.6	
	comp=N,966nm,2.5s						
TLY	**Talaya**	**7.36**	**238**	*e*PG	Pg	12 31 57.5	-6.3
TLY				*e*		12 33 33.0	
TLY				pmax	pmax		
	comp=Z,118nm,0.3s						
ARS	**Arshan**	**7.81**	**243**	*e*	Pg	12 32 27.2	+15
ARS				max		12 32 32.9	
	comp=Z,243nm,1.8s						
ARS				*e*		12 33 25.6	
ARS				*e*		12 33 41.5	
ARS				*e*Sg	**Sg**	**12 33 44.6**	**-8.6**
ARS				Smax		12 34 03.7	
	comp=Z,3μm,1.0s						
ZAK	**Zakamensk**	**8.43**	**232**	*e*Pg	Pg	12 32 16.7	-7.4
ZAK				Pmax		12 32 22.3	
	comp=Z,148nm,1.0s						
ZAK				*e*Sg	**Sg**	**12 34 05.3**	**-7.8**
ZAK				*e*		12 34 53.0	
ZAK				max		12 35 09.9	
	comp=Z,2μm,1.7s						
ZAK	**Zakamensk**	**8.43**	**232**	*e*PG	Pg	12 32 18.7	-5.4
ZAK				pmax	pmax		
	comp=Z,149nm,1.0s						
MOY	**Mondy**	**8.68**	**245**	*e*	Pg	12 32 48.1	+19
MOY				*e*		12 34 04.4	
MOY				*e*Sg	**Sg**	**12 34 12.7**	**-8.3**
MOY				Smax		12 34 34.5	
	comp=Z,2μm,1.4s						
ORL	**Orlik**	**8.83**	**252**	*e*	**Pn**	**12 31 49.6**	**-1.2**
ORL				max		12 32 01.9	
	comp=Z,327nm,1.4s						
ORL				*e*Sn	**Sn**	**12 33 28.4**	**-2.0**
ORL				*e*Sg	Sg	12 34 16.8	-9.1
ORL				Smax		12 34 34.0	
	comp=Z,2μm,1.5s						
ULN	**Ulaanbaatar**	**9.16**	**209**	P	Pn	12 32 00.2	+4.8
ULN	**Ulaanbaatar**	**9.16**	**209**	Pn	Pn	12 32 00.2	+4.8
SONM	**Songino Array**	**9.37**	**211**	Pn	**Pn**	**12 31 59.8**	**+1.6**
	comp=Z,1.9nm,0.3s,baz=22,slow=13,SNR=6.3						
SONM				Lg	Lg	12 34 38.4	
	comp=Z,6.5nm,0.3s,baz=17,slow=23,SNR=3.8						
YAK	**Yakutsk**	**10.18**	**47**	Pn	**Pn**	**12 32 06.0**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=174,slow=10,SNR=7.1						
YAK				Lg	Lg	12 34 55.5	
	comp=Z,1.2nm,0.3s,baz=319,slow=23,SNR=7.1						
YAK	**Yakutsk**	**10.18**	**47**	*e*P	**Pn**	**12 32 04.7**	**-4.4**
YAK				*e*S	**Sn**	**12 33 58.1**	**-5.2**
YAK				pmax	pmax		
	comp=N,60nm,0.9s						
YAK				pmax	pmax		
	comp=Z,60nm,0.9s						
YAK				pmax	pmax		
	comp=E,32nm,0.9s						
YAK				smax	smax		
	comp=N,162nm,1.0s						
YAK				smax	smax		
	comp=E,102nm,1.2s						
YAK				MLR	MLR		
	comp=Z,679nm,5.0s						
YAK	**Yakutsk**	**10.18**	**47**		**Pn**	**12 32 05.5**	**-3.6**
KNGR	**Kungurtug, Tuv**	**11.07**	**247**	*e*	Pn	12 32 29.4	+7.9
KZLR	**Kyzyl**	**12.12**	**257**	*e*Sg		12 35 57.6	
KZLR				*e*		12 36 07.9	
KLR	**Kul'dur**	**12.92**	**114**	Pn	**Pn**	**12 32 46.1**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=326,slow=12,SNR=8.2						
KLR				Lg	Lg	12 36 23.4	
	comp=Z,3.8nm,0.3s,baz=194,slow=11,SNR=4.1						
CN2	**Changchun**	**14.41**	**143**	*e*P	**Pn**	**12 33 09.4**	**+2.5**
CN2				S	**Sn**	**12 35 50.9**	**+4.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,4μm,11.0s						
CN2				LR	LR		
	comp=Z,2μm,11.0s						
CN2				LR	LR		
	comp=Z,3μm,12.0s						
GRNR	**Gornyy**	**14.54**	**102**	⇑*i*P	**Pn**	**12 33 09.5**	**+0.7**
GRNR				*e*S	**Sn**	**12 35 54.2**	**+4.1**
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GRNR				smax	smax		
	comp=E,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,1μm,20.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,20.0s						
MDJ	**Mudanjiang**	**15.28**	**132**		**Pn**	**12 33 18.7**	**0.0**
HHC	**Hu-ho-hao-te**	**15.29**	**186**	*e*P	**Pn**	**12 33 20.4**	**+1.5**
HHC				sP	sP	12 33 26.5	-1.3
HHC				S	**Sn**	**12 36 10.1**	**+1.7**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.5s						
HHC				LR	LR		
	comp=Z,3μm,8.7s						
HHC				LR	LR		
	comp=Z,2μm,8.5s						
BJI	**Beijing**	**16.12**	**173**	P	**Pn**	**12 33 30.1**	**+0.5**
BJI				S	**Sn**	**12 36 28.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJT	**Baijiatuau**	**16.14**	**173**	P	**Pn**	**12 33 30.1**	**+0.2**
BJT				pmax	pmax		
	comp=Z,39nm,1.0s						
BJT	**Baijiatuau**	**16.14**	**173**	Pn	**Pn**	**12 33 30.1**	**+0.2**
ZAA0	**Zalesovo Array**	**16.62**	**275**	Pn	**Pn**	**12 33 35.6**	**-0.4**
ZALV	**Zalesovo Beam**	**16.62**	**275**	Pn	**Pn**	**12 33 37.3**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=67,slow=11,SNR=11						
ZALV				Lg	Lg	12 38 28.2	
	comp=Z,0.2nm,0.3s,baz=60,slow=29,SNR=5.1						
USA0B	**Ussuriysk Arra**	**16.64**	**128**	P	**Pn**	**12 33 36.9**	**+0.6**
USA0B				pmax	pmax		
	comp=Z,45nm,1.3s						
USA0B	**Ussuriysk Arra**	**16.64**	**128**	Pn	**Pn**	**12 33 36.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**16.64**	**128**	Pn	**P**	**12 33 38.1**	**-0.7**
	baz=321,slow=11,SNR=15						
USRK				Lg	Lg	12 38 27.7	
	baz=321,slow=27,SNR=6.5						
TIXI	**Tiksi**	**16.92**	**17**	⇓*e*P	**Pn**	**12 33 35.3**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,239nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,2μm,16.0s						
TIXI	**Tiksi**	**16.92**	**17**	Pn	**Pn**	**12 33 35.0**	**-4.6**
TIXI				IAmb	IAmb	12 33 38.3	
	comp=Z,70nm,0.9s						
DGZ	**Jazzator, Alta**	**16.99**	**259**	⇓*e*P	**Pn**	**12 33 41.1**	**+0.3**
NRIK	**Noril'sk**	**17.68**	**329**	P	**Pn**	**12 33 45.1**	**-4.0**
	comp=Z,3.7nm,0.3s,baz=114,slow=8.7,SNR=11						
NRIK	**Noril'sk**	**17.68**	**329**	P	**Pn**	**12 33 42.9**	**-6.2**
NRIK				pmax	pmax		
	comp=Z,60nm,0.8s						
NRIK	**Noril'sk**	**17.68**	**329**		**Pn**	**12 33 42.9**	**-6.2**
NRIK				IAmb	IAmb	12 34 06.4	
	comp=Z,60nm,0.8s						
TYV	**Tymovskoe**	**17.96**	**95**	*e*P	Pn	12 33 42.2	-10
TYV				pmax	pmax		
	comp=Z,6.0nm,1.6s						
TYV				pmax	pmax		
	comp=Z,300nm,5.8s						
TIY	**Taiyuan**	**18.38**	**183**	*e*P	**P**	**12 34 02.6**	**+4.6**
TIY				S	**Sn**	**12 37 14.5**	**-8.7**
TIY				pmax	pmax		
	comp=Z,30nm,1.1s						
TIY				pmax	pmax		
	comp=Z,250nm,4.8s						
TIY				LR	LR		
	comp=Z,2μm,7.2s						
UGL	**Uglegorsk**	**18.54**	**100**	P	**Pn**	**12 33 59.4**	**-0.4**
UGL				MLR	MLR		
	comp=Z,2μm,13.0s						
UGL				MLR	MLR		
	comp=N,3μm,7.0s						
UGL				MLR	MLR		
	comp=E,3μm,7.0s						
GTA	**Gaotai**	**19.02**	**215**	*e*P	**Pn**	**12 34 05.9**	**+0.1**
GTA				pP	sP	12 34 10.8	+1.7
GTA				sP	pP	12 34 14.0	+6.2
GTA				pmax	pmax		
	comp=E,250nm,5.3s						
GTA				LR	LR		
	comp=E,2μm,11.4s						
GTA				LR	LR		
	comp=E,860nm,8.1s						
ZSN	**Zaisan**	**19.67**	**256**	*e*P	**Pn**	**12 34 13.7**	**+0.2**
	baz=255						
ZSN	**Zaisan**	**19.67**	**256**	*e*P	**Pn**	**12 34 13.6**	**+0.2**
MA2	**Magadan**	**19.90**	**64**	⇑*e*P	**Pn**	**12 34 15.9**	**-0.2**
MA2				pmax	pmax		
	comp=Z,30nm,1.3s						
MA2	**Magadan**	**19.90**	**64**		**P**	**12 34 14.7**	**+0.2**
TIA	**Tai'an**	**20.00**	**172**	P	**Pn**	**12 34 17.3**	**-0.1**
TIA				S	**S**	**12 37 57.7**	**-2.8**
TIA				pmax	pmax		
	comp=Z,23nm,1.0s						
TIA				pmax	pmax		
	comp=Z,190nm,6.3s						
TIA				LR	LR		
	comp=Z,1μm,10.8s						
TIA				LR	LR		
	comp=Z,970nm,9.8s						
TIA				LR	LR		
	comp=Z,2μm,11.6s						
YSS	**Yuzh-Sakhalins**	**20.14**	**105**	*e*P	**P**	**12 34 17.0**	**-0.2**
YSS				*e*		12 34 39.3	
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS				MLR	MLR		
	comp=E,1μm,12.0s						
INCN	**Inchon**	**20.54**	**149**	P	Pn	12 34 23.3	-0.5
INCN				pmax	pmax		
	comp=Z,62nm,1.3s						
INCN	**Inchon**	**20.54**	**149**	P	Pn	12 34 23.3	-0.5
INCN				IAmb	IAmb	12 34 26.1	
	comp=Z,62nm,1.2s						
SEY	**Seymchan**	**20.55**	**55**	P	**P**	**12 34 22.2**	**+0.7**
	comp=Z,17nm,0.7s,baz=283,slow=7.7,SNR=18						
SEY				Lg	Lg	12 40 25.1	
	comp=Z,30nm,1.0s,baz=301,slow=8.0,SNR=4.1						
SEY	**Seymchan**	**20.55**	**55**	⇑*i*P	Pn	12 34 23.0	-0.7
WMQ	**Urumqi**	**20.57**	**244**	*e*P	Pn	12 34 24.6	+0.5
WMQ				pP	sP	12 34 29.2	+3.4
WMQ				sP	pP	12 34 31.7	+7.1
WMQ				S	**S**	**12 38 11.1**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,46nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,330nm,5.1s						
WMQ				LR	LR		
	comp=Z,3μm,9.3s						
WMQ				LR	LR		
	comp=Z,1μm,10.7s						
WMQ	**Urumqi**	**20.57**	**244**	P	**P**	**12 34 19.6**	**-2.3**
WMQ				pmax	pmax		
	comp=Z,30nm,1.0s						
WMQ	**Urumqi**	**20.57**	**244**	P	**P**	**12 34 19.6**	**-2.3**
SEM	**Semipalatinsk**	**20.63**	**268**	*e*P	**P**	**12 34 23.1**	**+0.3**
	baz=267						
SEM				*e*S	Sn	12 38 19.0	+1.2
	baz=267						
SEM	**Semipalatinsk**	**20.63**	**268**	*e*P	**P**	**12 34 23.0**	**+0.3**
SEM				*e*S	Sn	12 38 18.9	+1.1
KSRS	**Korea Array**	**20.95**	**147**	P	Pn	12 34 27.4	-1.1
	comp=Z,5.7nm,0.9s,baz=352,slow=8.7,SNR=14						
KSRS				Lg	Lg	12 40 44.2	
	comp=Z,5.4nm,1.0s,baz=340,slow=28,SNR=5.0						
LZH	**Lanzhou**	**21.07**	**203**	*e*P	**P**	**12 34 28.4**	**+1.0**
LZH				pP	sP	12 34 32.7	+1.3
LZH				S	**S**	**12 38 21.3**	**-0.7**

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LZH                                sS     sS      12 38 26.7 +0.3
LZH                                SS     SnSn    12 38 50.5 +7.6
LZH                                pmax   pmax
       comp=Z,26nm,1.0s
LZH                                pmax   pmax
       comp=Z,320nm,4.3s
LZH                                LR     LR
       comp=Z,2µm,11.9s
LZH                                LR     LR
       comp=Z,2µm,13.6s
KURK   Kurchatov         21.40 270ceP     P       12 34 31.5 +0.7
KURK                               pmax   pmax
       comp=Z,50nm,1.0s
KURK   Kurchatov         21.40 270 P      P       12 34 31.6 +0.9
KURK                               IAmb   IAmb    12 34 37.8
       comp=Z,38nm,0.7s
MK31   Makanchi Array    21.47 258 P      P       12 34 32.4 +0.8
MK31                               pmax   pmax
       comp=Z,14nm,1.0s
MK31   Makanchi Array    21.47 258 P      P       12 34 32.4 +0.8
MKAR   Makanchi Array    21.47 258 P      P       12 34 32.7 +1.1
       comp=Z,11nm,0.8s,baz=62,slow=8.6,SNR=15
KURBB  Kurchatov Arra    21.50 270 P      P       12 34 33.4 +1.6
       comp=Z,31nm,0.8s,baz=63,slow=11,SNR=28
KURBB                              Lg     Lg      12 40 57.5
       comp=Z,4.7nm,1.1s,baz=65,slow=29,SNR=3.1
MAKZ   Makanchi          21.63 258 P      P       12 34 34.2 +0.9
MAKZ                               pmax   pmax
       comp=Z,30nm,1.4s
MAKZ   Makanchi          21.63 258 P      P       12 34 34.2 +0.9
ASAJ   Asahikawa         21.90 111 P      P       12 34 36.8 +0.6
       comp=Z,8.3nm,0.9s,baz=345,slow=14,SNR=5.5
XAN    Xi'an             22.26 190 P      P       12 34 41.3 +1.1
XAN                                pP     sP      12 34 45.9 +1.7
XAN                                pmax   pmax
       comp=Z,20nm,1.3s
XAN                                pmax   pmax
       comp=Z,160nm,5.5s
XAN                                LR     LR
       comp=Z,900nm,7.1s
XAN                                LR     LR
       comp=Z,4µm,14.8s
XAN                                LR     LR
       comp=Z,2µm,15.3s
XAN    Xi'an             22.26 190 P      P       12 34 41.6 +1.4
XAN                                pmax   pmax
       comp=Z,24nm,1.2s
XAN    Xi'an             22.26 190 P      P       12 34 41.6 +1.4
YUK    Yuzh-Kuril'sk     23.69 107 P      P       12 34 53.0 -1.8
YUK                               eS      S       12 38 58.2  -11
YUK                                MLR    MLR
       comp=Z,924nm,15.0s
NJ2    Nanjing           24.28 169 eP     P       12 35 00.3 -0.1
NJ2                                S      S       12 39 18.3 -0.9
NJ2                                sS     sS      12 39 26.3 +2.3
NJ2                                SS     SnSn    12 40 06.8 +5.3
NJ2                                pmax   pmax
       comp=Z,18nm,0.5s
NJ2                                pmax   pmax
       comp=Z,450nm,3.5s
NJ2                                LR     LR
       comp=Z,1µm,14.7s
NJ2                                LR     LR
       comp=Z,2µm,11.4s
NJ2                                LR     LR
       comp=Z,1µm,17.1s
TDK    Taldyqorghan      24.71 258 eP     P       12 35 05.5 +1.2
       comp=Z,32nm,0.9s,baz=258
TDK    Taldyqorghan      24.71 258 eP     P       12 35 05.5 +1.2
TDK                                pmax   pmax
       comp=Z,32nm,0.9s
JHS    Saijyo            24.93 140 P      P       12 35 07.5 +1.2
JHS                                IAmb   IAmb    12 35 08.6
       comp=Z,45nm,1.1s
BVAR   Borovoye Array    24.97 281 P      P       12 35 07.6 +1.0
       comp=Z,9.7nm,0.6s,baz=34,slow=20,SNR=12
BRVK   Borovoye          25.02 281⇓eP     P       12 35 07.7 +0.7
BRVK                               pmax   pmax
       comp=Z,24nm,1.0s
BRVK   Borovoye          25.02 281 P      P       12 35 07.9 +1.0
BRVK                               IAmb   IAmb    12 35 27.5
       comp=Z,24nm,0.8s
PDGK   Podgornoye        25.21 254 i P    P       12 35 09.8 +0.8
PDGK                               pmax   pmax
       comp=Z,13nm,0.9s
SHLS   Shalkode          25.34 254 eP     P       12 35 09.6 -0.6
       comp=Z,18nm,0.7s,baz=253
SHLS   Shalkode          25.34 254 eP     P       12 35 09.5 -0.6
SHLS                               pmax   pmax
       comp=Z,18nm,0.7s
PETK   Petropavlovsk-    25.37  78 P      P       12 35 10.7 +0.5
       comp=Z,11nm,0.9s,baz=302,slow=6.1,SNR=6.0
WHN    Wuhan             25.51 179 ⇓P     P       12 35 13.0 +1.4
WHN                                LR     LR
       comp=Z,1µm,10.2s
WHN                                LR     LR
       comp=Z,3µm,16.0s
KPKS   Kokpek            25.55 255 eP     P       12 35 14.4 +2.4
       comp=Z,20nm,1.3s,baz=255
KPKS   Kokpek            25.55 255 eP     P       12 35 14.4 +2.4
KPKS                               pmax   pmax
       comp=Z,21nm,1.3s
CD2    Chengdu           26.09 200 P      P       12 35 18.3 +1.4
CD2                                pmax   pmax
       comp=Z,30nm,1.0s
CD2                                LR     LR
       comp=Z,2µm,14.3s
CD2                                LR     LR
       comp=Z,1µm,12.2s
KUU    Kurty             26.55 259 eP     P       12 35 23.1 +2.0
       baz=258
KUU    Kurty             26.55 259 eP     P       12 35 23.0 +2.0
MDOK   Medeo             26.65 257 eP     P       12 35 23.5 +1.5
       baz=256
MDOK   Medeo             26.65 257 eP     P       12 35 23.5 +1.5
AAA    Alma-Ata          26.69 257 eP     P       12 35 24.5 +2.2
       baz=256
AAA    Alma-Ata          26.69 257 eP     P       12 35 24.4 +2.2
MTBS   Maitube           27.01 257 eP     P       12 35 27.5 +2.3
       baz=257
MTBS   Maitube           27.01 257 eP     P       12 35 27.4 +2.3
JSU    Suzuyama          27.23 147 P      P       12 35 29.1 +1.9
JSU                                IAmb   IAmb    12 35 33.1
       comp=Z,45nm,1.4s
AAK    Ala-Archa         28.39 258 P      P       12 35 39.2 +1.5
       comp=Z,3.1nm,0.8s,baz=71,slow=8.2,SNR=5.7
AAK    Ala-Archa         28.39 258⇓eP     P       12 35 38.8 +1.1
AAK                                pmax   pmax
       comp=Z,44nm,1.7s
AAK    Ala-Archa         28.39 258 P      P       12 35 39.6 +1.9
KSH    Kashi             29.76 252 P      P       12 35 56.5 +6.7
KSH                                pmax   pmax
       comp=Z,16nm,1.1s
KSH                                pmax   pmax
       comp=Z,140nm,4.5s
DZA    Taraz             29.98 262 eP     P       12 35 52.4 +0.9
       baz=262
DZA    Taraz             29.98 262 eP     P       12 35 52.4 +0.9
GYA    Guiyang           30.01 193 eP     P       12 35 55.9 +3.9
GYA                                LR     LR
       comp=Z,740nm,9.5s
GYA                                LR     LR
       comp=Z,690nm,7.6s
GYA                                LR     LR
       comp=Z,640nm,14.6s
KK31   Karatay Array     30.29 263 P      P       12 35 55.3 +1.0
KK31                               pmax   pmax
       comp=Z,8.0nm,0.9s
KK31   Karatay Array     30.29 263 P      P       12 35 55.3 +1.0
KKAR   Karatay Array     30.29 263 P      P       12 35 55.3 +1.0
KKAR                               pmax   pmax
       comp=Z,8.0nm,0.9s
KKAR   Karatay Array     30.29 263 P      P       12 35 55.3 +1.0
IUG    Iuzhnay           31.19 262 eP     P       12 36 03.7 +1.3
       baz=262
IUG    Iuzhnay           31.19 262 eP     P       12 36 03.6 +1.3
KMI    Kunming           31.92 199 ⇓P     P       12 36 09.0  0.0
KMI                                pP     sP      12 36 14.8 +1.7
KMI                                sP     pP      12 36 17.7 +5.8
KMI                                pmax   pmax
       comp=Z,19nm,1.5s
KMI                                LR     LR
       comp=Z,730nm,17.6s
KMI                                LR     LR
       comp=Z,2µm,13.7s
KMI                                LR     LR

       comp=Z,690nm,15.5s
ABKAR  Akbulak array     32.55 281 P      P       12 36 14.4 +0.3
AKTO   Aktyubinsk        32.97 284 P      P       12 36 20.4 +2.6
       comp=Z,2.1nm,0.8s,baz=80,slow=15,SNR=3.7
SHL    Shillong          34.33 216 P      P       12 36 31.0 +1.0
SHL                                pmax   pmax
       comp=Z,16nm,1.1s
SHL    Shillong          34.33 216 P      P       12 36 30.9 +1.0
SHL                                IAmb   IAmb    12 36 31.8
       comp=Z,16nm,1.1s
GUN    Gumba             34.44 227 eP     P       12 36 32.3 +1.1
ODAN   Odare             34.77 224 eP     P       12 36 34.7 +0.8
       comp=Z,35nm,1.0s
KKN    Kakani            34.80 228 eP     P       12 36 35.6 +1.5
       comp=Z,19nm,0.7s
PKI    Pulchoki          34.94 227 eP     P       12 36 36.5 +1.1
DANN   Dangsing          34.95 230 eP     P       12 36 36.6 +1.1
       comp=Z,13nm,0.6s
RAMN   Ramite            35.01 225 eP     P       12 36 36.3 +0.4
SLVN   Son La            35.43 196 P      P       12 36 40.9 +1.5
SLVN                               IAmb   IAmb    12 36 41.6
       comp=Z,16nm,1.1s
KOLN   Koldanda          35.52 230 eP     P       12 36 38.0 -2.3
QIZ    Qiongzhong        37.08 186 P      P       12 36 53.5  0.0
QIZ                                S      S       12 42 42.5 +2.9
QIZ                                LR     LR
       comp=Z,700nm,20.1s
QIZ                                LR     LR
       comp=Z,1µm,14.7s
QIZ                                LR     LR
       comp=Z,760nm,17.3s
KLMR   Klimovskoe        37.16 309 eP     P       12 36 52.9 -0.7
KLMR                              e               12 38 17.1
KLMR                               pmax   pmax
       comp=Z,21nm,1.4s
KLMR   Klimovskoe        37.16 309 eP     P       12 36 53.0 -0.7
KLMR                               AMP            12 36 57.0
       comp=Z,21nm,1.4s
KLMR                              ePP     PP      12 38 17.2 -0.9
SPITS  Spitsbergen Ar    37.30 340 P      P       12 36 55.5 +0.7
       comp=Z,43nm,1.2s,baz=76,slow=12,SNR=5.9
ANM    Nome              38.31  43 P      P       12 37 03.3 -0.1
ANM                                pmax   pmax
       comp=Z,15nm,1.3s
ANM    Nome              38.31  43 P      P       12 37 03.2 -0.1
A21K   Barrow            38.32  31 P      P       12 37 03.9 +0.5
       baz=295
A21K   Barrow            38.32  31 P      P       12 37 02.5 -0.9
ARCES  ARCESS Array B    38.61 326 P      P       12 37 05.1 -0.8
       comp=Z,5.8nm,0.9s,baz=68,slow=4.5,SNR=7.6
CM31   Chiang Mai Arr    39.15 202 P      P       12 37 11.7 +0.8
CMAR   Chiang Mai Arr    39.15 202 P      P       12 37 11.4 +0.5
       comp=Z,1.2nm,0.7s,baz=2.0,slow=7.3,SNR=8.9
CMAR                               PcP    PcP     12 39 20.9 +0.6
       comp=Z,0.9nm,0.9s,baz=337,slow=3.9,SNR=4.2
GEYT   Alibeck           40.73 268 P      P       12 37 25.7 +1.7
       comp=Z,4.5nm,0.7s,baz=243,slow=1.7,SNR=8.1
GYA0B  ALIBECK ARRAY     40.73 268 P      P       12 37 24.7 +0.7
VRH    Novokhopyorsk     41.15 295 eP     P       12 37 27.8 +0.6
VRH                                pmax   pmax
       comp=Z,30nm,1.3s
LPSR   Galich'ya Gora    41.73 298 eP     P       12 37 31.4 -0.6
LPSR                               pmax   pmax
       comp=Z,9.0nm,0.6s
TOLK   Toolik Lake Re    41.75  33 P      P       12 37 32.7 +0.7
       baz=303,SNR=7.5
TOLK   Toolik Lake Re    41.75  33 P      P       12 37 32.0  0.0
COLD   Coldfoot          42.34  35 P      P       12 37 37.5 +0.8
       baz=304,SNR=5.5
COLD   Coldfoot          42.34  35 P      P       12 37 37.6 +0.9
FINES  FINESS Array B    42.48 315 P      P       12 37 38.5 +0.5
       comp=Z,18nm,0.8s,baz=60,slow=7.7,SNR=17
TTA    Tatalina          42.72  42 P      P       12 37 39.4 -0.6
TTA                                pmax   pmax
       comp=Z,6.0nm,0.7s
TTA    Tatalina          42.72  42 P      P       12 37 39.4 -0.6
MLY    Manley            43.42  38 P      P       12 37 46.6 +1.0
       baz=306
I23K   Minto, Yukon-K    43.82  37 P      P       12 37 50.4 +1.6
       baz=307,SNR=7.0
I23K   Minto, Yukon-K    43.82  37 P      P       12 37 49.4 +0.7
I23K                               IAmb   IAmb    12 37 50.7
       comp=Z,14nm,1.1s
KTH    Kantishna Hill    44.23  40 P      P       12 37 53.1 +0.9
KTH                                IAmb   IAmb    12 37 55.5
       comp=Z,10nm,0.8s
GOF    Gofitskoye        44.27 287⇑eP     P       12 37 55.0 +2.4
MDM    Murphy Dome       44.32  37 P      P       12 37 53.6 +0.8
POKR   Poker Plat Res    44.49  37 P      P       12 37 55.2 +1.0
       baz=308
POKR   Poker Plat Res    44.49  37 P      P       12 37 55.6 +1.5
POKR                               IAmb   IAmb    12 37 58.9
       comp=Z,8.2nm,0.8s
TCOL   CIGO, UAF Yank    44.50  37 P      P       12 37 55.5 +1.4
       baz=308
TCOL   CIGO, UAF Yank    44.50  37 P      P       12 37 55.1 +0.9
TCOL                               IAmb   IAmb    12 37 58.6
       comp=Z,8.8nm,0.7s
COLA   College           44.50  37 P      P       12 37 54.8 +0.7
COLA                               pmax   pmax
       comp=Z,9.0nm,0.8s
COLA   College           44.50  37 P      P       12 37 54.8 +0.7
COLA                               IAmb   IAmb    12 37 58.6
       comp=Z,9.2nm,0.8s
TRF    Thorofare Moun    44.52  40 P      P       12 37 55.3 +0.7
TRF                                IAmb   IAmb    12 37 56.3
       comp=Z,19nm,1.0s
CCB    Clear Creek Bu    44.66  37 P      P       12 37 56.1 +0.7
CCB                                IAmb   IAmb    12 37 57.6
       comp=Z,12nm,1.2s
WRH    Wood River Hil    44.67  38 P      P       12 37 56.4 +0.9
WRH                                IAmb   IAmb    12 37 57.5
       comp=Z,11nm,0.9s
MCK    McKinley          44.83  39 P      P       12 37 57.6 +0.7
       baz=308
IL31                     44.89  37 P      P       12 37 57.5 +0.2
IL31                               IAmb   IAmb    12 38 00.3
       comp=Z,8.8nm,0.9s
ILAR   Eielson Array     44.89  37 P      P       12 37 58.0 +0.7
       comp=Z,5.2nm,0.8s,baz=300,slow=4.5,SNR=31
NCK    Nalchik           45.00 285⇑eP     P       12 38 00.5 +2.0
NCK                                pmax   pmax
       comp=Z,5.0nm,0.2s
HDA    Harding Lake      45.09  37 P      P       12 37 59.4 +0.5
       baz=309
HDA    Harding Lake      45.09  37 P      P       12 37 59.4 +0.5
HDA                                IAmb   IAmb    12 38 01.4
       comp=Z,9.0nm,0.8s
KIV    Kislovodsk        45.19 286c iP    P       12 38 01.6 +1.5
KIV                               e               12 39 40.4
KIV                               eS      S       12 44 43.8 +4.0
KIV                                pmax   pmax
       comp=Z,22nm,0.8s
KIV                                MLR    MLR
       comp=Z,787nm,18.0s
KIV    Kislovodsk        45.19 286 P      P       12 38 01.5 +1.5
KBZ    Khabaz            45.23 285 P      P       12 38 02.1 +1.9
       comp=Z,3.4nm,0.8s,baz=15,slow=6.2,SNR=7.3
RSO    Redoubt South     45.44  44 P      P       12 38 02.6 +0.6
MNK    Minsk             45.84 306 i P    P       12 38 03.5 -1.4
       comp=E,4.0nm,1.1s
MNK                               i P     P       12 38 03.5 -1.4
       comp=N,17nm,1.7s
MNK                               i P     P       12 38 03.5 -1.4
       comp=Z,6.0nm,1.2s
MNK                               i PcP   PcP     12 39 40.5 -1.6
MNK                               i PP    PP      12 39 51.2 -0.8
MNK                               i PPP   PPP     12 40 31.4
MNK                               i ScP   ScP     12 43 32.6 -2.4
MNK                               i PcS   PcS     12 43 34.9 -1.2
MNK                               i S     S       12 44 47.8 -0.9
MNK                               i ScS   ScS     12 47 59.6 -1.0
MNK                               i SS    SS      12 48 14.8 +2.2
MNK                               i SSS   SSS     12 49 04.6
MNK                               i LQ    LQ      12 53 58.8
MNK                               i LR    LR      12 57 28.4
MNK                               i LRM   MLR     12 59 12.4
       comp=Z,999nm,15.3s
MNK                               i LRM   MLR     12 59 16.1
       comp=E,114nm,20.4s
MNK                               i LRM   MLR     12 59 16.3
       comp=N,1µm,18.5s
GHO    Glory Hole Cre    46.06  41 P      P       12 38 06.8 +0.1
PMR    Palmer            46.10  41 P      P       12 38 05.6 -1.3
PMR                                pmax   pmax

       comp=Z,29nm,1.5s
PMR    Palmer            46.10  41 P      P       12 38 05.6 -1.3
PMR                                IAmb   IAmb    12 38 10.1
       comp=Z,29nm,1.5s
SML    Sawmill           46.26  41 P      P       12 38 08.3 +0.1
PAX    Paxson            46.52  38 P      P       12 38 10.4  0.0
PAX                                pmax   pmax
       comp=Z,7.0nm,0.8s
PAX    Paxson            46.52  38 P      P       12 38 10.4  0.0
PAX                                IAmb   IAmb    12 38 12.9
       comp=Z,6.7nm,0.8s
INK    Inuvik            46.55  28 P      P       12 38 10.8 +0.4
       comp=Z,7.9nm,0.7s,baz=332,slow=14,SNR=19
INK    Inuvik            46.55  28 P      P       12 38 10.9 +0.5
INK                                pmax   pmax
       comp=Z,37nm,1.5s
INK    Inuvik            46.55  28 P      P       12 38 10.9 +0.5
EGAK   Eagle             46.76  35 P      P       12 38 13.1 +1.0
EGAK                               IAmb   IAmb    12 38 13.6
       comp=Z,12nm,0.9s
M24K   Tolsona, Glenn    46.84  39 P      P       12 38 13.8 +0.9
       baz=311
M24K   Tolsona, Glenn    46.84  39 P      P       12 38 13.4 +0.6
K27K   Chicken           46.97  36 P      P       12 38 14.6 +0.9
       baz=312,SNR=9.0
K27K   Chicken           46.97  36 P      P       12 38 14.3 +0.7
K27K                               IAmb   IAmb    12 38 16.7
       comp=Z,9.6nm,0.8s
EPYK   Eagle Plains      47.02  31 P      P       12 38 14.6 +0.5
       baz=314
EPYK   Eagle Plains      47.02  31 P      P       12 38 14.8 +0.6
EPYK                               IAmb   IAmb    12 38 15.0
       comp=Z,11nm,1.1s
KDAK   Kodiak Island     47.21  47 P      P       12 38 16.0 +0.4
       comp=Z,4.7nm,0.5s,baz=322,slow=4.5,SNR=6.6
KDAK   Kodiak Island     47.21  47 P      P       12 38 15.8 +0.2
L26K   Log Cabin Wild    47.21  37 P      P       12 38 16.0 +0.3
       baz=312
KLU    Klutina           47.34  40 P      P       12 38 17.1 +0.4
ANN    Anapa             47.43 290 eP     P       12 38 12.3 -5.2
ANN                               e*PP    pP      12 38 14.8 -5.6
ANN                               eS      S       12 45 05.4 -6.2
ANN                                pmax   pmax
       comp=Z,127nm,1.6s
AKASG  Malin Array Be    47.66 301 P      P       12 38 19.2  0.0
       comp=Z,6.2nm,0.7s,baz=43,slow=8.7,SNR=14
AKASG  Malin Array Be    47.66 301 i P    P       12 38 20.2 +1.0
AKASG                              pmax   pmax
       comp=Z,6.0nm,0.7s
AKBB   Malin Array Si    47.66 301 P      P       12 38 19.1 -0.1
AKBB                               pmax   pmax
       comp=Z,8.0nm,1.1s
AKBB   Malin Array Si    47.66 301 P      P       12 38 19.1 -0.1
AKBB                               IAmb   IAmb    12 38 44.9
       comp=Z,7.6nm,1.1s
N25K   Chitina, Valde    47.73  39 P      P       12 38 21.0 +1.2
       baz=312,SNR=7.7
N25K   Chitina, Valde    47.73  39 P      P       12 38 20.2 +0.4
DAWY   Dawson            47.81  35 P      P       12 38 20.3  0.0
DAWY                               IAmb   IAmb    12 38 21.8
       comp=Z,9.9nm,1.1s
C36M   Paulatuk          48.10  24 P      P       12 38 21.9 -0.6
       baz=320,SNR=18
C36M   Paulatuk          48.10  24 P      P       12 38 21.6 -0.8
RES    Resolute Bay      48.15  10 P      P       12 38 22.3 -0.4
RES                                pmax   pmax
       comp=Z,9.0nm,1.3s
RES    Resolute Bay      48.15  10 P      P       12 38 22.3 -0.4
RES                                IAmb   IAmb    12 38 25.0
       comp=Z,8.7nm,1.2s
NB2    NORSAR Subarra    48.36 321 P      P       12 38 24.2 -0.4
       comp=Z,24nm,1.4s,baz=50,slow=7.9
NOA    NORSAR Array B    48.36 321 P      P       12 38 24.4 -0.2
       comp=Z,3.3nm,0.8s,baz=49,slow=7.6,SNR=8.8
GUMO   Guam              48.72 138 P      P       12 38 28.4 +0.6
       comp=Z,88nm,0.6s,baz=26,slow=17,SNR=1.8
TGL    Tana Glacier      48.94  39 P      P       12 38 30.8 +1.6
TGL                                IAmb   IAmb    12 38 32.3
       comp=Z,14nm,0.8s
KOPT   Kop Dagi          49.07 283 P      P       12 38 32.0 +1.3
KOPT                               IAmb   IAmb    12 38 46.0
       comp=Z,11nm,0.9s
BARN   Barnard Glacie    49.14  38 P      P       12 38 32.7 +1.9
CTGM   Chitina Glacie    49.32  38 P      P       12 38 33.4 +1.3
WSAR   Wadi Sarin        51.64 254 LR     LR      13 04 03.0
       comp=Z,264nm,19.9s,baz=68,slow=40
KOLS   Kolonicke sedl    52.16 303 eP     P       12 38 54.1 +0.6
KOLS   Kolonicke sedl    52.16 303 eP     P       12 38 54.0 +0.6
BR131  Keskin Array S    52.98 288 P      P       12 38 57.4 -2.5
BR131                              pmax   pmax
       comp=Z,8.0nm,0.9s
BR131  Keskin Array S    52.98 288 P      P       12 38 57.4 -2.5
BR131                              IAmb   IAmb    12 39 05.0
       comp=Z,8.3nm,0.9s
BRTR   Keskin Array B    52.98 288 P      P       12 39 01.1 +1.2
       comp=Z,2.9nm,0.9s,baz=67,slow=5.0,SNR=9.3
BRTR   Keskin Array B    52.98 288 i P    P       12 39 02.0 +2.1
BRTR                               pmax   pmax
       comp=Z,3.0nm,0.9s
OKC    Ostrava-Krasne    53.41 307 eP     P       12 39 06.4 +3.7
MORC   Moravsky Berou    53.72 307 eP     P       12 39 05.6 +0.5
DPC    Dobruska-Polom    53.85 308 eP     P       12 39 06.4 +0.4
UPC    Upice             53.87 308 eP     P       12 39 06.0 -0.1
UPC    Upice             53.87 308 eP     P       12 39 06.0 -0.1
VYHS   Vyhne             54.06 305 eP     P       12 39 08.7 +1.2
VYHS   Vyhne             54.06 305 eP     P       12 39 08.7 +1.2
JAVC   Velka Javorina    54.33 306 eP     P       12 39 10.0 +0.5
VRAC   Vranov            54.49 307 eP     P       12 39 11.1 +0.5
BRG    Berggiesshubel    54.51 310 eP     P       12 39 12.0 +1.3
BRG                                Amp            12 39 14.8
       comp=Z,4.9nm,0.8s
BRG    Berggiesshubel    54.51 310 eP     P       12 39 11.9 +1.3
BRG                                pmax   pmax
       comp=Z,5.0nm,0.8s
BRG    Berggiesshubel    54.51 310 eP     P       12 39 12.0 +1.3
BRG                                Amp            12 39 14.8
       comp=Z,4.9nm,0.8s
CLL    Collm             54.59 311 eP     P       12 39 11.0 -0.3
       comp=Z,6.0nm,0.9s
KRUC   Moravsky          54.76 307 eP     P       12 39 13.3 +0.8
PRU    Pruhonice         54.90 309 eP     P       12 39 21.5 +8.0
DLBC   Dease Lake        55.02  35 P      P       12 39 14.0 -0.4
       comp=Z,6.6nm,1.0s,baz=294,slow=4.5,SNR=5.5
PALK   Pallekele         55.18 221 P      P       12 39 16.6 +0.6
PALK                               pmax   pmax
       comp=Z,12nm,1.1s
PALK   Pallekele         55.18 221 P      P       12 39 16.6 +0.6
PALK                               IAmb   IAmb    12 39 17.4
       comp=Z,12nm,1.1s
PBCC   Pribram           55.36 309 eP     P       12 39 17.0 +0.1
MRSI   Marisa            55.82 170 P      P       12 39 21.6 +1.1
CONA   Conrad Observa    55.83 306 eP     P       12 39 22.0 +1.6
       comp=Z,4.1nm,0.8s
YKA    Yellowknife Ar    55.95  25 P      P       12 39 19.9 -1.0
       comp=Z,9.4nm,0.7s,baz=334,slow=6.6,SNR=53
KHC    Kasperske Hory    55.95 309 P      P       12 39 21.8 +0.6
KHC                                pmax   pmax
       comp=Z,6.0nm,0.8s
KHC    Kasperske Hory    55.95 309 eP     P       12 39 21.5 +0.3
KHC    Kasperske Hory    55.95 309 P      P       12 39 21.8 +0.6
KHC                                IAmb   IAmb    12 39 24.4
       comp=Z,6.3nm,0.8s
GEC2   GERESS Array S    56.11 308 P      P       12 39 22.9 +0.5
GERES  GERESS Array B    56.11 308 P      P       12 39 22.6 +0.1
       comp=Z,2.8nm,0.7s,baz=53,slow=5.2,SNR=16
GSI    Gunungsitoli      56.12 199 P      P       12 39 22.8 +0.2
GSI                                IAmb   IAmb    12 39 23.7
       comp=Z,18nm,1.0s
TNTI   Ternate           56.23 163 P      P       12 39 24.1 +0.7
ARSA   Arzberg           56.49 306 eP     P       12 39 27.8 +2.8
       comp=Z,1.9nm,0.6s
BKNI   Bangkinang        56.49 195 P      P       12 39 26.4 +1.1
GRF    Grafenberg Arr    56.55 311 eP     P       12 39 26.5 +1.0
       comp=Z,6.9nm,0.9s,baz=36,slow=6.1
GRF                               eX              12 40 06.9
DIVS   Divibare          56.74 301 P      P       12 39 28.3 +1.3
SOKA   Soboth            57.14 306 eP     P       12 39 30.9 +1.1
       comp=Z,3.1nm,0.6s
OBKA   Obir              57.49 306 i P    P       12 39 33.4 +1.2
       comp=Z,11nm,0.7s,SNR=14
KBA    Koelnbreinsper    57.60 307 eP     P       12 39 34.2 +1.1
       comp=Z,8.1nm,0.8s
MYKA   Terra Mystica     57.81 307 eP     P       12 39 35.2 +0.8
       comp=Z,8.0nm,0.7s
PRED   Cave del Predi    57.98 307 P      P       12 39 35.7  0.0
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PRED                            IAmb     IAmb     12 39 39.0
      comp=Z,6.4nm,0.8s
MEM   Membach          58.01 314 dP       P        12 39 34.9 -0.8
      comp=Z,12nm,0.8s
WATA  Walderalm        58.19 308 eP       P        12 39 38.2 +1.0
      comp=Z,7.8nm,0.9s
WTTA  Wattenberg       58.22 308 i P      P        12 39 38.3 +0.9
      comp=Z,6.9nm,0.7s,SNR=7.4
ABTA  Abfaltersbach    58.22 307 eP       P        12 39 36.5 -0.9
      comp=Z,4.3nm,1.0s
MOTA  Moosalm          58.39 309 i P      P        12 39 39.7 +1.1
      comp=Z,7.2nm,0.9s,SNR=4.7
RETA  Reutte           58.43 309 eP       P        12 39 40.5 +1.8
      comp=Z,11nm,1.9s
SQTA  Sankt Quirin     58.44 309 eP       P        12 39 39.0 +0.1
      comp=Z,5.3nm,0.9s
RAYN  Ar Rayn          58.65 266  P       P        12 39 40.7 +0.1
RAYN                              pmax    pmax
      comp=Z,10.0nm,1.1s
RAYN  Ar Rayn          58.65 266  P       P        12 39 40.7 +0.1
RAYN                              IAmb    IAmb     12 39 41.8
      comp=Z,9.6nm,1.1s
FETA  Feichten         58.80 309 i P      P        12 39 43.8 +2.3
      comp=Z,5.4nm,1.2s,SNR=5.0
DAVA  Damuels          58.97 309 eP       P        12 39 42.4 -0.3
      comp=Z,6.5nm,1.0s
CTI   Castel Tesino    59.14 307  P       P        12 39 43.4 -0.4
CTI                               pmax    pmax
      comp=Z,6.0nm,0.8s
CTI   Castel Tesino    59.14 307  P       P        12 39 43.4 -0.4
CTI                               IAmb    IAmb     12 39 45.8
      comp=Z,6.3nm,0.8s
FUORN Ofenpass-Fuorn   59.31 309  P       P        12 39 45.6 +0.5
TUE   Stuetta          59.83 309  P       P        12 39 49.3 +0.6
TUE                               IAmb    IAmb     12 39 52.1
      comp=Z,10nm,0.8s
FRB   Frobisher Bay    60.51   1  P       P        12 39 52.3 -0.5
      comp=Z,3.8nm,0.8s,baz=347,slow=9.6,SNR=6.5
BNI   Bardonecchia     62.10 310  P       P        12 40 05.0 +1.0
BNI                               pmax    pmax
      comp=Z,8.0nm,0.9s
BNI   Bardonecchia     62.10 310  P       P        12 40 05.0 +1.0
BNI                               IAmb    IAmb     12 40 12.3
      comp=Z,7.9nm,0.9s
FCC   Fort Churchill   63.39  16  P       P        12 40 12.0 -0.2
FCC                               pmax    pmax
      comp=Z,11nm,0.9s
FCC   Fort Churchill   63.39  16  P       P        12 40 11.9 -0.2
FFC   Flin Flon        65.80  22  P       P        12 40 27.1 -0.9
FFC                               pmax    pmax
      comp=Z,13nm,1.1s
FFC   Flin Flon        65.80  22  P       P        12 40 27.1 -0.9
FFC                               IAmb    IAmb     12 40 28.0
      comp=Z,13nm,1.1s
B08A  Colville Reser   66.94  35  P       P        12 40 35.8 +0.3
B08A                              IAmb    IAmb     12 40 36.4
      comp=Z,6.4nm,1.1s
LTY   Liberty          67.46  37  P       P        12 40 39.2 +0.3
LTY                               IAmb    IAmb     12 40 43.8
      comp=Z,4.5nm,0.8s
LON   Longmire         67.52  38  P       P        12 40 39.5 +0.3
LON                               pmax    pmax
      comp=Z,4.0nm,0.9s
LON   Longmire         67.52  38  P       P        12 40 39.5 +0.3
LON                               IAmb    IAmb     12 40 49.5
      comp=Z,4.1nm,0.8s
NEW   Newport          67.73  34  P       P        12 40 40.5  0.0
      comp=Z,2.5nm,0.7s,baz=333,slow=7.6,SNR=6.3
NEW   Newport          67.73  34  P       P        12 40 41.7 +1.2
NEW                               pmax    pmax
      comp=Z,3.0nm,0.7s
NEW   Newport          67.73  34  P       P        12 40 41.7 +1.2
C09A  Chrisman Ranch   67.78  35  P       P        12 40 40.9 +0.1
C09A                              IAmb    IAmb     12 40 43.6
      comp=Z,6.1nm,0.8s
WALA  Waterton Lakes   68.00  32  P       P        12 40 43.0 +0.7
WALA                              IAmb    IAmb     12 40 45.9
      comp=Z,4.6nm,0.7s
D08A  Wollman Farm,    68.22  36  P       P        12 40 44.1 +0.6
D08A                              IAmb    IAmb     12 40 46.3
      comp=Z,4.8nm,0.8s
E09A  Wood Farm, Sta   68.95  36  P       P        12 40 48.9 +0.8
E09A                              IAmb    IAmb     12 40 51.1
      comp=Z,5.7nm,0.8s
F10A  Beach Ranch, E   69.72  35  P       P        12 40 53.8 +0.7
G08A  Pilot Rock       69.76  37  P       P        12 40 54.9 +1.6
G08A                              IAmb    IAmb     12 41 07.5
      comp=Z,9.2nm,1.5s
MSO   Missoula         69.99  33  P       P        12 40 55.5 +0.8
      baz=334,SNR=6.7
MSO   Missoula         69.99  33  P       P        12 40 54.7  0.0
MSO                               IAmb    IAmb     12 40 59.7
      comp=Z,6.5nm,0.8s
EGMT  Eagleton         70.12  29  P       P        12 40 55.1 -0.3
      baz=336
EGMT  Eagleton         70.12  29  P       P        12 40 55.4  0.0
EGMT                              IAmb    IAmb     12 40 58.4
      comp=Z,9.2nm,1.1s
PBRG  Braganca         70.26 317 eP       P        12 40 56.6 +0.3
J04D  Umpqua Nationa   70.46  40  P       P        12 40 58.9 +1.2
      baz=331
BMO   Blue Mountains   70.69  36  P       P        12 40 59.5 +0.5
BMO                               pmax    pmax
      comp=Z,8.0nm,1.0s
BMO   Blue Mountains   70.69  36  P       P        12 40 59.5 +0.5
BMO                               IAmb    IAmb     12 41 00.9
      comp=Z,7.9nm,1.0s
PGAV  Gavieira, Arco   70.71 318 eP       P        12 40 59.2 +0.1
HRY   Holter Researc   70.72  31  P       P        12 40 59.4 +0.2
J05D  Fort Rock, OR    70.73  39  P       P        12 41 00.1 +0.8
      baz=331
PCAB  Cabril           70.84 318 eP       P        12 41 00.4 +0.6
MVO   Moncorvo         70.92 317 eP       P        12 41 01.4 +1.0
ESBB  Sonseca Array    70.98 314  P       P        12 41 00.8  0.0
ESBB                              IAmb    IAmb     12 41 03.6
      comp=Z,12nm,0.8s
ESDC  Sonseca Array    70.98 314  P       P        12 41 00.9 +0.1
      comp=Z,11nm,0.8s,baz=24,slow=6.2,SNR=45
POLO  Lamas de Olo     71.04 317 eP       P        12 41 01.7 +0.6
PVRL  Vila Real        71.09 317 eP       P        12 41 03.4 +2.0
DGMT  Dagmar           71.14  26  P       P        12 41 01.9 +0.3
      baz=339
DGMT  Dagmar           71.14  26  P       P        12 41 01.7 +0.1
ULM   Lac du Bonnet    71.25  20  P       P        12 41 00.7 -1.4
      comp=Z,3.4nm,0.9s,baz=37,slow=8.1,SNR=4.4
L04D  Klamath Falls    71.28  41  P       P        12 41 03.1 +0.4
      baz=331
K05A  Summer Lake      71.34  39  P       P        12 41 04.1 +1.0
K05A                              IAmb    IAmb     12 41 05.0
      comp=Z,9.4nm,1.1s
LRM   Limekiln Ridge   71.35  32  P       P        12 41 03.2  0.0
PTO   Porto            71.55 318 eP       P        12 41 05.1 +1.0
YBH   Yreka Blue Hor   71.55  41  P       P        12 41 04.7 +0.5
      comp=Z,2.3nm,0.9s,baz=195,slow=4.6,SNR=4.3
PVIS  Viseu            71.64 317 eP       P        12 41 05.2 +0.5
      comp=Z,20nm,1.2s
DLMT  Dillon           71.72  32  P       P        12 41 06.0 +0.8
DLMT                              IAmb    IAmb     12 41 07.2
      comp=Z,15nm,1.1s
MTE   Manteigas        71.78 317 eP       P        12 41 05.8 +0.2
      comp=Z,24nm,1.0s
BOZ   Bozeman (W)      71.79  32  P       P        12 41 05.6 -0.1
BOZ                               pmax    pmax
      comp=Z,4.0nm,1.0s
BOZ   Bozeman (W)      71.79  32  P       P        12 41 05.8 +0.1
      baz=335
BOZ   Bozeman (W)      71.79  32  P       P        12 41 05.6 -0.1
M02C  Callahan         71.79  41  P       P        12 41 06.7 +1.0
      baz=331
MCMT  McKenzie Canyo   72.13  33  P       P        12 41 08.7 +0.8
GCMT  Greycliff        72.18  30  P       P        12 41 08.2 +0.2
N02D  Trinity Center   72.21  41  P       P        12 41 09.2 +1.0
      baz=331
PCBR  Castelo Branco   72.24 316 eP       P        12 41 10.3 +2.1
MOD   Modoc Plateau    72.27  39  P       P        12 41 09.2 +0.6
MOD                               IAmb    IAmb     12 41 10.2
      comp=Z,9.4nm,1.1s
PCAS  Casmilo, Conde   72.45 317 eP       P        12 41 10.1 +0.6
MFID  Camas Ranch      72.46  36  P       P        12 41 09.6 -0.1
MFID                              IAmb    IAmb     12 41 14.2
      comp=Z,6.2nm,0.8s
PMRV  Marv??o          72.56 316 eP       P        12 41 10.3 +0.1
YHL   Hebgen Lake      72.60  32  P       P        12 41 11.3 +0.5
YHB   Horse Butte      72.69  32  P       P        12 41 11.0 -0.2
YHH   Holmes Hill      72.76  32  P       P        12 41 12.1 +0.4
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HLID  Hailey           72.78  34  P       P        12 41 12.5 +0.8
      baz=334,SNR=8.8
HLID  Hailey           72.78  34  P       P        12 41 12.3 +0.7
YNE   Yellowstone No   72.80  31  P       P        12 41 12.4 +0.5
O02D  Mt. Diablo Mer   72.88  42  P       P        12 41 13.0 +0.8
      baz=331
RLMT  Red Lodge        72.91  30  P       P        12 41 12.9 +0.4
      baz=337,SNR=8.3
RLMT  Red Lodge        72.91  30  P       P        12 41 12.8 +0.4
RLMT                              IAmb    IAmb     12 41 14.1
      comp=Z,14nm,1.1s
PSBE  So Bento         73.03 317 eP       P        12 41 12.3 -0.7
AGMN  Agassiz Nation   73.12  20  P       P        12 41 12.4 -1.0
      baz=343
AGMN  Agassiz Nation   73.12  20  P       P        12 41 12.5 -0.9
AGMN                              IAmb    IAmb     12 41 15.4
      comp=Z,17nm,1.2s
PMTG  Montargil        73.19 316 eP       P        12 41 13.9  0.0
H17A  Grant Village    73.20  31  P       P        12 41 16.3 +2.1
      baz=336
H17A  Grant Village    73.20  31  P       P        12 41 15.7 +1.5
H17A                              IAmb    IAmb     12 41 18.5
      comp=Z,4.7nm,0.8s
EVO   Evora            73.58 316 eP       P        12 41 16.9 +0.7
MOOW  Moose Ponds      73.74  32  P       P        12 41 18.1 +0.8
MOOW                              IAmb    IAmb     12 41 19.0
      comp=Z,7.4nm,1.1s
LOHW  Long Hollow      73.90  32  P       P        12 41 18.9 +0.5
BEKR  Beckworth        74.04  40  P       P        12 41 19.8 +0.6
REDW  Red Top Meadow   74.06  32  P       P        12 41 19.8 +0.5
REDW                              IAmb    IAmb     12 41 21.4
      comp=Z,12nm,1.2s
MATQ  Matagami         74.13   8  P       P        12 41 17.9 -1.3
      baz=354
PNCL  Nicolau / Gran   74.14 316 eP       P        12 41 20.8 +1.3
MESJ  Messejana        74.26 316 eP       P        12 41 21.0 +0.8
MESJ                              AMS     AMS      13 17 21.2
      comp=Z,450nm,17.7s
MESJ  Messejana        74.26 316 eP       P        12 41 21.0 +0.8
PCVE  Castro Verde     74.37 315 eP       P        12 41 22.6 +1.8
PVAQ  Vaqueiros        74.44 315 eP       P        12 41 21.7 +0.4
PAHR  Pah Rah Range    74.54  40  P       P        12 41 22.0  0.0
PTEO  Sao Teotonio     74.71 316 eP       P        12 41 24.0 +1.2
LSQQ  Lebel-sur-Quev   74.87   7  P       P        12 41 23.7 +0.1
      baz=354
HVU   Hansel Valley    74.91  34  P       P        12 41 25.1 +1.0
HVU                               pmax    pmax
      comp=Z,4.0nm,0.8s
HVU   Hansel Valley    74.91  34  P       P        12 41 25.1 +1.0
BW06  Boulder Array    74.98  31  P       P        12 41 23.3 -1.4
      baz=337
BW06  Boulder Array    74.98  31  P       P        12 41 23.5 -1.2
PD31  Pinedale Array   74.98  31  P       P        12 41 24.4 -0.2
PDAR  Pinedale Array   74.98  31  P       P        12 41 24.6 -0.1
      comp=Z,2.1nm,0.9s,baz=26,slow=2.1,SNR=14
PNTR  Pine Nut         75.00  40  P       P        12 41 25.3 +0.5
PNTR                              IAmb    IAmb     12 41 34.0
      comp=Z,5.7nm,0.8s
ELK   Elko             75.04  36  P       P        12 41 25.6 +0.6
ELK                               pmax    pmax
      comp=Z,3.0nm,0.7s
ELK   Elko             75.04  36  P       P        12 41 25.6 +0.6
RSSD  Black Hills      75.25  27  P       P        12 41 25.1 -1.0
RSSD                              pmax    pmax
      comp=Z,9.0nm,0.8s
RSSD  Black Hills      75.25  27  P       P        12 41 25.9 -0.2
      baz=339
RSSD  Black Hills      75.25  27  P       P        12 41 25.1 -1.0
RSSD                              IAmb    IAmb     12 41 28.2
      comp=Z,9.3nm,0.8s
WAKR  Walker           75.58  40  P       P        12 41 27.2 -0.9
BGU   Big Grassy Mou   75.60  35  P       P        12 41 26.7 -1.5
CMB   Columbia Colle   75.65  41  P       P        12 41 27.9 -0.4
CMB                               pmax    pmax
      comp=Z,4.0nm,1.2s
CMB   Columbia Colle   75.65  41  P       P        12 41 27.9 -0.4
VLDQ  Val d'Or         75.78   8  P       P        12 41 27.8 -1.0
F36A  Milaca           75.91  19  P       P        12 41 28.6 -1.0
F36A                              IAmb    IAmb     12 41 31.1
      comp=Z,8.4nm,0.8s
TCUT  Toone Canyon     75.94  33  P       P        12 41 30.5 +0.3
K22A  Casper           75.95  29  P       P        12 41 29.5 -0.6
      baz=338
NVAR  Mina Array Bea   76.06  40  P       P        12 41 31.5 +0.6
      comp=Z,2.5nm,0.7s,baz=323,slow=5.0,SNR=22
LHV   Little Huntoon   76.14  40  P       P        12 41 31.9 +0.8
LHV                               IAmb    IAmb     12 41 36.9
      comp=Z,5.4nm,0.8s
SUSD  Miller           76.16  23  P       P        12 41 31.2 +0.1
      baz=342
SUSD  Miller           76.16  23  P       P        12 41 31.2 +0.1
DUG   Dugway, Tooele   76.33  35  P       P        12 41 32.3  0.0
DUG   Dugway, Tooele   76.33  35  P       P        12 41 33.2 +0.9
      baz=335,SNR=5.5
DUG   Dugway, Tooele   76.33  35  P       P        12 41 32.3  0.0
MDPB  Devils Postpil   76.48  41  P       P        12 41 34.0 +0.7
SPMN  Marine on St.    76.65  19  P       P        12 41 33.3 -0.5
      baz=345
SPMN  Marine on St.    76.65  19  P       P        12 41 32.4 -1.5
SPMN                              IAmb    IAmb     12 41 34.5
      comp=Z,16nm,1.0s
TPH   Tonopah          76.76  39  P       P        12 41 35.4 +0.6
TPH                               pmax    pmax
      comp=Z,18nm,0.9s
TPH   Tonopah          76.76  39  P       P        12 41 35.4 +0.6
LATQ  La Tuque         76.78   4  P       P        12 41 34.9 +0.4
      baz=356
D55A  Sainte-Anne-du   77.00   6  P       P        12 41 35.6 -0.1
      baz=355
D56A  ZEC Mazanza, M   77.02   6  P       P        12 41 36.1 +0.3
      baz=355
D61A  St Aubert, Com   77.06   3  P       P        12 41 36.8 +0.8
      baz=358
D58A  Chemin du LacG   77.07   5  P       P        12 41 36.5 +0.4
      baz=356,SNR=5.8
R11A  Troy Canyon, C   77.08  38  P       P        12 41 37.0 +0.4
      baz=334
R11A  Troy Canyon, C   77.08  38  P       P        12 41 36.0 -0.7
D62A  Allapoint, All   77.20   2  P       P        12 41 37.7 +0.8
      baz=358
D63A  Stockholm        77.26   1  P       P        12 41 38.5 +1.3
      baz=359
D60A  Saint Jean D’O   77.32   3  P       P        12 41 37.9 +0.4
      baz=357
ECSD  EROS Data Cent   77.34  22  P       P        12 41 37.4 -0.4
      baz=343,SNR=6.6
ECSD  EROS Data Cent   77.34  22  P       P        12 41 37.7 -0.1
ECSD                              IAmb    IAmb     12 41 38.0
      comp=Z,7.3nm,0.8s
PSUT  Pine Spring      77.50  36  P       P        12 41 39.8 +0.8
E55A  Montcerf-Lytto   77.53   7  P       P        12 41 39.5 +0.8
      baz=354
P17A  Butcher Ranch,   77.64  34  P       P        12 41 39.5 -0.2
GRAC  Grapevine Rang   77.67  40  P       P        12 41 41.1 +1.3
      baz=334
E57A  Chemin Saint G   77.69   6  P       P        12 41 40.2 +0.5
      baz=356
WRAB  Tennant Creek    77.70 160⇑eP       P        12 41 39.0 -0.8
WRAB                              pmax    pmax
      comp=Z,22nm,1.4s
WRAB  Tennant Creek    77.70 160  P       P        12 41 39.2 -0.6
WRA   Warramunga Arr   77.71 160  P       P        12 41 39.4 -0.5
      comp=Z,5.6nm,0.9s,baz=351,slow=6.6,SNR=20
WRA   Warramunga Arr   77.71 160 i P      P        12 41 39.4 -0.5
WRA                               pmax    pmax
      comp=Z,4.0nm,0.7s
N23A  Red Feather La   77.75  30  P       P        12 41 40.8 +0.3
      baz=339
N23A  Red Feather La   77.75  30  P       P        12 41 40.7 +0.3
N23A                              IAmb    IAmb     12 41 41.5
      comp=Z,7.9nm,1.0s
WR0   Warramunga Arr   77.76 160  P       P        12 41 38.9 -1.3
WR0                               IAmb    IAmb     12 41 40.8
      comp=Z,18nm,1.2s
E58A  La Victoria      77.77   5  P       P        12 41 40.1  0.0
      baz=356
O20A  White River Ci   77.79  32  P       P        12 41 41.0 +0.4
      baz=338,SNR=8.5
O20A  White River Ci   77.79  32  P       P        12 41 40.7 +0.1
O20A                              IAmb    IAmb     12 41 44.8
      comp=Z,9.8nm,0.8s
E63A  Oxbow            77.87   1  P       P        12 41 40.7  0.0
      baz=359
ALGO  Algonquin Park   77.88   8  P       P        12 41 40.6 -0.1
      baz=353
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E64A  Bridgewater      77.88   1  P       P        12 41 41.7 +1.0
      baz=359
TCRU  Three Creeks R   77.89  35  P       P        12 41 42.0 +0.8
K31A  O'Neill          77.93  24  P       P        12 41 41.0 -0.1
MVU   Marysvale        78.06  35  P       P        12 41 42.9 +0.7
MSU   Marysvale        78.07  35  P       P        12 41 43.0 +0.8
MSU   Marysvale        78.07  35  P       P        12 41 43.0 +0.8
PRN   Pahroc Range     78.11  38  P       P        12 41 43.2 +0.9
F60A  Warwick          78.23   4  P       P        12 41 42.7 +0.1
      baz=357
F61A  St Evariste      78.26   3  P       P        12 41 43.3 +0.5
      baz=357
F59A  Saint Guilaume   78.31   5  P       P        12 41 43.6 +0.5
      baz=356
G54A  Lake Saint Pet   78.43   8  P       P        12 41 43.2 -0.5
      baz=353
ISA   Isabella, Lake   78.46  41  P       P        12 41 44.1 -0.1
      baz=333
MPMC  Manual Prospec   78.46  40  P       P        12 41 45.1 +0.7
      baz=334
MTPU  Mount Pierson    78.49  35  P       P        12 41 45.6 +0.9
ISCO  Idaho Springs    78.86  30  P       P        12 41 46.3 -0.3
ISCO                              pmax    pmax
      comp=Z,4.0nm,1.0s
ISCO  Idaho Springs    78.86  30  P       P        12 41 47.0 +0.4
      baz=339
ISCO  Idaho Springs    78.86  30  P       P        12 41 46.3 -0.3
PLVO  Plevna           78.86   8  P       P        12 41 47.1 +0.9
SHPR  Sheep Range      78.89  38  P       P        12 41 47.3 +0.6
LRMC  Laurel Mtn Rad   78.91  40  P       P        12 41 47.6 +0.9
      baz=334,SNR=5.5
G61A  St-Isidore-de-   78.93   4  P       P        12 41 47.5 +1.0
      baz=357
G57A  Newington        78.94   6  P       P        12 41 47.1 +0.5
      baz=355,SNR=6.1
G58A  Ormstown         78.95   6  P       P        12 41 47.1 +0.5
      baz=356
G64A  Maxfield         79.04   2  P       P        12 41 48.4 +1.3
      baz=359
SMCO  Snowmass         79.05  31  P       P        12 41 48.3 +0.5
SMCO                              IAmb    IAmb     12 41 49.7
      comp=Z,13nm,1.1s
LCMT  Little Creek M   79.08  37  P       P        12 41 48.3 +0.7
L34A  Svendsen Farm,   79.08  22  P       P        12 41 45.9 -1.5
PV22  Blue Mesa, Par   79.11  33  P       P        12 41 48.2 +0.4
PV22                              IAmb    IAmb     12 41 49.4
      comp=Z,11nm,1.0s
PV23  Carpenter Ridg   79.11  33  P       P        12 41 48.6 +0.6
PV23                              IAmb    IAmb     12 41 52.1
      comp=Z,9.9nm,0.8s
PV14  Lion Creek, Pa   79.18  33  P       P        12 41 48.6 +0.3
PV14                              IAmb    IAmb     12 41 51.4
      comp=Z,8.6nm,0.8s
KNB   Kanab            79.22  36  P       P        12 41 49.7 +1.3
KNB                               pmax    pmax
      comp=Z,15nm,0.9s
KNB   Kanab            79.22  36  P       P        12 41 49.7 +1.3
EDW2  Edwards Air Fo   79.33  41  P       P        12 41 48.1 -0.8
      baz=334
GSC   Goldstone, Bar   79.39  40  P       P        12 41 50.1 +0.8
      baz=334
LONY  Lake Ozonia      79.45   6  P       P        12 41 50.0 +0.7
      baz=355
H57A  Richville        79.56   7  P       P        12 41 49.8 -0.1
      baz=355
H60A  Morristown       79.61   5  P       P        12 41 50.6 +0.3
      baz=356
H62A  Milan            79.65   3  P       P        12 41 51.6 +1.1
      baz=357
H61A  Lyndonville      79.66   4  P       P        12 41 51.2 +0.6
      baz=357
H58A  Gabriels         79.67   6  P       P        12 41 50.5 -0.1
      baz=356
MWC   Mount Wilson     79.89  41  P       P        12 41 52.0 -0.2
MWC                               pmax    pmax
      comp=Z,11nm,1.3s
MWC   Mount Wilson     79.89  41  P       P        12 41 52.0 -0.2
MWC                               IAmb    IAmb     12 41 53.8
      comp=Z,11nm,1.2s
I57A  Carthage         80.06   7  P       P        12 41 53.4 +0.7
      baz=355
I63A  Otisfield        80.19   3  P       P        12 41 53.8 +0.4
      baz=358
I63A  Otisfield        80.19   3  P       P        12 41 55.9 +2.5
I61A  Oroboro, Fairl   80.25   4  P       P        12 41 54.5 +0.8
      baz=357
GMRC  Granite Mounta   80.26  39  P       P        12 41 54.9 +0.8
      baz=335
I60A  Shoreham         80.29   5  P       P        12 41 54.4 +0.5
      baz=356
N35A  Tabor            80.30  22  P       P        12 41 53.9 -0.2
I62A  Tamworth         80.34   4  P       P        12 41 54.0 -0.2
      baz=357
KSCO  Kaye Shedlock’   80.40  28  P       P        12 41 54.9 +0.1
      baz=340
KSCO  Kaye Shedlock’   80.40  28  P       P        12 41 54.7 -0.1
KSCO                              IAmb    IAmb     12 41 55.9
      comp=Z,23nm,1.2s
MVCO  Mesa Verde       80.41  33  P       P        12 41 55.5 +0.4
      baz=338
S22A  4UR Ranch, Cre   80.42  31  P       P        12 41 55.6 +0.5
      baz=338
S22A  4UR Ranch, Cre   80.42  31  P       P        12 41 53.8 -1.3
J57A  Williamstown     80.56   7  P       P        12 41 55.6 +0.2
      baz=355
J59A  Piesco           80.60   6  P       P        12 41 55.7  0.0
      baz=355
J56A  Wolcott          80.63   8  P       P        12 41 55.9 +0.1
      baz=354
J58A  Remsen           80.66   7  P       P        12 41 56.6 +0.7
      baz=355
SDCO  Great Sand Dun   80.80  30  P       P        12 41 57.4 +0.2
      baz=339,SNR=10
SDCO  Great Sand Dun   80.80  30  P       P        12 41 56.7 -0.4
J60A  Lant Hill Farm   80.88   5  P       P        12 41 55.5 -1.6
      baz=356
IRM   Iron Mountain    81.01  39  P       P        12 41 59.1 +1.1
      baz=335
PFO   Pinyon Flats O   81.03  40  P       P        12 41 58.6 +0.4
PFO                               pmax    pmax
      comp=Z,8.0nm,1.1s
PFO   Pinyon Flats O   81.03  40  P       P        12 41 58.4 +0.2
      baz=334
PFO   Pinyon Flats O   81.03  40  P       P        12 41 58.6 +0.4
PFO                               IAmb    IAmb     12 41 59.8
      comp=Z,7.7nm,1.1s
TPFO  Pinon Flats      81.03  40  P       P        12 41 58.3  0.0
      baz=334
WUAZ  Wupatki          81.06  36  P       P        12 41 58.7 +0.3
K56A  Middlesex        81.17   8  P       P        12 41 58.6 -0.1
      baz=354
K58A  Earlville        81.23   7  P       P        12 41 59.3 +0.3
      baz=355
K58A  Earlville        81.23   7  P       P        12 41 59.3 +0.3
ASAR  Alice Springs    81.26 161  P       P        12 41 59.1  0.0
      comp=Z,3.0nm,0.9s,baz=345,slow=4.7,SNR=13
K59A  Cooperstown      81.27   6  P       P        12 41 59.5 +0.3
      baz=355
BC3   Big Chuckawall   81.35  40  P       P        12 42 00.5 +0.6
      baz=335
T25A  Trinidad         81.67  30  P       P        12 42 01.2 -0.6
      baz=340
T25A  Trinidad         81.67  30  P       P        12 42 00.8 -0.9
T25A                              IAmb    IAmb     12 42 12.0
      comp=Z,14nm,1.5s
MONP2 Monument Peak    81.69  41  P       P        12 42 02.7 +0.9
      baz=334
L56A  Greenwood        81.71   8  P       P        12 42 02.0 +0.4
      baz=354
BINY  Binghamton       81.77   7  P       P        12 42 02.1 +0.2
      baz=355
BINY  Binghamton       81.77   7  P       P        12 42 02.4 +0.5
KSU1  Kansas State U   81.77  23  P       P        12 42 01.4 -0.5
      baz=344,SNR=10
KSU1  Kansas State U   81.77  23  P       P        12 42 01.5 -0.5
L59A  Walton           81.84   7  P       P        12 42 02.6 +0.3
      baz=355
L57A  Andrews Acres    81.90   8  P       P        12 42 02.3 -0.3
      baz=354
P38A  Dawn             81.92  21  P       P        12 42 02.3 -0.4
P38A                              IAmb    IAmb     12 42 04.6
      comp=Z,11nm,0.7s
L58A  Harry Jones Me   81.93   7  P       P        12 42 01.9 -0.8
      baz=355
R32A  Long Quarter,    81.94  25  P       P        12 42 02.1 -0.7
W18A  Petrified Fore   81.95  35  P       P        12 42 03.8 +0.6
```

	baz=337						
W18A	**Petrified Fore**	**81.95**	**35**	P	**P**	**12 42 03.7**	**+0.5**
X16A	**Lo Mia Camp, P**	**82.04**	**36**	P	**P**	**12 42 04.3**	**+0.7**
P40A	**Paris**	**82.30**	**20**	P	**P**	**12 42 04.0**	**-0.6**
P40A				IAmb	IAmb	12 42 05.5	
	comp=Z,11nm,1.0s						
X18A	**Snowflake**	**82.43**	**35**	P	**P**	**12 42 05.5**	**-0.2**
M57A	**Sunshine Farm,**	**82.54**	**8**	P	**P**	**12 42 06.4**	**+0.5**
	baz=354						
M58A	**Price's Panora**	**82.56**	**8**	P	**P**	**12 42 05.7**	**-0.4**
	baz=354						
P43A	**Skaggs, Pawnee**	**82.65**	**18**	P	**P**	**12 42 05.4**	**-1.1**
N53A	**Lisbon**	**82.72**	**11**	P	**P**	**12 42 06.5**	**-0.3**
M60A	**Port Jervis**	**82.73**	**6**	P	**P**	**12 42 07.0**	**+0.2**
	baz=355						
ACSO	**Alum Creek Sta**	**83.04**	**13**	P	**P**	**12 42 08.3**	**-0.2**
	baz=351						
N59A	**State Game Lan**	**83.06**	**7**	P	**P**	**12 42 09.1**	**+0.4**
	baz=355						
N59A	**State Game Lan**	**83.06**	**7**	P	**P**	**12 42 09.1**	**+0.4**
N58A	**Sunbury**	**83.07**	**8**	P	**P**	**12 42 09.0**	**+0.4**
	baz=354						
ANMO	**Albuquerque**	**83.13**	**32**	⇑*e*P	**P**	**12 42 09.7**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANMO	**Albuquerque**	**83.13**	**32**	P	**P**	**12 42 09.4**	**+0.1**
	baz=339						
ANMO	**Albuquerque**	**83.13**	**32**	P	**P**	**12 42 10.1**	**+0.7**
ANMO				IAmb	IAmb	12 42 11.3	
	comp=Z,5.9nm,1.1s						
N60A	**Cedar Hill Far**	**83.15**	**7**	P	**P**	**12 42 09.8**	**+0.7**
	baz=355						
SSPA	**Standing Stone**	**83.17**	**9**	P	**P**	**12 42 08.6**	**-0.6**
	baz=354						
SSPA	**Standing Stone**	**83.17**	**9**	P	**P**	**12 42 08.6**	**-0.6**
KAN10	**Anthony SW Sta**	**83.32**	**25**	P	**P**	**12 42 09.9**	**-0.2**
LUPA	**Lehigh Univers**	**83.40**	**7**	P	**P**	**12 42 10.9**	**+0.6**
R40A	**Maddies Statio**	**83.46**	**20**	P	**P**	**12 42 09.7**	**-1.0**
R40A				IAmb	IAmb	12 42 12.2	
	comp=Z,6.2nm,0.8s						
O56A	**Blue Knob Stat**	**83.48**	**9**	P	**P**	**12 42 10.9**	**+0.1**
	baz=353						
KAN14	**Manchester OK**	**83.51**	**25**	P	**P**	**12 42 09.6**	**-1.5**
KAN13	**South Haven SW**	**83.57**	**25**	P	**P**	**12 42 11.4**	**0.0**
P52A	**Corning**	**83.73**	**12**	P	**P**	**12 42 11.4**	**-0.7**
	baz=351						
BNM	**Barren Site**	**83.81**	**33**	P	**P**	**12 42 14.0**	**+1.1**
S39A	**Bolivar**	**83.83**	**21**	P	**P**	**12 42 11.5**	**-1.2**
S39A				IAmb	IAmb	12 42 12.5	
	comp=Z,6.8nm,0.8s						
CCM	**Cathedral Cave**	**83.88**	**20**	P	**P**	**12 42 12.7**	**-0.2**
CCM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CCM	**Cathedral Cave**	**83.88**	**20**	P	**P**	**12 42 12.2**	**-0.6**
	baz=346						
CCM	**Cathedral Cave**	**83.88**	**20**	P	**P**	**12 42 12.7**	**-0.2**
CCM				IAmb	IAmb	12 42 14.6	
	comp=Z,8.8nm,0.8s						
T35A	**Sooner Cattle**	**83.89**	**24**	P	**P**	**12 42 13.0**	**0.0**
P53A	**Whipple**	**83.96**	**12**	P	**P**	**12 42 12.3**	**-1.0**
FVM	**French Village**	**84.10**	**19**	P	**P**	**12 42 13.7**	**-0.3**
FVM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FVM	**French Village**	**84.10**	**19**	P	**P**	**12 42 13.7**	**-0.3**
FVM				IAmb	IAmb	12 42 15.8	
	comp=Z,5.5nm,0.8s						
Q54A	**Coxs Mills**	**84.52**	**11**	P	**P**	**12 42 16.7**	**+0.6**
AMTX	**Amarillo**	**84.54**	**29**	P	**P**	**12 42 16.6**	**+0.2**
	baz=341						
AMTX	**Amarillo**	**84.54**	**29**	P	**P**	**12 42 16.8**	**+0.4**
WCI	**Wyandotte Cave**	**84.55**	**16**	P	**P**	**12 42 16.1**	**-0.2**
WCI				pmax	pmax		
	comp=Z,17nm,1.0s						
WCI	**Wyandotte Cave**	**84.55**	**16**	P	**P**	**12 42 16.4**	**+0.1**
	baz=349						
WCI	**Wyandotte Cave**	**84.55**	**16**	P	**P**	**12 42 16.1**	**-0.2**
MGMO	**Mountain Grove**	**84.56**	**21**	P	**P**	**12 42 15.9**	**-0.5**
MGMO				IAmb	IAmb	12 42 18.0	
	comp=Z,5.4nm,0.7s						
Q53A	**Leroy**	**84.57**	**12**	P	**P**	**12 42 16.3**	**-0.1**
	baz=352						
SIUC	**Southern Illin**	**84.58**	**18**	P	**P**	**12 42 16.6**	**+0.2**
S44A	**Carbondale**	**84.59**	**18**	P	**P**	**12 42 16.6**	**+0.1**
OK031	**S. Brethren Rd**	**84.73**	**24**	P	**P**	**12 42 18.1**	**+0.8**
U38A	**Gravette**	**84.81**	**22**	P	**P**	**12 42 17.0**	**-0.7**
T42A	**Van Buren**	**84.91**	**20**	P	**P**	**12 42 17.6**	**-0.5**
121A	**Cookes Peak, D**	**84.96**	**34**	P	**P**	**12 42 19.6**	**+1.0**
	baz=338						
OK025	**Westminster Rd**	**84.97**	**25**	P	**P**	**12 42 19.0**	**+0.5**
MSTX	**Muleshoe**	**85.10**	**30**	P	**P**	**12 42 19.1**	**-0.2**
	baz=341						
MSTX	**Muleshoe**	**85.10**	**30**	P	**P**	**12 42 18.6**	**-0.6**
MSTX				IAmb	IAmb	12 42 21.8	
	comp=Z,8.5nm,1.1s						
U40A	**Yellville**	**85.21**	**21**	P	**P**	**12 42 18.9**	**-0.8**
	baz=346,SNR=9.0						
U40A	**Yellville**	**85.21**	**21**	P	**P**	**12 42 18.2**	**-1.5**
WMOK	**Wichita Mounta**	**85.43**	**26**	P	**P**	**12 42 20.8**	**0.0**
WMOK				pmax	pmax		
	comp=Z,11nm,0.8s						
WMOK	**Wichita Mounta**	**85.43**	**26**	P	**P**	**12 42 21.0**	**+0.2**
	baz=342,SNR=21						
WMOK	**Wichita Mounta**	**85.43**	**26**	P	**P**	**12 42 20.8**	**0.0**
W35A	**Tecumseh**	**85.49**	**25**	P	**P**	**12 42 21.1**	**0.0**
319A	**Douglas**	**85.55**	**36**	P	**P**	**12 42 21.7**	**+0.1**
319A				IAmb	IAmb	12 42 23.2	
	comp=Z,10nm,1.1s						
FCAR	**Ozark Folk Cen**	**85.81**	**21**	P	**P**	**12 42 21.1**	**-1.5**
FCAR				IAmb	IAmb	12 42 24.2	
	comp=Z,6.6nm,0.7s						
LCAR	**Lake Charles**	**85.83**	**20**	P	**P**	**12 42 22.0**	**-0.7**
LCAR				IAmb	IAmb	12 42 23.5	
	comp=Z,8.2nm,1.1s						
W39A	**Magazine**	**86.14**	**22**	P	**P**	**12 42 24.5**	**+0.3**
	baz=345						
WVT	**Waverly**	**86.36**	**17**	P	**P**	**12 42 25.0**	**-0.3**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WVT	**Waverly**	**86.36**	**17**	P	**P**	**12 42 25.3**	**0.0**
	baz=348						
WVT	**Waverly**	**86.36**	**17**	P	**P**	**12 42 25.0**	**-0.3**
WVT				IAmb	IAmb	12 42 28.1	
	comp=Z,10nm,0.8s						
X37A	**Clayton**	**86.38**	**24**	P	**P**	**12 42 26.4**	**+1.0**
X37A				IAmb	IAmb	12 42 27.4	
	comp=Z,5.2nm,0.8s						
MNTX	**Cornudas Mount**	**86.47**	**33**	P	**P**	**12 42 25.9**	**-0.1**
	baz=339						
MNTX	**Cornudas Mount**	**86.47**	**33**	P	**P**	**12 42 25.6**	**-0.4**
MNTX				IAmb	IAmb	12 42 27.0	
	comp=Z,7.7nm,1.4s						
W41B	**Gary Mavity, V**	**86.48**	**21**	P	**P**	**12 42 25.1**	**-0.8**
	baz=346						
MIAR	**Mount Ida**	**86.81**	**22**	P	**P**	**12 42 27.4**	**-0.2**
	baz=345						
V48A	**Smith Brothers**	**86.91**	**17**	P	**P**	**12 42 27.7**	**-0.4**
V48A				IAmb	IAmb	12 42 30.2	
	comp=Z,7.7nm,0.9s						
ABTX	**Abilene, Hawle**	**87.22**	**28**	P	**P**	**12 42 30.0**	**+0.4**
	baz=342						
ABTX	**Abilene, Hawle**	**87.22**	**28**	P	**P**	**12 42 29.4**	**-0.2**
ABTX				IAmb	IAmb	12 42 30.9	
	comp=Z,12nm,1.1s						
X43A	**Marvell**	**87.38**	**20**	P	**P**	**12 42 30.9**	**+0.6**
	baz=347						
TX31	**Lajitas Ar. Si**	**89.20**	**32**	P	**P**	**12 42 39.7**	**+0.5**
TX31				IAmb	IAmb	12 42 43.4	
	comp=Z,7.6nm,1.1s						
TX32	**Lajitas Array**	**89.20**	**32**	P	**P**	**12 42 39.5**	**+0.3**
JCT	**Junction City**	**89.21**	**28**	P	**P**	**12 42 39.3**	**+0.1**
JCT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
JCT	**Junction City**	**89.21**	**28**	P	**P**	**12 42 39.2**	**+0.1**
	baz=342						
JCT	**Junction City**	**89.21**	**28**	P	**P**	**12 42 39.3**	**+0.1**
JCT				IAmb	IAmb	12 42 41.5	
	comp=Z,3.6nm,0.7s						
DZM	**Mont Dzumac**	**89.70**	**132**	*e*LR	LR	13 11 17.0	
	comp=Z,250nm,21.3s						
TOA0	**Torodi Ar. Sit**	**90.98**	**295**	P	**P**	**12 42 47.4**	**-0.2**
TOA0				IAmb	IAmb	12 42 48.2	
	comp=Z,7.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**90.98**	**295**	P	**P**	**12 42 47.6**	**0.0**
	comp=Z,3.8nm,0.9s,baz=24,slow=4.5,SNR=12						
PPT2	**Papeete2**	**108.17**	**95**	*e*LR	LR	13 19 53.5	
	comp=Z,93nm,21.2s						
TBI	**Tubuai**	**112.84**	**98**	*e*LR	LR	13 22 01.3	
	comp=Z,129nm,27.0s						
VNDA	**Vanda**	**136.62**	**166**	PKP	**PKiKP**	**12 49 04.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=308,slow=7.0,SNR=3.6						
BDFB	**Brasilia**	**137.29**	**333**	PKP	**PKPdf**	**12 49 07.6**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=84,slow=6.4,SNR=3.5						
NVL	**N'lazarevskaya**	**145.00**	**214**	*e*PKIKP	**PKPbc**	**12 49 17.5**	**-0.8**
NVL				pmax	pmax		
	comp=Z,25nm,1.2s						
CPUP	**Villa Florida**	**149.58**	**344**	PKPbc	**PKPbc**	**12 49 31.9**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=13,slow=3.1,SNR=12						
SNAA	**Sanae**	**149.83**	**214**	PKPdf	**PKPbc**	**12 49 32.1**	**+0.3**
VNA2	**Neumayer--Watz**	**151.28**	**216**	PKPdf	**PKiKP**	**12 49 35.8**	**+0.1**
VNA3	**Neumayer Olymp**	**152.01**	**215**	PKPdf	**PKPbc**	**12 49 36.9**	**0.0**

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*MOS **03** 12:30:21.8±1.2, 56°.14N×113°.86E, h4^{km}, mb5.0/6, Error ellipse: s-maj=11.0km s-min=9.1km az=102.0*

MOS Felt (IV-V) at Severomuysk.

*IDC **03** 12:30:22.9±0.6, 56°.08N×113°.81E, h0^{km}, mb4.3/21, mb1 4.5/25, mb1mx4.3/54, mbtmp4.4/25, ML4.2/3, MS4.4/2, Ms1 4.4/2, ms1mx3.6/15, Error ellipse: s-maj=14.5km s-min=14.0km az=180.0*

*BYKL **03** 12:30:23.9±0.3, 56°.10N×113°.70E, h5^{km}±7^{km}, FELT I=V MSK at Severomuisk, IV at Taksimo, III at Yanchukan,II at Sogdiondon*

ISC 03 12:30:23.5±0.4, **55°.94N**±0°.02×**113°.65E**±0°.02, **h10^{km}, n90, σ2^s.40**/99, **mb4.6**/26, **MS4.6**/4, **6C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.18**	**344**	⇑*i*Pg	**Pg**	**12 30 25.7**	**-1.7**
SVKR				*e*Sg	**Sg**	**12 30 27.5**	**-2.6**
SVKR	**Severomuysk**	**0.18**	**344**	⇑*i*PG	**Pg**	**12 30 25.7**	**-1.7**
SVKR				*e*S	**Sg**	**12 30 28.2**	**-1.9**
UKT	**Uakit**	**0.46**	**181**	*e*Pg	**Pb**	**12 30 34.2**	**+0.6**
UKT				Pmax		12 30 37.0	
	3µm,0.7s						
UKT				*e*Sg	**Sb**	**12 30 42.4**	**+1.9**
UKT				Smax		12 30 54.7	
	32µm,1.8s						
YOA	**Uoyan**	**1.10**	**281**	Pg	**Pb**	**12 30 43.6**	**-0.9**
YOA				Pmax		12 30 45.0	
	46µm,1.5s						
YOA				*e*Sg	**Sb**	**12 30 58.5**	**-0.3**
YOA				max		12 31 03.2	
	94µm,1.8s						
YOA	**Uoyan**	**1.10**	**281**	*e*PG	**Pn**	**12 30 46.3**	**+1.4**
YOA				*i* S	**Sn**	**12 31 01.8**	**+1.7**
YOA				smax	smax		
	comp=N,94µm,1.0s						
NLYR	**Nelyaty**	**1.27**	**64**	*e*Pg	**Pn**	**12 30 44.7**	**-2.6**
NLYR				*e*Pb	**Pg**	**12 30 47.1**	**-0.8**
NLYR				max		12 30 49.9	
	comp=N,12µm,0.6s						
NLYR				*e*Sg	**Sb**	**12 31 01.5**	**-2.5**
NLYR				*e*Sb	**Sn**	**12 31 05.0**	**+0.5**
NLYR				max		12 31 07.4	
	comp=N,33µm,0.9s						
KMO	**Kumora**	**1.38**	**269**	*e*Pg	**Pb**	**12 30 49.0**	**-0.3**
KMO				Pmax		12 30 51.4	
	comp=N,8µm,0.7s						
KMO				*e*Sg	**Sg**	**12 31 09.2**	**+1.4**
KMO				*e*Sb	**Sb**	**12 31 11.3**	**+4.3**
KMO				max		12 31 13.1	
	comp=N,58µm,1.0s						
KMO	**Kumora**	**1.38**	**269**	*e*PG	**Pg**	**12 30 50.1**	**+0.2**
KMO				*e*		12 31 09.0	
KMO				pmax	pmax		
	comp=Z,7µm,0.8s						
KMO				smax	smax		
	comp=N,57µm,1.0s						
YLYR	**Ulyunkhan**	**1.77**	**234**	*e*Pg	**Pg**	**12 30 57.9**	**+0.4**
YLYR				Pmax		12 31 10.3	
	comp=N,4µm,1.9s						
YLYR				*e*Sg	**Sg**	**12 31 22.9**	**+2.4**
YLYR				Smax		12 31 29.0	
	comp=N,20µm,1.5s						
YLYR	**Ulyunkhan**	**1.77**	**234**	*e*PN	**Pg**	**12 30 59.0**	**+1.5**
YLYR				*e*		12 30 59.8	
YLYR				*e*S	**Sg**	**12 31 22.1**	**+1.6**
YLYR				*e*		12 31 22.7	
YLYR				pmax	pmax		
	comp=Z,4µm,1.5s						
YLYR				smax	smax		
	comp=N,18µm,0.6s						
BOD	**Bodaibo**	**1.89**	**6**	*e*Pg	**Pn**	**12 30 55.2**	**-0.6**
BOD				Pmax		12 31 10.8	
	comp=N,9µm,1.8s						
BOD				*e*Sg	**Sn**	**12 31 18.7**	**-1.0**
BOD				Smax		12 31 20.2	
	comp=N,14µm,0.9s						
BOD				*e*		12 31 28.8	
NIZ	**Nizh Angarsk**	**2.32**	**268**	*e*Sg	**Sg**	**12 31 38.0**	**0.0**
NIZ				Smax		12 31 39.4	
	comp=N,15µm,0.9s						
NIZ				*e*		12 31 42.3	
CRS	**Chara**	**2.74**	**68**	*e*Sg	**Sg**	**12 31 47.5**	**-3.9**
CRS				Smax		12 31 49.2	
	comp=N,14µm,1.4s						
CRS				*e*		12 32 06.0	
SYVR	**Suvo**	**3.11**	**224**	*e*Sg	**Sg**	**12 32 04.6**	**+1.2**
SYVR				*e*		12 32 14.7	
SYVR				max		12 32 18.8	
	comp=N,14µm,1.9s						
SYVR				*e*		12 32 25.3	
VTMR	**Vitim**	**3.56**	**351**	*e*Sg	**Sb**	**12 32 09.6**	**0.0**
MXMB	**Maximikha**	**3.92**	**229**	*e*	**Pb**	**12 31 34.2**	**+1.6**
MXMB				*e*Sg	**Sg**	**12 32 29.4**	**+0.3**
MXMB				*e*		12 32 36.4	
TUP	**Tupik**	**3.92**	**110**	*e*Pn	**Pn**	**12 31 25.0**	**+1.3**
TUP				*e*Pg	**Pb**	**12 31 32.8**	**+0.1**
TUP				Pmax		12 31 37.9	
	comp=N,960nm,0.6s						
TUP				*e*Sg	**Sg**	**12 32 25.1**	**-4.2**
TUP				*e*		12 32 30.6	
TUP				*e*		12 32 32.3	
TUP				max		12 32 32.7	
	comp=N,6µm,0.9s						
TUP	**Tupik**	**3.92**	**110**	*e*PN	**Pn**	**12 31 22.2**	**-1.5**
TUP				*e*		12 31 32.6	
TUP				*e*S	**Sn**	**12 32 09.4**	**-0.4**
TUP				*e*		12 32 25.0	
TUP				pmax	pmax		
	comp=Z,1µm,0.6s						
TUP				smax	smax		
	comp=N,6µm,0.9s						
CIT	**Chita**	**3.93**	**181**	*e*	**Pg**	**12 31 38.5**	**-0.2**
CIT				max		12 31 39.5	
	comp=N,1µm,0.7s						
CIT				*e*Sg	**Sg**	**12 32 29.9**	**+0.3**
CIT				Smax		12 32 45.8	
	comp=N,9µm,1.7s						
OGRR	**Ongureny**	**4.19**	**239**	*e*Pg	**Pg**	**12 31 40.8**	**-2.9**
OGRR				Pmax		12 31 53.1	
	comp=N,640nm,0.9s						
OGRR				*e*Sg	**Sg**	**12 32 37.1**	**-0.9**
OGRR				Smax		12 32 44.2	
	comp=N,4µm,1.8s						
YKLR	**Yuktali**	**4.51**	**78**	*e*Sg	**Sg**	**12 32 42.6**	**-5.6**
ZRHB	**Zarechye**	**5.10**	**231**	*e*Sg	**Sg**	**12 33 05.0**	**-2.1**
TRG	**Tyrgan**	**5.33**	**236**	*e*	**Pb**	**12 31 58.9**	**+2.3**
TRG				max		12 32 00.5	
	comp=N,223nm,1.3s						
TRG				*e*Sg	**Sg**	**12 33 12.4**	**-2.0**
TRG				*e*		12 33 24.3	
TRG				max		12 33 27.4	
	comp=N,3µm,1.8s						
FFNB	**Fofonovo**	**5.63**	**229**	*e*	**Sb**	**12 33 08.5**	**-0.8**
FFNB				Sg	**Sg**	**12 33 22.6**	**-1.5**
FFNB				*e*		12 33 31.5	
STDB	**Stepnoy Dvoret**	**5.71**	**232**	*e*Sg	**Sg**	**12 33 25.1**	**-1.7**
HRMR	**Khuramsha**	**5.87**	**225**	*e*Sg	**Sg**	**12 33 29.9**	**-1.7**
HRMR				Smax		12 33 45.4	
	comp=N,9µm,0.9s						
BGT	**Bolshoye Golou**	**6.23**	**235**	*e*	**Pg**	**12 32 19.4**	**-3.3**
BGT				max		12 32 25.9	
	comp=N,171nm,1.1s						
BGT				*e*		12 32 29.4	
BGT				*e*Sg	**Sg**	**12 33 40.0**	**-3.3**
BGT				Smax		12 33 50.4	
	comp=N,2µm,1.2s						
IENR	**Iengra**	**6.28**	**83**	*e*Sg	**Sg**	**12 33 36.6**	**-8.4**
KPC	**Khapcheranga**	**6.30**	**188**	*e*Pg	**Pg**	**12 32 21.3**	**-2.7**
KPC				Pmax		12 32 32.4	
	comp=N,193nm,1.0s						
KPC				*e*Sg	**Sg**	**12 33 44.8**	**-0.7**
KPC				*e*		12 33 59.1	
KPC				max		12 34 00.3	
	comp=N,6µm,1.3s						
LSTR	**Listvyanka**	**6.62**	**236**	*e*		12 33 47.6	
LSTR				*e*Sg	**Sg**	**12 33 52.8**	**-2.8**
LSTR				Smax		12 34 01.7	
	comp=N,2µm,1.8s						
IRK	**Irkutsk**	**6.64**	**240**	*e*		12 33 50.6	
IRK				*e*Sg	**Sg**	**12 33 53.7**	**-2.8**
IRK				Smax		12 33 55.4	
	comp=N,3µm,0.8s						
TLY	**Talaya**	**7.30**	**238**	*e*	**Pg**	**12 32 41.4**	**-1.7**
TLY				max		12 32 41.7	
	comp=N,113nm,1.1s						
TLY				*e*Sg	**Sg**	**12 34 12.1**	**-5.4**
TLY				Smax		12 34 29.5	
	comp=N,1µm,1.8s						
TLY	**Talaya**	**7.30**	**238**	*e*PG	Pg	12 32 38.1	-5.0
TLY				*e*		12 34 12.3	
TLY				pmax	pmax		
	comp=Z,153nm,0.6s						
TLY				smax	smax		
	comp=E,1.0nm,0.8s						
ARS	**Arshan**	**7.75**	**243**	*e*Sg	**Sg**	**12 34 25.9**	**-6.1**
ARS				Smax		12 34 44.7	
	comp=E,4µm,1.0s						
ZAK	**Zakamensk**	**8.35**	**232**	*e*	Pg	12 32 58.6	-4.6
ZAK				Sg	**Sg**	**12 34 46.2**	**-5.0**
MOY	**Mondy**	**8.62**	**245**	*e*Sg	**Sg**	**12 34 54.0**	**-6.0**
MOY				*e*		12 35 07.5	
MOY				max		12 35 12.4	
	comp=E,2µm,2.0s						
ORL	**Orlik**	**8.79**	**253**	*e*	Pg	12 33 34.4	+23
ORL				max		12 33 40.9	
	comp=E,186nm,0.9s						
ORL				*e*Sg	Sg	12 34 56.9	-8.4
ORL				Smax		12 35 14.8	
	comp=E,2µm,1.8s						
SONM	**Songino Array**	**9.27**	**212**	Pn	Pn	12 32 42.0	+4.8
	comp=E,4.4nm,0.3s,baz=20,slow=14,SNR=4.3						
SONM				Lg	Lg	12 35 22.6	
	comp=E,20nm,0.3s,baz=24,slow=28,SNR=4.4						
TDJR	**Todzha**	**10.88**	**258**	*e*Sg	Sn	12 35 20.2	+19
TDJR	**Todzha**	**10.88**	**258**	*e*Sg	Sn	12 35 59.0	+58
TDJR	**Todzha**	**10.88**	**258**	*e*	**Pn**	**12 32 56.3**	**-2.8**
TDJR	**Todzha**	**10.88**	**258**	*e*		12 34 30.3	
KNGR	**Kungurtug, Tuv**	**11.03**	**248**	*e*Sg		12 36 07.5	
KNGR	**Kungurtug, Tuv**	**11.03**	**248**	*e*Pg	**Pn**	**12 33 02.4**	**+1.2**
KNGR	**Kungurtug, Tuv**	**11.03**	**248**	*e*Sg	Sn	12 35 27.1	+23
KNGR	**Kungurtug, Tuv**	**11.03**	**248**	*e*		12 35 33.3	
ARDR	**Aradan**	**12.28**	**263**	*e*Sg	Sn	12 36 04.1	+29
ARDR	**Aradan**	**12.28**	**263**	*e*	Pn	12 33 34.5	+16
KLR	**Kul'dur**	**12.87**	**114**	Pn	**Pn**	**12 33 27.8**	**+1.4**
	comp=E,3.4nm,0.3s,baz=306,slow=16,SNR=4.6						
NKL	**Nikolayevsk**	**15.89**	**89**	*e*P	**P**	**12 34 14.7**	**+4.1**
NKL				pmax	pmax		
	comp=N,8.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,18nm,1.5s						
NKL				pmax	pmax		
	comp=Z,12nm,1.5s						
NKL				MLR	MLR		
	comp=E,803nm,12.0s						
NKL				MLR	MLR		
	comp=N,55nm,11.0s						
NKL				MLR	MLR		
	comp=Z,514nm,7.0s						
USRK	**Ussuriysk Ar.**	**16.57**	**127**	Pn	**P**	**12 34 17.2**	**-1.0**
	baz=320,slow=10,SNR=2.4						
ZALV	**Zalesovo Beam**	**16.63**	**275**	Pn	**P**	**12 34 19.4**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=58,slow=13,SNR=1.8						
DGZ	**Jazzator, Alta**	**16.97**	**259**	⇓*e*P	**Pn**	**12 34 20.1**	**-0.8**
DGZ				pmax	pmax		
	comp=Z,26nm,1.5s						
TIXI	**Tiksi**	**17.04**	**16**	⇑*e*P	**Pn**	**12 34 20.1**	**-1.3**
TYV	**Tymovskoe**	**17.95**	**94**	*e*P	Pn	12 34 22.9	-10
TYV				pmax	pmax		
	comp=Z,13nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
YSS	**Yuzh-Sakhalins**	**20.11**	**104**	⇑*e*P	Pn	12 35 00.3	+1.3
YSS				pmax	pmax		
	comp=Z,59nm,2.0s						
KSRS	**Korea Array**	**20.85**	**147**	P	Pn	12 35 08.1	+0.4
	comp=Z,3.6nm,0.9s,baz=343,slow=9.4,SNR=4.4						
KURK	**Kurchatov**	**21.40**	**271**	P	**P**	**12 35 15.6**	**+4.5**
MKAR	**Makanchi Array**	**21.44**	**258**	P	**P**	**12 35 15.6**	**+4.0**
	comp=Z,8.7nm,0.7s,baz=41,slow=7.9,SNR=3.3						
KURBB	**Kurchatov Arra**	**21.50**	**270**	P	**P**	**12 35 15.6**	**+3.6**
	comp=Z,29nm,0.8s,baz=62,slow=10,SNR=6.9						
BRVK	**Borovoye**	**25.04**	**282**	*ce*P	**P**	**12 35 50.0**	**+2.6**
BRVK				pmax	pmax		
	comp=Z,31nm,0.9s						
PETK	**Petropavlovsk-**	**25.40**	**78**	P	**P**	**12 35 52.0**	**+1.3**
	comp=Z,15nm,1.0s,baz=299,slow=6.1,SNR=4.2						
PETK	**Petropavlovsk-**	**25.40**	**78**	P	**P**	**12 35 52.0**	**+1.3**
ARU	**Arti**	**29.97**	**294**	*d i*P	**P**	**12 36 32.2**	**+0.6**
ARU				S	**S**	**12 41 30.3**	**+1.4**
ARU				pmax	pmax		
	comp=Z,20nm,1.3s						
ARU				MLR	MLR		
	comp=Z,2µm,18.0s						
KLMR	**Klimovskoe**	**37.23**	**309**	*e*P	**P**	**12 37 33.2**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,21nm,1.1s						
KLMR	**Klimovskoe**	**37.23**	**309**	*e*P	**P**	**12 37 33.2**	**-1.4**
KLMR				AMP		12 37 37.4	
	comp=Z,21nm,1.1s						
ARCES	**ARCESS Array B**	**38.71**	**326**	P	**P**	**12 37 46.3**	**-0.7**
	comp=Z,7.4nm,0.9s,baz=68,slow=9.8,SNR=6.9						
CMAR	**Chiang Mai Arr**	**39.04**	**202**	P	**P**	**12 37 51.9**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=359,slow=7.6,SNR=2.0						
FINES	**FINESS Array B**	**42.57**	**315**	P	**P**	**12 38 19.2**	**+0.3**
	comp=Z,9.2nm,0.7s,baz=66,slow=7.2,SNR=4.6						
ILAR	**Eielson Array**	**44.98**	**37**	P	**P**	**12 38 39.2**	**+0.9**
	comp=Z,4.4nm,0.8s,baz=305,slow=3.8,SNR=7.0						
KVAR	**Kislovodsk Arr**	**45.22**	**286**	LR	LR	13 00 09.3	
	comp=Z,625nm,18.5s,baz=250,slow=40						
KIV	**Kislovodsk**	**45.22**	**286**	⇑*e*P	**P**	**12 38 42.5**	**+1.9**
KIV				*e*		12 40 23.2	
KIV				pmax	pmax		
	comp=Z,12nm,0.8s						
KIV				MLR	MLR		
	comp=Z,787nm,18.0s						
INK	**Inuvik**	**46.66**	**28**	P	**P**	**12 38 51.1**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=359,slow=4.4,SNR=5.6						
AKASG	**Malin Array Be**	**47.72**	**301**	P	**P**	**12 39 01.3**	**+1.4**
	comp=Z,3.7nm,0.7s,baz=43,slow=8.7,SNR=4.1						
NOA	**NORSAR Array B**	**48.45**	**321**	P	**P**	**12 39 06.6**	**+1.0**
	comp=Z,4.2nm,0.8s,baz=48,slow=7.7,SNR=4.3						
BRTR	**Keskin Array B**	**53.02**	**288**	P	**P**	**12 39 42.1**	**+1.7**
	comp=Z,2.1nm,0.8s,baz=55,slow=3.5,SNR=4.3						
CLL	**Collm**	**54.67**	**311**	*i* P	**P**	**12 39 53.4**	**+1.3**
	comp=Z,7.0nm,0.8s						
YKA	**Yellowknife Ar**	**56.06**	**25**	P	**P**	**12 40 01.4**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=334,slow=6.9,SNR=8.2						
GERES	**GERESS Array B**	**56.19**	**308**	P	**P**	**12 40 04.2**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=32,slow=7.8,SNR=4.2						
FRB	**Frobisher Bay**	**60.63**	**1**	P	**P**	**12 40 33.3**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=34,slow=7.3,SNR=1.2						
ESDC	**Sonseca Array**	**71.07**	**314**	P	**P**	**12 41 42.7**	**+1.2**
	comp=Z,6.9nm,0.8s,baz=23,slow=6.3,SNR=7.2						
PDAR	**Pinedale Array**	**75.09**	**31**	P	**P**	**12 42 04.8**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=35,slow=2.7,SNR=5.3						
NVAR	**Mina Array Bea**	**76.15**	**40**	P	**P**	**12 42 12.8**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=315,slow=4.9,SNR=6.9						
MDT	**Midelt**	**77.19**	**310**	LR	LR	13 18 52.4	
	comp=Z,121nm,18.1s,baz=24,slow=38						
WRAB	**Tennant Creek**	**77.59**	**160**	⇓*e*P	**P**	**12 42 21.8**	**+2.3**
WRAB				pmax	pmax		
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**77.59**	**160**	P	**P**	**12 42 19.2**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=350,slow=6.0,SNR=5.5						
ASAR	**Alice Springs**	**81.14**	**161**	P	**P**	**12 42 40.0**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=350,slow=5.1,SNR=5.6						
ASAR	**Alice Springs**	**81.14**	**161**	P	**P**	**12 42 40.0**	**+1.1**
TORD	**Torodi Ar. Bea**	**91.03**	**295**	P	**P**	**12 43 27.4**	**-0.6**
	comp=Z,3.3nm,0.8s,baz=32,slow=5.0,SNR=7.0						
CPUP	**Villa Florida**	**149.70**	**344**	PKPbc	**PKiKP**	**12 50 12.7**	**-1.4**
	comp=Z,3.8nm,0.8s,baz=340,slow=3.3,SNR=3.9						

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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**280**	⇑*i*Pg	Pg	12 31 11.5	-0.1
SVKR				*e*Sg	Sg	12 31 14.1	+1.2
SVKR				*e*		12 31 18.5	
UKT	**Uakit**	**0.62**	**186**	*e*Pg	Pg	12 31 19.3	-2.1
UKT				Pmax		12 31 19.9	
	4µm,1.4s						
UKT				*e*Sg	Sg	12 31 27.7	-1.6
UKT				*e*Sb	Sb	12 31 33.5	+1.0
UKT				max		12 31 33.9	
	10µm,1.9s						
NLYR	**Nelyaty**	**1.16**	**69**	*e*Sg	Sg	12 31 46.1	-0.8
NLYR				Smax		12 31 59.8	
	9µm,1.2s						
KMO	**Kumora**	**1.44**	**263**	*e*Sg	Sg	12 31 55.6	-0.3
KMO				Smax		12 32 05.3	
	8µm,1.2s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Sg	Sn	12 32 03.4	-0.3
BOD				Smax		12 32 05.4	
	7µm,1.4s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Sg	Sn	12 32 08.9	+0.7
YLYR				Smax		12 32 15.8	
	9µm,1.5s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Sg	Sb	12 32 24.5	+1.2
NIZ				Smax		12 32 27.5	
	3µm,1.1s						
CRS	**Chara**	**2.64**	**70**	*e*Sg	Sb	12 32 30.2	-0.4
CRS				Smax		12 32 34.1	
	4µm,0.9s						
SYVR	**Suvo**	**3.27**	**223**	*e*Sg	Sb	12 32 50.3	+1.7
SYVR				Smax		12 32 59.5	
	5µm,1.9s						
VTMR	**Vitim**	**3.41**	**350**	*e*Sg	Sb	12 32 54.4	+1.6
TUP	**Tupik**	**3.93**	**113**	*e*Sg	Sb	12 33 11.6	+3.8
TUP				Smax		12 33 17.7	
	3µm,1.1s						
MXMB	**Maximikha**	**4.06**	**228**	*e*Sg	Sb	12 33 14.6	+3.1
CIT	**Chita**	**4.09**	**182**	*e*Sg	Sb	12 33 15.7	+3.3
CIT				Smax		12 33 17.5	
	4µm,1.7s						
OGRR	**Ongureny**	**4.32**	**238**	*e*Sg	Sg	12 33 24.2	-4.0
OGRR				Smax		12 33 37.6	
	1µm,1.3s						
YKLR	**Yuktali**	**4.43**	**80**	*e*Sg	Sb	12 33 26.8	+4.6
FFNB	**Fofonovo**	**5.77**	**228**	*e*Sg	Sb	12 34 07.3	+6.5
HRMR	**Khuramsha**	**6.01**	**225**	*e*Sg	Sg	12 34 15.7	-6.9
HRMR				Smax		12 34 39.0	
	3µm,1.1s						
IENR	**Iengra**	**6.21**	**84**	*e*Sg	Sg	12 34 21.9	-7.1
KPC	**Khapcheranga**	**6.46**	**188**	*e*Sg	Sg	12 34 31.1	-5.8
KPC				Smax		12 34 46.0	
	2µm,1.6s						
ZAK	**Zakamensk**	**8.49**	**232**	*e*Sg	Sg	12 35 31.3	-11
ZAK				Smax		12 35 33.5	
	882nm,1.8s						
MOY	**Mondy**	**8.74**	**245**	*e*Sg	Sg	12 35 40.6	-9.3
MOY				Smax		12 35 52.8	
	969nm,1.4s						
ORL	**Orlik**	**8.89**	**252**	*e*Sg	Sg	12 35 43.6	-11
ORL				Smax		12 36 00.2	
	821nm,2.0s						

BYKL 03 12:31:53.9±0.3, 56°.11N×113°.73E, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**274**	⇑*i*Pg	Pg	12 31 55.4	-0.3
SVKR				Pmax		12 31 55.6	
	28µm,0.1s						
SVKR				*e*Sg	Sg	12 31 57.5	+0.5
SVKR				Smax		12 32 01.9	
	94µm,0.8s						
UKT	**Uakit**	**0.62**	**185**	*e*Pg	Pg	12 32 04.9	-0.9
UKT				Pmax		12 32 06.5	
	1µm,0.5s						
UKT				*e*Sg	Sg	12 32 12.8	-1.1
UKT				*e*Sb	Sb	12 32 18.0	+0.9
UKT				max		12 32 27.1	
	4µm,1.5s						
YOA	**Uoyan**	**1.12**	**272**	*e*Sg	Sg	12 32 29.7	-0.3
YOA				Smax		12 32 30.9	
	17µm,1.1s						
NLYR	**Nelyaty**	**1.16**	**70**	*e*Pg	Pg	12 32 14.2	-2.0
NLYR				Pmax		12 32 27.3	
	597nm,0.4s						
NLYR				*e*Sg	Sg	12 32 30.2	-1.1
NLYR				*e*		12 32 37.0	
NLYR				max		12 32 40.1	
	12µm,1.0s						
KMO	**Kumora**	**1.44**	**262**	*e*	Pn	12 32 19.2	-2.0
KMO				*e*Sg	Sg	12 32 37.6	-2.5
KMO				*e*		12 32 41.6	
KMO				max		12 32 45.3	
	9µm,0.9s						
BOD	**Bodaibo**	**1.72**	**5**	*e*Sg	Sn	12 32 47.3	-0.4
BOD				Smax		12 32 47.9	
	2µm,1.0s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Pg	Pn	12 32 27.9	+0.1
YLYR				Pmax		12 32 32.4	
	965nm,0.6s						
YLYR				*e*Sg	Sn	12 32 53.3	+0.7
YLYR				*e*		12 32 55.9	
YLYR				max		12 32 58.4	
	2µm,0.4s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*	Pg	12 32 44.2	+4.7
NIZ				max		12 32 51.5	
	311nm,0.5s						
NIZ				*e*Sg	Sb	12 33 07.4	-0.1
NIZ				Smax		12 33 11.8	
	3µm,0.5s						
CRS	**Chara**	**2.64**	**71**	*e*Sg	Sb	12 33 16.4	+1.5
CRS				Smax		12 33 22.6	
	3µm,1.0s						
SYVR	**Suvo**	**3.27**	**223**	*e*Sg	Sb	12 33 34.6	+1.6
SYVR				Smax		12 33 43.2	
	2µm,1.4s						
VTMR	**Vitim**	**3.40**	**350**	*e*Sg	Sb	12 33 39.2	+2.4
TUP	**Tupik**	**3.94**	**113**	*e*Sg	Sg	12 33 56.6	-3.8
TUP				*e*		12 34 01.2	
TUP				max		12 34 06.7	
	1µm,0.8s						
MXMB	**Maximikha**	**4.06**	**227**	*e*Sg	Sb	12 33 59.4	+3.5
CIT	**Chita**	**4.10**	**182**	*e*Sg	Sg	12 34 02.0	-3.5
CIT				Smax		12 34 13.3	
	1µm,0.9s						
OGRR	**Ongureny**	**4.32**	**238**	*e*Sg	Sb	12 34 07.9	+4.6
OGRR				*e*		12 34 12.2	
OGRR				max		12 34 14.5	
	390nm,1.1s						
FFNB	**Fofonovo**	**5.78**	**228**	*e*Sg	Sg	12 34 52.9	-6.4
HRMR	**Khuramsha**	**6.02**	**225**	*e*Sg	Sb	12 34 59.3	+7.2
HRMR				Smax		12 35 07.2	
	2µm,1.3s						
IENR	**Iengra**	**6.22**	**84**	*e*Sg	Sb	12 35 04.9	+7.0
KPC	**Khapcheranga**	**6.47**	**188**	*e*Sg	Sg	12 35 13.9	-7.6
KPC				Smax		12 35 18.4	
	637nm,1.2s						
KPC				*e*		12 35 25.1	
IRK	**Irkutsk**	**6.77**	**239**	Sg	Sg	12 35 24.0	-7.1
IRK				Smax		12 35 27.3	
	775nm,1.0s						
TLY	**Talaya**	**7.43**	**238**	*e*Sg	Sg	12 35 43.0	-9.2
TLY				Smax		12 35 53.7	
	226nm,1.8s						
ARS	**Arshan**	**7.87**	**242**	Sg	Sg	12 35 57.8	-8.6
ARS				Smax		12 36 07.9	
	519nm,1.2s						
ORL	**Orlik**	**8.88**	**252**	*e*Sg	Sg	12 36 28.8	-10
ORL				Smax		12 36 34.4	
	472nm,1.8s						

JMA ***03*** *12:35:23.7±0.1, 24°.67N×122°.63E, h116km±1km, M3.9*
TAP ***03*** *12:35:24.5, 24°.71N×122°.66E, h110km, ML4.3, B*
ISC 03 12:35:24.2±1.2**, 24°.71N**±0°.03×**122°.66E**±0°.02**, h114**km±6km**,**
n140, σ**0s.70**/269**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.37**	**134**	P	Pn	12 35 40.6	-0.1
JYNG				S	Sn	12 35 53.2	+0.1
YOJ	**Yonaguni jima**	**0.41**	**127**	P	Pn	12 35 40.8	-0.1
YOJ				S	Sn	12 35 53.4	-0.1
YOJ	**Yonaguni jima**	**0.41**	**127**	P	Pn	12 35 40.6	-0.3
	baz=127						
YOJ				S	Sn	12 35 53.0	-0.4
	baz=127						
TWB1	**Santiao Chiao**	**0.68**	**296**	*e*P	Pn	12 35 42.9	+0.2
	baz=296						
TWB1				*e*S	Sn	12 35 56.6	0.0
	baz=296						
TWC	**Suao**	**0.74**	**263**	P	Pn	12 35 43.2	0.0
	baz=262						
TWC				S	Sn	12 35 57.1	-0.5
	baz=262						
NTC	**Toucheng**	**0.77**	**281**	P	Pn	12 35 43.6	+0.2
	baz=280						
NTC				S	Sn	12 35 57.4	-0.6
	baz=280						
TIPB	**Shuangxi**	**0.80**	**289**	P	Pn	12 35 44.2	+0.4
	baz=288						
TIPB				S	Sn	12 35 58.6	0.0
	baz=288						
ENAH	**Nanao**	**0.81**	**252**	P	Pn	12 35 44.1	+0.2
	baz=251						
ENAH				S	Sn	12 35 58.8	+0.1
	baz=251						
NWF	**Wu-fen Shan**	**0.87**	**295**	*e*P	Pn	12 35 44.8	+0.3
	baz=294						
NWF				*e*S	Sn	12 36 00.3	+0.4
	baz=294						
WFSB	**Wu-fen Shan**	**0.87**	**295**	*e*P	Pn	12 35 44.9	+0.5
	baz=294						
WFSB				*e*S	Sn	12 36 00.3	+0.5
	baz=294						
ENA	**Nanau**	**0.88**	**252**	P	Pn	12 35 44.8	+0.4
	baz=251						
ENA				S	Sn	12 36 00.2	+0.3
	baz=251						
TWE	**Neicheng**	**0.90**	**271**	P	Pn	12 35 44.9	+0.2
	baz=270						
TWE				S	Sn	12 35 59.6	-0.5
	baz=270						
TNOU	**National Taiwa**	**0.92**	**299**	*e*P	Pn	12 35 43.7	-1.1
	baz=298						
TNOU				*e*S	Sn	12 35 59.2	-1.2
	baz=298						
ENTT	**Nioudou**	**0.99**	**266**	P	Pn	12 35 46.4	+0.8
	baz=265						
ENTT				*e*S	Sn	12 36 01.6	-0.3
	baz=265						
TWA	**Mucha**	**1.01**	**286**	P	Pn	12 35 46.0	+0.2
	baz=285						
TWA				S	Sn	12 36 01.7	-0.5
	baz=285						
NDT	**Datong Townshi**	**1.04**	**265**	P	Pn	12 35 47.0	+0.8
	baz=264						
NDT				*e*S	Sn	12 36 03.5	+0.8
	baz=264						
IRIF	**Iriomote-Funau**	**1.05**	**111**	P	Pn	12 35 46.0	-0.1
IRIF				S	Sn	12 36 02.5	-0.2
NWLT	**Wulai**	**1.05**	**274**	P	Pn	12 35 46.5	+0.3
	baz=273						
NWLT				S	Sn	12 36 02.9	0.0
	baz=273						
NHDH	**Xindian Distri**	**1.06**	**284**	P	Pn	12 35 46.1	-0.1
	baz=283						
NHDH				S	Sn	12 36 02.0	-0.9
	baz=283						
PCYT	**Pengchaiyu**	**1.06**	**330**	*e*P	Pn	12 35 46.9	+0.6
	baz=330						
TATO	**Taipei**	**1.09**	**284**	*e*P	Pn	12 35 46.5	-0.1
	baz=283						
TAP	**Taipei**	**1.10**	**288**	*e*P	Pn	12 35 47.6	+0.9
	baz=287						
TAP				*e*S	Sn	12 36 03.2	-0.4
	baz=287						
NACB	**Ninganchiao**	**1.10**	**241**	*e*P	Pn	12 35 46.2	-0.5
	baz=241						
NACB				S	Sn	12 36 03.3	-0.5
	baz=241						
TWY	**Chenhua**	**1.11**	**301**	*e*P	Pn	12 35 47.4	+0.6
	baz=300						
TWY				S	Sn	12 36 04.0	0.0
	baz=300						
ANP	**Anpu**	**1.14**	**295**	*e*P	Pn	12 35 47.7	+0.5
	baz=294						
ANP				*e*S	Sn	12 36 03.8	-0.8
	baz=294						
BACT	**New Taipei Cit**	**1.14**	**285**	*e*P	Pn	12 35 47.3	+0.2
	baz=284						
BACT				*e*S	Sn	12 36 05.2	+0.7
	baz=284						
TWD	**Chiawan**	**1.15**	**237**	*e*P	Pn	12 35 46.8	-0.5
	baz=236						
TWD				*e*S	Sn	12 36 04.1	-0.7
	baz=236						
YHNB	**Yeheng**	**1.17**	**268**	P	Pn	12 35 47.9	+0.4
	baz=268						
YHNB				S	Sn	12 36 05.1	0.0
	baz=268						
ETLH	**Xiulin Townshi**	**1.18**	**245**	*e*P	Pn	12 35 47.3	-0.4
	baz=245						
ETLH				*e*S	Sn	12 36 05.1	-0.4
	baz=245						
NSK	**Sanguang**	**1.18**	**269**	P	Pn	12 35 48.0	+0.4
	baz=268						
NSK				S	Sn	12 36 05.3	-0.1
	baz=268						
NTST	**Danshui**	**1.19**	**293**	*e*P	Pn	12 35 48.2	+0.6
	baz=292						
NTST				S	Sn	12 36 05.2	-0.2
	baz=292						
TWS1	**Kuangyinshan**	**1.19**	**289**	*e*P	Pn	12 35 48.2	+0.5
	baz=289						
TWS1				*e*S	Sn	12 36 05.3	-0.2
	baz=289						
NNSB	**Datong**	**1.19**	**257**	*e*P	Pn	12 35 48.2	+0.4
	baz=256						
NNSB				*e*S	Sn	12 36 05.6	-0.1
	baz=256						
NNSH	**Datong**	**1.19**	**257**	*e*P	Pn	12 35 48.3	+0.5
	baz=256						
NNSH				*e*S	Sn	12 36 05.3	-0.5
	baz=256						
NNS	**Nan Shan**	**1.20**	**257**	*e*P	Pn	12 35 48.3	+0.4
	baz=256						
NNS				*e*S	Sn	12 36 05.8	-0.1
	baz=256						
HWA	**Hwalien**	**1.20**	**233**	*e*P	Pn	12 35 47.8	0.0
	baz=232						
HWA				*e*S	Sn	12 36 06.5	+0.8
	baz=232						
HATJ	**Hateruma jima**	**1.23**	**121**	P	Pn	12 35 48.5	+0.4
HATJ				*e*S	Sn	12 36 06.6	+0.3
NTY	**Taoyuan**	**1.27**	**284**	*e*P	Pn	12 35 48.5	-0.1
	baz=283						
NTY				*e*S	Sn	12 36 06.8	-0.2
	baz=283						
JKRS	**Kuro-shima**	**1.32**	**110**	P	Pn	12 35 49.4	+0.3
JKRS				S	Sn	12 36 08.5	+0.5
NCU	**National Centr**	**1.36**	**281**	*e*S	Sn	12 36 09.7	+0.8
	baz=280						
NCUH	**Zhongli**	**1.36**	**281**	*e*P	Pn	12 35 50.0	+0.4
	baz=280						
NCUH				*e*S	Sn	12 36 09.4	+0.5
	baz=280						
FUSS	**Fushou**	**1.37**	**251**	*e*P	Pn	12 35 50.9	+1.0
	baz=250						
FUSS				*e*S	Sn	12 36 09.4	0.0
	baz=250						
WHF	**Hehuan Shan**	**1.39**	**246**	*e*P	Pn	12 35 50.3	0.0
	baz=245						
WHF				S	Sn	12 36 09.0	-1.1
	baz=245						
JIJ	**Ishigaki jima**	**1.40**	**104**	P	Pn	12 35 49.8	-0.2
JIJ				S	Sn	12 36 08.9	-0.7
TWT	**Tachien**	**1.42**	**252**	*e*P	Pn	12 35 51.7	+1.2
	baz=251						
TWT				S	Sn	12 36 10.8	+0.4
	baz=251						
NJD	**Zhudong**	**1.43**	**271**	*e*P	Pn	12 35 51.1	+0.8
	baz=271						
NJD				*e*S	Sn	12 36 10.7	+0.5
	baz=271						
ESL	**Shilin**	**1.43**	**232**	*e*P	Pn	12 35 50.5	+0.1
	baz=231						
ESL				*e*S	Sn	12 36 09.6	-0.7
	baz=231						
TDCB	**Techi**	**1.44**	**252**	*e*P	Pn	12 35 51.4	+0.8
	baz=251						
TDCB				S	Sn	12 36 10.1	-0.6
	baz=251						
HSN1	**Hsinchu**	**1.49**	**273**	*e*P	Pn	12 35 51.9	+0.8
	baz=272						
HSN1				S	Sn	12 36 11.7	+0.2
	baz=272						
NHW	**Xinwu Township**	**1.49**	**282**	*e*P	Pn	12 35 51.5	+0.4
	baz=281						
NHW				*e*S	Sn	12 36 11.6	0.0
	baz=281						
LIOB	**Emei**	**1.49**	**268**	*e*P	Pn	12 35 51.7	+0.5
	baz=267						
LIOB				S	Sn	12 36 11.4	-0.2
	baz=267						
CHGB	**Renai**	**1.50**	**245**	*e*P	Pn	12 35 51.9	+0.5
	baz=244						
CHGB				*e*S	Sn	12 36 11.6	-0.4
	baz=244						
NSTT	**Nanjuang**	**1.51**	**267**	*e*P	Pn	12 35 51.7	+0.4
	baz=266						
NSTT				S	Sn	12 36 11.8	-0.1
	baz=266						
JISG	**Ishigakijimahi**	**1.51**	**94**	P	Pn	12 35 51.1	-0.2
JISG				S	Sn	12 36 11.3	-0.7
SBCB	**Hsinchu**	**1.52**	**274**	*e*P	Pn	12 35 52.1	+0.7
	baz=273						
SBCB				*e*S	Sn	12 36 11.6	-0.6
	baz=273						
HSN	**Hsinchu**	**1.54**	**274**	*e*P	Pn	12 35 52.0	+0.3
	baz=274						
HSN				*e*S	Sn	12 36 12.5	0.0
	baz=274						
WHP	**Taichung City**	**1.62**	**255**	*e*P	Pn	12 35 53.7	+1.0
	baz=254						
WHP				*e*S	Sn	12 36 14.9	+0.5
	baz=254						
NJN	**Zhunan**	**1.62**	**270**	*e*S	Sn	12 36 14.1	-0.2
	baz=269						
HGSD	**Ruisui**	**1.65**	**223**	*e*P	Pn	12 35 54.3	+1.3
	baz=223						
HGSD				*e*S	Sn	12 36 14.7	-0.3
	baz=223						
WPL	**Puli Township**	**1.70**	**246**	*e*P	Pn	12 35 54.5	+0.9
	baz=246						
WPL				*e*S	Sn	12 36 16.5	+0.5
	baz=246						
NMLH	**Miaoli**	**1.71**	**265**	*e*P	Pn	12 35 54.4	+0.7
	baz=264						
NMLH				*e*S	Sn	12 36 16.1	-0.1
	baz=264						
EHY	**Hungye**	**1.71**	**226**	*e*P	Pn	12 35 53.4	-0.4
	baz=225						
EHY				*e*S	Sn	12 36 15.2	-1.0
	baz=225						
DPDB	**Guoxing**	**1.71**	**247**	*e*P	Pn	12 35 55.0	+1.2
	baz=246						
DPDB				*e*S	Sn	12 36 16.8	+0.4
	baz=246						
NSY	**Sanyi**	**1.75**	**261**	*e*P	Pn	12 35 55.2	+0.9
	baz=260						
NSY				*e*S	Sn	12 36 17.9	+0.7
	baz=260						
TWQ1	**Liyutan**	**1.75**	**259**	*e*P	Pn	12 35 54.6	+0.4
	baz=258						
TWQ1				*e*S	Sn	12 36 17.5	+0.3
	baz=258						
SMLT	**Sun Moon Lake**	**1.80**	**243**	*e*P	Pn	12 35 55.9	+1.0
	baz=242						
SMLT				*e*S	Sn	12 36 19.0	+0.6
	baz=242						
SSLB	**Suanglung**	**1.80**	**240**	*e*P	Pn	12 35 55.8	+0.9
	baz=239						
SSLB				*e*S	Sn	12 36 19.1	+0.7
	baz=239						
YULB	**Yu-li**	**1.80**	**224**	*e*P	Pn	12 35 55.1	+0.2
	baz=223						
YULB				*e*S	Sn	12 36 16.7	-1.7
	baz=223						
EYUL	**Yuli**	**1.82**	**222**	*e*P	Pn	12 35 55.6	+0.4
	baz=222						
EYUL				*e*S	Sn	12 36 17.7	-1.1
	baz=222						
TYC	**Yuchr**	**1.83**	**244**	*e*P	Pn	12 35 56.1	+1.0
	baz=243						
TYC				*e*S	Sn	12 36 19.3	+0.5
	baz=243						
TWF1	**Yuli**	**1.83**	**223**	*e*P	Pn	12 35 55.5	+0.2
	baz=222						
TWF1				*e*S	Sn	12 36 18.0	-1.0
	baz=222						
JTJ	**Tarama**	**1.86**	**92**	P	Pn	12 35 55.7	+0.1
WDJ	**Dajia District**	**1.87**	**259**	*e*P	Pn	12 35 56.5	+0.8
	baz=258						
WDJ				*e*S	Sn	12 36 20.6	+0.8
	baz=258						
TCU	**Taichung**	**1.89**	**253**	*e*P	Pn	12 35 56.7	+0.8
	baz=252						
TCU				*e*S	Sn	12 36 20.4	+0.2
	baz=252						
WWF	**Wufeng**	**1.90**	**250**	*e*P	Pn	12 35 57.0	+0.9
	baz=249						
WWF				*e*S	Sn	12 36 21.0	+0.5
	baz=249						
WHYT	**Xinyi Township**	**1.93**	**239**	*e*P	Pn	12 35 58.0	+1.6
	baz=238						
WHYT				*e*S	Sn	12 36 21.9	+0.7
	baz=238						
FULB	**Fuli**	**1.95**	**220**	*e*P	Pn	12 35 56.8	0.0
	baz=219						
FULB				*e*S	Sn	12 36 21.7	0.0
	baz=219						
WJS	**Zhushan**	**1.97**	**244**	*e*P	Pn	12 35 57.9	+1.0
	baz=243						
WJS				*e*S	Sn	12 36 22.4	+0.5
	baz=243						
WNT1	**Nantou City**	**1.97**	**247**	*e*P	Pn	12 35 58.0	+1.0
	baz=246						
WNT1				*e*S	Sn	12 36 22.6	+0.5
	baz=246						
YUS	**Yu-Shan**	**1.97**	**232**	*e*P	Pn	12 35 58.1	+0.6
	baz=232						
YUS				*e*S	Sn	12 36 22.2	-0.6
	baz=232						
WNT	**Mingjian**	**1.98**	**246**	*e*P	Pn	12 35 57.9	+0.9
	baz=245						
WNT				*e*S	Sn	12 36 21.6	-0.6
	baz=245						
CHKT	**Chengkung**	**1.99**	**217**	*e*P	Pn	12 35 57.4	+0.2
	baz=216						
CHKT				*e*S	Sn	12 36 21.2	-1.2
	baz=216						
WCHH	**Zhanghua**	**2.01**	**252**	*e*P	Pn	12 35 58.0	+0.5
	baz=251						
WCHH				*e*S	Sn	12 36 22.9	0.0
	baz=251						
ALS	**Alishan**	**2.07**	**235**	*e*P	Pn	12 35 59.2	+0.7
	baz=234						
ALS				*e*S	Sn	12 36 24.8	+0.1
	baz=234						
CHN5	**Tsauling**	**2.12**	**239**	*e*P	Pn	12 35 59.9	+1.0
	baz=238						
CHN5				*e*S	Sn	12 36 26.0	+0.5
	baz=238						
EDH	**Donghe**	**2.12**	**216**	*e*P	Pn	12 35 58.8	-0.1
	baz=215						
EDH				*e*S	Sn	12 36 23.9	-1.6
	baz=215						
ELDTW	**Lidau**	**2.13**	**225**	*e*P	Pn	12 35 58.8	-0.3
	baz=224						
ELDTW				*e*S	Sn	12 36 24.6	-1.2
	baz=224						
WGK	**Gukeng**	**2.17**	**242**	*e*P	Pn	12 36 00.8	+1.3
	baz=241						
WGK				*e*S	Sn	12 36 26.9	+0.5
	baz=241						
WDLH	**Douliu**	**2.18**	**243**	*e*P	Pn	12 36 00.3	+0.7
	baz=242						
WDLH				*e*S	Sn	12 36 27.4	+0.6
	baz=242						
RLNB	**Erlin**	**2.25**	**249**	*e*P	Pn	12 36 01.1	+0.6
	baz=248						
RLNB				*e*S	Sn	12 36 28.2	-0.1

	baz=248						
LONT	**Longtian**	**2.27**	**218**	*e*P	**Pn**	**12 36 01.0**	**+0.2**
	baz=217						
LONT				*e*S	**Sn**	**12 36 28.2**	**-0.7**
	baz=217						
JIRB	**Irabujima**	**2.29**	**86**	P	**Pn**	**12 36 01.1**	**+0.1**
JIRB				S	**Sn**	**12 36 29.8**	**+0.5**
LDUT	**Ludao**	**2.30**	**208**	*e*P	**Pn**	**12 36 01.4**	**+0.3**
	baz=208						
LDUT				*e*S	**Sn**	**12 36 28.0**	**-1.4**
	baz=208						
WTK	**Tuku**	**2.31**	**244**	*e*P	**Pn**	**12 36 01.5**	**+0.2**
	baz=243						
WTK				S	**Sn**	**12 36 29.7**	**+0.1**
	baz=243						
STYT	**Tauyuan**	**2.32**	**229**	*e*P	**Pn**	**12 36 02.8**	**+1.3**
	baz=228						
STYT				*e*S	**Sn**	**12 36 30.4**	**+0.3**
	baz=228						
TPUB	**Ta-pu**	**2.32**	**233**	*e*P	**Pn**	**12 36 02.6**	**+1.2**
	baz=232						
TPUB				*e*S	**Sn**	**12 36 30.4**	**+0.3**
	baz=232						
JIKM	**Ikemajima**	**2.37**	**84**	P	**Pn**	**12 36 02.4**	**+0.4**
JIKM				*e*S	**Sn**	**12 36 30.8**	**-0.2**
WTP	**Ta-pu**	**2.37**	**233**	*e*P	**Pn**	**12 36 02.9**	**+0.8**
	baz=231						
WTP				*e*S	**Sn**	**12 36 31.7**	**+0.5**
	baz=231						
CHY	**Chiayi**	**2.37**	**240**	*e*P	**Pn**	**12 36 02.7**	**+0.7**
	baz=239						
CHY				*e*S	**Sn**	**12 36 30.9**	**-0.2**
	baz=239						
TWGBT	**Beinan**	**2.37**	**218**	*e*P	**Pn**	**12 36 02.2**	**+0.1**
	baz=217						
TWGBT				*e*S	**Sn**	**12 36 30.0**	**-1.2**
	baz=217						
TWG	**Pinlang**	**2.37**	**218**	*e*P	**Pn**	**12 36 02.0**	**-0.1**
	baz=217						
TWG				*e*S	**Sn**	**12 36 30.5**	**-0.7**
	baz=217						
TTN	**Taitung**	**2.39**	**216**	*e*S	**Sn**	**12 36 32.1**	**+0.7**
	baz=215						
JMJ	**Miyako jima 2**	**2.40**	**87**	*e*P	**Pn**	**12 36 03.2**	**+0.7**
	baz=87						
JMJ				*e*S	**Sn**	**12 36 31.6**	**-0.2**
	baz=87						
JMJ2	**Miyako jima3**	**2.43**	**89**	P	**Pn**	**12 36 03.2**	**+0.4**
JMJ2				*e*S	**Sn**	**12 36 32.7**	**+0.2**
TWK	**Hsinying**	**2.45**	**235**	*e*P	**Pn**	**12 36 03.5**	**+0.4**
	baz=233						
TWK				*e*S	**Sn**	**12 36 33.0**	**0.0**
	baz=233						
WSF	**Szhu**	**2.46**	**245**	*e*P	**Pn**	**12 36 04.4**	**+1.1**
	baz=244						
WSF				*e*S	**Sn**	**12 36 33.5**	**+0.3**
	baz=244						
CHN1	**Nanshi**	**2.47**	**233**	*e*P	**Pn**	**12 36 04.1**	**+0.7**
	baz=232						
CHN1				*e*S	**Sn**	**12 36 33.6**	**+0.2**
	baz=232						
SNST	**Tainan City**	**2.47**	**234**	*e*P	**Pn**	**12 36 03.8**	**+0.5**
	baz=233						
SNST				*e*S	**Sn**	**12 36 33.7**	**+0.3**
	baz=233						
WLGB	**Puzi**	**2.48**	**241**	*e*P	**Pn**	**12 36 03.6**	**+0.2**
	baz=240						
WLGB				*e*S	**Sn**	**12 36 33.1**	**-0.5**
	baz=240						
SGST	**Jiashian**	**2.49**	**230**	*e*P	**Pn**	**12 36 03.7**	**0.0**
	baz=229						
SGST				*e*S	**Sn**	**12 36 34.2**	**+0.3**
	baz=229						
JOGS	**Gusukube**	**2.50**	**88**	P	**Pn**	**12 36 04.2**	**+0.5**
JOGS				S	**Sn**	**12 36 34.1**	**0.0**
SLGT	**Liugui**	**2.51**	**228**	*e*P	**Pn**	**12 36 05.0**	**+1.1**
	baz=227						
SLGT				*e*S	**Sn**	**12 36 34.3**	**0.0**
	baz=227						
CHN8	**Yiju**	**2.61**	**239**	*e*P	**Pn**	**12 36 06.0**	**+0.8**
	baz=238						
CHN8				*e*S	**Sn**	**12 36 36.7**	**0.0**
	baz=238						
SCST	**Cishan**	**2.69**	**228**	*e*P	**Pn**	**12 36 06.3**	**+0.1**
	baz=227						
SCST				*e*S	**Sn**	**12 36 37.6**	**-0.8**
	baz=227						
SSD	**Sandimen**	**2.69**	**224**	*e*P	**Pn**	**12 36 07.5**	**+1.3**
	baz=223						
SSD				*e*S	**Sn**	**12 36 38.6**	**0.0**
	baz=223						
TSMG	**Majia**	**2.71**	**223**	*e*P	**Pn**	**12 36 07.0**	**+0.5**
	baz=222						
TSMG				*e*S	**Sn**	**12 36 39.5**	**+0.4**
	baz=222						
PTTC	**Pingtan**	**2.73**	**287**	*e*P	**Pn**	**12 36 06.4**	**-0.3**
	baz=286						
PTTC				*e*S	**Sn**	**12 36 38.0**	**-1.5**
	baz=286						
TWM1	**Shoushan**	**2.77**	**228**	*e*S	**Sn**	**12 36 40.5**	**-0.1**
	baz=227						
MASBT	**Mashibuluo**	**2.79**	**222**	*e*P	**Pn**	**12 36 08.4**	**+0.9**
	baz=221						
MASBT				*e*S	**Sn**	**12 36 40.9**	**0.0**
	baz=221						
MATB	**Ma-tsu**	**2.84**	**301**	*e*P	**Pn**	**12 36 08.1**	**-0.1**
	baz=299						
TAW	**Tawu**	**2.84**	**215**	*e*S	**Sn**	**12 36 41.1**	**-1.0**
	baz=214						
LAY	**Lan-yu**	**2.84**	**201**	*e*P	**Pn**	**12 36 08.2**	**-0.1**
	baz=200						
LAY				*e*S	**Sn**	**12 36 41.0**	**-1.2**
	baz=200						
EAST	**Anshuo**	**2.85**	**216**	*e*P	**Pn**	**12 36 09.8**	**+1.4**
	baz=215						
EAST				*e*S	**Sn**	**12 36 41.2**	**-1.1**
	baz=215						
MSUT	**Lienchiang**	**2.87**	**301**	*e*P	**Pn**	**12 36 09.2**	**+0.6**
	baz=300						
MSUT				*e*S	**Sn**	**12 36 42.9**	**+0.2**
	baz=300						
SSPT	**Xinbi**	**2.93**	**221**	*e*P	**Pn**	**12 36 10.2**	**+0.9**
	baz=220						
SSPT				*e*S	**Sn**	**12 36 44.1**	**0.0**
	baz=220						
SCZT	**Fangliau**	**2.98**	**219**	*e*P	**Pn**	**12 36 10.4**	**+0.3**
	baz=218						
SCZT				*e*S	**Sn**	**12 36 45.4**	**0.0**
	baz=218						
SLIU	**Shizi**	**3.01**	**215**	*e*P	**Pn**	**12 36 11.9**	**+1.5**
	baz=214						
SLIU				*e*S	**Sn**	**12 36 45.6**	**-0.5**
	baz=214						
PNG	**Penghu**	**3.05**	**249**	*e*P	**Pn**	**12 36 11.6**	**+0.6**
	baz=248						
PNG				*e*S	**Sn**	**12 36 45.9**	**-1.2**
	baz=248						
PHUB	**P'eng-hu**	**3.06**	**248**	*e*P	**Pn**	**12 36 11.7**	**+0.6**
	baz=247						
PHUB				*e*S	**Sn**	**12 36 45.9**	**-1.3**
	baz=247						
WDGT	**Dungji**	**3.10**	**243**	*e*P	**Pn**	**12 36 12.2**	**+0.7**
	baz=242						
WDGT				*e*S	**Sn**	**12 36 47.3**	**-0.8**
	baz=242						
XPSS	**Dashiqiu**	**3.14**	**315**	*e*P	**Pn**	**12 36 12.8**	**+0.8**
	baz=314						
LYJJ	**Jianjiangzhen**	**3.19**	**306**	*e*P	**Pn**	**12 36 12.7**	**-0.1**
	baz=304						
LYJJ				*e*S	**Sn**	**12 36 49.2**	**-1.2**
	baz=304						
PTMZ	**Houxiangcun**	**3.23**	**277**	*e*P	**Pn**	**12 36 13.5**	**+0.2**
	baz=275						
PTMZ				*e*S	**Sn**	**12 36 49.4**	**-1.9**
	baz=275						
TWKBT	**Hengchun**	**3.23**	**212**	*e*S	**Sn**	**12 36 51.3**	**-0.1**
	baz=211						
TWK1	**Hengchun**	**3.23**	**212**	*e*P	**Pn**	**12 36 14.5**	**+1.1**
	baz=211						
TWK1				*e*S	**Sn**	**12 36 51.1**	**-0.2**
	baz=211						
VCHM	**Qimei**	**3.31**	**244**	*e*P	**Pn**	**12 36 14.5**	**+0.2**
	baz=243						
VCHM				*e*S	**Sn**	**12 36 51.7**	**-1.4**
	baz=243						
MHZQ	**Yeshan**	**3.56**	**294**	*e*P	**Pn**	**12 36 17.6**	**-0.1**
	baz=292						
MHZQ				*e*S	**Sn**	**12 36 59.0**	**-0.1**
	baz=292						
KNM	**Kinmen**	**3.86**	**267**	*e*P	**Pn**	**12 36 23.4**	**+1.8**
	baz=265						
KNM				*e*S	**Sn**	**12 37 06.0**	**-0.2**
	baz=265						
KNMB	**Chin-men Tao**	**3.89**	**267**	*e*P	**Pn**	**12 36 22.0**	**-0.1**
	baz=266						
KNMB				*e*S	**Sn**	**12 37 04.7**	**-2.4**
	baz=266						
AXDP	**Jialang**	**4.26**	**274**	*e*P	**Pn**	**12 36 27.5**	**+0.5**
	baz=272						
AXDP				*e*S	**Sn**	**12 37 12.8**	**-3.1**
	baz=272						

BGR ***03*** *12:46:14.4±0.0, 36°.22N×75°.41E, h133^{km}, mb5.3*
MOS ***03*** *12:46:32.2±1.0, 37°.30N×71°.89E, h124^{km}, mb4.8/52, Error ellipse: s-maj=4.7km s-min=3.5km az=92.1*
BJI ***03*** *12:46:33.2±0.0, 37°.39N×71°.89E, h121^{km}, mB4.9/31, mb4.9/50*
NEIC ***03*** *12:46:34.3±1.4, 37°.29N±0°.06×71°.77E±0°.08, h128^{km}±6^{km}, mb4.9/97, Error ellipse: s-maj=9.4km s-min=8.9km az=219.0*
NNC ***03*** *12:46:34.8±2.8, 37°.50N×71°.61E, h142^{km}±38^{km}, mb4.6, mpv5.5, Error ellipse: s-maj=26.7km s-min=18.4km az=168.0*
IDC ***03*** *12:46:35.0±0.5, 37°.20N×71°.85E, h137^{km}±4^{km}, mb4.3/48, mb1 4.4/51, mb1mx4.3/68, mbtmp4.7/51, MS3.6/3, Ms1 3.7/3, ms1mx3.0/49, Error ellipse: s-maj=8.8km s-min=6.5km az=11.0*
GCMT ***03*** *12:46:36.3±0.4, 37°.40N±0°.04×71°.68E±0°.04, h131^{km}±5^{km}, MW4.8/82, Moment Tensor Solution. s12,c12; s82,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.68±.07; $M_{\theta\theta}$0.64±.12; $M_{\phi\phi}$1.04±.11; $M_{r\theta}$-0.42±.09; $M_{\theta\phi}$0.67±.11; $M_{\phi r}$-0.08±.09; Best double couple: $M_0$1.66200×10^{16} NP1:ϕ_s209.00000°, δ40.00000°, λ-103.00000°. NP2: ϕ_s45.00000°, δ51.00000°, λ-79.00000°. Principal axes: T 1.5700, Plg6.0000°, Azm128.0000°; N 0.1850, Plg8.0000°, Azm219.0000°; P -1.7530, Plg80.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 12:46:34.1±0.3**, 37°.28N**±0°.03×**71°.86E**±0°.03**, h130**^{km}±2^{km}**, h130**^{km}**:pP-P, n560,** σ1^{s}**58**/635**, mb4.8**/175**, 42C-46D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.45**	**179**	P	**Pn**	**12 47 27.2**	**+0.5**
CEP				S	**Sn**	**12 48 09.0**	**+1.6**
KBL	**Kabul**	**3.56**	**221**	PN	**Pn**	**12 47 28.1**	**-0.2**
KBL	**Kabul**	**3.56**	**221**	Pn	**Pn**	**12 47 28.1**	**-0.2**
KBL	**Kabul**	**3.56**	**221**	P	**Pn**	**12 47 28.2**	**-0.1**
	SNR=98						
KBL				S	**Sn**	**12 48 10.3**	**+0.2**
NIL	**Nilore**	**3.80**	**162**	PN	**Pn**	**12 47 31.8**	**+0.6**
NIL	**Nilore**	**3.80**	**162**	Pn	**Pn**	**12 47 31.8**	**+0.6**
NIL	**Nilore**	**3.80**	**162**	P	**Pn**	**12 47 32.3**	**+1.1**
NIL				S	**Sn**	**12 48 18.0**	**+2.6**
KSH	**Kashi**	**3.93**	**54**	P	**Pn**	**12 47 28.9**	**-4.1**
KSH				S	**Sn**	**12 48 12.6**	**-6.0**
KSH				LR	LR		
	comp=N,4μm,4.4s						
KSH				LR	LR		
	comp=E,7μm,4.9s						
KSH				LR	LR		
	comp=Z,3μm,4.9s						
THW	**Thamme Wali**	**4.48**	**181**	⇑P	**Pn**	**12 47 39.8**	**-0.4**
TAS	**Tashkent**	**4.50**	**335**	PN	**Pn**	**12 47 39.5**	**-1.0**
TAS	**Tashkent**	**4.50**	**335**	Pn	**Pn**	**12 47 39.5**	**-1.0**
AML	**Almayashu**	**5.05**	**16**	P	**Pn**	**12 47 47.9**	**-0.2**
	SNR=1343						
IUG	**Iuzhnay**	**5.06**	**344**	*e*P	**Pn**	**12 47 46.7**	**-1.3**
	baz=344						
IUG	**Iuzhnay**	**5.06**	**344**	*e*PN	**Pn**	**12 47 46.7**	**-1.3**
UCH	**Uchtor**	**5.35**	**22**	P	**Pn**	**12 47 52.1**	**-0.1**
	SNR=178						
SARP	**Sargodha**	**5.39**	**173**	P	**Pn**	**12 47 51.1**	**-1.3**
EKS2	**Erkin-Say**	**5.57**	**15**	P	**Pn**	**12 47 54.4**	**-0.5**
	SNR=255						
DZA	**Taraz**	**5.62**	**356**	*e*P	**Pn**	**12 47 54.2**	**-1.3**
	baz=356						
DZA	**Taraz**	**5.62**	**356**	*e*PN	**Pn**	**12 47 54.1**	**-1.3**
AAK	**Ala-Archa**	**5.72**	**20**	P	**Pn**	**12 47 57.6**	**+0.7**
	139nm,0.3s,baz=199,slow=13,SNR=2334						
AAK				S	**Sn**	**12 48 60.0**	**-1.6**
	31nm,0.3s,baz=338,slow=21,SNR=12						
AAK	**Ala-Archa**	**5.72**	**20**	P	**Pn**	**12 47 57.3**	**+0.4**
	SNR=264						
AAK	**Ala-Archa**	**5.72**	**20**	*i* P	**Pn**	**12 47 57.2**	**+0.4**
	SNR=386						
AAK	**Ala-Archa**	**5.72**	**20**	⇑P	**Pn**	**12 47 57.3**	**+0.4**
	389nm,0.6s						
AAK				⇓S	**Sn**	**12 48 58.8**	**-2.7**
	336nm,0.6s						
AAK	**Ala-Archa**	**5.72**	**20***c*	*i*PN	**Pn**	**12 47 57.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,2μm,0.8s						
AAK	**Ala-Archa**	**5.72**	**20**	Pn	**Pn**	**12 47 57.1**	**+0.3**
AAK	**Ala-Archa**	**5.72**	**20**	P	**Pn**	**12 47 57.3**	**+0.3**
AAK				S	**Sn**	**12 48 59.9**	**-1.7**
KBK	**Karagaybulak**	**5.87**	**23**	P	**Pn**	**12 47 59.2**	**+0.3**
	SNR=114						
KK31	**Karatay Array**	**5.91**	**350**	⇑P	**Pn**	**12 47 58.4**	**-0.9**
	comp=Z,686nm,0.4s,baz=171,slow=9.7						
KK31				S	**Sn**	**12 49 01.6**	**-4.2**
	comp=Z,170nm,0.4s,baz=176,slow=23,SNR=8.2						
KK31	**Karatay Array**	**5.91**	**350**	PN	**Pn**	**12 47 58.3**	**-0.9**
KK31	**Karatay Array**	**5.91**	**350**	Pn	**Pn**	**12 47 58.3**	**-1.0**
KKAR	**Karatay Array**	**5.91**	**350**	PN	**Pn**	**12 47 58.3**	**-1.0**
KKAR	**Karatay Array**	**5.91**	**350**	Pn	**Pn**	**12 47 58.3**	**-1.0**
ULHL	**Ulahol**	**6.00**	**33**	P	**Pn**	**12 48 00.5**	**-0.3**
	SNR=38						
CHMS	**Chumysh**	**6.13**	**20**	P	**Pn**	**12 48 02.1**	**-0.2**
	SNR=372						
DHRM	**DHARAMSHALA**	**6.21**	**143**	*e*P	**Pn**	**12 48 02.4**	**-1.3**
DHRM				*e*S	**Sn**	**12 49 08.7**	**-4.8**
DHRM				IAML		12 49 10.0	
	comp=N,2μm,0.4s						
DHRM				IAML		12 49 11.7	
	comp=E,3μm,0.4s						
USP	**Ospenovka**	**6.31**	**18**	P	**Pn**	**12 48 04.2**	**-0.5**
	SNR=161						
TKM2	**Tokmak 2**	**6.32**	**26**	P	**Pn**	**12 48 05.0**	**0.0**
	SNR=140						
TKM2	**Tokmak 2**	**6.32**	**26**	⇑P	**Pn**	**12 48 05.0**	**0.0**
	comp=E,320nm,0.6s						
TKM2				⇓S	**Sn**	**12 49 13.9**	**-2.1**
	comp=E,164nm,0.7s						
SGDS	**Sogindy**	**6.52**	**18**	⇓*i*P	**Pn**	**12 48 06.3**	**-1.2**
	baz=19						
SGDS	**Sogindy**	**6.52**	**18**	⇓*i*PN	**Pn**	**12 48 06.3**	**-1.2**
MTBS	**Maitube**	**6.81**	**29**	*e*P	**Pn**	**12 48 10.7**	**-0.8**
	baz=30						
MTBS	**Maitube**	**6.81**	**29**	*e*PN	**Pn**	**12 48 10.7**	**-0.8**
TNSS	**Tian-Shan**	**6.95**	**33**	*e*P	**Pn**	**12 48 12.8**	**-0.9**
	baz=33						
TNSS	**Tian-Shan**	**6.95**	**33**	*e*PN	**Pn**	**12 48 12.7**	**-0.9**
BHK	**Bhakra**	**6.96**	**146**	*e*P	**Pn**	**12 48 14.6**	**+1.1**
BHK				*e*S	**Sn**	**12 49 27.0**	**-4.3**
AAA	**Alma-Ata**	**7.07**	**32**	⇓*i*P	**Pn**	**12 48 15.0**	**-0.1**
	baz=32						
AAA	**Alma-Ata**	**7.07**	**32**	⇓*i*PN	**Pn**	**12 48 14.9**	**-0.1**
MDOK	**Medeo**	**7.09**	**32**	*e*P	**Pn**	**12 48 15.7**	**+0.4**
	baz=33						
MDOK	**Medeo**	**7.09**	**32**	⇓P	**Pn**	**12 48 15.7**	**+0.4**
	comp=E,111nm,0.6s						
MDOK	**Medeo**	**7.09**	**32**	*e*PN	**Pn**	**12 48 15.7**	**+0.4**
KNDC	**Almaty**	**7.10**	**32**	⇑P	**Pn**	**12 48 16.1**	**+0.8**
	comp=E,141nm,0.6s						
KUU	**Kurty**	**7.43**	**26**	⇓*e*P	**Pn**	**12 48 18.2**	**-1.6**
	baz=26						
KUU	**Kurty**	**7.43**	**26**	⇓*e*PN	**Pn**	**12 48 18.2**	**-1.6**
SMLA	**Simla**	**7.55**	**143**	*e*P	**Pn**	**12 48 19.5**	**-1.9**
SMLA				*e*S	Sn	12 49 33.5	-12
SMLA				IAML		12 49 43.1	
	comp=E,1μm,0.5s						
SMLA				IAML		12 49 43.2	
	comp=N,1μm,0.5s						
CHKK	**Chushkaly**	**7.64**	**29**	*e*P	**Pn**	**12 48 21.2**	**-1.3**
	baz=30						
CHKK	**Chushkaly**	**7.64**	**29**	*e*PN	**Pn**	**12 48 21.2**	**-1.3**
SATY	**Saty**	**7.64**	**39**	*e*P	**Pn**	**12 48 21.5**	**-1.3**
	comp=N,19nm,0.7s,baz=40						
SATY	**Saty**	**7.64**	**39**	*e*PN	**Pn**	**12 48 21.4**	**-1.3**
SATY				pmax	pmax		
	comp=Z,19nm,0.7s						
BTLS	**Baital**	**7.93**	**11**	*e*P	**Pn**	**12 48 24.8**	**-1.7**
	comp=Z,20nm,0.5s,baz=12						
BTLS	**Baital**	**7.93**	**11**	*e*PN	**Pn**	**12 48 24.7**	**-1.7**
BTLS				pmax	pmax		
	comp=Z,20nm,0.5s						
KPKS	**Kokpek**	**8.08**	**38**	*e*P	**Pn**	**12 48 27.5**	**-1.1**
	comp=Z,72nm,1.1s,baz=39						
KPKS	**Kokpek**	**8.08**	**38**	*e*PN	**Pn**	**12 48 27.5**	**-1.1**
KPKS				pmax	pmax		
	comp=Z,72nm,1.1s						
SHLS	**Shalkode**	**8.26**	**42**	*e*P	**Pn**	**12 48 33.1**	**+2.1**
	comp=Z,41nm,0.8s,baz=44						
SHLS	**Shalkode**	**8.26**	**42**	*e*PN	**Pn**	**12 48 33.1**	**+2.1**
SHLS				pmax	pmax		
	comp=Z,41nm,0.8s						
HRA	**Herat**	**8.32**	**253**	Pn	**Pn**	**12 48 30.4**	**-1.6**
PDGK	**Podgornoye**	**8.39**	**42**	⇓P	**Pn**	**12 48 31.7**	**-1.2**
	comp=Z,41nm,0.6s						
PDGK	**Podgornoye**	**8.39**	**42**	PN	**Pn**	**12 48 31.0**	**-1.8**
DDI	**Dehra Dun**	**8.64**	**142**	*e*P	**Pn**	**12 48 35.0**	**-1.3**
DDI				*e*S	Sn	12 50 02.6	-10
DDI				IAML		12 50 08.2	
	comp=N,873nm,0.3s						
DDI				IAML		12 50 08.2	
	comp=E,905nm,0.4s						
TDK	**Taldyqorghan**	**9.16**	**31**	*e*P	**Pn**	**12 48 41.8**	**-1.2**
	baz=31						
TDK	**Taldyqorghan**	**9.16**	**31**	*e*P	**Pn**	**12 48 41.7**	**-1.2**
NDI	**New Delhi**	**9.68**	**151**	*i* P	**Pn**	**12 48 48.0**	**-2.1**
NDI				*i* S	**Sn**	**12 50 30.0**	**-7.2**
ASHT	**Ashkhabad**	**10.71**	**278**	P	**Pn**	**12 49 00.0**	**-3.8**
ASHT	**Ashkhabad**	**10.71**	**278**	Pn	**Pn**	**12 49 00.0**	**-3.8**
GEYT	**Alibeck**	**10.92**	**278**	P	**Pn**	**12 49 02.0**	**-4.7**
	comp=E,12nm,0.3s,baz=116,slow=9.8,SNR=114						
GEYT				S	Sn	12 50 56.2	-11
	comp=E,26nm,0.3s,baz=353,slow=22,SNR=13						
GYA0B	**ALIBECK ARRAY**	**10.92**	**278**	⇑P	Pn	12 49 00.9	-5.8
GYA0B	**ALIBECK ARRAY**	**10.92**	**278**		Pn	12 49 01.3	-5.4
MAKZ	**Makanchi**	**12.12**	**35**	⇑P	**Pn**	**12 49 20.6**	**-1.8**
	comp=E,28nm,1.0s						
MAKZ	**Makanchi**	**12.12**	**35**	P	**Pn**	**12 49 21.2**	**-1.2**
MAKZ	**Makanchi**	**12.12**	**35**	Pn	**Pn**	**12 49 21.1**	**-1.2**
MK31	**Makanchi Array**	**12.26**	**36**	P	**Pn**	**12 49 22.8**	**-1.4**
MK31	**Makanchi Array**	**12.26**	**36**	Pn	**Pn**	**12 49 22.8**	**-1.4**
MKAR	**Makanchi Array**	**12.26**	**36**	P	**Pn**	**12 49 23.0**	**-1.2**
	comp=E,0.9nm,0.3s,baz=222,slow=12,SNR=105						
MKAR				LR	LR	12 54 56.3	
	comp=E,92nm,21.4s,baz=230,slow=41						
DANN	**Dangsing**	**13.39**	**128**	*e*P	**Pn**	**12 49 35.0**	**-4.2**
	comp=E,790nm,0.6s						
WMQ	**Urumqi**	**13.69**	**57**	*e*P	**Pn**	**12 49 41.9**	**-0.9**
WMQ				S	**Sn**	**12 52 13.2**	**-0.7**
WMQ				pmax	pmax		
	comp=E,33nm,1.1s						
WMQ				pmax	pmax		
	comp=E,460nm,4.5s						
WMQ	**Urumqi**	**13.69**	**57**	P	**Pn**	**12 49 41.6**	**-1.2**
WMQ	**Urumqi**	**13.69**	**57**	Pn	**Pn**	**12 49 41.6**	**-1.2**
ZSN	**Zaisan**	**13.97**	**39**	*e*P	**Pn**	**12 49 45.4**	**-0.9**
	baz=40						
ZSN	**Zaisan**	**13.97**	**39**	*e*P	**Pn**	**12 49 45.3**	**-0.9**
BHUJ	**Bhuj**	**14.11**	**188**	*e*P	**Pn**	**12 49 45.9**	**-2.3**
BHUJ				IAmb	IAmb	12 49 47.8	
BHUJ				IAML		12 52 16.4	
	comp=E,110nm,1.0s						
KURBB	**Kurchatov Arra**	**14.17**	**18**	P	**Pn**	**12 49 44.9**	**-3.8**
	comp=E,0.3nm,0.3s,baz=211,slow=12,SNR=36						
KURK	**Kurchatov**	**14.28**	**18**	⇓P	**Pn**	**12 49 46.7**	**-3.4**
	comp=E,27nm,0.9s						
KURK	**Kurchatov**	**14.28**	**18**	P	**Pn**	**12 49 47.0**	**-3.0**
KURK	**Kurchatov**	**14.28**	**18**		**Pn**	**12 49 47.0**	**-3.0**
KURK	**Kurchatov**	**14.28**	**18**	P	**P**	**12 49 52.7**	**-0.7**
KKN	**Kakani**	**14.74**	**126**	*e*P	**Pn**	**12 49 52.4**	**-4.0**
	comp=E,597nm,0.7s						
DMN	**Daman**	**14.76**	**127**	*e*P	**Pn**	**12 49 53.0**	**-3.6**
	comp=E,252nm,0.5s						
AB31	**Akbulak array**	**14.76**	**328**	P	**Pn**	**12 49 53.0**	**-3.1**
	comp=E,74nm,0.6s,baz=137,slow=11,SNR=2359						
ABKAR	**Akbulak array**	**14.76**	**328**	Pn	**Pn**	**12 49 53.1**	**-3.1**
BHPL	**Bhopal**	**14.79**	**160**	*e*P	**Pn**	**12 49 53.6**	**-3.3**
BHPL				*e*S	Sn	12 52 28.6	-12
PKIN	**Phulchoki**	**14.96**	**126**	*e*P	**Pn**	**12 49 55.5**	**-3.7**
	comp=E,691nm,0.6s						
PKI	**Pulchoki**	**14.97**	**126**	*e*P	**Pn**	**12 49 55.7**	**-3.7**
	comp=E,634nm,0.8s						
GUN	**Gumba**	**15.05**	**124**	*e*P	**Pn**	**12 49 56.7**	**-3.7**
	comp=E,360nm,0.5s						
BVAR	**Borovoye Array**	**15.78**	**357**	P	**Pn**	**12 50 03.6**	**-5.3**
	comp=E,0.9nm,0.3s,baz=225,slow=33,SNR=22						
BRVK	**Borovoye**	**15.81**	**357**	⇑*e*P	**Pn**	**12 50 07.1**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,51nm,1.3s						
BRVK	**Borovoye**	**15.81**	**357**	P	**Pn**	**12 50 07.3**	**-2.0**
RAMN	**Ramite**	**16.17**	**125**	*e*P	**Pn**	**12 50 10.7**	**-3.4**
	comp=Z,641nm,0.5s						
AKTO	**Aktyubinsk**	**16.47**	**327**	P	**Pn**	**12 50 15.7**	**-1.7**
	comp=Z,8.0nm,0.3s,baz=128,slow=13,SNR=116						
AKTO				S	Sn	12 53 09.1	-11
	comp=Z,1.4nm,0.3s,baz=192,slow=20,SNR=2.8						
AKTO	**Aktyubinsk**	**16.47**	**327**	⇑P	**Pn**	**12 50 15.7**	**-1.7**
	comp=Z,75nm,0.7s						
TAPN	**Taplejung**	**16.64**	**122**	*e*P	**Pn**	**12 50 16.4**	**-3.5**
	comp=Z,305nm,0.5s						
DGZ	**Jazzator, Alta**	**16.74**	**37**	*d i*P	**Pn**	**12 50 19.5**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ODAN	**Odare**	**16.75**	**124**	*e*P	**Pn**	**12 50 17.7**	**-3.5**
	comp=Z,409nm,0.6s						
NGP	**Nagpur**	**17.25**	**157**	*e*P	**P**	**12 50 23.6**	**-3.0**
NGP				*e*S	Sn	12 53 27.3	-12
BANOM	**Banah**	**17.40**	**234**	P	**P**	**12 50 27.7**	**-0.6**
SHME	**Shamm**	**17.42**	**234**	P	**Pn**	**12 50 29.7**	**+0.7**
LSA	**Lhasa**	**17.76**	**110**	P	**Pn**	**12 50 33.6**	**-0.1**
LSA	**Lhasa**	**17.76**	**110**	P	**Pn**	**12 50 34.4**	**+0.8**
LSA	**Lhasa**	**17.76**	**110**	P	**Pn**	**12 50 33.5**	**-0.1**
LSA				pmax	pmax		
	comp=Z,132nm,0.7s						
LSA	**Lhasa**	**17.76**	**110**		**Pn**	**12 50 33.5**	**-0.2**
LSA	**Lhasa**	**17.76**	**110**	P	**Pn**	**12 50 34.3**	**+0.8**
MDH	**Madha**	**17.84**	**232**	P	**Pn**	**12 50 34.0**	**-0.1**
MASF	**Masafi**	**17.88**	**233**	P	**Pn**	**12 50 34.7**	**0.0**
MSFE	**Esma-Masafi**	**17.89**	**233**	P	**Pn**	**12 50 35.4**	**+0.6**
WSAR	**Wadi Sarin**	**18.04**	**223**	P	**Pn**	**12 50 36.6**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=69,slow=7.7,SNR=11						
UOSS	**Minazif**	**18.16**	**232**	P	**P**	**12 50 36.1**	**-0.3**
UOSS	**Minazif**	**18.16**	**232**	P	**P**	**12 50 36.5**	**+0.1**
UOSS	**Minazif**	**18.16**	**232**	P	**P**	**12 50 36.6**	**+0.1**
LKRN	**Lenkeran, Azer**	**18.24**	**282**	P	**P**	**12 50 37.5**	**+0.3**
ASHO	**Ashiyiah**	**18.44**	**232**	*i* P	**P**	**12 50 39.8**	**+0.3**
	SNR=29						
ASHO	**Ashiyiah**	**18.44**	**232**	P	**P**	**12 50 40.1**	**+0.5**
NAZ	**Nazwa, Dubai**	**18.47**	**233**	P	**Pn**	**12 50 41.1**	**-0.5**
FAQ	**Al Faqa, Dubai**	**18.69**	**233**	P	**P**	**12 50 42.2**	**-0.1**
ZAA0	**Zalesovo Array**	**18.92**	**24**	⇓P	**P**	**12 50 44.0**	**-0.5**
	comp=Z,5.0nm,0.6s						
ZAA0	**Zalesovo Array**	**18.92**	**24**	P	**P**	**12 50 44.6**	**+0.1**
ZAA0				IAmb	IAmb	12 50 45.5	
	comp=Z,38nm,0.5s						
ZALV	**Zalesovo Beam**	**18.92**	**24**	P	**P**	**12 50 44.5**	**0.0**
	comp=Z,12nm,0.3s,baz=215,slow=10,SNR=228						
ZALV				S	**S**	**12 54 09.6**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=210,slow=20,SNR=2.8						
ASUD	**Al Ashush, Dub**	**18.94**	**233**	P	**P**	**12 50 46.0**	**+1.0**
ASUD	**Al Ashush, Dub**	**18.94**	**233**	P	**P**	**12 50 45.8**	**+0.9**
ALNE	**Al Ain**	**19.09**	**231**	*i* P	**P**	**12 50 46.7**	**+0.1**
	SNR=13						
ALNE	**Al Ain**	**19.09**	**231**	P	**P**	**12 50 46.5**	**-0.1**
	SNR=13						
AKT	**Akhty**	**19.10**	**290**	*e*P	**P**	**12 50 47.1**	**+0.4**
AKT				*e*S	**S**	**12 54 14.7**	**-1.7**
AKT				pmax	pmax		
	comp=Z,54nm,0.5s						
AKT				smax	smax		
	comp=N,33nm,0.5s						
AKT				smax	smax		
	comp=E,46nm,0.5s						
AJN	**Ajban**	**19.20**	**233**	*i* P	**P**	**12 50 47.7**	**-0.1**
	SNR=6.1						
AJN	**Ajban**	**19.20**	**233**	P	**P**	**12 50 47.6**	**-0.2**
	SNR=6.1						

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BSY   Bisya            19.22 225   P      P        12 50 45.9 -2.2
MAK   Makhachkala      19.44 295  eP      P        12 50 50.2  0.0
MAK                               eS      S        12 54 24.2 +1.4
MAK                                pmax   pmax
      comp=Z,63nm,0.7s
SEKA  Sheki            19.48 289   P      P        12 50 51.5 +0.7
MNGR  Mingechevir, A   19.54 288   P      Pn       12 50 52.6 -1.4
GANJ  Ganja            20.12 288   P      Pn       12 50 59.2 -1.5
GUWA  GUWAHATI         20.13 118  eP      P        12 50 59.2 +1.4
HYB   Hyderabad        20.65 162  i P     P        12 51 04.0 +0.5
HYB                               eS      S        12 54 47.0 -0.2
SHL   Shillong         20.65 119   P      P        12 51 04.9 +1.3
SHL                                pmax   pmax
      comp=Z,150nm,1.2s
SHL   Shillong         20.65 119  eP      P        12 51 04.5 +0.8
SHL                               eS      S        12 54 42.6 -4.8
SHL   Shillong         20.65 119   P      P        12 51 04.9 +1.3
GROC  Groznyy          20.71 295  eP      P        12 51 05.3 +1.4
GROC                              e*PP    pP       12 51 27.9  0.0
GROC                              eS      S        12 54 51.4 +3.4
GROC                              e*SS    sS       12 55 26.3 -3.0
GROC                               pmax   pmax
      comp=Z,101nm,1.1s
NAX   Nakhchivan       20.77 283   P      P        12 51 05.6 +0.8
ZIRO  ZIRO             20.92 111  eP      P        12 51 07.7 +1.2
ZIRO                              eS      S        12 54 51.3 -1.3
SVE   Sverdlovsk       20.94 343  eP      P        12 51 06.8 +0.5
SVE                               eS      S        12 54 53.2 +1.0
SVE                                pmax   pmax
      comp=Z,45nm,0.9s
ARU   Arti             21.13 339   P      P        12 51 08.5 +0.2
      comp=Z,6.2nm,0.7s,baz=159,slow=8.2,SNR=22
ARU                                S      S        12 54 56.5 +0.7
      comp=Z,2.1nm,0.4s,baz=105,slow=23,SNR=1.9
ARU   Arti             21.13 339c iP      P        12 51 08.1 -0.2
ARU                                                12 51 38.9
ARU                                S      S        12 54 57.7 +1.9
ARU                                pmax   pmax
      comp=Z,40nm,1.4s
ARU   Arti             21.13 339   P      P        12 51 08.3  0.0
ARU                                IAmb   IAmb     12 51 31.9
      comp=Z,28nm,0.6s
GNI   Garni            21.32 286   P      P        12 51 12.1 +1.4
      comp=Z,20nm,0.8s,baz=20,slow=6.9,SNR=4.7
GNI   Garni            21.32 286⇓eP      P        12 51 12.8 +2.1
GNI                                pmax   pmax
      comp=Z,38nm,1.1s
GNI   Garni            21.32 286   P      P        12 51 12.5 +1.8
GNI                                IAmb   IAmb     12 51 25.3
      comp=Z,67nm,1.0s
MIB   Mutribah         21.72 257  eP               12 51 14.3
RDF   Al-Radifah       21.96 255  eP               12 51 17.2
GTA   Gaotai           22.00  76 ⇓P      P        12 51 20.4 +2.6
GTA                                pP     pP       12 51 47.2 +4.1
GTA                                pmax   pmax
      comp=Z,46nm,0.9s
GTA                                pmax   pmax
      comp=Z,210nm,4.5s
GTA                                LR     LR
      comp=Z,190nm,11.3s
GTA                                LR     LR
      comp=Z,270nm,9.8s
GTA                                LR     LR
      comp=Z,190nm,11.3s
ZEI   Tsey             22.05 293  eP      P        12 51 21.6 +3.2
ZEI                                pmax   pmax
      comp=Z,17nm,0.7s
MOKO  MOKOCHONG        22.09 113  eP      P        12 51 20.9 +2.0
RST   Umm Al-Ruwaisa   22.12 257  eP               12 51 18.1
KOHI  KOHIMA           22.14 115  eP      P        12 51 20.5 +1.1
NCK   Nalchik          22.34 295⇓eP      P        12 51 20.7 -0.4
NCK                                pmax   pmax
      comp=Z,20nm,0.8s
BELG  Belogornoye      22.73 319   P      P        12 51 25.4 +0.7
      comp=Z,32nm,0.9s,baz=114,slow=4.0,SNR=12
KBZ   Khabaz           22.87 295   P      P        12 51 26.9 +0.8
      comp=Z,6.7nm,0.8s,baz=150,slow=8.4,SNR=8.6
KBZ   Khabaz           22.87 295   P      P        12 51 27.0 +0.8
GOF   Gofitskoye       22.95 299⇑eP      P        12 51 30.5 +3.5
GOF                                pmax   pmax
      comp=Z,99nm,1.5s
KIV   Kislovodsk       23.05 296⇑eP      P        12 51 31.5 +3.5
KIV                               e*PP    pP       12 51 58.2 +4.7
KIV                               eS      S        12 55 24.0 -4.8
KIV                                pmax   pmax
      comp=Z,7.0nm,0.7s
KIV   Kislovodsk       23.05 296   P      P        12 51 30.4 +2.4
KIV                                IAmb   IAmb     12 51 59.1
      comp=Z,36nm,0.7s
SAIH  SAIHA            23.44 123  ex      P        12 51 34.3 +2.5
SHAO  Shalim           23.91 221  i P     P        12 51 37.3 +1.4
      SNR=11
KOPT  Kop Dagi         24.58 286   P      P        12 51 43.1 +0.9
MARD  Mardin           24.67 280   P      P        12 51 43.1 +0.2
WHFO  Wadi Hawf        25.00 224   P      P        12 51 45.6 -0.2
RBK   Rabkut           25.09 223   P      P        12 51 47.1 +0.4
SOC   Sochi            25.16 295  eP      P        12 51 46.3 -0.7
SOC                               e                12 52 32.0
SOC                               eS      S        12 56 03.3 +1.0
VRH   Novokhopyorsk    25.47 313  eP      P        12 51 49.8  0.0
VRH                               e*PP    pP       12 52 16.2 -2.3
VRH                                pmax   pmax
      comp=Z,8.0nm,0.3s
LZH   Lanzhou          25.62  83 ⇑P      P        12 51 53.5 +2.0
LZH                                pP     pP       12 52 20.8 +0.3
LZH                                sP     sP       12 52 37.0 +0.9
LZH                                PP     PnPn     12 52 39.6 +3.6
LZH                                pmax   pmax
      comp=Z,27nm,1.1s
LZH                                pmax   pmax
      comp=Z,96nm,4.8s
KIRV  Kirov            25.85 333   P      P        12 51 53.9 +0.8
      comp=Z,23nm,0.6s,baz=143,slow=7.3,SNR=10
ZAK   Zakamensk        25.96  50  eP      P        12 51 56.0 +1.6
ZAK                                pmax   pmax
      comp=Z,11nm,1.2s
RAYN  Ar Rayn          26.44 246   P      P        12 51 58.7 -0.2
RAYN                               pmax   pmax
      comp=Z,8.0nm,0.7s
RAYN  Ar Rayn          26.44 246   P      P        12 51 58.7 -0.2
TLY   Talaya           26.61  47⇓eP      P        12 51 58.7 -1.4
TLY                                pmax   pmax
      comp=Z,5.0nm,0.7s
VORD  Divnogorie       26.83 311  eP      P        12 52 02.1 +0.1
VORD                              e*PP    pP       12 52 32.7 +1.8
VORD                               pmax   pmax
      comp=Z,9.0nm,0.4s
ANN   Anapa            26.88 297  eP      P        12 51 59.6 -2.9
ANN                               e*PP    pP       12 52 29.4 -1.9
ANN                               e                12 52 50.6
ANN                               eS      S        12 56 25.6 -3.8
ANN                                pmax   pmax
      comp=Z,131nm,1.0s
VSR   Storozhevoye     26.99 312  eP      P        12 52 03.6 +0.2
VSR                               e*PP    pP       12 52 34.3 +2.0
VSR                                pmax   pmax
      comp=Z,10.0nm,0.8s
CD2   Chengdu          27.09  94   P      P        12 52 06.8 +2.2
CD2                                pmax   pmax
      comp=Z,30nm,0.9s
SONM  Songino Array    27.33  56   P      P        12 52 08.6 +1.9
      comp=Z,9.3nm,0.8s,baz=262,slow=9.0,SNR=35
SONM                               PcP    PcP      12 55 22.7 +0.1
      comp=Z,1.9nm,0.9s,baz=246,slow=5.0,SNR=3.1
LPSR  Galich'ya Gora   27.59 314  eP      P        12 52 09.1 +0.4
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.6s
ULN   Ulaanbaatar      27.77  56d iP      P        12 52 12.2 +1.5
ULN                                pmax   pmax
      comp=Z,11nm,0.7s
ULN   Ulaanbaatar      27.77  56   P      P        12 52 11.2 +0.6
KMI   Kunming          28.93 106 ⇑P      P        12 52 25.3 +4.0
KMI                                pmax   pmax
      comp=Z,7.0nm,1.0s
OBN   Obninsk          29.80 318   P      P        12 52 29.4 +1.0
      comp=Z,7.3nm,0.4s,baz=104,slow=4.2,SNR=9.7
OBN   Obninsk          29.80 318⇑iP      P        12 52 29.2 +0.9
OBN                               e*PP    pP       12 52 58.3 +0.7
OBN                               e                12 53 28.6
OBN                               eS      S        12 57 15.3 +0.2
OBN                                pmax   pmax
      comp=Z,25nm,0.6s
OBN   Obninsk          29.80 318   P      P        12 52 29.6 +1.2
BR131 Keskin Array S   29.86 287   P      P        12 52 29.4 +0.1
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BR131                              pmax   pmax
      comp=Z,7.0nm,0.6s
BR131 Keskin Array S   29.86 287   P      P        12 52 29.4 +0.1
BRTR  Keskin Array B   29.86 287   P      P        12 52 30.4 +1.1
      comp=Z,4.1nm,0.6s,baz=107,slow=8.4,SNR=16
BRTR                               PcP    PcP      12 55 28.8 -0.4
      comp=Z,1.4nm,0.8s,baz=136,slow=4.3,SNR=3.7
MMAI  Mount Meron Ar   29.99 273   P      P        12 52 31.7 +1.4
      comp=Z,1.7nm,0.5s,baz=64,slow=10,SNR=2.2
MMAI                               PcP    PcP      12 55 31.2 +1.7
      comp=Z,3.7nm,0.6s,baz=72,slow=5.7,SNR=6.3
CM33  Chiang Mai Arr   30.00 120   P      P        12 52 39.0 +8.5
CHTO  Chiang Mai       30.00 120   P      P        12 52 32.0 +1.5
CHTO                               pmax   pmax
      comp=Z,4.0nm,0.8s
CHTO  Chiang Mai       30.00 120   P      P        12 52 32.0 +1.5
CM32  Chiang Mai Arr   30.05 121   P      P        12 52 43.0  +12
XAN   Xi'an            30.16  85   P      P        12 52 33.4 +1.5
XAN                                pmax   pmax
      comp=Z,25nm,0.9s
XAN   Xi'an            30.16  85   P      P        12 52 32.5 +0.6
XAN                                pmax   pmax
      comp=Z,17nm,0.9s
XAN   Xi'an            30.16  85   P      P        12 52 32.5 +0.6
XAN                                IAmb   IAmb     12 52 34.0
      comp=Z,17nm,0.9s
CM15  Chiang Mai Arr   30.24 121   P      P        12 52 38.0 +5.4
      comp=Z,7.3nm,0.9s
CM35  Chiang Mai Arr   30.24 120   P      P        12 52 38.0 +5.4
CM13  Chiang Mai Arr   30.25 121   P      P        12 52 37.3 +4.6
      comp=Z,6.2nm,0.9s
CM31  Chiang Mai Arr   30.25 121   P      P        12 52 38.6 +6.0
      comp=Z,239nm,0.7s
CM31  Chiang Mai Arr   30.25 121   P      P        12 52 35.0 +2.4
CMAR  Chiang Mai Arr   30.25 121   P      P        12 52 33.5 +0.9
      comp=Z,3.1nm,0.8s,baz=309,slow=9.3,SNR=16
CM02  Chiang Mai Arr   30.26 121   P      P        12 52 37.1 +4.3
      comp=Z,81nmcomp=Z,9.4nm,0.8s
PAYA  Payao            30.28 118   P      P        12 52 54.0  +21
CM01  Chiang Mai Arr   30.28 121   P      P        12 52 37.0 +4.0
      comp=Z,77nmcomp=Z,7.1nm,0.8s
CM05  Chiang Mai Arr   30.29 121   P      P        12 52 37.0 +4.0
      comp=Z,6.1nm,0.9s
CM09  Chiang Mai Arr   30.29 121   P      P        12 52 39.0 +6.0
      comp=Z,88nmcomp=Z,7.9nm,0.8s
CM36  Chiang Mai Arr   30.31 121   P      P        12 52 36.0 +2.8
CM04  Chiang Mai Arr   30.31 121   P      P        12 52 37.5 +4.3
      comp=Z,76nmcomp=Z,7.3nm,0.7s
HHC   Hu-ho-hao-te     30.85  71  eP      P        12 52 41.0 +3.1
HHC                                pmax   pmax
      comp=Z,10.0nm,0.9s
HHC                                pmax   pmax
      comp=Z,210nm,5.7s
KLMR  Klimovskoe       31.15 330  eP      P        12 52 39.2 -0.9
KLMR                              e*PP    pP       12 53 08.5 -0.6
KLMR                               pmax   pmax
      comp=Z,33nm,1.6s
KLMR  Klimovskoe       31.15 330  eP      P        12 52 39.2 -0.9
KLMR                               AMP             12 52 50.8
      comp=Z,33nm,1.6s
KLMR                              epP     pP       12 53 08.6 -0.6
KLMR                              esP     sP       12 53 25.9 +1.3
GYA   Guiyang          31.31 100 ⇑P      P        12 52 43.9 +1.8
GYA                                pP     pP       12 53 09.9 -1.7
GYA                                pmax   pmax
      comp=Z,45nm,0.8s
SUKH  Sukhothai        31.39 121   P      P        12 52 46.1 +3.4
      comp=Z,17nm,0.8s
ENH   Enshi            31.89  91   P      P        12 52 48.4 +1.3
ENH                                IAmb   IAmb     12 52 49.7
      comp=Z,23nm,1.2s
UTHA  Uthaitani        32.63 124   P      P        12 52 55.8 +2.2
      comp=Z,229nmcomp=Z,30nm,0.8s
AKASG Malin Array Be   33.00 308   P      P        12 52 56.8 +0.3
      comp=Z,12nm,0.5s,baz=81,slow=7.4,SNR=15
AKASG                              pP     pP       12 53 26.2 +0.6
      comp=Z,5.4nm,0.7s,baz=81,slow=7.0,SNR=2.9
AKASG                              PcP    PcP      12 55 35.8 -1.3
      comp=Z,3.0nm,0.7s,baz=73,slow=2.9,SNR=2.7
AKBB  Malin Array Si   33.00 308   P      P        12 52 56.7 +0.2
AKBB                               pmax   pmax
      comp=Z,14nm,0.7s
AKBB  Malin Array Si   33.00 308   P      P        12 52 56.6 +0.2
AKBB                               IAmb   IAmb     12 53 01.9
      comp=Z,14nm,0.7s
NRIK  Noril'sk         33.24  10   P      P        12 52 59.5 +1.3
      comp=Z,35nm,1.0s,baz=199,slow=5.8,SNR=35
NRIK  Noril'sk         33.24  10   P      P        12 52 59.0 +0.7
TPGR  Topolog          33.29 297 ⇓P      P        12 53 00.3 +1.2
SORM  Soroca           33.35 303 ⇑P      P        12 53 00.2 +0.7
SORM  Soroca           33.35 303 ⇑P      P        12 53 00.2 +0.7
NONG  Nongkai          33.45 116   P      P        12 53 08.0 +7.2
      comp=Z,15nm,0.9s
CFR   Carcaliu         33.48 298 ⇑P      P        12 53 01.8 +1.2
CFR   Carcaliu         33.48 298 ⇑P      P        12 53 01.8 +1.2
TMCR  Tamitsa          33.64 334  eP      P        12 53 00.8 -1.0
TMCR                               pmax   pmax
      comp=Z,36nm,0.6s
MANT  Manisa           33.96 286   P      P        12 53 05.8 +0.6
CHAI  Chaiyaphum       34.10 121   P      P        12 53 10.0 +3.6
      comp=Z,12nm,0.8s
MNK   Minsk            34.44 314  i P     P        12 53 09.6 +0.8
      comp=E,3.0nm,0.6s
MNK                               i P     P        12 53 09.6 +0.8
      comp=N,29nm,0.8s
MNK                               i P     P        12 53 09.6 +0.8
      comp=Z,20nm,0.7s
MNK                               i pP    pP       12 53 39.9 +1.6
MNK                               i PP    PP       12 54 29.7 +0.4
MNK                               i PcP   PcP      12 55 41.6 +0.5
MNK                               i S     S        12 58 26.3 -0.8
MNK                               i sS    sS       12 59 21.6 +2.7
MNK                               i SS    SnSn     13 00 56.0 +3.5
MNK                               i ScS   ScS      13 03 16.6 -0.3
MNK                               i LRM   MLR      13 08 44.0
      comp=E,14nm,10.5s
MNK                               i LRM   MLR      13 08 44.0
      comp=N,366nm,21.0s
MNK                               i LRM   MLR      13 08 44.0
      comp=Z,189nm,21.0s
TESR  Tescani          34.48 300 ⇑P      P        12 53 10.9 +1.5
PHET  Kaeng Krachan    34.71 127   P      P        12 53 14.1 +2.5
      comp=Z,541nmcomp=Z,61nm,0.8s
MLR   Muntele Rosu     35.01 298   P      P        12 53 15.3 +1.3
      comp=Z,14nm,0.7s,baz=139,slow=7.4,SNR=3.3
MLR   Muntele Rosu     35.01 298 ⇓P      P        12 53 16.4 +2.4
MLR   Muntele Rosu     35.01 298 ⇓P      P        12 53 16.4 +2.4
MLR   Muntele Rosu     35.01 298   P      P        12 53 15.9 +1.9
MLR                                IAmb   IAmb     12 53 17.4
      comp=Z,22nm,0.9s
NACGM Naroch           35.14 315  i P     P        12 53 15.3 +0.4
NACGM                             i P     P        12 53 15.3 +0.4
NACGM                             i P     P        12 53 15.3 +0.4
NACGM                             i Pb    pP       12 53 17.0  -27
      comp=Z,68nm,1.1s
NACGM                             i pP    sP       12 53 40.9  -19
NACGM                             i PP    PnPn     12 54 35.3 -1.6
NACGM                             i S     S        12 58 37.4 -0.6
NACGM                             i S     ScP      12 58 40.4  -36
NACGM                             i sS    sS       12 59 24.3 -5.5
NACGM                             i SS    SnSn     13 01 05.5 -4.0
IDID  Didziasalis      35.25 315  eP      P        12 53 17.2 +1.4
DOPR  Dopca            35.37 299 ⇓P      P        12 53 18.9 +1.9
BURAR Bucovina Array   35.45 302 ⇑P      P        12 53 19.1 +1.4
BURAR Bucovina Array   35.45 302 ⇑P      P        12 53 19.1 +1.4
BUR08 Bucovina Ar. S   35.46 302   P      P        12 53 18.0 +0.1
SRAK  Srakaew          35.48 123   P      P        12 53 24.0 +5.8
      comp=Z,114nm,1.3s
IIGN  Ignalina         35.55 315  eP      P        12 53 19.4 +1.0
VOIR                   35.64 298 ⇑P      P        12 53 20.9 +1.5
VOIR                   35.64 298 ⇑P      P        12 53 20.9 +1.5
ISAL  Salakas          35.65 316  eP      P        12 53 20.9 +1.7
WHN   Wuhan            35.67  88 ⇓P      P        12 53 22.1 +2.4
VSU   Vasula           36.01 321  eP      P        12 53 22.0 -0.2
VSU   Vasula           36.01 321d iP      P        12 53 22.7 +0.5
VSU                                pmax   pmax
      comp=Z,157nm,1.6s
TIA   Tai'an           36.02  78   P      P        12 53 24.9 +2.2
TIA                                pmax   pmax
      comp=Z,16nm,0.8s
ARCR  ARCALIA          36.04 301 ⇑P      P        12 53 25.3 +2.6
HIA   Hailar           36.28  55⇓eP      P        12 53 26.2 +1.5
HIA                                pmax   pmax
      comp=Z,7.0nm,0.8s
PABE  Paberze          36.84 315  eP      P        12 53 30.2 +0.9
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DEV   Deva             37.11 299 ⇑P      P        12 53 34.0 +2.3
DEV   Deva             37.11 299 ⇑P      P        12 53 34.0 +2.3
KWP   Kalwaria Pacla   37.11 305  eP      P        12 53 33.6 +1.9
DRGR                   37.18 301 ⇑P      P        12 53 34.4 +1.9
DRGR                   37.18 301 ⇑P      P        12 53 34.4 +1.9
FINES FINESS Array B   37.23 325   P      P        12 53 33.1 +0.7
      comp=Z,17nm,0.6s,baz=115,slow=9.1,SNR=91
GZR   Gura Zlata       37.24 298 ⇓P      P        12 53 33.9 +0.9
VTS   Vitosha          37.24 294 ⇑P      P        12 53 35.0 +1.9
VTS   Vitosha          37.24 294 ⇑P      P        12 53 35.0 +1.9
UZH   Uzhgorod         37.39 304  eP      P        12 53 31.9 -2.2
KOLS  Kolonicke sedl   37.40 304  eP      P        12 53 35.5 +1.3
KOLS                               pmax   pmax
      comp=Z,9.0nm,1.1s
KOLS  Kolonicke sedl   37.40 304  eP      P        12 53 35.5 +1.3
KOLS                              ePP     PP       12 54 57.9 -4.0
MTSE  Matsula          37.55 320  eP      P        12 53 35.9 +0.7
CRVS  Cervenica-Dubn   37.93 304  eP      P        12 53 43.6 +4.9
CRVS                               pmax   pmax
      comp=Z,156nm,2.5s
CRVS  Cervenica-Dubn   37.93 304  eP      P        12 53 43.5 +4.8
CRVS                              ePP     PP       12 55 02.6 -5.2
SIRR  Siria            37.94 300 ⇓P      P        12 53 40.8 +2.1
BZS   Buzias           38.03 299 ⇑P      P        12 53 41.4 +1.9
BZS   Buzias           38.03 299 ⇑P      P        12 53 41.4 +1.9
PBUR  Paburge          38.06 316  eP      P        12 53 40.1 +0.6
NIE   Niedzica         38.68 305  eP      P        12 53 46.7 +1.8
NJ2   Nanjing          38.69  83  eP      P        12 53 47.2 +2.0
NJ2                                pmax   pmax
      comp=Z,21nm,0.8s
FNA   Florina          38.93 291   P      P        12 53 47.4 +0.2
FNA                                pmax   pmax
      comp=Z,9.0nm,0.8s
FNA   Florina          38.93 291   P      P        12 53 47.4 +0.2
OJC   Ojcow            38.99 306  eP      P        12 53 47.4  0.0
OJC   Ojcow            38.99 306   P      P        12 53 47.5  0.0
OJC                                pmax   pmax
      comp=Z,15nm,0.9s
OJC   Ojcow            38.99 306   P      P        12 53 47.5  0.0
OJC                                IAmb   IAmb     12 53 49.2
      comp=Z,15nm,0.9s
DIVS  Divibare         39.36 297   P      P        12 53 51.8 +1.0
DIVS                               IAmb   IAmb     12 53 53.0
      comp=Z,18nm,1.1s
VYHS  Vyhne            39.69 304  eP      P        12 53 54.8 +1.5
VYHS                               pmax   pmax
      comp=Z,85nm,2.6s
VYHS  Vyhne            39.69 304  eP      P        12 53 54.8 +1.5
VYHS                              e                13 07 55.6
SRO2  Moca             40.04 303  eP      P        12 53 56.7 +0.5
SRO2  Moca             40.04 303  eP      P        12 53 56.7 +0.5
OKC   Ostrava-Krasne   40.06 306  eP      P        12 54 05.9  +10
SRO   Srobarova        40.09 303  eP      P        12 53 58.3 +1.7
SRO   Srobarova        40.09 303  eP      P        12 53 58.3 +1.7
JAVC  Velka Javorina   40.44 304  eP      P        12 54 01.6 +2.1
MORC  Moravsky Berou   40.46 306 ⇑P      P        12 54 01.4 +1.7
MORC  Moravsky Berou   40.46 306  eP      P        12 54 00.7 +1.0
MORC  Moravsky Berou   40.46 306 ⇑P      P        12 54 01.4 +1.7
MORC  Moravsky Berou   40.46 306   P      P        12 54 00.4 +0.7
GKP   Gorka Klasztor   40.57 311  eP      P        12 54 00.5 +0.1
GKP   Gorka Klasztor   40.57 311  eP      P        12 54 01.2 +0.7
CN2   Changchun        40.64  63  eP      P        12 54 00.1 -1.1
CN2                                sP     sP       12 54 41.1 -6.0
CN2                                S      S        12 59 58.6 -2.6
CN2                                pmax   pmax
      comp=Z,10.0nm,0.5s
CN2                                pmax   pmax
      comp=Z,100nm,3.0s
ARA0  ARCESS Array S   40.69 337  eP      P        12 54 02.3 +1.1
ARCES ARCESS Array B   40.69 337   P      P        12 54 02.2 +0.9
      comp=Z,25nm,0.7s,baz=113,slow=8.5,SNR=89
ARCES                              LR     LR       13 11 54.7
      comp=Z,406nm,18.2s,baz=230,slow=37
MODS  Modra-Piesok     40.73 304  eP      P        12 54 02.4 +0.5
MODS                               pmax   pmax
      comp=Z,8.0nm,1.0s
MODS  Modra-Piesok     40.73 304  eP      P        12 54 02.4 +0.5
ZEA   Zeya             41.04  48  eP      P        12 54 06.5 +2.2
ZEA                               e                12 55 49.9
ZEA                               eS      S        13 00 06.8  0.0
ZEA                                pmax   pmax
      comp=E,10.0nm,0.7s
ZEA                                pmax   pmax
      comp=N,10.0nm,0.5s
ZEA                                pmax   pmax
      comp=Z,20nm,0.8s
ZEA                                pmax   pmax
      comp=Z,200nm,6.5s
TPTI                   41.07 139   P      P        12 54 04.7 -0.3
      comp=Z,18nm,0.7s
VRAC  Vranov           41.11 305   P      P        12 54 06.6 +1.6
      comp=Z,17nm,0.9s,baz=87,slow=7.8,SNR=21
VRAC  Vranov           41.11 305 ⇑P      P        12 54 07.1 +2.1
VRAC  Vranov           41.11 305  eP      P        12 54 06.3 +1.3
VRAC  Vranov           41.11 305 ⇑P      P        12 54 07.1 +2.1
KCSI  Kotacane, Aceh   41.16 138   P      P        12 54 17.4  +12
KTK1  Kautokeino       41.18 336  eP      P        12 54 05.9 +0.6
KSP   Ksiaz            41.20 307  eP      P        12 54 06.6 +0.9
DPC   Dobruska-Polom   41.21 307  eP      P        12 54 05.9 +0.1
DPC                               ex      x        12 54 54.9
KRUC  Moravsky         41.26 305  eP      P        12 54 07.4 +1.2
OSTC  Ostas            41.27 307  eP      P        12 54 07.3 +1.1
CHVC  Chvalec          41.37 307  eP      P        12 54 08.2 +1.1
CONA  Conrad Observa   41.72 303  i P     P        12 54 11.0 +1.0
      comp=Z,14nm,0.9s,SNR=9.4
HAMF  Hammerfest       41.76 338  eP      P        12 54 11.2 +1.3
BSD   Bornholm Skovb   41.96 314  i P     P        12 54 11.9 +0.2
BSD                                pmax   pmax
      comp=Z,5.0nm,0.5s
BSD   Bornholm Skovb   41.96 314  i P     P        12 54 11.9 +0.2
      comp=Z,4.6nm,0.5s
BSD   Bornholm Skovb   41.96 314  i P     P        12 54 11.9 +0.2
BSD                                IAmb   IAmb     12 54 13.3
      comp=Z,4.6nm,0.5s
ARSA  Arzberg          42.03 302  eP      P        12 54 13.5 +0.9
      comp=Z,3.6nm,0.8s
IPM   Ipoh             42.17 134   P      P        12 54 14.3 +0.3
IPM                                IAmb   IAmb     12 54 15.5
      comp=Z,23nm,0.7s
DOBS  Dobrina          42.23 301  i P     P        12 54 15.2 +1.2
PRU   Pruhonice        42.38 306  eP      P        12 54 16.0 +0.7
PRU   Pruhonice        42.38 306  eP      P        12 54 16.0 +0.7
SOKA  Soboth           42.44 301  i P     P        12 54 17.2 +1.2
      comp=Z,21nm,1.3s,SNR=7.3
BOJS  Bojanci          42.48 300  i P     P        12 54 17.3 +1.2
BOJS                              epP     pP       12 54 48.4 +2.1
BOJS                              i PcP   PcP      12 56 07.2 +0.7
BRG   Berggiesshubel   42.69 308  i P     P        12 54 19.0 +1.3
BRG                                Amp             12 54 19.9
      comp=Z,20nm,0.7s
BRG                                Amp             13 04 42.0
      comp=E,0.7nm,18.5s
BRG                                Amp             13 04 42.0
      comp=N,1.3nm,18.5s
BRG                                Amp             13 04 45.0
      comp=Z,1.9nm,18.8s
BRG   Berggiesshubel   42.69 308  i P     P        12 54 19.0 +1.3
BRG                                pmax   pmax
      comp=Z,21nm,0.7s
BRG   Berggiesshubel   42.69 308  i P     P        12 54 19.0 +1.3
BRG                                Amp             12 54 19.9
      comp=Z,20nm,0.7s
BRG                                Amp             13 04 42.0
      comp=E,0.7nm,18.5s
BRG                                Amp             13 04 42.0
      comp=N,1.3nm,18.5s
BRG                                Amp             13 04 45.0
      comp=Z,1.9nm,18.8s
MOA   Molln            42.80 303  eP      P        12 54 19.8 +1.1
      comp=Z,12nm,0.9s
OBKA  Obir             42.80 301  i P     P        12 54 20.0 +1.2
      comp=Z,12nm,1.1s,SNR=5.1
SGRT  San Giovanni R   42.87 294   P      P        12 54 19.2 -0.3
SGRT                               IAmb   IAmb     12 54 20.8
      comp=Z,25nm,0.8s
LJU   Ljubljana        42.89 301  i P     P        12 54 20.9 +1.4
LJU                               i pP    pP       12 54 50.7 +0.9
LJU                               i PcP   PcP      12 56 08.6 +0.7
YAK   Yakutsk          42.93  36   P      P        12 54 20.1 +0.6
      comp=Z,8.1nm,0.3s,baz=264,slow=0.8,SNR=16
YAK   Yakutsk          42.93  36  eP      P        12 54 19.0 -0.5
YAK                                pmax   pmax
      comp=Z,26nm,0.8s
YAK                                pmax   pmax
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       comp=E,3.0nm,1.0s
YAK                                pmax    pmax
       comp=N,3.0nm,0.9s
YAK    Yakutsk          42.93  36    P       P       12 54 19.4 -0.1
GSI    Gunungsitoli     42.94 140    P       P       12 54 21.8 +1.6
GSI    Gunungsitoli     42.94 140    P       P       12 54 22.5 +2.3
       comp=N,153nm,0.7s
GERES  GERESS Array B   43.05 305    P       P       12 54 21.6 +0.8
       comp=N,1.8nm,0.7s,baz=81,slow=7.6,SNR=14
GERES                                pP      pP      12 54 52.1 +0.9
       comp=N,1.1nm,0.8s,baz=70,slow=8.9,SNR=2.7
GERES                                PcP     PcP     12 56 08.9 +0.4
       comp=N,1.5nm,0.6s,baz=114,slow=3.3,SNR=6.0
KHC    Kasperske Hory   43.09 305⇓eP     P       12 54 21.6 +0.5
KHC    Kasperske Hory   43.09 305  eP     P       12 54 21.8 +0.7
KHC                                 ex      x       12 56 19.1
KHC    Kasperske Hory   43.09 305    P       P       12 54 21.5 +0.5
CLL    Collm            43.24 308⇓iP     P       12 54 22.9 +0.7
       comp=Z,13nm,0.8s
CLL                                 epP     pP      12 54 53.0 +0.5
CLL    Collm            43.24 308    P       P       12 54 22.0 -0.2
CLL                                  pmax    pmax
       comp=Z,13nm,0.8s
CLL    Collm            43.24 308    P       P       12 54 22.0 -0.2
CLL                                  IAmb    IAmb    12 54 23.9
       comp=Z,13nm,0.8s
MYKA   Terra Mystica    43.40 302  eP     P       12 54 24.7 +1.1
       comp=Z,7.9nm,1.1s
FAUS   Fauske           43.43 332  eP     P       12 54 24.2 +0.7
MOR8   Moi Rana         43.48 330  eP     P       12 54 24.0 +0.1
KBA    Koelnbreinsper   43.53 302  eP     P       12 54 24.7 -0.1
       comp=Z,2.0nm,0.5s
ROBS   Robic            43.55 301  i P    P       12 54 25.5 +0.7
STEI   Steigen          43.59 333  eP     P       12 54 25.1 +0.4
SSLB   Suanglung        43.92  93    P       P       12 54 29.0 +1.0
NC405  NORSAR Array S   43.94 323    P       P       12 54 28.1 +0.4
NC405                                IAmb    IAmb    12 54 29.5
       comp=Z,26nm,0.8s
KSRS   Korea Array      43.98  72    P       P       12 54 29.1 +0.9
       comp=Z,7.3nm,0.9s,baz=282,slow=6.7,SNR=15
NC602  NORSAR Array S   43.99 322  eP     P       12 54 28.4 +0.3
KONS   Konsvik          44.07 330  eP     P       12 54 29.4 +0.9
NC303  NORSAR Array S   44.11 323    P       P       12 54 28.5 -0.5
KLR    Kul'dur          44.13  55    P       P       12 54 30.7 +1.3
       comp=Z,5.7nm,0.5s,baz=285,slow=7.9,SNR=20
INTR   Introdacqua      44.14 295    P       P       12 54 29.4 -0.3
INTR                                 IAmb    IAmb    12 54 31.1
       comp=Z,14nm,0.9s
ABTA   Abfaltersbach    44.15 302  eP     P       12 54 29.8 +0.2
       comp=Z,11nm,1.5s
ABTA                                eP      PcP     12 56 10.5 -1.7
       comp=Z,3.3nm,0.8s
NB2    NORSAR Subarra   44.17 323    P       P       12 54 29.6  0.0
       comp=Z,9.7nm,0.6s,baz=92,slow=7.9
NB2    NORSAR Subarra   44.17 323    P       P       12 54 29.6  0.0
       baz=92,slow=7.9
NOA    NORSAR Array B   44.17 323    P       P       12 54 29.5  0.0
       comp=Z,15nm,0.7s,baz=94,slow=7.7,SNR=52
NOA                                  pP      pP      12 55 01.2 +1.1
       comp=Z,5.5nm,0.9s,baz=94,slow=8.0,SNR=2.7
NOA                                  PP      PP      12 56 13.7 -1.1
       comp=Z,2.5nm,0.8s,baz=93,slow=9.8,SNR=3.4
NSS    Namsos           44.20 328  eP     P       12 54 30.0 +0.3
LOF    Lofoten          44.26 333  eP     P       12 54 29.7 -0.3
OSL    Oslo             44.36 321  eP     P       12 54 31.3 +0.4
NBO00  NORSAR Array S   44.39 322    P       P       12 54 31.4 +0.1
NC204  NORSAR Array S   44.41 323    P       P       12 54 31.9 +0.5
MNSI   Mandailing Nat   44.41 138    P       P       12 54 32.2 +0.3
       comp=Z,48nm,0.8s
TWG    Pinlang          44.49  95    P       P       12 54 35.4 +2.8
NRCA   Norcia           44.52 296    P       P       12 54 33.1 +0.5
GRF    Grafenberg Arr   44.55 306  eP     P       12 54 34.5 +1.8
       comp=Z,25nm,1.1s,baz=90,slow=7.0
GRF                                 epP     pP      12 55 05.1 +1.9
GRF                                 esP     sP      12 55 21.8 +3.5
WTTA   Wattenberg       44.65 303  i P    P       12 54 34.0 +0.3
       comp=Z,18nm,1.2s,SNR=5.5
WTTA                                eP      PcP     12 56 14.1  0.0
       comp=Z,5.2nm,0.7s
WATA   Walderalm        44.67 303  eP     P       12 54 33.9  0.0
       comp=Z,12nm,1.1s
WATA                                eP      PcP     12 56 13.8 -0.4
       comp=Z,7.4nm,1.1s
TIXI   Tiksi            44.79  22d iP    P       12 54 34.7 +0.5
TIXI                                 pmax    pmax
       comp=Z,118nm,1.0s
MURB   Monte Urbino     44.84 297    P       P       12 54 34.8 -0.3
CTI    Castel Tesino    44.86 301    P       P       12 54 35.1 -0.2
CTI                                  pmax    pmax
       comp=Z,13nm,0.9s
CTI    Castel Tesino    44.86 301    P       P       12 54 35.1 -0.2
KONO   Kongsberg        44.92 320  eP     P       12 54 35.8 +0.4
SQTA   Sankt Quirin     44.94 303  eP     P       12 54 35.9 -0.1
       comp=Z,5.4nm,0.7s
SQTA                                eP      PcP     12 56 15.1  0.0
       comp=Z,6.3nm,0.6s
TEOL   Teolo            44.98 300    P       P       12 54 35.8 -0.3
TEOL                                 IAmb    IAmb    12 54 37.8
       comp=Z,23nm,0.9s
MOTA   Moosalm          44.99 303  eP     P       12 54 36.5 +0.1
       comp=Z,10nm,1.0s
MOTA                                eP      PcP     12 56 15.4 +0.1
       comp=Z,5.9nm,0.7s
USRK   Ussuriysk Ar.    45.19  62    P       P       12 54 38.5 +0.7
       comp=Z,3.0nm,0.7s,baz=264,slow=6.6,SNR=8.7
RETA   Reutte           45.19 303  eP     P       12 54 38.0 +0.1
       comp=Z,5.4nm,0.9s
RETA                                eP      PcP     12 56 15.9 +0.1
       comp=Z,5.5nm,0.9s
DOMB   Dombas           45.26 324  eP     P       12 54 38.2 +0.1
FETA   Feichten         45.30 303  eP     P       12 54 35.9 -2.9
       comp=Z,5.7nm,0.7s
FETA                                eP      PcP     12 56 16.5 +0.2
       comp=Z,14nm,1.1s
HOMB   Homborsund       45.48 319  eP     P       12 54 40.5 +0.7
SKAR   Skarslia         45.58 322  eP     P       12 54 40.6 -0.1
BKNI   Bangkinang       45.59 137    P       P       12 54 41.2 -0.1
BKNI   Bangkinang       45.59 137    P       P       12 54 42.0 +0.8
OSSC   Osservatorio P   45.68 298    P       P       12 54 42.8 +1.0
OSSC                                 IAmb    IAmb    12 54 43.5
       comp=Z,35nm,1.3s
FUORN  Ofenpass-Fuorn   45.69 302    P       P       12 54 42.1 +0.1
SALO   Salr             45.72 301    P       P       12 54 42.8 +0.8
DAVA   Damuels          45.82 303  i P    P       12 54 43.4 +0.5
       comp=Z,23nm,0.6s,SNR=6.8
DAVA                                eP      PcP     12 56 17.0 -1.1
       comp=Z,10nm,0.9s
DAVOX  Davos/Dischmat   45.92 302    P       P       12 54 44.2 +0.4
       comp=Z,13nm,0.6s,baz=97,slow=7.1,SNR=37
DAVOX                                PcP     PcP     12 56 18.9 +0.4
       comp=Z,6.3nm,0.6s,baz=180,slow=6.1,SNR=5.9
MOL    Molde            46.00 325  eP     P       12 54 43.8 -0.1
VLC    Villacollemand   46.14 299    P       P       12 54 44.9 -0.5
VLC                                  IAmb    IAmb    12 54 48.1
       comp=Z,22nm,0.8s
AKN    Aaknes           46.24 324  eP     P       12 54 44.6 -1.2
PDSI   Padang           46.32 139    P       P       12 54 47.3 +0.3
TUE    Stuetta          46.34 302    P       P       12 54 47.2 +0.2
BLS5   Blasjo           46.52 320  eP     P       12 54 48.3 +0.3
GRNR   Gornyy           46.88  52⇓iP     P       12 54 52.4 +1.4
GRNR                                 pmax    pmax
       comp=Z,10.0nm,0.8s
GRNR                                 MLR     MLR
       comp=E,70nm,18.0s
GRNR                                 MLR     MLR
       comp=N,90nm,13.0s
GRNR                                 MLR     MLR
       comp=Z,110nm,17.0s
SPITS  Spitsbergen Ar   46.89 347    P       P       12 54 52.2 +1.6
       comp=Z,8.1nm,0.7s,baz=106,slow=12,SNR=9.1
BTNL   Ternell          47.64 308  dP     P       12 54 58.0 +1.1
       comp=Z,16nm,0.0s
BTNL                                dpP     pP      12 55 28.8 +0.9
BTNL                                dsP     sP      12 55 43.8 +0.8
MEM    Membach          47.72 308  dP     P       12 54 58.1 +0.7
JNU    Nakatsue         47.74  76    P       P       12 54 59.5 +1.6
       comp=Z,26nm,0.8s,baz=277,slow=6.3,SNR=9.2
SENIN  Lac Senin/Sane   47.75 302    P       P       12 54 57.4 -0.6
SENIN                                IAmb    IAmb    12 54 59.2
       comp=Z,17nm,0.9s
WLF    Walferdange      47.80 307  dP     P       12 54 59.6 +1.5
       comp=Z,21nm,1.0s
WLF                                 dpP     pP      12 55 29.9 +0.8
WLF                                 dPcP    PcP     12 56 25.8 +0.9
WLF    Walferdange      47.80 307    P       P       12 54 57.4 -0.7
WLF                                  pmax    pmax
       comp=Z,26nm,0.9s
WLF    Walferdange      47.80 307    P       P       12 54 57.4 -0.7
WLF                                  IAmb    IAmb    12 55 00.5
       comp=Z,26nm,0.9s
BGES   Gesves           48.34 308  dP     P       12 55 03.3 +1.2
DOU    Dourbes          48.70 308  dP     P       12 55 05.8 +0.8
DOU                                 dPcP    PcP     12 56 28.3 +0.1
SNF    Seneffe          48.81 308  dP     P       12 55 06.8 +1.0
KEST   Kesra            49.44 288    P       P       12 55 12.2 +1.2
       comp=Z,14nm,0.8s,baz=340,slow=1.3,SNR=14
KEST                                 PcP     PcP     12 56 31.8 +0.6
       comp=Z,2.3nm,0.5s,baz=120,slow=5.9,SNR=3.6
KEST   Kesra            49.44 288    P       P       12 55 12.0 +1.1
KEST                                 IAmb    IAmb    12 55 13.1
       comp=Z,18nm,0.9s
KMBO   Kilima Mbogo     49.86 228    P       P       12 55 15.3 +0.9
       comp=Z,15nm,0.7s,baz=36,slow=12,SNR=33
SSB    Saint Sauveur    49.88 302    P       P       12 55 14.5 +0.4
SSB                                  pmax    pmax
       comp=Z,13nm,0.8s
SSB    Saint Sauveur    49.88 302    P       P       12 55 14.5 +0.4
SSB                                  IAmb    IAmb    12 55 15.8
       comp=Z,12nm,0.8s
YSS    Yuzh-Sakhalins   51.81  55⇓eP     P       12 55 28.5 +0.1
YSS                                  pmax    pmax
       comp=Z,83nm,2.4s
MAJO   Matsushiro       52.03  69ceP     P       12 55 30.6 +0.4
MAJO                                 pmax    pmax
       comp=Z,14nm,0.8s
MAT    Matsushiro       52.03  69    P       P       12 55 30.3 +0.1
MJAR   Matsushiro Arr   52.03  69    P       P       12 55 31.1 +0.8
       comp=Z,9.9nm,0.9s,baz=290,slow=9.4,SNR=20
ASAJ   Asahikawa        52.56  59    P       P       12 55 34.1 +0.1
       comp=Z,4.5nm,0.5s,baz=292,slow=11,SNR=8.6
SEY    Seymchan         53.39  34    P       P       12 55 40.7 +1.0
       comp=Z,6.3nm,0.9s,baz=273,slow=7.8,SNR=9.7
SEY    Seymchan         53.39  34⇑eP     P       12 55 41.1 +1.3
JMM    Marumori         53.45  67    P       P       12 55 39.9 -0.7
MBAR   Mbarara          53.52 235    P       P       12 55 40.6 -1.0
MBAR                                 pmax    pmax
       comp=Z,17nm,0.8s
MBAR   Mbarara          53.52 235    P       P       12 55 40.6 -1.0
MBAR                                 IAmb    IAmb    12 55 42.3
       comp=Z,17nm,0.8s
DAG    Danmarks Havn    54.18 344⇓iP     P       12 55 46.1 +0.8
       comp=Z,22nm,0.8s
DAG    Danmarks Havn    54.18 344⇓iP     P       12 55 46.1 +0.8
DAG                                  IAmb    IAmb    12 55 46.8
       comp=Z,22nm,0.8s
DBG    Daneborg         55.07 341  i P    P       12 55 52.8 +1.0
DBG                                  IAmb    IAmb    12 55 53.8
       comp=Z,5.1nm,0.8s
ESBB   Sonseca Array    57.70 298    P       P       12 56 11.3 +0.2
ESBB                                 IAmb    IAmb    12 56 12.5
       comp=Z,16nm,0.8s
ESDC   Sonseca Array    57.70 298    P       P       12 56 11.5 +0.4
       comp=Z,17nm,0.8s,baz=59,slow=7.2,SNR=110
ESDC                                 pP      pP      12 56 43.1  0.0
       comp=Z,3.9nm,0.7s,baz=58,slow=7.4,SNR=4.7
PAB    San Pablo        58.02 298    P       P       12 56 13.9 +0.5
PAB                                  pmax    pmax
       comp=Z,17nm,1.4s
PAB    San Pablo        58.02 298    P       P       12 56 13.9 +0.5
PAB                                  IAmb    IAmb    12 56 14.9
       comp=Z,17nm,1.4s
PETK   Petropavlovsk-   58.93  45    P       P       12 56 19.0 -0.3
       comp=Z,5.2nm,1.0s,baz=84,slow=6.1,SNR=5.3
PETK   Petropavlovsk-   58.93  45    P       P       12 56 19.0 -0.3
MVO    Moncorvo         59.23 300  eP     P       12 56 22.6 +0.9
MVO    Moncorvo         59.23 300  eLR    LR      13 13 41.7
       comp=Z,408nm,20.0s
PVRL   Vila Real        59.66 301  eP     P       12 56 25.5 +1.0
POLO   Lamas de Olo     59.67 301  eP     P       12 56 25.5 +0.8
PGAV   Gavieira, Arco   59.75 302  eP     P       12 56 26.4 +1.2
MTE    Manteigas        59.91 300  eP     P       12 56 27.6 +1.3
       comp=Z,33nm,2.1s
MTE    Manteigas        59.91 300  eLR    LR      13 13 21.7
       comp=Z,351nm,20.0s
PVIS   Viseu            60.01 300  eP     P       12 56 28.1 +1.1
       comp=Z,22nm,1.1s
PMRV   Marv??o          60.21 299  eP     P       12 56 29.9 +1.6
PMRV   Marv??o          60.21 299  eLR    LR      13 14 14.0
       comp=Z,376nm,20.0s
SUMG   Summit           60.55 341  i P    P       12 56 31.9 +1.4
SUMG                                 pmax    pmax
       comp=Z,66nm,0.8s
SUMG   Summit           60.55 341    P       P       12 56 30.9 +0.4
SUMG   Summit           60.55 341  i P    P       12 56 31.9 +1.4
       comp=Z,66nm,0.8s
SUMG   Summit           60.55 341  i P    P       12 56 31.9 +1.4
SUMG                                 IAmb    IAmb    12 56 32.6
       comp=Z,66nm,0.8s
COI    Coimbra          60.59 300    P       P       12 56 31.4 +0.6
COI                                  pmax    pmax
       comp=Z,29nm,0.8s
COI    Coimbra          60.59 300  eP     P       12 56 32.2 +1.4
       comp=Z,36nm,0.8s
COI    Coimbra          60.59 300    P       P       12 56 31.4 +0.6
PCAS   Casmilo, Conde   60.71 300  eP     P       12 56 32.8 +1.1
PMTG   Montargil        60.95 299  eP     P       12 56 33.7 +0.4
EVO    Evora            61.04 298  eP     P       12 56 34.8 +0.9
PSBE   So Bento         61.15 299  eP     P       12 56 36.1 +1.4
       comp=Z,38nm,1.3s
PBEJ   Beja             61.16 297  eP     P       12 56 36.1 +1.4
KAPI   Kappang          61.29 123    P       P       12 56 34.9 -0.9
       comp=Z,11nm,0.5s,baz=127,slow=14,SNR=1.4
PVAQ   Vaqueiros        61.33 297  eP     P       12 56 36.9 +1.0
PVAQ   Vaqueiros        61.33 297  eLR    LR      13 15 11.6
       comp=Z,475nm,20.0s
PCVE   Castro Verde     61.46 297  eP     P       12 56 37.5 +0.7
MESJ   Messejana        61.49 297  eP     P       12 56 37.6 +0.7
MESJ                                 AMS     AMS     13 17 19.2
       comp=Z,458nm,24.7s
MESJ   Messejana        61.49 297  eP     P       12 56 37.6 +0.7
PBDV   Barranco-do-Ve   61.55 297  eP     P       12 56 38.8 +1.3
PNCL   Nicolau / Gran   61.59 298  eP     P       12 56 39.1 +1.5
PTEO   Sao Teotonio     61.98 297  eP     P       12 56 41.5 +1.2
EUNU   Eureka           62.28 356    P       P       12 56 42.9 +1.2
ICESG  Greenland Ices   62.74 338  i P    P       12 56 46.0 +0.7
TULEG  Thule            63.78 350    P       P       12 56 51.6 +0.1
TULEG                                IAmb    IAmb    12 56 52.5
       comp=Z,11nm,0.6s
TULEG  Thule            63.78 350  i P    P       12 56 51.9 +0.4
TULEG                                IAmb    IAmb    12 56 52.7
       comp=Z,11nm,0.7s
ILULI  Ilulissat        65.89 341  i P    P       12 57 06.2 +0.9
ILULI                                pmax    pmax
       comp=Z,23nm,0.6s
ILULI  Ilulissat        65.89 341  i P    P       12 57 06.2 +0.9
       comp=Z,23nm,0.6s
ILULI  Ilulissat        65.89 341  i P    P       12 57 06.2 +0.9
ILULI                                IAmb    IAmb    12 57 06.8
       comp=Z,23nm,0.6s
A21K   Barrow           66.38  15    P       P       12 57 08.6 +0.3
A21K                                 IAmb    IAmb    12 57 09.7
       comp=Z,14nm,0.7s
TOA0   Torodi Ar. Sit   66.42 269    P       P       12 57 08.0 -1.6
TORD   Torodi Ar. Bea   66.42 269    P       P       12 57 08.4 -1.1
       comp=Z,6.7nm,0.7s,baz=39,slow=5.9,SNR=34
LSZ    Lusaka           66.49 227    P       P       12 57 09.0 -1.0
LSZ                                  pmax    pmax
       comp=Z,9.0nm,0.7s
LSZ    Lusaka           66.49 227    P       P       12 57 09.0 -1.0
LSZ                                  IAmb    IAmb    12 57 10.0
       comp=Z,9.2nm,0.7s
SIJI   Sorong           66.62 110    P       P       12 57 10.9 +0.1
       comp=Z,17nm,1.0s,baz=303,slow=10,SNR=6.9
SFJD   Kangerlussuaq    67.28 339    P       P       12 57 14.5 +0.5
       comp=Z,7.8nm,0.7s,baz=91,slow=4.5,SNR=6.2
SFJD   Kangerlussuaq    67.28 339    P       P       12 57 15.0 +0.9
SFJD                                 pmax    pmax
       comp=Z,26nm,1.2s
SFJD   Kangerlussuaq    67.28 339    P       P       12 57 15.0 +0.9
SFJD                                 IAmb    IAmb    12 57 15.4
       comp=Z,26nm,1.2s
SFJD   Kangerlussuaq    67.28 339  i P    P       12 57 14.6 +0.5
SFJD   Kangerlussuaq    67.28 339  i P    P       12 57 14.7 +0.6
RES    Resolute Bay     67.97 356    P       P       12 57 19.3 +1.0
       comp=Z,2.3nm,0.5s,baz=20,slow=8.9,SNR=8.4
GUMO   Guam             68.44  89    LR      LR      13 26 29.9
       comp=Z,28nm,21.3s,baz=136,slow=35
TOLK   Toolik Lake Re   69.99  15    P       P       12 57 31.1 +0.1
KOWA   Kowa             70.21 273    P       P       12 57 32.8 -0.4
COLD   Coldfoot         71.03  16    P       P       12 57 37.9 +0.6
COLD                                 IAmb    IAmb    12 57 39.1
       comp=Z,24nm,1.1s
INK    Inuvik           73.02  10    P       P       12 57 50.0 +0.9
       comp=Z,16nm,0.6s,baz=348,slow=6.4,SNR=119
INK                                  pP      pP      12 58 24.3 +1.7
       comp=Z,3.4nm,0.6s,baz=0.8,slow=10.0,SNR=2.4
INK    Inuvik           73.02  10    P       P       12 57 50.2 +1.1
INK                                  IAmb    IAmb    12 57 50.9
       comp=Z,33nm,1.1s
C36M   Paulatuk         73.03   6    P       P       12 57 49.6 +0.4
MDM    Murphy Dome      73.38  17    P       P       12 57 51.9 +0.6
MDM                                  IAmb    IAmb    12 57 52.9
       comp=Z,16nm,1.1s
POKR   Poker Plat Res   73.42  16    P       P       12 57 52.2 +0.6
POKR                                 IAmb    IAmb    12 57 53.5
       comp=Z,27nm,1.1s
TCOL   CIGO, UAF Yank   73.53  17    P       P       12 57 52.6 +0.4
TCOL                                 IAmb    IAmb    12 57 53.7
       comp=Z,28nm,0.8s
COLA   College          73.53  17    P       P       12 57 52.6 +0.5
COLA                                 pmax    pmax
       comp=Z,26nm,0.8s
COLA   College          73.53  17    P       P       12 57 52.6 +0.5
BWN    Browne           73.75  18    P       P       12 57 54.3 +0.9
BWN                                  IAmb    IAmb    12 57 55.0
       comp=Z,35nm,1.0s
IL31                    73.84  16    P       P       12 57 53.8 -0.1
ILAR   Eielson Array    73.84  16    P       P       12 57 53.6 -0.3
       comp=Z,7.1nm,0.9s,baz=320,slow=4.6,SNR=57
ILAR                                 pP      pP      12 58 28.4 +0.8
       comp=Z,2.3nm,0.9s,baz=316,slow=5.1,SNR=3.2
KTH    Kantishna Hill   73.91  18    P       P       12 57 54.5 +0.1
KTH                                  IAmb    IAmb    12 57 55.7
       comp=Z,20nm,0.8s
PPLA   Purkeypile       74.12  19    P       P       12 57 56.2 +0.4
PPLA                                 IAmb    IAmb    12 57 56.6
       comp=Z,13nm,0.6s
TRF    Thorofare Moun   74.15  18    P       P       12 57 56.5 +0.4
RND    Reindeer         74.55  18    P       P       12 57 58.1 -0.1
RND                                  pmax    pmax
       comp=Z,11nm,0.6s
RND    Reindeer         74.55  18    P       P       12 57 58.1 -0.1
RND                                  IAmb    IAmb    12 57 58.6
       comp=Z,11nm,0.6s
DBIC   Dimbokro         75.42 267    P       P       12 58 02.8 -1.1
       comp=Z,1.0nm,0.4s,baz=4.6,slow=6.5,SNR=4.4
K27K   Chicken          75.51  15    P       P       12 58 04.2 +0.6
K27K                                 IAmb    IAmb    12 58 05.6
       comp=Z,14nm,0.9s
KIC    Kosan Boka       75.52 267  eP     P       12 58 03.5 -0.9
       comp=Z,5.1nm,0.7s
TIC    Toumodi          75.57 267  eP     P       12 58 03.7 -1.1
PAX    Paxson           75.72  17    P       P       12 58 04.9  0.0
PAX                                  pmax    pmax
       comp=Z,13nm,0.9s
PAX    Paxson           75.72  17    P       P       12 58 04.9  0.0
PAX                                  IAmb    IAmb    12 58 06.0
       comp=Z,13nm,0.9s
LBTB   Lobatse          75.72 223    P       P       12 58 04.1 -1.3
LBTB                                 pmax    pmax
       comp=Z,8.0nm,0.5s
LBTB   Lobatse          75.72 223    P       P       12 58 04.1 -1.3
LBTB                                 IAmb    IAmb    12 58 05.4
       comp=Z,8.4nm,0.5s
LIC    Lamto            75.82 267  eP     P       12 58 05.2 -1.0
       comp=Z,2.1nm,0.3s
GHO    Glory Hole Cre   75.91  19    P       P       12 58 06.8 +0.7
GHO                                  IAmb    IAmb    12 58 07.2
       comp=Z,16nm,0.7s
DAWY   Dawson           76.00  14    P       P       12 58 07.3 +0.8
SML    Sawmill          76.03  18    P       P       12 58 07.0 +0.3
SCM    Sheep Creek Mo   76.26  18    P       P       12 58 08.6 +0.6
SCM                                  pmax    pmax
       comp=Z,24nm,0.6s
SCM    Sheep Creek Mo   76.26  18    P       P       12 58 08.6 +0.6
M24K   Tolsona, Glenn   76.30  17    P       P       12 58 09.6 +1.4
KNK    Knik Glacier     76.33  19    P       P       12 58 08.7 +0.3
KNK                                  IAmb    IAmb    12 58 09.8
       comp=Z,27nm,1.0s
KDAK   Kodiak Island    78.22  23    P       P       12 58 19.0 +0.1
       comp=Z,8.7nm,0.6s,baz=4.7,slow=5.8,SNR=7.0
KDAK   Kodiak Island    78.22  23    P       P       12 58 19.0 +0.1
BOSA   Boshof           78.79 221    P       P       12 58 21.2 -1.2
       comp=Z,2.2nm,0.5s,baz=32,slow=5.0,SNR=9.9
BOSA   Boshof           78.79 221    P       P       12 58 21.2 -1.2
BOSA                                 pmax    pmax
       comp=Z,5.0nm,1.3s
BOSA   Boshof           78.79 221    P       P       12 58 21.2 -1.2
HYT    Haines Junctio   79.33  14    P       P       12 58 26.3 +1.2
HYT                                  IAmb    IAmb    12 58 27.5
       comp=Z,20nm,0.9s
YKA    Yellowknife Ar   80.43   3    P       P       12 58 31.2 +0.4
       comp=Z,13nm,0.6s,baz=1.7,slow=5.1,SNR=387
YKA                                  pP      pP      12 59 06.1 +1.1
       comp=Z,3.5nm,0.8s,baz=354,slow=5.8,SNR=2.9
WRA    Warramunga Arr   81.83 123    P       P       12 58 37.7 -1.1
       comp=Z,1.2nm,0.5s,baz=323,slow=5.0,SNR=20
WRA                                  pP      pP      12 59 12.9 -0.1
       comp=Z,1.8nm,0.8s,baz=322,slow=5.0,SNR=4.1
WRAB   Tennant Creek    81.83 123⇓eP     P       12 58 37.9 -0.9
WRAB                                 pmax    pmax
       comp=Z,20nm,2.1s
FCC    Fort Churchill   83.60 353    P       P       12 58 48.3 +1.0
FCC                                  pmax    pmax
       comp=Z,11nm,0.9s
FCC    Fort Churchill   83.60 353    P       P       12 58 48.3 +1.0
FCC                                  IAmb    IAmb    12 58 49.1
       comp=Z,11nm,0.8s
ASAR   Alice Springs    84.14 125    P       P       12 58 49.3 -1.4
       comp=Z,0.6nm,0.6s,baz=317,slow=4.7,SNR=11
ASAR                                 pP      pP      12 59 24.5 -0.7
       comp=Z,1.4nm,0.9s,baz=323,slow=5.7,SNR=3.4
PMG    Port Moresby     84.16 106    P       P       12 58 51.1 +0.2
       comp=Z,9.8nm,0.8s,baz=262,slow=7.1,SNR=3.9
PMG    Port Moresby     84.16 106⇑eP     P       12 58 50.9  0.0
PMG                                  pmax    pmax
       comp=Z,16nm,1.0s
FFC    Flin Flon        88.21 356    P       P       12 59 10.9 +0.8
FFC                                  pmax    pmax
       comp=Z,14nm,1.0s
FFC    Flin Flon        88.21 356    P       P       12 59 10.9 +0.8
FFC                                  IAmb    IAmb    12 59 11.6
       comp=Z,14nm,1.0s
ULM    Lac du Bonnet    92.17 352    P       P       12 59 28.2 -0.5
       comp=Z,3.9nm,0.9s,baz=346,slow=7.5,SNR=6.2
ULM                                  pP      pP      13 00 03.6 +0.1
       comp=Z,3.5nm,1.0s,baz=355,slow=6.0,SNR=2.7
LONY   Lake Ozonia      93.01 337    P       P       12 59 33.2 +0.5
LONY                                 IAmb    IAmb    12 59 34.2
       comp=Z,5.9nm,0.8s
E46A   Sault Ste Mari   94.02 344    P       P       12 59 37.6 +0.4
E46A                                 IAmb    IAmb    12 59 54.2
       comp=Z,5.9nm,0.8s
NEW    Newport          94.46   6    P       P       12 59 39.5 +0.2
       comp=Z,1.0nm,0.3s,baz=350,slow=3.4,SNR=3.8
PDAR   Pinedale Array  100.32   1    P       Pdif    13 00 06.4 +0.3
       comp=Z,0.2nm,0.5s,baz=45,slow=6.0,SNR=2.4
NVAR   Mina Array Bea  104.08   8    Pdiff   Pdif    13 00 25.4 +2.5
       comp=Z,0.1nm,0.5s,baz=16,slow=3.9,SNR=2.2
CPUP   Villa Florida   135.92 269    PKP     PKPdf   13 05 39.1 -0.5
       comp=Z,1.9nm,0.8s,baz=102,slow=4.0,SNR=3.1
PLCA   Paso Flores     150.73 251    PKPbc   PKPbc   13 06 09.2 -1.5
       comp=Z,4.2nm,0.9s,baz=339,slow=4.9,SNR=11
```

PRU 03 12:51:30.5±0.0**, 47°.52N×14°.92E, h0^{km}, Austria**

```
Code   Station Name      Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC     h  m  s    ISC
KHC    Kasperske Hory    1.84 331  eSG    Sb      12 52 28.7 -0.1
```

MOS ***03*** *12:53:11.2±1.1, 56°.07N×113°.76E, h7^{km}, mb4.3/5, Error ellipse: s-maj=9.8km s-min=6.9km az=77.1*

MOS Felt (II) at Severomuysk.

IDC ***03*** *12:53:12.0±0.8, 56°.06N×113°.83E, h0^{km}, mb3.8/12, mb1 4.0/16, mb1mx3.7/67, mbtmp3.8/16, ML2.7/4, Error ellipse: s-maj=21.3km s-min=16.4km az=162.0*

BYKL ***03*** *12:53:12.7±0.1, 56°.09N×113°.74E, h3^{km}±2^{km}, FELT I=II MSK at Severomuisk*

ISC 03 12:53:13.0±0.4**, 56°.10N**±0°.02**×113°.82E**±0°.02**, h10^{km}, n80,** σ**2^{s}.53**/143**, mb4.0**/13**, 9C-5D, East of Lake Baykal**

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

SVKR	**Severomuysk**	**0.15**	**275**	*e*Pg	**Pg**	**12 53 14.5**	**-1.8**
SVKR				Pmax		12 53 14.8	
	22µm,0.3s						
SVKR				*e*Sg	**Sg**	**12 53 17.1**	**-1.6**
SVKR				Smax		12 53 21.9	
	91µm,0.6s						
SVKR	**Severomuysk**	**0.15**	**275**	⇑*i*PG	**Pg**	**12 53 14.5**	**-1.8**
SVKR				*e*S	**Sg**	**12 53 16.8**	**-1.9**
UKT	**Uakit**	**0.63**	**190**	⇓*i*Pg	**Pg**	**12 53 23.2**	**-1.9**
UKT				Pmax		12 53 27.6	
	560nm,0.5s						
UKT				*e*Sg	**Sg**	**12 53 31.2**	**-2.1**
UKT				Smax		12 53 42.5	
	3µm,0.5s						
UKT	**Uakit**	**0.63**	**190**	*e*PG	**Pg**	**12 53 23.1**	**-2.0**
UKT				*e*		12 53 32.1	
UKT				pmax	pmax		
	comp=Z,407nm,0.3s						
UKT				smax	smax		
	comp=N,3µm,0.3s						
NLYR	**Nelyaty**	**1.12**	**69**	*e*Pg	**Pb**	**12 53 34.0**	**-0.4**
NLYR				*e*Pb	**Pn**	**12 53 36.1**	**+1.4**
NLYR				max		12 53 36.3	
	comp=N,3µm,0.3s						
NLYR				*e*Sg	**Sb**	**12 53 49.4**	**+0.4**
NLYR				*e*Sb	**Sn**	**12 53 54.4**	**+4.2**
NLYR				max		12 53 55.0	
	comp=N,4µm,0.8s						
NLYR	**Nelyaty**	**1.12**	**69**	*e*PG	**Pb**	**12 53 34.0**	**-0.4**
NLYR				*e*		12 53 49.3	
NLYR				pmax	pmax		
	comp=Z,50µm,0.3s						
NLYR				smax	smax		
	comp=N,29µm,0.3s						
YOA	**Uoyan**	**1.18**	**272**	*e*Pg	**Pb**	**12 53 33.1**	**-2.3**
YOA				*e*Pb	**Pg**	**12 53 35.5**	**0.0**
YOA				max		12 53 36.6	
	comp=N,1µm,0.5s						
YOA				*e*Sg	**Sb**	**12 53 48.7**	**-1.9**
YOA				*e*		12 53 55.0	
YOA				max		12 53 55.7	
	comp=N,7µm,0.4s						
YOA	**Uoyan**	**1.18**	**272**	⇑*i*PG	**Pb**	**12 53 33.2**	**-2.2**
YOA				*e*		12 53 48.8	
YOA				pmax	pmax		
	comp=Z,591nm,0.3s						
YOA				smax	smax		
	comp=E,7µm,0.4s						
KMO	**Kumora**	**1.49**	**263**	*e*Pg	**Pn**	**12 53 38.8**	**-1.0**
KMO				*e*		12 53 41.7	
KMO				max		12 53 43.0	
	comp=E,792nm,0.4s						
KMO				*e*Sg	**Sn**	**12 53 57.9**	**-1.4**
KMO				*e*		12 54 01.1	
KMO				max		12 54 02.1	
	comp=E,3µm,0.4s						
KMO	**Kumora**	**1.49**	**263**	*e*PG	**Pn**	**12 53 38.8**	**-1.0**
KMO				*e*		12 53 57.8	
KMO				pmax	pmax		
	comp=Z,334nm,0.2s						
KMO				smax	smax		
	comp=N,3µm,0.8s						
BOD	**Bodaibo**	**1.72**	**3**	*e*Pg	**Pn**	**12 53 44.2**	**+1.2**
BOD				Pmax		12 53 45.3	
	comp=N,551nm,0.8s						
BOD				*e*		12 53 45.5	
BOD				*e*Sg	**Sn**	**12 54 06.8**	**+1.8**
BOD				Smax		12 54 09.4	
	comp=N,2µm,0.4s						
BOD	**Bodaibo**	**1.72**	**3**	*e*PN	**Pn**	**12 53 43.6**	**+0.6**
BOD				*e*		12 54 06.9	
BOD				pmax	pmax		
	comp=Z,525nm,0.7s						
BOD				smax	smax		
	comp=E,2µm,0.8s						
YLYR	**Ulyunkhan**	**1.95**	**232**	*e*Pg	**Pn**	**12 53 46.8**	**+0.6**
YLYR				Pmax		12 53 48.4	
	comp=E,492nm,0.5s						
YLYR				*e*Sg	**Sn**	**12 54 11.8**	**+1.1**
YLYR				Smax		12 54 15.7	
	comp=E,3µm,0.6s						
YLYR	**Ulyunkhan**	**1.95**	**232**	⇑*i*PN	**Pn**	**12 53 46.7**	**+0.6**
YLYR				*e*		12 53 47.8	
YLYR				*e*S	**Sn**	**12 54 10.8**	**+0.1**
YLYR				*e*		12 54 12.0	
YLYR				pmax	pmax		
	comp=Z,502nm,0.5s						
YLYR				smax	smax		
	comp=N,3µm,0.6s						
NIZ	**Nizh Angarsk**	**2.43**	**264**	*e*Pn	**Pn**	**12 53 53.5**	**+0.8**
NIZ				*e*Pg	**Pb**	**12 53 55.7**	**-1.1**
NIZ				*e*		12 53 57.4	
NIZ				max		12 53 58.4	
	comp=N,183nm,0.6s						
NIZ				*e*Sn	**Sn**	**12 54 22.4**	**-0.1**
NIZ				*e*Sg	**Sb**	**12 54 27.3**	**+0.6**
NIZ				Smax		12 54 30.6	
	comp=N,1µm,0.6s						
NIZ	**Nizh Angarsk**	**2.43**	**264**	*e*PN	**Pn**	**12 53 53.3**	**+0.6**
NIZ				*e*		12 53 56.6	
CRS	**Chara**	**2.59**	**70**	⇓*i*Pn	**Pn**	**12 53 56.8**	**+1.8**
CRS				Pmax		12 54 00.9	
	comp=N,2µm,0.7s						
CRS				⇑*i*Pg	**Pb**	**12 54 01.0**	**+1.4**
CRS				*e*Sn	**Sn**	**12 54 29.2**	**+2.7**
CRS				*e*Sg	**Sb**	**12 54 34.8**	**+3.4**
CRS				Smax		12 54 36.7	
	comp=N,1µm,0.8s						
CRS	**Chara**	**2.59**	**70**	⇑*i*PN	**Pb**	**12 54 00.9**	**+1.4**
CRS				*e*		12 54 35.0	
CRS				pmax	pmax		
	comp=Z,908nm,0.6s						
CRS				smax	smax		
	comp=E,991nm,1.2s						
SYVR	**Suvo**	**3.30**	**224**	*e*Pn	**Pn**	**12 54 05.4**	**+0.7**
SYVR				*e*Pg	**Pb**	**12 54 11.9**	**+0.3**
SYVR				Pmax		12 54 15.5	
	comp=E,163nm,0.6s						
SYVR				*e*Sn	**Sn**	**12 54 43.5**	**-0.4**
SYVR				*e*Sg	**Sb**	**12 54 53.8**	**+2.1**
SYVR				*e*		12 55 01.5	
SYVR				max		12 55 05.8	
	comp=E,2µm,1.9s						
SYVR	**Suvo**	**3.30**	**224**	*e*PN	**Pn**	**12 54 05.0**	**+0.3**
SYVR				*e*		12 54 09.6	
SYVR				*e*		12 54 53.6	
SYVR				pmax	pmax		
	comp=Z,167nm,0.7s						
SYVR				smax	smax		
	comp=E,2µm,1.6s						
VTMR	**Vitim**	**3.41**	**349**	*e*Pn	**Pn**	**12 54 06.9**	**+0.7**
VTMR				*e*Pg	**Pb**	**12 54 14.4**	**+0.9**
VTMR				*e*Sn	**Sn**	**12 54 47.8**	**+1.1**
VTMR				*e*Sg	**Sb**	**12 54 57.4**	**+2.4**
TUP	**Tupik**	**3.89**	**113**	*e*Pn	**Pn**	**12 54 13.9**	**+1.1**
TUP				*e*Pg	**Pb**	**12 54 22.9**	**+1.2**
TUP				Pmax		12 54 30.4	
	comp=E,120nm,0.8s						
TUP				*e*Sn	**Sn**	**12 54 59.2**	**+0.7**
TUP				*e*Sg	**Sb**	**12 55 14.2**	**+5.4**
TUP				*e*		12 55 29.5	
TUP				max		12 55 32.0	
	comp=E,1µm,1.4s						
TUP				*e*		12 55 45.8	
TUP	**Tupik**	**3.89**	**113**	⇑*i*PN	**Pn**	**12 54 13.9**	**+1.1**
TUP				*e*		12 54 23.4	
TUP				*e*S	**Sn**	**12 54 59.3**	**+0.7**
TUP				*e*		12 55 13.8	
TUP				pmax	pmax		
	comp=Z,109nm,0.7s						
TUP				smax	smax		
	comp=E,1µm,1.0s						
CIT	**Chita**	**4.09**	**182**	*e*Pg	**Pb**	**12 54 25.9**	**+0.8**
CIT				Pmax		12 54 27.1	
	comp=E,124nm,0.4s						
CIT				*e*Sn	**Sn**	**12 55 02.8**	**-0.8**
CIT				*e*Sg	**Sb**	**12 55 18.1**	**+3.5**
CIT				Smax		12 55 26.1	
	comp=E,578nm,0.5s						
CIT	**Chita**	**4.09**	**182**	*e*PN	**Pn**	**12 54 14.8**	**-0.8**
CIT				*e*		12 54 25.6	
CIT				*e*S	**Sn**	**12 54 59.7**	**-3.9**
CIT				*e*		12 55 19.4	
CIT				pmax	pmax		
	comp=Z,113nm,0.9s						
CIT				smax	smax		
	comp=E,840nm,1.8s						
MXMB	**Maximikha**	**4.10**	**228**	*e*Pn	**Pn**	**12 54 16.4**	**+0.8**
MXMB				*e*Pg	**Pb**	**12 54 25.9**	**+0.8**
MXMB				*e*Sn	**Sn**	**12 55 02.0**	**-1.6**
MXMB				*e*Sg	**Sb**	**12 55 18.1**	**+3.4**
MXMB				*e*		12 55 25.5	
OGRR	**Ongureny**	**4.36**	**238**	*e*Pn	**Pn**	**12 54 20.9**	**+1.7**
OGRR				*e*Pg	**Pb**	**12 54 30.2**	**+0.6**
OGRR				Pmax		12 54 34.6	
	comp=E,77nm,1.0s						
OGRR				*e*Sn	**Sn**	**12 55 08.1**	**-2.0**
OGRR				*e*Sg	**Sb**	**12 55 25.6**	**+3.4**
OGRR				Smax		12 55 35.0	
	comp=E,325nm,1.2s						
OGRR	**Ongureny**	**4.36**	**238**	*e*PN	**Pn**	**12 54 19.2**	**0.0**
OGRR				*e*		12 54 30.4	
OGRR				*e*		12 55 25.6	
OGRR				pmax	pmax		
	comp=Z,91nm,1.6s						
OGRR				smax	smax		
	comp=N,325nm,1.9s						
YKLR	**Yuktali**	**4.39**	**80**	*e*Pn	**Pn**	**12 54 21.4**	**+1.8**
YKLR				*e*Pg	**Pb**	**12 54 31.8**	**+1.7**
YKLR				*e*Sn	**Sn**	**12 55 10.9**	**+0.2**
YKLR				*e*Sg	**Sg**	**12 55 29.9**	**-3.8**
ZRHB	**Zarechye**	**5.28**	**230**	*e*Pn	**Pn**	**12 54 32.5**	**+0.6**
ZRHB				*e*Pg	**Pb**	**12 54 46.7**	**+1.4**
ZRHB				Pmax		12 54 51.9	
	comp=N,148nm,0.8s						
ZRHB				*e*Sn	**Sn**	**12 55 30.6**	**-2.1**
ZRHB				*e*Sg	**Sb**	**12 55 54.5**	**+5.8**
ZRHB				Smax		12 56 17.8	
	comp=N,1µm,1.5s						
TRG	**Tyrgan**	**5.50**	**236**	*e*Pn	**Pn**	**12 54 35.0**	**+0.1**
TRG				*e*Pg	**Pb**	**12 54 50.1**	**+1.1**
TRG				*e*		12 54 55.4	
TRG				max		12 54 56.0	
	comp=N,44nm,1.1s						
TRG				*e*Sn	**Sn**	**12 55 36.8**	**-1.4**
TRG				*e*Sg	**Sb**	**12 56 01.2**	**+6.2**
TRG				Smax		12 56 16.7	
	comp=N,244nm,1.8s						
FFNB	**Fofonovo**	**5.81**	**229**	*e*Pn	**Pn**	**12 54 39.3**	**+0.1**
FFNB				*e*Pg	**Pb**	**12 54 57.0**	**+2.7**
FFNB				*e*Sg	**Sb**	**12 56 10.8**	**+6.9**
KAB	**Kabansk**	**5.85**	**229**	*e*Pg	**Pb**	**12 54 57.4**	**+2.3**
KAB				Pmax		12 55 12.8	
	comp=N,218nm,1.3s						
KAB				*e*Sg	**Sb**	**12 56 12.3**	**+7.1**
KAB				Smax		12 56 44.9	
	comp=N,1µm,1.1s						
STDB	**Stepnoy Dvoret**	**5.89**	**231**	*e*Pn	**Pn**	**12 54 41.2**	**+0.9**
STDB				*e*Pg	**Pb**	**12 54 58.1**	**+2.4**
STDB				*e*Sg	**Sb**	**12 56 13.3**	**+7.0**
STDB				*e*		12 56 18.4	
HRMR	**Khuramsha**	**6.05**	**225**	*e*Pn	**Pn**	**12 54 42.9**	**+0.5**
HRMR				*e*Pg	**Pb**	**12 55 01.2**	**+2.8**
HRMR				Pmax		12 55 09.7	
	comp=N,100nm,0.7s						
HRMR				*e*Sn	**Sn**	**12 55 50.2**	**-1.5**
HRMR				*e*Sg	**Sg**	**12 56 19.0**	**-8.0**
HRMR				Smax		12 56 33.9	
	comp=N,1µm,0.9s						
IENR	**Iengra**	**6.17**	**84**	*e*Pn	**Pn**	**12 54 45.5**	**+1.4**
IENR				*e*Pg	**Pb**	**12 55 04.2**	**+3.8**
IENR				*e*Sn	**Sn**	**12 55 55.1**	**+0.4**
IENR				*e*Sg	**Sg**	**12 56 25.0**	**-5.8**
BGT	**Bolshoye Golou**	**6.41**	**234**	*e*Pn	**Pn**	**12 54 48.2**	**+0.9**
BGT				*e*		12 54 58.8	
BGT				*e*Pg	**Pb**	**12 55 06.6**	**+2.1**
BGT				Pmax		12 55 06.7	
	comp=N,24nm,0.9s						
BGT				*e*Sg	**Sb**	**12 56 28.9**	**+7.9**
BGT				Smax		12 56 38.7	
	comp=N,112nm,1.1s						
BGT				*e*		12 56 49.4	
KPC	**Khapcheranga**	**6.47**	**188**	*e*Pn	**Pn**	**12 54 49.2**	**+0.9**
KPC				*e*		12 55 01.6	
KPC				*e*Pg	**Pb**	**12 55 08.7**	**+3.1**
KPC				*e*		12 55 14.0	
KPC				max		12 55 18.0	
	comp=N,62nm,1.8s						
KPC				*e*Sn	**Sn**	**12 55 59.8**	**-2.3**
KPC				*e*Sg	**Sg**	**12 56 32.1**	**-8.4**
KPC				*e*		12 56 43.4	
KPC				max		12 56 49.3	
	comp=N,644nm,1.5s						
IRK	**Irkutsk**	**6.81**	**239**	*e*PG	**Pb**	**12 55 14.1**	**+2.8**
IRK				*e*		12 56 41.7	
IRK				pmax	pmax		
	comp=Z,56nm,0.2s						
IRK				smax	smax		
	comp=N,324nm,1.3s						
TLY	**Talaya**	**7.47**	**238**	*e*Pg	**Pb**	**12 55 25.7**	**+3.2**
TLY				*e*		12 55 28.3	
TLY				max		12 56 01.8	
	comp=N,27nm,1.8s						
TLY				*e*Sn	**Sn**	**12 56 23.8**	**-2.8**
TLY				*e*Sg	Sb	12 57 02.0	+10
TLY				Smax		12 57 08.6	
	comp=N,90nm,1.4s						
TLY	**Talaya**	**7.47**	**238**	*e*PG	**Pb**	**12 55 26.6**	**+4.1**
TLY				*e*		12 56 59.9	
TLY				pmax	pmax		
	comp=Z,25nm,0.4s						
TLY				smax	smax		
	comp=E,85nm,0.7s						
HIA	**Hailar**	**7.73**	**150**	⇓*e*PN	**Pn**	**12 55 03.4**	**-2.2**
ARS	**Arshan**	**7.91**	**243**	*e*Pg	Pb	12 55 35.2	+5.1
ARS				Pmax		12 56 35.9	
	comp=E,84nm,1.3s						
ARS				*e*		12 57 13.9	
ARS				*e*Sg	Sg	12 57 15.8	-11
ARS				Smax		12 57 38.7	
	comp=E,295nm,0.7s						
ARS	**Arshan**	**7.91**	**243**	*e*PG	Pb	12 55 36.2	+6.1
ZEA	**Zeya**	**8.09**	**101**	*e*PN	**Pn**	**12 55 12.2**	**+1.8**
ZEA				*e*		12 55 41.5	
ZAK	**Zakamensk**	**8.53**	**232**	*e*Pn	**Pn**	**12 55 17.3**	**+0.8**
ZAK				*e*Pg	Pg	12 55 46.1	-10
ZAK				Pmax		12 56 10.8	
	comp=E,13nm,1.2s						
ZAK				*e*Sn	**Sn**	**12 56 48.4**	**-4.3**
ZAK				*e*Sg	Sg	12 57 35.3	-11
ZAK				Smax		12 58 12.9	
	comp=E,111nm,2.0s						
ZAK	**Zakamensk**	**8.53**	**232**	*e*PG	**Pg**	**12 55 54.4**	**-1.7**
ZAK				*e*		12 57 35.4	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK				smax	smax		
	comp=N,111nm,2.0s						
MOY	**Mondy**	**8.78**	**245**	*e*Pn	**Pn**	**12 55 19.5**	**-0.5**
MOY				*e*Pg	Pg	12 55 49.8	-11
MOY				Pmax		12 56 22.3	
	comp=N,45nm,1.8s						
MOY				*e*Sn	**Sn**	**12 56 55.7**	**-3.3**
MOY				*e*		12 57 20.9	
MOY				*e*Sg	Sg	12 57 42.1	-12
MOY				Smax		12 58 19.2	
	comp=N,181nm,1.5s						
MOY	**Mondy**	**8.78**	**245**	*e*PN	**Pn**	**12 55 20.9**	**+0.9**
MOY				*e*		12 55 49.8	
MOY				*e*S	**Sn**	**12 56 56.7**	**-2.3**
MOY				*e*		12 57 42.7	
MOY				pmax	pmax		
	comp=Z,28nm,1.2s						
MOY				smax	smax		
	comp=E,181nm,1.6s						
ORL	**Orlik**	**8.93**	**252**	*e*Pn	**Pn**	**12 55 22.5**	**+0.4**
ORL				*e*		12 55 50.2	
ORL				max		12 56 09.9	
	comp=E,26nm,1.3s						
ORL				*e*Sn	**Sn**	**12 56 59.5**	**-3.2**
ORL				*e*Sg	Sg	12 57 47.2	-12
ORL				Smax		12 58 01.9	
	comp=E,128nm,1.1s						
ORL	**Orlik**	**8.93**	**252**	*e*PN	**Pn**	**12 55 22.2**	**+0.1**
ORL				*e*		12 55 53.1	
ORL				*e*		12 57 47.2	
ORL				pmax	pmax		
	comp=Z,27nm,0.8s						
ORL				smax	smax		
	comp=N,127nm,1.3s						
SONM	**Songino Array**	**9.46**	**212**	Pn	**Pn**	**12 55 30.0**	**+0.7**
	comp=N,0.1nm,0.3s,baz=14,slow=14,SNR=1.9						
SONM				Pg		12 56 03.0	
	comp=N,0.5nm,0.3s,baz=22,slow=16,SNR=2.8						
SONM				Lg	Lg	12 58 09.4	
	comp=N,2.4nm,0.3s,baz=24,slow=29,SNR=9.2						
YAK	**Yakutsk**	**10.08**	**47**	*e*P	**Pn**	**12 55 36.7**	**-0.9**
YAK				*e*S	**Sn**	**12 57 30.2**	**-0.3**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK				smax	smax		
	comp=E,13nm,0.9s						
YAK				smax	smax		
	comp=N,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,129nm,1.3s						
YAK				pmax	pmax		
	comp=Z,53nm,1.1s						
YAK				pmax	pmax		
	comp=E,67nm,1.0s						
TDJR	**Todzha**	**11.00**	**258**	*e*Sg		12 58 50.9	
TDJR				*e*		12 59 00.7	
KNGR	**Kungurtug, Tuv**	**11.18**	**247**	*e*Pn	**Pn**	**12 55 53.9**	**+1.1**
KNGR				*e*Pg		12 56 32.6	
KNGR				*e*Sg		12 58 57.6	
ARDR	**Aradan**	**12.40**	**262**	*e*Sg		12 59 34.2	
KLR	**Kul'dur**	**12.85**	**115**	Pn	**Pn**	**12 56 14.9**	**-0.7**
	comp=E,0.4nm,0.3s,baz=305,slow=9.4,SNR=3.9						
KLR				Sn	Sn	12 58 25.6	-13
	comp=E,0.1nm,0.3s,baz=51,slow=17,SNR=2.3						
KLR				Lg	Lg	12 59 56.2	
	comp=E,0.3nm,0.3s,baz=43,slow=19,SNR=3.4						
USRK	**Ussuriysk Ar.**	**16.59**	**128**	Pn	**P**	**12 57 07.6**	**-0.4**
	baz=305,slow=14,SNR=2.1						
USRK				Lg	Lg	13 01 55.5	
	baz=328,slow=26,SNR=5.2						
ZALV	**Zalesovo Beam**	**16.71**	**275**	Pn	**Pn**	**12 57 05.8**	**-1.2**
	comp=E,0.1nm,0.3s,baz=72,slow=14,SNR=3.1						
ZALV				Lg	Lg	13 01 59.8	
	comp=E,0.1nm,0.3s,baz=68,slow=27,SNR=5.1						
TIXI	**Tiksi**	**16.86**	**16**	⇓*e*P	**Pn**	**12 57 08.7**	**+0.1**
NRIK	**Noril'sk**	**17.69**	**329**	P	**Pn**	**12 57 15.4**	**-3.7**
	comp=E,1.0nm,0.3s,baz=119,slow=9.5,SNR=6.9						
NRIK				S	Sn	13 00 25.1	-11
	comp=E,0.5nm,0.3s,baz=4.4,slow=15,SNR=2.6						
NRIK	**Noril'sk**	**17.69**	**329**	*e*P	**Pn**	**12 57 18.4**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	**Seymchan**	**20.45**	**55**	P	**P**	**12 57 51.6**	**+1.4**
	comp=Z,3.1nm,0.8s,baz=283,slow=14,SNR=4.2						
SEY	**Seymchan**	**20.45**	**55**	⇑*e*P	Pn	12 57 52.9	+0.5
KURK	**Kurchatov**	**21.50**	**270**	⇑*e*P	**P**	**12 58 02.6**	**+1.0**
KURK				pmax	pmax		
	comp=Z,14nm,1.1s						
MKAR	**Makanchi Array**	**21.57**	**258**	P	**P**	**12 58 03.3**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=54,slow=9.1,SNR=5.0						
KURBB	**Kurchatov Arra**	**21.59**	**270**	P	**P**	**12 58 03.5**	**+0.9**
	comp=Z,6.6nm,0.7s,baz=66,slow=11,SNR=5.7						
BVAR	**Borovoye Array**	**25.06**	**281**	P	**P**	**12 58 38.3**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=70,slow=9.3,SNR=2.1						
FINES	**FINESS Array B**	**42.52**	**315**	P	**P**	**13 01 07.9**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=96,slow=3.8,SNR=3.3						
FINES	**FINESS Array B**	**42.52**	**315**	*e*P	**P**	**13 01 09.4**	**+1.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
COLA	**College**	**44.41**	**37**	⇓*e*P	**P**	**13 01 25.2**	**+2.0**
COLA				pmax	pmax		
	comp=Z,9.0nm,2.0s						
ILAR	**Eielson Array**	**44.80**	**37**	P	**P**	**13 01 27.2**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=304,slow=11,SNR=5.1						
ILAR	**Eielson Array**	**44.80**	**37**	*e*P	**P**	**13 01 28.5**	**+2.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GNI	**Garni**	**46.74**	**281**	⇑*e*P	**P**	**13 01 40.7**	**-1.5**
YKA	**Yellowknife Ar**	**55.88**	**25**	P	**P**	**13 02 50.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=334,slow=6.7,SNR=8.3						
ESDC	**Sonseca Array**	**71.03**	**314**	P	**P**	**13 04 32.4**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=30,slow=6.4,SNR=9.9						
NVAR	**Mina Array Bea**	**75.96**	**40**	P	**P**	**13 05 01.9**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=326,slow=4.4,SNR=4.4						
WRA	**Warramunga Arr**	**77.71**	**160**	P	**P**	**13 05 09.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=349,slow=5.8,SNR=2.4						
PFO	**Pinyon Flats O**	**80.93**	**41**	P	**P**	**13 05 27.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=304,slow=7.3,SNR=1.7						
ASAR	**Alice Springs**	**81.27**	**161**	P	**P**	**13 05 28.9**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=353,slow=4.7,SNR=2.5						

MOS ***03*** *13:02:43.1±0.9, 56°.05N×113°.78E, h3^{km}, mb3.7/1, Error ellipse: s-maj=17.0km s-min=11.7km az=68.8*

BYKL ***03*** *13:02:45.0±0.2, 56°.11N×113°.73E, h5^{km}±3^{km}*

ISC 03 13:02:45.6±0.7, **56°.11N**±0°.03×**113°.72E**±0°.02, **h10**^{km}**, n42,** σ2^{s}.**86**/91**, 6C-5D, East of Lake Baikal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**274**	⇑*i*Pg	**Pg**	**13 02 46.5**	**-1.6**
SVKR				*e*Sg	**Sg**	**13 02 48.7**	**-1.2**
SVKR	**Severomuysk**	**0.09**	**274**	⇑*i*PG	**Pg**	**13 02 46.5**	**-1.6**
SVKR				pmax	pmax		
	comp=Z,13µm,0.3s						
YOA	**Uoyan**	**1.12**	**272**	*e*Pg	**Pb**	**13 03 05.4**	**-1.5**
YOA				*e*		13 03 10.4	
YOA				*e*Sg	**Sb**	**13 03 21.0**	**-0.5**
YOA				*e*		13 03 25.7	
YOA				max			
	comp=Z,369nm,0.2s						
YOA				max			
	comp=Z,2µm,0.7s						
YOA	**Uoyan**	**1.12**	**272**	⇑*i*PG	**Pb**	**13 03 05.5**	**-1.5**
YOA				*i*		13 03 21.0	
YOA				pmax	pmax		
	comp=Z,246nm,0.2s						
YOA				smax	smax		
	comp=E,2µm,0.5s						
NLYR	**Nelyaty**	**1.17**	**70**	⇓*i*Pg	**Pb**	**13 03 05.7**	**-2.2**
NLYR				*e*Pb	**Pg**	**13 03 08.0**	**-0.1**
NLYR				*e*Sg	**Sb**	**13 03 22.8**	**-0.4**
NLYR				*e*Sb	**Sn**	**13 03 26.0**	**+1.9**
NLYR				max			
	comp=E,1µm,0.3s						
NLYR				max			
	comp=E,2µm,0.9s						
KMO	**Kumora**	**1.43**	**262**	⇑*i*Pg	**Pn**	**13 03 10.5**	**-1.1**
KMO				*e*		13 03 12.3	
KMO				*e*Sg	**Sn**	**13 03 30.9**	**+0.4**
KMO				*e*Sb	**Sg**	**13 03 33.6**	**+2.0**
KMO				max			
	comp=E,215nm,0.3s						
KMO				max			
	comp=E,1µm,0.8s						
KMO	**Kumora**	**1.43**	**262**	⇑*i*PG	**Pn**	**13 03 10.5**	**-1.1**
KMO				*e*		13 03 30.3	
KMO				pmax	pmax		
	comp=Z,71nm,0.3s						
KMO				smax	smax		
	comp=N,1µm,0.8s						
BOD	**Bodaibo**	**1.72**	**5**	*e*Pg	**Pn**	**13 03 15.8**	**+0.2**
BOD				*e*		13 03 17.7	
BOD				*e*Sn	**Sn**	**13 03 38.1**	**+0.5**
BOD				*e*Sg	**Sb**	**13 03 39.0**	**+0.1**
BOD				max			
	comp=N,350nm,1.4s						
BOD				Smax			
	comp=N,746nm,0.2s						
BOD	**Bodaibo**	**1.72**	**5**	*e*PN	**Pn**	**13 03 15.5**	**-0.1**
BOD				*e*		13 03 38.4	
BOD				pmax	pmax		
	comp=Z,220nm,0.4s						
BOD				smax	smax		
	comp=E,978nm,0.3s						
YLYR	**Ulyunkhan**	**1.91**	**231**	⇓*i*Pn	**Pn**	**13 03 18.6**	**+0.4**
YLYR				*e*Pg	**Pb**	**13 03 20.0**	**-0.5**
YLYR				*e*		13 03 20.9	
YLYR				*e*Sn	**Sn**	**13 03 44.2**	**+1.9**
YLYR				*e*Sg	**Sb**	**13 03 45.4**	**+1.1**
YLYR				max			
	comp=E,183nm,0.4s						
YLYR				Smax			
	comp=E,2µm,1.2s						
YLYR	**Ulyunkhan**	**1.91**	**231**	⇓*i*PN	**Pn**	**13 03 18.7**	**+0.5**
YLYR				*e*		13 03 19.9	

YLYR				*e*S	**Sn**	**13 03 43.1**	**+0.8**
YLYR				*e*		13 03 44.2	
YLYR				pmax	pmax		
	comp=Z,186nm,0.3s						
YLYR				smax	smax		
	comp=N,2μm,0.8s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*Pn	**Pn**	**13 03 25.6**	**+1.1**
NIZ				*e*Pg	**Pb**	**13 03 28.1**	**-0.3**
NIZ				*e*Sn	**Sn**	**13 03 54.1**	**+0.4**
NIZ				*e*Sg	**Sb**	**13 03 59.3**	**+1.6**
NIZ				Pmax			
	comp=N,27nm,0.3s						
NIZ				Smax			
	comp=N,413nm,0.7s						
CRS	**Chara**	**2.65**	**71**	⇓*i*Pn	**Pn**	**13 03 28.5**	**+0.2**
CRS				⇑*i*Pg	**Pb**	**13 03 32.8**	**-0.2**
CRS				*e*Sg	**Sb**	**13 04 07.5**	**+2.0**
CRS				Pmax			
	comp=N,582nm,0.9s						
CRS				Smax			
	comp=N,452nm,1.0s						
CRS	**Chara**	**2.65**	**71**	*e*PN	**Pn**	**13 03 28.2**	**-0.1**
CRS				*e*		13 03 32.4	
CRS				*e*		13 04 06.8	
CRS				pmax	pmax		
	comp=Z,340nm,0.5s						
CRS				smax	smax		
	comp=E,452nm,0.8s						
SYVR	**Suvo**	**3.26**	**223**	*e*Pn	**Pn**	**13 03 36.9**	**+0.1**
SYVR				*e*Pg	**Pb**	**13 03 44.0**	**+0.5**
SYVR				*e*PgPg	**PbPb**	**13 03 46.9**	**+0.2**
SYVR				*e*Sn	**Sn**	**13 04 15.9**	**+0.3**
SYVR				*e*Sg	**Sb**	**13 04 25.6**	**+2.3**
SYVR				*e*SgSg	**Sg**	**13 04 31.9**	**+1.6**
SYVR				max			
	comp=E,97nm,1.1s						
SYVR				max			
	comp=E,515nm,1.7s						
SYVR	**Suvo**	**3.26**	**223**	*e*PN	**Pn**	**13 03 36.9**	**+0.1**
SYVR				*e*		13 03 42.1	
SYVR				*e*		13 04 25.5	
SYVR				pmax	pmax		
	comp=Z,98nm,0.7s						
SYVR				smax	smax		
	comp=E,544nm,1.5s						
VTMR	**Vitim**	**3.40**	**350**	*e*Pn	**Pn**	**13 03 39.1**	**+0.5**
VTMR				*e*Pg	**Pb**	**13 03 46.4**	**+0.6**
VTMR				*e*Sn	**Sn**	**13 04 19.5**	**+0.6**
VTMR				*e*Sg	**Sb**	**13 04 29.6**	**+2.5**
TUP	**Tupik**	**3.95**	**113**	⇓*i*Pn	**Pn**	**13 03 45.8**	**-0.4**
TUP				*e*Pg	**Pb**	**13 03 56.1**	**+0.9**
TUP				*e*Sn	**Sn**	**13 04 31.3**	**-1.3**
TUP				*e*Sg	**Sb**	**13 04 47.1**	**+4.1**
TUP				*e*SgSg	**Sg**	**13 04 51.8**	**-0.4**
TUP				Pmax			
	comp=E,26nm,0.4s						
TUP				max			
	comp=E,372nm,1.1s						
TUP	**Tupik**	**3.95**	**113**	*e*PN	**Pn**	**13 03 45.8**	**-0.4**
TUP				*e*		13 03 55.7	
TUP				*e*S	**Sn**	**13 04 31.2**	**-1.3**
TUP				*e*		13 04 47.0	
TUP				pmax	pmax		
	comp=Z,25nm,0.4s						
TUP				smax	smax		
	comp=E,373nm,1.0s						
MXMB	**Maximikha**	**4.06**	**227**	*e*Pg	**Pb**	**13 03 58.3**	**+1.2**
MXMB				*e*Sg	**Sb**	**13 04 50.7**	**+4.6**
CIT	**Chita**	**4.10**	**181**	*e*Sg	**Sb**	**13 04 52.3**	**+4.9**
CIT				Smax			
	comp=E,169nm,0.3s						
OGRR	**Ongureny**	**4.31**	**238**	*e*Pn	**Pn**	**13 03 53.2**	**+2.0**
OGRR				*e*Pg	**Pb**	**13 04 02.6**	**+1.2**
OGRR				*e*Sn	**Sn**	**13 04 41.2**	**-0.3**
OGRR				*e*Sg	**Sb**	**13 04 58.2**	**+4.7**
OGRR				Pmax			
	comp=E,32nm,1.2s						
OGRR				Smax			
	comp=E,102nm,1.2s						
OGRR	**Ongureny**	**4.31**	**238**	*e*PN	**Pn**	**13 03 51.8**	**+0.6**
OGRR				*e*		13 04 02.7	
OGRR				*e*		13 04 56.9	
OGRR				pmax	pmax		
	comp=Z,46nm,1.7s						
OGRR				smax	smax		
	comp=N,133nm,1.6s						
YKLR	**Yuktali**	**4.44**	**80**	*e*Pn	**Pn**	**13 03 52.9**	**-0.1**
YKLR				*e*Pg	**Pb**	**13 04 03.7**	**+0.1**
YKLR				*e*Sn	**Sn**	**13 04 42.4**	**-2.3**
YKLR				*e*Sg	**Sb**	**13 05 01.5**	**+4.3**
ZRHB	**Zarechye**	**5.24**	**230**	*e*Pg	**Pb**	**13 04 18.5**	**+1.3**
ZRHB				*e*Sg	**Sb**	**13 05 26.5**	**+6.4**
ZRHB				Pmax			
	comp=N,20nm,0.4s						
ZRHB				Smax			
	comp=N,553nm,1.3s						
TRG	**Tyrgan**	**5.45**	**235**	*e*Pn	**Pn**	**13 04 07.5**	**+0.6**
TRG				*e*Pg	**Pb**	**13 04 22.8**	**+1.9**
TRG				*e*		13 04 27.8	
TRG				*e*Sn	**Sn**	**13 05 09.2**	**-0.5**
TRG				*e*Sg	**Sb**	**13 05 33.4**	**+7.1**
TRG				Pmax			
	comp=N,1.0nm,0.3s						
TRG				Smax			
	comp=N,73nm,1.6s						
TRG	**Tyrgan**	**5.45**	**235**	*e*PN	**Pn**	**13 04 06.7**	**-0.2**
TRG				*e*		13 04 21.4	
TRG				*e*S	**Sn**	**13 05 06.1**	**-3.6**
TRG				*e*		13 05 30.7	
TRG				pmax	pmax		
	comp=Z,28nm,1.6s						
TRG				smax	smax		
	comp=E,73nm,1.0s						
FFNB	**Fofonovo**	**5.77**	**228**	*e*Pg	**Pb**	**13 04 28.3**	**+2.0**
FFNB				*e*Sg	**Sb**	**13 05 43.7**	**+8.3**
STDB	**Stepnoy Dvoret**	**5.85**	**231**	*e*Sg	**Sb**	**13 05 45.8**	**+8.1**
HRMR	**Khuramsha**	**6.01**	**224**	*e*Pn	**Pn**	**13 04 14.8**	**+0.3**
HRMR				*e*Pg	**Pb**	**13 04 34.1**	**+3.7**
HRMR				*e*Sn	**Sn**	**13 05 22.2**	**-1.2**
HRMR				*e*Sg	**Sg**	**13 05 51.8**	**-6.6**
HRMR				Pmax			
	comp=E,23nm,0.9s						
HRMR				Smax			
	comp=E,430nm,0.9s						
IENR	**Iengra**	**6.23**	**84**	*e*Pn	**Pn**	**13 04 16.9**	**-0.6**
IENR				*e*Pg	**Pb**	**13 04 36.8**	**+2.8**
IENR				*e*Sg	**Sb**	**13 05 56.3**	**+7.8**
BGT	**Bolshoye Golou**	**6.36**	**234**	*e*Sg	**Sg**	**13 06 02.6**	**-7.0**
BGT				Smax			
	comp=E,46nm,1.2s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*	**Pn**	**13 04 19.4**	**-1.5**
KPC				*e*Pg	**Pb**	**13 04 40.4**	**+2.2**
KPC				*e*Sn	**Sn**	**13 05 33.5**	**-1.2**
KPC				*e*Sg	**Sg**	**13 06 05.1**	**-8.0**
KPC				Pmax			
	comp=E,3.0nm,0.4s						
KPC				Smax			
	comp=E,197nm,1.4s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*PN	**Pn**	**13 04 18.9**	**-2.0**
KPC				*e*		13 04 39.0	
KPC				*e*		13 06 03.8	
KPC				pmax	pmax		
	comp=Z,23nm,1.2s						
KPC				smax	smax		
	comp=E,197nm,2.0s						
LSTR	**Listvyanka**	**6.74**	**235**	*e*Sg	Sg	13 06 13.9	-8.0
LSTR				Smax			
	comp=E,62nm,1.5s						
TLY	**Talaya**	**7.42**	**237**	*e*Sg	Sb	13 06 34.1	+11
TLY				Smax			
	comp=E,39nm,0.3s						
ARS	**Arshan**	**7.86**	**242**	*e*Sg	Sg	13 06 48.7	-9.0
ARS				Smax			
	comp=E,87nm,0.9s						
ZEA	**Zeya**	**8.15**	**101**	*e*PG	**Pg**	**13 05 19.1**	**-2.4**
ZAK	**Zakamensk**	**8.48**	**232**	*e*Sg	Sg	13 07 08.0	-10
ZAK				Smax			
	comp=E,40nm,1.8s						
MOY	**Mondy**	**8.73**	**245**	*e*Pn	**Pn**	**13 04 51.8**	**-0.1**
MOY				*e*Sn	**Sn**	**13 06 26.2**	**-4.1**
MOY				*e*Sg	Sg	13 07 14.4	-11
MOY				max			
	comp=E,13nm,1.3s						
MOY				Smax			
	comp=E,68nm,1.8s						
ORL	**Orlik**	**8.88**	**252**	*e*Pn	**Pn**	**13 04 56.5**	**+2.6**
ORL				*e*Sn	**Sn**	**13 06 30.5**	**-3.5**
ORL				*e*Sg	Sg	13 07 20.3	-10
ORL				max			
	comp=E,11nm,1.4s						
ORL				Smax			
	comp=E,39nm,1.6s						
KNGR	**Kungurtug, Tuv**	**11.13**	**247**	*e*Sg		13 08 30.5	

WEL 03 13:04:42.3, 38°S±10°×**18°0E**±°**, h33^{km}, M3.2**/20**, ML3.5**/20**, MLv3.2**/20**, Error ellipse: s-maj=0.0km s-min=0.0km az=176.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.24**	**268**	P	Pn	13 05 03.9	+0.6
MXZ	**Matakaoa Point**	**1.35**	**279**	P	Pn	13 05 05.3	+0.5
PUZ	**Puketiti**	**1.40**	**257**	P	Pn	13 05 06.0	+0.6
PUZ				S	Sn	13 05 23.5	+0.7
CNGZ	**Carnagh Statio**	**1.57**	**243**	P	Pb	13 05 09.7	-1.0
TWGZ	**Tauwhareparae**	**1.63**	**255**	P	Pn	13 05 09.8	+1.0
TWGZ				S	Sn	13 05 29.6	+1.0
HAZ	**Te Kaha**	**1.75**	**270**	P	Pn	13 05 10.9	+0.7
HAZ				S	Sn	13 05 31.5	+0.2
TKGZ	**Te Karaka**	**1.81**	**248**	P	Pn	13 05 12.3	+1.2
TKGZ				S	Sn	13 05 34.0	+1.1
RUGZ	**Raukumara Rang**	**1.83**	**263**	P	Pn	13 05 12.2	+0.7
RIGZ	**Rimuhau**	**1.98**	**241**	P	Pn	13 05 14.5	+1.0
RIGZ				S	Sn	13 05 38.9	+1.7
PRGZ	**Paritu Road**	**2.01**	**235**	P	Pn	13 05 15.0	+1.1
MWZ	**Matawai**	**2.02**	**253**	P	Pn	13 05 14.5	+0.4
MHGZ	**Mahia Peninsul**	**2.13**	**229**	P	Pn	13 05 16.4	+0.8
RAGZ	**Rawiri**	**2.15**	**250**	P	Pn	13 05 17.1	+1.3
RAGZ				S	Sn	13 05 42.1	+0.7
KNZ	**Kokohu**	**2.20**	**235**	P	Pn	13 05 17.2	+0.7
SNGZ	**Shannon Statio**	**2.31**	**243**	P	Pn	13 05 19.0	+1.0
SNGZ				S	Sn	13 05 46.1	+0.8
URZ	**Urewera**	**2.32**	**257**	P	Pn	13 05 19.6	+1.4
URZ				S	Sn	13 05 46.0	+0.5
RTZ	**Ruatahuna**	**2.51**	**250**	P	Pn	13 05 22.4	+1.5
WHHZ	**Waihua**	**2.52**	**238**	P	Pn	13 05 22.5	+1.6
WHHZ				S	Sn	13 05 51.9	+1.4
RAHZ	**Arahi**	**2.55**	**243**	P	Pn	13 05 22.8	+1.5
RAHZ				S	Sn	13 05 52.4	+1.3
MUGZ	**Murupara**	**2.63**	**254**	P	Pn	13 05 24.0	+1.6
MTHZ	**Maungataniwha**	**2.70**	**246**	P	Pn	13 05 24.8	+1.4
MTHZ				S	Sn	13 05 56.1	+1.3
OPRZ	**Ohinepanea**	**2.72**	**268**	P	Pn	13 05 23.9	+0.3
ARHZ	**Aropaoanui**	**2.77**	**237**	P	Pn	13 05 26.0	+1.7
TARZ	**Mount Tarawera**	**2.79**	**259**	P	Pn	13 05 26.2	+1.5
RRRZ	**Republican Roa**	**2.80**	**257**	P	Pn	13 05 27.0	+2.2
MRHZ	**Matea Rd**	**3.00**	**248**	P	Pn	13 05 29.5	+2.0
BKZ	**Black Stump Fm**	**3.07**	**242**	P	Pn	13 05 29.3	+0.7
KAHZ	**Kahuranaki**	**3.15**	**229**	P	Pn	13 05 30.1	+0.4
PXZ	**Pawanui**	**3.32**	**226**	P	Pn	13 05 31.2	-0.6
BHHZ	**Black Hill Sta**	**3.52**	**240**	P	Pn	13 05 35.4	+0.7
KUZ	**Kuaotunu**	**3.55**	**286**	P	Pn	13 05 35.3	+0.2
PRHZ	**Porangahau**	**3.60**	**225**	P	Pn	13 05 35.2	-0.6
TMVZ	**Te Maari**	**3.62**	**247**	P	Pn	13 05 38.3	+2.2
ETVZ	**East Tongariro**	**3.62**	**247**	P	Pn	13 05 37.8	+1.7
PNHZ	**Pukenui**	**3.65**	**233**	P	Pn	13 05 36.8	+0.4
OTVZ	**Oturere**	**3.66**	**246**	P	Pn	13 05 37.7	+1.0
TUVZ	**Tukino**	**3.71**	**245**	P	Pn	13 05 40.9	+3.5
WNVZ	**Wahianoa**	**3.77**	**244**	P	Pn	13 05 40.9	+2.7
ANWZ	**Angora Road**	**3.83**	**224**	P	Pn	13 05 38.1	-0.7
TSZ	**Takapari Road**	**3.88**	**233**	P	Pn	13 05 39.1	-0.5
DVHZ	**Dannevirke**	**3.90**	**229**	P	Pn	13 05 39.2	-0.6
ETAZ	**East Tamaki Re**	**4.11**	**280**	P	Pn	13 05 44.7	+2.0
PRWZ	**Pori Road**	**4.17**	**227**	P	Pn	13 05 43.3	-0.4
MBAZ	**Motutapu North**	**4.18**	**282**	P	Pn	13 05 45.0	+1.3
POWZ	**Post Office Ro**	**4.19**	**230**	P	Pn	13 05 44.1	+0.2
MRZ	**Mangatainoka R**	**4.47**	**229**	P	Pn	13 05 46.8	-1.0
OGWZ	**Otaki Gorge**	**4.81**	**229**	P	Pn	13 05 51.8	-0.6
WCZ	**Waipu Caves**	**4.88**	**290**	P	Pn	13 05 54.8	+1.5
PKE	**Pukeiti**	**4.91**	**251**	P	Pn	13 05 59.1	+5.3
KIW	**Kapiti Island**	**5.00**	**230**	P	Pn	13 05 54.1	-0.9
OUZ	**Omahuta**	**5.74**	**294**	P	Pn	13 06 07.1	+1.9
CTZ	**Chatham Island**	**6.49**	**158**	P	Pn	13 06 17.0	+1.6

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*IDC **03** 13:05:19.3±1.1, 38°.43N×21°.77E, h0^{km}, mb4.0/9, mb1 3.9/13, mb1mx3.7/43, mbtmp3.8/13, ML3.2/4, Error ellipse: s-maj=19.9km s-min=19.0km az=31.0*

*PDG **03** 13:05:20.5±0.7, 38°.35N×21°.78E, h9^{km}±1^{km}, ML3.7/11, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

*ATH **03** 13:05:20.3, 38°.36N×21°.76E, h6^{km}±1^{km}, ML3.4/21, Error ellipse: s-maj=1.6km s-min=0.6km az=120.0*

*THE **03** 13:05:20.1, 38°.37N×21°.77E, h0^{km}±1^{km}, ML3.4/14, Error ellipse: s-maj=1.1km s-min=0.2km az=232.0*

ISC 03 13:05:20.5±0.7**, 38°.37N**±0°.02×**21°.77E**±0°.01**, h10^{km}**±4^{km}**, n198, σ1.^{s}07**/251**, mb4.1**/8**, 6C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.12**	**60**	P	**Pg**	**13 05 23.1**	**-0.3**
EFP				S	**Sb**	**13 05 25.5**	**+0.1**
EFP				AML	AML	13 05 25.6	
EFP				AML	AML	13 05 26.0	
	comp=N,71013μm,0.3s						
EFP	**Efpalio**	**0.12**	**60**	P	**Pg**	**13 05 23.1**	**-0.3**
EFP				S	**Sb**	**13 05 25.5**	**+0.1**
EFP				AML	AML	13 05 25.6	
EFP				AML	AML	13 05 26.0	
	comp=N,71013μm,0.3s						
EFP	**Efpalio**	**0.12**	**60**	P	**Pg**	**13 05 23.1**	**-0.3**
EFP				S	**Sb**	**13 05 25.1**	**-0.4**
	comp=N,58μm,0.3s						
SERG	**Sergoula**	**0.23**	**78**	P	**Pg**	**13 05 25.0**	**-0.2**
SERG				S	**Sg**	**13 05 28.3**	**-0.1**
SERG				AML	AML	13 05 29.6	
	comp=N,24079μm,0.2s						
SERG				AML	AML	13 05 30.0	
	comp=E,33564μm,0.3s						
SERG	**Sergoula**	**0.23**	**78**	P	**Pg**	**13 05 25.0**	**-0.2**
SERG				S	**Sg**	**13 05 28.3**	**-0.1**
SERG				AML	AML	13 05 29.6	
	comp=N,24079μm,0.2s						
SERG				AML	AML	13 05 30.0	
	comp=E,33564μm,0.3s						
SERG	**Sergoula**	**0.23**	**78**	P	**Pg**	**13 05 24.9**	**-0.3**
SERG				S	**Sg**	**13 05 28.3**	**-0.1**
	comp=E,15μm,0.3s						
TRIZ	**Trizonia**	**0.23**	**90**	P	**Pg**	**13 05 25.2**	**-0.2**
TRIZ				S	**Sg**	**13 05 29.1**	**+0.5**
TRIZ	**Trizonia**	**0.23**	**90**	P	**Pg**	**13 05 25.2**	**-0.2**
TRIZ				S	**Sg**	**13 05 29.1**	**+0.5**
TRIZ	**Trizonia**	**0.23**	**90**	P	**Pg**	**13 05 25.1**	**-0.2**
TRIZ				S	**Sg**	**13 05 28.9**	**+0.3**
	comp=E,25μm,0.3s						
ANX	**Ano Chora**	**0.25**	**27**	P	**Pg**	**13 05 25.5**	**-0.3**
ANX				S	**Sg**	**13 05 28.7**	**-0.5**
ANX				AML	AML	13 05 30.1	
	comp=E,43228μm,0.3s						
ANX				AML	AML	13 05 30.2	
	comp=N,42765μm,0.3s						
ANX	**Ano Chora**	**0.25**	**27**	P	**Pg**	**13 05 25.5**	**-0.3**
ANX				S	**Sg**	**13 05 28.7**	**-0.5**
ANX				AML	AML	13 05 30.1	
	comp=E,43228μm,0.3s						
ANX				AML	AML	13 05 30.2	
	comp=N,42765μm,0.3s						
ANX	**Ano Chora**	**0.25**	**27**	P	**Pg**	**13 05 25.5**	**-0.3**
ANX				S	**Sg**	**13 05 29.0**	**-0.3**
	comp=N,22μm,0.3s						
ALIK	**Aliki, Aigiali**	**0.29**	**112**	P	**Pg**	**13 05 26.1**	**-0.1**
ALIK				S	**Sg**	**13 05 29.9**	**-0.2**
KALE	**Kalithea**	**0.29**	**85**	P	**Pg**	**13 05 26.1**	**-0.3**
KALE				S	**Sg**	**13 05 30.3**	**0.0**
KALE				AML	AML	13 05 32.1	
	comp=N,23468μm,0.2s						
KALE				AML	AML	13 05 32.2	
	comp=E,13098μm,0.2s						
KALE	**Kalithea**	**0.29**	**85**	P	**Pg**	**13 05 26.1**	**-0.3**
KALE				S	**Sg**	**13 05 30.3**	**0.0**
KALE				AML	AML	13 05 32.1	
	comp=N,23468μm,0.2s						
KALE				AML	AML	13 05 32.2	
	comp=E,13098μm,0.2s						
KALE	**Kalithea**	**0.29**	**85**	P	**Pg**	**13 05 26.0**	**-0.3**
KALE				S	**Sg**	**13 05 30.4**	**+0.1**
	comp=E,9μm,0.2s						
RLS	**Riolos of Patr**	**0.39**	**218**	P	**Pg**	**13 05 28.2**	**0.0**
RLS				S	**Sg**	**13 05 33.0**	**-0.4**
RLS				AML	AML	13 05 34.8	
	comp=N,14323μm,0.4s						
RLS				AML	AML	13 05 36.2	
	comp=E,12832μm,0.4s						
RLS	**Riolos of Patr**	**0.39**	**218**	P	**Pg**	**13 05 28.2**	**0.0**
RLS				S	**Sg**	**13 05 33.0**	**-0.4**
RLS				AML	AML	13 05 34.8	
	comp=N,14323μm,0.4s						
RLS				AML	AML	13 05 36.2	
	comp=E,12832μm,0.4s						
RLS	**Riolos of Patr**	**0.39**	**218**	P	**Pg**	**13 05 28.2**	**0.0**
RLS				S	**Sg**	**13 05 34.1**	**+0.7**
	comp=E,7μm,0.4s						
DRO	**Drossia**	**0.42**	**187**	P	**Pg**	**13 05 28.2**	**-0.4**
DRO				AML	AML	13 05 35.7	
	comp=E,9443μm,0.2s						
DRO				AML	AML	13 05 37.0	
	comp=N,17309μm,0.2s						
DRO	**Drossia**	**0.42**	**187**	P	**Pg**	**13 05 28.2**	**-0.4**
DRO				AML	AML	13 05 35.7	
	comp=E,9443μm,0.2s						
DRO				AML	AML	13 05 37.0	
	comp=N,17309μm,0.2s						
DRO	**Drossia**	**0.42**	**187**	P	**Pg**	**13 05 28.3**	**-0.4**
DRO				S	**Sg**	**13 05 34.4**	**+0.2**
	comp=N,7μm,0.4s						
KLV	**Kalavryta, Ach**	**0.44**	**137**	P	**Pg**	**13 05 28.4**	**-0.7**
KLV				AML	AML	13 05 39.2	
	comp=E,4362μm,0.3s						
KLV				AML	AML	13 05 39.7	
	comp=N,3005μm,0.3s						
KLV	**Kalavryta, Ach**	**0.44**	**137**	P	**Pg**	**13 05 28.4**	**-0.7**
KLV				AML	AML	13 05 39.2	
	comp=E,4362μm,0.3s						
KLV				AML	AML	13 05 39.7	
	comp=N,3005μm,0.3s						
KLV	**Kalavryta, Ach**	**0.44**	**137**	P	**Pg**	**13 05 28.4**	**-0.7**
KLV				S	**Sg**	**13 05 35.0**	**+0.1**
PDO	**Prodromos**	**0.52**	**297**	P	**Pg**	**13 05 29.7**	**-0.9**
PDO				S	**Sg**	**13 05 36.9**	**-0.6**
PDO				AML	AML	13 05 40.9	
	comp=N,29118μm,0.3s						
PDO				AML	AML	13 05 41.3	
	comp=E,17770μm,0.3s						
PDO	**Prodromos**	**0.52**	**297**	P	**Pg**	**13 05 29.7**	**-0.9**
PDO				S	**Sg**	**13 05 36.9**	**-0.6**
PDO				AML	AML	13 05 40.9	
	comp=N,29118μm,0.3s						
PDO				AML	AML	13 05 41.3	
	comp=E,17770μm,0.3s						
PDO	**Prodromos**	**0.52**	**297**	P	**Pg**	**13 05 30.0**	**-0.6**
EVR	**Evrytania**	**0.55**	**3**	P	**Pg**	**13 05 30.6**	**-0.6**
EVR				AML	AML	13 05 41.2	
	comp=N,6577μm,0.2s						
EVR				AML	AML	13 05 43.5	
	comp=E,12742μm,0.4s						
EVR	**Evrytania**	**0.55**	**3**	P	**Pg**	**13 05 30.6**	**-0.6**
EVR				AML	AML	13 05 41.2	
	comp=N,6577μm,0.2s						
EVR				AML	AML	13 05 43.5	
	comp=E,12742μm,0.4s						
EVR	**Evrytania**	**0.55**	**3**	P	**Pg**	**13 05 30.4**	**-0.8**
EVR				S	**Sg**	**13 05 38.7**	**+0.2**
	comp=E,5μm,0.4s						
DLFA	**Delphi**	**0.58**	**79**	P	**Pg**	**13 05 30.7**	**-1.0**
DLFA				AML	AML	13 05 42.0	
	comp=E,3057μm,0.3s						
DLFA				AML	AML	13 05 42.1	
	comp=N,4678μm,0.2s						
DLFA	**Delphi**	**0.58**	**79**	P	**Pg**	**13 05 30.7**	**-1.0**
DLFA				AML	AML	13 05 42.0	
	comp=E,3057μm,0.3s						
DLFA				AML	AML	13 05 42.1	
	comp=N,4678μm,0.2s						
DSF	**Desfina**	**0.59**	**86**	P	**Pg**	**13 05 31.0**	**-1.0**
DSF	**Desfina**	**0.59**	**86**	P	**Pg**	**13 05 31.0**	**-1.0**
DSF	**Desfina**	**0.59**	**86**	P	**Pg**	**13 05 31.0**	**-1.0**
DSF				S	**Sg**	**13 05 39.9**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.70**	**23**	P	**Pb**	**13 05 33.8**	**-1.0**
MAKR				S	**Sb**	**13 05 43.8**	**-0.8**
MAKR				AML	AML	13 05 46.8	
	comp=N,17334μm,0.3s						
MAKR				AML	AML	13 05 46.8	
	comp=E,23894μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.70**	**23**	P	**Pb**	**13 05 33.8**	**-1.0**
MAKR				S	**Sb**	**13 05 43.8**	**-0.8**
MAKR				AML	AML	13 05 46.8	
	comp=N,17334μm,0.3s						
MAKR				AML	AML	13 05 46.8	
	comp=E,23894μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.70**	**23**	P	**Pb**	**13 05 33.6**	**-1.2**
MAKR				S	**Sb**	**13 05 43.8**	**-0.8**
	comp=E,10μm,0.5s						
THAL	**Thalero**	**0.77**	**115**	P	**Pb**	**13 05 34.5**	**-1.5**
THAL				AML	AML	13 05 52.7	
	comp=E,11872μm,0.4s						
THAL				AML	AML	13 05 55.8	
	comp=N,7969μm,0.4s						
THAL	**Thalero**	**0.77**	**115**	P	**Pb**	**13 05 34.5**	**-1.5**
THAL				AML	AML	13 05 52.7	
	comp=E,11872μm,0.4s						
THAL				AML	AML	13 05 55.8	
	comp=N,7969μm,0.4s						
THAL	**Thalero**	**0.77**	**115**	P	**Pb**	**13 05 34.6**	**-1.4**
AGG	**Agios Georgios**	**0.79**	**33**	P	**Pb**	**13 05 34.3**	**-1.9**
AGG				AML	AML	13 05 48.5	
	comp=E,6935μm,0.3s						
AGG				AML	AML	13 05 48.8	
	comp=N,5199μm,0.3s						
AGG	**Agios Georgios**	**0.79**	**33**	P	**Pb**	**13 05 34.3**	**-1.9**
AGG				AML	AML	13 05 48.5	
	comp=E,6935μm,0.3s						
AGG				AML	AML	13 05 48.8	
	comp=N,5199μm,0.3s						
AGG	**Agios Georgios**	**0.79**	**33**	P	**Pb**	**13 05 34.4**	**-1.9**
AGG				S	**Sb**	**13 05 46.3**	**-0.7**
	comp=N,3μm,0.3s						
AXAR	**Agios Charalam**	**0.80**	**60**	P	**Pb**	**13 05 35.0**	**-1.4**
AXAR				S	**Sb**	**13 05 45.9**	**-1.4**
AXAR				AML	AML	13 05 51.2	
	comp=E,12222μm,0.3s						
AXAR				AML	AML	13 05 52.0	
	comp=N,11652μm,0.5s						
AXAR	**Agios Charalam**	**0.80**	**60**	P	**Pb**	**13 05 35.0**	**-1.4**
AXAR				S	**Sb**	**13 05 45.9**	**-1.4**
AXAR				AML	AML	13 05 51.2	
	comp=E,12222μm,0.3s						
AXAR				AML	AML	13 05 52.0	
	comp=N,11652μm,0.5s						
AXAR	**Agios Charalam**	**0.80**	**60**	P	**Pb**	**13 05 34.8**	**-1.7**
AXAR				S	**Sb**	**13 05 46.5**	**-0.8**
	comp=N,5μm,0.3s						
AMT	**Artemida-Makis**	**0.83**	**184**	P	**Pb**	**13 05 36.1**	**-1.0**
AMT	**Artemida-Makis**	**0.83**	**184**	P	**Pb**	**13 05 36.1**	**-1.0**
AMT	**Artemida-Makis**	**0.83**	**184**	P	**Pb**	**13 05 36.0**	**-1.0**
NYDR	**Nydri-Lefkada**	**0.91**	**293**	P	**Pb**	**13 05 37.0**	**-1.3**
NYDR	**Nydri-Lefkada**	**0.91**	**293**	P	**Pb**	**13 05 37.0**	**-1.3**
NYDR	**Nydri-Lefkada**	**0.91**	**293**	P	**Pb**	**13 05 37.0**	**-1.3**
EVGI	**Lefkada island**	**0.91**	**286**	P	**Pb**	**13 05 36.9**	**-1.5**
EVGI	**Lefkada island**	**0.91**	**286**	P	**Pb**	**13 05 36.9**	**-1.5**
EVGI	**Lefkada island**	**0.91**	**286**	P	**Pb**	**13 05 37.2**	**-1.2**
VLS	**Valsamata**	**0.95**	**259**	P	**Pb**	**13 05 37.7**	**-1.4**
VLS				AML	AML	13 05 54.3	
	comp=E,6869μm,0.2s						
VLS				AML	AML	13 05 54.5	
	comp=N,7003μm,0.3s						
VLS	**Valsamata**	**0.95**	**259**	P	**Pb**	**13 05 37.7**	**-1.4**
VLS				AML	AML	13 05 54.3	
	comp=E,6869μm,0.2s						
VLS				AML	AML	13 05 54.5	
	comp=N,7003μm,0.3s						
VLS	**Valsamata**	**0.95**	**259**	P	**Pb**	**13 05 37.6**	**-1.4**
VLS				S	**Sb**	**13 05 51.9**	**+0.2**
	comp=N,3μm,0.2s						
VSK1	**VASILIKIADES**	**0.95**	**273**	P	**Pb**	**13 05 37.7**	**-1.4**
VSK1				S	**Sb**	**13 05 52.4**	**+0.7**
FSK	**Fiskardo**	**0.96**	**276**	P	**Pb**	**13 05 37.6**	**-1.5**
FSK	**Fiskardo**	**0.96**	**276**	P	**Pb**	**13 05 37.6**	**-1.5**
FSK	**Fiskardo**	**0.96**	**276**	P	**Pb**	**13 05 37.7**	**-1.5**
FSK				S	**Sb**	**13 05 52.5**	**+0.7**

LKD2	Lefkada island	0.97	296	P	Pb	13 05 38.2	-1.1
LKD2				AML	AML	13 06 00.4	
	comp=N,4562µm,0.4s						
LKD2				AML	AML	13 06 02.6	
	comp=E,4432µm,0.4s						
LKD2	Lefkada island	0.97	296	P	Pb	13 05 38.2	-1.1
LKD2				AML	AML	13 06 00.4	
	comp=N,4562µm,0.4s						
LKD2				AML	AML	13 06 02.6	
	comp=E,4432µm,0.4s						
LKD2	Lefkada island	0.97	296	P	Pb	13 05 38.3	-1.1
PSDA	Pessada-Kefalo	0.97	255	P	Pb	13 05 37.9	-1.4
PSDA	Pessada-Kefalo	0.97	255	P	Pb	13 05 37.9	-1.4
PSDA	Pessada-Kefalo	0.97	255	P	Pb	13 05 38.0	-1.4
PSDA				S	Sb	13 05 52.4	+0.2
TSLK	Tsoukalades, L	0.99	298	P	Pb	13 05 38.8	-0.8
TSLK				AML	AML	13 06 03.5	
	comp=E,2985µm,0.6s						
TSLK				AML	AML	13 06 03.6	
	comp=N,3668µm,0.6s						
TSLK	Tsoukalades, L	0.99	298	P	Pb	13 05 38.8	-0.8
TSLK				AML	AML	13 06 03.5	
	comp=E,2985µm,0.6s						
TSLK				AML	AML	13 06 03.6	
	comp=N,3668µm,0.6s						
TSLK	Tsoukalades, L	0.99	298	P	Pb	13 05 38.9	-0.8
LKR	Lokris	1.00	73	P	Pb	13 05 38.4	-1.4
LKR				AML	AML	13 05 58.3	
	comp=N,3293µm,0.2s						
LKR				AML	AML	13 05 59.1	
	comp=E,3036µm,0.2s						
LKR	Lokris	1.00	73	P	Pb	13 05 38.4	-1.4
LKR				AML	AML	13 05 58.3	
	comp=N,3293µm,0.2s						
LKR				AML	AML	13 05 59.1	
	comp=E,3036µm,0.2s						
LKR	Lokris	1.00	73	P	Pb	13 05 38.5	-1.4
LKR				S	Sg	13 05 53.6	+0.8
	comp=E,1µm,0.4s						
VLMS	Volimes, Zakyn	1.00	241	P	Pb	13 05 38.8	-1.2
VLMS	Volimes, Zakyn	1.00	241	P	Pb	13 05 38.8	-1.2
VLMS	Volimes, Zakyn	1.00	241	P	Pb	13 05 38.7	-1.2
LOUT	Loutraki	1.02	111	P	Pb	13 05 40.1	-0.1
LOUT	Loutraki	1.02	111	P	Pb	13 05 40.1	-0.1
ARG2	Argostoli	1.03	260	P	Pb	13 05 39.1	-1.3
ATAL	Atalanti	1.03	71	P	Pb	13 05 39.2	-1.2
ATAL				S	Sb	13 05 53.2	-0.8
ATAL				AML	AML	13 05 54.7	
	comp=N,2328µm,0.6s						
ATAL				AML	AML	13 05 58.8	
	comp=E,1278µm,0.5s						
ATAL	Atalanti	1.03	71	P	Pb	13 05 39.2	-1.2
ATAL				S	Sb	13 05 53.2	-0.8
ATAL				AML	AML	13 05 54.7	
	comp=N,2328µm,0.6s						
ATAL				AML	AML	13 05 58.8	
	comp=E,1278µm,0.5s						
ATAL	Atalanti	1.03	71	P	Pb	13 05 39.4	-1.0
ATAL				S	Sg	13 05 54.3	+0.6
KEF5	Kardakata, Kep	1.03	265	P	Pb	13 05 38.9	-1.4
KEF5	Kardakata, Kep	1.03	265	P	Pb	13 05 38.9	-1.4
KEF5	Kardakata, Kep	1.03	265	P	Pb	13 05 39.0	-1.4
KRI1	kERI	1.03	227	P	Pb	13 05 39.5	-0.9
ARGA	Argostoli. Kep	1.04	260	P	Pb	13 05 39.1	-1.4
ARGA	Argostoli. Kep	1.04	260	P	Pb	13 05 39.1	-1.4
LXRA	Lixouri, Kepha	1.07	261	P	Pb	13 05 40.0	-1.0
LXRA	Lixouri, Kepha	1.07	261	P	Pb	13 05 40.0	-1.0
KEF4	Livadi, Kephal	1.07	265	P	Pb	13 05 39.7	-1.3
KEF4	Livadi, Kephal	1.07	265	P	Pb	13 05 39.7	-1.3
KEF4	Livadi, Kephal	1.07	265	P	Pb	13 05 39.8	-1.2
KEF4				S	Sb	13 05 55.8	+0.8
VLX	Vlachokerasia	1.10	154	P	Pb	13 05 40.5	-1.2
DMLN	Damoulianata-K	1.11	264	P	Pn	13 05 40.2	-1.9
DMLN	Damoulianata-K	1.11	264	P	Pn	13 05 40.2	-1.9
DMLN	Damoulianata-K	1.11	264	P	Pn	13 05 40.4	-1.7
KEF3	Kipouria, Keph	1.13	262	P	Pn	13 05 40.3	-2.1
KEF3	Kipouria, Keph	1.13	262	P	Pn	13 05 40.3	-2.1
ITM	Ithomi	1.19	174	P	Pn	13 05 42.2	-1.0
ITM	Ithomi	1.19	174	P	Pn	13 05 42.2	-1.0
ITM	Ithomi	1.19	174	P	Pn	13 05 42.3	-0.9
THL	Klokotos Trika	1.21	9	P	Pn	13 05 43.1	-0.3
THL	Klokotos Trika	1.21	9	P	Pn	13 05 43.1	-0.3
THL	Klokotos Trika	1.21	9	P	Pn	13 05 43.2	-0.3
THL				S	Sn	13 06 00.5	+0.6
	comp=E,765nm,0.6s						
SMIA	Simia	1.23	65	P	Pn	13 05 43.0	-0.7
SMIA	Simia	1.23	65	P	Pn	13 05 43.0	-0.7
SMIA	Simia	1.23	65	P	Pn	13 05 43.1	-0.7
VOL2	Volos	1.36	42	P	Pb	13 05 46.4	+0.5
VOL2	Volos	1.36	42	P	Pb	13 05 46.4	+0.5
PYL	PYLOS	1.47	181	P	Pn	13 05 46.6	-0.3
PYL	PYLOS	1.47	181	P	Pn	13 05 46.6	-0.3
PYL	PYLOS	1.47	181	P	Pn	13 05 47.2	+0.2
JAN	Janina	1.48	331	P	Pb	13 05 48.6	+0.6
JAN	Janina	1.48	331	P	Pb	13 05 48.6	+0.6
XOR	Xorichti	1.49	48	P	Pn	13 05 47.1	-0.2
XOR				AML	AML	13 06 14.6	
	comp=E,850µm,0.3s						
XOR				AML	AML	13 06 14.9	
	comp=N,1342µm,0.4s						
XOR	Xorichti	1.49	48	P	Pn	13 05 47.1	-0.2
XOR				AML	AML	13 06 14.6	
	comp=E,850µm,0.3s						
XOR				AML	AML	13 06 14.9	
	comp=N,1342µm,0.4s						
XOR	Xorichti	1.49	48	P	Pn	13 05 47.3	0.0
KPRO	Kipourio	1.62	349	P	Pn	13 05 50.2	+1.1
KPRO	Kipourio	1.62	349	P	Pn	13 05 50.2	+1.1
ATHU	Athens Univers	1.63	104	P	Pn	13 05 49.2	0.0
ATHU				AML	AML	13 06 11.9	
	comp=N,931µm,0.6s						
ATHU				AML	AML	13 06 15.8	
	comp=E,475µm,0.5s						
ATHU	Athens Univers	1.63	104	P	Pn	13 05 49.2	0.0
ATHU				AML	AML	13 06 11.9	
	comp=N,931µm,0.6s						
ATHU				AML	AML	13 06 15.8	
	comp=E,475µm,0.5s						
ATHU	Athens Univers	1.63	104	P	Pn	13 05 49.4	+0.1
PTL	Penteli	1.68	100	P	Pn	13 05 49.9	0.0
DION	Dionisos Attik	1.73	99	P	Pn	13 05 50.5	0.0
DION	Dionisos Attik	1.73	99	P	Pn	13 05 50.5	0.0
DION	Dionisos Attik	1.73	99	P	Pn	13 05 50.7	+0.2
LIT	Litokhoron	1.82	18	P	Pn	13 05 52.3	+0.5
LIT	Litokhoron	1.82	18	P	Pn	13 05 52.3	+0.5
LIT	Litokhoron	1.82	18	P	Pn	13 05 52.6	+0.8
KZN	Kozani	1.94	360	P	Pn	13 05 53.8	+0.3
KZN	Kozani	1.94	360	P	Pn	13 05 53.8	+0.3
PAIG	Paliouri	2.15	43	P	Pn	13 05 56.0	-0.3
PAIG	Paliouri	2.15	43	P	Pn	13 05 56.0	-0.3
OHR	Ohrid	2.84	345	iPn	Pb	13 06 09.8	-1.5
VAY	Valandovo	3.01	11	iPn	Pn	13 06 11.7	+3.5
SKO	Skopje	3.61	356	iPn	Pb	13 06 22.5	-1.9
IDI	Anoyia	3.96	140	Pn	Pn	13 06 22.5	+1.2
	comp=E,1.0nm,0.3s,baz=320,slow=17,SNR=2.7						
IDI				Sn	Sn	13 07 05.5	-2.4
	comp=E,1.2nm,0.3s,baz=331,slow=16,SNR=1.8						
ULC	Ulcinj	4.08	332	⇑iPn	Pn	13 06 24.6	+1.7
ULC				iSn	Sn	13 07 12.0	+1.3
DRME	Dracevica, Mon	4.30	333	ePn	Pn	13 06 27.2	+1.3
DRME	Dracevica, Mon	4.30	333	⇑iPn	Pn	13 06 27.7	+1.8
DRME				iSn	Sn	13 07 17.2	+1.1
PDG	Podgorica	4.49	335	ePn	Pn	13 06 29.7	+1.2
TTG	Podgorica	4.49	335	⇓iPn	Pn	13 06 30.3	+1.8
TTG				iSn	Sn	13 07 21.8	+1.0
BUM	Brajici-Budva	4.50	332	⇓iPn	Pn	13 06 30.0	+1.2
BUM				iSn	Sn	13 07 22.0	+0.8
CEME	Cevo	4.71	333	⇑iPn	Pn	13 06 33.2	+1.6
CEME				iSn	Sn	13 07 27.0	+0.7
HCY	Herceg Novi	4.78	329	ePn	Pn	13 06 31.7	-0.8
HCY	Herceg Novi	4.78	329	ePn	Pn	13 06 33.0	+0.5
HCY				iSn	Sn	13 07 28.7	+0.7
KOME	Kolasin	4.80	340	ePn	Pn	13 06 34.5	+1.7
KOME				iSn	Sn	13 07 29.1	+0.6
NKY	Niksic	4.92	335	⇑iPn	Pn	13 06 36.1	+1.6
NKY				iSn	Sn	13 07 31.9	+0.4
TREB	Trebinje	5.07	330	ePn	Pn	13 06 36.9	+0.5
SJES	Sjenica	5.08	345	ePn	Pn	13 06 39.2	+2.5
BRY	Bratogost	5.16	333	ePn	Pn	13 06 37.9	+0.1
BRY	Bratogost	5.16	333	⇑iPn	Pn	13 06 39.2	+1.4
BRY				iSn	Sn	13 07 37.4	0.0
PLE	Pljevlja	5.28	341	⇓iPn	Pn	13 06 41.0	+1.6
PLE				iSn	Sn	13 07 40.4	+0.1
UPM	Unac-Piva	5.30	337	ePn	Pn	13 06 40.8	+1.0
UPM	Unac-Piva	5.30	337	⇑iPn	Pn	13 06 41.2	+1.4
UPM				iSn	Sn	13 07 40.8	-0.2
STON	Ston	5.46	327	ePn	Pn	13 06 42.1	+0.2
STON	Ston	5.46	327	ePn	Pn	13 06 41.5	-0.4
DIVS	Divibare	5.88	347	ePn	Pn	13 06 48.1	+0.4
VAE	Valguarnera	5.89	264	Sn	Sn	13 07 58.6	+3.3
	comp=E,1.7nm,0.3s,baz=258,slow=19,SNR=1.9						
HAPS	Han Pijesak,Bl	6.10	340	ePn	Pn	13 06 50.1	-0.6
HVAR	Hvar	6.28	322	ePn	Pn	13 06 52.4	-0.7
KIJV	Kijevo	6.94	326	ePn	Pn	13 07 02.7	+0.6
FRGS	Fruska Gora	6.94	348	ePn	Pn	13 07 00.1	-2.1
ZIRJ	Zirje	7.03	321	ePn	Pn	13 07 04.2	+0.9
MORI	Morici	7.15	322	ePn	Pn	13 07 05.7	+0.6
BLY	Banja Luka	7.25	333	ePn	Pn	13 07 05.3	-1.0
DUGI	Dugi Otok	7.56	320	ePn	Pn	13 07 11.0	+0.3
UDBI	Udbina	7.63	326	ePn	Pn	13 07 12.8	+1.1
MLR	Muntele Rosu	7.77	22	Pn	Pn	13 07 15.0	+1.3
	comp=E,0.1nm,0.3s,baz=156,slow=21,SNR=1.9						
NVLJ	Novalja	8.07	322	ePn	Pn	13 07 18.4	+0.7
CRES	Cresnjev	8.81	330	ePn	Pn	13 07 26.7	-1.1
CEY	Cerknica	9.17	326	ePn	Pn	13 07 31.7	-1.0
BRTR	Keskin Array B	9.33	78	Pn	Pn	13 07 38.1	+3.0
	comp=E,0.2nm,0.3s,baz=258,slow=12,SNR=7.1						
SOKA	Soboth	9.68	331	ePn	Pn	13 07 40.3	+0.5
	comp=E,1.0nm,0.5s						
OBKA	Obir	9.73	329	ePn	Pn	13 07 42.0	+1.6
	comp=E,1.9nm,0.7s						
ABTA	Abfaltersbach	10.80	324	ePn	Pn	13 07 55.3	+0.1
	comp=E,2.3nm,0.6s						
WTTA	Wattenberg	11.59	323	ePn	Pn	13 08 08.1	+2.1
	comp=E,3.9nm,1.1s						
WATA	Walderalm	11.67	323	ePn	Pn	13 08 08.9	+1.9
	comp=E,1.7nm,0.5s						
SQTA	Sankt Quirin	11.76	322	ePn	Pn	13 08 09.2	+0.9
	comp=E,3.3nm,0.9s						
FETA	Feichten	11.86	320	ePn	Pn	13 08 10.9	+1.2
	comp=E,1.4nm,0.8s						
MOTA	Moosalm	11.90	322	ePn	Pn	13 08 11.1	+0.9
	comp=E,3.1nm,1.3s						
GERES	GERESS Array B	11.99	333	Pn	Pn	13 08 12.4	+1.0
	comp=E,0.1nm,0.3s,baz=162,slow=16,SNR=2.1						
RETA	Reutte	12.16	322	ePn	Pn	13 08 13.2	-0.5
	comp=E,4.3nm,1.2s						
DAVA	Damuels	12.46	319	ePn	Pn	13 08 19.2	+1.2
	comp=E,13nm,1.8s						
AKASG	Malin Array Be	13.42	21	Pn	Pn	13 08 33.8	+3.0
	comp=E,0.3nm,0.3s,baz=204,slow=11,SNR=2.3						
ESDC	Sonseca Array	20.02	282	P	Pn	13 09 55.1	0.0
	comp=E,0.8nm,0.7s,baz=71,slow=11,SNR=5.9						
FINES	FINESS Array B	23.26	5	P	P	13 10 26.0	-1.7
	comp=E,4.7nm,1.0s,baz=185,slow=12,SNR=4.4						
NOA	NORSAR Array B	23.64	347	P	P	13 10 30.6	-1.0
	comp=E,1.1nm,0.8s,baz=155,slow=9.4,SNR=4.8						
EKA	Eskdalemuir Ar	23.85	323	P	P	13 10 32.8	-0.8
	comp=E,2.7nm,0.8s,baz=128,slow=9.0,SNR=4.5						
TORD	Torodi Ar. Bea	30.81	221	P	P	13 11 36.8	+0.3
	comp=E,0.7nm,0.6s,baz=38,slow=8.0,SNR=4.1						
ARCES	ARCESS Array B	31.29	3	P	P	13 11 39.9	-0.3
	comp=E,3.9nm,1.0s,baz=195,slow=9.8,SNR=1.3						
SPITS	Spitsbergen Ar	39.98	358	P	P	13 12 56.1	+1.4
	comp=E,9.6nm,0.9s,baz=163,slow=10,SNR=1.7						
MKAR	Makanchi Array	44.36	59	P	P	13 13 30.9	+0.1
	comp=E,2.4nm,0.5s,baz=276,slow=7.6,SNR=78						
MKAR				PcP	PcP	13 15 14.9	+0.2
	comp=E,0.3nm,0.6s,baz=292,slow=3.1,SNR=2.8						
ZALV	Zalesovo Beam	44.83	48	P	P	13 13 34.2	-0.2
	comp=E,1.7nm,0.4s,baz=277,slow=8.1,SNR=11						

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*NEIC **03** 13:07:44.7±0.2, 19°.00N±0°.07×65°.62W±0°.04, h8^{km}±41^{km}, Error ellipse: s-maj=10.3km s-min=5.4km az=184.0*

RSPR 03 13:07:45.2, 19°.04N×65°.53W, h7^{km}±9^{km}, MD2.9/3, 4C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.76	162	⇓eP	Pg	13 07 59.0	-0.8
CUPR	Culebra, Puert	0.76	162	eS	Sg	13 08 09.6	-0.2
CUPR	Culebra, Puert	0.76	162	Pg	Pg	13 07 59.1	-0.8
CBYP	Canovanas	0.82	202	⇑eP	Pg	13 07 59.6	-1.3
CBYP	Canovanas	0.82	202	⇑eP	Pg	13 07 59.6	-1.3
CBYP				eS	Sg	13 08 11.2	-0.4
CBYP	Canovanas	0.82	202	Pg	Pg	13 07 59.2	-1.8
GCPR	Guaynabo City	0.89	216	Pg	Pg	13 08 00.6	-1.7
GCPR				IAML		13 08 14.8	
	comp=E,28nm,3.1s						
GCPR				IAML		13 08 21.3	
	comp=N,37nm,3.0s						
MTP	Monte Pirata	0.94	181	⇑eP	Pg	13 08 01.7	-1.4
MTP	Monte Pirata	0.94	181	⇑eP	Pg	13 08 01.7	-1.4
MTP				eS	Sg	13 08 14.4	-0.9
MTP	Monte Pirata	0.94	181	Pg	Pg	13 08 01.9	-1.3
MTP				IAML		13 08 07.1	
	comp=E,26nm,2.8s						
MTP				IAML		13 08 24.3	
	comp=N,33nm,1.6s						
IGPR	InterUniversit	1.20	207	Pg	Pg	13 08 07.7	-0.5
IGPR				IAML		13 08 24.1	
	comp=E,26nm,1.0s						

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*IDC **03** 13:14:44.8±2.7, 10°.44S×161°.45E, h80^{km}±21^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/25, mbtmp3.8/7, MS3.0/1, Ms1 3.0/1, ms1mx2.6/17, Error ellipse: s-maj=27.5km s-min=19.9km az=70.0*

ISC 03 13:14:43.1±0.9, 10°.3S±0°.1×161°.6E±0°.1, h61^{km}, n9, σ1^{s}.43/10, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.82	300	P	Pn	13 15 12.3	+0.2
	47nm,0.3s,baz=149,slow=10,SNR=36						
HNR				S	Sn	13 15 36.4	+2.3
	200nm,0.3s,baz=135,slow=16,SNR=14						
DZM	Mont Dzumac	12.57	159	P	Pn	13 17 41.1	+1.8
	0.5nm,0.3s,baz=35,slow=9.1,SNR=21						
PMG	Port Moresby	14.21	273	LR	LR	13 22 29.7	
	comp=Z,66nm,21.3s,baz=92,slow=33						
WRA	Warramunga Arr	27.90	247	P	P	13 20 26.6	-1.1
	1.1nm,0.5s,baz=77,slow=8.9,SNR=12						
WRA				PcP	PcP	13 23 41.4	-0.8
	0.5nm,0.9s,baz=80,slow=3.6,SNR=2.2						
ASAR	Alice Springs	29.50	240	P	P	13 20 39.9	-1.9
	0.4nm,0.5s,baz=65,slow=10.0,SNR=9.1						
SONM	Songino Array	75.70	325	P	P	13 26 22.0	-0.1
	0.8nm,0.6s,baz=144,slow=5.9,SNR=6.2						
ILAR	Eielson Array	84.20	20	P	P	13 27 07.6	0.0
	0.3nm,0.7s,baz=233,slow=4.9,SNR=1.9						
MKAR	Makanchi Array	90.20	318	P	P	13 27 36.2	-0.8
	0.2nm,0.4s,baz=102,slow=5.0,SNR=4.7						
YKA	Yellowknife Ar	96.26	28	P	P	13 28 04.6	+0.1
	0.2nm,0.7s,baz=262,slow=9.4,SNR=2.0						

BYKL 03 13:50:54.2±0.4, 56°.09N×113°.72E, h4^{km}±7^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.09	287	⇑iPg	Pg	13 50 55.8	-0.4
SVKR				eSg	Sg	13 50 58.0	+0.5
UKT	Uakit	0.60	185	ePg	Pg	13 51 04.5	-1.3
UKT				eSg	Sg	13 51 12.2	-1.4
UKT				Pmax			
	35nm,0.4s						
UKT				Smax			
	132nm,0.7s						
YOA	Uoyan	1.12	273	ePg	Pg	13 51 14.4	-1.2
YOA				eSg	Sb	13 51 30.7	-0.3
YOA				eSb	Sn	13 51 34.0	+1.5
YOA				Pmax			
	94nm,0.2s						
YOA				max			
	535nm,0.7s						
NLYR	Nelyaty	1.18	69	ePg	Pg	13 51 15.2	-1.5
NLYR				ePb	Pb	13 51 17.1	0.0
NLYR				eSg	Sg	13 51 31.4	-0.6
NLYR				e		13 51 35.7	
NLYR				max			
	54nm,0.4s						
NLYR				max			
	289nm,1.1s						
KMO	Kumora	1.43	263	ePg	Pn	13 51 19.8	-1.1
KMO				ePb	Pb	13 51 21.4	0.0
KMO				eSg	Sb	13 51 38.8	-1.2
KMO				e		13 51 42.1	
KMO				max			
	37nm,0.3s						
KMO				max			
	372nm,0.8s						
BOD	Bodaibo	1.74	5	ePg	Pn	13 51 25.4	+0.2
BOD				e		13 51 26.7	
BOD				eSg	Sn	13 51 48.1	+0.3
BOD				max			
	11nm,0.2s						
BOD				Smax			
	97nm,0.7s						
YLYR	Ulyunkhan	1.90	231	ePn	Pn	13 51 27.7	+0.3
YLYR				ePg	Pb	13 51 28.4	-1.0
YLYR				e		13 51 30.1	
TUP	Tupik	3.94	112	ePn	Pn	13 51 55.0	-0.4
TUP				ePg	Pb	13 52 05.4	+1.3
TUP				eSg	Sg	13 52 57.0	-3.6
TUP				Pmax			
	9.0nm,0.6s						
TUP				Smax			
	26nm,0.8s						

BYKL 03 13:51:21.6±0.2, 56°.10N×113°.73E, h7^{km}±3^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.10	280	⇑iPg	Pg	13 51 23.4	-0.5
SVKR				eSg	Sg	13 51 25.7	+0.2
UKT	Uakit	0.61	185	ePg	Pg	13 51 32.6	-0.8
UKT				eSg	Sg	13 51 40.0	-1.5
UKT				Pmax			
	159nm,0.3s						
UKT				Smax			
	434nm,0.4s						
YOA	Uoyan	1.12	273	ePg	Pg	13 51 41.7	-1.4
YOA				ePb	Pn	13 51 44.1	+0.3
YOA				e		13 51 46.7	
YOA				eSg	Sg	13 51 57.4	-0.3
YOA				e		13 52 05.0	
YOA				max			
	714nm,0.5s						
YOA				max			
	4µm,0.6s						
NLYR	Nelyaty	1.17	70	ePg	Pg	13 51 42.7	-1.3
NLYR				ePb	Pn	13 51 44.7	+0.3
NLYR				eSg	Sg	13 51 58.8	-0.3
NLYR				eSb	Sn	13 52 02.6	+2.0
NLYR				max			
	348nm,0.5s						
NLYR				max			
	2µm,1.0s						
KMO	Kumora	1.44	262	ePg	Pn	13 51 47.7	-0.4
KMO				ePb	Pb	13 51 48.9	+0.2
KMO				eSg	Sb	13 52 06.6	-0.6
KMO				e		13 52 09.8	
KMO				max			
	338nm,0.5s						
KMO				max			
	3µm,1.0s						
BOD	Bodaibo	1.73	5	ePg	Pn	13 51 52.5	+0.4
BOD				e		13 51 56.9	
BOD				eSg	Sb	13 52 15.6	0.0
BOD				max			
	87nm,0.5s						
BOD				Smax			
	431nm,0.8s						
YLYR	Ulyunkhan	1.91	231	ePn	Pn	13 51 53.6	-0.9
YLYR				ePg	Pb	13 51 55.4	-1.3
YLYR				e		13 51 57.4	
YLYR				eSg	Sb	13 52 21.0	+0.3
YLYR				Pmax			
	273nm,0.3s						
YLYR				Smax			
	535nm,0.2s						
NIZ	Nizh Angarsk	2.38	264	ePn	Pn	13 52 02.2	+1.2
NIZ				ePg	Pb	13 52 05.3	+0.6
NIZ				eSn	Sn	13 52 31.5	+1.1
NIZ				eSg	Sb	13 52 36.0	+1.7
NIZ				Pmax			
	76nm,0.7s						
NIZ				Smax			
	850nm,0.7s						
CRS	Chara	2.64	70	ePn	Pn	13 52 05.2	+0.6
CRS				ePg	Pb	13 52 09.4	+0.2
CRS				eSg	Sg	13 52 44.2	-2.2
CRS				Pmax			
	126nm,0.9s						
CRS				Smax			
	433nm,0.8s						
SYVR	Suvo	3.26	223	ePn	Pn	13 52 13.5	+0.4
SYVR				ePg	Pb	13 52 20.6	+0.8
SYVR				e		13 52 24.6	
SYVR				eSg	Sb	13 53 02.1	+2.5
SYVR				e		13 53 10.3	
SYVR				max			
	67nm,0.6s						
SYVR				max			
	209nm,1.7s						
VTMR	Vitim	3.41	350	ePn	Pn	13 52 15.3	+0.2
VTMR				ePg	Pb	13 52 23.4	+1.2
VTMR				eSn	Sn	13 52 55.4	-0.3
VTMR				eSg	Sb	13 53 06.1	+2.3
TUP	Tupik	3.94	113	ePn	Pn	13 52 22.5	+0.1
TUP				ePg	Pb	13 52 33.0	+1.7
TUP				e		13 52 38.4	
TUP				eSn	Sn	13 53 07.9	-0.9
TUP				eSg	Sg	13 53 23.9	-4.0
TUP				eSgSg	SbSb	13 53 28.8	+4.6
TUP				max			
	63nm,0.6s						
TUP				max			
	232nm,1.3s						
MXMB	Maximikha	4.06	228	ePn	Pn	13 52 24.3	+0.3
MXMB				ePg	Pb	13 52 34.9	+1.6
MXMB				eSg	Sg	13 53 27.5	-4.2
CIT	Chita	4.09	182	eSg	Sb	13 53 28.1	+4.6
CIT				Smax			
	241nm,0.4s						
OGRR	Ongureny	4.32	238	ePn	Pn	13 52 28.9	+1.3
OGRR				e		13 52 30.7	
OGRR				ePg	Pb	13 52 40.0	+2.3
OGRR				eSg	Sg	13 53 35.4	-4.6
OGRR				Pmax			
	29nm,1.0s						
OGRR				Smax			
	156nm,1.7s						
YKLR	Yuktali	4.44	80	ePg	Pb	13 52 39.8	0.0
YKLR				eSg	Sb	13 53 37.1	+3.7
ZRHB	Zarechye	5.24	230	ePg	Pb	13 52 56.0	+2.6
ZRHB				eSg	Sg	13 54 04.5	-5.1
TRG	Tyrgan	5.46	235	ePn	Pn	13 52 44.0	+0.7
TRG				ePg	Pb	13 52 59.3	+2.2
TRG				eSn	Sn	13 53 46.2	-0.1
TRG				eSg	Sg	13 54 10.4	-6.2
TRG				Pmax			
	13nm,1.0s						
TRG				Smax			
	71nm,0.9s						
FFNB	Fofonovo	5.77	228	ePn	Pn	13 52 48.1	+0.5
FFNB				ePg	Pb	13 53 04.7	+2.2
FFNB				eSg	Sg	13 54 19.9	-6.8
STDB	Stepnoy Dvoret	5.85	231	ePg	Pb	13 53 05.7	+1.8
STDB				eSg	Sg	13 54 22.3	-7.0
HRMR	Khuramsha	6.01	225	ePn	Pn	13 52 51.2	+0.3
HRMR				ePg	Pb	13 53 10.0	+3.4
HRMR				eSn	Sn	13 53 57.9	-2.0
HRMR				eSg	Sg	13 54 28.5	-5.9
HRMR				Pmax			
	31nm,0.9s						
HRMR				Smax			
	271nm,1.1s						
IENR	Iengra	6.22	84	ePn	Pn	13 52 53.7	-0.1
IENR				ePg	Pb	13 53 13.3	+3.1
IENR				eSn	Sn	13 54 04.3	-0.8
IENR				eSg	Sg	13 54 34.2	-6.9
BGT	Bolshoye Golou	6.36	234	ePg	Pb	13 53 16.5	+3.9
BGT				eSg	Sg	13 54 40.0	-5.7
BGT				Pmax			

	13nm,1.2s						
BGT				Smax			
	67nm,1.2s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pn	Pn	13 52 56.5	-0.6
KPC				*e*Pg	Pb	13 53 18.1	+3.8
KPC				*e*Sn	Sn	13 54 09.9	-1.1
KPC				*e*Sg	Sg	13 54 42.2	-6.6
KPC				*e*		13 54 56.4	
KPC				Pmax			
	3.0nm,0.4s						
KPC				max			
	126nm,1.1s						
LSTR	**Listvyanka**	**6.74**	**235**	*e*Sg	Sg	13 54 50.8	-7.1
LSTR				Smax			
	83nm,1.5s						
TLY	**Talaya**	**7.42**	**238**	*e*Pg	Pb	13 53 34.5	+3.9
TLY				*e*Sg	Sg	13 55 09.5	-10
TLY				Pmax			
	1.0nm,0.1s						
TLY				Smax			
	56nm,1.4s						
ARS	**Arshan**	**7.87**	**243**	*e*Pn	Pn	13 53 19.1	+2.7
ARS				*e*Pg	Pb	13 53 43.7	+5.5
ARS				*e*Sn	Sn	13 54 43.9	-1.7
ARS				*e*Sg	Sg	13 55 24.0	-10
ARS				Pmax			
	6.0nm,0.6s						
ARS				Smax			
	139nm,0.9s						
ZAK	**Zakamensk**	**8.48**	**232**	*e*Sg	Sg	13 55 42.9	-11
ZAK				Smax			
	32nm,1.4s						
MOY	**Mondy**	**8.73**	**245**	*e*Pn	Pn	13 53 28.5	+0.2
MOY				*e*Sn	Sn	13 55 04.7	-2.3
MOY				*e*Sg	Sg	13 55 50.7	-11
MOY				max			
	5.0nm,1.0s						
MOY				Smax			
	85nm,1.5s						
ORL	**Orlik**	**8.88**	**252**	*e*Pn	Pn	13 53 31.8	+1.5
ORL				*e*Sn	Sn	13 55 07.9	-2.7
ORL				*e*Sg	Sg	13 55 57.1	-9.3
ORL				max			
	3.0nm,0.7s						
ORL				Smax			
	52nm,1.9s						

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*ROM **03** 14:05:54.4±0.2, 44°.596N±0°.008×6°.80E±0°.01, h8^{km}±1^{km}, ML1.9/4, Error ellipse: s-maj=1.1km s-min=0.4km az=228.0*
*GEN **03** 14:05:54.8, 44°.58N×6°.77E, h3^{km}±5^{km}, Ml1.7*
*LDG **03** 14:05:54.9±0.1, 44°.58N×6°.82E, h2^{km}, Md2.0/1, Ml2.5/16, Error ellipse: s-maj=1.8km s-min=1.2km az=63.0*
*STR **03** 14:05:55.0±0.4, 45°N±3°×°±°, h11^{km}±4^{km}, MLv2.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
ISC 03 14:05:54.4±0.8**, 44°.60N**±0°.01×**6°.84E**±0°.02**, h17**^{km}±5^{km}**, n66,** σ1^s**28**/118**, 1C, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	**Montbardon**	**0.13**	**340**	*e*Pg	**Pg**	**14 05 57.7**	**-0.9**
MBDF				*e*Sg	**Sg**	**14 06 00.2**	**-1.1**
	233nm,0.2s						
PZZ	**Stroppo**	**0.22**	**115**	P	**Pb**	**14 05 60.0**	**-0.1**
PZZ				S	**Sg**	**14 06 03.7**	**+0.4**
PZZ	**Stroppo**	**0.22**	**115**	P	**Pb**	**14 05 60.0**	**-0.1**
PZZ				S	**Sg**	**14 06 03.7**	**+0.4**
PZZ				AML	AML		
	comp=N,870µm,0.3s						
PZZ				AML	AML		
	comp=E,876µm,0.4s						
OGAG	**Argentiere**	**0.26**	**235**	Pg	**Pg**	**14 06 00.2**	**0.0**
OGAG				Sg	**Sg**	**14 06 04.8**	**+0.6**
BHB	**Bricherasio**	**0.39**	**52**	P	**Pb**	**14 06 03.2**	**+0.4**
ISO	**Isola**	**0.45**	**160**	Pg	**Pg**	**14 06 03.3**	**-0.1**
ISO				Sg	**Sg**	**14 06 09.5**	**0.0**
BNI	**Bardonecchia**	**0.46**	**346**	P	**Pg**	**14 06 04.3**	**+0.5**
BNI				S	**Sg**	**14 06 11.1**	**+0.8**
STV	**Sant Anna di V**	**0.50**	**135**	P	**Pb**	**14 06 05.2**	**+0.4**
STV				S	**Sb**	**14 06 12.2**	**+0.4**
STV	**Sant Anna di V**	**0.50**	**135**	P	**Pb**	**14 06 05.0**	**+0.2**
STV				S	**Sb**	**14 06 12.0**	**+0.3**
ENR	**Entracque**	**0.56**	**132**	P	**Pb**	**14 06 06.6**	**+0.8**
OGDI	**Digne**	**0.62**	**218**	Pg	**Pn**	**14 06 08.3**	**-0.2**
RSP	**Reno Superiore**	**0.63**	**29**	P	**Pb**	**14 06 07.6**	**+0.7**
RSP				S	**Sb**	**14 06 16.5**	**+1.0**
RSP	**Reno Superiore**	**0.63**	**29**	P	**Pb**	**14 06 07.6**	**+0.7**
RSP				S	**Sb**	**14 06 16.3**	**+0.8**
RSP				AML	AML		
	comp=E,99µm,1.4s						
RSP				AML	AML		
	comp=N,130µm,0.4s						
RSP				AML	AML		
	comp=E,96µm,1.2s						
RSP				AML	AML		
	comp=N,132µm,1.2s						
RSP				AML	AML		
	comp=E,96µm,1.2s						
TURF	**col de Turini**	**0.74**	**147**	Pg	**Pb**	**14 06 09.4**	**+0.5**
TURF				Sg	**Sb**	**14 06 19.8**	**+0.9**
ORIF	**Oris-en-Rattie**	**0.75**	**295**	Pg	**Pg**	**14 06 08.5**	**-0.7**
ORIF	**Oris-en-Rattie**	**0.75**	**295**	*e*Pg	**Pg**	**14 06 08.4**	**-0.7**
ORIF				*e*Sg	**Sb**	**14 06 19.6**	**+0.6**
	comp=E,26nm,0.3s						
ORIF				*e*Sn	**Sn**	**14 06 22.8**	**+1.5**
ORIF	**Oris-en-Rattie**	**0.75**	**295**	P	**Pg**	**14 06 08.4**	**-0.7**
ORIF				S	**Sb**	**14 06 19.4**	**+0.4**
SAOF	**Saorge**	**0.80**	**140**	Pg	**Pn**	**14 06 11.1**	**+0.1**
SAOF				Sg	**Sb**	**14 06 21.8**	**+1.3**
SAOF	**Saorge**	**0.80**	**140**	P	**Pb**	**14 06 10.4**	**+0.5**
SAOF				S	**Sb**	**14 06 21.6**	**+1.2**
SAOF	**Saorge**	**0.80**	**140**	AML	AML		
	comp=E,49µm,1.4s						
SAOF				AML	AML		
	comp=N,58µm,1.6s						
GBOS	**Grotte di Boss**	**0.80**	**116**	P	**Pb**	**14 06 10.6**	**+0.7**
GBOS				S	**Sb**	**14 06 22.2**	**+1.6**
GBOS	**Grotte di Boss**	**0.80**	**116**	P	**Pb**	**14 06 10.6**	**+0.7**
GBOS				S	**Sb**	**14 06 22.0**	**+1.5**
GBOS				AML	AML		
	comp=E,66µm,0.9s						
GBOS				AML	AML		
	comp=N,105µm,0.5s						
CALF	**Calern**	**0.85**	**176**	Pg	**Pb**	**14 06 11.2**	**+0.4**
SBF	**Sospel**	**0.85**	**150**	*e*Pg	**Pg**	**14 06 09.9**	**-1.2**
SBF				*e*Sg	**Sg**	**14 06 19.6**	**-2.8**
	comp=N,34nm,0.4s						
SBF				*e*Sn	**Sb**	**14 06 23.0**	**+1.0**
ESCA	**l'Escarene**	**0.86**	**153**	Pg	**Pb**	**14 06 11.5**	**+0.6**
ESCA				Sg	**Sn**	**14 06 24.0**	**+0.1**
LSD	**Lago del Serru**	**0.88**	**14**	P	**Pb**	**14 06 12.2**	**+0.8**
LSD				S	**Sb**	**14 06 25.0**	**+2.0**
LSD	**Lago del Serru**	**0.88**	**14**	P	**Pg**	**14 06 11.8**	**+0.2**
LSD				S	**Sb**	**14 06 24.3**	**+1.3**
MGRO	**Montegrosso**	**0.89**	**128**	P	**Pn**	**14 06 12.7**	**+0.4**
MGRO				S	**Sn**	**14 06 25.8**	**+0.9**
LPG	**La Plagne**	**0.90**	**356**	*e*Pg	**Pg**	**14 06 11.9**	**-0.1**
LPG				*e*Sg	**Sg**	**14 06 23.9**	**0.0**
	comp=N,14nm,0.2s						
LPL	**La Plagne**	**0.92**	**355**	*e*Pg	**Pb**	**14 06 13.1**	**+1.1**
LPL				*e*Sg	**Sg**	**14 06 24.3**	**-0.1**
	comp=N,22nm,0.4s						
LPL				*e*Sn	**Sn**	**14 06 26.6**	**+1.0**
MLYF	**Mely**	**0.98**	**232**	Pg	**Pn**	**14 06 14.9**	**+1.5**
MLYF				Sn	**Sn**	**14 06 29.9**	**+3.0**
GRN	**Grenoble**	**1.01**	**310**	Pg	**Pn**	**14 06 14.5**	**+0.8**
GRN				Sg	**Sb**	**14 06 28.1**	**+1.8**
FRF	**La Foret Royal**	**1.05**	**188**	*e*Pg	**Pg**	**14 06 13.6**	**-1.1**
FRF				*e*Sg	**Sg**	**14 06 26.7**	**-1.8**
	comp=N,23nm,0.3s						
FRF				*e*Sn	**Sb**	**14 06 28.2**	**+0.7**
SMRF	**Simiane la Rot**	**1.10**	**236**	*e*Pg	**Pg**	**14 06 15.4**	**-0.3**
SMRF				*e*Sg	**Sg**	**14 06 29.3**	**-0.8**
	comp=N,20nm,0.3s						
BSTF	**la Bastide-des**	**1.12**	**230**	Pn	**Pn**	**14 06 17.4**	**+2.1**
BSTF				Pg	**Pg**	**14 06 18.9**	**+2.8**
LMR	**La Mourre**	**1.29**	**191**	*e*Pn	**Pn**	**14 06 17.3**	**-0.3**
LMR				*e*Sn	**Sb**	**14 06 33.8**	**-0.6**
LMR				*e*Sg	**Sn**	**14 06 34.4**	**0.0**
	comp=N,21nm,0.2s						
OGSM	**Saint Maurice**	**1.29**	**322**	Pg	**Pg**	**14 06 19.9**	**+0.6**
OGSM				Sg	**Sg**	**14 06 36.2**	**0.0**
VIVF	**Saint-Julien-l**	**1.56**	**280**	*e*Pn	**Pn**	**14 06 22.1**	**+0.7**
VIVF	**Saint-Julien-l**	**1.56**	**280**	*e*Pg	**Pg**	**14 06 24.1**	**-0.4**
VIVF				*e*Sn	**Sn**	**14 06 41.9**	**+0.7**
	comp=N,12nm,0.3s						
VIVF				*e*Sg	**Sg**	**14 06 45.2**	**+0.4**
EUCT	**Pavia**	**1.74**	**69**	S	**Sg**	**14 06 56.0**	**+5.5**
CABF	**La Chapelle**	**2.08**	**346**	*e*Pn	**Pn**	**14 06 29.1**	**+0.6**
CABF	**La Chapelle**	**2.08**	**346**	*e*Pg	**Pg**	**14 06 33.6**	**-0.7**
CABF				*e*Sg	**Sg**	**14 07 00.8**	**-0.5**
	comp=N,4.1nm,0.4s						
LASF	**Ste Croix**	**2.20**	**257**	*e*Pn	**Pn**	**14 06 30.5**	**+0.4**
LASF	**Ste Croix**	**2.20**	**257**	*e*Pg	**Pg**	**14 06 35.9**	**-0.7**
LASF				*e*Sn	**Sn**	**14 06 56.4**	**-0.6**
	comp=N,2.0nm,0.3s						
GRAM	**Graiana**	**2.31**	**92**	S	**Sb**	**14 07 07.0**	**+3.1**
PGF	**Pioggiola**	**2.58**	**142**	*e*Pn	**Pn**	**14 06 34.5**	**-1.0**
PGF				*e*Sn	**Sn**	**14 07 03.9**	**-2.6**
	comp=N,1.9nm,0.3s						
SMF	**Signal de Mont**	**2.93**	**315**	*e*Pn	**Pn**	**14 06 40.3**	**+0.1**
SMF	**Signal de Mont**	**2.93**	**315**	*e*Pg	**Pg**	**14 06 49.3**	**-1.3**
SMF				*e*Sn	**Sn**	**14 07 14.9**	**-0.1**
SMF				*e*Sg	**Sg**	**14 07 27.4**	**-1.2**
	comp=N,2.9nm,0.3s						
CAVE	**Cavezzo**	**2.98**	**83**	S	**Sg**	**14 07 28.0**	**-2.2**
AVF	**Avril sur Loir**	**3.28**	**313**	*e*Pn	**Pn**	**14 06 45.5**	**+0.6**
AVF	**Avril sur Loir**	**3.28**	**313**	*e*Pg	**Pg**	**14 06 56.4**	**-0.8**
AVF				*e*Sn	**Sn**	**14 07 23.0**	**-0.5**
AVF				*e*Sg	**Sg**	**14 07 38.4**	**-1.3**
	comp=N,1.5nm,0.3s						
LOR	**Lormes**	**3.38**	**323**	*e*Pn	**Pn**	**14 06 46.0**	**-0.4**
LOR	**Lormes**	**3.38**	**323**	*e*Pg	**Pg**	**14 06 58.0**	**-1.2**
LOR				*e*Sn	**Sn**	**14 07 26.1**	**+0.1**
	comp=N,1.9nm,0.3s						
LOR				*e*Sg	**Sg**	**14 07 41.4**	**-1.5**
SSF	**Saint Saulge**	**3.39**	**318**	*e*Pn	**Pn**	**14 06 47.4**	**+1.0**
SSF	**Saint Saulge**	**3.39**	**318**	*e*Pg	**Pg**	**14 06 58.2**	**-1.1**
SSF				*e*Sn	**Sn**	**14 07 25.8**	**-0.4**
SSF				*e*Sg	**Sg**	**14 07 40.9**	**-2.2**
CAF	**Calviac**	**3.41**	**277**	*e*Pn	**Pn**	**14 06 47.3**	**+0.5**
CAF				*e*Sn	**Sn**	**14 07 25.8**	**-1.1**
	comp=N,0.7nm,0.3s						
BGF	**Bois d'Agland**	**3.42**	**306**	*e*Pn	**Pn**	**14 06 49.2**	**+2.4**
BGF	**Bois d'Agland**	**3.42**	**306**	*e*Pg	**Pg**	**14 06 58.2**	**-1.6**
BGF				*e*Sg	**Sg**	**14 07 41.3**	**-2.8**
	comp=N,6.7nm,0.3s						
HAU	**Haudompre**	**3.42**	**355**	*e*Pn	**Pn**	**14 06 47.0**	**+0.1**
HAU				*e*Sn	**Sn**	**14 07 26.3**	**-0.8**
MTLF	**Montolieu**	**3.56**	**251**	*e*Pn	**Pn**	**14 06 49.2**	**+0.3**
MTLF				*e*Sn	**Sn**	**14 07 30.3**	**-0.2**
	comp=N,1.7nm,0.3s						
CDF	**Champ du Feu**	**3.82**	**4**	*e*Pn	**Pn**	**14 06 52.5**	**0.0**
CDF	**Champ du Feu**	**3.82**	**4**	*e*Pg	**Pg**	**14 07 05.2**	**-2.4**
CDF				*e*Sn	**Sn**	**14 07 35.7**	**-1.4**
CDF				*e*Sg	**Sg**	**14 07 54.6**	**-2.6**
	comp=N,3.3nm,0.4s						
CPGN	**Carpegna, Ital**	**4.02**	**100**	P	**Pg**	**14 07 11.6**	**+0.1**
APEC	**Apecchio**	**4.16**	**103**	P	Pg	14 07 20.2	+6.3
RISI	**Rein**	**4.35**	**56**	P	**Pb**	**14 07 08.3**	**-2.2**
SAMA	**S.Maria delle**	**5.07**	**122**	⇑P	Pn	14 07 16.4	+6.9

BYKL 03 14:08:02.5±0.2**, 56°.10N**×**113°.73E, h6**^{km}±4^{km}**, 1C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**280**	⇑*i*Pg	Pg	14 08 04.3	-0.4
SVKR				*e*Sg	Sg	14 08 06.7	+0.5
UKT	**Uakit**	**0.61**	**185**	*e*Pg	Pg	14 08 12.6	-1.7
UKT				*e*Sg	Sg	14 08 20.7	-1.6
UKT				Pmax			
	55nm,0.3s						
UKT				Smax			
	226nm,0.3s						
YOA	**Uoyan**	**1.12**	**273**	*e*Pg	Pg	14 08 22.8	-1.2
YOA				*e*		14 08 26.4	
YOA				*e*Sg	Sg	14 08 38.1	-0.5
YOA				*e*		14 08 43.7	
YOA				max			
	163nm,0.4s						
YOA				max			
	1µm,0.8s						
NLYR	**Nelyaty**	**1.17**	**70**	⇓*i*Pg	Pg	14 08 23.6	-1.3
NLYR				*e*Pb	Pn	14 08 25.9	+0.5
NLYR				*e*Sg	Sg	14 08 39.9	-0.1
NLYR				*e*Sb	Sn	14 08 43.5	+1.8
NLYR				max			
	337nm,0.5s						
NLYR				max			
	474nm,0.6s						
KMO	**Kumora**	**1.44**	**262**	*e*Pg	Pn	14 08 28.5	-0.6
KMO				*e*Pb	Pb	14 08 29.6	-0.1
KMO				*e*Sg	Sg	14 08 48.5	-0.1
KMO				*e*Sb	Sn	14 08 50.4	+2.1
KMO				max			
	52nm,0.3s						
KMO				max			
	566nm,1.0s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	14 08 33.6	+0.5
BOD				*e*		14 08 35.6	
BOD				*e*Sg	Sb	14 08 56.2	-0.4
BOD				Pmax			
	19nm,0.3s						
BOD				Smax			
	540nm,1.1s						
YLYR	**Ulyunkhan**	**1.91**	**231**	⇓*i*Pn	Pn	14 08 36.1	+0.5
YLYR				*e*Pg	Pb	14 08 36.7	-1.0
YLYR				*e*		14 08 37.6	
YLYR				*e*		14 08 38.5	
YLYR				*e*Sg	Sb	14 09 01.6	-0.2
YLYR				max			
	47nm,0.3s						
YLYR				Smax			
	461nm,1.2s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pg	Pb	14 08 45.1	-0.6
NIZ				*e*Sg	Sb	14 09 15.6	+0.3
NIZ				Pmax			
	14nm,0.5s						
NIZ				Smax			
	176nm,0.9s						
CRS	**Chara**	**2.64**	**70**	*e*Pn	Pn	14 08 46.5	+0.9
CRS				*e*Pg	Pb	14 08 50.6	+0.4
CRS				*e*Sn	Sn	14 09 19.2	+1.2
CRS				*e*Sg	Sg	14 09 25.2	-2.1
CRS				Pmax			
	220nm,0.8s						
CRS				Smax			
	188nm,0.9s						
SYVR	**Suvo**	**3.26**	**223**	*e*Pn	Pn	14 08 53.8	-0.3
SYVR				*e*Pg	Pb	14 08 59.9	-0.8
SYVR				*e*PgPg	PbPb	14 09 03.7	-0.2
SYVR				*e*Sg	Sb	14 09 42.9	+2.2
SYVR				*e*		14 09 53.6	
SYVR				max			
	17nm,0.8s						
SYVR				max			
	179nm,1.6s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pn	Pn	14 08 56.3	+0.2
VTMR				*e*Pg	Pb	14 09 04.7	+1.5
VTMR				*e*Sn	Sn	14 09 36.4	-0.4
VTMR				*e*Sg	Sb	14 09 47.4	+2.5
TUP	**Tupik**	**3.94**	**113**	⇓*i*Pn	Pn	14 09 03.6	+0.2
TUP				*e*Pg	Pb	14 09 14.3	+2.0
TUP				*e*		14 09 20.3	
TUP				*e*Sn	Sn	14 09 48.8	-1.1
TUP				*e*Sg	Sg	14 10 05.2	-3.6
TUP				*e*SgSg	SbSb	14 10 09.5	+4.3
TUP				max			
	18nm,0.8s						
TUP				max			
	124nm,1.0s						
MXMB	**Maximikha**	**4.06**	**228**	*e*Pn	Pn	14 09 06.0	+0.9
MXMB				*e*Pg	Pb	14 09 15.5	+1.2
MXMB				*e*Sg	Sg	14 10 09.0	-3.6
MXMB				*e*		14 10 14.8	
OGRR	**Ongureny**	**4.32**	**238**	*e*Pn	Pn	14 09 10.0	+1.4
OGRR				*e*Pg	Pb	14 09 19.3	+0.6
OGRR				*e*Sn	Sn	14 09 56.9	-2.3
OGRR				*e*Sg	Sg	14 10 16.0	-4.9
OGRR				Pmax			
	2.0nm,0.3s						
OGRR				Smax			
	48nm,1.3s						
YKLR	**Yuktali**	**4.44**	**80**	*e*Pn	Pn	14 09 09.8	-0.5
YKLR				*e*Pg	Pb	14 09 21.5	+0.7
YKLR				*e*Sg	Sb	14 10 19.5	+5.0
FFNB	**Fofonovo**	**5.77**	**228**	*e*Sg	Sg	14 11 01.8	-5.8
HRMR	**Khuramsha**	**6.01**	**225**	*e*Pn	Pn	14 09 34.6	+2.7
HRMR				*e*Pg	Pb	14 09 52.0	+4.4
HRMR				*e*Sg	Sg	14 11 09.0	-6.3
HRMR				Pmax			
	8.0nm,0.6s						
HRMR				Smax			
	127nm,1.2s						
IENR	**Iengra**	**6.22**	**84**	*e*Pn	Pn	14 09 34.7	-0.1
IENR				*e*Pg	Pb	14 09 53.3	+2.2
IENR				*e*Sn	Sn	14 10 44.7	-1.5
IENR				*e*Sg	Sg	14 11 15.6	-6.4
BGT	**Bolshoye Golou**	**6.36**	**234**	*e*Sg	Sg	14 11 18.4	-8.2
BGT				Smax			
	21nm,0.9s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pn	Pn	14 09 37.3	-0.8
KPC				*e*Pg	Pb	14 09 58.9	+3.6
KPC				*e*Sg	Sg	14 11 22.4	-7.3
KPC				*e*		14 11 35.4	
KPC				max			
	57nm,1.3s						

BYKL 03 14:08:54.5±0.2**, 56°.06N**×**113°.70E, h4**^{km}±4^{km}**, 1C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**306**	⇑*i*Pg	Pg	14 08 56.1	-0.4
SVKR				*e*Sg	Sg	14 08 58.5	+0.6
UKT	**Uakit**	**0.57**	**184**	*e*Pg	Pg	14 09 04.3	-1.2
UKT				*e*Sg	Sg	14 09 11.6	-1.3
UKT				Pmax			
	96nm,0.4s						
UKT				Smax			
	592nm,0.7s						
YOA	**Uoyan**	**1.11**	**275**	*e*Pg	Pg	14 09 14.1	-1.6
YOA				*e*		14 09 17.8	
YOA				*e*Sg	Sg	14 09 30.4	+0.3
YOA				*e*		14 09 35.1	
YOA				max			
	371nm,0.3s						
YOA				max			
	1µm,0.4s						
NLYR	**Nelyaty**	**1.20**	**68**	*e*Pg	Pg	14 09 16.0	-1.4
NLYR				*e*Pb	Pb	14 09 17.9	+0.1
NLYR				*e*Sg	Sg	14 09 32.4	-0.6
NLYR				*e*		14 09 36.5	
NLYR				max			
	254nm,0.4s						
NLYR				max			
	1µm,1.2s						
KMO	**Kumora**	**1.42**	**264**	*e*Pg	Pn	14 09 19.5	-1.5
KMO				*e*		14 09 21.6	
KMO				*e*Sg	Sb	14 09 38.5	-1.3
KMO				*e*		14 09 41.5	
KMO				max			
	147nm,0.4s						
KMO				max			
	982nm,0.9s						
BOD	**Bodaibo**	**1.77**	**5**	*e*Pn	Pn	14 09 25.1	-0.8
BOD				*e*Pg	Pb	14 09 26.0	-1.5
BOD				*e*		14 09 27.4	
BOD				*e*Sn	Sn	14 09 48.7	-0.2
BOD				*e*Sg	Sb	14 09 49.5	-0.6
BOD				max			
	17nm,0.2s						
BOD				Smax			
	503nm,1.1s						
YLYR	**Ulyunkhan**	**1.87**	**232**	*e*Pn	Pn	14 09 26.8	-0.5
YLYR				*e*Pg	Pb	14 09 27.9	-1.3
YLYR				*e*		14 09 29.6	
YLYR				*e*Sg	Sb	14 09 52.7	-0.2
YLYR				max			
	109nm,0.3s						
YLYR				Smax			
	560nm,0.5s						
NIZ	**Nizh Angarsk**	**2.36**	**265**	*e*Pg	Pb	14 09 36.4	-1.1
NIZ				*e*Sg	Sb	14 10 08.0	+1.0
NIZ				Pmax			
	20nm,0.3s						
NIZ				Smax			
	291nm,0.5s						
CRS	**Chara**	**2.67**	**70**	*e*Pg	Pb	14 09 42.5	-0.4
CRS				*e*Sg	Sg	14 10 18.2	-2.0
CRS				Pmax			
	145nm,0.8s						
CRS				Smax			
	397nm,1.2s						
SYVR	**Suvo**	**3.22**	**223**	*e*Sg	Sb	14 10 33.2	+1.5
SYVR				*e*		14 10 42.4	
SYVR				max			
	255nm,1.6s						
VTMR	**Vitim**	**3.44**	**350**	*e*Pg	Pb	14 09 57.3	+1.3
VTMR				*e*Sg	Sg	14 10 42.0	-3.1
TUP	**Tupik**	**3.94**	**112**	*e*Pn	Pn	14 09 55.5	-0.2
TUP				*e*Sg	Sb	14 10 56.4	+4.0
TUP				*e*SgSg	Sg	14 11 02.2	+1.4
TUP				max			
	19nm,0.5s						
TUP				max			
	208nm,1.2s						
MXMB	**Maximikha**	**4.02**	**228**	*e*Pg	Pb	14 10 06.7	+0.9
MXMB				*e*Sg	Sg	14 10 59.2	-4.2
OGRR	**Ongureny**	**4.28**	**238**	*e*Pn	Pn	14 10 01.9	+1.5
OGRR				*e*Pg	Pb	14 10 11.0	+0.8
OGRR				*e*Sn	Sn	14 10 48.8	-1.9
OGRR				*e*Sg	Sg	14 11 07.1	-4.7
OGRR				Pmax			
	17nm,0.7s						
OGRR				Smax			
	55nm,1.1s						
YKLR	**Yuktali**	**4.46**	**80**	*e*Pg	Pb	14 10 14.8	+1.5
YKLR				*e*Sg	Sg	14 11 12.8	-4.8
TRG	**Tyrgan**	**5.42**	**235**	*e*Pn	Pn	14 10 16.8	+0.8
TRG				*e*Pg	Pb	14 10 31.2	+1.5
TRG				*e*Sg	Sb	14 11 41.2	+6.2
TRG				Pmax			
	2.0nm,0.2s						
TRG				Smax			
	40nm,1.5s						
FFNB	**Fofonovo**	**5.73**	**228**	*e*Sg	Sg	14 11 52.0	-6.4
HRMR	**Khuramsha**	**5.97**	**225**	*e*Pg	Pb	14 10 42.5	+3.5
HRMR				*e*Sg	Sg	14 12 00.5	-5.5
HRMR				Pmax			
	15nm,0.5s						
HRMR				Smax			
	170nm,0.9s						
IENR	**Iengra**	**6.24**	**84**	*e*Pn	Pn	14 10 27.2	-0.1
IENR				*e*Pg	Pb	14 10 46.8	+3.1
IENR				*e*Sg	Sg	14 12 08.1	-6.6
BGT	**Bolshoye Golou**	**6.33**	**234**	*e*Sg	Sg	14 12 10.1	-7.3
BGT				Smax			
	30nm,0.8s						
KPC	**Khapcheranga**	**6.42**	**188**	*e*Pn	Pn	14 10 31.3	+1.5
KPC				*e*Pg	Pb	14 10 50.0	+3.3
KPC				*e*Sg	Sg	14 12 13.3	-7.1
KPC				*e*		14 12 28.8	
KPC				Pmax			
	2.0nm,0.4s						
KPC				max			
	80nm,1.3s						

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*DJA **03** 14:21:30.2±0.5, 4°N±6°×12°6E±°, h40^{km}±4^{km}, M4.4/13, mb4.3/7, mB4.8/4, MLv4.5/13, Mw(mB)4.1/4*
*IDC **03** 14:21:30.8±1.5, 3°.73N×125°.54E, h69^{km}±13^{km}, mb3.8/16, mb1 4.0/18, mb1mx3.7/39, mbtmp4.2/18, MS3.1/4, Ms1 3.1/4, ms1mx2.8/30, Error ellipse: s-maj=23.2km s-min=8.1km az=71.0*
*NOU **03** 14:21:31.5, 3°.43N×125°.59E, h45^{km}, mb4.7, Talaud Islands, Indonesia*
*NEIC **03** 14:21:31.8±2.4, 3°.74N±0°.07×125°.55E±0°.09, h80^{km}±9^{km}, mb4.7/13, Error ellipse: s-maj=13.9km s-min=7.6km az=59.0*
ISC 03 14:21:30.1±0.7**, 3°.75N**±0°.04×**125°.55E**±0°.06**, h62**^{km}±6^{km}**, n56,** σ1^s**64**/69**, mb4.3**/23**, 1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.07	196	P	Pn	14 21 37.8	-1.4
SGSI				S	Sn	14 21 44.2	-1.6
SKMP	Bagumbayan, Su	2.92	340	eP	Pn	14 22 14.1	-0.1
SKMP				eS	Sn	14 22 46.4	-1.8
MATI	Mati	3.25	13	eP	Pn	14 22 17.4	-1.2
MATI				eS	Sn	14 22 55.4	-0.8
KCP	Kidapawan	3.27	352	⇓eP	Pn	14 22 20.1	+1.2
DAV	Davao City (W)	3.29	1	P	Pn	14 22 20.8	+1.5
	44nm,0.3s,baz=78,slow=2.1,SNR=7.0						
DAV				S	Sn	14 22 59.0	+1.8
	83nm,0.3s,baz=275,slow=23,SNR=3.8						
DAV				LR	LR	14 24 03.3	
	comp=Z,510nm,18.2s,baz=145,slow=46						
DAV	Davao City (W)	3.29	1	Pn	Pn	14 22 22.2	+3.0
TNTI	Ternate	3.48	148	Pn	Pn	14 22 22.3	+0.6
TNTI	Ternate	3.48	148	P	Pn	14 22 22.6	+0.9
KMSI	Cibinong	3.52	206	P	Pn	14 22 23.5	+1.1
GTOI	Gorontalo	4.00	219	P	Pn	14 22 29.4	+0.5
BUKP	Musuan	4.13	353	eP	Pn	14 22 31.5	+0.8
BUKP				eS	Sn	14 23 20.4	+2.7
ZCP	Zamboanga City	4.68	313	⇓iP	Pn	14 22 38.5	+0.3
ZCP				i S	Sn	14 23 28.4	-3.0
CGP	Cagayan de Oro	4.75	350	⇑eP	Pn	14 22 42.3	+3.1
CGP				eS	Sn	14 23 38.8	+5.9
MRSI	Marisa	4.86	228	P	Pn	14 22 42.2	+1.6
TOLI2	Tolitoli	5.44	241	Pn	Pn	14 22 48.3	-0.2
LUWI	Luwuk	5.51	210		Pn	14 22 52.2	+2.6
LUWI	Luwuk	5.51	210	P	Pn	14 22 52.0	+2.4
	1.0nm3μm314nm,0.8s						
SANI	Sanana	5.78	176	P	Pn	14 22 52.9	-0.4
APSI	Ampana	6.05	220	P	Pn	14 23 01.5	+4.5
MPSI	Mapaga	6.59	239	P	Pn	14 23 06.1	+1.8
	0.1nm435nm17nm,0.8s						
MYLDM	Lahad Datu	7.17	282	Pn	Pn	14 23 15.0	+2.7
SWI	Sorong	7.32	129	P	Pn	14 23 15.2	+0.8
	0.1nm23nm,0.8s						
SIJI	Sorong	7.33	129	P	Pn	14 23 15.4	+0.8
	5.2nm,0.3s,baz=160,slow=22,SNR=19						
SIJI				S	Sn	14 24 34.4	-2.0
	0.1nm,0.3s,baz=273,slow=23,SNR=1.1						
FAKI	Fak Fak	9.42	135	Pn	Pn	14 23 43.7	+0.5
KAPI	Kappang	10.46	214	LR	LR	14 27 31.7	
	comp=Z,58nm,18.8s,baz=66,slow=35						
FITZ	Fitzroy Crossi	21.71	180	P	P	14 26 16.6	+0.4
	4.0nm,0.3s,baz=5.6,slow=11,SNR=18						
COEN	Coen	24.81	136	P	P	14 26 46.1	-0.5
WB0	Warramunga Arr	24.94	160	P	P	14 26 47.7	0.0
WB0				IAmb	IAmb	14 26 49.3	
	comp=Z,31nm,0.7s						
WRAB	Tennant Creek	25.08	160	P	P	14 26 48.9	-0.1
WRA	Warramunga Arr	25.08	160	P	P	14 26 48.9	-0.2
	comp=Z,20nm,0.6s,baz=343,slow=10.0,SNR=116						
WRA				S	S	14 31 06.3	-3.1
	comp=Z,1.0nm,1.1s,baz=317,slow=22,SNR=3.1						
WRA				ScP	ScP	14 33 55.9	-0.5
	comp=Z,0.5nm,1.0s,baz=342,slow=3.1,SNR=1.5						
WB2	Warramunga Arr	25.09	160	P	P	14 26 49.2	+0.1
WB2				IAmb	IAmb	14 26 50.9	
	comp=Z,34nm,0.7s						
WR0	Warramunga Arr	25.17	160	P	P	14 26 49.9	+0.1
WR0				IAmb	IAmb	14 26 51.6	
	comp=Z,20nm,0.8s						
PMG	Port Moresby	25.19	121	P	P	14 26 50.8	+0.7
	comp=Z,5.0nm,0.6s,baz=324,slow=2.8,SNR=7.3						
AS31	Alice Springs	28.44	164	P	P	14 27 19.4	+0.1
ASAR	Alice Springs	28.45	164	P	P	14 27 19.6	+0.3
	comp=Z,5.2nm,0.7s,baz=340,slow=7.3,SNR=104						
ASAR				PcP	PcP	14 30 30.8	+0.5
	comp=Z,0.2nm,0.4s,baz=343,slow=2.9,SNR=1.6						
ASAR				ScP	ScP	14 34 06.8	+0.4
	comp=Z,0.8nm,0.6s,baz=345,slow=2.9,SNR=11						
CMAR	Chiang Mai Arr	29.85	301	P	P	14 27 32.6	+0.8
	comp=Z,0.9nm,0.9s,baz=109,slow=6.7,SNR=5.8						
KSRS	Korea Array	33.61	3	P	P	14 28 04.5	-0.1
	comp=Z,2.3nm,0.7s,baz=182,slow=9.8,SNR=8.9						
MJAR	Matsushiro Arr	34.65	18	LR	LR	14 40 45.2	
	comp=Z,14nm,19.8s,baz=335,slow=33						
STKA	Stephens Creek	38.58	158	P	P	14 28 47.4	+0.2
	comp=Z,8.7nm,0.4s,baz=345,slow=7.9,SNR=68						
STKA	Stephens Creek	38.58	158	P	P	14 28 48.0	+0.9
USRK	Ussuriysk Ar.	40.68	7	P	P	14 29 04.6	+0.2
	comp=Z,4.2nm,0.8s,baz=196,slow=8.2,SNR=10						
ARMA	Armidale	42.14	146	P	P	14 29 17.2	+0.4
ARMA				IAmb	IAmb	14 29 19.0	
	comp=Z,11nm,0.8s						
ASAJ	Asahikawa	42.92	18	P	P	14 29 23.8	+1.0
	comp=Z,6.1nm,0.9s,baz=242,slow=11,SNR=9.1						
TOO	Toolangi	45.10	158	P	P	14 29 42.3	+2.0
SONM	Songino Array	46.91	342	P	P	14 29 53.7	-0.8
	comp=Z,0.3nm,0.6s,baz=164,slow=6.9,SNR=2.9						
SONM				PcP	PcP	14 31 26.1	-0.3
	comp=Z,0.6nm,0.6s,baz=132,slow=3.1,SNR=4.2						
SONM				LR	LR	14 54 18.5	
	comp=Z,38nm,19.0s,baz=32,slow=42						
DZM	Mont Dzumac	47.52	125	P	P	14 30 01.0	+1.4
	comp=Z,5.5nm,0.9s,baz=297,slow=18,SNR=1.4						
MK31	Makanchi Array	56.87	326	P	P	14 31 08.3	-0.2
MK31				IAmb	IAmb	14 32 30.1	
	comp=Z,8.7nm,1.9s						
MKAR	Makanchi Array	56.87	326	P	P	14 31 08.1	-0.5
	comp=Z,0.5nm,0.4s,baz=120,slow=7.8,SNR=13						
MKAR				PcP	PcP	14 32 02.5	-1.1
	comp=Z,0.6nm,0.6s,baz=128,slow=4.9,SNR=2.2						
MKAR				ScP	ScP	14 35 56.4	-1.7
	comp=Z,0.2nm,0.5s,baz=115,slow=5.4,SNR=3.5						
YAK	Yakutsk	58.23	2	P	P	14 31 16.2	-1.6
ZALV	Zalesovo Beam	60.04	334	P	P	14 31 28.7	-1.7
	comp=Z,0.3nm,0.3s,baz=108,slow=9.5,SNR=4.0						
TIXI	Tiksi	67.84	1	P	P	14 32 20.1	-1.2
TIXI				IAmb	IAmb	14 33 05.1	
	comp=Z,5.8nm,0.8s						
NRIK	Noril'sk	70.13	347	P	P	14 32 36.0	+0.4
	comp=Z,1.2nm,0.3s,baz=134,slow=12,SNR=3.7						
VNDA	Vanda	83.60	173	P	P	14 33 50.9	-0.3
	comp=Z,0.5nm,0.6s,baz=303,slow=6.7,SNR=1.7						
COLD	Coldfoot	84.33	23	P	P	14 33 56.1	+1.0
COLD				IAmb	IAmb	14 34 28.2	
	comp=Z,18nm,1.9s						
ILAR	Eielson Array	85.59	25	P	P	14 34 00.5	-1.1
	comp=Z,0.2nm,0.5s,baz=238,slow=4.8,SNR=6.6						
YKA	Yellowknife Ar	99.96	24	P	Pdif	14 35 08.2	+0.1
	comp=Z,0.1nm,0.4s,baz=303,slow=3.6,SNR=2.1						

NOU 03 14:55:56.0, 20°.56S×170°.75E, h0^{km}, MLv4.2, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.70	250	P	Pn	14 56 40.1	-0.6
LIFNC	LIFOU	3.29	266	P	Pn	14 56 48.7	-0.2
PINNC	Pines Island,	3.69	236	P	Pn	14 56 54.1	-0.2
YATNC	Mamie plateau,	3.90	247	P	Pn	14 56 56.3	-0.9
OUENC	Ouen Island, N	4.08	242	P	Pn	14 56 59.8	+0.1
DZM	Mont Dzumac	4.29	249	P	Pn	14 57 02.9	+0.3
NOUC	Port Laguerre	4.42	249	P	Pn	14 57 04.4	0.0

IDC 03 14:58:16.2±50.0, 17°.89S×176°.31W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.6/26, mbtmp3.7/3, Error ellipse: s-maj=933.3km s-min=169.4km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.39	242	P	P	15 05 56.5	+0.4
	1.0nm,0.5s,baz=74,slow=6.9,SNR=3.6						
WRA	Warramunga Arr	46.60	259	P	P	15 06 45.9	-0.4
	0.3nm,0.5s,baz=98,slow=7.4,SNR=14						
ASAR	Alice Springs	46.72	254	P	P	15 06 47.1	-0.2
	0.5nm,0.4s,baz=87,slow=8.3,SNR=29						

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*MOS **03** 15:00:41.5±1.6, 55°.99N×113°.80E, h10^{km}, mb3.7/1, Error ellipse: s-maj=12.5km s-min=8.2km az=62.0*
*BYKL **03** 15:00:42.1±0.1, 56°.08N×113°.69E, h6^{km}±2^{km}*
*IDC **03** 15:00:42.6±1.1, 55°.91N×114°.03E, h0^{km}, mb3.2/6, mb1 3.4/9, mb1mx3.3/38, mbtmp3.4/9, ML3.1/2, Error ellipse: s-maj=28.4km s-min=11.9km az=148.0*

ISC 03 15:00:42.3±0.5, 56°.09N±0°.02×113°.77E±0°.02, h10^{km}, n61, σ3°.07/115, mb3.2/5, 6C-6D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.12	282	⇑iPg	Pg	15 00 44.2	-1.0
SVKR				eSg	Sg	15 00 46.3	-1.0
SVKR				Pmax			
	10μm,0.1s						
SVKR				Smax			
	44μm,0.5s						
SVKR	Severomuysk	0.12	282	⇑iPG	Pg	15 00 44.2	-1.0
SVKR				pmax	pmax		
	comp=Z,10μm,0.4s						
UKT	Uakit	0.61	188	⇑iPg	Pg	15 00 52.3	-1.8
UKT				ePb	Pb	15 00 54.5	-0.6
UKT				eSg	Sg	15 01 00.0	-2.1
UKT				Pmax			
	comp=Z,147nm,0.2s						
UKT				Smax			
	comp=Z,1μm,0.6s						
YOA	Uoyan	1.15	273	ePg	Pb	15 01 02.4	-1.8
YOA				e		15 01 05.2	
YOA				eSg	Sg	15 01 17.2	-2.0
YOA				e		15 01 21.8	
YOA				max			
	comp=Z,458nm,0.3s						
YOA				max			
	comp=Z,2μm,0.6s						
YOA	Uoyan	1.15	273	⇑iPG	Pb	15 01 02.4	-1.8
YOA				i		15 01 17.2	
YOA				pmax	pmax		
	comp=Z,275nm,0.3s						
YOA				smax	smax		
	comp=N,2μm,0.6s						
NLYR	Nelyaty	1.15	69	⇓iPg	Pb	15 01 03.8	-0.5
NLYR				ePb	Pg	15 01 05.5	+1.2
NLYR				e		15 01 11.5	
NLYR				eSg	Sb	15 01 20.0	+0.8
NLYR				e		15 01 24.1	
NLYR				e		15 01 28.8	
NLYR				max			
	comp=N,833nm,0.4s						
NLYR				max			
	comp=N,2μm,0.9s						
NLYR	Nelyaty	1.15	69	⇓iPG	Pb	15 01 03.7	-0.5
NLYR				e		15 01 20.1	
NLYR				pmax	pmax		
	comp=Z,831nm,0.4s						
NLYR				smax	smax		
	comp=E,2μm,0.9s						
KMO	Kumora	1.46	263	⇓iPg	Pn	15 01 07.4	-1.3
KMO				e		15 01 10.2	
KMO				eSg	Sn	15 01 26.3	-1.5
KMO				e		15 01 29.8	
KMO				max			
	comp=E,278nm,0.4s						
KMO				max			
	comp=E,2μm,0.8s						
KMO	Kumora	1.46	263	⇓iPG	Pn	15 01 07.3	-1.4
KMO				e		15 01 26.1	
KMO				pmax	pmax		
	comp=Z,64nm,0.3s						
KMO				smax	smax		
	comp=N,2μm,0.8s						
BOD	Bodaibo	1.74	4	ePg	Pb	15 01 13.8	-0.4
BOD				e		15 01 15.5	
BOD				eSg	Sb	15 01 36.3	+0.2
BOD				max			
	comp=N,173nm,0.3s						
BOD				Smax			
	comp=N,1μm,1.0s						
BOD	Bodaibo	1.74	4	ePN	Pn	15 01 13.3	+0.8
BOD				e		15 01 36.1	
BOD				pmax	pmax		
	comp=Z,229nm,0.3s						
BOD				smax	smax		
	comp=E,977nm,0.3s						
YLYR	Ulyunkhan	1.92	232	⇓iPg	Pn	15 01 15.5	+0.5
YLYR				e		15 01 17.3	
YLYR				eSg	Sb	15 01 40.7	-0.7
YLYR				max			
YLYR				Smax			
	comp=E,1μm,0.7s						
YLYR	Ulyunkhan	1.92	232	⇓iPN	Pn	15 01 15.6	+0.5
YLYR				e		15 01 16.7	
YLYR				eS	Sn	15 01 39.5	+0.2
YLYR				e		15 01 40.6	
YLYR				pmax	pmax		
	comp=Z,126nm,0.2s						
YLYR				smax	smax		
	comp=N,1μm,0.7s						
NIZ	Nizh Angarsk	2.40	264	ePn	Pn	15 01 22.2	+0.6
NIZ				ePg	Pb	15 01 24.3	-1.3
NIZ				eSn	Sn	15 01 49.6	-1.5
NIZ				eSg	Sb	15 01 55.4	+0.2
NIZ				Pmax			
	comp=N,62nm,0.6s						
NIZ				max			
	comp=N,498nm,0.8s						
CRS	Chara	2.62	70	ePn	Pn	15 01 26.4	+1.7
CRS				ePg	Pb	15 01 30.7	+1.4
CRS				eSn	Sn	15 01 58.5	+1.9
CRS				eSg	Sg	15 02 05.3	-1.1
CRS				Pmax			
	comp=N,590nm,0.9s						
CRS				Smax			
	comp=N,520nm,0.8s						
CRS	Chara	2.62	70	ePN	Pn	15 01 26.1	+1.4
CRS				e		15 01 30.6	
CRS				e		15 02 05.7	
CRS				pmax	pmax		
	comp=Z,386nm,0.5s						
CRS				smax	smax		
	comp=E,524nm,0.7s						
SYVR	Suvo	3.27	223	ePn	Pn	15 01 34.0	+0.4
SYVR				ePg	Pb	15 01 40.6	+0.2
SYVR				eSn	Sn	15 02 12.3	-0.2
SYVR				eSg	Sb	15 02 22.3	+2.1
SYVR				Pmax			
	comp=E,66nm,0.8s						
SYVR				Smax			
	comp=E,530nm,1.2s						
SYVR	Suvo	3.27	223	ePN	Pn	15 01 33.8	+0.2
SYVR				e		15 01 39.2	
SYVR				e		15 02 22.4	
SYVR				pmax	pmax		
	comp=Z,68nm,0.6s						
SYVR				smax	smax		
	comp=E,548nm,0.8s						
VTMR	Vitim	3.42	349	ePn	Pn	15 01 36.7	+1.1
VTMR				ePg	Pb	15 01 43.9	+1.0
VTMR				ePgPg	Pg	15 01 46.6	-1.1
VTMR				e		15 01 51.3	
VTMR				eSn	Sn	15 02 16.3	+0.2
VTMR				eSg	Sb	15 02 26.9	+2.4
VTMR				Pmax			
	comp=E,330nm,0.4s						
VTMR				Smax			
	comp=E,2μm,0.5s						
TUP	Tupik	3.91	113	⇑iPn	Pn	15 01 43.5	+1.1
TUP				ePg	Pb	15 01 53.4	+2.1
TUP				e		15 02 00.2	
TUP				eSn	Sn	15 02 28.7	+0.3
TUP				eSg	Sg	15 02 44.2	-3.6
TUP				e		15 02 49.0	
TUP				e		15 02 59.7	
TUP				Pmax			
	comp=E,53nm,0.6s						
TUP				max			
	comp=E,432nm,0.9s						
TUP	Tupik	3.91	113	⇑iPN	Pn	15 01 43.5	+1.1
TUP				e		15 01 53.3	
TUP				eS	Sn	15 02 28.7	+0.3
TUP				e		15 02 44.2	
TUP				pmax	pmax		
	comp=Z,54nm,0.6s						
TUP				smax	smax		
	comp=E,427nm,0.9s						
MXMB	Maximikha	4.07	228	ePn	Pn	15 01 44.8	+0.3
MXMB				ePg	Pb	15 01 53.9	-0.1
MXMB				eSn	Sn	15 02 30.7	-1.5
MXMB				eSg	Sb	15 02 46.1	+3.0
CIT	Chita	4.08	182	eSn	Sn	15 02 32.1	-0.5
CIT				eSg	Sb	15 02 47.6	+4.0
CIT				Smax			
	comp=E,303nm,0.5s						
OGRR	Ongureny	4.33	238	ePn	Pn	15 01 49.2	+1.1
OGRR				ePg	Pb	15 01 59.0	+0.6
OGRR				eSg	Sb	15 02 54.6	+3.9
OGRR				Pmax			
	comp=E,66nm,1.2s						
OGRR				Smax			
	comp=E,136nm,0.8s						
OGRR	Ongureny	4.33	238	ePN	Pn	15 01 47.6	-0.5
OGRR				e		15 01 58.6	
OGRR				e		15 02 53.1	
OGRR				pmax	pmax		
	comp=Z,66nm,1.8s						
OGRR				smax	smax		
	comp=N,136nm,1.1s						
YKLR	Yuktali	4.42	80	ePg	Pb	15 02 01.7	+1.8
YKLR				e		15 02 05.9	
YKLR				eSn	Sn	15 02 40.9	+0.2
YKLR				eSg	Sg	15 02 59.7	-4.2
ZRHB	Zarechye	5.25	230	eSg	Sg	15 03 24.5	-6.2
ZRHB				Smax			
	comp=N,391nm,0.8s						
TRG	Tyrgan	5.47	235	ePn	Pn	15 02 04.8	+1.0
TRG				e		15 02 09.2	
TRG				ePg	Pb	15 02 19.9	+2.1
TRG				eSn	Sn	15 03 03.9	-2.8
TRG				e		15 03 27.6	
TRG				eSg	Sg	15 03 30.4	-7.3
TRG				e		15 03 32.4	
TRG				Pmax			
	comp=N,25nm,1.4s						
TRG				max			
	comp=N,97nm,0.8s						
TRG	Tyrgan	5.47	235	ePN	Pn	15 02 03.0	-0.8
TRG				e		15 02 18.4	
TRG				eS	Sn	15 03 03.4	-3.3
TRG				e		15 03 27.3	
TRG				pmax	pmax		
	comp=Z,25nm,1.5s						
TRG				smax	smax		
	comp=N,97nm,0.8s						
FFNB	Fofonovo	5.78	228	ePg	Pb	15 02 25.5	+2.4
FFNB				eSn	Sn	15 03 10.7	-3.7
FFNB				eSg	Sb	15 03 39.5	+7.1
FFNB				e		15 03 43.7	
KAB	Kabansk	5.83	229	eSg	Sg	15 03 41.7	-7.4
KAB				Smax			
	comp=N,452nm,1.4s						
STDB	Stepnoy Dvoret	5.86	231	ePg	Pb	15 02 27.4	+2.9
STDB				eSn	Sn	15 03 13.8	-2.6
STDB				eSg	Sg	15 03 43.0	-7.4
HRMR	Khuramsha	6.02	225	ePn	Pn	15 02 11.5	+0.1
HRMR				ePg	Pb	15 02 29.6	+2.4
HRMR				eSn	Sn	15 03 17.7	-2.6
HRMR				eSg	Sg	15 03 47.4	-8.0
HRMR				Pmax			
	comp=N,32nm,0.6s						
HRMR				Smax			
	comp=N,480nm,0.6s						
IENR	Iengra	6.20	84	ePn	Pn	15 02 15.0	+1.2
IENR				ePg	Pb	15 02 33.8	+3.6
IENR				e		15 02 40.9	
IENR				eSg	Sg	15 03 55.3	-5.7
BGT	Bolshoye Golou	6.38	234	eSg	Sb	15 03 57.5	+8.0
BGT				Smax			
	comp=N,62nm,0.8s						
KPC	Khapcheranga	6.46	188	ePn	Pn	15 02 16.5	-0.8
KPC				ePg	Pb	15 02 38.2	+3.6
KPC				eSn	Sn	15 03 29.0	-2.1
KPC				eSg	Sg	15 04 00.9	-8.4
KPC				e		15 04 10.2	
KPC				Pmax			
	comp=N,12nm,0.8s						
KPC				max			
	comp=N,163nm,1.2s						
KPC	Khapcheranga	6.46	188	ePN	Pn	15 02 16.6	-0.8
KPC				e		15 02 37.2	
KPC				e		15 03 58.8	
KPC				pmax	pmax		
	comp=Z,11nm,0.8s						
KPC				smax	smax		
	comp=E,163nm,1.3s						
LSTR	Listvyanka	6.76	235	eSg	Sb	15 04 09.1	+8.6
LSTR				Smax			
	comp=E,60nm,1.3s						
IRK	Irkutsk	6.78	239	ePG	Pb	15 02 44.4	+4.3
IRK				e		15 04 09.7	
IRK				pmax	pmax		
	comp=Z,166nm,0.1s						
IRK				smax	smax		
	comp=N,143nm,1.0s						
TLY	Talaya	7.44	238	ePn	Pn	15 02 30.0	-0.8
TLY				e		15 02 47.9	
TLY				ePg	Pb	15 02 55.1	+3.8
TLY				eSg	Sg	15 04 30.9	-10
TLY				e		15 04 37.5	
TLY				Pmax			
	comp=N,10.0nm,0.8s						
TLY				max			
	comp=N,33nm,1.4s						
ARS	Arshan	7.88	243	ePg	Pb	15 03 02.5	+3.6
ARS				eSn	Sn	15 04 02.0	-4.1
ARS				eSg	Sb	15 04 43.1	+10
ARS				Pmax			
	comp=N,13nm,0.6s						
ARS				Smax			
	comp=N,142nm,0.7s						
ARS	Arshan	7.88	243	ePG	Pb	15 03 03.0	+4.1
ARS				pmax	pmax		
	comp=Z,12nm,0.6s						
ZEA	Zeya	8.12	101	ePG	Pg	15 03 14.7	-2.8
ZAK	Zakamensk	8.50	232	eSn	Sn	15 04 28.0	+6.7
ZAK				eSg	Sg	15 05 03.7	-11
ZAK				Smax			
	comp=Z,38nm,1.4s						
MOY	Mondy	8.75	245	ePn	Pn	15 02 49.0	+0.1
MOY				e		15 03 00.0	
MOY				ePg	Pg	15 03 19.2	-10
MOY				eSn	Sn	15 04 23.6	-3.9
MOY				eSg	Sg	15 05 10.7	-12
MOY				Pmax			
	comp=Z,17nm,2.1s						
MOY				Smax			
	comp=Z,63nm,1.7s						
MOY	Mondy	8.75	245	ePN	Pn	15 02 52.6	+3.7
MOY				eS	Sn	15 04 24.9	-2.6
MOY				eS	Sg	15 05 10.6	-12
MOY				smax	smax		
	comp=N,62nm,1.8s						
ORL	Orlik	8.90	252	ePn	Pn	15 02 51.6	+0.7
ORL				ePg	Pg	15 03 22.1	-10
ORL				eSn	Sn	15 04 26.9	-4.3
ORL				eSg	Sg	15 05 16.6	-11
ORL				Pmax			
	comp=N,11nm,1.1s						
ORL				Smax			
	comp=N,40nm,1.1s						
ORL	Orlik	8.90	252	ePN	Pn	15 02 53.9	+3.0
ORL				e		15 03 23.5	
ORL				e		15 05 15.7	
ORL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ORL				smax	smax		
	comp=N,41nm,1.0s						
SONM	Songino Array	9.43	212	Pn	Pn	15 02 58.8	+0.5
	comp=N,0.2nm,0.3s,baz=21,slow=13,SNR=2.8						
SONM				Lg	Lg	15 05 37.3	
	comp=N,1.1nm,0.3s,baz=24,slow=30,SNR=16						
YAK	Yakutsk	10.11	47	Pn	Pn	15 03 04.6	-2.6
YAK				Sn	Sn	15 04 54.4	-6.2
YAK				Lg	Lg	15 05 55.0	
KNGR	Kungurtug, Tuv	11.15	247	eSg	Sn	15 06 25.6	+59
KLR	Kul'dur	12.87	115	Pn	Pn	15 03 44.0	-1.1
	comp=N,0.1nm,0.3s,baz=310,slow=7.9,SNR=2.5						
KLR				Lg	Lg	15 07 25.3	
	comp=N,0.2nm,0.3s,baz=238,slow=23,SNR=2.2						
NRIK	Noril'sk	17.69	329	P	Pn	15 04 46.0	-2.3
	comp=N,0.2nm,0.3s,baz=124,slow=12,SNR=2.1						
SEY	Seymchan	20.48	55	P	Pn	15 05 22.8	+0.8
	comp=N,0.4nm,0.3s,baz=269,slow=19,SNR=4.2						
KURK	Kurchatov	21.47	270	P	P	15 05 34.9	+4.3
MKAR	Makanchi Array	21.54	258	P	P	15 05 34.7	+3.2
	comp=N,0.9nm,0.8s,baz=58,slow=9.2,SNR=6.9						
KURBB	Kurchatov Arra	21.56	270	P	P	15 05 34.9	+3.3
	comp=N,2.2nm,0.9s,baz=67,slow=12,SNR=7.1						

BVAR	**Borovoye Array**	**25.03**	**281**	P	**P**	**15 06 10.3**	**+4.1**
	comp=N,0.3nm,0.6s,baz=99,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**44.82**	**37**	P	**P**	**15 08 58.2**	**+2.3**
	comp=N,0.2nm,0.6s,baz=302,slow=8.4,SNR=2.1						
YKA	**Yellowknife Ar**	**55.90**	**25**	P	**P**	**15 10 22.0**	**+2.4**
	comp=N,0.3nm,0.6s,baz=337,slow=6.6,SNR=6.4						
YKA	**Yellowknife Ar**	**55.90**	**25**	P	**P**	**15 10 22.0**	**+2.4**

IDC 03 15:15:40.5±5.1**, 13°.33S×109°.17W, h0^{km}, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.9**/15**, mbtmp3.7**/5**, MS3.5**/5**, Ms1 3.5**/5**, ms1mx3.4**/16**, Error ellipse: s-maj=299.4km s-min=54.5km az=105.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.73**	**181**	LR	LR	15 22 55.3	
	comp=Z,83nm,20.6s,baz=22,slow=32						
ATAH	**Atahualpa**	**30.88**	**82**	LR	LR	15 31 52.6	
	comp=Z,145nm,21.1s,baz=235,slow=32						
PPT	**Papeete**	**39.12**	**259**	LR	LR	15 34 18.3	
	comp=Z,65nm,21.4s,baz=127,slow=29						
PLCA	**Paso Flores**	**43.38**	**136**	LR	LR	15 38 21.2	
	comp=Z,78nm,18.1s,baz=334,slow=31						
CPUP	**Villa Florida**	**50.15**	**113**	LR	LR	15 43 23.0	
	comp=Z,62nm,18.8s,baz=212,slow=33						
NVAR	**Mina Array Bea**	**52.19**	**351**	P	P	15 24 53.1	-0.2
	0.6nm,0.7s,baz=171,slow=10,SNR=5.5						
PDAR	**Pinedale Array**	**55.82**	**360**	P	P	15 25 19.6	-0.2
	0.6nm,0.8s,baz=171,slow=6.1,SNR=4.9						
YKA	**Yellowknife Ar**	**75.70**	**357**	P	P	15 27 27.6	+0.3
	0.4nm,0.8s,baz=170,slow=5.8,SNR=5.4						
ILAR	**Eielson Array**	**82.93**	**345**	P	P	15 28 07.0	+0.1
	0.3nm,0.8s,baz=163,slow=3.4,SNR=2.6						
INK	**Inuvik**	**83.28**	**351**	P	P	15 28 08.5	-0.1
	1.7nm,1.0s,baz=145,slow=2.5,SNR=3.5						
CMAR	**Chiang Mai Arr**	**152.51**	**284**	PKPbc	PKPbc	15 35 39.6	-0.2
	2.3nm,0.8s,baz=70,slow=0.7,SNR=26						

IDC 03 15:16:06.3±2.1**, 8°.10S×127°.89E, h0^{km}, mb3.4**/1**, mb1 4.0**/3**, mb1mx3.4**/31**, mbtmp3.8**/3**, ML4.0**/2**, Error ellipse: s-maj=170.1km s-min=29.1km az=65.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.33**	**153**	Pn	Pn	15 19 16.6	-0.4
	1.0nm,0.3s,baz=322,slow=14,SNR=34						
WRA				Sn	Sn	15 21 40.1	-5.9
	1.6nm,0.3s,baz=332,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.52**	**160**	Pn	Pn	15 20 00.5	+0.8
	0.4nm,0.3s,baz=339,slow=10.0,SNR=74						
ASAR				Sn	Sn	15 23 04.0	+0.2
	0.4nm,0.3s,baz=345,slow=25,SNR=6.2						
MKAR	**Makanchi Array**	**68.02**	**328**	P	P	15 27 07.5	0.0
	0.3nm,0.6s,baz=134,slow=8.2,SNR=3.6						

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*MOS **03** 15:33:57.5±1.3, 56°.09N×113°.80E, h8^{km}, mb4.0/3, Error ellipse: s-maj=11.1km s-min=7.6km az=67.8*

*IDC **03** 15:33:58.7±0.8, 56°.01N×113°.87E, h0^{km}, mb3.5/11, mb1 3.7/16, mb1mx3.5/55, mbtmp3.5/16, ML3.3/5, MS3.3/9, Ms1 3.3/9, ms1mx3.0/43, Error ellipse: s-maj=17.8km s-min=12.3km az=159.0*

*BYKL **03** 15:33:59.5±0.2, 56°.08N×113°.69E, h6^{km}±3^{km}*

ISC 03 15:33:59.5±0.8**, 56°.09N**±0°.02×**113°.71E**±0°.02**, h7**^{km}±5^{km}**, n59, σ2^{s}.13**/92**, mb3.6**/11**, MS3.1**/7**, 11C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**285**	⇑*i*Pg	**Pg**	**15 34 01.3**	**-0.4**
SVKR				*e*Sg	**Sg**	**15 34 03.4**	**+0.2**
SVKR				Pmax			
	6µm,0.1s						
SVKR				Smax			
	44µm,0.6s						
SVKR	**Severomuysk**	**0.09**	**285**	⇑*i*PG	**Pg**	**15 34 01.3**	**-0.4**
SVKR				*e*S	**Sg**	**15 34 03.3**	**+0.1**
UKT	**Uakit**	**0.61**	**185**	⇑*i*Pg	**Pg**	**15 34 09.6**	**-1.6**
UKT				*e*Pb	**Pb**	**15 34 12.2**	**-0.3**
UKT				*e*Sg	**Sg**	**15 34 17.9**	**-1.3**
UKT				max			
	232nm,0.2s						
UKT				Smax			
	527nm,0.2s						
UKT	**Uakit**	**0.61**	**185**	*e*PG	**Pg**	**15 34 09.8**	**-1.4**
UKT				*e*S	**Sg**	**15 34 17.9**	**-1.3**
YOA	**Uoyan**	**1.12**	**273**	⇑*i*PG	**Pg**	**15 34 17.1**	**-3.8**
YOA				*e*		15 34 33.3	
YOA				pmax	pmax		
	comp=Z,631nm,0.2s						
YOA				smax	smax		
	comp=E,8µm,0.5s						
NLYR	**Nelyaty**	**1.18**	**69**	⇑*i*Pg	**Pg**	**15 34 20.8**	**-1.3**
NLYR				*e*Pb	**Pn**	**15 34 22.7**	**+0.3**
NLYR				*e*		15 34 24.5	
NLYR				*e*Sg	**Sg**	**15 34 36.2**	**-1.2**
NLYR				*e*Sb	**Sn**	**15 34 39.4**	**+0.7**
NLYR				max			
	comp=E,302nm,0.4s						
NLYR				max			
	comp=E,2µm,0.8s						
NLYR	**Nelyaty**	**1.18**	**69**	⇑*i*PG	**Pg**	**15 34 20.8**	**-1.3**
NLYR				*e*		15 34 35.6	
NLYR				pmax	pmax		
	comp=Z,315nm,0.6s						
NLYR				smax	smax		
	comp=E,2µm,0.9s						
KMO	**Kumora**	**1.43**	**263**	⇑*i*Pg	**Pn**	**15 34 24.7**	**-1.1**
KMO				*e*		15 34 26.5	
KMO				*e*Sg	**Sb**	**15 34 43.5**	**-1.3**
KMO				*e*		15 34 47.0	
KMO				max			
	comp=E,176nm,0.2s						
KMO				max			
	comp=E,4µm,0.8s						
KMO	**Kumora**	**1.43**	**263**	*e*PG	**Pn**	**15 34 24.6**	**-1.2**
KMO				*e*		15 34 41.7	
KMO				pmax	pmax		
	comp=Z,162nm,0.3s						
KMO				smax	smax		
	comp=N,8µm,1.0s						
BOD	**Bodaibo**	**1.74**	**5**	⇑*i*Pg	**Pn**	**15 34 30.8**	**+0.8**
BOD				*e*Sg	**Sb**	**15 34 54.0**	**+0.3**
BOD				Pmax			
	comp=N,122nm,0.5s						
BOD				Smax			
	comp=N,670nm,0.7s						
YLYR	**Ulyunkhan**	**1.90**	**231**	⇓*i*Pn	**Pn**	**15 34 32.8**	**+0.5**
YLYR				*e*Pg	**Pb**	**15 34 33.5**	**-0.9**
YLYR				*e*		15 34 35.8	
YLYR				*e*Sg	**Sb**	**15 34 58.3**	**0.0**
YLYR				Pmax			
	comp=N,167nm,0.5s						
YLYR				Smax			
	comp=N,1µm,0.2s						
YLYR	**Ulyunkhan**	**1.90**	**231**	⇓*i*PN	**Pn**	**15 34 32.8**	**+0.5**
YLYR				*e*		15 34 34.0	
YLYR				*e*S	**Sb**	**15 34 57.3**	**-1.0**
YLYR				*e*		15 34 58.3	
YLYR				pmax	pmax		
	comp=Z,139nm,0.2s						
YLYR				smax	smax		
	comp=E,1µm,0.2s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*Pn	**Pn**	**15 34 39.8**	**+1.0**
NIZ				*e*Pg	**Pb**	**15 34 41.8**	**-0.7**
NIZ				*e*		15 34 44.0	
NIZ				*e*Sg	**Sb**	**15 35 12.9**	**+1.0**
NIZ				max			
	comp=E,72nm,0.3s						
NIZ				Smax			
	comp=E,1µm,0.5s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*PN	**Pn**	**15 34 39.7**	**+1.0**
NIZ				*e*		15 34 44.0	
NIZ				*e*		15 35 13.9	
NIZ				pmax	pmax		
	comp=Z,187nm,1.4s						
NIZ				smax	smax		
	comp=N,2µm,0.9s						
CRS	**Chara**	**2.65**	**70**	*e*Pn	**Pn**	**15 34 43.5**	**+0.9**
CRS				*e*Pg	**Pb**	**15 34 48.2**	**+0.9**
CRS				*e*Sg	**Sg**	**15 35 23.4**	**-1.2**
CRS				Pmax			
	comp=N,301nm,1.2s						
CRS				Smax			
	comp=N,473nm,0.7s						
SYVR	**Suvo**	**3.25**	**223**	*e*Pn	**Pn**	**15 34 51.0**	**+0.1**
SYVR				*e*Pg	**Pb**	**15 34 57.7**	**+0.2**
SYVR				*e*Sg	**Sb**	**15 35 39.2**	**+2.0**
SYVR				Pmax			
	comp=N,85nm,0.6s						
SYVR				Smax			
	comp=N,281nm,0.6s						
SYVR	**Suvo**	**3.25**	**223**	*e*PN	**Pn**	**15 34 50.8**	**-0.1**
SYVR				*e*		15 34 58.6	
SYVR				*e*		15 35 39.1	
SYVR				pmax	pmax		
	comp=Z,168nm,0.7s						
SYVR				smax	smax		
	comp=N,781nm,0.9s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pn	**Pn**	**15 34 53.7**	**+0.7**
VTMR				*e*Pg	**Pb**	**15 35 01.5**	**+1.3**
VTMR				*e*Sg	**Sg**	**15 35 46.7**	**-2.3**
TUP	**Tupik**	**3.94**	**113**	*e*Pn	**Pn**	**15 35 00.6**	**+0.2**
TUP				*e*		15 35 03.3	
TUP				*e*Pg	**Pb**	**15 35 10.7**	**+1.4**
TUP				*e*Sg	**Sg**	**15 36 03.0**	**-3.0**
TUP				Pmax			
	comp=N,64nm,0.3s						
TUP				Smax			
	comp=N,579nm,1.0s						
MXMB	**Maximikha**	**4.04**	**228**	*e*Pn	**Pn**	**15 35 01.9**	**+0.1**
MXMB				*e*Pg	**Pb**	**15 35 11.8**	**+0.8**
MXMB				*e*Sg	**Sg**	**15 36 05.6**	**-3.7**
CIT	**Chita**	**4.08**	**181**	*e*Sg	**Sb**	**15 36 05.4**	**+4.2**
CIT				Smax			
	comp=N,262nm,0.4s						
OGRR	**Ongureny**	**4.30**	**238**	*e*Pn	**Pn**	**15 35 06.5**	**+1.2**
OGRR				*e*Pg	**Pb**	**15 35 17.0**	**+1.6**
OGRR				*e*Sg	**Sg**	**15 36 12.4**	**-5.2**
OGRR				Pmax			
	comp=N,32nm,0.7s						
OGRR				Smax			
	comp=N,117nm,0.4s						
YKLR	**Yuktali**	**4.45**	**80**	*e*Pg	**Pb**	**15 35 18.6**	**+0.8**
YKLR				*e*Sg	**Sg**	**15 36 17.6**	**-4.6**
TRG	**Tyrgan**	**5.44**	**235**	*e*Pn	**Pn**	**15 35 22.1**	**+1.1**
TRG				*e*Pg	**Pb**	**15 35 36.5**	**+1.7**
TRG				*e*Sg	**Sb**	**15 36 45.8**	**+5.5**
TRG				Pmax			
	comp=N,19nm,0.6s						
TRG				Smax			
	comp=N,72nm,0.5s						
TRG	**Tyrgan**	**5.44**	**235**	*e*PN	**Pn**	**15 35 21.0**	**0.0**
TRG				*e*		15 35 36.5	
TRG				*e*S	**Sn**	**15 36 20.9**	**-3.0**
TRG				*e*		15 36 47.6	
TRG				pmax	pmax		
	comp=Z,34nm,1.0s						
TRG				smax	smax		
	comp=E,202nm,1.1s						
HRMR	**Khuramsha**	**6.00**	**225**	*e*Pn	**Pn**	**15 35 28.9**	**+0.3**
HRMR				*e*Pg	**Pb**	**15 35 47.7**	**+3.4**
HRMR				*e*Sg	**Sg**	**15 37 05.6**	**-6.4**
HRMR				Pmax			
	comp=E,40nm,0.6s						
HRMR				Smax			
	comp=E,229nm,0.5s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*Pn	**Pn**	**15 35 33.9**	**-1.0**
KPC				*e*Pg	**Pb**	**15 35 54.8**	**+2.8**
KPC				*e*Sg	**Sg**	**15 37 19.1**	**-7.4**
KPC				Pmax			
	comp=E,9.0nm,0.7s						
KPC				Smax			
	comp=E,125nm,0.8s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*PN	**Pn**	**15 35 33.5**	**-1.4**
KPC				*e*		15 35 54.7	
KPC				*e*		15 37 20.4	
KPC				pmax	pmax		
	comp=Z,18nm,0.9s						
KPC				smax	smax		
	comp=E,517nm,1.2s						
TLY	**Talaya**	**7.41**	**238**	*e*PG	**Pb**	**15 36 11.0**	**+2.7**
TLY				*e*		15 37 47.5	
TLY				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TLY				smax	smax		
	comp=E,67nm,0.6s						
MOY	**Mondy**	**8.72**	**245**	*e*PN	**Pn**	**15 36 07.0**	**+1.0**
MOY				*e*		15 36 39.9	
SONM	**Songino Array**	**9.42**	**212**	Pn	**Pn**	**15 36 16.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=23,slow=11,SNR=2.9						
SONM				Sn	**Sn**	**15 38 05.0**	**+3.2**
	comp=E,0.3nm,0.3s,baz=19,slow=18,SNR=2.3						
SONM				Lg	Lg	15 38 56.4	
	comp=E,1.5nm,0.3s,baz=20,slow=29,SNR=11						
YAK	**Yakutsk**	**10.13**	**48**	Pn	**Pn**	**15 36 21.3**	**-3.8**
	comp=E,0.0nm,0.3s,baz=267,slow=2.5,SNR=1.4						
YAK				Sn	Sn	15 38 05.6	-13
	comp=E,0.0nm,0.3s,baz=202,slow=14,SNR=1.4						
YAK				Lg	Lg	15 39 21.7	
	comp=E,0.1nm,0.3s,baz=98,slow=22,SNR=2.7						
YAK	**Yakutsk**	**10.13**	**48**	*e*P	**Pn**	**15 36 23.1**	**-2.0**
YAK				*e*S	**Sn**	**15 38 17.7**	**-1.1**
YAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YAK				smax	smax		
	comp=E,8.0nm,1.3s						
YAK				smax	smax		
	comp=N,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,94nm,1.1s						
YAK				pmax	pmax		
	comp=E,29nm,1.0s						
YAK				pmax	pmax		
	comp=Z,34nm,1.0s						
KLR	**Kul'dur**	**12.90**	**115**	Pn	**Pn**	**15 37 03.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=320,slow=15,SNR=2.3						
KLR				Sn	**Sn**	**15 39 24.8**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=351,slow=20,SNR=2.2						
KLR				Lg	Lg	15 40 43.6	
	comp=Z,0.3nm,0.3s,baz=283,slow=9.0,SNR=5.3						
KLR				LR	LR	15 42 34.9	
	comp=Z,92nm,18.4s,baz=323,slow=40						
USRK	**Ussuriysk Ar.**	**16.63**	**128**	Lg	Lg	15 42 53.3	
	baz=312,slow=30,SNR=5.3						
ZALV	**Zalesovo Beam**	**16.65**	**275**	Pn	**Pn**	**15 37 54.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=64,slow=11,SNR=2.8						
ZALV				Lg	Lg	15 42 54.1	
	comp=Z,0.1nm,0.3s,baz=80,slow=26,SNR=6.0						
ZALV				LR	LR	15 44 43.5	
	comp=Z,67nm,18.9s,baz=78,slow=38						
TIXI	**Tiksi**	**16.88**	**17**	⇑*e*P	**Pn**	**15 37 55.7**	**-0.1**
NRIK	**Noril'sk**	**17.67**	**329**	P	**P**	**15 38 06.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=128,slow=16,SNR=2.3						
NRIK				S	**Sn**	**15 41 20.1**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=19,slow=13,SNR=4.2						
NRIK				LR	LR	15 45 43.2	
	comp=Z,94nm,20.5s,baz=181,slow=40						
NRIK	**Noril'sk**	**17.67**	**329**	⇓*e*P	**Pn**	**15 38 04.7**	**-1.0**
NRIK				pmax	pmax		
	comp=Z,20nm,4.6s						
YSS	**Yuzh-Sakhalins**	**20.12**	**105**	*e*P	**P**	**15 38 34.5**	**+0.9**
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
SEY	**Seymchan**	**20.51**	**55**	P	**P**	**15 38 39.0**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=60,slow=22,SNR=2.2						
KSRS	**Korea Array**	**20.95**	**147**	LR	LR	15 47 31.0	
	comp=Z,66nm,18.9s,baz=328,slow=39						
KURK	**Kurchatov**	**21.44**	**270**	⇑*e*P	**P**	**15 38 50.0**	**+2.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MKAR	**Makanchi Array**	**21.51**	**258**	P	**P**	**15 38 49.4**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=56,slow=8.8,SNR=10.0						
MKAR				Lg	Lg	15 45 26.7	
	comp=Z,0.4nm,0.9s,baz=20,slow=3.9,SNR=2.3						
MKAR				LR	LR	15 47 32.8	
	comp=Z,84nm,20.3s,baz=36,slow=38						
MKAR	**Makanchi Array**	**21.51**	**258**	*i* P	**P**	**15 38 52.2**	**+3.4**
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**15 38 50.7**	**+1.8**
	comp=Z,3.0nm,0.9s,baz=63,slow=10,SNR=13						
KURBB				Lg	Lg	15 45 26.2	
	comp=Z,0.4nm,0.8s,baz=150,slow=19,SNR=3.4						
ASAJ	**Asahikawa**	**21.88**	**111**	LR	LR	15 47 55.5	
	comp=Z,41nm,18.4s,baz=16,slow=38						
BVAR	**Borovoye Array**	**25.00**	**281**	P	**P**	**15 39 24.4**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=248,slow=27,SNR=3.7						
BRVK	**Borovoye**	**25.05**	**281**	⇑*e*P	**P**	**15 39 26.0**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,20nm,4.9s						
MJAR	**Matsushiro Arr**	**25.62**	**129**	LR	LR	15 50 12.2	
	comp=Z,59nm,18.3s,baz=75,slow=38						
JNU	**Nakatsue**	**25.87**	**145**	LR	LR	15 50 50.8	
	comp=Z,71nm,20.2s,baz=356,slow=39						
AAK	**Ala-Archa**	**28.44**	**258**	LR	LR	15 51 42.6	
	comp=Z,118nm,19.1s,baz=346,slow=37						
NOA	**NORSAR Array B**	**48.36**	**321**	P	**P**	**15 42 40.9**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=41,slow=5.9,SNR=4.7						
YKA	**Yellowknife Ar**	**55.91**	**25**	P	**P**	**15 43 37.0**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=336,slow=6.8,SNR=5.1						
GERES	**GERESS Array B**	**56.12**	**308**	P	**P**	**15 43 40.6**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=142,slow=37,SNR=1.6						
ESDC	**Sonseca Array**	**70.99**	**314**	P	**P**	**15 45 20.1**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=20,slow=6.5,SNR=3.2						
NVAR	**Mina Array Bea**	**76.01**	**40**	P	**P**	**15 45 48.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=316,slow=7.6,SNR=2.1						
WRA	**Warramunga Arr**	**77.72**	**160**	P	**P**	**15 45 56.5**	**-0.2**
	comp=Z,0.9nm,1.1s,baz=345,slow=5.7,SNR=2.8						
ASAR	**Alice Springs**	**81.28**	**161**	P	**P**	**15 46 14.9**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=339,slow=5.0,SNR=2.0						

BYKL 03 15:34:12.0±0.2**, 56°.12N×113°.67E, h11**^{km}±4^{km}**, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.06**	**267**	*e*Pg	Pg	15 34 14.1	-0.3
SVKR				Pmax		15 34 15.5	
	14µm,0.2s						
SVKR				*e*Sg	Sg	15 34 16.3	+0.2
SVKR				Smax		15 34 20.4	
	123µm,0.7s						
UKT	**Uakit**	**0.63**	**182**	*e*Pg	Pg	15 34 22.5	-1.8
UKT				Pmax		15 34 22.8	
	978nm,0.4s						
UKT				*e*Sg	Sg	15 34 30.4	-2.2
UKT				Smax		15 34 43.0	
	3µm,1.5s						
NLYR	**Nelyaty**	**1.19**	**71**	*e*Pg	Pb	15 34 34.2	-0.4
NLYR				Pmax		15 34 37.7	
	1µm,0.4s						
NLYR				*e*Sg	Sb	15 34 50.1	0.0
NLYR				*e*Sb	Sn	15 34 54.0	+3.2
NLYR				max		15 34 54.7	
	7µm,0.8s						
KMO	**Kumora**	**1.41**	**261**	*e*Pg	Pb	15 34 38.2	-0.1
KMO				*e*Sg	Sg	15 34 56.9	-0.3
KMO				Smax		15 35 01.0	
	8µm,1.0s						
BOD	**Bodaibo**	**1.71**	**6**	*e*Pg	Pb	15 34 43.5	0.0
BOD				Pmax		15 34 46.7	
	806nm,1.4s						
BOD				*e*Sg	Sb	15 35 04.8	-0.2
BOD				Smax		15 35 08.4	
	2µm,0.7s						
YLYR	**Ulyunkhan**	**1.90**	**230**	*e*Pg	Pb	15 34 46.4	-0.2
YLYR				Pmax		15 34 49.4	
	338nm,0.4s						
YLYR				*e*Sg	Sb	15 35 11.3	+1.1
YLYR				Smax		15 35 17.1	
	2µm,0.8s						
NIZ	**Nizh Angarsk**	**2.35**	**263**	Smax		15 34 27.4	
	2µm,0.8s						
NIZ				*e*Pg	Pb	15 34 53.5	-0.8
NIZ				Pmax		15 34 57.1	
	141nm,0.4s						
NIZ				*e*Sg	Sb	15 35 24.4	+1.1
CRS	**Chara**	**2.67**	**71**	*e*Pg	Pb	15 35 00.5	+0.8
CRS				Pmax		15 35 03.2	
	1µm,1.1s						
CRS				*e*Sg	Sb	15 35 34.5	+2.1
CRS				Smax		15 35 37.2	
	2µm,1.1s						
SYVR	**Suvo**	**3.25**	**222**	*e*Pg	Pb	15 35 10.2	+0.5
SYVR				Pmax		15 35 15.6	
	204nm,0.6s						
SYVR				*e*Sg	Sb	15 35 52.3	+3.0
SYVR				Smax		15 36 01.7	
	739nm,1.4s						
VTMR	**Vitim**	**3.38**	**350**	*e*Pg	Pb	15 35 13.1	+1.2
VTMR				*e*Sg	Sb	15 35 56.2	+3.2
TUP	**Tupik**	**3.98**	**113**	*e*Pg	Pb	15 35 23.7	+1.7
TUP				Pmax		15 35 26.4	
	201nm,0.7s						
TUP				*e*Sg	Sb	15 36 14.8	+4.7
TUP				Smax		15 36 23.9	
	1µm,1.0s						
MXMB	**Maximikha**	**4.04**	**227**	*e*Pg	Pb	15 35 24.6	+1.4
MXMB				*e*Sg	Sg	15 36 18.3	-3.5
OGRR	**Ongureny**	**4.30**	**237**	*e*Pg	Pb	15 35 29.5	+2.0
OGRR				Pmax		15 35 32.3	
	87nm,1.2s						
OGRR				*e*Sg	Sg	15 36 24.7	-5.1
OGRR				Smax		15 36 34.3	
	464nm,1.3s						
YKLR	**Yuktali**	**4.47**	**81**	*e*Pg	Pb	15 35 31.2	+0.8
YKLR				*e*Sg	Sb	15 36 29.7	+5.5
ZRHB	**Zarechye**	**5.22**	**230**	*e*Sg	Sg	15 36 53.6	-6.0
ZRHB				Smax		15 37 11.5	
	855nm,1.1s						
TRG	**Tyrgan**	**5.44**	**235**	*e*Sg	Sg	15 37 01.2	-5.2
TRG				Smax		15 37 13.8	
	200nm,1.1s						
HRMR	**Khuramsha**	**6.00**	**224**	*e*Pg	Pb	15 36 00.3	+3.8
HRMR				Pmax		15 36 07.8	
	103nm,0.7s						
HRMR				*e*Sg	Sg	15 37 18.9	-5.6
HRMR				Smax		15 37 34.1	
	727nm,1.1s						
IENR	**Iengra**	**6.25**	**84**	*e*Pn	Pn	15 35 44.9	+0.8
IENR				*e*Pg	Pb	15 36 04.7	+3.9
IENR				*e*Sg	Sg	15 37 25.0	-7.5
BGT	**Bolshoye Golou**	**6.35**	**233**	*e*Sg	Sg	15 37 28.8	-6.7
BGT				Smax		15 37 40.2	
	164nm,1.3s						
KPC	**Khapcheranga**	**6.47**	**187**	*e*Pn	Pn	15 35 46.3	-0.9
KPC				*e*Pg	Pb	15 36 08.6	+4.0
KPC				Pmax		15 36 16.7	
	18nm,1.1s						
KPC				*e*Sg	Sg	15 37 33.0	-6.7
KPC				Smax		15 37 48.5	
	518nm,1.2s						
TLY	**Talaya**	**7.40**	**237**	*e*	Pg	15 36 27.4	-6.2
TLY				*e*Sg	Sg	15 37 59.3	-10
TLY				Smax		15 38 17.6	
	109nm,1.6s						
ARS	**Arshan**	**7.84**	**242**	*e*Pg	Pb	15 36 34.1	+6.2
ARS				Pmax		15 36 37.3	
	29nm,0.6s						
ARS				*e*Sg	Sg	15 38 14.5	-9.0
ARS				Smax		15 38 36.7	
	396nm,0.8s						
ZAK	**Zakamensk**	**8.47**	**232**	*e*Sg	Sg	15 38 35.3	-8.3
ZAK				Smax		15 38 47.7	
	124nm,1.9s						
MOY	**Mondy**	**8.71**	**244**	*e*Pn	Pn	15 36 20.2	+2.3
MOY				max		15 36 32.9	
	28nm,1.3s						
MOY				*e*Sg	Sg	15 38 41.2	-10
MOY				Smax			
	231nm,1.5s						
ORL	**Orlik**	**8.86**	**252**	*e*Pn	Pn	15 36 21.0	+1.1
ORL				max		15 36 48.1	
	21nm,1.5s						
ORL				*e*Sn	Sn	15 37 56.9	-2.8
ORL				*e*Sg	Sg	15 38 44.7	-11
ORL				Smax		15 38 58.0	
	155nm,1.8s						

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*JMA **03** 15:38:09.5±0.2, 34°.63N×140°.64E, h54^{km}±2^{km}, M2.6*

*IDC **03** 15:38:10.1±1.5, 33°.99N×138°.41E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.1/48, mbtmp3.2/3, ML2.0/1, Error ellipse: s-maj=36.3km s-min=20.5km az=69.0*

ISC 03 15:38:09.1±1.6**, 34°.58N**±0°.05×**140°.56E**±0°.06**, h27**^{km}±14^{km}**, n17, σ0^{s}.96**/26**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.23**	**349**	P	**Pn**	**15 38 18.2**	**+1.7**
BSO3				*e*X		15 38 24.4	
BSO1	**Boso 1**	**0.35**	**77**	P	**Pn**	**15 38 18.8**	**+0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BSO1				eX		15 38 24.9	
BSO4	Boso 4	0.45	336	P	Pn	15 38 20.8	+1.0
KTR	Katsuura	0.60	340	P	Pn	15 38 22.1	+0.2
KTR				eS	Sn	15 38 30.3	-0.5
JKUC	kamogawauchiur	0.65	333	P	Pn	15 38 22.9	+0.3
JKUC				eS	Sn	15 38 31.7	-0.3
TATJ	Tateyama 2	0.72	310	P	Pn	15 38 24.7	+1.2
TATJ				eS	Sn	15 38 34.7	+1.1
JIM2	Oshima 3	0.94	279	P	Pb	15 38 27.4	+0.5
JTHY	Toshimahigashi	1.05	267	P	Pb	15 38 29.2	+0.5
JSMT	Sammumatsuo	1.07	355	P	Pn	15 38 27.9	-0.4
JSMT				eS	Sn	15 38 41.0	-1.2
KTJ3	Kamata3	1.28	287	P	Pn	15 38 31.6	+0.4
KTJ3				eS	Sn	15 38 46.3	-1.2
JOD2	Odawara 2	1.39	300	P	Pn	15 38 33.1	+0.3
JIZS	Izushimoda	1.40	276	P	Pb	15 38 33.7	-0.8
JIZS				eS	Sb	15 38 50.6	-1.3
JHJ	Hachijo jima 2	1.59	204	Pn	Pb	15 38 38.1	+0.2
	18nm,0.3s,baz=168,slow=23,SNR=8.1						
JHJ				Sn	Sb	15 38 57.4	-0.1
	20nm,0.3s,baz=73,slow=22,SNR=1.5						
MJAR	Matsushiro Arr	2.74	316	Pn	Pn	15 38 52.3	+0.9
	0.3nm,0.3s,baz=150,slow=13,SNR=32						
MJAR				Sn	Sn	15 39 25.5	+1.9
	0.6nm,0.3s,baz=246,slow=30,SNR=12						
MAT	Matsushiro	2.75	316	P	Pn	15 38 52.5	+1.1
MAT				eS	Sn	15 39 24.1	+0.4
WRA	Warramunga Arr	54.54	187	P	P	15 47 34.3	-0.5
	0.3nm,0.6s,baz=2.5,slow=7.7,SNR=6.2						
ASAR	Alice Springs	58.27	187	P	P	15 48 00.8	-0.5
	0.2nm,0.8s,baz=13,slow=8.7,SNR=1.0						

IDC ***03*** *15:42:34.4±1.6, 22°.69S×69°.39E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/48, mbtmp3.9/6, Error ellipse: s-maj=55.7km s-min=28.1km az=37.0*

NEIC ***03*** *15:42:35.4±2.2, 22°.8S±0°.2×69°.66E±0°.04, h10km±1km, mb4.7/9, Error ellipse: s-maj=28.4km s-min=5.6km az=183.0*

ISC 03 15:42:35.1±0.8**, 22°.9S**±0°.2×**69°.7E**±0°.1**, h10km, n18, σ1ˢ39**/15**, mb4.1**/9**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RER	Riviere de l'E	13.01	275	Pn	Pn	15 45 40.6	+0.3
H08S1	Diego Carcia H	15.39	11	T	T	16 01 44.2	
	baz=192,slow=76,SNR=46						
H08S2	Diego Garcia H	15.40	11	T	T	16 01 49.8	
	baz=192,slow=76,SNR=46						
H08S3	Diego Garcia H	15.41	11	T	T	16 01 48.7	
	baz=192,slow=76,SNR=63						
AIS	Amsterdam Isla	16.35	157		P	15 46 27.4	-0.2
AIS				IAmb	IAmb	15 46 39.8	
	comp=Z,252nm,1.3s						
FORT	Forrest	52.21	112	P	P	15 51 46.5	0.0
FORT				IAmb	IAmb	15 51 49.7	
	comp=Z,20nm,0.9s						
ASAR	Alice Springs	58.55	105	P	P	15 52 35.0	+2.6
	comp=Z,1.1nm,0.9s,baz=269,slow=6.0,SNR=7.8						
AS31	Alice Springs	58.55	105	P	P	15 52 33.3	+0.9
BBOO	Buckleboo	58.71	115	P	P	15 52 32.9	-0.4
MTN	Manton Dam	59.01	92	P	P	15 52 33.8	-1.7
WRA	Warramunga Arr	59.86	100	P	P	15 52 44.4	+2.9
	comp=Z,1.1nm,0.8s,baz=254,slow=7.0,SNR=6.9						
WRAB	Tennant Creek	59.87	100	P	P	15 52 40.7	-0.9
WRAB				IAmb	IAmb	15 52 51.8	
	comp=Z,7.0nm,1.1s						
MAKZ	Makanchi	70.25	9	P	P	15 53 47.2	-1.1
MK31	Makanchi Array	70.28	9	P	P	15 53 48.4	-0.2
MK31				IAmb	IAmb	15 53 49.1	
	comp=Z,2.1nm,1.1s						
MKAR	Makanchi Array	70.28	9	P	P	15 53 48.6	+0.1
	comp=Z,1.2nm,0.7s,baz=191,slow=5.6,SNR=13						
TORD	Torodi Ar. Bea	75.54	291	P	P	15 54 19.7	-0.7
	comp=Z,0.8nm,0.9s,baz=130,slow=5.8,SNR=3.6						
ZALV	Zalesovo Beam	77.63	9	P	P	15 54 31.0	-0.2
	comp=Z,1.4nm,0.7s,baz=208,slow=4.0,SNR=8.2						
SONM	Songino Array	77.75	24	P	P	15 54 33.3	+1.0
	comp=Z,0.4nm,0.5s,baz=224,slow=6.0,SNR=2.9						

ISK ***03*** *16:02:21.9, 35°.46N×27°.40E, h8km, ML3.0/14*

ATH ***03*** *16:02:22.4, 35°.41N×27°.39E, h7km±1km, ML3.0/7, Error ellipse: s-maj=2.3km s-min=1.1km az=345.0*

NIC ***03*** *16:02:22.1±0.0, 35°.49N×27°.37E, h20km±1km, Ml3.7/3*

THE ***03*** *16:02:23.2, 35°.54N×27°.38E, h2km±1km, ML3.2/3, Error ellipse: s-maj=1.9km s-min=0.4km az=335.0*

DDA ***03*** *16:02:27.2, 35°.87N×27°.27E, h31km±1km, ML2.9*

ISC 03 16:02:22.8±0.9**, 35°.49N**±0°.03×**27°.38E**±0°.02**, h16**km±5km**, n96, σ1ˢ12**/141**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.19	288	P	Pg	16 02 27.1	-0.4
KARP				S	Sg	16 02 30.5	-0.1
KARP				AML	AML	16 02 30.9	
	comp=N,47587µm,0.2s						
KARP				AML	AML	16 02 31.3	
	comp=E,55506µm,0.1s						
KARP	Karpathos	0.19	288	P	Pg	16 02 27.1	-0.4
KARP				S	Sg	16 02 30.5	-0.1
KARP				AML	AML	16 02 30.9	
	comp=N,47587µm,0.2s						
KARP				AML	AML	16 02 31.3	
	comp=E,55506µm,0.1s						
KARP	Karpathos	0.19	288	P	Pg	16 02 27.1	-0.4
KARP				S	Sg	16 02 30.5	-0.1
	comp=E,26µm,0.1s						
KARP	Karpathos	0.19	288	PG	Pg	16 02 26.9	-0.6
KARP				SG	Sg	16 02 30.4	-0.1
KARP	Karpathos	0.19	288	P	Pg	16 02 27.1	-0.4
KARP				AML	AML	16 02 30.5	
	comp=E,47nm,0.2s						
KARP				AML	AML	16 02 30.5	
	comp=E,47nm,0.2s						
KARP				S	Sg	16 02 30.6	0.0
KARP				AML	AML	16 02 30.9	
	comp=E,54nm,0.1s						
KARP				AML	AML	16 02 30.9	
	comp=E,54nm,0.1s						
ARG	Arkhangelos	0.94	40	P	Pb	16 02 41.2	+0.4
ARG				S	Sb	16 02 54.3	+1.3
ARG				AML	AML	16 02 56.4	
	comp=N,1773µm,0.2s						
ARG				AML	AML	16 02 59.3	
	comp=E,1910µm,0.3s						
ARG	Arkhangelos	0.94	40	P	Pb	16 02 41.2	+0.4
ARG				S	Sb	16 02 54.3	+1.3
ARG				AML	AML	16 02 56.4	
	comp=N,1773µm,0.2s						
ARG				AML	AML	16 02 59.3	
	comp=E,1910µm,0.3s						
ARG	Arkhangelos	0.94	40	P	Pb	16 02 41.1	+0.4
ARG				S	Sb	16 02 54.3	+1.3
	comp=E,1µm,0.5s						
ARG	Arkhangelos	0.94	40	PG	Pg	16 02 40.4	-0.7
ARG				SG	Sb	16 02 54.6	+1.6
ARG	Arkhangelos	0.94	40	P	Pg	16 02 40.7	-0.4
ARG				S	Sb	16 02 54.2	+1.3
ZKR	Zakros	1.02	249	P	Pg	16 02 40.6	-2.0
ZKR				AML	AML	16 03 01.8	
	comp=E,1244µm,1.0s						
ZKR				AML	AML	16 03 02.2	
	comp=N,1450µm,0.4s						
ZKR	Zakros	1.02	249	P	Pg	16 02 40.6	-2.0
ZKR				AML	AML	16 03 01.8	
	comp=E,1244µm,1.0s						
ZKR				AML	AML	16 03 02.2	
	comp=N,1450µm,0.4s						
ZKR	Zakros	1.02	249	PG	Pg	16 02 41.2	-1.4
ZKR				SG	Sb	16 02 56.8	+1.5
DATC	Datca-Mugla	1.29	10	PN	Pg	16 02 47.3	-0.3
KOSK	Kos Island	1.30	346	PN	Pn	16 02 46.8	+0.5
MRSB	Marmaris-Mugla	1.39	28	PN	Pb	16 02 48.6	+0.2
TURN	Turunc	1.46	28	PN	Pb	16 02 49.6	0.0
TURN	Turunc	1.46	28	i P	Pn	16 02 49.2	+0.8
TURN				i S	Sn	16 03 06.9	-0.4
NPS	Neapolis	1.46	262	P	Pn	16 02 48.9	+0.3
NPS				S	Sn	16 03 07.1	-0.3
NPS				AML	AML	16 03 17.4	
	comp=E,1939µm,0.7s						
NPS				AML	AML	16 03 17.7	
	comp=N,859µm,0.5s						
NPS	Neapolis	1.46	262	P	Pn	16 02 48.9	+0.3
NPS				S	Sn	16 03 07.1	-0.3
NPS				AML	AML	16 03 17.4	
	comp=E,1939µm,0.7s						
NPS				AML	AML	16 03 17.7	
	comp=N,859µm,0.5s						
NPS	Neapolis	1.46	262	P	Pn	16 02 49.0	+0.5
NPS				S	Sg	16 03 09.4	-0.7
	comp=N,735nm,0.8s						
BODT	Bodrum	1.57	358	PN	Pn	16 02 51.1	+1.1
BDRM	Kayabasi	1.57	2	i P	Pn	16 02 49.4	-0.7
BDRM				i S	Sn	16 03 05.7	-4.4
LAST	Lasithi	1.59	259	P	Pn	16 02 51.1	+0.8
LAST				AML	AML	16 03 22.5	
	comp=E,426µm,0.6s						
LAST				AML	AML	16 03 23.5	
	comp=N,573µm,0.5s						
LAST	Lasithi	1.59	259	P	Pn	16 02 51.1	+0.8
LAST				AML	AML	16 03 22.5	
	comp=E,426µm,0.6s						
LAST				AML	AML	16 03 23.5	
	comp=N,573µm,0.5s						
LAST	Lasithi	1.59	259	P	Pn	16 02 51.0	+0.7
LAST				S	Sb	16 03 12.8	+1.1
DALY	Dalyan (Mula)	1.68	37	PN	Pn	16 02 52.7	+1.3
DALY	Dalyan (Mula)	1.68	37	i P	Pb	16 02 53.9	+0.6
DALY				i S	Sn	16 03 13.4	+0.9
DALY				IAML		16 03 27.0	
	comp=N,138nm,0.6s						
DALY				IAML		16 03 54.0	
	comp=E,275nm,2.5s						
FETY	Fethiye	1.79	50	PN	Pn	16 02 54.2	+1.1
FETY	Fethiye	1.79	50	i P	Pn	16 02 53.7	+0.7
FETY				i S	Sn	16 03 13.9	-1.5
SANT	Santorini	1.79	300	P	Pn	16 02 53.2	+0.1
SANT				S	Sn	16 03 15.8	+0.3
SANT				AML	AML	16 03 20.3	
	comp=E,990µm,0.5s						
SANT				AML	AML	16 03 22.8	
	comp=N,300µm,0.3s						
SANT	Santorini	1.79	300	P	Pn	16 02 53.2	+0.1
SANT				S	Sn	16 03 15.8	+0.3
SANT				AML	AML	16 03 20.3	
	comp=E,990µm,0.5s						
SANT				AML	AML	16 03 22.8	
	comp=N,300µm,0.3s						
SANT	Santorini	1.79	300	PN	Pn	16 02 54.3	+1.2
THR8	Santorini-Mono	1.79	301	P	Pn	16 02 53.4	+0.4
THR8	Santorini-Mono	1.79	301	P	Pn	16 02 53.4	+0.4
THR8	Santorini-Mono	1.79	301	P	Pn	16 02 53.4	+0.4
YER	Yerkesik	1.80	24	PN	Pn	16 02 54.7	+1.5
THR6	Thira Island,	1.83	299	P	Pn	16 02 54.0	+0.5
THR6	Thira Island,	1.83	299	P	Pn	16 02 54.0	+0.5
THR6	Thira Island,	1.83	299	P	Pn	16 02 54.0	+0.5
MLSB	Milas	1.83	10	PN	Pn	16 02 54.9	+1.3
THR7	Fira-Santorini	1.84	301	P	Pn	16 02 54.2	+0.5
THR7	Fira-Santorini	1.84	301	P	Pn	16 02 54.2	+0.5
THR3	Thira Island,	1.85	300	P	Pn	16 02 54.6	+0.8
THR3	Thira Island,	1.85	300	P	Pn	16 02 54.6	+0.8
THR3	Thira Island,	1.85	300	P	Pn	16 02 54.3	+0.5
SNT5	Nea Kammeni, S	1.85	300	P	Pn	16 02 53.9	+0.1
SNT5				S	Sn	16 03 18.5	+1.6
SNT5	Nea Kammeni, S	1.85	300	P	Pn	16 02 53.9	+0.1
SNT5				S	Sn	16 03 18.5	+1.6
HRKL	Herakleio	1.87	265	PN	Pn	16 02 55.1	+1.0
THR5	Thira Island,	1.89	300	P	Pn	16 02 54.9	+0.5
THR5	Thira Island,	1.89	300	P	Pn	16 02 54.9	+0.5
THR5	Thira Island,	1.89	300	P	Pn	16 02 54.6	+0.2
KSL	Kastellorizon	1.91	69	P	Pn	16 02 55.8	+1.2
KSL	Kastellorizon	1.91	69	P	Pn	16 02 55.8	+1.2
KSL	Kastellorizon	1.91	69	S	Sn	16 03 17.9	-0.4
MULA	Mugla, Merkez-	1.92	23	i P	Pn	16 02 56.5	+1.6
MULA				i S	Sn	16 03 18.8	+0.1
AKAS	Kas	1.95	67	PN	Pn	16 02 56.5	+1.1
AKAS	Kas	1.95	67	i P	Pn	16 02 56.3	+1.0
AKAS				i S	Sn	16 03 16.2	-3.4
IDI	Anoyia	2.05	265	P	Pn	16 02 56.8	+0.2
IDI				S	Sn	16 03 22.6	+0.8
IDI				AML	AML	16 03 29.2	
	comp=N,421µm,0.5s						
IDI				AML	AML	16 03 29.5	
	comp=E,306µm,0.3s						
IDI	Anoyia	2.05	265	P	Pn	16 02 56.8	+0.2
IDI				S	Sn	16 03 22.6	+0.8
IDI				AML	AML	16 03 29.2	
	comp=N,421µm,0.5s						
IDI				AML	AML	16 03 29.5	
	comp=E,306µm,0.3s						
IDI	Anoyia	2.05	265	P	Pn	16 02 56.7	+0.1
IDI	Anoyia	2.05	265	PN	Pn	16 02 57.7	+1.1
SIVA	Sivas	2.16	258	P	Pn	16 02 57.3	-0.8
SIVA	Sivas	2.16	258	P	Pn	16 02 57.3	-0.8
APE	Apeiranthos	2.17	317	P	Pn	16 02 58.6	+0.3
APE	Apeiranthos	2.17	317	P	Pn	16 02 58.6	+0.3
APE	Apeiranthos	2.17	317	PN	Pn	16 02 59.6	+1.3
APE	Apeiranthos	2.17	317	P	Pn	16 02 57.8	-0.6
APE				S	Sn	16 03 24.6	-0.3
GCAM	G?zelcaml?	2.21	357	PN	Pn	16 03 00.5	+1.7
GCAM	G?zelcaml?	2.21	357	i P	Pn	16 03 00.4	+1.6
GCAM				i S	Sn	16 03 22.8	-2.9
CAEL	Denizli, Camel	2.26	43	i P	Pb	16 03 02.0	-1.3
CAEL				i S	Sn	16 03 26.9	-0.2
CAEL				IAML		16 03 41.0	
	comp=E,122nm,0.8s						
CAEL				IAML		16 03 45.0	
	comp=N,133nm,0.8s						
TAVA	DENIZLI_Tavas	2.33	32	i P	Pb	16 03 03.5	-0.9
TAVA				i S	Sn	16 03 28.2	-0.5
ELL	Elmali	2.40	58	PN	Pn	16 03 03.1	+1.6
GOLH	Golhisar	2.48	45	i P	Pb	16 03 05.5	-1.5
GOLH				i S	Sb	16 03 37.9	+0.6
GOLH				IAML		16 03 52.0	
	comp=N,57nm,0.7s						
GOLH				IAML		16 03 52.0	
	comp=E,56nm,0.4s						
VAM	Vamos	2.60	269	P	Pn	16 03 04.0	-0.1
VAM				S	Sn	16 03 35.3	-0.1
VAM	Vamos	2.60	269	P	Pn	16 03 04.0	-0.1
VAM				S	Sn	16 03 35.3	-0.1
GVD	Gavdhos	2.78	257	PN	Pn	16 03 08.3	+1.7
IMMV	Iera Moni Meta	2.78	270	P	Pn	16 03 07.0	+0.4
IMMV	Iera Moni Meta	2.78	270	P	Pn	16 03 07.0	+0.4
IMMV	Iera Moni Meta	2.78	270	PN	Pn	16 03 08.3	+1.7
KORT	Korkueli	2.83	57	PN	Pn	16 03 09.2	+1.7
URLA	Izmir	2.93	348	PN	Pn	16 03 10.8	+2.0
URLA	Izmir	2.93	348	i P	Pn	16 03 08.1	-0.7
URLA				i S	Sn	16 03 41.7	-2.0
BRDR	BURDUR-Merkez	3.08	44	i P	Pb	16 03 18.5	+1.2
BRDR				i S	Sn	16 03 48.0	+0.6
MANT	Manisa	3.14	17	i P	Pn	16 03 12.5	+0.8
MANT				i S	Sn	16 03 44.9	-4.1
KHAL	Karahalli	3.33	30	i P	Pn	16 03 15.5	+1.1
KHAL				i S	Sn	16 03 50.5	-3.2
KTHA	Kythira Island	3.59	284	P	Pn	16 03 18.3	+0.5
KTHA				S	Sn	16 03 59.2	-0.6
KTHA	Kythira Island	3.59	284	P	Pn	16 03 18.3	+0.5
KTHA				S	Sn	16 03 59.2	-0.6
OSC1	CSNet OBS 1	3.78	121	S	Sn	16 04 04.7	+0.3
VLI	Veliai	3.80	290	P	Pn	16 03 21.6	+0.9
VLI				S	Sn	16 04 04.7	-0.3
VLI	Veliai	3.80	290	P	Pn	16 03 21.6	+0.9
VLI				S	Sn	16 04 04.7	-0.3
AKMS	Akamas	4.08	95	P	Pn	16 03 24.3	-0.2
AKMS				S	Sn	16 04 11.6	-0.4
AKMS				AML	AML	16 04 13.8	
	comp=E,0.3nm,0.6s						
AKMS				AML	AML	16 04 13.8	
	comp=E,0.3nm,0.6s						
SZAC	Souni	4.57	98	P	Pn	16 03 30.9	-0.3
SZAC				S	Sn	16 04 24.3	+0.3
SZAC				AML	AML	16 04 25.2	
	comp=E,0.2nm,0.4s						
SZAC				AML	AML	16 04 25.2	
	comp=E,0.2nm,0.4s						
SZAC				AML	AML	16 04 25.2	
	comp=E,0.3nm,0.5s						
SZAC				AML	AML	16 04 25.2	
	comp=E,0.3nm,0.5s						
ASGA	Asgata	4.86	97	P	Pn	16 03 34.8	-0.4
ASGA				S	Sn	16 04 31.7	+0.6
CSS	Mathiatis	4.90	94	P	Pn	16 03 36.0	+0.2
MVOU	Mavrovouni	5.14	93	P	Pn	16 03 39.1	+0.1

IDC ***03*** *16:15:17.9±4.3, 16°.98N×59°.79E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.4/41, mbtmp3.7/7, ML3.6/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/42, Error ellipse: s-maj=85.5km s-min=32.5km az=36.0*

OMAN ***03*** *16:15:25.4±0.3, 17°.41N×59°.65E, h15km, mb5.2/11, ml4.1/9, ms2.5/1, Error ellipse: s-maj=12.0km s-min=7.7km az=264.0*

ISC 03 16:15:21.0±1.1**, 17°.23N**±0°.07×**59°.83E**±0°.07**, h10km, n28, σ1ˢ27**/47**, mb3.6**/5**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQM	DQM	3.45	321	P	Pn	16 16 15.2	+0.3
	SNR=201						
DQM				S	Sn	16 16 56.0	+0.1
SHAO	Shalim	4.09	282	P	Pn	16 16 24.0	+0.3
	SNR=32						
SHAO				S	Sn	16 17 09.4	-2.3
	SNR=9.2						
MHTO	MHTO	4.13	335	P	Pn	16 16 23.6	-0.6
	SNR=220						
MHTO				S	Sn	16 17 13.0	+0.4
	SNR=7.8						
DMTO	DMTO	4.69	277	P	Pn	16 16 32.4	+0.5
	SNR=32						
DMTO				S	Sn	16 17 23.4	-3.0
JLN	Jalan Bani Buh	4.91	355	P	Pn	16 16 33.8	-1.1
JLN				S	Sn	16 17 29.7	-2.1
JMDO	Jabal Madar	5.37	343	P	Pn	16 16 41.6	+0.4
	SNR=84						
JMDO				S	Sn	16 17 42.9	-0.2
	SNR=6.7						
RBK	Rabkut	5.38	274	P	Pn	16 16 42.2	+0.7
	SNR=16						
RBK				S	Sn	16 17 42.1	-1.5
	SNR=7.6						
WBK	Wadi Bani Khal	5.41	352	P	Pn	16 16 42.7	+0.8
	SNR=49						
WBK				S	Sn	16 17 43.5	-0.8
DOK	Doka	5.60	285	P	Pn	16 16 45.3	+0.9
	SNR=15						
DOK				S	Sn	16 17 47.5	-1.4
	SNR=6.5						
WHFO	Wadi Hawf	5.82	278	P	Pn	16 16 48.7	+1.2
	SNR=19						
WHFO				S	Sn	16 17 54.2	-0.3
BSY	Bisya	6.02	336	P	Pn	16 16 51.1	+1.0
BSY				S	Sn	16 17 57.8	-1.4
SMDO	Samad	6.03	344	P	Pn	16 16 51.1	+0.6
	SNR=34						
SMDO				S	Sn	16 17 58.1	-1.6
	SNR=8.6						
WSAR	Wadi Sarin	6.08	349	Pn	Pn	16 16 51.3	+0.2
	1.4nm,0.3s,baz=207,slow=11,SNR=34						
WSAR				Sn	Sn	16 17 58.2	-2.6
	4.2nm,0.3s,baz=66,slow=18,SNR=3.1						
WSAR				LR	LR	16 19 15.8	
	comp=Z,101nm,18.6s,baz=202,slow=38						
ABTO	Aybut	6.25	272	P	Pn	16 16 54.3	+1.0
	SNR=16						
ABTO				S	Sn	16 18 03.7	-1.1
	SNR=7.2						
BIDO	Bidbid	6.46	346	P	Pn	16 16 57.0	+0.8
	SNR=21						
BIDO				S	Sn	16 18 09.2	-0.8
HOQ	Hoqain	6.75	340	P	Pn	16 17 01.5	+1.3
	SNR=15						
HOQ				S	Sn	16 18 16.0	-1.2
ARQ	Araqi	6.82	333	P	Pn	16 17 02.5	+1.2
	SNR=23						
ARQ				S	Sn	16 18 18.3	-0.7
SOHO	SOHO	7.53	336	P	Pn	16 17 12.3	+1.4
SOHO				P	Pn	16 17 12.3	+1.4
ASHO	Ashiyiah	8.21	335	P	Pn	16 17 21.6	+1.2
	SNR=12						
ASHO				S	Sn	16 18 51.7	-1.5
FAQ	Al Faqa, Dubai	8.46	333	P	Pn	16 17 24.7	+1.0
	SNR=6.8						
FAQ				S	Sn	16 18 57.1	-2.2
ASUD	Al Ashush, Dub	8.47	331	P	Pn	16 17 24.9	+1.0
	SNR=14						
GEYT	Alibeck	20.68	356	P	P	16 20 03.2	+2.0
	1.3nm,0.6s,baz=178,slow=14,SNR=2.6						
GNI	Garni	26.32	333	LR	LR	16 32 47.0	
	comp=Z,85nm,19.6s,baz=146,slow=40						
MKAR	Makanchi Array	34.84	27	P	P	16 22 12.6	+0.3
	0.7nm,0.5s,baz=214,slow=9.8,SNR=15						
CMAR	Chiang Mai Arr	37.20	82	P	P	16 22 31.7	-1.1
	0.2nm,0.4s,baz=277,slow=12,SNR=4.6						
ZALV	Zalesovo Beam	41.45	22	P	P	16 23 08.3	+0.5
	0.7nm,0.5s,baz=226,slow=12,SNR=4.1						
SONM	Songino Array	48.68	41	P	P	16 24 05.8	+0.2
	0.2nm,0.5s,baz=243,slow=6.3,SNR=2.0						
FINES	FINESS Array B	50.21	340	P	P	16 24 16.8	-0.1
	5.7nm,0.9s,baz=147,slow=7.5,SNR=9.6						

JMA ***03*** *16:19:44.6±0.1, 23°.92N×121°.65E, h21km±2km, M2.0*

TAP ***03*** *16:19:45.7, 23°.98N×121°.60E, h18km, ML2.9, A*

ISC 03 16:19:45.9±0.9**, 23°.97N**±0°.01×**121°.64E**±0°.02**, h19**km±1km**, n95, σ0ˢ75**/171**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.03	279	eP	Pg	16 19 50.1	+0.8
	baz=128						
HWA				eS	Sg	16 19 54.3	+2.7
	baz=128						
TWD	Chiawan	0.11	342	eP	Pg	16 19 50.2	+0.3
	baz=1.0						
TWD				eS	Sg	16 19 53.7	+1.1
	baz=1.0						
NACB	Ninganchiao	0.20	350	P	Pb	16 19 51.2	+0.7
	baz=357						
NACB				S	Sg	16 19 55.3	+0.7
	baz=357						
ESL	Shilin	0.24	230	eP	Pb	16 19 51.3	-0.1
	baz=220						
ESL				eS	Sb	16 19 55.5	+0.4
	baz=220						
ETLH	Xiulin Townshi	0.27	329	P	Pg	16 19 52.1	-0.1
	baz=333						
ETLH				eS	Sg	16 19 56.6	+0.2
	baz=333						
EGFH	Guangfu	0.36	212	eP	Pg	16 19 53.3	-0.2
	baz=207						
EGFH				eS	Sb	16 19 59.1	+0.1
	baz=207						
WHF	Hehuan Shan	0.38	297	eP	Pg	16 19 53.7	-0.4
	baz=297						
WHF				eS	Sg	16 19 59.6	-0.1
	baz=297						
CHGB	Renai	0.43	282	P	Pg	16 19 54.7	-0.2
	baz=281						
CHGB				S	Sg	16 20 01.0	0.0
	baz=281						
FUSS	Fushou	0.45	308	P	Pg	16 19 55.2	-0.1
	baz=308						
FUSS				S	Sg	16 20 01.7	+0.1
	baz=308						
ENA	Nanau	0.46	12	eP	Pg	16 19 55.5	0.0
	baz=16						
ENA				eS	Sb	16 20 02.7	+0.6
	baz=16						
ENAH	Nanao	0.50	19	P	Pg	16 19 56.2	+0.1
	baz=22						
ENAH				eS	Sb	16 20 04.1	+1.1
	baz=22						
TWT	Tachien	0.50	304	P	Pg	16 19 56.2	0.0
	baz=303						
TWT				S	Sg	16 20 03.6	+0.5
	baz=303						
NNSB	Datong	0.51	333	P	Pg	16 19 56.1	-0.2
	baz=335						
NNSB				eS	Sg	16 20 03.2	-0.1
	baz=335						
NNSH	Datong	0.51	333	eP	Pg	16 19 56.1	-0.2
	baz=335						
NNSH				eS	Sg	16 20 03.3	+0.1
	baz=335						
HGSD	Ruisui	0.52	202	P	Pg	16 19 56.5	+0.2
	baz=198						
HGSD				eS	Sb	16 20 05.2	+1.8
	baz=198						
TDCB	Techi	0.52	303	P	Pg	16 19 56.3	-0.2
	baz=303						

TDCB				S	Sg	16 20 03.4	-0.2
	baz=303						
NNS	Nan Shan	0.52	333	eP	Pg	16 19 56.3	-0.3
	baz=335						
NNS				eS	Sg	16 20 03.9	+0.2
	baz=335						
EHY	Hungye	0.55	212	eP	Pb	16 19 55.7	-1.1
	baz=207						
WPL	Puli Township	0.62	274	P	Pb	16 19 57.9	-0.2
	baz=272						
WPL				eS	Sb	16 20 06.6	+0.2
	baz=272						
NDT	Datong Townshi	0.64	350	eP	Pb	16 19 58.5	+0.1
	baz=352						
NDT				eS	Sb	16 20 07.0	+0.1
	baz=352						
SSLB	Suanglung	0.65	254	eP	Pb	16 19 58.0	-0.6
	baz=251						
SSLB				eS	Sb	16 20 06.9	-0.4
	baz=251						
DPDB	Guoxing	0.65	275	P	Pb	16 19 58.4	-0.3
	baz=274						
DPDB				S	Sb	16 20 07.6	+0.3
	baz=274						
YULB	Yu-li	0.66	208	eP	Pb	16 19 56.9	-1.8
	baz=205						
YULB				eS	Sn	16 20 09.3	-0.7
	baz=205						
TWC	Suao	0.66	17	eP	Pb	16 19 59.3	+0.5
	baz=20						
TWC				eS	Sg	16 20 08.7	+0.8
	baz=20						
ENTT	Nioudou	0.67	355	eP	Pb	16 19 58.8	-0.1
	baz=357						
ENTT				S	Sg	16 20 08.6	+0.5
	baz=357						
SMLT	Sun Moon Lake	0.68	263	P	Pb	16 19 58.7	-0.5
	baz=260						
SMLT				S	Sb	16 20 08.2	0.0
	baz=260						
EYUL	Yuli	0.69	205	eP	Pb	16 19 59.6	+0.4
	baz=202						
EYUL				eS	Sg	16 20 09.9	+1.2
	baz=202						
TWF1	Yuli	0.69	207	eP	Pb	16 19 59.1	-0.2
	baz=203						
TWF1				eS	Sg	16 20 09.8	+1.0
	baz=203						
WHP	Taichung City	0.70	296	eP	Pb	16 19 59.5	-0.1
	baz=296						
WHP				S	Sb	16 20 09.0	+0.2
	baz=296						
TYC	Yuchr	0.71	265	eP	Pb	16 19 59.2	-0.6
	baz=263						
TYC				S	Sb	16 20 09.3	+0.1
	baz=263						
YHNB	Yeheng	0.73	341	eP	Pb	16 19 59.8	-0.3
	baz=343						
YHNB				eS	Sb	16 20 09.4	-0.4
	baz=343						
NSK	Sanguang	0.74	340	P	Pb	16 20 00.1	-0.3
	baz=342						
NSK				eS	Sb	16 20 10.2	0.0
	baz=342						
TWE	Neicheng	0.75	2	eP	Pb	16 20 00.2	-0.1
	baz=5.0						
TWE				S	Sg	16 20 11.0	+0.5
	baz=5.0						
WHYT	Xinyi Township	0.77	249	eP	Pb	16 20 00.5	-0.2
	baz=247						
WHYT				eS	Sb	16 20 11.1	+0.3
	baz=247						
NWLT	Wulai	0.81	351	eP	Pb	16 20 01.2	-0.2
	baz=353						
NWLT				eS	Sb	16 20 11.4	-0.6
	baz=353						
FULB	Fuli	0.83	202	eP	Pb	16 20 01.4	-0.3
	baz=199						
FULB				eS	Sn	16 20 14.7	+0.3
	baz=199						
WJS	Zhushan	0.84	260	eP	Pb	16 20 02.2	+0.2
	baz=258						
WJS				eS	Sg	16 20 14.3	+0.6
	baz=258						
WWF	Wufeng	0.86	275	eP	Pb	16 20 02.7	+0.5
	baz=274						
NSTT	Nanjuang	0.87	319	eP	Pb	16 20 02.4	-0.1
	baz=319						
NSTT				eS	Sb	16 20 14.2	+0.4
	baz=319						
WNT	Mingjian	0.88	264	eP	Pb	16 20 03.1	+0.6
	baz=262						
WNT				eS	Sg	16 20 14.8	+0.2
	baz=262						
LIOB	Emei	0.88	320	eP	Pb	16 20 02.8	+0.2
	baz=321						
LIOB				eS	Sb	16 20 14.7	+0.8
	baz=321						
WNT1	Nantou City	0.88	266	eP	Pb	16 20 02.8	+0.3
	baz=264						
ALS	Alishan	0.89	239	eP	Pb	16 20 02.5	-0.4
	baz=236						
ALS				eS	Sb	16 20 14.8	+0.3
	baz=236						
TCU	Taichung	0.89	281	eP	Pb	16 20 03.3	+0.5
	baz=280						
TCU				eS	Sn	16 20 16.4	+0.6
	baz=280						
NTC	Toucheng	0.90	11	eP	Pb	16 20 03.5	+0.6
	baz=13						
CHKT	Chengkung	0.90	196	eP	Pb	16 20 02.9	-0.1
	baz=193						
CHKT				eS	Sn	16 20 16.4	+0.3
	baz=193						
NSY	Sanyi	0.91	299	eP	Pb	16 20 03.8	+0.6
	baz=299						
NSY				eS	Sb	16 20 15.8	+0.9
	baz=299						
CHN5	Tsauling	0.95	247	eP	Pb	16 20 03.9	0.0
	baz=245						
CHN5				eS	Sg	16 20 17.6	+0.5
	baz=245						
NMLH	Miaoli	0.95	306	eP	Pb	16 20 04.4	+0.5
	baz=306						
NMLH				eS	Sg	16 20 17.3	+0.2
	baz=306						
ELDTW	Lidau	0.96	216	eP	Pb	16 20 02.9	-1.2
	baz=213						
WCHH	Zhanghua	0.99	276	eP	Pb	16 20 04.8	+0.4
	baz=275						
WCHH				eS	Sn	16 20 19.1	+0.8
	baz=275						
TIPB	Shuangxi	1.01	10	eP	Pb	16 20 05.1	+0.3
	baz=11						
TIPB				eS	Sg	16 20 19.7	+0.8
	baz=11						
EDH	Donghe	1.04	197	eP	Pb	16 20 03.8	-1.5
	baz=195						
EDH				eS	Sb	16 20 19.0	+0.4
	baz=195						
WDLH	Douliu	1.04	255	eP	Pb	16 20 05.5	+0.2
	baz=253						
NWF	Wu-fen Shan	1.10	7	eP	Pn	16 20 06.8	+0.3
	baz=8.0						
WFSB	Wu-fen Shan	1.10	7	eP	Pn	16 20 06.7	+0.4
	baz=8.0						
WFSB				eS	Sb	16 20 21.3	+0.9
	baz=8.0						
CHN4	Tsaushan	1.14	237	eP	Pn	16 20 06.9	0.0
	baz=235						
CHN4				eS	Sg	16 20 24.0	+1.1
	baz=235						
STYT	Tauyuan	1.14	225	eP	Pn	16 20 06.3	-0.6
	baz=223						
STYT				eS	Sb	16 20 21.7	+0.2
	baz=223						
TPUB	Ta-pu	1.14	234	eP	Pn	16 20 06.6	-0.3
	baz=232						
TPUB				eS	Sn	16 20 22.2	+0.2
	baz=232						
RLNB	Erlin	1.17	266	eP	Pn	16 20 07.3	0.0
	baz=265						
RLNB				eS	Sg	16 20 24.0	0.0
	baz=265						
WTK	Tuku	1.18	256	eP	Pn	16 20 07.3	0.0
	baz=255						
WTK				eS	Sg	16 20 25.3	+1.2
	baz=255						
WTP	Ta-pu	1.18	233	eP	Pn	16 20 07.5	0.0
	baz=230						
WTP				eS	Sn	16 20 23.8	+0.6
	baz=230						
CHY	Chiayi	1.21	247	eP	Pn	16 20 08.0	+0.2
	baz=245						
CHY				eS	Sn	16 20 24.7	+1.1
	baz=245						
TWGBT	Beinan	1.26	204	eP	Pn	16 20 07.9	-0.6
	baz=202						
TWK	Hsinying	1.27	236	eP	Pn	16 20 08.7	0.0
	baz=234						
TWK				eS	Sg	16 20 26.8	-0.2
	baz=234						
CHN1	Nanshi	1.28	233	eP	Pn	16 20 09.2	+0.3
	baz=231						
CHN1				eS	Sb	16 20 26.5	+0.9
	baz=231						
JYNG	Yonagunijimaku	1.29	68	P	Pn	16 20 08.4	-0.5
JYNG				S	Sn	16 20 24.7	-0.9
LDUT	Ludao	1.30	187	eP	Pn	16 20 08.3	-0.7
	baz=185						
LDUT				eS	Sb	16 20 26.7	+0.6
	baz=185						
SGST	Jiashian	1.31	228	eP	Pn	16 20 08.4	-0.8
	baz=225						
SGST				eS	Sn	16 20 24.7	-1.5
	baz=225						
WLGB	Puzi	1.32	248	eS	Sb	16 20 27.4	+0.8
	baz=247						
SLGT	Liugui	1.33	223	eP	Pn	16 20 09.9	+0.3
	baz=221						
SLGT				eS	Sg	16 20 28.5	-0.6
	baz=221						
WSF	Szhu	1.34	256	eS	Sg	16 20 28.8	-0.5
	baz=254						
YOJ	Yonaguni jima	1.35	69	eS	Sb	16 20 27.9	+0.4
	baz=69						
CHN8	Yiju	1.45	245	eS	Sb	16 20 30.9	+0.6
	baz=243						
SSD	Sandimen	1.53	217	eP	Pn	16 20 13.1	+0.9
	baz=215						
SSD				eS	Sb	16 20 33.4	+0.7
	baz=215						
TSMG	Majia	1.56	216	eP	Pn	16 20 13.4	+0.8
	baz=214						
TSMG				eS	Sb	16 20 34.5	+1.0
	baz=214						
MASBT	Mashibuluo	1.64	214	eP	Pn	16 20 14.2	+0.5
	baz=213						
MASBT				eS	Sb	16 20 35.9	+0.1
	baz=213						
EAST	Anshuo	1.74	205	eP	Pb	16 20 18.0	+0.7
	baz=203						
SLIU	Shizi	1.91	204	eP	Pn	16 20 19.0	+1.5
	baz=202						
LAY	Lan-yu	1.93	182	eP	Pn	16 20 16.1	-1.6
	baz=181						
LAY				eS	Sn	16 20 41.3	-0.1
	baz=181						
PHUB	P'eng-hu	1.94	257	eP	Pn	16 20 17.8	-0.1
	baz=255						
PHUB				eS	Sn	16 20 42.4	+0.6
	baz=255						
WDGT	Dungji	1.94	249	eP	Pn	16 20 17.8	-0.1
	baz=247						
IRIF	Iriomote-Funau	1.95	79	P	Pn	16 20 17.4	-0.6
IRIF				S	Sn	16 20 41.6	-0.3
PNG	Penghu	1.95	258	eP	Pn	16 20 17.9	0.0
	baz=257						
PNG				eS	Sn	16 20 41.6	-0.3
	baz=257						
HATJ	Hateruma jima	1.99	87	eS	Sn	16 20 41.9	-1.0
JKRS	Kuro-shima	2.19	83	P	Pn	16 20 21.3	+0.1
JKRS				S	Sn	16 20 47.3	-0.5
VWUC	VWUC	2.23	297	P	Pn	16 20 20.9	-1.0
	baz=297						
VWUC				eS	Sn	16 20 46.5	-2.5
	baz=297						
PTTC	Pingtan	2.28	312	eS	Sn	16 20 48.4	-1.6
	baz=312						
JIJ	Ishigaki jima	2.32	80	P	Pn	16 20 22.3	-0.8
JIJ				S	Sn	16 20 49.2	-2.0
JISG	Ishigakijimahi	2.52	75	P	Pn	16 20 25.0	-0.8
JISG				S	Sn	16 20 53.9	-2.1
PTMZ	Houxiangcun	2.53	295	P	Pn	16 20 25.3	-0.6
	baz=294						
PTMZ				eS	Sn	16 20 53.8	-2.4
	baz=294						
MATB	Ma-tsu	2.66	325	eP	Pn	16 20 28.3	+0.5
	baz=324						
MATB				eS	Sn	16 20 58.1	-1.3
	baz=324						
JTJ	Tarama	2.88	76	P	Pn	16 20 31.0	+0.3
JTJ				eS	Sn	16 21 03.9	-0.9
KNMB	Chin-men Tao	3.00	280	eP	Pn	16 20 31.8	-0.7
	baz=279						
AXDP	Jialang	3.47	286	eP	Pn	16 20 38.3	-0.6
	baz=285						

IDC 03 16:23:05.4±2.4, 6°.99S×129°.52E, h0^{km}, mb3.3/1, mb1 3.2/3, mb1mx3.1/20, mbtmp3.0/3, ML2.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/10, Error ellipse: s-maj=124.6km s-min=34.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.70	161	Pn	Pn	16 26 21.4	+0.3
	0.1nm,0.3s,baz=339,slow=14,SNR=1.2						
WRA				Sn	Sn	16 28 45.1	-9.0
	0.0nm,0.3s,baz=332,slow=23,SNR=2.3						
ASAR	Alice Springs	17.11	166	P	Pn	16 27 05.8	-0.3
	0.0nm,0.3s,baz=345,slow=10,SNR=1.4						
ASAR				LR	LR	16 34 01.1	
	comp=Z,59nm,20.1s,baz=204,slow=38						
MKAR	Makanchi Array	67.96	327	P	P	16 34 06.2	0.0
	0.2nm,0.6s,baz=119,slow=5.9,SNR=2.3						

WEL 03 16:25:17.4, 38°S±7°×17°6E±1°2, h192^{km}±17^{km}, M2.2/22, MLv2.2/22, Error ellipse: s-maj=0.0km s-min=0.0km az=114.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.67	98	P	Pn	16 25 43.3	-0.9
MRHZ	Matea Rd	0.67	170	P	Pn	16 25 43.9	-0.5
RTZ	Ruatahuna	0.71	129	P	Pn	16 25 44.1	-0.5
TOZ	Tahuroa Road	0.75	306	P	Pn	16 25 45.0	+0.3
MTHZ	Maungataniwha	0.82	147	P	Pn	16 25 44.9	-0.2
RAGZ	Rawiri	0.96	110	P	Pn	16 25 46.2	+0.1
RAHZ	Arahi	0.98	140	P	Pn	16 25 46.5	+0.4
MWZ	Matawai	1.00	100	P	Pn	16 25 46.2	-0.1
BKZ	Black Stump Fm	1.01	170	P	Pn	16 25 46.2	-0.2
SNGZ	Shannon Statio	1.04	126	P	Pn	16 25 46.9	+0.3
ETVZ	East Tongariro	1.06	204	P	Pn	16 25 47.0	+0.2
OTVZ	Oturere	1.10	205	P	Pn	16 25 47.6	+0.5
RUGZ	Raukumara Rang	1.13	80	P	Pn	16 25 46.5	-0.9
WNVZ	Wahianoa	1.27	204	P	Pn	16 25 48.9	+0.4
RIGZ	Rimuhau	1.29	115	P	Pn	16 25 49.0	+0.5
BHHZ	Black Hill Sta	1.33	187	P	Pn	16 25 48.9	+0.1
MTVZ	Mangateitei	1.36	207	P	Pn	16 25 49.7	+0.5
KNZ	Kokohu	1.39	128	P	Pn	16 25 49.7	+0.4
KAHZ	Kahuranaki	1.69	164	P	Pn	16 25 53.0	+0.9
TSZ	Takapari Road	1.90	187	P	Pn	16 25 54.6	+0.4
PXZ	Pawanui	1.92	166	P	Pn	16 25 55.1	+0.8
PRHZ	Porangahau	2.11	172	P	Pn	16 25 57.0	+0.6
ANWZ	Angora Road	2.29	176	P	Pn	16 25 59.1	+0.8
BFZ	Birch Farm	2.51	180	P	Pn	16 26 01.1	+0.3
MRZ	Mangatainoka R	2.54	192	P	Pn	16 26 01.3	+0.1
OGWZ	Otaki Gorge	2.78	197	P	Pn	16 26 04.1	+0.2
HOWZ	Holdsworth Sta	2.79	192	P	Pn	16 26 03.9	-0.1
CAW	Cannon Point	3.08	197	P	Pn	16 26 07.3	-0.2

WEL 03 16:25:59.3±1.4, 32°S±8°×17°8E±2°5, h33^{km}, M4.0/8, mB4.5/2, ML4.1/8, MLv4.0/8, Mw(mB)3.7/2, Error ellipse: s-maj=0.0km s-min=0.0km az=91.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRZ	Great Barrier	4.76	211	P	Pn	16 27 04.7	-4.0
HAZ	Te Kaha	5.58	186	P	Pn	16 27 21.1	+1.2
HAZ				S	Sn	16 28 25.6	+2.8
WMGZ	Waiomatatini S	5.61	181	P	Pn	16 27 21.8	+1.4
WMGZ				S	Sn	16 28 22.2	-1.4
RUGZ	Raukumara Rang	5.79	186	P	Pn	16 27 23.9	+0.9
RUGZ				S	Sn	16 28 28.3	-0.1
PUZ	Puketiti	5.86	182	P	Pn	16 27 24.3	+0.4
PUZ				S	Sn	16 28 28.6	-1.3
URZ	Urewera	6.15	190	P	Pn	16 27 28.6	+0.7
URZ				S	Sn	16 28 40.3	+3.3
MWZ	Matawai	6.17	187	P	Pn	16 27 28.8	+0.7
MWZ				S	Sn	16 28 36.9	-0.7
NGRZ	Ngongotaha	6.18	197	P	Pn	16 27 35.4	+7.0
MUGZ	Murupara	6.42	192	P	Pn	16 27 32.3	+0.8
MUGZ				S	Sn	16 28 48.5	+4.8
RIGZ	Rimuhau	6.52	185	P	Pn	16 27 31.9	-1.1
RIGZ				S	Sn	16 28 44.9	-1.3
RTZ	Ruatahuna	6.52	190	P	Pn	16 27 32.6	-0.4

MOS 03 16:42:26.3±0.8, 56°.04N×113°.74E, h3^{km}, mb3.7/1, Error ellipse: s-maj=11.0km s-min=7.2km az=69.4

IDC 03 16:42:27.9±0.9, 56°.12N×113°.76E, h0^{km}, mb3.5/11, mb1 3.8/14, mb1mx3.6/45, mbtmp3.6/14, ML3.1/3, Error ellipse: s-maj=27.0km s-min=16.7km az=160.0

BYKL 03 16:42:27.9±0.1, 56°.08N×113°.69E, h5^{km}±2^{km}

ISC 03 16:42:27.6±0.8, 56°.07N±0°.02×113°.64E±0°.02, h7^{km}±5^{km}, n68, σ2^{s}83/130, mb3.6/10, 14C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.07	319	⇑iPg	Pg	16 42 30.1	+0.7
SVKR				eSg	Sg	16 42 32.4	+1.7
SVKR				Pmax			
	8µm,0.1s						
SVKR				Smax			
	71µm,0.6s						
SVKR	Severomuysk	0.07	319	⇑iPG	Pg	16 42 30.1	+0.7
SVKR				e		16 42 32.2	
SVKR				pmax	pmax		
	comp=Z,8µm,0.7s						
SVKR				smax	smax		
	comp=N,31µm,0.5s						
UKT	Uakit	0.58	181	⇑iPg	Pg	16 42 38.1	-0.6
UKT				eSg	Sg	16 42 46.1	-0.2
UKT				Pmax			
	comp=N,123nm,0.5s						
UKT				Smax			
	comp=N,812nm,0.4s						
UKT	Uakit	0.58	181	⇑iPG	Pg	16 42 38.1	-0.6
UKT				e		16 42 46.7	
UKT				pmax	pmax		
	comp=Z,154nm,0.2s						
UKT				smax	smax		
	comp=E,668nm,0.3s						
YOA	Uoyan	1.07	274	⇑iPg	Pb	16 42 46.2	-2.3
YOA				e		16 42 49.0	
YOA				eSg	Sg	16 43 01.7	-0.4
YOA				e		16 43 07.6	
YOA				max			
	comp=E,749nm,0.3s						
YOA				max			
	comp=E,3µm,0.4s						
YOA	Uoyan	1.07	274	⇑iPG	Pb	16 42 46.2	-2.3
YOA				i		16 43 02.2	
YOA				pmax	pmax		
	comp=Z,460nm,0.2s						
YOA				smax	smax		
	comp=E,3µm,0.5s						
NLYR	Nelyaty	1.23	69	⇓iPg	Pb	16 42 49.4	-1.8
NLYR				ePb	Pg	16 42 51.5	+0.4
NLYR				eSg	Sb	16 43 05.7	-1.5
NLYR				eSb	Sn	16 43 09.2	+1.1
NLYR				max			
	comp=E,1µm,0.5s						
NLYR				max			
	comp=E,2µm,0.8s						
NLYR	Nelyaty	1.23	69	⇓iPG	Pb	16 42 49.4	-1.8
NLYR				e		16 43 03.8	
NLYR				pmax	pmax		
	comp=Z,1µm,0.4s						
NLYR				smax	smax		
	comp=E,1µm,0.8s						
KMO	Kumora	1.38	264	⇑iPg	Pn	16 42 53.5	+0.2
KMO				ePb	Pg	16 42 55.2	+1.1
KMO				e		16 42 58.8	
KMO				eSg	Sn	16 43 11.5	-0.3
KMO				e		16 43 16.4	
KMO				max			
	comp=E,422nm,0.3s						
KMO				max			
	comp=E,1µm,0.8s						
KMO	Kumora	1.38	264	⇑iPG	Pn	16 42 53.5	+0.2
KMO				e		16 43 12.3	
KMO				pmax	pmax		
	comp=Z,427nm,0.3s						
KMO				smax	smax		
	comp=N,1µm,1.1s						
BOD	Bodaibo	1.77	6	⇑iPg	Pb	16 42 59.7	-0.6
BOD				eSg	Sb	16 43 22.6	-0.1
BOD				Pmax			
	comp=N,296nm,0.7s						
BOD				Smax			
	comp=N,810nm,0.5s						
BOD	Bodaibo	1.77	6	ePN	Pb	16 42 59.5	-0.8
BOD				e		16 43 22.7	
BOD				pmax	pmax		
	comp=Z,294nm,0.7s						
BOD				smax	smax		
	comp=E,926nm,0.7s						
YLYR	Ulyunkhan	1.85	231	⇑iPg	Pb	16 43 01.6	-0.1
YLYR				e		16 43 08.0	
YLYR				eSg	Sb	16 43 26.6	+1.6
YLYR				Pmax			
	comp=E,281nm,0.3s						
YLYR				Smax			
	comp=E,934nm,0.3s						
YLYR	Ulyunkhan	1.85	231	⇑iPN	Pb	16 43 01.6	-0.1
YLYR				e		16 43 03.1	
YLYR				eS	Sb	16 43 26.2	+1.2
YLYR				e		16 43 27.6	
YLYR				pmax	pmax		
	comp=Z,231nm,0.3s						
YLYR				smax	smax		
	comp=E,957nm,0.4s						
NIZ	Nizh Angarsk	2.32	264	ePn	Pn	16 43 07.9	+1.6
NIZ				ePg	Pb	16 43 10.5	+0.7
NIZ				e		16 43 15.7	
NIZ				eSn	Sn	16 43 37.3	+2.2
NIZ				eSg	Sb	16 43 41.3	+2.6
NIZ				max			
	comp=E,96nm,0.4s						
NIZ				Smax			
	comp=E,506nm,0.4s						
CRS	Chara	2.70	70	⇓iPn	Pn	16 43 12.2	+0.7
CRS				⇑iPg	Pb	16 43 16.5	+0.2
CRS				ePgPg	Pg	16 43 20.8	+1.5
CRS				eSn	Sn	16 43 44.1	-0.3
CRS				eSg	Sb	16 43 50.7	+1.1
CRS				Pmax			
	comp=E,694nm,1.0s						
CRS				Smax			
	comp=E,584nm,0.8s						
CRS	Chara	2.70	70	ePN	Pn	16 43 11.9	+0.4
CRS				e		16 43 15.9	
CRS				e		16 43 50.3	
CRS				pmax	pmax		
	comp=Z,393nm,0.6s						
CRS				smax	smax		
	comp=E,580nm,0.8s						
SYVR	Suvo	3.20	223	ePn	Pn	16 43 19.8	+1.5
SYVR				ePg	Pb	16 43 25.7	+0.9
SYVR				ePgPg	Pg	16 43 29.9	+1.0
SYVR				eSn	Sn	16 43 57.6	+0.9
SYVR				eSg	Sb	16 44 07.7	+3.8
SYVR				eSgSg	Sg	16 44 14.8	+4.5
SYVR				max			
	comp=E,78nm,0.8s						
SYVR				max			
	comp=E,586nm,1.7s						
SYVR	Suvo	3.20	223	ePN	Pn	16 43 20.0	+1.7
SYVR				e		16 43 25.3	
SYVR				e		16 44 08.3	
SYVR				pmax	pmax		
	comp=Z,81nm,0.8s						

SYVR				smax	smax		
	comp=E,614nm,1.6s						
VTMR	**Vitim**	**3.43**	**351**	*e*Pn	**Pn**	**16 43 22.4**	**+0.9**
VTMR				*e*Pg	**Pb**	**16 43 29.7**	**+1.0**
VTMR				*e*		16 43 30.9	
VTMR				*e*		16 43 35.9	
VTMR				*e*Sn	**Sn**	**16 44 02.8**	**+0.4**
VTMR				*e*Sg	**Sb**	**16 44 13.7**	**+3.1**
VTMR				max			
	comp=E,500nm,0.4s						
VTMR				Smax			
	comp=E,3µm,0.6s						
TUP	**Tupik**	**3.97**	**112**	⇓*i*Pn	**Pn**	**16 43 29.1**	**+0.2**
TUP				*e*Pg	**Pb**	**16 43 39.4**	**+1.5**
TUP				*e*		16 43 45.0	
TUP				*e*Sg	**Sg**	**16 44 30.6**	**-4.4**
TUP				*e*SgSg	**SbSb**	**16 44 34.6**	**+3.4**
TUP				*e*		16 44 57.6	
TUP				Pmax			
	comp=E,93nm,0.6s						
TUP				max			
	comp=E,428nm,1.1s						
TUP	**Tupik**	**3.97**	**112**	*e*PN	**Pn**	**16 43 29.3**	**+0.4**
TUP				*e*		16 43 39.0	
TUP				*e*S	**Sn**	**16 44 14.8**	**-0.9**
TUP				*e*		16 44 29.7	
TUP				pmax	pmax		
	comp=Z,94nm,0.6s						
TUP				smax	smax		
	comp=E,429nm,1.1s						
MXMB	**Maximikha**	**4.00**	**227**	*e*Pn	**Pn**	**16 43 30.6**	**+1.4**
MXMB				*e*Pg	**Pb**	**16 43 40.3**	**+2.0**
MXMB				*e*		16 43 49.3	
MXMB				*e*Sn	**Sn**	**16 44 16.7**	**+0.4**
MXMB				*e*Sg	**Sg**	**16 44 32.5**	**-3.3**
CIT	**Chita**	**4.05**	**181**	*e*Sg	**Sg**	**16 44 34.4**	**-3.3**
CIT				Smax			
	comp=E,351nm,0.4s						
OGRR	**Ongureny**	**4.25**	**238**	⇑*i*Pn	**Pn**	**16 43 35.4**	**+2.6**
OGRR				*e*Pg	**Pb**	**16 43 45.5**	**+2.8**
OGRR				*e*		16 44 18.3	
OGRR				*e*Sn	**Sn**	**16 44 23.5**	**+0.9**
OGRR				*e*Sg	**Sg**	**16 44 41.0**	**-3.0**
OGRR				Pmax			
	comp=E,49nm,1.0s						
OGRR				Smax			
	comp=E,154nm,1.0s						
OGRR	**Ongureny**	**4.25**	**238**	⇑*i*PN	**Pn**	**16 43 35.4**	**+2.6**
OGRR				*e*		16 43 46.6	
OGRR				*e*		16 44 41.6	
OGRR				pmax	pmax		
	comp=Z,49nm,1.3s						
OGRR				smax	smax		
	comp=N,154nm,1.9s						
YKLR	**Yuktali**	**4.49**	**80**	*e*Pn	**Pn**	**16 43 36.4**	**+0.3**
YKLR				*e*Pg	**Pb**	**16 43 46.9**	**+0.1**
YKLR				*e*Sn	**Sn**	**16 44 26.7**	**-1.9**
YKLR				*e*Sg	**Sb**	**16 44 45.5**	**+4.4**
ZRHB	**Zarechye**	**5.18**	**230**	*e*Sg	**Sg**	**16 45 09.1**	**-4.6**
ZRHB				Smax			
	comp=N,605nm,1.5s						
TRG	**Tyrgan**	**5.39**	**235**	*e*Pn	**Pn**	**16 43 50.3**	**+1.8**
TRG				*e*		16 43 59.6	
TRG				*e*Pg	**Pb**	**16 44 05.6**	**+3.5**
TRG				*e*Sn	**Sn**	**16 44 49.9**	**-0.9**
TRG				*e*Sg	**Sg**	**16 45 15.2**	**-5.4**
TRG				*e*		16 45 37.1	
TRG				Pmax			
	comp=N,25nm,1.0s						
TRG				Smax			
	comp=N,88nm,1.2s						
TRG	**Tyrgan**	**5.39**	**235**	*e*PN	**Pn**	**16 43 48.4**	**-0.1**
TRG				*e*		16 44 04.0	
TRG				*e*S	**Sn**	**16 44 49.7**	**-1.1**
TRG				*e*		16 45 12.8	
TRG				pmax	pmax		
	comp=Z,24nm,0.7s						
TRG				smax	smax		
	comp=N,112nm,1.8s						
FFNB	**Fofonovo**	**5.71**	**228**	*e*Pg	**Pb**	**16 44 11.4**	**+3.9**
FFNB				*e*Sn	**Sn**	**16 44 58.5**	**0.0**
FFNB				*e*Sg	**Sg**	**16 45 26.3**	**-4.4**
KAB	**Kabansk**	**5.75**	**229**	*e*Sg	**Sg**	**16 45 27.0**	**-5.1**
KAB				Smax			
	comp=N,437nm,1.7s						
HRMR	**Khuramsha**	**5.95**	**224**	*e*Pn	**Pn**	**16 43 58.3**	**+2.2**
HRMR				*e*Pg	**Pb**	**16 44 15.2**	**+3.6**
HRMR				*e*		16 44 19.7	
HRMR				*e*Sn	**Sn**	**16 45 05.1**	**+0.6**
HRMR				*e*Sg	**Sg**	**16 45 33.6**	**-4.9**
HRMR				max			
	comp=N,48nm,0.5s						
HRMR				Smax			
	comp=N,372nm,0.8s						
IENR	**Iengra**	**6.28**	**84**	*e*Pn	**Pn**	**16 44 00.6**	**0.0**
IENR				*e*Pg	**Pb**	**16 44 19.7**	**+2.6**
IENR				*e*Sn	**Sn**	**16 45 10.7**	**-1.8**
IENR				*e*Sg	**Sg**	**16 45 41.5**	**-7.4**
BGT	**Bolshoye Golou**	**6.30**	**234**	*e*Pg	**Pb**	**16 44 22.2**	**+4.7**
BGT				*e*Sn	**Sn**	**16 45 11.3**	**-1.8**
BGT				*e*Sg	**Sg**	**16 45 44.3**	**-5.4**
BGT				*e*		16 46 04.3	
BGT				Pmax			
	comp=N,15nm,0.5s						
BGT				max			
	comp=N,84nm,0.9s						
KPC	**Khapcheranga**	**6.42**	**187**	*e*	**Pn**	**16 44 02.6**	**0.0**
KPC				*e*Pn	Pb	16 44 04.1	-16
KPC				*e*Pg	Pg	16 44 24.2	-6.3
KPC				*e*Sn	**Sn**	**16 45 16.4**	**+0.3**
KPC				*e*Sg	**Sg**	**16 45 47.8**	**-5.7**
KPC				*e*		16 46 03.5	
KPC				Pmax			
	comp=N,10.0nm,0.6s						
KPC				max			
	comp=N,319nm,1.4s						
KPC	**Khapcheranga**	**6.42**	**187**	*e*PN	**Pn**	**16 44 02.6**	**0.0**
KPC				*e*		16 44 21.8	
KPC				*e*		16 45 45.2	
KPC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KPC				smax	smax		
	comp=E,319nm,1.6s						
LSTR	**Listvyanka**	**6.68**	**235**	*e*Pg	Pb	16 44 29.1	+5.1
LSTR				*e*Sn	**Sn**	**16 45 21.1**	**-1.4**
LSTR				*e*Sg	**Sg**	**16 45 56.3**	**-5.6**
LSTR				Pmax			
	comp=E,34nm,1.9s						
LSTR				Smax			
	comp=E,71nm,1.4s						
IRK	**Irkutsk**	**6.70**	**239**	*e*Sg	**Sg**	**16 45 55.6**	**-7.0**
IRK				Smax			
	comp=E,116nm,0.8s						
TLY	**Talaya**	**7.36**	**238**	*e*Pn	**Pn**	**16 44 15.9**	**+0.5**
TLY				*e*		16 44 35.0	
TLY				*e*Pg	Pb	16 44 40.7	+5.1
TLY				*e*Sn	**Sn**	**16 45 37.4**	**-1.7**
TLY				*e*Sg	**Sg**	**16 46 16.5**	**-7.1**
TLY				Pmax			
	comp=E,14nm,1.1s						
TLY				Smax			
	comp=E,64nm,1.0s						
ARS	**Arshan**	**7.80**	**243**	*e*	Pb	16 44 33.8	-9.3
ARS				*e*Pg	Pg	16 44 48.6	-8.3
ARS				*e*Sn	**Sn**	**16 45 47.3**	**-2.8**
ARS				*e*Sg	**Sg**	**16 46 30.4**	**-7.4**
ARS				Pmax			
	comp=E,22nm,0.5s						
ARS				Smax			
	comp=E,119nm,1.2s						
ZEA	**Zeya**	**8.19**	**101**	*e*PN	Pb	16 44 38.7	-11
ZEA				*e*		16 46 43.3	
ZAK	**Zakamensk**	**8.42**	**232**	*e*Sn	**Sn**	**16 46 04.0**	**-1.4**
ZAK				*e*Sg	Sg	16 46 49.0	-8.7
ZAK				Smax			
	comp=E,53nm,1.8s						
MOY	**Mondy**	**8.67**	**245**	*e*Pn	**Pn**	**16 44 35.7**	**+2.2**
MOY				*e*		16 44 44.0	
MOY				*e*Sn	**Sn**	**16 46 09.3**	**-2.2**
MOY				*e*Sg	Sg	16 46 57.1	-8.5
MOY				max			
	comp=E,20nm,1.5s						
MOY				Smax			
	comp=E,71nm,2.0s						
MOY	**Mondy**	**8.67**	**245**	*e*PN	**Pn**	**16 44 35.6**	**+2.1**
MOY				*e*		16 45 05.7	
MOY				*e*S	**Sn**	**16 46 10.5**	**-1.0**
MOY				*e*		16 46 57.5	
MOY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MOY				smax	smax		
	comp=N,68nm,1.6s						
ORL	**Orlik**	**8.82**	**252**	*e*Pn	**Pn**	**16 44 37.2**	**+1.7**
ORL				*e*Pg	Pg	16 45 07.2	-9.2
ORL				*e*Sn	**Sn**	**16 46 12.8**	**-2.4**
ORL				*e*Sg	Sg	16 47 01.6	-8.9
ORL				*e*		16 47 30.4	
ORL				Pmax			
	comp=N,14nm,1.1s						
ORL				Smax			
	comp=N,56nm,1.3s						
ORL	**Orlik**	**8.82**	**252**	*e*PN	**Pn**	**16 44 37.5**	**+2.0**
ORL				*e*		16 45 08.8	
ORL				*e*S	**Sn**	**16 46 15.0**	**-0.2**
ORL				*e*		16 47 02.5	
ORL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ORL				smax	smax		
	comp=N,42nm,1.4s						
SONM	**Songino Array**	**9.37**	**211**	Pn	**Pn**	**16 44 45.8**	**+2.7**
	comp=N,0.2nm,0.3s,baz=23,slow=13,SNR=4.7						
SONM				Lg	Lg	16 47 24.0	
	comp=N,1.6nm,0.3s,baz=24,slow=25,SNR=14						
YAK	**Yakutsk**	**10.18**	**47**	Sn	**Sn**	**16 46 42.4**	**-5.8**
	comp=N,0.0nm,0.3s,baz=54,slow=14,SNR=1.5						
YAK				Lg	Lg	16 47 38.8	
	comp=N,0.0nm,0.3s,baz=148,slow=23,SNR=5.9						
YAK	**Yakutsk**	**10.18**	**47**	*e*P	**Pn**	**16 44 51.4**	**-2.6**
YAK				*e*S	**Sn**	**16 46 45.1**	**-3.1**
YAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK				smax	smax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,17nm,1.1s						
YAK				pmax	pmax		
	comp=N,43nm,1.0s						
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
TDJR	**Todzha**	**10.89**	**258**	*e*Sg	Sn	16 48 06.1	+60
KNGR	**Kungurtug, Tuv**	**11.07**	**247**	*e*Sg		16 48 11.1	
KLR	**Kul'dur**	**12.93**	**114**	Pn	**Pn**	**16 45 32.1**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=306,slow=14,SNR=10						
KLR				Sn	**Sn**	**16 48 00.2**	**+4.6**
	comp=Z,0.1nm,0.3s,baz=54,slow=14,SNR=1.5						
KLR				Lg	Lg	16 49 10.6	
	comp=Z,0.2nm,0.3s,baz=333,slow=9.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**16.61**	**275**	Pn	**P**	**16 46 22.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=64,slow=10,SNR=3.9						
ZALV				Lg	Lg	16 51 15.0	
	comp=Z,0.1nm,0.3s,baz=82,slow=32,SNR=1.5						
USRK	**Ussuriysk Ar.**	**16.65**	**128**	Lg	Lg	16 51 10.1	
	baz=252,slow=26,SNR=1.6						
NRIK	**Noril'sk**	**17.67**	**329**	P	**Pn**	**16 46 30.6**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=142,slow=12,SNR=3.6						
NRIK				S	**Sn**	**16 49 40.1**	**-11**
	comp=Z,0.2nm,0.3s,baz=322,slow=19,SNR=2.0						
NRIK				Lg	Lg	16 51 35.3	
	comp=Z,0.1nm,0.3s,baz=83,slow=12,SNR=1.3						
SEY	**Seymchan**	**20.56**	**55**	P	**P**	**16 47 07.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=73,slow=23,SNR=5.6						
KURK	**Kurchatov**	**21.39**	**270**	P	**P**	**16 47 17.7**	**+2.1**
MKAR	**Makanchi Array**	**21.46**	**258**	P	**P**	**16 47 18.9**	**+2.5**
	comp=Z,0.8nm,0.6s,baz=57,slow=7.6,SNR=9.7						
KURBB	**Kurchatov Arra**	**21.49**	**270**	P	**P**	**16 47 17.7**	**+1.1**
	comp=Z,1.7nm,0.5s,baz=65,slow=11,SNR=18						
BVAR	**Borovoye Array**	**24.96**	**281**	P	**P**	**16 47 54.6**	**+3.2**
	comp=Z,0.6nm,0.6s,baz=110,slow=12,SNR=2.2						
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**16 50 24.8**	**+2.0**
	comp=Z,3.3nm,0.9s,baz=46,slow=12,SNR=1.5						
ILAR	**Eielson Array**	**44.89**	**37**	P	**P**	**16 50 43.5**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=308,slow=8.9,SNR=4.2						
YKA	**Yellowknife Ar**	**55.95**	**25**	P	**P**	**16 52 06.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=335,slow=6.8,SNR=8.0						
ESDC	**Sonseca Array**	**70.98**	**314**	P	**P**	**16 53 46.2**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=27,slow=5.9,SNR=3.0						
PDAR	**Pinedale Array**	**74.98**	**31**	P	**P**	**16 54 10.4**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=270,slow=2.7,SNR=1.7						
NVAR	**Mina Array Bea**	**76.06**	**40**	P	**P**	**16 54 17.4**	**+1.7**
	comp=Z,0.1nm,0.4s,baz=350,slow=4.8,SNR=1.8						
WRA	**Warramunga Arr**	**77.71**	**160**	P	**P**	**16 54 26.2**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=329,slow=5.9,SNR=2.4						

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*TUL **03** 16:54:48.4±1.3, 36°.66N±0°.02×97°.63W±0°.02, h5^{km}, ML3.4, mb_Lg3.2/98(NEIC), Error ellipse: s-maj=3.1km s-min=2.2km az=48.0*

*NEIC **03** 16:54:48.4±0.6, 36°.63N±0°.02×97°.64W±0°.02, h3^{km}±8^{km}, Error ellipse: s-maj=2.4km s-min=1.9km az=153.0*

*ANF **03** 16:54:50.1±0.9, 36°.66N×97°.61W, h16^{km}±6^{km}, ML4.0/10, Error ellipse: s-maj=3.4km s-min=2.4km az=118.0*

ISC 03 16:54:48.8±0.8**, 36°.63N**±0°.03×**97°.65W**±0°.03**, h10^{km}, n80, σ1^{s}11**/45**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.41**	**20**		**Pg**	**16 54 56.0**	**-0.9**
KAN13				Sg	**Sg**	**16 55 01.4**	**-0.9**
KAN14	**Manchester OK**	**0.41**	**323**		**Pg**	**16 54 56.5**	**-0.4**
KAN10	**Anthony SW Sta**	**0.61**	**324**		**Pg**	**16 55 00.1**	**-0.5**
KAN08	**Anthony NE Sta**	**0.65**	**337**	Pg	**Pg**	**16 55 00.8**	**-0.6**
KAN12	**Harper NE Stat**	**0.72**	**338**	Sg	**Sg**	**16 55 11.8**	**-0.5**
QUOK	**Quay**	**0.89**	**121**	Pg	**Pg**	**16 55 05.2**	**-0.7**
OK031	**S. Brethren Rd**	**0.94**	**136**		**Pg**	**16 55 06.4**	**-0.5**
T35A	**Sooner Cattle**	**0.96**	**72**		**Pg**	**16 55 06.1**	**-1.1**
T35A				Sg	**Sg**	**16 55 18.6**	**-1.2**
T35B	**Sooner Cattle**	**0.96**	**72**	P		16 55 06.1	
	baz=253						
T35B				S		16 55 18.6	
	baz=253						
OK030	**Cody Creek RV**	**0.99**	**135**		**Pg**	**16 55 07.3**	**-0.6**
OK025	**Westminster Rd**	**1.08**	**166**		**Pb**	**16 55 09.0**	**-0.5**
U32A	**Winter Ranch,**	**1.12**	**258**		**Pb**	**16 55 09.7**	**-0.6**
U32A	**Winter Ranch,**	**1.12**	**258**	P		16 55 09.7	
	baz=76						
U32A				S		16 55 25.2	
	baz=76						
OKCFA	**Oklahoma City**	**1.22**	**172**		**Pn**	**16 55 11.5**	**-0.5**
W35A	**Tecumseh**	**1.60**	**157**		**Pn**	**16 55 17.4**	**+0.2**
R32A	**Long Quarter,**	**1.98**	**335**		**Pn**	**16 55 23.4**	**+1.0**
R32A	**Long Quarter,**	**1.98**	**335**	P		16 55 23.1	
	baz=154						
WMOK	**Wichita Mounta**	**2.10**	**206**	P	**Pn**	**16 55 25.0**	**+1.0**
	baz=26						
WMOK				S	**Sb**	**16 55 52.8**	**-0.4**
	baz=26						
WMOK	**Wichita Mounta**	**2.10**	**206**		**Pn**	**16 55 25.1**	**+1.0**
WMOK				IAmb_Lg		16 55 58.2	
	comp=Z,86nm,0.9s						
WMOK	**Wichita Mounta**	**2.10**	**206**	P		16 55 24.9	
	baz=26						
KSU1	**Kansas State U**	**2.60**	**18**	Pb	**Pb**	**16 55 36.5**	**+0.9**
	baz=198						
KSU1				S	**Sn**	**16 56 02.4**	**-0.2**
	baz=198						
KSU1	**Kansas State U**	**2.60**	**18**	P		16 55 31.2	
	baz=198						
CBKS	**Cedar Bluff**	**2.74**	**323**		**Pn**	**16 55 33.7**	**+0.9**
X37A	**Clayton**	**2.76**	**137**		**Pn**	**16 55 33.9**	**+0.8**
X37A				IAmb_Lg		16 56 22.4	
	comp=Z,50nm,0.8s						
X37A	**Clayton**	**2.76**	**137**	P		16 55 33.8	
	baz=319						
Z35A	**Perchaven, San**	**3.31**	**174**	P		16 55 41.4	
	baz=355						
Z35A				S		16 56 21.8	
	baz=355						
W39A	**Magazine**	**3.45**	**113**	Pb	**Pb**	**16 55 50.6**	**+0.6**
	baz=296						
W39A	**Magazine**	**3.45**	**113**	IAmb_Lg		16 56 45.6	
	comp=Z,57nm,0.8s						
S39A	**Bolivar**	**3.62**	**72**		**Pn**	**16 55 45.2**	**+0.3**
S39A				IAmb_Lg		16 56 46.5	
	comp=Z,42nm,0.9s						
S39A	**Bolivar**	**3.62**	**72**	P		16 55 44.7	
	baz=254						
AMTX	**Amarillo**	**3.71**	**243**	P	**Pn**	**16 55 47.7**	**+1.4**
	baz=61						
AMTX				Sb	**Sg**	**16 56 45.6**	**-2.5**
	baz=61						
AMTX	**Amarillo**	**3.71**	**243**		**Pn**	**16 55 47.2**	**+0.9**
U40A	**Yellville**	**3.88**	**93**	S	**Sn**	**16 56 34.3**	**+0.2**
	baz=276						
U40A	**Yellville**	**3.88**	**93**		**Pn**	**16 55 48.7**	**+0.2**
U40A				IAmb_Lg		16 56 52.3	
	comp=Z,96nm,0.9s						
U40A	**Yellville**	**3.88**	**93**	P		16 55 48.4	
	baz=276						
U40A				P		16 55 48.4	
	baz=276						
MIAR	**Mount Ida**	**3.92**	**121**	P	**Pn**	**16 55 50.2**	**+1.1**
	baz=304						
MIAR	**Mount Ida**	**3.92**	**121**		**Pn**	**16 55 50.1**	**+1.1**
N33A	**J Bar K, Exete**	**4.11**	**2**	IAmb_Lg		16 57 05.5	
	comp=Z,40nm,0.8s						
MGMO	**Mountain Grove**	**4.35**	**81**	Pn	**Pn**	**16 55 55.5**	**+0.5**
MGMO				IAmb_Lg		16 57 03.5	
	comp=Z,68nm,0.8s						
P38A	**Dawn**	**4.42**	**46**	IAmb_Lg		16 57 07.2	
	comp=Z,37nm,0.9s						
P38A	**Dawn**	**4.42**	**46**	P		16 55 55.9	
	baz=228						
X40A	**Basin Creek Fa**	**4.47**	**117**	P	**Pn**	**16 55 57.6**	**+0.9**
	baz=300						
N35A	**Tabor**	**4.51**	**20**		**Pn**	**16 55 57.5**	**+0.3**
N35A				IAmb_Lg		16 57 13.4	
	comp=Z,79nm,0.7s						
KSCO	**Kaye Shedlock’**	**4.60**	**303**	IAmb_Lg		16 57 25.7	
	comp=Z,29nm,0.8s						
W41B	**Gary Mavity, V**	**4.62**	**107**	Pb	**Pb**	**16 56 09.6**	**-0.4**
	baz=290						
W41B	**Gary Mavity, V**	**4.62**	**107**	IAmb_Lg		16 57 17.5	
	comp=Z,54nm,1.1s						
WHTX	**Lake Whitney,**	**4.63**	**178**	P	**Pn**	**16 55 59.6**	**+0.8**
	baz=358						
WHTX				Sb	**Sb**	**16 57 10.3**	**+4.4**
	baz=358						
WLAR	**White Oak Lake**	**4.74**	**127**	IAmb_Lg		16 57 22.3	
	comp=Z,39nm,1.2s						
BGNE	**Belgrade**	**4.79**	**356**	P	**Pn**	**16 56 01.0**	**0.0**
	baz=175						
BGNE	**Belgrade**	**4.79**	**356**		**Pn**	**16 56 00.2**	**-0.8**
BGNE	**Belgrade**	**4.79**	**356**	P		16 56 01.1	
	baz=175						
237A	**Washetta, Mont**	**4.86**	**161**	IAmb_Lg		16 57 28.5	
	comp=Z,28nm,0.9s						
LCAR	**Lake Charles**	**5.27**	**94**	IAmb_Lg		16 57 39.0	
	comp=Z,39nm,0.8s						
T42A	**Van Buren**	**5.28**	**84**	IAmb_Lg		16 57 43.5	
	comp=Z,38nm,0.8s						
P40A	**Paris**	**5.28**	**55**	IAmb_Lg		16 57 35.4	
	comp=Z,44nm,0.8s						
CCM	**Cathedral Cave**	**5.30**	**72**	IAmb_Lg		16 57 39.9	
	comp=Z,98nm,1.1s						
N38A	**Joes South For**	**5.40**	**38**	Pn	**Pn**	**16 56 09.3**	**-0.2**
N38A				IAmb_Lg		16 57 43.0	
	comp=Z,27nm,0.7s						
N38A	**Joes South For**	**5.40**	**38**	P		16 56 09.4	
	baz=221						
L34A	**Svendsen Farm,**	**5.42**	**10**	IAmb_Lg		16 57 45.1	
	comp=Z,38nm,0.7s						
T25A	**Trinidad**	**5.44**	**277**	IAmb_Lg		16 57 45.3	
	comp=Z,58nm,0.9s						
OGNE	**Ogallala**	**5.50**	**323**	IAmb_Lg		16 57 45.4	
	comp=Z,30nm,0.7s						
PBMO	**Poplar Bluff**	**5.80**	**86**	IAmb_Lg		16 58 02.0	
	comp=Z,34nm,0.8s						
435B	**Jarrell**	**5.83**	**179**	IAmb_Lg		16 58 03.2	
	comp=Z,39nm,0.7s						
X43A	**Marvell**	**5.91**	**109**	IAmb_Lg		16 58 02.3	
	comp=Z,34nm,0.8s						
FVM	**French Village**	**5.92**	**75**	IAmb_Lg		16 58 02.1	
	comp=Z,24nm,0.7s						
LPAR	**Lepanto**	**6.04**	**98**	IAmb_Lg		16 57 59.9	
	comp=Z,42nm,0.7s						
SLM	**Saint Louis**	**6.22**	**69**	IAmb_Lg		16 58 02.7	
	comp=Z,54nm,0.9s						
SCIA	**State Center**	**6.29**	**32**	IAmb_Lg		16 58 21.7	
	comp=Z,26nm,0.8s						
SDCO	**Great Sand Dun**	**6.37**	**282**		**Pn**	**16 56 24.3**	**+1.3**
Q24A	**Divide**	**6.38**	**294**	IAmb_Lg		16 58 12.3	
	comp=Z,20nm,0.8s						
143A	**Socs Landing,**	**6.47**	**125**	IAmb_Lg		16 58 27.2	
	comp=Z,20nm,1.1s						
N41A	**Harden Midland**	**6.70**	**50**	IAmb_Lg		16 58 22.9	
	comp=Z,31nm,0.8s						
ISCO	**Idaho Springs**	**7.02**	**299**		**Pn**	**16 56 33.2**	**+1.2**
W45A	**Hickory Valley**	**7.03**	**100**	IAmb_Lg		16 58 33.5	
	comp=Z,41nm,0.9s						
P43A	**Skaggs, Pawnee**	**7.08**	**62**	IAmb_Lg		16 58 38.4	
	comp=Z,46nm,0.7s						
ECSD	**EROS Data Cent**	**7.14**	**6**	Pn	**Pn**	**16 56 32.0**	**-1.3**
ECSD				IAmb_Lg		16 58 37.0	
	comp=Z,17nm,0.8s						
ANMO	**Albuquerque**	**7.35**	**259**	IAmb_Lg		16 58 45.5	
	comp=Z,10nm,0.8s						
ANMO				IAmb_Lg		16 58 45.5	
	comp=Z,11nm,0.8s						
L40A	**Anamosa**	**7.37**	**41**	Pn	**Pn**	**16 56 35.5**	**-0.8**
L40A				IAmb_Lg		16 58 44.3	
	comp=Z,22nm,1.0s						
N23A	**Red Feather La**	**7.75**	**306**	IAmb_Lg		16 59 00.2	
	comp=Z,18nm,0.8s						
WVT	**Waverly**	**7.94**	**91**	IAmb_Lg		16 59 02.1	
	comp=Z,12nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.99**	**254**	IAmb_Lg		16 59 15.1	
	comp=Z,36nm,0.8s						
O44A	**Mansfield**	**8.02**	**61**	IAmb_Lg		16 59 07.7	
	comp=Z,31nm,0.8s						
I37A	**Lemond, Waseca**	**8.06**	**22**	IAmb_Lg		16 59 08.6	
	comp=Z,19nm,0.9s						
L42A	**Oliver, Polo**	**8.19**	**47**	IAmb_Lg		16 59 13.0	
	comp=Z,18nm,0.7s						
Z47A	**Carrollton**	**8.58**	**111**	IAmb_Lg		16 59 44.2	
	comp=Z,16nm,1.1s						
P46A	**Rosedale**	**8.76**	**67**	IAmb_Lg		16 59 22.5	
	comp=Z,31nm,0.8s						
V48A	**Smith Brothers**	**8.80**	**93**	IAmb_Lg		16 59 25.3	
	comp=Z,16nm,0.9s						
RSSD	**Black Hills**	**8.93**	**329**	IAmb_Lg		16 59 34.8	
	comp=Z,11nm,0.7s						
SFIN	**Lafayette**	**9.08**	**62**	IAmb_Lg		16 59 35.7	
	comp=Z,32nm,0.8s						
K22A	**Casper**	**9.11**	**314**	IAmb_Lg		17 00 00.9	
	comp=Z,16nm,1.0s						
WCI	**Wyandotte Cave**	**9.18**	**77**	IAmb_Lg		16 59 34.9	
	comp=Z,22nm,0.8s						
SWET	**Sewanee**	**9.61**	**95**	IAmb_Lg		17 00 02.6	
	comp=Z,21nm,1.2s						

WEL 03 16:58:03.4, 39°S±2°×**17°6E**±°**, h146^{km}**±6^{km}**, M2.4**/40**, MLv2.4**/40**, Error ellipse: s-maj=0.0km s-min=0.0km az=78.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUTZ	**Kaahu Road**	**0.11**	**13**	P	Pn	16 58 22.5	-0.5
TLZ	**Tolley Road**	**0.33**	**323**	P	Pn	16 58 23.4	-0.2
KATZ	**Kakaramea**	**0.39**	**191**	P	Pn	16 58 23.9	0.0
TMVZ	**Te Maari**	**0.52**	**187**	P	Pn	16 58 24.7	+0.2
ETVZ	**East Tongariro**	**0.54**	**187**	P	Pn	16 58 24.7	+0.1
MRHZ	**Matea Rd**	**0.54**	**116**	P	Pn	16 58 23.7	-0.8
TWVZ	**Taurewa**	**0.55**	**210**	P	Pn	16 58 24.6	0.0
OTVZ	**Oturere**	**0.57**	**190**	P	Pn	16 58 25.2	+0.3
TUVZ	**Tukino**	**0.68**	**189**	P	Pn	16 58 25.7	+0.3
WNVZ	**Wahianoa**	**0.75**	**192**	P	Pn	16 58 26.2	+0.3
KMRZ	**Kaimai**	**0.76**	**9**	P	Pn	16 58 25.9	0.0
BKZ	**Black Stump Fm**	**0.79**	**136**	P	Pn	16 58 25.7	-0.4
MOVZ	**Moawhango**	**0.81**	**182**	P	Pn	16 58 26.3	0.0
MTHZ	**Maungataniwha**	**0.86**	**108**	P	Pn	16 58 26.3	-0.3
TOZ	**Tahuroa Road**	**0.89**	**345**	P	Pn	16 58 27.4	+0.5
BHHZ	**Black Hill Sta**	**0.92**	**167**	P	Pn	16 58 27.3	+0.2
RTZ	**Ruatahuna**	**0.93**	**92**	P	Pn	16 58 27.4	+0.2
VRZ	**Vera Road**	**0.96**	**236**	P	Pn	16 58 28.5	+1.1
RAHZ	**Arahi**	**1.06**	**108**	P	Pn	16 58 29.8	+1.5
URZ	**Urewera**	**1.09**	**72**	P	Pn	16 58 28.3	-0.2
ARHZ	**Aropaoanui**	**1.15**	**126**	P	Pn	16 58 30.5	+1.4
RAGZ	**Rawiri**	**1.28**	**86**	P	Pn	16 58 32.5	+2.1
PNHZ	**Pukenui**	**1.35**	**167**	P	Pn	16 58 31.9	+0.8
LREZ	**Lake Rotokare**	**1.38**	**231**	P	Pn	16 58 33.4	+2.1
MWZ	**Matawai**	**1.39**	**80**	P	Pn	16 58 32.6	+1.2
KAHZ	**Kahuranaki**	**1.46**	**145**	P	Pn	16 58 33.4	+1.2
TSZ	**Takapari Road**	**1.47**	**175**	P	Pn	16 58 33.1	+0.8

NEZ	North Egmont	1.48	242	P	Pn	16 58 34.8	+2.3
PKE	Pukeiti	1.53	246	P	Pn	16 58 35.5	+2.6
RIGZ	Rimuhau	1.55	95	P	Pn	16 58 34.0	+0.9
KHEZ	Kahui Hut	1.55	243	P	Pn	16 58 35.4	+2.2
RUGZ	Raukumara Rang	1.61	68	P	Pn	16 58 34.2	+0.2
PXZ	Pawanui	1.66	150	P	Pn	16 58 35.1	+0.9
DVHZ	Dannevirke	1.73	170	P	Pn	16 58 35.6	+0.5
MHGZ	Mahia Peninsul	1.74	109	P	Pn	16 58 36.3	+1.1
ETAZ	East Tamaki Re	1.78	337	P	Pn	16 58 37.1	+1.4
HAZ	Te Kaha	1.78	63	P	Pn	16 58 35.8	+0.2
PRHZ	Porangahau	1.79	159	P	Pn	16 58 36.7	+0.9
ANWZ	Angora Road	1.94	164	P	Pn	16 58 38.4	+1.0
PRWZ	Pori Road	1.96	176	P	Pn	16 58 38.7	+0.9
PUZ	Puketiti	2.01	76	P	Pn	16 58 39.0	+0.6
MRZ	Mangatainoka R	2.07	184	P	Pn	16 58 39.5	+0.5
BFZ	Birch Farm	2.11	171	P	Pn	16 58 40.1	+0.5
WMGZ	Waiomatatini S	2.21	70	P	Pn	16 58 40.1	-0.6
OGWZ	Otaki Gorge	2.27	192	P	Pn	16 58 42.1	+0.7
HOWZ	Holdsworth Sta	2.31	185	P	Pn	16 58 42.2	+0.3
KIW	Kapiti Island	2.36	196	P	Pn	16 58 43.0	+0.4
MTW	Mount Morrison	2.57	185	P	Pn	16 58 45.0	-0.1
CAW	Cannon Point	2.57	192	P	Pn	16 58 45.3	+0.2
DUWZ	D'Urville Isla	2.63	213	P	Pn	16 58 47.5	+1.6
TRWZ	Traveller	2.80	182	P	Pn	16 58 48.2	+0.2
TCW	Tory Channel	2.86	204	P	Pn	16 58 49.0	+0.2
PLWZ	Palliser	3.00	188	P	Pn	16 58 50.0	-0.5
TUWZ	Tuamarina	3.17	206	P	Pn	16 58 52.7	+0.1
NNZ	Nelson	3.21	215	P	Pn	16 58 54.0	+0.8
QRZ	Quartz Range	3.36	227	P	Pn	16 58 56.2	+1.1
THZ	Tophouse	3.86	214	P	Pn	16 59 02.4	+0.7
KHZ	Kahutara	4.18	204	P	Pn	16 59 05.4	-0.4
EAZ	Earnscleugh	8.20	214	P	Pn	17 00 03.5	+4.1
HHSZ	Highcliff Hill	8.24	206	P	Pn	17 00 06.7	+6.8
MSZ	Milford Sound	8.46	222	P	Pn	17 00 05.2	+2.5

IDC 03 16:58:45.6±3.4**,48°.92S**×**164°.67E,h0**^{km}**,mb3.7**/2**,**
mb1 3.9/3**,mb1mx3.6**/23**,mbtmp3.7**/3**,ML3.4**/1**,MS3.0**/1**,**
Ms1 3.0/1**,ms1mx2.7**/23**,Error ellipse: s-maj=79.2km**
s-min=32.6km az=161.0,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	6.83	43	Pn	Pn	17 00 26.9	-0.1
	0.7nm,0.3s,baz=205,slow=19,SNR=1.3						
RPZ				Sn	Sn	17 01 48.0	+2.6
	3.1nm,0.3s,baz=15,slow=21,SNR=9.1						
RPZ				LR	LR	17 03 23.3	
	comp=Z,127nm,18.8s,baz=302,slow=41						
ASAR	Alice Springs	34.95	305	P	P	17 05 39.5	+0.2
	0.5nm,0.4s,baz=136,slow=7.1,SNR=28						
WRA	Warramunga Arr	37.77	309	P	P	17 06 03.0	-0.4
	0.6nm,0.4s,baz=144,slow=9.4,SNR=14						
H01W1	Cape Leeuwin H	39.40	272	T	T	17 47 42.3	
	baz=128,slow=76,SNR=37						
H01W2	Cape Leeuwin H	39.41	272	T	T	17 47 45.0	
	baz=128,slow=76,SNR=32						
H01W3	Cape Leeuwin H	39.41	272	T	T	17 47 44.8	
	baz=128,slow=76,SNR=32						
H08S2	Diego Garcia H	85.73	263	T	T	18 45 23.7	
	baz=140,slow=76,SNR=48						
H08S1	Diego Carcia H	85.74	263	T	T	18 45 22.1	
	baz=140,slow=76,SNR=31						
H08S3	Diego Garcia H	85.75	263	T	T	18 45 25.2	
	baz=140,slow=76,SNR=64						
ARCES	ARCESS Array B	151.54	331	PKPbc	PKPbc	17 18 39.9	-0.2
	4.3nm,1.0s,baz=48,slow=1.3,SNR=5.6						

IDC 03 16:59:40.9±59.0**,21°.37S**×**178°.17W,h0**^{km}**,mb4.1**/3**,**
mb1 4.2/3**,mb1mx3.7**/23**,mbtmp4.1**/3**,Error ellipse:**
s-maj=1077.0km s-min=164.4km az=84.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.27	245	P	P	17 06 53.8	-0.9
	2.1nm,0.7s,baz=81,slow=12,SNR=4.0						
ASAR	Alice Springs	44.17	258	P	P	17 07 51.6	-0.2
	1.0nm,0.4s,baz=96,slow=7.3,SNR=42						
WRA	Warramunga Arr	44.33	263	P	P	17 07 53.6	+0.5
	0.9nm,0.3s,baz=95,slow=8.4,SNR=36						

IDC ***03*** *17:13:03.8±1.3, 15°.49N×147°.51E, h0*^{km}*, mb3.6/10,*
mb1 3.8/10, mb1mx3.7/32, mbtmp3.6/10, MS3.1/2,
Ms1 3.1/2, ms1mx2.6/50, Error ellipse: s-maj=34.8km
s-min=27.1km az=107.0

NEIC ***03*** *17:13:08.6±1.8, 15°.59N±0°.10×147°.4E±0°.1, h27*^{km}*±5*^{km}*,*
mb4.5/16, Error ellipse: s-maj=17.6km s-min=10.7km
az=130.0

ISC 03 17:13:08.0±0.6**,15°.50N**±0°.08×**147°.5E**±0°.1**,h29**^{km}**,n36,**
σ1^{s}**46**/30**,mb4.1**/18**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	3.21	234	Pn	Pn	17 13 54.6	-1.9
JCJ	Chichijima	12.56	338	LR	LR	17 20 00.6	
	comp=Z,68nm,18.1s,baz=225,slow=33						
PATS	Pohnpei	13.63	128	Pn	Pn	17 16 16.8	-2.6
H11S3	WAKE ISLAND Hy	18.55	78	T	T	17 36 45.2	
	baz=263,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	18.57	78	T	T	17 36 39.6	
	baz=263,slow=74,SNR=5.1						
H11S2	WAKE ISLAND Hy	18.57	78	T	T	17 36 37.8	
	baz=263,slow=74,SNR=9.5						
JMN	Monobe	21.95	328	P	P	17 17 55.2	-4.1
JMN				IAmb	IAmb	17 18 16.6	
	comp=Z,58nm,1.5s						
JGF	Kuroka	21.99	337		P	17 17 59.3	-0.5
MJAR	Matsushiro Arr	22.54	340	P	P	17 18 05.2	-0.5
	comp=Z,1.1nm,0.8s,baz=171,slow=10.0,SNR=4.9						
MAJO	Matsushiro	22.54	340	P	P	17 18 05.6	-0.1
MAJO				IAmb	IAmb	17 18 34.1	
	comp=Z,28nm,1.4s						
JMM	Marumori	23.06	346	P	P	17 18 11.4	+0.4
FAKI	Fak Fak	23.75	221	P	P	17 18 20.1	+2.1
PMG	Port Moresby	24.75	181	P	P	17 18 29.3	+2.1
PMG				IAmb	IAmb	17 19 05.1	
	comp=Z,15nm,1.2s						
KSRS	Korea Array	27.93	325	LR	LR	17 28 45.4	
	comp=Z,48nm,21.4s,baz=160,slow=34						
USRK	Ussuriysk Ar.	31.51	338	P	P	17 19 26.5	-0.9
	comp=Z,0.8nm,0.8s,baz=126,slow=11,SNR=1.9						
ASAR	Alice Springs	41.15	199	P	P	17 20 49.3	-0.6
	comp=Z,0.4nm,0.9s,baz=20,slow=8.9,SNR=2.4						
CMAR	Chiang Mai Arr	46.47	281	P	P	17 21 33.5	+0.7
	comp=Z,0.9nm,0.8s,baz=83,slow=6.6,SNR=7.6						
SONM	Songino Array	46.73	322	P	P	17 21 34.6	-0.1
	comp=Z,0.5nm,0.6s,baz=125,slow=8.1,SNR=3.6						
BBOO	Buckleboo	49.28	193	P	P	17 21 55.9	+1.7
GSI	Gunungsitoli	51.24	259	P	P	17 22 10.1	+0.5
GSI				IAmb	IAmb	17 22 30.1	
	comp=Z,8.0nm,1.0s						
ZALV	Zalesovo Beam	61.61	323	P	P	17 23 22.3	-0.5
	comp=Z,0.3nm,0.4s,baz=119,slow=8.9,SNR=2.3						
MK31	Makanchi Array	61.95	315	P	P	17 23 23.7	-1.5
MKAR	Makanchi Array	61.95	315	P	P	17 23 25.5	+0.2
	comp=Z,0.4nm,0.6s,baz=91,slow=7.7,SNR=7.3						
MAKZ	Makanchi	62.16	315	P	P	17 23 26.7	0.0
KTH	Kantishna Hill	63.69	26	P	P	17 23 39.4	+2.9
KURK	Kurchatov	64.82	319	P	P	17 23 43.1	-1.0
KURK				IAmb	IAmb	17 23 55.1	
	comp=Z,9.8nm,1.1s						
NRIK	Noril'sk	65.20	340	P	P	17 23 47.2	+1.0
	comp=Z,1.3nm,0.5s,baz=173,slow=3.3,SNR=4.2						
NRIK	Noril'sk	65.20	340	IAmb	IAmb	17 23 57.4	
	comp=Z,2.1nm,0.6s						
ILAR	Eielson Array	65.74	25	P	P	17 23 50.5	+0.6
	comp=Z,0.3nm,0.5s,baz=248,slow=5.4,SNR=5.6						
RIDG	Independent Ri	66.34	27	P	P	17 23 52.7	-1.1
KK31	Karatay Array	70.16	311	P	P	17 24 17.8	-0.3
KK31				IAmb	IAmb	17 24 29.1	
	comp=Z,2.6nm,0.9s						
KKAR	Karatay Array	70.16	311	P	P	17 24 17.5	-0.6
KKAR				IAmb	IAmb	17 24 29.0	
	comp=Z,2.6nm,0.9s						
AB05	Akbulak array	76.87	318	P	P	17 24 57.5	+0.1
AB03	Akbulak array	76.87	318	P	P	17 24 57.4	0.0
YKA	Yellowknife Ar	79.97	28	P	P	17 25 15.4	+1.2
	comp=Z,0.2nm,0.5s,baz=283,slow=4.1,SNR=5.1						
FINES	FINESS Array B	90.51	336	P	P	17 26 06.5	-0.5
	comp=Z,6.7nm,1.1s,baz=48,slow=2.1,SNR=1.9						

IDC ***03*** *17:27:21.9±1.4, 1°.12N×125°.67E, h0*^{km}*, mb3.7/5,*
mb1 3.9/6, mb1mx3.5/41, mbtmp3.7/6, ML3.6/1, Error
ellipse: s-maj=87.2km s-min=18.5km az=62.0

DJA ***03*** *17:27:26.6±0.3, 1°N±4°×12°6E±°, h10*^{km}*, M4.0/12, mb4.2/3,*
mB4.6/1, MLv3.9/12, Mw(mB)3.8/1

NEIC ***03*** *17:27:28.1±2.6, 1°.29N±0°.10×126°.06E±0°.05, h51*^{km}*±9*^{km}*,*
mb4.5/19, Error ellipse: s-maj=14.3km s-min=6.8km
az=199.0

ISC 03 17:27:28.2±0.6**,1°.26N**±0°.06×**126°.12E**±0°.06**,h50**^{km}**,n42,**
σ1^{s}**34**/43**,mb4.2**/16**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.34	111		Pn	17 27 50.8	+0.2
TNTI	Ternate	1.34	111	P	Pn	17 27 50.7	+0.2
KMSI	Cibinong	2.25	252	P	Pn	17 28 03.7	+0.8
KMSI				S	Sn	17 28 30.7	+1.3
SGSI	Sangihe	2.48	346	P	Pn	17 28 08.0	+1.9
GTOI	Gorontalo	3.17	259	P	Pn	17 28 17.6	+2.0
SANI	Sanana	3.29	182	P	Pn	17 28 17.0	-0.3
LUWI	Luwuk	4.06	236		Pn	17 28 30.0	+2.3
LUWI	Luwuk	4.06	236	P	Pn	17 28 28.0	+0.3
MRSI	Marisa	4.25	259	P	Pn	17 28 31.3	+0.9
APSI	Ampana	4.96	244	P	Pn	17 28 40.6	+0.4
TOLI2	Tolitoli	5.34	268		Pn	17 28 45.2	-0.2
MPSI	Mapaga	6.29	262	P	Pn	17 28 59.1	+0.7
	0.0nm415nm12nm,0.8s						
FAKI	Fak Fak	7.40	124	Pn	Pn	17 29 16.9	+3.3
TTSI	Tana Toraja	7.62	236	P	Pn	17 29 17.7	+1.1
MYLDM	Lahad Datu	8.54	297	Pn	Pn	17 29 29.9	+0.6
KKM	Kota Kinabalu	10.96	296	Pn	Pn	17 30 06.0	+3.4
FITZ	Fitzroy Crossi	19.25	181	P	P	17 31 47.4	-1.2
	0.1nm,0.3s,baz=350,slow=11,SNR=1.4						
WB0	Warramunga Arr	22.42	159	P	P	17 32 21.8	-1.1
WB0				IAmb	IAmb	17 32 33.6	
	comp=Z,12nm,1.2s						
YULB	Yu-li	22.49	348	P	P	17 32 23.7	+0.2
YULB				IAmb	IAmb	17 32 23.8	
	comp=Z,20nm,1.3s						
TPUB	Ta-pu	22.55	347	P	P	17 32 20.9	-3.2
TPUB				IAmb	IAmb	17 32 43.6	
	comp=Z,29nm,1.3s						
WRAB	Tennant Creek	22.56	159	P	P	17 32 23.6	-0.7
WRAB				IAmb	IAmb	17 32 29.0	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	22.56	159	P	P	17 32 23.5	-0.9
	comp=Z,1.3nm,0.3s,baz=334,slow=11,SNR=36						
WB2	Warramunga Arr	22.57	159	P	P	17 32 23.2	-1.3
WB2				IAmb	IAmb	17 32 29.6	
	comp=Z,9.5nm,1.0s						
WR0	Warramunga Arr	22.65	159	P	P	17 32 24.3	-1.0
COEN	Coen	22.68	132	P	P	17 32 24.2	-1.4
YOJ	Yonaguni jima	23.26	353	P	P	17 32 32.6	+1.2
ASAR	Alice Springs	25.91	163	P	P	17 32 55.9	+0.1
	comp=Z,0.9nm,0.5s,baz=346,slow=8.8,SNR=17						
ASAR				PcP	PcP	17 36 25.2	+1.4
	comp=Z,0.5nm,0.5s,baz=348,slow=2.1,SNR=7.0						
GSI	Gunungsitoli	28.54	270	P	P	17 33 18.0	-1.5
GSI				IAmb	IAmb	17 33 46.6	
	comp=Z,13nm,1.2s						
CMAR	Chiang Mai Arr	31.67	304	P	P	17 33 45.2	-1.9
	comp=Z,0.1nm,0.5s,baz=108,slow=10,SNR=2.0						
BBOO	Buckleboo	35.17	165	P	P	17 34 17.4	0.0
STKA	Stephens Creek	36.08	157	P	P	17 34 25.4	+0.2
	comp=Z,2.3nm,0.8s,baz=336,slow=12,SNR=4.0						
STKA	Stephens Creek	36.08	157	IAmb	IAmb	17 34 25.5	
	comp=Z,2.2nm,1.4s						
TOO	Toolangi	42.60	157	P	P	17 35 20.5	+1.0
TOO				IAmb	IAmb	17 35 29.5	
	comp=Z,52nm,1.6s						
MK31	Makanchi Array	59.24	326	P	P	17 37 24.0	-0.5
MKAR	Makanchi Array	59.24	326	P	P	17 37 24.0	-0.5
	comp=Z,0.4nm,0.4s,baz=122,slow=7.5,SNR=18						
MLZ	Mavora Lakes	59.45	147	P	P	17 37 25.3	-0.6
MLZ				IAmb	IAmb	17 37 50.3	
	comp=Z,14nm,1.1s						
LBZ	Lake Benmore	60.01	145	P	P	17 37 29.7	-0.1
TUWZ	Tuamarina	60.64	140	P	P	17 37 34.0	-0.1
YAK	Yakutsk	60.68	2	P	P	17 37 34.3	+0.3
BKZ	Black Stump Fm	61.19	137	P	P	17 37 38.3	+0.3
BKZ				IAmb	IAmb	17 37 43.1	
	comp=Z,16nm,1.5s						
KURK	Kurchatov	63.49	328	P	P	17 37 52.7	-0.4
KURK				IAmb	IAmb	17 38 18.5	
	comp=Z,6.1nm,1.6s						
VNDA	Vanda	81.07	173	P	P	17 39 38.5	+1.0
VNDA				IAmb	IAmb	17 39 48.2	
	comp=Z,4.7nm,1.4s						

BGR ***03*** *17:43:59.2±0.0, 44°.16N×116°.10W, h33*^{km}*, mb5.0*

BJI ***03*** *17:44:00.0±0.0, 44°.50N×114°.10W, h8*^{km}*, mB5.3/8,*
mb4.9/21, Ms5.0/7, Ms7 4.8/8

IDC ***03*** *17:44:01.6±0.3, 44°.52N×114°.34W, h0*^{km}*, mb4.8/31,*
mb1 4.9/38, mb1mx4.8/53, mbtmp4.8/38, ML3.9/6, MS4.1/38,
Ms1 4.1/38, ms1mx4.1/48, Error ellipse: s-maj=8.6km
s-min=5.9km az=96.0

BUT ***03*** *17:44:02.2±3.0, 44°.46N±0°.04×114°.14W±0°.05, h11*^{km}*±1*^{km}*,*
Error ellipse: s-maj=6.3km s-min=5.5km az=168.0

NEIC ***03*** *17:44:02, 44°.51N×114°.17W, h11*^{km}*, Moment Tensor*
Solution. Moment tensor: Scale 10^{16}*Nm;* M_{rr}*-1.74;*
$M_{\theta\theta}$*1.07;* $M_{\phi\phi}$*0.67;* $M_{r\theta}$*-0.58;* $M_{\theta\phi}$*-1.75;* $M_{\phi r}$*-0.92; Fault*
plane solution: M_0*2.56000×10*^{16} *NP1:*ϕ_s*340.93000°,*
δ56.39000°, λ-47.76000°. NP2:ϕ_s*102.30000°, δ51.93000°,*
λ-135.32000°. Principal axes: T 2.6358, Plg3.0000°,
Azm43.0000°; N -0.1688, Plg34.0000°, Azm134.0000°; P
-2.4671, Plg56.0000°, Azm309.0000°;

MOS ***03*** *17:44:02.4±0.9, 44°.58N×114°.16W, h14*^{km}*, mb5.2/30,*
MS4.6/5 Error ellipse: s-maj=6.7km s-min=4.1km az=88.3

NEIC ***03*** *17:44:03.5±2.8, 44°.51N±0°.04×114°.11W±0°.06, h8*^{km}*±3*^{km}*,*
mb5.0/209, ML5.2/110, Mwr4.9/116, Mww5.0, ML4.8(BUT),
Error ellipse: s-maj=5.9km s-min=5.6km az=138.0

ANF ***03*** *17:44:03.2±0.2, 44°.52N×114°.19W, h0*^{km}*, ML5.5/12, Error*
ellipse: s-maj=3.1km s-min=2.8km az=155.0

GCMT ***03*** *17:44:04.8±0.2, 44°.52N±0°.01×114°.07W±0°.02, h14*^{km}*,*
MW5.0/109, Moment Tensor Solution. s50,c61;
s109,c169; Duration: 0 Moment tensor: Scale 10^{16}*Nm;*
M_{rr}*-3.03±.15;* $M_{\theta\theta}$*1.49±.10;* $M_{\phi\phi}$*1.54±.10;* $M_{r\theta}$*-0.85±.21;*
$M_{\theta\phi}$*-2.86±.07;* $M_{\phi r}$*-1.01±.22; Best double couple:*
M_0*4.06300×10*^{16} *NP1:*ϕ_s*110.00000°, δ51.00000°,*
λ-128.00000°. NP2:ϕ_s*341.00000°, δ53.00000°,*
λ-53.00000°. Principal axes: T 4.3770, Plg1.0000°,
Azm45.0000°; N -0.6290, Plg29.0000°, Azm136.0000°; P
-3.7480, Plg61.0000°, Azm314.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function

NEIC ***03*** *17:44:09, 44°.54N×114°.12W, h16*^{km}*, Moment Tensor*
Solution. Moment tensor: Scale 10^{16}*Nm;* M_{rr}*-2.90;*
$M_{\theta\theta}$*1.61;* $M_{\phi\phi}$*1.28;* $M_{r\theta}$*-1.22;* $M_{\theta\phi}$*-2.73;* $M_{\phi r}$*-0.04; Fault*
plane solution: M_0*3.91000×10*^{16} *NP1:*ϕ_s*336.00000°,*
δ43.00000°, λ-55.00000°. NP2:ϕ_s*113.00000°, δ56.00000°,*
λ-117.00000°. Principal axes: T 4.2932, Plg7.0000°,
Azm222.0000°; N -0.9332, Plg22.0000°, Azm129.0000°;
P -3.3600, Plg66.0000°, Azm328.0000°;

ISC 03 17:44:03.6±0.6**,44°.49N**±0°.02×**114°.11W**±0°.03**,h12**^{km}±3^{km}**,**
n802,σ1^{s}**80**/721**,mb5.0**/171**,MS4.3**/45**,17C-26D,Fault**
plane solution: NP1:ϕ_s3.39840°**,**δ51.53632°**,**
λ-24.23252°. **NP2:**ϕ_s109.03909°**,**δ71.25384°**,**
λ-138.93886°. **Principal axes:** T Plg12.2740°**,**
Azm232.1073°**;** N Plg45.5621°**,** Azm129.2884°**;** P
Plg41.8421°**,** Azm333.3408°**; Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	Bear Canyon	0.54	109		Pg	17 44 12.5	-1.7
HLID	Hailey	0.95	193	P	Pg	17 44 19.1	-2.9
	baz=12,SNR=1000						
HLID				S	Sg	17 44 32.1	-2.3
	baz=12						
HLID	Hailey	0.95	193	Pg	Pg	17 44 19.1	-2.9
HLID				Sg	Sg	17 44 32.0	-2.3
MCMT	McKenzie Canyo	0.96	69	Pg	Pg	17 44 20.9	-1.4
DLMT	Dillon	1.39	50		Pn	17 44 28.5	-0.5
DLMT				Sg	Sg	17 44 48.8	+0.5
DLMT				IAML		17 44 54.2	
	49µm,0.9s						
MFID	Camas Ranch	1.64	230	Pn	Pn	17 44 31.1	-1.3
MFID				Sn	Sn	17 44 53.0	-0.6
LRM	Limekiln Ridge	1.78	41		Pn	17 44 33.4	-1.0
QLMT	Earthquake Lak	1.94	79	Pn	Pn	17 44 34.9	-1.9
BOZ	Bozeman (W)	2.08	57	P	Pn	17 44 37.6	-0.9
BOZ	Bozeman (W)	2.08	57	Pn	Pn	17 44 37.7	-0.8
	baz=240,SNR=1000						
BOZ				Pb	Pb	17 44 41.4	0.0
	baz=240						
BOZ				S	Sb	17 45 08.8	+1.5
	baz=240						
BOZ	Bozeman (W)	2.08	57		Pn	17 44 37.6	-0.9
BOZ				IAML		17 45 13.7	
	14µm,0.5s						
YHB	Horse Butte	2.10	82		Pn	17 44 38.3	-0.6
YHL	Hebgen Lake	2.12	79		Pn	17 44 39.2	0.0
YMR	Madison River	2.25	84		Pn	17 44 41.0	0.0
BMO	Blue Mountains	2.31	280	P	Pn	17 44 40.2	-1.4
BMO	Blue Mountains	2.31	280	Pn	Pn	17 44 40.2	-1.4
BMO				IAML		17 45 17.5	
	12µm,0.4s						
BMO				IAML		17 45 17.7	
	16µm,0.4s						
MSO	Missoula	2.35	3	P	Pn	17 44 41.4	-0.8
	baz=183,SNR=739						
MSO				S	Sn	17 45 11.7	+0.8
	baz=183						
MSO	Missoula	2.35	3		Pn	17 44 41.3	-0.8
MSO				IAML		17 45 22.0	
	18µm,0.7s						
MSO				IAML		17 45 24.2	
	19µm,0.8s						
YHH	Holmes Hill	2.35	81		Pn	17 44 42.2	-0.2
YPP	Pitchstone Pla	2.38	94		Pn	17 44 43.1	+0.3
ECR	Eagle Creek	2.45	125		Pn	17 44 44.4	+0.8
YNR	Norris Junctio	2.46	83		Pn	17 44 44.2	+0.3
FLWY	Flagg Ranch	2.48	98		Pn	17 44 44.8	+0.7
FLWY				IAML		17 45 27.7	
	9µm,0.9s						
FLWY				IAML		17 45 29.6	
	8µm,1.2s						
H17A	Grant Village	2.53	91	P	Pn	17 44 46.6	+1.7
	baz=274,SNR=692						
H17A				Sb	Sb	17 45 22.5	+2.0
	baz=274						
H17A	Grant Village	2.53	91		Pn	17 44 46.4	+1.5
MOOW	Moose Ponds	2.53	106	Pn	Pn	17 44 45.0	+0.1
YUF	Upper Falls	2.58	84		Pn	17 44 46.1	+0.6
REDW	Red Top Meadow	2.61	114		Pn	17 44 46.3	+0.4
REDW				IAML		17 45 29.5	
	7µm,0.8s						
LKWY	Lake	2.66	87	P	Pn	17 44 48.0	+1.4
LKWY	Lake	2.66	87		Pn	17 44 48.0	+1.4
F10A	Beach Ranch, E	2.66	305		Pn	17 44 46.2	-0.3
LOHW	Long Hollow	2.67	108		Pn	17 44 46.9	+0.1
AHID	Auburn Hatcher	2.78	127		Pn	17 44 48.7	+0.5
AHID				IAML		17 45 33.0	
	comp=E,6µm,0.8s						
AHID				IAML		17 45 36.7	
	comp=N,7µm,0.8s						
YMP	Mirror Lake Pl	2.83	83		Pn	17 44 49.9	+0.8
HVU	Hansel Valley	2.88	160	P	Pn	17 44 49.0	-0.5
HVU	Hansel Valley	2.88	160		Pn	17 44 49.0	-0.5
YNE	Yellowstone No	2.97	78		Pn	17 44 51.2	+0.4
JTMT	Jette	3.26	358		Pn	17 44 54.2	-0.6
JTMT				IAML		17 45 58.6	
	comp=N,8µm,0.7s						
SPUT	South Promonto	3.40	158		Pn	17 44 56.6	-0.1
GCMT	Greycliff	3.40	66		Pn	17 44 56.8	+0.1
E09A	Wood Farm, Sta	3.49	307		Pn	17 44 57.5	-0.2
E09A				IAML		17 45 57.8	
	comp=E,6µm,1.4s						
E09A				IAML		17 45 59.5	
	comp=N,4µm,1.0s						
RLMT	Red Lodge	3.50	78	Pn	Pn	17 44 59.0	+0.8
	baz=262,SNR=85						
RLMT				Pb	Pb	17 45 06.0	+0.2
	baz=262						
RLMT				Sb	Sg	17 45 53.0	-3.2
	baz=262						
RLMT	Red Lodge	3.50	78		Pn	17 44 58.9	+0.7
RLMT				IAML		17 45 58.8	
	comp=N,4µm,0.6s						
RLMT				IAML		17 45 59.2	
	comp=N,4µm,0.7s						
G08A	Pilot Rock	3.54	285	Pn	Pn	17 44 57.1	-1.5
G08A				IAML		17 45 54.4	
	comp=N,3µm,0.8s						
G08A				IAML		17 45 59.6	
	comp=E,3µm,0.6s						
BGU	Big Grassy Mou	3.65	167	Pn	Pn	17 44 59.9	-0.2
BW06	Boulder Array	3.73	116	P	Pn	17 45 03.9	+2.7
	baz=300,SNR=231						
BW06				Sb	Sb	17 45 56.8	+2.0
	baz=300						
BW06	Boulder Array	3.73	116		Pn	17 45 02.3	+1.1
PD31	Pinedale Array	3.73	116		Pn	17 45 02.1	+0.9
PDAR	Pinedale Array	3.73	116	Pn	Pb	17 45 06.8	-2.7
	comp=E,3.1nm,0.3s,baz=295,slow=11,SNR=121						
PDAR				Lg	Lg	17 45 57.7	
	comp=E,22nm,0.3s,baz=322,slow=28,SNR=2.5						
ELK	Elko	3.83	193	Pn	Pn	17 45 03.3	+0.6
	comp=E,42nm,0.3s,baz=3.1,slow=12,SNR=168						
ELK				Pg	Pb	17 45 09.4	-2.0
	comp=E,86nm,0.3s,baz=5.9,slow=17,SNR=92						
ELK				Lg	Lg	17 45 58.2	
	comp=E,222nm,0.3s,baz=146,slow=20,SNR=12						
ELK	Elko	3.83	193	P	Pn	17 45 02.5	-0.2
ELK	Elko	3.83	193	Pn	Pn	17 45 02.5	-0.2
WVOR	Wild Horse Val	3.88	240	P	Pn	17 45 02.6	-0.7
WVOR	Wild Horse Val	3.88	240	Pn	Pn	17 45 02.6	-0.7
WVOR				IAML		17 46 12.4	
	comp=E,3µm,1.2s						
WVOR				IAML		17 46 16.4	
	comp=E,3µm,0.9s						
TCUT	Toone Canyon	3.91	149		Pn	17 45 05.4	+1.6
E08A	Dider Farm, El	4.02	302		Pn	17 45 04.1	-0.9
E08A				IAML		17 46 20.3	
	comp=N,3µm,1.0s						
CTU	Camp Tracy	4.17	155	Pn	Pn	17 45 08.5	+1.1
D08A	Wollman Farm,	4.24	309	Pn	Pn	17 45 06.7	-1.3
D08A				IAML		17 46 19.5	
	comp=N,3µm,0.8s						
D08A				IAML		17 46 25.4	
	comp=E,3µm,0.8s						
HAWA	Hanford	4.27	298	Pn	Pn	17 45 07.4	-1.0
HAWA				IAML		17 46 34.3	
	comp=E,3µm,1.1s						
HAWA				IAML		17 46 38.3	
	comp=E,2µm,0.8s						
NEW	Newport	4.32	332	Pn	Pn	17 45 08.7	-0.5
	comp=E,92nm,0.3s,baz=155,slow=13,SNR=868						
NEW				Pg	Pb	17 45 21.0	+1.5
	comp=E,158nm,0.3s,baz=135,slow=14,SNR=20						
NEW				Sn	Sn	17 45 58.1	-1.4
	comp=E,146nm,0.3s,baz=306,slow=8.8,SNR=6.2						
NEW				Lg	Lg	17 46 18.7	
	comp=E,566nm,0.3s,baz=92,slow=18,SNR=17						
NEW				LR	LR	17 46 40.8	
	comp=E,724nm,20.2s,baz=156,slow=38						
NEW	Newport	4.32	332	P	Pn	17 45 08.5	-0.6
NEW	Newport	4.32	332		Pn	17 45 08.5	-0.6
F07A	Phinny Hill Vi	4.35	291		Pn	17 45 08.6	-1.0
JLU	Jordanelle	4.35	152		Pn	17 45 11.8	+2.0
DUG	Dugway, Tooele	4.40	167	P	Pn	17 45 10.2	-0.1
DUG	Dugway, Tooele	4.40	167	Pn	Pn	17 45 10.0	-0.4
	baz=348,SNR=214						
DUG				Pb	Pb	17 45 19.4	-1.5
	baz=348						
DUG				Sb	Sb	17 46 17.9	+3.9
	baz=348						
DUG	Dugway, Tooele	4.40	167		Pn	17 45 10.2	-0.1
C09A	Chrisman Ranch	4.40	320		Pn	17 45 09.2	-1.1
E07A	Sunnyside	4.54	299	Pn	Pn	17 45 11.5	-0.7
E07A				IAML		17 46 32.5	
	comp=N,4µm,1.1s						
E07A				IAML		17 46 38.9	
	comp=E,3µm,0.8s						
WALA	Waterton Lakes	4.58	2		Pn	17 45 12.7	-0.2
WALA				IAML		17 46 33.9	
	comp=N,3µm,0.7s						
EGMT	Eagleton	4.65	39	P	Pn	17 45 13.3	-0.5
	baz=222,SNR=139						
EGMT				Sb	Sb	17 46 25.5	+4.3
	baz=222						

EGMT	Eagleton	4.65	39	Pn	Pn	17 45 13.1	-0.7
NLU	North Lily Min	4.77	161		Pn	17 45 16.9	+1.2
MPU	Maple Canyon	4.83	157		Pn	17 45 15.5	-0.9
PINE	Pine Mountain	4.96	264		Pn	17 45 17.4	-0.8
PINE				IAML		17 46 46.1	
	comp=N,1µm,2.2s						
PINE				IAML		17 46 59.6	
	comp=E,1µm,0.9s						
RDMU	Red Mountain	5.15	138		Pn	17 45 22.4	+1.5
G05D	Wamic, OR	5.18	281	P	Pn	17 45 20.6	-0.5
	baz=95,SNR=36						
I05D	Terrebonne, OR	5.18	271	P	Pn	17 45 20.4	-0.7
	baz=85,SNR=67						
MOD	Modoc Plateau	5.21	242	Pn	Pn	17 45 21.1	-0.5
MOD				IAML		17 46 56.7	
	comp=N,1µm,0.9s						
MOD				IAML		17 47 14.1	
	comp=E,923nm,1.0s						
K05A	Summer Lake	5.23	253		Pn	17 45 21.4	-0.5
K05A				IAML		17 47 12.0	
	comp=N,1µm,2.6s						
K05A				IAML		17 47 17.5	
	comp=E,903nm,2.4s						
J05D	Fort Rock, OR	5.29	259	P	Pn	17 45 22.1	-0.5
	baz=74,SNR=260						
B08A	Colville Reser	5.29	319	Pn	Pn	17 45 21.3	-1.3
LTY	Liberty	5.35	303		Pn	17 45 22.1	-1.4
LTY				IAML		17 47 05.4	
	comp=N,1µm,1.1s						
LTY				IAML		17 47 11.2	
	comp=E,2µm,0.8s						
F05D	White Salmon	5.38	288	P	Pn	17 45 22.5	-1.3
	baz=102,SNR=21						
P17A	Butcher Ranch,	5.60	152		Pn	17 45 29.3	+2.3
TMUT	Trail Mountain	5.62	156		Pn	17 45 29.2	+1.8
H04A	Detroit Lake	5.77	275	Pn	Pn	17 45 27.9	-1.3
RWWY	Rawlins	5.77	117		Pn	17 45 31.8	+2.3
K22A	Casper	5.81	106	P	Pn	17 45 32.7	+2.9
	baz=292,SNR=90						
K22A	Casper	5.81	106		Pn	17 45 32.3	+2.5
C06D	Leavenworth	5.83	309	P	Pn	17 45 29.0	-1.0
	baz=123,SNR=53						
LON	Longmire	5.86	295	P	Pn	17 45 28.9	-1.4
LON	Longmire	5.86	295		Pn	17 45 28.9	-1.4
K04D	Chiloquin, OR	5.86	254	P	Pn	17 45 30.2	-0.2
	baz=68,SNR=46						
K04D				Sg	Sg	17 47 12.6	+1.0
	baz=68						
J04D	Umpqua Nationa	5.92	261	P	Pn	17 45 31.8	+0.5
	baz=75,SNR=42						
PSUT	Pine Spring	5.95	178		Pn	17 45 32.1	+0.3
LAO	LASA Array	5.96	66	P	Pn	17 45 31.8	+0.1
	baz=252,SNR=20						
LAO				Sb	Sb	17 47 06.7	+8.0
	baz=252						
LAO	LASA Array	5.96	66		Pn	17 45 31.2	-0.5
SRU	San Rafael Swe	6.00	152	P	Pn	17 45 35.1	+2.6
SRU	San Rafael Swe	6.00	152		Pn	17 45 35.1	+2.6
TCRU	Three Creeks R	6.00	167		Pn	17 45 34.8	+2.3
I04A	Tendick Farm,	6.01	266	P	Pn	17 45 32.4	-0.1
	baz=80,SNR=26						
PNT	Penticton	6.13	324	P	Pb	17 45 45.1	-5.2
D05A	Enumclaw	6.13	299	Pn	Pn	17 45 33.3	-0.7
MSU	Marysvale	6.14	166	P	Pn	17 45 37.2	+2.7
MSU	Marysvale	6.14	166	Pn	Pn	17 45 37.2	+2.7
MVU	Marysvale	6.14	166		Pn	17 45 37.0	+2.5
O20A	White River Ci	6.15	133	P	Pn	17 45 38.2	+3.7
	baz=317,SNR=35						
O20A	White River Ci	6.15	133	Pn	Pn	17 45 37.1	+2.6
H04D	Lebanon	6.17	273	P	Pn	17 45 34.5	-0.1
	baz=87						
PAHR	Pah Rah Range	6.18	221	Pn	Pn	17 45 36.2	+1.3
R11A	Troy Canyon, C	6.23	191	P	Pn	17 45 37.1	+1.5
	baz=9.6,SNR=32						
R11A				Sb	Sb	17 47 12.2	+5.4
	baz=9.6						
R11A	Troy Canyon, C	6.23	191	Pn	Pn	17 45 38.0	+2.4
M04C	Macdoel	6.27	247	P	Pn	17 45 35.8	-0.2
	baz=61,SNR=43						
E04D	Cinebar	6.29	292	P	Pn	17 45 35.3	-0.9
	baz=106,SNR=12						
L04D	Klamath Falls	6.39	252	P	Pn	17 45 37.2	-0.6
	baz=66,SNR=53						
B06A	Marblemount	6.49	311	Pn	Pn	17 45 38.4	-0.6
BEKR	Beckworth	6.55	227		Pn	17 45 40.0	0.0
G03D	McMinnville, O	6.55	280	P	Pn	17 45 40.5	+0.7
	baz=93,SNR=32						
COR	Corvallis	6.57	274	P	Pn	17 45 41.9	+1.8
COR	Corvallis	6.57	274		Pn	17 45 41.9	+1.8
MTPU	Mount Pierson	6.60	167	Pn	Pn	17 45 43.7	+2.8
D04E	Lakebay	6.62	297	P	Pn	17 45 41.4	+0.7
	baz=110,SNR=7.4						
VCNR	Virginia City	6.63	220		Pn	17 45 41.9	+0.8
B05A	Bryant	6.69	307	P	Pn	17 45 41.2	-0.5
	baz=121,SNR=29						
HUMO	Hull Mountain	6.70	257	Pn	Pn	17 45 40.6	-1.2
I03D	Drain, OR	6.70	266	P	Pn	17 45 42.0	+0.2
	baz=80,SNR=18						
RYN	Ryan	6.72	211	Pn	Pn	17 45 43.7	+1.4
PNTR	Pine Nut	6.78	219		Pn	17 45 45.1	+1.9
NVAR	Mina Array Bea	6.82	209	Pn	Pn	17 45 48.0	+4.2
	comp=E,1.1nm,0.3s,baz=24,slow=10,SNR=109						
NVAR				Pg	Pb	17 45 59.8	-2.4
	comp=E,12nm,0.3s,baz=28,slow=13,SNR=13						
NVAR				Lg	Lg	17 47 34.6	
	comp=E,17nm,0.3s,baz=27,slow=35,SNR=2.0						
TPH	Tonopah	6.82	201	P	Pn	17 45 47.1	+3.3
TPH	Tonopah	6.82	201		Pn	17 45 47.1	+3.3
YBH	Yreka Blue Hor	6.87	249	Pn	Pn	17 45 43.7	-0.6
	comp=E,1.0nm,0.3s,baz=42,slow=12,SNR=30						
YBH				Lg	Lg	17 47 36.5	
	comp=E,1.2nm,0.3s,baz=277,slow=17,SNR=1.4						
YBH	Yreka Blue Hor	6.87	249	P	Pn	17 45 43.6	-0.7
SZCU	Shurtz Canyon	6.93	173		Pn	17 45 49.2	+4.0
CCUT	Cedar City	6.95	175	Pn	Pn	17 45 49.6	+4.0
E03A	Lebam	6.95	291	Pn	Pn	17 45 46.0	+0.7
D03D	Eldon	6.96	299	P	Pn	17 45 44.7	-0.7
	baz=112,SNR=19						
N23A	Red Feather La	7.00	118	P	Pn	17 45 49.0	+2.6
	baz=304,SNR=89						
N23A	Red Feather La	7.00	118	Pn	Pn	17 45 48.7	+2.4
LHV	Little Huntoon	7.05	209		Pn	17 45 49.0	+2.3
RUBR	Rubicon Trail	7.06	222	Pn	Pn	17 45 47.0	-0.1
O03E	Paynes Creek	7.07	236	P	Pn	17 45 49.7	+2.7
	baz=51,SNR=29						
PRN	Pahroc Range	7.11	186		Pn	17 45 51.0	+3.3
M02C	Callahan	7.12	247	P	Pn	17 45 49.2	+1.4
	baz=61,SNR=5.0						
PV22	Blue Mesa, Par	7.16	144		Pn	17 45 49.9	+1.5
K02D	Willamette Mer	7.17	259	P	Pn	17 45 48.6	+0.3
	baz=72,SNR=54						
PKCU	Pink Cliffs	7.17	168		Pn	17 45 52.6	+4.0
WAKR	Walker	7.19	216		Pn	17 45 52.9	+4.1
PV14	Lion Creek, Pa	7.20	146		Pn	17 45 50.9	+1.8
J01E	Myrtle Point	7.23	263	P	Pn	17 45 50.9	+1.8
	baz=76,SNR=29						
N02D	Trinity Center	7.24	244	P	Pn	17 45 49.8	+0.5
	baz=58,SNR=25						
RSSD	Black Hills	7.24	89	P	Pn	17 45 51.2	+1.8
RSSD	Black Hills	7.24	89	P	Pn	17 45 52.0	+2.6
	baz=277						
RSSD	Black Hills	7.24	89		Pn	17 45 51.2	+1.8
A04D	Lummi Island	7.28	309	P	Pn	17 45 50.3	+0.6
	baz=122,SNR=8.2						
L02E	Cave Junction	7.30	255	P	Pn	17 45 50.3	+0.2
	baz=68,SNR=33						
PV12	Saucer Basin,	7.34	145		Pn	17 45 53.7	+2.8
WDC	Whiskeytown Da	7.35	241	P	Pn	17 45 51.9	+1.1
WDC	Whiskeytown Da	7.35	241		Pn	17 45 51.9	+1.1
PV03	Paradox Valley	7.38	146		Pn	17 45 51.9	+0.5
ORV	Oroville	7.38	231	P	Pn	17 45 52.8	+1.5
ORV	Oroville	7.38	231	Pn	Pn	17 45 52.8	+1.5
NLWA	Neilton Lookou	7.40	297		Pn	17 45 51.8	+0.4
LCMT	Little Creek M	7.50	175		Pn	17 45 55.9	+2.9
SMCO	Snowmass	7.52	132		Pn	17 45 52.6	-0.8
KNB	Kanab	7.53	172	P	Pn	17 45 56.4	+3.0
KNB	Kanab	7.53	172	Pn	Pn	17 45 56.4	+3.0
AFDM	Forest Hills D	7.55	225	Pn	Pn	17 45 56.8	+3.3
KEBM	Edson Butte	7.59	261		Pn	17 45 56.0	+2.0
PV01	Paradox Valley	7.59	145		Pn	17 45 56.1	+1.7
PGC	Sidney	7.66	306	Pn	Pn	17 45 55.0	-0.1
TPNV	Topopah Spring	7.70	193	P	Pn	17 45 59.0	+3.2
TPNV	Topopah Spring	7.70	193	P	Pn	17 45 59.2	+3.4
	baz=11,SNR=42						
TPNV	Topopah Spring	7.70	193	Pn	Pn	17 45 59.0	+3.2
KBO	Bosley Butte	7.72	256	Pn	Pn	17 46 00.2	+4.3
O02D	Mt. Diablo Mer	7.74	239	P	Pn	17 45 57.8	+1.6
	baz=53,SNR=25						
KRMB	Red Mountain	7.77	251		Pn	17 46 00.4	+3.8
MDPB	Devils Postpil	7.81	210		Pn	17 46 00.9	+3.6
ISCO	Idaho Springs	7.86	124	P	Pn	17 46 00.2	+2.1
ISCO	Idaho Springs	7.86	124	P	Pn	17 46 00.9	+2.8
	baz=310,SNR=67						
ISCO	Idaho Springs	7.86	124	Pn	Pn	17 46 00.2	+2.1
GRAC	Grapevine Rang	7.88	199	P	Pn	17 46 01.8	+3.6
	baz=17,SNR=18						
KHMM	Horse Mountain	7.95	246	Pn	Pn	17 46 01.5	+2.3
CMB	Columbia Colle	7.99	218	P	Pn	17 46 02.7	+3.0
CMB	Columbia Colle	7.99	218	Pn	Pn	17 46 02.7	+3.0
SHPR	Sheep Range	8.01	186	Pn	Pn	17 46 03.5	+3.4
TIN	Tinemaha, Big	8.05	204	P	Pn	17 46 04.8	+4.2
	baz=21,SNR=12						
U15A	North Rim	8.17	170	Pn	Pn	17 46 05.3	+3.0
JCC	Jacoby Creek,	8.18	247		Pn	17 46 05.8	+3.7
FURC	Furnace Creek,	8.28	196	P	Pn	17 46 08.3	+4.8
	baz=14						
KMRM	Mail Ridge	8.29	242	Pn	Pn	17 46 06.0	+2.3
MVCO	Mesa Verde	8.42	148	P	Pn	17 46 07.9	+2.2
	baz=332,SNR=17						
MVCO	Mesa Verde	8.42	148	Pn	Pn	17 46 07.1	+1.4
KCPM	Cahto Peak	8.52	239		Pn	17 46 06.5	-0.5
CWC	Cottonwood Cre	8.59	202	P	Pn	17 46 11.0	+3.0
	baz=19						
GDXM	Geysers	8.63	232		Pn	17 46 08.4	0.0
FS44D	FS44D	8.65	248	S	Sg	17 49 15.0	+34
HOPS	Hopland Field	8.66	234		Pn	17 46 12.4	+3.6
Q24A	Divide	8.68	126	P	Pn	17 46 11.7	+2.4
	baz=313,SNR=17						
Q24A	Divide	8.68	126		Pn	17 46 11.2	+1.9
S22A	4UR Ranch, Cre	8.69	138	P	Pn	17 46 11.8	+2.3
	baz=323,SNR=7.3						
S22A	4UR Ranch, Cre	8.69	138	Pn	Pn	17 46 10.7	+1.3
J27D	J27D	8.70	277	S	Sg	17 49 21.0	+38
G09D	G09D	8.71	248	S	Sg	17 49 19.4	+36
J19D	J19D	8.72	272	S	Sg	17 49 18.7	+35
SHOC	Shoshone, Teco	8.74	192	P	Pn	17 46 13.8	+3.9
	baz=10						
FS04D	FS04D	8.78	245	S	Sg	17 49 45.1	+60
FS16D	FS16D	8.79	247	S	Sg	17 49 34.8	+49
MPMC	Manual Prospec	8.80	198	P	Pn	17 46 14.0	+3.0
	baz=16,SNR=15						
FS10D	FS10D	8.81	246	S	Sg	17 49 28.9	+43
FS07D	FS07D	8.83	246	S	Sg	17 49 37.9	+51
FS13D	FS13D	8.85	247	S	Sg	17 49 12.6	+25
FS09D	FS09D	8.88	247	S	Sg	17 49 34.8	+46
J11D	J11D	8.89	268	S	Sg	17 48 54.4	+5.9
G01D	G01D	8.98	244	S	Sg	17 49 42.5	+51
G35D	G35D	9.14	262	S	Sn	17 48 55.9	+58
WUAZ	Wupatki	9.20	166	P	Pn	17 46 19.7	+3.4
	baz=348,SNR=38						
WUAZ	Wupatki	9.20	166	Pn	Pn	17 46 18.3	+2.0
G10D	G10D	9.21	250	S		17 49 29.6	
J28D	J28D	9.30	278	S		17 49 24.2	
J20D	J20D	9.30	274	S		17 49 39.5	
SDCO	Great Sand Dun	9.35	133	P	Pn	17 46 21.2	+2.7
	baz=319,SNR=15						
SDCO	Great Sand Dun	9.35	133		Pn	17 46 21.1	+2.5
W13A	Hualapai Mount	9.38	179	Pn	Pn	17 46 21.2	+2.4
LRMC	Laurel Mtn Rad	9.40	198	P	Pn	17 46 21.6	+2.5
	baz=16						
GSC	Goldstone, Bar	9.40	194	P	Pn	17 46 21.8	+2.7
GSC	Goldstone, Bar	9.40	194	P	Pn	17 46 22.2	+3.2
	baz=12						
GSC	Goldstone, Bar	9.40	194	Pn	Pn	17 46 21.8	+2.7
ISA	Isabella, Lake	9.43	202	P	Pn	17 46 22.5	+3.2
ISA	Isabella, Lake	9.43	202	P	Pn	17 46 22.9	+3.5
	baz=19						
ISA	Isabella, Lake	9.43	202	Pn	Pn	17 46 22.5	+3.2
G36D	G36D	9.52	262	S		17 49 23.8	
SAO	San Andreas Ge	9.52	218	P	Pn	17 46 22.4	+1.9
SAO	San Andreas Ge	9.52	218	Pn	Pn	17 46 22.4	+1.9
OGNE	Ogallala	9.57	108	P	Pn	17 46 22.8	+1.5
	baz=296,SNR=26						
OGNE	Ogallala	9.57	108	Pn	Pn	17 46 22.1	+0.8
E28A	Huff	9.65	73		Pn	17 46 23.4	+1.2
PMPB	Monarch Peak	9.71	214		Pn	17 46 28.1	+4.9
G37D	G37D	9.76	264	S		17 49 31.8	
GMRC	Granite Mounta	9.76	188	P	Pn	17 46 27.7	+3.6
	baz=6.4,SNR=13						
G20D	G20D	9.83	256	S		17 49 28.2	
PAGB	Antelope Grade	9.93	210		Pn	17 46 30.5	+4.4
W18A	Petrified Fore	9.94	159	P	Pn	17 46 31.1	+4.6
	baz=342						
W18A	Petrified Fore	9.94	159		Pn	17 46 27.3	+0.8
G03D7	G03D7	9.96	248	S		17 49 56.2	
EDW2	Edwards Air Fo	10.05	199	P	Pn	17 46 30.5	+2.6
	baz=16						
G29D	G29D	10.09	262	S		17 49 46.2	
PDMCI	Parker Dam,Lak	10.17	180	P	Pn	17 46 35.9	+6.4
	baz=0.1,SNR=6.7						
KSCO	Kaye Shedlock'	10.17	119	P	Pn	17 46 31.1	+1.5
	baz=307						
KSCO	Kaye Shedlock'	10.17	119	Pn	Pn	17 46 29.9	+0.3
G04D	G04D	10.33	250	S		17 49 59.0	
IRM	Iron Mountain	10.35	185	P	Pn	17 46 36.6	+4.7
	baz=4.0,SNR=9.4						
G21D	G21D	10.36	256	S		17 49 43.7	
T25A	Trinidad	10.38	132	P	Pn	17 46 35.7	+3.1
	baz=318,SNR=20						
PKM	Mcpherson Peak	10.54	207	P	Pn	17 46 38.9	+4.2
	baz=23						
BELC	Belle Mtn. Jos	10.57	189	P	Pn	17 46 37.9	+2.8
	baz=7.3,SNR=14						
G22D	G22D	10.64	258	S		17 49 46.5	
G13D	G13D	10.85	255	S		17 49 57.5	
BC3	Big Chuckawall	10.87	186	P	Pn	17 46 42.3	+3.2
	baz=5.0,SNR=17						
PFO	Pinyon Flats O	11.01	190	Pn	Pn	17 46 44.6	+3.5
	comp=E,0.1nm,0.3s,baz=12,slow=11,SNR=3.7						
PFO				Lg	Lg	17 49 46.2	
	comp=E,0.1nm,0.3s,baz=255,slow=20,SNR=1.7						
PFO				LR	LR	17 51 02.1	
	comp=E,792nm,20.9s,baz=8.5,slow=38						
PFO	Pinyon Flats O	11.01	190	P	Pn	17 46 45.8	+4.7
PFO	Pinyon Flats O	11.01	190	P	Pn	17 46 44.3	+3.2
	baz=8.7						
PFO	Pinyon Flats O	11.01	190	Pn	Pn	17 46 45.8	+4.7
ANMO	Albuquerque	11.20	146	Pn	Pn	17 46 48.4	+4.6
	comp=E,0.1nm,0.3s,baz=332,slow=13,SNR=5.2						
ANMO				Lg	Lg	17 49 57.7	
	comp=E,0.3nm,0.3s,baz=257,slow=16,SNR=3.5						
ANMO				LR	LR	17 51 11.7	
	comp=E,1µm,18.8s,baz=324,slow=38						
ANMO	Albuquerque	11.20	146	⇑eP	Pn	17 46 49.2	+5.5
ANMO	Albuquerque	11.20	146	P	Pn	17 46 47.2	+3.4
	baz=331						
ANMO	Albuquerque	11.20	146	Pn	Pn	17 46 49.9	+6.2
MONP2	Monument Peak	11.72	190	P	Pn	17 46 55.3	+4.5
	baz=8.1						
IKP	In-Ko-Pah, Jac	11.92	188	P	Pn	17 47 00.2	+6.6
	baz=6.8						
BBB	Bella Bella	12.07	315	Lg	Lg	17 50 16.0	
	comp=E,0.6nm,0.3s,baz=253,slow=17,SNR=2.2						
BBB				LR	LR	17 51 46.9	
	comp=E,1µm,20.1s,baz=114,slow=39						
BGNE	Belgrade	12.09	99	P	Pn	17 47 00.1	+4.3
	baz=290						
CBKS	Cedar Bluff	12.15	113	P	Pn	17 46 56.5	-0.1
CBKS	Cedar Bluff	12.15	113	P	Pn	17 46 56.8	+0.3
	baz=303,SNR=21						
CBKS	Cedar Bluff	12.15	113	Pn	Pn	17 46 56.5	-0.1
CBX	Cerro Bola	12.32	190		Pn	17 47 00.2	+1.2
TUC	Tucson	12.43	167	P	Pn	17 47 05.7	+5.2
	baz=349						
214A	Organ Pipe Nat	12.55	175	P	Pn	17 47 07.4	+5.3
	baz=356						
ECSD	EROS Data Cent	12.60	87	P	Pn	17 47 02.8	+0.1
	baz=280,SNR=85						
ECSD	EROS Data Cent	12.60	87	Pn	Pn	17 47 02.4	-0.3
F33A	5 Mile Ranch,	12.65	78	Pn	Pn	17 47 04.1	+0.7
121A	Cookes Peak, D	12.92	155	P	Pn	17 47 11.2	+4.0
	baz=340						
R32A	Long Quarter,	13.04	112		Pn	17 47 07.7	-1.0
AGMN	Agassiz Nation	13.16	67	P	Pn	17 47 08.4	-1.9
	baz=260,SNR=13						
AGMN	Agassiz Nation	13.16	67		Pn	17 47 07.8	-2.4
AMTX	Amarillo	13.53	131	P	Pn	17 47 20.0	+4.5
	baz=319						
ULM	Lac du Bonnet	13.62	59	Pn	Pn	17 47 13.6	-3.0
	comp=E,1.2nm,0.3s,baz=248,slow=12,SNR=15						
ULM				Pg	P	17 48 10.5	+45
	comp=E,3.2nm,0.3s,baz=251,slow=15,SNR=7.6						
ULM				Lg	Lg	17 50 59.8	
	comp=E,1.9nm,0.3s,baz=159,slow=20,SNR=3.2						
ULM				LR	LR	17 52 21.9	
	comp=E,1µm,19.9s,baz=256,slow=36						
ULM	Lac du Bonnet	13.62	59	P	Pn	17 47 13.4	-3.2
ULM	Lac du Bonnet	13.62	59	Pn	Pn	17 47 13.4	-3.2
MSTX	Muleshoe	13.68	136	P	P	17 47 22.6	-3.8
	baz=324						
KSU1	Kansas State U	14.11	106	P	Pn	17 47 22.8	-0.5
	baz=298						
KAN10	Anthony SW Sta	14.17	116		Pn	17 47 23.0	-1.2
KAN14	Manchester OK	14.36	116		Pn	17 47 27.2	+0.5
MNTX	Cornudas Mount	14.49	149	P	P	17 47 33.1	-2.2
	baz=334,SNR=9.1						
MNTX	Cornudas Mount	14.49	149	P	Pn	17 47 31.8	+3.3
F36A	Milaca	14.59	77	Pn	Pn	17 47 26.3	-3.5
SPMN	Marine on St.	15.13	80	P	Pn	17 47 35.0	-2.1
	baz=275,SNR=5.6						
SPMN	Marine on St.	15.13	80		Pn	17 47 34.0	-3.1
WMOK	Wichita Mounta	15.29	124	P	Pn	17 47 38.7	-0.6
	baz=314,SNR=15						
T35A	Sooner Cattle	15.32	114	Pn	Pn	17 47 37.8	-1.9
T35A				IAmb	IAmb	17 47 52.0	
	comp=Z,113nm,0.9s						
SCIA	State Center	15.45	92	P	P	17 47 43.9	-2.0
	baz=287						
SCIA	State Center	15.45	92	IAmb	IAmb	17 47 50.5	
	comp=Z,51nm,0.8s						
OK025	Westminster Rd	15.60	119	IAmb	IAmb	17 47 53.0	
	comp=Z,89nm,1.3s						
QUOK	Quay	15.63	116	IAmb	IAmb	17 47 53.7	
	comp=Z,107nm,0.9s						
HSIG		15.64	170	P	P	17 47 47.7	-0.4
OK030	Cody Creek RV	15.73	117	IAmb	IAmb	17 47 54.9	
	comp=Z,104nm,1.0s						
N38A	Joes South For	15.79	96	IAmb	IAmb	17 47 55.0	
	comp=Z,111nm,0.9s						
EYMN	Ely	16.02	70	P	Pn	17 47 45.4	-3.3
	baz=266						
ABTX	Abilene, Hawle	16.35	132	P	P	17 47 56.1	+0.1
	baz=321,SNR=26						
ABTX	Abilene, Hawle	16.35	132	P	P	17 47 54.8	-1.2
ABTX				IAmb	IAmb	17 48 02.3	
	comp=Z,175nm,1.0s						
L40A	Anamosa	16.84	90	P	Pn	17 47 59.4	+0.3
U38A	Gravette	17.00	111		Pn	17 48 01.6	+0.4
U38A				IAmb	IAmb	17 48 10.1	
	comp=Z,118nm,1.0s						
S39A	Bolivar	17.05	106	IAmb	IAmb	17 48 10.7	
	comp=Z,175nm,0.9s						
DLBC	Dease Lake	17.06	331	Pn	Pn	17 48 00.8	-1.2
	comp=Z,0.3nm,0.3s,baz=158,slow=5.5,SNR=2.8						
DLBC				Lg	Lg	17 52 49.5	
	comp=Z,0.2nm,0.3s,baz=170,slow=22,SNR=3.4						
DLBC				LR	LR	17 53 57.3	
	comp=Z,835nm,20.6s,baz=132,slow=35						
DLBC	Dease Lake	17.06	331	P	P	17 48 02.9	-0.9
TX31	Lajitas Ar. Si	17.25	148	P	P	17 48 07.0	+1.0
TX31				IAmb	IAmb	17 48 28.1	
	comp=Z,96nm,0.9s						
JFWS	Jewell Farm	17.32	87	P	P	17 48 05.9	-0.6
JFWS				pmax	pmax		
	comp=Z,58nm,1.1s						
JFWS	Jewell Farm	17.32	87	P	P	17 48 07.2	+0.7
	baz=284						
JFWS	Jewell Farm	17.32	87	P	P	17 48 05.9	-0.6
X37A	Clayton	17.47	118	P	P	17 48 08.4	+0.1
X37A				IAmb	IAmb	17 48 14.9	
	comp=Z,203nm,1.5s						
R40A	Maddies Statio	17.50	103	IAmb	IAmb	17 48 15.6	
	comp=Z,95nm,0.8s						
JCT	Junction City	17.97	136	P	P	17 48 14.7	+0.8
JCT				pmax	pmax		
	comp=Z,70nm,0.9s						
JCT	Junction City	17.97	136	P	P	17 48 15.2	+1.3
	baz=325,SNR=31						
JCT	Junction City	17.97	136		P	17 48 14.7	+0.8
D41A	Chassel	17.98	73	P	Pn	17 48 13.5	+0.1
D41A				IAmb	IAmb	17 48 51.5	
	comp=Z,88nm,0.8s						
WHTX	Lake Whitney,	18.03	128	P	P	17 48 16.4	+1.9
	baz=319						
YKA	Yellowknife Ar	18.04	359	P	Pn	17 48 11.2	-2.8
	comp=Z,1.8nm,0.3s,baz=174,slow=13,SNR=189						
YKA				Lg	Lg	17 53 21.6	
	comp=Z,0.6nm,0.3s,baz=97,slow=28,SNR=2.8						
YKA				LR	LR	17 55 33.8	
	comp=Z,820nm,20.8s,baz=0.0,slow=38						
MGMO	Mountain Grove	18.05	106	IAmb	IAmb	17 48 21.7	
	comp=Z,162nm,0.8s						
U40A	Yellville	18.07	109	P	P	17 48 15.4	+0.4
	baz=304,SNR=134						
W39A	Magazine	18.12	114	P	P	17 48 16.3	+0.9
	baz=307,SNR=31						
W39A	Magazine	18.12	114	IAmb	IAmb	17 48 23.8	
	comp=Z,90nm,1.0s						
CCM	Cathedral Cave	18.32	103	P	Pn	17 48 15.5	-2.0
CCM				pmax	pmax		
	comp=Z,47nm,0.8s						
CCM	Cathedral Cave	18.32	103	P	Pn	17 48 16.3	-1.2
	baz=298						
CCM	Cathedral Cave	18.32	103	P	Pn	17 48 15.5	-2.0
MIAR	Mount Ida	18.65	115	P	Pn	17 48 22.2	+0.6
MIAR				pmax	pmax		
	comp=Z,46nm,1.0s						
MIAR	Mount Ida	18.65	115	P	Pn	17 48 22.0	+0.4
	baz=308,SNR=18						
MIAR	Mount Ida	18.65	115	P	Pn	17 48 22.2	+0.6
HDIL	Hopedale	18.69	93	P	P	17 48 21.7	0.0
	baz=291,SNR=15						
K43A	Burlington	18.74	86	IAmb	IAmb	17 48 29.3	
	comp=Z,106nm,1.0s						
FCC	Fort Churchill	18.83	34	P	P	17 48 20.8	-2.2
FCC				pmax	pmax		
	comp=Z,20nm,0.8s						
FCC	Fort Churchill	18.83	34	P	P	17 48 20.8	-2.2
435B	Jarrell	18.88	131	P	Pn	17 48 27.3	+2.8
	baz=321						
T42A	Van Buren	18.92	105	IAmb	IAmb	17 48 30.5	
	comp=Z,87nm,0.9s						
WHAR	Wooly Hollow	19.05	111	IAmb	IAmb	17 48 33.2	
	comp=Z,83nm,1.0s						
E43A	Lone Tree Farm	19.09	75	P	P	17 48 26.1	0.0
W41B	Gary Mavity, V	19.15	112	P	Pn	17 48 27.7	+0.1
	baz=306,SNR=60						
W41B	Gary Mavity, V	19.15	112	IAmb	IAmb	17 48 34.4	
	comp=Z,121nm,0.9s						
X40A	Basin Creek Fa	19.17	114	P	Pn	17 48 29.5	+1.6
	baz=308,SNR=17						
LCAR	Lake Charles	19.38	108	P	P	17 48 29.6	+0.3
LCAR				IAmb	IAmb	17 48 36.2	
	comp=Z,93nm,0.9s						
WLAR	White Oak Lake	19.49	116	IAmb	IAmb	17 48 48.4	
	comp=Z,82nm,1.0s						
PBMO	Poplar Bluff	19.51	105	P	P	17 48 31.1	+0.4
PBMO				IAmb	IAmb	17 48 36.7	
	comp=Z,90nm,0.8s						
Q44A	Meyer Farm, Va	19.52	98	IAmb	IAmb	17 48 40.7	
	comp=Z,87nm,0.9s						
SKAG	Skagway	19.75	327	P	P	17 48 31.8	-1.4
SKAG				IAmb	IAmb	17 48 39.5	
	comp=Z,70nm,1.1s						
NATX	Nacogdoches	19.83	123	P	Pn	17 48 37.7	+1.9
	baz=316						
S44A	Carbondale	19.88	101	IAmb	IAmb	17 48 41.1	
	comp=Z,60nm,0.8s						
SIUC	Southern Illin	19.90	101	P	P	17 48 34.5	-0.4
SIUC				IAmb	IAmb	17 48 43.8	
	comp=Z,65nm,0.8s						
833A	Chaparral WMA,	19.96	139	P	Pn	17 48 38.8	+1.4
	baz=328						
Z41A	Richland Creek	19.96	117	P	Pn	17 48 37.6	+0.2
	baz=311						
OLIL	Olney	20.24	97	IAmb	IAmb	17 48 45.0	
	comp=Z,70nm,0.9s						
SFIN	Lafayette	20.32	92	P	P	17 48 40.3	+0.8
	baz=291						
SFIN	Lafayette	20.32	92	IAmb	IAmb	17 48 48.5	
	comp=Z,58nm,0.9s						
X43A	Marvell	20.44	111	P	Pn	17 48 45.8	+2.8
	baz=306,SNR=9.9						
HKT	Hockley	20.48	129	⇓eP	Pn	17 48 45.0	+1.5
HKT	Hockley	20.48	129	P	Pn	17 48 44.4	+0.9

LPIG	La Paz	20.57	170	P	Pn	17 48 45.7	+1.1
	comp=Z,129nm,1.0s,baz=214,slow=4.7,SNR=5.2						
LPIG				LR	LR	17 55 36.9	
	comp=Z,601nm,21.3s,baz=346,slow=34						
E46A	Sault Ste Mari	20.95	74	P	P	17 48 46.3	0.0
SLBS	Sierra La Lagu	21.03	169	P	P	17 48 50.4	+3.1
J47A	Sunmer	21.11	83	P	P	17 48 48.4	+0.3
J47A				IAmb	IAmb	17 48 56.5	
	comp=Z,84nm,0.8s						
BLO	Bloomington	21.18	95	P	P	17 48 48.8	0.0
BLO				pmax	pmax		
	comp=Z,108nm,0.8s						
BLO	Bloomington	21.18	95	P	P	17 48 48.8	0.0
OXF	Oxford	21.43	109	P	P	17 48 54.9	+3.3
	baz=305						
WVT	Waverly	21.64	104	P	P	17 48 52.0	-1.8
WVT				pmax	pmax		
	comp=Z,71nm,0.9s						
WVT	Waverly	21.64	104	P	P	17 48 53.8	0.0
	baz=301						
WVT	Waverly	21.64	104	P	P	17 48 52.0	-1.8
WVT				IAmb	IAmb	17 49 02.3	
	comp=Z,71nm,0.8s						
WCI	Wyandotte Cave	21.73	97	P	P	17 48 54.3	-0.5
WCI				pmax	pmax		
	comp=Z,62nm,0.9s						
WCI	Wyandotte Cave	21.73	97	P	P	17 48 54.8	0.0
	baz=296						
WCI	Wyandotte Cave	21.73	97	P	P	17 48 54.2	-0.5
WCI				IAmb	IAmb	17 49 01.6	
	comp=Z,62nm,0.9s						
PLAL	Pickwick Lake	22.08	106	P	P	17 48 59.1	+0.6
PCA	Pinnacle	22.14	324	P	P	17 48 59.2	+0.2
PCA				IAmb	IAmb	17 49 07.7	
	comp=Z,72nm,0.8s						
P49A	Miami Univ. Ec	22.33	93	P	P	17 49 01.9	+0.7
	baz=293,SNR=16						
R49A	Shelbyville	22.50	96	IAmb	IAmb	17 49 09.4	
	comp=Z,69nm,0.8s						
V48A	Smith Brothers	22.54	103	IAmb	IAmb	17 49 12.6	
	comp=Z,50nm,0.9s						
CLTN	Cedars of Leba	22.71	102	IAmb	IAmb	17 49 14.4	
	comp=Z,50nm,0.9s						
K50A	Casco	22.79	83	IAmb	IAmb	17 49 14.2	
	comp=Z,89nm,1.1s						
146A	Union	22.79	113	P	P	17 49 07.8	+1.6
146A				IAmb	IAmb	17 49 12.3	
	comp=Z,70nm,0.8s						
U49A	Red Boiling Sp	22.89	101	IAmb	IAmb	17 49 13.1	
	comp=Z,49nm,0.8s						
X48A	Hartselle	23.08	106	IAmb	IAmb	17 49 13.4	
	comp=Z,44nm,1.1s						
R50A	Paris	23.11	95	IAmb	IAmb	17 49 16.4	
	comp=Z,73nm,0.8s						
BARN	Barnard Glacie	23.24	325	IAmb	IAmb	17 49 15.2	
	comp=Z,64nm,1.2s						
T50A	Nancy	23.31	98	IAmb	IAmb	17 49 23.0	
	comp=Z,47nm,0.8s						
ACSO	Alum Creek Sta	23.31	90	P	P	17 49 11.6	+0.2
	baz=291,SNR=16						
ACSO	Alum Creek Sta	23.31	90	P	P	17 49 12.2	+0.7
SWET	Sewanee	23.43	104	P	P	17 49 12.7	0.0
Q51A	Peebles	23.51	93	IAmb	IAmb	17 49 20.8	
	comp=Z,62nm,0.8s						
M51A	Elyria	23.52	86	P	P	17 49 13.9	+0.5
	baz=289,SNR=5.4						
P51A	Williamsport	23.53	91	IAmb	IAmb	17 49 19.0	
	comp=Z,66nm,0.8s						
Y49A	Blount Mountai	23.85	107	IAmb	IAmb	17 49 30.6	
	comp=Z,53nm,0.8s						
W50A	Signal Mountai	23.88	103	IAmb	IAmb	17 49 21.2	
	comp=Z,49nm,0.8s						
S51A	Beattyville	23.91	96	IAmb	IAmb	17 49 56.0	
	comp=Z,28nm,0.8s						
LRAL	Lakeview Retre	23.93	109	P	P	17 49 18.9	+1.4
	baz=307,SNR=28						
LRAL	Lakeview Retre	23.93	109	P	P	17 49 16.3	-1.2
LRAL				IAmb	IAmb	17 49 23.8	
	comp=Z,54nm,0.8s						
P52A	Corning	24.14	90	P	P	17 49 19.7	+0.2
	baz=292,SNR=7.6						
O52A	Adamsville	24.18	89	IAmb	IAmb	17 49 32.4	
	comp=Z,48nm,0.8s						
V51A	Loudon	24.24	101	IAmb	IAmb	17 49 34.0	
	comp=Z,60nm,0.8s						
DAWY	Dawson	24.24	333	P	P	17 49 20.5	+0.2
TZTN	Tazewell	24.45	98	P	P	17 49 21.5	-0.8
	baz=299,SNR=6.3						
TZTN	Tazewell	24.45	98	P	P	17 49 21.8	-0.5
TZTN				IAmb	IAmb	17 49 38.5	
	comp=Z,30nm,0.9s						
M53A	WI Miller and	24.56	85	P	P	17 49 23.8	+0.5
	baz=289						
M53A	WI Miller and	24.56	85	IAmb	IAmb	17 49 29.8	
	comp=Z,34nm,0.8s						
O53A	New Philadelph	24.57	88	P	P	17 49 23.7	+0.3
	baz=291,SNR=9.1						
L53A	Girard	24.70	84	P	P	17 49 25.2	+0.7
	baz=288						
TKL	Tuckaleechee C	24.72	100	P	P	17 49 24.6	-0.2
	comp=Z,17nm,0.8s,baz=280,slow=4.2,SNR=14						
TKL				Lg	Lg	17 57 02.3	
	comp=Z,3.5nm,0.7s,baz=32,slow=15,SNR=2.0						
TKL				LR	LR	17 59 38.1	
	comp=Z,1µm,20.0s,baz=303,slow=38						
P53A	Whipple	24.73	90	P	P	17 49 25.7	+0.9
N25K	Chitina, Valde	24.74	325	P	P	17 49 26.4	+1.6
	baz=120						
N25K	Chitina, Valde	24.74	325	IAmb	IAmb	17 49 30.4	
	comp=Z,68nm,1.7s						
SADO	Sadowa	24.78	77	P	P	17 49 24.8	-0.4
	comp=Z,24nm,1.0s,baz=298,slow=6.1,SNR=5.4						
SADO				LR	LR	17 58 45.6	
	comp=Z,398nm,20.6s,baz=321,slow=36						
SADO	Sadowa	24.78	77	IAmb	IAmb	17 49 30.5	
	comp=Z,53nm,1.4s						
R53A	Hurricane	24.79	93	IAmb	IAmb	17 49 30.3	
	comp=Z,36nm,0.8s						
ERPA	Erie	24.84	83	P	P	17 49 26.9	+1.1
	baz=287						
ERPA	Erie	24.84	83	P	P	17 49 26.4	+0.6
Q53A	Leroy	24.88	92	P	P	17 49 26.6	+0.5
	baz=294						
L26K	Log Cabin Wild	25.00	328	P	P	17 49 26.8	-0.3
	baz=124,SNR=8.1						
250A	Grady	25.05	110	IAmb	IAmb	17 49 46.5	
	comp=Z,26nm,0.8s						
EPYK	Eagle Plains	25.12	339	P	P	17 49 28.8	+0.7
	baz=140						
EPYK	Eagle Plains	25.12	339	IAmb	IAmb	17 49 31.9	
	comp=Z,32nm,0.8s						
K27K	Chicken	25.13	331	P	P	17 49 29.0	+0.8
	baz=128						
K27K	Chicken	25.13	331	P	P	17 49 29.0	+0.8
K27K				IAmb	IAmb	17 49 32.8	
	comp=Z,37nm,1.0s						
N54A	Moraine State	25.20	86	P	P	17 49 29.4	+0.3
	baz=290						
N54A	Moraine State	25.20	86	IAmb	IAmb	17 49 43.9	
	comp=Z,22nm,0.8s						
H53A	Bobcaygeon	25.21	77	P	P	17 49 29.3	+0.3
	baz=283						
M54A	Oil Creek Stat	25.26	85	P	P	17 49 30.6	+1.0
	baz=289						
M54A	Oil Creek Stat	25.26	85	IAmb	IAmb	17 49 39.1	
	comp=Z,55nm,1.0s						
ALGO	Algonquin Park	25.31	74	P	P	17 49 30.1	+0.1
	baz=280						
G54A	Lake Saint Pet	25.38	75	P	P	17 49 31.1	+0.4
	baz=281						
VLDQ	Val d'Or	25.43	69	P	P	17 49 29.4	-1.6
VLDQ				IAmb	IAmb	17 49 34.6	
	comp=Z,82nm,1.7s						
C36M	Paulatuk	25.44	352	P	P	17 49 30.4	-0.5
	baz=163,SNR=10						
Y52A	Lilburn	25.46	104	P	P	17 49 31.7	+0.2
S54A	Dingess, Beckl	25.47	94	P	P	17 49 32.9	+1.3
	baz=296						
S54A	Dingess, Beckl	25.47	94	IAmb	IAmb	17 49 39.4	
	comp=Z,42nm,0.8s						
DOT	Dot Lake	25.62	329	P	P	17 49 33.4	+0.8
DOT				IAmb	IAmb	17 50 24.2	
	comp=Z,34nm,1.1s						
M24K	Tolsona, Glenn	25.64	325	P	P	17 49 34.3	+1.4
	baz=118						
M24K	Tolsona, Glenn	25.64	325	IAmb	IAmb	17 49 44.0	
	comp=Z,47nm,0.9s						
LSQQ	Lebel-sur-Quev	25.66	66	P	P	17 49 33.0	-0.2
	baz=274						
U54A	Nelsons Funny	25.68	97	P	P	17 49 33.4	-0.1
	baz=298						
WVNY	West Valley, N	25.74	82	P	P	17 49 35.7	+1.7
MCWV	Mont Chateau	25.77	89	P	P	17 49 37.7	+3.5
	baz=292,SNR=6.7						
SCRK	Sand Creek	25.77	330	P	P	17 49 34.2	0.0
	baz=125						
PAX	Paxson	25.78	327	IAmb	IAmb	17 49 40.3	
	comp=Z,30nm,1.0s						
INK	Inuvik	25.94	344	P	P	17 49 35.7	+0.3
	comp=Z,17nm,0.8s,baz=141,slow=10,SNR=49						
INK				Lg	Lg	17 57 46.1	
	comp=Z,2.3nm,0.8s,baz=24,slow=20,SNR=0.8						
INK	Inuvik	25.94	344	P	P	17 49 35.2	-0.2
INK				pmax	pmax		
	comp=Z,28nm,1.1s						
INK	Inuvik	25.94	344	P	P	17 49 35.2	-0.2
INK				IAmb	IAmb	17 49 37.6	
	comp=Z,28nm,1.1s						
SCM	Sheep Creek Mo	25.99	324	IAmb	IAmb	17 49 43.1	
	comp=Z,33nm,1.0s						
GOGA	Godfrey	26.13	105	P	P	17 49 37.7	+0.2
GOGA				pmax	pmax		
	comp=Z,53nm,0.9s						
GOGA	Godfrey	26.13	105	P	P	17 49 37.6	+0.2
	baz=304,SNR=17						
GOGA	Godfrey	26.13	105	P	P	17 49 37.6	+0.2
KNK	Knik Glacier	26.30	322	IAmb	IAmb	17 50 21.3	
	comp=Z,28nm,1.1s						
BLA	Blacksburg	26.36	94	P	P	17 49 42.2	+2.5
	baz=297						
N56A	West Decatur	26.43	85	P	P	17 49 43.2	+3.0
	baz=290						
O56A	Blue Knob Stat	26.46	87	P	P	17 49 42.9	+2.4
	baz=291						
Q56A	Snyder Ridge,	26.48	90	P	P	17 49 43.1	+2.5
	baz=293						
HODGE	Hodges	26.52	102	P	P	17 49 41.1	0.0
PAULI	Pauline	26.52	100	IAmb	IAmb	17 49 45.4	
	comp=Z,50nm,0.9s						
P56A	Dayton Farm, R	26.55	88	P	P	17 49 45.4	+4.1
	baz=293						
L56A	Greenwood	26.56	82	P	P	17 49 45.3	+3.8
	baz=288						
KMSC	Kings Mountain	26.70	99	P	P	17 49 44.1	+1.4
	baz=301						
T56A	Rocky Mt	26.72	94	P	P	17 49 42.6	-0.3
	baz=297,SNR=6.5						
U56A	King	26.79	96	P	P	17 49 46.6	+3.1
	baz=298						
SSPA	Standing Stone	26.82	85	P	P	17 49 46.9	+3.2
	baz=290						
D55A	Sainte-Anne-du	26.90	71	P	P	17 49 44.9	+0.6
	baz=279						
V56A	Mocksville	26.96	97	P	P	17 49 45.0	0.0
	baz=299,SNR=5.3						
N57A	Milroy	27.01	85	P	P	17 49 49.4	+3.9
	baz=290						
Q57A	Strasburg	27.04	89	P	P	17 49 48.7	+3.0
	baz=293						
HDA	Harding Lake	27.10	329	P	P	17 49 46.6	+0.6
	baz=122						
HDA	Harding Lake	27.10	329	IAmb	IAmb	17 49 56.8	
	comp=Z,21nm,0.8s						
L57A	Andrews Acres	27.11	82	P	P	17 49 49.3	+3.0
	baz=288						
M57A	Sunshine Farm,	27.12	84	P	P	17 49 49.5	+3.1
	baz=289						
KDAK	Kodiak Island	27.14	313	P	P	17 49 49.7	+3.3
	comp=Z,16nm,1.1s,baz=105,slow=5.3,SNR=3.5						
KDAK				LR	LR	17 59 22.4	
	comp=Z,334nm,19.0s,baz=129,slow=34						
KDAK	Kodiak Island	27.14	313	P	P	17 49 49.7	+3.3
KDAK				pmax	pmax		
	comp=Z,49nm,1.3s						
KDAK	Kodiak Island	27.14	313	IAmb	IAmb	17 49 50.3	
	comp=Z,49nm,1.3s						
O57A	Amberson	27.15	86	P	P	17 49 48.0	+1.3
	baz=291						
P57A	Homestead Farm	27.15	88	P	P	17 49 47.5	+0.8
	baz=293						
S57A	Dark Hollow, R	27.17	92	P	P	17 49 50.1	+3.2
	baz=296						
JSC	Jenkinsville	27.20	101	P	P	17 49 46.9	-0.3
JSC				pmax	pmax		
	comp=Z,37nm,0.9s						
JSC	Jenkinsville	27.20	101	P	P	17 49 46.9	-0.3
JSC				IAmb	IAmb	17 49 51.5	
	comp=Z,37nm,0.9s						
W56A	Indian Trail	27.23	98	P	P	17 49 50.1	+2.6
	baz=300,SNR=6.4						
X56A	White Oak	27.25	100	P	P	17 49 47.5	-0.1
	baz=302						
IL31		27.27	330	IAmb	IAmb	17 50 00.2	
	comp=Z,24nm,0.9s						
ILAR	Eielson Array	27.27	330	P	P	17 49 48.6	+1.1
	comp=Z,11nm,0.7s,baz=121,slow=8.1,SNR=122						
ILAR				PcP	PcP	17 53 06.8	-0.1
	comp=Z,0.9nm,0.7s,baz=133,slow=2.0,SNR=2.6						
ILAR				Lg	Lg	17 58 28.1	
	comp=Z,0.5nm,1.1s,baz=108,slow=9.2,SNR=4.1						
ILAR				LR	LR	18 01 51.0	
	comp=Z,400nm,19.1s,baz=123,slow=39						
E56A	St. Veronique	27.27	72	P	P	17 49 48.6	+0.8
	baz=280						
RND	Reindeer	27.34	326	IAmb	IAmb	17 49 55.5	
	comp=Z,87nm,1.9s						
D56A	ZEC Mazanza, M	27.38	71	P	P	17 49 48.6	-0.1
	baz=279						
V57A	Coltrane Farms	27.44	96	P	P	17 49 49.2	-0.1
	baz=299,SNR=6.8						
CUT	Chulitna	27.49	323	P	P	17 49 49.8	+0.3
	baz=114						
MCK	McKinley	27.52	327	P	P	17 49 51.0	+1.2
	baz=118,SNR=9.2						
CCB	Clear Creek Bu	27.54	329	P	P	17 49 50.6	+0.7
CCB				IAmb	IAmb	17 49 52.2	
	comp=Z,24nm,0.9s						
N58A	Sunbury	27.58	84	P	P	17 49 53.7	+3.2
	baz=290						
M58A	Price’s Panora	27.58	83	P	P	17 49 54.9	+4.3
	baz=289						
Z56A	Williston	27.63	103	P	P	17 49 54.3	+3.3
	baz=304						
W57A	Gilead	27.64	98	P	P	17 49 51.6	+0.5
	baz=300						
POKR	Poker Plat Res	27.65	330	P	P	17 49 52.0	+1.0
	baz=122,SNR=7.9						
POKR	Poker Plat Res	27.65	330	IAmb	IAmb	17 49 54.7	
	comp=Z,19nm,0.8s						
P58A	Pank, Wackersv	27.65	87	P	P	17 49 54.6	+3.4
	baz=293						
TRQ	Mont Tremblant	27.66	72	P	P	17 49 52.0	+0.7
COLA	College	27.67	329	c iP	P	17 49 52.2	+1.1
COLA				pmax	pmax		
	comp=Z,35nm,0.9s						
COLA	College	27.67	329	P	P	17 49 51.9	+0.8
COLA				IAmb	IAmb	17 49 53.6	
	comp=Z,36nm,0.8s						
TCOL	CIGO, UAF Yank	27.68	329	P	P	17 49 52.3	+1.1
	baz=121,SNR=8.8						
TCOL	CIGO, UAF Yank	27.68	329	IAmb	IAmb	17 49 53.6	
	comp=Z,38nm,0.9s						
L58A	Harry Jones Me	27.80	81	P	P	17 49 55.7	+3.2
	baz=288						
MDM	Murphy Dome	27.86	329	IAmb	IAmb	17 49 55.2	
	comp=Z,27nm,0.9s						
E57A	Chemin Saint G	27.90	72	P	P	17 49 54.0	+0.6
	baz=281						
RSO	Redoubt South	27.92	319	P	P	17 49 53.4	-0.2
TRF	Thorofare Moun	27.93	326	P	P	17 49 54.4	+0.7
TRF				IAmb	IAmb	17 50 03.6	
	comp=Z,23nm,0.9s						
V58A	Windy Hill, Pi	27.95	96	P	P	17 49 54.3	+0.4
	baz=299,SNR=6.1						
Z57A	Bowman	28.11	102	P	P	17 49 57.6	+2.2
	baz=304						
KTH	Kantishna Hill	28.23	325	IAmb	IAmb	17 50 26.3	
	comp=Z,28nm,1.3s						
W58A	Raeford	28.25	97	P	P	17 49 57.0	+0.5
	baz=300						
M59A	Waymart	28.26	82	P	P	17 49 58.4	+1.8
	baz=289						
H58A	Gabriels	28.31	76	P	P	17 49 57.2	+0.2
	baz=284						
I23K	Minto, Yukon-K	28.36	329	P	P	17 49 57.5	+0.3
	baz=120,SNR=6.8						
BPAW	Bear Paw Mtn.	28.50	326	IAmb	IAmb	17 50 07.3	
	comp=Z,24nm,0.8s						
E58A	La Victoria	28.50	72	P	P	17 50 01.5	+2.8
	baz=281						
Y58A	Scranton	28.52	100	P	P	17 50 01.8	+2.9
	baz=302						
V59A	Middlesex	28.59	95	P	P	17 50 01.3	+1.7
	baz=299						
D58A	Chemin du LacG	28.63	70	P	P	17 49 59.7	-0.2
	baz=280,SNR=5.5						
Z58A	St. Stephen	28.72	101	P	P	17 50 02.5	+1.8
	baz=303						
MLY	Manley	28.82	328	P	P	17 50 02.3	+0.8
	baz=118						
X60A	Albert Glenn T	29.36	97	P	P	17 50 10.2	+3.7
	baz=301						
SVW2	Sparrevohn	29.43	319	P	P	17 50 07.4	+0.6
COLD	Coldfoot	29.72	332	P	P	17 50 10.9	+1.6
	baz=122,SNR=10						
COLD	Coldfoot	29.72	332	P	P	17 50 10.5	+1.1
E60A	Ste Agathe de	29.74	71	P	P	17 50 13.2	+3.5
	baz=282						
LBNH	Lisbon	29.92	75	P	P	17 50 15.5	+4.1
	baz=286						
D60A	Saint Jean D’O	29.98	70	P	P	17 50 14.2	+2.4
	baz=282						
F61A	St Evariste	30.13	72	P	P	17 50 17.0	+3.8
	baz=283,SNR=5.3						
TTA	Tatalina	30.15	323	P	P	17 50 13.6	+0.3
TTA				pmax	pmax		
	comp=Z,31nm,1.0s						
TTA	Tatalina	30.15	323	P	P	17 50 13.6	+0.3
TTA				IAmb	IAmb	17 50 15.8	
	comp=Z,31nm,1.0s						
TOLK	Toolik Lake Re	30.30	335	P	P	17 50 15.6	+1.1
	baz=125,SNR=8.4						
E61A	Lac Etchemin	30.37	71	P	P	17 50 18.8	+3.5
	baz=283						
D61A	St Aubert, Com	30.42	69	P	P	17 50 19.1	+3.5
	baz=281						
RES	Resolute Bay	31.48	10	P	P	17 50 25.1	+0.4
	comp=Z,19nm,0.8s,baz=192,slow=13,SNR=38						
RES	Resolute Bay	31.48	10	P	P	17 50 24.8	+0.1
RES				pmax	pmax		
	comp=Z,24nm,0.9s						
RES	Resolute Bay	31.48	10	P	P	17 50 24.8	+0.1
RES				IAmb	IAmb	17 50 26.9	
	comp=Z,24nm,0.9s						
FRB	Frobisher Bay	31.97	37	P	P	17 50 29.9	+0.8
	comp=Z,15nm,0.7s,baz=247,slow=10,SNR=37						
A21K	Barrow	33.79	337	P	P	17 50 45.6	+0.7
	baz=120,SNR=13						
A21K	Barrow	33.79	337	IAmb	IAmb	17 50 48.5	
	comp=Z,28nm,1.1s						
EUNU	Eureka	37.07	8	P	P	17 51 13.9	+0.7
EUNU				IAmb	IAmb	17 51 16.0	
	comp=Z,37nm,0.8s						
TULEG	Thule	37.16	16	iP	P	17 51 15.1	+1.2
TULEG				IAmb	IAmb	17 51 15.9	
	comp=Z,13nm,0.9s						
TGUH	Tegucigalpa,Un	37.97	135	P	P	17 51 23.3	+1.8
SFJD	Kangerlussuaq	39.85	33	P	P	17 51 37.6	+1.0
	comp=Z,48nm,0.6s,baz=277,slow=6.3,SNR=33						
SFJD	Kangerlussuaq	39.85	33	iP	P	17 51 37.5	+1.0
SFJD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SFJD	Kangerlussuaq	39.85	33	P	P	17 51 37.6	+1.0
SFJD	Kangerlussuaq	39.85	33	iP	P	17 51 37.5	+1.0
	comp=Z,3.3nm,0.7s						
SFJD	Kangerlussuaq	39.85	33	iP	P	17 51 37.5	+1.0
SFJD				IAmb	IAmb	17 51 38.7	
	comp=Z,3.3nm,0.7s						
JTS	Las Juntas de	42.35	135	deP	P	17 51 59.6	+1.9
JTS				pmax	pmax		
	comp=Z,12nm,0.9s						
JTS	Las Juntas de	42.35	135	P	P	17 51 59.7	+2.0
JTS				IAmb	IAmb	17 53 30.7	
	comp=Z,39nm,1.5s						
ICESG	Greenland Ices	43.89	30	iP	P	17 52 10.6	+0.6
ICESG				IAmb	IAmb	17 52 15.1	
	comp=Z,68nm,1.0s						
SUMG	Summit	44.00	25	iP	P	17 52 11.0	+0.1
SUMG				pmax	pmax		
	comp=Z,57nm,0.6s						
SUMG	Summit	44.00	25	P	P	17 52 11.1	+0.2
SUMG				IAmb	IAmb	17 52 16.4	
	comp=Z,43nm,1.2s						
SUMG	Summit	44.00	25	iP	P	17 52 11.0	+0.1
	comp=Z,57nm,0.6s						
SUMG	Summit	44.00	25	iP	P	17 52 11.0	+0.1
SUMG				IAmb	IAmb	17 52 13.2	
	comp=Z,57nm,0.6s						
DAG	Danmarks Havn	48.40	18⇓	iP	P	17 52 44.1	-0.9
	comp=Z,19nm,0.8s						
DAG	Danmarks Havn	48.40	18⇓	iP	P	17 52 44.1	-0.9
DAG				IAmb	IAmb	17 52 45.8	
	comp=Z,19nm,0.8s						
DBG	Daneborg	48.79	21	iP	P	17 52 48.5	+0.5
DBG				IAmb	IAmb	17 52 53.6	
	comp=Z,21nm,1.4s						
PTBC	PUERTO BERRIO,	51.20	126	eP	P	17 53 07.0	-0.1
SDV	Santo Domingo	51.65	120	P	P	17 53 10.5	-0.2
SDV				IAmb	IAmb	17 53 15.7	
	comp=Z,25nm,0.8s						
SDV	Santo Domingo	51.65	120	eP	P	17 53 11.2	+0.5
NORC	Norcasia	51.76	127	eP	P	17 53 11.5	+0.3
BARC	Barichara	51.91	124	eP	P	17 53 12.6	0.0
YOTC	Yotoco, Valle	52.22	129	eP	P	17 53 15.4	+0.6
TOLC	Tolima	52.30	128	eP	P	17 53 19.6	+4.0
RUSC	La Rusia	52.53	125	eP	P	17 53 15.1	-2.4
ROSC	El Rosal	52.66	127	P	P	17 53 20.6	+2.2
	comp=Z,7.8nm,0.4s,baz=64,slow=7.4,SNR=5.3						
ROSC				LR	LR	18 19 45.7	
	comp=Z,99nm,18.5s,baz=199,slow=41						
TAMC	Tame, Arauca	52.86	123	eP	P	17 53 22.6	+3.1
ORTC	Ortega, Tolima	52.89	128	eP	P	17 53 23.1	+3.4
SEY	Seymchan	53.06	325	P	P	17 53 20.1	-0.2
	comp=Z,4.0nm,0.7s,baz=95,slow=7.2,SNR=10						
BBAC	Balboa, Cauca	53.36	132	eP	P	17 53 26.7	+3.4
OTAV	Otavalo	54.24	134	eP	P	17 53 32.9	+2.9
PUAC	Puerto Asis, P	54.96	132	eP	P	17 53 38.6	+3.9
PETK	Petropavlovsk-	55.20	313	P	P	17 53 36.0	0.0
	comp=Z,24nm,0.8s,baz=77,slow=9.2,SNR=20						
PETK				LR	LR	18 16 06.6	
	comp=Z,132nm,21.6s,baz=46,slow=35						
MA2	Magadan	55.35	322⇑	eP	P	17 53 37.5	+0.5
MA2				pmax	pmax		
	comp=Z,61nm,2.5s						
TIXI	Tiksi	55.99	340⇓	eP	P	17 53 40.3	-1.1
TIXI				pmax	pmax		
	comp=Z,68nm,1.7s						
TIXI	Tiksi	55.99	340	P	P	17 53 40.2	-1.2
TAOE	Nuku Hiva Isla	58.08	211	eLR	LR	18 11 05.2	
	comp=Z,474nm,30.6s						
TRO	Tromso	61.11	17	eP	P	17 54 16.9	-0.1
HAMF	Hammerfest	61.21	15	eP	P	17 54 17.0	-0.8
FAUS	Fauske	62.08	20	eP	P	17 54 24.0	+0.3
YAK	Yakutsk	62.17	331	deP	P	17 54 23.0	-1.4
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KONS	Konsvik	62.22	21	eP	P	17 54 24.6	0.0
ARA0	ARCESS Array S	62.48	15	eP	P	17 54 25.8	-0.6
ARCES	ARCESS Array B	62.48	15	P	P	17 54 24.8	-1.6
	comp=Z,15nm,0.8s,baz=324,slow=3.7,SNR=17						
ARCES				LR	LR	18 21 37.3	
	comp=Z,203nm,19.6s,baz=280,slow=36						
KTK1	Kautokeino	62.50	16	eP	P	17 54 26.1	-0.4
NSS	Namsos	63.42	23	eP	P	17 54 33.1	+0.4
AKN	Aaknes	63.69	27	eP	P	17 54 34.1	-0.4
SUE	Sulen	63.77	28	eP	P	17 54 35.4	+0.5
NRIK	Noril'sk	65.37	352	P	P	17 54 44.4	-1.0
	comp=Z,7.8nm,0.7s,baz=19,slow=5.5,SNR=18						
NRIK				LR	LR	18 23 33.3	
	comp=Z,190nm,19.8s,baz=25,slow=36						
NRIK	Noril'sk	65.37	352	d iP	P	17 54 44.1	-1.2
NRIK				pmax	pmax		
	comp=Z,14nm,1.0s						
NRIK	Noril'sk	65.37	352	P	P	17 54 44.5	-0.9
LVZ	Lovozero	65.49	12⇓	eP	P	17 54 45.4	-0.8
LVZ				pmax	pmax		
	comp=Z,89nm,0.8s						
LVZ	Lovozero	65.49	12	P	P	17 54 45.6	-0.6
PTGA	Pitinga	65.77	117	LR	LR	18 24 23.6	
	comp=Z,127nm,21.8s,baz=333,slow=37						
NB2	NORSAR Subarra	65.88	26	P	P	17 54 48.0	-0.9

	comp=Z,35nm,1.4s,baz=316,slow=6.9						
NB2	**NORSAR Subarra**	**65.88**	**26**	P	**P**	**17 54 48.0**	**-0.9**
	baz=316,slow=6.9						
NOA	**NORSAR Array B**	**65.88**	**26**	P	**P**	**17 54 48.4**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=316,slow=6.9,SNR=14						
NOA				LR	LR	18 24 00.6	
	comp=Z,112nm,18.3s,baz=315,slow=36						
NC602	**NORSAR Array S**	**66.22**	**26**	*e*P	**P**	**17 54 50.6**	**-0.3**
MDP	**Montagnes des**	**66.28**	**107**	LR	LR	18 24 41.2	
	comp=Z,119nm,21.2s,baz=348,slow=37						
YSS	**Yuzh-Sakhalins**	**66.59**	**313**	*e*P	**P**	**17 54 53.8**	**+0.3**
YSS				*e*		17 54 59.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
JKA	**Kamikawa-asahi**	**68.53**	**311**	P	**P**	**17 55 06.2**	**+0.3**
ASAJ	**Asahikawa**	**68.54**	**311**	P	**P**	**17 55 06.2**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,29nm,0.9s						
ZEA	**Zeya**	**69.03**	**326**	*e*P	**P**	**17 55 08.5**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
TMCR	**Tamitsa**	**69.48**	**13**	*e*P	**P**	**17 55 11.4**	**0.0**
TMCR				pmax	pmax		
	comp=Z,31nm,1.2s						
FINES	**FINESS Array B**	**69.62**	**19**	P	**P**	**17 55 11.9**	**-0.4**
	comp=Z,9.9nm,0.7s,baz=351,slow=4.8,SNR=22						
FINES				LR	LR	18 24 44.6	
	comp=Z,120nm,18.0s,baz=348,slow=35						
PPT	**Papeete**	**69.72**	**216**	LR	LR	18 18 01.9	
	comp=Z,34nm,21.2s,baz=360,slow=29						
PPT2	**Papeete2**	**69.74**	**216**	*e*LR	LR	18 16 24.3	
	comp=Z,414nm,34.0s						
RKT	**Rikitea**	**69.94**	**200**	*e*LR	LR	18 16 29.5	
	comp=Z,374nm,31.8s						
SAML	**Samuel**	**70.26**	**125**	P	**P**	**17 55 17.2**	**+0.4**
SAML				pmax	pmax		
	comp=Z,19nm,1.5s						
SAML	**Samuel**	**70.26**	**125**	P	**P**	**17 55 17.2**	**+0.4**
SAML				IAmb	IAmb	17 55 20.4	
	comp=Z,19nm,1.5s						
PGAV	**Gavieira, Arco**	**71.36**	**49**	*e*P	**P**	**17 55 24.4**	**+0.9**
	comp=Z,36nm,1.7s						
BMRD	**Maredsous**	**71.69**	**36**	*d*P	**P**	**17 55 24.0**	**-1.1**
	comp=Z,26nm,0.0s						
BGES	**Gesves**	**71.76**	**36**	*d*x	**P**	**17 55 25.8**	**+0.2**
BGES				*d*PcP	**PcP**	**17 55 44.1**	**-0.5**
BCLA	**Clavier**	**71.83**	**36**	*d*x	**P**	**17 55 26.4**	**+0.5**
BCLA				*d*PcP	**PcP**	**17 55 44.4**	**-0.4**
MEM	**Membach**	**71.98**	**35**	*d*x	**P**	**17 55 27.7**	**+0.9**
POLO	**Lamas de Olo**	**72.03**	**49**	*e*P	**P**	**17 55 28.0**	**+0.5**
BTNL	**Ternell**	**72.04**	**35**	*d*PcP	**PcP**	**17 55 46.6**	**+0.8**
PVRL	**Vila Real**	**72.14**	**49**	*e*P	**P**	**17 55 29.1**	**+1.0**
	comp=Z,37nm,1.7s						
PBRG	**Braganca**	**72.30**	**49**	*e*P	**P**	**17 55 29.0**	**0.0**
	comp=Z,25nm,1.5s						
PVIS	**Viseu**	**72.43**	**50**	*e*P	**P**	**17 55 31.1**	**+1.3**
	comp=Z,18nm,1.4s						
COI	**Coimbra**	**72.50**	**51**	*e*P	**P**	**17 55 31.5**	**+1.3**
	comp=Z,42nm,1.5s						
PCAS	**Casmilo, Conde**	**72.56**	**51**	*e*P	**P**	**17 55 30.8**	**+0.3**
	comp=Z,33nm,1.7s						
MVO	**Moncorvo**	**72.59**	**49**	*e*P	**P**	**17 55 31.2**	**+0.4**
	comp=Z,27nm,1.6s						
KLMR	**Klimovskoe**	**72.84**	**13**	*e*P	**P**	**17 55 30.9**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,71nm,1.7s						
KLMR	**Klimovskoe**	**72.84**	**13**	*e*P	**P**	**17 55 30.9**	**-0.9**
KLMR				AMP		17 55 36.6	
	comp=Z,71nm,1.7s						
MTE	**Manteigas**	**72.84**	**50**	*e*P	**P**	**17 55 33.2**	**+0.9**
	comp=Z,27nm,1.5s						
MTE	**Manteigas**	**72.84**	**50**	P	**P**	**17 55 32.2**	**-0.1**
MTE				IAmb	IAmb	17 55 41.4	
	comp=Z,22nm,1.2s						
PCBR	**Castelo Branco**	**73.27**	**50**	*e*P	**P**	**17 55 35.0**	**+0.3**
	comp=Z,2.4nm,0.7s						
PMRV	**Marv??o**	**73.60**	**51**	*e*P	**P**	**17 55 37.2**	**+0.4**
	comp=Z,27nm,1.6s						
JMM	**Marumori**	**73.78**	**307**	P	**P**	**17 55 36.9**	**-0.9**
EVO	**Evora**	**73.88**	**52**	*e*P	**P**	**17 55 40.1**	**+1.7**
	comp=Z,24nm,1.7s						
PNCL	**Nicolau / Gran**	**73.89**	**52**	*e*P	**P**	**17 55 40.3**	**+1.9**
	comp=Z,28nm,1.8s						
PESTR	**Estremoz**	**73.89**	**51**	P	**P**	**17 55 38.3**	**-0.2**
USRK	**Ussuriysk Ar.**	**73.94**	**317**	P	**P**	**17 55 38.0**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=30,slow=7.0,SNR=11						
USRK				LR	LR	18 28 29.9	
	comp=Z,128nm,21.0s,baz=11,slow=36						
CLL	**Collm**	**74.18**	**31**	*i* P	**P**	**17 55 39.7**	**-0.2**
	comp=Z,11nm,0.8s						
CLL				*i* pP	**pP**	**17 55 42.9**	**-1.4**
CLL				*e*SS	SS	18 10 06.0	+9.0
CLL				*e*(SSS)		18 13 12.0	
CLL	**Collm**	**74.18**	**31**	P	**P**	**17 55 39.8**	**-0.2**
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLL	**Collm**	**74.18**	**31**	P	**P**	**17 55 39.8**	**-0.1**
CLL				IAmb	IAmb	17 55 41.5	
	comp=Z,11nm,0.8s						
MESJ	**Messejana**	**74.25**	**52**	*e*P	**P**	**17 55 41.2**	**+0.7**
MESJ				AMS	AMS	18 25 53.6	
	comp=Z,186nm,16.1s						
MESJ	**Messejana**	**74.25**	**52**	*e*P	**P**	**17 55 41.2**	**+0.7**
PCVE	**Castro Verde**	**74.50**	**52**	*e*P	**P**	**17 55 44.0**	**+2.0**
	comp=Z,3.2nm,0.6s						
BFO	**Black Forest**	**74.70**	**36**	P	**P**	**17 55 43.1**	**+0.1**
BFO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BFO	**Black Forest**	**74.70**	**36**	P	**P**	**17 55 43.1**	**+0.1**
GRF	**Grafenberg Arr**	**74.80**	**33**	*e*P	**P**	**17 55 44.1**	**+0.6**
	comp=Z,13nm,1.0s,baz=323,slow=5.5						
PBDV	**Barranco-do-Ve**	**74.83**	**53**	*e*P	**P**	**17 55 45.6**	**+1.6**
NKC	**Novy Kostel**	**74.84**	**32**	*e*P	**P**	**17 55 43.7**	**-0.1**
NKC	**Novy Kostel**	**74.84**	**32**	*e*P	**P**	**17 55 43.7**	**-0.1**
TBI	**Tubuai**	**74.85**	**213**	*e*LR	LR	18 18 48.3	
	comp=Z,245nm,35.2s						
BRG	**Berggiesshubel**	**74.89**	**31**	*i* P	**P**	**17 55 44.5**	**+0.5**
BRG				Amp		17 55 48.5	
	comp=Z,6.8nm,0.9s						
BRG	**Berggiesshubel**	**74.89**	**31**	*i* P	**P**	**17 55 44.5**	**+0.5**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG	**Berggiesshubel**	**74.89**	**31**	*i* P	**P**	**17 55 44.5**	**+0.5**
BRG				Amp		17 55 48.5	
	comp=Z,6.8nm,0.9s						
PAB	**San Pablo**	**75.18**	**49**	P	**P**	**17 55 46.4**	**+0.3**
PAB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PAB	**San Pablo**	**75.18**	**49**	P	**P**	**17 55 46.4**	**+0.3**
MNMC	**Minye Minye**	**75.22**	**137**	P	**P**	**17 55 46.2**	**-0.4**
ESDC	**Sonseca Array**	**75.30**	**49**	P	**P**	**17 55 46.8**	**+0.1**
	comp=Z,8.2nm,0.8s,baz=310,slow=5.8,SNR=57						
ESDC				LR	LR	18 25 44.0	
	comp=Z,149nm,18.0s,baz=330,slow=33						
PVCC	**Panska Ves**	**75.40**	**31**	*e*P	**P**	**17 55 47.1**	**+0.1**
PVCC	**Panska Ves**	**75.40**	**31**	*e*P	**P**	**17 55 47.1**	**+0.1**
HIA	**Hailar**	**75.46**	**327**	⇓*e*P	**P**	**17 55 46.4**	**-1.0**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSP	**Ksiaz**	**75.76**	**30**	*e*P	**P**	**17 55 49.1**	**+0.1**
PRU	**Pruhonice**	**75.83**	**31**	*e*P	**P**	**17 55 51.5**	**+2.1**
PRU				*e*		17 55 57.8	
PRU	**Pruhonice**	**75.83**	**31**	*e*P	**P**	**17 55 49.6**	**+0.2**
CHVC	**Chvalec**	**75.89**	**30**	*e*P	**P**	**17 55 50.6**	**+0.8**
OSTC	**Ostas**	**75.97**	**30**	*e*P	**P**	**17 55 50.4**	**+0.1**
KHC	**Kasperske Hory**	**76.16**	**32**	⇓*i*P	**P**	**17 55 52.9**	**+1.5**
KHC				pmax	pmax		
	comp=Z,17nm,1.3s						
KHC	**Kasperske Hory**	**76.16**	**32**	*e*P	**P**	**17 55 51.5**	**+0.1**
KHC				*e*pP	**sP**	**17 55 57.8**	**+0.4**
DAVA	**Damuels**	**76.17**	**36**	*e*P	**P**	**17 55 51.7**	**+0.1**
	comp=Z,7.2nm,0.9s						
MJAR	**Matsushiro Arr**	**76.18**	**308**	P	**P**	**17 55 51.5**	**-0.2**
	comp=Z,8.6nm,0.8s,baz=48,slow=5.8,SNR=26						
MAJO	**Matsushiro**	**76.18**	**308**	⇑*e*P	**P**	**17 55 50.6**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,33nm,0.8s						
MAJO	**Matsushiro**	**76.18**	**308**	P	**P**	**17 55 51.4**	**-0.3**
MAT	**Matsushiro**	**76.18**	**308**	P	**P**	**17 55 51.4**	**-0.3**
DPC	**Dobruska-Polom**	**76.18**	**30**	*e*P	**P**	**17 55 51.6**	**+0.1**
PB08	**IPOC Station P**	**76.30**	**137**	IAmb	IAmb	17 55 57.8	
	comp=Z,16nm,0.9s						
RETA	**Reutte**	**76.37**	**35**	*e*P	**P**	**17 55 53.9**	**+1.3**
	comp=Z,8.3nm,1.5s						
KIRV	**Kirov**	**76.39**	**9**	P	**P**	**17 55 52.1**	**-0.3**
	comp=Z,14nm,0.7s,baz=84,slow=2.0,SNR=6.4						
GEC2	**GERESS Array S**	**76.44**	**32**	P	**P**	**17 55 53.6**	**+0.6**
GERES	**GERESS Array B**	**76.44**	**32**	P	**P**	**17 55 53.5**	**+0.4**
	comp=Z,3.6nm,0.7s,baz=331,slow=5.2,SNR=28						
GERES				LR	LR	18 31 44.6	
	comp=Z,157nm,18.5s,baz=313,slow=37						
KRLC	**Kraliky**	**76.58**	**30**	*e*P	**P**	**17 55 54.4**	**+0.7**
KRLC	**Kraliky**	**76.58**	**30**	*e*P	**P**	**17 55 54.4**	**+0.7**
TUE	**Stuetta**	**76.59**	**36**	IAmb	IAmb	17 55 56.6	
	comp=Z,10nm,0.9s						
MOTA	**Moosalm**	**76.62**	**35**	*e*P	**P**	**17 55 55.0**	**+0.8**
	comp=Z,17nm,1.5s						
FETA	**Feichten**	**76.73**	**35**	*i* P	**P**	**17 55 55.8**	**+1.0**
	comp=Z,7.9nm,1.1s,SNR=5.4						
SQTA	**Sankt Quirin**	**76.77**	**35**	*e*P	**P**	**17 55 56.4**	**+1.4**
	comp=Z,14nm,0.9s						
WATA	**Walderalm**	**76.82**	**35**	*i* P	**P**	**17 55 56.1**	**+0.7**
	comp=Z,9.1nm,0.9s,SNR=6.1						
WTTA	**Wattenberg**	**76.91**	**35**	*i* P	**P**	**17 55 56.8**	**+1.0**
	comp=Z,11nm,1.3s,SNR=4.9						
MORC	**Moravsky Berou**	**77.10**	**30**	*e*P	**P**	**17 55 57.4**	**+0.7**
VRAC	**Vranov**	**77.14**	**31**	*e*P	**P**	**17 55 57.0**	**+0.1**
OKC	**Ostrava-Krasne**	**77.26**	**29**	*e*P	P	17 55 51.6	-5.9
KRUC	**Moravsky**	**77.28**	**31**	*e*P	**P**	**17 55 58.1**	**+0.4**
MOA	**Molln**	**77.47**	**33**	*e*P	**P**	**17 55 59.2**	**+0.4**
	comp=Z,8.7nm,1.3s						
OJC	**Ojcow**	**77.51**	**28**	*e*P	**P**	**17 55 59.5**	**+0.5**
OJC	**Ojcow**	**77.51**	**28**	IAmb	IAmb	17 56 03.3	
	comp=Z,7.0nm,0.7s						
ABTA	**Abfaltersbach**	**77.68**	**34**	*i* P	**P**	**17 56 00.8**	**+0.7**
	comp=Z,5.2nm,0.7s,SNR=7.2						
OBN	**Obninsk**	**77.70**	**17**	P	**P**	**17 55 59.0**	**-0.9**
	comp=Z,2.8nm,0.6s,baz=324,slow=14,SNR=5.0						
OBN	**Obninsk**	**77.70**	**17**	⇓*i*P	**P**	**17 56 00.6**	**+0.7**
OBN				*e*		17 56 11.5	
OBN				pmax	pmax		
	comp=Z,94nm,2.5s						
OBN	**Obninsk**	**77.70**	**17**	P	**P**	**17 56 00.5**	**+0.7**
KBA	**Koelnbreinsper**	**77.74**	**34**	*e*P	**P**	**17 56 01.6**	**+1.0**
	comp=Z,9.7nm,1.1s						
JAVC	**Velka Javorina**	**77.91**	**30**	*e*P	**P**	**17 56 02.5**	**+1.2**
CONA	**Conrad Observa**	**78.02**	**32**	*i* P	**P**	**17 56 02.3**	**+0.3**
	comp=Z,6.0nm,0.8s,SNR=9.4						
SMOL	**Smolenice**	**78.11**	**31**	*e*P	**P**	**17 56 03.0**	**+0.7**
SMOL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SMOL	**Smolenice**	**78.11**	**31**	*e*P	**P**	**17 56 03.0**	**+0.7**
MODS	**Modra-Piesok**	**78.17**	**31**	*e*P	**P**	**17 56 03.0**	**+0.3**
MODS				pmax	pmax		
	comp=Z,16nm,1.3s						
MODS	**Modra-Piesok**	**78.17**	**31**	*e*P	**P**	**17 56 03.0**	**+0.3**
MYKA	**Terra Mystica**	**78.23**	**34**	*e*P	**P**	**17 56 03.6**	**+0.5**
	comp=Z,5.9nm,1.0s						
LANS	**Liptovska Anna**	**78.30**	**29**	*e*P	**P**	**17 56 04.0**	**+0.6**
LANS	**Liptovska Anna**	**78.30**	**29**	*e*P	**P**	**17 56 04.0**	**+0.6**
ARSA	**Arzberg**	**78.45**	**32**	*i* P	**P**	**17 56 04.4**	**+0.1**
	comp=Z,5.8nm,0.8s,SNR=5.1						
VYHS	**Vyhne**	**78.64**	**30**	*e*P	**P**	**17 56 05.5**	**+0.3**
VYHS	**Vyhne**	**78.64**	**30**	*e*P	**P**	**17 56 05.5**	**+0.3**
OBKA	**Obir**	**78.68**	**33**	*i* P	**P**	**17 56 05.5**	**-0.1**
	comp=Z,11nm,0.8s,SNR=5.3						
SOKA	**Soboth**	**78.73**	**33**	*i* P	**P**	**17 56 05.9**	**-0.1**
	comp=Z,8.0nm,0.8s,SNR=10						
TLY	**Talaya**	**78.81**	**337**	*e*P	**P**	**17 56 06.2**	**+0.1**
TLY				pmax	pmax		
	comp=Z,21nm,0.9s						
TLY				MLR	MLR		
	comp=Z,318nm,12.0s						
SVE	**Sverdlovsk**	**78.96**	**3**	*e*P	**P**	**17 56 06.0**	**-0.8**
SVE				pmax	pmax		
	comp=Z,27nm,1.0s						
ARU	**Arti**	**79.26**	**4**	*d i*P	**P**	**17 56 07.3**	**-1.2**
ARU				S	**S**	**18 06 06.9**	**-1.3**
ARU				SS	**SS**	**18 11 13.0**	**-0.2**
ARU				pmax	pmax		
	comp=Z,25nm,1.0s						
ARU	**Arti**	**79.26**	**4**	P	**P**	**17 56 07.5**	**-1.0**
ARU				IAmb	IAmb	17 56 09.2	
	comp=Z,21nm,0.9s						
CSKK	**Cskako**	**79.38**	**31**	*e*P	**P**	**17 56 11.1**	**+1.8**
TIH	**Tihany**	**79.64**	**31**	*e*P	**P**	**17 56 11.7**	**+1.0**
UZH	**Uzhgorod**	**79.71**	**28**	⇑*i*P	**P**	**17 56 11.0**	**-0.1**
UZH				*i*		17 56 17.4	
AKASG	**Malin Array Be**	**79.99**	**23**	P	**P**	**17 56 11.6**	**-0.9**
	comp=Z,5.4nm,0.7s,baz=336,slow=5.0,SNR=18						
AKASG				LR	LR	18 34 20.4	
	comp=Z,79nm,18.1s,baz=320,slow=38						
AKASG	**Malin Array Be**	**79.99**	**23**	*c e*P	**P**	**17 56 11.6**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKBB	**Malin Array Si**	**79.99**	**23**	P	**P**	**17 56 11.8**	**-0.7**
AKBB	**Malin Array Si**	**79.99**	**23**	P	**P**	**17 56 11.8**	**-0.7**
GO02	**Mina Guanaco**	**80.38**	**140**	P	**P**	**17 56 15.8**	**+0.6**
MURB	**Monte Urbino**	**80.51**	**36**	IAmb	IAmb	17 56 17.7	
	comp=Z,10nm,0.8s						
LPSR	**Galich'ya Gora**	**80.54**	**16**	*e*P	**P**	**17 56 13.8**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	**Zalesovo Beam**	**80.61**	**349**	P	**P**	**17 56 14.2**	**-1.6**
	comp=Z,9.3nm,0.8s,baz=11,slow=4.8,SNR=34						
ZALV				LR	LR	18 37 36.3	
	comp=Z,63nm,18.4s,baz=11,slow=40						
KSRS	**Korea Array**	**81.04**	**315**	P	**P**	**17 56 18.9**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=52,slow=5.9,SNR=9.9						
ULN	**Ulaanbaatar**	**81.17**	**333**	⇑*e*P	**P**	**17 56 18.6**	**-0.6**
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SONM	**Songino Array**	**81.41**	**334**	P	**P**	**17 56 20.1**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=19,slow=5.0,SNR=12						
SONM				LR	LR	18 36 42.9	
	comp=Z,276nm,18.3s,baz=359,slow=39						
ARCR	**ARCALIA**	**81.74**	**27**	⇓P	**P**	**17 56 22.6**	**+0.6**
VSR	**Storozhevoye**	**81.90**	**17**	*e*P	**P**	**17 56 21.5**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BZS	**Buzias**	**82.08**	**30**	⇑P	**P**	**17 56 23.7**	**-0.1**
VRH	**Novokhopyorsk**	**82.42**	**15**	*e*P	**P**	**17 56 23.1**	**-2.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BIZ	**Bicaz**	**82.43**	**26**	⇑P	**P**	**17 56 26.2**	**+0.5**
BRVK	**Borovoye**	**82.76**	**357**	⇓*i*P	**P**	**17 56 26.8**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,11nm,1.3s						
BRVK	**Borovoye**	**82.76**	**357**	P	**P**	**17 56 27.0**	**-0.2**
BRVK				IAmb	IAmb	17 56 28.2	
	comp=Z,9.3nm,0.9s						
DIVS	**Divibare**	**82.80**	**31**	IAmb	IAmb	17 56 34.4	
	comp=Z,24nm,1.8s						
MLR	**Muntele Rosu**	**83.66**	**27**	P	**P**	**17 56 34.1**	**+1.9**
	comp=Z,2.5nm,0.7s,baz=342,slow=9.6,SNR=2.7						
MLR	**Muntele Rosu**	**83.66**	**27**	P	**P**	**17 56 34.1**	**+1.9**
MLR				pmax	pmax		
	comp=Z,24nm,1.5s						
MLR	**Muntele Rosu**	**83.66**	**27**	IAmb	IAmb	17 56 41.2	
	comp=Z,24nm,1.5s						
DGZ	**Jazzator, Alta**	**84.33**	**346**	⇑*e*P	**P**	**17 56 34.0**	**-1.5**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**84.53**	**352**	⇓*e*P	**P**	**17 56 37.4**	**+1.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
CFR	**Carcaliu**	**84.64**	**26**	⇑P	**P**	**17 56 36.7**	**-0.2**
SEM	**Semipalatinsk**	**84.66**	**351**	*e*P	**P**	**17 56 35.2**	**-2.1**
	baz=351						
SEM	**Semipalatinsk**	**84.66**	**351**	*e*P	**P**	**17 56 35.2**	**-2.1**
BDFB	**Brasilia**	**84.70**	**118**	LR	LR	18 37 34.1	
	comp=Z,65nm,20.7s,baz=300,slow=38						
CO03	**El Pedregal**	**84.78**	**144**	IAmb	IAmb	17 56 42.2	
	comp=Z,12nm,0.9s						
TLCR		**84.84**	**25**	⇓P	**P**	**17 56 38.3**	**+0.3**
KEST	**Kesra**	**85.12**	**43**	P	**P**	**17 56 40.7**	**+1.0**
	comp=Z,22nm,0.9s,baz=317,slow=2.3,SNR=12						
KEST				LR	LR	18 32 43.9	
	comp=Z,154nm,19.3s,baz=258,slow=34						
HHC	**Hu-ho-hao-te**	**85.66**	**327**	*e*P	**P**	**17 56 44.5**	**+2.1**
HHC				S	**S**	**18 07 17.1**	**+2.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,5.9s						
HHC				LR	LR		
	comp=Z,220nm,16.9s						
HHC				LR	LR		
	comp=Z,340nm,16.9s						
STIP	**Stip**	**85.68**	**31**	*i* P	**P**	**17 56 43.1**	**+0.9**
VAY	**Valandovo**	**86.15**	**31**	*i* P	**P**	**17 56 44.8**	**+0.2**
FNA	**Florina**	**86.17**	**32**	P	**P**	**17 56 44.1**	**-0.7**
FNA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FNA	**Florina**	**86.17**	**32**	P	**P**	**17 56 44.1**	**-0.7**
FNA				IAmb	IAmb	17 56 48.8	
	comp=Z,10nm,0.8s						
ZON	**Zonda**	**86.26**	**142**	P	**P**	**17 56 45.6**	**+0.5**
ZON				pmax	pmax		
	comp=Z,26nm,0.9s						
ZON	**Zonda**	**86.26**	**142**	P	**P**	**17 56 45.6**	**+0.5**
ABKAR	**Akbulak array**	**86.50**	**4**	P	**P**	**17 56 45.5**	**-0.6**
ABKAR				IAmb	IAmb	17 56 47.7	
	comp=Z,18nm,1.0s						
CPUP	**Villa Florida**	**87.49**	**131**	P	**P**	**17 56 51.8**	**+0.6**
	comp=Z,8.1nm,0.8s,baz=335,slow=4.8,SNR=16						
CPUP				LR	LR	18 40 42.5	
	comp=Z,37nm,18.6s,baz=331,slow=39						
CPUP	**Villa Florida**	**87.49**	**131**	P	**P**	**17 56 51.7**	**+0.6**
CPUP				pmax	pmax		
	comp=Z,11nm,0.9s						
CPUP	**Villa Florida**	**87.49**	**131**	P	**P**	**17 56 51.7**	**+0.6**
CPUP				IAmb	IAmb	17 56 55.2	
	comp=Z,11nm,0.8s						
MK31	**Makanchi Array**	**87.96**	**349**	P	**P**	**17 56 51.6**	**-1.7**
MK31	**Makanchi Array**	**87.96**	**349**	P	**P**	**17 56 51.6**	**-1.7**
MKAR	**Makanchi Array**	**87.96**	**349**	P	**P**	**17 56 51.9**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=347,slow=4.9,SNR=21						
MKAR				LR	LR	18 42 11.2	
	comp=Z,94nm,18.8s,baz=0.5,slow=40						
GUMO	**Guam**	**88.28**	**287**	P	**P**	**17 56 52.1**	**-3.2**
	comp=Z,184nm,0.8s,baz=218,slow=23,SNR=3.6						
SOC	**Sochi**	**89.26**	**19**	*e*P	**P**	**17 56 56.9**	**-2.6**
SOC				*e*		18 00 27.1	
SOC				*e*PPP	PPP	18 02 26.8	
SOC				*e*S	**SKSac**	**18 07 25.6**	**-3.6**
SOC				*e*SS	**SS**	**18 13 38.1**	**-2.9**
SOC				*e*SSS	SSS	18 17 14.0	
SOC				pmax	pmax		
	comp=Z,54nm,0.9s						
SOC				MLR	MLR		
	comp=Z,149nm,15.0s						
KIV	**Kislovodsk**	**89.55**	**17**	⇑*e*P	**P**	**17 57 00.2**	**-0.7**
KIV				*e*		18 00 30.0	
KIV				*e*S	**SKSac**	**18 07 25.1**	**-6.1**
KIV				pmax	pmax		
	comp=Z,30nm,4.7s						
KIV				MLR	MLR		
	comp=Z,114nm,19.0s						
KBZ	**Khabaz**	**89.81**	**16**	P	**P**	**17 57 02.1**	**+0.2**
	comp=Z,11nm,0.8s,baz=329,slow=5.0,SNR=25						
KBZ				LR	LR	18 37 14.0	
	comp=Z,135nm,21.8s,baz=353,slow=36						
NJ2	**Nanjing**	**89.84**	**317**	*e*P	**P**	**17 57 01.9**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
WMQ	**Urumqi**	**89.95**	**344**	*e*P	**P**	**17 57 03.9**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.7s						
BTLS	**Baital**	**90.56**	**354**	*e*P	**P**	**17 57 04.7**	**-0.9**
	baz=354						
BTLS	**Baital**	**90.56**	**354**	*e*P	**P**	**17 57 04.6**	**-0.9**
GTA	**Gaotai**	**91.06**	**334**	*e*P	**P**	**17 57 08.2**	**+0.1**
GTA				pP	pP	17 57 12.5	-0.2
GTA				sP	sP	17 57 15.2	+1.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,99nm,6.5s						
GTA				LR	LR		
	comp=Z,200nm,19.3s						
GTA				LR	LR		
	comp=Z,260nm,24.7s						
GTA				LR	LR		
	comp=Z,150nm,18.9s						
BRTR	**Keskin Array B**	**91.28**	**24**	P	**P**	**17 57 08.4**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=338,slow=2.7,SNR=5.1						
BRTR				LR	LR	18 38 03.9	
	comp=Z,104nm,21.5s,baz=345,slow=36						
BRTR	**Keskin Array B**	**91.28**	**24**	*c e*P	**P**	**17 57 08.3**	**-0.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LC01	**Cunco**	**91.33**	**148**	IAmb	IAmb	17 57 12.8	
	comp=Z,11nm,0.9s						
SHLS	**Shalkode**	**91.90**	**350**	*e*P	**P**	**17 57 11.2**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=350						
SHLS	**Shalkode**	**91.90**	**350**	*e*P	**P**	**17 57 11.1**	**-0.8**
SHLS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LZH	**Lanzhou**	**92.73**	**330**	*e*P	**P**	**17 57 14.9**	**-1.1**
LZH				pP	PcP	17 57 17.0	+0.3
LZH				sP	pP	17 57 18.7	-1.8
LZH				*e*PP	**PP**	**18 00 59.2**	**+2.3**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,91nm,9.3s						
LZH				LR	LR		
	comp=Z,150nm,17.3s						
LZH				LR	LR		
	comp=Z,170nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,19.7s						
AAK	**Ala-Archa**	**92.92**	**354**	⇓*e*P	**P**	**17 57 16.4**	**-0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK	**Ala-Archa**	**92.92**	**354**	P	**P**	**17 57 16.6**	**-0.1**
PLCA	**Paso Flores**	**93.43**	**148**	P	**P**	**17 57 18.9**	**+0.3**
	comp=Z,9.3nm,0.7s,baz=328,slow=5.0,SNR=23						
PLCA				LR	LR	18 36 32.4	
	comp=Z,98nm,18.2s,baz=336,slow=34						
HNR	**Honiara**	**93.65**	**260**	LR	LR	18 34 30.2	
	comp=Z,109nm,18.5s,baz=13,slow=32						
IUG	**Iuzhnay**	**93.67**	**357**	*e*P	**P**	**17 57 19.6**	**-0.5**
	baz=357						
IUG	**Iuzhnay**	**93.67**	**357**	*e*P	**P**	**17 57 19.6**	**-0.5**
GEYT	**Alibeck**	**97.66**	**6**	LR	LR	18 47 36.6	
	comp=Z,48nm,18.8s,baz=35,slow=39						
DZM	**Mont Dzumac**	**98.01**	**247**	*e*LR	LR	18 29 24.8	
	comp=Z,205nm,29.1s						
TORD	**Torodi Ar. Bea**	**98.38**	**62**	P	**P**	**17 57 40.6**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=296,slow=8.0,SNR=2.5						
TORD				LR	LR	18 39 46.2	
	comp=Z,148nm,20.9s,baz=325,slow=34						
DBIC	**Dimbokro**	**98.85**	**72**	LR	LR	18 40 44.2	
	comp=Z,139nm,19.1s,baz=276,slow=34						
WRA	**Warramunga Arr**	**118.95**	**270**	PKP	**PKPdf**	**18 02 51.8**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=38,slow=1.9,SNR=12						
STKA	**Stephens Creek**	**121.16**	**254**	PKP	**PKPdf**	**18 02 55.8**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=166,slow=10,SNR=3.3						
STKA				PKKPbc	**PKKPbc**	**18 12 57.0**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=342,slow=3.2,SNR=2.9						
ASAR	**Alice Springs**	**121.63**	**267**	PKP	**PKPdf**	**18 02 56.9**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=58,slow=3.1,SNR=7.1						
ASAR				PKKPbc	**PKKPbc**	**18 12 55.5**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=221,slow=3.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**123.96**	**278**	PKP	**PKPdf**	**18 03 00.8**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=0.0,slow=4.0,SNR=1.2						
KMBO	**Kilima Mbogo**	**129.92**	**39**	PKP	**PKiKP**	**18 03 15.5**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=355,slow=7.7,SNR=3.3						
VNDA	**Vanda**	**131.72**	**197**	PKP	**PKiKP**	**18 03 15.6**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=36,slow=5.4,SNR=3.8						
BOSA	**Boshof**	**144.12**	**78**	PKP	**PKPab**	**18 03 37.0**	**0.0**
	comp=Z,9.0nm,0.8s,baz=337,slow=2.1,SNR=16						
BOSA	**Boshof**	**144.12**	**78**	PKIKP	**PKPab**	**18 03 37.0**	**0.0**
BOSA	**Boshof**	**144.12**	**78**		**PKPab**	**18 03 37.0**	**0.0**
SYO	**Syowa Base**	**151.96**	**160**	⇑*e*PKPbc	**PKPbc**	**18 03 57.2**	**-0.1**

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*NOU **03** 17:53:27.2, 5°.38S×148°.92E, h169^{km}, mb4.1, New Britain Region, P.N.G.*

*NEIC **03** 17:53:27.4±2.0, 5°.67S±0°.07×149°.13E±0°.09, h169^{km}±6^{km}, mb4.5/25, Error ellipse: s-maj=13.1km s-min=9.4km az=109.0*

*IDC **03** 17:53:27.2±1.3, 5°.67S×149°.23E, h168^{km}±14^{km}, mb3.7/11, mb1 3.8/14, mb1mx3.6/29, mbtmp4.1/14, Error ellipse: s-maj=30.8km s-min=9.7km az=118.0*

ISC 03 17:53:26.9±0.5, **5°.67S**±0°.06×**149°.08E**±0°.07, **h163^{km}, n45,** σ**1^{s}.75**/50, **mb4.3**/17, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.23	65	P	Pn	17 54 17.0	-0.7
	21nm,0.3s,baz=198,slow=0.6,SNR=11						
KRVT				S	Sn	17 55 01.8	+4.6
	4.6nm,0.3s,baz=345,slow=20,SNR=1.4						
RABL	Rabaul	3.41	65		Pn	17 54 19.5	-0.4
MANU	Manus Island	3.98	335		Pn	17 54 28.2	+0.9
PMG	Port Moresby	4.17	207	P	Pn	17 54 30.9	+1.1
	8.3nm,0.3s,baz=67,slow=6.4,SNR=41						
PMG				S	Sn	17 55 22.2	+3.3
	15nm,0.3s,baz=135,slow=18,SNR=3.2						
PMG	Port Moresby	4.17	207		Pn	17 54 30.5	+0.8
PMG	Port Moresby	4.17	207	P	Pn	17 54 32.2	+2.4
COEN	Coen	10.08	215	Pn	Pn	17 55 49.7	+1.9
CTA	Charters Tower	14.60	191	P	P	17 56 47.4	-0.4
	0.3nm,0.3s,baz=18,slow=18,SNR=1.5						
CTAO	Charters Tower	14.60	191		P	17 56 47.2	-0.7
MTN	Manton Dam	19.08	247	P	P	17 57 37.2	+0.1
EIDS	Eidsvold	19.69	175	P	Pn	17 57 46.3	-0.5
EIDS				IAmb	IAmb	17 58 09.8	
	comp=Z,31nm,1.6s						
WB0	Warramunga Arr	20.01	224	P	P	17 57 47.5	+0.4
WB0				IAmb	IAmb	17 57 52.2	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	20.04	224	P	P	17 57 47.9	+0.5
WR0				IAmb	IAmb	17 57 51.6	
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	20.16	224	P	P	17 57 49.4	+0.7
WRAB				IAmb	IAmb	17 57 49.8	
	comp=Z,10nm,0.6s						
WB2	Warramunga Arr	20.16	224	P	P	17 57 49.2	+0.4
WB2				IAmb	IAmb	17 57 49.9	
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	20.17	224	P	P	17 57 49.3	+0.5
	comp=Z,7.2nm,0.5s,baz=51,slow=11,SNR=99						
WRA				S	S	18 01 21.1	-5.4
	comp=Z,0.8nm,0.7s,baz=49,slow=20,SNR=1.5						
AS31	Alice Springs	23.10	218	P	P	17 58 19.6	+1.1
ASAR	Alice Springs	23.10	218	P	P	17 58 19.4	+0.9
	comp=Z,2.3nm,0.3s,baz=51,slow=8.6,SNR=164						
ASAR				pP	pwP	17 58 50.6	-0.7
	comp=Z,1.9nm,0.8s,baz=36,slow=15,SNR=3.0						
ASAR				S	S	18 02 21.0	+3.4
	comp=Z,0.9nm,0.9s,baz=30,slow=21,SNR=4.7						
ARMA	Armidale	24.74	175	P	P	17 58 35.6	+2.2
ARMA				IAmb	IAmb	17 58 56.5	
	comp=Z,25nm,1.4s						
FITZ	Fitzroy Crossi	26.01	240	P	P	17 58 44.7	-0.2
	comp=Z,6.0nm,0.6s,baz=74,slow=7.5,SNR=18						
FITZ	Fitzroy Crossi	26.01	240	P	P	17 58 44.8	-0.1
FITZ				IAmb	IAmb	17 58 48.1	
	comp=Z,9.3nm,0.8s						
STKA	Stephens Creek	27.00	194	P	P	17 58 53.4	-0.3
	comp=Z,1.7nm,0.8s,baz=19,slow=13,SNR=1.7						
TOO	Toolangi	31.93	185	P	P	17 59 36.4	-0.8
JOW	Kunigami	38.07	329	P	P	18 00 26.0	-3.9
JOW				IAmb	IAmb	18 00 28.0	
	comp=Z,4.0nm,0.6s						
MORW	Morawa	38.95	229	P	P	18 00 37.1	-0.1
MORW				IAmb	IAmb	18 00 53.9	
	comp=Z,21nm,1.3s						
SSLB	Suanglung	40.12	318	P	P	18 00 48.3	+1.3
MAJO	Matsushiro	43.20	347	P	P	18 01 13.6	+1.8
MJB9	Matsu-Tunnel	43.21	347	P	P	18 01 12.8	+1.0
KSRS	Korea Array	47.22	337	P	P	18 01 44.6	+1.3
	comp=Z,0.6nm,0.5s,baz=154,slow=8.9,SNR=5.1						
USA0B	Ussuriysk Arra	51.97	344	P	P	18 02 19.4	+0.2
USA0B				IAmb	IAmb	18 02 42.8	
	comp=Z,13nm,1.4s						
USRK	Ussuriysk Ar.	51.97	344	P	P	18 02 20.2	+1.0
	comp=Z,1.7nm,0.7s,baz=188,slow=7.8,SNR=4.8						
PEA0B	Petropavlovsk-	59.01	6	P	P	18 03 09.4	+0.1
PETK	Petropavlovsk-	59.01	6	P	P	18 03 09.7	+0.4
	comp=Z,11nm,1.1s,baz=146,slow=4.5,SNR=7.0						
SONM	Songino Array	65.14	330	P	P	18 03 51.6	+1.1
	comp=Z,0.5nm,0.5s,baz=162,slow=3.4,SNR=4.1						
CASY	Casey	66.14	196	P	P	18 03 52.9	-3.4
CASY				IAmb	IAmb	18 03 55.0	
	comp=Z,10nm,0.9s						
MKAR	Makanchi Array	78.56	320	P	P	18 05 10.0	-0.4
	comp=Z,0.3nm,0.5s,baz=97,slow=8.6,SNR=6.5						
ZALV	Zalesovo Beam	79.84	327	P	P	18 05 15.8	-1.3
	comp=Z,0.6nm,0.6s,baz=116,slow=6.4,SNR=3.9						
TTA	Tatalina	79.95	22	P	P	18 05 17.5	-0.1
TTA				IAmb	IAmb	18 05 18.9	
	comp=Z,9.5nm,1.3s						
CNPM	China Poot	80.12	27	P	P	18 05 19.0	+0.5
KTH	Kantishna Hill	82.23	23	P	P	18 05 28.2	-1.4
TRF	Thorofare Moun	82.43	23	P	P	18 05 29.5	-1.3
RND	Reindeer	82.98	24	P	P	18 05 32.7	-0.8
RND				IAmb	IAmb	18 05 33.6	
	comp=Z,4.8nm,0.8s						
IL31		84.37	23	P	P	18 05 39.1	-1.3
ILAR	Eielson Array	84.37	23	P	P	18 05 39.0	-1.5
	comp=Z,1.6nm,0.7s,baz=249,slow=4.8,SNR=15						
TORD	Torodi Ar. Bea	147.00	285	PKPbc	PKPbc	18 12 50.9	-0.5
	comp=Z,0.5nm,0.3s,baz=84,slow=2.6,SNR=7.9						

*CNRM **03** 18:05:13.8, 33°.16N×14°.92W, h0^{km}, Hypocentre not reviewed by the ISC*

*IGIL **03** 18:05:32.0, 33°.40N×13°.52W, h24^{km}, ML2.7*

*MDD **03** 18:05:32.3±0.9, 33°.52N×13°.60W, h30^{km}, mb4.6/2, Error ellipse: s-maj=25.1km s-min=4.8km az=151.0, PRXIMO*

*INMG **03** 18:05:35.4±1.0, 33°.45N×13°.55W, h7^{km}±13^{km}, ML2.7, Error ellipse: s-maj=5.6km s-min=3.5km az=148.0*

ISC 03 18:05:26.4±0.9**, 33°.55N**±0°.06×**13°.53W**±0°.05**, h10**^{km}**, n68, σ3^{s}.26**/102**, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPST	Porto Santo, M	2.39	259	ePn	Pb	18 06 08.7	-0.8
PMPST				eSn	Sn	18 06 33.4	-1.6
PMPST				A	A	18 06 39.8	
	50nm,0.4s						
PMPS	Porto Santo	2.40	259	P	Pb	18 06 08.7	-0.9
PMPS				S	Sn	18 06 33.4	-1.7
	25nm,0.4s						
PMPS	Porto Santo	2.40	259	ePn	Pb	18 06 08.2	-1.4
PMPS				eSn	Sn	18 06 33.0	-2.1
PMPS				A	A	18 06 38.5	
	38nm,0.2s						
PMAR	Madeira	2.96	255	S	Sn	18 06 47.2	-1.9
	32nm,0.2s						
PMAR	Madeira	2.96	255	eSn	Sn	18 06 47.2	-1.9
PMAR				A	A	18 06 52.2	
	65nm,0.2s						
FUL	Funchal	2.96	253	P	Pn	18 06 15.7	+2.3
FUL				S	Sn	18 06 47.1	-1.9
	41nm,0.2s						
FUL	Funchal	2.96	253	ePn	Pn	18 06 15.7	+2.3
FUL				eSn	Sn	18 06 47.1	-1.9
FUL				A	A	18 06 56.1	
	83nm,0.2s						
PMOZ	Porto Moniz, M	3.16	258	P	Pn	18 06 18.2	+2.0
	18nm,0.4s,SNR=7.9						
PMOZ				S	Sn	18 06 52.1	-1.9
	13nm,0.2s,SNR=7.9						
PMOZ	Porto Moniz, M	3.16	258	ePn	Pn	18 06 19.0	+2.8
PMOZ				eSn	Sn	18 06 51.7	-2.3
PMOZ				A	A	18 07 01.2	
	61nm,0.8s						
EFAM	Famara	4.41	180	S	Sn	18 07 15.3	-10
	0.5nm,0.1s,SNR=7.9						
SRHM	Skhour des Reh	4.85	101	P		18 06 43.0	
CFUE	Fuerteventura	4.90	184	P	Pn	18 06 39.2	-1.0
	4.5nm,0.2s,SNR=7.9						
CFUE				S	Sn	18 07 26.3	-11
	2.6nm,0.1s,SNR=7.9						
AVE	Averroes	5.12	91	eP	Pn	18 06 47.4	+4.2
AVE				eS	Sn	18 07 40.5	-1.9
PFVI	Vila Bisbo	5.25	46	P	Pn	18 06 48.7	+3.8
	3.8nm,0.1s,SNR=8.6						
PFVI				S	Sn	18 07 42.9	-2.6
	5.3nm,0.2s,SNR=5.5						
PFVI	Vila Bisbo	5.25	46	ePn	Pn	18 06 48.7	+3.8
PFVI				eSn	Sn	18 07 42.9	-2.6
PFVI				A	A	18 07 47.2	
	6.2nm,0.3s						
TTIG	Tnine Tigouga,	5.26	123	P		18 06 45.0	
CGIN	Giniginamar, F	5.35	185	S	Sn	18 07 36.8	-11
	SNR=7.9						
MORF	Marmelete	5.47	45	eP	Pn	18 06 51.5	+3.6
MORF				eS	Sn	18 07 49.7	-1.3
MORF				AML	AML	18 07 54.1	
	comp=E,16nm,0.1s						
MORF	Marmelete	5.47	45	P	Pn	18 06 52.3	+4.3
MORF				S	Sn	18 07 50.5	-0.5
	comp=E,7.6nm,0.2s						
MORF	Marmelete	5.47	45	ePn	Pn	18 06 52.3	+4.3
MORF				eSn	Sn	18 07 50.5	-0.5
MORF				A	A	18 07 54.7	
	comp=E,7.6nm,0.2s						
EBAJ	Bajamar	5.55	207	S	Sn	18 07 43.3	-10
	comp=E,0.5nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	5.59	43	P	Pn	18 06 54.0	+4.5
PTEO				S	Sn	18 07 51.7	-2.1
	comp=E,2.6nm,0.7s						
PTEO	Sao Teotonio	5.59	43	ePn	Pn	18 06 54.0	+4.5
PTEO				eSn	Sn	18 07 51.7	-2.1
PTEO				A	A	18 08 03.1	
	comp=E,5.2nm,0.7s						
ZHG	ZHG	5.76	89	P		18 06 55.0	
PBDV	Barranco-do-Ve	5.87	50	P	Pn	18 06 57.2	+3.7
PBDV				S	Sn	18 07 58.2	-2.7
PBDV	Barranco-do-Ve	5.87	50	ePn	Pn	18 06 57.2	+3.7
PBDV				eSn	Sn	18 07 58.2	-2.7
PCVE	Castro Verde	6.05	46	P	Pn	18 07 00.1	+4.2
PCVE				S	Sn	18 08 03.1	-2.1
	comp=E,3.0nm,0.5s						
PCVE	Castro Verde	6.05	46	ePn	Pn	18 07 00.1	+4.2
PCVE				eSn	Sn	18 08 03.1	-2.1
PCVE				A	A	18 08 17.2	
	comp=E,3.0nm,0.5s						
MESJ	Messejana	6.08	44	eP	Pn	18 06 59.8	+3.5
MESJ				eS	Sn	18 08 03.8	-2.2
MESJ				AML	AML	18 08 07.9	
	comp=N,3.7nm,0.2s						
MESJ	Messejana	6.08	44	P	Pn	18 06 59.8	+3.5
MESJ				S	Sn	18 08 03.8	-2.2
	comp=N,3.7nm,0.2s						
PNCL	Nicolau / Gran	6.10	40	P	Pn	18 07 00.9	+4.3
PNCL				S	Sn	18 08 04.4	-2.0
	comp=N,4.0nm,0.4s						
PNCL	Nicolau / Gran	6.10	40	ePn	Pn	18 07 00.9	+4.3
PNCL				eSn	Sn	18 08 04.4	-2.0
PNCL				A	A	18 08 09.4	
	comp=N,4.0nm,0.4s						
EGRO	El Granado	6.33	49	P	Pn	18 07 04.0	+4.3
	comp=N,0.8nm,0.1s,SNR=5.0						
EGRO				S	Sn	18 08 08.8	-3.3
	comp=N,0.4nm,0.2s,SNR=6.8						
PMAFR	Mafra	6.39	31	S	Sn	18 08 12.0	-1.6
	comp=N,3.4nm,0.2s,SNR=6.6						
PMAFR	Mafra	6.39	31	eSn	Sn	18 08 11.6	-2.0
PMAFR				A	A	18 08 18.2	
	comp=N,8.9nm,0.2s						
PBEJ	Beja	6.41	44	S	Sn	18 08 11.7	-2.4
	comp=N,1.0nm,0.4s						
PBEJ	Beja	6.41	44	eSn	Sn	18 08 11.7	-2.4
PBEJ				A	A	18 08 18.2	
	comp=N,2.0nm,0.4s						
EVO	Evora	6.68	40	P	Pn	18 07 08.5	+3.9
EVO				S	Sn	18 08 18.9	-1.9
	comp=N,4.3nm,0.3s						
EVO	Evora	6.68	40	ePn	Pn	18 07 08.5	+3.9
EVO				eSn	Sn	18 08 18.9	-1.9
EVO				A	A	18 08 24.5	
	comp=N,4.3nm,0.3s						
PMTG	Montargil	6.97	36	P	Pn	18 07 13.2	+4.6
PMTG				S	Sn	18 08 26.1	-1.9
	comp=N,1.8nm,0.1s						
PMTG	Montargil	6.97	36	ePn	Pn	18 07 13.2	+4.6
PMTG				eSn	Sn	18 08 26.1	-1.9
PMTG				A	A	18 08 30.9	
	comp=N,1.8nm,0.1s						
EMIN	Mina Concepcio	6.99	51	P	Pn	18 07 13.1	+4.3
	comp=N,0.5nm,0.2s,SNR=6.9						
EMIN				S	Sn	18 08 23.4	-4.9
	comp=N,0.4nm,0.1s,SNR=8.8						
IFR	Ifrane	7.02	88	eS	Sn	18 08 20.5	-8.9
SMIR	Smir Dam	7.05	70	P		18 07 15.0	
PSBE	So Bento	7.07	31	eSn	Sn	18 08 30.9	+0.6
ESPR	Espera	7.10	60	P	Pn	18 07 14.4	+4.1
	comp=N,2.4nm,0.2s,SNR=8.4						
ESPR				S	Sn	18 08 28.9	-2.2
	comp=N,1.1nm,0.1s,SNR=4.7						
PESTR	Estremoz	7.15	40	ePn	Pn	18 07 16.5	+5.4
PESTR				eSn	Sn	18 08 30.9	-1.5
PESTR				A	A	18 08 37.5	
	comp=N,1.2nm,0.6s						
EJIF	Jimena Fronter	7.22	64	S	Sn	18 08 34.0	0.0
	comp=N,240nm,0.2s,SNR=7.9						
MDT	Midelt	7.52	93	P		18 07 19.8	
PCAS	Casmilo, Conde	7.64	30	S	Sn	18 08 42.3	-2.1
PCAS	Casmilo, Conde	7.64	30	eSn	Sn	18 08 42.3	-2.1
PMRV	Marv??o	7.67	38	P	Pn	18 07 22.5	+4.4
PMRV				S	Sn	18 08 43.3	-1.8
	comp=N,1.6nm,0.2s						
PMRV	Marv??o	7.67	38	ePn	Pn	18 07 22.5	+4.4
PMRV				eSn	Sn	18 08 43.3	-1.8
PMRV				A	A	18 08 47.0	
	comp=N,1.6nm,0.2s						
ECAB	El Cabril	7.99	53	P	Pn	18 07 25.9	+3.4
	comp=N,0.4nm,0.1s,SNR=9.4						
ECAB				S	Sn	18 08 48.3	-4.6
	comp=N,1.8nm,0.2s,SNR=6.8						
PVIS	Viseu	8.45	31	S	Sn	18 09 01.5	-2.8
	comp=N,1.2nm,0.3s						
PVIS	Viseu	8.45	31	eSn	Sn	18 09 01.5	-2.8
PVIS				A	A	18 09 05.2	
	comp=N,2.5nm,0.3s						
EGOR	Sierra Gorda,	8.48	63	P	Pn	18 07 33.6	+4.2
	comp=N,0.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	18 09 03.2	-2.0
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA	Adamuz	8.60	55	P	Pn	18 07 34.0	+3.0
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	18 09 03.7	-4.4
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA	Plasencia	8.83	40	S	Sn	18 09 08.6	-4.9
	comp=N,0.5nm,0.1s,SNR=7.9						
EQUE	Quentar	9.01	63	S	Sn	18 09 16.6	-1.6
	comp=N,0.2nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	9.04	29	S	Sn	18 09 15.4	-3.5
	comp=N,0.8nm,0.4s						
POLO	Lamas de Olo	9.04	29	eSn	Sn	18 09 15.4	-3.5
POLO				A	A	18 09 22.1	
	comp=N,0.8nm,0.4s						
MVO	Moncorvo	9.19	32	S	Sn	18 09 17.9	-4.6
	comp=N,0.3nm,0.2s,SNR=7.9						
MVO	Moncorvo	9.19	32	eSn	Sn	18 09 19.1	-3.5
MVO				A	A	18 09 21.9	
	comp=N,2.3nm,0.7s						
ELOB	Lobios	9.36	26	S	Sn	18 09 21.6	-5.2
	comp=N,0.5nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	9.37	25	S	Sn	18 09 23.4	-3.7
	comp=N,2.0nm,0.6s						
PGAV	Gavieira, Arco	9.37	25	eSn	Sn	18 09 23.4	-3.7
PGAV				A	A	18 09 25.5	
	comp=N,2.0nm,0.6s						
PAB	San Pablo	9.50	48	S	Sn	18 09 26.3	-4.0
	comp=N,0.2nm,0.2s,SNR=7.9						
EQES	Quesada	9.51	61	P	Pn	18 07 46.3	+2.9
	comp=N,0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	18 09 26.0	-4.4
	comp=N,0.1nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	9.82	49	P	Pn	18 07 52.2	+4.5
	comp=N,0.2nm,0.3s,baz=236,slow=14,SNR=4.7						
ESDC				S	Sn	18 09 35.4	-2.6
	comp=N,0.5nm,0.3s,baz=235,slow=24,SNR=8.0						
SESP	Santiago Espad	10.02	60	S	Sn	18 09 38.3	-4.7
	comp=N,0.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	10.94	59	P	Pn	18 08 05.9	+2.8
	comp=N,0.4nm,0.2s,SNR=7.9						
ETOB				S	Sn	18 09 59.5	-6.1
	comp=N,0.4nm,0.1s,SNR=7.1						
ETOR	Torete	11.67	48	S	Sn	18 10 17.8	-5.6
	comp=N,0.5nm,0.3s,SNR=7.9						

IDC 03 18:13:37.5±8.8**, 3°.23S×138°.44E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/17**, mbtmp3.6**/3**, ML3.7**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.8**/19**, Error ellipse: s-maj=380.2km s-min=29.6km az=85.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.09	193	P	Pn	18 17 37.4	-0.5
	0.3nm,0.3s,baz=13,slow=13,SNR=14						
WRA				S	Sn	18 20 37.5	-11
	0.2nm,0.3s,baz=12,slow=23,SNR=5.9						
ASAR	Alice Springs	20.79	192	P	P	18 18 20.6	+0.2
	0.9nm,0.6s,baz=17,slow=11,SNR=25						
ASAR				S	S	18 22 05.2	-8.2
	0.6nm,0.7s,baz=18,slow=23,SNR=4.9						
DZM	Mont Dzumac	33.00	127	LR	LR	18 34 32.6	
	comp=Z,83nm,19.0s,baz=34,slow=38						
MKAR	Makanchi Array	70.04	323	P	P	18 24 51.3	0.0
	0.6nm,0.7s,baz=116,slow=7.3,SNR=9.3						

*NEIC **03** 18:14:31.6±0.6, 18°.20N±0°.05×66°.87W±0°.04, h32^{km}±13^{km}, ML2.4/27, Md2.9/6(RSPR), Error ellipse: s-maj=8.1km s-min=5.3km az=201.0*

RSPR 03 18:14:33.1, 18°.20N×66°.87W, h21^{km}**, MD2.4**/6**, 11C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	0.18	38	⇑eP	Pb	18 14 37.8	-1.1
AOPR	Arecibo Observ	0.18	38	eS	Sb	18 14 41.5	-1.5
AOPR	Arecibo Observ	0.18	38		Pb	18 14 37.8	-1.2
AOPR				IAML		18 14 41.9	
	comp=N,1µm,0.2s						
LSP	Las Mesas	0.20	263	⇑eP	Pb	18 14 38.3	-0.7
LSP	Las Mesas	0.20	263	eS	Sb	18 14 42.6	-0.5
GBPR	Guanica, Bosqu	0.22	182	⇓eP	Pb	18 14 38.5	-0.5
GBPR	Guanica, Bosqu	0.22	182	eS	Sb	18 14 42.6	-0.5
GBPR	Guanica, Bosqu	0.22	182		Pb	18 14 38.5	-0.5
GBPR					Sb	18 14 42.6	-0.5
MPR	Mayaguez	0.26	273	⇑eP	Pb	18 14 38.8	-0.4
MPR				eS	Sb	18 14 43.2	-0.3
MPR	Mayaguez	0.26	273		Pb	18 14 38.8	-0.4
MPR					Sb	18 14 43.2	-0.3
MLPR	Magueyes Islan	0.28	216	⇓eP	Pb	18 14 39.0	-0.5
MLPR	Magueyes Islan	0.28	216	eS	Sb	18 14 43.7	-0.3
MLPR	Magueyes Islan	0.28	216		Pb	18 14 39.0	-0.5
MLPR					Sb	18 14 43.7	-0.3
MLPR	Magueyes Islan	0.28	216	IAML		18 14 44.3	
	comp=N,642nm,0.3s						
MLPR				IAML		18 14 44.4	
	comp=E,311nm,0.2s						
OBIP	Obispado Ponce	0.30	122	⇓eP	Pb	18 14 39.3	-0.5
OBIP	Obispado Ponce	0.30	122	eS	Sb	18 14 44.0	-0.3
OBIP	Obispado Ponce	0.30	122		Pb	18 14 39.3	-0.5
OBIP					Sb	18 14 44.0	-0.3
OBIP	Obispado Ponce	0.30	122	IAML		18 14 44.9	
	comp=N,203nm,0.1s						
OBIP				IAML		18 14 45.5	
	comp=E,169nm,0.2s						
CELP	Cerrillos	0.30	114	⇓eP	Pb	18 14 39.3	-0.6
CELP	Cerrillos	0.30	114	eS	Sb	18 14 44.2	-0.3
CELP	Cerrillos	0.30	114		Pb	18 14 39.3	-0.6
CELP					Sb	18 14 44.2	-0.3
AGPR	Aguadilla, PR	0.35	320	⇑eP	Pb	18 14 40.0	-0.6
AGPR	Aguadilla, PR	0.35	320	eS	Sb	18 14 45.4	-0.2
AGPR	Aguadilla, PR	0.35	320		Pb	18 14 40.0	-0.6
AGPR					Sb	18 14 45.4	-0.2
AGPR	Aguadilla, PR	0.35	320	IAML		18 14 45.9	
	comp=N,219nm,0.3s						
AGPR				IAML		18 14 49.0	
	comp=E,184nm,0.5s						
ICMP	Isla Caja de M	0.45	133	⇑eP	Pb	18 14 41.5	-0.8
ICMP	Isla Caja de M	0.45	133	eS	Sb	18 14 47.6	-1.0
ICMP	Isla Caja de M	0.45	133		Pb	18 14 41.5	-0.8
ICMP					Sb	18 14 47.6	-1.0
ICMP	Isla Caja de M	0.45	133	IAML		18 14 50.3	
	comp=N,75nm,0.6s						
ICMP				IAML		18 14 50.4	
	comp=E,68nm,0.3s						
SJG	San Juan	0.69	97	Pn	Pb	18 14 45.0	-1.5
SJG				IAML		18 14 55.2	
	comp=E,229nm,0.2s						
SJG				IAML		18 14 56.1	
	comp=E,171nm,0.1s						
GCPR	Guaynabo City	0.76	82	⇑eP	Pb	18 14 45.9	-1.6
GCPR	Guaynabo City	0.76	82	eS	Sb	18 14 55.9	-1.6
GCPR	Guaynabo City	0.76	82		Pb	18 14 45.9	-1.6
GCPR					Sb	18 14 55.9	-1.6
GCPR	Guaynabo City	0.76	82	IAML		18 14 57.8	
	comp=E,146nm,0.2s						
IGPR	InterUniversit	0.77	108	⇓eP	Pb	18 14 46.1	-1.6
IGPR	InterUniversit	0.77	108	eS	Sb	18 14 55.9	-1.7
IGPR	InterUniversit	0.77	108		Pb	18 14 46.1	-1.5
IGPR				IAML		18 14 58.4	
	comp=E,226nm,0.2s						
PDPR	Patillas Dam,	0.83	102	⇑eP	Pb	18 14 47.1	-1.6
PDPR	Patillas Dam,	0.83	102	eS	Sb	18 14 57.9	-1.6
PDPR	Patillas Dam,	0.83	102		Pb	18 14 47.1	-1.6
PDPR					Sb	18 14 57.9	-1.6
PDPR	Patillas Dam,	0.83	102	IAML		18 14 59.0	
	comp=E,131nm,0.1s						
CBYP	Canovanas	0.97	86	⇑eP	Pb	18 14 49.2	-2.0
CBYP	Canovanas	0.97	86	eS	Sb	18 15 01.9	-1.7
CBYP	Canovanas	0.97	86		Pb	18 14 49.2	-2.0
CBYP					Sb	18 15 01.9	-1.7
HUMP	Col San Antoni	0.97	93	⇑eP	Pb	18 14 49.0	-2.3
HUMP	Col San Antoni	0.97	93	eS	Sb	18 15 01.1	-2.6
HUMP	Col San Antoni	0.97	93		Pb	18 14 49.0	-2.3
HUMP					Sb	18 15 01.1	-2.6
HUMP	Col San Antoni	0.97	93	IAML		18 15 04.2	
	comp=E,115nm,0.2s						
HUMP				IAML		18 15 06.6	
	comp=N,166nm,0.2s						
MTP	Monte Pirata	1.26	94	⇑eP	Pn	18 14 52.8	-2.7
MTP	Monte Pirata	1.26	94	eS	Sn	18 15 09.4	-2.4
MTP	Monte Pirata	1.26	94		Pn	18 14 52.8	-2.7
MTP					Sn	18 15 09.4	-2.4
MTP	Monte Pirata	1.26	94	IAML		18 15 12.1	
	comp=E,67nm,0.2s						
MTP				IAML		18 15 14.0	
	comp=N,54nm,0.1s						
CUPR	Culebra, Puert	1.52	86	⇑eP	Pn	18 14 56.9	-2.1
CUPR	Culebra, Puert	1.52	86	eS	Sn	18 15 15.3	-2.8
CUPR	Culebra, Puert	1.52	86		Pn	18 14 56.9	-2.1
CUPR				IAML		18 15 55.1	
	comp=N,36nm,3.2s						
CUPR	Culebra, Puert	1.52	86		Sn	18 15 15.3	-2.8
CUPR	Culebra, Puert	1.52	86	IAML		18 15 12.5	
	comp=E,24nm,2.7s						
CDVI	St. Croix	2.05	102	Pn	Pn	18 15 04.0	-2.4

*TUL **03** 18:28:47.2±0.9, 36°.85N±0°.03×98°.28W±0°.05, h6^{km}±7^{km}, ML3.0, mb_Lg2.7/44(NEIC), Error ellipse: s-maj=5.6km s-min=3.3km az=107.0*

*NEIC **03** 18:28:47.9±1.2, 36°.86N±0°.03×98°.29W±0°.06, h7^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=4.5km az=112.0*

*ANF **03** 18:28:48.6±2.4, 36°.80N×98°.31W, h8^{km}±17^{km}, ML3.6/8, Error ellipse: s-maj=7.4km s-min=4.8km az=32.0*

ISC 03 18:28:47.4±1.2**, 36°.84N**±0°.03×**98°.26W**±0°.03**, h4**^{km}±10^{km}**, n63, σ0^{s}.83**/66**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.27	64		Pg	18 28 52.9	+0.2
KAN14				Sg	Sg	18 28 56.9	+0.7
KAN10	Anthony SW Sta	0.32	25		Pg	18 28 53.5	-0.1
KAN10				Sg	Sg	18 28 58.1	+0.4
KAN08	Anthony NE Sta	0.45	31		Pg	18 28 56.1	-0.1
KAN08				Sg	Sg	18 29 02.1	+0.1
KAN12	Harper NE Stat	0.51	25		Pg	18 28 56.9	-0.2
KAN12				Sg	Sg	18 29 04.2	+0.4
KAN13	South Haven SW	0.65	74		Pg	18 28 59.9	0.0
U32A	Winter Ranch,	0.75	233		Pg	18 29 01.4	-0.4
U32A				Sg	Sg	18 29 11.3	-0.2
U32A	Winter Ranch,	0.75	233	P		18 29 01.3	
	baz=51						
U32A				S		18 29 11.6	
	baz=51						
T35A	Sooner Cattle	1.41	86		Pn	18 29 13.3	-0.6
T35A					Sb	18 29 32.4	-0.2
T35B	Sooner Cattle	1.41	86	P		18 29 13.3	
	baz=268						
T35B				S		18 29 32.4	
	baz=268						
QUOK	Quay	1.42	117		Pn	18 29 13.5	-0.5
OK031	S. Brethren Rd	1.45	127		Pn	18 29 13.8	-0.6
OK025	Westminster Rd	1.46	149		Pn	18 29 14.2	-0.4
OK030	Cody Creek RV	1.50	127		Pn	18 29 14.6	-0.5

OKCFA	Oklahoma City	1.56	155		Pn	18 29 15.5	-0.5
R32A	Long Quarter,	1.62	347		Pn	18 29 16.1	-0.7
R32A				IAmb_Lg		18 29 39.7	
	comp=Z,36nm,0.8s						
R32A	Long Quarter,	1.62	347	P		18 29 16.8	
	baz=168						
R32A				S		18 29 38.1	
	baz=168						
WMOK	Wichita Mounta	2.14	192	P	Pn	18 29 24.3	+0.3
	baz=11						
WMOK	Wichita Mounta	2.14	192		Pn	18 29 24.2	+0.3
WMOK	Wichita Mounta	2.14	192	P		18 29 24.0	
	baz=11						
WMOK				S		18 29 53.6	
	baz=11						
CBKS	Cedar Bluff	2.29	330	P	Pn	18 29 26.5	+0.4
	baz=149						
CBKS				S	Sn	18 29 55.4	+0.7
	baz=149						
CBKS	Cedar Bluff	2.29	330		Pn	18 29 26.5	+0.4
CBKS	Cedar Bluff	2.29	330	P		18 29 26.4	
	baz=149						
CBKS				S		18 29 55.4	
	baz=149						
KSU1	Kansas State U	2.61	30	S	Sb	18 30 07.1	-0.1
	baz=211						
KSU1	Kansas State U	2.61	30	Pn	Pn	18 29 30.2	-0.1
KSU1				IAmb_Lg		18 30 15.4	
	comp=Z,26nm,0.8s						
U38A	Gravette	3.14	96		Pn	18 29 37.4	-0.4
U38A				IAmb_Lg		18 30 35.2	
	comp=Z,20nm,0.8s						
X37A	Clayton	3.25	133	Pn	Pn	18 29 39.0	-0.2
X37A				IAmb_Lg		18 30 34.0	
	comp=Z,22nm,0.9s						
X37A	Clayton	3.25	133	P		18 29 39.4	
	baz=315						
AMTX	Amarillo	3.39	236	P	Pn	18 29 41.9	+0.7
	baz=54						
AMTX	Amarillo	3.39	236	Pn	Pn	18 29 41.5	+0.2
AMTX				IAmb_Lg		18 30 34.6	
	comp=Z,25nm,0.7s						
AMTX	Amarillo	3.39	236	P		18 29 41.7	
	baz=54						
HHAR	Hobbs	3.52	98		Pn	18 29 42.7	-0.3
HHAR				IAmb_Lg		18 30 44.8	
	comp=Z,22nm,0.8s						
Z35A	Perchaven, San	3.60	166		Pn	18 29 43.5	-0.4
Z35A				IAmb_Lg		18 30 50.9	
	comp=Z,18nm,1.1s						
W39A	Magazine	3.98	113	P	Pn	18 29 49.4	+0.1
	baz=296						
W39A				S	Sn	18 30 37.5	+1.1
	baz=296						
W39A	Magazine	3.98	113		Pn	18 29 48.7	-0.6
W39A				IAmb_Lg		18 30 57.2	
	comp=Z,18nm,0.9s						
S39A	Bolivar	4.03	76	Pn	Pn	18 29 48.8	-1.2
KSCO	Kaye Shedlock’	4.08	303		Pn	18 29 49.0	-1.6
KSCO				IAmb_Lg		18 31 03.3	
	comp=Z,14nm,0.8s						
ABTX	Abilene, Hawle	4.36	196	Pn	Pn	18 29 55.3	+0.9
U40A	Yellville	4.38	95	Pn	Pn	18 29 54.9	+0.2
U40A				IAmb_Lg		18 31 15.2	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	4.45	120	P	Pn	18 29 56.7	+1.1
	baz=302						
MIAR	Mount Ida	4.45	120	Pn	Pn	18 29 56.3	+0.7
MIAR				IAmb_Lg		18 31 15.8	
	comp=Z,16nm,0.9s						
MIAR	Mount Ida	4.45	120	P		18 29 56.7	
	baz=302						
Z38A	Mt. Pleasant	4.47	142	Pn	Pn	18 29 56.5	+0.5
N35A	Tabor	4.51	26	Pn	Pn	18 29 55.7	-0.7
P38A	Dawn	4.65	52	Pn	Pn	18 29 58.4	0.0
MSTX	Muleshoe	4.66	233	Pn	Pn	18 29 60.0	+1.2
MSTX				IAmb_Lg		18 31 17.8	
	comp=Z,13nm,0.8s						
MGMO	Mountain Grove	4.81	84	Pn	Pn	18 30 00.6	0.0
WHTX	Lake Whitney,	4.88	172	P	Pn	18 30 01.8	+0.2
	baz=352						
WHTX	Lake Whitney,	4.88	172	IAmb_Lg		18 31 34.0	
	comp=Z,13nm,1.1s						
T25A	Trinidad	4.93	275	Pn	Pn	18 29 59.8	-2.7
T25A				IAmb_Lg		18 31 22.9	
	comp=Z,21nm,0.9s						
R40A	Maddies Statio	4.98	71		Pn	18 30 01.9	-1.1
X40A	Basin Creek Fa	5.00	116	P	Pn	18 30 03.8	+0.5
	baz=300						
X40A	Basin Creek Fa	5.00	116	Pn	Pn	18 30 03.9	+0.5
FCAR	Ozark Folk Cen	5.04	99	IAmb_Lg		18 31 27.0	
	comp=Z,10nm,0.8s						
OGNE	Ogallala	5.05	326	Pn	Pn	18 30 04.6	+0.7
WHAR	Wooly Hollow	5.08	106	Pn	Pn	18 30 04.2	-0.1
W41B	Gary Mavity, V	5.15	107	Pn	Pn	18 30 05.2	-0.1
W41B				IAmb_Lg		18 31 33.4	
	comp=Z,18nm,1.0s						
237A	Washetta, Mont	5.23	156	Pn	Pn	18 30 05.9	-0.5
WLAR	White Oak Lake	5.26	125	Pn	Pn	18 30 05.4	-1.4
L34A	Svendsen Farm,	5.33	15	Pn	Pn	18 30 06.9	-0.8
N38A	Joes South For	5.57	43	Pn	Pn	18 30 11.0	-0.1
P40A	Paris	5.58	59	Pn	Pn	18 30 11.4	+0.2
P40A				IAmb_Lg		18 31 57.6	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	5.71	76		Pn	18 30 13.3	+0.2
Z41A	Richland Creek	5.73	127	Pn	Pn	18 30 10.7	-2.5
T42A	Van Buren	5.75	86	Pn	Pn	18 30 11.9	-1.6
LCAR	Lake Charles	5.78	96	Pn	Pn	18 30 14.2	+0.2
SDCO	Great Sand Dun	5.84	281	Pn	Pn	18 30 12.7	-2.4
Q24A	Divide	5.84	293	Pn	Pn	18 30 14.6	-0.5
Q24A				IAmb_Lg		18 31 50.5	
	comp=Z,9.3nm,0.8s						
435B	Jarrell	6.07	174	IAmb_Lg		18 32 08.7	
	comp=Z,16nm,0.9s						
HBAR	Harrisburg	6.28	99	Pn	Pn	18 30 20.6	-0.2
N23A	Red Feather La	7.23	306	IAmb_Lg		18 32 40.9	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	8.50	331	IAmb_Lg		18 33 28.8	
	comp=Z,7.4nm,1.0s						

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*IDC **03** 18:32:04.2±0.9, 67°.18N×20°.95E, h0^{km}, mb1 3.7/5, mb1mx3.2/48, mbtmp3.6/5, ML2.7/5, Error ellipse: s-maj=14.1km s-min=6.7km az=110.0*

*HEL **03** 18:32:04.4±0.0, 67°.19N×20°.68E, h0^{km}, ML2.0(UPP), Explosion*

*NAO **03** 18:32:04.7±1.0, 67°.17N×21°.21E, ML2.5*

*BER **03** 18:32:05.7±2.4, 67°.14N×20°.57E, h0^{km}, ML2.1, ML2.5(NAO), Suspected explosion*

ISC 03 18:32:03.7±0.7**, 67°.18N**±0°.02×**20°.69E**±0°.03**, h0^{km}, n42, σ1^s.43**/67**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.08	219	*i* P	Pg	18 32 05.7	+0.6
DUNU				*i* S	Sg	18 32 06.8	+0.8
RATU	Laukkuluspa	0.77	327	*i* P	Pg	18 32 17.9	-0.5
RATU				*i* S	Sg	18 32 27.9	-0.6
SALU	Saltoluokta	0.87	284	*i* P	Pg	18 32 19.9	-0.4
PAJU	Pajala	0.96	98	*e*P	Pg	18 32 21.8	-0.2
LANU	Lannavaara	1.00	29	*e*PB	Pb	18 32 23.1	-0.8
KOVU	Salmi	1.07	349	*e*P	Pg	18 32 23.2	-0.9
KALU	Kalix	1.70	140	*e*PG	Pn	18 32 35.1	+0.6
KALU				*e*SN	Sb	18 32 58.3	+0.6
TOF	Tornio	1.82	126	*e*P	Pn	18 32 36.7	+0.5
TOF				*e*SN	Sb	18 33 01.3	+0.2
KIF	Kilpisjarvi	1.83	1	Pn	Pb	18 32 37.3	-0.7
KIF				Sn	Sg	18 33 03.0	+0.5
KIF	Kilpisjarvi	1.83	1	Pn	Pb	18 32 37.3	-0.7
KIF				Sn	Sg	18 33 03.0	+0.5
KIF	Kilpisjarvi	1.83	1	*e*P	Pb	18 32 37.0	-1.0
KIF				*e*SG	Sg	18 33 03.1	+0.6
KTK1	Kautokeino	2.07	26	Pn	Pb	18 32 41.2	-0.9
KTK1				Sn	Sn	18 33 06.0	-0.2
KTK1	Kautokeino	2.07	26	*e*P	Pb	18 32 41.2	-0.9
KTK1				*e*S	Sn	18 33 06.1	-0.1
KTK1				IAML		18 33 09.3	
	comp=Z,35nm,0.3s						
RNF	Rovaniemi	2.18	103	*e*P	Pn	18 32 42.1	+1.0
RNF				*e*SG	Sb	18 33 11.3	0.0
STEI	Steigen	2.22	292	*e*P	Pn	18 32 41.2	-0.5
STEI				IAML		18 33 14.4	
	comp=Z,14nm,0.4s						
SGF	Sodankyl	2.28	81	*e*P	Pn	18 32 43.5	+1.1
BURU	Burvik	2.62	174	*e*P	Pn	18 32 48.3	+1.1
BURU				*e*S	Sn	18 33 21.3	+1.6
ARA0	ARCESS Array S	2.96	35	Pn	Pn	18 32 52.3	+0.4
	baz=216,slow=14						
ARA0				Sn	Sn	18 33 28.2	+0.1
	baz=212,slow=28						
ARA0				Lg	Lg	18 33 32.7	
	baz=214,slow=28						
ARA0	ARCESS Array S	2.96	35	Pn	Pn	18 32 52.3	+0.4
	baz=216,slow=14						
ARA0				Sn	Sn	18 33 28.2	+0.1
	baz=212,slow=28						
ARA0	ARCESS Array S	2.96	35	*e*P	Pn	18 32 52.4	+0.5
ARA0				*e*SG	Sb	18 33 35.4	+1.4
ARCES	ARCESS Array B	2.96	35	Pn	Pn	18 32 52.8	+0.9
	baz=213,slow=13,SNR=59						
ARCES				Sn	Sn	18 33 28.3	+0.2
	baz=217,slow=18,SNR=2.3						
ARCES				Lg	Lg	18 33 32.8	
	baz=215,slow=26,SNR=16						
OUL	Oulu	2.98	132	*e*PB	Pb	18 32 55.6	-2.0
OUL				*e*SB	Sb	18 33 35.0	+0.5
OUF	Merijarvi	3.28	148	*e*P	Pn	18 32 57.4	+1.2
OUF				*e*SG	Sg	18 33 47.1	-1.7
VRF	Varrio	3.48	76	*e*PG	Pb	18 33 06.4	+0.3
MSF	Maaselka	3.57	107	*e*P	Pn	18 33 00.7	+0.5
KU6	Riekki	3.85	103	*e*P	Pn	18 33 04.7	+0.7
HUSU	Husum	3.91	190	*e*S	Sn	18 33 50.5	-0.7
VAF	Ylistaro	4.24	168	*e*P	Pn	18 33 10.7	+1.3
VAF				*e*SG	Sg	18 34 16.4	-3.3
APA0	Apatity Array	4.77	79	Pn	Pn	18 33 16.5	-0.1
	baz=272,slow=14						
APA0				Sn	Sn	18 34 11.6	-0.9
	baz=283,slow=28						
APA0				Lg	Lg	18 34 28.2	
	baz=290,slow=28						
APA0	Apatity Array	4.77	79	Pn	Pn	18 33 16.5	-0.1
	baz=272,slow=14						
APA0				Sn	Sn	18 34 11.6	-0.9
	baz=283,slow=28						
FIA0	FINESS Array S	6.21	155	Pn	Pn	18 33 37.4	+0.8
	baz=346,slow=14						
FIA0				Sn	Sn	18 34 47.3	-0.8
	baz=347,slow=28						
FIA0				Lg	Lg	18 35 15.7	
	baz=347,slow=28						
FIA0	FINESS Array S	6.21	155	Pn	Pn	18 33 37.4	+0.8
	baz=346,slow=14						
FIA0				Sn	Sn	18 34 47.3	-0.8
	baz=347,slow=28						
FIA0				Sg	Sb	18 35 15.7	+8.2
	baz=347,slow=28						
FINES	FINESS Array B	6.21	155	Pn	Pn	18 33 37.5	+1.0
	comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=7.2						
FINES				Sn	Sn	18 34 47.0	-1.2
	comp=Z,0.4nm,0.3s,baz=336,slow=23,SNR=8.2						
FINES				Lg	Lg	18 35 17.5	
	comp=Z,0.5nm,0.3s,baz=339,slow=31,SNR=5.3						
NB2	NORSAR Subarra	7.42	218	Pn	Pn	18 33 53.3	+0.2
NB2	NORSAR Subarra	7.42	218	Pn	Pn	18 33 53.3	+0.2
NOA	NORSAR Array B	7.42	218	Pn	Pn	18 33 53.3	+0.2
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=4.6						
NOA				Sn	Sn	18 35 14.5	-3.4
	comp=Z,0.0nm,0.3s,baz=14,slow=18,SNR=2.0						
NOA				Lg	Lg	18 35 55.8	
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=2.1						
NRA0	NORESS Array S	7.61	216	Pn	Pn	18 33 54.8	-0.9
	baz=25,slow=14						
NRA0	NORESS Array S	7.61	216	Pn	Pn	18 33 54.8	-0.9
	baz=25,slow=14						
SPA0	Spitsbergen Ar	11.13	355	Pn	Pn	18 34 43.3	-0.4
	baz=167,slow=12						
SPA0	Spitsbergen Ar	11.13	355	Pn	Pn	18 34 43.3	-0.4
	baz=167,slow=12						
SPITS	Spitsbergen Ar	11.13	355	Pn	Pn	18 34 43.1	-0.6
	baz=160,slow=13,SNR=2.1						
EKA	Eskdalemuir Ar	16.36	235	Pn	Pn	18 35 55.7	+1.3
	baz=50,slow=16,SNR=2.5						

IDC 03 18:33:50.2±5.0**, 13°.19S**×**109°.75W, h0^{km}, mb3.5**/3**, mb1 4.0**/3**, mb1mx3.7**/24**, mbtmp3.5**/3**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx3.1**/14**, Error ellipse: s-maj=309.2km s-min=54.6km az=106.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	13.88	178	LR	LR	18 41 17.2	
	comp=Z,104nm,18.5s,baz=10,slow=32						
PLCA	Paso Flores	43.87	136	LR	LR	18 56 60.0	
	comp=Z,56nm,18.8s,baz=168,slow=32						
NVAR	Mina Array Bea	51.96	351	P	P	18 43 00.8	-0.5
	0.8nm,1.0s,baz=179,slow=9.0,SNR=3.7						
PDAR	Pinedale Array	55.67	0	P	P	18 43 28.1	-0.4
	0.3nm,0.8s,baz=160,slow=11,SNR=2.3						
YKA	Yellowknife Ar	75.53	358	P	P	18 45 36.8	+0.6
	0.8nm,1.1s,baz=163,slow=4.7,SNR=5.2						
H11S2	WAKE ISLAND Hy	88.14	289	T	T	20 22 37.4	
	baz=105,slow=74,SNR=12						
H11S1	WAKE ISLAND Hy	88.15	289	T	T	20 22 39.7	
	baz=105,slow=74,SNR=5.9						
H11S3	WAKE ISLAND Hy	88.16	289	T	T	20 22 39.1	
	baz=105,slow=74,SNR=6.9						
H11N3	WAKE ISLAND Hy	88.26	291	T	T	20 22 46.2	
	baz=109,slow=74						
H11N2	WAKE ISLAND Hy	88.28	291	T	T	20 22 47.1	
	baz=109,slow=74						
H11N1	WAKE ISLAND Hy	88.28	291	T	T	20 22 47.5	
	baz=109						
MKAR	Makanchi Array	145.00	346	PKPbc	PKPab	18 53 28.0	-0.9
	0.4nm,0.9s,baz=30,slow=3.8,SNR=2.7						
CMAR	Chiang Mai Arr	151.92	284	PKPbc	PKPbc	18 53 48.0	-0.2
	1.8nm,0.9s,baz=42,slow=0.6,SNR=15						

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*NNC **03** 18:34:04.0±13.0, 38°.02N×72°.02E, h244^{km}±242^{km}, mb2.6, mpv3.9, Error ellipse: s-maj=176.2km s-min=92.7km az=2.0*

ISC 03 18:33:51.6±1.4**, 37°.05N**±0°.09×**71°.7E**±0°.1**, h106^{km}, n18, σ1^s.87**/20**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.31	16	P	Pn	18 35 10.7	+1.8
	SNR=20						
UCH	Uchtor	5.61	22	P	Sn	18 36 14.1	-2.3
	SNR=7.2						
EKS2	Erkin-Say	5.83	15	P	Pn	18 35 18.0	+2.3
	SNR=8.6						
AAK	Ala-Archa	5.98	20	P	Pn	18 35 20.2	+2.4
	SNR=16						
AAK	Ala-Archa	5.98	20	⇑P	Pn	18 35 19.8	+2.0
	6.2nm,0.4s						
AAK				⇑S	Sn	18 36 23.9	-1.1
	6.4nm,0.6s						
KK31	Karatay Array	6.11	352	P	Pn	18 35 21.2	+1.9
	12nm,0.3s,baz=176,slow=12,SNR=509						
KK31				S	Sn	18 36 24.8	-3.0
	1.0nm,0.2s,baz=168,slow=22,SNR=6.6						
CHMS	Chumysh	6.39	21	P	Pn	18 35 25.2	+2.1
	SNR=8.2						
USP	Ospenovka	6.57	18	P	Pn	18 35 28.0	+2.4
	SNR=5.3						
TKM2	Tokmak 2	6.59	26	P	Pn	18 35 28.1	+2.1
	SNR=5.0						
TKM2	Tokmak 2	6.59	26	⇑P	Pn	18 35 27.8	+1.8
	3.5nm,0.5s						
TKM2				⇓S	Sn	18 36 28.8	-11
	0.4nm,0.5s						
DANN	Dangsing	13.37	127	*e*P	Pn	18 36 56.3	-1.0
	4.4nm,0.3s						
KKN	Kakani	14.73	125	*e*P	Pn	18 37 14.1	-0.7
DMN	Daman	14.74	126	*e*P	Pn	18 37 13.7	-1.3
	3.0nm,0.4s						
AB31	Akbulak array	14.88	329	⇓P	Pn	18 37 16.1	-0.1
	0.7nm,0.4s,baz=137,slow=11,SNR=49						
PKIN	Phulchoki	14.95	125	*e*P	Pn	18 37 17.1	-0.6
	6.2nm,0.5s						
PKI	Pulchoki	14.96	125	*e*P	Pn	18 37 17.5	-0.4
	3.5nm,0.4s						
RAMN	Ramite	16.16	124	*e*P	Pn	18 37 32.0	-0.8
	4.7nm,0.4s						
TAPN	Taplejung	16.65	121	*e*P	P	18 37 39.7	+0.2
	3.2nm,0.4s						

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*OTT **03** 18:41:49.9±0.4, 73°.61N×73°.31W, h18^{km}, ML3.1/3, 182km northeast from Pond Inlet, Nu Baffin Bay Seismic Zone.*

*DNK **03** 18:41:54.0±0.7, 73°.73N×73°.66W, h80^{km}±999^{km}, ML2.8*

ISC 03 18:41:45.7±1.0**, 73°.63N**±0°.05×**73°.91W**±0°.06**, h10^{km}, n7, σ3^s.15**/12**, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TULEG	Thule	3.21	22	PN	Pb	18 42 40.1	-2.6
TULEG				SN	Sn	18 43 14.4	+0.2
TULEG				Trac		18 43 15.5	
	comp=Z,30nm,0.2s						
TULEG	Thule	3.21	22	*e*	Pn	18 42 39.0	+3.0
	baz=209,slow=8.6						
TULEG				*i* P	Pb	18 42 40.1	-2.6
TULEG				*i* S	Sn	18 43 13.6	-0.7
TULEG				IAML		18 43 16.0	
	comp=Z,19nm,0.3s						
CLRN	Clyde River	3.57	150	PN	Pn	18 42 43.6	+2.6
CLRN				SN	Sn	18 43 21.0	-2.1
CLRN				Trac		18 43 24.8	
	comp=Z,12nm,0.1s						
UPNV	Upernavik	5.22	91	*i* P	Pn	18 43 07.0	+3.4
UPNV				*e*S	Sn	18 43 60.0	-3.7
UPNV				IAML		18 44 05.8	
	comp=Z,3.8nm,0.4s						
RES	Resolute Bay	5.83	290	PN	Pn	18 43 18.1	+6.1
RES				SN	Sn	18 44 21.3	+2.5
RES				Trac		18 44 22.8	
	comp=Z,2.9nm,0.2s						
FRB	Frobisher Bay	10.11	166	PN	Pn	18 44 12.7	+2.1
KUKN	Kugluktuk,NWT	14.49	267	SN	Sn	18 47 46.5	-4.4

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*IDC **03** 18:51:08.9±0.5, 39°.63N×143°.58E, h0^{km}, mb4.3/32, mb1 4.4/38, mb1mx4.4/49, mbtmp4.4/38, ML4.1/5, MS4.0/32, Ms1 4.0/32, ms1mx3.9/45, Error ellipse: s-maj=15.1km s-min=11.6km az=115.0*

*NIED **03** 18:51:10.0, 39°.69N×143°.68E, h29^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.02; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-0.97; M$_{r\theta}$0.34; M$_{\theta\phi}$-0.38; M$_{\phi r}$0.57; Fault plane solution: M$_0$1.25000×10^{16} NP1:ϕ_s26.00000°, δ61.00000°, λ97.00000°. NP2:ϕ_s192.00000°, δ30.00000°, λ78.00000°.*

*JMA **03** 18:51:09.9±0.2, 39°.69N×143°.68E, h29^{km}, M4.8*

JMA Felt I J1.

*BJI **03** 18:51:12.0±0.0, 39°.68N×143°.27E, h25^{km}, mB5.1/49, mb4.8/72, Ms4.7/64, Ms7 4.5/62*

*MOS **03** 18:51:12.3±0.9, 39°.79N×143°.43E, h28^{km}, mb5.0/30, Error ellipse: s-maj=6.6km s-min=4.2km az=101.7*

*NEIC **03** 18:51:13.4±2.3, 39°.62N±0°.05×143°.35E±0°.08, h25^{km}±5^{km}, mb4.9/126, Error ellipse: s-maj=10.0km s-min=5.1km az=123.0*

*NOU **03** 18:51:14.9, 39°.66N×143°.47E, h53^{km}, mb4.9, Off East Coast of Honshu, Japan*

ISC 03 18:51:12.6±0.8**, 39°.66N**±0°.03×**143°.49E**±0°.04**, h24^{km}**±4^{km}**, n407, σ1^s.67**/446**, mb4.8**/160**, MS4.3**/43**, 18C-9D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.28	283	P	Pn	18 51 34.4	-0.6
JTH				*e*S	Sb	18 51 52.0	0.0
MIYJ	Miyakonagasawa	1.29	267	P	Pn	18 51 34.9	-0.2
MIYJ				*e*S	Sb	18 51 52.7	+0.4
JKEN	Kujiedanarisaw	1.47	292	P	Pn	18 51 36.5	-1.1
OFUJ	Ofunato	1.52	248	P	Pn	18 51 38.0	-0.4
JANG	Nango	1.67	296	P	Pn	18 51 39.6	-0.8
JANG				*e*S	Sn	18 52 00.4	-0.7
JKZ	Kuzumaki	1.69	282	P	Pn	18 51 40.7	0.0
JKZ				*e*S	Sb	18 52 02.9	-1.0
JOM	Ohasama	1.71	264	P	Pn	18 51 41.4	+0.5
JKMT	Kesennumamotoy	1.78	242	P	Pn	18 51 41.4	-0.5
JMK	Ichinoseki	1.90	249	P	Pn	18 51 43.4	-0.1
JSZI	Iwateshizukuis	1.96	273	P	Pn	18 51 45.1	+0.8
JIO	Ouri	2.06	235	P	Pn	18 51 44.9	-0.8
JIO				*e*S	Sn	18 52 11.8	+1.3
JIKH	Ishinomakikobu	2.08	230	P	Pn	18 51 44.9	-1.0
JARK	Aomorirokkasho	2.10	310	P	Pn	18 51 46.1	-0.2
JARK				*e*S	Sn	18 52 12.4	+0.7
JTM	Tenmabayashi	2.17	302	P	Pn	18 51 47.2	0.0
JTM				*e*S	Sn	18 52 13.8	+0.6
JTM	Tenmabayashi	2.17	302	Pn	Pn	18 51 47.3	+0.2
JRG	Rokugo	2.22	264	P	Pn	18 51 48.6	+0.6
JAH	Hinai	2.25	284	P	Pn	18 51 49.2	+0.8
JOFO	Osakifurukawao	2.27	243	P	Pn	18 51 49.0	+0.5
JAHD	Aomorihigashid	2.29	315	P	Pn	18 51 48.5	-0.4
ERM	Erimo	2.36	354	d*e*P	Pn	18 51 50.0	+0.1
ERM				pmax	pmax		
	comp=Z,125nm,0.6s						
ERM	Erimo	2.36	354	Pn	Pn	18 51 49.5	-0.3
JOT	Ohata	2.53	314	P	Pn	18 51 51.7	-0.5
JOT				*e*S	Sn	18 52 22.9	+0.7
JYW	Yuwa	2.54	268	P	Pn	18 51 53.3	+1.1
JYK	Kaneyama	2.54	254	P	Pn	18 51 52.9	+0.6
JTHR	Tokachihiroo	2.63	357	P	Pn	18 51 52.7	-0.8
JTHR				*e*S	Sn	18 52 22.9	-1.8
JNBK	Urakawa-nobuka	2.67	348	P	Pn	18 51 54.5	+0.4
JNBK				*e*S	Sn	18 52 25.0	-0.7
JMM	Marumori	2.77	230	Pn	Pn	18 51 54.6	-0.8
JKB	Kayabe	2.90	321	P	Pn	18 51 57.9	+0.7
JCH	Churui	2.95	358	P	Pn	18 51 56.8	-1.1
JCH				*e*S	Sn	18 52 30.8	-1.8
JFT	Otama	3.27	230	P	Pn	18 52 02.1	-0.3
JAK	Akkeshi	3.45	15	P	Pn	18 52 03.0	-1.8
JAK				*e*S	Sn	18 52 42.8	-2.1
JEW	Eniwo	3.52	335	P	Pn	18 52 07.1	+1.2
JEW				*e*S	Sn	18 52 47.4	+0.6
JEW	Eniwo	3.52	335	Pn	Pn	18 52 06.8	+0.9
JAR	Ashorobuto	3.64	3	P	Pn	18 52 05.7	-1.7
JAR				S	Sn	18 52 47.7	-1.8
NMR	Nemuro--Hokkai	4.07	24	⇑*i*P	Pn	18 52 11.2	-2.1
NMR				*i* S	Sn	18 52 55.5	-4.6
JYT	Yasato	4.30	218	Pn	Pn	18 52 14.7	-1.9
GLVR	Golovnino	4.35	20	*e*P	Pn	18 52 15.2	-1.9
GLVR				*e*S	Sn	18 53 02.7	-4.3
GLVR				pmax	pmax		
	comp=Z,151nm,0.1s						
GLVR				smax	smax		
	comp=E,934nm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
JSD	Sado	4.39	250	Pn	Pn	18 52 18.1	+0.4
JKA	Kamikawa-asahi	4.50	352	Pn	Pn	18 52 19.4	+0.1
ASAJ	Asahikawa	4.50	352	Pn	Pn	18 52 19.3	+0.1
	comp=N,14nm,0.3s,baz=200,slow=14,SNR=72						
ASAJ				Sn	Sn	18 53 09.2	-1.6
	comp=N,22nm,0.3s,baz=284,slow=17,SNR=3.8						
ASAJ				LR	LR	18 54 16.8	
	comp=N,772nm,20.9s,baz=146,slow=41						
RUSJ	Misakicho	4.63	16	*e*P	Pn	18 52 19.5	-1.5
RUSJ				*e*S	Sn	18 53 11.2	-2.7
GRPR	Tuman	4.65	21	⇑*i*P	Pn	18 52 18.9	-2.4
GRPR				*i* S	Sn	18 53 08.3	-6.2
GRPR				pmax	pmax		
	comp=Z,258nm,0.4s						
GRPR				pmax	pmax		
	comp=N,129nm,0.3s						
GRPR				pmax	pmax		
	comp=E,168nm,0.3s						
GRPR				smax	smax		
	comp=N,1μm,0.4s						
GRPR				smax	smax		
	comp=E,4μm,0.5s						
YUK	Yuzh-Kuril'sk	4.71	21	d *i*P	Pn	18 52 20.1	-2.1
YUK				*i* S	Sn	18 53 10.5	-5.5
YUK				pmax	pmax		
	comp=Z,440nm,0.3s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
YUK				MLR	MLR		
	comp=Z,857nm,13.0s						
MJAR	Matsushiro Arr	5.20	235	Pn	Pn	18 52 30.3	+1.4
	comp=Z,1.4nm,0.3s,baz=43,slow=13,SNR=184						
MJAR				Sn	Sb	18 53 41.5	-3.3
	baz=64,slow=11,SNR=1.9						
MJAR				LR	LR	18 54 44.6	
	comp=Z,1μm,19.6s,baz=65,slow=41						

MAJO	**Matsushiro**	**5.20**	**235**	*de*P	**Pn**	**18 52 29.5**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,130nm,0.7s						
MAJO	**Matsushiro**	**5.20**	**235**	Pn	**Pn**	**18 52 30.2**	**+1.2**
MAT	**Matsushiro**	**5.20**	**235**	P	**Pn**	**18 52 30.1**	**+1.2**
MAT				*e*S	**Sn**	**18 53 32.0**	**+3.9**
MJB9	**Matsu-Tunnel**	**5.20**	**235**		**Pn**	**18 52 29.9**	**+1.0**
JGF	**Kuroka**	**6.33**	**232**		**Pn**	**18 52 45.2**	**+0.7**
KUR	**Kuril'sk**	**6.44**	**29**	⇓*i*P	**Pn**	**18 52 45.9**	**0.0**
KUR				*i* S	**Sn**	**18 53 52.4**	**-6.1**
KUR				pmax	pmax		
	comp=Z,120nm,0.4s						
KUR				pmax	pmax		
	comp=E,58nm,0.2s						
KUR				pmax	pmax		
	comp=N,37nm,0.3s						
KUR				smax	smax		
	comp=E,564nm,0.4s						
KUR				smax	smax		
	comp=N,213nm,0.3s						
KUR				MLR	MLR		
	comp=Z,838nm,12.0s						
JSG	**Sagara**	**6.53**	**222**	Pn	**Pn**	**18 52 45.8**	**-1.4**
INU	**Inuyama**	**6.71**	**232**	Pn	**Pn**	**18 52 50.9**	**+1.3**
JHJ2	**Mitsune**	**7.18**	**205**	Pn	**Pn**	**18 52 54.8**	**-1.3**
JHJ	**Hachijo jima 2**	**7.18**	**206**	Pn	**Pn**	**18 52 55.1**	**-1.0**
	comp=Z,26nm,0.3s,baz=320,slow=23,SNR=9.5						
JHJ				Sn	Sn	18 54 07.5	-9.4
	comp=Z,23nm,0.3s,baz=58,slow=19,SNR=1.4						
JHJ				LR	LR	18 55 29.0	
	comp=Z,357nm,21.0s,baz=85,slow=36						
YSS	**Yuzh-Sakhalins**	**7.31**	**356**	⇓*e*P	**Pn**	**18 52 58.7**	**+0.9**
YSS				*e*S	**Sn**	**18 54 16.4**	**-3.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				smax	smax		
	comp=N,70nm,0.4s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.31**	**356**	Pn	**Pn**	**18 52 58.3**	**+0.5**
TEY	**Ternei**	**7.40**	**319**	⇑*e*P	**Pn**	**18 53 02.8**	**+3.7**
TEY				pmax	pmax		
	comp=N,50nm,0.7s						
TEY				pmax	pmax		
	comp=E,50nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.9s						
TEY				MLR	MLR		
	comp=N,200nm,15.0s						
TEY				MLR	MLR		
	comp=Z,200nm,14.0s						
JWT	**Wachi**	**7.77**	**238**	Pn	**Pn**	**18 53 06.0**	**+1.8**
UGL	**Uglegorsk**	**9.47**	**354**	P	Pn	18 53 33.4	+6.0
UGL				S	**Sn**	**18 55 04.7**	**-8.2**
UGL				MLR	MLR		
	comp=Z,1µm,20.0s						
UGL				MLR	MLR		
	comp=N,2µm,18.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
JHS	**Saijyo**	**9.48**	**244**	Pn	**Pn**	**18 53 27.8**	**+0.2**
USA0B	**Ussuriysk Arra**	**9.69**	**302**	P	**Pn**	**18 53 31.3**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.69**	**302**	Pn	**Pn**	**18 53 31.3**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.69**	**302**	Pn	**Pn**	**18 53 33.0**	**+2.6**
	baz=99,slow=14,SNR=55						
USRK				LR	LR	18 57 17.4	
	comp=E,1µm,18.5s,baz=100,slow=38						
JMN	**Monobe**	**9.72**	**235**	Pn	**Pn**	**18 53 28.2**	**-2.8**
TYV	**Tymovskoe**	**11.21**	**357**	*e*P	**Pn**	**18 53 51.7**	**+0.4**
TYV				*e*S	**Sn**	**18 55 58.7**	**+2.9**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,300nm,4.3s						
TYV				smax	smax		
	comp=E,600nm,6.9s						
TYV				MLR	MLR		
	comp=Z,2µm,20.0s						
MDJ	**Mudanjiang**	**11.44**	**300**	P	**Pn**	**18 53 56.0**	**+1.6**
MDJ				S	**Sn**	**18 56 02.4**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,12nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,410nm,8.5s						
MDJ				LR	LR		
	comp=Z,1µm,13.9s						
MDJ				LR	LR		
	comp=Z,2µm,15.1s						
MDJ				LR	LR		
	comp=Z,3µm,16.0s						
MDJ	**Mudanjiang**	**11.44**	**300**	Pn	**Pn**	**18 53 55.6**	**+1.2**
JNU	**Nakatsue**	**12.07**	**241**	Pn	**Pn**	**18 54 03.2**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=226,slow=2.8,SNR=5.5						
JNU				LR	LR	18 59 01.8	
	comp=Z,1µm,18.7s,baz=49,slow=39						
JNU	**Nakatsue**	**12.07**	**241**	Pn	**Pn**	**18 54 02.7**	**-0.4**
GRNR	**Gornyy**	**12.16**	**338**	⇑*i*P	**Pn**	**18 54 04.3**	**0.0**
GRNR				*e*S	**Sn**	**18 56 21.4**	**+2.4**
GRNR				pmax	pmax		
	comp=E,9.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,890nm,14.0s						
GRNR				MLR	MLR		
	comp=N,500nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,800nm,14.0s						
KSRS	**Korea Array**	**12.38**	**265**	Pn	**Pn**	**18 54 11.5**	**+4.1**
	comp=Z,0.7nm,0.3s,baz=73,slow=14,SNR=11						
KSRS				LR	LR	18 58 37.0	
	comp=Z,1µm,18.4s,baz=75,slow=36						
KS19	**Wonju Array Si**	**12.41**	**265**	Pn	**Pn**	**18 54 08.9**	**+1.1**
KLR	**Kul'dur**	**12.70**	**323**	Pn	**Pn**	**18 54 11.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=137,slow=18,SNR=14						
KLR				LR	LR	18 59 17.2	
	comp=Z,838nm,20.3s,baz=134,slow=38						
JSU	**Suzuyama**	**13.36**	**236**	Pn	**Pn**	**18 54 20.5**	**-0.2**
OKH	**Okha**	**13.90**	**359**	MLR	MLR		
	comp=E,2µm,20.0s						
OKH				MLR	MLR		
	comp=Z,1µm,18.0s						
OKH				MLR	MLR		
	comp=N,2µm,16.0s						
PEA0B	**Petropavlovsk-**	**16.60**	**31**	P	**Pn**	**18 55 04.7**	**+1.1**
PEA0B				pmax	pmax		
	comp=Z,175nm,1.5s						
PEA0B	**Petropavlovsk-**	**16.60**	**31**	Pn	**Pn**	**18 55 04.7**	**+1.1**
PEA0B				IAmb	IAmb	18 55 07.9	
	comp=Z,175nm,1.5s						
PETK	**Petropavlovsk-**	**16.60**	**31**	Pn	**Pn**	**18 55 02.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=218,slow=9.0,SNR=1.9						
PETK				LR	LR	19 01 04.1	
	comp=Z,237nm,19.8s,baz=217,slow=36						
DL2	**Dalian**	**16.94**	**274**	P	**Pn**	**18 55 08.7**	**+0.8**
DL2				S	**Sn**	**18 58 15.9**	**+0.5**
DL2				pmax	pmax		
	comp=Z,62nm,1.2s						
DL2				pmax	pmax		
	comp=Z,230nm,5.3s						
DL2				LR	LR		
	comp=Z,690nm,14.5s						
DL2				LR	LR		
	comp=Z,730nm,13.7s						
DL2				LR	LR		
	comp=Z,990nm,15.1s						
ZEA	**Zeya**	**17.89**	**327**	*e*P	**Pn**	**18 55 16.7**	**-2.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=N,700nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,13.0s						
HIA	**Hailar**	**19.41**	**307**	*ce*P	**P**	**18 55 34.9**	**-2.0**
HIA				pmax	pmax		
	comp=Z,20nm,0.7s						
HIA	**Hailar**	**19.41**	**307**	P	**P**	**18 55 35.1**	**-1.7**
MA2	**Magadan**	**20.46**	**11**	P	**P**	**18 55 48.7**	**+0.5**
	comp=Z,24nm,0.6s,baz=199,slow=9.4,SNR=34						
MA2				LR	LR	19 04 39.2	
	comp=Z,408nm,18.3s,baz=200,slow=40						
MA2	**Magadan**	**20.46**	**11**	*c i*P	**P**	**18 55 48.6**	**+0.4**
MA2				pmax	pmax		
	comp=Z,18nm,0.7s						
MA2	**Magadan**	**20.46**	**11**		**P**	**18 55 48.9**	**+0.7**
MA2				IAmb	IAmb	18 55 49.9	
	comp=Z,31nm,0.6s						
BJI	**Beijing**	**20.95**	**280**	P	**P**	**18 55 51.8**	**-1.8**
BJI				S	**S**	**18 59 43.8**	**-2.0**
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
BJI				LR	LR		
	comp=Z,510nm,14.0s						
BJI				LR	LR		
	comp=Z,900nm,15.3s						
BJI				LR	LR		
	comp=Z,500nm,16.9s						
BJT	**Baijiatuau**	**20.95**	**280**	P	**P**	**18 55 51.3**	**-2.5**
BJT				pmax	pmax		
	comp=Z,21nm,1.2s						
BJT	**Baijiatuau**	**20.95**	**280**	P	**P**	**18 55 51.2**	**-2.5**
TIA	**Tai'an**	**21.05**	**269**	P	**P**	**18 55 53.2**	**-1.6**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
TIA				pmax	pmax		
	comp=Z,160nm,3.5s						
TIA				LR	LR		
	comp=Z,760nm,12.8s						
TIA				LR	LR		
	comp=Z,1µm,15.6s						
TIA				LR	LR		
	comp=Z,2µm,14.2s						
NJ2	**Nanjing**	**21.32**	**257**	*e*P	**P**	**18 55 58.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=Z,950nm,13.3s						
NJ2				LR	LR		
	comp=Z,800nm,14.4s						
NJ2				LR	LR		
	comp=Z,720nm,16.3s						
TATO	**Taipei**	**23.58**	**238**	P	**P**	**18 56 21.5**	**0.0**
TATO				IAmb	IAmb	18 56 21.6	
	comp=Z,74nm,1.2s						
YHNB	**Yeheng**	**23.86**	**238**		**P**	**18 56 23.9**	**-0.4**
YHNB				IAmb	IAmb	18 56 57.8	
	comp=Z,53nm,1.4s						
YAK	**Yakutsk**	**23.93**	**344**	P	**P**	**18 56 23.2**	**-1.3**
	comp=Z,10.0nm,0.4s,baz=162,slow=1.1,SNR=23						
YAK				S	**S**	**19 00 35.4**	**-3.9**
	comp=Z,1.0nm,0.4s,baz=310,slow=7.9,SNR=1.4						
YAK				LR	LR	19 06 18.7	
	comp=Z,236nm,19.7s,baz=122,slow=38						
YAK	**Yakutsk**	**23.93**	**344**	*e*P	**P**	**18 56 22.6**	**-1.8**
YAK				*e**PP	**pP**	**18 56 30.2**	**-0.7**
YAK				*e*		18 56 53.2	
YAK				*e*		19 00 03.6	
YAK				*e*S	**S**	**19 00 38.4**	**-0.9**
YAK				*e**SS	**sS**	**19 00 51.9**	**+1.7**
YAK				*e*SS	**SnSn**	**19 01 22.5**	**+2.9**
YAK				*e*		19 07 29.5	
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,32nm,1.0s						
YAK				pmax	pmax		
	comp=N,28nm,1.1s						
YAK				smax	smax		
	comp=N,152nm,2.5s						
YAK				smax	smax		
	comp=E,36nm,1.8s						
YAK				MLR	MLR		
	comp=Z,238nm,14.0s						
YAK				MLR	MLR		
	comp=N,236nm,16.0s						
YAK				MLR	MLR		
	comp=E,222nm,17.0s						
YAK	**Yakutsk**	**23.93**	**344**	P	**P**	**18 56 23.0**	**-1.5**
YAK				IAmb	IAmb	18 56 44.6	
	comp=Z,31nm,0.8s						
CIT	**Chita**	**24.05**	**311**	*e*P	**P**	**18 56 24.6**	**-1.2**
CIT				*e*		18 56 31.2	
CIT				*e*		18 56 35.0	
CIT				*e*		18 56 55.4	
CIT				*e*		18 57 07.7	
CIT				pmax	pmax		
	comp=Z,102nm,2.0s						
NACB	**Ninganchiao**	**24.07**	**237**	P	**P**	**18 56 22.3**	**-3.8**
HHC	**Hu-ho-hao-te**	**24.32**	**283**	*e*P	**P**	**18 56 26.6**	**-1.9**
HHC				PP	**PnPn**	**18 56 58.2**	**-0.6**
HHC				S	**S**	**19 00 38.6**	**-7.7**
HHC				sS	pS	19 00 52.4	-1.0
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,6.1s						
HHC				LR	LR		
	comp=Z,610nm,13.2s						
HHC				LR	LR		
	comp=Z,1µm,14.2s						
HHC				LR	LR		
	comp=Z,1µm,15.9s						
SMY	**Shemya**	**24.68**	**48**	P	**P**	**18 56 32.2**	**+0.8**
SMY				pmax	pmax		
	comp=Z,512nm,1.6s						
SMY	**Shemya**	**24.68**	**48**	P	**P**	**18 56 32.2**	**+0.8**
SSLB	**Suanglung**	**24.75**	**237**	P	**P**	**18 56 30.0**	**-2.4**
SSLB				IAmb	IAmb	18 56 32.5	
	comp=Z,29nm,1.0s						
YULB	**Yu-li**	**24.82**	**236**	P	**P**	**18 56 30.5**	**-2.4**
YULB				IAmb	IAmb	18 56 34.4	
	comp=Z,22nm,1.0s						
TPUB	**Ta-pu**	**25.31**	**237**	P	**P**	**18 56 35.9**	**-1.5**
TWG	**Pinlang**	**25.37**	**235**	P	**P**	**18 56 37.1**	**-0.9**
TWG				IAmb	IAmb	18 57 17.0	
	comp=Z,36nm,1.1s						
WHN	**Wuhan**	**25.43**	**258**	⇓P	**P**	**18 56 38.9**	**+0.5**
WHN				S	**S**	**19 01 04.1**	**+0.3**
WHN				pmax	pmax		
	comp=Z,150nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,17.6s						
WHN				LR	LR		
	comp=Z,2µm,16.7s						
WHN				LR	LR		
	comp=Z,2µm,15.7s						
GUMO	**Guam**	**26.00**	**177**	LR	LR	19 05 37.2	
	comp=Z,158nm,19.2s,baz=78,slow=33						
GUMO	**Guam**	**26.00**	**177**	P	**P**	**18 56 41.6**	**-2.1**
GUMO				pmax	pmax		
	comp=Z,532nm,1.4s						
GUMO	**Guam**	**26.00**	**177**	P	**P**	**18 56 41.6**	**-2.1**
ULN	**Ulaanbaatar**	**27.35**	**300**	*c i*P	**P**	**18 56 56.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,37nm,1.7s						
ULN	**Ulaanbaatar**	**27.35**	**300**	P	**P**	**18 56 55.6**	**-0.2**
ULN				IAmb	IAmb	18 56 58.0	
	comp=Z,25nm,1.1s						
SONM	**Songino Array**	**27.79**	**299**	P	**P**	**18 57 00.8**	**+1.0**
	comp=Z,8.2nm,0.7s,baz=93,slow=8.4,SNR=57						
SONM				LR	LR	19 08 42.1	
	comp=Z,658nm,20.3s,baz=86,slow=38						
XAN	**Xi'an**	**28.11**	**269**	P	**P**	**18 57 03.5**	**+0.9**
XAN				pP	sP	18 57 11.9	+0.2
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
XAN				pmax	pmax		
	comp=Z,66nm,3.9s						
XAN				LR	LR		
	comp=Z,360nm,14.1s						
XAN				LR	LR		
	comp=Z,980nm,15.1s						
XAN				LR	LR		
	comp=Z,1µm,15.0s						
XAN	**Xi'an**	**28.11**	**269**	P	**P**	**18 57 02.7**	**+0.1**
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
XAN	**Xi'an**	**28.11**	**269**	P	**P**	**18 57 02.7**	**+0.1**
XAN				IAmb	IAmb	18 57 12.3	
	comp=Z,16nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.28**	**128**	T	T	19 28 05.9	
	baz=318,slow=75,SNR=274						
H11N1	**WAKE ISLAND Hy**	**28.29**	**128**	T	T	19 28 04.8	
	baz=318,slow=75,SNR=208						
H11N3	**WAKE ISLAND Hy**	**28.30**	**128**	T	T	19 28 01.8	
	baz=318,slow=75,SNR=229						
ENH	**Enshi**	**29.25**	**262**	P	**P**	**18 57 12.4**	**-0.4**
ENH				IAmb	IAmb	18 57 22.2	
	comp=Z,29nm,0.8s						
TLY	**Talaya**	**29.95**	**307**	*e*P	**P**	**18 57 18.7**	**0.0**
TLY				pmax	pmax		
	comp=Z,40nm,1.5s						
TLY				MLR	MLR		
	comp=Z,1µm,13.0s						
TLY	**Talaya**	**29.95**	**307**	P	**P**	**18 57 17.8**	**-1.0**
ZAK	**Zakamensk**	**30.03**	**304**	*e*P	**P**	**18 57 19.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH	**Lanzhou**	**31.32**	**276**	*e*P	**P**	**18 57 32.2**	**+1.0**
LZH				pP	sP	18 57 40.2	-0.1
LZH				sP	pwP	18 57 45.6	+5.0
LZH				sS	sS	19 02 51.0	+3.2
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
LZH				LR	LR		
	comp=Z,550nm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
MOY	**Mondy**	**31.58**	**307**	*e*P	**P**	**18 57 33.9**	**+0.6**
MOY				pmax	pmax		
	comp=Z,20nm,1.3s						
TIXI	**Tiksi**	**32.90**	**352**	⇓*e*P	**P**	**18 57 43.8**	**-0.7**
TIXI	**Tiksi**	**32.90**	**352**	P	**P**	**18 57 45.5**	**+1.1**
GYA	**Guiyang**	**33.32**	**258**	⇑P	**P**	**18 57 48.6**	**-0.1**
GYA				pP	sP	18 57 57.4	-0.4
GYA				pmax	pmax		
	comp=Z,21nm,1.1s						
GYA				LR	LR		
	comp=Z,240nm,12.5s						
GYA				LR	LR		
	comp=Z,330nm,14.6s						
GYA				LR	LR		
	comp=Z,490nm,12.6s						
CD2	**Chengdu**	**33.36**	**267**	P	**P**	**18 57 48.7**	**-0.3**
CD2				S	**S**	**19 03 08.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,220nm,5.3s						
CD2				LR	LR		
	comp=Z,2µm,13.3s						
CD2				LR	LR		
	comp=Z,800nm,12.6s						
CD2				LR	LR		
	comp=Z,1µm,14.3s						
GTA	**Gaotai**	**33.43**	**284**	⇑P	**P**	**18 57 50.8**	**+1.1**
GTA				pP	pwP	18 57 59.4	+0.3
GTA				sP	sP	18 58 03.0	+4.2
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA				pmax	pmax		
	comp=Z,83nm,5.4s						
GTA				LR	LR		
	comp=Z,410nm,19.3s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,17.4s						
QIZ	**Qiongzhong**	**35.51**	**244**	P	**P**	**18 58 07.7**	**0.0**
QIZ				S	**S**	**19 03 44.3**	**+2.5**
QIZ				PcS	**PcS**	**19 04 23.8**	**-0.2**
QIZ				LR	LR		
	comp=Z,580nm,15.7s						
QIZ				LR	LR		
	comp=Z,390nm,18.6s						
QIZ				LR	LR		
	comp=Z,550nm,15.7s						
KMI	**Kunming**	**37.01**	**259**	⇓P	**P**	**18 58 21.5**	**+0.8**
KMI				sP	pwP	18 58 32.8	+2.5
KMI				S	**S**	**19 04 04.0**	**-1.1**
KMI				sS	sS	19 04 17.8	+1.9
KMI				SS	**SnSn**	**19 06 28.5**	**-11**
KMI				pmax	pmax		
	comp=Z,15nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,5.2s						
KMI				LR	LR		
	comp=Z,600nm,12.9s						
KMI				LR	LR		
	comp=Z,240nm,11.6s						
KMI				LR	LR		
	comp=Z,500nm,16.1s						
DGZ	**Jazzator, Alta**	**40.24**	**304**	*c i*P	**P**	**18 58 48.9**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,18nm,0.6s						
WMQ	**Urumqi**	**41.17**	**295**	P	**P**	**18 58 56.5**	**+1.4**
WMQ				pP	pwP	18 59 05.6	+1.0
WMQ				sP	sP	18 59 10.6	+6.3
WMQ				pmax	pmax		
	comp=Z,43nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.1s						
WMQ	**Urumqi**	**41.17**	**295**	P	**P**	**18 58 56.1**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,27nm,0.8s						
WMQ	**Urumqi**	**41.17**	**295**	P	**P**	**18 58 56.1**	**+1.0**
WMQ				IAmb	IAmb	18 59 06.8	
	comp=Z,27nm,0.8s						
ZAA0	**Zalesovo Array**	**41.41**	**310**	P	**P**	**18 58 56.8**	**0.0**
ZAA0				IAmb	IAmb	18 59 14.8	
	comp=Z,12nm,0.7s						
ZALV	**Zalesovo Beam**	**41.41**	**310**	P	**P**	**18 58 57.5**	**+0.7**
	comp=Z,7.1nm,0.4s,baz=94,slow=8.2,SNR=63						
ZALV				PcP	**PcP**	**19 00 54.9**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=90,slow=2.9,SNR=3.5						
ZALV				LR	LR	19 16 57.0	
	comp=Z,205nm,20.5s,baz=72,slow=37						
NRIK	**Noril'sk**	**41.60**	**334**	P	**P**	**18 58 58.4**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=129,slow=4.8,SNR=4.9						
NRIK				LR	LR	19 17 17.5	
	comp=Z,290nm,19.1s,baz=108,slow=38						
NRIK	**Noril'sk**	**41.60**	**334**	⇓*e*P	**P**	**18 58 58.6**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NRIK	**Noril'sk**	**41.60**	**334**	P	**P**	**18 58 57.9**	**-0.2**
ZSN	**Zaisan**	**42.30**	**301**	*e*P	**P**	**18 59 04.5**	**+0.2**
	baz=300						
ZSN	**Zaisan**	**42.30**	**301**	*e*P	**P**	**18 59 04.4**	**+0.2**
TTA	**Tatalina**	**42.34**	**36**	P	**P**	**18 59 08.3**	**+3.9**
TTA				pmax	pmax		
	comp=Z,13nm,1.6s						
TTA	**Tatalina**	**42.34**	**36**	P	**P**	**18 59 08.2**	**+3.9**
SVW2	**Sparrevohn**	**42.45**	**39**	P	**P**	**18 59 08.4**	**+3.1**
SVW2				IAmb	IAmb	18 59 49.4	
	comp=Z,23nm,1.5s						
A21K	**Barrow**	**43.40**	**24**	P	**P**	**18 59 12.8**	**0.0**
A21K				IAmb	IAmb	18 59 38.3	
	comp=Z,18nm,1.3s						
CHTO	**Chiang Mai**	**43.54**	**255**	P	**P**	**18 59 13.7**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	**43.54**	**255**	P	**P**	**18 59 13.7**	**-0.8**
TOLI2	**Tolitoli**	**43.60**	**214**	P	**P**	**18 59 16.7**	**+1.7**
LSA	**Lhasa**	**43.63**	**274**	P	**P**	**18 59 17.1**	**+1.3**
LSA				pmax	pmax		
	comp=Z,33nm,1.1s						
LSA	**Lhasa**	**43.63**	**274**	P	**P**	**18 59 17.0**	**+1.3**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**43.63**	**274**	P	**P**	**18 59 16.9**	**+1.2**
MRSI	**Marisa**	**43.68**	**212**	P	**P**	**18 59 17.2**	**+1.6**
	comp=Z,443nmcomp=Z,22nm,1.4s						
OHAK	**Old Harbor**	**43.73**	**45**	P	**P**	**18 59 19.0**	**+3.4**
CMAR	**Chiang Mai Arr**	**43.76**	**254**	P	**P**	**18 59 17.0**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=44,slow=7.2,SNR=21						
CMAR				LR	LR	19 19 34.1	
	comp=Z,157nm,18.2s,baz=90,slow=39						
MK31	**Makanchi Array**	**44.16**	**300**	*i* P	**P**	**18 59 19.5**	**+0.3**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MK31	**Makanchi Array**	**44.16**	**300**	P	**P**	**18 59 19.7**	**+0.4**
MK31				IAmb	IAmb	18 59 29.3	
	comp=Z,8.5nm,0.7s						
MKAR	**Makanchi Array**	**44.16**	**300**	P	**P**	**18 59 19.7**	**+0.5**

	comp=Z,4.6nm,0.5s,baz=85,slow=9.3,SNR=83						
MKAR				LR	LR	19 18 39.8	
	comp=Z,356nm,18.6s,baz=68,slow=37						
MAKZ	Makanchi	44.36	300	P	P	18 59 21.2	+0.3
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
MAKZ	Makanchi	44.36	300	P	P	18 59 21.2	+0.3
MAKZ				IAmb	IAmb	18 59 31.2	
	comp=Z,16nm,1.1s						
KRVT	Keravat (AS076	44.45	168	P	P	18 59 17.8	-4.0
	comp=Z,42nm,0.7s,baz=329,slow=5.9,SNR=2.8						
CNPM	China Poot	44.64	41	P	P	18 59 23.1	+0.1
KTH	Kantishna Hill	44.66	35	P	P	18 59 24.2	+1.1
KTH				IAmb	IAmb	18 59 48.9	
	comp=Z,29nm,1.6s						
SEM	Semipalatinsk	44.69	306	eP	P	18 59 22.5	-1.2
	comp=Z,4.4nm,1.1s,baz=305						
SEM	Semipalatinsk	44.69	306	eP	P	18 59 22.4	-1.2
SEM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SUA	Susitna One	44.78	38	P	P	18 59 24.9	+0.8
BRLK	Bradley Lake	44.80	41	P	P	18 59 23.6	-0.6
SHL	Shillong	45.10	268	P	P	18 59 26.8	-0.4
SHL				pmax	pmax		
	comp=Z,12nm,0.7s						
SHL	Shillong	45.10	268	P	P	18 59 26.8	-0.4
SHL				IAmb	IAmb	18 59 55.5	
	comp=Z,12nm,0.7s						
TOLK	Toolik Lake Re	45.39	28	P	P	18 59 29.4	+0.6
TOLK				IAmb	IAmb	19 00 02.7	
	comp=Z,32nm,1.8s						
RND	Reindeer	45.59	36	P	P	18 59 30.9	+0.4
RND				pmax	pmax		
	comp=Z,33nm,1.7s						
RND	Reindeer	45.59	36	P	P	18 59 30.9	+0.4
RND				IAmb	IAmb	18 59 36.6	
	comp=Z,32nm,1.7s						
GHO	Glory Hole Cre	45.64	38	P	P	18 59 28.1	-2.7
GHO				IAmb	IAmb	18 59 56.1	
	comp=Z,18nm,1.3s						
KURK	Kurchatov	45.64	306c	iP	P	18 59 31.0	+0.1
KURK				pmax	pmax		
	comp=Z,31nm,1.3s						
KURK	Kurchatov	45.64	306	P	P	18 59 31.2	+0.3
KURBB	Kurchatov Arra	45.72	306	P	P	18 59 31.8	+0.3
	comp=Z,14nm,0.8s,baz=81,slow=8.5,SNR=93						
MDM	Murphy Dome	45.83	33	P	P	18 59 33.6	+1.3
MDM				IAmb	IAmb	19 00 02.3	
	comp=Z,21nm,1.6s						
POKR	Poker Plat Res	46.16	33	P	P	18 59 35.8	+0.9
POKR				IAmb	IAmb	18 59 39.9	
	comp=Z,22nm,1.6s						
IL31		46.41	34	P	P	18 59 36.9	+0.2
ILAR	Eielson Array	46.41	34	P	P	18 59 37.1	+0.3
	comp=Z,1.0nm,0.6s,baz=258,slow=6.9,SNR=12						
KLU	Klutina	47.09	38	P	P	18 59 44.9	+2.6
KLU				IAmb	IAmb	19 00 38.5	
	comp=Z,21nm,1.4s						
SHLS	Shalkode	47.10	296	eP	P	18 59 40.1	-2.6
	comp=Z,3.1nm,0.6s,baz=296						
SHLS	Shalkode	47.10	296	eP	P	18 59 40.1	-2.6
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MID	Middleton Isla	47.14	41	P	P	18 59 42.5	-0.1
MID				pmax	pmax		
	comp=Z,497nm,1.3s						
MID	Middleton Isla	47.14	41	P	P	18 59 42.5	-0.1
TDK	Taldyqorghan	47.25	299	eP	P	18 59 43.8	0.0
	comp=Z,12nm,0.7s,baz=298						
TDK	Taldyqorghan	47.25	299	eP	P	18 59 43.7	0.0
TDK				pmax	pmax		
	comp=Z,13nm,0.7s						
TAPN	Taplejung	47.41	273	eP	P	18 59 46.3	+0.8
	comp=Z,48nm,1.4s						
BKB	Balikpapan	47.45	217	P	P	18 59 43.5	-2.0
KPKS	Kokpek	47.54	297	eP	P	18 59 46.0	-0.2
	comp=Z,12nm,1.1s,baz=296						
KPKS	Kokpek	47.54	297	eP	P	18 59 45.9	-0.2
KPKS				pmax	pmax		
	comp=Z,12nm,1.1s						
DOT	Dot Lake	47.72	35	P	P	18 59 48.1	+1.0
DOT				IAmb	IAmb	18 59 59.9	
	comp=Z,15nm,1.1s						
RAGM	Ragged Mountai	47.83	40	P	P	18 59 47.7	-0.4
SATY	Saty	47.87	296	eP	P	18 59 48.5	-0.2
	baz=296						
SATY	Saty	47.87	296	eP	P	18 59 48.5	-0.2
ODAN	Odare	47.91	272	eP	P	18 59 50.0	+0.7
	comp=Z,35nm,0.8s						
HMT	Hamilton	48.05	40	P	P	18 59 52.3	+2.6
GLB	Gilahina Butte	48.10	38	P	P	18 59 54.5	+4.4
GLB				IAmb	IAmb	19 00 18.4	
	comp=Z,28nm,1.6s						
RAMN	Ramite	48.47	273	eP	P	18 59 54.3	+0.6
	comp=Z,30nm,0.7s						
MCARA	McCarthy VSAT	48.48	38	P	P	18 59 55.5	+2.5
MCARA				IAmb	IAmb	18 59 58.6	
	comp=Z,14nm,1.0s						
CRQM	Cirque	48.53	39	P	P	18 59 53.9	+0.3
CRQM				IAmb	IAmb	18 59 59.5	
	comp=Z,25nm,1.2s						
GUN	Gumba	48.55	274	eP	P	18 59 55.1	+0.7
	comp=Z,68nm,0.6s						
K27K	Chicken	48.55	34	P	P	18 59 54.5	+1.0
K27K				IAmb	IAmb	19 00 11.0	
	comp=Z,20nm,1.7s						
CHKK	Chushkaly	48.58	298	eP	P	18 59 53.8	-0.2
	baz=297						
CHKK	Chushkaly	48.58	298	eP	P	18 59 53.8	-0.2
SAUI	Saumlaki	48.73	196	P	P	18 59 56.8	+1.4
MDOK	Medeo	48.77	297	eP	P	18 59 55.5	-0.2
	baz=296						
MDOK				LR	LR	19 20 26.4	
	comp=Z,294nm,16.0s,baz=296						
MDOK	Medeo	48.77	297	eP	P	18 59 55.4	-0.2
MDOK				MLR	MLR		
	comp=Z,294nm,16.0s						
AAA	Alma-Ata	48.84	297	eP	P	18 59 56.6	+0.4
	baz=296						
AAA	Alma-Ata	48.84	297	eP	P	18 59 56.5	+0.4
BALM	Baldy	48.86	38	P	P	18 59 58.0	+2.0
BALM				IAmb	IAmb	19 00 16.9	
	comp=Z,12nm,1.1s						
TNSS	Tian-Shan	48.88	297	eP	P	18 59 57.4	+0.6
	baz=296						
TNSS	Tian-Shan	48.88	297	eP	P	18 59 57.4	+0.6
ISLE	Juniper Island	48.94	39	P	P	18 59 57.8	+1.1
KUU	Kurty	49.01	298	eP	P	18 59 56.9	-0.5
	comp=Z,6.2nm,0.5s,baz=298						
KUU	Kurty	49.01	298	eP	P	18 59 56.8	-0.5
KUU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KKN	Kakani	49.07	275	eP	P	18 59 58.8	+0.6
	comp=Z,46nm,0.6s						
PKI	Pulchoki	49.08	274	eP	P	18 59 58.7	+0.3
	comp=Z,27nm,0.7s						
PKIN	Phulchoki	49.09	274	eP	P	18 59 59.1	+0.7
	comp=Z,9.4nm,0.5s						
DMN	Daman	49.29	275	eP	P	19 00 00.5	+0.5
	comp=Z,12nm,0.5s						
CTGM	Chitina Glacie	49.36	38	P	P	19 00 01.3	+1.4
CTGM				IAmb	IAmb	19 00 29.5	
	comp=Z,19nm,1.3s						
TABL	Table Mountain	49.55	39	P	P	19 00 00.9	-0.5
TABL				IAmb	IAmb	19 00 12.7	
	comp=Z,24nm,1.1s						
TKM2	Tokmak 2	49.85	297	P	P	19 00 05.2	+1.2
	SNR=25						
TKM2	Tokmak 2	49.85	297	i P	P	19 00 04.7	+0.7
TKM2				pmax	pmax		
	comp=Z,20nm,0.6s						
DANN	Dangsing	49.96	276	eP	P	19 00 06.0	+0.9
	comp=Z,81nm,0.5s						
PCA	Pinnacle	50.05	39	P	P	19 00 06.7	+1.6
BRVK	Borovoye	50.09	311	P	P	19 00 06.1	+0.7
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	50.09	311	P	P	19 00 06.1	+0.7
BRVK				IAmb	IAmb	19 00 20.3	
	comp=Z,9.9nm,0.8s						
SGDS	Sogindy	50.32	298	eP	P	19 00 07.6	+0.1
	baz=298						
SGDS	Sogindy	50.32	298	eP	P	19 00 07.5	+0.1
KBK	Karagaybulak	50.39	297	P	P	19 00 09.0	+0.9
	SNR=16						
EPYK	Eagle Plains	50.44	31	P	P	19 00 09.4	+1.6
EPYK				IAmb	IAmb	19 00 21.3	
	comp=Z,31nm,1.8s						
USP	Ospenovka	50.48	298	P	P	19 00 09.1	+0.5
	SNR=9.5						
AAK	Ala-Archa	50.71	297⇑	eP	P	19 00 10.7	+0.3
AAK				pmax	pmax		
	comp=Z,22nm,1.7s						
AAK	Ala-Archa	50.71	297	P	P	19 00 10.5	+0.1
AAK				IAmb	IAmb	19 00 25.8	
	comp=Z,24nm,1.6s						
AAK				PcP	PcP	19 01 26.8	-0.7
KSH	Kashi	50.86	293	P	P	19 00 15.9	+4.4
KSH				sP	pwP	19 00 28.2	+7.0
KSH				pmax	pmax		
	comp=Z,15nm,0.7s						
EKS2	Erkin-Say	51.19	297	P	P	19 00 14.7	+0.7
	SNR=7.1						
HYT	Haines Junctio	51.22	38	P	P	19 00 16.6	+2.6
HYT				IAmb	IAmb	19 00 33.6	
	comp=Z,12nm,1.1s						
INK	Inuvik	51.30	28	P	P	19 00 14.0	-0.3
	comp=Z,1.0nm,0.5s,baz=9.9,slow=2.1,SNR=6.8						
INK				LR	LR	19 25 15.9	
	comp=Z,111nm,18.2s,baz=314,slow=40						
INK	Inuvik	51.30	28	P	P	19 00 14.0	-0.3
INK	Inuvik	51.30	28	P	P	19 00 15.2	+0.9
INK				IAmb	IAmb	19 00 32.6	
	comp=Z,20nm,1.6s						
AML	Almayashu	51.45	297	P	P	19 00 17.0	+0.7
	SNR=8.0						
SOEI	Soe	52.30	204	P	P	19 00 21.9	-0.6
DZA	Taraz	52.77	299	eP	P	19 00 26.1	+0.4
	comp=Z,6.3nm,0.8s,baz=298						
DZA	Taraz	52.77	299	eP	P	19 00 26.1	+0.4
DZA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KK31	Karatay Array	53.25	299	P	P	19 00 29.4	+0.3
KK31				pmax	pmax		
	comp=Z,28nm,1.7s						
KK31	Karatay Array	53.25	299	P	P	19 00 29.4	+0.3
KK31				IAmb	IAmb	19 00 43.4	
	comp=Z,28nm,1.6s						
KKAR	Karatay Array	53.25	299	P	P	19 00 29.4	+0.2
KKAR				pmax	pmax		
	comp=Z,28nm,1.7s						
KKAR	Karatay Array	53.25	299	P	P	19 00 29.4	+0.2
KKAR				IAmb	IAmb	19 00 43.3	
	comp=Z,28nm,1.6s						
COEN	Coen	53.34	180	P	P	19 00 30.7	+0.7
MTN	Manton Dam	53.49	195	P	P	19 00 29.7	-1.3
IUG	Iuzhnay	53.95	298	eP	P	19 00 34.4	0.0
	baz=298						
IUG	Iuzhnay	53.95	298	eP	P	19 00 34.4	0.0
SVE	Sverdlovsk	54.28	318	eP	P	19 00 37.2	+0.8
SVE				pmax	pmax		
	comp=Z,24nm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
C36M	Paulatuk	54.36	26	P	P	19 00 37.8	+1.0
C36M				IAmb	IAmb	19 00 46.9	
	comp=Z,17nm,1.6s						
NIL	Nilore	55.36	287	P	P	19 00 45.9	+1.2
NIL				pmax	pmax		
	comp=Z,17nm,0.7s						
NIL	Nilore	55.36	287	P	P	19 00 45.9	+1.2
ARU	Arti	55.49	318c	iP	P	19 00 45.8	+0.6
ARU						19 01 42.7	
ARU						19 02 50.5	
ARU				S	S	19 08 32.2	+3.5
ARU				SS	SS	19 12 09.0	-4.0
ARU				pmax	pmax		
	comp=Z,32nm,1.3s						
ARU				MLR	MLR		
	comp=Z,923nm,15.0s						
ARU	Arti	55.49	318	P	P	19 00 46.0	+0.7
DIB	Dawson Inlet,	56.22	46	P	P	19 00 52.5	+2.1
GSI	Gunungsitoli	56.54	239	P	P	19 00 54.2	+1.0
GSI				IAmb	IAmb	19 00 55.0	
	comp=Z,22nm,1.2s						
GSI	Gunungsitoli	56.54	239	P	P	19 00 54.6	+1.3
	comp=Z,20nm,1.4s						
KNRA	Kununurra	56.74	197	P	P	19 00 57.1	+2.6
MDSI	Maura Dua	56.90	229	P	P	19 00 56.4	+0.6
	comp=Z,15nm,1.3s						
EUNU	Eureka	57.34	9	P	P	19 00 58.4	+0.2
ABKAR	Akbulak array	57.51	309	P	P	19 01 00.1	+0.4
ABKAR				IAmb	IAmb	19 01 28.6	
	comp=Z,8.7nm,0.7s						
KBL	Kabul	58.01	290	P	P	19 01 03.3	-0.5
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBL	Kabul	58.01	290	P	P	19 01 03.3	-0.5
KBL				IAmb	IAmb	19 01 13.4	
	comp=Z,10nm,0.9s						
SPITS	Spitsbergen Ar	58.26	349	P	P	19 01 05.4	+0.8
	comp=Z,21nm,1.1s,baz=51,slow=7.6,SNR=1.8						
SPITS				LR	LR	19 27 33.0	
	comp=Z,118nm,18.6s,baz=85,slow=38						
BBB	Bella Bella	59.05	46	LR	LR	19 29 51.3	
	comp=Z,25nm,18.4s,baz=296,slow=39						
RES	Resolute Bay	59.65	15	P	P	19 01 14.6	+0.4
	comp=Z,1.8nm,0.7s,baz=314,slow=7.4,SNR=11						
RES				LR	LR	19 30 01.3	
	comp=Z,95nm,19.5s,baz=88,slow=39						
RES	Resolute Bay	59.65	15	P	P	19 01 14.2	0.0
RES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RES	Resolute Bay	59.65	15	P	P	19 01 14.2	0.0
RES				IAmb	IAmb	19 01 39.6	
	comp=Z,7.6nm,1.0s						
WB0	Warramunga Arr	59.73	190	P	P	19 01 14.5	-0.9
WB0				IAmb	IAmb	19 01 21.2	
	comp=Z,24nm,1.6s						
FITZ	Fitzroy Crossi	59.83	200	P	P	19 01 15.7	-0.4
FITZ				IAmb	IAmb	19 01 47.1	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	59.90	190	P	P	19 01 14.9	-1.6
WB2	Warramunga Arr	59.91	190	P	P	19 01 15.3	-1.3
WB2				IAmb	IAmb	19 01 54.8	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	59.91	190	P	P	19 01 15.3	-1.3
	comp=Z,2.3nm,0.7s,baz=7.8,slow=7.0,SNR=28						
HYB	Hyderabad	59.91	268	i P	P	19 01 16.0	-0.9
LVZ	Lovozero	60.39	336	P	P	19 01 18.7	-0.7
LVZ				pmax	pmax		
	comp=Z,212nm,1.8s						
LVZ	Lovozero	60.39	336	P	P	19 01 18.7	-0.7
YKA	Yellowknife Ar	60.72	31	P	P	19 01 22.2	+0.6
	comp=Z,0.4nm,0.6s,baz=305,slow=5.7,SNR=6.9						
YKA	Yellowknife Ar	60.72	31c	eP	P	19 01 25.6	+3.9
KEV	Kevo	61.56	339	P	P	19 01 27.0	-0.3
KEV				pmax	pmax		
	comp=Z,240nm,1.8s						
KEV	Kevo	61.56	339	P	P	19 01 27.0	-0.3
ARCES	ARCESS Array B	62.11	339	P	P	19 01 31.8	+0.8
	comp=Z,1.0nm,0.5s,baz=37,slow=8.3,SNR=11						
ARCES				LR	LR	19 30 57.5	
	comp=Z,219nm,19.8s,baz=80,slow=38						
TULEG	Thule	62.28	8	P	P	19 01 31.4	-0.7
HRA	Herat	62.96	293	P	P	19 01 36.2	-1.3
DAG	Danmarks Havn	63.29	355	i P	P	19 01 39.1	+0.3
	comp=Z,3.3nm,0.7s						
DAG	Danmarks Havn	63.29	355	i P	P	19 01 39.1	+0.3
DAG				IAmb	IAmb	19 01 39.8	
	comp=Z,3.3nm,0.7s						
AS31	Alice Springs	63.63	190	P	P	19 01 41.0	-0.7
ASAR	Alice Springs	63.63	190	P	P	19 01 41.7	0.0
	comp=Z,0.9nm,0.7s,baz=5.0,slow=6.8,SNR=15						
NLWA	Neilton Lookou	63.75	49	P	P	19 01 44.4	+2.0
GEYT	Alibeck	64.00	299	P	P	19 01 44.2	+0.1
	comp=Z,2.5nm,0.7s,baz=66,slow=8.9,SNR=7.6						
GEYT				LR	LR	19 32 30.2	
	comp=Z,219nm,18.2s,baz=235,slow=39						
GYA0B	ALIBECK ARRAY	64.00	299	P	P	19 01 44.2	+0.1
GYA0B				IAmb	IAmb	19 02 01.7	
	comp=Z,4.9nm,0.7s						
DZM	Mont Dzumac	65.05	156	eLR	LR	19 21 21.0	
	comp=Z,135nm,22.9s						
NEW	Newport	67.12	46	LR	LR	19 31 03.6	
	comp=Z,33nm,19.1s,baz=310,slow=36						
FIA1	FINESS Array S	67.24	332	P	P	19 02 05.2	+0.6
FINES	FINESS Array B	67.25	332	P	P	19 02 05.0	+0.4
	comp=Z,6.7nm,0.6s,baz=62,slow=5.8,SNR=39						
FINES				LR	LR	19 34 31.6	
	comp=Z,326nm,19.8s,baz=37,slow=39						
KHMM	Horse Mountain	67.29	55	P	P	19 02 06.2	+0.7
KHMM				IAmb	IAmb	19 02 34.0	
	comp=Z,13nm,1.1s						
PINE	Pine Mountain	67.41	51	P	P	19 02 07.5	+1.3
PINE				IAmb	IAmb	19 02 31.3	
	comp=Z,14nm,1.5s						
YBH	Yreka Blue Hor	67.46	54	LR	LR	19 25 29.7	
	comp=Z,43nm,20.4s,baz=292,slow=31						
K05A	Summer Lake	68.03	52	P	P	19 02 12.1	+1.9
K05A				IAmb	IAmb	19 02 35.5	
	comp=Z,12nm,1.2s						
SUMG	Summit	68.05	1	i P	P	19 02 10.9	+0.9
SUMG				pmax	pmax		
	comp=Z,11nm,0.7s						
SUMG	Summit	68.05	1	P	P	19 02 11.0	+0.9
SUMG	Summit	68.05	1	i P	P	19 02 10.9	+0.9
	comp=Z,11nm,0.7s						
SUMG	Summit	68.05	1	i P	P	19 02 10.9	+0.9
SUMG				IAmb	IAmb	19 02 11.9	
	comp=Z,11nm,0.7s						
AKT	Akhty	68.82	307	eP	P	19 02 14.6	-0.4
AKT				e		19 02 39.8	
AKT				pmax	pmax		
	comp=Z,21nm,1.3s						
GOF	Gofitskoye	69.56	312⇑	eP	P	19 02 20.3	+0.9
BEKR	Beckworth	69.99	55	P	P	19 02 22.8	+0.4
BEKR				IAmb	IAmb	19 02 46.6	
	comp=Z,11nm,1.6s						
NCK	Nalchik	70.15	310⇑	eP	P	19 02 24.8	+1.7
NCK				pmax	pmax		
	comp=Z,14nm,1.0s						
ZEI	Tsey	70.39	310	eP	P	19 02 24.1	-0.7
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KIV	Kislovodsk	70.41	311c	iP	P	19 02 25.7	+0.9
KIV				e		19 04 57.7	
KIV				eS	SKiKP	19 12 12.4	+4.9
KIV				pmax	pmax		
	comp=Z,38nm,1.7s						
KIV	Kislovodsk	70.41	311	P	P	19 02 24.3	-0.4
KBZ	Khabaz	70.42	311	P	P	19 02 25.5	+0.9
	comp=Z,7.5nm,0.8s,baz=58,slow=4.2,SNR=16						
LRM	Limekiln Ridge	71.14	46	P	P	19 02 29.4	+0.1
STKA	Stephens Creek	71.20	182	P	P	19 02 29.8	+0.5
	comp=Z,2.9nm,1.1s,baz=349,slow=10,SNR=4.2						
STKA				LR	LR	19 36 19.6	
	comp=Z,33nm,19.7s,baz=17,slow=38						
STKA	Stephens Creek	71.20	182	P	P	19 02 29.8	+0.5
STKA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MNK	Minsk	71.22	326	i P	P	19 02 27.6	-1.8
	comp=E,3.0nm,0.8s						
MNK				i P	P	19 02 27.6	-1.8
	comp=N,23nm,0.9s						
MNK				i P	P	19 02 27.6	-1.8
	comp=Z,9.0nm,0.7s						
MNK				i PcP	PcP	19 02 47.7	-1.6
MNK				i PP	PP	19 05 04.6	-2.2
MNK				i PPP	PPP	19 06 47.5	
MNK				i S	S	19 11 42.8	-2.1
MNK				i ScS	ScS	19 12 31.5	-0.6
MNK				i SS	SS	19 16 18.1	+0.1
MNK				i SSS	SSS	19 19 37.0	
MNK				i LQ	LQ	19 28 44.8	
MNK				i LR	LR	19 34 09.1	
MNK				i LRM	MLR	19 36 31.6	
	comp=Z,425nm,19.1s						
MNK				i LRM	MLR	19 36 32.3	
	comp=N,454nm,17.2s						
MNK				i LRM	MLR	19 36 47.9	
	comp=E,35nm,13.1s						
NACGM	Naroch	71.42	327	i P	P	19 02 23.1	-7.5
NACGM				i P	P	19 02 23.1	-7.5
NACGM				i P	P	19 02 23.1	-7.5
NACGM				i Pb	pP	19 02 32.6	-4.8
	comp=Z,19nm,1.1s						
NACGM				i PcP	PcP	19 02 54.1	+4.0
NACGM				i PP	PP	19 04 51.2	-17
NACGM				i PPP	PPP	19 06 51.2	
NACGM				i S	S	19 11 30.9	-16
NACGM				i SS	SS	19 17 24.2	+63
NACGM				i SSS	SSS	19 18 28.4	
NACGM				i LQ	LQ	19 28 02.1	
NACGM				i LR	LR	19 32 33.7	
ICESG	Greenland Ices	71.54	1	i P	P	19 02 32.6	+1.1
BOZ	Bozeman (W)	71.73	46	P	P	19 02 34.1	+1.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	71.73	46	P	P	19 02 34.1	+1.3
LHV	Little Huntoon	72.11	55	P	P	19 02 36.7	+1.8
NVAR	Mina Array Bea	72.12	55	P	P	19 02 36.8	+1.4
	comp=Z,1.6nm,0.9s,baz=289,slow=5.8,SNR=8.6						
NC405	NORSAR Array S	72.18	338	P	P	19 02 35.0	-0.1
NC303	NORSAR Array S	72.19	338	P	P	19 02 36.3	+1.2
NB2	NORSAR Subarra	72.38	338	P	P	19 02 36.3	0.0
	comp=Z,2.3nm,0.7s,baz=37,slow=6.2						
NOA	NORSAR Array B	72.38	338	P	P	19 02 36.7	+0.4
	comp=Z,3.7nm,0.7s,baz=38,slow=6.0,SNR=13						
NOA				LR	LR	19 38 37.6	
	comp=Z,173nm,18.4s,baz=25,slow=39						
TPH	Tonopah	73.02	55	P	P	19 02 42.2	+1.5
TPH				pmax	pmax		
	comp=Z,75nm,1.5s						
TPH	Tonopah	73.02	55	P	P	19 02 42.2	+1.5
AKASG	Malin Array Be	73.21	323	P	P	19 02 41.5	+0.2
	comp=Z,3.7nm,0.4s,baz=45,slow=6.2,SNR=34						
FRB	Frobisher Bay	73.84	14	P	P	19 02 44.9	+0.1
	comp=Z,5.4nm,0.7s,baz=345,slow=7.0,SNR=10						
R11A	Troy Canyon, C	73.87	53	P	P	19 02 45.2	-0.5
TPNV	Topopah Spring	74.32	55	P	P	19 02 49.3	+1.0
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TPNV	Topopah Spring	74.32	55	P	P	19 02 49.2	+1.0
BW06	Boulder Array	74.67	47	P	P	19 02 52.4	+2.1
PD31	Pinedale Array	74.67	47	P	P	19 02 51.9	+1.5
PDAR	Pinedale Array	74.67	47	P	P	19 02 49.0	-1.4
	comp=Z,0.5nm,0.5s,baz=276,slow=2.4,SNR=5.5						
SHPR	Sheep Range	75.28	55	P	P	19 02 55.3	+1.4
MARD	Mardin	75.62	307	P	P	19 02 54.9	-0.9
MARD				IAmb	IAmb	19 02 57.6	
	comp=Z,10nm,0.8s						
RDMU	Red Mountain	76.08	49	P	P	19 03 00.1	+1.6
P17A	Butcher Ranch,	76.11	50	P	P	19 03 00.8	+2.2
ULM	Lac du Bonnet	76.42	35	P	P	19 02 59.1	-0.7
	comp=Z,1.8nm,0.7s,baz=337,slow=7.7,SNR=2.9						
SRU	San Rafael Swe	76.47	50	P	P	19 03 01.9	+1.3
SRU				pmax	pmax		
	comp=Z,15nm,1.8s						
SRU	San Rafael Swe	76.47	50	P	P	19 03 01.9	+1.3
U15A	North Rim	77.12	53	P	P	19 03 05.7	+1.2
BUR08	Bucovina Ar. S	77.23	322	P	P	19 03 05.3	+0.6
BUR08				IAmb	IAmb	19 03 45.7	
	comp=Z,15nm,1.4s						
KOLS	Kolonicke sedl	77.64	325	eP	P	19 03 08.3	+1.5
KOLS	Kolonicke sedl	77.64	325	eP	P	19 03 08.3	+1.5
PV14	Lion Creek, Pa	77.84	50	P	P	19 03 09.4	+1.0
UZH	Uzhgorod	77.85	325	eP	P	19 03 07.9	0.0
UZH				e		19 03 23.6	
PV22	Blue Mesa, Par	77.87	50	P	P	19 03 09.8	+1.2
PV17	East Wray Mesa	77.94	50	P	P	19 03 10.3	+1.4
PV17				IAmb	IAmb	19 03 14.1	
	comp=Z,7.1nm,0.8s						
PV16	Nyswonger Mesa	77.94	50	P	P	19 03 11.4	+2.5
PV11	David Mesa, Pa	77.98	50	P	P	19 03 12.0	+2.9
PV11				IAmb	IAmb	19 03 21.3	
	comp=Z,21nm,1.5s						
PV12	Saucer Basin,	78.00	50	P	P	19 03 12.6	+3.2
PV12				IAmb	IAmb	19 03 16.4	
	comp=Z,16nm,1.6s						
PV03	Paradox Valley	78.02	50	P	P	19 03 11.7	+2.3
PV03				IAmb	IAmb	19 03 36.2	
	comp=Z,11nm,1.4s						
BRTR	Keskin Array B	78.31	312	P	P	19 03 11.4	+0.6
	comp=Z,1.2nm,0.7s,baz=116,slow=4.5,SNR=5.8						
BRTR				LR	LR	19 42 43.5	
	comp=Z,60nm,18.0s,baz=32,slow=40						
OKC	Ostrava-Krasne	78.73	327	eP	P	19 03 15.7	+2.9
MORC	Moravsky Berou	79.03	328	eP	P	19 03 15.3	+0.8
DPC	Dobruska-Polom	79.08	329	eP	P	19 03 15.7	+0.9
VYHS	Vyhne	79.47	326	eP	P	19 03 18.0	+1.1
VYHS	Vyhne	79.47	326	eP	P	19 03 18.0	+1.1
CLL	Collm	79.61	331	eP	P	19 03 18.0	+0.4
	comp=Z,5.0nm,0.9s						
CLL				e		19 03 38.0	

JAVC	Velka Javorina	79.69	327	eP	P	19 03 20.0	+1.9
VRAC	Vranov	79.78	328	P	P	19 03 19.6	+1.0
	comp=Z,3.0nm,0.8s,baz=88,slow=5.5,SNR=5.6						
VRAC	Vranov	79.78	328	eP	P	19 03 19.7	+1.1
SMOL	Smolenice	80.05	327	eP	P	19 03 22.1	+2.0
SMOL	Smolenice	80.05	327	eP	P	19 03 22.0	+2.0
KRUC	Moravsky	80.06	328	eP	P	19 03 20.4	+0.3
PRU	Pruhonice	80.07	329	eP	P	19 03 20.7	+0.6
PRU	Pruhonice	80.07	329	eP	P	19 03 20.7	+0.6
SRO2	Moca	80.22	326	eP	P	19 03 21.3	+0.4
SRO2	Moca	80.22	326	eP	P	19 03 21.3	+0.4
PBCC	Pribram	80.53	329	eP	P	19 03 23.3	+0.7
KHC	Kasperske Hory	81.14	329	P	P	19 03 26.5	+0.6
KHC				pmax	pmax		
	comp=Z,14nm,1.5s						
KHC	Kasperske Hory	81.14	329	eP	P	19 03 25.9	0.0
KHC				ex	x	19 03 43.3	
KHC	Kasperske Hory	81.14	329	P	P	19 03 26.5	+0.6
KHC				IAmb	IAmb	19 03 44.9	
	comp=Z,14nm,1.5s						
RAYN	Ar Rayn	81.15	293	P	P	19 03 26.6	+0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	81.15	293	P	P	19 03 26.6	+0.2
CONA	Conrad Observa	81.17	327	eP	P	19 03 27.3	+1.2
	comp=Z,6.4nm,1.5s						
EKA	Eskdalemuir Ar	81.18	341	P	P	19 03 26.8	+0.8
	comp=Z,0.7nm,0.5s,baz=39,slow=5.6,SNR=4.8						
GERES	GERESS Array B	81.32	329	P	P	19 03 27.3	+0.3
	comp=Z,0.8nm,0.5s,baz=42,slow=5.6,SNR=9.6						
GERES				LR	LR	19 43 14.9	
	comp=Z,203nm,18.7s,baz=7.0,slow=38						
ANMO	Albuquerque	81.66	51	⇑eP	P	19 03 31.3	+2.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ARSA	Arzberg	81.84	327	eP	P	19 03 30.2	+0.5
	comp=Z,1.4nm,0.6s						
MOA	Molln	81.89	328	eP	P	19 03 29.7	-0.2
	comp=Z,8.3nm,1.6s						
SOKA	Soboth	82.50	327	eP	P	19 03 33.3	+0.1
	comp=Z,6.0nm,0.9s						
OBKA	Obir	82.84	327	eP	P	19 03 35.5	+0.5
	comp=Z,5.1nm,0.9s						
KBA	Koelnbreinsper	82.88	328	eP	P	19 03 36.9	+1.6
	comp=Z,4.0nm,0.9s						
MYKA	Terra Mystica	83.12	328	eP	P	19 03 35.9	-0.5
	comp=Z,9.8nm,1.5s						
WATA	Walderalm	83.38	329	eP	P	19 03 35.3	-2.5
	comp=Z,3.3nm,1.1s						
WTTA	Wattenberg	83.41	329	eP	P	19 03 40.1	+2.0
	comp=Z,4.0nm,1.0s						
ABTA	Abfaltersbach	83.48	328	eP	P	19 03 36.5	-1.8
	comp=Z,3.0nm,1.0s						
MOTA	Moosalm	83.55	330	eP	P	19 03 39.5	+0.8
	comp=Z,5.9nm,1.1s						
RETA	Reutte	83.57	330	eP	P	19 03 39.4	+0.7
	comp=Z,14nm,1.6s						
SQTA	Sankt Quirin	83.61	330	eP	P	19 03 38.6	-0.4
	comp=Z,3.9nm,1.2s						
FETA	Feichten	83.97	330	eP	P	19 03 41.8	+1.0
	comp=Z,7.1nm,1.6s						
PPT	Papeete	84.39	118	LR	LR	19 33 06.7	
	comp=Z,77nm,21.7s,baz=328,slow=30						
PPT2	Papeete2	84.41	118	eLR	LR	19 30 23.9	
	comp=Z,159nm,23.0s						
DAVOX	Davos/Dischmat	84.49	330	P	P	19 03 44.4	+0.8
	comp=Z,1.0nm,0.4s,baz=26,slow=11,SNR=4.4						
MEH	Mehetia	85.64	117	eT	T	20 38 20.0	
	comp=Z,11nm,0.3s						
TBI	Tubuai	88.51	122	eT	T	20 41 57.5	
	comp=Z,7.7nm,0.3s						
KEST	Kesra	93.89	324	LR	LR	19 51 39.9	
	comp=Z,153nm,19.0s,baz=268,slow=39						
ESDC	Sonseca Array	95.62	335	P	P	19 04 36.0	-0.1
	comp=Z,0.3nm,0.9s,baz=2.9,slow=5.1,SNR=2.4						
ESDC				LR	LR	19 53 43.4	
	comp=Z,132nm,18.1s,baz=0.0,slow=39						
TORD	Torodi Ar. Bea	116.56	318	PP	PP	19 11 01.4	0.0
	comp=Z,0.6nm,0.9s,baz=24,slow=5.2,SNR=3.7						
SNAA	Sanae	143.74	197	PKPdf	PKiKP	19 10 48.0	+0.1
VNA2	Neumayer--Watz	145.29	196	PKPdf	PKPdf	19 10 48.0	+0.9

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*FUNV **03** 19:42:08.9, 10°.85N×62°.17W, h96^{km}, MW3.4*
*TRN **03** 19:42:08.3, 10°.82N×62°.21W, h92^{km}, MD3.4*
ISC 03 19:42:06.7±1.3, **10°.81N**±0°.04×**62°.22W**±0°.04, **h108**^{km}±11^{km}, **n19**, σ**1^{s}35**/35, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.81	101	eP	Pn	19 42 27.2	+1.3
TRN				eS	Sn	19 42 39.3	-1.0
TRN	Trinidad (W)	0.81	101	eP	Pn	19 42 27.1	+1.3
TRN				eS	Sn	19 42 39.2	-1.2
TPP	Pointe-a-Pierr	0.90	123	eP	Pn	19 42 27.0	+0.3
TPP				eS	Sn	19 42 40.4	-1.4
CRUV	Carupano	1.01	263	⇓iP	Pn	19 42 28.5	+0.7
CRUV				eS	Sn	19 42 43.3	-0.5
GRGR	Grenville	1.43	23	eP	Pn	19 42 32.8	+0.3
GRGR				eS	Sn	19 42 52.0	-0.2
GRGR	Grenville	1.43	23	eP	Pn	19 42 32.9	+0.3
GRGR				eS	Sn	19 42 50.7	-1.5
GCMP	Grenada, Carri	1.84	25	eP	Pn	19 42 38.2	+0.6
GCMP				eS	Sn	19 43 00.2	-1.0
ORIV	Oritupano	2.09	214	eP	Pn	19 42 42.9	+2.2
PCRV	Puerto La Cruz	2.46	255	eP	Pn	19 42 47.2	+1.5
PCRV				eS	Sn	19 43 15.5	0.0
SVB	Belmont	2.63	21	eP	Pn	19 42 48.9	+1.1
SVB				eS	Sn	19 43 18.3	-1.0
SVV	Soufriere Volc	2.68	21	eP	Pn	19 42 50.2	+1.7
SVV				eS	Sn	19 43 20.6	0.0
RIOV	Rio Grande	2.75	172	eP	Pn	19 42 51.2	+1.8
RIOV				eS	Sn	19 43 22.0	-0.2
MCLT	Moule a Chique	3.14	23	eP	Pn	19 42 56.2	+1.6
MCLT				eS	Sn	19 43 31.2	-0.4
SLCP	Castries, St.	3.40	20	eP	Pn	19 42 59.6	+1.5
SLCP				eS	Sn	19 43 36.4	-1.3
SLBI	Saint Lucia, B	3.42	21	eP	Pn	19 42 58.9	+0.6
SLBI				eS	Sn	19 43 37.2	-0.8
BIRV	Birongo	4.00	266	eP	Pn	19 43 07.2	+1.2
LUEV	Luepa	4.99	171	eP	Pn	19 43 20.4	+0.8
LUEV				eS	Sn	19 44 13.4	-2.8
BAUV	El Baul	6.03	253	eP	Pn	19 43 33.6	+0.1
BAUV				eS	Sn	19 44 38.0	-3.3
PAYV	Puerto Ayacuch	7.59	226	eP	Pn	19 43 55.2	+0.5

IDC 03 20:10:55.6±1.6, **0°.15S**×**123°.88E**, **h0**^{km}, **mb3.3**/3, **mb1 3.5**/3, **mb1mx3.2**/38, **mbtmp3.3**/3, **Error ellipse: s-maj=187.6km s-min=24.1km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.18	153	P	P	20 15 53.0	-0.5
	0.7nm,0.7s,baz=331,slow=12,SNR=11						
ASAR	Alice Springs	25.32	158	P	P	20 16 24.7	+0.4
	0.1nm,0.4s,baz=339,slow=8.5,SNR=8.4						
MKAR	Makanchi Array	59.20	328	P	P	20 20 58.5	-0.1
	0.3nm,0.4s,baz=118,slow=8.2,SNR=10						

IDC 03 20:29:41.8±11.0, **5°.92N**×**95°.52E**, **h0**^{km}, **mb3.3**/2, **mb1 3.5**/3, **mb1mx3.1**/42, **mbtmp3.2**/3, **ML3.5**/1, **Error ellipse: s-maj=308.9km s-min=44.6km az=82.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.90	15	Pn	Pn	20 32 46.5	+0.1
	0.1nm,0.3s,baz=206,slow=13,SNR=5.1						
WRA	Warramunga Arr	46.02	125	P	P	20 38 07.0	-0.5
	0.5nm,0.9s,baz=304,slow=9.1,SNR=2.4						
ASAR	Alice Springs	47.62	130	P	P	20 38 20.2	+0.2
	0.2nm,0.6s,baz=302,slow=7.8,SNR=2.0						

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*MOS **03** 20:39:03.5±0.0, 42°.94N×47°.18E, h5^{km}, MPVA3.8*
*NORS **03** 20:39:04.4±0.0, 42°.90N×47°.12E, h10^{km}, MPVA3.8*
*DRS **03** 20:39:05.2±0.0, 42°.98N×47°.16E, h14^{km}, ML2.7/10*
ISC 03 20:39:05.0±0.9, **42°.95N**±0°.02×**47°.17E**±0°.02, **h14**^{km}±6^{km}, **n34**, σ**1^{s}30**/66, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUJR	Buynaksk	0.13	199	i Pg	Pb	20 39 08.9	-0.4
	2µm,0.3s						
BUJR				i Sg	Sg	20 39 12.7	+1.7
	3µm,0.4s						
KRNR	Karanay	0.23	238	ePg	Pb	20 39 10.0	-1.0
KRNR				eSg	Sg	20 39 14.2	+0.7
MAK	Makhachkala	0.25	87	ePg	Pg	20 39 09.7	-0.6
MAK				eSg	Sg	20 39 13.3	-0.7
DBC	Dubki	0.26	286	i Pg	Pg	20 39 10.0	-0.6
	153nm,0.3s						
DBC				i Sg	Sb	20 39 14.9	-0.9
	1µm,0.4s						
KANR	Karaman	0.34	43	ePg	Pg	20 39 11.9	-0.1
KANR				eSg	Sb	20 39 18.2	+0.1
ARKR	Arakani	0.37	200	i Pg	Pb	20 39 12.8	-0.5
	15nm,0.5s						
ARKR				eSg	Sb	20 39 18.9	-0.1
	37nm,0.4s						
DLMR	Dylym	0.41	287	ePg	Pb	20 39 13.4	-0.7
	22nm,0.3s						
DLMR				i Sg	Sb	20 39 21.0	+0.8
	215nm,0.4s						
XNZR	Khunzakh	0.53	220	ePg	Pb	20 39 15.9	-0.2
XNZR				eSg	Sb	20 39 22.7	-1.1
GNBR	Gunib	0.58	195	i Pg	Pn	20 39 17.5	-1.3
	90nm,0.5s						
GNBR				i Sg	Sn	20 39 27.3	-0.9
	277nm,0.7s						
SGKR	Sergokala	0.61	143	i Pg	Pb	20 39 17.5	+0.1
	90nm,0.2s						
SGKR				eSg	Sn	20 39 28.1	-0.7
	127nm,0.5s						
BTLR	Botlikh	0.75	248	i Pg	Pb	20 39 19.3	-0.6
	43nm,0.4s						
BTLR				i Sg	Sn	20 39 31.8	-0.6
	229nm,0.6s						
DVE	Vedeno	0.76	271	ePg	Pb	20 39 20.4	+0.3
DVE				eSg	Sn	20 39 32.2	-0.6
URKR	Urkarakh	0.85	156	ePg	Pn	20 39 22.1	-0.6
	39nm,0.3s						
URKR				eSg	Sn	20 39 35.3	+0.3
	116nm,0.7s						
GROC	Groznyy	1.04	285	ePg	Pn	20 39 26.4	+1.3
GROC				eSg	Sn	20 39 43.3	+4.0
LGD	Lagodekhi	1.31	212	P	Pg	20 39 30.2	+0.1
LGD				S	Sg	20 39 50.2	+3.1
LGD	Lagodekhi	1.31	212	ePg	Pg	20 39 29.6	-0.5
LGD				eSg	Sg	20 39 46.8	-0.4
AKT	Akhty	1.53	164	ePg	Pb	20 39 33.0	-0.1
	37nm,0.2s						
AKT				eSg	Sg	20 39 55.5	+1.3
	75nm,0.2s						
DDFL	Dedoflistskaro	1.69	208	P	Pg	20 39 39.2	+1.7
KMGR	Komgaron	1.69	274	ePg	Pg	20 39 36.8	-0.7
KMGR				eSg	Sg	20 40 01.5	+2.0
PNSH	Pansheti	1.90	261	P	Pb	20 39 39.6	0.0
PNSH				S	Sb	20 40 03.6	+0.3
TRKR	Terskaya	1.94	294	ePg	Pg	20 39 40.8	-1.5
TRKR				eSg	Sg	20 40 06.3	-1.0
BTKR	Batakoyurt	1.97	283	ePg	Pb	20 39 39.9	-0.7
BTKR				eSg	Sg	20 40 07.1	-1.2
GUDG	Gudauri	2.04	257	P	Pg	20 39 42.5	-1.7
GUDG				S	Sg	20 40 12.3	+1.6
GUDG	Gudauri	2.04	257	ePg	Pg	20 39 42.4	-1.7
GUDG				eSg	Sb	20 40 07.9	+0.6
LACR	Lac	2.11	268	ePg	Pn	20 39 41.1	+1.1
LACR				eSg	Sg	20 40 12.1	-0.8
ARNR	Ardon	2.13	277	ePg	Pb	20 39 41.9	-1.4
ARNR				eSg	Sg	20 40 11.0	-2.4
BTNK	Botanikuri	2.16	235	P	Pg	20 39 45.4	-1.1
STDR	Stavd-Durt	2.31	282	ePn	Pg	20 39 48.3	-1.0
STDR				eSn	Sb	20 40 14.8	0.0
ZEI	Tsey	2.41	267	ePn	Pb	20 39 46.1	-2.1
ZEI				eSn	Sn	20 40 15.2	+1.7
LSNR	Lesken	2.47	279	ePn	Pb	20 39 47.7	-1.4
LSNR				eSn	Sb	20 40 20.1	+0.7
DIGR	Digorskoe uzhe	2.63	270	ePn	Pn	20 39 49.0	+1.8
DIGR				eSn	Sn	20 40 19.8	+0.7
DMNI	Dmanisi	2.74	235	P	Pb	20 39 51.1	-2.7
DMNI				S	Sb	20 40 26.8	-0.6
KBTC	Kuba-Taba	2.87	289	ePn	Pn	20 39 52.0	+1.6
KBTC				eSn	Sn	20 40 26.3	+1.5
ALER	Alexandrovskoy	3.57	302	ePn	Pn	20 40 00.6	+0.6
ALER				eSn	Sn	20 40 43.6	+1.7

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*MDD **03** 20:41:15.5±2.6, 32°.40N×6°.18W, h0^{km}, mb4.3/1, Error ellipse: s-maj=33.7km s-min=23.1km az=74.0, PRXIMO*
*CNRM **03** 20:41:16.7, 32°.25N×6°.37W, h6^{km}, ml2.5, Hypocentre not reviewed by the ISC*
*INMG **03** 20:41:18.3±1.2, 32°.61N×6°.12W, h0^{km}, ML2.2, Error ellipse: s-maj=7.1km s-min=3.1km az=23.0*
*IGIL **03** 20:41:18.4, 32°.43N×6°.17W, h18^{km}*
ISC 03 20:41:19.3±3.1, **32°.7N**±0°.2×**6°.19W**±0°.05, **h12**^{km}, **n28**, σ**0^{s}70**/53, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHG	ZHG	0.88	334	P		20 41 38.0	
AVE	Averroes	1.22	302	eP	Pn	20 41 42.0	-0.2
AVE				eS	Sg	20 42 00.1	+1.5
IFR	Ifrane	1.23	46	eP	Pn	20 41 42.0	-0.6
IFR				eS	Sg	20 42 01.0	+1.8
SRHM	Skhour des Reh	1.46	263	P		20 41 43.0	
SRHM				S		20 42 03.0	
OUZM	OUZ	1.81	196	P		20 41 44.1	
TZRR	Tazzarine	1.94	164	P		20 41 46.1	
ARF	Arif	2.07	126	P		20 41 51.0	
PBDV	Barranco-do-Ve	4.79	343	P	Pn	20 42 31.1	-0.3
PBDV				S	Sn	20 43 26.4	-0.5
	2.3nm,0.7s						
PBDV	Barranco-do-Ve	4.79	343	eP	Pn	20 42 31.1	-0.3
PBDV				eS	Sn	20 43 26.4	-0.5
PBDV				A	A	20 43 28.0	
	2.3nm,0.7s						
PFVI	Vila Bisbo	4.97	335	P	Pn	20 42 33.2	-0.6
	2.9nm,0.2s,SNR=7.9						
PFVI				S	Sn	20 43 30.7	-0.4
	4.3nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.97	335	ePn	Pn	20 42 33.4	-0.3
PFVI				eSn	Sn	20 43 30.7	-0.4
PFVI				A	A	20 43 33.4	
	5.3nm,0.7s						
EGRO	El Granado	4.98	348	P	Pn	20 42 34.1	+0.2
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	20 43 31.1	-0.4
	0.4nm,0.1s,SNR=7.9						
MORF	Marmelete	5.06	337	eP	Pn	20 42 34.4	-0.8
MORF	Marmelete	5.06	337	P	Pn	20 42 34.9	-0.2
MORF				S	Sn	20 43 33.6	+0.1
	3.1nm,0.8s						
MORF	Marmelete	5.06	337	ePn	Pn	20 42 34.9	-0.2
MORF				eSn	Sn	20 43 33.6	+0.1
MORF				A	A	20 43 44.9	
	3.1nm,0.8s						
EMIN	Mina Concepcio	5.12	356	P	Pn	20 42 35.2	-0.6
	0.1nm,0.1s,SNR=4.0						
EMIN				S	Sn	20 43 34.9	+0.1
	0.7nm,0.2s,SNR=7.9						
PCVE	Castro Verde	5.19	344	P	Pn	20 42 36.8	0.0
PCVE				S	Sn	20 43 36.3	-0.4
	1.9nm,0.7s						
PCVE	Castro Verde	5.19	344	ePn	Pn	20 42 36.8	0.0
PCVE				eSn	Sn	20 43 36.3	-0.4
PCVE				A	A	20 43 43.3	
	1.9nm,0.7s						
PTEO	Sao Teotonio	5.30	338	P	Pn	20 42 38.8	+0.4
PTEO				S	Sn	20 43 38.9	-0.5
	3.3nm,0.5s						
PTEO	Sao Teotonio	5.30	338	ePn	Pn	20 42 38.8	+0.4
PTEO				eSn	Sn	20 43 38.9	-0.5
PTEO				A	A	20 43 43.0	
	6.7nm,0.5s						
MESJ	Messejana	5.43	343	eP	Pn	20 42 39.6	-0.6
MESJ	Messejana	5.43	343	P	Pn	20 42 39.6	-0.6
ECAB	El Cabril	5.44	6	P	Pn	20 42 40.5	+0.1
	0.5nm,0.2s,SNR=9.1						
ECAB				S	Sn	20 43 41.1	-1.8
	0.2nm,0.1s,SNR=4.0						
EADA	Adamuz	5.65	13	P	Pn	20 42 43.0	-0.2
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	20 43 48.7	+0.6
	0.4nm,0.1s,SNR=7.9						
PNCL	Nicolau / Gran	5.77	341	P	Pn	20 42 44.6	-0.2
PNCL				S	Sn	20 43 50.1	-0.8
	1.6nm,0.6s						
PNCL	Nicolau / Gran	5.77	341	ePn	Pn	20 42 44.6	-0.2
PNCL				eSn	Sn	20 43 50.1	-0.8
PNCL				A	A	20 43 51.7	
	1.6nm,0.6s						
EVO	Evora	6.05	346	P	Pn	20 42 48.6	0.0
EVO				S	Sn	20 43 56.4	-1.4
	1.6nm,0.5s						
EVO	Evora	6.05	346	ePn	Pn	20 42 48.6	0.0
EVO				eSn	Sn	20 43 56.4	-1.4
EVO				A	A	20 44 01.3	
	1.6nm,0.5s						
PESTR	Estremoz	6.30	350	ePn	Pn	20 42 51.9	-0.2
PESTR				eSn	Sn	20 44 03.6	-0.4
PESTR				A	A	20 44 08.8	
	1.0nm,0.7s						
PMTG	Montargil	6.61	346	P	Pn	20 42 56.1	-0.2
PMTG				S	Sn	20 44 10.6	-1.0
	0.6nm,0.5s						
PMTG	Montargil	6.61	346	ePn	Pn	20 42 56.1	-0.2
PMTG				eSn	Sn	20 44 10.6	-1.0
PMTG				A	A	20 44 18.8	
	0.6nm,0.5s						
PMRV	Marv??o	6.83	352	P	Pn	20 42 59.5	+0.2
PMRV				S	Sn	20 44 15.8	-1.2
	1.0nm,0.9s						
PMRV	Marv??o	6.83	352	ePn	Pn	20 42 59.5	+0.2
PMRV				eSn	Sn	20 44 15.8	-1.2
PMRV				A	A	20 44 17.6	
	1.0nm,0.9s						

IDC 03 20:46:14.6±3.2, **41°.91N**×**124°.50E**, **h0**^{km}, **mb1 3.2**/2, **mb1mx2.9**/46, **mbtmp3.2**/2, **ML2.6**/2, **Error ellipse: s-maj=29.7km s-min=25.0km az=83.0, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	5.17	148	Pg	Pg	20 47 50.2	-3.6
	0.3nm,0.3s,baz=337,slow=17,SNR=3.1						
KSRS				Lg	Lg	20 48 57.8	
	1.5nm,0.3s,baz=316,slow=29,SNR=9.4						
USRK	Ussuriysk Ar.	5.94	65	Pn	Pn	20 47 42.9	-0.9
	baz=254,slow=12,SNR=8.8						
USRK				Pg	Pg	20 48 04.2	-4.2
	baz=244,slow=16,SNR=10.0						
USRK				Lg	Lg	20 49 23.6	
	baz=252,slow=20,SNR=2.0						
KLR	Kul'dur	8.90	32	Lg	Lg	20 51 00.3	
	0.1nm,0.3s,baz=239,slow=11,SNR=4.6						
SONM	Songino Array	14.13	301	Pn	Pn	20 49 35.6	-0.4
	0.2nm,0.3s,baz=112,slow=14,SNR=4.3						

JMA 03 20:53:12.0, 34°.97N×**135°.44E**, **h10**^{km}, **M2.7**, **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.31	354	P	Pg	20 53 18.5	+0.2
JWT				S	Sg	20 53 22.6	+0.1
JHE	Heguri	0.38	147	P	Pg	20 53 19.4	0.0
JHE				S	Sg	20 53 24.5	+0.1
JKS	Kasai	0.49	272	P	Pg	20 53 21.5	0.0
JKS				S	Sg	20 53 28.0	0.0
JAWN	Awajishima-nag	0.66	223	P	Pg	20 53 24.6	-0.1
JAWN				S	Sg	20 53 33.5	+0.2
JKY	Yasaka	0.71	337	P	Pg	20 53 25.7	-0.1
JKY				S	Sg	20 53 35.1	0.0
JWY	Kouya	0.76	170	P	Pg	20 53 26.3	-0.4
JWY				S	Sg	20 53 36.3	-0.3
TSUJ	Tsu 2	0.85	108	P	Pg	20 53 27.9	-0.4
TSUJ				S	Sg	20 53 39.1	-0.2
JKSM	Kasumi	0.89	314	P	Pg	20 53 28.7	-0.4
JKSM				S	Sg	20 53 40.4	-0.2
JKN2	Miekihoku	1.00	136	P	Pg	20 53 30.8	-0.5
JKN2				S	Sg	20 53 43.5	-0.8
JAD	Aida	1.04	269	P	Pg	20 53 31.4	-0.7
JAD				S	Sg	20 53 44.9	-0.8
MAT	Matsushiro	2.74	54	P	Pn	20 53 58.1	+2.0
MAT				eS	Sn	20 54 31.0	+1.7

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*IDC **03** 20:59:52.7±0.6, 17°.18S×168°.80E, h0^{km}, mb4.5/23, mb1 4.7/26, mb1mx4.5/46, mbtmp4.6/26, ML5.5/3, MS4.7/27, Ms1 4.7/27, ms1mx4.6/35, Error ellipse: s-maj=15.4km s-min=14.1km az=168.0*
*MOS **03** 20:59:56.9±0.9, 17°.28S×168°.80E, h40^{km}, mb5.3/10, Error ellipse: s-maj=11.9km s-min=9.2km az=4.2*
*BJI **03** 20:59:57.0±0.0, 17°.10S×168°.90E, h35^{km}, mB5.3/35, mb4.9/50, Ms5.1/32, Ms7 4.8/33*
*NEIC **03** 20:59:57.1±1.8, 17°.16S±0°.07×168°.78E±0°.08, h29^{km}±2^{km}, mb5.1/70, Error ellipse: s-maj=12.2km s-min=9.0km az=49.0*
*GCMT **03** 20:59:58.1±0.1, 17°.19S±0°.01×168°.79E±0°.01, h12^{km}, MW5.3/137, Moment Tensor Solution. s107,c163; s137,c223; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.01; $M_{\theta\theta}$1.02±.01; $M_{\phi\phi}$-0.94±.01; $M_{r\theta}$0.01±.03; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$0.17±.03; Best double couple: $M_0$1.02100×10^{17} NP1:ϕ_s128.00000°, δ82.00000°, λ-6.00000°. NP2:ϕ_s219.00000°, δ84.00000°, λ-172.00000°. Principal axes: T 1.0430, Plg1.0000°, Azm354.0000°; N -0.0450, Plg80.0000°, Azm256.0000°; P -0.9990, Plg10.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **03** 21:01:08.7, 22°.00S×166°.79E, h0^{km}, MLv2.0, New Caledonia*
ISC 03 20:59:57.9±0.3, **17°.26S**±0°.05×**168°.85E**±0°.05, **h35**^{km}, **n242**, σ**1^{s}64**/232, **mb5.1**/87, **MS4.8**/39, **8C-8D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.40	319	Pn	Pn	21 00 30.8	-3.8
YATNC	Mamie plateau,	5.11	201	P	Pn	21 01 11.0	-1.0
DZM	Mont Dzumac	5.29	205	Pn	Pn	21 01 12.7	-1.9
	4.4nm,0.3s,baz=82,slow=13,SNR=64						
DZM				Sn	Sn	21 02 10.0	-4.4
	9.6nm,0.3s,baz=308,slow=22,SNR=6.3						
DZM				LR	LR	21 03 08.4	
	comp=Z,8µm,20.8s,baz=58,slow=37						
DZM	Mont Dzumac	5.29	205	ePn	Pn	21 01 12.8	-1.7
	62nm,0.3s						
DZM				eSn	Sn	21 02 08.6	-5.7
	27nm,0.2s						
DZM				eLR	LR	21 02 26.1	
	comp=Z,13µm,24.9s						
DZM	Mont Dzumac	5.29	205		Pn	21 01 13.3	-1.2
DZM	Mont Dzumac	5.29	205	P	Pn	21 01 14.3	-0.2
NOUC	Port Laguerre	5.38	206	P	Pn	21 01 18.3	+2.7
OUENC	Ouen Island, N	5.46	200	P	Pn	21 01 16.8	0.0
MSVF	Nonsavu	8.80	94	Pn	Pn	21 02 02.3	-0.4
	2.4nm,0.3s,baz=226,slow=7.1,SNR=9.9						
MSVF				LR	LR	21 04 41.3	
	comp=Z,16µm,18.3s,baz=270,slow=33						
MSVF	Nonsavu	8.80	94	d iP	Pn	21 02 04.7	+2.0
MSVF				pmax	pmax		
	comp=Z,197nm,2.2s						
MSVF	Nonsavu	8.80	94	Pn	Pn	21 02 02.7	0.0
HNR	Honiara	11.64	311	Pn	Pn	21 02 39.0	-2.6
	comp=Z,6.4nm,0.3s,baz=197,slow=8.9,SNR=1.8						
HNR				Sn	Sn	21 04 47.3	-3.1
	comp=Z,8.5nm,0.3s,baz=134,slow=16,SNR=1.4						
HNR				LR	LR	21 06 25.8	
	comp=Z,4µm,21.1s,baz=132,slow=34						
HNR	Honiara	11.64	311		Pn	21 02 40.3	-1.3
NFK	Norfolk Island	11.75	184	P	Pn	21 02 43.8	+0.7
	baz=12,SNR=4.2						
RAO	Raoul Island	17.02	137	P	Pn	21 03 53.4	+0.2
	comp=Z,47nm,0.3s,baz=57,slow=21,SNR=1.3						
RAO				LR	LR	21 09 21.3	
	comp=Z,2µm,18.2s,baz=252,slow=33						
RAO	Raoul Island	17.02	137		P	21 03 54.4	-0.3
OUZ	Omahuta	18.38	168	P	Pn	21 04 10.4	+0.5
EIDS	Eidsvold	18.40	241	P	Pn	21 04 12.2	+2.0
	baz=19,SNR=6.6						

EIDS	**Eidsvold**	18.40	241		Pn	21 04 11.0	+0.8
ARMA	**Armidale**	20.44	227	P	Pn	21 04 34.9	+0.1
	baz=21,SNR=6.7						
ARMA	**Armidale**	20.44	227	P	Pn	21 04 34.9	+0.2
RMQ	**Roma**	20.75	240	P	Pn	21 04 37.9	-0.4
	baz=21,SNR=11						
RABL	**Rabaul**	20.89	307	P	P	21 04 37.6	+0.3
RABL				IAmb	IAmb	21 05 02.5	
	comp=Z,114nm,1.3s						
KRVT	**Keravat (AS076**	20.92	306	P	P	21 04 34.2	-3.4
	comp=Z,52nm,0.8s,baz=92,slow=23,SNR=2.4						
CTA	**Charters Tower**	21.58	259	P	P	21 04 44.9	+0.1
	comp=Z,42nm,0.9s,baz=87,slow=12,SNR=13						
CTA				LR	LR	21 12 06.8	
	comp=Z,3μm,20.9s,baz=76,slow=34						
CTAO	**Charters Tower**	21.58	259	P	P	21 04 45.0	+0.2
CTAO				pmax	pmax		
	comp=Z,59nm,1.0s						
CTAO	**Charters Tower**	21.58	259	P	P	21 04 45.0	+0.2
CTAO				IAmb	IAmb	21 04 57.1	
	comp=Z,59nm,0.9s						
URZ	**Urewera**	22.14	163	P	P	21 04 50.9	+0.4
	comp=Z,13nm,1.0s,baz=11,slow=5.1,SNR=9.8						
URZ				LR	LR	21 11 39.8	
	comp=Z,5μm,21.5s,baz=352,slow=32						
URZ	**Urewera**	22.14	163	P	P	21 04 51.4	+0.9
URZ				IAmb	IAmb	21 05 10.8	
	comp=Z,67nm,1.2s						
PMG	**Port Moresby**	22.48	288	P	P	21 04 53.7	-0.7
	comp=Z,12nm,1.0s,baz=352,slow=1.9,SNR=4.1						
PMG				LR	LR	21 12 53.3	
	comp=Z,4μm,18.3s,baz=88,slow=35						
PMG	**Port Moresby**	22.48	288	⇓*e*P	P	21 04 54.4	0.0
PMG				pmax	pmax		
	comp=Z,46nm,1.1s						
PMG	**Port Moresby**	22.48	288	P	P	21 04 54.0	-0.4
PMG				IAmb	IAmb	21 05 14.9	
	comp=Z,139nm,1.6s						
BKZ	**Black Stump Fm**	22.82	165	P	P	21 04 59.1	+1.3
MTSU	**Mount Surprise**	23.38	264	P	P	21 05 03.9	+0.2
	baz=24,SNR=22						
QRZ	**Quartz Range**	23.69	173	P	P	21 05 07.4	+1.0
QRZ				IAmb	IAmb	21 05 12.5	
	comp=Z,102nm,1.3s						
BFZ	**Birch Farm**	24.20	166	P	P	21 05 11.0	-0.1
BFZ				IAmb	IAmb	21 05 11.9	
	comp=Z,116nm,1.7s						
QLP	**Quilpie**	24.60	244	P	P	21 05 15.4	+0.4
	baz=25,SNR=9.3						
BHW	**Baring Head**	24.61	169	P	P	21 05 15.1	+0.2
THZ	**Tophouse**	24.66	173	P	P	21 05 17.2	+1.8
THZ				IAmb	IAmb	21 05 21.0	
	comp=Z,43nm,1.0s						
MSWZ	**Moikau Station**	24.69	168	P	P	21 05 15.2	-0.4
PLWZ	**Palliser**	24.84	168	P	P	21 05 16.9	-0.2
COEN	**Coen**	24.93	274	P	P	21 05 17.8	-0.3
COEN				IAmb	IAmb	21 05 24.0	
	comp=Z,53nm,1.0s						
CNB	**Canberra Magne**	24.98	220	P	P	21 05 20.6	+2.2
	baz=25,SNR=9.3						
KHZ	**Kahutara**	25.39	172	P	P	21 05 23.2	+1.3
KHZ				IAmb	IAmb	21 05 27.6	
	comp=Z,78nm,1.3s						
LTZ	**Lake Taylor**	25.60	174	P	P	21 05 25.0	+1.1
LTZ				IAmb	IAmb	21 05 29.7	
	comp=Z,58nm,1.1s						
FOZ	**Fox Glacier**	26.20	178	P	P	21 05 29.9	+0.7
FOZ				IAmb	IAmb	21 05 49.1	
	comp=Z,78nm,1.5s						
RPZ	**Rata Peaks**	26.43	176	P	P	21 05 32.7	+1.3
	comp=Z,7.4nm,0.8s,baz=324,slow=22,SNR=2.4						
RPZ				LR	LR	21 15 12.3	
	comp=Z,6μm,19.5s,baz=11,slow=35						
RPZ	**Rata Peaks**	26.43	176	P	P	21 05 32.7	+1.3
QIS	**Mount Isa**	27.84	259	P	P	21 05 44.9	+0.6
	baz=28,SNR=5.3						
STKA	**Stephens Creek**	28.63	234	P	P	21 05 52.4	+1.1
	baz=29,SNR=16						
STKA	**Stephens Creek**	28.63	234	P	P	21 05 52.0	+0.8
	comp=Z,14nm,0.8s,baz=77,slow=8.8,SNR=15						
STKA				LR	LR	21 17 19.2	
	comp=Z,2μm,18.2s,baz=59,slow=36						
STKA	**Stephens Creek**	28.63	234	P	P	21 05 51.8	+0.6
STKA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
STKA	**Stephens Creek**	28.63	234	P	P	21 05 51.8	+0.6
TOO	**Toolangi**	28.82	221	P	P	21 05 54.9	+2.0
TOO				pmax	pmax		
	comp=Z,43nm,1.5s						
TOO	**Toolangi**	28.82	221	P	P	21 05 54.9	+2.0
RAR	**Rarotonga**	29.86	103	LR	LR	21 17 11.7	
	comp=Z,302nm,18.4s,baz=273,slow=35						
JAY	**Jayapura**	31.28	295	LR	LR	21 18 29.7	
	comp=Z,834nm,19.2s,baz=116,slow=36						
HTT	**Hallett**	31.32	233	P	P	21 06 16.2	+1.1
	baz=32,SNR=4.4						
WR0	**Warramunga Arr**	32.59	260	P	P	21 06 25.2	-1.1
WR0				IAmb	IAmb	21 06 51.0	
	comp=Z,37nm,1.4s						
WB0	**Warramunga Arr**	32.73	260	P	P	21 06 25.5	-2.1
WB0				IAmb	IAmb	21 06 30.9	
	comp=Z,47nm,1.5s						
WB2	**Warramunga Arr**	32.77	260	P	P	21 06 26.8	-1.1
WB2				IAmb	IAmb	21 06 31.3	
	comp=Z,26nm,1.2s						
WRAB	**Tennant Creek**	32.77	260	⇑*e*P	P	21 06 27.3	-0.6
WRAB				pmax	pmax		
	comp=Z,23nm,1.3s						
WRA	**Warramunga Arr**	32.78	260	P	P	21 06 26.6	-1.4
	comp=Z,4.9nm,1.0s,baz=80,slow=5.9,SNR=17						
WRA				PcP	PcP	21 09 11.8	-1.1
	comp=Z,1.2nm,0.9s,baz=92,slow=3.4,SNR=2.0						
WRA				LR	LR	21 18 56.6	
	comp=Z,2μm,20.1s,baz=80,slow=35						
AS31	**Alice Springs**	33.29	253	P	P	21 06 31.6	-0.8
ASAR	**Alice Springs**	33.29	253	P	P	21 06 31.1	-1.3
	comp=Z,24nm,0.7s,baz=80,slow=7.8,SNR=119						
ASAR				LR	LR	21 19 29.7	
	comp=Z,4μm,19.7s,baz=82,slow=35						
BBOO	**Buckleboo**	33.33	236	P	P	21 06 33.2	+0.6
	baz=34,SNR=11						
BBOO	**Buckleboo**	33.33	236	P	P	21 06 33.2	+0.6
BBOO				IAmb	IAmb	21 06 37.2	
	comp=Z,23nm,0.8s						
KDU	**Kakadu**	35.40	272	P	P	21 06 50.5	-0.2
	baz=36,SNR=3.7						
MTN	**Manton Dam**	36.64	272	P	P	21 07 01.6	+0.2
MTN				IAmb	IAmb	21 07 04.9	
	comp=Z,37nm,0.9s						
WRKA	**Warakurna**	38.49	251	P	P	21 07 16.7	-0.3
	baz=39,SNR=28						
FAKI	**Fak Fak**	38.64	288	P	P	21 07 17.9	-0.4
FAKI				IAmb	IAmb	21 07 22.3	
	comp=Z,64nm,1.1s						
GUMO	**Guam**	38.73	321	LR	LR	21 23 46.9	
	comp=Z,740nm,18.3s,baz=138,slow=37						
FORT	**Forrest**	39.39	242	P	P	21 07 25.1	+0.7
	baz=40,SNR=12						
FORT	**Forrest**	39.39	242	P	P	21 07 24.2	-0.2
TBI	**Tubuai**	39.47	106	*e*S	S	21 13 21.4	-3.6
	comp=Z,324nm,28.0s						
TBI				*e*LQ	LQ	21 16 32.5	
	comp=Z,3μm,29.5s						
TBI				*e*LR	LR	21 18 15.1	
	comp=Z,2μm,26.0s,baz=271						
PPT2	**Papeete2**	39.61	97	*e*S	S	21 13 20.2	-7.3
	comp=Z,409nm,25.8s						
PPT2				*e*LQ	LQ	21 16 38.2	
	comp=Z,2μm,36.5s						
PPT2				*e*LR	LR	21 18 18.0	
	comp=Z,3μm,25.5s,baz=260						
PPT	**Papeete**	39.62	97	LR	LR	21 20 07.0	
	comp=Z,1μm,18.3s,baz=261,slow=31						
SIJI	**Sorong**	40.39	290	P	P	21 07 31.5	-1.5
	comp=Z,7.2nm,0.9s,baz=55,slow=16,SNR=2.3						
SIJI				LR	LR	21 25 00.6	
	comp=Z,2μm,18.5s,baz=110,slow=37						
FITZ	**Fitzroy Crossi**	41.10	262	P	P	21 07 39.0	+0.3
	baz=41,SNR=14						
FITZ	**Fitzroy Crossi**	41.10	262	P	P	21 07 38.8	+0.1
	comp=Z,48nm,0.9s,baz=106,slow=7.3,SNR=14						
FITZ				LR	LR	21 24 12.4	
	comp=Z,2μm,19.2s,baz=98,slow=36						
FITZ	**Fitzroy Crossi**	41.10	262	P	P	21 07 38.6	-0.1
FITZ				IAmb	IAmb	21 07 43.2	
	comp=Z,53nm,0.9s						
SOEI	**Soe**	43.90	274	P	P	21 08 01.3	-0.4
BATI	**Baumata**	44.36	273	P	P	21 08 05.3	0.0
	comp=Z,89nm,0.9s,baz=306,slow=19,SNR=2.7						
BATI				LR	LR	21 25 39.1	
	comp=Z,1μm,21.6s,baz=130,slow=35						
MMRI	**Maumere**	46.12	275	P	P	21 08 19.1	-0.2
PSA00	**Pilbara Seismi**	46.27	256	P	P	21 08 20.7	+0.4
PSA00				IAmb	IAmb	21 08 24.5	
	comp=Z,66nm,1.6s						
EDFI	**Ende, Flores**	46.62	274	P	P	21 08 22.6	-0.6
	comp=Z,22nm,1.4s						
MEEK	**Meekatharra**	47.26	250	P	P	21 08 28.3	+0.3
	baz=47,SNR=18						
NWAO	**Narrogin (SRO)**	48.81	241	P	P	21 08 40.6	+0.8
	baz=49,SNR=8.9						
NWAO	**Narrogin (SRO)**	48.81	241	P	P	21 08 39.9	+0.1
NWAO				pmax	pmax		
	comp=Z,22nm,0.8s						
NWAO	**Narrogin (SRO)**	48.81	241	P	P	21 08 39.9	+0.1
NWAO				IAmb	IAmb	21 08 44.2	
	comp=Z,22nm,0.8s						
BKSI	**Bulukumba**	49.09	278	P	P	21 08 41.9	-0.4
	comp=Z,49nm,1.1s						
BNSI	**Bone**	49.40	279	P	P	21 08 49.0	+4.4
	comp=Z,66nm,1.4s						
KAPI	**Kappang**	49.54	278	P	P	21 08 46.0	+0.3
	comp=Z,58nm,0.9s,baz=100,slow=12,SNR=7.9						
KAPI				LR	LR	21 29 26.7	
	comp=Z,387nm,20.6s,baz=108,slow=36						
KAPI	**Kappang**	49.54	278	P	P	21 08 46.0	+0.3
KAPI				pmax	pmax		
	comp=Z,87nm,1.0s						
KAPI	**Kappang**	49.54	278	P	P	21 08 46.0	+0.3
MORW	**Morawa**	49.59	246	P	P	21 08 46.2	+0.3
MORW				IAmb	IAmb	21 08 50.8	
	comp=Z,35nm,1.2s						
PLAI	**Plampang**	50.33	273	P	P	21 08 55.6	+3.9
	comp=Z,102nm,0.9s						
TOLI2	**Tolitoli**	50.74	286	P	P	21 08 53.4	-1.4
TOLI2				IAmb	IAmb	21 08 58.1	
	comp=Z,32nm,1.3s						
TWSI	**Taliwang, Sumb**	51.20	273	P	P	21 08 59.4	+1.1
	comp=Z,1μmcomp=Z,133nm,1.0s						
MPSI	**Mapaga**	51.26	285	P	P	21 08 58.3	-0.4
	comp=Z,34nm,1.1s						
RKT	**Rikitea**	52.79	106	*e*S	S	21 16 33.3	-3.0
	comp=Z,447nm,28.0s						
RKT				*e*LQ	LQ	21 22 12.2	
	comp=Z,661nm,33.2s						
RKT				*e*LR	LR	21 24 46.2	
	comp=Z,2μm,27.2s						
BKB	**Balikpapan**	53.47	282	P	P	21 09 14.7	-0.5
BBKI	**Banjar Baru**	54.67	278	P	P	21 09 28.2	+4.3
	comp=Z,2μmcomp=Z,26nm,0.8s						
SBUM	**Sibu**	59.16	284	P	P	21 09 54.3	-1.5
SBUM				IAmb	IAmb	21 10 02.7	
	comp=Z,34nm,1.6s						
CISI	**Cisompet, Garu**	60.17	271	P	P	21 10 01.8	-1.0
VNDA	**Vanda**	60.38	182	P	P	21 10 02.5	-0.6
	comp=Z,3.6nm,1.2s,baz=30,slow=5.6,SNR=4.1						
VNDA				LR	LR	21 32 13.3	
	comp=Z,869nm,21.8s,slow=32						
VNDA	**Vanda**	60.38	182	P	P	21 10 03.6	+0.5
INU	**Inuyama**	60.41	330	P	P	21 10 02.5	-1.3
KSM	**Kuching**	60.59	282	P	P	21 10 04.8	-0.7
MJAR	**Matsushiro Arr**	60.84	332	LR	LR	21 34 07.6	
	comp=Z,254nm,21.1s,baz=155,slow=34						
CBJI	**Citeko**	61.40	272	P	P	21 10 19.1	+8.0
DBJI	**Dramaga**	61.46	272	P	P	21 10 15.0	+3.5
	comp=Z,57nm,0.9s						
JNU	**Nakatsue**	61.85	324	LR	LR	21 33 40.2	
	comp=Z,376nm,20.4s,baz=126,slow=33						
YHNB	**Yeheng**	62.28	311	P	P	21 10 15.0	-1.8
KSRS	**Korea Array**	66.67	325	LR	LR	21 37 17.2	
	comp=Z,277nm,20.2s,baz=127,slow=34						
QIZ	**Qiongzhong**	68.29	299	P	P	21 10 54.2	-1.6
QIZ				S	S	21 19 54.7	+0.1
QIZ				LR	LR		
	comp=Z,400nm,28.7s						
QIZ				LR	LR		
	comp=Z,410nm,26.5s						
QIZ				LR	LR		
	comp=Z,470nm,22.1s						
NJ2	**Nanjing**	68.54	316	*e*P	P	21 10 56.4	-0.7
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.5s						
NJ2				LR	LR		
	comp=Z,320nm,18.9s						
NJ2				LR	LR		
	comp=Z,350nm,9.5s						
NJ2				LR	LR		
	comp=Z,470nm,16.6s						
BKNI	**Bangkinang**	68.94	277	P	P	21 11 00.3	+0.3
BKNI	**Bangkinang**	68.94	277	P	P	21 11 05.0	+5.0
	comp=Z,1μmcomp=Z,80nm,1.2s						
USRK	**Ussuriysk Ar.**	69.82	333	LR	LR	21 38 03.9	
	comp=Z,489nm,21.0s,baz=134,slow=33						
MNSI	**Mandailing Nat**	70.48	277	P	P	21 11 12.5	+3.0
	comp=Z,15nm,1.0s						
PET	**Petropavlovsk**	70.55	353	*e*P	P	21 11 16.7	+7.7
PET				*e*S	S	21 20 25.8	+6.0
PET				*e*PS	SKSac	21 21 11.0	+3.1
PETK	**Petropavlovsk-**	70.74	353	LR	LR	21 37 52.4	
	comp=Z,813nm,20.1s,baz=154,slow=32						
WHN	**Wuhan**	70.75	312	⇓P	P	21 11 10.4	-0.4
WHN				LR	LR		
	comp=Z,1μm,22.8s						
TIA	**Tai'an**	72.23	318	P	P	21 11 25.3	+5.7
TIA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GSI	**Gunungsitoli**	72.54	277	P	P	21 11 26.8	+4.9
	comp=Z,24nm,1.9s						
CN2	**Changchun**	72.59	329	*e*P	P	21 11 13.8	-7.7
CN2				*e*sP	pP	21 11 30.9	-1.2
CN2				*e*S	S	21 20 34.5	-9.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s						
CN2				LR	LR		
	comp=E,500nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
QSPA	**South Pole Qui**	72.78	180	P	P	21 11 22.5	-0.1
QSPA				IAmb	IAmb	21 11 29.1	
	comp=Z,19nm,1.1s						
GRNR	**Gornyy**	73.48	339	⇑*i*P	P	21 11 27.8	+1.1
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KLR	**Kul'dur**	73.93	336	P	P	21 11 29.4	+0.1
	comp=Z,2.7nm,1.1s,baz=200,slow=11,SNR=4.5						
ENH	**Enshi**	74.14	309	P	P	21 11 29.7	-1.3
GYA	**Guiyang**	74.39	305	⇓P	P	21 11 33.4	+0.7
GYA				pP	pP	21 11 42.1	-1.2
GYA				pmax	pmax		
	comp=Z,17nm,1.0s						
GYA				LR	LR		
	comp=Z,280nm,17.6s						
BJT	**Baijiatuau**	75.17	321	P	P	21 11 36.4	-0.3
BJT				pmax	pmax		
	comp=Z,11nm,1.2s						
BJT	**Baijiatuau**	75.17	321	P	P	21 11 36.4	-0.3
BJI	**Beijing**	75.18	321	P	P	21 11 36.0	-0.8
BJI				S	S	21 21 14.3	+1.2
BJI				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BJI				LR	LR		
	comp=Z,330nm,23.1s						
BJI				LR	LR		
	comp=Z,440nm,18.6s						
BJI				LR	LR		
	comp=Z,660nm,25.4s						
TIY	**Taiyuan**	76.14	317	*e*P	P	21 11 47.8	+5.3
TIY				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN	**Xi'an**	76.51	312	P	P	21 11 45.1	+0.5
XAN				pP	PcP	21 11 57.3	+1.2
XAN				pmax	pmax		
	comp=Z,25nm,1.4s						
XAN	**Xi'an**	76.51	312	P	P	21 11 44.6	0.0
XAN				pmax	pmax		
	comp=Z,86nm,1.7s						
XAN	**Xi'an**	76.51	312	P	P	21 11 44.5	0.0
KMI	**Kunming**	76.92	302	⇑P	P	21 11 48.9	+1.6
KMI				pP	PcP	21 11 58.6	+0.3
KMI				sP	sP	21 12 02.5	+0.6
KMI				S	S	21 21 31.3	-2.1
KMI				sS	sS	21 21 51.7	+0.7
KMI				pmax	pmax		
	comp=Z,23nm,1.3s						
KMI				pmax	pmax		
	comp=Z,190nm,4.1s						
KMI				LR	LR		
	comp=Z,170nm,23.2s						
KMI				LR	LR		
	comp=Z,250nm,16.9s						
KMI				LR	LR		
	comp=Z,340nm,20.1s						
CM31	**Chiang Mai Arr**	77.36	294	P	P	21 11 50.4	+0.8
CMAR	**Chiang Mai Arr**	77.36	294	P	P	21 11 50.3	+0.6
	comp=Z,1.2nm,0.8s,baz=135,slow=6.9,SNR=4.4						
CMAR				LR	LR	21 47 48.8	
	comp=Z,76nm,18.1s,baz=162,slow=37						
HHC	**Hu-ho-hao-te**	78.49	319	*e*P	P	21 11 55.0	-0.6
HHC				sP	sP	21 12 11.7	+1.6
HHC				S	S	21 21 49.4	-0.1
HHC				sS	sS	21 22 04.9	-2.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.8s						
HHC				LR	LR		
	comp=Z,460nm,17.7s						
HHC				LR	LR		
	comp=Z,300nm,16.8s						
HHC				LR	LR		
	comp=Z,470nm,16.5s						
CD2	**Chengdu**	78.75	307	P	P	21 11 57.4	+0.2
CD2				S	S	21 21 57.4	+4.9
CD2				pmax	pmax		
	comp=Z,40nm,1.1s						
CD2				pmax	pmax		
	comp=Z,170nm,6.2s						
CD2				LR	LR		
	comp=Z,410nm,20.8s						
CD2				LR	LR		
	comp=Z,350nm,16.3s						
CD2				LR	LR		
	comp=Z,420nm,21.2s						
HIA	**Hailar**	79.23	330	P	P	21 11 59.9	+0.6
HIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HIA	**Hailar**	79.23	330	P	P	21 11 59.9	+0.6
BTO	**Baotou**	79.32	318	*e*P	P	21 12 01.4	+1.3
OHAK	**Old Harbor**	80.63	20	P	P	21 12 07.4	+0.8
SEY	**Seymchan**	80.97	352	P	P	21 12 06.7	-1.7
	comp=Z,2.5nm,0.9s,baz=79,slow=23,SNR=3.4						
LZH	**Lanzhou**	81.14	312	⇓P	P	21 12 11.7	+1.6
LZH				pP	sP	21 12 23.6	-1.1
LZH				S	S	21 22 17.0	-0.8
LZH				sS	ScS	21 22 37.6	+1.7
LZH				pmax	pmax		
	comp=Z,77nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,8.8s						
LZH				LR	LR		
	comp=Z,370nm,16.3s						
LZH				LR	LR		
	comp=Z,400nm,17.3s						
LZH				LR	LR		
	comp=Z,490nm,19.2s						
CIT	**Chita**	84.01	329	*e*P	P	21 12 28.2	+3.6
CIT				*e*		21 12 40.5	
CIT				pmax	pmax		
	comp=Z,47nm,2.0s						
BELA	**Belgrano 2**	84.09	175	P	P	21 12 23.7	-1.0
TTA	**Tatalina**	84.54	15	P	P	21 12 26.8	-0.2
TTA				pmax	pmax		
	comp=Z,34nm,1.5s						
TTA	**Tatalina**	84.54	15	P	P	21 12 26.8	-0.2
YAK	**Yakutsk**	84.89	343	P	P	21 12 28.1	-0.5
	comp=Z,2.5nm,0.5s,baz=336,slow=4.4,SNR=1.2						
YAK	**Yakutsk**	84.89	343	*e*P	P	21 12 31.6	+2.9
YAK				*e**PP	sP	21 12 42.9	-0.4
YAK				*e*		21 15 46.0	
YAK				*e*S	S	21 22 53.3	-1.0
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,122nm,4.2s						
YAK				pmax	pmax		
	comp=N,78nm,5.0s						
YAK				pmax	pmax		
	comp=E,72nm,4.0s						
YAK				smax	smax		
	comp=N,160nm,4.4s						
YAK				smax	smax		
	comp=E,106nm,5.1s						
YAK				MLR	MLR		
	comp=Z,725nm,19.0s						
YAK				MLR	MLR		
	comp=N,510nm,18.0s						
YAK				MLR	MLR		
	comp=E,268nm,23.0s						
YAK	**Yakutsk**	84.89	343	P	P	21 12 28.0	-0.6
YAK				IAmb	IAmb	21 12 36.0	
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	85.06	323	⇑*e*P	P	21 12 30.1	0.0
ULN				pmax	pmax		
	comp=Z,36nm,1.3s						
ULN	**Ulaanbaatar**	85.06	323	P	P	21 12 29.6	-0.6
SONM	**Songino Array**	85.42	323	P	P	21 12 32.3	+0.4
	comp=Z,5.8nm,0.9s,baz=146,slow=5.4,SNR=15						
GTA	**Gaotai**	85.50	313	⇑P	P	21 12 32.9	+0.4
GTA				pP	pP	21 12 43.4	+0.2
GTA				sP	sP	21 12 47.5	+0.4
GTA				pmax	pmax		
	comp=Z,19nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,5.0s						
GTA				LR	LR		
	comp=Z,220nm,21.1s						
GTA				LR	LR		
	comp=Z,260nm,20.5s						
GTA				LR	LR		
	comp=Z,320nm,19.6s						
WDC	**Whiskeytown Da**	85.74	45	P	P	21 12 33.9	+0.4
WDC				pmax	pmax		
	comp=Z,22nm,1.8s						
WDC	**Whiskeytown Da**	85.74	45	P	P	21 12 33.9	+0.4
WDC				IAmb	IAmb	21 12 39.6	
	comp=Z,22nm,1.8s						
ORV	**Oroville**	86.00	47	P	P	21 12 34.1	-0.7
ORV				pmax	pmax		
	comp=Z,12nm,1.5s						
ORV	**Oroville**	86.00	47	P	P	21 12 34.0	-0.7
SHL	**Shillong**	86.09	298	P	P	21 12 34.9	-0.9
SHL				pmax	pmax		
	comp=Z,23nm,1.0s						
SHL	**Shillong**	86.09	298	P	P	21 12 34.9	-0.9
YBH	**Yreka Blue Hor**	86.15	44	P	P	21 12 34.5	-1.2
	comp=Z,0.6nm,0.7s,baz=251,slow=8.7,SNR=1.4						
YBH	**Yreka Blue Hor**	86.15	44	P	P	21 12 35.5	-0.1
MWC	**Mount Wilson**	86.27	53	P	P	21 12 36.8	+0.3
MWC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MWC	**Mount Wilson**	86.27	53	P	P	21 12 36.8	+0.3
H02S1	**DAWSON INLET T**	86.38	31	T	T	22 48 13.1	
	SNR=18						
KTH	**Kantishna Hill**	86.39	17	P	P	21 12 36.8	+0.6
KTH				IAmb	IAmb	21 12 48.3	
	comp=Z,21nm,1.6s						
SYO	**Syowa Base**	86.72	196	⇑*e*PcP	PcP	21 12 41.8	+1.7
SYO	**Syowa Base**	86.72	196	⇑*e*sP	sP	21 12 51.4	-0.9
BEKR	**Beckworth**	86.93	47	P	P	21 12 39.5	-0.1
BEKR				IAmb	IAmb	21 13 15.7	
	comp=Z,19nm,1.7s						
OMMB	**Old Mammoth Mi**	86.95	49	P	P	21 12 40.4	+0.5
OMMB				IAmb	IAmb	21 12 49.2	
	comp=Z,13nm,1.3s						
PNTR	**Pine Nut**	87.13	48	P	P	21 12 40.9	+0.3
PNTR				IAmb	IAmb	21 12 57.2	
	comp=Z,12nm,1.2s						

PFO	Pinyon Flats O	87.25	54	P	P	21 12 42.1	+0.8
	comp=Z,1.9nm,0.8s,baz=298,slow=2.0,SNR=4.4						
PFO	Pinyon Flats O	87.25	54	P	P	21 12 41.5	+0.3
PFO				pmax	pmax		
	comp=Z,12nm,1.5s						
PFO	Pinyon Flats O	87.25	54	P	P	21 12 41.5	+0.3
PAHR	Pah Rah Range	87.54	47	P	P	21 12 42.9	+0.4
PAHR				IAmb	IAmb	21 13 06.0	
	comp=Z,22nm,1.6s						
LHV	Little Huntoon	87.57	49	P	P	21 12 42.6	+0.2
LHV				IAmb	IAmb	21 12 56.2	
	comp=Z,27nm,1.6s						
RYN	Ryan	87.71	48	P	P	21 12 44.2	+0.9
RYN				IAmb	IAmb	21 12 55.1	
	comp=Z,11nm,1.3s						
NVAR	Mina Array Bea	87.78	49	P	P	21 12 44.9	+1.1
	comp=Z,0.9nm,0.8s,baz=228,slow=7.7,SNR=7.5						
ILAR	Eielson Array	88.47	17	P	P	21 12 46.0	-0.1
	comp=Z,1.9nm,0.8s,baz=233,slow=6.1,SNR=11						
ILAR	Eielson Array	88.47	17	P	P	21 12 46.0	-0.1
ZAK	Zakamensk	88.48	324	*e*P	P	21 12 46.7	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	Talaya	88.93	326⇓	*e*P	P	21 12 49.7	+1.1
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHPR	Sheep Range	89.33	51	P	P	21 12 50.8	-0.3
NVL	N'lazarevskaya	90.76	187	*e*P	P	21 12 59.5	+2.6
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SNAA	Sanae	91.11	183	P	P	21 12 59.7	+1.0
SNAA	Sanae	91.11	183	P	P	21 12 59.1	+0.4
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SNAA	Sanae	91.11	183	P	P	21 12 59.1	+0.4
SNAA				IAmb	IAmb	21 13 06.4	
	comp=Z,9.5nm,1.1s						
U15A	North Rim	91.46	52	P	P	21 13 01.9	+0.7
U15A				IAmb	IAmb	21 13 11.0	
	comp=Z,12nm,1.4s						
VNA3	Neumayer Olymp	91.71	180	P	P	21 13 01.3	-0.2
VNA2	Neumayer--Watz	92.00	181	P	P	21 13 02.3	-0.5
	baz=169,slow=5.5						
TIXI	Tiksi	92.74	348⇓	*e*P	P	21 13 10.8	+4.9
WMQ	Urumqi	95.57	314	*e*P	P	21 13 19.8	+0.2
WMQ				pP	pP	21 13 26.0	-4.4
WMQ				sP	sP	21 13 34.4	+0.1
WMQ				pmax	pmax		
	comp=Z,30nm,1.3s						
WMQ				LR	LR		
	comp=Z,600nm,21.3s						
WMQ				LR	LR		
	comp=Z,1μm,25.5s						
DGZ	Jazzator, Alta	97.57	320⇓	*e*P	P	21 13 28.0	-0.7
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKA	Yellowknife Ar	99.09	27	P	Pdif	21 13 35.4	+0.4
	comp=Z,0.1nm,0.5s,baz=247,slow=3.3,SNR=4.1						
YKA				LR	LR	21 55 02.6	
	comp=Z,270nm,18.3s,baz=0.0,slow=33						
MKAR	Makanchi Array	100.07	316	P	Pdif	21 13 40.3	+0.5
	comp=Z,1.2nm,0.7s,baz=91,slow=4.9,SNR=7.1						
ZALV	Zalesovo Beam	100.32	323	P	Pdif	21 13 40.1	-0.5
	comp=Z,1.3nm,0.9s,baz=97,slow=12,SNR=3.3						
RAYN	Ar Rayn	126.81	287	PKIKP	PKiKP	21 18 59.4	+0.3
RAYN	Ar Rayn	126.81	287		PKiKP	21 18 59.4	+0.3
OBN	Obninsk	127.64	328⇑	*i*PKIKP	PKiKP	21 19 01.7	+2.0
OBN				*e*		21 21 01.1	
OBN				pmax	pmax		
	comp=Z,65nm,3.0s						
FINES	FINESS Array B	128.63	338	PKP	PKiKP	21 19 04.3	+2.8
	comp=Z,5.6nm,1.0s,baz=349,slow=4.3,SNR=1.9						
AKASG	Malin Array Be	133.67	325	PKP	PKiKP	21 19 12.6	+0.6
	comp=Z,0.5nm,0.5s,baz=45,slow=3.4,SNR=2.7						
KOLS	Kolonicke sedl	138.38	327	*e*PKIKP	PKiKP	21 19 26.8	+5.1
KOLS	Kolonicke sedl	138.38	327	*e*PKP	PKiKP	21 19 26.8	+5.1
VYHS	Vyhne	140.42	329	*e*PKIKP	PKiKP	21 19 31.2	+5.3
VYHS	Vyhne	140.42	329	*e*PKP	PKiKP	21 19 31.2	+5.3
CLL	Collm	140.97	336	*e*PKPdf	PKiKP	21 19 26.0	-0.9
CLL				*e*pPKPdf	pPKPdf	21 19 33.0	-2.3
CLL				LmV		22 24 00.0	
	comp=Z,300nm,18.9s						
PRU	Pruhonice	141.36	333	*e*PKIKP	PKiKP	21 19 26.9	-0.8
CONA	Conrad Observa	142.26	330	*e*P	PKiKP	21 19 28.6	-1.2
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	142.42	333	*e*PKP	PKPdf	21 19 26.9	-0.1
GERES	GERESS Array B	142.58	333	PKP	PKPdf	21 19 27.2	-0.1
	comp=Z,0.4nm,0.7s,baz=64,slow=2.3,SNR=4.3						
ARSA	Arzberg	142.90	330	*e*P	PKPdf	21 19 26.6	-1.3
	comp=Z,2.4nm,1.1s						
MOA	Molln	143.06	331	*e*P	PKPdf	21 19 28.2	+0.1
	comp=Z,4.9nm,0.9s						
SOKA	Soboth	143.54	329	*e*P	PKPbc	21 19 26.3	-0.1
	comp=Z,7.1nm,1.6s						
OBKA	Obir	143.90	329	*e*P	PKPbc	21 19 28.0	+0.5
	comp=Z,3.2nm,0.8s						
KBA	Koelnbreinsper	144.05	331	*e*P	PKPdf	21 19 30.1	0.0
	comp=Z,12nm,1.2s						
MYKA	Terra Mystica	144.24	330	*e*P	PKPdf	21 19 29.5	-0.7
	comp=Z,2.8nm,0.6s						
KIJV	Kijevo	144.63	325	P	PKPdf	21 19 31.9	+1.0
UDBI	Udbina	144.64	326	P	PKPdf	21 19 30.6	-0.4
WATA	Walderalm	144.65	333	*e*P	PKPab	21 19 29.3	-0.4
	comp=Z,9.4nm,1.1s						
ABTA	Abfaltersbach	144.68	331	*e*P	PKPbc	21 19 29.9	-0.1
	comp=Z,21nm,0.9s						
WTTA	Wattenberg	144.68	333	*e*P	PKPab	21 19 29.4	-0.5
	comp=Z,12nm,1.3s						
ITM	Ithomi	144.78	311		PKPab	21 19 29.7	-0.7
MOTA	Moosalm	144.85	333	*i* P	PKPbc	21 19 30.6	0.0
	comp=Z,19nm,0.9s,SNR=6.7						
RETA	Reutte	144.88	334	*e*P	PKPdf	21 19 30.9	-0.4
	comp=Z,14nm,1.1s						
SQTA	Sankt Quirin	144.90	333	*e*P	PKPab	21 19 30.2	-0.4
	comp=Z,15nm,0.8s						
STAL	STALIGIAL	144.95	331		PKPab	21 19 30.0	-0.7
MORI	Morici	145.11	325	P	PKPab	21 19 31.1	-0.2
FETA	Feichten	145.26	333	*i* P	PKPdf	21 19 32.3	+0.1
	comp=Z,38nm,0.9s,SNR=7.4						
DAVA	Damuels	145.41	335	*e*P	PKPab	21 19 32.3	-0.2
	comp=Z,41nm,1.0s						
CTI	Castel Tesino	145.60	331	PKIKP	PKPdf	21 19 31.1	-1.6
CTI	Castel Tesino	145.60	331		PKPdf	21 19 31.1	-1.6
TEOL	Teolo	146.11	331		PKPdf	21 19 32.5	-0.9
TUE	Stuetta	146.28	334		PKPdf	21 19 33.8	-0.2
ESDC	Sonseca Array	156.81	346	PKPab	PKPab	21 20 18.6	-0.8
	comp=Z,0.4nm,0.9s,baz=8.6,slow=3.8,SNR=2.7						
TORD	Torodi Ar. Bea	166.94	253	PKP	PKPdf	21 20 01.6	+0.7
	comp=Z,1.1nm,0.9s,baz=62,slow=1.2,SNR=3.8						
TORD				PKPab	PKPab	21 21 04.8	+0.3
	comp=Z,1.8nm,0.9s,baz=101,slow=3.6,SNR=4.8						

ANF ***03*** *21:04:29.0±0.5, 43.°70N×105.°29W, h1^{km}, ML3.7/13, Error ellipse: s-maj=5.2km s-min=4.7km az=126.0*

IDC ***03*** *21:04:28.7±1.0, 43.°84N×105.°54W, h0^{km}, mb4.3/4, mb1 4.1/10, mb1mx3.7/54, mbtmp3.9/10, ML3.3/5, MS4.6/1, Ms1 4.6/1, ms1mx2.7/55, Error ellipse: s-maj=22.9km s-min=7.6km az=148.0*

NEIC ***03*** *21:04:30.0±1.1, 43.°77N±0.°05×105.°30W±0.°09, h0^{km}±2^{km}, ML3.4/64, Error ellipse: s-maj=10.6km s-min=9.0km az=92.0*

ISC 03 21:04:29.0±0.7**, 43.°73N**±0.°04×**105.°27W**±0.°04**, h0**^{km}**, n76, σ1.^{s}30**/81**, mb4.4**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	66	P	Pg	21 04 48.3	+0.7
	baz=246						
RSSD	Black Hills	0.97	66	Pg	Pg	21 04 48.1	+0.6
K22A	Casper	1.42	221	P	Pn	21 04 55.3	-0.9
	baz=40,SNR=314						
K22A				S	Sg	21 05 14.5	-0.1
	baz=40						
K22A	Casper	1.42	221		Pn	21 04 55.4	-0.8
K22A				IAML		21 05 20.1	
	comp=N,748nm,0.6s						
K22A				IAML		21 05 22.2	
	comp=E,454nm,0.3s						
PHWY	Pilot Hill	2.43	183		Pn	21 05 11.4	+1.1
PHWY				IAML		21 05 49.4	
	comp=E,143nm,0.4s						
PHWY				IAML		21 05 50.0	
	comp=E,127nm,0.6s						
RWWY	Rawlins	2.50	216		Pn	21 05 12.9	+1.8
RWWY				IAML		21 05 47.7	
	comp=E,264nm,0.8s						
N23A	Red Feather La	2.88	190	Pb	Pn	21 05 18.2	+1.8
	baz=9.5,SNR=25						
N23A	Red Feather La	2.88	190	Pn	Pn	21 05 18.1	+1.8
N23A				IAML		21 06 02.4	
	comp=N,144nm,0.6s						
N23A				IAML		21 06 07.3	
	comp=E,120nm,0.9s						
LAO	LASA Array	3.03	347	P	Pn	21 05 18.1	-0.2
	baz=167						
LAO				Sb	Sb	21 06 01.7	+0.3
	baz=167						
LAO	LASA Array	3.03	347		Pn	21 05 17.8	-0.4
RLMT	Red Lodge	3.19	297	P	Pn	21 05 20.8	+0.2
	baz=115,SNR=23						
RLMT	Red Lodge	3.19	297		Pn	21 05 20.9	+0.4
RLMT				IAML		21 06 14.0	
	comp=E,107nm,0.6s						
RLMT				IAML		21 06 22.3	
	comp=E,92nm,0.9s						
BW06	Boulder Array	3.28	254	Pn	Pn	21 05 22.3	+0.5
	baz=72,SNR=100						
BW06				Pb	Pb	21 05 28.1	-0.1
	baz=72						
BW06	Boulder Array	3.28	254		Pn	21 05 22.4	+0.6
BW06				IAML		21 06 10.5	
	comp=E,70nm,0.4s						
BW06				IAML		21 06 18.4	
	comp=E,67nm,0.5s						
PD31	Pinedale Array	3.28	254		Pn	21 05 22.4	+0.5
PDAR	Pinedale Array	3.28	254	Pn	Pn	21 05 22.4	+0.5
	comp=E,10.0nm,0.3s,baz=74,slow=16,SNR=124						
PDAR				Lg	Lg	21 06 04.5	
	comp=E,11nm,0.3s,baz=71,slow=35,SNR=1.3						
YNE	Yellowstone No	3.63	292		Pn	21 05 26.9	+0.2
YMP	Mirror Lake Pl	3.66	288		Pn	21 05 27.4	+0.3
OGNE	Ogallala	3.67	138	Pg	Pg	21 05 38.7	-0.7
	baz=320,SNR=9.7						
OGNE	Ogallala	3.67	138		Pn	21 05 29.3	+2.2
GCMT	Greycliff	3.75	305		Pn	21 05 28.9	+0.6
LKWY	Lake	3.79	284		Pn	21 05 30.1	+1.3
LKWY				IAML		21 05 56.9	
	comp=E,51nm,0.7s						
LOHW	Long Hollow	3.88	270		Pn	21 05 30.9	+0.9
H17A	Grant Village	3.88	282	Pn	Pn	21 05 32.0	+1.8
	baz=98,SNR=13						
H17A				Pb	Pb	21 05 39.6	+1.1
	baz=98						
H17A				Sb	Sb	21 06 28.1	+2.0
	baz=98						
H17A	Grant Village	3.88	282		Pn	21 05 31.3	+1.2
H17A				IAML		21 06 35.8	
	comp=N,61nm,1.3s						
H17A				IAML		21 06 43.3	
	comp=E,42nm,1.0s						
ISCO	Idaho Springs	3.94	184	P	Pn	21 05 32.4	+1.4
	baz=3.4,SNR=11						
ISCO	Idaho Springs	3.94	184	Pn	Pn	21 05 32.6	+1.7
FLWY	Flagg Ranch	3.94	277		Pn	21 05 31.7	+0.7
FLWY				IAML		21 06 45.1	
	comp=E,63nm,1.1s						
FLWY				IAML		21 07 07.6	
	comp=E,71nm,1.2s						
MOOW	Moose Ponds	3.97	272		Pn	21 05 31.9	+0.5
YNR	Norris Junctio	4.01	286		Pn	21 05 32.7	+0.8
YPP	Pitchstone Pla	4.03	280		Pn	21 05 32.7	+0.4
REDW	Red Top Meadow	4.08	267		Pn	21 05 33.7	+0.9
REDW				IAML		21 06 40.5	
	comp=E,76nm,1.2s						
REDW				IAML		21 06 55.0	
	comp=E,75nm,1.2s						
YHH	Holmes Hill	4.15	287	Pn	Pn	21 05 33.8	0.0
O20A	White River Ci	4.22	213	P	Pn	21 05 36.2	+1.4
	baz=31,SNR=11						
O20A	White River Ci	4.22	213	Pn	Pn	21 05 36.1	+1.3
O20A				IAML		21 06 59.4	
	comp=E,66nm,1.0s						
E28A	Huff	4.30	47		Pn	21 05 36.9	+1.1
YHB	Horse Butte	4.38	285		Pn	21 05 37.2	+0.2
YHL	Hebgen Lake	4.39	287		Pn	21 05 37.0	-0.2
RDMU	Red Mountain	4.50	227		Pn	21 05 39.9	+1.4
Q24A	Divide	4.77	179		Pn	21 05 43.3	+1.0
Q24A				IAML		21 07 08.3	
	comp=E,40nm,0.8s						
DGMT	Dagmar	4.80	9	Pn	Pn	21 05 43.8	+1.3
	baz=190						
DGMT				Pb	Pb	21 05 54.6	+0.7
	baz=190						
DGMT				Sb	Sb	21 06 56.8	+4.6
	baz=190						
DGMT	Dagmar	4.80	9		Pn	21 05 43.7	+1.2
BOZ	Bozeman (W)	4.91	295	Pb	Pb	21 05 57.0	+1.1
	baz=110,SNR=5.7						
BOZ				Sb	Sb	21 06 58.2	+2.7
	baz=110						
HWUT	Hardware Ranch	5.11	248		Pn	21 05 47.8	+0.9
KSCO	Kaye Shedlock'	5.12	156	Pn	Pn	21 05 48.0	+1.0
EGMT	Eagleton	5.31	325	P	Pn	21 05 49.3	-0.4
	baz=143						
EGMT	Eagleton	5.31	325	Pn	Pn	21 05 49.2	-0.4
HRY	Holter Researc	5.51	305		Pn	21 05 52.7	+0.3
LRM	Limekiln Ridge	5.53	295		Pn	21 05 52.6	-0.1
SDCO	Great Sand Dun	5.98	182	P	Pn	21 06 00.9	+1.8
	baz=1.5						
PV14	Lion Creek, Pa	6.06	209		Pn	21 06 01.2	+1.1
S22A	4UR Ranch, Cre	6.10	192		Pn	21 06 02.6	+2.0
ECSD	EROS Data Cent	6.27	87	P	Pn	21 06 03.8	+1.1
	baz=273						
ECSD	EROS Data Cent	6.27	87		Pn	21 06 04.0	+1.3
TMUT	Trail Mountain	6.29	227		Pn	21 06 04.2	+1.0
BGU	Big Grassy Mou	6.40	247	Pn	Pn	21 06 05.5	+0.8
CBKS	Cedar Bluff	6.44	138	P	Pn	21 06 05.6	+0.5
	baz=321						
CBKS	Cedar Bluff	6.44	138		Pn	21 06 05.9	+0.8
T25A	Trinidad	6.62	174	Pn	Pn	21 06 09.0	+1.3
HLID	Hailey	6.64	272	Pn	Pn	21 06 09.8	+1.9
DUG	Dugway, Tooele	6.64	240	P	Pn	21 06 08.2	+0.3
	baz=55,SNR=7.5						
DUG	Dugway, Tooele	6.64	240	Pn	Pn	21 06 08.6	+0.7
MSO	Missoula	6.86	300	P	Pn	21 06 10.4	-0.4
	baz=114,SNR=6.1						
R32A	Long Quarter,	7.25	135	Pn	Pn	21 06 18.2	+1.9
ELK	Elko	7.98	251	Pn	Pn	21 06 26.4	0.0
	comp=E,0.6nm,0.3s,baz=68,slow=9.3,SNR=11						
ELK				Lg	Lg	21 08 34.7	
	comp=E,0.1nm,0.3s,baz=353,slow=19,SNR=1.7						
ELK				LR	LR	21 09 50.5	
	comp=E,34nm,19.5s,baz=311,slow=41						
ANMO	Albuquerque	8.82	186	Pg	Pg	21 07 12.5	-5.5
	comp=E,0.2nm,0.3s,baz=7.1,slow=18,SNR=2.0						
I10CA	LAC DU BONNET	9.04	41	*i*		21 58 00.0	
	baz=225,slow=349,SNR=2.5						
ULM	Lac du Bonnet	9.14	41	Pn	Pn	21 06 40.1	-2.0
	comp=E,2.1nm,0.3s,baz=234,slow=11,SNR=18						
ULM				Pg		21 07 12.8	
	comp=E,1.9nm,0.3s,baz=219,slow=14,SNR=8.2						
ULM				Lg	Lg	21 09 10.8	
	comp=E,0.7nm,0.3s,baz=314,slow=21,SNR=1.7						
NEW	Newport	9.41	303	Pn	Pn	21 06 42.2	-3.6
	comp=E,0.1nm,0.3s,baz=103,slow=18,SNR=2.3						
NEW				Lg	Lg	21 09 12.7	
	comp=E,0.1nm,0.3s,baz=64,slow=15,SNR=1.9						
NVAR	Mina Array Bea	11.17	246	Pn	Pn	21 07 11.3	+1.2
	comp=E,0.2nm,0.3s,baz=54,slow=12,SNR=8.6						
YKA	Yellowknife Ar	19.57	347	P	P	21 08 57.0	-1.2
	comp=E,0.2nm,0.3s,baz=160,slow=13,SNR=12						
ARCES	ARCESS Array B	61.42	18	P	P	21 14 45.5	-1.0
	comp=E,6.1nm,0.9s,baz=353,slow=6.5,SNR=4.8						
FINES	FINESS Array B	68.03	23	P	P	21 15 28.8	-0.9
	comp=E,12nm,1.2s,baz=177,slow=3.8,SNR=3.3						
SONM	Songino Array	84.64	339	P	P	21 17 04.3	-0.2
	comp=E,0.7nm,0.8s,baz=6.5,slow=3.8,SNR=3.4						
MKAR	Makanchi Array	89.61	355	P	P	21 17 27.1	-1.3
	comp=E,0.9nm,0.8s,baz=347,slow=4.4,SNR=6.6						
AAK	Ala-Archa	94.01	0	LR	LR	22 03 17.8	
	comp=E,285nm,19.7s,baz=116,slow=38						

JMA ***03*** *21:08:34.8±0.3, 39.°69N×143.°78E, h13^{km}, M4.1*

NIED ***03*** *21:08:34.8, 39.°69N×143.°78E, h13^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.21; $M_{\theta\theta}$1.23; $M_{\phi\phi}$-6.44; $M_{r\theta}$4.11; $M_{\theta\phi}$-2.35; $M_{\phi r}$2.64; Fault plane solution: $M_0$8.02000×10^{14} NP1:ϕ_s41.00000°, δ66.00000°, λ118.00000°. NP2:ϕ_s169.00000°, δ36.00000°, λ44.00000°.*

IDC ***03*** *21:08:35.1±1.6, 39.°60N×143.°78E, h0^{km}, mb3.7/8, mb1 3.8/12, mb1mx3.6/55, mbtmp3.8/12, ML3.1/4, MS3.3/3, Ms1 3.3/3, ms1mx2.7/53 Error ellipse: s-maj=35.1km s-min=19.7km az=104.0*

NEIC ***03*** *21:08:41.6±2.8, 39.°68N±0.°06×143.°3E±0.°1, h31^{km}±8^{km}, mb4.1/10, Error ellipse: s-maj=14.1km s-min=8.5km az=107.0*

ISC 03 21:08:37.2±0.9**, 39.°67N**±0.°05×**143.°62E**±0.°08**, h11**^{km}**, n49, σ0.^{s}97**/54**, mb3.8**/11**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JTH	Tanohata	1.38	282	P	Pn	21 09 01.4	-1.0
JTH				*e*S	Sn	21 09 21.0	+0.4
MIYJ	Miyakonagasawa	1.39	267	P	Pn	21 09 02.0	-0.5
JKEN	Kujiedanarisaw	1.56	291	P	Pn	21 09 03.5	-1.4
JANG	Nango	1.76	294	P	Pn	21 09 06.8	-0.9
JOM	Ohasama	1.81	265	P	Pn	21 09 08.4	+0.1
JMK	Ichinoseki	1.99	250	P	Pn	21 09 10.6	-0.2
JIO	Ouri	2.14	236	P	Pn	21 09 12.1	-0.7
JTM	Tenmabayashi	2.25	301	P	Pn	21 09 14.3	0.0
JTM				*e*S	Sn	21 09 42.2	+0.1
JTM	Tenmabayashi	2.25	301		Pn	21 09 14.7	+0.3
ERM	Erimo	2.37	352	Pn	Pn	21 09 16.5	+0.5
JOT	Ohata	2.60	312	P	Pn	21 09 19.4	+0.2
JYK	Kaneyama	2.64	255	P	Pn	21 09 20.1	+0.4
JNBK	Urakawa-nobuka	2.69	346	P	Pn	21 09 21.4	+1.0
JNBK				*e*S	Sn	21 09 53.6	+0.6
JMM	Marumori	2.85	232		Pn	21 09 21.7	-0.8
JCH	Churui	2.95	356	P	Pn	21 09 23.8	-0.2
JCH				*e*S	Sn	21 09 57.8	-1.6
JFT	Otama	3.35	231	P	Pn	21 09 29.3	-0.2
JEW	Eniwo	3.57	333		Pn	21 09 33.0	+0.6
JYT	Yasato	4.37	219		Pn	21 09 42.1	-1.4
JKA	Kamikawa-asahi	4.51	351		Pn	21 09 46.1	+0.6
ASAJ	Asahikawa	4.51	351	Pn	Pn	21 09 46.1	+0.7
	1.6nm,0.3s,baz=192,slow=12,SNR=13						
ASAJ				Sn	Sn	21 10 36.0	-1.8
	1.6nm,0.3s,baz=183,slow=31,SNR=1.4						
MJAR	Matsushiro Arr	5.28	236	Pn	Pn	21 09 57.5	+1.4
	0.3nm,0.3s,baz=41,slow=12,SNR=24						
MJAR				LR	LR	21 12 11.7	
	comp=Z,71nm,19.3s,baz=110,slow=40						
MAJO	Matsushiro	5.28	236		Pn	21 09 57.3	+1.2
MAT	Matsushiro	5.28	236	P	Pn	21 09 57.3	+1.2
MAT				*e*S	Sn	21 10 57.7	+0.7
MJB9	Matsu-Tunnel	5.28	236		Pn	21 09 56.4	+0.3
JGF	Kuroka	6.41	233	Pn	Pn	21 10 11.5	-0.1
JHJ	Hachijo jima 2	7.23	206	Pn	Pn	21 10 21.6	-1.2
	4.8nm,0.3s,baz=46,slow=18,SNR=1.3						
JWT	Wachi	7.86	239	Pn	Pn	21 10 31.6	+0.2
USA0B	Ussuriysk Arra	9.78	301	Pn	Pn	21 10 57.5	-0.2
USRK	Ussuriysk Ar.	9.78	301	Pn	Pn	21 10 59.7	+2.0
	baz=94,slow=13,SNR=7.7						
USRK				Sn	Sn	21 12 46.0	-1.3
	baz=139,slow=38,SNR=2.5						
USRK				LR	LR	21 14 11.3	
	comp=Z,78nm,19.3s,baz=55,slow=34						
KSRS	Korea Array	12.48	265	Pn	Pn	21 11 40.2	+5.5
	0.1nm,0.3s,baz=71,slow=14,SNR=1.6						
HIA	Hailar	19.48	307	P	P	21 13 01.8	-2.3
HIA				IAmb	IAmb	21 13 08.4	
	comp=Z,7.0nm,0.3s						
MA2	Magadan	20.44	10	P	P	21 13 14.6	+0.3
	comp=Z,4.7nm,0.7s,baz=180,slow=8.1,SNR=3.9						
MA2	Magadan	20.44	10	P	P	21 13 14.6	+0.3
MA2				IAmb	IAmb	21 13 20.4	
	comp=Z,11nm,1.0s						
SEY	Seymchan	23.89	10	P	P	21 13 50.8	+0.3
	comp=Z,2.0nm,0.8s,baz=189,slow=13,SNR=5.4						
TPUB	Ta-pu	25.39	237	P	P	21 14 02.1	-2.6
ULN	Ulaanbaatar	27.44	299	P	P	21 14 24.0	+0.9
SONM	Songino Array	27.88	299	P	P	21 14 27.9	+0.9
	comp=Z,0.8nm,0.7s,baz=86,slow=9.0,SNR=3.1						
DAV	Davao City (W)	36.28	211	LR	LR	21 30 13.3	
	comp=Z,334nm,20.5s,baz=106,slow=36						
ZAA0	Zalesovo Array	41.48	310	P	P	21 16 24.2	+0.3
ZAA0				IAmb	IAmb	21 16 38.0	
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	41.48	310	P	P	21 16 24.5	+0.6
	comp=Z,0.6nm,0.4s,baz=91,slow=9.0,SNR=3.8						
CMAR	Chiang Mai Arr	43.86	254	P	P	21 16 44.3	+0.7
	comp=Z,0.3nm,0.5s,baz=46,slow=7.7,SNR=2.2						
MK31	Makanchi Array	44.24	300	P	P	21 16 46.3	-0.2
MK31				IAmb	IAmb	21 17 05.3	
	comp=Z,3.1nm,1.2s						
MKAR	Makanchi Array	44.24	300	P	P	21 16 46.6	+0.1
	comp=Z,1.1nm,0.8s,baz=85,slow=11,SNR=9.3						
MAKZ	Makanchi	44.45	300	P	P	21 16 48.4	+0.3
KURK	Kurchatov	45.72	306	P	P	21 16 58.1	0.0
KURK				IAmb	IAmb	21 17 04.5	
	comp=Z,4.3nm,1.1s						
KURBB	Kurchatov Arra	45.80	306	P	P	21 16 58.9	+0.2
	comp=Z,1.9nm,0.8s,baz=79,slow=8.7,SNR=9.9						
SML	Sawmill	45.85	38	P	P	21 17 00.9	+1.8
ABKAR	Akbulak array	57.59	310	P	P	21 18 26.8	0.0
ABKAR				IAmb	IAmb	21 18 42.0	
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	59.93	190	P	P	21 18 42.6	-0.7
	comp=Z,0.5nm,0.8s,baz=7.3,slow=7.0,SNR=1.8						

IDC 03 21:18:16.0±2.5**, 5.°80N**×**127.°80E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.2**/61**, mbtmp3.5**/4**, Error ellipse: s-maj=189.6km s-min=28.1km az=66.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.38	166	P	P	21 23 53.8	-0.5
	0.5nm,1.0s,baz=347,slow=9.9,SNR=5.7						
ASAR	Alice Springs	29.89	169	P	P	21 24 25.8	+0.1
	0.2nm,0.4s,baz=351,slow=6.8,SNR=8.2						
STKA	Stephens Creek	39.71	161	P	P	21 25 50.6	+0.3
	1.2nm,0.4s,baz=338,slow=9.2,SNR=5.1						
MKAR	Makanchi Array	56.49	324	P	P	21 27 59.9	-0.1
	0.2nm,0.6s,baz=111,slow=7.1,SNR=2.1						

CRAAG ***03*** *21:19:33.8, 35.°63N×0.°41E, Ml3.0*

MDD ***03*** *21:19:35.9±0.5, 35.°58N×0.°40E, h12^{km}±5^{km}, mb3.5/8, Error ellipse: s-maj=6.9km s-min=4.2km az=154.0, PRXIMO*

ISC 03 21:19:35.0±1.1**, 35.°61N**±0.°06×**0.°41E**±0.°04**, h17**^{km}±8^{km}**, n24, σ1.^{s}15**/30**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OJBR	Djebel Berber	0.06	243	P	Pg	21 19 38.0	-0.3
OJBR	Djebel Berber	0.06	243	P	Pg	21 19 38.0	-0.3
OJGS	Djebel Guires	0.30	110	P	Pb	21 19 41.9	-0.1
OJGS	Djebel Guires	0.30	110	P	Pb	21 19 41.9	-0.1
OKGL	Djebel Kef Gue	0.47	24	P	Pg	21 19 37.0	-7.5
OKGL	Djebel Kef Gue	0.47	24	P	Pg	21 19 44.7	+0.1
	50nm,0.1s,SNR=7.9						
OKGL				S	Sb	21 19 53.2	+1.6
	326nm,0.2s,SNR=7.9						
ODJA	Bouhanifia	0.53	239	P	Pb	21 19 46.0	0.0
ODJA	Bouhanifia	0.53	239	P	Pb	21 19 46.0	0.0
EANR	'Ain N'Sour	0.66	59	P	Pb	21 19 48.2	0.0
EANR	'Ain N'Sour	0.66	59	P	Pb	21 19 48.2	0.0
ECHF	Ech Chlef	0.94	54	P	Pg	21 19 48.2	-5.0
ECHA	Ech Chlef	0.95	55	P	Pg	21 19 48.2	-5.3
OTSS	Djebel Tessala	1.03	252	P	Pn	21 19 56.0	+1.1
OTSS	Djebel Tessala	1.03	252	P	Pn	21 19 56.0	+1.1
EBNR	Beni Rached	1.14	53	P	Pg	21 19 57.0	-0.1
ENIJ	Nijar	2.51	304	P	Pn	21 20 15.5	+0.4
	1.0nm,0.2s,SNR=7.9						
ENIJ				S	Sn	21 20 42.1	-3.3
	4.1nm,0.3s,SNR=7.9						
EMUR	La Murta	2.59	330	P	Pn	21 20 16.2	0.0
	1.2nm,0.2s,SNR=5.6						
EMUR				S	Sn	21 20 46.5	-0.9
	1.4nm,0.3s						
EBER	Berja	2.96	297	P	Pn	21 20 21.3	-0.1
	1.6nm,0.2s,SNR=13						
EBER				S	Sn	21 20 56.1	-0.6
	1.6nm,0.3s						
ETOB	Tobarra	3.41	333	P	Pn	21 20 28.7	+1.2
	1.7nm,0.2s,SNR=17						
ETOB				S	Sn	21 21 06.7	-0.9
	1.8nm,0.3s						

SESP	Santiago Espad	3.45	318	P	Pn	21 20 29.4	+1.3
	4.4nm,0.2s,SNR=7.9						
SESP				S	Sn	21 21 09.1	+0.4
	7.5nm,0.4s,SNR=7.9						
EQUE	Quentar	3.49	298	P	Pn	21 20 29.7	+1.0
	0.9nm,0.2s,SNR=5.5						
EIBI	Ibiza	3.49	12	P	Pn	21 20 28.3	-0.3
	2.0nm,0.2s,SNR=7.7						
EIBI				S	Sn	21 21 07.6	-2.0
	1.1nm,0.4s						
ELGU	Los Guajares,	3.49	292	P	Pn	21 20 28.1	-0.6
	1.2nm,0.2s,SNR=7.9						
ELGU				S	Sn	21 21 07.4	-2.3
	2.3nm,0.2s,SNR=7.9						
EQES	Quesada	3.55	309	P	Pn	21 20 30.9	+1.4
	1.9nm,0.3s,SNR=12						
EQES				S	Sn	21 21 12.0	+0.8
	2.9nm,0.4s						

IDC 03 21:26:38.8±57.0**,22°.18S**×**177°.42W,h0**^{km}**,mb4.1**/3**, mb1 4.3**/3**,mb1mx3.8**/27**,mbtmp4.1**/3**,Error ellipse: s-maj=1048.0km s-min=160.0km az=85.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.58	246	P	P	21 33 55.5	+0.4
	2.0nm,0.7s,baz=76,slow=10,SNR=4.9						
ASAR	Alice Springs	44.69	258	P	P	21 34 53.5	-0.4
	1.7nm,0.6s,baz=94,slow=7.4,SNR=40						
WRA	Warramunga Arr	44.93	264	P	P	21 34 55.6	-0.2
	1.0nm,0.3s,baz=103,slow=8.4,SNR=79						

IDC 03 21:27:35.2±4.2**,12°.83S**×**110°.26W,h0**^{km}**,mb3.6**/5**, mb1 4.0**/5**,mb1mx3.7**/32**,mbtmp3.6**/5**,MS3.6**/3**,Ms1 3.6**/3**, ms1mx3.3**/22**,Error ellipse: s-maj=257.8km s-min=54.5km az=105.0,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	33.39	27	LR	LR	21 44 33.9	
	comp=Z,40nm,20.6s,baz=310,slow=30						
H03N2	Juan Fernandez	35.15	131	T	T	22 12 20.1	
	baz=301,slow=77,SNR=3.4						
H03N3	Juan Fernandez	35.16	131	T	T	22 12 19.8	
	baz=301,slow=77,SNR=4.6						
H03N1	Juan Fernandez	35.16	131	T	T	22 12 21.1	
	baz=301,slow=77,SNR=8.5						
PPT	Papeete	38.18	258	LR	LR	21 45 29.3	
	comp=Z,107nm,19.6s,baz=344,slow=28						
NVAR	Mina Array Bea	51.55	352	P	P	21 36 43.1	-0.2
	0.4nm,0.7s,baz=172,slow=10.0,SNR=3.3						
PDAR	Pinedale Array	55.33	1	P	P	21 37 11.1	0.0
	0.6nm,1.0s,baz=148,slow=5.3,SNR=2.7						
YKA	Yellowknife Ar	75.16	358	P	P	21 39 19.2	+0.2
	0.4nm,0.9s,baz=168,slow=5.0,SNR=3.9						
ILAR	Eielson Array	82.18	345	P	P	21 39 56.7	-1.0
	0.4nm,0.9s,baz=141,slow=3.5,SNR=3.1						
INK	Inuvik	82.63	351	P	P	21 40 01.0	+1.0
	2.0nm,1.1s,baz=173,slow=2.0,SNR=3.4						
HNR	Honiara	87.74	261	LR	LR	22 11 16.8	
	comp=Z,42nm,18.3s,baz=16,slow=30						
MKAR	Makanchi Array	144.53	345	PKP	PKPab	21 47 12.3	0.0
	1.1nm,1.1s,baz=11,slow=2.2,SNR=5.1						
CMAR	Chiang Mai Arr	151.35	285	PKPbc	PKPbc	21 47 31.9	0.0
	0.7nm,0.4s,baz=58,slow=1.4,SNR=12						

JMA ***03*** *21:35:51.0±0.1,35°.89N×140°.84E,h42*^{km}*±1*^{km}*,M3.3*

IDC ***03*** *21:35:52.9±4.1,35°.73N×140°.81E,h60*^{km}*±31*^{km}*,mb3.5/6, mb1 3.5/9,mb1mx3.3/43,mbtmp3.7/9,ML2.7/3,MS3.8/1, Ms1 3.8/1,ms1mx2.9/36,Error ellipse: s-maj=43.4km s-min=9.3km az=68.0*

ISC 03 21:35:51.3±1.0**,35°.87N**±0°.05×**140°.93E**±0°.09**,h43**^{km}±7^{km}**, n26,**σ**1**^{s}**21**/25**,mb3.7**/6**,1C-5D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.17	198	⇑P	Pn	21 35 58.3	-0.3
CHOJ				S	Sn	21 36 03.0	-0.8
JIHU	Itakohorinouch	0.34	287	⇓P	Pn	21 35 59.5	-0.7
JSMT	Sammumatsuo	0.45	240	⇓P	Pn	21 36 01.2	-0.2
JSMT				*e*S	Sn	21 36 07.4	-1.2
JHYU	Hitachinakayam	0.55	330	⇓P	Pn	21 36 01.9	-0.8
JYT	Yasato	0.69	301	⇓P	Pn	21 36 03.2	-1.5
JYT				*e*S	Sn	21 36 13.0	-1.3
JHO	Hitachi	0.80	339	⇓P	Pn	21 36 05.3	-0.8
BSO4	Boso 4	1.00	209	P	Pn	21 36 09.2	+0.5
BSO3	Boso 3	1.12	198	P	Pn	21 36 10.7	+0.5
JAG	Ashikaga	1.31	295	P	Pn	21 36 11.9	-1.3
MJAR	Matsushiro Arr	2.30	288	P	Pn	21 36 26.6	0.0
	2.1nm,0.3s,baz=47,slow=33,SNR=124						
MJAR				S	Sn	21 36 54.8	+1.0
	1.0nm,0.3s,baz=105,slow=18,SNR=4.9						
MAT	Matsushiro	2.30	288	P	Pn	21 36 26.5	-0.2
MAT				*e*S	Sn	21 36 53.3	-0.5
JHJ	Hachijo jima 2	2.90	199	P	Pn	21 36 34.5	-0.4
	26nm,0.3s,baz=120,slow=23,SNR=8.4						
JHJ				S	Sn	21 37 06.6	-1.9
	56nm,0.3s,baz=138,slow=23,SNR=7.4						
USRK	Ussuriysk Ar.	10.77	323	P	Pn	21 38 26.5	+3.7
	baz=134,slow=12,SNR=1.8						
H11N2	WAKE ISLAND Hy	27.92	118	T	T	22 10 42.0	
	baz=310,slow=75,SNR=7.3						
H11N1	WAKE ISLAND Hy	27.92	118	T	T	22 10 36.9	
	baz=310,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	27.93	118	T	T	22 10 40.8	
	baz=310,slow=75,SNR=9.8						
SONM	Songino Array	28.13	306	P	P	21 41 39.0	-0.3
	0.3nm,0.5s,baz=102,slow=9.7,SNR=2.6						
H11S1	WAKE ISLAND Hy	28.58	120	T	T	22 11 29.4	
	baz=312,slow=75,SNR=19						
H11S3	WAKE ISLAND Hy	28.58	120	T	T	22 11 28.5	
	baz=312,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	28.60	120	T	T	22 11 30.6	
	baz=312,slow=75,SNR=11						
ZALV	Zalesovo Beam	42.42	313	P	P	21 43 41.3	-0.2
	0.4nm,0.4s,baz=106,slow=9.2,SNR=2.8						
MKAR	Makanchi Array	44.41	303	P	P	21 43 57.4	-0.3
	1.4nm,0.8s,baz=91,slow=9.7,SNR=13						
LEM	Lembang	52.76	223	LR	LR	22 07 32.0	
	comp=Z,95nm,18.5s,baz=170,slow=36						
WRA	Warramunga Arr	55.85	187	P	P	21 45 23.6	-0.9
	0.3nm,0.3s,baz=1.3,slow=7.6,SNR=3.2						
ASAR	Alice Springs	59.58	187	P	P	21 45 49.8	-0.9
	0.3nm,0.7s,baz=18,slow=11,SNR=4.8						
FINES	FINESS Array B	69.66	332	P	P	21 46 55.8	-0.1
	5.7nm,1.0s,baz=60,slow=6.6,SNR=2.1						

IDC 03 21:45:11.9±3.7**,5°.00S**×**150°.81E,h72**^{km}±63^{km}**,mb3.3**/3**, mb1 3.6**/3**,mb1mx3.0**/42**,mbtmp3.7**/3**,Error ellipse: s-maj=86.3km s-min=24.4km az=118.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.40	60	P	Pn	21 45 35.8	+0.2
	65nm,0.3s,baz=31,slow=0.3,SNR=45						
KRVT				S	Sn	21 45 53.3	-0.1
	46nm,0.3s,baz=70,slow=24,SNR=15						
WRA	Warramunga Arr	21.85	226	P	P	21 49 59.1	+0.3
	1.4nm,0.5s,baz=50,slow=10,SNR=16						
ASAR	Alice Springs	24.70	220	P	P	21 50 26.1	-0.4
	1.8nm,0.6s,baz=56,slow=9.2,SNR=27						
SONM	Songino Array	65.45	329	P	P	21 55 47.5	+0.2
	0.2nm,0.5s,baz=138,slow=8.3,SNR=2.4						

BJI ***03*** *21:54:07.9±0.0,56°.41N×113°.99E,h8*^{km}*,mb3.9/7,Ms4.4/1, Ms7 4.1/1*

MOS ***03*** *21:54:09.5±0.9,56°.06N×113°.76E,h3*^{km}*,mb4.3/5,Error ellipse: s-maj=8.8km s-min=6.1km az=72.4*

BYKL ***03*** *21:54:11.4±0.1,56°.13N×113°.73E,h7*^{km}*±2*^{km}

IDC ***03*** *21:54:11.2±0.9,56°.14N×113°.73E,h0*^{km}*,mb3.7/11, mb1 3.9/15,mb1mx3.6/57,mbtmp3.7/15,ML3.4/4,Error ellipse: s-maj=24.6km s-min=16.0km az=159.0*

NEIC ***03*** *21:54:12.1±2.3,56°.13N±0°.04×113°.7E±0°.1,h10*^{km}*±1*^{km}*, mb4.1/12,Error ellipse: s-maj=12.9km s-min=6.6km az=249.0*

ISC 03 21:54:11.9±0.4**,56°.11N**±0°.02×**113°.69E**±0°.02**,h10**^{km}**,n105,**σ**2**^{s}**80**/167**,mb3.9**/17**,9C-17D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.07	275	⇑*i*Pg	Pg	21 54 13.1	-1.2
SVKR				*e*Sg	Sg	21 54 15.1	-0.8
SVKR	Severomuysk	0.07	275	⇑*i*PG	Pg	21 54 13.0	-1.2
SVKR				*e*S	Sg	21 54 15.1	-0.8
UKT	Uakit	0.62	183	⇑*i*Pg	Pg	21 54 22.1	-1.9
UKT				Pmax		21 54 22.6	
	516nm,0.7s						
UKT				*e*Sg	Sg	21 54 31.0	-1.2
UKT				Smax		21 54 37.0	
	3μm,1.1s						
UKT	Uakit	0.62	183	⇑*i*PG	Pg	21 54 22.0	-1.9
UKT				*e*		21 54 31.0	
UKT				pmax	pmax		
	comp=Z,593nm,0.3s						
UKT				smax	smax		
	comp=E,2μm,0.4s						
YOA	Uoyan	1.10	272	⇓*i*Pg	Pb	21 54 31.7	-1.3
YOA				Pmax		21 54 32.1	
	comp=E,535nm,0.4s						
YOA				*e*Sg	Sg	21 54 47.6	+0.3
YOA				*e*		21 54 52.6	
YOA				max		21 54 53.9	
	comp=E,7μm,0.5s						
YOA	Uoyan	1.10	272	⇓*i*PG	Pb	21 54 31.7	-1.3
YOA				*e*		21 54 47.5	
YOA				pmax	pmax		
	comp=Z,520nm,0.3s						
YOA				smax	smax		
	comp=N,7μm,0.3s						
NLYR	Nelyaty	1.19	70	⇓*i*Pg	Pb	21 54 32.2	-2.3
NLYR				*e*Pb	Pn	21 54 34.6	+0.1
NLYR	Nelyaty	1.19	70	⇓*i*PG	Pb	21 54 32.2	-2.3
KMO	Kumora	1.42	262	⇓*i*Pg	Pn	21 54 37.0	-0.7
KMO				*e*Pb	Pb	21 54 38.6	+0.2
KMO				max		21 54 39.0	
	comp=N,566nm,0.4s						
KMO				*e*Sg	Sn	21 54 55.9	-0.5
KMO				*e*Sb	Sg	21 54 59.4	+2.0
KMO				max		21 55 00.5	
	comp=N,4μm,0.8s						
KMO	Kumora	1.42	262	⇓*i*PG	Pn	21 54 37.0	-0.7
KMO				*e*		21 54 55.8	
KMO				pmax	pmax		
	comp=Z,529nm,0.4s						
KMO				smax	smax		
	comp=N,4μm,0.7s						
BOD	Bodaibo	1.72	6	*e*Pg	Pn	21 54 42.0	+0.1
BOD				*e*		21 54 44.0	
BOD				max		21 54 44.5	
	comp=N,861nm,1.6s						
BOD				*e*Sg	Sn	21 55 04.5	+0.6
BOD				Smax		21 55 08.1	
	comp=N,2μm,0.9s						
BOD	Bodaibo	1.72	6	*e*PN	Pn	21 54 41.6	-0.3
BOD				*e*		21 55 04.1	
BOD				pmax	pmax		
	comp=Z,778nm,0.8s						
BOD				smax	smax		
	comp=E,2μm,0.6s						
YLYR	Ulyunkhan	1.90	230	⇓*i*Pn	Pn	21 54 45.3	+1.0
YLYR				*e*Pg	Pb	21 54 45.9	-0.7
YLYR				*e*		21 54 47.6	
YLYR				max		21 54 47.8	
	comp=E,576nm,1.2s						
YLYR				*e*Sg	Sb	21 55 11.0	+0.7
YLYR				Smax		21 55 15.2	
	comp=E,3μm,1.2s						
YLYR	Ulyunkhan	1.90	230	⇓*i*PN	Pn	21 54 45.3	+1.0
YLYR				*e*		21 55 10.3	
YLYR				pmax	pmax		
	comp=Z,355nm,0.3s						
YLYR				smax	smax		
	comp=E,2μm,0.3s						
NIZ	Nizh Angarsk	2.36	264	*e*Pn	Pn	21 54 51.5	+0.9
NIZ				*e*Pg	Pb	21 54 53.8	-0.6
NIZ				Pmax		21 54 55.7	
	comp=E,179nm,0.9s						
NIZ				*e*Sg	Sg	21 55 25.9	-1.6
NIZ				Smax		21 55 28.0	
	comp=E,1μm,0.9s						
NIZ	Nizh Angarsk	2.36	264	⇑*i*PN	Pn	21 54 51.6	+0.9
NIZ				*e*		21 54 55.1	
NIZ				*e*		21 55 25.9	
NIZ				pmax	pmax		
	comp=Z,211nm,1.5s						
NIZ				smax	smax		
	comp=N,1μm,0.8s						
CRS	Chara	2.66	71	⇓*i*Pn	Pn	21 54 55.0	+0.2
CRS				*e*Pg	Pb	21 54 59.4	-0.2
CRS				Pmax		21 54 59.7	
	comp=N,2μm,1.0s						
CRS				*e*Sg	Sb	21 55 33.9	+1.6
CRS				Smax		21 55 37.2	
	comp=N,1μm,1.6s						
CRS	Chara	2.66	71	*e*PN	Pn	21 54 54.7	-0.1
CRS				*e*		21 54 59.1	
CRS				*e*		21 55 33.5	
CRS				pmax	pmax		
	comp=Z,879nm,0.6s						
CRS				smax	smax		
	comp=E,1μm,1.1s						
SYVR	Suvo	3.25	222	*e*Pn	Pn	21 55 03.2	+0.3
SYVR				*e*Pg	Pb	21 55 09.9	+0.2
SYVR				*e*		21 55 14.2	
SYVR				max		21 55 14.9	
	comp=E,190nm,1.3s						
SYVR				*e*Sn	Sn	21 55 41.0	-0.7
SYVR				*e*Sg	Sg	21 55 52.9	-3.4
SYVR				*e*		21 56 00.4	
SYVR				max		21 56 04.3	
	comp=E,1μm,1.5s						
SYVR	Suvo	3.25	222	*e*PN	Pn	21 55 03.5	+0.6
SYVR				*e*		21 55 09.1	
SYVR				*e*		21 55 51.9	
SYVR				pmax	pmax		
	comp=Z,194nm,0.8s						
SYVR				smax	smax		
	comp=N,2μm,1.3s						
VTMR	Vitim	3.39	350	*e*Pn	Pn	21 55 04.9	+0.1
VTMR				*e*Pg	Pb	21 55 13.1	+1.1
VTMR				*e*Sn	Sn	21 55 45.1	0.0
VTMR				*e*Sg	Sb	21 55 55.7	+2.4
KHNR	Khani	3.58	74	*e*Pn	Pn	21 55 08.0	+0.6
KHNR				*e*Pg	Pb	21 55 15.0	-0.2
KHNR				*e*		21 55 23.5	
KHNR				*e*Sg	Sb	21 56 01.5	+2.8
TUP	Tupik	3.96	113	⇓*i*Pn	Pn	21 55 12.2	-0.5
TUP				*e*Pg	Pb	21 55 22.9	+1.1
TUP				Pmax		21 55 24.3	
	comp=N,89nm,0.7s						
TUP				*e*Sn	Sn	21 55 57.7	-1.5
TUP				*e*Sg	Sb	21 56 13.7	+4.0
TUP				*e*SgSg	Sg	21 56 17.9	-1.1
TUP				max		21 56 21.0	
	comp=N,1μm,1.0s						
TUP	Tupik	3.96	113	⇓*i*PN	Pn	21 55 12.2	-0.5
TUP				*e*		21 55 22.1	
TUP				*e*S	Sn	21 55 57.6	-1.6
TUP				*e*		21 56 12.7	
TUP				pmax	pmax		
	comp=Z,89nm,0.5s						
TUP				smax	smax		
	comp=E,1μm,0.9s						
MXMB	Maximikha	4.05	227	*e*Pn	Pn	21 55 14.2	+0.4
MXMB				*e*Pg	Pb	21 55 25.0	+1.8
MXMB				*e*Sg	Sg	21 56 17.6	-4.1
CIT	Chita	4.10	181	*e*Pn	Pn	21 55 14.0	-0.6
CIT				*e*Pg	Pb	21 55 25.4	+1.3
CIT				Pmax		21 55 26.4	
	comp=E,143nm,0.9s						
CIT				*e*Sg	Sg	21 56 18.4	-5.0
CIT				Smax		21 56 24.0	
	comp=E,712nm,0.8s						
CIT	Chita	4.10	181	*e*PN	Pn	21 55 13.3	-1.3
CIT				*e*		21 55 24.2	
CIT				*e*S	Sn	21 56 02.3	-0.3
CIT				*e*		21 56 16.1	
CIT				pmax	pmax		
	comp=Z,627nm,0.9s						
CIT				smax	smax		
	comp=E,3μm,1.0s						
OGRR	Ongureny	4.30	237	*e*Pn	Pn	21 55 19.1	+1.8
OGRR				*e*Pg	Pb	21 55 29.3	+1.8
OGRR				*e*		21 55 31.6	
OGRR				max		21 55 32.4	
	comp=E,134nm,1.5s						
OGRR				*e*Sn	Sn	21 56 07.4	-0.1
OGRR				*e*Sg	Sb	21 56 24.6	+5.2
OGRR				Smax		21 56 32.0	
	comp=E,1μm,1.6s						
OGRR	Ongureny	4.30	237	*e*PN	Pn	21 55 19.1	+1.8
OGRR				*e*		21 55 29.9	
OGRR				*e*		21 56 23.8	
OGRR				pmax	pmax		
	comp=Z,136nm,1.7s						
OGRR				smax	smax		
	comp=N,376nm,1.9s						
YKLR	Yuktali	4.46	80	*e*Pn	Pn	21 55 19.5	0.0
YKLR				*e*Pg	Pb	21 55 30.3	+0.1
YKLR				*e*Sg	Sb	21 56 28.8	+4.9
ZRHB	Zarechye	5.23	230	*e*Pg	Pb	21 55 46.6	+3.3
ZRHB				Pmax		21 55 47.9	
	comp=N,147nm,1.2s						
ZRHB				*e*Sg	Sg	21 56 54.1	-5.4
ZRHB				Smax		21 57 15.6	
	comp=N,1μm,1.5s						
TRG	Tyrgan	5.44	235	*e*Pn	Pn	21 55 34.1	+1.1
TRG				*e*Pg	Pb	21 55 48.8	+1.8
TRG				*e*		21 55 54.4	
TRG				max		21 55 55.8	
	comp=N,38nm,1.1s						
TRG				*e*Sn	Sn	21 56 32.5	-3.2
TRG				*e*Sg	Sb	21 56 58.8	+6.5
TRG				Smax		21 57 02.7	
	comp=N,130nm,1.1s						
TRG	Tyrgan	5.44	235	*e*PN	Pn	21 55 33.2	+0.2
TRG				*e*		21 55 48.8	
TRG				*e*S	Sn	21 56 33.1	-2.6
TRG				*e*		21 56 57.6	
TRG				pmax	pmax		
	comp=Z,56nm,1.2s						
TRG				smax	smax		
	comp=N,233nm,1.0s						
FFNB	Fofonovo	5.76	228	*e*Pn	Pn	21 55 39.4	+2.0
FFNB				*e*Pg	Pb	21 55 55.2	+2.8
FFNB				*e*Sn	Sn	21 56 42.3	-1.2
FFNB				*e*Sg	Sg	21 57 11.1	-5.5
KAB	Kabansk	5.80	228	*e*Pg	Pb	21 55 55.8	+2.7
KAB				Pmax		21 55 56.2	
	comp=N,5.0nm,0.1s						
KAB				*e*Sg	Sg	21 57 12.5	-5.5
KAB				Smax		21 57 18.8	
	comp=N,801nm,1.4s						
STDB	Stepnoy Dvoret	5.84	230	*e*Sg	Sg	21 57 13.3	-5.9
HRMR	Khuramsha	6.00	224	*e*Pn	Pn	21 55 41.6	+0.9
HRMR				*e*Pg	Pb	21 55 59.4	+2.9
HRMR				Pmax		21 56 03.0	
	comp=N,61nm,0.6s						
HRMR				*e*Sn	Sn	21 56 48.7	-0.7
HRMR				*e*Sg	Sg	21 57 18.6	-5.8
HRMR				Smax		21 57 27.7	
	comp=N,987nm,0.7s						
IENR	Iengra	6.24	84	*e*Pn	Pn	21 55 43.5	-0.5
IENR				*e*Pg	Pb	21 56 02.6	+2.0
IENR				*e*		21 56 10.2	
IENR				*e*Sn	Sn	21 56 53.9	-1.4
IENR				*e*Sg	Sb	21 57 23.8	+8.6
BGT	Bolshoye Golou	6.35	234	*e*Pg	Pb	21 56 06.3	+3.9
BGT				Pmax		21 56 06.9	
	comp=N,8.0nm,0.1s						
BGT				*e*Sg	Sg	21 57 30.4	-5.1
BGT				Smax		21 57 36.7	
	comp=N,163nm,1.7s						
KPC	Khapcheranga	6.47	188	*e*Pn	Pn	21 55 47.4	+0.3
KPC				*e*Pg	Pb	21 56 08.8	+4.4
KPC				*e*		21 56 12.7	
KPC				max		21 56 13.6	
	comp=N,16nm,0.5s						
KPC				*e*Sn	Sn	21 56 59.4	-1.5
KPC				*e*Sg	Sg	21 57 33.4	-5.9
KPC				Smax		21 57 41.1	
	comp=N,438nm,1.4s						
KPC	Khapcheranga	6.47	188	*e*PN	Pn	21 55 45.8	-1.3
KPC				*e*		21 56 07.5	
KPC				*e*		21 57 30.0	
KPC				pmax	pmax		
	comp=Z,17nm,0.3s						
KPC				smax	smax		
	comp=E,438nm,2.0s						
LSTR	Listvyanka	6.73	235	*e*Sg	Sg	21 57 40.4	-7.4
LSTR				Smax		21 57 47.0	
	comp=E,167nm,1.6s						
IRK	Irkutsk	6.75	239	*e*Sg	Sg	21 57 41.2	-7.1
IRK				Smax		21 57 49.2	
	comp=E,288nm,1.0s						
IRK	Irkutsk	6.75	239	*e*PG	Pb	21 56 12.2	+3.0
IRK				*e*		21 57 40.0	
IRK				pmax	pmax		
	comp=Z,46nm,0.2s						
IRK				smax	smax		
	comp=N,291nm,1.5s						
TLY	Talaya	7.41	237	*e*Pg	Pb	21 56 26.2	+5.8
TLY				Pmax		21 56 27.5	
	comp=N,11nm,0.8s						
TLY				*e*Sg	Sg	21 58 01.4	-8.0
TLY				Smax		21 58 12.0	
	comp=N,105nm,1.7s						
TLY	Talaya	7.41	237	*e*PG	Pb	21 56 26.0	+5.6
TLY				*e*		21 58 01.8	
TLY				pmax	pmax		
	comp=Z,20nm,0.7s						
TLY				smax	smax		
	comp=E,78nm,0.8s						
TLY	Talaya	7.41	237	Pn	Pn	21 55 57.8	-2.2
HIA	Hailar	7.78	149	⇓*e*PN	Pn	21 56 05.4	+0.4
HIA	Hailar	7.78	149	Pn	Pn	21 56 04.1	-0.9
ARS	Arshan	7.85	242	*e*Pn	Pn	21 56 07.5	+1.4
ARS				*e*Pg	Pb	21 56 34.2	+6.3
ARS				Pmax		21 56 35.9	
	comp=E,36nm,0.9s						
ARS				*e*Sn	Sn	21 57 32.5	-2.4
ARS				*e*Sg	Sg	21 58 15.3	-8.3
ARS				Smax		21 58 29.0	
	comp=E,391nm,1.1s						
ARS	Arshan	7.85	242	*e*PN	Pb	21 56 17.5	-10
ARS				*e*P	Pg	21 56 34.2	-7.8
ARS				*e*S	Sg	21 58 15.6	-8.0
ARS				pmax	pmax		
	comp=Z,37nm,0.7s						
ARS				smax	smax		
	comp=E,300nm,0.0s						
ZEA	Zeya	8.17	101	*e*PN	Pn	21 56 10.9	+0.6
ZEA				*e*		21 57 39.2	
ZEA				smax	smax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,4.0s						
ZAK	Zakamensk	8.47	232	*e*Pg	Pb	21 56 44.6	+6.0
ZAK				Pmax		21 56 47.8	
	comp=Z,5.0nm,1.3s						
ZAK				*e*Sn	Sn	21 57 47.2	-3.1
ZAK				*e*Sg	Sg	21 58 35.5	-8.1
ZAK				Smax		21 58 53.9	
	comp=Z,157nm,1.4s						
ZAK	Zakamensk	8.47	232	*e*PN	Pn	21 56 26.1	+11
ZAK				*e*		21 58 39.3	
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
ZAK				smax	smax		
	comp=N,157nm,1.3s						
MOY	Mondy	8.72	245	*e*Pn	Pn	21 56 19.8	+1.8
MOY				max		21 56 32.9	
	comp=N,50nm,1.4s						
MOY				*e*		21 56 44.3	
MOY				*e*Sn	Sn	21 57 52.0	-4.3
MOY				*e*Sg	Sg	21 58 42.1	-9.2
MOY				Smax		21 58 47.9	
	comp=N,146nm,1.5s						
MOY	Mondy	8.72	245	*e*PN	Pn	21 56 19.5	+1.5
MOY				*e*		21 56 49.7	
MOY				*e*S	Sn	21 57 54.9	-1.4
MOY				*e*		21 58 40.4	
MOY				pmax	pmax		
	comp=Z,22nm,0.7s						

MOY				smax	smax		
	comp=N,222nm,1.7s						
ORL	**Orlik**	**8.86**	**252**	ePn	**Pn**	**21 56 21.2**	**+1.2**
ORL				max		21 56 34.5	
	comp=N,28nm,1.4s						
ORL				e		21 56 55.3	
ORL				eSn	**Sn**	**21 57 54.7**	**-5.2**
ORL				eSg	Sg	21 58 45.4	-11
ORL				Smax		21 58 53.1	
	comp=N,75nm,1.1s						
ORL	**Orlik**	**8.86**	**252**	ePN	**Pn**	**21 56 19.9**	**-0.1**
ORL				e		21 56 50.9	
ORL				e		21 58 47.1	
ORL				pmax	pmax		
	comp=Z,34nm,1.7s						
ORL				smax	smax		
	comp=N,87nm,2.1s						
SONM	**Songino Array**	**9.43**	**211**	Pn	**Pn**	**21 56 28.1**	**+0.4**
	comp=N,0.2nm,0.3s,baz=21,slow=14,SNR=10						
SONM				Sn	**Sn**	**21 58 21.7**	**+8.0**
	comp=N,0.7nm,0.3s,baz=30,slow=21,SNR=3.8						
SONM				Lg	Lg	21 59 05.4	
	comp=N,3.6nm,0.3s,baz=18,slow=30,SNR=14						
YAK	**Yakutsk**	**10.13**	**48**	Sn	**Sn**	**21 58 23.8**	**-6.8**
	baz=2.7,slow=18,SNR=1.2						
YAK				Lg	Lg	21 59 19.3	
	comp=N,0.0nm,0.3s,baz=151,slow=22,SNR=7.2						
YAK	**Yakutsk**	**10.13**	**48**	eP	**Pn**	**21 56 34.9**	**-2.3**
YAK				eS	**Sn**	**21 58 29.6**	**-1.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK				smax	smax		
	comp=N,8.0nm,0.9s						
YAK				smax	smax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,121nm,1.1s						
YAK				pmax	pmax		
	comp=E,66nm,1.1s						
YAK				pmax	pmax		
	comp=Z,68nm,0.9s						
YAK	**Yakutsk**	**10.13**	**48**	Pn	**Pn**	**21 56 35.5**	**-1.6**
KLR	**Kul'dur**	**12.92**	**115**	Pn	**Pn**	**21 57 15.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=309,slow=19,SNR=8.0						
KLR				Lg	Lg	22 00 54.1	
	comp=Z,0.5nm,0.3s,baz=35,slow=22,SNR=8.0						
ZAA0	**Zalesovo Array**	**16.64**	**275**	Pn	**Pn**	**21 58 04.4**	**-0.5**
ZALV	**Zalesovo Beam**	**16.64**	**275**	Pn	**Pn**	**21 58 04.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=27,slow=27,SNR=2.4						
ZALV				Lg	Lg	22 02 50.5	
	comp=Z,0.1nm,0.3s,baz=31,slow=31,SNR=2.0						
ZALV	**Zalesovo Beam**	**16.64**	**275**	P	**Pn**	**21 58 04.0**	**-0.9**
USRK	**Ussuriysk Ar.**	**16.66**	**128**	Lg	Lg	22 02 50.7	
	baz=330,slow=26,SNR=6.7						
TIXI	**Tiksi**	**16.87**	**17**	⇓iP	**Pn**	**21 58 05.6**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,39nm,0.7s						
TIXI	**Tiksi**	**16.87**	**17**	Pn	**Pn**	**21 58 05.0**	**-2.7**
TIXI				IAmb	IAmb	21 58 09.3	
	comp=Z,10.0nm,0.8s						
DGZ	**Jazzator, Alta**	**17.02**	**259**	⇓eP	**Pn**	**21 58 09.9**	**-0.1**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NRIK	**Noril'sk**	**17.65**	**329**	P	**Pn**	**21 58 16.0**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=121,slow=11,SNR=8.9						
NRIK				S	Sn	22 01 16.6	-17
	comp=Z,0.2nm,0.3s,baz=182,slow=17,SNR=1.7						
NRIK				Lg	Lg	22 03 18.1	
	comp=Z,0.2nm,0.3s,baz=217,slow=21,SNR=1.6						
NRIK	**Noril'sk**	**17.65**	**329**	⇑iP	**Pn**	**21 58 17.0**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NRIK	**Noril'sk**	**17.65**	**329**		**Pn**	**21 58 15.8**	**-1.7**
GTA	**Gaotai**	**19.07**	**215**	eP	**Pn**	**21 58 38.3**	**+3.1**
GTA				pP	sP	21 58 43.6	+4.4
GTA				sP	pP	21 58 46.4	+8.7
SEY	**Seymchan**	**20.51**	**55**	P	**P**	**21 58 50.8**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=80,slow=22,SNR=8.2						
SEY				Lg	Lg	22 04 51.8	
	comp=Z,1.0nm,0.7s,baz=344,slow=22,SNR=1.9						
SEY	**Seymchan**	**20.51**	**55**	⇓eP	**P**	**21 58 51.1**	**+1.4**
WMQ	**Urumqi**	**20.61**	**244**	P	**P**	**21 58 49.7**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ	**Urumqi**	**20.61**	**244**	P	**P**	**21 58 49.7**	**-1.4**
WMQ				IAmb	IAmb	21 58 55.8	
	comp=Z,7.8nm,0.9s						
KURK	**Kurchatov**	**21.42**	**270**	deP	**P**	**21 59 01.3**	**+1.6**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**21.42**	**270**	P	**P**	**21 59 00.7**	**+1.0**
KURK				IAmb	IAmb	21 59 05.9	
	comp=Z,10nm,1.2s						
MK31	**Makanchi Array**	**21.50**	**258**	P	**P**	**21 59 01.5**	**+0.9**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	**Makanchi Array**	**21.50**	**258**	P	**P**	**21 59 01.5**	**+0.9**
MKAR	**Makanchi Array**	**21.50**	**258**	P	**P**	**21 59 02.5**	**+1.8**
	comp=Z,1.2nm,0.6s,baz=60,slow=9.5,SNR=15						
MKAR				Lg	Lg	22 05 23.2	
	comp=Z,0.2nm,0.7s,baz=30,slow=31,SNR=1.9						
KURBB	**Kurchatov Arra**	**21.52**	**270**	P	**P**	**21 59 01.9**	**+1.2**
	comp=Z,7.6nm,0.9s,baz=66,slow=12,SNR=23						
KURBB				Lg	Lg	22 05 22.5	
	comp=Z,0.2nm,0.7s,baz=68,slow=29,SNR=1.7						
MAKZ	**Makanchi**	**21.66**	**258**	P	**P**	**21 59 02.7**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.4s						
MAKZ	**Makanchi**	**21.66**	**258**	P	**P**	**21 59 02.7**	**+0.3**
MAKZ				IAmb	IAmb	21 59 08.1	
	comp=Z,12nm,1.4s						
BVAR	**Borovoye Array**	**24.98**	**281**	P	**P**	**21 59 37.2**	**+1.9**
	comp=Z,1.0nm,0.9s,baz=46,slow=8.3,SNR=4.8						
BRVK	**Borovoye**	**25.03**	**281**	⇓eP	**P**	**21 59 37.4**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KK31	**Karatay Array**	**30.32**	**263**	P	**P**	**22 00 23.7**	**+0.4**
KK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KK31	**Karatay Array**	**30.32**	**263**	P	**P**	**22 00 23.7**	**+0.4**
KK31				IAmb	IAmb	22 00 25.5	
	comp=Z,5.2nm,1.5s						
FINES	**FINESS Array B**	**42.47**	**315**	P	**P**	**22 02 06.7**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=45,slow=8.4,SNR=5.0						
FINES	**FINESS Array B**	**42.47**	**315**	ceP	**P**	**22 02 08.6**	**+2.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TTA	**Tatalina**	**42.67**	**42**	P	**P**	**22 02 08.5**	**+0.2**
TTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TTA	**Tatalina**	**42.67**	**42**	P	**P**	**22 02 08.5**	**+0.2**
TTA				IAmb	IAmb	22 02 13.6	
	comp=Z,3.0nm,1.2s						
MDM	**Murphy Dome**	**44.27**	**37**	P	**P**	**22 02 21.8**	**+0.7**
COLA	**College**	**44.45**	**37**	⇑eP	**P**	**22 02 21.9**	**-0.5**
COLA				pmax	pmax		
	comp=Z,15nm,2.3s						
ILAR	**Eielson Array**	**44.84**	**37**	P	**P**	**22 02 26.4**	**+0.8**
	comp=Z,1.3nm,1.0s,baz=298,slow=3.3,SNR=7.6						
INK	**Inuvik**	**46.50**	**28**	P	**P**	**22 02 40.9**	**+2.2**
	comp=Z,1.6nm,1.0s,baz=324,slow=7.7,SNR=2.5						
K27K	**Chicken**	**46.91**	**36**	P	**P**	**22 02 41.9**	**-0.1**
C36M	**Paulatuk**	**48.05**	**24**	P	**P**	**22 02 50.2**	**-0.5**
YKA	**Yellowknife Ar**	**55.90**	**25**	P	**P**	**22 03 48.6**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=335,slow=6.4,SNR=14						
YKA	**Yellowknife Ar**	**55.90**	**25**	ceP	**P**	**22 03 50.5**	**+1.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**70.97**	**314**	P	**P**	**22 05 30.5**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=27,slow=6.5,SNR=5.4						
NVAR	**Mina Array Bea**	**76.00**	**40**	P	**P**	**22 05 59.3**	**0.0**
	comp=Z,0.2nm,0.5s,baz=327,slow=2.5,SNR=2.3						
WRA	**Warramunga Arr**	**77.75**	**160**	P	**P**	**22 06 09.4**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=346,slow=5.8,SNR=2.0						

BYKL 03 21:54:24.7±0.3, 56.°16N×113.°63E, h6^{km}±4^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.06**	**223**	ePg	Pg	21 54 25.6	-0.7
SVKR				eSg	Sg	21 54 27.5	+0.1
NLYR	**Nelyaty**	**1.20**	**73**	ePg	Pg	21 54 46.7	-1.0
NLYR				ePb	Pn	21 54 48.4	+0.3
NLYR				max		21 54 49.0	
	872nm,0.6s						
NLYR				Sg	Sg	21 55 01.7	-1.6
NLYR				e		21 55 06.8	
NLYR				max		21 55 07.0	
	3µm,1.0s						
KMO	**Kumora**	**1.39**	**260**	ePg	Pn	21 54 49.8	-0.8
KMO				Pmax		21 54 49.9	
	218nm,0.4s						
KMO				Sg	Sb	21 55 06.6	-2.5
KMO				Smax		21 55 07.1	
	2µm,0.6s						
BOD	**Bodaibo**	**1.68**	**7**	ePg	Pn	21 54 54.9	+0.4
BOD				Pmax		21 54 56.0	
	45nm,0.3s						
BOD				eSg	Sb	21 55 17.5	+0.2
BOD				Smax		21 55 18.0	
	1µm,1.1s						
YLYR	**Ulyunkhan**	**1.90**	**229**	ePg	Pn	21 54 58.7	+1.0
YLYR				Pmax		21 55 00.1	
	161nm,0.4s						
YLYR				eSg	Sb	21 55 24.5	+0.7
YLYR				Smax		21 55 25.4	
	2µm,0.8s						
NIZ	**Nizh Angarsk**	**2.33**	**262**	ePg	Pb	21 55 06.1	-1.0
NIZ				Pmax		21 55 07.5	
	22nm,0.3s						
NIZ				Sg	Sb	21 55 35.3	-0.8
NIZ				Smax		21 55 36.1	
	580nm,0.7s						
CRS	**Chara**	**2.67**	**72**	ePg	Pb	21 55 11.6	-1.4
CRS				Pmax		21 55 13.5	
	731nm,1.0s						
CRS				eSg	Sb	21 55 47.6	+1.6
CRS				Smax		21 55 48.7	
	1µm,1.1s						
SYVR	**Suvo**	**3.27**	**221**	ePg	Pb	21 55 23.3	+0.2
SYVR				Pmax		21 55 26.7	
	122nm,1.0s						
SYVR				eSg	Sg	21 56 06.5	-3.1
SYVR				Smax		21 56 07.5	
	1µm,1.6s						
VTMR	**Vitim**	**3.34**	**350**	Pg	Pb	21 55 25.5	+1.2
VTMR				eSg	Sb	21 56 08.1	+3.0
TUP	**Tupik**	**4.01**	**113**	eSg	Sb	21 56 28.2	+3.7
TUP				Smax		21 56 31.9	
	1µm,1.4s						
CIT	**Chita**	**4.15**	**181**	eSg	Sg	21 56 33.5	-4.3
CIT				Smax		21 56 38.6	
	258nm,0.5s						
OGRR	**Ongureny**	**4.30**	**237**	ePg	Pb	21 55 41.3	+0.7
OGRR				Pmax		21 55 41.4	
	68nm,1.0s						
OGRR				eSg	Sb	21 56 37.4	+4.7
OGRR				Smax		21 56 38.6	
	157nm,0.8s						
TRG	**Tyrgan**	**5.44**	**234**	ePg	Pb	21 56 02.8	+2.7
TRG				Pmax		21 56 07.7	
	40nm,1.5s						
TRG				eSg	Sg	21 57 13.8	-5.6
TRG				Smax		21 57 16.4	
	250nm,1.3s						
FFNB	**Fofonovo**	**5.77**	**227**	eSg	Sg	21 57 22.7	-7.1
HRMR	**Khuramsha**	**6.01**	**224**	eSg	Sg	21 57 29.9	-7.7
HRMR				Smax		21 57 30.7	
	953nm,0.8s						
KPC	**Khapcheranga**	**6.51**	**187**	eSg	Sg	21 57 46.0	-7.6
KPC				Smax		21 57 47.0	
	406nm,1.5s						
MOY	**Mondy**	**8.71**	**244**	ePn	Pn	21 56 32.2	+1.0
MOY				max		21 56 46.4	
	46nm,1.3s						
MOY				eSg	Sg	21 58 55.0	-8.9
MOY				Smax		21 59 00.2	
	222nm,1.8s						

BYKL 03 21:54:37.8±0.8, 56.°06N×113.°59E, h10^{km}±9^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.06**	**343**	ePg	Pg	21 54 39.9	-0.1
SVKR				eSg	Sg	21 54 41.9	+0.3
SVKR				Pmax			
	7µm,0.4s						
SVKR				Smax			
	25µm,0.4s						
UKT	**Uakit**	**0.57**	**178**	Sg	Sg	21 54 56.8	+0.3
UKT				Smax			
	492nm,0.4s						
YOA	**Uoyan**	**1.05**	**275**	eSg	Sg	21 55 10.7	-0.8
YOA				Smax			
	4µm,0.6s						
NLYR	**Nelyaty**	**1.25**	**69**	eSg	Sb	21 55 16.7	-1.1
NLYR				Smax			
	1µm,1.2s						
BOD	**Bodaibo**	**1.78**	**7**	eSg	Sb	21 55 33.5	+0.7
BOD				Smax			
	520nm,0.8s						
YLYR	**Ulyunkhan**	**1.82**	**230**	eSg	Sb	21 55 33.4	-0.7
YLYR				Smax			
	1µm,1.0s						
TUP	**Tupik**	**3.99**	**112**	eSg	Sb	21 56 40.5	+3.9
TUP				Smax			
	439nm,1.0s						
YKLR	**Yuktali**	**4.52**	**80**	eSg	Sg	21 56 57.3	-5.5

BYKL 03 21:54:48.0±0.5, 56.°06N×113.°62E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.07**	**329**	ePg	Pg	21 54 49.5	+0.2
SVKR				eSg	Sg	21 54 51.5	+1.4
SVKR				Pmax			
	5µm,0.2s						
SVKR				Smax			
	19µm,0.3s						
UKT	**Uakit**	**0.57**	**180**	Sg	Sg	21 55 06.4	+0.1
UKT				Smax			
	351nm,0.4s						
YOA	**Uoyan**	**1.06**	**275**	Sg	Sg	21 55 20.9	-1.3
YOA				Smax			
	4µm,0.8s						
BOD	**Bodaibo**	**1.78**	**7**	eSg	Sn	21 55 43.3	+0.1
BOD				Smax			
	269nm,0.4s						
YLYR	**Ulyunkhan**	**1.83**	**231**	eSg	Sn	21 55 44.5	-0.2
YLYR				Smax			
	977nm,0.8s						
CRS	**Chara**	**2.71**	**70**	Sg	Sb	21 56 11.7	+0.5
CRS				Smax			
	472nm,1.3s						
TUP	**Tupik**	**3.98**	**112**	Sg	Sb	21 56 50.6	+3.0
TUP				Smax			
	211nm,0.7s						

BYKL 03 21:55:09.2±0.5, 56.°11N×113.°76E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.11**	**274**	ePg	Pg	21 55 11.6	+0.3
SVKR				eSg	Sg	21 55 13.6	+0.8
SVKR				Pmax			
	3µm,0.3s						
SVKR				Smax			
	3µm,0.3s						
UKT	**Uakit**	**0.63**	**187**	Sg	Sg	21 55 28.3	-1.0
UKT				Smax			
	394nm,0.6s						
BOD	**Bodaibo**	**1.72**	**4**	eSg	Sn	21 56 02.6	-0.4
BOD				Smax			
	253nm,0.5s						
YLYR	**Ulyunkhan**	**1.93**	**231**	Sg	Sn	21 56 08.9	+0.7
YLYR				Smax			
	440nm,0.6s						
SYVR	**Suvo**	**3.28**	**223**	Sg	Sb	21 56 50.6	+1.9
SYVR				Smax			
	356nm,1.2s						

BYKL 03 21:55:23.5±1.4, 56.°09N×113.°73E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**286**	ePg	Pg	21 55 25.4	0.0
SVKR				eSg	Sg	21 55 27.4	+0.7
SVKR				Pmax			
	642nm,0.2s						
SVKR				Smax			
	2µm,0.5s						
UKT	**Uakit**	**0.60**	**186**	eSg	Sg	21 55 42.3	-0.6
UKT				Smax			
	116nm,0.4s						
BOD	**Bodaibo**	**1.74**	**5**	eSg	Sn	21 56 18.2	+0.4
BOD				Smax			
	244nm,0.8s						
YLYR	**Ulyunkhan**	**1.90**	**231**	eSg	Sn	21 56 22.5	+0.7
YLYR				Smax			
	285nm,0.7s						
TUP	**Tupik**	**3.93**	**113**	eSg	Sb	21 57 24.8	+3.0
TUP				Smax			
	148nm,1.0s						

BYKL 03 21:55:37.9±0.9, 56.°11N×113.°70E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**275**	ePg	Pg	21 55 39.3	-0.1
SVKR				eSg	Sg	21 55 41.2	+0.8
SVKR				Pmax			
	352nm,0.3s						
SVKR				Smax			
	1µm,0.4s						
UKT	**Uakit**	**0.62**	**184**	eSg	Sg	21 55 57.7	-0.2
UKT				Smax			
	120nm,0.3s						
KMO	**Kumora**	**1.42**	**262**	Sg	Sg	21 56 21.7	-1.8
KMO				Smax			
	121nm,0.4s						
BOD	**Bodaibo**	**1.72**	**5**	eSg	Sb	21 56 32.3	-0.2
BOD				Smax			
	269nm,1.2s						
YLYR	**Ulyunkhan**	**1.90**	**230**	Sg	Sb	21 56 37.2	-0.5
YLYR				Smax			
	184nm,0.8s						
SYVR	**Suvo**	**3.26**	**223**	Sg	Sb	21 57 18.3	+1.6
SYVR				Smax			
	177nm,1.2s						
TUP	**Tupik**	**3.96**	**113**	Sg	Sb	21 57 39.3	+2.5
TUP				Smax			
	134nm,1.2s						

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*MOS **03** 22:02:49.2±1.0, 56.°06N×113.°75E, h4^{km}, mb4.1/4, Error ellipse: s-maj=9.9km s-min=7.0km az=70.7*

*IDC **03** 22:02:50.8±1.3, 56.°16N×113.°61E, h0^{km}, mb3.7/10, mb1 3.8/14, mb1mx3.6/52, mbtmp3.7/14, ML3.5/4, MS3.6/4, Ms1 3.6/4, ms1mx3.0/46, Error ellipse: s-maj=33.7km s-min=11.7km az=155.0*

*BYKL **03** 22:02:51.0±0.2, 56.°09N×113.°72E, h6^{km}±3^{km}, FELT I=III MSK at Taksimo*

*BJI **03** 22:02:53.8±0.0, 55.°64N×114.°08E, h18^{km}, mb3.7/1*

ISC 03 22:02:51.1±0.5, 56.°08N±0.°02×113.°69E±0.°02, h10^{km}, n77, σ2.^{s}61/128, mb4.0/12, 11C-11D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**297**	⇑iPg	**Pg**	**22 02 53.0**	**-0.6**
SVKR				Pmax		22 02 53.2	
	17µm,0.2s						
SVKR				eSg	**Sg**	**22 02 54.4**	**-0.9**
SVKR				Smax		22 03 02.7	
	81µm,0.6s						
SVKR	**Severomuysk**	**0.08**	**297**	⇑iPG	**Pg**	**22 02 52.9**	**-0.6**
SVKR				e		22 02 55.2	
SVKR				pmax	pmax		
	comp=Z,16µm,0.2s						
SVKR				smax	smax		
	comp=N,76µm,0.4s						
UKT	**Uakit**	**0.59**	**183**	⇑iPg	**Pg**	**22 03 01.3**	**-1.4**
UKT				Pmax		22 03 02.2	
	comp=N,205nm,0.2s						
UKT				ePb	**Pb**	**22 03 04.3**	**+0.6**
UKT				eSg	**Sg**	**22 03 09.5**	**-1.0**
UKT				Smax		22 03 16.5	
	comp=N,2µm,0.7s						
UKT	**Uakit**	**0.59**	**183**	ePG	**Pg**	**22 03 01.3**	**-1.4**
UKT				eS	**Sg**	**22 03 10.2**	**-0.3**
YOA	**Uoyan**	**1.10**	**273**	⇑iPg	**Pb**	**22 03 11.3**	**-0.9**
YOA				ePb	**Pg**	**22 03 13.0**	**+0.8**
YOA				max		22 03 14.9	
	comp=N,968nm,0.4s						
YOA				e		22 03 15.0	
YOA				eSg	**Sg**	**22 03 26.1**	**-0.4**
YOA				eSb	**Sn**	**22 03 29.2**	**+1.3**
YOA				max		22 03 36.1	
	comp=N,8µm,0.7s						
YOA	**Uoyan**	**1.10**	**273**	⇑iPG	**Pb**	**22 03 11.3**	**-0.9**
YOA				e		22 03 26.9	
YOA				pmax	pmax		
	comp=Z,529nm,0.2s						
YOA				smax	smax		
	comp=E,8µm,0.4s						
NLYR	**Nelyaty**	**1.20**	**69**	⇓iPg	**Pb**	**22 03 12.3**	**-1.6**
NLYR				ePb	**Pn**	**22 03 14.6**	**+0.6**
NLYR				max		22 03 14.8	
	comp=E,3µm,0.6s						
NLYR				eSg	**Sb**	**22 03 28.5**	**-1.0**
NLYR				eSb	**Sn**	**22 03 32.4**	**+2.1**
NLYR				max		22 03 33.3	
	comp=E,2µm,0.9s						
NLYR	**Nelyaty**	**1.20**	**69**	⇓iPG	**Pb**	**22 03 12.1**	**-1.8**
NLYR				e		22 03 27.3	
NLYR				pmax	pmax		
	comp=Z,3µm,0.7s						
NLYR				smax	smax		
	comp=N,2µm,0.9s						
KMO	**Kumora**	**1.41**	**263**	⇑iPg	**Pn**	**22 03 16.7**	**-0.2**
KMO				ePb	**Pb**	**22 03 18.2**	**+0.7**
KMO				max		22 03 21.4	
	comp=N,517nm,0.5s						
KMO				eSg	**Sb**	**22 03 36.3**	**+0.8**
KMO				eSb	**Sg**	**22 03 39.0**	**+2.6**
KMO				max		22 03 40.3	
	comp=N,4µm,0.5s						
KMO	**Kumora**	**1.41**	**263**	⇑iPG	**Pn**	**22 03 16.7**	**-0.2**
KMO				e		22 03 36.5	
KMO				pmax	pmax		
	comp=Z,442nm,0.4s						
KMO				smax	smax		
	comp=N,4µm,0.5s						
BOD	**Bodaibo**	**1.75**	**6**	ePg	**Pn**	**22 03 22.2**	**+0.7**
BOD				Pmax		22 03 23.6	
	comp=N,197nm,0.3s						
BOD				eSg	**Sn**	**22 03 44.7**	**+0.8**
BOD				Smax		22 03 47.9	
	comp=N,4µm,1.4s						
BOD	**Bodaibo**	**1.75**	**6**	ePN	**Pn**	**22 03 22.1**	**+0.6**
BOD				e		22 03 44.9	
BOD				pmax	pmax		
	comp=Z,368nm,0.7s						
BOD				smax	smax		
	comp=E,4µm,0.8s						
YLYR	**Ulyunkhan**	**1.88**	**231**	⇓iPn	**Pn**	**22 03 24.7**	**+1.4**
YLYR				ePg	**Pb**	**22 03 26.0**	**+0.5**
YLYR				Pmax		22 03 26.3	
	comp=E,404nm,0.5s						
YLYR				eSg	**Sb**	**22 03 50.2**	**+1.2**
YLYR				e		22 03 54.1	
YLYR				max		22 03 54.2	
	comp=E,3µm,1.0s						
YLYR	**Ulyunkhan**	**1.88**	**231**	⇓iPN	**Pn**	**22 03 24.7**	**+1.4**
YLYR				e		22 03 50.2	
YLYR				pmax	pmax		
	comp=Z,410nm,0.4s						
YLYR				smax	smax		
	comp=N,3µm,1.0s						
NIZ	**Nizh Angarsk**	**2.35**	**264**	ePn	**Pn**	**22 03 31.1**	**+1.3**
NIZ				ePg	**Pb**	**22 03 33.8**	**+0.2**
NIZ				Pmax		22 03 36.8	
	comp=N,129nm,0.7s						
NIZ				eSn	**Sn**	**22 03 58.6**	**-0.1**
NIZ				e		22 04 02.0	
NIZ				eSg	**Sb**	**22 04 03.7**	**+1.1**
NIZ				Smax		22 04 07.6	
	comp=N,1µm,0.8s						
CRS	**Chara**	**2.67**	**70**	⇓iPn	**Pn**	**22 03 35.0**	**+0.7**
CRS				⇑iPg	**Pb**	**22 03 39.4**	**+0.4**

CRS				Pmax		22 03 39.7	
	comp=N,2µm,0.9s						
CRS				*e*Sn	**Sn**	**22 04 07.2**	**+0.6**
CRS				*e*Sg	**Sb**	**22 04 13.9**	**+2.1**
CRS				Smax		22 04 18.5	
	comp=N,1µm,0.6s						
CRS	**Chara**	**2.67**	**70**	⇓*i*PN	**Pn**	**22 03 34.9**	**+0.7**
CRS				*e*		22 03 39.0	
CRS				*e*		22 04 14.1	
CRS				pmax	pmax		
	comp=Z,1µm,0.8s						
CRS				smax	smax		
	comp=E,1µm,0.8s						
SYVR	**Suvo**	**3.23**	**223**	*e*Pn	**Pn**	**22 03 43.2**	**+1.3**
SYVR				*e*Pg	**Pb**	**22 03 49.3**	**+0.8**
SYVR				Pmax		22 03 55.0	
	comp=E,157nm,1.2s						
SYVR				*e*Sn	**Sn**	**22 04 20.9**	**+0.5**
SYVR				*e*Sg	**Sb**	**22 04 31.6**	**+3.7**
SYVR				*e*SgSg	**Sg**	**22 04 37.9**	**+3.1**
SYVR				max		22 04 44.2	
	comp=E,1µm,1.8s						
SYVR	**Suvo**	**3.23**	**223**	*e*PN	**Pn**	**22 03 43.1**	**+1.2**
SYVR				*e*		22 03 49.1	
SYVR				*e*		22 04 31.2	
SYVR				pmax	pmax		
	comp=Z,160nm,1.0s						
SYVR				smax	smax		
	comp=E,1µm,1.6s						
VTMR	**Vitim**	**3.42**	**350**	*e*Pn	**Pn**	**22 03 44.7**	**+0.2**
VTMR				*e*Pg	**Pb**	**22 03 53.1**	**+1.3**
VTMR				*e*Sn	**Sn**	**22 04 25.4**	**+0.4**
VTMR				*e*Sg	**Sb**	**22 04 36.1**	**+2.7**
TUP	**Tupik**	**3.95**	**112**	⇓*i*Pn	**Pn**	**22 03 52.0**	**+0.2**
TUP				*e*Pg	**Pb**	**22 04 01.2**	**+0.3**
TUP				Pmax		22 04 04.9	
	comp=E,86nm,0.9s						
TUP				*e*		22 04 08.9	
TUP				*e*Sn	**Sn**	**22 04 37.5**	**-0.7**
TUP				*e*Sg	**Sb**	**22 04 52.8**	**+4.1**
TUP				*e*		22 04 57.7	
TUP				max		22 04 58.2	
	comp=E,965nm,0.8s						
TUP				*e*		22 05 20.2	
TUP	**Tupik**	**3.95**	**112**	⇓*i*PN	**Pn**	**22 03 52.0**	**+0.2**
TUP				*e*		22 04 01.8	
TUP				*e*S	**Sn**	**22 04 37.5**	**-0.7**
TUP				*e*		22 04 53.1	
TUP				pmax	pmax		
	comp=Z,78nm,0.6s						
TUP				smax	smax		
	comp=E,968nm,1.0s						
MXMB	**Maximikha**	**4.03**	**227**	*e*Pg	**Pb**	**22 04 04.0**	**+1.9**
MXMB				*e*Sg	**Sg**	**22 04 57.0**	**-3.3**
MXMB				*e*		22 05 03.5	
CIT	**Chita**	**4.07**	**181**	*e*Pn	**Pn**	**22 03 53.3**	**-0.1**
CIT				*e*Pg	**Pb**	**22 04 03.8**	**+0.9**
CIT				Pmax		22 04 05.2	
	comp=E,91nm,0.7s						
CIT				*e*Sn	**Sn**	**22 04 41.5**	**+0.4**
CIT				*e*		22 04 51.2	
CIT				*e*Sg	**Sg**	**22 04 57.4**	**-4.3**
CIT				Smax		22 05 13.0	
	comp=E,752nm,1.6s						
OGRR	**Ongureny**	**4.28**	**238**	*e*Pn	**Pn**	**22 03 58.7**	**+2.4**
OGRR				*e*Pg	**Pb**	**22 04 08.8**	**+2.3**
OGRR				Pmax		22 04 11.5	
	comp=E,110nm,1.4s						
OGRR				*e*Sn	**Sn**	**22 04 45.0**	**-1.3**
OGRR				*e*Sg	**Sg**	**22 05 04.1**	**-4.5**
OGRR				Smax		22 05 13.6	
	comp=E,351nm,1.0s						
OGRR	**Ongureny**	**4.28**	**238**	*e*PN	**Pn**	**22 03 58.3**	**+2.0**
OGRR				*e*		22 04 09.2	
OGRR				*e*		22 05 03.4	
OGRR				pmax	pmax		
	comp=Z,110nm,1.7s						
OGRR				smax	smax		
	comp=N,351nm,1.6s						
YKLR	**Yuktali**	**4.46**	**80**	*e*Pn	**Pn**	**22 03 59.2**	**+0.4**
YKLR				*e*Pg	**Pb**	**22 04 09.6**	**0.0**
YKLR				*e*		22 04 13.4	
YKLR				*e*		22 04 40.1	
YKLR				*e*Sg	**Sb**	**22 05 07.8**	**+4.4**
ZRHB	**Zarechye**	**5.21**	**230**	*e*Pg	**Pb**	**22 04 25.4**	**+3.2**
ZRHB				Pmax		22 04 31.6	
	comp=N,225nm,1.1s						
ZRHB				*e*Sg	**Sg**	**22 05 32.6**	**-5.5**
ZRHB				*e*		22 05 51.1	
ZRHB				max		22 06 01.4	
	comp=N,1µm,1.6s						
TRG	**Tyrgan**	**5.42**	**235**	*e*Pn	**Pn**	**22 04 14.0**	**+2.0**
TRG				*e*Pg	**Pb**	**22 04 28.3**	**+2.4**
TRG				Pmax		22 04 34.3	
	comp=N,50nm,1.4s						
TRG				*e*Sn	**Sn**	**22 05 13.5**	**-1.0**
TRG				*e*Sg	**Sg**	**22 05 38.7**	**-6.4**
TRG				Smax		22 05 56.7	
	comp=N,212nm,1.3s						
TRG	**Tyrgan**	**5.42**	**235**	*e*PN	**Pn**	**22 04 13.7**	**+1.7**
TRG				*e*		22 04 29.7	
TRG				*e*		22 05 39.3	
TRG				pmax	pmax		
	comp=Z,50nm,1.4s						
TRG				smax	smax		
	comp=E,210nm,1.4s						
FFNB	**Fofonovo**	**5.74**	**228**	*e*Pg	**Pb**	**22 04 33.6**	**+2.3**
FFNB				*e*Sg	**Sb**	**22 05 47.6**	**+7.6**
KAB	**Kabansk**	**5.78**	**229**	*e*Sg	**Sg**	**22 05 51.4**	**-5.2**
KAB				Smax		22 06 16.0	
	comp=E,1µm,1.9s						
HRMR	**Khuramsha**	**5.98**	**225**	*e*Pn	**Pn**	**22 04 21.8**	**+2.2**
HRMR				*e*		22 04 31.8	
HRMR				*e*Pg	**Pb**	**22 04 39.0**	**+3.6**
HRMR				Pmax		22 04 41.3	
	comp=E,50nm,0.6s						
HRMR				*e*Sg	**Sg**	**22 05 57.4**	**-5.5**
HRMR				*e*		22 06 08.3	
HRMR				max		22 06 12.4	
	comp=E,891nm,0.9s						
IENR	**Iengra**	**6.25**	**84**	*e*Pn	**Pn**	**22 04 23.6**	**+0.3**
IENR				*e*Pg	**Pb**	**22 04 41.8**	**+1.9**
IENR				*e*Sg	**Sb**	**22 06 03.3**	**+8.7**
BGT	**Bolshoye Golou**	**6.33**	**234**	*e*Pg	Pb	22 04 46.9	+5.6
BGT				Pmax		22 04 47.7	
	comp=E,13nm,0.1s						
BGT				*e*Sn	**Sn**	**22 05 35.7**	**-1.0**
BGT				*e*Sg	**Sg**	**22 06 09.0**	**-5.2**
BGT				Smax		22 06 16.0	
	comp=E,183nm,1.1s						
KPC	**Khapcheranga**	**6.44**	**188**	*e*Pn	**Pn**	**22 04 26.3**	**+0.3**
KPC				*e*Pg	**Pb**	**22 04 47.5**	**+4.3**
KPC				Pmax		22 05 01.0	
	comp=E,14nm,0.9s						
KPC				*e*		22 05 54.8	
KPC				*e*Sg	**Sg**	**22 06 10.9**	**-6.7**
KPC				*e*		22 06 24.2	
KPC				max		22 06 27.7	
	comp=E,412nm,1.4s						
KPC	**Khapcheranga**	**6.44**	**188**	*e*PN	**Pn**	**22 04 25.0**	**-1.0**
KPC				*e*		22 04 46.3	
KPC				*e*		22 06 09.7	
KPC				pmax	pmax		
	comp=Z,11nm,0.5s						
KPC				smax	smax		
	comp=E,411nm,1.5s						
LSTR	**Listvyanka**	**6.71**	**235**	*e*Pn	**Pn**	**22 04 30.3**	**+0.6**
LSTR				max		22 05 07.0	
	comp=E,40nm,1.8s						
LSTR				*e*Sg	**Sg**	**22 06 19.4**	**-7.0**
LSTR				Smax		22 06 24.5	
	comp=E,194nm,1.9s						
TLY	**Talaya**	**7.39**	**238**	*e*Pn	**Pn**	**22 04 39.9**	**+0.9**
TLY				*e*Pg	Pb	22 05 04.7	+5.3
TLY				Pmax		22 05 18.7	
	comp=E,24nm,1.6s						
TLY				*e*		22 06 20.6	
TLY				*e*Sg	Sg	22 06 39.5	-8.6
TLY				Smax		22 06 47.0	
	comp=E,119nm,1.2s						
TLY	**Talaya**	**7.39**	**238**	*e*PG	Pb	22 05 06.0	+6.6
TLY				*e*		22 06 40.7	
TLY				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TLY				smax	smax		
	comp=E,78nm,0.9s						
ARS	**Arshan**	**7.83**	**243**	*e*Pn	**Pn**	**22 04 47.5**	**+2.3**
ARS				*e*Pg	Pb	22 05 12.7	+5.8
ARS				Pmax		22 05 23.7	
	comp=E,18nm,0.6s						
ARS				*e*Sg	Sg	22 06 53.6	-8.7
ARS				Smax		22 06 58.2	
	comp=E,300nm,0.7s						
ARS	**Arshan**	**7.83**	**243**	*e*PN	**Pn**	**22 04 47.4**	**+2.3**
ARS				*e*S	Sb	22 06 51.3	+11
ARS				smax	smax		
	comp=E,299nm,0.7s						
ZEA	**Zeya**	**8.16**	**101**	*e*PN	**Pn**	**22 04 51.0**	**+1.5**
ZEA				*e*		22 06 20.5	
ZEA				*e*		22 07 04.9	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				smax	smax		
	comp=E,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,6.0s						
ZAK	**Zakamensk**	**8.45**	**232**	*e*Pg	Pb	22 05 23.9	+6.4
ZAK				Pmax		22 05 27.0	
	comp=Z,2.0nm,0.1s						
ZAK				*e*Sg	**Sg**	**22 07 13.9**	**-8.3**
ZAK				*e*		22 07 22.4	
ZAK				max		22 07 32.4	
	comp=Z,141nm,1.7s						
MOY	**Mondy**	**8.70**	**245**	*e*Pn	**Pn**	**22 04 58.5**	**+1.4**
MOY				max		22 05 33.2	
	comp=Z,30nm,1.1s						
MOY				*e*Sn	**Sn**	**22 06 31.9**	**-3.3**
MOY				*e*Sg	Sg	22 07 20.6	-10
MOY				Smax		22 07 33.3	
	comp=Z,201nm,1.7s						
MOY	**Mondy**	**8.70**	**245**	*e*PG	Pg	22 05 32.4	-5.2
MOY				*e*		22 07 22.2	
ORL	**Orlik**	**8.85**	**252**	*e*Pn	**Pn**	**22 05 00.8**	**+1.7**
ORL				*e*		22 05 13.3	
ORL				*e*		22 05 43.7	
ORL				max		22 05 48.2	
	comp=Z,29nm,1.8s						
ORL				*e*Sn	**Sn**	**22 06 36.2**	**-2.7**
ORL				*e*Sg	Sg	22 07 24.3	-11
ORL				Smax		22 07 44.1	
	comp=Z,128nm,1.6s						
ORL	**Orlik**	**8.85**	**252**	*e*PN	**Pn**	**22 05 00.0**	**+0.9**
ORL				*e*		22 05 28.7	
ORL				*e*		22 07 25.3	
ORL				pmax	pmax		
	comp=Z,31nm,1.6s						
ORL				smax	smax		
	comp=N,128nm,1.8s						
SONM	**Songino Array**	**9.40**	**212**	Pn	**Pn**	**22 05 07.5**	**+0.8**
	comp=N,0.2nm,0.3s,baz=16,slow=13,SNR=1.8						
SONM				Lg	Lg	22 07 45.4	
	comp=N,1.1nm,0.3s,baz=28,slow=22,SNR=16						
YAK	**Yakutsk**	**10.15**	**47**	Pn	**Pn**	**22 05 14.0**	**-2.7**
	comp=N,0.1nm,0.3s,baz=31,slow=2.6,SNR=4.4						
YAK				Sn	Sn	22 07 01.5	-8.9
	comp=N,0.1nm,0.3s,baz=261,slow=9.2,SNR=1.7						
YAK				Lg	Lg	22 08 01.5	
	comp=N,0.1nm,0.3s,baz=162,slow=22,SNR=4.6						
YAK	**Yakutsk**	**10.15**	**47**	*e*P	**Pn**	**22 05 13.6**	**-3.1**
YAK				*e*S	**Sn**	**22 07 05.8**	**-4.6**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				smax	smax		
	comp=E,9.0nm,0.9s						
YAK				smax	smax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,158nm,1.3s						
YAK				pmax	pmax		
	comp=Z,42nm,1.0s						
YAK				pmax	pmax		
	comp=E,64nm,1.3s						
KLR	**Kul'dur**	**12.91**	**115**	Pn	**Pn**	**22 05 54.5**	**0.0**
	comp=E,0.2nm,0.3s,baz=317,slow=16,SNR=4.7						
KLR				Lg	Lg	22 09 35.1	
	comp=E,0.2nm,0.3s,baz=285,slow=8.2,SNR=4.0						
KLR				LR	LR	22 10 19.4	
	comp=E,113nm,18.7s,baz=311,slow=35						
ZALV	**Zalesovo Beam**	**16.64**	**275**	Pn	**Pn**	**22 06 44.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=67,slow=11,SNR=5.2						
ZALV				Lg	Lg	22 11 34.1	
	comp=E,0.1nm,0.3s,baz=79,slow=26,SNR=4.0						
ZALV	**Zalesovo Beam**	**16.64**	**275**	*i* P	**P**	**22 06 46.2**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**16.64**	**128**	Lg	Lg	22 11 30.6	
	baz=328,slow=32,SNR=4.6						
TIXI	**Tiksi**	**16.90**	**17**	⇑*e*P	**Pn**	**22 06 44.1**	**-3.2**
NRIK	**Noril'sk**	**17.67**	**329**	P	**Pn**	**22 06 51.9**	**-5.2**
	comp=Z,0.6nm,0.3s,baz=124,slow=5.4,SNR=2.4						
NRIK				S	Sn	22 09 56.9	-17
	comp=Z,0.3nm,0.3s,baz=324,slow=20,SNR=3.5						
NRIK				Lg	Lg	22 11 57.0	
	baz=151,slow=19,SNR=1.1						
NRIK	**Noril'sk**	**17.67**	**329**	⇓*e*P	**Pn**	**22 06 56.9**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SEY	**Seymchan**	**20.53**	**55**	P	Pn	22 07 31.2	-0.2
	comp=Z,1.9nm,0.6s,baz=273,slow=8.3,SNR=11						
SEY				Lg	Lg	22 13 42.7	
	comp=Z,5.7nm,1.2s,baz=196,slow=23,SNR=3.4						
SEY	**Seymchan**	**20.53**	**55**	⇓*i*P	**P**	**22 07 31.0**	**+1.8**
KSRS	**Korea Array**	**20.95**	**147**	LR	LR	22 16 45.0	
	comp=Z,52nm,18.2s,baz=335,slow=40						
KURK	**Kurchatov**	**21.42**	**270**	⇑*e*P	**P**	**22 07 39.7**	**+0.8**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**21.49**	**258**	P	**P**	**22 07 41.0**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=54,slow=7.2,SNR=8.8						
MKAR				Lg	Lg	22 14 11.2	
	comp=Z,0.3nm,0.8s,baz=176,slow=21,SNR=3.5						
KURBB	**Kurchatov Arra**	**21.52**	**270**	P	**P**	**22 07 41.1**	**+1.1**
	comp=Z,6.0nm,0.8s,baz=63,slow=11,SNR=16						
KURBB				Lg	Lg	22 14 02.1	
	comp=Z,0.3nm,0.7s,baz=37,slow=30,SNR=1.2						
BVAR	**Borovoye Array**	**24.99**	**281**	P	**P**	**22 08 15.1**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=68,slow=32,SNR=7.4						
BRVK	**Borovoye**	**25.03**	**281**	⇑*e*P	**P**	**22 08 15.6**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	**Ala-Archa**	**28.42**	**258**	*de*P	**P**	**22 08 48.5**	**+2.7**
AAK				pmax	pmax		
	comp=Z,21nm,2.0s						
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**22 10 46.3**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=46,slow=8.5,SNR=5.5						
FINES	**FINESS Array B**	**42.48**	**315**	*i* P	**P**	**22 10 47.0**	**+1.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	**Eielson Array**	**44.86**	**37**	P	**P**	**22 11 06.8**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=299,slow=10,SNR=7.1						
INK	**Inuvik**	**46.53**	**28**	P	**P**	**22 11 18.8**	**+0.7**
	comp=Z,1.5nm,1.0s,baz=331,slow=5.4,SNR=2.9						
KDAK	**Kodiak Island**	**47.18**	**47**	LR	LR	22 34 20.5	
	comp=Z,63nm,19.5s,baz=341,slow=40						
AKASG	**Malin Array Be**	**47.66**	**301**	P	**P**	**22 11 26.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=44,slow=8.1,SNR=3.1						
YKA	**Yellowknife Ar**	**55.93**	**25**	P	**P**	**22 12 28.5**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=334,slow=6.5,SNR=9.4						
YKA	**Yellowknife Ar**	**55.93**	**25**	*i* P	**P**	**22 12 28.8**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KEST	**Kesra**	**68.38**	**302**	LR	LR	22 47 43.7	
	comp=Z,252nm,19.2s,baz=262,slow=39						
ESDC	**Sonseca Array**	**70.99**	**314**	P	**P**	**22 14 09.5**	**+0.8**
	comp=Z,0.9nm,1.0s,baz=14,slow=5.8,SNR=5.0						

BYKL 03 22:03:23.5±0.5**, 56°.12N**×**113°.73E, h2**km±10km**, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**268**	*e*Pg	Pg	22 03 25.4	0.0
SVKR				*e*Sg	Sg	22 03 27.5	+0.8
SVKR				Pmax			
	3µm,0.2s						
SVKR				Smax			
	4µm,0.2s						
UKT	**Uakit**	**0.64**	**185**	*e*Sg	Sg	22 03 43.2	-0.7
YOA	**Uoyan**	**1.12**	**271**	*e*Sg	Sg	22 03 58.5	-1.0
BOD	**Bodaibo**	**1.71**	**5**	*e*Sg	Sn	22 04 16.7	0.0
BOD				Smax			
	353nm,0.4s						
YLYR	**Ulyunkhan**	**1.92**	**231**	*e*Sg	Sb	22 04 23.4	-0.2
YLYR				Smax			
	320nm,0.4s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	*e*Sg	Sb	22 04 36.4	-0.5
NIZ				Smax			
	197nm,0.6s						
TUP	**Tupik**	**3.94**	**113**	*e*Sg	Sb	22 05 25.5	+3.7
TUP				Smax			
	630nm,1.3s						

BYKL 03 22:03:30.5±0.8**, 56°.11N**×**113°.77E, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**273**	*e*Pg	Pg	22 03 32.8	0.0
SVKR				*e*Sg	Sg	22 03 34.8	+0.5
SVKR				Pmax			
	2µm,0.1s						
SVKR				Smax			
	10µm,0.2s						
UKT	**Uakit**	**0.63**	**187**	Sg	Sg	22 03 49.7	-0.9
YOA	**Uoyan**	**1.15**	**272**	Sg	Sg	22 04 05.9	-1.4
BOD	**Bodaibo**	**1.72**	**4**	*e*Sg	Sn	22 04 24.0	-0.3
BOD				Smax			
	472nm,0.6s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*Sg	Sb	22 04 30.8	-0.4
YLYR				Smax			
	348nm,0.5s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*Sg	Sb	22 04 44.8	+0.1
NIZ				Smax			
	245nm,0.4s						

KRSC 03 22:10:29.9±1.5**, 48°.18N**×**156°.07E, h16**km±29km**, ML3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.51**	**1**	*e*S	Sn	22 11 42.0	+1.8
PAU	**Pauzhetka**	**3.33**	**8**	S	Sb	22 12 05.6	-3.1
KDTR	**Khodutka, Kamc**	**3.86**	**19**	*e*S	Sb	22 12 19.1	-4.9
ASAK	**Asacha**	**4.37**	**15**	*e*P	Pn	22 11 39.6	+3.9
MTVR	**Mutnovka**	**4.52**	**17**	*e*P	Pn	22 11 42.1	+4.4
MTVR				*e*S	Sb	22 12 36.9	-6.2
RUS	**Russkaya**	**4.54**	**19**	*e*P	Pn	22 11 41.4	+3.5
RUS				*e*S	Sn	22 12 35.7	+5.4
GRL	**Gorelyy**	**4.56**	**16**	*e*P	Pn	22 11 42.9	+4.6
SDLR	**Sedlovina**	**5.41**	**18**	*e*P	Pn	22 11 54.3	+4.3

TRN ***03*** *22:10:47.8, 19°.94N×63°.08W, h61km, MD4.4*

ISC 03 22:10:49.5±2.5**, 19°.9N**±0°.2×**63°.07W**±0°.08**, h35**km**, n31,**
σ**0.92**/38**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEUS	**St. Eustatius**	**2.42**	**178**	*e*P	**Pn**	**22 11 26.4**	**-0.1**
SEUS				*e*S	**Sn**	**22 11 56.4**	**+1.4**
SKI	**Saint Kitts**	**2.59**	**173**	*e*P	**Pn**	**22 11 29.2**	**+0.2**
SKI				*e*S	**Sn**	**22 11 59.7**	**+0.4**
CDVI	**St. Croix**	**2.69**	**217**	*e*P	**Pn**	**22 11 31.3**	**+1.0**
CDVI				*e*S	**Sn**	**22 12 01.5**	**-0.2**
ANBD	**Bethesda, Anti**	**3.11**	**156**	*e*P	**Pn**	**22 11 37.5**	**+1.4**
ANBD				*e*S	**Sn**	**22 12 12.3**	**+0.1**
MLYT	**Lee's Yard**	**3.29**	**165**	*e*P	**Pn**	**22 11 39.0**	**+0.4**
ABD	**La Joyeuse, An**	**3.74**	**156**	*e*P	**Pn**	**22 11 45.5**	**+0.7**
ABD				*e*S	**Sn**	**22 12 27.4**	**-0.3**
AOPR	**Arecibo Observ**	**3.82**	**246**	*e*P	**Pn**	**22 11 46.0**	**+0.1**
AOPR				*e*S	**Sn**	**22 12 28.4**	**-1.2**
CBE	**Ff, Capester**	**4.08**	**160**	*e*P	**Pn**	**22 11 50.6**	**+1.2**
CBE				*e*S	**Sn**	**22 12 34.2**	**-1.8**
TBG	**Guadaloupe-3**	**4.27**	**161**	*e*P	**Pn**	**22 11 52.3**	**+0.3**
TBG	**Guadaloupe-3**	**4.27**	**161**	*e*S	**Sn**	**22 12 40.2**	**-0.5**
TDBA	**Terre de Bas,**	**4.27**	**161**	*e*P	**Pn**	**22 11 53.0**	**+0.9**
TDBA	**Terre de Bas,**	**4.27**	**161**	*e*S	**Sn**	**22 12 40.4**	**-0.4**
MAGL	**Barre de l'ile**	**4.30**	**156**	*e*P	**Pn**	**22 11 52.5**	**0.0**
DSLB	**Salisbury**	**4.73**	**160**	*e*P	**Pn**	**22 11 58.8**	**+0.5**
DSLB	**Salisbury**	**4.73**	**160**	*e*S	**Sn**	**22 12 51.2**	**-0.8**
BIM	**Bigot**	**5.70**	**160**	*e*P	**Pn**	**22 12 11.6**	**-0.2**
BIM	**Bigot**	**5.70**	**160**	*e*S	**Sn**	**22 13 14.6**	**-1.5**
MPOM	**Morne Pois Mar**	**5.84**	**158**	*e*P	**Pn**	**22 12 14.1**	**+0.4**
MPOM	**Morne Pois Mar**	**5.84**	**158**	*e*S	**Sn**	**22 13 17.6**	**-1.9**
SLBI	**Saint Lucia, B**	**6.20**	**161**	*e*P	**Pn**	**22 12 18.8**	**+0.3**
SMLC	**San Martn de**	**15.35**	**225**	*e*P	**Pn**	**22 14 23.9**	**+0.3**
ZARC	**Zaragoza, Cauc**	**16.83**	**224**	*e*P	**Pn**	**22 14 41.5**	**-1.1**
RUSC	**La Rusia**	**17.01**	**216**	*e*P	**P**	**22 14 47.7**	**+0.8**
UREC	**San Jos de Ur**	**17.10**	**227**	*e*P	**Pn**	**22 14 46.2**	**+0.3**
PTBC	**PUERTO BERRIO,**	**17.30**	**221**	*e*P	**P**	**22 14 49.0**	**-0.7**
DBBC	**Dabeiba**	**18.09**	**227**	*e*P	**P**	**22 15 00.8**	**+2.4**
HELC	**Santa Helena**	**18.25**	**223**	*e*P	**P**	**22 15 00.8**	**+0.4**
NORC	**Norcasia**	**18.32**	**220**	*e*P	**P**	**22 15 00.4**	**-0.5**
CHIC	**Chingaza**	**18.41**	**216**	*e*P	**Pn**	**22 15 02.4**	**-0.1**
PLMC	**San Jos del P**	**19.71**	**222**	*e*P	**Pn**	**22 15 17.1**	**-0.7**
BBAC	**Balboa, Cauca**	**22.55**	**220**	*e*P	**P**	**22 15 46.6**	**-0.4**

BJI ***03*** *22:12:42.8±0.0, 56°.43N×113°.89E, h7km, mb3.8/7, Ms4.3/1*

MOS ***03*** *22:12:45.8±0.9, 56°.06N×113°.71E, h7km, mb4.2/5, Error ellipse: s-maj=10.2km s-min=6.7km az=76.6*

BYKL ***03*** *22:12:46.9±0.2, 56°.09N×113°.72E, h6km±3km*

IDC ***03*** *22:12:47.0±1.3, 56°.18N×113°.58E, h0km, mb3.6/8, mb1 3.8/12, mb1mx3.5/47, mbtmp3.7/12, ML3.5/4, Error ellipse: s-maj=31.8km s-min=19.2km az=153.0*

ISC 03 22:12:47.1±1.0**, 56°.15N**±0°.02×**113°.83E**±0°.02**, h5**km±7km**,**
n72, σ**2.81**/121**, mb3.7**/10**, 9C-8D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.15**	**259**	⇑*i*Pg	**Pg**	**22 12 48.9**	**-1.2**
SVKR				Pmax		22 12 49.3	
	23µm,0.3s						
SVKR				*e*Sg	**Sg**	**22 12 51.0**	**-1.2**
SVKR				Smax		22 12 59.7	
	54µm,0.6s						
SVKR	**Severomuysk**	**0.15**	**259**	⇑*i*PG	**Pg**	**22 12 48.9**	**-1.2**
SVKR				*e*		22 12 50.9	
SVKR				pmax	pmax		
	comp=Z,23µm,1.1s						
SVKR				smax	smax		
	comp=N,51µm,0.7s						
UKT	**Uakit**	**0.67**	**190**	*e*Pg	**Pg**	**22 12 58.0**	**-1.9**
UKT				*e*Pb	**Pb**	**22 12 59.8**	**-1.5**
UKT				max		22 13 00.0	
	comp=N,316nm,0.4s						
UKT				*e*Sg	**Sg**	**22 13 05.7**	**-2.9**
UKT				Smax		22 13 18.5	
	comp=N,2µm,1.2s						
UKT	**Uakit**	**0.67**	**190**	⇑*i*PG	**Pg**	**22 12 58.0**	**-1.9**
UKT				*e*S	**Sg**	**22 13 06.3**	**-2.3**
NLYR	**Nelyaty**	**1.10**	**71**	*e*Pg	**Pg**	**22 13 08.2**	**+0.1**
NLYR				*e*Pb	**Pn**	**22 13 11.5**	**+2.3**
NLYR				max		22 13 12.7	
	comp=N,691nm,0.4s						
NLYR				*e*Sg	**Sb**	**22 13 24.0**	**+0.7**
NLYR				*e*		22 13 28.3	
NLYR				max		22 13 30.5	
	comp=N,3µm,1.1s						
NLYR	**Nelyaty**	**1.10**	**71**	⇑*i*PG	**Pg**	**22 13 08.1**	**0.0**
NLYR				*e*		22 13 23.7	
NLYR				pmax	pmax		
	comp=Z,692nm,0.4s						
NLYR				smax	smax		
	comp=E,3µm,1.0s						
YOA	**Uoyan**	**1.18**	**270**	*e*Pg	**Pg**	**22 13 07.4**	**-2.2**
YOA				Pmax		22 13 10.2	
	comp=E,2µm,0.2s						
YOA				*e*Sg	**Sg**	**22 13 22.8**	**-2.0**
YOA				Smax		22 13 37.7	
	comp=E,7µm,0.8s						
YOA	**Uoyan**	**1.18**	**270**	*e*PG	**Pg**	**22 13 07.6**	**-2.0**
YOA				*e*		22 13 23.5	
YOA				pmax	pmax		
	comp=Z,789nm,0.2s						
YOA				smax	smax		
	comp=E,7µm,0.7s						
KMO	**Kumora**	**1.50**	**261**	*e*Pg	**Pn**	**22 13 12.8**	**-1.8**
KMO				*e*Pb	**Pb**	**22 13 14.3**	**-1.0**
KMO				max		22 13 16.2	

	comp=E,965nm,0.5s						
KMO				*e*Sg	**Sn**	**22 13 31.7**	**-2.8**
KMO				*e*		22 13 35.1	
KMO				max		22 13 36.4	
	comp=E,10µm,1.3s						
KMO	**Kumora**	**1.50**	**261**	*e*PG	**Pn**	**22 13 12.6**	**-2.0**
KMO				*e*		22 13 31.6	
KMO				pmax	pmax		
	comp=Z,498nm,0.3s						
KMO				smax	smax		
	comp=N,10µm,1.0s						
BOD	**Bodaibo**	**1.68**	**3**	⇑*i*Pg	**Pb**	**22 13 18.0**	**-0.4**
BOD				Pmax		22 13 18.6	
	comp=N,299nm,0.4s						
BOD				*e*Sg	**Sb**	**22 13 40.3**	**+0.4**
BOD	**Bodaibo**	**1.68**	**3**	*e*PN	**Pn**	**22 13 17.6**	**+0.5**
BOD				*e*		22 13 40.8	
BOD				pmax	pmax		
	comp=Z,300nm,0.4s						
BOD				smax	smax		
	comp=E,1µm,0.5s						
YLYR	**Ulyunkhan**	**1.98**	**231**	⇓*i*Pn	**Pn**	**22 13 20.9**	**-0.4**
YLYR				*e*Pg	**Pb**	**22 13 21.6**	**-2.0**
YLYR				Pmax		22 13 22.0	
	comp=E,584nm,0.3s						
YLYR				*e*Sg	**Sn**	**22 13 46.4**	**-0.1**
YLYR				Smax		22 13 49.0	
	comp=E,2µm,0.3s						
YLYR	**Ulyunkhan**	**1.98**	**231**	⇓*i*PN	**Pn**	**22 13 20.9**	**-0.4**
YLYR				*e*		22 13 45.2	
YLYR				pmax	pmax		
	comp=Z,532nm,0.2s						
YLYR				smax	smax		
	comp=E,2µm,0.3s						
NIZ	**Nizh Angarsk**	**2.44**	**263**	*e*Pn	**Pn**	**22 13 27.2**	**-0.3**
NIZ				*e*Pg	**Pb**	**22 13 29.7**	**-1.7**
NIZ				*e*		22 13 33.5	
NIZ				max		22 13 33.6	
	comp=E,167nm,0.4s						
NIZ				*e*		22 13 59.5	
NIZ				*e*Sg	**Sb**	**22 14 01.4**	**-0.3**
NIZ				Smax		22 14 02.9	
	comp=E,3µm,0.8s						
CRS	**Chara**	**2.57**	**71**	*e*Pn	**Pn**	**22 13 31.4**	**+2.0**
CRS				*e*Pg	**Pb**	**22 13 35.0**	**+1.3**
CRS				Pmax		22 13 41.6	
	comp=E,283nm,1.0s						
CRS				*e*Sn	**Sn**	**22 14 01.7**	**+0.6**
CRS				*e*Sg	**Sg**	**22 14 09.2**	**-0.5**
CRS				Smax		22 14 13.5	
	comp=E,2µm,1.6s						
SYVR	**Suvo**	**3.33**	**223**	⇓*i*Pn	**Pn**	**22 13 38.9**	**-0.9**
SYVR				*e*Pg	**Pb**	**22 13 45.3**	**-1.3**
SYVR				Pmax		22 13 51.1	
	comp=E,217nm,0.8s						
SYVR				*e*Sn	**Sn**	**22 14 16.1**	**-3.7**
SYVR				*e*Sg	**Sb**	**22 14 27.4**	**0.0**
SYVR				Smax		22 14 41.4	
	comp=E,681nm,1.0s						
VTMR	**Vitim**	**3.37**	**349**	*e*Pn	**Pn**	**22 13 40.4**	**+0.1**
VTMR				*e*Pg	**Pb**	**22 13 49.0**	**+1.7**
VTMR				*e*		22 14 28.4	
VTMR				*e*Sg	**Sb**	**22 14 31.2**	**+2.7**
TUP	**Tupik**	**3.91**	**114**	*e*Pn	**Pn**	**22 13 48.0**	**+0.3**
TUP				*e*		22 13 49.6	
TUP				*e*Pg	**Pb**	**22 13 58.5**	**+2.1**
TUP				Pmax		22 14 00.1	
	comp=E,101nm,0.4s						
TUP				*e*Sn	**Sn**	**22 14 33.5**	**-0.4**
TUP				*e*Sg	**Sg**	**22 14 49.2**	**-3.2**
TUP				*e*		22 14 54.6	
TUP				max		22 15 07.4	
	comp=E,667nm,1.3s						
TUP	**Tupik**	**3.91**	**114**	*e*PN	**Pn**	**22 13 48.0**	**+0.3**
TUP				*e*		22 13 57.6	
TUP				*e*S	**Sn**	**22 14 33.5**	**-0.4**
TUP				*e*		22 14 48.6	
TUP				pmax	pmax		
	comp=Z,101nm,0.4s						
TUP				smax	smax		
	comp=E,666nm,1.2s						
MXMB	**Maximikha**	**4.13**	**228**	*e*Pn	**Pn**	**22 13 49.9**	**-0.9**
MXMB				*e*Pn	**Pb**	**22 13 58.2**	**-2.0**
MXMB				*e*Pg	Pg	22 13 59.8	-6.3
MXMB				*e*Sg	**Sb**	**22 14 52.3**	**+2.0**
CIT	**Chita**	**4.14**	**182**	*e*Pn	**Pn**	**22 13 48.8**	**-2.1**
CIT				*e*Pg	**Pb**	**22 13 59.8**	**-0.6**
CIT				Pmax		22 14 05.2	
	comp=E,73nm,0.3s						
CIT				*e*Sn	**Sn**	**22 14 35.6**	**-4.1**
CIT				*e*Sg	**Sb**	**22 14 52.6**	**+2.0**
CIT				Smax		22 15 01.8	
	comp=E,670nm,1.1s						
CIT	**Chita**	**4.14**	**182**	*e*PN	**Pn**	**22 13 47.5**	**-3.4**
CIT				*e*		22 14 00.9	
CIT				*e*S	**Sn**	**22 14 33.7**	**-6.0**
CIT				*e*		22 14 53.1	
CIT				pmax	pmax		
	comp=Z,76nm,1.6s						
CIT				smax	smax		
	comp=E,854nm,1.1s						
YKLR	**Yuktali**	**4.38**	**81**	*e*Pg	**Pb**	**22 14 05.7**	**+1.3**
YKLR				*e*Sg	**Sg**	**22 15 04.1**	**-3.4**
OGRR	**Ongureny**	**4.38**	**238**	⇓*i*Pn	**Pn**	**22 13 54.3**	**0.0**
OGRR				*e*Pg	**Pb**	**22 14 04.1**	**-0.5**
OGRR				Pmax		22 14 06.5	
	comp=E,122nm,1.3s						
OGRR				*e*Sg	**Sb**	**22 14 59.8**	**+2.1**
OGRR				Smax		22 15 13.0	
	comp=E,502nm,1.6s						
OGRR	**Ongureny**	**4.38**	**238**	*e*PN	**Pn**	**22 13 53.6**	**-0.7**
OGRR				*e*		22 14 04.7	
OGRR				*e*		22 14 59.7	
OGRR				pmax	pmax		
	comp=Z,123nm,2.2s						
OGRR				smax	smax		
	comp=E,502nm,1.8s						
ZRHB	**Zarechye**	**5.31**	**230**	*e*Sg	**Sb**	**22 15 28.5**	**+4.2**
ZRHB				Smax		22 16 09.6	
	comp=E,995nm,1.1s						
TRG	**Tyrgan**	**5.53**	**235**	*e*Pn	**Pn**	**22 14 09.2**	**-0.8**
TRG				*e*Pg	**Pb**	**22 14 24.4**	**+0.4**
TRG				*e*		22 14 28.8	
TRG				max		22 14 30.8	
	comp=E,59nm,1.4s						
TRG				*e*Sg	**Sb**	**22 15 33.5**	**+3.0**
TRG				Smax		22 15 54.8	
	comp=E,255nm,1.0s						
TRG	**Tyrgan**	**5.53**	**235**	*e*PN	**Pn**	**22 14 08.7**	**-1.3**
TRG				*e*		22 14 24.7	
TRG				*e*S	**Sn**	**22 15 10.9**	**-3.0**
TRG				*e*		22 15 34.6	
TRG				pmax	pmax		
	comp=Z,55nm,1.3s						
TRG				smax	smax		
	comp=E,255nm,1.0s						
KAB	**Kabansk**	**5.88**	**229**	*e*Sg	**Sb**	**22 15 47.2**	**+6.4**
KAB				Smax		22 16 19.0	
	comp=E,957nm,1.0s						
IENR	**Iengra**	**6.16**	**85**	*e*Pn	**Pn**	**22 14 20.0**	**+1.3**
IENR				*e*Pg	**Pb**	**22 14 38.4**	**+3.6**
IENR				*e*Sg	**Sg**	**22 16 00.4**	**-4.3**
BGT	**Bolshoye Golou**	**6.43**	**234**	*e*	Pb	22 14 31.4	-8.0
BGT				*e*Pg	Pg	22 14 40.2	-10
BGT				Pmax		22 14 45.1	
	comp=E,24nm,0.1s						
BGT				*e*		22 15 18.7	
BGT				*e*Sg	**Sb**	**22 16 03.1**	**+6.5**
BGT				Smax		22 16 15.8	
	comp=E,203nm,1.4s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*Pn	**Pn**	**22 14 22.1**	**-1.5**
KPC				*e*		22 14 30.1	
KPC				*e*Pg	**Pb**	**22 14 43.0**	**+2.2**
KPC				Pmax		22 14 54.5	
	comp=E,16nm,0.8s						
KPC				*e*Sg	**Sb**	**22 16 05.9**	**+6.9**
KPC				*e*		22 16 20.5	
KPC				max		22 16 24.0	
	comp=E,437nm,1.2s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*PN	**Pn**	**22 14 21.9**	**-1.7**
KPC				*e*		22 14 42.6	
KPC				*e*		22 16 06.0	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KPC				smax	smax		
	comp=E,435nm,1.5s						
LSTR	**Listvyanka**	**6.81**	**235**	*e*Pg	**Pb**	**22 14 48.2**	**+2.3**
LSTR				Pmax		22 14 54.2	
	comp=E,31nm,1.6s						
LSTR				*e*Sg	**Sb**	**22 16 14.9**	**+7.3**
LSTR				Smax		22 16 24.0	
	comp=E,247nm,1.3s						
IRK	**Irkutsk**	**6.83**	**239**	*e*PG	**Pb**	**22 14 48.2**	**+2.0**
IRK				*e*		22 16 15.3	
IRK				pmax	pmax		
	comp=Z,40nm,0.3s						
IRK				smax	smax		
	comp=N,302nm,1.0s						
TLY	**Talaya**	**7.49**	**238**	*e*Pg	**Pb**	**22 15 00.5**	**+3.1**
TLY				Pmax		22 16 05.8	
	comp=N,7.0nm,0.7s						
TLY				*e*Sg	**Sb**	**22 16 34.9**	**+7.9**
TLY				Smax		22 16 42.7	
	comp=N,102nm,1.1s						
TLY	**Talaya**	**7.49**	**238**	*e*PG	**Pb**	**22 15 01.7**	**+4.3**
TLY				*e*		22 16 34.9	
TLY				pmax	pmax		
	comp=Z,23nm,1.8s						
TLY				smax	smax		
	comp=E,101nm,1.1s						
ARS	**Arshan**	**7.93**	**243**	*e*Pn	**Pn**	**22 14 41.8**	**-1.3**
ARS				*e*Pg	**Pb**	**22 15 07.5**	**+2.5**
ARS				Pmax		22 15 12.2	
	comp=E,27nm,0.9s						
ARS				*e*Sg	**Sb**	**22 16 48.4**	**+8.6**
ARS				Smax		22 16 52.7	
	comp=E,545nm,0.8s						
ARS	**Arshan**	**7.93**	**243**	*e*PG	**Pb**	**22 15 09.6**	**+4.6**
ARS				pmax	pmax		
	comp=Z,23nm,0.8s						
ZEA	**Zeya**	**8.10**	**102**	*e*PG	**Pb**	**22 15 09.5**	**+1.8**
ZEA				*e*S	**Sn**	**22 16 14.9**	**-2.2**
ZEA				smax	smax		
	comp=E,10.0nm,0.8s						
ZEA				smax	smax		
	comp=N,20nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,200nm,5.0s						
ZAK	**Zakamensk**	**8.56**	**232**	*e*Pg	Pg	22 15 19.3	-11
ZAK				Pmax		22 15 28.0	
	comp=Z,12nm,1.2s						
ZAK				*e*Sn	**Sn**	**22 16 22.4**	**-6.1**
ZAK				*e*Sg	Sg	22 17 09.9	-12
ZAK				*e*		22 17 16.4	
ZAK				max		22 17 23.1	
	comp=Z,152nm,1.9s						
ZAK	**Zakamensk**	**8.56**	**232**	*e*PG	**Pg**	**22 15 28.4**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
MOY	**Mondy**	**8.80**	**245**	*e*Pn	**Pn**	**22 14 54.1**	**-0.9**
MOY				*e*		22 15 04.9	
MOY				max		22 15 08.1	
	comp=Z,35nm,1.6s						
MOY				*e*		22 16 34.6	
MOY				*e*		22 16 55.3	
MOY				*e*Sg	Sg	22 17 16.9	-12
MOY				Smax		22 17 35.8	
	comp=Z,238nm,1.4s						
MOY	**Mondy**	**8.80**	**245**	*e*PN	**Pn**	**22 14 54.3**	**-0.7**
MOY				*e*		22 15 23.8	
MOY				*e*S	**Sn**	**22 16 30.0**	**-4.5**
MOY				*e*		22 17 14.7	
MOY				pmax	pmax		
	comp=Z,25nm,1.3s						
MOY				smax	smax		
	comp=N,237nm,1.5s						
ORL	**Orlik**	**8.95**	**252**	*e*Pn	**Pn**	**22 14 56.2**	**-0.8**
ORL				max		22 15 11.0	
	comp=N,20nm,1.1s						
ORL				*e*Sn	**Sn**	**22 16 31.2**	**-6.9**
ORL				*e*Sg	Sg	22 17 21.1	-13
ORL				Smax		22 17 37.6	
	comp=N,198nm,1.5s						
ORL	**Orlik**	**8.95**	**252**	*e*PN	**Pn**	**22 14 56.0**	**-1.0**
ORL				*e*		22 15 25.9	
ORL				*e*S	**Sn**	**22 16 32.4**	**-5.7**
ORL				*e*		22 17 19.2	
ORL				pmax	pmax		
	comp=Z,18nm,0.9s						
ORL				smax	smax		
	comp=N,198nm,1.4s						
SONM	**Songino Array**	**9.50**	**212**	Pn	**Pn**	**22 15 04.2**	**-0.4**
	comp=N,0.5nm,0.3s,baz=19,slow=14,SNR=18						
SONM				Lg	Lg	22 17 40.2	
	comp=N,1.8nm,0.3s,baz=22,slow=27,SNR=18						
YAK	**Yakutsk**	**10.05**	**48**	Sn	**Sn**	**22 16 57.6**	**-7.2**
	comp=N,0.0nm,0.3s,baz=255,slow=9.1,SNR=1.3						
YAK				Lg	Lg	22 17 58.3	
	comp=N,0.1nm,0.3s,baz=152,slow=22,SNR=9.2						
YAK	**Yakutsk**	**10.05**	**48**	⇓*e*P	**Pn**	**22 15 15.3**	**+3.4**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KLR	**Kul'dur**	**12.87**	**115**	Pn	**Pn**	**22 15 53.1**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=304,slow=18,SNR=5.6						
KLR				Lg	Lg	22 19 28.9	
	comp=Z,0.2nm,0.3s,baz=166,slow=20,SNR=2.7						
USRK	**Ussuriysk Ar.**	**16.62**	**128**	Lg	Lg	22 21 30.6	
	baz=314,slow=20,SNR=4.0						
ZALV	**Zalesovo Beam**	**16.71**	**275**	Pn	**Pn**	**22 16 41.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=5.5						
ZALV				Lg	Lg	22 21 26.4	
	comp=Z,0.2nm,0.3s,baz=59,slow=10,SNR=1.2						
ZALV	**Zalesovo Beam**	**16.71**	**275**	*i* P	**Pn**	**22 16 42.0**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TIXI	**Tiksi**	**16.81**	**17**	⇑*e*P	**Pn**	**22 16 43.4**	**+0.6**
DGZ	**Jazzator, Alta**	**17.10**	**259**	⇓*e*P	**Pn**	**22 16 46.2**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,13nm,4.1s						
NRIK	**Noril'sk**	**17.66**	**329**	P	**Pn**	**22 16 52.7**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=140,slow=9.1,SNR=3.8						
NRIK				Lg	Lg	22 21 57.8	
	comp=Z,0.6nm,0.3s,baz=15,slow=22,SNR=2.1						
NRIK	**Noril'sk**	**17.66**	**329**	⇓*e*P	**Pn**	**22 16 52.7**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**21.50**	**270**	⇑*i*P	**P**	**22 17 36.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**22 17 36.7**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=62,slow=8.4,SNR=17						
MKAR	**Makanchi Array**	**21.58**	**258**	*i* P	**P**	**22 17 39.0**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**21.59**	**270**	P	**P**	**22 17 37.2**	**-0.3**
	comp=Z,7.6nm,0.9s,baz=66,slow=12,SNR=21						
ERM	**Erimo**	**23.62**	**114**	⇓*e*P	**P**	**22 17 59.4**	**+0.6**
BVAR	**Borovoye Array**	**25.05**	**281**	P	**P**	**22 18 12.3**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=35,slow=18,SNR=5.1						
BRVK	**Borovoye**	**25.10**	**281**	⇑*e*P	**P**	**22 18 12.6**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	**Ala-Archa**	**28.51**	**258**	P	**P**	**22 18 42.4**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=251,slow=8.3,SNR=2.9						
AAK	**Ala-Archa**	**28.51**	**258**	⇑*e*P	**P**	**22 18 42.3**	**-1.0**
AAK				pmax	pmax		
	comp=Z,17nm,1.4s						
FINES	**FINESS Array B**	**42.49**	**315**	P	**P**	**22 20 42.2**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=64,slow=8.9,SNR=3.8						
ILAR	**Eielson Array**	**44.76**	**37**	P	**P**	**22 21 02.9**	**+1.9**
	comp=Z,0.5nm,0.9s,baz=301,slow=8.3,SNR=4.7						
YKA	**Yellowknife Ar**	**55.83**	**25**	P	**P**	**22 22 25.0**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=334,slow=7.0,SNR=5.1						
YKA	**Yellowknife Ar**	**55.83**	**25**	*i* P	**P**	**22 22 26.2**	**+1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**71.00**	**314**	P	**P**	**22 24 04.8**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=28,slow=6.6,SNR=4.7						

BYKL 03 22:13:16.8±0.3, 56°.13N×113°.67E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.06**	**258**	*e*Pg	Pg	22 13 17.8	-0.2
SVKR				*e*Sg	Sg	22 13 19.8	+1.0
SVKR				Pmax			
	3µm,0.2s						
SVKR				Smax			
	17µm,0.4s						
NLYR	**Nelyaty**	**1.19**	**71**	*e*Pg	Pg	22 13 38.2	-1.4
NLYR				*e*Sg	Sg	22 13 54.1	-0.9
NLYR				*e*Sb	Sn	22 13 57.4	-0.2
NLYR				Pmax			
	335nm,0.4s						
NLYR				max			
	505nm,0.6s						
KMO	**Kumora**	**1.41**	**261**	Sg	Sg	22 14 00.8	-1.2
BOD	**Bodaibo**	**1.70**	**6**	Pg	Pn	22 13 47.2	-0.5
BOD				*e*Sg	Sn	22 14 09.8	-0.4
BOD				Smax			
	263nm,0.3s						
YLYR	**Ulyunkhan**	**1.90**	**230**	Pg	Pn	22 13 50.7	+0.2
YLYR				*e*Sg	Sn	22 14 15.7	+0.6
YLYR				Smax			
	383nm,0.3s						
SYVR	**Suvo**	**3.26**	**222**	Pg	Pb	22 14 14.9	-0.6
SYVR				*e*Sg	Sb	22 14 57.7	+2.0

BJI ***03*** *22:16:54.5±0.0, 56°.21N×113°.84E, h16^{km}, mB4.4/5, mb3.9/15, Ms4.4/2, Ms7 4.1/1*

MOS ***03*** *22:16:55.1±0.9, 56°.02N×113°.75E, h9^{km}, mb4.5/7, Error ellipse: s-maj=9.1km s-min=6.0km az=76.1*

IDC ***03*** *22:16:55.3±0.7, 55°.98N×113°.78E, h0^{km}, mb3.8/19, mb1 4.0/22, mb1mx3.9/46, mbtmp3.9/22, ML2.5/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/43, Error ellipse: s-maj=18.1km s-min=14.0km az=157.0*

NEIC ***03*** *22:16:56.3±1.6, 56°.08N±0°.08×113°.9E±0°.2, h10^{km}±1^{km}, mb4.2/22, Error ellipse: s-maj=14.9km s-min=13.4km az=105.0*

BYKL ***03*** *22:16:56.2±0.2, 56°.10N×113°.72E, h9^{km}±3^{km}*

ISC 03 22:16:56.9±0.4, 56°.02N±0°.02×113°.64E±0°.02, h10^{km}, n125, σ2^{s}.16/177, mb4.1/28, MS3.4/6, 12C-6D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**335**	⇑*i*Pg	**Pg**	**22 16 58.3**	**-1.3**
SVKR				Pmax		22 16 58.5	
	48µm,0.2s						
SVKR				*e*Sg	**Sg**	**22 17 00.4**	**-1.1**
SVKR				Smax		22 17 04.6	
	168µm,0.7s						
SVKR	**Severomuysk**	**0.10**	**335**	⇑*i*PG	**Pg**	**22 16 58.3**	**-1.3**
SVKR				*e*S	**Sg**	**22 17 00.0**	**-1.5**
UKT	**Uakit**	**0.54**	**181**	*e*Pg	**Pg**	**22 17 07.4**	**+0.1**
UKT				Pmax		22 17 10.5	
	619nm,0.5s						
UKT				*e*Sg	**Sg**	**22 17 15.0**	**+0.6**
UKT				Smax		22 17 15.6	
	5µm,0.8s						
UKT				*e*Sb	**Sn**	**22 17 19.1**	**-0.7**
UKT	**Uakit**	**0.54**	**181**	*e*PG	**Pg**	**22 17 06.8**	**-0.5**
UKT				*e*		22 17 15.3	
UKT				pmax	pmax		
	comp=Z,295nm,0.2s						
UKT				smax	smax		
	comp=E,4µm,0.4s						
YOA	**Uoyan**	**1.08**	**277**	⇑*i*Pg	**Pb**	**22 17 16.7**	**-0.9**
YOA				*e*		22 17 20.6	
YOA				max		22 17 21.8	
	comp=E,3µm,0.4s						
YOA				*e*Sg	**Sg**	**22 17 32.5**	**+0.9**
YOA				*e*		22 17 39.1	
YOA				max		22 17 40.9	
	comp=E,18µm,0.5s						
YOA	**Uoyan**	**1.08**	**277**	⇑*i*PG	**Pb**	**22 17 16.8**	**-0.9**
YOA				*e*		22 17 31.5	
YOA				pmax	pmax		
	comp=Z,1µm,0.3s						
YOA				smax	smax		
	comp=N,18µm,0.5s						
NLYR	**Nelyaty**	**1.25**	**67**	⇑*i*Pg	**Pn**	**22 17 17.4**	**-3.0**
NLYR				*e*Pb	**Pb**	**22 17 19.5**	**-1.0**
NLYR				*e*		22 17 22.2	
NLYR				max		22 17 22.9	
	comp=N,1µm,0.5s						
NLYR				*e*Sg	**Sb**	**22 17 33.0**	**-3.6**
NLYR				*e*		22 17 37.2	
NLYR				*e*		22 17 39.6	
NLYR				max		22 17 40.8	
	comp=N,9µm,0.9s						
NLYR	**Nelyaty**	**1.25**	**67**	⇑*i*PG	**Pn**	**22 17 17.4**	**-3.0**
NLYR				*e*		22 17 33.2	
NLYR				pmax	pmax		
	comp=Z,1µm,0.4s						
NLYR				smax	smax		
	comp=E,9µm,1.0s						
KMO	**Kumora**	**1.38**	**265**	⇓*i*Pg	**Pn**	**22 17 22.3**	**+0.1**
KMO				*e*Pb	**Pg**	**22 17 23.7**	**+0.4**
KMO				*e*		22 17 24.6	
KMO				max		22 17 25.9	
	comp=E,3µm,0.5s						
KMO				*e*Sg	**Sn**	**22 17 41.0**	**+0.6**
KMO				*e*		22 17 44.6	
KMO				max		22 17 45.7	
	comp=E,21µm,1.1s						
KMO	**Kumora**	**1.38**	**265**	*e*PG	**Pn**	**22 17 22.2**	**+0.1**
KMO				*e*		22 17 41.0	
KMO				pmax	pmax		
	comp=Z,947nm,0.3s						
KMO				smax	smax		
	comp=N,21µm,1.1s						
BOD	**Bodaibo**	**1.81**	**6**	⇑*i*Pg	**Pn**	**22 17 27.2**	**-0.9**
BOD				Pmax		22 17 28.1	
	comp=N,1µm,1.2s						
BOD				*e*Sg	**Sn**	**22 17 49.8**	**-1.3**
BOD				Smax		22 17 57.2	
	comp=N,3µm,0.9s						
BOD	**Bodaibo**	**1.81**	**6**	*e*PN	**Pn**	**22 17 27.2**	**-0.9**
BOD				*e*		22 17 49.2	
BOD				pmax	pmax		
	comp=Z,1µm,0.6s						
BOD				smax	smax		
	comp=E,3µm,0.9s						
YLYR	**Ulyunkhan**	**1.82**	**232**	⇓*i*Pn	**Pb**	**22 17 30.0**	**-0.3**
YLYR				*e*Pg	**Pg**	**22 17 30.8**	**-0.9**
YLYR				Pmax		22 17 31.1	
	comp=E,2µm,0.5s						
YLYR				*e*Sg	**Sg**	**22 17 55.8**	**+0.5**
YLYR				Smax		22 18 00.7	
	comp=E,4µm,0.5s						
NIZ	**Nizh Angarsk**	**2.32**	**266**	*e*Pn	**Pn**	**22 17 36.4**	**+1.3**
NIZ				*e*Pg	**Pb**	**22 17 39.1**	**+0.3**
NIZ				*e*		22 17 41.2	
NIZ				max		22 17 41.5	
	comp=E,574nm,0.5s						
NIZ				*e*Sn	**Sn**	**22 18 05.1**	**+1.4**
NIZ				*e*Sg	**Sg**	**22 18 10.9**	**-0.4**
NIZ				Smax		22 18 12.2	
	comp=E,7µm,0.8s						
NIZ	**Nizh Angarsk**	**2.32**	**266**	*e*PN	**Pn**	**22 17 36.4**	**+1.3**
NIZ				*e*		22 17 40.8	
NIZ				*e*		22 18 11.4	
NIZ				pmax	pmax		
	comp=Z,571nm,0.8s						
NIZ				smax	smax		
	comp=N,7µm,0.9s						
CRS	**Chara**	**2.72**	**69**	*e*Pn	**Pn**	**22 17 40.1**	**-0.5**
CRS				*e*Pg	**Pb**	**22 17 44.4**	**-1.1**
CRS				Pmax		22 17 50.1	
	comp=N,739nm,0.9s						
CRS				*e*Sn	**Sn**	**22 18 11.2**	**-2.3**
CRS				*e*Sg	**Sb**	**22 18 18.9**	**0.0**
CRS				*e*		22 18 22.1	
CRS				max		22 18 23.6	
	comp=N,2µm,1.2s						
SYVR	**Suvo**	**3.17**	**223**	⇓*i*Pn	**Pn**	**22 17 48.2**	**+1.5**
SYVR				*e*Pg	**Pb**	**22 17 53.7**	**+0.5**
SYVR				*e*PgPg	**PbPb**	**22 17 56.0**	**-0.4**
SYVR				Pmax		22 17 58.0	
	comp=N,538nm,1.0s						
SYVR				*e*Sn	**Sn**	**22 18 25.1**	**+0.5**
SYVR				*e*Sg	**Sg**	**22 18 36.8**	**-1.8**
SYVR				Smax		22 18 50.7	
	comp=N,2µm,1.0s						
SYVR	**Suvo**	**3.17**	**223**	⇓*i*PN	**Pn**	**22 17 48.3**	**+1.5**
SYVR				*e*		22 17 53.7	
SYVR				*e*		22 18 36.5	
SYVR				pmax	pmax		
	comp=Z,542nm,0.8s						

SYVR				smax	smax		
	comp=N,2µm,1.0s						
VTMR	Vitim	3.48	351	ePn	Pn	22 17 49.6	-1.3
VTMR				ePg	Pb	22 17 57.8	-0.6
VTMR				e		22 18 02.1	
VTMR				eSn	Sn	22 18 28.0	-4.1
VTMR				eSg	Sb	22 18 40.4	-0.2
TUP	Tupik	3.96	111	ePn	Pn	22 17 57.4	-0.2
TUP				e		22 17 59.0	
TUP				ePg	Pb	22 18 07.9	+1.2
TUP				Pmax		22 18 09.3	
	comp=N,140nm,0.6s						
TUP				eSg	Sg	22 18 59.2	-4.6
TUP				e		22 19 04.8	
TUP				max		22 19 16.7	
	comp=N,1µm,1.4s						
TUP	Tupik	3.96	111	ePN	Pn	22 17 57.4	-0.2
TUP				e		22 18 06.9	
TUP				eS	Sn	22 18 43.0	-1.1
TUP				e		22 18 57.7	
TUP				pmax	pmax		
	comp=Z,139nm,0.5s						
TUP				smax	smax		
	comp=E,1µm,1.4s						
MXMB	Maximikha	3.97	228	ePn	Pn	22 17 59.4	+1.7
MXMB				ePg	Pb	22 18 09.6	+2.8
MXMB				eSg	Sg	22 19 01.5	-2.6
CIT	Chita	4.01	181	ePg	Pb	22 18 09.3	+1.7
CIT				Pmax		22 18 13.1	
	comp=E,183nm,0.6s						
CIT				eSg	Sg	22 19 01.9	-3.7
CIT				Smax		22 19 08.8	
	comp=E,2µm,0.8s						
CIT	Chita	4.01	181	ePN	Pn	22 17 58.5	+0.1
CIT				e		22 18 11.1	
CIT				eS	Sn	22 18 43.4	-2.0
CIT				e		22 19 04.6	
CIT				pmax	pmax		
	comp=Z,158nm,0.9s						
CIT				smax	smax		
	comp=E,2µm,1.7s						
OGRR	Ongureny	4.23	238	ePn	Pn	22 18 03.7	+2.4
OGRR				ePg	Pb	22 18 13.6	+2.3
OGRR				Pmax		22 18 18.7	
	comp=E,214nm,0.9s						
OGRR				eSn	Sn	22 18 51.9	+1.1
OGRR				eSg	Sg	22 19 09.2	-3.4
OGRR				Smax		22 19 19.1	
	comp=E,1µm,1.2s						
OGRR	Ongureny	4.23	238	ePN	Pn	22 18 03.7	+2.4
OGRR				e		22 18 14.6	
OGRR				e		22 19 09.1	
OGRR				pmax	pmax		
	comp=Z,260nm,1.9s						
OGRR				smax	smax		
	comp=N,1µm,1.4s						
YKLR	Yuktali	4.50	79	ePn	Pn	22 18 04.0	-1.1
YKLR				ePg	Pb	22 18 15.0	-0.9
YKLR				e		22 18 20.4	
YKLR				eSn	Sn	22 18 52.4	-5.0
YKLR				eSg	Sb	22 19 13.5	+3.3
ZRHB	Zarechye	5.15	230	ePn	Pn	22 18 13.8	-0.2
ZRHB				ePg	Pb	22 18 30.8	+3.8
ZRHB				Pmax		22 18 37.3	
	comp=N,387nm,1.1s						
ZRHB				eSg	Sg	22 19 38.6	-3.4
ZRHB				Smax		22 20 00.8	
	comp=N,2µm,1.2s						
TRG	Tyrgan	5.37	235	ePn	Pn	22 18 18.6	+1.6
TRG				ePg	Pb	22 18 33.3	+2.6
TRG				Pmax		22 18 41.3	
	comp=N,108nm,1.0s						
TRG				eSn	Sn	22 19 19.0	+0.2
TRG				eSg	Sg	22 19 43.7	-5.4
TRG				Smax		22 19 51.1	
	comp=N,490nm,0.8s						
TRG	Tyrgan	5.37	235	ePN	Pn	22 18 17.5	+0.5
TRG				e		22 18 32.5	
TRG				eS	Sn	22 19 18.0	-0.8
TRG				e		22 19 42.4	
TRG				pmax	pmax		
	comp=Z,108nm,1.0s						
TRG				smax	smax		
	comp=N,500nm,1.2s						
FFNB	Fofonovo	5.68	228	ePn	Pn	22 18 22.7	+1.4
FFNB				ePg	Pg	22 18 41.5	-4.1
FFNB				eSg	Sg	22 19 55.7	-3.4
KAB	Kabansk	5.72	229	e	Pb	22 18 32.0	-4.8
KAB				ePg	Pg	22 18 40.0	-6.4
KAB				Pmax		22 18 42.3	
	comp=N,281nm,1.0s						
KAB				eSn	Sn	22 19 28.1	+0.5
KAB				eSg	Sg	22 19 56.7	-3.8
KAB				Smax		22 20 28.3	
	comp=N,2µm,0.9s						
HRMR	Khuramsha	5.92	225	ePn	Pn	22 18 26.0	+1.4
HRMR				ePg	Pb	22 18 43.8	+3.7
HRMR				Pmax		22 18 48.1	
	comp=N,299nm,0.6s						
HRMR				eSg	Sg	22 20 03.0	-3.7
HRMR				e		22 20 12.4	
HRMR				max		22 20 16.1	
	comp=N,2µm,0.7s						
BGT	Bolshoye Golou	6.28	234	ePg	Pb	22 18 51.5	+5.4
BGT				Pmax		22 18 57.8	
	comp=N,26nm,0.1s						
BGT				eSg	Sg	22 20 13.3	-4.8
BGT				Smax		22 20 21.9	
	comp=N,370nm,1.2s						
IENR	Iengra	6.28	84	ePn	Pn	22 18 28.7	-0.8
IENR				ePg	Pb	22 18 47.7	+1.5
IENR				eSg	Sb	22 20 07.9	+6.6
KPC	Khapcheranga	6.38	187	ePn	Pn	22 18 30.8	-0.1
KPC				ePg	Pb	22 18 52.2	+4.3
KPC				Pmax		22 19 00.0	
	comp=N,30nm,0.5s						
KPC				eSn	Sn	22 19 43.0	-0.7
KPC				eSg	Sg	22 20 14.7	-6.7
KPC				Smax		22 20 25.9	
	comp=N,878nm,1.5s						
KPC	Khapcheranga	6.38	187	ePN	Pn	22 18 30.9	0.0
KPC				e		22 18 52.2	
KPC				e		22 20 15.4	
KPC				pmax	pmax		
	comp=Z,30nm,0.8s						
KPC				smax	smax		
	comp=E,869nm,1.8s						
LSTR	Listvyanka	6.66	235	ePn	Pn	22 18 35.0	+0.3
LSTR				ePg	Pb	22 18 56.7	+4.1
LSTR				Pmax		22 19 20.3	
	comp=E,63nm,1.7s						
LSTR				e		22 20 12.9	
LSTR				eSg	Sg	22 20 23.5	-6.9
LSTR				Smax		22 20 31.7	
	comp=E,551nm,1.6s						
TLY	Talaya	7.34	238	ePG	Pb	22 19 10.0	+5.8
TLY				e		22 20 44.7	
TLY				pmax	pmax		
	comp=Z,35nm,0.6s						
TLY	Talaya	7.34	238	Pn	Pn	22 18 44.7	+0.7
TLY					LR	22 20 45.1	
HIA	Hailar	7.72	149	Pn	Pn	22 18 47.6	-1.6
HIA					LR	22 20 52.8	
ARS	Arshan	7.78	243	ePn	Pn	22 18 50.8	+0.6
ARS				ePg	Pb	22 19 16.9	+5.1
ARS				Pmax		22 19 27.2	
	comp=Z,82nm,0.7s						
ARS				eSg	Sg	22 20 58.2	-8.2
ARS				Smax		22 21 01.2	
	comp=Z,1µm,0.9s						
ARS	Arshan	7.78	243	ePG	Pb	22 19 19.3	+7.5
ARS				pmax	pmax		
	comp=Z,81nm,0.5s						
ZEA	Zeya	8.18	101	ePG	Pb	22 19 24.2	+5.7
ZEA				eS	Sn	22 20 29.7	+1.8
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				smax	smax		
	comp=N,210nm,0.9s						
ZAK	Zakamensk	8.40	232	ePg	Pb	22 19 28.9	+6.6
ZAK				Pmax		22 19 43.0	
	comp=N,27nm,1.1s						
ZAK				eSn	Sn	22 20 32.1	-1.3
ZAK				eSg	Sg	22 21 19.2	-6.9
ZAK				e		22 21 25.7	
ZAK				max		22 21 32.5	
	comp=N,279nm,1.8s						
MOY	Mondy	8.65	245	ePn	Pn	22 19 04.5	+2.4
MOY				max		22 19 17.7	
	comp=N,87nm,1.4s						
MOY				ePg	Pg	22 19 34.8	-7.6
MOY				e		22 20 54.5	
MOY				eSg	Sg	22 21 25.5	-8.8
MOY				Smax		22 21 45.1	
	comp=N,485nm,1.5s						
MOY	Mondy	8.65	245	ePN	Pn	22 19 04.3	+2.2
MOY				e		22 19 33.1	
MOY				e		22 21 25.8	
MOY				pmax	pmax		
	comp=Z,15nm,0.6s						
MOY				smax	smax		
	comp=N,485nm,1.5s						
ORL	Orlik	8.81	252	ePn	Pn	22 19 04.7	+0.4
ORL				max		22 19 32.8	
	comp=N,64nm,1.8s						
ORL				eSn	Sn	22 20 40.7	-2.9
ORL				eSg	Sg	22 21 31.5	-7.8
ORL				Smax		22 21 43.0	
	comp=N,373nm,1.3s						
ORL	Orlik	8.81	252	ePN	Pn	22 19 04.7	+0.4
ORL				e		22 19 35.2	
ORL				eS	Sn	22 20 43.3	-0.3
ORL				e		22 21 30.9	
ORL				pmax	pmax		
	comp=Z,64nm,1.3s						
ORL				smax	smax		
	comp=N,376nm,1.7s						
SONM	Songino Array	9.34	212	Pn	Pn	22 19 13.0	+1.5
	baz=27,slow=13,SNR=1.0						
SONM				Lg	Lg	22 21 47.4	
	comp=N,4.0nm,0.3s,baz=26,slow=26,SNR=4.1						
YAK	Yakutsk	10.21	47	Sn	Sn	22 21 03.1	-15
	comp=N,0.1nm,0.3s,baz=196,slow=22,SNR=1.6						
YAK				Lg	Lg	22 22 07.8	
	comp=N,0.1nm,0.3s,baz=321,slow=22,SNR=7.2						
YAK	Yakutsk	10.21	47	eP	Pn	22 19 29.1	+5.8
YAK				eS	Sn	22 21 23.7	+6.1
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				smax	smax		
	comp=N,22nm,0.9s						
YAK				smax	smax		
	comp=E,23nm,1.0s						
YAK				MLR	MLR		
	comp=Z,187nm,6.0s						
YAK				MLR	MLR		
	comp=E,171nm,6.0s						
KLR	Kul'dur	12.91	114	Lg	Lg	22 23 33.0	
	comp=E,0.3nm,0.3s,baz=212,slow=14,SNR=3.0						
KLR				LR	LR	22 25 06.8	
	comp=E,150nm,18.8s,baz=312,slow=38						
BJT	Baijiatuau	16.10	173	P	P	22 20 46.0	-0.5
BJT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJT	Baijiatuau	16.10	173		P	22 20 46.0	-0.5
ZAA0	Zalesovo Array	16.62	275		Pn	22 20 50.8	+1.2
ZALV	Zalesovo Beam	16.62	275	Pn	Pn	22 20 50.7	+1.1
	comp=Z,0.3nm,0.3s,baz=65,slow=11,SNR=8.6						
ZALV				Lg	Lg	22 25 35.4	
	comp=Z,0.1nm,0.3s,baz=228,slow=49,SNR=2.9						
ZALV				LR	LR	22 28 23.8	
	comp=Z,66nm,18.4s,baz=74,slow=41						
USRK	Ussuriysk Ar.	16.63	128	Pn	Pn	22 20 49.5	-0.3
	baz=328,slow=14,SNR=1.9						
USRK				LR	LR	22 27 25.1	
	comp=Z,119nm,19.4s,baz=309,slow=38						
TIXI	Tiksi	16.96	17	⇑iP	Pn	22 20 53.3	-0.6
TIXI	Tiksi	16.96	17	Pn	Pn	22 20 50.3	-3.6
TIXI				IAmb	IAmb	22 20 55.8	
	comp=Z,11nm,0.6s						
DGZ	Jazzator, Alta	16.98	259	ceP	P	22 20 56.2	-0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NRIK	Noril'sk	17.71	329	P	Pn	22 21 01.0	-2.2
	comp=Z,1.1nm,0.3s,baz=94,slow=5.4,SNR=5.4						
NRIK				S	Sn	22 24 01.8	-18
	comp=Z,0.3nm,0.3s,baz=166,slow=11,SNR=2.0						
NRIK				Lg	Lg	22 26 04.1	
	comp=Z,0.2nm,0.3s,baz=170,slow=15,SNR=1.5						
NRIK				LR	LR	22 27 24.8	
	comp=Z,112nm,19.0s,baz=177,slow=35						
NRIK	Noril'sk	17.71	329	⇓eP	P	22 21 04.4	+0.3
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRIK	Noril'sk	17.71	329	Pn	Pn	22 21 01.0	-2.2
GTA	Gaotai	18.98	215	eP	Pn	22 21 19.7	+0.6
GTA				pP	sP	22 21 29.3	+6.2
GTA				sP	pP	22 21 33.3	+12
MA2	Magadan	19.93	64	⇑eP	P	22 21 28.5	0.0
MA2				pmax	pmax		
	comp=Z,13nm,1.6s						
WMQ	Urumqi	20.54	244	P	P	22 21 34.3	-1.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ	Urumqi	20.54	244	P	P	22 21 34.3	-1.1
WMQ				IAmb	IAmb	22 21 41.3	
	comp=Z,9.6nm,1.0s						
SEY	Seymchan	20.58	55	P	P	22 21 36.4	+0.8
	comp=Z,1.1nm,0.5s,baz=74,slow=20,SNR=5.1						
SEY				Lg	Lg	22 27 36.6	
	comp=Z,3.4nm,0.9s,baz=319,slow=2.1,SNR=4.3						
KSRS	Korea Array	20.92	147	LR	LR	22 30 22.4	
	comp=Z,129nm,18.0s,baz=347,slow=39						
KURK	Kurchatov	21.39	270	eP	P	22 21 46.0	+1.6
KURK				pmax	pmax		
	comp=Z,23nm,0.9s						
KURK	Kurchatov	21.39	270	P	P	22 21 45.2	+0.8
KURK				IAmb	IAmb	22 21 51.9	
	comp=Z,19nm,0.8s						
MK31	Makanchi Array	21.45	258	i P	P	22 21 45.9	+0.8
MK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK31	Makanchi Array	21.45	258	P	P	22 21 46.0	+0.8
MK31				IAmb	IAmb	22 21 49.2	
	comp=Z,11nm,1.1s						
MKAR	Makanchi Array	21.45	258	P	P	22 21 46.3	+1.2
	comp=Z,7.9nm,0.9s,baz=60,slow=9.5,SNR=27						
MKAR				Lg	Lg	22 28 08.7	
	comp=Z,0.2nm,0.7s,baz=170,slow=29,SNR=1.8						
MKAR				LR	LR	22 30 26.5	
	comp=Z,97nm,19.9s,baz=32,slow=38						
KURBB	Kurchatov Arra	21.49	270	P	P	22 21 46.2	+0.8
	comp=Z,24nm,0.9s,baz=68,slow=11,SNR=28						
KURBB				Lg	Lg	22 28 02.6	
	comp=Z,0.2nm,0.6s,baz=246,slow=22,SNR=1.7						
MAKZ	Makanchi	21.62	258	P	P	22 21 47.3	+0.4
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
MAKZ	Makanchi	21.62	258	P	P	22 21 47.3	+0.4
MAKZ				IAmb	IAmb	22 21 51.3	
	comp=Z,12nm,0.9s						
XAN	Xi'an	22.23	190	P	P	22 21 54.8	+1.3
XAN				pP	sP	22 22 01.9	+3.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN	Xi'an	22.23	190	P	P	22 21 52.7	-0.8
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
XAN	Xi'an	22.23	190	P	P	22 21 52.6	-0.8
XAN				IAmb	IAmb	22 21 57.9	
	comp=Z,11nm,1.3s						
BVAR	Borovoye Array	24.97	281	P	P	22 22 21.0	+0.7
	comp=Z,1.1nm,0.6s,baz=42,slow=16,SNR=8.4						
BVAR	Borovoye Array	24.97	281	P	P	22 22 21.0	+0.7
BRVK	Borovoye	25.02	282	deP	P	22 22 22.3	+1.7
BRVK				pmax	pmax		
	comp=Z,18nm,1.4s						
BRVK	Borovoye	25.02	282	P	P	22 22 21.2	+0.6
MJAR	Matsushiro Arr	25.61	129	LR	LR	22 32 25.6	
	comp=Z,81nm,18.6s,baz=290,slow=36						
JNU	Nakatsue	25.84	145	LR	LR	22 33 26.3	
	comp=Z,117nm,18.0s,baz=352,slow=38						
AAK	Ala-Archa	28.38	259	P	P	22 22 53.5	+2.2
	comp=Z,1.9nm,0.8s,baz=47,slow=11,SNR=5.9						
AAK	Ala-Archa	28.38	259	⇑eP	P	22 22 52.1	+0.9
AAK				pmax	pmax		
	comp=Z,13nm,1.1s						
AAK	Ala-Archa	28.38	259	P	P	22 22 52.6	+1.3
KK31	Karatay Array	30.28	263	P	P	22 23 08.7	+0.8
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	Karatay Array	30.28	263	P	P	22 23 08.7	+0.8
KK31				IAmb	IAmb	22 23 12.3	
	comp=Z,4.6nm,0.8s						
KKAR	Karatay Array	30.28	263	P	P	22 23 08.5	+0.6
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	30.28	263	P	P	22 23 08.5	+0.6
KKAR				IAmb	IAmb	22 23 12.3	
	comp=Z,4.6nm,0.8s						
KMI	Kunming	31.88	199	⇑P	P	22 23 21.9	-0.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	32.55	281	P	P	22 23 29.1	+1.4
CMAR	Chiang Mai Arr	39.11	202	P	P	22 24 24.2	-0.1
	comp=Z,0.4nm,0.8s,baz=356,slow=7.1,SNR=4.1						
CMAR	Chiang Mai Arr	39.11	202	i P	P	22 24 25.7	+1.4
GEYT	Alibeck	40.72	268	P	P	22 24 39.2	+1.7
	comp=Z,1.6nm,0.7s,baz=22,slow=5.5,SNR=4.0						
GYA0B	ALIBECK ARRAY	40.72	268	P	P	22 24 38.7	+1.2
GYA0B				IAmb	IAmb	22 24 42.7	
	comp=Z,4.7nm,1.0s						
FIA1	FINESS Array S	42.50	315	P	P	22 24 52.5	+0.7
FINES	FINESS Array B	42.50	315	P	P	22 24 52.1	+0.3
	comp=Z,4.2nm,0.9s,baz=42,slow=3.1,SNR=8.2						
FINES	FINESS Array B	42.50	315	i P	P	22 24 52.7	+0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TTA	Tatalina	42.76	42	P	P	22 24 53.7	-0.3
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TTA	Tatalina	42.76	42	P	P	22 24 53.7	-0.3
TTA				IAmb	IAmb	22 24 56.1	
	comp=Z,3.6nm,1.0s						
ILAR	Eielson Array	44.92	37	P	P	22 25 12.6	+1.4
	comp=Z,1.7nm,1.1s,baz=302,slow=3.4,SNR=7.6						
KIV	Kislovodsk	45.19	286	P	P	22 25 15.3	+1.5
GHO	Glory Hole Cre	46.10	41	P	P	22 25 20.9	+0.2
INK	Inuvik	46.59	28	P	P	22 25 25.8	+1.4
	comp=Z,1.1nm,0.6s,baz=332,slow=9.6,SNR=3.8						
INK	Inuvik	46.59	28	P	P	22 25 25.0	+0.7
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	46.59	28	P	P	22 25 25.0	+0.7
INK				IAmb	IAmb	22 25 27.3	
	comp=Z,2.9nm,0.9s						
AKASG	Malin Array Be	47.67	301	P	P	22 25 32.6	-0.4
	comp=Z,1.1nm,0.7s,baz=43,slow=9.0,SNR=5.6						
AKASG	Malin Array Be	47.67	301	i P	P	22 25 34.5	+1.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
N25K	Chitina, Valde	47.77	39	P	P	22 25 33.5	-0.3
C36M	Paulatuk	48.14	24	P	P	22 25 35.5	-0.9
BRTR	Keskin Array B	52.99	288	P	P	22 26 14.6	+1.0
	comp=Z,0.6nm,0.7s,baz=46,slow=11,SNR=2.1						
YKA	Yellowknife Ar	55.99	25	P	P	22 26 33.6	-1.2
	comp=Z,1.1nm,0.7s,baz=336,slow=6.5,SNR=17						
GERES	GERESS Array B	56.13	308	P	P	22 26 36.2	-0.1
	comp=Z,0.7nm,0.8s,baz=46,slow=5.6,SNR=5.1						
GERES				LR	LR	22 52 21.5	
	comp=Z,92nm,20.9s,baz=252,slow=38						
ESDC	Sonseca Array	71.01	314	P	P	22 28 14.6	+0.1
	comp=Z,1.3nm,0.7s,baz=27,slow=5.0,SNR=12						
NVAR	Mina Array Bea	76.09	40	P	P	22 28 44.8	+0.1
	comp=Z,0.7nm,0.8s,baz=303,slow=4.3,SNR=4.3						
WRA	Warramunga Arr	77.67	160	P	P	22 28 52.6	-0.8
	comp=Z,0.7nm,0.7s,baz=349,slow=6.3,SNR=6.0						
WRA	Warramunga Arr	77.67	160	i P	P	22 28 53.7	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SADO	Sadowa	79.00	9	LR	LR	23 02 49.3	
	comp=Z,41nm,18.7s,baz=128,slow=35						
ASAR	Alice Springs	81.22	161	P	P	22 29 10.7	-1.9
	comp=Z,0.6nm,0.9s,baz=0.7,slow=6.5,SNR=4.4						
TORD	Torodi Ar. Bea	90.99	295	P	P	22 30 00.5	-0.8
	comp=Z,0.7nm,0.9s,baz=36,slow=6.1,SNR=2.9						

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*TIR **03** 22:17:02.3, 42.°46N×19.°29E, h7^{km}±20^{km}, Md3.1, Ml2.6*

*IASPEI **03** 22:17:03.6±0.8, 42.°45N±0.°02×19.°30E±0.°02, h17^{km}±4^{km}, Error ellipse: s-maj=2.9km s-min=2.5km az=48.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*PDG **03** 22:17:03.2±0.0, 42.°44N×19.°28E, h15^{km}, MD2.8/6, ML2.4/14, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*RHSSO **03** 22:17:03.9±0.3, 42.°44N×19.°35E, h10^{km}±1^{km}, ML2.5/12*

*BEO **03** 22:17:04.4±0.2, 42.°47N×19.°33E, h14^{km}±2^{km}, ML2.2/13*

ISC 03 22:17:03.9±0.8, **42.°46N**±0.°02×**19.°31E**±0.°02, **h15**^{km}±4^{km}, **n63,** σ0.^{s}**97**/113, **8C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDG	Podgorica	0.05	239	ePg	Pg	22 17 06.8	0.0
PDG				eSg	Sg	22 17 09.6	+1.0
PDG	Podgorica	0.05	239	⇑iPg	Pg	22 17 06.8	0.0
PDG				eSg	Sg	22 17 09.4	+0.8
TTG	Podgorica	0.05	239	ePg	Pg	22 17 05.7	-1.1
TTG				i Sg	Sg	22 17 07.8	-0.8
DRME	Dracevica, Mon	0.29	200	⇓iPg	Pg	22 17 09.3	-0.7
DRME				eSg	Sb	22 17 14.8	-0.5
DRME	Dracevica, Mon	0.29	200	⇓iPg	Pg	22 17 08.6	-1.4
DRME				i Sg	Sg	22 17 13.2	-0.9
CEME	Cevo	0.31	287	⇑iPg	Pg	22 17 09.1	-1.3
CEME				i Sg	Sg	22 17 14.1	-0.7
BUM	Brajici-Budva	0.35	244	⇓iPg	Pg	22 17 09.6	-1.5
BUM				i Sg	Sg	22 17 15.0	-1.0
NKME	Niksic	0.41	319	⇓iPg	Pg	22 17 11.1	-1.1
NKME				i Sg	Sg	22 17 17.8	-0.1
KOME	Kolasin	0.42	21	⇑iPg	Pg	22 17 11.8	-0.7
KOME				i Sg	Sb	22 17 19.0	-0.4
SDA	Shkodra	0.43	161	P	Pg	22 17 11.2	-1.3
	baz=158						
SDA				S	Sg	22 17 17.8	-0.5
	baz=158						
NKY	Niksic	0.43	327	⇑iPg	Pg	22 17 11.5	-1.1
NKY				i Sg	Sg	22 17 18.5	0.0
ULC	Ulcinj	0.49	186	⇓iPg	Pg	22 17 12.3	-1.5
ULC				i Sg	Sg	22 17 20.0	-0.4
PVY	Plav	0.50	74	ePg	Pg	22 17 13.1	-0.7
PVY				i Sg	Sb	22 17 21.5	0.0
BCI	Bajram Curri	0.56	99	P	Pg	22 17 14.2	-0.9
	baz=98						
BCI				S	Sb	22 17 22.8	-0.6
	baz=98						
BCI				AMP			
	comp=E,2.9nm,0.3s,baz=98						
IVA	Berane	0.60	46	⇓iPg	Pg	22 17 14.9	-0.8
IVA				i Sg	Sb	22 17 24.9	+0.5
PUK	Puka	0.60	134	P	Pg	22 17 14.7	-1.0
	baz=132						
PUK				S	Sg	22 17 23.6	0.0
	baz=132						
PUK				AMP			
	comp=N,1.0nm,0.1s,baz=132						
HCY	Herceg Novi	0.61	269	ePg	Pg	22 17 14.6	-1.3
HCY				eSg	Sb	22 17 25.1	+0.5
HCY	Herceg Novi	0.61	269	⇓iPg	Pg	22 17 14.3	-1.6
HCY				i Sg	Sg	22 17 23.6	-0.3
BRY	Bratogost	0.72	308	ePg	Pg	22 17 17.0	-1.1
BRY				eSg	Sb	22 17 28.5	+0.4
BRY	Bratogost	0.72	308	⇓iPg	Pg	22 17 16.7	-1.4
BRY				i Sg	Sg	22 17 28.1	+0.4
TREB	Trebinje	0.76	290	ePg	Pg	22 17 17.7	-1.0
TREB				eSg	Sb	22 17 29.9	+1.0
TREB	Trebinje	0.76	290	⇑iPg	Pg	22 17 17.7	-1.0
TREB				eSg	Sb	22 17 30.0	+1.0
UPM	Unac-Piva	0.81	338	⇓iPg	Pg	22 17 18.5	-1.2
UPM				eSg	Sb	22 17 30.7	+0.2
UPM	Unac-Piva	0.81	338	⇑iPg	Pg	22 17 18.4	-1.2
UPM				i Sg	Sb	22 17 31.3	+0.8
PLE	Pljevlja	0.88	4	⇑iPg	Pg	22 17 19.9	-1.0
PLE				i Sg	Sn	22 17 34.0	-0.3
SJES	Sjenica	0.94	31	ePg	Pb	22 17 21.7	-0.3
SJES				eSg	Sb	22 17 35.1	+0.8
SJES	Sjenica	0.94	31	⇓iPg	Pb	22 17 21.5	-0.5

SJES				eSg	Sg	22 17 33.8	-0.7
PHP	Peshkopia	1.14	132	P	Pb	22 17 25.3	-0.1
	baz=131						
PHP				S	Sn	22 17 42.8	+2.1
	baz=131						
PHP				AMP			
	comp=N,0.5nm,0.4s,baz=131						
RUDO	Rudo	1.16	2	ePg	Pn	22 17 24.7	-0.9
RUDO				eSg	Sg	22 17 41.7	+0.2
TIR	Tirane	1.18	159	ePg	Pn	22 17 25.8	-0.1
TIR				eSg	Sg	22 17 43.6	+1.5
TIR	Tirane	1.18	159	P	Pn	22 17 25.0	-0.9
	baz=158						
TIR				S	Sg	22 17 43.5	+1.4
	baz=158						
STON	Ston	1.26	290	ePg	Pn	22 17 26.3	-0.7
STON				eSg	Sg	22 17 45.3	+0.7
STON	Ston	1.26	290	ePg	Pn	22 17 25.5	-1.4
STON				Sg	Sb	22 17 43.0	-0.4
STON	Ston	1.26	290	ePg	Pn	22 17 26.2	-0.7
STON				eSg	Sg	22 17 44.7	+0.1
IVAS	Ivanjica	1.28	28	ePg	Pn	22 17 27.4	+0.1
IVAS				eSg	Sb	22 17 43.5	-0.5
BBLS	Lazići	1.41	3	ePg	Pb	22 17 30.1	+0.1
BBLS				eSg	Sg	22 17 49.7	+0.2
BBLS	Lazići	1.41	3	⇑iPg	Pb	22 17 30.2	+0.2
BBLS				eSg	Sg	22 17 49.6	+0.1
SELS	Selova	1.53	60	ePn	Pn	22 17 30.8	+0.1
HAPS	Han Pijesak,Bl	1.65	351	ePn	Pn	22 17 33.3	+0.8
HAPS				eSn	Sb	22 17 54.9	+0.1
HAPS	Han Pijesak,Bl	1.65	351	ePg	Pn	22 17 33.2	+0.8
HAPS				eSg	Sg	22 17 56.4	-0.7
DIVS	Divibare	1.71	17	ePn	Pn	22 17 33.2	-0.1
DIVS	Divibare	1.71	17	ePn	Pn	22 17 33.1	-0.2
DIVS				eSn	Sn	22 17 55.7	+0.7
OHR	Ohrid	1.74	140	i Pn	Pb	22 17 35.5	-0.2
GRUS	Gruza	1.76	35	ePn	Pn	22 17 33.8	-0.1
MAKA	Makarska	1.88	297	ePn	Pn	22 17 36.2	+0.7
MAKA				Sn	Sb	22 18 01.2	0.0
TRUS	Trudelj	1.94	24	ePn	Pn	22 17 36.2	-0.1
TEKS	Tekeris	2.10	4	eSn	Sb	22 18 06.3	-1.2
HVAR	Hvar	2.23	290	ePn	Pn	22 17 40.9	+0.6
HVAR				Sn	Sn	22 18 09.3	+1.8
STIP	Stip	2.27	109	i Pn	Pn	22 17 42.1	+1.3
BOSS	Bosilegrad	2.34	88	ePn	Pn	22 17 41.8	-0.1
ZAGS	Zajecar	2.53	57	ePn	Pn	22 17 44.5	+0.1
ZAPS	Zavoj	2.57	70	ePn	Pn	22 17 45.4	+0.3
KIJV	Kijevo	2.63	307	ePn	Pn	22 17 47.4	+1.6
KIJV				Sn	Sn	22 18 18.9	+1.4
FRGS	Fruska Gora	2.72	7	ePn	Pn	22 17 48.0	+0.9
FRGS				eSn	Sn	22 18 21.6	+1.8
BLY	Banja Luka	2.77	327	ePn	Pn	22 17 49.1	+1.4
BLY				eSn	Sn	22 18 22.8	+2.0
ZIRJ	Zirje	2.94	295	ePn	Pn	22 17 50.6	+0.5
MORI	Morici	2.99	299	ePn	Pn	22 17 51.7	+0.9
UDBI	Udbina	3.31	310	ePn	Pn	22 17 57.4	+2.2
UDBI				Sn	Sn	22 18 34.9	+0.6
DUGI	Dugi Otok	3.47	298	ePn	Pn	22 17 57.9	+0.5
DUGI				Sn	Sn	22 18 39.9	+1.8
NVLJ	Novalja	3.86	305	ePn	Pn	22 18 03.3	+0.6
NVLJ				Sn	Sn	22 18 48.2	+0.5
CRES	Cresnjev	4.37	322	ePn	Pn	22 18 10.7	+1.0
CRES				eSn	Sn	22 19 00.7	+0.5
CEY	Cerknica	4.81	315	ePn	Pn	22 18 16.3	+0.5
CEY				eSn	Sn	22 19 11.3	0.0
VYHS	Vyhne	6.05	357	ePN	Pn	22 18 29.4	-3.4

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*JMA **03** 22:22:56.8±0.1,36°.70N×141°.22E,h34^{km}±1^{km},M3.9*
JMA Felt II J1.
*NIED **03** 22:22:56.8,36°.70N×141°.22E,h34^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.12; $M_{\theta\theta}$0.43; $M_{\phi\phi}$3.69; $M_{r\theta}$-1.38; $M_{\theta\phi}$2.53; $M_{\phi r}$0.59; Fault plane solution: $M_0$4.90000×10^{14} NP1:ϕ_s49.00000°, δ50.00000°,λ-61.00000°. NP2:ϕ_s188.00000°,δ48.00000°, λ-120.00000°.*
*NEIC **03** 22:22:57.8±1.3,36°.76N±0°.04×141°.19E±0°.08,h20^{km}±5^{km}, mb4.4/13 Error ellipse: s-maj=9.8km s-min=5.7km az=112.0*
*IDC **03** 22:23:00.1±3.2,36°.73N×141°.14E,h36^{km}±27^{km},mb3.7/16, mb1 3.8/20,mb1mx3.6/41,mbtmp3.8/20,ML3.3/4,Error ellipse: s-maj=20.0km s-min=15.8km az=87.0*
ISC 03 22:22:56.8±1.5,**36°.71N**±0°.03×**141°.23E**±0°.06,**h15**^{km}±8^{km}, **n65**,σ**1^{s}.00**/69,**mb4.2**/21,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.52	319	P	Pg	22 23 07.4	+0.3
ONAJ				S	Sb	22 23 15.3	+0.2
JHO	Hitachi	0.54	260	P	Pg	22 23 07.5	0.0
JHO				S	Sg	22 23 15.3	+0.6
JHYU	Hitachinakayam	0.64	235	P	Pg	22 23 09.1	-0.1
JHYU				S	Sg	22 23 18.2	+0.5
JFFD	Fukushimafurud	0.66	306	P	Pg	22 23 09.4	-0.3
JFFD				S	Sg	22 23 18.5	+0.1
JFK	Kawauchi	0.71	337	P	Pb	22 23 10.3	-0.7
JFK				S	Sb	22 23 20.1	-0.5
JYT	Yasato	0.96	240	P	Pb	22 23 13.9	-1.3
JYT				S	Sb	22 23 26.5	-1.2
JYT	Yasato	0.96	240		Pb	22 23 13.8	-1.3
JYT				Sg	Sb	22 23 26.4	-1.2
JFT	Otama	1.08	319	P	Pb	22 23 16.6	-0.5
JMM	Marumori	1.21	343	P	Pn	22 23 17.9	-1.2
JMM				S	Sb	22 23 33.8	-0.9
JMM	Marumori	1.21	343	Pn	Pn	22 23 18.0	-1.2
JMM				Sn	Sb	22 23 33.5	-1.2
JFY	Yanaizu	1.40	300	P	Pn	22 23 21.8	-0.1
JFY				S	Sb	22 23 40.4	0.0
JAG	Ashikaga	1.46	259	P	Pn	22 23 21.4	-1.2
MJAR	Matsushiro Arr	2.44	267	Pn	Pn	22 23 36.1	+0.1
	1.4nm,0.3s,baz=66,slow=9.1,SNR=102						
MJAR				Sn	Sb	22 24 08.8	-1.3
	7.2nm,0.3s,baz=86,slow=29,SNR=7.0						
MAJO	Matsushiro	2.44	267		Pn	22 23 36.6	+0.6
MAT	Matsushiro	2.44	267	P	Pn	22 23 36.7	+0.6
MAT				eS	Sn	22 24 07.2	+1.6
JSD	Sado	2.71	300		Pn	22 23 39.5	-0.2
JSG	Sagara	3.20	232	Pn	Pn	22 23 48.7	+2.1
JGF	Kuroka	3.32	252		Pn	22 23 49.8	+1.5
INU	Inuyama	3.67	250		Pn	22 23 54.6	+1.5
JHJ2	Mitsune	3.77	198	Pn	Pn	22 23 55.1	+0.7
JHJ	Hachijo jima 2	3.77	199	Pn	Pn	22 23 55.0	+0.5
	7.9nm,0.3s,baz=211,slow=18,SNR=1.2						
JHJ				Sn	Sn	22 24 39.7	+1.1
	17nm,0.3s,baz=50,slow=20,SNR=1.6						
JTM	Tenmabayashi	4.07	358		Pn	22 23 59.5	+0.9
ASAJ	Asahikawa	7.47	8	Pn	Pn	22 24 45.6	+0.4
	1.1nm,0.3s,baz=196,slow=11,SNR=10						
JKA	Kamikawa-asahi	7.47	8		Pn	22 24 45.1	-0.1
USRK	Ussuriysk Ar.	10.27	320	Pn	Pn	22 25 27.3	+3.8
	baz=134,slow=15,SNR=4.3						
USA0B	Ussuriysk Arra	10.27	320	Pn	Pn	22 25 22.9	-0.7
KSRS	Korea Array	10.66	278	Pn	Pn	22 25 31.4	+2.6
	0.1nm,0.3s,baz=90,slow=14,SNR=1.7						
YAK	Yakutsk	26.35	348	P	P	22 28 31.4	-0.5
	2.8nm,0.5s,baz=98,slow=3.0,SNR=2.7						
YAK	Yakutsk	26.35	348	IAmb	IAmb	22 28 33.4	
	comp=Z,8.4nm,0.8s						
ENH	Enshi	27.16	266	P	P	22 28 39.5	-0.1
ENH				IAmb	IAmb	22 28 41.1	
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	27.84	305	P	P	22 28 44.4	-1.3
	comp=Z,0.8nm,0.8s,baz=99,slow=6.6,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.11	120	T	T	22 58 13.3	
	baz=313,slow=75,SNR=272						
H11N1	WAKE ISLAND Hy	28.12	120	T	T	22 58 13.9	
	baz=313,slow=75,SNR=363						
H11N3	WAKE ISLAND Hy	28.13	120	T	T	22 58 14.7	
	baz=313,slow=75,SNR=302						
H11S1	WAKE ISLAND Hy	28.81	122	T	T	22 59 05.9	
	baz=315,slow=76,SNR=219						
H11S3	WAKE ISLAND Hy	28.81	122	T	T	22 59 04.9	
	baz=315,slow=76,SNR=216						
H11S2	WAKE ISLAND Hy	28.83	122	T	T	22 59 06.8	
	baz=315,slow=76,SNR=157						
ZALV	Zalesovo Beam	42.02	313	P	P	22 30 47.6	+0.2
	comp=Z,1.4nm,0.7s,baz=92,slow=4.9,SNR=5.8						
ZALV				PcP	PcP	22 32 40.8	-1.3
	comp=Z,0.5nm,0.5s,baz=67,slow=4.8,SNR=3.0						
MK31	Makanchi Array	44.17	302	P	P	22 31 05.1	+0.2
MKAR	Makanchi Array	44.17	302	P	P	22 31 05.0	+0.1
	comp=Z,0.8nm,0.6s,baz=80,slow=10,SNR=11						
MAKZ	Makanchi	44.38	302	P	P	22 31 05.8	-0.8
KURK	Kurchatov	46.02	308	P	P	22 31 19.4	0.0
KURK				IAmb	IAmb	22 31 22.2	
	comp=Z,3.3nm,0.7s						
KURBB	Kurchatov Arra	46.09	308	P	P	22 31 19.9	0.0
	comp=Z,1.9nm,0.7s,baz=84,slow=7.8,SNR=12						
ILAR	Eielson Array	49.85	32	P	P	22 31 48.8	-0.1
	comp=Z,0.4nm,0.8s,baz=281,slow=8.5,SNR=4.2						
KK31	Karatay Array	53.16	300	P	P	22 32 14.6	+0.6
KK31				IAmb	IAmb	22 32 31.8	
	comp=Z,4.7nm,1.5s						
PCA	Pinnacle	53.47	38	P	P	22 32 15.5	-0.6
GSI	Gunungsitoli	53.51	239	P	P	22 32 17.5	+0.6
ARU	Arti	56.51	319	P	P	22 32 37.2	-0.8
	comp=Z,0.4nm,0.3s,baz=114,slow=9.0,SNR=4.7						
ARU	Arti	56.51	319	P	P	22 32 37.4	-0.6
ARU				IAmb	IAmb	22 32 51.0	
	comp=Z,8.7nm,1.5s						
WB0	Warramunga Arr	56.54	188	P	P	22 32 38.3	-0.3
WB0				IAmb	IAmb	22 32 38.9	
	comp=Z,3.7nm,1.0s						
WRA	Warramunga Arr	56.72	188	P	P	22 32 39.9	0.0
	comp=Z,1.7nm,0.6s,baz=5.1,slow=7.4,SNR=12						
ABKAR	Akbulak array	58.03	310	P	P	22 32 48.8	-0.1
ASAR	Alice Springs	60.45	188	P	P	22 33 06.2	+0.3
	comp=Z,0.8nm,0.9s,baz=11,slow=6.0,SNR=2.4						
YKA	Yellowknife Ar	64.16	30	P	P	22 33 31.6	+1.3
	comp=Z,0.1nm,0.6s,baz=312,slow=7.4,SNR=4.1						
FINES	FINESS Array B	69.03	332	P	P	22 34 00.5	-0.9
	comp=Z,8.0nm,1.1s,baz=54,slow=6.1,SNR=2.0						
KBZ	Khabaz	71.00	311	P	P	22 34 14.6	+0.8
	comp=Z,1.9nm,0.8s,baz=90,slow=2.0,SNR=2.8						
AKASG	Malin Array Be	74.46	322	P	P	22 34 34.1	-0.2
	comp=Z,0.8nm,0.4s,baz=46,slow=5.9,SNR=11						
AKBB	Malin Array Si	74.46	322	P	P	22 34 34.1	-0.1
NVAR	Mina Array Bea	75.30	53	P	P	22 34 40.4	+0.8
	comp=Z,0.2nm,0.3s,baz=289,slow=2.8,SNR=6.1						
PDAR	Pinedale Array	78.00	45	P	P	22 34 55.5	+0.7
	comp=Z,0.3nm,0.5s,baz=222,slow=1.2,SNR=2.3						
RAYN	Ar Rayn	80.64	292	P	P	22 35 09.1	-0.2
RAYN				IAmb	IAmb	22 35 10.6	
	comp=Z,4.3nm,1.1s						
GERES	GERESS Array B	82.91	328	P	P	22 35 20.3	-0.6
	comp=Z,0.2nm,0.4s,baz=17,slow=4.6,SNR=2.6						
H03N2	Juan Fernandez	147.14	96	T	T	01 27 05.4	
	baz=291,slow=76,SNR=76						
H03N3	Juan Fernandez	147.15	96	T	T	01 27 02.4	
	baz=291,slow=76,SNR=74						
H03N1	Juan Fernandez	147.15	96	T	T	01 27 02.6	
	baz=291,slow=76,SNR=108						

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*ISK **03** 23:24:14.9,37°.91N×37°.88E,h5^{km},ML3.4/21*
*DDA **03** 23:24:15.8,37°.89N×37°.86E,h4^{km}±2^{km},MW3.7*
ISC 03 23:24:15.0±1.1,**37°.90N**±0°.02×**37°.88E**±0°.02,**h5**^{km}±9^{km}, **n62**,σ**1^{s}.21**/97,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	Akcadag	0.40	5	i P	Pb	23 24 24.1	-0.5
AKCD				i S	Sg	23 24 28.4	+0.5
ATAB	Bozova	0.54	142	i P	Pb	23 24 26.8	-0.2
ATAB				i S	Sg	23 24 32.3	-0.2
GZT	Gaziantep	0.60	205	i P	Pb	23 24 27.8	-0.2
GZT				i S	Sg	23 24 32.7	-1.6
MALT	Malatya	0.60	46	PG	Pg	23 24 27.6	+1.1
MALT				SG	Sb	23 24 36.9	0.0
ELBS	KAHRAMANMARAS	0.72	306	i P	Pb	23 24 29.9	-0.3
ELBS				i S	Sg	23 24 38.0	-0.3
DARE	Darende-Malaty	0.74	335	PG	Pg	23 24 29.8	+0.6
DARE				SG	Sb	23 24 41.1	+0.2
KHMN	Narli-Kahraman	0.76	229	PG	Pb	23 24 31.5	+0.7
KAHM	Kahramanmaras,	0.80	242	i P	Pb	23 24 31.4	-0.1
KAHM				i S	Sg	23 24 40.7	-0.1
KMRS	Kahramanmaras	0.87	243	PG	Pb	23 24 32.6	0.0
KMRS				SG	Sb	23 24 45.3	+0.8
URFA	Urfa	0.88	121	PG	Pb	23 24 32.9	+0.1
GAZ	Gaziantep	0.90	216	PG	Pb	23 24 33.5	+0.4
CUGUR	Gurin_SVAS	0.95	330	i P	Pb	23 24 34.8	+0.7
CUGUR				i S	Sg	23 24 45.1	-0.5
HCB	Kahramanmara	0.95	234	i P	Pb	23 24 34.0	0.0
HCB				i S	Sg	23 24 44.8	-0.7
HEKM	Malatya_Hekimh	0.98	4	i P	Pg	23 24 34.4	+0.6
HEKM				i S	Sg	23 24 45.0	-1.5
ELZG	Elazig	1.06	55	i P	Pg	23 24 35.8	+0.5
ELZG				i S	Sg	23 24 48.5	-0.5
SANL	SANLIURFA_Merk	1.15	129	i P	Pb	23 24 37.7	+0.4
SANL				i S	Sg	23 24 50.0	-1.9
SURC	SANLIURFA_SURC	1.18	150	i P	Pn	23 24 38.6	+0.4
SURC				i S	Sg	23 24 50.7	-2.1
KAMA	Osmaniye	1.20	234	i P	Pb	23 24 38.5	+0.3
KAMA				i S	Sg	23 24 52.2	-1.2
SVRC	Sivrice-ELAZID	1.22	67	PN	Pg	23 24 38.9	+0.4
ARPR	Arapgir-MALATY	1.24	17	PN	Pn	23 24 39.6	+0.4
ANDN	Andirin	1.25	256	i P	Pb	23 24 39.5	+0.3
ANDN				i S	Sg	23 24 53.5	-1.8
SARI	SarD1z-Kayseri	1.26	294	PN	Pb	23 24 39.6	+0.3
KUZU	Kuzuini	1.29	210	i P	Pb	23 24 41.1	+1.2
KUZU				i S	Sg	23 24 54.0	-2.6
SAIM	ADANA	1.42	274	i P	Pg	23 24 42.6	+0.4
SAIM				i S	Sb	23 24 59.6	-0.9
KEMA	Kemaliye	1.45	19	i P	Pn	23 24 42.6	+0.6
KEMA				i S	Sb	23 24 59.5	-1.8
CUKAN	kangal_SIVAS	1.45	347	i P	Pn	23 24 42.6	+0.5
CUKAN				i S	Sb	23 24 59.7	-1.7
PTK	Pertek	1.55	50	PN	Pb	23 24 44.5	+0.2
CUALT	Altinyayla-SIV	1.63	328	i P	Pg	23 24 46.9	+0.7
CUALT				i S	Sn	23 25 04.8	-1.2
ILIC	ilic-Erzincan	1.64	19	PN	Pb	23 24 46.2	+0.4
KOZT	Kozan	1.68	256	PN	Pb	23 24 46.8	+0.4
KOVA	Elazig, Kovanc	1.72	62	i P	Pb	23 24 47.5	+0.3
KOVA				i S	Sn	23 25 07.2	-1.0
DIYA	Diyarbakir	1.77	89	i P	Pb	23 24 47.8	-0.3
DIYA				i S	Sn	23 25 08.2	-1.2
TNCL	Tunceli-Merkez	1.78	47	i P	Pb	23 24 48.5	+0.3
TNCL				i S	Sn	23 25 09.3	-0.4
DYBB	Diyarbakir	1.79	88	PN	Pb	23 24 48.5	+0.2
BNN	Bunyan	1.86	301	PN	Pb	23 24 49.3	-0.2
CEYT	Ceyhan	1.91	243	PN	Pb	23 24 50.3	-0.1
CUSAR	Sarkisla-SIVAS	1.98	320	i P	Pg	23 24 53.1	+0.1
CUSAR				i S	Sb	23 25 16.2	-0.5
CUZAR	Zara_SIVAS	1.99	358	i P	Pb	23 24 52.6	+0.9
CUZAR				i S	Sb	23 25 16.3	-0.6
YAHY	KAYSERI_Yahyal	2.00	276	i P	Pb	23 24 51.4	-0.4
YAHY				i S	Sn	23 25 13.5	-1.4
HANI	Diyarbakir_Han	2.05	75	i P	Pn	23 24 51.3	+1.0
HANI				i S	Sn	23 25 15.4	-0.9
MAZI	Mazidag	2.09	101	PN	Pn	23 24 51.7	+0.9
SVSK	Karacayir	2.13	341	PN	Pb	23 24 53.2	-0.8
ERZN	Erzincan	2.22	40	PN	Pn	23 24 54.4	+1.8
EUZM	Uzumlu	2.30	38	i P	Pb	23 24 58.0	+1.0
EUZM				i S	Sn	23 25 23.5	+1.1
CMRD	Camardi-Nigde	2.30	265	PN	Pb	23 24 55.9	-1.1
SUSE	Susehri	2.32	6	i P	Pb	23 24 57.1	-0.3
SUSE				i S	Sn	23 25 22.4	-0.6
KARA	Karaisali	2.33	255	PN	Pb	23 24 56.1	-1.4
MARD	Mardin	2.38	103	i P	Pn	23 24 55.1	+0.3
MARD				i S	Sn	23 25 26.7	+2.3
KRTS	Karatas	2.40	237	PN	Pn	23 24 56.9	+2.0
NIDE	Nigde/Merkez-G	2.45	273	i P	Pb	23 24 58.2	-1.4
NIDE				i S	Sn	23 25 27.5	+1.3
KELT	Kelkit	2.49	25	i P	Pn	23 24 58.3	+1.9
KELT				i S	Sn	23 25 24.1	-3.1
RSDY	Resadiye-TOKAT	2.53	350	PN	Pn	23 24 58.9	+2.1
ALUC	Giresun/Alucra	2.54	16	i P	Pb	23 25 00.2	-0.9
ALUC				i S	Sn	23 25 26.0	-2.4
GULE	Gulek	2.54	257	i P	Pn	23 24 59.0	+2.0
GULE				i S	Sn	23 25 28.1	-0.3
YEDI	Yedisu-Bingol	2.59	53	PN	Pn	23 24 59.9	+2.2
TOKT	Tokat	2.63	337	PN	Pn	23 25 00.1	+1.9
SVAN	Silvan-Diyarba	2.63	84	PN	Pn	23 24 59.7	+1.5
KARO	Karliova-Bingo	2.86	60	PN	Pn	23 25 03.6	+2.2
MUSM	Mu-Merkez	2.98	73	i P	Pb	23 25 06.3	-2.3
BAYT	Aydıntepe-Bayb	3.05	35	PN	Pn	23 25 06.2	+2.1
VRTB	Varto-Mus	3.08	65	PN	Pn	23 25 06.3	+1.9
GURO	Guroymak-BITLI	3.34	78	PN	Pn	23 25 10.3	+2.3

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*IDC **03** 23:29:19.5±1.2,39°.71N×143°.77E,h0^{km},mb3.7/9, mb1 3.8/12,mb1mx3.6/36,mbtmp3.7/12,ML2.9/3,MS3.6/2, Ms1 3.6/2,ms1mx2.6/37,Error ellipse: s-maj=34.3km s-min=17.8km az=82.0*
*NIED **03** 23:29:21.7,39°.90N×143°.69E,h25^{km},MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.94; $M_{\theta\theta}$0.49; $M_{\phi\phi}$-4.43; $M_{r\theta}$0.24; $M_{\theta\phi}$-1.66; $M_{\phi r}$1.18; Fault plane solution: $M_0$4.60000×10^{14} NP1:ϕ_s15.00000°, δ53.00000°,λ87.00000°. NP2:ϕ_s199.00000°,δ37.00000°, λ93.00000°.*
*JMA **03** 23:29:21.6±0.3,39°.90N×143°.69E,h25^{km},M3.8*
ISC 03 23:29:21.0±1.0,**39°.79N**±0°.06×**143°.8E**±0°.1,**h10**^{km},**n27**, σ**1^{s}.45**/31,**mb3.6**/9,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.50	276	P	Pn	23 29 45.9	-2.0
MIYJ	Miyakonagasawa	1.54	263	P	Pn	23 29 47.3	-1.2
JKEN	Kujiedanarisaw	1.66	285	P	Pn	23 29 48.1	-2.0
JANG	Nango	1.84	289	P	Pn	23 29 50.9	-1.8
JOM	Ohasama	1.96	262	P	Pn	23 29 53.8	-0.4
JMK	Ichinoseki	2.17	248	P	Pn	23 29 56.3	-0.8
JOT	Ohata	2.63	308	P	Pn	23 30 02.7	-0.7
JYK	Kaneyama	2.80	253	P	Pn	23 30 05.9	0.0
JCH	Churui	2.84	354	P	Pn	23 30 05.7	-0.7
JCH				eS	Sn	23 30 37.9	-2.7
JAK	Akkeshi	3.27	12	P	Pn	23 30 11.5	-0.8
JAK				eS	Sn	23 30 48.7	-2.6
JAR	Ashorobuto	3.50	360	P	Pn	23 30 14.3	-1.2
JFT	Otama	3.53	231	P	Pn	23 30 15.5	-0.4
JFT				eS	Sn	23 30 56.1	-1.6
ASAJ	Asahikawa	4.42	349	Pn	Pn	23 30 27.8	-0.2
	1.1nm,0.3s,baz=218,slow=14,SNR=8.0						
ASAJ				Sn	Sn	23 31 23.2	+3.8
	1.6nm,0.3s,baz=14,slow=27,SNR=2.1						
MJAR	Matsushiro Arr	5.47	235	Pn	Pn	23 30 42.9	+0.4
	0.3nm,0.3s,baz=38,slow=12,SNR=22						
MAT	Matsushiro	5.47	235	P	Pn	23 30 43.0	+0.5
MAT				eS	Sn	23 31 45.1	-0.4
USRK	Ussuriysk Ar.	9.83	300	Pn	Pn	23 31 44.2	+1.9
	baz=106,slow=13,SNR=9.0						
KSRS	Korea Array	12.63	264	LR	LR	23 36 42.4	
	comp=Z,32nm,20.3s,baz=340,slow=35						
SEY	Seymchan	23.75	10	P	P	23 34 35.4	+2.3
	2.0nm,0.8s,baz=227,slow=10.0,SNR=4.8						
SONM	Songino Array	27.94	299	P	P	23 35 12.0	+0.5
	0.6nm,0.6s,baz=88,slow=7.9,SNR=4.3						
ZALV	Zalesovo Beam	41.51	310	P	P	23 37 08.2	+0.2
	0.5nm,0.4s,baz=98,slow=9.3,SNR=4.3						
ZALV				PcP	PcP	23 39 05.9	+0.5
	0.4nm,0.5s,baz=29,slow=3.3,SNR=2.7						
MKAR	Makanchi Array	44.30	300	P	P	23 37 30.5	-0.4
	0.3nm,0.5s,baz=79,slow=7.8,SNR=5.1						
KURBB	Kurchatov Arra	45.83	306	P	P	23 37 42.8	-0.2
	1.1nm,0.6s,baz=81,slow=8.7,SNR=7.1						
BVAR	Borovoye Array	50.14	311	P	P	23 38 16.2	-0.1
	0.3nm,0.4s,baz=74,slow=8.0,SNR=3.1						
WRA	Warramunga Arr	60.07	190	P	P	23 39 27.4	-0.8
	0.8nm,0.7s,baz=4.6,slow=6.8,SNR=8.3						
ASAR	Alice Springs	63.80	190	P	P	23 39 53.2	-0.1
	0.2nm,0.6s,baz=9.2,slow=6.5,SNR=4.4						
FINES	FINESS Array B	67.24	333	P	P	23 40 15.3	+0.2
	4.9nm,1.0s,baz=131,slow=7.8,SNR=5.3						
RAO	Raoul Island	77.37	146	LR	LR	00 09 14.9	
	comp=Z,322nm,19.9s,baz=142,slow=31						

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*IDC **03** 23:39:47.8±1.7,56°.25N×113°.79E,h0^{km},mb3.2/3, mb1 3.5/6,mb1mx3.2/42,mbtmp3.4/6,ML3.3/3,MS3.0/2, Ms1 3.0/2,ms1mx2.5/26,Error ellipse: s-maj=36.2km s-min=26.2km az=152.0*
*MOS **03** 23:39:47.2±1.1,56°.03N×113°.72E,h7^{km},mb3.8/1,Error ellipse: s-maj=12.6km s-min=8.1km az=68.2*
*BYKL **03** 23:39:49.0±0.1,56°.08N×113°.68E,h5^{km}±3^{km}*
ISC 03 23:39:49.0±0.8,**56°.07N**±0°.02×**113°.66E**±0°.02,**h8**^{km}±6^{km}, **n50**,σ**2^{s}.10**/90,**mb3.2**/3,**9C-2D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.07	307	⇑iPg	Pg	23 39 50.7	-0.4
SVKR				eSg	Sg	23 39 52.8	+0.2
SVKR	Severomuysk	0.07	307	⇑iPG	Pg	23 39 50.7	-0.4
SVKR				e		23 39 52.7	
SVKR				pmax	pmax		
	comp=Z,3µm,0.1s						
SVKR				smax	smax		
	comp=N,45µm,0.8s						
UKT	Uakit	0.59	182	ePg	Pg	23 39 59.3	-1.1
UKT				eSg	Sg	23 40 06.9	-1.1
UKT				Pmax			
	comp=N,26nm,0.1s						
UKT				Smax			
	comp=N,840nm,0.9s						
YOA	Uoyan	1.09	274	ePg	Pg	23 40 08.8	-1.1
YOA				ePb	Pn	23 40 11.2	+0.6
YOA				eSg	Sg	23 40 24.0	0.0
YOA				e		23 40 29.3	
YOA				Pmax			
	comp=N,496nm,0.4s						
YOA				max			
	comp=N,4µm,0.4s						
YOA	Uoyan	1.09	274	⇑iPG	Pg	23 40 08.8	-1.1
YOA				i		23 40 24.7	
YOA				pmax	pmax		
	comp=Z,527nm,0.3s						
YOA				smax	smax		
	comp=E,4µm,0.5s						
NLYR	Nelyaty	1.21	69	⇑iPg	Pg	23 40 10.3	-2.0
NLYR				ePb	Pn	23 40 12.5	+0.2
NLYR				eSg	Sg	23 40 26.9	-1.1
NLYR				eSb	Sn	23 40 30.6	+1.7
NLYR				max			
	comp=E,237nm,0.7s						
NLYR				max			
	comp=E,2µm,1.4s						
NLYR	Nelyaty	1.21	69	⇑iPG	Pg	23 40 10.3	-2.0
NLYR				e		23 40 25.0	
NLYR				pmax	pmax		
	comp=Z,238nm,0.6s						
NLYR				smax	smax		
	comp=E,1µm,0.5s						
KMO	Kumora	1.40	263	⇑iPg	Pn	23 40 14.0	-0.9
KMO				e		23 40 15.8	
KMO				eSg	Sb	23 40 33.8	+0.5
KMO				eSb	Sn	23 40 36.6	+3.2
KMO				max			
	comp=E,224nm,0.6s						
KMO				max			
	comp=E,4µm,0.9s						
KMO	Kumora	1.40	263	⇑iPG	Pn	23 40 13.9	-0.9
KMO				e		23 40 33.2	
KMO				pmax	pmax		
	comp=Z,56nm,0.1s						
KMO				smax	smax		
	comp=N,4µm,0.9s						
BOD	Bodaibo	1.76	6	ePg	Pn	23 40 20.4	+0.6
BOD				eSg	Sn	23 40 43.2	+0.8
BOD				Pmax			
	comp=N,37nm,0.2s						
BOD				Smax			
	comp=N,443nm,0.6s						
BOD	Bodaibo	1.76	6	ePN	Pn	23 40 20.0	+0.2
BOD				e		23 40 42.9	
BOD				pmax	pmax		
	comp=Z,140nm,0.4s						
BOD				smax	smax		
	comp=E,452nm,0.6s						
YLYR	Ulyunkhan	1.86	231	⇓iPn	Pn	23 40 22.1	+0.9
YLYR				ePg	Pb	23 40 22.8	-0.5
YLYR				e		23 40 24.3	
YLYR				eSg	Sb	23 40 47.1	+0.4
YLYR				max			
	comp=E,200nm,0.7s						
YLYR				Smax			
	comp=E,2µm,0.9s						
YLYR	Ulyunkhan	1.86	231	⇓iPN	Pn	23 40 22.1	+0.9
YLYR				e		23 40 23.4	
YLYR				eS	Sn	23 40 46.2	+1.3
YLYR				e		23 40 47.2	
YLYR				pmax	pmax		
	comp=Z,161nm,0.2s						
YLYR				smax	smax		
	comp=E,2µm,0.4s						
NIZ	Nizh Angarsk	2.34	264	ePn	Pn	23 40 27.8	0.0

NIZ				ePg	Pb	23 40 31.0	-0.4
NIZ				eSn	Sn	23 40 56.8	+0.1
NIZ				eSg	Sb	23 41 02.1	+1.7
NIZ				Pmax			
	comp=E,58nm,0.8s						
NIZ				Smax			
	comp=E,1µm,0.5s						
NIZ	Nizh Angarsk	2.34	264	ePN	Pb	23 40 30.8	-0.6
NIZ				e		23 41 02.2	
NIZ				pmax	pmax		
	comp=Z,63nm,1.0s						
NIZ				smax	smax		
	comp=N,1µm,0.5s						
CRS	Chara	2.69	70	ePn	Pn	23 40 33.0	+0.4
CRS				ePg	Pb	23 40 37.4	+0.1
CRS				eSg	Sb	23 41 12.5	+2.1
CRS				Pmax			
	comp=N,287nm,1.0s						
CRS				Smax			
	comp=N,526nm,1.6s						
CRS	Chara	2.69	70	ePN	Pn	23 40 32.7	+0.1
CRS				e		23 40 37.0	
CRS				e		23 41 11.9	
CRS				pmax	pmax		
	comp=Z,289nm,0.8s						
CRS				smax	smax		
	comp=E,528nm,1.3s						
SYVR	Suvo	3.22	223	ePn	Pn	23 40 40.2	+0.4
SYVR				ePg	Pb	23 40 47.4	+1.0
SYVR				e		23 40 49.8	
SYVR				eSn	Sn	23 41 19.0	+0.7
SYVR				eSg	Sb	23 41 28.5	+2.8
SYVR				max			
	comp=E,93nm,0.8s						
SYVR				Smax			
	comp=E,456nm,1.8s						
SYVR	Suvo	3.22	223	ePN	Pn	23 40 40.1	+0.3
SYVR				e		23 40 47.4	
SYVR				e		23 41 28.7	
SYVR				pmax	pmax		
	comp=Z,101nm,0.6s						
SYVR				smax	smax		
	comp=E,468nm,0.6s						
VTMR	Vitim	3.43	350	ePn	Pn	23 40 43.0	+0.3
VTMR				ePg	Pb	23 40 51.3	+1.4
VTMR				eSn	Sn	23 41 24.3	+0.8
VTMR				eSg	Sb	23 41 35.2	+3.5
KHNR	Khani	3.60	74	ePn	Pn	23 40 45.6	+0.5
KHNR				ePg	Pb	23 40 54.1	+1.2
KHNR				eSn	Sn	23 41 27.6	-0.3
KHNR				eSg	Sb	23 41 39.4	+2.6
TUP	Tupik	3.96	112	⇑iPn	Pn	23 40 50.1	0.0
TUP				ePg	Pb	23 41 00.8	+1.7
TUP				eSn	Sn	23 41 36.7	0.0
TUP				eSg	Sb	23 41 50.8	+3.7
TUP				eSgSg	Sg	23 41 56.2	+0.1
TUP				e		23 42 06.2	
TUP				Pmax			
	comp=E,48nm,1.0s						
TUP				max			
	comp=E,431nm,1.3s						
TUP	Tupik	3.96	112	⇑iPN	Pn	23 40 50.1	0.0
TUP				e		23 40 59.5	
TUP				eS	Sn	23 41 35.5	-1.2
TUP				e		23 41 50.4	
TUP				pmax	pmax		
	comp=Z,49nm,0.7s						
TUP				smax	smax		
	comp=N,434nm,1.0s						
MXMB	Maximikha	4.01	227	ePn	Pn	23 40 52.1	+1.4
MXMB				ePg	Pb	23 41 01.3	+1.4
MXMB				eSg	Sb	23 41 53.0	+4.5
CIT	Chita	4.06	181	ePg	Pb	23 41 02.4	+1.6
CIT				eSg	Sb	23 41 54.6	+4.6
CIT				Pmax			
	comp=N,51nm,0.4s						
CIT				Smax			
	comp=N,380nm,1.0s						
CIT	Chita	4.06	181	ePN	Pn	23 40 50.8	-0.7
CIT				e		23 41 02.0	
CIT				e		23 41 54.6	
CIT				pmax	pmax		
	comp=Z,62nm,0.9s						
CIT				smax	smax		
	comp=E,276nm,1.2s						
OGRR	Ongureny	4.27	238	ePn	Pn	23 40 55.8	+1.5
OGRR				ePg	Pb	23 41 05.5	+1.2
OGRR				e		23 41 08.2	
OGRR				eSn	Sn	23 41 43.5	-0.8
OGRR				eSg	Sg	23 42 01.6	-4.4
OGRR				max			
	comp=E,31nm,1.1s						
OGRR				Smax			
	comp=E,146nm,0.8s						
OGRR	Ongureny	4.27	238	ePN	Pn	23 40 54.9	+0.6
OGRR				e		23 41 06.0	
OGRR				e		23 42 00.7	
OGRR				pmax	pmax		
	comp=Z,31nm,1.3s						
OGRR				smax	smax		
	comp=N,219nm,2.0s						
YKLR	Yuktali	4.48	80	ePn	Pn	23 40 57.7	+0.6
YKLR				ePg	Pb	23 41 08.2	+0.4
YKLR				eSg	Sg	23 42 07.4	-5.3
ZRHB	Zarechye	5.19	230	eSg	Sb	23 42 28.3	+5.8
ZRHB				Smax			
	comp=N,692nm,1.5s						
TRG	Tyrgan	5.41	235	ePg	Pb	23 41 26.4	+2.7
TRG				eSn	Sn	23 42 12.0	-0.4
TRG				eSg	Sg	23 42 36.6	-6.0
TRG				Pmax			
	comp=N,4.0nm,0.5s						
TRG				Smax			
	comp=N,108nm,1.4s						
TRG	Tyrgan	5.41	235	ePN	Pn	23 41 09.0	-1.0
TRG				e		23 41 24.8	
TRG				eS	Sn	23 42 11.4	-1.0
TRG				e		23 42 34.4	
TRG				pmax	pmax		
	comp=Z,41nm,1.8s						
TRG				smax	smax		
	comp=N,109nm,0.7s						
KPC	Khapcheranga	6.43	187	e	Pn	23 41 22.9	-1.0
KPC				ePg	Pb	23 41 45.7	+4.6
KPC				e		23 41 50.4	
KPC				eSg	Sg	23 43 09.1	-6.1
KPC				e		23 43 24.2	
KPC				max			
	comp=N,9.0nm,0.8s						
KPC				max			
	comp=N,200nm,1.3s						
KPC	Khapcheranga	6.43	187	ePN	Pn	23 41 23.0	-1.0
KPC				e		23 41 45.7	
KPC				e		23 43 07.3	
KPC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KPC				smax	smax		
	comp=E,200nm,1.2s						
TLY	Talaya	7.38	238	ePG	Pb	23 42 03.7	+6.5
TLY				e		23 43 35.7	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TLY				smax	smax		
	comp=E,57nm,0.6s						
ARS	Arshan	7.82	243	ePG	Pb	23 42 11.3	+6.5
ARS				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZEA	Zeya	8.17	101	ePG	Pg	23 42 19.4	-6.0
MOY	Mondy	8.69	245	ePN	Pn	23 41 56.2	+1.2
MOY				e		23 42 24.4	
MOY				eS	Sn	23 43 30.4	-2.7
MOY				e		23 44 17.5	
MOY				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MOY				smax	smax		
	comp=N,115nm,1.6s						
ORL	Orlik	8.84	252	ePN	Pn	23 41 58.6	+1.5
ORL				e		23 42 28.5	
ORL				eS	Sn	23 43 35.0	-1.8
ORL				e		23 44 19.6	
ORL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ORL				smax	smax		
	comp=N,71nm,1.4s						
SONM	Songino Array	9.39	212	Pn	Pn	23 42 04.8	+0.2
	comp=N,0.1nm,0.3s,baz=19,slow=13,SNR=4.6						
SONM				Lg	Lg	23 44 39.5	
	comp=N,1.2nm,0.3s,baz=24,slow=27,SNR=5.0						
YAK	Yakutsk	10.17	47	Lg	Lg	23 44 57.7	
	comp=N,0.1nm,0.3s,baz=142,slow=22,SNR=9.5						
KLR	Kul'dur	12.92	114	Pn	Pn	23 42 53.5	+0.7
	comp=N,0.1nm,0.3s,baz=324,slow=8.8,SNR=4.2						
KLR				Lg	Lg	23 46 31.3	
	comp=N,0.0nm,0.3s,baz=68,slow=23,SNR=4.6						
ZALV	Zalesovo Beam	16.63	275	LR	LR	23 51 00.2	
	comp=N,19nm,19.1s,baz=62,slow=40						
USRK	Ussuriysk Ar.	16.64	128	Lg	Lg	23 48 27.5	
	baz=83,slow=34,SNR=2.8						
NRIK	Noril'sk	17.67	329	P	Pn	23 43 51.8	-3.4
	comp=N,0.4nm,0.3s,baz=113,slow=13,SNR=4.7						
KURK	Kurchatov	21.41	270	P	P	23 44 40.4	+3.4
MKAR	Makanchi Array	21.48	258	P	P	23 44 38.6	+0.8
	comp=N,0.3nm,0.6s,baz=51,slow=7.8,SNR=8.6						
KURBB	Kurchatov Arra	21.50	270	P	P	23 44 40.4	+2.4
	comp=N,1.8nm,0.9s,baz=68,slow=11,SNR=7.6						
AAK	Ala-Archa	28.41	258	LR	LR	23 57 50.8	
	comp=N,69nm,19.9s,baz=74,slow=38						
YKA	Yellowknife Ar	55.94	25	P	P	23 49 25.5	-1.5
	comp=N,0.2nm,0.8s,baz=331,slow=5.7,SNR=4.2						

IDC ***03*** *23:51:00.3±0.8, 47°.21N×136°.86E, h0^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.6/35, mbtmp3.6/10, ML2.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/33, Error ellipse: s-maj=25.3km s-min=14.8km az=137.0*

MOS ***03*** *23:51:02.7±3.5, 47°.31N×136°.98E, h10^{km}, mb4.2/1, Error ellipse: s-maj=17.7km s-min=11.6km az=78.7*

SKHL ***03*** *23:51:02.5±0.9, 47°.32N×136°.87E, h8^{km}, mb4.4/8, Ms3.8/3*

ISC 03 23:51:01.9±0.6**, 47°.36N**±0°.04×**136°.78E**±0°.03**, h10^{km}, n31, σ2^{s}.25**/42**, mb3.7**/8**, 1C-2D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHBR	Khabarovsk	1.61	314	ePg	Pg	23 51 32.8	0.0
KHBR				AMB	AMB	23 51 33.6	
	124nm,0.4s						
KHBR				eSg	Sg	23 51 54.7	+1.0
KHBR				A	A	23 51 56.6	
	726nm,0.4s						
TEY	Ternei	2.33	183	ePn	Pn	23 51 40.8	+0.6
TEY				ePg	Pb	23 51 43.6	-0.3
TEY				AMB	AMB	23 51 44.1	
	122nm,0.6s						
TEY				eSg	Sb	23 52 13.0	+0.3
TEY				A	A	23 52 13.5	
	2µm,0.5s						
TEY	Ternei	2.33	183	⇑eP	Pb	23 51 43.8	-0.1
TEY				e		23 52 12.9	
TEY				pmax	pmax		
	comp=Z,370nm,0.4s						
TEY				pmax	pmax		
	comp=E,120nm,0.4s						
TEY				pmax	pmax		
	comp=N,360nm,0.5s						
TEY				pmax	pmax		
	comp=E,2µm,0.5s						
TEY				pmax	pmax		
	comp=N,550nm,0.6s						
GRNR	Gornyy	3.42	356	ePn	Pn	23 51 55.8	+0.5
GRNR				Pn	Pb	23 51 58.0	-4.6
GRNR				ePg	Pg	23 52 05.7	-1.7
GRNR				AMB	AMB	23 52 08.0	
	comp=N,43nm,0.5s						
GRNR				eSg	Sg	23 52 50.1	-1.6
GRNR				A	A	23 52 52.9	
	comp=N,139nm,0.6s						
GRNR				AMS	AMS	23 53 34.3	
	comp=N,124nm,4.0s						
GRNR				AMS	AMS	23 53 34.3	
	comp=N,192nm,4.0s						
GRNR				AMS	AMS	23 53 34.3	
	comp=N,131nm,4.0s						
GRNR	Gornyy	3.42	356	⇓iP	Pn	23 51 55.9	+0.6
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.5s						
KLR	Kul'dur	3.84	301	Pn	Pn	23 52 02.7	+1.6
	comp=Z,1.5nm,0.3s,baz=116,slow=14,SNR=8.2						
KLR				Lg	Lg	23 53 00.5	
	comp=Z,7.5nm,0.3s,baz=93,slow=22,SNR=4.3						
UGL	Uglegorsk	3.93	62	ePn	Pn	23 52 02.0	-0.2
UGL				ePg	Pb	23 52 13.5	+2.3
UGL				AMB	AMB	23 52 14.3	
	comp=Z,86nm,0.5s						
UGL				Pg	Pg	23 52 18.6	+1.4
UGL				eSg	Sg	23 53 04.4	-3.6
UGL				A	A	23 53 07.1	
	comp=Z,253nm,0.5s						
UGL				A	A	23 53 07.1	
	comp=Z,349nm,0.5s						
UGL	Uglegorsk	3.93	62	P	Pn	23 52 00.0	-2.2
UGL				eS	Sn	23 52 52.2	+3.8
UGL				pmax	pmax		
	comp=Z,58nm,1.0s						
UGL				smax	smax		
	comp=E,180nm,0.7s						
UGL				MLR	MLR		
	comp=Z,2µm,19.0s						
UGL				MLR	MLR		
	comp=N,800nm,16.0s						
UGL				MLR	MLR		
	comp=E,2µm,17.0s						
YSS	Yuzh-Sakhalins	4.10	93	eSg	Sb	23 53 07.8	+4.2
YSS	Yuzh-Sakhalins	4.10	93	eP	Pb	23 52 14.5	+0.4
USRK	Ussuriysk Ar.	4.61	228	Pn	Pn	23 52 11.1	-0.5
	baz=44,slow=15,SNR=14						
USRK				Pg	Pb	23 52 24.6	+1.8
	baz=40,slow=17,SNR=14						
USRK				Lg	Lg	23 53 24.0	
	baz=59,slow=29,SNR=12						
GRTR	Gornotajezhnoj	4.89	223	ePn	Pn	23 52 16.4	+1.0
GRTR				ePg	Pb	23 52 30.0	+2.4
GRTR				AMB	AMB	23 52 35.0	
	comp=E,23nm,0.6s						
GRTR				eSg	Sg	23 53 34.5	-4.3
GRTR				A	A	23 53 40.1	
	comp=E,90nm,0.4s						
GRTR				A	A	23 53 40.1	
	comp=E,72nm,0.4s						
GRTR				AMS	AMS	23 54 34.0	
	comp=E,150nm,4.0s						
GRTR				AMS	AMS	23 54 34.0	
	comp=E,140nm,4.0s						
GRTR				AMS	AMS	23 54 34.0	
	comp=E,100nm,4.0s						
TYV	Tymovskoe	5.21	46	eSg	Sg	23 53 42.7	-6.5
EKMR	Ekimchan	6.22	338	ePn	Pn	23 52 35.0	+1.2
EKMR				eSg	Sg	23 54 18.9	-2.6
EKMR				A	A	23 54 30.6	
	comp=E,74nm,0.6s						
NKL	Nikolayevsk	6.31	22	eSg	Sg	23 54 19.5	-4.9
NKL				A	A	23 54 23.4	
	comp=E,153nm,0.6s						
OKH	Okha	7.33	30	⇓eP	Pn	23 52 43.0	-6.0
ZEA	Zeya	8.80	320	eSg	Sg	23 55 41.8	-2.4
ZEA				A	A	23 55 44.5	
	comp=E,10.0nm,0.7s						
ZEA				A	A	23 55 44.5	
	comp=E,10.0nm,0.7s						
BMKR	Bomnak	8.89	329	ePn	Pn	23 53 12.0	+1.6
BMKR				eSg	Sg	23 55 44.1	-3.0
BMKR				A	A	23 55 51.0	
	comp=E,11nm,0.4s						
KSRS	Korea Array	11.86	217	LR	LR	23 58 01.8	
	comp=E,27nm,19.6s,baz=10.0,slow=36						
SONM	Songino Array	20.44	283	eP	Pn	23 55 46.8	+5.3
ZALV	Zalesovo Beam	32.95	301	P	P	23 57 36.7	+0.3
	comp=E,0.5nm,0.6s,baz=86,slow=8.8,SNR=2.5						
MKAR	Makanchi Array	36.47	290	P	P	23 58 07.6	+0.7
	comp=E,0.3nm,0.7s,baz=78,slow=7.4,SNR=3.8						
MKAR	Makanchi Array	36.47	290	eP	P	23 58 07.1	+0.2
ILAR	Eielson Array	42.99	38	P	P	23 59 01.3	+0.4
	comp=E,1.1nm,0.6s,baz=282,slow=7.3,SNR=22						
YKA	Yellowknife Ar	56.72	32	P	P	00 00 46.0	+0.8
	comp=E,0.8nm,0.9s,baz=309,slow=6.5,SNR=10						
YKA	Yellowknife Ar	56.72	32	P	P	00 00 46.0	+0.8
WRA	Warramunga Arr	67.02	182	P	P	00 01 52.5	-2.5
	comp=E,1.2nm,1.1s,baz=357,slow=7.3,SNR=3.5						
ASAR	Alice Springs	70.74	183	P	P	00 02 18.0	-0.1
	comp=E,0.6nm,0.9s,baz=2.2,slow=5.5,SNR=6.6						
ASAR	Alice Springs	70.74	183	P	P	00 02 18.0	-0.1
NVAR	Mina Array Bea	71.55	53	P	P	00 02 23.7	+0.4
	comp=E,0.2nm,0.6s,baz=305,slow=3.2,SNR=2.7						
PDAR	Pinedale Array	72.83	45	P	P	00 02 31.6	+0.7
	comp=E,0.5nm,0.6s,baz=11,slow=1.5,SNR=4.6						

BYKL 03 23:55:53.7±0.2**, 56°.13N**×**113°.72E, h4^{km}±4^{km}, 2C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.09	262	⇑iPg	Pg	23 55 55.5	-0.1
SVKR				eSg	Sg	23 55 57.4	+0.5
UKT	Uakit	0.65	185	ePg	Pg	23 56 04.6	-1.5
UKT				eSg	Sg	23 56 13.1	-1.3
UKT				Pmax			
	128nm,0.5s						
UKT				Smax			
	214nm,0.6s						
YOA	Uoyan	1.12	271	ePg	Pg	23 56 13.2	-1.9
YOA				eSg	Sg	23 56 27.2	-2.4
YOA				e		23 56 35.3	
YOA				Pmax			
	164nm,0.5s						
YOA				max			
	1µm,0.8s						
NLYR	Nelyaty	1.16	71	ePg	Pg	23 56 14.4	-1.6
NLYR				ePb	Pn	23 56 16.8	0.0
NLYR				eSg	Sg	23 56 30.8	-0.2
NLYR				eSb	Sn	23 56 34.6	+1.5
NLYR				max			
	566nm,0.4s						
NLYR				max			
	161nm,0.3s						
KMO	Kumora	1.44	261	ePg	Pn	23 56 19.4	-1.1
KMO				ePb	Pb	23 56 21.0	0.0
KMO				eSg	Sb	23 56 38.7	-0.9
KMO				e		23 56 42.1	
KMO				max			
	200nm,0.7s						
KMO				max			
	877nm,0.9s						
BOD	Bodaibo	1.70	5	ePg	Pn	23 56 24.2	+0.1
BOD				e		23 56 25.6	
BOD				eSg	Sn	23 56 46.4	+0.1
BOD				max			
	140nm,1.2s						
BOD				Smax			
	458nm,0.8s						
YLYR	Ulyunkhan	1.92	230	⇓iPn	Pn	23 56 27.8	+0.6
YLYR				ePg	Pb	23 56 28.4	-0.9
YLYR				e		23 56 30.1	
YLYR				eSg	Sb	23 56 53.9	+0.3
YLYR				max			
	109nm,0.8s						
YLYR				Smax			
	615nm,1.2s						
NIZ	Nizh Angarsk	2.38	263	ePn	Pn	23 56 34.5	+1.1
NIZ				ePg	Pb	23 56 36.0	-1.0
NIZ				eSg	Sg	23 57 08.4	-1.6
NIZ				Pmax			
	37nm,1.0s						
NIZ				Smax			
	439nm,0.8s						
CRS	Chara	2.64	71	ePn	Pn	23 56 37.2	+0.2
CRS				⇑iPg	Pb	23 56 41.6	+0.1
CRS				eSg	Sg	23 57 16.6	-1.7
CRS				Pmax			
	278nm,0.9s						
CRS				Smax			
	205nm,1.1s						
SYVR	Suvo	3.28	222	ePn	Pn	23 56 46.0	+0.2
SYVR				ePg	Pb	23 56 52.1	-0.3
SYVR				e		23 57 00.2	
SYVR				eSn	Sn	23 57 25.0	-0.3
SYVR				eSg	Sb	23 57 35.2	+2.6
SYVR				Pmax			
	31nm,1.5s						
SYVR				Smax			
	177nm,1.0s						
VTMR	Vitim	3.38	350	ePn	Pn	23 56 47.1	0.0
VTMR				ePg	Pb	23 56 55.2	+1.1
VTMR				eSn	Sn	23 57 27.1	-0.5
VTMR				eSg	Sb	23 57 37.7	+2.3
KHNR	Khani	3.56	75	ePn	Pn	23 56 50.1	+0.4
KHNR				ePg	Pb	23 56 57.4	+0.3
KHNR				eSg	Sg	23 57 45.0	-2.8
TUP	Tupik	3.95	113	ePn	Pn	23 56 54.6	-0.5
TUP				ePg	Pb	23 57 05.3	+1.4
TUP				eSg	Sb	23 57 56.1	+4.0
TUP				eSgSg	Sg	23 58 00.7	+0.1
TUP				Pmax			
	19nm,0.6s						
TUP				max			
	218nm,1.0s						
MXMB	Maximikha	4.07	227	ePn	Pn	23 56 57.3	+0.6
MXMB				ePg	Pb	23 57 07.0	+1.1
MXMB				eSg	Sg	23 58 00.1	-4.3
OGRR	Ongureny	4.33	237	ePn	Pn	23 57 01.8	+1.6
OGRR				ePg	Pb	23 57 11.4	+1.2
OGRR				eSg	Sg	23 58 09.3	-3.2
OGRR				Pmax			
	29nm,1.3s						
OGRR				Smax			
	90nm,1.8s						
YKLR	Yuktali	4.44	81	ePn	Pn	23 57 01.8	+0.1
YKLR				ePg	Pb	23 57 12.0	-0.1
YKLR				eSg	Sb	23 58 09.4	+3.5
TRG	Tyrgan	5.47	235	ePg	Pb	23 57 31.8	+2.1
TRG				eSg	Sg	23 58 43.2	-5.9
TRG				Pmax			
	3.0nm,0.4s						
TRG				Smax			
	50nm,1.6s						
KPC	Khapcheranga	6.49	188	ePn	Pn	23 57 29.3	-0.7
KPC				ePg	Pb	23 57 50.5	+3.4
KPC				eSn	Sn	23 58 42.4	-2.0
KPC				eSg	Sg	23 59 14.9	-7.0
KPC				Pmax			
	4.0nm,0.7s						
KPC				Smax			
	50nm,1.0s						

BYKL 03 23:56:06.9±0.3**, 56°.10N**×**113°.75E, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.11	279	ePg	Pg	23 56 08.1	-0.9
SVKR				eSg	Sg	23 56 10.0	-0.4
UKT	Uakit	0.62	187	eSg	Sg	23 56 25.2	-1.4
UKT				Smax			
	256nm,0.5s						
YOA	Uoyan	1.14	272	Pg	Pg	23 56 28.6	0.0
YOA				eSg	Sg	23 56 42.7	-0.6
YOA				e		23 56 48.5	
YOA				Pmax			
	329nm,0.3s						
YOA				max			
	2µm,0.5s						
NLYR	Nelyaty	1.16	69	ePg	Pg	23 56 27.1	-2.0
NLYR				ePb	Pb	23 56 29.4	-0.4
NLYR				eSg	Sg	23 56 43.2	-0.8
NLYR				eSb	Sn	23 56 47.0	+0.1
NLYR				max			
	556nm,0.3s						
NLYR				max			
	747nm,0.9s						
KMO	Kumora	1.45	263	ePg	Pn	23 56 32.5	-1.9
KMO				ePb	Pg	23 56 33.6	-1.0
KMO				eSg	Sg	23 56 52.2	-1.2
KMO				eSb	Sn	23 56 54.9	+0.8
KMO				max			
	172nm,0.4s						
KMO				max			
	687nm,0.8s						
BOD	Bodaibo	1.73	5	ePg	Pn	23 56 37.2	-1.0
BOD				eSg	Sn	23 57 00.0	-1.0
BOD				Pmax			
	38nm,0.2s						
BOD				Smax			
	345nm,0.6s						

YLYR	**Ulyunkhan**	**1.92**	**231**	*e*Pg	Pn	23 56 41.0	+0.2
YLYR				*e*		23 56 42.5	
YLYR				*e*Sg	Sb	23 57 07.1	-0.1
YLYR				max			
	132nm,0.7s						
YLYR				Smax			
	627nm,1.1s						
NIZ	**Nizh Angarsk**	**2.39**	**264**	*e*Pg	Pb	23 56 49.3	-1.5
NIZ				*e*Sg	Sb	23 57 21.4	+0.6
NIZ				Pmax			
	34nm,0.7s						
NIZ				Smax			
	322nm,0.8s						
CRS	**Chara**	**2.63**	**70**	*e*Pg	Pb	23 56 54.3	-0.6
CRS				*e*Sg	Sb	23 57 29.5	+1.8
CRS				Pmax			
	195nm,1.1s						
CRS				Smax			
	195nm,1.0s						
SYVR	**Suvo**	**3.27**	**223**	*e*Sg	Sb	23 57 48.8	+2.8
SYVR				Smax			
	266nm,1.7s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pg	Pb	23 57 07.9	-0.2
VTMR				*e*Sg	Sb	23 57 52.9	+2.8
KHNR	**Khani**	**3.55**	**74**	*e*Pg	Pb	23 57 10.4	-0.1
KHNR				*e*Sg	Sg	23 57 58.2	-2.6
TUP	**Tupik**	**3.93**	**113**	*e*Pg	Pb	23 57 17.3	+0.3
TUP				*e*Sg	Sb	23 58 07.4	+2.4
TUP				Pmax			
	26nm,0.5s						
TUP				Smax			
	180nm,1.5s						
MXMB	**Maximikha**	**4.06**	**228**	*e*Pg	Pb	23 57 20.2	+0.9
MXMB				*e*Sg	Sb	23 58 13.0	+4.1
OGRR	**Ongureny**	**4.32**	**238**	*e*Pg	Pb	23 57 24.4	+0.7
OGRR				*e*Sg	Sb	23 58 20.1	+3.7
OGRR				Pmax			
	27nm,1.5s						
OGRR				Smax			
	70nm,1.4s						
YKLR	**Yuktali**	**4.43**	**80**	*e*Pg	Pb	23 57 25.4	0.0
YKLR				*e*Sg	Sb	23 58 23.2	+3.9
TRG	**Tyrgan**	**5.46**	**235**	*e*Sg	Sg	23 58 55.8	-6.5
TRG				Smax			
	52nm,1.4s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pg	Pb	23 58 04.1	+4.0
KPC				*e*Sg	Sg	23 59 27.7	-6.6
KPC				Pmax			
	1.0nm,0.3s						
KPC				Smax			
	77nm,1.5s						

BYKL 03 23:56:22.4±0.4, 56°.08N×113°.69E, h2^{km}±8^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**297**	*e*Pg	Pg	23 56 23.9	-0.1
SVKR				*e*Sg	Sg	23 56 25.8	+0.6
SVKR				Pmax			
	6µm,0.5s						
SVKR				Smax			
	27µm,0.4s						
UKT	**Uakit**	**0.59**	**183**	*e*Sg	Sg	23 56 41.4	0.0
UKT				Smax			
	328nm,0.6s						
YOA	**Uoyan**	**1.10**	**274**	*e*Sg	Sg	23 56 57.8	0.0
YOA				Smax			
	1µm,1.0s						
NLYR	**Nelyaty**	**1.20**	**69**	Sg	Sg	23 56 59.2	-1.6
NLYR				max			
	573nm,0.9s						
KMO	**Kumora**	**1.41**	**263**	*e*Sg	Sg	23 57 05.4	-2.3
KMO				Smax			
	436nm,0.7s						
BOD	**Bodaibo**	**1.75**	**6**	*e*Sg	Sn	23 57 15.7	-0.9
BOD				Smax			
	280nm,1.1s						
YLYR	**Ulyunkhan**	**1.88**	**231**	*e*Sg	Sb	23 57 21.7	+0.4
YLYR				Smax			
	346nm,0.6s						
NIZ	**Nizh Angarsk**	**2.35**	**264**	*e*Sg	Sb	23 57 34.8	-0.2
NIZ				Smax			
	243nm,0.9s						
CRS	**Chara**	**2.67**	**70**	*e*Pn	Pn	23 57 07.1	+0.7
CRS				*e*Sg	Sg	23 57 46.3	-1.8
CRS				max			
	151nm,1.1s						
CRS				Smax			
	164nm,1.1s						
SYVR	**Suvo**	**3.23**	**223**	*e*Sg	Sb	23 58 02.0	+1.8
SYVR				Smax			
	209nm,2.0s						
VTMR	**Vitim**	**3.42**	**350**	*e*Pn	Pn	23 57 17.5	+0.8
VTMR				*e*Pg	Pb	23 57 23.6	-0.1
VTMR				*e*Sg	Sb	23 58 08.4	+2.7
TUP	**Tupik**	**3.95**	**112**	*e*Pn	Pn	23 57 23.2	-0.8
TUP				*e*Sg	Sb	23 58 23.6	+2.7
TUP				Smax			
	146nm,1.0s						

NOU 04 00:02:09.7, 21°.52S×169°.54E, h9^{km}, MLv3.5, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.41**	**271**	P	Pn	00 02 35.1	-0.4
PINNC	**Pines Island,**	**2.23**	**240**	P	Pn	00 02 46.8	0.0
YATNC	**Mamie plateau,**	**2.52**	**257**	P	Pn	00 02 50.8	-0.1
DZM	**Mont Dzumac**	**2.93**	**259**	P	Pn	00 02 56.4	-0.2
NOUC	**Port Laguerre**	**3.06**	**259**	P	Pn	00 02 58.6	+0.3
KOUNC	**Koumac, New Ca**	**5.00**	**280**	P	Pn	00 03 25.1	+0.1

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*MOS **04** 00:05:13.3±2.1, 55°.99N×113°.68E, h5^{km}, mb3.6/1, Error ellipse: s-maj=13.9km s-min=10.2km az=73.8*
*BYKL **04** 00:05:15.0±0.1, 56°.07N×113°.65E, h7^{km}±2^{km}*
*IDC **04** 00:05:21.9±9.3, 55°.99N×112°.38E, h0^{km}, mb3.1/1, mb1 3.2/3, mb1mx3.1/32, mbtmp3.2/3, ML2.7/2, Error ellipse: s-maj=120.6km s-min=43.2km az=86.0*

ISC 04 00:05:14.7±0.9, 56°.02N±0°.02×113°.63E±0°.02, h7^{km}±7^{km}, n35, σ1^{s}.98/75, 3C-3D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.11**	**339**	⇑*i*Pg	**Pg**	**00 05 17.1**	**-0.1**
SVKR				*e*Sg	**Sg**	**00 05 19.2**	**+0.2**
SVKR				Pmax			
	5µm,0.1s						
SVKR				Smax			
	32µm,0.9s						
SVKR	**Severomuysk**	**0.11**	**339**	⇑*i*PG	**Pg**	**00 05 17.1**	**-0.1**
SVKR				*e*		00 05 19.0	
SVKR				pmax	pmax		
	comp=Z,5µm,0.2s						
SVKR				smax	smax		
	comp=N,30µm,0.5s						
UKT	**Uakit**	**0.53**	**180**	*e*Pg	**Pg**	**00 05 25.4**	**+0.5**
UKT				*e*Sg	**Sb**	**00 05 33.0**	**-1.1**
UKT				Pmax			
	comp=N,150nm,0.3s						
UKT				Smax			
	comp=N,891nm,0.6s						
YOA	**Uoyan**	**1.07**	**277**	*e*Pg	**Pg**	**00 05 35.0**	**-0.3**
YOA				*e*Sg	**Sg**	**00 05 49.0**	**-0.2**
YOA				Pmax			
	comp=N,375nm,0.3s						
YOA				Smax			
	comp=N,3µm,0.3s						
YOA	**Uoyan**	**1.07**	**277**	*e*PG	**Pg**	**00 05 35.1**	**-0.3**
YOA				*e*		00 05 51.0	
YOA				pmax	pmax		
	comp=Z,230nm,0.2s						
YOA				smax	smax		
	comp=E,3µm,0.4s						
NLYR	**Nelyaty**	**1.25**	**67**	*e*Pg	**Pg**	**00 05 37.0**	**-1.7**
NLYR				*e*Pb	**Pb**	**00 05 38.6**	**0.0**
NLYR				*e*Sg	**Sg**	**00 05 53.5**	**-1.4**
NLYR				*e*Sb	**Sn**	**00 05 56.9**	**+1.2**
NLYR				max			
	comp=E,266nm,0.3s						
NLYR				max			
	comp=E,1µm,0.9s						
KMO	**Kumora**	**1.37**	**266**	⇓*i*Pg	**Pn**	**00 05 40.2**	**0.0**
KMO				*e*		00 05 42.0	
KMO				*e*Sg	**Sb**	**00 05 59.1**	**+0.7**
KMO				*e*		00 06 02.5	
KMO				max			
	comp=E,291nm,0.3s						
KMO				max			
	comp=E,2µm,0.9s						
KMO	**Kumora**	**1.37**	**266**	⇓*i*PG	**Pn**	**00 05 40.1**	**-0.1**
KMO				*e*		00 05 59.3	
KMO				pmax	pmax		
	comp=Z,294nm,0.3s						
KMO				smax	smax		
	comp=N,2µm,0.8s						
YLYR	**Ulyunkhan**	**1.81**	**232**	⇓*i*Pg	**Pb**	**00 05 48.3**	**+0.2**
YLYR				*e*Sg	**Sg**	**00 06 13.4**	**+0.6**
YLYR				Pmax			
	comp=N,292nm,0.4s						
YLYR				Smax			
	comp=N,612nm,0.3s						
BOD	**Bodaibo**	**1.82**	**6**	⇑*i*Pg	**Pn**	**00 05 46.6**	**+0.2**
BOD				*e*Sg	**Sn**	**00 06 09.7**	**+0.1**
BOD				Pmax			
	comp=N,70nm,0.3s						
BOD				Smax			
	comp=N,589nm,0.3s						
BOD	**Bodaibo**	**1.82**	**6**	*e*PN	**Pn**	**00 05 46.4**	**0.0**
BOD				*e*		00 06 09.8	
BOD				pmax	pmax		
	comp=Z,121nm,0.7s						
BOD				smax	smax		
	comp=E,594nm,0.4s						
NIZ	**Nizh Angarsk**	**2.31**	**266**	*e*Pn	**Pn**	**00 05 54.4**	**+1.2**
NIZ				*e*Pg	**Pb**	**00 05 56.9**	**+0.2**
NIZ				*e*		00 06 25.7	
NIZ				*e*Sg	**Sg**	**00 06 28.2**	**-0.8**
NIZ				Pmax			
	comp=E,57nm,0.4s						
NIZ				Smax			
	comp=E,665nm,0.5s						
CRS	**Chara**	**2.72**	**69**	*e*Pn	**Pn**	**00 05 59.4**	**+0.6**
CRS				*e*Pg	**Pb**	**00 06 04.2**	**+0.5**
CRS				*e*Sg	**Sb**	**00 06 38.9**	**+1.6**
CRS				Pmax			
	comp=E,117nm,0.9s						
CRS				Smax			
	comp=E,452nm,0.8s						
CRS	**Chara**	**2.72**	**69**	*e*PN	**Pb**	**00 06 03.6**	**-0.1**
CRS				*e*		00 06 38.4	
CRS				pmax	pmax		
	comp=Z,113nm,0.5s						
CRS				smax	smax		
	comp=E,451nm,0.6s						
SYVR	**Suvo**	**3.16**	**223**	*e*Pn	**Pn**	**00 06 06.4**	**+1.6**
SYVR				*e*Pg	**Pb**	**00 06 12.9**	**+1.8**
SYVR				*e*		00 06 34.4	
SYVR				*e*Sg	**Sg**	**00 06 54.6**	**-1.5**
SYVR				Pmax			
	comp=E,103nm,1.0s						
SYVR				Smax			
	comp=E,229nm,0.9s						
VTMR	**Vitim**	**3.48**	**351**	*e*Pn	**Pn**	**00 06 09.1**	**-0.1**
VTMR				*e*Pg	**Pb**	**00 06 16.8**	**+0.2**
VTMR				*e*Sn	**Sn**	**00 06 48.6**	**-2.0**
VTMR				*e*Sg	**Sb**	**00 07 00.4**	**+1.4**
KHNR	**Khani**	**3.64**	**73**	*e*Pn	**Pn**	**00 06 12.7**	**+1.3**
KHNR				*e*Pg	**Pb**	**00 06 20.2**	**+0.9**
KHNR				*e*Sn	**Sn**	**00 06 54.6**	**+0.1**
KHNR				*e*Sg	**Sb**	**00 07 06.6**	**+3.0**
MXMB	**Maximikha**	**3.96**	**228**	Pn	**Pn**	**00 06 16.9**	**+1.2**
MXMB				*e*Pg	**Pb**	**00 06 26.7**	**+2.0**
MXMB				*e*Sg	**Sg**	**00 07 19.2**	**-2.5**
TUP	**Tupik**	**3.96**	**111**	*e*Pn	**Pn**	**00 06 16.2**	**+0.4**
TUP				*e*Pg	**Pb**	**00 06 26.1**	**+1.4**
TUP				*e*Sn	**Sn**	**00 07 01.9**	**-0.5**
TUP				*e*Sg	**Sg**	**00 07 17.8**	**-3.9**
TUP				Pmax			
	comp=E,43nm,0.6s						
TUP				Smax			
	comp=E,219nm,0.8s						
TUP	**Tupik**	**3.96**	**111**	*e*PN	**Pn**	**00 06 16.4**	**+0.6**
TUP				*e*		00 06 26.3	
TUP				*e*S	**Sn**	**00 07 02.2**	**-0.2**
TUP				*e*		00 07 17.8	
TUP				pmax	pmax		
	comp=Z,44nm,0.6s						
TUP				smax	smax		
	comp=N,221nm,0.8s						
CIT	**Chita**	**4.00**	**181**	*e*Sg	**Sg**	**00 07 21.0**	**-2.1**
CIT				Smax			
	comp=N,291nm,0.5s						
CIT	**Chita**	**4.00**	**181**	*e*PN	**Pn**	**00 06 16.3**	**-0.1**
CIT				*e*		00 06 27.7	
CIT				*e*S	**Sn**	**00 07 03.8**	**+0.3**
CIT				*e*		00 07 19.5	
CIT				pmax	pmax		
	comp=Z,79nm,0.2s						
CIT				smax	smax		
	comp=E,184nm,1.6s						
OGRR	**Ongureny**	**4.22**	**238**	*e*Pn	**Pn**	**00 06 20.4**	**+1.0**
OGRR				*e*		00 06 22.1	
OGRR				*e*Pg	**Pb**	**00 06 31.7**	**+2.5**
OGRR				*e*		00 06 59.1	
OGRR				*e*Sg	**Sg**	**00 07 27.0**	**-3.1**
OGRR				Pmax			
	comp=E,38nm,1.0s						
OGRR				Smax			
	comp=E,88nm,0.9s						
OGRR	**Ongureny**	**4.22**	**238**	*e*PN	**Pn**	**00 06 20.4**	**+1.0**
OGRR				*e*		00 06 31.7	
OGRR				*e*		00 07 27.1	
OGRR				pmax	pmax		
	comp=Z,53nm,2.9s						
OGRR				smax	smax		
	comp=E,117nm,1.5s						
YKLR	**Yuktali**	**4.51**	**79**	*e*Pn	**Pn**	**00 06 23.2**	**-0.1**
YKLR				Pg	**Pb**	**00 06 35.7**	**+1.6**
YKLR				*e*Sg	**Sb**	**00 07 33.8**	**+5.3**
ZRHB	**Zarechye**	**5.14**	**230**	*e*Sg	**Sg**	**00 07 56.4**	**-3.2**
ZRHB				Smax			
	comp=E,696nm,1.4s						
TRG	**Tyrgan**	**5.36**	**236**	Pn	**Pn**	**00 06 36.6**	**+1.6**
TRG				*e*Pg	**Pb**	**00 06 51.5**	**+2.9**
TRG				*e*Sg	**Sg**	**00 08 00.7**	**-6.0**
TRG				Smax			
	comp=E,59nm,0.9s						
TRG	**Tyrgan**	**5.36**	**236**	*e*PN	**Pn**	**00 06 36.8**	**+1.8**
TRG				*e*		00 06 50.4	
TRG				*e*S	**Sn**	**00 07 35.4**	**-1.6**
TRG				*e*		00 08 00.5	
TRG				pmax	pmax		
	comp=Z,41nm,1.3s						
TRG				smax	smax		
	comp=E,59nm,1.0s						
KPC	**Khapcheranga**	**6.37**	**187**	Pn	**Pn**	**00 06 51.4**	**+2.5**
KPC				*e*Pg	**Pb**	**00 07 10.1**	**+4.3**
KPC				*e*Sn	**Sn**	**00 08 01.7**	**-0.1**
KPC				*e*Sg	**Sg**	**00 08 33.1**	**-5.9**
KPC				Pmax			
	comp=E,8.0nm,0.6s						
KPC				Smax			
	comp=E,123nm,1.4s						
ZEA	**Zeya**	**8.18**	**101**	*e*PN	**Pn**	**00 07 10.9**	**-2.8**
MOY	**Mondy**	**8.64**	**245**	*e*PN	**Pn**	**00 07 22.0**	**+1.8**
MOY				*e*		00 07 52.5	
MOY				*e*S	**Sn**	**00 08 57.3**	**-0.6**
MOY				*e*		00 09 44.4	
MOY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MOY				smax	smax		
	comp=N,49nm,1.3s						
ORL	**Orlik**	**8.80**	**252**	*e*PN	**Pn**	**00 07 25.8**	**+3.5**
ORL				*e*		00 07 56.2	
ORL				*e*S	**Sn**	**00 09 01.3**	**-0.4**
ORL				*e*		00 09 47.8	
ORL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ORL				smax	smax		
	comp=N,40nm,1.5s						
SONM	**Songino Array**	**9.33**	**212**	Pn	**Pn**	**00 07 31.9**	**+2.4**
	comp=N,0.1nm,0.3s,baz=19,slow=14,SNR=1.8						
SONM				Lg	Lg	00 10 07.3	
	comp=N,0.9nm,0.3s,baz=21,slow=26,SNR=12						
ZALV	**Zalesovo Beam**	**16.61**	**275**	Pn	**Pn**	**00 09 06.1**	**-1.7**
	comp=N,0.1nm,0.3s,baz=77,slow=12,SNR=2.0						
MKAR	**Makanchi Array**	**21.45**	**258**	P	**P**	**00 10 04.6**	**+1.3**
	comp=N,0.6nm,0.6s,baz=63,slow=10,SNR=9.6						

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*MOS **04** 00:19:03.4±1.0, 54°.99N×110°.65E, h5^{km}, mb4.2/2, Error ellipse: s-maj=11.2km s-min=6.4km az=63.8*
*BYKL **04** 00:19:04.9±0.1, 55°.00N×110°.69E, h13^{km}±2^{km}*
*IDC **04** 00:19:07.4±1.4, 54°.99N×109°.88E, h0^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.5/46, mbtmp3.7/10, ML3.3/4, MS3.2/2, Ms1 3.2/2, ms1mx2.5/57, Error ellipse: s-maj=30.0km s-min=18.6km az=137.0*

ISC 04 00:19:04.7±0.5, 55°.04N±0°.02×110°.67E±0°.02, h10^{km}, n73, σ2^{s}.53/159, mb3.8/7, 7C-10D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.33**	**120**	⇑*i*Pg	**Pg**	**00 19 11.4**	**+0.2**
YLYR				Pmax		00 19 11.5	
	3µm,0.1s						
YLYR				*e*Sg	**Sg**	**00 19 16.1**	**+0.4**
YLYR				Smax		00 19 16.2	
	40µm,0.3s						
YLYR	**Ulyunkhan**	**0.33**	**120**	⇑*i*PG	**Pg**	**00 19 11.5**	**+0.2**
YLYR				*e*		00 19 16.1	
YLYR				pmax	pmax		
	comp=Z,3µm,0.1s						
YLYR				smax	smax		
	comp=N,41µm,0.3s						
KMO	**Kumora**	**0.90**	**20**	*e*Pg	**Pg**	**00 19 21.8**	**-0.2**
KMO				Pmax		00 19 25.2	
	comp=N,1µm,0.2s						
KMO				*e*Sg	**Sb**	**00 19 34.6**	**+0.2**
KMO				Smax		00 19 35.9	
	comp=N,4µm,0.3s						
KMO	**Kumora**	**0.90**	**20**	*e*PG	**Pg**	**00 19 22.0**	**0.0**
KMO				*e*		00 19 33.4	
KMO				pmax	pmax		
	comp=Z,1µm,0.3s						
KMO				smax	smax		
	comp=N,5µm,0.9s						
NIZ	**Nizh Angarsk**	**0.97**	**319**	⇑*i*Pg	**Pb**	**00 19 24.1**	**+0.5**
	comp=N,267nm,0.5s						
NIZ				⇓*i*Pg	**Pb**	**00 19 24.1**	**+0.5**
	comp=N,92nm,0.5s						
NIZ				⇑*i*Pg	**Pb**	**00 19 24.1**	**+0.5**
	comp=N,800nm,0.5s						
NIZ				Pmax		00 19 24.3	
	comp=N,900nm,0.4s						
NIZ				*e*Pb	**Pn**	**00 19 26.9**	**+2.5**
NIZ				*e*		00 19 30.4	
NIZ				*e*Sg	**Sb**	**00 19 36.9**	**+0.3**
NIZ				*e*		00 19 37.8	
NIZ				*e*Sb	**Sn**	**00 19 41.2**	**+2.9**
NIZ				max		00 19 43.5	
	comp=N,1µm,0.3s						
YOA	**Uoyan**	**1.25**	**28**	*e*Pg	**Pn**	**00 19 28.3**	**+0.1**
YOA				*e*Pb	**Pg**	**00 19 29.9**	**+1.3**
YOA				max		00 19 30.0	
	comp=N,2µm,0.2s						
YOA				*e*		00 19 34.1	
YOA				*e*Sg	**Sb**	**00 19 44.8**	**+0.4**
YOA				*e*		00 19 46.6	
YOA				*e*		00 19 48.8	
YOA				max		00 19 49.1	
	comp=N,8µm,0.5s						
YOA	**Uoyan**	**1.25**	**28**	*e*PG	**Pn**	**00 19 28.7**	**+0.6**
YOA				*e*		00 19 45.6	
YOA				pmax	pmax		
	comp=Z,504nm,0.2s						
YOA				smax	smax		
	comp=E,8µm,0.4s						
SYVR	**Suvo**	**1.44**	**196**	⇑*i*Pg	**Pn**	**00 19 30.9**	**+0.1**
SYVR				Pmax		00 19 38.9	
	comp=E,345nm,0.4s						
SYVR				*e*Sg	**Sn**	**00 19 50.3**	**+0.5**
SYVR				Smax		00 19 52.8	
	comp=E,4µm,0.4s						
SYVR	**Suvo**	**1.44**	**196**	⇑*i*PG	**Pn**	**00 19 30.8**	**0.0**
SYVR				*e*		00 19 50.4	
SYVR				pmax	pmax		
	comp=Z,355nm,0.4s						
SYVR				smax	smax		
	comp=E,5µm,0.3s						
UKT	**Uakit**	**1.75**	**74**	*e*Pg	**Pn**	**00 19 36.0**	**+0.8**
UKT				*e*		00 19 40.4	
UKT				max		00 19 40.6	
	comp=E,413nm,0.4s						
UKT				*e*		00 19 45.2	
UKT				*e*Sg	**Sn**	**00 19 58.9**	**+1.3**
UKT				Smax		00 20 01.3	
	comp=E,1µm,0.3s						
UKT	**Uakit**	**1.75**	**74**	⇓*i*PN	**Pn**	**00 19 36.0**	**+0.8**
UKT				*e*		00 19 59.4	
UKT				pmax	pmax		
	comp=Z,411nm,0.6s						
UKT				smax	smax		
	comp=N,1µm,0.4s						
SVKR	**Severomuysk**	**1.96**	**56**	*e*Pn	**Pn**	**00 19 37.8**	**-0.2**
SVKR				*e*Pg	**Pb**	**00 19 40.0**	**-0.5**
SVKR				Pmax		00 19 42.9	
	comp=N,716nm,0.2s						
SVKR				*e*Sg	**Sb**	**00 20 06.9**	**+1.9**
SVKR				Smax		00 20 09.5	
	comp=N,5µm,0.4s						
SVKR	**Severomuysk**	**1.96**	**56**	*e*PN	**Pn**	**00 19 37.8**	**-0.2**
SVKR				*e*S	**Sb**	**00 20 05.0**	**0.0**
SVKR				*e*		00 20 07.0	
SVKR				pmax	pmax		
	comp=Z,771nm,0.4s						
SVKR				smax	smax		
	comp=E,2µm,0.5s						
MXMB	**Maximikha**	**2.11**	**213**	⇓*i*Pn	**Pn**	**00 19 40.7**	**+0.7**
MXMB				*e*Pg	**Pb**	**00 19 42.2**	**-0.8**
MXMB				*e*Sn	**Sn**	**00 20 06.8**	**+0.5**
MXMB				*e*Sg	**Sb**	**00 20 09.8**	**+0.5**
MXMB				*e*		00 20 12.1	
OGRR	**Ongureny**	**2.28**	**233**	⇓*i*Pn	**Pn**	**00 19 44.5**	**+2.1**
OGRR				*e*Pg	**Pb**	**00 19 46.4**	**+0.5**
OGRR				Pmax		00 19 46.9	
	comp=E,255nm,0.3s						
OGRR				*e*		00 19 52.6	
OGRR				*e*Sg	**Sb**	**00 20 16.4**	**+2.3**
OGRR				Smax		00 20 17.8	
	comp=E,998nm,0.4s						
OGRR	**Ongureny**	**2.28**	**233**	⇓*i*PN	**Pn**	**00 19 44.5**	**+2.1**
OGRR				*e*		00 19 46.5	
OGRR				*e*		00 20 16.4	
OGRR				pmax	pmax		
	comp=Z,201nm,0.4s						
OGRR				smax	smax		
	comp=N,996nm,0.4s						
NLYR	**Nelyaty**	**3.19**	**61**	*e*Pn	**Pn**	**00 19 55.8**	**+0.9**
NLYR				*e*		00 19 58.9	
NLYR				*e*Pg	**Pb**	**00 20 02.8**	**+1.3**
NLYR				Pmax		00 20 13.1	
	comp=N,94nm,0.6s						
NLYR				*e*Sn	**Sn**	**00 20 33.3**	**+0.3**
NLYR				*e*Sg	**Sb**	**00 20 44.3**	**+3.9**
NLYR				*e*SgSg	**Sg**	**00 20 47.4**	**+0.2**
NLYR				max		00 20 54.6	
	comp=N,757nm,0.9s						
NLYR				*e*		00 21 00.0	
NLYR	**Nelyaty**	**3.19**	**61**	*e*PN	**Pn**	**00 19 55.4**	**+0.5**
NLYR				*e*		00 20 02.8	
NLYR				*e*		00 20 43.6	
NLYR				pmax	pmax		
	comp=Z,98nm,1.1s						
NLYR				smax	smax		
	comp=E,756nm,1.0s						
ZRHB	**Zarechye**	**3.25**	**221**	*e*Pn	**Pn**	**00 19 56.1**	**+0.4**
ZRHB				*e*Pg	**Pb**	**00 20 03.1**	**+0.7**
ZRHB				Pmax		00 20 13.8	
	comp=E,243nm,0.9s						
ZRHB				*e*Sn	**Sn**	**00 20 34.5**	**+0.1**
ZRHB				*e*Sg	**Sb**	**00 20 45.6**	**+3.6**
ZRHB				Smax		00 21 17.0	
	comp=E,1µm,1.3s						
BOD	**Bodaibo**	**3.34**	**32**	*e*Pn	**Pn**	**00 19 58.0**	**+1.0**
BOD				*e*		00 20 00.5	
BOD				*e*Pg	**Pb**	**00 20 04.4**	**+0.4**
BOD				*e*PgPg	**PnPn**	**00 20 05.6**	**+1.5**

BOD				max		00 20 23.6	
	comp=E,46nm,0.5s						
BOD				*e*Sn	**Sn**	**00 20 35.9**	**-0.7**
BOD				*e*Sg	**Sb**	**00 20 47.6**	**+3.0**
BOD				Smax		00 20 55.0	
	comp=E,580nm,0.6s						
BOD	**Bodaibo**	**3.34**	**32**	*e*PN	**Pn**	**00 19 57.9**	**+1.0**
BOD				*e*		00 20 05.7	
BOD				*e*		00 20 47.1	
BOD				pmax	pmax		
	comp=Z,53nm,0.4s						
BOD				smax	smax		
	comp=E,579nm,0.8s						
TRG	**Tyrgan**	**3.43**	**230**	*e*Pn	**Pn**	**00 19 58.9**	**+0.7**
TRG				*e*		00 20 04.7	
TRG				*e*Pg	**Pb**	**00 20 05.5**	**0.0**
TRG				*e*PgPg	**Pg**	**00 20 08.8**	**-1.5**
TRG				max		00 20 11.3	
	comp=E,69nm,0.5s						
TRG				*e*Sn	**Sn**	**00 20 38.2**	**-0.6**
TRG				*e*Sg	**Sb**	**00 20 50.3**	**+3.1**
TRG				Smax		00 20 56.1	
	comp=E,428nm,0.5s						
TRG	**Tyrgan**	**3.43**	**230**	*e*PN	**Pn**	**00 19 59.3**	**+1.1**
TRG				*e*		00 20 06.7	
TRG				*e*S	**Sn**	**00 20 39.1**	**+0.3**
TRG				*e*		00 20 50.1	
TRG				pmax	pmax		
	comp=Z,47nm,0.3s						
TRG				smax	smax		
	comp=E,431nm,0.4s						
CIT	**Chita**	**3.48**	**149**	Pn	**Pn**	**00 19 57.5**	**-1.4**
CIT				*e*Pg	**Pb**	**00 20 05.8**	**-0.6**
CIT				*e*PgPg	**PnPn**	**00 20 07.3**	**+1.2**
CIT				max		00 20 15.1	
	comp=E,160nm,0.5s						
CIT				Sn	**Sn**	**00 20 39.3**	**-0.9**
CIT				*e*Sg	**Sb**	**00 20 51.0**	**+2.2**
CIT				Smax		00 20 57.6	
	comp=E,733nm,0.3s						
FFNB	**Fofonovo**	**3.80**	**219**	*e*Pn	**Pn**	**00 20 03.7**	**+0.5**
FFNB				*e*		00 20 10.3	
FFNB				*e*Pg	**Pb**	**00 20 12.1**	**+0.3**
FFNB				*e*Sg	**Sb**	**00 21 01.8**	**+4.0**
KAB	**Kabansk**	**3.84**	**220**	Pn	**Pn**	**00 20 04.7**	**+1.0**
KAB				*e*Pg	**Pb**	**00 20 13.0**	**+0.6**
KAB				Pmax		00 20 28.2	
	comp=E,262nm,1.5s						
KAB				Sn	**Sn**	**00 20 48.5**	**-0.4**
KAB				*e*Sg	**Sg**	**00 21 03.9**	**-3.9**
KAB				Smax		00 22 00.2	
	comp=E,1µm,1.7s						
STDB	**Stepnoy Dvoret**	**3.85**	**223**	*e*Pn	**Pn**	**00 20 05.1**	**+1.1**
STDB				*e*Pg	**Pb**	**00 20 14.2**	**+1.5**
STDB				*e*Sn	**Sn**	**00 20 48.3**	**-1.0**
STDB				*e*Sg	**Sb**	**00 21 04.3**	**+4.9**
HRMR	**Khuramsha**	**4.08**	**215**	*e*Pn	**Pn**	**00 20 07.9**	**+0.8**
HRMR				*e*Pg	**Pb**	**00 20 17.0**	**+0.4**
HRMR				Pmax		00 20 27.3	
	comp=E,163nm,0.5s						
HRMR				*e*Sn	**Sn**	**00 20 53.3**	**-1.6**
HRMR				*e*Sg	**Sb**	**00 21 10.4**	**+4.5**
HRMR				Smax		00 21 17.1	
	comp=E,1µm,0.4s						
BGT	**Bolshoye Golou**	**4.34**	**228**	*e*Pg	**Pb**	**00 20 23.0**	**+2.0**
BGT				Pmax		00 20 25.3	
	comp=E,42nm,0.5s						
BGT				*e*Sn	**Sn**	**00 20 59.9**	**-1.4**
BGT				*e*Sg	**Sb**	**00 21 18.7**	**+5.3**
BGT				Smax		00 21 24.1	
	comp=E,274nm,0.9s						
VTMR	**Vitim**	**4.53**	**12**	*e*Pn	**Pn**	**00 20 12.6**	**-0.5**
VTMR				*e*		00 20 22.2	
VTMR				*e*Pg	**Pb**	**00 20 26.6**	**+2.5**
VTMR				*e*Sn	**Sn**	**00 21 05.5**	**-0.2**
VTMR				*e*Sg	**Sg**	**00 21 25.9**	**-3.9**
CRS	**Chara**	**4.66**	**63**	*e*Pn	**Pn**	**00 20 16.1**	**+1.1**
CRS				*e*		00 20 19.7	
CRS				*e*Pg	**Pb**	**00 20 28.4**	**+2.0**
CRS				Pmax		00 20 41.4	
	comp=E,70nm,1.0s						
CRS				*e*Sn	**Sn**	**00 21 08.6**	**-0.5**
CRS				*e*Sg	**Sg**	**00 21 29.2**	**-4.9**
CRS				Smax		00 21 33.1	
	comp=E,375nm,0.9s						
CRS	**Chara**	**4.66**	**63**	*e*PN	**Pn**	**00 20 18.9**	**+3.9**
CRS				*e*		00 20 29.6	
CRS				*e*		00 21 28.6	
CRS				pmax	pmax		
	comp=Z,49nm,0.6s						
CRS				smax	smax		
	comp=E,373nm,0.6s						
LSTR	**Listvyanka**	**4.72**	**230**	*e*Pn	**Pn**	**00 20 16.3**	**+0.5**
LSTR				*e*		00 20 24.6	
LSTR				*e*Pg	**Pb**	**00 20 28.9**	**+1.5**
LSTR				Pmax		00 20 55.9	
	comp=E,46nm,0.9s						
LSTR				*e*Sn	**Sn**	**00 21 10.1**	**-0.5**
LSTR				*e*Sg	**Sb**	**00 21 30.6**	**+6.4**
LSTR				Smax		00 21 38.4	
	comp=E,188nm,1.2s						
IRK	**Irkutsk**	**4.73**	**236**	*e*Sn	**Sn**	**00 21 08.8**	**-2.0**
IRK				*e*Sg	**Sb**	**00 21 30.4**	**+5.9**
IRK				Smax		00 21 44.3	
	comp=E,581nm,0.6s						
TLY	**Talaya**	**5.39**	**234**	*e*Pn	**Pn**	**00 20 24.9**	**-0.1**
TLY				*e*		00 20 33.1	
TLY				*e*Pg	**Pb**	**00 20 41.6**	**+2.8**
TLY				Pmax		00 20 51.7	
	comp=E,25nm,0.6s						
TLY				*e*Sn	**Sn**	**00 21 25.4**	**-1.7**
TLY				*e*		00 21 42.5	
TLY				*e*Sg	**Sg**	**00 21 50.9**	**-6.6**
TLY				Smax		00 21 59.5	
	comp=E,149nm,1.0s						
TLY	**Talaya**	**5.39**	**234**	*e*PN	**Pn**	**00 20 24.9**	**-0.1**
TLY				*e*		00 20 42.1	
TLY				*e*		00 21 50.3	
TLY				pmax	pmax		
	comp=Z,58nm,0.3s						
TUP	**Tupik**	**5.42**	**93**	*e*Pn	**Pn**	**00 20 25.0**	**-0.5**
TUP				*e*		00 20 28.7	
TUP				*e*Pg	**Pb**	**00 20 41.4**	**+2.1**
TUP				Pmax		00 21 09.8	
	comp=Z,15nm,0.5s						
TUP				*e*Sn	**Sn**	**00 21 25.3**	**-2.5**
TUP				*e*Sg	**Sb**	**00 21 51.9**	**+7.6**
TUP				Smax		00 22 01.0	
	comp=Z,376nm,0.6s						
TUP	**Tupik**	**5.42**	**93**	*e*PN	**Pn**	**00 20 24.8**	**-0.7**
TUP				*e*		00 20 40.7	
TUP				*e*S	**Sn**	**00 21 26.1**	**-1.7**
TUP				*e*		00 21 50.7	
TUP				pmax	pmax		
	comp=Z,13nm,0.3s						
TUP				smax	smax		
	comp=N,379nm,1.0s						
KPC	**Khapcheranga**	**5.45**	**168**	*e*Pn	**Pn**	**00 20 24.5**	**-1.5**
KPC				*e*		00 20 33.7	
KPC				*e*Pg	**Pb**	**00 20 42.1**	**+2.2**
KPC				Pmax		00 20 52.1	
	comp=N,25nm,0.6s						
KPC				*e*Sn	**Sn**	**00 21 24.3**	**-4.4**
KPC				*e*Sg	**Sb**	**00 21 51.7**	**+6.4**
KPC				Smax		00 21 59.0	
	comp=N,314nm,1.2s						
KPC	**Khapcheranga**	**5.45**	**168**	*e*PN	**Pn**	**00 20 24.7**	**-1.3**
KPC				*e*		00 20 41.3	
KPC				*e*S	**Sn**	**00 21 26.1**	**-2.6**
KPC				*e*		00 21 51.7	
KPC				pmax	pmax		
	comp=Z,24nm,0.6s						
KPC				smax	smax		
	comp=E,313nm,1.2s						
KHNR	**Khani**	**5.56**	**66**	Pn	**Pn**	**00 20 28.9**	**+1.5**
KHNR				*e*		00 20 32.6	
KHNR				*e*Pg	**Pb**	**00 20 44.8**	**+3.1**
KHNR				*e*Sn	**Sn**	**00 21 30.0**	**-1.2**
KHNR				*e*Sg	**Sg**	**00 21 57.0**	**-5.9**
ARS	**Arshan**	**5.83**	**241**	*e*Pn	**Pn**	**00 20 31.1**	**-0.1**
ARS				*e*Pg	**Pb**	**00 20 49.0**	**+2.6**
ARS				Pmax		00 21 03.3	
	comp=E,62nm,0.6s						
ARS				*e*Sn	**Sn**	**00 21 35.4**	**-2.7**
ARS				*e*Sg	**Sb**	**00 22 04.0**	**+7.7**
ARS				Smax		00 22 09.9	
	comp=E,459nm,0.9s						
ARS	**Arshan**	**5.83**	**241**	*e*PN	**Pn**	**00 20 31.0**	**-0.1**
ARS				*e*		00 20 50.4	
ARS				*e*		00 22 04.1	
ARS				pmax	pmax		
	comp=Z,52nm,0.3s						
ARS				smax	smax		
	comp=E,458nm,0.7s						
YKLR	**Yuktali**	**6.38**	**71**	Pn	**Pn**	**00 20 39.3**	**+0.6**
YKLR				*e*Sn	**Sn**	**00 21 48.7**	**-2.9**
YKLR				*e*Sg	**Sg**	**00 22 23.0**	**-6.4**
ZAK	**Zakamensk**	**6.47**	**227**	*e*Pn	**Pn**	**00 20 41.3**	**+1.3**
ZAK				*e*		00 20 51.0	
ZAK				*e*Pg	**Pb**	**00 21 01.3**	**+3.9**
ZAK				Pmax		00 21 25.0	
	comp=E,11nm,0.7s						
ZAK				*e*Sg	**Sg**	**00 22 24.6**	**-7.7**
ZAK				Smax		00 22 49.8	
	comp=E,109nm,1.5s						
ZAK	**Zakamensk**	**6.47**	**227**	*e*PN	**Pn**	**00 20 41.3**	**+1.3**
ZAK				*e*		00 21 01.0	
ZAK				*e*		00 22 25.6	
ZAK				pmax	pmax		
	comp=Z,11nm,0.6s						
ZAK				smax	smax		
	comp=N,109nm,1.2s						
MOY	**Mondy**	**6.71**	**244**	*e*Pn	**Pn**	**00 20 43.7**	**+0.5**
MOY				*e*		00 20 51.8	
MOY				max		00 20 53.0	
	comp=N,32nm,0.8s						
MOY				*e*Sn	**Sn**	**00 21 56.3**	**-3.3**
MOY				*e*Sg	**Sg**	**00 22 31.2**	**-8.5**
MOY				Smax		00 22 38.6	
	comp=N,202nm,1.2s						
ORL	**Orlik**	**6.90**	**253**	*e*Pn	**Pn**	**00 20 46.9**	**+1.0**
ORL				*e*		00 20 55.1	
ORL				max		00 21 02.0	
	comp=N,28nm,0.8s						
ORL				*e*Sn	**Sn**	**00 22 02.2**	**-2.3**
ORL				*e*Sg	Sg	00 22 37.3	-8.8
ORL				Smax		00 22 42.7	
	comp=N,119nm,0.8s						
ORL	**Orlik**	**6.90**	**253**	*e*PN	**Pn**	**00 20 47.0**	**+1.0**
ORL				*e*		00 21 08.9	
ORL				*e*S	**Sn**	**00 22 02.3**	**-2.3**
ORL				*e*		00 22 36.5	
ORL				pmax	pmax		
	comp=Z,28nm,0.7s						
ORL				smax	smax		
	comp=N,121nm,1.1s						
ULN	**Ulaanbaatar**	**7.53**	**199**	⇓*e*PN	**Pn**	**00 20 55.5**	**+0.9**
SONM	**Songino Array**	**7.70**	**202**	Pn	**Pn**	**00 20 57.3**	**+0.5**
	comp=N,1.1nm,0.3s,baz=9.6,slow=14,SNR=22						
SONM				Lg	Lg	00 23 06.1	
	comp=N,5.9nm,0.3s,baz=18,slow=30,SNR=22						
SONM				LR	LR	00 24 10.4	
	comp=N,102nm,18.4s,baz=91,slow=40						
IENR	**Iengra**	**8.12**	**76**	Pn	**Pn**	**00 21 04.7**	**+2.2**
IENR				*e*Sn	**Sn**	**00 22 31.2**	**-3.1**
IENR				*e*Sg	Sg	00 23 16.2	-8.7
ZEA	**Zeya**	**9.76**	**91**	*e*P	**Pn**	**00 21 29.6**	**+4.6**
ZEA				*e*S	**Sn**	**00 23 17.6**	**+3.0**
ZEA				smax	smax		
	comp=N,10.0nm,0.5s						
YAK	**Yakutsk**	**12.12**	**47**	*e*P	**Pn**	**00 21 56.2**	**-0.9**
YAK				*e*S	**Sn**	**00 24 13.3**	**+1.2**
YAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				smax	smax		
	comp=N,6.0nm,1.4s						
YAK				smax	smax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,19nm,0.6s						
ZALV	**Zalesovo Beam**	**15.03**	**276**	Pn	**Pn**	**00 22 36.1**	**-0.7**
	comp=N,0.2nm,0.3s,baz=76,slow=10,SNR=33						
ZALV				Lg	Lg	00 26 50.5	
	comp=N,0.1nm,0.3s,baz=73,slow=26,SNR=2.7						
ZALV	**Zalesovo Beam**	**15.03**	**276**	*i* P	**Pn**	**00 22 36.7**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DGZ	**Jazzator, Alta**	**15.13**	**259**	⇓*e*P	**Pn**	**00 22 38.9**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**17.49**	**120**	Lg	Lg	00 28 21.4	
	baz=319,slow=28,SNR=4.3						
NRIK	**Noril'sk**	**17.75**	**333**	P	**Pn**	**00 23 10.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=141,slow=8.4,SNR=5.2						
MKAR	**Makanchi Array**	**19.59**	**257**	P	**P**	**00 23 31.2**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=48,slow=10,SNR=8.6						
KURK	**Kurchatov**	**19.71**	**271**	*de*P	**Pn**	**00 23 35.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURBB	**Kurchatov Arra**	**19.81**	**270**	P	**P**	**00 23 34.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=62,slow=11,SNR=12						
KURBB				Lg	Lg	00 29 17.9	
	comp=Z,0.0nm,0.3s,baz=160,slow=19,SNR=5.1						
BVAR	**Borovoye Array**	**23.52**	**282**	P	**P**	**00 24 14.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=97,slow=12,SNR=2.9						
BRVK	**Borovoye**	**23.56**	**282**	⇓*e*P	**P**	**00 24 15.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AAK	**Ala-Archa**	**26.52**	**257**	P	**P**	**00 24 43.0**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=72,slow=3.2,SNR=3.8						
AAK	**Ala-Archa**	**26.52**	**257**	⇓*e*P	**P**	**00 24 45.2**	**+2.8**
AAK				pmax	pmax		
	comp=Z,45nm,5.2s						
ARU	**Arti**	**28.79**	**294**	LR	LR	00 38 19.0	
	comp=Z,80nm,19.8s,baz=180,slow=40						
ARU	**Arti**	**28.79**	**294**	⇑*e*P	**P**	**00 25 05.8**	**+3.4**
FINES	**FINESS Array B**	**41.99**	**314**	P	**P**	**00 26 57.5**	**+2.1**
	comp=Z,5.7nm,1.1s,baz=79,slow=8.6,SNR=1.8						
ILAR	**Eielson Array**	**46.71**	**35**	P	P	00 27 40.3	+7.2
	comp=Z,0.8nm,1.0s,baz=301,slow=5.6,SNR=5.8						
BRTR	**Keskin Array B**	**51.67**	**287**	P	**P**	**00 28 12.0**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=36,slow=11,SNR=2.7						
BRTR	**Keskin Array B**	**51.67**	**287**	P	**P**	**00 28 12.0**	**+0.4**
YKA	**Yellowknife Ar**	**57.57**	**23**	P	P	00 28 59.1	+5.2
	comp=Z,0.3nm,0.9s,baz=336,slow=7.4,SNR=2.5						

*IDC **04** 00:20:05.7±1.8, 29°.79S×71°.36W, h0^{km}, mb3.9/4, mb1 3.9/7, mb1mx3.8/26, mbtmp3.8/7, ML3.3/3, MS3.2/5, Ms1 3.1/5, ms1mx3.0/20, Error ellipse: s-maj=42.1km s-min=37.9km az=160.0*

*SJA **04** 00:20:14.9±0.4, 29°.37S×71°.22W, h24^{km}±3^{km}, ML4.0, MW4.2*

*GUC **04** 00:20:14.5±0.5, 29°.39S×71°.15W, h55^{km}±3^{km}, ML3.9*

*NEIC **04** 00:20:15.4±1.5, 29°.37S±0°.04×71°.23W±0°.08, h60^{km}±5^{km}, Error ellipse: s-maj=10.6km s-min=5.3km az=90.0*

*NEIC **04** 00:20:15.4, 29°.36S×71°.20W, h54^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.30; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-0.34; M$_{r\theta}$0.31; M$_{\theta\phi}$-0.06; M$_{\phi r}$1.73; Fault plane solution: M$_0$1.78000×10^{15} NP1:ϕ_s10.23000°, δ84.74000°, λ90.39000°. NP2:ϕ_s186.01000°, δ5.28000°, λ85.79000°. Principal axes: T 1.7607, Plg50.0000°, Azm281.0000°; N 0.0458, Plg0.0000°, Azm190.0000°; P -1.8066, Plg40.0000°, Azm100.0000°;*

ISC 04 00:20:13.5±0.9, **29°.38S**±0°.03×**71°.46W**±0°.05, **h49**^{km}±10^{km}, **n74**, σ**2**^{s}**.30**/83, **mb4.1**/6, **MS3.4**/3, **3C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.76**	**61**	*e*S	**Sn**	**00 20 38.4**	**-0.4**
LCO	**Las Campanas**	**0.76**	**61**		**Pn**	**00 20 28.5**	**+0.3**
LCO				Sn	**Sn**	**00 20 38.6**	**-0.3**
GO04	**Tololo Observa**	**0.98**	**144**	*e*P	**Pn**	**00 20 32.1**	**+1.0**
GO04				*e*S	**Sn**	**00 20 43.7**	**-0.3**
GO04				IAML		00 20 48.5	
	comp=N,22µm,0.5s						
GO04	**Tololo Observa**	**0.98**	**144**		**Pn**	**00 20 32.2**	**+1.0**
GO04	**Tololo Observa**	**0.98**	**144**	*e*P	**Pn**	**00 20 32.3**	**+1.2**
GO04				*e*S	**Sn**	**00 20 45.0**	**+1.0**
AC05	**El Transito**	**1.17**	**63**	⇑*i*P	**Pn**	**00 20 34.3**	**+0.7**
AC05				*e*S	**Sn**	**00 20 47.4**	**-1.1**
AC05				IAML		00 20 49.2	
	comp=N,3µm,0.2s						
AC05	**El Transito**	**1.17**	**63**	Pn	**Pn**	**00 20 34.3**	**+0.7**
AC05				Sn	**Sn**	**00 20 46.0**	**-2.5**
AC04	**Llanos de Chal**	**1.22**	**16**	*e*P	**Pn**	**00 20 35.7**	**+1.6**
AC04				*i* S	**Sn**	**00 20 52.2**	**+2.7**
AC04				IAML		00 20 54.4	
	comp=N,2µm,0.2s						
AC04	**Llanos de Chal**	**1.22**	**16**	Pn	**Pn**	**00 20 35.9**	**+1.7**
CO01	**Juntas del Tor**	**1.33**	**117**	⇑*i*P	**Pn**	**00 20 37.2**	**+1.3**
CO01				*e*S	**Sn**	**00 20 51.6**	**-1.0**
CO01				IAML		00 20 54.7	
	comp=N,3µm,0.4s						
CO01	**Juntas del Tor**	**1.33**	**117**		**Pn**	**00 20 37.0**	**+1.1**
CO01				Sn	**Sn**	**00 20 49.0**	**-3.7**
CO03	**El Pedregal**	**1.60**	**156**	⇑*i*P	**Pn**	**00 20 41.1**	**+1.6**
CO03				*i* S	**Sn**	**00 21 00.6**	**+1.6**
CO03				IAML		00 21 01.5	
	comp=E,5µm,0.2s						
CO03	**El Pedregal**	**1.60**	**156**		**Pn**	**00 20 41.0**	**+1.5**
CO02	**Combarbal**	**1.86**	**168**		**Pn**	**00 20 44.9**	**+1.8**
AROD	**Rodeo**	**1.90**	**115**	*e*P	**Pn**	**00 20 46.2**	**+2.5**
AROD				*e*S	Sn	00 20 58.0	-8.6
GO03	**Copiap**	**2.08**	**31**	*e*P	**Pn**	**00 20 47.5**	**+1.5**
GO03				*e*S	**Sn**	**00 21 12.3**	**+1.5**
GO03	**Copiap**	**2.08**	**31**		**Pn**	**00 20 47.3**	**+1.3**
GO03	**Copiap**	**2.08**	**31**	*e*P	**Pn**	**00 20 47.8**	**+1.8**
GO03				*e*S	**Sn**	**00 21 14.8**	**+4.0**
ACDV	**Cuesta del Vie**	**2.18**	**112**	*e*S	**Sn**	**00 21 05.2**	**-8.2**
ACDV				IAML		00 21 21.2	
	comp=Z,913nm,0.6s						
ACCO	**Cerro Coronel**	**2.40**	**121**	*e*P	**Pn**	**00 20 54.0**	**+3.4**
ACCO				*e*S	Sn	00 21 09.1	-10
ACCO				IAML		00 21 11.0	
	comp=Z,1µm,1.7s						
VCA	**Vinchina**	**2.92**	**78**	⇓*i*P	Pn	00 21 02.0	+4.4
VCA	**Vinchina**	**2.92**	**78**	*e*P	Pn	00 21 02.0	+4.4
VCA				*e*S	**Sn**	**00 21 37.6**	**+6.1**
VCA				IAML		00 21 46.3	
	comp=Z,526nm,0.5s						
RTLL	**Cerro Villicun**	**3.23**	**128**	*e*P	**Pn**	**00 21 04.8**	**+3.0**
RTLL				*e*S	Sn	00 22 01.6	+23
RTLL				IAML		00 22 08.2	
	comp=Z,328nm,0.5s						
ZON	**Zonda**	**3.23**	**133**	*e*P	Pn	00 21 06.7	+4.9
ZON				IAML		00 22 02.7	
	comp=Z,344nm,0.7s						
AC02	**Maricunga**	**3.26**	**40**	*e*P	**Pn**	**00 21 04.4**	**+1.7**
AC02				IAML		00 21 59.9	
	comp=N,331nm,0.5s						
AC02	**Maricunga**	**3.26**	**40**	Pn	**Pn**	**00 21 04.2**	**+1.5**
AC01	**Pan de Azucar**	**3.31**	**14**	*e*P	**Pn**	**00 21 02.8**	**-0.1**
AC01				*e*S	**Sn**	**00 21 39.5**	**-1.5**
AC01				IAML		00 21 58.3	
	comp=E,154nm,0.3s						
AC01	**Pan de Azucar**	**3.31**	**14**		**Pn**	**00 21 02.8**	**-0.1**
AUSP	**Uspallata**	**3.35**	**148**	*e*P	**Pn**	**00 21 07.9**	**+4.3**
AUSP				*e*S	Sn	00 21 54.5	+12
VA03	**San Esteban**	**3.46**	**167**	*e*P	**Pn**	**00 21 07.3**	**+2.3**
VA03				*e*S	**Sn**	**00 21 47.8**	**+3.0**
VA03	**San Esteban**	**3.46**	**167**		**Pn**	**00 21 07.9**	**+2.9**
RTCV	**Cerro Valdivia**	**3.53**	**135**	*e*P	**Pn**	**00 21 09.5**	**+3.6**
RTCV				IAML		00 22 14.6	
	comp=Z,189nm,0.6s						
MT02	**Curacav**	**3.88**	**176**	*e*P	**Pn**	**00 21 12.1**	**+1.5**
MT02				*e*S	**Sn**	**00 21 53.9**	**-1.0**
MT02	**Curacav**	**3.88**	**176**		**Pn**	**00 21 12.8**	**+2.2**
ASAL	**Salagasta**	**3.92**	**146**	*e*P	Pn	00 21 15.4	+4.2
ASAL				*e*S	Sn	00 22 09.7	+14
ASAL				IAML		00 22 24.6	
	comp=Z,274nm,1.8s						
MT05	**Renca**	**4.05**	**171**	*e*P	**Pn**	**00 21 17.1**	**+4.1**
MT05	**Renca**	**4.05**	**171**		**Pn**	**00 21 14.2**	**+1.3**
ARCO	**CERRO ARCO**	**4.08**	**149**	*e*P	Pn	00 21 18.1	+4.6
ARCO				IAML		00 22 30.8	
	comp=Z,243nm,1.4s						
MT03	**Universidad Ad**	**4.18**	**169**	*e*P	**Pn**	**00 21 17.8**	**+3.0**
AAGR	**Agrelo**	**4.33**	**149**	*e*P	Pn	00 21 21.7	+4.8
AAGR				IAML		00 22 49.4	
	comp=Z,192nm,0.7s						
MT09	**Talagante**	**4.40**	**175**	*e*P	**Pn**	**00 21 19.9**	**+1.9**
GO02	**Mina Guanaco**	**4.52**	**22**		**Pn**	**00 21 19.5**	**-0.2**
LMEL	**Las Melosas**	**4.58**	**167**	*e*P	**Pn**	**00 21 24.0**	**+3.6**
LMEL				*e*S	**Sn**	**00 22 14.9**	**+2.5**
PB14	**IPOC Station P**	**4.83**	**11**		**Pn**	**00 21 23.3**	**-0.7**
BO02	**Sierra Bellavi**	**5.43**	**174**	Pn	**Pn**	**00 21 33.6**	**+1.7**
COIS	**El Sosneado**	**5.93**	**165**	*e*P	**Pn**	**00 21 42.1**	**+3.4**
RFA	**San Rafael**	**5.95**	**155**	*e*P	**Pn**	**00 21 42.4**	**+3.3**
RFA				IAML		00 23 28.5	
	comp=Z,28nm,0.8s						
AHML	**Horco Molle**	**6.00**	**66**	*e*P	**Pn**	**00 21 43.1**	**+3.4**
AHML				*e*S	Sn	00 23 05.5	+18
AHML				IAML		00 23 18.0	
	comp=Z,42nm,0.9s						
TCA	**Tanti**	**6.24**	**110**	*e*P	**Pn**	**00 21 43.7**	**+0.6**
TCA				*e*S	**Sn**	**00 22 51.5**	**-1.8**
TCA				IAML		00 23 29.8	
	comp=Z,96nm,1.4s						
LVC	**Limon Verde**	**7.12**	**19**	Pn	**Pn**	**00 21 55.9**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=200,slow=5.7,SNR=1.5						
LVC				Sn	Sn	00 23 23.8	+8.6
	comp=Z,1.1nm,0.3s,baz=104,slow=13,SNR=2.3						
LVC				LR	LR	00 24 49.5	
	comp=Z,43nm,18.9s,baz=228,slow=38						
LVC	**Limon Verde**	**7.12**	**19**		**Pn**	**00 21 56.4**	**+0.9**
H03N1	**Juan Fernandez**	**7.55**	**236**	Pn	**Pn**	**00 22 02.1**	**+1.4**
	baz=52						
H03N1				Sn	Sn	00 23 18.4	-6.4
	baz=110,slow=74						
H03N1				T	T	00 29 54.1	
	baz=65,slow=72,SNR=1050						
H03N2	**Juan Fernandez**	**7.56**	**236**	Pn	**Pn**	**00 22 02.7**	**+1.8**
	baz=52						
H03N2				Sn	**Sn**	**00 23 20.2**	**-4.8**
	baz=110,slow=74						
H03N2				T	T	00 29 45.6	
	baz=65,slow=72,SNR=774						
H03N3	**Juan Fernandez**	**7.56**	**236**	Pn	**Pn**	**00 22 02.2**	**+1.3**
	baz=52						
H03N3				Sn	Sn	00 23 19.3	-5.9
	baz=110						
H03N3				T	T	00 29 53.6	
	baz=65,slow=72,SNR=898						
PB01	**IPOC Station P**	**8.49**	**13**	Pn	**Pn**	**00 22 13.6**	**-0.4**
LC01	**Cunco**	**9.50**	**182**	Pn	**Pn**	**00 22 28.5**	**+0.8**
CPUP	**Villa Florida**	**12.87**	**80**	Pn	**Pn**	**00 23 11.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=247,slow=13,SNR=1.8						
CPUP				Sn	**Sn**	**00 25 36.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=261,slow=12,SNR=1.5						
CPUP				LR	LR	00 28 34.5	
	comp=Z,102nm,18.4s,baz=220,slow=40						
CPUP	**Villa Florida**	**12.87**	**80**	Pn	**Pn**	**00 23 11.9**	**-1.8**
SIV	**San Ignacio**	**16.40**	**38**	Pn	**Pn**	**00 24 01.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=224,slow=12,SNR=14						
BDFB	**Brasilia**	**25.55**	**63**	P	**P**	**00 25 37.1**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=239,slow=5.9,SNR=3.7						
BDFB				LR	LR	00 35 57.2	
	comp=Z,46nm,21.6s,baz=162,slow=37						
BDFB	**Brasilia**	**25.55**	**63**	P	**P**	**00 25 37.1**	**-0.9**
BELA	**Belgrano 2**	**51.34**	**171**	P	**P**	**00 29 12.6**	**+0.1**
SNAA	**Sanae**	**55.69**	**159**	P	**P**	**00 29 45.0**	**+0.4**
LPIG	**La Paz**	**64.98**	**321**	LR	LR	00 52 46.7	
	comp=Z,25nm,19.6s,baz=59,slow=30						
DBIC	**Dimbokro**	**73.26**	**72**	P	**P**	**00 31 40.0**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=238,slow=7.4,SNR=3.2						
DBIC				LR	LR	01 01 52.6	
	comp=Z,27nm,19.5s,baz=132,slow=34						
DBIC	**Dimbokro**	**73.26**	**72**	P	**P**	**00 31 39.7**	**-0.4**
DBIC				IAmb	IAmb	00 31 48.6	
	comp=Z,6.6nm,1.4s						
KOWA	**Kowa**	**78.29**	**66**	P	**P**	**00 32 08.9**	**+0.1**
KOWA				IAmb	IAmb	00 32 10.2	
	comp=Z,3.1nm,1.0s						
PDAR	**Pinedale Array**	**79.89**	**333**	P	**P**	**00 32 18.7**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=138,slow=8.5,SNR=2.2						
TOA0	**Torodi Ar. Sit**	**82.18**	**70**	P	**P**	**00 32 28.8**	**-1.0**
TOA0				IAmb	IAmb	00 32 31.1	
	comp=Z,4.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**82.18**	**70**	P	**P**	**00 32 28.3**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=254,slow=4.1,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**126.21**	**272**	T	T	02 58 06.9	
	baz=114,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hy**	**126.22**	**272**	T	T	02 58 07.8	

	baz=114,slow=75,SNR=18						
H11S3	WAKE ISLAND Hy	126.23	272	T	T	02 58 08.4	
	baz=114,slow=75,SNR=16						
ZALV	Zalesovo Beam	150.00	28	PKPbc	PKPbc	00 39 58.4	+0.3
	comp=Z,2.4nm,0.9s,baz=308,slow=3.6,SNR=10.0						

*BGR **04** 00:36:40.6±0.0, 64°.68N×21°.35W, h33^{km}, mb4.5*

*REY **04** 00:36:48.9, 64°.66N×17°.49W, h2^{km}*

*NEIC **04** 00:36:49.9±1.5, 64°.62N±0°.10×17°.7W±0°.1, h5^{km}±4^{km}, mb4.2/9, Error ellipse: s-maj=14.4km s-min=6.7km az=197.0*

*IDC **04** 00:36:49.5±0.8, 64°.65N×17°.74W, h0^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.7/50, mbtmp3.7/15, ML3.9/1, MS3.3/6, Ms1 3.3/6, ms1mx2.8/49, Error ellipse: s-maj=24.8km s-min=14.3km az=39.0*

ISC 04 00:36:50.3±0.4, **64°.68N**±0°.02×**17°.54W**±0°.02, **h10**^{km}, **n92**, σ**1^s.92**/104, **mb3.9**/20, **MS3.1**/4, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.13	32	P	Pg	00 36 52.4	-1.1
	baz=23						
IDYN				S	Sg	00 36 55.1	-0.6
	baz=23						
IDJK	Dyngjujokull	0.22	143	P	Pg	00 36 53.5	-1.4
	baz=145						
IURH	Urdarhals	0.22	49	P	Pg	00 36 53.7	-1.2
	baz=43						
IHAM	Hamarinn	0.23	212	P	Pg	00 36 53.9	-1.3
	baz=218						
IKVE	Kverkfjoll	0.37	90	P	Pg	00 36 56.2	-1.5
	baz=87						
IKVE				S	Sg	00 37 01.4	-1.2
	baz=87						
ISKR	Skrokkalda	0.39	252	P	Pb	00 36 56.8	-2.5
	baz=255						
THOR	Thorvaldshraun	0.45	55	P	Pg	00 36 57.5	-1.6
	baz=52						
THOR				S	Sg	00 37 04.3	-0.7
	baz=52						
IJOK	Jokulheimar	0.47	220	P	Pg	00 36 58.0	-1.5
	baz=223						
IKRE	Kreppuhraun	0.51	77	P	Pg	00 36 58.2	-2.0
	baz=75						
IASK	Askja	0.53	45	P	Pg	00 36 58.9	-1.8
	baz=42						
IMKO	Mokollar	0.59	59	P	Pg	00 36 59.9	-1.9
	baz=57						
IMKO				S	Sg	00 37 08.7	-0.9
	baz=57						
IIEY	Innrieyrar	0.64	204	P	Pg	00 37 00.7	-2.0
	baz=206						
IIEY				S	Sb	00 37 10.2	-2.4
	baz=206						
ISVA	Svartarkot	0.67	10	P	Pg	00 37 01.6	-1.8
	baz=8.3						
ISVA				S	Sg	00 37 11.3	-0.8
	baz=8.3						
IKSK	Karasker	0.69	138	P	Pg	00 37 00.8	-2.9
	baz=138						
IKAL	Kalfafell	0.74	185	P	Pg	00 37 02.2	-2.3
	baz=187						
IVSH	V-Sauoahnukur	0.79	80	P	Pg	00 37 02.8	-2.7
	baz=78						
IVSH				S	Sg	00 37 13.4	-2.3
	baz=78						
IFAG	Fagurholsmyri	0.89	154	P	Pg	00 37 04.7	-2.7
	baz=155						
IADA	Aoalbol	0.91	67	P	Pg	00 37 04.8	-3.0
	baz=66						
IADA				S	Sg	00 37 17.0	-2.5
	baz=66						
IMEL	Melhnausar	0.97	22	P	Pg	00 37 06.3	-2.7
	baz=21						
IREN	Reynihlio	1.01	15	P	Pg	00 37 07.1	-2.6
	baz=14						
ISNB	Snabyli	1.06	207	P	Pg	00 37 07.8	-2.8
	baz=209						
ISNB				S	Sb	00 37 22.9	-1.7
	baz=209						
IKVO	Krokottuvotn	1.08	15	P	Pg	00 37 08.1	-2.9
	baz=13						
IKVO				S	Sg	00 37 23.0	-2.0
	baz=13						
IGRS	Grimsstaoir	1.13	31	P	Pb	00 37 09.0	-3.0
	baz=30						
IGRS				S	Sb	00 37 25.5	-1.3
	baz=30						
IFED	Fedgar	1.15	236	P	Pb	00 37 10.0	-2.2
	baz=237						
IRJU	Rjupnafell	1.18	206	P	Pb	00 37 09.9	-2.8
	baz=207						
IMJO	Mjoaskard	1.20	232	P	Pb	00 37 10.7	-2.4
	baz=233						
ISKI	Skildingahlsh	1.22	10	P	Pn	00 37 10.5	-2.9
	baz=8.9						
ISKI				S	Sb	00 37 27.8	-1.3
	baz=8.9						
IGHA	Grjothals	1.23	17	P	Pn	00 37 10.5	-3.1
	baz=16						
IGYG	Gygjarholskot	1.23	252	P	Pb	00 37 10.7	-2.9
	baz=253						
IGRA	Granastaoir	1.25	359	P	Pn	00 37 10.8	-2.9
	baz=358						
IGRA				S	Sb	00 37 28.1	-1.8
	baz=358						
IHAU	Haukadalur	1.28	237	P	Pn	00 37 11.6	-2.5
	baz=238						
IHVO	Lagu-Hvolar	1.29	207	P	Pn	00 37 12.0	-2.3
	baz=208						
IDIM	Dimmadalss	1.31	11	P	Pn	00 37 11.9	-2.8
	baz=10.0						
IALF	Alftagrof	1.40	212	P	Pn	00 37 14.0	-1.8
	baz=213						
IHED	Heoinshofoi	1.41	4	P	Pn	00 37 13.4	-2.6
	baz=3.0						
IHED				S	Sn	00 37 32.9	-1.7
	baz=3.0						
IESK	Eystri-Skogar	1.43	217	P	Pn	00 37 14.5	-1.8
	baz=218						
IMID	Miomork	1.45	226	P	Pn	00 37 14.9	-1.7
	baz=227						
IBRE	Brettingsstaoi	1.46	354	P	Pn	00 37 14.3	-2.3
	baz=353						
IBRE				S	Sb	00 37 34.8	-1.3
	baz=353						
IGIL	Gilhagi	1.49	19	P	Pn	00 37 14.3	-2.7
	baz=18						
ISIG	Siglufjorour	1.57	339	P	Pn	00 37 16.1	-2.1
	baz=339						
ISIG				S	Sb	00 37 38.1	-1.2
	baz=339						
IASM	Asmuli	1.59	239	P	Pn	00 37 16.7	-1.7
	baz=240						
BORG	Borgarnes	1.63	274		Pn	00 37 17.1	-2.0
BORG				Sn	Sg	00 37 40.9	-1.8
IKRO	Krokur	1.66	251	P	Pn	00 37 17.3	-2.2
	baz=252						
ISOL	Solvholt	1.67	245	P	Pn	00 37 17.5	-2.0
	baz=246						
IHEI	Heioarbar	1.68	255	P	Pn	00 37 17.9	-1.7
	baz=256						
ILEI	Leirhofn	1.79	14	P	Pn	00 37 19.3	-1.9
	baz=13						
ISAN	Sandskeio	1.86	252	P	Pn	00 37 21.4	-0.9
	baz=253						
IKUD	Kuludalsa	1.91	261	P	Pn	00 37 21.1	-1.8
	baz=262						
IVOS	Vogsosar	2.00	247	P	Pn	00 37 23.1	-0.9
	baz=248						
SCO	Scoresbysund	6.07	346		Pn	00 38 18.6	-1.3
SCO	Scoresbysund	6.07	346	*e*	Pn	00 38 17.9	-2.0
	baz=165,slow=6.5						
SCO				*i*P	Pn	00 38 21.0	+1.1
SCO				*i*S	Sn	00 39 32.9	+3.5
SCO				IAML		00 39 42.3	
	comp=Z,1.3nm,0.4s						
JMIC	Jan Mayen	7.19	24	LR	LR	00 41 14.8	
	comp=Z,278nm,20.4s,baz=239,slow=37						
ICESG	Greenland Ices	9.72	307	*i*P	Pn	00 39 16.2	+5.9
EKB5	Eskdalemuir Ar	11.77	136	Pn	Pn	00 39 38.0	-0.1
EKA	Eskdalemuir Ar	11.78	136	Pn	Pn	00 39 38.5	+0.3
	baz=322,slow=13,SNR=10						
DAG	Danmarks Havn	12.16	359	*i*P	Pn	00 39 48.5	+5.2
DAG	Danmarks Havn	12.16	359	*i*P	Pn	00 39 48.6	+5.3
NOA	NORSAR Array B	13.55	92	Pn	Pn	00 40 02.6	+0.2
	baz=295,slow=14,SNR=1.5						
SFJD	Kangerlussuaq	13.65	295	LR	LR	00 44 39.1	
	comp=Z,115nm,19.4s,baz=68,slow=35						
CLL	Collm	20.72	116	*e*(P)	Pn	00 41 34.0	+1.1
GRF	Grafenberg Arr	21.35	121	*e*P	P	00 41 40.1	+2.7
	comp=Z,32nm,2.0s,baz=322,slow=10						
STU	Stuttgart	21.39	125	P	P	00 41 37.7	-0.1
CHVC	Chvalec	22.49	113	*e*P	P	00 41 52.3	+2.8
KHC	Kasperske Hory	22.69	118	*e*P	P	00 41 52.8	+1.0
KHC	Kasperske Hory	22.69	118	P	P	00 41 53.8	+2.0
KHC				IAmb	IAmb	00 41 56.0	
	comp=Z,7.5nm,1.2s						
DPC	Dobruska-Polom	22.78	113	*e*P	P	00 41 53.9	+1.2
GERES	GERESS Array B	22.97	119	P	P	00 41 56.2	+1.4
	comp=Z,1.4nm,0.9s,baz=339,slow=7.1,SNR=6.9						
GERES				LR	LR	00 51 41.6	
	comp=Z,67nm,18.7s,baz=300,slow=39						
MORC	Moravsky Berou	23.72	112	P	P	00 42 03.8	+1.6
SMOL	Smolenice	24.68	114	*e*P	P	00 42 13.4	+2.4
LANS	Liptovska Anna	24.98	111	*e*P	P	00 42 15.9	+2.1
ESDC	Sonseca Array	26.27	156	P	P	00 42 27.1	+1.5
	comp=Z,1.4nm,0.8s,baz=348,slow=8.9,SNR=12						
ESDC				LR	LR	00 51 44.1	
	comp=Z,44nm,20.0s,baz=285,slow=34						
KOLS	Kolonicke sedl	26.29	108	*e*	P	00 42 36.9	+11
AKASG	Malin Array Be	27.86	98	P	P	00 42 40.8	+1.2
	comp=Z,0.2nm,0.5s,baz=321,slow=11,SNR=2.8						
NRIK	Noril'sk	36.46	35	P	P	00 43 56.4	+1.7
	comp=Z,0.5nm,0.3s,baz=280,slow=6.1,SNR=3.0						
BRTR	Keskin Array B	38.50	105	P	P	00 44 14.4	+1.9
	comp=Z,0.6nm,0.7s,baz=341,slow=5.9,SNR=2.3						
YKA	Yellowknife Ar	39.19	313	P	P	00 44 17.8	-0.1
	comp=Z,1.5nm,1.1s,baz=38,slow=8.6,SNR=6.9						
INK	Inuvik	39.82	329	P	P	00 44 23.0	0.0
	comp=Z,1.9nm,1.0s,baz=21,slow=8.6,SNR=3.6						
ABKAR	Akbulak array	42.00	73	P	P	00 44 43.5	+2.3
GNI	Garni	42.85	94	LR	LR	01 03 23.4	
	comp=Z,27nm,18.4s,baz=342,slow=37						
ILAR	Eielson Array	45.67	332	P	P	00 45 11.8	+1.3
	comp=Z,1.8nm,1.1s,baz=14,slow=5.7,SNR=9.7						
ILAR				PcP	PcP	00 46 49.5	+1.2
	comp=Z,0.7nm,0.9s,baz=11,slow=3.4,SNR=5.4						
ILAR				LR	LR	01 06 08.4	
	comp=Z,30nm,18.7s,baz=206,slow=38						
ZALV	Zalesovo Beam	47.64	51	P	P	00 45 26.7	+0.7
	comp=Z,1.2nm,0.8s,baz=320,slow=6.5,SNR=5.2						
KURK	Kurchatov	48.12	58	P	P	00 45 30.7	+0.9
KURK				IAmb	IAmb	00 45 34.0	
	comp=Z,3.3nm,1.0s						
MK31	Makanchi Array	52.73	58	P	P	00 46 06.1	+1.3
MK31				IAmb	IAmb	00 46 22.1	
	comp=Z,2.6nm,1.5s						
MKAR	Makanchi Array	52.73	58	P	P	00 46 06.0	+1.2
	comp=Z,0.6nm,0.8s,baz=316,slow=8.5,SNR=6.3						
PD31	Pinedale Array	53.16	293	P	P	00 46 08.9	+0.6
PD31				IAmb	IAmb	00 46 10.8	
	comp=Z,5.1nm,1.3s						
PDAR	Pinedale Array	53.16	293	P	P	00 46 08.1	-0.2
	comp=Z,1.6nm,0.9s,baz=67,slow=8.2,SNR=11						
TOA0	Torodi Ar. Sit	53.16	156	P	P	00 46 08.3	+0.1
TOA0				IAmb	IAmb	00 46 26.8	
	comp=Z,3.8nm,1.4s						
TORD	Torodi Ar. Bea	53.16	156	P	P	00 46 08.0	-0.2
	comp=Z,1.4nm,1.0s,baz=350,slow=7.3,SNR=3.6						
TIC	Toumodi	58.61	165	*e*P	P	00 46 47.5	+0.2
KIC	Kosan Boka	58.92	165	*e*P	P	00 46 49.5	+0.1
	comp=Z,8.6nm,1.0s						
LIC	Lamto	59.03	165	*e*P	P	00 46 50.7	+0.6
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	84.14	59	P	P	00 49 22.3	+0.9
	comp=Z,0.3nm,0.4s,baz=338,slow=6.8,SNR=5.0						

*NEIC **04** 01:15:37.4±1.9, 29°.27N±0°.06×130°.6E±0°.1, h43^{km}±8^{km}, mb4.0/6, Error ellipse: s-maj=13.3km s-min=7.9km az=101.0*

*JMA **04** 01:15:37.6±0.1, 29°.36N×130°.55E, h56^{km}±4^{km}, M3.4*

*IDC **04** 01:15:39.5±3.2, 29°.42N×130°.71E, h57^{km}±27^{km}, mb3.5/10, mb1 3.6/16, mb1mx3.5/51, mbtmp3.8/16, ML2.9/5, Error ellipse: s-maj=28.3km s-min=22.0km az=38.0*

ISC 04 01:15:36.1±1.3, **29°.28N**±0°.04×**130°.65E**±0°.05, **h29**^{km}±10^{km}, **n50**, σ**1^s.09**/60, **mb3.8**/13, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.87	310	P	Pb	01 15 52.4	-0.3
JNN				*e*S	Sn	01 16 04.1	-0.1
JYAK	Yakushimahirau	0.96	353	P	Pb	01 15 54.0	-0.2
JYAK				*e*S	Sb	01 16 06.4	-0.1
JMTN	Minamitane	1.13	11	P	Pn	01 15 56.7	+0.7
JMTN				*e*S	Sb	01 16 12.1	+0.7
JZK	Kikaishima	1.13	212	P	Pn	01 15 58.2	+2.2
JKC	Kuchinoerabu	1.24	342	P	Pb	01 15 57.9	-1.0
JKC				*e*S	Sb	01 16 12.9	-1.6
JAM	Amami Oshima	1.26	227	P	Pn	01 15 59.2	+1.4
JTAJ	Takarajima	1.27	264	P	Pn	01 15 59.1	+1.2
JTN	Tanegashima 3	1.40	12	P	Pn	01 16 00.4	+0.7
JAMN	Amaminishikomi	1.66	232	P	Pn	01 16 04.5	+1.3
JAMN				*e*S	Sn	01 16 24.6	+1.1
JTSR	Tashiro 2	1.89	7	P	Pn	01 16 07.7	+1.2
JTSR				*e*S	Sn	01 16 29.7	+0.3
JTK	Tokunoshima	2.11	225	P	Pn	01 16 10.9	+1.4
JTK				*e*S	Sn	01 16 36.0	+1.2
JSU	Suzuyama	2.22	356	P	Pn	01 16 11.5	+0.5
JSU	Suzuyama	2.22	356		Pn	01 16 11.1	+0.1
JOKE	Okinoerabujima	2.65	224	P	Pn	01 16 18.4	+1.5
JYRO	Yoronjima	2.97	221	P	Pn	01 16 22.3	+1.0
JYRO				*e*S	Sn	01 16 57.6	+1.6
JOW	Kunigami	3.22	221	P	Pn	01 16 25.6	+0.9
JOW	Kunigami	3.22	221	Pn	Pn	01 16 25.2	+0.4
JIH	Iheya	3.26	227	P	Pn	01 16 26.1	+0.8
JKDJ	Kitadaitoujima	3.37	170	P	Pn	01 16 27.6	+0.8
JKDJ				S	Sn	01 17 05.1	-0.7
JMZ	Minamidaito 2	3.49	171	P	Pn	01 16 28.9	+0.5
JMZ				*e*S	Sn	01 17 07.6	-1.2
JMZ	Minamidaito 2	3.49	171	Pn	Pn	01 16 29.0	+0.5
JNU	Nakatsue	3.83	3	P	Pn	01 16 34.6	+1.4
	1.8nm,0.3s,baz=200,slow=8.2,SNR=23						
JNU				S	Sn	01 17 20.0	+2.7
	1.8nm,0.3s,baz=204,slow=17,SNR=1.6						
JNU	Nakatsue	3.83	3		Pn	01 16 35.1	+1.9
JMN	Monobe	5.22	31	Pn	Pn	01 16 53.2	+0.9
JHS	Saijyo	6.07	20	Pn	Pn	01 17 04.7	+0.8
JWT	Wachi	7.21	33	Pn	Pn	01 17 21.2	+1.7
INU	Inuyama	8.10	40		Pn	01 17 33.7	+2.0
KSRS	Korea Array	8.46	345	P	Pn	01 17 38.3	+1.6
	0.1nm,0.3s,baz=160,slow=14,SNR=3.1						
KS19	Wonju Array Si	8.52	345	Pn	Pn	01 17 37.7	+0.2
JHJ	Hachijo jima 2	8.71	62	P	Pn	01 17 40.5	+0.4
	15nm,0.3s,baz=240,slow=20,SNR=4.8						
MJAR	Matsushiro Arr	9.63	39	P	Pn	01 17 53.5	+0.8
	0.1nm,0.3s,baz=228,slow=11,SNR=5.5						
USRK	Ussuriysk Ar.	14.93	4	P	Pn	01 19 05.8	+0.8
	baz=178,slow=8.1,SNR=1.6						
KLR	Kul'dur	19.94	2	P	P	01 20 05.0	-0.6
	0.2nm,0.3s,baz=208,slow=8.0,SNR=8.6						
MK31	Makanchi Array	41.20	309	P	P	01 23 19.0	+0.8
MK31				IAmb	IAmb	01 23 31.5	
	comp=Z,1.8nm,1.4s						
MKAR	Makanchi Array	41.20	309	P	P	01 23 18.5	+0.3
	comp=Z,0.4nm,0.5s,baz=88,slow=11,SNR=9.3						
ZALV	Zalesovo Beam	41.21	320	P	P	01 23 17.4	-0.6
	comp=Z,0.6nm,0.6s,baz=81,slow=8.9,SNR=2.3						
KURK	Kurchatov	44.16	314	P	P	01 23 42.0	0.0
KURK	Kurchatov	44.16	314	IAmb	IAmb	01 23 42.8	
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	44.21	314	P	P	01 23 42.0	-0.4
	comp=Z,1.4nm,0.6s,baz=96,slow=9.3,SNR=16						
NIL	Nilore	48.62	291	P	P	01 24 16.9	-0.5
WRA	Warramunga Arr	49.07	175	P	P	01 24 22.0	+1.2
	comp=Z,0.9nm,0.9s,baz=354,slow=8.5,SNR=4.6						
BVAR	Borovoye Array	49.49	316	P	P	01 24 23.3	-0.4
	comp=Z,0.8nm,0.5s,baz=90,slow=12,SNR=11						
BRVK	Borovoye	49.55	316	P	P	01 24 23.9	-0.3
KBL	Kabul	51.86	293	P	P	01 24 40.4	-1.8
KBL				IAmb	IAmb	01 24 41.2	
	comp=Z,1.9nm,0.6s						
ABKAR	Akbulak array	56.17	312	P	P	01 25 12.7	-0.4
ILAR	Eielson Array	60.74	29	P	P	01 25 44.4	-0.3
	comp=Z,0.6nm,0.8s,baz=292,slow=7.6,SNR=4.3						
FINES	FINESS Array B	71.27	331	P	P	01 26 51.3	-1.1
	comp=Z,4.2nm,1.0s,baz=57,slow=7.0,SNR=5.4						
AKASG	Malin Array Be	74.60	320	P	P	01 27 11.5	-0.8
	comp=Z,0.4nm,0.4s,baz=62,slow=7.0,SNR=2.8						
YKA	Yellowknife Ar	74.86	26	P	P	01 27 13.1	-0.6
	comp=Z,0.3nm,0.7s,baz=319,slow=4.2,SNR=5.6						
BRTR	Keskin Array B	76.85	308	P	P	01 27 26.4	+0.7
	comp=Z,0.9nm,0.7s,baz=134,slow=3.6,SNR=4.1						

*IDC **04** 01:17:19.1±1.1, 29°.11N×130°.32E, h0^{km}, mb3.8/13, mb1 3.9/18, mb1mx3.8/49, mbtmp3.8/18, ML2.8/4, MS3.2/7, Ms1 3.2/7, ms1mx3.0/43, Error ellipse: s-maj=22.9km s-min=22.7km az=61.0*

*NEIC **04** 01:17:24.4±1.8, 29°.17N±0°.04×130°.3E±0°.1, h33^{km}±7^{km}, mb4.2/5, Error ellipse: s-maj=14.1km s-min=5.2km az=106.0*

*NIED **04** 01:17:26.6, 29°.35N×130°.56E, h54^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.18; M$_{\theta\theta}$0.10; M$_{\phi\phi}$-0.28; M$_{r\theta}$2.36; M$_{\theta\phi}$-0.22; M$_{\phi r}$4.56; Fault plane solution: M$_0$5.14000×10^{15} NP1:ϕ_s27.00000°, δ88.00000°, λ90.00000°. NP2:ϕ_s195.00000°, δ2.00000°, λ78.00000°.*

*JMA **04** 01:17:26.6±0.1, 29°.35N×130°.56E, h54^{km}±3^{km}, M3.6*

ISC 04 01:17:25.0±1.4, **29°.19N**±0°.07×**130°.59E**±0°.07, **h41**^{km}±13^{km}, **n44**, σ**1^s.27**/44, **mb3.7**/14, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.89	316	P	Pn	01 17 41.4	+0.3
JNN				*e*S	Sn	01 17 52.9	0.0
JZK	Kikaishima	1.03	212	P	Pn	01 17 47.1	+4.1
JYAK	Yakushimahirau	1.04	356	P	Pn	01 17 43.0	-0.1
JYAK				*e*S	Sn	01 17 55.1	-1.4
JAM	Amami Oshima	1.16	228	P	Pn	01 17 48.0	+3.2
JTAJ	Takarajima	1.21	268	P	Pn	01 17 47.9	+2.5
JMTN	Minamitane	1.23	13	P	Pn	01 17 45.6	-0.1
JMTN				*e*S	Sn	01 18 00.4	-0.7
JKC	Kuchinoerabu	1.31	345	P	Pn	01 17 47.1	+0.3
JTN	Tanegashima 3	1.50	13	P	Pn	01 17 49.3	-0.1
JTN				S	Sn	01 18 06.8	-0.9
JAMN	Amaminishikomi	1.56	233	P	Pn	01 17 53.5	+3.3
JTSR	Tashiro 2	1.99	8	P	Pn	01 17 56.7	+0.6
JTSR				*e*S	Sn	01 18 19.0	-0.8
JTK	Tokunoshima	2.01	226	P	Pn	01 18 00.3	+3.9
JSU	Suzuyama	2.31	357	P	Pn	01 18 00.3	-0.2
JSU				S	Sn	01 18 26.3	-1.4
JSU	Suzuyama	2.31	357	Pn	Pn	01 18 00.5	-0.1
JOKE	Okinoerabujima	2.55	225	P	Pn	01 18 07.2	+3.4
JYRO	Yoronjima	2.87	222	P	Pn	01 18 11.3	+3.1
JOW	Kunigami	3.12	222	P	Pn	01 18 14.4	+2.8
JIH	Iheya	3.16	228	P	Pn	01 18 15.0	+2.8
JMZ	Minamidaito 2	3.41	170	Pn	Pn	01 18 15.6	-0.1
JNU	Nakatsue	3.92	4	Pn	Pn	01 18 21.9	-0.8
	1.5nm,0.3s,baz=240,slow=16,SNR=1.5						
JNU				Sn	Sn	01 19 09.2	+1.6
	1.1nm,0.3s,baz=172,slow=8.6,SNR=1.6						
JNU				LR	LR	01 20 00.4	
	comp=Z,164nm,19.1s,baz=176,slow=40						
JMN	Monobe	5.32	31	Pn	Pn	01 18 42.8	+0.8
JHS	Saijyo	6.17	20	Pn	Pn	01 18 54.6	+0.9
INU	Inuyama	8.20	40		Pn	01 19 23.3	+1.8
KSRS	Korea Array	8.53	346	Pn	Pn	01 19 25.6	-0.3
	0.1nm,0.3s,baz=148,slow=14,SNR=1.6						
KSRS				LR	LR	01 23 01.8	
	comp=Z,160nm,19.0s,baz=168,slow=40						
JHJ	Hachijo jima 2	8.80	61	Pn	Pn	01 19 31.4	+1.8
	7.3nm,0.3s,baz=172,slow=13,SNR=2.0						
JHJ				LR	LR	01 22 44.5	
	comp=Z,86nm,19.7s,baz=331,slow=36						
MJAR	Matsushiro Arr	9.73	39	Pn	Pn	01 19 43.6	+1.2
	0.1nm,0.3s,baz=227,slow=13,SNR=3.1						
MJAR				LR	LR	01 23 38.5	
	comp=Z,70nm,21.7s,baz=240,slow=38						
USRK	Ussuriysk Ar.	15.02	4	Pn	Pn	01 20 54.1	-0.2
	baz=186,slow=12,SNR=2.0						
USRK				LR	LR	01 27 06.3	
	comp=Z,67nm,18.0s,baz=165,slow=39						
KLR	Kul'dur	20.03	2	P	P	01 21 53.8	-0.5
	2.7nm,0.7s,baz=180,slow=10,SNR=7.5						
KLR				LR	LR	01 29 02.2	
	comp=Z,60nm,22.0s,baz=180,slow=35						
SONM	Songino Array	26.37	322	P	P	01 22 55.9	-1.4
	0.8nm,0.6s,baz=131,slow=6.3,SNR=2.0						
TNTI	Ternate	28.43	187	P	P	01 23 14.2	-1.7
MKAR	Makanchi Array	41.21	309	P	P	01 25 04.2	-1.6
	0.2nm,0.5s,baz=97,slow=10,SNR=2.4						
ZALV	Zalesovo Beam	41.24	320	P	P	01 25 04.8	-1.0
	0.2nm,0.3s,baz=123,slow=11,SNR=1.4						
KURBB	Kurchatov Arra	44.23	314	P	P	01 25 27.8	-2.3
	0.8nm,0.6s,baz=101,slow=8.8,SNR=5.4						
BVAR	Borovoye Array	49.52	316	P	P	01 26 11.5	+0.1
	0.6nm,0.5s,baz=92,slow=10,SNR=6.2						
BRVK	Borovoye	49.58	316	P	P	01 26 11.8	-0.1
ABKAR	Akbulak array	56.19	312	P	P	01 27 00.6	0.0
ABKAR				IAmb	IAmb	01 27 05.3	
	comp=Z,2.7nm,0.9s						
IL31		60.84	29	P	P	01 27 33.9	+1.1
IL31				IAmb	IAmb	01 27 40.3	
	comp=Z,3.9nm,1.4s						
ILAR	Eielson Array	60.84	29	P	P	01 27 34.4	+1.6
	comp=Z,0.4nm,0.7s,baz=284,slow=6.1,SNR=5.2						
STKA	Stephens Creek	61.63	169	P	P	01 27 37.8	-0.6
	comp=Z,1.6nm,0.7s,baz=358,slow=15,SNR=3.3						
STKA	Stephens Creek	61.63	169	IAmb	IAmb	01 27 43.4	
	comp=Z,0.7nm,0.9s						
FINES	FINESS Array B	71.32	331	P	P	01 28 39.6	-0.4
	comp=Z,7.8nm,1.2s,baz=98,slow=7.3,SNR=1.4						
AKASG	Malin Array Be	74.63	320	P	P	01 29 00.4	+0.5
	comp=Z,0.6nm,0.5s,baz=57,slow=6.3,SNR=2.8						
AKASG				LR	LR	02 04 48.1	
	comp=Z,87nm,18.2s,baz=340,slow=38						
YKA	Yellowknife Ar	74.96	26	P	P	01 29 02.4	+0.8
	comp=Z,0.4nm,0.7s,baz=306,slow=5.0,SNR=3.7						
BRTR	Keskin Array B	76.86	308	P	P	01 29 13.3	+0.2
	comp=Z,0.7nm,0.7s,baz=56,slow=5.4,SNR=1.5						
NVAR	Mina Array Bea	86.96	47	P	P	01 30 08.2	+1.9
	comp=Z,0.3nm,0.7s,baz=305,slow=6.3,SNR=1.8						

*IDC **04** 01:21:37.0±1.0, 4°.78S×134°.00E, h0^{km}, mb3.7/5, mb1 4.2/12, mb1mx3.9/41, mbtmp4.0/12, ML4.0/7, MS3.5/4, Ms1 3.5/4, ms1mx2.9/40, Error ellipse: s-maj=25.4km s-min=18.7km az=62.0*

*NEIC **04** 01:21:40.0±1.1, 4°.69S±0°.07×134°.01E±0°.07, h18^{km}±2^{km}, mb4.2/12, Error ellipse: s-maj=10.2km s-min=9.7km az=186.0*

*DJA **04** 01:21:41.4±0.4, 5°S±5°×13°4E±°, h50^{km}±28^{km}, M4.5/12, mb4.6/6, mB5.2/7, MLv4.5/12, Mw(mB)4.6/7*

*NOU **04** 01:22:06.3, 6°.41S×133°.45E, h105^{km}, mb4.6, Aru Islands Region, Indonesia*

ISC 04 01:21:39.6±0.6, **4°.66S**±0°.05×**134°.13E**±0°.05, **h21**^{km}, **n43**, σ**1^s.54**/45, **mb3.9**/8, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPI	Kaimana, Papua	1.08	337	P	Pb	01 21 59.2	-0.3
KMPI				S	Sn	01 22 14.2	+0.4
FAKI	Fak Fak	2.55	313		Pn	01 22 19.4	-0.4
FAKI	Fak Fak	2.55	313	P	Pn	01 22 19.7	-0.1
RKPI	Ransiki, Papua	3.13	1	P	Pn	01 22 27.5	-0.2
BAKI	Biak	3.97	30	P	Pn	01 22 38.6	-0.6
BNDI	Bandanaira	4.22	272	P	Pn	01 22 44.7	+2.0
BNDI				S	Sn	01 23 32.0	+0.7
SAUI	Saumlaki	4.34	220	Pn	Pn	01 22 43.6	-0.8
SIJI	Sorong	4.73	323	Pn	Pn	01 22 50.1	+0.4
	5.8nm,0.3s,baz=143,slow=17,SNR=21						
SIJI				Sn	Sn	01 23 39.9	-4.1
	4.5nm,0.3s,baz=144,slow=8.6,SNR=4.6						
SWI	Sorong	4.74	323	P	Pn	01 22 49.6	-0.2
SMPI	Sarmi	5.28	60	P	Pn	01 22 57.1	-0.2
	0.5nm6µm12nm,1.1s						
MSAI	Masohi	5.35	284	P	Pn	01 22 59.2	+0.9
	0.3nm2µm18nm,0.7s						
JAY	Jayapura	6.90	72	Pn	Pn	01 23 19.6	+0.1
	0.7nm,0.3s,baz=228,slow=13,SNR=1.3						
JAY				Sn	Sn	01 24 33.9	-3.5
	0.7nm,0.3s,baz=111,slow=21,SNR=2.5						
NLAI	Namlea	7.16	281	P	Pn	01 23 24.9	+1.8
	0.2nm2µm40nm,0.6s						
MTN	Manton Dam	8.66	200		Pn	01 23 44.0	+0.3
SOEI	Soe	11.02	242	Pn	Pn	01 24 15.2	-1.0
BATI	Baumata	11.75	241	Pn	Pn	01 24 23.6	-2.6
	2.3nm,0.3s,baz=112,slow=5.4,SNR=2.1						
BATI				Sn	Sn	01 26 34.8	-2.0
	2.8nm,0.3s,baz=307,slow=23,SNR=1.4						

PMG	Port Moresby	13.76	111	Pn	Pn	01 24 56.1	+2.5
	0.6nm,0.3s,baz=312,slow=5.4,SNR=4.9						
PMG	Port Moresby	13.76	111		Pn	01 24 55.9	+2.3
WB0	Warramunga Arr	15.02	179		Pn	01 25 10.1	-0.6
WRAB	Tennant Creek	15.19	179		Pn	01 25 13.3	+0.4
WRAB				IAmb	IAmb	01 25 26.8	
	comp=Z,13nm,0.7s						
WB2	Warramunga Arr	15.19	179		Pn	01 25 13.1	+0.1
WB2				IAmb	IAmb	01 25 26.9	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	15.19	179	Pn	Pn	01 25 09.8	-3.2
	comp=Z,0.4nm,0.3s,baz=356,slow=13,SNR=20						
WRA				Sn	Sn	01 27 51.0	-10
	comp=Z,0.6nm,0.3s,baz=354,slow=24,SNR=4.6						
FITZ	Fitzroy Crossi	15.73	211	Pn	Pn	01 25 16.5	-3.5
	comp=Z,1.8nm,0.3s,baz=30,slow=9.7,SNR=65						
FITZ				Sn	Sn	01 28 02.1	-12
	comp=Z,1.6nm,0.3s,baz=191,slow=16,SNR=5.5						
FITZ				LR	LR	01 32 59.7	
	comp=Z,121nm,18.2s,baz=47,slow=44						
FITZ	Fitzroy Crossi	15.73	211	Pn	Pn	01 25 19.6	-0.4
FITZ				IAmb	IAmb	01 25 27.0	
	comp=Z,7.6nm,0.7s						
AS31	Alice Springs	18.90	181	P	P	01 25 59.9	+0.9
ASAR	Alice Springs	18.90	181	P	P	01 25 58.5	-0.4
	comp=Z,1.3nm,0.3s,baz=3.7,slow=10,SNR=56						
ASAR				S	Sn	01 29 18.8	-12
	comp=Z,0.2nm,0.3s,baz=0.4,slow=26,SNR=2.5						
ASAR				LR	LR	01 33 07.2	
	comp=Z,77nm,19.0s,baz=352,slow=37						
CTA	Charters Tower	19.35	143	P	P	01 26 04.9	+1.0
	comp=Z,0.2nm,0.3s,baz=316,slow=14,SNR=6.4						
CMAR	Chiang Mai Arr	41.60	305	P	P	01 29 26.3	-0.1
	comp=Z,0.8nm,0.4s,baz=128,slow=5.8,SNR=4.9						
BJT	Baijiatuau	47.43	341	P	P	01 30 13.3	+0.7
RPZ	Rata Peaks	50.70	146	LR	LR	01 51 43.2	
	comp=Z,89nm,18.0s,baz=245,slow=36						
URZ	Urewera	51.40	137	LR	LR	01 50 33.6	
	comp=Z,79nm,21.1s,baz=211,slow=34						
MK31	Makanchi Array	68.62	325	P	P	01 32 42.3	+1.1
MKAR	Makanchi Array	68.62	325	P	P	01 32 42.7	+1.4
	comp=Z,0.4nm,0.5s,baz=117,slow=7.7,SNR=9.1						
MAKZ	Makanchi	68.81	324	P	P	01 32 41.5	-0.9
MAKZ				IAmb	IAmb	01 32 45.5	
	comp=Z,1.5nm,0.7s						
NIL	Nilore	68.89	309	P	P	01 32 43.5	+0.3
ZAA0	Zalesovo Array	71.40	332	P	P	01 32 57.6	-0.5
ZAA0				IAmb	IAmb	01 33 11.1	
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	71.40	332	P	P	01 32 58.6	+0.6
	comp=Z,0.4nm,0.3s,baz=134,slow=8.3,SNR=2.5						
KURK	Kurchatov	72.75	327	P	P	01 33 07.2	+1.0
KURK	Kurchatov	72.75	327	IAmb	IAmb	01 33 10.1	
	comp=Z,6.6nm,1.4s						
KURBB	Kurchatov Arra	72.75	327	P	P	01 33 07.2	+1.0
	comp=Z,0.4nm,0.8s,baz=117,slow=4.7,SNR=2.7						
KK31	Karatay Array	74.37	317	P	P	01 33 16.9	+0.9
KKAR	Karatay Array	74.37	317	P	P	01 33 16.6	+0.6
KKAR				IAmb	IAmb	01 33 20.2	
	comp=Z,1.6nm,0.9s						
BVAR	Borovoye Array	78.34	326	P	P	01 33 39.8	+1.6
	comp=Z,0.3nm,0.5s,baz=90,slow=8.6,SNR=3.7						

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*NEIC **04** 01:25:13.5±1.7, 44°.418N±0°.007×114°.22W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=5.0km s-min=2.9km az=280.0*

BUT 04 01:25:13.7±2.5, **44°.45N**±0°.05×**114°.14W**±0°.06, **h12**^{km}±7^{km}, **ML3.5, ML2.8**/75(NEIC), **Error ellipse: s-maj=6.8km s-min=6.1km az=175.0, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BCYI	Bear Canyon	0.55	104	Pg	Pg	01 25 23.7	-0.7
HLID	Hailey	0.91	193	Pg	Pg	01 25 30.7	-0.5
HLID				IAML		01 25 43.9	
	418nm,0.2s						
HLID				IAML		01 25 44.1	
	429nm,0.2s						
MCMT	McKenzie Canyo	1.00	67	Pg	Pg	01 25 32.6	-0.3
DLMT	Dillon	1.43	50	Pn	Pb	01 25 40.4	0.0
MFID	Camas Ranch	1.60	230	Pn	Pb	01 25 42.9	-0.3
LRM	Limekiln Ridge	1.82	40	Pn	Pg	01 25 48.0	-0.7
BOZ	Bozeman (W)	2.12	56	Pn	Pb	01 25 51.8	-0.3
BOZ				IAML		01 26 22.9	
	111nm,0.2s						
YHB	Horse Butte	2.13	81		Pb	01 25 51.1	-1.3
YHL	Hebgen Lake	2.15	78		Pb	01 25 51.8	-1.0
YMR	Madison River	2.28	83		Pb	01 25 53.7	-1.3
BMO	Blue Mountains	2.29	281	Pn	Pn	01 25 52.7	+1.2
YHH	Holmes Hill	2.38	81		Pb	01 25 55.9	-0.8
MSO	Missoula	2.38	3		Pn	01 25 53.2	+0.5
MSO				IAML		01 26 30.3	
	73nm,0.2s						
YPP	Pitchstone Pla	2.40	93		Pn	01 25 54.9	+1.7
ECR	Eagle Creek	2.44	124		Pn	01 25 54.4	+0.7
ECR					LR	01 26 29.8	
FLWY	Flagg Ranch	2.50	97		Pn	01 25 56.3	+1.9
FLWY				IAML		01 26 38.0	
	34nm,0.9s						
MOOW	Moose Ponds	2.54	105		Pn	01 25 56.9	+1.9
H17A	Grant Village	2.56	90		Pb	01 26 00.6	+0.9
YUF	Upper Falls	2.61	83	Pn	Pn	01 25 56.7	+0.8
REDW	Red Top Meadow	2.61	113	Pn	Pn	01 25 55.7	-0.3
REDW				IAML		01 26 41.2	
	21nm,0.5s						
REDW				IAML		01 26 41.7	
	21nm,0.6s						
F10A	Beach Ranch, E	2.66	306		Pn	01 25 56.4	-0.1
LOHW	Long Hollow	2.69	107		Pn	01 25 58.0	+1.1
AHID	Auburn Hatcher	2.78	126		Pn	01 25 58.1	-0.1
AHID				IAML		01 26 47.4	
	comp=N,30nm,0.4s						
AHID				IAML		01 26 49.9	
	comp=E,26nm,0.7s						
HRY	Holter Researc	2.79	35		Pn	01 25 59.1	+0.9
HVU	Hansel Valley	2.85	159		Pn	01 25 58.8	-0.3
YMP	Mirror Lake Pl	2.86	83	Pn	Pn	01 26 00.4	+0.9
YNE	Yellowstone No	3.00	78	Pn	Pn	01 26 02.3	+1.0
JTMT	Jette	3.30	358	Pn	Pn	01 26 05.6	+0.3
JTMT				IAML		01 27 02.6	
	comp=E,27nm,0.4s						
JTMT				IAML		01 27 04.1	
	comp=N,26nm,0.5s						
SPUT	South Promonto	3.38	158		Pn	01 26 06.5	+0.1
HWUT	Hardware Ranch	3.41	145		Pn	01 26 06.0	-1.0
HWUT				IAML		01 27 06.1	
	comp=N,10nm,3.4s						
GCMT	Greycliff	3.44	65	Pn	Pn	01 26 08.3	+1.0
E09A	Wood Farm, Sta	3.49	308	Pn	Pn	01 26 09.6	+1.8
E09A				IAML		01 27 22.1	
	comp=E,14nm,2.4s						
G08A	Pilot Rock	3.53	285		Pn	01 26 09.2	+0.8
G08A				IAML		01 27 17.4	
	comp=E,9.2nm,3.9s						
RLMT	Red Lodge	3.54	77	Pn	Pn	01 26 10.3	+1.6
RLMT				IAML		01 27 07.5	
	comp=E,28nm,0.6s						
RLMT				IAML		01 27 13.6	
	comp=E,32nm,0.5s						
BGU	Big Grassy Mou	3.62	167	Pn	Pn	01 26 10.5	+0.8
PD31	Pinedale Array	3.73	115	Pn	Pn	01 26 12.5	+1.1
ELK	Elko	3.79	193		Pn	01 26 12.5	+0.4
ELK				IAML		01 27 12.9	
	comp=E,8.1nm,0.5s						
WVOR	Wild Horse Val	3.84	240		Pn	01 26 12.5	-0.3
WVOR				IAML		01 27 26.4	
	comp=E,18nm,4.3s						
I07A	Izee	3.87	266	Pn	Pn	01 26 12.6	-0.6
I07A				IAML		01 27 37.5	
	comp=N,11nm,4.3s						
I07A				IAML		01 27 55.1	
	comp=E,15nm,5.0s						
E08A	Dider Farm, El	4.02	302	Pn	Pn	01 26 14.4	-0.6
E08A				IAML		01 27 07.9	
	comp=E,13nm,0.9s						
E08A				IAML		01 27 50.4	
	comp=N,11nm,2.1s						
NEW	Newport	4.34	333	Pn	Pn	01 26 19.9	+0.4
NEW				IAML		01 27 34.9	
	comp=N,13nm,0.7s						
DUG	Dugway, Tooele	4.36	166		Pn	01 26 20.4	+0.5
DUG				IAML		01 27 41.8	
	comp=N,6.4nm,1.8s						
DUG				IAML		01 27 42.2	
	comp=N,7.3nm,0.9s						
EGMT	Eagleton	4.70	39	Pn	Pn	01 26 23.6	-0.8
PINE	Pine Mountain	4.94	265	Pn	Pn	01 26 27.9	0.0
PINE				IAML		01 28 30.1	
	comp=N,9.9nm,4.6s						
MOD	Modoc Plateau	5.17	243	Pn	Pn	01 26 32.0	+0.9
LTY	Liberty	5.36	304	Pn	Pn	01 26 33.9	+0.3
LTY				IAML		01 29 12.9	
	comp=E,8.6nm,4.4s						

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*IDC **04** 01:38:06.4±0.9, 55°.93N×113°.66E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.5/67, mbtmp3.6/12, ML3.2/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/37, Error ellipse: s-maj=21.7km s-min=16.4km az=150.0*

*MOS **04** 01:38:06.4±1.3, 56°.03N×113°.88E, h5^{km}, mb4.2/4, Error ellipse: s-maj=11.5km s-min=8.6km az=90.7*

*BYKL **04** 01:38:08.0±0.2, 56°.11N×113°.75E, h6^{km}±4^{km}*

ISC 04 01:38:07.7±0.5, **56°.05N**±0°.02×**113°.63E**±0°.02, **h10**^{km}, **n73**, σ**2**^{s}**69**/104, **mb3.8**/11, **MS3.3**/4, **4C-4D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.08	329	ePg	Pg	01 38 10.0	-0.1
SVKR				Pmax		01 38 10.1	
	22µm,0.2s						
SVKR				eSg	Sg	01 38 12.0	+0.1
SVKR				Smax		01 38 12.2	
	73µm,0.4s						
SVKR	Severomuysk	0.08	329	ePG	Pg	01 38 09.8	-0.3
UKT	Uakit	0.56	180	ePg	Pb	01 38 19.2	-0.5
UKT				Pmax		01 38 23.6	
	314nm,0.3s						
UKT				eSg	Sb	01 38 27.1	-0.7
UKT				Smax		01 38 35.6	
	1µm,0.4s						
YOA	Uoyan	1.07	275	ePg	Pb	01 38 29.1	+0.7
YOA				Pmax		01 38 36.3	
	877nm,0.4s						
YOA				eSg	Sn	01 38 44.2	+0.4
YOA				Smax		01 38 53.5	
	5µm,0.6s						
YOA	Uoyan	1.07	275	ePG	Pn	01 38 29.7	+0.9
YOA				e		01 38 44.2	
YOA				pmax	pmax		
	comp=Z,826nm,0.3s						
YOA				smax	smax		
	comp=E,5µm,0.5s						
NLYR	Nelyaty	1.24	68	ePg	Pn	01 38 28.8	-2.3
NLYR				e		01 38 31.4	
NLYR				max		01 38 31.5	
	comp=E,2µm,0.5s						
NLYR				eSg	Sb	01 38 45.0	-2.2
NLYR				eSb	Sn	01 38 49.1	+1.3
NLYR				max		01 38 52.0	
	comp=E,3µm,1.0s						
NLYR	Nelyaty	1.24	68	ePG	Pn	01 38 29.0	-2.1
NLYR				e		01 38 43.6	
NLYR				pmax	pmax		
	comp=Z,2µm,0.7s						
NLYR				smax	smax		
	comp=E,3µm,1.0s						
KMO	Kumora	1.38	264	ePg	Pn	01 38 33.8	+0.8
KMO				e		01 38 35.8	
KMO				max		01 38 36.9	
	comp=E,753nm,0.3s						
KMO				eSg	Sg	01 38 53.3	+1.3
KMO				e		01 38 56.8	
KMO				max		01 38 57.2	
	comp=E,3µm,0.8s						
BOD	Bodaibo	1.79	6	ePg	Pn	01 38 38.7	+0.1
BOD				Pmax		01 38 41.7	
	comp=E,609nm,0.6s						
BOD				eSg	Sn	01 39 01.7	+0.4
BOD				Smax		01 39 05.1	
	comp=E,2µm,0.9s						
BOD				e		01 39 16.6	
BOD	Bodaibo	1.79	6	ePN	Pn	01 38 39.2	+0.6
BOD				e		01 39 01.9	
BOD				pmax	pmax		
	comp=Z,604nm,1.0s						
BOD				smax	smax		
	comp=E,2µm,0.8s						
YLYR	Ulyunkhan	1.83	231	ePg	Pb	01 38 42.1	+0.8
YLYR				Pmax		01 38 44.7	
	comp=E,268nm,0.3s						
YLYR				eSg	Sg	01 39 08.2	+1.6
YLYR				Smax		01 39 10.4	
	comp=E,3µm,0.6s						
YLYR	Ulyunkhan	1.83	231	ePN	Pb	01 38 42.1	+0.8
YLYR				e		01 39 06.7	
YLYR				pmax	pmax		
	comp=Z,383nm,0.6s						
YLYR				smax	smax		
	comp=E,3µm,0.7s						
NIZ	Nizh Angarsk	2.32	265	ePn	Pn	01 38 47.4	+1.5
NIZ				ePg	Pb	01 38 50.4	+0.8
NIZ				Pmax		01 38 53.8	
	comp=E,159nm,0.7s						
NIZ				eSg	Sg	01 39 23.0	+0.8
NIZ				Smax		01 39 24.5	
	comp=E,1µm,0.8s						
CRS	Chara	2.71	70	⇑iPn	Pn	01 38 50.9	-0.4
CRS				⇑iPg	Pb	01 38 56.1	-0.2
CRS				Pmax		01 38 56.5	
	comp=E,1µm,0.9s						
CRS				eSg	Sb	01 39 30.7	+1.2
CRS				Smax		01 39 32.4	
	comp=E,720nm,1.1s						
SYVR	Suvo	3.19	223	ePn	Pn	01 39 00.5	+2.7
SYVR				ePg	Pg	01 39 07.0	-1.7
SYVR				Pmax		01 39 11.0	
	comp=E,185nm,1.0s						
SYVR				eSn	Sn	01 39 38.0	+2.1
SYVR				eSg	Sg	01 39 49.4	-0.6
SYVR				Smax		01 40 00.6	
	comp=E,1µm,1.6s						
VTMR	Vitim	3.45	351	ePn	Pn	01 39 01.2	-0.2
VTMR				ePg	Pb	01 39 08.5	-0.3
VTMR				eSn	Sn	01 39 40.7	-1.6
VTMR				eSg	Sb	01 39 52.2	+1.5
KHNR	Khani	3.63	73	ePn	Pn	01 39 04.2	+0.3
KHNR				ePg	Pb	01 39 11.7	-0.2
KHNR				eSn	Sn	01 39 45.6	-1.1
KHNR				eSg	Sb	01 39 57.7	+1.8
TUP	Tupik	3.97	112	ePn	Pn	01 39 09.4	+0.8
TUP				ePg	Pb	01 39 17.3	-0.4
TUP				Pmax		01 39 22.1	
	comp=E,85nm,1.1s						
TUP				eSn	Sn	01 39 54.5	-0.7
TUP				eSg	Sg	01 40 09.7	-5.3
TUP				Smax		01 40 15.2	
	comp=E,863nm,1.1s						
TUP	Tupik	3.97	112	ePN	Pn	01 39 09.3	+0.7
TUP				e		01 39 18.5	
TUP				eS	Sn	01 39 53.7	-1.5
TUP				e		01 40 07.5	
TUP				pmax	pmax		
	comp=Z,86nm,0.8s						
TUP				smax	smax		
	comp=E,866nm,1.0s						
MXMB	Maximikha	3.98	227	Pg	Pb	01 39 20.2	+2.3
MXMB				eSg	Sg	01 40 13.6	-1.8
CIT	Chita	4.04	181	eSg	Sg	01 40 14.4	-2.8
CIT				Smax		01 40 33.6	
	comp=E,506nm,0.4s						
CIT	Chita	4.04	181	ePN	Pn	01 39 10.0	+0.4
CIT				e		01 39 21.3	
CIT				e		01 40 15.1	
CIT				pmax	pmax		
	comp=Z,124nm,1.4s						
CIT				smax	smax		
	comp=E,763nm,1.8s						
OGRR	Ongureny	4.24	238	ePn	Pn	01 39 15.8	+3.5
OGRR				ePg	Pb	01 39 25.1	+2.8
OGRR				Pmax		01 39 28.4	
	comp=E,108nm,1.2s						
OGRR				eSg	Sg	01 40 21.9	-1.9
OGRR				Smax		01 40 32.8	
	comp=E,266nm,1.1s						
YKLR	Yuktali	4.50	80	ePg	Pb	01 39 26.5	-0.2
YKLR				eSg	Sb	01 40 25.0	+4.0
ZRHB	Zarechye	5.16	230	eSg	Sg	01 40 51.5	-1.8
ZRHB				Smax		01 41 12.6	
	comp=E,2µm,1.5s						
TRG	Tyrgan	5.38	235	eSg	Sg	01 40 58.1	-2.2
TRG				Smax		01 41 10.8	
	comp=E,197nm,1.2s						
FFNB	Fofonovo	5.70	228	eSg	Sg	01 41 07.9	-2.5
KAB	Kabansk	5.74	229	eSg	Sg	01 41 09.9	-1.9
KAB				Smax		01 41 46.5	
	comp=E,2µm,1.5s						
STDB	Stepnoy Dvoret	5.78	231	eSg	Sg	01 41 09.1	-3.9
HRMR	Khuramsha	5.94	225	ePg	Pb	01 39 55.6	+4.4
HRMR				Pmax		01 40 07.7	
	comp=E,76nm,0.6s						
HRMR				eSg	Sg	01 41 14.0	-4.1
HRMR				Smax		01 41 28.1	
	comp=E,1µm,0.8s						
IENR	Iengra	6.28	84	eSg	Sg	01 41 21.0	-8.1
BGT	Bolshoye Golou	6.29	234	eSg	Sg	01 41 26.3	-3.1
BGT				Smax		01 41 33.6	
	comp=E,174nm,1.6s						
KPC	Khapcheranga	6.40	187	ePn	Pn	01 39 43.6	+1.5
KPC				e		01 39 51.3	
KPC				ePg	Pg	01 40 05.2	-5.0
KPC				Pmax		01 40 11.2	
	comp=E,16nm,0.8s						
KPC				eSg	Sg	01 41 29.1	-4.0
KPC				Smax		01 41 45.6	
	comp=E,467nm,1.3s						
KPC	Khapcheranga	6.40	187	ePN	Pn	01 39 43.0	+0.9
KPC				e		01 40 04.4	
KPC				e		01 41 27.8	
KPC				pmax	pmax		
	comp=Z,17nm,0.7s						
KPC				smax	smax		
	comp=E,466nm,1.3s						
IRK	Irkutsk	6.69	239	eSg	Sg	01 41 37.2	-5.1
IRK				Smax		01 41 45.7	
	comp=E,306nm,0.7s						
IRK	Irkutsk	6.69	239	ePG	Pg	01 40 10.6	-5.1
IRK				e		01 41 38.1	
IRK				pmax	pmax		
	comp=Z,157nm,0.2s						
IRK				smax	smax		
	comp=E,305nm,1.1s						
TLY	Talaya	7.35	238	ePG	Pb	01 40 20.8	+5.6
TLY				e		01 41 55.4	
TLY				pmax	pmax		
	comp=Z,14nm,0.5s						
TLY				smax	smax		
	comp=E,72nm,0.6s						
HIA	Hailar	7.74	149	⇑ePN	Pn	01 40 01.0	+0.6
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARS	Arshan	7.79	243	ePn	Pn	01 40 05.1	+4.0
ARS				e		01 40 14.1	
ARS				ePg	Pb	01 40 30.0	+7.2
ARS				Pmax		01 40 31.9	
	comp=Z,23nm,1.2s						
ARS				eSg	Sg	01 42 11.4	-6.2
ARS				Smax		01 42 16.2	
	comp=Z,263nm,1.0s						
ARS	Arshan	7.79	243	ePG	Pg	01 40 31.7	-5.1
ZEA	Zeya	8.19	101	ePG	Pb	01 40 32.6	+3.2
ZEA				eS	Sn	01 41 39.5	+0.6
ZEA				e		01 42 19.2	
ZEA				smax	smax		
	comp=N,40nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,6.0s						
ZAK	Zakamensk	8.41	232	eSg	Sg	01 42 31.9	-5.5
ZAK				Smax		01 42 50.9	
	comp=Z,155nm,1.5s						
MOY	Mondy	8.66	245	ePn	Pn	01 40 15.9	+2.8
MOY				max		01 40 43.7	
	comp=Z,36nm,1.7s						
MOY				eSn	Sn	01 41 51.2	+0.4
MOY				eSg	Sg	01 42 38.1	-7.3
MOY				Smax		01 43 02.1	
	comp=Z,193nm,1.7s						
MOY	Mondy	8.66	245	ePN	Pn	01 40 17.1	+4.0
MOY				e		01 40 46.6	
MOY				eS	Sn	01 41 51.6	+0.8
MOY				e		01 42 38.7	
MOY				pmax	pmax		
	comp=Z,23nm,0.7s						
MOY				smax	smax		
	comp=E,193nm,1.7s						
ORL	Orlik	8.81	252	ePn	Pn	01 40 18.4	+3.2
ORL				max		01 40 31.1	
	comp=E,28nm,1.5s						
ORL				eSn	Sn	01 41 52.3	-2.2
ORL				eSg	Sg	01 42 43.4	-6.9
ORL				Smax		01 43 09.6	
	comp=E,85nm,2.0s						
ORL	Orlik	8.81	252	ePN	Pn	01 40 18.0	+2.8
ORL				e		01 40 47.7	
ORL				eS	Sn	01 41 52.6	-1.9
ORL				e		01 42 41.7	
ORL				pmax	pmax		
	comp=Z,29nm,1.3s						
ORL				smax	smax		
	comp=N,77nm,1.8s						
SONM	Songino Array	9.36	211	Pn	Pn	01 40 21.0	-1.6
	comp=N,0.3nm,0.3s,baz=19,slow=13,SNR=1.9						
SONM				Pg		01 40 55.3	
	comp=N,0.4nm,0.3s,baz=18,slow=16,SNR=1.9						
SONM				Lg	Lg	01 43 00.8	
	comp=N,1.8nm,0.3s,baz=29,slow=27,SNR=6.5						
KLR	Kul'dur	12.92	114	Pn	Pn	01 41 09.0	-2.3
	comp=N,0.1nm,0.3s,baz=309,slow=16,SNR=2.3						
KLR				Lg	Lg	01 44 50.6	
	comp=N,0.3nm,0.3s,baz=41,slow=18,SNR=3.4						
ZALV	Zalesovo Beam	16.61	275	Pn	Pn	01 41 56.7	-3.7
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=1.6						
ZALV				Lg	Lg	01 46 50.1	
	comp=N,0.1nm,0.3s,baz=85,slow=23,SNR=5.4						
ZALV	Zalesovo Beam	16.61	275	i P	P	01 42 05.6	+2.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
USRK	Ussuriysk Ar.	16.64	128	Lg	Lg	01 46 51.5	
	baz=325,slow=28,SNR=7.2						
TIXI	Tiksi	16.94	17	⇑eP	Pn	01 42 00.1	-4.3
DGZ	Jazzator, Alta	16.98	259	⇓eP	P	01 42 07.2	0.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MSHR	Mys Shultsa	17.60	133	⇓eP	P	01 42 13.8	0.0
NRIK	Noril'sk	17.68	329	P	Pn	01 42 08.2	-5.5
	comp=Z,0.4nm,0.3s,baz=131,slow=9.3,SNR=2.6						
NRIK				LR	LR	01 49 38.8	
	comp=Z,84nm,20.1s,baz=160,slow=39						
MA2	Magadan	19.92	64	LR	LR	01 51 10.4	
	comp=Z,25nm,19.1s,baz=302,slow=39						
KURK	Kurchatov	21.39	270	⇓eP	P	01 42 57.7	+2.5
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MKAR	Makanchi Array	21.46	258	P	P	01 42 54.9	-1.1
	comp=Z,0.7nm,0.8s,baz=57,slow=11,SNR=2.3						
MKAR				LR	LR	01 51 35.9	
	comp=Z,138nm,18.6s,baz=36,slow=38						
MKAR	Makanchi Array	21.46	258	i P	P	01 43 02.5	+6.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	21.49	270	P	P	01 42 56.4	+0.2
	comp=Z,2.0nm,0.9s,baz=66,slow=12,SNR=12						
ASAJ	Asahikawa	21.91	111	LR	LR	01 52 24.5	
	comp=Z,37nm,19.8s,baz=324,slow=39						
BVAR	Borovoye Array	24.96	281	P	P	01 43 31.7	+0.6
	comp=Z,0.3nm,0.6s,baz=53,slow=17,SNR=3.1						
BRVK	Borovoye	25.01	281	⇓eP	P	01 43 34.9	+3.5
BRVK				pmax	pmax		
	comp=Z,14nm,3.4s						
PETK	Petropavlovsk-	25.38	78	LR	LR	01 53 27.7	
	comp=Z,65nm,20.2s,baz=286,slow=36						
AAK	Ala-Archa	28.38	258	LR	LR	01 55 48.6	
	comp=Z,116nm,18.1s,baz=90,slow=37						
FINES	FINESS Array B	42.48	315	P	P	01 46 03.3	+0.8
	comp=Z,4.7nm,1.0s,baz=87,slow=9.7,SNR=6.6						
FINES	FINESS Array B	42.48	315	i P	P	01 46 04.3	+1.8
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	44.90	37	P	P	01 46 23.2	+1.3
	comp=Z,0.6nm,0.9s,baz=295,slow=6.8,SNR=6.3						
INK	Inuvik	46.57	28	P	P	01 46 35.4	+0.4
	comp=Z,0.6nm,0.6s,baz=338,slow=9.1,SNR=5.0						

YKA	Yellowknife Ar	55.97	25	P	P	01 47 45.9	+0.3
	comp=Z,0.8nm,0.7s,baz=335,slow=6.8,SNR=4.2						
ESDC	Sonseca Array	70.99	314	P	P	01 49 26.3	+1.0
	comp=Z,0.5nm,0.6s,baz=24,slow=6.7,SNR=10.0						
NVAR	Mina Array Bea	76.07	40	P	P	01 49 57.3	+1.8
	comp=Z,0.1nm,0.4s,baz=351,slow=4.6,SNR=2.0						
WRA	Warramunga Arr	77.70	160	P	P	01 50 05.0	+0.7
	comp=Z,0.7nm,0.9s,baz=351,slow=6.6,SNR=2.6						

IDC 04 01:43:22.2±17.0**,16°.71S**×**174°.76W,h543**^{km}±207^{km}**, mb3.4**/8**,mb1 3.6**/8**,mb1mx3.2**/47**,mbtmp4.3**/8**,Error ellipse: s-maj=56.3km s-min=36.5km az=121.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.25	241	P	P	01 50 28.4	+0.1
	1.6nm,0.5s,baz=60,slow=12,SNR=4.1						
WRA	Warramunga Arr	48.28	258	P	P	01 51 14.0	-0.5
	1.3nm,0.4s,baz=97,slow=6.0,SNR=65						
ASAR	Alice Springs	48.47	253	P	P	01 51 16.0	+0.1
	24nm,0.6s,baz=87,slow=7.9,SNR=407						
FITZ	Fitzroy Crossi	56.67	259	P	P	01 52 14.4	-0.1
	4.3nm,0.9s,baz=79,slow=5.8,SNR=2.1						
YBH	Yreka Blue Hor	75.43	38	P	P	01 54 10.5	-0.2
	1.9nm,0.6s,baz=172,slow=2.2,SNR=5.0						
NVAR	Mina Array Bea	76.17	42	P	P	01 54 14.8	-0.3
	1.6nm,0.8s,baz=235,slow=9.5,SNR=6.0						
ILAR	Eielson Array	83.98	12	P	P	01 54 54.8	-0.2
	0.7nm,0.6s,baz=222,slow=5.8,SNR=9.4						
PDAR	Pinedale Array	84.11	42	P	P	01 54 58.1	+1.6
	0.7nm,0.5s,baz=211,slow=3.2,SNR=1.1						
TORD	Torodi Ar. Bea	175.08	135	PKPab	PKPab	02 04 09.3	-0.9
	0.6nm,0.8s,baz=220,slow=3.8,SNR=2.8						

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*IDC **04** 01:47:12.1±0.9,38°.43N×110°.08E,h0^{km},mb3.9/8, mb1 4.0/9,mb1mx3.6/62,mbtmp3.9/9,ML3.0/1,MS3.7/2, Ms1 3.7/2,ms1mx2.7/38,Error ellipse: s-maj=33.0km s-min=16.3km az=60.0*

*NEIC **04** 01:47:13.3±1.4,38°.48N±0°.07×110°.2E±0°.1,h10^{km}±1^{km}, mb4.2/14,Error ellipse: s-maj=14.7km s-min=11.2km az=114.0*

ISC 04 01:47:16.7±0.6**,38°.54N**±0°.07×**110°.18E**±0°.09**,h35**^{km}**,n40,** σ**1^{s}29**/39**,mb4.1**/21**,Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAN	Xi'an	4.60	193		Pn	01 48 22.5	-1.4
BJT	Baijiatuau	4.88	70	Pn	Pn	01 48 26.0	-1.5
ENH	Enshi	8.27	184	Pn	Pn	01 49 11.7	-2.5
ULN	Ulaanbaatar	9.60	347	Pn	Pn	01 49 32.0	-0.5
SONM	Songino Array	9.69	345	Pn	Pn	01 49 34.0	+0.2
	0.1nm,0.3s,baz=163,slow=14,SNR=7.4						
SONM				Sn	Sn	01 51 17.6	-3.7
	baz=169,slow=25,SNR=2.8						
SONM				Lg	Lg	01 52 15.1	
	0.1nm,0.3s,baz=156,slow=28,SNR=1.7						
PAYA	Payao	21.10	208	P	P	01 51 58.9	+0.6
	11µm156nm,0.8s						
CM34	Chiang Mai Arr	21.84	209	P	P	01 52 07.0	+0.8
CM33	Chiang Mai Arr	21.95	210	P	P	01 52 08.0	+0.7
CHTO	Chiang Mai	21.95	210	P	P	01 52 07.6	+0.2
CHTO				IAmb	IAmb	01 52 12.8	
	comp=Z,12nm,1.6s						
CM35	Chiang Mai Arr	21.99	209	P	P	01 52 10.0	+2.2
MK31	Makanchi Array	22.02	301	P	P	01 52 06.6	-1.4
MKAR	Makanchi Array	22.02	301	P	P	01 52 07.6	-0.3
	comp=Z,1.9nm,0.7s,baz=101,slow=12,SNR=22						
CM36	Chiang Mai Arr	22.16	209	P	P	01 52 09.0	-0.7
MAKZ	Makanchi	22.23	301	P	P	01 52 09.5	-0.8
CM09	Chiang Mai Arr	22.27	209	P	P	01 52 11.9	+1.1
	comp=Z,6.7nm,0.8s						
CM31	Chiang Mai Arr	22.28	209	P	P	01 52 09.5	-1.4
CM31				IAmb	IAmb	01 52 11.3	
	comp=Z,18nm,1.5s						
CMAR	Chiang Mai Arr	22.28	209	P	P	01 52 09.0	-1.9
	comp=Z,2.9nm,0.8s,baz=13,slow=9.3,SNR=20						
MJAR	Matsushiro Arr	22.28	86	LR	LR	02 01 16.2	
	comp=Z,81nm,18.4s,baz=210,slow=38						
CM15	Chiang Mai Arr	22.29	209	P	P	01 52 12.6	+1.6
CM02	Chiang Mai Arr	22.30	209	P	P	01 52 10.0	-1.1
	comp=Z,57nmcomp=Z,5.5nm,0.9s						
CM01	Chiang Mai Arr	22.30	209	P	P	01 52 11.2	0.0
	comp=Z,67nmcomp=Z,7.1nm,0.8s						
CM04	Chiang Mai Arr	22.32	209	P	P	01 52 11.0	-0.3
	comp=Z,4.6nm,1.0s						
CM13	Chiang Mai Arr	22.32	209	P	P	01 52 12.0	+0.6
CM05	Chiang Mai Arr	22.33	209	P	P	01 52 10.0	-1.4
	comp=Z,3.6nm,0.9s						
JSG	Sagara	22.77	91	P	P	01 52 16.2	+0.1
ZAA0	Zalesovo Array	23.17	320	P	P	01 52 20.0	+0.1
ZAA0				IAmb	IAmb	01 52 21.1	
	comp=Z,7.5nm,1.7s						
ZALV	Zalesovo Beam	23.17	320	P	P	01 52 19.9	0.0
	comp=Z,0.7nm,0.6s,baz=112,slow=11,SNR=4.9						
KURK	Kurchatov	25.34	309	P	P	01 52 41.5	+1.4
KURBB	Kurchatov Arra	25.37	309	P	P	01 52 41.2	+0.8
	comp=Z,3.5nm,0.8s,baz=105,slow=11,SNR=20						
NIL	Nilore	30.10	272	P	P	01 53 23.2	+0.3
NIL				IAmb	IAmb	01 53 50.5	
	comp=Z,5.8nm,1.2s						
KK31	Karatay Array	30.16	291	P	P	01 53 23.4	0.0
KK31				IAmb	IAmb	01 53 47.5	
	comp=Z,6.8nm,1.8s						
KKAR	Karatay Array	30.16	291	P	P	01 53 23.1	-0.3
KKAR				IAmb	IAmb	01 53 47.5	
	comp=Z,6.8nm,1.8s						
KBL	Kabul	33.09	276	P	P	01 53 50.2	+0.7
TIXI	Tiksi	34.53	10	P	P	01 54 03.4	+2.1
TIXI				IAmb	IAmb	01 54 04.6	
	comp=Z,4.5nm,1.1s						
BRTR	Keskin Array B	57.60	297	P	P	01 57 04.0	+0.7
	comp=Z,1.1nm,0.8s,baz=72,slow=9.3,SNR=4.6						
WRA	Warramunga Arr	62.43	154	P	P	01 57 36.5	+0.1
	comp=Z,2.4nm,0.8s,baz=346,slow=7.4,SNR=16						
WB2	Warramunga Arr	62.44	154	P	P	01 57 38.1	+1.8
INK	Inuvik	63.46	22	P	P	01 57 43.9	+1.3
	comp=Z,1.3nm,0.9s,baz=291,slow=7.5,SNR=3.3						
ASAR	Alice Springs	65.76	156	P	P	01 57 58.5	+0.4
	comp=Z,1.8nm,0.8s,baz=343,slow=6.9,SNR=15						
TORD	Torodi Ar. Bea	95.85	292	LR	LR	02 49 06.2	
	comp=Z,68nm,18.0s,baz=0.0,slow=39						

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*NEIC **04** 01:49:55.6±3.0,50°.69N±0°.06×130°.21W±0°.07,h3^{km}±1^{km}, Error ellipse: s-maj=12.1km s-min=4.7km az=207.0*

*PGC **04** 01:49:55.7±0.9,50°.52N×130°.48W,h10^{km},mb4.2, MLSn3.8/32,Mw4.5,217km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*NEIC **04** 01:49:55.8,50°.52N×130°.48W,h3^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.07; M$_{\theta\theta}$-0.38; M$_{\phi\phi}$0.20; M$_{r\theta}$-0.03; M$_{\theta\phi}$0.54; M$_{\phi r}$-0.30; Fault plane solution: M$_0$6.90000×10^{15} NP1:φ$_s$164.00000°, δ80.00000°,λ154.00000°. NP2:φ$_s$258.00000°,δ65.00000°, λ11.00000°. Principal axes: T 0.6922, Plg25.0000°, Azm118.0000°; N -0.0042, Plg62.0000°, Azm323.0000°; P -0.6880, Plg10.0000°, Azm213.0000°;*

*IDC **04** 01:49:56.0±0.8,50°.67N×130°.28W,h0^{km},mb3.8/9, mb1 3.9/18,mb1mx3.8/51,mbtmp3.8/18,ML3.6/9,MS3.8/25, Ms1 3.8/25,ms1mx3.6/46 Error ellipse: s-maj=14.4km s-min=10.7km az=76.0*

*GCMT **04** 01:49:58.8±0.4,50°.50N±0°.03×130°.54W±0°.04,h15^{km}, MW4.8/76,Moment Tensor Solution. s6,c6; s76,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.09±.06; M$_{\theta\theta}$-0.34±.05; M$_{\phi\phi}$0.42±.06; M$_{r\theta}$0.78±.19; M$_{\theta\phi}$0.95±.04; M$_{\phi r}$-1.24±.19; Best double couple: M$_0$1.73600×10^{16} NP1:φ$_s$251.00000°,δ36.00000°,λ-3.00000°. NP2: φ$_s$344.00000°,δ88.00000°,λ-126.00000°. Principal axes: T 1.4850, Plg33.0000°, Azm103.0000°; N 0.5030, Plg36.0000°, Azm345.0000°; P -1.9870, Plg37.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 01:49:56.1±3.4**,50°.67N**±0°.05×**130°.27W**±0°.04**,h5**^{km}±23^{km}**, n378,**σ**1^{s}71**/351**,mb4.1**/20**,MS3.8**/17**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.36	90	Pn	Pn	01 50 20.4	-1.5
HOLB				Sn	Sb	01 50 37.9	-1.9
HOLB	Holberg	1.36	90		Pn	01 50 20.3	-1.5
HOLB					Sb	01 50 37.3	-2.5
HG4B	Hotspring	1.73	341	Pn	Pn	01 50 24.3	-2.6
HG4B				Sn	Sn	01 50 46.1	-3.2
PHC	Port Hardy	1.81	88	Pn	Pn	01 50 26.9	-1.1
PHC				Sn	Sn	01 50 49.5	-1.7
PHC	Port Hardy	1.81	88		Pn	01 50 26.9	-1.1
PHC					Sn	01 50 49.1	-2.1
MAYB	Maynard	1.99	97	Pn	Pn	01 50 29.0	-1.7
BBB	Bella Bella	2.03	41	Pn	Pn	01 50 30.9	-0.2
	33nm,0.3s,baz=243,slow=9.8,SNR=121						
BBB				Sn	Sn	01 50 54.5	-2.2
	162nm,0.3s,baz=328,slow=21,SNR=10						
BBB				LR	LR	01 51 25.6	
	comp=Z,2µm,20.2s,baz=240,slow=44						
BBB	Bella Bella	2.03	41	Pn	Pn	01 50 30.4	-0.7
BBB				Sn	Sn	01 50 56.5	-0.3
BBB	Bella Bella	2.03	41		Pn	01 50 30.3	-0.7
FHRB	Fair Harbour	2.11	106	Pn	Pn	01 50 30.3	-1.8
EDB	Eliza Dome	2.17	110	Pn	Pn	01 50 31.2	-1.7
EDB				Sn	Sn	01 50 56.6	-3.7
EDB	Eliza Dome	2.17	110		Pn	01 50 31.4	-1.6
TLCB	Telegraph Cove	2.19	92	Pn	Pn	01 50 32.4	-0.8
TLCB				Sn	Sn	01 50 59.4	-1.3
WOSB	Woss	2.42	101	Pn	Pn	01 50 35.5	-1.0
WOSB	Woss	2.42	101		Pn	01 50 35.4	-1.0
HG1B	Mitchell Dam	2.55	334	Sn	Sn	01 51 07.0	-2.5
MOBC	Moresby Island	2.69	338	Pn	Pn	01 50 37.9	-2.3
MOBC				Sn	Sn	01 51 11.0	-2.2
MOBC	Moresby Island	2.69	338		Pn	01 50 38.5	-1.7
NCRB	Newcastle Ridg	2.70	94	Pn	Pn	01 50 39.4	-1.0
ETB	Estevan Point	2.73	117	Pn	Pn	01 50 39.0	-1.6
BNAB	Bonilla	2.84	356	Pn	Pn	01 50 41.2	-0.9
GDR	Gold River	2.86	106	Pn	Pn	01 50 41.3	-1.1
DIB	Dawson Inlet,	2.88	333	Pn	Pn	01 50 40.2	-2.5
DIB				Sn	Sn	01 51 15.4	-2.3
DIB	Dawson Inlet,	2.88	333	Pn	Pn	01 50 40.4	-2.3
H02S1	DAWSON INLET T	2.88	333	Pn	Pn	01 50 40.5	-2.2
	SNR=3788						
H02S1				Sn	Sn	01 51 15.2	-2.6
H02S1	DAWSON INLET T	2.88	333		Sn	01 51 15.2	-2.6
GRNB	Grenville Isla	3.19	3	Pn	Pn	01 50 46.0	-1.0
GRNB				Sn	Sn	01 51 24.1	-1.3
TOFB	Tofino	3.20	117	Pn	Pn	01 50 45.1	-1.9
CBB	Campbell River	3.21	100	Pn	Pn	01 50 46.7	-0.5
CBB				Sn	Sn	01 51 23.7	-2.0
BTB	Buttle Lake	3.29	110	Pn	Pn	01 50 47.3	-1.2
BTB	Buttle Lake	3.29	110		Pn	01 50 47.3	-1.2
B012	Ucluelet	3.52	118	Pn	Pn	01 50 50.7	-0.8
OZB	Mount Ozzard	3.53	117	Pn	Pn	01 50 50.1	-1.6
RUBB	Prince Rupert	3.66	0	Pn	Pn	01 50 53.2	-0.3
RUBB				Sn	Sn	01 51 35.3	-1.7
RUBB	Prince Rupert	3.66	0		Pn	01 50 54.3	+0.8
NDB	Naden	3.68	335	Pn	Pn	01 50 52.7	-1.0
B927	Port Alberni	3.81	110	Pn	Pn	01 50 54.9	-0.6
TXB	Texada	3.87	102	Pn	Pn	01 50 55.9	-0.4
MGB	Mount Grey	3.98	113	Pn	Pn	01 50 57.3	-0.6
GHNB	Nanoose	4.12	107	Pn	Pn	01 50 59.4	-0.3
SHB	Sechelt	4.25	102	Pn	Pn	01 51 01.3	-0.4
NLLB	Nanaimo Lost L	4.30	107	Pn	Pn	01 51 02.2	0.0
OCP	Olym-Cheeka Pk	4.38	121	Pn	Pn	01 51 03.5	+0.2
B926	Mesachie Lake	4.39	113	Pn	Pn	01 51 03.7	+0.2
WPB	Watts Point	4.65	100	Pn	Pn	01 51 07.5	+0.5
BIB	Bowen Island	4.66	103	Pn	Pn	01 51 07.4	+0.2
GOBB	Galiano Island	4.70	109	Pn	Pn	01 51 08.4	+0.7
WSLR	Whistler	4.73	94	Pn	Pn	01 51 09.5	+1.2
OBC	Olympics--Boni	4.83	121	Pn	Pn	01 51 10.7	+1.1
B010	North Saanich	4.87	112	Pn	Pn	01 51 10.2	+0.3
PGC	Sidney	4.87	112	Pn	Pn	01 51 10.4	+0.4
PGC	Sidney	4.87	112		Pn	01 51 10.8	+0.8
B009	North Saanich	4.87	112	Pn	Pn	01 51 10.5	+0.5
B011	North Saanich	4.87	112	Pn	Pn	01 51 10.7	+0.7
SNB	Saturna Island	4.98	110	Pn	Pn	01 51 12.6	+1.0
STW	Striped Peak	4.99	118	Pn	Pn	01 51 12.5	+0.8
CRAG	Craig	5.11	341	Pn	Pn	01 51 13.0	-0.2
HNBB	Haney	5.16	103	Pn	Pn	01 51 13.6	-0.3
MCW	Mount Constitu	5.22	110	Pn	Pn	01 51 16.2	+1.3
FSB	Fort Saint Jam	5.26	41	Pn	Pn	01 51 16.2	+0.8
A04D	Lummi Island	5.28	109	P	Pn	01 51 17.4	+1.8
	baz=296,SNR=5.1						
NLWA	Neilton Lookou	5.34	125		Pn	01 51 17.3	+0.8
LLLB	Lillooet	5.34	87	Pn	Pn	01 51 17.1	+0.6
BLN	Blyn Mountain	5.46	116	Pn	Pn	01 51 19.4	+1.1
A05A	Maple Falls	5.55	104	Pn	Pn	01 51 20.9	+1.5
WISH	Wishkah	5.57	127	Pn	Pn	01 51 20.7	+1.1
HDW	Hoodsport	5.62	120	Pn	Pn	01 51 21.1	+0.7
D03D	Eldon	5.66	121	P	Pn	01 51 22.3	+1.3
	baz=308						
MBW	Mount Baker	5.75	106	Pn	Pn	01 51 23.6	+1.4
CMW	Cultus Mountai	5.76	110	Pn	Pn	01 51 23.4	+1.0
GNW	Green Mountain	5.79	120	Pn	Pn	01 51 23.6	+0.9
HOPB	Hope	5.84	99	Pn	Pn	01 51 24.2	+0.8
B05A	Bryant	5.85	111	P	Pn	01 51 24.7	+1.3
	baz=299,SNR=24						
WRAK	Wrangell Islan	5.89	349	Pn	Pn	01 51 23.5	-0.5
JCW	Jim Creek	5.98	111	Pn	Pn	01 51 26.1	+0.8
CPW	Capitol Peak	5.99	125	Pn	Pn	01 51 25.5	0.0
E03A	Lebam	6.07	130		Pn	01 51 27.9	+1.5
B06A	Marblemount	6.10	107	Pn	Pn	01 51 28.1	+1.1
B06A	Marblemount	6.10	107	Pn	Pn	01 51 28.3	+1.3
RPW	Rockport	6.11	108	Pn	Pn	01 51 28.3	+1.1
D05A	Enumclaw	6.47	119	Pn	Pn	01 51 33.7	+1.7
D05A	Enumclaw	6.47	119	Pn	Pn	01 51 33.7	+1.7
GPW	Glacier Peak	6.48	110	Pn	Pn	01 51 33.4	+1.0
E04D	Cinebar	6.56	126	P	Pn	01 51 35.6	+2.4
	baz=313						
C06D	Leavenworth	6.72	111	P	Pn	01 51 37.1	+1.6
	baz=299						
FMW	Mount Fremont	6.80	120	Pn	Pn	01 51 37.8	+1.1
LON	Longmire	6.83	122	Pn	Pn	01 51 38.1	+1.0
LON	Longmire	6.83	122		Pn	01 51 38.4	+1.3
PNT	Penticton	7.00	97	Pn	Pn	01 51 40.1	+0.8
LTY	Liberty	7.18	115	Pn	Pn	01 51 42.7	+0.9
LTY	Liberty	7.18	115		Pn	01 51 43.3	+1.5
BMBC	Bull Mountain	7.26	39	Pn	Pn	01 51 44.6	+1.7
BMBC				Sn	Sn	01 53 07.0	+1.3
B08A	Colville Reser	7.49	104	Pn	Pn	01 51 47.0	+1.0
B08A	Colville Reser	7.49	104	Pn	Pn	01 51 46.8	+0.8
F05D	White Salmon	7.58	126	P	Pn	01 51 50.3	+3.0
	baz=313						
NBC4	NorthernBC 4	7.65	45	Pn	Pn	01 51 50.1	+1.9
NBC4				Sn	Sn	01 53 16.6	+1.3
DLBC	Dease Lake	7.79	1	Pn	Pn	01 51 51.0	+0.9
	0.5nm,0.3s,baz=192,slow=18,SNR=7.1						
DLBC				Sn	Sn	01 53 19.0	+0.4
	0.5nm,0.3s,baz=269,slow=26,SNR=1.6						
DLBC	Dease Lake	7.79	1	Pn	Pn	01 51 52.0	+1.9
DLBC				Sn	Sn	01 53 21.5	+2.9
DLBC	Dease Lake	7.79	1		Sn	01 53 19.0	+0.4
H04D	Lebanon	7.98	138	P	Pn	01 51 56.4	+3.6
	baz=324						
E07A	Sunnyside	8.03	117	Pn	Pn	01 51 55.0	+1.5
G05D	Wamic, OR	8.10	129	P	Pn	01 51 58.0	+3.7
	baz=316						
H04A	Detroit Lake	8.10	135	Pn	Pn	01 51 53.9	-0.5
NBC5	NorthernBC 5	8.18	30	Pn	Pn	01 51 57.7	+2.1
D08A	Wollman Farm,	8.31	111	Pn	Pn	01 51 57.9	+0.6
HAWA	Hanford	8.31	117	Pn	Pn	01 51 58.4	+1.1
C09A	Chrisman Ranch	8.36	105	Pn	Pn	01 51 59.0	+1.1
I03D	Drain, OR	8.41	143	P	Pn	01 52 02.4	+3.8
	baz=329						
E08A	Dider Farm, El	8.53	115		Pn	01 52 01.4	+1.2
E09A	Wood Farm, Sta	9.04	113		Pn	01 52 07.9	+0.6
K02D	Willamette Mer	9.17	148	P	Pn	01 52 14.7	+5.5
	baz=333						
J04D	Umpqua Nationa	9.29	140	P	Pn	01 52 15.1	+4.2
	baz=327						
G08A	Pilot Rock	9.29	121	Pn	Pn	01 52 12.7	+1.8
PINE	Pine Mountain	9.35	134		Pn	01 52 15.0	+3.2
HUMO	Hull Mountain	9.50	145	Pn	Pn	01 52 17.0	+3.4
J05D	Fort Rock, OR	9.62	137	P	Pn	01 52 19.7	+4.3
	baz=324						
L02E	Cave Junction	9.67	149	P	Pn	01 52 19.5	+3.5
	baz=334						
F10A	Beach Ranch, E	9.87	113	Pn	Pn	01 52 19.2	+0.5
L04D	Klamath Falls	10.08	144	P	Pn	01 52 27.2	+5.6
	baz=330						
KRMB	Red Mountain	10.15	152	Pn	Pn	01 52 21.8	-0.9
WHY	Whitehorse	10.34	347	Pn	Pn	01 52 25.0	-0.2
WHY	Whitehorse	10.34	347	Pn	Pn	01 52 24.4	-0.7
YBH	Yreka Blue Hor	10.36	147	Pn	Pn	01 52 27.4	+2.0
	0.1nm,0.3s,baz=339,slow=15,SNR=6.0						
YBH				LR	LR	01 55 54.9	
	comp=Z,852nm,18.7s,baz=330,slow=35						
YBH	Yreka Blue Hor	10.36	147		Pn	01 52 23.3	-2.1
M02C	Callahan	10.61	148	P	Pn	01 52 32.8	+4.0
	baz=334						
WALA	Waterton Lakes	10.68	92	Pn	Pn	01 52 31.3	+1.4
BCPM	Bancas Point	10.71	334	Pn	Pn	01 52 28.6	-1.5
KHMM	Horse Mountain	10.80	153		Pn	01 52 29.5	-2.1
JTMT	Jette	10.86	99		Pn	01 52 32.6	+0.3
N02D	Trinity Center	11.03	149	P	Pn	01 52 39.8	+5.1
	baz=334						
MOD	Modoc Plateau	11.14	138		Pn	01 52 34.6	-1.6
KMRM	Mail Ridge	11.41	154	Pn	Pn	01 52 38.7	-1.1
MSO	Missoula	11.44	103	P	Pn	01 52 42.1	+1.9
	baz=296						
WDC	Whiskeytown Da	11.44	149	Pn	Pn	01 52 39.2	-1.0
MESA	MESA	11.59	330	Pn	Pn	01 52 41.5	-0.8
O02D	Mt. Diablo Mer	11.73	151	P	Pn	01 52 48.5	+4.4
	baz=336						
KCPM	Cahto Peak	11.95	154		Pn	01 52 45.0	-2.2
BARN	Barnard Glacie	12.20	333		Pn	01 52 49.6	-0.9
MID	Middleton Isla	12.69	320	Pn	Pn	01 52 57.0	-0.1
ORV	Oroville	12.71	148		Pn	01 52 55.4	-2.2
HOPS	Hopland Field	12.73	154		Pn	01 52 55.0	-2.8
BEKR	Beckworth	12.85	143		Pn	01 52 57.4	-2.2
MCARA	McCarthy VSAT	12.86	331	Pn	Pn	01 52 58.5	-1.0
PAHR	Pah Rah Range	13.37	141		Pn	01 53 06.9	+0.4
AFDM	Forest Hills D	13.44	147		Pn	01 53 06.4	-1.0
N25K	Chitina, Valde	13.52	330	P	Pn	01 53 10.1	+1.6
	baz=137						
VCNR	Virginia City	13.61	143		Pn	01 53 08.3	-1.7
EGMT	Eagleton	13.63	93	P	Pn	01 53 13.9	+3.8
	baz=290						
EGMT	Eagleton	13.63	93		Pn	01 53 10.5	+0.5
RUBR	Rubicon Trail	13.63	145	Pn	Pn	01 53 08.0	-2.4
PNTR	Pine Nut	13.81	143	Pn	Pn	01 53 11.5	-1.3
KLU	Klutina	13.88	327	Pn	Pn	01 53 12.2	-1.2
GLI	Glacier Island	13.89	324	Pn	Pn	01 53 12.8	-0.7
YHL	Hebgen Lake	14.08	107	Pn	Pn	01 53 18.1	+1.6
YHB	Horse Butte	14.12	107	Pn	Pn	01 53 18.4	+1.5
YHH	Holmes Hill	14.31	107	Pn	Pn	01 53 21.4	+1.7
WAKR	Walker	14.38	144	P	P	01 53 25.8	-1.9
ELK	Elko	14.42	128	LR	LR	01 58 57.0	
	comp=Z,314nm,18.1s,baz=324,slow=38						
ELK	Elko	14.42	128		Pn	01 53 21.7	+0.6
YNR	Norris Junctio	14.46	107		P	01 53 25.9	-2.7
CMB	Columbia Colle	14.46	147		Pn	01 53 20.1	-1.3
YKA	Yellowknife Ar	14.60	30	Pn	Pn	01 53 21.0	-2.2
	0.2nm,0.3s,baz=216,slow=12,SNR=19						
YKA				Sn	Sn	01 55 57.3	-7.9
	0.2nm,0.3s,baz=211,slow=22,SNR=6.8						
YKA				LR	LR	01 59 16.6	
	comp=Z,546nm,20.6s,baz=0.0,slow=38						
RYN	Ryan	14.63	141		Pn	01 53 24.4	+0.5
H17A	Grant Village	14.69	108	P	Pn	01 53 27.2	+2.4
	baz=303						
H17A	Grant Village	14.69	108		Pn	01 53 27.1	+2.4
LKWY	Lake	14.71	107		Pn	01 53 26.3	+1.4
YNE	Yellowstone No	14.72	105	Pn	Pn	01 53 26.1	+1.0
KNK	Knik Glacier	14.74	324		Pn	01 53 25.6	+0.5
K27K	Chicken	14.79	339	P	P	01 53 30.2	-1.7
	baz=149						
PAX	Paxson	14.82	332	Pn	Pn	01 53 26.2	0.0
BRLK	Bradley Lake	14.82	316	Pn	Pn	01 53 26.4	+0.2
KDAK	Kodiak Island	14.82	307	LR	LR	01 57 42.3	
	comp=Z,884nm,19.6s,baz=134,slow=32						
NVAR	Mina Array Bea	14.89	141	Pn	P	01 53 30.0	-3.4
	0.0nm,0.3s,baz=332,slow=11,SNR=6.5						
NVAR	Mina Array Bea	14.89	141	P	P	01 53 30.0	-3.4
MOOW	Moose Ponds	14.94	110		P	01 53 31.2	-2.7
MOOW				IAmb	IAmb	01 53 38.6	
	comp=Z,10nm,0.8s						
LHV	Little Huntoon	14.96	142	P	P	01 53 33.3	-0.6
REDW	Red Top Meadow	15.10	111		Pn	01 53 32.2	+1.9
LOHW	Long Hollow	15.10	110		Pn	01 53 31.4	+1.0
LOHW				IAmb	IAmb	01 53 40.5	
	comp=Z,7.5nm,0.8s						
PMR	Palmer	15.11	324		Pn	01 53 30.4	+0.4
RLMT	Red Lodge	15.12	103	Pn	P	01 53 32.6	-3.2
GHO	Glory Hole Cre	15.14	324	Pn	Pn	01 53 31.5	+0.9
SCRK	Sand Creek	15.21	336	P	P	01 53 38.5	+1.9
	baz=145,SNR=5.6						
EGAK	Eagle	15.26	342		Pn	01 53 33.1	+1.1
MDPB	Devils Postpil	15.28	144	P	P	01 53 36.6	-1.2
AHID	Auburn Hatcher	15.31	114		P	01 53 35.6	-2.3
AHID				IAmb	IAmb	01 53 47.9	
	comp=Z,14nm,1.1s						
OMMB	Old Mammoth Mi	15.33	144	P	P	01 53 37.1	-1.3
OMMB				IAmb	IAmb	01 53 56.7	
	comp=Z,14nm,1.5s						
BGU	Big Grassy Mou	15.44	122		Pn	01 53 35.9	+1.2
SPUT	South Promonto	15.49	120	Pn	P	01 53 37.1	-2.9
TPH	Tonopah	15.64	139		Pn	01 53 38.7	+1.3
PMPB	Monarch Peak	15.98	151		P	01 53 44.9	-0.4
PMPB				IAmb	IAmb	01 53 55.5	
	comp=Z,24nm,1.0s						
DUG	Dugway, Tooele	16.08	124	P	P	01 53 48.3	+1.8
	baz=317						
DUG	Dugway, Tooele	16.08	124	P	P	01 53 45.2	-1.3
TIN	Tinemaha, Big	16.11	143	P	P	01 53 51.1	+4.3
	baz=332,SNR=5.3						
R11A	Troy Canyon, C	16.13	134	P	P	01 53 45.7	-1.4
	baz=325						
R11A	Troy Canyon, C	16.13	134	P	P	01 53 45.7	-1.4
RND	Reindeer	16.19	329		Pn	01 53 44.6	+0.3
RND				IAmb	IAmb	01 54 13.2	
	comp=Z,28nm,1.5s						
TCUT	Toone Canyon	16.20	119	P	P	01 53 45.9	-2.0
BW06	Boulder Array	16.22	111	P	P	01 53 48.4	+0.3
	baz=307,SNR=8.8						
BW06	Boulder Array	16.22	111	P	P	01 53 46.5	-1.6
PD31	Pinedale Array	16.22	111	P	P	01 53 46.1	-2.0
PDAR	Pinedale Array	16.22	111	Pn	P	01 53 47.8	-0.3
	comp=Z,0.2nm,0.3s,baz=321,slow=12,SNR=24						
PDAR				LR	LR	01 59 43.6	
	comp=Z,206nm,18.7s,baz=314,slow=36						
PDAR	Pinedale Array	16.22	111	P	P	01 53 47.8	-0.3
CTU	Camp Tracy	16.30	121		P	01 53 48.4	-0.5
LAO	LASA Array	16.35	95	P	P	01 53 48.0	-1.4
	baz=294,SNR=6.7						
LAO	LASA Array	16.35	95	P	P	01 53 47.9	-1.4
LAO				IAmb	IAmb	01 53 50.2	
	comp=Z,17nm,1.1s						
MCK	McKinley	16.45	330	P	P	01 53 53.0	+2.8
	baz=134,SNR=6.9						
GRAC	Grapevine Rang	16.50	141	P	P	01 53 54.1	+3.1
	baz=330,SNR=5.3						
JLU	Jordanelle	16.52	120	P	P	01 53 51.4	-0.2
PAGB	Antelope Grade	16.60	150	P	P	01 53 52.7	+0.6
PAGB				IAmb	IAmb	01 54 08.4	
	comp=Z,21nm,1.2s						
IL31		16.60	335	P	P	01 53 50.6	-1.3
IL31				IAmb	IAmb	01 54 03.8	
	comp=Z,22nm,1.4s						
ILAR	Eielson Array	16.60	335	Pn	P	01 53 50.5	-1.5
	comp=Z,0.1nm,0.3s,baz=146,slow=8.2,SNR=18						
ILAR				LR	LR	01 59 47.1	
	comp=Z,341nm,19.2s,baz=142,slow=36						
ILAR	Eielson Array	16.60	335	P	P	01 53 50.5	-1.5
NLU	North Lily Min	16.64	123		P	01 53 53.1	+0.3
TRF	Thorofare Moun	16.70	328	P	P	01 53 52.3	-1.0
TRF				IAmb	IAmb	01 54 18.8	
	comp=Z,34nm,1.3s						
CWC	Cottonwood Cre	16.71	144	P	P	01 53 57.2	+3.7
	baz=333						
WRH	Wood River Hil	16.72	333	P	P	01 53 52.4	-0.8
CCB	Clear Creek Bu	16.77	333	P	P	01 53 53.0	-0.7
CCB				IAmb	IAmb	01 54 05.9	
	comp=Z,52nm,2.0s						
PSUT	Pine Spring	16.80	130	P	P	01 53 53.9	-0.7
BWN	Browne	16.92	330		P	01 53 54.9	-0.6
BWN				IAmb	IAmb	01 54 30.6	
	comp=Z,26nm,1.2s						
COLA	College	16.95	334		P	01 53 56.2	+0.5
TCOL	CIGO, UAF Yank	16.95	334		P	01 53 56.2	+0.4
KTH	Kantishna Hill	16.99	327	P	P	01 53 54.9	-1.4
KTH				IAmb	IAmb	01 54 00.2	
	comp=Z,25nm,1.1s						
TPNV	Topopah Spring	17.00	138	P	P	01 53 57.1	+0.3
	baz=329						
PPLA	Purkeypile	17.04	324	P	P	01 53 55.2	-1.8

MDM	Murphy Dome	17.12	334	P	Pn	01 53 55.7	-0.2
MDM				IAmb	IAmb	01 54 10.7	
	comp=Z,36nm,1.6s						
PRN	Pahroc Range	17.14	135	P	P	01 53 57.6	-0.7
PRN				IAmb	IAmb	01 54 19.1	
	comp=Z,28nm,1.9s						
ISA	Isabella, Lake	17.26	146	P	P	01 54 02.5	+3.0
	baz=334						
ISA	Isabella, Lake	17.26	146	P	P	01 54 00.1	+0.7
MPMC	Manual Prospec	17.27	143	P	P	01 54 03.2	+3.5
	baz=332						
BPAW	Bear Paw Mtn.	17.36	329		P	01 54 00.1	-0.3
SVW2	Sparrevohn	17.50	316		P	01 54 01.5	-0.4
SVW2				IAmb	IAmb	01 54 05.7	
	comp=Z,29nm,1.4s						
PKM	Mcpherson Peak	17.51	150	P	P	01 54 07.2	+4.8
	baz=338						
FFC	Flin Flon	17.56	66	P	P	01 54 04.1	+1.5
FFC				IAmb	IAmb	01 54 10.4	
	comp=Z,26nm,1.6s						
TMUT	Trail Mountain	17.58	123		P	01 54 06.1	+2.9
I23K	Minto, Yukon-K	17.59	333	P	P	01 54 02.1	-0.7
I23K				IAmb	IAmb	01 54 11.0	
	comp=Z,24nm,1.6s						
CHGN	Chignik	17.60	300		Pn	01 54 00.5	-1.4
RDMU	Red Mountain	17.60	117		P	01 54 03.7	+0.4
P17A	Butcher Ranch,	17.70	122	P	P	01 54 04.8	+0.3
INK	Inuvik	17.77	356	P	P	01 54 03.8	-1.0
	comp=Z,0.1nm,0.3s,baz=180,slow=9.1,SNR=2.7						
INK				LR	LR	02 00 19.5	
	comp=Z,159nm,18.2s,baz=182,slow=35						
INK	Inuvik	17.77	356	P	P	01 54 03.8	-1.0
CCUT	Cedar City	17.81	131	P	P	01 54 05.4	-0.4
SHPR	Sheep Range	17.84	137	P	P	01 54 05.2	-0.8
Q16A	Castle Valley	17.88	124	P	P	01 54 07.5	+1.0
SHOC	Shoshone, Teco	17.89	140	P	P	01 54 09.9	+3.5
	baz=330						
SZCU	Shurtz Canyon	17.91	130	P	P	01 54 08.7	+1.8
MLY	Manley	17.91	331	P	P	01 54 08.1	+1.6
	baz=133						
MTPU	Mount Pierson	18.01	128	P	P	01 54 10.0	+1.9
SRU	San Rafael Swe	18.08	122	P	P	01 54 09.3	+0.6
K22A	Casper	18.11	107	P	P	01 54 11.1	+2.2
	baz=305						
K22A	Casper	18.11	107	P	P	01 54 09.9	+0.9
K22A				IAmb	IAmb	01 54 18.8	
	comp=Z,17nm,1.0s						
GSC	Goldstone, Bar	18.20	142	P	P	01 54 13.6	+3.7
	baz=332						
GSC	Goldstone, Bar	18.20	142		Pn	01 54 08.9	-0.7
RWWY	Rawlins	18.26	111		P	01 54 11.7	+1.0
RWWY				IAmb	IAmb	01 54 17.5	
	comp=Z,25nm,1.7s						
LCMT	Little Creek M	18.30	132		Pn	01 54 08.8	-2.0
PKCU	Pink Cliffs	18.41	129	P	Pn	01 54 14.4	+2.0
KNB	Kanab	18.50	131	P	Pn	01 54 14.3	+1.0
TTA	Tatalina	18.53	321	P	Pn	01 54 14.3	+0.9
TTA				IAmb	IAmb	01 54 42.9	
	comp=Z,26nm,1.5s						
O20A	White River Ci	18.64	116	P	Pn	01 54 16.4	+1.4
	baz=312						
O20A	White River Ci	18.64	116	P	P	01 54 14.1	-0.8
SDPT	Sand Point	18.68	296	P	P	01 54 12.2	-2.7
MWC	Mount Wilson	18.70	147	P	P	01 54 12.2	-3.3
MWC				IAmb	IAmb	01 54 26.0	
	comp=Z,14nm,1.1s						
KUKN	Kugluktuk,NWT	18.77	18	P	Pn	01 54 18.3	+2.0
HEC	Hector,Ludlow	18.80	142	P	Pn	01 54 20.0	+3.1
	baz=332						
BFSC	Mount Baldy Ra	18.83	146	P	Pn	01 54 20.2	+2.9
	baz=335						
RSSD	Black Hills	18.87	100	P	Pn	01 54 20.0	+2.1
	baz=300						
RSSD	Black Hills	18.87	100	P	P	01 54 16.3	-1.0
RSSD				IAmb	IAmb	01 54 31.7	
	comp=Z,20nm,1.4s						
C36M	Paulatuk	18.97	7	P	Pn	01 54 20.1	+1.5
C36M	Paulatuk	18.97	7	P	Pn	01 54 19.8	+1.2
	baz=192						
C36M	Paulatuk	18.97	7	P	P	01 54 17.4	-0.6
C36M				IAmb	IAmb	01 54 26.0	
	comp=Z,16nm,1.4s						
SNCC	San Nicolas Is	19.12	152	P	P	01 54 18.8	-1.1
U15A	North Rim	19.23	131	P	P	01 54 20.7	-0.7
COLD	Coldfoot	19.36	336	P	Pn	01 54 25.2	+1.8
COLD	Coldfoot	19.36	336	P	Pn	01 54 26.1	+2.7
	baz=139,SNR=7.8						
COLD	Coldfoot	19.36	336	P	Pn	01 54 22.1	-1.3
COLD				IAmb	IAmb	01 54 34.6	
	comp=Z,10nm,1.0s						
N23A	Red Feather La	19.50	111	P	Pn	01 54 26.8	+1.3
	baz=309						
N23A	Red Feather La	19.50	111	P	Pn	01 54 25.6	+0.1
N23A				IAmb	IAmb	01 54 48.1	
	comp=Z,11nm,1.1s						
W13A	Hualapai Mount	19.58	136	P	P	01 54 24.2	-1.0
PV05	Paradox Valley	19.60	122	P	Pn	01 54 25.2	-1.4
PV05				IAmb	IAmb	01 55 09.8	
	comp=Z,34nm,2.0s						
BELC	Belle Mtn. Jos	19.66	143	P	Pn	01 54 28.2	+0.9
	baz=333						
PFO	Pinyon Flats O	19.83	144	P	Pn	01 54 28.5	-0.8
	comp=Z,0.1nm,0.3s,baz=324,slow=14,SNR=2.2						
PFO				LR	LR	02 02 40.4	
	comp=Z,153nm,18.1s,baz=319,slow=38						
PFO	Pinyon Flats O	19.83	144	P	Pn	01 54 32.1	+2.8
	baz=334						
PFO	Pinyon Flats O	19.83	144	P	Pn	01 54 29.7	+0.4
PFO				IAmb	IAmb	01 54 42.7	
	comp=Z,21nm,1.6s						
XPFO	Pion Flat	19.83	144	P	Pn	01 54 27.9	-1.5
XPFO				IAmb	IAmb	01 54 42.7	
	comp=Z,23nm,1.7s						
E28A	Huff	19.91	90	P	P	01 54 26.8	-1.7
SMCO	Snowmass	20.01	116	P	P	01 54 28.4	-1.6
MDND	Maddock	20.14	86	P	Pn	01 54 35.9	+3.1
	baz=290						
MDND	Maddock	20.14	86	P	Pn	01 54 31.2	-1.6
PDMCI	Parker Dam,Lak	20.15	138	P	Pn	01 54 34.6	+1.6
	baz=330						
BC3	Big Chuckawall	20.18	142	P	Pn	01 54 37.5	+4.1
	baz=332						
109C	Camp Elliot, M	20.24	146	P	P	01 54 30.8	-1.4
109C				IAmb	IAmb	01 54 43.0	
	comp=Z,13nm,1.1s						
TOLK	Toolik Lake Re	20.32	340	P	Pn	01 54 36.5	+1.8
	baz=143,SNR=8.3						
TOLK	Toolik Lake Re	20.32	340	P	Pn	01 54 33.4	-1.4
ISCO	Idaho Springs	20.39	113	P	Pn	01 54 37.8	+1.7
	baz=311						
ISCO	Idaho Springs	20.39	113	P	Pn	01 54 35.2	-0.9
WUAZ	Wupatki	20.40	131	P	Pn	01 54 37.1	+1.0
	baz=324						
WUAZ	Wupatki	20.40	131	P	P	01 54 33.1	-0.9
MONP2	Monument Peak	20.48	145	P	Pn	01 54 38.5	+1.3
	baz=335						
MVCO	Mesa Verde	20.56	123	P	Pn	01 54 38.1	+0.1
	baz=318						
MVCO	Mesa Verde	20.56	123	P	P	01 54 34.2	-1.6
MVCO				IAmb	IAmb	01 54 41.3	
	comp=Z,12nm,1.0s						
SWSC	Sam W. Stewart	20.67	143	P	Pn	01 54 39.9	+0.8
	baz=334						
IKP	In-Ko-Pah, Jac	20.82	145	P	Pn	01 54 41.9	+1.0
	baz=334,SNR=9.6						
RMX	La Rumorosa	20.87	144	P	P	01 54 37.7	-1.5
RMX				IAmb	IAmb	01 54 49.1	
	comp=Z,16nm,1.1s						
CBX	Cerro Bola	20.92	146	P	P	01 54 38.0	-1.7
S22A	4UR Ranch, Cre	21.08	119	P	P	01 54 44.0	+2.4
	baz=316						
S22A	4UR Ranch, Cre	21.08	119	P	P	01 54 41.2	-0.4
S22A				IAmb	IAmb	01 54 50.7	
	comp=Z,12nm,1.3s						
X16A	Lo Mia Camp, P	21.26	133	P	P	01 54 41.2	-2.1
X16A				IAmb	IAmb	01 54 55.5	
	comp=Z,11nm,1.1s						
W18A	Petrified Fore	21.52	128	P	P	01 54 44.8	-1.4
W18A				IAmb	IAmb	01 55 00.9	
	comp=Z,11nm,0.8s						
ULM	Lac du Bonnet	21.79	78	P	P	01 54 48.3	-0.4
	comp=Z,3.8nm,0.8s,baz=285,slow=12,SNR=4.7						
ULM				LR	LR	02 03 16.5	
	comp=Z,205nm,19.7s,baz=284,slow=37						
ULM	Lac du Bonnet	21.79	78	P	P	01 54 48.0	-0.7
ULM	Lac du Bonnet	21.79	78	P	P	01 54 48.3	-0.4
ULM	Lac du Bonnet	21.79	78	IAmb	IAmb	01 54 58.1	
	comp=Z,9.3nm,0.9s						
SDCO	Great Sand Dun	21.83	117	P	P	01 54 51.6	+2.0
	baz=315						
SDCO	Great Sand Dun	21.83	117	P	P	01 54 48.2	-1.4
X18A	Snowflake	21.88	130	P	P	01 54 48.0	-2.1
X18A				IAmb	IAmb	01 55 08.4	
	comp=Z,8.7nm,0.9s						
SPX	San Pedro Mart	22.50	145	P	P	01 54 56.1	-0.8
SPX				IAmb	IAmb	01 55 07.2	
	comp=Z,11nm,1.2s						
214A	Organ Pipe Nat	22.73	139	P	P	01 55 01.9	+2.9
	baz=331						
214A	Organ Pipe Nat	22.73	139	P	P	01 54 59.3	+0.3
214A				IAmb	IAmb	01 55 09.4	
	comp=Z,10nm,1.1s						
PIX	Pinacate	22.81	140	P	P	01 54 58.0	-1.7
TUC	Tucson	23.32	134	P	P	01 55 07.4	+2.3
	baz=328						
TUC	Tucson	23.32	134	P	P	01 55 05.0	-0.1
TUC				IAmb	IAmb	01 55 14.8	
	comp=Z,7.9nm,1.1s						
ANMO	Albuquerque	23.35	123	P	P	01 55 06.2	+0.7
	comp=Z,2.8nm,0.9s,baz=319,slow=10,SNR=8.7						
ANMO				LR	LR	02 04 16.0	
	comp=Z,115nm,18.5s,baz=314,slow=37						
ANMO	Albuquerque	23.35	123	P	P	01 55 07.5	+2.0
	baz=320						
ANMO	Albuquerque	23.35	123	P	P	01 55 03.7	-1.8
ECSD	EROS Data Cent	23.74	94	P	P	01 55 10.8	+1.6
	baz=299,SNR=5.2						
ECSD	EROS Data Cent	23.74	94	P	P	01 55 09.6	+0.4
ECSD				IAmb	IAmb	01 55 13.1	
	comp=Z,8.3nm,0.9s						
BNM	Barren Site	23.87	125	P	P	01 55 09.4	-1.3
SOLO	Sioux Lookout	24.20	77	P	P	01 55 13.7	+0.3
CBKS	Cedar Bluff	24.53	107	P	P	01 55 15.0	-1.6
121A	Cookes Peak, D	24.56	129	P	P	01 55 20.0	+3.0
	baz=325						
121A	Cookes Peak, D	24.56	129	P	P	01 55 16.4	-0.7
121A				IAmb	IAmb	01 55 21.4	
	comp=Z,4.8nm,0.8s						
319A	Douglas	24.79	133	P	P	01 55 17.8	-1.3
319A				IAmb	IAmb	01 55 35.7	
	comp=Z,7.7nm,1.1s						
AMTX	Amarillo	26.03	116	P	P	01 55 32.5	+2.2
	baz=316						
AMTX	Amarillo	26.03	116	P	P	01 55 29.7	-0.5
MSTX	Muleshoe	26.09	119	P	P	01 55 31.1	+0.3
MNTX	Cornudas Mount	26.44	126	P	P	01 55 36.0	+2.1
	baz=323,SNR=5.6						
MNTX	Cornudas Mount	26.44	126	P	P	01 55 33.3	-0.5
T35A	Sooner Cattle	27.70	107	P	P	01 55 45.4	+0.2
WMOK	Wichita Mounta	27.81	113	P	P	01 55 48.2	+2.0
	baz=315,SNR=7.2						
WMOK	Wichita Mounta	27.81	113	P	P	01 55 46.6	+0.4
RES	Resolute Bay	28.17	19	P	P	01 55 49.4	+0.4
	comp=Z,0.5nm,0.8s,baz=220,slow=6.6,SNR=1.7						
RES	Resolute Bay	28.17	19	P	P	01 55 49.4	+0.4
RES	Resolute Bay	28.17	19	IAmb	IAmb	01 56 05.2	
	comp=Z,7.1nm,1.4s						
OK030	Cody Creek RV	28.19	109	P	P	01 55 48.9	-0.6
JCT	Junction City	30.36	120	P	P	01 56 07.7	-1.2
WHTX	Lake Whitney,	30.55	115	P	P	01 56 12.3	+1.8
	baz=318						
SEY	Seymchan	41.43	318	P	P	01 57 44.2	+1.0
	comp=Z,1.6nm,0.7s,baz=104,slow=16,SNR=1.5						
SEY	Seymchan	41.43	318	P	P	01 57 44.2	+1.0
PETK	Petropavlovsk-	42.79	302	P	P	01 57 55.1	+0.6
	comp=Z,2.3nm,0.7s,baz=86,slow=7.4,SNR=2.4						
NRIK	Noril'sk	57.12	345	LR	LR	02 26 56.4	
	comp=Z,70nm,18.0s,baz=40,slow=39						
H11N2	WAKE ISLAND Hy	57.82	262	T	T	03 02 19.4	
	baz=43,slow=74						
H11N3	WAKE ISLAND Hy	57.82	262	T	T	03 02 17.8	
	baz=43						
H11N1	WAKE ISLAND Hy	57.84	262	T	T	03 02 21.1	
	baz=43,slow=74						
KLR	Kul'dur	58.36	310	LR	LR	02 23 43.0	
	comp=Z,82nm,21.1s,baz=4.0,slow=35						
H11S1	WAKE ISLAND Hy	58.85	261	T	T	03 03 35.8	
	baz=46,slow=74,SNR=23						
H11S2	WAKE ISLAND Hy	58.86	261	T	T	03 03 35.2	
	baz=46,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	58.87	261	T	T	03 03 35.5	
	baz=46,slow=74,SNR=10						
USRK	Ussuriysk Ar.	61.69	306	P	P	02 00 15.7	+0.8
	comp=Z,2.5nm,1.1s,baz=35,slow=5.3,SNR=3.6						
USRK				LR	LR	02 27 53.8	
	comp=Z,59nm,18.2s,baz=26,slow=37						
MJAR	Matsushiro Arr	63.66	296	LR	LR	02 23 36.6	
	comp=Z,24nm,22.0s,baz=245,slow=32						
NOA	NORSAR Array B	64.43	20	LR	LR	02 28 50.1	
	comp=Z,60nm,19.9s,baz=345,slow=36						
ROSC	El Rosal	65.18	115	LR	LR	02 34 33.4	
	comp=Z,46nm,18.6s,baz=51,slow=41						
FINES	FINESS Array B	66.64	12	LR	LR	02 29 18.0	
	comp=Z,86nm,21.3s,baz=5.5,slow=35						
KSRS	Korea Array	68.69	303	LR	LR	02 32 24.9	
	comp=Z,15nm,18.2s,baz=40,slow=37						
TIAR	Tiarei	69.97	199	*e*T	T	03 17 16.4	
	comp=Z,2.5nm,0.2s						
PPT	Papeete	70.03	200	LR	LR	02 24 41.9	
	comp=Z,58nm,19.6s,baz=186,slow=30						
PPT2	Papeete2	70.06	200	*e*LR	LR	02 22 13.7	
	comp=Z,110nm,28.0s						
PPT2	Papeete2	70.06	200	*e*T	T	03 17 22.3	
	comp=Z,4.5nm,0.3s						
PAE	Paea	70.13	200	*e*T	T	03 17 26.0	
	comp=Z,1.3nm,0.3s						
TVO	Taravao	70.17	199	*e*T	T	03 17 31.5	
	comp=Z,1.1nm,0.2s						
SONM	Songino Array	70.46	323	LR	LR	02 32 39.3	
	comp=Z,109nm,19.5s,baz=338,slow=36						
ZALV	Zalesovo Beam	71.67	339	P	P	02 01 18.7	+0.1
	comp=Z,0.2nm,0.4s,baz=29,slow=9.1,SNR=1.8						
HHC	Hu-ho-hao-te	74.05	316	*e*P	P	02 01 33.8	+0.8
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,6.6s						
TBI	Tubuai	75.62	198	*e*T	T	03 24 19.2	
	comp=Z,4.6nm,0.3s						
KURBB	Kurchatov Arra	76.14	342	P	P	02 01 45.2	+0.5
	comp=Z,0.6nm,0.9s,baz=21,slow=5.5,SNR=2.7						
GERES	GERESS Array B	76.16	24	LR	LR	02 36 50.2	
	comp=Z,38nm,18.1s,baz=323,slow=37						
AKASG	Malin Array Be	77.51	13	P	P	02 01 52.0	-0.5
	comp=Z,0.1nm,0.2s,baz=339,slow=4.6,SNR=1.7						
AKASG				LR	LR	02 35 21.3	
	comp=Z,48nm,18.9s,baz=325,slow=35						
MKAR	Makanchi Array	78.93	338	LR	LR	02 40 47.9	
	comp=Z,88nm,18.3s,baz=16,slow=39						
WMQ	Urumqi	80.26	333	*e*P	P	02 02 09.7	+1.9
CMAR	Chiang Mai Arr	98.73	313	LR	LR	02 49 33.9	
	comp=Z,54nm,18.2s,baz=217,slow=36						

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*NEIC **04** 01:54:07.2±1.4, 29°.30N±0°.06×130°.5E±0°.1, h28^{km}±6^{km}, mb4.2/15, Error ellipse: s-maj=14.4km s-min=8.2km az=86.0*

*JMA **04** 01:54:08.6, 29°.36N×130°.55E, h55^{km}±3^{km}, M3.7*

*NIED **04** 01:54:08.6, 29°.36N×130°.55E, h55^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.32; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.25; $M_{r\theta}$2.89; $M_{\theta\phi}$-0.39; $M_{\phi r}$6.53; Fault plane solution: $M_0$7.15000×10^{15} NP1:ϕ_s24.00000°, δ88.00000°, λ88.00000°. NP2:ϕ_s247.00000°, δ2.00000°, λ133.00000°.*

*IDC **04** 01:54:08.7±3.7, 29°.34N×130°.57E, h37^{km}±30^{km}, mb3.6/15, mb1 3.8/20, mb1mx3.6/48, mbtmp3.8/20, ML3.3/4, MS3.5/8, Ms1 3.5/8, ms1mx3.2/37 Error ellipse: s-maj=21.5km s-min=18.3km az=78.0*

ISC 04 01:54:08.2±0.5**, 29°.34N**±0°.04×**130°.55E**±0°.05**, h34**^{km}**, n59, σ0^{s}.75**/62**, mb3.9**/20**, MS3.6**/5**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.77	311	P	Pb	01 54 23.3	0.0
JNN				*e*S	Sb	01 54 35.1	+1.6
JYAK	Yakushimahirau	0.90	358	P	Pb	01 54 24.9	-0.5
JYAK				*e*S	Sn	01 54 36.4	+0.2
JMTN	Minamitane	1.10	16	P	Pn	01 54 27.8	+0.6
JZK	Kikaishima	1.14	206	P	Pb	01 54 29.1	-0.3
JKC	Kuchinoerabu	1.16	345	P	Pn	01 54 28.8	+0.8
JKC				S	Sb	01 54 43.6	-1.0
JTAJ	Takarajima	1.19	261	P	Pb	01 54 29.7	-0.5
JTAJ				S	Sb	01 54 44.8	-0.5
JAM	Amami Oshima	1.24	222	P	Pn	01 54 30.0	+0.9
JAM				*e*S	Sb	01 54 46.5	-0.3
JTN	Tanegashima 3	1.36	16	P	Pn	01 54 31.3	+0.4
JTN				*e*S	Sn	01 54 48.2	+0.4
JAMN	Amaminishikomi	1.62	228	P	Pn	01 54 35.4	+1.0
JAMN				S	Sn	01 54 55.2	+1.0
JTSR	Tashiro 2	1.85	10	P	Pn	01 54 38.9	+1.3
JTK	Tokunoshima	2.09	223	P	Pn	01 54 41.8	+1.0
JTK				*e*S	Sn	01 55 06.5	+0.8
JSU	Suzuyama	2.16	358	P	Pn	01 54 42.3	+0.4
JSU	Suzuyama	2.16	358		Pn	01 54 42.1	+0.3
JMZ	Minamidaito 2	3.56	170	Pn	Pn	01 54 59.6	-1.4
JNU	Nakatsue	3.78	4	Pn	Pn	01 55 05.6	+1.5
	3.1nm,0.3s,baz=184,slow=15,SNR=17						
JNU				Sn	Sn	01 55 48.6	+1.1
	1.7nm,0.3s,baz=47,slow=23,SNR=1.8						
JNU	Nakatsue	3.78	4		Pn	01 55 04.9	+0.7
JMN	Monobe	5.22	32	Pn	Pn	01 55 23.9	0.0
JHS	Saijyo	6.05	20	Pn	Pn	01 55 35.6	+0.4
JWT	Wachi	7.21	33		Pn	01 55 51.3	+0.2
INU	Inuyama	8.11	41		Pn	01 56 03.8	+0.2
KSRS	Korea Array	8.39	346	Pn	Pn	01 56 06.2	-1.1
	0.2nm,0.3s,baz=174,slow=13,SNR=1.8						
KSRS				LR	LR	01 59 41.6	
	comp=Z,202nm,19.8s,baz=168,slow=40						
JGF	Kuroka	8.49	41	Pn	Pn	01 56 09.6	+0.9
MJAR	Matsushiro Arr	9.64	40	Pn	Pn	01 56 25.8	+1.3
	0.1nm,0.3s,baz=230,slow=15,SNR=2.9						
JCJ	Chichijima	10.51	99	LR	LR	02 00 03.4	
	comp=Z,132nm,20.7s,baz=294,slow=34						
USRK	Ussuriysk Ar.	14.88	4	Pn	Pn	01 57 35.2	-0.7
	baz=172,slow=8.6,SNR=0.9						
USRK				LR	LR	02 03 51.5	
	comp=Z,100nm,18.9s,baz=182,slow=39						
BJT	Baijiatuau	15.90	316	Pn	Pn	01 57 49.4	+0.1
ENH	Enshi	18.30	278		P	01 58 19.2	-0.2
ENH				IAmb	IAmb	01 58 28.3	
	comp=Z,37nm,1.5s						
XAN	Xi'an	18.98	290	P	P	01 58 25.3	-1.5
XAN				IAmb	IAmb	01 58 37.4	
	comp=Z,7.2nm,0.8s						
KLR	Kul'dur	19.89	2	P	P	01 58 36.0	-0.5
	comp=Z,0.3nm,0.3s,baz=192,slow=6.8,SNR=11						
YSS	Yuzh-Sakhalins	19.99	25	P	P	01 58 37.8	+0.1
YSS				IAmb	IAmb	01 58 42.1	
	comp=Z,23nm,1.3s						
SONM	Songino Array	26.23	321	P	P	01 59 40.7	+0.6
	comp=Z,1.6nm,0.7s,baz=137,slow=9.3,SNR=7.0						
SONM				LR	LR	02 11 17.9	
	comp=Z,157nm,19.8s,baz=182,slow=39						
CMAR	Chiang Mai Arr	30.77	257	LR	LR	02 15 31.6	
	comp=Z,74nm,19.2s,baz=124,slow=42						
SEY	Seymchan	36.46	17	P	P	02 01 08.8	-0.8
	comp=Z,1.1nm,0.3s,baz=185,slow=3.2,SNR=5.0						
MKAR	Makanchi Array	41.10	309	P	P	02 01 49.0	+0.2
	comp=Z,0.3nm,0.5s,baz=88,slow=10,SNR=13						
MAKZ	Makanchi	41.31	309	P	P	02 01 51.0	+0.5
MAKZ				IAmb	IAmb	02 02 04.6	
	comp=Z,3.7nm,1.0s						
KURK	Kurchatov	44.06	314	P	P	02 02 13.3	+0.6
KURK				IAmb	IAmb	02 02 17.9	
	comp=Z,3.2nm,0.8s						
KURBB	Kurchatov Arra	44.10	314	P	P	02 02 13.3	+0.3
	comp=Z,0.7nm,0.3s,baz=100,slow=10,SNR=16						
NRIK	Noril'sk	46.97	341	P	P	02 02 35.5	0.0
	comp=Z,1.6nm,0.5s,baz=86,slow=11,SNR=4.3						
NRIK	Noril'sk	46.97	341	IAmb	IAmb	02 02 39.3	
	comp=Z,2.1nm,0.8s						
NIL	Nilore	48.52	290	P	P	02 02 46.8	-1.3
WRA	Warramunga Arr	49.13	175	P	P	02 02 52.0	-0.7
	comp=Z,0.8nm,0.8s,baz=357,slow=8.4,SNR=6.0						
KK31	Karatay Array	49.36	303	P	P	02 02 54.1	-0.2
KKAR	Karatay Array	49.36	303	P	P	02 02 54.6	+0.3
BRVK	Borovoye	49.45	316	P	P	02 02 55.7	+0.8
KBL	Kabul	51.76	293	P	P	02 03 11.9	-0.9
KBL				IAmb	IAmb	02 03 12.3	
	comp=Z,4.9nm,1.5s						
ASAR	Alice Springs	52.80	176	P	P	02 03 20.5	+0.3
	comp=Z,0.4nm,0.9s,baz=85,slow=7.7,SNR=4.3						
ABKAR	Akbulak array	56.07	312	P	P	02 03 43.8	0.0
ABKAR				IAmb	IAmb	02 03 48.3	
	comp=Z,2.4nm,0.9s						
AKTO	Aktyubinsk	57.15	313	LR	LR	02 30 31.2	
	comp=Z,153nm,19.9s,baz=40,slow=38						
GEYT	Alibeck	59.55	299	LR	LR	02 31 55.3	
	comp=Z,53nm,18.3s,baz=265,slow=38						
IL31		60.73	29	P	P	02 04 16.2	+0.2
IL31				IAmb	IAmb	02 04 17.2	
	comp=Z,2.7nm,1.1s						
ILAR	Eielson Array	60.73	29	P	P	02 04 16.2	+0.1
	comp=Z,0.7nm,0.8s,baz=291,slow=7.2,SNR=8.4						
WSAR	Wadi Sarin	63.86	283	LR	LR	02 35 38.2	
	comp=Z,36nm,19.7s,baz=174,slow=39						
INK	Inuvik	65.23	24	P	P	02 04 45.8	-0.1
	comp=Z,0.8nm,0.7s,baz=303,slow=4.0,SNR=4.0						
FINES	FINESS Array B	71.18	331	P	P	02 05 22.8	-0.4
	comp=Z,7.3nm,1.1s,baz=47,slow=6.1,SNR=2.2						
AKASG	Malin Array Be	74.50	320	P	P	02 05 43.5	+0.3
	comp=Z,0.5nm,0.5s,baz=59,slow=6.3,SNR=3.1						
YKA	Yellowknife Ar	74.85	26	P	P	02 05 44.1	-0.8
	comp=Z,0.4nm,0.8s,baz=314,slow=4.7,SNR=8.8						
BRTR	Keskin Array B	76.74	308	P	P	02 05 56.9	+0.5
	comp=Z,0.5nm,0.8s,baz=65,slow=8.1,SNR=1.5						
NVAR	Mina Array Bea	86.89	47	P	P	02 06 50.7	+0.8
	comp=Z,1.0nm,0.7s,baz=295,slow=5.3,SNR=10						
PDAR	Pinedale Array	89.47	40	P	P	02 07 02.9	+0.7
	comp=Z,0.4nm,0.8s,baz=72,slow=4.8,SNR=4.1						

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*IGIL **04** 02:19:34.7, 39°.42N×14°.75W, h30^{km}, ML2.2*

*MDD **04** 02:19:34.9±1.8, 39°.49N×14°.37W, h0^{km}, mb3.9/5, Error ellipse: s-maj=15.9km s-min=11.9km az=91.0, PRXIMO*

*INMG **04** 02:19:36.8±1.1, 39°.49N×14°.83W, h10^{km}, ML2.3, Error ellipse: s-maj=6.6km s-min=4.3km az=100.0*

ISC 04 02:19:31.5±3.3**, 39°.46N**±0°.05×**14°.5W**±0°.2**, h10**^{km}**, n57, σ2^{s}.39**/96**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	4.08	95	P	Pn	02 20 37.2	+3.2
	1.5nm,0.2s,SNR=7.9						
PMAFR				S	Sn	02 21 21.7	-0.1
	7.6nm,0.2s,SNR=7.8						
PMAFR	Mafra	4.08	95	*e*Pn	Pn	02 20 37.3	+3.4
PMAFR				*e*Sn	Sn	02 21 22.2	+0.4
PMAFR				A	A	02 21 27.6	
	7.3nm,0.2s						
PSBE	So Bento	4.41	87	*e*Sn	Sn	02 21 30.2	+0.2
PSBE				A	A	02 21 34.2	
	2.2nm,0.4s						
PCAS	Casmilo, Conde	4.66	81	P	Pn	02 20 45.2	+3.3
PCAS				S	Sn	02 21 35.5	-0.6
	2.4nm,0.1s						
PCAS	Casmilo, Conde	4.66	81	*e*Pn	Pn	02 20 45.2	+3.3
PCAS				*e*Sn	Sn	02 21 35.5	-0.6
PCAS				A	A	02 21 39.5	
	2.4nm,0.1s						
PTO	Porto	4.81	68	S	Sn	02 21 38.3	-1.4
	5.1nm,0.3s						
PTO	Porto	4.81	68	*e*Sn	Sn	02 21 38.3	-1.4
PTO				A	A	02 21 40.9	
	10nm,0.3s						
PNCL	Nicolau / Gran	4.85	104	S	Sn	02 21 39.1	-1.7
	2.6nm,0.4s						
PNCL	Nicolau / Gran	4.85	104	*e*Sn	Sn	02 21 39.1	-1.7
PNCL				A	A	02 21 40.7	
	2.6nm,0.4s						
PMTG	Montargil	4.88	93	P	Pn	02 20 48.0	+3.0
PMTG				S	Sn	02 21 41.6	+0.1
	1.9nm,0.8s						
PMTG	Montargil	4.88	93	*e*Pn	Pn	02 20 48.0	+3.0
PMTG				*e*Sn	Sn	02 21 41.6	+0.1
PMTG				A	A	02 21 47.2	
	1.9nm,0.8s						
PTEO	Sao Teotonio	4.92	111	P	Pn	02 20 47.3	+1.9
PTEO				S	Sn	02 21 38.5	-3.8
	2.8nm,0.9s						
PTEO	Sao Teotonio	4.92	111	*e*Pn	Pn	02 20 47.3	+1.9
PTEO				*e*Sn	Sn	02 21 38.5	-3.8
PTEO				A	A	02 21 43.1	
	5.5nm,0.9s						

PFVI	Vila Bisbo	5.03	116	P	Pn	02 20 48.3	+1.4
	4.3nm,0.1s,SNR=9.5						
PFVI				S	Sn	02 21 41.7	-3.3
	1.6nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	5.03	116	*e*Pn	Pn	02 20 48.3	+1.4
PFVI				*e*Sn	Sn	02 21 41.8	-3.3
MORF	Marmelete	5.07	113	*e*P	Pn	02 20 49.2	+1.6
MORF				*e*S	Sn	02 21 43.5	-2.7
MORF				AML	AML	02 21 46.5	
	comp=E,4.4nm,0.1s						
MORF	Marmelete	5.07	113	P	Pn	02 20 49.3	+1.7
MORF				S	Sn	02 21 42.8	-3.4
	comp=E,2.4nm,0.4s						
MORF	Marmelete	5.07	113	*e*Pn	Pn	02 20 49.3	+1.7
MORF				*e*Sn	Sn	02 21 42.8	-3.4
MORF				A	A	02 21 50.8	
	comp=E,2.4nm,0.4s						
EVO	Evora	5.14	98	P	Pn	02 20 50.9	+2.5
EVO				S	Sn	02 21 47.0	-0.8
	comp=E,2.0nm,0.3s						
EVO	Evora	5.14	98	*e*Pn	Pn	02 20 50.9	+2.5
EVO				*e*Sn	Sn	02 21 47.0	-0.8
EVO				A	A	02 21 51.1	
	comp=E,2.0nm,0.3s						
EZAM	Zamans	5.16	57	P	Pn	02 20 50.6	+1.8
	comp=E,0.3nm,0.1s,SNR=7.9						
EZAM				S	Sn	02 21 44.7	-3.6
	comp=E,2.4nm,0.2s,SNR=7.9						
MESJ	Messejana	5.17	106	*e*P	Pn	02 20 51.1	+2.2
MESJ				*e*S	Sn	02 21 46.3	-2.3
MESJ				AML	AML	02 21 48.5	
	comp=N,2.7nm,0.1s						
MESJ	Messejana	5.17	106	P	Pn	02 20 51.1	+2.2
MESJ				S	Sn	02 21 46.3	-2.3
	comp=N,2.7nm,0.1s						
PVIS	Viseu	5.22	74	P	Pn	02 20 51.8	+2.2
PVIS				S	Sn	02 21 48.5	-1.4
	comp=N,1.6nm,0.3s						
PVIS	Viseu	5.22	74	*e*Pn	Pn	02 20 51.8	+2.2
PVIS				*e*Sn	Sn	02 21 48.5	-1.4
PVIS				A	A	02 21 52.0	
	comp=N,3.1nm,0.3s						
PGAV	Gavieira, Arco	5.36	60	P	Pn	02 20 53.5	+2.0
PGAV				S	Sn	02 21 50.9	-2.4
	comp=N,2.5nm,0.6s						
PGAV	Gavieira, Arco	5.36	60	*e*Pn	Pn	02 20 53.5	+2.0
PGAV				*e*Sn	Sn	02 21 50.9	-2.4
PGAV				A	A	02 21 54.0	
	comp=N,2.5nm,0.6s						
PBEJ	Beja	5.38	103	S	Sn	02 21 51.4	-2.3
PBEJ	Beja	5.38	103	*e*Sn	Sn	02 21 51.4	-2.3
PCVE	Castro Verde	5.38	108	P	Pn	02 20 54.5	+2.7
PCVE				S	Sn	02 21 51.5	-2.3
	comp=N,2.2nm,0.4s						
PCVE	Castro Verde	5.38	108	*e*Pn	Pn	02 20 54.5	+2.7
PCVE				*e*Sn	Sn	02 21 51.5	-2.3
PCVE				A	A	02 21 55.3	
	comp=N,2.2nm,0.4s						
PESTR	Estremoz	5.40	94	*e*Sn	Sn	02 21 52.9	-1.4
PESTR				A	A	02 21 56.0	
	comp=N,1.4nm,0.4s						
MTE	Manteigas	5.43	78	S	Sn	02 21 54.1	-0.9
	comp=N,1.2nm,0.4s						
MTE	Manteigas	5.43	78	*e*Sn	Sn	02 21 54.1	-0.9
MTE				A	A	02 22 01.1	
	comp=N,2.3nm,0.4s						
EMAZ	Mazaricos	5.43	48	P	Pn	02 20 54.3	+1.8
	comp=N,0.3nm,0.1s,SNR=7.9						
EMAZ				S	Sn	02 21 52.0	-3.1
	comp=N,1.6nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	5.43	84	S	Sn	02 21 53.8	-1.2
	comp=N,1.0nm,0.4s						
PCBR	Castelo Branco	5.43	84	*e*Sn	Sn	02 21 53.8	-1.2
PCBR				A	A	02 21 57.3	
	comp=N,2.0nm,0.4s						
ELOB	Lobios	5.46	62	P	Pn	02 20 54.7	+1.8
	comp=N,0.3nm,0.1s,SNR=5.9						
ELOB				S	Sn	02 21 53.6	-2.2
	comp=N,1.7nm,0.1s,SNR=7.4						
POLO	Lamas de Olo	5.46	67	P	Pn	02 20 55.0	+2.0
POLO				S	Sn	02 21 53.9	-2.0
	comp=N,1.0nm,0.9s						
POLO	Lamas de Olo	5.46	67	*e*Pn	Pn	02 20 55.0	+2.0
POLO				*e*Sn	Sn	02 21 53.9	-2.0
POLO				A	A	02 21 56.2	
	comp=N,1.0nm,0.9s						
PMRV	Marv??o	5.50	88	P	Pn	02 20 56.0	+2.5
PMRV				S	Sn	02 21 55.2	-1.6
	comp=N,1.3nm,0.2s						
PMRV	Marv??o	5.50	88	*e*Pn	Pn	02 20 56.0	+2.5
PMRV				*e*Sn	Sn	02 21 55.2	-1.6
PMRV				A	A	02 22 01.6	
	comp=N,1.3nm,0.2s						
PBDV	Barranco-do-Ve	5.62	111	P	Pn	02 20 57.5	+2.5
PBDV				S	Sn	02 21 56.6	-3.0
	comp=N,2.7nm,0.8s						
PBDV	Barranco-do-Ve	5.62	111	*e*Pn	Pn	02 20 57.5	+2.5
PBDV				*e*Sn	Sn	02 21 56.6	-3.0
PBDV				A	A	02 22 06.0	
	comp=N,2.7nm,0.8s						
EGRO	El Granado	5.83	107	P	Pn	02 20 59.9	+2.0
	comp=N,0.9nm,0.3s,SNR=4.6						
EGRO				S	Sn	02 22 01.4	-3.4
	comp=N,0.8nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	5.88	53	P	Pn	02 21 00.2	+1.5
	comp=N,0.7nm,0.2s,SNR=7.9						
EAGO				S	Sn	02 22 02.8	-3.3
	comp=N,2.5nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.96	71	P	Pn	02 21 01.6	+1.8
	comp=N,0.2nm,0.1s,SNR=7.9						
MVO				S	Sn	02 22 05.4	-2.7
	comp=N,1.5nm,0.1s,SNR=8.9						
MVO	Moncorvo	5.96	71	*e*Pn	Pn	02 21 02.1	+2.3
MVO				*e*Sn	Sn	02 22 05.9	-2.2
MVO				A	A	02 22 11.9	
	comp=N,2.1nm,0.4s						
PBRG	Braganca	6.35	66	S	Sn	02 22 15.3	-2.4
	comp=N,0.6nm,0.4s						
PBRG	Braganca	6.35	66	*e*Sn	Sn	02 22 15.3	-2.4
PBRG				A	A	02 22 18.6	
	comp=N,1.1nm,0.4s						
EMIN	Mina Concepcio	6.36	103	P	Pn	02 21 07.8	+2.6
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	02 22 13.6	-4.2
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAL	Calabor	6.40	65	P	Pn	02 21 08.2	+2.4
	comp=N,0.8nm,0.3s,SNR=5.9						
ECAL				S	Sn	02 22 16.7	-2.3
	comp=N,0.8nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.51	82	S	Sn	02 22 18.8	-3.0
	comp=N,0.6nm,0.1s,SNR=7.9						
EPON	Pontenova	6.74	53	S	Sn	02 22 23.4	-3.9
	comp=N,1.3nm,0.2s,SNR=7.9						
ECAB	El Cabril	7.23	98	P	Pn	02 21 19.6	+2.4
	comp=N,0.1nm,0.1s,SNR=6.1						
ECAB				S	Sn	02 22 36.8	-2.5
	comp=N,0.7nm,0.2s,SNR=7.9						
PAB	San Pablo	7.85	86	S	Sn	02 22 51.4	-3.3
	comp=N,0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	7.85	96	S	Sn	02 22 53.2	-1.5
	comp=N,0.4nm,0.1s,SNR=7.9						

SJA ***04*** *02:38:47.6±0.6, 21°.43S×66°.74W, h252^{km}±4^{km}, ML4.4, MW4.2*

IDC ***04*** *02:38:48.3±0.8, 21°.30S×66°.57W, h203^{km}±8^{km}, mb3.6/12, mb1 3.8/19, mb1mx3.6/45, mbtmp4.2/19, Error ellipse: s-maj=12.8km s-min=10.1km az=152.0*

VAO ***04*** *02:38:48.9±0.2, 21°.29S×66°.91W, h238^{km}, mb4.2*

NEIC ***04*** *02:38:49.1±2.0, 21°.50S±0°.08×66°.8W±0°.1, h236^{km}±7^{km}, mb4.3/19, Error ellipse: s-maj=13.6km s-min=10.8km az=75.0*

GUC ***04*** *02:38:50.3±0.5, 21°.41S×66°.92W, h244^{km}±6^{km}, ML4.4*

SCB ***04*** *02:38:53.5±3.1, 21°.36S×66°.84W, h182^{km}±51^{km}, ML4.2/4, Error ellipse: s-maj=23.9km s-min=18.1km az=1.0*

ISC 04 02:38:48.8±0.6**, 21°.37S**±0°.04×**66°.79W**±0°.04**, h224**^{km}±6^{km}**, n170,** σ1^{s}**63**/203**, mb4.0**/16**, 5C-8D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	2.24	145	*e*P	Pn	02 39 32.9	+1.0
HJA				*e*S	S	02 40 06.5	+1.1
HJA				IAML		02 40 08.1	
	comp=Z,517nm,0.7s						
PB09	IPOC Station P	2.32	259	⇓*i*P	Pn	02 39 34.1	+1.7
PB09				*i* S	S	02 40 07.5	+1.0
PB09				IAML		02 40 12.8	
	comp=N,432nm,0.6s						
PB09	IPOC Station P	2.32	259		Pn	02 39 33.9	+1.4
PB09	IPOC Station P	2.32	259	P	Pn	02 39 34.2	+1.7
PB09	IPOC Station P	2.32	259	*e*P	Pn	02 39 34.1	+1.7
PB09				*e*S	S	02 40 08.4	+1.9
PB09				IAML		02 40 11.0	
	comp=Z,445nm,0.6s						
LVC	Limon Verde	2.32	237	P	Pn	02 39 34.2	+1.4
	comp=Z,9.4nm,0.3s,baz=46,slow=7.9,SNR=120						
LVC				S	S	02 40 07.6	+0.7
	comp=Z,57nm,0.3s,baz=229,slow=17,SNR=34						
LVC	Limon Verde	2.32	237	⇑*i*P	Pn	02 39 34.1	+1.4
LVC				*e*S	S	02 40 07.9	+1.0
LVC	Limon Verde	2.32	237	Pn	Pn	02 39 34.1	+1.4
LVC	Limon Verde	2.32	237	*e*P	Pn	02 39 34.3	+1.6
LVC				*e*S	S	02 40 08.7	+1.8
LVC	Limon Verde	2.32	237	*e*P	Pn	02 39 33.9	+1.2
LVC				*e*S	S	02 40 07.3	+0.4
PB08	IPOC Station P	2.52	298	⇓*i*P	Pn	02 39 36.8	+1.9
PB08				*i* S	S	02 40 12.9	+2.1
PB08				IAML		02 40 16.3	
	comp=E,684nm,0.2s						
PB08	IPOC Station P	2.52	298		Pn	02 39 36.8	+1.9
PB08	IPOC Station P	2.52	298	P	Pn	02 39 36.8	+1.9
PB08				S	S	02 40 09.2	-1.5
PB08				IAML		02 40 15.2	
	comp=E,628nm,0.2s						
PB08	IPOC Station P	2.52	298	*e*P	Pn	02 39 37.0	+2.1
PB08				*e*S	S	02 40 13.2	+2.4
PB08				IAML		02 40 16.6	
	comp=Z,354nm,0.5s						
PB01	IPOC Station P	2.54	277	⇓*i*P	Pn	02 39 35.6	+1.0
PB01				*i* S	S	02 40 11.0	+0.6
PB01				IAML		02 40 12.9	
	comp=N,1µm,0.2s						
PB01	IPOC Station P	2.54	277		Pn	02 39 36.2	+1.5
PB01	IPOC Station P	2.54	277	P	Pn	02 39 36.0	+1.3
PB01				S	S	02 40 07.3	-3.1
PB01				IAML		02 40 13.7	
	comp=N,752nm,0.2s						
PB01	IPOC Station P	2.54	277	*e*P	Pn	02 39 36.0	+1.3
PB01				*e*S	S	02 40 12.5	+2.1
PB01				IAML		02 40 16.0	
	comp=Z,653nm,0.2s						
GO01	Chusmiza	2.81	306	⇑*i*P	Pn	02 39 39.9	+1.7
GO01	Chusmiza	2.81	306		Pn	02 39 39.8	+1.7
PB03	IPOC Station P	2.83	256	⇓*i*P	Pn	02 39 38.8	+0.8
PB03				*i* S	S	02 40 16.3	-0.1
PB03	IPOC Station P	2.83	256	*e*P	Pn	02 39 39.1	+1.0
PB03				*e*S	S	02 40 16.4	0.0
PB03				IAML		02 40 17.1	
	comp=Z,1µm,0.2s						
PB07	IPOC Station P	2.90	262	⇓*i*P	Pn	02 39 39.6	+0.8
PB07				*e*S	S	02 40 17.5	-0.3
PB07	IPOC Station P	2.90	262		Pn	02 39 40.0	+1.3
PB07	IPOC Station P	2.90	262	*e*P	Pn	02 39 39.9	+1.1
PB07				*e*S	S	02 40 17.8	0.0
PB07				IAML		02 40 18.9	
	comp=Z,2µm,0.3s						
PB04	IPOC Station P	3.26	252	⇓*i*P	Pn	02 39 43.6	+0.8
PB04				*i* S	S	02 40 24.3	-0.9
PB04	IPOC Station P	3.26	252		Pn	02 39 44.0	+1.1
PB04	IPOC Station P	3.26	252	P	Pn	02 39 44.0	+1.1
PB04				S	S	02 40 21.4	-3.8
PB04				IAML		02 40 26.7	
	comp=Z,646nm,0.4s						
PB04	IPOC Station P	3.26	252	*e*P	Pn	02 39 43.8	+0.9
PB04				*e*S	S	02 40 24.8	-0.5
PB04				IAML		02 40 26.5	
	comp=Z,562nm,0.1s						
TA01	Diego Aracena	3.27	284	⇓*i*P	Pn	02 39 43.2	+0.4
TA01				*i* S	S	02 40 23.8	-1.1
TA01	Diego Aracena	3.27	284	Pn	Pn	02 39 43.0	+0.2
TA02	Huaiquique	3.31	289	*e*P	Pn	02 39 44.1	+0.8
TA02				*e*S	S	02 40 24.8	-1.1
MNMC	Minye Minye	3.44	310	⇑*i*P	Pn	02 39 46.8	+1.7
MNMC				*e*S	S	02 40 30.1	+0.8
MNMC	Minye Minye	3.44	310		Pn	02 39 46.7	+1.7
MNMC	Minye Minye	3.44	310	P	Pn	02 39 46.9	+1.7
MNMC				S	S	02 40 25.6	-3.7
MNMCX	Minye Minye	3.44	310	*e*P	Pn	02 39 46.8	+1.7
PB05	IPOC Station P	3.49	244	⇓*i*P	Pn	02 39 46.3	+0.8
PB05				*e*S	S	02 40 28.7	-1.2
PB05	IPOC Station P	3.49	244	*e*P	Pn	02 39 46.5	+1.1
PB05				*e*S	S	02 40 28.8	-1.2
PB05				IAML		02 40 32.7	
	comp=Z,287nm,1.0s						
SLA	San Lorenzo	3.54	161	P	Pn	02 39 47.6	+1.5
SLA	San Lorenzo	3.54	161	*e*P	Pn	02 39 47.2	+1.1
PSGC	Pisagua	3.58	299	*e*P	Pn	02 39 47.0	+0.4
PSGC				*e*S	S	02 40 30.6	-1.3
PSGC	Pisagua	3.58	299	P	Pn	02 39 47.2	+0.6
PSGC				S	S	02 40 28.1	-3.8
PSGCX	Pisagua	3.58	299	Pn	Pn	02 39 47.1	+0.5
PB16	IPOC Station P	3.95	319	⇑*i*P	Pn	02 39 53.8	+2.3
PB16				*i* S	S	02 40 42.2	+1.5
PB16	IPOC Station P	3.95	319	Pn	Pn	02 39 53.4	+1.9
PB10	IPOC Station P	4.08	238	*e*P	Pn	02 39 53.4	+1.0
PB10				*i* S	S	02 40 40.2	-2.4
PB10	IPOC Station P	4.08	238	Pn	Pn	02 39 53.1	+0.6
PB10	IPOC Station P	4.08	238	P	Pn	02 39 53.5	+1.0
PB10	IPOC Station P	4.08	238	*e*P	Pn	02 39 53.4	+1.0
PB10				*e*S	S	02 40 40.1	-2.5
PB10				IAML		02 40 42.7	
	comp=Z,255nm,0.4s						
AP01	Chacalluta	4.48	311	Pn	Pn	02 39 59.2	+1.9
GO02	Mina Guanaco	4.57	214	Pn	Pn	02 39 59.6	+0.8
PB14	IPOC Station P	4.65	225	Pn	Pn	02 39 60.0	+0.3
PB14	IPOC Station P	4.65	225	*e*P	Pn	02 40 00.3	+0.6
PB14				*e*S	S	02 40 53.0	-2.6
PB14				IAML		02 40 55.2	
	comp=Z,565nm,0.7s						
BBOE	La Paz, Chanca	4.67	346	P	Pn	02 40 02.6	+2.3
BBOD	La Paz, Gloria	5.00	340	P	Pn	02 40 06.8	+2.4
BBOD				S	S	02 41 00.7	-3.4
BBOD				IAML		02 41 08.1	
	comp=Z,93nm,0.6s						
BS09	Huarina	5.43	341	P	Pn	02 40 12.0	+2.3
AHML	Horco Molle	5.56	166	P	Pn	02 40 11.8	+1.0
AHML	Horco Molle	5.56	166	*e*P	Pn	02 40 11.9	+1.0
AC02	Maricunga	5.85	201	Pn	Pn	02 40 14.8	-0.1
AC01	Pan de Azucar	5.90	215	Pn	Pn	02 40 14.6	-0.5
GO03	Copiap	6.95	206	Pn	Pn	02 40 27.5	-1.0
CYA	Choya	7.10	173	*e*P	Pn	02 40 31.2	+0.7
VCA	Vinchina	7.45	190	*e*P	Pn	02 40 36.0	+1.0
VCA				*e*S	S	02 42 00.1	+0.1
VCA				IAML		02 42 09.1	
	comp=Z,22nm,1.8s						
SIV	San Ignacio	7.61	46	P	Pn	02 40 35.6	-1.6
	comp=Z,2.9nm,0.3s,baz=245,slow=8.2,SNR=142						
SIV				S	S	02 41 58.5	-5.3
	comp=Z,0.4nm,0.3s,baz=288,slow=19,SNR=4.1						
SIV	San Ignacio	7.61	46	Pn	Pn	02 40 36.3	-0.9
AC04	Llanos de Chal	7.84	209		Pn	02 40 37.6	-2.4
AC05	El Transito	8.08	202	Pn	Pn	02 40 41.7	-1.4
LCO	Las Campanas	8.39	204		Pn	02 40 45.2	-2.0
CO01	Juntas del Tor	9.08	198		Pn	02 40 54.5	-1.5
GO04	Tololo Observa	9.48	202		Pn	02 40 59.4	-1.8
CPUP	Villa Florida	9.97	122	P	Pn	02 41 06.3	-0.9
	comp=Z,0.1nm,0.3s,baz=313,slow=16,SNR=3.9						
CPUP	Villa Florida	9.97	122	*e*P	Pn	02 41 06.9	-0.3
CO03	El Pedregal	10.06	200	Pn	Pn	02 41 06.4	-2.1
ZON	Zonda	10.28	189		Pn	02 41 10.2	-1.0
AQDB	Aquidauana	10.41	87	*e*P	Pn	02 41 13.4	+0.5
VILB	Vilhena	10.47	38	*e*P	Pn	02 41 13.5	-0.3
CO02	Combarbal	10.50	200		Pn	02 41 12.1	-2.0
ETMB	Extrema	11.50	3	*e*P	Pn	02 41 26.4	-0.4
VA03	San Esteban	11.83	196		Pn	02 41 31.8	+0.8
PP1B	Ponte de Pedra	11.84	74	*e*P	Pn	02 41 30.2	-1.0
MT02	Curacav	12.46	197		Pn	02 41 38.5	-0.1
MT05	Renca	12.48	195	Pn	Pn	02 41 35.1	-3.9
SAML	Samuel	12.83	16	*e*P	Pn	02 41 43.3	-0.1
TRCB	Terra Rica	13.20	99	*e*P	P	02 41 52.1	+1.7
NNA	Nana	13.40	313	P	P	02 41 53.1	+0.5
	comp=Z,1.4nm,0.3s,baz=146,slow=11,SNR=8.9						
NNA	Nana	13.40	313	Pn	Pn	02 41 48.9	-1.7
BO02	Sierra Bellavi	13.83	194	Pn	Pn	02 41 51.9	-3.8
PCMB	Pacaembu	14.46	94	*e*P	Pn	02 42 03.7	+0.2
ITAB	Concordia	14.58	116	*e*P	P	02 42 06.2	+0.6
CZSB	Cruzeiro do Su	14.71	336	*e*P	Pn	02 42 03.3	-3.3
CPSB	Cacapava Do Su	15.00	130	*e*P	Pn	02 42 11.1	+1.1
ARAG	Araguaiana, MT	15.28	71	*e*P	Pn	02 42 14.1	+0.6
ITRB	Iturama	15.48	87	*e*P	Pn	02 42 16.7	+0.8
PLTB	Pedras Altas	15.68	134	*e*P	Pn	02 42 18.4	+0.1
CNLB	Canela	16.43	122	*e*P	Pn	02 42 27.2	+0.1
SNDB	Serra Nova Dou	17.53	60	*e*P	P	02 42 38.2	+0.2
IPMB	Ipameri, GO	17.82	82	*e*P	P	02 42 41.9	+0.6
LC01	Cunco	18.01	193	P	P	02 42 38.7	-4.4
LC01				IAmb	IAmb	02 42 47.8	
	comp=Z,19nm,1.1s						
NPGB	Novo Progresso	18.02	39	*e*P	P	02 42 42.8	-0.6
SPB	Sao Paulo	18.03	101	P	P	02 42 43.3	-0.1
SPB	Sao Paulo	18.03	101	*e*P	P	02 42 44.4	+0.9
ATAH	Atahualpa	18.05	320	P	Pn	02 42 47.9	+1.1
	comp=Z,0.4nm,0.3s,baz=130,slow=12,SNR=10						
PET01	Itanhaem-SP	18.23	103	*e*P	P	02 42 46.4	+0.9
VAO	Valinhos	18.43	99	*e*P	P	02 42 47.9	0.0
BDFB	Brasilia	18.69	75	P	P	02 42 51.2	+0.5
	comp=Z,1.8nm,0.3s,baz=248,slow=7.3,SNR=20						
BDFB	Brasilia	18.69	75	IAmb	IAmb	02 42 52.1	
	comp=Z,9.6nm,0.9s						
MACA	Manacapuru-AM	19.05	19	*e*P	P	02 42 53.8	-0.7
PLCA	Paso Flores	19.57	189	P	Pn	02 43 02.7	-1.4
	comp=Z,0.2nm,0.3s,baz=8.8,slow=16,SNR=4.5						
PLCA	Paso Flores	19.57	189	IAmb	IAmb	02 43 19.9	
	comp=Z,7.7nm,1.1s						
PARB	Paraibuna	19.68	100	*e*P	P	02 43 01.3	+0.1
ITTB	Itaituba	20.02	34	*e*P	P	02 43 03.5	-1.4
BSCB	Bom Sucesso	20.54	93	*e*P	P	02 43 10.3	-0.1
PTGA	Pitinga	21.57	19	P	P	02 43 19.1	-1.9
	comp=Z,2.0nm,0.2s,baz=217,slow=12,SNR=6.9						
VAS01	Vassouras-RJ	21.70	97	*e*P	P	02 43 21.7	-0.5
JANB	Januaria	22.25	77	*e*P	P	02 43 26.9	-0.6
SMTB	Santa Maria do	22.29	59	*e*P	P	02 43 27.4	-0.4
PRPB	Parauapebas	22.32	50	*e*P	P	02 43 27.2	-1.0
SDBA	SAO DESIDERIO	22.74	70	*e*P	P	02 43 31.3	-0.7
MALB	Monte Alegre	22.92	34	*e*P	P	02 43 33.5	0.0
SJMB	Sao Joao De Ma	24.20	88	*e*P	P	02 43 44.7	-0.4
OTAV	Otavalo	24.30	331	*e*P	P	02 43 50.4	+3.9
OTAV	Otavalo	24.30	331	*e*P	P	02 43 43.6	-3.0
ALF01	Guarapari-ES	24.34	93	*e*P	P	02 43 46.1	-0.3
GUVC	San Jose del G	24.44	346	*e*P	P	02 43 48.1	+0.8
RIB01	Linhares ES	24.83	90	*e*P	P	02 43 50.7	-0.1
NAN01	Guarapari, ES	25.35	87	*e*P	P	02 43 55.1	-0.5
BBAC	Balboa, Cauca	25.40	335	*e*P	P	02 43 58.7	+2.6
ORTC	Ortega, Tolima	26.45	341	*e*P	P	02 44 05.9	+0.5
CHIC	Chingaza	26.72	344	*e*P	P	02 44 09.4	+1.2
GDU01	Guandu, BA	27.01	78	*e*P	P	02 44 08.2	-2.2
PLMC	San Jos del P	27.72	339	*e*P	P	02 44 17.3	+0.6
CBOC	Ciudad Bolivar	28.53	341	*e*P	P	02 44 26.0	+1.9
PTBC	PUERTO BERRIO,	28.73	344	*e*P	P	02 44 23.6	-2.0
SOCV	Socops	29.73	352	*e*P	P	02 44 32.5	-1.9
ZARC	Zaragoza, Cauc	29.75	344	*e*P	P	02 44 29.8	-4.8
BELA	Belgrano 2	58.61	172	P	P	02 48 20.8	-1.0
BLA	Blacksburg	59.66	347	P	P	02 48 28.3	-1.2
S39A	Bolivar	63.83	337	P	P	02 48 57.8	+0.5
M50A	Fremont	64.25	346	P	P	02 48 59.4	-0.4
MSTX	Muleshoe	64.82	327	P	P	02 49 02.6	-1.3
MSTX				IAmb	IAmb	02 49 06.6	
	comp=Z,5.2nm,1.0s						
LIC	Lamto	66.46	73	*e*P	P	02 49 14.2	-0.5
	comp=Z,9.7nm,0.8s						
TIC	Toumodi	66.65	72	*e*P	P	02 49 15.6	-0.3
KIC	Kosan Boka	66.78	73	*e*P	P	02 49 16.4	-0.3
	comp=Z,16nm,0.8s						
DBIC	Dimbokro	66.81	72	P	P	02 49 16.8	-0.1
	comp=Z,7.3nm,0.8s,baz=209,slow=7.5,SNR=14						
DBIC	Dimbokro	66.81	72	P	P	02 49 16.1	-0.7
ANMO	Albuquerque	67.49	325	P	P	02 49 23.5	+2.6
	comp=Z,0.9nm,0.7s,baz=106,slow=7.4,SNR=5.0						
ANMO	Albuquerque	67.49	325	IAmb	IAmb	02 51 06.1	
	comp=Z,10nm,1.9s						
KSCO	Kaye Shedlock’	68.80	331	P	P	02 49 27.9	-1.1
KOWA	Kowa	71.16	66	P	P	02 49 42.8	-0.8
KOWA				IAmb	IAmb	02 49 44.1	
	comp=Z,6.1nm,0.8s						
SRU	San Rafael Swe	72.76	326	P	P	02 49 52.5	-0.3
PDAR	Pinedale Array	75.00	329	P	P	02 50 07.9	+2.1
	comp=Z,0.4nm,0.6s,baz=120,slow=9.5,SNR=5.0						
TOA0	Torodi Ar. Sit	75.46	69	P	P	02 50 08.8	0.0
TORD	Torodi Ar. Bea	75.46	69	P	P	02 50 08.5	-0.2
	comp=Z,13nm,0.7s,baz=258,slow=5.3,SNR=75						
ULM	Lac du Bonnet	75.81	341	P	P	02 50 10.4	+0.6
	comp=Z,1.3nm,0.6s,baz=162,slow=6.4,SNR=4.5						
ELK	Elko	76.45	324	P	P	02 50 17.0	+2.9
	comp=Z,0.6nm,0.6s,baz=90,slow=5.1,SNR=2.5						
ELK	Elko	76.45	324	IAmb	IAmb	02 50 18.3	
	comp=Z,5.9nm,1.6s						
NVAR	Mina Array Bea	76.62	321	P	P	02 50 18.2	+3.1
	comp=Z,0.8nm,0.8s,baz=164,slow=7.2,SNR=7.2						
VNDA	Vanda	77.32	190	P	P	02 50 21.4	+3.4
	comp=Z,0.5nm,0.7s,baz=99,slow=6.3,SNR=2.2						
BOSA	Boshof	81.76	117	P	P	02 50 43.9	+0.8
	comp=Z,2.7nm,0.8s,baz=217,slow=2.8,SNR=5.4						
TAM	Tamanrasset	83.01	62	P	P	02 50 49.0	-0.6
ESDC	Sonseca Array	84.37	44	P	P	02 50 57.3	+1.3
	comp=Z,2.1nm,1.1s,baz=259,slow=4.3,SNR=8.0						
YKA	Yellowknife Ar	91.73	340	P	P	02 51 32.2	+1.9
	comp=Z,1.3nm,0.7s,baz=126,slow=5.3,SNR=23						
ASAR	Alice Springs	130.91	205	PKP	PKiKP	02 57 35.7	+0.5
	comp=Z,0.4nm,0.5s,baz=132,slow=1.7,SNR=6.9						
WRA	Warramunga Arr	134.03	208	PKP	PKiKP	02 57 41.9	+0.3
	comp=Z,0.6nm,0.7s,baz=152,slow=1.8,SNR=8.2						
ZALV	Zalesovo Beam	140.97	27	PKP	PKiKP	02 57 52.8	-1.8
	comp=Z,1.5nm,0.7s,baz=318,slow=2.0,SNR=6.8						
KSH	Kashi	143.47	52	PKP	PKPdf	02 57 57.1	+0.1
MKAR	Makanchi Array	144.35	37	PKP	PKPdf	02 57 58.8	+0.7
	comp=Z,4.7nm,0.7s,baz=316,slow=3.7,SNR=58						
KLR	Kul'dur	148.52	336	PKPbc	PKiKP	02 58 10.0	-0.3
	comp=Z,0.5nm,0.6s,baz=68,slow=5.4,SNR=4.6						
SONM	Songino Array	153.03	10	PKP	PKPdf	02 58 14.4	+2.2
	comp=Z,0.9nm,0.8s,baz=318,slow=1.9,SNR=4.2						
SONM				PKPbc	PKiKP	02 58 21.4	+1.6
	comp=Z,1.5nm,0.8s,baz=286,slow=1.2,SNR=5.4						
LZH	Lanzhou	163.21	27	⇑PKP	PKPdf	02 58 24.0	-0.9
LZH				PKP	PKPab	02 59 19.2	+2.8
LZH				pPKP	pPKPdf	02 59 24.6	+0.4
LZH				sPKP		02 59 51.5	

ANF ***04*** *02:58:10.0±0.1, 34°.62N×118°.62W, h12^{km}±1^{km}, ML3.0/36, Error ellipse: s-maj=1.5km s-min=1.3km az=170.0*

PAS ***04*** *02:58:10.8±1.4, 34°.610N±0°.008×118°.636W±0°.008, h9^{km}±2^{km}, ML3.0/139, ML2.7/62(NEIC), Error ellipse: s-maj=1.3km s-min=0.9km az=211.0*

SCEDC ***04*** *02:58:10.8, 34°.62N×118°.63W, h2^{km}*

NEIC ***04*** *02:58:10.7±1.7, 34°.625N±0°.010×118°.62W±0°.01, h16^{km}, Error ellipse: s-maj=1.4km s-min=1.2km az=199.0*

ISC 04 02:58:10.3±0.8**, 34°.62N**±0°.01×**118°.63W**±0°.01**, h12**^{km}±4^{km}**, n148,** σ0^{s}**64**/187**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTPC	Burnt Peak	0.08	37		Pg	02 58 13.2	+0.1
OSI	Osito Audit: C	0.08	265	P	Pg	02 58 12.7	-0.2
	baz=89,SNR=1000						
OSI				S	Sg	02 58 14.4	-0.5
	baz=89						
OSI	Osito Audit: C	0.08	265		Sg	02 58 14.4	-0.5
OSI	Osito Audit: C	0.08	265	Pg	Pg	02 58 12.6	-0.3
OSI	Osito Audit: C	0.08	265	IAML		02 58 14.6	
	comp=N,18µm,0.5s						
OSI				IAML		02 58 14.8	
	comp=E,18µm,0.4s						
PYR	Pyramid	0.11	240		Pg	02 58 13.1	-0.3
PDE	Pardee, Santa	0.18	168		Pg	02 58 14.7	+0.3
PDE					Sg	02 58 18.2	+1.0
LEOC	Leona Valley	0.27	88		Pg	02 58 16.1	+0.2
OAT	Oat Mountain	0.28	177		Pg	02 58 16.7	+0.7
ALPC	Antelope	0.28	76		Pg	02 58 16.6	+0.4
ALPC					Sg	02 58 20.9	+0.9
THC	Tehachapi Micr	0.29	354		Pg	02 58 16.7	+0.3
BLCC	Black Canyon	0.38	185		Pg	02 58 18.6	+0.8
CJV	Casa Juvan	0.41	103		Pg	02 58 18.3	-0.2
CJV					Sg	02 58 24.0	0.0
TJR	Tejon Ranch	0.42	347		Pg	02 58 18.8	+0.2
TPO	Tropico Hills	0.42	52		Pg	02 58 19.1	+0.4
DECC	Green Verdugo	0.44	146	P	Pg	02 58 19.1	+0.1
	baz=326,SNR=28						
DECC				S	Sg	02 58 25.8	+0.9
	baz=326						
DECC	Green Verdugo	0.44	146		Pg	02 58 19.1	+0.1

MPI	**Mount Pinos, F**	**0.47**	**294**		**Pg**	**02 58 19.5**	**0.0**
LRRC	**Littlerock Res**	**0.51**	**101**		**Pg**	**02 58 20.0**	**-0.2**
ARVC	**Arvin**	**0.53**	**342**	P	**Pg**	**02 58 20.9**	**+0.2**
	baz=162,SNR=77						
ARVC				S	**Sg**	**02 58 28.4**	**+0.7**
	baz=162						
ARVC	**Arvin**	**0.53**	**342**		**Pg**	**02 58 20.9**	**+0.2**
DJJ	**Donna J Jenkin**	**0.53**	**164**		**Pg**	**02 58 21.1**	**+0.3**
DJJ	**Donna J Jenkin**	**0.53**	**164**		**Pg**	**02 58 21.0**	**+0.3**
GR2C	**Griffith Obs.**	**0.57**	**151**		**Sb**	**02 58 30.1**	**-0.3**
GR2C	**Griffith Obs.**	**0.57**	**151**		**Pg**	**02 58 21.4**	**0.0**
CHFC	**Chilao Flat St**	**0.58**	**120**		**Pg**	**02 58 21.1**	**-0.5**
CHFC					**Sg**	**02 58 28.6**	**-0.6**
PASC	**Pasadena Art C**	**0.58**	**141**		**Sg**	**02 58 29.4**	**+0.1**
PASC	**Pasadena Art C**	**0.58**	**141**	Pg	**Pg**	**02 58 21.2**	**-0.4**
PASC	**Pasadena Art C**	**0.58**	**141**	IAML		02 58 29.9	
	comp=N,265nm,0.6s						
PASC				IAML		02 58 30.6	
	comp=E,594nm,0.5s						
EDW2	**Edwards Air Fo**	**0.58**	**63**	P	**Pg**	**02 58 21.7**	**-0.1**
	baz=243,SNR=82						
EDW2				S	**Sg**	**02 58 29.8**	**+0.3**
	baz=243						
EDW2	**Edwards Air Fo**	**0.58**	**63**		**Pg**	**02 58 21.8**	**+0.1**
EDW2					**Sb**	**02 58 30.1**	**-0.7**
JNH	**Juniper Hills**	**0.58**	**107**		**Pg**	**02 58 21.3**	**-0.4**
JNH					**Sg**	**02 58 29.6**	**+0.1**
TEJ	**El Tejon**	**0.61**	**355**		**Pg**	**02 58 22.3**	**+0.1**
MWC	**Mount Wilson**	**0.62**	**130**		**Pg**	**02 58 22.0**	**-0.3**
MWC	**Mount Wilson**	**0.62**	**130**		**Sg**	**02 58 30.3**	**-0.3**
PT2	**Point Dume**	**0.63**	**193**		**Pg**	**02 58 22.4**	**-0.2**
SBB	**Saddle Back Bu**	**0.67**	**84**		**Pg**	**02 58 23.2**	**-0.1**
GVRC	**Garvey Reservo**	**0.71**	**143**		**Sb**	**02 58 34.5**	**+0.2**
GVRC	**Garvey Reservo**	**0.71**	**143**		**Pg**	**02 58 24.1**	**+0.1**
XTL	**Crystal Lake,**	**0.71**	**117**		**Pg**	**02 58 23.5**	**-0.6**
BCW	**Bitter Crk WRg**	**0.72**	**296**		**Pg**	**02 58 23.8**	**-0.4**
BCW					**Sg**	**02 58 34.4**	**+0.6**
CCAC	**Calif City Air**	**0.73**	**43**		**Pg**	**02 58 24.6**	**+0.2**
CCAC					**Sb**	**02 58 35.0**	**0.0**
PEM	**Pine Mountain**	**0.77**	**126**		**Pg**	**02 58 24.6**	**-0.7**
RHC	**Rose Hills Cem**	**0.80**	**140**		**Pb**	**02 58 26.1**	**-0.1**
PSRC	**Puddingstone R**	**0.86**	**128**		**Pb**	**02 58 26.3**	**-0.9**
PSRC					**Sb**	**02 58 38.0**	**-0.7**
SSK	**Sunset Peak**	**0.88**	**118**		**Pb**	**02 58 26.2**	**-1.3**
BFSC	**Mount Baldy Ra**	**0.89**	**115**	P	**Pb**	**02 58 26.3**	**-1.4**
	baz=295,SNR=70						
BFSC	**Mount Baldy Ra**	**0.89**	**115**		**Pb**	**02 58 26.6**	**-1.2**
BFSC					**Sn**	**02 58 40.5**	**-1.1**
HYS	**Haystack Butte**	**0.91**	**74**		**Pb**	**02 58 27.7**	**-0.3**
HYS					**Sb**	**02 58 39.4**	**-0.6**
DTP	**Desert Tortois**	**0.91**	**45**		**Pb**	**02 58 27.5**	**-0.6**
SBC	**Santa Barbara**	**0.91**	**259**	P	**Pg**	**02 58 28.4**	**+0.6**
	baz=79						
SBC				S	**Sn**	**02 58 41.8**	**-0.2**
	baz=79						
SBC	**Santa Barbara**	**0.91**	**259**		**Pg**	**02 58 28.5**	**+0.6**
WOFM	**Oak Flat**	**0.91**	**356**		**Pb**	**02 58 27.6**	**-0.6**
FMP	**Fort Macarthur**	**0.95**	**163**	P	**Pb**	**02 58 28.3**	**-0.4**
	baz=343						
FMP				S	**Sg**	**02 58 41.5**	**+0.5**
	baz=343						
FMP	**Fort Macarthur**	**0.95**	**163**		**Pb**	**02 58 28.2**	**-0.4**
FMP					**Sg**	**02 58 41.7**	**+0.7**
WBSM	**Bird Springs**	**1.00**	**24**		**Pn**	**02 58 30.8**	**+0.4**
PKM	**Mcpherson Peak**	**1.01**	**286**	P	**Pb**	**02 58 29.4**	**-0.5**
	baz=105,SNR=47						
PKM				S	**Sg**	**02 58 44.0**	**+1.0**
	baz=105						
PKM	**Mcpherson Peak**	**1.01**	**286**		**Pb**	**02 58 29.4**	**-0.5**
SS2	**San Sevaine**	**1.02**	**114**		**Pb**	**02 58 29.1**	**-0.8**
SCZ2	**Santa Cruz Isl**	**1.04**	**233**	P	**Pb**	**02 58 29.5**	**-0.8**
	baz=53						
SCZ2				S	**Sg**	**02 58 44.8**	**+0.9**
	baz=53						
ISA	**Isabella, Lake**	**1.05**	**7**	P	**Pb**	**02 58 29.9**	**-0.5**
	baz=187,SNR=84						
ISA	**Isabella, Lake**	**1.05**	**7**	Pg	**Pb**	**02 58 29.9**	**-0.5**
ISA				IAML		02 58 48.6	
	comp=E,176nm,0.8s						
WHFM	**Hanning Flat**	**1.10**	**12**		**Pb**	**02 58 30.8**	**-0.5**
WASM	**Alta Sierra Ca**	**1.12**	**3**		**Pb**	**02 58 31.2**	**-0.5**
WASM					**Sb**	**02 58 46.0**	**-0.3**
LRMC	**Laurel Mtn Rad**	**1.16**	**42**	P	**Pn**	**02 58 32.2**	**-0.2**
	baz=222,SNR=55						
LRMC				S	**Sg**	**02 58 47.9**	**+0.2**
	baz=222						
LRMC	**Laurel Mtn Rad**	**1.16**	**42**		**Pg**	**02 58 32.7**	**+0.1**
CARC	**Carrizo Plain**	**1.21**	**305**		**Pn**	**02 58 32.3**	**-0.8**
CARC					**Sb**	**02 58 48.6**	**-0.2**
RSBC	**Riverside Bore**	**1.26**	**121**		**Sn**	**02 58 50.3**	**-0.3**
VES	**Vestal, Richgr**	**1.27**	**343**	P	**Pn**	**02 58 33.3**	**-0.6**
	baz=163,SNR=74						
VES				S	**Sg**	**02 58 51.5**	**+0.2**
	baz=163						
NJQ	**Nojoqui County**	**1.28**	**267**		**Pn**	**02 58 34.0**	**-0.1**
NJQ					**Sg**	**02 58 51.7**	**+0.1**
SRTC	**Snort**	**1.29**	**34**		**Pb**	**02 58 34.6**	**+0.1**
SMMC	**Simmler**	**1.32**	**302**	P	**Pn**	**02 58 34.2**	**-0.4**
	baz=122,SNR=23						
SMMC				S	**Sn**	**02 58 51.7**	**-0.4**
	baz=122						
SME	**Santa Rosa Min**	**1.32**	**127**		**Pn**	**02 58 34.2**	**-0.5**
WCHM	**Chimney Peak**	**1.34**	**20**		**Pb**	**02 58 35.3**	**-0.2**
WSHM	**Spangler Hills**	**1.35**	**43**		**Pn**	**02 58 35.0**	**0.0**
SVD	**Seven Oaks Dam**	**1.37**	**112**		**Pb**	**02 58 35.9**	**+0.1**
RRX	**Edison Barstow**	**1.37**	**79**	Pg	**Pb**	**02 58 36.1**	**+0.3**
	baz=260,SNR=10						
RRX				S	**Sb**	**02 58 53.6**	**+0.3**
	baz=260						
RRX	**Edison Barstow**	**1.37**	**79**		**Pb**	**02 58 36.2**	**+0.4**
CFT	**Crafton Hills**	**1.39**	**115**		**Pb**	**02 58 35.9**	**-0.3**
BTL	**Butler Peak**	**1.39**	**105**		**Pb**	**02 58 36.2**	**-0.2**
ELS	**Elsinore Mount**	**1.39**	**134**		**Pb**	**02 58 36.0**	**-0.3**
PEC	**Perris**	**1.42**	**120**		**Pn**	**02 58 36.0**	**+0.1**
BBRC	**Big Bear Solar**	**1.46**	**104**	Pg	**Pb**	**02 58 37.4**	**-0.1**
	baz=285,SNR=13						
BBRC				S	**Sb**	**02 58 56.7**	**+0.6**
	baz=285						
BBRC	**Big Bear Solar**	**1.46**	**104**		**Pb**	**02 58 37.5**	**0.0**
BBRC					**Sg**	**02 58 57.0**	**-0.3**
JRC2	**Joshua Ridge**	**1.52**	**26**		**Sg**	**02 58 58.8**	**-0.3**
WLHM	**Little Horse**	**1.55**	**10**		**Pb**	**02 58 38.9**	**-0.2**
SNCC	**San Nicolas Is**	**1.56**	**209**	P	**Pn**	**02 58 37.5**	**-0.4**
	baz=28						
SNCC				S	**Sn**	**02 58 56.8**	**-1.2**
	baz=28						
SNCC	**San Nicolas Is**	**1.56**	**209**		**Pn**	**02 58 37.3**	**-0.6**
MURC	**Murrieta**	**1.57**	**130**	P	**Pn**	**02 58 37.6**	**-0.4**
	baz=311,SNR=27						
MURC				S	**Sn**	**02 58 57.7**	**-0.5**
	baz=311						
SPG2	**Springville 2**	**1.58**	**356**		**Pb**	**02 58 39.0**	**-0.5**
HMTC	**Hemet**	**1.63**	**124**		**Pn**	**02 58 38.6**	**-0.2**
HMTC					**Sb**	**02 59 01.1**	**+0.3**
SCI2	**San Clemente I**	**1.64**	**178**	P	**Pn**	**02 58 38.2**	**-0.7**
	baz=358,SNR=7.7						
SCI2				S	**Sn**	**02 58 59.8**	**-0.1**
	baz=358						
GSC	**Goldstone, Bar**	**1.64**	**65**	Pn	**Pn**	**02 58 39.1**	**0.0**
	baz=246,SNR=55						
GSC				Pg	**Pg**	**02 58 41.5**	**-0.4**
	baz=246						
GSC				Sb	**Sg**	**02 59 02.8**	**-0.5**
	baz=246						
GSC	**Goldstone, Bar**	**1.64**	**65**	Pn	**Pn**	**02 58 39.1**	**0.0**
BACC	**Bachelor Mtn.**	**1.66**	**127**		**Pn**	**02 58 39.0**	**-0.2**
POB	**Polly Butte**	**1.69**	**123**		**Pn**	**02 58 39.6**	**-0.1**
MPMC	**Manual Prospec**	**1.71**	**33**	P	**Pn**	**02 58 40.3**	**+0.1**
	baz=213,SNR=49						
MPMC				Sb	**Sg**	**02 59 04.8**	**-0.6**
	baz=213						
PAGB	**Antelope Grade**	**1.73**	**310**		**Pn**	**02 58 40.7**	**+0.5**
PAGB				IAML		02 59 10.7	
	comp=N,54nm,0.8s						
VOG	**Valley Oaks Go**	**1.80**	**340**	P	**Pn**	**02 58 41.7**	**+0.5**
	baz=160						
CWC	**Cottonwood Cre**	**1.87**	**14**	Pg	**Pg**	**02 58 45.5**	**-0.6**
	baz=194						
DPD	**Davis Peak**	**1.87**	**290**		**Pg**	**02 58 45.7**	**-0.5**
HEC	**Hector,Ludlow**	**1.90**	**83**	P	**Pn**	**02 58 42.1**	**-0.5**
	baz=264,SNR=36						
HEC				Sb	**Sg**	**02 59 10.4**	**-1.0**
	baz=264						
PLM	**Palomar**	**1.94**	**130**		**Pn**	**02 58 43.2**	**0.0**
EW2	**E Wide Canyon**	**1.96**	**110**		**Pb**	**02 58 46.6**	**+0.7**
QSM	**Queen of Sheba**	**1.97**	**47**		**Pn**	**02 58 43.8**	**+0.3**
SNDA	**J Saunders Pla**	**1.98**	**122**		**Pn**	**02 58 44.5**	**+0.6**
FRD	**Ford Ranch, An**	**2.02**	**123**		**Pn**	**02 58 44.9**	**+0.6**
PFO	**Pinyon Flats O**	**2.06**	**119**	P	**Pn**	**02 58 45.3**	**+0.4**
	baz=300,SNR=17						
PFO				S	**Sn**	**02 59 11.2**	**+0.6**
	baz=300						
PFO	**Pinyon Flats O**	**2.06**	**119**	Pn	**Pn**	**02 58 45.2**	**+0.3**
PMD	**Palm Desert**	**2.10**	**117**		**Pn**	**02 58 45.8**	**+0.4**
109C	**Camp Elliot, M**	**2.15**	**143**	P	**Pn**	**02 58 46.2**	**+0.3**
	baz=324,SNR=5.9						
109C	**Camp Elliot, M**	**2.15**	**143**		**Pn**	**02 58 46.3**	**+0.4**
109C				IAML		02 59 18.8	
	comp=N,62nm,0.3s						
109C				IAML		02 59 19.9	
	comp=E,50nm,0.2s						
MATG	**Mataguay Scout**	**2.17**	**130**		**Pn**	**02 58 47.2**	**+0.8**
TPC	**Twentynine Pal**	**2.20**	**103**		**Pn**	**02 58 47.2**	**+0.5**
BELC	**Belle Mtn. Jos**	**2.26**	**105**	P	**Pn**	**02 58 48.0**	**+0.4**
	baz=286,SNR=33						
BELC	**Belle Mtn. Jos**	**2.26**	**105**		**Pn**	**02 58 48.3**	**+0.6**
SHOC	**Shoshone, Teco**	**2.31**	**56**	P	**Pn**	**02 58 48.6**	**+0.4**
	baz=237,SNR=24						
SHOC				Sg	**Sg**	**02 59 25.8**	**+1.3**
	baz=237						
PMPB	**Monarch Peak**	**2.38**	**313**		**Pn**	**02 58 50.5**	**+1.3**
PMPB				IAML		02 59 46.8	
	comp=E,57nm,0.8s						
PMPB				IAML		02 59 48.4	
	comp=N,46nm,1.0s						
TIN	**Tinemaha, Big**	**2.45**	**7**	Pg	**Pg**	**02 58 56.0**	**-1.3**
	baz=188,SNR=16						
GMRC	**Granite Mounta**	**2.45**	**85**	P	**Pn**	**02 58 50.0**	**-0.2**
	baz=267,SNR=13						
GMRC				Sb	**Sg**	**02 59 27.6**	**-1.5**
	baz=267						
MONP2	**Monument Peak**	**2.52**	**133**	P	**Pn**	**02 58 51.7**	**+0.5**
	baz=314						
MONP2				S	**Sn**	**02 59 22.7**	**+0.6**
	baz=314						
BAR	**Barrett**	**2.53**	**139**	Pn	**Pn**	**02 58 51.4**	**+0.1**
BAR				IAML		02 59 28.4	
	comp=E,47nm,0.5s						
BAR				IAML		02 59 29.3	
	comp=N,40nm,0.2s						
GRAC	**Grapevine Rang**	**2.58**	**23**	Pg	**Pg**	**02 58 59.8**	**0.0**
	baz=204						
BC3	**Big Chuckawall**	**2.81**	**109**	P	**Pn**	**02 58 55.2**	**+0.2**
	baz=291						
BC3	**Big Chuckawall**	**2.81**	**109**		**Pn**	**02 58 55.3**	**+0.2**
CBX	**Cerro Bola**	**2.83**	**144**		**Pn**	**02 58 54.8**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**2.88**	**132**	Sb	**Sb**	**02 59 38.2**	**+1.3**
	baz=314						
SWSC	**Sam W. Stewart**	**2.89**	**125**	Sb	**Sb**	**02 59 39.1**	**+2.0**
	baz=306						
IRM	**Iron Mountain**	**2.92**	**98**	P	**Pn**	**02 58 56.5**	**-0.1**
	baz=280,SNR=12						
RMX	**La Rumorosa**	**2.93**	**133**	Pn	**Pn**	**02 58 58.4**	**+1.5**
RMX				IAML		02 59 43.5	
	comp=N,16nm,0.9s						
OMMB	**Old Mammoth Mi**	**3.00**	**354**	Pn	**Pn**	**02 58 59.5**	**+1.6**
OMMB				IAML		02 59 44.4	
	comp=E,27nm,0.9s						
OMMB				IAML		02 59 45.3	
	comp=N,25nm,0.5s						
TPNV	**Topopah Spring**	**3.02**	**39**	P	**Pn**	**02 58 58.9**	**+0.8**
	baz=220						
TPNV	**Topopah Spring**	**3.02**	**39**		**Pn**	**02 58 59.1**	**+0.9**
TPNV				IAML		02 59 54.1	
	comp=N,16nm,0.4s						
MDPB	**Devils Postpil**	**3.03**	**353**		**Pn**	**02 58 58.2**	**-0.1**
MDPB				IAML		02 59 44.6	
	comp=N,24nm,0.5s						
SAO	**San Andreas Ge**	**3.13**	**314**	Pn	**Pn**	**02 59 00.1**	**+0.6**
SHPR	**Sheep Range**	**3.40**	**55**	Pn	**Pn**	**02 59 04.2**	**+1.0**
SHPR				IAML		03 00 02.9	
	comp=E,13nm,0.6s						
LHV	**Little Huntoon**	**3.62**	**2**	Pn	**Pn**	**02 59 06.5**	**+0.2**
TPH	**Tonopah**	**3.63**	**18**	Pn	**Pn**	**02 59 07.5**	**+0.9**
CMB	**Columbia Colle**	**3.69**	**338**		**Pn**	**02 59 07.9**	**+0.7**
CMB				IAML		03 00 11.4	
	comp=E,15nm,0.8s						
WAKR	**Walker**	**3.93**	**351**	Pn	**Pn**	**02 59 11.6**	**+0.9**
WAKR				IAML		03 00 16.4	
	comp=N,13nm,0.9s						
WAKR				IAML		03 00 20.1	
	comp=E,11nm,1.1s						
W13A	**Hualapai Mount**	**3.93**	**82**	Pn	**Pn**	**02 59 10.6**	**-0.1**
W13A				IAML		03 00 17.3	
	comp=N,12nm,0.5s						
W13A				IAML		03 00 20.6	
	comp=E,7.4nm,1.1s						
RYN	**Ryan**	**4.00**	**1**	Pn	**Pn**	**02 59 13.9**	**+2.3**
RYN					Lg	03 00 20.5	
RYN				IAML		03 00 21.0	
	comp=E,9.8nm,0.8s						
RYN				IAML		03 00 26.6	
	comp=N,7.9nm,2.2s						
PRN	**Pahroc Range**	**4.02**	**45**	Pn	**Pn**	**02 59 12.9**	**+1.1**
PRN				IAML		03 00 24.0	
	comp=E,12nm,0.6s						
PRN				IAML		03 00 26.1	
	comp=N,9.4nm,0.8s						
PNTR	**Pine Nut**	**4.53**	**350**	Pn	**Pn**	**02 59 20.1**	**+1.2**
VCNR	**Virginia City**	**4.74**	**350**	Pn	**Pn**	**02 59 22.2**	**+0.5**
VCNR				IAML		03 00 02.6	
	comp=N,6.7nm,5.0s						
VCNR					LR	03 00 41.8	
VCNR				IAML		03 00 41.9	
	comp=E,8.7nm,2.4s						
LCMT	**Little Creek M**	**4.98**	**60**	Pn	**Pn**	**02 59 25.6**	**+0.5**
CCUT	**Cedar City**	**5.17**	**54**	Pn	**Pn**	**02 59 29.4**	**+1.7**
TCRU	**Three Creeks R**	**6.37**	**50**		**Pn**	**02 59 43.7**	**-0.5**

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*IDC **04** 03:18:08.4±0.9, 34°.56N×118°.59W, h0^{km}, mb4.2/5, mb1 4.1/11, mb1mx3.9/41, mbtmp3.9/11, ML3.4/5, MS3.3/10, Ms1 3.3/10, ms1mx3.0/47, Error ellipse: s-maj=16.2km s-min=8.2km az=58.0*

*ANF **04** 03:18:08.6±0.3, 34°.59N×118°.63W, h8^{km}±2^{km}, ML4.6/42, Error ellipse: s-maj=2.7km s-min=2.4km az=44.0*

*PAS **04** 03:18:09.5±1.8, 34°.617N±0°.010×118°.63W±0°.01, h9^{km}±3^{km}, Mwr4.3/6, mb4.2/24(NEIC), ML4.3/100(NEIC), Mwr4.2/71(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=204.0*

*SCEDC **04** 03:18:09.6, 34°.62N×118°.63W, h9^{km}*

*NEIC **04** 03:18:09.3±1.7, 34°.628N±0°.007×118°.617W±0°.009, h10^{km}±3^{km}, Error ellipse: s-maj=1.5km s-min=0.4km az=224.0*

*NEIC **04** 03:18:09.5, 34°.62N×118°.63W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.74; M$_{\theta\theta}$-1.86; M$_{\phi\phi}$0.12; M$_{r\theta}$-0.61; M$_{\theta\phi}$-1.12; M$_{\phi r}$-0.89; Fault plane solution: M$_0$2.38000×10^{15} NP1:ϕ_s86.83000°, δ36.61000°, λ123.05000°. NP2:ϕ_s227.80000°, δ60.01000°, λ67.94000°. Principal axes: T 2.1320, Plg67.0000°, Azm95.0000°; N 0.4326, Plg19.0000°, Azm239.0000°; P -2.5646, Plg12.0000°, Azm334.0000°;*

*NEIC **04** 03:18:09.6, 34°.62N×118°.63W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.42; M$_{\theta\theta}$-2.46; M$_{\phi\phi}$0.04; M$_{r\theta}$-0.39; M$_{\theta\phi}$-1.23; M$_{\phi r}$-1.05; Fault plane solution: M$_0$2.95000×10^{15} NP1:ϕ_s87.08000°, δ40.57000°, λ120.46000°. NP2:ϕ_s229.34000°, δ55.90000°, λ66.54000°. Principal axes: T 2.8163, Plg69.0000°, Azm88.0000°; N 0.2498, Plg19.0000°, Azm243.0000°; P -3.0661, Plg8.0000°, Azm336.0000°;*

ISC 04 03:18:09.6±0.7**, 34°.61N**±0°.01×**118°.63W**±0°.01**, h9**^{km}±4^{km}**, n265, σ1^{s}.28**/300**, mb4.2**/11**, MS3.2**/4**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSI	**Osito Audit: C**	**0.08**	**275**	P	**Pg**	**03 18 11.1**	**-0.8**
	baz=86,SNR=1000						
OSI				S	**Sg**	**03 18 13.1**	**-0.4**
	baz=86						
OSI	**Osito Audit: C**	**0.08**	**275**		**Sg**	**03 18 13.1**	**-0.4**
OSI	**Osito Audit: C**	**0.08**	**275**	Pg	**Pg**	**03 18 11.4**	**-0.4**
BTPC	**Burnt Peak**	**0.09**	**29**		**Pg**	**03 18 11.7**	**-0.3**
BTPC					**Sg**	**03 18 13.8**	**0.0**
PYR	**Pyramid**	**0.10**	**247**		**Pg**	**03 18 11.7**	**-0.5**
PDE	**Pardee, Santa**	**0.17**	**168**		**Pg**	**03 18 13.3**	**+0.1**
OAT	**Oat Mountain**	**0.26**	**178**		**Pg**	**03 18 15.4**	**+0.4**
LEOC	**Leona Valley**	**0.27**	**85**		**Pg**	**03 18 14.7**	**-0.3**
ALPC	**Antelope**	**0.28**	**74**		**Pn**	**03 18 19.5**	**-0.6**
THC	**Tehachapi Micr**	**0.30**	**354**		**Pg**	**03 18 15.2**	**-0.5**
BLCC	**Black Canyon**	**0.37**	**186**		**Pg**	**03 18 17.2**	**+0.4**
CJV	**Casa Juvan**	**0.40**	**101**		**Pg**	**03 18 16.9**	**-0.6**
CJV					**Sg**	**03 18 22.5**	**-0.5**
TPO	**Tropico Hills**	**0.42**	**50**		**Pg**	**03 18 17.6**	**-0.3**
DECC	**Green Verdugo**	**0.43**	**146**	P	**Pg**	**03 18 17.7**	**-0.3**
	baz=326,SNR=1000						
DECC				S	**Sg**	**03 18 24.3**	**+0.8**
	baz=326						
DECC	**Green Verdugo**	**0.43**	**146**		**Pg**	**03 18 17.7**	**-0.3**
DECC					**Sg**	**03 18 24.4**	**+0.8**
TJR	**Tejon Ranch**	**0.43**	**347**		**Pg**	**03 18 17.4**	**-0.7**
TJR					**Sg**	**03 18 23.4**	**-0.3**
AGOC	**Agoura**	**0.47**	**194**		**Pg**	**03 18 19.0**	**+0.1**
MPI	**Mount Pinos, F**	**0.47**	**296**		**Pg**	**03 18 18.1**	**-0.8**
MPI					**Sg**	**03 18 24.5**	**-0.7**
HLLC	**North Hollywoo**	**0.48**	**153**		**Pg**	**03 18 19.0**	**0.0**
LRRC	**Littlerock Res**	**0.50**	**99**		**Pg**	**03 18 18.7**	**-0.6**
DJJ	**Donna J Jenkin**	**0.52**	**164**		**Pg**	**03 18 19.7**	**0.0**
DJJ	**Donna J Jenkin**	**0.52**	**164**		**Pg**	**03 18 19.6**	**0.0**
ARVC	**Arvin**	**0.55**	**342**	P	**Pg**	**03 18 19.2**	**-1.0**
	baz=162,SNR=1000						
ARVC				S	**Sg**	**03 18 27.0**	**-0.4**
	baz=162						
ARVC	**Arvin**	**0.55**	**342**		**Pg**	**03 18 19.5**	**-0.7**
ARVC					**Sg**	**03 18 27.4**	**+0.1**
GR2C	**Griffith Obs.**	**0.56**	**151**		**Pg**	**03 18 20.0**	**-0.5**
GR2C					**Sg**	**03 18 28.3**	**+0.6**
CHFC	**Chilao Flat St**	**0.56**	**119**		**Pg**	**03 18 19.7**	**-0.9**
CHFC					**Sg**	**03 18 27.6**	**-0.5**
PASC	**Pasadena Art C**	**0.57**	**140**	Pg	**Pg**	**03 18 20.0**	**-0.6**
PASC				IAML		03 18 28.5	
	comp=E,20µm,0.6s						
PASC	**Pasadena Art C**	**0.57**	**140**		**Sg**	**03 18 28.1**	**+0.1**
JNH	**Juniper Hills**	**0.58**	**106**		**Pg**	**03 18 19.9**	**-0.9**
JNH					**Sg**	**03 18 28.6**	**+0.2**
EDW2	**Edwards Air Fo**	**0.59**	**62**	P	**Pg**	**03 18 20.2**	**-0.8**
	baz=244,SNR=1000						
EDW2				S	**Sg**	**03 18 28.6**	**0.0**
	baz=244						
EDW2	**Edwards Air Fo**	**0.59**	**62**		**Pg**	**03 18 20.4**	**-0.6**
EDW2					**Sg**	**03 18 28.7**	**0.0**
MWC	**Mount Wilson**	**0.60**	**129**		**Pg**	**03 18 20.4**	**-0.9**
MWC				IAML		03 18 29.4	
	comp=E,19µm,0.5s						
MWC				IAML		03 18 30.0	
	comp=N,19µm,0.3s						
PT2	**Point Dume**	**0.62**	**194**		**Pg**	**03 18 21.0**	**-0.6**
TEJ	**El Tejon**	**0.62**	**355**		**Pg**	**03 18 20.9**	**-0.8**
GSA	**Caltech--GSA**	**0.62**	**139**		**Sg**	**03 18 30.2**	**+0.4**
CACC	**Caltech Cellar**	**0.63**	**138**		**Pg**	**03 18 21.3**	**-0.5**
LCGC	**La Cienega, Cu**	**0.64**	**161**		**Pg**	**03 18 22.4**	**+0.4**
USC	**University of**	**0.65**	**154**		**Pg**	**03 18 22.3**	**+0.1**
BHPC	**Baldwin Hills**	**0.65**	**160**		**Pg**	**03 18 22.5**	**+0.3**
SBB	**Saddle Back Bu**	**0.66**	**83**		**Pg**	**03 18 21.6**	**-0.9**
GVRC	**Garvey Reservo**	**0.70**	**143**		**Pg**	**03 18 22.6**	**-0.4**
XTL	**Crystal Lake,**	**0.70**	**116**		**Pg**	**03 18 22.1**	**-1.1**
WTT2	**Watts, South G**	**0.72**	**155**		**Pg**	**03 18 24.0**	**+0.4**
BCW	**Bitter Crk WRg**	**0.73**	**297**		**Pg**	**03 18 22.3**	**-1.4**
CCAC	**Calif City Air**	**0.74**	**42**		**Pg**	**03 18 23.2**	**-0.6**
PEM	**Pine Mountain**	**0.76**	**125**		**Pg**	**03 18 23.2**	**-1.1**
RHC	**Rose Hills Cem**	**0.79**	**140**		**Pg**	**03 18 24.2**	**-0.7**
MAGC	**SCE Magundon P**	**0.79**	**342**		**Pg**	**03 18 24.1**	**-0.8**
BAKC	**Calstate**	**0.83**	**332**		**Pg**	**03 18 24.8**	**-0.9**
PSRC	**Puddingstone R**	**0.85**	**127**		**Pg**	**03 18 24.9**	**-1.0**
SSK	**Sunset Peak**	**0.87**	**117**		**Pg**	**03 18 24.8**	**-1.5**
BFSC	**Mount Baldy Ra**	**0.88**	**114**	P	**Pg**	**03 18 24.9**	**-1.7**
	baz=296,SNR=1000						
BFSC				S	**Sg**	**03 18 36.9**	**-1.1**
	baz=296						
BFSC	**Mount Baldy Ra**	**0.88**	**114**		**Pg**	**03 18 24.9**	**-1.7**
HYS	**Haystack Butte**	**0.91**	**73**		**Pg**	**03 18 26.2**	**-0.8**
SBC	**Santa Barbara**	**0.91**	**260**	P	**Pg**	**03 18 26.6**	**-0.6**
	baz=78,SNR=347						
SBC				S	**Sb**	**03 18 40.1**	**+0.2**
	baz=78						
SBC	**Santa Barbara**	**0.91**	**260**		**Pg**	**03 18 26.6**	**-0.6**
DTP	**Desert Tortois**	**0.92**	**44**		**Pg**	**03 18 26.1**	**-1.2**
WOFM	**Oak Flat**	**0.93**	**356**		**Pg**	**03 18 26.2**	**-1.3**
FMP	**Fort Macarthur**	**0.93**	**163**	P	**Pg**	**03 18 26.8**	**-0.8**
	baz=343,SNR=84						
FMP				S	**Sg**	**03 18 40.0**	**+0.2**
	baz=343						
FMP	**Fort Macarthur**	**0.93**	**163**		**Pg**	**03 18 26.7**	**-0.8**
ADO	**Adelanto Recei**	**0.98**	**93**		**Pg**	**03 18 28.1**	**-0.5**
CHNC	**Chino**	**0.99**	**128**		**Pg**	**03 18 27.6**	**-1.1**
WBSM	**Bird Springs**	**1.01**	**23**		**Pg**	**03 18 27.8**	**-1.3**
SS2	**San Sevaine**	**1.01**	**113**		**Pg**	**03 18 27.6**	**-1.5**
PKM	**Mcpherson Peak**	**1.02**	**286**	P	**Pg**	**03 18 28.0**	**-1.3**
	baz=105,SNR=1000						
PKM				S	**Sg**	**03 18 42.6**	**+0.2**
	baz=105						
PKM	**Mcpherson Peak**	**1.02**	**286**		**Pg**	**03 18 27.9**	**-1.3**
SCZ2	**Santa Cruz Isl**	**1.04**	**234**	P	**Pg**	**03 18 27.6**	**-1.9**
	baz=53,SNR=186						
SCZ2				S	**Sg**	**03 18 42.2**	**-0.8**
	baz=53						
SCZ2	**Santa Cruz Isl**	**1.04**	**234**		**Pg**	**03 18 28.2**	**-1.4**
ISA	**Isabella, Lake**	**1.06**	**7**	P	**Pg**	**03 18 28.4**	**-1.6**
	baz=187,SNR=1000						
ISA				S	**Sb**	**03 18 44.0**	**-0.2**
	baz=187						
ISA	**Isabella, Lake**	**1.06**	**7**	Pg	**Pg**	**03 18 28.4**	**-1.6**
ISA				IAML		03 18 45.8	
	comp=E,7µm,1.1s						
MLSC	**Mira Loma**	**1.07**	**124**		**Pg**	**03 18 28.6**	**-1.6**
VTV	**Victorville**	**1.07**	**92**		**Pg**	**03 18 29.2**	**-1.0**
WHFM	**Hanning Flat**	**1.11**	**12**		**Pg**	**03 18 29.3**	**-1.6**
SYP	**Santa Ynez Pea**	**1.12**	**266**		**Pb**	**03 18 29.9**	**-1.3**
WASM	**Alta Sierra Ca**	**1.13**	**3**		**Pg**	**03 18 29.7**	**-1.6**
WORM	**Onyx Ranch**	**1.13**	**16**		**Pg**	**03 18 29.7**	**-1.6**
FIGC	**Figueroa Mtn.**	**1.13**	**276**		**Pb**	**03 18 29.8**	**-1.6**
LRMC	**Laurel Mtn Rad**	**1.16**	**41**	P	**Pb**	**03 18 30.5**	**-1.5**
	baz=222,SNR=1000						
LRMC				S	**Sb**	**03 18 46.9**	**-0.4**
	baz=222						
LRMC	**Laurel Mtn Rad**	**1.16**	**41**		**Pb**	**03 18 30.8**	**-1.2**
RVR	**Riverside**	**1.20**	**120**		**Pb**	**03 18 30.7**	**-1.9**
CARC	**Carrizo Plain**	**1.22**	**305**		**Pn**	**03 18 30.9**	**-2.2**
RSBC	**Riverside Bore**	**1.25**	**120**		**Pn**	**03 18 31.6**	**-1.7**
VES	**Vestal, Richgr**	**1.29**	**343**	P	**Pn**	**03 18 31.9**	**-1.9**
	baz=163,SNR=1000						
VES				S	**Sb**	**03 18 50.1**	**-0.6**
	baz=163						
SMMC	**Simmler**	**1.33**	**302**	P	**Pn**	**03 18 32.5**	**-1.9**
	baz=121,SNR=944						
SMMC				S	**Sb**	**03 18 51.0**	**-1.0**
	baz=121						
RRX	**Edison Barstow**	**1.37**	**78**	P	**Pn**	**03 18 33.6**	**-1.3**
	baz=260,SNR=147						
RRX				S	**Sb**	**03 18 52.3**	**-0.7**
	baz=260						
CCCA	**Chr Cany lake**	**1.38**	**48**		**Pn**	**03 18 34.1**	**-1.1**
ELS	**Elsinore Mount**	**1.38**	**134**		**Pn**	**03 18 33.5**	**-1.6**
BBRC	**Big Bear Solar**	**1.45**	**103**	P	**Pn**	**03 18 35.3**	**-1.0**
	baz=285,SNR=500						
BBRC				S	**Sn**	**03 18 55.2**	**-0.4**
	baz=285						
SNCC	**San Nicolas Is**	**1.55**	**209**	P	**Pn**	**03 18 35.2**	**-2.3**
	baz=28,SNR=86						
SNCC				S	**Sn**	**03 18 54.9**	**-2.8**
	baz=28						
SNCC	**San Nicolas Is**	**1.55**	**209**		**Pn**	**03 18 35.3**	**-2.2**
SNCC				IAML		03 19 04.7	
	comp=E,3µm,1.0s						
MURC	**Murrieta**	**1.56**	**130**	P	**Pn**	**03 18 35.9**	**-1.7**
	baz=311,SNR=643						
MURC				S	**Sn**	**03 18 56.7**	**-1.2**
	baz=311						
SCI2	**San Clemente I**	**1.62**	**178**	P	**Pn**	**03 18 36.3**	**-2.1**
	baz=358,SNR=219						
SCI2				S	**Sn**	**03 18 59.7**	**+0.1**
	baz=358						
GSC	**Goldstone, Bar**	**1.65**	**65**	Pn	**Pn**	**03 18 37.6**	**-1.3**
	baz=246,SNR=1000						
GSC				Pg	**Pb**	**03 18 40.1**	**-0.1**
	baz=246						
GSC				S	**Sn**	**03 18 59.1**	**-1.1**
	baz=246						
GSC	**Goldstone, Bar**	**1.65**	**65**		**Pn**	**03 18 37.6**	**-1.3**
GSC				IAML		03 19 10.5	

	comp=N,4µm,0.9s						
MPMC	Manual Prospec	1.72	32	P	Pn	03 18 38.8	-1.1
	baz=213,SNR=1000						
MPMC				S	Sb	03 19 02.7	-0.7
	baz=213						
PAGB	Antelope Grade	1.74	311		Pn	03 18 39.0	-1.1
PAGB				IAML		03 19 09.1	
	comp=E,3µm,0.9s						
PAGB				IAML		03 19 09.5	
	comp=N,3µm,0.9s						
VOG	Valley Oaks Go	1.82	340	P	Pn	03 18 40.1	-1.1
	baz=160,SNR=58						
VOG				S	Sn	03 19 04.0	-0.3
	baz=160						
CWC	Cottonwood Cre	1.88	13	Pb	Pn	03 18 42.3	+0.1
	baz=194						
HEC	Hector,Ludlow	1.90	83	P	Pn	03 18 40.7	-1.6
	baz=264,SNR=688						
HEC				Sb	Sg	03 19 09.3	-1.4
	baz=264						
PFO	Pinyon Flats O	2.05	118	Pn	Pn	03 18 44.1	-0.4
	comp=N,115nm,0.3s,baz=296,slow=12,SNR=942						
PFO				Sn	Sn	03 19 10.0	-0.3
	comp=N,202nm,0.3s,baz=357,slow=21,SNR=15						
PFO	Pinyon Flats O	2.05	118	P	Pn	03 18 43.6	-0.8
	baz=300,SNR=756						
PFO				S	Sn	03 19 09.8	-0.5
	baz=300						
PFO	Pinyon Flats O	2.05	118		Pn	03 18 43.7	-0.8
PFO				IAML		03 19 18.4	
	comp=N,1µm,1.2s						
XPFO	Pion Flat	2.06	118	Pn	Pn	03 18 43.7	-0.9
XPFO				IAML		03 19 18.4	
	comp=N,1µm,1.2s						
TPFO	Pinon Flats	2.06	118	P	Pn	03 18 43.8	-0.8
	baz=300,SNR=714						
TPFO				S	Sn	03 19 10.4	0.0
	baz=300						
I57US	PINON FLAT INF	2.06	118	*i*		03 28 30.0	
	baz=295,slow=309,SNR=1.4						
109C	Camp Elliot, M	2.13	143	P	Pn	03 18 43.9	-1.6
	baz=324,SNR=124						
109C				S	Sn	03 19 10.0	-2.0
	baz=324						
109C	Camp Elliot, M	2.13	143	Pn	Pn	03 18 43.7	-1.7
109C				IAML		03 19 14.9	
	comp=E,2µm,0.9s						
109C				IAML		03 19 16.4	
	comp=N,2µm,0.5s						
BELC	Belle Mtn. Jos	2.26	105	P	Pn	03 18 46.2	-1.1
	baz=287,SNR=885						
BELC				S	Sn	03 19 16.3	+0.9
	baz=287						
SHOC	Shoshone, Teco	2.31	55	P	Pn	03 18 46.6	-1.4
	baz=237,SNR=89						
SHOC				Sb	Sg	03 19 22.8	-1.2
	baz=237						
FURC	Furnace Creek,	2.35	37	Pn	Pn	03 18 47.4	-1.0
	baz=218,SNR=155						
FURC				Pg	Pg	03 18 53.4	-1.2
	baz=218						
FURC				Sb	Sg	03 19 24.0	-1.0
	baz=218						
PMPB	Monarch Peak	2.40	313		Pn	03 18 48.2	-1.0
PMPB				IAML		03 19 52.7	
	comp=N,2µm,1.0s						
GMRC	Granite Mounta	2.45	85	Pn	Pn	03 18 47.8	-2.2
	baz=267,SNR=283						
GMRC				Pb	Pb	03 18 53.3	-0.6
	baz=267						
GMRC				Sb	Sb	03 19 25.2	+0.9
	baz=267						
TIN	Tinemaha, Big	2.46	7	Pg	Pb	03 18 54.5	+0.4
	baz=188,SNR=148						
TJX	Tijuana	2.47	147		Pn	03 18 49.1	-1.0
MONP2	Monument Peak	2.51	132	P	Pn	03 18 50.0	-0.8
	baz=314,SNR=367						
MONP2				S	Sn	03 19 20.8	-0.9
	baz=314						
BAR	Barrett	2.52	139		Pn	03 18 49.8	-1.1
BAR				IAML		03 19 27.1	
	comp=E,1µm,0.5s						
BAR				IAML		03 19 32.0	
	comp=N,1µm,0.6s						
GRAC	Grapevine Rang	2.59	23	P	Pn	03 18 52.0	+0.1
	baz=204,SNR=132						
TKX	Tecate	2.64	140		Pn	03 18 51.5	-1.0
TKX				IAML		03 19 30.9	
	comp=N,963nm,0.5s						
BC3	Big Chuckawall	2.80	109	P	Pn	03 18 53.2	-1.5
	baz=291,SNR=162						
BC3				Sb	Sb	03 19 35.4	+1.1
	baz=291						
CBX	Cerro Bola	2.81	144		Pn	03 18 54.0	-0.9
CBX				IAML		03 19 41.0	
	comp=E,688nm,0.8s						
CBX				IAML		03 19 43.4	
	comp=N,634nm,0.6s						
IKP	In-Ko-Pah, Jac	2.87	132	P	Pn	03 18 54.7	-0.9
	baz=314,SNR=68						
IKP				S	Sn	03 19 31.1	+0.8
	baz=314						
SWSC	Sam W. Stewart	2.88	124	P	Pn	03 18 54.2	-1.5
	baz=306						
SWSC				Sb	Sb	03 19 37.9	+1.4
	baz=306						
IRM	Iron Mountain	2.91	98	P	Pn	03 18 54.2	-2.0
	baz=280,SNR=49						
IRM				Sb	Sb	03 19 39.8	+2.2
	baz=280						
RMX	La Rumorosa	2.92	133		Pn	03 18 56.6	+0.1
RMX				IAML		03 19 42.3	
	comp=N,777nm,0.8s						
RMX				IAML		03 19 42.6	
	comp=E,665nm,0.6s						
OMMB	Old Mammoth Mi	3.01	354		Pn	03 18 57.5	-0.5
OMMB				IAML		03 19 53.7	
	comp=N,968nm,1.2s						
OMMB				IAML		03 19 55.8	
	comp=E,1µm,1.0s						
MLAC	Mammoth, Mammo	3.02	357	Pb	Pn	03 19 00.1	+2.2
	baz=177,SNR=187						
MLAC				Sb	Sb	03 19 42.7	+1.9
	baz=177						
TPNV	Topopah Spring	3.03	39	P	Pn	03 18 57.5	-0.4
	baz=220,SNR=78						
TPNV	Topopah Spring	3.03	39	Pn	Pn	03 18 57.6	-0.4
TPNV				IAML		03 19 48.0	
	comp=E,502nm,0.6s						
TPNV				IAML		03 19 57.9	
	comp=E,638nm,0.9s						
MDPB	Devils Postpil	3.04	353		Pn	03 18 59.5	+1.3
MDPB				IAML		03 19 46.2	
	comp=E,1µm,0.8s						
MDPB				IAML		03 19 52.1	
	comp=N,1µm,0.9s						
SAO	San Andreas Ge	3.15	314	Pn	Pn	03 18 58.1	-1.4
CCX	Cicese	3.19	148		Pn	03 19 00.6	+0.6
CCX				IAML		03 19 54.3	
	comp=E,519nm,0.8s						
NEE2	Needles Airpor	3.31	86	P	Pn	03 19 00.5	-1.1
	baz=269,SNR=20						
NEE2				Sb	Sg	03 19 53.8	-2.0
	baz=269						
UABX	UABC, Campus M	3.31	126	Pn	Pn	03 19 02.1	+0.5
SHPR	Sheep Range	3.40	55	Pn	Pn	03 19 02.5	-0.6
SHPR				IAML		03 20 01.3	
	comp=E,537nm,0.8s						
CPBX	Cerro Prieto	3.53	127		Pb	03 19 09.2	-3.1
LHV	Little Huntoon	3.64	1		Pn	03 19 06.3	+0.2
TPH	Tonopah	3.64	18		Pn	03 19 06.2	-0.1
CMB	Columbia Colle	3.70	338		Pn	03 19 06.9	-0.2
CMB				IAML		03 20 10.1	
	comp=E,573nm,0.9s						
PDMCI	Parker Dam,Lak	3.72	93	P	Pn	03 19 05.8	-1.4
	baz=276,SNR=42						
PDMCI				Sb	Sg	03 20 05.6	-3.4
	baz=276						
NVAR	Mina Array Bea	3.82	4	Pn	Pn	03 19 12.5	+3.6
	comp=E,2.1nm,0.3s,baz=196,slow=16,SNR=31						
NVAR				Pg	Pb	03 19 18.9	+1.5
	comp=E,34nm,0.3s,baz=186,slow=16,SNR=48						
NVAR				Lg	Lg	03 20 14.1	
	comp=E,28nm,0.3s,baz=188,slow=30,SNR=5.8						
W13A	Hualapai Mount	3.93	81	Pn	Pn	03 19 09.0	-1.3
W13A				IAML		03 20 17.5	
	comp=E,275nm,0.6s						
W13A				IAML		03 20 22.3	
	comp=N,470nm,1.0s						
WAKR	Walker	3.94	351		Pn	03 19 12.7	+2.2
RYN	Ryan	4.01	1		Pn	03 19 11.3	-0.1
RYN				IAML		03 20 20.3	
	comp=E,472nm,1.2s						
RYN				IAML		03 20 27.2	
	comp=N,341nm,1.0s						
PRN	Pahroc Range	4.02	45		Pn	03 19 11.5	-0.1
PRN				IAML		03 20 22.7	
	comp=N,338nm,0.6s						
PRN				IAML		03 20 33.8	
	comp=E,411nm,0.8s						
SPX	San Pedro Mart	4.45	142	Pn	Pn	03 19 17.5	0.0
113A	Mohawk Valley,	4.45	113		Pn	03 19 15.3	-2.0
R11A	Troy Canyon, C	4.46	32	P	Pn	03 19 17.5	-0.3
	baz=214,SNR=7.4						
R11A	Troy Canyon, C	4.46	32	Pn	Pn	03 19 17.4	-0.3
PNTR	Pine Nut	4.54	350		Pn	03 19 18.7	0.0
RUBR	Rubicon Trail	4.60	345		Pn	03 19 21.6	+2.0
AFDM	Forest Hills D	4.72	337	Pn	Pn	03 19 21.5	+0.3
AFDM				IAML		03 20 44.0	
	comp=E,225nm,0.9s						
VCNR	Virginia City	4.75	350		Pn	03 19 23.6	+1.9
VCNR				IAML		03 20 47.6	
	comp=N,296nm,1.1s						
MCCM	Marconi Confer	4.92	317	Pn	Pn	03 19 23.3	-0.5
MCCM				IAML		03 20 52.8	
	comp=E,126nm,1.2s						
MCCM				IAML		03 20 59.5	
	comp=N,149nm,1.6s						
LCMT	Little Creek M	4.99	60		Pn	03 19 25.2	+0.3
CCUT	Cedar City	5.17	54	Pn	Pn	03 19 28.1	+0.6
KNB	Kanab	5.29	61	Pn	Pn	03 19 29.5	+0.4
GDXM	Geysers	5.37	323		Pn	03 19 29.4	-0.6
SZCU	Shurtz Canyon	5.38	55		Pn	03 19 31.2	+0.8
BEKR	Beckworth	5.43	346		Pn	03 19 32.5	+1.6
ORV	Oroville	5.45	336	Pn	Pn	03 19 32.0	+0.9
U15A	North Rim	5.47	69	Pn	Pn	03 19 32.0	+0.4
PSUT	Pine Spring	5.48	43		Pn	03 19 32.5	+0.7
214A	Organ Pipe Nat	5.54	117	P	Pn	03 19 32.3	-0.1
	baz=300,SNR=8.1						
214A	Organ Pipe Nat	5.54	117	Pn	Pn	03 19 32.6	+0.2
HOPS	Hopland Field	5.65	322		Pn	03 19 33.8	0.0
X16A	Lo Mia Camp, P	5.93	90	Pn	Pn	03 19 37.5	-0.4
WUAZ	Wupatki	6.01	79	P	Pn	03 19 40.1	+1.1
	baz=264,SNR=12						
WUAZ	Wupatki	6.01	79	Pn	Pn	03 19 40.3	+1.3
O03E	Paynes Creek	6.21	337	P	Pn	03 19 44.0	+2.3
	baz=155,SNR=17						
MTPU	Mount Pierson	6.23	55	Pn	Pn	03 19 43.6	+1.5
TCRU	Three Creeks R	6.37	49	Pn	Pn	03 19 43.7	-0.3
KCPM	Cahto Peak	6.43	323		Pn	03 19 45.9	+1.2
MVU	Marysvale	6.46	51		Pn	03 19 46.6	+1.5
O02D	Mt. Diablo Mer	6.47	330	P	Pn	03 19 46.4	+1.2
	baz=148						
MSU	Marysvale	6.49	51		Pn	03 19 46.9	+1.4
ELK	Elko	6.69	23	Pn	Pn	03 19 49.9	+1.6
	comp=N,0.7nm,0.3s,baz=206,slow=12,SNR=11						
ELK				Lg	Lg	03 21 37.3	
	comp=N,1.2nm,0.3s,baz=247,slow=13,SNR=2.6						
ELK				LR	LR	03 22 57.4	
	comp=N,208nm,18.8s,baz=205,slow=43						
WDC	Whiskeytown Da	6.72	334	Pn	Pn	03 19 48.7	+0.1
TUC	Tucson	6.94	107	P	Pn	03 19 50.3	-1.4
	baz=292						
TUC	Tucson	6.94	107	Pn	Pn	03 19 50.9	-0.7
N02D	Trinity Center	7.13	334	P	Pn	03 19 57.1	+2.9
	baz=152						
X18A	Snowflake	7.16	88		Pn	03 19 55.4	+0.7
DUG	Dugway, Tooele	7.24	38	Pg	Pg	03 20 25.5	-2.8
	baz=221						
KHMM	Horse Mountain	7.45	329	Pn	Pn	03 19 59.5	+0.8
M02C	Callahan	7.55	335	P	Pn	03 20 03.2	+3.2
	baz=152						
M04C	Macdoel	7.60	342	P	Pn	03 20 03.6	+2.9
	baz=160						
YBH	Yreka Blue Hor	7.80	337	Pn	Pn	03 20 05.5	+2.0
	comp=N,0.3nm,0.3s,baz=168,slow=14,SNR=12						
YBH				Sn	Sn	03 21 35.8	+3.8
	comp=N,0.1nm,0.3s,baz=297,slow=12,SNR=1.9						
YBH				LR	LR	03 23 12.5	
	comp=N,110nm,19.1s,baz=166,slow=39						
YBH	Yreka Blue Hor	7.80	337	Pn	Pn	03 20 04.3	+0.8
L04D	Klamath Falls	8.13	340	P	Pn	03 20 10.8	+2.8
	baz=158						
CTU	Camp Tracy	8.16	40	Pn	Pn	03 20 07.3	-1.1
319A	Douglas	8.48	110	Pn	Pn	03 20 13.2	+0.3
PV14	Lion Creek, Pa	8.60	61	Pn	Pn	03 20 14.7	+0.2
MVCO	Mesa Verde	8.62	70	P	Pn	03 20 17.8	+3.0
	baz=256,SNR=5.6						
PV04	Paradox Valley	8.69	61	Pn	Pn	03 20 16.5	+0.8
J05D	Fort Rock, OR	8.90	348	P	Pn	03 20 23.6	+5.0
	baz=166						
K02D	Willamette Mer	8.98	335	P	Pn	03 20 24.2	+4.6
	baz=152						
SRIG	Santa Rosalia	9.10	141	Pn	Pn	03 20 21.0	-0.1
121A	Cookes Peak, D	9.28	100	P	Pn	03 20 23.7	-0.1
	baz=286,SNR=18						
121A	Cookes Peak, D	9.28	100	Pn	Pn	03 20 23.7	-0.1
J01E	Myrtle Point	9.49	336	P	Pn	03 20 31.6	+5.2
	baz=152						
HLID	Hailey	9.52	19	P	Pn	03 20 31.9	+4.8
	baz=202						
I04A	Tendick Farm,	9.63	343	P	Pn	03 20 33.7	+5.2
	baz=161						
I03D	Drain, OR	9.79	339	P	Pn	03 20 36.0	+5.5
	baz=156,SNR=15						
BNM	Barren Site	9.93	89	Pn	Pn	03 20 32.3	-0.5
O20A	White River Ci	9.93	53	P	Pn	03 20 36.3	+3.5
	baz=240,SNR=10						
I05D	Terrebonne, OR	9.94	349	P	Pn	03 20 40.0	+7.3
	baz=167						
ANMO	Albuquerque	10.02	85	Pn	Pn	03 20 37.0	+3.1
	comp=N,0.1nm,0.3s,baz=279,slow=12,SNR=6.4						
ANMO				Lg	Lg	03 23 23.3	
	comp=N,0.1nm,0.3s,baz=72,slow=15,SNR=4.5						
ANMO				LR	LR	03 24 36.9	
	comp=N,145nm,19.8s,baz=268,slow=39						
I02D	Swisshome	10.31	339	P	Pn	03 20 43.1	+5.5
	baz=155						
H04D	Lebanon	10.40	343	P	Pn	03 20 45.4	+6.5
	baz=161						
H04A	Detroit Lake	10.43	346	Pn	Pn	03 20 38.9	-0.5
BCYI	Bear Canyon	10.49	21	Pn	Pn	03 20 39.1	-1.4
PDAR	Pinedale Array	10.79	38	Pn	Pn	03 20 46.3	+1.8
	comp=N,0.1nm,0.3s,baz=228,slow=12,SNR=6.9						
PDAR				LR	LR	03 24 58.1	
	comp=N,80nm,18.7s,baz=232,slow=38						
G05D	Wamic, OR	10.82	350	P	Pn	03 20 50.6	+5.9
	baz=168,SNR=6.9						
MNTX	Cornudas Mount	11.47	101	P	Pn	03 20 53.7	0.0
	baz=288						
MNTX	Cornudas Mount	11.47	101	Pn	Pn	03 20 53.2	-0.5
BOZ	Bozeman (W)	12.21	24	P	Pn	03 21 09.9	+6.1
	baz=208						
MSO	Missoula	12.71	15	P	Pn	03 21 18.8	+8.1
	baz=198						
LPIG	La Paz	12.73	143	LR	LR	03 25 42.3	
	comp=N,191nm,19.0s,baz=21,slow=36						
MSTX	Muleshoe	13.13	88	P	Pn	03 21 20.1	+3.7
	baz=277,SNR=6.0						
NEW	Newport	13.69	4	Pn	Pn	03 21 27.0	+3.0
	comp=N,0.0nm,0.3s,baz=248,slow=5.4,SNR=2.3						
NEW				LR	LR	03 27 16.3	
	comp=N,78nm,18.3s,baz=188,slow=40						
WALA	Waterton Lakes	14.86	12	P	P	03 21 48.0	+2.2
EGMT	Eagleton	14.95	24	P	P	03 21 45.2	-1.7
	baz=210,SNR=7.1						
EGMT	Eagleton	14.95	24	Pn	Pn	03 21 40.6	-0.6
LAO	LASA Array	15.28	34	Pn	Pn	03 21 44.7	-0.8
CBKS	Cedar Bluff	15.71	69	Pn	Pn	03 21 50.0	-1.3
WMOK	Wichita Mounta	16.33	84	P	P	03 22 03.4	+1.3
	baz=275						
WMOK	Wichita Mounta	16.33	84	Pn	Pn	03 21 56.6	-2.6
OKCFA	Oklahoma City	17.37	81	Pn	Pn	03 22 10.0	-2.3
OKCFA				IAmb	IAmb	03 22 28.1	
	comp=Z,45nm,1.6s						
833A	Chaparral WMA,	17.55	106	Pn	Pn	03 22 12.8	-1.8
X37A	Clayton	19.14	83	P	P	03 22 32.9	-0.3
N35A	Tabor	19.19	64	P	P	03 22 32.8	-0.9
ECSD	EROS Data Cent	19.30	55	P	Pn	03 22 36.1	+0.2
	baz=249						
ECSD	EROS Data Cent	19.30	55	P	Pn	03 22 35.0	-0.9
Z38A	Mt. Pleasant	19.66	87	P	P	03 22 37.9	-0.9
NATX	Nacogdoches	20.25	91	P	P	03 22 44.1	-1.2
MIAR	Mount Ida	20.61	83	P	Pn	03 22 50.2	-1.3
	baz=277,SNR=10.0						
MIAR	Mount Ida	20.61	83	P	P	03 22 49.6	+0.3
S39A	Bolivar	20.64	74	P	Pn	03 22 50.6	-1.2
S39A				IAmb	IAmb	03 22 55.3	
	comp=Z,7.4nm,0.9s						
U40A	Yellville	21.04	78	P	P	03 22 54.4	+0.6
	baz=273						
U40A	Yellville	21.04	78	P	P	03 22 55.1	+1.3
U40A				IAmb	IAmb	03 22 55.8	
	comp=Z,15nm,1.2s						
MGMO	Mountain Grove	21.48	76	P	P	03 22 59.9	+1.3
R40A	Maddies Statio	21.49	72	P	P	03 22 59.8	+1.2
W41B	Gary Mavity, V	21.63	81	P	P	03 23 00.5	+0.4
	baz=276						
W41B	Gary Mavity, V	21.63	81	P	P	03 23 00.0	-0.1
FCAR	Ozark Folk Cen	21.66	79	P	P	03 23 00.4	-0.1
FCAR				IAmb	IAmb	03 23 04.1	
	comp=Z,13nm,1.2s						
P40A	Paris	21.73	69	P	P	03 23 02.4	+1.1
P40A				IAmb	IAmb	03 23 03.0	
	comp=Z,9.3nm,0.9s						
LCAR	Lake Charles	22.43	78	P	P	03 23 08.2	-0.6
ULM	Lac du Bonnet	22.81	40	P	P	03 23 11.9	-0.8
	comp=Z,20nm,1.2s,baz=228,slow=11,SNR=7.8						
ULM	Lac du Bonnet	22.81	40	P	P	03 23 12.2	-0.4
FVM	French Village	22.94	73	P	P	03 23 14.6	+0.4
FVM				IAmb	IAmb	03 23 16.2	
	comp=Z,13nm,1.4s						
FFC	Flin Flon	23.23	25	P	P	03 23 16.4	-0.6
P43A	Skaggs, Pawnee	23.69	69	P	P	03 23 22.4	+0.8
TLIG	Tlapa	24.67	128	P	P	03 23 31.8	+0.7
DLBC	Dease Lake	25.02	346	LR	LR	03 34 46.1	
	comp=Z,78nm,19.4s,baz=216,slow=40						
CMIG	Matias Romero	27.47	123	LR	LR	03 33 57.0	
	comp=Z,80nm,18.9s,baz=288,slow=35						
YKA	Yellowknife Ar	28.02	4	P	P	03 24 03.8	+3.0
	comp=Z,0.1nm,0.5s,baz=180,slow=9.0,SNR=4.7						
YKA				PcP	PcP	03 27 15.2	-0.1
	comp=Z,0.5nm,0.6s,baz=149,slow=2.8,SNR=10						
YKA				LR	LR	03 35 17.6	
	comp=Z,56nm,18.4s,baz=0.0,slow=37						
TKL	Tuckaleechee C	28.43	78	LR	LR	03 36 08.5	
	comp=Z,60nm,18.4s,baz=212,slow=38						
SML	Sawmill	33.09	334	P	P	03 24 45.6	-0.1
ILAR	Eielson Array	34.70	339	P	P	03 25 00.8	+1.3
	comp=Z,0.7nm,0.9s,baz=157,slow=8.4,SNR=4.3						
ILAR				PcP	PcP	03 27 33.5	+0.4
	comp=Z,0.3nm,0.6s,baz=182,slow=2.6,SNR=5.7						
USRK	Ussuriysk Ar.	78.70	316	P	P	03 30 13.6	+1.3
	comp=Z,1.3nm,0.7s,baz=52,slow=9.3,SNR=4.5						
FINES	FINESS Array B	80.08	16	P	P	03 30 19.2	-0.2
	comp=Z,4.5nm,0.9s,baz=337,slow=8.3,SNR=5.7						
ESDC	Sonseca Array	84.61	45	P	P	03 30 44.5	+0.8
	comp=Z,1.6nm,0.9s,baz=294,slow=4.9,SNR=9.1						
HHC	Hu-ho-hao-te	91.85	324	*e*P	P	03 31 17.6	-0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
WMQ	Urumqi	98.34	341	*e*P	Pdif	03 31 48.2	+0.2
ASAR	Alice Springs	116.92	259	PKP	PKPdf	03 36 54.1	-1.0
	comp=Z,0.4nm,0.7s,baz=86,slow=2.0,SNR=4.2						
BOSA	Boshof	148.78	89	PKPbc	PKPbc	03 37 56.9	-1.0
	comp=Z,4.1nm,1.1s,baz=249,slow=5.5,SNR=3.9						

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*BEO **04** 03:27:38.7±0.6, 44°.92N×22°.37E, h9km±5km, ML1.5/7*

BUC 04 03:27:39.1±0.3, **44°.99N**×**22°.35E, h7**km±5km, **ml1.6**/6, **12C-12D, Error ellipse: s-maj=1.7km s-min=1.4km az=139.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	Herculane	0.12	156	⇓P	Pg	03 27 41.8	+0.1
HERR				⇓S	Sg	03 27 43.7	+0.2
HERR	Herculane	0.12	156	⇓P	Pg	03 27 41.8	+0.1
HERR				⇓S	Sg	03 27 43.7	+0.2
DJES	Djerdap	0.35	159	*e*Pg	Pg	03 27 44.6	-1.3
DJES				*e*Sg	Sg	03 27 49.3	-1.2
RMGR	Halanga-Turnu	0.41	143	⇓S	Sg	03 27 52.9	+0.4
RMGR	Halanga-Turnu	0.41	143	⇓S	Sg	03 27 52.9	+0.4
MDVR	Moldovita	0.50	245	⇑P	Pg	03 27 48.7	0.0
MDVR				⇓S	Sg	03 27 55.6	+0.4
MDVR	Moldovita	0.50	245	⇑P	Pg	03 27 48.7	0.0
MDVR				⇓S	Sg	03 27 55.6	+0.4
GZR	Gura Zlata	0.50	37	⇑P	Pg	03 27 49.0	+0.2
GZR				⇑S	Sg	03 27 56.2	+0.9
GZR	Gura Zlata	0.50	37	⇑P	Pg	03 27 49.0	+0.2
GZR				⇑S	Sg	03 27 56.2	+0.9
SRE	Strehaia	0.69	118	⇑S	Sg	03 28 02.3	+0.9
SRE	Strehaia	0.69	118	⇑S	Sg	03 28 02.3	+0.9
KUBS	Kucevo	0.75	220	*e*Sg	Sg	03 28 01.1	-2.2
BZS	Buzias	0.81	321	⇓P	Pb	03 27 55.1	-0.4
BZS	Buzias	0.81	321	⇓P	Pb	03 27 55.1	-0.4
BZS	Buzias	0.81	321	*e*Pg	Pb	03 27 55.2	-0.3
BZS				*e*Sg	Sb	03 28 06.0	-0.7
BANR	Banloc	0.94	295	⇑S	Sn	03 28 12.3	-0.2
BANR	Banloc	0.94	295	⇑S	Sn	03 28 12.3	-0.2
DEV	Deva	0.97	24	⇑P	Pg	03 27 57.0	-0.7
DEV				⇓S	Sb	03 28 11.2	-0.1
DEV	Deva	0.97	24	⇑P	Pg	03 27 57.0	-0.7
DEV				⇓S	Sb	03 28 11.2	-0.1
SVIS	Svilajnac	1.09	228	*e*Sg	Sg	03 28 11.8	-2.2
ZAGS	Zajecar	1.18	184	*e*Pg	Pg	03 27 58.8	-3.0
ZAGS				*e*Sg	Sg	03 28 13.9	-3.2
TRUS	Trudelj	1.58	242	*e*Sg	Sb	03 28 28.9	-0.1
GRUS	Gruza	1.61	227	*e*Sg	Sb	03 28 29.6	0.0
ZAPS	Zavoj	1.73	173	*e*Pg	Pn	03 28 08.1	-1.6
ZAPS				*e*Sg	Sn	03 28 29.8	-2.3
DIVS	Divibare	1.91	243	*e*Sg	Sb	03 28 38.7	+0.4

BUC 04 03:27:41.8±0.2, **44°.98N**×**22°.33E, h10**km±1km, **ml1.8**/6, **18C-12D, Error ellipse: s-maj=1.6km s-min=1.4km az=20.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	Herculane	0.11	147	⇑P	Pg	03 27 44.4	-0.2
HERR				⇑S	Sg	03 27 46.5	0.0
HERR	Herculane	0.11	147	⇑P	Pg	03 27 44.4	-0.2
HERR				⇑S	Sg	03 27 46.5	0.0
RMGR	Halanga-Turnu	0.41	140	⇓S	Sg	03 27 55.7	+0.6
RMGR	Halanga-Turnu	0.41	140	⇓S	Sg	03 27 55.7	+0.6
MDVR	Moldovita	0.48	246	⇓P	Pg	03 27 51.6	+0.4
MDVR				⇑S	Sg	03 27 58.4	+0.9
MDVR	Moldovita	0.48	246	⇓P	Pg	03 27 51.6	+0.4
MDVR				⇑S	Sg	03 27 58.4	+0.9
GZR	Gura Zlata	0.52	37	⇑P	Pg	03 27 52.2	+0.2
GZR				⇑S	Sg	03 27 59.1	+0.2
GZR	Gura Zlata	0.52	37	⇑P	Pg	03 27 52.2	+0.2
GZR				⇑S	Sg	03 27 59.1	+0.2
SRE	Strehaia	0.70	116	⇓S	Sg	03 28 04.9	+0.5
SRE	Strehaia	0.70	116	⇓S	Sg	03 28 04.9	+0.5
DEV	Deva	0.99	24	⇑P	Pb	03 28 01.0	-0.1
DEV				⇓S	Sn	03 28 15.7	-0.2
DEV	Deva	0.99	24	⇑P	Pb	03 28 01.0	-0.1
DEV				⇓S	Sn	03 28 15.7	-0.2
ARR	Arges	1.68	76	⇓S	Sb	03 28 34.3	+0.3
ARR	Arges	1.68	76	⇓S	Sb	03 28 34.3	+0.3
DRGR		1.83	8	⇑P	Pn	03 28 13.3	-0.2
DRGR				⇓S	Sn	03 28 37.5	+0.7
DRGR		1.83	8	⇑P	Pn	03 28 13.3	-0.2
DRGR				⇓S	Sn	03 28 37.5	+0.7
VOIR		1.98	76	⇑P	Pn	03 28 15.4	0.0
VOIR				⇑S	Sn	03 28 40.5	+0.2
VOIR		1.98	76	⇑P	Pn	03 28 15.4	0.0
VOIR				⇑S	Sn	03 28 40.5	+0.2

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*NEIC **04** 03:39:32.7±1.8, 7°.29S±0°.09×121°.18E±0°.09, h549km±9km, mb4.0/11, Error ellipse: s-maj=14.8km s-min=9.6km az=137.0*

*IDC **04** 03:39:32.9±0.8, 7°.22S×121°.25E, h546km±9km, mb3.1/6, mb1 3.4/11, mb1mx2.9/54, mbtmp4.2/11, Error ellipse: s-maj=37.7km s-min=10.6km az=58.0*

*NOU **04** 03:39:33.1, 7°.29S×121°.22E, h541km, mb4.1, Flores Sea*

ISC 04 03:39:32.6±0.6, **7°.27S**±0°.09×**121°.19E**±0°.09, **h550**km, **n33**, σ**0s.83**/34, **mb3.8**/7, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.66	327	P	P	03 40 46.7	+1.0
	2.7nm,0.3s,baz=209,slow=2.2,SNR=7.7						
BATI	Baumata	3.81	140	P	P	03 40 53.9	+0.8
	44nm,0.3s,baz=323,slow=3.1,SNR=20						
BATI				S	S	03 41 57.6	-1.0
	38nm,0.3s,baz=320,slow=20,SNR=16						
SOEI	Soe	3.92	129	P	P	03 40 53.4	-0.7
LUWI	Luwuk	6.39	14	P	P	03 41 13.8	-1.0
JAGI	Jajag, Banyuwa	7.07	260	P	P	03 41 20.1	-1.2
TOLI2	Tolitoli	8.34	357	P	P	03 41 33.2	-0.5
MTN	Manton Dam	11.25	120	P	P	03 42 03.1	-0.3
FITZ	Fitzroy Crossi	11.60	158	P	P	03 42 07.0	0.0
	1.0nm,0.3s,baz=355,slow=6.4,SNR=18						
FAKI	Fak Fak	11.84	69	P	P	03 42 09.6	+0.1
SIJI	Sorong	11.89	58	P	P	03 42 09.9	-0.2
	1.5nm,0.3s,baz=268,slow=7.5,SNR=6.5						
MYLDM	Lahad Datu	12.66	348	P	P	03 42 19.6	+1.6
SBUM	Sibu	13.17	317	P	P	03 42 24.1	+0.8
KSM	Kuching	13.90	308	P	P	03 42 31.1	+0.2
KKM	Kota Kinabalu	14.13	339	P	P	03 42 33.6	+0.3
WB0	Warramunga Arr	17.84	135	P	P	03 43 09.7	+0.6
WB0				IAmb	IAmb	03 43 11.5	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	17.93	136	P	P	03 43 10.3	+0.4
	comp=Z,1.7nm,0.3s,baz=315,slow=11,SNR=102						
WRAB	Tennant Creek	17.93	136	P	P	03 43 10.2	+0.3
WR0	Warramunga Arr	18.08	136	P	P	03 43 11.8	+0.6
AS31	Alice Springs	20.37	145	P	P	03 43 32.5	+0.4
ASAR	Alice Springs	20.37	145	P	P	03 43 32.9	+0.8
	comp=Z,2.1nm,0.5s,baz=321,slow=8.2,SNR=106						
ASAR				PcP	PcP	03 47 20.8	+0.9
	comp=Z,0.4nm,0.5s,baz=336,slow=2.0,SNR=4.0						
RABL	Rabaul	30.97	86	P	P	03 45 04.3	-1.4
STKA	Stephens Creek	31.00	145	P	P	03 45 07.1	+1.4
	comp=Z,5.3nm,0.4s,baz=322,slow=8.7,SNR=22						
STKA	Stephens Creek	31.00	145	IAmb	IAmb	03 45 07.4	
	comp=Z,1.3nm,0.5s						
CMAR	Chiang Mai Arr	33.70	320	P	P	03 45 29.7	+1.0
	comp=Z,1.6nm,0.7s,baz=140,slow=6.8,SNR=9.6						
CHTO	Chiang Mai	33.96	320	P	P	03 45 30.8	0.0
CHTO				IAmb	IAmb	03 45 32.4	
	comp=Z,2.4nm,0.7s						
SONM	Songino Array	56.41	348	P	P	03 48 22.3	+0.1
	comp=Z,0.3nm,0.4s,baz=170,slow=9.1,SNR=2.7						
MK31	Makanchi Array	63.95	331	P	P	03 49 12.2	+0.2
MKAR	Makanchi Array	63.95	331	P	P	03 49 13.0	+1.0
	comp=Z,0.6nm,0.5s,baz=146,slow=6.6,SNR=8.9						
KBL	Kabul	64.43	314	P	P	03 49 15.2	-0.4
KBL				IAmb	IAmb	03 49 16.4	
	comp=Z,2.5nm,0.6s						
RER	Riviere de l'E	64.53	250	P	P	03 49 15.0	-1.3
ZALV	Zalesovo Beam	68.24	338	P	P	03 49 38.0	-0.4
	comp=Z,0.5nm,0.4s,baz=136,slow=4.5,SNR=3.5						
TORD	Torodi Ar. Bea	120.28	281	PKP	PKPdf	03 57 21.3	-1.1
	comp=Z,0.5nm,0.8s,baz=90,slow=1.6,SNR=3.5						
PLCA	Paso Flores	131.02	168	PKP	PKPdf	03 57 43.0	+0.5
	comp=Z,3.8nm,1.1s,baz=170,slow=6.1,SNR=3.6						

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*JMA **04** 03:39:40.5±0.1, 29°.33N×130°.56E, h38^{km}±4^{km}, M3.4*
*IDC **04** 03:39:43.4±4.4, 29°.43N×130°.41E, h51^{km}±38^{km}, mb3.3/9, mb1 3.4/11, mb1mx3.2/64, mbtmp3.5/11, ML3.1/2, MS2.9/6, Ms1 2.9/6, ms1mx2.8/25, Error ellipse: s-maj=30.2km s-min=23.8km az=65.0*
ISC 04 03:39:37.9±1.2**, 29°.30N**±0°.03×**130°.62E**±0°.05**, h15**^{km}±8^{km}**, n33, σ1ˢ.15**/43**, mb3.7**/9**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.84	310	P	Pn	03 39 55.3	+0.1
JNN				*e*S	Sn	03 40 05.6	-1.7
JYAK	Yakushimahirau	0.94	354	P	Pn	03 39 57.2	+0.7
JYAK				*e*S	Sn	03 40 09.0	-0.6
JMTN	Minamitane	1.12	12	P	Pg	03 39 59.7	+0.2
JMTN				S	Sg	03 40 15.0	+0.9
JZK	Kikaishima	1.14	210	P	Pg	03 40 00.7	+0.8
JKC	Kuchinoerabu	1.21	342	P	Pg	03 40 01.2	-0.1
JTAJ	Takarajima	1.25	263	P	Pg	03 40 01.7	-0.3
JTAJ				*e*S	Sg	03 40 17.3	-1.0
JAM	Amami Oshima	1.26	225	P	Pb	03 40 01.9	+0.6
JAM				*e*S	Sn	03 40 17.8	+0.3
JTN	Tanegashima 3	1.38	13	P	Pb	03 40 03.6	+0.2
JTN				*e*S	Sg	03 40 21.7	-0.8
JAMN	Amaminishikomi	1.65	231	P	Pb	03 40 07.4	-0.6
JAMN				S	Sn	03 40 27.5	+0.3
JTSR	Tashiro 2	1.88	8	P	Pb	03 40 10.9	-0.9
JTSR				*e*S	Sb	03 40 34.2	-0.9
JTK	Tokunoshima	2.11	225	P	Pn	03 40 13.8	+1.2
JTK				*e*S	Sn	03 40 38.5	0.0
JOKE	Okinoerabujima	2.65	224	P	Pn	03 40 21.2	+1.2
JOKE				*e*S	Sn	03 40 52.8	+0.9
JYRO	Yoronjima	2.97	221	P	Pn	03 40 25.1	+0.7
JYRO				*e*S	Sn	03 40 59.0	-0.8
JOW	Kunigami	3.22	221	P	Pn	03 40 28.3	+0.4
JOW				*e*S	Sn	03 41 06.0	0.0
JIH	Iheya	3.26	227	P	Pn	03 40 29.0	+0.6
JKDJ	Kitadaitoujima	3.39	170	P	Pn	03 40 30.4	+0.1
JKDJ				*e*S	Sn	03 41 07.7	-2.5
JMZ	Minamidaito 2	3.51	171	P	Pn	03 40 31.8	-0.1
JMZ				S	Sn	03 41 09.7	-3.4
JNU	Nakatsue	3.81	3	P	Pn	03 40 37.9	+1.8
	1.3nm,0.3s,baz=354,slow=6.6,SNR=8.1						
JNU				S	Sn	03 41 21.6	+1.0
	1.0nm,0.3s,baz=149,slow=5.6,SNR=3.8						
JNU				LR	LR	03 42 25.9	
	comp=Z,124nm,20.9s,baz=188,slow=44						
KSRS	Korea Array	8.44	345	LR	LR	03 45 14.6	
	comp=Z,115nm,19.7s,baz=172,slow=40						
MJAR	Matsushiro Arr	9.63	39	LR	LR	03 45 28.0	
	comp=Z,30nm,20.9s,baz=245,slow=36						
USRK	Ussuriysk Ar.	14.91	4	LR	LR	03 47 28.8	
	comp=Z,34nm,20.9s,baz=187,slow=32						
ASAJ	Asahikawa	17.60	30	LR	LR	03 50 58.7	
	comp=Z,65nm,20.0s,baz=317,slow=38						
KLR	Kul'dur	19.92	2	P	P	03 44 08.7	-0.2
	0.1nm,0.3s,baz=160,slow=15,SNR=2.9						
SONM	Songino Array	26.30	321	P	P	03 45 11.8	-1.1
	1.1nm,0.7s,baz=122,slow=11,SNR=4.4						
CMAR	Chiang Mai Arr	30.82	257	LR	LR	04 00 09.9	
	comp=Z,42nm,20.4s,baz=227,slow=40						
MKAR	Makanchi Array	41.17	309	P	P	03 47 19.3	-2.3
	0.3nm,0.5s,baz=84,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	44.18	314	P	P	03 47 45.5	-0.5
	0.5nm,0.3s,baz=100,slow=9.5,SNR=7.7						
BVAR	Borovoye Array	49.46	316	P	P	03 48 26.5	-0.8
	0.5nm,0.6s,baz=60,slow=8.8,SNR=4.1						
ASAR	Alice Springs	52.76	176	P	P	03 48 54.3	+2.0
	0.3nm,0.8s,baz=9.2,slow=13,SNR=5.6						
AKTO	Aktyubinsk	57.23	313	P	P	03 49 25.6	+1.2
	1.1nm,0.8s,baz=97,slow=8.1,SNR=3.8						
ILAR	Eielson Array	60.73	29	P	P	03 49 48.5	+0.1
	0.2nm,0.8s,baz=270,slow=4.5,SNR=2.2						
AKASG	Malin Array Be	74.57	320	P	P	03 51 15.6	-0.5
	0.4nm,0.5s,baz=56,slow=6.3,SNR=2.7						
NVAR	Mina Array Bea	86.86	47	P	P	03 52 23.6	+1.2
	0.3nm,0.6s,baz=290,slow=6.0,SNR=3.7						

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*KRNET **04** 03:47:48.2±0.1, 42°.50N×69°.40E, mb2.6*
ISC 04 03:47:48.7±1.8**, 42°.42N**±0°.08×**69°.5E**±0°.1**, h8**^{km}**, n4, σ0ˢ.98**/8**, 6C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	1.02	48	⇓P	Pn	03 48 08.8	-0.5
	0.2nm,0.5s,baz=232,slow=17,SNR=5.9						
KK31				⇓S	Sn	03 48 25.4	+1.5
	0.8nm,0.5s,baz=230,slow=29,SNR=6.1						
TAS	Tashkent	1.11	187	⇑*i*P	Pg	03 48 09.7	-0.2
	baz=84						
TAS				⇑*i*S	Sb	03 48 25.2	+0.5
	baz=84						
TRKS	Terek-Say	1.53	125	⇑*i*P	Pn	03 48 16.4	0.0
	baz=27						
TRKS				⇑*i*S	Sb	03 48 37.7	+0.8
	baz=27						
MNAS	Manas	2.24	87	⇑*i*P	Pn	03 48 25.7	-0.5
	baz=89						
MNAS				⇑*i*S	Sn	03 48 53.1	-1.0
	baz=89						

JMA 04 04:21:45.8, 35°.37N×133°.74E, h11^{km}, M0.5, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKR	Kurayoshi	0.07	83	P	Pg	04 21 48.1	0.0
JKR				S	Sg	04 21 49.7	-0.1
JAD	Aida	0.55	141	P	Pg	04 21 56.4	-0.2

JMA 04 04:22:51.6±0.1**, 36°.93N×138°.15E, h13**^{km}±2^{km}**, M1.0, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJN	Nakama	0.17	3	P	Pg	04 22 55.8	+0.2
JJN				S	Sg	04 22 58.9	+0.5
MAT	Matsushiro	0.39	173	P	Pg	04 22 58.9	-0.5
MAT				S	Sg	04 23 04.2	-0.5
MAT	Matsushiro	0.39	173	P	Pg	04 22 58.9	-0.5
MAT				S	Sg	04 23 04.2	-0.5
JNG	Nsakai	0.52	184	P	Pg	04 23 01.5	-0.4
JNG				S	Sg	04 23 08.6	-0.3

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*IDC **04** 04:29:01.4±11.0, 25°.55S×70°.30W, h0^{km}, mb4.0/1, mb1 4.0/1, mb1mx3.4/18, mbtmp4.0/1, Error ellipse: s-maj=621.0km s-min=107.2km az=10.0*
*NEIC **04** 04:29:04.4±1.2, 26°.68S±0°.05×70°.90W±0°.09, h56^{km}±9^{km}, Error ellipse: s-maj=12.6km s-min=5.8km az=115.0*
*GUC **04** 04:29:04.6±0.6, 26°.78S×70°.96W, h36^{km}±4^{km}, ML3.7*
ISC 04 04:29:01.6±0.7**, 26°.67S**±0°.02×**70°.91W**±0°.06**, h19**^{km}±3^{km}**, n51, σ1ˢ.54**/62**, 2C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC01	Pan de Azucar	0.58	28	*e*P	Pn	04 29 17.9	+3.0
AC01				*e*S	Sn	04 29 27.2	+3.3
AC01				IAML		04 29 27.5	
	comp=E,6μm,0.2s						
AC01	Pan de Azucar	0.58	28		Pn	04 29 17.9	+3.0
GO03	Copiap	1.10	147	*e*P	Pg	04 29 23.5	+0.5
GO03				*e*S	Sn	04 29 36.9	+0.1
GO03				IAML		04 29 39.6	
	comp=E,3μm,0.3s						
GO03	Copiap	1.10	147	Pn	Pg	04 29 23.8	+0.8
AC04	Llanos de Chal	1.54	185	*e*P	Pb	04 29 29.2	-0.3
AC04				*e*S	Sn	04 29 47.5	+0.1
AC04	Llanos de Chal	1.54	185		Pb	04 29 29.3	-0.2
AC02	Maricunga	1.60	96	⇑*e*P	Pb	04 29 31.0	+0.2
AC02				*e*S	Sn	04 29 49.4	-0.2
AC02				IAML		04 29 50.4	
	comp=N,2μm,0.2s						
AC02	Maricunga	1.60	96		Pb	04 29 30.8	0.0
GO02	Mina Guanaco	1.91	39	⇑*i*P	Pb	04 29 35.9	-0.1
GO02				*e*S	Sb	04 29 58.5	-1.0
GO02				IAML		04 30 01.3	
	comp=E,1μm,0.1s						
GO02	Mina Guanaco	1.91	39		Pb	04 29 36.1	+0.1
PB14	IPOC Station P	2.08	13	*e*P	Pb	04 29 37.8	-1.1
PB14				*e*S	Sb	04 30 03.6	-0.9
PB14	IPOC Station P	2.08	13		Pb	04 29 37.7	-1.2
AC05	El Transito	2.23	166	*e*P	Pb	04 29 39.9	-1.5
AC05				*e*S	Sb	04 30 07.3	-1.4
AC05	El Transito	2.23	166		Pb	04 29 39.7	-1.7
LCO	Las Campanas	2.34	176		Pn	04 29 40.8	+1.5
PB10	IPOC Station P	3.15	6	*e*P	Pn	04 29 51.8	+1.6
PB10	IPOC Station P	3.15	6	Pn	Pn	04 29 51.8	+1.6
VCA	Vinchina	3.16	131	*e*P	Pb	04 29 54.0	-3.2
VCA				*e*S	Sb	04 30 32.6	-2.9
VCA				IAML		04 30 34.8	
	comp=E,114nm,0.4s						
CO01	Juntas del Tor	3.38	168	*e*P	Pn	04 29 55.8	+2.3
CO01				*e*S	Sn	04 30 34.0	+0.9
CO01				IAML		04 30 58.0	
	comp=N,59nm,0.4s						
CO01	Juntas del Tor	3.38	168	Pn	Pn	04 29 53.6	+0.1
GO04	Tololo Observa	3.50	178	*e*P	Pn	04 29 56.8	+1.7
GO04				*e*S	Sn	04 30 37.6	+1.5
GO04				IAML		04 31 01.2	
	comp=E,398nm,0.5s						
GO04	Tololo Observa	3.50	178		Pn	04 29 55.6	+0.5
PB05	IPOC Station P	3.85	10	*e*P	Pn	04 30 00.9	+1.1
PB05				*e*S	Sn	04 30 45.5	+0.8
PB05				IAML		04 31 22.5	
	comp=E,48nm,0.4s						
CO03	El Pedregal	4.16	177	*e*P	Pn	04 30 05.9	+1.8
CO03				*e*S	Sn	04 30 53.1	+0.8
CO03	El Pedregal	4.16	177	Pn	Pn	04 30 05.4	+1.3
PB04	IPOC Station P	4.37	9	Pn	Pn	04 30 07.1	+0.1
LVC	Limon Verde	4.43	25	Pn	Pn	04 30 08.7	+0.7
CO02	Combarbal	4.52	181	*e*P	Pn	04 30 10.1	+0.9
CO02				*e*S	Sn	04 31 03.1	+1.9
CO02	Combarbal	4.52	181	Pn	Pn	04 30 10.3	+1.1
PB03	IPOC Station P	4.71	13	*e*P	Pn	04 30 15.2	+3.4
PB03				*e*S	Sb	04 31 16.9	-3.3
CYA	Choya	4.87	112	*e*P	Pn	04 30 15.5	+1.7
PB07	IPOC Station P	5.00	11	Pn	Pn	04 30 16.6	+0.8
PB09	IPOC Station P	5.08	18	Pn	Pn	04 30 18.0	+1.1
PB01	IPOC Station P	5.75	13		Pn	04 30 25.7	-0.2
VA03	San Esteban	6.09	177	Pn	Pn	04 30 31.4	+0.8
MT02	Curacav	6.58	182	Pn	Pn	04 30 38.7	+1.5
PB08	IPOC Station P	6.69	14	Pn	Pn	04 30 39.4	+0.2
MT05	Renca	6.71	179	Pn	Pn	04 30 40.2	+1.1
PSGCX	Pisagua	7.07	6	Pn	Pn	04 30 44.2	0.0
GO01	Chusmiza	7.14	13	Pn	Pn	04 30 46.5	+1.1
H03N1	Juan Fernandez	9.68	224	T	T	04 41 10.6	
	baz=50,slow=72,SNR=78						
H03N2	Juan Fernandez	9.69	224	T	T	04 41 12.8	
	baz=50,slow=72,SNR=76						
H03N3	Juan Fernandez	9.69	224	T	T	04 41 15.1	
	baz=50,slow=72,SNR=70						
SAML	Samuel	19.08	24	P	P	04 33 21.9	-1.2
SAML				IAmb	IAmb	04 34 00.3	
	comp=Z,4.6nm,1.4s						
SDV	Santo Domingo	35.34	0	P	P	04 35 54.8	-1.3
TOA0	Torodi Ar. Sit	80.81	70	P	P	04 41 11.9	-2.5
TOA0				IAmb	IAmb	04 41 28.8	
	comp=Z,2.6nm,0.7s						
TORD	Torodi Ar. Bea	80.81	70	P	P	04 41 12.7	-1.8
	comp=Z,0.9nm,0.7s,baz=257,slow=5.4,SNR=5.1						
KURK	Kurchatov	146.60	36		PKPdf	04 48 39.8	-0.2
KURBB	Kurchatov Arra	146.61	36	PKPbc	PKPdf	04 48 39.8	-0.2
	comp=Z,0.2nm,0.3s,baz=308,slow=3.1,SNR=3.1						
ZALV	Zalesovo Beam	147.38	27	PKPbc	PKPbc	04 48 43.1	-0.5
	comp=Z,1.2nm,0.5s,baz=310,slow=5.0,SNR=6.7						
MKAR	Makanchi Array	150.82	39	PKPbc	PKPbc	04 48 52.0	-0.6
	comp=Z,1.1nm,0.7s,baz=328,slow=0.9,SNR=12						

IDC 04 04:35:49.9±7.8**, 19°.34S×177°.06W, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/42**, mbtmp3.3**/3**, Error ellipse: s-maj=337.5km s-min=39.7km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.65	261	P	P	04 44 13.1	+0.4
	0.1nm,0.3s,baz=97,slow=7.5,SNR=8.1						
ASAR	Alice Springs	45.66	256	P	P	04 44 12.0	-0.7
	0.3nm,0.9s,baz=95,slow=7.5,SNR=3.7						
ILAR	Eielson Array	87.00	12	P	P	04 48 36.5	0.0
	0.3nm,0.8s,baz=228,slow=5.2,SNR=4.5						

IDC 04 04:43:13.3±14.0**, 8°.37S×129°.55E, h170**^{km}±179^{km}**, mb3.3**/1**, mb1 2.9**/4**, mb1mx2.7**/34**, mbtmp3.4**/4**, ML2.8**/3**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx2.8**/20**, Error ellipse: s-maj=111.2km s-min=53.1km az=23.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.09	252	LR	LR	04 47 40.6	
	comp=Z,387nm,18.5s,baz=330,slow=44						
FITZ	Fitzroy Crossi	10.39	201	P	Pn	04 45 37.5	-0.6
	0.1nm,0.3s,baz=14,slow=8.3,SNR=1.4						
WRA	Warramunga Arr	12.40	159	P	Pn	04 46 04.8	+0.5
	0.1nm,0.3s,baz=344,slow=12,SNR=3.8						
WRA				S	Sn	04 48 22.2	+0.4
	0.1nm,0.3s,baz=337,slow=23,SNR=3.0						
ASAR	Alice Springs	15.77	165	P	Pn	04 46 46.4	0.0
	0.0nm,0.3s,baz=338,slow=11,SNR=2.9						
MSVF	Nonsavu	48.03	106	LR	LR	05 08 56.7	
	comp=Z,288nm,21.9s,baz=70,slow=32						
SONM	Songino Array	59.60	342	P	P	04 52 59.4	0.0
	0.4nm,0.4s,baz=164,slow=5.7,SNR=3.5						

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*IDC **04** 04:46:32.1±3.0, 52°.97N×174°.30W, h188^{km}±26^{km}, mb3.4/10, mb1 3.7/13, mb1mx3.4/49, mbtmp4.0/13, Error ellipse: s-maj=22.8km s-min=14.5km az=172.0*
*AEIC **04** 04:46:33.1±4.4, 53°.1N±0°.1×174°.3W±0°.1, h171^{km}±7^{km}, Error ellipse: s-maj=18.0km s-min=8.5km az=166.0*
*NEIC **04** 04:46:33.6±1.5, 52°.8N±0°.2×174°.2W±0°.1, h195^{km}±9^{km}, mb4.3/89, ML3.9(AEIC), Error ellipse: s-maj=22.8km s-min=7.3km az=164.0*
ISC 04 04:46:33.2±0.6**, 52°.8N**±0°.1×**174°.13W**±0°.05**, h200**^{km}**, n208, σ1ˢ.12**/210**, mb4.1**/34**, 1D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWE	Korovin West	0.40	190		Pn	04 47 00.2	+0.2
KOFP	Korovin Flat P	0.48	177		Pn	04 47 00.1	-0.2
ATKA	Atka Island	0.56	184		Pn	04 46 59.8	-0.7
GSTR	Great Sitkin T	1.35	241		Pn	04 47 05.7	+0.1
GSMY	Great Sitkin M	1.38	240		Pn	04 47 05.5	-0.3
GSSP	Great Sitkin S	1.42	243		Pn	04 47 06.1	0.0
GSTD	Great Sitkin T	1.42	241		Pn	04 47 06.2	0.0
ADAG	Mount Adagdak	1.70	244		Pn	04 47 09.0	+0.3
ADK	Adak	1.79	242		Pn	04 47 09.6	+0.1
KICM	Kanaga Island	2.06	247		Pn	04 47 12.9	+0.7
KIKV	Kanaga Island	2.06	246		Pn	04 47 12.6	+0.4
KIMD	Kanaga Island	2.15	244		Pn	04 47 13.4	+0.2
TAFP	Tanaga Falls P	2.51	252		Pn	04 47 17.6	+0.4
TASE	Tanaga Southea	2.57	251		Pn	04 47 18.5	+0.6
GAEA	Gareloi East	3.00	253		Pn	04 47 23.6	+0.9
GALAA	Gareloi Lava P	3.02	253		Pn	04 47 23.7	+0.8
NIKH	Nikolski High	3.21	84	Pn	Pn	04 47 25.3	+0.1
OKTU	Okmok Mt. Tuli	3.73	78		Pn	04 47 31.9	+0.4
CERAA	Semis' Rag'd T	3.89	260		Pn	04 47 34.4	+0.9
CERB	Semis' Cerberu	3.91	260		Pn	04 47 35.0	+1.2
CESW	Semis' Southwe	3.96	260		Pn	04 47 35.3	+0.9
AMKA	Amchitka	4.28	254	Pn	Pn	04 47 38.1	-0.3
MGOD	Makushin Gods	4.48	74		Pn	04 47 41.4	+0.5
LSPA	Little Sitkin	4.54	263		Pn	04 47 42.8	+1.1
MSW	Makushin Switc	4.56	72		Pn	04 47 42.1	+0.3
MREP	Makushin Rep't	4.56	74		Pn	04 47 42.3	+0.4
MNAT	Makushin Natee	4.61	73		Pn	04 47 43.1	+0.6
UNV	Unalaska Valle	4.71	74	Pn	Pn	04 47 44.0	+0.3
ANM	Nome	12.67	17		Pn	04 49 28.3	+2.1
SVW2	Sparrevohn	13.09	43	Pn	Pn	04 49 32.2	+0.7
KDAK	Kodiak Island	13.25	59	P	Pn	04 49 30.8	-2.7
	2.9nm,0.3s,baz=275,slow=8.5,SNR=27						
KDAK	Kodiak Island	13.25	59	Pn	Pn	04 49 32.6	-0.9
TTA	Tatalina	13.98	36	Pn	Pn	04 49 42.8	+0.2
RSO	Redoubt South	14.02	48	Pn	Pn	04 49 43.7	+0.4
CNPM	China Poot	14.40	53	Pn	Pn	04 49 47.8	+0.1
BRLK	Bradley Lake	14.64	52	Pn	Pn	04 49 50.1	-0.7
SKT	Skwentna	15.21	44		Pn	04 49 57.9	+0.2
SUA	Susitna One	15.33	46		Pn	04 49 59.0	-0.2
SUA				IAmb	IAmb	04 50 02.7	
	comp=Z,17nm,0.9s						
PPLA	Purkeypile	15.39	40	P	P	04 50 02.2	+2.0
O22K	Cooper Landing	15.43	50	P	Pn	04 50 00.4	+0.2
	baz=251						
O22K	Cooper Landing	15.43	50	P	P	04 50 01.7	+1.3
SEW	Seward	15.44	52		Pn	04 49 59.7	-0.6
RC01	Rabbit Creek A	15.63	48	P	P	04 50 03.3	+0.6
	baz=249						
KTH	Kantishna Hill	16.23	39	P	P	04 50 10.2	+0.8
GHO	Glory Hole Cre	16.25	46	P	P	04 50 09.5	0.0
RDOG	Red Dog Mine	16.27	15	P	Pn	04 50 11.6	+1.2
RDOG				IAmb	IAmb	04 50 19.7	
	comp=Z,6.6nm,0.7s						
KNK	Knik Glacier	16.33	48	P	P	04 50 11.1	+0.7
KNK				IAmb	IAmb	04 50 12.5	
	comp=Z,12nm,0.7s						
TRF	Thorofare Moun	16.42	40	P	P	04 50 12.6	+1.0
BPAW	Bear Paw Mtn.	16.49	37	P	Pn	04 50 13.3	+0.2
PETK	Petropavlovsk-	16.95	282	P	P	04 50 15.7	-1.6
	comp=Z,0.1nm,0.3s,baz=88,slow=15,SNR=4.8						
RND	Reindeer	16.97	41	P	P	04 50 17.7	+0.3
SCM	Sheep Creek Mo	16.98	47		Pn	04 50 19.5	+0.6
FID	Port Fidalgo	17.04	51	P	P	04 50 17.8	-0.3
MCK	McKinley	17.09	40	P	P	04 50 19.6	+0.9
	baz=242,SNR=16						
BWN	Browne	17.10	38	P	Pn	04 50 20.5	+0.3
MLY	Manley	17.10	35	P	Pn	04 50 20.4	+0.1
	baz=235,SNR=14						
NEA2	Nenana	17.46	38	P	P	04 50 23.5	+0.7
	baz=239						
KLU	Klutina	17.50	49		Pn	04 50 25.4	+0.3
KLU				IAmb	IAmb	04 50 26.5	
	comp=Z,29nm,1.4s						
M24K	Tolsona, Glenn	17.58	47	P	P	04 50 24.7	+0.6
	baz=251						
M24K	Tolsona, Glenn	17.58	47	P	P	04 50 25.4	+1.2
I23K	Minto, Yukon-K	17.65	36	P	Pn	04 50 26.4	-0.3
	baz=237,SNR=13						
I23K	Minto, Yukon-K	17.65	36	P	Pn	04 50 26.4	-0.3
WRH	Wood River Hil	17.77	39	P	P	04 50 25.6	-0.5
WRH				IAmb	IAmb	04 50 29.4	
	comp=Z,16nm,0.7s						
MDM	Murphy Dome	17.96	37	P	P	04 50 27.8	-0.4
MDM				IAmb	IAmb	04 50 32.8	
	comp=Z,15nm,0.8s						
CCB	Clear Creek Bu	17.96	38	P	P	04 50 27.4	-0.7
TCOL	CIGO, UAF Yank	18.05	38	P	P	04 50 30.5	+1.3
	baz=240						
TCOL	CIGO, UAF Yank	18.05	38	P	P	04 50 30.5	+1.3
COLA	College	18.06	38	P	P	04 50 29.8	+0.7
N25K	Chitina, Valde	18.14	49	P	P	04 50 31.3	+1.0
	baz=254						
N25K	Chitina, Valde	18.14	49		Pn	04 50 33.3	+0.7
N25K				IAmb	IAmb	04 50 34.7	
	comp=Z,8.3nm,0.7s						
HDA	Harding Lake	18.18	40	P	P	04 50 31.9	+1.4
	baz=243,SNR=15						
HDA	Harding Lake	18.18	40	P	P	04 50 31.9	+1.4
PAX	Paxson	18.19	45	P	P	04 50 31.2	+0.5
PAX				IAmb	IAmb	04 50 34.2	
	comp=Z,11nm,0.7s						
POKR	Poker Plat Res	18.33	37	P	P	04 50 32.6	+0.4
	baz=240,SNR=6.3						
POKR	Poker Plat Res	18.33	37	P	P	04 50 32.4	+0.1
POKR				IAmb	IAmb	04 50 34.7	
	comp=Z,14nm,0.7s						
IL31		18.37	39	P	P	04 50 31.2	-1.3
ILAR	Eielson Array	18.37	39	P	P	04 50 30.9	-1.7
	comp=Z,2.5nm,0.3s,baz=233,slow=9.3,SNR=61						
GLB	Gilahina Butte	18.47	50	P	P	04 50 34.7	+0.9
GLB				IAmb	IAmb	04 50 39.5	
	comp=Z,13nm,1.2s						
COLD	Coldfoot	18.61	30	P	P	04 50 36.9	+1.8
	baz=231,SNR=8.7						
COLD	Coldfoot	18.61	30		P	04 50 37.0	+1.8
COLD				IAmb	IAmb	04 50 41.0	
	comp=Z,26nm,1.4s						
RIDG	Independent Ri	18.74	43	P	P	04 50 37.7	+1.1
DOT	Dot Lake	19.03	43	P	P	04 50 39.7	-0.1
L26K	Log Cabin Wild	19.12	45	P	P	04 50 41.5	+0.7
	baz=252,SNR=7.4						
SCRK	Sand Creek	19.18	42	P	P	04 50 41.6	+0.1
	baz=248,SNR=39						
TOLK	Toolik Lake Re	19.71	27	P	P	04 50 48.3	+1.3
	baz=229,SNR=18						
TOLK	Toolik Lake Re	19.71	27	P	P	04 50 48.2	+1.2
K27K	Chicken	19.98	43	P	P	04 50 50.4	+0.4
	baz=251						
K27K	Chicken	19.98	43	P	P	04 50 50.5	+0.6
A21K	Barrow	20.20	16	P	P	04 50 52.1	0.0
	baz=212						
A21K	Barrow	20.20	16	P	P	04 50 52.2	0.0
A21K				IAmb	IAmb	04 50 53.1	
	comp=Z,9.5nm,0.8s						
EGAK	Eagle	20.61	41	P	P	04 50 56.9	+0.3
DAWY	Dawson	21.12	44	P	P	04 51 02.2	+0.2
INK	Inuvik	24.67	35	P	P	04 51 35.2	+0.1
	comp=Z,4.2nm,0.9s,baz=231,slow=6.2,SNR=15						
INK	Inuvik	24.67	35	P	P	04 51 35.3	+0.1
INK				IAmb	IAmb	04 51 35.9	
	comp=Z,5.8nm,1.0s						
C36M	Paulatuk	28.25	35	P	P	04 52 07.1	0.0
	baz=260						
YKA	Yellowknife Ar	32.18	49	P	P	04 52 39.2	-2.5
	comp=Z,0.5nm,0.5s,baz=275,slow=8.1,SNR=12						
D03D	Eldon	32.55	78	P	P	04 52 47.4	+2.3

	baz=299						
B05A	**Bryant**	**32.79**	**77**	P	**P**	**04 52 49.0**	**+1.8**
	baz=298						
LON	**Longmire**	**33.70**	**79**	P	**P**	**04 52 57.2**	**+2.1**
B08A	**Colville Reser**	**34.38**	**75**	P	**P**	**04 53 02.2**	**+1.2**
B08A				IAmb	IAmb	04 53 02.9	
	comp=Z,7.8nm,0.7s						
I04A	**Tendick Farm,**	**34.89**	**84**	P	**P**	**04 53 06.6**	**+1.2**
	baz=304						
HAWA	**Hanford**	**35.23**	**78**	P	**P**	**04 53 09.0**	**+0.8**
HAWA				IAmb	IAmb	04 53 10.3	
	comp=Z,23nm,1.8s						
C09A	**Chrisman Ranch**	**35.27**	**75**	P	**P**	**04 53 09.4**	**+0.9**
C09A				IAmb	IAmb	04 53 10.1	
	comp=Z,15nm,1.5s						
YBH	**Yreka Blue Hor**	**35.88**	**87**	P	**P**	**04 53 15.1**	**+1.2**
J05D	**Fort Rock, OR**	**35.88**	**84**	P	**P**	**04 53 16.1**	**+2.2**
	baz=304						
E09A	**Wood Farm, Sta**	**35.99**	**77**	P	**P**	**04 53 16.9**	**+2.2**
E09A				IAmb	IAmb	04 53 55.4	
	comp=Z,16nm,1.9s						
M04C	**Macdoel**	**36.38**	**86**	P	**P**	**04 53 19.4**	**+1.3**
	baz=306						
I07A	**Izee**	**36.48**	**81**	P	**P**	**04 53 20.8**	**+1.8**
I07A				IAmb	IAmb	04 53 23.4	
	comp=Z,15nm,1.9s						
O02D	**Mt. Diablo Mer**	**36.76**	**89**	P	**P**	**04 53 23.7**	**+2.4**
	baz=308						
O03E	**Paynes Creek**	**37.28**	**88**	P	**P**	**04 53 27.2**	**+1.4**
	baz=308						
WVOR	**Wild Horse Val**	**37.93**	**83**	P	**P**	**04 53 32.5**	**+1.3**
MSO	**Missoula**	**38.30**	**74**	P	**P**	**04 53 34.6**	**+0.4**
	baz=302,SNR=5.5						
MSO	**Missoula**	**38.30**	**74**	P	**P**	**04 53 34.9**	**+0.6**
BEKR	**Beckworth**	**38.42**	**88**	P	**P**	**04 53 36.3**	**+0.9**
BEKR				IAmb	IAmb	04 54 15.8	
	comp=Z,9.5nm,1.8s						
PAHR	**Pah Rah Range**	**39.11**	**87**	P	**P**	**04 53 42.3**	**+1.2**
PAHR				IAmb	IAmb	04 53 43.5	
	comp=Z,3.9nm,0.8s						
VCNR	**Virginia City**	**39.21**	**88**	P	**P**	**04 53 44.2**	**+2.3**
PNTR	**Pine Nut**	**39.37**	**88**	P	**P**	**04 53 45.6**	**+2.4**
PNTR				IAmb	IAmb	04 53 51.2	
	comp=Z,8.5nm,0.7s						
CMB	**Columbia Colle**	**39.55**	**90**	P	**P**	**04 53 46.5**	**+1.9**
HRY	**Holter Researc**	**39.59**	**73**	P	**P**	**04 53 45.1**	**+0.1**
HLID	**Hailey**	**39.82**	**79**	P	**P**	**04 53 47.8**	**+0.9**
	baz=305						
WAKR	**Walker**	**39.83**	**88**	P	**P**	**04 53 49.5**	**+2.4**
WAKR				IAmb	IAmb	04 53 49.9	
	comp=Z,4.3nm,0.6s						
BCYI	**Bear Canyon**	**39.99**	**77**	P	**P**	**04 53 48.7**	**+0.3**
MCMT	**McKenzie Canyo**	**40.03**	**76**	P	**P**	**04 53 48.9**	**+0.2**
EGMT	**Eagleton**	**40.09**	**70**	P	**P**	**04 53 49.1**	**+0.1**
	baz=302						
RYN	**Ryan**	**40.31**	**88**	P	**P**	**04 53 52.9**	**+1.9**
BOZ	**Bozeman (W)**	**40.32**	**74**	P	**P**	**04 53 51.3**	**+0.3**
	baz=304,SNR=9.2						
BOZ	**Bozeman (W)**	**40.32**	**74**	P	**P**	**04 53 51.3**	**+0.3**
BOZ				IAmb	IAmb	04 53 52.1	
	comp=Z,5.3nm,0.8s						
NVAR	**Mina Array Bea**	**40.57**	**88**	P	**P**	**04 53 54.9**	**+1.8**
	comp=Z,2.2nm,0.7s,baz=300,slow=7.2,SNR=26						
NVAR				ScP	**ScP**	**04 59 21.9**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=319,slow=4.1,SNR=4.0						
MDPB	**Devils Postpil**	**40.60**	**89**	P	**P**	**04 53 55.9**	**+2.4**
MDPB				IAmb	IAmb	04 53 56.4	
	comp=Z,4.2nm,0.7s						
OMMB	**Old Mammoth Mi**	**40.66**	**89**	P	**P**	**04 53 56.5**	**+2.4**
ELK	**Elko**	**40.99**	**83**	P	**P**	**04 53 58.5**	**+1.9**
YHL	**Hebgen Lake**	**41.00**	**75**	P	**P**	**04 53 57.5**	**+0.8**
YHH	**Holmes Hill**	**41.23**	**75**	P	**P**	**04 53 59.0**	**+0.5**
YMR	**Madison River**	**41.23**	**75**	P	**P**	**04 53 59.4**	**+0.9**
GCMT	**Greycliff**	**41.35**	**73**	P	**P**	**04 53 59.9**	**+0.5**
H17A	**Grant Village**	**41.61**	**75**	P	**P**	**04 54 03.5**	**+1.8**
	baz=305,SNR=5.7						
H17A	**Grant Village**	**41.61**	**75**	P	**P**	**04 54 03.9**	**+2.2**
H17A				IAmb	IAmb	04 54 04.0	
	comp=Z,4.3nm,0.7s						
LKWY	**Lake**	**41.62**	**75**	P	**P**	**04 54 03.5**	**+1.8**
FLWY	**Flagg Ranch**	**41.72**	**76**	P	**P**	**04 54 03.4**	**+0.9**
VES	**Vestal, Richgr**	**41.77**	**91**	P	**P**	**04 54 03.9**	**+1.2**
	baz=312						
PKM	**Mcpherson Peak**	**41.96**	**93**	P	**P**	**04 54 06.4**	**+1.9**
	baz=313						
RLMT	**Red Lodge**	**41.96**	**73**	P	**P**	**04 54 05.0**	**+0.6**
	baz=305						
RLMT	**Red Lodge**	**41.96**	**73**	P	**P**	**04 54 05.4**	**+0.9**
RLMT				IAmb	IAmb	04 54 06.1	
	comp=Z,7.2nm,1.2s						
CWC	**Cottonwood Cre**	**41.99**	**90**	P	**P**	**04 54 06.2**	**+1.6**
	baz=311						
ISA	**Isabella, Lake**	**42.26**	**91**	P	**P**	**04 54 07.6**	**+0.8**
	baz=312						
R11A	**Troy Canyon, C**	**42.27**	**86**	P	**P**	**04 54 08.0**	**+1.1**
	baz=310,SNR=6.0						
MPMC	**Manual Prospec**	**42.60**	**90**	P	**P**	**04 54 10.9**	**+1.3**
	baz=312						
FURC	**Furnace Creek,**	**42.71**	**89**	P	**P**	**04 54 11.8**	**+1.6**
	baz=311						
TPNV	**Topopah Spring**	**42.77**	**88**	P	**P**	**04 54 12.5**	**+1.5**
	baz=311,SNR=9.3						
TPNV	**Topopah Spring**	**42.77**	**88**	P	**P**	**04 54 12.4**	**+1.5**
TPNV				IAmb	IAmb	04 54 13.2	
	comp=Z,5.6nm,0.7s						
DUG	**Dugway, Tooele**	**42.78**	**82**	P	**P**	**04 54 12.2**	**+1.1**
	baz=308						
LAO	**LASA Array**	**42.83**	**70**	P	**P**	**04 54 12.0**	**+0.7**
	baz=304						
BW06	**Boulder Array**	**43.16**	**76**	P	**P**	**04 54 14.6**	**+0.5**
	baz=307,SNR=8.9						
BW06	**Boulder Array**	**43.16**	**76**	P	**P**	**04 54 14.5**	**+0.4**
BW06				IAmb	IAmb	04 54 15.3	
	comp=Z,4.7nm,0.7s						
PD31	**Pinedale Array**	**43.16**	**76**	P	**P**	**04 54 14.6**	**+0.5**
PD31				IAmb	IAmb	04 54 15.3	
	comp=Z,4.2nm,0.7s						
PDAR	**Pinedale Array**	**43.16**	**76**	P	**P**	**04 54 14.5**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=313,slow=2.8,SNR=58						
PRN	**Pahroc Range**	**43.20**	**86**	P	**P**	**04 54 16.1**	**+1.8**
PSUT	**Pine Spring**	**43.20**	**84**	P	**P**	**04 54 15.8**	**+1.4**
SHOC	**Shoshone, Teco**	**43.44**	**89**	P	**P**	**04 54 17.0**	**+0.9**
	baz=312						
GSC	**Goldstone, Bar**	**43.51**	**90**	P	**P**	**04 54 18.2**	**+1.4**
	baz=312,SNR=8.5						
GSC	**Goldstone, Bar**	**43.51**	**90**	P	**P**	**04 54 18.2**	**+1.4**
GSC				IAmb	IAmb	04 54 19.0	
	comp=Z,6.3nm,1.0s						
BFSC	**Mount Baldy Ra**	**43.71**	**92**	P	**P**	**04 54 20.1**	**+1.6**
	baz=313						
TMUT	**Trail Mountain**	**44.31**	**82**	P	**P**	**04 54 24.9**	**+1.5**
RDMU	**Red Mountain**	**44.49**	**79**	P	**P**	**04 54 25.6**	**+0.8**
GMRC	**Granite Mounta**	**44.56**	**90**	P	**P**	**04 54 26.3**	**+1.1**
	baz=313						
BELC	**Belle Mtn. Jos**	**44.88**	**91**	P	**P**	**04 54 28.6**	**+0.9**
	baz=313						
K22A	**Casper**	**45.02**	**75**	P	**P**	**04 54 28.0**	**-0.8**
	baz=308						
IRM	**Iron Mountain**	**45.29**	**90**	P	**P**	**04 54 32.1**	**+1.2**
	baz=313						
W13A	**Hualapai Mount**	**45.42**	**88**	P	**P**	**04 54 33.5**	**+1.4**
U15A	**North Rim**	**45.51**	**85**	P	**P**	**04 54 34.3**	**+1.5**
O20A	**White River Ci**	**45.56**	**79**	P	**P**	**04 54 33.2**	**+0.1**
	baz=309,SNR=5.1						
O20A	**White River Ci**	**45.56**	**79**	P	**P**	**04 54 33.5**	**+0.4**
O20A				IAmb	IAmb	04 54 34.2	
	comp=Z,9.9nm,1.2s						
RSSD	**Black Hills**	**45.58**	**71**	P	**P**	**04 54 32.7**	**-0.5**
	baz=307						
PV04	**Paradox Valley**	**46.27**	**81**	P	**P**	**04 54 39.4**	**+0.7**
PV04				IAmb	IAmb	04 54 39.4	
	comp=Z,13nm,1.5s						
CPBX	**Cerro Prieto**	**46.39**	**92**	P	**P**	**04 54 39.0**	**-0.3**
WUAZ	**Wupatki**	**46.67**	**86**	P	**P**	**04 54 42.9**	**+1.1**
	baz=312						
WUAZ	**Wupatki**	**46.67**	**86**	P	**P**	**04 54 43.4**	**+1.6**
SONM	**Songino Array**	**48.58**	**298**	ScP	**ScP**	**04 59 53.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=50,slow=2.3,SNR=2.3						
SDCO	**Great Sand Dun**	**48.73**	**79**	P	**P**	**04 54 58.3**	**+0.6**
	baz=311						
TUC	**Tucson**	**49.21**	**88**	P	**P**	**04 55 02.4**	**+1.3**
	baz=314						
TUC	**Tucson**	**49.21**	**88**	P	**P**	**04 55 01.9**	**+0.8**
T25A	**Trinidad**	**49.78**	**79**	P	**P**	**04 55 06.4**	**+0.8**
	baz=312						
T25A	**Trinidad**	**49.78**	**79**	P	**P**	**04 55 06.8**	**+1.2**
T25A				IAmb	IAmb	04 55 07.4	
	comp=Z,6.2nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.05**	**288**	*e*P	**P**	**04 55 09.7**	**+2.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
121A	**Cookes Peak, D**	**50.88**	**86**	P	**P**	**04 55 13.9**	**+0.1**
	baz=314						
CBKS	**Cedar Bluff**	**51.43**	**74**	P	**P**	**04 55 17.5**	**-0.1**
MNTX	**Cornudas Mount**	**52.92**	**85**	P	**P**	**04 55 29.7**	**+1.1**
	baz=315,SNR=5.0						
MNTX	**Cornudas Mount**	**52.92**	**85**	P	**P**	**04 55 29.9**	**+1.2**
P40A	**Paris**	**55.38**	**69**	P	**P**	**04 55 45.2**	**-1.0**
P40A				IAmb	IAmb	04 55 46.0	
	comp=Z,9.5nm,1.0s						
U40A	**Yellville**	**57.11**	**72**	P	**P**	**04 55 56.9**	**-1.6**
	baz=314						
ARCES	**ARCESS Array B**	**57.18**	**352**	PcP	**PcP**	**04 56 49.1**	**-1.5**
	comp=Z,3.5nm,0.9s,baz=350,slow=4.6,SNR=4.0						
CHGQ	**Chibougamau**	**57.37**	**49**	P	**P**	**04 55 59.0**	**-1.1**
	baz=315						
LZH	**Lanzhou**	**57.72**	**288**	⇓P	**P**	**04 56 01.2**	**-1.8**
LZH				pP	pP	04 56 46.5	-0.6
LZH				sP	sP	04 57 08.3	-0.2
LZH				PP	**PP**	**04 58 13.6**	**+0.7**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,82nm,7.8s						
MIAR	**Mount Ida**	**57.96**	**74**	P	**P**	**04 56 04.3**	**-0.1**
	baz=315						
MIAR	**Mount Ida**	**57.96**	**74**	P	**P**	**04 56 04.4**	**-0.1**
W41B	**Gary Mavity, V**	**58.29**	**72**	P	**P**	**04 56 05.7**	**-1.0**
	baz=315						
OXF	**Oxford**	**60.40**	**71**	P	**P**	**04 56 20.7**	**-0.5**
	baz=316						
WMQ	**Urumqi**	**60.96**	**305**	*e*P	**P**	**04 56 27.0**	**+2.0**
L56A	**Greenwood**	**61.38**	**57**	P	**P**	**04 56 27.2**	**-0.5**
	baz=317						
MKAR	**Makanchi Array**	**61.38**	**310**	P	**P**	**04 56 26.7**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=46,slow=10,SNR=2.8						
ABKAR	**Akbulak array**	**68.51**	**325**	P	**P**	**04 57 13.9**	**+0.4**
ABKAR				IAmb	IAmb	04 59 14.8	
	comp=Z,12nm,1.9s						
KKAR	**Karatay Array**	**69.51**	**315**	P	**P**	**04 57 19.2**	**-0.5**
KKAR				IAmb	IAmb	04 59 15.0	
	comp=Z,7.4nm,1.9s						
AKASG	**Malin Array Be**	**75.05**	**345**	P	**P**	**04 57 51.0**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=17,slow=6.1,SNR=4.4						
GERES	**GERESS Array B**	**78.56**	**355**	P	**P**	**04 58 12.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=353,slow=5.4,SNR=4.0						
WRA	**Warramunga Arr**	**85.04**	**228**	P	**P**	**04 58 45.9**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=32,slow=5.7,SNR=6.6						
ESDC	**Sonseca Array**	**87.55**	**8**	P	**P**	**04 58 57.0**	**-1.2**
	comp=Z,0.3nm,0.9s,baz=354,slow=4.8,SNR=4.1						
ASAR	**Alice Springs**	**88.49**	**226**	P	**P**	**04 59 03.2**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=23,slow=4.8,SNR=14						
PLCA	**Paso Flores**	**128.66**	**109**	PKP	**PKPdf**	**05 05 15.9**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=292,slow=5.4,SNR=3.1						

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*IDC **04** 05:05:37.8±1.3, 35°.27N×25°.83E, h0^{km}, mb3.9/10, mb1 4.0/12, mb1mx3.8/57, mbtmp3.9/12, ML3.0/2, MS3.1/1, Ms1 3.2/1, ms1mx2.4/43, Error ellipse: s-maj=40.3km s-min=11.9km az=165.0*

*THE **04** 05:05:37.6, 35°.08N×25°.87E, h2^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=1.8km s-min=0.3km az=176.0*

*ISK **04** 05:05:37.5, 35°.19N×25°.88E, h3^{km}, ML3.4/16*

*ATH **04** 05:05:38.4, 35°.12N×25°.88E, h7^{km}±1^{km}, ML3.4/6, Error ellipse: s-maj=2.3km s-min=0.7km az=182.0*

ISC 04 05:05:38.6±0.9**, 35°.16N**±0°.03×**25°.87E**±0°.01**, h10**^{km}±6^{km}**, n113,** σ**0.^{s}84**/139**, mb3.9**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	**0.19**	**76**	P	**Pg**	**05 05 42.2**	**-0.4**
STIA				S	**Sg**	**05 05 45.9**	**+0.6**
NPS	**Neapolis**	**0.23**	**297**	P	**Pg**	**05 05 43.2**	**-0.3**
NPS				S	**Sg**	**05 05 47.7**	**+1.1**
NPS				AML	AML	05 05 48.5	
	comp=N,25698μm,0.5s						
NPS				AML	AML	05 05 51.2	
	comp=E,38727μm,0.4s						
NPS	**Neapolis**	**0.23**	**297**	P	**Pg**	**05 05 43.2**	**-0.3**
NPS				S	**Sg**	**05 05 47.7**	**+1.1**
NPS				AML	AML	05 05 48.5	
	comp=N,25698μm,0.5s						
NPS				AML	AML	05 05 51.2	
	comp=E,38727μm,0.4s						
NPS	**Neapolis**	**0.23**	**297**	P	**Pg**	**05 05 43.1**	**-0.3**
NPS				S	**Sg**	**05 05 47.9**	**+1.2**
	comp=E,17μm,0.5s						
ZKR	**Zakros**	**0.29**	**98**	P	**Pg**	**05 05 43.6**	**-0.8**
ZKR				S	**Sg**	**05 05 48.2**	**-0.2**
ZKR				AML	AML	05 05 48.9	
	comp=N,63626μm,0.4s						
ZKR				AML	AML	05 05 49.0	
	comp=E,84005μm,0.5s						
ZKR	**Zakros**	**0.29**	**98**	P	**Pg**	**05 05 43.6**	**-0.8**
ZKR				S	**Sg**	**05 05 48.2**	**-0.2**
ZKR				AML	AML	05 05 48.9	
	comp=N,63626μm,0.4s						
ZKR				AML	AML	05 05 49.0	
	comp=E,84005μm,0.5s						
ZKR	**Zakros**	**0.29**	**98**	P	**Pg**	**05 05 43.5**	**-1.0**
ZKR				S	**Sg**	**05 05 48.2**	**-0.2**
	comp=E,37μm,0.4s						
ZKR	**Zakros**	**0.29**	**98**	PG	**Pg**	**05 05 43.8**	**-0.7**
ZKR				SG	**Sg**	**05 05 48.7**	**+0.3**
LAST	**Lasithi**	**0.32**	**271**	P	**Pg**	**05 05 44.0**	**-1.0**
LAST				S	**Sg**	**05 05 49.6**	**+0.2**
LAST				AML	AML	05 05 50.7	
	comp=N,20310μm,0.4s						
LAST				AML	AML	05 05 55.3	
	comp=E,14373μm,0.8s						
LAST	**Lasithi**	**0.32**	**271**	P	**Pg**	**05 05 44.0**	**-1.0**
LAST				S	**Sg**	**05 05 49.6**	**+0.2**
LAST				AML	AML	05 05 50.7	
	comp=N,20310μm,0.4s						
LAST				AML	AML	05 05 55.3	
	comp=E,14373μm,0.8s						
LAST	**Lasithi**	**0.32**	**271**	P	**Pg**	**05 05 43.9**	**-1.1**
LAST				S	**Sg**	**05 05 49.5**	**+0.2**
HRKL	**Herakleio**	**0.65**	**284**	PG	**Pb**	**05 05 51.1**	**-0.9**
HRKL				SG	**Sb**	**05 06 00.5**	**-0.6**
IACM	**Heraklion**	**0.67**	**283**	P	**Pb**	**05 05 52.0**	**-0.4**
IACM	**Heraklion**	**0.67**	**283**	P	**Pb**	**05 05 52.0**	**-0.4**
IDI	**Anoyia**	**0.81**	**280**	Pg	**Pg**	**05 05 53.2**	**-1.1**
	comp=E,24nm,0.3s,baz=142,slow=6.4,SNR=162						
IDI				LR	LR	05 06 29.5	
	comp=E,437nm,19.7s,baz=118,slow=67						
IDI	**Anoyia**	**0.81**	**280**	P	**Pg**	**05 05 53.0**	**-1.3**
IDI				S	**Sb**	**05 06 05.1**	**-0.8**
IDI				AML	AML	05 06 16.4	
	comp=E,2014μm,0.7s						
IDI				AML	AML	05 06 17.2	
	comp=N,2336μm,0.8s						
IDI	**Anoyia**	**0.81**	**280**	P	**Pg**	**05 05 53.0**	**-1.3**
IDI				S	**Sb**	**05 06 05.1**	**-0.8**
IDI				AML	AML	05 06 16.4	
	comp=E,2014μm,0.7s						
IDI				AML	AML	05 06 17.2	
	comp=N,2336μm,0.8s						
IDI	**Anoyia**	**0.81**	**280**	P	**Pg**	**05 05 53.8**	**-0.5**
IDI				S	**Sb**	**05 06 06.3**	**+0.3**
	comp=N,832nm,0.5s						
IDI	**Anoyia**	**0.81**	**280**	PG	**Pg**	**05 05 53.4**	**-0.9**
IDI				SG	**Sb**	**05 06 05.9**	**-0.1**
SIVA	**Sivas**	**0.88**	**261**	P	**Pg**	**05 05 54.2**	**-1.4**
SIVA				S	**Sg**	**05 06 07.2**	**+0.2**
SIVA				AML	AML	05 06 11.3	
	comp=E,9581μm,0.5s						
SIVA				AML	AML	05 06 18.5	
	comp=N,4510μm,0.6s						
SIVA	**Sivas**	**0.88**	**261**	P	**Pg**	**05 05 54.2**	**-1.4**
SIVA				S	**Sg**	**05 06 07.2**	**+0.2**
SIVA				AML	AML	05 06 11.3	
	comp=E,9581μm,0.5s						
SIVA				AML	AML	05 06 18.5	
	comp=N,4510μm,0.6s						
SIVA	**Sivas**	**0.88**	**261**	P	**Pg**	**05 05 54.6**	**-1.0**
SIVA				S	**Sb**	**05 06 07.7**	**-0.1**
	comp=N,3μm,0.7s						
KARP	**Karpathos**	**1.13**	**69**	P	**Pg**	**05 05 59.1**	**-1.3**
KARP				S	**Sb**	**05 06 15.0**	**0.0**
KARP	**Karpathos**	**1.13**	**69**	P	**Pg**	**05 05 59.1**	**-1.3**
KARP				S	**Sb**	**05 06 15.0**	**0.0**
KARP	**Karpathos**	**1.13**	**69**	P	**Pg**	**05 05 59.0**	**-1.3**
KARP				S	**Sn**	**05 06 15.6**	**-0.6**
	comp=N,2μm,0.8s						
KARP	**Karpathos**	**1.13**	**69**	PN	**Pg**	**05 05 59.3**	**-1.0**
SANT	**Santorini**	**1.26**	**345**	P	**Pb**	**05 06 01.7**	**-0.8**
SANT				S	**Sn**	**05 06 19.3**	**-0.1**
SANT	**Santorini**	**1.26**	**345**	P	**Pb**	**05 06 01.7**	**-0.8**
SANT				S	**Sn**	**05 06 19.3**	**-0.1**
SANT	**Santorini**	**1.26**	**345**	P	**Pn**	**05 06 02.3**	**-0.1**
SANT	**Santorini**	**1.26**	**345**	PN	**Pn**	**05 06 02.0**	**-0.4**
SANT				SN	**Sn**	**05 06 19.6**	**+0.2**
THR6	**Thira Island,**	**1.26**	**342**	P	**Pn**	**05 06 01.9**	**-0.4**
THR6	**Thira Island,**	**1.26**	**342**	P	**Pn**	**05 06 01.9**	**-0.4**
THR9	**Santorini-Faro**	**1.27**	**341**	P	**Pn**	**05 06 02.6**	**+0.1**
THR9	**Santorini-Faro**	**1.27**	**341**	P	**Pn**	**05 06 02.6**	**+0.1**
THR9	**Santorini-Faro**	**1.27**	**341**	P	**Pn**	**05 06 02.5**	**+0.1**
THR8	**Santorini-Mono**	**1.29**	**346**	P	**Pb**	**05 06 02.2**	**-0.8**
THR8	**Santorini-Mono**	**1.29**	**346**	P	**Pb**	**05 06 02.2**	**-0.8**
THR8	**Santorini-Mono**	**1.29**	**346**	P	**Pn**	**05 06 02.4**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.30**	**343**	P	**Pb**	**05 06 02.5**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.30**	**343**	P	**Pb**	**05 06 02.5**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.30**	**343**	P	**Pb**	**05 06 02.5**	**-0.8**
THR3	**Thira Island,**	**1.30**	**343**	P	**Pg**	**05 06 02.2**	**-1.5**
THR3	**Thira Island,**	**1.30**	**343**	P	**Pg**	**05 06 02.2**	**-1.5**
THR3	**Thira Island,**	**1.30**	**343**	P	**Pb**	**05 06 02.5**	**-0.8**
THR7	**Fira-Santorini**	**1.31**	**344**	P	**Pn**	**05 06 03.4**	**+0.3**
THR7	**Fira-Santorini**	**1.31**	**344**	P	**Pn**	**05 06 03.4**	**+0.3**
THR5	**Thira Island,**	**1.33**	**342**	P	**Pg**	**05 06 02.6**	**-1.5**
THR5	**Thira Island,**	**1.33**	**342**	P	**Pg**	**05 06 02.6**	**-1.5**
THR5	**Thira Island,**	**1.33**	**342**	P	**Pb**	**05 06 02.9**	**-0.8**
VAM	**Vamos**	**1.39**	**281**	P	**Pn**	**05 06 03.3**	**-0.9**
VAM				AML	AML	05 06 31.5	
	comp=N,2138μm,0.6s						
VAM				AML	AML	05 06 38.4	
	comp=E,2625μm,0.8s						
VAM	**Vamos**	**1.39**	**281**	P	**Pn**	**05 06 03.3**	**-0.9**
VAM				AML	AML	05 06 31.5	
	comp=N,2138μm,0.6s						
VAM				AML	AML	05 06 38.4	
	comp=E,2625μm,0.8s						
VAM	**Vamos**	**1.39**	**281**	P	**Pn**	**05 06 03.2**	**-0.9**
GVDS	**Gavdos**	**1.49**	**258**	PN	**Pg**	**05 06 06.7**	**-0.6**
GVD	**Gavdhos**	**1.50**	**258**	P	**Pn**	**05 06 05.5**	**-0.1**
GVD	**Gavdhos**	**1.50**	**258**	P	**Pn**	**05 06 05.5**	**-0.1**
GVD	**Gavdhos**	**1.50**	**258**	PN	**Pg**	**05 06 06.6**	**-0.7**
IMMV	**Iera Moni Meta**	**1.57**	**282**	P	**Pn**	**05 06 06.9**	**+0.2**
IMMV	**Iera Moni Meta**	**1.57**	**282**	P	**Pn**	**05 06 06.9**	**+0.2**
IMMV	**Iera Moni Meta**	**1.57**	**282**	PN	**Pb**	**05 06 07.5**	**-0.3**
KOSK	**Kos Island**	**1.83**	**29**	PN	**Pn**	**05 06 10.2**	**0.0**
APE	**Apeiranthos**	**1.93**	**352**	P	**Pn**	**05 06 11.1**	**-0.5**
APE	**Apeiranthos**	**1.93**	**352**	P	**Pn**	**05 06 11.1**	**-0.5**
APE	**Apeiranthos**	**1.93**	**352**	P	**Pn**	**05 06 11.0**	**-0.6**
APE	**Apeiranthos**	**1.93**	**352**	PN	**Pn**	**05 06 11.3**	**-0.3**
MHLO	**Agia Marina, M**	**1.94**	**323**	P	**Pn**	**05 06 11.1**	**-0.6**
MHLO	**Agia Marina, M**	**1.94**	**323**	P	**Pn**	**05 06 11.1**	**-0.6**
MHLA	**Plaka, Milos I**	**1.97**	**324**	P	**Pn**	**05 06 12.1**	**0.0**
MHLA	**Plaka, Milos I**	**1.97**	**324**	P	**Pn**	**05 06 12.1**	**0.0**
ARG	**Arkhangelos**	**2.12**	**59**	PN	**Pn**	**05 06 15.1**	**+0.9**
ANKY	**Antikythira Is**	**2.21**	**289**	P	**Pn**	**05 06 15.4**	**-0.1**
ANKY	**Antikythira Is**	**2.21**	**289**	P	**Pn**	**05 06 15.4**	**-0.1**
ANKY	**Antikythira Is**	**2.21**	**289**	P	**Pn**	**05 06 15.2**	**-0.2**
BODT	**Bodrum**	**2.23**	**31**	PN	**Pb**	**05 06 16.8**	**-2.3**
TURN	**Turunc**	**2.52**	**49**	PN	**Pn**	**05 06 20.4**	**+0.8**
KTHA	**Kythira Island**	**2.53**	**296**	P	**Pn**	**05 06 19.4**	**-0.5**
KTHA	**Kythira Island**	**2.53**	**296**	P	**Pn**	**05 06 19.4**	**-0.5**
KTHA	**Kythira Island**	**2.53**	**296**	P	**Pn**	**05 06 19.3**	**-0.6**
KTHA	**Kythira Island**	**2.53**	**296**	PN	**Pn**	**05 06 19.9**	**0.0**
MLSB	**Milas**	**2.63**	**35**	PN	**Pn**	**05 06 21.9**	**+0.6**
SMG	**Samos**	**2.66**	**17**	P	**Pn**	**05 06 21.8**	**+0.1**
SMG	**Samos**	**2.66**	**17**	P	**Pn**	**05 06 21.8**	**+0.1**
GCAM	**G?zelcaml?**	**2.77**	**23**	PN	**Pn**	**05 06 24.1**	**+1.0**
YER	**Yerkesik**	**2.78**	**44**	PN	**Pn**	**05 06 23.9**	**+0.6**
DALY	**Dalyan (Mula)**	**2.80**	**53**	PN	**Pn**	**05 06 24.4**	**+0.9**
VLI	**Veliai**	**2.84**	**304**	P	**Pn**	**05 06 23.8**	**-0.3**
VLI	**Veliai**	**2.84**	**304**	P	**Pn**	**05 06 23.8**	**-0.3**
VLI	**Veliai**	**2.84**	**304**	P	**Pn**	**05 06 23.5**	**-0.6**
VLY	**Voula,Athens**	**3.17**	**329**	P	**Pn**	**05 06 28.8**	**+0.2**
VLY	**Voula,Athens**	**3.17**	**329**	P	**Pn**	**05 06 28.8**	**+0.2**
AKAS	**Kas**	**3.23**	**69**	PN	**Pn**	**05 06 30.4**	**+0.9**
URLA	**Izmir**	**3.25**	**10**	PN	**Pn**	**05 06 30.7**	**+0.9**
DION	**Dionisos Attik**	**3.30**	**332**	P	**Pn**	**05 06 31.3**	**+0.8**
DION	**Dionisos Attik**	**3.30**	**332**	P	**Pn**	**05 06 31.3**	**+0.8**
EPID	**Epidavros**	**3.31**	**319**	P	**Pn**	**05 06 31.6**	**+1.1**
EPID	**Epidavros**	**3.31**	**319**	P	**Pn**	**05 06 31.6**	**+1.1**
ELL	**Elmali**	**3.64**	**63**	PN	**Pn**	**05 06 36.8**	**+1.6**
KLV	**Kalavryta, Ach**	**4.15**	**315**	P	**Pn**	**05 06 42.0**	**-0.2**
KLV	**Kalavryta, Ach**	**4.15**	**315**	P	**Pn**	**05 06 42.0**	**-0.2**
STIP	**Stip**	**7.14**	**337**	*i* P	**Pn**	**05 07 26.6**	**+3.5**
BRTR	**Keskin Array B**	**7.68**	**51**	Pn	**Pn**	**05 07 31.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=225,slow=15,SNR=10						
KOLS	**Kolonicke sedl**	**14.02**	**350**	*e*PN	**P**	**05 09 07.4**	**+2.1**
KBZ	**Khabaz**	**15.67**	**52**	Pn	**P**	**05 09 23.4**	**-0.3**
	comp=E,0.1nm,0.3s,baz=245,slow=10,SNR=5.9						
AKASG	**Malin Array Be**	**15.73**	**8**	Pn	**P**	**05 09 23.8**	**-0.4**
	comp=E,1.0nm,0.3s,baz=197,slow=11,SNR=8.0						
ESDC	**Sonseca Array**	**24.06**	**290**	P	**P**	**05 10 54.5**	**+0.3**
	comp=E,0.7nm,0.7s,baz=77,slow=9.5,SNR=11						
ESDC				LR	LR	05 20 08.6	
	comp=E,47nm,18.9s,baz=145,slow=36						
AKTO	**Aktyubinsk**	**27.83**	**47**	P	**P**	**05 11 28.2**	**+0.2**
	comp=E,1.3nm,0.6s,baz=271,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**30.93**	**231**	P	**P**	**05 11 55.6**	**-0.3**
	comp=E,0.8nm,0.6s,baz=36,slow=8.6,SNR=4.2						
MKAR	**Makanchi Array**	**43.29**	**57**	P	**P**	**05 13 41.4**	**+0.9**
	comp=E,2.3nm,0.6s,baz=279,slow=6.6,SNR=30						
MKAR				PcP	**PcP**	**05 15 31.9**	**+2.5**
	comp=E,0.3nm,0.7s,baz=280,slow=4.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**44.59**	**46**	P	**P**	**05 13 50.6**	**-0.2**
	comp=E,0.9nm,0.5s,baz=261,slow=8.7,SNR=6.4						
NRIK	**Noril'sk**	**47.63**	**25**	P	**P**	**05 14 15.2**	**+0.7**
	comp=E,2.9nm,0.7s,baz=221,slow=3.6,SNR=5.0						
INK	**Inuvik**	**75.70**	**352**	P	**P**	**05 17 23.2**	**-0.6**
	comp=E,0.8nm,0.8s,baz=356,slow=8.0,SNR=4.4						
USRK	**Ussuriysk Ar.**	**76.43**	**45**	P	**P**	**05 17 28.1**	**-0.3**
	comp=E,2.2nm,0.8s,baz=283,slow=5.2,SNR=5.0						
YKA	**Yellowknife Ar**	**77.63**	**342**	P	**P**	**05 17 33.7**	**-1.1**
	comp=E,0.3nm,0.6s,baz=40,slow=5.6,SNR=5.4						
ILAR	**Eielson Array**	**80.24**	**357**	P	**P**	**05 17 48.9**	**-0.3**
	comp=E,0.5nm,0.8s,baz=352,slow=3.7,SNR=6.3						

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*IDC **04** 05:10:38.9±0.6, 18°.56N×121°.42E, h0^{km}, mb3.9/11, mb1 4.1/11, mb1mx3.8/49, mbtmp3.9/11, MS3.1/6, Ms1 3.1/6, ms1mx2.9/42, Error ellipse: s-maj=28.2km s-min=14.9km az=72.0*

*NEIC **04** 05:10:45.7±1.6, 18°.50N±0°.09×121°.2E±0°.2, h51^{km}±9^{km}, mb4.4/12, Error ellipse: s-maj=20.6km s-min=13.7km az=91.0*

*MAN **04** 05:10:46.6, 18°.53N×120°.93E, h18^{km}, MS3.5*

ISC 04 05:10:46.7±0.9**, 18°.61N**±0°.04×**120°.99E**±0°.06**, h56**^{km}±10^{km}**, n42,** σ**1.^{s}70**/48**, mb4.2**/16**, MS3.1**/5**, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
APYP	**Conner**	**0.78**	**162**	*e*P	**Pn**	**05 11 00.8**	**-1.0**
APYP				*e*S	**Sn**	**05 11 13.4**	**+0.6**
SIPP	**Brgy, Tapao**	**0.85**	**217**	⇑*e*P	**Pn**	**05 11 00.6**	**-2.1**
SIPP				*e*S	**Sn**	**05 11 13.6**	**-0.8**
SGCP	**Mt. Cagua**	**1.06**	**110**	*e*P	**Pn**	**05 11 05.7**	**+0.2**
SGCP				*e*S	**Sn**	**05 11 22.5**	**+3.1**
CAUP	**Cauayan**	**1.84**	**154**	*e*P	Pn	05 11 18.4	+2.5
BCP	**Baguio City**	**2.21**	**190**	⇑*i*P	**Pn**	**05 11 22.4**	**+1.2**
BCP				*i* S	**Sn**	**05 11 46.2**	**-1.3**
BOLP	**Bolinao**	**2.44**	**205**	*e*P	**Pn**	**05 11 25.6**	**+1.3**
BOLP				*e*S	**Sn**	**05 11 57.5**	**+4.5**
SMPP	**San Manuel, Pa**	**2.46**	**187**	*e*P	**Pn**	**05 11 24.5**	**0.0**
SMPP				*e*S	**Sn**	**05 11 54.5**	**+1.0**
BALP	**Baler**	**2.91**	**169**	*e*P	**Pn**	**05 11 31.9**	**+1.4**
BALP				*e*S	**Sn**	**05 12 08.4**	**+4.1**
TWG	**Pinlang**	**4.19**	**1**	Pn	**Pn**	**05 11 47.7**	**-0.4**
TPUB	**Ta-pu**	**4.68**	**356**		**Pn**	**05 11 54.4**	**-0.5**
YULB	**Yu-li**	**4.77**	**3**		**Pn**	**05 11 56.1**	**0.0**
SSLB	**Suanglung**	**5.15**	**360**		**Pn**	**05 12 01.7**	**+0.3**
NACB	**Ninganchiao**	**5.56**	**6**		**Pn**	**05 12 06.8**	**-0.1**
YHNB	**Yeheng**	**6.04**	**3**		**Pn**	**05 12 13.9**	**+0.3**
YOJ	**Yonaguni jima**	**6.12**	**18**	Pn	**Pn**	**05 12 15.4**	**+0.8**
SBUM	**Sibu**	**18.22**	**209**	P	**Pn**	**05 14 55.3**	**-0.4**

KSRS	Korea Array	19.73	17	P	Pn	05 15 12.2	-1.4
	0.3nm,0.3s,baz=200,slow=11,SNR=8.0						
KSRS				LR	LR	05 21 36.9	
	comp=Z,28nm,21.8s,baz=208,slow=34						
CMAR	Chiang Mai Arr	20.91	273	P	P	05 15 28.4	+3.7
	0.9nm,0.5s,baz=79,slow=8.0,SNR=9.6						
CMAR				LR	LR	05 22 52.8	
	comp=Z,76nm,18.7s,baz=198,slow=34						
JCJ	Chichijima	21.25	63	LR	LR	05 23 07.2	
	comp=Z,24nm,18.7s,baz=304,slow=36						
GUMO	Guam	23.47	99	LR	LR	05 22 49.0	
	comp=Z,53nm,21.3s,baz=116,slow=32						
JMM	Marumori	25.83	38	P	P	05 16 12.5	-0.3
SONM	Songino Array	31.49	341	P	P	05 17 03.9	+0.7
	0.5nm,0.5s,baz=153,slow=9.7,SNR=2.9						
SONM				LR	LR	05 30 40.5	
	comp=Z,53nm,21.2s,baz=104,slow=38						
WB0	Warramunga Arr	40.34	160	P	P	05 18 16.3	-2.7
WRA	Warramunga Arr	40.49	160	P	P	05 18 17.3	-3.0
	0.8nm,0.4s,baz=342,slow=9.1,SNR=25						
WRA				PcP	PcP	05 20 22.3	+0.2
	1.6nm,0.6s,baz=342,slow=3.2,SNR=18						
WR0	Warramunga Arr	40.57	160	P	P	05 18 18.3	-2.6
WR0				IAmb	IAmb	05 18 31.8	
	comp=Z,12nm,1.4s						
MK31	Makanchi Array	42.36	320	P	P	05 18 37.2	+1.8
MKAR	Makanchi Array	42.36	320	P	P	05 18 37.0	+1.6
	comp=Z,1.5nm,0.7s,baz=113,slow=9.8,SNR=18						
MKAR				PcP	PcP	05 20 28.4	+0.5
	comp=Z,1.0nm,0.7s,baz=86,slow=4.9,SNR=7.8						
AS31	Alice Springs	43.87	163	P	P	05 18 46.1	-1.6
ASAR	Alice Springs	43.87	163	P	P	05 18 46.0	-1.8
	comp=Z,1.0nm,0.5s,baz=344,slow=7.0,SNR=18						
ASAR				PcP	PcP	05 20 33.2	0.0
	comp=Z,0.6nm,0.5s,baz=341,slow=3.2,SNR=7.8						
PETK	Petropavlovsk-	44.65	31	P	P	05 18 52.1	-1.6
	comp=Z,1.3nm,0.7s,baz=276,slow=4.2,SNR=3.6						
ZALV	Zalesovo Beam	44.90	330	P	P	05 18 56.3	+0.7
	comp=Z,0.5nm,0.5s,baz=98,slow=7.6,SNR=4.2						
AAK	Ala-Archa	45.91	312	LR	LR	05 38 37.7	
	comp=Z,30nm,18.8s,baz=90,slow=36						
KURK	Kurchatov	46.35	324	P	P	05 19 08.5	+1.4
KURK				IAmb	IAmb	05 19 08.9	
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	53.24	3	P	P	05 19 58.9	-0.2
TIXI				IAmb	IAmb	05 20 28.3	
	comp=Z,5.5nm,1.1s						
STKA	Stephens Creek	53.95	158	P	P	05 20 02.4	-2.4
	comp=Z,0.9nm,0.4s,baz=319,slow=11,SNR=3.3						
NRIK	Noril'sk	54.73	346	P	P	05 20 10.2	+0.1
	comp=Z,3.1nm,0.6s,baz=142,slow=7.5,SNR=5.8						
ABKAR	Akbulak array	57.29	317	P	P	05 20 29.2	+0.6
ABKAR				IAmb	IAmb	05 20 56.9	
	comp=Z,3.1nm,1.3s						
TTA	Tatalina	70.43	29	P	P	05 21 54.7	-0.2
TTA				IAmb	IAmb	05 22 13.6	
	comp=Z,7.7nm,1.5s						
PPLA	Purkeypile	72.18	29	P	P	05 22 05.8	+0.3
MDM	Murphy Dome	73.65	26	P	P	05 22 14.4	+0.4
MDM				IAmb	IAmb	05 22 15.2	
	comp=Z,2.8nm,0.8s						
ILAR	Eielson Array	74.24	26	P	P	05 22 16.4	-1.1
	comp=Z,0.5nm,0.6s,baz=271,slow=5.1,SNR=13						
YKA	Yellowknife Ar	88.16	23	P	P	05 23 31.8	+0.6
	comp=Z,1.2nm,0.7s,baz=315,slow=3.9,SNR=18						

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*PGC **04** 05:15:35.6±1.4, 50°.50N×130°.57W, h10^{km}, MLSn3.3/18, Mw3.9/18, 223km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **04** 05:15:37.0±1.9, 50°.44N×129°.94W, h0^{km}, mb3.6/2, mb1 3.5/8, mb1mx3.4/50, mbtmp3.3/8, ML3.1/6, MS3.3/7, Ms1 3.3/7, ms1mx3.0/41, Error ellipse: s-maj=30.2km s-min=15.0km az=86.0*

ISC 04 05:15:35.9±1.1, **50°.55N**±0°.07×**130°.48W**±0°.06, **h14**^{km}, **n52**, σ**1^{s}60**/55, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.50	85	Pn	Pn	05 16 01.0	-1.4
HOLB				Sn	Sn	05 16 18.6	-3.1
HG4B	Hotspring	1.81	346	Pn	Pn	05 16 05.2	-1.5
HG4B				Sn	Sn	05 16 26.9	-2.4
PHC	Port Hardy	1.95	84	Pn	Pn	05 16 07.4	-1.1
PHC				Sn	Sn	05 16 29.9	-2.8
MAYB	Maynard	2.12	93	Pn	Pn	05 16 09.9	-1.1
FHRB	Fair Harbour	2.21	102	Pn	Pn	05 16 10.9	-1.2
BBB	Bella Bella	2.21	41	Pn	Pn	05 16 11.2	-1.0
	9.2nm,0.3s,baz=230,slow=6.7,SNR=42						
BBB				Sn	Sn	05 16 38.4	-0.8
	14nm,0.3s,baz=342,slow=19,SNR=6.5						
BBB				LR	LR	05 17 06.3	
	comp=Z,605nm,20.6s,baz=233,slow=43						
BBB	Bella Bella	2.21	41	Pn	Pn	05 16 11.1	-1.0
BBB				Sn	Sn	05 16 38.0	-1.2
EDB	Eliza Dome	2.26	106	Pn	Pn	05 16 11.7	-1.1
TLCB	Telegraph Cove	2.32	89	Pn	Pn	05 16 13.1	-0.5
TLCB				Sn	Sn	05 16 39.7	-2.3
WOSB	Woss	2.53	97	Pn	Pn	05 16 16.2	-0.4
MOBC	Moresby Island	2.76	341	Pn	Pn	05 16 19.4	-0.4
MOBC				Sn	Sn	05 16 50.5	-2.5
NCRB	Newcastle Ridg	2.83	91	Pn	Pn	05 16 19.9	-0.9
NCRB				Sn	Sn	05 16 53.2	-1.5
DIB	Dawson Inlet,	2.94	336	Pn	Pn	05 16 21.0	-1.1
DIB				Sn	Sn	05 16 54.2	-2.9
BNAB	Bonilla	2.95	358	Pn	Pn	05 16 21.8	-0.6
GDR	Gold River	2.96	103	Pn	Pn	05 16 21.9	-0.5
CBB	Campbell River	3.32	97	Pn	Pn	05 16 27.4	0.0
CBB				Sn	Sn	05 17 05.1	-1.5
GRNB	Grenville Isla	3.32	5	Pn	Pn	05 16 27.2	-0.3
GRNB				Sn	Sn	05 17 05.4	-1.3
BTB	Buttle Lake	3.37	107	Pn	Pn	05 16 27.8	-0.5
OZB	Mount Ozzard	3.60	114	Pn	Pn	05 16 31.4	+0.2
RUBB	Prince Rupert	3.79	2	Pn	Pn	05 16 33.8	0.0
TXB	Texada	3.98	100	Pn	Pn	05 16 36.0	-0.5
MGB	Mount Grey	4.06	110	Pn	Pn	05 16 37.6	0.0
SHB	Sechelt	4.36	100	Pn	Pn	05 16 42.3	+0.5
NLLB	Nanaimo Lost L	4.40	105	Pn	Pn	05 16 41.7	-0.5
OCP	Olym-Cheeka Pk	4.43	118	Pn	Pn	05 16 43.3	+0.6
WPB	Watts Point	4.76	98	Pn	Pn	05 16 47.8	+0.7
WSLR	Whistler	4.86	92	Pn	Pn	05 16 49.9	+1.3
FSB	Fort Saint Jam	5.44	41	Pn	Pn	05 16 57.2	+0.7
LLLB	Lillooet	5.48	86	Pn	Pn	05 16 57.6	+0.5
MBW	Mount Baker	5.84	104	Pn	Pn	05 17 03.5	+1.3
CMW	Cultus Mountai	5.85	108	Pn	Pn	05 17 03.0	+0.8
JCW	Jim Creek	6.06	110	Pn	Pn	05 17 07.5	+2.4
B06A	Marblemount	6.20	106	Pn	Pn	05 17 09.1	+2.2
RPW	Rockport	6.21	106	Pn	Pn	05 17 08.9	+1.9
LON	Longmire	6.88	120	Pn	Pn	05 17 18.8	+2.4
LTY	Liberty	7.25	113	Pn	Pn	05 17 24.1	+2.6
BMBC	Bull Mountain	7.44	39	Pn	Pn	05 17 25.7	+1.7
NBC5	NorthernBC 5	8.36	30	Pn	Pn	05 17 38.4	+1.8
YBH	Yreka Blue Hor	10.32	146	Pn	Pn	05 18 02.0	-1.6
	0.0nm,0.3s,baz=7.1,slow=8.1,SNR=1.3						
ELK	Elko	14.45	127	LR	LR	05 24 37.5	
	comp=Z,98nm,18.2s,baz=302,slow=38						
YKA	Yellowknife Ar	14.78	30	Pn	Pn	05 19 03.0	-1.2
	0.1nm,0.3s,baz=216,slow=12,SNR=6.1						
YKA				LR	LR	05 23 54.4	
	comp=Z,98nm,20.9s,baz=0.0,slow=34						
KDAK	Kodiak Island	14.79	308	LR	LR	05 23 42.2	
	comp=Z,115nm,18.5s,baz=139,slow=32						
NVAR	Mina Array Bea	14.88	140	Pn	Pn	05 19 06.5	+0.6
	0.0nm,0.3s,baz=327,slow=6.5,SNR=1.6						
PDAR	Pinedale Array	16.30	110	Pn	P	05 19 26.4	-1.0
	0.0nm,0.3s,baz=342,slow=5.7,SNR=4.0						
ILAR	Eielson Array	16.66	335	Pn	P	05 19 35.8	+4.7
	0.0nm,0.3s,baz=144,slow=10,SNR=6.4						
ILAR				LR	LR	05 25 07.7	
	comp=Z,148nm,20.1s,baz=144,slow=34						
ULM	Lac du Bonnet	21.95	77	P	P	05 20 29.4	+0.6
	1.1nm,0.6s,baz=267,slow=9.3,SNR=1.8						
RES	Resolute Bay	28.33	19	LR	LR	05 33 55.8	
	comp=Z,22nm,21.5s,baz=219,slow=39						
SEY	Seymchan	41.44	318	LR	LR	05 39 56.0	
	comp=Z,74nm,19.3s,baz=246,slow=35						
H11N2	WAKE ISLAND Hy	57.67	262	T	T	06 27 56.5	
	baz=42,slow=75,SNR=333						
H11N3	WAKE ISLAND Hy	57.67	262	T	T	06 27 58.3	
	baz=42,slow=75,SNR=280						
H11N1	WAKE ISLAND Hy	57.69	262	T	T	06 27 56.6	
	baz=42,slow=75,SNR=254						
AKASG	Malin Array Be	77.66	13	P	P	05 27 35.4	+3.9
	0.6nm,0.7s,baz=335,slow=4.7,SNR=2.9						

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*IDC **04** 05:16:34.5±0.9, 16°.59N×93°.83W, h80^{km}±11^{km}, mb4.1/26, mb1 4.3/26, mb1mx4.2/38, mbtmp4.4/26, MS3.6/5, Ms1 3.6/5, ms1mx3.3/21, Error ellipse: s-maj=21.2km s-min=9.9km az=52.0*

*NEIC **04** 05:16:36.4±2.6, 16°.45N±0°.04×94°.23W±0°.04, h104^{km}±6^{km}, mb4.9/99, Md5.1/51(MEX), Error ellipse: s-maj=5.9km s-min=5.3km az=67.0*

*MEX **04** 05:16:36.7±0.8, 16°.38N×94°.34W, h111^{km}±6^{km}, MD5.1*

*GCMT **04** 05:16:39.4±0.3, 16°.64N±0°.02×94°.11W±0°.02, h101^{km}±3^{km}, MW5.0/97, Moment Tensor Solution. s40,c44; s97,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46±.10; $M_{\theta\theta}$-2.12±.10; $M_{\phi\phi}$2.58±.10; $M_{r\theta}$1.72±.06; $M_{\theta\phi}$-1.72±.12; $M_{\phi r}$-0.86±.07; Best double couple: $M_0$3.50600×10^{16} NP1:ϕ_s206.00000°,δ56.00000°,λ-6.00000°. NP2: ϕ_s299.00000°,δ85.00000°,λ-146.00000°. Principal axes: T 3.6230, Plg20.0000°, Azm67.0000°; N -0.2370, Plg55.0000°, Azm306.0000°; P -3.3900, Plg27.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GCG **04** 05:16:43.5±3.4, 16°.43N×93°.44W, h0^{km}±999^{km}, MD4.8*

ISC 04 05:16:36.4±0.6, **16°.41N**±0°.04×**94°.26W**±0°.03, **h108**^{km}±5^{km}, **n320**, σ**1^{s}65**/350, **mb4.7**/63, **8D**, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.90	319	P	Pn	05 16 56.1	-0.5
	baz=149,slow=9.0						
CMIG				S	Sn	05 17 10.5	-1.1
	8μm,0.3s,baz=274,slow=19,SNR=74						
CMIG				LR	LR	05 17 13.0	
	comp=Z,806nm,19.9s,baz=326,slow=34						
CMIG	Matias Romero	0.90	319	*e*P	Pn	05 16 56.0	-0.5
CMIG				*e*S	Sn	05 17 10.4	-1.3
PCIG		1.22	125	*e*P	Pn	05 17 00.0	+0.1
PCIG				*e*S	Sn	05 17 17.0	-0.6
PCIG		1.22	125		Pn	05 17 00.0	+0.1
PCIG					Sn	05 17 17.0	-0.6
TUIG	Tuzandepetl	1.62	355	*e*P	Pn	05 17 03.9	-0.8
TUIG				*i* S	Sn	05 17 26.2	+0.1
TUIG	Tuzandepetl	1.62	355		Pn	05 17 03.9	-0.8
TUIG					Sn	05 17 25.0	-1.1
HUIG	Huatulco	1.89	250	*e*P	Pn	05 17 05.7	-2.2
HUIG				*e*S	Sn	05 17 28.9	-3.1
HUIG	Huatulco	1.89	250		Pn	05 17 05.7	-2.2
HUIG					Sn	05 17 29.8	-2.2
CCIG	Comitan	2.04	93	*e*P	Pn	05 17 10.1	+0.1
CCIG				*e*S	Sn	05 17 36.5	+0.7
CCIG	Comitan	2.04	93		Pn	05 17 10.4	+0.3
CCIG				Sn	Sn	05 17 35.7	0.0
THIG		2.44	128	*e*P	Pn	05 17 15.7	+0.8
THIG				*e*S	Sn	05 17 45.0	+0.5
THIG		2.44	128		Pn	05 17 15.7	+0.8
THIG					Sn	05 17 44.7	+0.2
VHO	Vista Hermosa	2.46	286	*e*P	Pn	05 17 16.3	+0.9
VHO				*e*S	Sn	05 17 43.0	-2.4
PEIG	Puerto Escondi	2.81	262	*e*P	Pn	05 17 17.8	-2.0
PEIG				*e*S	Sn	05 17 50.2	-3.1
HUEH	Huehuetenango	2.87	112	Pn	Pn	05 17 21.2	+0.3
RTAL	Retalhuleu	3.10	127		Pn	05 17 25.4	+1.6
RTAL				Sn	Sn	05 18 01.0	+0.7
TOIG	Toxpalan	3.16	302	*e*P	Pn	05 17 24.2	-0.5
TOIG				*e*S	Sn	05 17 59.8	-2.1
YOIG	Yosondua	3.18	278	*e*P	Pn	05 17 24.9	-0.1
YOIG				*e*S	Sn	05 17 59.9	-2.7
TXIG	Tlaxiaco	3.46	284	*e*P	Pn	05 17 29.6	+0.8
TXIG				*i* S	Sn	05 18 07.3	-2.0
TPIG	Tehuac#an	3.57	304	*i* P	Pn	05 17 28.3	-1.9
TPIG				*e*S	Sn	05 18 09.3	-2.4
TPIG	Tehuac#an	3.57	304		Pn	05 17 30.6	+0.4
TPIG					Sn	05 18 09.3	-2.4
HLIG	Huajuapan de L	3.67	293	*e*P	Pn	05 17 32.6	+1.1
HLIG				*i* S	Sn	05 18 11.4	-2.7
PNIG	Pinotepa	3.71	270	*e*P	Pn	05 17 30.5	-1.4
PNIG				*i* S	Sn	05 18 11.5	-3.4
PNIG	Pinotepa	3.71	270		Pn	05 17 30.5	-1.4
PNIG					Sn	05 18 09.9	-5.0
FUG	Fuego 3	3.83	120	*e*P	Pn	05 17 35.1	+1.5
FTIG	Fresnillo de T	3.99	292	*e*P	Pn	05 17 37.1	+1.4
FTIG				*e*S	Sn	05 18 18.7	-3.0
PCG	Pacaya	4.05	119	*e*P	Pn	05 17 38.5	+1.8
NBG	Las Nubes	4.19	115	*e*P	Pn	05 17 39.7	+1.2
PETF	Flores	4.24	83		Pn	05 17 38.5	-0.5
TLIG	Tlapa	4.28	286	*e*P	Pn	05 17 40.5	+1.0
TLIG				*i* S	Sn	05 18 25.9	-2.7
TLIG	Tlapa	4.28	286	Pn	Pn	05 17 40.6	+1.0
TLIG	Tlapa	4.28	286		Sn	05 18 20.8	-7.8
MRL	Marmol	4.60	106	*e*P	Pn	05 17 44.6	+0.5
CRIG	Cruz Grande	4.68	275	*e*P	Pn	05 17 43.9	-1.0
CRIG				*i* S	Sn	05 18 34.9	-3.4
PPM	Popocatepetl	4.93	303	*e*P	Pn	05 17 50.9	+2.2
ESQI	Esquipulas	5.09	111		Pn	05 17 50.3	-0.3
MTO3	Montecristo	5.13	112		Pn	05 17 50.5	-0.7
YAIG	Yautepec	5.19	299	*e*P	Pn	05 17 53.5	+1.6
YAIG				*i* S	Sn	05 18 47.8	-3.0
YAIG	Yautepec	5.19	299		Pn	05 17 53.5	+1.6
YAIG					Sn	05 18 44.1	-6.6
MEIG	Mezcala	5.34	287	*e*P	Pn	05 17 55.2	+1.3
MEIG				*e*S	Sn	05 18 51.7	-2.6
MEIG	Mezcala	5.34	287		Pn	05 17 55.2	+1.3
MEIG					Sn	05 18 48.5	-5.7
PLIG	Platanillo	5.38	292	*e*P	Pn	05 17 56.1	+1.7
PLIG				*e*S	Sn	05 18 52.6	-2.6
PLIG	Platanillo	5.38	292		Pn	05 17 56.1	+1.7
PLIG					Sn	05 18 50.6	-4.6
SNET	Serv Nac Est T	5.56	118	Pn	Pn	05 17 57.8	+0.9
ARIG	Puente Sto Nin	6.10	289	*e*P	Pn	05 18 06.1	+1.9
ARIG				*i* S	Sn	05 19 10.0	-2.7
ARIG	Puente Sto Nin	6.10	289		Pn	05 18 06.1	+1.9
ARIG					Sn	05 19 07.3	-5.5
TEIG	Tepich	6.83	55		Pn	05 18 12.4	-1.7
TEIG	Tepich	6.83	55	*e*P	Pn	05 18 11.6	-2.5
TEIG				*e*S	Sn	05 19 24.4	-5.9
ZIIG	Zihuatanejo	7.00	281	*e*P	Pn	05 18 16.9	+0.6
ZIIG				*e*S	Sn	05 19 30.9	-3.4
ZIIG	Zihuatanejo	7.00	281		Pn	05 18 16.9	+0.6
ZIIG					Sn	05 19 30.9	-3.4
TGUH	Tegucigalpa,Un	7.14	108	Pn	Pn	05 18 18.3	-0.1
TGUH	Tegucigalpa,Un	7.14	108	*e*P	Pn	05 18 18.4	0.0
MOIG	Morelia	7.35	297	*e*P	Pn	05 18 24.2	+2.9
MOIG	Morelia	7.35	297	Pn	Pn	05 18 23.6	+2.3
ACON	Acoyapa	9.86	115		Pn	05 18 55.8	+0.6
ZAIG	Zacatecas	10.06	310	Pn	Pn	05 19 00.0	+1.9
ESPN	Las Esperanzas	10.52	112		Pn	05 19 05.2	+1.0
JTS	Las Juntas de	10.91	123	P	Pn	05 19 09.2	-0.3
	8.0nm,0.3s,baz=16,slow=17,SNR=23						
JTS				S	Sn	05 21 03.5	-6.1
	0.5nm,0.3s,baz=343,slow=19,SNR=1.1						
JTS				LR	LR	05 23 15.8	
	comp=Z,132nm,20.1s,baz=21,slow=38						
JTS	Las Juntas de	10.91	123	Pn	Pn	05 19 09.5	+0.1
833A	Chaparral WMA,	12.77	339	P	Pn	05 19 36.7	+2.7
	baz=156,SNR=38						
833A	Chaparral WMA,	12.77	339	Pn	Pn	05 19 37.1	+3.1
HKT	Hockley	13.55	354	Pn	Pn	05 19 45.6	+1.4
LCCY	Blossom Villag	13.87	74	Pn	Pn	05 19 48.6	+0.2
CBCY	The Bluff, Cay	14.18	74		Pn	05 19 51.8	-0.6
435B	Jarrell	14.62	349	P	Pn	05 19 59.8	+1.8
	baz=167,SNR=32						
435B	Jarrell	14.62	349	Pn	Pn	05 19 58.7	+0.6
JCT	Junction City	14.89	341	P	Pn	05 20 01.9	+0.4
	baz=158						
JCT	Junction City	14.89	341	Pn	Pn	05 20 01.8	+0.4
342A	Flagon Creek P	15.00	6	Pn	Pn	05 20 01.7	-1.0
NATX	Nacogdoches	15.28	359	P	P	05 20 07.4	-1.3
	baz=178						
NATX	Nacogdoches	15.28	359	Pn	Pn	05 20 05.7	-0.6
NATX				IAmb	IAmb	05 20 11.0	
	comp=Z,37nm,0.7s						
344A	Westbrook Farm	15.31	11	Pn	Pn	05 20 05.7	-1.0
344A				IAmb	IAmb	05 20 10.0	
	comp=Z,108nm,1.5s						
237A	Washetta, Mont	15.59	355	P	P	05 20 12.1	0.0
237A				IAmb	IAmb	05 20 24.1	
	comp=Z,47nm,0.8s						
061Z	Ochoppi	15.60	51	Pn	P	05 20 10.0	-2.2
DWPF	Disney Wildern	16.61	43	P	Pn	05 20 21.6	-1.2
	baz=228						
Z38A	Mt. Pleasant	16.79	358	P	P	05 20 26.6	+1.2
Z38A				IAmb	IAmb	05 21 01.9	
	comp=Z,129nm,1.2s						
656A	Willston	16.80	38	P	P	05 20 25.1	-0.4
656A				IAmb	IAmb	05 21 05.7	
	comp=Z,56nm,0.8s						
Z41A	Richland Creek	16.82	4	P	P	05 20 26.9	+1.1
	baz=184,SNR=8.3						
Z41A	Richland Creek	16.82	4	P	Pn	05 20 25.0	-0.4
146A	Union	16.83	15	P	P	05 20 25.5	-0.3
ABTX	Abilene, Hawle	16.86	344	P	P	05 20 27.2	+1.0
	baz=161,SNR=20						
ABTX	Abilene, Hawle	16.86	344	P	P	05 20 27.2	+1.0
ABTX				IAmb	IAmb	05 20 34.5	
	comp=Z,45nm,0.5s						
250A	Grady	17.11	24	P	P	05 20 29.9	+1.0
250A				IAmb	IAmb	05 20 32.0	
	comp=Z,117nm,1.8s						
WLAR	White Oak Lake	17.23	3		Pn	05 20 30.9	+0.5
352A	Blakely	17.24	28	P	P	05 20 30.1	-0.3
352A				IAmb	IAmb	05 20 35.0	
	comp=Z,98nm,1.1s						
Z47A	Carrollton	17.63	17	P	Pn	05 20 34.9	-0.2
LRAL	Lakeview Retre	17.81	20	P	Pn	05 20 36.5	-0.8
	baz=203						
LRAL	Lakeview Retre	17.81	20		Pn	05 20 36.2	-1.1
X40A	Basin Creek Fa	18.05	4	P	Pn	05 20 39.7	-0.4
	baz=184						
X40A	Basin Creek Fa	18.05	4	P	Pn	05 20 39.7	-0.4
X40A				IAmb	IAmb	05 21 16.2	
	comp=Z,100nm,1.7s						
MIAR	Mount Ida	18.07	2	P	P	05 20 39.6	+0.2
	baz=182,SNR=19						
MIAR	Mount Ida	18.07	2		P	05 20 39.6	+0.2
MIAR				IAmb	IAmb	05 21 17.4	
	comp=Z,52nm,1.1s						
X37A	Clayton	18.13	357		Pn	05 20 40.6	-0.5
X37A				IAmb	IAmb	05 21 17.5	
	comp=Z,113nm,1.4s						
MNTX	Cornudas Mount	18.27	328	P	Pn	05 20 43.8	+0.8
	baz=143,SNR=5.8						
MNTX	Cornudas Mount	18.27	328		P	05 20 43.1	+1.4
152A	Waverly Hall	18.35	26	P	P	05 20 42.1	-0.3
GTBY	Guantanamo Bay	18.53	76		P	05 20 43.7	-0.9
OXF	Oxford	18.54	13	P	P	05 20 44.3	-0.3
	baz=194						
WMOK	Wichita Mounta	18.70	348	P	Pn	05 20 47.6	-0.3
	baz=166						
WMOK	Wichita Mounta	18.70	348	P	Pn	05 20 47.4	-0.5
WMOK				IAmb	IAmb	05 21 20.4	
	comp=Z,18nm,0.5s						
W39A	Magazine	18.71	1	P	Pn	05 20 47.1	-1.0
	baz=181						
W39A	Magazine	18.71	1	P	Pn	05 20 47.2	-0.9
Z51A	Franklin	18.72	24	P	P	05 20 45.9	-0.8
Z51A				IAmb	IAmb	05 21 22.7	
	comp=Z,22nm,0.3s						
Y49A	Blount Mountai	18.75	21	P	P	05 20 45.7	-1.2
W41B	Gary Mavity, V	18.77	5	P	Pn	05 20 47.7	-1.0
	baz=186						
W41B	Gary Mavity, V	18.77	5	P	P	05 20 47.0	-0.1
W41B				IAmb	IAmb	05 21 26.0	
	comp=Z,49nm,1.1s						
W35A	Tecumseh	18.81	353	P	Pn	05 20 48.6	-0.6
MSTX	Muleshoe	19.09	338	P	P	05 20 51.9	+1.2
	baz=154,SNR=13						
MSTX	Muleshoe	19.09	338	P	P	05 20 51.9	+1.2
X48A	Hartselle	19.10	18	P	P	05 20 49.2	-1.5
GOGA	Godfrey	19.53	28	P	P	05 20 54.2	-1.1
	baz=212						
GOGA	Godfrey	19.53	28		P	05 20 53.5	-1.9
AMTX	Amarillo	19.56	342	P	P	05 20 56.5	+0.8
	baz=158						
AMTX	Amarillo	19.56	342	P	P	05 20 56.6	+0.8
AMTX				IAmb	IAmb	05 20 58.3	
	comp=Z,32nm,0.5s						
OK030	Cody Creek RV	19.57	354	P	P	05 20 55.0	-0.8
FPAL	Fort Paine	19.65	22	P	P	05 20 55.6	-1.1
FPAL				IAmb	IAmb	05 21 35.0	
	comp=Z,112nm,1.8s						
Y52A	Lilburn	19.65	26	P	P	05 20 55.1	-1.6
Y52A				IAmb	IAmb	05 21 37.9	
	comp=Z,51nm,1.4s						
MOTC	Monteria, Cord	19.66	110	*e*P	P	05 20 55.2	-1.7
SJCC	San Jacinto, C	19.67	107	*e*P	P	05 20 56.6	-0.5
LCAR	Lake Charles	19.77	7	P	P	05 20 57.8	-0.2
QUOK	Quay	19.80	354	P	P	05 20 58.4	+0.1
U40A	Yellville	19.90	3	P	P	05 20 59.7	+0.3
	baz=184,SNR=7.9						
U40A	Yellville	19.90	3	P	P	05 20 59.4	0.0
U38A	Gravette	19.95	360	P	P	05 20 59.2	-0.7
U38A				IAmb	IAmb	05 21 37.0	
	comp=Z,45nm,1.1s						
DBBC	Dabeiba	19.97	116	*e*P	Pn	05 21 01.3	-1.8
SMRC	Santa Marta, M	20.14	102	*e*P	P	05 21 00.2	-1.9
SWET	Sewanee	20.15	20	P	P	05 21 00.8	-1.4
121A	Cookes Peak, D	20.19	325	P	Pn	05 21 05.9	+0.3
	baz=139,SNR=16						
121A	Cookes Peak, D	20.19	325	P	Pn	05 21 05.9	+0.3
UREC	San Jos de Ur	20.22	113	*e*P	P	05 21 00.1	-2.9
WVT	Waverly	20.46	15	P	P	05 21 04.5	-0.8
	baz=197						
WVT	Waverly	20.46	15	P	P	05 21 04.1	-1.2
T35A	Sooner Cattle	20.52	355	P	P	05 21 05.0	-1.0
T35A				IAmb	IAmb	05 21 41.5	
	comp=Z,61nm,0.8s						
PBMO	Poplar Bluff	20.57	9	P	P	05 21 06.2	-0.3
CBOC	Ciudad Bolivar	20.73	118	*e*P	P	05 21 08.2	-0.4
T42A	Van Buren	20.73	7	P	P	05 21 07.6	-0.6
T42A				IAmb	IAmb	05 21 47.5	
	comp=Z,95nm,1.7s						
MGMO	Mountain Grove	20.74	4	P	P	05 21 08.7	+0.4
MGMO				IAmb	IAmb	05 21 49.0	
	comp=Z,92nm,1.1s						
CLTN	Cedars of Leba	20.83	18	P	P	05 21 08.3	-1.1
BNM	Barren Site	20.87	330	P	P	05 21 12.1	+2.0
ZARC	Zaragoza, Cauc	20.93	113	*e*P	P	05 21 07.0	-3.7
Y22D	IRIS PASSCAL I	20.95	329	P	Pn	05 21 14.6	+0.1
	baz=144						
HELC	Santa Helena	20.97	117	*e*P	P	05 21 09.0	-2.4
PLMC	San Jos del P	21.02	121	*e*P	P	05 21 09.8	-1.8
SMLC	San Martn de	21.09	109	*e*P	P	05 21 09.8	-2.5
T45A	Paducah	21.12	13	P	P	05 21 11.3	-1.2
S39A	Bolivar	21.21	2	P	P	05 21 12.8	-0.6
TKL	Tuckaleechee C	21.33	24	P	P	05 21 12.5	-2.2
	comp=Z,3.3nm,0.7s,baz=179,slow=10,SNR=5.9						
TKL				S	S	05 25 06.2	+0.8
	comp=Z,3.0nm,0.4s,baz=324,slow=19,SNR=3.8						
TKL	Tuckaleechee C	21.33	24	P	P	05 21 13.3	-1.4
TKL				IAmb	IAmb	05 21 52.0	
	comp=Z,132nm,1.6s						
U49A	Red Boiling Sp	21.39	19	P	P	05 21 13.1	-2.3
U49A				IAmb	IAmb	05 21 52.6	
	comp=Z,40nm,1.0s						
CRJC	Cerrejon, Guaj	21.44	102	*e*P	P	05 21 16.2	0.0
ANMO	Albuquerque	21.45	332	P	P	05 21 18.0	+1.8
	comp=Z,4.6nm,0.8s,baz=149,slow=12,SNR=17						
ANMO	Albuquerque	21.45	332	P	P	05 21 18.2	+2.0
	baz=146						
ANMO	Albuquerque	21.45	332	P	P	05 21 16.2	0.0
YOTC	Yotoco, Valle	21.50	123	*e*P	P	05 21 16.3	-0.5
S44A	Carbondale	21.66	11	P	P	05 21 18.0	-0.1
S44A				IAmb	IAmb	05 21 55.8	
	comp=Z,35nm,1.0s						
SIUC	Southern Illin	21.68	11	P	P	05 21 17.6	-0.8
SIUC				IAmb	IAmb	05 21 56.0	
	comp=Z,48nm,1.1s						
CCM	Cathedral Cave	21.72	6	P	P	05 21 17.5	-1.4
	baz=187						
CCM	Cathedral Cave	21.72	6	P	P	05 21 17.5	-1.4
CCM				IAmb	IAmb	05 21 56.8	
	comp=Z,53nm,1.2s						
PTBC	PUERTO BERRIO,	21.72	115	*e*P	P	05 21 17.1	-2.1
V53A	Saluda	21.73	26	P	P	05 21 18.0	-1.1
TUC	Tucson	21.80	320	P	P	05 21 22.5	+2.7
	baz=132						
R40A	Maddies Statio	21.87	4	P	P	05 21 19.0	-1.4
R40A				IAmb	IAmb	05 21 58.4	
	comp=Z,45nm,0.9s						
ANIL	Santa Ana	21.98	121	*e*P	P	05 21 21.5	-0.6
TOLC	Tolima	21.99	120	*e*P	P	05 21 22.6	+0.3
BBAC	Balboa, Cauca	22.02	129	*e*P	P	05 21 23.9	+1.4
OTAV	Otavalo	22.39	134	P	P	05 21 27.4	+0.8
OTAV	Otavalo	22.39	134	*e*P	P	05 21 29.6	+3.0

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ORTC  Ortega, Tolima     22.43 122 eP     P        05 21 26.4 -0.1
SPBC  San Pablo de B     22.49 116 eP     P        05 21 25.1 -2.1
MARP  Paez Belalcaza     22.49 125 eP     P        05 21 28.8 +1.4
T25A  Trinidad           22.52 338  P     P        05 21 29.5 +2.1
      baz=153
T25A  Trinidad           22.52 338  P     P        05 21 26.2 -1.2
T25A                                IAmb  IAmb     05 22 09.8
      comp=Z,148nm,2.0s
ROSC  El Rosal           22.69 118  P     P        05 21 28.9 -0.7
      comp=Z,5.5nm,0.3s,baz=90,slow=2.0,SNR=4.8
KSU1  Kansas State U     22.70 355  P     P        05 21 29.5 +0.5
      baz=174
KSU1  Kansas State U     22.70 355  P     P        05 21 29.2 +0.2
KSU1                                IAmb  IAmb     05 22 05.6
      comp=Z,33nm,0.8s
BARC  Barichara          22.82 113 eP     P        05 21 28.2 -2.4
CBKS  Cedar Bluff        22.83 349  P     P        05 21 31.2 +0.9
      baz=166
WCI   Wyandotte Cave     22.84  16  P     P        05 21 28.5 -1.8
      baz=200
WCI   Wyandotte Cave     22.84  16  P     P        05 21 28.7 -1.6
WCI                                 IAmb  IAmb     05 22 07.7
      comp=Z,60nm,1.0s
214A  Organ Pipe Nat     22.88 316  P     P        05 21 33.9 +3.1
      baz=128
RUSC  La Rusia           23.23 114 eP     P        05 21 32.8 -2.1
CHIC  Chingaza           23.30 118 eP     P        05 21 34.6 -0.9
SDCO  Great Sand Dun     23.45 337  P     P        05 21 38.3 +1.9
      baz=152,SNR=5.3
PUAC  Puerto Asis, P     23.51 130 eP     P        05 21 39.8 +2.9
VILC  Villavicencio,     23.61 119 eP     P        05 21 36.5 -1.4
BLO   Bloomington        23.66  15  P     P        05 21 36.9 -1.2
P46A  Rosedale           23.93  14  P     P        05 21 39.3 -1.1
TAMC  Tame, Arauca       24.12 112 eP     P        05 21 41.5 -1.0
SDV   Santo Domingo      24.22 105  P     P        05 21 41.5 -1.9
      comp=Z,11nm,0.5s,baz=309,slow=8.7,SNR=13
SDV   Santo Domingo      24.22 105  P     P        05 21 41.7 -1.8
SDV   Santo Domingo      24.22 105 eP     P        05 21 42.2 -1.3
SDV   Santo Domingo      24.22 105 eP     P        05 21 41.6 -1.9
MVCO  Mesa Verde         24.25 331  P     P        05 21 45.7 +2.1
      baz=145
N38A  Joes South For     24.31   2  P     P        05 21 43.8  0.0
WUAZ  Wupatki            24.40 324  P     P        05 21 47.8 +2.9
      baz=136
HDIL  Hopedale           24.44   9  P     P        05 21 44.5 -0.5
      baz=191
P49A  Miami Univ. Ec     24.50  18  P     P        05 21 44.4 -1.1
      baz=202
MACC  Macarena, Meta     24.59 123 eP     P        05 21 47.5 +0.8
R54A  Victor             24.63  26  P     P        05 21 46.6 -0.1
      baz=212
PTLC  Puerto Leguiza     25.07 128 eP     P        05 21 54.5 +3.4
O49A  Covington          25.21  18  P     P        05 21 49.5 -2.6
GUVC  San Jose del G     25.35 121 eP     P        05 21 53.0 -0.6
BC3   Big Chuckawall     25.67 316  P     P        05 21 59.4 +3.0
      baz=126
ACSO  Alum Creek Sta     25.68  20  P     P        05 21 53.9 -2.3
      baz=205
L40A  Anamosa            25.70   5  P     P        05 21 55.1 -1.3
K38A  Parkersburg        26.18   2  P     P        05 21 59.6 -1.1
MCWV  Mont Chateau       26.35  26  P     P        05 22 03.2 +0.8
      baz=212
JFWS  Jewell Farm        26.64   7  P     P        05 22 04.3 -0.5
      baz=188,SNR=5.5
JFWS  Jewell Farm        26.64   7  P     P        05 22 04.5 -0.3
SJG   San Juan           26.89  82  P     P        05 22 03.4 -3.9
      comp=Z,15nm,1.0s,baz=240,slow=14,SNR=3.5
ECSD  EROS Data Cent     27.31 356  P     P        05 22 10.7 -0.1
      baz=175,SNR=8.6
ECSD  EROS Data Cent     27.31 356  P     P        05 22 10.2 -0.7
ATAH  Atahualpa          28.18 145  P     P        05 22 22.7 +3.4
      comp=Z,3.8nm,0.9s,baz=356,slow=10.0,SNR=3.6
TPNV  Topopah Spring     28.24 321  P     P        05 22 23.2 +3.8
      baz=130
SPMN  Marine on St.      28.75   2  P     P        05 22 22.8 -0.8
      baz=183,SNR=7.5
SPMN  Marine on St.      28.75   2  P     P        05 22 22.9 -0.8
SPMN                                IAmb  IAmb     05 22 24.3
      comp=Z,24nm,0.6s
RSSD  Black Hills        28.84 345  P     P        05 22 28.1 +3.4
      baz=160
PDAR  Pinedale Array     29.34 337  P     P        05 22 31.8 +2.5
      comp=Z,0.4nm,0.6s,baz=134,slow=8.6,SNR=4.1
F36A  Milaca             29.37   1  P     P        05 22 28.0 -1.1
REDW  Red Top Meadow     30.35 336  P     P        05 22 39.7 +1.6
REDW                                IAmb  IAmb     05 23 18.7
      comp=Z,33nm,1.4s
NVAR  Mina Array Bea     30.43 321  P     P        05 22 42.5 +3.5
      comp=Z,2.7nm,0.8s,baz=136,slow=8.7,SNR=22
E28A  Huff               30.55 351  P     P        05 22 40.4 +0.8
SADO  Sadowa             31.01  21  P     P        05 22 39.8 -3.9
      comp=Z,3.6nm,0.6s,baz=243,slow=11,SNR=4.3
B35A  Bob, Littlefor     31.86   1  P     P        05 22 49.0 -2.0
B35A                                IAmb  IAmb     05 22 51.2
      comp=Z,43nm,1.6s
CZSB  Cruzeiro do Su     32.10 137 eP     P        05 22 55.8 +2.2
ULM   Lac du Bonnet      33.78 358  P     P        05 23 06.0 -1.7
      comp=Z,7.8nm,0.5s,baz=176,slow=10,SNR=27
MSO   Missoula           34.45 336  P     P        05 23 16.5 +2.8
      baz=145
YBH   Yreka Blue Hor     35.13 322  P     P        05 23 20.8 +1.1
      comp=Z,0.4nm,0.2s,baz=111,slow=8.6,SNR=3.2
F10A  Beach Ranch, E     35.16 332  P     P        05 23 21.8 +1.9
F10A                                IAmb  IAmb     05 23 45.5
      comp=Z,20nm,1.4s
NEW   Newport            36.89 334  P     P        05 23 35.6 +1.1
      comp=Z,1.2nm,0.6s,baz=161,slow=6.8,SNR=7.2
NEW   Newport            36.89 334  P     P        05 23 35.0 +0.5
ETMB  Extrema            38.07 131 eP     P        05 23 45.0 +0.2
FFC   Flin Flon          38.70 353  P     P        05 23 50.0 +0.5
FFC                                 IAmb  IAmb     05 24 27.3
      comp=Z,25nm,1.2s
SAML  Samuel             39.76 127  P     P        05 23 56.5 -2.3
SAML                                IAmb  IAmb     05 23 58.4
      comp=Z,8.0nm,0.7s
PB16  IPOC Station P     42.26 144  P     P        05 24 22.0 +2.1
PB16                                IAmb  IAmb     05 24 26.4
      comp=Z,29nm,2.0s
FCC   Fort Churchill     42.28   0  P     P        05 24 18.4 -0.5
FCC                                 IAmb  IAmb     05 24 19.6
      comp=Z,13nm,0.6s
MNMC  Minye Minye        42.85 145  P     P        05 24 25.8 +1.5
MNMC                                IAmb  IAmb     05 24 30.5
      comp=Z,31nm,1.6s
VILB  Vilhena            44.55 129 eP     P        05 24 37.0 -0.8
MCPB  Macapa, AP         44.83 108 eP     P        05 24 36.9 -3.2
NPGB  Novo Progresso     45.00 118 eP     P        05 24 38.4 -3.0
YKA   Yellowknife Ar     48.20 347  P     P        05 25 05.9 +0.3
      comp=Z,4.3nm,0.5s,baz=145,slow=8.2,SNR=64
AC02  Maricunga          49.44 150  P     P        05 25 17.9 +1.8
AC02                                IAmb  IAmb     05 25 20.8
      comp=Z,38nm,1.9s
PP1B  Ponte de Pedra     51.45 129 eP     P        05 25 31.2 +0.3
CO03  El Pedregal        52.16 154  P     P        05 25 37.6 +1.5
CO03                                IAmb  IAmb     05 25 41.5
      comp=Z,12nm,1.1s
ARAG  Araguaiana, MT     52.66 125 eP     P        05 25 38.8 -1.1
BO02  Sierra Bellavi     55.60 157  P     P        05 26 02.5 +1.5
BO02                                IAmb  IAmb     05 26 04.0
      comp=Z,11nm,0.9s
CPUP  Villa Florida      55.62 139  P     P        05 26 00.8 -0.5
      comp=Z,5.6nm,0.8s,baz=322,slow=7.6,SNR=12
CPUP                                LR    LR       05 49 00.2
      comp=Z,66nm,18.7s,baz=218,slow=35
CPUP  Villa Florida      55.62 139  P     P        05 26 01.6 +0.3
CPUP                                IAmb  IAmb     05 26 04.5
      comp=Z,12nm,1.1s
BDFB  Brasilia           55.65 123  P     P        05 26 00.8 -0.9
      comp=Z,9.7nm,0.6s,baz=291,slow=8.0,SNR=22
BDFB  Brasilia           55.65 123  IAmb  IAmb     05 26 03.3
      comp=Z,10nm,0.7s
SDBA  SAO DESIDERIO      56.58 117 eP     P        05 26 06.2 -2.1
PCMB  Pacaembu           56.60 131 eP     P        05 26 07.8 -0.5
DAWY  Dawson             56.64 338  P     P        05 26 08.9 +0.9
DAWY                                IAmb  IAmb     05 28 04.6
      comp=Z,20nm,1.6s
IPMB  Ipameri, GO        56.78 125 eP     P        05 26 08.4 -1.3
INK   Inuvik             57.52 344  P     P        05 26 14.8 +0.7
      comp=Z,10.0nm,0.5s,baz=124,slow=5.0,SNR=48
RES   Resolute Bay       58.28 360  P     P        05 26 18.1 -1.1
      comp=Z,2.6nm,0.5s,baz=194,slow=7.6,SNR=18
RES   Resolute Bay       58.28 360  P     P        05 26 18.5 -0.7
JANB  Januaria           58.39 120 eP     P        05 26 19.9 -1.1
LC01  Cunco              58.88 160  P     P        05 26 25.2 +1.3
LC01                                IAmb  IAmb     05 26 25.4
      comp=Z,5.7nm,0.7s
ITAB  Concordia          59.60 136 eP     P        05 26 28.6 -0.6
IL18  Eielson Array      59.73 337  P     P        05 26 31.0 +1.5
IL31                     59.78 337  P     P        05 26 30.5 +0.8
IL31                                IAmb  IAmb     05 26 57.5
      comp=Z,20nm,1.3s
ILAR  Eielson Array      59.78 337  P     P        05 26 30.5 +0.7
      comp=Z,0.8nm,0.4s,baz=130,slow=5.2,SNR=32
CCB   Clear Creek Bu     60.07 336  P     P        05 26 33.5 +1.7
CCB                                 IAmb  IAmb     05 26 59.1
      comp=Z,24nm,1.8s
CUT   Chulitna           60.11 334  P     P        05 26 34.6 +2.6
      baz=113,SNR=5.4
TRF   Thorofare Moun     60.54 335  P     P        05 26 37.0 +1.8
I23K  Minto, Yukon-K     60.89 337  P     P        05 26 39.0 +1.7
      baz=116
PLCA  Paso Flores        60.97 160  P     P        05 26 39.4 +1.1
      comp=Z,3.6nm,0.7s,baz=328,slow=7.6,SNR=21
PLCA  Paso Flores        60.97 160  P     P        05 26 39.2 +0.9
PLCA                                IAmb  IAmb     05 28 13.5
      comp=Z,30nm,1.8s
BSCB  Bom Sucesso        61.15 126 eP     P        05 26 39.0 -0.9
MLY   Manley             61.37 336  P     P        05 26 41.9 +1.2
      baz=114
TULEG Thule              61.57   7 iP     P        05 26 41.2 -0.5
TULEG                               IAmb  IAmb     05 26 42.0
      comp=Z,2.8nm,0.7s
GDU01 Guandu, BA         61.77 116 eP     P        05 26 41.6 -2.4
COLD  Coldfoot           62.10 339  P     P        05 26 47.2 +1.8
      baz=116
TOLK  Toolik Lake Re     62.52 340  P     P        05 26 49.8 +1.5
      baz=117,SNR=5.1
TOLK  Toolik Lake Re     62.52 340  P     P        05 26 49.5 +1.1
TOLK                                IAmb  IAmb     05 27 16.6
      comp=Z,7.8nm,0.9s
SJMB  Sao Joao De Ma     62.80 122 eP     P        05 26 51.0 +0.1
EUNU  Eureka             63.78   2  P     P        05 26 56.5  0.0
SUMG  Summit             64.52  16  P     P        05 27 01.3 -0.5
SUMG  Summit             64.52  16 iP     P        05 27 01.6 -0.2
      comp=Z,24nm,0.6s
SUMG  Summit             64.52  16 iP     P        05 27 01.6 -0.2
SUMG                                IAmb  IAmb     05 27 02.0
      comp=Z,24nm,0.6s
DBG   Daneborg           70.00  16 iP     P        05 27 34.9 -1.0
DBG                                 IAmb  IAmb     05 27 36.9
      comp=Z,6.8nm,0.9s
DAG   Danmarks Havn      70.84  14 iP     P        05 27 39.6 -1.3
      comp=Z,14nm,0.7s
DAG   Danmarks Havn      70.84  14 iP     P        05 27 39.6 -1.3
DAG                                 IAmb  IAmb     05 27 41.1
      comp=Z,14nm,0.7s
ESDC  Sonseca Array      79.94  52  P     P        05 28 33.9 +0.1
      comp=Z,0.7nm,0.7s,baz=298,slow=4.3,SNR=7.0
NB2   NORSAR Subarra     83.07  28  P     P        05 28 50.3 +0.5
      comp=Z,16nm,0.9s,baz=293,slow=5.1
NB2   NORSAR Subarra     83.07  28  P     P        05 28 50.3 +0.5
      baz=293,slow=5.1
NOA   NORSAR Array B     83.07  28  P     P        05 28 50.3 +0.5
      comp=Z,5.1nm,0.7s,baz=293,slow=5.2,SNR=19
NOA                                 LR    LR       06 06 59.4
      comp=Z,19nm,18.2s,baz=5.0,slow=37
DOU   Dourbes            83.13  40 dP     P        05 28 51.0 +0.7
DOU                                dpP    pP       05 29 20.6 +1.9
BGES  Gesves             83.34  39 dP     P        05 28 52.3 +0.9
BGES                               dpP    pP       05 29 20.6 +0.8
BCLA  Clavier            83.46  39 dP     P        05 28 51.8 -0.2
BCLA                               dpP    pP       05 29 22.9 +2.5
MEM   Membach            83.83  39 dP     P        05 28 54.1 +0.3
PMSA  Palmer Station     84.16 167  LR    LR       05 58 04.7
      comp=Z,72nm,19.4s,baz=135,slow=30
WLF   Walferdange        84.22  40 dP     P        05 28 56.9 +1.0
ARCES ARCESS Array B     84.53  18  P     P        05 28 57.5 +0.4
      comp=Z,6.3nm,0.5s,baz=297,slow=4.9,SNR=72
SENIN Lac Senin/Sane     86.02  43  P     P        05 29 05.6 +0.4
BNI   Bardonecchia       86.05  44  P     P        05 29 04.5 -0.8
KOWA  Kowa               86.22  76  P     P        05 29 06.0 -0.5
KOWA                                IAmb  IAmb     05 29 08.1
      comp=Z,5.9nm,0.8s
DAVA  Damuels            87.36  41 eP     P        05 29 13.0 +1.4
      comp=Z,2.5nm,0.5s
DBIC  Dimbokro           87.57  84  P     P        05 29 11.0 -2.1
      comp=Z,2.9nm,0.6s,baz=260,slow=4.8,SNR=8.7
FETA  Feichten           88.00  41 iP     P        05 29 15.1 +0.4
      comp=Z,0.6nm,0.4s
MOTA  Moosalm            88.11  41 eP     P        05 29 18.3 +3.1
      comp=Z,2.5nm,0.7s
KHC   Kasperske Hory     88.93  39 eP     P        05 29 19.6 +0.7
GERES GERESS Array B     89.12  39  P     P        05 29 19.3 -0.5
      comp=Z,2.1nm,0.9s,baz=316,slow=3.7,SNR=9.1
ZCCA  Zocca              89.16  44  P     P        05 29 20.2 +0.2
FINES FINESS Array B     89.24  25  P     P        05 29 19.6 -0.4
      comp=Z,4.6nm,0.9s,baz=327,slow=1.2,SNR=13
MOA   Molln              89.88  40 eP     P        05 29 23.4 +0.1
      comp=Z,1.2nm,0.5s
OSTC  Ostas              89.88  37 eP     P        05 29 24.0 +0.7
DPC   Dobruska-Polom     90.03  37 eP     P        05 29 24.8 +0.8
OBKA  Obir               90.61  41 eP     P        05 29 26.8  0.0
      comp=Z,2.5nm,0.8s
SOKA  Soboth             90.84  41 iP     P        05 29 27.7 -0.2
      comp=Z,0.9nm,0.4s
TORD  Torodi Ar. Bea     91.92  76  P     P        05 29 31.6 -1.8
      comp=Z,0.7nm,0.5s,baz=292,slow=4.8,SNR=5.4
TORD                                LR    LR       06 06 03.5
      comp=Z,42nm,21.2s,baz=160,slow=32
OJC   Ojcow              92.07  36  P     P        05 29 33.9 +0.5
KOLS  Kolonicke sedl     94.11  36 eP     P        05 29 47.0 +4.2
AKASG Malin Array Be     96.89  32  P     P        05 29 54.4 -1.1
      comp=Z,0.5nm,0.5s,baz=287,slow=4.4,SNR=3.8
BOSA  Boshof            123.33 114  PKP   PKiKP    05 35 22.1 +0.4
      comp=Z,2.4nm,0.9s,baz=207,slow=4.5,SNR=4.9
KSH   Kashi             123.62   9  PKP   PKiKP    05 35 26.8 +4.7
LZH   Lanzhou           125.05 342 ePKP   PKPdf    05 35 24.5 -0.2
LZH                                 pPKP  pPKPdf   05 35 52.8 -1.6
LZH                                 sPKP           05 36 03.7
LZH                                 LR    LR
      comp=N,87nm,18.0s
LZH                                 LR    LR
      comp=E,96nm,18.2s
LZH                                 LR    LR
      comp=Z,140nm,20.1s
WRA   Warramunga Arr    133.81 258  PKP   PKPdf    05 35 42.6 +1.1
      comp=Z,0.5nm,0.6s,baz=83,slow=2.3,SNR=11
HYB   Hyderabad         145.65  12 iPKP   PKPdf    05 36 02.5 -0.5
HYB                                epPKP  pPKPab   05 36 31.0 -2.0
```

JMA ***04*** *05:23:04.8±0.1, 33°.33N×141°.03E, h54^{km}, M3.3*

IDC ***04*** *05:23:08.3±3.5, 33°.21N×140°.73E, h64^{km}±25^{km}, mb3.1/3, mb1 3.3/4, mb1mx3.0/32, mbtmp3.3/4, ML2.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/18, Error ellipse: s-maj=53.2km s-min=19.8km az=83.0*

ISC 04 05:23:05.3±2.1**, 33°.28N**±0°.06×**141°.0E**±0°.1**, h43**^{km}±21^{km}**, n21,** σ1^{s}.01/26**, mb3.6**/3**, Off east coast of Honshu**

```
Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                    Op    ISC       h  m  s    ISC
JHJ2  Mitsune             1.03 261  P     Pn       05 23 23.5 +0.2
JHCJ  Hachijojimakas      1.05 259  P     Pn       05 23 23.6  0.0
JHJ   Hachijo jima 2      1.06 262  P     Pn       05 23 23.6 -0.1
      300nm,0.3s,baz=85,slow=22,SNR=121
JHJ                                 S     Sn       05 23 36.4 -0.9
      232nm,0.3s,baz=73,slow=19,SNR=7.6
JAOM  Aogashimamukai      1.34 233  P     Pn       05 23 28.1 +0.5
JAOM                               eS     Sn       05 23 44.4 +0.2
JMKN  Mikurajimanish      1.35 297  P     Pn       05 23 27.5 -0.1
JMKN                               eS     Sn       05 23 43.6 -0.8
BSO1  Boso 1              1.37 358  P     Pn       05 23 27.7 +0.2
BSO3  Boso 3              1.58 344  P     Pn       05 23 30.4 -0.2
JIM2  Oshima 3            1.96 318  P     Pn       05 23 35.5 -0.5
JIZS  Izushimoda          2.29 309  P     Pn       05 23 41.0 +0.4
JOD2  Odawara 2           2.55 321  P     Pn       05 23 43.9 -0.3
JOD2                               eS     Sn       05 24 11.9 -2.1
TK02  Tokai 2             2.81 285  P     Pn       05 23 48.7 +1.2
TK04  Tokai 4             2.85 294  P     Pn       05 23 49.4 +1.3
SHZ3  Shizuoka 3          2.94 308  P     Pn       05 23 51.3 +1.7
JYN   Shimob              3.02 318  P     Pn       05 23 51.7 +1.0
JYN                                eS     Sn       05 24 26.1 +0.5
JRY   Ryogami san         3.25 328  P     Pn       05 23 54.3 +0.6
MJAR  Matsushiro Arr      4.00 325  P     Pn       05 24 06.0 +2.0
      0.4nm,0.3s,baz=152,slow=10,SNR=22
MAT   Matsushiro          4.00 325  P     Pn       05 24 05.6 +1.6
MAT                                 S     Sn       05 24 50.7 +1.1
MA2   Magadan            27.09  11  LR    LR       05 40 11.6
      comp=Z,63nm,20.6s,baz=87,slow=38
```

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MKAR  Makanchi Array     45.93 305  P     P        05 31 22.9 -0.9
      0.1nm,0.5s,baz=93,slow=10,SNR=1.7
WRA   Warramunga Arr     53.31 188  P     P        05 32 20.4 +0.3
      0.4nm,0.5s,baz=4.0,slow=7.5,SNR=11
ASAR  Alice Springs      57.03 188  P     P        05 32 46.9 -0.1
      0.3nm,0.5s,baz=1.4,slow=6.5,SNR=6.3
```

IDC 04 05:35:19.3±1.4**, 20°.94N**×**143°.31E, h0**^{km}**, mb3.4**/5**, mb1 3.6**/5**, mb1mx3.3**/50**, mbtmp3.4**/5**, Error ellipse: s-maj=48.4km s-min=27.7km az=72.0, Mariana Islands region**

```
Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                    Op    ISC       h  m  s    ISC
KSRS  Korea Array        21.19 324  P     P        05 40 07.9 +1.5
      1.2nm,0.6s,baz=144,slow=8.6,SNR=5.5
ASAR  Alice Springs      45.28 192  P     P        05 43 39.0  0.0
      0.3nm,1.0s,baz=24,slow=9.3,SNR=3.0
MKAR  Makanchi Array     55.30 313  P     P        05 44 54.7  0.0
      0.2nm,0.5s,baz=93,slow=9.0,SNR=3.8
KURBB Kurchatov Arra     58.16 317  P     P        05 45 13.7 -1.1
      0.4nm,0.5s,baz=95,slow=7.6,SNR=4.9
NVAR  Mina Array Bea     83.52  51  P     P        05 47 49.8 +0.1
      0.3nm,0.6s,baz=282,slow=4.5,SNR=4.0
```

BJI ***04*** *05:51:22.5±0.0, 29°.14N×130°.89E, h31^{km}, mB4.9/59, mb4.9/73, Ms5.2/81, Ms7 5.1/77*

GCMT ***04*** *05:51:24.9±0.4, 29°.37N±0°.03×130°.73E±0°.03, h33^{km}±2^{km}, MW5.2/54, Moment Tensor Solution. s41,c46; s54,c62; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.28±.20; $M_{\theta\theta}$-0.06±.14; $M_{\phi\phi}$-0.21±.15; $M_{r\theta}$2.91±.33; $M_{\theta\phi}$0.26±.11; $M_{\phi r}$6.76±.48; Best double couple: $M_0$7.36500×10^{16} NP1:ϕ_s129.00000°, δ2.00000°, λ16.00000°. NP2: ϕ_s23.00000°, δ89.00000°, λ92.00000°. Principal axes: T 7.5030, Plg46.0000°, Azm295.0000°; N -0.2770, Plg2.0000°, Azm203.0000°; P -7.2260, Plg44.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***04*** *05:51:25.3±1.0, 29°.32N×130°.51E, h34^{km}, mb5.1/62, MS4.7/21 Error ellipse: s-maj=6.5km s-min=4.1km az=109.9*

NEIC ***04*** *05:51:25.9±1.3, 29°.27N±0°.05×130°.55E±0°.08, h26^{km}±5^{km}, mb5.1/108, Ms_20 4.9/134, Error ellipse: s-maj=10.1km s-min=7.7km az=100.0*

NIED ***04*** *05:51:26.5, 29°.33N×130°.56E, h59^{km}, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.09; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-0.08; $M_{r\theta}$0.66; $M_{\theta\phi}$-0.12; $M_{\phi r}$1.08; Fault plane solution: $M_0$1.27000×10^{17} NP1:ϕ_s32.00000°, δ87.00000°, λ89.00000°. NP2:ϕ_s229.00000°, δ3.00000°, λ107.00000°.*

JMA ***04*** *05:51:26.4±0.1, 29°.33N×130°.56E, h59^{km}±3^{km}, M4.9*
JMA Felt II J1.

BGR ***04*** *05:51:27.9±0.0, 29°.47N×130°.84E, h33^{km}, mb5.2*

IDC ***04*** *05:51:28.4±1.5, 29°.36N×130°.52E, h44^{km}±14^{km}, mb4.5/31, mb1 4.6/37, mb1mx4.5/50, mbtmp4.7/37, ML4.0/6, MS4.6/33, Ms1 4.6/33, ms1mx4.5/45, Error ellipse: s-maj=12.5km s-min=8.3km az=89.0*

NOU ***04*** *05:51:32.4, 29°.55N×130°.80E, h84^{km}, mb4.9, Ryukyu Islands, Japan*

ISC 04 05:51:26.9±0.5**, 29°.29N**±0°.03×**130°.67E**±0°.03**, h33**^{km}±2^{km}**, h34**^{km}**:pP-P, n610,** σ1^{s}.70/608**, mb5.0**/165**, MS4.9**/131**, 55C-17D, Ryukyu Islands**

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Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                    Op    ISC       h  m  s    ISC
JNN   Nakanoshima         0.89 308  P     Pn       05 51 41.6 -1.4
JNN                                 S     Sn       05 51 53.4 -1.3
JYAK  Yakushimahirau      0.95 351  P     Pn       05 51 43.3 -0.7
JYAK                               eS     Sb       05 51 56.7 -0.6
JMTN  Minamitane          1.12  10  P     Pn       05 51 45.9 -0.3
JMTN                               eS     Sb       05 52 01.0 -1.0
JZK   Kikaishima          1.15 212  P     Pn       05 51 47.0 +0.3
JKC   Kuchinoerabu        1.24 341  P     Pn       05 51 47.2 -0.7
JKC                                eS     Sn       05 52 02.6 -0.8
JAM   Amami Oshima        1.28 227  P     Pn       05 51 48.1 -0.4
JTAJ  Takarajima          1.29 264  P     Pn       05 51 47.9 -0.7
JTN   Tanegashima 3       1.38  11  P     Pn       05 51 49.7 -0.2
JTN                                eS     Sb       05 52 08.1 -1.4
JAMN  Amaminishikomi      1.68 232  P     Pn       05 51 53.6 -0.3
JAMN                               eS     Sn       05 52 13.4 -0.9
JTSR  Tashiro 2           1.88   7  P     Pn       05 51 56.8 +0.1
JTSR                               eS     Sn       05 52 19.3 -0.1
JTK   Tokunoshima         2.13 226  P     Pn       05 51 59.9 -0.3
JTK                                eS     Sn       05 52 24.4 -1.1
JSU   Suzuyama            2.21 355  P     Pn       05 52 00.8 -0.5
JSU   Suzuyama            2.21 355  Pn    Pn       05 52 01.0 -0.4
JNAR  Kushima--Naru       2.29  13  P     Pn       05 52 02.6 +0.3
JNAR                                S     Sn       05 52 31.3 +2.0
JOKE  Okinoerabujima      2.67 224  P     Pn       05 52 07.6  0.0
JOKE                               eS     Sn       05 52 38.8  0.0
JYRO  Yoronjima           2.99 222  P     Pn       05 52 11.5 -0.5
JYRO                                S     Sn       05 52 45.7 -1.0
JOW   Kunigami            3.24 221  P     Pn       05 52 14.6 -0.8
JOW                                eS     Sn       05 52 52.3 -0.6
JIH   Iheya               3.28 227  P     Pn       05 52 15.2 -0.8
JKDJ  Kitadaitoujima      3.38 170  P     Pn       05 52 16.2 -1.1
JMZ   Minamidaito 2       3.49 172  P     Pn       05 52 17.8 -1.1
JMZ                                 S     Sn       05 52 56.7 -2.4
JMZ   Minamidaito 2       3.49 172  Pn    Pn       05 52 17.7 -1.2
JNTH  Nagotoyohara        3.62 221  P     Pn       05 52 19.8 -0.9
JNU   Nakatsue            3.82   3  P     Pn       05 52 24.1 +0.6
      13nm,0.3s,baz=192,slow=12,SNR=96
JNU                                 S     Sn       05 53 08.4 +1.2
      16nm,0.3s,baz=163,slow=17,SNR=2.6
JAGN  Aguni-jima          4.06 229  P     Pn       05 52 26.1 -0.5
JMN   Monobe              5.20  31  Pn    Pn       05 52 42.3 -0.1
JTU   Tsushima            5.33 349        Pn       05 52 45.9 +1.8
JHS   Saijyo              6.05  19  Pn    Pn       05 52 54.3 +0.2
JWT   Wachi               7.19  33  Pn    Pn       05 53 10.2 +0.5
TJN   Taejon              7.59 339⇓iP     Pn       05 53 18.9 +3.7
INU   Inuyama             8.08  40  Pn    Pn       05 53 23.1 +1.2
JSG   Sagara              8.34  48        Pn       05 53 26.1 +0.7
YOJ   Yonaguni jima       8.36 237  P     Pn       05 53 23.8 -2.0
YOJ   Yonaguni jima       8.36 237  Pn    Pn       05 53 23.8 -2.0
SSE   Sheshan             8.40 285  P     Pn       05 53 25.0 -1.3
SSE                                 S     Sn       05 54 59.8 -0.3
SSE                                 pmax  pmax
      comp=Z,11nm,0.6s
SSE                                 pmax  pmax
      comp=Z,61nm,4.6s
SSE                                 LR    LR
      comp=N,1μm,12.2s
SSE                                 LR    LR
      comp=E,3μm,15.2s
JGF   Kuroka              8.45  40        Pn       05 53 27.4 +0.4
KSRS  Korea Array         8.46 345  P     Pn       05 53 29.6 +2.6
      0.5nm,0.3s,baz=162,slow=14,SNR=27
KSRS                                LR    LR       05 57 01.7
      comp=Z,6μm,18.6s,baz=164,slow=40
KS19  Wonju Array Si      8.52 345        Pn       05 53 29.5 +1.7
JHJ   Hachijo jima 2      8.68  62  P     Pn       05 53 32.0 +1.9
      30nm,0.3s,baz=235,slow=23,SNR=8.3
JHJ                                 LR    LR       05 56 33.7
      comp=Z,3μm,20.3s,baz=257,slow=35
INCN  Inchon              8.84 339  P     Pn       05 53 33.1 +0.8
INCN  Inchon              8.84 339        Pn       05 53 33.1 +0.8
YHNB  Yeheng              9.48 243        Pn       05 53 40.9 -0.3
NACB  Ninganchiao         9.58 240        Pn       05 53 40.6 -1.9
MAJO  Matsushiro          9.61  39deP     Pn       05 53 44.0 +1.1
MAJO                                pmax  pmax
      comp=Z,34nm,1.0s
MAJO  Matsushiro          9.61  39  Pn    Pn       05 53 43.9 +1.1
MAT   Matsushiro          9.61  39  P     Pn       05 53 42.7 -0.1
MAT                                eS     Sn       05 55 33.1 +3.4
MJAR  Matsushiro Arr      9.61  39  P     Pn       05 53 44.3 +1.4
      comp=Z,0.6nm,0.3s,baz=242,slow=15,SNR=28
MJB9  Matsu-Tunnel        9.61  39  Pn    Pn       05 53 43.4 +0.5
YULB  Yu-li              10.26 237        Pn       05 53 51.3 -0.4
SSLB  Suanglung          10.28 240        Pn       05 53 49.3 -2.8
JCJ   Chichijima         10.39  99  LR    LR       05 57 21.5
      comp=Z,3μm,20.6s,baz=258,slow=34
NJ2   Nanjing            10.54 288 eP     Pn       05 53 56.7 +1.1
NJ2                                 sP             05 54 07.6
NJ2                                 S     Sn       05 55 56.2 +3.6
NJ2                                 sS             05 56 03.9
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NJ2                                   pmax     pmax
      comp=Z,26nm,0.5s
NJ2                                   pmax     pmax
      comp=Z,350nm,4.5s
NJ2                                   LR       LR
      comp=Z,3µm,15.3s
NJ2                                   LR       LR
      comp=Z,7µm,16.5s
NJ2                                   LR       LR
      comp=Z,9µm,16.9s
JYT   Yasato            10.58  47              Pn       05 53 56.8 +0.6
TPUB  Ta-pu             10.80 239              Pn       05 53 57.5  -1.8
QZH   Quanzhou          11.60 251     P        Pn       05 54 15.2 +5.1
QZH                                   S        Sn       05 56 26.2 +7.7
QZH                                   LR       LR
      comp=Z,3µm,14.7s
QZH                                   LR       LR
      comp=Z,2µm,14.7s
QZH                                   LR       LR
      comp=Z,3µm,15.6s
JMM   Marumori          12.01  42     Pn       Pn       05 54 17.9 +2.3
DL2   Dalian            12.16 324     P        Pn       05 54 20.6 +2.8
DL2                                   S        Sn       05 56 36.2 +4.0
DL2                                   pmax     pmax
      comp=Z,44nm,1.1s
DL2                                   pmax     pmax
      comp=Z,480nm,6.0s
DL2                                   LR       LR
      comp=Z,6µm,13.6s
DL2                                   LR       LR
      comp=Z,5µm,13.3s
DL2                                   LR       LR
      comp=Z,9µm,13.4s
TIA   Tai'an            13.32 305     P        Pn       05 54 36.3 +2.7
TIA                                   S        Sn       05 57 05.4 +4.8
TIA                                   pmax     pmax
      comp=Z,12nm,0.7s
TIA                                   pmax     pmax
      comp=Z,350nm,2.7s
TIA                                   LR       LR
      comp=Z,5µm,10.7s
TIA                                   LR       LR
      comp=Z,6µm,12.8s
TIA                                   LR       LR
      comp=Z,10µm,14.9s
SNY   Shenyang          13.77 337 ⇑P        Pn       05 54 40.1 +0.4
SNY                                   S        S        05 57 25.5  -7.5
SNY                                   pmax     pmax
      comp=Z,18nm,2.5s
SNY                                   pmax     pmax
      comp=Z,310nm,6.0s
SNY                                   LR       LR
      comp=Z,6µm,15.1s
SNY                                   LR       LR
      comp=Z,3µm,13.2s
SNY                                   LR       LR
      comp=Z,9µm,13.8s
WHN   Wuhan             14.21 279     P        Pn       05 54 46.9 +1.1
WHN                                   S        S        05 57 35.4  -6.9
WHN                                   pmax     pmax
      comp=Z,790nm,7.3s
WHN                                   LR       LR
      comp=Z,3µm,8.7s
WHN                                   LR       LR
      comp=Z,11µm,16.7s
WHN                                   LR       LR
      comp=Z,10µm,16.8s
USA0B Ussuriysk Arra    14.92   4     P        Pn       05 54 54.0  -1.3
USA0B Ussuriysk Arra    14.92   4              Pn       05 54 54.0  -1.3
USRK  Ussuriysk Ar.     14.92   4     P        Pn       05 54 57.4 +2.1
      baz=181,slow=9.3,SNR=21
USRK                                  LR       LR       06 00 39.5
      comp=Z,2µm,21.3s,baz=171,slow=37
CN2   Changchun         15.07 345    eP        P        05 55 02.5 +0.2
CN2                                   S        Sn       05 57 47.7 +4.6
CN2                                   pmax     pmax
      comp=Z,70nm,0.8s
CN2                                   pmax     pmax
      comp=Z,500nm,5.0s
CN2                                   LR       LR
      comp=Z,7µm,14.0s
CN2                                   LR       LR
      comp=Z,2µm,14.0s
CN2                                   LR       LR
      comp=Z,7µm,14.0s
MDJ   Mudanjiang        15.32 357     P        Pn       05 55 02.1 +1.5
MDJ                                   pP       pP       05 55 08.7  -4.7
MDJ                                   S        Sn       05 57 52.1 +2.9
MDJ                                   sS       S        05 58 02.1  -2.7
MDJ                                   pmax     pmax
      comp=Z,10.0nm,1.1s
MDJ                                   pmax     pmax
      comp=Z,150nm,5.1s
MDJ                                   LR       LR
      comp=Z,2µm,16.6s
MDJ                                   LR       LR
      comp=Z,2µm,13.9s
MDJ                                   LR       LR
      comp=Z,4µm,15.2s
TEY   Ternei            16.40  15⇑iP        P        05 55 18.8 +1.8
TEY                                   pmax     pmax
      comp=N,40nm,0.8s
TEY                                   pmax     pmax
      comp=Z,40nm,0.8s
TIY   Taiyuan           17.36 304    eP        P        05 55 31.2 +3.5
TIY                                   S        S        05 58 43.0  -3.6
TIY                                   pmax     pmax
      comp=Z,24nm,0.5s
TIY                                   pmax     pmax
      comp=Z,440nm,5.8s
TIY                                   LR       LR
      comp=Z,4µm,12.4s
TIY                                   LR       LR
      comp=Z,4µm,13.4s
TIY                                   LR       LR
      comp=Z,6µm,15.1s
ASAJ  Asahikawa         17.59  30     P        P        05 55 29.4  -0.7
      comp=Z,0.6nm,0.3s,baz=158,slow=16,SNR=9.0
ASAJ                                  LR       LR       06 02 35.1
      comp=Z,3µm,20.9s,baz=220,slow=38
YUK   Yuzh-Kuril'sk     19.06  35     P        P        05 55 40.8  -5.5
YUK                                  eS        Sn       05 59 08.3   -11
YUK                                   MLR      MLR
      comp=Z,2µm,19.0s
YUK                                   MLR      MLR
      comp=N,2µm,14.0s
YUK                                   MLR      MLR
      comp=E,1µm,18.0s
XAN   Xi'an             19.10 290     P        P        05 55 46.2  -0.7
XAN                                   pmax     pmax
      comp=E,22nm,0.9s
XAN                                   pmax     pmax
      comp=E,370nm,5.4s
XAN                                   LR       LR
      comp=E,2µm,15.4s
XAN                                   LR       LR
      comp=E,3µm,14.2s
XAN                                   LR       LR
      comp=E,4µm,13.7s
XAN   Xi'an             19.10 290     P        P        05 55 45.6  -1.4
XAN                                   pmax     pmax
      comp=Z,87nm,0.8s
XAN   Xi'an             19.10 290     P        P        05 55 45.6  -1.4
XAN                                   IAmb     IAmb     05 55 51.2
      comp=Z,87nm,0.8s
HHC   Hu-ho-hao-te      19.39 312    eP        Pn       05 55 50.5  -0.9
HHC                                   pP       pP       05 55 58.3  -0.3
HHC                                   PP       PnPn     05 56 11.1 +6.3
HHC                                   S        Sn       05 59 29.6 +1.7
HHC                                   pmax     pmax
      comp=Z,47nm,1.0s
HHC                                   pmax     pmax
      comp=Z,430nm,7.6s
HHC                                   LR       LR
      comp=Z,3µm,16.9s
HHC                                   LR       LR
      comp=Z,4µm,14.7s
HHC                                   LR       LR
      comp=Z,6µm,17.1s
KLR   Kul'dur           19.93   2     P        P        05 55 54.4  -1.3
      comp=Z,1.6nm,0.3s,baz=185,slow=7.2,SNR=88
KLR                                   LR       LR       06 03 36.6
      comp=Z,1µm,21.3s,baz=180,slow=37
YSS   Yuzh-Sakhalins    19.99  25⇑iP        Pn       05 55 58.1  -0.2
YSS                                  e*SP      sP       05 56 10.6 +2.0
YSS                                  ePPP      PPP      05 56 29.3
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YSS                                  eS        S        05 59 35.8  -3.6
YSS                                  eSS       SnSn     06 00 13.3   +17
YSS                                   pmax     pmax
      comp=Z,60nm,1.1s
YSS                                   MLR      MLR
      comp=Z,2µm,14.0s
YSS                                   MLR      MLR
      comp=N,1µm,17.0s
YSS                                   MLR      MLR
      comp=E,700nm,16.0s
YSS   Yuzh-Sakhalins    19.99  25     P        P        05 55 56.2  -0.2
YSS                                   IAmb     IAmb     05 55 59.8
      comp=Z,67nm,1.1s
BTO   Baotou            20.30 309    eP        Pn       05 56 03.0 +0.9
BTO                                   S        Sn       05 59 50.3 +0.5
GUMO  Guam              20.43 137     P        Pn       05 56 04.4 +0.7
      comp=Z,611nm,1.2s,baz=168,slow=7.7,SNR=5.2
GUMO                                  LR       LR       06 02 59.6
      comp=Z,1µm,18.1s,baz=326,slow=34
GUMO  Guam              20.43 137     P        P        05 56 02.1 +0.7
KUR   Kuril'sk          20.92  36     P        Pn       05 56 10.6 +1.4
KUR                                  eS        Sn       06 00 14.3   +10
KUR                                   MLR      MLR
      comp=Z,2µm,20.0s
KUR                                   MLR      MLR
      comp=E,2µm,18.0s
KUR                                   MLR      MLR
      comp=N,2µm,17.0s
GYA   Guiyang           21.40 268 ⇑P        P        05 56 12.5 +0.4
GYA                                   pP       pP       05 56 19.9  -0.6
GYA                                   S        S        06 00 06.7  -1.3
GYA                                   SS       SnSn     06 00 40.7 +8.9
GYA                                   pmax     pmax
      comp=N,32nm,0.7s
GYA                                   LR       LR
      comp=N,2µm,13.0s
GYA                                   LR       LR
      comp=N,3µm,11.1s
GYA                                   LR       LR
      comp=N,5µm,14.2s
QIZ   Qiongzhong        21.55 246     P        P        05 56 13.0  -0.5
QIZ                                   S        S        06 00 11.4 +0.7
QIZ                                   LR       LR
      comp=N,970nm,18.0s
QIZ                                   LR       LR
      comp=N,2µm,19.4s
QIZ                                   LR       LR
      comp=N,3µm,18.9s
HIA   Hailar            21.62 340⇓eP        P        05 56 13.1  -1.0
HIA                                   pmax     pmax
      comp=Z,14nm,0.9s
HIA   Hailar            21.62 340     P        P        05 56 11.8  -2.3
HIA   Hailar            21.62 340     IAMs_20  IAMs_20  06 05 16.6
      comp=Z,3µm,18.0s
CD2   Chengdu           23.32 281     P        P        05 56 31.5  -0.7
CD2                                   S        S        06 00 42.2  -0.6
CD2                                   pmax     pmax
      comp=Z,110nm,0.9s
CD2                                   pmax     pmax
      comp=Z,230nm,4.7s
CD2                                   LR       LR
      comp=Z,4µm,16.7s
CD2                                   LR       LR
      comp=Z,5µm,12.7s
CD2                                   LR       LR
      comp=Z,4µm,12.7s
TYV   Tymovskoe         23.36  19    eP        P        05 56 36.7 +4.5
TYV                                   pmax     pmax
      comp=Z,200nm,3.2s
TYV                                   pmax     pmax
      comp=Z,20nm,0.9s
TYV                                   MLR      MLR
      comp=Z,2µm,17.0s
LZH   Lanzhou           23.53 294 ⇑P        P        05 56 33.8  -0.5
LZH                                   pP       pP       05 56 42.6  -0.6
LZH                                   sP       sP       05 56 46.7 +0.3
LZH                                   PP       PnPn     05 57 07.0 +5.4
LZH                                   S        S        06 00 44.0  -2.2
LZH                                   sS       sS       06 00 59.7  -1.9
LZH                                   SS       SnSn     06 01 29.8 +5.9
LZH                                   pmax     pmax
      comp=Z,53nm,1.0s
LZH                                   pmax     pmax
      comp=Z,320nm,4.3s
LZH                                   LR       LR
      comp=Z,2µm,12.1s
LZH                                   LR       LR
      comp=Z,6µm,13.0s
LZH                                   LR       LR
      comp=Z,6µm,14.7s
ZEA   Zeya              24.55 355    eP        P        05 56 41.7  -1.7
ZEA                                  eS        S        06 00 52.6  -9.4
ZEA                                   pmax     pmax
      comp=N,20nm,1.0s
ZEA                                   pmax     pmax
      comp=Z,20nm,0.8s
ZEA                                   MLR      MLR
      comp=E,600nm,14.0s
ZEA                                   MLR      MLR
      comp=N,800nm,15.0s
ZEA                                   MLR      MLR
      comp=Z,600nm,16.0s
KMI   Kunming           25.16 267     P        P        05 56 49.2  -0.3
KMI                                   pP       pP       05 56 58.4  -0.1
KMI                                   sP       sP       05 57 02.2 +0.5
KMI                                   PP       PnPn     05 57 25.6 +1.5
KMI                                   S        S        06 01 09.7  -3.0
KMI                                   sS       sS       06 01 25.3  -2.5
KMI                                   SS       SnSn     06 02 10.2 +6.2
KMI                                   pmax     pmax
      comp=Z,45nm,0.9s
KMI                                   pmax     pmax
      comp=Z,120nm,3.7s
KMI                                   LR       LR
      comp=Z,2µm,13.9s
KMI                                   LR       LR
      comp=Z,4µm,14.3s
KMI                                   LR       LR
      comp=Z,4µm,14.2s
KMI   Kunming           25.16 267     IAMs_20  IAMs_20  06 07 49.3
      comp=Z,3µm,18.0s
SLVN  Son La            25.42 258     P        P        05 56 51.6  -0.1
SLVN                                  IAMs_20  IAMs_20  06 07 37.4
      comp=Z,2µm,19.0s
ULN   Ulaanbaatar       26.00 322d iP        P        05 56 56.3  -0.5
ULN                                   pmax     pmax
      comp=Z,32nm,1.0s
ULN   Ulaanbaatar       26.00 322     P        P        05 56 55.8  -1.1
ULN   Ulaanbaatar       26.00 322     IAMs_20  IAMs_20  06 08 16.4
      comp=Z,4µm,20.0s
SONM  Songino Array     26.34 321     P        P        05 56 59.2  -0.7
      comp=Z,20nm,0.8s,baz=136,slow=9.0,SNR=23
SONM                                  LR       LR       06 08 38.2
      comp=Z,3µm,21.0s,baz=124,slow=39
GTA   Gaotai            27.29 300    eP        P        05 57 09.0 +0.5
GTA                                   pP       pP       05 57 17.8 +0.3
GTA                                   sP       sP       05 57 21.8 +1.1
GTA                                   PcP      PcP      06 00 28.5 +0.9
GTA                                   S        S        06 01 47.2 +1.3
GTA                                   sS       sS       06 02 00.6  -0.7
GTA                                   ScP      ScP      06 04 07.2 +1.6
GTA                                   PcS      PcS      06 04 11.2 +1.9
GTA                                   pmax     pmax
      comp=Z,4.0nm,0.8s
GTA                                   LR       LR
      comp=Z,2µm,16.7s
GTA                                   LR       LR
      comp=Z,3µm,16.7s
GTA                                   LR       LR
      comp=Z,4µm,16.7s
SKR   Severo-Kuril's    28.67  35⇓eP        P        05 57 21.6 +1.1
ZAK   Zakamensk         29.49 323    eP        P        05 57 26.6  -1.3
ZAK                                   pmax     pmax
      comp=Z,9.0nm,1.1s
TOLI2 Tolitoli          29.57 200     P        P        05 57 28.2  -0.5
SIJI  Sorong            30.00 179     P        P        05 57 33.0 +0.4
      comp=Z,2.6nm,0.3s,baz=40,slow=5.6,SNR=3.8
TLY   Talaya            30.07 326    eP        P        05 57 33.0   0.0
TLY                                  eS        S        06 02 34.0 +4.8
TLY                                   pmax     pmax
      comp=Z,29nm,1.1s
TLY                                   MLR      MLR
      comp=Z,4µm,12.0s
TLY   Talaya            30.07 326     P        P        05 57 31.9  -1.1
TLY                                   IAMs_20  IAMs_20  06 10 44.3
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      comp=Z,3µm,21.0s
MPSI  Mapaga            30.57 202     P        P        05 57 38.6 +0.9
      comp=Z,783nmcomp=Z,6.1nm,0.5s
CHTO  Chiang Mai        30.70 257     P        P        05 57 38.1  -0.8
CHTO                                  pmax     pmax
      comp=Z,5.0nm,0.9s
CHTO                                  MLR      MLR
      comp=Z,2µm,18.0s
CHTO  Chiang Mai        30.70 257     P        P        05 57 38.1  -0.8
CHTO  Chiang Mai        30.70 257     IAMs_20  IAMs_20  06 11 33.7
      comp=Z,1µm,18.0s
BOD   Bodaibo           30.79 343    eP        P        05 57 37.0  -2.2
BOD                                   pmax     pmax
      comp=Z,5.0nm,0.8s
CMAR  Chiang Mai Arr    30.86 257     P        P        05 57 39.6  -0.7
      comp=Z,0.9nm,0.3s,baz=54,slow=6.9,SNR=10
CMAR                                  PcP      PcP      06 00 37.0 +0.3
      comp=Z,3.3nm,1.0s,baz=46,slow=2.6,SNR=6.4
CMAR                                  LR       LR       06 11 32.0
      comp=Z,1µm,18.5s,baz=111,slow=39
CMAR  Chiang Mai Arr    30.86 257ceP        P        05 57 40.4 +0.1
CMAR                                  pmax     pmax
      comp=Z,1.0nm,0.3s
PETK  Petropavlovsk-    30.96  32     P        P        05 57 41.4 +0.6
      comp=Z,10nm,0.9s,baz=226,slow=3.9,SNR=6.7
PETK                                  LR       LR       06 10 21.3
      comp=Z,953nm,20.6s,baz=230,slow=37
PET   Petropavlovsk     31.36  33    eP        P        05 57 44.6 +0.3
PET                                  eS        S        06 02 50.9 +1.7
PET                                   pmax     pmax
      comp=Z,35nm,1.1s
PET                                   MLR      MLR
      comp=Z,2µm,18.0s
PET                                   MLR      MLR
      comp=Z,2µm,20.0s
MOY   Mondy             31.41 324    eP        P        05 57 43.9  -1.0
FAKI  Fak Fak           32.06 177     P        P        05 57 51.4 +0.6
FAKI  Fak Fak           32.06 177     P        P        05 57 51.8 +1.0
      comp=Z,99nm,1.1s
YAK   Yakutsk           32.75 359    eP        P        05 57 55.0  -1.3
YAK                                  e*PP      pP       05 58 05.7 +0.5
YAK                                  e                  05 59 02.2
YAK                                  ePPP      PPP      05 59 22.0
YAK                                  e                  06 00 39.5
YAK                                  eS        S        06 03 10.1  -0.6
YAK                                  e*SS      sS       06 03 30.5 +4.3
YAK                                   pmax     pmax
      comp=Z,16nm,1.0s
YAK                                   pmax     pmax
      comp=N,3.0nm,1.0s
YAK                                   pmax     pmax
      comp=E,4.0nm,1.5s
YAK                                   pmax     pmax
      comp=Z,119nm,3.6s
YAK                                   pmax     pmax
      comp=N,138nm,4.1s
YAK                                   pmax     pmax
      comp=E,115nm,4.3s
YAK                                   smax     smax
      comp=N,104nm,3.4s
YAK                                   smax     smax
      comp=E,157nm,4.4s
YAK                                   MLR      MLR
      comp=Z,1µm,28.0s
YAK                                   MLR      MLR
      comp=N,779nm,22.0s
YAK                                   MLR      MLR
      comp=E,347nm,19.0s
YAK   Yakutsk           32.75 359     P        P        05 57 55.0  -1.3
YAK                                   IAmb     IAmb     05 58 02.8
      comp=Z,14nm,0.8s
JAY   Jayapura          33.05 161     LR       LR       06 08 37.2
      comp=Z,830nm,21.3s,baz=342,slow=31
MA2   Magadan           33.23  19ceP        P        05 58 00.6   0.0
MA2                                   pmax     pmax
      comp=Z,31nm,1.7s
MA2   Magadan           33.23  19     P        P        05 58 00.6   0.0
MA2                                   IAmb     IAmb     05 58 01.6
      comp=Z,19nm,0.7s
LSA   Lhasa             34.29 281     P        P        05 58 10.5  -0.2
LSA                                   pmax     pmax
      comp=Z,52nm,1.1s
LSA   Lhasa             34.29 281     P        P        05 58 10.6  -0.2
LSA                                   pmax     pmax
      comp=Z,18nm,1.0s
LSA                                   MLR      MLR
      comp=Z,2µm,20.0s
LSA   Lhasa             34.29 281     P        P        05 58 10.6  -0.1
LSA                                   IAmb     IAmb     05 58 20.6
      comp=Z,18nm,1.0s
LSA                                   IAMs_20  IAMs_20  06 13 09.5
      comp=Z,2µm,20.0s
SAIH  SAIHA             34.47 268⇑eP        P        05 58 09.8  -2.1
SHL   Shillong          34.52 273     P        P        05 58 10.8  -1.7
SHL                                   pmax     pmax
      comp=Z,27nm,1.0s
SHL                                   MLR      MLR
      comp=Z,1µm,22.0s
SHL   Shillong          34.52 273    eP        P        05 58 09.1  -3.3
SHL   Shillong          34.52 273     P        P        05 58 10.8  -1.7
SHL                                   IAmb     IAmb     05 58 12.9
      comp=Z,27nm,1.0s
SEY   Seymchan          36.48  17     P        P        05 58 29.2 +0.7
      comp=Z,17nm,0.8s,baz=221,slow=5.6,SNR=52
SEY                                   PcP      PcP      06 00 52.4 +0.6
      comp=Z,3.2nm,0.8s,baz=168,slow=4.3,SNR=3.7
SEY   Seymchan          36.48  17⇓eP        P        05 58 28.9 +0.4
WMQ   Urumqi            37.02 305    eP        P        05 58 36.2 +2.7
WMQ                                   pmax     pmax
      comp=Z,40nm,0.7s
WMQ                                   pmax     pmax
      comp=Z,500nm,6.5s
WMQ                                   LR       LR
      comp=Z,2µm,16.9s
WMQ                                   LR       LR
      comp=Z,2µm,18.3s
WMQ                                   LR       LR
      comp=Z,4µm,20.9s
WMQ   Urumqi            37.02 305     IAMs_20  IAMs_20  06 15 03.2
      comp=Z,2µm,19.0s
IPM   Ipoh              37.38 234     P        P        05 58 35.7  -1.1
IPM                                   IAmb     IAmb     05 58 38.7
      comp=Z,24nm,1.1s
TAPN  Taplejung         37.72 278    eP        P        05 58 39.3  -0.6
      comp=Z,28nm,1.1s
ODAN  Odare             38.11 277    eP        P        05 58 42.0  -1.2
      comp=Z,49nm,0.8s
DGZ   Jazzator, Alta    38.43 314⇓eP        P        05 58 44.6  -0.9
DGZ                                   pmax     pmax
      comp=Z,3.0nm,0.9s
RAMN  Ramite            38.77 277    eP        P        05 58 47.4  -1.4
      comp=Z,16nm,0.6s
GUN   Gumba             39.17 279    eP        P        05 58 51.6  -0.6
      comp=Z,59nm,0.4s
PBA   Port Blair        39.40 252     IAMs_20  IAMs_20  06 16 36.0
      comp=Z,2µm,20.0s
ZSN   Zaisan            39.58 310    eP        P        05 58 54.4  -0.6
      baz=310
ZSN   Zaisan            39.58 310    eP        P        05 58 54.3  -0.6
PKI   Pulchoki          39.66 279    eP        P        05 58 55.1  -1.1
      comp=Z,87nm,0.9s
KKN   Kakani            39.72 279    eP        P        05 58 55.7  -0.9
      comp=Z,119nm,1.0s
DMN   Daman             39.91 279    eP        P        05 58 57.3  -0.9
      comp=Z,41nm,0.8s
PSI   Prapat            40.04 235     P        P        05 58 59.7 +0.4
      comp=Z,7.5nm,0.9s,baz=0.0,slow=14,SNR=3.3
PSI                                   LR       LR       06 14 54.9
      comp=Z,290nm,21.7s,baz=89,slow=35
PSI   Prapat            40.04 235     P        P        05 58 59.7 +0.4
PSI                                   pmax     pmax
      comp=Z,9.0nm,0.8s
PSI                                   MLR      MLR
      comp=Z,500nm,20.0s
RPSI  Rantau Prapat     40.12 235     P        P        05 58 58.6  -1.1
RPSI  Rantau Prapat     40.12 235     P        P        05 58 59.7   0.0
GKN   Gorkha            40.22 280    eP        P        05 58 59.6  -1.1
      comp=Z,18nm,0.4s
KCSI  Kotacane, Aceh    40.38 237     P        P        05 58 59.4  -2.5
      comp=Z,17nm,0.9s
MLSI  Meulaboh, Aceh    40.90 239     P        P        05 59 06.1  -0.1
      comp=Z,42nm,0.9s
DANN  Dangsing          40.90 281    eP        P        05 59 05.7  -0.8
      comp=Z,94nm,0.8s
TPTI                    40.99 237     P        P        05 59 05.9  -1.0
      comp=Z,6.3nm,1.0s
MNSI  Mandailing Nat    41.00 232     P        P        05 59 07.1 +0.1
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	comp=Z,18nm,1.0s						
KOLN	Koldanda	41.17	280	eP	P	05 59 07.6	-1.0
	comp=Z,66nm,1.0s						
MK31	Makanchi Array	41.21	309	P	P	05 59 07.1	-1.4
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	41.21	309	P	P	05 59 07.1	-1.4
MKAR	Makanchi Array	41.21	309	P	P	05 59 07.7	-0.8
	comp=Z,2.8nm,0.7s,baz=84,slow=11,SNR=37						
MKAR				ScP	ScP	06 04 53.5	-1.0
	comp=Z,3.3nm,1.1s,baz=102,slow=4.2,SNR=9.1						
MKAR				LR	LR	06 18 05.8	
	comp=Z,1µm,18.1s,baz=93,slow=39						
MKAR	Makanchi Array	41.21	309	ceP	P	05 59 07.6	-0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAA0	Zalesovo Array	41.21	320	P	P	05 59 07.0	-1.3
ZALV	Zalesovo Beam	41.21	320	P	P	05 59 06.6	-1.8
	comp=Z,7.6nm,0.8s,baz=101,slow=7.7,SNR=29						
ZALV				PcP	PcP	06 01 06.0	-0.9
	comp=Z,6.5nm,1.0s,baz=100,slow=4.5,SNR=5.0						
ZALV				LR	LR	06 18 15.7	
	comp=Z,2µm,18.7s,baz=111,slow=39						
MAKZ	Makanchi	41.43	309	P	P	05 59 09.9	-0.4
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ				MLR	MLR		
	comp=Z,1µm,21.0s						
MAKZ	Makanchi	41.43	309	P	P	05 59 09.9	-0.4
MAKZ				IAMs_20	IAMs_20	06 18 26.1	
	comp=Z,1µm,21.0s						
PYUN	Piuthan	41.62	280	eP	P	05 59 11.5	-0.8
	comp=Z,84nm,0.4s						
PMG	Port Moresby	41.63	155	P	P	05 59 12.7	+0.6
PMG				pmax	pmax		
	comp=Z,33nm,1.2s						
PMG	Port Moresby	41.63	155	P	P	05 59 12.7	+0.6
PMG				IAmb	IAmb	05 59 15.0	
	comp=Z,33nm,1.2s						
PMG	Port Moresby	41.63	155	P	P	05 59 15.0	+2.9
	comp=Z,23nm,1.2s						
MTN	Manton Dam	41.89	179	P	P	05 59 13.9	-0.3
KPJI	Karang Pucung	42.00	213	P	P	05 59 16.0	+0.8
	comp=Z,75nm,0.9s						
GSI	Gunungsitoli	42.05	235	P	P	05 59 14.3	-1.4
GSI				IAmb	IAmb	05 59 31.3	
	comp=Z,36nm,1.2s						
MDSI	Maura Dua	42.13	222	P	P	05 59 16.7	+0.4
	comp=Z,24nm,1.6s						
LEM	Lembang	42.21	215	P	P	05 59 18.9	+1.8
	comp=Z,94nm,0.8s,baz=96,slow=6.6,SNR=12						
TIXI	Tiksi	42.42	359	⇓eP	P	05 59 16.2	-1.7
TIXI				pmax	pmax		
	comp=Z,26nm,1.0s						
TIXI	Tiksi	42.42	359	P	P	05 59 15.9	-2.0
TIXI				IAMs_20	IAMs_20	06 17 12.8	
	comp=Z,994nm,21.0s						
DBJI	Dramaga	42.43	217	P	P	05 59 19.7	+1.0
	comp=Z,125nm,1.2s						
SHLS	Shalkode	42.93	303	eP	P	05 59 18.0	-4.7
	baz=303						
SHLS	Shalkode	42.93	303	eP	P	05 59 17.9	-4.7
SEM	Semipalatinsk	43.10	314	eP	P	05 59 21.9	-2.2
	comp=Z,22nm,0.9s,baz=314						
SEM				LR	LR	06 17 30.5	
	comp=Z,1µm,14.6s,baz=314						
SEM	Semipalatinsk	43.10	314	eP	P	05 59 21.8	-2.2
SEM				pmax	pmax		
	comp=Z,22nm,0.9s						
SEM				MLR	MLR		
	comp=Z,1µm,15.0s						
KPKS	Kokpek	43.50	304	eP	P	05 59 24.8	-2.5
	baz=303						
KPKS	Kokpek	43.50	304	eP	P	05 59 24.7	-2.5
SATY	Saty	43.70	303	eP	P	05 59 27.9	-1.0
	baz=303						
SATY	Saty	43.70	303	eP	P	05 59 27.9	-1.0
TDK	Taldyqorghan	43.75	306	eP	P	05 59 28.6	-0.7
	comp=Z,6.5nm,0.6s,baz=306						
TDK				LR	LR	06 17 58.9	
	comp=Z,1µm,14.1s,baz=306						
TDK	Taldyqorghan	43.75	306	eP	P	05 59 28.5	-0.7
TDK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TDK				MLR	MLR		
	comp=Z,1µm,14.0s						
KURK	Kurchatov	44.17	314	d iP	P	05 59 31.5	-0.9
KURK				pmax	pmax		
	comp=Z,44nm,1.0s						
KURK	Kurchatov	44.17	314	P	P	05 59 31.0	-1.4
KURK				IAmb	IAmb	05 59 32.7	
	comp=Z,34nm,0.8s						
KURBB	Kurchatov Arra	44.22	314	P	P	05 59 31.9	-0.8
	comp=Z,20nm,0.8s,baz=100,slow=8.6,SNR=85						
MDOK	Medeo	44.70	303	eP	P	05 59 36.3	-0.6
	baz=303						
MDOK				LR	LR	06 19 13.1	
	comp=Z,1µm,16.6s,baz=303						
MDOK	Medeo	44.70	303	eP	P	05 59 36.3	-0.6
MDOK				MLR	MLR		
	comp=Z,1µm,17.0s						
CHKK	Chushkaly	44.74	304	eP	P	05 59 35.9	-1.2
	baz=304						
CHKK	Chushkaly	44.74	304	eP	P	05 59 35.9	-1.2
TNSS	Tian-Shan	44.77	303	eP	P	05 59 37.4	-0.5
	baz=303						
TNSS	Tian-Shan	44.77	303	eP	P	05 59 37.3	-0.5
AAA	Alma-Ata	44.79	303	eP	P	05 59 37.3	-0.3
	baz=303						
AAA				LR	LR	06 19 17.3	
	comp=Z,1µm,17.7s,baz=303						
AAA	Alma-Ata	44.79	303	eP	P	05 59 37.3	-0.3
AAA				MLR	MLR		
	comp=Z,1µm,18.0s						
KUU	Kurty	45.21	304	eP	P	05 59 38.7	-2.1
	comp=Z,8.9nm,1.0s,baz=304						
KUU	Kurty	45.21	304	eP	P	05 59 38.7	-2.1
KUU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH	Kashi	45.66	298	P	P	05 59 47.5	+2.9
KSH				pP	sP	05 59 57.3	+0.3
KSH				PcP	PcP	06 01 24.9	+2.5
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,5.8s						
KSH				LR	LR		
	comp=Z,1µm,8.2s						
KSH				LR	LR		
	comp=Z,2µm,13.7s						
KSH				LR	LR		
	comp=Z,5µm,19.1s						
TKM2	Tokmak 2	45.76	303	P	P	05 59 45.6	+0.2
	SNR=13						
SMLA	Simla	45.90	286	⇑eP	P	05 59 45.5	-0.8
KBK	Karagaybulak	46.25	302	P	P	05 59 48.5	-0.8
	SNR=5.9						
CHMS	Chumysh	46.38	303	P	P	05 59 50.0	-0.1
	SNR=8.9						
USP	Ospenovka	46.56	303	P	P	05 59 50.7	-0.8
	SNR=8.8						
AAK	Ala-Archa	46.58	302	P	P	05 59 51.5	-0.4
	comp=Z,5.8nm,0.9s,baz=114,slow=1.7,SNR=13						
AAK	Ala-Archa	46.58	302	P	P	05 59 51.2	-0.6
	SNR=5.6						
AAK	Ala-Archa	46.58	302	⇑eP	P	05 59 50.5	-1.4
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	46.58	302	P	P	05 59 51.1	-0.7
AAK	Ala-Archa	46.58	302	IAMs_20	IAMs_20	06 22 33.5	
	comp=Z,2µm,20.0s						
UCH	Uchtor	46.59	302	P	P	05 59 52.1	-0.2
	SNR=20						
NRIK	Noril'sk	47.05	341	P	P	05 59 53.5	-1.4
	comp=Z,17nm,0.8s,baz=120,slow=8.8,SNR=29						
NRIK				LR	LR	06 20 55.1	
	comp=Z,652nm,19.3s,baz=130,slow=38						
NRIK	Noril'sk	47.05	341	P	P	05 59 53.1	-1.7
NRIK				IAmb	IAmb	05 59 54.0	
	comp=Z,18nm,0.8s						
NRIK				IAMs_20	IAMs_20	06 22 47.7	
	comp=Z,821nm,21.0s						
FITZ	Fitzroy Crossi	47.36	187	P	P	05 59 58.5	+0.7
	comp=Z,6.0nm,0.6s,baz=11,slow=7.0,SNR=21						
NIL	Nilore	48.64	291	P	P	06 00 06.3	-1.5
NIL				pmax	pmax		
	comp=Z,35nm,1.0s						
NIL				MLR	MLR		
	comp=Z,1µm,19.0s						
NIL	Nilore	48.64	291	P	P	06 00 06.3	-1.5
NIL	Nilore	48.64	291	IAMs_20	IAMs_20	06 22 43.6	
	comp=Z,1µm,19.0s						
WB0	Warramunga Arr	48.91	175	P	P	06 00 09.4	-0.4
WB0				IAmb	IAmb	06 00 11.6	
	comp=Z,12nm,0.8s						
HYB	Hyderabad	48.94	268	i P	P	06 00 09.0	-1.2
HYB				ePcP	sP	06 00 33.0	+10
WRAB	Tennant Creek	49.07	175	deP	P	06 00 10.7	-0.3
WRAB				pmax	pmax		
	comp=Z,29nm,1.3s						
WRAB	Tennant Creek	49.07	175	P	P	06 00 10.6	-0.3
WRAB				IAmb	IAmb	06 00 12.2	
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	49.08	175	P	P	06 00 11.3	+0.2
	comp=Z,11nm,1.0s,baz=353,slow=8.4,SNR=40						
WRA				PcP	PcP	06 01 34.7	+0.3
	comp=Z,3.4nm,0.8s,baz=353,slow=4.1,SNR=3.4						
WRA				LR	LR	06 19 42.4	
	comp=Z,153nm,21.8s,baz=5.0,slow=34						
WB2	Warramunga Arr	49.08	175	P	P	06 00 10.9	-0.1
WB2				IAmb	IAmb	06 00 12.4	
	comp=Z,22nm,1.1s						
WR7	Warramunga Arr	49.10	175	IAMs_20	IAMs_20	06 18 03.5	
	comp=Z,638nm,22.0s						
WR0	Warramunga Arr	49.11	175	P	P	06 00 11.6	+0.3
WR0				IAmb	IAmb	06 00 12.7	
	comp=Z,25nm,1.1s						
KK31	Karatay Array	49.48	303	P	P	06 00 13.4	-0.7
KK31				pmax	pmax		
	comp=Z,14nm,0.8s						
KK31	Karatay Array	49.48	303	P	P	06 00 13.3	-0.7
KK31				IAmb	IAmb	06 00 15.3	
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	49.48	303	P	P	06 00 13.5	-0.5
KKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	49.48	303	P	P	06 00 13.5	-0.5
KKAR				IAmb	IAmb	06 00 15.3	
	comp=Z,14nm,0.8s						
BRVK	Borovoye	49.56	316	deP	P	06 00 12.9	-1.6
BRVK				pmax	pmax		
	comp=Z,44nm,1.0s						
BRVK	Borovoye	49.56	316	P	P	06 00 13.3	-1.2
BRVK	Borovoye	49.56	316	IAMs_20	IAMs_20	06 23 40.5	
	comp=Z,846nm,18.0s						
IUG	Iuzhnay	49.92	302	eP	P	06 00 16.5	-1.1
	baz=302						
IUG	Iuzhnay	49.92	302	eP	P	06 00 16.4	-1.1
TAS	Tashkent	50.55	301	IAMs_20	IAMs_20	06 25 00.5	
	comp=Z,847nm,19.0s						
PSAA2	Pilbara Seismi	51.62	193	IAMs_20	IAMs_20	06 15 38.7	
	comp=Z,893nm,22.0s						
PALK	Pallekele	51.79	255	P	P	06 00 30.7	-1.1
PALK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PALK				MLR	MLR		
	comp=Z,700nm,22.0s						
PALK	Pallekele	51.79	255	P	P	06 00 30.7	-1.1
PALK	Pallekele	51.79	255	IAMs_20	IAMs_20	06 23 29.1	
	comp=Z,738nm,22.0s						
KBL	Kabul	51.88	293	P	P	06 00 31.7	-0.8
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
KBL				MLR	MLR		
	comp=Z,700nm,20.0s						
KBL	Kabul	51.88	293	P	P	06 00 31.6	-0.8
KBL				IAMs_20	IAMs_20	06 25 35.6	
	comp=Z,746nm,20.0s						
AS31	Alice Springs	52.74	176	P	P	06 00 38.0	-0.6
ASAR	Alice Springs	52.74	176	P	P	06 00 39.1	+0.4
	comp=Z,4.0nm,0.6s,baz=9.2,slow=13,SNR=74						
ASAR				PcP	PcP	06 01 49.0	+0.9
	comp=Z,4.5nm,0.8s,baz=9.3,slow=4.8,SNR=6.0						
ASAR				LR	LR	06 21 34.7	
	comp=Z,202nm,21.6s,baz=357,slow=34						
ANM	Nome	52.80	29	P	P	06 00 39.3	+0.7
ANM				pmax	pmax		
	comp=Z,18nm,0.9s						
ANM	Nome	52.80	29	P	P	06 00 39.3	+0.7
ANM				IAmb	IAmb	06 00 40.9	
	comp=Z,18nm,0.9s						
RDOG	Red Dog Mine	54.38	25	P	P	06 00 50.6	+0.5
RDOG				IAMs_20	IAMs_20	06 23 09.9	
	comp=Z,643nm,21.0s						
SVE	Sverdlovsk	55.21	321	eP	P	06 00 55.6	-0.7
SVE				pmax	pmax		
	comp=Z,32nm,0.9s						
SVE				MLR	MLR		
	comp=Z,4µm,17.0s						
ABKAR	Akbulak array	56.18	312	P	P	06 01 02.9	-0.5
ARU	Arti	56.37	321	d iP	P	06 01 03.2	-1.4
ARU						06 01 57.3	
ARU						06 03 04.8	
ARU				S	S	06 08 53.9	+1.1
ARU				SS	SS	06 12 37.5	-2.1
ARU				pmax	pmax		
	comp=Z,44nm,0.9s						
ARU				MLR	MLR		
	comp=Z,3µm,16.0s						
A21K	Barrow	57.01	22	P	P	06 01 09.5	+0.5
	baz=264,SNR=9.0						
A21K	Barrow	57.01	22	P	P	06 01 09.7	+0.7
A21K				IAmb	IAmb	06 01 21.1	
	comp=Z,26nm,1.1s						
HRA	Herat	57.37	294	IAMs_20	IAMs_20	06 29 52.0	
	comp=Z,981nm,18.0s						
PPLA	Purkeypile	58.55	32	P	P	06 01 20.6	+0.5
PPLA				IAmb	IAmb	06 01 22.3	
	comp=Z,16nm,0.8s						
SKT	Skwentna	58.92	33	P	P	06 01 22.5	0.0
SKT				IAmb	IAmb	06 01 24.6	
	comp=Z,12nm,0.8s						
BPAW	Bear Paw Mtn.	59.01	30	P	P	06 01 23.6	+0.5
BPAW				IAmb	IAmb	06 01 26.1	
	comp=Z,19nm,1.0s						
MLY	Manley	59.06	29	P	P	06 01 24.8	+1.3
	baz=273,SNR=14						
KTH	Kantishna Hill	59.08	31	P	P	06 01 24.5	+0.9
KTH				IAmb	IAmb	06 01 25.6	
	comp=Z,18nm,1.2s						
COLD	Coldfoot	59.17	26	P	P	06 01 25.3	+1.2
	baz=273						
COLD	Coldfoot	59.17	26	P	P	06 01 25.3	+1.2
SUA	Susitna One	59.34	33	P	P	06 01 25.4	-0.1
TOLK	Toolik Lake Re	59.35	25	P	P	06 01 25.8	+0.4
	baz=272						
TRF	Thorofare Moun	59.37	31	P	P	06 01 26.8	+1.0
TRF				IAmb	IAmb	06 01 32.6	
	comp=Z,11nm,1.0s						
I23K	Minto, Yukon-K	59.64	29	P	P	06 01 28.6	+1.2
	baz=275,SNR=7.1						
GEYT	Alibeck	59.67	299	P	P	06 01 28.5	+0.4
	comp=Z,1.5nm,0.6s,baz=68,slow=5.0,SNR=3.1						
GEYT				LR	LR	06 31 33.8	
	comp=Z,762nm,18.1s,baz=40,slow=40						
GYA0B	ALIBECK ARRAY	59.67	299	IAMs_20	IAMs_20	06 31 14.8	
	comp=Z,643nm,18.0s						
BWN	Browne	59.67	30	IAMs_20	IAMs_20	06 27 15.1	
	comp=Z,620nm,20.0s						
FORT	Forrest	59.79	183	P	P	06 01 28.9	+0.2
NEA2	Nenana	59.81	29	P	P	06 01 29.6	+1.1
	baz=275,SNR=13						
RC01	Rabbit Creek A	59.86	34	P	P	06 01 28.9	-0.1
	baz=277						
O22K	Cooper Landing	59.94	34	P	P	06 01 29.4	0.0
	baz=277						
MCK	McKinley	59.95	30	P	P	06 01 30.1	+0.5
	baz=276,SNR=14						
RND	Reindeer	60.02	31	P	P	06 01 30.7	+0.6
RND				pmax	pmax		
	comp=Z,40nm,0.8s						
RND	Reindeer	60.02	31	P	P	06 01 30.7	+0.6
SEW	Seward	60.12	35	P	P	06 01 30.8	+0.1
MDM	Murphy Dome	60.13	29	P	P	06 01 31.7	+0.9
GHO	Glory Hole Cre	60.17	33	P	P	06 01 30.6	-0.5
GHO				IAmb	IAmb	06 01 34.4	
	comp=Z,24nm,1.1s						
GHO				IAMs_20	IAMs_20	06 31 29.5	
	comp=Z,559nm,20.0s						
TCOL	CIGO, UAF Yank	60.30	29	P	P	06 01 33.1	+1.2
	baz=276						
CCB	Clear Creek Bu	60.34	29	P	P	06 01 32.5	+0.3
KNK	Knik Glacier	60.43	33	P	P	06 01 33.9	+0.9
KNK				IAMs_20	IAMs_20	06 26 48.5	
	comp=Z,448nm,20.0s						
SML	Sawmill	60.44	33	P	P	06 01 33.5	+0.4
SML				IAmb	IAmb	06 01 34.3	
	comp=Z,17nm,0.8s						
POKR	Poker Plat Res	60.45	29	P	P	06 01 33.9	+0.9
	baz=276,SNR=19						
POKR	Poker Plat Res	60.45	29	P	P	06 01 34.1	+1.2
IL31		60.72	29	P	P	06 01 34.9	+0.1
IL31				IAmb	IAmb	06 01 37.8	
	comp=Z,8.2nm,0.8s						
ILAR	Eielson Array	60.72	29	P	P	06 01 34.3	-0.5
	comp=Z,7.1nm,0.8s,baz=273,slow=5.5,SNR=46						
ILAR				LR	LR	06 28 46.4	
	comp=Z,295nm,21.2s,baz=294,slow=37						
HDA	Harding Lake	60.74	30	P	P	06 01 34.9	0.0
	baz=277,SNR=14						
SCM	Sheep Creek Mo	60.91	33	P	P	06 01 37.1	+0.8
SCM				pmax	pmax		
	comp=Z,51nm,1.1s						
SCM	Sheep Creek Mo	60.91	33	P	P	06 01 37.1	+0.8
GLI	Glacier Island	61.16	34	P	P	06 01 38.4	+0.5
M24K	Tolsona, Glenn	61.41	32	P	P	06 01 40.3	+0.7
	baz=279						
FID	Port Fidalgo	61.48	34	P	P	06 01 39.9	-0.1
DZM	Mont Dzumac	61.60	142	eP	P	06 01 42.5	+1.1
	comp=Z,62nm,1.1s						
DZM				eS	S	06 10 03.5	+2.0
	comp=Z,297nm,25.4s						
DZM				eLR	LR	06 20 01.7	
	comp=Z,496nm,25.2s						
STKA	Stephens Creek	61.71	169	P	P	06 01 41.8	0.0
	comp=Z,6.1nm,0.8s,baz=336,slow=6.5,SNR=12						
STKA				LR	LR	06 28 31.3	
	comp=Z,200nm,21.4s,baz=5.2,slow=36						
SCRK	Sand Creek	62.09	30	P	P	06 01 44.3	0.0
	baz=280,SNR=15						
N25K	Chitina, Valde	62.23	33	P	P	06 01 46.3	+1.1
	baz=281						
L26K	Log Cabin Wild	62.54	31	P	P	06 01 48.2	+1.1
	baz=281,SNR=12						
K27K	Chicken	62.90	30	P	P	06 01 50.6	+1.1
	baz=282						
MCARA	McCarthy VSAT	63.02	33	P	P	06 01 51.5	+1.2
CRQM	Cirque	63.09	33	P	P	06 01 51.7	+0.6
NWAO	Narrogin (SRO)	63.18	193	P	P	06 01 51.0	-0.6
	comp=Z,16nm,0.9s,baz=37,slow=7.4,SNR=6.6						
DAWY	Dawson	64.05	29	P	P	06 01 58.0	+0.9
DAWY				IAmb	IAmb	06 01 59.2	
	comp=Z,9.0nm,0.9s						
PCA	Pinnacle	64.64	34	P	P	06 02 01.9	+0.9
TMCR	Tamitsa	65.17	331	eP	P	06 02 07.3	+3.0
TMCR				pmax	pmax		
	comp=Z,17nm,0.7s						
INK	Inuvik	65.23	24	P	P	06 02 05.2	+0.6
	comp=Z,6.2nm,0.8s,baz=299,slow=6.5,SNR=18						
INK	Inuvik	65.23	24	P	P	06 02 05.2	+0.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	65.23	24	P	P	06 02 05.2	+0.6
UOSS	Minazif	65.39	286	IAMs_20	IAMs_20	06 34 01.9	
	comp=Z,387nm,20.0s						
KLMR	Klimovskoe	65.43	327	eP	P	06 02 03.0	-3.1
KLMR				pmax	pmax		
	comp=Z,29nm,1.6s						
KLMR	Klimovskoe	65.43	327	eP	P	06 02 03.0	-3.1
KLMR				eP	P	06 02 03.0	-3.1
KLMR				eP	P	06 02 03.0	-3.1
KLMR				AMP		06 02 09.9	
	comp=Z,29nm,1.6s						
KLMR				LQ	LQ	06 26 31.9	
KLMR				LQ	LQ	06 26 31.9	
KLMR				LR	LR	06 28 34.7	
APA	Apatity	65.98	335	⇑iP	P	06 02 21.3	+12
APA				pmax	pmax		
	comp=Z,11nm,0.9s						
APA				MLR	MLR		
	comp=Z,900nm,21.0s						
AKT	Akhty	66.31	305	eP	P	06 02 10.7	-1.6
AKT				e		06 02 39.8	
AKT				e		06 04 35.8	
AKT				pmax	pmax		
	comp=Z,27nm,0.8s						
WHY	Whitehorse	67.03	32	P	P	06 02 17.4	+0.9
WHY				IAmb	IAmb	06 02 18.8	
	comp=Z,16nm,0.8s						
VRH	Novokhopyorsk	67.14	317	eP	P	06 02 15.2	-2.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	67.96	339	P	P	06 02 21.6	-0.5
	comp=Z,6.5nm,1.1s,baz=64,slow=2.8,SNR=4.3						
ARCES				LR	LR	06 37 14.3	
	comp=Z,1µm,19.0s,baz=50,slow=40						
MOS	Moscow	67.97	322	eP	P	06 02 20.8	-1.5
C36M	Paulatuk	68.07	22	P	P	06 02 23.1	+0.3
	baz=295,SNR=15						
C36M	Paulatuk	68.07	22	P	P	06 02 23.3	+0.6
C36M				IAmb	IAmb	06 02 24.0	
	comp=Z,17nm,0.9s						
LPSR	Galich'ya Gora	68.31	319	eP	P	06 02 22.5	-2.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
NCK	Nalchik	68.52	309	⇓eP	P	06 02 25.5	-0.6
NCK				pmax	pmax		
	comp=Z,29nm,1.2s						
ZEI	Tsey	68.55	308	eP	P	06 02 25.3	-1.3
ZEI				pmax	pmax		
	comp=Z,14nm,0.9s						
VSR	Storozhevoye	68.66	318	eP	P	06 02 24.7	-2.1
VSR				pmax	pmax		
	comp=Z,20nm,1.2s						
VORD	Divnogorie	68.67	317	eP	P	06 02 25.0	-1.8
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OBN	Obninsk	68.75	322	eP	P	06 02 25.8	-1.4
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	Garni	68.89	305	⇓eP	P	06 02 29.3	+0.6
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
KBZ	Khabaz	68.91	309	P	P	06 02 27.9	-0.6
	comp=Z,18nm,1.1s,baz=65,slow=3.4,SNR=13						
KBZ				LR	LR	06 38 36.5	
	comp=Z,625nm,18.5s,baz=64,slow=41						
KIV	Kislovodsk	68.97	309	⇑iP	P	06 02 30.0	+1.0
KIV				i		06 02 37.5	
KIV				i		06 02 51.9	
KIV				eS	S	06 11 21.5	-10
KIV				pmax	pmax		
	comp=Z,54nm,1.7s						
KIV				MLR	MLR		
	comp=Z,455nm,19.0s						
EUNU	Eureka	69.01	6	P	P	06 02 28.5	-0.1
EUNU				IAmb	IAmb	06 02 29.8	
	comp=Z,10.0nm,0.8s						
DLBC	Dease Lake	70.14	33	P	P	06 02 37.5	+1.6
DLBC				IAmb	IAmb	06 02 48.1	
	comp=Z,25nm,1.3s						
GEVA	Gevas	70.78	304	IAMs_20	IAMs_20	06 39 14.0	
	comp=Z,335nm,18.0s						
SOC	Sochi	71.11	310	eP	P	06 02 40.2	-1.8
SOC				e		06 05 15.5	
SOC				ePPP	PPP	06 06 59.7	
SOC				eS	S	06 11 55.7	-0.6
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
FINES	FINESS Array B	71.27	331	P	P	06 02 40.9	-1.7
	comp=Z,2.0nm,0.5s,baz=59,slow=5.3,SNR=24						
FINES				LR	LR	06 37 08.5	
	comp=Z,867nm,20.8s,baz=56,slow=38						
FINES	FINESS Array B	71.27	331	ceP	P	06 02 41.2	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KOPT	Kop Dagi	71.96	306	IAMs_20	IAMs_20	06 38 36.0	
	comp=Z,642nm,18.0s						
RES	Resolute Bay	72.14	12	P	P	06 02 47.9	+0.3
RES				pmax	pmax		
	comp=Z,28nm,0.9s						
RES	Resolute Bay	72.14	12	P	P	06 02 47.9	+0.3
DAG	Danmarks Havn	72.50	353	i P	P	06 02 48.0	-1.7
	comp=Z,9.4nm,0.9s						
DAG	Danmarks Havn	72.50	353	i P	P	06 02 48.1	-1.7
DAG				IAmb	IAmb	06 02 54.5	
	comp=Z,9.4nm,0.9s						
MNK	Minsk	73.58	324	i P	P	06 02 52.3	-4.3
	comp=E,3.0nm,1.0s						

MNK				*i* P	**P**	**06 02 52.3**	**-4.3**
	comp=N,13nm,1.0s						
MNK				*i* P	**P**	**06 02 52.3**	**-4.3**
	comp=Z,9.0nm,0.8s						
MNK				*i* PcP	**pwP**	**06 03 07.8**	**-1.0**
MNK				*i* PP	**PP**	**06 05 36.4**	**-4.0**
MNK				*i* PPP	PPP	06 07 26.3	
MNK				*i* S	**SKiKP**	**06 12 19.1**	**-5.0**
MNK				*i* SS	**SS**	**06 17 05.2**	**-1.6**
MNK				*i* SSS	SSS	06 20 26.8	
MNK				*i* LQ	LQ	06 30 08.6	
MNK				*i* LR	LR	06 35 57.3	
MNK				*i* LRM	MLR	06 38 22.5	
	comp=E,147nm,16.6s						
MNK				*i* LRM	MLR	06 38 24.7	
	comp=Z,1µm,16.6s						
MNK				*i* LRM	MLR	06 38 29.7	
	comp=N,300nm,16.6s						
TULEG	**Thule**	**73.72**	**5**	*i* P	**P**	**06 02 57.0**	**0.0**
TULEG				IAmb	IAmb	06 02 58.1	
	comp=Z,21nm,1.1s						
NACGM	**Naroch**	**73.96**	**324**	*i* P	**P**	**06 02 57.3**	**-1.4**
NACGM				*i* P	**P**	**06 02 57.3**	**-1.4**
NACGM				*i* P	**P**	**06 02 57.3**	**-1.4**
NACGM				*i* Pb	**pP**	**06 03 06.5**	**-1.9**
NACGM				*i* PP	**PP**	**06 05 43.0**	**-0.6**
NACGM				*i* PPP	PPP	06 07 30.1	
NACGM				*i* S	**S**	**06 12 31.7**	**+3.1**
NACGM				*i* PS	PnS	06 14 00.0	+56
NACGM				*i* SS	**SS**	**06 17 20.1**	**+7.6**
NACGM				*i* SSS	SSS	06 21 00.1	
NACGM				*i* LQ	LQ	06 30 54.0	
NACGM				*i* LQ	LQ	06 31 12.2	
NACGM				*i* LR	LR	06 35 33.9	
AKASG	**Malin Array Be**	**74.61**	**320**	P	**P**	**06 03 00.8**	**-1.8**
	comp=Z,3.5nm,0.5s,baz=56,slow=6.4,SNR=19						
AKASG				LR	LR	06 38 56.8	
	comp=Z,2µm,18.1s,baz=50,slow=38						
AKBB	**Malin Array Si**	**74.61**	**320**	P	**P**	**06 03 01.6**	**-1.0**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKBB	**Malin Array Si**	**74.61**	**320**	P	**P**	**06 03 01.6**	**-1.0**
YKA	**Yellowknife Ar**	**74.84**	**26**	P	**P**	**06 03 04.1**	**+0.4**
	comp=Z,6.4nm,0.8s,baz=308,slow=5.3,SNR=79						
YKA				LR	LR	06 36 35.1	
	comp=Z,133nm,21.9s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**74.84**	**26**	*ce*P	**P**	**06 03 04.0**	**+0.3**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBG	**Daneborg**	**74.89**	**352**	*i* P	**P**	**06 03 02.4**	**-1.4**
GAZ	**Gaziantep**	**75.48**	**305**	IAMs_20	IAMs_20	06 40 42.3	
	comp=Z,469nm,20.0s						
SORM	**Soroca**	**76.32**	**318**	⇑P	**P**	**06 03 11.7**	**-0.7**
SORM	**Soroca**	**76.32**	**318**	⇑P	**P**	**06 03 11.7**	**-0.7**
BRTR	**Keskin Array B**	**76.86**	**308**	P	**P**	**06 03 15.8**	**-0.1**
	comp=Z,10.0nm,0.8s,baz=96,slow=4.9,SNR=48						
BRTR				LR	LR	06 44 14.7	
	comp=Z,181nm,18.1s,baz=66,slow=41						
TLCR		**77.45**	**315**	⇑P	**P**	**06 03 18.7**	**-0.2**
TLCR		**77.45**	**315**	⇑P	**P**	**06 03 18.7**	**-0.2**
NB2	**NORSAR Subarra**	**77.52**	**334**	P	**P**	**06 03 17.0**	**-2.0**
	comp=Z,21nm,1.1s,baz=50,slow=5.9						
NB2	**NORSAR Subarra**	**77.52**	**334**	P	**P**	**06 03 17.0**	**-2.0**
	baz=50,slow=5.9						
NOA	**NORSAR Array B**	**77.52**	**334**	P	**P**	**06 03 17.2**	**-1.9**
	comp=Z,5.2nm,1.0s,baz=50,slow=5.5,SNR=5.4						
NOA				LR	LR	06 43 13.8	
	comp=Z,612nm,18.8s,baz=40,slow=40						
TPGR	**Topolog**	**77.86**	**315**	⇑P	**P**	**06 03 21.6**	**+0.3**
CFR	**Carcaliu**	**77.88**	**315**	⇑P	**P**	**06 03 21.0**	**-0.3**
CFR	**Carcaliu**	**77.88**	**315**	⇑P	**P**	**06 03 21.0**	**-0.3**
TIRR	**Tirgusor**	**78.06**	**314**	⇑P	**P**	**06 03 22.3**	**0.0**
TIRR	**Tirgusor**	**78.06**	**314**	⇑P	**P**	**06 03 22.3**	**0.0**
TESR	**Tescani**	**78.12**	**317**	⇑P	**P**	**06 03 22.6**	**0.0**
SUMG	**Summit**	**78.13**	**357**	P	**P**	**06 03 22.5**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,29nm,1.2s						
SUMG	**Summit**	**78.13**	**357**	P	**P**	**06 03 22.5**	**-0.2**
SUMG				IAmb	IAmb	06 03 31.2	
	comp=Z,29nm,1.2s						
SUMG	**Summit**	**78.13**	**357**	*i* P	**P**	**06 03 22.1**	**-0.6**
	comp=Z,33nm,0.8s						
SUMG	**Summit**	**78.13**	**357**	*i* P	**P**	**06 03 22.1**	**-0.6**
SUMG				IAmb	IAmb	06 03 27.4	
	comp=Z,33nm,0.8s						
BIZ	**Bicaz**	**78.23**	**317**	⇑P	**P**	**06 03 23.2**	**-0.1**
HARR	**Harsova**	**78.25**	**315**	⇓P	**P**	**06 03 23.7**	**+0.4**
HARR	**Harsova**	**78.25**	**315**	⇓P	**P**	**06 03 23.7**	**+0.4**
VRI	**Vrincioaia**	**78.40**	**316**	⇑P	**P**	**06 03 25.4**	**+1.2**
VRI	**Vrincioaia**	**78.40**	**316**	⇑P	**P**	**06 03 25.4**	**+1.2**
BUR08	**Bucovina Ar. S**	**78.40**	**318**	P	**P**	**06 03 23.9**	**-0.4**
BURAR	**Bucovina Array**	**78.41**	**318**	⇑P	**P**	**06 03 24.7**	**+0.4**
BURAR	**Bucovina Array**	**78.41**	**318**	⇑P	**P**	**06 03 24.7**	**+0.4**
PLOR	**Plostina**	**78.45**	**316**	⇑P	**P**	**06 03 25.8**	**+1.3**
PLOR	**Plostina**	**78.45**	**316**	⇑P	**P**	**06 03 25.8**	**+1.3**
BISRR	**Bisoca**	**78.57**	**316**	⇓P	**P**	**06 03 26.3**	**+1.1**
ICOR	**Ion Corvin**	**78.61**	**314**	⇑P	**P**	**06 03 26.2**	**+0.8**
D03D	**Eldon**	**78.90**	**42**	P	**P**	**06 03 28.4**	**+1.5**
	baz=301						
MLR	**Muntele Rosu**	**79.06**	**316**	⇑P	**P**	**06 03 27.0**	**-1.0**
MLR	**Muntele Rosu**	**79.06**	**316**	P	**P**	**06 03 27.3**	**-0.7**
MLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MLR	**Muntele Rosu**	**79.06**	**316**	P	**P**	**06 03 27.2**	**-0.7**
B05A	**Bryant**	**79.09**	**41**	P	**P**	**06 03 28.7**	**+0.8**
	baz=302						
DOPR	**Dopca**	**79.15**	**317**	⇑P	**P**	**06 03 28.7**	**+0.4**
SECR		**79.22**	**316**	⇑P	**P**	**06 03 29.6**	**+0.9**
CSS	**Mathiatis**	**79.28**	**304**	IAMs_20	IAMs_20	06 43 17.0	
	comp=Z,539nm,21.0s						
KOLS	**Kolonicke sedl**	**79.39**	**320**	*e*P	**P**	**06 03 30.3**	**+0.7**
KOLS	**Kolonicke sedl**	**79.39**	**320**	*e*P	**P**	**06 03 30.3**	**+0.7**
UZH	**Uzhgorod**	**79.54**	**320**	*e*P	**P**	**06 03 32.3**	**+1.9**
UZH				*e*		06 03 36.4	
UZH				*e*		06 03 42.8	
E04D	**Cinebar**	**79.72**	**42**	P	**P**	**06 03 32.2**	**+0.8**
	baz=302						
DAMY	**Dhamar**	**79.83**	**281**	IAMs_20	IAMs_20	06 42 10.8	
	comp=Z,354nm,20.0s						
CRVS	**Cervenica-Dubn**	**79.86**	**321**	*e*P	**P**	**06 03 32.6**	**+0.5**
CRVS	**Cervenica-Dubn**	**79.86**	**321**	*e*P	**P**	**06 03 32.6**	**+0.5**
ISP	**Isparta**	**79.90**	**308**	IAMs_20	IAMs_20	06 44 42.2	
	comp=Z,410nm,19.0s						
ARR	**Arges**	**79.92**	**317**	⇑P	**P**	**06 03 32.9**	**+0.4**
OJC	**Ojcow**	**80.03**	**322**	P	**P**	**06 03 32.3**	**-0.7**
OJC				pmax	pmax		
	comp=Z,15nm,0.9s						
OJC	**Ojcow**	**80.03**	**322**	P	**P**	**06 03 32.3**	**-0.7**
OJC				IAmb	IAmb	06 03 39.6	
	comp=Z,15nm,0.9s						
MXZ	**Matakaoa Point**	**80.08**	**143**	IAMs_20	IAMs_20	06 33 06.7	
	comp=Z,417nm,19.0s						
DRGR		**80.30**	**318**	⇑P	**P**	**06 03 34.7**	**+0.1**
DRGR		**80.30**	**318**	⇑P	**P**	**06 03 34.7**	**+0.1**
LOT	**Lotru**	**80.39**	**317**	⇑P	**P**	**06 03 35.1**	**-0.1**
LTY	**Liberty**	**80.44**	**41**	P	**P**	**06 03 35.2**	**-0.2**
B08A	**Colville Reser**	**80.59**	**39**	P	**P**	**06 03 36.8**	**+0.7**
B08A				IAmb	IAmb	06 03 38.2	
	comp=Z,12nm,0.8s						
J01E	**Myrtle Point**	**80.67**	**46**	P	**P**	**06 03 38.6**	**+2.0**
	baz=302						
I03D	**Drain, OR**	**80.75**	**45**	P	**P**	**06 03 38.7**	**+1.7**
	baz=302						
LANS	**Liptovska Anna**	**80.81**	**322**	*e*P	**P**	**06 03 39.4**	**+2.1**
LANS	**Liptovska Anna**	**80.81**	**322**	*e*P	**P**	**06 03 39.4**	**+2.1**
GZR	**Gura Zlata**	**81.01**	**317**	⇑P	**P**	**06 03 38.3**	**-0.2**
GZR	**Gura Zlata**	**81.01**	**317**	⇑P	**P**	**06 03 38.3**	**-0.2**
K02D	**Willamette Mer**	**81.08**	**46**	P	**P**	**06 03 40.2**	**+1.3**
	baz=302,SNR=6.5						
OKC	**Ostrava-Krasne**	**81.13**	**323**	*e*P	**P**	**06 03 43.0**	**+4.1**
OKC				MLR	MLR		
	comp=Z,2µm,13.6s						
G05D	**Wamic, OR**	**81.16**	**43**	P	**P**	**06 03 40.5**	**+1.3**
	baz=303						
PSZ	**Piszkesteto**	**81.27**	**320**	*e*P	**P**	**06 03 36.9**	**-2.9**
I04A	**Tendick Farm,**	**81.28**	**45**	P	**P**	**06 03 40.8**	**+0.9**
	baz=302,SNR=5.2						
L02E	**Cave Junction**	**81.40**	**46**	P	**P**	**06 03 42.2**	**+1.7**
	baz=302,SNR=7.2						
MORC	**Moravsky Berou**	**81.48**	**323**	⇑P	**P**	**06 03 39.6**	**-1.3**
MORC	**Moravsky Berou**	**81.48**	**323**	⇑P	**P**	**06 03 39.6**	**-1.3**
HERR	**Herculane**	**81.50**	**317**	⇑P	**P**	**06 03 41.5**	**+0.5**
VYHS	**Vyhne**	**81.53**	**321**	*e*P	**P**	**06 03 40.9**	**-0.2**
VYHS	**Vyhne**	**81.53**	**321**	*e*P	**P**	**06 03 40.9**	**-0.2**
D08A	**Wollman Farm,**	**81.55**	**40**	P	**P**	**06 03 42.5**	**+1.3**
D08A				IAmb	IAmb	06 03 43.4	
	comp=Z,16nm,0.8s						
BZS	**Buzias**	**81.57**	**318**	⇑P	**P**	**06 03 41.3**	**-0.1**
BZS	**Buzias**	**81.57**	**318**	⇑P	**P**	**06 03 41.3**	**-0.1**
I05D	**Terrebonne, OR**	**81.64**	**44**	P	**P**	**06 03 43.0**	**+1.2**
	baz=303						
ICESG	**Greenland Ices**	**81.65**	**357**	*i* P	**P**	**06 03 41.8**	**+0.1**
ICESG				IAmb	IAmb	06 03 42.7	
	comp=Z,15nm,0.9s						
OSTC	**Ostas**	**81.71**	**324**	AMS	AMS	06 43 20.0	
	comp=Z,2µm,18.1s						
CHVC	**Chvalec**	**81.77**	**324**	AMS	AMS	06 43 20.0	
	comp=Z,2µm,19.4s						
DPC	**Dobruska-Polom**	**81.78**	**324**	*e*P	**P**	**06 03 43.0**	**+0.6**
DPC				AMS	AMS	06 43 00.0	
	comp=Z,2µm,13.6s						
JCC	**Jacoby Creek,**	**81.83**	**48**	P	**P**	**06 03 44.3**	**+1.5**
JCC				IAmb	IAmb	06 03 46.2	
	comp=Z,26nm,1.1s						
UPC	**Upice**	**81.84**	**324**	*e*P	**P**	**06 03 45.0**	**+2.3**
UPC				MLR	MLR		
	comp=Z,2µm,20.2s						
UPC	**Upice**	**81.84**	**324**	*e*P	**P**	**06 03 45.0**	**+2.3**
UPC				AMS	AMS	06 43 00.0	
	comp=Z,2µm,20.2s						
MDVR	**Moldovita**	**81.98**	**317**	⇑P	**P**	**06 03 43.3**	**-0.3**
L04D	**Klamath Falls**	**82.19**	**46**	P	**P**	**06 03 46.0**	**+1.1**
	baz=303,SNR=11						
VTS	**Vitosha**	**82.23**	**315**	⇑P	**P**	**06 03 44.7**	**-0.4**
VTS	**Vitosha**	**82.23**	**315**	⇑P	**P**	**06 03 44.7**	**-0.4**
VRAC	**Vranov**	**82.26**	**323**	⇑P	**P**	**06 03 44.8**	**-0.1**
VRAC	**Vranov**	**82.26**	**323**	*e*P	**P**	**06 03 44.0**	**-0.9**
VRAC	**Vranov**	**82.26**	**323**	⇑P	**P**	**06 03 44.8**	**-0.1**
J05D	**Fort Rock, OR**	**82.27**	**44**	P	**P**	**06 03 46.8**	**+1.5**
	baz=303,SNR=16						
SMOL	**Smolenice**	**82.28**	**322**	*e*P	**P**	**06 03 46.1**	**+1.1**
SMOL	**Smolenice**	**82.28**	**322**	*e*P	**P**	**06 03 46.1**	**+1.1**
M02C	**Callahan**	**82.28**	**47**	P	**P**	**06 03 46.5**	**+1.3**
	baz=302,SNR=14						
E09A	**Wood Farm, Sta**	**82.30**	**41**	P	**P**	**06 03 46.1**	**+1.0**
E09A				IAmb	IAmb	06 03 47.2	
	comp=Z,13nm,0.9s						
K04D	**Chiloquin, OR**	**82.31**	**45**	P	**P**	**06 03 46.9**	**+1.5**
	baz=303,SNR=7.1						
MODS	**Modra-Piesok**	**82.44**	**322**	*e*P	**P**	**06 03 46.9**	**+1.0**
MODS	**Modra-Piesok**	**82.44**	**322**	*e*P	**P**	**06 03 46.9**	**+1.0**
KRUC	**Moravsky**	**82.51**	**323**	*e*P	**P**	**06 03 45.4**	**-0.8**
PVCC	**Panska Ves**	**82.56**	**325**	AMS	AMS	06 44 40.0	
	comp=Z,2µm,15.7s						
N02D	**Trinity Center**	**82.60**	**47**	P	**P**	**06 03 48.2**	**+1.3**
	baz=303,SNR=8.5						
M04C	**Macdoel**	**82.72**	**46**	P	**P**	**06 03 48.5**	**+0.9**
	baz=303,SNR=16						
TREC	**Trest**	**82.84**	**323**	AMS	AMS	06 44 50.0	
	comp=Z,1µm,18.3s						
CLL	**Collm**	**82.86**	**326**	*e*P	**P**	**06 03 47.0**	**-0.9**
	comp=Z,14nm,1.1s						
CLL				*i* sP	**pwP**	**06 03 59.4**	**-0.8**
CLL				*e*PP	**PP**	**06 06 58.0**	**+0.2**
CLL				Lm	MLR	06 44 00.0	
	comp=N,2µm,19.2s						
CLL				Lm	MLR	06 44 00.0	
	comp=E,1µm,20.3s						
I07A	**Izee**	**82.88**	**43**	P	**P**	**06 03 49.0**	**+0.7**
PRU	**Pruhonice**	**82.91**	**324**	*e*P	P	06 03 52.9	+4.7
PRU				*e*		06 03 58.2	
PRU				MLR	MLR		
	comp=Z,2µm,18.9s						
PRU	**Pruhonice**	**82.91**	**324**	*e*P	**P**	**06 03 50.7**	**+2.5**
PRU				AMS	AMS	06 43 50.0	
	comp=Z,2µm,15.3s						
PRA	**Prague**	**82.91**	**324**	AMS	AMS	06 45 10.0	
	comp=Z,1µm,16.8s						
WDC	**Whiskeytown Da**	**82.92**	**47**	P	**P**	**06 03 49.4**	**+0.9**
WDC				pmax	pmax		
	comp=Z,11nm,1.0s						
WDC	**Whiskeytown Da**	**82.92**	**47**	P	**P**	**06 03 49.4**	**+0.9**
WDC				IAmb	IAmb	06 03 50.3	
	comp=Z,11nm,1.0s						
O02D	**Mt. Diablo Mer**	**82.98**	**48**	P	**P**	**06 03 50.2**	**+1.3**
	baz=303,SNR=11						
MPLH	**Magyarpolny**	**83.01**	**321**	*e*P	**P**	**06 03 48.6**	**-0.3**
WALA	**Waterton Lakes**	**83.11**	**37**	P	**P**	**06 03 50.5**	**+1.0**
WALA				IAmb	IAmb	06 03 51.5	
	comp=Z,12nm,0.9s						
F10A	**Beach Ranch, E**	**83.13**	**41**	P	**P**	**06 03 50.0**	**+0.4**
F10A				IAmb	IAmb	06 04 02.7	
	comp=Z,15nm,1.0s						
DIVS	**Divibare**	**83.38**	**317**	IAMs_20	IAMs_20	06 44 15.0	
	comp=Z,856nm,20.0s						
KARP	**Karpathos**	**83.38**	**307**	IAMs_20	IAMs_20	06 46 49.3	
	comp=Z,531nm,18.0s						
CONA	**Conrad Observa**	**83.47**	**322**	*e*P	**P**	**06 03 52.1**	**+0.8**
	comp=Z,3.2nm,0.6s						
O03E	**Paynes Creek**	**83.55**	**47**	P	**P**	**06 03 51.8**	**-0.1**
	baz=303						
BMO	**Blue Mountains**	**83.73**	**42**	P	**P**	**06 03 53.3**	**+0.6**
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BMO	**Blue Mountains**	**83.73**	**42**	P	**P**	**06 03 53.3**	**+0.6**
BMO				IAmb	IAmb	06 03 54.6	
	comp=Z,8.0nm,0.8s						
KHC	**Kasperske Hory**	**83.93**	**324**	⇑*e*P	**P**	**06 03 53.2**	**-0.4**
KHC				pmax	pmax		
	comp=Z,13nm,1.1s						
KHC	**Kasperske Hory**	**83.93**	**324**	*e*P	**P**	**06 03 52.9**	**-0.7**
KHC				*e*x	x	06 03 58.2	
KHC				AMS	AMS	06 44 10.0	
	comp=Z,2µm,18.9s						
SFJD	**Kangerlussuaq**	**84.01**	**1**	*i* P	**P**	**06 03 52.3**	**-1.2**
SFJD	**Kangerlussuaq**	**84.01**	**1**	*i* P	**P**	**06 03 52.3**	**-1.2**
SFJD	**Kangerlussuaq**	**84.01**	**1**	*i* P	**P**	**06 03 52.3**	**-1.2**
GERES	**GERESS Array B**	**84.05**	**324**	P	**P**	**06 03 53.4**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=46,slow=5.8,SNR=9.6						
GERES				LR	LR	06 45 13.5	
	comp=Z,1µm,19.1s,baz=52,slow=38						
ARSA	**Arzberg**	**84.06**	**322**	*e*P	**P**	**06 03 54.0**	**-0.3**
	comp=Z,2.4nm,0.8s						
SANT	**Santorini**	**84.12**	**308**	IAMs_20	IAMs_20	06 47 12.0	
	comp=Z,406nm,21.0s						
ORV	**Oroville**	**84.15**	**48**	P	**P**	**06 03 55.0**	**+0.2**
ORV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ORV	**Oroville**	**84.15**	**48**	P	**P**	**06 03 55.0**	**+0.2**
ORV				IAmb	IAmb	06 03 56.0	
	comp=Z,10nm,1.0s						
MOA	**Molln**	**84.37**	**323**	*e*P	**P**	**06 03 55.0**	**-0.8**
	comp=Z,4.1nm,0.7s						
MSO	**Missoula**	**84.45**	**39**	P	**P**	**06 03 56.5**	**+0.1**
	baz=308						
MSO	**Missoula**	**84.45**	**39**	P	**P**	**06 03 56.1**	**-0.3**
MSO				IAmb	IAmb	06 04 10.3	
	comp=Z,14nm,1.5s						
SOKA	**Soboth**	**84.68**	**321**	*e*P	**P**	**06 03 56.5**	**-1.0**
	comp=Z,5.3nm,0.7s						
BEKR	**Beckworth**	**84.71**	**47**	P	**P**	**06 03 58.4**	**+0.5**
FCC	**Fort Churchill**	**84.71**	**22**	P	**P**	**06 03 57.5**	**+0.2**
FCC				pmax	pmax		
	comp=Z,26nm,0.8s						
FCC	**Fort Churchill**	**84.71**	**22**	P	**P**	**06 03 57.5**	**+0.2**
GRF	**Grafenberg Arr**	**84.77**	**325**	*e*P	**P**	**06 03 57.6**	**-0.2**
	comp=Z,14nm,0.9s,baz=56,slow=4.7						
OBKA	**Obir**	**85.05**	**322**	*e*P	**P**	**06 03 57.8**	**-1.5**
	comp=Z,3.8nm,0.9s						
IDI	**Anoyia**	**85.09**	**308**	IAMs_20	IAMs_20	06 49 08.6	
	comp=Z,398nm,19.0s						
EGMT	**Eagleton**	**85.91**	**36**	P	**P**	**06 04 04.4**	**+0.8**
	baz=311,SNR=8.4						
ABTA	**Abfaltersbach**	**85.99**	**323**	*e*P	**P**	**06 04 04.4**	**+0.3**
	comp=Z,2.9nm,0.6s						
ITM	**Ithomi**	**86.06**	**311**	IAMs_20	IAMs_20	06 47 17.3	
	comp=Z,396nm,21.0s						
WAKR	**Walker**	**86.06**	**48**	P	**P**	**06 04 05.6**	**+0.9**
WAKR				IAmb	IAmb	06 04 06.8	
	comp=Z,13nm,0.8s						
WATA	**Walderalm**	**86.11**	**323**	*e*P	**P**	**06 04 05.2**	**+0.5**
	comp=Z,2.3nm,0.7s						
WTTA	**Wattenberg**	**86.12**	**323**	*e*P	**P**	**06 04 06.2**	**+1.4**
	comp=Z,6.0nm,1.1s						
HLID	**Hailey**	**86.17**	**41**	P	**P**	**06 04 06.7**	**+1.5**
	baz=308,SNR=27						
MOTA	**Moosalm**	**86.35**	**324**	*e*P	**P**	**06 04 04.0**	**-1.9**
	comp=Z,2.1nm,0.8s						
SQTA	**Sankt Quirin**	**86.37**	**324**	*e*P	**P**	**06 04 06.1**	**+0.1**
	comp=Z,3.0nm,0.6s						
BOZ	**Bozeman (W)**	**86.47**	**39**	P	**P**	**06 04 07.2**	**+0.7**
	baz=309,SNR=13						
RYN	**Ryan**	**86.58**	**47**	P	**P**	**06 04 07.6**	**+0.4**
RYN				IAmb	IAmb	06 04 09.7	
	comp=Z,16nm,0.9s						
SCTE	**Santa Cesarea**	**86.63**	**315**	IAMs_20	IAMs_20	06 47 46.1	
	comp=Z,692nm,20.0s						
MDPB	**Devils Postpil**	**86.79**	**48**	P	**P**	**06 04 09.0**	**+0.6**
MDPB				IAmb	IAmb	06 04 11.2	
	comp=Z,12nm,1.0s						
LHV	**Little Huntoon**	**86.81**	**47**	P	**P**	**06 04 09.2**	**+1.2**
LHV				IAmb	IAmb	06 04 10.7	
	comp=Z,14nm,0.9s						
NVAR	**Mina Array Bea**	**86.84**	**47**	P	**P**	**06 04 09.8**	**+1.3**
	comp=Z,9.2nm,0.8s,baz=292,slow=5.3,SNR=86						
OMMB	**Old Mammoth Mi**	**86.86**	**48**	P	**P**	**06 04 08.9**	**+0.1**
OMMB				IAmb	IAmb	06 04 11.1	
	comp=Z,8.3nm,1.0s						
MLAC	**Mammoth, Mammo**	**86.95**	**48**	P	**P**	**06 04 10.5**	**+1.4**
	baz=305,SNR=6.3						
PAGB	**Antelope Grade**	**87.09**	**50**	P	**P**	**06 04 10.5**	**+0.9**
TEOL	**Teolo**	**87.33**	**322**	P	**P**	**06 04 11.0**	**+0.5**
SMMC	**Simmler**	**87.50**	**51**	P	**P**	**06 04 12.6**	**+1.0**
	baz=305						
TIN	**Tinemaha, Big**	**87.68**	**48**	P	**P**	**06 04 13.7**	**+1.2**
	baz=306						
LKWY	**Lake**	**87.80**	**39**	P	**P**	**06 04 15.5**	**+2.4**
LKWY				pmax	pmax		
	comp=Z,19nm,1.0s						
LKWY	**Lake**	**87.80**	**39**	P	**P**	**06 04 15.5**	**+2.4**
VES	**Vestal, Richgr**	**87.81**	**50**	P	**P**	**06 04 13.7**	**+0.7**
	baz=305						
H17A	**Grant Village**	**87.81**	**39**	P	**P**	**06 04 16.1**	**+2.9**
	baz=310,SNR=18						
PKM	**Mcpherson Peak**	**87.86**	**51**	P	**P**	**06 04 14.8**	**+1.3**
	baz=305,SNR=5.7						
FLWY	**Flagg Ranch**	**87.95**	**39**	P	**P**	**06 04 15.8**	**+2.0**
RLMT	**Red Lodge**	**88.05**	**38**	P	**P**	**06 04 15.4**	**+1.2**
	baz=311,SNR=8.8						
CWC	**Cottonwood Cre**	**88.13**	**49**	P	**P**	**06 04 15.6**	**+0.8**
	baz=306						
ISA	**Isabella, Lake**	**88.32**	**50**	P	**P**	**06 04 15.8**	**+0.3**
	baz=305						
LAO	**LASA Array**	**88.59**	**35**	P	**P**	**06 04 17.9**	**+1.4**
	baz=313						
BGU	**Big Grassy Mou**	**88.60**	**43**	P	**P**	**06 04 17.5**	**+0.7**
R11A	**Troy Canyon, C**	**88.61**	**46**	P	**P**	**06 04 18.2**	**+1.2**
	baz=307,SNR=9.8						
R11A	**Troy Canyon, C**	**88.61**	**46**	P	**P**	**06 04 17.7**	**+0.7**
MPMC	**Manual Prospec**	**88.74**	**49**	P	**P**	**06 04 19.0**	**+1.4**
	baz=306,SNR=5.5						
FURC	**Furnace Creek,**	**88.91**	**48**	P	**P**	**06 04 20.0**	**+1.9**
	baz=306,SNR=6.3						
TPNV	**Topopah Spring**	**89.02**	**47**	P	**P**	**06 04 19.9**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TPNV	**Topopah Spring**	**89.02**	**47**	P	**P**	**06 04 20.5**	**+1.5**
	baz=307,SNR=14						
TPNV	**Topopah Spring**	**89.02**	**47**	P	**P**	**06 04 19.9**	**+1.0**
TPNV				IAmb	IAmb	06 04 21.8	
	comp=Z,8.9nm,0.9s						
EDW2	**Edwards Air Fo**	**89.09**	**50**	P	**P**	**06 04 20.0**	**+0.8**
	baz=306						
DUG	**Dugway, Tooele**	**89.19**	**43**	P	**P**	**06 04 20.8**	**+1.2**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DUG	**Dugway, Tooele**	**89.19**	**43**	P	**P**	**06 04 21.2**	**+1.6**
	baz=309,SNR=9.5						
DUG	**Dugway, Tooele**	**89.19**	**43**	P	**P**	**06 04 20.8**	**+1.2**
DUG				IAmb	IAmb	06 04 22.1	
	comp=Z,9.1nm,1.0s						
BW06	**Boulder Array**	**89.43**	**40**	P	**P**	**06 04 21.6**	**+0.8**
	baz=311,SNR=8.0						
PDAR	**Pinedale Array**	**89.43**	**40**	P	**P**	**06 04 21.5**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=317,slow=1.3,SNR=42						
SHOC	**Shoshone, Teco**	**89.63**	**48**	P	**P**	**06 04 23.2**	**+1.6**
	baz=307						
GSC	**Goldstone, Bar**	**89.64**	**49**	P	**P**	**06 04 23.6**	**+1.8**
	baz=306,SNR=7.7						
PPT	**Papeete**	**89.87**	**110**	LR	LR	06 37 02.8	
	comp=Z,115nm,21.7s,baz=293,slow=30						
PPT2	**Papeete2**	**89.88**	**110**	*e*S	**S**	**06 15 15.8**	**+2.3**
	comp=Z,161nm,26.2s						
PPT2	**Papeete2**	**89.88**	**110**	*e*LR	LR	06 33 10.9	
	comp=Z,318nm,23.8s,baz=300						
SHPR	**Sheep Range**	**89.99**	**47**	P	**P**	**06 04 24.9**	**+1.4**
SHPR				IAmb	IAmb	06 04 26.8	
	comp=Z,7.6nm,1.0s						
HEC	**Hector,Ludlow**	**90.23**	**49**	P	**P**	**06 04 25.4**	**+0.9**
	baz=307						
MURC	**Murrieta**	**90.38**	**51**	P	**P**	**06 04 25.4**	**+0.2**
	baz=306						
MVU	**Marysvale**	**90.61**	**44**	P	**P**	**06 04 28.0**	**+1.6**
MSU	**Marysvale**	**90.62**	**44**	P	**P**	**06 04 28.1**	**+1.6**
MSU	**Marysvale**	**90.62**	**44**	P	**P**	**06 04 28.1**	**+1.6**
GMRC	**Granite Mounta**	**90.70**	**49**	P	**P**	**06 04 27.3**	**+0.5**
	baz=307						
ULM	**Lac du Bonnet**	**90.72**	**28**	P	**P**	**06 04 26.7**	**+0.4**
	comp=Z,14nm,0.9s,baz=309,slow=4.6,SNR=14						
ULM				LR	LR	06 48 17.7	
	comp=Z,176nm,19.8s,baz=322,slow=38						
PFO	**Pinyon Flats O**	**90.86**	**50**	P	**P**	**06 04 28.2**	**+0.7**
	baz=307,SNR=6.6						
BELC	**Belle Mtn. Jos**	**90.94**	**50**	P	**P**	**06 04 28.1**	**+0.2**
	baz=307						
CORL	**Corleone**	**91.14**	**315**	IAMs_20	IAMs_20	06 48 29.6	
	comp=Z,446nm,20.0s						
K22A	**Casper**	**91.18**	**38**	P	**P**	**06 04 29.2**	**+0.4**
	baz=313						
MONP2	**Monument Peak**	**91.31**	**51**	P	**P**	**06 04 30.3**	**+0.5**
	baz=307						
IRM	**Iron Mountain**	**91.41**	**49**	P	**P**	**06 04 30.8**	**+0.9**
	baz=307						
RSSD	**Black Hills**	**91.48**	**36**	P	**P**	**06 04 30.9**	**+0.6**
	baz=315						
BC3	**Big Chuckawall**	**91.51**	**50**	P	**P**	**06 04 31.2**	**+0.7**
	baz=307,SNR=6.8						
IKP	**In-Ko-Pah, Jac**	**91.67**	**51**	P	**P**	**06 04 31.3**	**+0.1**
	baz=307						
O20A	**White River Ci**	**91.91**	**41**	P	**P**	**06 04 33.2**	**+0.8**
	baz=312,SNR=6.8						
PDMCI	**Parker Dam,Lak**	**91.99**	**49**	P	**P**	**06 04 33.4**	**+0.8**
	baz=308						
UABX	**UABC, Campus M**	**92.13**	**51**	IAMs_20	IAMs_20	06 33 19.9	
	comp=Z,355nm,22.0s						
PV19	**Morning Glory**	**92.67**	**43**	IAMs_20	IAMs_20	06 44 02.3	
	comp=Z,345nm,21.0s						
N23A	**Red Feather La**	**92.69**	**39**	P	**P**	**06 04 37.3**	**+1.3**
	baz=313						
PV18	**Skein Mesa, Pa**	**92.76**	**43**	IAMs_20	IAMs_20	06 46 29.6	
	comp=Z,395nm,22.0s						
PV03	**Paradox Valley**	**92.79**	**43**	IAMs_20	IAMs_20	06 46 31.4	
	comp=Z,471nm,19.0s						
TBI	**Tubuai**	**92.90**	**115**	*e*LR	LR	06 34 27.5	
	comp=Z,196nm,26.5s						
WUAZ	**Wupatki**	**93.01**	**46**	P	**P**	**06 04 39.1**	**+1.7**
	baz=310						
SPX	**San Pedro Mart**	**93.07**	**52**	IAMs_20	IAMs_20	06 47 53.8	
	comp=Z,327nm,20.0s						
KMBO	**Kilima Mbogo**	**93.53**	**271**	LR	LR	06 49 38.4	
	comp=Z,224nm,19.0s,baz=94,slow=37						
ISCO	**Idaho Springs**	**93.62**	**40**	P	**P**	**06 04 41.8**	**+1.4**
	baz=314						
X16A	**Lo Mia Camp, P**	**93.66**	**47**	P	**P**	**06 04 41.2**	**+0.6**
X16A				IAmb	IAmb	06 04 44.1	
	comp=Z,11nm,0.9s						
MVCO	**Mesa Verde**	**93.69**	**43**	P	**P**	**06 04 42.8**	**+2.1**
	baz=311						
214A	**Organ Pipe Nat**	**94.31**	**50**	P	**P**	**06 04 44.5**	**+1.1**
	baz=309						
KEST	**Kesra**	**94.96**	**316**	LR	LR	06 52 25.4	
	comp=Z,541nm,18.6s,baz=297,slow=39						
TUC	**Tucson**	**95.42**	**48**	P	**P**	**06 04 49.7**	**+1.2**
	baz=310						
MNTX	**Cornudas Mount**	**99.28**	**46**	IAMs_20	IAMs_20	06 57 39.6	
	comp=Z,214nm,18.0s						
ESDC	**Sonseca Array**	**99.45**	**326**	LR	LR	06 55 41.7	
	comp=Z,523nm,18.8s,baz=10.0,slow=39						
ES04	**SONSECA Array**	**99.45**	**326**	IAMs_20	IAMs_20	06 35 24.1	
	comp=Z,405nm,20.0s						
ES13	**SONSECA Array**	**99.47**	**326**	IAMs_20	IAMs_20	06 35 31.5	
	comp=Z,497nm,22.0s						
WMOK	**Wichita Mounta**	**101.04**	**40**	IAMs_20	IAMs_20	06 36 59.5	
	comp=Z,289nm,22.0s						
OK031	**S. Brethren Rd**	**101.20**	**38**	IAMs_20	IAMs_20	06 50 51.3	
	comp=Z,341nm,20.0s						
OK030	**Cody Creek RV**	**101.25**	**38**	IAMs_20	IAMs_20	06 36 18.6	

	comp=Z,298nm,19.0s						
OKCFA	Oklahoma City	101.27	38	IAMs_20	IAMs_20	06 55 38.4	
	comp=Z,411nm,21.0s						
T45A	Paducah	104.42	32	IAMs_20	IAMs_20	06 58 52.0	
	comp=Z,704nm,22.0s						
RKT	Rikitea	104.54	108	*e*LR	LR	06 39 56.8	
	comp=Z,178nm,27.2s						
HAL	Halifax	105.28	11	IAMs_20	IAMs_20	06 52 39.3	
	comp=Z,642nm,22.0s						
TAM	Tamanrasset	106.06	308	IAMs_20	IAMs_20	07 02 51.8	
	comp=Z,380nm,19.0s						
PSUB	Penn St. - Bra	106.97	21	IAMs_20	IAMs_20	06 56 40.1	
	comp=Z,558nm,20.0s						
TOC3	Torodi Ar. Sit	115.15	303	IAMs_20	IAMs_20	07 09 21.2	
	comp=Z,374nm,19.0s						
TOB1	Torodi Ar. Sit	115.16	303	IAMs_20	IAMs_20	07 09 10.3	
	comp=Z,341nm,20.0s						
TOA0	Torodi Ar. Sit	115.17	303	IAMs_20	IAMs_20	07 09 11.5	
	comp=Z,344nm,19.0s						
TOB3	Torodi Ar. Sit	115.17	303	IAMs_20	IAMs_20	07 09 11.5	
	comp=Z,349nm,20.0s						
TORD	Torodi Ar. Bea	115.17	303	PKP	PKiKP	06 10 04.9	-0.6
	comp=Z,1.0nm,0.9s,baz=22,slow=2.3,SNR=3.4						
TOA3	Torodi Ar. Sit	115.17	303	IAMs_20	IAMs_20	07 09 11.7	
	comp=Z,326nm,19.0s						
TOB5	Torodi Ar. Sit	115.17	303	IAMs_20	IAMs_20	07 09 11.7	
	comp=Z,365nm,19.0s						
TOC4	Torodi Ar. Sit	115.18	303	IAMs_20	IAMs_20	07 09 11.9	
	comp=Z,344nm,20.0s						
TOC5	Torodi Ar. Sit	115.19	303	IAMs_20	IAMs_20	07 09 11.3	
	comp=Z,393nm,19.0s						
MTO3	Montecristo	121.86	47	IAMs_20	IAMs_20	07 00 29.9	
	comp=Z,277nm,18.0s						
DBIC	Dimbokro	124.27	303	PKP	PKPdf	06 10 21.8	-1.2
	comp=Z,2.6nm,0.8s,baz=59,slow=2.3,SNR=4.6						
KIC	Kosan Boka	124.39	302	*e*PKP2	PKPdf	06 10 22.1	-1.2
	comp=Z,13nm,1.1s						
TIC	Toumodi	124.40	303	*e*PKP2	PKPdf	06 10 22.7	-0.6
LIC	Lamto	124.69	302	*e*PKP2	PKPdf	06 10 23.3	-0.6
	comp=Z,16nm,1.0s						
SNAA	Sanae	130.69	198*c*	*i*PKIKP	PKiKP	06 10 36.8	+2.3
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
OCAC	Ocana	136.11	35	*e*P	PKPdf	06 10 46.3	+0.6
CBOC	Ciudad Bolivar	136.64	41	*e*P	PKiKP	06 10 47.4	-1.0
SDV	Santo Domingo	136.84	32	*e*P	PKPdf	06 10 46.6	-0.4
PTBC	PUERTO BERRIO,	136.95	38	*e*P	PKPdf	06 10 47.0	0.0
PLMC	San Jos del P	137.26	42	*e*P	PKPdf	06 10 48.2	+0.4
SPBC	San Pablo de B	137.89	38	*e*P	PKPdf	06 10 49.3	+0.4
YOTC	Yotoco, Valle	137.97	43	*e*P	PKPdf	06 10 49.2	+0.1
VILC	Villavicencio,	139.38	39	*e*P	PKPdf	06 10 51.6	-0.1
PTLC	Puerto Leguiza	141.92	44	*e*P	PKPdf	06 10 51.0	-5.1
NNA	Nana	149.15	62*c*	*i*PKP2	PKPbc	06 11 12.4	-0.2
NNA				pmax	pmax		
	comp=Z,21nm,0.8s						
SAML	Samuel	155.94	35	IAMs_20	IAMs_20	07 21 00.5	
	comp=Z,205nm,20.0s						
LC01	Cunco	159.06	123	IAMs_20	IAMs_20	07 17 42.5	
	comp=Z,203nm,18.0s						
PLCA	Paso Flores	159.26	129	PKP	PKPdf	06 11 21.4	-0.4
	comp=Z,1.8nm,0.9s,baz=256,slow=8.3,SNR=3.5						
BDFB	Brasilia	166.36	355	PKP	PKPdf	06 11 30.4	+0.9
	comp=Z,4.5nm,1.0s,baz=135,slow=4.3,SNR=5.8						
CPUP	Villa Florida	172.32	69	PKP	PKPdf	06 11 33.8	+1.1
	comp=Z,4.2nm,1.1s,baz=259,slow=2.0,SNR=4.2						

IDC 04 05:58:29.8±1.1**, 1°.98N**×**126°.22E, h0^{km}, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.6**/32**, mbtmp3.9**/5**, ML3.6**/1**, Error ellipse: s-maj=70.4km s-min=19.1km az=77.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.96	182	P	Pn	06 03 05.2	-0.1
	0.1nm,0.3s,baz=20,slow=12,SNR=2.7						
WRA	Warramunga Arr	23.20	160	P	P	06 03 37.3	-1.2
	1.3nm,0.4s,baz=334,slow=11,SNR=11						
ASAR	Alice Springs	26.57	164	P	P	06 04 10.0	+0.2
	0.4nm,0.3s,baz=348,slow=12,SNR=6.8						
USRK	Ussuriysk Ar.	42.35	6	P	P	06 06 25.1	-0.5
	2.0nm,0.7s,baz=200,slow=7.2,SNR=7.7						
MKAR	Makanchi Array	58.70	326	P	P	06 08 29.6	+0.2
	0.4nm,0.4s,baz=121,slow=7.8,SNR=11						

IDC 04 06:15:01.6±12.0**, 21°.70N**×**143°.59E, h107^{km}**±114^{km}**, mb3.1**/9**, mb1 3.3**/9**, mb1mx3.2**/32**, mbtmp3.5**/9**, Error ellipse: s-maj=43.8km s-min=16.8km az=92.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	20.73	323	P	Pn	06 19 35.5	-1.5
	0.7nm,0.5s,baz=148,slow=9.0,SNR=5.8						
KLR	Kul'dur	29.04	344	P	P	06 20 50.7	-0.7
	1.4nm,0.7s,baz=124,slow=7.3,SNR=5.2						
WRA	Warramunga Arr	42.37	193	P	P	06 22 44.4	-1.0
	0.4nm,0.8s,baz=14,slow=7.0,SNR=3.3						
ASAR	Alice Springs	46.07	192	P	P	06 23 15.6	+0.6
	0.3nm,0.8s,baz=19,slow=8.8,SNR=3.8						
ZALV	Zalesovo Beam	54.44	322	P	P	06 24 17.0	-0.6
	0.5nm,0.6s,baz=76,slow=6.1,SNR=2.4						
MKAR	Makanchi Array	54.97	313	P	P	06 24 21.4	-0.3
	0.4nm,0.9s,baz=92,slow=7.2,SNR=2.3						
ILAR	Eielson Array	61.86	27	P	P	06 25 08.2	-1.0
	0.4nm,0.8s,baz=264,slow=5.3,SNR=3.1						
YKA	Yellowknife Ar	76.28	28	P	P	06 26 39.2	+1.0
	0.3nm,0.5s,baz=296,slow=4.5,SNR=8.4						
NVAR	Mina Array Bea	82.85	52	P	P	06 27 15.1	+0.4
	0.2nm,0.6s,baz=278,slow=6.3,SNR=2.8						

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*IDC **04** 06:35:23.0±0.8, 44°.46N×114°.32W, h0^{km}, mb3.3/1, mb1 3.5/7, mb1mx3.4/57, mbtmp3.2/7, ML3.2/6, Error ellipse: s-maj=13.3km s-min=8.6km az=90.0*

*BUT **04** 06:35:23.6±1.4, 44°.45N±0°.01×114°.15W±0°.06, h11^{km}±6^{km}, ML4.0, ML3.6/96(NEIC), Mwr3.6/45(NEIC), Error ellipse: s-maj=6.2km s-min=1.5km az=104.0*

*NEIC **04** 06:35:23.6, 44°.45N×114°.15W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.82; $M_{\theta\theta}$1.56; $M_{\phi\phi}$0.26; $M_{r\theta}$0.61; $M_{\theta\phi}$-2.09; $M_{\phi r}$-1.93; Fault plane solution: $M_0$3.37000×10^{14} NP1:ϕ_s334.31000°, δ68.92000°, λ-57.48000°. NP2:ϕ_s93.74000°, δ38.11000°, λ-144.36000°. Principal axes: T 3.6140, Plg18.0000°, Azm41.0000°; N -0.5580, Plg30.0000°, Azm141.0000°; P -3.0561, Plg54.0000°, Azm285.0000°;*

*NEIC **04** 06:35:24.0±1.3, 44°.45N±0°.04×114°.13W±0°.05, h8^{km}±6^{km} Error ellipse: s-maj=6.1km s-min=4.1km az=133.0*

ISC 04 06:35:23.1±0.8**, 44°.45N**±0°.03×**114°.13W**±0°.03**, h6^{km}, n69, σ1^{s}.08**/73**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	Bear Canyon	0.54	104		Pg	06 35 34.0	+0.6
HLID	Hailey	0.91	193	Pg	Pg	06 35 40.6	+0.1
HLID				Sg	Sg	06 35 53.5	+1.2
HLID				IAML		06 35 58.2	
	2μm,0.4s						
HLID				IAML		06 35 58.6	
	2μm,0.4s						
MCMT	McKenzie Canyo	0.99	67	Pg	Pb	06 35 42.8	0.0
DLMT	Dillon	1.42	49		Pb	06 35 50.3	+0.2
DLMT				IAML		06 36 12.1	
	2μm,0.5s						
MFID	Camas Ranch	1.60	231		Pn	06 35 53.1	+1.1
MFID				Sn	Sg	06 36 15.1	+0.5
LRM	Limekiln Ridge	1.82	40		Pn	06 35 55.6	+0.4
BOZ	Bozeman (W)	2.11	56		Pn	06 35 59.7	+0.6
YHB	Horse Butte	2.12	81		Pn	06 35 59.2	-0.1
YHL	Hebgen Lake	2.14	78		Pn	06 36 00.7	+1.1
YMR	Madison River	2.27	83		Pn	06 36 02.1	+0.8
BMO	Blue Mountains	2.30	281		Pn	06 36 01.8	+0.1
YHH	Holmes Hill	2.37	81		Pn	06 36 04.2	+1.4
MSO	Missoula	2.39	3		Pn	06 36 03.1	+0.2
MSO				IAML		06 36 41.2	
	493nm,0.4s						
MSO				IAML		06 36 43.8	
	569nm,0.7s						
YPP	Pitchstone Pla	2.39	93		Pn	06 36 05.2	+2.1
ECR	Eagle Creek	2.44	124	Pn	Pn	06 36 04.5	+0.9
YNR	Norris Junctio	2.48	83		Pn	06 36 06.2	+1.9
FLWY	Flagg Ranch	2.49	97		Pn	06 36 05.3	+0.9
FLWY				IAML		06 36 47.6	
	385nm,0.8s						
FLWY				IAML		06 36 52.0	
	381nm,0.9s						
MOOW	Moose Ponds	2.54	105	Pn	Pn	06 36 03.6	-1.4
H17A	Grant Village	2.54	90		Pn	06 36 06.8	+1.6
YUF	Upper Falls	2.60	83		Pn	06 36 07.1	+1.2
REDW	Red Top Meadow	2.60	113		Pn	06 36 06.9	+0.9
REDW				IAML		06 36 48.2	
	287nm,0.8s						
REDW				IAML		06 36 48.4	
	261nm,0.8s						
LKWY	Lake	2.67	86		Pn	06 36 07.9	+1.0
LKWY				IAML		06 36 26.5	
	231nm,0.7s						
F10A	Beach Ranch, E	2.67	306	Pn	Pn	06 36 06.7	0.0
LOHW	Long Hollow	2.67	107		Pn	06 36 07.4	+0.5
LOHW				IAML		06 36 48.4	
	175nm,0.8s						
AHID	Auburn Hatcher	2.77	126		Pn	06 36 07.5	-0.7
AHID				IAML		06 36 55.3	
	comp=E,227nm,0.6s						
AHID				IAML		06 36 56.9	
	comp=N,275nm,0.5s						
HRY	Holter Researc	2.78	35		Pn	06 36 08.8	+0.5
HVU	Hansel Valley	2.84	159		Pn	06 36 10.2	+1.0
YNE	Yellowstone No	2.99	78		Pn	06 36 11.8	+0.6
JTMT	Jette	3.30	358		Pn	06 36 15.7	+0.2
SPUT	South Promonto	3.37	158		Pn	06 36 16.5	+0.1
HWUT	Hardware Ranch	3.40	146		Pn	06 36 17.5	+0.6
GCMT	Greycliff	3.43	65		Pn	06 36 16.9	-0.4
E09A	Wood Farm, Sta	3.50	308		Pn	06 36 18.7	+0.6
E09A				IAML		06 37 20.2	
	comp=E,131nm,1.0s						
E09A				IAML		06 37 20.6	
	comp=N,145nm,0.8s						
RLMT	Red Lodge	3.53	77		Pn	06 36 20.4	+1.8
RLMT				IAML		06 37 20.7	
	comp=N,184nm,0.6s						
G08A	Pilot Rock	3.54	285	Pn	Pn	06 36 18.2	-0.5
BGU	Big Grassy Mou	3.61	167		Pn	06 36 21.1	+1.4
PD31	Pinedale Array	3.72	115		Pn	06 36 22.1	+0.8
PDAR	Pinedale Array	3.72	115	Pn	Pb	06 36 26.4	-3.0
	comp=N,0.5nm,0.3s,baz=300,slow=14,SNR=20						
PDAR				Lg	Lg	06 37 17.4	
	comp=N,2.1nm,0.3s,baz=288,slow=26,SNR=5.9						
ELK	Elko	3.79	193	Pn	Pn	06 36 24.3	+2.1
	comp=N,1.0nm,0.3s,baz=19,slow=12,SNR=15						
ELK				Pg	Pb	06 36 29.5	-1.1
	comp=N,3.3nm,0.3s,baz=359,slow=16,SNR=39						
ELK				Lg	Lg	06 37 18.9	
	comp=N,14nm,0.3s,baz=175,slow=8.7,SNR=15						
ELK	Elko	3.79	193		Pn	06 36 23.0	+0.7
ELK				IAML		06 37 21.1	
	comp=N,68nm,0.7s						
WVOR	Wild Horse Val	3.85	240		Pn	06 36 24.0	+1.0
WVOR				IAML		06 37 33.6	
	comp=N,81nm,1.0s						
WVOR				IAML		06 37 35.3	
	comp=N,81nm,0.9s						
I07A	Izee	3.88	266		Pn	06 36 24.4	+1.0
I07A				IAML		06 37 29.2	
	comp=E,70nm,0.9s						
I07A				IAML		06 37 37.8	
	comp=N,81nm,1.4s						
E08A	Dider Farm, El	4.03	302		Pn	06 36 26.2	+0.9
E08A				IAML		06 37 43.6	
	comp=N,77nm,1.2s						
D08A	Wollman Farm,	4.25	310	Pn	Pn	06 36 29.2	+0.8
D08A				IAML		06 37 41.9	
	comp=N,62nm,0.8s						
D08A				IAML		06 37 46.9	
	comp=E,57nm,0.8s						
HAWA	Hanford	4.27	299	Pn	Pn	06 36 29.6	+0.9
JLU	Jordanelle	4.32	152	Pn	Pn	06 36 29.2	-0.3
NEW	Newport	4.34	333	Pn	Pn	06 36 30.7	+1.0
	comp=E,2.0nm,0.3s,baz=146,slow=12,SNR=33						
NEW				Lg	Lg	06 37 39.6	
	comp=E,10nm,0.3s,baz=290,slow=16,SNR=5.9						
NEW	Newport	4.34	333	Pn	Pn	06 36 30.7	+1.0
NEW				IAML		06 37 45.3	
	comp=E,117nm,0.6s						
DUG	Dugway, Tooele	4.36	167		Pn	06 36 32.0	+2.0
DUG				IAML		06 37 47.7	
	comp=E,66nm,1.4s						
DUG				IAML		06 37 49.0	
	comp=E,62nm,1.1s						
C09A	Chrisman Ranch	4.42	321	Pn	Pn	06 36 31.4	+0.6
E07A	Sunnyside	4.55	300	Pn	Pn	06 36 32.6	+0.1
E07A				IAML		06 37 53.5	
	comp=N,74nm,1.4s						
E07A				IAML		06 38 06.3	
	comp=E,61nm,0.6s						
WALA	Waterton Lakes	4.62	2		Pn	06 36 34.4	+0.8
WALA				IAML		06 37 55.0	
	comp=N,81nm,0.7s						
EGMT	Eagleton	4.69	39	Pn	Pn	06 36 34.9	+0.4
NLU	North Lily Min	4.74	161	Pn	Pn	06 36 35.0	-0.3
PINE	Pine Mountain	4.95	265		Pn	06 36 38.5	+0.4
PINE				IAML		06 38 31.3	
	comp=N,35nm,2.7s						
MOD	Modoc Plateau	5.18	243		Pn	06 36 40.8	-0.5
K05A	Summer Lake	5.21	253		Pn	06 36 43.1	+1.4
K05A				IAML		06 38 26.2	
	comp=N,28nm,3.0s						
K05A				IAML		06 40 07.9	
	comp=E,32nm,0.4s						
B08A	Colville Reser	5.32	319		Pn	06 36 43.0	0.0
B08A				IAML		06 38 13.4	
	comp=N,47nm,0.9s						
LTY	Liberty	5.37	304		Pn	06 36 43.7	0.0
LTY				IAML		06 38 26.5	
	comp=N,36nm,1.1s						
LTY				IAML		06 38 32.4	
	comp=E,27nm,1.5s						
LON	Longmire	5.86	296		Pn	06 36 51.1	+0.6
LAO	LASA Array	5.99	65		Pn	06 36 52.6	+0.4
MSU	Marysvale	6.11	165	Pn	Pn	06 36 53.6	-0.5
O20A	White River Ci	6.13	133	Pn	Pn	06 36 56.0	+1.6
D05A	Enumclaw	6.14	299		Pn	06 36 54.1	-0.1
PAHR	Pah Rah Range	6.14	221	Pn	Pn	06 36 53.8	-0.7
NVAR	Mina Array Bea	6.78	209	Pn	Pn	06 37 06.3	+3.0
	comp=E,0.1nm,0.3s,baz=24,slow=16,SNR=5.2						
NVAR				Pg	Pb	06 37 20.2	-1.2
	comp=E,0.4nm,0.3s,baz=25,slow=14,SNR=5.4						
NVAR				Lg	Lg	06 38 53.9	
	comp=E,1.4nm,0.3s,baz=25,slow=33,SNR=7.7						
YBH	Yreka Blue Hor	6.84	250	Pn	Pn	06 37 05.4	+1.4
	comp=E,0.1nm,0.3s,baz=69,slow=14,SNR=2.3						
YKA	Yellowknife Ar	18.08	359	P	Pn	06 39 33.2	-1.4
	comp=E,0.1nm,0.3s,baz=174,slow=12,SNR=8.5						
YKA				Lg	Lg	06 44 47.5	
	comp=E,0.0nm,0.3s,baz=172,slow=27,SNR=4.8						
ILAR	Eielson Array	27.30	330	P	P	06 41 08.6	+0.5
	comp=E,0.2nm,0.6s,baz=110,slow=7.8,SNR=4.5						

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*ATH **04** 06:42:43.9, 35°.08N×25°.86E, h5^{km}±1^{km}, ML3.6/11, Error ellipse: s-maj=2.2km s-min=0.7km az=183.0*

*ISK **04** 06:42:43.6, 35°.15N×25°.87E, h5^{km}, ML3.6/17*

*THE **04** 06:42:43.5, 35°.10N×25°.87E, h1^{km}±1^{km}, ML3.8/3, Error ellipse: s-maj=1.9km s-min=0.4km az=188.0*

*IDC **04** 06:42:45.0±2.3, 35°.27N×25°.82E, h10^{km}±15^{km}, mb4.0/16, mb1 4.1/19, mb1mx3.9/45, mbtmp4.0/19, ML3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/45, Error ellipse: s-maj=22.9km s-min=11.8km az=176.0*

ISC 04 06:42:44.1±0.9**, 35°.12N**±0°.03×**25°.86E**±0°.02**, h7^{km}**±6^{km}**, n123, σ0^{s}.79**/144**, mb4.1**/16**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	0.25	304	P	Pg	06 42 48.9	-0.1
NPS				S	Sg	06 42 52.5	+0.2
NPS				AML	AML	06 42 54.8	
	comp=N,59783μm,0.3s						
NPS				AML	AML	06 42 56.8	
	comp=E,87597μm,0.4s						
NPS	Neapolis	0.25	304	P	Pg	06 42 48.9	-0.1
NPS				S	Sg	06 42 52.5	+0.2
NPS				AML	AML	06 42 54.8	
	comp=N,59783μm,0.3s						
NPS				AML	AML	06 42 56.8	
	comp=E,87597μm,0.4s						
NPS	Neapolis	0.25	304	P	Pg	06 42 49.0	-0.1
NPS				S	Sg	06 42 53.5	+1.2
	comp=E,34μm,0.2s						
ZKR	Zakros	0.29	92	P	Pg	06 42 49.3	-0.6
ZKR				S	Sg	06 42 53.3	-0.5
ZKR				AML	AML	06 42 54.5	
ZKR				AML	AML	06 42 54.8	
	comp=N,54926μm,0.5s						
ZKR	Zakros	0.29	92	P	Pg	06 42 49.3	-0.6
ZKR				S	Sg	06 42 53.3	-0.5
ZKR				AML	AML	06 42 54.5	
ZKR				AML	AML	06 42 54.8	
	comp=N,54926μm,0.5s						
ZKR	Zakros	0.29	92	P	Pg	06 42 49.3	-0.6
ZKR				S	Sg	06 42 54.0	+0.2
	comp=N,39μm,0.5s						
ZKR	Zakros	0.29	92	PG	Pg	06 42 49.5	-0.4
ZKR				SG	Sg	06 42 54.3	+0.5
LAST	Lasithi	0.32	277	P	Pg	06 42 49.9	-0.5
LAST				S	Sg	06 42 54.8	+0.2
LAST				AML	AML	06 42 56.1	
	comp=N,41316μm,0.4s						
LAST				AML	AML	06 42 56.5	
	comp=E,17554μm,0.6s						
LAST	Lasithi	0.32	277	P	Pg	06 42 49.9	-0.5
LAST				S	Sg	06 42 54.8	+0.2
LAST				AML	AML	06 42 56.1	
	comp=N,41316μm,0.4s						
LAST				AML	AML	06 42 56.5	
	comp=E,17554μm,0.6s						
LAST	Lasithi	0.32	277	P	Pg	06 42 49.8	-0.5
LAST				S	Sg	06 42 55.5	+1.0
HRKL	Herakleio	0.65	287	PG	Pg	06 42 56.7	+0.1
HRKL				SG	Sb	06 43 06.1	-0.9
IACM	Heraklion	0.67	286	P	Pg	06 42 56.6	-0.5
IACM				S	Sg	06 43 05.8	0.0
IACM				AML	AML	06 43 14.4	
	comp=E,40220μm,0.6s						
IACM				AML	AML	06 43 14.7	
	comp=N,22369μm,0.3s						
IACM	Heraklion	0.67	286	P	Pg	06 42 56.6	-0.5
IACM				S	Sg	06 43 05.8	0.0
IACM				AML	AML	06 43 14.4	
	comp=E,40220μm,0.6s						
IACM				AML	AML	06 43 14.7	
	comp=N,22369μm,0.3s						
IACM	Heraklion	0.67	286	P	Pb	06 42 57.6	-0.5
IDI	Anoyia	0.81	282	Pg	Pg	06 42 59.7	0.0
	comp=N,113nm,0.3s,baz=119,slow=14,SNR=22						
IDI				Lg	Lg	06 43 10.6	
	comp=N,256nm,0.3s,baz=344,slow=19,SNR=10						
IDI	Anoyia	0.81	282	P	Pg	06 42 59.4	-0.4
IDI				AML	AML	06 43 15.0	
	comp=N,3040μm,0.3s						
IDI				AML	AML	06 43 15.1	
	comp=E,3655μm,0.4s						
IDI	Anoyia	0.81	282	P	Pg	06 42 59.4	-0.4
IDI				AML	AML	06 43 15.0	
	comp=N,3040μm,0.3s						
IDI				AML	AML	06 43 15.1	
	comp=E,3655μm,0.4s						
IDI	Anoyia	0.81	282	P	Pg	06 42 59.3	-0.4
IDI	Anoyia	0.81	282	PG	Pg	06 42 59.9	+0.2
IDI				SG	Sb	06 43 11.5	-0.2
SIVA	Sivas	0.87	263	P	Pg	06 43 00.3	-0.5
SIVA				S	Sg	06 43 11.3	-0.8
SIVA				AML	AML	06 43 17.8	
	comp=N,8719μm,1.0s						
SIVA				AML	AML	06 43 20.2	
	comp=E,10050μm,0.7s						
SIVA	Sivas	0.87	263	P	Pg	06 43 00.3	-0.5
SIVA				S	Sg	06 43 11.3	-0.8
SIVA				AML	AML	06 43 17.8	
	comp=N,8719μm,1.0s						
SIVA				AML	AML	06 43 20.2	
	comp=E,10050μm,0.7s						
SIVA	Sivas	0.87	263	P	Pg	06 43 01.0	+0.2
KARP	Karpathos	1.14	68	P	Pb	06 43 05.7	-0.5
KARP				AML	AML	06 43 27.1	
	comp=N,7058μm,0.5s						
KARP				AML	AML	06 43 27.8	
	comp=E,6792μm,0.6s						
KARP	Karpathos	1.14	68	P	Pb	06 43 05.7	-0.5
KARP				AML	AML	06 43 27.1	
	comp=N,7058μm,0.5s						
KARP				AML	AML	06 43 27.8	
	comp=E,6792μm,0.6s						
KARP	Karpathos	1.14	68	P	Pg	06 43 04.8	-1.3
KARP				S	Sn	06 43 22.0	-0.4
	comp=E,3μm,0.6s						
KARP	Karpathos	1.14	68	PN	Pb	06 43 05.8	-0.4
KARP				SN	Sn	06 43 21.6	-0.8
SANT	Santorini	1.29	345	P	Pn	06 43 08.2	-0.3
SANT				S	Sn	06 43 25.7	-0.3
SANT				AML	AML	06 43 27.8	
	comp=N,1835μm,0.3s						
SANT				AML	AML	06 43 31.0	
	comp=E,6742μm,0.4s						
SANT	Santorini	1.29	345	P	Pn	06 43 08.2	-0.3
SANT				S	Sn	06 43 25.7	-0.3
SANT				AML	AML	06 43 27.8	
	comp=N,1835μm,0.3s						
SANT				AML	AML	06 43 31.0	
	comp=E,6742μm,0.4s						
SANT	Santorini	1.29	345	P	Pg	06 43 07.7	-1.1
SANT	Santorini	1.29	345	PN	Pn	06 43 08.1	-0.3
SANT				SN	Sn	06 43 25.9	-0.1
THR6	Thira Island,	1.29	343	P	Pg	06 43 07.8	-1.0
THR6	Thira Island,	1.29	343	P	Pg	06 43 07.8	-1.0
THR9	Santorini-Faro	1.30	342	P	Pb	06 43 08.5	-0.3
THR9	Santorini-Faro	1.30	342	P	Pb	06 43 08.5	-0.3
THR8	Santorini-Mono	1.32	346	P	Pg	06 43 09.0	-0.4
THR8	Santorini-Mono	1.32	346	P	Pg	06 43 09.0	-0.4
THR8	Santorini-Mono	1.32	346	P	Pn	06 43 08.3	-0.6
SNT5	Nea Kammeni, S	1.33	344	P	Pg	06 43 09.1	-0.6
SNT5	Nea Kammeni, S	1.33	344	P	Pg	06 43 09.1	-0.6
SNT5	Nea Kammeni, S	1.33	344	P	Pn	06 43 08.1	-1.0
THR3	Thira Island,	1.34	344	P	Pg	06 43 09.2	-0.5
THR3	Thira Island,	1.34	344	P	Pg	06 43 09.2	-0.5
THR3	Thira Island,	1.34	344	P	Pn	06 43 08.1	-1.0
THR7	Fira-Santorini	1.34	345	P	Pg	06 43 09.3	-0.6
THR7	Fira-Santorini	1.34	345	P	Pg	06 43 09.3	-0.6
THR5	Thira Island,	1.36	342	P	Pn	06 43 08.9	-0.5
THR5	Thira Island,	1.36	342	P	Pn	06 43 08.9	-0.5
THR5	Thira Island,	1.36	342	P	Pn	06 43 08.6	-0.8
VAM	Vamos	1.39	282	P	Pn	06 43 08.8	-1.0
VAM				AML	AML	06 43 31.9	
	comp=N,2997μm,0.4s						
VAM				AML	AML	06 43 33.0	
	comp=E,3131μm,0.4s						
VAM	Vamos	1.39	282	P	Pn	06 43 08.8	-1.0
VAM				AML	AML	06 43 31.9	
	comp=N,2997μm,0.4s						
VAM				AML	AML	06 43 33.0	
	comp=E,3131μm,0.4s						
SAP4	Santorini-Oia	1.41	344	P	Pb	06 43 10.1	-0.5
SAP4	Santorini-Oia	1.41	344	P	Pb	06 43 10.1	-0.5
GVDS	Gavdos	1.48	260	PN	Pg	06 43 12.3	-0.2
GVD	Gavdhos	1.48	259	P	Pn	06 43 10.4	-0.7
GVD	Gavdhos	1.48	259	P	Pn	06 43 10.4	-0.7
GVD	Gavdhos	1.48	259	PN	Pb	06 43 12.0	0.0
IMMV	Iera Moni Meta	1.57	283	P	Pn	06 43 11.3	-1.1
IMMV	Iera Moni Meta	1.57	283	P	Pn	06 43 11.3	-1.1
IMMV	Iera Moni Meta	1.57	283	PN	Pn	06 43 12.9	+0.5
NISR	Nisiros	1.81	34	P	Pn	06 43 15.0	-0.6
NISR	Nisiros	1.81	34	P	Pn	06 43 15.0	-0.6
KOSK	Kos Island	1.86	29	PN	Pn	06 43 16.5	+0.2
APE	Apeiranthos	1.96	352	P	Pn	06 43 17.6	-0.1
APE				AML	AML	06 43 51.3	
	comp=N,751μm,0.4s						
APE				AML	AML	06 43 51.9	
	comp=E,674μm,0.3s						
APE	Apeiranthos	1.96	352	P	Pn	06 43 17.6	-0.1
APE				AML	AML	06 43 51.3	
	comp=N,751μm,0.4s						
APE				AML	AML	06 43 51.9	
	comp=E,674μm,0.3s						
APE	Apeiranthos	1.96	352	P	Pn	06 43 16.8	-1.0
APE	Apeiranthos	1.96	352	PN	Pn	06 43 16.9	-0.9
MHLO	Agia Marina, M	1.96	323	P	Pn	06 43 17.6	-0.1
MHLO	Agia Marina, M	1.96	323	P	Pn	06 43 17.6	-0.1
MHLO	Agia Marina, M	1.96	323	P	Pn	06 43 17.6	-0.1
MHLA	Plaka, Milos I	2.00	325	P	Pn	06 43 18.2	0.0
MHLA	Plaka, Milos I	2.00	325	P	Pn	06 43 18.2	0.0
ARG	Arkhangelos	2.14	59	P	Pn	06 43 19.9	-0.4

ARG				AML	AML	06 43 59.1	
	comp=N,1283µm,0.8s						
ARG				AML	AML	06 43 59.6	
	comp=E,1619µm,0.9s						
ARG	Arkhangelos	2.14	59	P	Pn	06 43 19.9	-0.4
ARG				AML	AML	06 43 59.1	
	comp=N,1283µm,0.8s						
ARG				AML	AML	06 43 59.6	
	comp=E,1619µm,0.9s						
ARG	Arkhangelos	2.14	59	PN	Pn	06 43 20.8	+0.6
DATC	Datca-Mugla	2.19	41	PN	Pn	06 43 21.3	+0.4
ANKY	Antikythira Is	2.22	290	P	Pn	06 43 20.6	-0.6
ANKY	Antikythira Is	2.22	290	P	Pn	06 43 20.6	-0.6
ANKY	Antikythira Is	2.22	290	P	Pn	06 43 21.0	-0.2
BODT	Bodrum	2.26	31	P	Pn	06 43 21.6	-0.3
BODT	Bodrum	2.26	31	PN	Pn	06 43 22.4	+0.5
TURN	Turunc	2.54	49	PN	Pn	06 43 26.3	+0.6
KTHA	Kythira Island	2.54	297	P	Pn	06 43 25.4	-0.4
KTHA	Kythira Island	2.54	297	P	Pn	06 43 25.4	-0.4
KTHA	Kythira Island	2.54	297	P	Pn	06 43 25.2	-0.5
KTHA	Kythira Island	2.54	297	PN	Pn	06 43 25.3	-0.4
KTHR	Kythira	2.59	297	P	Pn	06 43 25.8	-0.5
MLSB	Milas	2.66	35	PN	Pn	06 43 28.1	+0.7
SMG	Samos	2.70	17	P	Pn	06 43 27.5	-0.4
SMG	Samos	2.70	17	P	Pn	06 43 27.5	-0.4
SMG	Samos	2.70	17	P	Pn	06 43 27.0	-0.9
GCAM	G?zelcaml?	2.80	23	PN	Pn	06 43 30.3	+1.1
YER	Yerkesik	2.81	44	PN	Pn	06 43 30.2	+0.8
DALY	Dalyan (Mula)	2.83	52	PN	Pn	06 43 30.6	+1.0
VLI	Veliai	2.86	305	P	Pn	06 43 30.0	0.0
VLI	Veliai	2.86	305	P	Pn	06 43 30.0	0.0
FETY	Fethiye	3.02	59	PN	Pn	06 43 33.3	+1.0
AKAS	Kas	3.24	69	PN	Pn	06 43 36.5	+1.0
URLA	Izmir	3.28	10	PN	Pn	06 43 36.8	+0.9
ELL	Elmali	3.66	63	PN	Pn	06 43 42.5	+1.3
VAY	Valandovo	6.71	338	*i* P	Pn	06 44 23.6	+0.7
STIP	Stip	7.17	337	*i* P	Pn	06 44 33.6	+4.4
BRTR	Keskin Array B	7.71	51	Pn	Pn	06 44 38.3	+1.5
	comp=E,0.2nm,0.3s,baz=231,slow=15,SNR=8.9						
EIL	Elat	9.41	123	Pn	Pn	06 45 00.3	+0.2
	comp=E,1.4nm,0.3s,baz=318,slow=11,SNR=6.2						
KBZ	Khabaz	15.70	52	Pn	P	06 46 31.3	+1.7
	comp=E,0.1nm,0.3s,baz=269,slow=7.1,SNR=9.0						
VRAC	Vranov	15.73	337	Pn	Pn	06 46 25.3	-0.7
	comp=E,0.3nm,0.3s,baz=75,slow=20,SNR=1.8						
AKASG	Malin Array Be	15.76	8	Pn	Pn	06 46 27.6	+1.3
	comp=E,2.1nm,0.3s,baz=196,slow=11,SNR=16						
GERES	GERESS Array B	16.39	330	Pn	P	06 46 39.0	+1.5
	comp=E,0.1nm,0.3s,baz=157,slow=12,SNR=6.3						
ESDC	Sonseca Array	24.07	290	P	P	06 48 00.1	+0.1
	comp=E,1.0nm,0.5s,baz=82,slow=9.1,SNR=24						
MDT	Midelt	25.33	274	P	P	06 48 13.0	+1.5
	comp=E,0.8nm,0.8s,baz=95,slow=11,SNR=4.9						
GEYT	Alibeck	26.00	74	P	P	06 48 19.6	+2.0
	comp=E,2.1nm,0.5s,baz=256,slow=15,SNR=7.0						
GEYT				LR	LR	07 00 12.7	
	comp=E,108nm,18.5s,baz=15,slow=40						
AKTO	Aktyubinsk	27.86	47	P	P	06 48 33.7	-0.4
	comp=E,2.1nm,0.7s,baz=238,slow=8.7,SNR=4.5						
EKA	Eskdalemuir Ar	28.40	324	P	P	06 48 37.4	-1.5
	comp=E,0.5nm,0.5s,baz=105,slow=10,SNR=3.7						
TORD	Torodi Ar. Bea	30.91	231	P	P	06 49 02.0	+0.5
	comp=E,1.6nm,0.6s,baz=35,slow=9.1,SNR=7.8						
ARCES	ARCESS Array B	34.47	360	P	P	06 49 30.0	-2.1
	comp=E,4.5nm,1.1s,baz=173,slow=7.7,SNR=3.5						
MKAR	Makanchi Array	43.31	57	P	P	06 50 47.0	+0.4
	comp=E,2.0nm,0.5s,baz=285,slow=6.2,SNR=26						
ZALV	Zalesovo Beam	44.62	46	P	P	06 50 56.5	-0.3
	comp=E,2.0nm,0.5s,baz=272,slow=10.0,SNR=9.2						
NRIK	Noril'sk	47.67	25	P	P	06 51 21.1	+0.5
	comp=E,3.1nm,0.6s,baz=140,slow=2.7,SNR=6.3						
SONM	Songino Array	59.06	51	P	P	06 52 45.4	+0.5
	comp=E,1.1nm,0.7s,baz=282,slow=7.4,SNR=4.1						
CMAR	Chiang Mai Arr	66.00	84	P	P	06 53 31.7	+0.2
	comp=E,0.7nm,0.3s,baz=311,slow=7.1,SNR=4.2						
USRK	Ussuriysk Ar.	76.46	45	P	P	06 54 34.0	-0.4
	comp=E,1.7nm,0.7s,baz=277,slow=6.2,SNR=5.7						
YKA	Yellowknife Ar	77.66	342	P	P	06 54 40.3	-0.5
	comp=E,0.6nm,0.6s,baz=41,slow=5.5,SNR=17						
ILAR	Eielson Array	80.27	357	P	P	06 54 54.8	-0.3
	comp=E,0.8nm,0.8s,baz=2.9,slow=4.4,SNR=8.8						
ULM	Lac du Bonnet	80.66	326	P	P	06 54 57.3	-0.1
	comp=E,1.8nm,0.8s,baz=0.0,slow=8.1,SNR=2.6						

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*IDC **04** 06:51:17.9±0.9, 4.°68N×125.°40E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/41, mbtmp3.8/8, MS3.5/1, Ms1 3.4/1, ms1mx2.5/42, Error ellipse: s-maj=48.9km s-min=17.1km az=77.0*

*MAN **04** 06:51:21.9, 4.°53N×125.°42E, h49^{km}, MS3.6*

*NEIC **04** 06:51:24.4±2.2, 4.°55N±0.°03×125.°28E±0.°09, h53^{km}±8^{km}, mb4.4/15, Error ellipse: s-maj=13.5km s-min=4.1km az=89.0*

ISC 04 06:51:22.8±0.6**, 4.°51N**±0.°05×**125.°33E**±0.°07**, h35**^{km}**, n38, σ1**^{s}**84**/43**, mb4.2**/15**, 2C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	2.15	339	*e*P	Pn	06 51 56.4	+0.2
SKMP				*e*S	Sn	06 52 21.3	-0.3
KCP	Kidapawan	2.50	354⇑	*i*P	Pn	06 52 03.5	+2.5
KCP				*i* S	Sn	06 52 34.9	+4.5
DAV	Davao City (W)	2.56	5	Pn	Pn	06 52 04.5	+2.7
	43nm,0.3s,baz=343,slow=9.5,SNR=3.9						
MATI	Mati	2.59	21	*e*P	Pn	06 52 00.8	-1.4
MATI				*e*S	Sn	06 52 32.0	-0.5
BUKP	Musuan	3.36	355	*e*P	Pn	06 52 13.0	+0.1
BUKP				*e*S	Sn	06 52 52.3	+0.6
PAGZ	Pagadian	3.85	330	*e*P	Pn	06 52 20.1	+0.6
PAGZ				*e*S	Sn	06 53 02.5	-1.0
ZCP	Zamboanga City	4.04	307⇑	*i*P	Pn	06 52 24.0	+1.8
ZCP				*i* S	Sn	06 53 08.3	0.0
GLSP	General Luna,	5.30	8	*e*P	Pn	06 52 41.2	+1.7
GLSP				*e*S	Sn	06 53 44.7	+5.3
TOLI2	Tolitoli	5.66	234		Pn	06 52 45.5	+1.1
TOLI2				Sn	Sn	06 53 48.1	-0.2
LUWI	Luwuk	6.08	205	Pn	Pn	06 52 53.7	+3.5
MYLDM	Lahad Datu	6.84	276		Pn	06 53 01.3	+0.6
KKM	Kota Kinabalu	9.21	280	Pn	Pn	06 53 35.5	+2.2
MTN	Manton Dam	18.17	162	P	Pn	06 55 32.2	-0.2
MTN				IAmb	IAmb	06 55 39.9	
	comp=Z,42nm,1.4s						
YULB	Yu-li	19.18	349	P	P	06 55 42.0	-1.5
TPUB	Ta-pu	19.23	347	P	P	06 55 43.8	-0.3
TPUB				IAmb	IAmb	06 56 08.5	
	comp=Z,34nm,1.3s						
WB0	Warramunga Arr	25.71	160	P	P	06 56 50.9	+0.9
WB0				IAmb	IAmb	06 57 03.2	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	25.86	160	P	P	06 56 51.5	+0.2
	comp=Z,2.4nm,0.7s,baz=342,slow=10.0,SNR=14						
WB2	Warramunga Arr	25.86	160	P	P	06 56 51.3	-0.1
WB2				IAmb	IAmb	06 57 02.3	
	comp=Z,8.6nm,0.9s						
AS31	Alice Springs	29.22	164	P	P	06 57 22.6	+1.2
ASAR	Alice Springs	29.22	164	P	P	06 57 22.8	+1.3
	comp=Z,0.8nm,0.5s,baz=343,slow=7.5,SNR=9.6						
JWT	Wachi	32.01	16	P	P	06 57 45.4	-0.5
PATS	Pohnpei	32.89	84	P	P	06 57 53.6	-0.3
KS19	Wonju Array Si	32.92	4	P	P	06 57 53.9	0.0
XAN	Xi'an	33.11	335	P	P	06 57 54.4	-1.2
XAN				IAmb	IAmb	06 58 00.7	
	comp=Z,4.8nm,0.5s						
MJAR	Matsushiro Arr	34.01	19	P	P	06 58 01.5	-1.9
	comp=Z,0.9nm,0.7s,baz=218,slow=9.2,SNR=2.1						
STKA	Stephens Creek	39.35	158	P	P	06 58 52.0	+3.0
	comp=Z,0.6nm,0.3s,baz=2.0,slow=13,SNR=4.3						
STKA				LR	LR	07 16 06.5	
	comp=Z,64nm,18.3s,baz=205,slow=38						
H11N1	WAKE ISLAND Hy	43.20	66	T	T	07 45 07.1	
	baz=255,slow=75,SNR=28						
H11N2	WAKE ISLAND Hy	43.21	66	T	T	07 45 07.9	
	baz=255,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	43.22	66	T	T	07 45 08.5	
	baz=255,slow=75,SNR=30						
PETK	Petropavlovsk-	55.25	23	P	P	07 00 52.6	+0.2
	comp=Z,1.2nm,0.5s,baz=199,slow=3.0,SNR=6.4						
MK31	Makanchi Array	56.13	326	P	P	07 00 59.1	+0.3
MKAR	Makanchi Array	56.13	326	P	P	07 00 59.4	+0.5
	comp=Z,0.8nm,0.6s,baz=118,slow=8.6,SNR=17						
ZALV	Zalesovo Beam	59.27	333	P	P	07 01 18.9	-1.9
	comp=Z,0.2nm,0.3s,baz=167,slow=6.8,SNR=2.2						
KURK	Kurchatov	60.34	328	P	P	07 01 28.1	0.0
KURK				IAmb	IAmb	07 01 40.0	
	comp=Z,3.2nm,1.2s						
TTA	Tatalina	80.84	27	P	P	07 03 33.1	+0.2
TTA				IAmb	IAmb	07 03 46.2	
	comp=Z,5.4nm,1.3s						
PPLA	Purkeypile	82.58	27	P	P	07 03 42.5	+0.3
PPLA				IAmb	IAmb	07 04 00.6	
	comp=Z,5.1nm,1.1s						
MAW	Mawson	84.00	200	P	P	07 03 44.9	-4.2
MAW				IAmb	IAmb	07 03 46.4	
	comp=Z,5.9nm,0.5s						
ILAR	Eielson Array	85.01	25	P	P	07 03 53.2	-1.2
	comp=Z,0.6nm,0.8s,baz=253,slow=4.9,SNR=6.4						

IDC 04 07:05:28.6±0.8**, 8.°04N**×**141.°62E, h0**^{km}**, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.4**/36**, mbtmp3.5**/6**, MS3.1**/5**, Ms1 3.1**/5**, ms1mx2.8**/34**, Error ellipse: s-maj=36.2km s-min=9.2km az=87.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	6.37	30	LR	LR	07 10 18.9	
	comp=Z,68nm,18.8s,baz=154,slow=46						
JAY	Jayapura	10.53	185	LR	LR	07 11 33.7	
	comp=Z,90nm,18.1s,baz=276,slow=35						
H11S3	WAKE ISLAND Hy	26.48	64	T	T	07 38 48.6	
	baz=250,slow=75,SNR=58						
H11S2	WAKE ISLAND Hy	26.50	64	T	T	07 38 44.8	
	baz=250,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	26.50	64	T	T	07 38 45.4	
	baz=250,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	27.09	62	T	T	07 39 28.7	
	baz=248,slow=75,SNR=66						
H11N2	WAKE ISLAND Hy	27.10	62	T	T	07 39 29.2	
	baz=248,slow=75,SNR=61						
H11N3	WAKE ISLAND Hy	27.11	62	T	T	07 39 35.8	
	baz=248,slow=75,SNR=93						
MJAR	Matsushiro Arr	28.54	354	LR	LR	07 22 00.6	
	comp=Z,32nm,19.9s,baz=285,slow=35						
WRA	Warramunga Arr	28.72	194	P	P	07 11 27.1	-0.8
	0.5nm,0.9s,baz=14,slow=9.6,SNR=4.5						
KSRS	Korea Array	31.81	339	LR	LR	07 24 58.7	
	comp=Z,21nm,18.8s,baz=153,slow=37						
ASAR	Alice Springs	32.40	193	P	P	07 12 01.1	+0.7
	0.2nm,0.9s,baz=7.4,slow=9.3,SNR=2.7						
MKAR	Makanchi Array	63.38	319	P	P	07 16 00.9	+0.9
	0.6nm,0.8s,baz=104,slow=6.1,SNR=4.1						
ZALV	Zalesovo Beam	64.37	327	P	P	07 16 06.7	+0.4
	0.5nm,0.6s,baz=123,slow=5.3,SNR=2.6						
KURBB	Kurchatov Arra	66.88	322	P	P	07 16 21.3	-1.3
	0.9nm,0.9s,baz=110,slow=6.6,SNR=5.4						
KDAK	Kodiak Island	70.44	31	LR	LR	07 50 58.5	
	comp=Z,28nm,18.1s,baz=259,slow=39						
ILAR	Eielson Array	74.91	25	P	P	07 17 11.0	-0.2
	0.2nm,0.6s,baz=258,slow=4.8,SNR=4.3						

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*ANF **04** 07:34:12.0±0.5, 44.°48N×114.°28W, h0^{km}, ML4.3/11, Error ellipse: s-maj=6.4km s-min=3.6km az=109.0*

*IDC **04** 07:34:11.3±0.5, 44.°49N×114.°32W, h0^{km}, mb3.9/7, mb1 4.1/14, mb1mx3.8/48, mbtmp3.9/14, ML3.6/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/60, Error ellipse: s-maj=10.9km s-min=7.0km az=105.0*

*BUT **04** 07:34:12.3±2.8, 44.°48N±0.°03×114.°18W±0.°05, h10^{km}±6^{km}, ML4.1, mb4.1/8(NEIC), ML4.0/92(NEIC), Mwr3.8/66(NEIC), Error ellipse: s-maj=6.2km s-min=3.4km az=125.0*

*NEIC **04** 07:34:13.3, 44.°50N×114.°20W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-4.13; $M_{\theta\theta}$1.60; $M_{\phi\phi}$2.54; $M_{r\theta}$-2.45; $M_{\theta\phi}$-2.18; $M_{\phi r}$4.53; Fault plane solution: $M_0$6.66000×10^{14} NP1:ϕ_s149.30000°, δ70.49000°, λ-84.25000°. NP2:ϕ_s312.52000°, δ20.30000°, λ-105.79000°. Principal axes: T 6.6948, Plg25.0000°, Azm235.0000°; N -0.0770, Plg5.0000°, Azm327.0000°; P -6.6178, Plg64.0000°, Azm69.0000°;*

*NEIC **04** 07:34:13.6±2.5, 44.°53N±0.°04×114.°18W±0.°05, h4^{km}±6^{km} Error ellipse: s-maj=5.9km s-min=4.2km az=134.0*

ISC 04 07:34:13.4±0.5**, 44.°60N**±0.°03×**114.°29W**±0.°03**, h10**^{km}**, n136, σ1**^{s}**79**/144**, mb4.0**/8**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCYI	Bear Canyon	0.69	114		Pg	07 34 23.1	-3.7
HLID	Hailey	1.04	185	P	Pg	07 34 29.7	-3.7
	baz=10,SNR=1000						
HLID				S	Sg	07 34 41.6	-5.3
	baz=10						
HLID	Hailey	1.04	185	Pg	Pg	07 34 29.9	-3.5
HLID				Sg	Sg	07 34 43.0	-4.0
HLID				IAML		07 34 43.9	
	5µm,0.3s						
HLID				IAML		07 34 47.1	
	3µm,0.4s						
MCMT	McKenzie Canyo	1.05	77		Pg	07 34 31.5	-2.0
DLMT	Dillon	1.42	57		Pn	07 34 39.0	-0.4
DLMT				Sg	Sg	07 34 58.8	-0.2
MFID	Camas Ranch	1.63	224	Pn	Pn	07 34 41.2	-1.0
MFID				Sg	Sn	07 35 04.6	+1.4
LRM	Limekiln Ridge	1.78	46		Pn	07 34 44.1	-0.3
BOZ	Bozeman (W)	2.13	61	P	Pn	07 34 48.1	-1.0
	baz=239,SNR=545						
BOZ				S	Sb	07 35 18.9	+0.4
	baz=239						
BOZ	Bozeman (W)	2.13	61		Pn	07 34 48.2	-0.9
BMO	Blue Mountains	2.17	278		Pn	07 34 50.6	+1.0
BMO				IAML		07 35 25.9	
	819nm,0.6s						
BMO				IAML		07 35 27.5	
	591nm,0.4s						
YHB	Horse Butte	2.21	85	Pn	Pn	07 34 49.1	-1.1
YHL	Hebgen Lake	2.23	82		Pn	07 34 49.6	-1.0
MSO	Missoula	2.24	6	P	Pn	07 34 51.6	+1.1
	baz=184						
MSO				S	Sb	07 35 21.3	-0.5
	baz=184						
MSO	Missoula	2.24	6	Pn	Pn	07 34 51.7	+1.1
MSO				IAML		07 35 32.3	
	872nm,1.0s						
MSO				IAML		07 35 34.5	
	963nm,0.7s						
YMR	Madison River	2.37	87		Pn	07 34 51.6	-0.9
YHH	Holmes Hill	2.46	84		Pn	07 34 52.3	-1.5
F10A	Beach Ranch, E	2.49	304	Pn	Pn	07 34 56.5	+2.5
YPP	Pitchstone Pla	2.52	96		Pn	07 34 53.5	-1.1
YNR	Norris Junctio	2.58	86		Pn	07 34 54.1	-1.2
ECR	Eagle Creek	2.62	125		Pn	07 34 54.3	-1.6
FLWY	Flagg Ranch	2.62	100		Pn	07 34 55.2	-0.7
FLWY				IAML		07 35 35.9	
	1µm,0.8s						
FLWY				IAML		07 35 39.3	
	870nm,1.4s						
H17A	Grant Village	2.66	93	P	Pn	07 34 56.9	+0.4
	baz=273,SNR=97						
H17A	Grant Village	2.66	93		Pn	07 34 57.0	+0.4
MOOW	Moose Ponds	2.69	107	Pn	Pn	07 34 55.4	-1.4
HRY	Holter Researc	2.72	38		Pn	07 34 56.9	-0.4
REDW	Red Top Meadow	2.77	115		Pn	07 34 56.6	-1.4
REDW				IAML		07 35 40.0	
	860nm,0.6s						
REDW				IAML		07 35 49.9	
	801nm,0.8s						
LKWY	Lake	2.78	89		Pn	07 34 58.0	-0.1
LKWY				IAML		07 35 44.0	
	609nm,0.6s						
LOHW	Long Hollow	2.83	109		Pn	07 34 57.7	-1.1
LOHW				IAML		07 35 39.2	
	646nm,0.8s						
LOHW				IAML		07 35 39.8	
	398nm,0.8s						
YMP	Mirror Lake Pl	2.95	86		Pn	07 35 00.2	-0.3
AHID	Auburn Hatcher	2.95	127		Pn	07 35 00.1	-0.4
AHID				IAML		07 35 42.4	
	comp=E,861nm,0.7s						
HVU	Hansel Valley	3.03	158		Pn	07 35 00.2	-1.3
YNE	Yellowstone No	3.07	81	Pn	Pn	07 35 01.7	-0.5
JTMT	Jette	3.15	0		Pn	07 35 04.7	+1.7
JTMT				IAML		07 36 02.3	
	comp=E,521nm,0.4s						
JTMT				IAML		07 36 02.6	
	comp=N,380nm,0.6s						
E09A	Wood Farm, Sta	3.32	307		Pn	07 35 07.9	+2.6
E09A				IAML		07 36 08.4	
	comp=E,245nm,1.0s						
E09A				IAML		07 36 21.0	
	comp=N,234nm,0.8s						
G08A	Pilot Rock	3.39	283	Pn	Pn	07 35 08.2	+1.8
G08A				IAML		07 36 07.2	
	comp=E,233nm,0.8s						
GCMT	Greycliff	3.47	68		Pn	07 35 07.8	+0.2
SPUT	South Promonto	3.56	157		Pn	07 35 10.0	+1.2
RLMT	Red Lodge	3.60	80	P	Pn	07 35 09.8	+0.3
	baz=261						
RLMT	Red Lodge	3.60	80		Pn	07 35 10.2	+0.7
RLMT				IAML		07 36 10.3	
	comp=E,479nm,0.4s						
I07A	Izee	3.78	264		Pn	07 35 13.1	+1.4
BGU	Big Grassy Mou	3.79	165	Pn	Pn	07 35 12.9	+0.9
WVOR	Wild Horse Val	3.84	237		Pn	07 35 13.0	+0.4
WVOR				IAML		07 36 25.9	
	comp=E,203nm,0.9s						
WVOR				IAML		07 36 27.2	
	comp=E,162nm,1.4s						
BW06	Boulder Array	3.89	117	P	Pn	07 35 14.3	+1.0
	baz=299						
BW06	Boulder Array	3.89	117		Pn	07 35 15.0	+1.6
PDAR	Pinedale Array	3.89	117	Pn	Pn	07 35 14.7	+1.3
	comp=E,2.1nm,0.3s,baz=299,slow=11,SNR=141						
PDAR				Lg	Lg	07 36 06.7	
	comp=E,2.1nm,0.3s,baz=302,slow=29,SNR=3.7						
ELK	Elko	3.92	191	Pn	Pn	07 35 13.4	-0.4
	comp=E,3.0nm,0.3s,baz=3.1,slow=9.4,SNR=33						
ELK				Pg	Pb	07 35 18.2	-4.5
	comp=E,15nm,0.3s,baz=8.9,slow=14,SNR=64						
ELK				Lg	Lg	07 36 07.7	
	comp=E,56nm,0.3s,baz=206,slow=13,SNR=15						
ELK				LR	LR	07 36 17.8	
	comp=E,42nm,20.8s,baz=27,slow=33						
ELK	Elko	3.92	191		Pn	07 35 13.5	-0.3
ELK				IAML		07 36 11.7	
	comp=E,198nm,0.6s						
D08A	Wollman Farm,	4.07	309	Pn	Pn	07 35 18.2	+2.6
D08A				IAML		07 36 32.6	
	comp=N,123nm,0.8s						
TCUT	Toone Canyon	4.07	148		Pn	07 35 16.2	+0.2
HAWA	Hanford	4.10	298	Pn	Pn	07 35 17.9	+1.8
NEW	Newport	4.16	333	Pn	Pn	07 35 19.0	+2.2
	comp=N,8.8nm,0.3s,baz=141,slow=13,SNR=120						
NEW				Lg	Lg	07 36 27.9	
	comp=N,44nm,0.3s,baz=73,slow=22,SNR=12						
NEW	Newport	4.16	333	Pn	Pn	07 35 18.9	+2.1
NEW				IAML		07 36 33.6	
	comp=N,204nm,0.8s						
C09A	Chrisman Ranch	4.23	321	Pn	Pn	07 35 20.7	+2.8
CTU	Camp Tracy	4.33	154	Pn	Pn	07 35 20.9	+1.5
E07A	Sunnyside	4.37	299	Pn	Pn	07 35 22.2	+2.4
E07A				IAML		07 36 40.5	
	comp=E,132nm,0.7s						
E07A				IAML		07 36 47.4	
	comp=N,154nm,0.7s						
WALA	Waterton Lakes	4.47	3	Pn	Pn	07 35 23.3	+2.1
WALA				IAML		07 36 46.3	
	comp=N,146nm,1.3s						
DUG	Dugway, Tooele	4.54	166	P	Pn	07 35 20.5	-1.7
	baz=347						
DUG				Sb	Sb	07 36 28.9	+1.0
	baz=347						
EGMT	Eagleton	4.64	41	P	Pn	07 35 23.5	-0.1
	baz=222						
EGMT				Sb	Sg	07 36 37.5	-4.9
	baz=222						
EGMT	Eagleton	4.64	41	Pn	Pn	07 35 23.5	-0.1
PINE	Pine Mountain	4.85	263	Pn	Pn	07 35 27.7	+1.1
MPU	Maple Canyon	4.99	156	Pn	Pn	07 35 28.9	+0.5
G05D	Wamic, OR	5.04	280	P	Pn	07 35 30.8	+1.9
	baz=96						
I05D	Terrebonne, OR	5.06	269	Pb	Pb	07 35 40.6	-1.3
	baz=86,SNR=5.9						
B08A	Colville Reser	5.12	319	Pn	Pn	07 35 32.6	+2.4
B08A				IAML		07 37 06.2	
	comp=N,105nm,0.8s						
B08A				IAML		07 37 11.9	
	comp=E,96nm,0.7s						
LTY	Liberty	5.19	303		Pn	07 35 32.9	+1.9
LTY				IAML		07 37 12.0	
	comp=N,54nm,1.8s						
LTY				IAML		07 37 19.3	
	comp=E,66nm,1.2s						
J05D	Fort Rock, OR	5.19	258	P	Pn	07 35 32.9	+1.7
	baz=74,SNR=16						
J05D				Sg	Sg	07 36 59.4	-0.5
	baz=74						
H04A	Detroit Lake	5.64	274	Pn	Pn	07 35 40.2	+2.9
LON	Longmire	5.69	295		Pn	07 35 40.8	+2.7
K04D	Chiloquin, OR	5.77	253	P	Pn	07 35 40.5	+1.4
	baz=69,SNR=13						
TMUT	Trail Mountain	5.78	156		Pn	07 35 39.9	+0.6
RWWY	Rawlins	5.94	117		Pn	07 35 42.1	+0.5
K22A	Casper	5.96	106	P	Pn	07 35 43.0	+1.2
	baz=291,SNR=9.3						
K22A				Sb	Sb	07 37 09.9	+1.0
	baz=291						
K22A	Casper	5.96	106		Pn	07 35 43.0	+1.2
D05A	Enumclaw	5.97	298	Pn	Pn	07 35 44.9	+3.2
LAO	LASA Array	6.03	67	Sb	Sb	07 37 17.0	+6.4
	baz=251						
LAO	LASA Array	6.03	67		Pn	07 35 42.3	-0.2
PSUT	Pine Spring	6.07	177		Pn	07 35 45.7	+2.3
TCRU	Three Creeks R	6.14	166		Pn	07 35 45.5	+1.1
SRU	San Rafael Swe	6.16	152		Pn	07 35 45.4	+0.8
M04C	Macdoel	6.20	246	Pb	Pg	07 36 09.7	-2.3
	baz=62						
L04D	Klamath Falls	6.31	251	P	Pn	07 35 47.3	+0.7
	baz=66						
O20A	White River Ci	6.32	133	P	Pn	07 35 48.0	+1.3
	baz=317,SNR=12						
O20A				Sb	Sb	07 37 23.4	+4.2
	baz=317						
O20A	White River Ci	6.32	133	Pn	Pn	07 35 48.8	+2.0
R11A	Troy Canyon, C	6.32	189	P	Pn	07 35 49.2	+2.4
	baz=9.3						
R11A				Sb	Sb	07 37 23.7	+4.3
	baz=9.3						
HUMO	Hull Mountain	6.60	255	Pn	Pn	07 35 51.5	+1.0
YBH	Yreka Blue Hor	6.79	248	Pn	Pn	07 35 53.9	+0.7
	comp=E,0.6nm,0.3s,baz=44,slow=6.7,SNR=22						
YBH	Yreka Blue Hor	6.79	248	Pn	Pn	07 35 54.7	+1.5
NVAR	Mina Array Bea	6.86	207	Pn	Pn	07 35 55.1	+0.9
	comp=E,0.4nm,0.3s,baz=27,slow=11,SNR=18						
NVAR				Lg	Lg	07 37 43.6	
	comp=E,2.6nm,0.3s,baz=27,slow=37,SNR=4.3						
O03E	Paynes Creek	7.03	235	P	Pn	07 36 01.6	+5.3
	baz=51						
M02C	Callahan	7.05	246	Pg	Pg	07 36 23.6	-4.7
	baz=61						
N23A	Red Feather La	7.17	118	P	Pn	07 35 59.2	+0.7
	baz=303,SNR=12						
N23A				Sb	Sb	07 37 48.1	+4.4
	baz=303						
N23A	Red Feather La	7.17	118	Pn	Pn	07 35 59.2	+0.7
WDC	Whiskeytown Da	7.30	239	Pn	Pn	07 36 03.8	+3.8
PV22	Blue Mesa, Par	7.33	144		Pn	07 36 00.8	+0.2
RSSD	Black Hills	7.36	90		Pn	07 36 01.2	+0.2
ORV	Oroville	7.36	229	Pn	Pn	07 36 03.4	+2.5
PV14	Lion Creek, Pa	7.37	146		Pn	07 36 01.2	0.0
PV04	Paradox Valley	7.40	145		Pn	07 36 03.1	+1.5
PV07	Paradox Valley	7.47	144		Pn	07 36 03.1	+0.5
PV17	East Wray Mesa	7.47	146		Pn	07 36 02.4	-0.2
PV11	David Mesa, Pa	7.49	145		Pn	07 36 03.2	+0.3
PV12	Saucer Basin,	7.51	145		Pn	07 36 04.4	+1.3
PV03	Paradox Valley	7.54	145		Pn	07 36 04.0	+0.4
PV05	Paradox Valley	7.59	147		Pn	07 36 05.2	+1.0
PV15	Paradox Valley	7.62	143		Pn	07 36 06.0	+1.4
PV13	Radium Mtn., P	7.63	146		Pn	07 36 05.0	+0.2
SMCO	Snowmass	7.69	132		Pn	07 36 05.8	+0.1
PV01	Paradox Valley	7.76	144		Pn	07 36 07.0	+0.5
TPNV	Topopah Spring	7.79	192	P	Pn	07 36 11.1	+4.2
	baz=11						
ISCO	Idaho Springs	8.03	124	P	Pn	07 36 11.1	+0.8
	baz=309,SNR=5.3						
ISCO	Idaho Springs	8.03	124	Pn	Pn	07 36 10.3	0.0
SHPR	Sheep Range	8.12	185		Pn	07 36 11.7	+0.3
MVCO	Mesa Verde	8.58	147		Pn	07 36 19.5	+1.7
Q24A	Divide	8.85	126		Pn	07 36 22.1	+0.6
ECSD	EROS Data Cent	12.72	88	Pn	Pn	07 37 14.3	0.0
ULM	Lac du Bonnet	13.67	59	Pn	Pn	07 37 23.9	-3.3
	comp=E,0.2nm,0.3s,baz=270,slow=14,SNR=2.4						
ULM				Lg	Lg	07 41 14.6	
	comp=E,0.7nm,0.3s,baz=164,slow=22,SNR=6.4						
ULM				LR	LR	07 42 43.6	

	comp=E,116nm,18.1s,baz=246,slow=37						
WMOK	Wichita Mounta	15.45	124	P	P	07 37 56.0	+0.1
DLBC	Dease Lake	16.90	331	Lg	Lg	07 43 00.6	
	comp=E,0.2nm,0.3s,baz=344,slow=20,SNR=4.1						
YKA	Yellowknife Ar	17.93	360	P	Pn	07 38 21.4	-1.1
	comp=E,0.2nm,0.3s,baz=173,slow=13,SNR=36						
YKA				Lg	Lg	07 43 29.6	
	comp=E,0.1nm,0.3s,baz=169,slow=25,SNR=3.8						
MGMO	Mountain Grove	18.20	107	P	Pn	07 38 26.3	+0.2
MGMO				IAmb	IAmb	07 38 28.2	
	comp=Z,19nm,1.2s						
U40A	Yellville	18.23	109	P	Pn	07 38 26.4	0.0
U40A				IAmb	IAmb	07 38 29.5	
	comp=Z,9.8nm,0.8s						
CCM	Cathedral Cave	18.47	103		P	07 38 28.4	-0.8
FCAR	Ozark Folk Cen	18.98	110	P	P	07 38 34.1	-0.7
FCAR				IAmb	IAmb	07 38 36.8	
	comp=Z,14nm,0.9s						
PBMO	Poplar Bluff	19.66	105	P	P	07 38 43.0	+0.7
PBMO				IAmb	IAmb	07 38 46.8	
	comp=Z,11nm,0.8s						
WVT	Waverly	21.79	104	P	P	07 39 04.8	-0.5
LRAL	Lakeview Retre	24.08	109	P	P	07 39 29.4	+0.5
INK	Inuvik	25.79	344	P	P	07 39 46.0	+1.9
	comp=Z,1.0nm,1.0s,baz=141,slow=7.2,SNR=3.3						
ILAR	Eielson Array	27.11	330	P	P	07 39 54.9	-1.2
	comp=Z,0.4nm,0.7s,baz=116,slow=8.1,SNR=3.2						
RES	Resolute Bay	31.38	10	P	P	07 40 33.8	-0.1
	comp=Z,0.9nm,0.5s,baz=182,slow=8.3,SNR=5.8						
SFJD	Kangerlussuaq	39.82	33	P	P	07 41 47.9	+1.6
	comp=Z,6.2nm,0.5s,baz=254,slow=13,SNR=5.8						
FINES	FINESS Array B	69.55	19	P	P	07 45 21.1	-0.7
	comp=Z,2.1nm,0.8s,baz=319,slow=15,SNR=0.9						
ESDC	Sonseca Array	75.31	48	P	P	07 45 57.1	+0.4
	comp=Z,1.5nm,0.9s,baz=308,slow=6.3,SNR=11						
GERES	GERESS Array B	76.41	32	P	P	07 46 03.8	+0.9
	comp=Z,0.3nm,0.6s,baz=334,slow=6.5,SNR=2.1						
HHC	Hu-ho-hao-te	85.50	327	*e*P	P	07 46 52.1	+0.6
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,82nm,6.6s						
WMQ	Urumqi	89.81	344	*e*P	P	07 47 13.6	+1.5
DZM	Mont Dzumac	97.94	247	LR	LR	08 23 00.6	
	comp=Z,203nm,21.5s,baz=342,slow=30						

IDC 04 07:36:37.8±6.5**, 5°.83S×151°.05E, h60**^{km}±55^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.3**/36**, mbtmp3.8**/4**, ML1.6**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/27**, Error ellipse: s-maj=122.5km s-min=36.1km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.24	227	P	Pn	07 37 55.1	+1.5
	1.5nm,0.3s,baz=94,slow=15,SNR=2.5						
PMG				S	Sn	07 38 48.2	-4.5
	3.2nm,0.3s,baz=284,slow=12,SNR=4.2						
PMG				LR	LR	07 39 39.5	
	comp=Z,82nm,18.1s,baz=315,slow=35						
WRA	Warramunga Arr	21.46	228	P	P	07 41 20.4	-1.0
	2.6nm,0.8s,baz=53,slow=11,SNR=12						
ASAR	Alice Springs	24.22	221	P	P	07 41 49.1	0.0
	3.0nm,0.7s,baz=55,slow=8.6,SNR=32						
ILAR	Eielson Array	83.77	22	P	P	07 48 59.9	-0.4
	0.4nm,0.6s,baz=244,slow=4.9,SNR=6.6						
TORD	Torodi Ar. Bea	148.94	286	PKPbc	PKPbc	07 56 20.5	+0.4
	0.4nm,0.5s,baz=93,slow=3.7,SNR=4.1						

IDC 04 07:44:42.6±1.3**, 5°.90S×130°.32E, h0**^{km}**, mb3.2**/1**, mb1 3.6**/4**, mb1mx3.4**/35**, mbtmp3.4**/4**, ML3.6**/3**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/12**, Error ellipse: s-maj=16.0km s-min=12.7km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.96	200	Pn	Pn	07 47 48.3	+0.1
	0.2nm,0.3s,baz=28,slow=8.8,SNR=11						
FITZ				Sn	Sn	07 49 59.9	-13
	0.5nm,0.3s,baz=264,slow=20,SNR=6.0						
DAV	Davao City (W)	13.72	340	LR	LR	07 52 53.3	
	comp=Z,643nm,21.5s,baz=10.0,slow=36						
WRA	Warramunga Arr	14.50	165	Pn	Pn	07 48 09.0	-0.3
	0.3nm,0.3s,baz=338,slow=14,SNR=12						
WRA				Sn	Sn	07 50 37.7	-13
	0.3nm,0.3s,baz=342,slow=22,SNR=5.7						
ASAR	Alice Springs	18.00	169	P	P	07 48 55.0	0.0
	0.2nm,0.3s,baz=345,slow=9.6,SNR=8.9						
ASAR				S	Sn	07 52 03.1	-13
	0.1nm,0.3s,baz=356,slow=26,SNR=3.2						
MKAR	Makanchi Array	67.49	326	P	P	07 55 40.2	-0.3
	0.1nm,0.4s,baz=115,slow=8.1,SNR=2.0						

*BGR **04** 07:49:33.5±0.0, 65°.03N×20°.36W, h33^{km}, mb4.6*
*REY **04** 07:49:41.0, 64°.65N×17°.37W, h0^{km}*
*MOS **04** 07:49:42.7±1.7, 64°.61N×17°.73W, h12^{km}, mb4.5/28, Error ellipse: s-maj=13.0km s-min=8.3km az=114.8*
*NEIC **04** 07:49:42.3±1.8, 64°.60N±0°.09×17°.67W±0°.08, h6^{km}±4^{km}, mb4.5/32, Error ellipse: s-maj=13.7km s-min=3.5km az=197.0*
*IDC **04** 07:49:43.0±0.7, 64°.66N×17°.40W, h0^{km}, mb4.0/22, mb1 4.1/25, mb1mx4.0/47, mbtmp4.0/25, ML2.7/2, MS3.5/19, Ms1 3.5/19, ms1mx3.2/57, Error ellipse: s-maj=19.3km s-min=12.1km az=29.0*

ISC 04 07:49:43.5±0.4**, 64°.62N**±0°.03×**17°.59W**±0°.03**, h10**^{km}**, n199,** σ**1**^{s}**.89**/186**, mb4.3**/72**, MS3.5**/17**, 10C-1D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHAM	Hamarinn	0.18	216	P	Pg	07 49 46.4	-1.0
	baz=229						
IDYN	Dyngjuhals	0.19	29	P	Pg	07 49 44.5	-3.1
	baz=0.9						
IDYN				S	Sg	07 49 47.2	-3.4
	baz=0.9						
IURH	Urdarhals	0.27	43	P	Pg	07 49 45.7	-3.4
	baz=29						
ISKR	Skrokkalda	0.35	260	P	Pb	07 49 49.7	-2.2
	baz=259						
IKVE	Kverkfjoll	0.40	81	P	Pg	07 49 47.5	-3.9
	baz=84						
IJOK	Jokulheimar	0.41	222	P	Pb	07 49 50.8	-2.2
	baz=228						
IIEY	Innrieyrar	0.58	204	P	Pb	07 49 53.4	-2.4
	baz=211						
IKSK	Karasker	0.67	133	P	Pg	07 49 52.5	-4.0
	baz=141						
IKSK				S	Sg	07 50 02.2	-3.0
	baz=141						
IKAL	Kalfafell	0.68	184	P	Pg	07 49 54.5	-2.1
	baz=191						
ISVA	Svartarkot	0.73	11	P	Pg	07 49 53.8	-3.8
	baz=4.1						
IVSH	V-Sauoahnukur	0.82	76	P	Pg	07 49 54.3	-5.0
	baz=76						
IFAG	Fagurholsmyri	0.85	151	P	Pg	07 49 56.4	-3.5
	baz=158						
IHVE	Hveravellir	0.89	287	P	Pg	07 49 58.5	-2.1
	baz=284						
IADA	Aoalbol	0.95	64	P	Pg	07 49 56.5	-5.3
	baz=63						
ISNB	Snabyli	1.00	208	P	Pb	07 50 00.4	-2.5
	baz=212						
IMEL	Melhnausar	1.03	22	P	Pb	07 49 58.4	-5.1
	baz=18						
IMEL				S	Sb	07 50 13.7	-3.3
	baz=18						
IREN	Reynihlio	1.07	15	P	Pb	07 49 59.3	-4.8
	baz=11						
IFED	Fedgar	1.10	238	P	Pn	07 50 03.0	-1.9
	baz=239						
IRJU	Rjupnafell	1.12	206	P	Pb	07 50 02.7	-2.2
	baz=210						
IKVO	Krokottuvotn	1.14	15	P	Pn	07 50 00.3	-5.2
	baz=11						
IMJO	Mjoaskard	1.14	234	P	Pn	07 50 03.7	-2.0
	baz=236						
IGYG	Gygjarholskot	1.19	254	P	Pg	07 50 03.9	-2.5
	baz=255						
IGRS	Grimsstaoir	1.19	31	P	Pn	07 50 01.1	-5.1
	baz=27						
IGRS				S	Sb	07 50 17.3	-4.3
	baz=27						
IHVO	Lagu-Hvolar	1.23	207	P	Pb	07 50 04.4	-2.5
	baz=211						
ISKI	Skildingahlsh	1.27	10	P	Pn	07 50 02.7	-4.6
	baz=6.6						
IGHA	Grjothals	1.29	17	P	Pn	07 50 02.7	-4.8
	baz=14						
IGRA	Granastaoir	1.30	0	P	Pn	07 50 03.2	-4.5
	baz=356						
IDIM	Dimmadalss	1.37	11	P	Pn	07 50 04.2	-4.6
	baz=7.8						
IESK	Eystri-Skogar	1.37	217	P	Pb	07 50 06.9	-2.4
	baz=220						
ISAU	Saurbar	1.39	244	P	Pn	07 50 06.7	-2.1
	baz=245						
IMID	Miomork	1.40	227	P	Pb	07 50 07.2	-2.4
	baz=229						
IHED	Heoinshofoi	1.47	4	P	Pn	07 50 05.7	-4.3
	baz=1.0						
IBRE	Brettingsstaoi	1.51	355	P	Pn	07 50 06.6	-4.0
	baz=352						
IBRE				S	Sn	07 50 27.7	-2.6
	baz=352						
IASM	Asmuli	1.54	240	P	Pb	07 50 09.5	-2.6
	baz=242						
IGIL	Gilhagi	1.55	19	P	Pn	07 50 06.5	-4.6
	baz=16						
BORG	Borgarnes	1.61	276	P	Pn	07 50 10.0	-2.0
BORG	Borgarnes	1.61	276		Pn	07 50 10.0	-2.0
ISIG	Siglufjorour	1.61	340	P	Pn	07 50 08.6	-3.4
	baz=337						
ISOL	Solvholt	1.62	246	P	Pn	07 50 10.3	-1.8
	baz=247						
IKRO	Krokur	1.62	253	P	Pn	07 50 10.6	-1.6
	baz=253						
IHEI	Heioarbar	1.64	257	P	Pn	07 50 10.6	-1.8
	baz=257						
ISAN	Sandskeio	1.82	254	P	Pn	07 50 13.8	-1.1
	baz=254						
ILEI	Leirhofn	1.85	14	P	Pn	07 50 11.2	-4.0
	baz=11						
IKUD	Kuludalsa	1.88	263	P	Pn	07 50 14.0	-1.7
	baz=262						
IVOS	Vogsosar	1.96	249	P	Pn	07 50 15.3	-1.4
	baz=249						
SCO	Scoresbysund	6.12	346	*e*	Pn	07 51 09.3	-4.5
	baz=164,slow=7.4						
SCO				*i* P	Pn	07 51 13.0	-0.8
SCO				*i* S	Sn	07 52 26.8	+3.0
SCO				IAML		07 52 40.8	
	comp=Z,3.0nm,0.5s						
DBG	Daneborg	9.78	356	*e*P	Pn	07 52 14.0	+10
EKA	Eskdalemuir Ar	11.75	136	Pn	Pn	07 52 30.4	-0.7
	baz=324,slow=13,SNR=20						
ESK	Eskdalemuir	11.75	136	P	Pn	07 52 30.9	-0.1
ESK	Eskdalemuir	11.75	136	Pn	Pn	07 52 30.9	-0.1
DAG	Danmarks Havn	12.22	359	*i* P	Pn	07 52 40.0	+2.8
DAG	Danmarks Havn	12.22	359	*i* P	Pn	07 52 40.1	+2.8
NOA	NORSAR Array B	13.57	92	Pn	Pn	07 52 52.5	-3.3
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.5						
NOA				LR	LR	07 57 41.8	
	comp=Z,110nm,20.2s,baz=295,slow=36						
KONO	Kongsberg	13.58	99	*i* P	Pn	07 53 00.3	+4.4
KONO				pmax	pmax		
	comp=Z,17nm,1.1s						
SFJD	Kangerlussuaq	13.65	295	LR	LR	07 57 37.7	
	comp=Z,185nm,21.1s,baz=99,slow=35						
SPITS	Spitsbergen Ar	16.92	23	LR	LR	07 58 10.8	
	comp=Z,102nm,21.3s,baz=15,slow=30						
ARCES	ARCESS Array B	17.17	54	LR	LR	07 59 13.0	
	comp=Z,138nm,18.8s,baz=305,slow=33						
BTNL	Ternell	18.78	127	*d*Pn	P	07 54 02.4	-0.2
FINES	FINESS Array B	19.75	79	P	P	07 54 13.2	+0.1
	comp=Z,0.1nm,0.3s,baz=335,slow=18,SNR=4.4						
FINES				LR	LR	08 00 57.1	
	comp=Z,155nm,19.1s,baz=251,slow=34						
TULEG	Thule	19.87	327		P	07 54 13.6	-0.7
TULEG				IAmb	IAmb	07 54 21.6	
	comp=Z,33nm,1.5s						
CLL	Collm	20.72	115	*i* P	P	07 54 23.7	0.0
	comp=Z,117nm,2.5s						
CLL				*i*		07 54 36.2	
CLL	Collm	20.72	115	P	P	07 54 23.5	-0.2
CLL				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL	Collm	20.72	115	P	P	07 54 23.5	-0.2
GRF	Grafenberg Arr	21.34	121	*e*P	P	07 54 30.6	+0.2
	comp=Z,26nm,1.4s,baz=324,slow=10						
NKC	Novy Kostel	21.36	118	*e*P	P	07 54 35.3	+4.6
NKC	Novy Kostel	21.36	118	*e*P	P	07 54 35.3	+4.6
BRG	Berggiesshubel	21.43	115	*i* P	P	07 54 31.6	+0.2
BRG				Amp		07 54 34.2	
	comp=Z,22nm,1.2s						
BRG	Berggiesshubel	21.43	115	*i* P	P	07 54 31.5	+0.2
BRG				pmax	pmax		
	comp=Z,22nm,1.2s						
BRG	Berggiesshubel	21.43	115	*i* P	P	07 54 31.6	+0.2
BRG				Amp		07 54 34.2	
	comp=Z,22nm,1.2s						
BFO	Black Forest	21.45	127	P	P	07 54 30.4	-1.3
BFO				pmax	pmax		
	comp=Z,17nm,1.2s						
BFO	Black Forest	21.45	127	P	P	07 54 30.4	-1.3
BFO				IAmb	IAmb	07 54 40.7	
	comp=Z,17nm,1.2s						
VSU	Vasula	21.61	86	*i* P	P	07 54 35.7	+2.5
VSU				pmax	pmax		
	comp=Z,82nm,1.0s						
FRB	Frobisher Bay	21.73	291	LR	LR	08 02 16.9	
	comp=Z,145nm,20.9s,baz=70,slow=35						
PRU	Pruhonice	22.36	116	*e*P	P	07 54 45.7	+4.3
KSP	Ksiaz	22.38	112	*e*P	P	07 54 41.5	-0.1
CHVC	Chvalec	22.48	113	*e*P	P	07 54 45.6	+2.9
UPC	Upice	22.53	113	*e*P	P	07 54 44.9	+1.7
UPC	Upice	22.53	113	*e*P	P	07 54 44.9	+1.7
KHC	Kasperske Hory	22.69	118	*ce*P	P	07 54 47.4	+2.5
KHC				pmax	pmax		
	comp=Z,20nm,1.3s						
KHC	Kasperske Hory	22.69	118	*e*P	P	07 54 45.7	+0.8
KHC	Kasperske Hory	22.69	118	P	P	07 54 43.6	-1.3
DPC	Dobruska-Polom	22.78	113	*e*P	P	07 54 49.1	+3.2
DAVA	Damuels	22.89	126	*e*P	P	07 54 47.6	+0.5
	comp=Z,19nm,2.4s						
GEC2	GERESS Array S	22.97	118	P	P	07 54 46.8	-1.1
GERES	GERESS Array B	22.97	118	P	P	07 54 49.8	+1.9
	comp=Z,1.5nm,0.9s,baz=316,slow=7.5,SNR=6.8						
GERES				LR	LR	08 03 53.2	
	comp=Z,136nm,20.1s,baz=292,slow=37						
RETA	Reutte	23.02	125	*e*P	P	07 54 49.5	+1.0
	comp=Z,11nm,1.5s						
MOTA	Moosalm	23.27	124	*e*P	P	07 54 52.7	+1.7
	comp=Z,4.9nm,1.0s						
DAVOX	Davos/Dischmat	23.32	127	P	P	07 54 51.6	-0.1
	comp=Z,1.4nm,0.4s,baz=287,slow=8.4,SNR=4.1						
TMCR	Tamitsa	23.40	66	*e*P	P	07 54 54.1	+2.1
TMCR				pmax	pmax		
	comp=Z,24nm,1.3s						
TUE	Stuetta	23.41	128	P	P	07 54 51.4	-1.1
TUE				IAmb	IAmb	07 54 56.1	
	comp=Z,20nm,1.4s						
FETA	Feichten	23.41	125	*e*P	P	07 54 54.8	+2.3
	comp=Z,4.0nm,1.1s						
SQTA	Sankt Quirin	23.41	124	*e*P	P	07 54 54.4	+2.0
	comp=Z,22nm,1.8s						
WATA	Walderalm	23.44	124	P	P	07 54 52.9	+0.1
	comp=Z,5.3nm,1.0s						
WTTA	Wattenberg	23.53	124	*e*P	P	07 54 54.0	+0.4
	comp=Z,13nm,1.4s						
EUNU	Eureka	23.70	336	P	P	07 54 53.5	-1.4
EUNU				IAmb	IAmb	07 55 00.0	
	comp=Z,22nm,1.5s						
VRAC	Vranov	23.71	114	P	P	07 54 55.4	+0.2
	comp=Z,1.8nm,0.8s,baz=327,slow=7.6,SNR=4.7						
VRAC				LR	LR	08 04 11.3	
	comp=Z,114nm,19.0s,baz=312,slow=37						
VRAC	Vranov	23.71	114	*e*P	P	07 54 55.3	0.0
MORC	Moravsky Berou	23.71	112	*e*P	P	07 54 54.9	-0.4
MORC	Moravsky Berou	23.71	112	P	P	07 54 54.4	-0.9
MORC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MORC	Moravsky Berou	23.71	112	P	P	07 54 54.4	-0.9
KRUC	Moravsky	23.83	115	*e*P	P	07 54 55.7	-0.7
OKC	Ostrava-Krasne	23.91	111	*e*P	P	07 54 49.1	-8.0
ABTA	Abfaltersbach	24.28	123	*e*P	P	07 55 00.6	-0.2
	comp=Z,6.0nm,1.2s						
CONA	Conrad Observa	24.54	117	*e*P	P	07 55 05.0	+1.9
	comp=Z,5.1nm,1.0s						
CTI	Castel Tesino	24.57	125	P	P	07 55 01.7	-1.7
CTI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTI	Castel Tesino	24.57	125	P	P	07 55 01.7	-1.7
MNK	Minsk	24.60	93	*i* P	P	07 55 03.9	+0.5
	comp=E,4.0nm,1.2s						
MNK				*i* P	P	07 55 03.9	+0.5
	comp=N,20nm,1.0s						
MNK				*i* P	P	07 55 03.9	+0.5
	comp=Z,18nm,0.9s						
MNK				*i* PP	PnPn	07 55 35.8	+1.4
MNK				*i* PPP	PPP	07 55 43.8	
MNK				*i* PcP	PcP	07 58 40.2	-0.4
MNK				*i* S	S	07 59 26.0	+1.9
MNK				*i* SS	SnSn	08 00 14.7	+5.9
MNK				*i* SSS	SSS	08 00 28.4	
MNK				*i* PcS	PcS	08 02 20.4	0.0
MNK				*i* LR	LR	08 04 44.9	
MNK				*i* LRM	MLR	08 05 33.2	
	comp=Z,26nm,5.5s						
MNK				*i* LRM	MLR	08 05 35.8	
	comp=E,6.0nm,6.2s						
MNK				*i* LRM	MLR	08 05 37.2	
	comp=N,48nm,7.6s						
SMOL	Smolenice	24.68	114	*e*P	P	07 55 06.4	+2.2
SMOL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SMOL	Smolenice	24.68	114	*e*P	P	07 55 06.4	+2.2
LANS	Liptovska Anna	24.98	110	*e*P	P	07 55 09.2	+2.2
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	Liptovska Anna	24.98	110	*e*P	P	07 55 09.2	+2.2
OBKA	Obir	25.23	120	*e*P	P	07 55 12.5	+3.2
	comp=Z,8.7nm,1.4s						
VYHS	Vyhne	25.25	112	*e*P	P	07 55 12.4	+3.0
VYHS				pmax	pmax		
	comp=Z,11nm,1.5s						
VYHS	Vyhne	25.25	112	*e*P	P	07 55 12.4	+3.0
SOKA	Soboth	25.27	120	*e*P	P	07 55 11.6	+2.0
	comp=Z,4.5nm,1.5s						
KLMR	Klimovskoe	25.65	72	*e*P	P	07 55 09.4	-3.4
KLMR				pmax	pmax		
	comp=Z,28nm,1.6s						
KLMR	Klimovskoe	25.65	72	*e*P	P	07 55 09.5	-3.4
KLMR				AMP		07 55 11.8	
	comp=Z,28nm,1.6s						
CRVS	Cervenica-Dubn	25.99	108	*e*P	P	07 55 18.0	+1.9
CRVS				pmax	pmax		
	comp=Z,66nm,2.1s						
CRVS	Cervenica-Dubn	25.99	108	*e*P	P	07 55 18.0	+1.9
PSZ	Piszkesteto	26.14	112	P	P	07 55 16.4	-1.1
PSZ				pmax	pmax		
	comp=Z,23nm,1.4s						
PSZ	Piszkesteto	26.14	112	P	P	07 55 16.4	-1.1
PSZ				IAmb	IAmb	07 55 21.1	
	comp=Z,23nm,1.4s						
ESDC	Sonseca Array	26.23	156	P	P	07 55 20.0	+1.6
	comp=Z,1.3nm,0.8s,baz=348,slow=8.9,SNR=10.0						
ESDC				LR	LR	08 05 27.5	
	comp=Z,50nm,18.7s,baz=100,slow=36						
KOLS	Kolonicke sedl	26.30	107	*e*P	P	07 55 20.9	+2.0
KOLS				pmax	pmax		
	comp=Z,13nm,1.3s						
KOLS	Kolonicke sedl	26.30	107	*e*P	P	07 55 20.9	+2.0
LVV	L'vov	26.34	104	*e*P	P	07 55 20.3	+1.1
UZH	Uzhgorod	26.54	108	*e*P	P	07 55 24.6	+3.5
UZH				*i*		07 55 27.0	
UZH				*e*		07 55 29.9	
AKASG	Malin Array Be	27.87	97	P	P	07 55 32.9	-0.1
	comp=Z,1.3nm,0.8s,baz=325,slow=9.9,SNR=5.2						
OBN	Obninsk	27.92	84	*e*P	P	07 55 34.8	+1.4
OBN				*e*SS	SS	08 01 46.0	-28
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,89nm,16.0s						
MLR	Muntele Rosu	30.55	108	LR	LR	08 09 35.4	
	comp=Z,83nm,19.2s,baz=300,slow=39						
ARU	Arti	36.13	66	P	P	07 56 46.9	+1.6
	comp=Z,0.7nm,0.6s,baz=340,slow=12,SNR=3.2						
ARU	Arti	36.13	66	*i* P	P	07 56 46.6	+1.3
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	Arti	36.13	66	P	P	07 56 44.6	-0.7
ARU				IAmb	IAmb	07 56 47.2	
	comp=Z,11nm,1.3s						
NRIK	Noril'sk	36.52	35	P	P	07 56 49.3	+0.9
	comp=Z,2.5nm,0.8s,baz=311,slow=5.3,SNR=6.5						
BRTR	Keskin Array B	38.50	105	P	P	07 57 06.3	+0.6
	comp=Z,1.4nm,0.7s,baz=337,slow=7.4,SNR=5.6						
BRTR	Keskin Array B	38.50	105	*ce*P	P	07 57 08.8	+3.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	Kislovodsk	38.88	92	*ce*P	P	07 57 10.8	+2.0
KIV				pmax	pmax		
	comp=Z,14nm,1.7s						
KIV				MLR	MLR		
	comp=Z,50nm,16.0s						
KBZ	Khabaz	39.15	92	P	P	07 57 11.3	+0.4
	comp=Z,7.0nm,0.9s,baz=342,slow=8.8,SNR=6.9						
YKA	Yellowknife Ar	39.22	313	P	P	07 57 11.8	+0.5
	comp=Z,2.6nm,1.1s,baz=40,slow=8.9,SNR=16						
YKA				PcP	PcP	07 59 21.1	+1.1
	comp=Z,0.9nm,1.1s,baz=49,slow=4.2,SNR=5.6						
YKA	Yellowknife Ar	39.22	313	*ce*P	P	07 57 13.8	+2.5
YKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	39.86	329	LR	LR	08 14 50.9	
	comp=Z,73nm,18.8s,baz=11,slow=38						
AKTO	Aktyubinsk	40.34	73	P	P	07 57 20.5	-0.2
	comp=Z,2.1nm,1.0s,baz=313,slow=12,SNR=3.6						
AKTO				LR	LR	08 13 54.5	
	comp=Z,99nm,19.9s,baz=320,slow=36						
A21K	Barrow	41.46	341	P	P	07 57 29.1	-0.6
AB01	Akbulak array	42.04	73	P	P	07 57 34.6	-0.1
ABKAR	Akbulak array	42.04	73	P	P	07 57 33.5	-1.2
TIXI	Tiksi	42.08	15	*e*P	P	07 57 36.6	+1.8
TIXI	Tiksi	42.08	15	P	P	07 57 33.3	-1.5
TIXI				IAmb	IAmb	07 57 38.8	
	comp=Z,13nm,1.1s						
TOLK	Toolik Lake Re	42.77	336	P	P	07 57 40.3	-0.3
BRVK	Borovoye	43.19	62	*ce*P	P	07 57 46.2	+2.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BRVK	Borovoye	43.19	62	P	P	07 57 43.5	-0.5
BRVK				IAmb	IAmb	07 57 46.6	
	comp=Z,11nm,1.3s						
MARD	Mardin	43.54	100	P	P	07 57 46.6	-0.6
DAWY	Dawson	44.72	328	P	P	07 57 56.5	+0.3
DAWY				IAmb	IAmb	07 58 00.6	
	comp=Z,10nm,1.2s						
ILAR	Eielson Array	45.71	332	P	P	07 58 05.8	+1.7
	comp=Z,3.3nm,1.1s,baz=23,slow=7.3,SNR=16						
ILAR				PcP	PcP	07 59 41.8	+0.1
	comp=Z,1.3nm,1.0s,baz=313,slow=1.4,SNR=5.5						
ZALV	Zalesovo Beam	47.69	51	P	P	07 58 19.6	0.0
	comp=Z,0.7nm,0.5s,baz=335,slow=6.6,SNR=6.0						
ZALV				PcP	PcP	07 59 49.5	+0.8
	comp=Z,0.3nm,0.3s,baz=266,slow=5.9,SNR=3.9						
ZALV	Zalesovo Beam	47.69	51	*i* P	P	07 58 19.8	+0.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	48.17	58	*ce*P	P	07 58 23.4	0.0
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURBB	Kurchatov Arra	48.21	58	P	P	07 58 23.6	-0.1
	comp=Z,6.1nm,0.9s,baz=324,slow=7.5,SNR=27						
GEYT	Alibeck	50.47	83	P	P	07 58 41.6	+0.4
	comp=Z,8.4nm,1.2s,baz=243,slow=9.5,SNR=4.2						
GEYT				LR	LR	08 21 02.2	
	comp=Z,57nm,18.3s,baz=45,slow=37						
KK31	Karatay Array	51.33	70	P	P	07 58 46.6	-0.9
KK31				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KK31	Karatay Array	51.33	70	P	P	07 58 46.6	-0.9
KK31				IAmb	IAmb	07 58 50.7	
	comp=Z,5.8nm,1.2s						
KKAR	Karatay Array	51.33	70	P	P	07 58 46.5	-1.0
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KKAR	Karatay Array	51.33	70	P	P	07 58 46.5	-1.0
KKAR				IAmb	IAmb	07 58 50.7	
	comp=Z,5.8nm,1.2s						
LRM	Limekiln Ridge	51.72	297	P	P	07 58 49.6	-1.2
MK31	Makanchi Array	52.78	58	P	P	07 58 58.3	-0.1
MK31				pmax	pmax		

	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	52.78	58	P	P	07 58 58.3	-0.1
MKAR	Makanchi Array	52.78	58	P	P	07 58 58.1	-0.3
	comp=Z,2.7nm,0.9s,baz=335,slow=5.4,SNR=20						
MKAR				LR	LR	08 21 45.5	
	comp=Z,27nm,18.5s,baz=258,slow=36						
MKAR	Makanchi Array	52.78	58	ceP	P	07 58 58.7	+0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TORD	Torodi Ar. Bea	53.12	156	P	P	07 59 01.2	+0.1
	comp=Z,1.3nm,0.9s,baz=337,slow=8.9,SNR=4.3						
BW06	Boulder Array	53.16	293	P	P	07 59 01.7	+0.2
BW06				IAmb	IAmb	07 59 07.0	
	comp=Z,7.0nm,1.1s						
PD31	Pinedale Array	53.16	293	P	P	07 59 01.7	+0.3
PD31				IAmb	IAmb	07 59 07.0	
	comp=Z,6.3nm,1.1s						
PDAR	Pinedale Array	53.16	293	P	P	07 59 03.3	+1.8
	comp=Z,2.4nm,0.9s,baz=60,slow=6.0,SNR=12						
PDAR				LR	LR	08 21 27.1	
	comp=Z,95nm,18.2s,baz=46,slow=36						
AAK	Ala-Archa	53.31	67	P	P	07 59 03.0	+0.5
	comp=Z,2.7nm,0.7s,baz=269,slow=2.4,SNR=8.2						
AAK	Ala-Archa	53.31	67	ceP	P	07 59 04.2	+1.7
AAK				pmax	pmax		
	comp=Z,22nm,1.0s						
AAK	Ala-Archa	53.31	67	P	P	07 59 02.4	-0.1
AAK				IAmb	IAmb	07 59 05.9	
	comp=Z,8.7nm,1.1s						
PGC	Sidney	53.32	307	P	P	07 59 01.1	-1.1
KSH	Kashi	56.55	68	P	P	07 59 29.4	+3.5
KSH				pmax	pmax		
	comp=Z,32nm,1.1s						
KSH				pmax	pmax		
	comp=Z,260nm,7.1s						
SRU	San Rafael Swe	56.65	292	P	P	07 59 25.1	-1.6
SRU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SRU	San Rafael Swe	56.65	292	P	P	07 59 25.1	-1.6
PV14	Lion Creek, Pa	56.68	290	P	P	07 59 26.5	-0.5
PV14				IAmb	IAmb	07 59 30.1	
	comp=Z,2.5nm,0.8s						
WMQ	Urumqi	57.29	56	eP	P	07 59 33.8	+2.8
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.1s						
ANMO	Albuquerque	58.56	286	ceP	P	07 59 41.8	+1.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,2.5s						
SONM	Songino Array	59.70	40	P	P	07 59 47.8	0.0
	comp=Z,1.5nm,0.9s,baz=347,slow=5.9,SNR=2.9						
ULN	Ulaanbaatar	59.85	40	ceP	P	07 59 51.5	+2.6
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	59.85	40	P	P	07 59 48.9	-0.1
ULN				IAmb	IAmb	07 59 51.9	
	comp=Z,6.2nm,1.1s						
GDL2	Guadalupe Moun	60.06	282	P	P	07 59 49.0	-1.5
NVAR	Mina Array Bea	60.29	297	P	P	07 59 53.0	+0.9
	comp=Z,0.9nm,1.0s,baz=55,slow=9.4,SNR=2.7						
NIL	Nilore	60.50	73	P	P	07 59 53.0	-0.4
NIL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	Nilore	60.50	73	P	P	07 59 53.0	-0.4
KMRM	Mail Ridge	60.74	303	P	P	07 59 54.8	-0.2
PAGB	Antelope Grade	63.40	297	P	P	08 00 12.0	-0.8
PAGB				IAmb	IAmb	08 00 13.2	
	comp=Z,4.9nm,1.0s						
KLR	Kul'dur	63.99	22	LR	LR	08 28 59.8	
	comp=Z,51nm,18.2s,baz=328,slow=37						
GTA	Gaotai	65.36	49	eP	P	08 00 25.4	-0.3
GTA				pP	pP	08 00 28.7	-0.8
GTA				sP	sP	08 00 31.5	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
HHC	Hu-ho-hao-te	67.57	40	eP	P	08 00 40.2	+0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,65nm,6.6s						
LZH	Lanzhou	69.69	47	eP	P	08 00 51.6	-1.6
LZH				pP	pP	08 00 54.1	-2.9
LZH				sP	sP	08 00 55.2	-3.2
LZH				ePP	PP	08 03 27.5	+0.8
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,71nm,8.0s						
LZH				LR	LR		
	comp=N,140nm,16.2s						
LZH				LR	LR		
	comp=E,140nm,16.4s						
LZH				LR	LR		
	comp=Z,220nm,18.5s						
KSRS	Korea Array	74.70	28	LR	LR	08 35 58.7	
	comp=Z,15nm,20.5s,baz=330,slow=37						
NJ2	Nanjing	77.80	37	eP	P	08 01 39.8	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
CMAR	Chiang Mai Arr	84.19	59	P	P	08 02 15.1	+0.2
	comp=Z,0.7nm,0.4s,baz=320,slow=6.9,SNR=9.6						
ATAH	Atahualpa	84.42	241	LR	LR	08 36 18.3	
	comp=Z,32nm,21.9s,baz=44,slow=33						
BOSA	Boshof	98.75	143	LR	LR	08 49 04.8	
	comp=Z,34nm,18.8s,baz=162,slow=36						
ASAR	Alice Springs	135.02	38	PKP	PKPdf	08 09 03.2	+0.8
	comp=Z,0.8nm,0.9s,baz=23,slow=2.2,SNR=5.5						

UCR ***04*** *08:09:06.3±1.0, 7°.65N×82°.60W, h7^{km}±14^{km}, MW3.7*
UPA ***04*** *08:09:08.2±1.4, 7°.77N×82°.59W, h10^{km}±7^{km}, MW3.6*
ISC 04 08:09:06.4±1.8**, 7°.70N**±0°.07×**82°.59W**±0°.05**, h10**^{km}±10^{km}**,**
n20, σ**1**^{s}**.13**/30**, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	Canoas	0.91	342	eP	Pg	08 09 23.6	-0.3
CDITO				eS	Sg	08 09 36.2	+0.4
CDITO	Canoas	0.91	342	eP	Pg	08 09 23.5	-0.5
REME3	Remedios, Chir	0.92	55	eP	Pg	08 09 24.3	+0.2
REME3				eS	Sb	08 09 37.3	+0.5
PIRO	Carate, Puerto	1.01	314	eP	Pg	08 09 25.3	-0.7
PTJ1	Puerto Jimnez	1.08	320	eS	Sg	08 09 41.9	+0.4
BRU2	Volcan	1.09	355	eP	Pg	08 09 27.1	-0.4
BRU2				eS	Sb	08 09 43.0	+1.1
BRU2	Volcan	1.09	355	eP	Pg	08 09 27.0	-0.4
BRU2				eS	Sn	08 09 43.6	+0.4
BC3P	Paso Ancho	1.11	359	eP	Pg	08 09 27.6	-0.2
BC3P				eS	Sg	08 09 41.3	-0.9
EDSV	San Vito	1.17	341	eP	Pg	08 09 29.3	+0.3
CHGR2	Aguacate	1.30	20	eP	Pn	08 09 29.8	-1.0
CHGR2				eS	Sb	08 09 47.5	-0.5
RIOS	Rincon, Osa	1.35	317	eP	Pn	08 09 30.7	-0.6
GMAL	Guarumal, Vera	1.35	87	eP	Pn	08 09 31.0	-0.4
GMAL				eS	Sn	08 09 50.5	+1.1
PONU3	Ponuga, Veragu	1.61	83	eP	Pn	08 09 35.9	+0.9
DRK0	Durika	1.68	337	eP	Pn	08 09 36.0	-0.1
DRK0				eS	Sn	08 09 57.3	-0.4
DRK0	Durika	1.68	337	eP	Pn	08 09 35.7	-0.4
CACAO	El Cacao, Vera	1.75	102⇓	eP	Pn	08 09 32.6	-4.4
CACAO				eS	Sn	08 09 55.9	-3.5
EDLM	Las Mercedes	1.85	328	eP	Pn	08 09 38.6	+0.3
PEZE	Perez Zeledon,	1.98	327	eP	Pn	08 09 40.6	+0.4
AZU	Azuero	2.30	88	eP	Pn	08 09 47.1	+2.6
AZU				eS	Sn	08 10 11.0	-1.9
HDC	Heredia	2.73	327	eP	Pn	08 09 52.0	+1.4
HDC				eS	Sn	08 10 24.4	+0.6

IDC 04 08:24:08.4±1.9**, 4°.45S**×**151°.19E, h0**^{km}**, mb3.7**/4**,**
mb1 4.0/4**, mb1mx3.5**/40**, mbtmp3.7**/4**, Error ellipse:**
s-maj=108.1km s-min=26.0km az=128.0, New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.51	225	P	P	08 29 09.8	-0.1
	0.4nm,0.3s,baz=49,slow=10,SNR=15						
ASAR	Alice Springs	25.36	219	P	P	08 29 36.8	-0.6
	0.8nm,0.4s,baz=58,slow=9.1,SNR=28						
FITZ	Fitzroy Crossi	28.43	239	P	P	08 30 05.8	+0.7
	5.5nm,1.1s,baz=55,slow=12,SNR=2.2						
ILAR	Eielson Array	82.45	22	P	P	08 36 32.5	+0.1
	0.2nm,0.7s,baz=248,slow=4.8,SNR=2.4						

REN ***04*** *08:32:33.7±2.4, 41°.87N±0°.03×119°.63W±0°.02, h8^{km}±6^{km}, ML3.2/5, ML3.3/14(SEA), ML2.8/27(NEIC), Error ellipse: s-maj=4.8km s-min=1.5km az=162.0*
ANF ***04*** *08:32:33.5±0.5, 41°.84N×119°.65W, h8^{km}, ML3.0/12, Error ellipse: s-maj=4.1km s-min=3.0km az=103.0*
SEA ***04*** *08:32:34.4±3.5, 41°.83N±0°.03×119°.65W±0°.03, h0^{km}±1^{km}, Error ellipse: s-maj=4.3km s-min=2.9km az=175.0*
NEIC ***04*** *08:32:34.7±2.9, 41°.96N±0°.04×119°.65W±0°.03, h8^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=2.9km az=156.0*
ISC 04 08:32:33.9±0.9**, 41°.85N**±0°.03×**119°.66W**±0°.03**, h10**^{km}**, n45,**
σ**1**^{s}**.05**/53**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.48	277		Pg	08 32 43.4	0.0
MOD					Sb	08 32 50.8	-1.0
MOD	Modoc Plateau	0.48	277	IAML		08 32 51.4	
	comp=N,1μm,1.0s						
LKVW	Lakeview	0.64	306		Pg	08 32 45.8	-0.6
WVOR	Wild Horse Val	0.96	52		Pg	08 32 51.5	-0.9
WVOR					Sg	08 33 03.5	-1.4
WVOR				IAML		08 33 07.9	
	comp=N,367nm,0.8s						
K05A	Summer Lake	1.27	314		Pb	08 32 57.9	-0.1
K05A				IAML		08 33 18.1	
	comp=E,172nm,1.1s						
LASM	Arnica Sink	1.46	261		Pn	08 33 00.2	-0.2
LTIM	Timbered Crate	1.53	245		Pb	08 33 01.6	-0.7
LBCM	Butte Creek Ri	1.62	232		Pb	08 33 03.3	-0.8
M04C	Macdoel	1.63	268	P	Pn	08 33 02.5	-0.3
	baz=86,SNR=83						
M04C				Sb	Sg	08 33 26.6	+0.3
	baz=86						
M04C	Macdoel	1.63	268		Pn	08 33 02.5	-0.3
K04D	Chiloquin, OR	1.74	297	Pn	Pn	08 33 04.1	-0.1
	baz=115,SNR=69						
K04D				Pb	Pb	08 33 05.8	-0.1
	baz=115						
J05D	Fort Rock, OR	1.85	322	Pb	Pb	08 33 07.2	-0.7
	baz=140,SNR=98						
J05D				Sb	Sg	08 33 33.0	-0.3
	baz=140						
J05D	Fort Rock, OR	1.85	322		Pb	08 33 07.3	-0.6
WVA	Winnemucca Val	1.91	184		Pg	08 33 10.1	-0.4
LHEM	Herd Peak	1.93	264		Pb	08 33 09.4	+0.1
L04D	Klamath Falls	2.00	282	P	Pn	08 33 07.5	-0.4
	baz=99,SNR=64						
L04D				Sb	Sg	08 33 37.4	-0.9
	baz=99						
L04D	Klamath Falls	2.00	282		Pn	08 33 07.5	-0.4
BEKR	Beckworth	2.05	195		Pb	08 33 11.7	+0.4
BEKR				IAML		08 33 45.5	
	comp=E,37nm,0.9s						
BEKR				IAML		08 33 52.4	
	comp=N,26nm,0.9s						
PAHR	Pah Rah Range	2.15	174	Pn	Pb	08 33 11.8	-1.2
PAHR				IAML		08 33 43.8	
	comp=E,28nm,1.4s						
PINE	Pine Mountain	2.16	335		Pb	08 33 12.4	-0.8
PINE				IAML		08 33 43.9	
	comp=E,100nm,0.6s						
PINE				IAML		08 33 51.2	
	comp=N,67nm,1.0s						
LOY	Loyalton	2.23	192		Pg	08 33 15.5	-1.1
I07A	Izee	2.24	3		Pn	08 33 11.1	0.0
I07A				IAML		08 33 44.7	
	comp=N,78nm,0.6s						
I07A				IAML		08 33 53.8	
	comp=E,71nm,1.5s						
O03E	Paynes Creek	2.24	227	Pn	Pn	08 33 11.9	+0.7
	baz=45						
O03E				Pb	Pb	08 33 14.6	+0.1
	baz=45						
PEAR	Peavine Mounta	2.25	186		Pg	08 33 16.6	-0.5
J04D	Umpqua Nationa	2.28	308	Pb	Pb	08 33 16.0	+0.7
	baz=126,SNR=15						
M02C	Callahan	2.44	260	P	Pn	08 33 13.5	-0.3
	baz=78,SNR=6.1						
N02D	Trinity Center	2.45	250	Pb	Pb	08 33 17.4	-0.7
	baz=68,SNR=9.3						
IND	Independence	2.46	191		Pg	08 33 19.7	-1.3
WDC	Whiskeytown Da	2.52	241	Pn	Pn	08 33 14.3	-0.5
WDC				IAML		08 33 56.3	
	comp=N,19nm,1.0s						
HUMO	Hull Mountain	2.56	288		Pn	08 33 14.9	-0.6
ORV	Oroville	2.68	212	Pn	Pb	08 33 20.4	-1.6
I05D	Terrebonne, OR	2.78	334	Pb	Pb	08 33 23.1	-0.5
	baz=152,SNR=9.7						
I05D				Sb	Sg	08 34 01.2	-1.9
	baz=152						
I04A	Tendick Farm,	2.81	315	Pb	Pb	08 33 24.3	+0.1
	baz=132,SNR=12						
O02D	Mt. Diablo Mer	2.90	236	Pb	Pb	08 33 25.6	-0.1
	baz=54,SNR=13						
L02E	Cave Junction	2.96	277	P	Pn	08 33 21.7	+0.9
	baz=94,SNR=19						
L02E				Sb	Sb	08 34 05.2	+2.4
	baz=94						
AFDM	Forest Hills D	3.06	200	Pn	Pn	08 33 24.1	+1.7
K02D	Willamette Mer	3.09	287	P	Pn	08 33 23.8	+1.0
	baz=104						
KRMB	Red Mountain	3.20	266	Pn	Pn	08 33 25.9	+1.6
KRMB				IAML		08 34 23.7	
	comp=E,19nm,4.1s						
KRMB				IAML		08 34 37.5	
	comp=N,19nm,3.0s						
I03D	Drain, OR	3.29	305	Pb	Pb	08 33 32.1	-0.2
	baz=122						
KBO	Bosley Butte	3.42	278	Pn	Pn	08 33 28.3	+0.9
KMRM	Mail Ridge	3.47	243		Pn	08 33 30.6	+2.7
KMRM				IAML		08 34 39.5	
	comp=N,32nm,4.8s						
KMRM				IAML		08 34 42.9	
	comp=E,21nm,2.7s						
H04D	Lebanon	3.50	321	Pb	Pb	08 33 36.2	+0.3
	baz=138						
G05D	Wamic, OR	3.60	341	Pb	Pb	08 33 38.4	+0.8
	baz=159						
KEBM	Edson Butte	3.61	288	Pn	Pn	08 33 30.5	+0.6
HLID	Hailey	4.23	64	Sb	Sb	08 34 43.0	+3.3
	baz=248						

BGR ***04*** *08:38:58.2±0.0, 22°.42S×178°.06W, h33^{km}*
NOU ***04*** *08:40:04.7, 21°.16S×178°.51W, h561^{km}, mb4.5, Fiji Islands Region*
BJI ***04*** *08:40:05.1±0.0, 20°.73S×178°.67W, h544^{km}, mB5.1/16, mb4.7/28*
NEIC ***04*** *08:40:05.9±1.2, 21°.11S±0°.06×178°.71W±0°.10, h556^{km}±7^{km}, mb4.5/65, Error ellipse: s-maj=15.7km s-min=2.4km az=122.0*
IDC ***04*** *08:40:05.9±1.1, 21°.13S×178°.65W, h557^{km}±11^{km}, mb4.0/25, mb1 4.1/28, mb1mx4.0/37, mbtmp4.9/28, Error ellipse: s-maj=13.6km s-min=9.9km az=163.0*
ISC 04 08:40:05.0±0.3**, 21°.20S**±0°.05×**178°.62W**±0°.06**, h550**^{km}**,**
n385, σ**1**^{s}**.08**/435**, mb4.5**/69**, 43C-19D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.67	317	P	P	08 41 33.9	+1.6
	38nm,0.3s,baz=140,slow=12,SNR=170						
GLKZ	Green Lake	8.05	176	P	P	08 42 02.7	-0.4
GLKZ				S	S	08 43 40.8	+0.8
NIUE	Niue	8.44	77	P	P	08 42 07.1	-0.1
NIUE	Niue	8.44	77	P	P	08 42 07.1	-0.1
MARNC	Mare, Loyalty	12.44	266	P	P	08 42 48.9	+0.7
DZM	Mont Dzumac	13.92	264	P	P	08 43 03.6	+0.1
	1.6nm,0.3s,baz=82,slow=18,SNR=15						
DZM	Mont Dzumac	13.92	264	eP	P	08 43 01.8	-1.7
	127nm,1.4s						
DZM	Mont Dzumac	13.92	264	P	P	08 43 03.7	+0.2
NOUC	Port Laguerre	14.05	264	P	P	08 43 04.9	+0.2
OUZ	Omahuta	15.55	204	P	P	08 43 21.3	+1.4
OUZ				IAmb	IAmb	08 43 23.3	
	comp=Z,15nm,0.6s						
OUZ	Omahuta	15.55	204	P	P	08 43 21.4	+1.4
KOUNC	Koumac, New Ca	15.99	269	P	P	08 43 24.1	-0.4
HAZ	Te Kaha	16.79	190	P	P	08 43 31.4	-0.2
RUGZ	Raukumara Rang	17.01	190	P	P	08 43 33.6	-0.2
PUZ	Puketiti	17.03	188	P	P	08 43 34.5	+0.7
PUZ				S	S	08 46 30.3	+6.2
TGRZ	Tauranga	17.05	194	P	P	08 43 35.7	+1.6
TWGZ	Tauwhareparae	17.17	189	P	P	08 43 36.2	+1.0
TWGZ				S	S	08 46 48.8	+22
TOZ	Tahuroa Road	17.24	196	P	P	08 43 37.3	+1.5
KMRZ	Kaimai	17.24	195	P	P	08 43 37.5	+1.7
MWZ	Matawai	17.39	190	P	P	08 43 36.2	-1.0
URZ	Urewera	17.39	191	P	P	08 43 34.7	-2.4
	comp=Z,2.2nm,0.3s,baz=304,slow=1.6,SNR=17						
URZ	Urewera	17.39	191	P	P	08 43 34.9	-2.2
URZ				S	S	08 46 23.0	-7.1
CNGZ	Carnagh Statio	17.44	188	P	P	08 43 38.0	+0.5
TKGZ	Te Karaka	17.45	189	P	P	08 43 38.0	+0.4
RAGZ	Rawiri	17.57	190	P	P	08 43 38.6	-0.3
RAR	Rarotonga	17.58	93	P	P	08 43 38.4	-0.7
	comp=Z,1.5nm,0.3s,baz=249,slow=7.7,SNR=3.7						
RIGZ	Rimuhau	17.72	189	P	P	08 43 40.2	0.0
RAHZ	Arahi	18.04	191	P	P	08 43 42.5	-0.6
HIZ	Hauiti	18.14	197	P	P	08 43 46.4	+2.4
BKZ	Black Stump Fm	18.39	192	P	P	08 43 44.1	-2.3
TMVZ	Te Maari	18.51	194	P	P	08 43 47.1	-0.4
ETVZ	East Tongariro	18.52	194	P	P	08 43 46.8	-0.9
TWVZ	Taurewa	18.53	195	P	P	08 43 47.7	+0.1
OTVZ	Oturere	18.56	194	P	P	08 43 46.6	-1.4
WNVZ	Wahianoa	18.73	194	P	P	08 43 49.2	-0.5
BHHZ	Black Hill Sta	18.79	193	P	P	08 43 47.7	-2.2
KAHZ	Kahuranaki	18.93	191	P	P	08 43 50.8	-0.4
NEZ	North Egmont	19.06	198	P	P	08 43 56.5	+4.0
PXZ	Pawanui	19.16	191	P	P	08 43 52.8	-0.5
TSZ	Takapari Road	19.36	193	P	P	08 43 54.6	-0.6
KNTN	Kanton	19.51	21	P	P	08 43 55.5	-1.3
KNTN	Kanton	19.51	21	P	P	08 43 55.6	-1.2
BFZ	Birch Farm	19.90	192	P	P	08 43 58.8	-1.3
MRZ	Mangatainoka R	20.01	193	P	P	08 43 59.9	-1.2
PAE	Paea	27.59	88	eP	P	08 45 08.6	-0.1
	comp=Z,9.2nm,1.1s						
PPT2	Papeete2	27.61	88	eP	P	08 45 09.0	0.0
	comp=Z,49nm,1.1s						
PPT	Papeete	27.62	88	P	P	08 45 09.4	+0.4
	comp=Z,47nm,0.8s,baz=70,slow=2.2,SNR=5.8						
TIAR	Tiarei	27.84	88	eP	P	08 45 10.2	-0.7
	comp=Z,9.2nm,0.8s						
TVO	Taravao	27.88	88	eP	P	08 45 10.8	-0.5
	comp=Z,9.9nm,0.8s						
EIDS	Eidsvold	28.11	256	P	P	08 45 13.7	+0.6
EIDS				IAmb	IAmb	08 45 31.8	
	comp=Z,13nm,1.2s						
ARMA	Armidale	28.24	245	P	P	08 45 15.7	+1.3
ARMA				IAmb	IAmb	08 45 16.4	
	comp=Z,6.9nm,0.9s						
CTA	Charters Tower	32.85	266	P	P	08 45 54.1	+0.2
	comp=Z,8.2nm,0.3s,baz=90,slow=11,SNR=12						
CTAO	Charters Tower	32.85	266	P	P	08 45 54.4	+0.4
CTAO				IAmb	IAmb	08 46 07.8	
	comp=Z,30nm,1.4s						
PMG	Port Moresby	34.94	284	P	P	08 46 11.7	+0.2
	comp=Z,26nm,0.8s,baz=94,slow=6.6,SNR=8.8						
PMG	Port Moresby	34.94	284	P	P	08 46 11.4	-0.2
TOO	Toolangi	35.02	234	P	P	08 46 13.2	+1.2
STKA	Stephens Creek	36.96	245	P	P	08 46 28.6	+0.5
	comp=Z,4.9nm,0.8s,baz=93,slow=11,SNR=8.3						
STKA	Stephens Creek	36.96	245	P	P	08 46 28.6	+0.5
COEN	Coen	37.05	275	P	P	08 46 29.3	+0.3
COEN				IAmb	IAmb	08 46 30.2	
	comp=Z,8.1nm,0.8s						
TAOE	Nuku Hiva Isla	39.02	78	P	P	08 46 45.9	+0.8
BBOO	Buckleboo	41.72	244	P	P	08 47 06.2	-0.1
BBOO				IAmb	IAmb	08 47 07.0	
	comp=Z,9.4nm,1.0s						
WAKE	Wake Island	42.74	339	P	P	08 47 14.1	-0.3
JAY	Jayapura	43.72	290	P	P	08 47 22.4	+0.2
	comp=Z,63nm,0.8s,baz=138,slow=3.7,SNR=20						
WR0	Warramunga Arr	43.74	263	P	P	08 47 21.1	-1.2
AS31	Alice Springs	43.80	258	P	P	08 47 22.4	-0.4
ASAR	Alice Springs	43.80	258	P	P	08 47 22.4	-0.4
	comp=Z,8.2nm,0.5s,baz=94,slow=8.0,SNR=251						
ASAR				PcP	PcP	08 48 56.9	-0.3
	comp=Z,3.7nm,0.8s,baz=105,slow=4.2,SNR=13						
ASAR				ScP	ScP	08 51 55.8	-0.8
	comp=Z,0.8nm,0.8s,baz=92,slow=5.4,SNR=3.7						
ASAR				S	S	08 53 10.3	-3.6
	comp=Z,3.4nm,0.9s,baz=92,slow=15,SNR=18						
WB0	Warramunga Arr	43.91	263	P	P	08 47 22.9	-0.8
WB0				IAmb	IAmb	08 47 23.7	
	comp=Z,18nm,1.3s						
WB2	Warramunga Arr	43.92	263	P	P	08 47 22.8	-0.9
WB2				IAmb	IAmb	08 47 27.1	
	comp=Z,9.7nm,0.9s						
WRA	Warramunga Arr	43.93	263	P	P	08 47 22.9	-0.9
	comp=Z,2.7nm,0.3s,baz=96,slow=7.4,SNR=106						
WRA				PcP	PcP	08 48 57.7	+0.1
	comp=Z,2.8nm,0.9s,baz=95,slow=4.2,SNR=5.4						
WRA				S	S	08 53 12.8	-3.2
	comp=Z,3.2nm,1.0s,baz=98,slow=13,SNR=6.4						
HMH	Humu‘ula Sheep	46.45	31	P	P	08 47 43.3	0.0
MTN	Manton Dam	48.59	271	P	P	08 47 58.2	-1.0
MTN				IAmb	IAmb	08 48 02.6	
	comp=Z,27nm,1.1s						
SIJI	Sorong	52.86	286	P	P	08 48 30.0	-0.3
	comp=Z,55nm,0.9s,baz=82,slow=7.1,SNR=23						
VNDA	Vanda	57.16	185	P	P	08 49 01.0	+1.9
	comp=Z,1.6nm,0.8s,baz=5.2,slow=6.2,SNR=12						
VNDA	Vanda	57.16	185	P	P	08 49 01.0	+1.9
TOLI2	Tolitoli	63.19	283	P	P	08 49 39.4	-0.7
TOLI2				IAmb	IAmb	08 49 40.2	
	comp=Z,9.5nm,0.8s						
QSPA	South Pole Qui	68.87	180	P	P	08 50 15.7	+1.1
QSPA				IAmb	IAmb	08 50 16.7	
	comp=Z,12nm,0.9s						
MJAR	Matsushiro Arr	70.43	324	P	P	08 50 23.7	-0.6
	comp=Z,4.3nm,0.6s,baz=161,slow=6.1,SNR=16						
MAJO	Matsushiro	70.44	324	P	P	08 50 24.2	-0.1
MAT	Matsushiro	70.44	324	P	P	08 50 23.2	-1.1
JWT	Wachi	71.11	322	P	P	08 50 28.3	0.0
JWT				IAmb	IAmb	08 50 31.5	
	comp=Z,39nm,1.4s						
JTM	Tenmabayashi	72.16	329	P	P	08 50 34.6	+0.4
JNU	Nakatsue	72.39	317	P	P	08 50 34.5	-1.3
	comp=Z,15nm,1.0s,baz=88,slow=16,SNR=4.7						
ADK	Adak	72.79	1	P	P	08 50 37.0	-0.6
ATKA	Atka Island	73.19	3	P	P	08 50 39.2	-0.7
TPUB	Ta-pu	73.87	303	P	P	08 50 43.2	-1.2
SSLB	Suanglung	73.88	304	P	P	08 50 43.4	-1.1
SSLB				IAmb	IAmb	08 50 43.8	
	comp=Z,14nm,0.7s						
ASAJ	Asahikawa	74.07	332	P	P	08 50 45.8	+0.7
	comp=Z,11nm,0.9s,baz=186,slow=5.0,SNR=7.4						
UNV	Unalaska Valle	75.47	7	P	P	08 50 51.6	-1.1
PEA0B	Petropavlovsk-	76.80	346	P	P	08 50 59.9	-0.2
PEA0B				IAmb	IAmb	08 51 00.3	
	comp=Z,21nm,0.8s						
PETK	Petropavlovsk-	76.80	346	P	P	08 50 59.7	-0.4
	comp=Z,19nm,0.7s,baz=222,slow=2.0,SNR=39						
KSRS	Korea Array	77.03	319	P	P	08 51 02.0	+0.4
	comp=Z,2.2nm,0.8s,baz=140,slow=6.5,SNR=8.4						
SDPT	Sand Point	77.80	10	P	P	08 51 04.9	-0.4
BELA	Belgrano 2	78.94	173	P	P	08 51 11.3	-0.1
USRK	Ussuriysk Ar.	79.22	326	P	P	08 51 14.3	+1.0
	comp=Z,11nm,0.8s,baz=117,slow=3.2,SNR=25						
HOPS	Hopland Field	79.28	41	P	P	08 51 14.8	+1.0
HOPS				IAmb	IAmb	08 51 15.7	
	comp=Z,16nm,0.9s						
KCPM	Cahto Peak	79.40	40	P	P	08 51 15.4	+0.9
KCPM				IAmb	IAmb	08 51 16.7	
	comp=Z,16nm,1.0s						
CBX	Cerro Bola	79.62	49	P	P	08 51 17.1	+1.3
KMRM	Mail Ridge	79.67	40	P	P	08 51 17.5	+1.7
KMRM				IAmb	IAmb	08 51 18.2	
	comp=Z,35nm,0.8s						
ARVC	Arvin	79.70	46	P	P	08 51 17.2	+1.2
	baz=235						
NJ2	Nanjing	79.88	310	eP	P	08 51 18.2	+1.2
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
VES	Vestal, Richgr	79.94	45	P	P	08 51 18.7	+1.4
	baz=235						
MURC	Murrieta	79.95	48	P	P	08 51 18.2	+0.7
	baz=236						
BFSC	Mount Baldy Ra	79.99	47	P	P	08 51 18.3	+0.6
	baz=236						
KHMM	Horse Mountain	80.06	39	P	P	08 51 17.8	-0.2
KHMM				IAmb	IAmb	08 51 20.3	
	comp=Z,18nm,1.1s						
MONP2	Monument Peak	80.11	49	P	P	08 51 19.3	+0.9
	baz=237						
EDW2	Edwards Air Fo	80.12	47	P	P	08 51 19.2	+0.9
	baz=236						

O02D	Mt. Diablo Mer	80.19	40	P	P	08 51 20.1	+1.5
	baz=232,SNR=14						
IKP	In-Ko-Pah, Jac	80.20	49	P	P	08 51 19.5	+0.7
	baz=237						
ISA	Isabella, Lake	80.24	46	P	P	08 51 19.7	+0.8
	baz=235						
ISA	Isabella, Lake	80.24	46	P	P	08 51 19.7	+0.8
CMB	Columbia Colle	80.37	43	P	P	08 51 20.4	+0.8
TPFO	Pinon Flats	80.47	48	P	P	08 51 21.1	+0.8
	baz=237						
SWSC	Sam W. Stewart	80.58	49	P	P	08 51 21.7	+1.1
	baz=237						
LRMC	Laurel Mtn Rad	80.67	46	P	P	08 51 22.1	+0.8
	baz=236						
N02D	Trinity Center	80.73	39	P	P	08 51 23.0	+1.6
	baz=232,SNR=7.5						
O03E	Paynes Creek	80.85	40	P	P	08 51 22.7	+0.7
	baz=232,SNR=6.5						
M02C	Callahan	80.90	39	P	P	08 51 23.8	+1.6
	baz=231,SNR=11						
CWC	Cottonwood Cre	80.94	45	P	P	08 51 23.5	+0.9
	baz=235						
L02E	Cave Junction	80.95	38	P	P	08 51 23.7	+1.3
	baz=231						
BELC	Belle Mtn. Jos	81.01	48	P	P	08 51 24.0	+0.9
	baz=237						
MPMC	Manual Prospec	81.12	46	P	P	08 51 24.6	+0.9
	baz=236						
MLAC	Mammoth, Mammo	81.13	44	P	P	08 51 25.1	+1.3
	baz=235						
GSC	Goldstone, Bar	81.16	47	P	P	08 51 24.6	+0.8
	baz=236						
GSC	Goldstone, Bar	81.16	47	P	P	08 51 23.7	-0.1
TIN	Tinemaha, Big	81.19	45	P	P	08 51 24.8	+0.9
	baz=235						
YBH	Yreka Blue Hor	81.20	39	P	P	08 51 25.1	+1.3
	baz=159,slow=0.5						
YBH	Yreka Blue Hor	81.20	39	P	P	08 51 23.9	+0.2
YBH				IAmb	IAmb	08 51 25.9	
	comp=Z,12nm,0.8s						
BC3	Big Chuckawall	81.20	49	P	P	08 51 25.2	+1.2
	baz=237						
HEC	Hector,Ludlow	81.22	47	P	P	08 51 24.9	+0.9
	baz=237						
WAKR	Walker	81.25	43	P	P	08 51 24.6	+0.3
WAKR				IAmb	IAmb	08 51 26.3	
	comp=Z,9.6nm,1.0s						
K02D	Willamette Mer	81.25	38	P	P	08 51 24.8	+0.8
	baz=231						
J01E	Myrtle Point	81.40	37	P	P	08 51 25.5	+0.9
	baz=230						
BEKR	Beckworth	81.48	41	P	P	08 51 25.8	+0.5
PNTR	Pine Nut	81.49	42	P	P	08 51 26.2	+0.7
PNTR				IAmb	IAmb	08 51 27.3	
	comp=Z,18nm,0.8s						
VCNR	Virginia City	81.58	42	P	P	08 51 26.1	+0.2
HUMO	Hull Mountain	81.60	38	P	P	08 51 26.9	+1.2
HUMO				IAmb	IAmb	08 51 28.1	
	comp=Z,20nm,1.1s						
GMRC	Granite Mounta	81.67	48	P	P	08 51 27.2	+0.8
	baz=237						
IRM	Iron Mountain	81.69	49	P	P	08 51 27.5	+1.1
	baz=238						
LHV	Little Huntoon	81.70	44	P	P	08 51 27.3	+1.0
GRAC	Grapevine Rang	81.73	45	P	P	08 51 27.5	+1.0
	baz=236						
L04D	Klamath Falls	81.74	39	P	P	08 51 27.5	+0.9
	baz=232,SNR=5.8						
M04C	Macdoel	81.74	39	P	P	08 51 27.8	+1.2
	baz=232,SNR=5.8						
FURC	Furnace Creek,	81.77	46	P	P	08 51 27.3	+0.7
	baz=236						
SHOC	Shoshone, Teco	81.85	47	P	P	08 51 27.6	+0.4
	baz=237						
RYN	Ryan	81.91	43	P	P	08 51 27.8	+0.2
NVAR	Mina Array Bea	81.93	44	P	P	08 51 28.3	+0.5
	comp=Z,4.8nm,0.7s,baz=223,slow=8.5,SNR=48						
I03D	Drain, OR	82.07	37	P	P	08 51 29.1	+1.1
	baz=231						
214A	Organ Pipe Nat	82.20	52	P	P	08 51 30.3	+1.2
	baz=239						
TPH	Tonopah	82.43	44	P	P	08 51 30.8	+0.5
TPNV	Topopah Spring	82.45	46	P	P	08 51 31.3	+0.9
	baz=236						
PDMCI	Parker Dam,Lak	82.47	49	P	P	08 51 31.6	+1.3
	baz=238						
J04D	Umpqua Nationa	82.48	38	P	P	08 51 31.6	+1.2
	baz=232,SNR=5.4						
CN2	Changchun	82.50	323	*e*P	P	08 51 30.1	-0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
I04A	Tendick Farm,	82.66	37	P	P	08 51 31.8	+0.8
	baz=232						
MOD	Modoc Plateau	82.73	40	P	P	08 51 32.0	+0.4
MOD				IAmb	IAmb	08 51 33.3	
	comp=Z,9.2nm,0.9s						
KLR	Kul'dur	82.84	330	P	P	08 51 32.5	+0.7
	comp=Z,5.0nm,0.8s,baz=99,slow=4.1,SNR=17						
H04D	Lebanon	82.93	37	P	P	08 51 33.6	+1.3
	baz=231						
J05D	Fort Rock, OR	83.02	38	P	P	08 51 34.3	+1.2
	baz=232,SNR=19						
H04A	Detroit Lake	83.34	37	P	P	08 51 34.9	+0.5
H04A				IAmb	IAmb	08 51 35.3	
	comp=Z,9.8nm,0.7s						
PINE	Pine Mountain	83.49	38	P	P	08 51 36.4	+0.9
PINE				IAmb	IAmb	08 51 37.6	
	comp=Z,23nm,0.9s						
I05D	Terrebonne, OR	83.60	37	P	P	08 51 36.8	+1.0
	baz=232,SNR=5.3						
R11A	Troy Canyon, C	83.66	45	P	P	08 51 37.1	+0.7
	baz=237						
BRLK	Bradley Lake	83.81	14	P	P	08 51 35.8	-0.6
TUC	Tucson	83.87	52	P	P	08 51 39.0	+1.5
	baz=240						
MA2	Magadan	84.31	345	P	P	08 51 38.0	-0.9
	comp=Z,7.9nm,0.8s,baz=154,slow=6.1,SNR=6.8						
I07A	Izee	84.50	38	P	P	08 51 40.5	+0.2
I07A				IAmb	IAmb	08 51 42.1	
	comp=Z,9.8nm,1.0s						
D03D	Eldon	84.64	34	P	P	08 51 41.8	+1.0
	baz=231						
U15A	North Rim	84.86	48	P	P	08 51 43.1	+0.7
U15A				IAmb	IAmb	08 51 44.4	
	comp=Z,7.1nm,0.8s						
WUAZ	Wupatki	85.04	49	P	P	08 51 44.8	+1.6
	baz=240						
RC01	Rabbit Creek A	85.25	14	P	P	08 51 43.0	-0.4
	baz=207						
SUA	Susitna One	85.37	13	P	P	08 51 43.2	-0.9
SUA				IAmb	IAmb	08 51 44.1	
	comp=Z,16nm,0.7s						
G08A	Pilot Rock	85.53	38	P	P	08 51 45.8	+0.5
G08A				IAmb	IAmb	08 51 46.9	
	comp=Z,10nm,0.9s						
A04D	Lummi Island	85.59	33	P	P	08 51 46.6	+1.3
	baz=231						
B05A	Bryant	85.62	34	P	P	08 51 46.2	+0.7
	baz=231						
TTA	Tatalina	85.74	10	P	P	08 51 45.9	+0.1
TTA				IAmb	IAmb	08 51 47.2	
	comp=Z,17nm,1.2s						
GHO	Glory Hole Cre	86.04	14	P	P	08 51 46.6	-0.7
CUT	Chulitna	86.32	13	P	P	08 51 47.7	-0.7
	baz=206						
SCM	Sheep Creek Mo	86.45	14	P	P	08 51 48.5	-0.7
N25K	Chitina, Valde	86.91	16	P	P	08 51 51.1	-0.3
	baz=212						
SEY	Seymchan	86.93	347	P	P	08 51 50.8	-0.5
	comp=Z,16nm,0.8s,baz=142,slow=5.5,SNR=41						
M24K	Tolsona, Glenn	86.96	15	P	P	08 51 51.4	-0.2
	baz=210						
HLID	Hailey	87.24	41	P	P	08 51 54.3	+0.8
	baz=237						
VNA3	Neumayer Olymp	87.48	176	P	P	08 51 53.4	-0.6
MNTX	Cornudas Mount	87.63	55	P	P	08 51 56.0	+0.6
	baz=243						
MCK	McKinley	87.78	13	P	P	08 51 54.5	-0.8
	baz=208,SNR=12						
VNA2	Neumayer--Watz	87.91	177	P	P	08 51 56.0	-0.1
ANMO	Albuquerque	88.30	51	P	P	08 51 58.9	+0.2
	baz=243						
L26K	Log Cabin Wild	88.43	15	P	P	08 51 58.1	-0.3
	baz=213						
NEA2	Nenana	88.52	12	P	P	08 51 57.3	-1.5
	baz=208						
MLY	Manley	88.59	11	P	P	08 51 57.7	-1.5
	baz=206,SNR=12						
HDA	Harding Lake	88.80	13	P	P	08 51 58.9	-1.1
	baz=209,SNR=7.7						
TCOL	CIGO, UAF Yank	89.01	13	P	P	08 51 60.0	-1.0
	baz=209,SNR=8.3						
SCRK	Sand Creek	89.08	15	P	P	08 52 01.2	-0.4
	baz=212,SNR=6.7						
ILAR	Eielson Array	89.13	13	P	P	08 52 00.5	-1.0
	comp=Z,8.1nm,0.9s,baz=225,slow=5.2,SNR=48						
ILAR				PP	PP	08 55 43.0	+0.8
	comp=Z,1.3nm,0.8s,baz=221,slow=7.3,SNR=6.9						
KMI	Kunming	89.15	297	⇑P	P	08 52 04.2	+1.3
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
LAMP	Lampang	89.22	290	P	P	08 52 05.4	+2.3
	comp=Z,22nm,1.0s						
POKR	Poker Plat Res	89.32	13	P	P	08 52 01.2	-1.2
	baz=209						
S22A	4UR Ranch, Cre	89.32	49	P	P	08 52 04.0	+0.5
	baz=242						
REDW	Red Top Meadow	89.34	42	P	P	08 52 04.0	+0.6
REDW				IAmb	IAmb	08 52 04.8	
	comp=Z,6.2nm,0.9s						
HHC	Hu-ho-hao-te	89.43	315	*e*P	P	08 52 06.0	+2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
O20A	White River Ci	89.46	46	P	P	08 52 04.4	+0.4
	baz=242						
K27K	Chicken	89.59	15	P	P	08 52 04.1	+0.4
	baz=214						
CM04	Chiang Mai Arr	89.75	290	P	P	08 52 07.1	+1.6
	comp=Z,89nmcomp=Z,13nm,1.0s						
CM05	Chiang Mai Arr	89.78	290	P	P	08 52 07.0	+1.3
	comp=Z,9.3nm,1.0s						
CMAR	Chiang Mai Arr	89.80	290	P	P	08 52 07.2	+1.4
	comp=Z,7.9nm,1.0s,baz=130,slow=3.3,SNR=38						
CM15	Chiang Mai Arr	89.82	290	P	P	08 52 07.0	+1.2
	comp=Z,135nmcomp=Z,9.8nm,1.1s						
CM13	Chiang Mai Arr	89.82	290	P	P	08 52 07.5	+1.7
	comp=Z,8.7nm,1.0s						
BW06	Boulder Array	89.87	43	P	P	08 52 05.9	+0.1
	baz=241						
BW06	Boulder Array	89.87	43	P	P	08 52 06.0	+0.2
BW06				IAmb	IAmb	08 52 06.6	
	comp=Z,5.4nm,0.8s						
PDAR	Pinedale Array	89.87	43	P	P	08 52 05.8	0.0
	comp=Z,4.1nm,0.7s,baz=213,slow=3.0,SNR=42						
CMMT	Chiang Mai	89.93	290	P	P	08 52 07.5	+1.1
BOZ	Bozeman (W)	90.00	40	P	P	08 52 06.7	+0.5
	baz=239						
H17A	Grant Village	90.03	42	P	P	08 52 08.9	+2.3
	baz=240						
SDCO	Great Sand Dun	90.25	49	P	P	08 52 07.9	+0.1
	baz=243						
DAWY	Dawson	90.29	16	P	P	08 52 06.9	-0.1
COLD	Coldfoot	90.67	11	P	P	08 52 08.9	+0.3
	baz=206						
T25A	Trinidad	90.76	50	P	P	08 52 10.2	+0.1
	baz=244						
N23A	Red Feather La	91.37	46	P	P	08 52 14.0	+1.1
	baz=243						
TOLK	Toolik Lake Re	92.05	10	P	P	08 52 14.6	-0.4
	baz=207						
YAK	Yakutsk	92.55	338	P	P	08 52 16.2	-1.1
	comp=Z,8.0nm,0.5s,baz=58,slow=0.6,SNR=5.4						
LZH	Lanzhou	92.73	308	⇓P	P	08 52 19.1	0.0
LZH				pP	pwP	08 54 23.5	+0.1
LZH				sP	sP	08 55 11.4	-2.2
LZH				PP	PP	08 56 13.2	+2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,100nm,5.3s						
A21K	Barrow	93.53	7	P	P	08 52 21.2	-0.5
	baz=201						
SONM	Songino Array	95.90	319	P	P	08 52 34.8	+1.6
	comp=Z,1.0nm,0.6s,baz=112,slow=7.0,SNR=2.2						
GTA	Gaotai	96.97	309	*e*P	P	08 52 38.8	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	Yellowknife Ar	97.39	25	P	Pdif	08 52 38.8	-0.5
	comp=Z,0.6nm,0.8s,baz=246,slow=4.3,SNR=12						
ZALV	Zalesovo Beam	110.67	321	PKiKP	PKiKP	08 57 33.4	-1.7
	comp=Z,1.0nm,0.6s,baz=151,slow=1.4,SNR=6.7						
MKAR	Makanchi Array	111.26	313	Pdiff	Pdif	08 53 43.0	+1.6
	comp=Z,0.2nm,0.6s,baz=106,slow=3.1,SNR=3.1						
MKAR				PKiKP	PKiKP	08 57 35.0	-1.6
	comp=Z,1.4nm,0.9s,baz=67,slow=3.2,SNR=11						
KSH	Kashi	114.81	305	PKP	PKiKP	08 57 45.8	+2.1
KSH				PP	PP	08 58 57.6	+4.9
GEYT	Alibeck	128.67	302	PKP	PKPdf	08 58 09.7	-0.6
	comp=Z,3.9nm,1.0s,baz=295,slow=4.4,SNR=4.3						
ARCES	ARCESS Array B	129.50	349	PKP	PKPdf	08 58 09.9	-1.0
	comp=Z,3.9nm,0.7s,baz=40,slow=2.6,SNR=11						
KLMR	Klimovskoe	132.28	336	*e*PKPdf	PKPdf	08 58 13.7	-2.6
KLMR				AMP		08 58 14.7	
	comp=Z,30nm,1.8s						
KLMR				*e*PP	PP	09 00 49.6	+2.5
FINES	FINESS Array B	136.28	343	PKP	PKPdf	08 58 22.1	-1.7
	comp=Z,2.3nm,0.6s,baz=94,slow=5.7,SNR=7.3						
NB2	NORSAR Subarra	139.60	353	PKP	PKPdf	08 58 21.4	-8.5
	comp=Z,0.7nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.60	353	PKhKP	PKPpre	08 58 20.9	
	comp=Z,1.9nm,0.7s,baz=16,slow=4.6,SNR=5.7						
NOA				PKP	PKPdf	08 58 29.5	-0.4
	comp=Z,1.5nm,0.8s,baz=14,slow=4.0,SNR=3.7						
NOA				SKPbc	SKPbc	09 01 13.8	-0.1
	comp=Z,2.9nm,0.9s,baz=14,slow=4.3,SNR=4.1						
MNK	Minsk	141.18	335	*i* PKP	PKPdf	08 58 31.7	-1.2
	comp=E,5.0nm,1.1s						
MNK				*i* PKP	PKPdf	08 58 31.7	-1.2
	comp=N,21nm,0.9s						
MNK				*i* PKP	PKPdf	08 58 31.7	-1.2
	comp=Z,14nm,0.9s						
MNK				*i* pPKP	pPKPdf	09 00 42.4	+1.3
MNK				*i* PP	PP	09 01 40.2	-1.6
MNK				*i* PPP	PPP	09 04 21.1	
MNK				*i* SKS	SKSdf	09 04 31.2	-20
MNK				*i* SKKS	SKKSdf	09 14 12.0	-3.8
MNK				*i* LRM	MLR	10 01 42.5	
	comp=N,594nm,27.5s						
MNK				*i* LRM	MLR	10 01 42.7	
	comp=E,35nm,21.7s						
MNK				*i* LRM	MLR	10 01 53.4	
	comp=Z,42nm,11.6s						
SUW	Suwalki	143.28	338	*e*PKP	PKPab	08 58 34.3	-0.4
AKASG	Malin Array Be	143.34	330	PKP	PKPab	08 58 34.0	-1.0
	comp=Z,28nm,0.7s,baz=43,slow=4.4,SNR=123						
AKASG				SKPbc	SKPbc	09 01 21.8	-1.8
	comp=Z,2.4nm,0.7s,baz=40,slow=2.2,SNR=10						
SORM	Soroca	145.49	328	⇓P	PKPdf	08 58 40.6	0.0
EKB8	Eskdalemuir Ar	145.72	5	PKPdf	PKPbc	08 58 42.0	-0.5
BEL	Belsk	145.90	338	*e*PKP	PKPbc	08 58 43.3	+0.3
MILM	Milestii Mici	146.05	326	⇑P	PKPbc	08 58 42.8	-0.7
BSEG	Bad Segeberg	146.62	350	*e*PKPbc	PKPbc	08 58 44.3	-0.6
	baz=17,slow=2.4						
VASR	Vaslui	146.76	326	⇑P	PKPbc	08 58 45.5	-0.1
BR131	Keskin Array S	146.87	311		PKPbc	08 58 45.6	-0.7
BRTR	Keskin Array B	146.87	311	PKPbc	PKPbc	08 58 45.6	-0.7
	comp=Z,7.7nm,0.7s,baz=139,slow=4.8,SNR=36						
KWP	Kalwaria Pacla	146.97	334	*e*PKPdf	PKPbc	08 58 45.8	-0.2
KWP				*e*PKPab	PKPab	08 58 48.8	-0.4
PRAR	RASCA	147.07	328	⇑P	PKPbc	08 58 46.1	-0.3
TLCR		147.13	323	⇑P	PKPbc	08 58 46.3	-0.2
RUE	Ruedersdorf	147.34	346	*e*PKPbc	PKPbc	08 58 46.5	-0.4
	baz=17,slow=2.4						
BUR08	Bucovina Ar. S	147.37	330		PKPbc	08 58 47.1	-0.2
BURAR	Bucovina Array	147.38	330	⇑P	PKPbc	08 58 47.5	+0.2
BIZ	Bicaz	147.42	328	⇑P	PKPbc	08 58 47.8	+0.5
TESR	Tescani	147.44	327	⇓P	PKPbc	08 58 46.8	-0.6
CFR	Carcaliu	147.51	324	⇑P	PKPbc	08 58 47.2	-0.3
TPGR	Topolog	147.55	323	⇑P	PKPbc	08 58 47.0	-0.8
OJC	Ojcow	147.59	338	*e*PKPdf	PKPbc	08 58 47.1	-0.6
OJC				*e*PKPab	PKPab	08 58 51.0	-0.8
KOLS	Kolonicke sedl	147.69	334	*e*PKP	PKPbc	08 58 48.1	+0.2
ODBI	Odobesti	147.72	325	⇑P	PKiKP	08 58 48.8	-0.8
TIRR	Tirgusor	147.80	322	⇑P	PKPbc	08 58 47.8	-0.5
TIRR	Tirgusor	147.80	322		PKPbc	08 58 48.1	-0.2
VRI	Vrincioaia	147.83	326	⇑P	PKPbc	08 58 47.5	-0.9
PLOR	Plostina	147.88	326	⇑P	PKPbc	08 58 48.0	-0.6
HARR	Harsova	147.93	323	⇑P	PKPbc	08 58 48.5	-0.1
TLBR	Topalu	147.95	323	⇓P	PKPbc	08 58 48.4	-0.3
MFTR	Murfatlar	147.96	322	⇑P	PKPbc	08 58 47.9	-0.8
FLTG	Flechtingen	148.00	349	*e*PKPbc	PKPbc	08 58 48.0	-0.5
	baz=17,slow=2.4						
FLTG				*e*PKPab	PKPab	08 58 52.6	-0.7
	baz=16,slow=4.2						
NRDL	Niedersach Rie	148.04	350	*e*PKPbc	PKPbc	08 58 48.3	-0.3
	baz=17,slow=2.4						
CRVS	Cervenica-Dubn	148.04	335	*e*PKP	PKPbc	08 58 48.9	+0.1
NIE	Niedzica	148.08	336	*e*PKPdf	PKPbc	08 58 49.5	+0.5
NIE				*e*PKPab	PKPab	08 58 54.4	+0.6
OZUR		148.16	327	⇑P	PKPbc	08 58 49.4	+0.2
ARCR	ARCALIA	148.17	330	⇑P	PKPbc	08 58 49.0	-0.1
KSP	Ksiaz	148.18	342	*e*PKPdf	PKPbc	08 58 49.0	-0.1
KSP				*e*PKPab	PKPab	08 58 54.4	+0.2
ASSE	Asse, Remlinge	148.30	349	*e*PKPbc	PKPbc	08 58 48.9	-0.3
	baz=17,slow=2.4						
NEHR	Nehoiu	148.35	326	⇑P	PKPbc	08 58 49.4	-0.3
ISR	Istrita	148.42	325	⇑P	PKPbc	08 58 49.5	-0.4
DOPR	Dopca	148.45	327	⇑P	PKPbc	08 58 49.9	-0.1
OSTC	Ostas	148.46	342	⇑*e*PKP	PKPbc	08 58 50.1	+0.3
CHVC	Chvalec	148.48	342	⇑*e*PKP	PKPbc	08 58 50.0	+0.1
MLR	Muntele Rosu	148.49	326	⇑P	PKPbc	08 58 49.8	-0.4
MLR	Muntele Rosu	148.49	326		PKPbc	08 58 49.8	-0.4
IBBN	Ibbenburen	148.56	352	*e*PKPbc	PKPbc	08 58 49.5	-0.5
	baz=17,slow=2.4						
IBBN				*e*PKPab	PKPab	08 58 54.6	-1.0
	baz=16,slow=4.2						
LANS	Liptovska Anna	148.60	337	*e*PKP	PKiKP	08 58 51.1	-0.2
LANS				*e*		08 58 56.6	
CLL	Collm	148.61	346	*i* PKPab	PKPab	08 58 55.2	-0.6
	comp=Z,21nm,0.8s						
CLL	Collm	148.61	346		PKPbc	08 58 49.9	-0.2
CLL	Collm	148.61	346	*e*PKPbc	PKPbc	08 58 49.6	-0.5
	baz=17,slow=2.4						
CLL				*e*PKPab	PKPab	08 58 55.2	-0.6
	baz=16,slow=4.2						
CLL	Collm	148.61	346	⇓*i*PKPbc	PKPbc	08 58 49.7	-0.4
	comp=Z,39nm,1.1s						
CLZ	Clausthal	148.63	349	*e*PKPbc	PKPbc	08 58 50.1	-0.2
	baz=17,slow=2.4						
CLZ				*e*PKPab	PKPab	08 58 55.4	-0.5
	baz=16,slow=4.2						
SECR		148.73	325	⇑P	PKPbc	08 58 50.2	-0.4
MORC	Moravsky Berou	148.74	340	*e*PKP	PKPbc	08 58 50.0	-0.6
MORC				*e*		08 58 56.3	
KECS	Kecovo	148.77	335	*e*PKP	PKPbc	08 58 51.0	+0.4
BRG	Berggiesshubel	148.79	345	Amp		08 58 57.0	
	comp=Z,16nm,0.9s						
BRG	Berggiesshubel	148.79	345	Amp		08 58 57.0	
	comp=Z,16nm,0.9s						
BRG	Berggiesshubel	148.79	345	*e*PKPbc	PKPbc	08 58 50.1	-0.4
	baz=17,slow=2.4						
BRG				*e*PKPab	PKPab	08 58 55.9	-0.7
	baz=16,slow=4.2						
BRG	Berggiesshubel	148.79	345	*i* PKP	PKPbc	08 58 50.3	-0.3
BRG	Berggiesshubel	148.79	345	*i* PKP	PKPbc	08 58 50.3	-0.3
BRG	Berggiesshubel	148.79	345	Amp		08 58 51.4	
	comp=Z,20nm,0.9s						
BRG	Berggiesshubel	148.79	345	Amp		08 58 51.4	
	comp=Z,20nm,0.9s						
BRG	Berggiesshubel	148.79	345	*i* x	x	08 58 56.1	
BRG	Berggiesshubel	148.79	345	*i* x	x	08 58 56.1	
CJR	Cluj-Napoca	148.79	330	⇑P	PKPbc	08 58 50.4	-0.4
CSS	Mathiatis	148.80	303		PKPbc	08 58 50.6	-0.6
FBE	Freiberg	148.88	345	*e*PKPbc	PKPbc	08 58 50.9	+0.1
	baz=17,slow=2.4						
FBE				*e*PKPab	PKPab	08 58 56.8	-0.2
	baz=16,slow=4.2						
PVCC	Panska Ves	148.94	344	⇑*e*PKP	PKPbc	08 58 50.9	-0.1
NEUB	Neuenburg	148.97	347	*e*PKPbc	PKPbc	08 58 50.6	-0.4
	baz=17,slow=2.4						
NEUB				*e*PKPab	PKPab	08 58 56.7	-0.6
	baz=16,slow=4.2						
GTTG	Gottingen	148.98	350	*e*PKPbc	PKPbc	08 58 50.6	-0.4
	baz=17,slow=2.4						
GTTG				*e*PKPab	PKPab	08 58 56.7	-0.7
	baz=16,slow=4.2						
VOIR		148.99	327	⇑P	PKPbc	08 58 51.0	-0.4
DRGR		149.15	331	⇑P	PKPbc	08 58 50.9	-0.7
ARR	Arges	149.25	327	⇑P	PKiKP	08 58 52.9	+0.1
VYHS	Vyhne	149.38	337	*e*PKP	PKPbc	08 58 52.1	0.0
VYHS				*e*		08 58 59.4	
PRA	Prague	149.40	343	⇑*e*PKP	PKPbc	08 58 51.8	-0.3
PRU	Pruhonice	149.44	343	⇑*e*PKP	PKPbc	08 58 51.8	-0.4
VRAC	Vranov	149.45	340	⇓P	PKPab	08 58 59.9	+0.5
PSZ	Piszkesteto	149.46	335	⇑P	PKPbc	08 58 51.1	-1.3
BUG	Bochum--Univer	149.47	353	*e*PKPbc	PKPbc	08 58 52.0	-0.2
	baz=17,slow=2.4						
JAVC	Velka Javorina	149.49	339	*e*PKP	PKiKP	08 58 53.4	+0.2
MOX	Moxa	149.53	347	*e*PKPbc	PKPbc	08 58 52.2	-0.2
	baz=17,slow=2.4						
MOX				*e*PKPab	PKPab	08 58 58.8	-0.9
	baz=16,slow=4.2						
KASTN	Kahler Asten	149.56	351	*e*PKPbc	PKPbc	08 58 52.1	-0.4
	baz=17,slow=2.4						
TANN	Tannenbergstha	149.56	346	*e*PKPbc	PKPbc	08 58 52.3	-0.2
	baz=17,slow=2.4						
TANN				*e*PKPab	PKPab	08 58 59.2	-0.8
	baz=16,slow=4.2						
PLN	Plauen	149.57	346	*e*PKPbc	PKPbc	08 58 52.2	-0.2
	baz=17,slow=2.4						
PLN				*e*PKPab	PKPab	08 58 59.1	-0.8
	baz=16,slow=4.2						
WERD	Werda	149.57	346	*e*PKPbc	PKPbc	08 58 52.4	-0.1
	baz=17,slow=2.4						
WERD				*e*PKPab	PKPab	08 58 59.5	-0.4
	baz=16,slow=4.2						
LOT	Lotru	149.62	328	⇑P	PKPbc	08 58 51.5	-1.4
HUMR	Humele	149.64	325	⇑P	PKPbc	08 58 52.0	-0.8
GUNZ	Gunzen	149.64	346	*e*PKPbc	PKPbc	08 58 52.7	0.0
	baz=17,slow=2.4						
GUNZ				*e*PKPab	PKPab	08 59 00.1	-0.1
	baz=16,slow=4.2						
UBBA	Unterbreizbach	149.68	349	*e*PKPab	PKPab	08 58 59.6	-0.6
	baz=16,slow=4.2						
WERN	Wernitzgruen	149.70	346	*e*PKPbc	PKPbc	08 58 53.0	+0.2
	baz=17,slow=2.4						
WERN				*e*PKPab	PKPab	08 59 00.1	-0.4
	baz=16,slow=4.2						
KRUC	Moravsky	149.73	340	*e*PKP	PKPbc	08 58 52.6	-0.3
KRUC				*e*		08 59 00.3	
DEV	Deva	149.73	329	⇑P	PKPbc	08 58 52.9	-0.1
NKC	Novy Kostel	149.74	346	⇑*e*PKP	PKPbc	08 58 52.8	-0.1
NKC				*e*PKPAB	PKPab	08 59 00.2	-0.4
PBCC	Pribram	149.86	344	⇑*e*PKP	PKPbc	08 58 52.9	-0.3
PBCC				*e*PKPAB	PKPab	08 59 00.8	-0.3
SMOL	Smolenice	149.86	339	*e*PKP	PKiKP	08 58 53.7	-0.2
SMOL				*e*		08 59 01.5	
SIRR	Siria	150.02	331	⇑P	PKPbc	08 58 53.3	-0.4
MODS	Modra-Piesok	150.04	339	*e*PKP	PKPbc	08 58 53.0	-0.7
MODS				*e*		08 59 01.4	
GZR	Gura Zlata	150.15	329	⇑P	PKPbc	08 58 52.6	-1.5
ROTZ	Rotzenmuhle	150.23	346	*e*PKPbc	PKPbc	08 58 53.8	-0.3
	baz=17,slow=2.4						
ZST	Bratislava	150.25	339	*e*PKP	PKiKP	08 58 57.4	+2.7
AHRW	Bad Neuenahr-A	150.38	353	*e*PKPbc	PKiKP	08 58 54.7	-0.1
	baz=17,slow=2.4						
AHRW				*e*PKPab	PKPab	08 59 02.1	-1.1
	baz=16,slow=4.2						
MEM	Membach	150.43	354	*d*PKP	PKPbc	08 58 53.8	-0.7
MEM				*d*PKPab	PKPab	08 59 02.6	-0.8
BTNL	Ternell	150.44	354	*d*PKP	PKPbc	08 58 54.2	-0.4
KHC	Kasperske Hory	150.48	344	⇑*e*PKP	PKPbc	08 58 54.2	-0.5
KHC				*e*PKPAB	PKPab	08 59 03.8	0.0
BSTI	Sart Tilman	150.49	355	*d*PKP	PKPbc	08 58 54.5	-0.2
BSTI				*d*PKPab	PKPab	08 59 02.9	-0.8
TNS	Taunus Mts	150.51	351	*e*PKPbc	PKPbc	08 58 54.4	-0.3
	baz=17,slow=2.4						
TNS				*e*PKPab	PKPab	08 59 03.0	-0.9
	baz=16,slow=4.2						
GRF	Grafenberg Arr	150.52	347	*e*PKPbc	PKPbc	08 58 54.7	0.0
	baz=17,slow=2.4						
GRF				*e*PKPab	PKPab	08 59 03.2	-0.7
	baz=16,slow=4.2						
BZS	Buzias	150.53	330	⇑P	PKPbc	08 58 54.6	-0.3
WET	Wettzell	150.65	345	*e*PKPbc	PKPbc	08 58 54.6	-0.5
	baz=17,slow=2.4						
WET				*e*PKPab	PKPab	08 59 04.0	-0.5
	baz=16,slow=4.2						
SNF	Seneffe	150.66	356	*d*PKPab	PKPab	08 59 03.3	-1.0
HERR	Herculane	150.70	329	⇑P	PKPbc	08 58 54.9	-0.4
GEC2	GERESS Array S	150.71	343		PKPbc	08 58 55.0	-0.3
GEC2	GERESS Array S	150.71	343	*e*PKPbc	PKPbc	08 58 54.6	-0.7
	baz=17,slow=2.4						
GERES	GERESS Array B	150.71	343	PKPbc	PKPbc	08 58 55.0	-0.3
	comp=Z,9.0nm,0.8s,baz=36,slow=2.5,SNR=43						
BGES	Gesves	150.73	355	*d*PKPab	PKPab	08 59 03.6	-1.1

BMRD	Maredsous	150.84	356	*d*PKP	PKPbc	08 58 55.2	-0.2
BMRD				*d*PKPab	PKPab	08 59 04.3	-0.9
CONA	Conrad Observa	150.89	340	*i* P	PKPbc	08 58 55.5	-0.3
	comp=Z,14nm,0.7s						
BANR	Banloc	150.93	331	⇑P	PKPbc	08 58 55.6	-0.1
DOU	Dourbes	151.06	356	*d*PKP	PKPbc	08 58 54.9	-1.0
MDVR	Moldovita	151.11	329	⇓P	PKPbc	08 58 55.4	-0.9
WLF	Walferdange	151.35	354	*d*PKP	PKPbc	08 58 56.4	-0.2
WLF	Walferdange	151.35	354	*e*PKPbc	PKPbc	08 58 56.6	0.0
	baz=17,slow=2.4						
WLF				*e*PKPab	PKPab	08 59 06.8	-0.5
	baz=16,slow=4.2						
MOA	Molln	151.46	342	*e*P	PKPbc	08 58 56.0	-1.0
	comp=Z,6.1nm,0.8s						
ARSA	Arzberg	151.60	340	*i* P	PKPbc	08 58 56.3	-1.0
	comp=Z,10nm,1.4s						
STU	Stuttgart	151.79	349	*e*PKPbc	PKPbc	08 58 57.2	-0.5
	baz=17,slow=2.4						
STU				*e*PKPab	PKPab	08 59 08.4	-0.8
	baz=16,slow=4.2						
VTS	Vitosha	151.87	324	⇓P	PKPbc	08 58 57.6	-0.6
FUR	Furstenfeldbru	151.94	346	*e*PKPbc	PKPbc	08 58 57.5	-0.6
	baz=17,slow=2.4						
FUR				*e*PKPab	PKPab	08 59 09.5	-0.4
	baz=16,slow=4.2						
KOGS	Kog	152.05	338	*i* PKPab	PKPab	08 59 09.7	-0.7
KOGS	Kog	152.05	338	*e*PKPbc	PKPbc	08 58 57.1	-1.1
BISS	Bistriski jare	152.26	339	*i* PKPab	PKPab	08 59 10.9	-0.4
BISS	Bistriski jare	152.26	339	*e*PKPbc	PKPbc	08 58 57.4	-1.4
SOKA	Soboth	152.26	340	*e*P	PKPbc	08 58 57.7	-1.2
	comp=Z,8.0nm,1.1s,SNR=5.3						
SOKA				*e*P	PKPab	08 59 11.2	-0.2
	comp=Z,11nm,1.2s						
BFO	Black Forest	152.36	350	*e*PKPbc	PKPbc	08 58 58.2	-0.8
	baz=17,slow=2.4						
BFO				*e*PKPab	PKPab	08 59 10.7	-1.0
	baz=16,slow=4.2						
KBA	Koelnbreinsper	152.42	342	*e*P	PKPbc	08 58 58.2	-1.1
	comp=Z,14nm,1.4s						
OBKA	Obir	152.57	340	*e*P	PKPbc	08 58 58.2	-1.3
	comp=Z,4.2nm,0.9s						
WATA	Walderalm	152.65	345	*i* P	PKPbc	08 58 58.8	-1.0
	comp=Z,7.5nm,1.0s						
UBR	Ueberruh	152.66	347	*e*PKPbc	PKPbc	08 58 58.9	-0.7
	baz=17,slow=2.4						
RETA	Reutte	152.70	346	*e*P	PKPbc	08 58 59.0	-0.8
	comp=Z,3.5nm,0.8s						
RETA				*e*P	PKPab	08 59 12.9	-0.4
	comp=Z,7.0nm,0.7s,SNR=5.9						
WTTA	Wattenberg	152.70	345	*e*P	PKPbc	08 58 59.0	-0.9
	comp=Z,5.0nm,0.6s,SNR=5.8						
WTTA				*e*P	PKPab	08 59 13.4	0.0
	comp=Z,12nm,0.7s						
MYKA	Terra Mystica	152.74	341	*i* P	PKPbc	08 58 58.3	-1.6
	comp=Z,6.4nm,0.8s						
MYKA				*e*P	PKPab	08 59 12.7	-0.8
	comp=Z,3.3nm,0.5s						
MOTA	Moosalm	152.76	345	*i* P	PKPbc	08 58 58.7	-1.3
	comp=Z,8.8nm,0.8s						
MOTA				*e*P	PKPab	08 59 13.3	-0.2
	comp=Z,9.3nm,0.7s						
SQTA	Sankt Quirin	152.85	345	*i* P	PKPbc	08 58 59.2	-1.0
	comp=Z,7.2nm,0.8s						
ABTA	Abfaltersbach	152.96	343	*i* P	PKPbc	08 58 59.0	-1.4
	comp=Z,11nm,0.7s,SNR=7.4						
ABTA				*e*P	PKPab	08 59 13.5	-0.8
	comp=Z,6.0nm,0.8s						
LJU	Ljubljana	152.99	340	*i* PKPab	PKPab	08 59 13.5	-0.9
LJU	Ljubljana	152.99	340	*i* PKPbc	PKPbc	08 58 59.5	-0.8
DAVA	Damuels	153.08	347	*i* P	PKiKP	08 59 01.4	+0.6
	comp=Z,8.5nm,1.0s						
DAVA				*e*P	PKPab	08 59 14.5	-0.4
	comp=Z,6.2nm,0.7s						
FETA	Feichten	153.15	346	*i* P	PKPbc	08 59 00.1	-0.8
	comp=Z,8.6nm,0.9s						
FETA				*e*P	PKPab	08 59 15.0	-0.2
	comp=Z,16nm,1.2s						
LIT	Litokhoron	153.95	321	PKPab	PKPab	08 59 18.4	-0.4
ESDC	Sonseca Array	161.03	13	PKPab	PKPab	08 59 48.5	-1.0
	comp=Z,4.8nm,1.0s,baz=344,slow=4.6,SNR=15						
TORD	Torodi Ar. Bea	171.98	182	PKP	PKPdf	08 59 10.0	-1.7
	comp=Z,0.6nm,0.7s,baz=202,slow=1.6,SNR=3.1						

PRU 04 08:57:46.1±0.0**, 50°.26N**×**19°.25E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.35	96	*e*Pg	Pg	08 57 53.3	+0.4
OJC				*e*Sg	Sg	08 57 58.0	+0.5
LANS	Liptovska Anna	1.12	173	*e*PG	Pg	08 58 07.1	-0.4
LANS				*e*SG	Sg	08 58 21.0	-1.0
LANS				*e*LG	Lg	08 58 22.4	
MORC	Moravsky Berou	1.20	247	*e*PG	Pb	08 58 09.9	+0.1
MORC				*e*SG	Sg	08 58 24.8	+0.1
VYHS	Vyhne	1.79	189	*e*PN	Pn	08 58 17.2	-1.0
VYHS				*e*SN	Sn	08 58 40.1	-1.5
DPC	Dobruska-Polom	1.88	274	*e*PG	Pn	08 58 20.2	+0.7
DPC				*e*SG	Sg	08 58 46.5	+0.1
	comp=Z,18nm,0.8s						
OSTC	Ostas	1.96	280	*e*PG	Pb	08 58 21.9	-0.8
VRAC	Vranov	1.97	242	*e*PN	Pb	08 58 21.9	-0.9
VRAC				*e*SG	Sb	08 58 48.3	+0.4
CHVC	Chvalec	2.07	280	*e*SG	Sb	08 58 51.2	+0.4
KRUC	Moravsky	2.21	238	*e*PN	Pb	08 58 26.2	-0.7

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*IDC **04** 09:00:02.6±1.0, 30°.49N×141°.98E, h0^{km}, mb4.0/6, mb1 4.1/9, mb1mx3.8/33, mbtmp4.0/9, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.2/34, Error ellipse: s-maj=42.3km s-min=16.1km az=78.0*

*JMA **04** 09:00:03.6±0.2, 30°.63N×142°.48E, h66^{km}, M4.0*

*NIED **04** 09:00:03.6, 30°.63N×142°.48E, h66^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.16; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-4.13; $M_{r\theta}$-1.97; $M_{\theta\phi}$1.08; $M_{\phi r}$4.24; Fault plane solution: $M_0$6.34000×10^{14} NP1: ϕ_s338.00000°, δ69.00000°, λ84.00000°. NP2: ϕ_s175.00000°, δ22.00000°, λ106.00000°.*

ISC 04 09:00:06.6±0.8**, 30°.62N**±0°.06×**142°.3E**±0°.1**, h35^{km}, n21, σ1.^{s}97**/25**, mb4.0**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.28	320	Pn	Pn	09 00 54.7	-0.7
	4.7nm,0.3s,baz=1.5,slow=2.8,SNR=2.3						
JHJ				Sn	Sn	09 01 29.6	-3.6
	13nm,0.3s,baz=217,slow=15,SNR=1.6						
CBIJ	Chichi jima	3.51	182	*e*S	Sn	09 01 37.3	-1.8
JCJ	Chichijima	3.51	182	Pn	Pn	09 00 56.6	-2.1
	16nm,0.3s,baz=291,slow=20,SNR=5.0						
JCJ				Sn	Sn	09 01 37.4	-1.7
	17nm,0.3s,baz=294,slow=20,SNR=2.3						
BSO1	Boso 1	4.17	345	P	Pn	09 01 06.9	-0.3
BSO1				*e*S	Sn	09 01 54.8	+0.3
BSO3	Boso 3	4.43	341	P	Pn	09 01 10.7	-0.4
JOD2	Odawara 2	5.35	331	P	Pn	09 01 24.2	+0.2
JHU	Hanno	5.79	335	*e*S	Sn	09 02 34.9	-0.3
JRY	Ryogami san	6.08	333	*e*S	Sn	09 02 42.3	-0.1
JAG	Ashikaga	6.25	339	P	Pn	09 01 35.9	-0.5
MJAR	Matsushiro Arr	6.81	331	Pn	Pn	09 01 44.6	+0.5
	0.4nm,0.3s,baz=161,slow=11,SNR=39						
MAT	Matsushiro	6.82	331	P	Pn	09 01 44.7	+0.6
MAT				S	Sn	09 02 59.0	-1.5
JMK	Ichinoseki	8.36	354	P	Pn	09 02 04.0	-1.2
JMK				*e*S	Sn	09 03 32.5	-5.8
JCH	Churui	12.00	4	P	Pn	09 02 52.1	-3.0
JCH				*e*S	Sn	09 04 57.8	-10
KLR	Kul'dur	20.23	340	LR	LR	09 11 07.7	
	comp=Z,20nm,20.7s,baz=74,slow=33						
ZALV	Zalesovo Beam	46.94	317	PcP	PcP	09 10 06.9	+1.1
	0.6nm,0.6s,baz=69,slow=4.8,SNR=2.3						
MKAR	Makanchi Array	48.36	307	P	P	09 08 44.5	-0.3
	0.6nm,0.6s,baz=91,slow=9.4,SNR=11						
NRIK	Noril'sk	49.42	338	P	P	09 08 53.2	+0.6
	1.0nm,0.5s,baz=117,slow=7.7,SNR=4.1						
WRA	Warramunga Arr	50.85	190	P	P	09 09 03.8	-0.2
	2.6nm,0.6s,baz=6.6,slow=7.6,SNR=39						
ASAR	Alice Springs	54.57	189	P	P	09 09 31.7	+0.2
	0.5nm,0.5s,baz=359,slow=5.3,SNR=17						
FINES	FINESS Array B	74.84	333	P	P	09 11 44.5	+1.4
	6.2nm,1.0s,baz=20,slow=4.4,SNR=3.8						
NVAR	Mina Array Bea	78.28	52	P	P	09 12 06.6	+3.2
	0.2nm,0.5s,baz=279,slow=6.5,SNR=4.1						

IDC 04 09:01:57.3±2.9**, 30°.44N**×**142°.37E, h0^{km}, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.3**/31**, mbtmp3.4**/4**, ML2.8**/1**, Error ellipse: s-maj=115.0km s-min=9.7km az=72.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	7.00	331	Pn	Pn	09 03 40.7	-0.4
	0.2nm,0.3s,baz=158,slow=11,SNR=4.5						
MKAR	Makanchi Array	48.52	307	P	P	09 10 42.0	-0.1
	0.1nm,0.4s,baz=92,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	50.69	190	P	P	09 10 59.3	+0.6
	0.5nm,0.4s,baz=6.5,slow=7.5,SNR=5.7						
ASAR	Alice Springs	54.41	190	P	P	09 11 25.8	-0.5
	0.2nm,0.6s,baz=9.1,slow=6.4,SNR=3.7						

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*IDC **04** 09:14:14.4±0.9, 18°.74N×146°.51E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/33, mbtmp3.7/10, ML3.0/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/34, Error ellipse: s-maj=34.2km s-min=19.9km az=92.0*

ISC 04 09:14:23.0±1.0**, 18°.7N**±0°.2×**146°.4E**±0°.2**, h64^{km}, n11, σ0.^{s}92**/10**, mb3.6**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	19.14	340	P	P	09 18 40.8	-0.2
	0.0nm,0.3s,baz=138,slow=11,SNR=3.6						
KSRS	Korea Array	24.67	323	P	P	09 19 38.1	+0.3
	1.3nm,0.7s,baz=148,slow=8.2,SNR=7.4						
KSRS				LR	LR	09 27 59.4	
	comp=Z,39nm,20.7s,baz=198,slow=33						
PMG	Port Moresby	27.98	178	LR	LR	09 32 08.9	
	comp=Z,47nm,18.1s,baz=226,slow=38						
WRA	Warramunga Arr	40.22	198	P	P	09 21 53.5	0.0
	0.4nm,0.5s,baz=21,slow=8.5,SNR=6.5						
ASAR	Alice Springs	43.88	197	P	P	09 22 22.7	-0.6
	0.2nm,0.6s,baz=19,slow=6.2,SNR=3.5						
ZALV	Zalesovo Beam	58.38	322	P	P	09 24 10.8	-0.9
	0.8nm,0.7s,baz=90,slow=7.4,SNR=3.8						
MKAR	Makanchi Array	58.91	314	P	P	09 24 16.0	+0.5
	0.7nm,0.7s,baz=92,slow=8.9,SNR=9.1						
ILAR	Eielson Array	63.32	26	P	P	09 24 44.1	-0.9
	0.3nm,0.8s,baz=260,slow=4.8,SNR=4.0						
YKA	Yellowknife Ar	77.64	28	P	P	09 26 11.5	-0.7
	0.5nm,0.7s,baz=284,slow=4.7,SNR=6.8						
FINES	FINESS Array B	87.12	335	P	P	09 27 02.4	+0.8
	6.9nm,1.1s,baz=84,slow=4.3,SNR=4.9						
PDAR	Pinedale Array	87.33	46	P	P	09 27 05.0	+1.6
	0.3nm,0.7s,baz=336,slow=1.1,SNR=2.1						

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*GII **04** 09:19:33.8±0.0, 33°.26N×34°.82E, h1^{km}, MD2.1/5, Mm2.4/6*

*GRAL **04** 09:19:35.1±0.3, 33°.20N×34°.77E, h19^{km}±4^{km}, MD3.0*

ISC 04 09:19:34.0±1.8**, 33°.26N**±0°.05×**34°.78E**±0°.08**, h8^{km}**±11^{km}**, n18, σ0.^{s}57**/28**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	Hanita	0.38	118	Pg	Pg	09 19 41.8	+0.4
MMA0B	Mount Meron ar	0.58	115	Pg	Pb	09 19 45.8	-0.7
MMA0B				Sg	Sb	09 19 54.6	-0.4
BLGI	Bet Lehem HaGe	0.63	146	Pg	Pb	09 19 47.2	-0.2
BLGI				Sg	Sb	09 19 56.8	+0.4
OFRI	\`Ofer	0.67	165	Pg	Pb	09 19 47.3	-0.6
OFRI				Sg	Sb	09 19 57.9	+0.5
GEM	Giv'at Ha'Em	0.75	94	Pg	Pg	09 19 48.6	+0.2
GEM				Sg	Sb	09 20 00.1	+0.4
NATI	Neve Ativ	0.81	90	Pg	Pg	09 19 49.4	-0.1
NATI				Sg	Sb	09 20 01.3	0.0
QRWL	Qaraoun	0.81	69	*e*P	Pg	09 19 49.8	+0.2
QRWL				*e*S	Sg	09 20 00.7	+0.6
RCY	Rachaya	0.92	75	*e*P	Pg	09 19 51.5	-0.1
BHL	Bhannes	0.97	49	*e*P	Pg	09 19 52.8	+0.1
BHL				*e*S	Sg	09 20 05.8	+0.4
MMLI	Mount Malkishu	0.99	146	Pg	Pb	09 19 53.1	-0.3
MMLI				Sg	Sn	09 20 07.9	-0.6
SLTI	Sal'it	1.04	168	Pg	Pg	09 19 53.5	-0.6
HMDT	Nahal Hemdat	1.19	148	Pg	Pb	09 19 56.5	-0.4
HMDT				Sg	Sn	09 20 13.6	+0.2
HWQ	Hawqa	1.41	44	*e*P	Pn	09 19 59.5	-0.6
AMAZ	Amatzia	1.73	176	Pn	Pn	09 20 04.8	+0.3
DSI	Dead Sea	1.77	163	Pn	Pn	09 20 05.3	+0.4
DSI				Sn	Sg	09 20 29.6	-1.1
YTIR	Yattir	1.92	171	Pn	Pb	09 20 09.2	-0.1
GHAJ	Ghor Haditha	2.07	161	Pn	Pn	09 20 09.8	+0.8
PRNI	Paran	2.91	176	Pn	Pn	09 20 22.1	+1.4

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*ANF **04** 09:56:42.5±0.5, 41°.80N×119°.60W, h5^{km}, ML4.2/22, Error ellipse: s-maj=5.1km s-min=3.6km az=61.0*

*SEA **04** 09:56:42.5±3.6, 41°.80N±0°.03×119°.55W±0°.05, h0^{km}±6^{km}, Error ellipse: s-maj=5.7km s-min=4.5km az=91.0*

*IDC **04** 09:56:42.5±0.6, 41°.81N×119°.63W, h0^{km}, mb3.7/3, mb1 3.8/9, mb1mx3.7/37, mbtmp3.6/9, ML3.2/6, MS3.5/10, Ms1 3.5/10, ms1mx3.1/44, Error ellipse: s-maj=8.2km s-min=5.1km az=12.0*

*NEIC **04** 09:56:43.3, 41°.88N×119°.62W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.64; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$1.25; $M_{r\theta}$-0.59; $M_{\theta\phi}$-0.15; $M_{\phi r}$-1.02; Fault plane solution: $M_0$1.61000×10^{15} NP1:ϕ_s26.37000°, δ75.47000°, λ-58.84000°. NP2:ϕ_s138.90000°, δ34.07000°, λ-153.40000°. Principal axes: T 1.6989, Plg24.0000°, Azm93.0000°; N -0.2055, Plg30.0000°, Azm198.0000°; P -1.4934, Plg50.0000°, Azm331.0000°;*

*REN **04** 09:56:43.3±3.0, 41°.88N±0°.04×119°.62W±0°.05, h10^{km}±2^{km}, ML3.9/4, mb3.9/3(NEIC), ML4.1/88(SEA), ML3.7/104(NEIC), Mwr4.1/99(NEIC) Error ellipse: s-maj=5.7km s-min=5.0km az=217.0*

*NEIC **04** 09:56:43.4±2.8, 41°.91N±0°.04×119°.62W±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=5.6km s-min=3.1km az=166.0*

ISC 04 09:56:43.9±0.6**, 41°.84N**±0°.03×**119°.61W**±0°.02**, h10^{km}, n183, σ1.^{s}50**/206**, mb3.9**/3**, MS3.4**/6**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.52	277	Pg	Pg	09 56 53.2	-0.8
MOD				Sg	Sg	09 57 00.0	-1.0
MOD				IAML		09 57 05.5	
	comp=N,9µm,0.7s						
LKVW	Lakeview	0.68	305		Pg	09 56 55.5	-1.5
WVOR	Wild Horse Val	0.94	50	Pg	Pg	09 57 00.7	-1.3
WVOR				Sg	Sg	09 57 12.9	-1.3
WVOR				IAML		09 57 17.1	
	comp=N,3µm,1.1s						
WVOR				IAML		09 57 17.3	
	comp=N,4µm,1.3s						
K05A	Summer Lake	1.30	313	Pn	Pn	09 57 07.2	-1.1
K05A				Sn	Sb	09 57 24.6	-0.9
LASM	Arnica Sink	1.49	262		Pn	09 57 09.9	-1.0
LTIM	Timbered Crate	1.56	246		Pn	09 57 11.2	-0.5
HOG	Hogback Mounta	1.61	285		Pn	09 57 12.2	-0.3
HOG					Sg	09 57 35.3	-0.4
M04C	Macdoel	1.67	269	P	Pn	09 57 12.2	-1.1
	baz=87,SNR=106						
M04C				Sb	Sg	09 57 36.8	-0.7
	baz=87						
M04C	Macdoel	1.67	269		Pn	09 57 12.1	-1.2
M04C					Sg	09 57 37.1	-0.4
K04D	Chiloquin, OR	1.78	297	Pn	Pn	09 57 13.6	-1.1
	baz=116,SNR=222						
K04D				Pb	Pb	09 57 15.6	-1.0
	baz=116						
K04D				Sb	Sg	09 57 39.8	-1.1
	baz=116						
J05D	Fort Rock, OR	1.88	321	Pb	Pn	09 57 17.0	+0.8
	baz=140,SNR=213						
J05D				Sb	Sg	09 57 43.0	-1.3
	baz=140						
J05D	Fort Rock, OR	1.88	321		Pn	09 57 17.1	+0.8
L04D	Klamath Falls	2.04	282	Pn	Pn	09 57 17.1	-1.4
	baz=100,SNR=166						
L04D				Pg	Pg	09 57 22.1	-0.9
	baz=100						
L04D				Sb	Sg	09 57 47.7	-1.8
	baz=100						
L04D	Klamath Falls	2.04	282		Pn	09 57 17.2	-1.2
BEKR	Beckworth	2.05	196		Pb	09 57 21.2	-0.1
BEKR				IAML		09 57 52.1	
	comp=N,474nm,0.6s						
BEKR				IAML		09 57 52.3	
	comp=E,804nm,0.7s						
PAHR	Pah Rah Range	2.13	175		Pb	09 57 21.1	-1.6
PAHR				IAML		09 57 55.2	
	comp=E,359nm,0.6s						
PAHR				IAML		09 58 08.6	
	comp=N,323nm,1.2s						
PINE	Pine Mountain	2.19	334		Pn	09 57 20.1	-0.3
PINE				IAML		09 57 54.7	
	comp=N,522nm,1.2s						
PINE				IAML		09 57 59.6	
	comp=E,738nm,1.2s						
I07A	Izee	2.25	2		Pn	09 57 21.7	+0.5
I07A				IAML		09 58 03.5	
	comp=E,533nm,2.1s						
O03E	Paynes Creek	2.26	228	Pn	Pn	09 57 21.8	+0.4
	baz=46,SNR=187						
O03E				Pb	Pb	09 57 24.2	-0.7
	baz=46						
O03E				Sb	Sg	09 57 55.1	-1.5
	baz=46						
J04D	Umpqua Nationa	2.32	308	Pn	Pn	09 57 21.6	-0.7
	baz=126,SNR=124						
J04D				Pb	Pb	09 57 25.4	-0.5
	baz=126						
J04D				Sb	Sg	09 57 56.7	-1.7
	baz=126						
YBH	Yreka Blue Hor	2.32	268	Pn	Pn	09 57 21.2	-1.0
	comp=E,16nm,0.3s,baz=82,slow=9.8,SNR=48						
YBH				Pg	Pb	09 57 23.8	-2.1
	comp=E,16nm,0.3s,baz=76,slow=13,SNR=70						
YBH				Lg	Lg	09 57 55.8	
	comp=E,55nm,0.3s,baz=200,slow=9.9,SNR=13						
YBH	Yreka Blue Hor	2.32	268		Pn	09 57 21.2	-1.0
YBH				IAML		09 58 06.8	
	comp=N,479nm,1.3s						
YBH				IAML		09 58 08.0	
	comp=E,289nm,1.0s						
M02C	Callahan	2.47	261	P	Pn	09 57 22.9	-1.4
	baz=78,SNR=63						
M02C				Sb	Sg	09 58 00.8	-2.5
	baz=78						
N02D	Trinity Center	2.48	251	Pn	Pn	09 57 23.7	-0.7
	baz=68,SNR=95						
N02D				Pb	Pb	09 57 27.0	-1.6
	baz=68						
N02D				Sb	Sg	09 58 01.1	-2.5
	baz=68						
VCNR	Virginia City	2.54	181		Pb	09 57 27.6	-2.0
WDC	Whiskeytown Da	2.54	241		Pb	09 57 27.5	-2.1
WDC				IAML		09 58 07.4	
	comp=N,277nm,0.8s						
HUMO	Hull Mountain	2.60	288		Pn	09 57 24.8	-1.3
HUMO				IAML		09 58 10.8	
	comp=E,458nm,1.0s						
ORV	Oroville	2.69	213		Pn	09 57 28.6	+1.4
PNTR	Pine Nut	2.75	180		Pn	09 57 28.4	+0.2
I05D	Terrebonne, OR	2.80	334	Pb	Pb	09 57 32.6	-1.5
	baz=153,SNR=105						
RUBR	Rubicon Trail	2.81	189		Pn	09 57 27.9	-1.1
RUBR				IAML		09 58 15.4	
	comp=E,312nm,0.7s						
RUBR				IAML		09 58 37.3	
	comp=N,360nm,1.3s						
I04A	Tendick Farm,	2.84	314	Pn	Pn	09 57 29.2	-0.2
	baz=133						
I04A				Pb	Pb	09 57 33.9	-0.8
	baz=133,SNR=28						
I04A				Sb	Sb	09 58 11.6	+2.0
	baz=133						
O02D	Mt. Diablo Mer	2.92	236	Pn	Pn	09 57 30.2	-0.3
	baz=54,SNR=71						
O02D				Pb	Pb	09 57 35.1	-1.0
	baz=54						
O02D				Sb	Sg	09 58 14.2	-3.5
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	09 57 31.2	-0.2
	baz=95,SNR=80						
L02E				Sb	Sb	09 58 14.8	+1.0
	baz=95						
AFDM	Forest Hills D	3.07	200		Pn	09 57 31.8	-0.6
AFDM				IAML		09 58 29.7	
	comp=E,130nm,1.1s						
K02D	Willamette Mer	3.13	287	P	Pn	09 57 33.3	-0.1
	baz=104,SNR=385						
K02D				Sb	Sb	09 58 19.8	+1.9
	baz=104						
MFID	Camas Ranch	3.21	59		Pn	09 57 34.0	-0.4
MFID				IAML		09 58 30.9	
	comp=E,331nm,0.8s						
KRMB	Red Mountain	3.23	266		Pn	09 57 35.1	+0.3
KRMB				IAML		09 58 32.4	
	comp=N,239nm,1.5s						
KRMB				IAML		09 58 37.9	
	comp=E,150nm,1.1s						
KHMM	Horse Mountain	3.25	254		Pn	09 57 34.7	-0.3
KHMM				IAML		09 58 41.9	
	comp=E,287nm,1.7s						
KHMM				IAML		09 58 42.4	
	comp=N,296nm,1.3s						
RYN	Ryan	3.31	165		Pn	09 57 38.0	+2.1
RYN				IAML		09 58 36.4	
	comp=E,238nm,1.2s						
RYN				IAML		09 58 36.4	
	comp=N,238nm,0.9s						
I03D	Drain, OR	3.32	305	P	Pn	09 57 38.0	+2.2
	baz=123,SNR=6.6						
I03D				Sb	Sb	09 58 25.7	+2.4
	baz=123						
WAKR	Walker	3.33	178		Pn	09 57 37.9	+1.7
WAKR				IAML		09 58 43.3	
	comp=N,120nm,1.3s						
WAKR				IAML		09 58 44.3	
	comp=E,121nm,1.0s						
H04A	Detroit Lake	3.41	327		Pn	09 57 35.6	-1.6
BMO	Blue Mountains	3.45	28		Pn	09 57 36.0	-1.8
BMO				IAML		09 58 42.6	
	comp=E,189nm,2.2s						
J01E	Myrtle Point	3.46	294	P	Pn	09 57 39.0	+1.3
	baz=111						
KBO	Bosley Butte	3.46	278		Pn	09 57 38.7	+0.8
ELK	Elko	3.47	107	Pn	Pn	09 57 39.9	+1.7
	comp=E,2.5nm,0.3s,baz=294,slow=15,SNR=10						
ELK				Pg	Pb	09 57 43.7	-1.8
	comp=E,17nm,0.3s,baz=289,slow=16,SNR=60						
ELK				Sn	Sn	09 58 19.8	+0.4
	comp=E,13nm,0.3s,baz=334,slow=14,SNR=3.2						
ELK				Lg	Lg	09 58 31.9	
	comp=E,56nm,0.3s,baz=166,slow=11,SNR=14						
ELK	Elko	3.47	107		Pn	09 57 39.9	+1.7
ELK				IAML		09 58 37.2	
	comp=E,94nm,0.6s						
ELK				IAML		09 58 37.6	
	comp=E,121nm,0.6s						
JCC	Jacoby Creek,	3.48	254		Pn	09 57 38.6	+0.6
G08A	Pilot Rock	3.48	8		Pn	09 57 38.5	+0.3
KMRM	Mail Ridge	3.50	244		Pn	09 57 38.7	+0.4
H04D	Lebanon	3.53	321	P	Pn	09 57 40.9	+2.2
	baz=139						
NVAR	Mina Array Bea	3.55	163	Pn	Pn	09 57 40.3	+1.1
	comp=E,0.6nm,0.3s,baz=342,slow=12,SNR=4.8						
NVAR				Pg	Pb	09 57 45.4	-1.4
	comp=E,1.9nm,0.3s,baz=348,slow=13,SNR=9.3						
NVAR				Lg	Lg	09 58 34.0	
	comp=E,8.4nm,0.3s,baz=351,slow=28,SNR=1.9						
G05D	Wamic, OR	3.62	341	P	Pn	09 57 42.2	+2.1
	baz=160,SNR=7.5						
KEBM	Edson Butte	3.65	288		Pn	09 57 40.6	+0.2
LHV	Little Huntoon	3.68	166		Pn	09 57 42.6	+1.8
KCPM	Cahto Peak	3.70	236		Pn	09 57 41.9	+0.6
KCPM				IAML		09 58 51.6	
	comp=N,151nm,1.2s						
KCPM				IAML		09 58 56.1	
	comp=E,173nm,1.2s						
CMB	Columbia Colle	3.84	189		Pn	09 57 43.0	-0.1
CMB				IAML		09 58 51.8	
	comp=E,97nm,1.3s						
COR	Corvallis	3.85	317		Pn	09 57 42.6	-0.5
COR				IAML		09 58 56.2	
	comp=E,162nm,2.2s						
COR				IAML		09 59 08.5	
	comp=E,140nm,1.1s						
HOPS	Hopland Field	3.88	224		Pn	09 57 42.8	-0.7
HOPS				IAML		09 59 19.0	
	comp=N,77nm,1.9s						
GDXM	Geysers	3.88	220		Pn	09 57 45.9	+2.2
TPH	Tonopah	4.18	153		Pn	09 57 47.9	0.0

HLID	**Hailey**	**4.20**	**64**	P	**Pn**	**09 57 48.7**	**+0.6**
	baz=248						
HLID				Sb	**Sb**	**09 58 48.6**	**-0.2**
	baz=248						
HLID	**Hailey**	**4.20**	**64**		**Pn**	**09 57 48.3**	**+0.2**
HLID				IAML		09 59 04.8	
	comp=N,112nm,1.6s						
MDPB	**Devils Postpil**	**4.22**	**174**		**Pn**	**09 57 49.6**	**+1.1**
MDPB				IAML		09 59 15.6	
	comp=E,53nm,1.3s						
OMMB	**Old Mammoth Mi**	**4.24**	**173**		**Pn**	**09 57 52.1**	**+3.3**
F10A	**Beach Ranch, E**	**4.48**	**22**		**Pn**	**09 57 49.5**	**-2.3**
F10A				IAML		09 59 19.1	
	comp=E,62nm,1.9s						
F10A				IAML		09 59 44.4	
	comp=N,70nm,1.3s						
HAWA	**Hanford**	**4.55**	**1**		**Pn**	**09 57 51.9**	**-0.9**
HAWA				IAML		09 59 35.6	
	comp=N,45nm,1.4s						
R11A	**Troy Canyon, C**	**4.65**	**137**	P	**Pn**	**09 57 57.3**	**+3.0**
	baz=320						
R11A				Sg	**Sg**	**09 59 12.9**	**-0.3**
	baz=320						
R11A	**Troy Canyon, C**	**4.65**	**137**		**Pn**	**09 57 56.1**	**+1.7**
R11A				IAML		09 59 15.8	
	comp=E,97nm,1.2s						
R11A				IAML		09 59 19.5	
	comp=N,83nm,1.0s						
E08A	**Dider Farm, El**	**4.67**	**5**		**Pn**	**09 57 51.4**	**-3.0**
E08A				IAML		09 59 16.9	
	comp=E,62nm,1.3s						
E07A	**Sunnyside**	**4.72**	**358**		**Pn**	**09 57 54.9**	**-0.3**
E07A				IAML		09 59 28.4	
	comp=N,42nm,1.7s						
E07A				IAML		09 59 35.9	
	comp=E,64nm,2.4s						
E09A	**Wood Farm, Sta**	**4.79**	**12**		**Pn**	**09 57 53.3**	**-2.8**
E09A				IAML		09 59 30.1	
	comp=E,42nm,1.8s						
BGU	**Big Grassy Mou**	**5.03**	**98**		**Pn**	**09 58 00.9**	**+1.3**
HVU	**Hansel Valley**	**5.11**	**88**		**Pn**	**09 58 01.6**	**+1.0**
GRAC	**Grapevine Rang**	**5.14**	**160**	Sg	**Sg**	**09 59 29.8**	**+1.0**
	baz=341						
LON	**Longmire**	**5.16**	**343**		**Pn**	**09 57 59.5**	**-1.7**
BCYI	**Bear Canyon**	**5.17**	**59**		**Pn**	**09 58 00.2**	**-1.3**
E04D	**Cinebar**	**5.17**	**337**	P	**Pn**	**09 58 04.6**	**+3.3**
	baz=155						
D08A	**Wollman Farm,**	**5.24**	**5**		**Pn**	**09 58 02.7**	**+0.4**
D08A				IAML		09 59 43.6	
	comp=E,32nm,2.1s						
SAO	**San Andreas Ge**	**5.26**	**196**		**Pn**	**09 58 02.3**	**-0.3**
DUG	**Dugway, Tooele**	**5.40**	**105**	P	**Pn**	**09 58 06.6**	**+2.1**
	baz=290						
DUG	**Dugway, Tooele**	**5.40**	**105**		**Pn**	**09 58 04.8**	**+0.3**
SPUT	**South Promonto**	**5.40**	**93**		**Pn**	**09 58 05.5**	**+1.0**
LTY	**Liberty**	**5.47**	**352**	Pn	**Pn**	**09 58 03.2**	**-2.2**
E03A	**Lebam**	**5.50**	**330**		**Pn**	**09 58 04.1**	**-1.7**
PSUT	**Pine Spring**	**5.50**	**125**		**Pn**	**09 58 08.2**	**+2.1**
TPNV	**Topopah Spring**	**5.53**	**151**	Sg	**Sg**	**09 59 40.0**	**-1.4**
	baz=333						
TPNV	**Topopah Spring**	**5.53**	**151**		**Pn**	**09 58 08.2**	**+1.7**
D05A	**Enumclaw**	**5.61**	**343**		**Pn**	**09 58 07.7**	**+0.4**
PRN	**Pahroc Range**	**5.65**	**140**		**Pn**	**09 58 10.0**	**+2.0**
PMPB	**Monarch Peak**	**5.69**	**190**		**Pn**	**09 58 10.7**	**+2.2**
MCMT	**McKenzie Canyo**	**5.76**	**57**		**Pn**	**09 58 10.9**	**+1.3**
NLU	**North Lily Min**	**6.01**	**106**		**Pn**	**09 58 13.1**	**+0.1**
HWUT	**Hardware Ranch**	**6.02**	**90**		**Pn**	**09 58 14.4**	**+1.3**
CTU	**Camp Tracy**	**6.03**	**98**		**Pn**	**09 58 13.4**	**+0.2**
C09A	**Chrisman Ranch**	**6.04**	**9**		**Pn**	**09 58 09.7**	**-3.5**
DLMT	**Dillon**	**6.19**	**53**		**Pn**	**09 58 14.7**	**-0.8**
TCUT	**Toone Canyon**	**6.20**	**94**		**Pn**	**09 58 17.2**	**+1.5**
D03D	**Eldon**	**6.21**	**338**	P	**Pn**	**09 58 19.0**	**+3.4**
	baz=155,SNR=5.7						
ISA	**Isabella, Lake**	**6.23**	**171**		**Pn**	**09 58 15.2**	**-0.7**
JLU	**Jordanelle**	**6.28**	**99**		**Pn**	**09 58 15.2**	**-1.5**
MPU	**Maple Canyon**	**6.31**	**104**		**Pn**	**09 58 17.4**	**+0.3**
SHPR	**Sheep Range**	**6.35**	**146**		**Pn**	**09 58 17.3**	**-0.3**
MSO	**Missoula**	**6.44**	**37**	P	**Pn**	**09 58 21.4**	**+2.6**
	baz=221						
MSO	**Missoula**	**6.44**	**37**		**Pn**	**09 58 17.9**	**-0.8**
CCUT	**Cedar City**	**6.44**	**130**		**Pn**	**09 58 19.3**	**+0.3**
SHOC	**Shoshone, Teco**	**6.47**	**155**	Sg	**Sg**	**10 00 11.6**	**0.0**
	baz=337						
LRM	**Limekiln Ridge**	**6.53**	**50**	Pn	**Pn**	**09 58 21.2**	**+1.0**
MVU	**Marysvale**	**6.57**	**118**		**Pn**	**09 58 21.2**	**+0.5**
SZCU	**Shurtz Canyon**	**6.57**	**128**		**Pn**	**09 58 23.3**	**+2.5**
MSU	**Marysvale**	**6.59**	**118**		**Pn**	**09 58 22.0**	**+1.0**
B05A	**Bryant**	**6.66**	**346**	P	**Pn**	**09 58 25.9**	**+4.1**
	baz=164,SNR=8.2						
NEW	**Newport**	**6.66**	**14**	Pn	**Pn**	**09 58 25.3**	**+3.5**
	comp=E,0.1nm,0.3s,baz=246,slow=17,SNR=2.0						
NEW				Lg	Lg	10 00 12.3	
	comp=E,0.2nm,0.3s,baz=123,slow=22,SNR=3.4						
MOOW	**Moose Ponds**	**6.79**	**71**		**Pn**	**09 58 25.5**	**+1.7**
YHL	**Hebgen Lake**	**6.84**	**61**		**Pn**	**09 58 26.2**	**+1.7**
MTPU	**Mount Pierson**	**6.85**	**121**		**Pn**	**09 58 25.8**	**+1.2**
TMUT	**Trail Mountain**	**6.88**	**109**		**Pn**	**09 58 25.2**	**+0.1**
YPP	**Pitchstone Pla**	**6.89**	**66**		**Pn**	**09 58 25.9**	**+0.7**
BOZ	**Bozeman (W)**	**6.89**	**54**	P	**Pn**	**09 58 26.8**	**+1.8**
	baz=240						
BOZ	**Bozeman (W)**	**6.89**	**54**		**Pn**	**09 58 26.5**	**+1.4**
FLWY	**Flagg Ranch**	**6.91**	**68**		**Pn**	**09 58 25.9**	**+0.5**
YMR	**Madison River**	**6.92**	**63**		**Pn**	**09 58 23.8**	**-1.7**
YHH	**Holmes Hill**	**7.04**	**62**		**Pn**	**09 58 25.8**	**-1.4**
H17A	**Grant Village**	**7.09**	**66**		**Pn**	**09 58 28.8**	**+0.9**
KNB	**Kanab**	**7.12**	**130**	Pn	**Pn**	**09 58 26.9**	**-1.4**
YNR	**Norris Junctio**	**7.12**	**63**		**Pn**	**09 58 27.1**	**-1.3**
PKCU	**Pink Cliffs**	**7.14**	**126**		**Pn**	**09 58 31.4**	**+2.7**
P17A	**Butcher Ranch,**	**7.14**	**106**		**Pn**	**09 58 28.8**	**+0.2**
LKWY	**Lake**	**7.26**	**65**		**Pn**	**09 58 29.6**	**-0.6**
HRY	**Holter Researc**	**7.41**	**46**		**Pn**	**09 58 31.9**	**-0.3**
SRU	**San Rafael Swe**	**7.44**	**108**		**Pn**	**09 58 30.4**	**-2.2**
YMP	**Mirror Lake Pl**	**7.48**	**64**		**Pn**	**09 58 30.3**	**-3.0**
BW06	**Boulder Array**	**7.51**	**80**		**Pn**	**09 58 32.8**	**-0.9**
PD31	**Pinedale Array**	**7.51**	**80**		**Pn**	**09 58 32.0**	**-1.6**
PDAR	**Pinedale Array**	**7.51**	**80**	Pn	**Pn**	**09 58 36.8**	**+3.1**
	comp=E,0.1nm,0.3s,baz=264,slow=13,SNR=18						
PDAR				Lg	Lg	10 00 38.7	
	comp=E,0.1nm,0.3s,baz=268,slow=18,SNR=2.1						
YNE	**Yellowstone No**	**7.67**	**62**		**Pn**	**09 58 33.1**	**-2.8**
RDMU	**Red Mountain**	**7.68**	**96**		**Pn**	**09 58 36.4**	**+0.5**
GMRC	**Granite Mounta**	**7.69**	**155**	Sg	**Sg**	**10 00 49.5**	**-1.3**
	baz=337						
MWC	**Mount Wilson**	**7.70**	**170**		**Pn**	**09 58 37.3**	**+1.2**
PASC	**Pasadena Art C**	**7.74**	**171**	Pn	**Pn**	**09 58 35.9**	**-0.6**
U15A	**North Rim**	**7.84**	**131**		**Pn**	**09 58 39.5**	**+1.2**
GCMT	**Greycliff**	**8.20**	**58**		**Pn**	**09 58 44.1**	**+1.1**
RLMT	**Red Lodge**	**8.21**	**63**		**Pn**	**09 58 45.0**	**+1.9**
WALA	**Waterton Lakes**	**8.26**	**27**		**Pn**	**09 58 44.8**	**+1.1**
PFO	**Pinyon Flats O**	**8.58**	**162**		**Pn**	**09 58 49.6**	**+1.4**
O20A	**White River Ci**	**8.77**	**97**	Pn	**Pn**	**09 58 52.9**	**+2.1**
PV23	**Carpenter Ridg**	**8.79**	**109**		**Pn**	**09 58 50.5**	**-0.8**
PV14	**Lion Creek, Pa**	**8.82**	**110**		**Pn**	**09 58 51.3**	**-0.3**
PV20	**West Nyswonger**	**8.87**	**110**		**Pn**	**09 58 53.2**	**+1.0**
PV19	**Morning Glory**	**8.88**	**110**		**Pn**	**09 58 51.3**	**-1.0**
PV04	**Paradox Valley**	**8.89**	**109**		**Pn**	**09 58 50.6**	**-1.9**
PV17	**East Wray Mesa**	**8.90**	**110**		**Pn**	**09 58 53.9**	**+1.2**
PV22	**Blue Mesa, Par**	**8.91**	**108**		**Pn**	**09 58 51.6**	**-1.3**
PV16	**Nyswonger Mesa**	**8.92**	**110**		**Pn**	**09 58 52.2**	**-0.7**
PV18	**Skein Mesa, Pa**	**8.96**	**110**	Pn	**Pn**	**09 58 53.5**	**0.0**
PV11	**David Mesa, Pa**	**8.96**	**110**		**Pn**	**09 58 52.3**	**-1.2**
PV12	**Saucer Basin,**	**9.00**	**109**		**Pn**	**09 58 53.5**	**-0.5**
PV13	**Radium Mtn., P**	**9.06**	**110**		**Pn**	**09 58 55.0**	**+0.2**
PV02	**Paradox Valley**	**9.09**	**110**		**Pn**	**09 58 58.0**	**+2.6**
PV15	**Paradox Valley**	**9.21**	**109**		**Pn**	**09 58 59.1**	**+2.1**
PV01	**Paradox Valley**	**9.24**	**110**		**Pn**	**09 58 56.9**	**-0.5**
K22A	**Casper**	**9.74**	**81**		**Pn**	**09 59 01.7**	**-2.5**
X16A	**Lo Mia Camp, P**	**9.81**	**136**		**Pn**	**09 59 04.2**	**-0.9**
SMCO	**Snowmass**	**9.98**	**101**		**Pn**	**09 59 08.0**	**+0.3**
N23A	**Red Feather La**	**10.32**	**91**	Pn	**Pn**	**09 59 11.9**	**-0.2**
S22A	**4UR Ranch, Cre**	**10.65**	**108**		**Pn**	**09 59 18.3**	**+1.6**
BBB	**Bella Bella**	**11.86**	**334**	LR	LR	10 03 45.4	
	comp=E,87nm,19.2s,baz=76,slow=36						
ANMO	**Albuquerque**	**12.39**	**119**	Pn	**Pn**	**09 59 42.4**	**+1.9**
	comp=E,0.1nm,0.3s,baz=287,slow=15,SNR=6.0						
ANMO				LR	LR	10 04 21.7	
	comp=E,96nm,18.5s,baz=304,slow=37						
T25A	**Trinidad**	**12.64**	**107**		**Pn**	**09 59 44.4**	**+0.5**
MNTX	**Cornudas Mount**	**15.22**	**127**		**P**	**10 00 24.4**	**+0.5**
MNTX				IAmb	IAmb	10 00 31.7	
	comp=Z,7.4nm,1.4s						
ECSD	**EROS Data Cent**	**16.98**	**76**	Pn	**Pn**	**10 00 40.9**	**-0.5**
ECSD				IAmb	IAmb	10 00 45.1	
	comp=Z,7.3nm,1.1s						
DLBC	**Dease Lake**	**17.87**	**342**	LR	LR	10 09 27.7	
	comp=Z,68nm,20.6s,baz=274,slow=43						
LPIG	**La Paz**	**19.31**	**153**	LR	LR	10 07 53.2	
	comp=Z,54nm,19.9s,baz=14,slow=35						
YKA	**Yellowknife Ar**	**20.90**	**7**	P	**P**	**10 01 26.3**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=191,slow=10,SNR=16						
CCM	**Cathedral Cave**	**22.03**	**90**	P	**P**	**10 01 38.7**	**+0.3**
CCM				IAmb	IAmb	10 01 40.4	
	comp=Z,11nm,1.1s						
KDAK	**Kodiak Island**	**26.24**	**319**	LR	LR	10 10 38.8	
	comp=Z,113nm,18.9s,baz=161,slow=32						
INK	**Inuvik**	**27.56**	**349**	P	**P**	**10 02 31.6**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=146,slow=5.0,SNR=2.6						
INK				LR	LR	10 14 24.9	
	comp=Z,81nm,18.8s,baz=173,slow=38						
ILAR	**Eielson Array**	**27.74**	**335**	P	**P**	**10 02 34.2**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=154,slow=8.0,SNR=19						
TKL	**Tuckaleechee C**	**28.48**	**91**	LR	LR	10 14 55.4	
	comp=Z,82nm,21.4s,baz=296,slow=38						
SADO	**Sadowa**	**29.38**	**70**	LR	LR	10 14 10.6	
	comp=Z,61nm,18.2s,baz=266,slow=36						
ASAJ	**Asahikawa**	**67.17**	**309**	LR	LR	10 36 09.7	
	comp=Z,195nm,19.6s,baz=11,slow=35						
GUMO	**Guam**	**85.11**	**284**	LR	LR	10 47 16.9	
	comp=Z,72nm,18.5s,baz=178,slow=36						

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*MOS **04** 10:37:12.4±1.1,56°.04N×113°.81E,h3^{km},mb4.0/4,Error ellipse: s-maj=10.2km s-min=6.5km az=68.1*

MOS Felt (II-III) at Severomuysk.

*IDC **04** 10:37:13.4±1.4,56°.29N×113°.79E,h0^{km},mb3.7/6, mb1 3.9/10,mb1mx3.5/55,mbtmp3.7/10,ML3.4/4,MS3.0/7, Ms1 3.0/7,ms1mx2.7/43,Error ellipse: s-maj=32.4km s-min=20.9km az=155.0*

*BYKL **04** 10:37:13.7±0.2,56°.09N×113°.74E,h7^{km}±3^{km},FELT I=II-III MSK at Severomuisk*

ISC 04 10:37:14.1±0.5,**56°.10N**±0°.03×**113°.80E**±0°.02,**h10^{km},n80,** σ**2^{s}.91**/123,**mb3.8**/9,**MS2.9**/4,**6C-3D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.14**	**276**	⇑*i*Pg	**Pg**	**10 37 16.1**	**-1.2**
SVKR				Pmax		10 37 16.4	
	32μm,0.2s						
SVKR				*e*Sg	**Sg**	**10 37 18.0**	**-1.6**
SVKR				Smax		10 37 26.3	
	53μm,0.8s						
SVKR	**Severomuysk**	**0.14**	**276**	⇑*i*PG	**Pg**	**10 37 16.1**	**-1.2**
SVKR				*e*		10 37 18.0	
SVKR				pmax	pmax		
	comp=Z,32μm,0.3s						
SVKR				smax	smax		
	comp=N,35μm,0.5s						
UKT	**Uakit**	**0.62**	**189**	⇓*i*Pg	**Pg**	**10 37 24.6**	**-1.6**
UKT				Pmax		10 37 31.2	
	comp=N,320nm,0.5s						
UKT				*e*Sg	**Sg**	**10 37 33.0**	**-1.4**
UKT				Smax		10 37 38.1	
	comp=N,2μm,0.7s						
UKT	**Uakit**	**0.62**	**189**	*e*PG	**Pg**	**10 37 24.8**	**-1.4**
UKT				*e*		10 37 33.0	
UKT				pmax	pmax		
	comp=Z,246nm,0.6s						
UKT				smax	smax		
	comp=E,2μm,0.6s						
NLYR	**Nelyaty**	**1.13**	**69**	⇑*i*Pg	**Pb**	**10 37 34.9**	**-0.9**
NLYR				*e*Pb	**Pn**	**10 37 36.9**	**+0.9**
NLYR				*e*		10 37 38.7	
NLYR				max		10 37 40.8	
	comp=E,459nm,0.4s						
NLYR				*e*Sg	**Sb**	**10 37 51.1**	**+0.6**
NLYR				*e*Sb	**Sn**	**10 37 55.0**	**+3.4**
NLYR				max		10 37 57.6	
	comp=E,5μm,1.1s						
NLYR	**Nelyaty**	**1.13**	**69**	⇑*i*PG	**Pb**	**10 37 34.9**	**-0.9**
NLYR				*e*		10 37 51.0	
NLYR				pmax	pmax		
	comp=Z,457nm,0.5s						
NLYR				smax	smax		
	comp=E,5μm,1.1s						
YOA	**Uoyan**	**1.16**	**272**	*e*Pg	**Pb**	**10 37 34.7**	**-1.6**
YOA				Pmax		10 37 40.7	
	comp=E,1μm,0.3s						
YOA				*e*Sg	**Sb**	**10 37 49.6**	**-1.9**
YOA				Smax		10 37 59.0	
	comp=E,8μm,0.7s						
YOA	**Uoyan**	**1.16**	**272**	⇑*i*PG	**Pb**	**10 37 34.7**	**-1.6**
YOA				*e*		10 37 50.9	
YOA				pmax	pmax		
	comp=Z,949nm,0.5s						
YOA				smax	smax		
	comp=N,8μm,0.5s						
KMO	**Kumora**	**1.48**	**263**	*e*Pg	**Pn**	**10 37 40.0**	**-0.8**
KMO				*e*		10 37 41.7	
KMO				max		10 37 43.1	
	comp=N,718nm,0.5s						
KMO				*e*Sg	**Sn**	**10 37 59.2**	**-1.0**
KMO				*e*		10 38 02.7	
KMO				max		10 38 03.8	
	comp=N,8μm,1.2s						
KMO	**Kumora**	**1.48**	**263**	*e*PG	**Pn**	**10 37 39.9**	**-0.8**
KMO				*e*		10 37 59.1	
KMO				pmax	pmax		
	comp=Z,717nm,0.4s						
KMO				smax	smax		
	comp=N,8μm,1.1s						
BOD	**Bodaibo**	**1.72**	**4**	*e*Pg	**Pn**	**10 37 44.9**	**+0.7**
BOD				Pmax		10 37 47.1	
	comp=N,168nm,0.3s						
BOD				*e*Sg	**Sn**	**10 38 07.2**	**+1.0**
BOD				Smax		10 38 10.4	
	comp=N,986nm,0.3s						
BOD	**Bodaibo**	**1.72**	**4**	⇑*i*PN	**Pn**	**10 37 45.2**	**+1.0**
BOD				*e*		10 38 07.5	
BOD				pmax	pmax		
	comp=Z,221nm,0.5s						
BOD				smax	smax		
	comp=E,985nm,0.3s						
YLYR	**Ulyunkhan**	**1.94**	**232**	⇓*i*Pg	**Pn**	**10 37 47.9**	**+0.7**
YLYR				Pmax		10 37 49.0	
	comp=E,661nm,0.7s						
YLYR				*e*Sg	**Sb**	**10 38 13.9**	**+0.1**
YLYR				Smax		10 38 16.2	
	comp=E,2μm,0.6s						
YLYR	**Ulyunkhan**	**1.94**	**232**	*e*PN	**Pn**	**10 37 48.1**	**+0.9**
YLYR				*e*		10 37 49.3	
YLYR				*e*S	**Sn**	**10 38 12.5**	**+0.9**
YLYR				*e*		10 38 13.8	
YLYR				pmax	pmax		
	comp=Z,388nm,0.4s						
YLYR				smax	smax		
	comp=E,2μm,0.5s						
NIZ	**Nizh Angarsk**	**2.42**	**264**	*e*Pn	**Pn**	**10 37 54.5**	**+0.8**
NIZ				*e*Pg	**Pb**	**10 37 56.5**	**-1.2**
NIZ				Pmax		10 37 59.8	
	comp=E,124nm,0.5s						
NIZ				*e*Sn	**Sn**	**10 38 23.1**	**-0.3**
NIZ				*e*Sg	**Sb**	**10 38 28.8**	**+1.2**
NIZ				Smax		10 38 30.3	
	comp=E,2μm,0.7s						
CRS	**Chara**	**2.60**	**70**	*e*Pn	**Pn**	**10 37 57.6**	**+1.3**
CRS				*e*Pg	**Pb**	**10 38 01.9**	**+1.0**
CRS				Pmax		10 38 04.0	
	comp=E,326nm,1.0s						
CRS				*e*Sn	**Sn**	**10 38 29.3**	**+1.3**
CRS				*e*Sg	**Sg**	**10 38 36.4**	**-1.3**
CRS				Smax		10 38 42.2	
	comp=E,863nm,1.1s						
CRS	**Chara**	**2.60**	**70**	*e*PN	**Pn**	**10 37 57.5**	**+1.3**
CRS				*e*		10 38 01.7	
CRS				*e*		10 38 35.3	
CRS				pmax	pmax		
	comp=Z,328nm,0.8s						
CRS				smax	smax		
	comp=E,966nm,0.9s						
SYVR	**Suvo**	**3.29**	**223**	*e*Pn	**Pn**	**10 38 06.0**	**+0.3**
SYVR				*e*Pg	**Pb**	**10 38 11.7**	**-0.9**
SYVR				*e*PgPg	**PnPn**	**10 38 13.9**	**+1.1**
SYVR				max		10 38 17.7	
	comp=E,198nm,0.9s						
SYVR				*e*		10 38 35.7	
SYVR				*e*Sg	**Sb**	**10 38 54.7**	**+2.1**
SYVR				Smax		10 39 06.6	
	comp=E,576nm,1.5s						
SYVR	**Suvo**	**3.29**	**223**	*e*PN	**Pn**	**10 38 06.0**	**+0.3**
SYVR				*e*		10 38 13.6	
SYVR				*e*		10 38 55.0	
SYVR				pmax	pmax		
	comp=Z,202nm,0.8s						
SYVR				smax	smax		
	comp=N,607nm,1.3s						
VTMR	**Vitim**	**3.41**	**349**	*e*Pn	**Pn**	**10 38 07.5**	**+0.1**
VTMR				*e*Pg	**Pb**	**10 38 14.7**	**+0.1**
VTMR				*e*Sn	**Sn**	**10 38 47.5**	**-0.3**
VTMR				*e*Sg	**Sb**	**10 38 58.4**	**+2.3**
TUP	**Tupik**	**3.90**	**113**	*e*Pn	**Pn**	**10 38 15.0**	**+0.9**
TUP				*e*Pg	**Pb**	**10 38 24.1**	**+1.1**
TUP				Pmax		10 38 27.5	
	comp=N,131nm,0.4s						
TUP				*e*		10 38 45.0	
TUP				*e*Sn	**Sn**	**10 39 00.4**	**+0.5**
TUP				*e*Sg	**Sg**	**10 39 16.3**	**-3.0**
TUP				*e*		10 39 19.9	
TUP				max		10 39 23.9	
	comp=N,573nm,1.1s						
TUP	**Tupik**	**3.90**	**113**	*e*PN	**Pn**	**10 38 15.0**	**+0.9**
TUP				*e*		10 38 24.5	
TUP				*e*S	**Sn**	**10 39 00.1**	**+0.1**
TUP				*e*		10 39 14.3	
TUP				pmax	pmax		
	comp=Z,131nm,0.4s						
TUP				smax	smax		
	comp=E,573nm,0.9s						
MXMB	**Maximikha**	**4.09**	**228**	*e*Pn	**Pn**	**10 38 16.1**	**-0.6**
MXMB				*e*Pg	**Pb**	**10 38 25.7**	**-0.4**
MXMB				*e*Sg	**Sb**	**10 39 18.9**	**+3.3**
CIT	**Chita**	**4.09**	**182**	*e*Sn	**Sn**	**10 39 03.5**	**-1.2**
CIT				*e*Sg	**Sb**	**10 39 20.5**	**+4.7**
CIT				Smax		10 39 26.7	
	comp=E,613nm,0.7s						
OGRR	**Ongureny**	**4.35**	**238**	*e*Pn	**Pn**	**10 38 21.6**	**+1.3**
OGRR				*e*Pg	**Pb**	**10 38 30.6**	**0.0**
OGRR				*e*		10 38 33.9	
OGRR				max		10 38 35.2	
	comp=E,76nm,1.2s						
OGRR				*e*		10 38 55.5	
OGRR				*e*Sg	**Sb**	**10 39 27.0**	**+3.9**
OGRR				Smax		10 39 40.5	
	comp=E,327nm,1.5s						
OGRR	**Ongureny**	**4.35**	**238**	⇓*i*PN	**Pn**	**10 38 21.7**	**+1.4**
OGRR				*e*		10 38 32.5	
OGRR				*e*		10 39 26.6	
OGRR				pmax	pmax		
	comp=Z,80nm,1.8s						
OGRR				smax	smax		
	comp=E,370nm,1.8s						
YKLR	**Yuktali**	**4.40**	**80**	*e*Pg	**Pb**	**10 38 32.3**	**+0.9**
YKLR				*e*Sn	**Sn**	**10 39 11.1**	**-1.0**
YKLR				*e*Sg	**Sb**	**10 39 30.4**	**+5.9**
ZRHB	**Zarechye**	**5.27**	**230**	*e*Sg	**Sg**	**10 39 56.6**	**-6.6**
ZRHB				Smax		10 40 36.2	
	comp=E,883nm,1.9s						
TRG	**Tyrgan**	**5.49**	**235**	*e*Pn	**Pn**	**10 38 36.2**	**+0.3**
TRG				*e*Pg	**Pb**	**10 38 51.3**	**+1.3**
TRG				Pmax		10 38 56.5	
	comp=E,38nm,1.1s						
TRG				*e*Sg	**Sb**	**10 40 01.0**	**+5.1**
TRG				Smax		10 40 22.1	
	comp=E,172nm,1.1s						
TRG	**Tyrgan**	**5.49**	**235**	*e*PN	**Pn**	**10 38 36.3**	**+0.3**
TRG				*e*		10 38 51.7	
TRG				*e*S	**Sn**	**10 39 35.7**	**-3.4**
TRG				*e*		10 40 00.1	
TRG				pmax	pmax		
	comp=Z,38nm,0.8s						
TRG				smax	smax		
	comp=E,173nm,1.0s						
FFNB	**Fofonovo**	**5.80**	**228**	*e*Pn	**Pn**	**10 38 40.4**	**+0.2**
FFNB				*e*Pg	**Pb**	**10 38 56.9**	**+1.6**
FFNB				*e*Sg	**Sb**	**10 40 12.2**	**+7.4**
KAB	**Kabansk**	**5.84**	**229**	*e*Sn	**Sn**	**10 39 44.6**	**-3.2**
KAB				Sg	**Sb**	**10 40 13.6**	**+7.5**
KAB				Smax		10 40 37.9	
	comp=E,709nm,0.9s						
STDB	**Stepnoy Dvoret**	**5.88**	**231**	*e*Sg	**Sb**	**10 40 14.9**	**+7.7**
HRMR	**Khuramsha**	**6.04**	**225**	*e*Pn	**Pn**	**10 38 44.0**	**+0.5**
HRMR				*e*Pg	**Pb**	**10 39 00.5**	**+1.1**
HRMR				Pmax		10 39 04.1	
	comp=E,93nm,0.6s						
HRMR				*e*Sg	**Sb**	**10 40 19.4**	**+7.7**
HRMR				Smax		10 40 39.6	
	comp=E,664nm,0.9s						
IENR	**Iengra**	**6.18**	**84**	*e*Pn	**Pn**	**10 38 46.3**	**+0.9**
IENR				*e*Pg	**Pb**	**10 39 05.2**	**+3.4**
IENR				*e*Sn	**Sn**	**10 39 54.8**	**-1.3**
IENR				*e*Sg	**Sg**	**10 40 25.6**	**-6.7**
BGT	**Bolshoye Golou**	**6.40**	**234**	*e*Pg	**Pb**	**10 39 09.2**	**+3.7**
BGT				Pmax		10 39 26.1	
	comp=E,27nm,1.6s						
BGT				*e*Sn	**Sn**	**10 39 59.0**	**-2.4**
BGT				*e*Sg	**Sg**	**10 40 31.8**	**-7.5**
BGT				Smax		10 40 42.5	
	comp=E,156nm,1.3s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*Pn	**Pn**	**10 38 48.6**	**-0.9**
KPC				*e*		10 39 11.7	
KPC				max		10 39 37.8	
	comp=E,18nm,0.8s						
KPC				*e*Sn	**Sn**	**10 40 00.6**	**-2.6**
KPC				*e*Sg	**Sg**	**10 40 32.9**	**-8.7**
KPC				Smax		10 40 51.1	
	comp=E,301nm,1.2s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*PN	**Pn**	**10 38 48.5**	**-0.9**
KPC				*e*		10 39 11.7	
KPC				*e*		10 40 31.5	
KPC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KPC				smax	smax		
	comp=E,301nm,1.2s						
LSTR	**Listvyanka**	**6.78**	**235**	*e*Sg	**Sb**	**10 40 41.5**	**+8.6**
LSTR				Smax		10 40 49.9	
	comp=E,202nm,1.7s						
IRK	**Irkutsk**	**6.80**	**239**	*e*Sg	**Sb**	**10 40 41.7**	**+8.2**
IRK				Smax		10 40 54.4	
	comp=E,270nm,1.2s						
IRK	**Irkutsk**	**6.80**	**239**	*e*PG	**Pb**	**10 39 15.9**	**+3.6**
IRK				*e*		10 40 43.0	
IRK				pmax	pmax		
	comp=Z,53nm,0.1s						
IRK				smax	smax		
	comp=N,203nm,0.5s						
TLY	**Talaya**	**7.46**	**238**	*e*Pg	**Pb**	**10 39 26.6**	**+3.1**
TLY				Pmax		10 39 29.8	
	comp=N,19nm,1.4s						
TLY				*e*Sg	Sb	10 41 01.4	+9.0
TLY				Smax		10 41 10.2	
	comp=N,80nm,1.2s						
TLY	**Talaya**	**7.46**	**238**	*i* PN	**Pn**	**10 39 03.3**	**+0.4**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HIA	**Hailar**	**7.74**	**150**	*i* PN	**Pn**	**10 39 07.3**	**+0.5**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ARS	**Arshan**	**7.90**	**243**	*e*Sg	Sg	10 41 16.8	-11
ARS				Smax		10 41 19.6	
	comp=Z,371nm,1.0s						
ZEA	**Zeya**	**8.10**	**101**	*e*PG	Pb	10 39 42.4	+7.9
ZEA				*e*		10 41 31.8	
ZEA				smax	smax		
	comp=N,100nm,0.9s						
ZEA				MLR	MLR		
	comp=E,100nm,4.0s						
ZEA				MLR	MLR		
	comp=N,100nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,5.0s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*Pg	Pg	10 39 46.2	-11
ZAK				Pmax		10 40 14.4	
	comp=Z,11nm,2.0s						
ZAK				*e*Sg	Sg	10 41 36.1	-11
ZAK				Smax		10 41 49.5	
	comp=Z,112nm,1.7s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*PN	**Pn**	**10 39 20.7**	**+3.2**
ZAK				*e*		10 39 49.7	
ZAK				*e*		10 41 33.1	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAK				smax	smax		

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               comp=N,111nm,1.5s
MOY    Mondy              8.77 245  ePn     Pn      10 39 21.7 +0.7
MOY                                   max           10 40 05.2
               comp=N,44nm,1.6s
MOY                                 eSn     Sn      10 40 56.6  -3.3
MOY                                 eSg     Sg      10 41 44.0   -11
MOY                                   Smax          10 41 58.6
               comp=N,155nm,1.6s
MOY    Mondy              8.77 245  ePN     Pn      10 39 21.3 +0.3
MOY                                 e               10 39 52.9
MOY                                 eS      Sn      10 40 56.5  -3.3
MOY                                 e               10 41 43.6
MOY                                   pmax  pmax
               comp=Z,29nm,1.4s
MOY                                   smax  smax
               comp=N,155nm,1.6s
ORL    Orlik              8.92 252  ePn     Pn      10 39 23.4 +0.3
ORL                                 e               10 39 34.7
ORL                                 ePg     Pg      10 39 53.5   -11
ORL                                   Pmax          10 40 10.9
               comp=N,16nm,1.3s
ORL                                 eSn     Sn      10 40 59.3  -4.3
ORL                                 eSg     Sg      10 41 48.4   -12
ORL                                   Smax          10 42 05.5
               comp=N,148nm,1.6s
ORL    Orlik              8.92 252  ePN     Pn      10 39 23.3 +0.2
ORL                                 e               10 39 53.7
ORL                                 eS      Sn      10 40 59.7  -3.9
ORL                                 e               10 41 46.7
ORL                                   pmax  pmax
               comp=Z,16nm,0.9s
ORL                                   smax  smax
               comp=N,110nm,1.6s
ULN    Ulaanbaatar        9.24 210  i P     Pn      10 39 27.6 +0.2
ULN                                   pmax  pmax
               comp=Z,1.0nm,0.3s
SONM   Songino Array      9.45 212    Pn    Pn      10 39 31.5 +1.1
               comp=Z,0.3nm,0.3s,baz=26,slow=17,SNR=2.8
SONM                                  Lg    Lg      10 42 08.2
               comp=Z,1.6nm,0.3s,baz=24,slow=29,SNR=16
YAK    Yakutsk           10.09  47    Lg    Lg      10 42 24.2
               comp=Z,0.1nm,0.3s,baz=145,slow=23,SNR=7.2
YAK    Yakutsk           10.09  47  eP      Pn      10 39 32.0  -6.9
YAK                                   pmax  pmax
               comp=Z,6.0nm,1.1s
YAK                                   pmax  pmax
               comp=N,1.0nm,1.1s
YAK                                   pmax  pmax
               comp=E,2.0nm,1.1s
YAK                                   pmax  pmax
               comp=N,43nm,1.1s
KLR    Kul'dur           12.86 115    Pn    Pn      10 40 19.6 +2.7
               comp=N,0.2nm,0.3s,baz=11,slow=5.2,SNR=3.6
KLR                                   Lg    Lg      10 43 53.1
               comp=N,0.1nm,0.3s,baz=126,slow=8.1,SNR=5.1
KLR                                   LR    LR      10 44 43.9
               comp=N,50nm,21.1s,baz=278,slow=35
USRK   Ussuriysk Ar.     16.60 128    LR    LR      10 47 51.1
               comp=N,66nm,18.2s,baz=39,slow=38
ZALV   Zalesovo Beam     16.70 275    Pn    Pn      10 41 08.0 +0.1
               comp=N,0.2nm,0.3s,baz=71,slow=9.6,SNR=4.3
ZALV                                  Lg    Lg      10 46 00.1
               comp=N,0.1nm,0.3s,baz=77,slow=28,SNR=6.3
ZALV                                  LR    LR      10 47 08.1
               comp=N,19nm,21.9s,baz=160,slow=36
ZALV   Zalesovo Beam     16.70 275  i P     P       10 41 10.5 +0.2
ZALV                                  pmax  pmax
               comp=Z,1.0nm,0.6s
TIXI   Tiksi             16.86  16  eP      Pn      10 41 07.4  -2.4
NRIK   Noril'sk          17.69 329    P     Pn      10 41 16.9  -3.3
               comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=7.0
GTA    Gaotai            19.10 215  eP      Pn      10 41 38.6 +0.8
GTA                                   pP    sP      10 41 41.7   0.0
GTA                                   sP    pP      10 41 44.6 +4.4
SEY    Seymchan          20.46  55  i P     P       10 41 52.9 +1.4
KSRS   Korea Array       20.94 147    LR    LR      10 50 49.9
               comp=Z,45nm,19.1s,baz=328,slow=39
KURK   Kurchatov         21.49 270    P     P       10 42 04.3 +1.7
MKAR   Makanchi Array    21.56 258    P     P       10 42 04.5 +0.9
               comp=Z,1.1nm,0.7s,baz=59,slow=9.6,SNR=12
MKAR                                  LR    LR      10 50 34.8
               comp=Z,53nm,20.4s,baz=34,slow=37
MKAR   Makanchi Array    21.56 258  eP      P       10 42 07.3 +3.8
MKAR                                  pmax  pmax
               comp=Z,1.0nm,0.6s
KURBB  Kurchatov Arra    21.58 270    P     P       10 42 04.3 +0.7
               comp=Z,3.1nm,0.7s,baz=66,slow=12,SNR=12
BRVK   Borovoye          25.09 281  i P     P       10 42 40.8 +2.2
BRVK                                  pmax  pmax
               comp=Z,2.0nm,0.9s
MJAR   Matsushiro Arr    25.59 130    LR    LR      10 51 52.9
               comp=Z,37nm,19.7s,baz=240,slow=34
JNU    Nakatsue          25.85 146    LR    LR      10 52 21.7
               comp=Z,32nm,21.7s,baz=2.0,slow=35
BILL   Bilibino          26.38  42  i P     P       10 42 51.7 +1.6
AAK    Ala-Archa         28.49 259  i P     P       10 43 09.7 +0.2
AAK                                   pmax  pmax
               comp=Z,2.0nm,1.1s
OBN    Obninsk           41.49 302  eP      P       10 45 04.0 +3.2
OBN                                   pmax  pmax
               comp=Z,4.0nm,0.9s
FINES  FINESS Array B    42.51 315    P     P       10 45 09.0  -0.2
               comp=Z,8.3nm,1.1s,baz=89,slow=14,SNR=2.3
FINES  FINESS Array B    42.51 315    P     P       10 45 09.0  -0.2
ILAR   Eielson Array     44.80  37    P     P       10 45 25.5  -2.1
               comp=Z,0.5nm,0.9s,baz=307,slow=6.6,SNR=1.9
YKA    Yellowknife Ar    55.88  25    P     P       10 46 51.2  -0.1
               comp=Z,0.6nm,0.8s,baz=331,slow=6.9,SNR=8.6
ESDC   Sonseca Array     71.02 314    P     P       10 48 33.1 +1.2
               comp=Z,0.5nm,0.7s,baz=30,slow=7.2,SNR=4.2
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IDC ***04*** *10:47:53.8±0.8, 44.°51N×114.°30W, h0^{km}, mb1 3.3/6, mb1mx3.2/45, mbtmp3.0/6, ML3.1/6, Error ellipse: s-maj=13.2km s-min=7.9km az=81.0*

BUT ***04*** *10:47:54.9±2.8, 44.°46N±0.°04×114.°17W±0.°06, h12^{km}±7^{km}, ML3.8, ML3.3/106(NEIC), Error ellipse: s-maj=6.2km s-min=5.9km az=105.0*

NEIC ***04*** *10:47:56.7±1.9, 44.°53N±0.°04×114.°17W±0.°06, h10^{km}±2^{km}, Error ellipse: s-maj=7.2km s-min=7.0km az=126.0*

ISC 04 10:47:54.6±0.9**, 44.°53N**±0.°04×**114.°20W**±0.°04**, h6**^{km}**, n78, σ1^{s}78**/79**, Western Idaho**

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Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC       h  m  s     ISC
BCYI   Bear Canyon        0.61 111   Pg      Pg      10 48 05.7  -0.7
HLID   Hailey             0.98 189           Pg      10 48 12.3  -1.1
MCMT   McKenzie Canyo     1.01  73           Pg      10 48 14.0  +0.1
DLMT   Dillon             1.41  53           Pn      10 48 21.5  +0.6
MFID   Camas Ranch        1.62 227           Pn      10 48 24.5  +0.7
LRM    Limekiln Ridge     1.79  43           Pn      10 48 26.7  +0.6
BOZ    Bozeman (W)        2.11  59           Pn      10 48 31.4  +0.9
YHB    Horse Butte        2.15  83   Pn      Pn      10 48 31.6  +0.4
YHL    Hebgen Lake        2.17  81           Pb      10 48 33.9  -0.6
BMO    Blue Mountains     2.24 279           Pn      10 48 33.4  +1.2
BMO                                  IAML            10 49 10.1
               115nm,0.3s
BMO                                  IAML            10 49 10.3
               142nm,0.3s
MSO    Missoula           2.30   4           Pn      10 48 34.1  +1.0
MSO                                  IAML            10 49 04.9
               164nm,0.3s
MSO                                  IAML            10 49 16.3
               145nm,1.0s
YMR    Madison River      2.31  86           Pb      10 48 36.2  -0.6
YHH    Holmes Hill        2.40  83           Pn      10 48 35.9  +1.1
YPP    Pitchstone Pla     2.45  95           Pn      10 48 36.5  +1.1
YNR    Norris Junctio     2.52  85           Pn      10 48 38.1  +1.9
ECR    Eagle Creek        2.53 125           Pn      10 48 38.2  +1.8
FLWY   Flagg Ranch        2.55  99           Pn      10 48 38.2  +1.5
FLWY                                 IAML            10 49 18.4
               142nm,0.9s
FLWY                                 IAML            10 49 18.9
               195nm,0.9s
F10A   Beach Ranch, E     2.58 305           Pn      10 48 39.5  +2.5
H17A   Grant Village      2.60  92   Pn      Pn      10 48 39.5  +2.2
MOOW   Moose Ponds        2.61 106           Pn      10 48 38.4  +0.9
MOOW                                 IAML            10 49 13.3
               107nm,0.5s
MOOW                                 IAML            10 49 17.6
               101nm,0.4s
REDW   Red Top Meadow     2.69 115           Pn      10 48 40.6  +2.1
REDW                                 IAML            10 49 23.8
               168nm,0.6s
LKWY   Lake               2.72  88   Pn      Pn      10 48 40.4  +1.4
LKWY                                 IAML            10 49 24.6
               95nm,0.8s
HRY    Holter Researc     2.74  37           Pn      10 48 40.6  +1.5
LOHW   Long Hollow        2.75 108   Pn      Pn      10 48 41.4  +2.0
LOHW                                 IAML            10 49 21.7
               148nm,0.7s
AHID   Auburn Hatcher     2.86 127   Pn      Pn      10 48 42.1  +1.2
YMP    Mirror Lake Pl     2.89  84           Pn      10 48 43.9  +2.4
HVU    Hansel Valley      2.94 159           Pn      10 48 43.0  +1.0
YNE    Yellowstone No     3.02  80   Pn      Pn      10 48 44.8  +1.6
JTMT   Jette              3.21 359           Pn      10 48 47.1  +1.4
JTMT                                 IAML            10 49 43.4
               comp=N,70nm,0.4s
JTMT                                 IAML            10 49 44.8
               comp=E,109nm,0.4s
E09A   Wood Farm, Sta     3.41 307   Pn      Pn      10 48 51.2  +3.0
E09A                                 IAML            10 49 54.2
               comp=E,41nm,1.4s
GCMT   Greycliff          3.44  67           Pn      10 48 50.5  +1.6
G08A   Pilot Rock         3.46 284           Pn      10 48 51.7  +2.5
SPUT   South Promonto     3.47 158   Pn      Pn      10 48 51.6  +2.4
HWUT   Hardware Ranch     3.50 146   Pn      Pn      10 48 52.7  +3.0
HWUT                                 IAML            10 49 49.4
               comp=E,45nm,0.7s
RLMT   Red Lodge          3.56  79           Pn      10 48 51.0  +0.4
RLMT                                 IAML            10 49 55.1
               comp=E,84nm,0.7s
BGU    Big Grassy Mou     3.71 166           Pn      10 48 54.5  +2.0
BW06   Boulder Array      3.80 116           Pn      10 48 55.6  +1.7
PD31   Pinedale Array     3.80 116           Pn      10 48 56.1  +2.2
PDAR   Pinedale Array     3.80 116   Pn      Pn      10 48 57.4  +3.4
               comp=E,0.4nm,0.3s,baz=301,slow=10,SNR=46
PDAR                                 Lg      Lg      10 49 49.9
               comp=E,1.0nm,0.3s,baz=312,slow=28,SNR=4.7
I07A   Izee               3.83 265           Pn      10 48 56.1  +1.9
I07A                                 IAML            10 50 07.1
               comp=N,30nm,1.1s
WVOR   Wild Horse Val     3.85 239           Pn      10 48 55.5  +1.0
WVOR                                 IAML            10 50 09.7
               comp=N,30nm,1.4s
ELK    Elko               3.86 192   Pn      Pn      10 48 55.8  +1.1
               comp=N,1.7nm,0.3s,baz=9.2,slow=14,SNR=23
ELK                                  Pg      Pb      10 49 01.5  -1.8
               comp=N,2.0nm,0.3s,baz=4.6,slow=16,SNR=48
ELK                                  Lg      Lg      10 49 50.3
               comp=N,13nm,0.3s,baz=163,slow=9.3,SNR=18
ELK    Elko               3.86 192           Pn      10 48 56.7  +2.0
ELK                                  IAML            10 49 52.5
               comp=N,37nm,0.8s
ELK                                  IAML            10 49 54.4
               comp=N,36nm,0.5s
E08A   Dider Farm, El     3.94 302           Pn      10 48 57.2  +1.7
TCUT   Toone Canyon       3.98 148           Pn      10 48 57.8  +1.4
D08A   Wollman Farm,      4.16 309           Pn      10 49 00.1  +1.6
HAWA   Hanford            4.19 298           Pn      10 49 01.2  +2.2
CTU    Camp Tracy         4.24 154           Pn      10 48 59.5  -0.3
NEW    Newport            4.24 333   Pn      Pn      10 49 00.6  +0.8
               comp=N,2.7nm,0.3s,baz=147,slow=11,SNR=30
NEW                                  Lg      Lg      10 50 08.2
               comp=N,8.5nm,0.3s,baz=94,slow=20,SNR=12
NEW    Newport            4.24 333   Pn      Pn      10 49 01.5  +1.8
NEW                                  IAML            10 50 16.1
               comp=N,39nm,1.2s
NEW                                  IAML            10 50 16.1
               comp=N,31nm,0.8s
C09A   Chrisman Ranch     4.32 321           Pn      10 49 03.4  +2.5
JLU    Jordanelle         4.42 152           Pn      10 49 05.3  +2.9
DUG    Dugway, Tooele     4.46 166           Pn      10 49 03.1  +0.3
DUG                                  IAML            10 50 21.0
               comp=N,27nm,1.0s
DUG                                  IAML            10 50 24.0
               comp=N,34nm,1.2s
E07A   Sunnyside          4.46 299   Pn      Pn      10 49 05.7  +3.0
E07A                                 IAML            10 50 23.0
               comp=N,32nm,1.5s
E07A                                 IAML            10 50 29.0
               comp=E,24nm,0.6s
WALA   Waterton Lakes     4.53   2           Pn      10 49 05.4  +1.6
WALA                                 IAML            10 50 26.9
               comp=E,39nm,0.9s
WALA                                 IAML            10 50 28.8
               comp=N,24nm,1.1s
EGMT   Eagleton           4.66  40           Pn      10 49 06.0  +0.6
NLU    North Lily Min     4.84 160           Pn      10 49 10.6  +2.5
MPU    Maple Canyon       4.90 156           Pn      10 49 10.0  +1.1
PINE   Pine Mountain      4.91 264           Pn      10 49 11.3  +2.3
PINE                                 IAML            10 50 22.2
               comp=N,17nm,4.7s
PINE                                 IAML            10 51 04.8
               comp=E,22nm,4.7s
MOD    Modoc Plateau      5.18 242           Pn      10 49 15.2  +2.5
K05A   Summer Lake        5.18 252           Pn      10 49 13.5  +0.6
K05A                                 IAML            10 49 55.0
               comp=E,19nm,4.6s
K05A                                 IAML            10 52 38.2
               comp=N,14nm,4.8s
B08A   Colville Reser     5.22 319           Pn      10 49 14.3  +1.2
B08A                                 IAML            10 50 50.6
               comp=N,15nm,1.2s
B08A                                 IAML            10 50 55.2
               comp=E,16nm,1.0s
RDMU   Red Mountain       5.23 138           Pn      10 49 13.6   0.0
LTY    Liberty            5.27 303           Pn      10 49 15.9  +1.9
LTY                                  IAML            10 50 53.6
               comp=N,12nm,2.4s
LTY                                  IAML            10 51 04.0
               comp=E,12nm,1.8s
LAO    LASA Array         6.00  66           Pn      10 49 24.1  +0.2
PSUT   Pine Spring        6.00 177           Pn      10 49 25.6  +1.5
SRU    San Rafael Swe     6.07 152           Pn      10 49 27.1  +2.0
O20A   White River Ci     6.23 133           Pn      10 49 29.0  +1.8
R11A   Troy Canyon, C     6.27 190           Pn      10 49 29.1  +1.3
BEKR   Beckworth          6.53 227           Pn      10 49 31.7  +0.4
RYN    Ryan               6.73 210           Pn      10 49 36.3  +2.2
YBH    Yreka Blue Hor     6.83 249   Pn      Pn      10 49 36.9  +1.6
               comp=E,0.1nm,0.3s,baz=66,slow=12,SNR=2.7
NVAR   Mina Array Bea     6.83 208   Pn      Pn      10 49 37.2  +1.7
               comp=E,0.1nm,0.3s,baz=30,slow=9.3,SNR=2.5
NVAR                                 Lg      Lg      10 51 26.8
               comp=E,0.5nm,0.3s,baz=36,slow=22,SNR=2.1
TPH    Tonopah            6.84 200           Pn      10 49 38.8  +3.1
LHV    Little Huntoon     7.06 209           Pn      10 49 41.6  +3.2
PRN    Pahroc Range       7.15 185   Pn      Pn      10 49 41.3  +1.5
PV11   David Mesa, Pa     7.40 145           Pn      10 49 44.8  +1.5
YKA    Yellowknife Ar    18.00 359   P       Pn      10 52 03.4  -1.6
               comp=E,0.0nm,0.3s,baz=173,slow=13,SNR=4.4
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IDC ***04*** *10:55:37.9±1.3, 37.°22N×98.°11W, h0^{km}, mb3.4/1, mb1 3.9/4, mb1mx3.5/43, mbtmp3.6/4, ML2.3/2, Error ellipse: s-maj=20.3km s-min=10.8km az=13.0*

ANF ***04*** *10:55:39.8±0.3, 37.°21N×97.°99W, h5^{km}, ML4.4/14, Error ellipse: s-maj=3.7km s-min=3.0km az=45.0*

NEIC ***04*** *10:55:39.8±1.2, 37.°25N±0.°04×98.°02W±0.°05, h5^{km}±5^{km}, mb_Lg3.5/138, Error ellipse: s-maj=7.2km s-min=2.2km az=47.0*

ISC 04 10:55:39.6±0.8**, 37.°24N**±0.°03×**98.°01W**±0.°03**, h8**^{km}±4^{km}**, n141, σ1^{s}22**/138**, Kansas**

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Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC       h  m  s     ISC
KAN08  Anthony NE Sta     0.03 119   Pg      Pg      10 55 40.8  -0.3
KAN08                                Sg      Sg      10 55 41.9  -0.5
KAN12  Harper NE Stat     0.06   9   Pg      Pg      10 55 41.1  -0.4
KAN12                                        Sg      10 55 42.2  -0.5
KAN10  Anthony SW Sta     0.14 210   Pg      Pg      10 55 42.3  -0.2
KAN10                                Sg      Sg      10 55 44.4  -0.3
KS21   Milan North St     0.28  81   Pg      Pg      10 55 45.4  +0.3
KS21                                 Sg      Sg      10 55 49.7  +0.9
KAN14  Manchester OK      0.29 173   Pg      Pg      10 55 45.4  +0.1
KAN14                                Sg      Sg      10 55 49.7  +0.5
KAN13  South Haven SW     0.48 118           Pg      10 55 49.1  +0.2
KAN13                                Sg      Sg      10 55 54.5  -0.7
T35A   Sooner Cattle      1.24 105           Pg      10 56 02.9  -0.5
T35B   Sooner Cattle      1.24 105   P               10 56 02.9
               baz=286,SNR=590
T35B                                 S               10 56 19.3
               baz=286
R32A   Long Quarter,      1.30 335           Pn      10 56 03.5  -0.6
R32A   Long Quarter,      1.30 335   P               10 56 03.4
               baz=155,SNR=137
R32A                                 S               10 56 20.9
               baz=155
QUOK   Quay               1.50 135   Pn      Pn      10 56 07.2  +0.5
OK031  S. Brethren Rd     1.59 143           Pn      10 56 08.9  +0.8
OK030  Cody Creek RV      1.64 143   Pn      Pn      10 56 08.7   0.0
OK025  Westminster Rd     1.74 162           Pn      10 56 11.2  +1.0
OKCFA  Oklahoma City      1.88 166           Pb      10 56 14.2   0.0
OKCFA                                IAmb_Lg         10 56 40.4
               comp=Z,201nm,0.9s
CBKS   Cedar Bluff        2.08 319   P       Pn      10 56 15.6  +0.7
               baz=139,SNR=59
CBKS                                 S       Sn      10 56 42.7  +1.8
               baz=139
CBKS   Cedar Bluff        2.08 319           Pn      10 56 15.5  +0.7
CBKS   Cedar Bluff        2.08 319   P               10 56 15.3
               baz=139,SNR=93
CBKS                                 S               10 56 42.5
               baz=139
KSU1   Kansas State U     2.16  30   P       Pn      10 56 17.1  +1.4
               baz=211,SNR=48
KSU1                                 S       Sn      10 56 45.5  +2.8
               baz=211
KSU1   Kansas State U     2.16  30           Pn      10 56 17.2  +1.4
KSU1                                 IAmb_Lg         10 56 51.1
               comp=Z,291nm,0.8s
KSU1   Kansas State U     2.16  30   P               10 56 17.2
               baz=211,SNR=69
KSU1                                 S               10 56 45.3
               baz=211
W35A   Tecumseh           2.28 156           Pn      10 56 18.2  +0.8
WMOK   Wichita Mounta     2.58 194   P       Pn      10 56 22.5  +0.9
               baz=14,SNR=35
WMOK                                 S       Sn      10 56 55.4  +2.2
               baz=14
WMOK   Wichita Mounta     2.58 194   Pn      Pn      10 56 22.8  +1.2
WMOK   Wichita Mounta     2.58 194   P               10 56 22.7
               baz=14,SNR=104
WMOK                                 S               10 56 54.9
               baz=14
U38A   Gravette           3.02 104   Pn      Pn      10 56 29.1  +1.5
U38A                                 IAmb_Lg         10 57 22.0
               comp=Z,213nm,0.9s
U38A   Gravette           3.02 104   P               10 56 29.2
               baz=287,SNR=112
X37A   Clayton            3.41 140           Pn      10 56 34.3  +1.3
X37A   Clayton            3.41 140   P               10 56 33.7
               baz=322
X37A                                 S               10 57 14.7
               baz=322
N33B   J Bar K, Exete     3.52   7   P               10 56 35.1
               baz=187,SNR=5.4
N33B                                 S               10 57 16.1
               baz=187
N33A   J Bar K, Exete     3.52   7           Pn      10 56 34.8  +0.3
N33A                                 IAmb_Lg         10 57 39.0
               comp=Z,94nm,0.7s
S39A   Bolivar            3.75  82           Pn      10 56 38.7  +0.9
S39A                                 IAmb_Lg         10 57 39.9
               comp=Z,102nm,0.9s
S39A   Bolivar            3.75  82   P               10 56 38.5
               baz=265,SNR=105
AMTX   Amarillo           3.79 233   P       Pn      10 56 39.5  +1.1
               baz=50
AMTX   Amarillo           3.79 233   Pn      Pn      10 56 39.7  +1.3
Z35A   Perchaven, San     3.95 171   Pn      Pn      10 56 41.0  +0.5
W39A   Magazine           3.98 120   Pn      Pn      10 56 42.3  +1.4
               baz=302,SNR=5.5
W39A                                 Pb      Pb      10 56 51.2  +1.3
               baz=302
W39A                                 S       Sn      10 57 29.0  +1.4
               baz=302
W39A   Magazine           3.98 120           Pn      10 56 42.2  +1.3
W39A   Magazine           3.98 120   P               10 56 42.2
               baz=302,SNR=10
KSCO   Kaye Shedlock'     4.05 297   Pn      Pn      10 56 43.6  +1.7
               baz=115
KSCO                                 Pb      Pb      10 56 52.8  +1.6
               baz=115
KSCO                                 Sb      Sg      10 57 46.1  -3.4
               baz=115
KSCO   Kaye Shedlock'     4.05 297           Pn      10 56 43.1  +1.2
N35A   Tabor              4.05  26           Pn      10 56 43.6  +1.7
BGNE   Belgrade           4.16 359   P       Pn      10 56 44.3  +0.9
               baz=179
BGNE                                 S       Sn      10 57 32.5  +0.3
               baz=179
BGNE   Belgrade           4.16 359           Pn      10 56 44.8  +1.4
BGNE                                 IAmb_Lg         10 57 58.2
               comp=Z,130nm,0.9s
BGNE   Belgrade           4.16 359   P               10 56 44.3
               baz=179,SNR=7.0
U40A   Yellville          4.23 101   P       Pn      10 56 45.4  +1.1
               baz=284,SNR=33
U40A                                 S       Sn      10 57 34.8  +0.9
               baz=284
U40A   Yellville          4.23 101           Pn      10 56 45.9  +1.5
U40A   Yellville          4.23 101   P               10 56 45.2
               baz=284,SNR=169
U40A                                 P               10 56 45.2
               baz=284,SNR=169
P38A   Dawn               4.24  55   Pn      Pn      10 56 45.5  +1.0
P38A                                 IAmb_Lg         10 57 58.2
               comp=Z,69nm,0.8s
P38A   Dawn               4.24  55   P               10 56 45.2
               baz=237,SNR=21
MIAR   Mount Ida          4.49 125   P       Pn      10 56 49.0  +1.1
               baz=308,SNR=8.8
MIAR                                 S       Sn      10 57 40.7  +0.4
               baz=308
MIAR   Mount Ida          4.49 125   Pn      Pn      10 56 49.0  +1.1
MIAR                                 IAmb_Lg         10 58 05.3
               comp=Z,82nm,0.7s
MIAR   Mount Ida          4.49 125   P               10 56 48.9
               baz=308,SNR=11
MGMO   Mountain Grove     4.58  89   Pn      Pn      10 56 50.9  +1.8
MGMO                                 IAmb_Lg         10 58 07.6
               comp=Z,59nm,0.8s
R40A   Maddies Statio     4.67  75           Pn      10 56 50.9  +0.6
R40A   Maddies Statio     4.67  75   P               10 56 50.9
               baz=259,SNR=19
Z38A   Mt. Pleasant       4.68 147   Pn      Pn      10 56 51.6  +1.1
Z38A   Mt. Pleasant       4.68 147   P               10 56 51.1
               baz=329,SNR=13
ABTX   Abilene, Hawle     4.80 197   S       Sn      10 57 48.3  +0.3
               baz=16
ABTX   Abilene, Hawle     4.80 197           Pn      10 56 53.9  +1.7
ABTX                                 IAmb_Lg         10 58 22.7
               comp=Z,56nm,1.1s
L34A   Svendsen Farm,     4.88  14           Pn      10 56 54.0  +0.7
FCAR   Ozark Folk Cen     4.92 104           Pn      10 56 54.9  +1.1
FCAR                                 IAmb_Lg         10 58 13.1
               comp=Z,62nm,0.8s
X40A   Basin Creek Fa     5.02 122   P       Pn      10 56 56.6  +1.4
               baz=305,SNR=6.6
X40A                                 S       Sn      10 57 54.0  +0.6
               baz=305
X40A   Basin Creek Fa     5.02 122           Pn      10 56 57.2  +2.0
X40A                                 IAmb_Lg         10 58 19.2
               comp=Z,64nm,0.7s
X40A   Basin Creek Fa     5.02 122   P               10 56 56.1
               baz=305,SNR=45
X40A                                 P               10 56 56.1
               baz=305,SNR=45
MSTX   Muleshoe           5.07 231   P       Pn      10 56 57.1  +1.1
               baz=48,SNR=6.4
MSTX                                 S       Sn      10 57 57.0  +2.2
               baz=48
MSTX   Muleshoe           5.07 231           Pn      10 56 56.6  +0.6
W41B   Gary Mavity, V     5.09 112   P       Pn      10 56 57.0  +0.8
               baz=296
W41B                                 S       Sn      10 57 54.6  -0.6
               baz=296
W41B   Gary Mavity, V     5.09 112           Pn      10 56 56.5  +0.4
W41B   Gary Mavity, V     5.09 112   P               10 56 56.9
               baz=296,SNR=35
T25A   Trinidad           5.11 271   P       Pn      10 56 58.0  +1.3
               baz=87
T25A   Trinidad           5.11 271           Pn      10 56 57.3  +0.7
N38A   Joes South For     5.14  45           Pn      10 56 57.5  +0.8
P40A   Paris              5.21  62           Pn      10 56 55.0  -2.8
WLAR   White Oak Lake     5.34 130   Pn      Pn      10 57 00.2  +0.6
WLAR                                 IAmb_Lg         10 58 43.9
               comp=Z,102nm,1.0s
K31A   O'Neill            5.40 354           Pn      10 57 00.4  -0.1
CCM    Cathedral Cave     5.43  79   P       Pn      10 57 01.4  +0.7
               baz=264
CCM    Cathedral Cave     5.43  79           Pn      10 57 02.5  +1.8
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CCM				IAmb_Lg		10 58 35.4	
	comp=Z,89nm,0.8s						
CCM	Cathedral Cave	5.43	79	P		10 57 01.4	
	baz=264,SNR=22						
237A	Washetta, Mont	5.53	160	Pn	Pn	10 57 01.2	-1.0
237A				IAmb_Lg		10 58 41.4	
	comp=Z,51nm,0.8s						
LCAR	Lake Charles	5.63	100	Pn	Pn	10 57 04.8	+1.3
LCAR				IAmb_Lg		10 58 39.7	
	comp=Z,90nm,0.9s						
Z41A	Richland Creek	5.83	132	P	Pn	10 57 06.5	+0.3
	baz=315,SNR=6.7						
Z41A				S	Sn	10 58 11.9	-1.2
	baz=315						
Z41A	Richland Creek	5.83	132		Pn	10 57 06.8	+0.6
Z41A				IAmb_Lg		10 58 53.1	
	comp=Z,62nm,0.8s						
Q24A	Divide	5.89	289	P	Pn	10 57 07.6	+0.2
	baz=105						
Q24A				S	Sn	10 58 15.8	+0.6
	baz=105						
Q24A	Divide	5.89	289		Pn	10 57 09.9	+2.5
Q24A				IAmb_Lg		10 58 51.5	
	comp=Z,51nm,0.8s						
SCIA	State Center	5.95	37	IAmb_Lg		10 58 56.5	
	comp=Z,94nm,0.8s						
PBMO	Poplar Bluff	6.08	92	Pn	Pn	10 57 09.8	0.0
NATX	Nacogdoches	6.13	152	P	Pn	10 57 11.3	+0.9
	baz=334						
NATX				S	Sn	10 58 18.1	-2.6
	baz=334						
NATX	Nacogdoches	6.13	152	IAmb_Lg		10 59 10.6	
	comp=Z,53nm,0.8s						
SLM	Saint Louis	6.30	75	IAmb_Lg		10 58 57.8	
	comp=Z,94nm,0.7s						
X43A	Marvell	6.39	113	IAmb_Lg		10 59 10.3	
	comp=Z,79nm,0.8s						
LPAR	Lepanto	6.43	102	IAmb_Lg		10 59 10.4	
	comp=Z,80nm,0.8s						
435B	Jarrell	6.45	177	P	Pn	10 57 14.9	0.0
	baz=357						
435B	Jarrell	6.45	177	Pn	Pn	10 57 15.3	+0.5
435B	Jarrell	6.45	177	P		10 57 14.5	
	baz=357,SNR=10						
ISCO	Idaho Springs	6.49	295	P	Pn	10 57 17.4	+1.8
	baz=111						
ISCO	Idaho Springs	6.49	295		Pn	10 57 16.4	+0.8
N41A	Harden Midland	6.56	56	IAmb_Lg		10 59 14.8	
	comp=Z,61nm,0.8s						
ECSD	EROS Data Cent	6.57	9	P	Pn	10 57 16.5	0.0
	baz=190						
ECSD				S	Sn	10 58 29.2	-2.3
	baz=190						
ECSD	EROS Data Cent	6.57	9		Pn	10 57 17.9	+1.4
ECSD	EROS Data Cent	6.57	9	P		10 57 16.2	
	baz=190,SNR=13						
PVMO	Portageville	6.71	95	IAmb_Lg		10 59 22.2	
	comp=Z,85nm,0.8s						
JCT	Junction City	6.91	193	P	Pn	10 57 21.3	+0.1
	baz=12						
JCT	Junction City	6.91	193	IAmb_Lg		10 59 29.2	
	comp=Z,62nm,0.8s						
S44A	Carbondale	6.98	84		Pn	10 57 22.4	+0.3
S44A	Carbondale	6.98	84	P		10 57 21.9	
	baz=269,SNR=11						
SIUC	Southern Illin	7.01	83		Pn	10 57 22.6	+0.2
143A	Socs Landing,	7.06	128	Pn	Pn	10 57 23.3	+0.1
143A				IAmb_Lg		10 59 27.7	
	comp=Z,44nm,0.9s						
L40A	Anamosa	7.11	45		Pn	10 57 23.9	+0.1
N23A	Red Feather La	7.17	303	P	Pn	10 57 26.4	+1.5
	baz=118						
N23A				S	Sn	10 58 47.9	+1.2
	baz=118						
ANMO	Albuquerque	7.21	254	Pn	Pn	10 57 25.2	-0.3
	comp=Z,0.1nm,0.3s,baz=66,slow=10.0,SNR=2.4						
ANMO				Lg	Lg	10 59 23.3	
	comp=Z,1.4nm,0.3s,baz=141,slow=12,SNR=6.6						
ANMO	Albuquerque	7.21	254		Pn	10 57 25.4	-0.1
SUSD	Miller	7.23	355	IAmb_Lg		10 59 40.9	
	comp=Z,52nm,0.8s						
Q44A	Meyer Farm, Va	7.28	74	IAmb_Lg		10 59 48.2	
	comp=Z,50nm,0.9s						
W45A	Hickory Valley	7.43	104	Pn	Pn	10 57 28.6	+0.3
OXF	Oxford	7.49	109	P	Pn	10 57 29.2	+0.1
	baz=294						
OXF				S	Sn	10 58 53.4	-0.9
	baz=294						
OXF	Oxford	7.49	109		Pn	10 57 28.3	-0.8
HDIL	Hopedale	7.56	61	P	Pn	10 57 30.4	+0.5
	baz=247						
HDIL				S	Sn	10 58 54.3	-1.5
	baz=247						
HDIL	Hopedale	7.56	61	Pn	Pn	10 57 30.0	+0.1
HDIL	Hopedale	7.56	61	P		10 57 30.1	
	baz=247,SNR=13						
I37A	Lemond, Waseca	7.62	26	Pn	Pn	10 57 31.1	+0.3
I37A				IAmb_Lg		10 59 49.4	
	comp=Z,40nm,0.8s						
Y45A	Yeager Farm, C	7.68	114	IAmb_Lg		10 59 55.3	
	comp=Z,63nm,0.9s						
Y22D	IRIS PASSCAL I	7.91	249	IAmb_Lg		11 00 02.4	
	comp=Z,59nm,1.0s						
L42A	Oliver, Polo	8.00	51	Pn	Pn	10 57 36.4	+0.3
L42A				IAmb_Lg		11 00 00.6	
	comp=Z,36nm,0.8s						
O44A	Mansfield	8.01	66	IAmb_Lg		10 59 59.2	
	comp=Z,28nm,0.8s						
JFWS	Jewell Farm	8.21	44	P	Pn	10 57 39.0	+0.1
	baz=229,SNR=6.6						
JFWS	Jewell Farm	8.21	44		Pn	10 57 39.0	+0.1
JFWS				IAmb_Lg		11 00 01.5	
	comp=Z,66nm,0.8s						
JFWS	Jewell Farm	8.21	44	P		10 57 38.8	
	baz=229,SNR=14						
MNTX	Cornudas Mount	8.22	230	P	Pn	10 57 39.2	0.0
	baz=46,SNR=6.7						
MNTX				S	Sn	10 59 11.8	-0.5
	baz=46						
MNTX	Cornudas Mount	8.22	230		Pn	10 57 39.4	+0.2
MNTX				IAmb_Lg		11 00 15.5	
	comp=Z,29nm,1.2s						
MNTX	Cornudas Mount	8.22	230	P		10 57 39.2	
	baz=46,SNR=15						
USIN	University of	8.24	82	IAmb_Lg		11 00 09.5	
	comp=Z,40nm,0.8s						
WVT	Waverly	8.25	95	P	Pn	10 57 39.9	+0.4
	baz=281						
WVT				S	Sn	10 59 10.9	-2.0
	baz=281						
WVT	Waverly	8.25	95		Pn	10 57 39.3	-0.3
RSSD	Black Hills	8.26	328	P	Pn	10 57 41.7	+1.9
	baz=144						
RSSD	Black Hills	8.26	328	Pn	Pn	10 57 41.2	+1.5
RWWY	Rawlins	8.39	305	IAmb_Lg		11 00 24.2	
	comp=Z,27nm,0.8s						
K22A	Casper	8.48	312		Pn	10 57 43.1	+0.3
K22A				IAmb_Lg		11 00 14.2	
	comp=Z,44nm,1.0s						
146A	Union	8.66	119	IAmb_Lg		11 00 36.3	
	comp=Z,36nm,1.1s						
I40A	Norwalk	8.70	38	IAmb_Lg		11 00 24.3	
	comp=Z,31nm,1.1s						
M44A	Midewin, Midew	8.76	59	IAmb_Lg		11 00 22.3	
	comp=Z,56nm,1.1s						
P46A	Rosedale	8.80	71	IAmb_Lg		11 00 19.2	
	comp=Z,49nm,0.8s						
HQIL	Hanson Quary C	9.07	57	IAmb_Lg		11 00 33.3	
	comp=Z,35nm,0.9s						
SFIN	Lafayette	9.07	66	P	Pn	10 57 51.1	+0.3
	baz=253						
SFIN	Lafayette	9.07	66	IAmb_Lg		11 00 29.9	
	comp=Z,24nm,0.7s						
Z47A	Carrollton	9.08	113	IAmb_Lg		11 00 44.6	
	comp=Z,31nm,0.9s						
V48A	Smith Brothers	9.13	96	IAmb_Lg		11 00 26.7	
	comp=Z,27nm,1.0s						
L44A	Lake County Fo	9.21	55	IAmb_Lg		11 00 43.7	
	comp=Z,47nm,0.9s						
K43A	Burlington	9.21	51	IAmb_Lg		11 00 34.4	
	comp=Z,45nm,0.9s						
BLO	Bloomington	9.24	74	IAmb_Lg		11 00 32.0	
	comp=Z,42nm,0.8s						
X48A	Hartselle	9.33	104	Pn	Pn	10 57 53.8	-0.4
X48A				IAmb_Lg		11 00 37.2	
	comp=Z,23nm,1.0s						
WCI	Wyandotte Cave	9.33	80	P	Pn	10 57 55.7	+1.4
	baz=268						
WCI				S	Sn	10 59 36.7	-2.8
	baz=268						
WCI	Wyandotte Cave	9.33	80	IAmb_Lg		11 00 36.0	
	comp=Z,38nm,0.8s						
E28A	Huff	9.54	349	IAmb_Lg		11 00 51.0	
	comp=Z,39nm,0.8s						
I42A	Draeger Farm,	9.59	43	IAmb_Lg		11 00 58.9	
	comp=Z,34nm,1.1s						
I42A	Draeger Farm,	9.59	43	P		10 57 57.7	
	baz=229,SNR=7.1						
U49A	Red Boiling Sp	9.83	91	IAmb_Lg		11 01 13.6	
	comp=Z,28nm,1.1s						
D32A	Dogwood Acres,	9.91	4	IAmb_Lg		11 01 00.8	
	comp=Z,29nm,0.8s						
LRAL	Lakeview Retre	9.94	112	P	Pn	10 58 02.5	-0.2
	baz=298						
SWET	Sewanee	9.96	98	IAmb_Lg		11 00 57.9	
	comp=Z,21nm,0.7s						
PDAR	Pinedale Array	10.43	305	Pn	Pn	10 58 08.6	-1.1
	comp=Z,0.3nm,0.3s,baz=122,slow=15,SNR=9.1						
PDAR				Pg		10 58 50.4	
	comp=Z,0.6nm,0.3s,baz=110,slow=16,SNR=4.6						
PDAR				Lg	Lg	11 01 08.2	
	comp=Z,0.9nm,0.3s,baz=111,slow=29,SNR=8.8						
P49A	Miami Univ. Ec	10.68	74	P	Pn	10 58 13.2	+0.4
	baz=262						
TKL	Tuckaleechee C	11.57	94	Pn	Pn	10 58 24.6	-0.5
	comp=Z,0.6nm,0.3s,baz=198,slow=6.2,SNR=8.5						
TKL				Sn	Sn	11 00 30.1	-4.4
	comp=Z,0.3nm,0.3s,baz=131,slow=19,SNR=1.3						
TKL				Lg	Lg	11 01 39.2	
	comp=Z,1.0nm,0.3s,baz=190,slow=19,SNR=4.6						
TKL	Tuckaleechee C	11.57	94		Pn	10 58 24.8	-0.2
ULM	Lac du Bonnet	13.09	6	Pn	Pn	10 58 40.8	-4.9
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=3.8						
ULM				Sn	Sn	11 00 59.5	-12
	comp=Z,0.4nm,0.3s,baz=144,slow=14,SNR=3.0						
ULM				Lg	Lg	11 02 23.6	
	comp=Z,0.3nm,0.3s,baz=106,slow=21,SNR=3.0						
Q53A	Leroy	13.09	78	P	Pn	10 58 44.4	-1.4
	baz=268						
ILAR	Eielson Array	39.70	330	P	P	11 03 13.1	+1.2
	comp=Z,0.5nm,0.8s,baz=104,slow=5.9,SNR=7.3						

MEX 04 11:29:09.0±0.4,24°.88N×109°.32W,h16^{km}±19^{km},MD3.6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSIG	Topolobambo	0.76	19	*e*P	Pg	11 29 20.9	-2.9
TSIG				*i* S	Sg	11 29 30.4	-3.5
LPIG	La Paz	1.19	230	*e*P	Pn	11 29 27.2	-3.8
CSIG	Choix	2.12	23	*i* P	Pn	11 29 41.4	-2.4
CSIG				*e*S	Sn	11 30 04.8	-5.0
CGIG		5.59	12	*e*P	Pn	11 30 29.9	-1.7
CGIG				*i* S	Sn	11 31 32.0	-3.7

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*IDC **04** 12:51:11.7±0.7,57°.84S×25°.56W,h0^{km},mb4.1/8, mb1 4.2/9,mb1mx4.0/31,mbtmp4.1/9,MS3.5/1,Ms1 3.5/1, ms1mx3.0/16,Error ellipse: s-maj=29.4km s-min=18.2km az=74.0*

ISC 04 12:51:17.9±0.6,58°.1S±0°.1×25°.4W±0°.2,h49^{km},n20, σ2^{s}.14/20,mb4.1/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	14.58	157	P	Pn	12 54 41.4	+0.5
VNA3	Neumayer Olymp	14.78	160	P	Pn	12 54 44.1	+0.5
VNA2	Neumayer--Watz	14.97	157	P	Pn	12 54 46.5	+0.4
SNAA	Sanae	16.52	155	P	Pn	12 55 07.6	+1.7
SNAA	Sanae	16.52	155	Pn	Pn	12 55 07.6	+1.7
	baz=313,slow=14						
SNAA				Sn	Sn	12 58 00.6	-7.4
	0.1nm,0.3s,baz=48,slow=16,SNR=2.7						
PMSA	Palmer Station	19.40	234	LR	LR	13 01 39.1	
	comp=Z,116nm,18.3s,baz=120,slow=32						
QSPA	South Pole Qui	32.20	180	P	P	12 57 43.1	+2.1
	2.7nm,0.5s,baz=222,slow=1.1,SNR=37						
PLCA	Paso Flores	33.32	281	P	P	12 57 49.8	-1.0
	0.9nm,0.4s,baz=212,slow=5.1,SNR=2.7						
CPUP	Villa Florida	38.85	311	P	P	12 58 36.9	-1.2
	0.7nm,0.4s,baz=180,slow=9.1,SNR=3.4						
VNDA	Vanda	44.62	182	P	P	12 59 27.3	+2.7
	2.1nm,0.6s,baz=182,slow=6.1,SNR=15						
BDFB	Brasilia	45.58	329	P	P	12 59 32.5	-0.6
	2.0nm,0.6s,baz=139,slow=11,SNR=3.4						
SIV	San Ignacio	49.64	313	P	P	13 00 03.7	-0.8
	1.0nm,0.4s,baz=200,slow=8.8,SNR=10						
DBIC	Dimbokro	66.62	22	P	P	13 02 03.0	0.0
	2.4nm,0.9s,baz=197,slow=13,SNR=3.2						
TORD	Torodi Ar. Bea	74.36	27	P	P	13 02 50.7	+0.6
	1.3nm,0.6s,baz=200,slow=6.2,SNR=9.2						
PDAR	Pinedale Array	122.20	300	PKP	PKPdf	13 10 06.0	-0.5
	0.2nm,0.4s,baz=115,slow=4.6,SNR=4.8						
NVAR	Mina Array Bea	123.03	291	PKP	PKiKP	13 10 08.5	0.0
	0.2nm,0.5s,baz=144,slow=3.4,SNR=3.4						
FINES	FINESS Array B	125.71	28	PKP	PKPdf	13 10 12.2	-0.1
	3.1nm,0.9s,baz=126,slow=2.6,SNR=5.3						
YKA	Yellowknife Ar	138.29	316	PKhKP	PKPpre	13 10 27.6	
	0.2nm,0.6s,baz=118,slow=3.9,SNR=5.6						
YKA				PKP	PKPdf	13 10 36.3	+0.3
	1.0nm,0.6s,baz=120,slow=3.3,SNR=28						
SONM	Songino Array	149.85	89	PKPbc	PKPbc	13 11 02.0	+0.4
	0.9nm,0.4s,baz=227,slow=3.0,SNR=9.0						
ILAR	Eielson Array	152.14	309	PKPbc	PKiKP	13 11 06.5	0.0
	2.3nm,0.5s,baz=134,slow=2.1,SNR=45						

GUC 04 12:51:25.2±0.5,38°.36S×75°.09W,h15^{km},ML3.8,2C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI04	Isla Mocha	0.94	93	*e*P	Pb	12 51 42.7	-0.5
BI04				*e*S	Sb	12 51 54.7	-0.9
BI04				IAML		12 51 59.6	
	comp=E,3μm,0.1s						
LAJA	Laja	2.17	61	*e*P	Pn	12 52 01.1	+0.3
LAJA				*e*S	Sn	12 52 28.0	+0.7
LAJA				IAML		12 52 30.6	
	comp=N,531nm,0.2s						
BI03	Tigo	2.23	48	*e*P	Pn	12 52 01.6	-0.1
BI03				*i* S	Sn	12 52 29.4	+0.5
BI03				IAML		12 52 30.7	
	comp=E,4μm,0.4s						
LC01	Cunco	2.57	103	⇑*i*P	Pn	12 52 07.8	+1.5
LC01				*i* S	Sn	12 52 38.0	+0.7
LC01				IAML		12 52 40.8	
	comp=N,285nm,0.5s						
LL01	San Ignacio de	4.50	154	*e*P	Pn	12 52 32.6	-0.2
BO03	Pichilemu	4.61	34	⇑*i*P	Pn	12 52 33.6	-0.7
BO03				*e*S	Sn	12 53 26.1	-1.4
BO02	Sierra Bellavi	4.97	46	*e*P	Pn	12 52 39.5	+0.2
BO02				*i* S	Sn	12 53 37.0	+0.4
VA05	Santo Domingo	5.47	32	*e*P	Pn	12 52 45.5	-0.7
VA05				*e*S	Sn	12 53 46.3	-2.5
MT09	Talagante	5.65	37	*e*P	Pn	12 52 48.9	+0.1
MT09				*e*S	Sn	12 53 52.7	-0.8
LMEL	Las Melosas	5.99	43	*e*P	Pn	12 52 54.6	+1.1
LMEL				*e*S	Sn	12 54 02.1	+0.2
MT05	Renca	6.09	37	*e*P	Pn	12 52 54.7	0.0
MT05				*e*S	Sn	12 54 03.4	-0.7
MT03	Universidad Ad	6.11	39	*e*P	Pn	12 52 54.9	-0.2
MT03				*e*S	Sn	12 54 05.3	+0.4

IDC 04 12:57:14.8±2.3,7°.40S×127°.80E,h0^{km},mb3.1/1, mb1 3.3/3,mb1mx3.1/28,mbtmp3.1/3,ML2.5/2,Error ellipse: s-maj=282.6km s-min=31.5km az=64.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.99	154	Pn	Pn	13 00 32.8	-1.7
	0.0nm,0.3s,baz=329,slow=14,SNR=3.0						
WRA				Sn	Sn	13 02 55.0	-16
	0.1nm,0.3s,baz=336,slow=22,SNR=3.4						
ASAR	Alice Springs	17.20	161	P	P	13 01 18.1	-0.3
	0.0nm,0.3s,baz=344,slow=9.6,SNR=2.4						
ASAR				S	Sn	13 04 21.1	-7.8
	0.0nm,0.3s,baz=346,slow=26,SNR=1.7						
MKAR	Makanchi Array	67.38	328	P	P	13 08 12.0	0.0
	0.2nm,0.7s,baz=111,slow=7.9,SNR=2.7						

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*IDC **04** 13:21:54.2±0.5,44°.51N×114°.35W,h0^{km},mb3.9/8, mb1 4.1/15,mb1mx3.9/39,mbtmp3.8/15,ML3.6/5,MS2.7/2, Ms1 2.7/2,ms1mx2.3/49,Error ellipse: s-maj=11.1km s-min=7.1km az=101.0*

*ANF **04** 13:21:55.0±1.8,44°.44N×114°.08W,h4^{km}±19^{km},ML4.2/7, Error ellipse: s-maj=12.5km s-min=5.3km az=162.0*

*NEIC **04** 13:21:55.2±1.2,44°.48N±0°.03×114°.17W±0°.05,h6^{km}±4^{km}, ML4.0/78,Mwr3.7/54,ML3.9(BUT),Error ellipse: s-maj=6.4km s-min=3.2km az=130.0*

*BUT **04** 13:21:55.3±1.7,44°.47N±0°.03×114°.17W±0°.05,h10^{km}±4^{km}, Error ellipse: s-maj=6.5km s-min=3.2km az=131.0*

*NEIC **04** 13:21:55.4,44°.48N×114°.17W,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.77; $M_{\theta\theta}$0.87; $M_{\phi\phi}$2.89; $M_{r\theta}$-1.59; $M_{\theta\phi}$-2.54; $M_{\phi r}$-0.14; Fault plane solution: $M_0$4.55000×10^{14} NP1:ϕ_s346.34000°, δ43.69000°,λ-58.37000°. NP2:ϕ_s125.91000°,δ53.97000°, λ-116.61000°. Principal axes: T 4.6918, Plg5.0000°, Azm234.0000°; N -0.3091, Plg21.0000°, Azm142.0000°; P -4.3826, Plg68.0000°, Azm338.0000°;*

ISC 04 13:21:54.5±1.4,44°.49N±0°.04×114°.15W±0°.04,h3^{km}±10^{km}, n87,σ1^{s}.30/93,mb3.9/8,Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	Bear Canyon	0.56	108		Pg	13 22 06.0	+0.8
HLID	Hailey	0.94	192	P	Pg	13 22 12.8	+0.2
	baz=10.0						
HLID				S	Sg	13 22 24.5	-0.3
	baz=10.0						
HLID	Hailey	0.94	192	Pg	Pg	13 22 12.7	+0.2
HLID				Sg	Sg	13 22 24.2	-0.5
HLID				IAML		13 22 26.8	
	6μm,0.3s						
HLID				IAML		13 22 29.9	
	5μm,0.3s						
MCMT	McKenzie Canyo	0.99	69	Pg	Pg	13 22 14.2	+0.9
DLMT	Dillon	1.41	51		Pn	13 22 21.9	+0.8
DLMT				Sn	Sb	13 22 40.7	+0.9
MFID	Camas Ranch	1.62	229	Pn	Pb	13 22 24.8	-0.2
LRM	Limekiln Ridge	1.79	41		Pn	13 22 27.1	+0.5
BOZ	Bozeman (W)	2.10	57	P	Pn	13 22 31.3	+0.6
	baz=239						
BOZ				Sb	Sg	13 23 02.1	+0.1
	baz=239						
BOZ	Bozeman (W)	2.10	57		Pn	13 22 31.7	+1.0
YHB	Horse Butte	2.12	82		Pn	13 22 32.4	+1.3
YHL	Hebgen Lake	2.15	79		Pn	13 22 32.9	+1.5
YMR	Madison River	2.28	84		Pn	13 22 34.3	+1.2
BMO	Blue Mountains	2.28	280	Pn	Pn	13 22 33.7	+0.6
BMO				IAML		13 23 09.8	
	724nm,0.4s						
BMO				IAML		13 23 12.0	
	935nm,0.3s						
MSO	Missoula	2.35	3	P	Pn	13 22 34.6	+0.6
	baz=184						
MSO				S	Sn	13 23 03.9	+0.6
	baz=184						
MSO	Missoula	2.35	3	Pn	Pn	13 22 34.5	+0.6
MSO				IAML		13 23 10.9	
	899nm,0.8s						
MSO				IAML		13 23 14.9	
	1μm,0.5s						
YHH	Holmes Hill	2.37	82		Pn	13 22 35.8	+1.3
YPP	Pitchstone Pla	2.41	94		Pn	13 22 36.4	+1.4
ECR	Eagle Creek	2.47	125		Pn	13 22 37.7	+2.0
FLWY	Flagg Ranch	2.51	98		Pn	13 22 38.4	+2.1
FLWY				IAML		13 23 18.8	
	466nm,0.9s						
FLWY				IAML		13 23 19.7	
	561nm,0.7s						
H17A	Grant Village	2.56	91		Pn	13 22 38.8	+1.7
MOOW	Moose Ponds	2.56	106		Pn	13 22 38.6	+1.6
MOOW				IAML		13 23 17.7	
	445nm,0.8s						
MOOW				IAML		13 23 18.0	
	437nm,0.5s						
YUF	Upper Falls	2.61	84	Pn	Pn	13 22 39.3	+1.6
REDW	Red Top Meadow	2.63	114		Pn	13 22 39.7	+1.7
REDW				IAML		13 23 19.6	
	842nm,0.6s						
REDW				IAML		13 23 24.2	
	592nm,0.7s						
F10A	Beach Ranch, E	2.64	305	Pn	Pn	13 22 39.3	+1.3
LOHW	Long Hollow	2.70	108		Pn	13 22 40.6	+1.6
LOHW				IAML		13 23 22.1	
	595nm,0.7s						
HRY	Holter Researc	2.75	35		Pn	13 22 40.2	+0.6
YMP	Mirror Lake Pl	2.86	84		Pn	13 22 42.1	+0.9
HVU	Hansel Valley	2.89	159		Pn	13 22 42.7	+1.2
YNE	Yellowstone No	2.99	79		Pn	13 22 44.1	+1.1
JTMT	Jette	3.26	358		Pn	13 22 47.3	+0.7
JTMT				IAML		13 23 48.5	
	comp=N,450nm,0.6s						
SPUT	South Promonto	3.41	158		Pn	13 22 49.8	+1.1
G08A	Pilot Rock	3.51	285	Pn	Pn	13 22 50.6	+0.6
BGU	Big Grassy Mou	3.65	167		Pn	13 22 53.0	+1.0
BW06	Boulder Array	3.75	116	Pb	Pb	13 23 00.7	-0.7
	baz=299						
BW06	Boulder Array	3.75	116	Pn	Pn	13 22 54.5	+1.1
PD31	Pinedale Array	3.75	116		Pn	13 22 54.2	+0.8
PDAR	Pinedale Array	3.75	116	Pn	Pb	13 22 58.8	-2.6
	comp=N,1.9nm,0.3s,baz=306,slow=14,SNR=44						
PDAR				Lg	Lg	13 23 49.7	
	comp=N,3.1nm,0.3s,baz=314,slow=32,SNR=6.1						
ELK	Elko	3.83	193	Pn	Pn	13 22 56.4	+2.0
	comp=N,3.3nm,0.3s,baz=1.9,slow=12,SNR=37						
ELK				Pg	Pb	13 23 01.3	-1.4
	comp=N,13nm,0.3s,baz=360,slow=16,SNR=52						
ELK				Lg	Lg	13 23 50.8	
	comp=N,62nm,0.3s,baz=158,slow=8.0,SNR=21						
ELK	Elko	3.83	193	Pn	Pn	13 22 56.1	+1.6
ELK				IAML		13 23 53.3	
	comp=N,198nm,0.5s						
ELK				IAML		13 23 56.9	
	comp=N,182nm,0.8s						
WVOR	Wild Horse Val	3.86	239	Pn	Pn	13 22 56.1	+1.3
WVOR				IAML		13 24 07.6	
	comp=N,129nm,1.1s						
WVOR				IAML		13 24 09.1	
	comp=N,135nm,0.9s						
I07A	Izee	3.87	266	Pn	Pn	13 22 56.4	+1.5
D08A	Wollman Farm,	4.21	309	Pn	Pn	13 23 00.3	+0.8
D08A				IAML		13 24 15.4	
	comp=N,93nm,1.0s						
HAWA	Hanford	4.24	299	Pn	Pn	13 23 00.8	+0.9
NEW	Newport	4.30	332	Pn	Pn	13 23 01.9	+1.1
	comp=N,25nm,0.3s,baz=138,slow=13,SNR=257						
NEW				Lg	Lg	13 24 09.5	
	comp=N,48nm,0.3s,baz=74,slow=21,SNR=12						
NEW				LR	LR	13 24 26.1	
	comp=N,30nm,20.1s,baz=156,slow=36						
C09A	Chrisman Ranch	4.38	321	Pn	Pn	13 23 02.7	+0.8
DUG	Dugway, Tooele	4.40	167		Pn	13 23 03.9	+1.6
DUG				IAML		13 24 21.5	
	comp=N,127nm,1.0s						
DUG				IAML		13 24 24.0	
	comp=N,108nm,0.9s						
E07A	Sunnyside	4.51	299	Pn	Pn	13 23 04.6	+0.9
E07A				IAML		13 24 30.7	
	comp=E,164nm,0.7s						
E07A				IAML		13 24 35.3	
	comp=N,157nm,1.1s						
WALA	Waterton Lakes	4.58	2	Pn	Pn	13 23 05.9	+1.3
WALA				IAML		13 24 29.2	
	comp=N,125nm,0.8s						
EGMT	Eagleton	4.67	39	P	Pn	13 23 06.7	+0.8
	baz=222						
EGMT				S	Sn	13 24 01.6	+1.0
	baz=222						
EGMT	Eagleton	4.67	39	Pn	Pn	13 23 06.5	+0.7
PINE	Pine Mountain	4.94	264	Pn	Pn	13 23 11.1	+1.4
G05D	Wamic, OR	5.15	281	P	Pn	13 23 14.4	+1.9
	baz=96						
MOD	Modoc Plateau	5.19	242	Pn	Pn	13 23 14.3	+1.2
J05D	Fort Rock, OR	5.26	259	P	Pn	13 23 16.1	+2.0
	baz=74						
B08A	Colville Reser	5.28	319	Pn	Pn	13 23 14.5	+0.3
B08A				IAML		13 24 47.7	
	comp=E,96nm,0.7s						
B08A				IAML		13 24 49.0	
	comp=N,94nm,0.6s						
LTY	Liberty	5.33	304		Pn	13 23 15.5	+0.6

LTY				IAML		13 24 57.1	
	comp=N,55nm,1.8s						
LTY				IAML		13 25 02.6	
	comp=E,71nm,0.8s						
LON	Longmire	5.83	296		Pn	13 23 22.7	+0.8
LAO	LASA Array	5.98	66	Pn	Pn	13 23 25.3	+1.5
D05A	Enumclaw	6.11	299	Pn	Pn	13 23 26.8	+1.3
O20A	White River Ci	6.17	133	Pn	Pn	13 23 28.1	+1.5
B06A	Marblemount	6.47	311	Pn	Pn	13 23 31.6	+1.1
HUMO	Hull Mountain	6.67	257	Pn	Pn	13 23 34.3	+1.0
NVAR	Mina Array Bea	6.81	209	Pn	Pn	13 23 38.3	+2.9
	comp=E,0.2nm,0.3s,baz=25,slow=12,SNR=9.0						
NVAR				Lg	Lg	13 25 26.3	
	comp=E,1.8nm,0.3s,baz=43,slow=23,SNR=4.2						
YBH	Yreka Blue Hor	6.85	249	Pn	Pn	13 23 36.9	+1.2
	comp=E,0.5nm,0.3s,baz=54,slow=9.3,SNR=9.2						
YBH	Yreka Blue Hor	6.85	249	Pn	Pn	13 23 37.2	+1.5
LHV	Little Huntoon	7.04	209	Pn	Pn	13 23 39.8	+1.5
PV14	Lion Creek, Pa	7.22	146	Pn	Pn	13 23 42.3	+1.2
PV04	Paradox Valley	7.25	145	Pn	Pn	13 23 43.0	+1.6
PV16	Nyswonger Mesa	7.31	146	Pn	Pn	13 23 43.7	+1.4
PV17	East Wray Mesa	7.32	146	Pn	Pn	13 23 44.8	+2.4
PV11	David Mesa, Pa	7.34	146	Pn	Pn	13 23 43.9	+1.2
PV12	Saucer Basin,	7.36	145	Pn	Pn	13 23 44.4	+1.5
AFDM	Forest Hills D	7.53	225	Pn	Pn	13 23 47.3	+2.2
PV01	Paradox Valley	7.61	145	Pn	Pn	13 23 48.9	+2.5
PGC	Sidney	7.64	306	Pn	Pn	13 23 47.9	+1.4
ULM	Lac du Bonnet	13.64	59	Pn	Pn	13 25 07.2	-1.5
	comp=E,0.2nm,0.3s,baz=250,slow=12,SNR=3.2						
ULM				Lg	Lg	13 28 57.7	
	comp=E,0.3nm,0.3s,baz=316,slow=21,SNR=4.3						
YKA	Yellowknife Ar	18.04	359	P	Pn	13 26 03.9	-2.0
	comp=E,0.3nm,0.3s,baz=174,slow=13,SNR=35						
YKA				Lg	Lg	13 31 15.5	
	comp=E,0.1nm,0.3s,baz=160,slow=24,SNR=3.1						
TKL	Tuckaleechee C	24.74	100	LR	LR	13 37 17.9	
	comp=E,47nm,18.2s,baz=88,slow=37						
ILAR	Eielson Array	27.25	330	P	P	13 27 38.9	-0.6
	comp=E,0.6nm,0.7s,baz=116,slow=8.4,SNR=9.9						
PETK	Petropavlovsk-	55.18	313	P	P	13 31 27.9	-0.1
	comp=E,2.2nm,0.9s,baz=86,slow=14,SNR=4.4						
ARCES	ARCESS Array B	62.49	15	P	P	13 32 18.3	-0.3
	comp=E,6.9nm,1.1s,baz=350,slow=6.3,SNR=4.7						
FINES	FINESS Array B	69.63	19	P	P	13 33 04.7	+0.1
	comp=E,2.6nm,0.8s,baz=2.9,slow=7.6,SNR=3.7						
ESDC	Sonseca Array	75.32	48	P	P	13 33 39.4	+0.5
	comp=E,1.3nm,0.9s,baz=317,slow=6.9,SNR=4.0						
GERES	GERESS Array B	76.46	32	P	P	13 33 46.0	+0.6
	comp=E,0.5nm,0.7s,baz=315,slow=9.6,SNR=1.9						
ZALV	Zalesovo Beam	80.61	349	P	P	13 34 08.1	+0.1
	comp=E,0.3nm,0.3s,baz=53,slow=5.6,SNR=2.0						
MKAR	Makanchi Array	87.95	349	P	P	13 34 44.4	-1.1
	comp=E,0.2nm,0.6s,baz=352,slow=5.0,SNR=4.5						
WRA	Warramunga Arr	118.93	270	PKP	PKPdf	13 40 43.7	-0.8
	comp=E,0.6nm,0.9s,baz=41,slow=1.7,SNR=3.8						

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*ISK **04** 13:38:27.3, 36°.02N×31°.75E, h13^{km}, ML3.5/43*
*IDC **04** 13:38:29.1±1.5, 35°.93N×31°.83E, h84^{km}±19^{km}, mb4.0/2, mb1 3.9/6, mb1mx3.2/49, mbtmp4.1/6, Error ellipse: s-maj=19.3km s-min=10.7km az=72.0*
*NIC **04** 13:38:30.6±0.0, 35°.90N×31°.75E, h28^{km}±4^{km}, Ml3.5/4*
*GII **04** 13:38:31.6±0.0, 35°.56N×32°.01E, h1^{km}, MD2.5/4*
*DDA **04** 13:38:31.0, 36°.14N×31°.85E, h52^{km}±1^{km}, ML3.0*
*HLW **04** 13:38:38.0, 35°.29N×32°.01E, h10^{km}±20^{km}, Md3.8, Ml4.1*
ISC 04 13:38:28.7±0.8, **36°.00N**±0°.03×**31°.77E**±0°.02, **h71**^{km}±8^{km}, **n137**, σ1^s**38**/173, **mb3.9**/3, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.50	61	*i* P	Pn	13 38 41.8	+0.2
GAZI				*i* S	Sn	13 38 49.8	-1.3
GAZI				IAML		13 38 52.0	
	comp=N,1µm,0.5s						
GAZI				IAML		13 38 52.0	
	comp=E,497nm,0.3s						
KEPZ	Antalya-Kepez	0.92	352	*i* P	Pn	13 38 47.1	+0.9
KEPZ				*i* S	Sn	13 38 59.3	+0.1
KEPZ				IAML		13 39 02.0	
	comp=N,605nm,0.9s						
KEPZ				IAML		13 39 03.0	
	comp=E,464nm,0.3s						
BOZY	Bozyazi-Mersin	0.98	83	PG	Pn	13 38 47.2	+0.2
AKMS	Akamas	1.08	154	P	Pn	13 38 49.4	+1.2
TEKE	Tekeli-Mersin	1.10	82	PN	Pn	13 38 49.2	+0.8
TEKE				SN	Sn	13 39 04.6	+1.4
ERMK	Ermenek	1.13	55	*i* P	Pn	13 38 50.3	+1.3
ERMK				*i* S	Sn	13 39 03.7	-0.4
ERMK				IAML		13 39 09.0	
	comp=E,361nm,0.3s						
ERMK				IAML		13 39 09.0	
	comp=N,379nm,0.3s						
KEMT	Kemer-ANTALYA	1.15	302	PN	Pn	13 38 49.2	+0.1
AKDN	Akdeniz- Kıbrı	1.20	125	PN	Pn	13 38 51.1	+1.4
AKDN				SN	Sn	13 39 07.9	+2.5
AKUM	Antalya-Kumluc	1.20	286	*i* P	Pn	13 38 50.9	+1.2
AKUM				IAML		13 39 16.0	
	comp=E,228nm,0.7s						
AKUM				IAML		13 39 16.0	
	comp=N,251nm,0.3s						
BERE	Bereket-Mersin	1.23	73	PN	Pn	13 38 51.1	+0.9
BERE				SN	Sn	13 39 07.8	+1.4
LEF	Lefka	1.27	133	PN	Pn	13 38 50.8	+0.3
LEF	Lefka	1.27	133	*i* P	Pn	13 38 50.1	-0.5
LEF				*i* S	Sn	13 39 04.9	-2.0
LEF				IAML		13 39 07.0	
	comp=N,223nm,0.3s						
LEF				IAML		13 39 16.0	
	comp=E,165nm,0.5s						
ANTB	Antalya	1.27	315	PN	Pn	13 38 50.7	0.0
YORU	Yoruktepe-Mers	1.34	83	PN	Pn	13 38 52.2	+0.7
OREN	Orenkoy-Mersin	1.39	81	PN	Pn	13 38 53.4	+1.3
SEYD	Seydisehir-KON	1.41	2	PN	Pn	13 38 53.2	+0.6
AKK1	Akkuyu-Mersin	1.44	84	PN	Pn	13 38 54.2	+1.3
AKK2	Akkuyu-Mersin	1.45	84	PN	Pn	13 38 54.3	+1.4
GULN	MERSIN_Gulnar	1.45	82	*i* P	Pn	13 38 54.0	+1.1
GULN				*i* S	Sn	13 39 12.1	+0.9
GULN				IAML		13 39 16.0	
	comp=N,225nm,0.5s						
AKKU	Akkuyu-Mersin	1.45	83	PN	Pn	13 38 54.3	+1.3
SEDI	Konya, Seydise	1.45	360	*i* P	Pn	13 38 54.7	+1.6
SEDI				*i* S	Sn	13 39 12.2	+0.6
SEDI				IAML		13 39 18.0	
	comp=N,302nm,0.4s						
SEDI				IAML		13 39 20.0	
	comp=E,157nm,0.7s						
TEPK	Tepekoy-MERSIN	1.46	80	PN	Pn	13 38 54.2	+1.1
KORT	Korkueli	1.52	312	PN	Pn	13 38 54.6	+0.6
KORT	Korkueli	1.52	312	*i* P	Pn	13 38 53.8	-0.3
KORT				IAML		13 39 20.0	
	comp=E,130nm,0.6s						
KORT				IAML		13 39 20.0	
	comp=N,129nm,0.3s						
DEMR	Demre-Antalya	1.53	280	PN	Pn	13 38 54.8	+0.8
YESI	Yesilovacik-Me	1.53	82	PN	Pn	13 38 55.3	+1.3
SZAC	Souni	1.54	143	P	Pn	13 38 55.8	+1.7
KKBE	Karaman, Kazim	1.54	37	*i* P	Pn	13 38 55.5	+1.2
KKBE				*i* S	Sn	13 39 14.1	+0.4
TISA	Tisan-Mersin	1.56	83	PN	Pn	13 38 55.7	+1.3
IKL	Isikli	1.57	81	PN	Pn	13 38 55.9	+1.3
ATHAL	Athalassa	1.58	122	P	Pn	13 38 55.3	+0.7
ATHAL				S	Sn	13 39 15.2	+0.9
ATHAL				AML	AML	13 39 22.9	
	comp=N,2.0nm,0.4s						
ATHAL				AML	AML	13 39 22.9	
	comp=N,2.0nm,0.4s						
ATHAL				AML	AML	13 39 24.2	
	comp=N,2.0nm,0.7s						
ATHAL				AML	AML	13 39 24.2	
	comp=N,2.0nm,0.7s						
KARG	Kargicak-Mersi	1.58	82	PN	Pn	13 38 56.1	+1.3
CSS	Mathiatis	1.64	128	PN	Pn	13 38 56.1	+0.6
BUCA	Burdur, Bucak-	1.65	324	*i* P	Pn	13 38 54.9	-0.8
ELL	Elmali	1.68	297	PN	Pn	13 38 56.9	+0.8
ELL	Elmali	1.68	297	P	Pn	13 38 58.2	+2.1
ELL				S	Sn	13 39 19.4	+2.5
KRMN	Karaman	1.68	45	PN	Pn	13 38 57.3	+1.1
AKIN	Akıncılar- Kıb	1.69	125	PN	Pn	13 38 57.9	+1.7
ASGA	Asgata	1.71	134	P	Pn	13 38 57.3	+0.9
BCK	Bucak	1.74	327	PN	Pn	13 38 57.7	+0.8
AKAS	Kas	1.77	278	PN	Pn	13 38 58.3	+1.0
AKAS	Kas	1.77	278	*i* P	Pn	13 38 57.9	+0.5
SILI	Silifke-Mersin	1.78	77	PN	Pn	13 38 58.9	+1.5
MVOU	Mavrovouni	1.81	122	P	Pn	13 38 57.6	-0.1
KIZK	Mersin	1.98	75	PN	Pn	13 39 01.7	+1.7
KIZK	Mersin	1.98	75	*i* P	Pn	13 39 01.8	+1.7
KIZK				*i* S	Sn	13 39 21.6	-2.3
KIZK				IAML		13 39 31.0	
	comp=E,80nm,0.3s						
KONT	Konya--Tatoy	2.00	14	PN	Pn	13 39 01.8	+1.4
KONT	Konya--Tatoy	2.00	14	*i* P	Pn	13 39 01.9	+1.4
EREN	Erenkoy	2.01	103	PN	Pn	13 39 02.3	+1.9
EREN	Erenkoy	2.01	103	*i* P	Pn	13 39 01.7	+1.4
EREN				*i* S	Sn	13 39 24.9	+0.4
EREN				IAML		13 39 27.0	
	comp=N,302nm,0.5s						
EREN				IAML		13 39 34.0	
	comp=E,194nm,0.5s						
ISP	Isparta	2.08	332	PN	Pn	13 39 02.6	+1.1
DOGA	KONYA_Doganhis	2.11	358	*i* P	Pn	13 39 02.8	+0.9
DOGA				IAML		13 39 36.0	
	comp=N,82nm,0.5s						
BAGO	Egridir - ISPA	2.14	339	*i* P	Pn	13 39 03.0	+0.7
GOLH	Golhisar	2.17	306	*i* P	Pn	13 39 05.2	+2.6
GOLH				*i* S	Sn	13 39 29.5	+0.9
GOLH				IAML		13 39 33.0	
	comp=E,175nm,0.5s						
GOLH				IAML		13 39 34.0	
	comp=N,147nm,0.4s						
BRDR	BURDUR-Merkez	2.18	322	*i* P	Pn	13 39 04.0	+1.2
LADK	Ladik-KONYA	2.25	12	PN	Pn	13 39 04.9	+1.1
FETY	Fethiye	2.26	287	*i* P	Pn	13 39 04.9	+1.0
FETY				IAML		13 39 36.0	
	comp=N,56nm,0.2s						
CAEL	Denizli, Camel	2.27	300	*i* P	Pn	13 39 06.0	+1.9
CAEL				IAML		13 39 36.0	
	comp=E,117nm,0.4s						
CAEL				IAML		13 39 36.0	
	comp=N,169nm,0.3s						
YVAC	Isparta, Yalva	2.31	350	*i* P	Pn	13 39 05.4	+0.7
BASM	Basmaki-Afyon	2.36	325	PN	Pn	13 39 06.8	+1.5
KERG	Konya-Eregli	2.37	52	*i* P	Pn	13 39 06.4	+1.0
KERG				*i* S	Sn	13 39 31.9	-1.5
KERG				IAML		13 39 35.0	
	comp=N,94nm,0.3s						
KERG				IAML		13 39 37.0	
	comp=E,66nm,0.4s						
ALIN	Konya, Altinte	2.46	21	*i* P	Pn	13 39 07.5	+0.9
OSC1	CSNet OBS 1	2.52	189	P	Pn	13 39 08.5	+1.2
OSC1				S	Sn	13 39 36.6	-0.4
KDHN	Kadinhani	2.54	6	*i* P	Pn	13 39 08.3	+0.6
KZIL	AFYON_Kizioren	2.61	331	*i* P	Pn	13 39 08.1	-0.5
KZIL				*i* S	Sn	13 39 37.7	-1.6
DALY	Dalyan (Mula)	2.64	289	*i* P	Pn	13 39 09.2	+0.2
DALY				*i* S	Sn	13 39 39.4	-0.5
DALY				IAML		13 39 42.0	
	comp=N,80nm,0.2s						
TAVA	DENIZLI_Tavas	2.72	303	*i* P	Pn	13 39 11.2	+1.0
TAVA				IAML		13 39 45.0	
	comp=E,39nm,0.2s						
SHUT	Suhut-Afyon	2.73	340	PN	Pn	13 39 11.9	+1.6
KARA	Karaisali	2.93	63	PN	Pn	13 39 15.1	+2.2
OSC2	CSNet OBS 4	2.94	172	P	Pn	13 39 14.1	+1.0
TURN	Turunc	2.95	286	PN	Pn	13 39 15.1	+2.0
TURN	Turunc	2.95	286	*i* P	Pn	13 39 13.4	+0.3
TURN				IAML		13 39 49.0	
	comp=N,82nm,0.2s						
ARG	Arkhangelos	2.96	275	PN	Pn	13 39 15.2	+1.9
KRTS	Karatas	2.97	78	PN	Pn	13 39 15.3	+1.9
MRSB	Marmaris-Mugla	2.97	285	PN	Pn	13 39 15.5	+2.0
KHAL	Karahalli	2.99	323	*i* P	Pn	13 39 14.5	+0.7
KHAL				*i* S	Sn	13 39 48.8	+0.3
YER	Yerkesik	3.03	293	PN	Pn	13 39 16.0	+1.7
CMRD	Camardi-Nigde	3.07	56	PN	Pn	13 39 17.0	+2.0
CIFT	Cifteler, Eski	3.41	351	PN	Pn	13 39 20.8	+1.3
CIFT	Cifteler, Eski	3.41	351	*i* P	Pn	13 39 19.7	+0.2
USAK	Uak-Merkez	3.49	322	*i* P	Pn	13 39 20.9	+0.4
USAK				*i* S	Sn	13 39 59.4	-1.3
USAK				IAML		13 40 02.0	
	comp=N,36nm,0.8s						
YAHY	KAYSERI_Yahyal	3.56	53	*i* P	Pn	13 39 22.6	+1.1
KOZT	Kozan	3.58	64	PN	Pn	13 39 23.3	+1.5
GDZ	Gediz	3.58	330	*i* P	Pn	13 39 21.4	-0.6
GDZ				*i* S	Sn	13 39 59.0	-4.1
TAHT	Tahtakopru-Hat	3.59	83	PN	Pn	13 39 23.9	+2.0
AFSR	Afar-Bala (An	3.60	16	PN	Pn	13 39 24.4	+2.3
SGAZ	Eskisehir, Sey	3.60	348	*i* P	Pn	13 39 22.8	+0.6
KARP	Karpathos	3.77	265	P	Pn	13 39 25.3	+0.9
BHL	Bhannes	3.81	122	*e*P	Pn	13 39 26.9	+1.9
SAIM	ADANA	3.98	59	*i* P	Pn	13 39 28.3	+1.0
ANDN	Andirin	4.00	65	*i* P	Pn	13 39 27.3	-0.3
BRTR	Keskin Array B	4.01	21	P	Pn	13 39 28.6	+0.9
	comp=N,0.5nm,0.3s,baz=188,slow=16,SNR=21						
BRTR				S	Sn	13 40 15.3	+1.8
	comp=N,0.4nm,0.3s,baz=181,slow=24,SNR=2.9						
HNTI	Hanita	4.04	135	Pn	Pn	13 39 29.0	+0.9
HNTI				Sn	Sn	13 40 13.5	-0.7
KAMA	Osmaniye	4.12	72	*i* P	Pn	13 39 29.6	+0.4
KAMA				*i* S	Sn	13 40 13.3	-2.8
RCY	Rachaya	4.17	125	*e*P	Pn	13 39 31.7	+1.7
MMC7	Mount Meron ar	4.21	134	Pn	Pn	13 39 31.6	+1.1
MMA0B	Mount Meron ar	4.22	134	Pn	Pn	13 39 31.6	+1.0
MMA0B				Sn	Sn	13 40 17.6	-1.1
MMAI	Mount Meron Ar	4.22	134	P	Pn	13 39 32.0	+1.4
	comp=N,36nm,0.3s,baz=312,slow=12,SNR=157						
MMAI				S	Sn	13 40 17.3	-1.4
	comp=N,32nm,0.3s,baz=312,slow=28,SNR=22						
GEM	Giv'at Ha'Em	4.25	130	Pn	Pn	13 39 32.1	+1.2
GEM				Sn	Sn	13 40 18.1	-1.1
NATI	Neve Ativ	4.26	129	Pn	Pn	13 39 32.2	+1.2
NATI				Sn	Sn	13 40 18.0	-1.4
OFRI	`Ofer	4.29	141	Pn	Pn	13 39 31.9	+0.4
OFRI				Sn	Sn	13 40 17.9	-2.4
BLGI	Bet Lehem HaGe	4.31	138	Pn	Pn	13 39 32.7	+0.9
HCB	Kahramanmara	4.35	70	*i* P	Pn	13 39 32.2	-0.1
HCB				*i* S	Sn	13 40 18.1	-3.5
HCB				IAML		13 40 21.0	
	comp=N,16nm,0.7s						
KUZU	Kuzuini	4.35	78	*i* P	Pn	13 39 31.9	-0.5
KUZU				*i* S	Sn	13 40 18.6	-3.3
KUZU				IAML		13 40 25.0	
	comp=E,16nm,0.3s						
KUZU				IAML		13 40 25.0	
	comp=N,26nm,0.5s						
MMLI	Mount Malkishu	4.66	138	Pn	Pn	13 39 37.8	+1.2
MMLI				Sn	Sn	13 40 27.9	-1.5
HMDT	Nahal Hemdat	4.86	139	Pn	Pn	13 39 41.0	+1.7
AMAZ	Amatzia	5.17	149	Pn	Pn	13 39 44.4	+1.0
DSI	Dead Sea	5.34	145	Pn	Pn	13 39 47.0	+1.2
YTIR	Yattir	5.40	148	Pn	Pn	13 39 47.7	+1.0
YTIR				Sn	Sn	13 40 46.4	-1.1
KZIT	Kziot	5.53	156	Pn	Pn	13 39 48.9	+0.5
IDI	Anoyia	5.65	265	P	Pn	13 39 51.4	+1.3
	comp=N,1.4nm,0.3s,baz=354,slow=6.8,SNR=8.8						
IDI				S	Sn	13 40 49.7	-3.9
	comp=N,1.7nm,0.3s,baz=112,slow=23,SNR=8.4						
HHAG	Hagoal	6.03	177	P	Pn	13 39 56.3	+1.0
	baz=179						
KOT	Kottamia	6.05	179	P	Pn	13 39 56.2	+0.7
	baz=182						
SUZ	Suez	6.20	171	P	Pn	13 39 58.6	+1.0
	baz=172						
HMYD	Mayadein	6.24	188	P	Pn	13 39 59.5	+1.4
	baz=191						
PRNI	Paran	6.25	153	Pn	Pn	13 39 58.6	+0.4
HSAF	As Saff	6.36	182	P	Pn	13 40 00.6	+0.8
	baz=185						
HSAF				S	Sn	13 41 01.5	-10
	baz=185						
GLL	Jalalah	6.40	180	P	Pn	13 40 01.2	+0.9
	baz=183						
HNAT	Natroun	6.42	189	P	Pn	13 40 02.9	+2.4
	baz=193						
HRFI	Mount Harif	6.54	154	Pn	Pn	13 40 03.0	+0.7
MBRI	Mt Berech	6.72	156	Pn	Pn	13 40 05.3	+0.5
ZAF	Zafarana	6.73	174	P	Pn	13 40 05.4	+0.6
	baz=175						
EIL	Elat	6.85	156	P	Pn	13 40 07.3	+0.8
	comp=N,8.8nm,0.3s,baz=340,slow=3.9,SNR=53						
EIL				S	Sn	13 41 20.2	-2.9
	comp=N,2.4nm,0.3s,baz=132,slow=20,SNR=5.6						
EIL	Elat	6.85	156	Pn	Pn	13 40 07.1	+0.6
RYAN	Fayoum	7.01	191	P	Pn	13 40 10.6	+2.0
	baz=194						
RYAN				AMP		13 41 00.0	
	baz=194						
NBNS	Bani Suef	7.36	183	P	Pn	13 40 14.8	+1.3
	baz=186						
HDHB	Dhahab	7.64	161	P	Pn	13 40 18.6	+1.3
	baz=160						
HKAT	Jabal Katrina	7.68	165	P	Pn	13 40 18.2	+0.2
	baz=165						
AKASG	Malin Array Be	14.81	354	P	P	13 41 57.6	-0.6
	comp=N,1.7nm,0.3s,baz=182,slow=11,SNR=8.4						
GERES	GERESS Array B	18.45	320	P	Pn	13 42 40.6	+1.2
	comp=N,0.1nm,0.3s,baz=111,slow=11,SNR=3.1						
WTTA	Wattenberg	18.74	313	*i* P	P	13 42 42.5	+0.7
	comp=N,2.3nm,0.6s						
SQTA	Sankt Quirin	18.97	313	*i* P	P	13 42 44.9	+0.6
	comp=N,1.0nm,0.3s						
MOTA	Moosalm	19.09	313	*i* P	P	13 42 46.7	+1.0
	comp=N,0.9nm,0.2s						
RETA	Reutte	19.36	313	*i* P	P	13 42 48.5	-0.1
	comp=N,1.1nm,0.3s						
FINES	FINESS Array B	25.73	354	P	P	13 43 50.7	-1.3
	comp=N,1.8nm,0.5s,baz=159,slow=11,SNR=17						
ARCES	ARCESS Array B	33.77	356	P	P	13 45 01.6	-1.6
	comp=N,5.3nm,1.0s,baz=162,slow=9.5,SNR=4.1						
MKAR	Makanchi Array	38.80	58	P	P	13 45 46.7	+0.3
	comp=N,0.1nm,0.4s,baz=264,slow=7.0,SNR=3.5						

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*IDC **04** 13:44:32.2±0.8, 0°.15S×125°.42E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.8/42, mbtmp3.9/11, ML3.3/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/37, Error ellipse: s-maj=40.1km s-min=14.6km az=69.0*
*DJA **04** 13:44:38.0±0.3, 0°S±4°×12°6E±°, h10^{km}, M4.0/12, mb4.2/4, MLv4.0/12*
*NEIC **04** 13:44:40.9±2.1, 0°.02S±0°.08×125°.86E±0°.06, h69^{km}±9^{km}, mb4.2/11, Error ellipse: s-maj=12.2km s-min=9.1km az=165.0*
ISC 04 13:44:39.2±0.6, **0°.03S**±0°.06×**125°.81E**±0°.07, **h50**^{km}, **n49**, σ1^s**70**/40, **mb4.1**/15, **MS3.4**/9, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.75	63		Pn	13 45 08.0	+0.8
TNTI	Ternate	1.75	63	P	Pn	13 45 09.4	+2.2
KMSI	Cibinong	1.92	288	P	Pn	13 45 08.5	-1.0
SANI	Sanana	2.01	175	P	Pn	13 45 09.6	-1.2
GTOI	Gorontalo	2.87	283	P	Pn	13 45 25.0	+2.5
LUWI	Luwuk	3.20	252		Pn	13 45 29.4	+2.4
LUWI	Luwuk	3.20	252	P	Pn	13 45 27.2	+0.2
NLAI	Namlea	3.44	158	P	Pn	13 45 31.7	+1.4
MRSI	Marisa	3.90	277	P	Pn	13 45 38.0	+1.4
APSI	Ampana	4.25	258	P	Pn	13 45 40.7	-0.7
TOLI2	Tolitoli	5.15	283		Pn	13 45 55.5	+1.7
SIJI	Sorong	5.52	99	Pn	Pn	13 46 01.3	+2.3
	0.8nm,0.3s,baz=246,slow=13,SNR=6.6						
MPSI	Mapaga	5.92	274	P	Pn	13 46 04.2	-0.1
	0.1nm20nm,0.7s						
TTSI	Tana Toraja	6.69	243	P	Pn	13 46 14.9	0.0
FAKI	Fak Fak	7.05	114	Pn	Pn	13 46 20.8	+0.9
MYLDM	Lahad Datu	8.95	305	Pn	Pn	13 46 50.0	+4.1
MMRI	Maumere	9.26	202	Pn	Pn	13 46 54.1	+3.9
MTN	Manton Dam	13.78	158	Pn	Pn	13 47 52.9	+0.9
JAY	Jayapura	15.10	100	LR	LR	13 55 03.0	
	comp=Z,250nm,21.8s,baz=278,slow=41						
KSM	Kuching	15.57	276	P	P	13 48 21.2	+2.2
KSM				IAmb	IAmb	13 48 29.8	
	comp=Z,28nm,1.4s						
FITZ	Fitzroy Crossi	17.95	181	P	Pn	13 48 42.3	-3.0
	comp=Z,0.1nm,0.3s,baz=24,slow=9.3,SNR=2.0						
FITZ	Fitzroy Crossi	17.95	181	IAmb	IAmb	13 48 52.7	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	21.34	157	P	P	13 49 21.5	-0.8
WB0				IAmb	IAmb	13 49 28.3	
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	21.48	158	P	P	13 49 23.1	-0.6
	comp=Z,9.6nm,0.9s,baz=334,slow=11,SNR=22						
WB2	Warramunga Arr	21.49	158	P	P	13 49 22.6	-1.3
WB2				IAmb	IAmb	13 49 29.9	
	comp=Z,18nm,1.0s						
WR0	Warramunga Arr	21.57	157	P	P	13 49 24.2	-0.5
WR0				IAmb	IAmb	13 49 42.7	
	comp=Z,13nm,1.1s						
COEN	Coen	22.07	130	P	P	13 49 30.9	+0.7
COEN				IAmb	IAmb	13 49 38.5	
	comp=Z,7.1nm,0.9s						
PMG	Port Moresby	23.21	114	LR	LR	14 02 22.4	
	comp=Z,128nm,18.9s,baz=297,slow=46						
AS31	Alice Springs	24.77	162	P	P	13 49 56.9	+0.4
ASAR	Alice Springs	24.78	162	P	P	13 49 56.3	-0.2
	comp=Z,2.8nm,0.6s,baz=341,slow=6.4,SNR=36						
FORT	Forrest	30.65	176	P	P	13 50 48.9	-0.1
CMAR	Chiang Mai Arr	32.16	306	LR	LR	14 05 31.6	
	comp=Z,41nm,19.9s,baz=120,slow=40						
BBOO	Buckleboo	34.01	164	P	P	13 51 19.1	+0.8
STKA	Stephens Creek	35.02	156	P	P	13 51 26.8	-0.3
	comp=Z,3.6nm,0.7s,baz=345,slow=10,SNR=7.1						
STKA				LR	LR	14 07 35.0	
	comp=Z,99nm,19.2s,baz=349,slow=39						
STKA	Stephens Creek	35.02	156	IAmb	IAmb	13 51 31.3	
	comp=Z,1.0nm,0.8s						
KSRS	Korea Array	37.35	3	P	P	13 51 47.5	+0.6
	comp=Z,0.8nm,0.8s,baz=190,slow=11,SNR=4.9						
KSRS				LR	LR	14 08 10.4	
	comp=Z,28nm,20.6s,baz=171,slow=38						
USRK	Ussuriysk Ar.	44.38	6	P	P	13 52 45.0	+0.3
	comp=Z,1.5nm,0.8s,baz=227,slow=6.4,SNR=3.2						
ASAJ	Asahikawa	46.44	17	LR	LR	14 12 47.7	
	comp=Z,38nm,20.5s,baz=188,slow=36						
SONM	Songino Array	50.58	343	P	P	13 53 33.6	+0.6
	comp=Z,0.5nm,0.6s,baz=158,slow=6.7,SNR=3.7						
SONM				LR	LR	14 16 30.6	
	comp=Z,54nm,21.9s,baz=145,slow=38						
MK31	Makanchi Array	60.14	327	P	P	13 54 40.7	-1.0
MK31				IAmb	IAmb	13 54 50.5	
	comp=Z,1.6nm,1.0s						
MKAR	Makanchi Array	60.14	327	P	P	13 54 41.0	-0.7
	comp=Z,1.0nm,0.5s,baz=120,slow=9.0,SNR=13						
MA2	Magadan	62.55	14	LR	LR	14 22 54.9	
	comp=Z,18nm,20.0s,baz=264,slow=37						
ZALV	Zalesovo Beam	63.53	334	P	P	13 55 03.9	-0.4
	comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=3.1						
BVAR	Borovoye Array	69.97	328	P	P	13 55 45.1	-0.3
	comp=Z,0.4nm,0.5s,baz=47,slow=6.3,SNR=3.1						
GEYT	Alibeck	72.55	310	LR	LR	14 31 45.7	
	comp=Z,21nm,21.4s,baz=10.0,slow=39						
AKTO	Aktyubinsk	76.03	322	P	P	13 56 17.3	-4.0
	comp=Z,0.5nm,0.5s,baz=135,slow=7.1,SNR=2.3						
BOSA	Boshof	99.25	241	LR	LR	14 37 05.6	
	comp=Z,81nm,20.9s,baz=128,slow=32						
TORD	Torodi Ar. Bea	123.12	286	PKP	PKPdf	14 03 30.0	-1.4
	comp=Z,0.7nm,0.9s,baz=58,slow=1.8,SNR=3.1						
TORD	Torodi Ar. Bea	123.12	286		PKPdf	14 03 30.0	-1.4

IDC 04 13:49:39.8±1.8, **0°.23S**×**125°.42E**, **h0**^{km}, **mb3.1**/3, **mb1 3.4**/3, **mb1mx3.2**/42, **mbtmp3.2**/3, **Error ellipse: s-maj=178.1km s-min=26.1km az=64.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.45	156	P	P	13 54 31.3	+1.4
	0.8nm,0.9s,baz=334,slow=11,SNR=4.8						
ASAR	Alice Springs	24.71	161	P	P	13 55 01.8	-1.1
	0.3nm,0.6s,baz=351,slow=7.1,SNR=4.6						
MKAR	Makanchi Array	60.10	327	P	P	13 59 49.0	+0.1
	0.2nm,0.6s,baz=112,slow=6.4,SNR=2.2						

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*SOME **04** 13:51:00.8, 40°.00N×70°.57E, h0^{km}*
*ISU **04** 13:51:01, 39°.90N×70°.50E, h5^{km}, Hypocentre not reviewed by the ISC*
*KRNET **04** 13:51:01.6±0.1, 39°.88N×70°.55E, h12^{km}, mb2.6*
*NNC **04** 13:51:05.6±3.3, 40°.07N×70°.61E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=26.8km s-min=16.3km az=17.0*
ISC 04 13:51:03.6±1.4, **39°.89N**±0°.06×**70°.58E**±0°.05, **h10**^{km}, **n19**, σ1^s**78**/34, **20C-11D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.25	48	⇓*i*P	Pg	13 51 06.9	-1.9
	baz=50						
BTK				⇓*i*S	Sg	13 51 11.0	-1.3
	baz=50						
BTK	Batken	0.25	48	*e*P		13 51 07.0	
BTK				*e*S		13 51 11.0	

DRK	**Karamyk**	1.03	113	⇑*i*P	Pg	13 51 21.7	-1.7
	baz=12						
DRK				⇑*i*S	Sg	13 51 36.3	-0.6
	baz=12						
CHMG	**Chimgan**	1.71	346	*e*P		13 51 34.0	
CHMG				*e*S		13 51 59.0	
TGS	**TashGRES**	1.73	333	*e*P		13 51 01.0	
TGS				*e*S		13 51 27.0	
TAS	**Tashkent**	1.73	326	⇓*i*P	Pn	13 51 34.0	+0.2
	baz=27						
TAS				⇓*i*S	Sb	13 51 57.6	+0.2
	baz=27						
OHH	**Osh**	1.81	69	⇑*i*P	Pn	13 51 35.7	+0.8
	baz=69						
OHH				⇑*i*S	Sg	13 52 00.6	-1.1
	baz=69						
SFK	**Sufi-Kurgan**	2.25	86	⇓*i*P	Pn	13 51 42.4	+1.2
	baz=86						
SFK				⇓*i*S	Sb	13 52 12.4	-0.2
	baz=86						
SFK	**Sufi-Kurgan**	2.25	86	*e*P		13 51 44.0	
SFK				*e*S		13 52 16.0	
IUG	**Iuzhnay**	2.29	350	*e*P	Pn	13 51 43.0	+1.4
	22nm,0.2s						
IUG				*e*S	Sb	13 52 13.7	+0.2
	118nm,0.5s						
IUG	**Iuzhnay**	2.29	350	Pg	Pn	13 51 43.0	+1.4
	34nm,0.6s						
IUG				Lg	Lg	13 52 15.4	
	97nm,0.6s						
ARSB	**Arslanbob**	2.33	51	⇓*i*P	Pn	13 51 43.5	+1.4
	baz=51						
ARSB				⇓*i*S	Sb	13 52 14.1	-0.5
	baz=51						
MNAS	**Manas**	2.98	29	⇑*i*P	Pn	13 51 52.5	+1.5
	baz=29						
MNAS				⇑*i*S	Sn	13 52 29.7	+2.9
	baz=29						
KK31	**Karatay Array**	3.21	359	⇑Pn	Pn	13 51 56.0	+1.9
	0.5nm,0.3s,baz=172,slow=11,SNR=24						
KK31				⇑Pg	Pb	13 51 59.9	-0.8
	0.5nm,0.3s,baz=184,slow=17,SNR=7.3						
KK31				⇑Lg	Lg	13 52 41.4	
	3.6nm,0.5s,baz=179,slow=28,SNR=15						
AML	**Almayashu**	3.25	45	⇑*i*P	Pn	13 51 56.4	+1.3
	baz=46						
AML				⇑*i*S	Sn	13 52 36.4	+2.4
	baz=46						
ARLS	**Aral**	3.46	54	⇓*i*P	Pn	13 51 59.4	+1.8
	baz=54						
ARLS				⇓*i*S	Sn	13 52 41.5	+2.8
	baz=54						
MRKS	**Merke**	3.48	34	*e*P	Pb	13 52 04.9	-0.5
	1.8nm,0.2s						
MRKS				*e*S	Sg	13 52 51.5	-3.9
	9.5nm,0.4s						
MRKS	**Merke**	3.48	34	Pg	Pb	13 52 04.5	-0.9
	1.3nm,0.4s						
MRKS				Lg	Lg	13 52 51.8	
	9.4nm,0.5s						
EKS2	**Erkin-Say**	3.67	40	⇑*i*P	Pn	13 52 02.2	+1.6
	baz=40						
EKS2				⇑*i*S	Sn	13 52 46.4	+2.4
	baz=40						
UCH	**Uchtor**	3.78	51	⇑*e*P	Pn	13 52 03.8	+1.4
	baz=51						
UCH				⇑*i*S	Sn	13 52 49.2	+2.0
	baz=51						
AAK	**Ala-Archa**	4.03	46	⇓Pn	Pn	13 52 08.6	+3.0
	1.0nm,0.5s						
AAK				⇑Lg	Lg	13 53 08.4	
	1.7nm,0.3s						
KBK	**Karagaybulak**	4.30	49	⇑*i*P	Pn	13 52 10.9	+1.6
	baz=49						
KBK				⇑*i*S	Sn	13 53 01.6	+2.0
	baz=49						
TKM2	**Tokmak 2**	4.84	50	⇑Pn	Pn	13 52 17.1	+0.4
	1.6nm,0.7s						
TKM2				⇑Lg	Lg	13 53 32.8	
	1.0nm,0.6s						

MOS ***04*** *13:58:02.9±1.8, 64.°48N×60.°33E, h10^{km}, mb4.3/9, Error ellipse: s-maj=11.5km s-min=5.7km az=86.8*
IDC ***04*** *13:58:04.0±0.5, 64.°51N×60.°70E, h0^{km}, mb3.8/20, mb1 4.1/30, mb1mx4.0/50, mbtmp4.0/30, ML4.0/7, MS3.2/8, Ms1 3.2/8, ms1mx2.8/49, Error ellipse: s-maj=8.0km s-min=6.8km az=64.0*
KOLA ***04*** *13:58:05.0, 65.°02N×61.°14E, h0^{km}, ML3.5, Komi republic*
NEIC ***04*** *13:58:05.3±1.6, 64.°41N±0.°09×60.°5E±0.°2, h14^{km}±5^{km}, mb4.4/40, Error ellipse: s-maj=13.8km s-min=11.7km az=133.0*
IEPN ***04*** *13:58:05.0, 64.°49N×60.°49E, h10^{km}*
MIRAS ***04*** *13:58:07.4±0.0, 64.°31N×60.°94E, h10^{km}, ML4.0/5*
HEL ***04*** *13:58:09.2±0.2, 64.°69N×60.°10E, h10^{km}, ML4.4, Confirmed Earthquake*
NNC ***04*** *13:58:14.3±5.3, 63.°93N×60.°79E, h37^{km}±69^{km}, mb3.9, Error ellipse: s-maj=86.1km s-min=48.5km az=105.0*
ISC 04 13:58:04.1±0.3, **64.°47N**±0.°03×**60.°49E**±0.°03, **h10^{km}, n229,** σ**2.^{s}85**/296, **mb4.3**/50, **MS3.1**/7, **35C-8D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVUR	**Severouralsk**	4.29	183	*e*P	Pn	13 59 12.6	+3.2
	baz=187						
SVUR				*e*S	Sn	14 00 03.6	+4.2
	887nm,0.6s,baz=187						
SVUR	**Severouralsk**	4.29	183	⇓*i*P	Pn	13 59 10.9	+1.6
SVUR				*e*S	Sn	14 00 02.6	+3.2
AMDE	**Amderma**	5.34	4	⇑*i*P	Pn	13 59 24.8	+1.1
AMDE				*e*S	Sn	14 00 24.2	-0.9
	532nm,0.2s						
PR7R	**Sarany**	5.99	189	*e*P	Pn	13 59 35.9	+3.1
	baz=191						
PR7R				*e*S	Sn	14 00 45.4	+4.1
	572nm,0.8s,baz=191						
PR7R	**Sarany**	5.99	189	⇓*i*P	Pn	13 59 35.8	+3.1
PR7R				*e*S	Sn	14 00 45.4	+4.1
LSH	**Leshukonskoye**	6.35	280	*e*P	Pn	13 59 39.9	+2.3
	19nm,0.4s						
LSH				*e*S	Sn	14 00 51.5	+1.6
PR0R	**Verkhnechusovs**	6.49	196	*e*P	Pn	13 59 42.4	+2.9
	baz=198						
PR0R				*e*S	Sn	14 00 54.3	+0.7
	151nm,0.7s,baz=198						
PR0R	**Verkhnechusovs**	6.49	196	⇓*i*P	Pn	13 59 41.9	+2.3
PR0R				*e*S	Sn	14 00 54.9	+1.3
PR4R	**Vlasy**	6.97	202	*e*P	Pn	13 59 46.0	-0.2
	baz=204						
PR4R				*i* S	Sn	14 01 04.8	-0.6
	626nm,0.8s,baz=204						
PR4R	**Vlasy**	6.97	202	⇓*i*P	Pn	13 59 46.1	-0.1
PR4R				*e*S	Sn	14 01 05.8	+0.4
PR3R	**Kungur**	7.25	195	*e*P	Pn	13 59 51.9	+2.0
	baz=197						
PR3R				*e*S	Sn	14 01 15.4	+3.3
	293nm,0.4s,baz=197						
SVE	**Sverdlovsk**	7.67	179	*e*P	Pn	13 59 57.4	+1.7
	baz=181						
SVE				*e*S	Sn	14 01 21.9	-0.6
	baz=181						
SVE	**Sverdlovsk**	7.67	179	*e*P	Pn	13 59 57.0	+1.3
SVE				*e*S	Sn	14 01 24.2	+1.7
SVE	**Sverdlovsk**	7.67	179	*e*P	Pn	13 59 56.9	+1.3
SVE				*e*S	Sn	14 01 20.4	-2.1
KIRV	**Kirov**	7.92	227	Pn	Pn	14 00 02.5	+3.4
	16nm,0.3s,baz=38,slow=7.8,SNR=24						
KIRV				Sn	Sn	14 01 29.7	+1.2
	6.2nm,0.3s,baz=354,slow=22,SNR=8.1						
KIRV				Lg	Lg	14 02 06.8	
	2.7nm,0.3s,baz=329,slow=19,SNR=1.7						
KAUR	**Kamensk Uralsk**	8.08	176	*e*P	Pn	14 00 02.1	+0.8
	baz=178						
KAUR				*e*S	Sn	14 01 31.8	-0.7
	70nm,4.5s,baz=178						
ARU	**Arti**	8.12	188	Pn	Pn	14 00 02.8	+0.9
	0.0nm,0.3s,baz=357,slow=7.9,SNR=51						
ARU				Sn	Sn	14 01 32.0	-1.6
	0.0nm,0.3s,baz=270,slow=20,SNR=3.0						
ARU				Lg	Lg	14 02 18.8	
	0.0nm,0.3s,baz=108,slow=20,SNR=3.8						
ARU	**Arti**	8.12	188	*e*P	Pn	14 00 02.9	+0.9
	baz=190						
ARU				*i* S	Sn	14 01 35.9	+2.3
	baz=190						
ARU	**Arti**	8.12	188	*d* *i*P	Pn	14 00 03.3	+1.4
ARU				S	Sn	14 01 36.6	+3.0
ARU				pmax	pmax		
	comp=Z,18nm,0.6s						
ARU	**Arti**	8.12	188	Pn	Pn	14 00 02.0	+0.1
ARU	**Arti**	8.12	188	⇑*i*P	Pn	14 00 03.1	+1.2
ARU				*e*S	Sn	14 01 33.1	-0.5
TMCR	**Tamitsa**	9.74	278	*e*P	Pn	14 00 23.1	-0.9
TMCR				*e*		14 02 13.5	
TMCR				pmax	pmax		
	comp=Z,29nm,1.0s						
TMCR	**Tamitsa**	9.74	278	*e*P	Pn	14 00 23.6	-0.4
	comp=Z,26nm,1.2s						
TMCR				*e*S	Sn	14 02 11.7	-1.5
BA1R	**Ufa**	10.20	196	*i* P	Pn	14 00 30.4	+0.1
BA1R				*e*S	Sn	14 02 22.7	-1.9
KLMR	**Klimovskoe**	10.28	259	*e*P	Pn	14 00 31.7	+0.2
KLMR				*e*		14 02 24.0	
KLMR				pmax	pmax		
	comp=Z,52nm,1.1s						
KLMR	**Klimovskoe**	10.28	259	*e*Pn	Pn	14 00 31.7	+0.2
KLMR				*e*Pn	Pn	14 00 31.7	+0.2
KLMR				*e*Pn	Pn	14 00 31.7	+0.2
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				*e*P	P	14 00 32.2	+0.7
KLMR				AMP		14 00 37.4	
	comp=Z,52nm,1.1s						
KLMR				*e*Sn	Sn	14 02 24.1	-2.5
KLMR				*e*Sn	Sn	14 02 24.1	-2.5
KLMR				*e*S	S	14 02 26.5	-0.1
KLMR				*e*S	S	14 02 26.5	-0.1
KLMR				*e*S	S	14 02 26.5	-0.1
KLMR				*e*S	S	14 02 26.5	-0.1
KLMR				*e*S	S	14 02 26.5	-0.1
KLMR				*e*S	S	14 02 26.5	-0.1
SLVR	**Solovky**	10.58	284	*e*P	Pn	14 00 34.0	-1.5
	comp=Z,12nm,0.5s						
SLVR				*e*S	Sn	14 02 30.5	-3.4
LVZ	**Lovozero**	10.95	300	*i* P	Pn	14 00 37.8	-2.9
	baz=300						
LVZ				*e*S	Sn	14 02 36.7	-6.3
	baz=300						
LVZ	**Lovozero**	10.95	300	*c* *e*P	Pn	14 00 39.8	-0.8
LVZ				pmax	pmax		
	comp=Z,192nm,2.5s						
LVZ	**Lovozero**	10.95	300	Pn	Pn	14 00 38.9	-1.7
APA	**Apatity**	11.40	298	P	Pn	14 00 45.0	-1.7
APA				S	Sn	14 02 45.6	-8.2
APA0	**Apatity Array**	11.56	298	Pn	Pn	14 00 47.5	-1.4
	baz=72,slow=16						
APA0				Sn	Sn	14 02 50.1	-7.7
	baz=98,slow=28						
APA0	**Apatity Array**	11.56	298	Pn	Pn	14 00 47.5	-1.4
	baz=72,slow=16						
APA0				Sn	Sn	14 02 50.1	-7.7
	baz=98,slow=28						
APA0	**Apatity Array**	11.56	298	P	Pn	14 00 47.2	-1.7
APA0				S	Sn	14 02 49.9	-7.9
NRIK	**Noril'sk**	11.62	53	Pn	Pn	14 00 47.7	-2.0
	comp=Z,2.3nm,0.3s,baz=271,slow=3.7,SNR=12						
NRIK				Sn	Sn	14 02 51.7	-7.6
	comp=Z,1.8nm,0.3s,baz=210,slow=20,SNR=7.4						
NRIK				LR	LR	14 05 49.8	
	comp=Z,64nm,20.0s,baz=244,slow=40						
NRIK	**Noril'sk**	11.62	53	Pn	Pn	14 00 47.9	-1.8
BRVK	**Borovoye**	12.50	152	⇑P	Pn	14 01 01.3	-0.4
	comp=Z,1.1nm,0.4s						
BRVK				⇑S	Sn	14 03 16.1	-4.7
	comp=Z,4.0nm,0.4s						
BRVK	**Borovoye**	12.50	152	*c* *e*P	Pn	14 01 02.4	+0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	12.50	152	Pn	Pn	14 00 59.8	-2.0
BRVK	**Borovoye**	12.50	152	*e*P	Pn	14 01 02.4	+0.6
BVAR	**Borovoye Array**	12.55	151	Pn	Pn	14 00 59.1	-3.4
	comp=Z,1.4nm,0.3s,baz=334,slow=13,SNR=24						
BVAR				Sn	Sn	14 03 17.4	-4.7
	comp=Z,4.2nm,0.3s,baz=238,slow=28,SNR=9.4						
KU6	**Riekki**	12.85	291	*e*P	Pn	14 01 04.5	-2.0
KU6				MPN		14 01 08.8	
	comp=Z,7.1nm,0.2s						
KU6				*e*S	Sn	14 03 20.0	-9.3
VRF	**Varrio**	12.85	299	*e*P	Pn	14 01 03.9	-2.7
VRF				MPN		14 01 07.2	
	comp=Z,11nm,0.3s						
VRF				*e*S	Sn	14 03 19.4	-10
JOF	**Joensuu**	12.98	276	*e*P	Pn	14 01 06.1	-2.2
JOF				MPN		14 01 09.8	
	comp=Z,20nm,0.4s						
JOF				*e*S	Sn	14 03 23.3	-9.2
MSF	**Maaselka**	13.21	290	*e*P	Pn	14 01 09.2	-2.2
MSF				MPN		14 01 13.0	
	comp=Z,13nm,0.3s						
MSF				*e*S	Sn	14 03 27.7	-10
KEV	**Kevo**	13.91	307	P	Pn	14 01 17.8	-3.1
KEV	**Kevo**	13.91	307	Pn	Pn	14 01 17.8	-3.1
SGF	**Sodankyl**	14.04	297	*e*P	Pn	14 01 19.6	-3.1
SGF				MPN		14 01 23.8	
	comp=Z,5.6nm,0.3s						
SGF				*e*S	Sn	14 03 46.9	-12
AKTO	**Aktyubinsk**	14.13	186	Pn	Pn	14 01 21.6	-2.5
	comp=Z,0.5nm,0.3s,baz=336,slow=11,SNR=10						
AKTO				Sn	Sn	14 03 54.5	-6.3
	comp=Z,0.4nm,0.3s,baz=299,slow=19,SNR=2.1						
AKTO				LR	LR	14 05 51.6	
	comp=Z,48nm,19.5s,baz=353,slow=33						
AKTO	**Aktyubinsk**	14.13	186	⇓P	Pn	14 01 23.5	-0.6
	comp=Z,3.5nm,0.7s						
AKTO				⇑S	Sn	14 03 52.9	-7.9
	comp=Z,8.0nm,0.6s						
MOS	**Moscow**	14.29	243	*e*P	Pn	14 01 25.0	-1.1
MOS				*e*S	Sn	14 03 56.3	-8.1
MOS				pmax	pmax		
	comp=Z,33nm,0.8s						
RNF	**Rovaniemi**	14.33	294	*e*P	Pn	14 01 23.6	-3.0
RNF				*e*S	Sn	14 03 53.5	-12
ARA0	**ARCESS Array S**	14.42	306	P	Pn	14 01 23.9	-4.0
	baz=94,slow=14						
ARA0	**ARCESS Array S**	14.42	306	*e*P	Pn	14 01 24.3	-3.6
ARA0				*e*S	Sn	14 03 55.3	-12
ARCES	**ARCESS Array B**	14.42	306	Pn	Pn	14 01 23.9	-4.0
	baz=308,slow=6.0,SNR=77						
ARCES				Sn	Sn	14 03 55.0	-13
	baz=96,slow=23,SNR=7.6						
OUL	**Oulu**	14.65	288	*e*P	Pn	14 01 28.8	-2.3
OUL				*e*S	Sn	14 04 02.1	-11
OBF4	**Vikkela, Lumij**	15.05	287	*e*P	Pn	14 01 33.1	-3.3
OBF4				*e*S	Sn	14 04 11.1	-12
TOF	**Tornio**	15.08	292	*e*P	Pn	14 01 33.4	-3.5
TOF				*e*S	Sn	14 04 10.9	-13
HAMF	**Hammerfest**	15.13	310	*e*P	Pn	14 01 39.0	+1.5
OBN	**Obninsk**	15.15	243	Pn	Pn	14 01 35.4	-2.5
	comp=Z,1.5nm,0.3s,baz=329,slow=14,SNR=8.6						
OBN				Sn	Sn	14 04 22.2	-3.3
	comp=Z,1.3nm,0.3s,baz=113,slow=20,SNR=5.5						
OBN	**Obninsk**	15.15	243	*c* *e*P	Pn	14 01 37.4	-0.5
OBN				*i* S	Sn	14 04 21.5	-4.0
OBN				pmax	pmax		
	comp=Z,37nm,0.8s						
OBN				MLR	MLR		
	comp=Z,90nm,15.0s						
OBN	**Obninsk**	15.15	243	Pn	Pn	14 01 37.0	-0.8
KTK1	**Kautokeino**	15.21	304	*e*P	Pn	14 01 34.3	-4.3
AB05	**Akbulak array**	15.24	181	Pn	Pn	14 01 37.3	-1.7
AB06	**Akbulak array**	15.25	181	Pn	Pn	14 01 37.3	-1.9
AB31	**Akbulak array**	15.25	181	P	Pn	14 01 37.7	-1.6
	comp=Z,2.7nm,0.4s,baz=8.7,slow=12,SNR=130						
AB31				⇑S	Sn	14 04 24.7	-3.4
	comp=Z,2.6nm,0.5s,baz=5.2,slow=22,SNR=5.4						
ABKAR	**Akbulak array**	15.25	181	Pn	Pn	14 01 37.2	-2.1
ABKAR				IAmb	IAmb	14 01 47.5	
	comp=Z,8.8nm,0.6s						
OUF	**Merijarvi**	15.32	286	*e*P	Pn	14 01 37.0	-3.0
OUF				*e*S	Sn	14 04 18.0	-12
FIA1	**FINESS Array S**	15.81	275	Pn	Pn	14 01 42.5	-4.0
FIA1				IAmb	IAmb	14 01 48.5	
	comp=Z,58nm,1.4s						
FIA1	**FINESS Array S**	15.81	275	*e*P	Pn	14 01 43.6	-2.8
FIA0	**FINESS Array S**	15.81	275	P	Pn	14 01 42.5	-3.9
	baz=62,slow=11						
FIA0	**FINESS Array S**	15.81	275	P	Pn	14 01 42.5	-3.9
	baz=62,slow=11						
FINES	**FINESS Array B**	15.81	275	Pn	Pn	14 01 42.6	-3.9
	comp=Z,3.3nm,0.3s,baz=60,slow=12,SNR=103						
FINES				Sn	Sn	14 04 35.5	-6.1
	comp=Z,1.5nm,0.3s,baz=58,slow=23,SNR=4.8						
KIF	**Kilpisjarvi**	16.09	304	P	Pn	14 01 45.3	-4.7
KIF	**Kilpisjarvi**	16.09	304	P	Pn	14 01 45.3	-4.7
ZALV	**Zalesovo Beam**	16.19	119	Pn	Pn	14 01 51.4	0.0
	comp=Z,0.1nm,0.3s,baz=327,slow=16,SNR=2.7						
ZALV				Sn	Sn	14 04 46.8	-3.9
	comp=Z,0.8nm,0.3s,baz=315,slow=21,SNR=4.5						
LPSR	**Galich'ya Gora**	16.26	233	*e*P	Pn	14 01 52.0	-0.3
LPSR				*e*S	Sn	14 04 56.7	+4.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR				smax	smax		
	comp=N,140nm,4.4s						
VRH	**Novokhopyorsk**	16.53	225	*e*P	Pn	14 01 53.9	-1.8
VRH				*e*S	Sn	14 04 56.7	-2.3
VRH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VRH				smax	smax		
	comp=N,280nm,4.4s						
KURK	**Kurchatov**	16.76	137	*c* *e*P	P	14 02 01.7	+0.8
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURK	**Kurchatov**	16.76	137	Pn	Pn	14 01 57.3	-1.4
KURK	**Kurchatov**	16.76	137		Sn	14 04 56.9	-7.8
ZFI	**Zemlya Franca-**	16.78	353	*e*P	Pn	14 01 55.1	-3.6
	comp=Z,60nm,1.9s						
ZFI				*e*S	Sn	14 04 51.7	-13
ZFI2	**Zemlya Franca-**	16.78	353	*e*P	Pn	14 01 54.7	-4.0
	comp=Z,7.2nm,0.7s						
ZFI2				*e*S	Sn	14 04 50.4	-14
KURBB	**Kurchatov Arra**	16.82	137	Pn	Pn	14 01 56.3	-3.1
	comp=Z,0.0nm,0.3s,baz=338,slow=12,SNR=3.9						
KURBB				Sn	Sn	14 04 56.9	-9.2
	comp=Z,0.2nm,0.3s,baz=327,slow=19,SNR=6.4						
KURBB	**Kurchatov Arra**	16.82	137	⇓P	Pn	14 01 59.8	+0.4
	comp=Z,6.0nm,0.7s						
VSR	**Storozhevoye**	17.34	230	*e*P	Pn	14 02 04.9	-1.0
VSR				*e*S	Sn	14 05 13.0	-5.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR				smax	smax		
	comp=E,390nm,3.0s						
VORD	**Divnogorie**	17.51	229	*e*P	Pn	14 02 06.5	-1.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
N2IH	**Innhavet**	17.99	301	*e*P	Pn	14 02 12.8	-1.0
STEI	**Steigen**	18.25	301	*e*P	Pn	14 02 16.2	-0.9
FAUS	**Fauske**	18.35	299	*e*P	Pn	14 02 18.0	-0.2
LOF	**Lofoten**	18.84	302	*e*P	P	14 02 23.2	-0.5
SPA0	**Spitsbergen Ar**	18.92	334	P	P	14 02 22.8	-1.7
	baz=107,slow=12						
SPA0	**Spitsbergen Ar**	18.92	334	P	P	14 02 23.0	-1.5
SPA0	**Spitsbergen Ar**	18.92	334	P	P	14 02 22.8	-1.7
	baz=107,slow=12						
SPA0				*e*P	Pn	14 02 26.1	+0.9
SPITS	**Spitsbergen Ar**	18.92	334	P	P	14 02 22.6	-1.9
	baz=112,slow=15,SNR=29						
SPITS				LR	LR	14 12 07.1	
	comp=Z,74nm,18.4s,baz=155,slow=45						
MOR8	**Moi Rana**	18.97	296	*e*P	P	14 02 24.9	-0.2
NBB17	**Glomfjord B¥r**	18.98	298	*e*P	P	14 02 25.9	+0.6
MNK	**Minsk**	19.10	254	*i* P	P	14 02 25.4	-1.1
	comp=E,4.0nm,1.2s						
MNK				*i* P	P	14 02 25.4	-1.1
	comp=N,30nm,1.1s						
MNK				*i* P	P	14 02 25.4	-1.1
	comp=Z,6.0nm,0.8s						
MNK				*i* PP	PnPn	14 02 38.7	-1.0
MNK				*i* PPP	PPP	14 02 46.6	
MNK				*i* S	Sn	14 05 59.9	-1.1
MNK				*i* SS	SnSn	14 06 16.1	+1.5
MNK				*i* SSS	SSS	14 06 29.1	
MNK				*i* PcP	PcP	14 06 52.2	+1.9
MNK				*i* LQ	LQ	14 08 08.5	
MNK				*i* LR	LR	14 09 35.6	
MNK				*i* LRM	MLR	14 10 58.8	
	comp=N,494nm,21.5s						
MNK				*i* LRM	MLR	14 11 10.5	
	comp=E,22nm,17.2s						
MNK				*i* LRM	MLR	14 11 30.2	
	comp=Z,54nm,12.9s						
MNK				*i* ScS	ScS	14 14 07.2	+0.1
KONS	**Konsvik**	19.39	297	*e*P	Pn	14 02 31.2	+0.3
KBS	**Kingsbay**	20.00	335	P	P	14 02 37.2	+0.9
KBS				pmax	pmax		
	comp=Z,19nm,0.8s						
KBS	**Kingsbay**	20.00	335	P	P	14 02 37.3	+0.9
KBS	**Kingsbay**	20.00	335	P	P	14 02 37.1	+0.9
KBS				IAmb	IAmb	14 02 45.0	
	comp=Z,19nm,0.8s						
KBS	**Kingsbay**	20.00	335	P	P	14 02 37.3	+0.9
NSS	**Namsos**	20.49	292	*e*P	P	14 02 43.2	+1.5
DGZ	**Jazzator, Alta**	20.57	123	*i* P	P	14 02 43.8	+0.9
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.7s						
MAKZ	**Makanchi**	21.26	136	⇑P	P	14 02 53.4	+3.2
	comp=Z,3.0nm,1.1s						
MAKZ				⇓S	S	14 06 39.2	-6.9
	comp=Z,4.0nm,0.8s						
MAKZ	**Makanchi**	21.26	136	P	P	14 02 51.0	+0.9
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAKZ	**Makanchi**	21.26	136	P	P	14 02 51.0	+0.9
MK31	**Makanchi Array**	21.36	136	P	P	14 02 52.4	+1.1
	comp=Z,2.2nm,0.8s,baz=341,slow=8.5,SNR=31						
MK31				⇑S	S	14 06 46.0	-2.3
	comp=Z,3.0nm,0.6s,baz=338,slow=22,SNR=12						
MK31	**Makanchi Array**	21.36	136	*c* *e*P	P	14 02 52.4	+1.1
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	21.36	136	P	P	14 02 52.0	+0.6
MKAR	**Makanchi Array**	21.36	136	P	P	14 02 52.6	+1.3
	comp=Z,1.9nm,0.8s,baz=344,slow=8.5,SNR=12						
MKAR				S	S	14 06 50.4	+2.2
	comp=Z,4.3nm,0.6s,baz=338,slow=23,SNR=18						
MKAR	**Makanchi Array**	21.36	136	*e*P	P	14 02 51.9	+0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	21.39	245	P	P	14 02 52.8	+1.2
	comp=Z,2.3nm,0.3s,baz=35,slow=12,SNR=18						
AKASG				S	S	14 06 49.1	+0.4
	comp=Z,1.3nm,0.6s,baz=24,slow=22,SNR=2.9						
AKBB	**Malin Array Si**	21.39	245	P	P	14 02 50.5	-1.1
AKBB				pmax	pmax		
	comp=Z,33nm,1.5s						
AKBB	**Malin Array Si**	21.39	245	P	P	14 02 50.5	-1.1
AKBB				IAmb	IAmb	14 02 58.1	
	comp=Z,33nm,1.4s						
NC405	**NORSAR Array S**	22.10	284	P	P	14 02 59.9	+0.8
NC405				IAmb	IAmb	14 03 06.0	
	comp=Z,22nm,1.0s						
KK03	**Karatay Array**	22.15	160	P	P	14 02 59.2	-0.6
KK31	**Karatay Array**	22.15	160	P	P	14 02 59.6	-0.2
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	**Karatay Array**	22.15	160	P	P	14 02 59.6	-0.2
KKAR	**Karatay Array**	22.15	160	P	P	14 02 59.5	-0.3
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	**Karatay Array**	22.15	160	P	P	14 02 59.5	-0.3
KK06	**Karatay Array**	22.16	160	P	P	14 02 59.3	-0.6
NC303	**NORSAR Array S**	22.19	284	P	P	14 03 01.2	+1.1
NB201	**NORSAR Array S**	22.31	284	P	P	14 03 02.4	+1.0
NB201				IAmb	IAmb	14 03 27.9	
	comp=Z,18nm,1.1s						
NB2	**NORSAR Subarra**	22.35	284	P	P	14 03 03.3	+1.5
	baz=67,slow=11						
NB2	**NORSAR Subarra**	22.35	284	P	P	14 03 03.3	+1.5
	baz=67,slow=11						
NOA	**NORSAR Array B**	22.35	284	P	P	14 03 02.7	+0.9
	comp=Z,1.5nm,0.4s,baz=59,slow=9.4,SNR=13						
NOA				LR	LR	14 11 05.4	
	comp=Z,31nm,19.4s,baz=345,slow=35						
NC602	**NORSAR Array S**	22.37	283	P	P	14 03 02.8	+0.9
NC602	**NORSAR Array S**	22.37	283	*e*P	P	14 03 03.7	+1.7
NC204	**NORSAR Array S**	22.42	285	P	P	14 03 03.6	+1.0
NC204				IAmb	IAmb	14 03 13.0	
	comp=Z,14nm,0.8s						

NBO00	NORSAR Array S	22.54	284	P	P	14 03 04.4	+0.6
NAO01	NORSAR Array S	22.59	284	P	P	14 03 04.7	+0.4
NAO01				IAmb	IAmb	14 03 30.3	
	comp=Z,26nm,1.4s						
DOMB	Dombas	22.75	288	eP	P	14 03 07.6	+1.6
KIV	Kislovodsk	22.88	215	⇑P	P	14 03 00.7	-6.8
KIV	Kislovodsk	22.88	215	eP	P	14 03 06.6	-0.9
KIV				i		14 03 29.7	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,42nm,16.0s						
KIV	Kislovodsk	22.88	215	P	P	14 03 08.0	+0.5
KBZ	Khabaz	23.04	214	P	P	14 03 11.1	+2.0
	comp=Z,2.3nm,0.4s,baz=306,slow=8.4,SNR=8.6						
AAK	Ala-Archa	23.29	153	P	P	14 03 14.2	+2.3
	comp=Z,0.7nm,0.6s,baz=214,slow=11,SNR=3.3						
AAK				LR	LR	14 11 57.2	
	comp=Z,50nm,18.5s,baz=282,slow=36						
AAK	Ala-Archa	23.29	153	ceP	P	14 03 13.1	+1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZEI	Tsey	23.69	212	eP	P	14 03 22.9	+7.0
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SKAR	Skarslia	23.76	285	eP	P	14 03 17.8	+1.6
KONO	Kongsberg	23.77	282	i P	P	14 03 16.1	-0.2
KONO				pmax	pmax		
	comp=Z,18nm,1.1s						
KONO	Kongsberg	23.77	282	P	P	14 03 17.3	+1.0
MILM	Milestii Mici	24.64	240	⇑P	P	14 03 32.5	+8.1
KWP	Kalwaria Pacla	24.85	251	P	P	14 03 26.4	0.0
KWP				pmax	pmax		
	comp=Z,32nm,1.2s						
KWP	Kalwaria Pacla	24.85	251	P	P	14 03 26.4	0.0
ODD1	Odda	24.88	285	eP	P	14 03 26.6	+0.1
HOMB	Homborsund	25.02	280	i P	P	14 03 32.0	+4.2
SUE	Sulen	25.03	288	eP	P	14 03 27.8	0.0
TIXI	Tiksi	25.12	44	i P	P	14 03 30.9	+2.3
TIXI	Tiksi	25.12	44	P	P	14 03 30.3	+1.7
TIXI	Tiksi	25.12	44	eP	P	14 03 30.9	+2.3
BER	Bergen	25.16	286	eP	P	14 03 30.2	+1.3
BUR08	Bucovina Ar. S	25.43	245	P	P	14 03 34.4	+2.7
BUR08				IAmb	IAmb	14 03 48.7	
	comp=Z,9.0nm,0.7s						
BURAR	Bucovina Array	25.44	245	⇑P	P	14 03 35.0	+3.2
BURAR	Bucovina Array	25.44	245	⇑P	P	14 03 35.0	+3.2
SNART	Snartemo	25.54	281	i P	P	14 03 43.4	+11
KOLS	Kolonicke sedl	25.57	251	eP	P	14 03 36.1	+3.2
KOLS	Kolonicke sedl	25.57	251	eP	P	14 03 36.1	+3.2
OJC	Ojcow	25.61	256	P	P	14 03 35.2	+2.0
OJC				pmax	pmax		
	comp=Z,16nm,1.1s						
OJC	Ojcow	25.61	256	P	P	14 03 35.2	+2.0
BIZ	Bicaz	25.65	243	⇑P	P	14 03 38.4	+4.8
WMQ	Urumqi	25.73	130	eP	P	14 03 36.4	+1.9
WMQ				pP	sP	14 03 41.3	+2.5
WMQ				sP	pP	14 03 43.8	+6.2
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.1s						
TESR	Tescani	25.80	242	⇑P	P	14 03 36.8	+1.8
KMY	Karmoy	25.85	284	eP	P	14 03 36.5	+1.2
CRVS	Cervenica-Dubn	25.93	252	eP	P	14 03 40.5	+4.3
CRVS	Cervenica-Dubn	25.93	252	eP	P	14 03 40.5	+4.3
BOD	Bodaibo	25.95	80	eP	P	14 03 36.6	+0.4
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ARCR	ARCALIA	26.22	246	⇑P	P	14 03 43.1	+4.3
VRI	Vrincioaia	26.30	241	⇑P	P	14 03 45.3	+5.8
VRI	Vrincioaia	26.30	241	⇑P	P	14 03 45.3	+5.8
PLOR	Plostina	26.35	241	⇑P	P	14 03 46.4	+6.4
PLOR	Plostina	26.35	241	⇑P	P	14 03 46.4	+6.4
CFR	Carcaliu	26.36	238	⇑P	P	14 03 43.4	+3.4
CFR	Carcaliu	26.36	238	⇑P	P	14 03 43.4	+3.4
LANS	Liptovska Anna	26.57	254	eP	P	14 03 45.0	+3.1
LANS	Liptovska Anna	26.57	254	eP	P	14 03 45.0	+3.1
KSH	Kashi	26.59	153	P	P	14 03 47.1	+4.8
KSH				pP	sP	14 03 51.8	+5.1
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,160nm,4.0s						
GYA2	ALIBECK ARRAY	26.61	184	P	P	14 03 42.8	+0.4
GYA2				IAmb	IAmb	14 03 46.2	
	comp=Z,5.9nm,0.9s						
GEYT	Alibeck	26.61	184	P	P	14 03 45.4	+2.9
	comp=Z,2.0nm,0.6s,baz=332,slow=12,SNR=7.0						
MORC	Moravsky Berou	26.90	258	⇑P	P	14 03 51.1	+6.2
MORC	Moravsky Berou	26.90	258	⇑P	P	14 03 51.1	+6.2
DRGR		27.11	247	⇑P	P	14 03 51.1	+4.2
DRGR		27.11	247	⇑P	P	14 03 51.1	+4.2
VOIR		27.31	243	⇑P	P	14 03 54.8	+6.2
VOIR		27.31	243	⇑P	P	14 03 54.8	+6.2
VYHS	Vyhne	27.34	254	eP	P	14 03 52.4	+3.5
VYHS	Vyhne	27.34	254	eP	P	14 03 52.4	+3.5
VRAC	Vranov	27.66	258	LR	LR	14 16 51.9	
	comp=Z,62nm,18.0s,baz=54,slow=41						
GZR	Gura Zlata	28.23	246	⇑P	P	14 03 54.0	-2.9
GERES	GERESS Array B	29.24	260	LR	LR	14 15 40.6	
	comp=Z,46nm,18.4s,baz=331,slow=36						
BRTR	Keskin Array B	29.32	225	P	P	14 04 09.8	+3.1
	comp=Z,1.2nm,0.7s,baz=32,slow=5.4,SNR=5.6						
BRTR	Keskin Array B	29.32	225	eP	P	14 04 08.2	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DIVS	Divibare	30.41	248	P	P	14 04 17.6	+1.3
DIVS				IAmb	IAmb	14 04 19.7	
	comp=Z,11nm,1.5s						
EKA	Eskdalemuir Ar	31.84	284	P	P	14 04 31.3	+2.7
	comp=Z,0.5nm,0.4s,baz=46,slow=8.4,SNR=3.8						
SEY	Seymchan	37.36	49	P	P	14 05 16.9	+0.7
	comp=Z,0.9nm,0.6s,baz=38,slow=19,SNR=3.1						
SEY	Seymchan	37.36	49	P	P	14 05 17.0	+0.7
HHC	Hu-ho-hao-te	37.46	104	eP	P	14 05 19.2	+1.7
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,6.6s						
BILL	Bilibino	37.75	36	eP	P	14 05 23.8	+4.3
LZH	Lanzhou	38.39	116	eP	P	14 05 25.5	0.0
LZH				pP	sP	14 05 30.2	+0.3
LZH				sP	pP	14 05 32.6	+4.0
LZH				ePP	PnPn	14 06 56.7	+1.9
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,58nm,5.4s						
LZH				LR	LR		
	comp=N,170nm,13.2s						
LZH				LR	LR		
	comp=E,170nm,13.5s						
LZH				LR	LR		
	comp=Z,260nm,16.4s						
A21K	Barrow	42.12	17	P	P	14 05 56.9	+1.2
USA0B	Ussuriysk Arra	43.53	82	P	P	14 06 08.1	+0.7
USA0B				pmax	pmax		
	comp=Z,9.0nm,1.5s						
USA0B	Ussuriysk Arra	43.53	82	P	P	14 06 08.1	+0.7
USA0B				IAmb	IAmb	14 06 08.6	
	comp=Z,9.1nm,1.4s						
USRK	Ussuriysk Ar.	43.53	82	P	P	14 06 08.4	+1.0
	comp=Z,1.2nm,0.5s,baz=315,slow=6.5,SNR=12						
ESDC	Sonseca Array	44.17	268	P	P	14 06 14.8	+2.1
	comp=Z,0.5nm,0.6s,baz=28,slow=8.6,SNR=3.2						
MSHR	Mys Shultsa	44.48	84	ceP	P	14 06 15.8	+0.8
MSHR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TOLK	Toolik Lake Re	45.48	15	P	P	14 06 24.1	+1.3
C36M	Paulatuk	46.42	2	P	P	14 06 30.7	+0.6
C36M				IAmb	IAmb	14 06 50.3	
	comp=Z,3.5nm,1.1s						
INK	Inuvik	47.14	7	P	P	14 06 36.6	+0.9
	comp=Z,1.0nm,0.5s,baz=28,slow=4.6,SNR=14						
INK	Inuvik	47.14	7	P	P	14 06 36.2	+0.5
INK				IAmb	IAmb	14 06 46.4	
	comp=Z,8.0nm,1.5s						
KSRS	Korea Array	47.30	91	P	P	14 06 39.0	+1.6
	comp=Z,1.0nm,0.8s,baz=323,slow=8.8,SNR=4.8						
ILAR	Eielson Array	49.51	15	P	P	14 06 56.6	+2.5
	comp=Z,2.5nm,1.2s,baz=349,slow=7.5,SNR=8.5						
ILAR				LR	LR	14 32 23.3	
	comp=Z,43nm,18.2s,baz=262,slow=42						
CCB	Clear Creek Bu	49.53	16	P	P	14 06 56.0	+1.8
BPAW	Bear Paw Mtn.	49.66	18	P	P	14 06 56.4	+1.1
BPAW				IAmb	IAmb	14 07 08.9	
	comp=Z,4.2nm,1.3s						
KTH	Kantishna Hill	50.19	18	P	P	14 07 01.0	+1.6
KTH				IAmb	IAmb	14 07 23.8	
	comp=Z,4.0nm,1.2s						
TRF	Thorofare Moun	50.38	17	P	P	14 07 02.6	+1.7
TRF				IAmb	IAmb	14 07 26.1	
	comp=Z,5.3nm,1.2s						
PPLA	Purkeypile	50.65	19	P	P	14 07 04.1	+1.1
DAWY	Dawson	50.94	11	P	P	14 07 07.7	+2.7
DAWY				IAmb	IAmb	14 07 35.3	
	comp=Z,7.8nm,1.5s						
SKT	Skwentna	51.62	19	P	P	14 07 10.9	+0.8
SKT				IAmb	IAmb	14 07 17.8	
	comp=Z,10nm,1.4s						
SUA	Susitna One	52.23	18	P	P	14 07 15.5	+0.8
CMAR	Chiang Mai Arr	52.72	132	P	P	14 07 19.4	+0.7
	comp=Z,0.5nm,0.7s,baz=335,slow=6.2,SNR=5.0						
YKA	Yellowknife Ar	53.30	357	P	P	14 07 23.3	+0.9
	comp=Z,0.9nm,0.5s,baz=12,slow=8.3,SNR=25						
YAH	Yahtse	54.37	13	P	P	14 07 32.6	+2.1
ULM	Lac du Bonnet	64.15	343	P	P	14 08 38.4	+0.3
	comp=Z,1.7nm,0.7s,baz=338,slow=5.3,SNR=3.1						
ULM	Lac du Bonnet	64.15	343	P	P	14 08 39.1	+1.0
ULM				IAmb	IAmb	14 08 41.7	
	comp=Z,2.2nm,0.9s						
TORD	Torodi Ar. Bea	65.01	247	P	P	14 08 45.7	+1.6
	comp=Z,0.4nm,0.4s,baz=354,slow=8.7,SNR=4.2						
PDAR	Pinedale Array	72.82	352	P	P	14 09 34.0	+1.2
	comp=Z,0.2nm,0.5s,baz=70,slow=2.4,SNR=3.8						
DBIC	Dimbokro	73.53	250	P	P	14 09 38.4	+1.5
	comp=Z,1.3nm,0.5s,baz=44,slow=6.2,SNR=4.6						

IDC ***04*** *14:30:04.9±5.1, 13°.36S×167°.05E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/32, mbtmp4.0/5, Error ellipse: s-maj=129.1km s-min=43.0km az=114.0*

NEIC ***04*** *14:30:23.9±1.7, 13°.6S±0°.1×167°.3E±0°.2, h194km±9km, mb4.3/12, Error ellipse: s-maj=27.1km s-min=17.1km az=92.0*

ISC 04 14:30:25.0±1.0**, 13°.8S**±0°.1×**167°.4E**±0°.2**, h200**km**, n18, σ1s27**/17**, mb4.0**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.66	185	Pn	Pn	14 31 00.4	+0.2
BKZ	Black Stump Fm	26.54	164	P	P	14 35 44.6	+0.3
BKZ				IAmb	IAmb	14 36 05.9	
	comp=Z,13nm,1.3s						
STKA	Stephens Creek	29.68	228	P	P	14 36 13.5	+1.2
	comp=Z,3.3nm,0.4s,baz=52,slow=8.4,SNR=3.7						
STKA	Stephens Creek	29.68	228	P	P	14 36 13.0	+0.7
WR0	Warramunga Arr	31.97	254	P	P	14 36 31.4	-1.1
WR0				IAmb	IAmb	14 36 47.8	
	comp=Z,3.8nm,1.1s						
WHZ	Wether Hill Ro	32.01	179	P	P	14 36 31.0	-1.5
WHZ				IAmb	IAmb	14 36 48.4	
	comp=Z,38nm,1.4s						
WB0	Warramunga Arr	32.09	255	P	P	14 36 32.5	-1.1
WB0				IAmb	IAmb	14 36 42.1	
	comp=Z,5.9nm,1.4s						
WB2	Warramunga Arr	32.15	254	P	P	14 36 32.5	-1.6
WB2				IAmb	IAmb	14 36 36.0	
	comp=Z,7.1nm,1.4s						
WRA	Warramunga Arr	32.16	254	P	P	14 36 33.0	-1.2
	comp=Z,0.8nm,0.7s,baz=85,slow=8.6,SNR=11						
AS31	Alice Springs	33.10	248	P	P	14 36 41.1	-1.3
ASAR	Alice Springs	33.11	248	P	P	14 36 41.5	-1.0
	comp=Z,1.1nm,0.4s,baz=75,slow=9.7,SNR=55						
BBOO	Buckleboo	34.24	231	P	P	14 36 52.2	+0.2
BBOO				IAmb	IAmb	14 37 00.2	
	comp=Z,20nm,1.3s						
JGF	Kuroka	56.74	331	P	P	14 39 46.6	-1.5
CMAR	Chiang Mai Arr	74.65	294	P	P	14 41 44.5	+1.5
	comp=Z,0.4nm,0.7s,baz=108,slow=4.1,SNR=5.3						
CHGN	Chignik	75.45	19	P	P	14 41 46.0	-0.7
QSPA	South Pole Qui	76.24	180	P	P	14 41 52.2	+0.9
PBA	Port Blair	78.18	285	P	P	14 42 02.6	-0.2
MKAR	Makanchi Array	96.58	316	P	P	14 43 34.0	+1.8
	comp=Z,0.3nm,0.6s,baz=101,slow=6.3,SNR=3.8						

IDC ***04*** *14:35:27.9±0.4, 56°.74S×150°.57W, h0km, mb4.9/11, mb1 5.0/11, mb1mx4.8/23, mbtmp4.8/11, MS4.2/14, Ms1 4.2/14, ms1mx4.2/19, Error ellipse: s-maj=22.0km s-min=15.1km az=14.0*

MOS ***04*** *14:35:28.5±1.1, 56°.90S×150°.47W, h10km, mb5.3/21, Error ellipse: s-maj=19.0km s-min=14.6km az=104.2*

NEIC ***04*** *14:35:29.2±1.1, 56°.9S±0°.1×150°.58W±0°.07, h10km±1km, mb5.3/63, Error ellipse: s-maj=19.3km s-min=5.0km az=347.0*

BJI ***04*** *14:35:31.5±0.0, 56°.90S×150°.60W, h30km, Ms5.2/1, Ms7 4.8/1*

GCMT ***04*** *14:35:37.2±0.2, 56°.97S±0°.01×150°.84W±0°.03, h12km, MW5.1/98, Moment Tensor Solution. s68,c95; s98,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.17±.12; $M_{\theta\theta}$3.42±.12; $M_{\phi\phi}$1.75±.11; $M_{r\theta}$1.80±.37; $M_{\theta\phi}$-3.38±.10; $M_{\phi r}$2.78±.33; Best double couple: $M_0$6.52200×10^{16} NP1:ϕ_s283.00000°,δ50.00000°,λ-128.00000°. NP2: ϕ_s154.00000°,δ53.00000°,λ-53.00000°. Principal axes: T 6.0760, Plg2.0000°, Azm219.0000°; N 0.8930, Plg28.0000°, Azm310.0000°; P -6.9690, Plg61.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 14:35:29.4±0.2**, 56°.81S**±0°.07×**150°.52W**±0°.06**, h10**km**, n346, σ1s05**/331**, mb5.2**/53**, MS4.3**/19**, 1C-1D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.39	201	P	P	14 41 06.6	+1.3
	23nm,1.2s,baz=55,slow=9.6,SNR=13						
VNDA				LR	LR	14 48 59.3	
	comp=Z,724nm,18.6s,baz=80,slow=31						
VNDA	Vanda	26.39	201	P	P	14 41 05.0	-0.3
RPZ	Rata Peaks	27.43	282	LR	LR	14 50 01.3	
	comp=Z,435nm,19.3s,baz=130,slow=32						
URZ	Urewera	28.27	297	LR	LR	14 50 39.9	
	comp=Z,503nm,19.3s,baz=210,slow=32						
OUZ	Omahuta	32.40	296	P	P	14 42 00.2	+1.2
QSPA	South Pole Qui	33.33	180	P	P	14 42 08.4	+1.2
	37nm,1.1s,baz=67,slow=3.4,SNR=56						
QSPA				PcP	PcP	14 44 48.8	+0.3
	5.5nm,0.9s,baz=39,slow=1.2,SNR=4.4						
QSPA	South Pole Qui	33.33	180	P	P	14 42 07.4	+0.2
QSPA					PcP	14 44 49.0	+0.5
TBI	Tubuai	33.43	2	eS	S	14 47 28.0	-1.3
	206nm,26.8s						
TBI				eLQ	LQ	14 49 27.8	
	444nm,33.8s						
TBI				eLR	LR	14 50 49.9	
	comp=Z,1μm,29.2s,baz=190						
TBI	Tubuai	33.43	2	eT	T	15 16 55.4	
	97nm,0.4s						
RKT	Rikitea	35.52	25	eLQ	LQ	14 50 21.2	
	279nm,32.0s						
RKT				eLR	LR	14 51 50.3	
	comp=Z,2μm,29.0s						
MEH	Mehetia	38.91	4	eT	T	15 23 47.6	
	9.6nm,0.2s						
TVO	Taravao	38.98	2	eT	T	15 23 51.3	
	2.7nm,0.4s						
PAE	Paea	39.09	1	eT	T	15 23 59.7	
	2.4nm,0.4s						
PPT2	Papeete2	39.16	1	eS	S	14 48 55.0	-2.1
	264nm,25.2s						
PPT2				eLQ	LQ	14 51 52.0	
	402nm,24.5s						
PPT2				eLR	LR	14 53 27.7	
	comp=Z,1μm,25.5s,baz=186						
PPT2	Papeete2	39.16	1	eT	T	15 24 03.9	
	4.4nm,0.4s						
PPT	Papeete	39.18	1	LR	LR	14 55 13.9	
	comp=Z,263nm,18.9s,baz=175,slow=30						
BELA	Belgrano 2	40.05	163	P	P	14 43 03.3	-0.7
VAH	Vaihoa	41.55	4	eT	T	15 27 04.0	
	139nm,0.4s						
GO09	Cerro Castillo	43.90	118	P	P	14 43 36.4	+0.7
GO09				IAmb	IAmb	14 43 38.1	
	comp=Z,91nm,1.3s						
MSVF	Nonsavu	45.56	316	LR	LR	14 59 06.5	
	comp=Z,71nm,21.3s,baz=251,slow=31						
MSVF	Nonsavu	45.56	316	i P	P	14 43 49.6	+0.2
MSVF				pmax	pmax		
	comp=Z,13nm,1.0s						
TOO	Toolangi	45.67	267	P	P	14 43 52.0	+2.0
	baz=46,SNR=7.2						
TOO	Toolangi	45.67	267	P	P	14 43 51.3	+1.2
TOO				pmax	pmax		
	comp=Z,27nm,1.0s						
TOO	Toolangi	45.67	267	P	P	14 43 51.3	+1.2
TOO				IAmb	IAmb	14 43 54.6	
	comp=Z,27nm,1.0s						
DZM	Mont Dzumac	46.77	300	eS	S	14 50 44.3	-4.6
	comp=Z,68nm,26.8s						
DZM				eLR	LR	14 56 59.2	
	comp=Z,224nm,28.4s						
VNA3	Neumayer Olymp	49.28	164	P	P	14 44 16.8	-0.9
SNAA	Sanae	49.82	167	P	P	14 44 21.0	-0.8
SNAA	Sanae	49.82	167	i P	P	14 44 21.0	-0.8
SNAA				pmax	pmax		
	comp=Z,19nm,1.1s						
SNAA	Sanae	49.82	167	P	P	14 44 20.3	-1.4
SNAA				IAmb	IAmb	14 44 22.0	
	comp=Z,30nm,1.2s						
LL01	San Ignacio de	49.84	108	P	P	14 44 22.9	+0.6
LL01				IAmb	IAmb	14 44 24.1	
	comp=Z,19nm,0.8s						
VNA2	Neumayer--Watz	49.90	165	P	P	14 44 21.6	-0.7
	baz=199,slow=8.3						
VNA1	Neumayer--Stat	50.02	165	P	P	14 44 22.7	-0.6
EFI	East Falkland	50.30	126	P	P	14 44 25.5	0.0
EFI				pmax	pmax		
	comp=Z,108nm,1.4s						
EFI	East Falkland	50.30	126	P	P	14 44 25.5	0.0
EIDS	Eidsvold	51.93	282	P	P	14 44 38.4	+0.2
EIDS				IAmb	IAmb	14 44 41.7	
	comp=Z,28nm,1.0s						
PLCA	Paso Flores	52.00	108	P	P	14 44 40.1	+1.5
	comp=Z,31nm,1.0s,baz=225,slow=7.1,SNR=48						
PLCA				LR	LR	15 01 32.4	
	comp=Z,232nm,18.7s,baz=174,slow=30						
PLCA	Paso Flores	52.00	108	eP	P	14 44 39.9	+1.3
PLCA				pmax	pmax		
	comp=Z,31nm,1.0s						
PLCA	Paso Flores	52.00	108	P	P	14 44 39.6	+1.0
PLCA				IAmb	IAmb	14 44 41.0	
	comp=Z,47nm,1.1s						
PLCA	Paso Flores	52.00	108	eP	P	14 44 39.6	+1.0
STKA	Stephens Creek	52.04	268	P	P	14 44 40.5	+1.6
	baz=52,SNR=18						
STKA	Stephens Creek	52.04	268	P	P	14 44 40.3	+1.4
	comp=Z,17nm,0.8s,baz=131,slow=7.9,SNR=21						
STKA				LR	LR	15 03 59.0	
	comp=Z,301nm,19.0s,baz=149,slow=33						
STKA	Stephens Creek	52.04	268	eP	P	14 44 39.7	+0.7
STKA				pmax	pmax		
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	52.04	268	P	P	14 44 39.8	+0.9
NVL	N'lazarevskaya	52.10	173	eP	P	14 44 37.7	-1.1
NVL				pmax	pmax		
	comp=Z,24nm,1.2s						
SANVU	Saraoutou	52.16	305	P	P	14 44 39.7	-0.2
RMQ	Roma	52.30	279	P	P	14 44 43.2	+2.3
	baz=52,SNR=5.7						
HTT	Hallett	52.34	265	P	P	14 44 42.8	+1.6
	baz=52,SNR=5.5						
H03S2	Juan Fernandez	52.59	96	T	T	15 41 39.6	
	baz=219,slow=74,SNR=122						
H03S1	Juan Fernandez	52.60	96	T	T	15 41 40.9	
	baz=219,slow=74,SNR=111						
H03S3	Juan Fernandez	52.61	96	T	T	15 41 40.7	
	baz=219,slow=74,SNR=106						
LC01	Cunco	52.64	106	P	P	14 44 43.6	+0.3
LC01				IAmb	IAmb	14 44 45.1	
	comp=Z,61nm,0.9s						
H03N3	Juan Fernandez	52.88	96	T	T	15 41 58.3	
	baz=222,slow=72,SNR=319						
H03N2	Juan Fernandez	52.89	96	T	T	15 41 58.1	
	baz=222,slow=72,SNR=676						
H03N1	Juan Fernandez	52.90	96	T	T	15 41 57.1	
	baz=222,slow=72,SNR=230						
MAW	Mawson	53.45	195	P	P	14 44 49.8	+1.0
	comp=Z,6.5nm,0.8s,baz=203,slow=14,SNR=4.4						
MAW				LR	LR	15 04 33.7	
	comp=Z,740nm,21.3s,baz=162,slow=33						
MAW	Mawson	53.45	195	P	P	14 44 49.4	+0.5
BI03	Tigo	53.55	103	P	P	14 44 50.6	+0.6
BI03				IAmb	IAmb	14 44 52.0	
	comp=Z,27nm,1.1s						
SYO	Syowa Base	54.27	184	⇑epP	P	14 44 54.4	-0.4
SYO	Syowa Base	54.27	184	⇓esP	sP	14 44 56.9	-0.9
BO02	Sierra Bellavi	56.29	103	P	P	14 45 10.2	+0.2
MT02	Curacav	57.26	102	P	P	14 45 16.6	-0.3
MT05	Renca	57.38	102	P	P	14 45 17.9	+0.2
VA03	San Esteban	57.96	102	P	P	14 45 21.9	0.0
VA03				IAmb	IAmb	14 45 23.1	
	comp=Z,33nm,0.9s						
CTA	Charters Tower	58.80	281	P	P	14 45 29.3	+1.5
	comp=Z,12nm,1.0s,baz=149,slow=11,SNR=5.7						
CTA				LR	LR	15 06 58.3	
	comp=Z,211nm,20.3s,baz=175,slow=32						
CO03	El Pedregal	59.37	100	P	P	14 45 31.4	-0.3
CO03				IAmb	IAmb	14 45 32.9	
	comp=Z,39nm,1.1s						
GO04	Tololo Observa	59.82	100	P	P	14 45 34.4	-0.6
GO04				IAmb	IAmb	14 45 35.8	
	comp=Z,34nm,0.9s						
ZON	Zonda	59.90	102	P	P	14 45 35.2	-0.1
ZON				pmax	pmax		
	comp=Z,17nm,1.0s						
ZON	Zonda	59.90	102	P	P	14 45 35.2	-0.1
FORT	Forrest	60.27	259	P	P	14 45 37.4	-0.4
CO01	Juntas del Tor	60.36	100	P	P	14 45 38.8	+0.1
HNR	Honiara	60.78	301	P	P	14 45 41.7	+0.4
HNR				pmax	pmax		
	comp=Z,138nm,1.3s						
HNR	Honiara	60.78	301	P	P	14 45 41.7	+0.4
LCO	Las Campanas	60.78	99	P	P	14 45 41.2	-0.4
LCO				pmax	pmax		
	comp=Z,20nm,1.0s						
LCO	Las Campanas	60.78	99	P	P	14 45 41.2	-0.4
LCO				IAmb	IAmb	14 45 42.7	
	comp=Z,20nm,1.0s						
AC05	El Transito	61.15	99	P	P	14 45 43.9	0.0
AC04	Llanos de Chal	61.21	98	P	P	14 45 44.2	0.0
AC04				IAmb	IAmb	14 45 45.3	
	comp=Z,23nm,0.8s						
MTSU	Mount Surprise	61.44	281	P	P	14 45 47.1	+1.2
	baz=62,SNR=6.1						
QIS	Mount Isa	62.04	275	P	P	14 45 50.3	+0.4
	baz=62,SNR=10						
GO03	Copiap	62.15	98	P	P	14 45 50.7	+0.1
GO03				IAmb	IAmb	14 45 51.8	
	comp=Z,31nm,1.0s						
AS31	Alice Springs	62.68	268	P	P	14 45 53.2	-1.0
ASAR	Alice Springs	62.68	268	P	P	14 45 53.1	-1.0
	comp=Z,18nm,0.9s,baz=138,slow=6.7,SNR=127						
ASAR				LR	LR	15 08 52.8	
	comp=Z,189nm,21.6s,baz=148,slow=32						
AC01	Pan de Azucar	63.09	97	P	P	14 45 56.5	-0.4
AC01				IAmb	IAmb	14 45 57.9	
	comp=Z,23nm,1.1s						
AC02	Maricunga	63.35	99	P	P	14 45 58.6	-0.5
AC02				IAmb	IAmb	14 46 01.1	
	comp=Z,32nm,0.9s						
H01W1	Cape Leeuwin H	64.30	245	T	T	15 56 11.3	
	baz=142,slow=75,SNR=21						
H01W2	Cape Leeuwin H	64.31	245	T	T	15 56 10.2	
	baz=142,slow=75,SNR=25						
H01W3	Cape Leeuwin H	64.32	245	T	T	15 56 12.6	
	baz=142,slow=75,SNR=22						
PB14	IPOC Station P	64.41	96	P	P	14 46 05.6	-0.3
PB14				IAmb	IAmb	14 46 07.0	
	comp=Z,18nm,1.1s						
GO02	Mina Guanaco	64.42	97	P	P	14 46 06.1	+0.1
GO02				IAmb	IAmb	14 46 07.2	
	comp=Z,33nm,0.9s						
WRKA	Warakurna	64.66	263	P	P	14 46 07.0	-0.3
	baz=65,SNR=17						
PB10	IPOC Station P	65.21	95	P	P	14 46 10.8	+0.1
PB10				IAmb	IAmb	14 46 12.1	
	comp=Z,23nm,1.1s						
WR0	Warramunga Arr	65.30	271	P	P	14 46 10.9	-0.5
WR0				IAmb	IAmb	14 46 14.0	

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      comp=Z,16nm,1.1s
WB2   Warramunga Arr   65.42 271   P       P        14 46 11.6  -0.6
WRA   Warramunga Arr   65.43 271   P       P        14 46 11.6  -0.7
      comp=Z,7.0nm,0.9s,baz=148,slow=5.5,SNR=19
WRA   Warramunga Arr   65.43 271  eP       P        14 46 11.8  -0.4
WRA                                pmax    pmax
      comp=Z,7.0nm,0.9s
WRAB  Tennant Creek    65.43 271  i P      P        14 46 11.6  -0.6
WRAB                               pmax    pmax
      comp=Z,15nm,1.2s
COEN  Coen             65.50 282   P       P        14 46 12.6  -0.1
COEN                               IAmb    IAmb     14 46 16.4
      comp=Z,19nm,1.1s
WB0   Warramunga Arr   65.54 271   P       P        14 46 12.1  -0.8
PB04  IPOC Station P   66.38  95   P       P        14 46 18.5   0.0
LVC   Limon Verde      66.83  96   P       P        14 46 22.3  +0.6
LVC                                pmax    pmax
      comp=Z,43nm,0.8s
LVC   Limon Verde      66.83  96   P       P        14 46 22.3  +0.6
LVC   Limon Verde      66.83  96  eP       P        14 46 22.8  +1.1
PB07  IPOC Station P   67.01  95   P       P        14 46 23.1  +0.5
PB09  IPOC Station P   67.31  95   P       P        14 46 25.4  +0.9
PB09                               IAmb    IAmb     14 46 26.3
      comp=Z,39nm,1.2s
PLTB  Pedras Altas     67.60 114  eP       P        14 46 25.7  -0.3
ITQB  Itaqui           67.74 110  eP       P        14 46 26.7  -0.1
PB01  IPOC Station P   67.78  95   P       P        14 46 27.4  +0.1
PB01                               IAmb    IAmb     14 46 29.2
      comp=Z,21nm,0.8s
TA01  Diego Aracena    67.78  94   P       P        14 46 27.7  +0.4
MORW  Morawa           67.99 250   P       P        14 46 30.7  +2.3
      baz=68,SNR=3.6
MORW  Morawa           67.99 250   P       P        14 46 28.3  -0.2
MORW                               IAmb    IAmb     14 46 31.6
      comp=Z,17nm,0.9s
PSGCX Pisagua          68.59  93   P       P        14 46 33.0  +0.5
PB08  IPOC Station P   68.69  94   P       P        14 46 33.1  -0.3
PB08                               IAmb    IAmb     14 46 34.7
      comp=Z,31nm,1.5s
CPSB  Cacapava Do Su   68.78 113  eP       P        14 46 32.9  -0.4
GO01  Chusmiza         69.05  94   P       P        14 46 36.1  +0.4
GO01                               IAmb    IAmb     14 46 41.8
      comp=Z,22nm,1.2s
MNMC  Minye Minye      69.26  93   P       P        14 46 37.5  +0.7
PB16  IPOC Station P   69.95  93   P       P        14 46 42.2  +0.7
PB16                               IAmb    IAmb     14 46 43.9
      comp=Z,32nm,1.0s
CPUP  Villa Florida    70.06 108   P       P        14 46 41.6  +0.3
      comp=Z,32nm,0.9s,baz=231,slow=5.7,SNR=54
CPUP                               LR      LR       15 13 28.3
      comp=Z,163nm,18.1s,baz=220,slow=32
CPUP  Villa Florida    70.06 108   P       P        14 46 41.4   0.0
CPUP  Villa Florida    70.06 108  eP       P        14 46 41.8  +0.5
CNLB  Canela           70.96 114  eP       P        14 46 47.7  +0.8
NNA   Nana             71.12  83  i P      P        14 46 48.1  +0.1
NNA                                pmax    pmax
      comp=Z,58nm,1.1s
NNA   Nana             71.12  83   P       P        14 46 47.7  -0.3
NNA                                IAmb    IAmb     14 46 50.0
      comp=Z,41nm,1.1s
FITZ  Fitzroy Crossi   71.70 265   P       P        14 46 50.6  -0.8
FITZ                               IAmb    IAmb     14 46 54.6
      comp=Z,29nm,1.4s
ITAB  Concordia        72.02 112  eP       P        14 46 53.5  +0.3
PSA00 Pilbara Seismi   72.03 258   P       P        14 46 53.0  -0.4
PSA00                              IAmb    IAmb     14 46 56.1
      comp=Z,33nm,0.9s
TRCB  Terra Rica       75.40 109  eP       P        14 47 12.5  -0.7
AQDB  Aquidauana       75.69 105  eP       P        14 47 13.8  -1.0
FRTB  Fartura          76.53 112  eP       P        14 47 20.4  +0.7
CZSB  Cruzeiro do Su   76.90  84  eP       P        14 47 22.4  +0.7
PCMB  Pacaembu         77.09 110  eP       P        14 47 23.0  +0.3
PTLB  Pontes e Lacer   77.98 100  eP       P        14 47 28.1  +0.4
VAO   Valinhos         78.13 114  eP       P        14 47 29.1  +0.5
PARB  Paraibuna        78.52 115  eP       P        14 47 31.3  +0.5
ETMB  Extrema          78.74  91  eP       P        14 47 32.0   0.0
ITRB  Iturama          79.13 109  eP       P        14 47 34.4  +0.3
SOEI  Soe              79.29 269   P       P        14 47 36.9  +1.7
      comp=Z,53nm,1.0s
VILB  Vilhena          79.45  97  eP       P        14 47 36.6  +0.6
OTAV  Otavalo          80.45  75   P       P        14 47 41.6  -0.2
OTAV                               pmax    pmax
      comp=Z,33nm,1.4s
OTAV  Otavalo          80.45  75   P       P        14 47 41.6  -0.2
OTAV                               IAmb    IAmb     14 47 46.4
      comp=Z,32nm,1.4s
OTAV  Otavalo          80.45  75  eP       P        14 47 43.9  +2.1
VAS01 Vassouras-RJ     80.49 116  eP       P        14 47 41.7  +0.2
BSCB  Bom Sucesso      80.91 114  eP       P        14 47 43.7  -0.1
SAML  Samuel           81.12  93   P       P        14 47 44.7  -0.2
SAML                               pmax    pmax
      comp=Z,23nm,0.9s
SAML  Samuel           81.12  93   P       P        14 47 44.7  -0.2
SAML                               IAmb    IAmb     14 47 46.3
      comp=Z,23nm,0.9s
SAML  Samuel           81.12  93  eP       P        14 47 45.0  +0.1
DUB01 Friburgo-RJ      81.18 117  eP       P        14 47 45.4  +0.2
IPMB  Ipameri, GO      81.68 110  eP       P        14 47 47.5  -0.4
ARAG  Araguaiana, MT   81.69 106  eP       P        14 47 48.2  +0.3
ALF01 Guarapari-ES     83.23 117  eP       P        14 47 55.4  -0.4
BDFB  Brasilia         83.74 109   P       P        14 47 58.3  -0.4
      comp=Z,9.1nm,0.8s,baz=198,slow=2.9,SNR=14
BDFB                               LR      LR       15 21 56.3
      comp=Z,206nm,18.0s,baz=135,slow=33
RIB01 Linhares ES      84.50 117  eP       P        14 48 01.8  -0.6
SJMB  Sao Joao De Ma   84.63 116  eP       P        14 48 02.0  -1.1
SANI  Sanana           84.72 274   P       P        14 48 04.0  +0.5
      comp=Z,33nm,1.3s
SNDB  Serra Nova Dou   85.07 104  eP       P        14 48 05.4  +0.1
JTS   Las Juntas de    85.66  64  i P      P        14 48 08.9  +0.7
JTS                                pmax    pmax
      comp=Z,28nm,1.2s
NAN01 Guarapari, ES    85.88 116  eP       P        14 48 08.9  -0.5
JANB  Januaria         86.14 112  eP       P        14 48 10.2  -0.5
ROSC  El Rosal         86.52  76   LR      LR       15 18 58.4
      comp=Z,139nm,20.0s,baz=129,slow=30
PEXB  Peixe            86.55 107  eP       P        14 48 12.9  +0.2
NPGB  Novo Progresso   86.98  98  eP       P        14 48 14.7  -0.1
MACA  Manacapuru-AM    87.29  92  eP       P        14 48 16.7  +0.5
PWJI  Pagerwojo        87.53 259   P       P        14 48 18.5  +1.1
      comp=Z,56nm,1.2s
SDBA  SAO DESIDERIO    88.07 110  eP       P        14 48 19.5  -0.5
ITTB  Itaituba         89.00  96  eP       P        14 48 24.8  +0.4
SMTB  Santa Maria do   89.64 106  eP       P        14 48 27.8  +0.4
GDU01 Guandu, BA       89.67 115  eP       P        14 48 27.0  -0.5
MPSI  Mapaga           90.05 271   P       P        14 48 29.0  -0.3
PRPB  Parauapebas      90.71 102  eP       P        14 48 32.6  +0.2
SDV   Santo Domingo    91.88  77   P       P        14 48 37.0  -1.0
SDV   Santo Domingo    91.88  77  eP       P        14 48 36.4  -1.5
214A  Organ Pipe Nat   94.02  31   P       P        14 48 48.8  +1.6
MCPB  Macapa, AP       94.34  97  eP       P        14 48 49.5  +0.3
TMAB  Tom-Au,PA,Br     94.81 102  eP       P        14 48 51.4  +0.1
BOSA  Boshof           94.84 176   P       P        14 48 48.8  -2.7
      comp=Z,4.5nm,1.0s,baz=167,slow=8.4,SNR=3.5
BOSA                               LR      LR       15 27 59.6
      comp=Z,154nm,19.4s,baz=172,slow=33
TUC   Tucson           94.94  33   P       P        14 48 53.3  +1.9
TUC                                pmax    pmax
      comp=Z,3.0nm,1.0s
TUC   Tucson           94.94  33   P       P        14 48 53.3  +1.9
OMMB  Old Mammoth Mi   97.77  25   P       Pdif     14 49 06.3  +1.8
HKT   Hockley          97.99  46  i P      P        14 49 04.4  -0.7
HKT                                pmax    pmax
      comp=Z,5.0nm,1.1s
KRJI  Kerinci          98.03 254   P       Pdif     14 49 13.6  +7.5
RCBR  Riachuelo        98.26 114  eP       Pdif     14 49 07.5  +0.4
U15A  North Rim        98.36  30   P       Pdif     14 49 09.5  +2.4
NVAR  Mina Array Bea   98.72  25   P       Pdif     14 49 09.3  +0.7
      comp=Z,0.4nm,0.8s,baz=199,slow=10.0,SNR=4.1
ANMO  Albuquerque      98.72  35  i P      Pdif     14 49 09.8  +1.1
ANMO                               pmax    pmax
      comp=Z,1.0nm,1.4s
H10S3 ASCENSION HYDR  105.12 135   T       T        16 47 51.7
      baz=16,slow=74,SNR=10
H10S2 ASCENSION HYDR  105.12 135   T       T        16 47 45.5
      baz=204,slow=74,SNR=18
KSRS  Korea Array     116.20 299   PKP     PKPdf    14 54 11.9   0.0
      comp=Z,1.0nm,0.8s,baz=165,slow=2.4,SNR=5.1
KSRS  Korea Array     116.20 299   PKIKP   PKPdf    14 54 12.0   0.0
CMAR  Chiang Mai Arr  116.48 263   PKP     PKPdf    14 54 12.6  -0.6
      comp=Z,1.0nm,0.7s,baz=196,slow=1.8,SNR=11
CMAR  Chiang Mai Arr  116.48 263  ePKIKP   PKPdf    14 54 12.4  -0.8
CMAR                               pmax    pmax
      comp=Z,1.0nm,0.7s
```

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USRK  Ussuriysk Ar.   119.64 306   PKP     PKPdf    14 54 18.6  +0.2
      comp=Z,1.7nm,0.8s,baz=256,slow=2.2,SNR=4.7
RND   Reindeer        119.89   1   PKIKP   PKPdf    14 54 18.4   0.0
RND   Reindeer        119.89   1   PKPdf   PKPdf    14 54 18.4   0.0
TRF   Thorofare Moun  119.93   0   PKPdf   PKPdf    14 54 18.4  -0.2
KTH   Kantishna Hill  120.03 360   PKPdf   PKPdf    14 54 18.1  -0.6
BPAW  Bear Paw Mtn.   120.58 360   PKPdf   PKPdf    14 54 18.8  -0.9
BWN   Browne          120.66   1           PKPdf    14 54 19.2  -0.6
DAWY  Dawson          120.85   6   PKPdf   PKPdf    14 54 20.3  +0.1
HDA   Harding Lake    120.92   2           PKPdf    14 54 20.3   0.0
WRH   Wood River Hil  120.97   1   PKPdf   PKPdf    14 54 20.1  -0.3
CCB   Clear Creek Bu  121.15   1   PKPdf   PKPdf    14 54 20.3  -0.3
IL31                  121.29   2           PKPdf    14 54 20.5  -0.4
ILAR  Eielson Array   121.29   2   PKP     PKPdf    14 54 21.0   0.0
      comp=Z,10nm,0.9s,baz=242,slow=1.9,SNR=81
COLA  College         121.38   1   PKIKP   PKPdf    14 54 20.8  -0.3
COLA  College         121.38   1           PKPdf    14 54 20.8  -0.3
TCOL  CIGO, UAF Yank  121.38   1           PKPdf    14 54 20.6  -0.5
MDM   Murphy Dome     121.46   1   PKPdf   PKPdf    14 54 20.8  -0.6
ANM   Nome            121.58 353   PKIKP   PKPdf    14 54 21.8  +0.3
ANM   Nome            121.58 353   PKPdf   PKPdf    14 54 21.8  +0.3
KMBO  Kilima Mbogo    121.91 189   PKP     PKiKP    14 54 24.4  +0.1
      comp=Z,0.8nm,0.4s,baz=297,slow=6.8,SNR=3.8
YKA   Yellowknife Ar  122.20  19   PKP     PKPdf    14 54 22.5  -0.3
      comp=Z,3.1nm,1.0s,baz=184,slow=2.0,SNR=22
YKA                                PKKPab  PKKPbc   15 04 18.3  -0.5
      comp=Z,0.6nm,0.9s,baz=27,slow=4.8,SNR=7.1
CN2   Changchun       122.32 302  ePKP     PKPdf    14 54 23.0  -0.6
CN2                                PP      PP       14 56 04.6  +4.3
CN2                                LR      LR
      comp=Z,200nm,19.0s
CN2                                LR      LR
      comp=Z,200nm,19.0s
CN2                                LR      LR
      comp=Z,200nm,20.0s
EPYK  Eagle Plains    123.30   7           PKPdf    14 54 24.5  -0.4
KLR   Kul'dur         123.65 310   PKP     PKPdf    14 54 26.3  +0.3
      comp=Z,5.6nm,0.8s,baz=144,slow=1.1,SNR=20
FCC   Fort Churchill  123.66  31   PKIKP   PKPdf    14 54 24.6  -1.0
FCC   Fort Churchill  123.66  31   PKPdf   PKPdf    14 54 24.6  -1.0
COLD  Coldfoot        123.72   0   PKPdf   PKPdf    14 54 25.9  +0.3
BILL  Bilibino        128.54 341  ePKIKP   PKPdf    14 54 33.5  -1.3
LSA   Lhasa           129.70 265   PKIKP   PKPdf    14 54 39.0  +0.2
LSA   Lhasa           129.70 265           PKPdf    14 54 39.0  +0.2
TOA0  Torodi Ar. Sit  131.51 143   PKPdf   PKPdf    14 54 41.1  -1.0
TORD  Torodi Ar. Bea  131.51 143   PKP     PKPdf    14 54 41.0  -1.0
      comp=Z,1.6nm,0.8s,baz=194,slow=1.2,SNR=6.7
GTA   Gaotai          132.18 280  ePKP     PKPdf    14 54 41.8  -1.0
GTA                                sPKP             14 54 50.3
YAK   Yakutsk         133.68 320  ePKIKP   PKPdf    14 54 45.3  +0.7
YAK                                pmax    pmax
      comp=Z,12nm,1.0s
YAK                                pmax    pmax
      comp=N,25nm,1.9s
YAK                                pmax    pmax
      comp=E,18nm,1.3s
SONM  Songino Array   134.51 293   PKP     PKPdf    14 54 46.1  -0.8
      comp=E,0.7nm,0.7s,baz=126,slow=2.5,SNR=5.1
ZAK   Zakamensk       137.72 294  ePKIKP   PKPdf    14 54 53.7  +1.0
ZAK                                pmax    pmax
      comp=Z,5.0nm,1.3s
TLY   Talaya          138.33 296  ePKIKP   PKPdf    14 54 50.0  -3.7
TLY                                pmax    pmax
      comp=Z,22nm,1.0s
TIXI  Tiksi           139.80 331  i PKIKP  PKPdf    14 54 53.4  -2.3
ILULI Ilulissat       144.32  37   PKIKP   PKPbc    14 55 02.9  +0.7
ILULI Ilulissat       144.32  37           PKPbc    14 55 02.9  +0.6
ILULI Ilulissat       144.32  37  i P      PKPbc    14 55 03.1  +0.9
      comp=Z,80nm,1.1s
ILULI Ilulissat       144.32  37  i P      PKPbc    14 55 03.1  +0.9
ILULI                              IAmb    IAmb     14 55 04.1
      comp=Z,80nm,1.1s
RAYN  Ar Rayn         144.75 206   PKIKP   PKPab    14 55 04.8  -0.2
RAYN  Ar Rayn         144.75 206   PKPdf   PKPab    14 55 04.8  -0.2
KBL   Kabul           145.22 247   PKP2    PKPbc    14 55 05.3  -1.2
KBL   Kabul           145.22 247           PKPbc    14 55 05.3  -1.2
DGZ   Jazzator, Alta  145.56 283  i PKIKP  PKPdf    14 55 06.4  -0.4
ZSN   Zaisan          145.63 278  ePKP     PKPdf    14 55 05.5  -1.3
      baz=278
ZSN   Zaisan          145.63 278  ePKIKP   PKPdf    14 55 05.5  -1.3
SHLS  Shalkode        145.90 268  ePKP     PKPdf    14 55 06.2  -1.5
      baz=268
SHLS  Shalkode        145.90 268  ePKIKP   PKPdf    14 55 06.1  -1.5
SATY  Saty            146.41 267  ePKP     PKPdf    14 55 08.2  -0.3
      baz=267
SATY  Saty            146.41 267  ePKIKP   PKPdf    14 55 08.1  -0.3
KPKS  Kokpek          146.53 268  ePKP     PKPdf    14 55 08.3  -0.4
      baz=268
KPKS  Kokpek          146.53 268  ePKIKP   PKPdf    14 55 08.2  -0.4
MK31  Makanchi Array  146.64 276   PKP2    PKPdf    14 55 09.1  +0.5
MK31  Makanchi Array  146.64 276   PKPdf   PKPdf    14 55 09.1  +0.5
MKAR  Makanchi Array  146.64 276   PKPbc   PKPbc    14 55 10.1  -0.2
      comp=Z,30nm,0.8s,baz=120,slow=3.8,SNR=165
MKAR                               PP      PP       14 58 33.4  -1.2
      comp=Z,2.0nm,1.0s,baz=106,slow=5.2,SNR=5.1
MAKZ  Makanchi        146.82 275   PKIKP   PKPdf    14 55 09.3  +0.4
MAKZ  Makanchi        146.82 275   PKPdf   PKPdf    14 55 09.3  +0.4
TNSS  Tian-Shan       147.20 266  ePKP     PKPdf    14 55 11.0  +0.9
      baz=266
TNSS  Tian-Shan       147.20 266  ePKP2    PKPdf    14 55 11.0  +0.9
MDOK  Medeo           147.22 266  ePKP     PKPdf    14 55 10.0  +0.2
      baz=266
MDOK  Medeo           147.22 266  ePKIKP   PKPdf    14 55 10.0  +0.2
AAA   Alma-Ata        147.33 266  ePKP     PKPdf    14 55 10.8  +0.8
      baz=266
AAA   Alma-Ata        147.33 266  ePKIKP   PKPdf    14 55 10.7  +0.8
ISOG  Isortoq, Green  147.51  46  i P      PKPbc    14 55 12.1  +0.1
MTBS  Maitube         147.54 265  ePKP     PKPbc    14 55 12.5  -0.5
      baz=265
MTBS  Maitube         147.54 265  ePKP2    PKPbc    14 55 12.4  -0.5
TDK   Taldyqorghan    147.67 270  ePKP     PKPdf    14 55 11.7  +1.3
      baz=270
TDK   Taldyqorghan    147.67 270  ePKIKP   PKPdf    14 55 11.6  +1.3
CHKK  Chushkaly       147.71 267  ePKP     PKPdf    14 55 11.0  +0.5
      baz=267
CHKK  Chushkaly       147.71 267  ePKIKP   PKPdf    14 55 10.9  +0.5
KUU   Kurty           148.09 266  ePKP     PKPdf    14 55 10.6  -0.6
      baz=266
KUU   Kurty           148.09 266  ePKIKP   PKPdf    14 55 10.5  -0.6
ICESG Greenland Ices  148.19  40  i P      PKPbc    14 55 13.2  -1.1
ICESG                              IAmb    IAmb     14 55 16.2
      comp=Z,34nm,1.0s
PTEO  Sao Teotonio    148.25 111  ePKP     PKPbc    14 55 15.8  +0.9
AAK   Ala-Archa       148.27 263   PKPbc   PKPbc    14 55 14.4  -0.6
      comp=Z,9.1nm,0.9s,baz=22,slow=0.9,SNR=6.2
AAK   Ala-Archa       148.27 263   PKP2    PKPbc    14 55 15.0   0.0
AAK   Ala-Archa       148.27 263           PKPbc    14 55 15.0   0.0
HRA   Herat           148.43 239           PKPbc    14 55 15.4  -0.4
PCVE  Castro Verde    148.66 112  ePKP     PKPbc    14 55 15.3  -0.7
ZALV  Zalesovo Beam   149.15 289   PKPbc   PKPbc    14 55 15.7  -1.0
      comp=Z,10.0nm,0.7s,baz=144,slow=2.4,SNR=46
SUMG  Summit          149.16  33   PKP2    PKPbc    14 55 17.3  +0.6
SUMG  Summit          149.16  33           PKPbc    14 55 17.3  +0.6
SUMG  Summit          149.16  33  i P      PKPbc    14 55 17.0  +0.3
      comp=Z,119nm,0.9s
SUMG  Summit          149.16  33  i P      PKPbc    14 55 17.0  +0.3
SUMG                               IAmb    IAmb     14 55 18.6
      comp=Z,119nm,0.9s
EVO   Evora           149.36 111  ePKP     PKPbc    14 55 18.0  +0.3
PMTG  Montargil       149.65 110  ePKP     PKPbc    14 55 18.4   0.0
PSBE  So Bento        149.68 108  ePKP     PKiKP    14 55 19.3  -0.2
SEM   Semipalatinsk   149.81 280  ePKP     PKPdf    14 55 16.1  +2.2
      baz=279
SEM   Semipalatinsk   149.81 280  ePKHKP   PKPpre   14 55 16.0
PESTR Estremoz        149.83 111           PKPbc    14 55 18.9  +0.1
BTLS  Baital          150.09 266  ePKP     PKPdf    14 55 13.4  -0.8
      baz=266
BTLS                              ePKiKP   sPKPdf   14 55 18.5  +1.0
      baz=266
BTLS  Baital          150.09 266  ePKIKP   PKPdf    14 55 13.4  -0.8
BTLS                              i                 14 55 18.5
PCAS  Casmilo, Conde  150.24 108  ePKP     PKiKP    14 55 20.5  -0.1
PMRV  Marv??o         150.35 110  ePKP     PKPbc    14 55 20.1   0.0
IUG   Iuzhnay         150.36 258  ePKiKP   PKPbc    14 55 19.7  -0.4
      baz=258
IUG   Iuzhnay         150.36 258  i PKIKP  PKPbc    14 55 19.7  -0.4
COI   Coimbra         150.39 108   PKIKP   PKPbc    14 55 20.0  -0.1
COI   Coimbra         150.39 108  ePKP     PKiKP    14 55 21.0  +0.1
COI   Coimbra         150.39 108           PKPbc    14 55 20.0  -0.1
PCBR  Castelo Branco  150.61 109  ePKP     PKPbc    14 55 20.8  +0.1
KURBB Kurchatov Arra  150.86 279   PKP     PKPdf    14 55 14.0  -1.2
      comp=Z,2.1nm,0.9s,baz=127,slow=1.5,SNR=8.9
KURBB                              PKPbc   PKPbc    14 55 20.4  -0.5
      comp=Z,22nm,0.9s,baz=121,slow=2.0,SNR=67
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KURK  Kurchatov       150.86 279   PKIKP   PKPdf    14 55 14.0  -1.2
KURK                                                14 55 20.4
KURK  Kurchatov       150.86 279   PKPbc   PKPbc    14 55 20.1  -0.8
MTE   Manteigas       150.99 109  ePKP     PKiKP    14 55 22.2   0.0
MTE   Manteigas       150.99 109           PKPbc    14 55 21.6   0.0
PVIS  Viseu           151.03 108  ePKP     PKPbc    14 55 21.5  -0.2
PVRL  Vila Real       151.53 107  ePKP     PKiKP    14 55 23.4  +0.1
POLO  Lamas de Olo    151.56 107  ePKP     PKPbc    14 55 22.9  -0.1
PCAB  Cabril          151.68 106  ePKP     PKPbc    14 55 23.3  +0.2
PGAV  Gavieira, Arco  151.73 105  ePKP     PKPbc    14 55 23.4  +0.1
MVO   Moncorvo        151.81 108  ePKP     PKiKP    14 55 24.0  +0.1
PAB   San Pablo       151.99 114   PKIKP   PKPbc    14 55 24.0   0.0
PAB   San Pablo       151.99 114           PKPbc    14 55 24.0   0.0
NRIK  Noril'sk        152.13 320   PKPbc   PKiKP    14 55 23.7  +0.2
      comp=Z,8.2nm,0.8s,baz=95,slow=3.2,SNR=17
NRIK  Noril'sk        152.13 320   PKIKP   PKPbc    14 55 23.4  +0.1
NRIK  Noril'sk        152.13 320           PKPbc    14 55 23.4  +0.1
ESDC  Sonseca Array   152.28 114   PKP     PKPdf    14 55 18.4  +0.5
      comp=Z,1.0nm,0.9s,baz=321,slow=1.2,SNR=5.0
ESDC                               PKPbc   PKiKP    14 55 25.1  +0.2
      comp=Z,7.3nm,1.0s,baz=229,slow=1.7,SNR=27
ESBB  Sonseca Array   152.28 114           PKPbc    14 55 24.4  -0.2
PBRG  Braganca        152.42 107  ePKP     PKiKP    14 55 25.2  +0.1
GEYT  Alibeck         153.25 237   PKPbc   PKiKP    14 55 27.1  +0.2
      comp=Z,4.9nm,0.7s,baz=10,slow=8.8,SNR=5.5
DAG   Danmarks Havn   153.80  23  i P      PKPbc    14 55 26.0  -0.8
DAG   Danmarks Havn   153.80  23  i P      PKPbc    14 55 26.0  -0.8
ELL   Elmali          159.93 181   PKP2    PKPab    14 56 07.2  -0.3
ELL   Elmali          159.93 181           PKPab    14 56 07.2  -0.3
AKTO  Aktyubinsk      162.00 261   PKPab   PKPab    14 56 15.2  -0.9
      comp=Z,7.5nm,0.9s,baz=140,slow=2.7,SNR=8.9
BRTR  Keskin Array B  162.69 191   PKP     PKPdf    14 55 31.8  +0.8
      comp=Z,1.7nm,1.0s,baz=160,slow=3.9,SNR=5.3
BRTR                               PKPab   PKPab    14 56 17.1  -2.3
      comp=Z,1.4nm,0.9s,baz=176,slow=5.8,SNR=4.4
ARU   Arti            164.04 281   PKPab   PKPab    14 56 23.2  -1.8
      comp=Z,0.5nm,0.3s,baz=90,slow=2.0,SNR=4.0
KBZ   Khabaz          164.39 219   PKPab   PKPab    14 56 26.6  -0.1
      comp=Z,3.0nm,0.9s,baz=262,slow=7.1,SNR=3.0
FETA  Feichten        164.89 122  eP       PKPdf    14 55 32.8   0.0
      comp=Z,8.0nm,1.3s
FETA                              eP       PKPab    14 56 28.7  -0.4
      comp=Z,7.7nm,1.2s
RETA  Reutte          165.24 121  eP       PKPdf    14 55 33.9  +1.0
      comp=Z,12nm,1.6s
SQTA  Sankt Quirin    165.26 123  eP       PKPdf    14 55 33.9  +0.9
      comp=Z,7.8nm,1.6s
MOTA  Moosalm         165.30 122  eP       PKPdf    14 55 32.7  -0.4
      comp=Z,5.8nm,1.5s
WTTA  Wattenberg      165.49 124  eP       PKPdf    14 55 32.0  -1.2
      comp=Z,4.6nm,1.1s
WTTA                              eP       PKPab    14 56 31.3  -0.5
      comp=Z,6.7nm,1.0s
ABTA  Abfaltersbach   165.49 127  eP       PKPdf    14 55 32.3  -0.9
      comp=Z,6.5nm,1.4s
ABTA                              eP       PKPab    14 56 31.4  -0.3
      comp=Z,8.2nm,1.2s
WATA  Walderalm       165.51 123  eP       PKPdf    14 55 34.2  +0.9
      comp=Z,7.6nm,1.1s
WATA                              eP       PKPab    14 56 32.3  +0.5
      comp=Z,7.5nm,1.3s
ZOU   Zoufplan        165.54 128           PKPab    14 56 31.4  -0.6
SOKA  Soboth          166.50 133  eP       PKPdf    14 55 37.5  +3.5
      comp=Z,5.6nm,1.1s
SOKA                              eP       PKPab    14 56 36.8  +0.7
      comp=Z,7.1nm,1.2s
MOA   Molln           167.10 128  eP       PKPab    14 56 38.9  +0.3
      comp=Z,7.5nm,1.3s
ARSA  Arzberg         167.16 132  eP       PKPdf    14 55 36.5  +2.1
      comp=Z,3.6nm,0.9s
ARSA                              eP       PKPab    14 56 38.5  -0.4
      comp=Z,5.1nm,1.1s
GERES GERESS Array B  167.59 123   PKP     PKPdf    14 55 36.9  +2.2
      comp=Z,0.2nm,0.3s,baz=198,slow=2.9,SNR=3.4
GERES                              PKPab   PKPab    14 56 39.9  -1.0
      comp=Z,0.6nm,0.7s,baz=234,slow=3.4,SNR=3.1
KHC   Kasperske Hory  167.73 122   PKP2    PKPab    14 56 40.5  -1.0
KHC   Kasperske Hory  167.73 122   PKPab   PKPab    14 56 40.5  -1.0
MLR   Muntele Rosu    168.45 167   PKP2    PKPab    14 56 43.0  -1.7
MLR   Muntele Rosu    168.45 167   PKPab   PKPab    14 56 43.0  -1.7
CLL   Collm           168.87 113  ePKPab   PKPab    14 56 46.0  -0.4
      comp=Z,12nm,1.2s
VYHS  Vyhne           169.47 138  ePKIKP   PKPdf    14 55 38.8  +2.9
VYHS                              e                 14 56 48.5
VYHS  Vyhne           169.47 138  ePKP     PKPdf    14 55 38.8  +2.9
VYHS                              e                 14 56 48.5
COP   Copenhagen      170.44  90  i PKIKP  PKPdf    14 55 26.0  -10
CRVS  Cervenica-Dubn  170.72 145  ePKP2    PKPab    14 56 54.7  +0.1
VRH   Novokhopyorsk   170.87 237  ePKP2    PKPab    14 56 53.0  -2.2
VRH                                pmax    pmax
      comp=Z,7.0nm,0.4s
VSR   Storozhevoye    172.01 230  ePKP2    PKPab    14 56 58.6  -1.6
VSR                                pmax    pmax
      comp=Z,20nm,1.2s
LPSR  Galich'ya Gora  173.09 236  ePKP2    PKPab    14 57 02.8  -2.2
LPSR                               pmax    pmax
      comp=Z,10.0nm,0.8s
AKASG Malin Array Be  173.88 178   PKP     PKPdf    14 55 36.3  -1.6
      comp=Z,0.2nm,0.4s,baz=333,slow=1.0,SNR=5.4
AKASG                              PKPab   PKPab    14 57 05.2  -3.3
      comp=Z,0.6nm,0.6s,baz=184,slow=4.3,SNR=6.2
OBN   Obninsk         175.67 250  ePKP2    PKPab    14 57 15.7  -0.7
OBN                                pmax    pmax
      comp=Z,16nm,1.3s
MNK   Minsk           177.51 158  i PKP    PKPdf    14 55 42.0  +3.4
      comp=E,3.0nm,0.9s
MNK                               i PKP    PKPdf    14 55 42.0  +3.4
      comp=N,27nm,1.3s
MNK                               i PKP    PKPdf    14 55 42.0  +3.4
      comp=Z,10.0nm,0.9s
MNK                               i PP     PP       15 01 19.6  +1.6
MNK                               i SKS    SKSdf    15 02 45.1  +4.1
MNK                               i PPP    PPP      15 05 36.5
MNK                               i SS     SS       15 21 29.8  -83
MNK                               i SSS    SSS      15 30 13.6
MNK                               i LR     LR       16 22 54.5
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*IDC **04** 14:50:52.6±6.0, 36°.01N×69°.91E, h55km±35km, mb3.3/4, mb1 3.5/10, mb1mx3.1/54, mbtmp3.7/10, ML3.5/6, Error ellipse: s-maj=67.7km s-min=19.1km az=158.0*

*NNC **04** 14:51:01.6±6.3, 36°.57N×70°.20E, h264km±53km, mb2.9, mpv3.9, Error ellipse: s-maj=60.3km s-min=45.1km az=167.0*

ISC 04 14:50:49.6±1.0, **35°.78N**±0°.09×**70°.06E**±0°.07, **h50km, n27, σ1s93**/32, **mb3.3**/3, **2C-5D, Hindu Kush region**

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Code  Station Name        Δ°  AZ°   Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
AML   Almayashu         6.95   23    P       Pn       14 52 31.0  +1.9
      SNR=37
UCH   Uchtor            7.31   27    P       Pn       14 52 36.9  +2.7
      SNR=8.0
KK31  Karatay Array     7.32    3   ⇓P       Pn       14 52 35.6  +1.6
      3.8nm,0.3s,baz=196,slow=17,SNR=58
KK31                                ⇓S       Sn       14 53 52.4  -3.2
      3.4nm,0.5s,baz=194,slow=24,SNR=4.3
EKS2  Erkin-Say         7.45   22    P       Pn       14 52 38.6  +2.7
      SNR=9.2
AAK   Ala-Archa         7.67   25    P       Pn       14 52 41.5  +2.8
      2.1nm,0.3s,baz=195,slow=5.3,SNR=29
AAK                                  S       Sn       14 54 03.9  -0.4
      1.3nm,0.3s,baz=344,slow=23,SNR=12
AAK   Ala-Archa         7.67   25    P       Pn       14 52 41.9  +3.1
      SNR=11
AAK   Ala-Archa         7.67   25   ⇓P       Pn       14 52 41.6  +2.8
      3.6nm,0.4s
AAK                                 ⇑S       Sn       14 54 02.7  -1.6
      15nm,0.5s
CHMS  Chumysh           8.07   25    P       Pn       14 52 46.3  +2.1
      SNR=7.9
USP   Ospenovka         8.23   23    P       Pn       14 52 48.1  +1.7
      SNR=11
TKM2  Tokmak 2          8.32   29   ⇑P       Pn       14 52 50.0  +2.3
      2.1nm,0.4s
TKM2                                ⇓S       Sn       14 54 18.1  -2.4
      8.8nm,1.1s
GEYT  Alibeck           9.81  286    P       Pn       14 53 07.8  -0.2
      0.6nm,0.3s,baz=122,slow=9.3,SNR=9.3
GEYT                                 S       Sn       14 54 55.1  -1.6
      1.1nm,0.3s,baz=263,slow=12,SNR=6.9
PYUN  Piuthan          13.38  121   eP       Pn       14 53 57.5  +0.5
      5.7nm,0.2s
DANN  Dangsing         13.77  119   eP       Pn       14 54 01.6  -0.8
      3.3nm,0.2s
```

KOLN	**Koldanda**	**14.01**	**121**	*e*P	**Pn**	**14 54 04.2**	**-1.3**
	2.6nm,0.3s						
MKAR	**Makanchi Array**	**14.32**	**36**	P	**Pn**	**14 54 10.6**	**+1.2**
	0.0nm,0.3s,baz=219,slow=14,SNR=4.6						
GKN	**Gorkha**	**14.60**	**118**	*e*P	**Pn**	**14 54 12.1**	**-1.3**
	4.4nm,0.3s						
AB31	**Akbulak array**	**15.37**	**334**	⇓P	**Pn**	**14 54 21.9**	**-1.2**
	3.4nm,0.3s,baz=159,slow=13,SNR=306						
PKIN	**Phulchoki**	**15.39**	**118**	*e*P	**Pn**	**14 54 21.2**	**-2.6**
	4.7nm,0.3s						
GUN	**Gumba**	**15.55**	**116**	*e*P	**Pn**	**14 54 23.3**	**-2.7**
	2.6nm,0.3s						
KURBB	**Kurchatov Arra**	**16.05**	**20**	P	**Pn**	**14 54 32.2**	**+0.4**
	0.0nm,0.3s,baz=210,slow=12,SNR=3.6						
AKTO	**Aktyubinsk**	**17.05**	**333**	P	**Pn**	**14 54 44.3**	**0.0**
	0.8nm,0.3s,baz=132,slow=16,SNR=9.7						
TAPN	**Taplejung**	**17.21**	**114**	*e*P	**Pn**	**14 54 45.9**	**-0.9**
	7.2nm,0.5s						
BVAR	**Borovoye Array**	**17.25**	**1**	P	**Pn**	**14 54 46.0**	**-0.8**
	0.4nm,0.3s,baz=97,slow=6.1,SNR=9.4						
ZALV	**Zalesovo Beam**	**20.89**	**25**	P	**P**	**14 55 27.4**	**0.0**
	2.1nm,0.3s,baz=216,slow=11,SNR=11						
ARU	**Arti**	**22.08**	**343**	P	**P**	**14 55 41.0**	**+0.8**
	0.5nm,0.4s,baz=145,slow=13,SNR=3.6						
AKASG	**Malin Array Be**	**32.81**	**310**	P	**P**	**14 57 20.0**	**+2.0**
	0.5nm,0.5s,baz=95,slow=6.2,SNR=4.1						
NOA	**NORSAR Array B**	**44.50**	**324**	P	**P**	**14 58 55.4**	**-0.4**
	0.4nm,0.8s,baz=100,slow=8.5,SNR=3.0						

IDC 04 15:08:23.5±26.0**, 29°.26S**×**179°.75E, h491**^{km}±234^{km}**, mb3.0**/3**, mb1 3.3**/3**, mb1mx2.9**/25**, mbtmp3.8**/3**, Error ellipse: s-maj=253.2km s-min=94.4km az=139.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.22**	**267**	P	P	15 15 24.4	-0.5
	0.3nm,0.3s,baz=105,slow=7.4,SNR=13						
WRA	**Warramunga Arr**	**42.10**	**272**	P	P	15 15 32.3	+0.3
	0.8nm,0.4s,baz=111,slow=8.1,SNR=13						
ILAR	**Eielson Array**	**97.27**	**14**	P	Pdif	15 21 01.7	-0.8
	0.3nm,0.9s,baz=220,slow=6.8,SNR=3.1						
FINES	**FINESS Array B**	**143.40**	**339**	PKP	PKPdf	15 27 02.5	+1.7
	4.4nm,1.0s,baz=38,slow=2.9,SNR=9.6						
AKASG	**Malin Array Be**	**149.21**	**322**	PKPbc	PKPbc	15 27 14.4	-1.4
	0.2nm,0.3s,baz=54,slow=2.4,SNR=3.1						

IDC 04 15:36:08.3±1.6**, 0°.07N**×**125°.80E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.5**/37**, mbtmp3.8**/5**, ML3.3**/1**, Error ellipse: s-maj=110.8km s-min=22.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.06**	**180**	P	Pn	15 40 20.1	-0.7
	0.1nm,0.3s,baz=3.7,slow=13,SNR=2.2						
WRA	**Warramunga Arr**	**21.58**	**158**	P	P	15 40 59.2	-0.6
	1.3nm,0.5s,baz=337,slow=10,SNR=23						
ASAR	**Alice Springs**	**24.88**	**162**	P	P	15 41 33.4	+0.4
	0.8nm,0.7s,baz=341,slow=8.4,SNR=22						
STKA	**Stephens Creek**	**35.12**	**156**	P	P	15 43 03.9	+0.2
	0.7nm,0.3s,baz=325,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**60.05**	**327**	P	P	15 46 17.1	-0.1
	0.6nm,0.4s,baz=123,slow=7.5,SNR=9.5						

IDC 04 15:46:42.8±0.2**, 1°.65S**×**136°.08E, h0**^{km}**, mb3.6**/2**, mb1 3.7**/5**, mb1mx3.4**/30**, mbtmp3.5**/5**, ML3.1**/3**, Error ellipse: s-maj=11.0km s-min=4.4km az=112.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.70**	**101**	Pn	Pn	15 47 56.1	+1.0
	0.2nm,0.3s,baz=218,slow=12,SNR=6.4						
JAY				Sn	Sn	15 48 56.9	+6.4
	0.5nm,0.3s,baz=150,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**18.26**	**185**	P	Pn	15 50 56.2	-1.6
	0.1nm,0.3s,baz=16,slow=12,SNR=3.8						
FITZ	**Fitzroy Crossi**	**19.29**	**211**	P	Pn	15 51 10.1	-0.3
	0.1nm,0.3s,baz=51,slow=13,SNR=12						
ASAR	**Alice Springs**	**21.99**	**185**	P	P	15 51 38.4	-0.3
	0.3nm,0.4s,baz=13,slow=10,SNR=6.4						
ILAR	**Eielson Array**	**85.97**	**25**	P	P	15 59 24.7	0.0
	0.9nm,0.7s,baz=239,slow=5.3,SNR=21						

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*HLW **04** 16:00:24.7, 34°.54N×26°.82E, h29^{km}±26^{km}, Md4.1*
*ATH **04** 16:00:25.0, 34°.45N×26°.82E, h21^{km}±3^{km}, ML2.8/3, Error ellipse: s-maj=4.3km s-min=1.9km az=339.0*
*ISK **04** 16:00:25.2, 34°.68N×26°.90E, h20^{km}, ML3.1/12*
*NIC **04** 16:00:26.6±0.0, 34°.56N×27°.26E, h10^{km}±3^{km}, Ml4.0/3*
*DDA **04** 16:00:26.0, 34°.54N×27°.13E, h22^{km}±638^{km}, ML2.6*
*THE **04** 16:00:26.9, 34°.57N×26°.80E, h20^{km}±3^{km}, ML2.8/1, Error ellipse: s-maj=3.4km s-min=0.8km az=164.0*
*IDC **04** 16:00:36.6±11.0, 34°.87N×26°.39E, h153^{km}±120^{km}, mb3.3/3, mb1 3.4/4, mb1mx2.9/33, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=52.5km s-min=20.7km az=132.0*
ISC 04 16:00:23.7±1.3**, 34°.45N**±0°.03×**26°.86E**±0°.03**, h30**^{km}±11^{km}**, n68, σ1^s.26**/90**, mb4.1**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.84**	**322**	P	**Pn**	**16 00 40.2**	**+0.6**
ZKR				S	**Sn**	**16 00 51.5**	**+0.5**
ZKR				AML	AML	16 00 56.3	
	comp=N,1244µm,0.4s						
ZKR				AML	AML	16 01 03.8	
	comp=E,2304µm,0.6s						
ZKR	**Zakros**	**0.84**	**322**	P	**Pn**	**16 00 40.4**	**+0.8**
ZKR				S	**Sb**	**16 00 50.7**	**-0.2**
	comp=E,808nm,0.8s						
ZKR	**Zakros**	**0.84**	**322**	PG	**Pb**	**16 00 39.5**	**-0.4**
KARP	**Karpathos**	**1.12**	**13**	P	**Pb**	**16 00 44.8**	**+0.3**
KARP				S	**Sn**	**16 00 59.3**	**+1.4**
KARP				AML	AML	16 01 03.8	
	comp=E,814µm,0.3s						
KARP				AML	AML	16 01 05.8	
	comp=N,1018µm,0.4s						
KARP	**Karpathos**	**1.12**	**13**	P	**Pb**	**16 00 44.8**	**+0.3**
KARP				S	**Sb**	**16 00 58.1**	**-0.7**
KARP	**Karpathos**	**1.12**	**13**	PG	**Pn**	**16 00 42.9**	**-0.5**
KARP	**Karpathos**	**1.12**	**13**	P	**Pb**	**16 00 44.7**	**+0.1**
KARP				S	**Sn**	**16 00 59.3**	**+1.4**
KARP				AML	AML	16 01 05.2	
	comp=N,1.0nm,0.4s						
KARP				AML	AML	16 01 05.2	
	comp=N,1.0nm,0.4s						
KARP				AML	AML	16 01 07.6	
	comp=N,0.9nm,0.5s						
KARP				AML	AML	16 01 07.6	
	comp=N,0.9nm,0.5s						
NPS	**Neapolis**	**1.30**	**309**	P	**Pb**	**16 00 46.9**	**-0.7**
NPS	**Neapolis**	**1.30**	**309**	P	**Pb**	**16 00 46.9**	**-0.7**
LAST	**Lasithi**	**1.34**	**302**	P	**Pn**	**16 00 47.1**	**+0.7**
LAST				S	**Sn**	**16 01 03.6**	**+0.3**
LAST				AML	AML	16 01 05.5	
	comp=N,789µm,0.7s						
LAST				AML	AML	16 01 07.8	
	comp=E,635µm,0.6s						
LAST	**Lasithi**	**1.34**	**302**	P	**Pb**	**16 00 47.4**	**-0.8**
LAST				S	**Sn**	**16 01 03.9**	**+0.6**
SIVA	**Sivas**	**1.78**	**289**	P	**Pn**	**16 00 53.9**	**+1.6**
SIVA	**Sivas**	**1.78**	**289**	P	**Pn**	**16 00 54.0**	**+1.6**
IDI	**Anoyia**	**1.82**	**298**	P	**Pn**	**16 00 54.2**	**+1.1**
IDI	**Anoyia**	**1.82**	**298**	P	**Pn**	**16 00 54.4**	**+1.3**
ARG	**Arkhangelos**	**2.04**	**30**	P	**Pn**	**16 00 57.9**	**+1.8**
ARG	**Arkhangelos**	**2.04**	**30**	P	**Pn**	**16 00 57.8**	**+1.8**
ARG	**Arkhangelos**	**2.04**	**30**	PN	**Pn**	**16 00 56.5**	**+0.4**
ARG				SN	**Sn**	**16 01 19.3**	**-1.3**
ARG	**Arkhangelos**	**2.04**	**30**	P	**Pn**	**16 00 57.7**	**+1.6**
ARG				S	**Sn**	**16 01 21.2**	**+0.6**
GVD	**Gavdhos**	**2.32**	**280**	P	**Pn**	**16 01 01.1**	**+1.3**
GVD	**Gavdhos**	**2.32**	**280**	P	**Pn**	**16 01 01.1**	**+1.3**
VAM	**Vamos**	**2.38**	**294**	P	**Pn**	**16 01 02.0**	**+1.3**
IMMV	**Iera Moni Meta**	**2.57**	**294**	P	**Pn**	**16 01 04.6**	**+1.3**
IMMV	**Iera Moni Meta**	**2.57**	**294**	P	**Pn**	**16 01 04.8**	**+1.5**
TURN	**Turunc**	**2.58**	**26**	PN	**Pn**	**16 01 04.1**	**+0.7**
TURN				SN	**Sn**	**16 01 32.1**	**-1.7**
TURN	**Turunc**	**2.58**	**26**	*i* P	**Pn**	**16 01 05.3**	**+1.9**
TURN				*i* S	**Sn**	**16 01 30.9**	**-2.8**
TURN				IAML		16 01 35.0	
	comp=E,33nm,0.6s						
TURN				IAML		16 01 36.0	
	comp=N,37nm,0.2s						
BODT	**Bodrum**	**2.63**	**8**	PN	**Pn**	**16 01 04.4**	**+0.2**
DALY	**Dalyan (Mula)**	**2.78**	**31**	PN	**Pn**	**16 01 07.0**	**+0.9**
DALY	**Dalyan (Mula)**	**2.78**	**31**	*i* P	**Pn**	**16 01 07.4**	**+1.3**
DALY				*i* S	**Sn**	**16 01 37.4**	**-1.2**
DALY				IAML		16 01 41.0	
	comp=N,34nm,0.4s						
KSL	**Kastellorizon**	**2.80**	**52**	P	**Pn**	**16 01 07.0**	**+0.5**
KSL				S	**Sn**	**16 01 39.6**	**+0.4**
APE	**Apeiranthos**	**2.83**	**338**	PN	**Pn**	**16 01 06.2**	**-0.7**
FETY	**Fethiye**	**2.84**	**39**	PN	**Pn**	**16 01 07.3**	**+0.3**
FETY	**Fethiye**	**2.84**	**39**	*i* P	**Pn**	**16 01 06.6**	**-0.4**
FETY				*i* S	**Sn**	**16 01 39.8**	**-0.3**
FETY				IAML		16 01 43.0	
	comp=E,12nm,0.6s						
FETY				IAML		16 01 47.0	
	comp=N,14nm,0.4s						
AKAS	**Kas**	**2.86**	**51**	PN	**Pn**	**16 01 08.7**	**+1.2**
AKAS	**Kas**	**2.86**	**51**	*i* P	**Pn**	**16 01 08.5**	**+1.0**
AKAS				*i* S	**Sn**	**16 01 39.3**	**-1.7**
AKAS				IAML		16 01 42.0	
	comp=N,33nm,0.4s						
AKAS				IAML		16 01 48.0	
	comp=E,28nm,0.4s						
YER	**Yerkesik**	**2.92**	**23**	PN	**Pn**	**16 01 08.8**	**+0.7**
MULA	**Mugla, Merkez-**	**3.04**	**23**	*i* P	**Pn**	**16 01 12.3**	**+2.5**
MULA				IAML		16 01 48.0	
	comp=E,30nm,0.4s						
MULA				IAML		16 01 58.0	
	comp=N,12nm,0.5s						
SLUM	**Salum**	**3.26**	**206**	P	**Pn**	**16 01 13.9**	**+1.1**
	baz=205						
CAEL	**Denizli, Camel**	**3.33**	**36**	*i* P	**Pn**	**16 01 15.3**	**+1.3**
CAEL				*i* S	**Sn**	**16 01 53.2**	**+0.6**
CAEL				IAML		16 01 55.0	
	comp=N,31nm,0.6s						
CAEL				IAML		16 01 58.0	
	comp=E,44nm,0.5s						
ELL	**Elmali**	**3.38**	**46**	PN	**Pn**	**16 01 16.1**	**+1.5**
ELL	**Elmali**	**3.38**	**46**	P	**Pn**	**16 01 15.7**	**+1.1**
TAVA	**DENIZLI_Tavas**	**3.44**	**28**	*i* P	**Pn**	**16 01 17.4**	**+2.0**
TAVA				*i* S	**Sn**	**16 01 53.9**	**-1.3**
TAVA				IAML		16 01 56.0	
	comp=N,19nm,0.2s						
TAVA				IAML		16 01 57.0	
	comp=E,19nm,0.2s						
GOLH	**Golhisar**	**3.54**	**38**	*i* P	**Pn**	**16 01 18.6**	**+1.8**
GOLH				*i* S	**Sn**	**16 01 58.9**	**+1.2**
GOLH				IAML		16 02 01.0	
	comp=N,23nm,0.4s						
GOLH				IAML		16 02 02.0	
	comp=E,19nm,0.2s						
KTHA	**Kythira Island**	**3.59**	**301**	P	**Pn**	**16 01 18.2**	**+0.9**
OSC1	**CSNet OBS 1**	**3.79**	**103**	P	**Pn**	**16 01 20.3**	**+0.2**
OSC1				S	**Sn**	**16 02 03.5**	**-0.2**
KORT	**Korkueli**	**3.81**	**47**	PN	**Pn**	**16 01 22.3**	**+1.8**
BCK	**Bucak**	**4.26**	**44**	PN	**Pn**	**16 01 28.5**	**+1.8**
AKMS	**Akamas**	**4.55**	**81**	P	**Pn**	**16 01 31.1**	**+0.7**
AKMS				S	**Sn**	**16 02 21.2**	**-1.1**
AKMS				AML	AML	16 02 21.3	
	comp=E,0.7nm,0.5s						
AKMS				AML	AML	16 02 21.3	
	comp=E,0.7nm,0.5s						
AKMS				AML	AML	16 02 22.6	
	comp=E,0.5nm,1.2s						
AKMS				AML	AML	16 02 22.6	
	comp=E,0.5nm,1.2s						
OSC2	**CSNet OBS 4**	**4.71**	**105**	P	**Pn**	**16 01 34.5**	**+1.8**
NATA	**Nata**	**4.72**	**84**	P	**Pn**	**16 01 33.2**	**+0.3**
SZAC	**Souni**	**4.98**	**85**	P	**Pn**	**16 01 37.2**	**+0.7**
SZAC				S	**Sn**	**16 02 32.3**	**-0.7**
SZAC				AML	AML	16 02 33.0	
	comp=E,0.4nm,0.4s						
SZAC				AML	AML	16 02 33.0	
	comp=E,0.4nm,0.4s						
SZAC				AML	AML	16 02 35.0	
	comp=E,0.4nm,0.5s						
SZAC				AML	AML	16 02 35.0	
	comp=E,0.4nm,0.5s						
ASGA	**Asgata**	**5.28**	**85**	P	**Pn**	**16 01 41.5**	**+0.9**
SWA2		**5.33**	**193**	P	**Pn**	**16 01 42.5**	**+1.3**
	baz=193						
SWA2				S	**Sn**	**16 02 39.2**	**-2.4**
	baz=193						
CSS	**Mathiatis**	**5.36**	**83**	P	**Pn**	**16 01 42.1**	**+0.5**
MVOU	**Mavrovouni**	**5.61**	**82**	P	**Pn**	**16 01 45.7**	**+0.6**
RYAN	**Fayoum**	**6.09**	**151**	P	**Pn**	**16 01 53.1**	**+1.4**
	baz=150						
KOT	**Kottamia**	**6.17**	**136**	P	**Pn**	**16 01 54.6**	**+1.7**
	baz=136						
HSAF	**As Saff**	**6.25**	**139**	P	**Pn**	**16 01 55.3**	**+1.3**
	baz=139						
HHAG	**Hagoal**	**6.31**	**134**	P	**Pn**	**16 01 56.8**	**+2.0**
	baz=134						
GLL	**Jalalah**	**6.37**	**138**	P	**Pn**	**16 01 56.7**	**+1.1**
	baz=138						
SUZ	**Suez**	**6.84**	**131**	P	**Pn**	**16 02 03.3**	**+1.3**
	baz=131						
ZAF	**Zafarana**	**7.07**	**135**	P	**Pn**	**16 02 07.0**	**+1.9**
	baz=135						
GRB	**Gharib**	**7.98**	**139**	P	**Pn**	**16 02 18.2**	**+0.6**
	baz=139						
HBST	**Basata**	**8.49**	**126**	P	**Pn**	**16 02 25.5**	**+0.9**
	baz=126						
AKASG	**Malin Array Be**	**16.33**	**5**	P	**Pn**	**16 04 11.9**	**+1.2**
	comp=E,0.5nm,0.3s,baz=193,slow=10,SNR=4.9						
TORD	**Torodi Ar. Bea**	**31.14**	**233**	P	**P**	**16 06 40.4**	**+0.5**
	comp=E,1.5nm,0.5s,baz=38,slow=8.2,SNR=9.3						
ARCES	**ARCESS Array B**	**35.14**	**359**	P	**P**	**16 07 11.5**	**-2.9**
	comp=E,1.7nm,0.7s,baz=173,slow=8.2,SNR=4.5						
MKAR	**Makanchi Array**	**43.01**	**56**	P	**P**	**16 08 21.2**	**+0.9**
	comp=E,0.2nm,0.5s,baz=273,slow=5.7,SNR=3.1						

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*IDC **04** 16:10:14.5±1.0, 28°.62N×103°.97E, h0^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.4/38, mbtmp3.4/8, ML3.4/2, MS3.1/2, Ms1 3.2/2, ms1mx2.7/29, Error ellipse: s-maj=31.9km s-min=19.6km az=69.0*
ISC 04 16:10:19.5±0.9**, 28°.6N**±0°.1×**104°.0E**±0°.2**, h35**^{km}**, n9, σ0^s.92**/8**, mb3.6**/6**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.11**	**205**	Pn	**Pn**	**16 12 55.8**	**-0.1**
	0.1nm,0.3s,baz=14,slow=11,SNR=4.4						
CMAR				LR	LR	16 16 37.0	
	comp=Z,21nm,19.8s,baz=344,slow=34						
SONM	**Songino Array**	**19.28**	**5**	P	**P**	**16 14 41.3**	**+0.1**
	0.1nm,0.3s,baz=185,slow=11,SNR=2.8						
KSRS	**Korea Array**	**21.89**	**60**	P	**P**	**16 15 08.9**	**-0.5**
	1.6nm,0.8s,baz=244,slow=10.0,SNR=6.6						
MKAR	**Makanchi Array**	**24.82**	**323**	P	**P**	**16 15 39.5**	**+1.2**
	1.0nm,0.7s,baz=123,slow=12,SNR=8.0						
WRA	**Warramunga Arr**	**56.50**	**145**	P	**P**	**16 19 59.4**	**+1.1**
	0.4nm,0.5s,baz=337,slow=8.2,SNR=9.1						
AKASG	**Malin Array Be**	**59.00**	**314**	P	**P**	**16 20 14.6**	**-0.9**
	0.5nm,0.5s,baz=64,slow=6.9,SNR=2.4						
ASAR	**Alice Springs**	**59.45**	**148**	P	**P**	**16 20 18.4**	**-0.5**
	0.3nm,0.4s,baz=326,slow=6.8,SNR=16						
GERES	**GERESS Array B**	**69.20**	**315**	LR	LR	16 54 41.1	
	comp=Z,68nm,18.8s,baz=298,slow=38						
YKA	**Yellowknife Ar**	**84.10**	**17**	P	**P**	**16 22 46.4**	**0.0**
	0.1nm,0.6s,baz=340,slow=4.8,SNR=2.3						

IDC 04 16:27:29.9±1.5**, 1°.97N**×**125°.88E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/24**, mbtmp3.3**/3**, Error ellipse: s-maj=176.8km s-min=13.4km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.30**	**160**	P	P	16 32 39.3	-0.3
	0.6nm,0.6s,baz=337,slow=10,SNR=9.6						
ASAR	**Alice Springs**	**26.65**	**163**	P	P	16 33 11.7	+1.1
	0.2nm,0.6s,baz=345,slow=8.7,SNR=4.6						
MKAR	**Makanchi Array**	**58.52**	**326**	P	P	16 37 28.1	-0.1
	0.1nm,0.5s,baz=120,slow=7.9,SNR=4.5						

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*IDC **04** 16:48:51.9±0.5, 35°.36N×25°.68E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.3/39, mbtmp3.6/5, Error ellipse: s-maj=26.9km s-min=7.7km az=149.0*
*ISK **04** 16:48:51.5, 35°.04N×25°.85E, h5^{km}, ML3.1/11*
*THE **04** 16:48:51.9, 35°.08N×25°.86E, h2^{km}±1^{km}, ML3.1/4, Error ellipse: s-maj=1.8km s-min=0.3km az=182.0*
*ATH **04** 16:48:52.7, 35°.08N×25°.87E, h6^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=2.7km s-min=0.8km az=181.0*
ISC 04 16:48:52.7±0.9**, 35°.10N**±0°.04×**25°.87E**±0°.02**, h10**^{km}±7^{km}**, n70, σ0^s.80**/87**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.26**	**309**	P	**Pg**	**16 48 57.8**	**-0.3**
NPS				S	**Sg**	**16 49 02.3**	**+0.7**
NPS				AML	AML	16 49 03.1	
	comp=N,19007µm,0.3s						
NPS				AML	AML	16 49 05.3	
	comp=E,19700µm,0.4s						
NPS	**Neapolis**	**0.26**	**309**	P	**Pg**	**16 48 57.8**	**-0.3**
NPS				S	**Sg**	**16 49 02.3**	**+0.7**
NPS				AML	AML	16 49 03.1	
	comp=N,19007µm,0.3s						
NPS				AML	AML	16 49 05.3	
	comp=E,19700µm,0.4s						
NPS	**Neapolis**	**0.26**	**309**	P	**Pg**	**16 48 57.5**	**-0.5**
NPS				S	**Sg**	**16 49 02.4**	**+0.7**
	comp=E,9µm,0.3s						
ZKR	**Zakros**	**0.29**	**87**	P	**Pg**	**16 48 58.1**	**-0.4**
ZKR				S	**Sg**	**16 49 02.8**	**+0.4**
ZKR				AML	AML	16 49 03.2	
	comp=N,9456µm,0.6s						
ZKR				AML	AML	16 49 03.3	
	comp=E,24113µm,0.4s						
ZKR	**Zakros**	**0.29**	**87**	P	**Pg**	**16 48 58.1**	**-0.4**
ZKR				S	**Sg**	**16 49 02.8**	**+0.4**
ZKR				AML	AML	16 49 03.2	
	comp=N,9456µm,0.6s						
ZKR				AML	AML	16 49 03.3	
	comp=E,24113µm,0.4s						
ZKR	**Zakros**	**0.29**	**87**	P	**Pg**	**16 48 57.9**	**-0.6**
ZKR				S	**Sg**	**16 49 02.6**	**+0.2**
	comp=E,8µm,0.5s						
ZKR	**Zakros**	**0.29**	**87**	PG	**Pg**	**16 48 58.1**	**-0.4**
ZKR				SG	**Sg**	**16 49 03.0**	**+0.6**
LAST	**Lasithi**	**0.32**	**281**	P	**Pg**	**16 48 58.6**	**-0.6**
LAST				S	**Sg**	**16 49 04.1**	**+0.6**
LAST				AML	AML	16 49 04.7	
	comp=N,12948µm,0.4s						
LAST				AML	AML	16 49 05.3	
	comp=E,4229µm,0.4s						
LAST	**Lasithi**	**0.32**	**281**	P	**Pg**	**16 48 58.6**	**-0.6**
LAST				S	**Sg**	**16 49 04.1**	**+0.6**
LAST				AML	AML	16 49 04.7	
	comp=N,12948µm,0.4s						
LAST				AML	AML	16 49 05.3	
	comp=E,4229µm,0.4s						
LAST	**Lasithi**	**0.32**	**281**	P	**Pg**	**16 48 58.5**	**-0.6**
LAST				S	**Sg**	**16 49 03.9**	**+0.4**
HRKL	**Herakleio**	**0.66**	**289**	PG	**Pg**	**16 49 04.7**	**-0.8**
HRKL				SG	**Sb**	**16 49 14.4**	**-1.1**
IDI	**Anoyia**	**0.82**	**284**	P	**Pg**	**16 49 07.7**	**-0.9**
IDI				AML	AML	16 49 33.1	
	comp=N,892µm,0.6s						
IDI				AML	AML	16 49 35.6	
	comp=E,779µm,0.7s						
IDI	**Anoyia**	**0.82**	**284**	P	**Pg**	**16 49 07.7**	**-0.9**
IDI				AML	AML	16 49 33.1	
	comp=N,892µm,0.6s						
IDI				AML	AML	16 49 35.6	
	comp=E,779µm,0.7s						
IDI	**Anoyia**	**0.82**	**284**	P	**Pg**	**16 49 08.1**	**-0.4**
IDI				S	**Sb**	**16 49 20.1**	**-0.1**
SIVA	**Sivas**	**0.87**	**265**	P	**Pg**	**16 49 08.8**	**-0.6**
SIVA				S	**Sb**	**16 49 21.3**	**-0.2**
SIVA				AML	AML	16 49 26.6	
	comp=N,2416µm,0.6s						
SIVA				AML	AML	16 49 35.2	
	comp=E,2300µm,0.8s						
SIVA	**Sivas**	**0.87**	**265**	P	**Pg**	**16 49 08.8**	**-0.6**
SIVA				S	**Sb**	**16 49 21.3**	**-0.2**
SIVA				AML	AML	16 49 26.6	
	comp=N,2416µm,0.6s						
SIVA				AML	AML	16 49 35.2	
	comp=E,2300µm,0.8s						
SIVA	**Sivas**	**0.87**	**265**	P	**Pg**	**16 49 08.9**	**-0.6**
SIVA				S	**Sb**	**16 49 21.7**	**+0.2**
	comp=E,1µm,0.6s						
KARP	**Karpathos**	**1.15**	**67**	P	**Pg**	**16 49 13.5**	**-1.3**
KARP	**Karpathos**	**1.15**	**67**	P	**Pg**	**16 49 13.5**	**-1.3**
KARP	**Karpathos**	**1.15**	**67**	P	**Pg**	**16 49 13.3**	**-1.5**
KARP				S	**Sn**	**16 49 30.4**	**-0.3**
	comp=E,728nm,0.6s						
KARP	**Karpathos**	**1.15**	**67**	PN	**Pn**	**16 49 14.6**	**-0.3**
KARP				SN	**Sn**	**16 49 31.4**	**+0.7**
SANT	**Santorini**	**1.31**	**346**	P	**Pn**	**16 49 16.2**	**-0.9**
SANT	**Santorini**	**1.31**	**346**	P	**Pn**	**16 49 16.2**	**-0.9**
SANT	**Santorini**	**1.31**	**346**	PN	**Pg**	**16 49 17.7**	**-0.2**
THR6	**Thira Island,**	**1.31**	**343**	P	**Pb**	**16 49 17.2**	**-0.3**
THR6	**Thira Island,**	**1.31**	**343**	P	**Pb**	**16 49 17.2**	**-0.3**
THR8	**Santorini-Mono**	**1.34**	**347**	P	**Pg**	**16 49 17.8**	**-0.6**
THR8	**Santorini-Mono**	**1.34**	**347**	P	**Pg**	**16 49 17.8**	**-0.6**
SNT5	**Nea Kammeni, S**	**1.36**	**344**	P	**Pn**	**16 49 17.8**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.36**	**344**	P	**Pn**	**16 49 17.8**	**+0.1**
THR3	**Thira Island,**	**1.36**	**344**	P	**Pg**	**16 49 18.3**	**-0.5**
THR3	**Thira Island,**	**1.36**	**344**	P	**Pg**	**16 49 18.3**	**-0.5**
VAM	**Vamos**	**1.40**	**283**	P	**Pn**	**16 49 17.9**	**-0.4**
VAM				AML	AML	16 49 45.0	
	comp=N,861µm,0.3s						
VAM				AML	AML	16 49 53.4	
	comp=E,797µm,1.0s						
VAM	**Vamos**	**1.40**	**283**	P	**Pn**	**16 49 17.9**	**-0.4**
VAM				AML	AML	16 49 45.0	
	comp=N,861µm,0.3s						
VAM				AML	AML	16 49 53.4	
	comp=E,797µm,1.0s						
CMBO	**Columbo, Santo**	**1.42**	**345**	P	**Pn**	**16 49 18.8**	**+0.2**
CMBO	**Columbo, Santo**	**1.42**	**345**	P	**Pn**	**16 49 18.8**	**+0.2**
IMMV	**Iera Moni Meta**	**1.58**	**284**	P	**Pn**	**16 49 20.8**	**0.0**
IMMV				AML	AML	16 49 49.0	
	comp=E,837µm,0.7s						
IMMV				AML	AML	16 49 59.1	
	comp=N,690µm,1.1s						
IMMV	**Iera Moni Meta**	**1.58**	**284**	P	**Pn**	**16 49 20.8**	**0.0**
IMMV				AML	AML	16 49 49.0	
	comp=E,837µm,0.7s						
IMMV				AML	AML	16 49 59.1	
	comp=N,690µm,1.1s						
KOSK	**Kos Island**	**1.88**	**28**	PN	**Pb**	**16 49 25.9**	**-1.2**
APE	**Apeiranthos**	**1.98**	**352**	P	**Pn**	**16 49 25.5**	**-0.9**
APE	**Apeiranthos**	**1.98**	**352**	P	**Pn**	**16 49 25.5**	**-0.9**
APE	**Apeiranthos**	**1.98**	**352**	PN	**Pn**	**16 49 26.5**	**+0.1**
ARG	**Arkhangelos**	**2.15**	**58**	P	**Pn**	**16 49 29.0**	**+0.3**
ARG	**Arkhangelos**	**2.15**	**58**	P	**Pn**	**16 49 29.0**	**+0.3**
ARG	**Arkhangelos**	**2.15**	**58**	PN	**Pn**	**16 49 29.5**	**+0.9**
BODT	**Bodrum**	**2.28**	**30**	PN	**Pn**	**16 49 31.6**	**+1.1**
TURN	**Turunc**	**2.56**	**48**	PN	**Pn**	**16 49 35.4**	**+1.2**
KTHA	**Kythira Island**	**2.56**	**298**	P	**Pn**	**16 49 33.9**	**-0.4**
KTHA	**Kythira Island**	**2.56**	**298**	P	**Pn**	**16 49 33.9**	**-0.4**
YER	**Yerkesik**	**2.82**	**43**	PN	**Pn**	**16 49 39.2**	**+1.3**
DALY	**Dalyan (Mula)**	**2.84**	**52**	PN	**Pn**	**16 49 39.4**	**+1.3**
VLI	**Veliai**	**2.87**	**305**	P	**Pn**	**16 49 38.4**	**-0.1**
VLI	**Veliai**	**2.87**	**305**	P	**Pn**	**16 49 38.4**	**-0.1**
AKAS	**Kas**	**3.25**	**69**	PN	**Pn**	**16 49 45.1**	**+1.3**
URLA	**Izmir**	**3.31**	**10**	PN	**Pn**	**16 49 46.2**	**+1.6**
DION	**Dionisos Attik**	**3.36**	**333**	P	**Pn**	**16 49 45.0**	**-0.2**
DION	**Dionisos Attik**	**3.36**	**333**	P	**Pn**	**16 49 45.0**	**-0.2**
KLV	**Kalavryta, Ach**	**4.19**	**316**	P	**Pn**	**16 49 57.6**	**+0.9**
KLV	**Kalavryta, Ach**	**4.19**	**316**	P	**Pn**	**16 49 57.6**	**+0.9**
DRO	**Drossia**	**4.39**	**312**	P	**Pn**	**16 50 01.1**	**+1.7**
DRO	**Drossia**	**4.39**	**312**	P	**Pn**	**16 50 01.1**	**+1.7**
ANX	**Ano Chora**	**4.71**	**319**	P	**Pn**	**16 50 04.7**	**+0.9**
ANX	**Ano Chora**	**4.71**	**319**	P	**Pn**	**16 50 04.7**	**+0.9**
AGG	**Agios Georgios**	**4.83**	**325**	P	**Pn**	**16 50 07.1**	**+1.7**
AGG	**Agios Georgios**	**4.83**	**325**	P	**Pn**	**16 50 07.1**	**+1.7**
ESDC	**Sonseca Array**	**24.08**	**290**	P	**P**	**16 54 07.0**	**-1.4**
	comp=N,0.3nm,0.5s,baz=82,slow=9.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**30.89**	**231**	P	**P**	**16 55 10.6**	**+1.1**
	comp=N,0.4nm,0.5s,baz=29,slow=8.2,SNR=3.0						
KURBB	**Kurchatov Arra**	**40.71**	**51**	P	**P**	**16 56 33.3**	**0.0**
	comp=N,1.2nm,0.6s,baz=276,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**43.33**	**57**	P	**P**	**16 56 55.6**	**+0.8**
	comp=N,0.7nm,0.5s,baz=275,slow=7.5,SNR=11						
ZALV	**Zalesovo Beam**	**44.63**	**46**	P	**P**	**16 57 05.1**	**0.0**
	comp=N,0.5nm,0.4s,baz=258,slow=7.1,SNR=3.1						

IDC **04** *17:08:47.8±1.8, 0.°93N×125.°60E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.3/41, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=119.5km s-min=23.8km az=67.0*
DJA **04** *17:08:55.3±1.3, 1°N±5°×12°5E±°, h16^{km}±12^{km}, M4.2/12, mb4.3/4, MLv4.2/12*
ISC 04 17:08:48.8±1.6**, 0.°9N**±0.°1×**125.°8E**±0.°1**, h10**^{km}**, n15, σ1^{s}17**/14**, mb3.4**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.56	96	P	Pg	17 09 28.0	+9.1
KMSI	Cibinong	1.87	259	P	Pn	17 09 19.7	-1.2
GTOI	Gorontalo	2.82	264	P	Pn	17 09 35.7	+1.7
SANI	Sanana	2.98	177	P	Pn	17 09 36.3	+0.1
LUWI	Luwuk	3.62	237	P	Pn	17 09 45.7	+0.7
MRSI	Marisa	3.90	263	P	Pn	17 09 48.6	-0.2
APSI	Ampana	4.55	246	P	Pn	17 09 58.5	+0.7
MPSI	Mapaga	5.94	264	P	Pn	17 10 16.8	-0.2
	0.1nm12nm,0.8s						
TTSI	Tana Toraja	7.18	236	P	Pn	17 10 34.5	+0.5
	0.4nm26nm,0.6s						
SPSI	Sidrap Palu	7.76	231	P	Pn	17 10 42.1	+0.1
	0.1nm20nm,0.7s						
BNSI	Bone	7.79	227	P	Pn	17 10 41.7	-0.6
FITZ	Fitzroy Crossi	18.92	181	P	P	17 13 08.4	-1.6
	0.1nm,0.3s,baz=354,slow=10,SNR=2.8						
WRA	Warramunga Arr	22.38	159	P	P	17 13 47.3	-0.2
	0.7nm,0.5s,baz=338,slow=11,SNR=18						
ASAR	Alice Springs	25.70	163	P	P	17 14 21.9	+2.5
	0.3nm,0.3s,baz=335,slow=6.4,SNR=24						
MKAR	Makanchi Array	59.33	327	P	P	17 18 50.8	-0.3
	0.1nm,0.3s,baz=123,slow=7.7,SNR=6.1						

NEIC **04** *17:34:33.0±2.4, 36.°77N±0.°05×141.°48E±0.°10, h10^{km}±2^{km}, mb4.3/3, Error ellipse: s-maj=13.7km s-min=8.1km az=100.0*
JMA **04** *17:34:34.8±0.1, 36.°79N×141.°31E, h34^{km}±2^{km}, M4.3*
JMA Felt I J1.
NIED **04** *17:34:34.8, 36.°79N×141.°31E, h34^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.72; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$1.08; $M_{r\theta}$0.43; $M_{\theta\phi}$0.17; $M_{\phi r}$-0.30; Fault plane solution: $M_0$1.10000×10^{15} NP1: ϕ_s338.00000°, δ61.00000°, λ-128.00000°. NP2: ϕ_s217.00000°, δ47.00000°, λ-42.00000°.*
IDC **04** *17:34:36.3±0.6, 36.°71N×141.°27E, h27^{km}±3^{km}, mb3.7/15, mb1 4.0/20, mb1mx3.8/41, mbtmp4.0/20, ML3.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/39 Error ellipse: s-maj=14.8km s-min=13.4km az=99.0*
ISC 04 17:34:36.1±0.6**, 36.°80N**±0.°04×**141.°27E**±0.°05**, h28**^{km}±4^{km}**, n66, σ1^{s}46**/74**, mb4.3**/27**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.48	308	P	Pb	17 34 45.4	-0.8
ONAJ				S	Sb	17 34 52.3	-0.7
JHO	Hitachi	0.60	251	P	Pn	17 34 46.8	-1.8
JHO				S	Sn	17 34 55.4	-2.0
JFFD	Fukushimafurud	0.64	297	P	Pn	17 34 47.5	-1.7
JFK	Kawauchi	0.64	331	P	Pn	17 34 47.6	-1.8
JFK				S	Sn	17 34 56.2	-2.5
JHYU	Hitachinakayam	0.72	230	P	Pn	17 34 48.5	-1.8
JHYU				S	Sn	17 34 58.4	-2.0
JFT	Otama	1.03	314	P	Pb	17 34 54.4	-0.9
JYT	Yasato	1.04	237		Pn	17 34 53.4	-1.3
JMM	Marumori	1.13	340	P	Pn	17 34 54.7	-1.2
JMM				S	Sn	17 35 09.4	-1.1
JMM	Marumori	1.13	340		Pn	17 34 54.5	-1.4
JFY	Yanaizu	1.39	296	P	Pb	17 34 59.8	-1.6
MJAR	Matsushiro Arr	2.48	265	Pn	Pn	17 35 15.2	+0.7
	4.7nm,0.3s,baz=89,slow=15,SNR=424						
MJAR				Sn	Sb	17 35 46.2	-3.7
	8.6nm,0.3s,baz=194,slow=29,SNR=5.5						
MAJO	Matsushiro	2.48	265	Pn	Pn	17 35 15.6	+1.1
MAT	Matsushiro	2.48	265	P	Pn	17 35 15.6	+1.1
MAT				S	Sn	17 35 45.5	+1.7
MJB9	Matsu-Tunnel	2.48	265		Pn	17 35 15.8	+1.2
JSD	Sado	2.69	298		Pn	17 35 17.6	+0.1
JSG	Sagara	3.29	231		Pn	17 35 25.9	+0.3
JGF	Kuroka	3.38	250	Pn	Pn	17 35 28.8	+1.8
INU	Inuyama	3.74	248	Pn	Pn	17 35 33.7	+1.8
JHJ2	Mitsune	3.87	198	Pn	Pn	17 35 32.2	-1.5
JHJ	Hachijo jima 2	3.87	199	Pn	Pn	17 35 34.3	+0.6
	49nm,0.3s,baz=331,slow=23,SNR=9.6						
JHJ				Sn	Sn	17 36 19.3	+1.0
	52nm,0.3s,baz=37,slow=20,SNR=1.9						
JTM	Tenmabayashi	3.98	358	Pn	Pn	17 35 35.7	+0.6
JWT	Wachi	4.99	254	Pn	Pn	17 35 51.2	+2.1
ERM	Erimo	5.41	15	Pn	Pn	17 35 54.8	0.0
JMN	Monobe	6.78	245	Pn	Pn	17 36 14.7	+1.0
JHS	Saijyo	6.86	257	Pn	Pn	17 36 17.6	+2.9
ASAJ	Asahikawa	7.37	7	Pn	Pn	17 36 23.2	+1.4
	2.0nm,0.3s,baz=201,slow=15,SNR=12						
JKA	Kamikawa-asahi	7.37	7		Pn	17 36 20.6	-1.2
JNU	Nakatsue	9.29	250	LR	LR	17 40 53.6	
	comp=Z,84nm,20.7s,baz=63,slow=41						
JCJ	Chichijima	9.71	175	Pn	Pn	17 36 51.4	-2.5
	16nm,0.3s,baz=281,slow=11,SNR=5.5						
JCJ	Chichijima	9.71	175	Pn	Pn	17 36 51.7	-2.2
USRK	Ussuriysk Ar.	10.22	319	Pn	Pn	17 37 04.1	+3.4
	baz=168,slow=16,SNR=5.3						
KSRS	Korea Array	10.68	277	Pn	Pn	17 37 10.9	+3.8
	0.1nm,0.3s,baz=89,slow=14,SNR=8.3						
KSRS				LR	LR	17 40 30.9	
	comp=Z,63nm,20.7s,baz=32,slow=33						
KLR	Kul'dur	14.22	334	Pn	P	17 37 59.5	-3.0
	0.1nm,0.3s,baz=200,slow=15,SNR=1.9						
ENH	Enshi	27.20	265	P	P	17 40 16.8	-0.6
ENH				IAmb	IAmb	17 40 27.2	
	comp=Z,9.5nm,0.8s						
SONM	Songino Array	27.82	304	P	P	17 40 24.2	+1.3
	comp=Z,1.0nm,0.7s,baz=107,slow=9.3,SNR=8.0						
SONM				pP	pP	17 40 32.0	+0.9
	comp=Z,2.3nm,0.8s,baz=110,slow=9.1,SNR=11						
H11N2	WAKE ISLAND Hy	28.13	120	T	T	18 09 46.0	
	baz=313,slow=75,SNR=353						
H11N1	WAKE ISLAND Hy	28.14	120	T	T	18 09 55.7	
	baz=313,slow=75,SNR=430						
H11N3	WAKE ISLAND Hy	28.15	120	T	T	18 09 47.3	
	baz=313,slow=75,SNR=372						
H11S1	WAKE ISLAND Hy	28.83	122	T	T	18 10 36.7	
	baz=315,slow=76,SNR=285						
H11S3	WAKE ISLAND Hy	28.83	122	T	T	18 10 45.4	
	baz=315,slow=76,SNR=290						
H11S2	WAKE ISLAND Hy	28.85	122	T	T	18 10 44.7	
	baz=315,slow=76,SNR=181						
TIXI	Tiksi	35.50	353	P	P	17 41 30.6	+0.8
TIXI				IAmb	IAmb	17 41 32.9	
	comp=Z,3.2nm,0.7s						
SIJI	Sorong	38.62	196	P	P	17 41 56.5	-0.4
	comp=Z,1.9nm,0.5s,baz=346,slow=19,SNR=1.5						
CMAR	Chiang Mai Arr	41.33	255	P	P	17 42 20.2	+0.7
	comp=Z,0.4nm,0.7s,baz=40,slow=6.8,SNR=5.7						
ZALV	Zalesovo Beam	41.98	313	P	P	17 42 25.6	+1.2
	comp=Z,0.7nm,0.4s,baz=86,slow=7.6,SNR=4.6						
ZALV				pP	pP	17 42 33.2	+0.4
	comp=Z,3.0nm,0.6s,baz=99,slow=6.6,SNR=10						
MKAR	Makanchi Array	44.14	302	P	P	17 42 42.4	+0.4
	comp=Z,1.2nm,0.7s,baz=89,slow=9.5,SNR=15						
MKAR				pP	pP	17 42 50.6	+0.1
	comp=Z,2.9nm,0.7s,baz=88,slow=9.8,SNR=20						
MAKZ	Makanchi	44.35	302	P	P	17 42 44.8	+1.1
MAKZ				IAmb	IAmb	17 42 53.3	
	comp=Z,2.7nm,0.7s						
TAPN	Taplejung	45.84	274	*e*P	P	17 42 56.1	0.0
	comp=Z,4.1nm,0.4s						
ODAN	Odare	46.31	274	*e*P	P	17 43 00.2	+0.4
	comp=Z,6.4nm,0.6s						
RAMN	Ramite	46.91	274	*e*P	P	17 43 04.6	+0.2
	comp=Z,35nm,0.8s						
GUN	Gumba	47.06	276	*e*P	P	17 43 06.3	+0.5
	comp=Z,5.8nm,0.4s						
PKI	Pulchoki	47.59	276	*e*P	P	17 43 11.1	+1.3
	comp=Z,8.4nm,0.8s						
KKN	Kakani	47.59	276	*e*P	P	17 43 10.7	+1.0
	comp=Z,3.5nm,0.5s						
PKIN	Phulchoki	47.59	276	*e*P	P	17 43 10.8	+1.0
	comp=Z,2.4nm,0.4s						
GKN	Gorkha	48.02	277	*e*P	P	17 43 13.6	+0.7
	comp=Z,10nm,0.7s						
DANN	Dangsing	48.56	277	*e*P	P	17 43 18.3	+1.0
	comp=Z,20nm,0.7s						
ILAR	Eielson Array	49.75	32	P	P	17 43 26.5	+1.0
	comp=Z,0.9nm,0.8s,baz=270,slow=6.3,SNR=8.0						
ILAR				pP	pP	17 43 34.8	+0.7
	comp=Z,2.3nm,0.7s,baz=268,slow=6.4,SNR=16						
WRA	Warramunga Arr	56.82	188	P	P	17 44 17.3	-0.6
	comp=Z,1.7nm,0.5s,baz=6.5,slow=7.5,SNR=33						
ASAR	Alice Springs	60.55	188	P	P	17 44 43.5	-0.4
	comp=Z,1.9nm,0.8s,baz=6.6,slow=8.1,SNR=16						
YKA	Yellowknife Ar	64.06	30	P	P	17 45 07.6	+0.7
	comp=Z,0.6nm,1.1s,baz=310,slow=6.9,SNR=2.8						
ARCES	ARCESS Array B	64.17	339	P	P	17 45 09.2	+1.7
	comp=Z,6.0nm,1.1s,baz=57,slow=6.6,SNR=1.2						
FINES	FINESS Array B	68.96	332	P	P	17 45 38.7	+0.5
	comp=Z,3.9nm,0.9s,baz=124,slow=2.5,SNR=3.3						
FINES				pP	pP	17 45 47.5	+0.4
	comp=Z,3.2nm,0.7s,baz=62,slow=4.5,SNR=2.7						
AKASG	Malin Array Be	74.41	322	P	P	17 46 11.1	-0.1
	comp=Z,0.4nm,0.3s,baz=45,slow=6.0,SNR=6.0						
AKASG				pP	pP	17 46 19.8	-0.3
	comp=Z,0.6nm,0.4s,baz=46,slow=6.1,SNR=4.3						
NVAR	Mina Array Bea	75.22	53	P	P	17 46 17.9	+1.5
	comp=Z,0.6nm,0.7s,baz=288,slow=5.4,SNR=4.1						
NVAR				pP	PcP	17 46 26.7	-3.1
	comp=Z,1.2nm,0.8s,baz=290,slow=6.5,SNR=4.0						
PDAR	Pinedale Array	77.91	45	P	P	17 46 32.5	+1.0
	comp=Z,0.2nm,0.6s,baz=281,slow=5.1,SNR=2.6						
PDAR				pP	pP	17 46 41.2	+0.8
	comp=Z,0.6nm,0.8s,baz=285,slow=2.9,SNR=4.0						
GERES	GERESS Array B	82.85	328	P	P	17 46 56.8	-1.0
	comp=Z,0.2nm,0.4s,baz=5.1,slow=5.5,SNR=1.9						

IDC **04** *17:46:34.0±1.7, 4.°36S×102.°20E, h22^{km}±6^{km}, mb3.7/11, mb1 3.9/11, mb1mx3.6/29, mbtmp3.9/11, MS3.0/2, Ms1 3.0/2, ms1mx2.6/38, Error ellipse: s-maj=53.9km s-min=14.1km az=59.0*
DJA **04** *17:46:35.1±0.4, 5°S±3°×10°2E±°, h51^{km}±15^{km}, M4.6/22, mb4.7/7, mB5.1/2, MLv4.6/22, Mw(mB)4.5/2, MwMwp4.9/1, Mwp5.2/1*
NEIC **04** *17:46:36.4±1.3, 4.°44S±0.°08×102.°04E±0.°10, h55^{km}±13^{km}, mb4.6/9, Error ellipse: s-maj=16.2km s-min=8.7km az=53.0*
KLM **04** *17:46:38, 4.°46S×102.°06E, h40^{km}, mb4.3*
ISC 04 17:46:33.9±1.0**, 4.°63S**±0.°10×**101.°8E**±0.°1**, h37**^{km}**, n60, σ1^{s}70**/59**, mb4.3**/17**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.18	77		Pn	17 46 53.1	-0.7
MNAI	Manna	1.18	77	P	Pn	17 46 53.1	-0.7
KSI	Kapahiang	1.25	39	P	Pn	17 46 54.6	-0.2
MASI	Maura Aman, Be	1.54	16	P	Pn	17 46 59.3	+0.5
LHSI	Lahat	1.89	65	P	Pn	17 47 03.5	-0.1
LWLI	Liwa	2.27	100	P	Pn	17 47 09.5	+0.5
MDSI	Maura Dua	2.37	87	P	Pn	17 47 10.3	+0.1
KASI	Kota Agung	2.82	108	P	Pn	17 47 17.0	+0.6
KLSI		2.91	91	P	Pn	17 47 18.5	+0.8
PMBI	Palembang	3.41	60	Pn	Pn	17 47 22.7	-1.8
PMBI	Palembang	3.41	60	P	Pn	17 47 23.0	-1.5
JMBI	JAMBI	3.49	32	P	Pn	17 47 25.8	+0.1
SDSI	Sungai Dareh	3.69	354	P	Pn	17 47 30.3	+1.9
PDSI	Padang	3.93	340	P	Pn	17 47 34.2	+2.5
RGRI	Rengat	4.29	7	P	Pn	17 47 38.6	+2.0
CGJI	Cibinong	4.34	117	P	Pn	17 47 38.5	+1.2
PPBI	Pangkal Pinang	4.97	61	P	Pn	17 47 46.7	+0.7
BKNI	Bangkinang	4.98	351	P	Pn	17 47 48.2	+2.0
	0.5nm82nm,0.5s						
DBJI	Dramaga	5.28	111	P	Pn	17 47 51.2	+1.0
	0.6nm45nm,0.9s						
CBJI	Citeko	5.32	110	P	Pn	17 47 54.7	+3.9
	0.8nm248nm,0.9s						
MNSI	Mandailing Nat	5.83	337	P	Pn	17 47 59.5	+1.7
	0.2nm6μm890nm35nm,0.4s						
LEM	Lembang	6.18	111	Pn	Pn	17 48 05.8	+3.1
	2.8nm,0.3s,baz=324,slow=19,SNR=4.3						
LEM				Sn	Sn	17 49 17.2	+4.9
	2.9nm,0.3s,baz=320,slow=19,SNR=2.3						
LEM				LR	LR	17 50 46.2	
	comp=Z,155nm,21.2s,baz=249,slow=43						
CISI	Cisompet, Garu	6.64	116		Pn	17 48 09.2	+0.2
CISI	Cisompet, Garu	6.64	116	P	Pn	17 48 09.0	0.0
MYKOM	Kota Tinggi	6.70	18	P	Pn	17 48 14.0	+4.3
GSI	Gunungsitoli	7.25	324		Pn	17 48 19.2	+1.8
GSI	Gunungsitoli	7.25	324	P	Pn	17 48 19.4	+2.0
CMJI	Cimerak	7.31	116	P	Pn	17 48 18.1	0.0
	0.2nm42nm,1.2s						
PSI	Prapat	7.92	339	LR	LR	17 51 54.3	
	comp=Z,93nm,21.1s,baz=91,slow=41						
IPM	Ipoh	9.08	355	P	Pn	17 48 44.0	+1.5
UGM	Wanagama	9.26	111	Pn	Pn	17 48 46.4	+1.5
KULM	Kulim	9.92	353	Pn	Pn	17 48 54.6	+0.6
KULM	Kulim	9.92	353	P	Pn	17 48 56.0	+2.0
KSM	Kuching	10.44	55	P	Pn	17 49 00.0	-1.0
JAGI	Jajag, Banyuwa	12.84	108	Pn	Pn	17 49 32.3	-1.7
SPMM	Sapulut	17.33	58	P	P	17 50 34.0	-0.2
TOLI2	Tolitoli	19.80	74	Pn	Pn	17 51 00.9	-2.1
BATI	Baumata	22.36	106	P	P	17 51 27.2	-1.8
	21nm,0.4s,baz=180,slow=3.0,SNR=1.3						
SOEI	Soe	22.85	104	P	P	17 51 34.4	+0.2
CMAR	Chiang Mai Arr	23.11	353	P	P	17 51 35.9	-0.9
	1.1nm,0.7s,baz=181,slow=8.9,SNR=14						
FITZ	Fitzroy Crossi	26.88	122	P	P	17 52 11.8	+0.4
	4.4nm,1.0s,baz=325,slow=8.2,SNR=8.4						
FITZ				pP	pP	17 52 18.6	-2.6
	2.5nm,0.6s,baz=329,slow=12,SNR=1.9						
FITZ	Fitzroy Crossi	26.88	122	P	P	17 52 09.2	-2.2
H08S2	Diego Garcia H	29.30	263	T	T	18 23 04.3	
	baz=85,slow=76,SNR=55						
H08S3	Diego Garcia H	29.30	263	T	T	18 22 57.5	
	baz=85,slow=76,SNR=40						
H08S1	Diego Carcia H	29.31	263	T	T	18 22 50.9	
	baz=85,slow=76,SNR=34						
MTN	Manton Dam	30.08	108	P	P	17 52 38.0	-2.1
WB0	Warramunga Arr	35.12	118	P	P	17 53 24.5	+0.4
WB0				IAmb	IAmb	17 53 29.8	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	35.13	118	P	P	17 53 24.2	0.0
	comp=Z,0.4nm,0.3s,baz=303,slow=11,SNR=20						
WRA				pP	pP	17 53 30.1	-4.2
	comp=Z,0.6nm,0.3s,baz=309,slow=11,SNR=6.5						
WRAB	Tennant Creek	35.14	118	P	P	17 53 23.9	-0.4
WRAB				IAmb	IAmb	17 53 26.2	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	35.15	118	P	P	17 53 24.4	+0.1
WB2				IAmb	IAmb	17 53 38.1	
	comp=Z,14nm,1.4s						
WR0	Warramunga Arr	35.32	118	P	P	17 53 26.0	+0.2
WR0				IAmb	IAmb	17 53 45.9	
	comp=Z,8.6nm,1.4s						
ASAR	Alice Springs	36.27	125	P	P	17 53 35.0	+1.0
	comp=Z,0.9nm,0.7s,baz=302,slow=8.3,SNR=19						
ASAR				pP	pP	17 53 41.9	-2.1
	comp=Z,4.4nm,0.3s,baz=301,slow=7.7,SNR=40						
AS31	Alice Springs	36.27	125	P	P	17 53 36.0	+2.0
AS31				IAmb	IAmb	17 53 42.6	
	comp=Z,2.9nm,0.5s						
STKA	Stephens Creek	46.07	131	P	P	17 54 55.8	+1.4
	comp=Z,1.0nm,0.5s,baz=319,slow=11,SNR=2.8						
KSRS	Korea Array	48.42	28	P	P	17 55 12.1	-0.4
	comp=Z,0.6nm,0.6s,baz=228,slow=7.5,SNR=6.2						
SONM	Songino Array	52.40	4	P	P	17 55 43.5	+0.9
	comp=Z,0.9nm,0.6s,baz=184,slow=9.2,SNR=13						
MJAR	Matsushiro Arr	53.23	37	P	P	17 55 46.9	-1.9
	comp=Z,1.0nm,0.7s,baz=286,slow=6.3,SNR=5.0						
MKAR	Makanchi Array	54.04	344	P	P	17 55 55.9	+1.4
	comp=Z,0.8nm,0.5s,baz=152,slow=8.9,SNR=17						
USRK	Ussuriysk Ar.	55.66	26	P	P	17 56 05.8	-0.6
	comp=Z,1.4nm,0.4s,baz=222,slow=3.4,SNR=11						
ZALV	Zalesovo Beam	60.08	349	P	P	17 56 37.1	0.0
	comp=Z,1.7nm,0.5s,baz=173,slow=4.6,SNR=8.7						

GCG **04** *18:12:06.7±3.6, 12.°93N×95.°24W, h4^{km}±999^{km}, MD4.1*
IDC **04** *18:12:45.1±3.8, 14.°58N×91.°65W, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.6/32, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=124.8km s-min=43.5km az=31.0*
MEX **04** *18:12:51.5±0.6, 14.°33N×92.°22W, h83^{km}±12^{km}, MD4.1*
SNET **04** *18:12:51.8±1.0, 14.°19N×92.°29W, h49^{km}±19^{km}, ML3.9*
UCR **04** *18:12:52.0±0.9, 14.°19N×92.°27W, h49^{km}±17^{km}, ML3.7*
ISC 04 18:12:50.9±1.6**, 14.°15N**±0.°09×**92.°38W**±0.°06**, h43**^{km}±17^{km}**, n34, σ1^{s}09**/50**, mb3.6**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.76	8	*i* P	Pn	18 13 04.6	-0.7
THIG				*e*S	Sn	18 13 15.5	-0.1
RTAL	Retalhuleu	0.76	61	*e*P	Pn	18 13 04.8	-0.5
RTAL				*e*S	Sn	18 13 15.6	-0.1
HUEH	Huehuetenango	1.44	36	*e*P	Pn	18 13 14.8	+0.1
FUG	Fuego 3	1.52	79	*e*P	Pn	18 13 15.9	0.0
PCG	Pacaya	1.74	82	*e*P	Pn	18 13 19.3	+0.4
PCIG		1.74	332	*e*P	Pn	18 13 18.2	-0.5
PCIG				*i* S	Sn	18 13 38.1	-1.7
NBG	Las Nubes	2.02	77	*e*P	Pn	18 13 24.6	+1.8
CCIG	Comitan	2.13	6	*e*P	Pn	18 13 26.0	+1.8
CCIG				*i* S	Sn	18 13 50.2	+0.6
CEVE	Cerro Verde	2.69	97	*e*P	Pn	18 13 32.6	+0.6
CEVE				*e*S	Sn	18 14 04.5	+0.9
CEVE				IAML		18 14 10.4	
	comp=Z,910nm,0.4s						
CEVE	Cerro Verde	2.69	97	*e*P	Pn	18 13 32.6	+0.6
CEVE				*e*S	Sn	18 14 04.5	+0.9
CEVE				IAML		18 14 10.4	
	comp=Z,910nm,0.4s						
SBLS	San Blas	2.69	96	*e*P	Pn	18 13 32.4	+0.3
SBLS	San Blas	2.69	96	*e*P	Pn	18 13 32.4	+0.3
MRL	Marmol	2.77	70	*e*P	Pn	18 13 32.6	-0.4
MRL	Marmol	2.77	70	*e*P	Pn	18 13 32.6	-0.4
MRL	Marmol	2.77	70	*e*P	Pn	18 13 34.0	+1.0
JAYA	Jayaque - finc	2.89	99	*e*P	Pn	18 13 34.7	+0.1
JAYA				*e*S	Sn	18 14 07.0	-1.2
JAYA				IAML		18 14 13.6	
	comp=Z,416nm,0.3s						
JAYA	Jayaque - finc	2.89	99	*e*P	Pn	18 13 34.7	+0.1
JAYA				*e*S	Sn	18 14 07.0	-1.2
JAYA				IAML		18 14 13.6	
	comp=Z,416nm,0.3s						
MTO3	Montecristo	2.94	85	*e*P	Pn	18 13 36.1	+0.8
MTO3	Montecristo	2.94	85	*e*P	Pn	18 13 36.1	+0.8
TACO	Tacachico	2.94	93	*e*P	Pn	18 13 35.1	-0.2
TACO				*e*S	Sn	18 14 09.4	0.0
TACO	Tacachico	2.94	93	*e*P	Pn	18 13 35.1	-0.2
TACO				*e*S	Sn	18 14 09.4	0.0
PMON	Piamonte	3.01	98	*e*P	Pn	18 13 36.6	+0.4
PMON				*e*S	Sn	18 14 12.1	+1.0
PMON	Piamonte	3.01	98	*e*P	Pn	18 13 36.6	+0.4
PMON				*e*S	Sn	18 14 12.1	+1.0
LFRS	El Faro	3.27	99	*e*P	Pn	18 13 40.6	+0.8
LFRS	El Faro	3.27	99	*e*P	Pn	18 13 40.6	+0.8
COEG	Centro de Oper	3.44	98	*e*P	Pn	18 13 42.4	+0.3
COEG				*e*S	Sn	18 14 21.0	-0.7
COEG				IAML		18 14 33.5	
	comp=Z,166nm,0.4s						
COEG	Centro de Oper	3.44	98	*e*P	Pn	18 13 42.4	+0.3
COEG				*e*S	Sn	18 14 21.0	-0.7
COEG				IAML		18 14 33.5	
	comp=Z,166nm,0.4s						
PETF	Flores	3.67	41	*e*P	Pn	18 13 45.7	+0.5
CMIG	Matias Romero	3.79	321	Pn	Pn	18 13 47.0	+0.1
	comp=Z,0.9nm,0.3s,baz=150,slow=14,SNR=6.3						
CMIG				Sn	Sn	18 14 34.7	+4.5
	comp=Z,9.6nm,0.3s,baz=40,slow=17,SNR=4.5						
CMIG	Matias Romero	3.79	321	*i* P	Pn	18 13 47.2	+0.3
CMIG				*e*S	Sn	18 14 28.5	-1.7
ANMO	Albuquerque	24.29	331	P	P	18 18 05.4	+0.8
	comp=Z,0.5nm,0.4s,baz=137,slow=11,SNR=3.8						
NVAR	Mina Array Bea	33.32	321	P	P	18 19 26.2	+1.2
	comp=Z,0.6nm,0.7s,baz=139,slow=8.4,SNR=5.6						
YKA	Yellowknife Ar	50.80	347	P	P	18 21 44.5	-2.2
	comp=Z,0.4nm,0.6s,baz=146,slow=8.6,SNR=8.2						
CMAR	Chiang Mai Arr	145.73	341	PKPbc	PKPdf	18 32 25.2	-0.5
	comp=Z,1.0nm,0.7s,baz=337,slow=3.4,SNR=11						

NIC **04** *18:27:50.5±0.0, 35.°03N×33.°83E, h40^{km}±1^{km}, Ml2.9/4*
ISK **04** *18:27:51.5, 35.°22N×33.°71E, h18^{km}, ML2.8/14*
ISC 04 18:27:51.4±1.1**, 35.°08N**±0.°04×**33.°80E**±0.°03**, h33**^{km}±3^{km}**, n28, σ0^{s}74**/36**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVOU	Mavrovouni	0.15	246	P	Pn	18 27 57.4	+0.9
MVOU				S	Sb	18 28 02.8	+1.0
MVOU				AML	AML	18 28 03.5	
	7.0nm,0.5s						
MVOU				AML	AML	18 28 03.5	
	7.0nm,0.5s						
MVOU				AML	AML	18 28 03.5	
	4.9nm,0.3s						
MVOU				AML	AML	18 28 03.5	
	4.9nm,0.3s						
PARAL	Paralimni	0.21	114	P	Pn	18 27 57.4	-0.5
PARAL				AML	AML	18 28 02.6	
	7.8nm,0.2s						
PARAL				AML	AML	18 28 02.6	
	7.8nm,0.2s						
PARAL				S	Sb	18 28 03.0	+0.3
PARAL				AML	AML	18 28 04.3	
	6.6nm,0.4s						
PARAL				AML	AML	18 28 04.3	
	6.6nm,0.4s						
AKIN	Akıncılar- Kıb	0.28	257	PG	Pb	18 27 58.5	-0.5
ATHAL	Athalassa	0.34	281	P	Pb	18 27 59.8	+0.1
ATHAL				AML	AML	18 28 07.6	
	4.5nm,0.5s						
ATHAL				AML	AML	18 28 11.8	
	4.5nm,0.6s						
CSS	Mathiatis	0.40	253	PG	Pb	18 27 59.9	-0.7
CSS				SG	Sb	18 28 06.9	0.0
CSS	Mathiatis	0.40	253	P	Pb	18 27 59.9	-0.7
CSS				S	Sb	18 28 07.2	+0.3
ASGA	Asgata	0.54	237	P	Pn	18 28 01.9	-0.9
ASGA				AML	AML	18 28 13.7	
	3.7nm,0.9s						
ASGA				AML	AML	18 28 14.4	
	1.9nm,0.4s						
EREN	Erenkoy	0.54	34	PG	Pb	18 28 02.0	-0.7
LEF	Lefka	0.75	273	PG	Pn	18 28 05.4	-0.3
SZAC	Souni	0.82	247	P	Pn	18 28 06.7	-0.1
NATA	Nata	1.06	254	P	Pn	18 28 10.8	+0.9
AKKU	Akkuyu-Mersin	1.10	349	PG	Pn	18 28 10.4	-0.1
AKKU				SG	Sn	18 28 24.0	-0.5
IKL	Isikli	1.16	355	PG	Pn	18 28 10.9	-0.5
IKL				SG	Sn	18 28 25.8	-0.3
TEKE	Tekeli-Mersin	1.20	332	PG	Pn	18 28 11.7	-0.2
TEKE				SG	Sn	18 28 26.3	-0.7
AKMS	Akamas	1.21	267	P	Pn	18 28 13.4	+1.4
SILI	Silifke-Mersin	1.29	4	PN	Pn	18 28 13.4	+0.3
SILI				SN	Sn	18 28 29.3	+0.1
BERE	Bereket-Mersin	1.35	340	PN	Pn	18 28 13.9	-0.2
BERE				SN	Sn	18 28 30.2	-0.8
TEVE	Tevekalti-Mers	1.38	348	PN	Pn	18 28 14.5	0.0
TEVE				SN	Sn	18 28 31.1	-0.6
KIZK	Mersin	1.43	11	PN	Pn	18 28 15.5	+0.5
GAZI	Gazipasa	1.67	314	PN	Pn	18 28 18.6	+0.2
KRMN	Karaman	2.13	348	PN	Pn	18 28 25.2	+0.3
RCY	Rachaya	2.31	133	*e*P	Pn	18 28 25.0	-2.3
TAHT	Tahtakopru-Hat	2.33	56	PN	Pn	18 28 29.4	+1.9
KARA	Karaisali	2.40	25	PN	Pn	18 28 28.9	+0.5
CMRD	Camardi-Nigde	2.75	20	PN	Pn	18 28 34.3	+1.0
SEYD	Seydisehir-KON	2.81	326	PN	Pn	18 28 34.7	+0.5
KOZT	Kozan	2.90	34	PN	Pn	18 28 36.8	+1.5
MMLI	Mount Malkishu	2.96	152	PN	Pn	18 28 41.4	+5.2

IDC **04** *18:30:17.5±1.0, 5.°83N×125.°55E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/47, mbtmp3.5/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/24, Error ellipse: s-maj=64.8km s-min=19.7km az=74.0*
MAN **04** *18:30:21.9, 5.°47N×125.°42E, h43^{km}, MS3.1*
ISC 04 18:30:20.8±2.0**, 5.°61N**±0.°07×**125.°45E**±0.°06**, h15**^{km}±12^{km}**, n15, σ2^{s}11**/22**, mb3.5**/6**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.56	28	*e*P	Pn	18 30 36.3	+2.0
DDMP				*e*S	Sn	18 30 47.5	+4.3
SKMP	Bagumbayan, Su	1.27	315	*e*P	Pn	18 30 45.0	+0.9
SKMP				*e*S	Sg	18 31 02.6	+0.5
KCP	Kidapawan	1.43	346	⇑*i*P	Pg	18 30 49.4	+0.9
KCP				*i* S	Sg	18 31 06.8	-0.3
MATI	Mati	1.55	31	*e*P	Pb	18 30 48.9	-0.4
MATI				*e*S	Sg	18 31 08.5	-2.3
BUKP	Musuan	2.29	350	*e*P	Pb	18 31 00.7	-1.2

BUKP				*e*S	Sg	18 31 33.3	-1.1
CGP	**Cagayan de Oro**	**2.92**	**345**	⇓*e*P	Pb	18 31 12.8	+0.1
CGP				*e*S	Sb	18 31 50.7	+2.4
PAGZ	**Pagadian**	**3.02**	**317**	*e*P	Pn	18 31 09.0	+0.8
BUTP	**Butuan**	**3.34**	**3**	*e*P	Pn	18 31 15.1	+2.5
BUTP				*e*S	Sb	18 31 55.9	-4.4
FITZ	**Fitzroy Crossi** 3.8nm,1.0s,baz=342,slow=13,SNR=2.4	**23.56**	**180**	P	P	18 35 32.4	+1.5
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=341,slow=10,SNR=5.8	**26.86**	**161**	P	P	18 36 01.3	+0.2
ASAR	**Alice Springs** 0.3nm,0.5s,baz=339,slow=6.9,SNR=8.9	**30.25**	**164**	P	P	18 36 32.1	+0.8
ASAR	0.7nm,1.1s,baz=344,slow=2.7,SNR=3.2			PcP	PcP	18 39 31.1	-1.0
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=133,slow=8.8,SNR=4.4	**55.29**	**325**	P	P	18 39 52.6	-1.2
MSVF	**Nonsavu** comp=Z,39nm,20.7s,baz=164,slow=31	**56.86**	**115**	LR	LR	18 59 43.1	
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=127,slow=5.8,SNR=4.6	**59.48**	**327**	P	P	18 40 20.6	-2.6
ILAR	**Eielson Array** 0.3nm,0.8s,baz=254,slow=3.9,SNR=5.5	**83.97**	**26**	P	P	18 42 48.5	-1.8

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*TAP **04** 18:33:41.4,24°.19N×122°.52E,h44km,ML2.8,D*
*JMA **04** 18:33:41.1,24°.10N×122°.51E,h42km±3km,M2.1*
ISC 04 18:33:39.9±1.3,**24°.09N**±0°.02×**122°.53E**±0°.02,**h19**km±3km,
n94,σ0s.77/176,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.52**	**46**	P	Pn	18 33 52.2	-0.1
JYNG				S	Sn	18 34 00.0	-0.6
YOJ	**Yonaguni jima**	**0.57**	**49**	P	Pn	18 33 53.0	0.0
YOJ				S	Sn	18 34 01.8	-0.1
YOJ	**Yonaguni jima** baz=50	**0.57**	**49**	P	Pn	18 33 52.9	-0.1
YOJ	baz=50			*e*S	Sn	18 34 01.4	-0.5
ENA	**Nanau** baz=289	**0.80**	**295**	*i* P	Pg	18 33 55.7	+0.2
ENA	baz=289			*i* S	Sn	18 34 07.8	+0.3
TWC	**Suao** baz=305	**0.81**	**310**	P	Pb	18 33 55.8	+0.4
TWC	baz=305			S	Sb	18 34 05.6	-0.4
TWD	**Chiawan** baz=252	**0.86**	**270**	P	Pb	18 33 56.3	+0.2
TWD	baz=252			S	Sb	18 34 07.8	+0.6
NACB	**Ninganchiao** baz=257	**0.86**	**276**	P	Pb	18 33 56.7	+0.5
NACB	baz=257			*e*S	Sg	18 34 08.2	0.0
ETLH	**Xiulin Townshi** baz=271	**0.97**	**277**	*e*P	Pb	18 33 58.2	+0.2
ETLH	baz=271			*e*S	Sb	18 34 10.4	-0.1
NTC	**Toucheng** baz=317	**1.00**	**320**	*e*P	Pb	18 33 58.9	+0.4
NTC	baz=317			*e*S	Sb	18 34 11.6	+0.4
TWE	**Neicheng** baz=305	**1.01**	**309**	P	Pb	18 33 59.1	+0.3
TWE	baz=305			S	Sb	18 34 11.5	-0.1
ENTT	**Nioudou** baz=297	**1.04**	**302**	*e*P	Pb	18 33 59.7	+0.4
ENTT	baz=297			*e*S	Sb	18 34 13.2	+0.6
ESL	**Shilin** baz=240	**1.04**	**255**	P	Pb	18 33 59.1	-0.2
ESL	baz=240			*e*S	Sb	18 34 12.3	-0.3
NDT	**Datong Townshi** baz=285	**1.06**	**299**	*e*P	Pb	18 33 59.9	+0.3
NDT	baz=285			S	Sb	18 34 13.4	+0.3
TIPB	**Shuangxi** baz=332	**1.09**	**324**	*e*P	Pb	18 33 59.5	-0.7
TIPB	baz=332			*e*S	Sb	18 34 12.8	-1.2
EGFH	**Guangfu** baz=243	**1.10**	**248**	P	Pn	18 33 60.0	-0.2
EGFH	baz=243			S	Sb	18 34 14.7	+0.6
NNSB	**Datong** baz=283	**1.10**	**288**	*e*P	Pn	18 34 00.3	-0.2
NNSB	baz=283			S	Sb	18 34 14.8	+0.3
NNSH	**Datong** baz=283	**1.10**	**288**	*e*P	Pn	18 34 00.3	-0.1
NNSH	baz=283			S	Sb	18 34 14.5	0.0
NNS	**Nan Shan** baz=283	**1.12**	**288**	P	Pn	18 34 00.6	0.0
NNS	baz=283			S	Sb	18 34 14.8	0.0
IRIF	**Iriomote-Funau**	**1.12**	**77**	P	Pn	18 34 00.8	+0.3
IRIF				*e*S	Sb	18 34 15.1	+0.3
WHF	**Hehuan Shan** baz=256	**1.16**	**273**	*e*P	Pn	18 34 01.1	-0.4
WHF	baz=256			*e*S	Sb	18 34 15.6	-0.8
HATJ	**Hateruma jima**	**1.16**	**91**	P	Pb	18 34 02.2	+0.9
NWLT	**Wulai** baz=312	**1.16**	**306**	*e*P	Pn	18 34 01.3	+0.1
NWLT	baz=312			S	Sb	18 34 15.6	-0.5
HGSD	**Ruisui** baz=235	**1.18**	**240**	P	Pn	18 34 00.9	-0.5
HGSD	baz=235			S	Sb	18 34 15.5	-1.0
FUSS	**Fushou** baz=262	**1.19**	**278**	*e*P	Pn	18 34 01.8	+0.1
FUSS	baz=262			*e*S	Sn	18 34 17.9	+0.5
YHNB	**Yeheng** baz=295	**1.20**	**299**	P	Pn	18 34 02.0	+0.2
YHNB	baz=295			S	Sb	18 34 16.0	-1.3
NSK	**Sanguang** baz=295	**1.22**	**299**	P	Pn	18 34 02.2	+0.3
NSK	baz=295			S	Sb	18 34 17.0	-0.8
TWA	**Mucha** baz=326	**1.24**	**316**	*e*P	Pn	18 34 02.1	-0.1
TWA	baz=326			S	Sb	18 34 17.2	-1.1
CHGB	**Renai** baz=253	**1.24**	**269**	P	Pn	18 34 02.6	+0.2
CHGB	baz=253			S	Sb	18 34 18.7	+0.1
TWT	**Tachien** baz=261	**1.25**	**278**	P	Pb	18 34 03.4	+0.5
TWT	baz=261			S	Sb	18 34 18.8	0.0
EHY	**Hungye** baz=249	**1.25**	**243**	*e*P	Pn	18 34 02.5	+0.1
EHY	baz=249			S	Sb	18 34 18.4	-0.3
NHDH	**Xindian Distri** baz=324	**1.27**	**314**	*e*P	Pn	18 34 02.9	+0.4
NHDH	baz=324			*e*S	Sn	18 34 18.8	-0.2
TDCB	**Techi** baz=265	**1.27**	**278**	*e*P	Pn	18 34 03.0	+0.3
TATO	**Taipei** baz=323	**1.30**	**313**	*e*P	Pb	18 34 04.6	+0.9
TATO	baz=323			*e*S	Sn	18 34 19.6	-0.2
YULB	**Yu-li** baz=248	**1.33**	**239**	*e*P	Pn	18 34 03.8	+0.3
YULB	baz=248			*e*S	Sn	18 34 20.6	0.0
TWF1	**Yuli** baz=225	**1.35**	**237**	P	Pn	18 34 04.4	+0.7
TWF1	baz=225			S	Sn	18 34 21.5	+0.4
JKRS	**Kuro-shima**	**1.35**	**83**	P	Pb	18 34 05.0	+0.4
JKRS				*e*S	Sb	18 34 22.1	+0.5
TWS1	**Kuangyinshan** baz=324	**1.43**	**315**	*e*S	Sn	18 34 23.3	+0.2
FULB	**Fuli** baz=229	**1.44**	**232**	*e*P	Pb	18 34 06.5	+0.4
FULB	baz=229			*e*S	Sn	18 34 22.7	-0.7
WPL	**Puli Township** baz=263	**1.44**	**267**	P	Pb	18 34 06.0	-0.1
NTY	**Taoyuan** baz=319	**1.45**	**309**	*e*S	Sn	18 34 22.5	-1.0
NTST	**Danshui** baz=326	**1.46**	**318**	*e*S	Sn	18 34 23.3	-0.4
CHKT	**Chengkung** baz=224	**1.46**	**228**	*e*P	Pn	18 34 04.9	-0.2
CHKT	baz=224			S	Sn	18 34 22.0	-1.7
WHP	**Taichung City** baz=263	**1.46**	**278**	*e*P	Pb	18 34 07.0	+0.4
WHP	baz=263			*e*S	Sb	18 34 26.0	+1.2
DPDB	**Guoxing** baz=257	**1.47**	**268**	P	Pb	18 34 06.7	0.0
DPDB	baz=257			S	Sb	18 34 25.5	+0.5
SSLB	**Suanglung** baz=254	**1.48**	**259**	*e*P	Pn	18 34 06.3	+0.9
SSLB	baz=254			*e*S	Sn	18 34 23.5	-0.7
LIOB	**Emei** baz=288	**1.49**	**292**	*e*P	Pn	18 34 06.5	+0.8
LIOB	baz=288			*e*S	Sn	18 34 25.1	+0.4
JIJ	**Ishigaki jima**	**1.49**	**79**	P	Pn	18 34 05.9	+0.2
JIJ				S	Sn	18 34 23.9	-0.7
NSTT	**Nanjuang** baz=287	**1.50**	**291**	P	Pb	18 34 06.9	-0.2
NSTT	baz=287			S	Sn	18 34 24.4	-0.4
SMLT	**Sun Moon Lake** baz=258	**1.51**	**263**	*e*P	Pn	18 34 06.8	+0.9
TYC	**Yuchr** baz=259	**1.54**	**263**	*e*P	Pn	18 34 07.3	+0.9
TYC	baz=259			*e*S	Sn	18 34 25.5	-0.4
EDH	**Donghe** baz=216	**1.58**	**226**	*e*P	Pn	18 34 07.5	+0.6
EDH	baz=216			*e*S	Sn	18 34 26.0	-0.9
WHYT	**Xinyi Township** baz=244	**1.59**	**256**	*e*P	Pb	18 34 08.9	+0.3
WHYT	baz=244			*e*S	Sb	18 34 28.8	+0.5
TWQ1	**Liyutan** baz=275	**1.63**	**279**	*e*P	Pb	18 34 09.5	+0.1
TWQ1	baz=275			*e*S	Sn	18 34 28.7	+0.7
NSY	**Sanyi** baz=278	**1.65**	**282**	*e*P	Pb	18 34 09.2	-0.5
ELDTW	**Lidau** baz=234	**1.66**	**238**	P	Pn	18 34 08.4	+0.4
ELDTW	baz=234			S	Sn	18 34 27.7	-1.1
WJS	**Zhushan** baz=257	**1.67**	**261**	P	Pb	18 34 10.3	+0.3
WJS	baz=257			*e*S	Sg	18 34 33.2	-0.7
WWF	**Wufeng** baz=265	**1.68**	**269**	*e*P	Pb	18 34 09.7	-0.5
ALS	**Alishan** baz=246	**1.69**	**250**	*e*P	Pb	18 34 10.2	-0.2
ALS	baz=246			*e*S	Sn	18 34 30.9	+1.1
JISG	**Ishigakijimahi**	**1.69**	**73**	P	Pn	18 34 08.4	0.0
JISG				*e*S	Sn	18 34 29.0	-0.6
WNT	**Mingjian** baz=259	**1.71**	**263**	P	Pb	18 34 10.6	0.0
WNT	baz=259			S	Sb	18 34 31.8	+0.1
WNT1	**Nantou City** baz=260	**1.71**	**264**	*e*P	Pb	18 34 10.4	-0.2
WNT1	baz=260			*e*S	Sg	18 34 33.8	-1.2
LDUT	**Ludao** baz=212	**1.72**	**215**	*e*P	Pn	18 34 10.0	+1.3
LDUT	baz=212			*e*S	Sn	18 34 29.5	-0.6
LONT	**Longtian** baz=236	**1.75**	**228**	*e*S	Sn	18 34 31.1	+0.2
CHN5	**Tsauling** baz=250	**1.77**	**254**	*e*P	Pb	18 34 11.6	-0.2
CHN5	baz=250			S	Sb	18 34 33.6	+0.1
TWGBT	**Beinan** baz=234	**1.84**	**227**	*e*P	Pn	18 34 11.2	+0.7
TWGBT	baz=234			*e*S	Sn	18 34 32.6	-0.6
TWG	**Pinlang** baz=234	**1.84**	**227**	*e*P	Pn	18 34 11.6	+1.1
TWG	baz=234			*e*S	Sn	18 34 32.6	-0.7
WGK	**Gukeng** baz=254	**1.85**	**258**	*e*P	Pb	18 34 12.7	-0.4
WGK	baz=254			*e*S	Sb	18 34 35.6	-0.2
WDLH	**Douliu** baz=254	**1.87**	**258**	*e*P	Pb	18 34 12.7	-0.7
WDLH	baz=254			*e*S	Sb	18 34 37.7	+1.3
STYT	**Tauyuan** baz=230	**1.87**	**241**	*e*P	Pb	18 34 12.7	-0.8
STYT	baz=230			*e*S	Sn	18 34 35.4	+1.3
TPUB	**Ta-pu** baz=243	**1.91**	**246**	P	Pb	18 34 13.5	-0.7
TPUB	baz=243			S	Sb	18 34 37.9	+0.1
CHN4	**Tsaushan** baz=244	**1.93**	**248**	P	Pb	18 34 14.5	+0.1
CHN4	baz=244			S	Sb	18 34 38.2	+0.2
WTP	**Ta-pu** baz=241	**1.95**	**245**	P	Pb	18 34 14.3	-0.5
WTP	baz=241			S	Sb	18 34 39.0	+0.2
RLNB	**Erlin** baz=261	**2.00**	**265**	P	Pb	18 34 14.6	-1.0
RLNB	baz=261			*e*S	Sb	18 34 40.0	-0.1
WTK	**Tuku** baz=245	**2.00**	**259**	*e*P	Pb	18 34 14.8	-0.9
WTK	baz=245			*e*S	Sb	18 34 39.2	-1.0
CHY	**Chiayi** baz=250	**2.02**	**253**	*e*P	Pn	18 34 14.6	+1.7
CHY	baz=250			*e*S	Sb	18 34 41.5	+0.8
TWK	**Hsinying** baz=243	**2.05**	**247**	*e*P	Pb	18 34 15.7	-0.8
TWK	baz=243			S	Sb	18 34 40.5	-1.0
CHN1	**Nanshi** baz=241	**2.05**	**244**	P	Pb	18 34 16.1	-0.4
CHN1	baz=241			S	Sb	18 34 41.1	-0.5
SLGT	**Liugui** baz=228	**2.05**	**238**	*e*S	Sb	18 34 40.5	-1.0
JTJ	**Tarama**	**2.05**	**74**	P	Pn	18 34 14.1	+0.8
SGST	**Jiashian** baz=238	**2.05**	**241**	*e*P	Pn	18 34 14.8	+1.5
SGST	baz=238			*e*S	Sb	18 34 41.4	-0.3
ECL	**Taimali** baz=231	**2.08**	**225**	*e*P	Pn	18 34 14.2	+0.5
ECL	baz=231			*e*S	Sn	18 34 37.7	-1.3
WSF	**Szhu** baz=268	**2.16**	**258**	*e*P	Pn	18 34 16.7	+1.8
WSF	baz=268			*e*S	Sb	18 34 43.8	-1.1
ICHU	**Yijhu** baz=248	**2.19**	**251**	*e*P	Pb	18 34 17.6	-1.2
ICHU	baz=248			*e*S	Sn	18 34 44.0	+2.1
SSD	**Sandimen** baz=226	**2.20**	**233**	*e*P	Pb	18 34 17.7	-1.3
SSD	baz=226			*e*S	Sb	18 34 44.8	-1.1
TSMG	**Majia** baz=226	**2.22**	**232**	*e*P	Pb	18 34 17.8	-1.5
TSMG	baz=226			*e*S	Sn	18 34 43.4	+0.9
SCST	**Cishan** baz=247	**2.22**	**238**	*e*P	Pn	18 34 17.1	+1.4
SCST	baz=247			*e*S	Sb	18 34 46.5	-0.2
LAY	**Lan-yu** baz=203	**2.23**	**204**	*e*P	Pn	18 34 17.7	+1.9
LAY	baz=203			*e*S	Sn	18 34 41.1	-1.9
MASBT	**Mashibuluo** baz=225	**2.28**	**230**	*e*P	Pn	18 34 18.4	+1.8
MASBT	baz=225			*e*S	Sn	18 34 45.9	+1.8
EAST	**Anshuo** baz=220	**2.30**	**223**	*e*P	Pn	18 34 17.5	+0.7
EAST	baz=220			*e*S	Sn	18 34 43.9	-0.8
SCZT	**Fangliau** baz=220	**2.45**	**226**	*e*P	Pn	18 34 20.6	+1.8
SCZT	baz=220			*e*S	Sn	18 34 49.7	+1.3
SLIU	**Shizi** baz=226	**2.46**	**221**	*e*P	Pn	18 34 20.4	+1.5
SLIU	baz=226			*e*S	Sn	18 34 48.1	-0.3
WDGT	**Dungji** baz=250	**2.76**	**253**	*e*P	Pn	18 34 24.2	+1.1
WDGT	baz=250			*e*S	Sn	18 34 55.7	-0.2
PHUB	**P'eng-hu** baz=268	**2.77**	**259**	*e*P	Pn	18 34 24.8	+1.6
PHUB	baz=268			*e*S	Sn	18 34 56.0	-0.2
PNG	**Penghu** baz=256	**2.78**	**260**	*e*P	Pn	18 34 23.8	+0.4
PNG	baz=256			*e*S	Sn	18 34 56.9	+0.6

TAP 04 18:38:41.9,23°.19N×120°.75E,h13km,ML1.8,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan** baz=159	**0.03**	**172**	P	Pg	18 38 44.7	+0.4
STYT	baz=159			S	Sg	18 38 46.6	+0.6
WTP	**Ta-pu** baz=294	**0.14**	**294**	*e*P	Pb	18 38 45.9	-0.5
TPUB	**Ta-pu** baz=314	**0.16**	**314**	*e*P	Pg	18 38 46.2	+0.5
SGST	**Jiashian** baz=234	**0.19**	**236**	*e*P	Pg	18 38 46.5	+0.4
SGST	baz=234			*e*S	Sb	18 38 50.2	-0.6
CHN4	**Tsaushan** baz=317	**0.22**	**317**	P	Pb	18 38 47.4	-0.3
ELDTW	**Lidau** baz=91	**0.24**	**90**	P	Pb	18 38 48.5	+0.3
TWK	**Hsinying** baz=288	**0.26**	**287**	*e*P	Pb	18 38 48.0	-0.4
TWK	baz=288			*e*S	Sb	18 38 52.5	-0.3
ALS	**Alishan** baz=9.0	**0.32**	**9**	*e*P	Pb	18 38 49.3	-0.4

TAP 04 18:38:45.6,23°.21N×120°.75E,h10km,ML1.6,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan** baz=158	**0.05**	**166**	P	Pg	18 38 48.1	+0.5
STYT	baz=158			S	Sg	18 38 49.8	+0.7
WTP	**Ta-pu** baz=287	**0.13**	**287**	*i* P	Pg	18 38 49.1	+0.5
WTP	baz=287			S	Sg	18 38 51.5	+0.8
WTP	**Ta-pu** baz=294	**0.13**	**287**	*e*S	Pg	18 38 48.9	+0.3
TPUB	**Ta-pu** baz=311	**0.14**	**311**	P	Pg	18 38 49.3	+0.5
TPUB	baz=311			S	Sg	18 38 51.9	+0.9
TPUB	**Ta-pu** baz=314	**0.14**	**311**	S	Pg	18 38 49.2	+0.4
SGST	**Jiashian** baz=228	**0.20**	**230**	P	Pg	18 38 49.7	-0.1
SGST	baz=228			S	Sg	18 38 53.4	+0.9
CHN4	**Tsaushan** baz=323	**0.20**	**315**	P	Pg	18 38 50.5	+0.8
CHN4	baz=323			S	Sg	18 38 54.4	+1.8
CHN4	**Tsaushan** baz=317	**0.20**	**315**	S	Pg	18 38 50.6	+0.8
CHN1	**Nanshi** baz=263	**0.20**	**263**	*i* P	Pg	18 38 50.9	+1.0
CHN1	baz=263			S	Sg	18 38 54.4	+1.7
SNST	**Tainan City** baz=279	**0.23**	**273**	*e*P	Pg	18 38 51.5	+1.2
SNST	baz=279			S	Sg	18 38 55.6	+2.1
SLGT	**Liugui** baz=197	**0.23**	**203**	P	Pg	18 38 51.3	+0.9
SLGT	baz=197			S	Sg	18 38 55.6	+2.0
TWK	**Hsinying** baz=294	**0.24**	**284**	P	Pg	18 38 51.3	+0.7
TWK	baz=294			S	Sg	18 38 55.6	+1.6
ELDTW	**Lidau** baz=95	**0.25**	**94**	P	Pb	18 38 51.6	-0.7
ELDTW	baz=95			S	Sb	18 38 55.6	-1.2
ELDTW	**Lidau** baz=91	**0.25**	**94**	S	Pg	18 38 51.6	+0.8
ALS	**Alishan** baz=12	**0.30**	**10**	*i* P	Pg	18 38 52.3	+0.5
ALS	baz=12			S	Sb	18 38 57.5	-1.0
ALS	**Alishan** baz=9.0	**0.30**	**10**	*e*S	Pg	18 38 52.4	+0.6
CHN5	**Tsauling** baz=358	**0.39**	**351**	*e*P	Pb	18 38 54.4	-0.3
CHN5	baz=358			S	Sb	18 39 00.8	0.0
SSD	**Sandimen** baz=185	**0.47**	**193**	P	Pb	18 38 55.6	-0.4
SSD	baz=185			S	Sb	18 39 02.4	-0.7
TWG	**Pinlang** baz=133	**0.49**	**142**	P	Pb	18 38 55.9	-0.4
TWG	baz=133			S	Sb	18 39 04.0	+0.4
TWGBT	**Beinan** baz=133	**0.50**	**142**	P	Pb	18 38 56.2	-0.2
TWGBT	baz=133			*e*S	Sb	18 39 04.1	+0.3
WGK	**Gukeng** baz=341	**0.50**	**341**	*e*S	Sb	18 39 05.0	+1.1
FULB	**Fuli** baz=83	**0.51**	**91**	*e*P	Pb	18 38 56.9	+0.3
FULB	baz=83			S	Sb	18 39 05.0	+1.0
TSMG	**Majia** baz=184	**0.51**	**190**	*e*P	Pg	18 38 55.8	+0.3
TSMG	baz=184			*e*S	Sg	18 39 02.8	+0.5
WDLH	**Douliu** baz=338	**0.51**	**338**	*e*P	Pb	18 38 57.0	+0.3
WDLH	baz=338			*e*S	Sn	18 39 06.1	-1.8
TWF1	**Yuli** baz=75	**0.53**	**74**	P	Pb	18 38 56.8	-0.2
TWF1	baz=75			S	Sg	18 39 03.4	+0.6
YULB	**Yu-li** baz=70	**0.54**	**70**	P	Pg	18 38 56.6	+0.5
YULB	baz=70			S	Sg	18 39 03.8	+0.5
EYUL	**Yuli** baz=76	**0.55**	**75**	*e*S	Sg	18 39 04.1	+0.7
EDH	**Donghe** baz=120	**0.57**	**114**	*e*P	Pb	18 38 57.6	0.0
MASBT	**Mashibuluo** baz=187	**0.60**	**190**	P	Pg	18 38 57.7	+0.4
MASBT	baz=187			*e*S	Sb	18 39 07.3	+0.5
EHY	**Hungye**	**0.61**	**61**	*e*P	Pn	18 38 59.5	-0.9

	baz=71						
EHY				*e*S	Sg	18 39 05.8	+0.4
	baz=71						
SSLB	**Suanglung**	**0.61**	**18**	*e*P	Pg	18 38 57.5	+0.1
	baz=24						
SSLB				*e*S	Sb	18 39 06.5	-0.4
	baz=24						
WJS	**Zhushan**	**0.61**	**359**	*e*P	Pb	18 38 59.2	+0.8
	baz=342						
WJS				*e*S	Sn	18 39 08.9	-1.4
	baz=342						
ECL	**Taimali**	**0.64**	**162**	*e*P	Pb	18 38 59.0	+0.2
	baz=148						
ECL				*e*S	Sb	18 39 08.3	+0.4
	baz=148						
WNT	**Mingjian**	**0.67**	**355**	*e*S	Sb	18 39 10.1	+1.4
	baz=356						
HGSD	**Ruisui**	**0.69**	**66**	*e*P	Pg	18 38 58.8	0.0
	baz=73						
HGSD				*e*S	Sb	18 39 08.9	-0.3
	baz=73						
SMLT	**Sun Moon Lake**	**0.69**	**12**	P	Pb	18 39 00.4	+0.7
	baz=19						
SMLT				*e*S	Sn	18 39 11.3	-1.0
	baz=19						
TYC	**Yuchr**	**0.70**	**8**	P	Pb	18 39 00.2	+0.3
	baz=9.0						
TYC				S	Sn	18 39 11.7	-0.7
	baz=9.0						

TAP 04 18:39:14.5, 23°.20N×120°.75E, h10^{km}±1^{km}, ML1.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan**	**0.04**	**173**	P	Pg	18 39 17.2	+0.7
	baz=162						
STYT				S	Sg	18 39 18.8	+0.8
	baz=162						
WTP	**Ta-pu**	**0.14**	**289**	P	Pg	18 39 18.2	+0.5
	baz=289						
WTP				S	Sg	18 39 20.7	+0.7
	baz=289						
TPUB	**Ta-pu**	**0.15**	**311**	*e*P	Pg	18 39 18.4	+0.5
	baz=311						
TPUB				*e*S	Sg	18 39 21.4	+1.1
	baz=311						
SGST	**Jiashian**	**0.20**	**233**	P	Pg	18 39 18.7	0.0
	baz=231						
CHN1	**Nanshi**	**0.21**	**266**	*e*P	Pb	18 39 20.1	-0.3
	baz=265						
CHN4	**Tsaushan**	**0.21**	**316**	P	Pg	18 39 19.6	+0.7
	baz=315						
SLGT	**Liugui**	**0.23**	**205**	*e*P	Pb	18 39 20.7	0.0
	baz=205						
SNST	**Tainan City**	**0.23**	**275**	*e*S	Sg	18 39 24.3	+1.7
	baz=274						
ELDTW	**Lidau**	**0.24**	**93**	*i* P	Pb	18 39 20.7	-0.3
	baz=93						
TWK	**Hsinying**	**0.25**	**285**	P	Pg	18 39 20.0	+0.3
	baz=285						
TWK				S	Sb	18 39 25.5	-0.1
	baz=285						
ALS	**Alishan**	**0.31**	**9**	*e*P	Pg	18 39 21.5	+0.6
	baz=10.0						
ALS				*e*S	Sb	18 39 27.0	-0.6
	baz=10.0						
CHN5	**Tsauling**	**0.40**	**350**	*e*P	Pb	18 39 24.6	+0.9
	baz=350						
CHN5				*e*S	Sb	18 39 30.3	+0.4
	baz=350						

TAP 04 18:39:18.4, 23°.20N×120°.75E, h12^{km}, ML1.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan**	**0.04**	**173**	*i* P	Pg	18 39 21.2	+0.5
	baz=162						
STYT				S	Sg	18 39 22.8	+0.5
	baz=162						
WTP	**Ta-pu**	**0.14**	**290**	*e*P	Pg	18 39 22.2	+0.4
	baz=290						
WTP				*e*S	Sg	18 39 24.7	+0.5
	baz=290						
TPUB	**Ta-pu**	**0.15**	**312**	*e*P	Pb	18 39 22.6	-0.6
	baz=311						
TPUB				*e*S	Sg	18 39 25.4	+1.0
	baz=311						
SGST	**Jiashian**	**0.20**	**233**	*e*P	Pg	18 39 23.1	+0.4
	baz=231						
SGST				*e*S	Sg	18 39 26.8	+1.2
	baz=231						
SGST	**Jiashian**	**0.20**	**233**	*e*S	Pg	18 39 22.7	0.0
	baz=231						
CHN1	**Nanshi**	**0.21**	**266**	*e*P	Pb	18 39 23.7	-0.5
	baz=265						
CHN1				*e*S	Sg	18 39 27.5	+1.6
	baz=265						
CHN1	**Nanshi**	**0.21**	**266**	*e*S	Pg	18 39 23.6	+0.8
	baz=265						
CHN4	**Tsaushan**	**0.21**	**316**	*e*P	Pb	18 39 23.8	-0.4
	baz=316						
CHN4				*e*S	Sg	18 39 27.6	+1.6
	baz=316						
CHN4	**Tsaushan**	**0.21**	**316**	S	Pb	18 39 23.6	-0.6
	baz=315						
SLGT	**Liugui**	**0.23**	**205**	*e*P	Pb	18 39 24.4	-0.1
	baz=205						
SLGT				*e*S	Sg	18 39 28.2	+1.7
	baz=205						
SLGT	**Liugui**	**0.23**	**205**	*e*S	Pb	18 39 24.3	-0.2
	baz=205						
ELDTW	**Lidau**	**0.24**	**93**	P	Pb	18 39 24.6	-0.2
	baz=92						
ELDTW				*e*S	Sg	18 39 28.7	+1.6
	baz=92						
ELDTW	**Lidau**	**0.24**	**93**	*i* S	Pb	18 39 24.6	-0.2
	baz=93						
TWK	**Hsinying**	**0.25**	**285**	*e*P	Pg	18 39 24.1	+0.4
	baz=285						
TWK				*e*S	Sb	18 39 28.9	-0.4
	baz=285						
ALS	**Alishan**	**0.31**	**9**	*e*P	Pg	18 39 25.3	+0.4
	baz=10.0						
ALS				*e*S	Sb	18 39 30.6	-0.7
	baz=10.0						

BEO ***04*** *19:40:32.8±1.2, 45°.81N×27°.13E, h107^{km}±8^{km}, ML4.5/23*
SOF ***04*** *19:40:35.9, 45°.69N×26°.34E, h135^{km}, MD4.0*
SIGU ***04*** *19:40:37.8, 45°.56N×26°.43E, h128^{km}*
MOS ***04*** *19:40:37.1±0.9, 45°.56N×26°.40E, h121^{km}, mb4.5/6, Error ellipse: s-maj=6.3km s-min=5.2km az=90.2*
NEIC ***04*** *19:40:38.7±2.3, 45°.58N±0°.04×26°.38E±0°.05, h124^{km}±2^{km}, Error ellipse: s-maj=5.7km s-min=5.2km az=164.0*
IDC ***04*** *19:40:38.5±0.3, 45°.55N×26°.22E, h119^{km}±2^{km}, mb3.6/21, mb1 3.7/27, mb1mx3.5/51, mbtmp4.0/27, Error ellipse: s-maj=12.8km s-min=8.6km az=153.0*
BUC ***04*** *19:40:38.6±0.2, 45°.53N×26°.37E, h120^{km}±2^{km}, ml4.5/59, Error ellipse: s-maj=1.7km s-min=1.4km az=12.0*
PRU ***04*** *19:40:42.7±0.0, 44°.98N×25°.14E, h0^{km}, M4.2*

ISC 04 19:40:38.7±0.4, 45°.53N±0°.02×26°.36E±0°.02, h124^{km}±3^{km}, n447, σ1°.59/628, mb4.2/47, 156C-107D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	**Nehoiu**	**0.11**	**206**	⇑P	**Pn**	**19 40 55.9**	**+0.2**
NEHR				⇑S	**Sn**	**19 41 08.4**	**0.0**
NEHR	**Nehoiu**	**0.11**	**206**	⇑P	**Pn**	**19 40 55.9**	**+0.2**
NEHR				⇑S	**Sn**	**19 41 08.4**	**0.0**
BISRR	**Bisoca**	**0.24**	**85**	⇑P	**Pn**	**19 40 56.4**	**+0.5**
BISRR				⇑S	**Sn**	**19 41 08.5**	**-0.5**
BISRR	**Bisoca**	**0.24**	**85**	⇑P	**Pn**	**19 40 56.4**	**+0.5**
BISRR				⇑S	**Sn**	**19 41 08.5**	**-0.5**
BISRR	**Bisoca**	**0.24**	**85**		**Pn**	**19 40 56.4**	**+0.5**
BISRR					**Sn**	**19 41 08.5**	**-0.5**
MLR	**Muntele Rosu**	**0.30**	**263**	⇑P	**Pn**	**19 40 56.3**	**+0.1**
MLR				⇓S	**Sn**	**19 41 09.3**	**-0.1**
MLR	**Muntele Rosu**	**0.30**	**263**	P	**Pn**	**19 40 56.3**	**+0.1**
	666nm,0.3s,baz=334,slow=2.4,SNR=3994						
MLR				S	**Sn**	**19 41 09.0**	**-0.5**
	817nm,0.3s,baz=217,slow=17,SNR=21						
MLR	**Muntele Rosu**	**0.30**	**263**	⇑P	**Pn**	**19 40 56.3**	**+0.1**
MLR				⇓S	**Sn**	**19 41 09.3**	**-0.1**
MLR	**Muntele Rosu**	**0.30**	**263**	*e*Pg	**Pn**	**19 40 55.4**	**-0.8**
MLR				*e*Sg	**Sn**	**19 41 06.1**	**-3.4**
MLR	**Muntele Rosu**	**0.30**	**263**	P	**Pn**	**19 40 56.3**	**+0.1**
MLR						19 41 09.3	
MLR	**Muntele Rosu**	**0.30**	**263**		**Pn**	**19 40 56.3**	**+0.1**
MLR					**Sn**	**19 41 09.3**	**-0.1**
PLOR	**Plostina**	**0.38**	**32**	⇑P	**Pn**	**19 40 56.4**	**-0.1**
PLOR				⇓S	**Sn**	**19 41 09.4**	**-0.5**
PLOR	**Plostina**	**0.38**	**32**	⇑P	**Pn**	**19 40 56.4**	**-0.1**
PLOR				⇓S	**Sn**	**19 41 09.4**	**-0.5**
PLOR	**Plostina**	**0.38**	**32**		**Pn**	**19 40 56.4**	**-0.1**
PLOR					**Sn**	**19 41 09.4**	**-0.5**
VRI	**Vrincioaia**	**0.42**	**37**	⇑P	**Pn**	**19 40 56.8**	**+0.1**
VRI				⇑S	**Sn**	**19 41 10.0**	**-0.3**
VRI	**Vrincioaia**	**0.42**	**37**	⇑P	**Pn**	**19 40 56.8**	**+0.1**
VRI				⇑S	**Sn**	**19 41 10.0**	**-0.3**
VRI	**Vrincioaia**	**0.42**	**37**	*e*P	**Pn**	**19 40 56.6**	**0.0**
VRI	**Vrincioaia**	**0.42**	**37**	*e*P	**Pn**	**19 40 56.8**	**+0.1**
VRI				*e*S	**Sn**	**19 41 09.0**	**-1.2**
VRI	**Vrincioaia**	**0.42**	**37**		**Pn**	**19 40 56.8**	**+0.1**
VRI					**Sn**	**19 41 10.0**	**-0.3**
ISR	**Istrita**	**0.43**	**163**	⇑P	**Pn**	**19 40 57.0**	**+0.3**
ISR				⇓S	**Sn**	**19 41 09.4**	**-1.0**
ISR	**Istrita**	**0.43**	**163**	⇑P	**Pn**	**19 40 57.0**	**+0.3**
ISR				⇓S	**Sn**	**19 41 09.4**	**-1.0**
ISR	**Istrita**	**0.43**	**163**	*e*P	**Pn**	**19 40 57.0**	**+0.3**
ISR				*e*S	**Sn**	**19 41 09.3**	**-1.0**
ISR	**Istrita**	**0.43**	**163**		**Pn**	**19 40 57.0**	**+0.3**
ISR					**Sn**	**19 41 09.4**	**-1.0**
SECR		**0.54**	**203**	⇑P	**Pn**	**19 40 57.9**	**+0.6**
SECR				⇑S	**Sn**	**19 41 12.5**	**+1.2**
SECR		**0.54**	**203**	⇑P	**Pn**	**19 40 57.9**	**+0.6**
SECR				⇑S	**Sn**	**19 41 12.5**	**+1.2**
SECR		**0.54**	**203**		**Pn**	**19 40 57.9**	**+0.6**
SECR					**Sn**	**19 41 12.5**	**+1.2**
ODBI	**Odobesti**	**0.54**	**64**	⇓P	**Pn**	**19 40 58.2**	**+0.9**
ODBI				⇑S	**Sn**	**19 41 12.3**	**+1.0**
ODBI	**Odobesti**	**0.54**	**64**	⇓P	**Pn**	**19 40 58.2**	**+0.9**
ODBI				⇑S	**Sn**	**19 41 12.3**	**+1.0**
PLAR	**PLOIESTI**	**0.66**	**201**	⇑P	**Pn**	**19 40 58.8**	**+0.7**
PLAR	**PLOIESTI**	**0.66**	**201**	⇑P	**Pn**	**19 40 58.8**	**+0.7**
PLAR	**PLOIESTI**	**0.66**	**201**		**Pn**	**19 40 58.8**	**+0.7**
PLAR					**Sn**	**19 41 13.7**	**+1.0**
OZUR		**0.70**	**325**	⇑P	**Pn**	**19 40 58.0**	**-0.4**
OZUR				⇑S	**Sn**	**19 41 11.9**	**-1.5**
OZUR		**0.70**	**325**	⇑P	**Pn**	**19 40 58.0**	**-0.4**
OZUR				⇑S	**Sn**	**19 41 11.9**	**-1.5**
PGOR	**Pogoanele**	**0.76**	**145**	⇑P	**Pn**	**19 40 59.3**	**+0.5**
PGOR				⇑S	**Sn**	**19 41 15.2**	**+1.1**
PGOR	**Pogoanele**	**0.76**	**145**	⇑P	**Pn**	**19 40 59.3**	**+0.5**
PGOR				⇑S	**Sn**	**19 41 15.2**	**+1.1**
DOPR	**Dopca**	**0.81**	**303**	⇑P	**Pn**	**19 40 59.1**	**-0.2**
DOPR				⇑S	**Sn**	**19 41 14.5**	**-0.5**
DOPR	**Dopca**	**0.81**	**303**	⇑P	**Pn**	**19 40 59.1**	**-0.2**
DOPR				⇑S	**Sn**	**19 41 14.5**	**-0.5**
DOPR	**Dopca**	**0.81**	**303**		**Pn**	**19 40 59.1**	**-0.2**
DOPR					**Sn**	**19 41 14.5**	**-0.5**
SULR		**0.85**	**185**	⇑P	**Pn**	**19 41 00.2**	**+0.6**
SULR				⇓S	**Sn**	**19 41 16.5**	**+1.0**
SULR		**0.85**	**185**	⇑P	**Pn**	**19 41 00.2**	**+0.6**
SULR				⇓S	**Sn**	**19 41 16.5**	**+1.0**
TUDR		**0.92**	**85**	⇓P	**Pn**	**19 40 59.9**	**-0.3**
TUDR				⇓S	**Sn**	**19 41 15.6**	**-0.9**
TUDR		**0.92**	**85**	⇓P	**Pn**	**19 40 59.9**	**-0.3**
TUDR				⇓S	**Sn**	**19 41 15.6**	**-0.9**
TUDR		**0.92**	**85**		**Pn**	**19 40 59.9**	**-0.3**
TUDR					**Sn**	**19 41 15.7**	**-0.9**
VOIR		**0.93**	**265**	⇑P	**Pn**	**19 41 00.4**	**-0.1**
VOIR				⇑S	**Sn**	**19 41 15.8**	**-1.1**
VOIR		**0.93**	**265**	⇑P	**Pn**	**19 41 00.4**	**-0.1**
VOIR				⇑S	**Sn**	**19 41 15.8**	**-1.1**
MTUR	**Matau**	**0.97**	**252**	⇑P	**Pn**	**19 41 01.1**	**+0.3**
MTUR	**Matau**	**0.97**	**252**	⇑P	**Pn**	**19 41 01.1**	**+0.3**
TESR	**Tescani**	**1.00**	**11**	⇑P	**Pn**	**19 41 00.7**	**-0.3**
TESR				⇓S	**Sn**	**19 41 16.5**	**-1.5**
TESR	**Tescani**	**1.00**	**11**	⇑P	**Pn**	**19 41 00.7**	**-0.3**
TESR				⇓S	**Sn**	**19 41 16.5**	**-1.5**
TESR	**Tescani**	**1.00**	**11**		**Pn**	**19 41 00.7**	**-0.3**
TESR					**Sn**	**19 41 16.5**	**-1.5**
SCHL	**Schela**	**1.03**	**91**	⇓P	**Pn**	**19 41 00.8**	**-0.4**
SCHL				⇓S	**Sn**	**19 41 16.8**	**-1.6**
SCHL	**Schela**	**1.03**	**91**	⇓P	**Pn**	**19 41 00.8**	**-0.4**
SCHL				⇓S	**Sn**	**19 41 16.8**	**-1.6**
INCR	**INCERC-Sediu C**	**1.10**	**188**	⇑P	**Pn**	**19 41 02.2**	**+0.2**
INCR				⇑S	**Sn**	**19 41 20.3**	**+0.7**
INCR	**INCERC-Sediu C**	**1.10**	**188**	⇑P	**Pn**	**19 41 02.2**	**+0.2**
INCR				⇓S	**Sn**	**19 41 20.3**	**+0.7**
LEHL	**Lehliu**	**1.10**	**163**	⇑P	**Pn**	**19 41 02.5**	**+0.5**
LEHL				⇓S	**Sn**	**19 41 20.3**	**+0.6**
LEHL	**Lehliu**	**1.10**	**163**	⇑P	**Pn**	**19 41 02.5**	**+0.5**
LEHL				⇓S	**Sn**	**19 41 20.3**	**+0.6**
VARL	**Varlezi**	**1.10**	**70**	⇓P	**Pn**	**19 41 02.1**	**+0.1**
VARL				⇑S	**Sn**	**19 41 18.7**	**-1.0**
VARL	**Varlezi**	**1.10**	**70**	⇓P	**Pn**	**19 41 02.1**	**+0.1**
VARL				⇑S	**Sn**	**19 41 18.7**	**-1.0**
AMRR	**Amara**	**1.15**	**143**	⇓P	**Pn**	**19 41 02.9**	**+0.5**
AMRR				⇑S	**Sn**	**19 41 20.5**	**0.0**
AMRR	**Amara**	**1.15**	**143**	⇓P	**Pn**	**19 41 02.9**	**+0.5**
AMRR				⇑S	**Sn**	**19 41 20.5**	**0.0**
BIR	**Birlad**	**1.15**	**50**	⇓P	**Pn**	**19 41 02.7**	**+0.2**
BIR				⇑S	**Sn**	**19 41 19.9**	**-0.7**
BIR	**Birlad**	**1.15**	**50**	⇓P	**Pn**	**19 41 02.7**	**+0.2**
BIR				⇑S	**Sn**	**19 41 19.9**	**-0.7**
GISR	**Galati**	**1.19**	**94**	⇓P	**Pn**	**19 41 03.1**	**+0.2**
GISR				⇑S	**Sn**	**19 41 20.5**	**-0.8**
GISR	**Galati**	**1.19**	**94**	⇓P	**Pn**	**19 41 03.1**	**+0.2**
GISR				⇑S	**Sn**	**19 41 20.5**	**-0.8**
STFAR	**Stefanesti-Arg**	**1.20**	**237**	⇑P	**Pn**	**19 41 03.5**	**+0.5**
STFAR				⇑S	**Sn**	**19 41 21.4**	**0.0**
STFAR	**Stefanesti-Arg**	**1.20**	**237**	⇑P	**Pn**	**19 41 03.5**	**+0.5**
STFAR				⇑S	**Sn**	**19 41 21.4**	**0.0**
BUC1	**Bucharest**	**1.21**	**192**	⇑P	**Pn**	**19 41 03.5**	**+0.4**
BUC1				⇑S	**Sn**	**19 41 21.7**	**+0.1**
BUC1	**Bucharest**	**1.21**	**192**	⇑P	**Pn**	**19 41 03.5**	**+0.4**
BUC1				⇑S	**Sn**	**19 41 21.7**	**+0.1**
ARR	**Arges**	**1.23**	**263**	⇑P	**Pn**	**19 41 03.6**	**+0.1**
ARR				⇓S	**Sn**	**19 41 21.6**	**-0.6**
ARR	**Arges**	**1.23**	**263**	⇑P	**Pn**	**19 41 03.6**	**+0.1**
ARR				⇓S	**Sn**	**19 41 21.6**	**-0.6**
ARR	**Arges**	**1.23**	**263**		**Pn**	**19 41 03.6**	**+0.1**
ARR					**Sn**	**19 41 21.6**	**-0.6**
GIUM	**Giurgiulesti**	**1.30**	**91**	⇓P	**Pn**	**19 41 04.3**	**+0.3**
GIUM				⇓S	**Sn**	**19 41 23.2**	**-0.1**
GIUM	**Giurgiulesti**	**1.30**	**91**	⇓P	**Pn**	**19 41 04.3**	**+0.3**
GIUM				⇓S	**Sn**	**19 41 23.2**	**-0.1**
CFR	**Carcaliu**	**1.30**	**105**	⇓P	**Pn**	**19 41 03.6**	**-0.5**
CFR				⇑S	**Sn**	**19 41 21.8**	**-1.5**
CFR	**Carcaliu**	**1.30**	**105**	⇓P	**Pn**	**19 41 03.6**	**-0.5**
CFR				⇑S	**Sn**	**19 41 21.8**	**-1.5**
CFR	**Carcaliu**	**1.30**	**105**		**Pn**	**19 41 03.6**	**-0.5**
CFR					**Sn**	**19 41 21.8**	**-1.5**
JOSR	**Joseni**	**1.32**	**334**	⇑P	**Pn**	**19 41 03.9**	**-0.5**
JOSR	**Joseni**	**1.32**	**334**	⇑P	**Pn**	**19 41 03.9**	**-0.5**
SGRR	**Singureni**	**1.33**	**192**	⇑P	**Pn**	**19 41 04.7**	**+0.2**
SGRR				⇑S	**Sn**	**19 41 23.6**	**-0.4**
SGRR	**Singureni**	**1.33**	**192**	⇑P	**Pn**	**19 41 04.7**	**+0.2**
SGRR				⇑S	**Sn**	**19 41 23.6**	**-0.4**
HARR	**Harsova**	**1.39**	**127**	⇓P	**Pn**	**19 41 05.1**	**+0.1**
HARR	**Harsova**	**1.39**	**127**	⇓P	**Pn**	**19 41 05.1**	**+0.1**
HUMR	**Humele**	**1.40**	**225**	⇑P	**Pn**	**19 41 05.2**	**0.0**
HUMR				⇑S	**Sn**	**19 41 24.9**	**-0.5**
HUMR	**Humele**	**1.40**	**225**	⇑P	**Pn**	**19 41 05.2**	**0.0**
HUMR				⇑S	**Sn**	**19 41 24.9**	**-0.5**
BIZ	**Bicaz**	**1.42**	**353**	⇑P	**Pn**	**19 41 06.2**	**+0.7**
BIZ				⇑S	**Sn**	**19 41 25.9**	**0.0**
BIZ	**Bicaz**	**1.42**	**353**	⇑P	**Pn**	**19 41 06.2**	**+0.7**
BIZ				⇑S	**Sn**	**19 41 25.9**	**0.0**
RASA	**Rasa**	**1.43**	**157**	⇑P	**Pn**	**19 41 05.7**	**+0.2**
RASA	**Rasa**	**1.43**	**157**	⇑P	**Pn**	**19 41 05.7**	**+0.2**
GIRR	**Girov**	**1.43**	**4**	⇑P	**Pn**	**19 41 05.7**	**+0.2**
GIRR	**Girov**	**1.43**	**4**	⇑P	**Pn**	**19 41 05.7**	**+0.2**
VASR	**Vaslui**	**1.49**	**41**	⇓P	**Pn**	**19 41 06.2**	**0.0**
VASR				⇓S	**Sn**	**19 41 25.9**	**-1.3**
VASR	**Vaslui**	**1.49**	**41**	⇓P	**Pn**	**19 41 06.2**	**0.0**
VASR				⇓S	**Sn**	**19 41 25.9**	**-1.3**
MDB	**Medias**	**1.52**	**295**	⇓P	**Pn**	**19 41 07.2**	**+0.7**
MDB				⇑S	**Sn**	**19 41 27.8**	**+0.1**
MDB	**Medias**	**1.52**	**295**	⇓P	**Pn**	**19 41 07.2**	**+0.7**
MDB				⇑S	**Sn**	**19 41 27.8**	**+0.1**
TPGR	**Topolog**	**1.60**	**114**	⇓P	**Pn**	**19 41 07.1**	**-0.4**
TPGR				⇑S	**Sn**	**19 41 28.6**	**-0.9**
TPGR	**Topolog**	**1.60**	**114**	⇓P	**Pn**	**19 41 07.1**	**-0.4**
TPGR				⇑S	**Sn**	**19 41 28.6**	**-0.9**
COPA	**Copaceanca**	**1.62**	**211**	⇑P	**Pn**	**19 41 07.7**	**+0.1**
COPA				⇑S	**Sn**	**19 41 29.0**	**-0.7**
COPA	**Copaceanca**	**1.62**	**211**	⇑P	**Pn**	**19 41 07.7**	**+0.1**
COPA				⇑S	**Sn**	**19 41 29.0**	**-0.7**
CVDA	**Cernavoda**	**1.69**	**135**	⇓P	**Pn**	**19 41 08.7**	**+0.3**
CVDA				⇓S	**Sn**	**19 41 30.0**	**-1.2**
CVDA	**Cernavoda**	**1.69**	**135**	⇓P	**Pn**	**19 41 08.7**	**+0.3**
CVDA				⇓S	**Sn**	**19 41 30.0**	**-1.2**
ICOR	**Ion Corvin**	**1.74**	**144**	⇓P	**Pn**	**19 41 09.6**	**+0.4**
ICOR				⇓S	**Sn**	**19 41 31.6**	**-0.8**
ICOR	**Ion Corvin**	**1.74**	**144**	⇓P	**Pn**	**19 41 09.6**	**+0.4**
ICOR				⇓S	**Sn**	**19 41 31.6**	**-0.8**
TIRR	**Tirgusor**	**1.81**	**126**	⇓P	**Pn**	**19 41 09.9**	**0.0**
TIRR				⇑S	**Sn**	**19 41 32.1**	**-1.6**
TIRR	**Tirgusor**	**1.81**	**126**	⇓P	**Pn**	**19 41 09.9**	**0.0**
TIRR				⇑S	**Sn**	**19 41 32.1**	**-1.6**
TIRR	**Tirgusor**	**1.81**	**126**	*e*P	**Pn**	**19 41 09.8**	**-0.1**
TIRR				*e*S	**Sn**	**19 41 32.3**	**-1.4**
TIRR	**Tirgusor**	**1.81**	**126**	Pn	**Pn**	**19 41 09.7**	**-0.2**
TIRR	**Tirgusor**	**1.81**	**126**		**Pn**	**19 41 09.9**	**0.0**
TIRR					**Sn**	**19 41 32.1**	**-1.6**
LOT	**Lotru**	**1.83**	**268**	*e*P	**Pn**	**19 41 09.9**	**-0.4**
PRAR	**RASCA**	**1.84**	**357**	⇑P	**Pn**	**19 41 10.8**	**+0.5**
PRAR	**RASCA**	**1.84**	**357**	⇑P	**Pn**	**19 41 10.8**	**+0.5**
IAS	**Iasi**	**1.86**	**26**	⇓P	**Pn**	**19 41 10.3**	**-0.3**
IAS				⇑S	**Sn**	**19 41 33.3**	**-1.7**
IAS	**Iasi**	**1.86**	**26**	⇓P	**Pn**	**19 41 10.3**	**-0.3**
IAS				⇑S	**Sn**	**19 41 33.3**	**-1.7**
JURR	**Jurilovca**	**1.94**	**112**	⇑P	**Pn**	**19 41 11.7**	**+0.2**
JURR	**Jurilovca**	**1.94**	**112**	⇑P	**Pn**	**19 41 11.7**	**+0.2**
MFTR	**Murfatlar**	**1.99**	**132**	⇓P	**Pn**	**19 41 12.2**	**+0.1**
MFTR				⇓S	**Sn**	**19 41 36.4**	**-1.3**
MFTR	**Murfatlar**	**1.99**	**132**	⇓P	**Pn**	**19 41 12.2**	**+0.1**
MFTR				⇓S	**Sn**	**19 41 36.4**	**-1.3**
ZIMR		**2.00**	**201**	⇑P	**Pn**	**19 41 12.3**	**0.0**
ZIMR				⇑S	**Sn**	**19 41 37.0**	**-1.0**
ZIMR		**2.00**	**201**	⇑P	**Pn**	**19 41 12.3**	**0.0**
ZIMR				⇑S	**Sn**	**19 41 37.0**	**-1.0**
VLAD	**Vladila**	**2.07**	**223**	⇑P	**Pn**	**19 41 12.9**	**-0.3**
VLAD	**Vladila**	**2.07**	**223**	⇑P	**Pn**	**19 41 12.9**	**-0.3**
ARCR	**ARCALIA**	**2.09**	**319**	⇓P	**Pn**	**19 41 13.1**	**-0.3**
ARCR	**ARCALIA**	**2.09**	**319**	⇓P	**Pn**	**19 41 13.1**	**-0.3**
TSCT	**Constanta Port**	**2.13**	**129**	⇑P	**Pn**	**19 41 14.0**	**+0.1**
TSCT				⇑S	**Sn**	**19 41 39.4**	**-1.4**
TSCT	**Constanta Port**	**2.13**	**129**	⇑P	**Pn**	**19 41 14.0**	**+0.1**
TSCT				⇑S	**Sn**	**19 41 39.4**	**-1.4**
EFOR	**EFORIE**	**2.17**	**131**	⇓P	**Pn**	**19 41 14.6**	**+0.2**
EFOR				⇓S	**Sn**	**19 41 40.7**	**-1.0**
EFOR	**EFORIE**	**2.17**	**131**	⇓P	**Pn**	**19 41 14.6**	**+0.2**
EFOR				⇓S	**Sn**	**19 41 40.7**	**-1.0**
MILM	**Milestii Mici**	**2.20**	**50**	⇓P	**Pn**	**19 41 14.4**	**-0.2**
MILM	**Milestii Mici**	**2.20**	**50**	⇓P	**Pn**	**19 41 14.4**	**-0.2**
KIS	**Kishinev**	**2.25**	**48**	⇓*i*P	**Pn**	**19 41 15.2**	**-0.2**
	1μm,0.3s						
KIS				*i* S	**Sn**	**19 41 41.5**	**-2.0**
	2μm,0.7s						
KIS	**Kishinev**	**2.25**	**48**	⇓P	**Pn**	**19 41 15.2**	**-0.2**
KIS	**Kishinev**	**2.25**	**48**	⇓P	**Pn**	**19 41 15.2**	**-0.2**
KIS	**Kishinev**	**2.25**	**48**	*d* *i*P	**Pn**	**19 41 15.2**	**-0.2**
KIS				*i* S	**Sn**	**19 41 41.5**	**-2.0**
KIS				pmax	pmax		
	comp=Z,1μm,0.3s						
KIS				smax	smax		
	comp=N,2μm,0.7s						
KIS				smax	smax		
	comp=E,2μm,0.8s						
KIS	**Kishinev**	**2.25**	**48**	⇑*i*P	**Pn**	**19 41 15.2**	**-0.2**
KIS				Pm		19 41 15.4	
KIS				*i* S	**Sn**	**19 41 41.5**	**-2.0**
KIS				m		19 41 42.3	
KIS				Sm		19 41 42.7	
PSN	**Preselentsi**	**2.26**	**144**	*i* P	**Pn**	**19 41 16.0**	**+0.5**
CJR	**Cluj-Napoca**	**2.26**	**303**	⇓P	**Pn**	**19 41 15.5**	**-0.1**
CJR				⇓S	**Sn**	**19 41 44.3**	**+0.4**
CJR	**Cluj-Napoca**	**2.26**	**303**	⇓P	**Pn**	**19 41 15.5**	**-0.1**
CJR				⇓S	**Sn**	**19 41 44.3**	**+0.4**
BUR08	**Bucovina Ar. S**	**2.26**	**340**		**Pn**	**19 41 16.7**	**+1.0**
SZH	**Strazhica**	**2.28**	**188**	*i* P	**Pn**	**19 41 15.9**	**0.0**
MANR	**Mangalia**	**2.33**	**136**	⇓P	**Pn**	**19 41 16.5**	**+0.1**
MANR	**Mangalia**	**2.33**	**136**	⇓P	**Pn**	**19 41 16.5**	**+0.1**
TSMN	**Mangalia Port-**	**2.35**	**137**	⇑P	**Pn**	**19 41 16.8**	**+0.1**
TSMN				⇑S	**Sn**	**19 41 44.6**	**-1.2**
TSMN	**Mangalia Port-**	**2.35**	**137**	⇑P	**Pn**	**19 41 16.8**	**+0.1**
TSMN				⇑S	**Sn**	**19 41 44.6**	**-1.2**
SRE	**Strehaia**	**2.40**	**250**	⇑P	**Pn**	**19 41 17.3**	**-0.1**
SRE				⇑S	**Sn**	**19 41 45.6**	**-1.4**
SRE	**Strehaia**	**2.40**	**250**	⇑P	**Pn**	**19 41 17.3**	**-0.1**
SRE				⇑S	**Sn**	**19 41 45.6**	**-1.4**
TSSL	**Sulina**	**2.40**	**98**	⇓P	**Pn**	**19 41 17.5**	**+0.3**
TSSL				⇑S	**Sn**	**19 41 46.5**	**-0.4**
TSSL	**Sulina**	**2.40**	**98**	⇓P	**Pn**	**19 41 17.5**	**+0.3**
TSSL				⇑S	**Sn**	**19 41 46.5**	**-0.4**
PVL	**Pavlikeni**	**2.43**	**198**	*i* P	**Pn**	**19 41 19.5**	**+1.8**
PRD	**Provadia**	**2.44**	**162**	*i* P	**Pn**	**19 41 18.7**	**+0.8**
DEV	**Deva**	**2.45**	**280**	⇓P	**Pn**	**19 41 18.4**	**+0.4**
DEV				⇓S	**Sn**	**19 41 47.4**	**-0.7**
DEV	**Deva**	**2.45**	**280**	⇓P	**Pn**	**19 41 18.4**	**+0.4**
DEV				⇓S	**Sn**	**19 41 47.4**	**-0.7**
GZR	**Gura Zlata**	**2.53**	**268**	⇓P	**Pn**	**19 41 19.2**	**+0.2**
GZR				⇑S	**Sn**	**19 41 50.3**	**+0.3**
GZR	**Gura Zlata**	**2.53**	**268**	⇓P	**Pn**	**19 41 19.2**	**+0.2**
GZR				⇑S	**Sn**	**19 41 50.3**	**+0.3**
GZR	**Gura Zlata**	**2.53**	**268**	*e*Pn	**Pn**	**19 41 18.9**	**-0.1**
GZR				*e*Sn	**Sn**	**19 41 42.7**	**-7.3**
ROIA	**ROIAK**	**2.54**	**163**	*i* P	**Pn**	**19 41 19.6**	**+0.4**
BAIL	**Bailesti**	**2.63**	**236**	⇓P	**Pn**	**19 41 20.0**	**-0.2**
BAIL				⇑S	**Sn**	**19 41 51.2**	**-0.9**
BAIL	**Bailesti**	**2.63**	**236**	⇓P	**Pn**	**19 41 20.0**	**-0.2**
BAIL				⇑S	**Sn**	**19 41 51.2**	**-0.9**
PUNG	**Punghina**	**2.74**	**244**	⇑P	**Pn**	**19 41 20.8**	**-0.9**
PUNG	**Punghina**	**2.74**	**244**	⇑P	**Pn**	**19 41 20.8**	**-0.9**
PUNG	**Punghina**	**2.74**	**244**	*e*Pn	**Pn**	**19 41 20.1**	**-1.6**
PUNG				*e*Sn	**Sn**	**19 41 48.4**	**-6.3**
RMGR	**Halanga-Turnu**	**2.74**	**253**	⇑P	**Pn**	**19 41 21.3**	**-0.4**
RMGR	**Halanga-Turnu**	**2.74**	**253**	⇑P	**Pn**	**19 41 21.3**	**-0.4**
DRGR		**2.84**	**298**	⇓P	**Pn**	**19 41 22.4**	**-0.5**
DRGR				⇓S	**Sn**	**19 41 56.1**	**-1.0**
DRGR		**2.84**	**298**	⇓P	**Pn**	**19 41 22.4**	**-0.5**
DRGR				⇓S	**Sn**	**19 41 56.1**	**-1.0**
DJES	**Djerdap**	**2.86**	**254**	*e*Pn	**Pn**	**19 41 23.3**	**+0.1**
DJES				*e*Sn	**Sn**	**19 41 53.7**	**-3.8**
HERR	**Herculane**	**2.87**	**258**	⇑P	**Pn**	**19 41 22.6**	**-0.7**
HERR	**Herculane**	**2.87**	**258**	⇑P	**Pn**	**19 41 22.6**	**-0.7**
BMR	**Baia Mare**	**2.92**	**318**	⇑P	**Pn**	**19 41 24.1**	**+0.1**
BMR	**Baia Mare**	**2.92**	**318**	⇑P	**Pn**	**19 41 24.1**	**+0.1**
RAKU	**Rahkiv**	**2.92**	**330**	⇓*i*P	**Pn**	**19 41 24.3**	**+0.3**
RAKU				Pm		19 41 25.0	
RAKU				*i* S	**Sn**	**19 41 59.7**	**+0.8**
RAKU				Sm		19 42 24.4	
KSV	**Kosov**	**2.93**	**343**	⇑*i*P	**Pn**	**19 41 23.6**	**-0.5**
KSV				Pm		19 41 25.6	
KSV				*i* S	**Sn**	**19 41 58.9**	**-0.2**
KSV				Sm		19 42 02.0	
SORM	**Soroca**	**2.94**	**27**	⇓P	**Pn**	**19 41 23.4**	**-0.9**
SORM	**Soroca**	**2.94**	**27**	⇓P	**Pn**	**19 41 23.4**	**-0.9**
NSLU	**Nyzhne Selyshc**	**2.97**	**335**	⇓*i*P	Pn	19 41 29.7	+5.0
NSLU				Pm		19 41 30.3	
NSLU				*e*S	Sn	19 42 09.5	+9.3
NSLU				Sm		19 42 19.6	
KMPD	**K-Podol'skiy**	**3.04**	**1**	⇑*i*P	**Pn**	**19 41 24.9**	**-0.6**
KMPD				⇓*i*S	**Sn**	**19 41 59.5**	**-2.1**
NDNU	**Novodnistrovsk**	**3.14**	**12**	*i* P	**Pn**	**19 41 26.2**	**-0.7**
NDNU				Pm		19 41 26.6	
NDNU				*i* S	**Sn**	**19 42 02.7**	**-1.4**
NDNU				Sm		19 42 06.4	
BZS	**Buzias**	**3.33**	**273**	⇓P	**Pn**	**19 41 28.8**	**-0.6**
BZS	**Buzias**	**3.33**	**273**	⇓P	**Pn**	**19 41 28.8**	**-0.6**
BZS	**Buzias**	**3.33**	**273**	*e*Pn	**Pn**	**19 41 28.7**	**-0.7**
BZS				*e*Sn	**Sn**	**19 42 00.9**	**-7.8**
PGB	**Panagyurishte**	**3.37**	**209**	*i* P	**Pn**	**19 41 30.9**	**+0.9**
MDVR	**Moldovita**	**3.37**	**259**	⇑P	**Pn**	**19 41 29.4**	**-0.6**
MDVR	**Moldovita**	**3.37**	**259**	⇑P	**Pn**	**19 41 29.4**	**-0.6**
MDVR	**Moldovita**	**3.37**	**259**	*e*Pn	**Pn**	**19 41 29.1**	**-0.9**
MDVR				*e*Sn	**Sn**	**19 42 05.5**	**-4.2**
ZAGS	**Zajecar**	**3.41**	**241**	*e*Pn	**Pn**	**19 41 28.7**	**-1.7**
STNU	**Starunia**	**3.43**	**339**	*e*P	**Pn**	**19 41 31.0**	**+0.4**

STNU				iS	Sn	19 42 11.4	+0.5
KORU	Korolevo	3.44	321	P	Pn	19 41 31.3	+0.5
KORU				Pm		19 41 31.9	
KORU				iS	Sn	19 42 12.3	+1.2
KORU				Sm		19 42 27.1	
TRSU	Trosnyk	3.47	319	iP	Pn	19 41 31.6	+0.4
TRSU				Pm		19 41 33.0	
TRSU				eS	Sn	19 42 13.2	+1.3
TRSU				Sm		19 42 22.1	
ZAPS	Zavoj	3.50	231	ePn	Pn	19 41 31.4	-0.2
ZAPS				eSn	Sn	19 42 08.5	-4.1
KUBS	Kucevo	3.51	253	ePn	Pn	19 41 29.8	-2.0
KUBS				eSn	Sn	19 42 08.2	-4.6
DIM	Dimitrovgrad	3.53	190	iP	Pn	19 41 32.0	0.0
MEZ	Mezhgor'ye	3.57	328	⇓iP	Pn	19 41 33.3	+0.8
MEZ				Pm		19 41 34.7	
MEZ				eS	Sn	19 42 15.0	+0.9
MEZ				Sm		19 42 17.2	
LTVH	Ltavrtes, Hu	3.60	303	ePN	Pn	19 41 32.7	-0.2
LTVH				eSN	Sn	19 42 16.7	+1.8
BRIU	Brid	3.63	322	⇓iP	Pn	19 41 33.2	0.0
BRIU				Pm		19 41 33.6	
BRIU				eS	Sn	19 42 16.4	+0.9
BRIU				Sm		19 42 52.8	
PLD	Plovdiv	3.63	200	eP	Pn	19 41 32.6	-0.7
PLD	Plovdiv	3.63	200	iP	Pn	19 41 32.8	-0.5
VTS	Vitosha	3.68	219	⇑P	Pn	19 41 34.2	0.0
VTS	Vitosha	3.68	219	⇑P	Pn	19 41 34.2	0.0
VTS	Vitosha	3.68	219	iP	Pn	19 41 34.5	+0.3
BANR	Banloc	3.68	270	eSn	Sn	19 42 10.8	-6.0
HORU	Horodok	3.69	1	eP	Pn	19 41 34.5	+0.4
HORU				iS	Sn	19 42 16.4	-0.6
EDRB	Edirne	3.69	176	P	Pn	19 41 34.8	+0.6
EDRB	Edirne	3.69	176	eP	Pn	19 41 34.4	+0.2
BERU	Beregovo	3.72	318	iP	Pn	19 41 34.8	+0.4
BERU				eS	Sn	19 42 18.7	+1.0
BOVS	Bovan	3.83	242	eSn	Sn	19 42 16.6	-3.8
MUKU	Mukachevo	3.86	321	⇓iP	Pn	19 41 36.4	+0.1
MUKU				eS	Sn	19 42 22.4	+1.4
SVIS	Svilajnac	3.87	253	ePn	Pn	19 41 34.9	-1.6
KDZ	Kurdzhali	3.94	190	eP	Pn	19 41 37.7	+0.2
MORS	Morshin	3.98	336	iP	Pn	19 41 38.5	+0.6
MORS				eS	Sn	19 42 24.3	+0.4
BOSS	Bosilegrad	4.13	224	ePn	Pn	19 41 40.3	+0.3
BOSS				eSn	Sn	19 42 22.1	-5.4
UZH	Uzhgorod	4.17	320	eP	Pn	19 41 39.0	-1.4
UZH				eS	Sn	19 42 26.2	-2.2
UZH				pmax	pmax		
	comp=N,3.0nm,0.8s						
UZH				pmax	pmax		
	comp=E,3.0nm,0.8s						
UZH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
UZH				smax	smax		
	comp=N,8.0nm,0.8s						
UZH				smax	smax		
	comp=E,9.0nm,0.8s						
UZH				smax	smax		
	comp=Z,3.0nm,0.8s						
UZH				MLR	MLR		
	comp=Z,3.0nm,0.8s						
UZH	Uzhgorod	4.17	320	eP	Pn	19 41 41.0	+0.6
UZH				Pm		19 41 46.2	
UZH				iS	Sn	19 42 29.4	+1.0
UZH				Sm		19 43 12.1	
SHIU	Shidnytsya	4.22	332	iP	Pn	19 41 41.7	+0.5
SHIU				Pm		19 41 43.8	
SHIU				iS	Sn	19 42 30.2	+0.5
SHIU				Sm		19 42 37.7	
GRUS	Gruza	4.35	250	ePn	Pn	19 41 42.2	-0.7
GRUS				eSn	Sn	19 42 28.4	-4.3
KKB	Krupnik	4.37	214	iP	Pn	19 41 43.7	+0.5
KOLS	Kolonicke sedl	4.40	322	eP	Pn	19 41 44.3	+0.7
KOLS	Kolonicke sedl	4.40	322	eP	Pn	19 41 44.3	+0.7
SELS	Selova	4.41	240	ePn	Pn	19 41 42.7	-1.1
RDO	Rodhopi	4.42	188	P	Pn	19 41 43.7	-0.2
RDO	Rodhopi	4.42	188	eP	Pn	19 41 43.3	-0.6
TRUS	Trudelj	4.43	255	ePn	Pn	19 41 43.2	-0.8
TRUS				eSn	Sn	19 42 29.7	-5.1
SLVT	Silivri	4.50	162	eP	Pn	19 41 44.9	-0.1
NVR	Nevrokopi	4.56	204	P	Pn	19 41 46.1	+0.3
LVV	L'vov	4.57	341	eP	Pn	19 41 46.0	+0.1
LVV				eS	Sn	19 42 38.2	+0.1
LVV				pmax	pmax		
	comp=Z,30nm,1.4s						
LVV				smax	smax		
	comp=E,110nm,2.1s						
LVV				smax	smax		
	comp=N,100nm,2.3s						
LVV				MLR	MLR		
	comp=N,1µm,4.6s						
LVV				MLR	MLR		
	comp=E,1µm,4.6s						
LVV				MLR	MLR		
	comp=Z,1µm,4.7s						
LVV	L'vov	4.57	341	iP	Pn	19 41 45.6	-0.3
FRGS	Fruska Gora	4.64	268	ePn	Pn	19 41 46.0	-0.8
FRGS				eSn	Sn	19 42 34.0	-5.7
FRGS	Fruska Gora	4.64	268	ePn	Pn	19 41 45.7	-1.1
KAVA	Kavala	4.73	197	P	Pn	19 41 48.0	0.0
CRVS	Cervenica-Dubn	4.75	317	eP	Pn	19 41 48.2	0.0
CRVS	Cervenica-Dubn	4.75	317	eP	Pn	19 41 48.2	0.0
DIVS	Divibare	4.75	255	ePn	Pn	19 41 47.3	-1.1
DIVS				eSn	Sn	19 42 37.9	-4.7
DIVS	Divibare	4.75	255	ePn	Pn	19 41 47.2	-1.1
DIVS	Divibare	4.75	255		Pn	19 41 47.3	-1.1
ENEZ	Enez	4.79	182	eP	Pn	19 41 46.9	-2.0
IVAS	Ivanjica	4.85	248	ePn	Pn	19 41 50.4	+0.7
IVAS				eSn	Sn	19 42 39.7	-5.2
SRS	Serrai	4.85	206	P	Pn	19 41 49.9	+0.2
ERIK	Erikli-Kesan	4.86	179	eP	Pn	19 41 49.7	0.0
ISK	Istanbul-Kandi	4.88	155	eP	Pn	19 41 48.8	-1.2
KAVV	Kandilli-Istan	4.88	155	eP	Pn	19 41 47.5	-2.5
STIP	Stip	4.89	220	iPn	Pn	19 41 48.0	-2.1
TEKS	Tekeris	4.94	261	ePn	Pn	19 41 50.0	-0.9
TEKS				eSn	Sn	19 42 42.3	-4.8
TEKS	Tekeris	4.94	261	ePn	Pn	19 41 49.6	-1.3
KECS	Kecovo	4.99	308	eP	Pn	19 41 50.7	-0.8
KECS	Kecovo	4.99	308	eP	Pn	19 41 50.7	-0.8
KNT	Kendrikon	5.04	211	P	Pn	19 41 52.6	+0.3
KNT	Kendrikon	5.04	211	eP	Pn	19 41 52.6	+0.3
PSZ	Piszkesteto	5.05	301	ePN	Pn	19 41 51.9	-0.4
PSZ	Piszkesteto	5.05	301	P	Pn	19 41 50.7	-1.6
PSZ	Piszkesteto	5.05	301	Pn	Pn	19 41 50.7	-1.6
THAS	Thassos island	5.07	194	P	Pn	19 41 52.7	+0.2
SMTH	Samothraki Isl	5.09	187	P	Pn	19 41 53.2	+0.3
SJES	Sjenica	5.11	246	ePn	Pn	19 41 53.2	0.0
SJES	Sjenica	5.11	246	ePn	Pn	19 41 52.3	-0.9
GELI	Tayfur-Gelibol	5.13	179	eP	Pn	19 41 53.5	+0.1
LPK	Lapseki	5.16	177	eP	Pn	19 41 52.6	-1.2
SOH	Sokhos	5.19	206	P	Pn	19 41 54.5	+0.2
BBLS	Lazići	5.23	254	ePn	Pn	19 41 54.0	-0.8
BBLS	Lazići	5.23	254	ePn	Pn	19 41 53.8	-1.0
SEV	Sevastopol'	5.27	98	eP	Pn	19 41 51.3	-3.9
SEV				eS	Sn	19 42 50.1	-4.7
SEV	Sevastopol'	5.27	98	eP	Pn	19 41 51.3	-3.9
SEV				Pm		19 41 52.6	
SEV				eS	Sn	19 42 50.1	-4.7
SEV				Sm		19 42 52.5	
RUDO	Rudo	5.35	252	ePn	Pn	19 41 52.0	-4.3
GRG	Griva	5.41	214	P	Pn	19 41 58.3	+1.1
GRG	Griva	5.41	214	eP	Pn	19 41 56.9	-0.3
HAPS	Han Pijesak,BI	5.47	257	ePn	Pn	19 41 55.7	-2.3
HORT	Hortiatis	5.48	207	eP	Pn	19 41 55.2	-3.0
OUR	Ouranopolis	5.48	199	P	Pn	19 41 58.6	+0.5
OUR	Ouranopolis	5.48	199	eP	Pn	19 41 58.4	+0.3
SIM	Simferopol'	5.50	93	eP	Pn	19 41 56.8	-1.6
SIM				eS	Sn	19 42 57.3	-3.2
SIM				pmax	pmax		
	comp=Z,51nm,0.3s						
SIM				smax	smax		
	comp=N,79nm,1.2s						
SIM	Simferopol'	5.50	93	eP	Pn	19 41 56.6	-1.8
SIM				Pm		19 41 57.8	
SIM				eS	Sn	19 42 57.1	-3.4
SIM				Sm		19 43 02.0	
AKBB	Malin Array Si	5.52	19	P	Pn	19 41 56.9	-1.6
AKBB	Malin Array Si	5.52	19		Pn	19 41 56.9	-1.6
AKASG	Malin Array Be	5.52	19	P	Pn	19 41 57.5	-1.0
	comp=N,4.1nm,0.3s,baz=204,slow=12,SNR=17						
AKASG				S	Sn	19 42 53.8	-7.0
	comp=N,9.7nm,0.3s,baz=196,slow=22,SNR=11						
AKASG	Malin Array Be	5.52	19	ceP	Pn	19 41 57.5	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KDZE	Karadeniz Ereo	5.61	137	eP	Pn	19 42 00.3	+0.5
YAL	Yalta	5.62	98	eP	Pn	19 41 58.3	-1.6
YAL				eS	Sn	19 43 00.3	-3.0
YAL	Yalta	5.62	98	⇑eP	Pn	19 41 58.3	-1.6
YAL				eS	Sn	19 43 00.3	-3.0
BOZC	Bozcaada	5.69	182	eP	Pn	19 41 59.2	-1.7
LIA	Limnos Island	5.69	189	P	Pn	19 42 01.2	+0.2
ALU	Alushta	5.75	96	eP	Pn	19 41 59.8	-1.9
ALU				eS	Sn	19 43 04.5	-2.0
ALU	Alushta	5.75	96	eP	Pn	19 41 59.8	-1.9
ALU				Pm		19 42 08.2	
ALU				eS	Sn	19 43 04.5	-2.0
ALU				Sm		19 43 10.3	
LANS	Liptovska Anna	5.92	310	eP	Pn	19 42 04.9	+0.9
LANS	Liptovska Anna	5.92	310	eP	Pn	19 42 04.9	+0.9
PAIG	Paliouri	5.94	200	P	Pn	19 42 04.8	+0.6
VYHS	Vyhne	5.94	303	eP	Pn	19 42 04.4	+0.1
VYHS	Vyhne	5.94	303	eP	Pn	19 42 04.4	+0.1
FNA	Florina	5.98	219	P	Pn	19 42 05.5	+0.6
FNA	Florina	5.98	219	eP	Pn	19 42 05.5	+0.6
FNA	Florina	5.98	219	P	Pn	19 42 05.9	+1.0
FNA	Florina	5.98	219	Pn	Pn	19 42 05.9	+1.0
PDG	Podgorica	5.99	241	ePn	Pn	19 42 04.7	-0.2
SUDU	Sudak	6.13	93	eP	Pn	19 42 05.9	-1.0
SUDU				eS	Sn	19 43 13.7	-2.0
SUDU	Sudak	6.13	93	eP	Pn	19 42 05.9	-1.0
SUDU				Pm		19 42 07.8	
SUDU				eS	Sn	19 43 13.7	-2.0
SUDU				Sm		19 43 14.1	
DRME	Dracevica, Mon	6.17	240	ePn	Pn	19 42 10.1	+2.7
KOLL	Kolacno	6.24	302	eP	Pn	19 42 08.3	+0.1
SIGR	SIGRI	6.32	184	P	Pn	19 42 10.5	+1.0
SIGR	SIGRI	6.32	184	eP	Pn	19 42 09.5	0.0
MPLH	Magyarpolny	6.33	288	⇑ePN	Pn	19 42 10.4	+1.0
MPLH				eSN	Sn	19 43 19.4	-1.0
FEO	Feodosiya	6.39	91	eP	Pn	19 42 08.5	-1.8
FEO				eS	Sn	19 43 19.4	-2.5
FEO	Feodosiya	6.39	91	eP	Pn	19 42 08.5	-1.8
FEO				Pm		19 42 11.4	
FEO				eS	Sn	19 43 19.4	-2.5
FEO				Sm		19 43 25.1	
TREB	Trebinje	6.42	247	ePn	Pn	19 42 13.2	+2.5
NEST	Nestorio	6.43	219	P	Pn	19 42 12.2	+1.2
BLY	Banja Luka	6.54	266	ePn	Pn	19 42 11.6	-0.8
XOR	Xorichti	6.59	202	P	Pn	19 42 13.6	+0.5
BEHE	Becsehely	6.75	281	ePn	Pn	19 42 17.8	+2.7
STON	Ston	6.77	250	ePn	Pn	19 42 14.9	-0.5
STON	Ston	6.77	250	ePn	Pn	19 42 15.7	+0.3
JAVC	Velka Javorina	6.79	302	ePN	Pn	19 42 16.4	+0.6
SOP	Sopron	7.09	291	eSN	Sn	19 43 37.3	-1.5
KIJV	Kijevo	7.25	261	ePn	Pn	19 42 22.6	+0.7
UDBI	Udbina	7.58	266	ePn	Pn	19 42 27.7	+1.3
CONA	Conrad Observa	7.61	292	eP	Pn	19 42 26.8	0.0
	comp=Z,2.4nm,0.7s						
VRAC	Vranov	7.63	303	P	Pn	19 42 27.3	+0.3
	comp=Z,0.2nm,0.3s,baz=119,slow=12,SNR=8.9						
VRAC	Vranov	7.63	303	ePN	Pn	19 42 25.9	-1.1
KRUC	Moravsky	7.64	301	ePN	Pn	19 42 26.9	-0.3
CRES	Cresnjev	7.65	276	ePn	Pn	19 42 27.6	+0.3
ARSA	Arzberg	7.69	287	ePn	Pn	19 42 29.2	+1.3
	comp=Z,1.6nm,0.6s						
MORI	Morici	7.77	261	ePn	Pn	19 42 30.3	+1.3
MORI				Sn	Sn	19 43 55.0	-0.4
ZIRJ	Zirje	7.88	260	ePn	Pn	19 42 30.7	+0.3
BRTR	Keskin Array B	7.90	135	P	Pn	19 42 30.2	-0.6
	comp=Z,0.4nm,0.3s,baz=322,slow=12,SNR=16						
SOKA	Soboth	7.96	282	ePn	Pn	19 42 32.5	+1.0
	comp=Z,6.1nm,0.6s,SNR=8.3						
DUGI	Dugi Otok	8.19	263	ePn	Pn	19 42 36.7	+2.0
OBKA	Obir	8.28	281	ePn	Pn	19 42 37.5	+1.5
	comp=Z,4.1nm,0.7s,SNR=4.2						
DPC	Dobruska-Polom	8.29	309	eP	Pn	19 42 36.6	+0.7
OSTC	Ostas	8.46	310	eP	Pn	19 42 47.0	+8.8
CHVC	Chvalec	8.56	310	eP	Pn	19 42 41.1	+1.5
ITM	Ithomi	8.98	203	Pn	Pn	19 42 43.7	-1.7
MNK	Minsk	9.04	6	iP	Pn	19 42 43.8	-2.1
	comp=E,1.0nm,0.8s						
MNK				iP	Pn	19 42 43.8	-2.1
	comp=N,19nm,1.1s						
MNK				iP	Pn	19 42 43.8	-2.1
	comp=Z,7.0nm,0.9s						
MNK				iS	Sn	19 44 22.6	-3.2
MNK				iLRM	MLR	19 46 25.6	
	comp=E,3.0nm,5.4s						
MNK				iLRM	MLR	19 46 25.6	
	comp=N,15nm,6.3s						
MNK				iLRM	MLR	19 46 28.8	
	comp=Z,30nm,10.4s						
PRU	Pruhonice	9.13	304	eP	Pn	19 42 51.5	+4.3
KBA	Koelnbreinsper	9.15	284	ePn	Pn	19 42 49.4	+1.7
	comp=Z,8.9nm,0.9s,SNR=5.4						
GEC2	GERESS Array S	9.24	296	Pn	Pn	19 42 49.2	+0.4
GERES	GERESS Array B	9.24	296	P	Pn	19 42 49.7	+0.9
	comp=Z,0.3nm,0.3s,baz=105,slow=13,SNR=14						
GERES				S	Sn	19 44 28.4	-2.6
	comp=Z,0.1nm,0.3s,baz=116,slow=25,SNR=4.2						
PBCC	Pribram	9.33	301	eP	Pn	19 42 50.5	+0.5
ZOU	Zoufplan	9.37	281	Pn	Pn	19 42 50.8	+0.1
KHC	Kasperske Hory	9.40	297	ceP	Pn	19 42 50.3	-0.6
KHC				pmax	pmax		
	comp=Z,32nm,2.5s						
KHC	Kasperske Hory	9.40	297	eP	Pn	19 42 51.5	+0.6
KHC	Kasperske Hory	9.40	297	Pn	Pn	19 42 51.8	+0.8
TIP	Timpagrande	9.53	232	Pn	Pn	19 42 52.9	+0.1
ABTA	Abfaltersbach	9.70	282	ePn	Pn	19 42 57.6	+2.7
	comp=Z,2.9nm,0.8s						
NRCA	Norcia	9.89	259	Pn	Pn	19 42 57.4	-0.3
VORD	Divnogorie	10.19	53	eP	Pn	19 42 59.4	-2.1
VORD				eS	Sn	19 44 45.9	-7.9
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VORD				smax	smax		
	comp=N,150nm,0.7s						
VSR	Storozhevoye	10.24	52	eP	Pn	19 43 01.5	-0.6
VSR				eS	Sn	19 44 47.2	-7.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR				smax	smax		
	comp=N,170nm,1.2s						
WTTA	Wattenberg	10.32	285	ePn	Pn	19 43 05.9	+2.4
	comp=N,1.4nm,0.5s						
WATA	Walderalm	10.37	285	ePn	Pn	19 43 05.8	+1.7
	comp=N,2.1nm,0.6s						
SQTA	Sankt Quirin	10.61	285	ePn	Pn	19 43 09.7	+2.4
	comp=N,0.9nm,0.4s						
MOTA	Moosalm	10.69	285	ePn	Pn	19 43 11.3	+2.9
	comp=N,1.3nm,0.5s						
LPSR	Galich'ya Gora	10.85	45	eP	Pn	19 43 07.2	-3.2
LPSR				eS	Sn	19 45 00.0	-10
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR				smax	smax		
	comp=E,40nm,0.8s						
ZCCA	Zocca	10.97	269	Pn	Pn	19 43 09.3	-2.8
GRA1	Grafenberg Arr	11.04	298	Pn	Pn	19 43 11.6	-1.3
GRF	Grafenberg Arr	11.04	298	P	Pn	19 43 11.6	-1.3
DAVOX	Davos/Dischmat	11.51	282	P	P	19 43 29.1	+1.2
	comp=E,0.4nm,0.3s,baz=66,slow=8.3,SNR=10						
OBN	Obninsk	11.59	30	eP	Pn	19 43 17.4	-2.7
OBN				pmax	pmax		
	comp=Z,9.0nm,0.3s						
OBN	Obninsk	11.59	30	Pn	Pn	19 43 16.8	-3.3
VRH	Novokhopyorsk	11.68	55	eP	Pn	19 43 18.1	-3.2
VRH				eS	Sn	19 45 21.6	-8.1
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
VRH				smax	smax		
	comp=N,90nm,0.9s						
KIV	Kislovodsk	11.72	92	eP	P	19 43 26.5	-3.6
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	Khabaz	11.92	93	P	Pn	19 43 24.9	+0.4
	comp=Z,0.1nm,0.3s,baz=304,slow=7.3,SNR=4.3						
MOS	Moscow	12.45	31	eP	Pn	19 43 30.6	-0.8
MOS				e		19 45 36.7	
VSU	Vasula	12.96	1	iP	Pn	19 43 37.0	-0.9
VSU				pmax	pmax		
	comp=Z,45nm,1.1s						
SENIN	Lac Senin/Sane	13.30	280	P	P	19 43 48.7	+0.8
BNI	Bardonecchia	13.87	275	P	Pn	19 43 49.7	-0.3
BNI	Bardonecchia	13.87	275	Pn	Pn	19 43 49.7	-0.3
SSB	Saint Sauveur	15.33	277	P	Pn	19 44 06.7	-1.6
SSB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SSB	Saint Sauveur	15.33	277	Pn	Pn	19 44 06.7	-1.6
FINES	FINESS Array B	15.95	359	P	Pn	19 44 12.1	-3.6
	comp=Z,0.5nm,0.3s,baz=174,slow=15,SNR=13						
FINES	FINESS Array B	15.95	359	iP	Pn	19 44 14.6	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FIA1	FINESS Array S	15.95	360	P	P	19 44 16.6	-0.3
FIA1				IAmb	IAmb	19 44 19.0	
	comp=Z,12nm,1.2s						
KLMR	Klimovskoe	17.20	22	eP	P	19 44 29.5	-1.2
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s						
KLMR	Klimovskoe	17.20	22	ePn	P	19 44 29.5	-1.2
KLMR				AMP		19 44 32.9	
	comp=Z,32nm,1.5s						
NC602	NORSAR Array S	17.57	335	P	P	19 44 33.3	-1.5
NB201	NORSAR Array S	17.89	336	P	P	19 44 37.7	-0.7
NB2	NORSAR Subarra	17.91	336	P	P	19 44 38.6	+0.1
	comp=Z,0.5nm,0.5s,baz=145,slow=12						
NOA	NORSAR Array B	17.91	336	P	P	19 44 38.1	-0.4
	comp=Z,0.0nm,0.3s,baz=144,slow=11,SNR=3.4						
NC303	NORSAR Array S	18.01	336	P	P	19 44 38.3	-1.3
NBO00	NORSAR Array S	18.03	335	P	P	19 44 40.0	+0.1
KIRV	Kirov	19.15	39	P	P	19 44 52.1	+0.2
	comp=Z,1.8nm,0.3s,baz=274,slow=8.0,SNR=3.7						
AKTO	Aktyubinsk	21.65	65	P	P	19 45 18.9	-0.1
	comp=Z,1.9nm,0.4s,baz=262,slow=7.2,SNR=10.0						
ARU	Arti	22.80	50	P	P	19 45 29.8	-0.8
	comp=Z,2.8nm,0.3s,baz=236,slow=10,SNR=32						
ARU				pP	pP	19 45 54.5	+0.3
	comp=Z,1.5nm,0.5s,baz=279,slow=12,SNR=2.9						
ARU	Arti	22.80	50	c iP	P	19 45 30.8	+0.2
ARU						19 45 55.5	
ARU				S	S	19 49 30.4	+0.4
ARU				SS	SnSn	19 50 21.7	+6.4
ARU				pmax	pmax		
	comp=Z,44nm,3.9s						
ARU	Arti	22.80	50	P	P	19 45 30.3	-0.3
ARU				IAmb	IAmb	19 45 31.7	
	comp=Z,13nm,1.1s						
LVZ	Lovozero	22.84	8	ceP	P	19 45 33.7	+2.8
LVZ				pmax	pmax		
	comp=Z,51nm,1.3s						
LVZ	Lovozero	22.84	8	P	P	19 45 30.5	-0.4
ABKAR	Akbulak array	22.92	68	P	P	19 45 32.4	+0.6
ABKAR				IAmb	IAmb	19 45 41.0	
	comp=Z,3.3nm,0.6s						
ESBB	Sonseca Array	22.99	266	P	P	19 45 30.0	-2.7
ESBB				IAmb	IAmb	19 45 45.2	
	comp=Z,12nm,1.5s						
ESDC	Sonseca Array	22.99	266	P	P	19 45 31.8	-0.9
	comp=Z,1.7nm,0.8s,baz=62,slow=10.0,SNR=17						
PAB	San Pablo	23.32	266	P	P	19 45 32.7	-3.0
PAB				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PAB	San Pablo	23.32	266	P	P	19 45 32.7	-3.0
ARCES	ARCESS Array B	24.08	359	P	P	19 45 42.0	-0.1
	comp=Z,4.4nm,0.9s,baz=172,slow=9.8,SNR=11						
GEYT	Alibeck	24.77	97	P	P	19 45 50.4	+1.7
	comp=Z,3.4nm,0.7s,baz=294,slow=11,SNR=7.2						
MDT	Midelt	26.98	253	P	P	19 46 12.6	+3.7
	comp=Z,0.8nm,0.7s,baz=55,slow=16,SNR=4.3						
BVAR	Borovoye Array	29.29	59	P	P	19 46 29.9	+0.9
	comp=Z,0.5nm,0.4s,baz=284,slow=7.5,SNR=4.7						
SPITS	Spitsbergen Ar	33.00	356	P	P	19 47 01.8	+0.5
	comp=Z,18nm,1.1s,baz=127,slow=11						
AAK	Ala-Archa	34.29	77	ceP	P	19 47 15.7	+2.6
AAK				pmax	pmax		
	comp=Z,15nm,1.0s						
AAK	Ala-Archa	34.29	77	P	P	19 47 14.5	+1.4
AAK				IAmb	IAmb	19 47 16.3	
	comp=Z,13nm,1.5s						
KURK	Kurchatov	34.66	62	P	P	19 47 16.7	+0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURK	Kurchatov	34.66	62	P	P	19 47 16.7	+0.8
KURK				IAmb	IAmb	19 47 17.2	
	comp=Z,2.3nm,0.4s						
KSH	Kashi	36.57	81	P	P	19 47 32.6	0.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,320nm,6.4s						
ZAA0	Zalesovo Array	37.71	55	P	P	19 47 42.4	+0.5
ZAA0				IAmb	IAmb	19 47 43.7	
	comp=Z,4.5nm,0.7s						
ZALV	Zalesovo Beam	37.71	55	P	P	19 47 42.9	+1.0
	comp=Z,4.1nm,0.5s,baz=284,slow=8.9,SNR=26						
ZALV				pP	pP	19 48 10.1	+0.7
	comp=Z,2.8nm,0.7s,baz=277,slow=9.4,SNR=6.2						
MK31	Makanchi Array	38.06	67	P	P	19 47 45.8	+0.9
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	Makanchi Array	38.06	67	P	P	19 47 45.8	+0.9
MKAR	Makanchi Array	38.06	67	P	P	19 47 46.2	+1.3
	comp=Z,1.3nm,0.5s,baz=274,slow=8.0,SNR=28						
MKAR				pP	pP	19 48 13.8	+1.3
	comp=Z,0.7nm,0.5s,baz=284,slow=7.4,SNR=4.6						
MKAR	Makanchi Array	38.06	67	ceP	P	19 47 46.2	+1.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TOA0	Torodi Ar. Sit	38.46	221	P	P	19 47 49.4	+0.9
TORD	Torodi Ar. Bea	38.46	221	P	P	19 47 49.7	+1.2
	comp=Z,1.5nm,0.6s,baz=24,slow=8.7,SNR=9.5						
TORD				PcP	PcP	19 49 57.8	-1.4
	comp=Z,0.4nm,0.7s,baz=55,slow=2.8,SNR=2.3						
KOWA	Kowa	40.16	229	P	P	19 48 03.3	+0.7
	comp=Z,0.4nm,0.3s,baz=28,slow=13,SNR=1.6						
DGZ	Jazzator, Alta	40.38	61	iP	P	19 48 06.1	+1.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	42.70	69	eP	P	19 48 24.6	+1.3
DBIC	Dimbokro	47.22	225	P	P	19 48 58.2	-0.9
	comp=Z,1.0nm,0.4s,baz=18,slow=8.5,SNR=9.4						
DANN	Dangsing	47.95	90	eP	P	19 49 06.5	+1.5
	comp=Z,8.6nm,0.5s						
DMN	Daman	49.34	90	eP	P	19 49 17.0	+1.3
	comp=Z,6.3nm,0.4s						
KKN	Kakani	49.35	90	eP	P	19 49 16.7	+1.0
	comp=Z,15nm,0.6s						
PKIN	Phulchoki	49.56	90	eP	P	19 49 17.7	+0.3
	comp=Z,6.1nm,0.6s						
PKI	Pulchoki	49.58	90	eP	P	19 49 17.9	+0.4
	comp=Z,7.4nm,0.8s						
GUN	Gumba	49.70	89	eP	P	19 49 19.3	+0.8
	comp=Z,8.0nm,0.5s						
RAMN	Ramite	50.79	90	eP	P	19 49 27.3	+0.7
	comp=Z,10nm,0.6s						
TAPN	Taplejung	51.33	89	eP	P	19 49 31.7	+1.0
	comp=Z,4.0nm,0.3s						
ODAN	Odare	51.40	89	eP	P	19 49 31.7	+0.5
	comp=Z,10.0nm,0.8s						
LSA	Lhasa	52.33	84	P	P	19 49 39.0	+0.8
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	52.33	84	P	P	19 49 39.0	+0.8
LSA				IAmb	IAmb	19 49 41.1	
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	52.59	57	P	P	19 49 41.0	+1.5
	comp=Z,1.8nm,0.5s,baz=298,slow=8.4,SNR=22						
SONM	Songino Array	52.59	57	P	P	19 49 41.0	+1.5
GTA	Gaotai	52.78	69	eP	P	19 49 42.2	+1.1
RES	Resolute Bay	53.93	344	P	P	19 49 51.6	+2.8
	comp=Z,0.7nm,0.8s,baz=108,slow=3.2,SNR=2.6						
LZH	Lanzhou	57.28	70	⇑P	P	19 50 13.4	-0.1
LZH				pP	pP	19 50 41.0	-1.9
LZH				sP	sP	19 50 54.5	-2.1
LZH				PP	PP	19 52 23.7	+2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,84nm,6.5s						
HHC	Hu-ho-hao-te	59.47	61	eP	P	19 50 29.5	+1.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
SEY	Seymchan	63.68	24	P	P	19 50 57.2	+0.9
	comp=Z,1.0nm,0.5s,baz=316,slow=7.5,SNR=7.5						
MHMT	Maesarieng	64.42	90	P	P	19 51 03.4	+1.6
CHTO	Chiang Mai	64.70	89	P	P	19 51 02.6	-1.0

CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**64.70**	**89**	P	**P**	**19 51 02.6**	**-1.0**
CHTO				IAmb	IAmb	19 51 05.1	
	comp=Z,3.6nm,0.8s						
CMMT	**Chiang Mai**	**64.70**	**88**	P	**P**	**19 51 04.0**	**+0.3**
CM15	**Chiang Mai Arr**	**64.93**	**89**	P	**P**	**19 51 06.2**	**+1.0**
CM13	**Chiang Mai Arr**	**64.94**	**89**	P	**P**	**19 51 06.2**	**+1.1**
CM31	**Chiang Mai Arr**	**64.94**	**89**	P	**P**	**19 51 06.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**64.94**	**89**	P	**P**	**19 51 06.1**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=305,slow=7.6,SNR=38						
CM02	**Chiang Mai Arr**	**64.96**	**89**	P	**P**	**19 51 06.5**	**+1.2**
CM01	**Chiang Mai Arr**	**64.97**	**89**	P	**P**	**19 51 06.5**	**+1.2**
CM05	**Chiang Mai Arr**	**64.98**	**89**	P	**P**	**19 51 06.5**	**+1.1**
CM09	**Chiang Mai Arr**	**64.98**	**89**	P	**P**	**19 51 06.7**	**+1.3**
CM04	**Chiang Mai Arr**	**65.00**	**89**	P	**P**	**19 51 06.8**	**+1.2**
INK	**Inuvik**	**65.49**	**352**	P	**P**	**19 51 07.5**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=18,slow=5.2,SNR=8.0						
DGAR	**Diego Garcia**	**66.90**	**129**	*ce*P	**P**	**19 51 21.5**	**+3.9**
DGAR				pmax	pmax		
	comp=Z,115nm,1.7s						
YKA	**Yellowknife Ar**	**67.89**	**342**	P	**P**	**19 51 22.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=36,slow=6.1,SNR=14						
YKA				pP	**pP**	**19 51 52.5**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=314,slow=7.5,SNR=3.3						
YKA	**Yellowknife Ar**	**67.89**	**342**	*i* P	**P**	**19 51 23.0**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**69.03**	**48**	P	**P**	**19 51 31.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=318,slow=4.4,SNR=2.8						
ILAR	**Eielson Array**	**69.91**	**357**	P	**P**	**19 51 36.8**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=360,slow=7.5,SNR=4.6						
KSRS	**Korea Array**	**71.42**	**55**	P	**P**	**19 51 46.0**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=316,slow=5.0,SNR=4.7						
PDAR	**Pinedale Array**	**83.72**	**329**	P	**P**	**19 52 53.0**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=60,slow=3.6,SNR=3.0						
WRA	**Warramunga Arr**	**116.44**	**92**	PKP	**PKPdf**	**19 59 06.5**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=319,slow=1.7,SNR=3.1						
ASAR	**Alice Springs**	**118.56**	**95**	PKP	**PKPdf**	**19 59 11.3**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=312,slow=1.6,SNR=11						
STKA	**Stephens Creek**	**128.96**	**98**	PKP	**PKPdf**	**19 59 31.6**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=348,slow=2.4,SNR=5.3						

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*ANF **04** 20:08:13.7±0.5, 41°.85N×119°.57W, h7^{km}, ML3.7/21, Error ellipse: s-maj=4.3km s-min=3.0km az=89.0*

*REN **04** 20:08:14.2±2.7, 41°.88N±0°.01×119°.64W±0°.03, h10^{km}±6^{km}, ML3.9/5, ML3.7/49(SEA), ML3.6/46(NEIC), Mwr3.7/42(NEIC), Error ellipse: s-maj=2.7km s-min=1.5km az=79.0*

*SEA **04** 20:08:14.8±2.4, 41°.81N±0°.03×119°.62W±0°.03, h0^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=3.3km az=200.0*

*NEIC **04** 20:08:14.1, 41°.85N×119°.62W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.66; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$3.34; $M_{r\theta}$-1.35; $M_{\theta\phi}$2.39; $M_{\phi r}$2.15; Fault plane solution: $M_0$4.64000×10^{14} NP1:ϕ_s173.45000°, δ65.64000°, λ-130.15000°. NP2:ϕ_s57.39000°, δ45.87000°, λ-35.08000°. Principal axes: T 4.7341, Plg12.0000°, Azm291.0000°; N -0.2047, Plg36.0000°, Azm193.0000°; P -4.5294, Plg52.0000°, Azm36.0000°;*

*IDC **04** 20:08:15.6±1.7, 41°.89N×119°.40W, h0^{km}, mb2.9/1, mb1 3.5/4, mb1mx3.3/42, mbtmp3.1/4, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/12 Error ellipse: s-maj=14.7km s-min=12.2km az=113.0*

*NEIC **04** 20:08:15±3.2, 41°.89N±0°.03×119°.60W±0°.03, h9^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=2.7km az=178.0*

ISC 04 20:08:14.6±0.7, **41°.83N**±0°.03×**119°.62W**±0°.02, **h10**^{km}, **n70**, σ**1^{s}39**/93, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.52**	**278**		**Pg**	**20 08 24.1**	**-0.6**
MOD	**Modoc Plateau**	**0.52**	**278**		**Sg**	**20 08 31.4**	**-0.1**
LKVW	**Lakeview**	**0.68**	**306**		**Pg**	**20 08 26.6**	**-1.2**
LKVW					**Sg**	**20 08 36.3**	**-0.4**
WVOR	**Wild Horse Val**	**0.95**	**50**		**Pg**	**20 08 31.9**	**-1.0**
WVOR					**Sg**	**20 08 44.8**	**-0.4**
WVOR	**Wild Horse Val**	**0.95**	**50**	IAML		20 08 48.2	
	3μm,0.7s						
WVOR				IAML		20 08 48.6	
	2μm,1.1s						
K05A	**Summer Lake**	**1.30**	**314**		**Pn**	**20 08 38.0**	**-1.1**
K05A					**Sg**	**20 08 56.2**	**-0.3**
K05A	**Summer Lake**	**1.30**	**314**	IAML		20 08 58.9	
	comp=E,1μm,1.0s						
LASM	**Arnica Sink**	**1.48**	**262**		**Pn**	**20 08 41.0**	**-0.5**
LTIM	**Timbered Crate**	**1.55**	**246**		**Pn**	**20 08 42.3**	**-0.1**
LBCM	**Butte Creek Ri**	**1.64**	**233**		**Pn**	**20 08 43.7**	**0.0**
M04C	**Macdoel**	**1.66**	**269**	P	**Pn**	**20 08 43.3**	**-0.7**
	baz=87,SNR=179						
M04C				S	**Sg**	**20 09 07.6**	**-0.5**
	baz=87						
M04C	**Macdoel**	**1.66**	**269**		**Pn**	**20 08 43.5**	**-0.5**
M04C					**Sg**	**20 09 07.7**	**-0.3**
K04D	**Chiloquin, OR**	**1.77**	**297**	Pn	**Pn**	**20 08 44.6**	**-0.9**
	baz=116,SNR=44						
K04D				Pb	**Pn**	**20 08 46.3**	**+0.8**
	baz=116						
K04D				Sb	**Sg**	**20 09 11.6**	**-0.1**
	baz=116						
K04D	**Chiloquin, OR**	**1.77**	**297**		**Pn**	**20 08 46.3**	**+0.8**
K04D					**Sg**	**20 09 11.8**	**+0.1**
J05D	**Fort Rock, OR**	**1.88**	**321**	Pn	**Pn**	**20 08 46.4**	**-0.6**
	baz=140,SNR=642						
J05D				Pb	**Pn**	**20 08 48.1**	**+1.1**
	baz=140						
J05D				Sb	**Sb**	**20 09 13.8**	**+1.0**
	baz=140						
J05D	**Fort Rock, OR**	**1.88**	**321**		**Pn**	**20 08 48.2**	**+1.1**
L04D	**Klamath Falls**	**2.04**	**282**	P	**Pn**	**20 08 48.1**	**-1.0**
	baz=100,SNR=112						
L04D				S	**Sb**	**20 09 17.8**	**+0.6**
	baz=100						
L04D	**Klamath Falls**	**2.04**	**282**		**Pn**	**20 08 48.3**	**-0.8**
BEKR	**Beckworth**	**2.04**	**196**		**Pn**	**20 08 49.9**	**+0.7**
BEKR				IAML		20 09 21.3	
	comp=E,462nm,0.4s						
BEKR				IAML		20 09 21.4	
	comp=N,348nm,0.3s						
TMBU	**Tom Butte, New**	**2.10**	**328**		**Pb**	**20 08 52.1**	**-0.8**
PAHR	**Pah Rah Range**	**2.13**	**175**		**Pn**	**20 08 51.6**	**+1.2**
PAHR				IAML		20 09 24.4	
	comp=E,282nm,0.6s						
PAHR				IAML		20 09 24.8	
	comp=N,284nm,0.5s						
PINE	**Pine Mountain**	**2.19**	**334**		**Pn**	**20 08 50.8**	**-0.5**
PINE				IAML		20 09 30.8	
	comp=E,410nm,1.2s						
PINE				IAML		20 09 32.0	
	comp=N,297nm,0.8s						
I07A	**Izee**	**2.25**	**2**		**Pn**	**20 08 52.7**	**+0.6**
I07A				IAML		20 09 25.6	
	comp=N,357nm,0.7s						
I07A				IAML		20 09 33.7	
	comp=E,343nm,0.8s						
O03E	**Paynes Creek**	**2.25**	**228**	Pn	**Pn**	**20 08 52.5**	**+0.4**
	baz=46,SNR=90						
O03E				Pb	**Pb**	**20 08 55.4**	**-0.1**
	baz=46						
O03E				Sb	**Sg**	**20 09 25.7**	**-1.4**
	baz=46						
YBH	**Yreka Blue Hor**	**2.31**	**269**	Pn	**Pn**	**20 08 51.8**	**-1.1**
YBH				IAML		20 09 28.4	
	comp=N,237nm,0.7s						
J04D	**Umpqua Nationa**	**2.32**	**308**	Pb	**Pb**	**20 08 56.4**	**-0.3**
	baz=126,SNR=47						
M02C	**Callahan**	**2.46**	**261**	P	**Pn**	**20 08 53.7**	**-1.2**
	baz=78,SNR=32						
M02C				Sb	**Sg**	**20 09 31.9**	**-1.9**
	baz=78						
N02D	**Trinity Center**	**2.47**	**251**	P	**Pn**	**20 08 54.1**	**-1.0**
	baz=68,SNR=44						
N02D				Sb	**Sg**	**20 09 32.5**	**-1.7**
	baz=68						
WDC	**Whiskeytown Da**	**2.53**	**241**	Pn	**Pn**	**20 08 55.3**	**-0.5**
WDC				IAML		20 09 33.1	
	comp=N,167nm,0.6s						
HUMO	**Hull Mountain**	**2.60**	**288**	Pn	**Pn**	**20 08 55.7**	**-1.1**
PNTR	**Pine Nut**	**2.74**	**180**		**Pb**	**20 09 04.0**	**+0.2**
PNTR				IAML		20 09 46.0	
	comp=E,321nm,0.9s						
I05D	**Terrebonne, OR**	**2.81**	**334**	Pb	**Pb**	**20 09 04.1**	**-0.8**
	baz=153,SNR=10						
I05D				Sb	**Sb**	**20 09 41.8**	**+2.5**
	baz=153						
RUBR	**Rubicon Trail**	**2.81**	**189**		**Pb**	**20 09 05.4**	**+0.4**
RUBR				IAML		20 09 46.0	
	comp=E,233nm,0.6s						
RUBR				IAML		20 09 46.9	
	comp=N,228nm,0.5s						
I04A	**Tendick Farm,**	**2.84**	**315**	Pb	**Pb**	**20 09 04.9**	**-0.5**
	baz=133,SNR=14						
I04A				Sb	**Sb**	**20 09 42.8**	**+2.5**
	baz=133						
O02D	**Mt. Diablo Mer**	**2.91**	**236**	Pn	**Pn**	**20 09 02.1**	**+1.0**
	baz=54,SNR=66						
O02D				Pb	**Pb**	**20 09 06.4**	**-0.3**
	baz=54						
O02D				Sb	**Sg**	**20 09 45.5**	**-2.6**
	baz=54						
L02E	**Cave Junction**	**2.99**	**278**	P	**Pn**	**20 09 02.5**	**+0.4**
	baz=95,SNR=51						
L02E				Sb	**Sb**	**20 09 45.5**	**+1.1**
	baz=95						
AFDM	**Forest Hills D**	**3.06**	**200**		**Pn**	**20 09 05.1**	**+2.0**
K02D	**Willamette Mer**	**3.12**	**287**	P	**Pn**	**20 09 04.8**	**+0.7**
	baz=104,SNR=88						
MFID	**Camas Ranch**	**3.21**	**59**	Pn	**Pn**	**20 09 04.2**	**-1.2**
KRMB	**Red Mountain**	**3.23**	**266**		**Pn**	**20 09 05.9**	**+0.4**
KHMM	**Horse Mountain**	**3.24**	**254**	Pn	**Pn**	**20 09 07.4**	**+1.7**
KHMM				IAML		20 10 03.9	
	comp=E,89nm,1.2s						
KHMM				IAML		20 10 06.7	
	comp=N,165nm,1.8s						
I03D	**Drain, OR**	**3.32**	**305**	Pb	**Pb**	**20 09 14.2**	**+0.6**
	baz=123,SNR=13						
KBO	**Bosley Butte**	**3.45**	**278**	Pn	**Pn**	**20 09 09.3**	**+0.8**
KBO				IAML		20 10 10.8	
	comp=E,175nm,1.0s						
J01E	**Myrtle Point**	**3.45**	**294**	Pb	**Pb**	**20 09 15.6**	**-0.3**
	baz=111						
BMO	**Blue Mountains**	**3.46**	**28**		**Pn**	**20 09 09.0**	**+0.3**
ELK	**Elko**	**3.48**	**107**	Pn	**Pn**	**20 09 10.6**	**+1.6**
	baz=291,slow=16,SNR=0.8						
ELK				Pg	**Pb**	**20 09 14.4**	**-2.0**
	comp=E,11nm,0.3s,baz=292,slow=14,SNR=8.1						
ELK				Sn	**Sn**	**20 09 50.7**	**+0.3**
	comp=E,5.5nm,0.3s,baz=112,slow=16,SNR=4.3						
ELK				Lg	Lg	20 10 01.2	
	comp=E,18nm,0.3s,baz=47,slow=18,SNR=6.3						
H04D	**Lebanon**	**3.53**	**321**	Pb	**Pb**	**20 09 16.8**	**-0.4**
	baz=139,SNR=18						
NVAR	**Mina Array Bea**	**3.54**	**163**	Pn	**Pn**	**20 09 11.9**	**+2.0**
	comp=E,1.3nm,0.3s,baz=341,slow=12,SNR=22						
NVAR				Lg	Lg	20 10 08.6	
	comp=E,21nm,0.3s,baz=348,slow=33,SNR=6.9						
G05D	**Wamic, OR**	**3.63**	**341**	Pb	**Pb**	**20 09 18.3**	**-0.5**
	baz=160						
KEBM	**Edson Butte**	**3.65**	**288**	Pn	**Pn**	**20 09 10.9**	**-0.3**
KEBM				IAML		20 10 19.0	
	comp=N,149nm,1.5s						
I02D	**Swisshome**	**3.85**	**308**	Pb	**Pb**	**20 09 24.3**	**+1.8**
	baz=125						
HLID	**Hailey**	**4.21**	**64**	P	**Pn**	**20 09 18.8**	**-0.2**
	baz=248						
HLID				Sb	**Sb**	**20 10 22.5**	**+2.6**
	baz=248						
HLID	**Hailey**	**4.21**	**64**		**Pn**	**20 09 19.5**	**+0.5**
HLID				IAML		20 10 27.8	
	comp=N,77nm,0.7s						
R11A	**Troy Canyon, C**	**4.66**	**137**	Pn	**Pn**	**20 09 28.4**	**+3.2**
	baz=320						
R11A				Pg	**Pg**	**20 09 42.1**	**-1.7**
	baz=320						
BGU	**Big Grassy Mou**	**5.04**	**98**		**Pn**	**20 09 31.3**	**+0.9**
BCYI	**Bear Canyon**	**5.18**	**59**	Pn	**Pn**	**20 09 33.0**	**+0.6**
DUG	**Dugway, Tooele**	**5.40**	**105**	P	**Pn**	**20 09 38.1**	**+2.7**
	baz=290						
TPNV	**Topopah Spring**	**5.53**	**151**	P	**Pn**	**20 09 41.1**	**+3.9**
	baz=333						
TPNV				Sg	**Sg**	**20 11 11.4**	**-0.8**
	baz=333						
MCMT	**McKenzie Canyo**	**5.78**	**56**		**Pn**	**20 09 41.6**	**+1.0**
TCUT	**Toone Canyon**	**6.21**	**94**	Pn	**Pn**	**20 09 46.3**	**-0.3**
MSO	**Missoula**	**6.45**	**37**	P	**Pn**	**20 09 51.6**	**+1.9**
	baz=221						
MSO	**Missoula**	**6.45**	**37**		**Pn**	**20 09 49.7**	**0.0**
NEW	**Newport**	**6.67**	**15**	Lg	Lg	20 11 43.1	
	comp=N,0.1nm,0.3s,baz=90,slow=17,SNR=4.0						
NEW				LR	LR	20 12 36.0	
	comp=N,114nm,18.5s,baz=244,slow=40						
TMUT	**Trail Mountain**	**6.89**	**109**		**Pn**	**20 09 53.9**	**-2.1**
BOZ	**Bozeman (W)**	**6.91**	**54**	Pn	**Pn**	**20 09 57.9**	**+1.9**
PDAR	**Pinedale Array**	**7.52**	**79**	Pn	**Pn**	**20 10 08.0**	**+3.5**
	comp=N,0.1nm,0.3s,baz=256,slow=12,SNR=6.0						
PDAR				Pg	**Pb**	**20 10 23.7**	**-1.6**
	comp=N,0.3nm,0.3s,baz=266,slow=13,SNR=11						
WALA	**Waterton Lakes**	**8.27**	**27**		**Pn**	**20 10 10.9**	**-3.8**
O20A	**White River Ci**	**8.77**	**97**	Pn	**Pn**	**20 10 20.7**	**-1.0**
PV22	**Blue Mesa, Par**	**8.92**	**108**	Pn	**Pn**	**20 10 21.0**	**-2.8**
YKA	**Yellowknife Ar**	**20.91**	**7**	P	**P**	**20 12 58.5**	**+1.5**
	comp=N,0.5nm,0.9s,baz=186,slow=12,SNR=3.9						

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*IDC **04** 20:13:49.6±1.2, 2°.64N×95°.68E, h0^{km}, mb4.0/10, mb1 4.1/12, mb1mx3.9/42, mbtmp4.0/12, ML3.7/2, MS3.4/5, Ms1 3.5/5, ms1mx3.0/43, Error ellipse: s-maj=32.5km s-min=17.5km az=40.0*

*DJA **04** 20:13:52.9±0.8, 3°N±4°×9°6E±°, h13^{km}±7^{km}, M4.3/13, mb4.3/7, MLv4.2/13*

*NEIC **04** 20:13:53.7±1.7, 2°.65N±0°.08×95°.8E±0°.1, h28^{km}±7^{km}, mb4.5/9, Error ellipse: s-maj=20.5km s-min=9.9km az=69.0*

ISC 04 20:13:53.4±0.7, **2°.65N**±0°.06×**95°.66E**±0°.08, **h25**^{km}, **n83**, σ**1^{s}32**/72, **mb4.4**/28, **2C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.71**	**110**	P	**Pb**	**20 14 06.8**	**-0.3**
TPTI		**1.64**	**68**	P	**Pn**	**20 14 19.4**	**-1.2**
MLSI	**Meulaboh, Aceh**	**1.77**	**25**	P	**Pn**	**20 14 21.8**	**-0.6**
KCSI	**Kotacane, Aceh**	**2.28**	**68**	P	**Pn**	**20 14 29.6**	**+0.1**
GSI	**Gunungsitoli**	**2.34**	**125**		**Pn**	**20 14 29.8**	**-0.4**
GSI	**Gunungsitoli**	**2.34**	**125**	P	**Pn**	**20 14 30.1**	**-0.1**
LHMI	**Lhok Sumawe**	**2.87**	**27**	Pn	**Pn**	**20 14 38.0**	**+0.5**
LHMI	**Lhok Sumawe**	**2.87**	**27**	P	**Pn**	**20 14 38.0**	**+0.5**
TSI	**Tuntungan**	**3.02**	**74**	P	**Pn**	**20 14 40.2**	**+0.5**
PSI	**Prapat**	**3.27**	**87**	Pn	**Pn**	**20 14 43.4**	**+0.2**
	1.8nm,0.3s,baz=357,slow=1.3,SNR=16						
PSI				Sn	**Sn**	**20 15 23.1**	**+1.8**
	6.3nm,0.3s,baz=360,slow=23,SNR=7.2						
PSI				LR	LR	20 16 17.4	
	comp=Z,596nm,18.1s,baz=269,slow=46						
MNSI	**Mandailing Nat**	**4.33**	**115**	P	**Pn**	**20 14 58.4**	**+0.7**
KULM	**Kulim**	**5.63**	**62**	Pn	**Pn**	**20 15 15.3**	**-0.2**
IPM	**Ipoh**	**5.66**	**71**	Pn	**Pn**	**20 15 15.8**	**-0.2**
PKDT	**Phuket**	**5.85**	**27**	P	Pn	20 15 24.3	+5.7
	26nm,0.6s						
PDSI	**Padang**	**5.97**	**126**	P	**Pn**	**20 15 20.4**	**+0.2**
	0.1nm14nm,1.2s						
TRTT	**Trang**	**6.53**	**38**	P	Pn	20 15 36.0	+8.1
	19nm,0.6s						
MDSI	**Maura Dua**	**11.08**	**130**	P	Pn	20 16 37.8	+7.5
SRAK	**Srakaew**	**12.93**	**29**	P	Pn	20 17 01.0	+5.3
	2μm113nm,1.3s						
CHAI	**Chaiyaphum**	**14.57**	**25**	P	**P**	**20 17 25.8**	**+1.4**
	17nm,0.7s						
LEM	**Lembang**	**15.20**	**128**	LR	LR	20 23 57.7	
	comp=Z,247nm,18.6s,baz=214,slow=40						
MHMT	**Maesarieng**	**15.59**	**8**	P	**Pn**	**20 17 34.9**	**+3.2**
	18nm,1.0s						
UTTA	**Uttaradit**	**15.75**	**17**	P	**P**	**20 17 37.0**	**-0.5**
	15nm,0.7s						
CM05	**Chiang Mai Arr**	**15.98**	**11**	P	**Pn**	**20 17 39.0**	**+2.3**
	66nm8.7nm,0.9s						
CM04	**Chiang Mai Arr**	**15.99**	**12**	P	**Pn**	**20 17 39.2**	**+2.5**
	91nm12nm,0.8s						
CM13	**Chiang Mai Arr**	**15.99**	**11**	P	**Pn**	**20 17 39.2**	**+2.4**
	94nm13nm,0.9s						
CM01	**Chiang Mai Arr**	**16.00**	**11**	P	**Pn**	**20 17 39.4**	**+2.4**
	93nm13nm,0.8s						
CM02	**Chiang Mai Arr**	**16.02**	**11**	P	**Pn**	**20 17 39.0**	**+1.9**
	73nm9.9nm,0.9s						
CM15	**Chiang Mai Arr**	**16.03**	**11**	P	**Pn**	**20 17 39.5**	**+2.2**
	98nm10nm,0.9s						
CM09	**Chiang Mai Arr**	**16.03**	**12**	P	**Pn**	**20 17 40.0**	**+2.7**
	82nm10nm,0.8s						
CM31	**Chiang Mai Arr**	**16.04**	**11**	P	**Pn**	**20 17 39.7**	**+2.3**
	217nm,0.9s						
CM31	**Chiang Mai Arr**	**16.04**	**11**	P	**Pn**	**20 17 39.6**	**+2.3**
CMAR	**Chiang Mai Arr**	**16.04**	**11**	Pn	**Pn**	**20 17 36.6**	**-0.8**
	0.3nm,0.3s,baz=199,slow=11,SNR=45						
CMAR				LR	LR	20 23 26.3	
	comp=Z,103nm,20.7s,baz=240,slow=36						
CM36	**Chiang Mai Arr**	**16.13**	**12**	P	**Pn**	**20 17 40.0**	**+1.5**
CM32	**Chiang Mai Arr**	**16.21**	**11**	P	**Pn**	**20 17 41.0**	**+1.4**
LAMP	**Lampang**	**16.25**	**14**	P	**P**	**20 17 43.0**	**0.0**
	18nm,0.8s						
CM35	**Chiang Mai Arr**	**16.29**	**12**	P	**Pn**	**20 17 42.0**	**+1.3**
CHTO	**Chiang Mai**	**16.38**	**11**		**Pn**	**20 17 40.3**	**-1.5**
CMMT	**Chiang Mai**	**16.38**	**11**	P	**Pn**	**20 17 41.1**	**-0.8**
	2.9nm,1.7s						
CM34	**Chiang Mai Arr**	**16.46**	**12**	P	**Pn**	**20 17 42.0**	**-0.8**
NONG	**Nongkai**	**16.99**	**25**	P	**Pn**	**20 17 50.1**	**+0.6**
SAIH	**SAIHA**	**19.89**	**353**	*e*P	**P**	**20 18 22.3**	**-0.9**
KOHI	**KOHIMA**	**22.99**	**356**	*e*P	**P**	**20 18 53.5**	**-3.0**
KOHI				IAmb	IAmb	20 19 00.0	
	comp=Z,4.8nm,0.7s						
BOK	**Bokaro**	**23.05**	**337**	*e*P	**P**	**20 18 57.7**	**+0.7**
BOK				IAmb	IAmb	20 19 00.9	
	comp=Z,26nm,0.8s						
SHL	**Shillong**	**23.07**	**351**	*e*P	**P**	**20 18 56.7**	**-0.7**
LKP	**Lekhapani**	**24.55**	**0**	⇑*e*P	**P**	**20 19 09.7**	**-1.5**
H08S2	**Diego Garcia H**	**25.27**	**246**	T	T	20 45 29.8	
	baz=67,slow=76,SNR=942						
H08S3	**Diego Garcia H**	**25.27**	**246**	T	T	20 45 28.1	
	baz=67,slow=76,SNR=797						
H08S1	**Diego Carcia H**	**25.29**	**246**	T	T	20 45 29.8	
	baz=67,slow=76,SNR=390						
ODAN	**Odare**	**25.34**	**343**	*e*P	**P**	**20 19 20.1**	**+1.4**
	comp=Z,25nm,0.9s						
GTK	**Tadong**	**25.44**	**345**	*e*P	**P**	**20 19 21.4**	**+1.9**
GTK				IAmb	IAmb	20 19 22.4	
	comp=Z,8.8nm,0.8s						
RAMN	**Ramite**	**25.67**	**341**	*e*P	**P**	**20 19 23.3**	**+1.5**
	comp=Z,53nm,0.6s						
TAPN	**Taplejung**	**25.71**	**344**	*e*P	**P**	**20 19 23.1**	**+1.0**
	comp=Z,16nm,0.8s						
PKI	**Pulchoki**	**26.65**	**339**	*e*P	**P**	**20 19 31.1**	**+0.4**
	comp=Z,9.0nm,0.7s						
PKIN	**Phulchoki**	**26.66**	**339**	*e*P	**P**	**20 19 31.2**	**+0.5**
	comp=Z,8.4nm,0.6s						
DMN	**Daman**	**26.79**	**339**	*e*P	**P**	**20 19 32.2**	**+0.3**
GUN	**Gumba**	**26.80**	**341**	*e*P	**P**	**20 19 33.1**	**+1.1**
	comp=Z,50nm,0.6s						
KKN	**Kakani**	**26.89**	**339**	*e*P	**P**	**20 19 33.7**	**+0.9**
	comp=Z,31nm,0.8s						
DANN	**Dangsing**	**27.96**	**337**	*e*P	**P**	**20 19 42.9**	**+0.5**
	comp=Z,23nm,0.6s						
DAV	**Davao City (W)**	**30.13**	**81**	LR	LR	20 33 18.8	
	comp=Z,25nm,18.3s,baz=12,slow=39						
SMLA	**Simla**	**33.28**	**330**	⇑*e*P	**P**	**20 20 29.9**	**+1.0**
SMLA				IAmb	IAmb	20 20 32.5	
	comp=Z,3.6nm,0.6s						
XAN	**Xi'an**	**33.59**	**20**	P	**P**	**20 20 28.5**	**-3.3**
DHRM	**DHARAMSHALA**	**34.62**	**330**	*e*P	**P**	**20 20 41.2**	**+0.3**
DHRM				IAmb	IAmb	20 20 48.4	
	comp=Z,4.5nm,0.6s						
H01W3	**Cape Leeuwin H**	**41.17**	**157**	T	T	21 05 08.1	
	baz=332,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**41.18**	**157**	T	T	21 05 09.3	
	baz=332,slow=76,SNR=38						
H01W1	**Cape Leeuwin H**	**41.19**	**157**	T	T	21 05 11.6	
	baz=332,slow=76,SNR=55						
WRA	**Warramunga Arr**	**44.11**	**122**	P	**P**	**20 21 59.7**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=302,slow=9.1,SNR=8.4						
MKAR	**Makanchi Array**	**45.48**	**347**	P	**P**	**20 22 11.1**	**+0.5**
	comp=Z,6.6nm,0.8s,baz=162,slow=8.1,SNR=68						
ASAR	**Alice Springs**	**45.49**	**127**	P	**P**	**20 22 10.6**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=290,slow=7.6,SNR=4.6						
MAKZ	**Makanchi**	**45.57**	**347**	P	**P**	**20 22 11.3**	**0.0**
MAKZ				IAmb	IAmb	20 22 12.2	
	comp=Z,4.6nm,0.7s						
KSRS	**Korea Array**	**45.57**	**37**	P	**P**	**20 22 10.6**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=229,slow=9.0,SNR=10						
SONM	**Songino Array**	**45.96**	**10**	P	**P**	**20 22 14.2**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=190,slow=8.5,SNR=30						
SONM				PcP	**PcP**	**20 23 51.9**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=193,slow=4.1,SNR=4.4						
ULN	**Ulaanbaatar**	**46.10**	**11**	P	**P**	**20 22 14.5**	**-1.2**
ULN				IAmb	IAmb	20 22 15.7	
	comp=Z,8.3nm,1.4s						
GEYT	**Alibeck**	**49.12**	**320**	P	**P**	**20 22 40.1**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=156,slow=7.5,SNR=4.1						
KURK	**Kurchatov**	**50.01**	**346**	P	**P**	**20 22 45.0**	**-0.6**
KURK				IAmb	IAmb	20 22 53.7	
	comp=Z,3.3nm,0.8s						
ZAA0	**Zalesovo Array**	**51.90**	**352**	P	**P**	**20 22 59.8**	**+0.1**
ZAA0				IAmb	IAmb	20 23 00.9	
	comp=Z,5.3nm,0.7s						
ZALV	**Zalesovo Beam**	**51.90**	**352**	P	**P**	**20 23 00.0**	**+0.2**
	comp=Z,6.3nm,0.6s,baz=181,slow=7.2,SNR=44						
USRK	**Ussuriysk Ar.**	**52.36**	**33**	P	**P**	**20 23 03.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=224,slow=5.9,SNR=5.2						
BRVK	**Borovoye**	**54.45**	**341**	P	**P**	**20 23 18.3**	**-0.3**
BRVK				IAmb	IAmb	20 23 19.2	
	comp=Z,2.4nm,0.7s						
ABKAR	**Akbulak array**	**55.52**	**332**	P	**P**	**20 23 26.7**	**+0.3**
KMBO	**Kilima Mbogo**	**58.51**	**267**	LR	LR	20 46 45.3	
	comp=Z,60nm,18.2s,baz=81,slow=34						
AKASG	**Malin Array Be**	**73.18**	**322**	P	**P**	**20 25 22.1**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=92,slow=4.4,SNR=3.6						
FINES	**FINESS Array B**	**78.01**	**333**	P	**P**	**20 25 49.6**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=128,slow=3.1,SNR=4.3						
CLL	**Collm**	**83.34**	**321**	*e*P	**P**	**20 26 18.0**	**-0.3**

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*BGR **04** 20:18:08.2±0.0, 19°.37S×176°.18W, h33^{km}*

*NOU **04** 20:19:11.4, 17°.94S×178°.09W, h578^{km}, mb4.2, Fiji Islands Region*

*NEIC **04** 20:19:11.7±2.1, 18°.2S±0°.2×178°.3W±0°.1, h571^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=23.7km s-min=16.9km az=153.0*

*IDC **04** 20:19:11.9±1.0, 18°.10S×178°.26W, h571^{km}±10^{km}, mb3.5/17, mb1 3.7/19, mb1mx3.7/28, mbtmp4.4/19, Error ellipse: s-maj=16.6km s-min=11.4km az=117.0*

ISC 04 20:19:12.2±0.5, **18°.1S**±0°.1×**178°.28W**±0°.08, **h579**^{km}, **n133**, σ**0^{s}78**/135, **mb4.2**/30, **18C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.51**	**276**	P	**P**	**20 20 32.6**	**-0.3**
	4.0nm,0.3s,baz=126,slow=8.0,SNR=28						
MSVF				S	**S**	**20 21 38.1**	**-0.6**
	0.4nm,0.3s,baz=111,slow=23,SNR=13						
MSVF	**Nonsavu**	**3.51**	**276**	P	**P**	**20 20 32.0**	**-1.0**
MSVF	**Nonsavu**	**3.51**	**276**	P	**P**	**20 20 32.4**	**-0.6**
NIUE	**Niue**	**7.98**	**98**	P	**P**	**20 21 10.4**	**-0.2**
NIUE	**Niue**	**7.98**	**98**	P	**P**	**20 21 09.7**	**-1.0**
DZM	**Mont Dzumac**	**14.87**	**252**	P	**P**	**20 22 18.1**	**-1.8**
	0.5nm,0.3s,baz=94,slow=19,SNR=2.6						
DZM	**Mont Dzumac**	**14.87**	**252**	P	**P**	**20 22 20.3**	**+0.4**
DZM	**Mont Dzumac**	**14.87**	**252**	P	**P**	**20 22 22.1**	**+2.2**
NOUC	**Port Laguerre**	**15.00**	**252**	P	**P**	**20 22 22.8**	**+1.7**
URZ	**Urewera**	**20.45**	**190**	P	**P**	**20 23 09.7**	**-1.0**
	11nm,0.4s,baz=7.5,slow=0.5,SNR=18						
URZ	**Urewera**	**20.45**	**190**	P	**P**	**20 23 09.3**	**-1.5**
BKZ	**Black Stump Fm**	**21.44**	**191**	P	**P**	**20 23 18.4**	**-1.4**
BKZ				IAmb	IAmb	20 23 33.5	
	comp=Z,5.2nm,0.7s						
RPZ	**Rata Peaks**	**27.04**	**197**	P	**P**	**20 24 10.4**	**+1.2**
	comp=Z,3.5nm,0.4s,baz=37,slow=20,SNR=1.9						
LBZ	**Lake Benmore**	**27.90**	**198**	P	**P**	**20 24 15.9**	**-0.9**
LBZ				IAmb	IAmb	20 24 26.3	
	comp=Z,17nm,1.2s						
CTAO	**Charters Tower**	**33.53**	**261**	P	**P**	**20 25 05.1**	**-0.2**
TOO	**Toolangi**	**37.12**	**231**	P	**P**	**20 25 36.0**	**+1.3**
TOO				IAmb	IAmb	20 25 46.6	
	comp=Z,4.6nm,0.8s						
COEN	**Coen**	**37.23**	**271**	P	**P**	**20 25 36.1**	**+0.2**
COEN				IAmb	IAmb	20 25 36.5	
	comp=Z,8.7nm,0.7s						
STKA	**Stephens Creek**	**38.62**	**241**	P	**P**	**20 25 48.4**	**+1.4**
	comp=Z,6.2nm,0.5s,baz=94,slow=10,SNR=18						
STKA	**Stephens Creek**	**38.62**	**241**	P	**P**	**20 25 47.8**	**+0.7**
BBOO	**Buckleboo**	**43.40**	**241**	P	**P**	**20 26 25.5**	**+0.7**
WB0	**Warramunga Arr**	**44.68**	**260**	P	**P**	**20 26 34.1**	**-0.8**
WB0				IAmb	IAmb	20 26 34.9	
	comp=Z,8.3nm,0.7s						
WB2	**Warramunga Arr**	**44.70**	**260**	P	**P**	**20 26 34.4**	**-0.5**
WRA	**Warramunga Arr**	**44.71**	**260**	P	**P**	**20 26 34.5**	**-0.6**
	comp=Z,5.7nm,0.5s,baz=96,slow=6.9,SNR=115						

WRA				PcP	PcP	20 28 05.5	+0.7
	comp=Z,1.2nm,0.4s,baz=94,slow=3.4,SNR=5.6						
AS31	Alice Springs	44.84	254	P	P	20 26 36.3	+0.3
ASAR	Alice Springs	44.84	254	P	P	20 26 36.2	+0.2
	comp=Z,58nm,0.6s,baz=88,slow=8.4,SNR=895						
ASAR				PcP	PcP	20 28 06.2	+0.9
	comp=Z,2.2nm,0.5s,baz=104,slow=3.9,SNR=6.4						
ASAR				S	S	20 32 29.8	-2.7
	comp=Z,2.0nm,1.1s,baz=88,slow=15,SNR=9.3						
FITZ	Fitzroy Crossi	53.11	261	P	P	20 27 37.4	+0.3
	comp=Z,4.9nm,0.8s,baz=150,slow=3.8,SNR=18						
FITZ	Fitzroy Crossi	53.11	261	P	P	20 27 36.2	-0.8
PSA00	Pilbara Seismi	57.97	256	P	P	20 28 09.4	-1.2
PSA00				IAmb	IAmb	20 28 11.3	
	comp=Z,18nm,0.9s						
VNDA	Vanda	60.23	185	P	P	20 28 25.9	+1.1
	comp=Z,0.9nm,0.8s,baz=30,slow=6.9,SNR=2.1						
MORW	Morawa	60.50	246	P	P	20 28 27.4	+0.1
MORW				IAmb	IAmb	20 28 29.2	
	comp=Z,13nm,1.0s						
GIRL	Giralia	62.94	253	P	P	20 28 44.3	+0.9
MJAR	Matsushiro Arr	68.16	323	P	P	20 29 14.7	-0.8
	comp=Z,3.3nm,0.6s,baz=162,slow=5.8,SNR=17						
JHS	Saijyo	70.15	319	P	P	20 29 27.7	+0.3
JHS				IAmb	IAmb	20 29 28.2	
	comp=Z,11nm,0.7s						
PETK	Petropavlovsk-	73.93	345	P	P	20 29 48.4	-0.5
	comp=Z,4.6nm,0.8s,baz=124,slow=7.6,SNR=7.4						
KSRS	Korea Array	74.95	318	P	P	20 29 55.6	+0.6
	comp=Z,1.4nm,0.8s,baz=128,slow=6.9,SNR=8.1						
USRK	Ussuriysk Ar.	76.87	326	P	P	20 30 06.5	+1.1
	comp=Z,1.1nm,0.5s,baz=121,slow=5.5,SNR=5.1						
BEKR	Beckworth	78.98	42	P	P	20 30 17.9	+0.8
PNTR	Pine Nut	79.03	43	P	P	20 30 18.8	+1.4
PNTR				IAmb	IAmb	20 30 19.6	
	comp=Z,6.9nm,0.8s						
NVAR	Mina Array Bea	79.51	44	P	P	20 30 21.1	+1.2
	comp=Z,2.5nm,0.7s,baz=224,slow=8.4,SNR=22						
X16A	Lo Mia Camp, P	82.24	50	P	P	20 30 34.3	+0.2
U15A	North Rim	82.58	48	P	P	20 30 37.5	+1.7
U15A				IAmb	IAmb	20 30 38.6	
	comp=Z,8.1nm,0.8s						
GHO	Glory Hole Cre	83.00	14	P	P	20 30 36.9	-0.2
GHO				IAmb	IAmb	20 30 37.4	
	comp=Z,10.0nm,0.6s						
RND	Reindeer	84.47	13	P	P	20 30 44.0	-0.2
RND				IAmb	IAmb	20 30 44.6	
	comp=Z,9.8nm,0.8s						
WRH	Wood River Hil	85.57	13	P	P	20 30 48.7	-0.8
CCB	Clear Creek Bu	85.78	13	P	P	20 30 49.8	-0.7
CCB				IAmb	IAmb	20 30 49.9	
	comp=Z,3.7nm,0.6s						
IL31		86.08	13	P	P	20 30 51.1	-0.8
ILAR	Eielson Array	86.08	13	P	P	20 30 50.9	-1.1
	comp=Z,1.3nm,0.4s,baz=222,slow=4.9,SNR=25						
PDAR	Pinedale Array	87.44	43	P	P	20 31 00.0	+0.9
	comp=Z,1.8nm,0.6s,baz=220,slow=3.0,SNR=17						
CMAR	Chiang Mai Arr	89.07	290	P	P	20 31 08.6	+1.6
	comp=Z,1.9nm,0.9s,baz=104,slow=2.7,SNR=18						
INK	Inuvik	92.08	15	P	P	20 31 19.2	-0.5
	comp=Z,1.8nm,0.7s,baz=218,slow=5.9,SNR=7.3						
SONM	Songino Array	93.80	319	P	P	20 31 28.8	+0.6
	comp=Z,0.7nm,0.9s,baz=149,slow=9.7,SNR=4.7						
YKA	Yellowknife Ar	94.49	25	P	P	20 31 30.8	-0.1
	comp=Z,0.8nm,0.8s,baz=250,slow=4.2,SNR=11						
ZALV	Zalesovo Beam	108.49	322	PKiKP	PKiKP	20 36 34.8	-0.6
	comp=Z,0.7nm,0.6s,baz=155,slow=0.9,SNR=4.2						
MKAR	Makanchi Array	109.38	314	PKiKP	PKiKP	20 36 37.0	-0.4
	comp=Z,0.8nm,0.5s,baz=147,slow=0.5,SNR=18						
ARCES	ARCESS Array B	126.56	350	PKP	PKPdf	20 37 09.1	-0.5
	comp=Z,4.1nm,0.8s,baz=319,slow=1.2,SNR=5.6						
FINES	FINESS Array B	133.44	344	PKP	PKPdf	20 37 23.2	+0.4
	comp=Z,7.2nm,1.0s,baz=166,slow=1.6,SNR=6.0						
AKASG	Malin Array Be	140.82	332	PKhKP	PKPpre	20 37 29.9	
	comp=Z,0.5nm,0.4s,baz=44,slow=4.2,SNR=5.0						
AKASG				PKP	PKiKP	20 37 39.0	-0.6
	comp=Z,0.9nm,0.5s,baz=40,slow=3.4,SNR=5.6						
SORM	Soroca	143.05	330	⇑P	PKPab	20 37 38.5	0.0
KWP	Kalwaria Pacla	144.33	336	*e*PKP	PKPdf	20 37 43.1	+0.1
TLCR		144.83	326	⇑P	PKPab	20 37 45.2	-0.2
BUR08	Bucovina Ar. S	144.86	332		PKPab	20 37 46.0	+0.4
OJC	Ojcow	144.87	340	*e*PKP	PKPbc	20 37 44.8	+0.3
BURAR	Bucovina Array	144.87	332	⇑P	PKPab	20 37 46.1	+0.4
BIZ	Bicaz	144.97	330	⇑P	PKPab	20 37 46.3	+0.4
TESR	Tescani	145.02	329	⇑P	PKPab	20 37 45.6	-0.5
BRTR	Keskin Array B	145.03	315	PKPbc	PKPbc	20 37 45.9	+0.3
	comp=Z,5.0nm,0.8s,baz=105,slow=3.2,SNR=21						
KOLS	Kolonicke sedl	145.06	336	*e*PKP	PKPab	20 37 46.0	-0.2
FLTG	Flechtingen	145.07	350	*e*PKPbc	PKPbc	20 37 45.2	+0.2
	baz=14,slow=2.7						
NRDL	Niedersach Rie	145.09	351	*e*PKPbc	PKPbc	20 37 45.3	+0.3
	baz=14,slow=2.7						
CFR	Carcaliu	145.19	327	⇑P	PKPab	20 37 46.3	-0.5
TPGR	Topolog	145.26	326	⇑P	PKPab	20 37 46.7	-0.4
KSP	Ksiaz	145.36	344	*e*PKP	PKPab	20 37 46.8	-0.5
NIE	Niedzica	145.38	339	*e*PKP	PKPab	20 37 47.0	-0.5
CRVS	Cervenica-Dubn	145.39	337	*e*PKP	PKPab	20 37 46.9	-0.6
HARR	Harsova	145.63	326	⇑P	PKPab	20 37 47.8	-0.8
OSTC	Ostas	145.64	344	*e*PKP	PKPab	20 37 47.7	-0.8
CLL	Collm	145.71	347	⇓*i*PKPbc	PKPbc	20 37 47.2	+0.3
	comp=Z,15nm,1.0s						
CLL	Collm	145.71	347	*e*PKPbc	PKPbc	20 37 47.3	+0.3
	baz=14,slow=2.7						
UPC	Upice	145.74	344	*e*PKP	PKPbc	20 37 47.8	+0.7
DPC	Dobruska-Polom	145.80	343	*e*PKP	PKPab	20 37 48.2	-0.9
LANS	Liptovska Anna	145.90	339	*e*PKP	PKPab	20 37 49.1	-0.4
BRG	Berggiesshubel	145.92	346	*e*PKPbc	PKPbc	20 37 48.2	+0.6
	baz=14,slow=2.7						
KRLC	Kraliky	145.92	343	*e*PKP	PKPbc	20 37 48.4	+0.8
MORC	Moravsky Berou	145.97	342	⇑P	PKPbc	20 37 48.6	+0.8
MORC	Moravsky Berou	145.97	342	*e*PKP	PKiKP	20 37 50.2	-0.1
FBE	Freiberg	146.00	347	*e*PKPbc	PKPbc	20 37 48.4	+0.7
	baz=14,slow=2.7						
DOPR	Dopca	146.01	330	⇑P	PKPab	20 37 49.3	-0.8
MLR	Muntele Rosu	146.09	329	⇑P	PKPbc	20 37 49.0	+0.6
PVCC	Panska Ves	146.09	345	*e*PKP	PKPbc	20 37 49.0	+1.0
DRGR		146.60	333	⇑P	PKPbc	20 37 50.3	+0.7
PRU	Pruhonice	146.60	345	*e*PKP	PKPbc	20 37 50.0	+0.6
PRU				*e*x	x	20 37 52.5	
VRAC	Vranov	146.66	342	⇑P	PKPbc	20 37 50.2	+0.6
VRAC	Vranov	146.66	342	*e*PKP	PKPbc	20 37 50.1	+0.4
PLN	Plauen	146.66	348	*e*PKPbc	PKPbc	20 37 50.2	+0.6
	baz=14,slow=2.7						
TANN	Tannenbergstha	146.67	347	*e*PKPbc	PKPbc	20 37 50.4	+0.7
	baz=14,slow=2.7						
WERD	Werda	146.67	348	*e*PKPbc	PKPbc	20 37 50.3	+0.6
	baz=14,slow=2.7						
VYHS	Vyhne	146.67	339	*e*PKP	PKPbc	20 37 50.5	+0.8
VYHS				*e*		20 37 53.2	
GUNZ	Gunzen	146.75	348	*e*PKPbc	PKPbc	20 37 50.6	+0.8
	baz=14,slow=2.7						
ARR	Arges	146.81	330	⇑P	PKiKP	20 37 51.6	-0.6
KRUC	Moravsky	146.94	342	*e*PKP	PKPbc	20 37 50.8	+0.4
PBCC	Pribram	147.01	345	*e*PKP	PKPbc	20 37 51.1	+0.5
SMOL	Smolenice	147.12	341	*e*PKP	PKiKP	20 37 52.2	-0.4
MODS	Modra-Piesok	147.29	341	*e*PKP	PKPbc	20 37 51.8	+0.5
ROTZ	Rotzenmuhle	147.34	347	*e*PKPbc	PKPbc	20 37 52.1	+0.7
	baz=14,slow=2.7						
TNS	Taunus Mts	147.54	352	*e*PKPbc	PKPbc	20 37 52.6	+0.6
	baz=14,slow=2.7						
GRF	Grafenberg Arr	147.60	348	*e*PKPbc	PKiKP	20 37 52.9	-0.8
	baz=14,slow=2.7						
KHC	Kasperske Hory	147.63	345	*e*PKP	PKPbc	20 37 52.9	+0.7
KHC				*e*x	x	20 37 56.3	
KHC	Kasperske Hory	147.63	345		PKiKP	20 37 53.2	-0.5
GZR	Gura Zlata	147.66	332	⇑P	PKPbc	20 37 52.7	+0.2
GEC2	GERESS Array S	147.86	345	*e*PKPbc	PKPbc	20 37 53.4	+0.5
	baz=14,slow=2.7						
GERES	GERESS Array B	147.86	345	PKPbc	PKPbc	20 37 53.5	+0.6
	comp=Z,5.2nm,0.6s,baz=27,slow=3.1,SNR=37						
BZS	Buzias	147.99	333	⇑P	PKPbc	20 37 52.8	-0.4
CONA	Conrad Observa	148.12	342	*e*P	PKiKP	20 37 54.6	-0.2
	comp=Z,4.9nm,0.7s						
HERR	Herculane	148.21	332	⇑P	PKPbc	20 37 54.2	+0.4
FUR	Furstenfeldbru	149.05	348	*e*PKPbc	PKPbc	20 37 55.9	+0.2
	baz=14,slow=2.7						
BFO	Black Forest	149.41	351	*e*PKPbc	PKPbc	20 37 57.0	+0.3
	baz=14,slow=2.7						
SOKA	Soboth	149.49	342	*e*P	PKPbc	20 37 56.7	-0.3
	comp=Z,4.9nm,0.9s,SNR=4.8						
VTS	Vitosha	149.51	328	⇑P	PKiKP	20 37 58.0	0.0
UBR	Ueberruh	149.74	349	*e*PKPbc	PKiKP	20 37 57.9	-0.2
	baz=14,slow=2.7						
WATA	Walderalm	149.78	347	*e*P	PKPbc	20 37 57.7	0.0
	comp=Z,4.1nm,0.6s						
RETA	Reutte	149.80	348	*e*P	PKPbc	20 37 57.9	+0.2
	comp=Z,2.0nm,0.5s,SNR=4.2						
WTTA	Wattenberg	149.83	346	*i* P	PKPbc	20 37 58.1	+0.3
	comp=Z,6.9nm,0.6s						
MOTA	Moosalm	149.87	347	*e*P	PKPbc	20 37 58.0	+0.1
	comp=Z,3.4nm,0.6s,SNR=5.6						
DIVS	Divibare	149.90	333		PKiKP	20 37 58.8	+0.2
MYKA	Terra Mystica	149.93	343	*e*P	PKPbc	20 37 57.6	-0.4
	comp=Z,5.9nm,0.6s,SNR=5.8						
SQTA	Sankt Quirin	149.96	347	*e*P	PKiKP	20 37 58.4	-0.2
	comp=Z,7.9nm,0.6s,SNR=8.4						
ABTA	Abfaltersbach	150.11	345	*e*P	PKPbc	20 37 58.1	-0.3
	comp=Z,11nm,0.7s,SNR=5.1						
DAVA	Damuels	150.16	349	*i* P	PKiKP	20 37 59.4	+0.2
	comp=Z,13nm,1.1s						
FETA	Feichten	150.25	348	*i* P	PKiKP	20 37 59.5	+0.2
	comp=Z,6.0nm,0.8s						
STAL	STALIGIAL	150.51	344		PKPbc	20 37 59.3	0.0
FNA	Florina	151.80	327		PKPbc	20 38 02.4	0.0
ESDC	Sonseca Array	157.98	12	PKPab	PKPab	20 38 39.6	-1.1
	comp=Z,0.3nm,0.9s,baz=315,slow=3.0,SNR=5.8						
TORD	Torodi Ar. Bea	175.04	180	PKP	PKPdf	20 38 15.6	-1.5
	comp=Z,1.5nm,1.1s,baz=242,slow=1.5,SNR=3.3						

JMA 04 20:34:33.7±0.7,31°.31N×141°.44E,h0km,M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	3.36	353	P	Pn	20 35 29.0	+2.1
JOD2	Odawara 2	4.41	334	P	Pn	20 35 43.4	+1.5
JHO	Hitachi	5.34	352	P	Pn	20 35 54.9	+0.3
JAG	Ashikaga	5.36	343	P	Pn	20 35 56.2	+1.2

TAP 04 20:49:49.2,24°.01N×121°.61E,h11km,ML1.1,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.04	184	*i* P	Pg	20 49 52.2	+1.1
	baz=171						
HWA				*i* S	Sg	20 49 53.3	+0.8
	baz=171						
TWD	Chiawan	0.07	351	*i* P	Pg	20 49 52.3	+0.8
	baz=357						
TWD				*i* S	Sg	20 49 53.9	+0.7
	baz=357						
NACB	Ninganchiao	0.16	356	P	Pb	20 49 53.6	-0.7
	baz=355						
NACB				S	Sg	20 49 56.0	+0.8
	baz=355						
ETLH	Xiulin Townshi	0.23	329	P	Pb	20 49 54.9	-0.6
	baz=329						
ETLH				S	Sg	20 49 58.6	+1.4
	baz=329						
ESL	Shilin	0.26	219	*i* P	Pg	20 49 55.1	+0.7
	baz=217						
ESL				*i* S	Sg	20 49 58.6	+0.7
	baz=217						
CHGB	Renai	0.40	277	P	Pb	20 49 58.5	0.0
	baz=276						
CHGB				S	Sb	20 50 04.2	-0.5
	baz=276						
FUSS	Fushou	0.41	305	*e*P	Pb	20 49 58.6	0.0
	baz=305						
FUSS				*e*S	Sb	20 50 04.6	-0.3
	baz=305						
ENA	Nanau	0.43	16	*e*P	Pb	20 49 58.6	-0.2
	baz=17						
ENA				S	Sb	20 50 04.7	-0.7
	baz=17						
NNSB	Datong	0.46	334	*e*P	Pb	20 49 59.5	0.0
	baz=333						
NNSB				*e*S	Sb	20 50 05.9	-0.5
	baz=333						
NNSH	Datong	0.46	334	*e*P	Pb	20 49 59.4	-0.1
	baz=333						
NNSH				*e*S	Sb	20 50 06.0	-0.4
	baz=333						
TWT	Tachien	0.46	301	*e*P	Pb	20 49 59.8	+0.3
	baz=300						
TWT				*e*S	Sb	20 50 07.7	+1.2
	baz=300						
TDCB	Techi	0.47	300	P	Pb	20 49 59.9	+0.1
	baz=300						
TDCB				S	Sb	20 50 07.2	+0.3
	baz=300						
NNS	Nan Shan	0.48	333	P	Pb	20 49 59.3	-0.4
	baz=333						
NNS				S	Sb	20 50 06.9	0.0
	baz=333						
NDT	Datong Townshi	0.59	352	*e*P	Pb	20 50 01.9	+0.2
	baz=351						
NDT				*e*S	Sb	20 50 09.9	-0.2
	baz=351						
ENTT	Nioudou	0.62	356	*e*P	Pb	20 50 02.1	-0.1
	baz=357						
ENTT				S	Sb	20 50 11.2	+0.1
	baz=357						
SSLB	Suanglung	0.64	250	*e*P	Pb	20 50 02.8	+0.4
	baz=249						
SSLB				*e*S	Sg	20 50 10.2	+0.2
	baz=249						
YULB	Yu-li	0.68	205	*e*S	Sb	20 50 12.6	0.0
	baz=204						

JMA 04 20:50:36.9±0.2,24°.87N×123°.32E,h23km,M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.54	219	P	Pb	20 50 47.5	-0.2
IRIF	Iriomote-Funau	0.65	145	*e*S	Sb	20 50 58.4	+0.2
JKRS	Kuro-shima	0.89	135	P	Pb	20 50 53.5	-0.1
JKRS				S	Sb	20 51 05.0	-0.1
JIJ	Ishigaki jima	0.90	124	P	Pb	20 50 53.3	-0.6
JIJ				S	Sb	20 51 04.8	-0.7
JISG	Ishigakijimahi	0.94	107	P	Pb	20 50 54.0	-0.6
JISG				*e*S	Sb	20 51 05.9	-0.8

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*NEIC **04** 21:00:54.8±1.1,25°.0S±0°.1×178°.4E±0°.1,h555km±10km, mb4.6/35,Error ellipse: s-maj=19.5km s-min=15.7km az=105.0*

*NOU **04** 21:00:55.1,24°.88S×178°.62E,h586km,mb4.6,South of Fiji Islands*

*IDC **04** 21:00:55.7±1.9,24°.93S×178°.38E,h560km±20km, mb3.7/13,mb1 3.9/15,mb1mx3.7/26,mbtmp4.6/15,Error ellipse: s-maj=17.0km s-min=13.5km az=64.0*

ISC 04 21:00:56.1±0.4,25°.05S±0°.06×178°.41E±0°.07,h579km, n103,σ1ˢ.90/115,mb4.6/30,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	5.32	143	P	P	21 02 32.8	+2.6
GLKZ				S	S	21 03 51.0	+3.8
MSVF	Nonsavu	7.29	357	P	P	21 02 44.6	-3.6
MSVF	Nonsavu	7.29	357	P	P	21 02 45.4	-2.8
MARNC	Mare, Loyalty	10.18	288	P	P	21 03 16.2	-0.2
PINNC	Pines Island,	10.32	281	P	P	21 03 18.1	+0.3
OUENC	Ouen Island, N	10.91	282	P	P	21 03 24.4	+0.6
OUZ	Omahuta	10.96	201	P	P	21 03 26.7	+2.8
YATNC	Mamie plateau,	10.98	283	P	P	21 03 25.0	+0.6
DZM	Mont Dzumac	11.37	283	P	P	21 03 29.2	+0.7
	6.6nm,0.3s,baz=101,slow=10,SNR=45						
DZM	Mont Dzumac	11.37	283	P	P	21 03 28.2	-0.3
DZM	Mont Dzumac	11.37	283	P	P	21 03 29.0	+0.5
GRZ	Great Barrier	11.45	192	P	P	21 03 31.2	+2.2
NOUC	Port Laguerre	11.48	282	P	P	21 03 30.0	+0.4
MYRZ	Mayor Island	12.33	188	P	P	21 03 46.0	+8.0
NIUE	Niue	12.34	63	P	P	21 03 36.9	-1.4
MXZ	Matakaoa Point	12.47	180	P	P	21 03 37.0	-2.4
MXZ				S	S	21 05 50.1	-3.8
HAZ	Te Kaha	12.68	182	P	P	21 03 39.4	-2.1
HAZ				S	S	21 05 52.0	-5.7
WMGZ	Waiomatatini S	12.73	180	P	P	21 03 40.0	-2.1
PKGZ	Pakihiroa	12.80	181	P	P	21 03 40.4	-2.4
RUGZ	Raukumara Rang	12.89	183	P	P	21 03 42.7	-1.1
RUGZ				S	S	21 05 58.5	-3.4
TWGZ	Tauwhareparae	13.09	181	P	P	21 03 42.1	-3.7
TWGZ				S	S	21 06 03.6	-1.8
URZ	Urewera	13.21	184	P	P	21 03 44.7	-2.3
	6.4nm,0.3s,baz=105,slow=0.9,SNR=24						
URZ				S	S	21 06 01.3	-6.3
	0.7nm,0.3s,baz=49,slow=20,SNR=4.3						
URZ	Urewera	13.21	184	P	P	21 03 44.6	-2.4
URZ					S	21 06 06.7	-0.9
URZ	Urewera	13.21	184	P	P	21 03 44.9	-2.1
URZ				S	S	21 06 01.7	-5.8
MWZ	Matawai	13.27	183	P	P	21 03 46.0	-1.6
MWZ				S	S	21 06 07.9	-0.7
TKGZ	Te Karaka	13.36	182	P	P	21 03 46.6	-1.8
CNGZ	Carnagh Statio	13.39	181	P	P	21 03 47.1	-1.7
HIZ	Hauiti	13.76	192	P	P	21 03 50.2	-2.4
BKZ	Black Stump Fm	14.17	186	P	P	21 03 54.3	-2.5
BKZ				S	S	21 06 24.5	-0.4
SNZO	South Karori	16.51	190	P	P	21 04 18.5	-0.3
MSWZ	Moikau Station	16.53	188	P	P	21 04 19.1	0.0
BHW	Baring Head	16.58	189	P	P	21 04 18.7	-0.8
NNZ	Nelson	16.66	193	P	P	21 04 20.8	+0.6
PLWZ	Palliser	16.68	188	P	P	21 04 19.3	-1.2
TUWZ	Tuamarina	16.75	192	P	P	21 04 20.8	-0.3
BSWZ	Blackbirch Sta	17.04	192	P	P	21 04 23.9	+0.2
THZ	Tophouse	17.28	194	P	P	21 04 26.1	+0.2
LHI	Lord Howe Isla	18.20	245	P	P	21 04 34.5	0.0
RPZ	Rata Peaks	19.57	196	P	P	21 04 48.2	+1.5
	3.5nm,0.3s,baz=4.8,slow=6.7,SNR=7.4						
FOZ	Fox Glacier	19.73	199	P	P	21 04 48.5	+0.4
FOZ				IAmb	IAmb	21 04 50.1	
	comp=Z,30nm,0.9s						
MLZ	Mavora Lakes	21.91	200	P	P	21 05 08.6	+0.9
MLZ				IAmb	IAmb	21 05 10.7	
	comp=Z,21nm,0.7s						
ARMA	Armidale	24.27	251	P	P	21 05 29.8	+0.7
ARMA				IAmb	IAmb	21 05 31.9	
	comp=Z,20nm,0.7s						
EIDS	Eidsvold	24.71	263	P	P	21 05 32.6	-0.4
EIDS				IAmb	IAmb	21 05 34.5	
	comp=Z,15nm,0.7s						
CTA	Charters Tower	30.06	273	P	P	21 06 20.4	+0.8
	comp=Z,16nm,0.4s,baz=93,slow=11,SNR=41						
CTAO	Charters Tower	30.06	273	P	P	21 06 19.5	-0.1
CTAO				IAmb	IAmb	21 06 20.8	
	comp=Z,18nm,0.5s						
TOO	Toolangi	30.61	238	P	P	21 06 24.6	+0.5
TOO				IAmb	IAmb	21 06 26.1	
	comp=Z,13nm,0.6s						
STKA	Stephens Creek	32.96	250	P	P	21 06 45.2	+1.1
	comp=Z,7.1nm,0.3s,baz=88,slow=9.4,SNR=53						
STKA	Stephens Creek	32.96	250	P	P	21 06 44.8	+0.6
COEN	Coen	34.90	282	P	P	21 07 00.9	+0.3
COEN				IAmb	IAmb	21 07 01.6	
	comp=Z,7.5nm,0.9s						
BBOO	Buckleboo	37.66	248	P	P	21 07 23.3	+0.1
AS31	Alice Springs	40.43	262	P	P	21 07 46.1	+0.5
AS31				IAmb	IAmb	21 07 47.6	
	comp=Z,7.9nm,0.6s						
ASAR	Alice Springs	40.43	262	P	P	21 07 45.9	+0.3
	comp=Z,8.3nm,0.3s,baz=87,slow=6.9,SNR=214						
ASAR				ScP	ScP	21 12 31.6	+2.7
	comp=Z,1.2nm,0.8s,baz=115,slow=4.0,SNR=6.9						
ASAR				S	S	21 13 10.3	-3.0
	comp=Z,1.9nm,0.8s,baz=99,slow=16,SNR=11						
WR0	Warramunga Arr	40.71	268	P	P	21 07 47.4	-0.4
WR0				IAmb	IAmb	21 07 48.1	
	comp=Z,16nm,0.7s						
WB2	Warramunga Arr	40.89	268	P	P	21 07 49.0	-0.2
WRAB	Tennant Creek	40.89	268	P	P	21 07 48.3	-0.9
WB0	Warramunga Arr	40.90	268	P	P	21 07 49.0	-0.3
WRA	Warramunga Arr	40.90	268	P	P	21 07 48.4	-0.8
	comp=Z,26nm,0.5s,baz=101,slow=6.9,SNR=340						
WRA				ScP	ScP	21 12 33.8	+3.1
	comp=Z,2.4nm,0.7s,baz=97,slow=3.9,SNR=9.4						
WRA				S	S	21 13 17.2	-2.9
	comp=Z,2.7nm,0.8s,baz=103,slow=15,SNR=9.2						
FORT	Forrest	44.56	251	P	P	21 08 17.4	-0.2
MTN	Manton Dam	46.12	276	P	P	21 08 29.1	-0.6
MTN				IAmb	IAmb	21 08 46.2	
	comp=Z,28nm,1.1s						
FITZ	Fitzroy Crossi	49.31	267	P	P	21 08 53.2	-0.3
FITZ				IAmb	IAmb	21 08 55.8	
	comp=Z,22nm,1.1s						
VNDA	Vanda	53.12	184	P	P	21 09 21.9	+1.9
	comp=Z,2.1nm,0.6s,baz=5.7,slow=7.1,SNR=13						
VNDA	Vanda	53.12	184	P	P	21 09 21.8	+1.8
QSPA	South Pole Qui	65.04	180	P	P	21 10 42.0	+2.1
	comp=Z,17nm,0.7s,baz=27,slow=1.4,SNR=37						
QSPA	South Pole Qui	65.04	180	P	P	21 10 41.6	+1.8
QSPA				IAmb	IAmb	21 10 42.7	
	comp=Z,16nm,0.8s						
MAW	Mawson	76.17	201	P	P	21 11 45.9	+0.9
	comp=Z,4.9nm,0.5s,baz=148,slow=9.9,SNR=6.2						
MAW	Mawson	76.17	201	P	P	21 11 46.4	+1.3
PETK	Petropavlovsk-	79.89	347	P	P	21 12 05.8	+0.7
	comp=Z,4.6nm,1.0s,baz=115,slow=6.5,SNR=1.7						
NJ2	Nanjing	80.33	312	*e*P	P	21 12 08.0	+0.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SNAA	Sanae	83.54	180	P	P	21 12 24.1	+0.5
VNA3	Neumayer Olymp	83.80	177	P	P	21 12 26.2	+1.3
VNA2	Neumayer--Watz	84.20	178	P	P	21 12 27.7	+0.8
ISA	Isabella, Lake	84.86	47	P	P	21 12 31.4	+0.8
CMB	Columbia Colle	85.03	44	P	P	21 12 32.0	+0.6
AFDM	Forest Hills D	85.22	43	P	P	21 12 33.3	+1.0
PNTR	Pine Nut	86.16	44	P	P	21 12 37.8	+0.8
PNTR				IAmb	IAmb	21 12 39.5	
	comp=Z,6.1nm,0.7s						
NVAR	Mina Array Bea	86.58	45	P	P	21 12 40.2	+1.2
	comp=Z,2.1nm,0.7s,baz=224,slow=8.6,SNR=24						
TPNV	Topopah Spring	87.07	47	P	P	21 12 42.0	+0.7
MOD	Modoc Plateau	87.42	41	P	P	21 12 43.4	+0.7
MOD				IAmb	IAmb	21 12 44.8	
	comp=Z,3.5nm,0.7s						
PRN	Pahroc Range	88.12	47	P	P	21 12 47.0	+0.9
PINE	Pine Mountain	88.19	39	P	P	21 12 47.4	+1.0
PINE				IAmb	IAmb	21 12 49.0	
	comp=Z,11nm,1.1s						
PLCA	Paso Flores	88.50	135	P	P	21 12 49.6	+1.7
	comp=Z,2.2nm,0.9s,baz=241,slow=6.9,SNR=4.5						
CMAR	Chiang Mai Arr	88.57	291	P	P	21 12 48.5	0.0
	comp=Z,0.5nm,0.8s,baz=154,slow=3.5,SNR=4.7						
X16A	Lo Mia Camp, P	88.99	51	P	P	21 12 51.3	+1.0
X16A				IAmb	IAmb	21 12 53.0	
	comp=Z,3.2nm,0.9s						
U15A	North Rim	89.45	49	P	P	21 12 53.2	+0.7
U15A				IAmb	IAmb	21 12 55.1	
	comp=Z,5.2nm,0.7s						
ELK	Elko	89.85	44	P	P	21 12 54.7	+0.5
HHC	Hu-ho-hao-te	90.22	316	*e*P	P	21 12 52.6	-3.1
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
TMUT	Trail Mountain	91.68	47	P	P	21 13 03.9	+1.1
LZH	Lanzhou	92.95	309	⇑P	P	21 13 08.9	+0.4
LZH				pP	pwP	21 15 17.2	-2.0
LZH				sP	sP	21 16 14.5	+4.3
LZH				PP	PP	21 17 05.3	+3.4
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,6.5s						
ILAR	Eielson Array	93.49	14	P	P	21 13 09.0	-1.1
	comp=Z,0.4nm,0.7s,baz=231,slow=5.7,SNR=2.7						
MCMT	McKenzie Canyo	93.55	42	P	P	21 13 11.9	+0.8
PDAR	Pinedale Array	94.52	45	P	P	21 13 15.6	0.0
	comp=Z,0.4nm,0.7s,baz=197,slow=2.8,SNR=3.3						
KSCO	Kaye Shedlock’	97.40	50	P	P	21 13 29.3	+0.8
ARCES	ARCESS Array B	132.70	347	PKP	PKPdf	21 19 04.9	-0.1
	comp=Z,1.7nm,0.7s,baz=14,slow=4.2,SNR=4.2						
FINES	FINESS Array B	139.05	340	PKhKP	PKPpre	21 19 09.2	
	comp=Z,9.4nm,1.1s,baz=199,slow=4.0,SNR=3.4						
NB2	NORSAR Subarra	142.97	350	PKP	PKiKP	21 19 21.8	-5.7
	comp=Z,1.3nm,0.5s,baz=14,slow=3.1						
NOA	NORSAR Array B	142.97	350	PKhKP	PKPpre	21 19 21.3	
	comp=Z,0.5nm,0.5s,baz=22,slow=1.1,SNR=9.2						
AKASG	Malin Array Be	145.12	325	PKPbc	PKPdf	21 19 28.8	+0.8
	comp=Z,0.8nm,0.4s,baz=45,slow=4.1,SNR=6.9						
BRTR	Keskin Array B	147.08	305	PKPbc	PKPab	21 19 38.0	-0.6
	comp=Z,0.3nm,0.3s,baz=129,slow=1.2,SNR=2.5						
OJC	Ojcow	149.91	332	*e*PKP	PKiKP	21 19 42.1	0.0
KSP	Ksiaz	150.80	336	*e*PKP	PKiKP	21 19 44.5	+0.6
CLL	Collm	151.49	341	*e*PKPbc	PKiKP	21 19 46.0	+0.7
ESDC	Sonseca Array	165.28	7	PKPab	PKPab	21 20 56.9	+0.4
	comp=Z,0.4nm,0.8s,baz=329,slow=3.7,SNR=2.4						
TORD	Torodi Ar. Bea	167.76	195	PKPab	PKPab	21 21 09.1	+1.1
	comp=Z,1.5nm,0.6s,baz=163,slow=4.1,SNR=10						

IDC ***04*** *21:02:44.3±0.6, 14°.62N×45°.06W, h0^{km}, mb4.0/16, mb1 4.2/17, mb1mx4.0/40, mbtmp4.0/17, ML4.6/1, MS3.6/9, Ms1 3.6/9, ms1mx3.3/37, Error ellipse: s-maj=20.6km s-min=14.3km az=138.0*

NEIC ***04*** *21:02:45.2±1.1, 14°.6N±0°.2×45°.1W±0°.1, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=28.9km s-min=9.8km az=149.0*

ISC 04 21:02:46.0±0.5**, 14°.6N**±0°.1×**45°.1W**±0°.1**, h12**^{km}**, n35, σ1ˢ.03**/25**, mb4.1**/18**, MS3.5**/8**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**12.00**	**219**	Pn	**Pn**	**21 05 36.9**	**-0.1**
	4.0nm,0.3s,baz=31,slow=14,SNR=76						
MDP				LR	LR	21 09 25.6	
	comp=Z,205nm,20.0s,baz=56,slow=33						
PTGA	**Pitinga**	**21.18**	**225**	P	**P**	**21 07 31.7**	**+0.2**
	2.2nm,0.5s,baz=46,slow=13,SNR=6.2						
PTGA				LR	LR	21 15 07.7	
	comp=Z,102nm,19.0s,baz=45,slow=35						
RCBR	**Riachuelo**	**22.19**	**155**	LR	LR	21 14 07.4	
	comp=Z,139nm,19.1s,baz=341,slow=31						
SDV	**Santo Domingo**	**25.66**	**260**	P	**P**	**21 08 15.7**	**-0.5**
	1.9nm,0.6s,baz=336,slow=12,SNR=1.8						
SDV				LR	LR	21 20 37.0	
	comp=Z,69nm,18.2s,baz=76,slow=42						
SDV	**Santo Domingo**	**25.66**	**260**	P	**P**	**21 08 13.0**	**-3.1**
BDFB	**Brasilia**	**30.15**	**186**	P	**P**	**21 08 57.0**	**+0.9**
	9.5nm,0.8s,baz=1.0,slow=9.3,SNR=21						
BDFB				LR	LR	21 19 53.6	
	comp=Z,88nm,20.7s,baz=338,slow=34						
BDFB	**Brasilia**	**30.15**	**186**	P	**P**	**21 08 55.2**	**-1.0**
ROSC	**El Rosal**	**30.38**	**254**	LR	LR	21 22 27.6	
	comp=Z,198nm,20.2s,baz=99,slow=39						
SIV	**San Ignacio**	**34.23**	**208**	P	**P**	**21 09 33.1**	**+1.2**
	0.6nm,0.4s,baz=70,slow=8.8,SNR=6.2						
H10N3	**ASCENSION HYDR**	**37.60**	**124**	T	T	21 49 44.7	
	baz=306,slow=75,SNR=275						
H10N2	**ASCENSION HYDR**	**37.60**	**124**	T	T	21 49 45.0	
	baz=306,slow=75,SNR=246						
H10N1	**ASCENSION HYDR**	**37.62**	**124**	T	T	21 49 46.2	
	baz=306,slow=75,SNR=270						
H10S3	**ASCENSION HYDR**	**38.13**	**126**	T	T	21 50 25.8	
	baz=304,slow=74,SNR=88						
H10S2	**ASCENSION HYDR**	**38.15**	**126**	T	T	21 50 27.1	
	baz=276,slow=74,SNR=34						
KOWA	**Kowa**	**39.69**	**85**	P	**P**	**21 10 18.9**	**+0.5**
	4.2nm,1.0s,baz=294,slow=2.1,SNR=7.1						
KOWA	**Kowa**	**39.69**	**85**	P	**P**	**21 10 18.6**	**+0.2**
KOWA				IAmb	IAmb	21 10 24.7	
	comp=Z,4.9nm,0.8s						
DBIC	**Dimbokro**	**40.23**	**97**	P	**P**	**21 10 22.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=248,slow=11,SNR=1.6						
LVC	**Limon Verde**	**43.71**	**213**	LR	LR	21 28 52.8	
	comp=Z,81nm,21.1s,baz=347,slow=36						
ESDC	**Sonseca Array**	**43.77**	**47**	P	**P**	**21 10 51.6**	**0.0**
	comp=Z,0.8nm,0.8s,baz=246,slow=9.3,SNR=8.4						
TOA0	**Torodi Ar. Sit**	**45.35**	**86**	P	**P**	**21 11 03.4**	**-1.1**
TOA0				IAmb	IAmb	21 11 05.9	
	comp=Z,6.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**45.35**	**86**	P	**P**	**21 11 04.2**	**-0.4**
	comp=Z,2.9nm,1.1s,baz=285,slow=8.4,SNR=8.1						
TAM	**Tamanrasset**	**48.42**	**72**	P	**P**	**21 11 27.5**	**-1.1**
TAM				IAmb	IAmb	21 11 36.1	
	comp=Z,4.8nm,1.3s						
FRB	**Frobisher Bay**	**51.78**	**347**	LR	LR	21 31 56.7	
	comp=Z,74nm,18.0s,baz=338,slow=34						
GERES	**GERESS Array B**	**58.71**	**41**	P	**P**	**21 12 43.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=245,slow=9.2,SNR=1.3						
CLL	**Collm**	**58.93**	**38**	*e*P	**P**	**21 12 46.0**	**+0.9**
NB2	**NORSAR Subarra**	**61.32**	**27**	P	**P**	**21 13 02.5**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=246,slow=6.9						
NOA	**NORSAR Array B**	**61.32**	**27**	P	**P**	**21 13 02.1**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=243,slow=6.8,SNR=8.3						
YKA	**Yellowknife Ar**	**67.77**	**332**	P	**P**	**21 13 42.3**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=98,slow=7.6,SNR=8.1						
NVAR	**Mina Array Bea**	**68.05**	**306**	P	**P**	**21 13 47.3**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=84,slow=8.3,SNR=2.9						
AKASG	**Malin Array Be**	**68.92**	**41**	P	**P**	**21 13 50.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=264,slow=6.6,SNR=4.0						
ARCES	**ARCESS Array B**	**69.69**	**21**	P	**P**	**21 13 55.4**	**+0.1**
	comp=Z,6.9nm,1.0s,baz=292,slow=3.8,SNR=5.7						
BRTR	**Keskin Array B**	**72.22**	**53**	P	**P**	**21 14 11.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=247,slow=5.0,SNR=9.4						
ILAR	**Eielson Array**	**81.92**	**335**	P	**P**	**21 15 05.7**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=70,slow=4.8,SNR=19						
ARU	**Arti**	**85.35**	**33**	LR	LR	21 50 07.1	
	comp=Z,49nm,20.8s,baz=214,slow=33						
CMAR	**Chiang Mai Arr**	**131.68**	**48**	PKP	**PKPdf**	**21 21 59.5**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=291,slow=4.1,SNR=4.2						

KRSC 04 21:16:41.3±1.2**, 50°.88N**×**157°.35E, h74**^{km}±18^{km}**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.68**	**331**	*e*P	Pn	21 16 57.8	+1.6
PAU				*e*S	Sn	21 17 09.4	+2.1
SKR	**Severo-Kuril's**	**0.80**	**257**	*e*P	Pn	21 16 58.7	+1.1
SKR				*e*S	Sn	21 17 10.8	+1.1
KDTR	**Khodutka, Kamc**	**1.04**	**26**	*e*P	Pn	21 17 01.8	+1.4
KDTR				*e*S	Sn	21 17 16.1	+1.4
ASAK	**Asacha**	**1.55**	**13**	*e*P	Pn	21 17 08.8	+1.7
ASAK				*e*S	Sn	21 17 29.1	+2.6
MTVR	**Mutnovka**	**1.69**	**18**	*e*P	Pn	21 17 10.7	+1.7
MTVR				*e*S	Sn	21 17 31.9	+1.9
RUS	**Russkaya**	**1.72**	**25**	*e*P	Pn	21 17 10.1	+0.9
RUS				*e*S	Sn	21 17 31.3	+0.9
GRL	**Gorelyy**	**1.74**	**15**	*e*P	Pn	21 17 11.7	+2.1
GRL				*e*S	Sn	21 17 33.4	+2.3
KRMR	**Karymshinskiy**	**2.02**	**14**	*e*P	Pn	21 17 14.7	+1.5
KRMR				*e*S	Sn	21 17 38.9	+1.4
PET	**Petropavlovsk**	**2.30**	**20**	*e*P	Pn	21 17 19.2	+2.2
PET				*e*S	Sn	21 17 47.0	+2.7
DALK	**Dalny**	**2.33**	**21**	*e*P	Pn	21 17 19.3	+1.9
DALK				*e*S	Sn	21 17 47.2	+2.2
UGLR	**Uglovaya**	**2.51**	**21**	*e*P	Pn	21 17 23.9	+4.0
AVH	**Avacha**	**2.54**	**19**	*e*P	Pn	21 17 23.5	+3.1
SMAR	**Somma**	**2.55**	**20**	*e*P	Pn	21 17 24.4	+3.8
KRX	**Arik**	**2.61**	**17**	*e*P	Pn	21 17 24.4	+3.0
SPN	**Mys Shipunski**	**2.77**	**36**	*e*S	Sn	21 17 59.4	+3.6
KBTR	**Krutoberegovo**	**6.26**	**29**	*e*P	Pn	21 18 12.0	+1.1

IDC ***04*** *21:23:14.3±0.4, 14°.58N×45°.02W, h0^{km}, mb4.5/29, mb1 4.7/30, mb1mx4.6/36, mbtmp4.6/30, ML5.0/1, MS4.3/34, Ms1 4.3/34, ms1mx4.3/38, Error ellipse: s-maj=13.7km s-min=10.8km az=138.0*

MOS ***04*** *21:23:14.0±1.0, 14°.56N×45°.07W, h10^{km}, mb5.2/15, Error ellipse: s-maj=8.3km s-min=6.0km az=46.0*

NEIC ***04*** *21:23:15.2±1.4, 14°.51N±0°.09×44°.99W±0°.09, h10^{km}±1^{km}, mb5.0/139, Error ellipse: s-maj=16.2km s-min=14.7km az=149.0*

GCMT ***04*** *21:23:19.1±0.2, 14°.68N±0°.02×44°.94W±0°.01, h12^{km}, MW5.1/134, Moment Tensor Solution. s49,c54; s134,c203; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.18±.09; M$_{\theta\theta}$0.31±.10; M$_{\phi\phi}$4.87±.08; M$_{r\theta}$0.57±.46; M$_{\theta\phi}$0.01±.08; M$_{\phi r}$-0.52±.29; Best double couple: M$_0$5.08200×10^{16} NP1:φ$_s$186.00000°, δ42.00000°, λ-81.00000°. NP2:φ$_s$354.00000°, δ48.00000°, λ-98.00000°. Principal axes: T 4.8970, Plg3.0000°, Azm90.0000°; N 0.3660, Plg6.0000°, Azm359.0000°; P -5.2660, Plg83.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***04*** *21:23:29.9±0.0, 14°.80N×42°.82W, h33^{km}, mb5.1*

ISC 04 21:23:16.1±0.3**, 14°.51N**±0°.05×**45°.03W**±0°.05**, h12**^{km}**, n464, σ1ˢ.18**/427**, mb5.0**/159**, MS4.4**/40**, 37C, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.99**	**219**	Pn	**Pn**	**21 26 06.9**	**-0.1**
	10nm,0.3s,baz=26,slow=15,SNR=92						
MDP				LR	LR	21 29 56.4	
	comp=Z,2μm,20.7s,baz=88,slow=33						
H05S1	**Guadeloupe/Mar**	**15.31**	**272**	T	T	21 42 36.1	
	SNR=21						
FDF	**Fort de France**	**15.61**	**273**	P	**Pn**	**21 26 56.0**	**-0.1**
FDF				pmax	pmax		
	comp=Z,233nm,1.2s						
FDF	**Fort de France**	**15.61**	**273**	Pn	**Pn**	**21 26 56.0**	**-0.1**
SVB	**Belmont**	**15.80**	**267**	Pn	**Pn**	**21 26 57.1**	**-1.5**
MCPB	**Macapa, AP**	**16.34**	**206**	*e*P	**Pn**	**21 27 04.4**	**-1.0**
TMAB	**Tom-Au,PA,Br**	**17.05**	**191**	*e*P	**P**	**21 27 16.9**	**+0.6**
ROSB	**Rosrio**	**17.32**	**177**	*e*P	**P**	**21 27 20.1**	**+0.8**
MALB	**Monte Alegre**	**18.66**	**210**	*e*P	**Pn**	**21 27 34.7**	**+0.3**
PCRV	**Puerto La Cruz**	**19.63**	**260**	LR	LR	21 35 05.7	
	comp=Z,742nm,20.6s,slow=36						
MTP	**Monte Pirata**	**20.02**	**283**		**P**	**21 27 46.6**	**-2.3**
MTP				IAmb	IAmb	21 27 53.7	
	comp=Z,74nm,1.1s						
HUMP	**Col San Antoni**	**20.30**	**283**		**P**	**21 27 48.7**	**-3.4**
HUMP				IAmb	IAmb	21 27 56.8	
	comp=Z,133nm,1.2s						
CBYP	**Canovanas**	**20.33**	**283**	P	**P**	**21 27 51.5**	**-0.9**
PDPR	**Patillas Dam,**	**20.45**	**283**	P	**P**	**21 27 53.4**	**-0.3**
PDPR				IAmb	IAmb	21 27 58.3	
	comp=Z,129nm,1.2s						
SJG	**San Juan**	**20.59**	**283**	P	**P**	**21 27 55.1**	**0.0**
	comp=Z,75nm,1.1s,baz=78,slow=7.0,SNR=9.7						
SJG				LR	LR	21 34 28.6	
	comp=Z,1μm,22.0s,baz=102,slow=33						
SJG	**San Juan**	**20.59**	**283**	P	**P**	**21 27 54.3**	**-0.8**
PRPB	**Parauapebas**	**21.09**	**193**	*e*P	**P**	**21 28 01.6**	**+0.9**
PTGA	**Pitinga**	**21.17**	**226**	P	**P**	**21 28 01.8**	**+0.3**
	comp=Z,46nm,1.0s,baz=41,slow=12,SNR=32						
PTGA				LR	LR	21 35 19.3	
	comp=Z,894nm,20.7s,baz=49,slow=34						
ITTB	**Itaituba**	**21.56**	**210**	*e*P	**P**	**21 28 06.3**	**+0.7**
NBPA	**Parau_RN**	**21.61**	**158**	*e*P	**P**	**21 28 07.1**	**+1.0**
RCBR	**Riachuelo**	**22.14**	**155**	LR	LR	21 34 47.7	
	comp=Z,943nm,18.4s,baz=336,slow=31						
RCBR	**Riachuelo**	**22.14**	**155**	*e*P	**P**	**21 28 13.5**	**+1.5**
NBLI	**Livramento-PB**	**23.17**	**159**	*e*P	**P**	**21 28 24.0**	**+1.2**
SMTB	**Santa Maria do**	**23.36**	**186**	*e*P	**P**	**21 28 26.0**	**+1.3**
MACA	**Manacapuru-AM**	**23.44**	**223**	*e*P	**P**	**21 28 26.5**	**+1.1**
DR12	**Loma Pena Alta**	**23.71**	**284**	P	**P**	**21 28 27.4**	**-0.8**
NPGB	**Novo Progresso**	**23.75**	**206**	*e*P	**P**	**21 28 28.9**	**+0.4**
SDV	**Santo Domingo**	**25.68**	**260**	P	**P**	**21 28 46.6**	**+0.2**
	comp=Z,18nm,1.0s,baz=78,slow=5.4,SNR=13						
SDV	**Santo Domingo**	**25.68**	**260**	P	**P**	**21 28 46.9**	**+0.4**
SDV				IAmb	IAmb	21 28 49.5	
	comp=Z,46nm,1.2s						
SDV	**Santo Domingo**	**25.68**	**260**	*e*P	**P**	**21 28 46.0**	**-0.4**
SDV	**Santo Domingo**	**25.68**	**260**	*e*P	**P**	**21 28 46.9**	**+0.4**
PEXB	**Peixe**	**26.65**	**187**	*e*P	**P**	**21 28 55.6**	**+0.7**
SDBA	**SAO DESIDERIO**	**26.75**	**180**	*e*P	**P**	**21 28 55.8**	**-0.1**
SNDB	**Serra Nova Dou**	**27.04**	**194**	*e*P	**P**	**21 28 59.0**	**+0.5**
CRJC	**Cerrejon, Guaj**	**27.38**	**266**	*e*P	**P**	**21 29 00.9**	**-0.8**
GDU01	**Guandu, BA**	**28.57**	**169**	*e*P	**P**	**21 29 12.3**	**+0.1**
RUSC	**La Rusia**	**28.88**	**256**	*e*P	**P**	**21 29 16.8**	**+1.2**
SMLC	**San Martn de**	**28.99**	**262**	*e*P	**P**	**21 29 13.1**	**-2.9**
JANB	**Januaria**	**29.39**	**179**	*e*P	**P**	**21 29 19.5**	**0.0**
SAML	**Samuel**	**29.46**	**219**	P	**P**	**21 29 20.2**	**+0.1**
SAML				pmax	pmax		
	comp=Z,17nm,1.3s						
SAML	**Samuel**	**29.46**	**219**	P	**P**	**21 29 20.2**	**+0.1**
SAML	**Samuel**	**29.46**	**219**	*e*P	**P**	**21 29 21.7**	**+1.6**
CHIC	**Chingaza**	**29.92**	**254**	*e*P	**P**	**21 29 25.8**	**+1.1**
VILC	**Villavicencio,**	**30.08**	**253**	*e*P	**P**	**21 29 26.9**	**+1.1**
ZARC	**Zaragoza, Cauc**	**30.08**	**260**	*e*P	**P**	**21 29 24.3**	**-1.4**
BDFB	**Brasilia**	**30.11**	**186**	P	**P**	**21 29 27.3**	**+1.4**
	comp=Z,32nm,0.9s,baz=5.4,slow=8.5,SNR=46						
BDFB				LR	LR	21 40 56.8	
	comp=Z,606nm,19.4s,baz=314,slow=35						
BDFB	**Brasilia**	**30.11**	**186**	P	**P**	**21 29 25.5**	**-0.4**
BDFB				IAmb	IAmb	21 29 28.1	
	comp=Z,34nm,0.9s						
ROSC	**El Rosal**	**30.40**	**254**	P	**P**	**21 29 30.0**	**+1.1**
	comp=Z,6.7nm,0.7s,baz=72,slow=20,SNR=2.7						
ROSC				LR	LR	21 43 08.0	
	comp=Z,1μm,19.8s,baz=62,slow=39						
ROSC	**El Rosal**	**30.40**	**254**	P	**P**	**21 29 30.0**	**+1.1**
ROSC	**El Rosal**	**30.40**	**254**	P	**P**	**21 29 29.0**	**+0.1**
MOTC	**Monteria, Cord**	**30.52**	**263**	*e*P	**P**	**21 29 29.8**	**+0.2**
NORC	**Norcasia**	**30.67**	**256**	*e*P	**P**	**21 29 30.2**	**-0.7**
ARAG	**Araguaiana, MT**	**30.77**	**193**	*e*P	**P**	**21 29 33.3**	**+1.6**
MACC	**Macarena, Meta**	**31.00**	**249**	*e*P	**P**	**21 29 34.6**	**+0.8**
VILB	**Vilhena**	**31.16**	**210**	*e*P	**P**	**21 29 37.1**	**+2.0**
PMOZ	**Porto Moniz, M**	**31.18**	**49**	*e*LQ	LQ	21 36 19.7	
PMOZ				*e*LR	LR	21 37 22.9	
	comp=Z,437nm,22.0s						
PMOZ	**Porto Moniz, M**	**31.18**	**49**	*e*T	T	22 01 39.8	
PMAR	**Madeira**	**31.34**	**50**	*e*T	T	22 01 44.7	
TOLC	**Tolima**	**31.42**	**255**	*e*P	**P**	**21 29 37.6**	**-0.3**
DBBC	**Dabeiba**	**31.50**	**260**	*e*P	**P**	**21 29 38.8**	**+0.5**
ORTC	**Ortega, Tolima**	**31.59**	**253**	*e*P	**P**	**21 29 38.8**	**-0.3**
CBOC	**Ciudad Bolivar**	**31.65**	**257**	*e*P	**P**	**21 29 38.4**	**-1.4**
ETMB	**Extrema**	**32.03**	**222**	*e*P	**P**	**21 29 43.7**	**+0.9**
PLMC	**San Jos del P**	**32.21**	**256**	*e*P	**P**	**21 29 43.7**	**-0.9**
BETC	**Betania**	**32.23**	**251**	*e*P	**P**	**21 29 45.4**	**+0.6**
IPMB	**Ipameri, GO**	**32.44**	**186**	*e*P	**P**	**21 29 46.6**	**+0.2**
GARC	**Garzon, Huila**	**32.48**	**251**	*e*P	**P**	**21 29 46.0**	**-1.1**
MARP	**Paez Belalcaza**	**32.65**	**252**	*e*P	**P**	**21 29 47.0**	**-1.6**
PTLB	**Pontes e Lacer**	**32.88**	**206**	*e*P	**P**	**21 29 51.6**	**+1.4**
SJMB	**Sao Joao De Ma**	**33.22**	**173**	*e*P	**P**	**21 29 53.6**	**+0.4**
PP1B	**Ponte de Pedra**	**33.36**	**197**	*e*P	**P**	**21 29 57.1**	**+2.7**
RIB01	**Linhares ES**	**33.92**	**172**	*e*P	**P**	**21 30 00.2**	**+0.9**
SIV	**San Ignacio**	**34.21**	**208**	P	**P**	**21 30 03.7**	**+1.9**
	comp=Z,4.1nm,0.9s,baz=50,slow=7.7,SNR=17						
ITRB	**Iturama**	**34.41**	**189**	*e*P	**P**	**21 30 05.5**	**+2.1**
ALF01	**Guarapari-ES**	**35.17**	**173**	*e*P	**P**	**21 30 11.3**	**+1.3**
CZSB	**Cruzeiro do Su**	**35.24**	**233**	*e*P	**P**	**21 30 11.5**	**+0.6**
BSCB	**Bom Sucesso**	**35.29**	**180**	*e*P	**P**	**21 30 12.0**	**+0.8**
BB19B	**Bebedouro**	**35.52**	**186**	*e*P	**P**	**21 30 14.6**	**+1.4**
OTAV	**Otavalo**	**35.97**	**250**	P	**P**	**21 30 17.3**	**-0.3**
OTAV				pmax	pmax		
	comp=Z,40nm,1.4s						
OTAV	**Otavalo**	**35.97**	**250**	P	**P**	**21 30 17.3**	**-0.3**
OTAV				IAmb	IAmb	21 30 26.2	
	comp=Z,40nm,1.4s						
OTAV	**Otavalo**	**35.97**	**250**	*e*P	**P**	**21 30 17.3**	**-0.3**
OTAV	**Otavalo**	**35.97**	**250**	*e*P	**P**	**21 30 18.8**	**+1.2**
AQDB	**Aquidauana**	**36.32**	**197**	*e*P	**P**	**21 30 21.8**	**+1.9**
PCMB	**Pacaembu**	**36.41**	**190**	*e*P	**P**	**21 30 22.0**	**+1.2**
DUB01	**Friburgo-RJ**	**36.46**	**176**	*e*P	**P**	**21 30 22.2**	**+1.0**
VAS01	**Vassouras-RJ**	**36.60**	**178**	*e*P	**P**	**21 30 23.6**	**+1.3**
MAN01	**Angra dos Reis**	**37.16**	**178**	*e*P	**P**	**21 30 28.0**	**+0.9**
VAO	**Valinhos**	**37.33**	**183**	*e*P	**P**	**21 30 30.0**	**+1.4**
H10N3	**ASCENSION HYDR**	**37.55**	**124**	T	T	22 10 14.6	
	baz=306,slow=75,SNR=479						
H10N2	**ASCENSION HYDR**	**37.55**	**124**	T	T	22 10 14.9	
	baz=306,slow=75,SNR=602						
H10N1	**ASCENSION HYDR**	**37.57**	**124**	T	T	22 10 15.8	
	baz=306,slow=75,SNR=13						
TRCB	**Terra Rica**	**37.82**	**191**	*e*P	**P**	**21 30 34.3**	**+1.5**
FRTB	**Fartura**	**37.89**	**187**	*e*P	**P**	**21 30 35.0**	**+1.7**
S57A	**Dark Hollow, R**	**37.93**	**314**	P	**P**	**21 30 34.3**	**+0.8**
S57A				IAmb	IAmb	21 30 42.1	
	comp=Z,38nm,1.2s						
SPB	**Sao Paulo**	**37.95**	**184**	P	**P**	**21 30 33.2**	**-0.5**
SPB				IAmb	IAmb	21 30 36.3	
	comp=Z,27nm,1.0s						
SPB	**Sao Paulo**	**37.95**	**184**	*e*P	**P**	**21 30 35.8**	**+2.1**
H10S3	**ASCENSION HYDR**	**38.08**	**126**	T	T	22 10 54.7	
	baz=304,slow=74,SNR=306						
H10S2	**ASCENSION HYDR**	**38.10**	**126**	T	T	22 10 56.1	
	baz=276,slow=74,SNR=119						
V56A	**Mocksville**	**38.17**	**310**	P	**P**	**21 30 36.1**	**+0.6**
	baz=115						
KMSC	**Kings Mountain**	**38.53**	**309**	P	**P**	**21 30 39.4**	**+0.8**
PET01	**Itanhaem-SP**	**38.63**	**183**	*e*P	**P**	**21 30 40.6**	**+1.2**
BLA	**Blacksburg**	**38.72**	**312**	P	**P**	**21 30 40.9**	**+0.7**
BLA				pmax	pmax		
	comp=Z,57nm,1.4s						
BLA	**Blacksburg**	**38.72**	**312**	P	**P**	**21 30 40.9**	**+0.7**
BLA				IAmb	IAmb	21 30 44.5	
	comp=Z,57nm,1.4s						
PFVI	**Vila Bisbo**	**39.26**	**48**	*e*P	**P**	**21 30 45.9**	**+1.2**
MORF	**Marmelete**	**39.46**	**48**	*e*P	**P**	**21 30 47.7**	**+1.2**
MORF				AMS	AMS	21 43 26.0	
	comp=E,463nm,20.7s						
MORF	**Marmelete**	**39.46**	**48**	*e*P	**P**	**21 30 47.6**	**+1.2**
MORF	**Marmelete**	**39.46**	**48**	*e*P	**P**	**21 30 48.0**	**+1.6**
	comp=E,76nm,1.7s						
PTEO	**Sao Teotonio**	**39.51**	**48**	*e*P	**P**	**21 30 48.8**	**+2.0**
	comp=E,52nm,1.5s						
PTGB	**Pitanga**	**39.59**	**190**	*e*P	**P**	**21 30 49.1**	**+1.5**
S54A	**Dingess, Beckl**	**39.61**	**313**	P	**P**	**21 30 49.8**	**+2.1**
	baz=116						
S54A	**Dingess, Beckl**	**39.61**	**313**	P	**P**	**21 30 48.6**	**+0.9**
S54A				IAmb	IAmb	21 31 00.2	
	comp=Z,36nm,1.2s						
KOWA	**Kowa**	**39.66**	**85**	P	**P**	**21 30 47.3**	**-1.0**
KOWA				IAmb	IAmb	21 30 55.2	
	comp=Z,28nm,1.0s						
BG3	**Lake Jocassee**	**39.69**	**308**	P	**P**	**21 30 49.4**	**+1.0**
V53A	**Saluda**	**39.84**	**309**	P	**P**	**21 30 50.2**	**+0.5**
MESJ	**Messejana**	**40.00**	**48**	*e*P	**P**	**21 30 52.1**	**+1.3**
MESJ				AMS	AMS	21 43 35.8	
	comp=Z,538nm,19.1s						
MESJ	**Messejana**	**40.00**	**48**	*e*P	**P**	**21 30 52.1**	**+1.3**
PCVE	**Castro Verde**	**40.04**	**48**	*e*P	**P**	**21 30 52.9**	**+1.7**
	comp=Z,75nm,1.6s						
TIC	**Toumodi**	**40.04**	**97**	*e*P	**P**	**21 30 51.2**	**-0.3**
LIC	**Lamto**	**40.14**	**98**	*e*P	**P**	**21 30 52.2**	**-0.2**
	comp=Z,2.1nm,0.2s						
PVAQ	**Vaqueiros**	**40.17**	**48**	*e*LQ	LQ	21 40 11.2	
PVAQ				*e*LR	LR	21 41 40.0	
	comp=Z,538nm,20.0s						
DBIC	**Dimbokro**	**40.19**	**97**	P	**P**	**21 30 52.7**	**0.0**
	comp=Z,6.1nm,0.9s,baz=280,slow=8.4,SNR=10.0						
DBIC				LR	LR	21 44 04.4	
	comp=Z,689nm,21.2s,baz=249,slow=31						
DBIC	**Dimbokro**	**40.19**	**97**	P	**P**	**21 30 52.0**	**-0.8**
PSBE	**So Bento**	**40.34**	**45**	*e*P	**P**	**21 30 55.2**	**+1.4**
	comp=Z,54nm,1.6s						
KIC	**Kosan Boka**	**40.38**	**97**	*e*P	**P**	**21 30 54.1**	**-0.3**
	comp=Z,5.8nm,0.8s						
EVO	**Evora**	**40.44**	**47**	*e*P	**P**	**21 30 55.8**	**+1.3**
	comp=Z,46nm,1.7s						
PMTG	**Montargil**	**40.53**	**46**	*e*P	**P**	**21 30 56.4**	**+1.1**
	comp=Z,35nm,1.7s						
TKL	**Tuckaleechee C**	**40.57**	**308**	P	**P**	**21 30 55.8**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=134,slow=5.8,SNR=4.1						
TKL	**Tuckaleechee C**	**40.57**	**308**	IAmb	IAmb	21 31 03.1	
	comp=Z,64nm,1.8s						
PCAS	**Casmilo, Conde**	**40.80**	**44**	*e*P	**P**	**21 30 58.3**	**+0.8**
	comp=Z,42nm,1.3s						
TGUH	**Tegucigalpa,Un**	**40.90**	**275**	P	**P**	**21 30 59.2**	**+0.5**
D55A	**Sainte-Anne-du**	**41.16**	**328**	P	**P**	**21 31 01.1**	**+0.8**
	baz=132						
S51A	**Beattyville**	**41.19**	**311**	P	**P**	**21 31 01.6**	**+0.9**
S51A				IAmb	IAmb	21 31 05.3	
	comp=Z,41nm,1.4s						
PMRV	**Marv??o**	**41.27**	**46**	*e*P	**P**	**21 31 02.3**	**+0.9**
	comp=Z,22nm,1.6s						
PMRV	**Marv??o**	**41.27**	**46**	*e*LR	LR	21 42 04.3	
PCBR	**Castelo Branco**	**41.40**	**45**	*e*P	**P**	**21 31 03.5**	**+1.1**
	comp=Z,42nm,1.6s						
PVIS	**Viseu**	**41.52**	**44**	*e*P	**P**	**21 31 04.5**	**+1.1**
	comp=Z,38nm,1.4s						
Q51A	**Peebles**	**41.58**	**313**	IAmb	IAmb	21 31 12.3	
	comp=Z,37nm,1.3s						
MTE	**Manteigas**	**41.61**	**44**	*e*P	**P**	**21 31 05.2**	**+1.0**
	comp=Z,41nm,1.4s						
MTE				*e*LQ	LQ	21 40 41.9	
MTE				*e*LR	LR	21 42 16.9	
	comp=Z,612nm,20.0s						
MTE	**Manteigas**	**41.61**	**44**	P	**P**	**21 31 03.9**	**-0.3**
MTE				IAmb	IAmb	21 31 06.2	
	comp=Z,41nm,1.2s						
ACSO	**Alum Creek Sta**	**41.85**	**315**	P	**P**	**21 31 07.5**	**+1.3**
	baz=117						
PGAV	**Gavieira, Arco**	**41.88**	**42**	*e*P	**P**	**21 31 07.5**	**+1.1**
	comp=Z,52nm,1.4s						
PGAV	**Gavieira, Arco**	**41.88**	**42**	*e*LR	LR	21 42 39.4	
	comp=Z,640nm,20.0s						
POLO	**Lamas de Olo**	**41.90**	**43**	*e*P	**P**	**21 31 07.8**	**+1.2**
	comp=Z,13nm,2.8s						
PVRL	**Vila Real**	**41.90**	**43**	*e*P	**P**	**21 31 07.5**	**+0.9**
	comp=Z,33nm,1.9s						
ITAB	**Concordia**	**42.07**	**189**	*e*P	**P**	**21 31 09.6**	**+1.7**
SWET	**Sewanee**	**42.07**	**307**	P	**P**	**21 31 08.8**	**+0.8**
SWET				IAmb	IAmb	21 31 10.6	
	comp=Z,71nm,1.8s						
LRAL	**Lakeview Retre**	**42.27**	**303**	P	**P**	**21 31 10.5**	**+0.8**
MVO	**Moncorvo**	**42.31**	**44**	*e*P	**P**	**21 31 10.9**	**+1.0**
	comp=Z,37nm,1.3s						
MVO				*e*LQ	LQ	21 40 56.3	
MVO				*e*LR	LR	21 42 49.8	
	comp=Z,550nm,20.0s						
CPUP	**Villa Florida**	**42.33**	**196**	P	**P**	**21 31 10.4**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=24,slow=9.8,SNR=2.6						
CPUP				LR	LR	21 48 50.6	
	comp=Z,275nm,20.4s,baz=22,slow=36						
CPUP	**Villa Florida**	**42.33**	**196**	P	**P**	**21 31 10.0**	**0.0**
CPUP	**Villa Florida**	**42.33**	**196**	*e*P	**P**	**21 31 10.8**	**+0.8**
U49A	**Red Boiling Sp**	**42.39**	**309**	IAmb	IAmb	21 31 15.9	
	comp=Z,54nm,1.7s						
CHGQ	**Chibougamau**	**42.63**	**332**	P	**P**	**21 31 12.8**	**+0.5**
	baz=136						
PBRG	**Braganca**	**42.80**	**43**	*e*P	**P**	**21 31 15.1**	**+1.2**
	comp=Z,28nm,1.8s						
WCI	**Wyandotte Cave**	**43.38**	**311**	P	**P**	**21 31 19.6**	**+1.0**
	baz=112						
PAB	**San Pablo**	**43.46**	**47**	P	**P**	**21 31 19.0**	**-0.3**
PAB				pmax	pmax		
	comp=Z,43nm,2.0s						
PAB	**San Pablo**	**43.46**	**47**	P	**P**	**21 31 19.0**	**-0.3**
PAB				IAmb	IAmb	21 32 56.0	
	comp=Z,43nm,1.9s						
ESDC	**Sonseca Array**	**43.78**	**47**	P	**P**	**21 31 22.9**	**+1.0**
	comp=Z,6.0nm,0.9s,baz=247,slow=8.1,SNR=47						
ESDC				PcP	**PcP**	**21 33 09.1**	**+0.6**
	comp=Z,1.5nm,1.1s,baz=287,slow=3.5,SNR=4.8						
ESDC				LR	LR	21 46 28.3	
	comp=Z,384nm,19.7s,baz=250,slow=32						
WVT	**Waverly**	**43.83**	**307**	P	**P**	**21 31 22.1**	**-0.1**
WVT				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WVT	**Waverly**	**43.83**	**307**	P	**P**	**21 31 22.7**	**+0.5**
	baz=108						
WVT	**Waverly**	**43.83**	**307**	P	**P**	**21 31 22.1**	**-0.1**
CNLB	**Canela**	**43.93**	**187**	*e*P	**P**	**21 31 25.2**	**+2.1**
TOA0	**Torodi Ar. Sit**	**45.33**	**86**	P	**P**	**21 31 33.5**	**-1.0**
TOA0				IAmb	IAmb	21 31 42.4	
	comp=Z,34nm,1.5s						
TORD	**Torodi Ar. Bea**	**45.33**	**86**	P	**P**	**21 31 34.3**	**-0.1**
	comp=Z,7.5nm,1.1s,baz=281,slow=7.6,SNR=16						
TORD				PcP	**PcP**	**21 33 12.3**	**-1.8**
	comp=Z,1.2nm,0.9s,baz=300,slow=4.8,SNR=3.6						
TORD				LR	LR	21 47 53.7	
	comp=Z,941nm,21.9s,baz=270,slow=33						
ITQB	**Itaqui**	**45.33**	**194**	*e*P	**P**	**21 31 35.5**	**+1.3**
CPSB	**Cacapava Do Su**	**45.39**	**190**	*e*P	**P**	**21 31 36.1**	**+1.4**
PLTB	**Pedras Altas**	**46.74**	**190**	*e*P	**P**	**21 31 46.4**	**+1.1**
CCM	**Cathedral Cave**	**47.01**	**309**	P	**P**	**21 31 48.6**	**+1.2**
	baz=107						
W41B	**Gary Mavity, V**	**47.03**	**305**	P	**P**	**21 31 48.5**	**+0.9**
	baz=104						
W41B	**Gary Mavity, V**	**47.03**	**305**	IAmb	IAmb	21 31 54.1	
	comp=Z,20nm,1.0s						
U40A	**Yellville**	**47.79**	**306**	P	**P**	**21 31 53.8**	**+0.2**
	baz=104						
P40A	**Paris**	**48.05**	**310**	P	**P**	**21 31 56.2**	**+0.7**
W39A	**Magazine**	**48.26**	**304**	P	**P**	**21 31 58.6**	**+1.5**
	baz=103						
W39A	**Magazine**	**48.26**	**304**	P	**P**	**21 31 56.2**	**-0.9**
TAM	**Tamanrasset**	**48.41**	**72**	P	**P**	**21 31 57.8**	**-0.9**
TAM				pmax	pmax		
	comp=Z,55nm,1.6s						
TAM	**Tamanrasset**	**48.41**	**72**	P	**P**	**21 31 57.8**	**-0.9**
AC05	**El Transito**	**49.53**	**209**	P	**P**	**21 32 06.6**	**-0.5**
AC05				IAmb	IAmb	21 32 14.9	
	comp=Z,21nm,1.2s						
CO01	**Juntas del Tor**	**50.41**	**208**	P	**P**	**21 32 12.8**	**-1.0**
435B	**Jarrell**	**50.69**	**298**	P	**P**	**21 32 15.3**	**-0.5**
435B				IAmb	IAmb	21 32 23.2	
	comp=Z,16nm,0.8s						
ZON	**Zonda**	**51.12**	**206**	P	**P**	**21 32 18.5**	**-0.4**
ZON				pmax	pmax		
	comp=Z,20nm,1.5s						
ZON	**Zonda**	**51.12**	**206**	P	**P**	**21 32 18.5**	**-0.4**
CLF	**Chambon-Foret**	**51.27**	**39**	P	**P**	**21 32 18.8**	**-1.1**
FRB	**Frobisher Bay**	**51.83**	**347**	P	**P**	**21 32 23.9**	**+0.2**
	comp=Z,6.2nm,0.9s,baz=159,slow=9.6,SNR=7.7						
FRB	**Frobisher Bay**	**51.83**	**347**	P	**P**	**21 32 24.0**	**+0.2**
KAN12	**Harper NE Stat**	**52.02**	**306**	P	**P**	**21 32 24.9**	**-0.8**
833A	**Chaparral WMA,**	**52.05**	**295**	P	**P**	**21 32 25.2**	**-0.8**
833A				IAmb	IAmb	21 32 34.6	
	comp=Z,30nm,1.2s						
WMOK	**Wichita Mounta**	**52.20**	**303**	P	**P**	**21 32 26.3**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,20nm,1.6s						
WMOK	**Wichita Mounta**	**52.20**	**303**	P	**P**	**21 32 26.3**	**-0.9**
JCT	**Junction City**	**52.56**	**297**	P	**P**	**21 32 29.4**	**-0.4**

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JCT                                 pmax     pmax
      comp=Z,14nm,1.0s
JCT   Junction City     52.56 297   P        P        21 32 30.2 +0.3
      baz=95
JCT   Junction City     52.56 297   P        P        21 32 29.4 -0.4
ABTX  Abilene, Hawle    52.64 300   P        P        21 32 30.9 +0.5
      baz=97
ABTX  Abilene, Hawle    52.64 300   P        P        21 32 29.5 -0.9
KEST  Kesra             52.86  56   P        P        21 32 31.6 -0.4
      comp=Z,16nm,1.0s,baz=216,slow=3.9,SNR=5.1
KEST                                LR       LR       21 52 51.4
      comp=Z,436nm,21.0s,baz=243,slow=34
KEST  Kesra             52.86  56   P        P        21 32 31.3 -0.7
KEST                                IAmb     IAmb     21 32 33.9
      comp=Z,26nm,1.1s
UCC   Uccle             53.66  37   P        P        21 32 37.6 +0.1
UCC                                 pmax     pmax
      comp=Z,37nm,0.9s
UCC   Uccle             53.66  37   P        P        21 32 37.6 +0.1
ULM   Lac du Bonnet     54.30 322   P        P        21 32 40.8 -1.5
      comp=Z,3.5nm,0.8s,baz=122,slow=5.6,SNR=5.2
ULM                                 LR       LR       21 52 23.5
      comp=Z,508nm,21.8s,baz=114,slow=32
ULM   Lac du Bonnet     54.30 322   P        P        21 32 41.5 -0.8
ULM                                 pmax     pmax
      comp=Z,48nm,2.0s
ULM   Lac du Bonnet     54.30 322   P        P        21 32 41.5 -0.8
ULM                                 IAmb     IAmb     21 34 27.5
      comp=Z,48nm,1.9s
AMTX  Amarillo          54.59 303   P        P        21 32 43.6 -1.1
AMTX                                IAmb     IAmb     21 32 54.4
      comp=Z,23nm,1.4s
AHRW  Bad Neuenahr-A    55.16  38  eP        P        21 32 48.8 +0.4
      comp=Z,20nm,1.1s,baz=250,slow=7.3
BFO   Black Forest      55.16  41   P        P        21 32 47.4 -1.2
BFO                                 pmax     pmax
      comp=Z,18nm,1.1s
BFO   Black Forest      55.16  41   P        P        21 32 47.4 -1.2
BFO                                 IAmb     IAmb     21 32 50.1
      comp=Z,18nm,1.1s
BFO   Black Forest      55.16  41  eP        P        21 32 48.0 -0.6
      comp=Z,20nm,1.1s,baz=250,slow=7.3
MSTX  Muleshoe          55.39 301   P        P        21 32 49.1 -1.4
MSTX                                IAmb     IAmb     21 33 02.0
      comp=Z,11nm,0.9s
BUG   Bochum--Univer    55.60  37  eP        P        21 32 52.0 +0.4
      comp=Z,37nm,1.1s,baz=250,slow=7.3
OSSC  Osservatorio P    55.80  47   P        P        21 32 51.7 -1.5
DAVA  Damuels           55.84  42  eP        P        21 32 54.4 +0.8
      comp=Z,9.1nm,0.9s
STU   Stuttgart         55.85  40   P        P        21 32 52.4 -1.1
STU                                 pmax     pmax
      comp=Z,14nm,0.8s
STU   Stuttgart         55.85  40   P        P        21 32 52.4 -1.1
STU                                 IAmb     IAmb     21 32 54.6
      comp=Z,14nm,0.8s
STU   Stuttgart         55.85  40  eP        P        21 32 52.5 -1.0
      comp=Z,26nm,1.1s,baz=250,slow=7.3
TNS   Taunus Mts        55.86  39  eP        P        21 32 53.1 -0.6
      comp=Z,8.9nm,0.9s,baz=250,slow=7.3
UBR   Ueberruh          56.10  42  eP        P        21 32 53.7 -1.8
      comp=Z,25nm,1.3s,baz=250,slow=7.3
KASTN Kahler Asten      56.19  37  eP        P        21 32 55.1 -0.8
      comp=Z,50nm,1.7s,baz=250,slow=7.3
IBBN  Ibbenburen        56.20  36  eP        P        21 32 55.9  0.0
      comp=Z,48nm,1.1s,baz=250,slow=7.3
FETA  Feichten          56.32  43  eP        P        21 32 57.5 +0.4
      comp=Z,14nm,1.1s,SNR=6.7
RETA  Reutte            56.47  42  eP        P        21 32 57.7 -0.4
      comp=Z,13nm,1.3s,SNR=4.8
MOTA  Moosalm           56.66  43  eP        P        21 32 59.7 +0.2
      comp=Z,9.2nm,0.8s,SNR=8.0
CTI   Castel Tesino     56.68  44   P        P        21 32 58.3 -1.3
CTI                                 pmax     pmax
      comp=Z,28nm,1.1s
CTI   Castel Tesino     56.68  44   P        P        21 32 58.3 -1.3
SQTA  Sankt Quirin      56.69  43  eP        P        21 32 59.2 -0.5
      comp=Z,27nm,1.5s,SNR=8.3
WATA  Walderalm         56.96  43  eP        P        21 33 00.6 -1.0
      comp=Z,16nm,1.4s,SNR=5.2
WTTA  Wattenberg        56.98  43  eP        P        21 33 01.8  0.0
      comp=Z,23nm,1.8s
UBBA  Unterbreizbach    57.00  38  eP        P        21 33 02.5 +1.0
      comp=Z,27nm,2.0s,baz=250,slow=7.3
GTTG  Gottingen         57.21  37  eP        P        21 33 03.6 +0.4
      comp=Z,36nm,1.1s,baz=250,slow=7.3
GRF   Grafenberg Arr    57.40  40  eP        P        21 33 04.8 +0.3
      comp=Z,40nm,1.6s,baz=250,slow=7.3
MNTX  Cornudas Mount    57.42 298   P        P        21 33 05.3 +0.3
      baz=93
MNTX  Cornudas Mount    57.42 298   P        P        21 33 04.8 -0.2
ABTA  Abfaltersbach     57.43  44  eP        P        21 33 04.7 -0.2
      comp=Z,16nm,1.3s,SNR=5.6
NRDL  Niedersach Rie    57.62  36  eP        P        21 33 07.0 +1.1
      comp=Z,58nm,1.2s,baz=250,slow=7.3
ZOU   Zoufplan          57.70  44   P        P        21 33 06.4 -0.5
ASSE  Asse, Remlinge    57.82  37  eP        P        21 33 08.4 +1.0
      comp=Z,39nm,1.4s,baz=250,slow=7.3
SDCO  Great Sand Dun    57.98 306   P        P        21 33 08.8 -0.4
KBA   Koelnbreinsper    58.07  43  eP        P        21 33 09.0 -0.5
      comp=Z,22nm,1.2s
MYKA  Terra Mystica     58.16  44  eP        P        21 33 09.5 -0.5
      comp=Z,12nm,0.8s,SNR=6.3
SUMG  Summit            58.17   2  i P       P        21 33 10.0  0.0
SUMG  Summit            58.17   2   P        P        21 33 09.4 -0.6
SUMG                                IAmb     IAmb     21 34 23.1
      comp=Z,30nm,1.6s
SUMG  Summit            58.17   2  i P       P        21 33 10.0  0.0
SUMG  Summit            58.17   2  i P       P        21 33 10.0  0.0
PLN   Plauen            58.20  39  eP        P        21 33 10.1 -0.1
      comp=Z,35nm,1.8s,baz=250,slow=7.3
FLTG  Flechtingen       58.22  37  eP        P        21 33 10.6 +0.5
      comp=Z,58nm,1.4s,baz=250,slow=7.3
GUNZ  Gunzen            58.27  39  eP        P        21 33 11.2 +0.5
      comp=Z,12nm,1.4s,baz=250,slow=7.3
WERN  Wernitzgruen      58.28  39  eP        P        21 33 11.2 +0.5
      comp=Z,24nm,1.2s,baz=250,slow=7.3
WET   Wettzell          58.28  41  eP        P        21 33 09.8 -1.0
      comp=Z,12nm,1.2s,baz=250,slow=7.3
NKC   Novy Kostel       58.31  40  eP        P        21 33 11.7 +0.8
NKC                                e                  21 33 17.4
NKC   Novy Kostel       58.31  40  eP        P        21 33 11.7 +0.8
NKC                                ex        x        21 33 17.4
ISCO  Idaho Springs     58.32 308   P        P        21 33 10.3 -1.2
ISCO                                pmax     pmax
      comp=Z,16nm,1.4s
ISCO  Idaho Springs     58.32 308   P        P        21 33 13.3 +1.7
      baz=98
ISCO  Idaho Springs     58.32 308   P        P        21 33 10.3 -1.2
ISCO                                IAmb     IAmb     21 33 30.1
      comp=Z,16nm,1.4s
SNART Snartemo          58.37  29  i P       P        21 33 12.2 +1.1
MUD   Monsted U'grnd    58.55  32  i P       P        21 33 13.0 +0.6
MUD                                 pmax     pmax
      comp=Z,31nm,1.1s
MUD   Monsted U'grnd    58.55  32  i P       P        21 33 13.0 +0.6
      comp=Z,31nm,1.1s
MUD   Monsted U'grnd    58.55  32  i P       P        21 33 13.0 +0.6
MUD                                 IAmb     IAmb     21 33 14.7
      comp=Z,31nm,1.1s
BNM   Barren Site       58.59 301   P        P        21 33 12.4 -1.1
KHC   Kasperske Hory    58.72  41ceP        P        21 33 13.2 -0.6
KHC                                 pmax     pmax
      comp=Z,55nm,2.5s
KHC   Kasperske Hory    58.72  41  eP        P        21 33 14.0 +0.2
KHC                                ex        x        21 33 19.4
KHC   Kasperske Hory    58.72  41   P        P        21 33 12.8 -1.0
GEC2  GERESS Array S    58.73  41  eP        P        21 33 13.4 -0.5
      comp=Z,7.8nm,1.1s,baz=250,slow=7.3
GERES GERESS Array B    58.73  41   P        P        21 33 12.4 -1.5
      comp=Z,1.2nm,0.6s,baz=238,slow=7.6,SNR=7.0
GERES                               LR       LR       21 54 28.6
      comp=Z,158nm,21.9s,baz=260,slow=32
OBKA  Obir              58.74  44  eP        P        21 33 13.8 -0.3
      comp=Z,13nm,0.8s
LC01  Cunco             58.77 204   P        P        21 33 11.2 -3.0
LC01                                IAmb     IAmb     21 33 15.2
      comp=Z,20nm,1.1s
MOA   Molln             58.85  43  eP        P        21 33 14.8 +0.1
      comp=Z,12nm,1.5s
CLL   Collm             58.95  38  i P       P        21 33 14.8 -0.5
      comp=Z,16nm,1.0s
CLL                                i                  21 33 22.3
CLL                                eS        S        21 41 36.0  +15
CLL   Collm             58.95  38   P        P        21 33 14.4 -0.9
CLL                                 pmax     pmax
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      comp=Z,17nm,1.1s
CLL   Collm             58.95  38   P        P        21 33 14.4 -0.9
CLL                                 IAmb     IAmb     21 33 16.9
      comp=Z,17nm,1.1s
CLL   Collm             58.95  38  eP        P        21 33 15.5 +0.1
      comp=Z,16nm,1.0s,baz=250,slow=7.3
S22A  4UR Ranch, Cre    59.03 305   P        P        21 33 15.2 -1.4
S22A                                IAmb     IAmb     21 33 29.5
      comp=Z,40nm,1.9s
SOKA  Soboth            59.11  44  eP        P        21 33 15.5 -1.1
      comp=Z,8.0nm,1.4s
FFC   Flin Flon         59.39 326   P        P        21 33 17.9 -0.4
FFC                                 pmax     pmax
      comp=Z,19nm,1.6s
FFC   Flin Flon         59.39 326   P        P        21 33 17.9 -0.4
FFC                                 IAmb     IAmb     21 33 31.0
      comp=Z,19nm,1.6s
BRG   Berggiesshubel    59.40  39  eP        P        21 33 18.6 +0.2
BRG                                 Amp               21 33 21.6
      comp=Z,8.5nm,1.3s
BRG   Berggiesshubel    59.40  39  eP        P        21 33 18.6 +0.2
BRG                                 pmax     pmax
      comp=Z,9.0nm,1.3s
BRG   Berggiesshubel    59.40  39  eP        P        21 33 18.6 +0.2
BRG                                 Amp               21 33 21.6
      comp=Z,8.5nm,1.3s
BRG   Berggiesshubel    59.40  39  eP        P        21 33 19.1 +0.7
      baz=250,slow=7.3
PRU   Pruhonice         59.54  40  eP        P        21 33 14.0 -5.5
PRU                                e                  21 33 19.4
ARSA  Arzberg           59.55  43  eP        P        21 33 19.3 -0.4
      comp=Z,6.8nm,0.7s,SNR=7.1
PLCA  Paso Flores       59.85 202   P        P        21 33 21.7  0.0
      comp=Z,10nm,1.0s,baz=24,slow=10,SNR=8.6
PLCA                                LR       LR       22 02 01.3
      comp=Z,124nm,18.1s,baz=2.0,slow=39
PLCA  Paso Flores       59.85 202   P        P        21 33 20.4 -1.3
PLCA                                IAmb     IAmb     21 33 23.5
      comp=Z,22nm,1.2s
PLCA  Paso Flores       59.85 202  eP        P        21 33 22.3 +0.6
CONA  Conrad Observa    59.92  43  eP        P        21 33 21.8 -0.4
      comp=Z,14nm,1.0s
RGN   Rugen             60.10  35  eP        P        21 33 24.0 +0.9
      baz=250,slow=7.3
BEHE  Becsehely         60.24  45  eP        P        21 33 34.5  +10
LNIZ  Loecknitz         60.28  36  eP        P        21 33 24.2 -0.2
      baz=250,slow=7.3
SOP   Sopron            60.33  43  eP        P        21 33 26.5 +1.6
PV01  Paradox Valley    60.44 306   P        P        21 33 25.5 -0.6
PV01                                IAmb     IAmb     21 33 36.6
      comp=Z,34nm,2.0s
KRUC  Moravsky          60.51  42  eP        P        21 33 26.1  0.0
UPC   Upice             60.59  40  eP        P        21 33 27.3 +0.7
UPC                                e                  21 33 33.3
UPC   Upice             60.59  40  eP        P        21 33 27.3 +0.7
UPC                                ex        x        21 33 33.3
PV13  Radium Mtn., P    60.63 306   P        P        21 33 26.6 -0.9
PV13                                IAmb     IAmb     21 33 38.5
      comp=Z,14nm,1.3s
VRAC  Vranov            60.69  41  ⇑P        P        21 33 27.3  0.0
VRAC  Vranov            60.69  41  eP        P        21 33 27.5 +0.2
VRAC  Vranov            60.69  41  ⇑P        P        21 33 27.3  0.0
OSTC  Ostas             60.72  40  eP        P        21 33 28.0 +0.4
DPC   Dobruska-Polom    60.74  40  eP        P        21 33 28.3 +0.6
EGYH  Egyhazaskeszo     60.79  44  eP        P        21 33 23.9 -4.2
MPLH  Magyarpolny       60.89  44  eP        P        21 33 28.6 -0.1
MODS  Modra-Piesok      60.94  42  eP        P        21 33 28.5 -0.6
MODS                                pmax     pmax
      comp=Z,45nm,1.7s
MODS  Modra-Piesok      60.94  42  eP        P        21 33 28.5 -0.6
TIH   Tihany            61.08  44  eP        P        21 33 30.5 +0.5
NC204 NORSAR Array S    61.24  27   P        P        21 33 30.0 -0.9
NB2   NORSAR Subarra    61.35  27   P        P        21 33 32.8 +1.2
      comp=Z,3.8nm,0.7s,baz=246,slow=6.9
NOA   NORSAR Array B    61.35  27   P        P        21 33 32.6 +0.9
      comp=Z,14nm,1.0s,baz=246,slow=6.4,SNR=17
NOA                                 LR       LR       21 56 06.7
      comp=Z,129nm,18.2s,baz=240,slow=32
DBG   Daneborg          61.38   7  i P       P        21 33 32.9 +1.3
MORC  Moravsky Berou    61.39  41  ⇑P        P        21 33 32.9 +0.8
MORC  Moravsky Berou    61.39  41  eP        P        21 33 32.4 +0.3
MORC  Moravsky Berou    61.39  41  ⇑P        P        21 33 32.9 +0.8
MORC  Moravsky Berou    61.39  41   P        P        21 33 31.4 -0.8
MORC                                IAmb     IAmb     21 33 39.6
      comp=Z,13nm,1.2s
CSKK  Cskako            61.41  44  eP        P        21 33 31.3 -0.9
NC303 NORSAR Array S    61.49  27   P        P        21 33 32.8 +0.3
SRO   Srobarova         61.52  43  eP        P        21 33 33.8 +0.8
SRO                                 pmax     pmax
      comp=Z,22nm,1.1s
SRO   Srobarova         61.52  43  eP        P        21 33 33.8 +0.8
NC405 NORSAR Array S    61.60  27   P        P        21 33 33.4 +0.1
BW06  Boulder Array     61.63 311   P        P        21 33 34.1 -0.1
      baz=96
BW06  Boulder Array     61.63 311   IAmb     IAmb     21 33 51.0
      comp=Z,29nm,1.9s
PD31  Pinedale Array    61.63 311   P        P        21 33 32.6 -1.5
PD31                                IAmb     IAmb     21 33 51.0
      comp=Z,26nm,1.9s
PDAR  Pinedale Array    61.63 311   P        P        21 33 34.4 +0.2
      comp=Z,0.5nm,0.6s,baz=122,slow=7.3,SNR=6.4
PDAR                                LR       LR       21 57 32.8
      comp=Z,331nm,21.8s,baz=122,slow=33
OKC   Ostrava-Krasne    61.78  41  eP        P        21 33 28.3 -6.4
VYHS  Vyhne             61.98  43  eP        P        21 33 36.3 +0.2
VYHS                                pmax     pmax
      comp=Z,57nm,2.0s
VYHS  Vyhne             61.98  43  eP        P        21 33 36.3 +0.2
TUC   Tucson            62.02 299   P        P        21 33 35.5 -1.2
TUC                                 pmax     pmax
      comp=Z,8.0nm,1.1s
TUC   Tucson            62.02 299   P        P        21 33 35.5 -1.2
DIVS  Divibare          62.13  48   P        P        21 33 36.4 -1.0
WUAZ  Wupatki           62.55 303   P        P        21 33 40.3  0.0
WUAZ                                IAmb     IAmb     21 33 51.6
      comp=Z,20nm,1.4s
X16A  Lo Mia Camp, P    62.58 301   P        P        21 33 40.3 -0.4
OJC   Ojcow             62.90  41   IAmb     IAmb     21 33 44.5
      comp=Z,18nm,1.1s
HWUT  Hardware Ranch    63.01 309   IAmb     IAmb     21 33 54.8
      comp=Z,8.2nm,1.0s
YHB   Horse Butte       63.03 313   P        P        21 33 43.2 -0.2
TULEG Thule             63.27 354  i P       P        21 33 44.6 +0.4
MTPU  Mount Pierson     63.28 305   P        P        21 33 44.5 -0.9
U15A  North Rim         63.31 304   IAmb     IAmb     21 34 29.0
      comp=Z,21nm,1.8s
MDVR  Moldovita         63.43  47  ⇑P        P        21 33 46.9 +1.0
BZS   Buzias            63.45  46  ⇑P        P        21 33 47.2 +1.2
BZS   Buzias            63.45  46  ⇑P        P        21 33 47.2 +1.2
DAG   Danmarks Havn     63.76   7  i P       P        21 33 47.0 -0.4
      comp=Z,12nm,1.0s
DAG   Danmarks Havn     63.76   7  i P       P        21 33 47.0 -0.4
DAG                                 IAmb     IAmb     21 33 48.8
      comp=Z,12nm,1.0s
CRVS  Cervenica-Dubn    63.76  42  eP        P        21 33 49.2 +1.2
CRVS                                pmax     pmax
      comp=Z,70nm,1.7s
CRVS  Cervenica-Dubn    63.76  42  eP        P        21 33 49.2 +1.2
DUG   Dugway, Tooele    63.86 308   P        P        21 33 48.2 -0.8
DUG                                 pmax     pmax
      comp=Z,17nm,1.7s
DUG   Dugway, Tooele    63.86 308   P        P        21 33 48.2 -0.8
DUG                                 IAmb     IAmb     21 34 04.7
      comp=Z,17nm,1.7s
HERR  Herculane         63.94  47  ⇑P        P        21 33 50.2 +1.0
BGU   Big Grassy Mou    64.06 309   P        P        21 33 49.7 -0.6
CCUT  Cedar City        64.20 305   P        P        21 33 50.4 -0.9
GZR   Gura Zlata        64.24  46  ⇑P        P        21 33 52.2 +1.0
GZR   Gura Zlata        64.24  46  ⇑P        P        21 33 52.2 +1.0
UZH   Uzhgorod          64.27  43  eP        P        21 33 51.5 +0.2
UZH                                e                  21 33 58.1
DRGR                    64.34  45  ⇑P        P        21 33 52.8 +0.9
DRGR                    64.34  45  ⇑P        P        21 33 52.8 +0.9
VTS   Vitosha           64.35  50  ⇑P        P        21 33 53.6 +1.4
VTS   Vitosha           64.35  50  ⇑P        P        21 33 53.6 +1.4
DEV   Deva              64.38  46  ⇑P        P        21 33 53.3 +1.3
DEV   Deva              64.38  46  ⇑P        P        21 33 53.3 +1.3
PSUT  Pine Spring       64.61 306   P        P        21 33 53.6 -0.3
HLID  Hailey            65.24 311   P        P        21 33 57.6 -0.3
ARCR  ARCALIA           65.49  45  ⇑P        P        21 34 00.7 +1.4
LVV   L'vov             65.55  42  eP        P        21 34 00.3 +0.7
ARR   Arges             65.55  47  ⇑P        P        21 34 00.7 +1.0
ELK   Elko              65.73 308   LR       LR       22 02 11.3
      comp=Z,386nm,18.5s,baz=96,slow=36
```

```
ELK   Elko              65.73 308   P        P        21 34 01.1 -0.2
ELK                                 pmax     pmax
      comp=Z,6.0nm,1.2s
ELK   Elko              65.73 308   P        P        21 34 01.1 -0.2
HUMR  Humele            65.74  47  ⇑P        P        21 34 02.0 +1.0
R11A  Troy Canyon, C    65.96 306   P        P        21 34 03.0 +0.2
      baz=90
RES   Resolute Bay      66.05 347   IAmb     IAmb     21 34 10.3
      comp=Z,9.8nm,1.2s
GMRC  Granite Mounta    66.06 302   P        P        21 34 04.3 +0.9
      baz=89
MFID  Camas Ranch       66.26 311   P        P        21 34 03.8 -0.7
MFID                                IAmb     IAmb     21 34 22.2
      comp=Z,17nm,1.6s
MLR   Muntele Rosu      66.47  46  ⇑P        P        21 34 06.9 +1.1
MLR   Muntele Rosu      66.47  46  ⇑P        P        21 34 06.9 +1.1
MLR   Muntele Rosu      66.47  46   P        P        21 34 04.8 -1.0
BIZ   Bicaz             66.67  45  ⇑P        P        21 34 07.9 +1.0
PFO   Pinyon Flats O    66.76 301   LR       LR       22 01 19.7
      comp=Z,291nm,21.6s,baz=102,slow=34
GSC   Goldstone, Bar    66.99 302   IAmb     IAmb     21 34 44.2
      comp=Z,20nm,1.9s
VRI   Vrincioaia        67.04  46  ⇑P        P        21 34 09.7 +0.4
VRI   Vrincioaia        67.04  46  ⇑P        P        21 34 09.7 +0.4
NEW   Newport           67.41 316   LR       LR       22 01 40.1
      comp=Z,446nm,19.6s,baz=94,slow=34
YKA   Yellowknife Ar    67.82 332   P        P        21 34 12.6 -1.2
      comp=Z,2.0nm,1.0s,baz=96,slow=7.5,SNR=14
YKA                                 LR       LR       22 01 36.3
      comp=Z,369nm,19.5s,baz=0.0,slow=34
YKA                                 PKP2ab            22 02 42.6
      comp=Z,0.3nm,0.9s,baz=306,slow=3.6,SNR=3.8
YKA   Yellowknife Ar    67.82 332ceP        P        21 34 12.1 -1.7
YKA                                 pmax     pmax
      comp=Z,2.0nm,1.0s
HARR  Harsova           67.85  47  ⇑P        P        21 34 14.3 -0.1
HARR  Harsova           67.85  47  ⇑P        P        21 34 14.3 -0.1
NVAR  Mina Array Bea    68.10 306   P        P        21 34 16.9 +0.5
      comp=Z,0.4nm,0.8s,baz=79,slow=10,SNR=3.3
NVAR                                PP       PP       21 36 50.4 +3.9
      comp=Z,0.4nm,0.8s,baz=92,slow=7.4,SNR=3.6
EUNU  Eureka            68.19 353   P        P        21 34 15.5 -0.5
SORM  Soroca            68.25  44  ⇑P        P        21 34 16.1 -0.7
SORM  Soroca            68.25  44  ⇑P        P        21 34 16.1 -0.7
ISA   Isabella, Lake    68.33 303   P        P        21 34 17.2 -0.5
ISA                                 pmax     pmax
      comp=Z,6.0nm,1.1s
ISA   Isabella, Lake    68.33 303   P        P        21 34 17.2 -0.5
MANT  Manisa            68.34  54   P        P        21 34 15.6 -2.2
FINES FINESS Array B    68.34  29   P        P        21 34 16.9 -0.2
      comp=Z,8.7nm,1.0s,baz=147,slow=11,SNR=4.7
FINES                               LR       LR       21 59 31.9
      comp=Z,207nm,21.2s,baz=238,slow=32
FINES FINESS Array B    68.34  29ceP        P        21 34 17.3 +0.2
FINES                               pmax     pmax
      comp=Z,9.0nm,1.0s
MNK   Minsk             68.39  37  i P       P        21 34 16.5 -1.1
MNK                                i P       P        21 34 16.5 -1.1
      comp=N,28nm,1.2s
MNK                                i P       P        21 34 16.5 -1.1
      comp=Z,16nm,0.9s
MNK                                i PcP     PcP      21 34 47.9 +4.9
MNK                                i PP      PP       21 36 47.2 -1.2
MNK                                i PPP     PPP      21 38 25.8
MNK                                i S       S        21 43 18.5 -0.2
MNK                                i ScS     SKSac    21 44 16.0 -0.3
MNK                                i SS      SS       21 47 51.6  +10
MNK                                i SSS     SSS      21 50 58.9
MNK                                i LR      LR       22 03 51.9
MNK                                i LRM     MLR      22 05 52.8
      comp=Z,405nm,18.8s
MNK                                i LRM     MLR      22 05 54.2
      comp=N,2µm,21.7s
MNK                                i LRM     MLR      22 06 13.8
      comp=E,33nm,18.8s
AKASG Malin Array Be    68.94  41   P        P        21 34 20.6 -0.5
      comp=E,5.1nm,0.8s,baz=268,slow=5.2,SNR=15
AKASG                               LR       LR       22 02 32.3
      comp=E,101nm,20.2s,baz=265,slow=34
WAKR  Walker            68.98 306   P        P        21 34 20.9 -1.0
WAKR                                IAmb     IAmb     21 34 40.4
      comp=Z,24nm,1.9s
ARCES ARCESS Array B    69.72  21   P        P        21 34 25.6  0.0
      comp=Z,14nm,1.0s,baz=243,slow=1.2,SNR=9.8
ARCES                               LR       LR       21 58 20.0
      comp=Z,202nm,21.9s,baz=255,slow=30
TSUM  Tsumeb            70.14 117   P        P        21 34 27.4 -1.7
ORV   Oroville          70.54 307   P        P        21 34 30.7 -0.5
ORV                                 pmax     pmax
      comp=Z,12nm,1.6s
ORV   Oroville          70.54 307   P        P        21 34 30.7 -0.5
YBH   Yreka Blue Hor    71.35 309   LR       LR       22 05 06.6
      comp=Z,279nm,19.4s,baz=92,slow=35
BR131 Keskin Array S    72.22  53   P        P        21 34 40.9 -0.6
BR131                               pmax     pmax
      comp=Z,17nm,0.9s
BR131 Keskin Array S    72.22  53   P        P        21 34 40.9 -0.6
BR131                               IAmb     IAmb     21 34 43.0
      comp=Z,17nm,0.8s
BRTR  Keskin Array B    72.22  53   P        P        21 34 41.8 +0.3
      comp=Z,12nm,1.0s,baz=259,slow=5.3,SNR=33
BRTR                                LR       LR       22 05 04.7
      comp=Z,77nm,20.5s,baz=260,slow=35
OBN   Obninsk           73.43  36   LR       LR       22 04 34.5
      comp=Z,27nm,19.9s,baz=240,slow=34
OBN   Obninsk           73.43  36ceP        P        21 34 47.4 -0.8
OBN                                e                  21 37 29.9
OBN                                 pmax     pmax
      comp=Z,11nm,1.1s
OBN                                 MLR      MLR
      comp=Z,215nm,16.0s
BBB   Bella Bella       74.45 321   LR       LR       22 05 06.6
      comp=Z,235nm,20.8s,baz=76,slow=34
ANN   Anapa             74.61  47  eP        P        21 34 49.1 -6.2
ANN                                 pmax     pmax
      comp=Z,154nm,1.0s
KLMR  Klimovskoe        74.80  30  eP        P        21 34 54.3 -1.7
KLMR                                pmax     pmax
      comp=Z,38nm,1.2s
KLMR  Klimovskoe        74.80  30  eP        P        21 34 54.3 -1.7
KLMR                                AMP               21 34 57.8
      comp=Z,38nm,1.2s
DLBC  Dease Lake        75.16 327   LR       LR       22 05 01.8
      comp=Z,376nm,21.6s,baz=88,slow=33
INK   Inuvik            76.08 337   P        P        21 35 02.9 -0.4
INK                                 pmax     pmax
      comp=Z,25nm,1.4s
INK   Inuvik            76.08 337   P        P        21 35 02.9 -0.4
INK                                 IAmb     IAmb     21 35 10.8
      comp=Z,25nm,1.4s
MBAR  Mbarara           76.38  94ceP        P        21 35 08.2 +2.0
MBAR                                pmax     pmax
      comp=Z,8.0nm,1.3s
MBAR  Mbarara           76.38  94   P        P        21 35 03.9 -2.3
MBAR                                IAmb     IAmb     21 35 08.5
      comp=Z,16nm,1.1s
LSZ   Lusaka            78.19 109   P        P        21 35 15.1 -1.1
LSZ                                 pmax     pmax
      comp=Z,23nm,1.4s
LSZ   Lusaka            78.19 109   P        P        21 35 15.1 -1.1
LSZ                                 IAmb     IAmb     21 35 29.6
      comp=Z,23nm,1.4s
KIV   Kislovodsk        78.45  47ceP        P        21 35 18.2 +1.0
KIV                                e                  21 38 14.4
KIV                                eS        S        21 45 29.5  +16
KIV                                 pmax     pmax
      comp=Z,14nm,1.3s
KIV                                 MLR      MLR
      comp=Z,75nm,17.0s
KIV   Kislovodsk        78.45  47   P        P        21 35 16.9 -0.3
KIV                                 IAmb     IAmb     21 35 33.0
      comp=Z,17nm,1.1s
KBZ   Khabaz            78.64  48   P        P        21 35 18.2 +0.2
      comp=Z,7.5nm,1.0s,baz=264,slow=6.1,SNR=8.4
KBZ                                 LR       LR       22 10 13.4
      comp=Z,65nm,19.6s,baz=296,slow=36
LBTB  Lobatse           79.23 119   P        P        21 35 20.6 -1.2
LBTB                                pmax     pmax
      comp=Z,8.0nm,0.9s
LBTB  Lobatse           79.23 119   P        P        21 35 20.6 -1.2
BOSA  Boshof            80.29 123   P        P        21 35 27.8 +0.3
      comp=Z,7.6nm,1.0s,baz=286,slow=3.4,SNR=7.3
BOSA                                LR       LR       22 04 43.9
      comp=Z,142nm,20.1s,baz=284,slow=31
BOSA  Boshof            80.29 123   P        P        21 35 26.5 -1.0
```

GNI	**Garni**	**80.62**	**51**	*ce*P	**P**	**21 35 30.4**	**+1.2**
GNI				pmax	pmax		
	comp=Z,26nm,1.7s						
MCARA	**McCarthy VSAT**	**81.17**	**331**	IAmb	IAmb	21 35 40.7	
	comp=Z,25nm,1.2s						
TOLK	**Toolik Lake Re**	**81.80**	**339**	P	**P**	**21 35 35.0**	**+0.3**
	baz=71						
TOLK	**Toolik Lake Re**	**81.80**	**339**	IAmb	IAmb	21 35 44.3	
	comp=Z,14nm,1.2s						
IL31		**81.97**	**335**	IAmb	IAmb	21 35 42.6	
	comp=Z,13nm,1.1s						
ILAR	**Eielson Array**	**81.97**	**335**	P	**P**	**21 35 35.6**	**-0.1**
	comp=Z,6.6nm,0.9s,baz=72,slow=4.5,SNR=34						
ILAR				LR	LR	22 12 27.1	
	comp=Z,74nm,18.1s,baz=90,slow=36						
COLA	**College**	**82.33**	**335**	P	**P**	**21 35 37.8**	**+0.3**
COLA				pmax	pmax		
	comp=Z,23nm,0.3s						
COLA	**College**	**82.33**	**335**	P	**P**	**21 35 37.8**	**+0.3**
TCOL	**CIGO, UAF Yank**	**82.34**	**335**	P	**P**	**21 35 37.8**	**+0.2**
	baz=72						
TCOL	**CIGO, UAF Yank**	**82.34**	**335**	IAmb	IAmb	21 35 39.9	
	comp=Z,14nm,1.1s						
CCB	**Clear Creek Bu**	**82.38**	**335**	IAmb	IAmb	21 35 45.9	
	comp=Z,25nm,1.5s						
MDM	**Murphy Dome**	**82.46**	**335**	IAmb	IAmb	21 35 40.6	
	comp=Z,15nm,1.3s						
COLD	**Coldfoot**	**82.49**	**338**	P	**P**	**21 35 38.9**	**+0.6**
	baz=70						
COLD	**Coldfoot**	**82.49**	**338**	P	**P**	**21 35 38.6**	**+0.2**
WRH	**Wood River Hil**	**82.55**	**335**	IAmb	IAmb	21 35 46.0	
	comp=Z,18nm,1.2s						
KMBO	**Kilima Mbogo**	**82.81**	**93**	P	**P**	**21 35 42.0**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=295,slow=7.1,SNR=3.6						
KMBO				LR	LR	22 12 51.9	
	comp=Z,256nm,18.1s,baz=276,slow=36						
I23K	**Minto, Yukon-K**	**82.86**	**336**	P	**P**	**21 35 40.7**	**+0.5**
	baz=71						
NEA2	**Nenana**	**82.92**	**335**	P	**P**	**21 35 40.3**	**-0.3**
	baz=71						
RND	**Reindeer**	**83.21**	**334**	P	**P**	**21 35 42.5**	**+0.2**
RND				pmax	pmax		
	comp=Z,33nm,1.6s						
RND	**Reindeer**	**83.21**	**334**	P	**P**	**21 35 42.5**	**+0.2**
MLY	**Manley**	**83.44**	**336**	P	**P**	**21 35 43.3**	**-0.1**
	baz=70						
BPAW	**Bear Paw Mtn.**	**83.87**	**335**	IAmb	IAmb	21 35 54.8	
	comp=Z,7.8nm,1.0s						
KTH	**Kantishna Hill**	**84.04**	**334**	P	**P**	**21 35 46.6**	**+0.1**
ARU	**Arti**	**85.37**	**33**	*c i*P	**P**	**21 35 54.1**	**+0.9**
ARU						21 39 12.2	
ARU				S	**S**	**21 46 19.1**	**-4.8**
ARU				SS	**SS**	**21 52 03.9**	**+5.9**
ARU				pmax	pmax		
	comp=Z,13nm,1.4s						
SVE	**Sverdlovsk**	**86.31**	**32**	*e*P	**P**	**21 35 58.3**	**+0.4**
RDOG	**Red Dog Mine**	**86.53**	**341**	IAmb	IAmb	21 36 09.4	
	comp=Z,12nm,1.2s						
ABKAR	**Akbulak array**	**88.61**	**39**	P	**P**	**21 36 08.9**	**-0.2**
ABKAR				IAmb	IAmb	21 36 12.2	
	comp=Z,12nm,1.4s						
VNA1	**Neumayer--Stat**	**88.64**	**168**	P	**P**	**21 36 07.7**	**-0.9**
VNA3	**Neumayer Olymp**	**88.86**	**169**	P	**P**	**21 36 10.1**	**+0.4**
VNA2	**Neumayer--Watz**	**89.03**	**168**	P	**P**	**21 36 10.9**	**+0.4**
	baz=332,slow=5.5						
NRIK	**Noril'sk**	**89.98**	**15**	P	**P**	**21 36 15.5**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=330,slow=1.9,SNR=3.8						
SNAA	**Sanae**	**90.53**	**168**	P	**P**	**21 36 17.6**	**+0.1**
SNAA	**Sanae**	**90.53**	**168**	*ce*P	**P**	**21 36 17.9**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,16nm,1.0s						
TIXI	**Tiksi**	**93.94**	**2**	*i* P	**P**	**21 36 33.1**	**-0.3**
TIXI	**Tiksi**	**93.94**	**2**	P	**P**	**21 36 33.4**	**-0.1**
TIXI				IAmb	IAmb	21 36 34.1	
	comp=Z,4.6nm,0.9s						
RKT	**Rikitea**	**95.53**	**248**	*e*LR	LR	22 07 23.2	
	comp=Z,306nm,33.2s						
TAOE	**Nuku Hiva Isla**	**97.10**	**263**	*e*LR	LR	22 08 19.5	
	comp=Z,235nm,30.1s						
KURK	**Kurchatov**	**98.56**	**32**	*i* P	Pdif	21 36 55.5	+0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**99.55**	**27**	PP	**PP**	**21 41 00.5**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=305,slow=10,SNR=4.7						
ZALV				LR	LR	22 20 13.6	
	comp=Z,97nm,18.9s,baz=312,slow=34						
PPT2	**Papeete2**	**107.87**	**256**	*e*LR	LR	22 13 15.5	
	comp=Z,590nm,32.8s						
MJAR	**Matsushiro Arr**	**129.13**	**357**	PKP	**PKPdf**	**21 42 23.2**	**-1.5**
	comp=Z,4.0nm,1.1s,baz=282,slow=2.3,SNR=6.1						
ENH	**Enshi**	**129.15**	**29**		**PKPdf**	**21 42 24.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**131.69**	**48**	PKP	**PKPdf**	**21 42 28.9**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=289,slow=3.5,SNR=11						
CMAR	**Chiang Mai Arr**	**131.69**	**48**	PKIKP	**PKPdf**	**21 42 29.0**	**-1.0**
DZM	**Mont Dzumac**	**149.24**	**251**	*e*LR	LR	22 32 26.2	
	comp=Z,166nm,28.0s						
ASAR	**Alice Springs**	**170.84**	**174**	PKPab	**PKPab**	**21 44 42.4**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=179,slow=5.2,SNR=10						

*TUL **04** 21:37:01.3±0.6, 35°.82N±0°.02×97°.44W±0°.04, h7^{km}±6^{km}, ML3.5, mb_Lg3.7/156(NEIC), Mwr3.6/22(NEIC), Error ellipse: s-maj=5.4km s-min=1.0km az=113.0*

*NEIC **04** 21:37:01.5, 35°.84N×97°.45W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.27; $M_{\theta\theta}$2.50; $M_{\phi\phi}$-2.23; $M_{r\theta}$-1.30; $M_{\theta\phi}$0.44; $M_{\phi r}$-0.06; Fault plane solution: $M_0$2.75000×10^{14} NP1:ϕ_s311.62000°, δ76.53000°, λ16.94000°. NP2:ϕ_s217.57000°, δ73.54000°, λ165.94000°. Principal axes: T 3.0537, Plg21.0000°, Azm175.0000°; N -0.7776, Plg68.0000°, Azm349.0000°; P -2.2761, Plg2.0000°, Azm84.0000°;*

*ANF **04** 21:37:01.8±0.2, 35°.76N×97°.44W, h4^{km}, ML4.6/15 Error ellipse: s-maj=3.0km s-min=2.0km az=174.0*

ISC 04 21:37:01.1±1.0, **35°.84N**±0°.02×**97°.51W**±0°.02, **h5**^{km}±9^{km}, **n132**, σ**1**^{s}**15**/124, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.27**	**164**		**Pg**	**21 37 06.4**	**+0.1**
OK009				Sg	**Sg**	**21 37 09.9**	**+0.2**
OK025	**Westminster Rd**	**0.29**	**151**		**Pg**	**21 37 06.7**	**-0.1**
OK025				Sg	**Sg**	**21 37 10.5**	**-0.1**
OK005	**Luther M Schoo**	**0.32**	**125**		**Pg**	**21 37 06.8**	**-0.5**
OK001	**Jones High Sch**	**0.33**	**147**	Pg	**Pg**	**21 37 07.3**	**-0.2**
OK001				Sg	**Sg**	**21 37 11.6**	**-0.2**
OKCFA	**Oklahoma City**	**0.42**	**173**		**Pg**	**21 37 09.4**	**+0.1**
OKCFA				Sg	**Sg**	**21 37 15.3**	**+0.5**
OK031	**S. Brethren Rd**	**0.56**	**78**		**Pg**	**21 37 11.3**	**-0.5**
OK031				Sg	**Sg**	**21 37 18.1**	**-1.0**
OK030	**Cody Creek RV**	**0.60**	**81**		**Pg**	**21 37 12.0**	**-0.6**
OK030				Sg	**Sg**	**21 37 19.3**	**-1.1**
QUOK	**Quay**	**0.73**	**63**	Pg	**Pg**	**21 37 14.7**	**-0.5**
QUOK				Sg	**Sg**	**21 37 23.8**	**-0.8**
OK011	**Prague**	**0.76**	**117**		**Pg**	**21 37 14.7**	**-0.9**
OK011				Sg	**Sg**	**21 37 24.3**	**-1.2**
W35A	**Tecumseh**	**0.86**	**143**		**Pg**	**21 37 16.4**	**-1.1**
KAN13	**South Haven SW**	**1.17**	**1**		**Pg**	**21 37 23.8**	**+0.2**
KAN14	**Manchester OK**	**1.17**	**342**		**Pg**	**21 37 24.0**	**+0.4**
U32A	**Winter Ranch,**	**1.32**	**295**		**Pn**	**21 37 26.7**	**+0.4**
U32A	**Winter Ranch,**	**1.32**	**295**	P		21 37 26.7	
	baz=113						
T35A	**Sooner Cattle**	**1.34**	**37**	Pn	**Pn**	**21 37 25.8**	**-0.8**
T35B	**Sooner Cattle**	**1.34**	**37**	P		21 37 25.8	
	baz=214,SNR=214						
T35B				S		21 37 43.6	
	baz=214						
KAN10	**Anthony SW Sta**	**1.37**	**340**		**Pn**	**21 37 27.2**	**+0.3**
KAN08	**Anthony NE Sta**	**1.43**	**345**		**Pn**	**21 37 28.2**	**+0.4**
KS21	**Milan North St**	**1.45**	**355**	IAmb_Lg		21 37 49.9	
	comp=Z,567nm,1.1s						
KAN12	**Harper NE Stat**	**1.51**	**345**		**Pn**	**21 37 29.6**	**+0.8**
WMOK	**Wichita Mounta**	**1.51**	**224**	P	**Pn**	**21 37 29.2**	**+0.3**
	baz=45,SNR=250						
WMOK				S	**Sn**	**21 37 49.7**	**+0.7**
	baz=45						
WMOK	**Wichita Mounta**	**1.51**	**224**		**Pn**	**21 37 29.2**	**+0.3**
WMOK				IAmb_Lg		21 37 53.9	
	comp=Z,338nm,0.7s						
WMOK	**Wichita Mounta**	**1.51**	**224**	P		21 37 29.4	
	baz=45,SNR=622						
WMOK				S		21 37 49.6	
	baz=45						
X37A	**Clayton**	**2.15**	**125**	Pn	**Pn**	**21 37 37.3**	**-0.3**
X37A				IAmb_Lg		21 38 12.2	
	comp=Z,440nm,0.9s						
Z35A	**Perchaven, San**	**2.51**	**175**		**Pn**	**21 37 42.9**	**+0.3**
Z35A				IAmb_Lg		21 38 26.3	
	comp=Z,369nm,1.2s						
Z35A	**Perchaven, San**	**2.51**	**175**	P		21 37 43.1	
	baz=357,SNR=32						
Z35A				S		21 38 15.8	
	baz=357						
U38A	**Gravette**	**2.60**	**76**	Pn	**Pn**	**21 37 44.1**	**+0.2**
U38A				IAmb_Lg		21 38 27.7	
	comp=Z,224nm,1.1s						
U38A	**Gravette**	**2.60**	**76**	P		21 37 44.3	
	baz=257,SNR=83						
R32A	**Long Quarter,**	**2.75**	**340**		**Pn**	**21 37 46.9**	**+0.9**
R32A				IAmb_Lg		21 38 36.3	
	comp=Z,163nm,0.9s						
HHAR	**Hobbs**	**2.93**	**80**		**Pn**	**21 37 47.5**	**-0.9**
W39A	**Magazine**	**3.11**	**101**	P	**Pn**	**21 37 50.2**	**-0.7**
	baz=283,SNR=38						
W39A	**Magazine**	**3.11**	**101**		**Pn**	**21 37 50.1**	**-0.7**
W39A				IAmb_Lg		21 38 45.9	
	comp=Z,180nm,0.7s						
W39A	**Magazine**	**3.11**	**101**	P		21 37 50.1	
	baz=283,SNR=90						
Z38A	**Mt. Pleasant**	**3.31**	**140**	Pn	**Pn**	**21 37 53.1**	**-0.5**
Z38A				IAmb_Lg		21 38 52.9	
	comp=Z,382nm,1.1s						
KSU1	**Kansas State U**	**3.33**	**12**	Pn	**Pn**	**21 37 55.0**	**+1.0**
	baz=192						
KSU1				Pb	**Pb**	**21 38 03.0**	**+2.2**
	baz=192						
KSU1	**Kansas State U**	**3.33**	**12**	Pn	**Pn**	**21 37 54.0**	**0.0**
KSU1				IAmb_Lg		21 38 54.2	
	comp=Z,210nm,0.7s						
CBKS	**Cedar Bluff**	**3.46**	**330**	Pn	**Pn**	**21 37 57.5**	**+1.8**
	baz=148						
CBKS				Pb	**Pb**	**21 38 05.5**	**+2.6**
	baz=148						
CBKS				Sb	**Sg**	**21 38 51.6**	**-0.6**
	baz=148						
CBKS	**Cedar Bluff**	**3.46**	**330**	Pn	**Pn**	**21 37 56.5**	**+0.8**
MIAR	**Mount Ida**	**3.47**	**111**	P	**Pn**	**21 37 56.1**	**+0.2**
	baz=293						
MIAR				S	**Sn**	**21 38 37.3**	**-0.1**
	baz=293						
MIAR	**Mount Ida**	**3.47**	**111**	Pn	**Pn**	**21 37 55.3**	**-0.5**
MIAR				IAmb_Lg		21 38 58.2	
	comp=Z,301nm,1.2s						
MIAR	**Mount Ida**	**3.47**	**111**	P		21 37 55.8	
	baz=293						
MIAR				S		21 38 37.6	
	baz=293						
AMTX	**Amarillo**	**3.54**	**256**	Pn	**Pn**	**21 37 58.6**	**+1.7**
	baz=74						
AMTX				Pb	**Pb**	**21 38 04.3**	**0.0**
	baz=74						
AMTX				Sb	**Sg**	**21 38 53.2**	**-1.5**
	baz=74						
AMTX	**Amarillo**	**3.54**	**256**	Pn	**Pn**	**21 37 57.8**	**+0.9**
AMTX				IAmb_Lg		21 38 57.8	
	comp=Z,250nm,1.0s						
AMTX	**Amarillo**	**3.54**	**256**	P		21 37 58.6	
	baz=74						
ABTX	**Abilene, Hawle**	**3.66**	**209**	P	**Pn**	**21 37 59.2**	**+0.7**
	baz=29,SNR=40						
ABTX				S	**Sn**	**21 38 43.8**	**+1.7**
	baz=29						
ABTX	**Abilene, Hawle**	**3.66**	**209**	Pn	**Pn**	**21 37 58.6**	**+0.1**
ABTX				IAmb_Lg		21 39 03.2	
	comp=Z,140nm,0.7s						
ABTX	**Abilene, Hawle**	**3.66**	**209**	P		21 37 59.0	
	baz=29,SNR=12						
U40A	**Yellville**	**3.81**	**81**	P	**Pn**	**21 38 00.7**	**+0.3**
	baz=263,SNR=33						
U40A				Sb	**Sb**	**21 38 56.7**	**+1.4**
	baz=263						
U40A	**Yellville**	**3.81**	**81**		**Pn**	**21 37 59.8**	**-0.7**
U40A				IAmb_Lg		21 39 01.7	
	comp=Z,143nm,0.8s						
U40A	**Yellville**	**3.81**	**81**	P		21 37 59.9	
	baz=263,SNR=91						
U40A				P		21 37 59.9	
	baz=263,SNR=91						
WHTX	**Lake Whitney,**	**3.84**	**179**	P	**Pn**	**21 38 01.2**	**+0.3**
	baz=0.2						
WHTX				Sb	**Sb**	**21 38 58.1**	**+2.0**
	baz=0.2						
WHTX	**Lake Whitney,**	**3.84**	**179**	Pn	**Pn**	**21 38 00.6**	**-0.3**
S39A	**Bolivar**	**3.84**	**60**	Pn	**Pn**	**21 38 00.3**	**-0.6**
S39A				IAmb_Lg		21 39 07.2	
	comp=Z,219nm,0.8s						
S39A	**Bolivar**	**3.84**	**60**	P		21 38 00.9	
	baz=242,SNR=14						
X40A	**Basin Creek Fa**	**4.06**	**108**	P	**Pn**	**21 38 03.7**	**-0.2**
	baz=291						
X40A	**Basin Creek Fa**	**4.06**	**108**		**Pn**	**21 38 03.2**	**-0.8**
X40A				IAmb_Lg		21 39 16.2	
	comp=Z,275nm,1.1s						
X40A	**Basin Creek Fa**	**4.06**	**108**	P		21 38 03.7	
	baz=291,SNR=18						
X40A				P		21 38 03.7	
	baz=291,SNR=18						
237A	**Washetta, Mont**	**4.08**	**159**	Pn	**Pn**	**21 38 03.5**	**-0.7**
237A				IAmb_Lg		21 39 19.3	
	comp=Z,179nm,1.0s						
237A	**Washetta, Mont**	**4.08**	**159**	S		21 38 52.7	
	baz=341						
WLAR	**White Oak Lake**	**4.21**	**119**	Pn	**Pn**	**21 38 05.1**	**-0.9**
WLAR				IAmb_Lg		21 39 21.6	
	comp=Z,303nm,1.2s						
WHAR	**Wooly Hollow**	**4.29**	**96**	Pn	**Pn**	**21 38 06.2**	**-0.9**
WHAR				IAmb_Lg		21 39 17.3	
	comp=Z,148nm,0.8s						
W41B	**Gary Mavity, V**	**4.34**	**97**	Pn	**Pn**	**21 38 07.2**	**-0.6**
	baz=280,SNR=12						
W41B				Pb	**Pb**	**21 38 17.8**	**-0.1**
	baz=280						
W41B				Sn	**Sn**	**21 38 58.6**	**-0.2**
	baz=280						
W41B				Sb	**Sb**	**21 39 14.3**	**+3.6**
	baz=280						
W41B	**Gary Mavity, V**	**4.34**	**97**	Pn	**Pn**	**21 38 07.0**	**-0.8**
W41B				IAmb_Lg		21 39 19.1	
	comp=Z,174nm,0.7s						
W41B	**Gary Mavity, V**	**4.34**	**97**	P		21 38 07.2	
	baz=280,SNR=54						
FCAR	**Ozark Folk Cen**	**4.38**	**88**		**Pn**	**21 38 07.4**	**-0.9**
FCAR				IAmb_Lg		21 39 27.7	
	comp=Z,145nm,0.7s						
MGMO	**Mountain Grove**	**4.42**	**71**	Pn	**Pn**	**21 38 08.2**	**-0.8**
MGMO				IAmb_Lg		21 39 27.0	
	comp=Z,183nm,0.8s						
Z41A	**Richland Creek**	**4.66**	**122**	S	**Sn**	**21 39 05.1**	**-1.6**
	baz=305						
Z41A	**Richland Creek**	**4.66**	**122**	Pn	**Pn**	**21 38 11.7**	**-0.5**
Z41A				IAmb_Lg		21 39 35.5	
	comp=Z,167nm,0.8s						
MSTX	**Muleshoe**	**4.71**	**248**	P	**Pn**	**21 38 14.3**	**+1.4**
	baz=66,SNR=14						
MSTX				Sb	**Sg**	**21 39 29.4**	**-2.9**
	baz=66						
MSTX	**Muleshoe**	**4.71**	**248**		**Pn**	**21 38 13.4**	**+0.5**
MSTX				IAmb_Lg		21 39 40.6	
	comp=Z,93nm,1.0s						
NATX	**Nacogdoches**	**4.71**	**149**		**Pn**	**21 38 11.9**	**-0.9**
R40A	**Maddies Statio**	**4.86**	**58**		**Pn**	**21 38 14.2**	**-0.6**
R40A				IAmb_Lg		21 39 35.0	
	comp=Z,158nm,0.8s						
R40A	**Maddies Statio**	**4.86**	**58**	P		21 38 14.9	
	baz=241,SNR=12						
N33A	**J Bar K, Exete**	**4.89**	**1**		**Pn**	**21 38 15.5**	**+0.1**
N33A				IAmb_Lg		21 39 47.1	
	comp=Z,150nm,1.0s						
P38A	**Dawn**	**4.92**	**39**	Pn	**Pn**	**21 38 15.3**	**-0.4**
P38A				IAmb_Lg		21 39 46.3	
	comp=Z,100nm,0.8s						
435B	**Jarrell**	**5.04**	**181**	P	**Pn**	**21 38 17.6**	**+0.2**
	baz=1.4						
435B				Sn	**Sn**	**21 39 15.4**	**-0.7**
	baz=1.4						
435B	**Jarrell**	**5.04**	**181**	Pn	**Pn**	**21 38 17.1**	**-0.4**
CCAR	**Cane Creek**	**5.09**	**110**	Pn	**Pn**	**21 38 16.6**	**-1.5**
CCAR				IAmb_Lg		21 39 50.6	
	comp=Z,224nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.16**	**309**	P	**Pn**	**21 38 22.0**	**+2.8**
	baz=126						
KSCO	**Kaye Shedlock'**	**5.16**	**309**	Pn	**Pn**	**21 38 19.8**	**+0.6**
KSCO				IAmb_Lg		21 39 52.1	
	comp=Z,94nm,0.9s						
LCAR	**Lake Charles**	**5.16**	**86**		**Pn**	**21 38 18.2**	**-0.9**
LCAR				IAmb_Lg		21 39 47.5	
	comp=Z,87nm,0.7s						
N35A	**Tabor**	**5.23**	**16**	Pn	**Pn**	**21 38 19.9**	**0.0**
N35A	**Tabor**	**5.23**	**16**	P		21 38 20.3	
	baz=196						
CCM	**Cathedral Cave**	**5.49**	**64**	P	**Pn**	**21 38 24.1**	**+0.6**
	baz=248						
CCM	**Cathedral Cave**	**5.49**	**64**	Pn	**Pn**	**21 38 22.8**	**-0.7**
CCM				IAmb_Lg		21 39 55.3	
	comp=Z,117nm,1.0s						
BGNE	**Belgrade**	**5.58**	**355**		**Pn**	**21 38 25.1**	**+0.2**
BGNE				IAmb_Lg		21 40 12.2	
	comp=Z,133nm,0.8s						
X43A	**Marvell**	**5.59**	**102**	IAmb_Lg		21 40 04.3	
	comp=Z,144nm,1.0s						
JCT	**Junction City**	**5.68**	**200**	P		21 38 26.6	
	baz=20						
JCT	**Junction City**	**5.68**	**200**	P	**Pn**	**21 38 26.6**	**+0.3**
	baz=20						
P40A	**Paris**	**5.69**	**48**	IAmb_Lg		21 40 07.6	
	comp=Z,187nm,0.8s						
T25A	**Trinidad**	**5.71**	**285**	P	**Pn**	**21 38 27.8**	**+1.0**
	baz=101,SNR=8.9						
T25A				Sb	**Sg**	**21 40 00.6**	**-3.8**
	baz=101						
T25A	**Trinidad**	**5.71**	**285**	Pn	**Pn**	**21 38 27.4**	**+0.6**
T25A				IAmb_Lg		21 40 15.5	
	comp=Z,143nm,0.9s						
PBMO	**Poplar Bluff**	**5.79**	**79**	IAmb_Lg		21 40 02.3	
	comp=Z,130nm,0.8s						
143A	**Socs Landing,**	**5.95**	**120**	IAmb_Lg		21 40 10.7	
	comp=Z,81nm,0.8s						
FVM	**French Village**	**6.07**	**67**		**Pn**	**21 38 30.7**	**-0.8**
FVM				IAmb_Lg		21 40 11.7	
	comp=Z,141nm,1.0s						
L34A	**Svendsen Farm,**	**6.18**	**8**	Pn	**Pn**	**21 38 33.2**	**+0.1**
OGNE	**Ogallala**	**6.21**	**327**	P	**Pn**	**21 38 35.7**	**+2.1**
	baz=143,SNR=11						
OGNE	**Ogallala**	**6.21**	**327**	Pn	**Pn**	**21 38 34.1**	**+0.5**
OGNE				IAmb_Lg		21 40 34.2	
	comp=Z,138nm,0.7s						
MET	**Memphis--Engin**	**6.22**	**94**	IAmb_Lg		21 40 29.4	
	comp=Z,189nm,0.8s						
HALT	**Halls**	**6.64**	**87**	IAmb_Lg		21 40 46.8	
	comp=Z,157nm,1.0s						
SDCO	**Great Sand Dun**	**6.69**	**289**	P	**Pn**	**21 38 42.3**	**+2.0**
	baz=104,SNR=33						
SDCO				Sb	**Sg**	**21 40 32.2**	**-3.6**
	baz=104						
SDCO	**Great Sand Dun**	**6.69**	**289**		**Pn**	**21 38 40.8**	**+0.5**
OXF	**Oxford**	**6.77**	**99**	P	**Pn**	**21 38 40.7**	**-0.4**
	baz=284						
OXF	**Oxford**	**6.77**	**99**	Pn	**Pn**	**21 38 40.1**	**-1.0**
OXF				IAmb_Lg		21 40 48.1	
	comp=Z,171nm,1.2s						
W45A	**Hickory Valley**	**6.83**	**93**	IAmb_Lg		21 40 42.7	
	comp=Z,156nm,1.2s						
Q24A	**Divide**	**6.83**	**299**	IAmb_Lg		21 40 43.7	
	comp=Z,69nm,0.8s						
VBMS	**Vicksburg**	**6.84**	**120**	IAmb_Lg		21 40 54.4	
	comp=Z,82nm,1.1s						
Y45A	**Yeager Farm, C**	**6.84**	**104**	Pn	**Pn**	**21 38 41.1**	**-1.0**
Y45A				IAmb_Lg		21 40 46.4	
	comp=Z,76nm,1.1s						
K31A	**O'Neill**	**6.84**	**352**	IAmb_Lg		21 40 46.4	
	comp=Z,157nm,0.8s						
S44A	**Carbondale**	**6.88**	**72**	IAmb_Lg		21 40 53.2	
	comp=Z,149nm,1.0s						
SIUC	**Southern Illin**	**6.92**	**72**	IAmb_Lg		21 40 56.6	
	comp=Z,118nm,0.8s						
ANMO	**Albuquerque**	**7.36**	**266**	IAmb_Lg		21 41 15.7	
	comp=Z,18nm,0.9s						
P43A	**Skaggs, Pawnee**	**7.38**	**57**		**Pn**	**21 38 48.9**	**-0.6**
ISCO	**Idaho Springs**	**7.53**	**304**	P	**Pn**	**21 38 52.9**	**+1.0**
	baz=119						
ISCO	**Idaho Springs**	**7.53**	**304**	Pn	**Pn**	**21 38 52.4**	**+0.5**
833A	**Chaparral WMA,**	**7.66**	**193**	IAmb_Lg		21 41 12.9	
	comp=Z,83nm,1.0s						
BNM	**Barren Site**	**7.67**	**260**	Pn	**Pn**	**21 38 54.2**	**+0.5**
146A	**Union**	**7.69**	**112**	IAmb_Lg		21 41 17.2	
	comp=Z,66nm,1.1s						
MNTX	**Cornudas Mount**	**7.74**	**240**	P	**Pn**	**21 38 55.2**	**+0.6**
	baz=56						
MNTX	**Cornudas Mount**	**7.74**	**240**	Pn	**Pn**	**21 38 55.0**	**+0.5**
WVT	**Waverly**	**7.85**	**85**	IAmb_Lg		21 41 07.0	
	comp=Z,32nm,0.8s						
ECSD	**EROS Data Cent**	**7.92**	**5**	P	**Pn**	**21 38 56.0**	**-0.8**
	baz=185,SNR=6.2						
ECSD				S	**Sn**	**21 40 23.8**	**-3.1**
	baz=185						
ECSD	**EROS Data Cent**	**7.92**	**5**	Pn	**Pn**	**21 38 57.0**	**+0.1**
ECSD				IAmb_Lg		21 41 16.7	
	comp=Z,54nm,1.0s						
ECSD	**EROS Data Cent**	**7.92**	**5**	P		21 38 56.1	
	baz=185,SNR=9.4						
Y22D	**IRIS PASSCAL I**	**7.92**	**260**	IAmb_Lg		21 41 32.6	
	comp=Z,112nm,0.8s						
HDIL	**Hopedale**	**8.00**	**51**	Pn	**Pn**	**21 38 57.5**	**-0.6**
USIN	**University of**	**8.17**	**72**	IAmb_Lg		21 41 22.5	
	comp=Z,101nm,1.0s						
PHWY	**Pilot Hill**	**8.27**	**314**		**Pn**	**21 39 02.5**	**+0.4**
PHWY				IAmb_Lg		21 41 43.8	
	comp=Z,61nm,1.0s						
N23A	**Red Feather La**	**8.33**	**310**	P	**Pn**	**21 39 05.1**	**+2.3**
	baz=125,SNR=8.5						
N23A	**Red Feather La**	**8.33**	**310**	Pn	**Pn**	**21 39 03.2**	**+0.4**
SUSD	**Miller**	**8.66**	**353**	IAmb_Lg		21 41 55.1	
	comp=Z,65nm,0.8s						
X48A	**Hartselle**	**8.68**	**96**	IAmb_Lg		21 41 41.0	
	comp=Z,49nm,1.2s						
I37A	**Lemond, Waseca**	**8.75**	**20**	IAmb_Lg		21 42 02.6	
	comp=Z,101nm,1.1s						
JFWS	**Jewell Farm**	**9.03**	**36**	IAmb_Lg		21 41 56.8	
	comp=Z,91nm,0.8s						
CLTN	**Cedars of Leba**	**9.07**	**85**	IAmb_Lg		21 41 48.4	
	comp=Z,61nm,1.3s						
121A	**Cookes Peak, D**	**9.13**	**252**	IAmb_Lg		21 42 02.8	
	comp=Z,44nm,1.2s						
WCI	**Wyandotte Cave**	**9.28**	**72**	IAmb_Lg		21 42 07.9	
	comp=Z,50nm,0.9s						
Y49A	**Blount Mountai**	**9.34**	**99**	IAmb_Lg		21 42 07.4	
	comp=Z,41nm,0.9s						
PV13	**Radium Mtn., P**	**9.34**	**288**	IAmb_Lg		21 42 18.5	
	comp=Z,44nm,1.3s						
BLO	**Bloomington**	**9.34**	**66**		**Pn**	**21 39 15.7**	**-0.8**
SFIN	**Lafayette**	**9.38**	**58**	IAmb_Lg		21 41 56.8	
	comp=Z,109nm,1.0s						
PV11	**David Mesa, Pa**	**9.41**	**288**	IAmb_Lg		21 42 18.5	
	comp=Z,42nm,1.2s						
PV19	**Morning Glory**	**9.49**	**288**	IAmb_Lg		21 42 15.7	
	comp=Z,35nm,1.3s						
U49A	**Red Boiling Sp**	**9.51**	**83**	IAmb_Lg		21 42 07.2	
	comp=Z,42nm,1.0s						
I40A	**Norwalk**	**9.63**	**31**	IAmb_Lg		21 42 11.6	
	comp=Z,73nm,1.0s						
RSSD	**Black Hills**	**9.67**	**331**	P	**Pn**	**21 39 23.2**	**+2.1**
	baz=146						
RSSD	**Black Hills**	**9.67**	**331**	Pn	**Pn**	**21 39 21.4**	**+0.3**
RSSD				IAmb_Lg		21 42 11.2	
	comp=Z,40nm,1.0s						
K22A	**Casper**	**9.75**	**317**		**Pn**	**21 39 22.7**	**+0.5**
K22A				IAmb_Lg		21 42 38.0	
	comp=Z,82nm,1.0s						
W50A	**Signal Mountai**	**9.97**	**90**	IAmb_Lg		21 42 22.7	
	comp=Z,55nm,1.0s						
PD31	**Pinedale Array**	**11.61**	**310**		**Pn**	**21 39 48.2**	**+0.5**

DJA 04 21:40:26.2±2.7, **2°N**±4°×**12°6E**±°, **h24**^{km}±28^{km}, **M3.8**/13, **mb3.9**/3, **mB4.4**/1, **MLv3.7**/13, **Mw(mB)3.6**/1, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.74**	**126**	P	Pn	21 40 55.3	+0.4
SGSI	**Sangihe**	**1.92**	**347**	P	Pn	21 40 57.9	+0.5
KMSI	**Cibinong**	**2.34**	**238**	P	Pn	21 41 02.7	-0.4
GTOI	**Gorontalo**	**3.18**	**249**	P	Pn	21 41 15.4	+0.6
SANI	**Sanana**	**3.83**	**180**	P	Pn	21 41 22.5	-1.3
MRSI	**Marisa**	**4.24**	**252**	P	Pn	21 41 30.3	+1.0
LUWI	**Luwuk**	**4.27**	**228**	P	Pn	21 41 30.4	+0.6
APSI	**Ampana**	**5.10**	**238**	P	Pn	21 41 41.5	+0.4
	0.2nm376nm33nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	6.25	257	P	Pn	21 41 57.7	+0.8

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*ASRS **04** 21:47:07.8±0.2, 51°N±1°×8°4E±°, h10km, MLh3.2/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **04** 21:47:08.5±1.3, 51°.04N×83°.88E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=13.4km s-min=10.3km az=102.0, Suspected Mining explosion.*
*SOME **04** 21:47:16.3, 50°.65N×83°.32E, h10km*
ISC 04 21:47:08.6±0.7, **51°.06N**±0°.02×**83°.95E**±0°.02, **h0km, n40, σ1s.42**/75, **7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKR	Ust'-Kan	0.54	103	Pg	Pg	21 47 19.4	+0.5
UKR				Sg	Sg	21 47 26.6	+0.7
GALT	Gorno-Altaysk,	1.54	53	Pg	Pg	21 47 38.3	+0.1
GALT				Sg	Sn	21 47 59.2	+1.1
ARTR	Artybash	2.21	69	Pg	Pb	21 47 49.7	+0.2
ARTR				Sg	Sg	21 48 19.4	-0.3
CHBI	Chibit, Altay	2.38	107	Pg	Pb	21 47 52.3	-0.1
CHBI				Sg	Sb	21 48 23.6	+1.2
SEM	Semipalatinsk	2.44	256	eP	Pb	21 47 53.5	+0.1
	8.8nm,0.1s						
SEM				eS	Sn	21 48 22.3	+1.8
	86nm,0.1s						
SEM	Semipalatinsk	2.44	256	Pg	Pb	21 47 53.6	+0.1
	7.7nm,0.2s						
SEM				Lg	Lg	21 48 22.4	
	81nm,0.2s						
ULGR	Ulagan, Altay	2.58	98	Pg	Pb	21 47 56.4	+0.5
ULGR				Sg	Sg	21 48 30.1	-1.5
DGZ	Jazzator, Alta	2.61	120	Pg	Pb	21 47 56.8	+0.4
DGZ				Sg	Sg	21 48 31.7	-0.9
ELT	Eltsovka	2.62	32	Pg	Pb	21 47 56.9	+0.6
ELT				Sg	Sg	21 48 32.2	-0.5
ZAA0	Zalesovo Array	2.94	10	⇑Pn	Pn	21 47 56.4	-0.2
	0.3nm,0.6s						
ZAA0				⇑Lg	Lg	21 48 39.6	
	4.7nm,0.6s						
CUR	Chagan-Uzun	2.97	107	Pg	Pb	21 48 03.2	+0.7
CUR				Sg	Sg	21 48 42.8	-1.2
TASR	Tashtagol	2.97	54	Pg	Pg	21 48 04.4	-1.1
TASR				Sg	Sg	21 48 43.6	-0.5
KURK	Kurchatov	3.39	266	P	Pn	21 48 03.2	+0.5
KURK				Pg	Pg	21 48 12.4	-1.2
KURK				Sg	Sg	21 48 55.1	-2.4
KURK	Kurchatov	3.39	266	⇑Pn	Pn	21 48 03.6	+0.8
	0.4nm,0.5s						
KURK				⇑Lg	Lg	21 48 51.9	
	5.9nm,0.4s						
BJR1	Bachatsky 1, K	3.43	21	Sg	Sg	21 48 57.6	-1.1
KURBB	Kurchatov Arra	3.46	265	⇓Pn	Pn	21 48 02.9	-0.8
	0.7nm,0.4s						
KURBB				⇑Lg	Lg	21 48 53.7	
	15nm,0.6s						
SALR	Pechorkino, Sa	3.53	17	Pg	Pb	21 48 13.2	+1.4
SALR				Sg	Sg	21 49 00.6	-1.2
BSTK	Bystrovka, Nov	3.60	348	Pg	Pg	21 48 16.5	-1.1
BSTK				Sg	Sg	21 49 04.2	0.0
ZSN	Zaisan	3.66	170	eP	Pg	21 48 16.9	-2.0
	6.8nm,0.4s						
ZSN				eS	Sg	21 49 04.0	-2.3
	17nm,0.5s						
ZSN	Zaisan	3.66	170	Pg	Pb	21 48 15.4	+1.1
	6.9nm,0.6s						
ZSN				Lg	Lg	21 48 59.2	
	37nm,0.6s						
NVS	Novosibirsk	3.81	354	Pg	Pg	21 48 20.1	-1.5
NVS				Sg	Sg	21 49 11.1	+0.1
NVSII	Novosibirsk	3.81	354	Pg	Pg	21 48 21.0	-0.6
NVSII				Sg	Sg	21 49 11.8	+0.8
NHES	Novosibirsk, N	3.85	352	Sg	Sg	21 49 12.7	+0.5
TEL	Teeli	3.95	88	Pg	Pg	21 48 22.5	-1.7
TEL				Sg	Sg	21 49 15.0	-0.4
ALXA	Alekseevka, NS	3.96	349	Sg	Sg	21 49 18.5	+2.7
LUZB	Luzhba, Kemero	4.00	47	P	Pn	21 48 13.0	+1.8
LUZB				Pg	Pg	21 48 22.8	-2.4
LUZB				S	Sn	21 48 58.5	-0.2
LUZB				Sg	Sg	21 49 16.3	-0.8
MK31	Makanchi Array	4.41	195	⇑Pn	Pn	21 48 18.2	+1.4
	0.2nm,0.2s,baz=17,slow=13,SNR=45						
MK31				⇓Pg	Pb	21 48 28.0	+1.1
	0.4nm,0.3s,baz=19,slow=16,SNR=5.8						
MK31				⇓Lg	Lg	21 49 26.6	
	4.9nm,0.5s,baz=15,slow=24,SNR=13						
MKAR	Makanchi Array	4.41	195	P	Pn	21 48 18.1	+1.3
MKAR				Pg	Pg	21 48 31.1	-2.0
MKAR				Sg	Sg	21 49 30.8	+0.6
MAKZ	Makanchi	4.45	198	P	Pn	21 48 18.1	+0.7
MAKZ				Pg	Pb	21 48 30.5	+2.8
MAKZ				S	Sn	21 49 09.5	-0.4
MAKZ				Sg	Sg	21 49 29.1	-2.4
MAKZ	Makanchi	4.45	198	⇓Pn	Pn	21 48 17.9	+0.5
	1.1nm,0.3s						
MAKZ				⇑Pg	Pb	21 48 27.9	+0.3
	0.7nm,0.4s						
MAKZ				⇓Lg	Lg	21 49 24.1	
	6.5nm,0.7s						
KEM	Kemerovo	4.48	16	Sg	Sg	21 49 30.5	-1.9
VEH	Verkhnyaya Baz	4.50	58	P	Pn	21 48 19.1	+1.1
VEH				Pg	Pg	21 48 31.9	-2.8
VEH				S	Sn	21 49 08.8	-2.3
VEH				Sg	Sg	21 49 31.6	-1.4
TBTR	Tabat	4.58	63	Pg	Pn	21 48 21.6	+2.4
TBTR				Sg	Sg	21 49 33.2	-2.6
DJO	Djoy, Khakassi	4.82	66	Sg	Sg	21 49 43.2	-0.1
CERR	Cheremushki	4.96	66	Sg	Sg	21 49 47.5	-0.2
SHRR	Shira	5.10	45	P	Pn	21 48 27.4	+1.1
SHRR				Pg	Pg	21 48 44.7	-1.6
SHRR				Sg	Sg	21 49 49.5	-2.9
ABNR	Abakan	5.30	57	Sg	Sg	21 49 59.3	+0.4
BLRR	Bol'shaya Rech	5.60	66	Pg	Pg	21 48 54.6	-1.2
BLRR				Sg	Sg	21 50 06.7	-1.5
ARDR	Aradan	6.08	72	Sg	Sg	21 50 24.1	+0.5
KAPS	Kapalarasan	6.54	210	Pg	Pb	21 49 06.5	+3.2
	1.1nm,0.5s						
KAPS				Lg	Lg	21 50 26.6	
	8.0nm,0.7s						

IDC 04 21:50:52.6±7.2, **31°.17S**×**178°.72W, h0km, mb3.8**/2, **mb1 4.1**/2, **mb1mx3.7**/26, **mbtmp3.8**/2, **Error ellipse: s-maj=302.2km s-min=56.0km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.86	205	Sn	Sn	21 54 11.2	-6.5
	0.4nm,0.3s,baz=99,slow=19,SNR=2.5						
ASAR	Alice Springs	42.46	268	P	P	21 58 49.4	-0.2
	0.4nm,0.4s,baz=107,slow=7.3,SNR=7.1						
WRA	Warramunga Arr	43.52	273	P	P	21 58 58.0	-0.2
	1.1nm,0.4s,baz=112,slow=8.0,SNR=24						
FINES	FINESS Array B	145.65	339	PKPbc	PKPdf	22 10 31.7	-0.5
	1.9nm,1.0s,baz=28,slow=3.3,SNR=2.9						

IDC 04 21:58:29.1±3.4, **33°.60S**×**178°.72W, h0km, mb3.4**/2, **mb1 3.7**/3, **mb1mx3.6**/36, **mbtmp3.5**/3, **ML3.5**/1, **Error ellipse: s-maj=79.7km s-min=37.6km az=115.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.75	215	Pn	Pn	21 59 56.1	+0.4
	1.3nm,0.3s,baz=18,slow=3.2,SNR=10						
URZ				Sn	Sn	22 01 01.2	-1.1
	2.2nm,0.3s,baz=178,slow=19,SNR=6.4						
ASAR	Alice Springs	42.43	271	P	P	22 06 26.2	+0.3
	0.3nm,0.6s,baz=108,slow=7.7,SNR=2.1						
WRA	Warramunga Arr	43.71	276	P	P	22 06 35.9	-0.3
	0.2nm,0.3s,baz=116,slow=7.9,SNR=5.5						
FINES	FINESS Array B	147.90	338	PKPbc	PKPbc	22 18 14.5	-0.9
	2.7nm,1.1s,baz=28,slow=6.3,SNR=1.2						

ISC 04 22:02:08.2±1.2, **44°.58N**±0°.04×**16°.68E**±0°.03, **h3km**±12km, **n10, σ0s.86**/20, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLY	Banja Luka	0.40	65	ePg	Pg	22 02 15.6	-0.3
BLY				eSg	Sg	22 02 21.0	0.0
KIJV	Kijevo	0.61	199	ePg	Pg	22 02 19.1	-0.8
KIJV				Sg	Sg	22 02 27.5	-0.2
UDBI	Udbina	0.66	266	ePg	Pg	22 02 20.6	-0.2
UDBI				Sg	Sg	22 02 30.2	+1.0
MORI	Morici	1.00	225	ePg	Pg	22 02 26.9	-0.4
MORI				Sg	Sg	22 02 40.2	-0.1
ZIRJ	Zirje	1.19	219	ePg	Pg	22 02 30.5	-0.5
ZIRJ				Sg	Sg	22 02 46.3	-0.1
NVLJ	Novalja	1.29	270	ePg	Pn	22 02 32.9	-0.2
NVLJ				Sg	Sn	22 02 51.0	+0.2
DUGI	Dugi Otok	1.30	244	ePg	Pn	22 02 32.5	-0.8
DUGI				Sg	Sn	22 02 51.0	-0.2
OZLJ	Ozalj	1.34	321	ePg	Pb	22 02 34.2	+0.3
OZLJ				Sg	Sn	22 02 52.2	+0.1
HVAR	Hvar	1.41	187	ePn	Pn	22 02 35.2	+0.5
HVAR				Sn	Sg	22 02 56.5	+2.9
STON	Ston	1.86	156	ePn	Pb	22 02 42.7	-0.1
STON				Sn	Sg	22 03 08.2	+0.1

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*NEIC **04** 22:09:33.0±1.5, 6°.44S±0°.08×76°.08W±0°.10, h70km±11km, mb4.4/9, Error ellipse: s-maj=14.8km s-min=10.7km az=59.0*
*IDC **04** 22:09:36.7±2.2, 6°.81S×76°.36W, h116km±24km, mb3.6/8, mb1 3.8/12, mb1mx3.6/43, mbtmp4.0/12, Error ellipse: s-maj=30.7km s-min=11.7km az=46.0*
*VAO **04** 22:09:41.2±0.7, 6°.51S×75°.98W, h134km±6km, mb4.3*
ISC 04 22:09:35.9±0.5, **6°.68S**±0°.05×**76°.20W**±0°.06, **h100km, n55, σ2s.17**/58, **mb4.1**/12, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.23	258	P	Pn	22 10 12.2	+0.3
	186nm,0.3s,baz=38,slow=6.9,SNR=1134						
ATAH				S	Sn	22 10 37.3	-1.9
	115nm,0.3s,baz=329,slow=23,SNR=30						
CZSB	Cruzeiro do Su	3.62	107	eP	Pn	22 10 33.9	+3.8
NNA	Nana	5.31	187	P	Pn	22 10 53.5	+0.6
	3.8nm,0.3s,baz=354,slow=7.3,SNR=9.4						
NNA				S	Sn	22 11 49.2	-3.7
	16nm,0.3s,baz=264,slow=16,SNR=5.4						
NNA	Nana	5.31	187		Pn	22 10 54.5	+1.5
NNA				Sn	Sn	22 11 50.0	-2.9
PTLC	Puerto Leguiza	6.95	12	eP	Pn	22 11 13.3	-2.0
PUAC	Puerto Asis, P	7.20	357	eP	Pn	22 11 21.0	+2.4
OTAV	Otavalo	7.23	342	Pn	Pn	22 11 14.5	-5.0
OTAV	Otavalo	7.23	342	eP	Pn	22 11 23.5	+4.0
OTAV	Otavalo	7.23	342	eP	Pn	22 11 23.5	+4.0
BBAC	Balboa, Cauca	8.71	353	eP	Pn	22 11 42.6	+3.2
GARC	Garzon, Huila	8.84	5	eP	Pn	22 11 43.4	+2.2
MACC	Macarena, Meta	9.08	15	eP	Pn	22 11 47.0	+2.8
MARP	Paez Belalcaza	9.47	1	eP	Pn	22 11 52.9	+3.2
ETMB	Extrema	10.36	108	eP	Pn	22 12 03.9	+2.3
VILC	Villavicencio,	11.01	13	eP	Pn	22 12 12.8	+2.2
CHIC	Chingaza	11.51	12	eP	Pn	22 12 20.1	+2.6
RUSC	La Rusia	12.87	14	eP	Pn	22 12 38.9	+3.1
SAML	Samuel	13.09	101		Pn	22 12 35.2	-2.9
SAML				Sn	Sn	22 14 56.1	-6.1
SAML	Samuel	13.09	101	eP	Pn	22 12 38.8	+0.7
PB16	IPOC Station P	13.29	151	Pn	Pn	22 12 44.0	+2.7
ZARC	Zaragoza, Cauc	14.15	5	eP	P	22 12 58.2	+1.8
SMLC	San Martn de	15.53	8	eP	P	22 13 13.1	+1.4
MACA	Manacapuru-AM	15.85	78	eP	Pn	22 13 13.9	+0.5
VILB	Vilhena	16.94	113	eP	P	22 13 28.5	+1.1
PTGA	Pitinga	17.24	71	P	P	22 13 30.5	-0.1
	0.8nm,0.3s,baz=244,slow=12,SNR=9.2						
LVC	Limon Verde	17.32	157	eP	Pn	22 13 35.4	+3.5
SIV	San Ignacio	17.47	123	P	Pn	22 13 34.2	+0.8
	0.5nm,0.3s,baz=311,slow=13,SNR=8.7						
PTLB	Pontes e Lacer	18.86	119	eP	Pn	22 13 50.6	+0.6
ITTB	Itaituba	20.50	85	eP	P	22 14 06.8	+0.6
NPGB	Novo Progresso	20.70	92	eP	P	22 14 08.2	-0.1
MALB	Monte Alegre	22.39	79	eP	P	22 14 26.8	+0.5
AQDB	Aquidauana	24.14	127	eP	P	22 14 44.8	+2.0
MCPB	Macapa, AP	24.89	76	eP	P	22 14 50.2	+0.5
ARAG	Araguaiana, MT	25.52	113	eP	P	22 14 55.9	+0.5
PRPB	Parauapebas	26.22	90	eP	P	22 15 02.3	+0.5
CPUP	Villa Florida	26.55	140	P	P	22 15 05.1	+0.5
	9.6nm,0.8s,baz=344,slow=14,SNR=6.5						
CPUP	Villa Florida	26.55	140	P	P	22 15 05.0	+0.4
CPUP				IAmb	IAmb	22 15 09.1	
	comp=Z,15nm,1.0s						
LL01	San Ignacio de	35.70	175	P	P	22 16 26.9	+2.2
GDU01	Guandu, BA	36.68	104	eP	P	22 16 33.7	+0.2
WLAR	White Oak Lake	43.24	339	P	P	22 17 25.7	-1.7
TZTN	Tazewell	43.55	351	P	P	22 17 28.1	-1.8
TZTN				IAmb	IAmb	22 17 33.5	
	comp=Z,9.2nm,1.1s						
ANMO	Albuquerque	50.29	327	P	P	22 18 22.7	+0.1
	comp=Z,1.5nm,0.8s,baz=169,slow=9.5,SNR=4.7						
ANMO	Albuquerque	50.29	327	P	P	22 18 21.7	-1.0
SDCO	Great Sand Dun	51.96	330	P	P	22 18 34.5	-0.7
SDCO				IAmb	IAmb	22 18 36.1	
	comp=Z,3.4nm,0.9s						
X16A	Lo Mia Camp, P	52.73	323	P	P	22 18 40.7	-0.2
X16A				IAmb	IAmb	22 18 43.0	
	comp=Z,2.0nm,0.8s						
PDAR	Pinedale Array	57.81	331	P	P	22 19 15.9	-1.4
	comp=Z,0.3nm,0.6s,baz=128,slow=5.8,SNR=2.3						
ULM	Lac du Bonnet	59.22	345	P	P	22 19 24.9	-1.7
	comp=Z,1.4nm,0.5s,baz=182,slow=7.8,SNR=2.7						
ULM	Lac du Bonnet	59.22	345	P	P	22 19 25.3	-1.3
NVAR	Mina Array Bea	59.52	322	P	P	22 19 29.1	-0.1
	comp=Z,0.7nm,0.7s,baz=129,slow=8.1,SNR=6.5						
MFID	Camas Ranch	61.43	328	P	P	22 19 41.4	-0.5
MFID				IAmb	IAmb	22 19 42.5	
	comp=Z,3.8nm,0.9s						
YKA	Yellowknife Ar	74.99	343	P	P	22 21 05.0	-1.1
	comp=Z,0.6nm,0.6s,baz=136,slow=6.8,SNR=16						
TORD	Torodi Ar. Bea	79.82	75	P	P	22 21 33.4	-0.6
	comp=Z,0.7nm,0.8s,baz=275,slow=7.1,SNR=2.4						
ILAR	Eielson Array	87.92	336	P	P	22 22 12.4	-1.7
	comp=Z,0.7nm,1.0s,baz=141,slow=3.0,SNR=3.2						
ASAR	Alice Springs	137.88	223	PKP	PKPdf	22 28 47.2	-2.5
	comp=Z,0.5nm,0.8s,baz=136,slow=2.2,SNR=4.1						
WRA	Warramunga Arr	139.96	228	PKP	PKPdf	22 28 51.1	-2.5
	comp=Z,0.7nm,0.5s,baz=123,slow=2.2,SNR=10						

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*TIR **04** 22:10:36.0, 40°.75N×21°.67E, h18km, Ml3.3*
*SKO **04** 22:10:35.6, 40°.78N×21°.71E, h15km*
*ATH **04** 22:10:37.0, 40°.80N×21°.71E, h7km±2km, ML3.0/12, Error ellipse: s-maj=2.4km s-min=1.0km az=258.0*
*THE **04** 22:10:36.6, 40°.77N×21°.71E, h2km, ML2.9/15, Error ellipse: s-maj=0.8km s-min=0.3km az=166.0*
*PDG **04** 22:10:36.9±0.4, 40°.81N×21°.68E, h1km±1km, ML3.2/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*BEO **04** 22:10:36.5±0.6, 40°.78N×21°.79E, h0km, ML2.9/9*
*SOF **04** 22:10:37.7, 40°.87N×21°.72E, h19km, MD3.0*
ISC 04 22:10:36.5±1.0, **40°.77N**±0°.02×**21°.72E**±0°.01, **h6km**±8km, **n146, σ1s.06**/203, **17C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.26	273	P	Pg	22 10 41.3	-0.2
FNA				S	Sg	22 10 44.3	-0.7
FNA				AML	AML	22 10 45.7	
	comp=N,10968µm,0.3s						
FNA				AML	AML	22 10 45.9	
	comp=E,13740µm,0.2s						
FNA	Florina	0.26	273	P	Pg	22 10 41.5	0.0
FNA				S	Sg	22 10 44.9	-0.1
	comp=E,6µm,0.4s						
FNA	Florina	0.26	273	ePg	Pg	22 10 41.6	0.0
FNA				eSg	Sg	22 10 45.3	+0.3
FNA	Florina	0.26	273	P	Pg	22 10 41.5	0.0
	baz=279						
FNA				S	Sg	22 10 45.5	+0.5
	baz=279						
FNA	Florina	0.26	273	⇓iPg	Pg	22 10 41.5	0.0
FNA				i Sg	Sg	22 10 45.5	+0.5
KZN	Kozani	0.47	175	P	Pg	22 10 45.3	-0.1
KZN				S	Sg	22 10 52.8	+1.2
KZN				AML	AML	22 10 55.8	
	comp=N,3920µm,0.3s						
KZN				AML	AML	22 10 57.8	
	comp=E,5617µm,0.4s						
KZN	Kozani	0.47	175	P	Pg	22 10 45.2	-0.3
KZN				S	Sg	22 10 52.4	+0.8
	comp=E,2µm,0.3s						
GRG	Griva	0.55	70	P	Pg	22 10 47.3	+0.2
GRG				S	Sg	22 10 55.5	+1.2
	comp=E,2µm,0.1s						
GRG	Griva	0.55	70	⇑iPg	Pg	22 10 47.3	+0.2
GRG				i Sg	Sb	22 10 55.9	-0.9
NEST	Nestorio	0.62	235	P	Pg	22 10 48.1	-0.3
NEST				S	Sg	22 10 57.6	+1.1
NEST				AML	AML	22 11 01.4	
	comp=N,4196µm,0.3s						
NEST				AML	AML	22 11 01.6	
	comp=E,5392µm,0.5s						
NEST	Nestorio	0.62	235	P	Pg	22 10 48.1	-0.3
NEST				S	Sg	22 10 57.3	+0.8
	comp=E,2µm,0.5s						
KBN	Korca	0.72	258	P	Pg	22 10 49.9	-0.4
KBN				S	Sb	22 11 00.8	-0.8
	comp=E,1µm,0.4s						
KBN	Korca	0.72	258	P	Pg	22 10 50.0	-0.3
	baz=260						
KBN				S	Sg	22 10 59.8	+0.1
	baz=260						
KBN				AMP			
	comp=N,5.1nm,0.3s,baz=260						
PENT	Pentalofos	0.72	218	P	Pg	22 10 50.1	-0.2
PENT				S	Sg	22 11 00.7	+0.9
PENT				AML	AML	22 11 05.1	
	comp=E,2373µm,1.0s						
PENT				AML	AML	22 11 05.9	
	comp=N,2925µm,0.5s						
PENT	Pentalofos	0.72	218	P	Pg	22 10 50.2	-0.2
PENT				S	Sb	22 11 01.1	-0.7
	comp=N,1µm,0.9s						
OHR	Ohrid	0.77	296	i Pg	Pg	22 10 50.9	-0.5
OHR				i Sg	Sb	22 11 02.9	-0.2
OHR				eLg	Lg	22 11 03.0	
	comp=N,322nm,0.5s						
OHR				eLg	Lg	22 11 04.6	
	comp=E,875nm,0.4s						
KPRO	Kipourio	0.86	198	P	Pg	22 10 52.6	-0.4
KPRO				AML	AML	22 11 12.3	
	comp=E,2620µm,0.6s						
KPRO				AML	AML	22 11 14.2	
	comp=N,3183µm,0.4s						
KPRO	Kipourio	0.86	198	P	Pg	22 10 52.7	-0.3
KPRO				S	Sb	22 11 05.4	-0.2
	comp=N,1µm,0.7s						
LIT	Litokhoron	0.89	138	P	Pg	22 10 53.1	-0.6
LIT				S	Sb	22 11 06.3	-0.3
LIT				AML	AML	22 11 10.7	
	comp=N,2765µm,0.3s						
LIT				AML	AML	22 11 11.1	
	comp=E,2806µm,0.5s						
LIT	Litokhoron	0.89	138	P	Pg	22 10 52.9	-0.7
LIT				S	Sb	22 11 06.5	0.0
	comp=E,1µm,0.4s						
LIT	Litokhoron	0.89	138	i Pg	Pg	22 10 53.0	-0.6
LIT				i Sg	Sb	22 11 06.7	+0.1
THE	Thessaloniki	0.96	98	P	Pg	22 10 54.5	-0.4
THE	Thessaloniki	0.96	98	P	Pg	22 10 54.8	-0.1
THE				S	Sb	22 11 08.6	+0.2
	comp=E,252nm,0.6s						
THE	Thessaloniki	0.96	98	P	Pg	22 10 54.9	+0.1
	baz=96						
THE				S	Sn	22 11 09.6	-0.8
	baz=96						
THE	Thessaloniki	0.96	98	i Pg	Pg	22 10 55.0	+0.1
KNT	Kendrikon	0.98	66	P	Pg	22 10 55.1	-0.2
KNT				S	Sg	22 11 07.8	0.0
KNT				AML	AML	22 11 15.1	
	comp=N,1642µm,0.8s						
KNT				AML	AML	22 11 16.2	
	comp=E,982µm,0.5s						
KNT	Kendrikon	0.98	66	P	Pg	22 10 55.0	-0.2
KNT				S	Sb	22 11 08.7	-0.3
	comp=E,415nm,0.3s						
KNT	Kendrikon	0.98	66	⇑iPg	Pg	22 10 55.0	-0.2
KNT				i Sg	Sg	22 11 08.1	+0.2
STIP	Stip	0.99	21	⇑iPg	Pn	22 10 57.0	+0.2
STIP				i Sg	Sn	22 11 13.1	+1.9
LSK	Leskovik	1.05	234	P	Pg	22 10 55.8	-0.8
LSK				S	Sb	22 11 11.6	+0.4
	comp=E,1µm,0.7s						
LSK	Leskovik	1.05	234	P	Pg	22 10 55.9	-0.8
	baz=235						
LSK				S	Sg	22 11 10.1	-0.2
	baz=235						
LSK				AMP			
	comp=N,5.8nm,0.6s,baz=235						
HORT	Hortiatis	1.07	99	P	Pg	22 10 56.4	-0.5
HORT				S	Sb	22 11 12.4	+0.8
	comp=N,228nm,0.5s						
SKO	Skopje	1.22	350	i Pg	Pg	22 10 59.2	-0.6
THL	Klokotos Trika	1.23	169	P	Pb	22 10 58.9	-1.1
THL				AML	AML	22 11 20.0	
	comp=N,1166µm,0.5s						
THL				AML	AML	22 11 20.3	
	comp=E,1561µm,0.7s						
THL	Klokotos Trika	1.23	169	P	Pb	22 10 59.2	-0.8
SOH	Sokhos	1.25	87	P	Pb	22 10 59.9	-0.5
SOH	Sokhos	1.25	87	P	Pb	22 10 59.9	-0.5
SOH				S	Sn	22 11 17.8	+0.2
	comp=E,470nm,1.0s						
SOH	Sokhos	1.25	87	i Pg	Pb	22 10 59.9	-0.5
JAN	Janina	1.30	211	P	Pn	22 11 00.7	-0.4
JAN				AML	AML	22 11 26.4	
	comp=E,900µm,0.5s						
JAN				AML	AML	22 11 28.3	
	comp=N,724µm,1.0s						
JAN	Janina	1.30	211	P	Pn	22 11 00.7	-0.4
JAN				S	Sn	22 11 19.2	+0.4
	comp=N,418nm,0.5s						
PHP	Peshkopia	1.33	314	P	Pn	22 11 00.7	-0.9
PHP				S	Sn	22 11 20.7	+1.1
PHP	Peshkopia	1.33	314	P	Pn	22 11 00.7	-0.9
	baz=316						
PHP				S	Sn	22 11 19.7	+0.1
	baz=316						
PHP				AMP			
	comp=N,1.8nm,0.8s,baz=316						
PLG	Polygyros	1.38	106	P	Pn	22 11 02.0	-0.3
PLG				AML	AML	22 11 23.3	
	comp=N,517µm,0.6s						
PLG				AML	AML	22 11 26.7	
	comp=E,516µm,0.7s						
PLG	Polygyros	1.38	106	P	Pn	22 11 01.9	-0.3
PLG				S	Sg	22 11 21.8	+1.1
	comp=E,232nm,0.6s						
SRS	Serrai	1.46	76	P	Pn	22 11 03.2	-0.2
SRS	Serrai	1.46	76	P	Pn	22 11 03.2	-0.2
SRS	Serrai	1.46	76	ePn	Pn	22 11 02.5	-0.9
SRS	Serrai	1.46	76	i Pn	Pn	22 11 03.2	-0.2
KKB	Krupnik	1.50	43	i P	Pb	22 11 04.4	-0.4
TIR	Tirane	1.51	293	⇓P	Pg	22 11 06.5	+1.1
TIR				⇑S	Sg	22 11 28.2	+3.1
TIR	Tirane	1.51	293	ePn	Pg	22 11 06.2	+0.7
TIR				eSn	Sg	22 11 27.2	+2.1
TIR	Tirane	1.51	293	P	Pg	22 11 05.6	+0.1
	baz=295						
TIR				S	Sg	22 11 25.1	0.0
	baz=295						
TIR				AMP			
	comp=E,0.7nm,0.8s,baz=295						
SRN	Sarande	1.58	236	P	Pg	22 11 07.1	+0.2
	baz=237						
SRN				S	Sg	22 11 27.2	-0.1
	baz=237						
SRN				AMP			
	comp=E,1.2nm,0.5s,baz=237						
GJIK	Gjilan	1.70	353	i Pn	Pb	22 11 07.8	-0.3
PAIG	Paliouri	1.72	119	P	Pn	22 11 06.8	-0.1
PAIG	Paliouri	1.72	119	P	Pn	22 11 06.6	-0.3
NVR	Nevrokopi	1.72	70	P	Pn	22 11 07.0	0.0
NVR	Nevrokopi	1.72	70	P	Pn	22 11 07.0	0.0
MMB	Musomiste	1.73	61	i P	Pn	22 11 07.3	+0.3
OUR	Ouranopolis	1.78	103	P	Pn	22 11 08.4	+0.7
MAKR	Makrakomi, Fth	1.79	170	P	Pb	22 11 09.0	-0.6
AGG	Agios Georgios	1.81	165	P	Pn	22 11 08.7	+0.5
AGG				AML	AML	22 11 45.6	
	comp=N,485µm,0.6s						
AGG				AML	AML	22 11 45.8	
	comp=E,490µm,0.7s						
BOSS	Bosilegrad	1.82	18	ePn	Pn	22 11 08.8	+0.5
BOSS				eSn	Sn	22 11 31.9	+0.3
EVR	Evrytania	1.85	178	P	Pb	22 11 10.1	-0.7
PUK	Puka	1.87	313	P	Pb	22 11 10.2	-0.9
	baz=315						

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PUK                                   S       Sg      22 11 36.2 -0.4
       baz=315
PUK                                   AMP
       comp=N,0.9nm,0.6s,baz=315
BCI    Bajram Curri         2.02 323  P       Pb      22 11 12.5 -1.0
       baz=324
BCI                                   S       Sb      22 11 39.9 +1.0
       baz=324
BCI                                   AMP
       comp=E,1.0nm,0.5s,baz=324
AXAR   Agios Charalam       2.13 160  P       Pn      22 11 14.0 +1.4
KAVA   Kavala               2.13  83  P       Pn      22 11 13.1 +0.5
LKD2   Lefkada island       2.14 203  P       Pn      22 11 13.7 +0.9
       baz=203
VTS    Vitosha              2.17  31  ⇑P      Pn      22 11 13.8 +0.5
VTS    Vitosha              2.17  31  i P     Pn      22 11 13.1 -0.1
VTS    Vitosha              2.17  31  i Pn    Pn      22 11 13.7 +0.5
ANX    Ano Chora            2.18 176  P       Pn      22 11 15.0 +1.6
ULC    Ulcinj               2.21 303  i Pn    Pb      22 11 16.1 -0.8
ULC    Ulcinj               2.21 303  ⇑iPn    Pb      22 11 15.2 -1.6
ULC                                   i Sn    Sb      22 11 45.3 +0.9
SMIA   Simia                2.21 148  P       Pn      22 11 14.8 +1.1
THAS   Thassos island       2.29  93  P       Pn      22 11 14.2 -0.5
EFP    Efpalio              2.35 176  P       Pn      22 11 16.9 +1.4
EFP                                   AML     AML     22 12 01.8
       comp=E,503µm,0.9s
EFP                                   AML     AML     22 12 05.6
       comp=N,420µm,0.5s
DRME   Dracevica, Mon       2.37 307  ePn     Pb      22 11 18.4 -1.1
DRME   Dracevica, Mon       2.37 307  ⇓iPn    Pn      22 11 17.5 +1.6
DRME                                  i Sn    Sb      22 11 49.1 +0.1
SERG   Sergoula             2.37 174  P       Pn      22 11 16.8 +0.9
KALE   Kalithea             2.40 172  P       Pn      22 11 17.2 +0.9
DSF    Desfina              2.44 165  P       Pn      22 11 17.8 +1.0
RZN    Rozhen               2.44  67  i P     Pn      22 11 18.9 +1.9
PDG    Podgorica            2.48 313  ⇓P      Pb      22 11 20.1 -1.3
PDG    Podgorica            2.48 313  ePn     Pb      22 11 20.0 -1.4
PDG                                   eSn     Sn      22 11 48.8 +0.9
PDG    Podgorica            2.48 313  ePn     Pb      22 11 20.1 -1.3
TTG    Podgorica            2.48 313  ⇓iPn    Pn      22 11 19.0 +1.6
TTG                                   i Sn    Sb      22 11 51.7 -0.5
BEY    Berane               2.50 328  i Pn    Pb      22 11 19.9 -1.9
IVA    Berane               2.50 328  ⇑iPn    Pn      22 11 19.2 +1.4
IVA                                   i Sn    Sb      22 11 52.2 -0.7
ZAPS   Zavoj                2.59  15  ePn     Pn      22 11 20.3 +1.3
PLD    Plovdiv              2.61  58  ePn     Pn      22 11 18.7 -0.5
BUM    Brajici-Budva        2.61 307  ⇓iPn    Pn      22 11 20.7 +1.4
BUM                                   i Sn    Sb      22 11 54.9 -1.2
KOME   Kolasin              2.65 322  ⇑iPn    Pn      22 11 21.2 +1.4
KOME                                  i Sn    Sb      22 11 55.7 -1.5
KLV    Kalavryta, Ach       2.75 173  P       Pn      22 11 21.6 +0.5
CEME   Cevo                 2.75 311  ⇑iPn    Pn      22 11 22.6 +1.5
CEME                                  i Sn    Sb      22 11 58.1 -1.8
SJES   Sjenica              2.81 333  ePn     Pn      22 11 24.2 +2.2
SJES   Sjenica              2.81 333  ePn     Pn      22 11 23.5 +1.5
NKME   Niksic               2.87 315  ⇑iPn    Pn      22 11 24.3 +1.5
NKME                                  i Sn    Sb      22 12 01.0 -2.5
NKY    Niksic               2.88 316  ⇑iPn    Pn      22 11 24.4 +1.4
NKY                                   i Sn    Sb      22 12 01.3 -2.6
HCY    Herceg Novi          2.94 306  ePn     Pn      22 11 24.7 +1.0
HCY    Herceg Novi          2.94 306  ⇓iPn    Pn      22 11 25.3 +1.6
HCY                                   i Sn    Sb      22 12 02.7 -2.7
IVAS   Ivanjica             3.03 338  ePn     Pn      22 11 25.6 +0.5
ZAGS   Zajecar              3.06   7  ePn     Pn      22 11 25.6 +0.2
TREB   Trebinje             3.18 309  ePn     Pn      22 11 28.1 +1.1
BRY    Bratogost            3.19 313  ePn     Pn      22 11 26.5 -0.8
BRY    Bratogost            3.19 313  ePn     Pn      22 11 28.7 +1.4
BRY                                   i Sn    Sn      22 12 08.6 +3.0
GRUS   Gruza                3.20 347  ePn     Pn      22 11 27.7 +0.4
UPM    Unac-Piva            3.21 320  ePn     Pn      22 11 30.3 +2.7
BBLS   Lazi&#263;i          3.54 332  ePn     Pn      22 11 33.7 +1.7
DIVS   Divibare             3.56 340  ePn     Pn      22 11 33.0 +0.6
DIVS   Divibare             3.56 340  ePn     Pn      22 11 32.9 +0.6
TRUS   Trudelj              3.58 345  ePn     Pn      22 11 32.9 +0.3
STON   Ston                 3.66 306  ePn     Pn      22 11 34.2 +0.6
STON   Ston                 3.66 306  ePn     Pn      22 11 34.5 +0.9
HAPS   Han Pijesak,BI       3.89 329  ePn     Pn      22 11 38.4 +1.5
HAPS   Han Pijesak,BI       3.89 329  ePn     Pn      22 11 37.6 +0.7
MDVR   Moldovita            4.01 360  ⇓P      Pn      22 11 38.4  0.0
TEKS   Tekeris              4.11 338  ePn     Pn      22 11 40.9 +1.2
HERR   Herculane            4.14   7  ⇑P      Pn      22 11 40.3 +0.2
FRGS   Fruska Gora          4.60 343  ePn     Pn      22 11 46.8 +0.2
HVAR   Hvar                 4.60 303  ePn     Pn      22 11 47.6 +1.1
HVAR                                  Sn      Sn      22 12 39.5 -0.8
GZR    Gura Zlata           4.68   9  ⇑P      Pn      22 11 47.9 +0.1
BZS    Buzias               4.84 359  ⇓P      Pn      22 11 49.2 -0.7
BZS    Buzias               4.84 359  ePn     Pn      22 11 48.9 -1.0
LOT    Lotru                4.91  17  ⇑P      Pn      22 11 51.0 +0.1
LOT                                   ⇑S      Sn      22 12 45.3 -2.7
ARR    Arges                5.07  24  ⇓P      Pn      22 11 53.2 +0.2
KIJV   Kijevo               5.09 311  ePn     Pn      22 11 54.9 +1.7
KIJV                                  Sn      Sn      22 12 52.5 +0.2
BLY    Banja Luka           5.19 321  ePn     Pn      22 11 56.3 +1.7
ZIRJ   Zirje                5.35 305  ePn     Pn      22 11 57.6 +0.8
ZIRJ                                  Sn      Sn      22 12 59.2 +0.5
MORI   Morici               5.42 307  ePn     Pn      22 11 59.4 +1.6
MLR    Muntele Rosu         5.64  32  ⇑P      Pn      22 12 02.9 +1.9
UDBI   Udbina               5.77 313  ePn     Pn      22 12 04.9 +2.2
DUGI   Dugi Otok            5.89 305  ePn     Pn      22 12 04.7 +0.5
DRGR                        6.06   6  ⇑P      Pn      22 12 07.5 +0.9
VRI    Vrincioaia           6.27  34  ⇓P      Pn      22 12 11.8 +2.3
NVLJ   Novalja              6.31 309  ePn     Pn      22 12 10.6 +0.7
CRES   Cresnjev             6.81 320  ePn     Pn      22 12 17.0 +0.2
CEY    Cerknica             7.28 315  ePn     Pn      22 12 24.0 +0.7
SOKA   Soboth               7.63 323  ePn     Pn      22 12 29.0 +0.8
       comp=N,0.5nm,0.3s
OBKA   Obir                 7.74 320  ePn     Pn      22 12 30.1 +0.4
       comp=N,2.4nm,0.8s
ARSA   Arzberg              7.86 328  ePn     Pn      22 12 32.1 +0.7
       comp=N,1.1nm,0.4s
VYHS   Vyhne                7.99 346  ePN     Pn      22 12 35.3 +2.3
MODS   Modra-Piesok         8.23 339  ePN     Pn      22 12 38.8 +2.4
WATA   Walderalm            9.81 315  ePn     Pn      22 13 00.4 +2.3
       comp=N,1.0nm,0.3s
SQTA   Sankt Quirin         9.94 314  ePn     Pn      22 13 00.9 +1.0
       comp=N,1.4nm,0.3s
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*NEIC **04** 22:12:45.3±1.5, 26°.96N±0°.09×140°.94E±0°.04, h24^{km}±5^{km}, mb4.5/55, Error ellipse: s-maj=13.7km s-min=5.0km az=180.0*

*IDC **04** 22:12:46.2±5.9, 26°.92N×140°.89E, h27^{km}±40^{km}, mb4.0/28, mb1 4.1/30, mb1mx4.0/49, mbtmp4.1/30, ML2.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/32, Error ellipse: s-maj=14.0km s-min=12.1km az=7.0*

ISC 04 22:12:47.1±0.5**, 26°.99N**±0°.08×**140°.93E**±0°.06**, h35**^{km}**, n104,** σ1^{s}**21**/104**, mb4.3**/49**, Bonin Islands region**

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Code   Station Name          Δ°  AZ°  Phase ID          Time      Res
                                      Op      ISC     h  m  s     ISC
JCJ    Chichijima           1.13  84  Pn      Pn      22 13 05.8 -0.6
       287nm,0.3s,baz=136,slow=1.8,SNR=96
JCJ                                   Sn      Sn      22 13 21.2 +0.6
       341nm,0.3s,baz=294,slow=23,SNR=6.3
JCJ                                   LR      LR      22 13 33.3
       comp=Z,576nm,21.6s,baz=244,slow=40
JCJ    Chichijima           1.13  84          Pn      22 13 05.5 -0.9
JCJ                                           Sn      22 13 20.1 -0.5
MJAR   Matsushiro Arr       9.80 347  Pn      Pn      22 15 05.5  0.0
       0.0nm,0.3s,baz=155,slow=9.9,SNR=1.9
MJAR                                  LR      LR      22 18 49.8
       comp=Z,164nm,18.9s,baz=200,slow=37
JNU    Nakatsue            10.63 307  LR      LR      22 18 48.4
       comp=Z,87nm,19.0s,baz=62,slow=34
JMM    Marumori            10.85 359          Pn      22 15 17.2 -2.6
KSRS   Korea Array         15.15 317  Pn      P       22 16 23.6 +0.5
       0.5nm,0.3s,baz=126,slow=12,SNR=61
KS19   Wonju Array Si      15.21 317          Pn      22 16 18.9 -0.4
KS19                                  IAmb    IAmb    22 16 29.0
       comp=Z,25nm,0.9s
JEW    Eniwo               15.82   1  Pn      Pn      22 16 25.6 -1.5
JEW                                   IAmb    IAmb    22 16 34.4
       comp=Z,50nm,1.1s
INCN   Inchon              15.97 314  Pn      Pn      22 16 28.3 -0.8
INCN                                  IAmb    IAmb    22 16 39.9
       comp=Z,18nm,1.0s
JKA    Kamikawa-asahi      17.14   4  Pn      Pn      22 16 41.8 -2.1
TWG    Pinlang             18.48 261  P       P       22 16 58.7 -1.3
USA0B  Ussuriysk Arra      18.63 340  P       Pn      22 17 01.9 -0.1
USRK   Ussuriysk Ar.       18.63 340  P       Pn      22 17 03.1 +1.1
       baz=162,slow=11,SNR=17
NJ2    Nanjing             19.85 290  eP      Pn      22 17 17.2 +0.4
NJ2                                   pmax    pmax
       comp=Z,12nm,0.5s
KLR    Kul'dur             23.32 345  P       P       22 17 52.0 +0.2
       comp=Z,1.1nm,0.5s,baz=176,slow=6.6,SNR=7.1
BJT    Baijiatuau          24.30 309  P       P       22 18 01.0 -0.2
H11N2  WAKE ISLAND Hy      24.88 101  T       T       22 44 12.0
       baz=290,slow=75,SNR=32
H11N1  WAKE ISLAND Hy      24.88 101  T       T       22 44 11.1
       baz=290,slow=75,SNR=28
H11N3  WAKE ISLAND Hy      24.90 101  T       T       22 44 14.3
       baz=290,slow=75,SNR=34
PET    Petropavlovsk       29.17  22  P       P       22 18 45.0 +0.2
LZH    Lanzhou             32.72 295  eP      P       22 19 19.1 +2.5
LZH                                   pP      pP      22 19 24.5 -1.4
LZH                                   sP      pwP     22 19 27.0 -2.3
LZH                                   ePP     PnPn    22 20 18.3 -7.0
LZH                                   pmax    pmax
       comp=Z,21nm,1.3s
LZH                                   pmax    pmax
       comp=Z,67nm,5.2s
LZH                                   LR      LR
       comp=N,220nm,13.1s
LZH                                   LR      LR
       comp=E,220nm,13.3s
LZH                                   LR      LR
       comp=Z,330nm,16.2s
ULN    Ulaanbaatar         33.63 317  P       P       22 19 23.5 -1.0
SONM   Songino Array       34.02 317  P       P       22 19 28.8 +1.1
       comp=Z,1.1nm,0.8s,baz=114,slow=7.7,SNR=7.2
GTA    Gaotai              36.27 301  P       P       22 19 48.2 +1.0
GTA                                   pP      sP      22 20 00.8 +0.2
GTA                                   sP      pwP     22 20 05.2 +5.5
GTA                                   pmax    pmax
       comp=Z,4.0nm,1.2s
GTA                                   pmax    pmax
       comp=Z,97nm,5.3s
GTA                                   LR      LR
       comp=N,130nm,15.3s
GTA                                   LR      LR
       comp=E,120nm,14.9s
GTA                                   LR      LR
       comp=Z,140nm,15.3s
SEY    Seymchan            36.73   9  P       P       22 19 52.2 +1.6
       comp=Z,3.3nm,0.6s,baz=191,slow=7.9,SNR=21
CMAR   Chiang Mai Arr      39.50 267  P       P       22 20 15.5 +1.0
       comp=Z,0.2nm,0.3s,baz=96,slow=5.8,SNR=1.3
WMQ    Urumqi              45.73 306  eP      P       22 21 06.9 +2.0
WMQ                                   pmax    pmax
       comp=Z,11nm,1.1s
WMQ                                   pmax    pmax
       comp=Z,300nm,6.5s
WMQ                                   LR      LR
       comp=N,540nm,29.5s
WMQ                                   LR      LR
       comp=E,2µm,28.1s
WMQ                                   LR      LR
       comp=Z,2µm,28.8s
WB0    Warramunga Arr      46.91 188  P       P       22 21 12.9 -1.3
WR0    Warramunga Arr      47.08 188  P       P       22 21 14.9 -0.6
WR0                                   IAmb    IAmb    22 21 21.0
       comp=Z,4.8nm,0.8s
WB2    Warramunga Arr      47.09 188  P       P       22 21 14.5 -1.1
WRA    Warramunga Arr      47.09 188  P       P       22 21 14.3 -1.3
       comp=Z,2.3nm,0.6s,baz=8.5,slow=8.5,SNR=26
ZALV   Zalesovo Beam       48.84 319  PcP     PcP     22 22 51.5 -1.6
       comp=Z,0.4nm,0.5s,baz=108,slow=4.7,SNR=1.7
MK31   Makanchi Array      49.68 310  P       P       22 21 36.1 +0.6
MK31                                  IAmb    IAmb    22 21 36.9
       comp=Z,2.2nm,0.9s
MKAR   Makanchi Array      49.68 310  P       P       22 21 36.3 +0.8
       comp=Z,1.9nm,0.7s,baz=93,slow=9.2,SNR=26
MKAR                                  PcP     PcP     22 22 55.6 -0.8
       comp=Z,0.5nm,0.9s,baz=142,slow=5.1,SNR=2.3
MAKZ   Makanchi            49.89 310  P       P       22 21 36.4 -0.7
MAKZ                                  IAmb    IAmb    22 21 39.3
       comp=Z,2.5nm,0.9s
ASAR   Alice Springs       50.81 188  P       P       22 21 44.8 +0.6
       comp=Z,0.6nm,0.6s,baz=15,slow=12,SNR=4.8
ASAR                                  PcP     PcP     22 22 59.3 -1.4
       comp=Z,0.4nm,0.8s,baz=20,slow=6.0,SNR=2.0
KURK   Kurchatov           52.26 315  P       P       22 21 55.2 +0.5
KURK                                  IAmb    IAmb    22 21 56.9
       comp=Z,3.3nm,0.8s
KURBB  Kurchatov Arra      52.31 314  P       P       22 21 54.4 -0.7
       comp=Z,2.3nm,0.7s,baz=92,slow=7.6,SNR=21
NRIK   Noril'sk            52.34 339  P       P       22 21 54.2 -0.9
       comp=Z,0.7nm,0.3s,baz=120,slow=8.6,SNR=3.9
NRIK   Noril'sk            52.34 339  P       P       22 21 54.1 -0.9
KSH    Kashi               54.67 301  P       P       22 22 18.3 +5.5
KSH                                   pmax    pmax
       comp=Z,20nm,1.1s
KSH                                   pmax    pmax
       comp=Z,260nm,5.3s
KDAK   Kodiak Island       55.12  37  P       P       22 22 17.1 +1.6
       comp=Z,12nm,1.0s,baz=342,slow=2.9,SNR=8.1
KDAK   Kodiak Island       55.12  37  P       P       22 22 15.5  0.0
AAK    Ala-Archa           55.40 305  P       P       22 22 18.6 +0.6
       comp=Z,1.8nm,0.8s,baz=150,slow=4.7,SNR=8.4
AAK    Ala-Archa           55.40 305  P       P       22 22 17.4 -0.6
SEW    Seward              56.88  34  P       P       22 22 28.4 +0.3
BVAR   Borovoye Array      57.36 317  P       P       22 22 32.5 +0.8
       comp=Z,0.4nm,0.5s,baz=93,slow=6.4,SNR=4.2
NIL    Nilore              57.88 294  P       P       22 22 35.6 -0.1
NIL                                   IAmb    IAmb    22 22 45.3
       comp=Z,6.4nm,1.1s
KK31   Karatay Array       58.24 306  P       P       22 22 38.3 +0.3
KKAR   Karatay Array       58.24 306  P       P       22 22 38.2 +0.2
ILAR   Eielson Array       58.34  29  P       P       22 22 40.4 +2.0
       comp=Z,1.8nm,0.9s,baz=285,slow=6.2,SNR=6.9
STKA   Stephens Creek      58.54 179  P       P       22 22 40.9 +0.9
       comp=Z,0.7nm,0.4s,baz=331,slow=15,SNR=2.9
STKA   Stephens Creek      58.54 179  P       P       22 22 40.1 +0.1
KBL    Kabul               61.06 296  P       P       22 22 57.8  0.0
KBL                                   IAmb    IAmb    22 23 07.2
       comp=Z,6.1nm,1.1s
INK    Inuvik              63.59  24  P       P       22 23 14.9 +1.1
       comp=Z,0.9nm,0.7s,baz=283,slow=1.1,SNR=5.2
INK    Inuvik              63.59  24  P       P       22 23 13.4 -0.5
ABKAR  Akbulak array       64.36 314  P       P       22 23 19.0 -0.3
GEYT   Alibeck             68.61 303  P       P       22 23 48.1 +1.3
       comp=Z,1.5nm,0.7s,baz=28,slow=6.5,SNR=4.5
YKA    Yellowknife Ar      72.77  28  P       P       22 24 12.7 +1.2
       comp=Z,2.5nm,0.6s,baz=291,slow=5.2,SNR=41
ARCES  ARCESS Array B      73.27 341  P       P       22 24 13.6 -0.8
       comp=Z,5.3nm,1.1s,baz=64,slow=8.4,SNR=3.9
KBZ    Khabaz              77.26 313  P       P       22 24 38.0 +0.2
       comp=Z,5.0nm,1.0s,baz=334,slow=1.3,SNR=5.8
FINES  FINESS Array B      77.55 333  P       P       22 24 37.7 -1.3
       comp=Z,3.6nm,0.9s,baz=36,slow=3.5,SNR=5.4
NEW    Newport             77.74  42  P       P       22 24 40.0 -0.4
       comp=Z,4.4nm,0.8s,baz=320,slow=8.9,SNR=7.8
BMO    Blue Mountains      79.17  45  P       P       22 24 48.2 -0.3
BMO                                   IAmb    IAmb    22 24 52.2
       comp=Z,2.3nm,0.8s
BEKR   Beckworth           79.39  51  P       P       22 24 49.7 -0.2
BEKR                                  IAmb    IAmb    22 24 53.4
       comp=Z,4.5nm,1.0s
PNTR   Pine Nut            80.26  51  P       P       22 24 54.7  0.0
PNTR                                  IAmb    IAmb    22 24 58.5
       comp=Z,4.2nm,0.8s
MFID   Camas Ranch         80.79  46  P       P       22 24 57.6 +0.3
MFID                                  IAmb    IAmb    22 25 01.3
       comp=Z,5.1nm,1.1s
NVAR   Mina Array Bea      81.46  51  P       P       22 25 01.0 -0.1
       comp=Z,1.5nm,0.7s,baz=296,slow=5.7,SNR=12
HLID   Hailey              81.62  45  P       P       22 25 01.6 -0.1
HLID                                  IAmb    IAmb    22 25 06.1
       comp=Z,2.7nm,1.1s
BCYI   Bear Canyon         81.88  44  P       P       22 25 03.2  0.0
ELK    Elko                82.45  48  P       P       22 25 08.1 +1.8
       comp=Z,1.3nm,0.6s,baz=312,slow=6.4,SNR=5.9
ELK    Elko                82.45  48  P       P       22 25 06.1 -0.2
YHB    Horse Butte         83.02  43  P       P       22 25 09.3 +0.1
R11A   Troy Canyon, C      83.38  50  P       P       22 25 11.1  0.0
R11A                                  IAmb    IAmb    22 25 14.8
       comp=Z,2.1nm,0.9s
HVU    Hansel Valley       83.55  46  P       P       22 25 12.0 +0.1
H17A   Grant Village       83.58  43  P       P       22 25 12.6 +0.5
H17A                                  IAmb    IAmb    22 25 17.2
       comp=Z,5.3nm,1.0s
MOOW   Moose Ponds         83.82  44  P       P       22 25 14.0 +0.7
MOOW                                  IAmb    IAmb    22 25 17.0
       comp=Z,3.0nm,0.8s
AHID   Auburn Hatcher      84.11  45  P       P       22 25 14.9 +0.1
RAYN   Ar Rayn             84.16 293  P       P       22 25 15.2  0.0
RAYN                                  IAmb    IAmb    22 25 22.4
       comp=Z,2.3nm,1.1s
PRN    Pahroc Range        84.21  51  P       P       22 25 16.2 +1.0
DUG    Dugway, Tooele      84.33  48  P       P       22 25 17.0 +1.1
PSUT   Pine Spring         84.47  49  P       P       22 25 17.4 +0.7
CTU    Camp Tracy          84.77  47  P       P       22 25 18.1  0.0
PFO    Pinyon Flats O      85.06  55  P       P       22 25 20.3 +0.7
       comp=Z,3.7nm,0.8s,baz=269,slow=3.8,SNR=7.2
PFO    Pinyon Flats O      85.06  55  P       P       22 25 20.7 +1.1
PFO                                   IAmb    IAmb    22 25 23.3
       comp=Z,4.9nm,1.1s
BW06   Boulder Array       85.07  44  P       P       22 25 20.3 +0.6
BW06                                  IAmb    IAmb    22 25 22.1
       comp=Z,5.4nm,1.1s
PD31   Pinedale Array      85.08  44  P       P       22 25 19.6  0.0
PD31                                  IAmb    IAmb    22 25 22.2
       comp=Z,4.4nm,1.1s
PDAR   Pinedale Array      85.08  44  P       P       22 25 20.3 +0.6
       comp=Z,2.9nm,0.9s,baz=270,slow=3.0,SNR=12
BRTR   Keskin Array B      85.25 312  P       P       22 25 19.2 -1.3
       comp=Z,0.6nm,0.7s,baz=34,slow=5.9,SNR=1.9
MSU    Marysvale           85.62  49  P       P       22 25 21.9 -0.5
LCMT   Little Creek M      85.66  51  P       P       22 25 20.6 -1.9
MTPU   Mount Pierson       85.85  49  P       P       22 25 22.6 -1.2
KNB    Kanab               85.95  50  P       P       22 25 23.2 -0.8
P17A   Butcher Ranch,      86.07  47  P       P       22 25 24.6  0.0
Q16A   Castle Valley       86.08  48  P       P       22 25 25.3 +0.6
RDMU   Red Mountain        86.25  46  P       P       22 25 25.7 +0.2
U15A   North Rim           86.61  51  P       P       22 25 29.2 +1.7
U15A                                  IAmb    IAmb    22 25 30.9
       comp=Z,2.2nm,0.8s
ULM    Lac du Bonnet       88.14  33  P       P       22 25 35.0 +0.8
       comp=Z,1.0nm,0.5s,baz=239,slow=5.9,SNR=3.4
ULM    Lac du Bonnet       88.14  33  P       P       22 25 33.9 -0.3
ANMO   Albuquerque         91.41  49  P       P       22 25 52.2 +2.2
       comp=Z,2.8nm,0.8s,baz=275,slow=3.1,SNR=7.1
ANMO   Albuquerque         91.41  49  P       P       22 25 48.2 -1.8
ANMO                                  IAmb    IAmb    22 25 53.5
       comp=Z,2.1nm,0.8s
BNM    Barren Site         91.74  50  P       P       22 25 49.8 -1.8
PLCA   Paso Flores        150.66 126  PKPbc   PKPbc   22 32 35.6 +0.1
       comp=Z,2.0nm,0.9s,baz=246,slow=4.6,SNR=3.3
PLCA   Paso Flores        150.66 126          PKPbc   22 32 34.4 -1.1
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*BJI **04** 22:25:22.0±0.0, 45°.29N×148°.14E, h134^{km}, mB5.2/47, mb5.4/69*

*SKHL **04** 22:25:24.3±0.4, 45°.15N×148°.15E, h141^{km}±6^{km}, mb5.6/4, msh5.8/1, msh5.6/3*

SKHL Felt (III) at Malokuril'skoye; (II-III) at Kuril'sk, Reidovo.

*MOS **04** 22:25:24.4±1.1, 45°.31N×147°.92E, h145^{km}, mb4.8/36, Error ellipse: s-maj=5.4km s-min=4.2km az=106.1*

MOS Felt (III) at Malokuril'skoye, (II-III) at Kuril'sk, Reydovo.

*IDC **04** 22:25:25.0±0.4, 45°.43N×147°.75E, h130^{km}±3^{km}, mb4.5/30, mb1 4.6/36, mb1mx4.6/38, mbtmp4.9/36, MS3.7/18, Ms1 3.7/18, ms1mx3.6/36, Error ellipse: s-maj=10.1km s-min=8.4km az=129.0*

*NEIC **04** 22:25:25.7±1.1, 45°.25N±0°.06×147°.95E±0°.09, h142^{km}±5^{km}, mb4.8/308, Error ellipse: s-maj=10.7km s-min=7.6km az=139.0*

*BGR **04** 22:25:25.4±0.0, 45°.64N×150°.75E, h153^{km}, mb5.1*

*JMA **04** 22:25:26.6±0.6, 44°.89N×148°.06E, h145^{km}, M5.0*

JMA Felt I J1.

*GCMT **04** 22:25:26.7±0.2, 45°.31N±0°.02×148°.12E±0°.02, h140^{km}±2^{km}, MW5.1/119, Moment Tensor Solution. s53,c61; s119,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.16±.16; M$_{\theta\theta}$3.27±.17; M$_{\phi\phi}$-3.43±.16; M$_{r\theta}$-2.84±.12; M$_{\theta\phi}$-0.69±.18; M$_{\phi r}$-3.46±.11; Best double couple: M$_0$5.58500×10^{16} NP1:φ$_s$318.00000°, δ37.00000°, λ1.00000°. NP2:φ$_s$227.00000°, δ89.00000°, λ127.00000°. Principal axes: T 5.1500, Plg35.0000°, Azm168.0000°; N 0.8670, Plg37.0000°, Azm46.0000°; P -6.0190, Plg34.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NIED **04** 22:25:26.6, 44°.89N×148°.06E, h145^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.11; M$_{\theta\theta}$0.87; M$_{\phi\phi}$-1.98; M$_{r\theta}$-1.68; M$_{\theta\phi}$-0.53; M$_{\phi r}$-1.70; Fault plane solution: M$_0$2.98000×10^{16} NP1: φ$_s$221.00000°, δ77.00000°, λ117.00000°. NP2: φ$_s$335.00000°, δ29.00000°, λ27.00000°.*

*NOU **04** 22:25:26.0, 45°.06N×148°.06E, h123^{km}, mb5.2, Kuril Islands*

ISC 04 22:25:24.8±0.3**, 45°.28N**±0°.03×**148°.00E**±0°.03**, h134**^{km}±2^{km}**, h134**^{km}**:pP-P, n948,** σ1^{s}**35**/998**, mb4.9**/285**, 102C-78D, Fault plane solution: NP1:**φ$_s$316.37366°**,** δ16.33675°**,** λ-2.04338°. **NP2:**φ$_s$48.33460°**,** δ89.42535°**,** λ-106.32691°. **Principal axes:** T Plg42.1803°**,** Azm153.8945°**;** N Plg16.3261°**,** Azm48.5029°**;** P Plg43.2867°**,** Azm302.4873°**; Kuril Islands**

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Code   Station Name          Δ°  AZ°  Phase ID          Time      Res
                                      Op      ISC     h  m  s     ISC
KUR    Kuril'sk             0.11 242  eP      Pn      22 25 43.0 +0.1
KUR                                   AMB     AMB     22 25 46.0
       6µm,0.5s
KUR                                   eS      Sn      22 25 57.0 +0.5
KUR                                   A       A       22 25 58.0
       14µm,0.6s
KUR                                   A       A       22 25 58.0
       10µm,0.6s
KUR                                   A       A       22 25 58.3
       193µm,2.0s
KUR                                   A       A       22 25 58.3
       149µm,2.0s
KUR    Kuril'sk             0.11 242c iPN     Pn      22 25 43.0 +0.1
KUR                                   i S     Sn      22 25 57.0 +0.5
KUR                                   pmax    pmax
       comp=N,5µm,0.5s
KUR                                   pmax    pmax
       comp=E,3µm,0.5s
KUR                                   pmax    pmax
       comp=Z,8µm,0.5s
KUR                                   smax    smax
       comp=E,14µm,0.9s
KUR                                   smax    smax
       comp=N,10µm,1.0s
KUR                                   smax    smax
       comp=N,193µm,2.0s
KUR                                   smax    smax
       comp=E,150µm,2.1s
YUK    Yuzh-Kuril'sk        1.97 231  eP      Pn      22 25 59.0 +0.4
YUK                                   AMB     AMB     22 26 01.0
       comp=E,4µm,0.2s
YUK                                   eS      Sn      22 26 24.7 +0.3
YUK                                   A       A       22 26 36.0
       comp=E,2µm,0.3s
YUK                                   A       A       22 26 36.0
       comp=E,3µm,0.3s
YUK    Yuzh-Kuril'sk        1.97 231  ePN     Pn      22 25 59.7 +1.1
YUK                                   eS      Sn      22 26 27.1 +2.7
YUK                                   pmax    pmax
       comp=Z,4µm,0.2s
YUK                                   smax    smax
       comp=E,3µm,0.3s
YUK                                   smax    smax
       comp=N,2µm,0.2s
GRPR   Tuman                2.05 232  eP      Pn      22 26 00.0 +0.5
GRPR                                  eS      Sn      22 26 27.0 +0.9
GRPR   Tuman                2.05 232  ePN     Pn      22 26 00.5 +1.0
GRPR                                  eS      Sn      22 26 27.9 +1.8
RUSJ   Misakicho            2.29 240  ePN     Pn      22 26 03.5 +1.0
RUSJ                                  S       Sn      22 26 38.0 +6.6
GLVR   Golovnino            2.35 230  eP      Pn      22 26 04.0 +0.7
GLVR                                  AMB     AMB     22 26 07.0
       comp=N,2µm,0.4s
GLVR                                  eS      Sn      22 26 34.0 +1.2
GLVR                                  A       A       22 26 36.0
       comp=N,17µm,0.5s
GLVR                                  A       A       22 26 36.0
       comp=N,3µm,0.5s
GLVR   Golovnino            2.35 230  ePN     Pn      22 26 04.3 +1.0
GLVR                                  eS      Sn      22 26 34.4 +1.6
GLVR                                  pmax    pmax
       comp=Z,2µm,0.4s
GLVR                                  pmax    pmax
       comp=N,432nm,0.2s
GLVR                                  smax    smax
       comp=N,17µm,0.2s
GLVR                                  smax    smax
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      comp=E,3µm,0.2s
JRA   Rausu             2.46 238 ⇓P     Pn    22 26 05.4 +0.8
NEM2  Nemuro 2          2.51 221 ⇑P     Pn    22 26 04.3 -0.9
NEM2                            eS     Sn    22 26 33.8 -2.5
NMR   Nemuro--Hokkai    2.52 221 i P    Pn    22 26 04.0 -1.3
NMR   Nemuro--Hokkai    2.52 221⇓iPN    Pn    22 26 04.7 -0.6
NMR                             i S    Sn    22 26 34.7 -1.7
JNSB  Nemuroshibetsu    2.62 236 ⇓P     Pn    22 26 07.7 +1.1
JNK   Nakash            2.90 235 ⇓P     Pn    22 26 11.2 +1.0
JKHN  Kushirohamanak    3.00 224 ⇑P     Pn    22 26 11.0 -0.5
JKHN                            eS     Sn    22 26 45.2 -2.4
JTKR  Abashiri--Toko    3.21 247 ⇓P     Pn    22 26 15.2 +1.1
JAK   Akkeshi           3.30 227 ⇑P     Pn    22 26 15.1 -0.3
JAK                             eS     Sn    22 26 52.3 -2.2
JAR   Ashorobuto        3.63 238 ⇓P     Pn    22 26 21.0 +1.3
JSE   Soyaes            3.85 267 ⇓P     Pn    22 26 24.5 +2.0
JKK2  Kamakawa 2        4.01 251 ⇓P     Pn    22 26 26.5 +1.8
YSS   Yuzh-Sakhalins    4.01 296 i P    Pn    22 26 26.0 +1.3
YSS                              AMB   AMB   22 26 28.0
      comp=E,490nm,0.7s
YSS                              AMB   AMB   22 26 28.0
      comp=E,1µm,3.0s
YSS                             eS     Sn    22 27 14.2 +3.0
YSS                              A     A     22 27 18.0
      comp=E,1µm,1.2s
YSS                              A     A     22 27 18.0
      comp=E,1µm,1.2s
YSS                              A     A     22 27 19.0
      comp=E,4µm,3.0s
YSS                              A     A     22 27 19.0
      comp=E,8µm,3.0s
YSS   Yuzh-Sakhalins    4.01 296κiPN    Pn    22 26 26.7 +2.0
YSS                             eS     Sn    22 27 12.8 +1.6
YSS                              pmax  pmax
      comp=Z,490nm,0.7s
YSS                              pmax  pmax
      comp=Z,1µm,2.8s
YSS                              smax  smax
      comp=N,1µm,1.1s
YSS                              smax  smax
      comp=E,1µm,1.2s
YSS                              smax  smax
      comp=N,4µm,2.6s
YSS                              smax  smax
      comp=E,8µm,3.1s
YSS                              MLR   MLR
      comp=Z,1µm,12.0s
YSS   Yuzh-Sakhalins    4.01 296        Pn    22 26 26.3 +1.6
YSS                              Sn    Sn    22 27 11.9 +0.7
JKA   Kamikawa-asahi    4.03 255 eP     Pn    22 26 26.7 +1.8
JKA   Kamikawa-asahi    4.03 255  Pn    Pn    22 26 26.7 +1.8
JKA                              Sn    Sn    22 27 11.6 +0.1
ASAJ  Asahikawa         4.03 255  P     Pn    22 26 27.2 +2.3
      comp=Z,210nm,0.3s,baz=87,slow=17,SNR=562
ASAJ                             S     Sn    22 27 12.9 +1.3
      baz=313,slow=29,SNR=0.7
ASAJ  Asahikawa         4.03 255  PN    Pn    22 26 26.7 +1.8
ASAJ                                         22 27 11.6
JCH   Churui            4.28 233  P     Pn    22 26 28.3  0.0
JCH                             eS     Sn    22 27 14.7 -3.0
JWK2  Keihoku           4.31 273 ⇓P     Pn    22 26 31.8 +3.2
JFR   Furan             4.43 243 ⇓P     Pn    22 26 31.9 +1.6
JHR   Hokuryu           4.75 253 ⇓P     Pn    22 26 36.9 +2.4
JYG   Yagishiri         4.75 262 ⇓P     Pn    22 26 37.0 +2.4
ERM   Erimo             4.80 229cePN    Pn    22 26 35.5 +0.3
ERM                              pmax  pmax
      comp=Z,820nm,0.6s
ERM   Erimo             4.80 229        Pn    22 26 35.0 -0.2
ERM                              Sn    Sn    22 27 29.4 -0.5
JNBK  Urakawa-nobuka    4.84 234  P     Pn    22 26 35.0 -0.8
JRBN  Rebuntou          4.89 274 ⇓P     Pn    22 26 38.2 +1.8
JEW   Eniwo             5.32 245 ⇓P     Pn    22 26 43.9 +1.8
JEW   Eniwo             5.32 245        Pn    22 26 43.6 +1.5
UGL   Uglegorsk         5.55 315 eP     Pn    22 26 47.5 +2.4
UGL                              AMB   AMB   22 26 48.0
      comp=Z,900nm,1.0s
UGL                              AMB   AMB   22 26 48.0
      comp=Z,740nm,0.8s
UGL                             eS     Sn    22 27 51.0 +3.1
UGL                              A     A     22 27 57.0
      comp=Z,6µm,4.0s
UGL                              A     A     22 27 57.0
      comp=Z,7µm,4.0s
UGL                              A     A     22 28 02.0
      comp=Z,500nm,0.8s
UGL                              A     A     22 28 02.0
      comp=Z,600nm,0.8s
UGL   Uglegorsk         5.55 315⇓iPN    Pn    22 26 47.5 +2.4
UGL                             eS     Sn    22 27 50.9 +3.1
UGL                              pmax  pmax
      comp=Z,900nm,0.9s
UGL                              pmax  pmax
      comp=Z,742nm,0.8s
UGL                              smax  smax
      comp=N,6µm,5.2s
UGL                              smax  smax
      comp=E,7µm,3.6s
UGL                              smax  smax
      comp=N,510nm,0.8s
UGL                              smax  smax
      comp=E,555nm,0.9s
JSK   Shakotan          5.74 253  P     Pn    22 26 49.1 +1.4
JKB   Kayabe            6.09 239 ⇓P     Pn    22 26 51.7 -0.8
JKB                             eS     Sn    22 27 56.6 -4.4
JOT   Ohata             6.40 235 ⇓P     Pn    22 26 54.6 -2.0
JOT                             eS     Sn    22 28 01.0 -7.3
TYV   Tymovskoe         6.63 329 eP     Pn    22 27 01.7 +2.0
TYV                              AMB   AMB   22 27 02.6
      comp=E,500nm,3.0s
TYV                              AMB   AMB   22 27 02.8
      comp=E,160nm,0.7s
TYV                             eS     Sn    22 28 15.4 +1.5
TYV                              A     A     22 28 17.2
      comp=E,800nm,8.0s
TYV                              A     A     22 28 17.3
      comp=E,64nm,0.9s
TYV   Tymovskoe         6.63 329 ePN    Pn    22 27 02.0 +2.3
TYV                             eS     Sn    22 28 15.4 +1.5
TYV                              pmax  pmax
      comp=Z,500nm,2.5s
TYV                              pmax  pmax
      comp=Z,162nm,0.7s
TYV                              smax  smax
      comp=N,800nm,7.8s
TYV                              smax  smax
      comp=N,64nm,0.9s
JTM   Tenmabayashi      6.78 231        Pn    22 26 59.7 -2.1
JOSM  Okushiri--Mats    6.96 246 ⇓P     Pn    22 27 04.2  0.0
SKR   Severo-Kuril's    7.67  42 eP     Pn    22 27 13.1 -0.5
SKR                              AMB   AMB   22 27 13.5
      comp=N,67nm,1.0s
SKR                             eS     Sn    22 28 37.6 -1.2
SKR                              A     A     22 28 50.6
      comp=N,130nm,1.0s
SKR                              A     A     22 28 50.6
      comp=N,180nm,1.0s
SKR   Severo-Kuril's    7.67  42 ePN    Pn    22 27 12.4 -1.2
SKR                             eS     Sn    22 28 40.6 +1.8
SKR                              pmax  pmax
      comp=Z,68nm,1.0s
SKR                              smax  smax
      comp=E,190nm,1.1s
SKR                              smax  smax
      comp=N,129nm,1.4s
SKR                              MLR   MLR
      comp=Z,200nm,15.0s
SKR                              MLR   MLR
      comp=Z,600nm,15.0s
TEY   Ternei            8.06 272 i P    Pn    22 27 20.0 +1.1
TEY                              AMB   AMB   22 27 22.6
      comp=Z,200nm,3.0s
TEY                              AMB   AMB   22 27 22.6
      comp=Z,700nm,3.0s
TEY                              AMB   AMB   22 27 22.6
      comp=Z,700nm,3.0s
TEY                              AMB   AMB   22 27 22.7
      comp=Z,70nm,0.8s
TEY                              AMB   AMB   22 27 22.7
      comp=Z,1µm,0.8s
TEY   Ternei            8.06 272⇓iPN    Pn    22 27 21.8 +2.9
TEY                              pmax  pmax
      comp=E,700nm,2.8s
TEY                              pmax  pmax
      comp=Z,700nm,2.8s
TEY                              pmax  pmax
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      comp=E,1µm,0.9s
TEY                              pmax  pmax
      comp=N,70nm,0.8s
TEY                              pmax  pmax
      comp=Z,60nm,0.9s
TEY                              pmax  pmax
      comp=N,200nm,2.5s
JMK   Ichinoseki        8.09 221 eS     Sn    22 28 40.0 -9.2
PAU   Pauzhetka         8.52  40 eP     Pn    22 27 24.9 -0.1
PAU                              AMB   AMB   22 27 26.0
      comp=N,420nm,0.5s
PAU                             eS     Sn    22 28 56.6 -2.8
PAU                              A     A     22 28 59.9
      comp=N,170nm,0.8s
PAU                              A     A     22 28 59.9
      comp=N,170nm,0.8s
OKH   Okha              8.91 340 eP     Pn    22 27 32.3 +2.1
OKH                              AMB   AMB   22 27 34.1
      comp=N,320nm,0.9s
OKH   Okha              8.91 340dePN    Pn    22 27 24.9 -5.3
OKH                              MLR   MLR
      comp=E,300nm,5.0s
OKH                              MLR   MLR
      comp=N,500nm,16.0s
OKH                              MLR   MLR
      comp=Z,200nm,7.0s
JMM   Marumori          9.17 219  Pn    Pn    22 27 29.6 -4.2
NKL   Nikolayevsk       9.21 331 eP     Pn    22 27 33.5 -0.8
NKL                              AMB   AMB   22 27 33.9
      comp=Z,7.0nm,1.0s
NKL                              AMB   AMB   22 27 33.9
      comp=Z,46nm,1.0s
NKL                              AMB   AMB   22 27 33.9
      comp=Z,238nm,1.0s
NKL                             eS     Sn    22 29 20.8 +4.7
NKL   Nikolayevsk       9.21 331 ePN    Pn    22 27 33.5 -0.8
NKL                             eS     Sn    22 29 20.8 +4.7
NKL                              pmax  pmax
      comp=E,46nm,0.6s
NKL                              pmax  pmax
      comp=N,7.0nm,1.1s
NKL                              pmax  pmax
      comp=Z,238nm,1.4s
GRNR  Gornyy            9.50 309 eP     Pn    22 27 40.6 +2.4
GRNR                             AMB   AMB   22 27 42.0
      comp=Z,50nm,0.9s
GRNR                             AMB   AMB   22 27 42.0
      comp=Z,80nm,0.9s
GRNR                             AMB   AMB   22 27 42.0
      comp=Z,120nm,0.9s
GRNR  Gornyy            9.50 309⇓iPN    Pn    22 27 40.6 +2.4
GRNR                            eS     Sn    22 29 29.1 +5.9
GRNR                             pmax  pmax
      comp=E,80nm,0.9s
GRNR                             pmax  pmax
      comp=N,50nm,1.0s
GRNR                             pmax  pmax
      comp=Z,120nm,0.9s
GRNR                             smax  smax
      comp=E,20nm,0.9s
GRNR                             MLR   MLR
      comp=E,280nm,17.0s
GRNR                             MLR   MLR
      comp=N,260nm,12.0s
GRNR                             MLR   MLR
      comp=Z,380nm,17.0s
PEA0B Petropavlovsk-   10.07  35  PN    Pn    22 27 46.3 +0.5
PEA0B Petropavlovsk-   10.07  35  Pn    Pn    22 27 46.3 +0.5
PETK  Petropavlovsk-   10.07  35  P     Pn    22 27 46.2 +0.4
      comp=Z,3.8nm,0.3s,baz=192,slow=12,SNR=50
JSD   Sado             10.27 229        Pn    22 27 46.0 -2.5
PET   Petropavlovsk    10.41  38 eP     Pn    22 27 50.8 +0.4
PET                              AMB   AMB   22 27 56.2
      comp=Z,70nm,0.8s
PET                             eS     Sn    22 29 40.5 -4.7
PET   Petropavlovsk    10.41  38 ePN    Pn    22 27 54.5 +4.1
PET                             eS     Sn    22 29 52.7 +7.5
PET                              pmax  pmax
      comp=Z,69nm,0.8s
PET                              pmax  pmax
      comp=Z,2µm,5.1s
PET                              MLR   MLR
      comp=Z,300nm,21.0s
PET   Petropavlovsk    10.41  38  Pn    Pn    22 27 48.8 -1.5
JHK   Hiroka           10.49 223  P     Pn    22 27 48.8 -2.8
JYT   Yasato           10.81 216        Pn    22 27 51.9 -3.8
MJB9  Matsu-Tunnel     11.44 224  Pn    Pn    22 28 03.5 -0.7
MAJO  Matsushiro       11.44 224 i PN   Pn    22 28 02.5 -1.8
MAJO  Matsushiro       11.44 224        Pn    22 28 02.4 -1.8
MJAR  Matsushiro Arr   11.44 224  P     Pn    22 28 02.5 -1.8
      comp=Z,0.9nm,0.3s,baz=23,slow=15,SNR=38
USA0B Ussuriysk Arra   11.45 270  PN    Pn    22 28 04.7 +0.5
USA0B Ussuriysk Arra   11.45 270        Pn    22 28 04.7 +0.5
USRK  Ussuriysk Ar.    11.45 270  P     Pn    22 28 04.8 +0.7
      baz=87,slow=12,SNR=401
KLR   Kul'dur          11.73 295  P     Pn    22 28 10.1 +2.3
      comp=Z,2.6nm,0.3s,baz=102,slow=14,SNR=252
KLR                              LR    LR    22 32 43.9
      comp=Z,234nm,20.3s,baz=116,slow=38
KLR                              ScP   ScP   22 37 04.4 -0.5
      comp=Z,0.1nm,0.3s,baz=24,slow=3.2,SNR=8.8
MSHR  Mys Shultsa      12.44 263dePN    Pn    22 28 16.2 -1.0
MSHR                             pmax  pmax
      comp=Z,617nm,1.7s
EKMR  Ekimchan         12.54 314 eP     Pn    22 28 19.7 +1.3
EKMR                             AMB   AMB   22 28 21.8
      comp=Z,140nm,0.8s
EKMR                             AMB   AMB   22 28 21.8
      comp=Z,140nm,0.8s
EKMR                             AMB   AMB   22 28 21.8
      comp=Z,270nm,0.8s
JGF   Kuroka           12.61 224        Pn    22 28 17.7 -1.7
INU   Inuyama          12.98 224  Pn    Pn    22 28 22.3 -1.8
MDJ   Mudanjiang       13.06 274  P     Pn    22 28 25.6 +0.4
MDJ                              S     Sn    22 30 49.7 +0.4
MDJ                              pmax  pmax
      comp=Z,89nm,1.0s
MDJ                              pmax  pmax
      comp=Z,470nm,8.3s
MDJ                              LR    LR
      comp=Z,480nm,14.0s
MDJ                              LR    LR
      comp=Z,380nm,16.3s
MDJ   Mudanjiang       13.06 274  Pn    Pn    22 28 25.2  0.0
JHJ2  Mitsune          13.70 210  Pn    Pn    22 28 31.9 -1.6
JHJ   Hachijo jima 2   13.71 210  P     Pn    22 28 34.9 +1.3
      comp=Z,16nm,0.3s,baz=72,slow=20,SNR=2.3
JHJ                              S     Sn    22 30 53.8  -11
      comp=Z,70nm,0.3s,baz=243,slow=22,SNR=9.0
JWT   Wachi            13.85 228  Pn    Pn    22 28 34.4 -1.0
MA2   Magadan          14.41   6 eP     P     22 28 44.2 -1.1
MA2   Magadan          14.41   6 i P    P     22 28 44.2 -1.1
MA2                              pmax  pmax
      comp=Z,42nm,0.9s
MA2   Magadan          14.41   6  Pn    Pn    22 28 43.1 +0.8
JHS   Saijyo           15.31 233  Pn    Pn    22 28 52.7 -1.1
BMKR  Bomnak           15.47 314 eP     Pn    22 28 55.8 +0.2
BMKR                             AMB   AMB   22 28 59.5
      comp=Z,60nm,0.5s
JMN   Monobe           15.85 228  Pn    Pn    22 28 59.2 -1.2
JMN                              IAmb  IAmb  22 29 05.8
      comp=Z,56nm,1.1s
ZEA   Zeya             15.87 310 eP     P     22 29 01.1 -0.4
ZEA                              AMB   AMB   22 29 02.4
      comp=Z,130nm,0.9s
ZEA                              AMB   AMB   22 29 02.4
      comp=Z,100nm,0.9s
ZEA                              AMB   AMB   22 29 02.4
      comp=Z,200nm,0.9s
ZEA   Zeya             15.87 310deP     P     22 29 01.7 +0.2
ZEA                              pmax  pmax
      comp=N,130nm,0.8s
ZEA                              pmax  pmax
      comp=E,100nm,0.9s
ZEA                              pmax  pmax
      comp=Z,200nm,0.9s
CN2   Changchun        16.14 273 eP     Pn    22 29 02.4 -1.5
CN2                              S     Sn    22 31 56.9 -6.5
CN2                              pmax  pmax
      comp=Z,40nm,1.0s
CN2                              pmax  pmax
      comp=Z,300nm,5.0s
KROS  Kirovskiy        16.31 312 eP     Pn    22 29 06.1 +0.2
KROS                             AMB   AMB   22 29 08.7
      comp=Z,23nm,0.4s
KROS                             AMB   AMB   22 29 08.7
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      comp=Z,32nm,0.4s
KROS                             AMB   AMB   22 29 08.7
      comp=Z,43nm,0.4s
KSRS  Korea Array      16.95 250  P     P     22 29 12.6 -1.0
      comp=Z,3.1nm,0.3s,baz=58,slow=12,SNR=122
KSRS                             LR    LR    22 35 27.7
      comp=Z,125nm,18.4s,baz=44,slow=36
KSRS                             ScP   ScP   22 37 15.9 +1.8
      comp=Z,0.1nm,0.3s,baz=27,slow=0.6,SNR=5.4
KS19  Wonju Array Si   16.96 250        P     22 29 12.9 -0.8
INCN  Inchon           17.80 252  P     P     22 29 22.6 -0.3
INCN                             pmax  pmax
      comp=Z,258nm,0.8s
INCN  Inchon           17.80 252        P     22 29 22.6 -0.3
INCN  Inchon           17.80 252  P     Pn    22 29 23.7 -0.3
JTU   Tsushima         17.82 239        P     22 29 23.6 +0.4
JTU                              IAmb  IAmb  22 29 25.4
      comp=Z,104nm,1.1s
SEY   Seymchan         17.86   7  P     Pn    22 29 24.2 -0.3
      comp=Z,2.0nm,0.3s,baz=187,slow=8.7,SNR=53
SEY   Seymchan         17.86   7 eP     Pn    22 29 25.0 +0.5
SEY   Seymchan         17.86   7 i P    Pn    22 29 25.0 +0.5
TJN   Taejon           17.94 247ceP     P     22 29 24.8 +0.4
JNU   Nakatsue         17.95 233  P     P     22 29 24.3 -0.3
      comp=Z,4.0nm,0.3s,baz=0.8,slow=3.0,SNR=36
JNU   Nakatsue         17.95 233        P     22 29 25.0 +0.4
SNY   Shenyang         18.02 268 ⇓P     P     22 29 25.9 +0.7
SNY                              sP    sP    22 30 02.5 -1.9
SNY                              S     S     22 32 46.3 +1.3
SNY                              pmax  pmax
      comp=Z,140nm,1.5s
SNY                              LR    LR
      comp=Z,180nm,8.3s
SNY                              LR    LR
      comp=Z,180nm,9.0s
SNY                              LR    LR
      comp=Z,290nm,13.9s
JSU   Suzuyama         19.39 231  Pn    Pn    22 29 41.6 -1.2
HIA   Hailar           19.53 292  P     P     22 29 39.3 -2.4
HIA                              pmax  pmax
      comp=Z,59nm,0.8s
HIA   Hailar           19.53 292  P     P     22 29 39.3 -2.4
HIA                              IAmb  IAmb  22 29 49.5
      comp=Z,59nm,0.8s
YAK   Yakutsk          19.86 334 eP     P     22 29 43.6 -1.4
YAK   Yakutsk          19.86 334 eP     P     22 29 43.6 -1.4
YAK                             eS     S     22 33 19.6 -1.4
YAK                              pmax  pmax
      comp=Z,381nm,1.1s
YAK                              pmax  pmax
      comp=N,131nm,1.1s
YAK                              pmax  pmax
      comp=E,107nm,1.3s
YAK                              smax  smax
      comp=N,217nm,2.2s
YAK                              smax  smax
      comp=E,266nm,2.6s
YAK   Yakutsk          19.86 334  P     P     22 29 43.5 -1.4
DL2   Dalian           20.53 261⇓iP     P     22 29 52.7 +0.2
DL2                              S     S     22 33 38.7 +4.0
DL2                              sS    sS    22 34 17.6 +2.8
DL2                              pmax  pmax
      comp=E,230nm,0.8s
DL2                              pmax  pmax
      comp=E,230nm,7.2s
CIT   Chita            23.57 299 eP     P     22 30 19.2 -3.8
CIT                             e            22 30 52.3
CIT                             e            22 31 01.8
CIT                             e            22 34 05.6
CIT                             e            22 34 21.9
CIT                              pmax  pmax
      comp=Z,74nm,1.3s
BJI   Beijing          23.89 269  P     P     22 30 26.2 +0.3
BJI                              S     S     22 34 32.8 +0.5
BJI                              pmax  pmax
      comp=Z,63nm,0.9s
BJI                              LR    LR
      comp=Z,280nm,6.5s
BJI                              LR    LR
      comp=Z,180nm,9.6s
BJT   Baijiatuau       23.90 269  P     P     22 30 26.3 +0.2
BJT                              pmax  pmax
      comp=Z,49nm,0.8s
BJT   Baijiatuau       23.90 269  P     P     22 30 26.3 +0.2
BJT                              IAmb  IAmb  22 30 27.5
      comp=Z,49nm,0.8s
TIA   Tai'an           24.96 260  P     P     22 30 36.1 +0.4
TIA                              pmax  pmax
      comp=Z,34nm,0.9s
NJ2   Nanjing          26.16 250⇓iP     P     22 30 47.2 +0.7
NJ2                              pmax  pmax
      comp=Z,37nm,0.7s
HHC   Hu-ho-hao-te     26.84 274 eP     P     22 30 53.7 +1.0
HHC                              pP    pwP   22 31 27.0 +2.7
HHC                              S     S     22 35 23.0 +3.8
HHC                              pmax  pmax
      comp=Z,160nm,1.0s
HHC                              pmax  pmax
      comp=Z,310nm,6.6s
TIY   Taiyuan          27.52 267 eP     P     22 31 00.3 +1.5
TIY                              pmax  pmax
      comp=Z,75nm,1.1s
TIY                              pmax  pmax
      comp=Z,270nm,4.8s
TIXI  Tiksi            27.99 347 eP     P     22 30 59.8 -2.7
TIXI                             pmax  pmax
      comp=Z,21nm,0.7s
TIXI  Tiksi            27.99 347  P     P     22 30 59.5 -2.9
BTO   Baotou           28.01 274 eP     P     22 31 00.6 -2.6
ULN   Ulaanbaatar      28.04 290 eP     P     22 31 01.9 -1.5
ULN   Ulaanbaatar      28.04 290ceP     P     22 31 01.9 -1.5
ULN                              pmax  pmax
      comp=Z,17nm,1.0s
ULN   Ulaanbaatar      28.04 290  P     P     22 31 03.2 -0.2
ULN                              IAmb  IAmb  22 31 06.0
      comp=Z,12nm,0.9s
ULN   Ulaanbaatar      28.04 290  P     P     22 31 01.3 -2.1
SONM  Songino Array    28.48 290  P     P     22 31 06.3 -1.0
      comp=Z,6.2nm,0.5s,baz=76,slow=7.3,SNR=36
SONM                             ScP   ScP   22 37 44.3 +0.1
      comp=Z,1.3nm,0.7s,baz=116,slow=2.3,SNR=6.1
SONM                             LR    LR    22 42 37.8
      comp=Z,224nm,21.6s,baz=112,slow=37
TLY   Talaya           29.72 299 eP     P     22 31 16.2 -1.9
TLY                              pmax  pmax
      comp=Z,41nm,1.7s
TLY                              MLR   MLR
      comp=Z,421nm,12.0s
TLY   Talaya           29.72 299  P     P     22 31 15.7 -2.4
YHNB  Yeheng           29.76 235  P     P     22 31 19.4 +0.7
YHNB                             IAmb  IAmb  22 31 22.8
      comp=Z,17nm,0.7s
H11N2 WAKE ISLAND Hy   29.90 142  T     T     23 02 28.8
      baz=333,slow=75,SNR=96
H11N1 WAKE ISLAND Hy   29.91 142  T     T     23 02 34.2
      baz=333,slow=75,SNR=565
H11N3 WAKE ISLAND Hy   29.92 142  T     T     23 02 36.7
      baz=333,slow=75,SNR=630
WHN   Wuhan            30.10 252⇓iP     P     22 31 22.1 +0.5
SSLB  Suanglung        30.68 235  P     P     22 31 26.7 -0.1
SSLB                             IAmb  IAmb  22 31 28.5
      comp=Z,18nm,1.0s
YULB  Yu-li            30.79 234  P     P     22 31 27.7 -0.1
YULB                             IAmb  IAmb  22 31 39.5
      comp=Z,21nm,0.9s
H11S1 WAKE ISLAND Hy   30.90 144  T     T     23 03 49.7
      baz=326,slow=79,SNR=644
H11S3 WAKE ISLAND Hy   30.91 144  T     T     23 03 48.0
      baz=326,slow=79,SNR=408
H11S2 WAKE ISLAND Hy   30.92 144  T     T     23 03 48.7
      baz=326,slow=79,SNR=506
QZH   Quanzhou         31.20 239 eP     P     22 31 32.8 +1.5
QZH                              S     S     22 36 35.5 +7.8
TPUB  Ta-pu            31.25 235  P     P     22 31 31.8 +0.1
TWG   Pinlang          31.37 233  P     P     22 31 32.1 -0.7
KNMB  Chin-men Tao     31.68 239  P     P     22 31 35.1 -0.4
XAN   Xi'an            31.82 263  P     P     22 31 37.2 +0.4
XAN                              pmax  pmax
      comp=Z,74nm,0.9s
XAN   Xi'an            31.82 263  P     P     22 31 36.9 +0.1
XAN                              pmax  pmax
      comp=Z,47nm,0.9s
XAN   Xi'an            31.82 263  P     P     22 31 36.9 +0.1
ANM   Nome             31.99  36  P     P     22 31 38.7 +0.9
ANM                              pmax  pmax
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      comp=Z,6.0nm,0.8s
ANM   Nome              31.99  36   P      P       22 31 38.7 +0.9
ENH   Enshi             33.58 257   P      P       22 31 52.1  0.0
RDOG  Red Dog Mine      33.89  31   P      P       22 31 54.8 +0.5
LZH   Lanzhou           34.35 270 ⇓P      P       22 32 00.0 +1.1
LZH                                 pP     pwP     22 32 29.5 -1.5
LZH                                 sP     sP      22 32 44.7 +2.8
LZH                                 PP     PP      22 33 19.5 +0.3
LZH                                 pmax   pmax
      comp=Z,710nm,4.9s
GTA   Gaotai            35.66 278 ⇓P      P       22 32 10.8 +0.8
GTA                                 pP     pwP     22 32 44.5 +2.1
GTA                                 PcP    PcP     22 34 36.0 +0.5
GTA                                 ScP    ScP     22 38 09.5 +0.6
GTA                                 PcS    PcS     22 38 22.9 -0.1
GTA                                 ScS    ScS     22 42 14.9 +0.7
GTA                                 pmax   pmax
      comp=Z,61nm,1.1s
GTA                                 pmax   pmax
      comp=Z,230nm,4.5s
GTA                                 LR     LR
      comp=Z,240nm,13.5s
GTA                                 LR     LR
      comp=Z,180nm,13.8s
GTA                                 LR     LR
      comp=Z,160nm,15.3s
TTA   Tatalina          35.86  40   P      P       22 32 12.4 +1.0
TTA                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TTA   Tatalina          35.86  40   P      P       22 32 12.4 +1.0
SVW2  Sparrevohn        36.02  43   P      P       22 32 13.9 +1.2
A21K  Barrow            36.90  26   P      P       22 32 19.5 -0.5
      baz=255,SNR=15
A21K  Barrow            36.90  26   P      P       22 32 19.6 -0.3
A21K                                IAmb   IAmb    22 32 20.7
      comp=Z,17nm,0.6s
CD2   Chengdu           37.19 263 ⇓P      P       22 32 23.5 +0.6
CD2                                 S      S       22 37 58.5 -1.2
CD2                                 pmax   pmax
      comp=Z,110nm,5.2s
PPLA  Purkeypile        37.61  40   P      P       22 32 28.1 +1.8
PPLA                                IAmb   IAmb    22 32 31.1
      comp=Z,26nm,1.2s
GYA   Guiyang           37.91 255 ⇓P      P       22 32 29.2 +0.1
GYA                                 pmax   pmax
      comp=Z,95nm,0.7s
BPAW  Bear Paw Mtn.     38.14  38   P      P       22 32 31.3 +0.8
BPAW                                PcP    PcP     22 34 43.2 +0.8
KTH   Kantishna Hill    38.17  39   P      P       22 32 32.1 +1.2
KTH                                 IAmb   IAmb    22 32 40.4
      comp=Z,18nm,1.0s
NRIK  Noril'sk          38.21 330   P      P       22 32 29.0 -2.0
      comp=Z,2.7nm,0.5s,baz=102,slow=7.8,SNR=8.9
NRIK                                pP     pP      22 32 58.6 -0.9
      comp=Z,5.7nm,0.9s,baz=81,slow=22,SNR=3.2
NRIK                                PP     PnPn    22 34 03.7 -0.4
      comp=Z,11nm,0.8s,baz=75,slow=9.3,SNR=3.6
NRIK                                PcP    PcP     22 34 41.6 -0.8
      comp=Z,6.9nm,0.4s,baz=81,slow=3.3,SNR=13
NRIK                                ScP    ScP     22 38 17.7 +0.1
      comp=Z,4.9nm,0.8s,baz=107,slow=3.9,SNR=4.8
NRIK                                LR     LR      22 47 49.6
      comp=Z,94nm,21.3s,baz=110,slow=35
NRIK  Noril'sk          38.21 330   P      P       22 32 30.1 -1.0
NRIK                                PcP    PcP     22 34 43.1 +0.6
MLY   Manley            38.25  37   P      P       22 32 33.1 +1.7
      baz=269,SNR=8.0
TRF   Thorofare Moun    38.46  40   P      P       22 32 33.8 +0.4
TRF                                 IAmb   IAmb    22 32 43.0
      comp=Z,7.8nm,0.7s
COLD  Coldfoot          38.53  33   P      P       22 32 34.5 +0.7
      baz=267,SNR=24
COLD  Coldfoot          38.53  33   P      P       22 32 34.4 +0.7
COLD                                IAmb   IAmb    22 32 40.4
      comp=Z,14nm,0.8s
BWN   Browne            38.80  38   P      P       22 32 37.1 +1.1
I23K  Minto, Yukon-K    38.83  37   P      P       22 32 37.5 +1.3
      baz=270,SNR=6.4
I23K  Minto, Yukon-K    38.83  37   P      P       22 32 37.3 +1.1
I23K                                IAmb   IAmb    22 32 42.1
      comp=Z,9.2nm,0.7s
TOLK  Toolik Lake Re    38.86  31   P      P       22 32 37.0 +0.5
      baz=266,SNR=16
TOLK  Toolik Lake Re    38.86  31   P      P       22 32 37.0 +0.5
TOLK                                IAmb   IAmb    22 32 38.4
      comp=Z,12nm,0.7s
NEA2  Nenana            38.96  38   P      P       22 32 38.5 +1.1
      baz=271,SNR=11
MCK   McKinley          39.05  39   P      P       22 32 39.0 +0.9
      baz=273
RND   Reindeer          39.10  40   P      P       22 32 38.1 -0.6
RND                                 pmax   pmax
      comp=Z,7.0nm,0.8s
RND   Reindeer          39.10  40   P      P       22 32 38.1 -0.6
GHO   Glory Hole Cre    39.19  42   P      P       22 32 40.4 +1.0
GHO                                 IAmb   IAmb    22 32 49.3
      comp=Z,21nm,1.0s
MDM   Murphy Dome       39.31  37   P      P       22 32 41.1 +0.8
WRH   Wood River Hil    39.39  38   P      P       22 32 41.3 +0.4
WRH                                 IAmb   IAmb    22 32 48.9
      comp=Z,10nm,0.8s
KNK   Knik Glacier      39.45  43   P      P       22 32 42.0 +0.6
KNK                                 IAmb   IAmb    22 32 45.0
      comp=Z,24nm,1.2s
SML   Sawmill           39.47  42   P      P       22 32 42.4 +0.7
TCOL  CIGO, UAF Yank    39.47  37   P      P       22 32 43.3 +1.7
      baz=272,SNR=5.7
TCOL  CIGO, UAF Yank    39.47  37   P      P       22 32 42.7 +1.2
COLA  College           39.48  37   P      P       22 32 42.8 +1.2
COLA                                pmax   pmax
      comp=Z,23nm,0.5s
COLA  College           39.48  37   P      P       22 32 42.8 +1.2
CCB   Clear Creek Bu    39.51  38   P      P       22 32 42.7 +0.8
POKR  Poker Plat Res    39.65  37   P      P       22 32 45.1 +2.1
      baz=272,SNR=14
POKR  Poker Plat Res    39.65  37   P      P       22 32 43.7 +0.7
POKR                                IAmb   IAmb    22 32 47.4
      comp=Z,15nm,0.8s
HDA   Harding Lake      39.89  38   P      P       22 32 45.1 +0.1
      baz=274
HDA   Harding Lake      39.89  38   P      P       22 32 45.1 +0.1
HDA                                 IAmb   IAmb    22 32 55.6
      comp=Z,7.1nm,0.6s
IL31                    39.89  37   P      P       22 32 45.7 +0.6
IL31                                IAmb   IAmb    22 32 48.1
      comp=Z,16nm,1.1s
ILAR  Eielson Array     39.89  37   P      P       22 32 45.6 +0.5
      comp=Z,4.8nm,0.5s,baz=272,slow=9.2,SNR=69
ILAR                                pP     pwP     22 33 15.8 -1.0
      comp=Z,7.7nm,1.0s,baz=270,slow=7.3,SNR=4.4
ILAR                                ScP    ScP     22 38 23.6 -0.7
      comp=Z,1.8nm,1.0s,baz=292,slow=5.0,SNR=6.8
DGZ   Jazzator, Alta    40.19 299 i P      P       22 32 48.8 +0.8
DGZ                                 pmax   pmax
      comp=Z,6.0nm,0.7s
M24K  Tolsona, Glenn    40.45  41   P      P       22 32 51.1 +1.3
      baz=277
M24K  Tolsona, Glenn    40.45  41   P      P       22 32 50.7 +1.0
M24K                                IAmb   IAmb    22 32 59.2
      comp=Z,16nm,0.8s
ZAA0  Zalesovo Array    40.58 306   P      P       22 32 48.3 -2.6
ZALV  Zalesovo Beam     40.58 306   P      P       22 32 48.2 -2.6
      comp=Z,1.9nm,0.4s,baz=61,slow=7.0,SNR=9.7
ZALV                                PcP    PcP     22 34 51.0 +0.7
      comp=Z,13nm,0.7s,baz=72,slow=3.5,SNR=15
ZALV                                ScP    ScP     22 38 26.8 -0.3
      comp=Z,11nm,0.7s,baz=63,slow=4.6,SNR=25
KLU   Klutina           40.65  42   P      P       22 32 52.3 +0.9
KLU                                 IAmb   IAmb    22 33 04.3
      comp=Z,14nm,0.9s
RIDG  Independent Ri    40.87  39   P      P       22 32 53.6 +0.4
RIDG                                IAmb   IAmb    22 33 04.6
      comp=Z,17nm,1.1s
RIDG                                ScP    ScP     22 38 26.7 -1.4
SCRK  Sand Creek        41.22  38   P      P       22 32 56.4 +0.3
      baz=277,SNR=11
N25K  Chitina, Valde    41.26  42   P      P       22 32 58.0 +1.6
      baz=279
KMI   Kunming           41.45 257 ⇑P      P       22 32 59.0 +0.3
KMI                                 PP     PP      22 34 35.5 -1.5
KMI                                 ScP    ScP     22 38 33.3 +2.0
KMI                                 pmax   pmax
      comp=Z,97nm,1.1s
KMI                                 pmax   pmax
      comp=Z,280nm,3.5s
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KMI   Kunming           41.45 257   P      P       22 32 58.9 +0.3
KMI                                 pmax   pmax
      comp=Z,78nm,0.9s
KMI   Kunming           41.45 257   P      P       22 32 58.9 +0.2
L26K  Log Cabin Wild    41.62  40   P      P       22 33 01.1 +1.7
      baz=278,SNR=6.1
VRDI  Verde Repeater    41.86  42   P      P       22 33 02.1 +0.6
CRQM  Cirque            42.10  43   P      P       22 33 04.5 +1.1
CRQM                                IAmb   IAmb    22 33 07.5
      comp=Z,31nm,1.1s
WMQ   Urumqi            42.12 290  eP      P       22 33 05.1 +1.5
WMQ                                 pP     pwP     22 33 36.7  0.0
WMQ                                 pmax   pmax
      comp=Z,33nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,480nm,4.7s
WMQ   Urumqi            42.12 290   P      P       22 33 04.3 +0.7
WMQ                                 pmax   pmax
      comp=Z,23nm,1.1s
WMQ   Urumqi            42.12 290   P      P       22 33 04.3 +0.7
WMQ                                 IAmb   IAmb    22 33 20.8
      comp=Z,23nm,1.1s
BALM  Baldy             42.42  43   P      P       22 33 06.9 +0.9
BALM                                IAmb   IAmb    22 33 14.5
      comp=Z,18nm,1.0s
ZSN   Zaisan            42.55 296  eP      P       22 33 05.6 -1.5
      baz=296
ZSN   Zaisan            42.55 296  eP      P       22 33 05.5 -1.5
BARN  Barnard Glacie    42.75  42   P      P       22 33 09.1 +0.5
BARN                                IAmb   IAmb    22 33 17.5
      comp=Z,24nm,1.1s
CTGM  Chitina Glacie    42.92  43   P      P       22 33 11.3 +1.3
CTGM                                IAmb   IAmb    22 33 19.2
      comp=Z,26nm,1.0s
DAWY  Dawson            43.21  38   P      P       22 33 12.5 +0.4
SLVN  Son La            43.21 251   P      P       22 33 12.2 -0.4
SLVN                                IAmb   IAmb    22 33 15.0
      comp=Z,49nm,1.1s
EPYK  Eagle Plains      43.91  34   P      P       22 33 18.6 +0.9
      baz=280
SEM   Semipalatinsk     44.33 302  eP      P       22 33 18.7 -2.8
      comp=Z,8.7nm,0.8s,baz=302
SEM   Semipalatinsk     44.33 302  eP      P       22 33 18.7 -2.8
SEM                                 pmax   pmax
      comp=Z,9.0nm,0.8s
MK31  Makanchi Array    44.43 297   P      P       22 33 21.4 -0.7
MK31                                pmax   pmax
      comp=Z,10.0nm,0.9s
MK31  Makanchi Array    44.43 297   P      P       22 33 21.4 -0.7
MKAR  Makanchi Array    44.43 297   P      P       22 33 20.9 -1.1
      comp=Z,7.1nm,0.5s,baz=76,slow=8.0,SNR=99
MKAR                                PcP    PcP     22 35 03.8 +0.4
      comp=Z,8.7nm,0.7s,baz=72,slow=4.6,SNR=8.4
MKAR                                ScP    ScP     22 38 42.4 -0.4
      comp=Z,2.2nm,0.7s,baz=64,slow=4.6,SNR=6.4
MKAR                                LR     LR      22 52 10.5
      comp=Z,144nm,21.4s,baz=69,slow=36
MKAR  Makanchi Array    44.43 297  eP      P       22 33 21.0 -1.1
MKAR  Makanchi Array    44.43 297  i P     P       22 33 21.0 -1.1
MKAR                                pmax   pmax
      comp=Z,7.0nm,0.5s
MAKZ  Makanchi          44.62 297   P      P       22 33 22.7 -0.9
MAKZ                                pmax   pmax
      comp=Z,12nm,0.8s
MAKZ  Makanchi          44.62 297   P      P       22 33 22.7 -0.9
MAKZ                                IAmb   IAmb    22 33 27.2
      comp=Z,12nm,0.8s
INK   Inuvik            44.77  31   P      P       22 33 24.6 +0.2
      comp=Z,6.0nm,0.3s,baz=288,slow=8.1,SNR=6.2
INK                                 ScP    ScP     22 38 44.1 +0.4
      comp=Z,2.3nm,1.0s,baz=314,slow=9.9,SNR=3.5
INK   Inuvik            44.77  31   P      P       22 33 25.1 +0.7
HYT   Haines Junctio    44.77  42   P      P       22 33 26.8 +2.0
HYT                                 IAmb   IAmb    22 33 34.7
      comp=Z,28nm,0.9s
LKP   Lekhapani         44.86 265  eP      P       22 33 27.4 +1.7
LKP                                 IAmb   IAmb    22 33 28.4
      comp=Z,259nm,0.7s
KURK  Kurchatov         45.19 303  eP      P       22 33 26.1 -1.9
KURK  Kurchatov         45.19 303ceP      P       22 33 26.1 -1.9
KURK                                pmax   pmax
      comp=Z,16nm,0.8s
KURK  Kurchatov         45.19 303   P      P       22 33 26.5 -1.5
KURK                                IAmb   IAmb    22 33 29.5
      comp=Z,14nm,0.8s
KURK                                PcP    PcP     22 35 05.9 +0.1
KURK  Kurchatov         45.19 303   P      P       22 33 25.9 -2.1
KURK                                P      P       22 33 25.9 -2.1
KURBB Kurchatov Arra    45.28 303   P      P       22 33 26.9 -1.8
      comp=Z,9.3nm,0.5s,baz=74,slow=8.2,SNR=71
KURBB                               PcP    PcP     22 35 06.6 +0.5
      comp=Z,10nm,0.8s,baz=70,slow=3.6,SNR=11
KURBB                               ScP    ScP     22 38 45.8 -0.4
      comp=Z,5.1nm,1.1s,baz=73,slow=3.4,SNR=8.3
NONG  Nongkai           46.02 249   P      P       22 33 36.2 +1.2
      comp=Z,14µmcomp=Z,131nm,0.8s
ZIRO  ZIRO              46.15 267  eP      P       22 33 37.3 +1.2
ZIRO                                IAmb   IAmb    22 33 38.3
      comp=Z,144nm,0.6s
MOKO  MOKOCHONG         46.42 265  eP      P       22 33 39.5 +1.3
MOKO                                IAmb   IAmb    22 33 40.6
      comp=Z,192nm,0.5s
LSA   Lhasa             46.77 271   P      P       22 33 42.4 +1.2
LSA                                 pmax   pmax
      comp=Z,200nm,1.1s
LSA   Lhasa             46.77 271   P      P       22 33 42.8 +1.6
LSA   Lhasa             46.77 271   P      P       22 33 40.6 -0.6
LSA                                 pmax   pmax
      comp=Z,51nm,1.0s
LSA   Lhasa             46.77 271   P      P       22 33 40.6 -0.6
LSA   Lhasa             46.77 271   P      P       22 33 43.0 +1.8
LSA                                 P      P       22 33 43.0 +1.8
KOHI  KOHIMA            47.08 264  eP      P       22 33 44.0 +0.6
KOHI                                IAmb   IAmb    22 33 45.5
      comp=Z,125nm,0.6s
DLV   T  Lat            47.27 238   P      P       22 33 44.6 -0.2
DLV                                 IAmb   IAmb    22 33 47.4
      comp=Z,27nm,0.9s
PAYA  Payao             47.29 253   P      P       22 33 46.2 +1.3
      comp=Z,7µmcomp=Z,849nm,0.8s
BAKI  Biak              47.47 196   P      P       22 33 46.5 +0.4
      comp=Z,217nm,1.8s
TDK   Taldyqorghan      47.64 296  eP      P       22 33 46.1 -1.2
      comp=Z,18nm,0.6s,baz=296
TDK   Taldyqorghan      47.64 296  eP      P       22 33 46.0 -1.2
TDK                                 pmax   pmax
      comp=Z,18nm,0.6s
SHLS  Shalkode          47.80 293  eP      P       22 33 44.8 -3.8
      baz=293
SHLS  Shalkode          47.80 293  eP      P       22 33 44.8 -3.8
C36M  Paulatuk          47.84  29   P      P       22 33 48.3  0.0
      baz=288,SNR=32
C36M  Paulatuk          47.84  29   P      P       22 33 48.5 +0.2
UTTA  Uttaradit         47.97 251   P      P       22 33 51.1 +1.1
      comp=Z,437nmcomp=Z,60nm,0.7s
LAMP  Lampang           48.04 253   P      P       22 33 51.9 +1.4
      comp=Z,978nmcomp=Z,108nm,0.7s
KPKS  Kokpek            48.16 294  eP      P       22 33 49.8 -1.6
      comp=Z,13nm,0.8s,baz=294
KPKS  Kokpek            48.16 294  eP      P       22 33 49.7 -1.6
KPKS                                pmax   pmax
      comp=Z,13nm,0.8s
SWI   Sorong            48.29 203   P      P       22 33 53.4 +1.0
      comp=Z,40nm,0.9s
CMMT  Chiang Mai        48.30 253   P      P       22 33 53.0 +0.4
      comp=Z,412nmcomp=Z,34nm,0.9s
CHTO  Chiang Mai        48.30 253   P      P       22 33 53.8 +1.2
CHTO                                pmax   pmax
      comp=Z,75nm,1.1s
CHTO  Chiang Mai        48.30 253   P      P       22 33 53.8 +1.2
CHTO  Chiang Mai        48.30 253   P      P       22 33 53.6 +1.1
CHTO                                P      P       22 33 53.6 +1.1
CHAI  Chaiyaphum        48.35 248   P      P       22 33 53.6 +0.6
      comp=Z,1µmcomp=Z,114nm,0.7s
PHIT  Phitsanulok       48.46 251   P      P       22 33 55.3 +1.5
      comp=Z,107nm,0.7s
GUWA  GUWAHATI          48.49 267⇑eP      P       22 33 54.4 +0.4
GUWA                                IAmb   IAmb    22 33 55.6
      comp=Z,55nm,0.7s
SATY  Saty              48.53 294  eP      P       22 33 52.5 -1.8
      comp=Z,5.9nm,0.6s,baz=294
SATY  Saty              48.53 294  eP      P       22 33 52.4 -1.8
SATY                                pmax   pmax
      comp=Z,6.0nm,0.6s
CM31  Chiang Mai Arr    48.55 253   P      P       22 33 55.8 +1.3
      comp=Z,9µmcomp=Z,936nm,0.7s
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CM31  Chiang Mai Arr    48.55 253   P      P       22 33 55.8 +1.3
CM31                                IAmb   IAmb    22 33 56.5
      comp=Z,24nm,0.7s
CMAR  Chiang Mai Arr    48.55 253   P      P       22 33 55.9 +1.4
      comp=Z,17nm,0.7s,baz=42,slow=7.4,SNR=132
CMAR                                ScP    ScP     22 39 02.4 +2.0
      comp=Z,10nm,0.9s,baz=19,slow=3.5,SNR=38
CMAR                                LR     LR      22 53 25.0
      comp=Z,49nm,21.5s,baz=36,slow=35
SHL   Shillong          48.74 266   P      P       22 33 56.1 -0.1
SHL                                 pmax   pmax
      comp=Z,117nm,0.7s
SHL   Shillong          48.74 266  eP      P       22 33 56.0 -0.1
SHL   Shillong          48.74 266   P      P       22 33 56.1 -0.1
SHL   Shillong          48.74 266   P      P       22 33 56.4 +0.3
      SNR=37
BVAR  Borovoye Array    49.01 309   P      P       22 33 56.3 -1.3
      comp=Z,2.1nm,0.5s,baz=22,slow=12,SNR=19
BVAR                                PcP    PcP     22 35 19.7 +0.2
      comp=Z,3.3nm,0.5s,baz=56,slow=5.4,SNR=4.6
BVAR                                ScP    ScP     22 39 01.5 -0.3
      comp=Z,2.4nm,0.9s,baz=45,slow=16,SNR=6.6
BRVK  Borovoye          49.06 309  eP      P       22 33 56.6 -1.3
BRVK  Borovoye          49.06 309ceP      P       22 33 56.6 -1.3
BRVK                                pmax   pmax
      comp=Z,17nm,1.0s
BRVK  Borovoye          49.06 309   P      P       22 33 56.7 -1.2
BRVK                                IAmb   IAmb    22 33 59.3
      comp=Z,15nm,1.0s
BRVK                                PcP    PcP     22 35 20.0 +0.4
CHKK  Chushkaly         49.07 295  eP      P       22 33 56.9 -1.4
      baz=295
CHKK  Chushkaly         49.07 295  eP      P       22 33 56.8 -1.4
MDOK  Medeo             49.36 294  eP      P       22 33 59.2 -1.4
      baz=294
MDOK  Medeo             49.36 294  eP      P       22 33 59.2 -1.4
AAA   Alma-Ata          49.42 294  eP      P       22 34 00.2 -0.8
AAA   Alma-Ata          49.42 294  eP      P       22 34 00.2 -0.8
      comp=Z,13nm,0.7s,baz=294
AAA   Alma-Ata          49.42 294  eP      P       22 34 00.2 -0.8
AAA                                 pmax   pmax
      comp=Z,13nm,0.7s
MHMT  Maesarieng        49.43 254   P      P       22 34 02.7 +1.5
      comp=Z,930nmcomp=Z,88nm,1.1s
KUU   Kurty             49.47 295  eP      P       22 33 59.5 -1.7
      comp=Z,10.0nm,0.5s,baz=296
KUU   Kurty             49.47 295  eP      P       22 33 59.5 -1.7
KUU                                 pmax   pmax
      comp=Z,10.0nm,0.5s
TNSS  Tian-Shan         49.48 294  eP      P       22 34 01.2 -0.6
      baz=294
TNSS  Tian-Shan         49.48 294  eP      P       22 34 01.2 -0.6
SRAK  Srakaew           49.70 246   P      P       22 34 01.7 -1.6
      comp=Z,6µmcomp=Z,712nm,0.8s
MTBS  Maitube           49.77 295  eP      P       22 34 03.2 -0.5
      baz=294
MTBS  Maitube           49.77 295  eP      P       22 34 03.1 -0.5
SAIH  SAIHA             49.93 262  eP      P       22 34 05.5 +0.4
GTK   Tadong            49.98 270  eP      P       22 34 05.1 -0.3
GTK                                 IAmb   IAmb    22 34 08.0
      comp=Z,52nm,0.6s
MRSI  Marisa            50.21 215   P      P       22 33 54.6  -12
UTHA  Uthaitani         50.27 250   P      P       22 34 09.1 +1.5
      comp=Z,749nmcomp=Z,87nm,0.8s
ULHL  Ulahol            50.32 294   P      P       22 34 08.4 +0.5
      SNR=13
BTLS  Baital            50.37 298  eP      P       22 34 06.5 -1.5
      baz=298
BTLS  Baital            50.37 298  eP      P       22 34 06.5 -1.5
TKM2  Tokmak 2          50.41 295   P      P       22 34 09.2 +0.6
      SNR=17
TKM2  Tokmak 2          50.41 295  i P     P       22 34 08.0 -0.6
TKM2                                pmax   pmax
      comp=Z,28nm,1.3s
TAPN  Taplejung         50.59 271  eP      P       22 34 11.3 +1.0
      comp=Z,167nm,1.0s
SGDS  Sogindy           50.77 296  eP      P       22 34 09.8 -1.3
      comp=Z,12nm,1.3s,baz=296
SGDS  Sogindy           50.77 296  eP      P       22 34 09.8 -1.3
SGDS                                pmax   pmax
      comp=Z,12nm,1.3s
CHMS  Chumysh           50.91 295   P      P       22 34 09.9 -2.3
      SNR=5.8
USP   Ospenovka         50.94 296   P      P       22 34 12.0 -0.4
      SNR=25
KBK   Karagaybulak      50.95 295   P      P       22 34 13.1 +0.5
      SNR=15
SANI  Sanana            51.03 209   P      P       22 34 13.2  0.0
      comp=Z,33nm,1.0s
ODAN  Odare             51.12 270  eP      P       22 34 14.9 +0.8
      comp=Z,108nm,0.9s
AAK   Ala-Archa         51.25 295   P      P       22 34 15.0 +0.2
AAK   Ala-Archa         51.25 295  eP      P       22 34 15.1 +0.2
AAK   Ala-Archa         51.25 295   P      P       22 34 15.1 +0.2
AAK                                 pmax   pmax
      comp=Z,17nm,0.9s
AAK   Ala-Archa         51.25 295   P      P       22 34 15.1 +0.2
AAK                                 IAmb   IAmb    22 34 16.0
      comp=Z,17nm,0.9s
AAK   Ala-Archa         51.25 295   P      P       22 34 13.9 -0.9
AAK                                 P      P       22 34 13.9 -0.9
PATY  Pattaya           51.27 246   P      P       22 34 16.0 +0.9
      comp=Z,4µmcomp=Z,56nm,0.7s
MSAI  Masohi            51.32 205   P      P       22 34 16.9 +1.6
      comp=Z,640nmcomp=Z,15nm,0.8s
SRDT  SRDT              51.36 249   P      P       22 34 17.4 +1.6
GUN   Gumba             51.54 273  eP      P       22 34 18.1 +0.7
      comp=Z,180nm,0.4s
RAMN  Ramite            51.62 271  eP      P       22 34 18.6 +0.7
      comp=Z,456nm,0.8s
EKS2  Erkin-Say         51.70 295   P      P       22 34 17.8 -0.3
      SNR=5.6
KSH   Kashi             51.88 291   P      P       22 34 23.5 +4.0
KSH                                 pmax   pmax
      comp=Z,190nm,1.6s
KKN   Kakani            52.04 273  eP      P       22 34 21.7 +0.8
      comp=Z,553nm,1.2s
PKI   Pulchoki          52.08 273  eP      P       22 34 21.9 +0.5
      comp=Z,122nm,0.6s
PKIN  Phulchoki         52.09 273  eP      P       22 34 21.8 +0.4
      comp=Z,105nm,0.5s
DMN   Daman             52.27 273  eP      P       22 34 23.7 +1.0
      comp=Z,260nm,0.8s
SVE   Sverdlovsk        52.45 316  eP      P       22 34 21.6 -1.7
SVE                                 pmax   pmax
      comp=Z,19nm,0.8s
POHA  Pohakuloa         52.75  99   P      P       22 34 26.4 +0.1
DANN  Dangsing          52.77 274  eP      P       22 34 27.7 +1.3
      comp=Z,336nm,0.5s
SBUM  Sibu              52.97 227   P      P       22 34 30.0 +2.4
DZA   Taraz             53.14 297  eP      P       22 34 27.7 -0.9
      comp=Z,16nm,1.3s,baz=297
DZA   Taraz             53.14 297  eP      P       22 34 27.7 -0.9
DZA                                 pmax   pmax
      comp=Z,17nm,1.3s
RES   Resolute Bay      53.32  17   P      P       22 34 28.3 -1.1
RES                                 pmax   pmax
      comp=Z,9.0nm,0.9s
RES   Resolute Bay      53.32  17   P      P       22 34 28.3 -1.1
RES                                 IAmb   IAmb    22 34 46.0
      comp=Z,9.2nm,0.8s
SPITS Spitsbergen Ar    53.39 349   P      P       22 34 27.9 -2.1
      comp=Z,8.8nm,0.9s,baz=48,slow=9.0,SNR=8.8
SPITS                               PcP    PcP     22 35 35.7 +0.3
      comp=Z,3.4nm,0.5s,baz=88,slow=7.5,SNR=14
ARU   Arti              53.65 316  eP      P       22 34 30.3 -1.8
ARU   Arti              53.65 316c iP      P       22 34 30.3 -1.8
ARU                                 *PP    pP      22 35 03.0 +0.9
ARU                                                22 35 35.1
ARU                                                22 36 31.3
ARU                                 S      S       22 41 54.8 -0.3
ARU                                 SS     SKiKP   22 45 33.3 +1.4
ARU                                 pmax   pmax
      comp=Z,24nm,0.9s
ARU   Arti              53.65 316   P      P       22 34 30.1 -2.0
ARU                                 IAmb   IAmb    22 34 33.8
      comp=Z,24nm,0.9s
ARU                                 PcP    PcP     22 35 36.5 -0.2
BOK   Bokaro            54.09 269  eP      P       22 34 36.6 +0.9
BOK                                 IAmb   IAmb    22 34 37.8
      comp=Z,81nm,1.0s
YKA   Yellowknife Ar    54.19  35   P      P       22 34 36.9 +1.0
      comp=Z,3.2nm,0.6s,baz=300,slow=6.1,SNR=52
YKA                                 pP     pP      22 35 07.3 +0.6
      comp=Z,5.8nm,0.8s,baz=300,slow=6.4,SNR=6.9
YKA                                 ScP    ScP     22 39 25.2 +1.1
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       comp=Z,1.0nm,0.8s,baz=301,slow=3.9,SNR=5.8
YKA                                LR        LR       22 58 02.5
       comp=Z,40nm,21.2s,baz=0.0,slow=36
IUG    Iuzhnay          54.34 296  eP        P        22 34 37.3 -0.2
       comp=Z,30nm,1.0s,baz=296
IUG    Iuzhnay          54.34 296  eP        P        22 34 37.2 -0.2
IUG                                pmax      pmax
       comp=Z,30nm,1.0s
KSM    Kuching          54.79 228  P         P        22 34 42.0 +1.2
DDI    Dehra Dun        55.59 280  eP        P        22 34 47.3 +0.7
DHRM   DHARAMSHALA      55.67 283  eP        P        22 34 46.2 -1.1
DHRM                               IAmb      IAmb     22 34 48.5
       comp=Z,137nm,0.9s
SMLA   Simla            55.73 281  eP        P        22 34 47.7 +0.3
DGPR   DIGLIPUR         56.35 254  eP        P        22 34 53.0 +1.0
DGPR                               IAmb      IAmb     22 34 54.4
       comp=Z,44nm,0.5s
KIRV   Kirov            56.76 322  P         P        22 34 52.5 -1.8
       comp=Z,7.0nm,0.5s,baz=80,slow=2.4,SNR=5.6
KIRV                               PcP       PcP      22 35 49.0 +0.4
       comp=Z,31nm,0.6s,baz=67,slow=0.7,SNR=14
NIL    Nilore           56.94 286  P         P        22 34 56.0  0.0
NIL                                pmax      pmax
       comp=Z,156nm,0.9s
NIL    Nilore           56.94 286  P         P        22 34 56.0  0.0
NIL    Nilore           56.94 286  P         P        22 34 56.7 +0.7
KULM   Kulim            57.24 241  P         P        22 34 58.4 +0.2
KULM   Kulim            57.24 241  P         P        22 34 59.0 +0.7
PBA    Port Blair       57.57 253  eP        P        22 35 01.2 +0.7
PBA                                IAmb      IAmb     22 35 04.8
       comp=Z,37nm,0.8s
PBA    Port Blair       57.57 253  P         P        22 35 00.4 -0.1
IPM    Ipoh             57.64 240  P         P        22 35 02.0 +0.9
DAG    Danmarks Havn    57.93 356  i P       P        22 34 58.8 -3.4
DAG    Danmarks Havn    57.93 356  i P       P        22 34 58.9 -3.4
TMCR   Tamitsa          57.93 331  eP        P        22 35 00.2 -2.2
TMCR                               pmax      pmax
       comp=Z,25nm,1.0s
ARCES  ARCESS Array B   58.02 340  P         P        22 35 01.8 -1.3
       comp=Z,10nm,0.9s,baz=46,slow=6.9,SNR=11
ARCES                              PcP       PcP      22 35 53.9 +0.4
       comp=Z,2.3nm,0.4s,baz=64,slow=4.2,SNR=14
ARCES                              LR        LR       23 03 59.8
       comp=Z,65nm,20.2s,baz=275,slow=40
COEN   Coen             59.12 185  P         P        22 35 10.6 -0.6
COEN                               IAmb      IAmb     22 35 14.5
       comp=Z,16nm,0.8s
KBL    Kabul            59.25 289  P         P        22 35 11.7 -0.6
KBL                                pmax      pmax
       comp=Z,64nm,0.7s
KBL    Kabul            59.25 289  P         P        22 35 11.7 -0.6
KBL    Kabul            59.25 289  P         P        22 35 11.7 -0.6
       SNR=27
KLMR   Klimovskoe       59.47 327  eP        P        22 35 10.2 -2.9
KLMR                               e*SP      sP       22 35 57.9 -0.1
KLMR                               pmax      pmax
       comp=Z,25nm,1.1s
KLMR   Klimovskoe       59.47 327  eP        P        22 35 10.2 -2.9
KLMR                               AMP                22 35 12.2
       comp=Z,25nm,1.1s
KLMR                               esP       sP       22 35 57.9 -0.1
B08A   Colville Reser   59.61  51  P         P        22 35 15.4 +1.0
MTN    Manton Dam       59.84 199  P         P        22 35 16.1  0.0
J01E   Myrtle Point     59.99  58  P         P        22 35 19.6 +2.6
       baz=306
I03D   Drain, OR        60.02  57  P         P        22 35 19.6 +2.4
       baz=306
H04A   Detroit Lake     60.13  55  P         P        22 35 18.5 +0.5
H04A                               IAmb      IAmb     22 35 20.6
       comp=Z,19nm,0.9s
PSI    Prapat           60.25 240  P         P        22 35 20.1 +0.9
       comp=Z,12nm,0.8s,baz=0.3,slow=4.2,SNR=9.1
G05D   Wamic, OR        60.31  54  P         P        22 35 20.9 +1.7
       baz=306
RPSI   Rantau Prapat    60.33 240  P         P        22 35 20.1 +0.5
E07A   Sunnyside        60.37  52  IAmb      IAmb     22 35 22.0
       comp=Z,12nm,1.2s
BHPL   Bhopal           60.41 274  eP        P        22 35 20.1 -0.1
BHPL                               IAmb      IAmb     22 35 21.6
       comp=Z,120nm,0.8s
DBG    Daneborg         60.44 356  i P       P        22 35 17.4 -2.1
C09A   Chrisman Ranch   60.52  51  IAmb      IAmb     22 35 24.2
       comp=Z,7.0nm,0.9s
I04A   Tendick Farm,    60.52  56  P         P        22 35 22.2 +1.6
       baz=306
D08A   Wollman Farm,    60.60  52  P         P        22 35 21.3 +0.3
L02E   Cave Junction    60.77  58  P         P        22 35 24.1 +1.8
       baz=306,SNR=6.3
I05D   Terrebonne, OR   60.83  55  P         P        22 35 24.6 +1.9
       baz=306
E08A   Dider Farm, El   60.85  52  P         P        22 35 23.1 +0.3
E08A                               IAmb      IAmb     22 35 26.0
       comp=Z,13nm,1.2s
J04D   Umpqua Nationa   61.02  57  P         P        22 35 26.3 +2.1
       baz=306
BELG   Belogornoye      61.20 317  P         P        22 35 23.6 -1.4
       comp=Z,22nm,0.6s,baz=78,slow=3.1,SNR=6.9
E09A   Wood Farm, Sta   61.35  52  P         P        22 35 26.4 +0.3
E09A                               IAmb      IAmb     22 35 29.0
       comp=Z,12nm,1.0s
PINE   Pine Mountain    61.38  56  P         P        22 35 26.8 +0.2
MNSI   Mandailing Nat   61.43 238  P         P        22 35 28.9 +1.9
J05D   Fort Rock, OR    61.51  56  P         P        22 35 29.6 +2.1
       baz=307,SNR=6.9
L04D   Klamath Falls    61.51  58  P         P        22 35 29.3 +1.8
       baz=307,SNR=7.9
K04D   Chiloquin, OR    61.60  57  P         P        22 35 30.1 +2.0
       baz=307
M02C   Callahan         61.68  59  P         P        22 35 30.8 +2.3
       baz=307
N02D   Trinity Center   62.02  59  P         P        22 35 32.9 +2.1
       baz=307
M04C   Macdoel          62.05  58  P         P        22 35 33.1 +2.0
       baz=307,SNR=7.3
WALA   Waterton Lakes   62.09  47  P         P        22 35 31.6 +0.4
F10A   Beach Ranch, E   62.18  52  P         P        22 35 32.0 +0.1
F10A                               IAmb      IAmb     22 35 35.9
       comp=Z,7.0nm,0.9s
GSI    Gunungsitoli     62.25 241  P         P        22 35 31.4 -1.1
GSI                                IAmb      IAmb     22 35 50.8
       comp=Z,18nm,0.8s
KCPM   Cahto Peak       62.26  61  IAmb      IAmb     22 35 35.2
       comp=Z,20nm,1.0s
WDC    Whiskeytown Da   62.35  59  P         P        22 35 33.0 +0.1
WDC                                pmax      pmax
       comp=Z,8.0nm,0.9s
WDC    Whiskeytown Da   62.35  59  P         P        22 35 33.0 +0.1
WDC                                IAmb      IAmb     22 35 35.5
       comp=Z,8.4nm,0.9s
SUMG   Summit           62.35   2  P         P        22 35 32.4 -0.5
SUMG                               pmax      pmax
       comp=Z,13nm,0.9s
SUMG   Summit           62.35   2  P         P        22 35 32.4 -0.5
SUMG                               IAmb      IAmb     22 35 44.4
       comp=Z,12nm,0.9s
SUMG   Summit           62.35   2  i P       P        22 35 32.2 -0.7
SUMG   Summit           62.35   2  i P       P        22 35 32.2 -0.7
O02D   Mt. Diablo Mer   62.45  60  P         P        22 35 35.6 +2.0
       baz=307,SNR=9.9
BMO    Blue Mountains   62.82  53  P         P        22 35 35.9 -0.2
BMO                                pmax      pmax
       comp=Z,2.0nm,0.8s
BMO    Blue Mountains   62.82  53  P         P        22 35 35.9 -0.2
MOD    Modoc Plateau    62.89  57  P         P        22 35 38.1 +1.4
MOD                                IAmb      IAmb     22 35 39.1
       comp=Z,8.0nm,0.8s
SANVU  Saraoutou        62.91 159  P         P        22 35 36.8 +0.1
O03E   Paynes Creek     62.97  59  P         P        22 35 38.1 +0.9
       baz=308,SNR=11
GDXM   Geysers          63.27  61  IAmb      IAmb     22 35 42.6
       comp=Z,9.7nm,1.0s
HYB    Hyderabad        63.43 268  i P       P        22 35 40.0 -0.4
       comp=Z,96nm,0.8s
HYB                                e                  22 36 15.5
HYB                                e                  22 36 36.0
HYB    Hyderabad        63.43 268  eP        P        22 35 40.4  0.0
HYB                                IAmb      IAmb     22 35 41.5
       comp=Z,77nm,0.5s
MSO    Missoula         63.45  49  P         P        22 35 41.4 +1.2
       baz=309,SNR=10
MSO    Missoula         63.45  49  IAmb      IAmb     22 35 43.6
       comp=Z,12nm,1.0s
WVOR   Wild Horse Val   63.55  56  IAmb      IAmb     22 35 43.4
       comp=Z,11nm,0.9s
MOS    Moscow           63.57 324  eP        P        22 35 37.5 -3.2
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MOS                                e                  22 36 13.7
FINES  FINESS Array B   63.79 333  P         P        22 35 40.3 -1.7
       comp=Z,23nm,0.5s,baz=39,slow=7.9,SNR=196
FINES                              PcP       PcP      22 36 16.4 -0.4
       comp=Z,9.2nm,0.6s,baz=72,slow=4.8,SNR=6.1
FINES                              LR        LR       23 05 16.8
       comp=Z,87nm,20.1s,baz=33,slow=38
FFC    Flin Flon        64.11  37  P         P        22 35 45.5 +1.2
FFC                                pmax      pmax
       comp=Z,5.0nm,0.7s
FFC    Flin Flon        64.11  37  P         P        22 35 45.5 +1.2
BEKR   Beckworth        64.11  59  IAmb      IAmb     22 35 46.8
       comp=Z,15nm,0.9s
GEYT   Alibeck          64.24 299  P         P        22 35 45.6 +0.1
       comp=Z,29nm,0.8s,baz=8.5,slow=3.0,SNR=61
GEYT                               LR        LR       23 04 03.8
       comp=Z,72nm,18.4s,baz=80,slow=36
FCC    Fort Churchill   64.39  31  P         P        22 35 47.3 +1.3
FCC                                pmax      pmax
       comp=Z,16nm,0.8s
FCC    Fort Churchill   64.39  31  P         P        22 35 47.3 +1.3
FCC                                IAmb      IAmb     22 35 48.3
       comp=Z,16nm,0.8s
OBN    Obninsk          64.44 324  eP        P        22 35 45.3 -1.1
OBN    Obninsk          64.44 324ceP         P        22 35 45.3 -1.1
OBN                                e                  22 36 18.4
OBN                                eS        S        22 44 12.1 -2.0
OBN                                eSS       SS       22 48 22.1 -3.6
OBN                                pmax      pmax
       comp=Z,33nm,1.3s
OBN    Obninsk          64.44 324  IAmb      IAmb     22 35 47.0
       comp=Z,12nm,0.8s
RUBR   Rubicon Trail    64.74  59  IAmb      IAmb     22 35 51.2
       comp=Z,14nm,0.8s
PAHR   Pah Rah Range    64.80  58  P         P        22 35 49.0 -0.2
PAHR                               IAmb      IAmb     22 35 51.4
       comp=Z,14nm,1.1s
EGMT   Eagleton         64.89  46  P         P        22 35 51.0 +1.4
       baz=310
EGMT   Eagleton         64.89  46  P         P        22 35 50.1 +0.6
EGMT                               IAmb      IAmb     22 35 51.5
       comp=Z,14nm,1.1s
PNTR   Pine Nut         65.05  59  IAmb      IAmb     22 35 53.5
       comp=Z,13nm,0.9s
DLMT   Dillon           65.10  50  IAmb      IAmb     22 35 54.0
       comp=Z,8.5nm,1.1s
CMB    Columbia Colle   65.24  60  IAmb      IAmb     22 35 54.2
       comp=Z,14nm,1.0s
HLID   Hailey           65.25  53  P         P        22 35 53.6 +1.5
       baz=310,SNR=9.4
SAO    San Andreas Ge   65.38  62  IAmb      IAmb     22 35 54.8
       comp=Z,9.4nm,1.0s
BOZ    Bozeman (W)      65.47  49  P         P        22 35 55.0 +1.5
       baz=310,SNR=17
BOZ    Bozeman (W)      65.47  49  IAmb      IAmb     22 35 55.7
       comp=Z,11nm,0.8s
WAKR   Walker           65.52  59  IAmb      IAmb     22 35 56.6
       comp=Z,13nm,1.0s
VSU    Vasula           65.80 330  eP        P        22 35 52.5 -2.6
VSU                                epP       PcP      22 36 25.0 -0.1
ICESG  Greenland Ices   65.81   3  i P       P        22 35 53.7 -1.7
BHUJ   Bhuj             65.85 279  eP        P        22 35 57.1 +1.1
BHUJ                               IAmb      IAmb     22 35 58.2
       comp=Z,71nm,0.6s
WB0    Warramunga Arr   65.91 194  P         P        22 35 56.4 +0.2
RYN    Ryan             66.00  59  IAmb      IAmb     22 35 59.4
       comp=Z,12nm,0.9s
POO    Poona            66.01 272  eP        P        22 35 55.5 -1.6
POO                                eP        P        22 35 57.4 +0.2
POO                                IAmb      IAmb     22 35 58.6
       comp=Z,116nm,0.7s
WR0    Warramunga Arr   66.08 194  IAmb      IAmb     22 35 58.2
       comp=Z,15nm,0.8s
WRAB   Tennant Creek    66.08 194ceP         P        22 35 57.2 -0.1
WRAB                               pmax      pmax
       comp=Z,43nm,1.3s
WRAB   Tennant Creek    66.08 194  P         P        22 35 57.4  0.0
WRA    Warramunga Arr   66.09 194  P         P        22 35 57.2 -0.2
       comp=Z,16nm,0.9s,baz=8.3,slow=6.8,SNR=71
WRA                                pP        pP       22 36 28.6 -1.1
       comp=Z,5.2nm,0.8s,baz=13,slow=6.4,SNR=3.1
NVAR   Mina Array Bea   66.25  59  P         P        22 36 00.1 +1.5
       comp=Z,12nm,0.9s,baz=294,slow=6.8,SNR=50
NVAR                               pP        pP       22 36 30.4 -0.5
       comp=Z,6.0nm,0.9s,baz=297,slow=6.7,SNR=4.0
MDPB   Devils Postpil   66.29  60  IAmb      IAmb     22 36 01.4
       comp=Z,9.0nm,0.9s
PAGB   Antelope Grade   66.78  62  IAmb      IAmb     22 36 04.3
       comp=Z,24nm,1.0s
H17A   Grant Village    66.82  50  P         P        22 36 05.2 +3.0
       baz=311,SNR=8.1
H17A   Grant Village    66.82  50  IAmb      IAmb     22 36 06.8
       comp=Z,12nm,0.9s
RLMT   Red Lodge        67.04  49  P         P        22 36 05.0 +1.4
       baz=312
TIN    Tinemaha, Big    67.18  60  P         P        22 36 06.3 +1.8
       baz=310
SMMC   Simmler          67.21  62  P         P        22 36 06.5 +2.0
       baz=310
REDW   Red Top Meadow   67.36  51  IAmb      IAmb     22 36 08.4
       comp=Z,8.8nm,0.9s
VES    Vestal, Richgr   67.44  61  P         P        22 36 06.7 +0.8
       baz=310
LAO    LASA Array       67.57  46  P         P        22 36 08.2 +1.5
       baz=313
PKM    Mcpherson Peak   67.59  63  P         P        22 36 08.6 +1.4
       baz=310,SNR=6.2
CWC    Cottonwood Cre   67.67  60  P         P        22 36 08.8 +1.2
       baz=310
GRAC   Grapevine Rang   67.75  60  P         P        22 36 09.5 +1.6
       baz=311,SNR=12
ISA    Isabella, Lake   67.93  61  P         P        22 36 09.7 +0.6
       baz=311,SNR=7.6
ISA    Isabella, Lake   67.93  61  IAmb      IAmb     22 36 10.4
       comp=Z,8.8nm,0.9s
R11A   Troy Canyon, C   67.94  57  P         P        22 36 10.4 +1.2
       baz=311,SNR=14
GOA    Goa              68.06 270  eP        P        22 36 10.3 +0.2
GOA                                IAmb      IAmb     22 36 10.8
       comp=Z,53nm,0.6s
AKT    Akhty            68.12 307  eP        P        22 36 10.4 +0.2
AKT                                e                  22 36 33.3
AKT                                e*PP      pP       22 36 42.9 +1.0
AKT                                e*SP      sP       22 36 59.4 +3.3
AKT                                pmax      pmax
       comp=Z,55nm,0.8s
HWUT   Hardware Ranch   68.12  53  IAmb      IAmb     22 36 12.8
       comp=Z,10.0nm,1.1s
IDID   Didziasalis      68.18 328  eP        P        22 36 09.2 -1.0
NC405  NORSAR Array S   68.20 339  IAmb      IAmb     22 36 19.4
       comp=Z,31nm,1.1s
ISAL   Salakas          68.21 329  eP        P        22 36 09.7 -0.7
GOF    Gofitskoye       68.26 313⇑eP         P        22 36 11.1 +0.2
GOF                                pmax      pmax
       comp=Z,61nm,0.8s
MPMC   Manual Prospec   68.28  60  P         P        22 36 12.6 +1.2
       baz=311,SNR=20
IIGN   Ignalina         68.35 329  eP        P        22 36 10.8 -0.5
DUG    Dugway, Tooele   68.35  54  P         P        22 36 13.3 +1.6
       baz=312,SNR=15
DUG    Dugway, Tooele   68.35  54  IAmb      IAmb     22 36 14.2
       comp=Z,14nm,0.9s
MNK    Minsk            68.37 327  i P       P        22 36 10.6 -0.8
       comp=E,5.0nm,1.1s
MNK                                i P       P        22 36 10.6 -0.8
       comp=N,42nm,1.2s
MNK                                i P       P        22 36 10.6 -0.8
       comp=Z,44nm,1.0s
MNK                                i PcP     PcP      22 36 34.8 -1.1
MNK                                i pP      pP       22 36 44.5 +1.7
MNK                                i PP      PP       22 38 43.1 -0.2
MNK                                i PPP     PPP      22 40 23.8
MNK                                i S       S        22 45 01.8 +0.2
MNK                                i ScS     ScS      22 45 58.3 +0.3
MNK                                i sS      SKKSac   22 46 00.4 +3.1
MNK                                i SS      SS       22 49 28.4 +1.9
MNK                                i SS      SS       22 49 28.4 +1.9
MNK                                i SSS     SSS      22 52 45.7
MNK                                i LRM     MLR      23 09 37.8
       comp=E,24nm,20.3s
MNK                                i LRM     MLR      23 09 46.5
       comp=N,675nm,24.6s
MNK                                i LRM     MLR      23 09 51.6
       comp=Z,184nm,23.2s
NB2    NORSAR Subarra   68.39 339  P         P        22 36 09.4 -2.1
       comp=Z,3.9nm,0.6s,baz=30,slow=6.5
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NOA    NORSAR Array B   68.39 339  P         P        22 36 09.9 -1.6
       comp=Z,9.6nm,0.9s,baz=31,slow=6.6,SNR=29
NOA                                LR        LR       23 10 05.6
       comp=Z,42nm,19.8s,baz=10.0,slow=39
FURC   Furnace Creek,   68.40  60  P         P        22 36 13.5 +1.7
       baz=311,SNR=24
TPNV   Topopah Spring   68.45  59  P         P        22 36 13.8 +1.4
       baz=311,SNR=16
TPNV   Topopah Spring   68.45  59  IAmb      IAmb     22 36 14.8
       comp=Z,16nm,0.9s
OSI    Osito Audit: C   68.45  62  P         P        22 36 14.0 +1.6
       baz=311
OSI    Osito Audit: C   68.45  62  IAmb      IAmb     22 36 14.6
       comp=Z,20nm,0.8s
BW06   Boulder Array    68.46  51  P         P        22 36 13.5 +1.0
       baz=312,SNR=10
BW06   Boulder Array    68.46  51  P         P        22 36 12.7 +0.2
PD31   Pinedale Array   68.46  51  P         P        22 36 12.7 +0.2
PDAR   Pinedale Array   68.46  51  P         P        22 36 13.4 +0.9
       comp=Z,5.9nm,0.8s,baz=280,slow=1.7,SNR=46
PDAR                               pP        pP       22 36 45.0  0.0
       comp=Z,4.0nm,0.6s,baz=271,slow=1.6,SNR=6.1
PDAR                               LR        LR       23 06 03.6
       comp=Z,29nm,19.2s,baz=333,slow=36
NACGM  Naroch           68.48 328  i P       P        22 36 10.7 -1.4
NACGM                              i P       P        22 36 10.7 -1.4
NACGM                              i P       P        22 36 10.7 -1.4
NACGM                              i Pb      PcP      22 36 12.8  -24
       comp=Z,56nm,1.1s
NACGM                              i pP      pP       22 36 42.4 -1.1
NACGM                              i sP      sP       22 36 56.8 -0.8
NACGM                              i PP      PP       22 38 42.8 -1.4
NACGM                              i PPP     PPP      22 40 23.3
NACGM                              i S       S        22 45 01.7 -1.2
NACGM                              i sS      SKKSac   22 45 58.3 +0.2
NACGM                              i SS      SS       22 50 37.5  +69
NACGM                              i SSS     SSS      22 53 12.0
LRMC   Laurel Mtn Rad   68.54  61  P         P        22 36 14.2 +1.2
       baz=311,SNR=7.0
EDW2   Edwards Air Fo   68.74  62  P         P        22 36 15.4 +1.3
       baz=311,SNR=19
DECC   Green Verdugo    68.93  62  P         P        22 36 16.6 +1.2
       baz=311
PALK   Pallekele        68.94 259  P         P        22 36 15.5 -0.1
PALK                               pmax      pmax
       comp=Z,27nm,0.9s
PALK   Pallekele        68.94 259  P         P        22 36 15.5 -0.1
PALK                               IAmb      IAmb     22 36 17.2
       comp=Z,27nm,0.9s
PALK   Pallekele        68.94 259  P         P        22 36 16.1 +0.5
PABE   Paberze          69.04 330  eP        P        22 36 14.8 -0.8
DZM    Mont Dzumac      69.11 162  eP        P        22 36 15.4 -1.0
       comp=Z,149nm,1.1s
MWC    Mount Wilson     69.13  62  IAmb      IAmb     22 36 18.7
       comp=Z,17nm,1.1s
GSC    Goldstone, Bar   69.19  61  P         P        22 36 18.1 +1.1
       baz=311,SNR=9.6
GSC    Goldstone, Bar   69.19  61  IAmb      IAmb     22 36 19.0
       comp=Z,12nm,0.9s
KIV    Kislovodsk       69.19 312  ⇑P        P        22 36 17.5 +0.6
KIV    Kislovodsk       69.19 312  i P       P        22 36 17.4 +0.6
       SNR=12
KIV    Kislovodsk       69.19 312  eP        P        22 36 17.3 +0.5
KIV    Kislovodsk       69.19 312  eP        P        22 36 17.3 +0.5
KIV                                i                  22 36 54.5
KIV                                e                  22 38 50.3
KIV                                pmax      pmax
       comp=Z,69nm,1.4s
KIV                                MLR       MLR
       comp=Z,81nm,19.0s
KIV    Kislovodsk       69.19 312  P         P        22 36 17.3 +0.5
KIV    Kislovodsk       69.19 312  P         P        22 36 17.4 +0.5
KBZ    Khabaz           69.24 312  P         P        22 36 17.3 +0.3
       comp=Z,31nm,0.9s,baz=128,slow=2.8,SNR=50
KBZ                                LR        LR       23 11 08.3
       comp=Z,145nm,18.2s,baz=40,slow=40
ZEI    Tsey             69.34 310  eP        P        22 36 16.7 -1.2
ZEI                                pmax      pmax
       comp=Z,26nm,1.0s
BFSC   Mount Baldy Ra   69.36  62  P         P        22 36 19.2 +1.1
       baz=311,SNR=11
SHPR   Sheep Range      69.40  59  IAmb      IAmb     22 36 20.9
       comp=Z,11nm,1.0s
HEC    Hector,Ludlow    69.80  61  P         P        22 36 21.9 +1.2
       baz=312,SNR=20
AS31   Alice Springs    69.81 194  P         P        22 36 20.3 -0.3
ASAR   Alice Springs    69.81 194  P         P        22 36 21.6 +0.9
       comp=Z,14nm,0.7s,baz=10,slow=5.6,SNR=104
ULM    Lac du Bonnet    69.91  38  P         P        22 36 21.1 +0.1
       comp=Z,2.6nm,0.5s,baz=316,slow=5.9,SNR=7.6
ULM                                pP        pP       22 36 53.8 +0.2
       comp=Z,3.3nm,0.5s,baz=303,slow=6.4,SNR=4.0
P17A   Butcher Ranch,   70.02  54  P         P        22 36 22.1  0.0
MURC   Murrieta         70.08  62  P         P        22 36 23.4 +1.1
       baz=312,SNR=7.4
Q16A   Castle Valley    70.14  55  P         P        22 36 22.9  0.0
K22A   Casper           70.17  49  P         P        22 36 23.7 +0.7
       baz=314
LCMT   Little Creek M   70.21  57  P         P        22 36 23.5 +0.2
GMRC   Granite Mounta   70.24  60  P         P        22 36 24.7 +1.2
       baz=312,SNR=13
CHVG   Ch'k'valeri      70.36 311  ⇑P        P        22 36 25.0 +1.1
CHVG   Ch'k'valeri      70.36 311  ⇑P        P        22 36 25.0 +1.1
EIDS   Eidsvold         70.37 177  IAmb      IAmb     22 36 27.0
       comp=Z,32nm,1.1s
RSSD   Black Hills      70.45  47  P         P        22 36 24.4 -0.3
RSSD                               pmax      pmax
       comp=Z,5.0nm,0.8s
RSSD   Black Hills      70.45  47  P         P        22 36 25.7 +0.9
       baz=315
RSSD   Black Hills      70.45  47  P         P        22 36 24.4 -0.3
KNB    Kanab            70.46  57  P         P        22 36 25.0 +0.2
KNB                                pmax      pmax
       comp=Z,13nm,0.9s
KNB    Kanab            70.46  57  P         P        22 36 25.0 +0.2
SUW    Suwalki          70.50 329  eP        P        22 36 23.8 -0.7
PFO    Pinyon Flats O   70.53  62  P         P        22 36 25.5 +0.3
PFO                                pmax      pmax
       comp=Z,9.0nm,1.0s
PFO    Pinyon Flats O   70.53  62  P         P        22 36 26.0 +0.8
       baz=312,SNR=6.2
PFO    Pinyon Flats O   70.53  62  P         P        22 36 25.5 +0.3
BELC   Belle Mtn. Jos   70.55  61  P         P        22 36 26.0 +0.6
       baz=312,SNR=9.9
109C   Camp Elliot, M   70.60  63  P         P        22 36 27.0 +1.5
       baz=312
109C   Camp Elliot, M   70.60  63  IAmb      IAmb     22 36 27.9
       comp=Z,21nm,0.9s
GNI    Garni            70.69 308  P         P        22 36 27.7 +1.6
GNI    Garni            70.69 308  i P       P        22 36 27.5 +1.4
GNI                                pmax      pmax
       comp=Z,61nm,1.4s
GNI    Garni            70.69 308  P         P        22 36 25.8 -0.3
GNI    Garni            70.69 308  P         P        22 36 26.6 +0.5
AKASG  Malin Array Be   70.70 324  P         P        22 36 24.4 -1.4
       comp=Z,11nm,0.6s,baz=37,slow=6.3,SNR=43
AKBB   Malin Array Si   70.70 324  IAmb      IAmb     22 36 26.0
       comp=Z,23nm,0.8s
O20A   White River Ci   70.97  52  P         P        22 36 28.9 +1.0
       baz=314,SNR=5.1
IRM    Iron Mountain    70.97  61  P         P        22 36 29.3 +1.5
       baz=312,SNR=13
BAR    Barrett          71.01  63  P         P        22 36 28.2 +0.1
BAR                                IAmb      IAmb     22 36 29.9
       comp=Z,13nm,0.9s
MONP2  Monument Peak    71.03  62  P         P        22 36 29.1 +0.7
       baz=312,SNR=5.5
W13A   Hualapai Mount   71.11  59  P         P        22 36 28.5 -0.4
BC3    Big Chuckawall   71.12  61  P         P        22 36 29.7 +0.9
       baz=312,SNR=9.1
U15A   North Rim        71.17  57  IAmb      IAmb     22 36 31.9
       comp=Z,12nm,0.8s
IKP    In-Ko-Pah, Jac   71.39  62  P         P        22 36 31.6 +1.2
       baz=312,SNR=7.4
PDMCI  Parker Dam,Lak   71.49  60  P         P        22 36 32.3 +1.5
       baz=313,SNR=6.5
PV23   Carpenter Ridg   71.70  54  P         P        22 36 32.3 -0.1
PV23                               IAmb      IAmb     22 36 34.5
       comp=Z,19nm,1.0s
PV10   Paradox Valley   71.73  54  P         P        22 36 32.7 +0.2
PV14   Lion Creek, Pa   71.74  54  IAmb      IAmb     22 36 34.6
       comp=Z,16nm,0.9s
PV22   Blue Mesa, Par   71.77  54  P         P        22 36 32.7  0.0
PV22                               IAmb      IAmb     22 36 34.8
       comp=Z,16nm,0.9s
PV04   Paradox Valley   71.80  54  IAmb      IAmb     22 36 35.1
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      comp=Z,14nm,0.8s
PV20  West Nyswonger   71.80  54   IAmb   IAmb   22 36 35.0
      comp=Z,15nm,0.9s
PV19  Morning Glory    71.81  54   P      P      22 36 32.8 -0.2
PV19                               IAmb   IAmb   22 36 35.1
      comp=Z,21nm,0.9s
PV17  East Wray Mesa   71.84  54   P      P      22 36 32.9 -0.3
PV16  Nyswonger Mesa   71.85  54   IAmb   IAmb   22 36 35.3
      comp=Z,19nm,1.0s
PV11  David Mesa, Pa   71.88  54   IAmb   IAmb   22 36 36.7
      comp=Z,18nm,0.8s
PV18  Skein Mesa, Pa   71.90  54   IAmb   IAmb   22 36 35.6
      comp=Z,19nm,0.9s
PV05  Paradox Valley   71.90  54   P      P      22 36 33.5  0.0
PV05                               IAmb   IAmb   22 36 35.8
      comp=Z,23nm,0.9s
PV12  Saucer Basin,    71.91  54   P      P      22 36 33.2 -0.3
PV12                               IAmb   IAmb   22 36 36.6
      comp=Z,13nm,1.0s
PV07  Paradox Valley   71.91  53   P      P      22 36 33.5 -0.1
PV03  Paradox Valley   71.93  54   P      P      22 36 33.6 -0.1
PV03                               IAmb   IAmb   22 36 35.8
      comp=Z,12nm,0.8s
PV13  Radium Mtn., P   72.01  54   P      P      22 36 34.2  0.0
PV13                               IAmb   IAmb   22 36 36.3
      comp=Z,17nm,0.7s
PV15  Paradox Valley   72.07  53   IAmb   IAmb   22 36 37.1
      comp=Z,17nm,1.1s
PV01  Paradox Valley   72.17  54   P      P      22 36 35.1  0.0
WUAZ  Wupatki          72.34  57   P      P      22 36 38.0 +1.9
      baz=313,SNR=6.9
WUAZ  Wupatki          72.34  57   P      P      22 36 36.0  0.0
SMCO  Snowmass         72.34  52   P      P      22 36 36.2 -0.1
ISCO  Idaho Springs    72.65  51   P      P      22 36 38.1  0.0
ISCO                               pmax   pmax
      comp=Z,5.0nm,0.8s
ISCO  Idaho Springs    72.65  51   P      P      22 36 39.9 +1.8
      baz=315,SNR=6.2
ISCO  Idaho Springs    72.65  51   P      P      22 36 38.1  0.0
MVCO  Mesa Verde       72.85  54   P      P      22 36 40.3 +1.1
      baz=314,SNR=8.5
MVCO  Mesa Verde       72.85  54   P      P      22 36 39.2  0.0
MVCO                               IAmb   IAmb   22 36 41.3
      comp=Z,13nm,0.9s
SORM  Soroca           73.03 323 ⇑P     P      22 36 38.6 -1.1
SORM  Soroca           73.03 323 ⇑P     P      22 36 38.6 -1.1
X16A  Lo Mia Camp, P   73.05  58   P      P      22 36 40.2 -0.1
X16A                               IAmb   IAmb   22 36 43.5
      comp=Z,15nm,0.8s
KOPT  Kop Dagi         73.11 310   IAmb   IAmb   22 36 43.9
      comp=Z,27nm,1.0s
BEL   Belsk            73.11 329  eP      P      22 36 40.0 -0.1
GKP   Gorka Klasztor   73.18 332  eP      P      22 36 39.4 -1.1
BANOM Banah            73.20 290  i P     P      22 36 41.5 +0.4
      SNR=52
BANOM Banah            73.20 290   P      P      22 36 42.0 +0.8
      SNR=13
SHME  Shamm            73.22 290  i P     P      22 36 41.5 +0.2
      SNR=19
SHME  Shamm            73.22 290   P      P      22 36 42.6 +1.4
      SNR=5.7
S22A  4UR Ranch, Cre   73.42  53   P      P      22 36 44.6 +2.0
      baz=315,SNR=11
S22A  4UR Ranch, Cre   73.42  53   P      P      22 36 42.1 -0.5
LVV   L'vov            73.50 326  eP      P      22 36 42.3 -0.2
Q24A  Divide           73.50  51   P      P      22 36 44.6 +1.5
      baz=315,SNR=5.8
Q24A  Divide           73.50  51   P      P      22 36 42.9 -0.2
EYMN  Ely              73.54  37   P      P      22 36 43.6 +0.9
      baz=321
BIDO  Bidbid           73.59 287   P      P      22 36 46.0 +2.5
      SNR=8.0
MDH   Madha            73.62 289  i P     P      22 36 43.3 -0.3
      SNR=16
MDH   Madha            73.62 289   P      P      22 36 44.0 +0.4
      SNR=11
WBK   Wadi Bani Khal   73.64 286   P      P      22 36 46.0 +2.3
      SNR=7.5
JLN   Jalan Bani Buh   73.64 285   P      P      22 36 46.0 +2.2
      SNR=16
MASF  Masafi           73.67 290   P      P      22 36 45.1 +1.2
      SNR=10
MSFE  Esma-Masafi      73.67 290  i P     P      22 36 44.2 +0.2
      SNR=15
MILM  Milestii Mici    73.76 321 ⇓P     P      22 36 43.0 -1.1
X18A  Snowflake        73.86  57   P      P      22 36 45.0 -0.1
UMQ   Umm Al-Quwin     73.89 290   P      P      22 36 46.3 +1.2
214A  Organ Pipe Nat   73.91  61   P      P      22 36 46.1 +0.9
      baz=314
UOSS  Minazif          73.92 289  i P     P      22 36 45.4  0.0
      SNR=14
UOSS  Minazif          73.92 289   P      P      22 36 45.1 -0.3
UOSS  Minazif          73.92 289   P      P      22 36 44.9 -0.5
SMDO  Samad            73.96 287   P      P      22 36 48.0 +2.3
      SNR=7.0
HATD  Hatta, Dubai     74.05 289  i P     P      22 36 46.5 +0.4
      SNR=51
HATD  Hatta, Dubai     74.05 289   P      P      22 36 47.0 +0.8
      SNR=26
IAS   Iasi             74.09 322 ⇑P     P      22 36 45.7 -0.2
IAS   Iasi             74.09 322 ⇑P     P      22 36 45.7 -0.2
HOQ   Hoqain           74.10 287   P      P      22 36 47.3 +0.9
      SNR=12
KWP   Kalwaria Pacla   74.17 327  eP      P      22 36 46.5 +0.1
KWP   Kalwaria Pacla   74.17 327   P      P      22 36 46.7 +0.3
KWP                                pmax   pmax
      comp=Z,43nm,1.0s
KWP   Kalwaria Pacla   74.17 327   P      P      22 36 46.7 +0.3
SDCO  Great Sand Dun   74.17  52   P      P      22 36 48.2 +1.2
      baz=315,SNR=5.8
SDCO  Great Sand Dun   74.17  52   P      P      22 36 47.1 +0.1
ASHO  Ashiyiah         74.20 289  i P     P      22 36 47.3 +0.3
      SNR=44
ASHO  Ashiyiah         74.20 289   P      P      22 36 48.0 +1.0
      SNR=23
SOHO  SOHO             74.25 288  i P     P      22 36 47.3  0.0
      SNR=35
SOHO  SOHO             74.25 288   P      P      22 36 47.6 +0.3
NAZ   Nazwa, Dubai     74.25 290  i P     P      22 36 47.5 +0.3
      SNR=24
NAZ   Nazwa, Dubai     74.25 290   P      P      22 36 48.0 +0.7
      SNR=9.1
JMDO  Jabal Madar      74.39 286   P      P      22 36 49.2 +1.1
      SNR=14
ECSD  EROS Data Cent   74.42  43   P      P      22 36 48.9 +0.9
      baz=319
ECSD  EROS Data Cent   74.42  43   P      P      22 36 48.5 +0.5
FAQ   Al Faqa, Dubai   74.47 289  i P     P      22 36 48.5  0.0
      SNR=40
FAQ   Al Faqa, Dubai   74.47 289   P      P      22 36 49.0 +0.5
      SNR=13
ASUD  Al Ashush, Dub   74.72 290  i P     P      22 36 50.6 +0.6
      SNR=36
ASUD  Al Ashush, Dub   74.72 290   P      P      22 36 51.0 +1.0
      SNR=14
BUR08 Bucovina Ar. S   74.74 324   P      P      22 36 49.7 -0.2
BUR08                              IAmb   IAmb   22 36 52.3
      comp=Z,10.0nm,0.8s
BSY   Bisya            74.75 287   P      P      22 36 52.0 +1.8
      SNR=15
BURAR Bucovina Array   74.76 324 ⇑P     P      22 36 49.2 -0.8
BURAR Bucovina Array   74.76 324 ⇑P     P      22 36 49.2 -0.8
BIR   Birlad           74.78 322 ⇑P     P      22 36 51.3 +1.3
BIR   Birlad           74.78 322 ⇑P     P      22 36 51.3 +1.3
OJC   Ojcow            74.79 328  eP      P      22 36 49.7 -0.3
OJC   Ojcow            74.79 328   P      P      22 36 50.1 +0.1
OJC                                pmax   pmax
      comp=Z,19nm,1.0s
OJC   Ojcow            74.79 328   P      P      22 36 50.0 +0.1
OJC                                IAmb   IAmb   22 36 50.8
      comp=Z,19nm,1.0s
ARQ   Araqi            74.80 288   P      P      22 36 52.0 +1.5
      SNR=9.8
ALNE  Al Ain           74.83 289  i P     P      22 36 51.0 +0.4
      SNR=18
ALNE  Al Ain           74.83 289   P      P      22 36 51.3 +0.7
      SNR=22
MARD  Mardin           74.88 308   P      P      22 36 51.0 +0.2
KOLS  Kolonicke sedl   74.90 326  eP      P      22 36 50.3 -0.3
KOLS                               pmax   pmax
      comp=Z,10.0nm,1.0s
KOLS  Kolonicke sedl   74.90 326  eP      P      22 36 50.3 -0.3
TUC   Tucson           74.90  59   P      P      22 36 50.9 -0.1
TUC                                pmax   pmax
      comp=Z,9.0nm,1.0s
TUC   Tucson           74.90  59   P      P      22 36 52.4 +1.4
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      baz=314
TUC   Tucson           74.90  59   P      P      22 36 50.9 -0.1
BIZ   Bicaz            74.92 323 ⇑P     P      22 36 50.6 -0.2
AJN   Ajban            74.99 290  i P     P      22 36 51.4 -0.1
      SNR=5.6
AJN   Ajban            74.99 290   P      P      22 36 51.7 +0.2
      SNR=7.6
TESR  Tescani          75.02 322 ⇑P     P      22 36 50.4 -0.9
TLCR                   75.09 320 ⇑P     P      22 36 51.7  0.0
TLCR                   75.09 320 ⇑P     P      22 36 51.7  0.0
UZH   Uzhgorod         75.13 326  eP      P      22 36 50.8 -1.1
UZH                               i              22 37 07.2
T25A  Trinidad         75.21  52   P      P      22 36 53.8 +0.9
      baz=316
T25A  Trinidad         75.21  52   P      P      22 36 53.1 +0.2
T25A                               IAmb   IAmb   22 36 54.9
      comp=Z,12nm,0.9s
CRVS  Cervenica-Dubn   75.24 327  eP      P      22 36 52.7 +0.1
CRVS  Cervenica-Dubn   75.24 327  eP      P      22 36 52.7 +0.1
NIE   Niedzica         75.26 328  eP      P      22 36 53.4 +0.7
CFR   Carcaliu         75.40 321 ⇑P     P      22 36 52.9 -0.6
CFR   Carcaliu         75.40 321 ⇑P     P      22 36 52.9 -0.6
ARMA  Armidale         75.41 177   IAmb   IAmb   22 36 57.3
      comp=Z,28nm,1.0s
MHTO  MHTO             75.42 285   P      P      22 36 55.2 +1.2
      SNR=33
ODBI  Odobesti         75.43 322 ⇑P     P      22 36 55.2 +1.5
VRI   Vrincioaia       75.49 322 ⇑P     P      22 36 54.1  0.0
VRI   Vrincioaia       75.49 322 ⇑P     P      22 36 54.1  0.0
TPGR  Topolog          75.53 320 ⇑P     P      22 36 53.6 -0.7
KSP   Ksiaz            75.53 331  eP      P      22 36 53.7 -0.4
PLOR  Plostina         75.53 322 ⇑P     P      22 36 54.5 +0.1
PLOR  Plostina         75.53 322 ⇑P     P      22 36 54.5 +0.1
ARCR  ARCALIA          75.54 324 ⇑P     P      22 36 55.0 +0.8
ANMO  Albuquerque      75.61  55ceP     P      22 36 56.6 +1.4
ANMO                               pmax   pmax
      comp=Z,6.0nm,0.9s
ANMO  Albuquerque      75.61  55   P      P      22 36 56.7 +1.5
      baz=316
ANMO  Albuquerque      75.61  55   P      P      22 36 55.8 +0.6
OKC   Ostrava-Krasne   75.71 329  eP      P      22 36 55.3 +0.1
OKC   Ostrava-Krasne   75.71 329  eP      P      22 36 55.3 +0.1
OZUR                   75.72 323 ⇑P     P      22 36 56.3 +0.9
LANS  Liptovska Anna   75.79 328  eP      P      22 36 56.6 +0.8
LANS                               pmax   pmax
      comp=Z,13nm,1.0s
LANS  Liptovska Anna   75.79 328  eP      P      22 36 56.5 +0.8
CHVC  Chvalec          75.83 331  eP      P      22 36 56.0 +0.1
TIRR  Tirgusor         75.84 320 ⇑P     P      22 36 56.7 +0.7
TIRR  Tirgusor         75.84 320 ⇑P     P      22 36 56.7 +0.7
TIRR  Tirgusor         75.84 320 ⇑P     P      22 36 56.7 +0.7
HARR  Harsova          75.87 320 ⇑P     P      22 36 55.9 -0.3
HARR  Harsova          75.87 320 ⇑P     P      22 36 55.9 -0.3
UPC   Upice            75.91 331  eP      P      22 36 56.6 +0.3
UPC   Upice            75.91 331  eP      P      22 36 56.6 +0.3
DPC   Dobruska-Polom   75.93 330  eP      P      22 36 57.1 +0.6
DPC                               ePCP    PcP    22 37 06.3 -2.1
TLBR  Topalu           75.93 320 ⇓P     P      22 36 56.2 -0.3
KECS  Kecovo           75.95 327  eP      P      22 36 56.2 -0.4
KECS  Kecovo           75.95 327  eP      P      22 36 56.2 -0.4
MORC  Moravsky Berou   75.98 329 ⇑P     P      22 36 57.1 +0.3
MORC  Moravsky Berou   75.98 329  eP      P      22 36 56.8  0.0
MORC  Moravsky Berou   75.98 329 ⇑P     P      22 36 57.1 +0.3
MORC  Moravsky Berou   75.98 329   P      P      22 36 57.2 +0.4
MORC                               IAmb   IAmb   22 36 57.9
      comp=Z,22nm,1.0s
DOPR  Dopca            75.99 323 ⇑P     P      22 36 58.5 +1.6
BNM   Barren Site      76.08  55   P      P      22 36 58.0 +0.1
MLR   Muntele Rosu     76.12 322 ⇑P     P      22 36 58.6 +0.8
MLR   Muntele Rosu     76.12 322 ⇑P     P      22 36 58.6 +0.8
MLR   Muntele Rosu     76.12 322   P      P      22 36 57.5 -0.4
MLR                                IAmb   IAmb   22 36 59.8
      comp=Z,20nm,0.9s
CJR   Cluj-Napoca      76.15 324 ⇑P     P      22 36 58.0 +0.2
CJR   Cluj-Napoca      76.15 324 ⇑P     P      22 36 58.0 +0.2
ISR   Istrita          76.16 322 ⇑P     P      22 36 58.6 +0.7
ISR   Istrita          76.16 322 ⇑P     P      22 36 58.6 +0.7
AMRR  Amara            76.20 321 ⇑P     P      22 36 58.7 +0.6
AMRR  Amara            76.20 321 ⇑P     P      22 36 58.7 +0.6
CLL   Collm            76.23 333  i P     P      22 36 56.3 -1.8
      comp=Z,18nm,0.7s
CLL                               i              22 37 04.8
CLL                               ePP     PP     22 39 47.0 -3.3
CLL   Collm            76.23 333   IAmb   IAmb   22 36 58.7
      comp=Z,21nm,1.0s
LTVH  Ltavrtes, Hu     76.30 326  eP      P      22 36 60.0 +1.4
MIB   Mutribah         76.31 298  eP             22 36 58.8
ICOR  Ion Corvin       76.38 320 ⇑P     P      22 36 59.9 +0.8
DRGR                   76.45 325 ⇑P     P      22 36 59.2 -0.4
DRGR                   76.45 325 ⇑P     P      22 36 59.2 -0.4
319A  Douglas          76.47  59   P      P      22 36 59.9 -0.1
121A  Cookes Peak, D   76.55  57   P      P      22 37 02.5 +2.0
      baz=315,SNR=6.4
VOIR                   76.55 323 ⇑P     P      22 37 00.8 +0.6
VOIR                   76.55 323 ⇑P     P      22 37 00.8 +0.6
VYHS  Vyhne            76.57 328  eP      P      22 37 00.3 +0.2
VYHS                               pmax   pmax
      comp=Z,19nm,1.3s
VYHS  Vyhne            76.57 328  eP      P      22 37 00.3 +0.2
PSZ   Piszkesteto      76.64 327  eP      P      22 37 01.4 +0.7
PSZ   Piszkesteto      76.64 327   P      P      22 37 01.4 +0.7
PSZ                                pmax   pmax
      comp=Z,11nm,1.0s
PSZ   Piszkesteto      76.64 327   P      P      22 37 01.4 +0.7
PSZ                                IAmb   IAmb   22 37 01.5
      comp=Z,11nm,1.0s
QRN   Al-Qurain        76.69 297  eP             22 37 01.4
JAVC  Velka Javorina   76.70 329  eP      P      22 37 02.0 +1.1
VRAC  Vranov           76.71 330 ⇑P     P      22 37 00.5 -0.4
VRAC  Vranov           76.71 330  eP      P      22 37 01.0 +0.1
VRAC  Vranov           76.71 330 ⇑P     P      22 37 00.5 -0.4
RST   Umm Al-Ruwaisa   76.73 298  eP             22 37 01.0
ARR   Arges            76.79 323 ⇑P     P      22 37 03.9 +2.4
RDF   Al-Radifah       76.79 298  eP             22 37 01.9
PRU   Pruhonice        76.85 331  eP      P      22 37 01.3 -0.4
PRU                               e              22 37 15.7
PRU   Pruhonice        76.85 331  eP      P      22 37 01.3 -0.4
PRU                               ex      x      22 37 15.7
BR131 Keskin Array S   76.92 314   P      P      22 37 02.4  0.0
BR131                              pmax   pmax
      comp=Z,42nm,0.9s
BR131 Keskin Array S   76.92 314   P      P      22 37 02.4  0.0
BRTR  Keskin Array B   76.92 314   P      P      22 37 02.7 +0.2
      comp=Z,20nm,0.9s,baz=72,slow=4.5,SNR=71
BRTR                               LR     LR     23 17 43.8
      comp=Z,24nm,18.2s,baz=52,slow=41
BRTR  Keskin Array B   76.92 314  i P     P      22 37 02.7 +0.2
BRTR                               pmax   pmax
      comp=Z,21nm,0.9s
GAZ   Gaziantep        76.94 310   P      P      22 37 02.5  0.0
GAZ                                IAmb   IAmb   22 37 04.9
      comp=Z,22nm,1.0s
KRUC  Moravsky         76.99 330  eP      P      22 37 02.5  0.0
STKA  Stephens Creek   77.02 186   P      P      22 37 04.0 +1.4
      comp=Z,11nm,0.8s,baz=359,slow=8.2,SNR=17
STKA  Stephens Creek   77.02 186   P      P      22 37 03.0 +0.4
STKA                               pmax   pmax
      comp=Z,4.0nm,1.1s
STKA  Stephens Creek   77.02 186   P      P      22 37 03.0 +0.4
SMOL  Smolenice        77.08 329  eP      P      22 37 03.7 +0.7
SMOL                               pmax   pmax
      comp=Z,6.0nm,0.8s
SMOL  Smolenice        77.08 329  eP      P      22 37 03.7 +0.7
MODS  Modra-Piesok     77.25 329  eP      P      22 37 03.6 -0.3
MODS                               pmax   pmax
      comp=Z,38nm,1.5s
MODS  Modra-Piesok     77.25 329  eP      P      22 37 03.6 -0.3
SIRR  Siria            77.30 325 ⇑P     P      22 37 04.6 +0.3
SRO   Srobarova        77.33 328  eP      P      22 37 04.9 +0.5
SRO   Srobarova        77.33 328  eP      P      22 37 04.9 +0.5
BUD   Budapest         77.34 327  eP      P      22 37 05.1 +0.7
NKC   Novy Kostel      77.34 333  eP      P      22 37 04.1 -0.3
NKC   Novy Kostel      77.34 333  eP      P      22 37 04.1 -0.3
MATQ  Matagami         77.35  28   P      P      22 37 05.2 +0.8
      baz=329
COPA  Copaceanca       77.51 322 ⇑P     P      22 37 04.7 -0.8
GZR   Gura Zlata       77.55 324 ⇑P     P      22 37 05.0 -0.7
GZR   Gura Zlata       77.55 324 ⇑P     P      22 37 05.0 -0.7
MDUB  Mudurnu          77.58 316   P      P      22 37 06.4 +0.3
CSKK  Cskako           77.73 328  eP      P      22 37 07.1 +0.5
BZS   Buzias           77.84 325 ⇑P     P      22 37 06.6 -0.7
BZS   Buzias           77.84 325 ⇑P     P      22 37 06.6 -0.7
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KHC   Kasperske Hory   77.91 331ceP     P      22 37 06.6 -1.0
KHC                                pmax   pmax
      comp=Z,59nm,1.3s
KHC   Kasperske Hory   77.91 331  eP      P      22 37 07.6  0.0
KHC                               ex      x      22 37 12.0
KHC   Kasperske Hory   77.91 331   P      P      22 37 07.8 +0.1
KHC                                IAmb   IAmb   22 37 08.9
      comp=Z,24nm,1.1s
EGYH  Egyhazaskeszo    78.03 328  eP      P      22 37 05.3 -2.9
SOP   Sopron           78.09 329  eP      P      22 37 08.3 -0.3
HERR  Herculane        78.11 324 ⇑P     P      22 37 08.1 -0.7
GERES GERESS Array B   78.11 331   P      P      22 37 08.6 -0.3
      comp=Z,4.3nm,0.8s,baz=37,slow=5.2,SNR=28
GERES                              LR     LR     23 15 24.9
      comp=Z,63nm,20.0s,baz=7.0,slow=38
CONA  Conrad Observa   78.14 329  eP      P      22 37 09.2 +0.3
      comp=Z,16nm,0.9s,SNR=6.6
MPLH  Magyarpolny      78.16 328  eP      P      22 37 08.5 -0.5
GRA1  Grafenberg Arr   78.20 333   IAmb   IAmb   22 37 10.4
      comp=Z,23nm,1.1s
GRF   Grafenberg Arr   78.20 333  eP      P      22 37 09.0 -0.2
      comp=Z,23nm,1.2s,baz=26,slow=4.7
GRF                               epP     pwP    22 37 46.8 +1.3
BANR  Banloc           78.23 325 ⇑P     P      22 37 09.2 -0.1
CHGQ  Chibougamau      78.28  26   P      P      22 37 09.7 +0.1
      baz=331
AMTX  Amarillo         78.36  52   P      P      22 37 11.8 +1.4
      baz=318
AMTX  Amarillo         78.36  52   IAmb   IAmb   22 37 12.6
      comp=Z,19nm,0.8s
MSTX  Muleshoe         78.42  53   P      P      22 37 11.6 +0.8
      baz=317
MSTX  Muleshoe         78.42  53   P      P      22 37 10.6 -0.3
MSTX                               IAmb   IAmb   22 37 13.1
      comp=Z,12nm,1.0s
BBOO  Buckleboo        78.48 190   IAmb   IAmb   22 37 12.8
      comp=Z,24nm,0.9s
MNTX  Cornudas Mount   78.56  56   P      P      22 37 12.8 +1.3
      baz=316,SNR=18
MNTX  Cornudas Mount   78.56  56   P      P      22 37 11.8 +0.3
MOA   Molln            78.77 330  eP      P      22 37 12.2 -0.1
      comp=Z,6.7nm,0.9s
VLDQ  Val d'Or         78.83  29   P      P      22 37 12.6  0.0
VLDQ                               IAmb   IAmb   22 37 17.0
      comp=Z,14nm,0.7s
ARSA  Arzberg          78.83 329  eP      P      22 37 12.7 -0.1
      comp=Z,13nm,1.3s,SNR=5.8
BTNL  Ternell          78.95 336  dP      P      22 37 12.4 -0.8
FRGS  Fruska Gora      78.95 325⇓iP     P      22 37 12.9 -0.5
MEM   Membach          78.96 336  dP      P      22 37 12.9 -0.4
SHAO  Shalim           79.05 284   P      P      22 37 14.8 +0.5
BSTI  Sart Tilman      79.11 337  dP      P      22 37 14.3 +0.2
BCLA  Clavier          79.33 337  dP      P      22 37 15.4  0.0
BGES  Gesves           79.42 337  dP      P      22 37 16.5 +0.6
KALN  Kalnik           79.44 328   P      P      22 37 15.1 -0.9
BISS  Bistriski jare   79.49 329  eP      P      22 37 16.0 -0.2
SOKA  Soboth           79.50 329  eP      P      22 37 16.1 -0.3
      comp=Z,24nm,1.1s,SNR=11
PERS  Pernice          79.50 329  eP      P      22 37 16.1 -0.3
SNF   Seneffe          79.53 337  dP      P      22 37 19.1 +2.7
BMRD  Maredsous        79.59 337  dP      P      22 37 16.2 -0.4
VTS   Vitosha          79.59 322 ⇑P     P      22 37 17.9 +0.8
VTS   Vitosha          79.59 322 ⇑P     P      22 37 17.9 +0.8
T35A  Sooner Cattle    79.62  47   IAmb   IAmb   22 37 19.3
      comp=Z,16nm,0.9s
DOK   Doka             79.66 286   P      P      22 37 19.0 +1.4
      SNR=6.2
DMTO  DMTO             79.73 285   P      P      22 37 18.0  0.0
DIVS  Divibare         79.75 325⇓iP     P      22 37 17.0 -0.8
DIVS  Divibare         79.75 325   P      P      22 37 17.7 -0.1
DIVS                               IAmb   IAmb   22 37 18.6
      comp=Z,21nm,0.9s
KBA   Koelnbreinsper   79.75 330  eP      P      22 37 17.9  0.0
      comp=Z,34nm,0.8s,SNR=11
WLF   Walferdange      79.77 336  dx      P      22 37 21.9 +4.2
PTJ   Puntijarka       79.81 328   P      P      22 37 17.4 -0.7
OBKA  Obir             79.81 329  eP      P      22 37 18.2  0.0
      comp=Z,11nm,0.9s
ISP   Isparta          79.95 314   P      P      22 37 19.2 +0.1
ISP                                pmax   pmax
      comp=Z,29nm,0.8s
ISP   Isparta          79.95 314   P      P      22 37 19.2 +0.1
ISP                                IAmb   IAmb   22 37 21.1
      comp=Z,29nm,0.8s
MYKA  Terra Mystica    80.03 330  eP      P      22 37 18.6 -0.7
      comp=Z,20nm,1.1s
WMOK  Wichita Mounta   80.06  50   P      P      22 37 19.2 -0.4
WMOK                               pmax   pmax
      comp=Z,7.0nm,0.9s
WMOK  Wichita Mounta   80.06  50   P      P      22 37 20.2 +0.6
      baz=319,SNR=7.5
WMOK  Wichita Mounta   80.06  50   P      P      22 37 19.2 -0.4
CRES  Cresnjev         80.07 328⇓iP     P      22 37 18.2 -1.2
WATA  Walderalm        80.14 332  eP      P      22 37 19.7 -0.2
      comp=Z,56nm,1.3s,SNR=18
WTTA  Wattenberg       80.18 332  eP      P      22 37 20.3 +0.1
      comp=Z,28nm,0.8s,SNR=15
BBLS  Lazi&#263;i      80.18 325  eP      P      22 37 20.2 +0.1
HAPS  Han Pijesak,Bl   80.18 325  eP      P      22 37 19.9 -0.3
RETA  Reutte           80.28 332  eP      P      22 37 20.7 +0.1
      comp=Z,19nm,1.3s,SNR=6.8
MOTA  Moosalm          80.29 332  eP      P      22 37 20.6 -0.2
      comp=Z,38nm,1.2s,SNR=16
BFO   Black Forest     80.31 334   P      P      22 37 20.7  0.0
BFO                                pmax   pmax
      comp=Z,15nm,1.1s
BFO   Black Forest     80.31 334   P      P      22 37 20.7  0.0
BFO                                IAmb   IAmb   22 37 21.4
      comp=Z,15nm,1.1s
BLY   Banja Luka       80.32 327  eP      P      22 37 20.3 -0.5
ABTA  Abfaltersbach    80.33 331  eP      P      22 37 20.1 -0.8
      comp=Z,12nm,1.2s
ZOU   Zoufplan         80.33 330   P      P      22 37 20.2 -0.9
GBAS  Gorenja Brezov   80.34 329  eP      P      22 37 19.3 -1.6
SQTA  Sankt Quirin     80.36 332  eP      P      22 37 21.0 -0.1
      comp=Z,43nm,1.3s,SNR=14
RBK   Rabkut           80.38 285   P      P      22 37 21.7 +0.2
WHFO  Wadi Hawf        80.39 286   P      P      22 37 21.7 +0.1
MANT  Manisa           80.41 316   P      P      22 37 21.5 -0.1
SJES  Sjenica          80.45 324  eP      P      22 37 21.5 -0.1
CEY   Cerknica         80.52 329⇓iP     P      22 37 20.9 -0.9
CSS   Mathiatis        80.68 311   P      P      22 37 22.9 +0.1
FETA  Feichten         80.69 332  eP      P      22 37 22.8 -0.2
      comp=Z,18nm,1.1s,SNR=9.7
DAVA  Damuels          80.74 333  eP      P      22 37 23.1  0.0
      comp=Z,23nm,1.2s,SNR=6.7
STIP  Stip             80.80 322  i P     P      22 37 22.4 -0.9
RIY   Rijeka           80.85 329  eP      P      22 37 21.9 -1.7
SKO   Skopje           80.89 323  i P     P      22 37 24.3 +0.5
UDBI  Udbina           81.05 328   P      P      22 37 24.5 -0.2
ELL   Elmali           81.09 314   P      P      22 37 25.2  0.0
ELL                                pmax   pmax
      comp=Z,150nm,0.9s
ELL   Elmali           81.09 314   P      P      22 37 25.2  0.0
ABTO  Aybut            81.10 286   P      P      22 37 25.4  0.0
ABTX  Abilene, Hawle   81.17  52   P      P      22 37 26.5 +0.9
      baz=319,SNR=5.3
ABTX  Abilene, Hawle   81.17  52   P      P      22 37 25.8 +0.2
CTI   Castel Tesino    81.23 331   P      P      22 37 25.0 -0.7
CTI                                pmax   pmax
      comp=Z,13nm,0.8s
CTI   Castel Tesino    81.23 331   P      P      22 37 25.0 -0.7
CTI                                IAmb   IAmb   22 37 25.6
      comp=Z,13nm,0.8s
BRY   Bratogost        81.33 325  eP      P      22 37 25.4 -1.0
CCM   Cathedral Cave   81.39  43   P      P      22 37 27.0 +0.5
      baz=322
E57A  Chemin Saint G   81.42  28   P      P      22 37 27.0 +0.4
      baz=332
HHAR  Hobbs            81.43  46   P      P      22 37 27.2 +0.4
PDG   Podgorica        81.43 324 ⇓P     P      22 37 26.4 -0.3
PDG   Podgorica        81.43 324⇓iP     P      22 37 26.0 -0.7
PDG   Podgorica        81.43 324   P      P      22 37 26.3 -0.3
TREB  Trebinje         81.56 325  eP      P      22 37 26.0 -1.4
TUE   Stuetta          81.63 333   P      P      22 37 28.2 +0.3
TUE                                IAmb   IAmb   22 37 29.1
      comp=Z,26nm,1.0s
MORI  Morici           81.64 327   P      P      22 37 26.4 -1.3
DRME  Dracevica, Mon   81.67 324⇓iP     P      22 37 27.6 -0.3
STON  Ston             81.70 325   P      P      22 37 26.6 -1.4
STON  Ston             81.70 325  eP      P      22 37 25.5 -2.5
HCY   Herceg Novi      81.73 325  eP      P      22 37 27.0 -1.3
E58A  La Victoria      81.74  27   P      P      22 37 28.5 +0.3
      baz=332
```

DUGI	Dugi Otok	81.78	328	P	P	22 37 27.9	-0.6
TEOL	Teolo	81.82	331	IAmb	IAmb	22 37 29.2	
	comp=Z,18nm,0.8s						
ZIRJ	Zirje	81.84	327	P	P	22 37 27.9	-0.9
HPIG		81.84	60	P	P	22 37 29.3	0.0
HPIG				IAmb	IAmb	22 37 31.3	
	comp=Z,14nm,0.8s						
OHR	Ohrid	81.87	323	*i* P	P	22 37 28.5	-0.6
FNA	Florina	81.89	322	P	P	22 37 29.4	+0.2
FNA				pmax	pmax		
	comp=Z,35nm,0.9s						
FNA	Florina	81.89	322	P	P	22 37 29.4	+0.2
RAYN	Ar Rayn	81.91	295	*i* P	P	22 37 30.2	+0.7
	SNR=26						
RAYN	Ar Rayn	81.91	295	P	P	22 37 29.7	+0.1
RAYN				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	Ar Rayn	81.91	295	P	P	22 37 29.6	+0.1
RAYN				IAmb	IAmb	22 37 30.8	
	comp=Z,20nm,0.8s						
U40A	Yellville	81.92	45	P	P	22 37 29.6	+0.2
	baz=322,SNR=6.1						
U40A	Yellville	81.92	45	P	P	22 37 29.7	+0.3
U40A				IAmb	IAmb	22 37 31.4	
	comp=Z,10nm,0.8s						
Z35A	Perchaven, San	81.96	50	P	P	22 37 29.9	+0.2
Z35A				IAmb	IAmb	22 37 31.4	
	comp=Z,22nm,0.9s						
TIR	Tirane	82.08	323	⇑P	P	22 37 30.3	+0.2
TIR	Tirane	82.08	323	⇑P	P	22 37 30.3	+0.2
CLF	Chambon-Foret	82.34	338	P	P	22 37 31.7	+0.4
CLF				IAmb	IAmb	22 37 34.5	
	comp=Z,25nm,1.1s						
SENIN	Lac Senin/Sane	82.38	334	P	P	22 37 32.4	+0.5
TOO	Toolangi	82.51	182	IAmb	IAmb	22 37 35.2	
	comp=Z,13nm,1.0s						
JCT	Junction City	82.69	54	P	P	22 37 33.9	+0.4
	baz=319,SNR=6.0						
JCT	Junction City	82.69	54	IAmb	IAmb	22 37 35.3	
	comp=Z,17nm,0.9s						
WHTX	Lake Whitney,	82.86	51	P	P	22 37 35.5	+1.2
	baz=320						
WHTX	Lake Whitney,	82.86	51	IAmb	IAmb	22 37 36.6	
	comp=Z,20nm,0.7s						
MIAR	Mount Ida	82.97	47	P	P	22 37 36.3	+1.4
	baz=321						
MIAR	Mount Ida	82.97	47	IAmb	IAmb	22 37 39.8	
	comp=Z,8.9nm,0.8s						
WHAR	Wooly Hollow	83.04	46	IAmb	IAmb	22 37 39.9	
	comp=Z,12nm,0.9s						
W41B	Gary Mavity, V	83.16	46	P	P	22 37 37.0	+1.2
	baz=322						
VLC	Villacollemand	83.32	331	IAmb	IAmb	22 37 38.5	
	comp=Z,26nm,0.9s						
OSSC	Osservatorio P	83.57	330	IAmb	IAmb	22 37 39.9	
	comp=Z,24nm,1.2s						
BNI	Bardonecchia	83.75	334	IAmb	IAmb	22 37 40.7	
	comp=Z,16nm,0.9s						
SSB	Saint Sauveur	84.20	335	IAmb	IAmb	22 37 42.2	
	comp=Z,16nm,0.9s						
PPT	Papeete	84.30	122	LR	LR	23 08 33.5	
	comp=Z,61nm,20.9s,baz=360,slow=31						
PPT2	Papeete2	84.32	122	*e*LR	LR	23 03 50.2	
	comp=Z,231nm,34.8s						
PPT2	Papeete2	84.32	122	*e*T	T	00 10 03.6	
	comp=Z,8.6nm,0.3s						
PAE	Paea	84.37	122	*e*T	T	00 10 17.0	
	comp=Z,1.7nm,0.3s						
TIAR	Tiarei	84.43	122	*e*T	T	00 10 13.3	
	comp=Z,3.8nm,0.3s						
NATX	Nacogdoches	84.56	49	P	P	22 37 45.2	+2.2
	baz=321						
IDI	Anoyia	84.73	317	⇑P	P	22 37 42.9	-1.0
HKT	Hockley	85.32	51	*i* P	P	22 37 49.7	+3.0
MEH	Mehetia	85.45	121	*e*T	T	00 11 17.4	
	comp=Z,18nm,0.2s						
TBI	Tubuai	88.85	125	*e*T	T	00 15 32.6	
	comp=Z,5.6nm,0.3s						
THZ	Tophouse	89.48	162	P	P	22 38 06.7	+0.5
PBRG	Braganca	90.40	341	*e*P	P	22 38 09.8	-1.1
PGAV	Gavieira, Arco	90.58	343	*e*P	P	22 38 10.7	-1.1
	comp=Z,36nm,1.4s						
PCAB	Cabril	90.78	342	*e*P	P	22 38 12.3	-0.3
POLO	Lamas de Olo	91.05	342	*e*P	P	22 38 13.1	-0.9
MVO	Moncorvo	91.08	341	*e*P	P	22 38 12.9	-1.2
	comp=Z,26nm,1.5s						
KEST	Kesra	91.11	327	P	P	22 38 13.6	-0.8
	comp=Z,7.4nm,0.7s,baz=322,slow=8.3,SNR=3.5						
KEST				LR	LR	23 23 32.2	
	comp=Z,115nm,21.1s,baz=262,slow=38						
PVRL	Vila Real	91.12	342	*e*P	P	22 38 13.4	-0.9
	comp=Z,30nm,1.4s						
PVIS	Viseu	91.70	342	*e*P	P	22 38 15.8	-1.2
ESDC	Sonseca Array	91.75	339	P	P	22 38 16.2	-1.1
	comp=Z,3.5nm,0.9s,baz=12,slow=5.3,SNR=26						
ESDC				PP	PP	22 41 52.7	-4.0
	comp=Z,0.5nm,0.9s,baz=359,slow=7.8,SNR=2.9						
ESDC				LR	LR	23 24 55.3	
	comp=Z,70nm,19.1s,baz=10.0,slow=39						
MTE	Manteigas	91.92	342	*e*P	P	22 38 17.1	-0.9
	comp=Z,25nm,1.5s						
PCBR	Castelo Branco	92.44	341	*e*P	P	22 38 19.1	-1.2
PCAS	Casmilo, Conde	92.46	342	*e*P	P	22 38 19.1	-1.3
PSBE	So Bento	93.05	342	*e*P	P	22 38 22.0	-1.2
PNCL	Nicolau / Gran	94.33	342	*e*P	P	22 38 28.0	-1.0
PVAQ	Vaqueiros	94.82	341	*e*P	P	22 38 30.3	-1.0
MORF	Marmelete	95.13	342	*e*P	P	22 38 32.7	-0.1
TORD	Torodi Ar. Bea	114.34	324	PKP	PKiKP	22 43 48.5	-0.5
	comp=Z,0.9nm,0.5s,baz=25,slow=2.1,SNR=5.9						
TORD				PKKPbc	PKKPbc	22 54 29.2	+2.2
	comp=Z,1.2nm,0.9s,baz=222,slow=2.0,SNR=3.6						
VNDA	Vanda	122.83	176	PKP	PKiKP	22 44 03.6	+0.1
	comp=Z,1.8nm,0.8s,baz=317,slow=4.3,SNR=5.2						
VNDA				pPKP	pPKPdf	22 44 39.4	+0.2
	comp=Z,2.1nm,0.8s,baz=351,slow=4.5,SNR=3.5						
DBIC	Dimbokro	122.84	327	PKP	PKPdf	22 44 05.2	-0.1
	comp=Z,1.9nm,0.5s,baz=351,slow=2.3,SNR=10						
DBIC				pPKP	pPKPdf	22 44 40.5	0.0
	comp=Z,3.2nm,0.8s,baz=10,slow=3.3,SNR=4.3						
BOSA	Boshof	132.31	270	SKPbc	SKPbc	22 47 37.1	-0.1
	comp=Z,7.0nm,0.9s,baz=75,slow=3.1,SNR=9.3						
BOSA	Boshof	132.31	270	PKIKP	PKPdf	22 44 22.4	-0.6
BOSA	Boshof	132.31	270	PKPdf	PKPdf	22 44 22.4	-0.6
H03N2	Juan Fernandez	142.33	88	T	T	01 23 20.3	
	baz=305,slow=77,SNR=23						
H03N1	Juan Fernandez	142.34	88	T	T	01 23 21.6	
	baz=305,slow=77,SNR=18						
H03N3	Juan Fernandez	142.34	88	T	T	01 23 07.5	
	baz=305,slow=77,SNR=18						
PTLB	Pontes e Lacer	142.50	46	*e*P	PKiKP	22 44 45.5	+0.5
PEXB	Peixe	144.12	28	*e*P	PKPdf	22 44 45.7	+0.8
SDBA	SAO DESIDERIO	145.44	23	*e*P	PKPab	22 44 48.0	+0.3
BDFB	Brasilia	147.51	30	PKPbc	PKiKP	22 44 55.2	-0.3
	comp=Z,8.1nm,0.9s,baz=287,slow=0.9,SNR=7.9						
BDFB				pPKPbc	pPKPbc	22 45 28.2	-0.6
	comp=Z,9.5nm,0.8s,baz=67,slow=0.8,SNR=6.0						
BDFB	Brasilia	147.51	30	PKP2	PKPbc	22 44 53.6	+0.1
BDFB	Brasilia	147.51	30		PKPbc	22 44 53.6	+0.1
JANB	Januaria	148.12	23	*e*P	PKPbc	22 44 55.2	+0.1
AQDB	Aquidauana	148.47	46	*e*P	PKPbc	22 44 55.2	-0.6
IPMB	Ipameri, GO	149.60	32	*e*P	PKPbc	22 44 58.1	-0.6
SNAA	Sanae	150.10	198	P	PKPbc	22 44 58.6	+0.3
VNA2	Neumayer--Watz	151.63	197	P	PKiKP	22 45 02.8	+0.5
PLCA	Paso Flores	151.63	95	PKPbc	PKiKP	22 45 04.0	+0.7
	comp=Z,22nm,0.8s,baz=282,slow=2.7,SNR=42						
PLCA				pPKPbc	pPKPbc	22 45 38.9	+0.4
	comp=Z,20nm,0.8s,baz=248,slow=3.3,SNR=8.8						
PLCA	Paso Flores	151.63	95	*e*P	PKPdf	22 44 58.7	+2.2
VNA3	Neumayer Olymp	151.81	195	P	PKiKP	22 45 02.9	+0.2
VNA1	Neumayer--Stat	152.02	197	P	PKiKP	22 45 03.7	+0.7
CPUP	Villa Florida	152.26	56	PKPbc	PKPbc	22 45 04.6	-0.1
	comp=Z,2.6nm,0.8s,baz=42,slow=2.7,SNR=4.9						
CPUP				pPKPbc	pPKPbc	22 45 39.5	-0.7
	comp=Z,2.3nm,0.5s,baz=342,slow=8.2,SNR=3.3						

*ATH **04** 23:09:50.0, 36°.49N×28°.47E, h61^{km}±4^{km}, ML2.5/1 Error ellipse: s-maj=17.9km s-min=2.6km az=171.0*

*DDA **04** 23:09:50.3, 36°.18N×28°.55E, h3^{km}±7^{km}, ML1.9*

*ISK **04** 23:09:50.9, 36°.28N×28°.54E, h52^{km}, ML2.5/13*

*NIC **04** 23:09:51.5±0.0, 36°.02N×28°.60E, h29^{km}±1^{km}, Ml3.3/2*

*THE **04** 23:09:51.7, 36°.23N×28°.54E, h54^{km}±2^{km}, ML2.3/2, Error ellipse: s-maj=2.1km s-min=0.6km az=296.0*

ISC 04 23:09:50.9±1.3**, 36°.24N**±0°.03×**28°.53E**±0°.03**, h57**^{km}±8^{km}**, n40,** σ0^{s}.57/60**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.33	266	P	Pn	23 10 01.0	+0.1
ARG				S	Sn	23 10 08.3	+0.2
ARG				AML	AML	23 10 08.8	
	comp=N,1078µm,0.2s						
ARG				AML	AML	23 10 08.9	
	comp=E,703µm,0.1s						
ARG	Arkhangelos	0.33	266	P	Pn	23 10 00.9	+0.1
ARG				S	Sn	23 10 08.6	+0.5
	comp=E,450nm,0.2s						
ARG	Arkhangelos	0.33	266	PG	Pn	23 10 00.9	+0.1
ARG				SG	Sn	23 10 08.4	+0.3
ARG	Arkhangelos	0.33	266	P	Pn	23 10 01.0	+0.1
ARG				S	Sn	23 10 08.5	+0.5
MRSB	Marmaris-Mugla	0.55	331	PG	Pn	23 10 03.0	-0.2
MRSB				SG	Sn	23 10 11.8	-0.3
TURN	Turunc	0.58	337	PG	Pn	23 10 03.4	-0.1
TURN				SG	Sn	23 10 12.5	-0.2
TURN	Turunc	0.58	337	*i* P	Pn	23 10 03.2	-0.3
TURN				IAML		23 10 12.0	
	comp=E,64nm,0.2s						
TURN				*i* S	Sn	23 10 12.5	-0.2
TURN				IAML		23 10 14.0	
	comp=N,37nm,0.2s						
DALY	Dalyan (Mula)	0.59	10	PG	Pn	23 10 03.4	-0.2
DALY				SG	Sn	23 10 12.3	-0.5
DALY	Dalyan (Mula)	0.59	10	*i* P	Pn	23 10 03.4	-0.2
DALY				IAML		23 10 12.0	
	comp=N,95nm,0.4s						
DALY				*i* S	Sn	23 10 12.2	-0.5
DALY				IAML		23 10 13.0	
	comp=E,61nm,0.4s						
FETY	Fethiye	0.60	48	PG	Pn	23 10 03.5	-0.3
FETY				SG	Sn	23 10 12.9	-0.2
KSL	Kastellorizon	0.86	96	P	Pn	23 10 07.2	+0.3
KSL	Kastellorizon	0.86	96	P	Pn	23 10 07.2	+0.3
KSL				S	Sn	23 10 18.6	-0.1
	comp=E,122nm,0.7s						
KSL	Kastellorizon	0.86	96	P	Pn	23 10 06.6	-0.3
KSL				S	Sn	23 10 18.6	-0.1
AKAS	Kas	0.87	90	PG	Pn	23 10 07.6	+0.4
AKAS	Kas	0.87	90	*i* P	Pn	23 10 07.4	+0.1
AKAS				IAML		23 10 20.0	
	comp=N,90nm,0.3s						
AKAS				*i* S	Sn	23 10 20.0	+0.8
AKAS				IAML		23 10 21.0	
	comp=E,46nm,0.3s						
DATC	Datca-Mugla	0.87	307	PG	Pn	23 10 07.4	+0.3
YER	Yerkesik	0.92	348	P	Pn	23 10 08.0	+0.2
YER				S	Sn	23 10 20.6	+0.4
YER	Yerkesik	0.92	348	PG	Pn	23 10 07.7	-0.1
MLSB	Milas	1.22	330	PN	Pn	23 10 11.9	+0.2
ELL	Elmali	1.22	65	PN	Pn	23 10 12.3	+0.4
ELL	Elmali	1.22	65	P	Pn	23 10 12.7	+0.8
TAVA	DENIZLI_Tavas	1.26	14	*i* P	Pn	23 10 12.3	-0.1
TAVA				IAML		23 10 28.0	
	comp=N,20nm,0.2s						
TAVA				*i* S	Sn	23 10 28.1	-0.4
TAVA				IAML		23 10 30.0	
	comp=E,16nm,0.1s						
BODT	Bodrum	1.28	310	PN	Pn	23 10 11.9	-0.7
GOLH	Golhisar	1.30	39	*i* P	Pn	23 10 13.7	+0.8
GOLH				*i* S	Sn	23 10 30.9	+1.6
GOLH				IAML		23 10 31.0	
	comp=N,36nm,0.8s						
GOLH				IAML		23 10 35.0	
	comp=E,20nm,0.4s						
KARP	Karpathos	1.31	239	P	Pn	23 10 13.4	+0.4
KARP	Karpathos	1.31	239	P	Pn	23 10 13.3	+0.4
KARP				S	Sn	23 10 29.5	+0.1
KARP	Karpathos	1.31	239	P	Pn	23 10 13.4	+0.4
KARP				S	Sn	23 10 29.7	+0.2
AKUM	Antalya-Kumluc	1.47	86	*i* P	Pn	23 10 16.2	+1.2
AKUM				*i* S	Sn	23 10 33.3	+0.1
AKUM				IAML		23 10 36.0	
	comp=E,30nm,0.8s						
AKUM				IAML		23 10 36.0	
	comp=N,40nm,0.4s						
BCK	Bucak	2.05	53	PN	Pn	23 10 23.9	+0.8
BASM	Basmaki-Afyon	2.07	35	PN	Pn	23 10 23.1	-0.3
ZKR	Zakros	2.19	240	P	Pn	23 10 25.9	+1.0
ZKR	Zakros	2.19	240	P	Pn	23 10 25.9	+1.0
NPS	Neapolis	2.56	249	P	Pn	23 10 29.9	-0.2
NPS	Neapolis	2.56	249	P	Pn	23 10 29.7	-0.3
LAST	Lasithi	2.71	248	P	Pn	23 10 32.0	-0.1
LAST	Lasithi	2.71	248	P	Pn	23 10 31.9	-0.1
OSC1	CSNet OBS 1	3.54	140	S	Sn	23 11 21.7	-2.3
NATA	Nata	3.60	113	P	Pn	23 10 44.2	-0.1
NATA				S	Sn	23 11 25.0	-0.6
SZAC	Souni	3.85	111	P	Pn	23 10 47.3	-0.3
SZAC				AML	AML	23 11 30.7	
	comp=N,0.2nm,0.3s						
SZAC				AML	AML	23 11 31.3	
	comp=N,0.3nm,0.6s						
ASGA	Asgata	4.11	109	P	Pn	23 10 50.9	-0.3
ASGA				AML	AML	23 11 36.0	
	comp=N,0.1nm,0.6s						
ASGA				AML	AML	23 11 36.6	
	comp=N,0.1nm,0.3s						

IDC 04 23:21:36.2±2.2**, 1°.96N**×**126°.45E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.1**/45**, mbtmp3.3**/3**, Error ellipse: s-maj=175.7km s-min=28.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.11	161	P	P	23 26 42.9	-1.1
	0.5nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	Alice Springs	26.49	165	P	P	23 27 16.9	+1.4
	0.3nm,0.7s,baz=348,slow=13,SNR=1.8						
MKAR	Makanchi Array	58.84	326	P	P	23 31 36.5	-0.2
	0.1nm,0.5s,baz=111,slow=8.5,SNR=2.2						

*IDC **04** 23:23:40.9±0.5, 57°.92S×157°.65E, h0^{km}, mb4.6/10, mb1 4.7/12, mb1mx4.5/22, mbtmp4.6/12, ML4.1/2, MS4.5/12, Ms1 4.5/12, ms1mx4.2/21, Error ellipse: s-maj=21.1km s-min=15.5km az=84.0*

*NEIC **04** 23:23:43.6±2.1, 57°.91S±0°.08×157°.7E±0°.3, h10^{km}±1^{km}, mb4.9/32, Error ellipse: s-maj=23.3km s-min=14.1km az=278.0*

*GCMT **04** 23:23:49.6±0.2, 57°.77S±0°.02×157°.87E±0°.03, h21^{km}±1^{km}, MW5.1/84, Moment Tensor Solution. s54,c70; s84,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.29±.17; $M_{\theta\theta}$-0.29±.11; $M_{\phi\phi}$-3.00±.12; $M_{r\theta}$2.45±.25; $M_{\theta\phi}$1.47±.09; $M_{\phi r}$-3.88±.31; Best double couple: $M_0$5.75400×10^{16} NP1:ϕ_s345.00000°, δ19.00000°, λ105.00000°. NP2: ϕ_s149.00000°, δ72.00000°, λ85.00000°. Principal axes: T 5.6050, Plg63.0000°, Azm51.0000°; N 0.2950, Plg5.0000°, Azm151.0000°; P -5.9030, Plg26.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 23:23:42.9±0.4**, 57°.87S**±0°.05×**157°.85E**±0°.08**, h10**^{km}**, n128,** σ1^{s}.74/113**, mb4.8**/20**, MS4.5**/15**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	3.44	11		Pn	23 24 35.0	-1.5
MCQ				Sn	Sn	23 25 13.4	-3.8
PYZ	Puysegur Point	12.91	29	Pn	Pn	23 26 47.3	+1.0
SYZ	Scrubby Hill	13.27	36	P	Pn	23 26 51.8	+0.6
WHZ	Wether Hill Ro	13.50	32	Pn	Pn	23 26 54.9	+0.6
WHZ					Sn	23 29 19.9	-4.4
DCZ	Deep Cove	13.68	29	Pn	Pn	23 26 58.6	+1.8
DCZ					Sn	23 29 27.3	-1.4
TUZ	Tuapeka	13.95	36	P	Pn	23 27 01.3	+0.9
MLZ	Mavora Lakes	14.03	31		Pn	23 27 03.0	+1.3
MLZ					Sn	23 29 35.0	-2.3
HHSZ	Highcliff Hill	14.32	39	P	Pn	23 27 08.4	+2.8
EAZ	Earnscleugh	14.50	34	P	Pn	23 27 08.3	+0.3
MSZ	Milford Sound	14.62	30	P	Pn	23 27 12.7	+3.1
WKZ	Wanaka	14.78	33	Pn	Pn	23 27 13.6	+1.8
WKZ					Sn	23 29 54.4	-1.1
WKZ	Wanaka	14.78	33	P	Pn	23 27 13.7	+1.8
ODZ	Otahua Downs	15.08	37		Pn	23 27 17.9	+2.1
ODZ				IAmb	IAmb	23 27 27.1	
	comp=Z,71nm,0.9s						
ODZ	Otahua Downs	15.08	37	P	Pn	23 27 17.1	+1.2
JCZ	Jackson Bay	15.41	31	P	P	23 27 23.5	-1.4
LBZ	Lake Benmore	15.53	35	Pn	Pn	23 27 22.2	+0.4
LBZ	Lake Benmore	15.53	35	P	Pn	23 27 21.4	-0.4
TMZ	Timaru	15.79	37	P	P	23 27 27.5	-1.5
FOZ	Fox Glacier	16.20	33		P	23 27 32.5	-1.0
FOZ				IAmb	IAmb	23 27 38.2	
	comp=Z,126nm,1.3s						
FOZ	Fox Glacier	16.20	33	P	P	23 27 33.6	0.0
ARCZ	Arundel	16.23	37	P	P	23 27 33.2	-0.8
RPZ	Rata Peaks	16.40	36	Pn	Pn	23 27 34.3	+1.3
	comp=Z,3.8nm,0.3s,baz=183,slow=10,SNR=9.3						
RPZ				LR	LR	23 32 52.0	
	comp=Z,2µm,20.6s,baz=188,slow=33						
RPZ	Rata Peaks	16.40	36		P	23 27 35.5	-0.4
WACZ	Wakanui South	16.45	38	P	P	23 27 37.1	+0.8
GCSZ	Gaunt Creek Bo	16.54	34	P	P	23 27 38.8	+1.4
MQZ	McQueen’s Vall	16.93	40		P	23 27 42.5	+0.8
MQZ				IAmb	IAmb	23 27 53.0	
	comp=Z,90nm,1.2s						
OXZ	Oxford	17.07	38	P	P	23 27 44.8	+1.6
OXZ				IAmb	IAmb	23 27 47.2	
	comp=Z,48nm,0.8s						
LTZ	Lake Taylor	17.63	37		P	23 27 51.2	+1.7
KHZ	Kahutara	18.38	39		P	23 28 01.2	+3.6
KHZ				IAmb	IAmb	23 28 11.0	
	comp=Z,50nm,0.9s						
THZ	Tophouse	18.75	37	P	Pn	23 28 06.0	+3.7
THZ				IAmb	IAmb	23 28 18.6	
	comp=Z,59nm,0.9s						
BSWZ	Blackbirch Sta	19.11	39	P	Pn	23 28 08.9	+2.3
NNZ	Nelson	19.40	37	P	Pn	23 28 10.0	0.0
NNZ				IAmb	IAmb	23 28 22.2	
	comp=Z,108nm,1.2s						
QRZ	Quartz Range	19.48	35	P	Pn	23 28 13.5	+2.5
QRZ				IAmb	IAmb	23 28 17.9	
	comp=Z,100nm,0.9s						
VNDA	Vanda	19.78	177	P	P	23 28 11.1	-1.8
	comp=Z,0.1nm,0.3s,baz=354,slow=12,SNR=11						
VNDA				LR	LR	23 34 39.1	
	comp=Z,2µm,19.0s,baz=357,slow=33						
TOO	Toolangi	21.88	333		P	23 28 38.2	+2.3
TOO				IAmb	IAmb	23 28 56.0	
	comp=Z,41nm,1.1s						
BKZ	Black Stump Fm	22.29	41	P	P	23 28 43.7	+3.5
HIZ	Hauiti	22.32	37	P	P	23 28 44.1	+3.5
HIZ				IAmb	IAmb	23 28 44.4	
	comp=Z,63nm,1.1s						
URZ	Urewera	23.31	41	P	P	23 28 52.4	+1.6
	comp=Z,54nm,1.0s,baz=226,slow=5.8,SNR=19						
URZ				LR	LR	23 37 46.8	
	comp=Z,2µm,18.3s,baz=195,slow=36						
URZ	Urewera	23.31	41	P	P	23 28 52.9	+2.1
OUZ	Omahuta	24.99	32	P	P	23 29 09.6	+3.1
STKA	Stephens Creek	28.28	330	LR	LR	23 39 50.9	
	comp=Z,957nm,18.8s,baz=172,slow=34						
BBOO	Buckleboo	29.11	320	P	P	23 29 44.7	+1.0
BBOO				IAmb	IAmb	23 29 59.5	
	comp=Z,25nm,1.2s						
QSPA	South Pole Qui	32.23	180	P	P	23 30 11.8	+0.7
	comp=Z,7.8nm,0.9s,baz=2.9,slow=2.7,SNR=12						
QSPA				PcP	PcP	23 32 58.5	-0.6
	comp=Z,3.0nm,0.6s,baz=5.1,slow=2.0,SNR=2.9						
FORT	Forrest	33.95	310	P	P	23 30 27.1	+0.9
DZM	Mont Dzumac	36.30	14	*e*S	S	23 36 31.5	+4.2
	comp=Z,162nm,25.4s						
DZM				*e*LR	LR	23 40 40.0	
	comp=Z,995nm,22.4s						
H01W1	Cape Leeuwin H	36.97	289	T	T	00 10 34.0	
	baz=141,slow=76,SNR=24						
H01W2	Cape Leeuwin H	36.98	289	T	T	00 10 34.4	
	baz=141,slow=76,SNR=22						
H01W3	Cape Leeuwin H	36.99	289	T	T	00 10 35.2	
	baz=141,slow=76,SNR=22						
NWAO	Narrogin (SRO)	37.02	295	P	P	23 30 51.4	-1.2
	comp=Z,11nm,0.8s,baz=112,slow=7.0,SNR=5.1						
ASAR	Alice Springs	38.27	323	P	P	23 31 03.1	-0.1
	comp=Z,4.8nm,0.8s,baz=160,slow=8.1,SNR=36						
ASAR				PcP	PcP	23 33 15.5	-1.7
	comp=Z,2.1nm,0.8s,baz=151,slow=3.7,SNR=5.2						
AS31	Alice Springs	38.27	323	P	P	23 31 04.6	+1.4
CTAO	Charters Tower	38.69	342	P	P	23 31 07.1	+0.4
CTAO				IAmb	IAmb	23 31 08.9	
	comp=Z,31nm,1.2s						
MAW	Mawson	40.27	216	P	P	23 31 19.4	0.0
	comp=Z,10nm,0.9s,baz=122,slow=10.0,SNR=5.8						
MAW				LR	LR	23 47 52.5	
	comp=Z,1µm,18.1s,baz=84,slow=36						
MORW	Morawa	40.78	297	P	P	23 31 24.9	+0.8
MORW				IAmb	IAmb	23 31 33.6	
	comp=Z,24nm,1.2s						
WR0	Warramunga Arr	41.55	326	IAmb	IAmb	23 31 37.1	
	comp=Z,26nm,1.2s						
WB2	Warramunga Arr	41.62	326	P	P	23 31 31.2	+0.1
WRA	Warramunga Arr	41.62	326	P	P	23 31 30.7	-0.4
	comp=Z,4.5nm,0.8s,baz=163,slow=7.2,SNR=23						
WRA				PcP	PcP	23 33 27.0	-1.0
	comp=Z,1.5nm,0.6s,baz=163,slow=3.0,SNR=7.1						
WRAB	Tennant Creek	41.63	326	P	P	23 31 31.8	+0.7
WB0	Warramunga Arr	41.77	326	P	P	23 31 32.9	+0.6
MSVF	Nonsavu	42.79	29	LR	LR	23 45 48.1	
	comp=Z,576nm,20.4s,baz=200,slow=31						
BELA	Belgrano 2	44.28	176	P	P	23 31 52.4	+0.3
COEN	Coen	45.22	340	P	P	23 31 59.8	-0.3
COEN				IAmb	IAmb	23 32 02.5	
	comp=Z,25nm,1.1s						
PSA00	Pilbara Seismi	45.50	307	P	P	23 32 02.2	-0.1
FITZ	Fitzroy Crossi	46.29	315	LR	LR	23 49 46.7	
	comp=Z,187nm,18.7s,baz=148,slow=34						
HNR	Honiara	48.36	3	LR	LR	23 50 00.7	
	comp=Z,507nm,18.3s,baz=188,slow=33						
PMG	Port Moresby	49.05	346	LR	LR	23 50 31.8	
	comp=Z,520nm,18.8s,baz=145,slow=33						
MTN	Manton Dam	49.29	325	P	P	23 32 32.1	+0.3
SNAA	Sanae	50.04	188	P	P	23 32 36.7	-0.3
SNAA	Sanae	50.04	188	P	P	23 32 36.8	-0.3
VNA3	Neumayer Olymp	50.87	185	P	P	23 32 43.2	-0.1
TBI	Tubuai	50.89	70	*e*S	S	23 40 02.2	+2.0
	comp=Z,162nm,28.0s						
TBI				*e*LR	LR	23 47 09.3	
	comp=Z,751nm,24.0s,baz=212						
TBI	Tubuai	50.89	70	*e*T	T	00 26 17.3	
	comp=Z,5.2nm,0.3s						
VNA2	Neumayer--Watz	51.07	186	P	P	23 32 43.8	-0.9
VNA1	Neumayer--Stat	51.39	186	P	P	23 32 46.8	-0.2
PPT2	Papeete2	55.69	66	*e*S	S	23 41 06.8	+1.1
	comp=Z,264nm,28.2s						
PPT2				*e*LR	LR	23 49 19.1	
	comp=Z,681nm,29.0s						
PPT	Papeete	55.71	66	LR	LR	23 52 31.7	
	comp=Z,250nm,19.5s,baz=183,slow=31						
RKT	Rikitea	58.61	84	*e*S	S	23 41 43.3	-0.6
	comp=Z,126nm,25.0s						
RKT				*e*LR	LR	23 50 44.3	
	comp=Z,620nm,24.5s						
VAH	Vaihoa	58.66	67	*e*T	T	00 36 48.6	
	comp=Z,10nm,0.3s						
TAOE	Nuku Hiva Isla	67.84	70	*e*LR	LR	23 54 59.7	
	comp=Z,441nm,25.2s						
PLCA	Paso Flores	73.75	144	P	P	23 35 16.0	-1.0
	comp=Z,3.3nm,0.9s,baz=217,slow=9.3,SNR=4.5						
H03S2	Juan Fernandez	77.01	134	T	T	01 01 08.5	
	baz=206,slow=74,SNR=4.4						
H03S1	Juan Fernandez	77.01	134	T	T	01 00 48.1	
	baz=206,slow=74,SNR=3.8						
H03S3	Juan Fernandez	77.02	134	T	T	01 00 41.4	
	baz=206,slow=74,SNR=11						
H03N3	Juan Fernandez	77.35	134	T	T	01 01 11.3	
	baz=216,slow=78,SNR=7.0						
H03N2	Juan Fernandez	77.36	134	T	T	01 01 17.1	
	baz=216,slow=78,SNR=14						
H03N1	Juan Fernandez	77.36	134	T	T	01 01 02.5	
	baz=216,slow=78,SNR=3.3						
BO02	Sierra Bellavi	79.08	141	P	P	23 35 47.1	-0.2
BO02				IAmb	IAmb	23 35 47.8	
	comp=Z,19nm,0.9s						
H08S2	Diego Garcia H	81.11	270	T	T	01 06 00.4	
	baz=147,slow=76,SNR=18						
H08S1	Diego Carcia H	81.12	270	T	T	01 05 37.6	
	baz=147,slow=76,SNR=14						
H08S3	Diego Garcia H	81.13	270	T	T	01 05 40.2	
	baz=147,slow=76,SNR=13						
BOSA	Boshof	85.14	221	P	P	23 36 18.2	-1.1
	comp=Z,8.4nm,1.1s,baz=170,slow=2.4,SNR=7.2						

BOSA				LR	LR	00 09 47.8	
	comp=Z,314nm,19.4s,baz=162,slow=32						
CMAR	Chiang Mai Arr	90.23	306	P	P	23 36 43.8	+0.3
	comp=Z,0.7nm,0.3s,baz=184,slow=2.4,SNR=6.7						
CMAR				LR	LR	00 16 13.6	
	comp=Z,108nm,19.0s,baz=191,slow=35						
LVC	Limon Verde	90.87	138	P	P	23 36 47.8	+0.8
LVC				IAmb	IAmb	23 36 48.5	
	comp=Z,9.3nm,0.9s						
CPUP	Villa Florida	91.09	149	P	P	23 36 47.5	-0.1
	comp=Z,2.5nm,0.9s,baz=250,slow=4.6,SNR=4.7						
NJ2	Nanjing	95.38	328	*e*P	P	23 37 08.9	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
H06S1	SOCORRO T	106.28	81	T	T	01 36 59.5	
WMQ	Urumqi	116.87	310	*e*P	PKiKP	23 42 28.9	+2.1
WMQ				pmax	pmax		
	comp=Z,220nm,5.1s						
NVAR	Mina Array Bea	118.57	63	PKP	PKPdf	23 42 30.4	-0.1
	comp=Z,0.6nm,0.8s,baz=194,slow=3.7,SNR=5.8						
MKAR	Makanchi Array	121.51	309	PKP	PKPdf	23 42 33.4	-2.2
	comp=Z,0.4nm,0.8s,baz=90,slow=1.2,SNR=5.3						
PDAR	Pinedale Array	126.13	66	PKP	PKPdf	23 42 44.9	0.0
	comp=Z,0.5nm,0.6s,baz=198,slow=4.2,SNR=5.8						
DBIC	Dimbokro	127.18	202	PKP	PKPdf	23 42 47.1	-0.3
	comp=Z,1.7nm,0.7s,baz=101,slow=6.9,SNR=4.5						
ILAR	Eielson Array	129.29	27	PKP	PKPdf	23 42 49.6	-0.2
	comp=Z,1.5nm,1.0s,baz=250,slow=3.1,SNR=7.9						
TORD	Torodi Ar. Bea	131.85	212	PKP	PKPdf	23 42 53.2	-3.0
	comp=Z,1.2nm,0.9s,baz=202,slow=1.6,SNR=3.7						
YKA	Yellowknife Ar	137.56	43	PKhKP	PKPpre	23 42 55.0	
	comp=Z,0.4nm,0.8s,baz=238,slow=2.8,SNR=6.6						
YKA				PP	PP	23 45 51.4	-1.3
	comp=Z,0.8nm,1.2s,baz=253,slow=7.3,SNR=3.5						
OBN	Obninsk	148.35	291	PKPbc	PKPdf	23 43 26.2	+1.6
	comp=Z,1.1nm,0.5s,baz=134,slow=3.3,SNR=3.7						
RES	Resolute Bay	148.98	30	PKPbc	PKPbc	23 43 28.0	-1.2
	comp=Z,6.7nm,1.0s,baz=267,slow=3.2,SNR=14						
KLMR	Klimovskoe	149.45	302	*e*	PKPbc	23 43 29.1	-1.6
KLMR				AMP		23 43 45.8	
	comp=Z,36nm,1.5s						
AKASG	Malin Array Be	149.82	279	PKPbc	PKPbc	23 43 30.7	-1.2
	comp=Z,2.1nm,0.7s,baz=88,slow=2.4,SNR=11						
VYHS	Vyhne	154.09	267	*e*	PKPab	23 43 50.4	-5.1
VYHS				*e*		23 44 09.6	
ARSA	Arzberg	155.08	261	P	PKPab	23 44 00.3	+0.5
	comp=Z,3.4nm,1.0s						
MOA	Molln	156.12	261	*e*P	PKPab	23 44 05.4	+1.1
	comp=Z,7.1nm,1.4s						
ARCES	ARCESS Array B	156.62	319	PKPab	PKPab	23 44 04.0	-1.8
	comp=Z,2.6nm,0.7s,baz=64,slow=6.4,SNR=4.8						
GERES	GERESS Array B	157.03	262	PKPab	PKPab	23 44 05.9	-2.3
	comp=Z,0.4nm,0.7s,baz=188,slow=8.1,SNR=4.1						
FRB	Frobisher Bay	157.07	56	PKPab	PKPab	23 44 07.3	-0.5
	comp=Z,9.7nm,1.1s,baz=167,slow=3.7,SNR=6.0						
WTTA	Wattenberg	157.13	257	*e*P	PKPab	23 44 08.2	-0.6
	comp=Z,5.3nm,0.9s						
WATA	Walderalm	157.21	257	*e*P	PKPab	23 44 09.1	0.0
	comp=Z,4.5nm,1.1s						
SQTA	Sankt Quirin	157.32	256	P	PKPab	23 44 08.8	-0.8
	comp=Z,7.8nm,1.2s						
FETA	Feichten	157.44	256	*e*P	PKPab	23 44 10.4	+0.2
	comp=Z,12nm,1.7s						
MOTA	Moosalm	157.46	257	P	PKPab	23 44 08.9	-1.3
	comp=Z,6.1nm,1.0s						
DAVOX	Davos/Dischmat	157.72	254	PKPab	PKPab	23 44 10.1	-1.3
	comp=Z,1.4nm,1.0s,baz=116,slow=11,SNR=3.7						
RETA	Reutte	157.73	256	*e*P	PKPab	23 44 11.9	+0.6
	comp=Z,14nm,1.9s						
ESDC	Sonseca Array	158.32	221	PKPab	PKPab	23 44 12.4	-1.5
	comp=Z,2.6nm,1.0s,baz=156,slow=4.1,SNR=13						
CLL	Collm	158.79	267	*e*(PKPdf)	PKPdf	23 43 45.0	+5.4
CLL				*e*		23 44 33.0	
PMTG	Montargil	159.12	212	*e*PKPab	PKPab	23 44 17.8	+0.5
PMRV	Marv??o	159.21	214	*e*PKPab	PKPab	23 44 18.2	+0.5
PMAFR	Mafra	159.30	209	*e*PKPab	PKPab	23 44 18.2	+0.1
PCBR	Castelo Branco	159.62	214	*e*PKPab	PKPab	23 44 19.3	-0.2
POLO	Lamas de Olo	161.12	215	*e*PKPab	PKPab	23 44 26.4	+0.3

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*IDC **04** 23:29:30.7±0.9, 64°.59N×17°.71W, h0^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.5/39, mbtmp3.5/10, ML3.8/1, Error ellipse: s-maj=30.7km s-min=17.3km az=41.0*

*REY **04** 23:29:30.6, 64°.67N×17°.45W, h4^{km}*

*NEIC **04** 23:29:31.1±3.0, 64°.59N±0°.09×17°.8W±0°.2, h8^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=13.9km s-min=9.7km az=201.0*

ISC 04 23:29:30.7±0.5**, 64°.66N**±0°.02×**17°.48W**±0°.02**, h10^{km}, n58, σ1^{s}.84**/81**, mb4.0**/18**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.14	21	S	Sg	23 29 36.1	-0.1
	baz=16						
IDYN				P	Pg	23 29 33.5	-0.4
	baz=16						
IURH	Urdarhals	0.21	42	P	Pg	23 29 34.8	-0.4
	baz=40						
IURH				S	Sg	23 29 38.0	-0.2
	baz=40						
IHAM	Hamarinn	0.24	219	P	Pg	23 29 35.3	-0.3
	baz=221						
IHAM				S	Sg	23 29 39.5	+0.6
	baz=221						
IKVE	Kverkfjoll	0.34	87	P	Pg	23 29 37.1	-0.5
	baz=87						
IKVE				S	Sg	23 29 41.8	-0.4
	baz=87						
ISKR	Skrokkalda	0.41	255	P	Pb	23 29 38.2	-1.8
	baz=256						
ISKR				S	Sb	23 29 44.6	-1.6
	baz=256						
IJOK	Jokulheimar	0.48	223	P	Pb	23 29 39.7	-1.5
	baz=224						
IJOK				S	Sb	23 29 46.7	-1.5
	baz=224						
IMKO	Mokollar	0.58	57	P	Pg	23 29 40.9	-1.0
	baz=56						
IMKO				S	Sg	23 29 49.2	-0.4
	baz=56						
IIEY	Innrieyrar	0.64	206	P	Pb	23 29 42.1	-1.8
	baz=207						
IIEY				S	Sb	23 29 51.3	-1.5
	baz=207						
IKSK	Karasker	0.67	139	P	Pg	23 29 42.0	-1.6
	baz=140						
IKSK				S	Sg	23 29 51.8	-0.6
	baz=140						
ISVA	Svartarkot	0.68	8	P	Pg	23 29 42.6	-1.3
	baz=7.0						
ISVA				S	Sg	23 29 52.0	-0.8
	baz=7.0						
IKAL	Kalfafell	0.72	187	P	Pb	23 29 43.7	-1.7
	baz=188						
IKAL				S	Sb	23 29 53.6	-1.7
	baz=188						
IVSH	V-Sauoahnukur	0.77	78	P	Pg	23 29 43.8	-1.7
	baz=78						
IVSH				S	Sg	23 29 54.2	-1.2
	baz=78						
IFAG	Fagurholsmyri	0.87	155	P	Pg	23 29 46.0	-1.4
	baz=156						
IFAG				S	Sg	23 29 57.5	-1.2
	baz=156						
IADA	Aoalbol	0.89	65	P	Pg	23 29 45.8	-2.0
	baz=65						
IADA				S	Sg	23 29 57.8	-1.5
	baz=65						
IHVE	Hveravellir	0.92	284	P	Pg	23 29 46.5	-1.9
	baz=284						
IHVE				S	Sb	23 29 59.5	-1.5
	baz=284						
IMEL	Melhnausar	0.97	21	P	Pg	23 29 47.4	-2.0
	baz=20						
IMEL				S	Sg	23 30 00.9	-1.2
	baz=20						
IREN	Reynihlio	1.02	14	P	Pg	23 29 48.1	-2.1
	baz=13						
IREN				S	Sg	23 30 01.3	-2.1
	baz=13						
ISNB	Snabyli	1.06	209	P	Pg	23 29 49.4	-1.6
	baz=210						
ISNB				S	Sg	23 30 03.2	-1.6
	baz=210						
IKVO	Krokottuvotn	1.08	13	P	Pg	23 29 49.2	-2.3
	baz=13						
IGRS	Grimsstaoir	1.13	30	P	Pb	23 29 50.1	-2.3
	baz=29						
IRJU	Rjupnafell	1.17	207	P	Pb	23 29 51.3	-1.7
	baz=208						
IRJU				S	Sb	23 30 06.5	-1.8
	baz=208						
ISKI	Skildingahlsh	1.23	9	P	Pn	23 29 51.6	-2.3
	baz=8.2						
ISKI				S	Sb	23 30 07.8	-2.0
	baz=8.2						
IGHA	Grjothals	1.23	16	P	Pn	23 29 51.6	-2.4
	baz=15						
IGHA				S	Sb	23 30 07.6	-2.5
	baz=15						
IGYG	Gygjarholskot	1.25	253	P	Pb	23 29 52.9	-1.3
	baz=253						
IGRA	Granastaoir	1.26	358	P	Pn	23 29 52.0	-2.3
	baz=358						
IGRA				S	Sb	23 30 09.2	-1.5
	baz=358						
IHAU	Haukadalur	1.29	238	P	Pb	23 29 53.5	-1.4
	baz=239						
IHVO	Lagu-Hvolar	1.29	208	P	Pn	23 29 53.3	-1.4
	baz=209						
IDIM	Dimmadalss	1.32	10	P	Pn	23 29 53.1	-2.1
	baz=9.3						
BORG	Borgarnes	1.66	275	Pn	Pn	23 29 58.6	-1.1
SCO	Scoresbysund	6.09	346		Pn	23 31 01.7	+1.2
SCO	Scoresbysund	6.09	346	*e*	Pn	23 31 00.8	+0.2
	baz=147,slow=9.3						
SCO				*i* P	Pn	23 31 02.1	+1.5
SCO				*e*S	Sn	23 32 16.7	+6.6
ANGG	Ammassalik, Gr	8.54	285	Pn	Pn	23 31 32.1	-2.0
EKA	Eskdalemuir Ar	11.75	136	Pn	Pn	23 32 19.6	+1.4
	baz=320,slow=13,SNR=4.6						
GERES	GERESS Array B	22.95	119	P	P	23 34 37.4	+2.6
	1.2nm,1.0s,baz=305,slow=9.4,SNR=4.3						
OJC	Ojcow	24.25	109	P	P	23 34 44.9	-2.6
ZOU	Zoufplan	24.59	123	P	P	23 34 50.8	-0.1
ZOU				IAmb	IAmb	23 34 56.9	
	comp=Z,17nm,1.5s						
COI	Coimbra	25.06	163	P	P	23 34 55.8	+1.0
COI				IAmb	IAmb	23 35 00.8	
	comp=Z,23nm,1.2s						
ESDC	Sonseca Array	26.25	156	P	P	23 35 07.3	+1.6
	comp=Z,0.7nm,0.9s,baz=343,slow=10,SNR=4.1						
RES	Resolute Bay	26.47	324	P	P	23 35 08.2	+0.8
MURB	Monte Urbino	27.30	127	P	P	23 35 13.5	-1.6
NRIK	Noril'sk	36.46	35	P	P	23 36 35.7	+0.7
YKA	Yellowknife Ar	39.22	313	P	P	23 36 59.5	+1.0
	comp=Z,0.5nm,1.1s,baz=36,slow=9.6,SNR=3.9						
TIXI	Tiksi	42.03	15	P	P	23 37 25.4	+3.9
TIXI				IAmb	IAmb	23 37 26.2	
	comp=Z,4.3nm,1.1s						
RDOG	Red Dog Mine	45.31	343	P	P	23 37 50.4	+2.4
RDOG				IAmb	IAmb	23 37 55.3	
	comp=Z,4.6nm,0.5s						
IL31		45.69	332	P	P	23 37 50.3	-0.7
ILAR	Eielson Array	45.69	332	P	P	23 37 54.2	+3.2
	comp=Z,1.5nm,1.1s,baz=32,slow=5.8,SNR=6.7						
MDM	Murphy Dome	45.79	333	P	P	23 37 52.2	+0.4
MDM				IAmb	IAmb	23 37 57.4	
	comp=Z,12nm,1.4s						
ZALV	Zalesovo Beam	47.63	51	P	P	23 38 09.2	+2.9
	comp=Z,0.3nm,0.3s,baz=322,slow=12,SNR=4.1						
N25K	Chitina, Valde	48.03	329	P	P	23 38 08.1	-1.4
N25K				IAmb	IAmb	23 38 09.6	
	comp=Z,9.0nm,1.3s						
KURK	Kurchatov	48.11	58	P	P	23 38 12.6	+2.5
KURK				IAmb	IAmb	23 38 13.4	
	comp=Z,3.9nm,1.1s						
PAULI	Pauline	48.21	264	P	P	23 38 11.6	+0.6
MKAR	Makanchi Array	52.72	58	P	P	23 38 46.1	+1.1
	comp=Z,0.8nm,1.0s,baz=350,slow=6.2,SNR=5.4						
TORD	Torodi Ar. Bea	53.14	156	P	P	23 38 49.5	+1.2
	comp=Z,0.7nm,0.8s,baz=334,slow=9.5,SNR=1.9						
PDAR	Pinedale Array	53.19	293	P	P	23 38 49.1	+0.3
	comp=Z,0.9nm,0.9s,baz=30,slow=4.1,SNR=5.8						
AAK	Ala-Archa	53.25	67	P	P	23 38 50.3	+1.1
AAK				IAmb	IAmb	23 38 53.3	
	comp=Z,5.7nm,1.5s						
MIAR	Mount Ida	53.49	275	P	P	23 38 46.4	-4.4
MIAR				IAmb	IAmb	23 38 53.2	
	comp=Z,11nm,1.5s						
KSCO	Kaye Shedlock'	53.54	285	P	P	23 38 49.4	-1.9
NVAR	Mina Array Bea	60.31	297	P	P	23 39 40.6	+1.1
	comp=Z,0.3nm,0.8s,baz=40,slow=3.5,SNR=3.7						

IDC 04 23:39:03.0±2.7**, 8°.14S**×**116°.15E, h0^{km}, mb3.0**/3**, mb1 3.3**/3**, mb1mx3.0**/36**, mbtmp3.1**/3**, Error ellipse: s-maj=168.1km s-min=29.0km az=50.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.17	126	P	P	23 43 49.5	-0.5
	0.1nm,0.3s,baz=300,slow=12,SNR=5.7						
ASAR	Alice Springs	22.98	134	P	P	23 44 09.9	+0.5
	0.3nm,0.5s,baz=313,slow=9.7,SNR=4.2						
MKAR	Makanchi Array	62.44	334	P	P	23 49 27.9	0.0
	0.1nm,0.3s,baz=144,slow=7.5,SNR=1.6						

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*IDC **04** 23:43:59.9±0.5, 6°.91S×150°.95E, h0^{km}, mb4.7/21, mb1 4.8/23, mb1mx4.7/34, mbtmp4.7/23, ML3.3/2, MS3.9/10, Ms1 3.9/10, ms1mx3.6/33, Error ellipse: s-maj=17.7km s-min=10.6km az=118.0*

*BJI **04** 23:44:01.3±0.0, 6°.95S×151°.21E, h31^{km}, mB5.1/32, mb4.8/52, Ms4.9/6, Ms7 4.5/7*

*MOS **04** 23:44:03.2±0.9, 6°.97S×150°.81E, h30^{km}, mb5.1/20, Error ellipse: s-maj=10.7km s-min=7.8km az=95.9*

*NEIC **04** 23:44:05.4±1.4, 7°.02S±0°.04×150°.90E±0°.06, h35^{km}±1^{km}, mb5.1/115, Error ellipse: s-maj=9.5km s-min=6.8km az=255.0*

*DJA **04** 23:44:06.0±0.6, 7°S±4°×15°1E±°, h55^{km}±7^{km}, M5.1/11, mB5.2/4, mb4.8/11, MLv5.4/2, Mw(mB)4.6/4*

*GCMT **04** 23:44:07.4±0.5, 7°.29S±0°.04×151°.03E±0°.04, h32^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s30,c35; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.39±.24; $M_{\theta\theta}$2.24±.14; $M_{\phi\phi}$1.15±.14; $M_{r\theta}$-1.35±.13; $M_{\theta\phi}$0.23±.10; $M_{\phi r}$-0.69±.15; Best double couple: $M_0$3.21100×10^{16} NP1:ϕ_s260.00000°, δ31.00000°, λ-83.00000°. NP2: ϕ_s72.00000°, δ59.00000°, λ-94.00000°. Principal axes: T 2.6460, Plg14.0000°, Azm165.0000°; N 1.1300, Plg4.0000°, Azm74.0000°; P -3.7760, Plg76.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **04** 23:44:08.0, 6°.98S×150°.79E, h58^{km}, mb4.9, New Britain Region, P.N.G.*

ISC 04 23:44:05.7±0.3**, 7°.02S**±0°.05×**150°.89E**±0°.06**, h40^{km}, n280, σ1^{s}.51**/279**, mb5.0**/120**, MS4.0**/11**, 9C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.08	24		Pn	23 44 52.3	+0.4
RABL				Sn	Sn	23 45 28.4	+0.8
RABL	Rabaul	3.08	24	P	Pn	23 44 54.3	+2.4
PMG	Port Moresby	4.39	237	Pn	Pn	23 45 11.1	+1.1
	28nm,0.3s,baz=67,slow=6.5,SNR=30						
PMG				Sn	Sn	23 46 03.2	+3.3
	25nm,0.3s,baz=95,slow=14,SNR=4.4						
PMG	Port Moresby	4.39	237	P	Pn	23 45 10.1	+0.1
PMG						23 46 02.6	
PMG	Port Moresby	4.39	237	Pn	Pn	23 45 10.1	+0.1
PMG				Sn	Sn	23 46 02.6	+2.7
PMG	Port Moresby	4.39	237	P	Pn	23 45 11.7	+1.8
COEN	Coen	10.25	227	Pn	Pn	23 46 30.1	-0.4
MTSU	Mount Surprise	12.77	210	P	Pn	23 47 05.3	+0.4
	baz=13,SNR=23						
CTA	Charters Tower	13.75	199	Pn	Pn	23 47 19.4	+1.1
	0.3nm,0.3s,baz=24,slow=14,SNR=5.6						
CTA				LR	LR	23 51 56.4	
	comp=Z,280nm,21.9s,baz=46,slow=34						
CTAO	Charters Tower	13.75	199	P	Pn	23 47 19.3	+1.1
CTAO	Charters Tower	13.75	199	Pn	Pn	23 47 19.3	+1.1
QIS	Mount Isa	17.34	218	P	Pn	23 48 04.8	-0.1
	baz=17,SNR=4.5						
EIDS	Eidsvold	18.25	179	P	P	23 48 14.9	-1.0
	baz=18,SNR=6.1						
EIDS	Eidsvold	18.25	179		P	23 48 15.9	0.0
KDU	Kakadu	19.00	251	P	P	23 48 24.3	+0.2
	baz=19,SNR=6.2						
FAKI	Fak Fak	19.01	281		P	23 48 23.8	-0.6
FAKI	Fak Fak	19.01	281	P	P	23 48 24.3	-0.1
	32nm,0.8s						
RMQ	Roma	19.47	186	P	Pn	23 48 30.4	-0.3
	baz=20,SNR=48						
MTN	Manton Dam	20.30	252	P	P	23 48 38.6	+0.2
	baz=20,SNR=12						
MTN	Manton Dam	20.30	252	P	P	23 48 38.9	+0.5
MTN				IAmb	IAmb	23 48 39.4	
	comp=Z,40nm,0.7s						
WB0	Warramunga Arr	20.42	230	P	P	23 48 39.4	-0.3
WR0	Warramunga Arr	20.43	229	P	P	23 48 39.5	-0.2
WR0					Sn	23 52 35.2	+3.7
QLP	Quilpie	20.46	197	P	P	23 48 40.4	+0.3
	baz=20,SNR=15						
WRAB	Tennant Creek	20.55	230	*ce*P	P	23 48 41.2	+0.1
WRAB				pmax	pmax		
	comp=Z,28nm,0.7s						
WRAB	Tennant Creek	20.55	230	P	P	23 48 40.8	-0.3
WB2	Warramunga Arr	20.56	230	P	P	23 48 40.8	-0.4
WRA	Warramunga Arr	20.57	230	P	P	23 48 39.9	-1.4
	comp=Z,25nm,0.8s,baz=55,slow=11,SNR=80						
WRA				S	Sn	23 52 37.0	+2.0
	comp=Z,7.8nm,1.2s,baz=54,slow=16,SNR=6.7						
DZM	Mont Dzumac	21.19	137	P	P	23 48 49.2	+1.1
	comp=Z,29nm,1.0s,baz=296,slow=2.5,SNR=13						
DZM				LR	LR	23 56 00.4	
	comp=Z,532nm,18.1s,baz=324,slow=34						
DZM	Mont Dzumac	21.19	137	P	P	23 48 48.9	+0.9
DZM	Mont Dzumac	21.19	137	P	P	23 48 49.2	+1.1
GUMO	Guam	21.33	344	LR	LR	23 55 45.2	
	comp=Z,142nm,18.8s,baz=114,slow=33						
AS31	Alice Springs	23.24	223	P	P	23 49 09.7	-0.1
ASAR	Alice Springs	23.24	223	P	P	23 49 09.7	-0.1
	comp=Z,12nm,1.0s,baz=58,slow=9.3,SNR=61						
ASAR				S	S	23 53 19.6	+0.3
	comp=Z,2.2nm,0.9s,baz=44,slow=16,SNR=5.8						
ASAR				LR	LR	23 58 27.1	
	comp=Z,179nm,18.2s,baz=44,slow=37						
ARMA	Armidale	23.29	178	P	P	23 49 09.7	-0.5
	baz=23,SNR=8.8						
ARMA	Armidale	23.29	178	P	P	23 49 09.9	-0.2
SANI	Sanana	25.31	280	P	P	23 49 28.5	-0.4
	comp=Z,46nm,1.0s						
LHI	Lord Howe Isla	25.54	164	P	P	23 49 28.3	-2.5
LHI				IAmb	IAmb	23 49 38.8	
	comp=Z,61nm,1.1s						
STKA	Stephens Creek	26.21	198	P	P	23 49 36.2	-0.7
	baz=26,SNR=38						
STKA	Stephens Creek	26.21	198	P	P	23 49 36.1	-0.7
	comp=Z,37nm,0.8s,baz=9.5,slow=10,SNR=42						
STKA				LR	LR	00 00 47.8	
	comp=Z,219nm,18.4s,baz=18,slow=38						
STKA	Stephens Creek	26.21	198	P	P	23 49 36.4	-0.5
STKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
STKA	Stephens Creek	26.21	198	P	P	23 49 36.4	-0.5
SOEI	Soe	26.48	262	P	P	23 49 38.6	-1.0
SOEI				IAmb	IAmb	23 49 57.8	
	comp=Z,42nm,0.7s						
FITZ	Fitzroy Crossi	26.96	244	P	P	23 49 43.6	-0.1
	comp=Z,16nm,0.7s,baz=52,slow=8.9,SNR=31						
FITZ				LR	LR	00 00 59.1	
	comp=Z,139nm,18.8s,baz=78,slow=38						
YNG	Young	27.25	185	P	P	23 49 45.6	-0.6
	baz=27,SNR=8.3						
WRKA	Warakurna	28.07	228	P	P	23 49 53.6	-0.1
	baz=28,SNR=21						
HTT	Hallett	28.53	201	P	P	23 49 57.3	-0.4
	baz=29,SNR=11						
MSVF	Nonsavu	28.54	114	LR	LR	23 59 05.4	
	comp=Z,155nm,21.1s,baz=189,slow=32						
LUWI	Luwuk	28.66	281	P	P	23 49 59.1	+0.1
LUWI				IAmb	IAmb	23 50 18.1	
	comp=Z,31nm,0.7s						
BBOO	Buckleboo	29.13	206	P	P	23 50 02.1	-1.0
ARPS	Mount Arapiles	30.75	194	P	P	23 50 17.2	-0.1
	baz=31,SNR=6.5						
FORT	Forrest	31.88	219	P	P	23 50 26.2	-1.2
MYLDM	Lahad Datu	34.52	290	P	P	23 50 51.9	+1.3
MYLDM				IAmb	IAmb	23 51 05.8	
	comp=Z,9.7nm,0.7s						
KMBL	Kambalda	36.35	224	P	P	23 51 06.4	+0.3
	baz=36,SNR=4.7						
MEEK	Meekatharra	36.36	234	P	P	23 51 06.5	+0.2
	baz=36,SNR=10						
UGM	Wanagama	40.03	266	P	P	23 51 37.8	+0.5
UGM				IAmb	IAmb	23 51 51.1	
	comp=Z,52nm,1.0s						
LTZ	Lake Taylor	40.30	155	P	P	23 51 38.6	-0.6
PLWZ	Palliser	40.65	152	P	P	23 51 40.5	-1.6
YHNB	Yeheng	42.65	319	P	P	23 51 58.5	-0.3
YHNB				IAmb	IAmb	23 52 02.4	
	comp=Z,22nm,1.0s						
JMN	Monobe	43.62	339	P	P	23 52 06.3	-0.1
JNU	Nakatsue	44.22	336	P	P	23 52 10.7	-0.5
JNU				IAmb	IAmb	23 52 11.7	
	comp=Z,19nm,0.8s						
JGF	Kuroka	44.27	344	P	P	23 52 12.9	+1.4
JWT	Wachi	44.54	342	P	P	23 52 13.2	-0.5
JWT				IAmb	IAmb	23 52 19.5	
	comp=Z,22nm,0.9s						
XMIS	Christmas Isla	44.82	262	P	P	23 52 16.5	+0.2
XMIS				IAmb	IAmb	23 52 29.2	
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	44.94	346	P	P	23 52 16.7	-0.2
	comp=Z,1.3nm,0.8s,baz=173,slow=9.6,SNR=2.3						
MJAR				PcP	PcP	23 53 57.9	+0.1
	comp=Z,2.4nm,0.8s,baz=158,slow=3.8,SNR=4.9						
JHS	Saijyo	45.03	339	P	P	23 52 16.3	-1.4
DLV	T Lat	46.19	294	P	P	23 52 26.4	-0.9
DLV				IAmb	IAmb	23 52 27.5	
	comp=Z,24nm,0.8s						
KSRS	Korea Array	49.17	336	P	P	23 52 50.0	+0.1
	comp=Z,7.6nm,0.7s,baz=156,slow=8.4,SNR=33						
KSRS				PcP	PcP	23 54 13.2	+0.5
	comp=Z,0.6nm,0.4s,baz=191,slow=3.3,SNR=4.1						
KSRS	Korea Array	49.17	336	P	P	23 52 50.0	+0.1
NJ2	Nanjing	49.43	324	*e*P	P	23 52 54.6	+2.7
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
KULM	Kulim	51.61	282	P	P	23 53 08.4	-0.3
KULM				IAmb	IAmb	23 53 09.7	
	comp=Z,14nm,1.0s						
RPSI	Rantau Prapat	52.76	279	P	P	23 53 16.4	-0.8
PSI	Prapat	52.78	279	P	P	23 53 16.4	-1.1
	comp=Z,3.7nm,0.4s,baz=180,slow=3.8,SNR=5.2						
USA0B	Ussuriysk Arra	53.77	343	P	P	23 53 25.6	+1.5
USA0B				pmax	pmax		
	comp=Z,5.0nm,1.1s						
USA0B	Ussuriysk Arra	53.77	343	P	P	23 53 25.6	+1.5
USRK	Ussuriysk Ar.	53.77	343	P	P	23 53 23.0	-1.1
	comp=Z,2.3nm,0.9s,baz=163,slow=7.4,SNR=6.6						
GYA	Guiyang	54.28	310	*e*P	P	23 53 29.1	+0.7
GYA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MDJ	Mudanjiang	54.87	342	P	P	23 53 32.6	+0.5
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,300nm,6.3s						
KMI	Kunming	56.70	306	⇑P	P	23 53 46.5	+0.6
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN	Xi'an	56.96	319	P	P	23 53 46.5	-0.9
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	57.15	297	P	P	23 53 49.5	+0.5
	comp=Z,2.8nm,0.9s,baz=128,slow=5.8,SNR=19						
CMAR				PcP	PcP	23 54 44.4	+1.0
	comp=Z,0.6nm,0.3s,baz=113,slow=3.2,SNR=4.3						
CD2	Chengdu	58.78	313	*e*P	P	23 54 01.5	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	59.78	326	*e*P	P	23 54 09.3	+2.3
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
PETK	Petropavlovsk-	60.17	5	P	P	23 54 08.2	-1.1
	comp=Z,6.2nm,0.7s,baz=155,slow=7.2,SNR=8.9						
LZH	Lanzhou	61.53	318	*e*P	P	23 54 19.3	+0.2
LZH				pP	pP	23 54 30.8	+1.8
LZH				sP	pwP	23 54 35.0	-1.9
LZH				PP	PP	23 56 37.5	+2.4

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LZH                                      pmax     pmax
       comp=Z,25nm,1.3s
LZH                                      pmax     pmax
       comp=Z,92nm,7.6s
LZH                                      LR       LR
       comp=Z,230nm,15.4s
LZH                                      LR       LR
       comp=Z,240nm,15.6s
LZH                                      LR       LR
       comp=Z,370nm,18.0s
HIA    Hailar             62.31 337      IAmb     IAmb      23 54 24.4
       comp=Z,14nm,0.6s
ZEA    Zeya               63.73 345     eP        P         23 54 33.4 +0.2
ZEA                                      pmax     pmax
       comp=Z,10.0nm,1.0s
GTA    Gaotai             66.03 319      P        P         23 54 48.4  -0.2
GTA                                      pmax     pmax
       comp=Z,5.0nm,0.9s
ULN    Ulaanbaatar        66.90 330ceP            P         23 54 54.4 +0.3
ULN                                      pmax     pmax
       comp=Z,7.0nm,1.0s
ULN    Ulaanbaatar        66.90 330      P        P         23 54 54.3 +0.3
SONM   Songino Array      67.21 329      P        P         23 54 56.0   0.0
       comp=Z,4.5nm,0.5s,baz=148,slow=5.0,SNR=59
SONM                                     PcP      PcP       23 55 22.7  -1.0
       comp=Z,3.8nm,0.8s,baz=152,slow=4.1,SNR=7.6
SEY    Seymchan           69.76   1    i P        P         23 55 11.7 +0.3
TAPN   Taplejung          69.95 302     eP        P         23 55 13.9 +0.1
       comp=Z,32nm,0.8s
ODAN   Odare              70.06 302     eP        P         23 55 15.0 +0.6
       comp=Z,62nm,0.7s
UNV    Unalaska Valle     70.42  25      P        P         23 55 16.6 +1.0
UNV                                      IAmb     IAmb      23 55 28.6
       comp=Z,34nm,1.1s
ZAK    Zakamensk          70.42 330     eP        P         23 55 15.2  -0.7
ZAK                                     e                   23 55 34.0
ZAK                                      pmax     pmax
       comp=Z,8.0nm,1.1s
ZAK                                      pmax     pmax
       comp=Z,5.0nm,1.0s
VNDA   Vanda              70.70 177      P        P         23 55 17.4 +0.3
       comp=Z,1.6nm,1.0s,baz=315,slow=10.0,SNR=2.8
VNDA   Vanda              70.70 177      P        P         23 55 17.7 +0.6
VNDA                                     pmax     pmax
       comp=Z,3.0nm,1.1s
VNDA   Vanda              70.70 177      P        P         23 55 17.7 +0.6
RAMN   Ramite             70.76 302     eP        P         23 55 19.3 +0.7
       comp=Z,12nm,0.6s
YAK    Yakutsk            70.78 350ceP            P         23 55 18.8 +1.1
YAK                                      pmax     pmax
       comp=Z,10.0nm,0.7s
AKUT   Akutan             70.93  25      P        P         23 55 18.5  -0.3
GUN    Gumba              71.67 302     eP        P         23 55 24.0  -0.3
       comp=Z,61nm,0.7s
PKI    Pulchoki           71.96 302     eP        P         23 55 26.2 +0.2
PKIN   Phulchoki          71.97 302     eP        P         23 55 26.3 +0.3
       comp=Z,15nm,0.6s
KKN    Kakani             72.13 302     eP        P         23 55 27.1 +0.2
       comp=Z,31nm,0.7s
DMN    Daman              72.22 302     eP        P         23 55 27.7 +0.2
       comp=Z,48nm,0.7s
DANN   Dangsing           73.58 302     eP        P         23 55 35.2  -0.4
       comp=Z,26nm,0.6s
SDPT   Sand Point         74.03  26      P        P         23 55 37.6 +0.4
HYB    Hyderabad          75.44 290    i P        P         23 55 46.0  -0.2
CHGN   Chignik            75.54  26      P        P         23 55 46.6 +0.7
CHGN                                     IAmb     IAmb      23 55 46.9
       comp=Z,39nm,1.2s
WMQ    Urumqi             76.10 318     eP        P         23 55 49.9 +0.4
WMQ                                      sP       sP        23 56 02.8  -0.9
WMQ                                      pmax     pmax
       comp=Z,16nm,0.9s
WMQ                                      pmax     pmax
       comp=Z,230nm,5.1s
DGAR   Diego Garcia       77.71 264      P        P         23 55 58.4  -0.7
DGAR                                     pmax     pmax
       comp=Z,51nm,1.2s
DGAR   Diego Garcia       77.71 264      P        P         23 55 58.4  -0.7
OHAK   Old Harbor         78.38  27      P        P         23 56 02.5 +0.6
OHAK                                     IAmb     IAmb      23 56 15.3
       comp=Z,30nm,1.0s
ANM    Nome               78.45  18      P        P         23 56 03.8 +1.7
ANM                                      pmax     pmax
       comp=Z,15nm,0.9s
ANM    Nome               78.45  18      P        P         23 56 03.8 +1.7
ANM                                      IAmb     IAmb      23 56 05.5
       comp=Z,15nm,0.9s
DGZ    Jazzator, Alta     78.72 324    i P        P         23 56 03.9  -0.2
DGZ                                      pmax     pmax
       comp=Z,7.0nm,0.8s
KDAK   Kodiak Island      79.00  27      LR       LR        00 24 01.1
       comp=Z,196nm,20.2s,baz=216,slow=30
KDAK   Kodiak Island      79.00  27               P         23 56 06.7 +1.4
KDAK   Kodiak Island      79.00  27      P        P         23 56 06.2 +0.9
KDAK                                     IAmb     IAmb      23 56 08.1
       comp=Z,22nm,0.9s
ZSN    Zaisan             79.36 321     eP        P         23 56 06.8  -0.8
       baz=321
ZSN    Zaisan             79.36 321     eP        P         23 56 06.7  -0.8
SVW2   Sparrevohn         79.60  23      IAmb     IAmb      23 56 12.1
       comp=Z,19nm,0.8s
TIXI   Tiksi              79.84 353     eP        P         23 56 10.7 +1.1
TIXI   Tiksi              79.84 353      P        P         23 56 09.7 +0.1
RSO    Redoubt South      80.38  25      P        P         23 56 13.3 +0.3
TTA    Tatalina           80.52  22      P        P         23 56 13.5   0.0
TTA                                      pmax     pmax
       comp=Z,14nm,1.1s
TTA    Tatalina           80.52  22      P        P         23 56 13.5   0.0
TTA                                      IAmb     IAmb      23 56 21.5
       comp=Z,14nm,1.1s
CNPM   China Poot         80.53  26      P        P         23 56 14.4 +0.8
MK31   Makanchi Array     80.76 320ceP            P         23 56 15.1   0.0
MKAR   Makanchi Array     80.76 320      P        P         23 56 15.0  -0.1
       comp=Z,5.0nm,0.7s,baz=96,slow=8.1,SNR=30
MKAR                                     LR       LR        00 32 21.5
       comp=Z,80nm,19.3s,baz=82,slow=36
BRLK   Bradley Lake       80.80  26      P        P         23 56 15.2 +0.2
MAKZ   Makanchi           80.97 320      P        P         23 56 16.0  -0.2
MAKZ                                     pmax     pmax
       comp=Z,18nm,1.2s
MAKZ   Makanchi           80.97 320      P        P         23 56 16.0  -0.2
MAKZ                                     IAmb     IAmb      23 56 18.1
       comp=Z,18nm,1.1s
SHLS   Shalkode           81.46 315     eP        P         23 56 17.1  -1.9
       comp=Z,14nm,1.3s,baz=316
SHLS   Shalkode           81.46 315     eP        P         23 56 17.1  -1.9
SHLS                                     pmax     pmax
       comp=Z,14nm,1.3s
SEW    Seward             81.60  26      P        P         23 56 19.4 +0.2
RDOG   Red Dog Mine       81.62  16      P        P         23 56 20.1 +0.9
RDOG                                     IAmb     IAmb      23 56 21.6
       comp=Z,20nm,1.2s
O22K   Cooper Landing     81.67  26      P        P         23 56 19.6 +0.1
SKT    Skwentna           81.70  24      P        P         23 56 18.3  -1.5
SKT                                      IAmb     IAmb      23 56 20.5
       comp=Z,17nm,1.2s
SUA    Susitna One        81.75  24      IAmb     IAmb      23 56 21.9
       comp=Z,18nm,0.8s
PPLA   Purkeypile         81.94  23      P        P         23 56 21.5 +0.3
ZALV   Zalesovo Beam      81.95 327      P        P         23 56 20.2  -1.0
       comp=Z,5.5nm,0.7s,baz=115,slow=5.4,SNR=27
RC01   Rabbit Creek A     81.97  25      P        P         23 56 21.7 +0.5
       baz=240
KPKS   Kokpek             82.09 316     eP        P         23 56 22.4   0.0
       comp=Z,17nm,1.3s,baz=316
KPKS   Kokpek             82.09 316     eP        P         23 56 22.3   0.0
KPKS                                     pmax     pmax
       comp=Z,17nm,1.3s
SATY   Saty               82.16 315     eP        P         23 56 23.2 +0.3
       comp=Z,8.9nm,1.3s,baz=315
SATY   Saty               82.16 315     eP        P         23 56 23.1 +0.3
SATY                                     pmax     pmax
       comp=Z,9.0nm,1.3s
CUT    Chulitna           82.43  24      P        P         23 56 23.4  -0.1
       baz=239
PMR    Palmer             82.48  25      P        P         23 56 24.0 +0.2
PMR                                      pmax     pmax
       comp=Z,14nm,0.9s
PMR    Palmer             82.48  25      P        P         23 56 24.0 +0.2
PMR                                      IAmb     IAmb      23 56 25.1
       comp=Z,14nm,0.9s
GHO    Glory Hole Cre     82.65  25      P        P         23 56 25.1 +0.3
GHO                                      IAmb     IAmb      23 56 26.3
       comp=Z,17nm,0.8s
KNK    Knik Glacier       82.67  25      P        P         23 56 25.2 +0.3
KNK                                      IAmb     IAmb      23 56 27.3
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       comp=Z,14nm,0.8s
TDK    Taldyqorghan       82.74 317     eP        P         23 56 26.2 +0.6
       comp=Z,17nm,1.2s,baz=317
TDK    Taldyqorghan       82.74 317     eP        P         23 56 26.2 +0.6
TDK                                      pmax     pmax
       comp=Z,17nm,1.2s
KTH    Kantishna Hill     82.78  23      IAmb     IAmb      23 56 26.7
       comp=Z,21nm,0.9s
KSH    Kashi              82.94 311      P        P         23 56 29.3 +2.4
KSH                                      pmax     pmax
       comp=Z,52nm,1.3s
KSH                                      pmax     pmax
       comp=Z,350nm,4.7s
TRF    Thorofare Moun     82.96  23      IAmb     IAmb      23 56 28.6
       comp=Z,17nm,0.9s
GLI    Glacier Island     82.99  26      P        P         23 56 27.0 +0.5
HIN    Hinchinbrook I     83.03  26      P        P         23 56 27.6 +0.8
HIN                                      IAmb     IAmb      23 56 29.8
       comp=Z,30nm,1.0s
BPAW   Bear Paw Mtn.      83.04  22      IAmb     IAmb      23 56 28.7
       comp=Z,11nm,0.8s
MDOK   Medeo              83.15 315     eP        P         23 56 28.6 +0.7
       baz=315
MDOK   Medeo              83.15 315     eP        P         23 56 28.6 +0.7
TNSS   Tian-Shan          83.18 315     eP        P         23 56 29.3 +0.9
       baz=315
TNSS   Tian-Shan          83.18 315     eP        P         23 56 29.3 +0.9
FID    Port Fidalgo       83.20  26      P        P         23 56 28.2 +0.6
FID                                      IAmb     IAmb      23 56 30.3
       comp=Z,24nm,1.0s
AAA    Alma-Ata           83.25 315     eP        P         23 56 29.2 +0.8
       comp=Z,7.4nm,0.5s,baz=315
AAA    Alma-Ata           83.25 315     eP        P         23 56 29.1 +0.8
AAA                                      pmax     pmax
       comp=Z,7.0nm,0.5s
SEM    Semipalatinsk      83.27 323     eP        P         23 56 26.8  -1.7
       comp=Z,3.8nm,0.9s,baz=323
SEM    Semipalatinsk      83.27 323     eP        P         23 56 26.7  -1.7
SEM                                      pmax     pmax
       comp=Z,4.0nm,0.9s
SCM    Sheep Creek Mo     83.35  25      P        P         23 56 28.7 +0.3
SCM                                      pmax     pmax
       comp=Z,47nm,1.1s
SCM    Sheep Creek Mo     83.35  25      P        P         23 56 28.7 +0.3
CHKK   Chushkaly          83.38 316     eP        P         23 56 29.1 +0.2
       baz=316
CHKK   Chushkaly          83.38 316     eP        P         23 56 29.1 +0.2
MLY    Manley             83.62  21      P        P         23 56 30.4 +0.7
       baz=238
MCK    McKinley           83.63  23      P        P         23 56 29.6  -0.1
       baz=240
BWN    Browne             83.65  22      P        P         23 56 29.6  -0.2
NIL    Nilore             83.67 305      P        P         23 56 30.9 +0.2
NIL                                      pmax     pmax
       comp=Z,50nm,0.9s
NIL    Nilore             83.67 305      P        P         23 56 30.9 +0.2
KLU    Klutina            83.78  26      P        P         23 56 31.7 +1.1
KUU    Kurty              83.84 316     eP        P         23 56 31.0  -0.4
       comp=Z,45nm,1.2s,baz=316
KUU    Kurty              83.84 316     eP        P         23 56 30.9  -0.4
KUU                                      pmax     pmax
       comp=Z,45nm,1.2s
M24K   Tolsona, Glenn     83.96  25      P        P         23 56 33.3 +1.8
       baz=243
HMT    Hamilton           84.00  27      P        P         23 56 32.7 +1.0
HMT                                      IAmb     IAmb      23 56 33.9
       comp=Z,26nm,1.0s
NEA2   Nenana             84.01  22      P        P         23 56 31.6  -0.1
       baz=240
SUCK   Suckling Hills     84.10  27      P        P         23 56 33.7 +1.4
SUCK                                     IAmb     IAmb      23 56 34.2
       comp=Z,30nm,1.1s
TKM2   Tokmak 2           84.11 314      P        P         23 56 33.6 +0.7
       SNR=22
I23K   Minto, Yukon-K     84.18  22      P        P         23 56 33.3 +0.8
       baz=240
WRH    Wood River Hil     84.32  22      IAmb     IAmb      23 56 35.4
       comp=Z,25nm,1.0s
KURK   Kurchatov          84.35 323ceP            P         23 56 33.6  -0.1
KURK                                     pmax     pmax
       comp=Z,28nm,1.3s
KURK   Kurchatov          84.35 323      P        P         23 56 33.4  -0.2
KURK                                     IAmb     IAmb      23 56 35.1
       comp=Z,28nm,1.1s
KURBB  Kurchatov Arra     84.38 322      P        P         23 56 32.5  -1.3
       comp=Z,9.9nm,0.8s,baz=115,slow=3.7,SNR=81
N25K   Chitina, Valde     84.40  26      P        P         23 56 35.2 +1.4
       baz=244
N25K   Chitina, Valde     84.40  26      P        P         23 56 34.6 +0.8
KBK    Karagaybulak       84.50 314      P        P         23 56 35.8 +0.9
       SNR=15
CCB    Clear Creek Bu     84.51  22      IAmb     IAmb      23 56 35.7
       comp=Z,17nm,0.8s
TCOL   CIGO, UAF Yank     84.60  22      P        P         23 56 34.5  -0.2
       baz=241
TCOL   CIGO, UAF Yank     84.60  22      P        P         23 56 34.4  -0.2
COLA   College            84.60  22      P        P         23 56 34.1  -0.5
COLA                                     pmax     pmax
       comp=Z,32nm,0.8s
COLA   College            84.60  22      P        P         23 56 34.1  -0.5
PAX    Paxson             84.64  24      P        P         23 56 35.1 +0.1
PAX                                      pmax     pmax
       comp=Z,7.0nm,1.0s
PAX    Paxson             84.64  24      P        P         23 56 35.1 +0.1
GLB    Gilahina Butte     84.67  26      P        P         23 56 35.8 +0.7
GLB                                      IAmb     IAmb      23 56 38.3
       comp=Z,18nm,0.8s
CRQM   Cirque             84.68  27      P        P         23 56 36.0 +0.6
UCH    Uchtor             84.70 314      P        P         23 56 38.0 +1.7
       SNR=25
HDA    Harding Lake       84.72  23      P        P         23 56 35.4 +0.2
       baz=242
HDA    Harding Lake       84.72  23      IAmb     IAmb      23 56 38.3
       comp=Z,11nm,0.9s
CHMS   Chumysh            84.72 314      P        P         23 56 36.5 +0.6
       SNR=24
VRDI   Verde Repeater     84.74  26      P        P         23 56 35.9 +0.2
VRDI                                     IAmb     IAmb      23 56 38.8
       comp=Z,22nm,0.9s
TGL    Tana Glacier       84.82  27      P        P         23 56 36.6 +0.6
TGL                                      IAmb     IAmb      23 56 38.2
       comp=Z,22nm,1.1s
AAK    Ala-Archa          84.82 314      P        P         23 56 37.6 +1.2
       comp=Z,22nm,0.6s,baz=128,slow=5.0,SNR=115
AAK    Ala-Archa          84.82 314      P        P         23 56 37.3 +0.8
       SNR=35
AAK    Ala-Archa          84.82 314ceP            P         23 56 37.5 +1.0
AAK                                      pmax     pmax
       comp=Z,181nm,1.7s
AAK    Ala-Archa          84.82 314      P        P         23 56 37.0 +0.5
POKR   Poker Plat Res     84.88  22      P        P         23 56 36.2 +0.2
       baz=241
POKR   Poker Plat Res     84.88  22      IAmb     IAmb      23 56 38.0
       comp=Z,8.8nm,1.1s
IL31                      84.92  22      IAmb     IAmb      23 56 37.6
       comp=Z,22nm,0.8s
ILAR   Eielson Array      84.92  22      P        P         23 56 35.6  -0.7
       comp=Z,19nm,0.8s,baz=254,slow=4.9,SNR=104
ILAR                                     LR       LR        00 28 33.6
       comp=Z,114nm,20.8s,baz=224,slow=32
SGDS   Sogindy            84.92 315     eP        P         23 56 37.0 +0.1
       comp=Z,8.4nm,0.8s,baz=315
SGDS   Sogindy            84.92 315     eP        P         23 56 37.0 +0.1
SGDS                                     pmax     pmax
       comp=Z,8.0nm,0.8s
COLD   Coldfoot           84.97  20      P        P         23 56 36.9 +0.5
COLD                                     IAmb     IAmb      23 56 38.9
       comp=Z,11nm,1.0s
USP    Ospenovka          84.97 315      P        P         23 56 37.9 +0.8
       SNR=60
ISLE   Juniper Island     84.97  27      P        P         23 56 37.6 +0.8
ISLE                                     IAmb     IAmb      23 56 45.1
       comp=Z,23nm,1.1s
MCARA  McCarthy VSAT      84.99  26      P        P         23 56 37.6 +0.9
BALM   Baldy              85.15  27      P        P         23 56 37.8 +0.2
BALM                                     IAmb     IAmb      23 56 40.9
       comp=Z,14nm,0.8s
YAH    Yahtse             85.15  27      P        P         23 56 39.0 +1.3
YAH                                      IAmb     IAmb      23 56 49.2
       comp=Z,13nm,1.1s
RIDG   Independent Ri     85.24  24      P        P         23 56 38.3 +0.3
RIDG                                     IAmb     IAmb      23 56 40.2
       comp=Z,11nm,0.9s
AML    Almayashu          85.27 313      P        P         23 56 40.8 +1.7
       SNR=53
EKS2   Erkin-Say          85.34 314      P        P         23 56 40.5 +1.5
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       SNR=38
A21K   Barrow             85.42  15      P        P         23 56 39.3 +0.7
       baz=232
A21K   Barrow             85.42  15      IAmb     IAmb      23 56 41.1
       comp=Z,11nm,0.9s
TABL   Table Mountain     85.45  27      P        P         23 56 40.6 +1.3
TABL                                     IAmb     IAmb      23 56 42.8
       comp=Z,14nm,0.8s
BARN   Barnard Glacie     85.46  27      P        P         23 56 40.1 +0.8
DOT    Dot Lake           85.51  24      IAmb     IAmb      23 56 42.1
       comp=Z,19nm,0.8s
L26K   Log Cabin Wild     85.54  25      P        P         23 56 40.7 +1.2
       baz=245
SCRK   Sand Creek         85.68  24      P        P         23 56 41.0 +0.8
       baz=244
TOLK   Toolik Lake Re     85.91  18      P        P         23 56 42.4 +1.2
       baz=239
TOLK   Toolik Lake Re     85.91  18      IAmb     IAmb      23 56 43.7
       comp=Z,15nm,0.8s
EGAK   Eagle              87.13  23      P        P         23 56 47.8 +0.6
DZA    Taraz              87.14 314     eP        P         23 56 47.9 +0.1
       comp=Z,13nm,0.9s,baz=314
DZA    Taraz              87.14 314     eP        P         23 56 47.9 +0.1
DZA                                      pmax     pmax
       comp=Z,13nm,0.9s
HYT    Haines Junctio     87.27  28      P        P         23 56 49.5 +1.4
KBL    Kabul              87.27 305      P        P         23 56 47.9  -0.9
KBL                                      pmax     pmax
       comp=Z,3.0nm,0.8s
KBL    Kabul              87.27 305      P        P         23 56 47.9  -0.9
NRIK   Noril'sk           87.44 341      P        P         23 56 48.6   0.0
       comp=Z,8.8nm,0.7s,baz=111,slow=4.5,SNR=16
NRIK   Noril'sk           87.44 341ceP            P         23 56 48.5   0.0
NRIK                                     pmax     pmax
       comp=Z,11nm,0.8s
NRIK   Noril'sk           87.44 341      IAmb     IAmb      23 56 49.7
       comp=Z,13nm,1.0s
IUG    Iuzhnay            87.93 313     eP        P         23 56 51.6  -0.2
       comp=Z,2.5nm,0.8s,baz=313
IUG    Iuzhnay            87.93 313     eP        P         23 56 51.5  -0.2
IUG                                      pmax     pmax
       comp=Z,2.0nm,0.8s
WHY    Whitehorse         88.44  28      P        P         23 56 55.1 +1.4
WHY                                      IAmb     IAmb      23 56 57.7
       comp=Z,11nm,0.7s
EPYK   Eagle Plains       89.43  23      P        P         23 56 59.4 +1.3
       baz=251
EPYK   Eagle Plains       89.43  23      IAmb     IAmb      23 57 01.3
       comp=Z,16nm,0.8s
BRVK   Borovoye           89.94 323ceP            P         23 57 00.0  -0.8
BRVK                                     pmax     pmax
       comp=Z,15nm,2.5s
BRVK   Borovoye           89.94 323      P        P         23 56 59.5  -1.2
INK    Inuvik             91.19  21      IAmb     IAmb      23 57 08.6
       comp=Z,14nm,1.1s
HRA    Herat              92.80 304      IAmb     IAmb      23 57 16.0
       comp=Z,4.9nm,0.9s
C36M   Paulatuk           94.76  21      P        P         23 57 23.8 +1.2
       baz=263
C36M   Paulatuk           94.76  21      IAmb     IAmb      23 57 24.6
       comp=Z,7.7nm,0.9s
LHV    Little Huntoon     94.76  52      P        P         23 57 24.2 +0.8
LHV                                      IAmb     IAmb      23 57 26.5
       comp=Z,6.1nm,1.1s
RYN    Ryan               94.78  52      P        P         23 57 24.0 +0.3
NVAR   Mina Array Bea     94.94  52      P        P         23 57 25.9 +1.4
       comp=Z,2.7nm,0.9s,baz=256,slow=7.3,SNR=15
ARU    Arti               97.09 326      P        P         23 57 31.4  -2.1
ARU                                                         00 01 28.0
ARU                                      S        SKSac     00 08 05.8  -1.6
YKA    Yellowknife Ar     98.26  28      P        P         23 57 38.4  -0.2
       comp=Z,1.5nm,0.6s,baz=265,slow=3.7,SNR=28
YKA                                      PKKPbc   PKKPdf    00 14 26.6  +11
       comp=Z,0.4nm,1.1s,baz=70,slow=4.1,SNR=3.6
PDAR   Pinedale Array    101.73  48      P        Pdif      23 57 55.1 +0.1
       comp=Z,0.4nm,0.7s,baz=280,slow=0.9,SNR=4.0
ARCES  ARCESS Array B    108.41 342      PKiKP    PKiKP     00 02 29.0  -0.5
       comp=Z,2.4nm,0.8s,baz=116,slow=1.2,SNR=5.9
MNK    Minsk             114.46 327    i P        Pdif      23 58 58.9 +8.0
       comp=E,4.0nm,1.2s
MNK                                    i P        Pdif      23 58 58.9 +8.0
       comp=N,11nm,0.9s
MNK                                    i P        Pdif      23 58 58.9 +8.0
       comp=Z,7.0nm,1.2s
MNK                                    i PKP      PKiKP     00 02 38.0  -3.2
MNK                                    i PKP      PKiKP     00 02 38.0  -3.2
MNK                                    i PKP      PKiKP     00 02 38.0  -3.2
MNK                                    i PP       PP        00 03 34.0  -3.8
MNK                                    i PPP      PPP       00 05 59.0
MNK                                    i SKS      SKSdf     00 09 47.5  -2.7
MNK                                    i PS       PS        00 13 03.6   -13
MNK                                    i SS       SS        00 19 26.2  -1.3
MNK                                    i SSS      SSS       00 23 40.3
MNK                                    i LQ       LQ        00 44 34.6
MNK                                    i LR       LR        00 49 27.3
MNK                                    i LRM      MLR       00 51 26.0
       comp=N,1µm,24.6s
MNK                                    i LRM      MLR       00 51 31.1
       comp=Z,221nm,19.5s
MNK                                    i LRM      MLR       00 51 34.0
       comp=E,60nm,19.6s
AKASG  Malin Array Be    115.16 323      PKP      PKiKP     00 02 42.0  -0.7
       comp=E,0.3nm,0.2s,baz=69,slow=1.3,SNR=2.2
KHC    Kasperske Hory    124.81 327     ePKIKP    PKiKP     00 03 01.7  -0.1
KHC    Kasperske Hory    124.81 327     ePKPDF    PKiKP     00 03 01.7  -0.1
GERES  GERESS Array B    124.90 327      PKP      PKPdf     00 03 01.7   0.0
       comp=E,1.2nm,0.6s,baz=66,slow=1.6,SNR=13
DAVOX  Davos/Dischmat    128.20 327      PKP      PKPdf     00 03 08.4 +0.2
       comp=E,2.0nm,0.6s,baz=166,slow=7.5,SNR=3.8
MDT    Midelt            145.70 322      PKPbc    PKPab     00 03 41.4 +0.1
       comp=E,6.2nm,0.8s,baz=47,slow=2.0,SNR=26
TOA0   Torodi Ar. Sit    149.09 284               PKPbc     00 03 50.8   0.0
TORD   Torodi Ar. Bea    149.09 284      PKPbc    PKPbc     00 03 50.8   0.0
       comp=E,16nm,0.6s,baz=64,slow=2.9,SNR=76
TORD                                     PP       PP        00 07 22.6 +0.1
       comp=E,1.5nm,0.8s,baz=68,slow=5.4,SNR=4.0
BDFB   Brasilia          150.71 140      PKPbc    PKPbc     00 03 54.7  -0.2
       comp=E,3.0nm,0.5s,baz=222,slow=1.7,SNR=8.2
KOWA   Kowa              154.28 289      PKPbc    PKPbc     00 04 02.6  -0.1
       comp=E,2.5nm,0.5s,baz=75,slow=1.5,SNR=14
KIC    Kosan Boka        155.79 270     ePKP1     PKPab     00 04 23.7 +0.4
       comp=E,13nm,0.7s
DBIC   Dimbokro          155.92 271      PKP      PKPdf     00 03 59.1 +2.4
       comp=E,0.7nm,0.6s,baz=315,slow=2.9,SNR=1.4
DBIC                                     PKPab    PKPab     00 04 23.7  -0.1
       comp=E,4.7nm,0.7s,baz=71,slow=6.6,SNR=9.3
LIC    Lamto             156.07 270     ePKP1     PKPab     00 04 24.8 +0.3
       comp=E,13nm,0.7s
TIC    Toumodi           156.08 271     ePKP1     PKPab     00 04 24.7 +0.1
```

IDC 05 00:02:57.8±1.8**, 7°.46S**×**129°.04E, h0**km**, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.5**/21**, mbtmp3.5**/4**, ML3.7**/2**, Error ellipse: s-maj=138.7km s-min=30.5km az=68.0, Banda Sea**

```
Code   Station Name        Δ°    AZ°     Phase ID             Time      Res
                                        Op       ISC         h  m  s    ISC
WRA    Warramunga Arr     13.44 158     Pn       Pn         00 06 09.6  -0.2
       0.4nm,0.3s,baz=340,slow=13,SNR=33
WRA                                     Sn       Sn         00 08 26.2   -14
       0.8nm,0.3s,baz=339,slow=22,SNR=17
ASAR   Alice Springs      16.78 164     Pn       Pn         00 06 54.6 +0.2
       0.2nm,0.3s,baz=339,slow=9.0,SNR=12
ASAR                                    Sn       Sn         00 09 47.4   -14
       0.3nm,0.3s,baz=235,slow=12,SNR=6.1
MKAR   Makanchi Array     68.09 327     P        P          00 13 59.6 +0.1
       0.2nm,0.5s,baz=117,slow=7.9,SNR=5.1
ZALV   Zalesovo Beam      71.57 334     P        P          00 14 20.6  -0.1
       0.3nm,0.4s,baz=122,slow=5.4,SNR=1.9
```

MDD ***05*** *00:17:35.6±1.7, 33°.26N×12°.63W, h121km±62km, mb3.2/1, Error ellipse: s-maj=69.7km s-min=7.8km az=151.0, PRXIMO*

INMG ***05*** *00:17:37.8±1.9, 33°.02N×12°.49W, h10km, ML2.3, Error ellipse: s-maj=8.4km s-min=4.1km az=149.0*

IGIL 05 00:17:38.1, 33°.99N×12°.96W, h1km**, Madeira Islands region**

```
Code   Station Name        Δ°    AZ°     Phase ID             Time      Res
                                        Op       ISC         h  m  s    ISC
PMPST  Porto Santo, M      2.96 253    ePn       Pn         00 18 22.9  -3.4
PMPS   Porto Santo         2.96 253     P        Pn         00 18 22.9  -3.4
PMPS   Porto Santo         2.96 253    eP        Pn         00 18 22.7  -3.6
PMAR   Madeira             3.54 250     P        Pn         00 18 29.7  -4.7
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PMAR	Madeira	3.54	250	*e*Pn	Pn	00 18 29.7	-4.7
PMOZ	Porto Moniz, M	3.73	253	P	Pn	00 18 32.6	-4.4
PMOZ	Porto Moniz, M	3.73	253	*e*Pn	Pn	00 18 32.6	-4.4
PFVI	Vila Bisbo	4.61	46	P	Pn	00 18 47.0	-1.9
	0.7nm,0.1s,SNR=7.9						
PFVI				S	Sn	00 19 40.4	-2.7
	0.4nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.61	46	*e*Pn	Pn	00 18 47.2	-1.7
PFVI				*e*Sn	Sn	00 19 40.9	-2.1
PFVI				A	A	00 19 50.2	
	3.5nm,0.7s						
MORF	Marmelete	4.83	45	*e*P	Pn	00 18 49.9	-2.1
MORF	Marmelete	4.83	45	P	Pn	00 18 50.3	-1.7
MORF				S	Sn	00 19 45.9	-2.7
	2.9nm,0.2s						
MORF	Marmelete	4.83	45	*e*Pn	Pn	00 18 50.3	-1.7
MORF				*e*Sn	Sn	00 19 45.9	-2.7
MORF				A	A	00 19 50.1	
	2.9nm,0.2s						
PTEO	Sao Teotonio	4.95	43	S	Sn	00 19 51.1	-0.4
	1.5nm,0.9s						
PTEO	Sao Teotonio	4.95	43	*e*Sn	Sn	00 19 51.1	-0.4
PTEO				A	A	00 19 54.2	
	3.0nm,0.9s						
PBDV	Barranco-do-Ve	5.23	50	P	Pn	00 18 55.5	-2.0
PBDV				S	Sn	00 19 53.4	-5.1
	1.7nm,0.6s						
PBDV	Barranco-do-Ve	5.23	50	*e*Pn	Pn	00 18 55.5	-2.0
PBDV				*e*Sn	Sn	00 19 53.4	-5.1
PBDV				A	A	00 19 57.4	
	1.7nm,0.6s						
PCVE	Castro Verde	5.41	46	S	Sn	00 20 00.5	-2.3
	1.5nm,0.4s						
PCVE	Castro Verde	5.41	46	*e*Sn	Sn	00 20 00.5	-2.3
PCVE				A	A	00 20 04.2	
	1.5nm,0.4s						
PNCL	Nicolau / Gran	5.46	40	S	Sn	00 20 05.1	+1.0
	1.5nm,0.6s						
PNCL	Nicolau / Gran	5.46	40	*e*Sn	Sn	00 20 05.1	+1.0
PNCL				A	A	00 20 07.9	
	1.5nm,0.6s						
PVAQ	Vaqueiros	5.46	50	P	Pn	00 18 58.4	-2.3
PVAQ				S	Sn	00 19 59.3	-4.9
	1.7nm,0.4s						
PVAQ	Vaqueiros	5.46	50	*e*Pn	Pn	00 18 58.4	-2.3
PVAQ				*e*Sn	Sn	00 19 59.3	-4.9
PVAQ				A	A	00 20 03.8	
	1.7nm,0.4s						
EGRO	El Granado	5.69	50	P	Pn	00 19 01.7	-2.1
	0.5nm,0.1s,SNR=5.2						
EGRO				S	Sn	00 20 03.4	-6.4
	0.3nm,0.1s,SNR=7.9						
PBEJ	Beja	5.77	44	S	Sn	00 20 10.1	-1.7
PBEJ	Beja	5.77	44	*e*Sn	Sn	00 20 10.1	-1.7
EVO	Evora	6.04	40	S	Sn	00 20 18.5	0.0
	1.8nm,0.5s						
EVO	Evora	6.04	40	*e*Sn	Sn	00 20 18.5	0.0
EVO				A	A	00 20 24.1	
	1.8nm,0.5s						
PMTG	Montargil	6.34	36	P	Pn	00 19 14.9	+2.1
PMTG				S	Sn	00 20 26.5	+0.6
	1.7nm,0.6s						
PMTG	Montargil	6.34	36	*e*Pn	Pn	00 19 14.9	+2.1
PMTG				*e*Sn	Sn	00 20 26.5	+0.6
PMTG				A	A	00 20 29.3	
	1.7nm,0.6s						
EMIN	Mina Concepcio	6.35	52	P	Pn	00 19 09.0	-3.8
	0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	00 20 18.1	-7.9
	0.1nm,0.2s,SNR=7.9						
PSBE	So Bento	6.45	30	*e*Sn	Sn	00 20 31.8	+3.2
PESTR	Estremoz	6.51	40	*e*Sn	Sn	00 20 29.6	-0.6
PMRV	Marv??o	7.03	38	P	Pn	00 19 23.8	+1.5
PMRV				S	Sn	00 20 41.1	-1.8
	1.0nm,0.3s						
PMRV	Marv??o	7.03	38	*e*Pn	Pn	00 19 23.8	+1.5
PMRV				*e*Sn	Sn	00 20 41.1	-1.8
PMRV				A	A	00 20 45.1	
	1.0nm,0.3s						
ECAB	El Cabril	7.35	54	P	Pn	00 19 22.4	-4.2
	0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	00 20 41.9	-8.8
	0.1nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	7.86	64	P	Pn	00 19 28.2	-5.5
	0.4nm,0.3s,SNR=7.9						
EGOR				S	Sn	00 20 51.7	-12
	1.0nm,0.5s,SNR=7.9						
EADA	Adamuz	7.97	56	P	Pn	00 19 30.2	-4.9
	0.6nm,0.3s,SNR=7.9						
EADA				S	Sn	00 20 55.8	-10
	0.2nm,0.2s,SNR=7.9						
EQES	Quesada	8.88	62	P	Pn	00 19 42.1	-5.7
	0.3nm,0.2s,SNR=7.9						
EQES				S	Sn	00 21 16.6	-12
	0.1nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	9.18	49	P	Pn	00 19 49.3	-2.4
	0.1nm,0.2s,baz=234,slow=13,SNR=4.9						
SESP	Santiago Espad	9.39	61	P	Pn	00 19 49.5	-5.2
	1.4nm,0.5s,SNR=7.9						
SESP				S	Sn	00 21 28.5	-12
	0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	10.31	60	P	Pn	00 20 01.7	-5.6
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	00 21 49.5	-14
	0.2nm,0.2s,SNR=7.9						

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*PGC **05** 00:18:35.2±0.3, 50°.76N×130°.46W, h10^{km}, MLSn3.3/11, Mw4.0/11, 214km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **05** 00:18:38.5±1.6, 50°.90N×129°.77W, h0^{km}, mb1 3.7/6, mb1mx3.4/38, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=23.1km s-min=11.8km az=82.0*

ISC 05 00:18:35.9±1.2**, 50°.84N**±0°.07×**130°.27W**±0°.07**, h12^{km}, n27, σ1^s.81**/30**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.37	98	P	Pn	00 18 59.6	-1.3
HOLB				S	Sn	00 19 17.4	-1.6
HG4B	Hotspring	1.56	339	Pn	Pn	00 19 00.8	-2.6
HG4B				Sn	Sn	00 19 20.6	-3.1
PHC	Port Hardy	1.81	93	Pn	Pn	00 19 05.9	-0.9
PHC				Sn	Sn	00 19 28.5	-1.0
BBB	Bella Bella	1.90	44	Pn	Pn	00 19 07.8	-0.3
	17nm,0.3s,baz=240,slow=10,SNR=54						
BBB				Sn	Sn	00 19 29.0	-2.9
	114nm,0.3s,baz=0.0,slow=7.1,SNR=15						
BBB	Bella Bella	1.90	44	Pn	Pn	00 19 07.8	-0.3
BBB				Sn	Sn	00 19 31.0	-0.9
MAYB	Maynard	2.02	101	Pn	Pn	00 19 08.7	-1.2
FHRB	Fair Harbour	2.16	110	Pn	Pn	00 19 10.3	-1.3
TLCB	Telegraph Cove	2.20	96	Pn	Pn	00 19 11.8	-0.4
EDB	Eliza Dome	2.24	115	Pn	Pn	00 19 11.6	-1.1
HG1B	Mitchell Dam	2.39	332	Pn	Pn	00 19 13.7	-1.2
WOSB	Woss	2.46	105	Pn	Pn	00 19 15.1	-0.8
NCRB	Newcastle Ridg	2.72	98	Pn	Pn	00 19 18.6	-0.8
DIB	Dawson Inlet,	2.73	331	Pn	Pn	00 19 17.1	-2.3
GDR	Gold River	2.92	110	Pn	Pn	00 19 21.0	-1.0
GRNB	Grenville Isla	3.01	3	Pn	Pn	00 19 22.4	-1.0
CBB	Campbell River	3.24	103	Pn	Pn	00 19 26.0	-0.5
BTB	Buttle Lake	3.35	112	Pn	Pn	00 19 27.4	-0.7
MGB	Mount Grey	4.05	115	Pn	Pn	00 19 37.5	-0.2
DLBC	Dease Lake	7.61	1	Pn	Pn	00 20 28.4	+1.9
	0.3nm,0.3s,baz=172,slow=15,SNR=1.6						
DLBC				Sn	Sn	00 21 56.4	+3.7
	0.2nm,0.3s,baz=209,slow=18,SNR=1.5						
YBH	Yreka Blue Hor	10.50	147	Pn	Pn	00 21 07.4	+1.1
	0.1nm,0.3s,baz=60,slow=9.7,SNR=1.6						
YKA	Yellowknife Ar	14.45	30	Pn	Pn	00 21 58.4	-1.5
	0.1nm,0.3s,baz=223,slow=11,SNR=6.4						
YKA				Sn	Sn	00 24 26.6	-13
	0.0nm,0.3s,baz=3.1,slow=30,SNR=1.5						
NVAR	Mina Array Bea	15.03	141	Pn	P	00 22 14.3	+0.8
	baz=327,slow=13,SNR=1.8						
PDAR	Pinedale Array	16.28	112	Pn	P	00 22 27.5	0.0
	0.1nm,0.3s,baz=312,slow=11,SNR=17						
ILAR	Eielson Array	16.45	334	Pn	P	00 22 33.4	+4.4
	0.0nm,0.3s,baz=146,slow=10.0,SNR=10						
H11N2	WAKE ISLAND Hy	57.85	262	T	T	01 30 47.7	
	baz=42,slow=76						
H11N3	WAKE ISLAND Hy	57.85	262	T	T	01 30 49.5	
	baz=42,slow=76						
H11N1	WAKE ISLAND Hy	57.86	262	T	T	01 30 48.8	
	baz=42,slow=76						

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*IDC **05** 00:32:25.1±2.4, 24°.30S×179°.33E, h499^{km}±21^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.2/30, mbtmp4.3/7, Error ellipse: s-maj=32.6km s-min=24.9km az=133.0*

*NEIC **05** 00:32:26.1±1.3, 24°.01S±0°.08×179°.6E±0°.2, h550^{km}±15^{km}, mb4.5/14, Error ellipse: s-maj=23.4km s-min=10.0km az=104.0*

ISC 05 00:32:25.7±0.7**, 24°.13S**±0°.09×**179°.6E**±0°.1**, h537^{km}, n33, σ1^s.21**/37**, mb4.3**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.52	347	P	P	00 34 07.2	-1.6
	2.4nm,0.3s,baz=248,slow=23,SNR=9.0						
MSVF	Nonsavu	6.52	347	P	P	00 34 07.9	-0.9
NIUE	Niue	10.98	65	P	P	00 34 53.6	-0.1
DZM	Mont Dzumac	12.26	277	P	P	00 35 05.8	-1.2
	0.4nm,0.3s,baz=162,slow=20,SNR=1.9						
DZM	Mont Dzumac	12.26	277	P	P	00 35 07.3	+0.3
URZ	Urewera	14.24	188	P	P	00 35 25.8	-1.4
	2.0nm,0.3s,baz=35,slow=4.1,SNR=16						
URZ				S	S	00 37 54.3	-2.7
	0.5nm,0.3s,baz=162,slow=20,SNR=1.3						
URZ	Urewera	14.24	188	P	P	00 35 26.9	-0.4
HIZ	Hauiti	14.89	195	P	P	00 35 37.8	+3.7
HIZ				IAmb	IAmb	00 35 45.0	
	comp=Z,14nm,1.0s						
FUNA	Funafuti	15.52	359	P	P	00 35 40.2	-0.7
SNZO	South Karori	17.61	192	P	P	00 36 00.6	+0.2
MSWZ	Moikau Station	17.61	191	P	P	00 36 00.4	-0.1
QRZ	Quartz Range	17.67	198	P	P	00 36 02.3	+1.3
QRZ				IAmb	IAmb	00 36 06.3	
	comp=Z,17nm,1.0s						
BHW	Baring Head	17.67	192	P	P	00 36 01.8	+0.8
NNZ	Nelson	17.81	195	P	P	00 36 02.9	+0.7
NNZ				IAmb	IAmb	00 36 05.8	
	comp=Z,19nm,1.2s						
KHZ	Kahutara	18.91	194	P	P	00 36 12.6	+0.3
LTZ	Lake Taylor	19.56	196	P	P	00 36 20.5	+2.2
LTZ				IAmb	IAmb	00 36 38.4	
	comp=Z,18nm,1.1s						
FOZ	Fox Glacier	20.95	200	P	P	00 36 32.5	+1.7
FOZ				IAmb	IAmb	00 36 51.9	
	comp=Z,13nm,1.1s						
ODZ	Otahua Downs	22.09	197	P	P	00 36 41.0	-0.1
ODZ				IAmb	IAmb	00 36 47.2	
	comp=Z,6.5nm,0.9s						
CTA	Charters Tower	31.09	271	P	P	00 38 00.8	+0.3
	comp=Z,6.0nm,0.3s,baz=89,slow=11,SNR=12						
CTAO	Charters Tower	31.09	271	P	P	00 38 00.9	+0.5
BBOO	Buckleboo	39.00	247	P	P	00 39 05.9	-0.2
BBOO				IAmb	IAmb	00 39 07.6	
	comp=Z,12nm,1.1s						
ASAR	Alice Springs	41.62	261	P	P	00 39 27.1	-0.1
	comp=Z,0.7nm,0.4s,baz=95,slow=7.5,SNR=12						
ASAR				PcP	PcP	00 41 12.5	+0.9
	comp=Z,0.1nm,0.4s,baz=113,slow=3.1,SNR=1.2						
WR0	Warramunga Arr	41.82	267	P	P	00 39 28.1	-0.7
WB2	Warramunga Arr	41.99	267	P	P	00 39 29.5	-0.7
WB0	Warramunga Arr	42.00	267	P	P	00 39 29.6	-0.7
WRA	Warramunga Arr	42.01	267	P	P	00 39 29.5	-0.8
	comp=Z,1.4nm,0.4s,baz=95,slow=8.5,SNR=51						
WRA				PcP	PcP	00 41 13.7	+0.8
	comp=Z,0.2nm,0.3s,baz=97,slow=6.0,SNR=1.5						
MTN	Manton Dam	47.09	275	P	P	00 40 08.6	-0.8
MTN				IAmb	IAmb	00 40 16.4	
	comp=Z,10nm,0.9s						
FITZ	Fitzroy Crossi	50.42	266	P	P	00 40 34.4	+0.2
	comp=Z,2.5nm,0.9s,baz=82,slow=7.1,SNR=1.4						
ARCES	ARCESS Array B	132.03	348	PKP	PKPdf	00 50 38.9	+1.4
	comp=Z,2.9nm,1.0s,baz=95,slow=3.8,SNR=5.6						
FINES	FINESS Array B	138.54	341	PKP	PKPdf	00 50 51.3	+1.5
	comp=Z,2.4nm,0.9s,baz=48,slow=2.1,SNR=3.7						
AKASG	Malin Array Be	144.95	327	PKP	PKPdf	00 51 01.9	+0.4
	comp=Z,0.5nm,0.4s,baz=46,slow=4.6,SNR=4.6						
BRTR	Keskin Array B	147.41	307	PKP	PKPbc	00 51 09.8	+0.3
	comp=Z,1.4nm,0.6s,baz=124,slow=3.9,SNR=2.3						
BRTR				PKPbc	PKPab	00 51 13.9	+0.6
	comp=Z,1.4nm,0.6s,baz=79,slow=1.5,SNR=9.8						
CLL	Collm	150.96	343	*e*PKPbc	PKPbc	00 51 18.0	+0.5

DJA 05 00:35:11.2±1.6**, 4°N**±5°×**12°4E**±°**, h17^{km}**±14^{km}**, M4.2**/9**, mb4.5**/2**, mB4.9**/1**, MLv4.1**/9**, Mw(mB)4.2**/1**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.16	86	P	Pb	00 35 32.9	+0.1
SGSI				S	Sb	00 35 46.7	-0.9
KMSI	Cibinong	3.04	187	P	Pn	00 35 59.2	+0.6
GTOI	Gorontalo	3.25	205	P	Pn	00 36 00.0	-1.5
MRSI	Marisa	3.95	218	P	Pn	00 36 11.1	+0.1
LUWI	Luwuk	4.89	199	P	Pn	00 36 25.0	+1.0
APSI	Ampana	5.25	211	P	Pn	00 36 29.8	+0.8
	0.3nm1μm67nm,0.6s						

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*DJA **05** 00:53:36.9±0.5, 1°S±4°×12°8E±°, h35^{km}±10^{km}, M3.3/7, MLv3.3/7*

*IDC **05** 00:53:36.8±1.5, 1°.00S×127°.27E, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.5/43, mbtmp3.7/4, MS4.3/1, Ms1 4.3/1, ms1mx2.7/40, Error ellipse: s-maj=156.6km s-min=22.6km az=69.0*

ISC 05 00:53:39.7±1.0**, 1°.07S**±0°.07×**128°.10E**±0°.08**, h35^{km}, n10, σ3^s.55**/9**, mb3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.97	338	P	Pn	00 54 08.8	-1.8
SANI	Sanana	2.32	245	P	Pn	00 54 13.2	-2.2
NLAI	Namlea	2.38	205	P	Pn	00 54 12.8	-3.4
MSAI	Masohi	2.41	160	P	Pn	00 54 13.1	-3.6
SWI	Sorong	3.17	86	P	Pn	00 54 24.3	-2.8
WRA	Warramunga Arr	19.73	162	P	Pn	00 58 11.8	+3.6
	0.7nm,0.5s,baz=342,slow=12,SNR=14						
ASAR	Alice Springs	23.16	166	P	P	00 58 47.9	+4.6
	5.1nm,0.3s,baz=345,slow=12,SNR=19						
JHJ	Hachijo jima 2	35.75	17	LR	LR	01 17 02.3	
	comp=Z,391nm,18.2s,baz=314,slow=39						
SONM	Songino Array	52.25	342	P	P	01 02 47.5	-0.1
	0.1nm,0.4s,baz=165,slow=6.0,SNR=1.7						
MKAR	Makanchi Array	62.26	326	P	P	01 03 57.1	-1.1
	0.3nm,0.5s,baz=117,slow=7.4,SNR=4.5						

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*NEIC **05** 00:59:47.4±0.9, 10°.2S±0°.1×160°.6E±0°.1, h35^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=28.3km s-min=9.1km az=46.0*

*NOU **05** 00:59:48.3, 10°.06S×160°.58E, h40^{km}, mb4.7, Solomon Islands*

*IDC **05** 00:59:48.1±2.0, 10°.13S×160°.55E, h43^{km}±15^{km}, mb4.0/13, mb1 4.2/15, mb1mx4.0/39, mbtmp4.2/15, ML3.6/2, MS3.5/9, Ms1 3.5/9, ms1mx3.1/45, Error ellipse: s-maj=23.7km s-min=13.8km az=86.0*

ISC 05 00:59:47.6±0.6**, 10°.11S**±0°.08×**160°.6E**±0°.1**, h37^{km}, n39, σ0^s.73**/33**, mb4.4**/17**, MS3.8**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.92	316	P	Pn	01 00 04.6	+0.6
	176nm,0.3s,baz=192,slow=17,SNR=18						
HNR				S	Sn	01 00 17.1	+1.0
	2μm,0.3s,baz=180,slow=20,SNR=15						
HNR				LR	LR	01 00 26.1	
	comp=Z,198nm,19.9s,baz=114,slow=42						
HNR	Honiara	0.92	316	P	Pn	01 00 04.5	+0.5
SANVU	Saraoutou	8.35	130	Pn	Pn	01 01 45.7	-0.5
SANVU	Saraoutou	8.35	130	P	Pn	01 01 47.5	+1.4
DZM	Mont Dzumac	13.15	155	P	Pn	01 02 52.7	+0.7
	0.2nm,0.3s,baz=335,slow=19,SNR=2.3						
DZM				LR	LR	01 07 19.4	
	comp=Z,79nm,19.4s,baz=100,slow=34						
CTA	Charters Tower	17.02	233	P	P	01 03 43.6	-0.8
	0.3nm,0.3s,baz=52,slow=18,SNR=2.1						
CTAO	Charters Tower	17.02	233		P	01 03 44.0	-0.4
CTAO				IAmb	IAmb	01 03 59.2	
	comp=Z,22nm,1.2s						
COEN	Coen	17.46	256		P	01 03 49.4	+0.2
EIDS	Eidsvold	17.66	210		P	01 03 52.8	+1.3
MSVF	Nonsavu	18.55	116	LR	LR	01 09 51.2	
	comp=Z,95nm,21.0s,baz=168,slow=32						
ARMA	Armidale	21.87	201	P	P	01 04 38.9	+1.5
ARMA				IAmb	IAmb	01 04 53.4	
	comp=Z,9.5nm,0.9s						
WR0	Warramunga Arr	26.96	246	P	P	01 05 25.6	-0.3
WR0				IAmb	IAmb	01 05 29.7	
	comp=Z,32nm,1.6s						
WB0	Warramunga Arr	27.04	246	P	P	01 05 26.4	-0.2
WB0				IAmb	IAmb	01 05 27.4	
	comp=Z,9.9nm,0.8s						
WB2	Warramunga Arr	27.13	246	P	P	01 05 27.3	-0.1
WB2				IAmb	IAmb	01 05 28.2	
	comp=Z,7.3nm,0.8s						
WRA	Warramunga Arr	27.14	246	P	P	01 05 27.2	-0.3
	comp=Z,6.5nm,0.7s,baz=73,slow=9.3,SNR=47						
WRA				PcP	PcP	01 08 48.0	+0.3
	comp=Z,0.5nm,0.6s,baz=69,slow=3.0,SNR=3.2						
STKA	Stephens Creek	27.90	216	P	P	01 05 34.2	0.0
	comp=Z,1.1nm,0.4s,baz=38,slow=17,SNR=3.7						
STKA				LR	LR	01 15 43.7	
	comp=Z,70nm,18.6s,baz=25,slow=34						
STKA	Stephens Creek	27.90	216	P	P	01 05 34.4	+0.2
GUMO	Guam	28.24	326	LR	LR	01 16 33.5	
	comp=Z,31nm,20.9s,baz=148,slow=36						
ASAR	Alice Springs	28.81	239	P	P	01 05 41.6	-0.8
	comp=Z,5.0nm,0.3s,baz=61,slow=10.0,SNR=8.5						
URZ	Urewera	31.71	155	LR	LR	01 16 43.0	
	comp=Z,57nm,18.7s,baz=31,slow=32						
BBOO	Buckleboo	31.96	221	P	P	01 06 10.0	-0.1
FITZ	Fitzroy Crossi	34.77	253	P	P	01 06 33.8	-0.9
	comp=Z,13nm,0.7s,baz=94,slow=6.9,SNR=18						
FITZ	Fitzroy Crossi	34.77	253	IAmb	IAmb	01 06 34.9	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	40.70	249	P	P	01 07 24.6	-0.3
NWAO	Narrogin (SRO)	45.86	234	LR	LR	01 27 53.0	
	comp=Z,131nm,18.1s,baz=85,slow=37						
KSRS	Korea Array	56.35	329	P	P	01 09 25.6	+0.6
	comp=Z,1.0nm,0.5s,baz=143,slow=7.8,SNR=5.2						
USRK	Ussuriysk Ar.	59.95	337	P	P	01 09 50.3	+0.3
	comp=Z,2.2nm,0.9s,baz=99,slow=8.9,SNR=5.1						
PETK	Petropavlovsk-	63.01	358	LR	LR	01 35 19.7	
	comp=Z,57nm,19.7s,baz=89,slow=34						
CMAR	Chiang Mai Arr	67.11	295	P	P	01 10 36.8	-1.1
	comp=Z,1.5nm,0.3s,baz=119,slow=5.8,SNR=9.7						
VNDA	Vanda	67.40	180	P	P	01 10 39.2	+0.5
	comp=Z,1.3nm,1.0s,baz=327,slow=8.9,SNR=4.1						
VNDA	Vanda	67.40	180	P	P	01 10 39.4	+0.7
VNDA				IAmb	IAmb	01 12 05.6	
	comp=Z,16nm,1.8s						
SONM	Songino Array	74.97	326	P	P	01 11 25.7	+0.6
	comp=Z,0.7nm,0.5s,baz=136,slow=5.8,SNR=5.6						
QSPA	South Pole Qui	79.89	180	P	P	01 11 51.3	-1.1
	comp=Z,2.3nm,0.5s,baz=354,slow=1.8,SNR=8.1						
ILAR	Eielson Array	84.30	20	P	P	01 12 14.8	-0.5
	comp=Z,0.5nm,0.6s,baz=252,slow=5.1,SNR=6.7						
MKAR	Makanchi Array	89.40	318	P	P	01 12 39.8	-0.7
	comp=Z,0.6nm,0.9s,baz=98,slow=6.2,SNR=4.4						
PFO	Pinyon Flats O	89.72	56	LR	LR	01 48 01.6	
	comp=Z,50nm,19.1s,baz=323,slow=32						
NRIK	Noril'sk	93.50	340	LR	LR	01 53 34.9	
	comp=Z,36nm,20.7s,baz=84,slow=34						
YKA	Yellowknife Ar	96.49	28	P	P	01 13 12.3	-0.4
	comp=Z,0.1nm,0.6s,baz=253,slow=4.2,SNR=2.0						
DBIC	Dimbokro	165.21	258	PKPab	PKPab	01 20 46.4	0.0
	comp=Z,2.6nm,0.7s,baz=41,slow=4.8,SNR=5.6						

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*MOS **05** 01:11:12.5±1.1, 60°.81N×165°.61E, h11^{km}, mb4.2/8, Error ellipse: s-maj=16.8km s-min=6.7km az=77.8*

*KRSC **05** 01:11:12.0±0.6, 60°.76N×165°.86E, h36^{km}±11^{km}, ML4.8*

*IDC **05** 01:11:13.6±0.9, 61°.02N×165°.73E, h0^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.6/66, mbtmp3.8/12, ML2.7/2, MS3.6/13, Ms1 3.6/13, ms1mx3.4/45, Error ellipse: s-maj=26.3km s-min=13.6km az=1.0*

*NEIC **05** 01:11:15.9±2.0, 61°.0N±0°.1×165°.6E±0°.1, h14^{km}±5^{km}, mb4.2/44, Error ellipse: s-maj=20.1km s-min=6.8km az=195.0*

ISC 05 01:11:15.2±0.5**, 60°.81N**±0°.04×**165°.71E**±0°.05**, h15^{km}, n101, σ1^s.58**/97**, mb4.1**/30**, MS3.6**/12**, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TILK	Tilichiki	0.43	150	PN	Pg	01 11 20.7	-3.1
TILK				S	Sg	01 11 27.4	-2.2
TILK	Tilichiki	0.43	150	*i* P	Pg	01 11 20.7	-3.1
TILK				*e*S	Sg	01 11 27.4	-2.2
KMSK	Kamenskaya	1.68	8	PN	Pn	01 11 41.7	-2.3
KMSK				S	Sn	01 12 03.2	-2.0
KMSK	Kamenskaya	1.68	8	*i* P	Pn	01 11 41.7	-2.3
KMSK				*e*S	Sn	01 12 03.2	-2.0
OSSR	Ossora	2.06	221	PN	Pn	01 11 46.5	-2.7
OSSR				S	Sn	01 12 12.2	-2.3
OSSR	Ossora	2.06	221	*e*P	Pn	01 11 46.5	-2.7
OSSR				*e*S	Sn	01 12 12.2	-2.3
PALN	Palana	3.37	242	PN	Pn	01 12 05.5	-1.7
PALN				S	Sn	01 12 46.4	-0.4
PALN	Palana	3.37	242	*e*P	Pn	01 12 05.5	-1.7
PALN				*e*S	Sn	01 12 46.4	-0.4
SMKR	Semkarok	4.79	209	PN	Pn	01 12 26.0	-0.8
SMKR	Semkarok	4.79	209	P	Pn	01 12 26.0	-0.8
SRKR	Sorokina	4.79	212	PN	Pn	01 12 27.8	+0.9
SRKR	Sorokina	4.79	212	P	Pn	01 12 27.8	+0.9
KBTR	Krutoberegovo	4.86	199	PN	Pn	01 12 26.2	-1.5
KBTR	Krutoberegovo	4.86	199	*e*P	Pn	01 12 26.2	-1.5
SRDR	Sredinnyy	5.49	217	PN	Pn	01 12 36.0	-0.4
SRDR	Sredinnyy	5.49	217	P	Pn	01 12 36.0	-0.4
BKI	Bering	5.63	178	PN	Pn	01 12 36.9	-1.3
BKI	Bering	5.63	178	P	Pn	01 12 36.9	-1.3
ESO	Esso	6.13	220	PN	Pn	01 12 44.4	-0.8
ESO	Esso	6.13	220	P	Pn	01 12 44.4	-0.8
TUMR	Tumrok	6.28	210	PN	Pn	01 12 47.6	+0.3
TUMR	Tumrok	6.28	210	P	Pn	01 12 47.6	+0.3
SEY	Seymchan	6.65	294	Pn	Pn	01 12 50.9	-1.3
	0.8nm,0.3s,baz=103,slow=13,SNR=8.6						
SEY				Sn	Sn	01 14 05.0	-2.6
	0.7nm,0.3s,baz=174,slow=19,SNR=1.4						
SEY				Lg	Lg	01 14 39.8	
	2.6nm,0.3s,baz=27,slow=19,SNR=7.0						
MA2	Magadan	7.55	267		Pn	01 13 03.2	-1.4
PETK	Petropavlovsk-	8.87	213	Pn	Pn	01 13 25.0	+2.2
	0.1nm,0.3s,baz=122,slow=11,SNR=2.2						
PETK				LR	LR	01 16 51.1	
	comp=Z,365nm,18.3s,baz=16,slow=37						
PETK	Petropavlovsk-	8.87	213	PN	Pn	01 13 25.0	+2.2
NIKH	Nikolski High	15.88	108	P	P	01 15 05.6	+4.1
TTA	Tatalina	17.99	67	P	P	01 15 25.3	+0.3
TTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TTA	Tatalina	17.99	67	P	P	01 15 25.3	+0.3
A21K	Barrow	18.17	39	P	P	01 15 28.8	+2.1
SVW2	Sparrevohn	18.62	72	P	Pn	01 15 33.4	+1.3
PPLA	Purkeypile	19.71	66	P	P	01 15 44.8	+0.9
PPLA				IAmb	IAmb	01 15 49.8	
	comp=Z,20nm,1.5s						
BPAW	Bear Paw Mtn.	19.99	62	P	Pn	01 15 48.3	-0.3
KTH	Kantishna Hill	20.13	63	P	Pn	01 15 50.2	0.0
KTH				IAmb	IAmb	01 15 50.7	
	comp=Z,9.0nm,1.2s						
TOLK	Toolik Lake Re	20.18	48	P	Pn	01 15 50.7	-0.1
TOLK				IAmb	IAmb	01 16 05.5	
	comp=Z,5.3nm,0.7s						
TRF	Thorofare Moun	20.43	63	P	P	01 15 52.8	+1.1
TRF				IAmb	IAmb	01 15 57.5	
	comp=Z,14nm,1.2s						
RND	Reindeer	21.07	63	P	P	01 16 01.7	+3.2
RND				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RND	Reindeer	21.07	63	P	P	01 16 01.6	+3.2
WRH	Wood River Hil	21.16	60	P	P	01 16 02.8	+3.4
WRH				IAmb	IAmb	01 16 03.1	
	comp=Z,5.2nm,0.8s						
KDAK	Kodiak Island	21.25	80	P	P	01 16 00.3	-0.1
	comp=Z,5.5nm,1.0s,baz=18,slow=9.6,SNR=1.4						
KDAK				LR	LR	01 23 57.9	
	comp=Z,214nm,20.4s,baz=294,slow=36						
CCB	Clear Creek Bu	21.25	59	P	P	01 16 00.9	+0.6
IL31		21.61	59	P	P	01 16 05.8	+1.7
IL31				IAmb	IAmb	01 16 16.6	
	comp=Z,6.5nm,1.1s						
ILAR	Eielson Array	21.61	59	P	P	01 16 04.2	0.0
	comp=Z,2.5nm,0.6s,baz=271,slow=8.5,SNR=36						
SML	Sawmill	21.74	67	P	P	01 16 07.1	+1.4
SML				IAmb	IAmb	01 16 10.3	
	comp=Z,7.5nm,0.9s						
KNK	Knik Glacier	21.80	68	P	P	01 16 07.9	+1.5
KNK				IAmb	IAmb	01 16 25.4	

	comp=Z,9.4nm,1.2s						
SCM	Sheep Creek Mo	22.18	67	P	P	01 16 10.5	0.0
SCM				pmax	pmax		
	comp=Z,21nm,1.2s						
SCM	Sheep Creek Mo	22.18	67	P	P	01 16 10.4	0.0
KLR	Kul'dur	22.37	254	LR	LR	01 25 03.5	
	comp=Z,131nm,19.2s,baz=42,slow=37						
M24K	Tolsona, Glenn	22.61	66	P	P	01 16 16.0	+0.9
RIDG	Independent Ri	22.72	61	P	P	01 16 15.9	-0.3
RIDG				IAmb	IAmb	01 16 27.5	
	comp=Z,8.7nm,1.2s						
KLU	Klutina	22.93	67	P	P	01 16 19.0	+0.6
KLU				IAmb	IAmb	01 16 34.7	
	comp=Z,12nm,1.4s						
N25K	Chitina, Valde	23.48	66	P	P	01 16 24.3	+0.3
GLB	Gilahina Butte	23.90	66	P	P	01 16 27.8	-0.2
GLB				IAmb	IAmb	01 16 44.1	
	comp=Z,7.8nm,1.2s						
EGAK	Eagle	24.00	57	P	P	01 16 27.8	-1.0
EGAK				IAmb	IAmb	01 16 29.0	
	comp=Z,5.7nm,0.7s						
VRDI	Verde Repeater	24.14	67	P	P	01 16 30.1	-0.2
VRDI				IAmb	IAmb	01 16 37.7	
	comp=Z,8.1nm,1.0s						
MCARA	McCarthy VSAT	24.27	66	P	P	01 16 31.9	+0.5
MCARA				IAmb	IAmb	01 16 35.0	
	comp=Z,8.9nm,0.8s						
CRQM	Cirque	24.45	67	P	P	01 16 33.5	+0.2
BALM	Baldy	24.70	66	P	P	01 16 36.0	+0.6
BALM				IAmb	IAmb	01 16 44.5	
	comp=Z,8.0nm,1.1s						
DAWY	Dawson	24.94	59	P	P	01 16 37.6	+0.1
BARN	Barnard Glacie	25.00	66	P	P	01 16 38.8	+0.5
CTGM	Chitina Glacie	25.19	66	P	P	01 16 39.8	-0.1
EPYK	Eagle Plains	25.36	53	P	P	01 16 40.7	-0.6
EPYK				IAmb	IAmb	01 16 49.1	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	26.00	246	LR	LR	01 29 05.4	
	comp=Z,99nm,18.6s,baz=14,slow=41						
INK	Inuvik	26.08	48	P	P	01 16 47.2	-0.5
	comp=Z,0.8nm,0.5s,baz=158,slow=31,SNR=2.9						
INK	Inuvik	26.08	48	P	P	01 16 47.8	0.0
INK				IAmb	IAmb	01 17 02.9	
	comp=Z,4.2nm,1.1s						
HYT	Haines Junctio	26.95	65	P	P	01 16 56.9	+1.1
MJAR	Matsushiro Arr	29.90	228	LR	LR	01 31 07.8	
	comp=Z,89nm,18.0s,baz=40,slow=40						
KSRS	Korea Array	33.27	243	LR	LR	01 30 19.1	
	comp=Z,91nm,21.9s,baz=18,slow=34						
YKA	Yellowknife Ar	35.64	52	P	P	01 18 10.4	-1.5
	comp=Z,0.5nm,0.7s,baz=303,slow=7.5,SNR=9.9						
SONM	Songino Array	35.65	276	LR	LR	01 32 42.5	
	comp=Z,131nm,21.0s,baz=66,slow=36						
YBH	Yreka Blue Hor	46.06	80	P	P	01 19 39.4	+1.3
YBH				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YBH	Yreka Blue Hor	46.06	80	P	P	01 19 39.4	+1.3
KURK	Kurchatov	46.48	299	P	P	01 19 42.1	+0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	46.48	299	P	P	01 19 42.1	+0.9
KURBB	Kurchatov Arra	46.58	299	P	P	01 19 42.2	+0.2
	comp=Z,3.3nm,0.6s,baz=42,slow=7.8,SNR=35						
ARCES	ARCESS Array B	46.88	342	LR	LR	01 41 06.8	
	comp=Z,40nm,18.0s,baz=25,slow=38						
MK31	Makanchi Array	47.78	293	P	P	01 19 51.1	-0.4
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	47.78	293	P	P	01 19 51.1	-0.4
MK31				IAmb	IAmb	01 20 03.5	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	47.78	293	P	P	01 19 49.9	-1.6
	comp=Z,0.9nm,0.6s,baz=44,slow=7.4,SNR=17						
MAKZ	Makanchi	47.91	293	P	P	01 19 53.0	+0.5
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAKZ	Makanchi	47.91	293	P	P	01 19 53.0	+0.5
BRVK	Borovoye	48.16	306	P	P	01 19 54.1	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	48.16	306	P	P	01 19 54.1	-0.2
BRVK				IAmb	IAmb	01 19 57.9	
	comp=Z,1.9nm,0.7s						
HLID	Hailey	48.61	73	P	P	01 19 58.6	+0.5
FRB	Frobisher Bay	49.21	28	LR	LR	01 42 26.1	
	comp=Z,76nm,20.1s,baz=196,slow=38						
RLMT	Red Lodge	49.78	67	P	P	01 20 08.4	+1.3
NVAR	Mina Array Bea	50.75	80	P	P	01 20 14.4	-0.1
	comp=Z,0.2nm,0.6s,baz=302,slow=5.2,SNR=3.7						
PD31	Pinedale Array	51.48	70	P	P	01 20 20.1	+0.2
PD31				IAmb	IAmb	01 20 36.7	
	comp=Z,4.1nm,1.4s						
PDAR	Pinedale Array	51.48	70	P	P	01 20 19.4	-0.5
	comp=Z,1.0nm,0.6s,baz=308,slow=3.1,SNR=11						
PDAR				LR	LR	01 43 45.5	
	comp=Z,78nm,19.4s,baz=354,slow=38						
PV04	Paradox Valley	55.24	72	P	P	01 20 48.0	+0.4
PV04				IAmb	IAmb	01 20 48.9	
	comp=Z,2.4nm,0.7s						
NOA	NORSAR Array B	56.90	346	P	P	01 20 59.8	+0.9
	comp=Z,0.8nm,1.0s,baz=14,slow=7.3,SNR=5.7						
WMOK	Wichita Mounta	62.89	67	P	P	01 21 41.4	+1.0
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMOK	Wichita Mounta	62.89	67	P	P	01 21 41.4	+1.0
WMOK				IAmb	IAmb	01 21 42.1	
	comp=Z,2.5nm,1.0s						
AKASG	Malin Array Be	63.47	331	LR	LR	01 53 52.3	
	comp=Z,62nm,19.1s,baz=355,slow=40						
W41B	Gary Mavity, V	65.41	62	P	P	01 21 56.2	-0.7
LPIG	La Paz	66.37	83	LR	LR	01 48 39.9	
	comp=Z,35nm,19.1s,baz=16,slow=34						
MCWV	Mont Chateau	66.58	50	P	P	01 22 03.7	-0.7
GERES	GERESS Array B	68.38	341	LR	LR	01 55 26.9	
	comp=Z,53nm,19.5s,baz=27,slow=39						
CTA	Charters Tower	82.14	198	P	P	01 23 37.8	+2.9
	comp=Z,2.3nm,0.6s,baz=85,slow=1.2,SNR=5.8						
CTAO	Charters Tower	82.14	198	P	P	01 23 38.9	+4.0
CTAO				pmax	pmax		
	comp=Z,21nm,1.4s						
CTAO	Charters Tower	82.14	198	P	P	01 23 38.9	+4.0

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*JMA **05** 01:13:30.0, 39°.46N×142°.10E, h48^{km}±1^{km}, M3.7*
JMA Felt II J1.
*NIED **05** 01:13:30.1, 39°.46N×142°.10E, h48^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.55; $M_{\theta\theta}$2.73; $M_{\phi\phi}$-1.18; $M_{r\theta}$2.93; $M_{\theta\phi}$-0.83; $M_{\phi r}$2.06; Fault plane solution: $M_0$4.37000×10^{14} NP1: ϕ_s245.00000°, δ78.00000°, λ-119.00000°. NP2: ϕ_s135.00000°, δ31.00000°, λ-23.00000°.*
*IDC **05** 01:13:31.1±2.8, 39°.52N×142°.29E, h72^{km}±19^{km}, mb3.6/5, mb1 3.6/9, mb1mx3.2/63, mbtmp3.8/9 Error ellipse: s-maj=37.3km s-min=12.3km az=111.0*
ISC 05 01:13:29.5±1.2, **39°.48N**±0°.04×**142°.21E**±0°.09, **h46**^{km}±9^{km}, **n27**, σ**1^{s}.79**/35, **mb3.7**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.32	288	P	Pn	01 13 38.5	+0.1
MIYJ				S	Sn	01 13 44.4	-0.4
JTH	Tanohata	0.53	330	P	Pn	01 13 41.2	+0.2
JTH				S	Sn	01 13 48.9	-0.2
OFUJ	Ofunato	0.58	227	P	Pn	01 13 41.2	-0.3
OFUJ				S	Sn	01 13 49.1	-1.0
JOM	Ohasama	0.71	270	P	Pn	01 13 42.8	-0.4
JOM				S	Sn	01 13 52.0	-1.1
JKZ	Kuzumaki	0.85	307	P	Pn	01 13 45.2	+0.1
JKZ				S	Sn	01 13 55.8	-0.7
JKMT	Kesennumamotoy	0.88	221	P	Pn	01 13 45.0	-0.5
JKMT				S	Sn	01 13 55.6	-1.5
JMK	Ichinoseki	0.93	236	P	Pn	01 13 45.6	-0.6
JMK				S	Sn	01 13 56.8	-1.6
JANG	Nango	1.04	329	P	Pn	01 13 47.7	0.0
JANG				S	Sn	01 14 00.8	-0.4
JIO	Ouri	1.22	214	P	Pn	01 13 49.7	-0.5
JIO				S	Sn	01 14 03.9	-1.6
JRG	Rokugo	1.22	267	P	Pn	01 13 49.7	-0.5
JRG				S	Sn	01 14 05.0	-0.6
JAH	Hinai	1.41	301	P	Pn	01 13 52.6	-0.1
JAH				*e*S	Sn	01 14 09.1	-0.9
MAT	Matsushiro	4.31	228	P	Pn	01 14 35.0	+2.4
MAT				S	Sn	01 15 27.7	+6.2
MJAR	Matsushiro Arr	4.31	228	P	Pn	01 14 34.9	+2.3
	0.3nm,0.3s,baz=37,slow=13,SNR=17						
MJAR				S	Sn	01 15 24.9	+3.4
	0.1nm,0.3s,baz=249,slow=28,SNR=1.4						
ASAJ	Asahikawa	4.64	3	P	Pn	01 14 38.3	+1.2
	3.8nm,0.3s,baz=192,slow=10,SNR=13						
ASAJ				S	Sn	01 15 30.7	+1.0
	1.8nm,0.3s,baz=110,slow=9.7,SNR=1.4						
USRK	Ussuriysk Ar.	8.97	305	P	Pn	01 15 38.7	+2.3
	baz=118,slow=14,SNR=13						
KSRS	Korea Array	11.38	264	P	Pn	01 16 12.7	+3.3
	baz=66,slow=15,SNR=1.5						
H11N2	WAKE ISLAND Hy	28.96	126	T	T	01 49 57.1	
	baz=318,slow=75						
H11N1	WAKE ISLAND Hy	28.97	126	T	T	01 50 01.0	
	baz=318,slow=75						
H11N3	WAKE ISLAND Hy	28.98	126	T	T	01 50 00.3	
	baz=318,slow=75						
H11S1	WAKE ISLAND Hy	29.75	128	T	T	01 50 58.1	
	baz=320,slow=76						
H11S3	WAKE ISLAND Hy	29.76	128	T	T	01 51 00.8	
	baz=320,slow=76						
H11S2	WAKE ISLAND Hy	29.77	128	T	T	01 50 58.8	
	baz=320,slow=76						
ZALV	Zalesovo Beam	40.77	310	P	P	01 21 04.3	-1.6
	0.5nm,0.4s,baz=103,slow=6.5,SNR=2.7						
MKAR	Makanchi Array	43.40	300	P	P	01 21 26.4	-1.0
	0.4nm,0.6s,baz=83,slow=8.6,SNR=2.9						
KURBB	Kurchatov Arra	45.03	306	P	P	01 21 39.7	-0.7
	0.8nm,0.6s,baz=83,slow=8.3,SNR=6.2						
ASAR	Alice Springs	63.29	189	P	P	01 23 52.7	-0.9
	1.1nm,0.7s,baz=17,slow=9.7,SNR=1.2						
FINES	FINESS Array B	66.95	332	P	P	01 24 15.5	-1.3
	5.1nm,1.0s,baz=20,slow=12,SNR=2.9						

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*BJI **05** 01:15:13.0±0.0, 2°.86N×123°.09E, h480^{km}, mB4.7/37, mb4.8/62*
*IDC **05** 01:15:15.7±0.6, 2°.93N×122°.98E, h497^{km}±6^{km}, mb4.0/40, mb1 4.1/45, mb1mx4.0/57, mbtmp4.9/45, Error ellipse: s-maj=9.4km s-min=4.9km az=78.0*
*NOU **05** 01:15:15.9, 2°.95N×123°.02E, h485^{km}, mb4.9, Celebes Sea*
*NEIC **05** 01:15:15.5±1.7, 2°.94N±0°.08×122°.92E±0°.08, h491^{km}±4^{km}, mb4.9/104, Error ellipse: s-maj=11.7km s-min=11.2km az=60.0*
*DJA **05** 01:15:15.8±0.4, 3°N±5°×12°3E±°, h470^{km}±5^{km}, M4.9/24, mB5.3/18, mb5.1/24, MLv5.4/18, Mw(mB)4.7/18*
*KLM **05** 01:15:15, 3°.00N×122°.99E, h470^{km}, mb4.9*
ISC 05 01:15:15.2±0.5, **2°.92N**±0°.04×**122°.97E**±0°.05, **h491**^{km}±5^{km}, **n297**, σ**1^{s}.14**/333, **mb4.7**/109, **5C-4D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	2.27	179	P	P	01 16 19.2	-1.8
KMSI	Cibinong	2.54	157	P	P	01 16 21.7	-0.9
MRSI	Marisa	2.64	203	P	P	01 16 22.4	-0.8
SGSI	Sangihe	2.66	73	P	P	01 16 22.1	-1.2
TOLI2	Tolitoli	2.83	231	P	P	01 16 23.5	-0.9
SKMP	Bagumbayan, Su	3.90	24	*e*P	P	01 16 30.5	-1.8
LUWI	Luwuk	3.94	183	P	P	01 16 30.6	-2.1
LUWI				S	S	01 17 31.8	-3.8
LUWI	Luwuk	3.94	183	P	P	01 16 30.7	-1.9
MPSI	Mapaga	4.01	230	P	P	01 16 32.2	-0.9
APSI	Ampana	4.03	199	P	P	01 16 32.8	-0.6
KCP	Kidapawan	4.58	27	⇓*i*P	P	01 16 38.1	+0.1
KCP				*i* S	S	01 17 45.1	-0.4
DAV	Davao City (W)	4.87	32	P	P	01 16 40.8	+0.2
	157nm,0.3s,baz=53,slow=2.1,SNR=14						
DAV				S	S	01 17 53.2	+3.0
	284nm,0.3s,baz=83,slow=21,SNR=16						
TNTI	Ternate	4.88	116	P	P	01 16 38.1	-2.6
TNTI				S	S	01 17 48.5	-1.8
TNTI	Ternate	4.88	116	P	P	01 16 40.3	-0.4
PAGZ	Pagadian	4.91	5	*e*P	P	01 16 41.3	+0.3
MYLDM	Lahad Datu	5.00	297	P	P	01 16 42.4	+0.7
MATI	Mati	5.17	39	*e*P	P	01 16 43.1	-0.2
BUKP	Musuan	5.34	23	*e*P	P	01 16 45.4	+0.4
CGP	Cagayan de Oro	5.76	17	⇓*e*P	P	01 16 56.2	+7.4
SANI	Sanana	5.79	149	P	P	01 16 47.1	-2.0
	8.7nm8μm660nm,0.8s						
SMKI	Samarinda	6.66	240	P	P	01 16 59.7	+1.9
	1.6nm21μm486nm,0.8s						
TTSI	Tana Toraja	6.71	208	P	P	01 16 58.5	+0.2
	5.7nm13μm2μm,0.8s						
BKB	Balikpapan	7.36	236	P	P	01 17 05.7	+0.8
BKB	Balikpapan	7.36	236	P	P	01 17 06.3	+1.4
	1.9nm5μm558nm,0.9s						
NLAI	Namlea	7.38	146	P	P	01 17 07.1	+2.1
	2.2nm5μm472nm,0.8s						
MSLP	Maasin	7.41	15	*e*P	P	01 17 04.3	-0.9
KKM	Kota Kinabalu	7.42	295	P	P	01 17 04.8	-0.7
SPSI	Sidrap Palu	7.55	205	P	P	01 17 07.3	+0.5
	7.7nm20μm2μm,0.7s						
BATP	Bataraza	7.78	319	*e*P	P	01 17 08.4	-0.8
BNSI	Bone	7.82	202	P	P	01 17 10.8	+1.2
	2.4nm9μm851nm,0.9s						
OCLP	Ormoc	8.24	11	*e*P	P	01 17 17.7	+3.8
KAPI	Kappang	8.52	202	P	P	01 17 17.4	+0.6
	14nm,0.3s,baz=76,slow=1.8,SNR=30						
KAPI	Kappang	8.52	202	P	P	01 17 18.2	+1.3
MSAI	Masohi	8.61	136	P	P	01 17 19.7	+1.8
	1μm94nm,0.9s						
BKSI	Bulukumba	8.67	199	P	P	01 17 19.7	+1.2
	1μm157nm,0.6s						
MTKI	Muara Teweh, K	8.94	245	P	P	01 17 33.2	+12
BESP	Borongan	8.96	16	*e*P	P	01 17 24.5	+2.9
SIJI	Sorong	9.10	114	P	P	01 17 24.1	+1.0
	8.8nm,0.3s,baz=237,slow=22,SNR=9.7						
SIJI				S	S	01 19 07.8	-0.4
	2.1nm,0.3s,baz=334,slow=23,SNR=6.4						
KBKI	Kotabaru	9.19	228	P	P	01 17 24.9	+0.9
	1μm125nm,0.7s						
OTRP	Odiongan	9.43	354	*e*P	P	01 17 25.8	-0.7
BNDI	Bandanaira	10.13	137	P	P	01 17 34.9	+0.9
	10μm785nm,0.6s						
BBKI	Banjar Baru	10.31	232	P	P	01 17 41.4	+5.5
BOAC	Boac	10.53	354	*e*P	P	01 17 37.9	-0.3
PVCP	Virac	10.67	6	*e*P	P	01 17 39.0	-0.6
SCSP	San Jose Seism	10.68	3	*e*P	P	01 17 37.2	-2.5
PGP	Puerto Galera	10.70	349	⇑*e*P	P	01 17 41.1	+1.1
SBUM	Sibu	10.75	268	P	P	01 17 41.4	+0.8
SBUM	Sibu	10.75	268	P	P	01 17 42.0	+1.4
FAKI	Fak Fak	10.94	122	P	P	01 17 43.0	+0.4
FAKI	Fak Fak	10.94	122	P	P	01 17 43.0	+0.4
	1μm116nm,0.7s						
LQP	Lukban	11.21	353	⇑*e*P	P	01 17 45.7	0.0
MMRI	Maumere	11.50	184	P	P	01 17 50.2	+1.6
MMRI	Maumere	11.50	184	P	P	01 17 49.8	+1.2
	280nm,1.1s						
EDFI	Ende, Flores	11.66	186	P	P	01 17 51.1	+0.7
	482nm51nm,0.8s						
QVP	Quezon City--P	11.79	351	*e*P	P	01 17 52.5	+0.9
PBKI	Pangkalan Bun	12.61	244	P	P	01 18 00.7	+0.3
	15μm294nm,1.0s						
SOEI	Soe	12.66	174	P	P	01 18 02.0	+0.9
SOEI	Soe	12.66	174	P	P	01 18 01.1	+0.1
	175nm,0.9s						
KSM	Kuching	12.74	264	P	P	01 18 01.6	-0.1
KSM	Kuching	12.74	264	P	P	01 18 03.0	+1.2
BALP	Baler	12.81	354	*e*P	P	01 18 02.1	-0.4
BATI	Baumata	13.06	177	P	P	01 18 06.1	+0.9
	23nm,0.3s,baz=332,slow=0.8,SNR=12						
BATI				S	S	01 20 27.4	+2.0
	4.0nm,0.3s,baz=223,slow=21,SNR=13						
BATI	Baumata	13.06	177	P	P	01 18 06.2	+1.0
	148nm,0.8s						
TWSI	Taliwang, Sumb	13.08	208	P	P	01 18 13.8	+8.4
SMPP	San Manuel, Pa	13.34	350	*e*P	P	01 18 06.5	-1.6
KMMI	Kalianget	13.38	222	P	P	01 18 08.7	+0.2
SRBI	Singaraja	13.40	215	P	P	01 18 08.9	+0.2
	4μm491nm,0.8s						
SAUI	Saumlaki	13.65	143	P	P	01 18 11.5	+0.1
BOLP	Bolinao	13.71	348	*e*P	P	01 18 10.2	-1.8
CVP	Callao Caves	14.73	356	⇑*e*P	P	01 18 22.8	0.0
APYP	Conner	14.95	354	*e*P	P	01 18 23.4	-1.6
SGCP	Mt. Cagua	15.25	357	*e*P	P	01 18 26.1	-2.2
SMRI	Semarang	15.96	232	P	P	01 18 36.2	+0.5
UGM	Wanagama	16.43	229	P	P	01 18 39.3	-1.5
MTN	Manton Dam	17.63	153	P	P	01 18 52.0	-0.8
MTN				IAmb	IAmb	01 18 54.7	
	comp=Z,38nm,0.8s						
LEM	Lembang	18.13	238	P	P	01 18 58.2	+0.6
	comp=Z,16nm,0.3s,baz=51,slow=6.8,SNR=28						
CISI	Cisompet, Garu	18.36	235	P	P	01 18 58.0	-1.6
MYKOM	Kota Tinggi	19.14	267	P	P	01 19 07.2	+0.6
MYKOM				IAmb	IAmb	01 19 08.8	
	comp=Z,71nm,1.1s						
TWG	Pinlang	19.87	355	P	P	01 19 12.5	-0.6
TPUB	Ta-pu	20.39	354	P	P	01 19 17.8	-0.1
YULB	Yu-li	20.41	356	P	P	01 19 16.0	-2.2
SSLB	Suanglung	20.84	355	P	P	01 19 20.9	-1.1
FITZ	Fitzroy Crossi	21.05	173	P	P	01 19 24.1	+0.1
	comp=Z,4.8nm,0.4s,baz=16,slow=8.0,SNR=59						
FITZ				S	S	01 22 45.6	-0.2
	comp=Z,6.6nm,0.7s,baz=14,slow=11,SNR=3.6						
FITZ	Fitzroy Crossi	21.05	173	P	P	01 19 24.2	+0.2
FITZ				IAmb	IAmb	01 20 16.8	
	comp=Z,38nm,1.6s						
NACB	Ninganchiao	21.17	357	P	P	01 19 23.8	-1.2
NACB				IAmb	IAmb	01 19 28.7	
	comp=Z,21nm,0.6s						
YOJ	Yonaguni jima	21.41	0	P	P	01 19 27.7	+0.5
YHNB	Yeheng	21.68	356	P	P	01 19 29.2	-0.5
XMIS	Christmas Isla	21.79	232	P	P	01 19 29.5	-1.2
XMIS				IAmb	IAmb	01 19 35.7	
	comp=Z,43nm,0.8s						
TATO	Taipei	21.97	356	P	P	01 19 31.6	-0.6
KULM	Kulim	22.39	277	P	P	01 19 36.1	-0.1
KULM				IAmb	IAmb	01 19 36.9	
	comp=Z,62nm,1.9s						
KULM	Kulim	22.39	277	P	P	01 19 36.0	-0.2
PSI	Prapat	24.02	270	P	P	01 19 50.2	-0.7
	comp=Z,5.8nm,0.5s,baz=2.1,slow=2.4,SNR=6.8						
PSI				ScP	ScP	01 26 07.5	-0.7
	comp=Z,11nm,0.8s,baz=179,slow=2.7,SNR=10						
RPSI	Rantau Prapat	24.02	270	P	P	01 19 50.4	-0.3
RPSI				IAmb	IAmb	01 19 54.1	
	comp=Z,25nm,1.2s						
RPSI	Rantau Prapat	24.02	270	P	P	01 19 50.2	-0.6
RPSI					ScP	01 26 07.5	-0.5
JMZ	Minamidaito 2	24.11	18	P	P	01 19 50.6	-0.7
PSA00	Pilbara Seismi	24.54	187	P	P	01 19 54.9	-0.3
PSA00				IAmb	IAmb	01 19 56.1	
	comp=Z,20nm,0.7s						
PSA00				PcP	PcP	01 23 17.6	+0.4
WB0	Warramunga Arr	25.18	154	P	P	01 20 00.5	-0.5
WB0				IAmb	IAmb	01 20 25.9	
	comp=Z,56nm,1.9s						
WRAB	Tennant Creek	25.31	154	P	P	01 20 02.0	-0.1
WRA	Warramunga Arr	25.32	154	P	P	01 20 01.5	-0.7
	comp=Z,7.5nm,0.6s,baz=334,slow=9.8,SNR=148						
WRA				PcP	PcP	01 23 19.1	+0.1
	comp=Z,2.8nm,0.5s,baz=321,slow=2.4,SNR=3.5						
WRA				S	S	01 23 49.8	-3.3
	comp=Z,3.4nm,0.9s,baz=334,slow=16,SNR=5.1						
WRA				ScP	ScP	01 26 11.6	0.0
	comp=Z,2.8nm,0.5s,baz=337,slow=2.9,SNR=8.8						
WB2	Warramunga Arr	25.32	154	P	P	01 20 01.9	-0.3
WB2				IAmb	IAmb	01 20 02.5	
	comp=Z,10nm,0.6s						
WB2				PcP	PcP	01 23 19.1	+0.1
WR0	Warramunga Arr	25.42	154	P	P	01 20 02.4	-0.7
GSI	Gunungsitoli	25.43	267	P	P	01 20 02.1	-1.2
GSI				IAmb	IAmb	01 20 04.9	
	comp=Z,44nm,0.6s						
GSI				PcP	PcP	01 23 20.6	+1.1
CMAR	Chiang Mai Arr	28.15	305	P	P	01 20 27.4	+0.2
	comp=Z,0.7nm,0.3s,baz=140,slow=9.1,SNR=6.5						
CMAR				PcP	PcP	01 23 26.9	+1.0
	comp=Z,2.5nm,0.6s,baz=186,slow=2.3,SNR=10						
CMAR				ScP	ScP	01 26 21.0	+0.8
	comp=Z,3.7nm,0.6s,baz=163,slow=2.4,SNR=23						
GYA	Guiyang	28.15	328	⇓P	P	01 20 28.2	+1.0
GYA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	28.49	159	P	P	01 20 30.2	+0.1
	comp=Z,3.2nm,0.4s,baz=341,slow=7.0,SNR=73						
ASAR				PcP	PcP	01 23 26.8	+0.1
	comp=Z,0.8nm,0.3s,baz=356,slow=2.3,SNR=1.7						
ASAR				S	S	01 24 42.0	-0.8
	comp=Z,12nm,0.9s,baz=347,slow=19,SNR=19						
ASAR				ScP	ScP	01 26 21.0	-0.2
	comp=Z,3.3nm,0.7s,baz=346,slow=2.5,SNR=8.2						
NJ2	Nanjing	29.23	353	*e*P	P	01 20 37.4	+1.0
NJ2				pmax	pmax		
	comp=Z,35nm,0.8s						
JSU	Suzuyama	29.29	13	P	P	01 20 36.4	-0.6
JSU				IAmb	IAmb	01 20 37.1	
	comp=Z,59nm,0.9s						
KMI	Kunming	29.45	320	*e*P	P	01 20 39.9	+1.3
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
ENH	Enshi	30.05	336	P	P	01 20 44.4	+0.8
ENH				IAmb	IAmb	01 20 45.4	
	comp=Z,28nm,0.7s						
JCJ	Chichijima	30.27	36	P	P	01 20 44.5	-0.9
	comp=Z,281nm,0.5s,baz=246,slow=4.5,SNR=18						
JCJ	Chichijima	30.27	36	P	P	01 20 44.2	-1.3
JNU	Nakatsue	30.94	13	P	P	01 20 50.5	-0.8
	comp=Z,45nm,0.8s,baz=225,slow=1.9,SNR=20						
JNU	Nakatsue	30.94	13	P	P	01 20 50.4	-0.8
JNU				IAmb	IAmb	01 20 51.6	
	comp=Z,56nm,0.9s						
JTU	Tsushima	32.01	10	P	P	01 20 60.0	-0.3
JTU				IAmb	IAmb	01 21 01.4	
	comp=Z,46nm,0.8s						
JMN	Monobe	32.30	17	P	P	01 21 03.3	+0.4
MORW	Morawa	32.50	191	P	P	01 21 04.9	+0.3
MORW				IAmb	IAmb	01 21 05.5	
	comp=Z,20nm,0.9s						
CD2	Chengdu	33.23	329	*e*P	P	01 21 11.0	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JHS	Saijyo	33.28	15	P	P	01 21 11.3	+0.1
JHS				IAmb	IAmb	01 21 14.9	
	comp=Z,39nm,0.6s						
XAN	Xi'an	33.62	339	P	P	01 21 14.3	+0.2
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
FORT	Forrest	33.86	172	P	P	01 21 16.6	+0.4
FORT				IAmb	IAmb	01 21 17.4	
	comp=Z,52nm,0.7s						
FORT				PcP	PcP	01 23 41.6	+0.4
JWT	Wachi	34.20	18	P	P	01 21 19.1	+0.2
JWT				IAmb	IAmb	01 21 20.1	
	comp=Z,42nm,0.7s						
KSRS	Korea Array	34.67	7	P	P	01 21 23.8	+1.0
	comp=Z,24nm,0.7s,baz=185,slow=9.8,SNR=96						
KSRS				ScP	ScP	01 26 42.5	+0.6
	comp=Z,4.8nm,0.6s,baz=181,slow=3.5,SNR=15						
KS19	Wonju Array Si	34.71	7	P	P	01 21 23.6	+0.4
KS19				IAmb	IAmb	01 21 24.4	
	comp=Z,34nm,0.8s						
INU	Inuyama	34.80	20	P	P	01 21 23.9	0.0
JGF	Kuroka	35.14	21	P	P	01 21 26.2	-0.7
JGF				IAmb	IAmb	01 21 28.3	
	comp=Z,34nm,0.9s						
DL2	Dalian	35.84	358	P	P	01 21 32.4	-0.2
DL2				pmax	pmax		
	comp=Z,110nm,0.5s						
DL2				pmax	pmax		
	comp=Z,220nm,3.6s						
TIY	Taiyuan	35.95	346	*e*P	P	01 21 33.6	0.0
TIY				pmax	pmax		
	comp=Z,49nm,1.1s						
NWAO	Narrogin (SRO)	36.07	188	P	P	01 21 35.1	+0.6
	comp=Z,23nm,0.6s,baz=27,slow=8.5,SNR=17						
NWAO	Narrogin (SRO)	36.07	188	P	P	01 21 35.3	+0.7
NWAO				IAmb	IAmb	01 21 36.0	
	comp=Z,24nm,0.8s						
NWAO	Narrogin (SRO)	36.07	188	P	P	01 21 34.9	+0.3
NWAO				IAmb	IAmb	01 21 36.0	
	comp=Z,29nm,0.8s						
MAJO	Matsushiro	36.29	21	P	P	01 21 35.6	-0.8
MAJO				IAmb	IAmb	01 21 36.4	
	comp=Z,47nm,0.9s						
MAT	Matsushiro	36.29	21	P	P	01 21 35.3	-1.1
MJAR	Matsushiro Arr	36.29	21	P	P	01 21 35.4	-1.0
	comp=Z,48nm,0.8s,baz=192,slow=8.9,SNR=86						
MJAR				ScP	ScP	01 26 48.3	+0.4
	comp=Z,6.9nm,0.9s,baz=196,slow=4.2,SNR=10						
BJT	Baijiatuau	37.44	351	P	P	01 21 46.0	+0.2
BJT				IAmb	IAmb	01 21 46.6	
	comp=Z,36nm,0.6s						
LZH	Lanzhou	37.44	334	⇓P	P	01 21 47.3	+1.2
LZH				pP	pwP	01 23 17.5	-0.3

LZH				PP	**PP**	**01 23 28.7**	**+2.3**
LZH				sP	sP	01 24 12.6	+3.2
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.2s						
BJI	**Beijing**	**37.46**	**351**	P	**P**	**01 21 46.1**	**+0.2**
BJI				pmax	pmax		
	comp=Z,48nm,0.6s						
BBOO	**Buckleboo**	**37.64**	**162**	P	**P**	**01 21 48.5**	**+1.0**
BBOO				IAmb	IAmb	01 21 49.3	
	comp=Z,25nm,0.8s						
BBOO				PcP	**PcP**	**01 23 53.1**	**+0.5**
JSD	**Sado**	**37.65**	**20**	P	**P**	**01 21 47.1**	**-0.5**
JSD				IAmb	IAmb	01 21 48.1	
	comp=Z,46nm,0.9s						
JMM	**Marumori**	**38.42**	**23**	P	**P**	**01 21 53.9**	**+0.1**
STKA	**Stephens Creek**	**38.87**	**154**	P	**P**	**01 21 58.8**	**+1.2**
	comp=Z,15nm,0.4s,baz=332,slow=8.5,SNR=43						
STKA	**Stephens Creek**	**38.87**	**154**	P	**P**	**01 21 58.9**	**+1.3**
HHC	**Hu-ho-hao-te**	**39.14**	**346**	*e*P	**P**	**01 22 00.1**	**+0.3**
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
EIDS	**Eidsvold**	**39.16**	**138**	P	**P**	**01 22 00.7**	**+0.6**
CN2	**Changchun**	**40.77**	**3**	*e*P	**P**	**01 22 11.3**	**-1.4**
CN2				PP	**PP**	**01 23 57.9**	**-2.9**
CN2				S	**S**	**01 27 47.9**	**+0.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
JTM	**Tenmabayashi**	**41.08**	**21**	P	**P**	**01 22 15.4**	**+0.1**
TAPN	**Taplejung**	**41.54**	**309**	*e*P	**P**	**01 22 19.6**	**0.0**
	comp=Z,11nm,0.4s						
ODAN	**Odare**	**41.55**	**308**	*e*P	**P**	**01 22 20.8**	**+1.2**
	comp=Z,21nm,0.8s						
USA0B	**Ussuriysk Arra**	**41.87**	**10**	P	**P**	**01 22 21.6**	**+0.1**
USA0B				IAmb	IAmb	01 22 22.7	
	comp=Z,49nm,0.7s						
USRK	**Ussuriysk Ar.**	**41.87**	**10**	P	**P**	**01 22 21.7**	**+0.2**
	comp=Z,40nm,0.6s,baz=196,slow=7.3,SNR=111						
USRK				ScP	**ScP**	**01 27 08.9**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=242,slow=4.1,SNR=6.6						
MDJ	**Mudanjiang**	**41.93**	**7**	P	**P**	**01 22 22.3**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,160nm,0.9s						
MDJ	**Mudanjiang**	**41.93**	**7**	P	**P**	**01 22 22.2**	**+0.3**
GTA	**Gaotai**	**41.98**	**333**	⇑P	**P**	**01 22 23.2**	**+0.6**
GTA				pP	pP	01 23 54.6	+1.8
GTA				ScP	**ScP**	**01 27 10.6**	**+0.4**
GTA				ScS	**ScS**	**01 31 27.9**	**-1.8**
GTA				pmax	pmax		
	comp=Z,22nm,0.8s						
GTA				pmax	pmax		
	comp=Z,130nm,4.2s						
RAMN	**Ramite**	**42.22**	**308**	*e*P	**P**	**01 22 25.4**	**+0.6**
	comp=Z,13nm,0.5s						
PALK	**Pallekele**	**42.31**	**278**	P	**P**	**01 22 25.8**	**+0.3**
ERM	**Erimo**	**42.92**	**22**	P	**P**	**01 22 30.0**	**+0.2**
ERM				IAmb	IAmb	01 22 33.8	
	comp=Z,56nm,1.0s						
ARMA	**Armidale**	**42.98**	**143**	P	**P**	**01 22 33.4**	**+2.8**
GUN	**Gumba**	**43.23**	**309**	*e*P	**P**	**01 22 33.3**	**+0.3**
PKI	**Pulchoki**	**43.44**	**308**	*e*P	**P**	**01 22 34.5**	**-0.1**
PKIN	**Phulchoki**	**43.46**	**308**	*e*P	**P**	**01 22 34.3**	**-0.3**
KKN	**Kakani**	**43.65**	**308**	*e*P	**P**	**01 22 36.7**	**+0.7**
DMN	**Daman**	**43.70**	**308**	*e*P	**P**	**01 22 37.2**	**+0.7**
	comp=Z,20nm,0.9s						
ASAJ	**Asahikawa**	**44.55**	**20**	P	**P**	**01 22 42.5**	**+0.1**
	comp=Z,56nm,0.5s,baz=235,slow=8.3,SNR=73						
JKA	**Kamikawa-asahi**	**44.55**	**20**	P	**P**	**01 22 42.9**	**+0.4**
DANN	**Dangsing**	**45.09**	**308**	*e*P	**P**	**01 22 47.5**	**+0.2**
	comp=Z,36nm,0.7s						
TOO	**Toolangi**	**45.39**	**155**	P	**P**	**01 22 51.2**	**+2.1**
TOO				IAmb	IAmb	01 23 59.5	
	comp=Z,63nm,1.9s						
TOO				PcP	**pP**	**01 24 19.6**	**-0.6**
HYB	**Hyderabad**	**45.89**	**291**	*i* P	**P**	**01 22 53.5**	**+0.2**
HIA	**Hailar**	**46.26**	**357**	P	**P**	**01 22 55.6**	**+0.1**
HIA				IAmb	IAmb	01 22 56.5	
	comp=Z,56nm,0.7s						
KLR	**Kul'dur**	**46.74**	**8**	P	**P**	**01 22 58.9**	**-0.3**
	comp=Z,7.5nm,0.5s,baz=210,slow=4.2,SNR=45						
KLR				ScP	**ScP**	**01 27 29.0**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=177,slow=1.4,SNR=4.5						
ULN	**Ulaanbaatar**	**46.83**	**345**	P	**P**	**01 23 00.4**	**+0.3**
ULN				IAmb	IAmb	01 23 01.4	
	comp=Z,32nm,0.8s						
SONM	**Songino Array**	**46.98**	**345**	P	**P**	**01 23 01.2**	**+0.1**
	comp=Z,31nm,0.8s,baz=158,slow=8.9,SNR=207						
SONM				ScP	**ScP**	**01 27 30.0**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=159,slow=5.2,SNR=10						
DZM	**Mont Dzumac**	**49.20**	**123**	P	**P**	**01 23 17.9**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=252,slow=20,SNR=1.3						
TLY	**Talaya**	**51.22**	**345**	P	**P**	**01 23 33.1**	**+0.7**
TLY				IAmb	IAmb	01 23 34.1	
	comp=Z,17nm,0.7s						
WMQ	**Urumqi**	**51.31**	**328**	P	**P**	**01 23 34.9**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,450nm,5.5s						
WMQ	**Urumqi**	**51.31**	**328**	P	**P**	**01 23 34.5**	**+1.2**
ZSN	**Zaisan**	**55.21**	**329**	*e*P	**P**	**01 24 00.7**	**-0.3**
	baz=329						
NIL	**Nilore**	**55.49**	**309**	P	**P**	**01 24 03.4**	**+0.1**
NIL				PcP	**PcP**	**01 24 56.4**	**+0.2**
SHLS	**Shalkode**	**55.63**	**322**	*e*P	**P**	**01 24 02.6**	**-1.5**
	comp=Z,7.3nm,0.7s,baz=323						
KSH	**Kashi**	**56.02**	**317**	P	**P**	**01 24 09.0**	**+2.1**
KSH				S	**S**	**01 31 23.9**	**+6.2**
KSH				pmax	pmax		
	comp=Z,33nm,1.2s						
KSH				pmax	pmax		
	comp=Z,360nm,6.2s						
MK31	**Makanchi Array**	**56.14**	**327**	P	**P**	**01 24 08.0**	**+0.5**
MK31				PcP	**PcP**	**01 24 58.3**	**-0.1**
MKAR	**Makanchi Array**	**56.14**	**327**	P	**P**	**01 24 07.8**	**+0.3**
	comp=Z,11nm,0.7s,baz=122,slow=8.6,SNR=106						
MKAR				PcP	**PcP**	**01 24 58.0**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=127,slow=4.3,SNR=7.3						
MKAR				ScP	**ScP**	**01 28 09.3**	**-1.0**
	comp=Z,3.5nm,0.7s,baz=127,slow=5.5,SNR=6.8						
MKAR				S	**S**	**01 31 19.3**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=130,slow=13,SNR=2.9						
SATY	**Saty**	**56.23**	**322**	*e*P	**P**	**01 24 08.8**	**+0.5**
	comp=Z,13nm,0.9s,baz=322						
KPKS	**Kokpek**	**56.27**	**322**	*e*P	**P**	**01 24 08.6**	**0.0**
	comp=Z,12nm,0.9s,baz=322						
MAKZ	**Makanchi**	**56.32**	**327**	P	**P**	**01 24 08.8**	**0.0**
TNSS	**Tian-Shan**	**57.12**	**321**	*e*P	**P**	**01 24 15.4**	**+0.5**
	baz=321						
MDOK	**Medeo**	**57.12**	**321**	*e*P	**P**	**01 24 14.8**	**+0.3**
	baz=321						
AAA	**Alma-Ata**	**57.23**	**321**	*e*P	**P**	**01 24 15.7**	**+0.5**
	baz=321						
CHKK	**Chushkaly**	**57.52**	**322**	*e*P	**P**	**01 24 16.8**	**-0.3**
	baz=322						
PEA0B	**Petropavlovsk-**	**57.64**	**24**	P	**P**	**01 24 18.5**	**+0.9**
PEA0B				IAmb	IAmb	01 24 20.1	
	comp=Z,36nm,0.8s						
PETK	**Petropavlovsk-**	**57.64**	**24**	P	**P**	**01 24 18.1**	**+0.5**
	comp=Z,16nm,0.7s,baz=204,slow=2.7,SNR=32						
TKM2	**Tokmak 2**	**57.92**	**320**	P	**P**	**01 24 21.0**	**+1.0**
	SNR=8.7						
KUU	**Kurty**	**57.94**	**322**	*e*P	**P**	**01 24 19.9**	**-0.1**
	comp=Z,17nm,0.8s,baz=322						
UCH	**Uchtor**	**58.28**	**319**	P	**P**	**01 24 23.8**	**+1.0**
	SNR=8.9						
AAK	**Ala-Archa**	**58.49**	**320**	P	**P**	**01 24 24.9**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=148,slow=5.0,SNR=9.6						
AAK	**Ala-Archa**	**58.49**	**320**	P	**P**	**01 24 25.1**	**+1.2**
	SNR=5.3						
AAK	**Ala-Archa**	**58.49**	**320**	P	**P**	**01 24 24.8**	**+1.0**
AAK				PcP	**PcP**	**01 25 09.0**	**+1.0**
AML	**Almayashu**	**58.77**	**319**	P	**P**	**01 24 27.2**	**+1.2**
	SNR=11						
USP	**Ospenovka**	**58.79**	**320**	P	**P**	**01 24 26.2**	**+0.5**
	SNR=14						
EKS2	**Erkin-Say**	**58.96**	**319**	P	**P**	**01 24 28.3**	**+1.3**
	SNR=8.3						
KBL	**Kabul**	**59.07**	**309**	P	**P**	**01 24 28.0**	**0.0**
YAK	**Yakutsk**	**59.18**	**4**	P	**P**	**01 24 28.0**	**+0.1**
ZAA0	**Zalesovo Array**	**59.67**	**335**	P	**P**	**01 24 30.4**	**-0.8**
ZALV	**Zalesovo Beam**	**59.67**	**335**	P	**P**	**01 24 30.4**	**-0.9**
	comp=Z,5.8nm,0.4s,baz=125,slow=5.5,SNR=37						
ZALV				S	**S**	**01 32 00.8**	**-2.6**
	comp=Z,1.3nm,0.7s,baz=114,slow=15,SNR=6.6						
BTLS	**Baital**	**59.94**	**322**	*e*P	**P**	**01 24 32.8**	**-0.5**
	baz=322						
MA2	**Magadan**	**60.45**	**16**	P	**P**	**01 24 37.5**	**+1.1**
MA2				IAmb	IAmb	01 24 38.5	
	comp=Z,56nm,0.7s						
KURBB	**Kurchatov Arra**	**60.45**	**329**	P	**P**	**01 24 36.5**	**-0.1**
	comp=Z,13nm,0.7s,baz=132,slow=6.5,SNR=142						
KURK	**Kurchatov**	**60.46**	**329**	P	**P**	**01 24 36.5**	**-0.2**
KURK				IAmb	IAmb	01 24 37.4	
	comp=Z,33nm,0.8s						
IUG	**Iuzhnay**	**61.22**	**317**	*e*P	**P**	**01 24 41.7**	**-0.4**
	baz=317						
KK06	**Karatay Array**	**61.29**	**319**	P	**P**	**01 24 42.4**	**+0.1**
KK05	**Karatay Array**	**61.30**	**319**	P	**P**	**01 24 43.0**	**+0.6**
KK02	**Karatay Array**	**61.31**	**319**	P	**P**	**01 24 43.0**	**+0.5**
KK31	**Karatay Array**	**61.31**	**319**	P	**P**	**01 24 43.0**	**+0.6**
KKAR	**Karatay Array**	**61.31**	**319**	P	**P**	**01 24 43.0**	**+0.5**
MLZ	**Mavora Lakes**	**62.57**	**146**	P	**P**	**01 24 51.8**	**+1.2**
MLZ				IAmb	IAmb	01 25 12.7	
	comp=Z,99nm,1.7s						
QRZ	**Quartz Range**	**62.70**	**139**	P	**P**	**01 24 53.5**	**+2.0**
QRZ				IAmb	IAmb	01 26 56.6	
	comp=Z,58nm,1.3s						
WHZ	**Wether Hill Ro**	**62.79**	**146**	P	**P**	**01 24 52.6**	**+0.6**
LBZ	**Lake Benmore**	**63.18**	**144**	P	**P**	**01 24 55.6**	**+1.1**
RPZ	**Rata Peaks**	**63.32**	**143**	P	**P**	**01 24 56.5**	**+1.0**
	comp=Z,14nm,0.6s,baz=294,slow=2.8,SNR=7.8						
RPZ	**Rata Peaks**	**63.32**	**143**	P	**P**	**01 24 57.2**	**+1.7**
RPZ				IAmb	IAmb	01 25 19.0	
	comp=Z,92nm,1.6s						
LTZ	**Lake Taylor**	**63.56**	**141**	P	**P**	**01 24 58.5**	**+1.3**
KHZ	**Kahutara**	**64.17**	**141**	P	**P**	**01 25 01.5**	**+0.7**
SNZO	**South Karori**	**64.36**	**139**	P	**P**	**01 25 02.4**	**+0.3**
BKZ	**Black Stump Fm**	**64.55**	**136**	P	**P**	**01 25 04.5**	**+1.0**
BKZ				IAmb	IAmb	01 25 05.2	
	comp=Z,17nm,0.5s						
URZ	**Urewera**	**64.57**	**135**	P	**P**	**01 25 04.1**	**+0.5**
URZ				IAmb	IAmb	01 26 03.4	
	comp=Z,24nm,1.4s						
PLWZ	**Palliser**	**64.85**	**139**	P	**P**	**01 25 05.9**	**+0.6**
BRVK	**Borovoye**	**66.06**	**328**	P	**P**	**01 25 12.6**	**-0.1**
BRVK				IAmb	IAmb	01 25 13.4	
	comp=Z,15nm,1.1s						
GYB1	**ALIBECK ARRAY**	**68.49**	**310**	P	**P**	**01 25 28.5**	**+0.4**
GEYT	**Alibeck**	**68.50**	**310**	P	**P**	**01 25 28.6**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=164,slow=5.9,SNR=8.9						
TIXI	**Tiksi**	**68.73**	**2**	P	**P**	**01 25 28.4**	**-0.3**
TIXI				IAmb	IAmb	01 25 28.9	
	comp=Z,28nm,0.7s						
SOCY	**Socotra**	**68.85**	**282**	P	**P**	**01 25 29.3**	**-1.4**
SOCY				IAmb	IAmb	01 25 29.9	
	comp=Z,38nm,0.7s						
NRIK	**Noril'sk**	**70.36**	**347**	P	**P**	**01 25 38.5**	**0.0**
	comp=Z,28nm,0.7s,baz=132,slow=6.1,SNR=79						
NRIK	**Noril'sk**	**70.36**	**347**	P	**P**	**01 25 38.5**	**0.0**
NRIK				IAmb	IAmb	01 25 39.3	
	comp=Z,28nm,0.7s						
AB07	**Akbulak array**	**70.41**	**322**	P	**P**	**01 25 38.9**	**-0.4**
ABKAR	**Akbulak array**	**70.43**	**322**	P	**P**	**01 25 39.2**	**-0.1**
AKTO	**Aktyubinsk**	**71.98**	**322**	P	**P**	**01 25 48.6**	**+0.1**
	comp=Z,8.3nm,0.6s,baz=108,slow=7.8,SNR=33						
ARU	**Arti**	**73.64**	**329**	P	**P**	**01 25 56.9**	**-1.0**
	comp=Z,3.4nm,0.6s,baz=108,slow=2.5,SNR=20						
ARU	**Arti**	**73.64**	**329**	P	**P**	**01 25 57.2**	**-0.7**
AKUT	**Akutan**	**76.71**	**35**	P	**P**	**01 26 15.7**	**+0.6**
RAYN	**Ar Rayn**	**77.35**	**293**	P	**P**	**01 26 18.6**	**-0.8**
ABPO	**Ambohimpanom**	**77.51**	**250**	P	**P**	**01 26 20.0**	**-0.5**
BELG	**Belogornoye**	**78.77**	**323**	P	**P**	**01 26 25.7**	**-0.6**
	comp=Z,7.1nm,0.4s,baz=284,slow=5.1,SNR=6.3						
KIRV	**Kirov**	**78.98**	**329**	P	**P**	**01 26 26.9**	**-0.4**
	comp=Z,16nm,0.5s,baz=15,slow=1.1,SNR=8.9						
ANM	**Nome**	**79.55**	**25**	P	**P**	**01 26 31.6**	**+1.4**
GEVA	**Gevas**	**80.28**	**308**	P	**P**	**01 26 35.6**	**+0.7**
GEVA				IAmb	IAmb	01 26 36.3	
	comp=Z,20nm,0.7s						
KBZ	**Khabaz**	**80.81**	**314**	P	**P**	**01 26 36.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=121,slow=2.0,SNR=5.3						
KVAR	**Kislovodsk Arr**	**80.98**	**314**	P	**P**	**01 26 37.5**	**-0.8**
	comp=Z,9.6nm,1.1s,baz=60,slow=20,SNR=3.5						
RDOG	**Red Dog Mine**	**81.39**	**21**	P	**P**	**01 26 40.9**	**+1.1**
MAW	**Mawson**	**81.72**	**200**	P	**P**	**01 26 40.8**	**-0.6**
	comp=Z,13nm,1.0s,baz=59,slow=6.2,SNR=6.4						
MARD	**Mardin**	**82.03**	**307**	P	**P**	**01 26 44.2**	**+0.3**
VNDA	**Vanda**	**83.12**	**172**	P	**P**	**01 26 48.5**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=312,slow=6.8,SNR=24						
VNDA	**Vanda**	**83.12**	**172**	P	**P**	**01 26 48.8**	**+0.4**
SVW2	**Sparrevohn**	**83.31**	**29**	P	**P**	**01 26 50.0**	**+0.3**
SVW2				IAmb	IAmb	01 27 24.8	
	comp=Z,27nm,1.7s						
TTA	**Tatalina**	**83.32**	**27**	P	**P**	**01 26 50.7**	**+0.9**
TTA				IAmb	IAmb	01 29 34.6	
	comp=Z,29nm,2.0s						
A21K	**Barrow**	**84.17**	**19**	P	**P**	**01 26 54.9**	**+1.2**
A21K				IAmb	IAmb	01 26 56.2	
	comp=Z,21nm,0.8s						
KDAK	**Kodiak Island**	**84.57**	**32**	P	**P**	**01 26 55.4**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=215,slow=1.7,SNR=7.2						
KDAK	**Kodiak Island**	**84.57**	**32**	P	**P**	**01 26 57.9**	**+1.9**
GAZ	**Gaziantep**	**84.87**	**307**	P	**P**	**01 26 57.1**	**-1.0**
GAZ				IAmb	IAmb	01 26 59.7	
	comp=Z,16nm,1.1s						
BPAW	**Bear Paw Mtn.**	**85.65**	**26**	P	**P**	**01 27 01.5**	**+0.3**
KMBO	**Kilima Mbogo**	**85.78**	**269**	P	**P**	**01 27 03.6**	**+0.5**
	comp=Z,8.8nm,0.9s,baz=49,slow=6.9,SNR=16						
TOLK	**Toolik Lake Re**	**86.37**	**22**	P	**P**	**01 27 05.6**	**+1.1**
MMAI	**Mount Meron Ar**	**86.39**	**303**	P	**P**	**01 27 05.6**	**+0.2**
	comp=Z,5.1nm,0.7s,baz=96,slow=7.7,SNR=4.8						
ILAR	**Eielson Array**	**87.44**	**25**	P	**P**	**01 27 08.2**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=240,slow=5.6,SNR=20						
BRTR	**Keskin Array B**	**87.64**	**309**	P	**P**	**01 27 09.8**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=124,slow=4.2,SNR=5.9						
ARCES	**ARCESS Array B**	**89.90**	**340**	P	**P**	**01 27 19.3**	**-1.7**
	comp=Z,6.5nm,1.0s,baz=84,slow=2.6,SNR=11						
AKASG	**Malin Array Be**	**90.14**	**321**	P	**P**	**01 27 20.5**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=68,slow=4.5,SNR=2.3						
SYO	**Syowa Base**	**90.33**	**201**	⇑*e*P	**P**	**01 27 23.5**	**+0.7**
FINES	**FINESS Array B**	**90.76**	**332**	P	**P**	**01 27 23.9**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=79,slow=4.1,SNR=9.0						
INK	**Inuvik**	**92.27**	**21**	P	**P**	**01 27 31.1**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=300,slow=3.6,SNR=12						
QSPA	**South Pole Qui**	**92.83**	**180**	P	**P**	**01 27 35.2**	**+0.5**
QSPA				IAmb	IAmb	01 27 36.3	
	comp=Z,16nm,1.6s						
LSZ	**Lusaka**	**95.38**	**255**	P	**P**	**01 27 46.2**	**-1.1**
LSZ				IAmb	IAmb	01 27 47.2	
	comp=Z,4.2nm,0.8s						
CLL	**Collm**	**100.06**	**323**	*e*Pdif	**Pdif**	**01 28 14.0**	**+6.7**
CLL				*e*(PP)		01 32 13.0	
YKA	**Yellowknife Ar**	**101.76**	**24**	P	**Pdif**	**01 28 15.3**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=302,slow=3.4,SNR=8.0						
YKA				PKiKP	**PKiKP**	**01 32 34.3**	**-0.5**
	comp=Z,1.0nm,1.1s,baz=301,slow=5.0,SNR=5.2						
YKA				PKKPbc	**PKKPbc**	**01 44 17.3**	**-4.1**
	comp=Z,0.4nm,0.4s,baz=115,slow=4.8,SNR=13						
NVAR	**Mina Array Bea**	**110.22**	**47**	PKKPbc	PKKPbc	01 43 53.8	-1.4
	comp=Z,0.4nm,0.6s,baz=119,slow=5.2,SNR=4.5						
NVAR				PKKPab	PKKPab	01 44 06.5	-1.1
	comp=Z,0.7nm,0.7s,baz=118,slow=3.7,SNR=7.4						
PDAR	**Pinedale Array**	**114.40**	**40**	PKKPbc	PKKPbc	01 43 39.5	-2.2
	comp=Z,0.5nm,0.5s,baz=128,slow=5.7,SNR=8.1						
PDAR				PKKPab	PKKPab	01 43 47.0	-2.1
	comp=Z,1.3nm,0.5s,baz=116,slow=6.7,SNR=16						
ESDC	**Sonseca Array**	**115.53**	**317**	PKP	**PKPdf**	**01 33 00.8**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=22,slow=2.9,SNR=1.6						
TOA0	**Torodi Ar. Sit**	**119.58**	**287**		**PKPdf**	**01 33 09.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**119.58**	**287**	PKP	**PKPdf**	**01 33 09.0**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=78,slow=1.7,SNR=20						
TORD				SKP		01 35 57.8	
	comp=Z,1.9nm,0.8s,baz=43,slow=2.3,SNR=6.1						
KIC	**Kosan Boka**	**126.99**	**280**	*e*PKIKP	**PKiKP**	**01 33 24.2**	**-0.4**
	comp=Z,7.5nm,0.6s						
DBIC	**Dimbokro**	**127.06**	**281**	PKP	**PKPdf**	**01 33 23.8**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=55,slow=4.7,SNR=8.6						
DBIC	**Dimbokro**	**127.06**	**281**		**PKiKP**	**01 33 24.3**	**-0.5**
TIC	**Toumodi**	**127.22**	**281**	*e*PKIKP	**PKiKP**	**01 33 24.5**	**-0.6**
LIC	**Lamto**	**127.29**	**280**	*e*PKIKP	**PKiKP**	**01 33 24.6**	**-0.6**
	comp=Z,14nm,0.4s						
PLCA	**Paso Flores**	**140.43**	**164**	PKhKP	PKPpre	01 33 43.8	
	comp=Z,2.0nm,0.7s,baz=226,slow=4.3,SNR=6.9						
PLCA	**Paso Flores**	**140.43**	**164**		PKPpre	01 33 42.9	
BO02	**Sierra Bellavi**	**145.81**	**160**		**PKPab**	**01 34 00.6**	**-0.5**
MT02	**Curacav**	**147.06**	**158**	PKPbc	**PKPbc**	**01 34 03.6**	**+0.5**
VA03	**San Esteban**	**147.72**	**158**	PKPbc	**PKiKP**	**01 34 05.7**	**-0.8**
CO02	**Combarbal**	**148.93**	**156**	PKPbc	**PKiKP**	**01 34 08.7**	**-0.4**
CO03	**El Pedregal**	**149.38**	**156**	PKPbc	**PKiKP**	**01 34 09.5**	**-0.5**
ZON	**Zonda**	**149.48**	**160**		**PKiKP**	**01 34 09.9**	**-0.2**
HDC	**Heredia**	**150.12**	**64**		**PKPdf**	**01 34 05.8**	**0.0**
CO01	**Juntas del Tor**	**150.38**	**157**	PKPbc	**PKiKP**	**01 34 12.8**	**+0.5**
LCO	**Las Campanas**	**150.97**	**155**		**PKiKP**	**01 34 13.5**	**0.0**
AC05	**El Transito**	**151.31**	**155**		**PKiKP**	**01 34 14.5**	**+0.5**
CPUP	**Villa Florida**	**156.72**	**179**	PKP	**PKPdf**	**01 34 14.6**	**0.0**
	comp=Z,1.5nm,0.9s,baz=247,slow=4.8,SNR=3.7						
CPUP				PKPab	**PKPab**	**01 34 47.1**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=182,slow=4.6,SNR=12						
CPUP	**Villa Florida**	**156.72**	**179**		**PKPab**	**01 34 47.3**	**+0.6**
BDFB	**Brasilia**	**164.56**	**215**	PKPab	**PKPab**	**01 35 21.6**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=111,slow=3.6,SNR=6.0						
BDFB	**Brasilia**	**164.56**	**215**		**PKPab**	**01 35 20.9**	**-0.6**

IDC ***05*** *01:17:08.1±4.1, 35°.83N×69°.42E, h0^{km}, mb3.4/2, mb1 3.4/7, mb1mx3.2/57, mbtmp3.4/7, ML3.6/3, Error ellipse: s-maj=80.2km s-min=20.2km az=144.0*

NNC ***05*** *01:17:15.2±1.6, 36°.44N×69°.03E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=15.7km s-min=12.1km az=105.0*

ISC 05 01:17:15.0±2.1**, 36°.1N**±0°.2×**69°.1E**±0°.1**, h35^{km}, n16, σ1^s.67**/21**, 5C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**7.00**	**30**	P	**Pn**	**01 18 56.0**	**+0.5**
	SNR=25						
KK31	**Karatay Array**	**7.07**	**9**	⇑Pn	**Pn**	**01 18 55.5**	**-0.5**
	2.4nm,0.7s,baz=200,slow=15,SNR=29						
KK31				⇓Sn	**Sn**	**01 20 14.3**	**-0.9**
	2.4nm,0.7s,baz=162,slow=24,SNR=4.4						
KK31				⇑Lg	Lg	01 20 49.6	
	1.9nm,0.5s,baz=196,slow=30,SNR=4.0						
UCH	**Uchtor**	**7.43**	**33**	P	**Pn**	**01 19 01.8**	**+0.5**
	SNR=8.5						
AAK	**Ala-Archa**	**7.75**	**31**	Pn	**Pn**	**01 19 05.9**	**+0.4**
	1.4nm,0.3s,baz=215,slow=5.1,SNR=20						
AAK				Sn	**Sn**	**01 20 33.7**	**+1.5**
	0.4nm,0.3s,baz=332,slow=24,SNR=1.8						
AAK				Lg	Lg	01 21 16.6	
	0.1nm,0.3s,baz=178,slow=18,SNR=1.1						
AAK	**Ala-Archa**	**7.75**	**31**	P	**Pn**	**01 19 06.2**	**+0.7**
	SNR=8.7						
AAK	**Ala-Archa**	**7.75**	**31**	⇑Pn	**Pn**	**01 19 06.1**	**+0.6**
	1.9nm,0.3s						
AAK				⇑Sn	**Sn**	**01 20 32.6**	**+0.5**
	13nm,1.4s						
CHMS	**Chumysh**	**8.16**	**31**	P	**Pn**	**01 19 11.4**	**+0.4**
	SNR=6.5						
USP	**Ospenovka**	**8.28**	**29**	P	**Pn**	**01 19 12.6**	**-0.1**
	SNR=6.5						
TKM2	**Tokmak 2**	**8.47**	**35**	P	**Pn**	**01 19 15.3**	**-0.1**
	SNR=5.4						
TKM2	**Tokmak 2**	**8.47**	**35**	⇑Pn	**Pn**	**01 19 15.2**	**-0.1**
	3.1nm,0.8s						
TKM2				⇓Sn	**Sn**	**01 20 50.5**	**+0.8**
	1.9nm,0.6s						
GEYT	**Alibeck**	**8.94**	**285**	Pn	**Pn**	**01 19 21.7**	**0.0**
	0.6nm,0.3s,baz=139,slow=12,SNR=6.2						
GEYT				Sn	**Sn**	**01 20 60.0**	**-1.1**
	0.8nm,0.3s,baz=130,slow=18,SNR=5.5						
MKAR	**Makanchi Array**	**14.55**	**39**	Pn	**Pn**	**01 20 33.9**	**-4.4**
	baz=224,slow=10,SNR=2.2						
KURBB	**Kurchatov Arra**	**16.03**	**22**	Pn	**Pn**	**01 20 53.2**	**-4.5**
	baz=211,slow=12,SNR=2.2						
BVAR	**Borovoye Array**	**16.94**	**3**	P	**P**	**01 21 11.4**	**+0.6**
	0.1nm,0.3s,baz=160,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**20.94**	**27**	P	**P**	**01 21 53.7**	**-0.9**
	0.9nm,0.4s,baz=216,slow=9.9,SNR=6.1						
ESDC	**Sonseca Array**	**56.25**	**297**	P	**P**	**01 26 53.3**	**+1.4**
	0.4nm,0.9s,baz=67,slow=8.0,SNR=5.4						

JMA 05 01:47:15.2±0.1**, 35°.92N×138°.59E, h170^{km}**±1^{km}**, M2.6, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRY	**Ryogami san**	**0.27**	**69**	P	Pn	01 47 38.4	+0.3
JRY				S	Sn	01 47 55.5	-0.1
JHU	**Hanno**	**0.57**	**97**	P	Pn	01 47 39.4	+0.3
MAT	**Matsushiro**	**0.69**	**334**	P	Pn	01 47 39.7	-0.1
MAT				S	Sn	01 47 57.7	-1.2
JOD2	**Odawara 2**	**0.77**	**148**	P	Pn	01 47 40.4	+0.1
JNY	**Yasuok**	**0.82**	**227**	P	Pn	01 47 40.9	+0.2
JNY				S	Sn	01 47 59.9	-0.3
JYT	**Yasato**	**1.33**	**76**	P	Pn	01 47 44.9	+0.2
BSO4	**Boso 4**	**1.70**	**123**	P	Pn	01 47 49.1	+0.8
JHO	**Hitachi**	**1.74**	**66**	P	Pn	01 47 49.1	+0.4

IDC ***05*** *01:47:19.4±0.8, 42°.15N×119°.58W, h0^{km}, mb2.0/1, mb1 3.0/5, mb1mx3.0/61, mbtmp2.8/5, ML3.0/4, Error ellipse: s-maj=13.0km s-min=5.1km az=5.0*

ANF ***05*** *01:47:20.7±0.3, 41°.81N×119°.65W, h0^{km}, ML3.5/18, Error ellipse: s-maj=2.4km s-min=2.0km az=96.0*

NEIC ***05*** *01:47:22.2, 41°.86N×119°.62W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.82; M$_{\theta\theta}$0.06; M$_{\phi\phi}$0.76; M$_{r\theta}$-0.38; M$_{\theta\phi}$2.17; M$_{\phi r}$2.13; Fault plane solution: M$_0$3.16000×10^{14} NP1:ϕ_s80.00000°, δ45.00000°, λ-15.00000°. NP2:ϕ_s181.00000°, δ79.00000°, λ-134.00000°. Principal axes: T 3.1641, Plg22.0000°, Azm303.0000°; N 0.0006, Plg43.0000°, Azm191.0000°; P -3.1647, Plg39.0000°, Azm52.0000°;*

SEA ***05*** *01:47:22.5±3.6, 41°.84N±0°.03×119°.63W±0°.05, h0^{km}±4^{km} Error ellipse: s-maj=6.0km s-min=3.9km az=54.0*

REN ***05*** *01:47:22.2±3.6, 41°.86N±0°.01×119°.62W±0°.04, h7^{km}±6^{km}, ML3.7/5, ML3.4/43(SEA), ML3.3/74(NEIC), Mwr3.6/22(SLM), Error ellipse: s-maj=4.8km s-min=1.9km az=97.0*

NEIC ***05*** *01:47:23.4±3.2, 41°.88N±0°.03×119°.67W±0°.06, h11^{km}±6^{km}, Error ellipse: s-maj=6.0km s-min=4.2km az=91.0*

ISC 05 01:47:20.9±1.2**, 41°.89N**±0°.02×**119°.61W**±0°.02**, h2^{km}**±11^{km}**, n98, σ1^s.74**/118**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.52**	**272**	Pg	**Pg**	**01 47 32.0**	**+1.1**
MOD				Sg	**Sg**	**01 47 38.8**	**+1.1**
LKVW	**Lakeview**	**0.66**	**301**		**Pg**	**01 47 34.4**	**+0.8**
LKVW					**Sg**	**01 47 43.5**	**+1.5**
WVOR	**Wild Horse Val**	**0.91**	**52**		**Pb**	**01 47 39.6**	**+0.2**
WVOR					**Sb**	**01 47 52.3**	**+0.2**
WVOR				IAML		01 47 56.2	
	1μm,0.8s						
WVOR				IAML		01 48 00.2	
	743nm,0.7s						
K05A	**Summer Lake**	**1.27**	**312**		**Pb**	**01 47 46.0**	**+0.2**
K05A					**Sb**	**01 48 03.4**	**+0.8**
K05A				IAML		01 48 11.3	
	comp=N,656nm,1.1s						
K05A				IAML		01 48 15.9	
	comp=E,561nm,0.8s						
LASM	**Arnica Sink**	**1.50**	**260**		**Pn**	**01 47 48.8**	**-0.3**
LASM					**Sn**	**01 48 09.7**	**+0.3**
LTIM	**Timbered Crate**	**1.58**	**244**		**Pn**	**01 47 50.0**	**-0.1**
M04C	**Macdoel**	**1.67**	**267**	P	**Pn**	**01 47 51.0**	**-0.4**
	baz=87,SNR=127						
M04C				Sb	**Sg**	**01 48 14.8**	**+0.1**
	baz=87						
M04C	**Macdoel**	**1.67**	**267**		**Pn**	**01 47 51.0**	**-0.4**
LBCM	**Butte Creek Ri**	**1.68**	**232**		**Pn**	**01 47 51.4**	**-0.1**
K04D	**Chiloquin, OR**	**1.76**	**296**	P	**Pn**	**01 47 52.4**	**-0.2**
	baz=115,SNR=111						
K04D				Sb	**Sg**	**01 48 18.5**	**+1.1**
	baz=115						
K04D	**Chiloquin, OR**	**1.76**	**296**		**Pn**	**01 47 52.5**	**0.0**
J05D	**Fort Rock, OR**	**1.84**	**320**	Pb	**Pb**	**01 47 55.7**	**+0.2**
	baz=140,SNR=275						
J05D				Sb	**Sg**	**01 48 21.8**	**+1.6**
	baz=140						
J05D	**Fort Rock, OR**	**1.84**	**320**		**Pb**	**01 47 55.8**	**+0.3**
LHEM	**Herd Peak**	**1.97**	**263**		**Pn**	**01 47 55.5**	**-0.1**
M03C	**McCloud**	**1.98**	**253**		**Pb**	**01 47 57.6**	**-0.2**
LGBM	**Gray Butte**	**2.01**	**255**		**Pn**	**01 47 56.3**	**+0.1**
L04D	**Klamath Falls**	**2.04**	**280**	P	**Pn**	**01 47 55.9**	**-0.5**
	baz=99,SNR=148						
L04D				Sb	**Sg**	**01 48 25.8**	**-0.5**
	baz=99						
L04D	**Klamath Falls**	**2.04**	**280**		**Pn**	**01 47 56.0**	**-0.4**
TMBU	**Tom Butte, New**	**2.06**	**327**		**Pb**	**01 47 59.1**	**0.0**

BEKR	Beckworth	2.10	196		Pb	01 47 59.5	-0.3
BEKR				IAML		01 48 29.2	
	comp=N,287nm,0.3s						
SVIC	Surveyors Ice	2.13	326		Pb	01 48 01.1	+0.7
PINE	Pine Mountain	2.14	333		Pb	01 48 00.4	-0.2
PINE				IAML		01 48 31.2	
	comp=E,194nm,0.7s						
PINE				IAML		01 48 39.7	
	comp=N,174nm,0.7s						
PAHR	Pah Rah Range	2.18	176		Pb	01 48 00.3	-0.9
PAHR				IAML		01 48 32.2	
	comp=E,228nm,0.6s						
PAHR				IAML		01 48 32.6	
	comp=N,244nm,0.5s						
I07A	Izee	2.20	2	Pg	Pb	01 48 02.3	+0.8
I07A				IAML		01 48 42.3	
	comp=E,197nm,1.5s						
J04D	Umpqua Nationa	2.29	307	Pb	Pb	01 48 03.2	0.0
	baz=126						
O03E	Paynes Creek	2.30	227	Pg	Pb	01 48 03.1	-0.1
	baz=46						
O03E				Sb	Sb	01 48 31.2	-0.9
	baz=46						
YBH	Yreka Blue Hor	2.33	267	Pn	Pn	01 47 59.6	-0.8
	comp=E,7.3nm,0.3s,baz=61,slow=12,SNR=66						
YBH				Pg	Pb	01 48 03.0	-0.6
	comp=E,8.5nm,0.3s,baz=68,slow=12,SNR=41						
YBH				Lg	Lg	01 48 34.0	
	comp=E,24nm,0.3s,baz=353,slow=18,SNR=16						
YBH	Yreka Blue Hor	2.33	267	Pn	Pn	01 47 59.1	-1.3
YBH				IAML		01 48 36.2	
	comp=N,181nm,0.6s						
M02C	Callahan	2.48	260	P	Pn	01 48 01.5	-1.0
	baz=78,SNR=49						
M02C				Sb	Sb	01 48 37.9	+0.5
	baz=78						
N02D	Trinity Center	2.50	250	P	Pn	01 48 01.7	-1.0
	baz=68,SNR=9.7						
N02D				Sg	Sg	01 48 40.9	-0.4
	baz=68						
N02D	Trinity Center	2.50	250		Pb	01 48 05.9	-0.7
WDC	Whiskeytown Da	2.57	240	Pn	Pn	01 48 03.1	-0.4
WDC				IAML		01 48 44.0	
	comp=N,155nm,0.5s						
VCNR	Virginia City	2.59	181		Pb	01 48 09.1	+0.9
HUMO	Hull Mountain	2.59	287	Pn	Pn	01 48 03.1	-0.8
HUMO				IAML		01 48 43.5	
	comp=N,100nm,0.5s						
HUMO				IAML		01 48 49.8	
	comp=E,86nm,0.7s						
ORV	Oroville	2.74	212		Pn	01 48 06.1	+0.2
I05D	Terrebonne, OR	2.76	333	Pb	Pb	01 48 11.4	+0.4
	baz=153						
I05D				Sb	Sg	01 48 49.4	-0.2
	baz=153						
I05D	Terrebonne, OR	2.76	333		Pb	01 48 12.0	+0.9
PNTR	Pine Nut	2.79	180	Pg	Pb	01 48 12.5	+0.8
I04A	Tendick Farm,	2.81	314	Pb	Pb	01 48 12.2	+0.3
	baz=132						
I04A				Sb	Sg	01 48 50.0	-1.1
	baz=132						
RUBR	Rubicon Trail	2.86	189	Pg	Pb	01 48 13.3	+0.4
O02D	Mt. Diablo Mer	2.95	236	P	Pn	01 48 08.2	-0.7
	baz=54						
O02D				Sb	Sb	01 48 52.1	+1.2
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	01 48 09.4	-0.1
	baz=94						
L02E				Sb	Sb	01 48 52.4	+0.5
	baz=94						
AFDM	Forest Hills D	3.11	200	Pg	Pb	01 48 16.4	-0.6
K02D	Willamette Mer	3.12	286	P	Pn	01 48 11.5	+0.2
	baz=104,SNR=209						
K02D				Sb	Sb	01 48 58.1	+2.4
	baz=104						
K02D	Willamette Mer	3.12	286		Pn	01 48 13.1	+1.8
MFID	Camas Ranch	3.18	60	Pn	Pn	01 48 11.9	-0.2
KRMB	Red Mountain	3.24	265	Pn	Pn	01 48 12.9	0.0
KRMB				IAML		01 49 11.1	
	comp=N,61nm,1.4s						
KRMB				IAML		01 49 11.3	
	comp=E,56nm,1.2s						
KHMM	Horse Mountain	3.26	253	Pn	Pn	01 48 15.5	+2.2
KHMM				IAML		01 49 11.7	
	comp=E,64nm,1.3s						
KHMM				IAML		01 49 15.0	
	comp=N,109nm,1.2s						
I03D	Drain, OR	3.30	305	Pb	Pb	01 48 19.3	-0.8
	baz=123						
RYN	Ryan	3.36	165	Pn	Pn	01 48 17.6	+3.0
RYN				IAML		01 49 11.7	
	comp=N,110nm,0.6s						
H04A	Detroit Lake	3.37	327	Pg	Pb	01 48 22.1	+0.7
WAKR	Walker	3.38	178	Pn	Pn	01 48 17.3	+2.3
WAKR				IAML		01 49 10.9	
	comp=N,64nm,0.5s						
WAKR				IAML		01 49 16.3	
	comp=E,71nm,0.8s						
BMO	Blue Mountains	3.41	29	Pg	Pb	01 48 21.9	-0.1
G08A	Pilot Rock	3.44	8	Pg	Pb	01 48 25.2	+2.6
J01E	Myrtle Point	3.44	293	Pg	Pg	01 48 26.8	-0.1
	baz=111						
KBO	Bosley Butte	3.46	277	Pg	Pb	01 48 24.2	+1.3
ELK	Elko	3.48	108	Pn	Pn	01 48 17.5	+1.1
	comp=E,0.5nm,0.3s,baz=298,slow=15,SNR=7.9						
ELK				Pg	Pb	01 48 22.1	-1.4
	comp=E,10.0nm,0.3s,baz=300,slow=15,SNR=130						
ELK				Lg	Lg	01 49 09.7	
	comp=E,33nm,0.3s,baz=158,slow=8.5,SNR=11						
ELK	Elko	3.48	108	Pn	Pn	01 48 17.2	+0.8
ELK				IAML		01 49 16.5	
	comp=E,83nm,0.3s						
ELK				IAML		01 49 17.8	
	comp=E,44nm,0.5s						
H04D	Lebanon	3.49	320	Pb	Pb	01 48 24.2	+0.8
	baz=138						
JCC	Jacoby Creek,	3.50	254	Pg	Pg	01 48 26.8	-1.1
KMRM	Mail Ridge	3.52	243	Pn	Pn	01 48 17.5	+0.8
G05D	Wamic, OR	3.58	340	Sb	Sg	01 49 14.6	-1.2
	baz=160						
NVAR	Mina Array Bea	3.59	163	Pn	Pn	01 48 19.8	+1.9
	comp=E,1.0nm,0.3s,baz=342,slow=12,SNR=19						
NVAR				Pg	Pg	01 48 28.6	-1.2
	comp=E,5.8nm,0.3s,baz=345,slow=16,SNR=26						
NVAR				Lg	Lg	01 49 14.7	
	comp=E,17nm,0.3s,baz=348,slow=32,SNR=11						
LHV	Little Huntoon	3.73	167	Pn	Pn	01 48 22.8	+3.3
KCPM	Cahto Peak	3.73	235	Pn	Pn	01 48 21.9	+2.1
KCPM				IAML		01 49 26.4	
	comp=N,35nm,0.8s						
KCPM				IAML		01 49 39.8	
	comp=E,45nm,0.9s						
CMB	Columbia Colle	3.89	189	Pn	Pn	01 48 25.7	+3.9
HLID	Hailey	4.18	65	P	Pn	01 48 26.5	+0.7
	baz=248						
HLID	Hailey	4.18	65	Pn	Pn	01 48 27.3	+1.4
HLID				IAML		01 49 35.5	
	comp=E,39nm,0.6s						
HLID				IAML		01 49 36.7	
	comp=E,52nm,1.0s						
TPH	Tonopah	4.22	154	Pn	Pn	01 48 29.6	+3.0
MDPB	Devils Postpil	4.27	174	Pg	Pg	01 48 40.2	-2.5
MDPB				IAML		01 49 37.6	
	comp=E,22nm,0.8s						
OMMB	Old Mammoth Mi	4.29	174	Pg	Pg	01 48 41.0	-2.2
F10A	Beach Ranch, E	4.43	22	Pg	Pg	01 48 43.9	-2.0
F10A				IAML		01 49 50.1	
	comp=E,27nm,3.8s						
F10A				IAML		01 50 23.0	
	comp=N,30nm,4.0s						
R11A	Troy Canyon, C	4.69	138	Pg	Pg	01 48 50.0	-0.7
	baz=320						
R11A	Troy Canyon, C	4.69	138	Pn	Pn	01 48 35.8	+2.8
R11A				IAML		01 49 54.0	
	comp=E,30nm,0.9s						
R11A				IAML		01 49 57.8	
	comp=N,22nm,0.7s						
BGU	Big Grassy Mou	5.04	99	Pn	Pn	01 48 40.1	+2.4
HVU	Hansel Valley	5.11	89	Pn	Pn	01 48 42.4	+3.8
BCYI	Bear Canyon	5.15	60	Pn	Pn	01 48 40.8	+1.5
PANH	Panhandle Gap,	5.18	344		Pb	01 48 49.0	-3.4
SPUT	South Promonto	5.40	94	Pn	Pn	01 48 44.1	+1.4
DUG	Dugway, Tooele	5.41	106	Pg	Pg	01 49 04.7	+0.2
	baz=290						
DUG	Dugway, Tooele	5.41	106	Pn	Pn	01 48 45.3	+2.5
PSUT	Pine Spring	5.53	125	Pn	Pn	01 48 46.4	+1.9
TPNV	Topopah Spring	5.57	151	Pn	Pn	01 48 48.8	+3.8
PRN	Pahroc Range	5.69	140	Pn	Pn	01 48 50.2	+3.6
MCMT	McKenzie Canyo	5.74	57	Pn	Pn	01 48 49.3	+2.0
TCUT	Toone Canyon	6.20	94	Pn	Pn	01 48 58.1	+4.4
JLU	Jordanelle	6.28	99	Pn	Pn	01 48 57.7	+2.9
TCRU	Three Creeks R	6.38	119	Pn	Pn	01 48 58.1	+1.9
MSO	Missoula	6.39	37	Pn	Pn	01 48 59.0	+2.7
CCUT	Cedar City	6.47	130	Pn	Pn	01 49 01.2	+3.7
MSU	Marysvale	6.61	118	Pn	Pn	01 49 03.0	+3.7
YHL	Hebgen Lake	6.82	61	Pn	Pn	01 49 07.0	+4.8
YMR	Madison River	6.89	63	Pn	Pn	01 49 01.9	-1.3
KNB	Kanab	7.15	131	Pn	Pn	01 49 08.1	+1.3
PD31	Pinedale Array	7.50	80	Pn	Pn	01 49 11.0	-0.5
PDAR	Pinedale Array	7.50	80	Pn	Pn	01 49 14.2	+2.6
	comp=N,0.0nm,0.3s,baz=256,slow=12,SNR=5.5						
PDAR				Lg	Lg	01 51 12.8	
	comp=N,0.0nm,0.3s,baz=269,slow=30,SNR=1.8						
U15A	North Rim	7.87	131	Pn	Pn	01 49 19.4	+2.7
YKA	Yellowknife Ar	20.85	7	P	P	01 51 59.7	-4.1
	comp=N,0.0nm,0.4s,baz=176,slow=9.9,SNR=4.3						

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*IDC **05** 02:37:44.8±1.0, 32°.77N×47°.21E, h0^{km}, mb3.8/18, mb1 3.9/22, mb1mx3.8/52, mbtmp3.8/22, ML3.9/4, MS3.2/2, Ms1 3.2/2, ms1mx2.5/44, Error ellipse: s-maj=22.1km s-min=16.1km az=6.0*

*MOS **05** 02:37:45.2±1.5, 32°.70N×47°.32E, h11^{km}, mb4.2/13, Error ellipse: s-maj=11.2km s-min=6.4km az=90.5*

*ISN **05** 02:37:48.5±1.3, 32°.97N×47°.20E, h17^{km}, ML3.5*

*NEIC **05** 02:37:48.4±2.6, 32°.89N±0°.04×47°.17E±0°.06, h10^{km}±1^{km}, mb4.1/17, mb_Lg4.0(TEH), ML3.9(THR), Error ellipse: s-maj=8.1km s-min=6.2km az=94.0*

*TEH **05** 02:37:49.0, 32°.95N×47°.31E, h12^{km}, ML4.0*

*OMAN **05** 02:38:00.7±1.3, 31°.61N×47°.39E, h10^{km}, mb5.4/16, ms2.6/1, Error ellipse: s-maj=32.2km s-min=24.9km az=67.0*

ISC 05 02:37:48.0±1.2**, 32°.85N**±0°.03×**47°.29E**±0°.03**, h14^{km}**±8^{km}**, n214, σ2^{s}16**/229**, mb4.0**/49**, 13C, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.82	35	Pg	Pb	02 38 03.6	-0.5
IKFM				Sg	Sn	02 38 15.2	-2.0
IKFM	Kafar-mosalman	0.82	35	*e*Sg	Sn	02 38 15.2	-2.0
IKFM				*e*Pg	Pb	02 38 03.7	-0.4
IKMR	Kamar-syah	1.13	54	*e*		02 38 12.6	
	comp=Z,99nm,0.2s						
IKMR				*e*Pg	Pg	02 38 09.5	-0.4
IBDR	Badra	1.17	283	*e*Pn	Pb	02 38 10.0	-0.1
IBDR				*e*Sn	Sb	02 38 26.0	+0.9
IBDR				AML	AML	02 38 43.8	
	comp=E,944nm,0.3s						
IBDR				AML	AML	02 38 45.4	
	comp=N,888nm,1.2s						
IKOM	Komasi	1.33	8		Pg	02 38 13.0	-0.7
IKOM					Sn	02 38 30.5	+0.4
IKOM	Komasi	1.33	8	*e*Pg	Pg	02 38 13.1	-0.7
IKOM				*e*		02 38 15.1	
	comp=Z,99nm,0.3s						
IKOM				*e*Sg	Sn	02 38 30.6	+0.4
KCHF	Cheshme Sefid,	1.44	352		Pg	02 38 14.6	-1.1
KCHF	Cheshme Sefid,	1.44	352	*e*Pg	Pg	02 38 14.7	-1.0
KCHF				*e*		02 38 36.8	
	comp=Z,99nm,0.3s						
SHGR	Shooshtar-Gavs	1.48	120		Pg	02 38 18.1	+1.6
SHGR	Shooshtar-Gavs	1.48	120	*e*Pg	Pg	02 38 18.1	+1.6
KER	Kermanshah	1.54	355	*e*Pg	Pg	02 38 16.6	-1.0
IGHG	Ghaleghazi	1.59	338		Pg	02 38 18.1	-0.6
IGHG	Ghaleghazi	1.59	338	*e*Pg	Pg	02 38 18.1	-0.6
IGHG				*e*		02 38 50.1	
	comp=Z,99nm,0.6s						
IBZA	Bozab	1.68	16		Pg	02 38 19.3	-1.1
IBZA	Bozab	1.68	16	*e*Pg	Pg	02 38 19.3	-1.1
IBZA				*e*		02 38 47.8	
	comp=Z,99nm,0.3s						
IVIS	Veis	1.71	348	Pg	Pb	02 38 19.2	-0.2
IVIS	Veis	1.71	348	*e*Pg	Pb	02 38 19.2	-0.2
IVIS				*e*		02 38 44.5	
	comp=Z,99nm,0.4s						
AHWZ	Ahwaz	1.90	142	Pg	Pg	02 38 26.4	+1.8
AHWZ	Ahwaz	1.90	142	*e*Pg	Pg	02 38 26.4	+1.8
IDHR	Dehrash	1.99	338	Pn	Pb	02 38 23.0	-1.2
IDHR	Dehrash	1.99	338	*e*Pn	Pb	02 38 23.1	-1.2
IDHR				*e*		02 38 56.8	
	comp=Z,99nm,0.4s						
NSR	Nassriya	2.08	208	*e*Pn	Pn	02 38 25.0	+2.5
NSR				*e*Sn	Sn	02 38 51.0	+2.8
NSR				AML	AML	02 39 08.8	
	comp=E,734nm,0.5s						
ILIN	Lien	2.08	353	Pn	Pb	02 38 24.9	-0.8
ILIN	Lien	2.08	353	*e*Pn	Pb	02 38 25.0	-0.8
ILIN				*e*		02 38 59.1	
	comp=Z,99nm,0.5s						
IALM	Almabolaq	2.13	20	*e*Pn	Pb	02 38 26.0	-0.7
SNGE	Sanandaj	2.24	1	Pn	Pn	02 38 26.2	+1.3
SNGE	Sanandaj	2.24	1		Sb	02 38 56.0	-0.1
SNGE	Sanandaj	2.24	1	*e*Pn	Pn	02 38 26.3	+1.3
KHMZ	Khomeyn	2.41	68	Pn	Pb	02 38 30.2	-1.1
KHMZ	Khomeyn	2.41	68	*e*Pn	Pb	02 38 30.3	-1.1
BHD	Baghdad	2.48	281	*e*Pn	Pn	02 38 29.0	+1.0
BHD				*e*Sn	Sn	02 38 59.0	+0.9
BHD				AML	AML	02 39 25.6	
	comp=E,546nm,0.3s						
HSRG	Sareghieh	2.52	19	Pn	Pb	02 38 31.8	-1.6
HSRG	Sareghieh	2.52	19	*e*Pn	Pb	02 38 31.9	-1.5
HSRG				*e*		02 38 39.2	
	comp=Z,99nm,0.5s						
ASAO	Ashtian	2.84	53	Pn	Pn	02 38 35.9	+2.6
ASAO	Ashtian	2.84	53	*e*Pn	Pn	02 38 36.0	+2.6
MIB	Mutribah	3.04	179	*e*P		02 38 38.5	
IPIR	Pirpir	3.04	92	Pn	Pn	02 38 38.8	+2.7
IPIR	Pirpir	3.04	92	*e*Pn	Pn	02 38 38.9	+2.8
SHK1	Shahrekord	3.08	99	*e*Pn	Pn	02 38 39.1	+2.5
RST	Umm Al-Ruwaisa	3.35	184	*e*P		02 38 42.7	
IRAZ	Razeghan	3.36	40	Pn	Pn	02 38 43.3	+2.9
IRAZ	Razeghan	3.36	40	*e*Pn	Pn	02 38 43.3	+2.9
QABG	Abgarm-Qazvin	3.43	33	Pn	Pn	02 38 42.4	+1.1
QABG	Abgarm-Qazvin	3.43	33	*e*Pn	Pn	02 38 42.5	+1.1
QAM	Ghamsar	3.59	74	*e*Pn	Pn	02 38 46.8	+3.2
IKLH	Kolahrood	3.63	81	Pn	Pn	02 38 46.9	+2.8
IKLH	Kolahrood	3.63	81	*e*Pn	Pn	02 38 47.0	+2.8
IKLH				*e*		02 38 50.4	
	comp=Z,99nm,0.2s						
GHVR	GHOM	3.72	63	Pn	Pn	02 38 47.4	+2.2
GHVR	GHOM	3.72	63	*e*Pn	Pn	02 38 47.4	+2.2
IQOM	Qom	3.72	57	Pn	Pn	02 38 47.2	+1.8
IQOM	Qom	3.72	57	*e*Pn	Pn	02 38 47.3	+1.8
RDF	Al-Radifah	3.92	177	*e*P		02 38 50.7	
QSDN	Sirdan	3.96	23	*e*Pn	Pn	02 38 51.4	+2.7
IMHD	Mahdasht	3.98	44	Pn	Pn	02 38 51.1	+2.3
IMHD	Mahdasht	3.98	44	*e*Pn	Pn	02 38 51.1	+2.3
IGAR	Gharneh	4.04	95	Pn	Pn	02 38 51.9	+2.2
IGAR	Gharneh	4.04	95	*e*Pn	Pn	02 38 52.0	+2.2
IGAR				*e*		02 38 54.1	
	comp=Z,99nm,0.2s						
KLNJ	Kolanjah	4.10	115	Pn	Pn	02 38 53.3	+2.7
KLNJ	Kolanjah	4.10	115	*e*Pn	Pn	02 38 53.4	+2.8
KLNJ				*e*		02 39 46.7	
	comp=Z,99nm,0.4s						
MAHB	Mahabad	4.12	342	Pn	Pn	02 38 52.5	+1.8
MAHB	Mahabad	4.12	342	*e*Pn	Pn	02 38 52.5	+1.8
QRN	Al-Qurain	4.13	172	*e*P		02 38 53.1	
IHSB	Hasanabad	4.20	51	Pn	Pn	02 38 53.8	+2.0
IHSB	Hasanabad	4.20	51	*e*Pn	Pn	02 38 53.8	+2.0
IZEF	Zefreh	4.24	88	Pn	Pn	02 38 55.1	+2.5
IZEF	Zefreh	4.24	88	*e*Pn	Pn	02 38 55.2	+2.6
IVRN	Varamin	4.27	59	Pn	Pn	02 38 54.6	+1.9
IVRN	Varamin	4.27	59	*e*Pn	Pn	02 38 54.6	+1.9
IGZV	Ghazvin	4.28	34	Pn	Pn	02 38 55.1	+2.1
IGZV	Ghazvin	4.28	34	*e*Pn	Pn	02 38 55.1	+2.1
IRAM	Ramesheh	4.44	102	Pn	Pn	02 38 57.0	+1.8
IRAM	Ramesheh	4.44	102	*e*Pn	Pn	02 38 57.1	+1.8
QALM	Alamut, Qazvin	4.52	37	Pn	Pn	02 38 57.9	+1.5
QALM	Alamut, Qazvin	4.52	37	*e*Pn	Pn	02 38 57.9	+1.5
IDMV	Damavand	4.78	54	Pn	Pn	02 39 01.7	+1.8
IDMV	Damavand	4.78	54	*e*Pn	Pn	02 39 01.8	+1.8
ISRB	Sarab	4.97	3	Pn	Pn	02 39 04.8	+2.2
ISRB	Sarab	4.97	3	*e*Pn	Pn	02 39 04.8	+2.2
IFIR	Firoozkooh	5.32	57	Pn	Pn	02 39 09.0	+1.7
IFIR	Firoozkooh	5.32	57	*e*Pn	Pn	02 39 09.0	+1.7
ILAS	Lasjerd	5.34	60	Pn	Pn	02 39 08.5	+0.9
ILAS	Lasjerd	5.34	60	*e*Pn	Pn	02 39 08.5	+0.9
IPRN	Peran	5.37	50	Pn	Pn	02 39 10.5	+2.6
IPRN	Peran	5.37	50	*e*Pn	Pn	02 39 10.6	+2.6
ANAR	Anarak	5.42	85	Pn	Pn	02 39 10.2	+1.5
ANAR	Anarak	5.42	85	*e*Pn	Pn	02 39 10.2	+1.5
IHRS	Heris	5.46	358	Pn	Pn	02 39 12.1	+2.8
IHRS	Heris	5.46	358	*e*Pn	Pn	02 39 12.1	+2.8
ISHM	Shahmirzad	5.78	58	Pn	Pn	02 39 15.1	+1.4
ISHM	Shahmirzad	5.78	58	*e*Pn	Pn	02 39 15.2	+1.5
IMRD	Marand	5.99	348	Pn	Pn	02 39 18.8	+2.3
IMRD	Marand	5.99	348	*e*Pn	Pn	02 39 18.9	+2.4
IANJ	Anjilo	6.08	63	Pn	Pn	02 39 18.8	+1.0
IANJ	Anjilo	6.08	63	*e*Pn	Pn	02 39 18.9	+1.1
GEVA	Gevas	6.45	329	Pn	Pn	02 39 23.6	+0.9
IGLO	Ghaloghah	6.51	54	Pn	Pn	02 39 26.3	+2.7
IGLO	Ghaloghah	6.51	54	*e*Pn	Pn	02 39 26.3	+2.7
MARD	Mardin	6.95	312	Pn	Pn	02 39 29.5	-0.1
GNI	Garni	7.57	345	LR	LR	02 42 25.7	
	comp=Z,28nm,18.6s,baz=40,slow=37						
GNI	Garni	7.57	345	*i* P	Pn	02 39 41.7	+3.6
TPRV	Parvadeh(Tabas	7.90	86	Pn	Pn	02 39 44.5	+1.8
TPRV	Parvadeh(Tabas	7.90	86	*e*Pn	Pn	02 39 44.5	+1.8
TKDS	Koohdasht(Taba	8.28	82	Pn	Pn	02 39 49.0	+1.2
TKDS	Koohdasht(Taba	8.28	82	*e*Pn	Pn	02 39 49.1	+1.2
GENO	Geno	9.42	123	Pn	Pn	02 40 05.6	+2.1
GENO	Geno	9.42	123	*e*Pn	Pn	02 40 05.6	+2.1
RAYN	Ar Rayn	9.43	190	P	Pn	02 40 03.1	-0.5
RAYN	Ar Rayn	9.43	190	Pn	Pn	02 40 03.1	-0.5
SHME	Shamm	10.27	129	P	Pn	02 40 16.1	+1.0
SHME				S	Sn	02 42 04.9	-5.1
BANOM	Banah	10.46	129	P	Pn	02 40 17.2	-0.5
BANOM				S	Sn	02 42 08.6	-6.1
NAZ	Nazwa, Dubai	10.73	135	P	Pn	02 40 22.2	+0.8
NAZ				S	Sn	02 42 16.9	-4.5
ASUD	Al Ashush, Dub	10.81	137	P	Pn	02 40 23.4	+0.9
FAQ	Al Faqa, Dubai	10.87	136	P	Pn	02 40 24.2	+0.9
FAQ				S	Sn	02 42 17.4	-7.4
MDH	Madha	10.89	131	P	Pn	02 40 25.2	+1.5
MDH				S	Sn	02 42 19.2	-6.2
NCK	Nalchik	11.02	346	*i* P	Pn	02 40 29.3	+4.1
NCK				pmax	pmax		
	comp=Z,44nm,2.0s						
EIL	Elat	11.02	257	Pn	Pn	02 40 23.0	-2.4
	comp=Z,0.2nm,0.3s,baz=102,slow=9.3,SNR=1.8						
UOSS	Minazif	11.09	133	Pn	Pn	02 40 25.9	-0.4
UOSS	Minazif	11.09	133	P	Pn	02 40 26.3	-0.1
UOSS				S	Sn	02 42 25.1	-5.1
HATD	Hatta, Dubai	11.13	134	P	Pn	02 40 27.4	+0.5
HATD				S	Sn	02 42 24.8	-6.5
ASHO	Ashiyiah	11.19	134	P	Pn	02 40 28.5	+0.7
	SNR=13						
ASHO				S	Sn	02 42 27.0	-5.8
SOHO	SOHO	11.89	135	P	Pn	02 40 38.6	+1.4
SOHO				S	Sn	02 42 39.4	-10
ARQ	Araqi	12.49	137	P	Pn	02 40 47.0	+1.5
	SNR=7.3						
ARQ				S	Sn	02 42 54.6	-10
HOQ	Hoqain	12.77	134	P	Pn	02 40 49.7	+0.3
HOQ				P	Pn	02 40 49.7	+0.3
HOQ				S	Sn	02 43 01.5	-10
HOQ				S	Sn	02 43 01.5	-10
BSY	Bisya	13.35	136	P	Pn	02 40 57.4	+0.2
BSY				S	Sn	02 43 17.7	-7.7
WSAR	Wadi Sarin	13.85	131	Pn	Pn	02 41 02.5	-1.5
	comp=Z,1.2nm,0.3s,baz=321,slow=7.9,SNR=14						
MHTO	MHTO	15.16	139	P	Pn	02 41 21.0	-0.9
	SNR=8.8						
MHTO				S	Sn	02 43 59.9	-10
DOK	Doka	15.45	155	P	Pn	02 41 22.8	-2.9
	SNR=7.9						
DOK				S	Sn	02 44 09.5	-7.2
DQM	DQM	15.80	142	P	Pn	02 41 28.7	-1.5
DQM				S	Sn	02 44 13.7	-12
WHFO	Wadi Hawf	15.97	157	P	Pn	02 41 29.9	-2.6
	SNR=19						
ABKAR	Akbulak array	18.92	26	P	Pn	02 42 08.9	-0.1
AKTO	Aktyubinsk	19.28	21	P	P	02 42 12.3	+0.1
	comp=Z,0.4nm,0.3s,baz=207,slow=12,SNR=11						
BELG	Belogornoye	19.53	1	P	Pn	02 42 15.9	-0.4
	comp=Z,0.6nm,0.3s,baz=115,slow=19,SNR=2.0						
MLR	Muntele Rosu	20.73	314	⇑P	Pn	02 42 35.4	+4.7
TESR	Tescani	20.86	317	⇑P	Pn	02 42 33.2	+1.2
SORM	Soroca	20.90	322	⇑P	Pn	02 42 32.5	0.0
KK31	Karatay Array	20.91	54	P	Pn	02 42 31.9	-0.8
KK31				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KK31	Karatay Array	20.91	54	P	Pn	02 42 31.9	-0.8
KK31				IAmb	IAmb	02 42 34.8	
	comp=Z,6.6nm,1.3s						
KKAR	Karatay Array	20.91	54	P	P	02 42 31.8	+1.6
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KKAR	Karatay Array	20.91	54	P	Pn	02 42 31.8	-0.9
ITM	Ithomi	21.19	289	P	P	02 42 33.1	-0.1
VOIR		21.26	313	⇑P	P	02 42 35.3	+1.3
FNA	Florina	22.15	298	P	P	02 42 43.7	+0.2
FNA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FNA	Florina	22.15	298	P	P	02 42 43.7	+0.2
FNA				IAmb	IAmb	02 42 58.0	
	comp=Z,6.6nm,1.0s						
AKASG	Malin Array Be	22.25	329	P	P	02 42 43.3	-1.1
	comp=Z,1.3nm,0.5s,baz=138,slow=10,SNR=11						
AKBB	Malin Array Si	22.25	329	P	P	02 42 46.0	+1.6
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	22.25	329	P	P	02 42 46.0	+1.6
AKBB				IAmb	IAmb	02 42 46.9	
	comp=Z,4.6nm,0.8s						
BURAR	Bucovina Array	22.28	318	⇑P	P	02 42 45.4	+0.5
BUR08	Bucovina Ar. S	22.31	318	P	P	02 42 46.4	+1.2
BUR08				IAmb	IAmb	02 42 54.6	
	comp=Z,4.0nm,0.9s						
DRGR		23.33	314	⇑P	P	02 42 58.2	+2.3
OBN	Obninsk	23.50	344	*i* P	P	02 42 57.4	+0.1
OBN				*i*		02 43 29.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PDG	Podgorica	24.08	301	P	P	02 43 03.9	+0.9
KOLS	Kolonicke sedl	24.65	318	*e*P	P	02 43 11.0	+2.8
KOLS	Kolonicke sedl	24.65	318	*e*P	P	02 43 11.0	+2.8
ARU	Arti	24.84	15	P	P	02 43 09.0	-0.8
	comp=Z,0.4nm,0.4s,baz=163,slow=17,SNR=2.3						
ARU	Arti	24.84	15	P	P	02 43 11.3	+1.5
ARU						02 43 49.3	
ARU				S	S	02 47 37.4	+5.4
ARU				SS	SnSn	02 48 31.7	+12
ARU	Arti	24.84	15	P	P	02 43 10.4	+0.6
ARU				IAmb	IAmb	02 43 12.0	
	comp=Z,2.4nm,0.8s						
MNK	Minsk	25.63	333	*i* P	P	02 43 17.7	+0.7
	comp=E,5.0nm,1.1s						
MNK				*i* P	P	02 43 17.7	+0.7
	comp=N,17nm,1.1s						
MNK				*i* P	P	02 43 17.7	+0.7
	comp=Z,7.0nm,0.8s						
MNK				*i* PP	PnPn	02 43 56.8	+3.7
MNK				*i* PcP	PcP	02 46 45.5	-1.9
MNK				*i* S	S	02 47 44.8	+0.2
MNK				*i* SS	SnSn	02 48 45.7	+6.9
MNK				*i* LQ	LQ	02 50 35.8	
MNK				*i* LR	LR	02 52 51.9	
MNK				*i* LRM	MLR	02 54 29.6	
	comp=E,24nm,18.8s						
MNK				*i* LRM	MLR	02 54 33.9	
	comp=N,716nm,25.3s						
MNK				*i* LRM	MLR	02 54 56.3	
	comp=Z,66nm,13.8s						
BRVK	Borovoye	26.09	32	*ce*P	P	02 43 22.1	+0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	Borovoye Array	26.11	33	P	P	02 43 20.7	-0.8
	comp=Z,1.5nm,0.7s,baz=226,slow=7.7,SNR=10						
VYHS	Vyhne	26.44	315	*e*P	P	02 43 27.6	+3.2
VYHS	Vyhne	26.44	315	*e*P	P	02 43 27.6	+3.2
OJC	Ojcow	26.69	319	P	P	02 43 26.7	0.0
OJC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OJC	Ojcow	26.69	319	P	P	02 43 26.7	0.0
OJC				IAmb	IAmb	02 43 29.1	
	comp=Z,6.5nm,1.1s						
KURBB	Kurchatov Arra	29.00	43	P	P	02 43 48.5	+1.2

	comp=Z,0.6nm,0.7s,baz=248,slow=9.1,SNR=4.5						
KURK	Kurchatov	29.10	43	*i* P	P	02 43 48.2	+0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VSU	Vasula	29.12	338	*i* P	P	02 43 48.8	+0.5
VSU				pmax	pmax		
	comp=Z,32nm,1.0s						
GERES	GERESS Array B	29.71	312	P	P	02 43 54.6	+0.9
	comp=Z,0.3nm,0.5s,baz=103,slow=10,SNR=4.1						
MK31	Makanchi Array	30.00	52	*ce*P	P	02 43 56.7	+0.4
MK31	Makanchi Array	30.00	52	P	P	02 43 56.8	+0.4
MKAR	Makanchi Array	30.00	52	P	P	02 43 57.0	+0.7
	comp=Z,1.1nm,0.6s,baz=248,slow=7.8,SNR=18						
WTTA	Wattenberg	30.55	309	*e*P	P	02 44 01.3	0.0
	comp=Z,0.5nm,0.3s						
WATA	Walderalm	30.61	309	*e*P	P	02 44 02.0	+0.2
	comp=Z,0.5nm,0.2s						
SQTA	Sankt Quirin	30.82	308	*e*P	P	02 44 03.5	-0.1
	comp=Z,0.7nm,0.3s						
MOTA	Moosalm	30.92	309	*e*P	P	02 44 04.1	-0.5
	comp=Z,0.4nm,0.2s						
PYUN	Piuthan	31.04	89	*e*P	P	02 44 06.9	+1.1
	comp=Z,7.6nm,0.6s						
RETA	Reutte	31.18	309	*e*Pg	P	02 44 06.1	-0.7
	comp=Z,0.6nm,0.2s						
DANN	Dangsing	31.61	88	*e*P	P	02 44 12.1	+1.1
	comp=Z,6.2nm,0.4s						
KOLN	Koldanda	31.65	89	*e*P	P	02 44 12.2	+0.9
FINES	FINESS Array B	31.73	341	P	P	02 44 10.6	-0.7
	comp=Z,1.8nm,0.5s,baz=143,slow=9.9,SNR=13						
FINES	FINESS Array B	31.73	341	*ce*P	P	02 44 10.3	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GKN	Gorkha	32.45	89	*e*P	P	02 44 19.0	+0.8
	comp=Z,14nm,0.5s						
DMN	Daman	32.97	89	*e*P	P	02 44 23.6	+0.7
	comp=Z,3.3nm,0.3s						
KKN	Kakani	33.06	89	*e*P	P	02 44 24.8	+1.2
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	33.23	89	*e*P	P	02 44 25.8	+0.7
	comp=Z,12nm,0.6s						
WMQ	Urumqi	33.23	59	*e*P	P	02 44 28.0	+3.2
PKI	Pulchoki	33.24	89	*e*P	P	02 44 25.8	+0.5
	comp=Z,11nm,0.5s						
SENIN	Lac Senin/Sane	33.27	306	P	P	02 44 25.7	+0.5
SENIN				IAmb	IAmb	02 44 29.3	
	comp=Z,4.5nm,1.1s						
BNI	Bardonecchia	33.51	303	P	P	02 44 28.2	+0.9
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BNI	Bardonecchia	33.51	303	P	P	02 44 28.2	+0.9
GUN	Gumba	33.53	88	*e*P	P	02 44 28.8	+0.9
	comp=Z,17nm,0.7s						
ZAA0	Zalesovo Array	33.90	40	P	P	02 44 30.1	-0.2
ZAA0				IAmb	IAmb	02 44 33.4	
	comp=Z,1.6nm,0.6s						
ZALV	Zalesovo Beam	33.90	40	P	P	02 44 30.8	+0.4
	comp=Z,0.9nm,0.3s,baz=253,slow=10,SNR=6.5						
DGZ	Jazzator, Alta	34.07	48	*i* P	P	02 44 33.8	+1.7
RAMN	Ramite	34.44	89	*e*P	P	02 44 35.8	+0.1
	comp=Z,15nm,0.7s						
TAPN	Taplejung	35.25	88	*e*P	P	02 44 43.8	+1.1
	comp=Z,11nm,0.6s						
NC405	NORSAR Array S	36.45	332	P	P	02 44 51.8	-0.4
NOA	NORSAR Array B	36.61	331	P	P	02 44 51.6	-2.0
	comp=Z,0.5nm,0.6s,baz=126,slow=8.4,SNR=3.3						
ARCES	ARCESS Array B	38.71	348	P	P	02 45 10.0	-1.3
	comp=Z,3.9nm,1.0s,baz=162,slow=7.7,SNR=13						
ARCES	ARCESS Array B	38.71	348	P	P	02 45 10.0	-1.3
ESDC	Sonseca Array	41.41	295	P	P	02 45 33.2	-1.0
	comp=Z,1.0nm,1.2s,baz=75,slow=8.3,SNR=2.6						
GTA	Gaotai	42.43	66	*e*P	P	02 45 43.6	+1.0
GTA				pP	pP	02 45 47.1	-0.1
GTA				sP	sP	02 45 49.7	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK	Noril'sk	42.89	20	*ce*P	P	02 45 46.7	+1.0
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TORD	Torodi Ar. Bea	45.91	256	P	P	02 46 09.4	-1.2
	comp=Z,0.4nm,0.9s,baz=62,slow=8.0,SNR=1.4						
SONM	Songino Array	46.36	53	P	P	02 46 12.5	-1.4
	comp=Z,0.3nm,0.7s,baz=276,slow=3.9,SNR=2.1						
CMAR	Chiang Mai Arr	48.27	94	P	P	02 46 29.1	+0.1
	comp=Z,0.8nm,0.4s,baz=291,slow=7.7,SNR=4.6						
CMAR	Chiang Mai Arr	48.27	94	*ce*P	P	02 46 29.8	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HHC	Hu-ho-hao-te	51.03	62	*e*P	P	02 46 51.0	+1.1
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,98nm,5.7s						
TIXI	Tiksi	56.56	22	*e*P	P	02 47 29.7	0.0
SEY	Seymchan	67.68	29	*i* P	P	02 48 45.2	+0.7
C36M	Paulatuk	77.91	357	P	P	02 49 44.0	-1.1
TOLK	Toolik Lake Re	78.04	6	P	P	02 49 46.6	+0.7
TOLK				IAmb	IAmb	02 49 47.0	
	comp=Z,3.1nm,0.7s						
INK	Inuvik	79.15	0	P	P	02 49 49.6	-2.3
	comp=Z,1.1nm,0.9s,baz=63,slow=2.3,SNR=1.9						
YKA	Yellowknife Ar	83.88	352	P	P	02 50 15.7	-1.3
	comp=Z,0.2nm,0.4s,baz=22,slow=5.4,SNR=5.6						
YKA	Yellowknife Ar	83.88	352	*ce*P	P	02 50 17.2	+0.2
BBB	Bella Bella	95.23	357	LR	LR	03 42 23.9	
	comp=Z,56nm,21.7s,baz=292,slow=41						
WRA	Warramunga Arr	98.18	108	P	P	02 51 23.1	-2.0
	comp=Z,0.3nm,0.8s,baz=318,slow=4.2,SNR=1.2						
WRAB	Tennant Creek	98.19	108	*ce*P	P	02 51 22.5	-2.6
WRAB				pmax	pmax		
	comp=Z,24nm,2.5s						
ASAR	Alice Springs	99.79	112	P	Pdif	02 51 29.1	-3.1
	comp=Z,0.2nm,0.9s,baz=330,slow=5.4,SNR=1.2						

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*TAP **05** 02:41:40.6, 24°.63N×122°.22E, h19^{km}, ML2.6, B*

*JMA **05** 02:41:41.3, 24°.57N×122°.24E, h36^{km}, M2.3*

ISC 05 02:41:40.6±1.0, **24°.62N**±0°.03×**122°.25E**±0°.03, **h13**^{km}±9^{km}, **n44,** σ**0^s.47**/64, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.36	308	*i* P	Pg	02 41 48.0	0.0
	baz=309						
EGS				*e*S	Sg	02 41 53.0	0.0
	baz=309						
TWC	Suao	0.36	268	*i* P	Pg	02 41 47.6	-0.3
	baz=266						
TWC				*e*S	Sg	02 41 52.6	-0.4
	baz=266						
ENAH	Nanao	0.43	247	*e*P	Pg	02 41 49.3	0.0
	baz=248						
NTC	Toucheng	0.45	301	*e*P	Pg	02 41 49.4	-0.1
	baz=302						
TWB1	Santiao Chiao	0.45	328	*e*P	Pg	02 41 49.5	-0.1
	baz=335						
ENA	Nanau	0.50	248	P	Pg	02 41 50.4	-0.2
	baz=250						
ENA				*e*S	Sg	02 41 56.9	-0.3
	baz=250						
TIPB	Shuangxi	0.52	312	*e*P	Pg	02 41 51.0	+0.1
	baz=305						
TIPB				*e*S	Sg	02 41 57.3	-0.5
	baz=305						
TWE	Neicheng	0.54	281	P	Pg	02 41 51.0	-0.2
	baz=276						
TWE				*e*S	Sg	02 41 58.1	-0.3
	baz=276						
NWF	Wu-fen Shan	0.62	317	*e*P	Pb	02 41 53.5	+0.2
	baz=310						
WFSB	Wu-fen Shan	0.62	317	*e*P	Pb	02 41 53.3	0.0
	baz=317						
WFSB				*e*S	Sg	02 42 01.2	+0.3
	baz=317						
ENTT	Nioudou	0.62	272	*e*P	Pg	02 41 52.4	-0.4
	baz=270						
ENTT				*e*S	Sg	02 42 01.8	+0.7
	baz=270						
JYNG	Yonagunijimaku	0.66	105	P	Pg	02 41 53.7	+0.3
JYNG				S	Sb	02 42 03.8	+0.9
NDT	Datong Townshi	0.67	269	*e*P	Pg	02 41 53.7	0.0
	baz=274						
NWLT	Wulai	0.70	283	*e*P	Pg	02 41 53.9	-0.3
	baz=282						
NWLT				*e*S	Sg	02 42 03.6	+0.2
	baz=282						
TWA	Mucha	0.70	301	*e*P	Pg	02 41 54.0	-0.3
	baz=292						
TWA				S	Sg	02 42 03.7	+0.1
	baz=292						
YOJ	Yonaguni jima	0.71	103	P	Pg	02 41 54.7	+0.3
YOJ				*e*S	Sb	02 42 05.2	+0.7
YOJ	Yonaguni jima	0.71	103	P	Pg	02 41 54.8	+0.3
	baz=103						
YOJ				S	Sb	02 42 05.3	+0.7
	baz=103						
NHDH	Xindian Distri	0.74	297	*e*S	Sg	02 42 04.9	+0.1
	baz=289						
NACB	Ninganchiao	0.74	233	P	Pg	02 41 55.0	-0.1
	baz=239						
NACB				S	Sg	02 42 04.8	-0.1
	baz=239						
TATO	Taipei	0.78	297	*e*P	Pb	02 41 56.2	+0.2
	baz=289						
TATO				*e*S	Sg	02 42 05.8	-0.1
	baz=289						
YHNB	Yeheng	0.80	274	P	Pg	02 41 55.9	-0.2
	baz=273						
YHNB				*e*S	Sg	02 42 06.9	+0.4
	baz=273						
TWD	Chiawan	0.80	228	*e*P	Pg	02 41 55.8	-0.4
	baz=232						
ETLH	Xiulin Townshi	0.81	240	P	Pg	02 41 56.2	-0.2
	baz=238						
NNSB	Datong	0.81	257	*e*P	Pg	02 41 55.8	-0.6
	baz=255						
NNSH	Datong	0.81	257	*e*P	Pg	02 41 56.0	-0.4
	baz=256						
NSK	Sanguang	0.81	274	P	Pg	02 41 56.2	-0.2
	baz=273						
NSK				S	Sg	02 42 07.2	+0.1
	baz=273						
NNS	Nan Shan	0.82	257	*e*P	Pg	02 41 56.7	+0.2
	baz=255						
NNS				*e*S	Sg	02 42 07.1	-0.2
	baz=255						
TWY	Chenhua	0.88	318	*e*P	Pb	02 41 58.0	+0.3
	baz=319						
TWY				*e*S	Sb	02 42 10.5	+1.1
	baz=319						
WHF	Hehuan Shan	1.01	242	*e*P	Pb	02 41 59.4	-0.9
	baz=241						
PCYT	Pengchaiyu	1.02	351	*e*P	Pb	02 41 59.4	-0.7
	baz=352						
TDCB	Techi	1.06	250	*e*P	Pb	02 42 01.5	+0.5
	baz=249						
LIOB	Emei	1.12	272	*e*P	Pg	02 42 03.0	+0.7
	baz=271						
CHGB	Renai	1.13	241	*e*P	Pb	02 42 02.4	+0.2
	baz=235						
NSTT	Nanjuang	1.14	271	*e*P	Pg	02 42 03.5	+1.0
	baz=263						
WHP	Taichung City	1.24	254	*e*P	Pg	02 42 05.3	+0.9
	baz=253						
IRIF	Iriomote-Funau	1.38	102	*e*S	Sn	02 42 23.1	-0.6
SSLB	Suanglung	1.45	235	*e*P	Pb	02 42 07.7	+0.3
	baz=217						
HATJ	Hateruma jima	1.53	111	*e*S	Sn	02 42 27.2	-0.1
JKRS	Kuro-shima	1.65	103	P	Pn	02 42 09.1	-0.2
JKRS				S	Sn	02 42 29.5	-0.8
ALS	Alishan	1.72	230	*e*P	Pb	02 42 12.7	+0.4
	baz=213						
JIJ	Ishigaki jima	1.74	98	P	Pn	02 42 10.2	-0.4
JIJ				*e*S	Sn	02 42 31.6	-1.1
CHN5	Tsauling	1.76	235	*e*P	Pb	02 42 13.0	+0.2
	baz=216						
JISG	Ishigakijimahi	1.88	91	*e*S	Sn	02 42 35.5	-0.5
CHN4	Tsaushan	1.97	231	*e*P	Pg	02 42 18.2	-0.3
	baz=213						

JMA 05 02:42:04.0, 35°.29N×135°.90E, h15^{km}, M3.2, 2C-3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	Mihama	0.25	16	⇑P	Pg	02 42 09.5	+0.1
JFM				S	Sg	02 42 13.4	+0.3
JWT	Wachi	0.41	269	⇓P	Pg	02 42 12.1	-0.1
JWT				S	Sg	02 42 17.4	-0.4
JHE	Heguri	0.66	196	⇑P	Pg	02 42 16.6	-0.3
JHE				S	Sg	02 42 25.2	-0.4
TSUJ	Tsu 2	0.72	143	⇓P	Pg	02 42 17.3	-0.7
TSUJ				S	Sg	02 42 26.7	-0.8
JKY	Yasaka	0.73	298	⇓P	Pg	02 42 18.2	-0.1
JKY				S	Sg	02 42 27.9	-0.1
MAT	Matsushiro	2.25	56	P	Pn	02 42 42.0	+1.3
MAT				*e*S	Sb	02 43 11.7	-0.4

IDC 05 02:42:14.0±3.2, **7°.33S**×**156°.20E, h0**^{km}, **mb3.8**/4, **mb1 3.9**/4, **mb1mx3.6**/29, **mbtmp3.8**/4, **MS3.0**/3, **Ms1 2.9**/3, **ms1mx2.6**/44, **Error ellipse: s-maj=105.1km s-min=34.1km az=113.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.26	120	LR	LR	02 44 51.4	
	comp=Z,65nm,21.3s,baz=323,slow=37						
WRA	Warramunga Arr	24.62	237	P	P	02 47 37.1	+0.6
	1.6nm,0.7s,baz=63,slow=9.6,SNR=12						
WRA				PcP	PcP	02 51 13.3	-1.1
	0.7nm,1.0s,baz=70,slow=2.3,SNR=2.4						
ASAR	Alice Springs	26.86	230	P	P	02 47 56.4	-0.4
	0.4nm,0.6s,baz=55,slow=9.3,SNR=5.8						
STKA	Stephens Creek	27.96	207	LR	LR	02 58 58.5	
	comp=Z,22nm,20.4s,baz=23,slow=36						
MKAR	Makanchi Array	84.44	318	P	P	02 54 49.6	+0.9
	1.2nm,0.7s,baz=101,slow=5.9,SNR=14						
ZALV	Zalesovo Beam	85.12	326	P	P	02 54 50.7	-1.2
	0.8nm,0.6s,baz=94,slow=5.8,SNR=2.6						
INK	Inuvik	89.61	20	LR	LR	03 34 32.0	
	comp=Z,26nm,19.1s,baz=10,slow=35						

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*ISK **05** 02:49:04.5, 38°.43N×26°.54E, h5^{km}, ML2.5/13*

*DDA **05** 02:49:04.7, 38°.39N×26°.61E, h7^{km}±1^{km}, ML2.4*

ISC 05 02:49:05.1±1.0, **38°.42N**±0°.03×**26°.55E**±0°.05, **h8**^{km}±8^{km}, **n16,** σ**0^s.53**/20, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.07	149	PG	Pg	02 49 06.8	-0.2
URLA	Izmir	0.07	149	*i* P	Pg	02 49 06.4	-0.7
ZEYE	Izmir, Urla-Ze	0.18	192	*i* P	Pg	02 49 08.8	0.0
ZEYE				*i* S	Sg	02 49 12.0	+0.7
ZEYE				IAML		02 49 12.0	
	comp=E,2μm,0.3s						
ZEYE				IAML		02 49 12.0	
	comp=N,1μm,0.5s						
FOCM	Foa	0.33	25	PG	Pg	02 49 11.2	-0.3
FOCM				SG	Sg	02 49 16.4	+0.5
DKL	Dikili	0.71	23	PG	Pg	02 49 18.3	-0.4
DKL				SG	Sg	02 49 28.4	+0.4
GCAM	G?zelcaml?	0.90	143	PG	Pg	02 49 21.4	-0.9
SIGR	SIGRI	0.96	326	PG	Pg	02 49 23.0	-0.5
GOMA	Golmarmara-Man	1.11	74	PN	Pb	02 49 26.3	-0.2
EZN	Ezine	1.42	353	PN	Pn	02 49 31.2	+0.1
EZN				SN	Sg	02 49 50.9	+0.3
BOZC	Bozcaada	1.47	345	PN	Pn	02 49 32.2	+0.3
BODT	Bodrum	1.48	156	PN	Pb	02 49 32.4	-0.4
MLSB	Milas	1.48	139	PN	Pb	02 49 32.4	-0.5
BALB	Balikesir	1.60	40	PN	Pn	02 49 34.1	+0.5
KULA	Kula-Manisa	1.66	86	PN	Pn	02 49 34.9	+0.4
YER	Yerkesik	1.88	133	PN	Pn	02 49 38.1	+0.6
SIMA	Simav-Kutahya	2.01	70	PN	Pn	02 49 40.1	+0.7

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*NEIC **05** 02:54:56.0±2.8, 19°.32S±0°.07×172°.92W±0°.09, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=17.9km s-min=7.0km az=129.0*

*IDC **05** 02:54:56.6±2.4, 19°.12S×173°.34W, h0^{km}, mb4.0/9, mb1 4.2/9, mb1mx4.0/37, mbtmp3.9/9, MS3.3/4, Ms1 3.3/4, ms1mx3.0/30, Error ellipse: s-maj=134.0km s-min=19.3km az=149.0*

ISC 05 02:54:56.6±0.6, **19°.3S**±0°.1×**172°.93W**±0°.08, **h10**^{km}, **n29,** σ**1^s.29**/25, **mb4.4**/13, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	2.85	85		Pn	02 55 40.6	-1.6
MSVF	Nonsavu	8.70	279	LR	LR	02 59 51.5	
	comp=Z,156nm,20.2s,baz=157,slow=36						
RAO	Raoul Island	10.87	204	Pn	Pn	02 57 31.8	-0.5
RAR	Rarotonga	12.49	101	LR	LR	03 02 41.7	
	comp=Z,139nm,18.2s,baz=223,slow=36						
RAR	Rarotonga	12.49	101	Pn	Pn	02 57 53.8	-0.7
FUNA	Funafuti	13.18	324	Pn	Pn	02 58 03.0	-1.0
URZ	Urewera	20.75	203	P	P	02 59 39.6	+2.0
URZ				IAmb	IAmb	02 59 54.6	
	comp=Z,15nm,1.0s						
PPT	Papeete	22.22	89	LR	LR	03 06 11.1	
	comp=Z,38nm,19.0s,baz=250,slow=30						
CTA	Charters Tower	38.36	262	P	P	03 02 16.7	-1.6
	comp=Z,5.5nm,0.5s,baz=91,slow=9.7,SNR=14						
CTAO	Charters Tower	38.36	262	P	P	03 02 17.0	-1.2
CTAO				IAmb	IAmb	03 02 30.2	
	comp=Z,19nm,1.3s						
STKA	Stephens Creek	42.58	244	P	P	03 02 52.3	-0.7
	comp=Z,2.6nm,1.0s,baz=64,slow=6.9,SNR=3.0						
STKA	Stephens Creek	42.58	244	P	P	03 02 53.4	+0.4
WR0	Warramunga Arr	49.30	260	P	P	03 03 44.9	-1.3
WR0				IAmb	IAmb	03 03 59.5	
	comp=Z,14nm,1.5s						
AS31	Alice Springs	49.42	255	P	P	03 03 47.0	-0.2
ASAR	Alice Springs	49.43	255	P	P	03 03 46.2	-0.9
	comp=Z,2.0nm,0.4s,baz=90,slow=8.3,SNR=42						
WB0	Warramunga Arr	49.47	260	P	P	03 03 46.0	-1.5
WB0				IAmb	IAmb	03 03 57.6	
	comp=Z,6.1nm,1.0s						
WB2	Warramunga Arr	49.48	260	P	P	03 03 46.3	-1.3
WB2				IAmb	IAmb	03 04 03.6	
	comp=Z,5.8nm,1.1s						
WRA	Warramunga Arr	49.49	260	P	P	03 03 45.8	-1.9
	comp=Z,1.1nm,0.5s,baz=98,slow=5.7,SNR=24						
MTN	Manton Dam	53.95	268	P	P	03 04 21.4	+0.4
FORT	Forrest	54.12	246	P	P	03 04 23.0	+0.9
FORT				IAmb	IAmb	03 04 24.4	
	comp=Z,13nm,0.9s						
FITZ	Fitzroy Crossi	57.92	260	P	P	03 04 48.5	-1.0
	comp=Z,4.9nm,1.1s,baz=90,slow=8.1,SNR=1.6						
FITZ	Fitzroy Crossi	57.92	260	P	P	03 04 50.5	+1.1
LPIG	La Paz	74.74	57	LR	LR	03 31 32.2	
	comp=Z,28nm,19.2s,baz=202,slow=29						
NVAR	Mina Array Bea	76.96	41	P	P	03 06 51.8	+2.0
	comp=Z,0.4nm,0.6s,baz=220,slow=8.1,SNR=7.0						
PDAR	Pinedale Array	84.89	41	P	P	03 07 34.0	+1.9
	comp=Z,0.2nm,0.6s,baz=222,slow=2.0,SNR=3.5						
ILAR	Eielson Array	86.20	11	P	P	03 07 38.5	+0.8
	comp=Z,0.4nm,0.7s,baz=226,slow=5.4,SNR=7.3						
YKA	Yellowknife Ar	93.51	23	P	P	03 08 12.8	+0.6
	comp=Z,0.1nm,0.6s,baz=224,slow=2.6,SNR=1.7						
CLL	Collm	147.75	353	*e*PKPbc	PKiKP	03 14 43.0	-0.5
BRTR	Keskin Array B	149.41	317	PKPbc	PKiKP	03 14 48.4	+0.8
	comp=Z,1.7nm,0.8s,baz=128,slow=2.2,SNR=7.7						

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*IDC **05** 02:56:02.8±0.9, 37°.39N×142°.11E, h0^{km}, mb3.6/9, mb1 3.8/13, mb1mx3.7/39, mbtmp3.7/13, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.6/57, Error ellipse: s-maj=22.7km s-min=18.2km az=96.0*

*NEIC **05** 02:56:08.1±3.0, 37°.35N±0°.06×142°.2E±0°.1, h38^{km}±10^{km}, mb4.3/6, Error ellipse: s-maj=11.7km s-min=8.4km az=87.0*

*JMA **05** 02:56:09.5±0.1, 37°.39N×141°.84E, h47^{km}±3^{km}, M3.9*

JMA Felt I J1.

*NIED **05** 02:56:09.6, 37°.39N×141°.84E, h47^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.60; $M_{\theta\theta}$-4.47; $M_{\phi\phi}$-0.14; $M_{r\theta}$0.55; $M_{\theta\phi}$2.42; $M_{\phi r}$2.89; Fault plane solution: $M_0$5.90000×10^{14} NP1: ϕ_s320.00000°, δ55.00000°, λ125.00000°. NP2: ϕ_s89.00000°, δ48.00000°, λ50.00000°.*

ISC 05 02:56:06.9±2.9, **37°.37N**±0°.04×**142°.02E**±0°.07, **h25**^{km}±19^{km}, **n55,** σ**1^s.70**/62, **mb3.7**/13, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.92	270	P	Pn	02 56 24.2	+0.1
JFK				S	Sb	02 56 34.2	-1.7
JMST	Minamisoumatoc	0.97	292	P	Pn	02 56 24.8	0.0
JMST				S	Sn	02 56 35.8	-1.9
ONAJ	Iwakimizuishiy	1.01	255	P	Pn	02 56 25.6	+0.1
ONAJ				S	Sn	02 56 36.9	-2.0
JIKH	Ishinomakikobu	1.04	335	P	Pn	02 56 26.8	+1.1
JIKH				S	Sn	02 56 39.2	-0.2
JMM	Marumori	1.09	297	P	Pn	02 56 26.9	+0.3
JMM				S	Sn	02 56 39.3	-1.5
JMM	Marumori	1.09	297	Pn	Pn	02 56 26.8	+0.3
JIO	Ouri	1.21	334	P	Pn	02 56 29.2	+1.1
JIO				S	Sn	02 56 43.0	-0.6
JFT	Otama	1.35	277	P	Pn	02 56 31.0	+0.9
JFT				S	Sn	02 56 46.3	-0.9
JOU	Okura	1.46	313	P	Pn	02 56 32.7	+1.0
JOU				*e*S	Sn	02 56 50.0	0.0
JMK	Ichinoseki	1.70	338	P	Pn	02 56 36.5	+1.6
JMK				*e*S	Sn	02 56 56.0	+0.2
JYS	Shirataka	1.77	299	P	Pn	02 56 37.0	+1.2
JYS				*e*S	Sn	02 56 57.5	0.0
JFY	Yanaizu	1.85	272	P	Pn	02 56 37.7	+0.8
JFY				*e*S	Sn	02 56 58.1	-1.4
JYT	Yasato	1.86	233	Pn	Pn	02 56 37.4	+0.4
JYK	Kaneyama	2.03	320	P	Pn	02 56 40.7	+1.3
JSD	Sado	3.06	284	Pn	Pn	02 56 54.4	+0.9
MJAR	Matsushiro Arr	3.17	256	Pn	Pn	02 56 56.5	+1.5
	1.0nm,0.3s,baz=84,slow=15,SNR=25						
MJAR				Sn	Sn	02 57 35.6	+3.6
	1.3nm,0.3s,baz=85,slow=14,SNR=5.7						
MJAR				LR	LR	02 58 21.3	
	comp=Z,109nm,18.2s,baz=55,slow=43						
MAJO	Matsushiro	3.17	256	Pn	Pn	02 56 57.6	+2.5
MAT	Matsushiro	3.17	256	P	Pn	02 56 56.8	+1.7
MAT				S	Sn	02 57 34.3	+2.3
MJB9	Matsu-Tunnel	3.17	256	Pn	Pn	02 56 58.8	+3.7
JTM	Tenmabayashi	3.49	348	Pn	Pn	02 57 01.6	+2.2
JGF	Kuroka	4.15	246	Pn	Pn	02 57 11.6	+3.0
INU	Inuyama	4.52	245	Pn	Pn	02 57 16.8	+3.2
JHJ2	Mitsune	4.62	204	Pn	Pn	02 57 16.1	+1.1
JHJ	Hachijo jima 2	4.62	204	Pn	Pn	02 57 15.7	+0.6
	47nm,0.3s,baz=333,slow=16,SNR=26						
JHJ				Sn	Sn	02 58 04.0	-3.9
	21nm,0.3s,baz=74,slow=22,SNR=1.7						
JHJ				LR	LR	02 59 06.5	
	comp=Z,94nm,18.1s,baz=358,slow=39						
ERM	Erimo	4.72	10	Pn	Pn	02 57 17.9	+1.5
JWT	Wachi	5.74	251	Pn	Pn	02 57 33.2	+2.8
ASAJ	Asahikawa	6.75	4	Pn	Pn	02 57 44.9	+0.6
	2.3nm,0.3s,baz=171,slow=26,SNR=9.1						
ASAJ				Sn	Sn	02 58 58.2	-2.1
	0.9nm,0.3s,baz=108,slow=20,SNR=1.7						
JKA	Kamikawa-asahi	6.75	4	Pn	Pn	02 57 42.8	-1.5
JMN	Monobe	7.57	244	Pn	Pn	02 57 59.3	+3.8
JHS	Saijyo	7.58	254	Pn	Pn	02 57 59.9	+4.1
USRK	Ussuriysk Ar.	10.21	315	Pn	Pn	02 58 32.3	+0.6
	baz=121,slow=14,SNR=1.7						
H11N2	WAKE ISLAND Hy	27.91	122	T	T	03 31 28.6	
	baz=315,slow=75,SNR=102						
H11N1	WAKE ISLAND Hy	27.92	122	T	T	03 31 29.0	
	baz=315,slow=75,SNR=88						
H11N3	WAKE ISLAND Hy	27.93	122	T	T	03 31 29.8	
	baz=315,slow=75,SNR=67						
SONM	Songino Array	28.00	303	P	P	03 01 55.5	-0.2
	0.9nm,0.6s,baz=103,slow=9.7,SNR=7.5						
H11S1	WAKE ISLAND Hy	28.64	124	T	T	03 32 25.0	
	baz=317,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	28.64	124	T	T	03 32 25.6	
	baz=317,slow=76,SNR=60						
H11S2	WAKE ISLAND Hy	28.66	124	T	T	03 32 25.6	
	baz=317,slow=76,SNR=49						
ZALV	Zalesovo Beam	42.05	312	P	P	03 03 56.0	-0.1
	0.8nm,0.5s,baz=100,slow=8.1,SNR=5.5						
MK31	Makanchi Array	44.35	302	P	P	03 04 14.4	-0.4
MKAR	Makanchi Array	44.35	302	P	P	03 04 14.5	-0.4
	1.5nm,0.7s,baz=85,slow=9.3,SNR=15						
KURK	Kurchatov	46.11	308	P	P	03 04 28.1	-0.6
KURK				IAmb	IAmb	03 04 28.8	
	comp=Z,2.9nm,1.0s						
WB0	Warramunga Arr	57.28	189	P	P	03 05 52.6	+0.2
CTA	Charters Tower	57.29	175	LR	LR	03 30 15.3	
	comp=Z,80nm,19.8s,baz=302,slow=36						
WR0	Warramunga Arr	57.46	188	P	P	03 05 53.5	-0.1
WR0				IAmb	IAmb	03 05 59.9	
	comp=Z,5.3nm,1.2s						
WB2	Warramunga Arr	57.46	189	P	P	03 05 53.8	+0.2
WB2				IAmb	IAmb	03 05 58.3	

	comp=Z,7.4nm,1.2s						
WRA	Warramunga Arr	57.46	189	P	P	03 05 53.5	-0.2
	comp=Z,0.7nm,0.5s,baz=6.6,slow=7.3,SNR=9.9						
ABKAR	Akbulak array	58.09	310	P	P	03 05 57.3	-0.6
ABKAR				IAmb	IAmb	03 05 57.5	
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	61.19	188	P	P	03 06 19.1	-0.3
	comp=Z,0.4nm,0.8s,baz=14,slow=7.9,SNR=2.0						
YKA	Yellowknife Ar	63.27	30	P	P	03 06 33.1	+0.2
	comp=Z,0.1nm,0.5s,baz=305,slow=5.4,SNR=4.8						
MSVF	Nonsavu	64.46	142	LR	LR	03 29 11.4	
	comp=Z,35nm,20.2s,baz=68,slow=31						
AKASG	Malin Array Be	74.33	322	P	P	03 07 40.3	-1.6
	comp=Z,0.2nm,0.3s,baz=46,slow=6.1,SNR=2.8						
PDAR	Pinedale Array	77.08	46	P	P	03 07 58.3	+0.2
	comp=Z,0.2nm,0.7s,baz=282,slow=0.8,SNR=1.9						
CLL	Collm	81.05	330	*e*P	P	03 08 21.0	+1.6
GERES	GERESS Array B	82.68	328	P	P	03 08 28.0	-0.1
	comp=Z,0.3nm,0.6s,baz=19,slow=6.4,SNR=2.4						

*KLM **05** 03:14:48, 6°.32S×129°.62E, h100^{km}, mb4.9*

*NEIC **05** 03:14:51.8±1.8, 6°.54S±0°.06×129°.88E±0°.07, h179^{km}±5^{km}, mb4.9/83, Error ellipse: s-maj=10.6km s-min=8.7km az=64.0*

*DJA **05** 03:14:51.4±0.1, 7°S±2°×13°0E±°, h185^{km}±2^{km}, M4.9/67, mB5.3/32, mb5.0/67, MLv5.6/13, Mw(mB)4.8/32, MwMwp5.7/1, Mwp5.8/1*

*IDC **05** 03:14:52.1±0.6, 6°.55S×129°.89E, h184^{km}±5^{km}, mb4.2/28, mb1 4.2/33, mb1mx4.1/51, mbtmp4.7/33, MS3.4/8, Ms1 3.4/8, ms1mx3.0/32, Error ellipse: s-maj=10.5km s-min=7.4km az=66.0*

*NOU **05** 03:14:52.9, 6°.81S×129°.88E, h168^{km}, mb5.0, Banda Sea*

ISC 05 03:14:51.9±0.3**, 6°.58S**±0°.03**×129°.92E**±0°.04**, h184^{km}, n342,** σ1^{s}**44**/366**, mb4.8**/111**, 21C-20D, Fault plane solution: NP1:**φs17.82617°**,** δ78.56764°**,** λ52.38762°. **NP2:** φs273.39871°**,** δ39.06414°**,** λ161.66782°. **Principal axes:** T Plg43.5655°**,** Azm251.2713°**;** N Plg36.7416°**,** Azm26.5088°**;** P Plg24.1339°**,** Azm136.0484°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.95	136	Pn	Pn	03 15 29.5	+0.8
SAUI				Sn	Sn	03 15 56.9	-0.5
SAUI	Saumlaki	1.95	136	P	Pn	03 15 29.4	+0.7
SAUI				S	Sn	03 15 56.4	-1.0
BNDI	Bandanaira	2.04	360	P	Pn	03 15 30.5	+0.8
BNDI				S	Sn	03 15 59.7	+0.5
MSAI	Masohi	3.36	343	P	Pn	03 15 45.7	+0.5
MSAI				S	Sn	03 16 25.2	-1.7
FAKI	Fak Fak	4.31	33	Pn	Pn	03 15 55.4	-1.8
FAKI				Sn	Sn	03 16 42.7	-5.7
FAKI	Fak Fak	4.31	33	P	Pn	03 15 55.2	-1.9
FAKI				S	Sn	03 16 40.9	-7.4
NLAI	Namlea	4.35	320	P	Pn	03 15 58.9	+1.3
SIJI	Sorong	5.83	13	P	Pn	03 16 14.9	-1.9
	45nm,0.3s,baz=188,slow=17,SNR=138						
SIJI				S	Sn	03 17 16.8	-6.9
	175nm,0.3s,baz=270,slow=20,SNR=6.8						
SIJI				LR	LR	03 18 52.3	
	comp=Z,241nm,19.5s,baz=186,slow=41						
SWI	Sorong	5.83	13	P	Pn	03 16 14.5	-2.3
	11nm8μm133nm,0.4s						
SANI	Sanana	5.97	319	P	Pn	03 16 19.0	+0.4
	1.0nm2μm292nm,1.1s						
MTN	Manton Dam	6.34	169	P	Pn	03 16 22.4	-0.9
	baz=6.4,SNR=201						
MTN				S	Sn	03 17 31.0	-4.6
	baz=6.4						
MTN	Manton Dam	6.34	169	Pn	Pn	03 16 22.5	-0.8
SOEI	Soe	6.42	240	Pn	Pn	03 16 24.3	-0.4
SOEI	Soe	6.42	240	P	Pn	03 16 24.2	-0.4
	9.1nm13μm1μm,0.8s						
KDU	Kakadu	6.57	158	P	Pn	03 16 25.4	-0.9
	baz=6.6,SNR=72						
KDU				S	Sn	03 17 35.7	-5.3
	baz=6.6						
BATI	Baumata	7.16	239	P	Pn	03 16 34.3	0.0
	268nm,0.3s,baz=72,slow=3.3,SNR=81						
BATI				S	Sn	03 17 50.9	-4.3
	273nm,0.3s,baz=105,slow=19,SNR=16						
BATI				LR	LR	03 18 49.9	
	comp=Z,482nm,19.8s,baz=352,slow=33						
BATI	Baumata	7.16	239	P	Pn	03 16 33.6	-0.6
	3.4nm10μm896nm,0.6s						
TNTI	Ternate	7.74	341	P	Pn	03 16 48.9	+7.2
MMRI	Maumere	7.88	255	Pn	Pn	03 16 42.3	-1.4
MMRI	Maumere	7.88	255	P	Pn	03 16 41.2	-2.5
	1.0nm4μm226nm,0.5s						
BAKI	Biak	8.17	49	P	Pn	03 16 47.2	-0.2
	22μm2μm,1.0s						
EDFI	Ende, Flores	8.44	255	P	Pn	03 16 50.9	-0.2
	2μm142nm,0.9s						
LUWI	Luwuk	9.01	307	Pn	Pn	03 16 58.4	-0.1
KNRA	Kununurra	9.11	187	P	Pn	03 16 59.6	-0.2
	baz=9.1,SNR=3.3						
KNRA	Kununurra	9.11	187	Pn	Pn	03 16 59.2	-0.6
BKSI	Bulukumba	9.83	277	P	Pn	03 17 09.7	+0.6
	1μm48nm,0.9s						
BASI	Baing, Sumba	9.93	248	P	Pn	03 17 08.6	-1.8
	5μm227nm,0.5s						
GTOI	Gorontalo	9.95	316	P	Pn	03 17 13.6	+2.9
	443nm26nm,0.8s						
APSI	Ampana	9.99	304	P	Pn	03 17 12.7	+1.4
	1μm141nm,1.0s						
BNSI	Bone	10.01	282	P	Pn	03 17 12.0	+0.5
	61nm,1.1s						
WSI	Waingapu	10.01	252	P	Pn	03 17 10.0	-1.5
	1μm,0.5s						
KAPI	Kappang	10.24	278	P	Pn	03 17 15.5	+1.0
	baz=72,slow=20,SNR=1.4						
SPSI	Sidrap Palu	10.44	284	P	Pn	03 17 19.0	+1.9
	89nm,0.7s						
MRSI	Marisa	10.61	311	P	Pn	03 17 20.6	+1.2
	1μm117nm,1.0s						
TTSI	Tana Toraja	10.66	289	P	P	03 17 26.7	-0.9
GENI	Genyem	10.95	69	P	Pn	03 17 24.5	+0.7
JAY	Jayapura	11.48	70	P	Pn	03 17 31.6	+1.0
	3.2nm,0.3s,baz=218,slow=10,SNR=7.9						
JAY				S	Sn	03 19 39.0	+0.5
	1.5nm,0.3s,baz=309,slow=13,SNR=2.9						
JAY	Jayapura	11.48	70	P	Pn	03 17 30.6	-0.1
	37nm,1.0s						
TOLI2	Tolitoli	11.90	310	Pn	Pn	03 17 36.0	0.0
MPSI	Mapaga	12.13	304	P	P	03 17 44.5	+0.4
FITZ	Fitzroy Crossi	12.19	200	P	Pn	03 17 37.9	-1.7
	baz=12,SNR=16						
FITZ	Fitzroy Crossi	12.19	200	P	Pn	03 17 37.2	-2.4
	2.1nm,0.3s,baz=20,slow=9.6,SNR=68						
FITZ				S	Sn	03 19 44.3	-11
	13nm,0.3s,baz=76,slow=14,SNR=6.7						
FITZ				LR	LR	03 23 29.9	
	comp=Z,125nm,18.2s,baz=4.0,slow=42						
FITZ	Fitzroy Crossi	12.19	200	Pn	Pn	03 17 36.9	-2.7
PLAI	Plampang	12.24	259	P	Pn	03 17 37.6	-2.8
	4μm366nm,0.8s						
TWSI	Taliwang, Sumb	13.10	260	P	Pn	03 17 48.5	-2.8
	2μm81nm,1.1s						
WB0	Warramunga Arr	13.81	162	Pn	Pn	03 17 57.0	-3.1
WRAB	Tennant Creek	13.95	162		Pn	03 17 58.5	-3.4
WRA	Warramunga Arr	13.96	163	P	Pn	03 17 59.1	-2.8
	3.8nm,0.3s,baz=344,slow=13,SNR=91						
WRA				S	Sn	03 20 29.1	-8.5
	8.8nm,0.3s,baz=345,slow=21,SNR=8.9						
WRA				LR	LR	03 24 10.0	
	comp=Z,103nm,19.3s,baz=320,slow=40						
WB2	Warramunga Arr	13.96	162	Pn	Pn	03 17 58.9	-3.2
WR0	Warramunga Arr	14.04	162		Pn	03 18 00.3	-2.7
KBKI	Kotabaru	14.08	283	P	P	03 18 04.7	-1.0
	2μm101nm,0.9s						
SRBI	Singaraja	14.66	263	P	Pn	03 18 09.1	-1.7
	92nm,1.0s						
COEN	Coen	14.95	120		Pn	03 18 14.8	+0.5
BBKI	Banjar Baru	15.34	281	P	P	03 18 21.0	+1.4
	4μm358nm,1.0s						
ABJI	Asem Bagus	15.61	265	P	Pn	03 18 18.5	-3.9
	174nm,0.9s						
JAGI	Jajag, Banyuwa	15.75	262		Pn	03 18 21.5	-2.6
JAGI	Jajag, Banyuwa	15.75	262	P	Pn	03 18 19.3	-4.7
	3μm116nm,0.7s						
KMMI	Kalianget	15.85	267	P	Pn	03 18 24.7	-0.6
	144nm,0.8s						
MTKI	Muara Teweh, K	16.00	290	P	Pn	03 18 30.2	+3.1
QIS	Mount Isa	16.77	147	P	P	03 18 36.0	+0.6
	baz=17,SNR=131						
PMG	Port Moresby	17.30	100	P	P	03 18 42.4	+1.1
	8.0nm,0.3s,baz=285,slow=6.6,SNR=20						
PMG				S	S	03 21 47.8	-4.2
	2.1nm,0.3s,baz=210,slow=18,SNR=1.8						
PMG	Port Moresby	17.30	100	P	Pn	03 18 43.2	+0.6
PMG	Port Moresby	17.30	100	P	Pn	03 18 44.8	+2.2
	176nm,1.0s						
GRJI	Gresik	17.32	268	P	Pn	03 18 46.1	+3.2
AS31	Alice Springs	17.41	168	P	P	03 18 43.1	+0.7
AS31				IAmb	IAmb	03 18 45.7	
	comp=Z,58nm,0.9s						
ASAR	Alice Springs	17.41	168	P	P	03 18 43.5	+1.0
	comp=Z,22nm,0.3s,baz=345,slow=9.3,SNR=568						
ASAR				S	S	03 21 51.5	-2.8
	comp=Z,2.6nm,0.3s,baz=349,slow=24,SNR=9.5						
ASAR				LR	LR	03 26 15.2	
	comp=Z,111nm,19.0s,baz=5.0,slow=39						
ASAR				ScP	ScP	03 26 30.9	-1.3
	comp=Z,0.6nm,0.3s,baz=0.3,slow=1.8,SNR=4.6						
MBWA	Marble Bar	17.53	213	P	P	03 18 44.0	+0.3
MBWA				P	Pn	03 18 44.2	-1.1
MBWA				S	S	03 21 56.5	-0.1
PSA00	Pilbara Seismi	17.81	212	P	P	03 18 47.3	+0.6
TBJI	Tambak Boyo	17.95	268	P	P	03 18 47.6	-0.8
	comp=Z,209nm,1.1s						
MANU	Manus Island	17.97	76	P	Pn	03 18 51.3	+0.8
MANU				IAmb	IAmb	03 18 52.4	
	comp=Z,78nm,0.8s						
PWJI	Pagerwojo	18.03	264	P	P	03 18 47.8	-1.4
	comp=Z,107nm,1.1s						
MTSU	Mount Surprise	18.14	131	P	P	03 18 51.5	+1.1
	baz=18,SNR=250						
WRKA	Warakurna	18.42	185	P	P	03 18 54.3	+0.9
	baz=18,SNR=94						
KKM	Kota Kinabalu	18.56	312	P	Pn	03 18 56.5	-1.1
KKM				IAmb	IAmb	03 19 21.9	
	comp=Z,42nm,1.2s						
PBKI	Pangkalan Bun	18.59	281	P	Pn	03 19 00.9	+3.1
UGM	Wanagama	19.29	265	P	P	03 19 03.6	+0.6
UGM	Wanagama	19.29	265	P	P	03 19 01.3	-1.6
	comp=Z,122nm,1.4s						
SBUM	Sibu	19.82	296	P	P	03 19 10.4	+1.8
SBUM				IAmb	IAmb	03 19 11.9	
	comp=Z,56nm,0.9s						
CTA	Charters Tower	20.77	132	P	P	03 19 20.2	+1.4
	comp=Z,39nm,0.6s,baz=303,slow=12,SNR=32						
CTAO	Charters Tower	20.77	132	P	P	03 19 20.2	+1.4
CTAO				IAmb	IAmb	03 19 21.2	
	comp=Z,78nm,1.1s						
KPJI	Karang Pucung	20.85	267	P	P	03 19 18.1	-1.5
	comp=Z,83nm,0.8s						
KSM	Kuching	21.15	292	P	P	03 19 22.2	-0.5
KSM				IAmb	IAmb	03 19 24.4	
	comp=Z,43nm,1.1s						
KSM	Kuching	21.15	292	P	P	03 19 21.0	-1.8
CMJI	Cimerak	21.34	265	P	P	03 19 22.5	-2.3
	comp=Z,1μmcomp=Z,151nm,0.8s						
CISI	Cisompet, Garu	21.96	266	P	P	03 19 30.4	-0.9
CISI	Cisompet, Garu	21.96	266	P	P	03 19 28.6	-2.6
	comp=Z,4μmcomp=Z,495nm,0.7s						
GIRL	Giralia	22.00	222	P	P	03 19 32.3	+0.9
	baz=22,SNR=16						
GIRL	Giralia	22.00	222	P	P	03 19 32.3	+0.9
LEM	Lembang	22.15	268	P	P	03 19 34.5	+1.2
	comp=Z,49nm,0.7s,baz=56,slow=18,SNR=2.2						
LEM	Lembang	22.15	268	P	P	03 19 31.7	-1.5
	comp=Z,56nm,0.8s						
TPI	Tanjungpandan	22.51	279	P	P	03 19 36.6	+0.2
	comp=Z,41nm,0.9s						
MEEK	Meekatharra	22.67	207	P	P	03 19 37.7	0.0
	baz=23,SNR=16						
CBJI	Citeko	22.92	269	P	P	03 19 40.0	-0.1
DBJI	Dramaga	23.02	269	P	P	03 19 41.6	+0.6
CGJI	Cibinong	24.07	269	P	P	03 19 48.8	-1.7
	comp=Z,9μmcomp=Z,109nm,1.2s						
PPBI	Pangkal Pinang	24.11	279	P	P	03 19 50.3	-0.7
QLP	Quilpie	24.12	147	P	P	03 19 51.7	+0.8
	baz=24,SNR=19						
FORT	Forrest	24.14	184	P	P	03 19 52.0	+1.1
	baz=24,SNR=12						
FORT	Forrest	24.14	184	P	P	03 19 50.5	-0.4
FORT				IAmb	IAmb	03 20 13.6	
	comp=Z,21nm,0.7s						
XMIS	Christmas Isla	24.31	259	P	P	03 19 53.5	+0.8
KLSI		25.14	273	P	P	03 19 59.8	-0.5
	comp=Z,7.4nm,1.0s						
PMBI	Palembang	25.32	277	P	P	03 20 05.9	+4.0
MDSI	Maura Dua	25.70	273	P	P	03 20 04.5	-0.9
	comp=Z,1μmcomp=Z,11nm,0.7s						
KMBL	Kambalda	25.78	196	P	P	03 20 06.4	+0.5
	baz=26,SNR=36						
MORW	Morawa	25.93	209	P	P	03 20 07.3	+0.1
	baz=26,SNR=3.6						
MORW	Morawa	25.93	209	P	P	03 20 07.1	-0.1
MORW				IAmb	IAmb	03 20 10.0	
	comp=Z,32nm,1.4s						
BBOO	Buckleboo	26.72	168	P	P	03 20 14.1	-0.1
	baz=27,SNR=9.9						
BBOO	Buckleboo	26.72	168	P	P	03 20 14.5	+0.3
BBOO				IAmb	IAmb	03 20 15.0	
	comp=Z,20nm,0.7s						
RMQ	Roma	26.72	140	P	P	03 20 15.0	+0.7
	baz=27,SNR=9.6						
BLDU	Ballidu	26.94	206	P	P	03 20 16.3	+0.1
	baz=27,SNR=7.7						
KLBR	Kellerberrin	27.36	203	P	P	03 20 20.4	+0.4
	baz=27,SNR=26						
STKA	Stephens Creek	27.43	158	P	P	03 20 20.9	+0.4
	baz=28,SNR=62						
STKA	Stephens Creek	27.43	158	P	P	03 20 21.1	+0.5
	comp=Z,13nm,0.4s,baz=338,slow=8.1,SNR=66						
STKA				LR	LR	03 32 47.0	
	comp=Z,79nm,18.9s,baz=8.2,slow=39						
STKA	Stephens Creek	27.43	158	P	P	03 20 21.0	+0.4
EIDS	Eidsvold	27.54	135	P	P	03 20 23.2	+1.5
HTT	Hallett	27.99	164	P	P	03 20 25.9	+0.2
	baz=28,SNR=11						
NWAO	Narrogin (SRO)	28.75	203	P	P	03 20 32.9	+0.7
	baz=29,SNR=8.5						
NWAO	Narrogin (SRO)	28.75	203	P	P	03 20 32.3	+0.1
	comp=Z,8.1nm,0.3s,baz=51,slow=7.5,SNR=12						
NWAO				LR	LR	03 32 05.4	
	comp=Z,83nm,19.3s,baz=97,slow=36						
NWAO	Narrogin (SRO)	28.75	203	P	P	03 20 32.5	+0.2
NWAO	Narrogin (SRO)	28.75	203	P	P	03 20 32.5	+0.2
NWAO				IAmb	IAmb	03 21 00.5	
	comp=Z,13nm,1.1s						
IPM	Ipoh	30.87	290	P	P	03 20 52.0	+0.8
ARMA	Armidale	31.27	142	P	P	03 20 56.2	+1.5
	baz=31,SNR=5.9						
ARMA	Armidale	31.27	142	P	P	03 20 56.2	+1.5
ARMA				IAmb	IAmb	03 20 57.1	
	comp=Z,22nm,1.2s						
KULM	Kulim	31.51	291	P	P	03 20 55.6	-1.2
KULM				IAmb	IAmb	03 21 00.9	
	comp=Z,30nm,1.3s						
KULM	Kulim	31.51	291	P	P	03 20 58.0	+1.2
ARPS	Mount Arapiles	31.96	162	P	P	03 21 02.1	+1.6
	baz=32,SNR=10						
RPSI	Rantau Prapat	32.29	286	P	P	03 21 01.5	-2.1
PSI	Prapat	32.32	286	P	P	03 21 02.6	-1.5
	comp=Z,52nm,0.9s,baz=180,slow=2.9,SNR=25						
YNG	Young	32.44	151	P	P	03 21 06.1	+1.4
	baz=33,SNR=21						
MGCD	Mangrove Creek	33.00	146	P	P	03 21 11.7	+2.1
	baz=33,SNR=5.7						
GSI	Gunungsitoli	33.22	283	P	P	03 21 12.0	+0.2
GSI	Gunungsitoli	33.22	283	P	P	03 21 08.3	-3.5
	comp=Z,8μmcomp=Z,82nm,0.9s						
TRTT	Trang	33.38	295	P	P	03 21 12.2	-0.8
	comp=Z,21nm,0.9s						
CNB	Canberra Magne	33.73	151	P	P	03 21 17.6	+1.7
	baz=34,SNR=11						
TOO	Toolangi	33.95	158	P	P	03 21 19.4	+1.7
	baz=34,SNR=11						
TOO	Toolangi	33.95	158	P	P	03 21 20.1	+2.4
TOO				IAmb	IAmb	03 21 20.8	
	comp=Z,16nm,0.8s						
TPTI		34.12	286	P	P	03 21 16.3	-3.2
	comp=Z,21nm,1.0s						
SRAK	Srakaew	34.41	307	P	P	03 21 23.2	+1.2
	comp=Z,7μmcomp=Z,73nm,0.8s						
MLSI	Meulaboh, Aceh	35.15	287	P	P	03 21 25.5	-2.9
	comp=Z,172nm,1.0s						
PHET	Kaeng Krachan	35.79	303	P	P	03 21 33.7	0.0
	comp=Z,27nm,0.6s						
NONG	Nongkai	36.03	313	P	P	03 21 35.5	-0.2
	comp=Z,24nm,0.8s						
UTHA	Uthaitani	37.35	306	P	P	03 21 46.7	-0.3
	comp=Z,458nmcomp=Z,64nm,0.8s						
PHIT	Phitsanulok	37.52	309	P	P	03 21 49.0	+0.6
	comp=Z,109nm,0.8s						
SANVU	Saraoutou	37.59	107	P	P	03 21 50.2	+1.3
UTTA	Uttaradit	37.75	310	P	P	03 21 50.2	-0.1
	comp=Z,354nmcomp=Z,44nm,0.8s						
SUKH	Sukhothai	38.30	309	P	P	03 21 55.0	+0.1
	comp=Z,47nm,0.8s						
NOUC	Port Laguerre	38.34	118	P	P	03 21 56.1	+0.9
DZM	Mont Dzumac	38.45	117	P	P	03 21 56.4	+0.1
	comp=Z,9.4nm,0.7s,baz=273,slow=6.9,SNR=9.3						
DZM	Mont Dzumac	38.45	117	P	P	03 21 56.6	+0.4
DZM				IAmb	IAmb	03 21 57.6	
	comp=Z,19nm,0.9s						
DZM	Mont Dzumac	38.45	117	P	P	03 21 57.9	+1.6
LAMP	Lampang	38.92	310	P	P	03 22 07.0	+7.0
PAYA	Payao	39.25	312	P	P	03 22 10.6	+7.8
CM36	Chiang Mai Arr	39.32	310	P	P	03 22 03.0	-0.4
CM04	Chiang Mai Arr	39.34	310	P	P	03 22 03.0	-0.6
	comp=Z,204nmcomp=Z,24nm,0.8s						
CM09	Chiang Mai Arr	39.36	310	P	P	03 22 04.0	+0.3
	comp=Z,165nmcomp=Z,20nm,0.9s						
CM05	Chiang Mai Arr	39.37	310	P	P	03 22 04.0	+0.2
	comp=Z,138nmcomp=Z,16nm,0.8s						
CM01	Chiang Mai Arr	39.37	310	P	P	03 22 04.0	+0.2
	comp=Z,202nmcomp=Z,25nm,0.8s						
CM35	Chiang Mai Arr	39.37	310	P	P	03 22 03.0	-0.8
CM02	Chiang Mai Arr	39.39	310	P	P	03 22 04.2	+0.2
	comp=Z,136nmcomp=Z,19nm,0.8s						
CM31	Chiang Mai Arr	39.40	310	P	P	03 22 10.6	+6.6
CM31	Chiang Mai Arr	39.40	310	P	P	03 22 04.0	-0.1
CM31				IAmb	IAmb	03 22 11.0	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	39.40	310	P	P	03 22 04.2	+0.1
	comp=Z,6.7nm,0.7s,baz=139,slow=7.4,SNR=37						
CMAR				PcP	PcP	03 24 09.9	+1.3
	comp=Z,0.9nm,0.3s,baz=171,slow=2.2,SNR=4.2						
CMAR				ScP	ScP	03 27 39.8	-0.1
	comp=Z,1.0nm,0.3s,baz=157,slow=3.0,SNR=10						
CM13	Chiang Mai Arr	39.41	310	P	P	03 22 04.2	+0.1
	comp=Z,147nmcomp=Z,19nm,0.8s						
CM15	Chiang Mai Arr	39.41	310	P	P	03 22 04.7	+0.5
	comp=Z,678nmcomp=Z,18nm,0.8s						
CM34	Chiang Mai Arr	39.48	310	P	P	03 22 04.0	-0.7
JNU	Nakatsue	39.49	1	P	P	03 22 04.9	+0.3
	comp=Z,2.5nm,0.4s,baz=194,slow=4.2,SNR=3.2						
JNU	Nakatsue	39.49	1	P	P	03 22 04.6	0.0
JNU				IAmb	IAmb	03 22 31.8	
	comp=Z,47nm,1.6s						
CM32	Chiang Mai Arr	39.59	310	P	P	03 22 06.5	+0.8
CHTO	Chiang Mai	39.61	310	P	P	03 22 05.1	-0.7
CHTO				IAmb	IAmb	03 22 13.2	
	comp=Z,18nm,0.8s						
CM33	Chiang Mai Arr	39.61	310	P	P	03 22 05.0	-0.8
NJ2	Nanjing	39.84	345	*e*P	P	03 22 09.0	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	Guiyang	39.84	326	⇓P	P	03 22 07.6	-0.1
GYA				pmax	pmax		
	comp=Z,17nm,0.8s						
JMN	Monobe	40.26	5	P	P	03 22 11.6	+0.6
JMN				IAmb	IAmb	03 22 40.1	
	comp=Z,96nm,2.0s						
KMI	Kunming	41.14	321	⇓*e*P	P	03 22 19.4	+0.9
KMI				pmax	pmax		
	comp=Z,19nm,1.0s						
JHS	Saijyo	41.46	4	P	P	03 22 20.9	+0.2
JWT	Wachi	41.96	7	P	P	03 22 24.8	+0.1
JWT				IAmb	IAmb	03 22 28.5	
	comp=Z,14nm,0.7s						
MJAR	Matsushiro Arr	43.59	10	P	P	03 22 37.0	-0.8
	comp=Z,1.6nm,0.6s,baz=187,slow=9.2,SNR=6.8						
MJAR				ScP	ScP	03 27 55.1	-1.1
	comp=Z,2.3nm,0.9s,baz=159,slow=4.0,SNR=3.9						
MAT	Matsushiro	43.59	10	P	P	03 22 37.0	-0.9
KSRS	Korea Array	43.84	358	P	P	03 22 39.4	-0.4
	comp=Z,1.7nm,0.6s,baz=174,slow=10,SNR=6.2						
KSRS				LR	LR	03 43 29.3	
	comp=Z,30nm,18.1s,baz=122,slow=39						
CD2	Chengdu	44.91	328	*e*P	P	03 22 49.0	+0.6
XAN	Xi'an	45.03	335	P	P	03 22 48.6	-0.7
XAN				pP	pP	03 22 53.4	-35
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN	Xi'an	45.03	335	P	P	03 22 48.2	-1.1
BJT	Baijiatuau	48.07	346	P	P	03 23 13.0	+0.2
BJI	Beijing	48.09	346	P	P	03 23 12.9	0.0
BJI				pmax	pmax		
	comp=Z,16nm,0.7s						
MSVF	Nonsavu	48.20	108	P	P	03 23 15.6	+1.3
	comp=Z,10nm,0.8s,baz=266,slow=11,SNR=3.9						
SHL	Shillong	48.86	312	P	P	03 23 18.0	-1.3
SHL				IAmb	IAmb	03 23 21.0	
	comp=Z,20nm,0.9s						
LZH	Lanzhou	49.00	332	⇑P	P	03 23 20.5	+0.3
LZH				pP	pP	03 24 00.3	+0.7
LZH				sP	sP	03 24 19.6	+0.1
LZH				PP	PP	03 25 16.8	+1.2
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,83nm,6.5s						
HHC	Hu-ho-hao-te	50.12	342	*e*P	P	03 23 30.0	+1.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
DCZ	Deep Cove	50.39	146	P	P	03 23 31.8	+1.5
DCZ				IAmb	IAmb	03 23 50.6	
	comp=Z,48nm,1.4s						
USA0B	Ussuriysk Arra	50.58	2	P	P	03 23 30.4	-1.3
USRK	Ussuriysk Ar.	50.58	2	P	P	03 23 32.1	+0.5
	comp=Z,3.5nm,0.6s,baz=180,slow=7.1,SNR=16						
USRK				pP	pP	03 24 13.1	+1.6
	comp=Z,1.4nm,0.6s,baz=185,slow=7.3,SNR=2.6						
FOZ	Fox Glacier	50.77	143	P	P	03 23 34.1	+0.9
FOZ				IAmb	IAmb	03 23 45.0	
	comp=Z,61nm,1.6s						
MLZ	Mavora Lakes	50.87	146	P	P	03 23 34.8	+0.8
MLZ				IAmb	IAmb	03 23 56.4	
	comp=Z,36nm,1.4s						
PALK	Pallekele	50.99	285	P	P	03 23 34.7	-0.7
PALK	Pallekele	50.99	285	P	P	03 23 33.3	-2.1
QRZ	Quartz Range	51.02	139	P	P	03 23 37.2	+2.1
QRZ				IAmb	IAmb	03 23 52.6	
	comp=Z,46nm,1.2s						
WHZ	Wether Hill Ro	51.09	146	P	P	03 23 36.5	+0.9
LBZ	Lake Benmore	51.47	144	P	P	03 23 39.4	+1.0
LBZ				IAmb	IAmb	03 23 50.8	
	comp=Z,68nm,1.5s						
RPZ	Rata Peaks	51.61	143	P	P	03 23 40.1	+0.5
	comp=Z,22nm,0.6s,baz=327,slow=4.8,SNR=8.3						
RPZ	Rata Peaks	51.61	143	P	P	03 23 41.1	+1.6
RPZ				IAmb	IAmb	03 23 41.6	
	comp=Z,28nm,0.7s						
THZ	Tophouse	51.74	139	P	P	03 23 41.7	+1.2
THZ				IAmb	IAmb	03 23 45.2	
	comp=Z,56nm,1.7s						
LSA	Lhasa	51.84	316	P	P	03 23 42.2	+0.2
LSA				pmax	pmax		
	comp=Z,98nm,0.9s						
LSA	Lhasa	51.84	316	P	P	03 23 43.1	+1.1
LSA				IAmb	IAmb	03 23 43.4	
	comp=Z,19nm,0.8s						
LTZ	Lake Taylor	51.86	141	P	P	03 23 42.7	+1.3
LTZ				IAmb	IAmb	03 23 58.7	
	comp=Z,63nm,1.6s						
OXZ	Oxford	52.00	142	P	P	03 23 43.9	+1.5
TUWZ	Tuamarina	52.25	139	P	P	03 23 44.8	+0.6
KHZ	Kahutara	52.47	140	P	P	03 23 46.2	+0.4
MQZ	McQueen’s Vall	52.58	142	P	P	03 23 47.1	+0.5
BHW	Baring Head	52.85	138	P	P	03 23 48.6	-0.1
ODAN	Odare	52.92	311	*e*P	P	03 23 49.3	-0.4
	comp=Z,38nm,0.6s						
BKZ	Black Stump Fm	52.95	135	P	P	03 23 50.1	+0.6
BKZ				IAmb	IAmb	03 23 51.1	
	comp=Z,15nm,1.0s						
TAPN	Taplejung	52.95	312	*e*P	P	03 23 49.6	-0.4
	comp=Z,31nm,0.5s						
URZ	Urewera	53.01	134	P	P	03 23 50.0	+0.1

	comp=Z,2.3nm,0.3s,baz=335,slow=19,SNR=2.4						
URZ	**Urewera**	53.01	134	P	**P**	**03 23 50.1**	**+0.3**
URZ				IAmb	IAmb	03 24 17.4	
	comp=Z,51nm,1.8s						
PLWZ	**Palliser**	53.18	138	P	**P**	**03 23 50.9**	**-0.2**
BFZ	**Birch Farm**	53.44	137	P	**P**	**03 23 53.1**	**+0.1**
RAMN	**Ramite**	53.57	310	*e*P	**P**	**03 23 54.3**	**-0.1**
GTA	**Gaotai**	53.57	331	⇑P	**P**	**03 23 54.4**	**+0.3**
GTA				pP	pwP	03 24 38.5	-1.8
GTA				sP	PcP	03 24 59.4	+1.1
GTA				ScP	**ScP**	**03 28 38.4**	**-0.3**
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
GTA				pmax	pmax		
	comp=Z,49nm,4.5s						
GTA				LR	LR		
	comp=N,120nm,14.5s						
GTA				LR	LR		
	comp=E,88nm,16.4s						
GTA				LR	LR		
	comp=Z,100nm,13.5s						
GUN	**Gumba**	54.62	311	*e*P	**P**	**03 24 01.7**	**-0.4**
	comp=Z,76nm,0.7s						
PKI	**Pulchoki**	54.80	310	*e*P	**P**	**03 24 02.6**	**-0.8**
	comp=Z,23nm,0.6s						
PKIN	**Phulchoki**	54.81	310	*e*P	**P**	**03 24 02.7**	**-0.7**
	comp=Z,17nm,0.6s						
KKN	**Kakani**	55.01	311	*e*P	**P**	**03 24 04.1**	**-0.7**
KLR	**Kul'dur**	55.60	1	P	**P**	**03 24 09.1**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=185,slow=8.8,SNR=3.9						
KLR				ScP	**ScP**	**03 28 45.8**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=96,slow=2.4,SNR=4.6						
GKN	**Gorkha**	55.60	310	*e*P	**P**	**03 24 08.6**	**-0.3**
	comp=Z,24nm,0.2s						
HYB	**Hyderabad**	56.06	296	*i* P	**P**	**03 24 10.0**	**-2.2**
KOLN	**Koldanda**	56.27	310	*e*P	**P**	**03 24 13.5**	**-0.3**
DANN	**Dangsing**	56.45	310	*e*P	**P**	**03 24 14.5**	**-0.6**
	comp=Z,35nm,0.8s						
PYUN	**Piuthan**	56.91	310	*e*P	**P**	**03 24 18.0**	**-0.2**
	comp=Z,105nm,0.8s						
DGAR	**Diego Garcia**	57.01	265	P	**P**	**03 24 19.6**	**+0.6**
ULN	**Ulaanbaatar**	57.84	342	P	**P**	**03 24 25.3**	**+1.0**
ULN				IAmb	IAmb	03 24 26.0	
	comp=Z,8.9nm,0.7s						
SONM	**Songino Array**	58.02	342	P	**P**	**03 24 26.2**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=158,slow=6.9,SNR=15						
SONM				pP	**pP**	**03 25 07.8**	**+1.5**
	comp=Z,3.0nm,1.1s,baz=143,slow=3.2,SNR=2.0						
SONM				ScP	**ScP**	**03 28 57.5**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=132,slow=2.1,SNR=2.9						
WMQ	**Urumqi**	63.00	327	P	**P**	**03 25 00.3**	**+1.0**
WMQ				pP	pwP	03 25 46.8	0.0
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,350nm,5.1s						
WMQ	**Urumqi**	63.00	327		**P**	**03 25 00.3**	**+1.0**
WMQ				IAmb	IAmb	03 25 00.9	
	comp=Z,26nm,0.8s						
PETK	**Petropavlovsk-**	63.95	18	P	**P**	**03 25 06.2**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=163,slow=3.9,SNR=7.7						
ZSN	**Zaisan**	66.88	329	*e*P	**P**	**03 25 24.2**	**0.0**
	baz=329						
NIL	**Nilore**	66.89	311	P	**P**	**03 25 24.6**	**+0.1**
NIL				IAmb	IAmb	03 25 25.2	
	comp=Z,18nm,0.6s						
SHLS	**Shalkode**	67.34	322	*e*P	**P**	**03 25 26.0**	**-1.3**
	comp=Z,20nm,0.9s,baz=322						
KSH	**Kashi**	67.66	317	P	**P**	**03 25 30.8**	**+1.4**
KSH				pmax	pmax		
	comp=Z,37nm,1.0s						
KSH				pmax	pmax		
	comp=Z,480nm,5.4s						
MK31	**Makanchi Array**	67.83	327	P	**P**	**03 25 30.3**	**+0.1**
MK31				IAmb	IAmb	03 25 31.7	
	comp=Z,25nm,0.8s						
MKAR	**Makanchi Array**	67.83	327	P	**P**	**03 25 31.0**	**+0.9**
	comp=Z,30nm,0.6s,baz=123,slow=7.9,SNR=438						
MKAR				pP	**pP**	**03 26 11.7**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=118,slow=8.5,SNR=1.3						
SATY	**Saty**	67.93	322	*e*P	**P**	**03 25 31.5**	**+0.5**
	comp=Z,12nm,0.7s,baz=322						
KPKS	**Kokpek**	67.98	322	*e*P	**P**	**03 25 31.5**	**+0.2**
	comp=Z,20nm,0.7s,baz=322						
MAKZ	**Makanchi**	68.01	327	P	**P**	**03 25 31.7**	**+0.4**
MAKZ				IAmb	IAmb	03 25 32.6	
	comp=Z,26nm,0.8s						
TNSS	**Tian-Shan**	68.82	321	*e*P	**P**	**03 25 37.7**	**+0.9**
	baz=321						
MDOK	**Medeo**	68.83	321	*e*P	**P**	**03 25 37.0**	**+0.5**
	baz=321						
AAA	**Alma-Ata**	68.93	321	*e*P	**P**	**03 25 37.7**	**+0.6**
	comp=Z,7.0nm,0.5s,baz=321						
MTBS	**Maitube**	69.20	321	*e*P	**P**	**03 25 39.2**	**+0.5**
	baz=321						
CHKK	**Chushkaly**	69.23	322	*e*P	**P**	**03 25 38.8**	**-0.1**
	baz=322						
TKM2	**Tokmak 2**	69.61	320	P	**P**	**03 25 42.3**	**+0.8**
	SNR=45						
KUU	**Kurty**	69.65	322	*e*P	**P**	**03 25 41.6**	**+0.1**
	comp=Z,41nm,0.7s,baz=322						
KBK	**Karagaybulak**	69.89	320	P	**P**	**03 25 44.3**	**+1.1**
	SNR=16						
UCH	**Uchtor**	69.96	319	P	**P**	**03 25 45.1**	**+1.2**
	SNR=27						
AAK	**Ala-Archa**	70.17	320	P	**P**	**03 25 46.0**	**+1.1**
	SNR=25						
AAK	**Ala-Archa**	70.17	320	*i* P	**P**	**03 25 46.0**	**+1.1**
	SNR=35						
AAK	**Ala-Archa**	70.17	320	P	**P**	**03 25 46.2**	**+1.3**
AAK				IAmb	IAmb	03 25 46.9	
	comp=Z,21nm,0.7s						
CHMS	**Chumysh**	70.19	320	P	**P**	**03 25 45.3**	**+0.6**
	SNR=9.6						
KBL	**Kabul**	70.44	310	P	**P**	**03 25 46.3**	**-0.3**
KBL	**Kabul**	70.44	310	P	**P**	**03 25 47.4**	**+0.8**
	SNR=6.0						
AML	**Almayashu**	70.44	319	P	**P**	**03 25 48.0**	**+1.2**
	SNR=34						
USP	**Ospenovka**	70.48	320	P	**P**	**03 25 47.3**	**+0.7**
	SNR=43						
SGDS	**Sogindy**	70.49	321	*e*P	**P**	**03 25 46.6**	**0.0**
	comp=Z,5.6nm,0.6s,baz=321						
EKS2	**Erkin-Say**	70.65	320	P	**P**	**03 25 48.6**	**+0.9**
	SNR=44						
ZAA0	**Zalesovo Array**	71.17	334	P	**P**	**03 25 50.4**	**0.0**
ZALV	**Zalesovo Beam**	71.17	334	P	**P**	**03 25 49.9**	**-0.6**
	comp=Z,7.6nm,0.9s,baz=119,slow=4.4,SNR=25						
ZALV				pP	**pP**	**03 26 31.0**	**-1.8**
	comp=Z,2.1nm,0.6s,baz=108,slow=4.8,SNR=3.3						
SEY	**Seymchan**	71.41	11	P	**P**	**03 25 52.5**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=226,slow=3.5,SNR=6.8						
KURBB	**Kurchatov Arra**	72.11	328	pP	pP	03 26 37.8	-1.0
	comp=Z,3.9nm,0.8s,baz=128,slow=5.5,SNR=2.6						
KURK	**Kurchatov**	72.12	329	P	**P**	**03 25 56.2**	**+0.1**
DZA	**Taraz**	72.34	319	*e*P	**P**	**03 25 57.8**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=319						
IUG	**Iuzhnay**	72.87	318	*e*P	**P**	**03 26 01.4**	**+0.5**
	comp=Z,10nm,0.9s,baz=318						
VNDA	**Vanda**	72.87	173	P	**P**	**03 26 00.9**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=322,slow=6.9,SNR=16						
VNDA	**Vanda**	72.87	173	P	**P**	**03 26 00.9**	**+0.8**
KK31	**Karatay Array**	72.97	319	P	**P**	**03 26 02.1**	**+0.7**
KK31				IAmb	IAmb	03 26 02.8	
	comp=Z,18nm,1.1s						
KKAR	**Karatay Array**	72.97	319	P	**P**	**03 26 02.1**	**+0.7**
KKAR				IAmb	IAmb	03 26 02.8	
	comp=Z,18nm,1.1s						
BRLS	**Borolday**	73.39	318	*e*P	**P**	**03 26 03.9**	**+0.1**
	comp=Z,27nm,0.7s,baz=318						
JLN	**Jalan Bani Buh**	74.66	295	P	**P**	**03 26 11.9**	**+0.3**
WBK	**Wadi Bani Khal**	75.16	295	P	**P**	**03 26 15.4**	**+0.9**
	SNR=5.3						
MAW	**Mawson**	75.31	201	P	**P**	**03 26 15.5**	**+1.1**
	comp=Z,2.5nm,0.6s,baz=70,slow=12,SNR=5.1						
MAW	**Mawson**	75.31	201	P	**P**	**03 26 14.8**	**+0.4**
HRA	**Herat**	75.64	308	P	**P**	**03 26 16.7**	**-0.5**
HRA				IAmb	IAmb	03 26 18.5	
	comp=Z,18nm,1.2s						
MHTO	**MHTO**	75.69	294	P	**P**	**03 26 17.6**	**+0.1**
	SNR=14						
DQM	**DQM**	75.86	292	P	**P**	**03 26 18.9**	**+0.4**
SMDO	**Samad**	76.09	296	P	**P**	**03 26 20.4**	**+0.5**
BIDO	**Bidbid**	76.13	296	P	**P**	**03 26 21.0**	**+1.0**
BSY	**Bisya**	76.78	295	P	**P**	**03 26 24.2**	**+0.5**
HOQ	**Hoqain**	76.87	296	P	**P**	**03 26 25.1**	**+1.0**
SOHO	**SOHO**	77.69	296	*i* P	**P**	**03 26 28.9**	**+0.3**
	SNR=7.8						
SOHO	**SOHO**	77.69	296	P	**P**	**03 26 29.2**	**+0.5**
BRVK	**Borovoye**	77.74	328	P	**P**	**03 26 27.8**	**-0.5**
SOCY	**Socotra**	77.75	284	P	**P**	**03 26 29.4**	**+0.1**
SOCY				IAmb	IAmb	03 26 32.3	
	comp=Z,19nm,0.8s						
SOCY	**Socotra**	77.75	284	P	**P**	**03 26 29.3**	**+0.1**
DMTO	**DMTO**	77.81	290	P	**P**	**03 26 29.6**	**+0.2**
TIXI	**Tiksi**	78.07	360	P	**P**	**03 26 30.0**	**+0.3**
UOSS	**Minazif**	78.16	297	P	**P**	**03 26 31.6**	**+0.4**
UOSS	**Minazif**	78.16	297	P	**P**	**03 26 31.9**	**+0.6**
UOSS	**Minazif**	78.16	297	P	**P**	**03 26 31.9**	**+0.6**
HATD	**Hatta, Dubai**	78.20	297	*i* P	**P**	**03 26 32.3**	**+0.8**
	SNR=5.8						
HATD	**Hatta, Dubai**	78.20	297	P	**P**	**03 26 32.3**	**+0.8**
	SNR=5.5						
ASHO	**Ashiyiah**	78.23	297	*i* P	**P**	**03 26 32.4**	**+0.7**
	SNR=7.0						
ASHO	**Ashiyiah**	78.23	297	P	**P**	**03 26 32.4**	**+0.7**
	SNR=6.4						
MSFE	**Esma-Masafi**	78.30	297	*i* P	**P**	**03 26 33.2**	**+1.2**
	SNR=14						
MASF	**Masafi**	78.30	298	P	**P**	**03 26 33.3**	**+1.2**
	SNR=14						
BANOM	**Banah**	78.30	298	*i* P	**P**	**03 26 33.0**	**+1.0**
	SNR=14						
BANOM	**Banah**	78.30	298	P	**P**	**03 26 32.7**	**+0.6**
SHME	**Shamm**	78.47	298	*i* P	**P**	**03 26 33.7**	**+0.8**
	SNR=13						
SHME	**Shamm**	78.47	298	P	**P**	**03 26 34.0**	**+1.1**
	SNR=13						
NAZ	**Nazwa, Dubai**	78.65	297	P	**P**	**03 26 34.3**	**+0.4**
NAZ	**Nazwa, Dubai**	78.65	297	P	**P**	**03 26 34.6**	**+0.6**
FAQ	**Al Faqa, Dubai**	78.66	297	P	**P**	**03 26 34.5**	**+0.5**
FAQ	**Al Faqa, Dubai**	78.66	297	P	**P**	**03 26 34.6**	**+0.5**
DOK	**Doka**	78.75	290	P	**P**	**03 26 34.5**	**-0.1**
	SNR=11						
ASUD	**Al Ashush, Dub**	78.87	297	P	**P**	**03 26 36.0**	**+0.9**
ASUD	**Al Ashush, Dub**	78.87	297	P	**P**	**03 26 36.2**	**+1.0**
WHFO	**Wadi Hawf**	78.95	290	P	**P**	**03 26 35.4**	**-0.3**
	SNR=16						
ABTO	**Aybut**	79.30	289	P	**P**	**03 26 38.0**	**+0.4**
	SNR=6.2						
GEYT	**Alibeck**	79.88	310	P	**P**	**03 26 40.9**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=144,slow=8.5,SNR=7.8						
UNV	**Unalaska Valle**	80.19	33	P	**P**	**03 26 42.7**	**+1.2**
NRIK	**Noril'sk**	81.14	346	P	**P**	**03 26 46.7**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=182,slow=2.0,SNR=5.4						
ABKAR	**Akbulak array**	82.13	322	P	**P**	**03 26 51.5**	**-0.4**
AKTO	**Aktyubinsk**	83.69	322	P	**P**	**03 27 00.1**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=126,slow=7.8,SNR=4.9						
SYO	**Syowa Base**	84.02	201	⇑*e*PcP	**PcP**	**03 27 06.6**	**+1.8**
ARU	**Arti**	85.31	328	P	**P**	**03 27 07.2**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=359,slow=0.3,SNR=8.0						
ARU	**Arti**	85.31	328	P	**P**	**03 27 07.8**	**-0.1**
ANM	**Nome**	85.37	23	P	**P**	**03 27 09.2**	**+1.2**
RAYN	**Ar Rayn**	87.50	294	P	**P**	**03 27 19.9**	**+0.5**
RAYN				*i* P	**P**	**03 27 19.9**	**+0.5**
	SNR=7.5						
RAYN	**Ar Rayn**	87.50	294	P	**P**	**03 27 20.3**	**+0.8**
RAYN				IAmb	IAmb	03 27 21.1	
	comp=Z,9.9nm,0.9s						
OHAK	**Old Harbor**	88.40	32	P	**P**	**03 27 23.4**	**+0.7**
OHAK				IAmb	IAmb	03 27 42.6	
	comp=Z,41nm,1.6s						
KDAK	**Kodiak Island**	88.91	32	P	**P**	**03 27 24.5**	**-0.7**
	comp=Z,5.0nm,0.8s,baz=310,slow=7.9,SNR=1.5						
CCB	**Clear Creek Bu**	92.59	25	P	**P**	**03 27 41.1**	**-1.0**
ILAR	**Eielson Array**	93.00	25	P	**P**	**03 27 42.3**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=256,slow=4.5,SNR=11						
YKA	**Yellowknife Ar**	107.41	26	PKiKP	**PKiKP**	**03 32 55.5**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=325,slow=0.5,SNR=8.8						
VYHS	**Vyhne**	108.83	319	*e*PDIFF	**Pdif**	**03 28 59.1**	**+3.8**
GERES	**GERESS Array B**	112.05	320	PKiKP	**PKiKP**	**03 33 05.2**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=174,slow=2.5,SNR=3.8						
PDAR	**Pinedale Array**	116.65	45	PKP	**PKPdf**	**03 33 14.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=135,slow=0.6,SNR=4.8						
ANMO	**Albuquerque**	121.12	53	PKP	**PKPdf**	**03 33 23.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=190,slow=6.6,SNR=4.0						
ANMO	**Albuquerque**	121.12	53		**PKPdf**	**03 33 22.5**	**-1.0**
ULM	**Lac du Bonnet**	122.14	33	PKP	**PKPdf**	**03 33 24.1**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=304,slow=3.6,SNR=1.9						
ESDC	**Sonseca Array**	127.15	316	PP	PP	03 35 35.5	-0.1
	comp=Z,0.7nm,0.9s,baz=54,slow=6.9,SNR=5.5						
TORD	**Torodi Ar. Bea**	128.65	282	PKP	**PKPdf**	**03 33 38.0**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=70,slow=1.7,SNR=5.9						
TORD				SKPbc	SKPbc	03 36 40.0	
	comp=Z,1.5nm,0.7s,baz=60,slow=3.6,SNR=6.4						
DBIC	**Dimbokro**	135.09	273	PKP	**PKPdf**	**03 33 50.6**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=270,slow=5.9,SNR=4.0						
DBIC				SKPbc	**SKPbc**	**03 37 02.1**	**-1.8**
	comp=Z,5.9nm,0.8s,baz=90,slow=4.7,SNR=9.9						
DBIC	**Dimbokro**	135.09	273	PKPdf	**PKPdf**	**03 33 49.0**	**-1.4**
CPUP	**Villa Florida**	146.54	168	PKPbc	**PKPbc**	**03 34 12.3**	**0.0**
	comp=Z,6.2nm,0.9s,baz=199,slow=2.2,SNR=14						
CPUP				pPKPbc	pPKPbc	03 34 58.5	+0.2
	comp=Z,2.2nm,0.8s,baz=191,slow=3.6,SNR=2.6						
CPUP				SKPbc	**SKPbc**	**03 37 32.5**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=148,slow=2.4,SNR=4.1						
CPUP	**Villa Florida**	146.54	168	PKPbc	**PKPdf**	**03 34 11.7**	**+1.1**

IDC 05 03:23:59.2±3.1**, 32°.75S**×**178°.43W, h0**^{km}**, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.7**/27**, mbtmp3.7**/3**, ML3.6**/1 **Error ellipse: s-maj=73.2km s-min=45.9km az=119.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	6.58	212	Pn	Pn	03 25 36.4	-0.8
	1.2nm,0.3s,baz=308,slow=20,SNR=21						
URZ				Sn	Sn	03 26 48.6	-4.4
	1.3nm,0.3s,baz=123,slow=24,SNR=5.8						
ASAR	**Alice Springs**	42.67	270	P	P	03 31 57.8	0.0
	0.2nm,0.3s,baz=112,slow=8.0,SNR=4.6						
WRA	**Warramunga Arr**	43.87	275	P	P	03 32 07.5	0.0
	0.8nm,0.4s,baz=114,slow=7.8,SNR=12						
FINES	**FINESS Array B**	147.21	338	PKPbc	PKPbc	03 43 42.8	-0.8
	1.7nm,0.7s,baz=67,slow=4.7,SNR=5.0						

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*THE **05** 03:28:35.9, 38°.25N×20°.39E, h15*^{km}*, ML2.5/10, Error ellipse: s-maj=0.9km s-min=0.4km az=272.0*

*ATH **05** 03:28:36.0, 38°.25N×20°.39E, h16*^{km}*, ML2.5/4, Error ellipse: s-maj=1.7km s-min=0.9km az=268.0*

ISC 05 03:28:34.2±0.9**, 38°.25N**±0°.02×**20°.28E**±0°.04**, h19**^{km}±2^{km}**, n57,** σ**0**^{s}**.86**/95**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	0.07	127	P	**Pg**	**03 28 38.7**	**+1.0**
KEF3				S	**Sg**	**03 28 40.8**	**+0.7**
KEF3	**Kipouria, Keph**	0.07	127	P	**Pg**	**03 28 38.7**	**+1.0**
KEF3				S	**Sg**	**03 28 40.8**	**+0.7**
KEF3	**Kipouria, Keph**	0.07	127	P	**Pg**	**03 28 38.7**	**+1.0**
KEF3				S	**Sg**	**03 28 40.7**	**+0.6**
DMLN	**Damoulianata-K**	0.08	95	P	**Pg**	**03 28 38.7**	**+0.9**
DMLN				S	**Sg**	**03 28 40.9**	**+0.6**
DMLN	**Damoulianata-K**	0.08	95	P	**Pg**	**03 28 38.7**	**+0.9**
DMLN				S	**Sg**	**03 28 40.9**	**+0.6**
DMLN	**Damoulianata-K**	0.08	95	P	**Pg**	**03 28 38.7**	**+0.9**
DMLN				S	**Sg**	**03 28 40.6**	**+0.4**
	14µm,0.1s						
KEF4	**Livadi, Kephal**	0.12	84	P	**Pg**	**03 28 38.7**	**+0.5**
KEF4				S	**Sg**	**03 28 40.9**	**+0.1**
KEF4	**Livadi, Kephal**	0.12	84	P	**Pg**	**03 28 38.7**	**+0.5**
KEF4				S	**Sg**	**03 28 40.9**	**+0.1**
KEF4	**Livadi, Kephal**	0.12	84	P	**Pg**	**03 28 38.6**	**+0.5**
KEF4				S	**Sg**	**03 28 40.9**	**+0.1**
	20µm,0.2s						
LXR1	**Lixouri, Cepha**	0.13	109	P	**Pg**	**03 28 39.0**	**+0.7**
LXR1				S	**Sg**	**03 28 41.4**	**+0.3**
LXRA	**Lixouri, Kepha**	0.13	110	P	**Pg**	**03 28 38.9**	**+0.6**
LXRA				S	**Sg**	**03 28 41.3**	**+0.2**
LXRA	**Lixouri, Kepha**	0.13	110	P	**Pg**	**03 28 38.9**	**+0.6**
LXRA				S	**Sg**	**03 28 41.3**	**+0.2**
KEF5	**Kardakata, Kep**	0.15	78	P	**Pg**	**03 28 38.8**	**+0.2**
KEF5				S	**Sb**	**03 28 40.8**	**+1.5**
KEF5	**Kardakata, Kep**	0.15	78	P	**Pg**	**03 28 38.8**	**+0.2**
KEF5				S	**Sb**	**03 28 40.8**	**+1.5**
KEF5	**Kardakata, Kep**	0.15	78	P	**Pg**	**03 28 38.8**	**+0.2**
KEF5				S	**Sg**	**03 28 41.1**	**-0.5**
	7µm,0.1s						
ARGA	**Argostoli. Kep**	0.17	113	P	**Pg**	**03 28 39.1**	**+0.3**
ARGA				S	**Sb**	**03 28 41.5**	**+1.2**
ARGA	**Argostoli. Kep**	0.17	113	P	**Pg**	**03 28 39.1**	**+0.3**
ARGA				S	**Sb**	**03 28 41.5**	**+1.2**
ARG2	**Argostoli**	0.18	112	P	**Pg**	**03 28 39.1**	**+0.2**
ARG2				S	**Sb**	**03 28 41.7**	**+1.1**
VLS	**Valsamata**	0.26	105	P	**Pg**	**03 28 39.9**	**-0.2**
VLS				S	**Sb**	**03 28 43.1**	**-1.0**
VLS				AML	AML	03 28 43.2	
	comp=E,8883µm,0.1s						
VLS				AML	AML	03 28 43.2	
	comp=N,7964µm,0.1s						
VLS	**Valsamata**	0.26	105	P	**Pg**	**03 28 39.9**	**-0.2**
VLS				S	**Sb**	**03 28 43.1**	**-1.0**
VLS				AML	AML	03 28 43.2	
	comp=E,8883µm,0.1s						
VLS				AML	AML	03 28 43.2	
	comp=N,7964µm,0.1s						
VLS	**Valsamata**	0.26	105	P	**Pg**	**03 28 39.9**	**-0.2**
VLS				S	**Sb**	**03 28 43.1**	**-1.0**
	comp=N,4µm,0.1s						
FSK	**Fiskardo**	0.31	46	P	**Pg**	**03 28 41.2**	**+0.2**
FSK				S	**Sg**	**03 28 45.3**	**-0.3**
FSK				AML	AML	03 28 45.6	
	comp=N,1874µm,0.2s						
FSK				AML	AML	03 28 45.9	
	comp=E,5153µm,0.2s						
FSK	**Fiskardo**	0.31	46	P	**Pg**	**03 28 41.2**	**+0.2**
FSK				S	**Sg**	**03 28 45.3**	**-0.3**
FSK				AML	AML	03 28 45.6	
	comp=N,1874µm,0.2s						
FSK				AML	AML	03 28 45.9	
	comp=E,5153µm,0.2s						
FSK	**Fiskardo**	0.31	46	P	**Pg**	**03 28 41.2**	**+0.2**
FSK				S	**Sg**	**03 28 45.3**	**-0.3**
	comp=E,2µm,0.2s						
EVGI	**Lefkada island**	0.48	38	P	**Pg**	**03 28 44.2**	**+0.2**
EVGI				S	**Sg**	**03 28 51.0**	**+0.5**
EVGI	**Lefkada island**	0.48	38	P	**Pg**	**03 28 44.2**	**+0.2**
EVGI				S	**Sg**	**03 28 51.0**	**+0.5**
EVGI	**Lefkada island**	0.48	38	P	**Pg**	**03 28 44.1**	**+0.2**
EVGI				S	**Sg**	**03 28 51.0**	**+0.5**
	comp=E,238nm,0.1s						
VLMS	**Volimes, Zakyn**	0.48	140	P	**Pg**	**03 28 43.8**	**-0.1**
VLMS				S	**Sg**	**03 28 50.6**	**+0.1**
VLMS				AML	AML	03 28 51.9	
	comp=E,2159µm,0.2s						
VLMS				AML	AML	03 28 52.1	
	comp=N,1934µm,0.1s						
VLMS	**Volimes, Zakyn**	0.48	140	P	**Pg**	**03 28 43.8**	**-0.1**
VLMS				S	**Sg**	**03 28 50.6**	**+0.1**
VLMS				AML	AML	03 28 51.9	
	comp=E,2159µm,0.2s						
VLMS				AML	AML	03 28 52.1	
	comp=N,1934µm,0.1s						
VLMS	**Volimes, Zakyn**	0.48	140	P	**Pg**	**03 28 43.9**	**-0.1**
VLMS				S	**Sg**	**03 28 50.8**	**+0.3**
	comp=N,1µm,0.1s						
NYDR	**Nydri-Lefkada**	0.57	35	P	**Pb**	**03 28 45.6**	**0.0**
NYDR				S	**Sb**	**03 28 53.3**	**-0.1**
	comp=N,100nm,0.3s						
LKD2	**Lefkada island**	0.62	29	P	**Pb**	**03 28 46.8**	**+0.4**
LKD2	**Lefkada island**	0.62	29	P	**Pb**	**03 28 46.8**	**+0.4**
LKD2	**Lefkada island**	0.62	29	P	**Pb**	**03 28 46.8**	**+0.4**
LKD2				S	**Sg**	**03 28 56.0**	**+1.1**
	comp=N,130nm,0.5s						
PDO	**Prodromos**	0.79	63	P	**Pb**	**03 28 49.0**	**-0.5**
PDO				AML	AML	03 29 01.7	
	comp=E,206µm,0.6s						
PDO				AML	AML	03 29 06.2	
	comp=N,243µm,0.4s						
PDO	**Prodromos**	0.79	63	P	**Pb**	**03 28 49.0**	**-0.5**
PDO				AML	AML	03 29 01.7	
	comp=E,206µm,0.6s						
PDO				AML	AML	03 29 06.2	
	comp=N,243µm,0.4s						
PDO	**Prodromos**	0.79	63	P	**Pb**	**03 28 49.4**	**-0.1**
PDO				S	**Sb**	**03 29 00.3**	**+0.4**
	comp=N,198nm,0.6s						
RLS	**Riolos of Patr**	0.96	101	P	**Pb**	**03 28 52.4**	**+0.2**
DRO	**Drossia**	1.17	104	P	**Pn**	**03 28 55.8**	**+0.1**
DRO	**Drossia**	1.17	104	P	**Pn**	**03 28 55.8**	**+0.1**
DRO	**Drossia**	1.17	104	P	**Pn**	**03 28 55.8**	**+0.1**
EFP	**Efpalio**	1.29	81	P	**Pn**	**03 28 57.1**	**-0.2**
EFP	**Efpalio**	1.29	81	P	**Pn**	**03 28 57.1**	**-0.2**
ANX	**Ano Chora**	1.34	74	P	**Pn**	**03 28 58.5**	**+0.4**
ANX	**Ano Chora**	1.34	74	P	**Pn**	**03 28 58.5**	**+0.4**
ANX	**Ano Chora**	1.34	74	P	**Pn**	**03 28 58.7**	**+0.7**
AMT	**Artemida-Makis**	1.34	122	P	**Pb**	**03 28 58.9**	**+0.1**
AMT	**Artemida-Makis**	1.34	122	P	**Pb**	**03 28 58.9**	**+0.1**
AMT	**Artemida-Makis**	1.34	122	P	**Pb**	**03 28 58.9**	**+0.1**
SERG	**Sergoula**	1.41	83	P	**Pn**	**03 28 59.4**	**+0.4**
SERG	**Sergoula**	1.41	83	P	**Pn**	**03 28 59.4**	**+0.4**
KEK	**Kerkira**	1.51	346	P	**Pb**	**03 29 01.8**	**+0.1**
STON	**Ston**	5.02	338	*e*Pn	**Pn**	**03 29 48.9**	**+0.4**
STON				Sn	**Sn**	**03 30 43.9**	**-2.1**
MAKA	**Makarska**	5.61	335	*e*Pn	**Pn**	**03 29 57.6**	**+1.0**
MAKA				Sn	**Sn**	**03 30 57.9**	**-2.7**
HVAR	**Hvar**	5.72	331	*e*Pn	**Pn**	**03 29 58.4**	**+0.2**
HVAR				Sn	**Sn**	**03 31 00.3**	**-3.1**
ZIRJ	**Zirje**	6.44	328	*e*Pn	**Pn**	**03 30 10.8**	**+2.8**
ZIRJ				Sn	**Sn**	**03 31 18.2**	**-2.8**
KIJV	**Kijevo**	6.45	334	*e*Pn	**Pn**	**03 30 10.1**	**+1.8**
KIJV				Sn	**Sn**	**03 31 20.6**	**-0.8**

WEL 05 04:00:37.0, 42°S±1°×**17°4E**±°**, h39**^{km}±2^{km}**, M3.5**/21**, ML3.7**/21**, MLv3.5**/21**, Error ellipse: s-maj=0.0km s-min=0.0km az=118.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.15	284	P	Pn	04 00 44.0	-1.0
CMWZ				S	Sn	04 00 48.5	-2.9
BSWZ	**Blackbirch Sta**	0.40	280	P	Pn	04 00 47.0	+0.5
BSWZ				S	Sn	04 00 53.8	+0.7
TUWZ	**Tuamarina**	0.50	315	P	Pn	04 00 48.0	+0.3
TUWZ				S	Sn	04 00 55.7	+0.5
BHW	**Baring Head**	0.51	43	P	Pn	04 00 48.7	+0.8
BHW				S	Sn	04 00 56.8	+1.2
TCW	**Tory Channel**	0.58	350	P	Pn	04 00 49.3	+0.4
TCW				S	Sn	04 00 57.4	+0.1
PLWZ	**Palliser**	0.67	71	P	Pn	04 00 50.8	+0.7
MSWZ	**Moikau Station**	0.73	60	P	Pn	04 00 51.8	+0.9
CAW	**Cannon Point**	0.84	36	P	Pn	04 00 53.4	+1.0
PAWZ	**Paruwai Farm**	0.86	63	P	Pn	04 00 53.4	+0.6
KHZ	**Kahutara**	0.90	225	P	Pn	04 00 54.3	+1.0
KHZ				S	Sn	04 01 06.4	+1.3
NNZ	**Nelson**	0.96	306	P	Pn	04 00 54.8	+0.9
KIW	**Kapiti Island**	1.00	22	P	Pn	04 00 55.8	+1.2
MTW	**Mount Morrison**	1.03	53	P	Pn	04 00 55.6	+0.5
TRWZ	**Traveller**	1.04	68	P	Pn	04 00 55.5	+0.4
DUWZ	**D'Urville Isla**	1.05	339	P	Pn	04 00 56.6	+1.3
THZ	**Tophouse**	1.12	271	P	Pn	04 00 57.5	+1.1
THZ				S	Sn	04 01 11.1	+0.6
OGWZ	**Otaki Gorge**	1.13	31	P	Pn	04 00 57.4	+1.1
HOWZ	**Holdsworth Sta**	1.22	44	P	Pn	04 00 58.2	+0.6
TMWZ	**Te Maipa**	1.30	59	P	Pn	04 00 59.0	+0.3
MRZ	**Mangatainoka R**	1.43	39	P	Pn	04 01 01.2	+0.7
TIWZ	**Tintock**	1.50	48	P	Pn	04 01 01.8	+0.3
GVZ	**Greta Valley S**	1.56	220	P	Pn	04 01 02.8	+0.5
CPWZ	**Castlepoint**	1.61	58	P	Pn	04 01 03.3	+0.4
PRWZ	**Pori Road**	1.71	44	P	Pn	04 01 04.6	+0.4
QRZ	**Quartz Range**	1.71	304	P	Pn	04 01 06.3	+2.0
OHWZ	**Ohakea**	1.72	24	P	Pn	04 01 07.0	+2.5
POWZ	**Post Office Ro**	1.73	37	P	Pn	04 01 05.3	+0.7
BFZ	**Birch Farm**	1.77	52	P	Pn	04 01 04.8	-0.3
LTZ	**Lake Taylor**	1.87	237	P	Pn	04 01 07.4	+0.8
AMCZ	**Amberley**	1.90	222	P	Pn	04 01 07.4	+0.4
DSZ	**Denniston Nort**	1.95	270	P	Pn	04 01 09.3	+1.7
WAZ	**Wanganui**	2.08	12	P	Pn	04 01 12.6	+3.2
TSZ	**Takapari Road**	2.09	35	P	Pn	04 01 09.9	+0.4
OKCZ	**Okains Bay**	2.18	207	P	Pn	04 01 10.7	-0.1
PRHZ	**Porangahau**	2.27	49	P	Pn	04 01 11.5	-0.5
WPHZ	**Waipukurau**	2.31	43	P	Pn	04 01 12.8	+0.2
MQZ	**McQueen's Vall**	2.31	213	P	Pn	04 01 11.8	-0.7
OXZ	**Oxford**	2.33	228	P	Pn	04 01 12.5	-0.3
AKCZ	**Akaroa Harbour**	2.36	207	P	Pn	04 01 12.9	-0.4
INZ	**Inchbonnie**	2.39	246	P	Pn	04 01 14.6	+0.9
PXZ	**Pawanui**	2.56	48	P	Pn	04 01 15.0	-0.9
RACZ	**Rakaia**	2.56	220	P	Pn	04 01 15.4	-0.6
MOVZ	**Moawhango**	2.59	24	P	Pn	04 01 17.5	+1.0

BHHZ	Black Hill Sta	2.62	29	P	Pn	04 01 17.6	+0.8
WNVZ	Wahianoa	2.62	21	P	Pn	04 01 18.6	+1.6
KAHZ	Kahuranaki	2.73	44	P	Pn	04 01 17.6	-0.8
NGZ	Ngauruhoe	2.76	20	P	Pn	04 01 20.8	+1.9
OTVZ	Oturere	2.79	21	P	Pn	04 01 21.1	+1.8
KWHZ	Kaweka Forest	2.81	34	P	Pn	04 01 19.3	-0.2
WTVZ	West Tongariro	2.82	19	P	Pn	04 01 21.5	+1.8
ETVZ	East Tongariro	2.83	21	P	Pn	04 01 21.3	+1.5
TMVZ	Te Maari	2.84	21	P	Pn	04 01 21.5	+1.4
KRVZ	Karewarewa	2.85	20	P	Pn	04 01 22.2	+2.1
WACZ	Wakanui South	2.87	220	P	Pn	04 01 19.8	-0.4
MCHZ	McNeill Hill	2.92	37	P	Pn	04 01 20.5	-0.4
WVZ	Waitaha Valley	3.01	243	P	Pn	04 01 22.7	+0.6
BKZ	Black Stump Fm	3.06	32	P	Pn	04 01 22.5	-0.4
ARCZ	Arundel	3.21	227	P	Pn	04 01 24.8	-0.2
NMHZ	Naumai	3.25	35	P	Pn	04 01 25.2	-0.4
GCSZ	Gaunt Creek Bo	3.38	242	P	Pn	04 01 28.7	+1.5
MTHZ	Maungataniwha	3.47	33	P	Pn	04 01 28.1	-0.5
TMZ	Timaru	3.60	223	P	Pn	04 01 29.9	-0.3
FOZ	Fox Glacier	3.81	241	P	Pn	04 01 34.4	+1.2
LBZ	Lake Benmore	4.04	229	P	Pn	04 01 36.6	+0.3
ODZ	Otahua Downs	4.26	219	P	Pn	04 01 38.6	-0.7
RUGZ	Raukumara Rang	4.57	34	P	Pn	04 01 42.2	-1.5
HAZ	Te Kaha	4.79	34	P	Pn	04 01 45.2	-1.4
HHSZ	Highcliff Hill	4.94	213	P	Pn	04 01 48.5	-0.2
CTZ	Chatham Island	6.89	109	P	Pn	04 02 15.4	+0.1
CTZ				S	Sn	04 03 24.6	-7.8

NEIC ***05*** *04:12:45.4±1.4, 60°.21N±0°.04×153°.2W±0°.1, h143^{km}±4^{km}, Error ellipse: s-maj=7.9km s-min=5.5km az=105.0*

AEIC ***05*** *04:12:46.6±1.4, 60°.20N±0°.02×153°.1W±0°.1, h142^{km}±3^{km}, ML3.1/123, ML3.5/74(NEIC), Error ellipse: s-maj=7.5km s-min=2.9km az=82.0*

ANF ***05*** *04:12:48.4±0.6, 60°.40N×152°.68W, h155^{km}±4^{km}, ML3.5/12, ML3.6/12, Error ellipse: s-maj=5.1km s-min=5.0km az=168.0*

ISC 05 04:12:45.0±1.1, **60°.24N**±0°.04×**153°.11W**±0°.04, **h153**^{km}±7^{km}, **n140**, σ1^{s}.**16**/168, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	Iliamna Volcan	0.23	168		Pn	04 13 05.0	-0.8
IVE					Sn	04 13 20.7	-0.8
RED	Redoubt Volcan	0.25	43		Pn	04 13 05.1	-0.6
RED					Sn	04 13 20.0	-1.7
RDSO	Redoubt South	0.28	40		Pn	04 13 05.2	-0.7
ILS	Iliamna Low So	0.28	175		Pn	04 13 05.6	-0.3
RSO	Redoubt South	0.29	38		Pn	04 13 05.5	-0.6
NCT	North Crescent	0.34	16		Pn	04 13 05.6	-0.4
NCT					Sn	04 13 20.4	-1.9
DFR	Drift River	0.41	31		Pn	04 13 05.7	-0.6
DFR					Sn	04 13 21.2	-1.5
OPT	Oil Point	0.59	186		Pn	04 13 06.7	-0.5
AUL	Augustine Lava	0.88	191		Pn	04 13 08.6	-0.4
AUL					Sn	04 13 26.1	-1.2
AUW	Augustine West	0.89	192		Pn	04 13 08.7	-0.4
AUP	Augustine Pinn	0.89	190		Pn	04 13 08.9	-0.4
AUH	Augustine H	0.90	191		Pn	04 13 08.8	-0.4
CKT	Bend	1.06	24		Pn	04 13 10.8	+0.2
SPWE	Spurr West	1.07	14		Pn	04 13 11.1	+0.4
SPBG	Spurr Blockage	1.09	19		Pn	04 13 11.3	+0.5
SPBG					Sn	04 13 31.1	+0.5
SPCN	Chakachatna No	1.09	24		Pn	04 13 11.1	+0.4
CAPN	Captain Cook N	1.10	60	P	Pn	04 13 12.3	+1.5
	baz=240						
CAPN				S	Sn	04 13 32.9	+2.3
	baz=240						
CAPN	Captain Cook N	1.10	60		Pn	04 13 12.3	+1.5
CRP	Crater Peak	1.13	24		Pn	04 13 11.6	+0.3
CRP					Sn	04 13 32.0	+0.5
SPCP	Crater Peak Br	1.13	24		Pn	04 13 11.6	+0.4
SPCG	Spurr Capps Gl	1.18	26		Pn	04 13 11.9	+0.2
CNPM	China Poot	1.19	126		Pn	04 13 11.6	-0.1
CNPM					Sn	04 13 30.7	-1.3
BRLK	Bradley Lake	1.22	112		Pn	04 13 12.3	+0.4
BRLK				IAML		04 13 32.1	
	comp=E,556nm,0.2s						
BRSE	Bradley Lake S	1.29	112		Pn	04 13 12.8	+0.2
BRSE					Sn	04 13 32.7	-1.1
STLK	Strandline Lak	1.41	26		Pn	04 13 14.2	+0.4
SLKM	Skilak Lake	1.46	78		Pn	04 13 14.1	-0.3
SLKM					Sn	04 13 35.5	-1.3
SVW2	Sparrevohn	1.49	306		Pn	04 13 13.8	-0.7
FIS	Fire Island	1.69	56		Pn	04 13 17.7	+1.1
SUA	Susitna One	1.69	42		Pn	04 13 17.3	+0.5
SUA	Susitna One	1.69	42		Sn	04 13 41.6	+0.3
SUA				IAML		04 13 42.5	
	comp=N,561nm,0.5s						
O22K	Cooper Landing	1.70	80	P	Pn	04 13 16.8	0.0
	baz=262,SNR=9.4						
O22K				S	Sn	04 13 39.7	-1.6
	baz=262						
O22K	Cooper Landing	1.70	80		Pn	04 13 16.7	0.0
O22K					Sn	04 13 40.0	-1.2
SEW	Seward	1.83	93	Pn	Pn	04 13 18.6	+0.3
KAHC	Katmai Hardscr	1.87	212		Pn	04 13 18.3	-0.5
RC01	Rabbit Creek A	1.87	61	P	Pn	04 13 18.4	-0.2
	baz=243,SNR=10						
RC01				S	Sn	04 13 43.1	-1.5
	baz=243						
RC01	Rabbit Creek A	1.87	61		Pn	04 13 18.5	-0.2
RC01					Sn	04 13 43.9	-0.7
SKT	Skwentna	1.91	23	Pn	Pn	04 13 19.4	+0.3
KCG	Knife Ck. Glac	2.19	209		Pn	04 13 22.5	-0.1
KABU	Katmai Buttres	2.27	210		Pn	04 13 23.4	0.0
KABU					Sn	04 13 51.5	-1.6
KCE	Katmai Mt Cerb	2.27	209		Pn	04 13 23.8	+0.3
KABR	Katmai Barrier	2.32	205		Pn	04 13 23.8	-0.3
PMR	Palmer	2.37	53	Pn	Pn	04 13 23.5	-1.0
PMR				Sn	Sn	04 13 53.1	-1.9
PMR				IAML		04 13 55.2	
	comp=N,153nm,0.3s						
ANCK	Angle Creek	2.38	212		Pn	04 13 24.6	-0.2
PWL	Port Wells	2.44	73		Pn	04 13 24.7	-0.8
KDAK	Kodiak Island	2.48	173	Pn	Pn	04 13 24.3	-1.6
KDAK	Kodiak Island	2.48	173	IAML		04 13 55.8	
	comp=N,118nm,0.5s						
KDAK				IAML		04 13 56.1	
	comp=N,94nm,0.5s						
GHO	Glory Hole Cre	2.56	51	Pn	Pn	04 13 26.2	-0.6
GHO				IAML		04 13 58.8	
	comp=E,244nm,0.8s						
GHO				IAML		04 13 58.9	
	comp=N,209nm,0.6s						
KNK	Knik Glacier	2.57	61	Pn	Pn	04 13 25.6	-1.3
KNK				IAML		04 13 59.6	
	comp=N,216nm,0.5s						
KNK				IAML		04 14 00.1	
	comp=E,276nm,0.3s						
CUT	Chulitna	2.57	31	P	Pn	04 13 27.4	+0.5
	baz=213,SNR=7.5						
CUT				S	Sn	04 13 58.9	-0.5
	baz=213						
CUT	Chulitna	2.57	31		Pn	04 13 27.6	+0.7
PPLA	Purkeypile	2.70	9	Pn	Pn	04 13 29.7	+0.9
SML	Sawmill	2.81	54	Pn	Pn	04 13 29.2	-0.8
SML				IAML		04 14 03.8	
	comp=N,168nm,0.6s						
SML				IAML		04 14 04.7	
	comp=E,104nm,0.4s						
TT01	Tatalina	3.02	334		Pn	04 13 32.5	0.0
OHAK	Old Harbor	3.03	182	Pn	Pn	04 13 30.0	-2.7
TTA	Tatalina	3.04	334	Pn	Pn	04 13 32.1	-0.8
GLI	Glacier Island	3.04	75	Pn	Pn	04 13 32.6	-0.2
GLI				IAML		04 14 10.4	
	comp=N,103nm,0.5s						
GLI				IAML		04 14 11.8	
	comp=E,127nm,0.3s						
SCM	Sheep Creek Mo	3.24	58	Pn	Pn	04 13 34.5	-0.9
SCM				IAML		04 14 14.1	
	comp=E,162nm,0.7s						
SCM				IAML		04 14 15.9	
	comp=N,91nm,0.4s						
HIN	Hinchinbrook I	3.29	84	Pn	Pn	04 13 36.1	0.0
HIN				Sn	Sn	04 14 14.7	-1.1
HIN				IAML		04 14 16.1	
	comp=E,141nm,0.5s						
HIN				IAML		04 14 16.3	
	comp=N,133nm,1.2s						
WAT7	Susitna Watana	3.31	36		Pn	04 13 37.0	+0.6
FID	Port Fidalgo	3.32	78	Pn	Pn	04 13 36.7	+0.3
FID				Sn	Sn	04 14 13.7	-2.7
FID				IAML		04 14 16.1	
	comp=N,163nm,0.3s						
FID				IAML		04 14 16.2	
	comp=E,170nm,0.3s						
WAT1	Susitna Watana	3.39	38		Pn	04 13 37.6	+0.2
KTH	Kantishna Hill	3.48	16	Pn	Pn	04 13 38.5	0.0
WAT2	Susitna Watana	3.48	36		Pn	04 13 38.8	+0.2
TRF	Thorofare Moun	3.49	21	Pn	Pn	04 13 39.0	+0.3
TRF				IAML		04 14 24.4	
	comp=E,42nm,0.6s						
WAT6	Susitna Watana	3.49	45		Pn	04 13 38.7	0.0
EYAK	Cordova Ski Ar	3.67	82	Pn	Pn	04 13 40.8	0.0
CHUM	Lake Minchumin	3.68	6		Pn	04 13 41.9	+1.0
KLU	Klutina	3.73	67	Pn	Pn	04 13 41.3	-0.5
RND	Reindeer	3.77	31	Pn	Pn	04 13 42.2	+0.1
M24K	Tolsona, Glenn	3.85	58	P	Pn	04 13 43.6	+0.4
	baz=243,SNR=7.7						
M24K				S	Sn	04 14 29.1	+0.6
	baz=243						
M24K	Tolsona, Glenn	3.85	58	Pn	Pn	04 13 43.1	-0.1
M24K				IAML		04 14 32.8	
	comp=N,80nm,1.1s						
BPAW	Bear Paw Mtn.	4.00	14	Pn	Pn	04 13 45.9	+0.7
MCK	McKinley	4.02	28	P	Pn	04 13 46.3	+0.9
	baz=211,SNR=11						
MCK				S	Sn	04 14 29.9	-2.6
	baz=211						
MCK	McKinley	4.02	28		Pn	04 13 46.5	+1.1
PS12	TAPS Pump St12	4.09	69		Pn	04 13 47.4	+1.0
PS11	TAPS Pump St11	4.13	60		Pn	04 13 46.8	-0.1
GOAT	Goat Mountain	4.17	82		Pn	04 13 48.3	+0.8
RAGM	Ragged Mountai	4.20	84	Pn	Pn	04 13 48.1	+0.3
BMRM	Bremner River	4.26	76		Pn	04 13 49.3	+0.8
BWN	Browne	4.30	22	Pn	Pn	04 13 50.2	+1.2
BWN				IAML		04 15 03.7	
	comp=N,40nm,2.4s						
BWN				IAML		04 16 04.1	
	comp=E,30nm,2.8s						
KAIM	Kayak Island	4.37	90	Pn	Pn	04 13 50.6	+0.7
N25K	Chitina, Valde	4.38	68	P	Pn	04 13 50.1	0.0
	baz=255						
N25K				S	Sn	04 14 39.0	-1.9
	baz=255						
N25K	Chitina, Valde	4.38	68	Pn	Pn	04 13 50.7	+0.6
N25K				IAML		04 14 42.3	
	comp=E,38nm,0.4s						
N25K				IAML		04 14 43.4	
	comp=N,55nm,0.5s						
HMT	Hamilton	4.41	85	Pn	Pn	04 13 51.1	+0.6
HMT				IAML		04 14 48.2	
	comp=N,87nm,1.0s						
PAX	Paxson	4.56	50	Pn	Pn	04 13 52.9	+0.3
GLB	Gilahina Butte	4.71	71	Pn	Pn	04 13 55.4	+0.9
GLB				IAML		04 14 49.8	
	comp=E,21nm,0.5s						
GLB				IAML		04 14 49.9	
	comp=N,27nm,0.3s						
NEA2	Nenana	4.75	22	P	Pn	04 13 55.7	+0.7
	baz=205,SNR=26						
NEA2				S	Sn	04 14 46.8	-2.9
	baz=205						
NEA2	Nenana	4.75	22		Pn	04 13 55.8	+0.7
CHGN	Chignik	4.84	218	Pn	Pn	04 13 55.2	-1.0
CHGN				IAML		04 15 57.8	
	comp=E,52nm,0.1s						
CHGN				IAML		04 16 10.2	
	comp=N,36nm,4.9s						
VRDI	Verde Repeater	4.84	74	Pn	Pn	04 13 57.3	+0.9
VRDI				IAML		04 14 52.8	
	comp=N,30nm,0.6s						
VRDI				IAML		04 14 53.7	
	comp=E,18nm,0.4s						
WRH	Wood River Hil	4.85	27	Pn	Pn	04 13 56.7	+0.5
WRH				IAML		04 14 55.2	
	comp=E,22nm,3.9s						
MLY	Manley	4.93	12	P	Pn	04 13 57.6	+0.2
	baz=194,SNR=8.1						
MLY	Manley	4.93	12		Pn	04 13 58.1	+0.7
CRQM	Cirque	4.96	80	Pn	Pn	04 13 58.6	+0.7
CCB	Clear Creek Bu	5.06	27		Pn	04 13 59.4	+0.3
CCB				IAML		04 14 58.8	
	comp=E,16nm,0.9s						
MCARA	McCarthy VSAT	5.07	73	Pn	Pn	04 14 00.6	+1.4
MCARA				IAML		04 15 02.4	
	comp=N,45nm,0.4s						
MCARA				IAML		04 15 02.0	
	comp=E,43nm,0.4s						
HDA	Harding Lake	5.07	32	P	Pn	04 13 59.7	+0.5
	baz=217,SNR=14						
HDA				S	Sn	04 14 54.7	-2.5
	baz=217						
HDA				S	Sn	04 14 54.7	-2.5
	baz=217						
HDA	Harding Lake	5.07	32	Pn	Pn	04 13 59.8	+0.5
TGL	Tana Glacier	5.11	80	Pn	Pn	04 14 01.1	+1.2
TGL				IAML		04 14 59.0	
	comp=N,47nm,0.5s						
TGL				IAML		04 15 01.3	
	comp=E,37nm,0.5s						
PS08	TAPS Pump Stn8	5.21	31		Pn	04 14 01.5	+0.5
I23K	Minto, Yukon-K	5.22	18	P	Pn	04 14 01.7	+0.6
	baz=201,SNR=17						
I23K	Minto, Yukon-K	5.22	18	Pn	Pn	04 14 02.3	+1.2
RIDG	Independent Ri	5.24	44	Pn	Pn	04 14 02.7	+1.1
MDM	Murphy Dome	5.25	23	Pn	Pn	04 14 02.2	+0.7
TCOL	CIGO, UAF Yank	5.25	25	P	Pn	04 14 01.6	+0.2
	baz=210,SNR=8.7						
TCOL				S	Sn	04 14 59.8	-1.5
	baz=210						
TCOL	CIGO, UAF Yank	5.25	25	Pn	Pn	04 14 01.9	+0.5
COLA	College	5.25	25	Pn	Pn	04 14 01.9	+0.4
PTPK	Patty Peak	5.32	75		Pn	04 14 04.2	+1.5
KIAG	Kiagna River	5.35	78		Pn	04 14 03.9	+0.9
ISLE	Juniper Island	5.35	81	Pn	Pn	04 14 04.1	+1.0
BALM	Baldy	5.36	77	Pn	Pn	04 14 04.5	+1.3
IL31		5.38	30	Pn	Pn	04 14 03.9	+0.6
DOT	Dot Lake	5.47	47	Pn	Pn	04 14 05.1	+0.6
POKR	Poker Plat Res	5.55	26	P	Pn	04 14 06.0	+0.5
	baz=210,SNR=8.8						
POKR				S	Sn	04 15 06.5	-2.1
	baz=210						
POKR	Poker Plat Res	5.55	26	Pn	Pn	04 14 06.0	+0.5
MESA	MESA	5.57	86	Pn	Pn	04 14 07.5	+1.5
GRNC	Granite Creek	5.64	80		Pn	04 14 08.3	+1.3
YAH	Yahtse	5.66	84	Pn	Pn	04 14 09.1	+1.9
SCRK	Sand Creek	5.69	45	P	Pn	04 14 07.7	+0.1
	baz=232,SNR=7.5						
SCRK				S	Sn	04 15 09.0	-3.1
	baz=232						
SCRK	Sand Creek	5.69	45		Pn	04 14 07.8	+0.3
BARN	Barnard Glacie	5.69	77	Pn	Pn	04 14 09.5	+1.9
IM01	Indian Mountai	5.79	358		Pn	04 14 09.7	+1.0
CTGM	Chitina Glacie	5.85	78	Pn	Pn	04 14 11.5	+1.8
TABL	Table Mountain	5.95	83	Pn	Pn	04 14 12.5	+1.5
LOGN	Logan Glacier	6.01	79		Pn	04 14 12.9	+1.1
YUK2	White River	6.17	70		Pn	04 14 15.2	+1.3
PCA	Pinnacle	6.42	86	Pn	Pn	04 14 19.0	+1.8
PNL	Peninsula	6.91	89		Pn	04 14 24.2	+0.5
COLD	Coldfoot	7.13	9	P	Pn	04 14 27.4	+0.9
	baz=192						
COLD	Coldfoot	7.13	9	Pn	Pn	04 14 28.1	+1.5
ANM	Nome	7.15	313	Pn	Pn	04 14 28.8	+2.0
EGAK	Eagle	7.16	45	Pn	Pn	04 14 27.5	+0.6
DAWY	Dawson	7.48	53	Pn	Pn	04 14 31.7	+0.5
HYT	Haines Junctio	7.72	79	Pn	Pn	04 14 36.5	+1.9
BM03	Burnt Mountain	8.12	24		Pn	04 14 40.0	+0.2
TOLK	Toolik Lake Re	8.57	9	Pn	Pn	04 14 47.9	+2.2
WHY	Whitehorse	9.02	79	Pn	Pn	04 14 54.9	+3.1
EPYK	Eagle Plains	9.58	43	Pn	Pn	04 15 03.5	+4.4
NIKH	Nikolski High	11.30	237	Pn	Pn	04 15 22.8	+0.9
INK	Inuvik	11.68	38		Pn	04 15 26.7	+0.1

IDC 05 04:24:03.0±0.8, **56°.53S**×**150°.79W**, **h0**^{km}, **mb4.0**/5, **mb1 4.3**/5, **mb1mx3.9**/24, **mbtmp4.0**/5, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.9**/16, **Error ellipse: s-maj=109.5km s-min=22.3km az=8.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT	Papeete	38.90	2	LR	LR	04 42 48.6	
	comp=Z,50nm,21.5s,baz=186,slow=29						
STKA	Stephens Creek	51.90	268	P	P	04 33 14.2	+1.0
	2.1nm,0.7s,baz=158,slow=10,SNR=3.6						
PLCA	Paso Flores	52.23	109	P	P	04 33 16.1	+0.5
	2.2nm,1.0s,baz=216,slow=5.1,SNR=3.9						
H03S2	Juan Fernandez	52.77	97	T	T	05 30 17.2	
	baz=219,slow=74,SNR=42						
H03S1	Juan Fernandez	52.78	97	T	T	05 30 16.4	
	baz=219,slow=74,SNR=39						
H03S3	Juan Fernandez	52.79	97	T	T	05 30 15.6	
	baz=219,slow=74,SNR=40						
H03N3	Juan Fernandez	53.06	96	T	T	05 30 35.2	
	baz=222,slow=72,SNR=142						
H03N2	Juan Fernandez	53.07	96	T	T	05 30 32.4	
	baz=222,slow=72,SNR=152						
H03N1	Juan Fernandez	53.08	96	T	T	05 30 38.4	
	baz=222,slow=72,SNR=8.4						
ASAR	Alice Springs	62.54	268	P	P	04 34 28.1	-0.3
	1.2nm,0.5s,baz=138,slow=6.6,SNR=11						
H01W1	Cape Leeuwin H	64.28	245	T	T	05 44 45.3	
	baz=142,slow=76,SNR=9.3						
H01W2	Cape Leeuwin H	64.29	245	T	T	05 44 46.8	
	baz=142,slow=76,SNR=9.0						
H01W3	Cape Leeuwin H	64.30	245	T	T	05 44 47.6	
	baz=142,slow=76,SNR=8.0						
WRA	Warramunga Arr	65.27	271	P	P	04 34 46.1	-0.4
	0.7nm,0.9s,baz=147,slow=5.5,SNR=5.9						
CPUP	Villa Florida	70.29	108	P	P	04 35 17.9	-0.2
	2.1nm,0.9s,baz=237,slow=8.3,SNR=4.1						
H10S3	ASCENSION HYDR	105.42	135	T	T	06 36 20.0	
	baz=16,slow=74,SNR=9.2						
H10S2	ASCENSION HYDR	105.42	135	T	T	06 36 17.3	
	baz=204,slow=74,SNR=5.4						
H10N3	ASCENSION HYDR	106.50	134	T	T	06 37 40.5	
	baz=203,slow=75,SNR=40						
H10N1	ASCENSION HYDR	106.50	134	T	T	06 37 40.8	
	baz=203,slow=75,SNR=32						
H10N2	ASCENSION HYDR	106.52	134	T	T	06 37 41.9	
	baz=203,slow=75,SNR=36						
ILAR	Eielson Array	121.01	2	PKP	PKPdf	04 42 55.8	0.0
	1.1nm,0.9s,baz=216,slow=1.8,SNR=9.3						
MKAR	Makanchi Array	146.47	276	PKPbc	PKPbc	04 43 44.7	-0.3
	4.1nm,0.8s,baz=117,slow=4.5,SNR=48						
ZALV	Zalesovo Beam	148.92	289	PKPbc	PKPbc	04 43 50.6	-0.7
	2.0nm,0.8s,baz=108,slow=3.5,SNR=7.8						
KURBB	Kurchatov Arra	150.67	280	PKPbc	PKPbc	04 43 55.2	-0.6
	2.1nm,0.8s,baz=124,slow=2.1,SNR=16						
ESDC	Sonseca Array	152.53	114	PKPbc	PKPbc	04 43 59.7	-0.9
	0.7nm,1.1s,baz=236,slow=2.6,SNR=2.9						

KRNET ***05*** *04:25:41.7±0.1, 41°.48N×72°.72E, h15^{km}, mb2.8*

SOME ***05*** *04:25:42.4, 41°.50N×72°.73E, h10^{km}*

NNC ***05*** *04:25:45.4±1.0, 41°.61N×72°.70E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=9.7km s-min=3.8km az=170.0*

ISC 05 04:25:41.4±0.9, **41°.48N**±0°.02×**72°.73E**±0°.02, **h13**^{km}±8^{km}, **n52**, σ1^{s}.**09**/84, **22C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.24	129	⇓iP	Pg	04 25 46.8	0.0
	baz=28						
ARSB				⇓iS	Sg	04 25 50.7	+0.3
	baz=28						
OHH	Osh	0.95	177	⇑iP	Pb	04 25 59.9	+0.1
	baz=77						
OHH				⇑iS	Sb	04 26 12.4	0.0
	baz=77						
AML	Almayashu	0.97	48	⇑iP	Pb	04 26 00.2	-0.2
	baz=48						
AML				⇑iS	Sb	04 26 11.6	-1.6
	baz=48						
AML	Almayashu	0.97	48	P	Pn	04 26 01.1	0.0
	SNR=15						
MNAS	Manas	1.02	351	⇑iP	Pb	04 26 01.1	0.0
	baz=51						
MNAS				⇑iS	Sg	04 26 14.6	0.0
	baz=51						
TRKS	Terek-Say	1.20	273	⇑iP	Pn	04 26 03.4	-0.6
	baz=70						
TRKS				⇑iS	Sb	04 26 18.5	-0.9
	baz=70						
ARLS	Aral	1.25	72	⇑iP	Pb	04 26 05.3	+0.3
	baz=72						
ARLS				⇑iS	Sn	04 26 22.1	+0.5
	baz=72						
MRKS	Merke	1.32	16	eP	Pg	04 26 07.7	+1.0
	8.8nm,0.1s						
MRKS				eS	Sg	04 26 25.3	+1.3
	25nm,0.2s						
MRKS	Merke	1.32	16	P	Pg	04 26 07.8	+1.0
	8.3nm,0.1s						
MRKS				S	Sg	04 26 25.3	+1.3
	25nm,0.3s						
UCH	Uchtor	1.53	60	⇓iP	Pb	04 26 10.2	+0.3
	baz=60						
UCH				⇓iS	Sb	04 26 30.3	+1.0
	baz=60						
UCH	Uchtor	1.53	60	P	Pg	04 26 11.4	+0.6
	SNR=18						
SFK	Sufi-Kurgan	1.58	158	⇑iP	Pb	04 26 11.0	+0.4
	baz=58						
SFK				⇑iS	Sg	04 26 32.3	+0.1
	baz=58						
AAK	Ala-Archa	1.75	48	⇑iP	Pb	04 26 13.7	+0.2
	baz=48						
AAK				⇑iS	Sg	04 26 37.1	-0.7
	baz=48						
AAK	Ala-Archa	1.75	48	P	Pg	04 26 16.3	+1.2
	SNR=14						
AAK	Ala-Archa	1.75	48	⇑P	Pg	04 26 15.8	+0.7
	3.6nm,0.3s						
AAK				⇑S	Sg	04 26 39.5	+1.7
	19nm,0.7s						
KBK	Karagaybulak	2.03	54	P	Pg	04 26 21.0	+0.6
	SNR=6.7						
BTK	Batken	2.03	226	⇓eP	Pb	04 26 17.5	-0.7
	baz=26						
BTK				⇓iS	Sb	04 26 43.2	-0.2
	baz=26						
DRK	Karamyk	2.12	200	⇓iP	Pb	04 26 18.8	-1.0
	baz=99						
DRK				⇓iS	Sb	04 26 45.6	-0.5
	baz=99						
IUG	Iuzhnay	2.12	289	eP	Pg	04 26 22.2	0.0
	19nm,0.2s						
IUG				eS	Sg	04 26 49.9	+0.2
	77nm,0.3s						
IUG	Iuzhnay	2.12	289	Pg	Pg	04 26 22.2	0.0
	19nm,0.2s						
IUG				Lg	Lg	04 26 49.9	
	77nm,0.3s						
CHMS	Chumysh	2.14	44	⇓iP	Pb	04 26 19.3	-0.7
	baz=44						
CHMS				⇓iS	Sb	04 26 46.6	+0.2
	baz=44						
CHMS	Chumysh	2.14	44	P	Pg	04 26 22.9	+0.5
	SNR=9.3						
USP	Ospenovka	2.22	36	⇑iP	Pb	04 26 20.3	-1.1
	baz=36						
USP				⇑iS	Sb	04 26 48.1	-0.6
	baz=36						
USP	Ospenovka	2.22	36	P	Pg	04 26 23.7	-0.2
	SNR=13						
KK31	Karatay Array	2.31	315	Pn	Pb	04 26 24.2	+1.2
	2.6nm,0.3s,baz=131,slow=16,SNR=25						
KK31				Lg	Lg	04 26 55.4	
	10nm,0.4s,baz=137,slow=26,SNR=18						
SGDS	Sogindy	2.42	35	Pg	Pg	04 26 27.7	-0.2
	4.8nm,0.3s						
SGDS				Lg	Lg	04 26 59.6	
	32nm,0.6s						
TKM2	Tokmak 2	2.57	55	⇑eP	Pb	04 26 25.5	-2.0
	baz=55						
TKM2				⇑iS	Sb	04 26 57.3	-1.8
	baz=55						
TKM2	Tokmak 2	2.57	55	P	Pg	04 26 29.8	-0.9
	SNR=25						
TKM2	Tokmak 2	2.57	55	⇑Pn	Pg	04 26 30.0	-0.8
	8.4nm,0.6s						
TKM2				⇑Lg	Lg	04 27 05.0	
	37nm,0.9s						
BOOM	Boomskoye usch	2.60	66	⇓eP	Pn	04 26 25.7	+2.4
	baz=66						
BOOM				⇓iS	Sb	04 26 57.9	-1.9
	baz=66						
BRLS	Borolday	2.65	307	eP	Pg	04 26 31.5	-0.7
	40nm,0.4s						
BRLS				eS	Sg	04 27 05.7	-0.8
	35nm,0.4s						

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BRLS  Borolday            2.65 307   Pg     Pg      04 26 31.5 -0.7
      40nm,0.4s
BRLS                                 Lg     Lg      04 27 05.7
      35nm,0.4s
ULHL  Ulahol              2.73  73⇓iP     Pn      04 26 27.7 +2.5
      baz=73
ULHL                               ⇓eS     Sn      04 27 00.7 +2.6
      baz=73
ULHL  Ulahol              2.73  73   P      Pg      04 26 32.6 -1.2
      SNR=8.2
DGS   Degeres             2.86  51  eP      Pg      04 26 35.3 -1.0
      8.0nm,0.6s
DGS                                 eS      Sg      04 27 12.2 -1.2
      22nm,0.6s
DGS   Degeres             2.86  51   Pg     Pg      04 26 35.3 -1.0
      7.2nm,0.6s
DGS                                  Lg     Lg      04 27 12.2
      22nm,0.7s
KST   Kastek              2.86  56  eP      Pg      04 26 35.8 -0.6
      17nm,0.2s
KST                                 eS      Sg      04 27 13.0 -0.4
      44nm,0.5s
KST   Kastek              2.86  56   Pg     Pg      04 26 35.8 -0.6
      17nm,0.4s
KST                                  Lg     Lg      04 27 13.0
      44nm,0.5s
KRBS  Karabastau          3.10  43  eP      Pg      04 26 39.8 -1.1
      4.3nm,0.4s
KRBS                                eS      Sg      04 27 19.6 -1.5
      8.5nm,0.4s
KRBS  Karabastau          3.10  43   Pg     Pg      04 26 39.8 -1.1
      4.3nm,0.4s
KRBS                                 Lg     Lg      04 27 19.6
      8.5nm,0.4s
MTBS  Maitube             3.20  58  eP      Pg      04 26 42.6 -0.2
      3.9nm,0.2s
MTBS                                eS      Sg      04 27 25.1 +0.9
      20nm,0.4s
IZV   Izvestkoviy         3.28  60  eP      Pg      04 26 42.9 -1.3
      9.1nm,0.5s
IZV                                 eS      Sg      04 27 25.1 -1.6
      20nm,0.6s
IZV   Izvestkoviy         3.28  60   Pg     Pg      04 26 42.9 -1.3
      9.2nm,0.7s
IZV                                  Lg     Lg      04 27 25.1
      20nm,0.8s
TNSS  Tian-Shan           3.50  62  eP      Pg      04 26 47.4 -1.0
      4.6nm,0.3s
TNSS                                eS      Sg      04 27 33.5 -0.2
      5.7nm,0.5s
KUU   Kurty               3.59  47  eP      Pg      04 26 49.2 -1.0
      1.9nm,0.4s
KUU                                 eS      Sg      04 27 35.8 -0.9
      14nm,0.3s
KUU   Kurty               3.59  47   Pg     Pg      04 26 49.2 -1.0
      1.9nm,0.6s
KUU                                  Lg     Lg      04 27 35.8
      14nm,0.6s
MDOK  Medeo               3.62  61  eP      Pg      04 26 50.0 -0.7
      5.4nm,0.5s
MDOK                                eS      Sg      04 27 37.5 -0.1
      9.1nm,0.5s
KTBS  Karatobe            3.67  51  eP      Pg      04 26 50.6 -1.2
      2.1nm,0.4s
KTBS                                eS      Sg      04 27 38.2 -1.2
      23nm,0.5s
KTBS  Karatobe            3.67  51   Pg     Pg      04 26 50.6 -1.2
      1.5nm,0.3s
KTBS                                 Lg     Lg      04 27 38.2
      23nm,0.5s
CHKK  Chushkaly           3.94  51  eP      Pg      04 26 55.3 -1.5
      2.2nm,0.3s
CHKK                                eS      Sg      04 27 46.8 -1.0
      13nm,0.3s
ARXS  Arharly             4.64  52  eP      Pg      04 27 08.2 -2.0
      5.7nm,0.6s
ARXS                                eS      Sg      04 28 08.7 -1.6
      8.7nm,0.7s
ARXS  Arharly             4.64  52   Pg     Pg      04 27 08.2 -2.0
      5.7nm,0.6s
ARXS                                 Lg     Lg      04 28 08.7
      8.7nm,0.7s
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*IDC **05** 04:33:47.2±0.7, 51°.79N×175°.43W, h0^{km}, mb3.8/14, mb1 4.1/16, mb1mx3.8/52, mbtmp3.8/16, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/52, Error ellipse: s-maj=26.6km s-min=13.9km az=165.0*

*AEIC **05** 04:33:53.4±2.9, 51°.62N±0°.07×175°.22W±0°.07, h26^{km}±5^{km}, ML4.0/27, mb4.1/74(NEIC), Error ellipse: s-maj=11.3km s-min=3.9km az=155.0*

*NEIC **05** 04:33:54.8±1.9, 51°.77N±0°.07×175°.20W±0°.03, h50^{km}±6^{km}, Error ellipse: s-maj=10.5km s-min=2.4km az=187.0*

ISC 05 04:33:54.2±0.6**, 51°.69N**±0°.09×**175°.23W**±0°.04**, h50**^{km}**,**
n135, σ1^{s}.**20**/130**, mb4.0**/28**, Andreanof Islands**

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Code  Station Name         Δ°   AZ°   Phase ID         Time     Res
                                    Op      ISC      h  m  s   ISC
GSMY  Great Sitkin M      0.62 305          Pn      04 34 06.6 -0.3
GSTR  Great Sitkin T      0.66 309          Pn      04 34 07.4  0.0
GSCK  Great Sitkin C      0.66 300          Pn      04 34 07.3 -0.2
GSCK                                        Sn      04 34 17.0 -0.1
GSTD  Great Sitkin T      0.68 304          Pn      04 34 07.3 -0.4
GSSP  Great Sitkin S      0.71 305          Pn      04 34 08.2 +0.1
ETKA  Kagalaska Isla      0.75 284          Pn      04 34 07.9 -0.7
ATKA  Atka Island         0.82  51  Pn      Pn      04 34 08.3 -1.2
ADAG  Mount Adagdak       0.90 290          Pn      04 34 10.9 +0.3
KOWE  Korovin West        0.91  41          Pn      04 34 10.7  0.0
KOFP  Korovin Flat P      0.92  49          Pn      04 34 10.4 -0.4
ADK   Adak                0.92 283  Pn      Pn      04 34 10.2 -0.6
KIKV  Kanaga Island       1.22 280          Pn      04 34 14.7 -0.2
KICM  Kanaga Island       1.24 282          Pn      04 34 15.3 +0.2
KICM                                        Sn      04 34 31.4 +0.6
KIMD  Kanaga Island       1.25 274          Pn      04 34 14.9 -0.3
TAFP  Tanaga Falls P      1.72 278          Pn      04 34 22.3 +0.6
TAFP                                        Sn      04 34 43.4 +0.9
TASE  Tanaga Southea      1.75 276          Pn      04 34 22.6 +0.5
GALAA Gareloi Lava P      2.20 273          Pn      04 34 28.9 +0.6
CEAP  Semis' Anvil P      3.24 278          Pn      04 34 43.8 +1.4
CESW  Semis' Southwe      3.24 276          Pn      04 34 43.7 +1.2
AMKA  Amchitka            3.43 267  Pn      Pn      04 34 45.1  0.0
LSPA  Little Sitkin       3.85 276          Pn      04 34 52.5 +1.6
LSNW  Little Sitkin       3.89 277          Pn      04 34 53.4 +2.0
NIKH  Nikolski High       4.12  69  Pn      Pn      04 34 55.8 +1.3
UNV   Unalaska Valle      5.72  64  Pn      Pn      04 35 19.2 +2.8
SPIA  Saint Paul Isl      6.22  26  Pn      Pn      04 35 24.9 +1.6
OHAK  Old Harbor         13.88  58  Pn      Pn      04 37 05.1 -2.8
ANM   Nome               13.90  18  Pn      Pn      04 37 10.8 +2.7
KDAK  Kodiak Island      14.39  56  Pn      Pn      04 37 12.1 -2.7
      0.3nm,0.3s,baz=317,slow=2.2,SNR=21
KDAK  Kodiak Island      14.39  56          Pn      04 37 14.4 -0.3
KDAK  Kodiak Island      14.39  56  Pn      Pn      04 37 11.3 -3.5
RSO   Redoubt South      15.25  46  Pn      Pn      04 37 23.2 -2.9
CNPM  China Poot         15.59  50  Pn      Pn      04 37 30.1 -0.3
CNPM                                IAmb    IAmb    04 37 47.0
      comp=Z,27nm,1.3s
BRLK  Bradley Lake       15.84  50  Pn      Pn      04 37 32.5 -1.1
BRLK                                IAmb    IAmb    04 37 39.9
      comp=Z,19nm,1.4s
SUA   Susitna One        16.56  44  Pn      P       04 37 44.3 -0.4
SUA                                 IAmb    IAmb    04 37 54.1
      comp=Z,38nm,1.3s
SEW   Seward             16.64  50  Pn      Pn      04 37 44.4 +0.9
SEW                                 IAmb    IAmb    04 37 49.4
      comp=Z,25nm,1.2s
O22K  Cooper Landing     16.64  48  Pn      Pn      04 37 43.9 +0.3
O22K                                IAmb    IAmb    04 37 58.2
      comp=Z,16nm,0.6s
PPLA  Purkeypile         16.65  39  P       P       04 37 48.3 +2.7
PPLA                                IAmb    IAmb    04 37 52.6
      comp=Z,14nm,1.3s
GHO   Glory Hole Cre     17.48  45  P       Pn      04 37 54.8 +0.7
KTH   Kantishna Hill     17.48  38  P       P       04 37 56.4 +1.6
KTH                                 IAmb    IAmb    04 37 59.2
      comp=Z,13nm,0.9s
TRF   Thorofare Moun     17.68  39  P       P       04 37 58.5 +1.5
TRF                                 IAmb    IAmb    04 38 03.5
      comp=Z,11nm,1.1s
BPAW  Bear Paw Mtn.      17.75  36  P       P       04 38 00.0 +2.3
SCM   Sheep Creek Mo     18.21  45  P       P       04 38 03.1 +0.4
RND   Reindeer           18.22  40  P       P       04 38 03.3 +0.5
FID   Port Fidalgo       18.24  49  P       P       04 38 01.4 -1.6
FID                                 IAmb    IAmb    04 38 17.4
      comp=Z,19nm,1.3s
BWN   Browne             18.36  37  P       Pn      04 38 05.9 +1.1
BWN                                 IAmb    IAmb    04 38 10.4
      comp=Z,14nm,1.1s
EYAK  Cordova Ski Ar     18.53  50  P       Pn      04 38 08.9 +2.2
KLU   Klutina            18.72  47  P       P       04 38 08.8 +0.4
KLU                                 IAmb    IAmb    04 38 25.9
      comp=Z,16nm,1.5s
M24K  Tolsona, Glenn     18.81  45  P       Pn      04 38 10.8 +0.5
M24K                                IAmb    IAmb    04 38 12.3
      comp=Z,14nm,1.1s
WRH   Wood River Hil     19.03  37  P       P       04 38 10.8 -0.8
CCB   Clear Creek Bu     19.22  37  P       P       04 38 12.7 -1.0
MDM   Murphy Dome        19.22  36  P       P       04 38 14.4 +0.6
MDM                                 IAmb    IAmb    04 38 19.9
      comp=Z,7.8nm,1.0s
N25K  Chitina, Valde     19.36  47  P       P       04 38 12.2 -3.1
PAX   Paxson             19.43  43  P       Pn      04 38 17.7  0.0
HDA   Harding Lake       19.43  38  P       P       04 38 15.3 -0.8
HDA                                 IAmb    IAmb    04 38 22.3
      comp=Z,6.3nm,0.8s
IL31                     19.63  37  P       P       04 38 17.8 -0.3
ILAR  Eielson Array      19.63  37  P       P       04 38 16.9 -1.3
      comp=Z,0.6nm,0.3s,baz=230,slow=8.4,SNR=36
GLB   Gilahina Butte     19.68  48  P       P       04 38 20.0 +1.2
GLB                                 IAmb    IAmb    04 38 29.6
      comp=Z,8.2nm,1.2s
COLD  Coldfoot           19.87  29  P       Pn      04 38 22.6 -0.1
COLD                                IAmb    IAmb    04 38 28.1
      comp=Z,6.1nm,0.8s
RIDG  Independent Ri     19.98  41  P       P       04 38 21.9 -0.2
RIDG                                IAmb    IAmb    04 38 27.8
      comp=Z,8.5nm,0.6s
DOT   Dot Lake           20.27  42  P       P       04 38 25.1 -0.1
DOT                                 IAmb    IAmb    04 38 29.4
      comp=Z,9.5nm,0.8s
YAH   Yahtse             20.42  52  P       P       04 38 26.9 -0.2
YAH                                 IAmb    IAmb    04 38 31.9
      comp=Z,15nm,1.2s
SEY   Seymchan           20.55 316  P       P       04 38 26.7 -1.4
      comp=Z,1.4nm,0.2s,baz=172,slow=24,SNR=1.4
CTGM  Chitina Glacie     20.73  50  P       Pn      04 38 33.6 +0.4
CTGM                                IAmb    IAmb    04 38 35.0
      comp=Z,13nm,1.4s
TOLK  Toolik Lake Re     20.97  26  P       P       04 38 34.5 +1.8
TOLK                                IAmb    IAmb    04 38 36.8
      comp=Z,6.3nm,0.8s
A21K  Barrow             21.42  16  P       P       04 38 38.6 +1.2
A21K                                IAmb    IAmb    04 38 40.9
      comp=Z,6.3nm,0.8s
EGAK  Eagle              21.86  40  P       P       04 38 42.5 +0.2
EGAK                                IAmb    IAmb    04 38 57.2
      comp=Z,4.3nm,0.8s
DAWY  Dawson             22.36  43  P       P       04 38 48.2 +0.5
HYT   Haines Junctio     22.56  51  P       P       04 38 51.3 +1.4
EPYK  Eagle Plains       24.14  38  P       P       04 39 05.6 +0.5
EPYK                                IAmb    IAmb    04 39 07.9
      comp=Z,9.5nm,1.3s
INK   Inuvik             25.93  34  P       P       04 39 20.6 -0.7
      comp=Z,1.7nm,0.9s,baz=210,slow=6.5,SNR=5.8
INK   Inuvik             25.93  34  P       P       04 39 21.1 -0.2
C36M  Paulatuk           29.52  34  P       P       04 39 52.3 -1.0
C36M                                IAmb    IAmb    04 40 02.1
      comp=Z,5.7nm,1.5s
YKA   Yellowknife Ar     33.39  47  P       P       04 40 27.7 +0.3
      comp=Z,0.1nm,0.3s,baz=270,slow=17,SNR=14
YKA                                 PcP     PcP     04 43 08.2 +0.5
      comp=Z,0.2nm,0.3s,baz=289,slow=2.1,SNR=7.6
H11N2 WAKE ISLAND Hy     34.84 210  T       T       05 17 28.9
      baz=18,slow=76,SNR=44
H11N3 WAKE ISLAND Hy     34.85 210  T       T       05 17 29.5
      baz=18,slow=76,SNR=43
H11N1 WAKE ISLAND Hy     34.86 210  T       T       05 17 30.7
      baz=18,slow=76,SNR=43
H11S1 WAKE ISLAND Hy     36.05 210  T       T       05 19 01.0
      baz=19,slow=76,SNR=19
H11S2 WAKE ISLAND Hy     36.06 210  T       T       05 19 01.0
      baz=19,slow=76,SNR=21
H11S3 WAKE ISLAND Hy     36.06 210  T       T       05 19 01.6
      baz=19,slow=76,SNR=11
NEW   Newport            36.68  72  P       P       04 40 56.4 +0.6
      comp=Z,3.5nm,0.8s,baz=284,slow=8.3,SNR=6.5
NEW   Newport            36.68  72  P       P       04 40 57.5 +1.6
NEW                                 IAmb    IAmb    04 40 58.3
      comp=Z,6.0nm,1.1s
MCMT  McKenzie Canyo     40.96  74  P       P       04 41 33.0 +1.0
BOZ   Bozeman (W)        41.27  72  P       P       04 41 35.4 +0.9
BOZ                                 IAmb    IAmb    04 41 36.5
      comp=Z,5.5nm,1.4s
NVAR  Mina Array Bea     41.30  86  P       P       04 41 35.2 +0.4
      comp=Z,0.2nm,0.6s,baz=306,slow=7.7,SNR=1.8
ELK   Elko               41.81  81  P       P       04 41 39.7 +0.7
      comp=Z,0.8nm,0.8s,baz=342,slow=7.3,SNR=3.6
ELK   Elko               41.81  81  P       P       04 41 39.9 +1.0
KSRS  Korea Array        41.85 273  P       P       04 41 38.4 -0.7
      comp=Z,1.9nm,0.7s,baz=58,slow=7.9,SNR=5.9
KSRS                                LR      LR      05 01 02.6
      comp=Z,17nm,18.8s,baz=53,slow=39
YHL   Hebgen Lake        41.94  73  P       P       04 41 41.3 +1.2
YHH   Holmes Hill        42.17  73  P       P       04 41 42.2 +0.2
REDW  Red Top Meadow     42.97  75  P       P       04 41 50.1 +1.7
REDW                                IAmb    IAmb    04 42 01.5
      comp=Z,2.8nm,1.0s
R11A  Troy Canyon, C     43.04  84  P       P       04 41 51.4 +2.5
TPNV  Topopah Spring     43.50  86  P       P       04 41 53.0 +0.4
TPNV                                IAmb    IAmb    04 42 03.4
      comp=Z,2.4nm,1.1s
BW06  Boulder Array      44.08  75  P       P       04 41 57.9 +0.6
BW06                                IAmb    IAmb    04 41 58.8
      comp=Z,2.1nm,0.7s
PD31  Pinedale Array     44.08  75  P       P       04 41 58.0 +0.6
PD31                                IAmb    IAmb    04 41 58.8
      comp=Z,1.9nm,0.7s
PDAR  Pinedale Array     44.08  75  P       P       04 41 58.4 +1.0
      comp=Z,1.2nm,0.5s,baz=301,slow=3.9,SNR=17
RDMU  Red Mountain       45.38  77  P       P       04 42 08.8 +1.2
O20A  White River Ci     46.45  77  P       P       04 42 16.4 +0.3
O20A                                IAmb    IAmb    04 42 17.4
      comp=Z,3.1nm,0.8s
RSSD  Black Hills        46.57  70  P       P       04 42 18.7 +1.7
PV17  East Wray Mesa     47.16  79  P       P       04 42 22.5 +0.9
PV17                                IAmb    IAmb    04 42 33.2
      comp=Z,3.1nm,0.9s
PV13  Radium Mtn., P     47.32  79  P       P       04 42 23.8 +0.9
PV13                                IAmb    IAmb    04 42 29.6
      comp=Z,2.4nm,0.7s
SONM  Songino Array      48.48 298  P       P       04 42 30.0 -1.7
      comp=Z,0.2nm,0.5s,baz=73,slow=4.8,SNR=1.5
SONM                                PcP     PcP     04 43 56.1 -1.0
      comp=Z,0.7nm,0.7s,baz=85,slow=2.7,SNR=3.9
HHC   Hu-ho-hao-te       49.73 288 eP       P       04 42 43.5 +2.2
HHC                                 pmax    pmax
      comp=Z,7.0nm,0.7s
HHC                                 pmax    pmax
      comp=Z,58nm,5.7s
SPA0  Spitsbergen Ar     50.21 357  P       P       04 42 43.9 -0.4
ECSD  EROS Data Cent     51.08  66  P       P       04 42 50.6 -0.7
ECSD                                IAmb    IAmb    04 42 51.1
      comp=Z,1.8nm,0.6s
P40A  Paris              56.41  67  P       P       04 43 30.3  0.0
ARCES ARCESS Array B     58.14 352  P       P       04 43 40.4 -1.7
      comp=Z,7.6nm,1.0s,baz=15,slow=7.1,SNR=7.0
LCAR  Lake Charles       59.28  70  P       P       04 43 50.1 -0.4
KURK  Kurchatov          60.40 315  P       P       04 43 55.5 -2.3
P49A  Miami Univ. Ec     60.54  63  P       P       04 43 58.5 -0.6
WMQ   Urumqi             61.02 305 eP       P       04 44 04.7 +2.4
R50A  Paris              61.63  63  P       P       04 44 07.1 +0.6
Q51A  Peebles            61.65  62  P       P       04 44 06.4 -0.2
O52A  Adamsville         61.70  60  P       P       04 44 07.2 +0.3
P53A  Whipple            62.39  61  P       P       04 44 11.6  0.0
L56A  Greenwood          62.53  56  P       P       04 44 13.3 +0.8
TZTN  Tazewell           63.30  64  P       P       04 44 18.0 +0.3
SSPA  Standing Stone     63.44  58  P       P       04 44 18.8 +0.3
S54A  Dingess, Beckl     63.64  62  P       P       04 44 20.3 +0.3
KSPA  Keystone Colle     63.87  56  P       P       04 44 21.7 +0.4
H62A  Milan              63.95  51  P       P       04 44 21.1 -0.7
V53A  Saluda             64.35  64  P       P       04 44 25.2 +0.7
GOGA  Godfrey            65.61  67  P       P       04 44 33.2 +0.4
ABKAR Akbulak array      69.01 325  P       P       04 44 54.5 +0.5
KK31  Karatay Array      69.79 315  P       P       04 44 59.7 +0.7
KK31                                IAmb    IAmb    04 44 59.9
      comp=Z,1.2nm,0.8s
KKAR  Karatay Array      69.79 315  P       P       04 44 59.8 +0.8
KKAR                                IAmb    IAmb    04 44 59.8
      comp=Z,1.2nm,0.8s
CMAR  Chiang Mai Arr     73.19 279  P       P       04 45 19.8 +0.1
      comp=Z,0.9nm,0.4s,baz=27,slow=7.6,SNR=7.4
AKASG Malin Array Be     75.90 344  P       P       04 45 33.5 -1.4
      comp=Z,0.4nm,0.3s,baz=18,slow=5.9,SNR=5.0
WRA   Warramunga Arr     83.82 227  P       P       04 46 17.8 -0.2
      comp=Z,0.2nm,0.4s,baz=33,slow=5.8,SNR=5.4
ASAR  Alice Springs      87.26 225  P       P       04 46 34.6 -0.5
      comp=Z,0.9nm,0.9s,baz=39,slow=4.9,SNR=6.6
TORD  Torodi Ar. Bea    115.38   3  PKP     PKiKP   04 52 29.8 -0.6
      comp=Z,0.3nm,0.4s,baz=354,slow=3.0,SNR=4.4
H03N2 Juan Fernandez    119.10 108  T       T       07 03 37.5
      baz=317,slow=78,SNR=3.5
H03N1 Juan Fernandez    119.11 108  T       T       07 03 37.5
      baz=317,slow=78,SNR=5.9
H03N3 Juan Fernandez    119.12 108  T       T       07 03 37.0
      baz=317,slow=78,SNR=2.5
BOSA  Boshof            152.32 319  PKPbc   PKiKP   04 53 44.9 +0.3
      comp=Z,4.3nm,0.4s,baz=334,slow=1.2,SNR=22
BOSA  Boshof            152.32 319          PKPbc   04 53 44.5 +0.2
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*IDC **05** 04:46:58.1±1.4, 37°.99N×26°.34W, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/32, mbtmp3.9/8, MS3.3/14, Ms1 3.4/14, ms1mx3.2/39, Error ellipse: s-maj=37.7km s-min=26.8km az=31.0*

ISC 05 04:46:55.0±1.3**, 37°.75N**±0°.06×**26°.42W**±0°.04**, h0**^{km}±9^{km}**,**
n44, σ1^{s}.**63**/45**, mb3.9**/8**, MS3.4**/12**, 1C, Azores Islands**

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Code  Station Name         Δ°   AZ°   Phase ID         Time     Res
                                    Op      ISC      h  m  s   ISC
PSET  Sete Cidades        0.56  82  eP      Pn      04 47 08.5 -1.6
PSET                                eS      Sg      04 47 14.4 +1.6
PSET                                 A      A       04 47 17.9
      3µm,0.2s
PDA   Ponta Delgada       0.60  90  eP      Pn      04 47 09.2 -1.4
PDA                                 eS      Sb      04 47 16.0 -1.2
PDA                                  A      A       04 47 18.1
      2µm,0.2s
GRON  Grota Negra         0.70  88  eP      Pn      04 47 12.7 +0.6
GRON                                eS      Sn      04 47 21.4 -2.2
GRON                                 A      A       04 47 22.6
      2µm,0.4s
CMLA  Cha da Macela       0.71  89  eP      Pn      04 47 10.8 -1.4
CMLA                                eS      Sg      04 47 18.6 +1.0
CMLA                                 A      A       04 47 19.7
      6µm,0.4s
PCALD Caldeiras da R      0.74  86  eP      Pn      04 47 11.4 -1.2
PCALD                               eS      Sg      04 47 19.2 +0.6
PCALD                                A      A       04 47 20.7
      4µm,0.2s
BART  Pico Bartolome      0.99  88  eP      Pb      04 47 14.9 -0.1
BART                                eS      Sg      04 47 25.5 -1.2
BART                                 A      A       04 47 30.2
      2µm,0.3s
PSCM  Serra do Cume       1.10 330  eP      Pn      04 47 17.3 -0.3
PSCM                                eS      Sb      04 47 30.0 -1.7
PSCM                                 A      A       04 47 32.7
      3µm,0.3s
ADH   Angra Heroismo      1.11 325⇑iP      Pn      04 47 17.7  0.0
ADH                                 eS      Sb      04 47 30.9 -1.1
ADH                                  A      A       04 47 33.0
      2µm,0.3s
PAGU  Agualva, Azore      1.18 329  eP      Pg      04 47 18.5 +0.9
PAGU                                eS      Sb      04 47 31.9 -2.2
PAGU                                 A      A       04 47 33.4
      8µm,0.2s
PSMA  Santa Maria         1.27 126  eP      Pg      04 47 20.1 +0.8
PSMA                                eS      Sb      04 47 34.8 -1.8
PSMA                                 A      A       04 47 36.3
      214nm,0.1s
PSMN  Pico do Norte,      1.31 124  eP      Pg      04 47 20.3 +0.3
PSMN                                eS      Sb      04 47 34.9 -2.8
PSMN                                 A      A       04 47 36.6
      183nm,0.2s
PID   Ribeirinha          1.51 298  eP      Pg      04 47 25.1 +1.2
PID                                 eS      Sn      04 47 41.4 -2.3
PID                                  A      A       04 47 43.3
      1µm,0.3s
ROSA  Rosais              1.73 304  eP      Pg      04 47 27.7 -0.5
ROSA                                eS      Sn      04 47 47.1 -2.0
ROSA                                 A      A       04 47 48.5
      395nm,0.1s
PICO  Pico                1.75 296  eP      Pg      04 47 28.1 -0.5
PICO                                eS      Sn      04 47 48.0 -1.7
PICO                                 A      A       04 47 50.2
      2µm,0.2s
PGRA  Graciosa            1.77 317  eP      Pb      04 47 27.3 -1.0
PGRA                                eS      Sn      04 47 47.1 -3.0
PGRA                                 A      A       04 47 47.9
      527nm,0.4s
PCAN  Candelaria          1.78 294  eP      Pg      04 47 29.0 -0.1
PCAN                                eS      Sn      04 47 49.2 -1.1
PCAN                                 A      A       04 47 51.2
      991nm,0.4s
HOR   Horta               1.91 295  eP      Pb      04 47 30.3 -0.3
HOR                                 eS      Sn      04 47 51.9 -1.5
HOR                                  A      A       04 47 53.9
      1µm,0.2s
CALA  Caldeira            1.98 295  eP      Pb      04 47 31.5 -0.5
CALA                                eS      Sn      04 47 53.3 -2.1
PCED  Cedros              2.00 297  eP      Pb      04 47 31.6 -0.6
PCED                                eS      Sn      04 47 53.4 -2.4
PCED                                 A      A       04 47 56.9
      920nm,0.2s
ESDC  Sonseca Array      17.62  77  P       Pn      04 50 59.1 -2.8
      0.1nm,0.3s,baz=262,slow=13,SNR=11
ESDC                                LR      LR      04 56 24.1
      comp=Z,75nm,20.4s,baz=275,slow=32
MDT   Midelt             18.46  99  LR      LR      04 56 19.3
      comp=Z,73nm,21.9s,baz=293,slow=30
EKA   Eskdalemuir Ar     23.59  34  P       P       04 52 06.4 -0.6
      1.5nm,0.7s,baz=229,slow=9.3,SNR=4.7
DAVOX Davos/Dischmat     28.12  60  LR      LR      05 02 13.5
      comp=Z,98nm,18.8s,baz=254,slow=33
KEST  Kesra              28.62  83  LR      LR      05 02 57.1
      comp=Z,58nm,21.3s,baz=293,slow=34
CLL   Collm              30.80  51  e(P)    P       04 53 20.0 +7.9
CLL                                 ePPP    PPP     04 54 24.0
GERES GERESS Array B     30.89  56  LR      LR      05 03 43.2
      comp=Z,42nm,21.6s,baz=276,slow=33
NOA   NORSAR Array B     33.06  33  LR      LR      05 05 54.7
      comp=Z,48nm,18.4s,baz=245,slow=35
TORD  Torodi Ar. Bea     35.03 127  P       P       04 53 52.9 +3.5
      1.1nm,0.6s,baz=315,slow=9.3,SNR=7.3
FINES FINESS Array B     39.95  36  P       P       04 54 31.9 +1.3
      5.6nm,1.0s,baz=238,slow=8.0,SNR=2.2
FINES                               LR      LR      05 09 29.0
      comp=Z,66nm,19.2s,baz=262,slow=34
AKASG Malin Array Be     40.97  53  LR      LR      05 11 09.7
      comp=Z,36nm,18.2s,baz=290,slow=36
ARCES ARCESS Array B     42.04  24  LR      LR      05 10 11.6
      comp=Z,46nm,19.4s,baz=225,slow=33
BRTR  Keskin Array B     46.11  68  LR      LR      05 14 01.2
      comp=Z,13nm,21.5s,baz=262,slow=35
H10N2 ASCENSION HYDR46.69 164  T       T       05 45 12.9
      baz=347,slow=75,SNR=25
H10N3 ASCENSION HYDR46.70 164  T       T       05 45 13.6
      baz=347,slow=75,SNR=21
H10N1 ASCENSION HYDR46.71 164  T       T       05 45 14.3
      baz=347,slow=75,SNR=24
H10S3 ASCENSION HYDR47.74 164  T       T       05 46 30.4
      baz=347,slow=74,SNR=40
H10S2 ASCENSION HYDR47.75 164  T       T       05 46 31.0
      baz=233,slow=74,SNR=16
ROSC  El Rosal           54.51 245  LR      LR      05 16 28.3
      comp=Z,46nm,20.5s,baz=19,slow=32
YKA   Yellowknife Ar     56.52 326  P       P       04 56 39.8 +1.3
      0.8nm,1.0s,baz=78,slow=7.4,SNR=7.3
PDAR  Pinedale Array     61.17 303  P       P       04 57 14.2 +2.7
      0.8nm,1.0s,baz=49,slow=6.8,SNR=3.8
CPUP  Villa Florida      70.04 209  LR      LR      05 24 52.0
      comp=Z,26nm,21.9s,baz=102,slow=32
ZALV  Zalesovo Beam      71.21  36  P       P       04 58 18.1 +2.7
      0.8nm,0.6s,baz=327,slow=7.6,SNR=2.5
ZALV                                LR      LR      05 30 02.0
      comp=Z,40nm,18.2s,baz=206,slow=36
MKAR  Makanchi Array     74.44  42  P       P       04 58 36.8 +2.0
      0.8nm,0.7s,baz=318,slow=5.3,SNR=10
MKAR                                LR      LR      05 30 16.4
      comp=Z,34nm,19.5s,baz=356,slow=35
SONM  Songino Array      84.98  30  P       P       04 59 35.6 +3.5
      0.9nm,0.9s,baz=313,slow=3.0,SNR=5.3
```

PGC 05 04:58:15.8±2.8**, 50°.63N**×**130°.40W, h10**^{km}**, MLSn3.2**/12**,**
Mw3.8/12**, 210km west of Pt. Hardy, Bc Vancouver**

Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.44	89	Pn	Pn	04 58 39.9	-2.1
HOLB				Sn	Sn	04 58 56.9	-4.1
HG4B	Hotspring	1.74	344	Pn	Pn	04 58 43.6	-2.4
HG4B				Sn	Sn	04 59 04.9	-3.4
PHC	Port Hardy	1.89	87	Pn	Pn	04 58 46.3	-1.8
PHC				Sn	Sn	04 59 07.9	-4.0
MAYB	Maynard	2.07	95	Pn	Pn	04 58 48.7	-2.1
MAYB				Sn	Sn	04 59 12.6	-4.1
BBB	Bella Bella	2.12	42	Pn	Pn	04 58 50.1	-1.1
BBB				Sn	Sn	04 59 14.5	-3.0
FHRB	Fair Harbour	2.18	104	Pn	Pn	04 58 50.0	-2.1
FHRB				Sn	Sn	04 59 14.5	-4.6
EDB	Eliza Dome	2.24	109	Pn	Pn	04 58 51.8	-1.1
EDB				Sn	Sn	04 59 16.0	-4.5
TLCB	Telegraph Cove	2.27	91	Pn	Pn	04 58 52.0	-1.3
TLCB				Sn	Sn	04 59 18.0	-3.3
WOSB	Woss	2.50	99	Pn	Pn	04 58 55.0	-1.5
NCRB	Newcastle Ridg	2.78	93	Pn	Pn	04 58 58.8	-1.7
DIB	Dawson Inlet,	2.88	334	Pn	Pn	04 58 59.6	-2.1
GDR	Gold River	2.93	105	Pn	Pn	04 59 00.5	-1.8
GRNB	Grenville Isla	3.23	5	Pn	Pn	04 59 05.7	-0.8
GRNB				Sn	Sn	04 59 42.8	-2.3
CBB	Campbell River	3.28	99	Pn	Pn	04 59 06.1	-1.1
CBB				Sn	Sn	04 59 42.5	-3.8
SHB	Sechelt	4.33	101	Pn	Pn	04 59 20.0	-1.6
SHB				Sn	Sn	05 00 07.3	-4.8
NLLB	Nanaimo Lost L	4.37	106	Pn	Pn	04 59 21.1	-1.0
FSB	Fort Saint Jam	5.34	42	Pn	Pn	04 59 34.8	-0.8

IDC 05 05:13:42.3±45.0, **18°.24S**×**173°.44W**, **h0**^{km}, **mb4.3**/3, **mb1 4.4**/3, **mb1mx3.8**/35, **mbtmp4.3**/3, **Error ellipse: s-maj=853.0km s-min=185.8km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.64	243	P	P	05 21 40.4	-0.4
	1.7nm,0.3s,baz=64,slow=8.5,SNR=2.7						
WRA	Warramunga Arr	49.21	259	P	P	05 22 32.3	-0.5
	0.9nm,0.5s,baz=96,slow=6.7,SNR=9.4						
ASAR	Alice Springs	49.25	254	P	P	05 22 33.4	+0.4
	4.0nm,0.4s,baz=90,slow=8.7,SNR=22						

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*NEIC **05** 05:14:20.6±2.7, 0°.01S±0°.07×123°.5E±0°.1, h126^{km}±7^{km}, mb4.2/12, Error ellipse: s-maj=16.9km s-min=7.8km az=64.0*

*DJA **05** 05:14:22.5±0.3, 0°S±2°×12°3E±°, h123^{km}±4^{km}, M4.5/19, mb4.4/9, mB5.2/2, MLv4.6/19, Mw(mB)4.6/2*

*IDC **05** 05:14:22.8±2.7, 0°.03S×123°.46E, h151^{km}±27^{km}, mb3.7/14, mb1 3.9/16, mb1mx3.7/43, mbtmp4.2/16, Error ellipse: s-maj=22.5km s-min=11.8km az=71.0*

ISC 05 05:14:21.5±0.6, **0°.05S**±0°.05×**123°.46E**±0°.05, **h140**^{km}±6^{km}, **n62**, σ1^{s}**30**/72, **mb4.2**/27, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.81	40	P	Pn	05 14 44.9	+1.1
KMSI				S	Sn	05 15 02.0	+1.3
GTOI	Gorontalo	0.82	327	P	Pn	05 14 45.6	+1.8
GTOI				S	Sn	05 15 02.6	+1.8
LUWI	Luwuk	1.20	215	Pn	Pn	05 14 46.6	-0.6
LUWI				Sn	Sn	05 15 04.4	-2.4
LUWI	Luwuk	1.20	215	P	Pn	05 14 46.4	-0.8
LUWI				S	Sn	05 15 04.0	-2.8
MRSI	Marisa	1.60	289	P	Pn	05 14 50.5	-1.0
MRSI				S	Sn	05 15 11.6	-2.7
APSI	Ampana	2.00	245	P	Pn	05 14 55.8	-0.2
APSI				S	Sn	05 15 20.1	-2.4
TOLI2	Tolitoli	2.91	293		Pn	05 15 08.8	+1.4
TOLI2				Sn	Sn	05 15 40.5	-2.4
SANI	Sanana	3.22	128	P	Pn	05 15 09.9	-1.4
MPSI	Mapaga	3.58	276	P	Pn	05 15 17.4	+1.4
TNTI	Ternate	4.00	78	P	Pn	05 15 19.3	-2.2
TTSI	Tana Toraja	4.70	231	P	Pn	05 15 31.0	+0.2
NLAI	Namlea	4.83	131	P	Pn	05 15 33.3	+0.8
SPSI	Sidrap Palu	5.36	223	P	Pn	05 15 40.3	+0.8
	0.6nm2μm79nm,0.6s						
BNSI	Bone	5.46	218	P	Pn	05 15 42.3	+1.3
	0.5nm78nm,0.6s						
KAPI	Kappang	6.16	217	P	Pn	05 15 52.8	+2.4
	8.5nm,0.3s,baz=32,slow=4.2,SNR=14						
KAPI				S	Sn	05 17 00.2	+0.4
	14nm,0.3s,baz=346,slow=23,SNR=10						
KAPI	Kappang	6.16	217		Pn	05 15 53.2	+2.8
BKSI	Bulukumba	6.20	212	P	Pn	05 15 52.5	+1.6
	0.3nm35nm,0.7s						
MYLDM	Lahad Datu	7.18	316		Pn	05 16 06.4	+2.4
EDFI	Ende, Flores	8.82	191	P	Pn	05 16 28.1	+2.0
	17nm,1.2s						
FAKI	Fak Fak	9.24	108	Pn	Pn	05 16 31.4	-0.3
FAKI	Fak Fak	9.24	108	P	Pn	05 16 30.9	-0.7
	30nm,1.4s						
SOEI	Soe	9.67	175	P	Pn	05 16 36.9	-0.6
MTN	Manton Dam	14.81	149	Pn	Pn	05 17 44.6	+0.4
CISI	Cisompet, Garu	17.29	244	P	P	05 18 15.1	+1.2
FITZ	Fitzroy Crossi	18.06	173	P	P	05 18 23.4	+1.1
	1.7nm,0.3s,baz=9.5,slow=7.7,SNR=49						
FITZ	Fitzroy Crossi	18.06	173	P	P	05 18 23.4	+1.1
FITZ				IAmb	IAmb	05 18 25.0	
	comp=Z,13nm,1.0s						
WB0	Warramunga Arr	22.33	152	P	P	05 19 08.6	+0.5
WB0				IAmb	IAmb	05 19 09.7	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	22.46	152	P	P	05 19 09.7	+0.5
	comp=Z,4.6nm,0.5s,baz=331,slow=10,SNR=124						
WB2	Warramunga Arr	22.46	152	P	P	05 19 09.8	+0.5
WB2				IAmb	IAmb	05 19 11.1	
	comp=Z,8.1nm,0.9s						
AS31	Alice Springs	25.57	157	P	P	05 19 38.7	+0.9
ASAR	Alice Springs	25.57	157	P	P	05 19 38.1	+0.3
	comp=Z,1.4nm,0.5s,baz=345,slow=14,SNR=15						
ASAR				PcP	PcP	05 23 06.0	+0.6
	comp=Z,0.7nm,0.6s,baz=356,slow=2.0,SNR=5.4						
CMAR	Chiang Mai Arr	30.30	309	P	P	05 20 21.6	+1.7
	comp=Z,1.5nm,0.6s,baz=132,slow=6.9,SNR=9.1						
FORT	Forrest	30.87	172	P	P	05 20 25.4	+0.7
STKA	Stephens Creek	36.01	153	P	P	05 21 10.3	+1.1
	comp=Z,1.2nm,0.4s,baz=320,slow=12,SNR=5.0						
STKA	Stephens Creek	36.01	153	P	P	05 21 08.7	-0.5
JWT	Wachi	36.88	16	P	P	05 21 16.2	-0.4
MJAR	Matsushiro Arr	38.90	19	P	P	05 21 32.6	-1.0
	comp=Z,4.5nm,0.8s,baz=188,slow=9.3,SNR=9.1						
ODAN	Odare	43.80	311	*e*P	P	05 22 15.0	+1.0
	comp=Z,8.2nm,0.5s						
TAPN	Taplejung	43.82	311	*e*P	P	05 22 14.9	+0.7
	comp=Z,5.7nm,0.4s						
RAMN	Ramite	44.45	310	*e*P	P	05 22 20.4	+1.2
	comp=Z,16nm,0.5s						
USRK	Ussuriysk Ar.	44.71	9	P	P	05 22 20.3	-0.3
	comp=Z,1.8nm,0.7s,baz=199,slow=6.9,SNR=6.2						
GUN	Gumba	45.50	311	*e*P	P	05 22 28.5	+0.9
	comp=Z,14nm,0.3s						
PKI	Pulchoki	45.68	310	*e*P	P	05 22 29.3	+0.3
	comp=Z,8.5nm,0.5s						
PKIN	Phulchoki	45.69	310	*e*P	P	05 22 29.3	+0.3
	comp=Z,5.2nm,0.3s						
GKN	Gorkha	46.49	310	*e*P	P	05 22 36.1	+1.0
	comp=Z,13nm,0.3s						
KOLN	Koldanda	47.17	309	*e*P	P	05 22 41.3	+0.8
DANN	Dangsing	47.33	310	*e*P	P	05 22 42.3	+0.5
PYUN	Piuthan	47.80	309	*e*P	P	05 22 46.3	+0.9
	comp=Z,36nm,0.5s						
KLR	Kul'dur	49.61	7	P	P	05 22 58.7	+0.2
	comp=Z,2.1nm,1.0s,baz=202,slow=5.5,SNR=4.7						
SONM	Songino Array	49.95	345	P	P	05 23 01.9	+0.6
	comp=Z,1.8nm,0.6s,baz=161,slow=8.2,SNR=13						
MK31	Makanchi Array	58.90	328	P	P	05 24 05.4	-0.5
MK31				IAmb	IAmb	05 24 06.7	
	comp=Z,1.1nm,0.6s						
MKAR	Makanchi Array	58.90	328	P	P	05 24 05.5	-0.4
	comp=Z,1.5nm,0.5s,baz=126,slow=8.8,SNR=26						
MKAR				PcP	PcP	05 24 52.4	-1.3
	comp=Z,0.7nm,0.5s,baz=144,slow=3.4,SNR=7.4						
PETK	Petropavlovsk-	60.16	23	P	P	05 24 14.9	+0.5
	comp=Z,3.1nm,0.6s,baz=220,slow=2.4,SNR=6.5						
ZALV	Zalesovo Beam	62.55	335	P	P	05 24 29.5	-0.8
	comp=Z,0.6nm,0.3s,baz=138,slow=7.4,SNR=4.7						
KURK	Kurchatov	63.25	330	P	P	05 24 34.0	-1.1
KURK				IAmb	IAmb	05 24 35.8	
	comp=Z,2.4nm,0.8s						
TIXI	Tiksi	71.67	2	P	P	05 25 26.6	-1.0
TIXI				IAmb	IAmb	05 25 27.7	
	comp=Z,10.0nm,1.2s						
ABKAR	Akbulak array	73.05	322	P	P	05 25 35.8	-0.5
ILAR	Eielson Array	89.90	25	P	P	05 27 03.2	-1.3
	comp=Z,0.3nm,0.5s,baz=241,slow=5.2,SNR=6.6						
ARCES	ARCESS Array B	92.84	340	P	P	05 27 16.6	-1.4
	comp=Z,6.6nm,1.1s,baz=64,slow=4.1,SNR=2.1						
INK	Inuvik	94.85	21	P	P	05 27 26.5	-0.7
	comp=Z,0.4nm,0.3s,baz=297,slow=4.6,SNR=4.8						
ULM	Lac du Bonnet	119.82	28	PKP	PKPdf	05 32 54.6	-0.7
	comp=Z,0.8nm,0.3s,baz=347,slow=2.4,SNR=4.7						
TORD	Torodi Ar. Bea	120.86	285	PKP	PKPdf	05 32 57.5	-0.7
	comp=Z,0.4nm,0.3s,baz=67,slow=1.7,SNR=7.1						

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*BJI **05** 05:18:45.9±0.0, 4°.65S×151°.72E, h5^{km}, mB5.2/38, mb4.7/50, Ms4.8/17, Ms7 4.4/16*

*DJA **05** 05:18:51.7±1.0, 5°S±3°×15°1E±°, h26^{km}±8^{km}, M4.9/30, mB5.4/13, mb5.0/30, MLv5.0/3, Mw(mB)4.8/13*

*NEIC **05** 05:18:51.9±2.2, 4°.47S±0°.08×151°.31E±0°.05, h25^{km}±5^{km}, mb5.1/50, Error ellipse: s-maj=11.2km s-min=7.1km az=167.0*

*GCMT **05** 05:18:52.9±0.2, 4°.46S±0°.01×151°.18E±0°.01, h15^{km}±1^{km}, MW5.0/116, Moment Tensor Solution. s38,c49; s116,c170; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.36±.12; $M_{\theta\theta}$4.18±.13; $M_{\phi\phi}$-3.82±.12; $M_{r\theta}$0.53±.22; $M_{\theta\phi}$0.51±.10; $M_{\phi r}$-1.09±.25; Best double couple: $M_0$4.22100×10^{16} NP1:ϕ_s42.00000°, δ74.00000°, λ-172.00000°. NP2:ϕ_s310.00000°, δ83.00000°, λ-16.00000°. Principal axes: T 4.2580, Plg6.0000°, Azm357.0000°; N -0.0760, Plg73.0000°, Azm106.0000°; P -4.1830, Plg16.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **05** 05:18:52.4±1.0, 4°.55S×151°.26E, h37^{km}, mb5.3/26 Error ellipse: s-maj=11.3km s-min=7.2km az=98.8*

*IDC **05** 05:18:53.0±3.3, 4°.57S×151°.18E, h27^{km}±22^{km}, mb4.5/23, mb1 4.7/25, mb1mx4.6/41, mbtmp4.7/25, ML2.3/1, MS4.2/29, Ms1 4.2/29, ms1mx4.1/45, Error ellipse: s-maj=16.6km s-min=10.2km az=109.0*

ISC 05 05:18:53.8±0.3, **4°.54S**±0°.05×**151°.31E**±0°.05, **h35**^{km}, **n266**, σ1^{s}**27**/248, **mb5.0**/96, **MS4.2**/30, **10C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.92	68		Pn	05 19 08.8	-1.5
RABL					Sn	05 19 19.6	-2.7
MANU	Manus Island	4.65	302		Pn	05 19 59.3	-2.4
PMG	Port Moresby	6.35	220	Pn	Pn	05 20 25.6	+0.6
	4.4nm,0.3s,baz=47,slow=9.2,SNR=10						
PMG				LR	LR	05 22 50.1	
	comp=Z,2μm,20.3s,baz=36,slow=38						
PMG	Port Moresby	6.35	220	*ce*P	Pn	05 20 27.0	+2.0
PMG				pmax	pmax		
	comp=Z,128nm,0.8s						
HNR	Honiara	9.85	120	LR	LR	05 25 34.2	
	comp=Z,3μm,18.6s,baz=302,slow=40						
JAY	Jayapura	10.77	280	LR	LR	05 24 43.0	
	comp=Z,2μm,21.5s,baz=60,slow=33						
MTSU	Mount Surprise	15.14	206	P	Pn	05 22 26.8	+1.5
	baz=15,SNR=5.0						
CTA	Charters Tower	16.22	197	Pn	Pn	05 22 39.8	+0.7
	comp=Z,1.7nm,0.3s,baz=9.5,slow=11,SNR=7.9						
CTA				LR	LR	05 28 39.4	
	comp=Z,595nm,19.5s,baz=28,slow=36						
CTAO	Charters Tower	16.22	197	P	P	05 22 42.9	+0.9
CTAO				pmax	pmax		
	comp=Z,86nm,1.2s						
CTAO	Charters Tower	16.22	197	P	P	05 22 42.9	+0.9
GUMO	Guam	19.11	341	LR	LR	05 29 22.0	
	comp=Z,225nm,20.9s,baz=150,slow=33						
QIS	Mount Isa	19.57	215	P	P	05 23 17.7	-1.3
	baz=20,SNR=4.3						
KDU	Kakadu	20.29	245	P	P	05 23 24.7	-2.1
	baz=20,SNR=3.2						
SIJI	Sorong	20.35	280	P	P	05 23 26.2	-1.2
	comp=Z,8.0nm,0.4s,baz=73,slow=8.7,SNR=14						
SWI	Sorong	20.36	280	P	P	05 23 24.5	-3.0
	comp=Z,1μmcomp=Z,86nm,1.2s						
EIDS	Eidsvold	20.71	181	P	P	05 23 31.3	+0.1
BNDI	Bandanaira	21.34	269	P	P	05 23 40.0	+1.9
	comp=Z,448nm,1.4s						
RMQ	Roma	21.96	186	P	P	05 23 45.7	+1.1
	baz=22,SNR=6.4						
WB0	Warramunga Arr	22.38	226	P	P	05 23 46.6	-2.7
WB0				IAmb	IAmb	05 24 03.2	
	comp=Z,230nm,1.8s						
WRAB	Tennant Creek	22.52	226	*ce*P	P	05 23 48.4	-2.3
WRAB				pmax	pmax		
	comp=Z,53nm,1.7s						
WRAB	Tennant Creek	22.52	226	P	P	05 23 48.2	-2.5
WRAB				IAmb	IAmb	05 24 04.7	
	comp=Z,165nm,1.6s						
WB2	Warramunga Arr	22.52	226	P	P	05 23 48.4	-2.4
	baz=22						
WB2	Warramunga Arr	22.52	226	P	P	05 23 48.7	-2.1
WB2				IAmb	IAmb	05 24 04.9	
	comp=Z,167nm,1.6s						
WRA	Warramunga Arr	22.53	226	P	P	05 23 48.5	-2.4
	comp=Z,6.0nm,0.7s,baz=49,slow=10.0,SNR=37						
WRA				S	S	05 27 54.9	-1.1
	comp=Z,8.9nm,1.2s,baz=47,slow=17,SNR=4.8						
WRA				LR	LR	05 33 42.8	
	comp=Z,672nm,18.6s,baz=60,slow=40						
DZM	Mont Dzumac	22.78	141	P	P	05 23 55.5	+1.9
	comp=Z,44nm,1.1s,baz=341,slow=18,SNR=4.6						
DZM				LR	LR	05 32 11.5	
	comp=Z,845nm,19.1s,baz=2.5,slow=35						
DZM	Mont Dzumac	22.78	141	*e*P	P	05 23 54.1	+0.6
	comp=Z,109nm,1.2s						
DZM				*e*S	S	05 27 57.2	-3.2
	comp=Z,330nm,25.6s						
DZM				*e*LQ	LQ	05 28 29.3	
	comp=Z,4μm,29.9s						
DZM				*e*LR	LR	05 29 32.5	
	comp=Z,1μm,26.4s						
DZM	Mont Dzumac	22.78	141	P	P	05 23 54.8	+1.2
DZM				IAmb	IAmb	05 24 01.2	
	comp=Z,64nm,1.2s						
AS31	Alice Springs	25.37	220	P	P	05 24 16.3	-1.6
ASAR	Alice Springs	25.37	220	P	P	05 24 16.8	-1.2
	comp=Z,14nm,1.0s,baz=54,slow=8.4,SNR=49						
ASAR				S	S	05 28 43.5	+1.2
	comp=Z,1.0nm,0.9s,baz=49,slow=18,SNR=1.5						
ASAR				LR	LR	05 34 29.9	
	comp=Z,509nm,18.7s,baz=42,slow=37						
SANI	Sanana	25.40	275	P	P	05 24 15.8	-2.5
	comp=Z,2μmcomp=Z,86nm,1.4s						
ARMA	Armidale	25.74	179	P	P	05 24 22.2	+0.9
	baz=26,SNR=9.1						
ARMA	Armidale	25.74	179	P	P	05 24 21.7	+0.4
ARMA				IAmb	IAmb	05 24 42.2	
	comp=Z,58nm,1.1s						
BATI	Baumata	27.98	257	LR	LR	05 38 38.7	
	comp=Z,1μm,19.9s,baz=94,slow=43						
DAV	Davao City (W)	28.15	294	LR	LR	05 35 28.0	
	comp=Z,751nm,18.6s,baz=130,slow=36						
FITZ	Fitzroy Crossi	28.49	240	P	P	05 24 43.9	-2.1
	baz=28,SNR=6.3						
FITZ	Fitzroy Crossi	28.49	240	P	P	05 24 44.0	-2.1
	comp=Z,12nm,0.6s,baz=75,slow=7.6,SNR=21						
FITZ				LR	LR	05 36 27.3	
	comp=Z,559nm,20.9s,baz=69,slow=37						
FITZ	Fitzroy Crossi	28.49	240	P	P	05 24 43.8	-2.3
STKA	Stephens Creek	28.68	197	P	P	05 24 46.8	-0.8
	baz=29,SNR=4.2						
STKA	Stephens Creek	28.68	197	P	P	05 24 46.6	-1.0
	comp=Z,8.7nm,1.0s,baz=51,slow=14,SNR=5.4						
STKA				LR	LR	05 35 53.5	
	comp=Z,655nm,20.1s,baz=13,slow=36						
STKA	Stephens Creek	28.68	197	P	P	05 24 48.5	+0.9
STKA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
STKA	Stephens Creek	28.68	197	P	P	05 24 48.5	+0.9
MSVF	Nonsavu	29.27	119	LR	LR	05 35 48.0	
	comp=Z,791nm,20.4s,baz=307,slow=35						
MRSI	Marisa	29.76	279	P	P	05 25 00.5	+3.1
	comp=Z,28nm,1.1s						
APSI	Ampana	29.84	276	P	P	05 24 56.7	-1.4
	comp=Z,42nm,1.1s						
WRKA	Warakurna	30.07	225	P	P	05 24 58.4	-1.6
	baz=30,SNR=11						
HTT	Hallett	30.98	200	P	P	05 25 06.9	-1.1
	baz=31,SNR=3.2						
KAPI	Kappang	31.45	268	LR	LR	05 39 06.2	
	comp=Z,121nm,20.1s,baz=97,slow=39						
ARPS	Mount Arapiles	33.24	194	P	P	05 25 27.0	-0.7
	baz=33,SNR=7.5						
TOO	Toolangi	33.30	188	P	P	05 25 28.2	-0.1
	baz=33,SNR=4.8						
TOO	Toolangi	33.30	188	P	P	05 25 27.3	-1.0
TOO				pmax	pmax		
	comp=Z,35nm,1.2s						
TOO	Toolangi	33.30	188	P	P	05 25 27.3	-1.0
TOO				IAmb	IAmb	05 25 41.1	
	comp=Z,35nm,1.1s						
FORT	Forrest	34.07	217	P	P	05 25 33.6	-1.5
	baz=34,SNR=6.7						
FORT	Forrest	34.07	217	P	P	05 25 33.2	-1.8
MYLDM	Lahad Datu	34.16	286	P	P	05 25 34.8	-1.2
OUZ	Omahuta	36.83	149	P	P	05 25 59.0	+0.3
OUZ				IAmb	IAmb	05 26 11.7	
	comp=Z,30nm,1.0s						
MEEK	Meekatharra	38.19	231	P	P	05 26 08.5	-1.8
	baz=38,SNR=5.1						
KMBL	Kambalda	38.42	223	P	P	05 26 10.6	-1.7
	baz=38,SNR=5.2						
YULB	Yu-li	40.35	315	P	P	05 26 27.9	-0.5
YULB				IAmb	IAmb	05 26 40.5	
	comp=Z,32nm,1.1s						
SSLB	Suanglung	40.84	315	P	P	05 26 31.2	-1.3
URZ	Urewera	40.97	148	P	P	05 26 34.4	+1.1
	comp=Z,10nm,0.9s,baz=152,slow=3.6,SNR=3.3						
URZ	Urewera	40.97	148	P	P	05 26 34.4	+1.1
JSU	Suzuyama	40.99	332	P	P	05 26 32.4	-1.2
JSU				IAmb	IAmb	05 26 38.8	
	comp=Z,40nm,1.2s						
YHNB	Yeheng	41.12	316	P	P	05 26 34.1	-0.7
YHNB				IAmb	IAmb	05 26 49.8	
	comp=Z,36nm,0.9s						
MORW	Morawa	41.36	230	P	P	05 26 35.6	-1.1
MORW				IAmb	IAmb	05 26 41.5	
	comp=Z,82nm,1.8s						
KSM	Kuching	41.40	277	P	P	05 26 35.8	-1.4
KSM				IAmb	IAmb	05 26 49.0	
	comp=Z,42nm,1.3s						
KLBR	Kellerberrin	41.41	225	P	P	05 26 34.8	-2.3
	baz=41,SNR=5.5						
BLDU	Ballidu	41.65	227	P	P	05 26 36.7	-2.3
	baz=42						
TUWZ	Tuamarina	41.95	154	P	P	05 26 42.0	+0.8
JNU	Nakatsue	42.17	334	LR	LR	05 42 24.5	
	comp=Z,133nm,20.4s,baz=182,slow=34						
NWAO	Narrogin (SRO)	42.52	224	LR	LR	05 45 44.7	
	comp=Z,423nm,18.5s,baz=62,slow=38						
MJAR	Matsushiro Arr	42.66	344	P	P	05 26 45.4	-1.8
	comp=Z,2.8nm,0.9s,baz=162,slow=8.5,SNR=3.1						
MJAR				LR	LR	05 43 00.3	
	comp=Z,190nm,20.0s,baz=185,slow=34						
RPZ	Rata Peaks	42.73	159	P	P	05 26 47.1	-0.6
RPZ				IAmb	IAmb	05 26 54.3	
	comp=Z,49nm,1.0s						
QZH	Quanzhou	43.24	314	*e*P	P	05 26 57.0	+5.0
QIZ	Qiongzhong	47.06	301	P	P	05 27 21.8	-0.7
QIZ				S	S	05 34 14.7	+2.3
QIZ				LR	LR		
	comp=Z,120nm,13.6s						
QIZ				LR	LR		
	comp=Z,200nm,22.5s						
QIZ				LR	LR		
	comp=Z,210nm,16.5s						
KSRS	Korea Array	47.11	334	P	P	05 27 23.0	+0.5
	comp=Z,1.9nm,0.7s,baz=139,slow=9.7,SNR=6.2						
KSRS				LR	LR	05 47 28.6	
	comp=Z,122nm,18.1s,baz=144,slow=36						
INCN	Inchon	47.70	333	P	P	05 27 26.8	-0.4
INCN				pmax	pmax		
	comp=Z,47nm,1.0s						
INCN	Inchon	47.70	333	P	P	05 27 26.8	-0.4
NJ2	Nanjing	47.72	322	*e*P	P	05 27 27.9	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USA0B	Ussuriysk Arra	51.54	342	P	P	05 27 55.4	-0.8
USA0B				pmax	pmax		
	comp=Z,24nm,1.0s						
USA0B	Ussuriysk Arra	51.54	342	P	P	05 27 55.4	-0.8
USA0B				IAmb	IAmb	05 28 04.7	
	comp=Z,24nm,1.0s						
USRK	Ussuriysk Ar.	51.54	342	P	P	05 27 56.9	+0.6
	comp=Z,5.7nm,0.8s,baz=163,slow=8.2,SNR=13						
USRK				LR	LR	05 48 12.7	
	comp=Z,122nm,20.3s,baz=156,slow=34						
YSS	Yuzh-Sakhalins	51.83	353	*ce*P	P	05 28 00.1	+1.8
YSS				pmax	pmax		
	comp=Z,12nm,0.7s						
ENH	Enshi	52.90	314	P	P	05 28 05.5	-1.2
GYA	Guiyang	53.06	308	⇓P	P	05 28 16.8	+8.8
GYA				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN	Xi'an	55.42	317	P	P	05 28 24.7	-0.3
XAN				pP	pP	05 28 28.2	-6.9
XAN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XAN	Xi'an	55.42	317	P	P	05 28 24.1	-0.9
XAN				pmax	pmax		
	comp=Z,31nm,1.4s						
XAN	Xi'an	55.42	317	P	P	05 28 24.1	-0.9
XAN				IAmb	IAmb	05 28 33.8	
	comp=Z,31nm,1.4s						
KMI	Kunming	55.61	305	*e*P	P	05 28 29.0	+2.2
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TYV	Tymovskoe	55.68	353	*e*P	P	05 28 26.8	+0.3
TYV				*e*		05 36 14.4	
TYV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLR	Kul'dur	56.19	345	LR	LR	05 49 24.4	
	comp=Z,215nm,21.7s,baz=114,slow=33						
KLR	Kul'dur	56.19	345	*i* P	P	05 28 29.4	-0.8
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	56.42	296	P	P	05 28 32.8	+0.4
	comp=Z,2.7nm,0.8s,baz=115,slow=5.4,SNR=16						
CMAR				LR	LR	05 52 12.7	
	comp=Z,122nm,19.9s,baz=154,slow=36						
CMAR	Chiang Mai Arr	56.42	296	*ce*P	P	05 28 33.2	+0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHTO	Chiang Mai	56.54	296	P	P	05 28 32.8	-0.4
CHTO				pmax	pmax		
	comp=Z,16nm,1.4s						
CHTO	Chiang Mai	56.54	296	P	P	05 28 32.8	-0.4
CD2	Chengdu	57.45	311	P	P	05 28 39.9	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
PET	Petropavlovsk	57.68	5	*i* P	P	05 28 42.9	+2.3
PET				pmax	pmax		
	comp=Z,228nm,1.2s						
PEA0B	Petropavlovsk-	57.69	5	*i* P	P	05 28 40.9	+0.2
PETK	Petropavlovsk-	57.69	5	P	P	05 28 41.3	+0.6
	comp=Z,12nm,0.7s,baz=171,slow=9.8,SNR=4.1						
PETK				LR	LR	05 48 52.7	
	comp=Z,228nm,20.6s,baz=189,slow=31						
HHC	Hu-ho-hao-te	57.98	325	*e*P	P	05 28 49.8	+6.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
PPT	Papeete	59.22	108	LR	LR	05 51 43.1	
	comp=Z,77nm,18.3s,baz=268,slow=33						
PPT2	Papeete2	59.22	108	*e*P	P	05 28 59.0	+6.8
	comp=Z,51nm,1.2s						
PPT2				*e*S	S	05 37 10.2	+12
	comp=Z,52nm,27.8s						
PPT2				*e*LR	LR	05 46 40.0	
	comp=Z,450nm,35.2s						
PAE	Paea	59.22	108	*e*P	P	05 28 58.7	+6.6
	comp=Z,23nm,1.5s						
TIAR	Tiarei	59.44	108	*e*P	P	05 29 00.4	+6.8
	comp=Z,44nm,1.2s						
TVO	Taravao	59.55	108	*e*P	P	05 29 01.4	+7.0
	comp=Z,18nm,1.0s						
LZH	Lanzhou	60.01	316	*e*P	P	05 28 57.9	+0.5
LZH				sP	pP	05 29 03.4	-4.2

LZH				S	S	05 37 09.7	+1.7
LZH				sS	pS	05 37 17.2	-2.8
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,300nm,4.9s						
LZH				LR	LR		
	comp=Z,250nm,13.6s						
LZH				LR	LR		
	comp=Z,380nm,13.6s						
LZH				LR	LR		
	comp=Z,400nm,15.7s						
TBI	Tubuai	60.02	114	eLQ	LQ	05 44 29.2	
	comp=Z,411nm,35.5s						
TBI				eLR	LR	05 47 08.3	
	comp=Z,577nm,32.5s						
MEH	Mehetia	60.68	108	eP	P	05 29 08.7	+6.6
	comp=Z,52nm,1.2s						
VAH	Vaihoa	60.91	105	eP	P	05 29 10.4	+6.7
	comp=Z,156nm,1.1s						
ZEA	Zeya	61.48	344	eP	P	05 29 12.6	+5.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MA2	Magadan	63.92	360	ceP	P	05 29 23.2	+0.2
MA2				pmax	pmax		
	comp=Z,42nm,1.7s						
GTA	Gaotai	64.46	318	P	P	05 29 27.7	+0.6
GTA				pP	pP	05 29 32.8	-4.6
GTA				sP	pwP	05 29 35.6	-3.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,160nm,5.7s						
GTA				LR	LR		
	comp=Z,90nm,17.8s						
GTA				LR	LR		
	comp=Z,160nm,19.6s						
GTA				LR	LR		
	comp=Z,240nm,16.4s						
SHL	Shillong	64.90	301	P	P	05 29 29.4	-0.9
SHL				pmax	pmax		
	comp=Z,128nm,1.8s						
SHL	Shillong	64.90	301	P	P	05 29 29.4	-0.9
ULN	Ulaanbaatar	65.00	329	ceP	P	05 29 31.4	+0.9
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	Ulaanbaatar	65.00	329	P	P	05 29 30.8	+0.3
ULN				IAmb	IAmb	05 29 40.0	
	comp=Z,18nm,1.1s						
SONM	Songino Array	65.32	328	P	P	05 29 33.4	+0.9
	comp=Z,5.2nm,1.0s,baz=130,slow=6.5,SNR=12						
SONM				LR	LR	05 58 00.2	
	comp=Z,157nm,21.2s,baz=76,slow=36						
LSA	Lhasa	66.87	305	P	P	05 29 42.8	-0.5
LSA				pmax	pmax		
	comp=Z,12nm,1.1s						
LSA	Lhasa	66.87	305	P	P	05 29 42.8	-0.5
SEY	Seymchan	67.29	1	LR	LR	05 54 42.8	
	comp=Z,172nm,21.2s,baz=272,slow=32						
SEY	Seymchan	67.29	1	i P	P	05 29 45.3	+0.6
YAK	Yakutsk	68.43	349	eP	P	05 30 01.1	+9.2
YAK				pmax	pmax		
	comp=Z,40nm,1.1s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK	Yakutsk	68.43	349	P	P	05 29 53.0	+1.1
ZAK	Zakamensk	68.50	329	eP	P	05 29 53.4	+0.7
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
TAPN	Taplejung	69.00	301	eP	P	05 29 56.7	+0.2
	comp=Z,24nm,1.0s						
BOD	Bodaibo	69.03	340	eP	P	05 29 54.5	-1.2
BOD				pmax	pmax		
	comp=Z,14nm,1.8s						
TLY	Talaya	69.12	330	i P	P	05 29 57.7	+1.3
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ODAN	Odare	69.13	301	eP	P	05 29 57.3	0.0
RAMN	Ramite	69.84	301	eP	P	05 30 01.7	+0.1
	comp=Z,15nm,0.8s						
MOY	Mondy	70.43	329	eP	P	05 30 09.9	+5.3
MOY				pmax	pmax		
	comp=Z,45nm,2.5s						
GUN	Gumba	70.72	301	eP	P	05 30 07.3	+0.1
	comp=Z,41nm,0.7s						
PKI	Pulchoki	71.03	301	eP	P	05 30 08.6	-0.4
PKIN	Phulchoki	71.04	301	eP	P	05 30 08.8	-0.2
DMN	Daman	71.29	301	eP	P	05 30 10.5	-0.1
	comp=Z,33nm,0.8s						
GKN	Gorkha	71.80	301	eP	P	05 30 13.1	-0.4
KOLN	Koldanda	72.62	301	eP	P	05 30 18.3	-0.2
	comp=Z,40nm,0.8s						
DANN	Dangsing	72.64	301	eP	P	05 30 18.3	-0.3
	comp=Z,58nm,1.0s						
VNDA	Vanda	73.15	178	P	P	05 30 19.9	-0.4
	comp=Z,2.8nm,1.0s,baz=304,slow=3.2,SNR=4.4						
VNDA				LR	LR	06 00 54.2	
	comp=Z,98nm,18.2s,baz=332,slow=34						
VNDA	Vanda	73.15	178	P	P	05 30 20.8	+0.4
VNDA				pmax	pmax		
	comp=Z,22nm,1.4s						
VNDA	Vanda	73.15	178	P	P	05 30 20.8	+0.4
VNDA				IAmb	IAmb	05 30 26.9	
	comp=Z,22nm,1.4s						
PYUN	Piuthan	73.23	301	eP	P	05 30 21.5	-0.6
	comp=Z,63nm,0.8s						
RKT	Rikitea	73.26	113	eLR	LR	05 53 15.6	
	comp=Z,318nm,31.2s						
WMQ	Urumqi	74.55	318	P	P	05 30 31.5	+2.2
WMQ				pP	pP	05 30 35.8	-3.8
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,320nm,5.5s						
HYB	Hyderabad	75.00	289	i P	P	05 30 31.5	-0.9
HYB				e		05 30 36.5	
ANM	Nome	75.98	18	P	P	05 30 37.5	+0.6
ANM				pmax	pmax		
	comp=Z,54nm,1.5s						
ANM	Nome	75.98	18	P	P	05 30 37.5	+0.6
ANM				IAmb	IAmb	05 30 44.3	
	comp=Z,54nm,1.5s						
DGZ	Jazzator, Alta	76.98	323	i P	P	05 30 43.5	+0.3
DGZ				pmax	pmax		
	comp=Z,22nm,1.3s						
TIXI	Tiksi	77.45	353	eP	P	05 30 46.2	+1.1
TIXI	Tiksi	77.45	353	P	P	05 30 45.0	-0.1
ZSN	Zaisan	77.72	320	eP	P	05 30 47.6	+0.4
	comp=Z,2.7nm,1.3s,baz=320						
ZSN	Zaisan	77.72	320	eP	P	05 30 47.6	+0.4
ZSN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
CNPM	China Poot	78.13	26	P	P	05 30 48.1	-1.1
CAPN	Captain Cook N	78.80	25	P	P	05 30 54.0	+1.2
	baz=239						
MK31	Makanchi Array	79.16	319	ceP	P	05 30 55.8	+0.7
MK31	Makanchi Array	79.16	319	P	P	05 30 54.5	-0.7
MKAR	Makanchi Array	79.16	319	P	P	05 30 55.5	+0.3
	comp=Z,2.2nm,0.8s,baz=105,slow=5.9,SNR=17						
O22K	Cooper Landing	79.27	26	P	P	05 30 55.4	0.0
	baz=240						
MAKZ	Makanchi	79.36	319	P	P	05 30 55.6	-0.6
MAKZ				pmax	pmax		
	comp=Z,14nm,1.0s						
MAKZ	Makanchi	79.36	319	P	P	05 30 55.6	-0.6
MAKZ				IAmb	IAmb	05 31 05.0	
	comp=Z,14nm,0.9s						
RC01	Rabbit Creek A	79.56	25	P	P	05 30 58.5	+1.5
	baz=240						
SHLS	Shalkode	80.00	315	eP	P	05 30 58.9	-1.0
	baz=315						
SHLS	Shalkode	80.00	315	eP	P	05 30 58.9	-1.0
PDGK	Podgornoye	80.03	315	i P	P	05 31 00.3	+0.2
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	80.12	327	P	P	05 30 59.7	-0.4
	comp=Z,14nm,0.9s,baz=121,slow=5.2,SNR=22						
KPKS	Kokpek	80.63	315	eP	P	05 31 03.8	+0.5
	baz=315						
KPKS	Kokpek	80.63	315	eP	P	05 31 03.7	+0.5
RND	Reindeer	81.07	23	P	P	05 31 05.0	-0.2
RND				pmax	pmax		
	comp=Z,25nm,0.9s						
RND	Reindeer	81.07	23	P	P	05 31 05.0	-0.2
RND				IAmb	IAmb	05 31 10.0	
	comp=Z,25nm,0.9s						
MLY	Manley	81.18	21	P	P	05 31 05.9	+0.3
	baz=239,SNR=13						
MCK	McKinley	81.20	23	P	P	05 31 06.1	+0.4
	baz=241,SNR=11						
M24K	Tolsona, Glenn	81.55	25	P	P	05 31 07.8	+0.2
	baz=243						
NEA2	Nenana	81.57	22	P	P	05 31 07.3	-0.4
	baz=240,SNR=8.3						
KSH	Kashi	81.64	311	P	P	05 31 11.5	+2.7
KSH				pP	PcP	05 31 16.0	+1.4
KSH				S	S	05 41 19.3	+0.3
KSH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,330nm,5.3s						
I23K	Minto, Yukon-K	81.74	22	P	P	05 31 07.9	-0.7
	baz=240,SNR=5.7						
WRH	Wood River Hil	81.88	22	P	P	05 31 08.6	-0.7
WRH				IAmb	IAmb	05 31 14.6	
	comp=Z,27nm,1.2s						
N25K	Chitina, Valde	82.00	26	P	P	05 31 10.0	-0.1
	baz=245						
CCB	Clear Creek Bu	82.07	22	P	P	05 31 09.8	-0.5
CCB				IAmb	IAmb	05 31 14.8	
	comp=Z,11nm,0.8s						
TCOL	CIGO, UAF Yank	82.16	22	P	P	05 31 10.6	-0.1
	baz=242,SNR=6.4						
COLA	College	82.17	22	i P	P	05 31 11.6	+0.8
COLA				pmax	pmax		
	comp=Z,20nm,0.9s						
HDA	Harding Lake	82.29	23	P	P	05 31 12.0	+0.5
	baz=242						
KUU	Kurty	82.38	315	eP	P	05 31 12.8	+0.3
	comp=Z,3.6nm,1.0s,baz=315						
KUU	Kurty	82.38	315	eP	P	05 31 12.7	+0.3
KUU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
POKR	Poker Plat Res	82.44	22	P	P	05 31 12.0	-0.3
	baz=242						
IL31		82.48	22	P	P	05 31 10.8	-1.6
IL31				IAmb	IAmb	05 31 16.7	
	comp=Z,10nm,0.8s						
ILAR	Eielson Array	82.48	22	P	P	05 31 11.4	-1.1
	comp=Z,5.9nm,0.8s,baz=262,slow=4.8,SNR=11						
ILAR				LR	LR	06 06 20.9	
	comp=Z,107nm,18.4s,baz=304,slow=34						
COLD	Coldfoot	82.51	20	P	P	05 31 12.9	+0.3
	baz=239						
NIL	Nilore	82.61	305	P	P	05 31 13.1	-0.7
NIL				pmax	pmax		
	comp=Z,92nm,1.5s						
NIL	Nilore	82.61	305	P	P	05 31 13.1	-0.7
KURK	Kurchatov	82.65	322	ceP	P	05 31 14.1	+0.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	Kurchatov	82.65	322	P	P	05 31 12.7	-0.9
KURK				IAmb	IAmb	05 31 22.0	
	comp=Z,24nm,1.1s						
TKM2	Tokmak 2	82.68	314	i P	P	05 31 14.6	+0.3
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
A21K	Barrow	82.94	15	P	P	05 31 14.9	+0.2
	baz=232						
L26K	Log Cabin Wild	83.12	25	P	P	05 31 16.4	+0.5
	baz=246						
SCRK	Sand Creek	83.26	24	P	P	05 31 17.1	+0.4
	baz=245,SNR=6.8						
AAK	Ala-Archa	83.41	314	i P	P	05 31 18.2	+0.2
AAK				pmax	pmax		
	comp=Z,87nm,2.2s						
AAK	Ala-Archa	83.41	314	P	P	05 31 15.5	-2.5
TOLK	Toolik Lake Re	83.44	18	P	P	05 31 18.4	+1.0
	baz=239						
SGDS	Sogindy	83.49	314	eP	P	05 31 18.7	+0.4
	baz=314						
SGDS	Sogindy	83.49	314	eP	P	05 31 18.6	+0.4
MAW	Mawson	85.24	203	P	P	05 31 26.6	+0.1
	baz=85,SNR=5.6						
MAW	Mawson	85.24	203	P	P	05 31 27.1	+0.6
	comp=Z,17nm,1.1s,baz=278,slow=14,SNR=6.1						
MAW				LR	LR	06 06 53.6	
	comp=Z,273nm,19.8s,baz=74,slow=34						
NRIK	Noril'sk	85.24	341	P	P	05 31 27.3	+0.8
	comp=Z,30nm,1.0s,baz=120,slow=4.2,SNR=20						
NRIK	Noril'sk	85.24	341	ceP	P	05 31 27.1	+0.7
NRIK				pmax	pmax		
	comp=Z,56nm,1.3s						
NRIK	Noril'sk	85.24	341	P	P	05 31 26.4	0.0
QSPA	South Pole Qui	85.42	180	P	P	05 31 25.8	-1.8
DZA	Taraz	85.75	313	eP	P	05 31 30.5	+0.9
	baz=314						
DZA	Taraz	85.75	313	eP	P	05 31 30.5	+0.9
KK31	Karatay Array	86.38	314	P	P	05 31 32.8	+0.1
KK31				pmax	pmax		
	comp=Z,34nm,1.3s						
KK31	Karatay Array	86.38	314	P	P	05 31 32.8	+0.1
IUG	Iuzhnay	86.57	313	eP	P	05 31 34.5	+0.6
	comp=Z,1.7nm,0.8s,baz=313						
IUG	Iuzhnay	86.57	313	eP	P	05 31 34.4	+0.6
IUG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EPYK	Eagle Plains	87.00	23	P	P	05 31 35.7	+0.4
	baz=252						
BRVK	Borovoye	88.21	323	ceP	P	05 31 41.9	+0.6
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
O02D	Mt. Diablo Mer	89.77	50	P	P	05 31 49.3	+0.3
	baz=264						
M02C	Callahan	89.85	49	P	P	05 31 49.3	0.0
	baz=264,SNR=7.0						
N02D	Trinity Center	89.91	49	P	P	05 31 49.3	-0.4
	baz=264,SNR=5.8						
YBH	Yreka Blue Hor	89.99	48	P	P	05 31 50.2	+0.2
	comp=Z,3.5nm,1.1s,baz=278,slow=3.2,SNR=4.6						
YBH	Yreka Blue Hor	89.99	48	P	P	05 31 48.4	-1.6
YBH				pmax	pmax		
	comp=Z,19nm,1.2s						
YBH	Yreka Blue Hor	89.99	48	P	P	05 31 48.4	-1.6
YBH				IAmb	IAmb	05 31 57.3	
	comp=Z,19nm,1.2s						
L04D	Klamath Falls	90.34	48	P	P	05 31 51.5	-0.2
	baz=264						
O03E	Paynes Creek	90.53	50	P	P	05 31 52.2	-0.4
	baz=265						
M04C	Macdoel	90.64	48	P	P	05 31 53.9	+0.7
	baz=265						
J05D	Fort Rock, OR	91.22	47	P	P	05 31 55.8	0.0
	baz=265						
PKM	Mcpherson Peak	91.64	55	P	P	05 31 57.8	-0.2
	baz=266						
VES	Vestal, Richgr	92.31	54	P	P	05 32 01.2	+0.4
	baz=266						
C36M	Paulatuk	92.31	21	P	P	05 32 00.6	+0.6
	baz=263						
PAHR	Pah Rah Range	92.33	51	P	P	05 31 58.9	-2.2
PAHR				IAmb	IAmb	05 32 18.1	
	comp=Z,16nm,1.5s						
ISA	Isabella, Lake	92.79	55	P	P	05 32 03.1	-0.1
	baz=266						
LHV	Little Huntoon	92.92	52	P	P	05 32 01.1	-2.4
NVAR	Mina Array Bea	93.09	52	P	P	05 32 05.6	+0.9
	comp=Z,4.9nm,0.8s,baz=251,slow=6.8,SNR=18						
EDW2	Edwards Air Fo	93.14	55	P	P	05 32 04.1	-0.7
	baz=267,SNR=5.4						
CWC	Cottonwood Cre	93.16	54	P	P	05 32 05.1	+0.1
	baz=267						
LRMC	Laurel Mtn Rad	93.42	55	P	P	05 32 06.4	+0.3
	baz=267,SNR=8.2						
MPMC	Manual Prospec	93.61	54	P	P	05 32 07.1	-0.1
	baz=267,SNR=5.8						
GRAC	Grapevine Rang	93.76	53	P	P	05 32 07.7	+0.1
	baz=267						
GSC	Goldstone, Bar	94.13	55	P	P	05 32 09.7	+0.4
	baz=267						
FURC	Furnace Creek,	94.14	54	P	P	05 32 09.9	+0.7
	baz=268,SNR=7.9						
MONP2	Monument Peak	94.34	57	P	P	05 32 10.4	-0.1
	baz=268,SNR=6.4						
PFO	Pinyon Flats O	94.34	57	P	P	05 32 10.3	-0.1
	baz=268						
TPFO	Pinon Flats	94.34	57	P	P	05 32 09.5	-0.9
	baz=268						
HEC	Hector,Ludlow	94.50	56	P	P	05 32 10.5	-0.5
	baz=268,SNR=6.2						
SHOC	Shoshone, Teco	94.59	54	P	P	05 32 11.2	-0.2
	baz=268,SNR=6.9						
IKP	In-Ko-Pah, Jac	94.59	58	P	P	05 32 10.6	-0.9
	baz=268						
TPNV	Topopah Spring	94.65	53	P	P	05 32 10.5	-1.3
	baz=268,SNR=6.1						
BELC	Belle Mtn. Jos	94.74	56	P	P	05 32 12.9	+0.6
	baz=268						
SWSC	Sam W. Stewart	94.86	57	P	P	05 32 13.3	+0.6
	baz=268						
GMRC	Granite Mounta	95.05	56	P	P	05 32 12.4	-1.3
	baz=268,SNR=5.4						
BC3	Big Chuckawall	95.18	57	P	P	05 32 13.8	-0.4
	baz=268						
R11A	Troy Canyon, C	95.22	52	P	P	05 32 14.2	-0.3
	baz=268,SNR=5.9						
IRM	Iron Mountain	95.45	56	P	P	05 32 14.2	-1.2
	baz=268,SNR=5.9						
YKA	Yellowknife Ar	95.89	28	P	P	05 32 16.6	-0.1
	comp=Z,1.8nm,0.8s,baz=267,slow=3.7,SNR=22						
YKA				PP	PP	05 36 15.3	+6.4
	comp=Z,1.2nm,1.1s,baz=267,slow=7.3,SNR=6.2						
HLID	Hailey	96.20	47	P	P	05 32 18.4	-0.3
	baz=270						
BW06	Boulder Array	99.77	48	P	Pdif	05 32 34.5	-0.4
	baz=273						
PDAR	Pinedale Array	99.77	48	P	Pdif	05 32 36.3	+1.4
	comp=Z,1.8nm,0.9s,baz=224,slow=2.1,SNR=9.4						
PDAR				LR	LR	06 11 19.2	
	comp=Z,63nm,19.8s,baz=322,slow=32						
SNAA	Sanae	102.08	188	P	Pdif	05 32 48.0	+3.7
S54A	Dingess, Beckl	121.83	48	P	PKPdf	05 37 44.4	-0.4
	baz=291						
KHC	Kasperske Hory	122.94	328	ePKIKP	PKiKP	05 37 50.5	+3.7
KHC	Kasperske Hory	122.94	328	ePKP	PKiKP	05 37 50.5	+3.7
GERES	GERESS Array B	123.05	328	PKP	PKPdf	05 37 46.4	-0.5
	comp=Z,1.3nm,0.7s,baz=130,slow=37,SNR=2.8						
E60A	Ste Agathe de	124.30	35	P	PKPdf	05 37 48.7	-0.5
	baz=305						
Y58A	Scranton	124.45	52	P	PKPdf	05 37 48.7	-1.1
	baz=290						
G60A	Masonville	124.50	36	P	PKPdf	05 37 48.8	-0.9
	baz=304						
I61A	Oroboro, Fairl	125.22	38	P	PKPdf	05 37 50.5	-0.6
	baz=303						
MDT	Midelt	143.98	324	PKP	PKiKP	05 38 28.0	-1.9
	comp=Z,4.3nm,1.2s,baz=24,slow=5.8,SNR=5.8						
TORD	Torodi Ar. Bea	148.81	288	PKPbc	PKPbc	05 38 38.2	-0.6
	comp=Z,1.5nm,0.7s,baz=55,slow=3.7,SNR=4.1						
KOWA	Kowa	153.76	294	PKPbc	PKiKP	05 38 51.6	+1.2
	comp=Z,0.7nm,0.5s,baz=295,slow=6.7,SNR=2.5						

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*IDC **05** 05:33:57.8±2.1, 7°.62S×128°.36E, h156^{km}±24^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.3/45, mbtmp4.0/8, Error ellipse: s-maj=32.9km s-min=21.0km az=93.0*

ISC 05 05:33:56.4±0.8**, 7°.81S**±0°.07×**128°.46E**±0°.10**, h150^{km}, n9, σ2^{s}.35**/13**, mb3.6**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.30	243	P	Pn	05 35 16.0	+2.0
	66nm,0.3s,baz=109,slow=3.8,SNR=21						
BATI				S	Sn	05 36 12.4	-2.0
	29nm,0.3s,baz=285,slow=22,SNR=7.8						
SIJI	Sorong	7.44	22	P	Pn	05 35 42.0	-0.4
	1.6nm,0.3s,baz=324,slow=3.4,SNR=4.0						
FITZ	Fitzroy Crossi	10.59	195	P	Pn	05 36 26.0	+1.7
	1.1nm,0.3s,baz=29,slow=12,SNR=25						
FITZ				S	Sn	05 38 19.4	-2.1
	3.4nm,0.3s,baz=291,slow=13,SNR=8.3						
WRA	Warramunga Arr	13.34	155	P	P	05 37 03.4	-0.9
	0.5nm,0.3s,baz=332,slow=16,SNR=20						
WRA				S	Sn	05 39 27.3	-0.5
	1.5nm,0.3s,baz=328,slow=22,SNR=7.9						
ASAR	Alice Springs	16.61	162	P	Pn	05 37 45.5	+4.8
	0.5nm,0.3s,baz=339,slow=10,SNR=59						
ASAR				S	S	05 40 41.7	-3.7
	0.2nm,0.3s,baz=334,slow=16,SNR=3.9						
SONM	Songino Array	58.74	343	P	P	05 43 38.4	-0.3
	0.5nm,0.6s,baz=170,slow=9.1,SNR=4.5						
MKAR	Makanchi Array	68.08	328	P	P	05 44 39.4	-0.5
	0.3nm,0.4s,baz=122,slow=8.3,SNR=2.4						
ZALV	Zalesovo Beam	71.64	335	P	P	05 45 00.6	-0.9
	0.4nm,0.3s,baz=132,slow=6.0,SNR=4.0						
KURBB	Kurchatov Arra	72.41	329	P	P	05 45 05.5	-0.7
	0.7nm,0.5s,baz=128,slow=5.1,SNR=7.4						

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*TIR **05** 05:35:36.9, 39°.43N×20°.71E, h3^{km}±1^{km}, Ml3.6*

*IDC **05** 05:35:37.3±1.1, 39°.37N×20°.67E, h0^{km}, mb3.7/7, mb1 3.8/13, mb1mx3.6/60, mbtmp3.7/13, ML3.4/5, MS2.7/5, Ms1 2.8/5, ms1mx2.4/50, Error ellipse: s-maj=19.4km s-min=18.0km az=18.0*

*THE **05** 05:35:37.6, 39°.42N×20°.72E, h3^{km}±2^{km}, ML3.4/9, Error ellipse: s-maj=2.3km s-min=0.4km az=266.0*

*ATH **05** 05:35:38.7, 39°.45N×20°.71E, h0^{km}±1^{km}, ML3.4/23, Error ellipse: s-maj=1.6km s-min=0.6km az=269.0*

ISC 05 05:35:38.2±0.9**, 39°.44N**±0°.01×**20°.70E**±0°.02**, h8^{km}**±7^{km}**, n197, σ1^{s}.19**/246**, mb3.8**/7**, 11C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.25	29	P	Pg	05 35 42.7	-0.6
JAN				S	Sg	05 35 46.4	-0.3
JAN				AML	AML	05 35 48.8	
	comp=E,44383μm,0.6s						
JAN				AML	AML	05 35 52.8	
	comp=N,24460μm,0.8s						
JAN	Janina	0.25	29	P	Pg	05 35 42.7	-0.6
JAN				S	Sg	05 35 46.4	-0.3
JAN				AML	AML	05 35 48.8	
	comp=E,44383μm,0.6s						
JAN				AML	AML	05 35 52.8	
	comp=N,24460μm,0.8s						
JAN	Janina	0.25	29	P	Pg	05 35 42.4	-0.9
JAN				S	Sg	05 35 46.6	-0.1
	comp=N,19μm,0.9s						
TSLK	Tsoukalades, L	0.61	183	P	Pg	05 35 49.7	-0.3
TSLK				AML	AML	05 36 05.9	
	comp=N,7089μm,0.5s						
TSLK				AML	AML	05 36 10.5	
	comp=E,4992μm,0.6s						
TSLK	Tsoukalades, L	0.61	183	P	Pg	05 35 49.7	-0.3
TSLK				AML	AML	05 36 05.9	
	comp=N,7089μm,0.5s						
TSLK				AML	AML	05 36 10.5	
	comp=E,4992μm,0.6s						
TSLK	Tsoukalades, L	0.61	183	P	Pg	05 35 49.4	-0.6
TSLK				S	Sg	05 35 57.4	-0.6
	comp=E,3μm,0.7s						
LKD2	Lefkada island	0.65	183	P	Pg	05 35 50.1	-0.6
LKD2				S	Sb	05 36 00.4	-0.6
LKD2				AML	AML	05 36 12.7	
	comp=N,5697μm,0.6s						
LKD2				AML	AML	05 36 13.6	
	comp=E,5376μm,0.6s						
LKD2	Lefkada island	0.65	183	P	Pg	05 35 50.1	-0.6
LKD2				S	Sb	05 36 00.4	-0.6
LKD2				AML	AML	05 36 12.7	
	comp=N,5697μm,0.6s						
LKD2				AML	AML	05 36 13.6	
	comp=E,5376μm,0.6s						
LKD2	Lefkada island	0.65	183	P	Pg	05 35 49.6	-1.1
LKD2	Lefkada island	0.65	183	P	Pg	05 35 49.8	-1.0
	baz=184						
LKD2				S	Sb	05 36 00.2	-0.7
	baz=184						
KASA	Kassiopi	0.66	298	P	Pg	05 35 51.1	+0.1
KASA				S	Sg	05 36 00.5	+0.8
KASA	Kassiopi	0.66	298	P	Pg	05 35 51.1	+0.1
KASA				S	Sg	05 36 00.5	+0.8
SRN	Sarande	0.69	310	P	Pg	05 35 50.9	-0.7
SRN				S	Sb	05 36 02.4	+0.1
	comp=E,1μm,1.1s						
SRN	Sarande	0.69	310	P	Pg	05 35 51.1	-0.5
	baz=310						
SRN				S	Sb	05 36 02.4	+0.1
	baz=310						
SRN				AMP			
	comp=N,4.7nm,0.5s,baz=310						
LSK	Leskovik	0.72	354	P	Pg	05 35 51.1	-1.0
LSK				S	Sb	05 36 02.7	-0.3
	comp=N,4μm,0.9s						
LSK	Leskovik	0.72	354	P	Pg	05 35 51.4	-0.7
	baz=354						
LSK				S	Sb	05 36 02.3	-0.7

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      baz=354
LSK                              AMP
      comp=E,17nm,0.7s,baz=354
NYDR  Nydri-Lefkada     0.72 180  P     Pg    05 35 50.5 -1.6
KPRO  Kipourio          0.73  45  P     Pg    05 35 51.4 -0.9
KPRO                              S     Sg    05 36 01.5 -0.4
KPRO                              AML   AML   05 36 10.8
      comp=E,8906µm,0.7s
KPRO                              AML   AML   05 36 11.7
      comp=N,8654µm,0.6s
KPRO  Kipourio          0.73  45  P     Pg    05 35 51.4 -0.9
KPRO                              S     Sg    05 36 01.5 -0.4
KPRO                              AML   AML   05 36 10.8
      comp=E,8906µm,0.7s
KPRO                              AML   AML   05 36 11.7
      comp=N,8654µm,0.6s
KPRO  Kipourio          0.73  45  P     Pg    05 35 50.9 -1.4
KPRO                              S     Sg    05 36 02.0 +0.1
      comp=N,4µm,0.7s
KEK   Kerkira           0.74 292  P     Pg    05 35 52.4 -0.1
KEK                               S     Sb    05 36 03.3 -0.5
KEK                               AML   AML   05 36 11.8
      comp=E,4321µm,0.4s
KEK                               AML   AML   05 36 13.5
      comp=N,4885µm,0.8s
KEK   Kerkira           0.74 292  P     Pg    05 35 52.4 -0.1
KEK                               S     Sb    05 36 03.3 -0.5
KEK                               AML   AML   05 36 11.8
      comp=E,4321µm,0.4s
KEK                               AML   AML   05 36 13.5
      comp=N,4885µm,0.8s
KEK   Kerkira           0.74 292  P     Pg    05 35 52.2 -0.4
KEK                               S     Sg    05 36 03.0 +0.7
      comp=N,3µm,0.9s
EVGI  Lefkada island    0.81 182  P     Pg    05 35 52.7 -1.2
EVGI  Lefkada island    0.81 182  P     Pg    05 35 52.7 -1.2
EVGI  Lefkada island    0.81 182  P     Pg    05 35 52.2 -1.7
PENT  Pentalofos        0.83  24  P     Pg    05 35 53.7 -0.6
PENT                              S     Sg    05 36 05.4 +0.3
PENT                              AML   AML   05 36 15.0
      comp=N,3160µm,0.6s
PENT                              AML   AML   05 36 15.6
      comp=E,1930µm,0.5s
PENT  Pentalofos        0.83  24  P     Pg    05 35 53.7 -0.6
PENT                              S     Sg    05 36 05.4 +0.3
PENT                              AML   AML   05 36 15.0
      comp=N,3160µm,0.6s
PENT                              AML   AML   05 36 15.6
      comp=E,1930µm,0.5s
PENT  Pentalofos        0.83  24  P     Pg    05 35 53.8 -0.5
PENT                              S     Sg    05 36 05.4 +0.3
      comp=E,2µm,0.7s
PDO   Prodromos         0.92 155  P     Pg    05 35 55.5 -0.4
PDO                               AML   AML   05 36 16.5
      comp=N,7673µm,0.4s
PDO                               AML   AML   05 36 17.5
      comp=E,5970µm,0.6s
PDO   Prodromos         0.92 155  P     Pg    05 35 55.5 -0.4
PDO                               AML   AML   05 36 16.5
      comp=N,7673µm,0.4s
PDO                               AML   AML   05 36 17.5
      comp=E,5970µm,0.6s
PDO   Prodromos         0.92 155  P     Pg    05 35 54.9 -1.0
PDO                               S     Sg    05 36 07.6 -0.2
      comp=E,5µm,1.0s
FSK   Fiskardo          0.98 186  P     Pb    05 35 57.6 +0.2
FSK                               S     Sb    05 36 11.0 +0.4
FSK                               AML   AML   05 36 15.7
      comp=N,5239µm,0.7s
FSK                               AML   AML   05 36 17.9
      comp=E,6110µm,0.4s
FSK   Fiskardo          0.98 186  P     Pb    05 35 57.6 +0.2
FSK                               S     Sb    05 36 11.0 +0.4
FSK                               AML   AML   05 36 15.7
      comp=N,5239µm,0.7s
FSK                               AML   AML   05 36 17.9
      comp=E,6110µm,0.4s
FSK   Fiskardo          0.98 186  P     Pg    05 35 56.0 -1.1
EVR   Evrytania         1.01 121  P     Pg    05 35 57.1 -0.6
EVR                               AML   AML   05 36 18.9
      comp=E,2716µm,0.5s
EVR                               AML   AML   05 36 19.4
      comp=N,4652µm,0.5s
EVR   Evrytania         1.01 121  P     Pg    05 35 57.1 -0.6
EVR                               AML   AML   05 36 18.9
      comp=E,2716µm,0.5s
EVR                               AML   AML   05 36 19.4
      comp=N,4652µm,0.5s
EVR   Evrytania         1.01 121  P     Pg    05 35 56.0 -1.6
NEST  Nestorio          1.01  15  P     Pg    05 35 57.8 +0.1
NEST                              AML   AML   05 36 24.3
      comp=N,2924µm,0.7s
NEST                              AML   AML   05 36 27.9
      comp=E,2710µm,0.8s
NEST  Nestorio          1.01  15  P     Pg    05 35 57.8 +0.1
NEST                              AML   AML   05 36 24.3
      comp=N,2924µm,0.7s
NEST                              AML   AML   05 36 27.9
      comp=E,2710µm,0.8s
NEST  Nestorio          1.01  15  P     Pg    05 35 57.2 -0.5
THL   Klokotos Trika    1.03  82  P     Pg    05 35 57.8 -0.2
THL                               S     Sb    05 36 12.0 +0.1
THL                               AML   AML   05 36 19.9
      comp=N,2716µm,0.8s
THL                               AML   AML   05 36 20.2
      comp=E,1883µm,0.7s
THL   Klokotos Trika    1.03  82  P     Pg    05 35 57.8 -0.2
THL                               S     Sb    05 36 12.0 +0.1
THL                               AML   AML   05 36 19.9
      comp=N,2716µm,0.8s
THL                               AML   AML   05 36 20.2
      comp=E,1883µm,0.7s
THL   Klokotos Trika    1.03  82  P     Pg    05 35 56.1 -1.9
KEF5  Kardakata, Kep    1.17 189  P     Pb    05 36 00.6 -0.1
KEF5                              S     Sn    05 36 16.7 -0.4
KEF5  Kardakata, Kep    1.17 189  P     Pb    05 36 00.6 -0.1
KEF5                              S     Sn    05 36 16.7 -0.4
KBN   Korca             1.19   3  P     Pb    05 36 00.7 -0.3
KBN   Korca             1.19   3  P     Pn    05 36 01.2  0.0
      baz=2.0
KBN                               S     Sn    05 36 18.7 +1.1
      baz=2.0
KBN                               AMP
      comp=N,4.7nm,0.9s,baz=2.0
MAKR  Makrakomi, Fth    1.19 110  P     Pb    05 36 00.5 -0.6
MAKR                              S     Sn    05 36 17.2 -0.5
MAKR                              AML   AML   05 36 25.1
      comp=N,7090µm,1.3s
MAKR                              AML   AML   05 36 28.9
      comp=E,8835µm,0.7s
MAKR  Makrakomi, Fth    1.19 110  P     Pb    05 36 00.5 -0.6
MAKR                              S     Sn    05 36 17.2 -0.5
MAKR                              AML   AML   05 36 25.1
      comp=N,7090µm,1.3s
MAKR                              AML   AML   05 36 28.9
      comp=E,8835µm,0.7s
MAKR  Makrakomi, Fth    1.19 110  P     Pb    05 35 59.7 -1.4
KEF4  Livadi, Kephal    1.20 190  P     Pb    05 36 01.0 -0.1
KEF4                              S     Sn    05 36 18.1 +0.5
KEF4  Livadi, Kephal    1.20 190  P     Pb    05 36 01.0 -0.1
KEF4                              S     Sn    05 36 18.1 +0.5
KZN   Kozani            1.20  43  P     Pb    05 36 00.4 -0.9
KZN                               AML   AML   05 36 25.2
      comp=N,2816µm,0.6s
KZN                               AML   AML   05 36 30.8
      comp=E,2727µm,1.0s
KZN   Kozani            1.20  43  P     Pb    05 36 00.4 -0.9
KZN                               AML   AML   05 36 25.2
      comp=N,2816µm,0.6s
KZN                               AML   AML   05 36 30.8
      comp=E,2727µm,1.0s
KZN   Kozani            1.20  43  P     Pb    05 36 00.2 -1.1
LXRA  Lixouri, Kepha    1.25 189  P     Pn    05 36 01.8 -0.2
LXRA  Lixouri, Kepha    1.25 189  P     Pn    05 36 01.8 -0.2
VLS   Valsamata         1.26 184  P     Pb    05 36 02.1 -0.1
VLS                               S     Sn    05 36 19.6 +0.3
VLS                               AML   AML   05 36 27.8
      comp=E,4085µm,0.6s
VLS                               AML   AML   05 36 30.2
      comp=N,4245µm,0.5s
VLS   Valsamata         1.26 184  P     Pb    05 36 02.1 -0.1
VLS                               S     Sn    05 36 19.6 +0.3
VLS                               AML   AML   05 36 27.8
      comp=E,4085µm,0.6s
VLS                               AML   AML   05 36 30.2
      comp=N,4245µm,0.5s
VLS   Valsamata         1.26 184  P     Pn    05 36 00.2 -1.9
KEF3  Kipouria, Keph    1.26 193  P     Pn    05 36 01.8 -0.3
KEF3                              S     Sn    05 36 19.2  0.0
KEF3  Kipouria, Keph    1.26 193  P     Pn    05 36 01.8 -0.3
KEF3                              S     Sn    05 36 19.2  0.0
ARGA  Argostoli. Kep    1.27 188  P     Pg    05 36 02.6  0.0
ARGA                              S     Sn    05 36 20.0 +0.7
ARGA  Argostoli. Kep    1.27 188  P     Pg    05 36 02.6  0.0
ARGA                              S     Sn    05 36 20.0 +0.7
ANX   Ano Chora         1.27 131  P     Pg    05 36 02.7 +0.1
ANX                               S     Sn    05 36 19.5 -0.2
ANX                               AML   AML   05 36 30.5
      comp=N,3255µm,0.5s
ANX                               AML   AML   05 36 32.9
      comp=E,4272µm,0.7s
ANX   Ano Chora         1.27 131  P     Pg    05 36 02.7 +0.1
ANX                               S     Sn    05 36 19.5 -0.2
ANX                               AML   AML   05 36 30.5
      comp=N,3255µm,0.5s
ANX                               AML   AML   05 36 32.9
      comp=E,4272µm,0.7s
ANX   Ano Chora         1.27 131  P     Pn    05 36 00.9 -1.5
ANX                               S     Sn    05 36 19.7  0.0
      comp=E,2µm,0.8s
AGG   Agios Georgios    1.34 108  P     Pn    05 36 02.3 -0.9
AGG                               AML   AML   05 36 28.5
      comp=N,2964µm,0.5s
AGG                               AML   AML   05 36 30.0
      comp=E,2140µm,0.7s
AGG   Agios Georgios    1.34 108  P     Pn    05 36 02.3 -0.9
AGG                               AML   AML   05 36 28.5
      comp=N,2964µm,0.5s
AGG                               AML   AML   05 36 30.0
      comp=E,2140µm,0.7s
AGG   Agios Georgios    1.34 108  P     Pn    05 36 02.0 -1.2
EFP   Efpalio           1.38 136  P     Pg    05 36 04.5 -0.2
EFP   Efpalio           1.38 136  P     Pg    05 36 04.5 -0.2
FNA   Florina           1.44  21  P     Pn    05 36 04.5 -0.2
FNA                               AML   AML   05 36 31.9
      comp=N,2484µm,0.7s
FNA                               AML   AML   05 36 35.8
      comp=E,3397µm,0.6s
FNA   Florina           1.44  21  P     Pn    05 36 04.5 -0.2
FNA                               AML   AML   05 36 31.9
      comp=N,2484µm,0.7s
FNA                               AML   AML   05 36 35.8
      comp=E,3397µm,0.6s
FNA   Florina           1.44  21  P     Pn    05 36 03.6 -1.1
FNA   Florina           1.44  21  P     Pb    05 36 05.1 -0.3
      baz=20
FNA                               S     Sg    05 36 26.7 +2.0
      baz=20
SERG  Sergoula          1.47 133  P     Pn    05 36 05.1  0.0
SERG                              AML   AML   05 36 41.3
      comp=E,2385µm,0.7s
SERG                              AML   AML   05 36 43.6
      comp=N,1910µm,0.6s
SERG  Sergoula          1.47 133  P     Pn    05 36 05.1  0.0
SERG                              AML   AML   05 36 41.3
      comp=E,2385µm,0.7s
SERG                              AML   AML   05 36 43.6
      comp=N,1910µm,0.6s
RLS   Riolos of Patr    1.50 156  P     Pn    05 36 05.5 +0.1
RLS                               AML   AML   05 36 35.6
      comp=N,1511µm,0.5s
RLS                               AML   AML   05 36 37.7
      comp=E,1706µm,1.0s
RLS   Riolos of Patr    1.50 156  P     Pn    05 36 05.5 +0.1
RLS                               AML   AML   05 36 35.6
      comp=N,1511µm,0.5s
RLS                               AML   AML   05 36 37.7
      comp=E,1706µm,1.0s
TRIZ  Trizonia          1.52 134  P     Pb    05 36 06.5 -0.1
TRIZ  Trizonia          1.52 134  P     Pb    05 36 06.5 -0.1
LIT   Litokhoron        1.53  64  P     Pn    05 36 06.2 +0.3
LIT   Litokhoron        1.53  64  P     Pn    05 36 06.2 +0.3
LIT   Litokhoron        1.53  64  P     Pn    05 36 05.3 -0.6
KALE  Kalithea          1.54 132  P     Pb    05 36 07.1 +0.1
KALE                              AML   AML   05 36 38.0
      comp=N,2486µm,1.1s
KALE                              AML   AML   05 36 39.6
      comp=E,1690µm,0.7s
KALE  Kalithea          1.54 132  P     Pb    05 36 07.1 +0.1
KALE                              AML   AML   05 36 38.0
      comp=N,2486µm,1.1s
KALE                              AML   AML   05 36 39.6
      comp=E,1690µm,0.7s
VLMS  Volimes, Zakyn    1.56 181  P     Pn    05 36 06.2 -0.1
VLMS  Volimes, Zakyn    1.56 181  P     Pn    05 36 06.2 -0.1
AXAR  Agios Charalam    1.67 113  P     Pb    05 36 08.6 -0.6
AXAR  Agios Charalam    1.67 113  P     Pb    05 36 08.6 -0.6
OHR   Ohrid             1.68   3 i Pn   Pg    05 36 10.6 +0.3
DRO   Drossia           1.68 151  P     Pn    05 36 08.5 +0.6
DRO                               AML   AML   05 36 44.6
      comp=E,1014µm,0.8s
DRO                               AML   AML   05 36 45.1
      comp=N,2827µm,0.5s
DRO   Drossia           1.68 151  P     Pn    05 36 08.5 +0.6
DRO                               AML   AML   05 36 44.6
      comp=E,1014µm,0.8s
DRO                               AML   AML   05 36 45.1
      comp=N,2827µm,0.5s
VOL2  Volos             1.75  92  P     Pn    05 36 08.6 -0.2
VOL2  Volos             1.75  92  P     Pn    05 36 08.6 -0.2
DSF   Desfina           1.76 125  P     Pn    05 36 09.8 +0.7
DSF                               AML   AML   05 36 42.8
      comp=N,901µm,0.7s
DSF                               AML   AML   05 36 45.7
      comp=E,1114µm,0.8s
DSF   Desfina           1.76 125  P     Pn    05 36 09.8 +0.7
DSF                               AML   AML   05 36 42.8
      comp=N,901µm,0.7s
DSF                               AML   AML   05 36 45.7
      comp=E,1114µm,0.8s
KLV   Kalavryta, Ach    1.80 140  P     Pn    05 36 10.1 +0.5
KLV   Kalavryta, Ach    1.80 140  P     Pn    05 36 10.1 +0.5
SCTE  Santa Cesarea     1.83 291  P     Pn    05 36 10.0 +0.1
SCTE  Santa Cesarea     1.83 291  P     Pn    05 36 10.0 +0.1
XOR   Xorichti          1.94  91  P     Pn    05 36 11.8 +0.4
XOR   Xorichti          1.94  91  P     Pn    05 36 11.8 +0.4
ATAL  Atalanti          1.96 112  P     Pn    05 36 12.1 +0.4
ATAL  Atalanti          1.96 112  P     Pn    05 36 12.1 +0.4
LKR   Lokris            1.96 113  P     Pn    05 36 12.4 +0.7
LKR                               AML   AML   05 36 47.6
      comp=N,401µm,1.0s
LKR                               AML   AML   05 36 48.1
      comp=E,530µm,0.6s
LKR   Lokris            1.96 113  P     Pn    05 36 12.4 +0.7
LKR                               AML   AML   05 36 47.6
      comp=N,401µm,1.0s
LKR                               AML   AML   05 36 48.1
      comp=E,530µm,0.6s
TIR   Tirane            2.01 342  P     Pn    05 36 12.5 +0.1
TIR   Tirane            2.01 342  P     Pn    05 36 12.5 +0.1
TIR   Tirane            2.01 342 ⇑P     Pb    05 36 15.3 +0.3
TIR   Tirane            2.01 342  P     Pb    05 36 15.7 +0.7
      baz=342
TIR                               S     Sg    05 36 44.5 +1.6
      baz=342
TIR                               AMP
      comp=N,1.0nm,0.7s,baz=342
SMIA  Simia             2.03 105  P     Pn    05 36 13.5 +0.7
SMIA  Simia             2.03 105  P     Pn    05 36 13.5 +0.7
THE   Thessaloniki      2.11  55  P     Pn    05 36 14.1 +0.3
THE   Thessaloniki      2.11  55  P     Pn    05 36 14.1 +0.3
HORT  Hortiatis         2.18  57  P     Pn    05 36 15.2 +0.4
HORT  Hortiatis         2.18  57  P     Pn    05 36 15.2 +0.4
PHP   Peshkopia         2.25 355  P     Pb    05 36 19.1 -0.1
      baz=355
PHP                               S     Sg    05 36 50.0 -0.6
      baz=355
PHP                               AMP
      comp=N,1.7nm,1.2s,baz=355
PLG   Polygyros         2.31  65  P     Pn    05 36 17.1 +0.4
PLG   Polygyros         2.31  65  P     Pn    05 36 17.1 +0.4
PAIG  Paliouri          2.35  77  P     Pn    05 36 17.6 +0.5
PAIG  Paliouri          2.35  77  P     Pn    05 36 17.6 +0.5
KNT   Kendrikon         2.41  44  P     Pn    05 36 18.3 +0.3
KNT   Kendrikon         2.41  44  P     Pn    05 36 18.3 +0.3
STIP  Stip              2.52  26 i Pn   Pb    05 36 23.2 -0.6
SKO   Skopje            2.59  12 i Pn   Pb    05 36 24.7 -0.3
PUK   Puka              2.67 347  P     Pn    05 36 23.9 +2.3
      baz=347
BCI   Bajram Curri      2.96 351  P     Pn    05 36 28.2 +2.6
      baz=351
DRME  Dracevica, Mon    2.98 338 ePn    Pn    05 36 26.4 +0.7
TIP   Timpagrande       3.06 266 ⇑P     Pb    05 36 30.2 -2.8
PDG   Podgorica         3.18 340 ⇑P     Pn    05 36 31.0 +2.5
PDG   Podgorica         3.18 340 ePn    Pn    05 36 29.7 +1.2
MATE  Matera            3.29 293 ⇑P     Pn    05 36 32.8 +2.8
HCY   Herceg Novi       3.44 332 ePn    Pn    05 36 31.8 -0.3
VTS   Vitosha           3.71  30 ⇓P     Pn    05 36 39.0 +3.0
TREB  Trebinje          3.73 332 ePn    Pn    05 36 35.5 -0.5
SJES  Sjenica           3.86 352 ePn    Pn    05 36 38.1 +0.1
STON  Ston              4.11 328 ePn    Pn    05 36 40.6 -0.6
STON                              Sn    Sn    05 37 27.1 -2.4
STON  Ston              4.11 328 ePn    Pn    05 36 40.1 -1.1
BBLS  Lazi&#263;i       4.53 348 ePn    Pn    05 36 49.3 +2.2
DIVS  Divibare          4.69 354 ePn    Pn    05 36 49.7 +0.4
HAPS  Han Pijesak,Bl    4.83 345 ePn    Pn    05 36 52.8 +1.6
HVAR  Hvar              4.92 321 ePn    Pn    05 36 52.2 -0.2
HVAR                              Sn    Sn    05 37 46.9 -2.6
IDI   Anoyia            5.32 140  Pn    Pn    05 36 58.7 +0.7
      comp=N,0.8nm,0.3s,baz=71,slow=17,SNR=2.2
IDI                               Sn    Sn    05 37 56.4 -3.1
      comp=N,0.8nm,0.3s,baz=329,slow=7.8,SNR=1.7
MDVR  Moldovita         5.39   8 ⇑P     Pn    05 37 02.2 +3.2
KIJV  Kijevo            5.58 326 ePn    Pn    05 37 01.7 +0.2
KIJV                              Sn    Sn    05 38 04.7 -1.1
HERR  Herculane         5.59  13 ⇑P     Pn    05 37 04.5 +2.9
ZIRJ  Zirje             5.67 320 ePn    Pn    05 37 03.2 +0.6
ZIRJ                              Sn    Sn    05 38 05.4 -2.4
FRGS  Fruska Gora       5.75 354 ePn    Pn    05 37 04.2 +0.3
MORI  Morici            5.79 321 ePn    Pn    05 37 04.7 +0.4
BLY   Banja Luka        5.92 335 ePn    Pn    05 37 05.7 -0.4
GZR   Gura Zlata        6.15  14 ⇑P     Pn    05 37 12.5 +3.2
DUGI  Dugi Otok         6.20 319 ePn    Pn    05 37 10.0  0.0
BZS   Buzias            6.21   6 ⇑P     Pn    05 37 12.9 +2.7
AQU   L'Aquila          6.25 300 ePn    Pn    05 37 12.5 +1.8
UDBI  Udbina            6.27 326 ePn    Pn    05 37 12.6 +1.5
UDBI                              Sn    Sn    05 38 22.0 -0.9
NVLJ  Novalja           6.71 322 ePn    Pn    05 37 17.3 +0.3
NVLJ                              Sn    Sn    05 38 30.0 -3.5
SIRR  Siria             6.86   6 ⇓P     Pn    05 37 22.6 +3.4
MLR   Muntele Rosu      7.19  31  Pn    Pn    05 37 27.5 +3.8
      comp=N,0.4nm,0.3s,baz=312,slow=22,SNR=1.7
MLR   Muntele Rosu      7.19  31 ⇑P     Pn    05 37 27.8 +4.2
CRES  Cresnjev          7.46 331 ePn    Pn    05 37 25.9 -1.4
RIY   Rijeka            7.47 324 ePn    Pn    05 37 25.7 -1.6
PLOR  Plostina          7.77  32 ⇑P     Pn    05 37 34.6 +3.1
CEY   Cerknica          7.81 326 ePn    Pn    05 37 31.9 -0.2
VRI   Vrincioaia        7.81  33 ⇑P     Pn    05 37 35.4 +3.3
SOKA  Soboth            8.34 332 ePn    Pn    05 37 39.3 -0.1
      comp=N,1.0nm,0.3s
OBKA  Obir              8.38 330 ePn    Pn    05 37 40.7 +0.7
      comp=N,2.7nm,0.5s
ARSA  Arzberg           8.67 336 ePn    Pn    05 37 45.1 +1.2
      comp=N,2.7nm,0.5s
MYKA  Terra Mystica     8.85 327 ePn    Pn    05 37 45.2 -1.2
      comp=N,0.3nm,0.1s
VYHS  Vyhne             9.15 352 ePN    Pn    05 37 57.6 +7.1
KBA   Koelnbreinsper    9.33 327 ePn    Pn    05 37 53.1  0.0
      comp=N,0.2nm,0.1s
ABTA  Abfaltersbach     9.44 323 ePn    Pn    05 37 53.4 -1.1
      comp=N,2.1nm,0.6s
MOA   Molln             9.61 333 ePn    Pn    05 37 58.4 +1.6
      comp=N,1.3nm,0.3s
BRTR  Keskin Array B   10.00  84  Pn    Pn    05 38 04.5 +2.2
      comp=N,0.0nm,0.3s,baz=269,slow=13,SNR=2.0
WTTA  Wattenberg       10.23 323 ePn    Pn    05 38 06.3 +1.0
      comp=N,1.5nm,0.3s
VRAC  Vranov           10.29 345  LR    LR    05 42 55.9
      comp=N,80nm,19.8s,baz=226,slow=42
WATA  Walderalm        10.31 323 ePn    Pn    05 38 06.9 +0.5
      comp=N,0.9nm,0.3s
SQTA  Sankt Quirin     10.40 322 ePn    Pn    05 38 09.6 +1.9
      comp=N,1.3nm,0.3s
FETA  Feichten         10.50 319 ePn    Pn    05 38 10.5 +1.4
      comp=N,1.7nm,0.6s
MOTA  Moosalm          10.54 322 ePn    Pn    05 38 11.3 +1.7
      comp=N,3.3nm,0.5s
GERES GERESS Array B   10.66 334  Pn    Pn    05 38 12.9 +1.7
      comp=N,0.1nm,0.3s,baz=153,slow=15,SNR=4.7
GERES                             Sn    Sn    05 40 04.9 -5.8
      comp=N,0.0nm,0.3s,baz=154,slow=29,SNR=2.0
GERES                             LR    LR    05 42 44.5
      comp=N,35nm,20.6s,baz=309,slow=40
DAVOX Davos/Dischmat   10.78 316  LR    LR    05 43 17.2
      comp=N,13nm,20.4s,baz=299,slow=42
DAVA  Damuels          11.11 318 ePn    Pn    05 38 18.1 +0.7
      comp=N,0.7nm,0.3s
KVAR  Kislovodsk Arr   17.03  68  P     Pn    05 39 36.8 +0.1
      baz=256,slow=8.3,SNR=1.5
ESDC  Sonseca Array    19.00 279  P     Pn    05 40 02.3 +1.3
      baz=77,slow=11,SNR=6.6
FINES FINESS Array B   22.28   7  P     P     05 40 35.4 -0.2
      comp=N,1.3nm,0.7s,baz=165,slow=12,SNR=1.4
NB2   NORSAR Subarra   22.41 348  P     P     05 40 36.7 -0.3
      comp=Z,5.5nm,1.4s,baz=159,slow=9.3
NOA   NORSAR Array B   22.41 348  P     P     05 40 37.2 +0.2
      comp=Z,0.6nm,0.7s,baz=294,slow=18,SNR=1.9
NOA                               LR    LR    05 49 59.8
      comp=Z,27nm,19.1s,baz=305,slow=38
EKA   Eskdalemuir Ar   22.49 323  P     P     05 40 38.3 +0.4
      comp=Z,2.1nm,0.7s,baz=116,slow=9.6,SNR=3.3
KIRV  Kirov            26.53  34  LR    LR    05 51 04.4
      comp=Z,36nm,21.9s,baz=39,slow=35
ARCES ARCESS Array B   30.27   3  P     P     05 41 50.3 +1.0
      comp=Z,2.7nm,0.9s,baz=194,slow=10.0,SNR=1.0
TORD  Torodi Ar. Bea   31.10 218  P     P     05 41 56.2 -0.9
      comp=Z,1.1nm,0.7s,baz=41,slow=9.5,SNR=4.6
MKAR  Makanchi Array   44.54  60  P     P     05 43 50.9 +0.6
      comp=Z,0.7nm,0.5s,baz=275,slow=7.6,SNR=7.9
ZALV  Zalesovo Beam    44.76  49  P     P     05 43 52.7 +0.8
      comp=Z,1.3nm,0.5s,baz=274,slow=9.0,SNR=6.6
ROSC  El Rosal         90.83 277  LR    LR    06 25 03.2
      comp=Z,101nm,21.5s,baz=9.0,slow=33
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*BJI **05** 05:53:44.7±0.0, 24.°66N×122.°03E, h70 km, mB4.5/22, mb4.2/35, Ms4.1/11, Ms7 3.9/10*

*NIED **05** 05:53:45.8, 24.°66N×121.°99E, h81 km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.31; $M_{\theta\theta}$1.73; $M_{\phi\phi}$-2.04; $M_{r\theta}$1.31; $M_{\theta\phi}$-1.91; $M_{\phi r}$-2.55; Fault plane solution: $M_0$3.93000×10^{15} NP1: ϕ_s159.00000°, δ87.00000°, λ47.00000°. NP2:ϕ_s65.00000°, δ43.00000°, λ175.00000°.*

*JMA **05** 05:53:45.7±0.2, 24.°66N×121.°99E, h81 km±3 km, M4.0*

*NEIC **05** 05:53:46.3, 24.°66N×122.°03E, h73 km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.96; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-2.46; $M_{r\theta}$0.13; $M_{\theta\phi}$-2.11; $M_{\phi r}$-2.76; Fault plane solution: $M_0$4.43000×10^{15} NP1:ϕ_s190.02000°, δ66.00000°, λ66.72000°. NP2:ϕ_s56.62000°, δ32.95000°, λ131.59000°. Principal axes: T 4.3184, Plg62.0000°, Azm64.0000°; N 0.2108, Plg21.0000°, Azm200.0000°; P -4.5291, Plg18.0000°, Azm297.0000°;*

*TAP **05** 05:53:46.5, 24.°69N×122.°02E, h74 km, ML5.1, B*

*NEIC **05** 05:53:46.3±2.0, 24.°66N±0.°04×122.°02E±0.°04, h76 km±4 km, mb4.6/33, Mwr4.4/21, ML4.7(TAP), Error ellipse: s-maj=6.1km s-min=4.7km az=190.0*

*ASIES **05** 05:53:47.1, 24.°74N×122.°04E, h59 km, MW4.2*

*IDC **05** 05:53:48.4±2.7, 24.°71N×122.°11E, h94 km±24 km, mb3.9/20, mb1 4.0/22, mb1mx3.8/42, mbtmp4.2/22, MS3.3/5, Ms1 3.3/5, ms1mx2.9/55, Error ellipse: s-maj=17.1km s-min=11.3km az=70.0*

ISC 05 05:53:46.4±0.5**, 24.°70N**±0.°02×**122.°03E**±0.°02**, h74** km±4 km**, n246, σ1§42**/372**, mb4.4**/43**, 44C-4D, Taiwan region**

```
Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                  Op      ISC      h  m  s     ISC
EGS                     0.17 330⇑iP      Pn      05 53 57.6  +0.2
      baz=342
EGS                              i S      Sn      05 54 05.7  +0.3
      baz=342
TWC   Suao              0.18 242⇑iP      Pn      05 53 57.6  +0.2
      baz=240
TWC                                S      Sn      05 54 05.5  +0.1
      baz=240
NTC   Toucheng          0.24 311⇑iP      Pn      05 53 57.8  +0.2
      baz=318
NTC                              i S      Sn      05 54 05.6  -0.3
      baz=318
TWB1  Santiao Chiao     0.31 354⇑iP      Pn      05 53 58.2  +0.1
      baz=351
TWB1                             i S      Sn      05 54 06.3  -0.4
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      baz=351
ENAH  Nanao            0.32 219⇑iP   Pn   05 53 58.8 +0.7
      baz=220
ENAH                          i S    Sn   05 54 07.5 +0.8
      baz=220
TWE   Neicheng         0.33 274⇑iP   Pn   05 53 58.8 +0.6
      baz=279
TWE                           eS     Sn   05 54 08.8 +1.9
      baz=279
TIPB  Shuangxi         0.33 326⇑iP   Pn   05 53 58.4 +0.2
      baz=317
TIPB                          i S    Sn   05 54 06.5  -0.5
      baz=317
ENA   Nanau            0.37 224⇑iP   Pn   05 53 59.1 +0.6
      baz=219
ENA                             S    Sn   05 54 08.4 +0.9
      baz=219
ENTT  Nioudou          0.42 262⇑iP   Pn   05 53 59.9 +0.9
      baz=262
ENTT                          i S    Sn   05 54 09.4 +1.2
      baz=262
NWF   Wu-fen Shan      0.43 329⇑iP   Pn   05 53 59.3 +0.2
      baz=323
NWF                             S    Sn   05 54 07.9  -0.6
      baz=323
WFSB  Wu-fen Shan      0.43 329⇑iP   Pn   05 53 59.3 +0.3
      baz=323
WFSB                          i S    Sn   05 54 08.2  -0.1
      baz=323
NDT   Datong Townshi   0.48 259⇑iP   Pn   05 54 00.3 +0.9
      baz=267
NDT                           i S    Sn   05 54 09.9 +1.0
      baz=267
NWLT  Wulai            0.48 280⇑iP   Pn   05 53 60.0 +0.5
      baz=289
NWLT                            S    Sn   05 54 09.9 +0.8
      baz=289
TWA   Mucha            0.49 305⇑iP   Pn   05 53 59.7 +0.2
      baz=311
TWA                           i S    Sn   05 54 08.7  -0.5
      baz=311
NHDH  Xindian Distri   0.53 300⇑iP   Pn   05 54 00.1 +0.3
      baz=305
NHDH                          i S    Sn   05 54 09.5  -0.2
      baz=305
TATO  Taipei           0.56 300  Pn  Pn   05 54 00.4 +0.2
TATO                             Sn  Sn   05 54 10.2  -0.1
TAP   Taipei           0.58 306⇑iP   Pn   05 54 00.6 +0.2
      baz=312
TAP                           i S    Sn   05 54 10.6   0.0
      baz=312
YHNB  Yeheng           0.59 268⇑iP   Pn   05 54 01.2 +0.6
      baz=277
YHNB                          i S    Sn   05 54 11.5 +0.4
      baz=277
YHNB  Yeheng           0.59 268      Pn   05 54 01.2 +0.6
YHNB                             Sn  Sn   05 54 11.4 +0.4
NSK   Sanguang         0.61 268⇑iP   Pn   05 54 01.2 +0.5
      baz=268
NSK                           i S    Sn   05 54 11.4 +0.1
      baz=268
BACT  New Taipei Cit   0.61 299  eP  Pn   05 54 01.1 +0.5
      baz=304
BACT                          eS     Sn   05 54 12.0 +0.8
      baz=304
YM01  YM01             0.61 317⇑iP   Pn   05 54 00.9 +0.2
      baz=317
YM01                          i S    Sn   05 54 10.9  -0.4
      baz=317
YM10  YM10             0.62 317⇑iP   Pn   05 54 01.0 +0.1
      baz=318
YM10                            S    Sn   05 54 11.1  -0.4
      baz=318
YM11  YM11             0.62 319  i P Pn   05 54 01.0 +0.1
      baz=318
YM11                            S    Sn   05 54 11.5  -0.1
      baz=318
YM05  YM05             0.63 318⇑iP   Pn   05 54 00.9   0.0
      baz=318
YM05                          eS     Sn   05 54 11.7   0.0
      baz=318
YM08  YM08             0.63 321⇑iP   Pn   05 54 00.7  -0.2
      baz=320
YM08                          i S    Sn   05 54 10.6  -1.0
      baz=320
YM04  YM04             0.64 316⇑iP   Pn   05 54 01.1 +0.1
      baz=321
YM04                            S    Sn   05 54 10.7  -1.0
      baz=321
NNSB  Datong           0.65 246⇑iP   Pn   05 54 01.9 +0.7
      baz=238
NNSB                          i S    Sn   05 54 12.4 +0.4
      baz=238
NNSH  Datong           0.65 246⇑iP   Pn   05 54 01.9 +0.7
      baz=238
NNSH                          i S    Sn   05 54 12.3 +0.3
      baz=238
NNS   Nan Shan         0.65 247⇑iP   Pn   05 54 01.9 +0.7
      baz=247
NNS                             S    Sn   05 54 13.1 +1.0
      baz=247
NACB  Ninganchiao      0.65 217⇑iP   Pn   05 54 01.0  -0.2
      baz=210
NACB                          eS     Sn   05 54 11.8  -0.2
      baz=210
NACB  Ninganchiao      0.65 217      Pn   05 54 00.9  -0.2
NACB                             Sn  Sn   05 54 11.1  -0.9
ANP   Anpu             0.67 317  eP  Pn   05 54 01.6 +0.2
      baz=317
ANP                           eS     Sn   05 54 13.2 +0.7
      baz=317
TWS1  Kuangyinshan     0.68 306⇑iP   Pn   05 54 01.9 +0.5
      baz=313
TWS1                            S    Sn   05 54 13.7 +1.2
      baz=313
TWY   Chenhua          0.69 326⇑iP   Pn   05 54 02.0 +0.4
      baz=326
TWY                           eS     Sn   05 54 12.1  -0.7
      baz=326
ETLH  Xiulin Townshi   0.70 226⇑iP   Pn   05 54 01.8 +0.2
      baz=233
ETLH                          eS     Sn   05 54 12.9  -0.1
      baz=233
NTST  Danshui          0.70 312 ⇑P   Pn   05 54 02.1 +0.5
      baz=318
NTST                          eS     Sn   05 54 13.9 +1.1
      baz=318
NTY   Taoyuan          0.73 295   P  Pn   05 54 02.7 +0.8
      baz=294
NTY                             S    Sn   05 54 15.1 +1.7
      baz=294
TWD   Chiawan          0.73 213⇑iP   Pn   05 54 01.8  -0.2
      baz=224
TWD                           eS     Sn   05 54 13.3  -0.1
      baz=224
NCU   National Centr   0.81 290⇑iP   Pn   05 54 03.6 +0.8
      baz=280
NCU                           i S    Sn   05 54 16.3 +1.2
      baz=280
NCUH  Zhongli          0.81 290⇑iP   Pn   05 54 03.7 +0.9
      baz=281
NCUH                          i S    Sn   05 54 15.9 +0.9
      baz=281
HWA   Hwalien          0.81 208  i P Pn   05 54 03.2 +0.4
      baz=199
HWA                           eS     Sn   05 54 15.9 +0.9
      baz=199
FUSS  Fushou           0.84 238⇑iP   Pn   05 54 04.2 +0.7
      baz=238
FUSS                          eS     Sn   05 54 16.4 +0.3
      baz=238
JYNG  Yonagunijimaku   0.87 106   P  Pn   05 54 03.9 +0.4
JYNG                            S    Sn   05 54 16.5 +0.2
WHF   Hehuan Shan      0.89 232⇑iP   Pn   05 54 04.4 +0.3
      baz=227
WHF                           eS     Sn   05 54 18.0 +0.7
      baz=227
TDCB  Techi            0.91 241⇑iP   Pn   05 54 05.2 +1.0
      baz=234
TDCB                            S    Sn   05 54 17.5 +0.2
      baz=234
HSN1  Hsinchu          0.92 275  i P Pn   05 54 05.0 +0.8
      baz=275
HSN1                            S    Sn   05 54 18.5 +1.2
      baz=275
LIOB  Emei             0.92 267  i P Pn   05 54 04.8 +0.6
      baz=267
LIOB                            S    Sn   05 54 18.4 +0.9
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      baz=267
YOJ   Yonaguni jima    0.93 104   P  Pn   05 54 04.5 +0.3
YOJ                           eS     Sn   05 54 17.5 +0.1
YOJ   Yonaguni jima    0.93 104⇓iP   Pn   05 54 04.3 +0.1
      baz=100
YOJ                           eS     Sn   05 54 17.2  -0.2
      baz=100
YOJ   Yonaguni jima    0.93 104  Pn  Pn   05 54 04.4 +0.3
YOJ                              Sn  Sn   05 54 16.6  -0.8
PCYT  Pengchaiyu       0.93   2⇑iP   Pn   05 54 04.8 +0.5
      baz=1.0
PCYT                          eS     Sn   05 54 18.6 +1.1
      baz=1.0
NSTT  Nanjuang         0.94 266   P  Pn   05 54 04.8 +0.5
      baz=266
NSTT                            S    Sn   05 54 18.1 +0.4
      baz=266
SBCB  Hsinchu          0.95 276  eP  Pn   05 54 05.0 +0.5
      baz=275
SBCB                          i S    Sn   05 54 18.7 +0.7
      baz=275
HSN   Hsinchu          0.97 276   P  Pn   05 54 05.0 +0.4
      baz=278
HSN                             S    Sn   05 54 18.4 +0.1
      baz=278
CHGB  Renai            1.00 231⇑iP   Pn   05 54 06.1 +0.7
      baz=231
CHGB                          eS     Sn   05 54 19.4   0.0
      baz=231
ESL   Shilin           1.03 212   P  Pn   05 54 04.7  -0.8
      baz=219
ESL                           eS     Sn   05 54 19.0  -0.8
      baz=219
WHP   Taichung City    1.07 247⇑iP   Pn   05 54 07.5 +1.4
      baz=247
WHP                             S    Sn   05 54 21.9 +1.2
      baz=247
NMLH  Miaoli           1.14 262   P  Pn   05 54 07.4 +0.6
      baz=261
NMLH                          i S    Sn   05 54 22.5 +0.4
      baz=261
EGFH  Guangfu          1.16 208  eP  Pn   05 54 07.1   0.0
      baz=217
EGFH                          eS     Sn   05 54 21.1  -1.5
      baz=217
NSY   Sanyi            1.19 257⇓iP   Pn   05 54 08.5 +1.0
      baz=255
NSY                           i S    Sn   05 54 24.2 +1.0
      baz=255
WPL   Puli Township    1.19 235   P  Pn   05 54 08.6 +1.1
      baz=228
WPL                           eS     Sn   05 54 24.0 +0.7
      baz=228
TWQ1  Liyutan          1.19 253   P  Pn   05 54 08.4 +0.9
      baz=252
TWQ1                          eS     Sn   05 54 23.9 +0.5
      baz=252
DPDB  Guoxing          1.20 237  eP  Pn   05 54 09.0 +1.3
      baz=246
DPDB                          eS     Sn   05 54 24.6 +1.0
      baz=246
SMLT  Sun Moon Lake    1.31 232   P  Pn   05 54 10.0 +0.9
      baz=231
SMLT                          eS     Sn   05 54 29.0 +2.8
      baz=231
WDJ   Dajia District   1.31 255  eP  Pn   05 54 09.9 +0.9
      baz=254
WDJ                             S    Sn   05 54 27.0 +1.0
      baz=254
HGSD  Ruisui           1.32 205  eP  Pn   05 54 08.9  -0.2
      baz=213
HGSD                          eS     Sn   05 54 25.4  -0.9
      baz=213
TYC   Yuchr            1.33 234  eP  Pn   05 54 10.2 +1.0
      baz=228
TYC                           eS     Sn   05 54 27.8 +1.4
      baz=228
SSLB  Suanglung        1.33 227  eP  Pn   05 54 09.9 +0.5
      baz=232
SSLB                          eS     Sn   05 54 27.6 +1.0
      baz=232
SSLB  Suanglung        1.33 227  Pn  Pn   05 54 09.9 +0.5
SSLB                             Sn  Sn   05 54 27.2 +0.5
TCU   Taichung         1.35 246  eP  Pn   05 54 11.6 +2.1
      baz=255
TCU                           eS     Sn   05 54 27.5 +0.6
      baz=255
EHY   Hungye           1.35 209   P  Pn   05 54 08.8  -0.8
      baz=209
EHY                           eS     Sn   05 54 25.0  -2.0
      baz=209
WWF   Wufeng           1.38 242  eP  Pn   05 54 11.0 +1.2
      baz=251
WWF                           eS     Sn   05 54 29.3 +1.7
      baz=251
YULB  Yu-li            1.46 207  i P Pn   05 54 09.9  -1.1
      baz=208
YULB                          eS     Sn   05 54 27.1  -2.5
      baz=208
YULB  Yu-li            1.46 207  Pn  Pn   05 54 09.6  -1.4
WHYT  Xinyi Township   1.46 227  eP  Pn   05 54 12.8 +1.8
      baz=235
WHYT                          eS     Sn   05 54 31.8 +2.1
      baz=235
WJS   Zhushan          1.47 234  eP  Pn   05 54 12.9 +1.8
      baz=244
WJS                           eS     Sn   05 54 31.1 +1.3
      baz=244
WNT   Mingjian         1.47 237  eP  Pn   05 54 12.2 +1.1
      baz=246
WNT                           eS     Sn   05 54 31.0 +1.3
      baz=246
WCHH  Zhanghua         1.47 246  eP  Pn   05 54 11.5 +0.4
      baz=244
WCHH                          eS     Sn   05 54 30.7 +0.9
      baz=244
EYUL  Yuli             1.49 206  eP  Pn   05 54 11.5 +0.1
      baz=207
EYUL                          eS     Sn   05 54 28.0  -2.3
      baz=207
TWF1  Yuli             1.50 207  eP  Pn   05 54 10.5  -1.0
      baz=207
TWF1                          eS     Sn   05 54 27.6  -2.8
      baz=207
IRIF  Iriomote-Funau   1.59 103   P  Pn   05 54 13.1 +0.4
IRIF                          eS     Sn   05 54 32.9 +0.3
ALS   Alishan          1.63 224  i P Pn   05 54 14.9 +1.5
      baz=234
ALS                             S    Sn   05 54 35.7 +1.8
      baz=234
FULB  Fuli             1.64 204  i P Pn   05 54 13.1  -0.2
      baz=211
FULB                          eS     Sn   05 54 33.8 +0.1
      baz=211
CHN5  Tsauling         1.65 229  i P Pn   05 54 15.0 +1.5
      baz=237
CHN5                            S    Sn   05 54 35.3 +1.2
      baz=237
WGK   Gukeng           1.67 233  eP  Pn   05 54 15.1 +1.3
      baz=241
WGK                           eS     Sn   05 54 36.1 +1.5
      baz=241
WDLH  Douliu           1.69 234  eP  Pn   05 54 15.0 +1.0
      baz=243
WDLH                          eS     Sn   05 54 36.3 +1.4
      baz=243
CHKT  Chengkung        1.70 201⇑iP   Pn   05 54 13.3  -0.8
      baz=194
CHKT                          eS     Sn   05 54 32.9  -2.3
      baz=194
RLNB  Erlin            1.72 243   P  Pn   05 54 14.8 +0.4
      baz=241
RLNB                          i S    Sn   05 54 36.2 +0.6
      baz=241
HATJ  Hateruma jima    1.74 111   P  Pn   05 54 15.2 +0.5
HATJ                            S    Sn   05 54 37.2 +1.1
ELDTW Lidau            1.76 212  eP  Pn   05 54 14.8  -0.3
      baz=206
ELDTW                         eS     Sn   05 54 36.3  -0.6
      baz=206
WTK   Tuku             1.80 236   P  Pn   05 54 15.9 +0.4
      baz=235
WTK                           eS     Sn   05 54 38.5 +1.0
      baz=235
CHN2  Minshiung        1.83 231  eP  Pn   05 54 17.4 +1.6
      baz=239
CHN2                          eS     Sn   05 54 38.6 +0.4
      baz=239
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EDH   Donghe           1.84 201 ⇑P   Pn   05 54 15.4  -0.6
      baz=202
EDH                           eS     Sn   05 54 37.6  -0.9
      baz=202
JKRS  Kuro-shima       1.86 104   P  Pn   05 54 17.1 +0.8
JKRS                          eS     Sn   05 54 39.9 +0.9
CHN4  Tsaushan         1.88 225  i P Pn   05 54 18.1 +1.6
      baz=234
CHN4                          eS     Sn   05 54 42.0 +2.7
      baz=234
TPUB  Ta-pu            1.89 223   P  Pn   05 54 18.2 +1.5
      baz=232
TPUB                            S    Sn   05 54 42.5 +2.8
      baz=232
TPUB  Ta-pu            1.89 223  Pn  Pn   05 54 17.9 +1.2
TPUB                             Sn  Sn   05 54 37.3  -2.4
CHY   Chiayi           1.89 231   P  Pn   05 54 17.6 +1.0
      baz=239
CHY                           eS     Sn   05 54 40.2 +0.5
      baz=239
WTP   Ta-pu            1.94 222  eP  Pn   05 54 18.7 +1.3
      baz=233
WTP                           eS     Sn   05 54 44.4 +3.5
      baz=233
JIJ   Ishigaki jima    1.96  99   P  Pn   05 54 17.7 +0.2
JIJ                           eS     Sn   05 54 40.9  -0.3
WSF   Szhu             1.96 238  eP  Pn   05 54 16.9  -0.7
      baz=236
WSF                           eS     Sn   05 54 41.2   0.0
      baz=236
LONT  Longtian         1.96 205  eP  Pn   05 54 15.6  -2.1
      baz=198
LONT                          eS     Sn   05 54 40.6  -0.8
      baz=198
WLGB  Puzi             1.99 233  eP  Pn   05 54 17.9  -0.1
      baz=240
WLGB                          eS     Sn   05 54 42.9 +0.8
      baz=240
TWK   Hsinying         2.00 225  eP  Pn   05 54 19.5 +1.2
      baz=235
TWK                           eS     Sn   05 54 44.0 +1.5
      baz=235
SNST  Tainan City      2.03 224  eP  Pn   05 54 20.7 +2.2
      baz=234
SNST                          eS     Sn   05 54 44.1 +1.1
      baz=234
CHN1  Nanshi           2.04 223  eP  Pn   05 54 19.9 +1.3
      baz=231
CHN1                          eS     Sn   05 54 44.8 +1.6
      baz=231
TWGBT Beinan           2.06 205   P  Pn   05 54 17.6  -1.4
      baz=199
TWGBT                         eS     Sn   05 54 40.6  -3.2
      baz=199
TWG   Pinlang          2.06 205  eP  Pn   05 54 17.7  -1.3
      baz=199
TWG                           eS     Sn   05 54 40.8  -3.1
      baz=199
TWG   Pinlang          2.06 205      Pn   05 54 17.6  -1.3
LDUT  Ludao            2.08 194   P  Pn   05 54 18.1  -1.0
      baz=190
LDUT                          eS     Sn   05 54 41.7  -2.5
      baz=190
ICHU  Yijhu            2.08 231  eP  Pn   05 54 19.9 +0.7
      baz=229
ICHU                          eS     Sn   05 54 44.9 +0.7
      baz=229
JISG  Ishigakijimahi   2.08  93   P  Pn   05 54 19.7 +0.5
JISG                          eS     Sn   05 54 44.6 +0.4
SGST  Jiashian         2.08 220   P  Pn   05 54 19.8 +0.5
      baz=229
SGST                            S    Sn   05 54 44.4 +0.1
      baz=229
TTN   Taitung          2.10 203  eP  Pn   05 54 18.8  -0.7
      baz=204
SLGT  Liugui           2.12 217   P  Pn   05 54 21.5 +1.8
      baz=217
SLGT                          eS     Sn   05 54 48.4 +3.3
      baz=217
CHN8  Yiju             2.14 231  eP  Pn   05 54 22.2 +2.3
      baz=229
CHN8                          eS     Sn   05 54 46.9 +1.3
      baz=229
PTTC  Pingtan          2.20 292⇓iP   Pn   05 54 20.4  -0.3
      baz=291
CHN3  Shinhua          2.22 224  eP  Pn   05 54 23.0 +1.9
      baz=232
SCLT  Jiali            2.26 228  eP  Pn   05 54 22.5 +0.9
      baz=227
SCST  Cishan           2.29 218  eP  Pn   05 54 24.6 +2.6
      baz=228
SCST                          eS     Sn   05 54 53.3 +4.1
      baz=228
SSD   Sandimen         2.33 214  eP  Pn   05 54 23.9 +1.4
      baz=206
TSMG  Majia            2.35 213  eP  Pn   05 54 24.2 +1.4
      baz=206
VWUC  VWUC             2.36 278  eP  Pn   05 54 22.8  -0.1
      baz=277
MATB  Ma-tsu           2.38 308  eP  Pn   05 54 23.2   0.0
      baz=308
TWM1  Shoushan         2.38 219  eP  Pn   05 54 26.0 +2.8
      baz=228
MSUT  Lienchiang       2.40 308  eP  Pn   05 54 23.4  -0.1
      baz=308
SGLT  Jiouru           2.42 216  eP  Pn   05 54 25.8 +2.1
      baz=217
JTJ   Tarama           2.43  91   P  Pn   05 54 25.3 +1.3
JTJ                             S    Sn   05 54 54.4 +1.6
MASBT Mashibuluo       2.44 212  eP  Pn   05 54 25.2 +1.2
      baz=213
SNJT  Kaohsiung City   2.48 219  eP  Pn   05 54 27.0 +2.4
      baz=229
PNG   Penghu           2.52 244  eP  Pn   05 54 24.6  -0.5
      baz=241
PHUB  P'eng-hu         2.53 243  eP  Pn   05 54 24.5  -0.9
      baz=240
EAST  Anshuo           2.54 205  eP  Pn   05 54 24.8  -0.8
      baz=201
TAW   Tawu             2.55 204  eP  Pn   05 54 23.2  -2.3
      baz=201
SSPT  Xinbi            2.58 212  eP  Pn   05 54 28.3 +2.4
      baz=213
WDGT  Dungji           2.59 237  eP  Pn   05 54 26.0  -0.1
      baz=235
SCZT  Fangliau         2.65 209  eP  Pn   05 54 28.3 +1.4
      baz=211
PTMZ  Houxiangcun      2.66 278  eP  Pn   05 54 26.9  -0.2
      baz=277
LAY   Lan-yu           2.68 189  eP  Pn   05 54 26.4  -1.0
      baz=184
SLIU  Shizi            2.71 205  eP  Pn   05 54 28.9 +1.1
      baz=207
LYJJ  Jianjiangzhen    2.75 313  eP  Pn   05 54 28.4 +0.1
      baz=313
XPSS  Dashiqiu         2.77 324  eP  Pn   05 54 28.5  -0.1
      baz=324
WLCH  Liuqiu           2.78 213  eP  Pn   05 54 32.7 +4.0
      baz=214
TWP   Hsiaoliuchiu     2.79 213  eP  Pn   05 54 31.1 +2.3
      baz=215
VCHM  Qimei            2.80 239  eP  Pn   05 54 28.5  -0.5
      baz=236
JIRB  Irabujima        2.86  87   P  Pn   05 54 30.9 +1.1
JIRB                          eS     Sn   05 55 04.4 +1.2
HEN   Hengchun         2.93 204  eP  Pn   05 54 31.4 +0.7
      baz=216
JIKM  Ikemajima        2.94  85  eS  Sn   05 55 06.9 +2.0
TWK1  Hengchun         2.96 203  eP  Pn   05 54 31.6 +0.4
      baz=204
TWKBT Hengchun         2.96 202  eP  Pn   05 54 31.2   0.0
      baz=204
TSEB  Hengchuen, Pin   2.97 201  eP  Pn   05 54 31.8 +0.5
      baz=203
JMJ   Miyako jima 2    2.97  87  eP  Pn   05 54 34.3 +3.1
      baz=88
JMJ2  Miyako jima3     3.00  88  eS  Sn   05 55 08.0 +1.4
MHZQ  Yeshan           3.05 298  eP  Pn   05 54 31.9  -0.4
      baz=298
QZH   Quanzhou         3.13 275⇓iP   Pn   05 54 33.1  -0.3
QZH                             S    Sn   05 55 06.6  -3.1
QZH                           smax   smax
      comp=N,570nm,0.6s
QZH                           smax   smax
      comp=E,410nm,0.4s
KNM   Kinmen           3.28 266  eP  Pn   05 54 36.5 +1.0
      baz=265
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KNMB	Chin-men Tao	3.32	267	eP	Pn	05 54 35.4	-0.6
	baz=265						
KNMB	Chin-men Tao	3.32	267	Pn	Pn	05 54 35.3	-0.7
AXDP	Jialang	3.69	274	eP	Pn	05 54 41.1	+0.1
	baz=272						
VDOS	Pratas Island	6.30	232	eP	Pn	05 55 17.2	+0.5
	baz=229						
NJ2	Nanjing	7.84	340	eP	Pn	05 55 38.2	+0.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				smax	smax		
	comp=N,86nm,0.9s						
NJ2				smax	smax		
	comp=E,52nm,0.7s						
GZH	Guangzhou	8.11	260	P	Pn	05 55 37.0	-4.4
GZH				S	Sn	05 57 03.2	-8.3
GZH				smax	smax		
	comp=N,230nm,1.0s						
GZH				smax	smax		
	comp=E,190nm,1.0s						
JMZ	Minamidaito 2	8.40	80	Pn	Pn	05 55 44.4	-1.0
WHN	Wuhan	8.96	312	⇑P	Pn	05 55 52.8	-0.2
WHN				S	Sn	05 57 28.1	-4.1
WHN				LR	LR		
	comp=Z,460nm,9.6s						
QIZ	Qiongzhong	12.64	246	P	Pn	05 56 42.7	-0.5
QIZ				S	Sn	05 59 02.3	+0.1
KSRS	Korea Array	13.68	20	P	Pn	05 56 59.4	+2.4
	2.2nm,0.3s,baz=202,slow=12,SNR=62						
KSRS				LR	LR	06 02 57.1	
	comp=Z,58nm,19.3s,baz=146,slow=40						
KS19	Wonju Array Si	13.71	20	Pn	Pn	05 56 57.3	-0.1
GYA	Guiyang	13.98	280	⇑P	P	05 57 06.5	-0.3
GYA				pmax	pmax		
	comp=Z,19nm,0.9s						
DL2	Dalian	14.17	359	P	P	05 57 11.7	+3.0
DL2				pmax	pmax		
	comp=Z,46nm,0.8s						
XAN	Xi'an	14.72	312	P	Pn	05 57 12.6	+1.9
XAN				pP	P	05 57 19.9	+4.9
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	Xi'an	14.72	312	Pn	Pn	05 57 09.3	-1.5
CD2	Chengdu	17.30	295	P	Pn	05 57 43.3	+0.2
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
KMI	Kunming	17.50	275	eP	P	05 57 46.0	0.0
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
JHJ	Hachijo jima 2	17.65	58	LR	LR	06 04 05.7	
	comp=Z,60nm,20.5s,baz=243,slow=35						
MJAR	Matsushiro Arr	18.23	46	P	P	05 57 52.6	-1.1
	comp=Z,0.1nm,0.3s,baz=233,slow=9.7,SNR=4.7						
MJAR				LR	LR	06 04 56.0	
	comp=Z,80nm,20.8s,baz=90,slow=37						
HHC	Hu-ho-hao-te	18.33	334	eP	Pn	05 57 59.6	+4.0
HHC				S	S	06 01 13.8	-5.9
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
HHC				LR	LR		
	comp=Z,380nm,16.1s						
HHC				LR	LR		
	comp=Z,230nm,13.3s						
HHC				LR	LR		
	comp=Z,220nm,12.3s						
CN2	Changchun	19.26	8	eP	P	05 58 04.6	-0.3
CN2				pP	pP	05 58 19.0	-0.9
CN2				S	S	06 01 32.1	-7.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LZH	Lanzhou	19.33	310	eP	Pn	05 58 08.5	+0.9
LZH				pP	pP	05 58 22.1	+1.2
LZH				PP	sP	05 58 28.7	-1.6
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,82nm,4.7s						
LZH				LR	LR		
	comp=Z,370nm,12.0s						
LZH				LR	LR		
	comp=Z,370nm,11.9s						
LZH				LR	LR		
	comp=Z,490nm,14.6s						
CHAI	Chaiyaphum	20.71	249	P	Pn	05 58 23.0	-0.9
	comp=Z,416nmcomp=Z,18nm,0.9s						
USRK	Ussuriysk Ar.	21.09	20	P	P	05 58 26.1	+1.4
	comp=Z,2.6nm,0.7s,baz=206,slow=11,SNR=7.7						
SRAK	Srakaew	21.61	244	P	P	05 58 29.2	-1.3
	comp=Z,59nm,1.1s						
LAMP	Lampang	21.70	258	P	P	05 58 34.4	+3.1
CM35	Chiang Mai Arr	22.07	259	P	P	05 58 37.0	+1.6
CM36	Chiang Mai Arr	22.17	258	P	P	05 58 38.0	+1.5
CM33	Chiang Mai Arr	22.21	259	P	P	05 58 39.0	+2.1
CHTO	Chiang Mai	22.21	259	P	P	05 58 35.3	-1.6
CM04	Chiang Mai Arr	22.32	258	P	P	05 58 40.6	+2.5
	comp=Z,4.9nm,0.9s						
CMAR	Chiang Mai Arr	22.33	258	P	P	05 58 39.5	+1.3
	comp=Z,2.5nm,0.7s,baz=63,slow=8.5,SNR=15						
CMAR				PcP	PcP	06 02 32.0	+0.7
	comp=Z,0.6nm,0.3s,baz=62,slow=0.7,SNR=4.9						
CM02	Chiang Mai Arr	22.34	258	P	P	05 58 40.8	+2.5
	comp=Z,6.2nm,0.8s						
CM05	Chiang Mai Arr	22.35	258	P	P	05 58 43.0	+4.5
	comp=Z,90nmcomp=Z,4.1nm,0.4s						
CM13	Chiang Mai Arr	22.38	258	P	P	05 58 41.4	+2.7
GTA	Gaotai	23.78	313	P	P	05 58 54.2	+1.8
GTA				pP	pP	05 59 05.9	-3.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HIA	Hailar	24.59	356	P	P	05 58 58.6	-0.8
KLR	Kul'dur	25.65	15	P	P	05 59 08.7	-0.3
	comp=Z,3.4nm,0.7s,baz=243,slow=6.0,SNR=7.5						
SONM	Songino Array	26.21	336	P	P	05 59 15.0	+0.8
	comp=Z,6.1nm,0.9s,baz=157,slow=9.9,SNR=15						
SHL	Shillong	27.28	278	P	P	05 59 23.2	-1.0
SHL				IAmb	IAmb	05 59 29.1	
	comp=Z,9.7nm,0.7s						
PSI	Prapat	31.15	229	LR	LR	06 12 21.9	
	comp=Z,68nm,18.6s,baz=271,slow=36						
WMQ	Urumqi	33.86	313	eP	P	06 00 23.8	+1.9
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
MK31	Makanchi Array	38.51	315	P	P	06 01 01.8	+0.3
MKAR	Makanchi Array	38.51	315	P	P	06 01 01.9	+0.4
	comp=Z,1.9nm,0.4s,baz=95,slow=10,SNR=34						
MKAR				PcP	PcP	06 03 12.3	-0.7
	comp=Z,0.4nm,0.7s,baz=78,slow=5.5,SNR=2.8						
MKAR				ScP	S	06 06 52.8	+1.1
	comp=Z,0.9nm,0.7s,baz=98,slow=4.6,SNR=8.8						
MAKZ	Makanchi	38.72	315	P	P	06 01 03.8	+0.6
MAKZ				IAmb	IAmb	06 01 04.4	
	comp=Z,2.6nm,0.5s						
ZAA0	Zalesovo Array	40.24	326	P	P	06 01 15.4	-0.3
ZALV	Zalesovo Beam	40.24	326	P	P	06 01 15.6	-0.1
	comp=Z,2.3nm,0.5s,baz=116,slow=7.7,SNR=11						
KURK	Kurchatov	42.20	319	P	P	06 01 31.8	0.0
KURBB	Kurchatov Arra	42.22	319	P	P	06 01 32.4	+0.4
	comp=Z,0.7nm,0.4s,baz=110,slow=9.9,SNR=7.1						
COEN	Coen	43.61	149	P	P	06 01 44.5	+0.9
COEN				IAmb	IAmb	06 02 04.9	
	comp=Z,25nm,1.5s						
KK31	Karatay Array	45.77	307	P	P	06 02 01.9	+1.3
KKAR	Karatay Array	45.77	307	P	P	06 02 01.9	+1.3
WB0	Warramunga Arr	45.81	164	P	P	06 02 00.8	-0.2
WB0				IAmb	IAmb	06 02 01.4	
	comp=Z,5.3nm,0.6s						
WRAB	Tennant Creek	45.95	164	P	P	06 02 01.7	-0.5
WRAB				IAmb	IAmb	06 02 02.7	
	comp=Z,5.6nm,0.6s						
WRA	Warramunga Arr	45.96	164	P	P	06 02 01.9	-0.3
	comp=Z,4.7nm,0.5s,baz=346,slow=8.8,SNR=45						
WRA				PcP	PcP	06 03 37.2	-0.8
	comp=Z,0.9nm,0.8s,baz=346,slow=3.5,SNR=4.6						
WB2	Warramunga Arr	45.96	164	P	P	06 02 02.1	-0.1
WB2				IAmb	IAmb	06 02 02.8	
	comp=Z,8.2nm,0.6s						
TIXI	Tiksi	47.14	3	P	P	06 02 10.7	-0.2
TIXI				IAmb	IAmb	06 02 10.9	
	comp=Z,7.0nm,0.8s						
BVAR	Borovoye Array	47.77	320	P	P	06 02 16.2	+0.2
	comp=Z,1.5nm,0.6s,baz=58,slow=14,SNR=8.3						
BRVK	Borovoye	47.84	320	P	P	06 02 17.1	+0.5
BRVK				IAmb	IAmb	06 02 17.9	
	comp=Z,4.5nm,0.8s						
ASAR	Alice Springs	49.44	166	P	P	06 02 29.2	+0.2
	comp=Z,1.2nm,0.6s,baz=344,slow=9.1,SNR=13						
ASAR				PcP	PcP	06 03 49.8	-0.6
	comp=Z,1.0nm,0.5s,baz=338,slow=3.0,SNR=8.0						
ABKAR	Akbulak array	53.64	314	P	P	06 03 00.7	+0.5
ARU	Arti	55.16	323	P	P	06 03 10.7	-0.4
	comp=Z,2.6nm,0.5s,baz=92,slow=3.7,SNR=16						
ARU	Arti	55.16	323	P	P	06 03 11.0	-0.1
BBOO	Buckleboo	58.73	166	P	P	06 03 36.5	0.0
STKA	Stephens Creek	59.28	161	P	P	06 03 39.7	-0.7
	comp=Z,3.9nm,0.7s,baz=340,slow=8.1,SNR=7.7						
STKA	Stephens Creek	59.28	161	P	P	06 03 38.6	-1.7
A21K	Barrow	64.06	21	P	P	06 04 12.1	+0.1
A21K				IAmb	IAmb	06 04 13.1	
	comp=Z,9.3nm,0.9s						
TOO	Toolangi	65.75	160	P	P	06 04 24.1	+0.7
TOO				IAmb	IAmb	06 04 24.7	
	comp=Z,8.1nm,0.9s						
ILAR	Eielson Array	68.41	27	P	P	06 04 38.9	-1.1
	comp=Z,0.6nm,0.5s,baz=268,slow=5.3,SNR=8.3						
ARCES	ARCESS Array B	69.35	338	P	P	06 04 45.6	-0.1
	comp=Z,2.5nm,0.8s,baz=27,slow=4.2,SNR=1.7						
PAX	Paxson	69.42	29	P	P	06 04 45.7	-0.7
PAX				IAmb	IAmb	06 04 48.0	
	comp=Z,3.2nm,0.7s						
GLB	Gilahina Butte	70.57	31	P	P	06 04 53.1	-0.3
GLB				IAmb	IAmb	06 05 04.9	
	comp=Z,11nm,1.4s						
FINES	FINESS Array B	71.39	330	P	P	06 04 58.2	0.0
	comp=Z,2.3nm,0.7s,baz=57,slow=7.0,SNR=6.8						
DAWY	Dawson	71.73	27		P	06 05 00.9	+0.6
DAWY				IAmb	IAmb	06 05 02.4	
	comp=Z,3.9nm,0.8s						
CTGM	Chitina Glacie	71.86	31	P	P	06 05 01.9	+0.7
CTGM				IAmb	IAmb	06 05 03.0	
	comp=Z,12nm,1.2s						
INK	Inuvik	72.46	22		P	06 05 03.7	-0.9
AKASG	Malin Array Be	73.00	318	P	P	06 05 07.0	-1.0
	comp=Z,0.8nm,0.5s,baz=59,slow=6.2,SNR=3.0						
BRTR	Keskin Array B	73.49	306	P	P	06 05 11.3	-0.1
	comp=Z,2.4nm,0.8s,baz=103,slow=5.8,SNR=9.8						
BRTR				LR	LR	06 42 06.9	
	comp=Z,76nm,18.1s,baz=47,slow=39						
C36M	Paulatuk	75.06	20		P	06 05 18.6	-1.2
C36M				IAmb	IAmb	06 05 20.8	
	comp=Z,4.0nm,0.6s						
NOA	NORSAR Array B	78.13	332	P	P	06 05 36.1	-1.1
	comp=Z,0.7nm,0.8s,baz=59,slow=5.8,SNR=1.9						
YKA	Yellowknife Ar	82.20	23	P	P	06 05 58.0	-1.0
	comp=Z,1.7nm,0.6s,baz=321,slow=4.0,SNR=71						
B08A	Colville Reser	88.92	36	P	P	06 06 32.6	-0.2
ORV	Oroville	92.86	44	P	P	06 06 50.6	-0.6
ORV				IAmb	IAmb	06 06 51.3	
	comp=Z,2.4nm,0.8s						
BEKR	Beckworth	93.39	43	P	P	06 06 53.5	-0.4
VCNR	Virginia City	94.17	43	P	P	06 06 56.7	-0.8
PNTR	Pine Nut	94.33	43	P	P	06 06 56.7	-1.5
CMB	Columbia Colle	94.45	45	P	P	06 06 58.1	-0.5
CMB				IAmb	IAmb	06 06 59.1	
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	95.53	43	P	P	06 07 04.0	+0.2
	comp=Z,1.6nm,0.7s,baz=293,slow=5.2,SNR=14						
VNA2	Neumayer--Watz	125.61	198	PKPdf	PKPdf	06 12 37.4	-1.0
	baz=104,slow=4.3						

BYKL 05 05:54:23.2±0.2, 56°.13N×113°.72E, h4^{km}±3^{km}, 3C-3D,
East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.09	262	⇑iPg	Pg	05 54 24.9	-0.2
SVKR				i Sg	Sg	05 54 26.9	+0.5
UKT	Uakit	0.65	185	⇓iPg	Pg	05 54 34.2	-1.4
UKT				eSg	Sg	05 54 42.6	-1.3
UKT				Pmax			
	95nm,0.5s						
UKT				Smax			
	171nm,0.6s						
YOA	Uoyan	1.12	271	ePg	Pg	05 54 43.4	-1.2
YOA				eSg	Sg	05 54 58.0	-1.1
YOA				Pmax			
	205nm,0.2s						
YOA				Smax			
	520nm,0.5s						
NLYR	Nelyaty	1.16	71	⇓iPg	Pg	05 54 43.8	-1.7
NLYR				ePb	Pn	05 54 46.2	-0.1
NLYR				eSg	Sg	05 54 59.6	-0.9
NLYR				max			
	448nm,0.3s						
NLYR				Smax			
	750nm,1.2s						
KMO	Kumora	1.44	261	ePg	Pn	05 54 49.0	-1.0
KMO				eSg	Sb	05 55 08.4	-0.7
KMO				Pmax			
	2µm,0.4s						
KMO				Smax			
	5µm,0.6s						
BOD	Bodaibo	1.70	5	⇑iPg	Pn	05 54 53.6	0.0
BOD				eSg	Sn	05 55 16.0	+0.2
BOD				Pmax			
	107nm,0.7s						
BOD				Smax			
	285nm,0.4s						
YLYR	Ulyunkhan	1.92	230	⇓iPg	Pn	05 54 57.4	+0.7
YLYR				eSg	Sb	05 55 23.4	+0.3
YLYR				Pmax			
	55nm,0.6s						
YLYR				Smax			
	281nm,0.6s						
NIZ	Nizh Angarsk	2.38	263	ePn	Pn	05 55 03.8	+0.9
NIZ				ePg	Pb	05 55 06.2	-0.3
NIZ				eSg	Sb	05 55 37.4	+1.2
NIZ				Pmax			
	31nm,0.9s						
NIZ				Smax			
	245nm,0.8s						
CRS	Chara	2.64	71	ePn	Pn	05 55 06.8	+0.3
CRS				⇑iPg	Pb	05 55 11.0	0.0
CRS				eSg	Sb	05 55 45.5	+1.8
CRS				Pmax			
	160nm,1.0s						
CRS				Smax			
	205nm,0.8s						
SYVR	Suvo	3.28	222	ePn	Pn	05 55 15.8	+0.5
SYVR				ePg	Pb	05 55 22.4	+0.5
SYVR				eSg	Sb	05 56 04.5	+2.4
SYVR				Pmax			
	16nm,0.9s						
SYVR				Smax			
	146nm,0.9s						
TUP	Tupik	3.95	113	ePn	Pn	05 55 24.1	-0.5
TUP				ePg	Pb	05 55 34.1	+0.7
TUP				Pmax			
	13nm,0.5s						
TUP				Smax			
	60nm,0.8s						

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*MOS **05** 05:55:00.1±1.2, 56°.10N×113°.82E, h4^{km}, mb3.8/1, Error ellipse: s-maj=14.2km s-min=9.6km az=59.9*
*IDC **05** 05:55:01.5±1.4, 56°.12N×113°.91E, h0^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.3/44, mbtmp3.6/6, ML3.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/46, Error ellipse: s-maj=33.2km s-min=22.8km az=171.0*
*BYKL **05** 05:55:02.0±0.2, 56°.12N×113°.73E, h8^{km}±3^{km}*
ISC 05 05:55:02.5±0.6**, 56°.09N**±0°.02×**113°.70E**±0°.02**, h10^{km}, n51,**
$\sigma 2^{s}.01$/96**, mb3.6**/4**, 5C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.08	287	⇑iPg	Pg	05 55 03.7	-1.3
SVKR				eSg	Sg	05 55 05.7	-1.1
SVKR	Severomuysk	0.08	287	⇑iPG	Pg	05 55 03.7	-1.3
SVKR				e		05 55 05.7	
SVKR				pmax	pmax		
	comp=Z,18µm,0.2s						
SVKR				smax	smax		
	comp=N,80µm,0.4s						
SVKR	Severomuysk	0.08	287	⇑iPg	Pg	05 55 03.6	-1.4
SVKR				eSg	Sg	05 55 05.7	-1.1
UKT	Uakit	0.61	184	ePg	Pg	05 55 13.0	-1.3
UKT				eSg	Sg	05 55 21.3	-0.9
UKT				Pmax			
	comp=N,219nm,0.3s						
UKT				Smax			
	comp=N,738nm,0.3s						
UKT	Uakit	0.61	184	ePG	Pg	05 55 12.9	-1.3
UKT				e		05 55 22.4	
UKT				pmax	pmax		
	comp=Z,198nm,0.2s						
UKT				smax	smax		
	comp=N,722nm,0.3s						
UKT	Uakit	0.61	184	⇓iPg	Pg	05 55 12.9	-1.3
UKT				eSg	Sg	05 55 21.8	-0.4
UKT				Pmax			
	comp=N,254nm,0.4s						
UKT				Smax			
	comp=N,475nm,1.0s						
YOA	Uoyan	1.11	273	ePg	Pb	05 55 22.8	-1.0
YOA				ePb	Pn	05 55 24.6	+0.5
YOA				eSg	Sb	05 55 38.2	-0.1
YOA				e		05 55 43.5	
YOA				max			
	comp=N,651nm,0.3s						
YOA				max			
	comp=N,4µm,0.4s						
YOA	Uoyan	1.11	273	ePG	Pb	05 55 22.8	-1.0
YOA				i		05 55 37.9	
YOA				pmax	pmax		
	comp=Z,467nm,0.2s						
YOA				smax	smax		
	comp=E,4µm,0.3s						
YOA	Uoyan	1.11	273	ePg	Pb	05 55 22.2	-1.6
YOA				eSg	Sg	05 55 36.9	-1.3
YOA				Pmax			
	comp=E,646nm,0.3s						
YOA				Smax			
	comp=E,2µm,0.4s						
NLYR	Nelyaty	1.19	69	ePg	Pb	05 55 23.0	-2.1
NLYR				ePb	Pg	05 55 25.1	-0.1
NLYR				eSg	Sb	05 55 37.6	-2.9
NLYR				e		05 55 43.0	
NLYR				max			
	comp=E,1µm,0.4s						
NLYR				max			
	comp=E,2µm,1.0s						
NLYR	Nelyaty	1.19	69	⇑iPG	Pb	05 55 23.0	-2.1
NLYR				e		05 55 39.7	
NLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
NLYR				smax	smax		
	comp=E,1µm,0.5s						
NLYR	Nelyaty	1.19	69	⇑iPg	Pb	05 55 22.9	-2.1
NLYR				Pmax			
	comp=E,1µm,0.5s						
NLYR				Smax			
	comp=E,1µm,0.6s						
KMO	Kumora	1.42	263	ePg	Pn	05 55 27.9	-0.5
KMO				e		05 55 29.7	
KMO				eSg	Sn	05 55 47.0	-0.1
KMO				e		05 55 50.7	
KMO				max			
	comp=E,499nm,0.5s						
KMO				max			
	comp=E,3µm,0.8s						
KMO	Kumora	1.42	263	ePG	Pb	05 55 28.6	-0.5
KMO				e		05 55 47.2	
KMO				pmax	pmax		
	comp=Z,494nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.9s						
KMO	Kumora	1.42	263	ePg	Pn	05 55 27.8	-0.6
KMO				eSg	Sg	05 55 48.1	-0.1
KMO				Pmax			
	comp=N,500nm,0.4s						
KMO				Smax			
	comp=N,3µm,0.6s						
BOD	Bodaibo	1.74	5	ePg	Pn	05 55 32.9	+0.2
BOD				eSg	Sn	05 55 55.1	+0.1
BOD				Pmax			
	comp=N,60nm,0.2s						
BOD				Smax			
	comp=N,1µm,1.6s						
BOD	Bodaibo	1.74	5	ePg	Pn	05 55 32.3	-0.4
BOD				eSg	Sn	05 55 54.8	-0.2
BOD				Pmax			
	comp=N,250nm,0.4s						
BOD				Smax			
	comp=N,944nm,1.0s						
YLYR	Ulyunkhan	1.89	231	ePn	Pb	05 55 36.2	-0.9
YLYR				ePg	Pg	05 55 36.8	-1.9
YLYR				eSg	Sb	05 56 01.8	+1.0
YLYR				Pmax			
	comp=N,237nm,0.4s						
YLYR				Smax			
	comp=N,2µm,0.3s						
YLYR	Ulyunkhan	1.89	231	ePN	Pb	05 55 36.2	-0.9
YLYR				e		05 55 37.4	
YLYR				eS	Sb	05 56 00.5	-0.3
YLYR				e		05 56 01.8	
YLYR				pmax	pmax		
	comp=Z,238nm,0.2s						
YLYR				smax	smax		
	comp=E,2µm,0.2s						
YLYR	Ulyunkhan	1.89	231	ePg	Pb	05 55 36.1	-1.0
YLYR				eSg	Sb	05 56 01.7	+1.0
YLYR				Pmax			
	comp=E,246nm,0.4s						
YLYR				Smax			
	comp=E,2µm,0.4s						
NIZ	Nizh Angarsk	2.36	264	ePn	Pn	05 55 40.0	-1.3
NIZ				ePg	Pb	05 55 45.1	0.0
NIZ				eSn	Sn	05 56 11.1	+0.7
NIZ				eSg	Sg	05 56 16.3	-2.1
NIZ				Pmax			
	comp=E,128nm,0.6s						
NIZ				Smax			
	comp=E,1µm,0.9s						
NIZ	Nizh Angarsk	2.36	264	ePg	Pb	05 55 44.5	-0.6
NIZ				eSg	Sb	05 56 14.5	+0.2
NIZ				Pmax			
	comp=E,156nm,0.6s						
NIZ				Smax			
	comp=E,569nm,0.4s						
CRS	Chara	2.66	70	ePg	Pb	05 55 49.7	-0.5
CRS				eSg	Sb	05 56 23.6	+0.8
CRS				Pmax			
	comp=E,560nm,1.0s						
CRS				Smax			
	comp=E,499nm,1.3s						
CRS	Chara	2.66	70	ePg	Pb	05 55 48.7	-1.5
CRS				eSg	Sb	05 56 23.6	+0.8
CRS				Pmax			
	comp=E,460nm,0.8s						
CRS				Smax			
	comp=E,500nm,0.7s						
SYVR	Suvo	3.25	223	ePn	Pn	05 55 54.5	+1.1
SYVR				ePg	Pb	05 56 00.5	+0.3
SYVR				eSn	Sn	05 56 33.4	+1.3
SYVR				eSg	Sg	05 56 43.3	-3.3
SYVR				max			
	comp=E,124nm,1.1s						
SYVR				Smax			
	comp=E,594nm,1.0s						
VTMR	Vitim	3.41	350	ePn	Pn	05 55 56.0	+0.3
VTMR				ePg	Pb	05 56 02.8	-0.2
VTMR				eSg	Sb	05 56 47.1	+2.6
KHNR	Khani	3.58	74	ePn	Pn	05 55 58.3	+0.3
KHNR				ePg	Pb	05 56 05.9	+0.1
KHNR				eSg	Sg	05 56 53.1	-4.1
TUP	Tupik	3.95	112	ePn	Pn	05 56 03.1	-0.1
TUP				ePg	Pb	05 56 13.6	+1.5
TUP				eSn	Sn	05 56 49.6	+0.1
TUP				eSg	Sg	05 57 04.7	-4.5
TUP				eSgSg	SbSb	05 57 08.7	+3.7
TUP				Pmax			
	comp=E,53nm,0.6s						
TUP				max			
	comp=E,563nm,1.1s						
TUP	Tupik	3.95	112	ePN	Pn	05 56 03.0	-0.1
TUP				e		05 56 13.0	
TUP				eS	Sn	05 56 49.0	-0.5
TUP				e		05 57 04.1	
TUP				pmax	pmax		
	comp=Z,53nm,0.4s						
TUP				smax	smax		
	comp=E,567nm,1.0s						
TUP	Tupik	3.95	112	ePg	Pb	05 56 12.8	+0.7

TUP				*e*Sg	**Sg**	**05 57 04.6**	**-4.6**
TUP				Pmax			
	comp=E,58nm,0.6s						
TUP				Smax			
	comp=E,198nm,1.1s						
MXMB	**Maximikha**	**4.04**	**227**	*e*Pn	**Pn**	**05 56 05.3**	**+0.9**
MXMB				*e*Pg	**Pb**	**05 56 15.5**	**+1.8**
MXMB				*e*Sg	**Sg**	**05 57 08.1**	**-4.0**
OGRR	**Ongureny**	**4.30**	**238**	*e*Pn	**Pn**	**05 56 09.8**	**+1.9**
OGRR				*e*Pg	**Pb**	**05 56 19.5**	**+1.4**
OGRR				*e*Sn	**Sn**	**05 56 56.5**	**-1.6**
OGRR				*e*Sg	**Sg**	**05 57 15.2**	**-5.2**
OGRR				Pmax			
	comp=E,70nm,1.2s						
OGRR				Smax			
	comp=E,154nm,0.5s						
OGRR	**Ongureny**	**4.30**	**238**	*e*PN	**Pn**	**05 56 09.4**	**+1.5**
OGRR				*e*		05 56 20.4	
OGRR				*e*		05 57 15.0	
OGRR				pmax	pmax		
	comp=Z,71nm,1.2s						
OGRR				smax	smax		
	comp=N,219nm,1.3s						
YKLR	**Yuktali**	**4.45**	**80**	*e*Pn	**Pn**	**05 56 08.4**	**-1.6**
YKLR				*e*Pg	**Pb**	**05 56 20.3**	**-0.4**
YKLR				*e*Sg	**Sb**	**05 57 18.9**	**+4.5**
TRG	**Tyrgan**	**5.44**	**235**	*e*Pn	**Pn**	**05 56 23.2**	**-0.4**
TRG				*e*Pg	**Pb**	**05 56 40.1**	**+2.6**
TRG				*e*Sn	**Sn**	**05 57 26.0**	**-0.2**
TRG				*e*Sg	**Sg**	**05 57 51.3**	**-5.6**
TRG				Pmax			
	comp=N,21nm,1.1s						
TRG				Smax			
	comp=N,127nm,1.4s						
TRG	**Tyrgan**	**5.44**	**235**	*e*PN	**Pn**	**05 56 25.7**	**+2.1**
TRG				*e*		05 56 41.1	
TRG				*e*S	**Sn**	**05 57 26.4**	**+0.2**
TRG				*e*		05 57 50.9	
TRG				pmax	pmax		
	comp=Z,27nm,1.4s						
TRG				smax	smax		
	comp=E,119nm,0.9s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*Pn	**Pn**	**05 56 37.0**	**-0.5**
KPC				*e*Pg	**Pb**	**05 56 59.1**	**+4.3**
KPC				*e*		05 57 45.9	
KPC				*e*Sg	**Sg**	**05 58 22.7**	**-6.7**
KPC				Pmax			
	comp=E,11nm,0.7s						
KPC				Smax			
	comp=E,148nm,1.0s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*PN	**Pn**	**05 56 37.1**	**-0.5**
KPC				*e*		05 56 57.8	
KPC				*e*		05 58 21.2	
KPC				pmax	pmax		
	comp=Z,11nm,0.6s						
KPC				smax	smax		
	comp=E,262nm,1.7s						
IRK	**Irkutsk**	**6.75**	**239**	*e*PG	Pg	05 57 05.6	-6.0
IRK				*e*		05 58 31.5	
IRK				pmax	pmax		
	comp=Z,138nm,0.3s						
IRK				smax	smax		
	comp=E,288nm,0.4s						
TLY	**Talaya**	**7.40**	**238**	*e*PG	Pb	05 57 16.5	+5.5
TLY				*e*		05 58 50.2	
TLY				pmax	pmax		
	comp=Z,14nm,0.5s						
TLY				smax	smax		
	comp=E,58nm,0.6s						
ZEA	**Zeya**	**8.15**	**101**	*e*PG	**Pb**	**05 57 26.8**	**+3.1**
ZEA				*e*		05 59 18.2	
ORL	**Orlik**	**8.86**	**252**	*e*PN	**Pn**	**05 57 11.8**	**+1.1**
ORL				*e*		05 57 41.9	
ORL				*e*		05 59 34.2	
ORL				pmax	pmax		
	comp=Z,18nm,0.9s						
ORL				smax	smax		
	comp=N,73nm,1.8s						
SONM	**Songino Array**	**9.41**	**212**	Pn	**Pn**	**05 57 19.8**	**+1.6**
	comp=N,0.2nm,0.3s,baz=22,slow=14,SNR=2.0						
SONM				Lg	Lg	05 59 59.1	
	comp=N,2.6nm,0.3s,baz=26,slow=31,SNR=13						
KLR	**Kul'dur**	**12.91**	**115**	Pn	**Pn**	**05 58 05.7**	**-0.1**
	comp=N,0.3nm,0.3s,baz=312,slow=18,SNR=7.7						
KLR				Lg	Lg	06 01 47.2	
	comp=N,0.3nm,0.3s,baz=214,slow=17,SNR=4.8						
USRK	**Ussuriysk Ar.**	**16.64**	**128**	Lg	Lg	06 03 43.4	
	baz=325,slow=27,SNR=5.0						
NRIK	**Noril'sk**	**17.67**	**329**	LR	LR	06 06 32.4	
	comp=N,227nm,20.8s,baz=120,slow=39						
KURK	**Kurchatov**	**21.43**	**270**	P	**P**	**05 59 53.3**	**+2.9**
MKAR	**Makanchi Array**	**21.50**	**258**	P	**P**	**05 59 51.9**	**+0.6**
	comp=N,1.2nm,0.7s,baz=55,slow=9.4,SNR=8.4						
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**05 59 53.3**	**+1.9**
	comp=N,4.3nm,0.9s,baz=67,slow=12,SNR=8.9						
YKA	**Yellowknife Ar**	**55.91**	**25**	P	**P**	**06 04 39.2**	**-0.8**
	comp=N,0.4nm,0.7s,baz=337,slow=6.4,SNR=7.9						
ESDC	**Sonseca Array**	**70.99**	**314**	P	**P**	**06 06 22.6**	**+2.6**
	comp=N,0.5nm,0.8s,baz=16,slow=5.8,SNR=2.8						

BYKL 05 05:55:15.8±0.3,56°.09N×113°.73E,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**286**	*e*Pg	Pg	05 55 17.3	-0.4
SVKR				*e*Sg	Sg	05 55 19.5	+0.5
UKT	**Uakit**	**0.60**	**186**	*e*Sg	Sg	05 55 34.2	-1.0
UKT				Smax			
	792nm,0.9s						
NLYR	**Nelyaty**	**1.17**	**69**	*e*Pg	Pg	05 55 36.6	-1.6
NLYR				*e*Pb	Pb	05 55 38.8	-0.1
NLYR				*e*Sg	Sg	05 55 54.0	+0.6
KMO	**Kumora**	**1.44**	**263**	*e*Pg	Pn	05 55 42.2	-0.9
KMO				*e*Sg	Sg	05 56 01.5	-0.4
KMO				*e*Sb	Sn	05 56 04.1	+1.5
KMO				Pmax			
	393nm,0.6s						
KMO				max			
	2µm,0.7s						
BOD	**Bodaibo**	**1.74**	**5**	*e*Pg	Pn	05 55 46.7	-0.5
BOD				*e*		05 55 48.3	
BOD				*e*Sg	Sn	05 56 09.1	-1.0
BOD				max			
	396nm,1.2s						
BOD				Smax			
	976nm,0.8s						
YLYR	**Ulyunkhan**	**1.90**	**231**	*e*Pg	Pn	05 55 49.9	+0.4
YLYR				*e*Sg	Sb	05 56 15.7	+0.1
YLYR				max			
	181nm,0.4s						
YLYR				Smax			
	1µm,0.6s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pg	Pb	05 55 58.4	-1.1
NIZ				*e*Sg	Sb	05 56 30.0	+0.7
NIZ				Pmax			
	113nm,0.8s						
NIZ				Smax			
	563nm,0.9s						
CRS	**Chara**	**2.64**	**70**	*e*Pg	Pb	05 56 03.5	-0.5
CRS				*e*Sg	Sb	05 56 37.9	+0.9
CRS				Pmax			
	521nm,1.1s						
CRS				Smax			
	682nm,1.3s						
SYVR	**Suvo**	**3.25**	**223**	*e*Sg	Sb	05 56 57.0	+2.5
SYVR				Smax			
	723nm,1.4s						
KHNR	**Khani**	**3.56**	**74**	*e*Pg	Pb	05 56 19.5	-0.2
KHNR				*e*Sg	Sb	05 57 05.2	+1.8
TUP	**Tupik**	**3.93**	**113**	*e*Pg	Pb	05 56 25.6	-0.4
TUP				*e*Sg	Sb	05 57 17.4	+3.3
TUP				*e*SgSg	SbSb	05 57 20.3	+1.1
TUP				Pmax			
	41nm,0.8s						
TUP				max			
	525nm,1.2s						
MXMB	**Maximikha**	**4.05**	**228**	*e*Pg	Pb	05 56 28.7	+0.8
MXMB				*e*Sg	Sb	05 57 20.9	+3.5
OGRR	**Ongureny**	**4.31**	**238**	*e*Pg	Pb	05 56 33.8	+1.4
OGRR				*e*Sg	Sg	05 57 29.5	-4.6
OGRR				Pmax			
	38nm,1.0s						
OGRR				Smax			
	144nm,0.9s						
YKLR	**Yuktali**	**4.44**	**80**	*e*Pg	Pb	05 56 34.7	+0.1
YKLR				*e*Sg	Sg	05 57 33.5	-4.8
KPC	**Khapcheranga**	**6.45**	**188**	*e*Sg	Sg	05 58 35.6	-7.2
KPC				Smax			
	262nm,1.4s						

BYKL 05 05:55:36.3±0.2,56°.10N×113°.81E,h18^{km}±3^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.14**	**277**	*e*Pg	Pg	05 55 41.1	+0.6
SVKR				*e*Sg	Sg	05 55 43.3	-0.1
UKT	**Uakit**	**0.62**	**190**	*e*Pg	Pg	05 55 48.2	-0.4
UKT				*e*Sg	Sg	05 55 56.4	-0.5
UKT				Pmax			
	270nm,0.3s						
UKT				Smax			
	400nm,0.4s						
NLYR	**Nelyaty**	**1.13**	**69**	*e*Pg	Pn	05 55 57.2	0.0
NLYR				*e*Sg	Sb	05 56 11.8	+0.3
YOA	**Uoyan**	**1.17**	**272**	*e*Sg	Sb	05 56 12.5	-0.3
YOA				Smax			
	1µm,0.4s						
KMO	**Kumora**	**1.48**	**263**	*e*Pg	Pb	05 56 03.4	+0.1
KMO				*e*Sg	Sb	05 56 22.5	+0.7
KMO				Pmax			
	514nm,0.4s						
KMO				Smax			
	834nm,0.8s						
BOD	**Bodaibo**	**1.73**	**3**	*e*Pg	Pb	05 56 07.5	+0.1
BOD				*e*Sg	Sb	05 56 29.6	+0.8
BOD				Pmax			
	334nm,0.3s						
BOD				Smax			
	294nm,0.6s						
YLYR	**Ulyunkhan**	**1.94**	**232**	*e*Sg	Sb	05 56 36.0	+1.0
YLYR				Smax			
	391nm,0.5s						
NIZ	**Nizh Angarsk**	**2.42**	**264**	*e*Sg	Sg	05 56 51.8	-2.4
NIZ				Smax			
	170nm,0.4s						
CRS	**Chara**	**2.60**	**70**	*e*Sg	Sb	05 56 56.0	+2.1
CRS				Smax			
	212nm,0.6s						
SYVR	**Suvo**	**3.29**	**224**	*e*Sg	Sg	05 57 18.4	-3.5
SYVR				Smax			
	107nm,0.6s						
TUP	**Tupik**	**3.90**	**113**	*e*Sg	Sg	05 57 36.8	-4.5
TUP				Smax			
	121nm,0.6s						
MXMB	**Maximikha**	**4.09**	**228**	*e*Sg	Sg	05 57 42.5	-5.0
CIT	**Chita**	**4.09**	**182**	*e*Sg	Sg	05 57 42.8	-4.7
CIT				Smax			
	155nm,0.3s						
OGRR	**Ongureny**	**4.35**	**238**	*e*Pn	Pn	05 56 42.4	+0.9
OGRR				*e*Sg	Sg	05 57 50.3	-5.6
OGRR				Smax			
	167nm,1.0s						
TRG	**Tyrgan**	**5.49**	**236**	*e*Sg	Sg	05 58 25.8	-6.6
TRG				Smax			
	65nm,0.6s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*Sg	Sg	05 58 57.1	-6.5
KPC				Smax			
	48nm,0.6s						

BYKL 05 05:57:03.8±0.5,56°.11N×113°.68E,1C,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.07**	**276**	⇑*i*Pg	Pg	05 57 04.9	-0.2
SVKR				*i* Sg	Sg	05 57 07.0	+1.0
UKT	**Uakit**	**0.62**	**183**	*e*Pg	Pg	05 57 14.0	-1.7
UKT				*e*Sg	Sg	05 57 21.9	-1.9
UKT				Pmax			
	112nm,0.5s						
UKT				Smax			
	286nm,0.5s						
YOA	**Uoyan**	**1.10**	**272**	*e*Pg	Pg	05 57 23.7	-1.1
YOA				*e*Sg	Sg	05 57 39.0	0.0
YOA				Pmax			
	499nm,0.6s						
YOA				Smax			
	2µm,0.8s						
NLYR	**Nelyaty**	**1.19**	**70**	*e*Pg	Pg	05 57 25.7	-0.9
NLYR				*e*Pb	Pb	05 57 26.4	-0.9
NLYR				*e*Sg	Sg	05 57 41.4	-0.6
NLYR				*e*Sb	Sn	05 57 44.3	-0.3
NLYR				max			
	612nm,0.3s						
NLYR				max			
	905nm,1.0s						
KMO	**Kumora**	**1.41**	**262**	*e*Pg	Pn	05 57 29.2	-1.5
KMO				*e*Sg	Sg	05 57 48.2	-0.9
KMO				Pmax			
	173nm,0.5s						
KMO				Smax			
	1µm,0.8s						
BOD	**Bodaibo**	**1.72**	**6**	*e*Pg	Pn	05 57 34.0	-1.0
BOD				*e*Sg	Sn	05 57 56.2	-1.5
BOD				Pmax			
	122nm,0.6s						
BOD				Smax			
	418nm,0.4s						
YLYR	**Ulyunkhan**	**1.89**	**230**	*e*Pg	Pn	05 57 37.2	-0.2
YLYR				*i* Sg	Sn	05 58 02.6	+0.7
YLYR				Pmax			
	84nm,0.6s						
YLYR				Smax			
	567nm,0.5s						
NIZ	**Nizh Angarsk**	**2.35**	**264**	*e*Pn	Pn	05 57 44.1	+0.4
NIZ				*e*Sn	Sn	05 58 13.8	+0.6
NIZ				*e*Sg	Sb	05 58 17.4	+0.8
NIZ				Smax			
	276nm,0.6s						
CRS	**Chara**	**2.66**	**71**	*e*Pn	Pb	05 57 51.0	-1.4
CRS				*e*Sg	Sb	05 58 25.6	0.0
CRS				Smax			
	231nm,0.8s						

BYKL 05 05:59:53.4±0.4,56°.10N×113°.71E,h12^{km}±6^{km},1C-2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.09**	**281**	⇑*i*Pg	Pg	05 59 55.6	-0.6
SVKR				*i* Sg	Sg	05 59 57.8	-0.4
UKT	**Uakit**	**0.61**	**184**	⇓*i*Pg	Pg	06 00 04.5	-0.9
UKT				*e*Sg	Sg	06 00 13.4	-0.1
UKT				Pmax			
	45nm,0.4s						
UKT				Smax			
	122nm,0.4s						
YOA	**Uoyan**	**1.11**	**273**	*e*Pg	Pb	06 00 13.7	-0.9
YOA				*e*Sg	Sb	06 00 29.1	+0.1
YOA				Pmax			
	227nm,0.3s						
YOA				Smax			
	448nm,0.6s						
NLYR	**Nelyaty**	**1.18**	**70**	⇓*i*Pg	Pb	06 00 14.6	-1.1
NLYR				*e*Pb	Pg	06 00 16.9	+0.9
NLYR				*e*Sg	Sb	06 00 31.1	+0.2
NLYR				max			
	223nm,0.4s						
NLYR				Smax			
	220nm,0.8s						
KMO	**Kumora**	**1.43**	**262**	*e*Pg	Pb	06 00 19.6	-0.3
KMO				*e*Sg	Sb	06 00 38.6	+0.6
KMO				*e*		06 00 41.8	
KMO				Pmax			
	42nm,0.4s						
KMO				max			
	231nm,0.8s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pb	06 00 24.7	-0.4
BOD				*e*Sg	Sb	06 00 47.1	+0.3
BOD				Pmax			
	43nm,0.7s						
BOD				Smax			
	171nm,0.3s						
YLYR	**Ulyunkhan**	**1.90**	**231**	*e*Pn	Pn	06 00 24.2	-1.4
YLYR				*e*Pg	Pb	06 00 28.2	+0.2
YLYR				*e*Sg	Sg	06 00 53.1	-1.3
YLYR				Pmax			
	28nm,0.5s						
YLYR				Smax			
	167nm,0.7s						
CRS	**Chara**	**2.65**	**71**	*e*Pg	Pb	06 00 41.8	+1.0
CRS				*e*Sg	Sg	06 01 16.7	-1.8
CRS				Pmax			
	106nm,0.9s						
CRS				Smax			
	57nm,0.6s						
TUP	**Tupik**	**3.95**	**113**	*e*Pn	Pn	06 00 53.0	-0.8
TUP				*e*Pg	Pb	06 01 03.6	+0.7
TUP				*e*Sn	Sn	06 01 39.4	-0.6
TUP				*e*Sg	Sg	06 01 56.0	-4.0
TUP				Pmax			
	34nm,1.2s						
TUP				Smax			
	60nm,0.8s						

BYKL 05 06:03:53.9±0.5,56°.15N×113°.71E,h2^{km}±9^{km},2C-1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.09**	**249**	⇑*i*Pg	Pg	06 03 55.4	-0.3
SVKR				*i* Sg	Sg	06 03 57.4	+0.5
UKT	**Uakit**	**0.66**	**184**	⇓*i*Pg	Pg	06 04 04.8	-1.8
UKT				*i* Sg	Sg	06 04 14.6	-0.6
UKT				Pmax			
	48nm,0.3s						
UKT				Smax			
	108nm,0.4s						
NLYR	**Nelyaty**	**1.16**	**72**	⇑*i*Pg	Pg	06 04 14.6	-1.5
NLYR				*e*Sg	Sg	06 04 31.0	-0.2
NLYR				Pmax			
	155nm,0.2s						
NLYR				Smax			
	183nm,0.8s						
KMO	**Kumora**	**1.43**	**260**	*e*Pg	Pn	06 04 19.7	-1.2
KMO				*e*Sg	Sg	06 04 38.6	-1.3
KMO				Pmax			
	64nm,0.6s						
KMO				Smax			
	247nm,0.6s						
BOD	**Bodaibo**	**1.68**	**5**	*e*Sg	Sn	06 04 46.0	-0.4
BOD				Smax			
	107nm,0.2s						
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Pn	Pn	06 04 27.7	-0.1
YLYR				*e*Sg	Sb	06 04 54.6	+0.3
YLYR				Smax			
	195nm,0.2s						

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*MOS **05** 06:04:27.6±1.0,56°.15N×113°.71E,h5^{km},mb4.8/31, MS4.2/5,Error ellipse: s-maj=7.0km s-min=4.7km az=75.1*

MOS Felt (IV-V) at Severomuysk.

*BJI **05** 06:04:27.0±0.0,56°.25N×113°.99E,h5^{km},mB4.8/29, mb4.5/45,ML5.0/1,Ms4.9/39,Ms7 4.5/36*

*BYKL **05** 06:04:29.1±0.2,56°.10N×113°.75E,h5^{km}±2^{km}, Mw4.6/10(IEC),#STATIONS ALE PET INCN TATO ENH KMI WMQ AAK KIEV LVZ SUMG FELT I=V MSK at Severomuisk,IV at Yanchukan, III-IV at Kuanda,Vitimskiy, Mama, III at Muskovit, Kolotovka*

*IDC **05** 06:04:29.4±0.5,56°.22N×113°.71E,h0^{km},mb4.3/24, mb1 4.4/28,mb1mx4.3/60,mbtmp4.3/28,ML3.8/3,MS4.0/25, Ms1 4.0/25,ms1mx3.8/48,Error ellipse: s-maj=14.9km s-min=11.1km az=171.0*

*NEIC **05** 06:04:31.1±1.5,56°.26N±0°.05×113°.6E±0°.1,h10^{km}±1^{km}, mb4.7/78,Error ellipse: s-maj=13.7km s-min=3.9km az=56.0*

*GCMT **05** 06:04:31.1±0.4,56°.19N±0°.02×113°.75E±0°.04,h18^{km}±1^{km}, MW4.7/82,Moment Tensor Solution. s6,c6; s82,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.27±.09; $M_{\theta\theta}$1.39±.09; $M_{\phi\phi}$-1.13±.07; $M_{r\theta}$-0.45±.18; $M_{\theta\phi}$0.74±.07; $M_{\phi r}$0.46±.17; Best double couple: $M_0$1.61200×10^{16} NP1:ϕ_s212.00000°,δ66.00000°,λ-170.00000°. NP2: ϕ_s118.00000°,δ81.00000°,λ-24.00000°. Principal axes: T 1.6480, Plg10.0000°, Azm167.0000°; N -0.0790, Plg64.0000°, Azm278.0000°; P -1.5760, Plg24.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 06:04:30.0±0.6,56°.20N±0°.02×113°.74E±0°.02,h9^{km}±3^{km}, n274,σ2.^{s}17/343,mb4.6/99,MS4.1/31,13C-16D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.13**	**230**	⇑*i*Pg	**Pg**	**06 04 31.1**	**-2.0**
SVKR				*e*Sg	**Sg**	**06 04 33.2**	**-2.0**
SVKR	**Severomuysk**	**0.13**	**230**	⇑*i*PG	**Pg**	**06 04 31.0**	**-2.0**
SVKR				*e*S	**Sg**	**06 04 32.5**	**-2.7**
UKT	**Uakit**	**0.72**	**185**	⇑*i*Pg	**Pg**	**06 04 40.3**	**-3.6**
UKT				Pmax		06 04 46.6	
	3µm,0.3s						
UKT				*e*Sg	**Sg**	**06 04 48.7**	**-4.5**
UKT				Smax		06 04 55.3	
	24µm,0.6s						
UKT	**Uakit**	**0.72**	**185**	⇑*i*PG	**Pg**	**06 04 40.2**	**-3.6**
UKT				*e*		06 04 48.9	
UKT				pmax	pmax		
	comp=Z,3µm,0.3s						
UKT				smax	smax		
	comp=N,24µm,0.3s						
YOA	**Uoyan**	**1.13**	**267**	⇓*i*Pg	**Pg**	**06 04 49.8**	**-1.9**
YOA				*e*Pb	**Pn**	**06 04 52.3**	**+0.4**
YOA				max		06 04 52.5	
	comp=N,8µm,0.2s						
YOA				*e*Sg	**Sb**	**06 05 05.4**	**-1.0**
YOA				*e*		06 05 10.9	
YOA				max		06 05 13.0	
	comp=N,97µm,0.5s						
YOA	**Uoyan**	**1.13**	**267**	⇓*i*PG	**Pg**	**06 04 49.8**	**-1.9**
YOA				*e*S	**Sb**	**06 05 05.7**	**-0.7**
NLYR	**Nelyaty**	**1.13**	**74**	⇓*i*Pg	**Pb**	**06 04 50.0**	**-1.8**
NLYR				*e*Pb	**Pg**	**06 04 52.4**	**+0.6**
NLYR				max		06 04 52.7	
	comp=N,12µm,0.3s						
NLYR				*e*Sg	**Sb**	**06 05 06.2**	**-0.4**
NLYR				*e*Sb	**Sn**	**06 05 09.9**	**+2.2**
NLYR				max		06 05 10.5	
	comp=N,32µm,1.2s						
NLYR	**Nelyaty**	**1.13**	**74**	⇓*i*PG	**Pb**	**06 04 50.0**	**-1.8**
NLYR				*e*		06 05 05.4	
NLYR				pmax	pmax		
	comp=Z,12µm,0.8s						
NLYR				smax	smax		
	comp=N,32µm,1.1s						
KMO	**Kumora**	**1.46**	**259**	⇓*i*Pg	**Pn**	**06 04 55.1**	**-1.4**
KMO				*e*Pb	**Pb**	**06 04 56.6**	**-0.7**
KMO				max		06 04 57.0	
	comp=N,7µm,0.3s						
KMO				*e*Sg	**Sn**	**06 05 14.3**	**-1.3**
KMO				*e*		06 05 17.5	
KMO				max		06 05 18.7	
	comp=N,49µm,0.8s						
KMO	**Kumora**	**1.46**	**259**	⇓*i*PG	**Pn**	**06 04 55.2**	**-1.3**
KMO				*e*		06 05 14.0	
KMO				pmax	pmax		
	comp=Z,7µm,0.3s						
KMO				smax	smax		
	comp=N,49µm,0.7s						
BOD	**Bodaibo**	**1.63**	**5**	⇑*i*Pg	**Pb**	**06 04 59.7**	**-0.4**
BOD				Pmax		06 05 01.7	
	comp=N,6µm,1.4s						
BOD				*e*Sg	**Sg**	**06 05 22.2**	**-0.2**
BOD				Smax		06 05 24.8	
	comp=N,17µm,1.5s						
BOD	**Bodaibo**	**1.63**	**5**	⇑*i*PG	**Pb**	**06 04 59.8**	**-0.4**
BOD				*e*		06 05 22.7	
BOD				pmax	pmax		
	comp=Z,6µm,1.1s						
BOD				smax	smax		
	comp=N,11µm,0.6s						
YLYR	**Ulyunkhan**	**1.98**	**229**	⇓*i*Pg	**Pn**	**06 05 03.6**	**0.0**
YLYR				*e*		06 05 05.1	
YLYR				max		06 05 06.1	
	comp=N,6µm,0.6s						
YLYR				*e*Sg	**Sb**	**06 05 29.3**	**-1.5**

YLYR				Smax		06 05 34.1	
	comp=N,31µm,1.0s						
YLYR	Ulyunkhan	1.98	229	⇓iPN	Pn	06 05 03.5	0.0
YLYR				e		06 05 05.1	
YLYR				eS	Sn	06 05 28.3	-0.1
YLYR				e		06 05 29.9	
YLYR				pmax	pmax		
	comp=Z,6µm,0.6s						
YLYR				smax	smax		
	comp=N,20µm,0.5s						
NIZ	Nizh Angarsk	2.40	261	⇑iPn	Pn	06 05 10.0	+0.6
NIZ				ePg	Pb	06 05 12.0	-1.2
NIZ				Pmax		06 05 15.9	
	comp=N,2µm,1.2s						
NIZ				eSg	Sg	06 05 44.0	-2.9
NIZ				Smax		06 05 46.6	
	comp=N,14µm,0.9s						
CRS	Chara	2.61	73	⇓iPn	Pn	06 05 12.8	+0.5
CRS				⇓iPg	Pb	06 05 16.8	0.0
CRS				Pmax		06 05 17.6	
	comp=N,8µm,1.1s						
CRS				eSn	Sn	06 05 44.0	0.0
CRS				eSg	Sb	06 05 51.1	+2.2
CRS				Smax		06 05 53.9	
	comp=N,9µm,1.5s						
CRS	Chara	2.61	73	⇓iPN	Pn	06 05 12.8	+0.5
CRS				e		06 05 16.6	
CRS				e		06 05 50.6	
CRS				pmax	pmax		
	comp=Z,8µm,0.9s						
CRS				smax	smax		
	comp=E,9µm,1.4s						
VTMR	Vitim	3.31	349	⇑iPn	Pn	06 05 22.5	+0.6
VTMR				ePg	Pb	06 05 30.7	+1.9
VTMR				eSn	Sn	06 06 02.1	+0.8
VTMR				eSg	Sg	06 06 13.6	-2.6
SYVR	Suvo	3.34	222	ePn	Pn	06 05 21.7	-0.6
SYVR				ePg	Pb	06 05 29.0	-0.3
SYVR				Pmax		06 05 33.1	
	comp=E,2µm,0.7s						
SYVR				eSn	Sn	06 06 00.7	-1.3
SYVR				eSg	Sb	06 06 11.1	+1.1
SYVR				eSgSg	Sg	06 06 16.8	-0.3
SYVR				max		06 06 22.8	
	comp=E,18µm,1.6s						
SYVR	Suvo	3.34	222	ePN	Pn	06 05 21.7	-0.6
SYVR				e		06 05 27.6	
SYVR				e		06 06 10.7	
SYVR				pmax	pmax		
	comp=Z,2µm,0.8s						
SYVR				smax	smax		
	comp=N,9µm,1.6s						
TUP	Tupik	3.97	114	⇓iPn	Pn	06 05 30.2	-0.9
TUP				ePg	Pb	06 05 40.2	+0.1
TUP				Pmax		06 05 42.4	
	comp=N,554nm,0.5s						
TUP				eSn	Sn	06 06 15.6	-2.1
TUP				eSg	Sb	06 06 30.8	+2.5
TUP				Smax		06 06 39.6	
	comp=N,7µm,1.6s						
TUP	Tupik	3.97	114	⇓iPN	Pn	06 05 30.2	-0.9
TUP				e		06 05 39.9	
TUP				eS	Sn	06 06 15.6	-2.1
TUP				e		06 06 30.8	
TUP				pmax	pmax		
	comp=Z,551nm,0.5s						
TUP				smax	smax		
	comp=N,7µm,1.6s						
MXMB	Maximikha	4.13	227	ePn	Pn	06 05 32.7	-0.4
MXMB				ePg	Pb	06 05 41.0	-1.7
MXMB				eSg	Sb	06 06 34.6	+1.9
CIT	Chita	4.19	182	ePn	Pn	06 05 32.4	-1.6
CIT				ePg	Pb	06 05 41.9	-1.9
CIT				Pmax		06 05 44.1	
	comp=N,2µm,1.0s						
CIT				eSg	Sb	06 06 35.5	+1.0
CIT				Smax		06 06 52.3	
	comp=N,7µm,0.7s						
CIT	Chita	4.19	182	ePN	Pn	06 05 32.3	-1.8
CIT				e		06 05 43.4	
CIT				eS	Sn	06 06 21.4	-1.7
CIT				e		06 06 36.1	
CIT				pmax	pmax		
	comp=Z,2µm,1.6s						
CIT				smax	smax		
	comp=E,6µm,1.2s						
OGRR	Ongureny	4.37	237	⇓iPn	Pn	06 05 37.0	+0.5
OGRR				ePg	Pb	06 05 46.5	-0.4
OGRR				e		06 05 49.4	
OGRR				max		06 05 50.6	
	comp=E,1µm,1.5s						
OGRR				eSg	Sb	06 06 42.7	+3.0
OGRR				e		06 06 49.4	
OGRR				max		06 06 50.4	
	comp=E,5µm,1.6s						
OGRR	Ongureny	4.37	237	ePN	Pn	06 05 37.0	+0.5
OGRR				e		06 05 48.0	
OGRR				e		06 06 42.5	
OGRR				pmax	pmax		
	comp=Z,1µm,1.7s						
OGRR				smax	smax		
	comp=N,5µm,1.8s						
YKLR	Yuktali	4.42	82	⇓iPn	Pn	06 05 37.3	+0.2
YKLR				ePg	Pb	06 05 47.5	-0.2
YKLR				eSg	Sb	06 06 45.7	+4.7
ZRHB	Zarechye	5.30	229	ePg	Pb	06 06 03.8	+1.0
ZRHB				Pmax		06 06 09.0	
	comp=N,1µm,0.7s						
ZRHB				eSg	Sb	06 07 11.2	+4.7
ZRHB				Smax		06 07 35.7	
	comp=N,13µm,1.5s						
TRG	Tyrgan	5.52	234	ePn	Pn	06 05 52.1	-0.1
TRG				ePg	Pb	06 06 06.7	+0.3
TRG				e		06 06 11.8	
TRG				max		06 06 14.5	
	comp=N,511nm,1.4s						
TRG				eSg	Sb	06 07 17.4	+4.8
TRG				Smax		06 07 31.0	
	comp=N,2µm,1.2s						
TRG	Tyrgan	5.52	234	ePN	Pn	06 05 51.8	-0.4
TRG				e		06 06 07.0	
TRG				eS	Sn	06 06 51.8	-3.9
TRG				e		06 07 16.0	
TRG				pmax	pmax		
	comp=Z,512nm,1.4s						
TRG				smax	smax		
	comp=E,2µm,1.2s						
FFNB	Fofonovo	5.84	227	ePn	Pn	06 05 56.8	+0.1
FFNB				ePg	Pb	06 06 12.8	+0.9
FFNB				eSn	Sn	06 07 01.3	-2.4
FFNB				eSg	Sb	06 07 27.3	+5.4
KAB	Kabansk	5.88	228	ePG	Pb	06 06 16.5	+3.8
KAB				eS	Sg	06 07 33.8	-4.9
HRMR	Khuramsha	6.08	224	ePn	Pn	06 05 59.7	-0.3
HRMR				ePg	Pb	06 06 17.8	+1.7
HRMR				Pmax		06 06 21.2	
	comp=E,556nm,0.5s						
HRMR				eSg	Sb	06 07 36.0	+7.1
HRMR				Smax		06 08 01.1	
	comp=E,13µm,1.5s						
IENR	Iengra	6.21	85	ePg	Pb	06 06 20.7	+2.5
IENR				eSg	Sb	06 07 41.0	+8.5
BGT	Bolshoye Golou	6.42	233	ePn	Pn	06 06 04.5	-0.2
BGT				ePg	Pb	06 06 23.8	+1.9
BGT				Pmax		06 06 27.6	
	comp=E,190nm,0.9s						
BGT				eSg	Sg	06 07 46.9	-9.2
BGT				Smax		06 08 00.0	
	comp=E,2µm,1.3s						
KPC	Khapcheranga	6.56	188	ePn	Pn	06 06 04.0	-2.6
KPC				ePg	Pb	06 06 25.3	+1.1
KPC				Pmax		06 06 33.8	
	comp=E,143nm,1.0s						
KPC				eSn	Sn	06 07 16.5	-5.0
KPC				eSg	Sb	06 07 49.3	+6.6
KPC				Smax		06 07 59.4	
	comp=E,4µm,1.4s						
KPC				e		06 08 02.3	
KPC	Khapcheranga	6.56	188	ePN	Pn	06 06 04.0	-2.6
KPC				e		06 06 24.4	
KPC				e		06 07 48.8	
KPC				pmax	pmax		
	comp=Z,144nm,1.2s						
KPC				smax	smax		
	comp=E,4µm,1.9s						
LSTR	Listvyanka	6.80	234	ePn	Pn	06 06 09.8	-0.1
LSTR				ePg	Pb	06 06 30.4	+2.1
LSTR				Pmax		06 06 32.2	
	comp=E,133nm,1.5s						
LSTR				eSg	Sg	06 07 58.6	-10
LSTR				Smax		06 08 06.1	
	comp=E,2µm,1.6s						
IRK	Irkutsk	6.82	238	eSg	Sb	06 07 57.7	+7.7
IRK				Smax		06 08 07.6	
	comp=E,4µm,1.2s						
IRK	Irkutsk	6.82	238	ePG	Pb	06 06 30.7	+2.1
IRK				e		06 07 58.5	
IRK				pmax	pmax		
	comp=Z,440nm,0.2s						
IRK				smax	smax		
	comp=E,4µm,1.2s						
TLY	Talaya	7.48	237	ePn	Pn	06 06 18.9	-0.3
TLY				ePg	Pb	06 06 42.6	+2.8
TLY				Pmax		06 06 54.7	
	comp=E,88nm,1.0s						
TLY				eSg	Sb	06 08 17.2	+8.2
TLY				e		06 08 22.2	
TLY				max		06 08 30.2	
	comp=E,1µm,1.4s						
TLY	Talaya	7.48	237	ePN	Pn	06 06 18.8	-0.4
TLY				e		06 06 43.2	
TLY				e		06 08 17.1	
TLY				pmax	pmax		
	comp=Z,141nm,0.2s						
TLY				smax	smax		
	comp=E,1.0nm,0.5s						
TLY	Talaya	7.48	237	Pn	Pn	06 06 18.7	-0.4
ARS	Arshan	7.92	242	ePn	Pn	06 06 24.9	-0.3
ARS				e		06 06 38.6	
ARS				ePg	Pb	06 06 51.2	+4.0
ARS				Pmax		06 06 54.8	
	comp=E,235nm,0.7s						
ARS				eSn	Sn	06 07 50.8	-4.0
ARS				eSg	Sg	06 08 32.0	-12
ARS				Smax		06 08 46.4	
	comp=E,3µm,1.0s						
ARS	Arshan	7.92	242	ePN	Pn	06 06 24.6	-0.6
ARS				e		06 06 47.9	
ARS				e		06 08 30.7	
ARS				pmax	pmax		
	comp=Z,236nm,0.8s						
ARS				smax	smax		
	comp=E,3µm,1.0s						
ZEA	Zeya	8.16	102	ePN	Pn	06 06 27.5	-0.9
ZEA				e		06 06 56.5	
ZEA				eS	Sn	06 07 56.4	-4.2
ZEA				e		06 08 44.8	
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.5s						
ZEA				smax	smax		
	comp=E,360nm,0.8s						
ZEA				smax	smax		
	comp=N,800nm,1.0s						
ZEA				smax	smax		
	comp=E,1µm,2.5s						
ZEA				MLR	MLR		
	comp=E,3µm,3.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,5.0s						
ZAK	Zakamensk	8.55	231	ePn	Pn	06 06 35.0	+1.1
ZAK				ePg	Pg	06 07 02.9	-11
ZAK				Pmax		06 07 13.8	
	comp=Z,69nm,1.1s						
ZAK				eSg	Sg	06 08 53.4	-11
ZAK				Smax		06 09 40.0	
	comp=Z,2µm,1.8s						
ZAK	Zakamensk	8.55	231	ePN	Pn	06 06 36.1	+2.2
ZAK				e		06 07 05.4	
ZAK				e		06 08 54.6	
ZAK				pmax	pmax		
	comp=Z,69nm,1.0s						
ZAK				smax	smax		
	comp=N,2µm,1.6s						
MOY	Mondy	8.78	244	ePn	Pn	06 06 36.8	-0.3
MOY				max		06 06 51.1	
	comp=N,381nm,1.3s						
MOY				eSn	Sn	06 08 10.2	-5.9
MOY				eSg	Sg	06 08 59.4	-12
MOY				Smax		06 09 19.6	
	comp=N,2µm,1.9s						
MOY	Mondy	8.78	244	ePN	Pn	06 06 37.1	0.0
MOY				eS	Sg	06 09 00.1	-11
MOY				smax	smax		
	comp=N,2µm,1.9s						
ORL	Orlik	8.92	252	ePn	Pn	06 06 38.7	-0.2
ORL				e		06 06 48.3	
ORL				ePg	Pg	06 07 09.9	-11
ORL				Pmax		06 07 14.6	
	comp=N,205nm,1.2s						
ORL				eSg	Sg	06 09 03.8	-12
ORL				Smax		06 09 11.4	
	comp=N,935nm,1.2s						
ORL	Orlik	8.92	252	ePN	Pn	06 06 39.1	+0.2
ORL				e		06 07 08.6	
ORL				eS	Sn	06 08 16.6	-2.8
ORL				e		06 09 03.7	
ORL				pmax	pmax		
	comp=Z,210nm,0.9s						
ORL				smax	smax		
	comp=N,962nm,1.3s						
ULN	Ulaanbaatar	9.30	209	P	Pn	06 06 45.7	+1.4
ULN	Ulaanbaatar	9.30	209		Pn	06 06 45.7	+1.4
SONM	Songino Array	9.52	211	Pn	Pn	06 06 46.4	-0.8
	comp=N,1.6nm,0.3s,baz=21,slow=13,SNR=20						
SONM				Lg	Lg	06 09 24.5	
	comp=N,31nm,0.3s,baz=20,slow=25,SNR=17						
SONM				LR	LR	06 10 33.2	
	comp=N,436nm,20.9s,baz=40,slow=38						
YAK	Yakutsk	10.05	48	eP	Pn	06 06 48.1	-6.2
YAK				eS	Sn	06 08 41.4	-5.5
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK				smax	smax		
	comp=E,72nm,0.9s						
YAK				smax	smax		
	comp=N,57nm,0.7s						
YAK				MLR	MLR		
	comp=Z,591nm,13.0s						
KLR	Kul'dur	12.94	115	Pn	Pn	06 07 33.3	-0.5
	comp=Z,1.6nm,0.3s,baz=309,slow=15,SNR=25						
KLR				Lg	Lg	06 11 13.2	
	comp=Z,1.1nm,0.3s,baz=34,slow=18,SNR=7.2						
KLR				LR	LR	06 12 06.3	
	comp=Z,355nm,18.6s,baz=318,slow=35						
KLR	Kul'dur	12.94	115	i P	Pn	06 07 32.7	-1.1
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLR				MLR	MLR		
	comp=Z,323nm,18.0s						
CN2	Changchun	14.49	144	eP	Pn	06 07 51.8	-3.2
CN2				PP	PnPn	06 08 03.3	+0.5
CN2				S	Sn	06 10 33.4	-2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,2µm,13.0s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
MDJ	Mudanjiang	15.34	132	Pn	Pn	06 08 06.9	+0.5
HHC	Hu-ho-hao-te	15.43	186	eP	P	06 08 11.0	-1.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
HHC				LR	LR		
	comp=Z,1µm,15.2s						
HHC				LR	LR		
	comp=Z,1µm,16.1s						
HHC				LR	LR		
	comp=Z,2µm,16.1s						
BTO	Baotou	15.80	190	eP	Pn	06 08 09.5	-3.0
BJI	Beijing	16.25	173	P	P	06 08 22.6	+1.3
BJI				S	S	06 11 26.7	-4.7
BJT	Baijiatuau	16.27	173	P	Pn	06 08 19.8	+1.2
BJT				pmax	pmax		
	comp=Z,20nm,0.8s						
BJT	Baijiatuau	16.27	173	Pn	Pn	06 08 19.8	+1.2
ZAA0	Zalesovo Array	16.66	274	Pn	Pn	06 08 22.9	-0.5
ZALV	Zalesovo Beam	16.66	274	Pn	Pn	06 08 22.9	-0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=13,SNR=24						
ZALV				Lg	Lg	06 13 11.1	
	comp=Z,0.3nm,0.3s,baz=79,slow=24,SNR=7.4						
ZALV				LR	LR	06 15 01.6	
	comp=Z,541nm,18.3s,baz=68,slow=38						
USA0B	Ussuriysk Arra	16.69	128	i P	Pn	06 08 22.4	-1.4
USRK	Ussuriysk Ar.	16.69	128	Pn	Pn	06 08 23.9	0.0
	baz=303,slow=8.4,SNR=8.6						
USRK				Lg	Lg	06 13 10.7	
	baz=328,slow=27,SNR=6.2						
USRK				LR	LR	06 14 57.4	
	comp=Z,336nm,18.8s,baz=317,slow=38						
TIXI	Tiksi	16.78	17	d iP	Pn	06 08 21.7	-3.0
DGZ	Jazzator, Alta	17.07	259	i P	Pn	06 08 28.1	-0.6
DGZ				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK	Noril'sk	17.59	329	P	Pn	06 08 29.7	-5.2
	comp=Z,2.3nm,0.3s,baz=120,slow=12,SNR=15						
NRIK				S	Sn	06 11 36.0	-14
	baz=350,slow=23,SNR=7.1						
NRIK				Lg	Lg	06 13 38.2	
	comp=Z,0.8nm,0.3s,baz=226,slow=22,SNR=1.8						
NRIK				LR	LR	06 16 00.9	
	comp=Z,707nm,18.8s,baz=135,slow=39						
NRIK	Noril'sk	17.59	329	eP	Pn	06 08 34.5	-0.4
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NRIK				MLR	MLR		
	comp=Z,1µm,12.0s						
UGL	Uglegorsk	18.52	101	eP	Pn	06 08 47.7	+1.3
UGL				eS	Sn	06 12 01.3	-12
UGL				pmax	pmax		
	comp=Z,23nm,0.9s						
UGL				MLR	MLR		
	comp=Z,900nm,14.0s						
GTA	Gaotai	19.16	215	P	P	06 08 53.3	-0.3
GTA				pP	pP	06 08 56.5	-0.2
GTA				sP	sP	06 08 59.1	+0.9
GTA				S	Sn	06 12 28.5	-0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,90nm,5.4s						
GTA				LR	LR		
	comp=Z,820nm,11.3s						
GTA				LR	LR		
	comp=Z,2µm,10.5s						
MA2	Magadan	19.80	65	Lg	Lg	06 14 47.1	
	comp=Z,0.5nm,0.3s,baz=345,slow=23,SNR=2.1						
MA2	Magadan	19.80	65	P	P	06 09 01.2	+0.9
MA2				IAmb	IAmb	06 09 09.1	
	comp=Z,22nm,1.0s						
YSS	Yuzh-Sakhalins	20.13	105	eP	P	06 09 01.4	-2.6
YSS				eS	S	06 12 40.8	-9.1
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
SEY	Seymchan	20.43	55	P	Pn	06 09 09.0	-0.2
	comp=Z,7.9nm,0.7s,baz=268,slow=6.8,SNR=16						
SEY				Lg	Lg	06 15 11.9	
	comp=Z,10.0nm,0.9s,baz=319,slow=14,SNR=6.5						
SEY				LR	LR	06 17 14.2	
	comp=Z,600nm,18.9s,baz=298,slow=37						
SEY	Seymchan	20.43	55	i P	Pn	06 09 08.7	-0.6
INCN	Inchon	20.63	150	P	Pn	06 09 11.7	-0.1
INCN				pmax	pmax		
	comp=Z,27nm,0.8s						
INCN	Inchon	20.63	150	P	Pn	06 09 11.7	-0.1
INCN				IAmb	IAmb	06 09 13.0	
	comp=Z,27nm,0.8s						
WMQ	Urumqi	20.67	244	P	Pn	06 09 12.2	-0.1
WMQ				pP	sP	06 09 15.5	+1.0
WMQ				pmax	pmax		
	comp=Z,85nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,800nm,5.5s						
WMQ				LR	LR		
	comp=Z,2µm,8.5s						
WMQ				LR	LR		
	comp=Z,2µm,12.3s						
WMQ				LR	LR		
	comp=Z,3µm,19.9s						
WMQ	Urumqi	20.67	244	P	P	06 09 10.9	+0.9
WMQ				pmax	pmax		
	comp=Z,77nm,1.2s						
WMQ	Urumqi	20.67	244		P	06 09 10.9	+0.9
KSRS	Korea Array	21.04	147	P	P	06 09 14.6	+0.7
	comp=Z,5.9nm,1.0s,baz=338,slow=9.6,SNR=15						
KSRS				Lg	Lg	06 15 35.2	
	comp=Z,11nm,1.0s,baz=344,slow=26,SNR=4.9						
KSRS				LR	LR	06 18 15.4	
	comp=Z,424nm,19.0s,baz=342,slow=39						
LZH	Lanzhou	21.21	203	eP	P	06 09 17.0	+1.1
LZH				pP	pP	06 09 19.6	+0.5
LZH				sP	sP	06 09 21.7	+1.2
LZH				sS	S	06 13 13.3	+1.6
LZH				SS	SnSn	06 13 39.7	+6.3
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,11.9s						
LZH				LR	LR		
	comp=Z,4µm,10.8s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
KURK	Kurchatov	21.45	270	ceP	P	06 09 18.6	+0.4
KURK				pmax	pmax		
	comp=Z,147nm,1.7s						
KURK	Kurchatov	21.45	270	P	P	06 09 17.5	-0.7
KURBB	Kurchatov Arra	21.54	270	P	P	06 09 19.8	+0.6
	comp=Z,74nm,1.0s,baz=68,slow=12,SNR=49						
KURBB				Lg	Lg	06 15 43.5	
	comp=Z,1.3nm,0.6s,baz=310,slow=21,SNR=3.5						
MK31	Makanchi Array	21.55	257	ceP	P	06 09 19.9	+0.6
MK31	Makanchi Array	21.55	257	P	P	06 09 19.1	-0.2
MK31				IAmb	IAmb	06 09 21.9	
	comp=Z,35nm,1.2s						
MKAR	Makanchi Array	21.55	257	P	P	06 09 20.1	+0.7
	comp=Z,36nm,1.0s,baz=57,slow=9.3,SNR=76						
MKAR				Lg	Lg	06 15 48.1	
	comp=Z,3.4nm,1.0s,baz=60,slow=12,SNR=5.2						
MAKZ	Makanchi	21.71	258	P	P	06 09 20.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,45nm,1.0s						
MAKZ	Makanchi	21.71	258	P	P	06 09 20.7	-0.4
MAKZ				IAmb	IAmb	06 09 25.6	
	comp=Z,45nm,0.9s						
ASAJ	Asahikawa	21.91	111	P	P	06 09 23.1	0.0
	comp=Z,2.2nm,0.4s,baz=325,slow=26,SNR=1.7						
ASAJ	Asahikawa	21.91	111	P	P	06 09 23.1	0.0
ASAJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
JKA	Kamikawa-asahi	21.91	111	P	P	06 09 23.1	-0.1
XAN	Xi'an	22.41	191	P	P	06 09 31.5	+2.8
XAN				pP	sP	06 09 35.3	+2.1
XAN				PP	PnPn	06 10 00.1	+8.6
XAN				S	S	06 13 37.8	+3.1
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,5.2s						
XAN				LR	LR		
	comp=Z,1µm,14.5s						
XAN				LR	LR		
	comp=Z,2µm,12.6s						
XAN				LR	LR		
	comp=Z,1µm,14.9s						
NJ2	Nanjing	24.41	169	eP	P	06 09 49.2	+0.7
NJ2				S	S	06 14 11.8	+3.8
NJ2				pmax	pmax		
	comp=Z,17nm,0.7s						
NJ2				LR	LR		
	comp=Z,830nm,13.3s						
NJ2				LR	LR		
	comp=Z,460nm,11.0s						
NJ2				LR	LR		
	comp=Z,1µm,14.2s						
BVAR	Borovoye Array	24.99	281	P	P	06 09 55.0	+1.3
	comp=Z,10.0nm,0.9s,baz=229,slow=26,SNR=25						
BVAR	Borovoye Array	24.99	281	P	P	06 09 55.0	+1.3

JHS	Saijyo	25.00	140	P	P	06 09 54.4	+0.5
BRVK	Borovoye	25.04	281	ceP	P	06 09 54.4	+0.4
BRVK				pmax	pmax		
	comp=Z,31nm,1.1s						
BRVK	Borovoye	25.04	281	P	P	06 09 54.2	+0.2
PETK	Petropavlovsk-	25.29	78	P	P	06 09 56.3	-0.1
	comp=Z,15nm,1.0s,baz=262,slow=4.5,SNR=5.3						
PETK				LR	LR	06 20 38.4	
	comp=Z,360nm,18.5s,baz=292,slow=38						
PDGK	Podgornoye	25.30	254	iP	P	06 09 55.8	-0.8
PDGK				pmax	pmax		
	comp=Z,31nm,1.0s						
WHN	Wuhan	25.65	179	⇑P	P	06 10 04.8	+5.1
WHN				LR	LR		
	comp=Z,1µm,11.5s						
WHN				LR	LR		
	comp=Z,610nm,9.6s						
WHN				LR	LR		
	comp=Z,1µm,15.0s						
JNU	Nakatsue	25.95	146	LR	LR	06 21 01.1	
	comp=Z,456nm,19.5s,baz=344,slow=38						
CD2	Chengdu	26.24	200	P	P	06 10 06.9	+1.7
CD2				S	S	06 14 40.7	+3.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=Z,1µm,11.0s						
CD2				LR	LR		
	comp=Z,2µm,11.2s						
CD2				LR	LR		
	comp=Z,1µm,11.0s						
TKM2	Tokmak 2	27.68	258	P	P	06 10 20.8	+2.5
	SNR=22						
USP	Ospenovka	28.05	259	P	P	06 10 23.8	+2.5
	SNR=9.4						
CHMS	Chumysh	28.09	259	P	P	06 10 23.4	+1.7
	SNR=8.4						
KBK	Karagaybulak	28.21	258	P	P	06 10 25.6	+2.6
	SNR=7.5						
AAK	Ala-Archa	28.47	258	P	P	06 10 26.2	+0.9
	comp=Z,12nm,1.1s,baz=91,slow=6.4,SNR=16						
AAK	Ala-Archa	28.47	258	P	P	06 10 27.9	+2.6
	SNR=11						
AAK	Ala-Archa	28.47	258	iP	P	06 10 26.0	+0.7
AAK				pmax	pmax		
	comp=Z,59nm,1.3s						
AAK	Ala-Archa	28.47	258	P	P	06 10 26.1	+0.9
AAK				IAmb	IAmb	06 10 29.4	
	comp=Z,20nm,1.2s						
EKS2	Erkin-Say	28.85	259	P	P	06 10 30.6	+2.0
	SNR=11						
JHJ	Hachijo jima 2	29.27	131	LR	LR	06 21 12.8	
	comp=Z,168nm,21.4s,baz=347,slow=34						
KSH	Kashi	29.85	252	P	P	06 10 44.9	+7.4
KSH				PP	PP	06 11 42.8	-1.9
KSH				pmax	pmax		
	comp=Z,39nm,1.3s						
KSH				pmax	pmax		
	comp=Z,280nm,6.6s						
KSH				LR	LR		
	comp=Z,830nm,7.5s						
KSH				LR	LR		
	comp=Z,710nm,7.3s						
KSH				LR	LR		
	comp=Z,800nm,6.6s						
ARU	Arti	29.91	294	c iP	P	06 10 37.8	+0.1
ARU						06 11 31.8	
ARU				PPP	PPP	06 11 42.8	
ARU				S	S	06 15 36.3	+1.6
ARU				SS	SnSn	06 17 07.6	+2.5
ARU				pmax	pmax		
	comp=Z,17nm,3.2s						
KK31	Karatay Array	30.36	263	P	P	06 10 42.0	+0.2
KK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KK31	Karatay Array	30.36	263	P	P	06 10 42.0	+0.2
KK31				IAmb	IAmb	06 10 44.9	
	comp=Z,7.8nm,0.9s						
KKAR	Karatay Array	30.36	263	P	P	06 10 42.2	+0.4
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KKAR	Karatay Array	30.36	263	P	P	06 10 42.2	+0.4
KKAR				IAmb	IAmb	06 10 44.9	
	comp=Z,7.8nm,0.9s						
KMI	Kunming	32.06	199	eP	P	06 10 58.1	+0.9
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
ABKAR	Akbulak array	32.57	281	P	P	06 11 00.8	-0.3
TAPN	Taplejung	34.34	224	eP	P	06 11 17.2	0.0
	comp=Z,36nm,1.2s						
SHL	Shillong	34.47	216	P	P	06 11 18.7	+0.6
SHL				pmax	pmax		
	comp=Z,16nm,1.1s						
SHL	Shillong	34.47	216	P	P	06 11 18.7	+0.6
SHL				IAmb	IAmb	06 11 20.3	
	comp=Z,16nm,1.1s						
GUN	Gumba	34.57	227	eP	P	06 11 20.3	+1.1
	comp=Z,41nm,1.1s						
ODAN	Odare	34.91	224	eP	P	06 11 22.3	+0.3
	comp=Z,40nm,1.0s						
KKN	Kakani	34.92	228	eP	P	06 11 23.6	+1.5
	comp=Z,56nm,1.0s						
GKN	Gorkha	35.01	229	eP	P	06 11 24.6	+1.9
	comp=Z,115nm,1.2s						
PKI	Pulchoki	35.06	227	eP	P	06 11 24.4	+1.0
	comp=Z,28nm,1.2s						
PKIN	Phulchoki	35.06	227	eP	P	06 11 24.2	+0.8
DANN	Dangsing	35.07	230	eP	P	06 11 25.1	+1.6
	comp=Z,36nm,1.0s						
RAMN	Ramite	35.14	225	eP	P	06 11 24.1	+0.1
	comp=Z,26nm,1.1s						
DMN	Daman	35.16	228	eP	P	06 11 25.4	+1.2
	comp=Z,36nm,1.0s						
SLVN	Son La	35.58	196	P	P	06 11 28.8	+1.3
SLVN				IAmb	IAmb	06 11 30.1	
	comp=Z,8.8nm,1.1s						
PYUN	Piuthan	35.62	231	eP	P	06 11 29.8	+1.7
	comp=Z,127nm,1.2s						
KOLN	Koldanda	35.65	230	eP	P	06 11 29.8	+1.5
	comp=Z,47nm,0.9s						
NIL	Nilore	35.71	248	P	P	06 11 29.8	+1.2
NIL				pmax	pmax		
	comp=Z,21nm,1.3s						
NIL	Nilore	35.71	248	P	P	06 11 29.8	+1.2
NIL				IAmb	IAmb	06 11 31.9	
	comp=Z,21nm,1.3s						
KLMR	Klimovskoe	37.11	309	eP	P	06 11 39.4	-0.7
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s						
KLMR	Klimovskoe	37.11	309	eP	P	06 11 39.5	-0.7
KLMR				eP	P	06 11 39.5	-0.7
KLMR				eP	P	06 11 39.5	-0.7
KLMR				AMP		06 11 42.8	
	comp=Z,23nm,1.4s						
KLMR				LQ	LQ	06 21 59.1	
KLMR				LQ	LQ	06 21 59.1	
SPA0	Spitsbergen Ar	37.19	340	P	P	06 11 39.6	-1.2
SPA0				IAmb	IAmb	06 11 50.6	
	comp=Z,16nm,1.0s						
SPITS	Spitsbergen Ar	37.19	340	P	P	06 11 40.2	-0.6
	comp=Z,5.5nm,0.8s,baz=70,slow=9.3,SNR=2.1						
QIZ	Qiongzhong	37.23	186	P	P	06 11 43.6	+2.0
QIZ				S	S	06 17 32.6	+4.1
QIZ				LR	LR		
	comp=Z,360nm,18.3s						
QIZ				LR	LR		
	comp=Z,240nm,15.6s						
QIZ				LR	LR		
	comp=Z,410nm,15.2s						
ANM	Nome	38.17	44	P	P	06 11 50.7	+1.5
ANM				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ANM	Nome	38.17	44	P	P	06 11 50.7	+1.5
ARCES	ARCESS Array B	38.52	326	P	P	06 11 51.3	-0.8
	comp=Z,2.0nm,0.6s,baz=64,slow=8.1,SNR=9.5						
ARCES				LR	LR	06 30 57.8	
	comp=Z,133nm,18.6s,baz=70,slow=41						
CMAR	Chiang Mai Arr	39.30	202	P	P	06 12 00.1	+1.0
	comp=Z,0.7nm,0.3s,baz=360,slow=7.0,SNR=8.4						
CMAR				LR	LR	06 27 43.1	
	comp=Z,179nm,19.3s,baz=54,slow=36						
GEYT	Alibeck	40.78	268	P	P	06 12 12.6	+1.3
	comp=Z,6.5nm,0.9s,baz=207,slow=3.0,SNR=10.0						
VRH	Novokhopyorsk	41.14	295	eP	P	06 12 13.3	-0.7
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
OBN	Obninsk	41.41	302	iP	P	06 12 18.2	+2.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TOLK	Toolik Lake Re	41.60	33	P	P	06 12 18.7	+1.0
LPSR	Galich'ya Gora	41.71	298	eP	P	06 12 17.5	-1.2
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VSR	Storozhevoye	42.42	296	eP	P	06 12 22.7	-1.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FINES	FINESS Array B	42.42	315	P	P	06 12 24.1	-0.2
	comp=Z,6.1nm,0.8s,baz=61,slow=9.0,SNR=13						
FINES				LR	LR	06 31 37.0	
	comp=Z,219nm,19.9s,baz=60,slow=38						
VORD	Divnogorie	42.51	296	eP	P	06 12 24.9	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TTA	Tatalina	42.59	43	P	P	06 12 26.8	+1.0
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TTA	Tatalina	42.59	43	P	P	06 12 26.8	+1.0
EUNU	Eureka	43.50	5	P	P	06 12 33.6	+0.6
BPAW	Bear Paw Mtn.	43.74	39	P	P	06 12 34.4	-0.7
SVW2	Sparrevohn	43.81	45	P	P	06 12 37.3	+1.7
PPLA	Purkeypile	44.03	41	P	P	06 12 39.5	+2.0
KTH	Kantishna Hill	44.09	40	P	P	06 12 39.7	+1.7
MDM	Murphy Dome	44.18	37	P	P	06 12 39.6	+1.0
MDM				IAmb	IAmb	06 12 42.3	
	comp=Z,6.2nm,1.0s						
COLA	College	44.36	37	P	P	06 12 41.0	+1.1
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
COLA	College	44.36	37	P	P	06 12 41.0	+1.1
COLA				IAmb	IAmb	06 12 44.9	
	comp=Z,6.0nm,0.7s						
TRF	Thorofare Moun	44.38	40	P	P	06 12 41.9	+1.5
TRF				IAmb	IAmb	06 12 48.7	
	comp=Z,9.6nm,1.0s						
WRH	Wood River Hil	44.53	38	P	P	06 12 42.6	+1.3
WRH				IAmb	IAmb	06 12 45.2	
	comp=Z,11nm,1.3s						
IL31		44.75	37	P	P	06 12 43.8	+0.8
IL31				IAmb	IAmb	06 12 46.1	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	44.75	37	P	P	06 12 44.6	+1.5
	comp=Z,9.1nm,1.1s,baz=296,slow=5.5,SNR=33						
RND	Reindeer	44.92	39	P	P	06 12 45.8	+1.2
RND				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RND	Reindeer	44.92	39	P	P	06 12 45.8	+1.2
KIV	Kislovodsk	45.20	286	iP	P	06 12 44.0	-3.0
KIV				i		06 14 28.9	
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,232nm,17.0s						
MNK	Minsk	45.80	306	iP	P	06 12 47.2	-4.3
	comp=E,1.0nm,0.8s						
MNK				iP	P	06 12 47.2	-4.3
	comp=N,6.0nm,0.8s						
MNK				iP	P	06 12 47.2	-4.3
	comp=Z,9.0nm,0.8s						
MNK				iPcP	PcP	06 14 24.1	-4.7
MNK				iPP	PP	06 14 34.8	-3.6
MNK				iPPP	PPP	06 15 15.1	
MNK				iScP	ScP	06 18 07.5	-14
MNK				iPcS	PcS	06 18 18.5	-4.2
MNK				iS	S	06 19 30.5	-4.4
MNK				iScS	ScS	06 22 43.3	-3.8
MNK				iSS	SS	06 22 58.5	-0.2
MNK				iSSS	SSS	06 23 48.3	
MNK				iLQ	LQ	06 28 42.6	
MNK				iLR	LR	06 30 20.7	
MNK				iLRM	MLR	06 33 48.5	
	comp=Z,156nm,17.2s						
MNK				iLRM	MLR	06 34 29.2	
	comp=N,568nm,17.2s						
MNK				iLRM	MLR	06 34 30.1	
	comp=E,186nm,17.2s						
RIDG	Independent Ri	46.09	37	P	P	06 12 54.0	+0.1
RIDG				IAmb	IAmb	06 12 58.8	
	comp=Z,8.7nm,1.1s						
SML	Sawmill	46.12	41	P	P	06 12 55.1	+1.0
PAX	Paxson	46.38	38	P	P	06 12 56.9	+0.8
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PAX	Paxson	46.38	38	P	P	06 12 56.9	+0.8
PAX				IAmb	IAmb	06 13 00.0	
	comp=Z,3.9nm,0.8s						
INK	Inuvik	46.41	28	P	P	06 12 56.9	+0.8
	comp=Z,5.2nm,0.8s,baz=317,slow=9.4,SNR=13						
INK				LR	LR	06 36 16.5	
	comp=Z,115nm,19.1s,baz=302,slow=41						
INK	Inuvik	46.41	28	P	P	06 12 56.5	+0.4
INK				IAmb	IAmb	06 13 01.6	
	comp=Z,7.7nm,1.0s						
DOT	Dot Lake	46.42	37	P	P	06 12 56.8	+0.4
SCM	Sheep Creek Mo	46.47	40	P	P	06 12 56.7	-0.1
SCM				pmax	pmax		
	comp=Z,19nm,1.2s						
SCM	Sheep Creek Mo	46.47	40	P	P	06 12 56.7	-0.1
OHAK	Old Harbor	47.15	48	P	P	06 13 03.8	+1.7
N25K	Chitina, Valde	47.59	39	P	P	06 13 07.0	+1.4
AKASG	Malin Array Be	47.62	301	P	P	06 13 05.5	-0.3
	comp=Z,2.5nm,0.7s,baz=43,slow=8.8,SNR=12						
DAWY	Dawson	47.67	35	P	P	06 13 07.4	+1.3
DAWY				IAmb	IAmb	06 13 09.7	
	comp=Z,4.3nm,0.9s						
HIN	Hinchinbrook I	47.72	41	P	P	06 13 07.8	+1.3
EYAK	Cordova Ski Ar	47.89	41	P	P	06 13 09.7	+1.9
C36M	Paulatuk	47.96	24	P	P	06 13 08.0	-0.2
RES	Resolute Bay	48.00	10	LR	LR	06 34 35.3	
	comp=Z,216nm,19.0s,baz=332,slow=38						
RES	Resolute Bay	48.00	10	P	P	06 13 08.9	+0.4
RES				pmax	pmax		
	comp=Z,6.0nm,1.4s						
RES	Resolute Bay	48.00	10	P	P	06 13 08.9	+0.4
RES				IAmb	IAmb	06 13 11.2	
	comp=Z,6.1nm,1.4s						
VRDI	Verde Repeater	48.26	39	P	P	06 13 12.2	+1.3
VRDI				IAmb	IAmb	06 13 24.9	
	comp=Z,9.8nm,1.4s						
NB2	NORSAR Subarra	48.28	320	P	P	06 13 09.1	-1.8
	comp=Z,20nm,1.4s,baz=49,slow=7.9						
NOA	NORSAR Array B	48.28	320	P	P	06 13 11.3	+0.4
	comp=Z,0.3nm,0.4s,baz=45,slow=6.3,SNR=2.1						
NOA				LR	LR	06 35 10.1	
	comp=Z,214nm,18.7s,baz=25,slow=38						
NBO00	NORSAR Array S	48.45	321	P	P	06 13 12.0	-0.1
NBO00				IAmb	IAmb	06 13 14.8	
	comp=Z,2.7nm,0.7s						
BALM	Baldy	48.78	39	P	P	06 13 16.0	+1.2
TGL	Tana Glacier	48.80	39	P	P	06 13 16.6	+1.7
TGL				IAmb	IAmb	06 13 19.5	
	comp=Z,8.3nm,0.8s						
BARN	Barnard Glacie	49.00	39	P	P	06 13 17.9	+1.3
CTGM	Chitina Glacie	49.18	39	P	P	06 13 20.1	+2.2
HYT	Haines Junctio	50.59	37	P	P	06 13 29.3	+0.7
WHY	Whitehorse	51.58	36	P	P	06 13 37.9	+1.9
BUR08	Bucovina Ar. S	51.64	300	P	P	06 13 36.2	-0.5
BRTR	Keskin Array B	52.99	288	P	P	06 13 47.7	+0.9
	comp=Z,1.6nm,0.8s,baz=46,slow=4.2,SNR=4.4						
DPC	Dobruska-Polom	53.80	308	eP	P	06 13 53.2	+0.7
DPC				e		06 13 59.5	
DPC	Dobruska-Polom	53.80	308	eP	P	06 13 53.2	+0.7
DPC				epP	sP	06 13 59.5	+2.3
CLL	Collm	54.53	311	eP	P	06 13 57.0	-0.8
CLL				i		06 14 04.6	
CLL				Lm	MLR	06 39 00.0	
	comp=N,400nm,22.0s						
CLL				Lm	MLR	06 39 00.0	
	comp=E,300nm,18.4s						
CLL	Collm	54.53	311	eP	P	06 13 57.0	-0.8
CONA	Conrad Observa	55.79	306	eP	P	06 14 08.0	+1.0
	comp=E,4.9nm,1.1s						
YKA	Yellowknife Ar	55.81	25	P	P	06 14 06.2	-0.5
	comp=E,4.9nm,0.7s,baz=335,slow=6.7,SNR=66						
KHC	Kasperske Hory	55.91	309	eP	P	06 14 08.3	+0.5
KHC				e		06 14 10.6	
KHC	Kasperske Hory	55.91	309	eP	P	06 14 08.3	+0.5
KHC				ex	x	06 14 10.6	
GERES	GERESS Array B	56.07	308	P	P	06 14 09.3	+0.3
	comp=E,0.9nm,0.7s,baz=44,slow=7.8,SNR=6.4						
SFJD	Kangerlussuaq	56.56	353	LR	LR	06 38 15.5	
	comp=E,147nm,18.9s,baz=2.5,slow=36						
MOA	Molln	56.56	307	eP	P	06 14 13.6	+1.2
	comp=E,5.0nm,1.4s						
OBKA	Obir	57.45	306	eP	P	06 14 19.9	+1.1
	comp=E,12nm,1.1s						
KBA	Koelnbreinsper	57.56	307	eP	P	06 14 19.4	-0.3
	comp=E,4.0nm,0.8s						
MYKA	Terra Mystica	57.76	307	eP	P	06 14 19.1	-1.9
	comp=E,7.5nm,1.2s						
WATA	Walderalm	58.14	308	eP	P	06 14 22.2	-1.5
	comp=E,1.8nm,0.5s						
WTTA	Wattenberg	58.17	308	eP	P	06 14 23.9	0.0
	comp=E,6.0nm,1.4s						
MOTA	Moosalm	58.34	309	eP	P	06 14 23.7	-1.5
	comp=E,2.1nm,0.6s						
SQTA	Sankt Quirin	58.39	309	eP	P	06 14 23.3	-2.2
	comp=E,6.1nm,1.3s						
FETA	Feichten	58.75	309	eP	P	06 14 29.3	+1.3
	comp=E,5.4nm,1.7s						
DAVOX	Davos/Dischmat	59.31	309	LR	LR	06 43 04.0	
	comp=E,191nm,19.0s,baz=34,slow=39						
FRB	Frobisher Bay	60.37	1	LR	LR	06 38 50.6	
	comp=E,87nm,21.3s,baz=343,slow=34						
FCC	Fort Churchill	63.25	16	P	P	06 14 57.7	-0.4
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FCC	Fort Churchill	63.25	16	P	P	06 14 57.7	-0.4
FFC	Flin Flon	65.65	22	P	P	06 15 15.4	+1.5
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FFC	Flin Flon	65.65	22	P	P	06 15 15.4	+1.5
FFC				IAmb	IAmb	06 15 16.6	
	comp=Z,5.9nm,0.8s						
NEW	Newport	67.59	34	LR	LR	06 47 39.9	
	comp=Z,102nm,20.9s,baz=337,slow=38						
KEST	Kesra	68.34	302	LR	LR	06 46 31.8	
	comp=Z,113nm,18.5s,baz=326,slow=37						
F10A	Beach Ranch, E	69.58	35	P	P	06 15 39.4	+0.3
BMO	Blue Mountains	70.55	36	P	P	06 15 46.5	+1.5
BMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BMO	Blue Mountains	70.55	36	P	P	06 15 46.5	+1.5
BMO				IAmb	IAmb	06 15 49.8	
	comp=Z,5.5nm,0.9s						
HRY	Holter Researc	70.58	31	P	P	06 15 45.6	+0.5
ESBB	Sonseca Array	70.92	314	P	P	06 15 47.5	+0.2
ESBB				IAmb	IAmb	06 15 49.2	
	comp=Z,5.3nm,1.1s						
ESDC	Sonseca Array	70.92	314	P	P	06 15 48.1	+0.8
	comp=Z,2.3nm,0.7s,baz=28,slow=6.7,SNR=24						
ESDC				LR	LR	06 49 37.5	
	comp=Z,78nm,18.7s,baz=5.0,slow=38						
ULM	Lac du Bonnet	71.10	20	LR	LR	06 49 10.3	
	comp=Z,106nm,19.0s,baz=310,slow=38						
YHL	Hebgen Lake	72.46	32	P	P	06 15 57.5	+0.8
YHB	Horse Butte	72.55	32	P	P	06 15 57.1	-0.1
B35A	Bob, Littlefor	73.31	19	P	P	06 16 02.2	+0.8
BEKR	Beckworth	73.91	40	P	P	06 16 06.4	+1.1
PDAR	Pinedale Array	74.84	32	P	P	06 16 12.6	+1.9
	comp=Z,0.9nm,0.7s,baz=25,slow=2.5,SNR=9.8						
PNTR	Pine Nut	74.87	40	P	P	06 16 12.3	+1.4
PNTR				IAmb	IAmb	06 16 16.1	
	comp=Z,3.4nm,0.7s						
HNR	Honiara	75.72	133	LR	LR	06 47 45.1	
	comp=Z,35nm,19.7s,baz=356,slow=34						
F36A	Milaca	75.76	19	P	P	06 16 15.5	-0.1
F36A				IAmb	IAmb	06 16 18.0	
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	75.92	40	P	P	06 16 18.2	+1.3
	comp=Z,1.3nm,0.6s,baz=328,slow=5.7,SNR=18						
LHV	Little Huntoon	76.00	40	P	P	06 16 18.6	+1.5
TPH	Tonopah	76.62	39	P	P	06 16 22.2	+1.3
TPH				pmax	pmax		
	comp=Z,35nm,1.4s						
TPH	Tonopah	76.62	39	P	P	06 16 22.2	+1.3
RDMU	Red Mountain	76.85	32	P	P	06 16 22.9	+0.7
ECSD	EROS Data Cent	77.19	22	P	P	06 16 25.3	+1.5
ECSD				IAmb	IAmb	06 16 26.6	
	comp=Z,5.9nm,0.9s						
SADO	Sadowa	78.82	9	LR	LR	06 53 17.6	
	comp=Z,103nm,18.0s,baz=319,slow=37						
PV14	Lion Creek, Pa	79.04	33	P	P	06 16 35.6	+1.2
PV14				IAmb	IAmb	06 16 38.0	
	comp=Z,6.3nm,0.8s						
KNB	Kanab	79.08	36	P	P	06 16 34.9	+0.3
KNB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KNB	Kanab	79.08	36	P	P	06 16 34.9	+0.3
PV20	West Nyswonger	79.08	33	P	P	06 16 34.6	0.0
PV20				IAmb	IAmb	06 16 40.6	
	comp=Z,3.8nm,0.7s						
S39A	Bolivar	83.68	21	P	P	06 17 00.3	+1.5
S39A				IAmb	IAmb	06 17 01.1	
	comp=Z,4.3nm,0.7s						
CCM	Cathedral Cave	83.73	20	P	P	06 16 59.9	+0.9
CCM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CCM	Cathedral Cave	83.73	20	P	P	06 16 59.9	+0.9
CCM				IAmb	IAmb	06 17 01.4	
	comp=Z,4.0nm,0.7s						
WMOK	Wichita Mounta	85.28	26	P	P	06 17 07.8	+0.8
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMOK	Wichita Mounta	85.28	26	P	P	06 17 07.8	+0.8
WMOK				IAmb	IAmb	06 17 10.6	
	comp=Z,6.8nm,0.8s						
FCAR	Ozark Folk Cen	85.66	21	P	P	06 17 09.9	+1.1
FCAR				IAmb	IAmb	06 17 11.4	
	comp=Z,4.5nm,0.7s						
TORD	Torodi Ar. Bea	90.97	295	P	P	06 17 35.9	+1.5
	comp=Z,1.4nm,0.8s,baz=25,slow=4.0,SNR=6.1						
QSPA	South Pole Qui	145.96	180	PKPbc	PKPbc	06 24 08.5	+0.1
	comp=Z,1.9nm,0.7s,baz=239,slow=1.5,SNR=4.6						
CPUP	Villa Florida	149.46	344	PKPbc	PKiKP	06 24 20.3	+0.1
	comp=Z,2.4nm,0.7s,baz=309,slow=2.3,SNR=6.9						

BYKL 05 06:07:23.4±0.6, 56°.13N×113°.74E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.10	263	ePg	Pg	06 07 24.7	-0.6
SVKR				eSg	Sg	06 07 26.5	-0.2
UKT	Uakit	0.65	186	ePg	Pg	06 07 34.7	-1.0
UKT				eSg	Sg	06 07 43.5	-0.6
UKT				Pmax			
	117nm,0.3s						
UKT				Smax			
	445nm,0.6s						
YOA	Uoyan	1.13	271	eSg	Sb	06 08 00.4	-0.6
YOA				Smax			
	2µm,0.9s						
NLYR	Nelyaty	1.15	71	ePg	Pg	06 07 43.8	-1.7
NLYR				ePb	Pb	06 07 45.9	-0.3
NLYR				eSg	Sg	06 07 59.6	-0.8
NLYR				max			
	524nm,0.3s						
NLYR				Smax			
	1µm,0.8s						
KMO	Kumora	1.45	261	ePg	Pn	06 07 49.6	-1.2
KMO				eSg	Sg	06 08 09.0	-0.8
KMO				Pmax			
	361nm,0.6s						
KMO				Smax			
	1µm,0.8s						
BOD	Bodaibo	1.70	5	ePg	Pn	06 07 53.8	-0.5
BOD				eSg	Sn	06 08 16.0	-0.7
BOD				Pmax			
	145nm,0.4s						
BOD				Smax			
	555nm,0.6s						
YLYR	Ulyunkhan	1.93	230	ePg	Pn	06 07 57.4	-0.1
YLYR				eSg	Sn	06 08 22.6	+0.1
YLYR				Pmax			
	159nm,0.5s						
YLYR				Smax			
	837nm,0.3s						
TUP	Tupik	3.94	113	eSg	Sb	06 09 25.6	+3.6
TUP				Smax			
	152nm,0.6s						

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*MOS **05** 06:08:32.0±1.0, 56°.11N×113°.74E, h2^{km}, mb4.4/11, Error ellipse: s-maj=9.8km s-min=7.4km az=81.2*

MOS Felt (II-III) at Severomuysk.

*BYKL **05** 06:08:33.7±0.2, 56°.09N×113°.72E, h1^{km}±3^{km}, FELT I=II-III MSK at Severomuisk*

*IDC **05** 06:08:34.9±1.5, 56°.39N×113°.65E, h0^{km}, mb3.9/11, mb1 4.2/12, mb1mx3.9/56, mbtmp4.0/12, ML2.1/1, Error ellipse: s-maj=42.6km s-min=17.7km az=166.0*

*NEIC **05** 06:08:38.4±1.9, 56°.77N±0°.07×113°.3E±0°.1, h15^{km}±5^{km}, mb4.4/15, Error ellipse: s-maj=14.7km s-min=4.3km az=46.0*

ISC 05 06:08:35.4±0.4**, 56°.14N**±0°.03×**113°.72E**±0°.02**, h10**^{km}**, n89, σ2^{s}.57**/128**, mb4.2**/19**, MS3.8**/4**, 13C-7D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.09	257	⇑*i*Pg	Pg	06 08 35.5	-2.5
SVKR				*e*Sg	Sg	06 08 37.7	-2.1
SVKR	Severomuysk	0.09	257	⇑*i*PG	Pg	06 08 35.5	-2.5
SVKR				*e*S	Sg	06 08 37.3	-2.5
UKT	Uakit	0.65	185	*e*Pg	Pg	06 08 44.5	-3.6
UKT				Pmax		06 08 45.1	
	992nm,0.4s						
UKT				*e*Sg	Sg	06 08 52.3	-4.3
UKT				*e*Sb	Sb	06 08 56.3	-1.8
UKT				max		06 08 59.4	
	6µm,0.5s						
UKT	Uakit	0.65	185	*e*PG	Pg	06 08 44.5	-3.6
UKT				*e*S	Sg	06 08 52.5	-4.1
YOA	Uoyan	1.12	271	*e*Pg	Pb	06 08 54.3	-2.5
YOA				Pmax		06 08 55.2	
	4µm,0.5s						
YOA				*e*Sg	Sg	06 09 09.5	-1.8
YOA				*e*		06 09 14.6	
YOA				max		06 09 18.7	
	18µm,0.8s						
YOA	Uoyan	1.12	271	*e*PG	Pb	06 08 54.1	-2.7
YOA				*e*		06 09 09.6	
YOA				pmax	pmax		
	comp=Z,991nm,0.2s						
YOA				smax	smax		
	comp=N,18µm,0.4s						
NLYR	Nelyaty	1.16	71	⇓*i*Pg	Pb	06 08 54.8	-2.8
NLYR				*e*Pb	Pg	06 08 57.2	-0.5
NLYR				*e*Sg	Sb	06 09 11.2	-1.5
NLYR				*e*Sb	Sn	06 09 15.2	+1.5
NLYR	Nelyaty	1.16	71	*e*PG	Pb	06 08 54.9	-2.7
NLYR				pmax	pmax		
	comp=Z,4µm,0.5s						
NLYR				smax	smax		
	comp=E,7µm,0.8s						
KMO	Kumora	1.44	261	*e*Pg	Pn	06 08 59.2	-2.3
KMO				Pmax		06 09 02.6	
	comp=E,2µm,0.5s						
KMO				*e*Sg	Sn	06 09 18.6	-1.8
KMO				*e*Sb	Sb	06 09 20.6	0.0
KMO				max		06 09 23.0	
	comp=E,9µm,0.8s						
KMO	Kumora	1.44	261	*e*PG	Pn	06 08 59.6	-1.9
KMO				*e*		06 09 18.4	
KMO				pmax	pmax		
	comp=Z,529nm,0.4s						
KMO				smax	smax		
	comp=N,13µm,0.7s						
BOD	Bodaibo	1.69	5	*e*Pg	Pn	06 09 04.8	-0.2
BOD				Pmax		06 09 06.4	
	comp=N,2µm,0.7s						
BOD				*e*Sg	Sn	06 09 27.1	+0.4
BOD				Smax		06 09 35.6	
	comp=N,8µm,1.6s						
BOD	Bodaibo	1.69	5	*e*PG	Pn	06 09 04.9	-0.1
BOD				*e*		06 09 27.3	
BOD				pmax	pmax		
	comp=Z,2µm,1.1s						
BOD				smax	smax		
	comp=E,7µm,0.9s						
YLYR	Ulyunkhan	1.93	230	⇓*i*Pn	Pn	06 09 07.6	-0.7
YLYR				*e*Pg	Pb	06 09 08.3	-2.3
YLYR				Pmax		06 09 11.4	
	comp=E,721nm,0.3s						
YLYR				*e*Sg	Sn	06 09 33.1	+0.6
YLYR				Smax		06 09 37.1	
	comp=E,13µm,1.0s						
YLYR	Ulyunkhan	1.93	230	*e*PN	Pn	06 09 07.5	-0.7
YLYR				*e*		06 09 33.2	
YLYR				pmax	pmax		
	comp=Z,714nm,0.3s						
YLYR				smax	smax		
	comp=N,13µm,1.0s						
NIZ	Nizh Angarsk	2.38	263	*e*Pg	Pn	06 09 15.2	+0.8
NIZ				Pmax		06 09 19.7	
	comp=N,476nm,0.8s						
NIZ				*e*Sn	Sn	06 09 42.1	-1.5
NIZ				*e*Sg	Sb	06 09 46.2	-1.4
NIZ				*e*		06 09 48.6	
NIZ				Smax		06 09 48.9	
	comp=N,2µm,0.7s						
NIZ				*e*SgSg	Sg	06 09 50.3	-1.4
CRS	Chara	2.63	71	*e*Pn	Pn	06 09 17.7	-0.3
CRS				*e*Pg	Pb	06 09 21.8	-0.9
CRS				Pmax		06 09 22.3	
	comp=N,4µm,1.2s						
CRS				*e*Sg	Sb	06 09 56.5	+1.4
CRS				Smax		06 10 00.8	
	comp=N,4µm,1.9s						
SYVR	Suvo	3.28	222	*e*Pn	Pn	06 09 25.8	-1.1
SYVR				*e*Pg	Pb	06 09 31.5	-2.2
SYVR				Pmax		06 09 36.9	
	comp=N,478nm,1.0s						
SYVR				*e*Sn	Sn	06 10 04.6	-1.4
SYVR				*e*Sg	Sb	06 10 14.5	+0.8
SYVR				*e*SgSg	Sg	06 10 21.0	+0.2
SYVR				max		06 10 26.9	
	comp=N,5µm,1.8s						
TUP	Tupik	3.96	113	*e*Pn	Pn	06 09 34.9	-1.2
TUP				*e*Pg	Pb	06 09 44.8	-0.4
TUP				Pmax		06 09 52.1	
	comp=N,565nm,1.0s						
TUP				*e*Sn	Sn	06 10 19.8	-2.8
TUP				*e*Sg	Sb	06 10 35.7	+2.6
TUP				*e*		06 10 40.1	
TUP				max		06 10 40.8	
	comp=N,3µm,0.8s						
TUP	Tupik	3.96	113	*e*PN	Pn	06 09 35.0	-1.2
TUP				*e*		06 09 44.7	
TUP				*e*S	Sn	06 10 20.2	-2.4
TUP				*e*		06 10 35.4	
TUP				pmax	pmax		
	comp=Z,567nm,0.9s						
TUP				smax	smax		
	comp=E,3µm,1.0s						
MXMB	Maximikha	4.08	227	*e*Pg	Pb	06 09 46.4	-0.8
MXMB				*e*Sn	Sn	06 10 22.9	-2.6
MXMB				*e*Sg	Sb	06 10 39.8	+3.3
CIT	Chita	4.13	181	*e*Pn	Pn	06 09 37.1	-1.4
CIT				*e*Pg	Pb	06 09 47.3	-0.8
CIT				Pmax		06 09 50.1	
	comp=E,196nm,0.2s						
CIT				*e*Sg	Sb	06 10 39.2	+1.2
CIT				Smax		06 10 56.0	
	comp=E,2µm,0.8s						
OGRR	Ongureny	4.33	237	*e*Pn	Pn	06 09 41.3	0.0
OGRR				*e*Pg	Pb	06 09 51.3	-0.2
OGRR				Pmax		06 09 54.5	
	comp=E,282nm,1.4s						
OGRR				*e*Sg	Sb	06 10 46.6	+2.8
OGRR				Smax		06 10 58.7	
	comp=E,883nm,1.1s						
YKLR	Yuktali	4.44	81	*e*Sg	Sb	06 10 50.6	+3.7
ZRHB	Zarechye	5.26	230	*e*Pn	Pn	06 09 52.7	-1.3
ZRHB				max		06 09 53.4	
	comp=E,1µm,1.1s						
ZRHB				*e*Sg	Sb	06 11 16.0	+5.5
ZRHB				Smax		06 12 16.6	
	comp=E,4µm,1.5s						
TRG	Tyrgan	5.47	235	*e*Pg	Pb	06 10 11.0	0.0
TRG				Pmax		06 10 18.8	
	comp=E,221nm,1.4s						
TRG				*e*Sg	Sb	06 11 21.7	+5.1
TRG				Smax		06 11 39.4	
	comp=E,640nm,1.7s						
TRG	Tyrgan	5.47	235	*e*PN	Pn	06 09 56.6	-0.4
TRG				*e*		06 10 12.4	
TRG				*e*S	Sn	06 10 56.8	-3.1
TRG				*e*		06 11 22.3	
TRG				pmax	pmax		
	comp=Z,272nm,1.6s						
TRG				smax	smax		
	comp=E,627nm,1.6s						
FFNB	Fofonovo	5.79	228	*e*Pg	Pb	06 10 16.6	+0.2
FFNB				*e*Sg	Sb	06 11 31.7	+5.9
HRMR	Khuramsha	6.03	224	*e*Pn	Pn	06 10 04.8	+0.1
HRMR				*e*Pg	Pb	06 10 22.1	+1.6
HRMR				Pmax		06 10 29.7	
	comp=E,260nm,1.0s						
HRMR				*e*Sg	Sb	06 11 40.3	+7.5
HRMR				Smax		06 12 04.7	
	comp=E,3µm,1.2s						
IENR	Iengra	6.22	85	*e*Pn	Pn	06 10 07.9	+0.6
IENR				*e*Sg	Sb	06 11 45.8	+7.6
BGT	Bolshoye Golou	6.38	233	*e*Pg	Pb	06 10 27.7	+1.3
BGT				Pmax		06 10 30.3	
	comp=E,150nm,1.0s						
BGT				*e*Sg	Sb	06 11 50.6	+7.9
BGT				Smax		06 11 58.9	
	comp=E,473nm,1.2s						
KPC	Khapcheranga	6.50	188	*e*Pg	Pb	06 10 29.5	+1.0
KPC				Pmax		06 10 29.8	
	comp=E,263nm,1.6s						
KPC				*e*Sg	Sb	06 11 54.2	+8.0
KPC				*e*		06 12 06.8	
KPC				max		06 12 10.7	
	comp=E,1µm,1.4s						
LSTR	Listvyanka	6.76	234	*e*		06 11 55.2	
LSTR				*e*Sg	Sb	06 12 00.4	+6.7
LSTR				Smax		06 12 09.9	
	comp=E,573nm,1.4s						
TLY	Talaya	7.44	237	*e*Sg	Sb	06 12 22.2	+9.1
TLY				Smax		06 12 38.4	
	comp=E,342nm,1.0s						
HIA	Hailar	7.79	150	⇑*e*PN	Pn	06 10 28.2	-0.6
ARS	Arshan	7.88	242	*e*Sg	Sb	06 12 36.3	+11
ARS				Smax		06 12 45.3	
	comp=E,936nm,1.0s						
MOY	Mondy	8.74	244	Pn	Pn	06 10 41.9	0.0
MOY				*e*Sg	Sg	06 13 04.8	-11
MOY				Smax		06 13 16.3	
	comp=E,569nm,1.9s						
ORL	Orlik	8.89	252	*e*Sg	Sg	06 13 08.2	-12
ORL				Smax		06 13 27.0	
	comp=E,337nm,1.4s						
ULN	Ulaanbaatar	9.24	209	⇑*e*P	Pn	06 10 49.3	+0.5
SONM	Songino Array	9.46	212	Lg	Lg	06 13 31.0	
	comp=E,7.9nm,0.3s,baz=29,slow=29,SNR=6.3						
KLR	Kul'dur	12.92	115	Lg	Lg	06 15 16.0	
	comp=E,0.7nm,0.3s,baz=158,slow=22,SNR=3.7						
KLR	Kul'dur	12.92	115	⇑*e*P	Pn	06 11 39.3	+0.4
KLR				pmax	pmax		
	comp=Z,97nm,0.8s						
GRNR	Gornyy	14.52	102	⇓*i*P	Pn	06 11 53.5	-7.3
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,300nm,12.0s						
GRNR				MLR	MLR		
	comp=N,420nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,500nm,13.0s						
MDJ	Mudanjiang	15.30	132		P	06 12 20.2	+4.1
ZAA0	Zalesovo Array	16.65	275	Pn	Pn	06 12 27.6	-1.0
USA0B	Ussuriysk Arra	16.66	128	⇑*e*P	Pn	06 12 28.2	-0.6
USA0B	Ussuriysk Arra	16.66	128	P	P	06 12 40.2	+9.1
USA0B				IAmb	IAmb	06 12 57.4	
	comp=Z,32nm,1.2s						
USRK	Ussuriysk Ar.	16.66	128	Pn	P	06 12 31.0	-0.2
	baz=332,slow=18,SNR=3.2						
USRK				Lg	Lg	06 17 22.5	
	baz=332,slow=28,SNR=4.8						
USRK	Ussuriysk Ar.	16.66	128	P	P	06 12 31.0	-0.2
TIXI	Tiksi	16.84	17	Pn	Pn	06 12 24.1	-6.7
TIXI				IAmb	IAmb	06 12 25.9	
	comp=Z,58nm,1.2s						
DGZ	Jazzator, Alta	17.04	259	⇓*e*P	Pn	06 12 34.2	+0.4
NRIK	Noril'sk	17.63	329	⇑*e*P	Pn	06 12 40.5	-0.3
SEY	Seymchan	20.48	55	P	P	06 13 12.6	-0.3
	comp=Z,7.0nm,0.9s,baz=261,slow=14,SNR=3.4						
SEY				Lg	Lg	06 19 17.8	
	comp=Z,5.6nm,1.0s,baz=341,slow=23,SNR=1.2						
SEY	Seymchan	20.48	55	⇓*e*P	P	06 13 12.4	-0.6
INCN	Inchon	20.59	150	P	Pn	06 13 24.0	+7.5
INCN				IAmb	IAmb	06 13 43.3	
	comp=Z,15nm,0.5s						
WMQ	Urumqi	20.63	244	P	Pn	06 13 17.4	+0.2
WMQ				pmax	pmax		
	comp=Z,21nm,1.2s						
WMQ	Urumqi	20.63	244	P	Pn	06 13 17.4	+0.3
WMQ				IAmb	IAmb	06 13 17.8	
	comp=Z,20nm,1.2s						
KSRS	Korea Array	20.99	147	Lg	Lg	06 19 43.2	
	comp=Z,4.9nm,0.9s,baz=338,slow=28,SNR=5.9						
KURK	Kurchatov	21.44	270	⇑*e*P	P	06 13 23.2	-0.2
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
KURK				MLR	MLR		
	comp=Z,322nm,16.0s						
KURK	Kurchatov	21.44	270	P	P	06 13 22.9	-0.5
KURK				IAmb	IAmb	06 13 28.1	
	comp=Z,30nm,1.1s						
MK31	Makanchi Array	21.52	258	⇑*e*P	P	06 13 23.1	-1.3
MK31	Makanchi Array	21.52	258	P	P	06 13 26.0	+1.6
MKAR	Makanchi Array	21.52	258	P	P	06 13 24.7	+0.3
	comp=Z,4.7nm,0.9s,baz=61,slow=9.9,SNR=4.0						
KURBB	Kurchatov Arra	21.53	270	P	P	06 13 26.5	+2.1
	comp=Z,18nm,0.9s,baz=68,slow=12,SNR=12						
KURBB				Lg	Lg	06 19 57.0	
	comp=Z,4.6nm,1.1s,baz=67,slow=32,SNR=4.8						
MAKZ	Makanchi	21.69	258	P	P	06 13 26.3	+0.2
MAKZ				pmax	pmax		
	comp=Z,15nm,1.1s						
MAKZ	Makanchi	21.69	258	P	P	06 13 26.3	+0.2
MAKZ				IAmb	IAmb	06 13 30.3	
	comp=Z,15nm,1.1s						
XAN	Xi'an	22.34	191	P	P	06 13 43.0	+10
BRVK	Borovoye	25.04	281	⇑*e*P	P	06 13 58.2	-1.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,253nm,17.0s						
BRVK	Borovoye	25.04	281	P	P	06 13 58.5	-0.8
BRVK				IAmb	IAmb	06 14 02.2	
	comp=Z,10nm,1.1s						
MAJO	Matsushiro	25.64	130	⇑*e*P	P	06 14 04.0	-1.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.5s						
AAK	Ala-Archa	28.45	258	⇑*e*P	P	06 14 28.3	-2.1
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	Arti	29.93	294	P	P	06 14 42.2	-0.9
ARU						06 15 35.3	
ARU				S	S	06 19 40.1	-0.1
BELG	Belogornoye	37.45	293	⇓*e*P	P	06 15 49.1	+0.6
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BELG				MLR	MLR		
	comp=Z,26nm,17.0s						
FINES	FINESS Array B	42.46	315	P	P	06 16 28.4	-1.6
	comp=Z,9.9nm,1.1s,baz=81,slow=6.4,SNR=3.8						
FINES	FINESS Array B	42.46	315	*i* P	P	06 16 30.2	+0.3
FINES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
COLA	College	44.42	37	⇑*e*P	P	06 16 46.4	+0.7
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	44.80	37	P	P	06 16 48.9	+0.1
	comp=Z,2.2nm,1.1s,baz=293,slow=5.7,SNR=4.1						
KBZ	Khabaz	45.24	285	⇓*e*P	P	06 16 50.0	-2.5
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MNK	Minsk	45.83	306	*i* P	P	06 16 59.1	+2.1
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	06 16 59.1	+2.1
	comp=N,16nm,0.8s						
MNK				*i* P	P	06 16 59.1	+2.1
	comp=Z,6.0nm,0.8s						
MNK				*i* PcP	PcP	06 18 36.3	+2.1
MNK				*i* PP	PP	06 18 46.5	+2.5
MNK				*i* PPP	PPP	06 19 26.6	
MNK				*i* ScP	ScP	06 22 29.4	+2.4
MNK				*i* PcS	PcS	06 22 30.7	+2.5
MNK				*i* S	S	06 23 46.1	+5.6
MNK				*i* ScS	ScS	06 26 55.3	+2.8
MNK				*i* SS	SS	06 27 09.7	+5.3
MNK				*i* SSS	SSS	06 27 59.1	
MNK				*i* LQ	LQ	06 32 52.8	
MNK				*i* LR	LR	06 35 21.9	
MNK				*i* LRM	MLR	06 38 33.6	
	comp=N,691nm,17.1s						
MNK				*i* LRM	MLR	06 38 36.2	
	comp=E,15nm,17.1s						
MNK				*i* LRM	MLR	06 38 40.1	
	comp=Z,171nm,17.1s						
INK	Inuvik	46.47	28	P	P	06 17 01.3	-0.6
	comp=Z,1.6nm,0.8s,baz=274,slow=7.4,SNR=3.1						
INK	Inuvik	46.47	28	P	P	06 17 01.3	-0.6
INK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
INK	Inuvik	46.47	28	IAmb	IAmb	06 17 03.9	
	comp=Z,8.9nm,1.4s						
AKASG	Malin Array Be	47.65	301	P	P	06 17 10.6	-0.7
	comp=Z,1.7nm,0.8s,baz=43,slow=8.8,SNR=3.2						
C36M	Paulatuk	48.02	24	P	P	06 17 12.7	-1.3
YAH	Yahtse	49.52	39	P	P	06 17 25.9	0.0
YKA	Yellowknife Ar	55.87	25	P	P	06 18 11.4	-1.2
	comp=Z,2.0nm,0.9s,baz=334,slow=7.0,SNR=10						
YKA	Yellowknife Ar	55.87	25	*i* P	P	06 18 11.3	-1.2
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ESDC	Sonseca Array	70.96	314	P	P	06 19 52.7	-0.1
	comp=Z,1.5nm,1.0s,baz=19,slow=6.6,SNR=4.5						
PDAR	Pinedale Array	74.90	32	P	P	06 20 16.8	+0.4
	comp=Z,0.5nm,0.7s,baz=267,slow=5.4,SNR=4.1						
NVAR	Mina Array Bea	75.97	40	P	P	06 20 22.7	+0.2
	comp=Z,0.4nm,0.6s,baz=315,slow=4.5,SNR=4.0						

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*MOS **05** 06:08:59.7±1.2, 56°.27N×113°.67E, h5^{km}, mb4.4/8, Error ellipse: s-maj=11.9km s-min=7.8km az=74.9*

MOS Felt (II-III) at Severomuysk.

*BYKL **05** 06:09:03.4±0.2, 56°.14N×113°.70E, h10^{km}±3^{km}, FELT I=II-III MSK at Severomuisk*

ISC 05 06:09:01.9±0.8**, 56°.21N**±0°.02×**113°.70E**±0°.02**, h14**^{km}±4^{km}**, n56, σ3^{s}.01**/93**, mb4.3**/9**, 13C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.12	220	*e*Pg	Pg	06 09 04.9	-0.4
SVKR				Pmax		06 09 05.1	
	41µm,0.2s						
SVKR				*e*Sg	Sg	06 09 07.1	-0.6
SVKR				Smax		06 09 07.3	
	499µm,0.8s						
SVKR	Severomuysk	0.12	220	*e*PG	Pg	06 09 04.9	-0.4
SVKR				*e*S	Sg	06 09 06.9	-0.8
UKT	Uakit	0.72	183	*e*Pg	Pg	06 09 15.0	-1.0
UKT				Pmax		06 09 16.4	
	1µm,0.5s						
UKT				*e*Sg	Sg	06 09 23.6	-1.9
UKT				Smax		06 09 31.2	
	12µm,1.3s						
YOA	Uoyan	1.11	267	*e*Pg	Pg	06 09 24.3	+1.1
YOA				Pmax		06 09 29.8	
	11µm,0.6s						
YOA				*e*Sg	Sn	06 09 39.2	+1.0
YOA				*e*Sb	Sg	06 09 43.9	+6.2
YOA				max		06 09 47.5	
	42µm,0.5s						
YOA	Uoyan	1.11	267	*e*PG	Pg	06 09 24.0	+0.8
YOA				*e*		06 09 39.2	
YOA				pmax	pmax		
	comp=Z,3µm,0.2s						
YOA				smax	smax		
	comp=N,42µm,0.5s						
NLYR	Nelyaty	1.15	75	*e*Pg	Pg	06 09 24.1	0.0
NLYR				*e*Pb	Pn	06 09 26.0	+2.3
NLYR				max		06 09 26.7	
	comp=N,6µm,0.3s						
NLYR				*e*Sg	Sn	06 09 40.1	+0.8
NLYR				*e*Sb	Sg	06 09 43.8	+4.7
NLYR				max		06 09 44.3	
	comp=N,39µm,1.1s						
NLYR	Nelyaty	1.15	75	*e*PG	Pg	06 09 24.5	+0.4
NLYR				pmax	pmax		
	comp=Z,7µm,0.6s						
NLYR				smax	smax		
	comp=N,39µm,1.0s						
KMO	Kumora	1.44	258	*e*Pg	Pg	06 09 29.9	+0.4
KMO				Pmax		06 09 32.9	
	comp=N,4µm,0.5s						
KMO				*e*Sg	Sg	06 09 48.0	-0.2
KMO				*e*		06 09 52.0	
KMO				max		06 09 52.7	
	comp=N,36µm,1.0s						
KMO	Kumora	1.44	258	*e*PG	Pb	06 09 28.5	0.0
KMO				*e*		06 09 48.1	
KMO				pmax	pmax		
	comp=Z,3µm,0.4s						
KMO				smax	smax		
	comp=N,36µm,0.8s						
BOD	Bodaibo	1.62	6	*e*Pg	Pg	06 09 34.2	+1.1
BOD				*e*Sg	Sg	06 09 56.2	+2.0
YLYR	Ulyunkhan	1.96	228	*e*Pg	Pg	06 09 38.9	-0.7
YLYR				Pmax		06 09 39.5	
	comp=N,3µm,0.6s						
YLYR				*e*Sg	Sg	06 10 03.7	-1.4
YLYR				Smax		06 10 12.1	
	comp=N,18µm,1.8s						
CRS	Chara	2.62	73	*e*Pn	Pb	06 09 47.4	-1.4
CRS				*e*Pg	Pg	06 09 51.0	-1.2
CRS				Pmax		06 09 51.5	
	comp=N,6µm,1.0s						
CRS				*e*Sg	Sg	06 10 24.8	-1.4
CRS				Smax		06 10 29.5	
	comp=N,5µm,1.0s						
VTMR	Vitim	3.30	350	*e*Pn	Pb	06 09 56.6	-3.6
VTMR				*e*Pg	Pg	06 10 03.8	-1.3
VTMR				*e*Sg	Sg	06 10 46.9	-0.9
SYVR	Suvo	3.33	221	*e*Pn	Pn	06 09 56.1	+2.5
SYVR				*e*Pg	Pb	06 10 02.9	+2.1
SYVR				Pmax		06 10 07.1	
	comp=N,665nm,0.8s						
SYVR				*e*Sg	Sg	06 10 45.3	-3.5
SYVR				*e*SgSg	SbSb	06 10 51.0	+4.8
SYVR				max		06 10 57.0	
	comp=N,10µm,1.9s						
TUP	Tupik	4.00	114	*e*Pn	Pn	06 10 04.1	+1.3
TUP				*e*		06 10 08.9	
TUP				*e*Pg	Pb	06 10 14.7	+2.6
TUP				Pmax		06 10 21.4	
	comp=N,502nm,0.7s						
TUP				*e*Sn	Sn	06 10 50.6	+1.2
TUP				*e*Sg	Sg	06 11 05.6	-4.6
TUP				Smax		06 11 12.3	
	comp=N,5µm,1.1s						
TUP	Tupik	4.00	114	*e*PN	Pn	06 10 04.1	+1.3
TUP				*e*		06 10 14.3	
TUP				*e*S	Sn	06 10 50.2	+0.8
TUP				*e*		06 11 06.3	
TUP				pmax	pmax		
	comp=Z,483nm,0.8s						
TUP				smax	smax		
	comp=E,5µm,1.1s						
MXMB	Maximikha	4.12	226	*e*Pg	Pb	06 10 16.2	+2.0
MXMB				*e*Sg	Sg	06 11 10.1	-3.9
CIT	Chita	4.20	181	*e*Pn	Pn	06 10 05.8	+0.2
CIT				*e*Pg	Pb	06 10 17.3	+1.7
CIT				Pmax		06 10 18.7	
	comp=E,655nm,0.3s						
CIT				*e*Sg	Sb	06 11 11.1	+5.0
CIT				Smax		06 11 16.6	
	comp=E,4µm,1.4s						
CIT	Chita	4.20	181	*e*PN	Pn	06 10 06.4	+0.8
CIT				*e*		06 10 17.9	
CIT				*e*S	Sn	06 10 56.7	+2.3
CIT				*e*		06 11 15.8	
CIT				pmax	pmax		
	comp=Z,851nm,1.5s						
CIT				smax	smax		
	comp=E,3µm,1.3s						
OGRR	Ongureny	4.36	236	*e*Pn	Pn	06 10 08.7	+0.9
OGRR				*e*Pg	Pb	06 10 21.3	+3.0
OGRR				Pmax		06 10 24.6	
	comp=E,544nm,1.9s						
OGRR				*e*Sg	Sb	06 11 16.3	+5.6
OGRR				*e*		06 11 23.5	

OGRR				max		06 11 24.5	
	comp=E,3µm,1.6s						
OGRR	Ongureny	4.36	236	ePN	Pn	06 10 09.4	+1.6
OGRR				e		06 10 20.9	
OGRR				e		06 11 17.1	
OGRR				pmax	pmax		
	comp=Z,2µm,1.4s						
OGRR				smax	smax		
	comp=N,3µm,2.0s						
YKLR	Yuktali	4.44	82	ePg	Pg	06 10 23.8	-3.1
YKLR				eSg	Sg	06 11 21.3	-3.0
ZRHB	Zarechye	5.29	229	eSg	Sg	06 11 45.6	-6.1
TRG	Tyrgan	5.50	234	ePg	Pb	06 10 41.2	+3.4
TRG				Pmax		06 10 49.0	
	comp=N,272nm,1.6s						
TRG				eSg	Sg	06 11 51.4	-7.0
TRG				Smax		06 11 55.4	
	comp=N,2µm,1.3s						
TRG	Tyrgan	5.50	234	ePN	Pn	06 10 23.4	-0.1
TRG				e		06 10 39.8	
TRG				e		06 11 50.0	
TRG				pmax	pmax		
	comp=Z,274nm,1.7s						
TRG				smax	smax		
	comp=N,2µm,1.3s						
FFNB	Fofonovo	5.83	227	ePn	Pn	06 10 29.6	+1.6
FFNB				eSg	Sg	06 12 03.1	-5.8
HRMR	Khuramsha	6.08	224	ePg	Pg	06 10 53.0	-5.2
HRMR				Pmax		06 10 58.0	
	comp=N,301nm,0.6s						
HRMR				eSg	Sg	06 12 10.9	-5.9
HRMR				Smax		06 12 21.4	
	comp=N,7µm,1.0s						
BGT	Bolshoye Golou	6.41	233	ePg	Pb	06 10 58.5	+5.2
BGT				Pmax		06 11 06.9	
	comp=N,127nm,0.9s						
BGT				eSg	Sg	06 12 20.9	-6.7
BGT				Smax		06 12 28.8	
	comp=N,930nm,1.2s						
KPC	Khapcheranga	6.56	188	ePg	Pb	06 11 01.2	+5.3
KPC				Pmax		06 11 19.8	
	comp=N,225nm,2.0s						
KPC				eSg	Sg	06 12 26.1	-6.4
KPC				Smax		06 12 33.6	
	comp=N,2µm,2.0s						
LSTR	Listvyanka	6.79	234	eSg	Sg	06 12 32.7	-7.0
LSTR				Smax		06 12 40.1	
	comp=N,2µm,1.7s						
IVK	Ivanovka	7.03	235	eSg	Sg	06 12 39.3	-8.0
IVK				Smax		06 12 48.4	
	comp=N,1µm,1.8s						
TLY	Talaya	7.46	237	eSg	Sg	06 12 52.3	-9.0
TLY				Smax		06 12 59.0	
	comp=N,720nm,1.5s						
HIA	Hailar	7.86	150	⇑ePN	Pn	06 10 57.8	+2.0
ARS	Arshan	7.90	242	eSg	Sg	06 13 06.9	-8.3
ARS				Smax		06 13 10.1	
	comp=N,2µm,1.0s						
MOY	Mondy	8.76	244	eSg	Sg	06 13 32.5	-10
MOY				Smax		06 13 39.7	
	comp=N,2µm,1.6s						
ORL	Orlik	8.90	251	eSg	Sg	06 13 37.7	-9.5
ORL				Smax		06 13 45.4	
	comp=N,567nm,1.4s						
ORL	Orlik	8.90	251	ePN	Pn	06 11 11.1	+1.0
ORL				e		06 11 43.6	
ORL				e		06 13 36.9	
ORL				pmax	pmax		
	comp=Z,187nm,0.9s						
ORL				smax	smax		
	comp=N,568nm,1.7s						
ULN	Ulaanbaatar	9.30	209	⇑eP	Pn	06 11 17.2	+1.5
YAK	Yakutsk	10.06	48	⇓eP	Pn	06 11 27.2	+1.4
MDJ	Mudanjiang	15.36	132	P	Pn	06 12 28.7	-9.4
MDJ				pmax	pmax		
	comp=Z,150nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,350nm,1.4s						
USA0B	Ussuriysk Arra	16.71	128	⇑eP	Pn	06 12 56.1	+0.6
TIXI	Tiksi	16.77	17	⇑eP	Pn	06 12 56.2	+0.1
NRIK	Noril'sk	17.57	329	⇑eP	Pn	06 13 05.5	-0.5
UGL	Uglegorsk	18.54	101	eP	P	06 13 15.5	-2.4
UGL				S	S	06 16 52.6	+3.8
UGL				pmax	pmax		
	comp=Z,24nm,0.6s						
KURK	Kurchatov	21.43	270	⇑eP	P	06 13 49.2	-0.1
KURK				pmax	pmax		
	comp=Z,25nm,1.1s						
MK31	Makanchi Array	21.53	257	⇑eP	P	06 13 52.5	+2.0
BRVK	Borovoye	25.01	281	⇑eP	P	06 14 27.3	+2.2
BRVK				pmax	pmax		
	comp=Z,14nm,1.2s						
BILL	Bilibino	26.34	42	⇑eP	P	06 14 37.9	+0.9
AAK	Ala-Archa	28.45	258	⇑eP	P	06 14 57.7	+1.3
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	Arti	29.89	294	P	P	06 15 07.2	-1.6
ARU				S	S	06 20 02.3	-2.9
BELG	Belogornoye	37.42	293	⇑eP	P	06 16 14.2	0.0
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	Obninsk	41.38	302	i P	P	06 16 46.6	-0.6
OBN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
COLA	College	44.37	37	⇑eP	P	06 17 10.5	-0.8
COLA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KIV	Kislovodsk	45.18	286	i P	P	06 17 11.6	-6.5
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	45.21	285	⇑eP	P	06 17 16.4	-1.9
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MNK	Minsk	45.78	306	i P	P	06 17 21.5	-1.2
	comp=E,2.0nm,0.8s						
MNK				i P	P	06 17 21.5	-1.2
	comp=N,13nm,0.8s						
MNK				i P	P	06 17 21.5	-1.2
	comp=Z,5.0nm,0.8s						
MNK				i PcP	PcP	06 18 58.7	-1.3
MNK				i PP	PP	06 19 08.9	-0.6
MNK				i PPP	PPP	06 19 49.0	
MNK				i ScP	ScP	06 22 51.7	-0.5
MNK				i PcS	PcS	06 22 53.0	-0.9
MNK				i S	S	06 24 04.2	-1.2
MNK				i ScS	ScS	06 27 17.6	-0.1
MNK				i SS	SS	06 27 32.0	+2.9
MNK				i SSS	SSS	06 28 21.4	
MNK				i LQ	LQ	06 33 15.2	
MNK				i LR	LR	06 35 20.5	

BYKL 05 06:09:48.5±1.4, 56°.10N×113°.68E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.07	284	ePg	Pg	06 09 49.4	-0.4
SVKR				eSg	Sg	06 09 51.2	+0.5
UKT	Uakit	0.61	183	ePg	Pg	06 09 59.2	-1.0
UKT				eSg	Sg	06 10 07.8	-0.3
UKT				Smax			
	482nm,0.6s						
NLYR	Nelyaty	1.19	70	eSg	Sg	06 10 25.0	-1.8
NLYR				Smax			
	718nm,0.6s						
KMO	Kumora	1.41	262	eSg	Sg	06 10 32.7	-1.0
KMO				Smax			
	944nm,0.4s						
BOD	Bodaibo	1.73	6	eSg	Sb	06 10 43.4	-0.1
BOD				Smax			
	607nm,0.6s						

NOU ***05*** *06:10:03.5, 6°.86S×130°.23E, h37^{km}, mb4.8, Banda Sea*

IDC ***05*** *06:10:05.8±2.3, 7°.14S×130°.32E, h52^{km}±22^{km}, mb4.0/12, mb1 4.2/16, mb1mx3.9/46, mbtmp4.4/16, ML4.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/37, Error ellipse: s-maj=27.1km s-min=13.8km az=83.0*

DJA ***05*** *06:10:07.6±0.3, 7°S±2°×13°1E±°, h146^{km}±6^{km}, M4.8/11, mb4.8/9, mB5.3/4, MLv4.8/11, Mw(mB)4.8/4*

NEIC ***05*** *06:10:08.6±2.6, 7°.11S±0°.07×130°.28E±0°.09, h81^{km}±8^{km}, mb4.6/19, Error ellipse: s-maj=13.3km s-min=9.5km az=83.0*

ISC 05 06:10:10.1±0.4, 7°.22S±0°.05×130°.25E±0°.06, h100^{km}, n76, σ1^{s}.55/73, mb4.5/24, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.28	126	Pn	Pn	06 10 34.4	+0.6
SAUI	Saumlaki	1.28	126	P	Pn	06 10 34.5	+0.7
SAUI				S	Sn	06 10 51.4	-0.3
BNDI	Bandanaira	2.71	353	P	Pn	06 10 51.9	-0.1
MSAI	Masohi	4.07	341	P	Pn	06 11 09.9	-0.5
MSAI				S	Sn	06 11 58.0	+1.0
FAKI	Fak Fak	4.71	25		Pn	06 11 15.5	-3.5
FAKI	Fak Fak	4.71	25	P	Pn	06 11 15.2	-3.9
MTN	Manton Dam	5.65	171	Pn	Pn	06 11 31.4	-0.3
SIJI	Sorong	6.39	9	P	Pn	06 11 37.6	-4.2
	19nm,0.3s,baz=191,slow=10,SNR=18						
SIJI				S	Sn	06 12 43.5	-10
	16nm,0.3s,baz=352,slow=20,SNR=7.9						
SWI	Sorong	6.40	9	P	Pn	06 11 37.8	-4.1
	0.8nm69nm,0.4s						
SOEI	Soe	6.43	247	Pn	Pn	06 11 43.9	+1.4
SOEI	Soe	6.43	247	P	Pn	06 11 43.2	+0.7
	1.2nm3µm252nm,0.7s						
BATI	Baumata	7.16	245	P	Pn	06 11 54.1	+1.9
	69nm,0.3s,baz=86,slow=1.1,SNR=38						
BATI				S	Sn	06 13 07.7	-4.3
	13nm,0.3s,baz=244,slow=18,SNR=1.5						
BAKI	Biak	8.36	44	P	Pn	06 12 01.2	-7.5
	176nm,1.0s						
KNRA	Kununurra	8.53	190		Pn	06 12 11.0	+0.1
EDFI	Ende, Flores	8.62	259	P	Pn	06 12 13.2	+1.0
	23nm,0.7s						
BASI	Baing, Sumba	10.02	252	P	Pn	06 12 31.5	+0.4
	195nm,1.4s						
JAY	Jayapura	11.41	66	P	Pn	06 12 45.3	-4.9
	1.1nm,0.3s,baz=283,slow=7.1,SNR=2.3						
FITZ	Fitzroy Crossi	11.71	202	P	Pn	06 12 51.0	-3.0
	21nm,0.3s,baz=33,slow=11,SNR=294						
FITZ				S	Sn	06 14 53.0	-10
	12nm,0.3s,baz=91,slow=12,SNR=6.4						
FITZ				LR	LR	06 18 15.0	
	comp=Z,75nm,18.8s,baz=8.5,slow=41						
FITZ	Fitzroy Crossi	11.71	202	Pn	Pn	06 12 51.0	-3.0
WRAB	Tennant Creek	13.24	163		Pn	06 13 10.8	-3.5
WRA	Warramunga Arr	13.25	163	P	Pn	06 13 10.4	-4.0
	5.5nm,0.3s,baz=334,slow=13,SNR=112						
WRA				S	Sn	06 15 28.8	-11
	9.1nm,0.3s,baz=341,slow=22,SNR=17						
WR0	Warramunga Arr	13.33	162	Pn	Pn	06 13 11.9	-3.5
COEN	Coen	14.35	119	Pn	Pn	06 13 26.9	-1.8
AS31	Alice Springs	16.72	168	Pn	Pn	06 13 57.2	-1.2
ASAR	Alice Springs	16.72	168	P	Pn	06 13 56.4	-2.0
	3.4nm,0.3s,baz=335,slow=8.4,SNR=150						
ASAR				S	Sn	06 16 48.2	-16
	0.7nm,0.3s,baz=334,slow=16,SNR=5.1						
PSAD1	Pilbara Seismi	17.37	214	P	P	06 14 06.2	0.0
PSAD1				IAmb	IAmb	06 14 07.6	
	comp=Z,57nm,1.1s						
PSAC2	Pilbara Seismi	17.41	214	P	P	06 14 06.4	-0.3
PSAC2				IAmb	IAmb	06 14 07.7	
	comp=Z,39nm,1.1s						
PSAD2	Pilbara Seismi	17.42	214	P	P	06 14 07.1	+0.3
PSAD2				IAmb	IAmb	06 14 10.9	
	comp=Z,23nm,0.8s						
PSAB2	Pilbara Seismi	17.43	214	P	P	06 14 07.2	+0.3
PSAB2				IAmb	IAmb	06 14 08.4	
	comp=Z,29nm,0.8s						
PSAA2	Pilbara Seismi	17.44	214	P	P	06 14 07.4	+0.4
PSAA2				IAmb	IAmb	06 14 08.6	
	comp=Z,29nm,0.8s						
PSA00	Pilbara Seismi	17.45	214	P	P	06 14 06.8	-0.3
PSA00				IAmb	IAmb	06 14 08.6	
	comp=Z,26nm,0.7s						
GIRL	Giralia	21.75	223	P	P	06 14 54.8	+1.1
FORT	Forrest	23.52	185	P	P	06 15 13.6	+2.2
FORT				IAmb	IAmb	06 15 22.0	
	comp=Z,24nm,0.7s						
MORW	Morawa	25.53	210	P	P	06 15 32.8	+3.2
MORW				IAmb	IAmb	06 15 34.0	
	comp=Z,6.0nm,0.7s						
BBOO	Buckleboo	26.02	169	P	P	06 15 35.2	+1.2
BBOO				IAmb	IAmb	06 15 54.9	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	26.71	158	P	P	06 15 41.7	+1.5
	comp=Z,3.1nm,0.4s,baz=341,slow=8.6,SNR=11						
STKA	Stephens Creek	26.71	158	P	P	06 15 42.0	+1.8
CMAR	Chiang Mai Arr	40.07	310	P	P	06 17 36.5	+0.5
	comp=Z,0.8nm,0.3s,baz=143,slow=7.3,SNR=5.6						
JWT	Wachi	42.55	6	P	P	06 17 56.2	+0.2
JWT				IAmb	IAmb	06 18 05.8	
	comp=Z,19nm,1.3s						
KSRS	Korea Array	44.50	357	P	P	06 18 11.2	-0.4
	comp=Z,0.8nm,0.5s,baz=175,slow=8.6,SNR=1.7						
USRK	Ussuriysk Ar.	51.21	2	P	P	06 19 02.9	-0.4
	comp=Z,1.3nm,0.7s,baz=174,slow=8.0,SNR=0.7						
ODAN	Odare	53.59	311	eP	P	06 19 21.3	-0.3
	comp=Z,7.0nm,0.6s						
TAPN	Taplejung	53.62	312	eP	P	06 19 21.6	-0.3
	comp=Z,6.5nm,0.4s						
RAMN	Ramite	54.23	311	eP	P	06 19 26.3	0.0
	comp=Z,12nm,0.5s						
GUN	Gumba	55.29	311	eP	P	06 19 34.0	0.0
	comp=Z,13nm,0.6s						
PKI	Pulchoki	55.46	311	eP	P	06 19 35.3	+0.1
DMN	Daman	55.71	310	eP	P	06 19 36.4	-0.5
GKN	Gorkha	56.27	311	eP	P	06 19 40.7	-0.1
	comp=Z,8.6nm,0.3s						
KOLN	Koldanda	56.94	310	eP	P	06 19 45.4	-0.1
	comp=Z,8.5nm,0.5s						
PYUN	Piuthan	57.57	310	eP	P	06 19 49.9	-0.1
	comp=Z,13nm,0.5s						
SONM	Songino Array	58.73	341	P	P	06 19 56.9	-0.7
	comp=Z,1.9nm,0.9s,baz=148,slow=11,SNR=5.3						
PEA0B	Petropavlovsk-	64.46	18	P	P	06 20 37.1	+1.3
PETK	Petropavlovsk-	64.46	18	P	P	06 20 36.5	+0.6
	comp=Z,2.1nm,0.5s,baz=136,slow=3.0,SNR=9.6						
MK31	Makanchi Array	68.55	327	P	P	06 21 03.2	+1.1
MKAR	Makanchi Array	68.55	327	P	P	06 21 03.1	+1.0
	comp=Z,4.8nm,0.4s,baz=113,slow=7.9,SNR=76						
MAKZ	Makanchi	68.73	327	P	P	06 21 04.2	+1.0
AAK	Ala-Archa	70.88	320	P	P	06 21 18.2	+1.5
	comp=Z,1.6nm,0.3s,baz=157,slow=7.2,SNR=5.2						
SEY	Seymchan	71.98	10	P	P	06 21 23.6	+1.1
	comp=Z,7.5nm,1.0s,baz=188,slow=4.2,SNR=4.9						
VNDA	Vanda	72.20	173	P	P	06 21 24.6	+0.8
KURBB	Kurchatov Arra	72.83	328	P	P	06 21 28.4	+0.5
	comp=Z,1.3nm,0.5s,baz=127,slow=5.0,SNR=8.2						
KURK	Kurchatov	72.84	329	P	P	06 21 28.4	+0.4
KURK				IAmb	IAmb	06 21 48.5	
	comp=Z,14nm,1.3s						
QSPA	South Pole Qui	82.75	180	P	P	06 22 24.8	+1.9
	comp=Z,1.8nm,0.6s,baz=232,slow=1.7,SNR=7.9						
ABKAR	Akbulak array	82.84	322	P	P	06 22 24.6	+1.2
AB08	Akbulak array	82.84	322	P	P	06 22 23.9	+0.5
BELG	Belogornoye	91.19	323	LR	LR	07 08 00.7	
	comp=Z,2µm,19.6s,baz=250,slow=38						
ILAR	Eielson Array	93.44	25	P	P	06 23 12.8	-1.2
	comp=Z,0.4nm,0.5s,baz=246,slow=4.8,SNR=5.0						
YKA	Yellowknife Ar	107.84	26	PKiKP	PKiKP	06 28 25.6	+0.1
	comp=Z,0.1nm,0.5s,baz=296,slow=0.3,SNR=6.8						
GERES	GERESS Array B	112.75	320	PKiKP	PKiKP	06 28 36.4	+1.0
	comp=Z,0.4nm,0.4s,baz=76,slow=5.6,SNR=4.7						
WTTA	Wattenberg	114.53	319	eP	PKiKP	06 28 39.7	+0.8
	comp=Z,3.7nm,0.4s						
WATA	Walderalm	114.55	319	eP	PKiKP	06 28 40.7	+1.8
	comp=Z,0.2nm,0.2s						
MOTA	Moosalm	114.85	319	eP	PKiKP	06 28 40.1	+0.6
	comp=Z,1.1nm,0.4s						
FETA	Feichten	115.19	319	eP	PKPdf	06 28 41.0	+0.8
	comp=Z,0.6nm,0.4s						
DAVA	Damuels	115.66	319	eP	PKPdf	06 28 41.9	+0.8
	comp=Z,1.9nm,0.3s						
TORD	Torodi Ar. Bea	129.10	281	PKP	PKiKP	06 29 08.8	+0.6
	comp=Z,1.2nm,0.6s,baz=70,slow=2.0,SNR=6.5						
DBIC	Dimbokro	135.45	272	PKP	PKiKP	06 29 22.1	+1.0
	comp=Z,1.2nm,0.5s,baz=22,slow=3.9,SNR=4.5						
CPUP	Villa Florida	145.84	168	PKPbc	PKPab	06 29 40.1	+1.0
	comp=Z,3.9nm,0.7s,baz=213,slow=1.9,SNR=10						

BYKL 05 06:10:41.1±0.3, 56°.16N×113°.70E, h14^{km}±3^{km}, 1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.09	241	⇓iPg	Pg	06 10 44.1	-0.1
SVKR				i Sg	Sg	06 10 46.0	-0.3
UKT	Uakit	0.67	184	ePg	Pg	06 10 53.0	-1.3
UKT				eSg	Sg	06 11 01.6	-1.6
UKT				Pmax			
	247nm,0.5s						
UKT				Smax			
	467nm,0.3s						
YOA	Uoyan	1.11	269	eSg	Sb	06 11 15.5	-0.8
YOA				Smax			
	3µm,0.5s						
NLYR	Nelyaty	1.16	73	ePg	Pn	06 11 01.8	-1.2
NLYR				eSg	Sb	06 11 18.1	+0.1
NLYR				Pmax			
	763nm,0.5s						
NLYR				Smax			
	1µm,0.6s						
KMO	Kumora	1.43	260	ePg	Pn	06 11 06.7	+0.1
KMO				eSg	Sb	06 11 25.8	+0.2
KMO				Pmax			
	441nm,0.4s						
KMO				Smax			
	731nm,0.9s						
BOD	Bodaibo	1.67	6	ePn	Pn	06 11 09.4	-0.5
BOD				eSg	Sb	06 11 32.9	+0.4
BOD				Smax			
	596nm,0.6s						
YLYR	Ulyunkhan	1.93	229	ePg	Pb	06 11 16.4	+0.3
YLYR				eSg	Sg	06 11 42.0	-1.2
YLYR				Pmax			
	417nm,1.0s						
YLYR				Smax			
	912nm,0.9s						
NIZ	Nizh Angarsk	2.37	262	ePg	Pb	06 11 23.6	+0.1
NIZ				eSg	Sb	06 11 54.3	+1.7
NIZ				Pmax			
	226nm,0.4s						
NIZ				Smax			
	227nm,0.5s						
CRS	Chara	2.64	72	eSg	Sb	06 12 02.3	+2.0
CRS				Smax			
	139nm,0.4s						
SYVR	Suvo	3.29	222	eSg	Sb	06 12 22.2	+3.0
SYVR				Smax			
	214nm,0.5s						
TUP	Tupik	3.98	113	eSg	Sg	06 12 45.0	-3.6
TUP				Smax			
	216nm,0.8s						
MXMB	Maximikha	4.08	227	eSg	Sb	06 12 47.0	+5.1
CIT	Chita	4.15	181	eSg	Sb	06 12 48.9	+5.1
CIT				Smax			
	226nm,0.4s						
OGRR	Ongureny	4.33	237	eSg	Sg	06 12 56.0	-4.1
OGRR				Smax			
	105nm,0.6s						
KPC	Khapcheranga	6.52	188	eSg	Sg	06 14 03.3	-6.8
KPC				Smax			
	118nm,0.8s						

BYKL 05 06:15:04.8±0.2, 56°.08N×113°.67E, h5^{km}±4^{km}, 2C-1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.07	301	⇑iPg	Pg	06 15 06.3	-0.2
SVKR				eSg	Sg	06 15 08.9	+1.2
UKT	Uakit	0.59	182	ePg	Pg	06 15 14.3	-1.9
UKT				eSg	Sg	06 15 22.9	-1.0
UKT				Pmax			
	144nm,0.4s						
UKT				Smax			
	544nm,0.7s						
YOA	Uoyan	1.09	274	ePg	Pg	06 15 24.4	-1.3
YOA				eSg	Sg	06 15 40.1	+0.3
YOA				e		06 15 45.3	
YOA				Pmax			
	94nm,0.2s						
YOA				max			
	2µm,0.4s						
NLYR	Nelyaty	1.21	69	⇓iPg	Pg	06 15 25.8	-2.1
NLYR				ePb	Pb	06 15 27.9	-0.2
NLYR				eSg	Sg	06 15 42.3	-1.2
NLYR				eSb	Sn	06 15 46.3	+1.2
NLYR				max			
	388nm,0.6s						
NLYR				max			
	613nm,0.7s						
KMO	Kumora	1.40	263	ePg	Pn	06 15 29.8	-1.2
KMO				ePb	Pb	06 15 31.3	-0.1
KMO				eSg	Sb	06 15 49.3	-0.3
KMO				eSb	Sn	06 15 52.0	+2.1
KMO				max			
	87nm,0.4s						
KMO				max			
	603nm,0.7s						
BOD	Bodaibo	1.75	6	⇑iPg	Pn	06 15 36.0	+0.2
BOD				eSn	Sn	06 15 58.6	+0.1
BOD				eSg	Sb	06 15 59.6	-0.1
BOD				Pmax			
	24nm,0.2s						
BOD				Smax			
	380nm,0.7s						
YLYR	Ulyunkhan	1.87	231	ePn	Pn	06 15 37.9	+0.5
YLYR				ePg	Pb	06 15 38.7	-0.7
YLYR				e		06 15 40.1	
YLYR				eSg	Sb	06 16 03.0	-0.1
YLYR				max			
	46nm,0.2s						
YLYR				Smax			
	380nm,0.4s						
NIZ	Nizh Angarsk	2.34	264	ePg	Pb	06 15 46.0	-1.5
NIZ				eSg	Sb	06 16 16.7	0.0
NIZ				Pmax			
	6.0nm,0.2s						
NIZ				Smax			
	194nm,0.7s						
CRS	Chara	2.68	70	ePn	Pn	06 15 48.9	+0.3
CRS				ePg	Pb	06 15 52.8	-0.4
CRS				eSg	Sb	06 16 27.7	+1.3
CRS				Pmax			
	213nm,1.1s						
CRS				Smax			
	295nm,1.0s						
SYVR	Suvo	3.22	223	ePn	Pn	06 15 56.7	+0.7
SYVR				ePg	Pb	06 16 02.0	-0.5
SYVR				eSg	Sb	06 16 45.1	+3.1
SYVR				Pmax			
	4.0nm,0.3s						
SYVR				Smax			
	107nm,0.8s						
VTMR	Vitim	3.42	350	ePn	Pn	06 15 58.8	+0.1
VTMR				ePg	Pb	06 16 06.6	+0.8
VTMR				eSg	Sg	06 16 51.2	-3.4
KHNR	Khani	3.60	74	eSg	Sg	06 16 56.8	-3.4
TUP	Tupik	3.96	112	ePn	Pn	06 16 05.6	-0.6
TUP				ePg	Pb	06 16 16.1	+1.1
TUP				eSn	Sn	06 16 52.1	-0.9
TUP				eSg	Sg	06 17 07.8	-4.1
TUP				eSgSg	SbSb	06 17 11.8	+3.5
TUP				max			
	11nm,0.3s						
TUP				max			
	190nm,1.2s						
MXMB	Maximikha	4.02	227	eSg	Sg	06 17 09.6	-4.1
OGRR	Ongureny	4.28	238	ePg	Pb	06 16 20.9	+0.5
OGRR				eSg	Sg	06 17 17.7	-4.3
OGRR				Pmax			
	5.0nm,0.5s						
OGRR				Smax			
	68nm,1.6s						
YKLR	Yuktali	4.47	80	eSg	Sg	06 17 23.4	-4.9
TRG	Tyrgan	5.42	235	eSg	Sb	06 17 51.6	+6.5
TRG				Smax			
	72nm,1.8s						
KPC	Khapcheranga	6.43	188	eSg	Sg	06 18 24.1	-7.2
KPC				Smax			
	116nm,1.8s						

BYKL 05 06:15:36.5±0.4, 56°.13N×113°.69E, h7^{km}±5^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.07	260	⇑iPg	Pg	06 15 38.0	-0.4
SVKR				i Sg	Sg	06 15 40.1	+0.3

UKT	**Uakit**	**0.64**	**183**	*e*Pg	Pg	06 15 47.5	-1.4
UKT				*e*Sg	Sg	06 15 56.4	-0.9
UKT				Pmax			
	94nm,0.5s						
UKT				Smax			
	150nm,0.5s						
YOA	**Uoyan**	**1.10**	**271**	*e*Sg	Sg	06 16 10.5	-1.4
YOA				Smax			
	757nm,0.4s						
NLYR	**Nelyaty**	**1.18**	**71**	*e*Pg	Pg	06 15 57.9	-1.2
NLYR				*e*Sg	Sg	06 16 13.9	-0.5
NLYR				Pmax			
	199nm,0.3s						
NLYR				Smax			
	194nm,0.6s						
KMO	**Kumora**	**1.42**	**261**	*e*Pg	Pn	06 16 02.0	-0.7
KMO				*e*Sg	Sb	06 16 21.3	-0.3
KMO				Pmax			
	181nm,0.3s						
KMO				Smax			
	299nm,0.6s						
BOD	**Bodaibo**	**1.70**	**6**	*e*Sg	Sn	06 16 29.0	+0.4
BOD				Smax			
	121nm,0.6s						
YLYR	**Ulyunkhan**	**1.91**	**230**	*e*Pn	Pn	06 16 09.2	-0.3
YLYR				*e*Sg	Sb	06 16 36.2	+0.5
YLYR				Smax			
	212nm,0.5s						

BYKL 05 06:16:28.9±0.2, 56°.13N×113°.70E, 1C-2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**261**	⇑*i*Pg	Pg	06 16 30.4	0.0
SVKR				*i* Sg	Sg	06 16 32.3	+0.9
UKT	**Uakit**	**0.64**	**184**	⇓*i*Pg	Pg	06 16 40.1	-1.1
UKT				*e*Sg	Sg	06 16 48.2	-1.3
UKT				Pmax			
	160nm,0.4s						
UKT				Smax			
	272nm,0.3s						
YOA	**Uoyan**	**1.11**	**271**	*e*Pg	Pg	06 16 47.9	-2.2
YOA				*e*Sg	Sg	06 17 03.2	-1.2
YOA				Pmax			
	477nm,0.6s						
YOA				Smax			
	2μm,0.4s						
NLYR	**Nelyaty**	**1.17**	**71**	⇓*i*Pg	Pg	06 16 49.7	-1.7
NLYR				*e*Pb	Pb	06 16 51.8	-0.3
NLYR				*i* Sg	Sg	06 17 05.4	-1.2
NLYR				max			
	553nm,0.2s						
NLYR				Smax			
	700nm,0.8s						
KMO	**Kumora**	**1.43**	**261**	*e*Pg	Pn	06 16 54.6	-1.4
KMO				*e*Pb	Pg	06 16 55.8	-0.4
KMO				*e*Sg	Sg	06 17 13.1	-1.5
KMO				*e*		06 17 17.8	
KMO				max			
	172nm,0.8s						
KMO				max			
	690nm,0.9s						
BOD	**Bodaibo**	**1.70**	**5**	*e*Pg	Pn	06 16 59.4	-0.4
BOD				*e*Sg	Sn	06 17 21.6	-0.7
BOD				Pmax			
	157nm,0.9s						
BOD				Smax			
	385nm,0.6s						
YLYR	**Ulyunkhan**	**1.91**	**230**	*e*Pg	Pn	06 17 02.9	+0.1
YLYR				*e*Sg	Sb	06 17 28.5	-0.6
YLYR				Pmax			
	88nm,0.6s						
YLYR				Smax			
	345nm,0.7s						
NIZ	**Nizh Angarsk**	**2.37**	**263**	*e*Sn	Sn	06 17 36.8	-1.9
NIZ				*e*Sg	Sb	06 17 42.8	+0.7
NIZ				Smax			
	273nm,0.5s						
CRS	**Chara**	**2.65**	**71**	*e*Pn	Pn	06 17 13.9	+1.0
CRS				*e*Pg	Pb	06 17 16.7	-0.5
CRS				*e*Sn	Sn	06 17 43.2	-2.5
CRS				*e*Sg	Sb	06 17 51.8	+1.6
CRS				Pmax			
	127nm,0.9s						
CRS				Smax			
	277nm,0.9s						
SYVR	**Suvo**	**3.27**	**222**	*e*Sg	Sg	06 18 11.1	-2.8
SYVR				Smax			
	166nm,1.2s						
TUP	**Tupik**	**3.96**	**113**	*e*Pn	Pn	06 17 30.6	-0.3
TUP				*e*Sg	Sb	06 18 30.9	+2.8
TUP				Smax			
	181nm,1.1s						
OGRR	**Ongureny**	**4.32**	**237**	*e*Sg	Sg	06 18 43.1	-4.4
OGRR				Smax			
	56nm,0.7s						
TRG	**Tyrgan**	**5.46**	**235**	*e*Sg	Sb	06 19 16.8	+5.8
TRG				Smax			
	69nm,0.8s						
HRMR	**Khuramsha**	**6.02**	**224**	*e*Sg	Sg	06 19 35.7	-6.4
HRMR				Smax			
	95nm,0.5s						

BYKL 05 06:29:28.2±0.4, 56°.14N×113°.68E, h2^{km}±8^{km}, 3C-2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.07**	**251**	Pg	Pg	06 29 31.9	+2.3
SVKR				*e*Sg	Sg	06 29 34.3	+3.7
SVKR	**Severomuysk**	**0.07**	**251**	*e*Pg	Pg	06 29 29.4	-0.2
SVKR				*e*Sg	Sg	06 29 31.5	+0.9
SVKR	**Severomuysk**	**0.07**	**251**	*e*Pg	Pg	06 29 32.3	+2.7
SVKR				*e*Sg	Sg	06 29 34.3	+3.7
UKT	**Uakit**	**0.65**	**183**	*e*Pg	Pb	06 29 41.6	-0.8
UKT				*e*Sg	Sg	06 29 50.2	+1.1
UKT				Pmax			
	116nm,0.6s						
UKT				Smax			
	307nm,1.1s						
UKT	**Uakit**	**0.65**	**183**	*e*Pg	Pg	06 29 38.8	-1.9
UKT				*e*Sg	Sg	06 29 47.7	-1.4
UKT				Pmax			
	120nm,0.5s						
UKT				Smax			
	153nm,0.8s						
UKT	**Uakit**	**0.65**	**183**	*e*Pg	Pb	06 29 41.7	-0.7
UKT				*e*Sg	Sg	06 29 50.2	+1.1
UKT				Pmax			
	120nm,0.6s						
UKT				Smax			
	304nm,1.0s						
YOA	**Uoyan**	**1.09**	**270**	*e*Pg	Pn	06 29 51.2	+0.6
YOA				*e*Sg	Sn	06 30 07.3	+1.0
YOA				*e*		06 30 12.1	
YOA				Pmax			
	205nm,0.4s						
YOA				max			
	2μm,0.5s						
NLYR	**Nelyaty**	**1.18**	**72**	*e*Pg	Pg	06 29 51.0	+0.2
NLYR				*e*		06 29 53.6	
NLYR				*e*Sg	Sb	06 30 07.3	+0.2
NLYR				*e*Sb	Sn	06 30 11.3	+2.9
NLYR				max			
	540nm,0.3s						
NLYR				max			
	1μm,1.0s						
NLYR	**Nelyaty**	**1.18**	**72**	⇓*i*Pg	Pg	06 29 48.8	-2.0
NLYR				*e*Pb	Pb	06 29 50.8	-0.5
NLYR				*e*Sg	Sg	06 30 06.2	+0.1
NLYR				max			
	203nm,0.4s						
NLYR				Smax			
	355nm,0.6s						
NLYR	**Nelyaty**	**1.18**	**72**	*e*Pg	Pn	06 29 52.1	+0.3
NLYR				*e*Sg	Sn	06 30 09.1	+0.7
NLYR				Pmax			
	546nm,0.3s						
NLYR				Smax			
	1μm,0.8s						
KMO	**Kumora**	**1.42**	**261**	*e*Pg	Pb	06 29 56.5	+1.2
KMO				*e*Pb	Pg	06 29 57.9	+2.6
KMO				*e*Sg	Sn	06 30 15.7	+1.5
KMO				*e*		06 30 18.9	
KMO				max			
	169nm,0.4s						
KMO				max			
	842nm,1.0s						
KMO	**Kumora**	**1.42**	**261**	*e*Pg	Pn	06 29 53.4	-1.6
KMO				*e*Sg	Sg	06 30 12.4	-1.2
KMO				Pmax			
	73nm,0.4s						
KMO				Smax			
	167nm,0.7s						
KMO	**Kumora**	**1.42**	**261**	*e*Pg	Pb	06 29 56.4	+1.1
KMO				*e*Sg	Sn	06 30 15.8	+1.6
KMO				Pmax			
	172nm,0.4s						
KMO				Smax			
	845nm,0.7s						
BOD	**Bodaibo**	**1.69**	**6**	*e*Pg	Pg	06 30 01.3	+0.7
BOD				*e*Sg	Sg	06 30 23.6	+1.1
BOD				Pmax			
	74nm,0.3s						
BOD				Smax			
	307nm,0.7s						
BOD	**Bodaibo**	**1.69**	**6**	*e*Pg	Pn	06 29 58.1	-0.7
BOD				*e*Sg	Sn	06 30 20.9	-0.1
BOD				Pmax			
	114nm,0.6s						
BOD				Smax			
	305nm,0.4s						
BOD	**Bodaibo**	**1.69**	**6**	*e*Pg	Pg	06 30 01.3	+0.7
BOD				*e*Sg	Sg	06 30 23.2	+0.7
BOD				Pmax			
	139nm,0.5s						
BOD				Smax			
	297nm,0.4s						
YLYR	**Ulyunkhan**	**1.91**	**230**	*e*Pn	Pg	06 30 04.6	-0.2
YLYR				*e*Pg	Pb	06 30 05.5	+1.7
YLYR				*e*		06 30 07.5	
YLYR				*e*Sg	Sg	06 30 30.7	+1.1
YLYR				max			
	111nm,0.7s						
YLYR				Smax			
	619nm,1.1s						
YLYR	**Ulyunkhan**	**1.91**	**230**	*e*Pg	Pn	06 30 01.9	+0.1
YLYR				*e*Sg	Sb	06 30 28.1	0.0
YLYR				Smax			
	189nm,0.4s						
YLYR	**Ulyunkhan**	**1.91**	**230**	⇓*i*Pg	Pg	06 30 04.6	-0.2
YLYR				*e*Sg	Sg	06 30 30.6	+1.0
YLYR				Pmax			
	110nm,0.7s						
YLYR				Smax			
	619nm,0.8s						
NIZ	**Nizh Angarsk**	**2.36**	**263**	*e*Pn	Pb	06 30 10.8	-0.5
NIZ				*e*Pg	Pg	06 30 13.5	+0.2
NIZ				*e*Sg	Sg	06 30 45.2	+1.4
NIZ				Pmax			
	36nm,0.9s						
NIZ				Smax			
	203nm,0.6s						
NIZ	**Nizh Angarsk**	**2.36**	**263**	*e*Pg	Pb	06 30 10.4	-0.9
NIZ				*e*Sg	Sb	06 30 41.7	+0.9
NIZ				Pmax			
	33nm,0.5s						
NIZ				Smax			
	59nm,0.5s						
NIZ	**Nizh Angarsk**	**2.36**	**263**	*e*Pg	Pg	06 30 12.8	-0.5
NIZ				*e*Sg	Sg	06 30 43.1	-0.7
NIZ				Pmax			
	40nm,0.7s						
NIZ				Smax			
	203nm,0.5s						
CRS	**Chara**	**2.65**	**71**	⇑*i*Pn	Pb	06 30 15.8	-0.6
CRS				⇑*i*Pg	Pg	06 30 18.5	-0.5
CRS				*e*Sg	Sb	06 30 50.7	+1.2
CRS				Pmax			
	239nm,1.0s						
CRS				Smax			
	176nm,0.7s						
CRS	**Chara**	**2.65**	**71**	*e*Pn	Pn	06 30 13.9	+1.9
CRS				*e*Pg	Pb	06 30 15.6	-0.8
CRS				*e*Sg	Sb	06 30 50.6	+1.1
CRS				Pmax			
	59nm,0.8s						
CRS				Smax			
	61nm,0.5s						
CRS	**Chara**	**2.65**	**71**	⇑*i*Pg	Pg	06 30 18.7	-0.3
CRS				*e*Sg	Sg	06 30 53.3	-0.1
CRS				Pmax			
	238nm,0.9s						
CRS				Smax			
	178nm,0.5s						
SYVR	**Suvo**	**3.27**	**222**	*e*Pn	Pb	06 30 24.0	-2.9
SYVR				*e*Pg	Pg	06 30 28.8	-2.0
SYVR				*e*PgPg	PgPg	06 30 32.7	+1.9
SYVR				*e*		06 30 34.6	
SYVR				*e*Sg	Sg	06 31 12.1	-1.1
SYVR				max			
	36nm,1.0s						
SYVR				Smax			
	192nm,1.7s						
SYVR	**Suvo**	**3.27**	**222**	*e*Pn	Pn	06 30 22.9	+2.4
SYVR				*e*Sg	Sb	06 31 10.0	+2.8
SYVR				Smax			
	208nm,1.0s						
SYVR	**Suvo**	**3.27**	**222**	*e*Pg	Pg	06 30 29.5	-1.3
SYVR				*e*Sg	Sg	06 31 12.3	-0.9
SYVR				Pmax			
	68nm,0.6s						
SYVR				Smax			
	165nm,1.0s						
VTMR	**Vitim**	**3.36**	**350**	*e*Pn	Pn	06 30 23.9	+2.2
VTMR				*e*Pg	Pg	06 30 32.0	-0.6
VTMR				*e*Sg	Sg	06 31 16.3	+0.1
TUP	**Tupik**	**3.98**	**113**	*e*Pn	Pn	06 30 31.6	+1.4
TUP				*e*Pg	Pg	06 30 42.1	-2.3
TUP				*e*Sn	Sn	06 31 16.7	-0.7
TUP				*e*Sg	Sg	06 31 31.8	-4.1
TUP				*e*SgSg	SgSg	06 31 36.8	+0.9
TUP				Pmax			
	19nm,0.4s						
TUP				max			
	186nm,1.0s						
TUP	**Tupik**	**3.98**	**113**	*e*Pn	Pn	06 30 28.5	-1.7
TUP				*e*Pg	Pb	06 30 39.4	+0.4
TUP				*e*Sg	Sb	06 31 31.6	+4.1
TUP				Pmax			
	22nm,0.5s						
TUP				Smax			
	74nm,1.0s						
TUP	**Tupik**	**3.98**	**113**	*e*Pg	Pg	06 30 41.8	-2.6
TUP				*e*Sg	Sg	06 31 34.4	-1.5
TUP				Pmax			
	22nm,1.1s						
TUP				Smax			
	185nm,1.0s						
MXMB	**Maximikha**	**4.06**	**227**	*e*Pg	Pg	06 30 43.7	-2.3
MXMB				*e*Sg	Sg	06 31 36.9	-1.7
OGRR	**Ongureny**	**4.31**	**237**	*e*Pn	Pn	06 30 36.8	+2.0
OGRR				*e*Pg	Pg	06 30 48.5	-2.3
OGRR				*e*		06 30 51.3	
OGRR				*e*Sn	Sn	06 31 26.7	+1.1
OGRR				*e*Sg	Sg	06 31 44.4	-2.2
OGRR				max			
	13nm,0.9s						
OGRR				Smax			
	75nm,1.8s						
OGRR	**Ongureny**	**4.31**	**237**	*e*Pn	Pn	06 30 33.2	-1.6
OGRR				*e*Sg	Sg	06 31 42.0	-4.6
OGRR				Smax			
	14nm,0.7s						
YKLR	**Yuktali**	**4.46**	**81**	*e*Pg	Pb	06 30 48.5	+1.4
YKLR				*e*Sg	Sb	06 31 46.1	+4.8
TRG	**Tyrgan**	**5.46**	**235**	*e*Pg	Pb	06 31 08.2	+4.1
TRG				*e*Sg	Sg	06 32 18.3	-5.0
TRG				Pmax			
	7.0nm,1.2s						
TRG				Smax			
	34nm,1.8s						
TRG	**Tyrgan**	**5.46**	**235**	*e*Sg	Sg	06 32 20.3	-3.0
TRG				Smax			
	28nm,1.1s						
KPC	**Khapcheranga**	**6.50**	**187**	*e*Pg	Pb	06 31 26.5	+4.6
KPC				*e*Sg	Sg	06 32 51.2	-5.4
KPC				Pmax			
	2.0nm,0.6s						
KPC				Smax			
	61nm,1.6s						

IDC 05 06:31:48.2±5.7, 13°.09S×114°.44W, h0^{km}, mb3.5/3, mb1 4.0/3, mb1mx3.6/36, mbtmp3.5/3, MS3.8/10, Ms1 3.8/10, ms1mx3.6/22, Error ellipse: s-maj=394.7km s-min=120.5km az=94.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**35.67**	**33**	LR	LR	06 49 01.8	
	comp=Z,42nm,20.3s,baz=181,slow=29						
LPIG	**La Paz**	**37.19**	**6**	LR	LR	06 50 19.1	
	comp=Z,141nm,19.6s,baz=168,slow=30						
JTS	**Las Juntas de**	**37.37**	**53**	LR	LR	06 49 32.9	
	comp=Z,141nm,20.8s,baz=161,slow=28						
H03N2	**Juan Fernandez**	**38.13**	**128**	T	T	07 17 00.8	
	baz=300,slow=77,SNR=30						
H03N3	**Juan Fernandez**	**38.14**	**128**	T	T	07 17 04.7	
	baz=300,slow=77,SNR=42						
H03N1	**Juan Fernandez**	**38.14**	**128**	T	T	07 17 02.1	
	baz=300,slow=77,SNR=42						
RAR	**Rarotonga**	**43.94**	**253**	LR	LR	06 53 50.8	
	comp=Z,72nm,21.8s,baz=276,slow=30						
PLCA	**Paso Flores**	**47.16**	**134**	LR	LR	06 54 27.9	
	comp=Z,219nm,18.1s,baz=293,slow=29						
NVAR	**Mina Array Bea**	**51.38**	**356**	P	P	06 40 54.3	-0.8
	2.4nm,0.8s,baz=179,slow=9.9,SNR=13						
CPUP	**Villa Florida**	**54.96**	**113**	LR	LR	06 59 04.8	
	comp=Z,66nm,20.9s,baz=286,slow=30						
PDAR	**Pinedale Array**	**55.76**	**4**	P	P	06 41 27.1	0.0
	0.5nm,0.5s,baz=165,slow=7.5,SNR=6.8						
PMSA	**Palmer Station**	**61.99**	**158**	LR	LR	07 01 27.9	
	comp=Z,193nm,20.4s,baz=247,slow=29						
URZ	**Urewera**	**65.13**	**234**	LR	LR	07 04 25.9	
	comp=Z,45nm,21.1s,baz=30,slow=30						
YKA	**Yellowknife Ar**	**75.34**	**360**	P	P	06 43 34.1	+1.0
	0.2nm,0.9s,baz=165,slow=5.1,SNR=4.0						
YKA				LR	LR	07 13 22.5	
	comp=Z,92nm,18.8s,baz=0.0,slow=33						
ILAR	**Eielson Array**	**81.43**	**347**	LR	LR	07 12 41.3	
	comp=Z,53nm,19.6s,baz=270,slow=30						
MKAR	**Makanchi Array**	**143.58**	**341**	PKP	PKPbc	06 51 23.6	+1.1
	0.2nm,0.7s,baz=27,slow=3.1,SNR=2.6						

IDC 05 06:36:36.9±6.8, 19°.15S×176°.28W, h0^{km}, mb4.0/2, mb1 4.3/2, mb1mx3.6/32, mbtmp4.0/2, Error ellipse: s-maj=286.7km s-min=109.6km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.41**	**260**	P	P	06 45 05.8	+0.1
	0.6nm,0.3s,baz=97,slow=7.5,SNR=28						
ASAR	**Alice Springs**	**46.42**	**255**	P	P	06 45 05.3	-0.4
	1.5nm,0.5s,baz=94,slow=7.7,SNR=32						
AKASG	**Malin Array Be**	**142.59**	**333**	PKP	PKPdf	06 56 11.1	-0.7
	0.7nm,0.4s,baz=42,slow=4.3,SNR=5.5						

*IDC **05** 06:46:23.3±2.4, 37°.90N×38°.81E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.3/41, mbtmp3.4/6, ML2.9/3, Error ellipse: s-maj=40.8km s-min=15.3km az=2.0*

*ISK **05** 06:46:24.8, 38°.31N×38°.79E, h2^{km}, ML3.8/34*

*DDA **05** 06:46:25.6, 38°.30N×38°.81E, h16^{km}±1^{km}, MW3.9*

ISC 05 06:46:25.9±0.9, 38°.31N±0°.02×38°.80E±0°.02, h12^{km}±7^{km}, n73, σ1^{s}34/86, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**37**	*i* P	**Pg**	**06 46 31.0**	**0.0**
ELZG				*i* S	**Sg**	**06 46 35.0**	**+0.4**
ELZG				IAML		06 46 36.0	
	comp=E,38μm,0.6s						
ELZG				IAML		06 46 37.0	
	comp=N,27μm,0.5s						
MALT	**Malatya**	**0.29**	**272**	PG	**Pg**	**06 46 31.8**	**-0.2**
MALT				SG	**Sg**	**06 46 36.4**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.40**	**79**	PG	**Pg**	**06 46 33.4**	**-0.6**
AKCD	**Akcadag**	**0.69**	**270**	*i* P	**Pg**	**06 46 39.2**	**-0.2**
AKCD				*i* S	**Sb**	**06 46 49.3**	**-0.1**
AKCD				IAML		06 46 50.0	
	comp=E,6μm,0.4s						
AKCD				IAML		06 46 51.0	
	comp=N,9μm,0.7s						
URFA	**Urfa**	**0.86**	**179**	PG	**Pg**	**06 46 42.4**	**-0.1**
URFA				SG	**Sn**	**06 46 55.5**	**-0.9**
HEKM	**Malatya_Hekimh**	**0.88**	**311**	*i* P	**Pb**	**06 46 42.2**	**-0.9**
HEKM				*i* S	**Sg**	**06 46 55.1**	**+0.8**
HEKM				IAML		06 46 58.0	
	comp=N,2μm,0.3s						
HEKM				IAML		06 46 59.0	
	comp=E,3μm,0.5s						
KOVA	**Elazig, Kovanc**	**0.89**	**63**	*i* P	**Pb**	**06 46 42.5**	**-0.8**
KOVA				IAML		06 47 00.0	
	comp=N,824nm,0.9s						
KOVA				IAML		06 47 05.0	
	comp=E,1μm,0.6s						
ATAB	**Bozova**	**0.93**	**206**	*i* P	**Pn**	**06 46 44.2**	**-0.5**
ATAB				IAML		06 46 59.0	
	comp=E,2μm,1.0s						
KEMA	**Kemaliye**	**0.99**	**346**	*i* P	**Pb**	**06 46 44.4**	**-0.7**
KEMA				*i* S	**Sg**	**06 46 57.8**	**-0.2**
KEMA				IAML		06 47 00.0	
	comp=E,3μm,0.5s						
KEMA				IAML		06 47 02.0	
	comp=N,3μm,0.5s						
TNCL	**Tunceli-Merkez**	**0.99**	**35**	*i* P	**Pb**	**06 46 43.8**	**-1.2**
TNCL				*i* S	**Sn**	**06 46 59.4**	**-0.4**
TNCL				IAML		06 47 00.0	
	comp=N,2μm,0.7s						
TNCL				IAML		06 47 01.0	
	comp=E,3μm,0.6s						
DARE	**Darende-Malaty**	**1.07**	**285**	PG	**Pb**	**06 46 45.3**	**-1.0**
DARE				SG	**Sn**	**06 47 01.4**	**-0.2**
DIYA	**Diyarbakir**	**1.11**	**110**	*i* P	**Pg**	**06 46 47.4**	**+0.2**
DIYA				*i* S	**Sn**	**06 47 02.3**	**-0.1**
DIYA				IAML		06 47 08.0	
	comp=E,3μm,0.3s						
DIYA				IAML		06 47 09.0	
	comp=N,3μm,0.5s						
DYBB	**Diyarbakir**	**1.11**	**108**	PN	**Pg**	**06 46 47.2**	**-0.1**
SANL	**SANLIURFA_Merk**	**1.14**	**172**	*i* P	**Pg**	**06 46 48.1**	**+0.3**
SANL				*i* S	**Sg**	**06 47 03.9**	**+1.3**
SANL				IAML		06 47 05.0	
	comp=N,5μm,0.7s						
SANL				IAML		06 47 05.0	
	comp=E,3μm,0.9s						
ILIC	**ilic-Erzincan**	**1.16**	**351**	PN	**Pb**	**06 46 47.5**	**-0.4**
HANI	**Diyarbakir_Han**	**1.26**	**84**	*i* P	**Pb**	**06 46 49.2**	**-0.3**
HANI				*i* S	**Sg**	**06 47 06.3**	**-0.2**
HANI				IAML		06 47 08.0	
	comp=E,2μm,0.4s						
HANI				IAML		06 47 09.0	
	comp=N,3μm,0.4s						
CUGUR	**Gurin_SVAS**	**1.27**	**290**	*i* P	**Pb**	**06 46 49.4**	**-0.4**
CUGUR				IAML		06 47 13.0	
	comp=E,1μm,0.7s						
CUGUR				IAML		06 47 14.0	
	comp=N,1μm,0.7s						
ELBS	**KAHRAMANMARAS**	**1.31**	**271**	*i* P	**Pb**	**06 46 50.5**	**0.0**
ELBS				IAML		06 47 13.0	
	comp=N,3μm,0.7s						
ELBS				IAML		06 47 14.0	
	comp=E,4μm,0.6s						
GZT	**Gaziantep**	**1.36**	**226**	*i* P	**Pb**	**06 46 51.1**	**-0.2**
GZT				IAML		06 47 13.0	
	comp=E,1μm,0.6s						
GZT				IAML		06 47 14.0	
	comp=N,2μm,0.8s						
CUKAN	**kangal_SIVAS**	**1.45**	**314**	*i* P	**Pg**	**06 46 53.1**	**-0.7**
CUKAN				IAML		06 47 17.0	
	comp=N,333nm,0.4s						
CUKAN				IAML		06 47 21.0	
	comp=E,436nm,0.6s						
ERZN	**Erzincan**	**1.47**	**29**	PN	**Pb**	**06 46 53.1**	**-0.1**
MAZI	**Mazidag**	**1.55**	**122**	PN	**Pb**	**06 46 54.5**	**-0.1**
EUZM	**Uzumlu**	**1.56**	**26**	*i* P	**Pb**	**06 46 54.7**	**-0.1**
EUZM				IAML		06 47 20.0	
	comp=E,268nm,0.4s						

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EUZM                                 IAML           06 47 24.0
      comp=N,253nm,1.1s
KAHM  Kahramanmaras,     1.64 242  i P       Pb     06 46 55.3 -0.7
KAHM                                 IAML           06 47 23.0
      comp=E,549nm,0.7s
KAHM                                 IAML           06 47 24.0
      comp=N,1μm,0.7s
GAZ   Gaziantep          1.69 229    PN      Pb     06 46 56.3 -0.7
KMRS  Kahramanmaras      1.70 243    PN      Pb     06 46 56.4 -0.7
YEDI  Yedisu-Bingol      1.77  50    PN      Pb     06 46 57.6 -0.7
CUZAR Zara_SIVAS         1.77 333  i P       Pg     06 46 59.0 -0.9
CUZAR                              i S       Sg     06 47 25.3 +2.4
CUZAR                                IAML           06 47 30.0
      comp=N,695nm,0.6s
CUZAR                                IAML           06 47 30.0
      comp=E,1μm,0.6s
HCB   Kahramanmara       1.78 238  i P       Pn     06 46 56.5 +0.1
HCB                                  IAML           06 47 28.0
      comp=E,284nm,0.7s
HCB                                  IAML           06 47 41.0
      comp=N,226nm,0.6s
MARD  Mardin             1.85 122  i P       Pb     06 46 59.5 -0.2
MARD                                 IAML           06 47 25.0
      comp=E,3μm,0.5s
MARD                                 IAML           06 47 28.0
      comp=N,2μm,0.4s
SARI  SarD1z-Kayseri     1.88 274    PN      Pb     06 46 58.8 -1.3
SVAN  Silvan-Diyarba     1.89  94    PN      Pb     06 46 59.4 -1.0
SVAN  Silvan-Diyarba     1.89  94  i P       Pn     06 46 58.5 +0.5
SVAN                               i S       Sg     06 47 25.3 -1.4
SVAN                                 IAML           06 47 32.0
      comp=E,378nm,0.3s
BTMN  Batman             1.99 101  i P       Pn     06 46 59.8 +0.4
BTMN                                 IAML           06 47 29.0
      comp=N,2μm,0.3s
BTMN                                 IAML           06 47 29.0
      comp=E,2μm,0.8s
KAMA  Osmaniye           2.03 237  i P       Pn     06 47 00.1 +0.2
KAMA                                 IAML           06 47 36.0
      comp=N,152nm,0.7s
KAMA                                 IAML           06 47 39.0
      comp=E,187nm,0.7s
ALUC  Giresun/Alucra     2.04 359  i P       Pb     06 47 02.2 -0.7
ALUC                                 IAML           06 47 39.0
      comp=E,662nm,1.1s
ALUC                                 IAML           06 47 43.0
      comp=N,509nm,0.6s
KUZU  Kuzuini            2.05 222  i P       Pn     06 47 00.8 +0.5
KUZU                                 IAML           06 47 40.0
      comp=N,2μm,0.6s
KUZU                                 IAML           06 47 40.0
      comp=E,1μm,0.7s
ANDN  Andirin            2.07 250  i P       Pn     06 47 01.1 +0.6
ANDN                                 IAML           06 47 41.0
      comp=N,657nm,0.9s
ANDN                                 IAML           06 47 49.0
      comp=E,341nm,0.8s
SVSK  Karacayir          2.14 319    PN      Pb     06 47 02.5 -1.9
MUSM  Mu-Merkez          2.17  78  i P       Pn     06 47 02.7 +0.9
MUSM                               i S       Sg     06 47 33.8 -1.7
MUSM                                 IAML           06 47 34.0
      comp=E,211nm,0.5s
MUSM                                 IAML           06 47 38.0
      comp=N,243nm,0.7s
MIDY  Mardin/Midyat-     2.24 113  i P       Pb     06 47 05.7 -0.6
MIDY                               i S       Sb     06 47 34.9 +0.9
MIDY                                 IAML           06 47 41.0
      comp=N,1μm,0.4s
MIDY                                 IAML           06 47 49.0
      comp=E,1μm,0.6s
BAYB  BAYBURT            2.25  30  i P       Pb     06 47 05.4 -1.2
BAYB                                 IAML           06 47 49.0
      comp=N,75nm,0.6s
BAYB                                 IAML           06 47 50.0
      comp=E,176nm,1.0s
CUSAR Sarkisla-SIVAS     2.29 300  i P       Pb     06 47 05.7 -1.4
CUSAR                                IAML           06 47 50.0
      comp=N,126nm,0.6s
CUSAR                                IAML           06 48 09.0
      comp=E,114nm,0.8s
BNN   Bunyan             2.38 284    PN      Pb     06 47 06.3 -2.4
RSDY  Resadiye-TOKAT     2.38 332    PN      Pn     06 47 06.1 +1.4
KOZT  Kozan              2.49 252    PN      Pn     06 47 06.8 +0.6
GURO  Guroymak-BITLI     2.55  83    PN      Pb     06 47 08.7 -2.9
ESPY  Espiye-Giresun     2.61 359    PN      Pn     06 47 09.3 +1.5
TOKT  Tokat              2.67 320    PN      Pn     06 47 10.1 +1.4
KTUT  Trabzon            2.78  15    PN      Pn     06 47 11.9 +1.7
TAHT  Tahtakopru-Hat     2.84 228    PN      Pn     06 47 12.2 +1.2
YURE  YUREGIR            2.92 241    PN      Pn     06 47 13.7 +1.6
SIRT  Sirnak             2.99 104    PN      Pn     06 47 14.9 +1.8
MLAZ  Malazgirt-MUS      3.05  73    PN      Pn     06 47 15.7 +1.7
CMRD  Camardi-Nigde      3.08 259    PN      Pn     06 47 15.9 +1.5
KARA  Karaisali          3.15 252    PN      Pn     06 47 16.9 +1.7
CHOM  Cayeli-Rize        3.17  28    PN      Pn     06 47 17.3 +1.7
AKDM  Akdamar-Van        3.29  88    PN      Pn     06 47 19.2 +1.9
KVT   Kavak              3.49 323    PN      Pn     06 47 21.9 +1.9
SENK  Senkaya-Erzuru     3.55  50    PN      Pn     06 47 22.9 +1.9
GULA  Gulagac            3.59 272    PN      Pn     06 47 23.2 +1.8
CORM  Corum              3.74 301    PN      Pn     06 47 25.3 +1.8
CUKT  Cukurca            3.95 104    PN      Pn     06 47 28.6 +2.2
YAYX  Yaylak             3.96 281    PN      Pn     06 47 28.5 +2.0
KIZK  Mersin             4.13 245    PN      Pn     06 47 30.9 +2.2
SERE  Sereflikochisa     4.15 280    PN      Pn     06 47 31.3 +2.2
BRTR  Keskin Array B     4.26 291    Pn      Pn     06 47 33.0 +2.4
      comp=E,0.7nm,0.3s,baz=113,slow=14,SNR=14
BRTR                                 Lg      Lg     06 48 46.1
      comp=E,0.3nm,0.3s,baz=120,slow=28,SNR=6.5
BRTR  Keskin Array B     4.26 291    PN      Pn     06 47 32.8 +2.1
KBZ   Khabaz             6.24  28    Pn      Pn     06 48 02.5 +4.8
      comp=E,0.1nm,0.3s,baz=102,slow=21,SNR=2.2
AKASG Malin Array Be    14.14 334    Pn      P      06 49 49.7 -3.6
      comp=E,0.1nm,0.3s,baz=141,slow=13,SNR=2.0
GERES GERESS Array B    20.92 308    P       Pn     06 51 10.8  0.0
      comp=E,0.5nm,0.6s,baz=122,slow=8.6,SNR=2.2
KURBB Kurchatov Arra    30.54  53    P       P      06 52 41.2 +2.3
      comp=E,0.4nm,0.6s,baz=263,slow=8.9,SNR=2.8
MKAR  Makanchi Array    32.79  61    P       P      06 53 00.5 +1.7
      comp=E,2.1nm,0.8s,baz=260,slow=6.7,SNR=20
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*IDC **05** 06:53:32.0±1.4, 36°.93N×97°.86E, h0^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.5/53, mbtmp3.6/9, ML3.3/4, Error ellipse: s-maj=40.8km s-min=21.3km az=42.0*

ISC 05 06:53:33.0±1.3, **36°.9N**±0°.2×**97°.7E**±0°.2, **h10**^{km}, **n9**, σ**1^{s}.23**/9, **mb3.7**/5, **Qinghai**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
SONM  Songino Array     12.67  28    Pn      Pn     06 56 34.0 +0.7
      1.2nm,0.3s,baz=210,slow=15,SNR=18
MKAR  Makanchi Array    15.11 316    Pn      Pn     06 57 04.7 -1.9
      0.1nm,0.3s,baz=120,slow=14,SNR=3.0
ZALV  Zalesovo Beam     19.23 336    P       Pn     06 57 57.4 -0.8
      0.1nm,0.3s,baz=120,slow=8.5,SNR=2.9
KURBB Kurchatov Arra    19.40 321    P       Pn     06 58 00.7 +0.6
      0.1nm,0.3s,baz=127,slow=11,SNR=6.6
KSRS  Korea Array       24.06  79    P       P      06 58 47.6 -0.8
      1.0nm,0.5s,baz=279,slow=9.0,SNR=4.5
BVAR  Borovoye Array    24.94 319    P       P      06 58 57.8 +1.6
      0.4nm,0.6s,baz=191,slow=15,SNR=4.7
ARCES ARCESS Array B    49.76 334    P       P      07 02 25.5 +0.2
      1.4nm,0.6s,baz=83,slow=7.4,SNR=5.1
WRA   Warramunga Arr    66.28 142    P       P      07 04 22.0 +0.3
      0.5nm,0.6s,baz=336,slow=6.5,SNR=5.1
ILAR  Eielson Array     66.88  25    P       P      07 04 24.0 -0.9
      0.2nm,0.6s,baz=331,slow=7.2,SNR=2.4
```

BYKL 05 06:59:18.5±0.3, **56°.09N**×**113°.71E**, **2C-1D**, **East of Lake Baykal**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
SVKR  Severomuysk        0.09 288⇑ iPg     Pg     06 59 20.4 +0.2
SVKR                               eSg     Sg     06 59 22.4 +1.1
UKT   Uakit              0.60 184  ePg     Pg     06 59 29.2 -0.8
UKT                                eSg     Sg     06 59 37.0 -0.9
UKT                                  Pmax
      40nm,0.4s
UKT                                  Smax
      90nm,0.3s
YOA   Uoyan              1.11 273  eSg     Sg     06 59 53.8 -0.4
YOA                                  Smax
      398nm,0.3s
NLYR  Nelyaty            1.18  69  ePg     Pg     06 59 39.7 -1.4
NLYR                               ePb     Pb     06 59 41.9 +0.1
NLYR                               eSg     Sg     06 59 56.0 -0.4
NLYR                               eSb     Sn     06 59 59.9 +0.8
NLYR                               ePb     Pb
      58nm,0.4s
NLYR                                 max   Pb
      205nm,0.9s
KMO   Kumora             1.43 263  ePg     Pn     06 59 44.2 -1.4
KMO                                ePb     Pg     06 59 45.7 -0.1
KMO                                eSg     Sg     07 00 03.0 -1.2
KMO                                eSb     Sn     07 00 06.4 +1.3
KMO                                  max
      46nm,0.4s
KMO                                  max
      338nm,0.8s
BOD   Bodaibo            1.74   5⇑ iPg     Pn     06 59 49.7 -0.3
BOD                                eSg     Sn     07 00 11.6 -1.2
BOD                                  Pmax
      17nm,1.0s
BOD                                  Smax
      43nm,0.4s
YLYR  Ulyunkhan          1.89 231⇓ iPg     Pn     06 59 52.1  0.0
YLYR                               eSg     Sb     07 00 17.6 -0.5
YLYR                                 Pmax
      39nm,0.4s
YLYR                                 Smax
      129nm,0.3s
NIZ   Nizh Angarsk       2.37 264  ePg     Pb     07 00 01.0 -1.0
NIZ                                eSg     Sb     07 00 32.5 +0.8
NIZ                                  Pmax
      13nm,0.8s
NIZ                                  Smax
      142nm,0.4s
CRS   Chara              2.66  70  ePg     Pb     07 00 06.2 -0.7
CRS                                eSg     Sb     07 00 40.8 +0.8
CRS                                  Pmax
      25nm,0.9s
CRS                                  Smax
      67nm,0.8s
TUP   Tupik              3.94 112  ePg     Pb     07 00 28.9 +0.1
TUP                                eSn     Sn     07 01 05.6 -1.6
TUP                                eSg     Sb     07 01 20.5 +3.4
TUP                                  Pmax
      8.0nm,0.9s
TUP                                  Smax
      28nm,0.9s
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*BJI **05** 07:01:50.1±0.0, 56°.39N×114°.35E, h8^{km}, mB4.3/1, mb3.8/8, ML4.4/1, Ms4.4/4, Ms7 4.1/3*

*MOS **05** 07:01:51.0±1.4, 56°.19N×113°.77E, h6^{km}, mb4.4/6, MS3.3/5, Error ellipse: s-maj=8.3km s-min=5.5km az=72.9*

*IDC **05** 07:01:52.6±0.8, 56°.41N×113°.51E, h0^{km}, mb3.6/12, mb1 3.8/16, mb1mx3.7/53, mbtmp3.7/16, ML2.7/3, MS3.4/14, Ms1 3.4/14, ms1mx3.1/48, Error ellipse: s-maj=18.1km s-min=16.0km az=163.0*

*BYKL **05** 07:01:53.3±0.1, 56°.12N×113°.72E, h6^{km}±2^{km}, Mw4.3/8(IEC), #STATIONS KDAK MAJO INCN TATO ENH WMQ AAK LVZ*

*NEIC **05** 07:01:53.9±2.1, 56°.49N±0°.06×113°.6E±0°.1, h10^{km}±1^{km}, mb4.0/9, Error ellipse: s-maj=14.1km s-min=8.6km az=63.0*

ISC 05 07:01:53.0±0.8, **56°.22N**±0°.02×**113°.80E**±0°.02, **h9**^{km}±5^{km}, **n116**, σ**2^{s}.47**/167, **mb4.0**/21, **MS3.4**/13, **20C-15D**, **East of Lake Baykal**

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Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s     ISC
SVKR  Severomuysk        0.17 233⇑ iPg     Pg     07 01 55.3 -1.3
SVKR                                 Pmax         07 01 55.5
      12μm,0.1s
SVKR                               eSg     Sg     07 01 57.2 -1.9
SVKR                                 Smax         07 01 57.5
      348μm,0.6s
SVKR  Severomuysk        0.17 233  ePG     Pg     07 01 55.2 -1.3
SVKR                               eS      Sg     07 01 57.0 -2.1
UKT   Uakit              0.74 188⇑ iPg     Pg     07 02 04.3 -2.9
UKT                                  Pmax         07 02 05.3
      958nm,0.7s
UKT                                eSg     Sg     07 02 13.4 -3.4
UKT                                eSb     Sb     07 02 18.7 +0.5
UKT                                  max          07 02 20.9
      3μm,0.4s
UKT   Uakit              0.74 188⇑ iPG     Pg     07 02 04.4 -2.8
UKT                                e              07 02 13.6
UKT                                  pmax  pmax
      comp=Z,150nm,0.2s
UKT                                  smax  smax
      comp=E,3μm,0.4s
NLYR  Nelyaty            1.09  75⇓ iPg     Pb     07 02 14.2 +0.2
NLYR                               ePb     Pn     07 02 16.6 +2.2
NLYR                                 max          07 02 16.9
      comp=E,3μm,0.6s
NLYR                               eSg     Sn     07 02 30.3 +0.6
NLYR                               eSb     Sb     07 02 34.2 +5.8
NLYR                                 max          07 02 34.7
      comp=E,10μm,1.1s
NLYR  Nelyaty            1.09  75⇓ iPG     Pb     07 02 14.2 +0.2
NLYR                               e              07 02 29.6
NLYR                                 pmax  pmax
      comp=Z,3μm,0.7s
NLYR                                 smax  smax
      comp=N,10μm,1.1s
YOA   Uoyan              1.16 267⇓ iPG     Pb     07 02 13.9 -1.3
YOA                                e              07 02 29.4
YOA                                  pmax  pmax
      comp=Z,1μm,0.3s
YOA                                  smax  smax
      comp=N,25μm,0.4s
KMO   Kumora             1.50 258⇓ iPg     Pn     07 02 19.2 -0.7
KMO                                ePb     Pb     07 02 20.8  0.0
KMO                                  max          07 02 21.5
      comp=N,2μm,0.4s
KMO                                eSg     Sn     07 02 38.3 -1.2
KMO                                e              07 02 41.5
KMO                                  max          07 02 42.7
      comp=N,13μm,0.8s
KMO   Kumora             1.50 258  ePG     Pn     07 02 19.1 -0.8
KMO                                e              07 02 38.3
KMO                                  pmax  pmax
      comp=Z,2μm,0.4s
KMO                                  smax  smax
      comp=N,13μm,0.7s
BOD   Bodaibo            1.61   4⇑ iPg     Pg     07 02 23.9 +0.1
BOD                                  Pmax         07 02 26.0
      comp=N,1μm,1.2s
BOD                                eSg     Sg     07 02 46.2 +1.6
BOD                                  Smax         07 02 49.4
      comp=N,4μm,1.4s
BOD   Bodaibo            1.61   4⇑ iPG     Pg     07 02 23.6 -0.2
BOD                                e              07 02 46.5
BOD                                  pmax  pmax
      comp=Z,1μm,1.1s
BOD                                  smax  smax
      comp=E,4μm,1.0s
YLYR  Ulyunkhan          2.01 229⇓ iPg     Pn     07 02 27.6 +0.5
YLYR                                 Pmax         07 02 30.3
      comp=E,1μm,0.8s
YLYR                               eSg     Sn     07 02 53.4 +1.1
YLYR                                 Smax         07 02 58.2
      comp=E,8μm,0.9s
YLYR  Ulyunkhan          2.01 229⇓ iPN     Pn     07 02 27.6 +0.5
YLYR                               e              07 02 29.1
YLYR                               eS      Sn     07 02 52.2 -0.1
YLYR                               e              07 02 53.4
YLYR                                 pmax  pmax
      comp=Z,1μm,0.7s
YLYR                                 smax  smax
      comp=E,8μm,0.8s
NIZ   Nizh Angarsk       2.43 261  ePn     Pn     07 02 33.8 +1.0
NIZ                                ePg     Pb     07 02 36.3 -0.5
NIZ                                e              07 02 40.7
NIZ                                  max          07 02 40.8
      comp=E,384nm,0.9s
NIZ                                eSn     Sn     07 03 01.5 -1.1
NIZ                                eSg     Sb     07 03 07.3 +0.4
NIZ                                  Smax         07 03 10.2
      comp=E,3μm,0.5s
CRS   Chara              2.57  73⇓ iPn     Pb     07 02 37.0 -2.1
CRS                              ⇑ iPg     Pg     07 02 41.4 -0.7
CRS                                  Pmax         07 02 41.9
      comp=E,3μm,1.0s
CRS                                eSn     Sn     07 03 08.4 +2.4
CRS                                eSg     Sg     07 03 16.1 +0.8
CRS                                  Smax         07 03 20.6
      comp=E,2μm,1.3s
CRS   Chara              2.57  73  ePN     Pn     07 02 36.6 +1.9
CRS                                e              07 02 40.7
CRS                                e              07 03 14.0
CRS                                  pmax  pmax
      comp=Z,2μm,1.0s
CRS                                  smax  smax
      comp=E,2μm,1.2s
VTMR  Vitim              3.30 349  ePn     Pn     07 02 46.7 +2.0
VTMR                               ePg     Pg     07 02 54.2 -1.9
VTMR                               eSg     Sg     07 03 37.5 -1.3
SYVR  Suvo               3.37 222  ePn     Pn     07 02 45.7 -0.1
SYVR                               ePg     Pb     07 02 52.2 -0.7
SYVR                               ePgPg   PbPb   07 02 56.7 +0.7
SYVR                                 max          07 02 57.7
      comp=E,297nm,0.9s
SYVR                               eSn     Sn     07 03 23.3 -2.6
SYVR                               eSg     Sb     07 03 34.7 +0.7
SYVR                               eSgSg   Sg     07 03 40.8 -0.4
SYVR                                 max          07 03 46.9
      comp=E,3μm,1.7s
SYVR  Suvo               3.37 222  ePN     Pn     07 02 45.7 -0.1
SYVR                               e              07 02 53.5
SYVR                               e              07 03 33.8
SYVR                                 pmax  pmax
      comp=Z,306nm,0.8s
SYVR                                 smax  smax
      comp=N,4μm,1.7s
TUP   Tupik              3.95 115⇓ iPn     Pn     07 02 54.3 +0.6
TUP                                e              07 03 02.6
TUP                                  max          07 03 02.6
      comp=N,3μm,1.0s
TUP                                ePg     Pb     07 03 04.0 +1.3
TUP                                  Pmax         07 03 06.0
      comp=N,151nm,1.1s
TUP                                eSn     Sn     07 03 39.5 -0.5
TUP                                eSg     Sb     07 03 55.0 +4.5
TUP                                e              07 03 59.9
TUP   Tupik              3.95 115⇓ iPN     Pn     07 02 54.3 +0.6
TUP                                e              07 03 04.0
TUP                                eS      Sn     07 03 39.6 -0.5
TUP                                e              07 03 55.4
TUP                                  pmax  pmax
      comp=Z,143nm,0.6s
TUP                                  smax  smax
      comp=E,3μm,1.0s
MXMB  Maximikha          4.17 227  ePn     Pn     07 02 57.6 +1.0
MXMB                               ePg     Pb     07 03 06.7 +0.4
MXMB                               eSn     Sn     07 03 43.0 -2.4
MXMB                               eSg     Sb     07 03 59.4 +2.7
CIT   Chita              4.21 182  ePn     Pn     07 02 57.0 -0.3
CIT                                ePg     Pb     07 03 07.0 -0.1
CIT                                  Pmax         07 03 08.7
      comp=E,350nm,0.5s
CIT                                eSn     Sn     07 03 44.0 -2.5
CIT                                eSg     Sb     07 03 59.9 +1.9
CIT                                  Smax         07 04 06.5
      comp=E,1μm,0.6s
CIT   Chita              4.21 182  ePN     Pn     07 02 56.3 -1.0
CIT                                e              07 03 07.6
CIT                                eS      Sn     07 03 42.7 -3.8
CIT                                e              07 04 00.0
CIT                                  pmax  pmax
      comp=Z,287nm,1.1s
CIT                                  smax  smax
      comp=E,1μm,1.3s
YKLR  Yuktali            4.38  82  ePn     Pn     07 03 01.4 +1.8
YKLR                               ePg     Pb     07 03 12.4 +2.4
YKLR                               eSg     Sg     07 04 10.6 -2.9
OGRR  Ongureny           4.41 237  ePn     Pn     07 03 00.9 +1.0
OGRR                               ePg     Pb     07 03 11.6 +1.1
OGRR                               e              07 03 13.3
OGRR                                 max          07 03 14.9
      comp=E,265nm,0.9s
OGRR                               eSn     Sn     07 03 49.0 -2.4
OGRR                               eSg     Sb     07 04 07.3 +3.5
OGRR                               e              07 04 13.3
OGRR                                 max          07 04 14.5
      comp=E,1μm,1.6s
OGRR  Ongureny           4.41 237  ePN     Pn     07 03 01.0 +1.0
OGRR                               e              07 03 11.8
OGRR                               e              07 04 05.6
OGRR                                 pmax  pmax
      comp=Z,271nm,1.8s
OGRR                                 smax  smax
      comp=N,1μm,2.0s
ZRHB  Zarechye           5.34 229  ePg     Pb     07 03 28.2 +1.8
ZRHB                                 Pmax         07 03 34.7
      comp=N,191nm,0.9s
ZRHB                               eSg     Sb     07 04 36.5 +5.9
ZRHB                                 Smax         07 04 53.3
      comp=N,2μm,1.1s
TRG   Tyrgan             5.55 235  ePn     Pn     07 03 16.2 +0.5
TRG                                e              07 03 26.2
TRG                                ePg     Pb     07 03 30.7 +0.7
TRG                                  Pmax         07 03 38.9
      comp=N,95nm,1.4s
TRG                                eSg     Sb     07 04 41.1 +4.4
TRG                                e              07 04 52.2
TRG                                  max          07 04 58.8
      comp=N,534nm,1.3s
FFNB  Fofonovo           5.88 228  ePn     Pn     07 03 20.2 +0.1
FFNB                               ePg     Pb     07 03 37.0 +1.5
FFNB                               eSg     Sb     07 04 51.6 +5.7
STDB  Stepnoy Dvoret     5.96 230  eSg     Sb     07 04 54.8 +6.6
HRMR  Khuramsha          6.12 224  ePn     Pn     07 03 23.5  0.0
HRMR                               ePg     Pb     07 03 41.5 +1.8
HRMR                                 Pmax         07 03 49.7
      comp=N,95nm,0.6s
HRMR                               eSg     Sb     07 04 59.9 +6.9
HRMR                                 Smax         07 05 25.2
      comp=N,2μm,1.5s
IENR  Iengra             6.17  85  eSg     Sg     07 05 05.6 -5.3
BGT   Bolshoye Golou     6.46 233  ePn     Pn     07 03 29.2 +1.0
BGT                                ePg     Pb     07 03 47.4 +1.9
BGT                                  Pmax         07 03 51.9
      comp=N,37nm,0.8s
BGT                                e              07 05 08.0
BGT                                eSg     Sb     07 05 10.9 +8.1
BGT                                  Smax         07 05 18.6
      comp=N,298nm,1.2s
KPC   Khapcheranga       6.58 188  ePn     Pn     07 03 28.4 -1.5
KPC                                ePg     Pb     07 03 49.6 +2.1
KPC                                  Pmax         07 03 54.0
      comp=N,28nm,0.4s
KPC                                eSn     Sn     07 04 40.6 -4.4
KPC                                eSg     Sb     07 05 13.7 +7.4
KPC                                  Smax         07 05 23.6
      comp=N,875nm,1.2s
KPC   Khapcheranga       6.58 188  ePN     Pn     07 03 28.4 -1.5
KPC                                e              07 03 48.9
KPC                                e              07 05 11.8
KPC                                  pmax  pmax
      comp=Z,28nm,8.0s
KPC                                  smax  smax
      comp=E,869nm,2.0s
LSTR  Listvyanka         6.84 234  e       Pn     07 03 38.7 +5.3
LSTR                               ePg     Pb     07 03 53.3 +1.4
LSTR                                 Pmax         07 03 56.5
      comp=E,41nm,1.6s
LSTR                               eSg     Sb     07 05 21.2 +7.5
LSTR                                 Smax         07 05 30.1
      comp=E,434nm,1.7s
IRK   Irkutsk            6.86 238  ePG     Pb     07 03 57.0 +4.8
IRK                                e              07 05 23.0
IRK                                  pmax  pmax
      comp=Z,134nm,0.1s
IRK                                  smax  smax
      comp=N,652nm,1.1s
TLY   Talaya             7.52 237  ePG     Pb     07 04 08.0 +4.6
TLY                                e              07 05 41.0
TLY                                  pmax  pmax
      comp=Z,29nm,0.6s
TLY                                  smax  smax
      comp=E,187nm,0.7s
TLY   Talaya             7.52 237    Pn    Pn     07 03 45.6 +2.9
HIA   Hailar             7.84 150⇑ ePN     Pn     07 03 46.7 -0.4
HIA   Hailar             7.84 150    Pn    Pn     07 03 51.1 +4.0
ARS   Arshan             7.95 242  ePg     Pb     07 04 15.0 +4.1
ARS                                  Pmax         07 04 18.3
      comp=E,36nm,0.7s
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ARS				*e*Sg	Sb	07 05 56.4	+11
ARS				Smax		07 06 00.0	
	comp=E,612nm,0.9s						
ARS	**Arshan**	**7.95**	**242**	*e*PG	Pb	07 04 17.5	+6.6
ARS				pmax	pmax		
	comp=Z,35nm,0.7s						
ZEA	**Zeya**	**8.13**	**102**	*e*PN	**Pn**	**07 03 52.9**	**+1.9**
ZEA				*e*		07 04 22.2	
ZEA				*e*S	**Sn**	**07 05 20.3**	**-2.5**
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				pmax	pmax		
	comp=E,20nm,0.7s						
ZEA				smax	smax		
	comp=N,200nm,1.0s						
ZEA				smax	smax		
	comp=E,200nm,1.4s						
ZEA				MLR	MLR		
	comp=E,500nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,5.0s						
ZAK	**Zakamensk**	**8.59**	**231**	*e*Pg	Pg	07 04 26.3	-11
ZAK				Pmax		07 04 32.3	
	comp=Z,8.0nm,0.2s						
ZAK				*e*Sg	Sg	07 06 15.5	-13
ZAK				Smax		07 07 16.2	
	comp=Z,273nm,1.4s						
ZAK	**Zakamensk**	**8.59**	**231**	*e*PN	**Pn**	**07 04 00.6**	**+3.2**
ZAK				*e*		07 04 28.4	
ZAK				*e*		07 06 15.5	
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ZAK				smax	smax		
	comp=N,237nm,1.3s						
MOY	**Mondy**	**8.82**	**244**	*e*Pn	**Pn**	**07 04 01.8**	**+1.3**
MOY				max		07 04 15.3	
	comp=N,44nm,1.4s						
MOY				*e*Sg	Sg	07 06 24.2	-12
MOY				Smax		07 06 29.5	
	comp=N,475nm,1.7s						
MOY	**Mondy**	**8.82**	**244**	*e*PN	**Pn**	**07 04 01.8**	**+1.3**
MOY				*e*		07 04 29.6	
MOY				*e*		07 06 23.6	
MOY				pmax	pmax		
	comp=Z,42nm,1.2s						
MOY				smax	smax		
	comp=N,474nm,1.6s						
ORL	**Orlik**	**8.96**	**252**	*e*Pn	**Pn**	**07 04 02.8**	**+0.4**
ORL				max		07 04 16.9	
	comp=N,43nm,1.1s						
ORL				*e*Sn	**Sn**	**07 05 38.6**	**-4.8**
ORL				*e*Sg	Sg	07 06 27.1	-13
ORL				Smax		07 06 35.3	
	comp=N,198nm,1.2s						
ORL	**Orlik**	**8.96**	**252**	*e*PN	**Pn**	**07 04 03.9**	**+1.5**
ORL				*e*		07 04 34.0	
ORL				*e*S	**Sn**	**07 05 39.0**	**-4.4**
ORL				*e*		07 06 26.8	
ORL				pmax	pmax		
	comp=Z,55nm,0.7s						
ORL				smax	smax		
	comp=N,201nm,1.7s						
ULN	**Ulaanbaatar**	**9.34**	**209**	⇑*e*P	**Pn**	**07 04 05.9**	**-1.8**
ULN	**Ulaanbaatar**	**9.34**	**209**	Pn	**Pn**	**07 04 10.9**	**+3.2**
SONM	**Songino Array**	**9.55**	**212**	Pn	**Pn**	**07 04 10.6**	**0.0**
	comp=N,0.3nm,0.3s,baz=23,slow=14,SNR=6.3						
SONM				Pg		07 04 47.6	
	comp=N,1.0nm,0.3s,baz=16,slow=14,SNR=6.6						
SONM				Sn	**Sn**	**07 06 02.4**	**+4.4**
	comp=N,1.6nm,0.3s,baz=29,slow=16,SNR=2.6						
SONM				Lg	Lg	07 06 50.2	
	comp=N,6.9nm,0.3s,baz=23,slow=28,SNR=17						
YAK	**Yakutsk**	**10.01**	**48**	Sn	Sn	07 05 58.6	-10
	comp=N,0.2nm,0.3s,baz=240,slow=16,SNR=1.6						
YAK				Lg	Lg	07 07 02.4	
	comp=N,0.1nm,0.3s,baz=155,slow=23,SNR=12						
YAK				LR	LR	07 08 12.1	
	comp=N,100nm,20.1s,baz=258,slow=38						
YAK	**Yakutsk**	**10.01**	**48**	⇓*e*P	**Pn**	**07 04 16.8**	**+0.1**
YAK	**Yakutsk**	**10.01**	**48**	Pn	**Pn**	**07 04 16.2**	**-0.5**
KLR	**Kul'dur**	**12.91**	**115**	Pn	**Pn**	**07 04 57.5**	**+1.1**
	comp=N,0.5nm,0.3s,baz=314,slow=15,SNR=11						
KLR				Sn	**Sn**	**07 07 18.9**	**-1.2**
	comp=N,0.1nm,0.3s,baz=231,slow=13,SNR=2.1						
KLR				Lg	Lg	07 08 35.5	
	comp=N,0.3nm,0.3s,baz=36,slow=18,SNR=6.9						
KLR				LR	LR	07 09 30.4	
	comp=N,96nm,18.5s,baz=42,slow=35						
KLR	**Kul'dur**	**12.91**	**115**	⇑*e*P	**Pn**	**07 04 57.2**	**+0.8**
GRNR	**Gornyy**	**14.49**	**103**	⇓*i*P	Pn	07 05 08.8	-9.2
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,130nm,12.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,16.0s						
GRNR				MLR	MLR		
	comp=N,60nm,13.0s						
USA0B	**Ussuriysk Arra**	**16.68**	**129**	⇑*e*P	**Pn**	**07 05 45.7**	**-0.9**
USRK	**Ussuriysk Ar.**	**16.68**	**129**	Pn	**P**	**07 05 51.0**	**+2.0**
	baz=302,slow=11,SNR=6.0						
USRK				Lg	Lg	07 10 35.1	
	baz=321,slow=27,SNR=11						
USRK	**Ussuriysk Ar.**	**16.68**	**129**	P	**P**	**07 05 51.0**	**+2.0**
ZAA0	**Zalesovo Array**	**16.69**	**274**		**Pn**	**07 05 47.3**	**+0.6**
ZALV	**Zalesovo Beam**	**16.69**	**274**	Pn	**Pn**	**07 05 45.0**	**-1.7**
	comp=N,0.3nm,0.3s,baz=57,slow=11,SNR=4.7						
ZALV				Lg	Lg	07 10 32.7	
	baz=83,slow=25,SNR=3.6						
ZALV				LR	LR	07 12 25.9	
	comp=N,88nm,20.0s,baz=64,slow=38						
TIXI	**Tiksi**	**16.75**	**17**	⇑*e*P	**Pn**	**07 05 46.6**	**-0.7**
TIXI	**Tiksi**	**16.75**	**17**	Pn	**Pn**	**07 05 45.8**	**-1.5**
TIXI				IAmb	IAmb	07 05 48.6	
	comp=Z,8.2nm,0.8s						
DGZ	**Jazzator, Alta**	**17.10**	**259**	⇑*e*P	**Pn**	**07 05 51.6**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NRIK	**Noril'sk**	**17.59**	**329**	P	**Pn**	**07 05 55.1**	**-2.7**
	comp=Z,0.9nm,0.3s,baz=118,slow=13,SNR=15						
NRIK				S	Sn	07 08 58.9	-15
	comp=Z,0.2nm,0.3s,baz=343,slow=21,SNR=6.9						
NRIK				Lg	Lg	07 11 03.4	
	comp=Z,0.2nm,0.3s,baz=43,slow=19,SNR=1.9						
NRIK				LR	LR	07 13 07.2	
	comp=Z,192nm,19.0s,baz=128,slow=39						
NRIK	**Noril'sk**	**17.59**	**329**	⇑*e*P	**Pn**	**07 05 56.3**	**-1.6**
NRIK	**Noril'sk**	**17.59**	**329**		**Pn**	**07 05 53.1**	**-4.8**
NRIK				IAmb	IAmb	07 05 59.7	
	comp=Z,8.6nm,0.8s						
UGL	**Uglegorsk**	**18.48**	**101**	P	P	07 06 01.5	-7.4
UGL				MLR	MLR		
	comp=Z,1μm,22.0s						
UGL				MLR	MLR		
	comp=N,700nm,17.0s						
GTA	**Gaotai**	**19.20**	**215**	*e*P	Pn	07 06 25.3	+7.5
GTA				pP	sP	07 06 28.6	+7.2
GTA				sP	pP	07 06 31.2	+11
GTA				pmax	pmax		
	comp=N,3.0nm,1.1s						
MA2	**Magadan**	**19.76**	**65**	⇑*e*P	**P**	**07 06 23.1**	**+0.3**
MA2				pmax	pmax		
	comp=Z,19nm,2.3s						
MA2				MLR	MLR		
	comp=Z,85nm,14.0s						
SEY	**Seymchan**	**20.39**	**55**	P	Pn	07 06 32.1	+0.4
	comp=Z,2.2nm,0.6s,baz=269,slow=13,SNR=5.1						
SEY				Lg	Lg	07 12 34.6	
	comp=Z,1.6nm,0.2s,baz=352,slow=17,SNR=4.0						
SEY	**Seymchan**	**20.39**	**55**	⇑*e*P	Pn	07 06 31.8	0.0
KSRS	**Korea Array**	**21.03**	**147**	P	**P**	**07 06 40.6**	**+3.8**
	comp=Z,0.5nm,0.3s,baz=347,slow=10.0,SNR=2.8						
KSRS				Lg	Lg	07 13 07.1	
	comp=Z,1.8nm,0.8s,baz=316,slow=32,SNR=4.5						
KSRS				LR	LR	07 15 20.2	
	comp=Z,91nm,19.1s,baz=340,slow=38						
KURK	**Kurchatov**	**21.48**	**270**	*de*P	**P**	**07 06 43.1**	**+1.6**
KURK				pmax	pmax		
	comp=Z,20nm,1.7s						
KURK				MLR	MLR		
	comp=Z,111nm,16.0s						
KURK	**Kurchatov**	**21.48**	**270**	P	**P**	**07 06 42.0**	**+0.4**
KURBB	**Kurchatov Arra**	**21.58**	**270**	P	**P**	**07 06 42.9**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=61,slow=12,SNR=21						
KURBB				Lg	Lg	07 13 08.4	
	comp=Z,0.6nm,0.8s,baz=63,slow=30,SNR=1.9						
MK31	**Makanchi Array**	**21.59**	**257**	⇓*e*P	**P**	**07 06 43.7**	**+1.0**
MK31	**Makanchi Array**	**21.59**	**257**	P	**P**	**07 06 42.8**	**+0.1**
MKAR	**Makanchi Array**	**21.59**	**257**	P	**P**	**07 06 44.3**	**+1.6**
	comp=Z,2.3nm,1.0s,baz=55,slow=7.8,SNR=16						
MKAR				Lg	Lg	07 13 12.6	
	comp=Z,0.7nm,0.9s,baz=43,slow=28,SNR=2.5						
MKAR				LR	LR	07 15 22.6	
	comp=Z,199nm,20.7s,baz=54,slow=38						
MKAR	**Makanchi Array**	**21.59**	**257**	*i* P	**P**	**07 06 44.7**	**+2.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**21.75**	**258**	P	**P**	**07 06 45.6**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAKZ	**Makanchi**	**21.75**	**258**	P	**P**	**07 06 45.6**	**+1.2**
MAKZ				IAmb	IAmb	07 06 50.0	
	comp=Z,7.5nm,1.1s						
BVAR	**Borovoye Array**	**25.02**	**281**	P	**P**	**07 07 15.0**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=69,slow=8.2,SNR=9.6						
BRVK	**Borovoye**	**25.07**	**281**	⇓*e*P	**P**	**07 07 18.9**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,59nm,14.0s						
BRVK	**Borovoye**	**25.07**	**281**	P	**P**	**07 07 18.0**	**+0.7**
PETK	**Petropavlovsk-**	**25.26**	**78**	LR	LR	07 17 23.2	
	comp=Z,110nm,18.5s,baz=33,slow=37						
PET	**Petropavlovsk**	**25.81**	**78**	⇑*e*P	**P**	**07 07 25.3**	**+1.3**
JNU	**Nakatsue**	**25.95**	**146**	LR	LR	07 17 27.7	
	comp=Z,78nm,20.0s,baz=343,slow=36						
AAK	**Ala-Archa**	**28.51**	**258**	LR	LR	07 19 33.8	
	comp=Z,128nm,19.6s,baz=54,slow=37						
AAK	**Ala-Archa**	**28.51**	**258**	⇑*e*P	**P**	**07 07 49.8**	**+1.2**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AAK				MLR	MLR		
	comp=Z,336nm,18.0s						
KK31	**Karatay Array**	**30.40**	**263**	P	**P**	**07 08 05.7**	**+0.6**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KK31	**Karatay Array**	**30.40**	**263**	P	**P**	**07 08 05.7**	**+0.6**
KK31				IAmb	IAmb	07 08 08.6	
	comp=Z,2.9nm,1.1s						
KKAR	**Karatay Array**	**30.40**	**263**	P	**P**	**07 08 04.8**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	**Karatay Array**	**30.40**	**263**	P	**P**	**07 08 04.8**	**-0.3**
KKAR				IAmb	IAmb	07 08 08.6	
	comp=Z,2.9nm,1.1s						
AKTO	**Aktyubinsk**	**33.01**	**284**	LR	LR	07 23 40.5	
	comp=Z,34nm,18.3s,baz=28,slow=40						
KIRV	**Kirov**	**33.59**	**301**	LR	LR	07 23 47.9	
	comp=Z,62nm,18.6s,baz=309,slow=39						
KIRV	**Kirov**	**33.59**	**301**	⇑*e*P	**P**	**07 08 32.7**	**-0.2**
LVZ	**Lovozero**	**36.14**	**321**	⇓*e*P	**P**	**07 08 55.6**	**+0.7**
LVZ				pmax	pmax		
	comp=Z,33nm,1.3s						
CMAR	**Chiang Mai Arr**	**39.33**	**203**	LR	LR	07 25 06.4	
	comp=Z,43nm,18.4s,baz=356,slow=35						
PUL	**Pulkovo**	**41.62**	**311**	⇑*e*P	**P**	**07 09 40.1**	**-0.7**
PUL				pmax	pmax		
	comp=Z,43nm,0.7s						
FINES	**FINESS Array B**	**42.43**	**315**	P	**P**	**07 09 46.3**	**-1.1**
	comp=Z,3.8nm,1.0s,baz=100,slow=9.9,SNR=4.1						
ILAR	**Eielson Array**	**44.71**	**37**	P	**P**	**07 10 04.4**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=301,slow=9.0,SNR=1.2						
MNK	**Minsk**	**45.82**	**306**	*i* P	**P**	**07 10 11.8**	**-2.8**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**P**	**07 10 11.8**	**-2.8**
	comp=N,9.0nm,0.8s						
MNK				*i* P	**P**	**07 10 11.8**	**-2.8**
	comp=Z,11nm,0.8s						
MNK				*i* PcP	**PcP**	**07 11 48.8**	**-3.0**
MNK				*i* PP	**PP**	**07 11 59.3**	**-2.3**
MNK				*i* PPP	PPP	07 12 39.5	
MNK				*i* ScP	**ScP**	**07 15 41.9**	**-2.7**
MNK				*i* PcS	**PcS**	**07 15 43.2**	**-2.6**
MNK				*i* S	**S**	**07 16 54.7**	**-3.4**
MNK				*i* ScS	**ScS**	**07 20 07.9**	**-2.3**
MNK				*i* SS	**SS**	**07 20 22.7**	**+0.8**
MNK				*i* SSS	SSS	07 21 12.3	
MNK				*i* LQ	LQ	07 26 06.2	
MNK				*i* LR	LR	07 27 00.9	
MNK				*i* LR	LR	07 29 35.7	
MNK				*i* LRM	MLR	07 31 19.2	
	comp=Z,44nm,17.2s						
MNK				*i* LRM	MLR	07 31 23.2	
	comp=E,7.0nm,17.9s						
MNK				*i* LRM	MLR	07 31 23.2	
	comp=N,412nm,17.9s						
AKASG	**Malin Array Be**	**47.65**	**301**	P	**P**	**07 10 28.1**	**-0.9**
	comp=N,0.2nm,0.2s,baz=43,slow=8.3,SNR=4.2						
NOA	**NORSAR Array B**	**48.29**	**320**	LR	LR	07 32 23.9	
	comp=N,37nm,18.7s,baz=355,slow=38						
BRTR	**Keskin Array B**	**53.01**	**288**	LR	LR	07 39 18.5	
	comp=N,15nm,20.2s,baz=32,slow=42						
YKA	**Yellowknife Ar**	**55.78**	**25**	P	**P**	**07 11 29.9**	**+0.4**
	comp=N,0.7nm,0.8s,baz=334,slow=6.5,SNR=8.6						
YKA	**Yellowknife Ar**	**55.78**	**25**	*i* P	**P**	**07 11 32.0**	**+2.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**70.94**	**314**	P	**P**	**07 13 10.1**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=29,slow=6.6,SNR=5.5						
KIP	**Kipapa**	**71.48**	**79**	⇑*e*P	**P**	**07 13 14.0**	**+0.3**
KIP				pmax	pmax		
	comp=Z,74nm,1.2s						
NVAR	**Mina Array Bea**	**75.88**	**40**	P	**P**	**07 13 41.7**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=324,slow=5.0,SNR=4.4						
WRA	**Warramunga Arr**	**77.83**	**160**	P	**P**	**07 13 52.7**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=355,slow=6.6,SNR=2.1						

IDC 05 07:04:34.9±2.1,4°.15S×150°.73E,h0^{km},mb3.4/3, mb1 3.7/3,mb1mx3.3/37,mbtmp3.4/3,MS2.9/1,Ms1 2.9/1, ms1mx2.6/19,Error ellipse: s-maj=140.8km s-min=31.8km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.40**	**224**	P	P	07 09 35.3	+0.1
	0.9nm,0.6s,baz=50,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**25.31**	**218**	P	P	07 10 03.3	-0.2
	0.4nm,0.7s,baz=57,slow=9.1,SNR=4.8						
FITZ	**Fitzroy Crossi**	**28.20**	**239**	LR	LR	07 21 34.6	
	comp=Z,28nm,20.9s,baz=204,slow=36						
ILAR	**Eielson Array**	**82.34**	**23**	P	P	07 16 58.4	+0.1
	0.4nm,0.7s,baz=242,slow=5.9,SNR=2.1						

IDC 05 07:08:26.5±3.0,54°.13N×86°.60E,h0^{km},mb1 3.0/2, mb1mx2.9/49,mbtmp3.0/2,ML2.7/2,Error ellipse: s-maj=23.2km s-min=13.9km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**261**	*i*		07 16 26.1	
	baz=80,slow=328,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.07**	**261**	Pg	Pg	07 08 46.0	-0.9
	0.7nm,0.3s,baz=81,slow=16,SNR=8.7						
ZALV				Lg	Lg	07 09 01.8	
	1.7nm,0.3s,baz=91,slow=28,SNR=13						
ZALV				Rg	Rg	07 09 07.2	
	22nm,1.0s,baz=80,slow=34,SNR=28						
KURBB	**Kurchatov Arra**	**6.06**	**238**	Pn	Pn	07 09 58.1	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=4.8						
KURBB				Lg	Lg	07 11 39.7	
	0.0nm,0.3s,baz=59,slow=31,SNR=3.3						
MKAR	**Makanchi Array**	**7.84**	**202**	Pn	Pn	07 10 23.0	+1.2
	0.2nm,0.3s,baz=26,slow=14,SNR=5.0						
MKAR				Sn	Sn	07 11 50.8	-0.5
	0.1nm,0.3s,baz=20,slow=26,SNR=5.1						
MKAR				Lg	Lg	07 12 37.4	
	0.0nm,0.3s,baz=18,slow=29,SNR=2.4						

PRU 05 07:11:26.9±0.0,50°.16N×12°.26E,h0^{km},West Bohemia, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.14**	**59**	*e*PG	Pg	07 11 29.6	0.0
NKC				*e*SG	Sg	07 11 31.6	+0.2
	comp=Z,9.6nm,0.2s						

BJI ***05*** *07:24:58.8±0.0,30°.41N×142°.46E,h19^{km},mB4.9/16, mb4.6/29,Ms4.2/4,Ms7 4.1/4*

IDC ***05*** *07:25:01.9±0.5,30°.54N×142°.10E,h0^{km},mb4.3/22, mb1 4.4/27,mb1mx4.3/48,mbtmp4.3/27,ML4.1/4,MS3.4/7, Ms1 3.4/7,ms1mx3.1/37,Error ellipse: s-maj=16.2km s-min=12.2km az=79.0*

NIED ***05*** *07:25:02.5,30°.73N×142°.50E,h53^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.77; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-3.42; $M_{r\theta}$-1.29; $M_{\theta\phi}$0.69; $M_{\phi r}$2.64; Fault plane solution: $M_0$4.70000×10^{15} NP1: ϕ_s340.00000°,δ64.00000°,λ83.00000°. NP2: ϕ_s175.00000°,δ26.00000°,λ104.00000°.*

JMA ***05*** *07:25:02.4±0.2,30°.73N×142°.50E,h53^{km},M4.7*

NEIC ***05*** *07:25:03.1±1.9,30°.56N±0°.06×142°.1E±0°.1,h10^{km}±1^{km}, mb4.7/28,Error ellipse: s-maj=16.2km s-min=10.3km az=76.0*

MOS ***05*** *07:25:04.1±1.1,30°.56N×142°.03E,h27^{km},mb4.9/28,Error ellipse: s-maj=12.0km s-min=5.2km az=115.6*

NOU ***05*** *07:25:05.0,30°.55N×142°.27E,h21^{km},mb4.9,Southeast of Honshu, Japan*

ISC 05 07:25:03.1±0.4,30°.54N±0°.04×142°.03E±0°.07,h10^{km},n151, σ1^{s}31/154,mb4.7/58,MS3.7/7,9C-13D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.18**	**324**	P	**Pn**	**07 25 52.5**	**-0.7**
JHJ2				S	**Sn**	**07 26 30.5**	**-0.7**
JHJ2	**Mitsune**	**3.18**	**324**	Pn	**Pn**	**07 25 52.8**	**-0.4**
JHJ	**Hachijo jima 2**	**3.21**	**324**	Pn	**Pn**	**07 25 52.6**	**-0.9**
	47nm,0.3s,baz=233,slow=23,SNR=11						
JHJ				Sn	**Sn**	**07 26 29.9**	**-1.9**
	54nm,0.3s,baz=224,slow=20,SNR=3.9						
JHJ				LR	LR	07 27 22.3	
	comp=Z,570nm,19.4s,baz=138,slow=44						
CBIJ	**Chichi jima**	**3.44**	**178**	P	**Pn**	**07 25 57.5**	**+0.8**
JCJ	**Chichijima**	**3.44**	**178**	Pn	**Pn**	**07 25 56.9**	**+0.1**
	30nm,0.3s,baz=288,slow=20,SNR=7.5						
JCJ				Sn	**Sn**	**07 26 35.6**	**-1.9**
	65nm,0.3s,baz=286,slow=22,SNR=6.5						
JMKN	**Mikurajimanish**	**3.93**	**329**	*e*S	**Sn**	**07 26 48.8**	**-0.9**
BSO1	**Boso 1**	**4.20**	**348**	P	**Pn**	**07 26 04.8**	**-1.9**
BSO1				*e*S	**Sn**	**07 26 52.5**	**-3.0**
JOD2	**Odawara 2**	**5.32**	**333**	P	**Pn**	**07 26 21.9**	**-0.7**
JOD2				*e*S	**Sn**	**07 27 22.6**	**-1.4**
TTO1	**TONANKAI O.B.S**	**5.41**	**306**	P	**Pn**	**07 26 25.8**	**+2.2**
JYT	**Yasato**	**5.88**	**345**	Pn	**Pn**	**07 26 30.4**	**+0.1**
JIE	**Ise**	**5.92**	**312**	P	**Pn**	**07 26 32.7**	**+1.9**
JRY	**Ryogami san**	**6.06**	**335**	P	**Pn**	**07 26 33.0**	**+0.2**
JRY				*e*S	**Sn**	**07 27 41.2**	**-1.0**
INU	**Inuyama**	**6.38**	**320**	Pn	**Pn**	**07 26 37.5**	**+0.3**
MJA0	**Matsu Arr-Jizo**	**6.77**	**333**	*e*P	**Pn**	**07 26 43.5**	**+1.0**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MJAR	**Matsushiro Arr**	**6.78**	**333**	Pn	**Pn**	**07 26 43.6**	**+0.9**
	comp=Z,5.0nm,0.3s,baz=162,slow=11,SNR=246						
MJAR				Sn	**Sn**	**07 27 59.1**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=166,slow=19,SNR=9.9						
MJAR				LR	LR	07 29 12.0	
	comp=Z,247nm,19.4s,baz=130,slow=37						
MAJO	**Matsushiro**	**6.78**	**333**	*d i*P	**Pn**	**07 26 43.7**	**+1.0**
MAJO	**Matsushiro**	**6.78**	**333**	Pn	**Pn**	**07 26 44.0**	**+1.2**
MJB9	**Matsu-Tunnel**	**6.79**	**333**	Pn	**Pn**	**07 26 43.6**	**+0.8**
JWT	**Wachi**	**7.31**	**312**	Pn	**Pn**	**07 26 52.3**	**+2.4**
JMM	**Marumori**	**7.38**	**352**	Pn	**Pn**	**07 26 49.0**	**-1.9**
JMN	**Monobe**	**7.61**	**297**	Pn	**Pn**	**07 26 54.6**	**+0.5**
JSD	**Sado**	**8.10**	**338**	Pn	**Pn**	**07 26 59.7**	**-1.1**
JMK	**Ichinoseki**	**8.42**	**356**	P	**Pn**	**07 27 01.7**	**-3.4**
JMK				S	Sn	07 28 30.9	-9.3
JHS	**Saijyo**	**8.72**	**303**	Pn	**Pn**	**07 27 09.5**	**+0.1**
JNU	**Nakatsue**	**9.83**	**288**	Pn	**Pn**	**07 27 27.8**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=22,slow=18,SNR=2.6						
JTM	**Tenmabayashi**	**10.25**	**356**	Pn	**Pn**	**07 27 29.3**	**-1.0**
ERM	**Erimo**	**11.49**	**4**	⇑*e*P	**Pn**	**07 27 42.9**	**-4.2**
ERM				pmax	pmax		
	comp=Z,13nm,0.4s						
ERM	**Erimo**	**11.49**	**4**	Pn	**Pn**	**07 27 43.7**	**-3.5**
JEW	**Eniwo**	**12.28**	**358**	Pn	**Pn**	**07 27 57.7**	**-0.3**
TJN	**Taejon**	**13.55**	**299**	⇑*e*P	**Pn**	**07 28 16.8**	**+1.4**
ASAJ	**Asahikawa**	**13.56**	**2**	Pn	**Pn**	**07 28 12.8**	**-2.6**
	comp=Z,2.2nm,0.3s,baz=215,slow=8.2,SNR=11						
ASAJ				Sn	Sn	07 30 35.2	-11
	comp=Z,0.6nm,0.3s,baz=18,slow=19,SNR=2.5						
ASAJ				LR	LR	07 34 17.6	
	comp=Z,131nm,21.7s,baz=165,slow=41						
ASAJ	**Asahikawa**	**13.56**	**2**	P	**Pn**	**07 28 13.8**	**-1.6**
JKA	**Kamikawa-asahi**	**13.56**	**2**	Pn	**Pn**	**07 28 13.8**	**-1.7**
KSRS	**Korea Array**	**13.58**	**304**	Pn	**Pn**	**07 28 17.7**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=118,slow=13,SNR=8.6						
KSRS				LR	LR	07 33 15.2	
	comp=Z,129nm,20.6s,baz=108,slow=36						
YUK	**Yuzh-Kuril'sk**	**13.81**	**12**	⇓*e*P	**Pn**	**07 28 19.8**	**+1.0**
USA0B	**Ussuriysk Arra**	**15.78**	**333**	⇓*e*P	**Pn**	**07 28 43.3**	**-2.1**
USRK	**Ussuriysk Ar.**	**15.78**	**333**	Pn	**Pn**	**07 28 44.1**	**-1.3**
	baz=149,slow=12,SNR=6.8						
YSS	**Yuzh-Sakhalins**	**16.40**	**2**	*e*P	Pn	07 28 45.9	-7.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS	**Yuzh-Sakhalins**	**16.40**	**2**		**Pn**	**07 28 53.2**	**0.0**
MDJ	**Mudanjiang**	**17.14**	**329**	P	**Pn**	**07 29 00.8**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,250nm,6.1s						
MDJ	**Mudanjiang**	**17.14**	**329**		**Pn**	**07 29 02.1**	**-0.5**
CN2	**Changchun**	**18.66**	**320**	*e*P	**P**	**07 29 19.8**	**-1.3**
CN2				*e*PP	**PnPn**	**07 29 36.0**	**+2.7**
CN2				*e*S	**Sn**	**07 32 46.0**	**-4.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				LR	LR		
	comp=Z,230nm,13.0s						
CN2				LR	LR		
	comp=Z,170nm,13.0s						
CN2				LR	LR		
	comp=Z,290nm,14.0s						
YHNB	**Yeheng**	**19.21**	**257**	P	**P**	**07 29 27.6**	**+0.2**
YHNB				IAmb	IAmb	07 29 28.9	
	comp=Z,26nm,0.7s						
NACB	**Ninganchiao**	**19.22**	**256**	P	**P**	**07 29 26.6**	**-0.8**
YULB	**Yu-li**	**19.79**	**254**	P	**P**	**07 29 32.8**	**-0.8**
YULB				IAmb	IAmb	07 29 35.7	
	comp=Z,24nm,0.8s						
SSLB	**Suanglung**	**19.91**	**255**	P	**P**	**07 29 34.2**	**-0.8**
SSLB				IAmb	IAmb	07 29 38.5	
	comp=Z,51nm,1.0s						
KLR	**Kul'dur**	**20.23**	**340**	P	**P**	**07 29 38.5**	**+0.3**
	comp=Z,3.5nm,0.5s,baz=160,slow=11,SNR=14						
KLR	**Kul'dur**	**20.23**	**340**	⇑*i*P	**P**	**07 29 38.1**	**-0.1**
KLR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TYV	**Tymovskoe**	**20.31**	**1**	*e*P	Pn	07 29 40.8	-0.2
TYV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TPUB	**Ta-pu**	**20.38**	**254**	P	**P**	**07 29 41.2**	**+1.0**
GRNR	**Gornyy**	**20.64**	**350**	⇓*i*P	Pn	07 29 44.5	-0.5
GRNR				pmax	pmax		
	comp=N,4.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,150nm,17.0s						
GRNR				MLR	MLR		
	comp=N,80nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,18.0s						
BJT	**Baijiatuau**	**23.07**	**301**	P	**P**	**07 30 07.9**	**-0.9**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJT	**Baijiatuau**	**23.07**	**301**	P	**P**	**07 30 07.8**	**-0.9**
PETK	**Petropavlovsk-**	**25.28**	**22**	LR	LR	07 44 36.9	
	comp=Z,65nm,18.7s,baz=209,slow=46						
H11S3	**WAKE ISLAND Hy**	**25.37**	**113**	T	T	07 57 43.1	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**25.38**	**112**	T	T	07 58 02.1	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**25.39**	**112**	T	T	07 57 54.0	
	baz=304						
ZEA	**Zeya**	**25.54**	**339**	*e*P	**P**	**07 30 33.4**	**+1.6**
ZEA				pmax	pmax		

	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.0s						
ULN	Ulaanbaatar	31.81	313	⇓*e*P	P	07 31 29.4	+1.4
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
SONM	Songino Array	32.22	313	P	P	07 31 32.7	+1.2
	comp=Z,2.0nm,0.5s,baz=119,slow=8.6,SNR=12						
SONM				LR	LR	07 45 13.9	
	comp=Z,157nm,19.1s,baz=82,slow=38						
YAK	Yakutsk	32.52	349	*ce*P	P	07 31 34.3	+0.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SIJI	Sorong	32.88	200	LR	LR	07 43 21.9	
	comp=Z,70nm,18.2s,baz=336,slow=33						
GTOI	Gorontalo	34.80	215	P	P	07 31 52.0	-2.1
	comp=Z,7.2nm,0.6s						
ZAK	Zakamensk	35.00	316	*e*P	P	07 31 57.2	+1.5
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TLY	Talaya	35.24	318	*e*P	P	07 32 00.5	+2.8
TLY				pmax	pmax		
	comp=Z,37nm,1.0s						
TLY				MLR	MLR		
	comp=Z,443nm,20.0s						
GTA	Gaotai	35.44	296	*e*P	P	07 31 59.0	-0.7
GTA				pP	sP	07 32 03.3	+1.7
GTA				sP	pwP	07 32 06.2	-2.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SANI	Sanana	35.84	208	P	P	07 32 01.0	-2.1
	comp=Z,28nm,0.9s						
BNDI	Bandanaira	36.75	200	P	P	07 32 09.2	-1.6
	comp=Z,208nm,0.7s						
APSI	Ampana	36.81	216	P	P	07 32 09.8	-1.6
	comp=Z,33nm,1.1s						
MTKI	Muara Teweh, K	40.59	225	P	P	07 32 49.0	+5.9
CHTO	Chiang Mai	40.63	264	P	P	07 32 42.3	-1.3
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	Chiang Mai	40.63	264	P	P	07 32 42.2	-1.3
CMAR	Chiang Mai Arr	40.79	263	P	P	07 32 44.6	-0.2
	comp=Z,2.1nm,0.4s,baz=61,slow=6.1,SNR=8.8						
CMAR	Chiang Mai Arr	40.79	263	*e*P	P	07 32 44.4	-0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TIXI	Tiksi	41.78	354	⇓*e*P	P	07 32 51.5	-0.8
DGZ	Jazzator, Alta	44.84	311	⇑*e*P	P	07 33 18.7	+1.2
DGZ				pmax	pmax		
	comp=Z,16nm,0.9s						
ZALV	Zalesovo Beam	46.84	317	P	P	07 33 33.8	+0.7
	comp=Z,1.4nm,0.4s,baz=103,slow=8.1,SNR=7.1						
ZALV				PcP	PcP	07 35 05.9	-0.1
	comp=Z,4.7nm,0.5s,baz=108,slow=3.3,SNR=15						
MK31	Makanchi Array	48.23	307	P	P	07 33 44.4	+0.3
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	48.23	307	P	P	07 33 44.4	+0.3
MK31				IAmb	IAmb	07 33 45.6	
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	48.23	307	P	P	07 33 44.8	+0.7
	comp=Z,5.2nm,0.6s,baz=91,slow=9.3,SNR=74						
MKAR	Makanchi Array	48.23	307	*e*P	P	07 33 44.5	+0.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	Makanchi	48.45	307	P	P	07 33 46.4	+0.7
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	48.45	307	P	P	07 33 46.4	+0.7
MAKZ				IAmb	IAmb	07 33 48.1	
	comp=Z,6.1nm,0.6s						
KPJI	Karang Pucung	49.25	226	P	P	07 33 49.4	-2.7
	comp=Z,36nm,1.2s						
NRIK	Noril'sk	49.41	338	P	P	07 33 53.6	+0.9
	comp=Z,8.0nm,0.9s,baz=108,slow=9.2,SNR=10.0						
NRIK	Noril'sk	49.41	338	⇓*e*P	P	07 33 53.0	+0.3
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NRIK	Noril'sk	49.41	338	P	P	07 33 53.8	+1.1
NRIK				IAmb	IAmb	07 33 54.8	
	comp=Z,8.5nm,0.9s						
KLSI		49.99	232	P	P	07 33 57.5	-0.3
	comp=Z,9.5nm,1.8s						
MDSI	Maura Dua	50.22	233	P	P	07 33 57.7	-1.8
	comp=Z,19nm,1.1s						
KURK	Kurchatov	50.52	313	⇑*e*P	P	07 34 01.4	0.0
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	50.52	313	P	P	07 34 01.5	+0.1
KURK				IAmb	IAmb	07 34 15.0	
	comp=Z,6.9nm,0.8s						
WR0	Warramunga Arr	50.73	189	P	P	07 34 02.7	-0.5
WRAB	Tennant Creek	50.73	189	*c i*P	P	07 34 03.1	-0.1
WRAB				pmax	pmax		
	comp=Z,21nm,1.3s						
WB2	Warramunga Arr	50.73	189	P	P	07 34 02.6	-0.7
WRA	Warramunga Arr	50.74	189	P	P	07 34 03.1	-0.1
	comp=Z,17nm,0.5s,baz=5.9,slow=7.5,SNR=252						
WRA	Warramunga Arr	50.74	189	*e*P	P	07 34 02.8	-0.5
WRA				pmax	pmax		
	comp=Z,17nm,0.5s						
FITZ	Fitzroy Crossi	50.87	200	P	P	07 34 02.9	-1.3
FITZ				IAmb	IAmb	07 34 09.9	
	comp=Z,13nm,1.1s						
KDAK	Kodiak Island	51.72	38	P	P	07 34 10.2	-0.1
	comp=Z,9.9nm,1.1s,baz=316,slow=5.1,SNR=6.3						
KDAK	Kodiak Island	51.72	38	P	P	07 34 10.2	-0.1
KDAK				pmax	pmax		
	comp=Z,35nm,1.5s						
TKM2	Tokmak 2	53.38	303	*i* P	P	07 34 24.4	+1.2
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AAK	Ala-Archa	54.23	303	⇓*i*P	P	07 34 30.2	+0.9
AAK				pmax	pmax		
	comp=Z,20nm,1.3s						
AAK	Ala-Archa	54.23	303	P	P	07 34 29.9	+0.6
AAK				IAmb	IAmb	07 34 31.9	
	comp=Z,3.6nm,0.7s						
AS31	Alice Springs	54.46	189	P	P	07 34 30.9	+0.1
AS31				IAmb	IAmb	07 34 33.2	
	comp=Z,3.7nm,0.5s						
ASAR	Alice Springs	54.46	189	P	P	07 34 31.1	+0.2
	comp=Z,5.1nm,0.5s,baz=360,slow=5.5,SNR=108						
ILAR	Eielson Array	54.78	30	P	P	07 34 32.3	-0.4
	comp=Z,1.2nm,0.8s,baz=254,slow=6.5,SNR=13						
ILAR	Eielson Array	54.78	30	*e*P	P	07 34 32.1	-0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	Borovoye	55.51	316	⇓*i*P	P	07 34 39.0	+0.8
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BRVK	Borovoye	55.51	316	P	P	07 34 36.9	-1.3
INK	Inuvik	59.97	25	P	P	07 35 09.4	+0.1
	comp=Z,0.8nm,0.5s,baz=276,slow=3.3,SNR=7.2						
KBL	Kabul	60.41	295	P	P	07 35 12.5	-0.7
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBL	Kabul	60.41	295	P	P	07 35 12.5	-0.7
SVE	Sverdlovsk	60.44	321	*e*P	P	07 35 14.0	+1.3
SVE				pmax	pmax		
	comp=Z,16nm,1.0s						
ARU	Arti	61.65	321	*d i*P	P	07 35 21.3	+0.4
ARU				S	S	07 43 45.3	+2.3
ARU				SS	SS	07 47 45.1	+1.2
ARU				pmax	pmax		
	comp=Z,16nm,1.0s						
STKA	Stephens Creek	62.08	180	P	P	07 35 24.4	+0.4
	comp=Z,3.3nm,0.6s,baz=353,slow=7.0,SNR=14						
STKA	Stephens Creek	62.08	180	⇓*e*P	P	07 35 25.1	+1.2
STKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ABKAR	Akbulak array	62.63	313	P	P	07 35 27.6	0.0
ABKAR				IAmb	IAmb	07 35 41.3	
	comp=Z,5.3nm,0.8s						
HRA	Herat	65.75	297	P	P	07 35 48.7	+0.1
KIRV	Kirov	65.79	325	⇑*e*P	P	07 35 48.9	+0.8
GEYT	Alibeck	67.55	302	P	P	07 36 00.9	+1.0
	comp=Z,4.8nm,0.9s,baz=191,slow=1.5,SNR=8.2						
BELG	Belogornoye	68.97	319	⇓*e*P	P	07 36 09.0	+0.6
BELG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YKA	Yellowknife Ar	69.19	29	P	P	07 36 09.7	+0.1
	comp=Z,0.7nm,0.8s,baz=290,slow=5.6,SNR=12						
KLMR	Klimovskoe	69.55	329	*e*P	P	07 36 09.7	-2.1
KLMR				pmax	pmax		
	comp=Z,30nm,2.0s						
KLMR	Klimovskoe	69.55	329	*e*P	P	07 36 09.7	-2.1
KLMR				AMP		07 36 19.4	
	comp=Z,30nm,2.0s						
ARCES	ARCESS Array B	70.26	340	P	P	07 36 16.6	+0.5
	comp=Z,1.4nm,0.7s,baz=68,slow=6.8,SNR=4.6						
OBN	Obninsk	73.64	325	*i* P	P	07 36 35.3	-1.3
OBN				*i*		07 36 50.5	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,102nm,21.0s						
UOSS	Minazif	74.39	290	P	P	07 36 41.3	-0.3
UOSS				IAmb	IAmb	07 36 43.8	
	comp=Z,5.0nm,0.7s						
FINES	FINESS Array B	74.81	333	P	P	07 36 43.7	+0.4
	comp=Z,3.5nm,0.5s,baz=64,slow=5.9,SNR=30						
KBZ	Khabaz	75.58	312	P	P	07 36 49.5	+1.5
	comp=Z,3.6nm,0.7s,baz=116,slow=4.9,SNR=12						
KBZ	Khabaz	75.58	312	*de*P	P	07 36 49.1	+1.0
KBZ				pmax	pmax		
	comp=Z,21nm,2.7s						
KIV	Kislovodsk	75.61	313	*i* P	P	07 36 50.3	+1.9
KIV				*i*		07 37 00.8	
KIV				*i*		07 39 41.5	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,45nm,16.0s						
NVAR	Mina Array Bea	78.51	52	P	P	07 37 05.5	+0.6
	comp=Z,1.8nm,0.5s,baz=295,slow=5.8,SNR=30						
AKASG	Malin Array Be	79.77	323	P	P	07 37 11.6	+0.3
	comp=Z,1.0nm,0.4s,baz=50,slow=5.4,SNR=4.8						
AKBB	Malin Array Si	79.77	323	P	P	07 37 11.5	+0.2
AKBB				pmax	pmax		
	comp=Z,16nm,1.5s						
AKBB	Malin Array Si	79.77	323	P	P	07 37 11.5	+0.2
AKBB				IAmb	IAmb	07 37 12.3	
	comp=Z,16nm,1.5s						
NB2	NORSAR Subarra	80.37	338	P	P	07 37 14.3	-0.2
	comp=Z,4.7nm,0.6s,baz=41,slow=5.3						
NOA	NORSAR Array B	80.37	338	P	P	07 37 15.1	+0.7
	comp=Z,3.9nm,0.9s,baz=41,slow=5.3,SNR=8.0						
NOA	NORSAR Array B	80.37	338	*e*P	P	07 37 14.7	+0.2
NOA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	Topopah Spring	80.66	53	P	P	07 37 17.0	+0.4
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TPNV	Topopah Spring	80.66	53	P	P	07 37 17.0	+0.4
TPNV				IAmb	IAmb	07 37 22.2	
	comp=Z,8.6nm,1.5s						
PDAR	Pinedale Array	81.87	45	P	P	07 37 23.3	+0.3
	comp=Z,0.9nm,0.6s,baz=272,slow=2.6,SNR=9.8						
FRB	Frobisher Bay	82.96	13	P	P	07 37 28.8	+0.8
	comp=Z,0.8nm,0.6s,baz=45,slow=5.7,SNR=1.5						
SRU	San Rafael Swe	83.31	48	P	P	07 37 30.7	+0.1
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SRU	San Rafael Swe	83.31	48	P	P	07 37 30.7	+0.1
BR131	Keskin Array S	83.58	313	⇑*e*P	P	07 37 32.5	+0.6
BRTR	Keskin Array B	83.58	313	P	P	07 37 32.9	+1.0
	comp=Z,4.2nm,0.9s,baz=146,slow=2.4,SNR=8.3						
VYHS	Vyhne	86.37	326	*e*P	P	07 37 46.9	+1.3
VYHS	Vyhne	86.37	326	*e*P	P	07 37 46.9	+1.3
MODS	Modra-Piesok	87.20	327	*e*P	P	07 37 49.9	+0.3
MODS	Modra-Piesok	87.20	327	*e*P	P	07 37 49.9	+0.3
TORD	Torodi Ar. Bea	122.19	313	PKP	PKPdf	07 43 58.9	0.0
	comp=Z,0.7nm,0.6s,baz=33,slow=0.9,SNR=6.3						
PLCA	Paso Flores	151.78	120	PKPbc	PKiKP	07 44 58.6	+0.1
	comp=Z,1.1nm,0.7s,baz=226,slow=0.7,SNR=5.8						

IDC 05 07:26:30.5±0.9, 30°.54N×141°.96E, h0^{km}, mb4.1/8, mb1 4.4/8, mb1mx3.9/48, mbtmp4.1/8, MS3.5/4, Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=38.6km s-min=22.7km az=97.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	15.76	333	LR	LR	07 36 18.1	
	comp=Z,106nm,18.0s,baz=148,slow=37						
GUMO	Guam	17.08	170	LR	LR	07 35 41.6	
	comp=Z,123nm,20.9s,baz=310,slow=32						
MKAR	Makanchi Array	48.19	307	P	P	07 35 12.2	-0.4
	1.5nm,0.6s,baz=85,slow=7.4,SNR=2.8						
NRIK	Noril'sk	49.39	338	P	P	07 35 21.7	+0.2
	4.2nm,0.9s,baz=118,slow=6.9,SNR=3.9						
WRA	Warramunga Arr	50.72	189	P	P	07 35 31.9	-0.2
	7.4nm,0.8s,baz=9.5,slow=8.2,SNR=6.1						
ASAR	Alice Springs	54.44	189	P	P	07 35 59.7	0.0
	1.9nm,0.7s,baz=9.7,slow=6.6,SNR=4.3						
ILAR	Eielson Array	54.82	30	P	P	07 36 01.7	-0.3
	1.3nm,1.1s,baz=258,slow=6.9,SNR=1.9						
YKA	Yellowknife Ar	69.23	29	P	P	07 37 38.7	-0.1
	0.9nm,1.1s,baz=301,slow=6.2,SNR=3.5						
ARCES	ARCESS Array B	70.24	340	LR	LR	08 12 54.0	
	comp=Z,43nm,18.2s,baz=5.0,slow=40						
FINES	FINESS Array B	74.79	333	P	P	07 38 12.3	+0.2
	3.8nm,0.9s,baz=60,slow=8.2,SNR=2.4						
NVAR	Mina Array Bea	78.56	52	P	P	07 38 34.5	+0.2
	0.8nm,0.6s,baz=289,slow=5.5,SNR=4.1						
PDAR	Pinedale Array	81.92	45	LR	LR	08 15 49.8	
	comp=Z,24nm,19.1s,baz=316,slow=36						

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*IDC **05** 07:28:27.1±0.6, 30°.52N×142°.13E, h0^{km}, mb4.0/17, mb1 4.2/21, mb1mx4.0/55, mbtmp4.0/21, ML3.7/4, Error ellipse: s-maj=23.7km s-min=13.0km az=77.0*

*NEIC **05** 07:28:28.7±1.6, 30°.55N±0°.04×142°.2E±0°.1, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=20.5km s-min=4.1km az=76.0*

ISC 05 07:28:30.9±0.5, 30°.58N±0°.05×142°.1E±0°.1, h23^{km}, n51, σ0^{s}.92/57, mb4.3/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.19	323	Pn	Pn	07 29 17.9	-1.8
JHJ	Hachijo jima 2	3.22	323	Pn	Pn	07 29 19.0	-1.0
	19nm,0.3s,baz=66,slow=22,SNR=1.7						
JHJ				Sn	Sn	07 29 55.1	-2.5
	45nm,0.3s,baz=74,slow=18,SNR=2.8						
JCJ	Chichijima	3.47	179	Pn	Pn	07 29 21.5	-2.0
	7.9nm,0.3s,baz=312,slow=18,SNR=2.0						
JCJ				Sn	Sn	07 30 03.6	-0.3
	19nm,0.3s,baz=127,slow=20,SNR=1.9						
JCJ	Chichijima	3.47	179	Pn	Pn	07 29 22.3	-1.2
JYT	Yasato	5.86	345	Pn	Pn	07 29 56.2	-0.1
INU	Inuyama	6.40	319	Pn	Pn	07 30 04.5	+0.8
JGF	Kuroka	6.40	323	Pn	Pn	07 30 05.2	+1.4
MJAR	Matsushiro Arr	6.78	332	Pn	Pn	07 30 09.0	0.0
	2.1nm,0.3s,baz=161,slow=11,SNR=20						
MJAR				Sn	Sn	07 31 25.6	+0.1
	0.3nm,0.3s,baz=162,slow=19,SNR=6.1						
MAJO	Matsushiro	6.78	332		Pn	07 30 09.6	+0.6
MAT	Matsushiro	6.78	332	P	Pn	07 30 09.2	+0.2
MAT				S	Sn	07 31 23.2	-2.3
MJB9	Matsu-Tunnel	6.79	332	Pn	Pn	07 30 09.4	+0.4
JWT	Wachi	7.33	312	Pn	Pn	07 30 17.2	+0.6
JMM	Marumori	7.35	352	Pn	Pn	07 30 15.9	-0.9
JSD	Sado	8.09	338	Pn	Pn	07 30 26.3	-0.6
JTM	Tenmabayashi	10.22	356	Pn	Pn	07 30 55.0	-1.1
JKA	Kamikawa-asahi	13.52	2	Pn	Pn	07 31 39.4	-1.8
KSRS	Korea Array	13.61	304	Pn	Pn	07 31 43.9	+1.4
	0.2nm,0.3s,baz=104,slow=13,SNR=2.8						
YULB	Yu-li	19.86	254	P	P	07 33 00.2	-0.3
YULB				IAmb	IAmb	07 33 16.1	
	comp=Z,17nm,1.0s						
KLR	Kul'dur	20.22	340	P	P	07 33 03.9	-0.3
	comp=Z,2.1nm,0.6s,baz=171,slow=11,SNR=4.2						
SONM	Songino Array	32.24	313	P	P	07 34 58.2	+0.7
	comp=Z,1.2nm,0.7s,baz=121,slow=9.2,SNR=3.2						
MTN	Manton Dam	44.44	195	P	P	07 36 39.0	-1.2
ZALV	Zalesovo Beam	46.86	317	P	P	07 36 59.8	+0.8
	comp=Z,0.7nm,0.5s,baz=134,slow=6.2,SNR=2.4						
ZALV				PcP	PcP	07 38 31.4	-0.2
	comp=Z,1.8nm,0.5s,baz=116,slow=3.5,SNR=7.0						
MK31	Makanchi Array	48.27	307	P	P	07 37 10.5	+0.4
MK31				IAmb	IAmb	07 37 10.6	
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	48.27	307	P	P	07 37 10.1	0.0
	comp=Z,2.1nm,0.6s,baz=89,slow=9.0,SNR=9.5						
MAKZ	Makanchi	48.48	307	P	P	07 37 12.1	+0.4
MAKZ				IAmb	IAmb	07 37 24.0	
	comp=Z,2.1nm,0.7s						
NRIK	Noril'sk	49.40	338	P	P	07 37 18.6	+0.2
	comp=Z,2.9nm,0.6s,baz=113,slow=9.0,SNR=3.3						
CTAO	Charters Tower	50.53	175	P	P	07 37 27.9	+0.4
KURK	Kurchatov	50.55	313	P	P	07 37 27.4	+0.1
WB0	Warramunga Arr	50.60	189	P	P	07 37 27.3	-0.8
WB2	Warramunga Arr	50.78	189	P	P	07 37 28.6	-0.8
WB2				IAmb	IAmb	07 37 30.7	
	comp=Z,6.8nm,0.8s						
WRA	Warramunga Arr	50.78	189	P	P	07 37 28.4	-1.0
	comp=Z,6.7nm,0.6s,baz=6.3,slow=7.6,SNR=21						
WRA				PcP	PcP	07 38 46.3	+0.1
	comp=Z,0.5nm,0.6s,baz=3.9,slow=3.8,SNR=1.6						
PPLA	Purkeypile	52.23	32	P	P	07 37 41.0	+1.1
PPLA				IAmb	IAmb	07 38 06.7	
	comp=Z,17nm,1.5s						
AS31	Alice Springs	54.51	189	P	P	07 37 56.7	-0.3
ASAR	Alice Springs	54.51	189	P	P	07 37 56.1	-0.8
	comp=Z,1.7nm,0.5s,baz=357,slow=5.2,SNR=13						
ILAR	Eielson Array	54.71	30	P	P	07 37 58.1	+0.1
	comp=Z,0.4nm,0.7s,baz=250,slow=6.4,SNR=2.4						
KK31	Karatay Array	57.04	304	P	P	07 38 16.1	+1.0
KK31				IAmb	IAmb	07 38 28.9	
	comp=Z,6.7nm,1.1s						
KKAR	Karatay Array	57.04	304	P	P	07 38 16.1	+1.1
KKAR				IAmb	IAmb	07 38 28.9	
	comp=Z,6.7nm,1.1s						
DAWY	Dawson	57.98	31	P	P	07 38 22.2	+0.9
STKA	Stephens Creek	62.12	180	P	P	07 38 49.7	-0.2
	comp=Z,2.0nm,0.9s,baz=335,slow=6.5,SNR=4.0						
STKA	Stephens Creek	62.12	180	P	P	07 38 50.8	+0.9
FORT	Forrest	62.46	194	P	P	07 38 52.0	-0.2
ABKAR	Akbulak array	62.65	313	P	P	07 38 53.8	+0.3
ABKAR				IAmb	IAmb	07 39 06.4	
	comp=Z,2.5nm,0.8s						
YKA	Yellowknife Ar	69.13	29	P	P	07 39 34.8	-0.1
	comp=Z,0.3nm,0.7s,baz=294,slow=5.5,SNR=4.2						
FINES	FINESS Array B	74.81	333	P	P	07 40 09.0	0.0
	comp=Z,1.1nm,0.4s,baz=64,slow=6.0,SNR=7.5						
KBZ	Khabaz	75.61	312	P	P	07 40 14.4	+0.5
	comp=Z,2.7nm,0.7s,baz=95,slow=5.3,SNR=4.1						
NVAR	Mina Array Bea	78.43	52	P	P	07 40 30.9	+0.6
	comp=Z,0.7nm,0.5s,baz=282,slow=6.2,SNR=10						
AKASG	Malin Array Be	79.78	323	P	P	07 40 37.2	+0.1
	comp=Z,0.5nm,0.5s,baz=46,slow=7.0,SNR=2.4						
NOA	NORSAR Array B	80.36	338	P	P	07 40 40.3	+0.2
	comp=Z,0.5nm,0.7s,baz=46,slow=4.7,SNR=1.7						
PDAR	Pinedale Array	81.80	45	P	P	07 40 48.7	+0.3
	comp=Z,0.3nm,0.5s,baz=316,slow=2.5,SNR=2.8						
BRTR	Keskin Array B	83.60	313	P	P	07 40 58.2	+0.6
	comp=Z,2.0nm,0.9s,baz=75,slow=6.1,SNR=3.3						
TORD	Torodi Ar. Bea	122.21	313	PKP	PKPdf	07 47 23.4	-1.1
	comp=Z,0.4nm,0.7s,baz=59,slow=1.2,SNR=1.5						

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*IDC **05** 07:54:55.4±1.2, 30°.48N×142°.00E, h0^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.6/39, mbtmp3.7/7, ML3.4/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/47, Error ellipse: s-maj=45.0km s-min=18.5km az=77.0*

*NEIC **05** 07:54:56.1±1.0, 30°.57N±0°.08×142°.3E±0°.2, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=29.3km s-min=11.0km az=73.0*

*JMA **05** 07:54:58.3±0.7, 30°.73N×142°.29E, h74^{km}, M4.1*

ISC 05 07:54:58.0±0.8, 30°.62N±0°.06×142°.3E±0°.1, h23^{km}, n30, σ1^{s}.75/34, mb4.0/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.24	321	P	Pn	07 55 46.2	-1.2
JHJ2	Mitsune	3.24	321	Pn	Pn	07 55 46.8	-0.6
JHJ	Hachijo jima 2	3.26	321	Pn	Pn	07 55 46.7	-1.1
	8.1nm,0.3s,baz=109,slow=20,SNR=5.4						
JHJ				Sn	Sn	07 56 22.7	-3.1
	16nm,0.3s,baz=72,slow=19,SNR=2.2						
JCJ	Chichijima	3.51	181	Pn	Pn	07 55 50.2	-0.9
	9.7nm,0.3s,baz=270,slow=20,SNR=1.5						
JCJ				Sn	Sn	07 56 29.6	-2.4
	15nm,0.3s,baz=287,slow=19,SNR=1.9						
JCJ	Chichijima	3.51	181	Pn	Pn	07 55 50.4	-0.7
BSO1	Boso 1	4.17	345	P	Pn	07 55 59.6	-0.1
BSO1				*i* S	Sn	07 56 46.2	-1.2
BSO3	Boso 3	4.42	341	P	Pn	07 56 03.0	-0.5
JOD2	Odawara 2	5.34	331	P	Pn	07 56 16.0	-0.4
JOD2				S	Sn	07 57 15.8	-1.4
JYT	Yasato	5.86	343	Pn	Pn	07 56 24.9	+1.5
JRY	Ryogami san	6.07	333	P	Pn	07 56 26.7	+0.3
JAG	Ashikaga	6.25	339	P	Pn	07 56 28.5	-0.3
JGF	Kuroka	6.45	322	Pn	Pn	07 56 32.0	+0.4
MJAR	Matsushiro Arr	6.80	331	Pn	Pn	07 56 37.1	+0.6
	0.4nm,0.3s,baz=161,slow=11,SNR=21						
MAJO	Matsushiro	6.80	331		Pn	07 56 37.9	+1.4
MAT	Matsushiro	6.80	331	P	Pn	07 56 37.3	+0.8
MAT				S	Sn	07 57 52.5	-0.7
JFK	Kawauchi	6.83	351	P	Pn	07 56 35.5	-1.3
JFK				S	Sn	07 57 46.8	-7.1
JMM	Marumori	7.33	351	Pn	Pn	07 56 42.9	-0.8
JTM	Tenmabayashi	10.20	355	Pn	Pn	07 57 23.6	+0.7
KSRS	Korea Array	13.69	304	LR	LR	08 03 36.2	
	comp=Z,21nm,18.4s,baz=10.0,slow=38						
ZALV	Zalesovo Beam	46.92	317	LR	LR	08 21 54.8	
	comp=Z,26nm,18.2s,baz=66,slow=35						
MK31	Makanchi Array	48.34	307	P	P	08 03 38.0	+0.2
MK31				IAmb	IAmb	08 03 39.0	
	comp=Z,2.0nm,1.4s						
MKAR	Makanchi Array	48.34	307	P	P	08 03 37.9	+0.1
	comp=Z,0.5nm,0.6s,baz=90,slow=9.3,SNR=6.7						
WR0	Warramunga Arr	50.83	189	P	P	08 03 56.6	-0.3
WR0				IAmb	IAmb	08 04 04.4	
	comp=Z,7.3nm,1.2s						
WB2	Warramunga Arr	50.84	190	P	P	08 03 56.8	-0.2
WRA	Warramunga Arr	50.84	190	P	P	08 03 56.5	-0.5
	comp=Z,1.3nm,0.6s,baz=5.6,slow=7.5,SNR=15						
ASAR	Alice Springs	54.56	189	P	P	08 04 24.1	-0.4
	comp=Z,0.5nm,0.8s,baz=0.0,slow=5.4,SNR=6.6						
KK31	Karatay Array	57.12	304	P	P	08 04 44.2	+1.4
KK31				IAmb	IAmb	08 04 45.7	
	comp=Z,1.6nm,1.1s						
KKAR	Karatay Array	57.12	304	P	P	08 04 44.2	+1.4
KKAR				IAmb	IAmb	08 04 45.7	
	comp=Z,1.6nm,1.1s						
ABKAR	Akbulak array	62.71	313	P	P	08 05 22.5	+1.4
NVAR	Mina Array Bea	78.32	52	P	P	08 06 59.0	+2.2
	comp=Z,0.2nm,0.5s,baz=298,slow=3.8,SNR=2.6						

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*MOS **05** 08:16:15.2±0.5, 56°.12N×113°.78E, h4^{km}, mb3.6/2, Error ellipse: s-maj=16.0km s-min=9.8km az=48.4*

*BYKL **05** 08:16:16.5±0.2, 56°.11N×113°.74E, h5^{km}±3^{km}*

*IDC **05** 08:16:17.1±2.5, 56°.21N×113°.79E, h0^{km}, mb3.3/3, mb1 3.3/5, mb1mx3.2/49, mbtmp3.2/5, ML2.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.3/28, Error ellipse: s-maj=66.1km s-min=27.8km az=143.0*

ISC 05 08:16:17.7±0.6, 56°.16N±0°.03×113°.74E±0°.02, h10^{km}, n41, σ2^{s}.12/73, mb3.5/3, 2C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.11	249	⇓*i*Pg	Pg	08 16 18.2	-2.3
SVKR				*e*Sg	Sg	08 16 20.2	-2.3
SVKR	Severomuysk	0.11	249	*e*PG	Pg	08 16 18.2	-2.3
SVKR				*e*		08 16 19.9	
SVKR				pmax	pmax		
	comp=Z,2µm,0.4s						
SVKR				smax	smax		
	comp=N,39µm,0.9s						
UKT	Uakit	0.67	186	*e*Pg	Pg	08 16 27.5	-3.2
UKT				*e*Sg	Sg	08 16 36.0	-3.5
UKT				Pmax			
	comp=N,152nm,0.6s						
UKT				Smax			
	comp=N,450nm,1.0s						
YOA	Uoyan	1.13	270	*e*Pg	Pb	08 16 37.2	-2.1
YOA				*e*Sg	Sb	08 16 52.8	-1.3
YOA				*e*		08 16 58.0	
YOA				Pmax			
	comp=N,182nm,0.4s						
YOA				max			
	comp=N,2µm,0.5s						
YOA	Uoyan	1.13	270	*e*PG	Pb	08 16 37.2	-2.1
YOA				*e*		08 16 53.2	
YOA				pmax	pmax		
	comp=Z,175nm,0.3s						
YOA				smax	smax		
	comp=E,2µm,0.4s						
NLYR	Nelyaty	1.14	72	⇓*i*Pg	Pb	08 16 37.0	-2.6

NLYR				*e*Pb	**Pn**	**08 16 39.4**	**-0.4**
NLYR				*e*Sg	**Sg**	**08 16 53.5**	**-1.0**
NLYR				*e*Sb	**Sn**	**08 16 57.2**	**+1.7**
NLYR				max			
	comp=E,685nm,0.4s						
NLYR				max			
	comp=E,959nm,1.0s						
NLYR	**Nelyaty**	**1.14**	**72**	⇓*i*PG	**Pb**	**08 16 37.0**	**-2.6**
NLYR				*e*		08 16 52.3	
NLYR				pmax	pmax		
	comp=Z,684nm,0.3s						
NLYR				smax	smax		
	comp=E,957nm,1.3s						
KMO	**Kumora**	**1.45**	**260**	*e*Pg	**Pn**	**08 16 42.3**	**-1.7**
KMO				*e*		08 16 44.0	
KMO				*e*Sg	**Sn**	**08 17 01.9**	**-1.2**
KMO				*e*		08 17 05.2	
KMO				max			
	comp=E,255nm,0.7s						
KMO				max			
	comp=E,1µm,0.7s						
KMO	**Kumora**	**1.45**	**260**	*e*PG	**Pn**	**08 16 42.4**	**-1.6**
KMO				*e*		08 17 01.1	
KMO				pmax	pmax		
	comp=Z,34nm,0.3s						
KMO				smax	smax		
	comp=N,1µm,0.8s						
BOD	**Bodaibo**	**1.67**	**5**	*e*Pg	**Pn**	**08 16 47.1**	**+0.1**
BOD				*e*Sg	**Sn**	**08 17 09.2**	**+0.7**
BOD				Pmax			
	comp=N,178nm,1.1s						
BOD				Smax			
	comp=N,567nm,0.6s						
BOD	**Bodaibo**	**1.67**	**5**	*e*PG	**Pn**	**08 16 46.7**	**-0.3**
BOD				*e*		08 17 08.9	
BOD				pmax	pmax		
	comp=Z,179nm,0.6s						
BOD				smax	smax		
	comp=E,561nm,0.4s						
YLYR	**Ulyunkhan**	**1.95**	**230**	*e*Pn	**Pn**	**08 16 50.9**	**0.0**
YLYR				*e*Pg	**Pb**	**08 16 51.5**	**-1.8**
YLYR				*e*		08 16 52.8	
YLYR				*e*Sg	**Sb**	**08 17 16.6**	**-1.0**
YLYR				max			
	comp=E,133nm,0.5s						
YLYR				Smax			
	comp=E,730nm,1.1s						
YLYR	**Ulyunkhan**	**1.95**	**230**	*e*PN	**Pn**	**08 16 50.9**	**0.0**
YLYR				*e*		08 16 52.7	
YLYR				*e*S	**Sn**	**08 17 15.5**	**+0.1**
YLYR				*e*		08 17 17.0	
YLYR				pmax	pmax		
	comp=Z,134nm,0.4s						
YLYR				smax	smax		
	comp=N,727nm,0.9s						
NIZ	**Nizh Angarsk**	**2.39**	**263**	*e*Pn	**Pn**	**08 16 56.1**	**-0.8**
NIZ				*e*Pg	**Pb**	**08 16 59.7**	**-1.1**
NIZ				*e*Sn	**Sn**	**08 17 25.6**	**-0.7**
NIZ				*e*Sg	**Sb**	**08 17 31.4**	**+1.0**
NIZ				Pmax			
	comp=N,41nm,0.7s						
NIZ				Smax			
	comp=N,373nm,0.8s						
CRS	**Chara**	**2.62**	**72**	⇓*i*Pn	**Pn**	**08 17 00.0**	**-0.1**
CRS				⇑*i*Pg	**Pb**	**08 17 04.2**	**-0.5**
CRS				*e*Sg	**Sg**	**08 17 38.8**	**-2.9**
CRS				Pmax			
	comp=N,287nm,1.0s						
CRS				Smax			
	comp=N,268nm,0.9s						
CRS	**Chara**	**2.62**	**72**	*e*PN	**Pn**	**08 16 59.9**	**-0.1**
CRS				*e*		08 17 03.8	
CRS				*e*		08 17 37.9	
CRS				pmax	pmax		
	comp=Z,180nm,0.6s						
CRS				smax	smax		
	comp=E,256nm,0.8s						
SYVR	**Suvo**	**3.31**	**222**	*e*Pn	**Pn**	**08 17 09.3**	**-0.2**
SYVR				*e*Pg	**Pb**	**08 17 15.2**	**-1.2**
SYVR				*e*PgPg	**PbPb**	**08 17 19.1**	**-0.5**
SYVR				*e*Sn	**Sn**	**08 17 47.9**	**-0.9**
SYVR				*e*Sg	**Sb**	**08 17 57.9**	**+1.2**
SYVR				max			
	comp=E,50nm,1.0s						
SYVR				Smax			
	comp=E,313nm,1.7s						
SYVR	**Suvo**	**3.31**	**222**	*e*PN	**Pn**	**08 17 08.9**	**-0.6**
SYVR				*e*		08 17 14.7	
SYVR				*e*		08 17 57.8	
SYVR				pmax	pmax		
	comp=Z,50nm,0.9s						
SYVR				smax	smax		
	comp=N,320nm,1.6s						
VTMR	**Vitim**	**3.35**	**350**	*e*Pg	**Pb**	**08 17 17.6**	**+0.4**
VTMR				*e*Sg	**Sb**	**08 18 01.8**	**+3.8**
TUP	**Tupik**	**3.95**	**113**	*e*Pn	**Pn**	**08 17 17.1**	**-1.3**
TUP				*e*Pg	**Pb**	**08 17 27.4**	**0.0**
TUP				*e*Sn	**Sn**	**08 18 02.6**	**-2.2**
TUP				*e*Sg	**Sb**	**08 18 18.2**	**+2.9**
TUP				*e*SgSg	**Sg**	**08 18 23.4**	**-1.1**
TUP				Pmax			
	comp=N,25nm,0.5s						
TUP				max			
	comp=N,207nm,1.2s						
TUP	**Tupik**	**3.95**	**113**	⇑*i*PN	**Pn**	**08 17 17.6**	**-0.8**
TUP				*e*		08 17 27.0	
TUP				*e*S	**Sn**	**08 18 02.7**	**-2.1**
TUP				*e*		08 18 17.5	
TUP				pmax	pmax		
	comp=Z,25nm,0.4s						
TUP				smax	smax		
	comp=E,206nm,0.9s						
MXMB	**Maximikha**	**4.10**	**227**	*e*Pn	**Pn**	**08 17 19.2**	**-1.2**
MXMB				*e*Pg	**Pb**	**08 17 29.9**	**0.0**
MXMB				*e*Sg	**Sb**	**08 18 22.5**	**+3.0**
OGRR	**Ongureny**	**4.35**	**237**	*e*Pn	**Pn**	**08 17 24.3**	**+0.5**
OGRR				*e*Pg	**Pb**	**08 17 34.7**	**+0.5**
OGRR				*e*Sg	**Sb**	**08 18 29.9**	**+3.2**
OGRR				Pmax			
	comp=E,34nm,1.4s						
OGRR				Smax			
	comp=E,74nm,1.6s						
OGRR	**Ongureny**	**4.35**	**237**	*e*PN	**Pn**	**08 17 23.9**	**+0.1**
OGRR				*e*		08 17 35.0	
OGRR				*e*		08 18 29.9	
OGRR				pmax	pmax		
	comp=Z,34nm,1.8s						
OGRR				smax	smax		
	comp=E,73nm,1.8s						
YKLR	**Yuktali**	**4.42**	**81**	*e*Pn	**Pn**	**08 17 24.5**	**-0.3**
YKLR				*e*Pg	**Pb**	**08 17 35.2**	**-0.2**
YKLR				*e*Sg	**Sb**	**08 18 33.0**	**+4.3**
ZRHB	**Zarechye**	**5.28**	**230**	*e*Sg	**Sb**	**08 18 58.6**	**+5.2**
ZRHB				Smax			
	comp=E,303nm,1.4s						
TRG	**Tyrgan**	**5.49**	**235**	*e*Pn	**Pn**	**08 17 38.8**	**-0.8**
TRG				*e*Pg	**Pb**	**08 17 53.7**	**0.0**
TRG				*e*Sg	**Sb**	**08 19 04.5**	**+4.9**
TRG				Pmax			
	comp=E,7.0nm,1.1s						
TRG				Smax			
	comp=E,32nm,0.9s						
KPC	**Khapcheranga**	**6.52**	**188**	*e*Pn	**Pn**	**08 17 53.2**	**-0.4**
KPC				*e*Pg	**Pb**	**08 18 12.4**	**+1.3**
KPC				*e*Sg	**Sb**	**08 19 36.5**	**+7.5**
KPC				*e*		08 19 50.2	
KPC				Pmax			
	comp=E,1.0nm,0.3s						
KPC				max			
	comp=E,107nm,1.5s						
IRK	**Irkutsk**	**6.80**	**239**	*e*PG	**Pb**	**08 18 18.5**	**+2.6**
IRK				*e*		08 19 45.4	
IRK				pmax	pmax		
	comp=Z,120nm,0.2s						
IRK				smax	smax		
	comp=E,123nm,0.4s						
TLY	**Talaya**	**7.46**	**237**	*e*PG	**Pb**	**08 18 31.1**	**+4.0**
TLY				*e*		08 20 05.9	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TLY				smax	smax		
	comp=E,12nm,0.8s						
ZEA	**Zeya**	**8.15**	**102**	*e*PG	Pg	08 18 46.2	-7.3
ZEA				*e*		08 20 32.0	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				smax	smax		
	comp=N,30nm,1.0s						
MOY	**Mondy**	**8.76**	**244**	*e*PN	**Pn**	**08 18 25.5**	**+1.0**
MOY				*e*		08 18 55.0	
MOY				*e*		08 20 47.1	
MOY				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MOY				smax	smax		
	comp=E,44nm,1.6s						
SONM	**Songino Array**	**9.48**	**212**	Pn	**Pn**	**08 18 35.6**	**+1.2**
	comp=E,0.1nm,0.3s,baz=31,slow=14,SNR=1.5						
SONM				Lg	Lg	08 21 12.2	
	comp=E,0.7nm,0.3s,baz=16,slow=28,SNR=15						
YAK	**Yakutsk**	**10.08**	**48**	Lg	Lg	08 21 24.9	
	comp=E,0.2nm,0.3s,baz=337,slow=22,SNR=6.2						
KLR	**Kul'dur**	**12.91**	**115**	Lg	Lg	08 23 00.4	
	comp=E,0.1nm,0.3s,baz=34,slow=17,SNR=5.3						
KLR				LR	LR	08 24 40.4	
	comp=E,43nm,20.9s,baz=31,slow=39						
ZALV	**Zalesovo Beam**	**16.66**	**274**	Pn	**Pn**	**08 20 11.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=96,slow=15,SNR=1.4						
KSRS	**Korea Array**	**21.00**	**147**	LR	LR	08 29 37.5	
	comp=E,19nm,19.8s,baz=85,slow=38						
KURK	**Kurchatov**	**21.45**	**270**	P	**P**	**08 21 07.8**	**+1.9**
MKAR	**Makanchi Array**	**21.54**	**258**	P	**P**	**08 21 08.7**	**+1.8**
	comp=E,0.5nm,0.7s,baz=54,slow=11,SNR=8.0						
KURBB	**Kurchatov Arra**	**21.55**	**270**	P	**P**	**08 21 07.8**	**+0.9**
	comp=E,1.6nm,0.8s,baz=63,slow=9.9,SNR=6.8						
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**08 25 55.1**	**+0.4**
	comp=E,0.4nm,0.9s,baz=338,slow=6.3,SNR=4.2						

BYKL 05 08:17:33.6±0.3, 56°.06N×113°.67E, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**313**	⇑*i*Pg	Pg	08 17 35.0	-0.2
SVKR				*e*Sg	Sg	08 17 37.4	+1.1
UKT	**Uakit**	**0.57**	**182**	*e*Pg	Pg	08 17 43.2	-1.3
UKT				*e*Sg	Sg	08 17 51.5	-0.5
UKT				Pmax			
	101nm,0.4s						
UKT				Smax			
	189nm,0.4s						
YOA	**Uoyan**	**1.09**	**275**	*e*Pg	Pg	08 17 53.1	-1.4
YOA				*e*		08 17 56.7	
YOA				*e*Sg	Sg	08 18 09.1	+0.4
YOA				*e*		08 18 14.9	
YOA				max			
	147nm,0.2s						
YOA				max			
	1µm,0.4s						
NLYR	**Nelyaty**	**1.21**	**68**	*e*Pg	Pg	08 17 55.7	-1.1
NLYR				*e*Sg	Sg	08 18 11.8	-0.7
NLYR				*e*Sb	Sn	08 18 15.2	+0.2
NLYR				Pmax			
	149nm,0.4s						
NLYR				max			
	339nm,0.7s						
KMO	**Kumora**	**1.40**	**264**	*e*Pg	Pn	08 17 58.5	-1.9
KMO				*e*Pb	Pg	08 17 59.8	-0.6
KMO				*e*Sg	Sg	08 18 17.8	-0.7
KMO				*e*Sb	Sn	08 18 20.6	+1.1
KMO				max			
	104nm,0.5s						
KMO				max			
	518nm,0.9s						
BOD	**Bodaibo**	**1.77**	**6**	*e*Pg	Pn	08 18 04.6	-0.9
BOD				*e*Sn	Sn	08 18 27.8	-0.9
BOD				*e*Sg	Sb	08 18 28.6	-1.1
BOD				Pmax			
	49nm,0.4s						
BOD				Smax			
	228nm,0.5s						
YLYR	**Ulyunkhan**	**1.86**	**231**	*e*Pg	Pn	08 18 07.0	+0.3
YLYR				*e*Sg	Sn	08 18 31.4	+0.6
YLYR				Pmax			
	55nm,0.2s						
YLYR				Smax			
	389nm,0.4s						
NIZ	**Nizh Angarsk**	**2.34**	**265**	*e*Pg	Pb	08 18 16.5	-0.1
NIZ				*e*Sg	Sb	08 18 46.5	+0.4
NIZ				Pmax			
	31nm,0.7s						
NIZ				Smax			
	188nm,0.5s						
CRS	**Chara**	**2.69**	**70**	*e*Pg	Pb	08 18 22.2	-0.3
CRS				*e*Sg	Sb	08 18 56.8	+0.8
CRS				Pmax			
	4.0nm,0.2s						
CRS				Smax			
	142nm,1.1s						
SYVR	**Suvo**	**3.21**	**223**	*e*Sg	Sb	08 19 12.5	+1.5
SYVR				Smax			
	64nm,1.0s						
VTMR	**Vitim**	**3.44**	**350**	*e*Pg	Pb	08 18 35.4	0.0
VTMR				*e*Sg	Sb	08 19 20.0	+2.3
TUP	**Tupik**	**3.95**	**112**	*e*Sg	Sb	08 19 36.1	+3.7
TUP				*e*SgSg	SgSg	08 19 41.1	+0.6
TUP				max			
	83nm,0.8s						
MXMB	**Maximikha**	**4.00**	**228**	*e*Sg	Sb	08 19 38.0	+4.1
OGRR	**Ongureny**	**4.26**	**238**	*e*Sg	Sb	08 19 45.0	+3.6
OGRR				Smax			
	37nm,0.8s						
YKLR	**Yuktali**	**4.48**	**80**	*e*Sg	Sb	08 19 52.1	+4.6
TRG	**Tyrgan**	**5.40**	**235**	*e*Sg	Sg	08 20 20.8	-6.3
TRG				Smax			
	24nm,1.1s						
KPC	**Khapcheranga**	**6.42**	**188**	*e*Pg	Pb	08 19 27.9	+1.8
KPC				*e*Sg	Sg	08 20 52.2	-7.3
KPC				*e*		08 21 08.3	
KPC				Pmax			
	7.0nm,0.7s						
KPC				max			
	58nm,1.5s						

BYKL 05 08:18:29.1±0.3, 56°.08N×113°.69E, 1C-1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**297**	⇑*i*Pg	Pg	08 18 30.9	+0.2
SVKR				*e*Sg	Sg	08 18 33.0	+1.3
UKT	**Uakit**	**0.59**	**183**	*e*Pg	Pg	08 18 38.8	-1.6
UKT				*e*Sg	Sg	08 18 46.6	-1.5
UKT				Pmax			
	64nm,0.4s						
UKT				Smax			
	142nm,0.4s						
YOA	**Uoyan**	**1.10**	**274**	*e*Pg	Pg	08 18 48.7	-1.5
YOA				*e*Sg	Sg	08 19 03.7	-0.8
YOA				Pmax			
	138nm,0.4s						
YOA				Smax			
	436nm,0.6s						
NLYR	**Nelyaty**	**1.20**	**69**	⇓*i*Pg	Pg	08 18 50.0	-2.0
NLYR				*e*Pb	Pb	08 18 52.5	-0.1
NLYR				*e*Sg	Sg	08 19 06.7	-0.8
NLYR				*e*Sb	Sn	08 19 10.7	+0.6
NLYR				max			
	76nm,0.6s						
NLYR				max			
	220nm,0.4s						
KMO	**Kumora**	**1.41**	**263**	*e*Pg	Pn	08 18 54.3	-1.8
KMO				*e*Pb	Pg	08 18 56.0	-0.1
KMO				*e*Sg	Sg	08 19 14.0	-0.4
KMO				*e*Sb	Sn	08 19 16.4	+1.0
KMO				max			
	72nm,0.4s						
KMO				max			
	308nm,0.8s						
BOD	**Bodaibo**	**1.75**	**6**	*e*Pn	Pn	08 18 59.2	-1.5
BOD				*e*Pg	Pb	08 19 00.6	-1.5
BOD				*e*Sg	Sn	08 19 23.5	-0.2
BOD				Pmax			
	83nm,0.8s						
BOD				Smax			
	165nm,0.6s						
YLYR	**Ulyunkhan**	**1.88**	**231**	*e*Pn	Pn	08 19 02.3	-0.2
YLYR				*e*Pg	Pb	08 19 03.6	-0.7
YLYR				*i* Sg	Sn	08 19 27.4	+0.5
YLYR				Pmax			
	53nm,0.2s						
YLYR				Smax			
	190nm,0.3s						
NIZ	**Nizh Angarsk**	**2.35**	**264**	*e*Pg	Pb	08 19 11.8	-0.6
NIZ				*e*Sn	Sn	08 19 36.4	-2.2
NIZ				*e*Sg	Sb	08 19 41.7	-0.3
NIZ				Pmax			
	25nm,0.6s						
NIZ				Smax			
	108nm,0.5s						
CRS	**Chara**	**2.67**	**70**	*e*Pg	Pb	08 19 17.5	-0.2
CRS				*e*Sn	Sn	08 19 46.1	-0.3
CRS				*e*Sg	Sb	08 19 52.8	+1.8
CRS				Pmax			
	26nm,0.6s						
CRS				Smax			
	89nm,0.6s						
SYVR	**Suvo**	**3.23**	**223**	*e*Sg	Sb	08 20 09.0	+1.8
SYVR				Smax			
	54nm,1.0s						
TUP	**Tupik**	**3.95**	**112**	*e*Pn	Pg	08 20 01.2	+16
TUP				*e*Sg	Sb	08 20 31.4	+3.5
TUP				Smax			
	41nm,0.7s						

IDC 05 08:24:13.7±2.3, 14°.64S×167°.68E, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx3.8/40, mbtmp4.1/4, ML4.0/1, Error ellipse: s-maj=54.9km s-min=39.3km az=107.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.49**	**189**	Pn	Pn	08 26 04.5	+0.2
	2.1nm,0.3s,baz=88,slow=15,SNR=22						
WRA	**Warramunga Arr**	**32.23**	**256**	P	P	08 30 44.3	+0.2
	0.3nm,0.4s,baz=84,slow=8.1,SNR=9.2						
ASAR	**Alice Springs**	**33.08**	**249**	P	P	08 30 50.9	-0.6
	3.2nm,0.5s,baz=78,slow=8.8,SNR=88						
CMAR	**Chiang Mai Arr**	**75.27**	**294**	P	P	08 35 59.6	+0.5
	1.6nm,0.4s,baz=99,slow=4.7,SNR=5.8						
ARCES	**ARCESS Array B**	**120.26**	**346**	PKP	PKPdf	08 43 05.9	-0.4
	2.4nm,0.9s,baz=49,slow=2.6,SNR=6.0						

IDC 05 08:25:43.9±3.4, 54°.31N×87°.29E, h0^{km}, mb1 2.6/2, mb1mx2.5/48, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=28.9km s-min=20.6km az=44.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**257**	*i*		08 36 09.8	
	baz=76,slow=326,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.50**	**257**	Pg	Pn	08 26 10.6	-1.4
	1.9nm,0.3s,baz=74,slow=16,SNR=21						
ZALV				Lg	Lg	08 26 31.4	
	1.4nm,0.3s,baz=74,slow=26,SNR=7.3						
KURBB	**Kurchatov Arra**	**6.50**	**239**	Pn	Pn	08 27 21.5	+0.8
	0.1nm,0.3s,baz=55,slow=14,SNR=4.3						
KURBB				Lg	Lg	08 29 09.9	
	0.0nm,0.3s,baz=54,slow=32,SNR=3.6						
MKAR	**Makanchi Array**	**8.16**	**205**	Pn	Pn	08 27 44.8	+1.2
	0.1nm,0.3s,baz=23,slow=12,SNR=1.7						

DDA ***05*** *08:57:22.0, 38°.58N×39°.75E, h7^{km}±2^{km}, ML2.6*

ISK 05 08:57:48.4, 39°.31N×40°.77E, h5^{km}, ML2.7/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YEDI	**Yedisu-Bingol**	**0.21**	**305**	PG	Pg	08 57 53.6	+0.9
KARO	**Karliova-Bingo**	**0.22**	**91**	PG	Pg	08 57 53.8	+1.1
KARO				SG	Sg	08 57 57.6	+2.0
BNGB	**Bingl**	**0.33**	**193**	PG	Pb	08 57 56.1	-0.7
BNGB				SG	Sb	08 58 01.6	-0.9
SLHN	**Bingol, Solhan**	**0.41**	**151**	*i* P	Pb	08 57 57.8	-0.3
SLHN				*i* S	Sb	08 58 04.3	-0.4
SLHN				IAML		08 58 05.0	
	comp=E,1µm,0.5s						
SLHN				IAML		08 58 05.0	
	comp=N,1µm,0.3s						
VRTB	**Varto-Mus**	**0.55**	**106**	PG	Pb	08 58 00.4	-0.3
VRTB	**Varto-Mus**	**0.55**	**106**	*i* P	Pb	08 58 00.1	-0.6
VRTB				*i* S	Sb	08 58 08.4	-0.6
VRTB				IAML		08 58 25.0	
	comp=N,511nm,1.1s						
MUSM	**Mu-Merkez**	**0.82**	**135**	*i* P	Pg	08 58 04.5	+0.3
MUSM				*i* S	Sb	08 58 17.3	+0.5
MUSM				IAML		08 58 18.0	
	comp=N,229nm,0.5s						
MUSM				IAML		08 58 19.0	
	comp=E,213nm,0.5s						
ERZN	**Erzincan**	**0.86**	**289**	PG	Pb	08 58 05.6	-0.2
ERZN				SG	Sn	08 58 19.8	-0.4
KOPR	**Koprukoy-ERZUR**	**1.08**	**51**	PG	Pg	08 58 09.3	+0.2
KOPR				SG	Sn	08 58 26.0	+0.3
BAYT	**Aydıntepe-Bayb**	**1.18**	**336**	PN	Pn	08 58 12.3	+0.5
SVAN	**Silvan-Diyarba**	**1.21**	**164**	PN	Pn	08 58 12.8	+0.8
SVAN				SN	Sn	08 58 31.3	+2.5
GURO	**Guroymak-BITLI**	**1.24**	**127**	PN	Pn	08 58 12.7	+0.1
MLAZ	**Malazgirt-MUS**	**1.39**	**97**	PN	Pg	08 58 16.1	+1.0
DYBB	**Diyarbakir**	**1.45**	**200**	PN	Pg	08 58 16.8	+0.7
SVRC	**Sivrice-ELAZID**	**1.48**	**231**	PN	Pg	08 58 17.3	+0.6
SRTM	**Siirt_Merkez**	**1.60**	**145**	*i* P	Pg	08 58 19.8	+0.8
SRTM				*i* S	Sn	08 58 25.3	-13
SRTM				IAML		08 58 26.0	
	comp=E,59nm,0.5s						
SRTM				IAML		08 58 29.0	
	comp=N,48nm,0.5s						
ILIC	**ilic-Erzincan**	**1.71**	**275**	PN	Pb	08 58 20.6	+0.2
AGRB	**Hanur-Agry**	**1.74**	**81**	PN	Pb	08 58 21.0	+0.1
SENK	**Senkaya-Erzuru**	**1.74**	**44**	PN	Pb	08 58 21.2	+0.2
CHOM	**Cayeli-Rize**	**1.78**	**360**	PN	Pb	08 58 21.7	+0.1
KTUT	**Trabzon**	**1.84**	**336**	PN	Pb	08 58 22.4	-0.1

IDC ***05*** *09:01:07.8±0.7, 3°.98N×126°.31E, h0^{km}, mb4.2/14, mb1 4.3/15, mb1mx4.1/34, mbtmp4.2/15, ML4.0/1, MS3.2/8, Ms1 3.3/8, ms1mx2.9/46, Error ellipse: s-maj=31.5km s-min=13.2km az=71.0*

DJA ***05*** *09:01:09.4±0.8, 4°N±6°×12°7E±°, h39^{km}±5^{km}, M4.6/11, mb4.6/7, mB5.1/3, MLv4.6/11, Mw(mB)4.4/3*

NEIC ***05*** *09:01:14.3±1.6, 3°.98N±0°.10×126°.4E±0°.1, h48^{km}±8^{km}, mb4.5/13, Error ellipse: s-maj=19.5km s-min=11.8km az=60.0*

ISC 05 09:01:14.1±0.5, 4°.00N±0°.04×126°.54E±0°.06, h45^{km}, n50, σ1^{s}.64/55, mb4.2/19, MS3.4/5, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.06**	**253**	P	**Pn**	**09 01 32.7**	**+0.2**
SGSI				S	**Sn**	**09 01 47.2**	**+1.1**
DDMP	**Don Marcelino,**	**2.25**	**338**	*e*P	**Pn**	**09 01 47.8**	**-1.1**
DDMP				*e*S	**Sn**	**09 02 17.1**	**+1.7**
MATI	**Mati**	**2.94**	**354**	*e*P	**Pn**	**09 01 58.2**	**-0.2**
MATI				*e*S	**Sn**	**09 02 32.1**	**-0.3**
DAV	**Davao City (W)**	**3.20**	**343**	LR	LR	09 03 32.5	
	comp=Z,399nm,19.6s,baz=59,slow=46						
SKMP	**Bagumbayan, Su**	**3.20**	**322**	*e*P	**Pn**	**09 02 02.9**	**+1.0**
SKMP				*e*S	**Sn**	**09 02 40.9**	**+2.0**
TNTI	**Ternate**	**3.31**	**166**	Pn	**Pn**	**09 02 04.5**	**+1.2**
TNTI	**Ternate**	**3.31**	**166**	P	**Pn**	**09 02 01.5**	**-1.9**
KCP	**Kidapawan**	**3.32**	**334**	⇑*e*P	**Pn**	**09 02 06.4**	**+2.7**
KCP				*i* S	**Sn**	**09 02 48.5**	**+6.5**
BUKP	**Musuan**	**4.13**	**339**	*e*P	**Pn**	**09 02 16.6**	**+2.0**
BUKP				*e*S	**Sn**	**09 03 05.2**	**+3.4**
CGP	**Cagayan de Oro**	**4.79**	**338**	⇓*e*P	Pn	09 02 30.2	+6.4
GTOI	**Gorontalo**	**4.86**	**227**	P	**Pn**	**09 02 26.3**	**+1.6**
	0.1nm24nm,0.6s						
PAGZ	**Pagadian**	**4.95**	**321**	*e*P	**Pn**	**09 02 26.5**	**+0.5**
PAGZ				*e*S	**Sn**	**09 03 22.8**	**+0.8**
GLSP	**General Luna,**	**5.76**	**356**	*e*P	**Pn**	**09 02 38.8**	**+1.7**
GLSP				*e*S	**Sn**	**09 03 40.5**	**-1.5**
MRSI	**Marisa**	**5.78**	**233**	P	**Pn**	**09 02 39.2**	**+1.9**
	0.3nm1µm86nm,0.6s						
SANI	**Sanana**	**6.03**	**185**	P	Pn	09 02 35.8	-5.0
LUWI	**Luwuk**	**6.27**	**217**	P	**Pn**	**09 02 45.6**	**+1.6**
	0.6nm3µm176nm,1.1s						
SIJI	**Sorong**	**6.75**	**136**	Pn	**Pn**	**09 02 52.0**	**+1.2**
	2.7nm,0.3s,baz=357,slow=8.9,SNR=5.3						

SIJI				Sn	Sn	09 04 08.5	+2.0
	0.4nm,0.3s,baz=0.0,slow=20,SNR=1.7						
SIJI				LR	LR	09 05 57.6	
	comp=Z,248nm,18.0s,baz=346,slow=42						
APSI	**Ampana**	6.91	225	P	Pn	09 02 52.6	-0.2
	0.3nm842nm80nm,0.9s						
MPSI	**Mapaga**	7.57	241	P	Pn	09 03 02.0	+0.1
FAKI	**Fak Fak**	8.93	140	Pn	Pn	09 03 21.6	+1.0
KAPI	**Kappang**	11.23	217	LR	LR	09 08 34.5	
	comp=Z,94nm,21.1s,baz=53,slow=40						
MTN	**Manton Dam**	17.34	165	Pn	Pn	09 05 12.0	-1.0
MTN				IAmb	IAmb	09 05 15.2	
	comp=Z,71nm,1.4s						
TPUB	**Ta-pu**	20.02	344	P	P	09 05 40.9	-2.4
SSLB	**Suanglung**	20.40	345	P	P	09 05 45.8	-1.6
SSLB				IAmb	IAmb	09 05 51.1	
	comp=Z,10nm,0.6s						
FITZ	**Fitzroy Crossi**	21.97	182	P	P	09 06 07.3	+3.0
	comp=Z,2.6nm,0.5s,baz=345,slow=10,SNR=6.6						
FITZ	**Fitzroy Crossi**	21.97	182	P	P	09 06 04.2	-0.1
FITZ				IAmb	IAmb	09 06 15.5	
	comp=Z,38nm,1.5s						
COEN	**Coen**	24.30	138	P	P	09 06 26.6	-0.9
COEN				IAmb	IAmb	09 06 47.1	
	comp=Z,15nm,1.3s						
WB0	**Warramunga Arr**	24.84	162	P	P	09 06 32.7	+0.2
WB0				IAmb	IAmb	09 06 45.8	
	comp=Z,23nm,1.2s						
WRA	**Warramunga Arr**	24.99	162	P	P	09 06 33.8	-0.1
	comp=Z,3.1nm,0.7s,baz=340,slow=10,SNR=21						
WB2	**Warramunga Arr**	25.00	162	P	P	09 06 33.8	0.0
WB2				IAmb	IAmb	09 06 50.1	
	comp=Z,14nm,1.1s						
WR0	**Warramunga Arr**	25.07	162	P	P	09 06 35.0	+0.5
WR0				IAmb	IAmb	09 06 48.2	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	28.42	166	P	P	09 07 04.3	-0.3
ASAR	**Alice Springs**	28.42	166	P	P	09 07 04.6	0.0
	comp=Z,0.7nm,0.6s,baz=347,slow=7.0,SNR=19						
CMAR	**Chiang Mai Arr**	30.58	300	P	P	09 07 22.5	-1.3
	comp=Z,1.1nm,0.3s,baz=119,slow=7.3,SNR=8.5						
CMAR				LR	LR	09 20 02.4	
	comp=Z,24nm,19.9s,baz=185,slow=37						
KSRS	**Korea Array**	33.32	2	P	P	09 07 48.0	+0.4
	comp=Z,1.8nm,0.6s,baz=183,slow=9.7,SNR=9.2						
KSRS				LR	LR	09 20 30.6	
	comp=Z,16nm,20.9s,baz=170,slow=35						
BBOO	**Buckleboo**	37.70	167	P	P	09 08 24.6	-0.7
STKA	**Stephens Creek**	38.44	159	P	P	09 08 32.3	+0.7
	baz=326,slow=11,SNR=6.2						
USRK	**Ussuriysk Ar.**	40.33	6	P	P	09 08 47.2	+0.1
	comp=Z,1.8nm,0.7s,baz=207,slow=7.8,SNR=7.5						
ASAJ	**Asahikawa**	42.39	17	P	P	09 09 04.7	+0.6
	comp=Z,1.6nm,0.3s,baz=165,slow=16,SNR=4.5						
SONM	**Songino Array**	46.99	341	P	P	09 09 40.2	-0.6
	comp=Z,1.3nm,0.6s,baz=155,slow=8.6,SNR=10						
SONM				LR	LR	09 29 40.2	
	comp=Z,52nm,20.4s,baz=317,slow=36						
PETK	**Petropavlovsk-**	55.25	22	P	P	09 10 43.0	+0.3
	comp=Z,4.3nm,0.9s,baz=193,slow=5.8,SNR=4.5						
MKAR	**Makanchi Array**	57.23	325	P	P	09 10 55.6	-1.3
	comp=Z,1.1nm,0.5s,baz=125,slow=8.6,SNR=5.3						
MKAR				ScP	ScP	09 15 48.5	+1.3
	comp=Z,0.6nm,0.7s,baz=119,slow=4.5,SNR=5.5						
ZALV	**Zalesovo Beam**	60.27	333	P	P	09 11 16.0	-1.8
	comp=Z,0.9nm,0.4s,baz=141,slow=6.1,SNR=2.0						
NRIK	**Noril'sk**	70.13	346	P	P	09 12 21.7	+0.3
	comp=Z,6.5nm,0.6s,baz=131,slow=6.6,SNR=25						
NRIK	**Noril'sk**	70.13	346	P	P	09 12 20.6	-0.8
ABKAR	**Akbulak array**	71.83	321	P	P	09 12 30.8	-1.4
ILAR	**Eielson Array**	84.94	25	P	P	09 13 45.5	+1.3
	comp=Z,0.2nm,0.4s,baz=239,slow=6.2,SNR=2.2						
ARCES	**ARCESS Array B**	90.14	340	P	P	09 14 10.5	+1.3
	comp=Z,5.3nm,1.0s,baz=25,slow=4.7,SNR=3.6						
ARCES				LR	LR	10 00 41.6	
	comp=Z,23nm,19.1s,baz=75,slow=40						
FINES	**FINESS Array B**	91.51	332	P	P	09 14 14.9	-0.7
	comp=Z,2.9nm,0.9s,baz=61,slow=6.5,SNR=2.0						
NOA	**NORSAR Array B**	98.47	334	LR	LR	10 02 52.3	
	comp=Z,13nm,18.8s,baz=290,slow=38						

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*KRNET **05** 09:07:48.5±0.1, 43°.25N×78°.71E, h15^{km}, mb3.2*
*SOME **05** 09:07:48.5, 43°.25N×78°.68E, h15^{km}*
*NNC **05** 09:07:48.2±0.3, 43°.23N×78°.74E, h0^{km}, mb3.4, mpv3.4, Error ellipse: s-maj=3.7km s-min=1.4km az=176.0*
ISC 05 09:07:48.6±0.9, **43°.25N**±0°.02×**78°.69E**±0°.01, **h6**^{km}±8^{km}, **n73,** σ1^{s}.**22**/135, **34C-28D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	**Zhinishke**	0.21	246	⇑*i*P	Pg	09 07 52.9	+0.2
	baz=49						
ZHN				⇑*i*S	Sg	09 07 55.9	+0.4
	baz=49						
ZHN	**Zhinishke**	0.21	246	⇑*i*P	Pg	09 07 52.9	+0.2
	49nm,0.1s						
ZHN				⇑*i*S	Sg	09 07 55.9	+0.4
	145nm,0.2s						
ZHN	**Zhinishke**	0.21	246	P	Pg	09 07 52.9	+0.2
	49nm,0.1s						
ZHN				S	Sg	09 07 55.9	+0.4
	145nm,0.2s						
KPKS	**Kokpek**	0.21	358	⇓*i*P	Pg	09 07 53.2	+0.4
	baz=55						
KPKS				⇓*i*S	Sg	09 07 56.3	+0.6
	baz=55						
KPKS	**Kokpek**	0.21	358	⇓*i*P	Pg	09 07 53.2	+0.4
	1µm,0.1s						
KPKS				⇓*i*S	Sg	09 07 56.3	+0.6
	410nm,0.2s						
UZB	**Uzynbulak**	0.26	114	*e*P	Pg	09 07 53.4	-0.3
	baz=14						
UZB				*e*S	Sg	09 07 56.7	-0.6
	baz=14						
UZB	**Uzynbulak**	0.26	114	*e*P	Pg	09 07 53.4	-0.3
	36nm,0.1s						
UZB				*e*S	Sg	09 07 56.7	-0.6
	1µm,0.1s						
UZB	**Uzynbulak**	0.26	114	P	Pg	09 07 53.4	-0.3
	36nm,0.1s						
UZB				S	Sg	09 07 56.7	-0.6
	1µm,0.1s						
SATY	**Saty**	0.29	227	⇓*i*P	Pg	09 07 54.4	+0.2
	baz=30						
SATY				⇑*i*S	Sg	09 07 58.5	+0.5
	baz=30						
SATY	**Saty**	0.29	227	⇓*i*P	Pg	09 07 54.4	+0.2
	82nm,0.1s						
SATY				⇑*i*S	Sg	09 07 58.5	+0.5
	595nm,0.1s						
SATY	**Saty**	0.29	227	P	Pg	09 07 54.4	+0.2
	82nm,0.1s						
SATY				S	Sg	09 07 58.5	+0.5
	595nm,0.1s						
KURS	**Kuram**	0.45	302	⇓*i*P	Pg	09 07 57.7	+0.4
	baz=2.0						
KURS				⇓*i*S	Sg	09 08 04.3	+1.1
	baz=2.0						
KURS	**Kuram**	0.45	302	⇓*i*P	Pg	09 07 57.7	+0.4
	9.6nm,0.4s						
KURS				⇓*i*S	Sg	09 08 04.2	+1.1
	47nm,0.4s						
KURS	**Kuram**	0.45	302	P	Pg	09 07 57.7	+0.4
	5.4nm,0.1s						
KURS				S	Sg	09 08 04.2	+1.1
	47nm,0.4s						
SHLS	**Shalkode**	0.57	100	⇑*i*P	Pn	09 08 05.1	+1.7
	baz=96						
SHLS				⇓*i*S	Sn	09 08 16.7	+3.5
	baz=96						
SHLS	**Shalkode**	0.57	100	⇑*i*P	Pn	09 08 05.0	+1.7
	8.3nm,0.1s						
SHLS				⇓*i*S	Sn	09 08 16.6	+3.5
	42nm,0.1s						
SHLS	**Shalkode**	0.57	100	P	Pn	09 08 05.0	+1.7
	8.3nm,0.1s						
SHLS				S	Sn	09 08 16.6	+3.5
	42nm,0.1s						
PDGK	**Podgornoye**	0.59	82	P	Pg	09 07 59.3	-0.6
	3.8nm,0.1s						
PDGK				S	Sg	09 08 06.9	-0.7
	12nm,0.1s						
PDGK	**Podgornoye**	0.59	82	⇑P	Pg	09 07 59.2	-0.6
	4.0nm,0.2s						
PDGK				⇑S	Sg	09 08 06.6	-1.0
	11nm,0.3s						
PRZ	**Przheval'sk**	0.80	196	⇑*i*P	Pb	09 08 04.5	-0.5
	baz=97						
PRZ				⇑*i*S	Sg	09 08 14.6	+0.3
	baz=97						
MNBS	**Baschi**	0.85	346	⇑*i*P	Pb	09 08 05.2	-0.7
	67nm,0.1s						
MNBS				⇓*i*S	Sb	09 08 16.8	-0.8
	74nm,0.1s						
MNBS	**Baschi**	0.85	346	P	Pb	09 08 05.2	-0.7
	67nm,0.1s						
MNBS				S	Sb	09 08 16.8	-0.8
	74nm,0.1s						
ANVS	**Anan'yevo**	0.89	238	⇑*i*P	Pb	09 08 05.8	-0.7
	baz=39						
ANVS				⇑*i*S	Sb	09 08 17.3	-1.4
	baz=39						
ARXS	**Arharly**	1.15	327	⇑*i*P	Pn	09 08 10.1	-1.1
	30nm,0.2s						
ARXS				⇓*i*S	Sn	09 08 25.6	-1.8
	26nm,0.1s						
ARXS	**Arharly**	1.15	327	P	Pn	09 08 10.1	-1.1
	30nm,0.2s						
ARXS				S	Sn	09 08 25.6	-1.8
	26nm,0.1s						
KOTS	**Kotyrbulak**	1.16	270	*e*P	Pg	09 08 10.9	+0.1
	66nm,0.1s						
KOTS				*e*S	Sg	09 08 27.4	+1.7
	118nm,0.2s						
KOTS	**Kotyrbulak**	1.16	270	P	Pg	09 08 10.9	+0.1
	66nm,0.1s						
KOTS				S	Sg	09 08 27.4	+1.7
	118nm,0.2s						
MDOK	**Medeo**	1.21	266	*e*P	Pn	09 08 11.1	-1.1
	baz=67						
MDOK				*e*S	Sn	09 08 27.3	-1.6
	baz=67						
MDOK	**Medeo**	1.21	266	*e*P	Pn	09 08 11.1	-1.1
	7.2nm,0.1s						
MDOK				*e*S	Sn	09 08 27.3	-1.6
	17nm,0.5s						
MDOK	**Medeo**	1.21	266	⇑P	Pg	09 08 13.4	+1.7
	3.2nm,0.4s						
MDOK				⇓S	Sn	09 08 27.6	-1.3
	10nm,0.5s						
KTMS	**Ketmen**	1.22	80	⇑*i*P	Pn	09 08 10.7	-1.6
	9.4nm,0.1s						
KTMS				⇓*i*S	Sb	09 08 26.6	-1.7
	32nm,0.2s						
KTMS	**Ketmen**	1.22	80	P	Pn	09 08 10.7	-1.6
	9.4nm,0.1s						
KTMS				S	Sb	09 08 26.7	-1.7
	30nm,0.1s						
TNSS	**Tian-Shan**	1.30	261	*e*P	Pn	09 08 12.7	-0.9
	baz=62						
TNSS				*e*S	Sn	09 08 30.0	-1.5
	baz=62						
TNSS	**Tian-Shan**	1.30	261	*e*P	Pn	09 08 12.7	-0.9
	7.7nm,0.1s						
TNSS				*e*S	Sn	09 08 30.0	-1.5
	20nm,0.2s						
DJR	**Jarkent**	1.34	36	*e*P	Pb	09 08 13.6	-0.5
	16nm,0.2s						
DJR				*e*S	Sg	09 08 32.0	+0.4
	145nm,0.3s						
CHKK	**Chushkaly**	1.38	296	*e*P	Pb	09 08 14.4	-0.4
	baz=97						
CHKK				*e*S	Sg	09 08 32.7	-0.1
	baz=97						
CHKK	**Chushkaly**	1.38	296	*e*P	Pb	09 08 14.4	-0.4
	5.4nm,0.2s						
CHKK				*e*S	Sg	09 08 32.7	-0.1
	76nm,0.2s						
KTBS	**Karatobe**	1.54	288	*e*P	Pb	09 08 17.3	-0.2
	baz=88						
KTBS				*e*S	Sg	09 08 37.8	-0.1
	baz=88						
KTBS	**Karatobe**	1.54	288	*e*P	Pb	09 08 17.3	-0.2
	14nm,0.3s						
KTBS				*e*S	Sg	09 08 37.8	-0.1
	64nm,0.5s						
KTBS	**Karatobe**	1.54	288	P	Pb	09 08 17.3	-0.2
	14nm,0.3s						
KTBS				S	Sg	09 08 37.8	-0.1
	56nm,0.3s						
IZV	**Izvestkoviy**	1.54	263	*e*P	Pb	09 08 17.2	-0.4
	baz=63						
IZV				*e*S	Sg	09 08 38.2	+0.2
	baz=63						
IZV	**Izvestkoviy**	1.54	263	*e*P	Pb	09 08 17.2	-0.4
	10nm,0.2s						
IZV				*e*S	Sg	09 08 38.2	+0.2
	25nm,0.2s						
IZV	**Izvestkoviy**	1.54	263	P	Pb	09 08 17.2	-0.4
	10nm,0.2s						
IZV				S	Sg	09 08 38.2	+0.2
	25nm,0.2s						
KDJ	**Kajisay**	1.58	225	⇑*i*P	Pb	09 08 17.9	-0.5
	baz=25						
KDJ				⇑*i*S	Sg	09 08 38.8	-0.7
	baz=25						
MTBS	**Maitube**	1.66	266	*e*P	Pg	09 08 19.8	-0.6
	baz=67						
MTBS				*e*S	Sg	09 08 42.4	+0.5
	baz=67						
MTBS	**Maitube**	1.66	266	*e*P	Pg	09 08 19.8	-0.6
	7.3nm,0.1s						
MTBS				*e*S	Sg	09 08 42.5	+0.5
	34nm,0.3s						
MTBS	**Maitube**	1.66	266	P	Pg	09 08 19.9	-0.5
	7.3nm,0.1s						
MTBS				S	Sg	09 08 42.5	+0.5
	34nm,0.3s						
KUU	**Kurty**	1.83	291	*e*P	Pb	09 08 22.0	-0.5
	baz=91						
KUU				*e*S	Sb	09 08 46.2	+0.6
	baz=91						
KUU	**Kurty**	1.83	291	*e*P	Pb	09 08 21.9	-0.5
	3.9nm,0.2s						
KUU				*e*S	Sb	09 08 46.1	+0.6
	51nm,0.2s						
KUU	**Kurty**	1.83	291	P	Pb	09 08 21.9	-0.5
	3.9nm,0.2s						
KUU				S	Sb	09 08 46.1	+0.6
	51nm,0.2s						
KST	**Kastek**	2.01	265	*e*P	Pb	09 08 25.6	0.0
	11nm,0.4s						
KST				*e*S	Sg	09 08 52.5	-0.7
	19nm,0.5s						
KST	**Kastek**	2.01	265	Pg	Pb	09 08 25.7	0.0
	10.0nm,0.3s						
KST				Lg	Lg	09 08 52.4	
	17nm,0.2s						
ULHL	**Ulahol**	2.07	242	⇑*i*P	Pb	09 08 26.2	-0.4
	baz=42						
ULHL				⇑*i*S	Sb	09 08 53.2	+0.5
	baz=42						
KAPS	**Kapalarasan**	2.09	13	*e*P	Pb	09 08 26.8	-0.1
	9.4nm,0.2s						
KAPS				*e*S	Sg	09 08 54.1	-1.5
	60nm,0.2s						
KAPS	**Kapalarasan**	2.09	13	Pg	Pb	09 08 26.8	-0.1
	7.0nm,0.1s						
KAPS				Lg	Lg	09 08 54.1	
	41nm,0.1s						
DGS	**Degeres**	2.13	271	*e*P	Pb	09 08 27.4	-0.4
	20nm,0.2s						
DGS				*e*S	Sb	09 08 55.5	+1.0
	48nm,0.4s						
DGS	**Degeres**	2.13	271	Pg	Pb	09 08 27.4	-0.4
	20nm,0.2s						
DGS				Lg	Lg	09 08 55.5	
	48nm,0.4s						
BOOM	**Boomskoye usch**	2.16	250	⇑*i*P	Pb	09 08 27.9	-0.3
	baz=51						
BOOM				⇑*i*S	Sb	09 08 54.9	-0.5
	baz=51						
KRBS	**Karabastau**	2.24	282	*e*P	Pb	09 08 28.9	-0.6
	baz=83						
KRBS				*e*S	Sb	09 08 57.5	-0.1
	baz=83						
KRBS	**Karabastau**	2.24	282	*e*P	Pb	09 08 28.9	-0.6
	3.5nm,0.2s						
KRBS				*e*S	Sb	09 08 57.4	-0.1
	7.8nm,0.2s						
KRBS	**Karabastau**	2.24	282	Pg	Pb	09 08 28.9	-0.6
	3.5nm,0.2s						
KRBS				Lg	Lg	09 08 57.3	
	9.4nm,0.2s						
TKM2	**Tokmak 2**	2.29	263	⇓*i*P	Pb	09 08 30.0	-0.5
	baz=63						
TKM2				⇓*i*S	Sb	09 08 58.7	-0.5
	baz=63						
TKM2	**Tokmak 2**	2.29	263	⇑Pg	Pb	09 08 30.1	-0.3
	2.2nm,0.3s						
TKM2				⇓Lg	Lg	09 09 02.4	
	6.7nm,0.3s						
KBK	**Karagaybulak**	2.81	259	⇑*i*P	Pb	09 08 37.0	-2.3
	baz=59						
KBK				⇑*i*S	Sb	09 09 11.2	-2.9
	baz=59						
CHMS	**Chumysh**	2.90	266	⇑*i*P	Pb	09 08 38.4	-2.3
	baz=66						
CHMS				⇑*i*S	Sb	09 09 12.9	-3.5
	baz=66						
SGDS	**Sogindy**	2.97	275	Pg	Pb	09 08 42.3	+0.4
	2.7nm,0.5s						
SGDS				Lg	Lg	09 09 20.5	
	5.6nm,0.2s						
AAK	**Ala-Archa**	3.15	260	⇓*i*P	Pn	09 08 41.0	+2.2
	baz=60						
AAK				⇓*i*S	Sn	09 09 18.9	+2.2
	baz=60						
AAK	**Ala-Archa**	3.15	260	⇓Pg	Pb	09 08 45.8	+0.8
	1.6nm,0.5s						
AAK				⇓Lg	Lg	09 09 29.0	
	3.3nm,0.5s						
UCH	**Uchtor**	3.25	253	⇑*i*P	Pb	09 08 43.1	-3.8
	baz=53						
UCH				⇑*i*S	Sn	09 09 21.7	+2.1
	baz=53						
EKS2	**Erkin-Say**	3.66	262	⇓*i*P	Pn	09 08 48.8	+3.0
	baz=62						
EKS2				⇓*i*S	Sn	09 09 31.1	+1.8
	baz=62						
MAKZ	**Makanchi**	4.25	32	⇓Pn	Pn	09 08 55.4	+1.6
	3.5nm,1.2s						
MAKZ				⇑Lg	Lg	09 10 02.7	
	1.7nm,0.5s						
MK31	**Makanchi Array**	4.36	35	⇓Pn	Pn	09 08 57.8	+2.4
	1.4nm,0.6s,baz=202,slow=15,SNR=9.7						
MK31				⇓Lg	Lg	09 10 05.6	
	0.5nm,0.2s,baz=212,slow=25,SNR=8.4						
KK31	**Karatay Array**	5.99	271	⇑Pg	Pb	09 09 37.7	+4.4
	0.3nm,0.4s,baz=79,slow=15,SNR=4.9						
KK31				⇑Lg	Lg	09 10 59.4	
	1.7nm,0.7s,baz=78,slow=26,SNR=4.1						

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*DRS **05** 09:12:19.6±0.0, 41°.70N×48°.48E, h8^{km}, ML2.9/4*
ISC 05 09:12:19.0±3.8, **41°.2N**±0°.1×**48°.3E**±0°.2, **h2**^{km}±18^{km}, **n7,** σ**0**^{s}.**85**/14, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKT	**Akhty**	0.50	309	*i* Pg	Pg	09 12 28.1	-0.5
	491nm,0.2s						
AKT				*i* Sg	Sg	09 12 34.5	-0.5
	4µm,0.4s						
GNBR	**Gunib**	1.55	322	*e*Pg	Pg	09 12 49.0	+0.3
	40nm,0.7s						
GNBR				*e*Sg	Sg	09 13 09.1	+0.2
	120nm,0.7s						
DDFL	**Dedoflistskaro**	1.63	281	P	Pn	09 12 48.7	0.0
DDFL				S	Sn	09 13 11.2	+0.8
LGD	**Lagodekhi**	1.65	295	P	Pn	09 12 47.7	-1.2
LGD				S	Sn	09 13 09.7	-1.0
KRNR	**Karanay**	1.94	329	*e*Pg	Pg	09 12 56.4	+0.4
	1.0nm,0.4s						
KRNR				*i* Sg	Sg	09 13 22.0	+0.9
	2.0nm,1.0s						
DBC	**Dubki**	2.13	331	*i* Pg	Pg	09 12 58.9	-0.9
	36nm,0.5s						
DBC				*e*Sg	Sg	09 13 28.3	+0.9
	65nm,0.7s						
BTNK	**Botanikuri**	2.65	282	P	Pn	09 13 03.6	+1.0
BTNK				S	Sn	09 13 35.5	+0.1

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*IDC **05** 09:20:06.1±1.4, 23°.39N×92°.93E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.5/50, mbtmp3.7/7, ML3.9/1, MS3.7/2, Ms1 3.7/2, ms1mx2.7/49, Error ellipse: s-maj=63.7km s-min=15.0km az=59.0*
*NDI **05** 09:20:16.7±2.0, 24°.13N×93°.94E, h79^{km}±16^{km}, ML3.6*
ISC 05 09:20:17.5±1.0, **24°.10N**±0°.05×**93°.75E**±0°.06, **h69**^{km}±12^{km}, **n32,** σ**2**^{s}.**17**/47, **mb3.5**/6, **3C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	0.75	14	*e*P	Pn	09 20 32.8	-0.2
IMP				*e*S	Sn	09 20 44.3	-0.2
IMP				IAML		09 20 44.7	
	comp=N,5µm,0.4s						
IMP				IAML		09 20 44.7	
	comp=E,2µm,0.4s						
SILR	**SILCHAR**	1.10	308	*e*S	Sn	09 20 56.4	+4.5
SILR				IAML		09 20 59.9	
	comp=E,1µm,0.3s						
SILR				IAML		09 21 00.5	
	comp=N,972nm,0.3s						
KOHI	**KOHIMA**	1.65	11	*e*P	Pn	09 20 44.2	-0.4
KOHI				*e*S	Sn	09 21 04.3	-0.7
KOHI				IAML		09 21 05.9	
	comp=N,491nm,0.6s						
SAIH	**SAIHA**	1.75	204	*e*P	Pn	09 20 45.3	-0.5
SAIH				*e*S	Sn	09 21 08.1	+0.8
SAIH				IAML		09 21 13.0	
	comp=E,549nm,0.3s						
SHL	**Shillong**	2.24	311	⇑*e*P	Pn	09 20 54.4	+1.8
SHL				*e*S	Sn	09 21 19.6	+0.2
SHL				IAML		09 21 21.2	
	comp=E,438nm,0.1s						
BELO	**BELONIA**	2.28	249	*e*P	Pn	09 20 55.3	+2.5
BELO				*e*S	Sn	09 21 22.9	+3.0
AGT	**Agartala**	2.30	265	*e*P	Pn	09 20 54.7	+1.6
AGT				*e*S	Sn	09 21 23.5	+3.1
AGT				IAML		09 21 25.1	
	comp=E,409nm,0.3s						
AGT				IAML		09 21 25.8	
	comp=N,463nm,0.3s						
MOKO	**MOKOCHONG**	2.32	17	⇑*e*P	Pn	09 20 52.9	-0.7
MOKO				IAML		09 21 08.4	
	comp=N,340nm,0.5s						
MOKO				IAML		09 21 10.2	
	comp=E,355nm,0.5s						
GUWA	**GUWAHATI**	2.80	319	*e*P	Pn	09 20 60.0	0.0
GUWA				*e*S	Sn	09 21 31.5	-1.2
GUWA				IAML		09 21 32.7	
	comp=E,447nm,0.1s						
GUWA				IAML		09 21 33.1	
	comp=N,562nm,0.1s						
ZIRO	**ZIRO**	3.42	1	⇑*e*P	Pn	09 21 07.5	-1.0
GTK	**Tadong**	5.65	306	*e*P	Pn	09 21 40.7	+1.7
TAPN	**Taplejung**	6.34	302	*e*Pn	Pn	09 21 49.7	+1.1
TAPN				*e*Sn	Sn	09 22 58.8	-1.0
	comp=N,65nm,0.2s						
ODAN	**Odare**	6.37	297	*e*Pn	Pn	09 21 49.9	+0.9
ODAN				*e*Sn	Sn	09 22 58.3	-2.2
	comp=N,275nm,0.4s						
RAMN	**Ramite**	7.06	295	*e*Pn	Pn	09 21 59.7	+1.3
RAMN				*e*Sn	Sn	09 23 15.7	-1.6
	comp=N,66nm,0.3s						
CMAR	**Chiang Mai Arr**	7.41	138	Pn	Pn	09 21 58.4	-4.6
	comp=N,0.5nm,0.3s,baz=314,slow=14,SNR=11						
CMAR				Sn	Sn	09 23 25.1	-0.6
	baz=318,slow=17,SNR=0.8						
CMAR				Lg	Lg	09 24 01.5	
	comp=N,0.4nm,0.3s,baz=317,slow=27,SNR=4.1						
GUN	**Gumba**	8.04	300	*e*Pn	Pn	09 22 12.3	+0.4
GUN				*e*Sn	Sn	09 23 38.5	-2.9
	comp=N,105nm,0.3s						
PKI	**Pulchoki**	8.28	296	*e*Pn	Pn	09 22 15.3	+0.2
PKI				*e*Sn	Sn	09 23 45.3	-1.9
PKIN	**Phulchoki**	8.29	296	*e*Pn	Pn	09 22 15.4	+0.2
PKIN				*e*Sn	Sn	09 23 45.6	-1.8
	comp=N,78nm,0.4s						
KKN	**Kakani**	8.47	298	*e*Pn	Pn	09 22 17.6	0.0
KKN				*e*Sn	Sn	09 23 49.4	-2.4
	comp=N,29nm,0.2s						
DMN	**Daman**	8.54	296	*e*Pn	Pn	09 22 18.8	+0.2
DMN				*e*Sn	Sn	09 23 50.9	-2.7
	comp=N,30nm,0.4s						
GKN	**Gorkha**	9.07	297	*e*Pn	Pn	09 22 25.1	-0.7
GKN				*e*Sn	Sn	09 24 03.7	-2.8
KOLN	**Koldanda**	9.84	294	*e*Pn	Pn	09 22 35.8	-0.6

KOLN				*e*Sn	Sn	09 24 21.5	-3.9
	comp=N,67nm,0.4s						
DANN	Dangsing	9.92	297	*e*Pn	Pn	09 22 36.4	-1.1
DANN				*e*Sn	Sn	09 24 23.5	-3.9
	comp=N,66nm,0.6s						
PYUN	Piuthan	10.46	295	*e*Pn	Pn	09 22 43.5	-1.4
PYUN				*e*Sn	Sn	09 24 36.6	-3.9
MKAR	Makanchi Array	24.45	341	P	P	09 25 31.1	+1.4
	comp=N,0.7nm,0.4s,baz=152,slow=10,SNR=20						
MKAR				LR	LR	09 37 24.4	
	comp=N,43nm,18.4s,baz=83,slow=42						
SONM	Songino Array	25.74	20	P	P	09 25 46.6	+5.0
	comp=N,0.7nm,0.8s,baz=198,slow=9.2,SNR=4.1						
KURBB	Kurchatov Arra	29.00	340	P	P	09 26 10.7	+0.1
	comp=N,0.2nm,0.6s,baz=153,slow=6.3,SNR=4.3						
ZALV	Zalesovo Beam	30.56	350	P	P	09 26 26.2	+1.9
	comp=N,0.6nm,0.5s,baz=166,slow=8.6,SNR=3.0						
WRA	Warramunga Arr	58.98	134	P	P	09 30 07.3	-2.9
	comp=N,1.0nm,0.6s,baz=317,slow=7.8,SNR=14						
ASAR	Alice Springs	61.42	138	P	P	09 30 24.4	-2.5
	comp=N,1.2nm,0.5s,baz=319,slow=6.8,SNR=28						
PMG	Port Moresby	61.86	116	LR	LR	10 01 22.6	
	comp=N,200nm,18.5s,baz=52,slow=40						
STKA	Stephens Creek	72.03	138	P	P	09 31 32.7	-1.5
	baz=343,slow=9.1,SNR=3.6						

ISC 05 09:22:31.4±1.2**, 49°.17N**±0°.06×**18°.87E**±0°.05**, h10^{km}, n5, σ0^{s}.82**/9**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANS	Liptovska Anna	0.40	92	*e*PG	Pg	09 22 38.7	-0.5
LANS				*e*SG	Sg	09 22 44.7	+0.2
LANS				*e*LG	Lg	09 22 45.4	
KOLL	Kolacno	0.66	208	*e*PG	Pg	09 22 43.1	-1.2
KOLL				*e*SG	Sg	09 22 54.0	+1.1
VYHS	Vyhne	0.67	182	*e*PG	Pb	09 22 45.9	+0.6
VYHS				*e*SG	Sn	09 22 57.3	-0.3
JAVC	Velka Javorina	0.85	249	*e*PG	Pb	09 22 48.9	+0.7
JAVC				*e*SG	Sn	09 23 01.6	-0.3
MORC	Moravsky Berou	1.06	306	*e*PG	Pb	09 22 52.3	+0.4

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*IDC **05** 09:23:18.0±0.7, 57°.22N×155°.52W, h0^{km}, mb4.1/28, mb1 4.2/30, mb1mx4.1/50, mbtmp4.1/30, ML3.9/2, MS3.3/9, Ms1 3.3/9, ms1mx2.9/55, Error ellipse: s-maj=20.7km s-min=9.8km az=9.0*

*AEIC **05** 09:23:21.4±2.4, 57°.15N±0°.04×155°.29W±0°.09, h5^{km}±4^{km}, ML3.9/133, mb4.3/18(NEIC), ML4.1/24(NEIC), Error ellipse: s-maj=7.0km s-min=4.9km az=77.0*

*NEIC **05** 09:23:21.1±2.5, 57°.10N±0°.02×155°.32W±0°.06, h21^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=2.2km az=93.0*

ISC 05 09:23:18.4±1.5**, 57°.10N**±0°.05×**155°.30W**±0°.04**, h5^{km}**±9^{km}**, n198, σ1^{s}.16**/194**, mb4.2**/32**, MS3.4**/6**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLK3	Peulik 3	0.79	319		Pb	09 23 35.3	+0.7
PLK3					Sn	09 23 48.1	-0.3
PLK2	Peulik 2	0.86	321		Pn	09 23 36.9	-0.4
PLK1	Peulik 1	0.99	315		Pn	09 23 38.8	-0.2
PLBL	Peulik Blue Cr	1.02	307		Pn	09 23 39.7	+0.4
OHAK	Old Harbor	1.10	83	Pg	Pg	09 23 38.1	-1.5
OHAK				IAML		09 24 00.1	
	comp=N,4μm,0.8s						
ANCK	Angle Creek	1.10	355		Pb	09 23 39.9	-0.2
ANCK					Sn	09 23 55.2	-1.1
KABU	Katmai Buttres	1.17	1		Pn	09 23 41.2	-0.4
KABU					Sn	09 23 56.6	-1.4
PLK5	Peulik 5	1.24	317		Pn	09 23 43.1	+0.8
KELA	Mount Kelaz	1.36	350		Pg	09 23 44.3	-0.2
KAHG	Katmai Hook Gl	1.45	16		Pn	09 23 45.4	0.0
KAHG					Sg	09 24 04.9	-0.2
KAHC	Katmai Hardscr	1.56	6		Pn	09 23 47.2	+0.3
KDAK	Kodiak Island	1.62	64	Pn	Pn	09 23 48.1	+0.5
	comp=N,452nm,0.3s,baz=255,slow=15,SNR=7086						
KDAK				Sn	Sn	09 24 09.3	+0.4
	comp=N,186nm,0.3s,baz=129,slow=22,SNR=12						
KDAK				LR	LR	09 24 25.4	
	comp=N,219nm,21.8s,baz=191,slow=40						
KDAK	Kodiak Island	1.62	64	Pn	Pn	09 23 47.6	0.0
KDAK				IAML		09 24 15.5	
	comp=N,2μm,0.5s						
KDAK				IAML		09 24 16.3	
	comp=N,2μm,0.9s						
KDAK	Kodiak Island	1.62	64		Sg	09 24 10.6	+0.1
CHGN	Chignik	1.90	246		Pn	09 23 51.8	+0.4
CHGN					Sn	09 24 16.8	+1.2
CHGN	Chignik	1.90	246	IAML		09 24 20.5	
	comp=E,1μm,0.6s						
CHGN				IAML		09 24 27.6	
	comp=N,1μm,0.7s						
VNSG	Veniaminof 6	2.31	247		Pn	09 23 59.7	+2.5
VNSS	Veniaminof 8	2.45	251		Pn	09 24 01.0	+1.7
AUH	Augustine H	2.47	23		Pn	09 24 00.8	+1.4
AUW	Augustine West	2.47	22		Pn	09 24 00.7	+1.3
AUP	Augustine Pinn	2.48	23		Pn	09 24 01.1	+1.7
VNWF	Veniaminof 8	2.54	250		Pn	09 24 02.8	+2.5
OPT	Oil Point	2.78	22		Pn	09 24 04.6	+1.0
ILS	Iliamna Low So	3.10	21		Pn	09 24 09.0	+1.0
IVE	Iliamna Volcan	3.16	21		Pn	09 24 10.2	+1.3
CNPM	China Poot	3.24	40		Pn	09 24 11.5	+1.6
CNPM					Sn	09 24 51.4	+2.5
CNPM	China Poot	3.24	40	IAML		09 25 07.3	
	comp=E,442nm,0.8s						
CNPM				IAML		09 25 15.3	
	comp=N,423nm,0.8s						
CNBA	Chernabura Isl	3.32	228		Pn	09 24 10.7	-0.3
SDPT	Sand Point	3.38	241		Pn	09 24 14.0	+2.3
SDPT	Sand Point	3.38	241	IAML		09 25 09.8	
	comp=E,520nm,1.0s						
BRLK	Bradley Lake	3.54	39		Pn	09 24 14.9	+0.9
BRLK	Bradley Lake	3.54	39	IAML		09 25 10.8	
	comp=E,299nm,0.7s						
BRLK				IAML		09 25 15.6	
	comp=N,271nm,0.6s						
BRSE	Bradley Lake S	3.57	40		Pn	09 24 15.5	+1.1
RED	Redoubt Volcan	3.58	21		Pn	09 24 15.5	+0.9
RDSO	Redoubt South	3.62	21		Pn	09 24 17.0	+1.8
RSO	Redoubt South	3.62	20		Pn	09 24 17.3	+2.0
NCT	North Crescent	3.68	19		Pn	09 24 17.8	+1.8
DFR	Drift River	3.75	20		Pn	09 24 18.4	+1.4
PS1A	Pavlof South-1	3.97	248		Pn	09 24 22.5	+2.6
SVW2	Sparrevohn	4.01	358		Pn	09 24 22.3	+1.8
SVW2	Sparrevohn	4.01	358	IAML		09 25 36.2	
	comp=E,196nm,0.7s						
PS4A	Pavlof South-4	4.06	247		Pn	09 24 23.3	+2.2
HAG	Hague Volcano	4.10	247		Pn	09 24 24.1	+2.4
CAPN	Captain Cook N	4.26	29		Pn	09 24 25.7	+1.9
SEW	Seward	4.29	43	Pn	Pn	09 24 24.2	-0.1
SLKM	Skilak Lake	4.32	36		Pn	09 24 25.7	+1.0
DT1	Dutton Round H	4.39	246		Pn	09 24 28.1	+2.5
SPCR	Spurr Chakacha	4.41	20		Pn	09 24 27.9	+1.9
O22K	Cooper Landing	4.46	38		Pn	09 24 27.6	+1.0
SPCP	Crater Peak Br	4.48	20		Pn	09 24 28.9	+1.8
SPCG	Spurr Capps Gl	4.53	20		Pn	09 24 29.1	+1.4
STLK	Strandline Lak	4.75	20		Pn	09 24 32.6	+1.9
RC01	Rabbit Creek A	4.92	33		Pn	09 24 34.4	+1.4
SUA	Susitna One	4.96	26		Sn	09 25 33.3	+2.0
SUA	Susitna One	4.96	26	Pn	Pn	09 24 35.5	+1.9
SUA	Susitna One	4.96	26	IAML		09 25 45.4	
	comp=N,145nm,0.9s						
FALS	False Pass	5.08	247		Pn	09 24 36.6	+1.4
PWL	Port Wells	5.21	41		Pn	09 24 37.5	+0.5
SKT	Skwentna	5.26	20		Pn	09 24 37.0	-0.5
MID	Middleton Isla	5.28	60		Pn	09 24 38.5	+0.7
SSLS	Shishaldin Sou	5.45	248		Pn	09 24 41.4	+1.1
SSBA	Shishaldin	5.48	249		Pn	09 24 41.9	+1.2
PMR	Palmer	5.50	32	Pn	Pn	09 24 41.4	+0.5
KNK	Knik Glacier	5.57	36		Pn	09 24 41.7	-0.2
HIN	Hinchinbrook I	5.65	51	Pn	Pn	09 24 42.8	-0.2
GLI	Glacier Island	5.69	45		Pn	09 24 43.1	-0.3
GHO	Glory Hole Cre	5.70	32		Pn	09 24 44.6	+0.9
FID	Port Fidalgo	5.85	48		Pn	09 24 44.9	-0.9
TTA	Tatalina	5.86	357		Pn	09 24 47.1	+1.2
SML	Sawmill	5.91	34		Pn	09 24 47.6	+1.1
JPK	Jack Peak	5.99	45		Pn	09 24 48.4	+0.8
PPLA	Purkeypile	6.02	14	Pn	Pn	09 24 51.3	+3.1
EYAK	Cordova Ski Ar	6.04	51		Pn	09 24 47.7	-0.7
SCM	Sheep Creek Mo	6.25	37		Pn	09 24 52.1	+0.9
DIV	Divide	6.35	47		Pn	09 24 52.8	+0.1
KAIM	Kayak Island	6.37	59		Pn	09 24 52.7	-0.1
RAGM	Ragged Mountai	6.44	55		Pn	09 24 53.5	-0.3
GOAT	Goat Mountain	6.50	53		Pn	09 24 54.5	-0.2
KLU	Klutina	6.51	44		Pn	09 24 55.5	+0.6
HMT	Hamilton	6.60	56		Pn	09 24 55.9	-0.1
WAT6	Susitna Watana	6.68	32		Pn	09 24 58.0	+0.7
NICHA	Nichawak Mount	6.69	57		Pn	09 24 57.0	-0.2
SUCK	Suckling Hills	6.72	59		Pn	09 24 57.5	-0.1
BMRM	Bremner River	6.74	50		Pn	09 24 57.5	-0.5
WAT2	Susitna Watana	6.77	27		Pn	09 24 59.5	+1.0
PS12	TAPS Pump St12	6.80	46		Pn	09 24 59.0	+0.2
KTH	Kantishna Hill	6.83	17		Pn	09 25 00.8	+1.6
M24K	Tolsona, Glenn	6.83	39		Pn	09 25 00.0	+0.9
TRF	Thorofare Moun	6.84	19		Pn	09 25 00.4	+1.0
BERG	Berg Lake	6.88	57		Pn	09 24 59.2	-0.6
GRIN	Grindle Hills	7.01	58		Pn	09 25 01.6	-0.1
RND	Reindeer	7.09	24		Pn	09 25 03.2	+0.4
N25K	Chitina, Valde	7.09	46		Pn	09 25 03.2	+0.4
KHIT	Khitrov Hills	7.10	57		Pn	09 25 02.5	-0.5
SNH	Sunshine Point	7.20	59		Pn	09 25 04.4	+0.2
KULT	Kultieth River	7.28	59		Pn	09 25 05.5	+0.2
CRQM	Cirque	7.28	55		Pn	09 25 05.1	-0.4
GLB	Gilahina Butte	7.32	49		Pn	09 25 05.7	-0.2
BPAW	Bear Paw Mtn.	7.33	15		Pn	09 25 07.2	+1.1
MCK	McKinley	7.36	23		Pn	09 25 06.6	+0.2
VRDI	Verde Repeater	7.36	51		Pn	09 25 06.7	+0.1
TGL	Tana Glacier	7.42	55		Pn	09 25 07.1	-0.2
ISLE	Juniper Island	7.58	57		Pn	09 25 09.5	-0.1
MCARA	McCarthy VSAT	7.62	51		Pn	09 25 10.5	+0.6
MESA	MESA	7.62	61		Pn	09 25 10.5	+0.4
BWN	Browne	7.65	20		Pn	09 25 13.4	+3.1
PAX	Paxson	7.67	36		Pn	09 25 11.8	+1.1
KIAG	Kiagna River	7.70	55		Pn	09 25 10.6	-0.6
BALM	Baldy	7.75	54		Pn	09 25 11.5	-0.4
PTPK	Patty Peak	7.76	53		Pn	09 25 11.8	-0.3
YAH	Yahtse	7.77	59		Pn	09 25 12.3	0.0
RKAV	Rock Avalanche	7.94	60		Pn	09 25 14.5	0.0
CHX	Chaix Hills	7.98	62		Pn	09 25 15.1	+0.1
BARN	Barnard Glacie	8.06	55		Pn	09 25 16.0	-0.3
TABL	Table Mountain	8.08	60		Pn	09 25 16.3	-0.2
SAMH	Samovar Hills	8.16	62		Pn	09 25 17.3	-0.2
CTGM	Chitina Glacie	8.17	56		Pn	09 25 17.6	-0.1
WRH	Wood River Hil	8.19	22		Pn	09 25 18.0	+0.3
MENT	Mentasta	8.23	40		Pn	09 25 21.3	+3.0
MLY	Manley	8.26	14		Pn	09 25 18.6	-0.2
LOGN	Logan Glacier	8.27	57		Pn	09 25 18.5	-0.6
HDA	Harding Lake	8.39	26		Pn	09 25 20.9	+0.4
CCB	Clear Creek Bu	8.40	23		Pn	09 25 20.5	-0.1
PCA	Pinnacle	8.41	63		Pn	09 25 20.5	-0.3
RIDG	Independent Ri	8.42	33	Pn	Pn	09 25 22.9	+1.9
I23K	Minto, Yukon-K	8.57	17		Pn	09 25 22.9	0.0
TCOL	CIGO, UAF Yank	8.59	22		Pn	09 25 25.6	+2.4
COLA	College	8.59	22	Pn	Pn	09 25 25.7	+2.5
MDM	Murphy Dome	8.59	21		Pn	09 25 23.0	-0.3
DOT	Dot Lake	8.60	36		Pn	09 25 25.4	+1.9
BCPM	Bancas Point	8.68	64		Pn	09 25 24.2	-0.3
IL31		8.71	24		Pn	09 25 25.2	+0.3
ILAR	Eielson Array	8.71	24	Pn	Pn	09 25 24.9	0.0
	comp=N,0.4nm,0.3s,baz=205,slow=12,SNR=30						
ILAR				Sn	Sn	09 26 53.3	-10
	baz=208,slow=21,SNR=1.3						
ILAR				LR	LR	09 28 49.3	
	comp=N,91nm,18.8s,baz=160,slow=38						
YUK2	White River	8.73	51		Pn	09 25 25.5	+0.2
PNL	Peninsula	8.74	66		Pn	09 25 24.2	-1.2
YUK3	Moose Creek	8.89	52		Pn	09 25 27.2	-0.3
POKR	Poker Plat Res	8.89	22		Pn	09 25 29.1	+1.7
ANM	Nome	8.95	331		Pn	09 25 28.8	+0.7
BC03		9.01	43		Pn	09 25 28.7	-0.3
BVCY	Beaver Creek	9.01	48		Pn	09 25 29.7	+0.6
YUK1	Sand Pete Hill	9.03	50		Pn	09 25 30.0	+0.6
YUK4	Talbot Arm	9.53	57		Pn	09 25 37.9	+1.6
YUK6	Outpost Mounta	9.54	59		Pn	09 25 36.3	-0.1
YUK5	Granite Creek	9.82	58		Pn	09 25 40.4	+0.1
HYT	Haines Junctio	9.91	60	Pn	Pn	09 25 42.0	+0.5
EGAK	Eagle	10.30	36	Pn	Pn	09 25 48.0	+1.4
COLD	Coldfoot	10.43	11	Pn	Pn	09 25 49.7	+1.2
DAWY	Dawson	10.46	42	Pn	Pn	09 25 50.4	+1.5
WHY	Whitehorse	11.14	63		Pn	09 25 57.9	-0.4
RDOG	Red Dog Mine	11.52	346	Pn	Pn	09 26 05.3	+1.9
DLBC	Dease Lake	13.53	74	Pn	Pn	09 26 32.5	+1.6
	comp=N,0.2nm,0.3s,baz=235,slow=2.5,SNR=5.6						
DLBC				Sn	Sn	09 29 01.0	-0.5
	comp=N,0.1nm,0.3s,baz=302,slow=19,SNR=1.5						
DLBC				LR	LR	09 31 00.8	
	comp=N,74nm,18.3s,baz=293,slow=34						
INK	Inuvik	14.91	32	Pn	Pn	09 26 49.5	-0.1
	comp=N,0.4nm,0.3s,baz=237,slow=13,SNR=9.8						
INK				LR	LR	09 33 08.2	
	comp=N,98nm,18.4s,baz=150,slow=40						
INK	Inuvik	14.91	32	Pn	Pn	09 26 51.1	+1.5
YKA	Yellowknife Ar	20.89	58	P	P	09 28 01.3	+0.2
	comp=N,5.9nm,0.8s,baz=272,slow=9.8,SNR=33						
NEW	Newport	24.48	95	P	P	09 28 39.7	+1.4
	comp=N,4.3nm,0.9s,baz=304,slow=11,SNR=8.4						
NEW	Newport	24.48	95	IAmb	IAmb	09 28 44.7	
	comp=Z,6.4nm,1.1s						
YBH	Yreka Blue Hor	25.86	112	P	P	09 28 52.8	+2.0
	comp=Z,2.2nm,1.0s,baz=323,slow=10,SNR=3.1						
YBH	Yreka Blue Hor	25.86	112	IAmb	IAmb	09 28 54.5	
	comp=Z,7.5nm,1.4s						
SEY	Seymchan	26.14	305	P	P	09 28 51.3	-1.7
	comp=Z,1.0nm,0.7s,baz=135,slow=7.1,SNR=1.8						
JTMT	Jette	26.33	93	IAmb	IAmb	09 29 03.9	
	comp=Z,4.6nm,0.9s						
PETK	Petropavlovsk-	26.75	282	P	P	09 28 57.9	-0.8
	comp=Z,3.8nm,0.7s,baz=72,slow=12,SNR=8.0						
RES	Resolute Bay	28.42	29	P	P	09 29 13.5	+0.1
	comp=Z,0.7nm,0.6s,baz=248,slow=9.9,SNR=7.0						
PAHR	Pah Rah Range	29.06	111	P	P	09 29 21.4	+1.8
PNTR	Pine Nut	29.41	112	P	P	09 29 24.8	+2.0
PNTR				IAmb	IAmb	09 29 29.9	
	comp=Z,5.0nm,0.9s						
ELK	Elko	30.44	105	P	P	09 29 34.0	+2.1
	comp=Z,1.2nm,0.8s,baz=320,slow=16,SNR=6.1						
ELK	Elko	30.44	105	IAmb	IAmb	09 29 37.9	
	comp=Z,4.4nm,1.4s						
NVAR	Mina Array Bea	30.57	112	P	P	09 29 34.8	+1.7
	comp=Z,1.9nm,0.8s,baz=304,slow=8.5,SNR=14						
R11A	Troy Canyon, C	32.02	109	P	P	09 29 47.3	+1.5
BW06	Boulder Array	32.07	97	P	P	09 29 47.2	+1.0
BW06				IAmb	IAmb	09 29 52.0	
	comp=Z,2.4nm,0.6s						
PD31	Pinedale Array	32.07	97	P	P	09 29 47.1	+0.8
PD31				IAmb	IAmb	09 29 52.0	
	comp=Z,2.2nm,0.6s						
PDAR	Pinedale Array	32.07	97	P	P	09 29 47.4	+1.1
	comp=Z,2.5nm,0.5s,baz=328,slow=4.2,SNR=13						
ULM	Lac du Bonnet	34.85	75	P	P	09 30 10.4	+0.4
	comp=Z,0.9nm,0.3s,baz=313,slow=12,SNR=1.8						
ULM				LR	LR	09 44 01.8	
	comp=Z,55nm,20.1s,baz=20,slow=36						
PV14	Lion Creek, Pa	35.46	102	IAmb	IAmb	09 30 21.6	
	comp=Z,8.1nm,1.5s						
PV11	David Mesa, Pa	35.60	102	P	P	09 30 18.2	+1.3
PV01	Paradox Valley	35.88	102	IAmb	IAmb	09 30 25.8	
	comp=Z,3.7nm,0.7s						
ANMO	Albuquerque	39.39	103	P	P	09 30 50.1	+1.1
	comp=Z,0.7nm,0.5s,baz=321,slow=7.8,SNR=3.7						
ASAJ	Asahikawa	40.07	279	P	P	09 30 52.6	-1.8
	comp=Z,4.1nm,0.9s,baz=102,slow=19,SNR=1.8						
FRB	Frobisher Bay	40.16	44	P	P	09 30 55.2	+0.4
	comp=Z,1.0nm,0.3s,baz=311,slow=9.5,SNR=8.2						
KLR	Kul'dur	42.46	292	P	P	09 31 12.8	-1.2
	comp=Z,4.5nm,0.6s,baz=64,slow=9.0,SNR=18						
NRIK	Noril'sk	45.97	334	P	P	09 31 40.9	-0.9
	comp=Z,1.8nm,0.5s,baz=51,slow=9.8,SNR=4.4						
KSRS	Korea Array	52.64	283	P	P	09 32 33.0	-0.2
	comp=Z,1.4nm,0.8s,baz=51,slow=6.6,SNR=4.6						
KSRS				LR	LR	09 53 29.5	
	comp=Z,10nm,21.9s,baz=30,slow=34						
SONM	Songino Array	55.52	306	P	P	09 32 53.8	-0.4
	comp=Z,0.9nm,0.6s,baz=42,slow=7.0,SNR=6.6						
SONM				PcP	PcP	09 33 54.2	0.0
	comp=Z,0.8nm,0.5s,baz=61,slow=1.4,SNR=4.5						
SONM				LR	LR	09 58 33.2	
	comp=Z,52nm,19.4s,baz=69,slow=38						
ZALV	Zalesovo Beam	58.99	323	P	P	09 33 18.4	-0.1
	comp=Z,1.0nm,0.5s,baz=46,slow=8.4,SNR=2.7						
ZALV				LR	LR	10 01 15.9	
	comp=Z,35nm,21.2s,baz=60,slow=39						
NB2	NORSAR Subarra	61.72	7	P	P	09 33 36.6	-0.5
	comp=Z,2.9nm,0.8s,baz=352,slow=6.9						
NOA	NORSAR Array B	61.72	7	P	P	09 33 36.9	-0.3
	comp=Z,1.1nm,0.6s,baz=352,slow=6.7,SNR=6.3						
FINES	FINESS Array B	61.79	359	P	P	09 33 37.2	-0.2
	comp=Z,3.3nm,0.9s,baz=8.2,slow=13,SNR=3.7						
KURK	Kurchatov	63.73	325	P	P	09 33 51.6	+1.0
KURBB	Kurchatov Arra	63.84	325	P	P	09 33 51.6	+0.3
	comp=Z,0.9nm,0.8s,baz=27,slow=6.7,SNR=3.2						
BVAR	Borovoye Array	64.05	331	P	P	09 33 51.5	-1.1
	comp=Z,0.9nm,0.5s,baz=70,slow=12,SNR=2.8						
AAK	Ala-Archa	72.21	324	P	P	09 34 43.1	-1.1
	comp=Z,2.3nm,0.8s,baz=23,slow=13,SNR=4.7						
AAK				LR	LR	10 08 06.3	
	comp=Z,36nm,20.5s,baz=349,slow=37						
AAK	Ala-Archa	72.21	324	IAmb	IAmb	09 34 44.8	
	comp=Z,2.7nm,0.8s						
AKASG	Malin Array Be	72.50	357	P	P	09 34 44.4	-1.2
	comp=Z,2.2nm,0.6s,baz=9.5,slow=6.1,SNR=10.0						
GERES	GERESS Array B	74.03	8	P	P	09 34 54.8	0.0
	comp=Z,1.1nm,0.6s,baz=356,slow=5.9,SNR=5.6						
ESDC	Sonseca Array	80.60	22	P	P	09 35 32.2	+0.5
	comp=Z,0.5nm,0.5s,baz=340,slow=5.2,SNR=6.7						
ESDC				LR	LR	10 13 39.2	
	comp=Z,12nm,18.4s,baz=155,slow=38						
CMAR	Chiang Mai Arr	82.93	293	P	P	09 35 43.9	-0.4
	comp=Z,1.6nm,0.4s,baz=11,slow=5.7,SNR=11						
BRTR	Keskin Array B	83.24	353	P	P	09 35 45.5	-0.3
	comp=Z,1.6nm,0.7s,baz=349,slow=1.5,SNR=4.3						
LBTB	Lobatse	147.94	358	PKPbc	PKPbc	09 43 04.0	-0.5
	comp=Z,2.9nm,0.6s,baz=21,slow=2.7,SNR=6.0						
BOSA	Boshof	151.52	359	PKPbc	PKPbc	09 43 12.7	-0.5
	comp=Z,3.6nm,0.9s,baz=299,slow=2.0,SNR=3.8						

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*SKHL **05** 09:44:04.5±0.6, 42°.99N×149°.10E, h52^{km}±5^{km}, mb4.6/3*

*JMA **05** 09:44:05.4±0.7, 43°.32N×149°.06E, h30^{km}, M4.2*

ISC 05 09:44:02.5±2.5**, 42°.84N**±0°.07×**149°.2E**±0°.1**, h35^{km}, n22, σ2^{s}.05**/38**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	2.55	283	P	Pn	09 44 42.3	+1.0
NEM2				*e*S	Sn	09 45 09.6	-1.5
NMR	Nemuro--Hokkai	2.56	283	*i* P	Pn	09 44 42.0	+0.5
NMR				*i* S	Sn	09 45 10.0	-1.4
KUR	Kuril'sk	2.56	339	*e*P	Pn	09 44 41.8	+0.3
KUR				AMB	AMB	09 44 42.0	
	80nm,0.3s						
KUR				*e*S	Sn	09 45 09.3	-2.2
KUR				A	A	09 45 12.0	
	90nm,0.3s						
KUR				A	A	09 45 12.0	
	122nm,0.3s						
YUK	Yuzh-Kuril'sk	2.68	298	*e*P	Pn	09 44 43.0	0.0
YUK				AMB	AMB	09 44 44.0	
	103nm,0.3s						
YUK				*e*S	Sn	09 45 11.8	-2.4
YUK				A	A	09 45 14.0	
	300nm,0.4s						
YUK				A	A	09 45 14.0	
	220nm,0.4s						
GRPR	Tuman	2.72	296	*e*S	Sn	09 45 13.0	-2.2
GLVR	Golovnino	2.80	290	*e*P	Pn	09 44 45.0	+0.3
GLVR				AMB	AMB	09 44 47.0	
	133nm,0.6s						
GLVR				*e*S	Sn	09 45 16.0	-1.2
GLVR				A	A	09 45 19.0	
	338nm,0.3s						
GLVR				A	A	09 45 19.0	
	179nm,0.3s						
JRA	Rausu	3.13	292	P	Pn	09 44 50.6	+1.3
JRA				*e*S	Sn	09 45 24.3	-1.2
JAK	Akkeshi	3.27	274	P	Pn	09 44 53.1	+1.8
JAK				*e*S	Sn	09 45 27.8	-1.2
JNK	Nakash	3.32	284	P	Pn	09 44 52.9	+0.9
JNK				*e*S	Sn	09 45 28.5	-1.7
JOB	Onbets	3.91	273	P	Pn	09 45 02.0	+2.0
JOB				*e*S	Sn	09 45 43.7	-0.9
JAR	Ashorobuto	3.97	278	P	Pn	09 45 02.9	+2.1
JAR				*e*S	Sn	09 45 45.2	-0.9
JTKR	Abashiri--Toko	3.98	288	P	Pn	09 45 03.2	+2.2
JCH	Churui	4.27	269	P	Pn	09 45 07.2	+2.2
JCH				*e*S	Sn	09 45 52.2	-1.3
JMP	Maruseppu	4.38	287	P	Pn	09 45 08.8	+2.4
JWK2	Keihoku	5.78	298	P	Pn	09 45 29.6	+3.9
JNB	Noboribetsu	5.99	269	P	Pn	09 45 31.7	+3.1
JNB				*e*S	Sn	09 46 34.8	-1.2
JKB	Kayabe	6.09	264	P	Pn	09 45 32.9	+3.0
JKB				*e*S	Sn	09 46 35.8	-2.5
JTH	Tanohata	6.20	245	P	Pn	09 45 33.0	+1.5
JTH				*e*S	Sn	09 46 37.7	-3.4
JANG	Nango	6.23	249	P	Pn	09 45 33.3	+1.4
JANG				*e*S	Sn	09 46 39.0	-2.9
JTM	Tenmabayashi	6.38	254	*e*S	Sn	09 46 43.0	-2.5
JYM2	Yakumo 2	6.53	267	*e*S	Sn	09 46 48.3	-1.0
JIO	Ouri	7.37	236	P	Pn	09 45 49.4	+1.8
JIO				*e*S	Sn	09 47 06.7	-3.3

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*IDC **05** 09:59:34.5±1.2, 30°.03S×177°.59W, h0^{km}, mb4.2/5, mb1 4.4/6, mb1mx4.0/25, mbtmp4.2/6, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/27, Error ellipse: s-maj=28.0km s-min=16.5km az=83.0*

ISC 05 09:59:39.2±1.1**, 30°.13S**±0°.07×**177°.7W**±0°.2**, h35^{km}, n17, σ1^{s}.80**/12**, mb4.1**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.90	347	Pn	Pn	09 59 54.1	-1.3
	710nm,0.3s,baz=73,slow=19,SNR=31						
RAO				Sn	Sn	10 00 05.8	-1.4
	3μm,0.3s,baz=90,slow=20,SNR=15						
URZ	Urewera	9.18	207	Pn	Pn	10 01 45.3	-3.9
	0.5nm,0.3s,baz=45,slow=10.0,SNR=2.2						
URZ				Sn	Sn	10 03 30.3	-0.8
	1.7nm,0.3s,baz=20,slow=23,SNR=9.8						
MSVF	Nonsavu	12.94	342	LR	LR	10 06 34.0	
	comp=Z,81nm,19.0s,baz=179,slow=33						
RPZ	Rata Peaks	16.25	210	Pn	Pn	10 03 24.9	+0.1
	0.4nm,0.3s,baz=317,slow=4.2,SNR=2.2						
RPZ				Sn	Sn	10 06 08.6	-15
	0.3nm,0.3s,baz=29,slow=13,SNR=2.2						
CTA	Charters Tower	34.03	279	P	P	10 06 21.7	+1.6
	4.4nm,0.4s,baz=105,slow=11,SNR=14						
STKA	Stephens Creek	34.80	257	P	P	10 06 28.2	+1.5
	baz=104,slow=11,SNR=4.6						
ASAR	Alice Springs	43.40	267	P	P	10 07 39.2	+0.5
	1.0nm,0.4s,baz=105,slow=7.3,SNR=35						
WRA	Warramunga Arr	44.36	272	P	P	10 07 47.3	+0.9
	3.0nm,0.3s,baz=110,slow=8.2,SNR=86						
QSPA	South Pole Qui	59.98	180	P	P	10 09 43.7	+1.7
	0.6nm,0.4s,baz=353,slow=5.2,SNR=8.1						
H03S2	Juan Fernandez	80.38	123	T	T	11 41 08.3	
	baz=238,slow=74,SNR=5.9						
H03S1	Juan Fernandez	80.39	123	T	T	11 41 08.9	
	baz=238,slow=74,SNR=5.5						
H03S3	Juan Fernandez	80.40	123	T	T	11 41 11.7	
	baz=238,slow=74,SNR=3.9						
H03N3	Juan Fernandez	80.57	123	T	T	11 41 22.7	
	baz=232,slow=74						
H03N2	Juan Fernandez	80.58	123	T	T	11 41 30.6	
	baz=232						
H03N1	Juan Fernandez	80.59	123	T	T	11 41 21.5	
	baz=232,slow=74,SNR=5.8						
NVAR	Mina Array Bea	87.86	43	P	P	10 12 25.7	+0.5
	0.4nm,0.7s,baz=217,slow=5.7,SNR=4.5						
FINES	FINESS Array B	144.99	340	PKP	PKPab	10 19 10.3	-1.0
	3.6nm,0.5s,baz=62,slow=3.3,SNR=26						

IDC 05 10:03:22.4±2.6**, 53°.73N**×**86°.98E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/60**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=24.3km s-min=15.1km az=73.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.30	280	*i*		10 12 29.2	
	baz=96,slow=334,SNR=1.3						
ZALV	Zalesovo Beam	1.30	280	Pg	Pg	10 03 45.7	-1.5
	2.7nm,0.3s,baz=99,slow=18,SNR=25						
ZALV				Lg	Lg	10 04 04.7	
	1.4nm,0.3s,baz=103,slow=29,SNR=5.5						
ZALV				*i*		10 12 35.3	
	2.2nm,0.3s,baz=155,slow=25,SNR=13						
KURBB	Kurchatov Arra	6.06	242	Pn	Pn	10 04 54.1	+1.0
	0.1nm,0.3s,baz=58,slow=13,SNR=6.7						

KURBB				Lg	Lg	10 06 32.1	
	0.0nm,0.3s,baz=62,slow=36,SNR=1.5						
MKAR	Makanchi Array	7.57	205	Pn	Pn	10 05 15.4	+1.5
	0.2nm,0.3s,baz=27,slow=14,SNR=5.7						
MKAR				Lg	Lg	10 07 21.2	
	0.1nm,0.3s,baz=28,slow=28,SNR=1.9						

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*SOME **05** 10:14:17.7, 44.°27N×82.°97E, h15km*

*NNC **05** 10:14:24.2±1.9, 44.°47N×82.°48E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=22.6km s-min=7.2km az=126.0*

ISC 05 10:14:18.4±1.6**, 44.°30N**±0.°07×**83.°01E**±0.°07**, h10km, n18, σ1s.79**/28**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.10	247	eP	Pb	10 14 56.7	0.0
	9.8nm,0.2s						
KTMS				eS	Sb	10 15 24.3	+1.3
	27nm,0.3s						
DJR	Jarkent	2.31	272	eP	Pb	10 15 00.9	+0.7
	12nm,0.5s						
DJR				eS	Sg	10 15 32.0	-0.6
	6.1nm,0.5s						
MK31	Makanchi Array	2.54	349	⇓Pn	Pb	10 15 04.2	0.0
	0.4nm,0.2s,baz=164,slow=16,SNR=6.1						
MK31				⇓Lg	Lg	10 15 36.6	
	1.6nm,0.3s,baz=168,slow=28,SNR=10.0						
MAKZ	Makanchi	2.61	344	⇑Pn	Pb	10 15 04.7	-0.5
	1.1nm,0.3s						
MAKZ				⇑Lg	Lg	10 15 38.2	
	2.8nm,0.6s						
PDGK	Podgornoye	2.73	250	Pg	Pb	10 15 06.8	-0.6
	1.2nm,0.2s						
PDGK				Lg	Lg	10 15 42.6	
	7.9nm,0.4s						
PDGK	Podgornoye	2.73	250	⇑Pn	Pb	10 15 06.7	-0.6
	0.5nm,0.2s						
PDGK				⇓Lg	Lg	10 15 42.4	
	11nm,0.5s						
KAPS	Kapalarasan	2.78	292	eP	Pb	10 15 07.8	-0.4
	2.0nm,0.1s						
KAPS				eS	Sb	10 15 44.3	+2.0
	5.6nm,0.5s						
SHLS	Shalkode	2.81	247	eP	Pn	10 15 04.2	+0.7
	10nm,0.3s						
SHLS				eS	Sn	10 15 38.1	+0.5
	19nm,0.3s						
UZB	Uzynbulak	3.11	250	Pg	Pb	10 15 13.0	-0.9
	1.2nm,0.2s						
UZB				Lg	Lg	10 15 52.9	
	6.2nm,0.4s						
KPKS	Kokpek	3.23	256	eP	Pb	10 15 15.7	-0.3
	4.3nm,0.1s						
KPKS				eS	Sb	10 15 57.0	+1.5
	25nm,0.4s						
MNBS	Baschi	3.32	268	eP	Pb	10 15 16.3	-1.2
MNBS				eS	Sb	10 15 58.8	+0.9
MNBS	Baschi	3.32	268	Pg	Pb	10 15 16.3	-1.2
MNBS				Lg	Lg	10 15 58.8	
ZSN	Zaisan	3.40	22	eP	Pb	10 15 18.1	-0.7
	1.7nm,0.1s						
ZSN				eS	Sb	10 16 01.8	+1.5
	3.1nm,0.3s						
SATY	Saty	3.56	251	eP	Pb	10 15 20.7	-0.9
	0.8nm,0.2s						
SATY				eS	Sb	10 16 06.1	+1.2
	4.2nm,0.3s						
KTBS	Karatobe	4.60	265	eP	Pb	10 15 42.0	+2.7
	0.5nm,0.2s						
KTBS				eS	Sg	10 16 42.5	-3.6
	6.6nm,0.4s						
KTBS	Karatobe	4.60	265	Pg	Pb	10 15 41.9	+2.7
	0.5nm,0.2s						
KTBS				Lg	Lg	10 16 42.5	
	6.6nm,0.4s						
KUU	Kurty	4.82	267	eP	Pb	10 15 44.9	+2.0
	0.6nm,0.3s						
KUU				eS	Sg	10 16 48.2	-4.9
	1.7nm,0.4s						
KUU	Kurty	4.82	267	Pg	Pb	10 15 44.9	+2.0
	0.6nm,0.3s						
KUU				Lg	Lg	10 16 48.2	
	1.7nm,0.4s						

DJA 05 10:27:05.4±0.5**, 8°S**±9°×**11°2E**±°**, h77km**±7km**, M3.6**/13**, MLv3.6**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWJI	Pagerwojo	0.46	346	P	Pn	10 27 19.6	+1.1
PWJI				S	Sn	10 27 30.2	+2.0
NGJI	Ngawi	1.19	337	P	Pn	10 27 26.8	+0.2
UGM	Wanagama	1.49	292	P	Pn	10 27 30.8	+0.3
UGM				S	Sn	10 27 49.6	+0.1
GMJI	Gumukmas	1.52	83	P	Pn	10 27 30.6	-0.3
GMJI				S	Sn	10 27 51.9	+1.8
GRJI	Gresik	1.64	20	P	Pn	10 27 32.6	+0.1
BLJI	Banyuglugur	1.81	67	P	Pn	10 27 34.6	-0.1
JAGI	Jajag, Banyuwa	2.21	90	P	Pn	10 27 40.2	+0.2
ABJI	Asem Bagus	2.39	74	P	Pn	10 27 43.0	+0.6
KPJI	Karang Pucung	3.17	291	P	Pn	10 27 54.4	+1.4
SRBI	Singaraja	3.28	84	P	Pn	10 27 54.1	-0.4

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*SJA **05** 10:41:03.9±0.6, 23.°84S×66.°79W, h223km±5km, ML3.9, MW4.0*

*IDC **05** 10:41:05.5±0.9, 23.°79S×66.°66W, h190km±9km, mb3.8/12, mb1 3.9/16, mb1mx3.7/37, mbtmp4.3/16, Error ellipse: s-maj=14.5km s-min=12.6km az=31.0*

*NEIC **05** 10:41:05.3±2.9, 23.°88S±0.°06×66.°80W±0.°05, h191km±8km, Error ellipse: s-maj=10.7km s-min=2.8km az=220.0*

*GUC **05** 10:41:06.9±0.5, 23.°90S×67.°19W, h230km±7km, ML4.6*

*VAO **05** 10:41:08.7±0.9, 23.°75S×66.°88W, h251km±10km, mb4.3*

ISC 05 10:41:05.5±0.6**, 23.°92S**±0.°04×**66.°90W**±0.°04**, h202km**±6km**, n134, σ1s.39**/174**, mb4.1**/13**, 14C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.51	122	⇓iP	Pn	10 41 40.2	+0.6
SLA				i S	S	10 42 06.3	+0.6
SLA	San Lorenzo	1.51	122	eP	Pn	10 41 40.3	+0.6
SLA				eS	S	10 42 06.6	+0.9
SLA				IAML		10 42 07.7	
	comp=Z,238nm,1.0s						
AZAP	Zapla	1.71	101	eP	Pn	10 41 41.4	-0.1
AZAP				eS	S	10 42 09.2	+0.2
AZAP				IAML		10 42 11.8	
	comp=Z,236nm,1.6s						
ASTB	Santa Barbara	2.24	91	eP	Pn	10 41 46.5	-0.4
ASTB				IAML		10 42 30.7	
	comp=Z,9.4nm,0.7s						
LVC	Limon Verde	2.26	305	P	Pn	10 41 48.4	+1.2
	comp=Z,72nm,0.3s,baz=130,slow=8.0,SNR=836						
LVC				S	S	10 42 20.5	+1.5
	comp=Z,219nm,0.3s,baz=266,slow=21,SNR=75						
LVC	Limon Verde	2.26	305	⇓iP	Pn	10 41 48.3	+1.0
LVC				i S	S	10 42 19.6	+0.5
LVC	Limon Verde	2.26	305	eP	Pn	10 41 48.3	+1.0
LVC				eS	S	10 42 21.1	+2.0
LVC				IAML		10 42 22.9	
	comp=Z,486nm,0.3s						
FSA	Cafayete	2.34	159	eP	Pn	10 41 48.5	+0.6
FSA				eS	S	10 42 19.7	-0.8
PB06	IPOC Station P	2.73	296		Pn	10 41 53.2	+0.8
GO02	Mina Guanaco	2.74	243	⇑iP	Pn	10 41 53.6	+1.1
GO02				i S	S	10 42 29.7	+1.1
GO02				IAML		10 42 31.9	
	comp=E,2µm,0.7s						
GO02	Mina Guanaco	2.74	243		Pn	10 41 53.7	+1.1
GO02				Sn	S	10 42 29.9	+1.3
PB09	IPOC Station P	3.02	314	⇑iP	Pn	10 41 56.8	+1.2
PB09				i S	S	10 42 35.0	+0.9
PB09				IAML		10 42 37.2	
	comp=E,538nm,0.2s						
PB09	IPOC Station P	3.02	314		Pn	10 41 56.9	+1.2
PB09				Sn	S	10 42 36.0	+1.9
PB09	IPOC Station P	3.02	314	eP	Pn	10 41 56.8	+1.2
PB09				eS	S	10 42 35.2	+1.1
PB09				IAML		10 42 36.9	
	comp=Z,638nm,0.2s						
AHML	Horco Molle	3.19	154	eP	Pn	10 41 57.8	+0.3
AHML				eS	S	10 42 35.1	-2.6
AHML	Horco Molle	3.19	154	eP	Pn	10 41 58.1	+0.6
AHML				eS	S	10 42 38.0	+0.3
AHML				IAML		10 42 43.5	
	comp=Z,20nm,1.8s						
PB05	IPOC Station P	3.21	289	⇑iP	Pn	10 41 58.2	+0.4
PB05				i S	S	10 42 36.8	-1.3
PB05	IPOC Station P	3.21	289	eP	Pn	10 41 58.2	+0.4
PB05				eS	S	10 42 37.2	-0.9
PB05				IAML		10 42 42.7	
	comp=Z,562nm,0.4s						
PB03	IPOC Station P	3.22	305	⇑iP	Pn	10 41 58.5	+0.5
PB03				i S	S	10 42 37.4	-0.9
PB03	IPOC Station P	3.22	305	eP	Pn	10 41 58.5	+0.5
PB03				eS	S	10 42 37.5	-0.9
PB03				IAML		10 42 41.0	
	comp=Z,1µm,0.4s						
PB14	IPOC Station P	3.27	257	⇑iP	Pn	10 41 59.3	+0.6
PB14				i S	S	10 42 38.7	-1.0
PB14	IPOC Station P	3.27	257		Pn	10 41 59.4	+0.6
PB14					S	10 42 39.4	-0.3
PB14	IPOC Station P	3.27	257	eP	Pn	10 41 59.4	+0.7
PB14				eS	S	10 42 39.7	0.0
PB14				IAML		10 42 42.8	
	comp=Z,456nm,0.5s						
PB10	IPOC Station P	3.37	276	⇑iP	Pn	10 41 59.9	+0.2
PB10				i S	S	10 42 39.7	-1.6
PB10	IPOC Station P	3.37	276		Pn	10 42 00.6	+1.0
PB10					S	10 42 40.4	-0.9
PB10	IPOC Station P	3.37	276	eP	Pn	10 42 00.6	+1.0
PB10				eS	S	10 42 41.0	-0.3
PB10				IAML		10 42 45.1	
	comp=Z,418nm,0.3s						
PB04	IPOC Station P	3.38	297	⇑iP	Pn	10 42 00.3	+0.4
PB04				i S	S	10 42 40.7	-1.1
PB04	IPOC Station P	3.38	297		Pn	10 42 00.4	+0.4
PB04					S	10 42 41.3	-0.5
PB04	IPOC Station P	3.38	297	eP	Pn	10 42 00.4	+0.4
PB04				eS	S	10 42 41.1	-0.7
PB04				IAML		10 42 47.2	
	comp=Z,1µm,0.2s						
PB07	IPOC Station P	3.51	308	⇑iP	Pn	10 42 01.8	+0.2
PB07				i S	S	10 42 43.3	-1.4
PB07	IPOC Station P	3.51	308		Pn	10 42 01.7	+0.2
PB07	IPOC Station P	3.51	308	eP	Pn	10 42 01.6	+0.1
PB07				eS	S	10 42 43.4	-1.3
PB07				IAML		10 42 44.9	
	comp=Z,806nm,0.2s						
AC02	Maricunga	3.54	214	⇑iP	Pn	10 42 03.3	+1.1
AC02	Maricunga	3.54	214		Pn	10 42 03.3	+1.1
PB01	IPOC Station P	3.73	320	⇑iP	Pn	10 42 04.2	+0.1
PB01				eS	S	10 42 48.5	-0.9
PB01	IPOC Station P	3.73	320		Pn	10 42 04.3	+0.3
AC01	Pan de Azucar	4.02	236	⇑iP	Pn	10 42 07.3	-0.3
AC01				i S	S	10 42 54.2	-1.6
AC01	Pan de Azucar	4.02	236		Pn	10 42 07.2	-0.3
PB08	IPOC Station P	4.30	331	eP	Pn	10 42 12.4	+1.0
PB08				eS	S	10 43 02.5	-0.2
PB08	IPOC Station P	4.30	331		Pn	10 42 12.5	+1.0
PATCX	Punta Patache	4.30	315	eP	Pn	10 42 10.5	-0.8
PATCX				eS	S	10 42 58.9	-3.5
PATCX	Punta Patache	4.30	315		Pn	10 42 10.8	-0.5
TA01	Diego Aracena	4.51	317	eP	Pn	10 42 13.1	-0.6
TA01				eS	S	10 43 03.5	-3.4
TA01	Diego Aracena	4.51	317		Pn	10 42 13.8	0.0
HMBC	Humberstone	4.56	322	eP	Pn	10 42 13.2	-1.3
CYA	Choya	4.62	168	eP	Pn	10 42 16.1	+1.1
CYA				eS	S	10 43 09.2	-0.3
CYA				IAML		10 43 13.7	
	comp=Z,14nm,0.7s						
TA02	Huaiquique	4.70	320	eP	Pn	10 42 14.9	-1.3
GO01	Chusmiza	4.73	333	eP	Pn	10 42 17.2	+0.1
GO01	Chusmiza	4.73	333		Pn	10 42 18.4	+1.4
GO03	Copiap	4.74	219	⇑eP	Pn	10 42 15.9	-0.7
GO03	Copiap	4.74	219		Pn	10 42 15.9	-0.7
GO03	Copiap	4.74	219	eP	Pn	10 42 16.1	-0.5
GO03				eS	S	10 43 11.0	-1.3
VCA	Vinchina	4.94	193	⇑iP	Pn	10 42 21.0	+1.7
VCA				eS	S	10 43 19.8	+2.6
VCA	Vinchina	4.94	193	eP	Pn	10 42 21.3	+2.0
VCA				eS	S	10 43 20.9	+3.8
VCA				IAML		10 43 24.1	
	comp=Z,25nm,0.5s						
PSGC	Pisagua	5.24	325	eP	Pn	10 42 21.4	-1.7
PSGCX	Pisagua	5.24	325		Pn	10 42 21.7	-1.4
MNMC	Minye Minye	5.38	332	eP	Pn	10 42 24.8	-0.3
MNMC	Minye Minye	5.38	332		Pn	10 42 25.1	0.0
AC04	Llanos de Chal	5.68	220	⇑eP	Pn	10 42 26.9	-1.7
AC04	Llanos de Chal	5.68	220		Pn	10 42 27.1	-1.6
AC05	El Transito	5.76	211	eP	Pn	10 42 29.1	-0.6
AC05				eS	S	10 43 31.4	-4.7
AC05	El Transito	5.76	211		Pn	10 42 29.4	-0.4
PB16	IPOC Station P	6.06	336		Pn	10 42 34.4	+0.2
LCO	Las Campanas	6.11	213		Pn	10 42 33.0	-1.4
ACDV	Cuesta del Vie	6.54	197	eP	Pn	10 42 40.8	+0.9
ACDV				eS	S	10 43 54.5	0.0
ACDV				IAML		10 43 56.5	
	comp=Z,12nm,0.7s						
AROD	Rodeo	6.63	200	eP	Pn	10 42 42.3	+1.0
AROD				eS	S	10 43 54.2	-2.8
CO01	Juntas del Tor	6.67	205		Pn	10 42 41.5	-0.3
ACCO	Cerro Coronel	6.92	196	eP	Pn	10 42 45.2	+0.3
ACCO				eS	S	10 44 01.5	-2.2
ACCO				IAML		10 44 03.8	
	comp=Z,15nm,0.6s						
GO04	Tololo Observa	7.13	208		Pn	10 42 45.8	-1.9
GO04	Tololo Observa	7.13	208	eP	Pn	10 42 46.4	-1.3
GO04				eS	S	10 44 05.6	-3.1
TCA	Tanti	7.67	165	eP	Pn	10 42 54.4	-0.1
TCA				eS	S	10 44 16.4	-4.8
TCA				IAML		10 44 41.0	
	comp=Z,5.4nm,1.1s						
CO03	El Pedregal	7.67	205		Pn	10 42 52.9	-1.6
CO02	Combarbal	8.12	206		Pn	10 42 58.3	-2.1
CPUP	Villa Florida	9.00	107	P	Pn	10 43 09.9	-1.8
	comp=Z,0.3nm,0.3s,baz=292,slow=10,SNR=9.8						
VA03	San Esteban	9.38	199		Pn	10 43 16.2	-0.6
SIV	San Ignacio	9.60	36	P	Pn	10 43 17.1	-2.6
	comp=Z,5.3nm,0.3s,baz=227,slow=12,SNR=148						
SIV				S	S	10 44 52.3	-15
	comp=Z,0.2nm,0.3s,baz=234,slow=14,SNR=3.3						
MT02	Curacav	10.02	201		Pn	10 43 22.3	-2.7
BO02	Sierra Bellavi	11.35	196		Pn	10 43 40.9	-1.3
VILB	Vilhena	12.62	31	eP	Pn	10 43 58.7	+0.4
TRCB	Terra Rica	13.16	88	eP	P	10 44 07.2	-0.7
PTGB	Pitanga	13.55	96	eP	P	10 44 13.5	+1.1
CPSB	Cacapava Do Su	13.61	121	eP	P	10 44 12.2	-0.7
ETMB	Extrema	14.04	3	eP	Pn	10 44 14.4	-1.5
SAML	Samuel	15.30	14		Pn	10 44 30.9	-0.6
FRTB	Fartura	15.90	91	eP	Pn	10 44 37.8	-0.9
ITRB	Iturama	15.92	78	eP	Pn	10 44 37.9	-1.1
ARAG	Araguaiana, MT	16.37	63	eP	P	10 44 42.8	-0.8
CLDB	Colider	16.73	41	eP	P	10 44 46.1	-1.4
PLCA	Paso Flores	17.05	189	P	P	10 44 52.7	+2.0
	comp=Z,0.2nm,0.3s,baz=8.4,slow=9.8,SNR=11						
PLCA	Paso Flores	17.05	189		P	10 44 52.4	+1.6
PLCA				IAmb	IAmb	10 44 59.9	
	comp=Z,6.6nm,0.7s						
PLCA	Paso Flores	17.05	189	eP	P	10 44 52.8	+2.0
BB19B	Bebedouro	17.22	84	eP	P	10 44 52.4	-0.4
SPB	Sao Paulo	17.83	93	eP	P	10 44 59.4	0.0
RCLB	Rio Claro- Sao	17.88	89	eP	P	10 44 60.0	-0.1
PET01	Itanhaem-SP	17.93	95	eP	P	10 44 59.3	-1.2
VAO	Valinhos	18.32	91	eP	P	10 45 03.5	-1.3
IPMB	Ipameri, GO	18.42	75	eP	P	10 45 05.5	-0.5
PARB	Paraibuna	19.51	93	eP	P	10 45 17.5	-0.2
BDFB	Brasilia	19.57	69	P	P	10 45 17.7	-0.8
	baz=238,slow=12						
NPGB	Novo Progresso	20.10	35	eP	P	10 45 21.3	-2.7
ESAR	Angra dos Reis	20.62	92	eP	P	10 45 28.2	-1.3
BSCB	Bom Sucesso	20.66	86	eP	P	10 45 30.1	+0.2
MACA	Manacapuru-AM	21.49	17	eP	P	10 45 36.8	-1.9
VAS01	Vassouras-RJ	21.64	90	eP	P	10 45 39.6	-0.6
ITTB	Itaituba	22.22	31	eP	P	10 45 43.4	-2.4
JANB	Januaria	23.02	72	eP	P	10 45 51.6	-1.6
CAM01	Campos-RJ	23.35	90	eP	P	10 45 55.3	-0.7
SMTB	Santa Maria do	23.77	54	eP	P	10 45 58.3	-1.6
SDBA	SAO DESIDERIO	23.79	65	eP	P	10 45 58.6	-1.5
PTGA	Pitinga	24.01	17	P	P	10 46 01.3	-0.7
	comp=Z,2.7nm,0.3s,baz=212,slow=17,SNR=16						
PRPB	Parauapebas	24.11	46	eP	P	10 46 00.7	-2.3
SJMB	Sao Joao De Ma	24.50	83	eP	P	10 46 05.3	-1.2
RIB01	Linhares ES	25.05	85	eP	P	10 46 10.4	-1.0
MALB	Monte Alegre	25.11	31	eP	P	10 46 09.8	-2.3
GDU01	Guandu, BA	27.73	73	eP	P	10 46 33.7	-1.8
MDP	Montagnes des	32.02	28	P	P	10 47 11.9	-1.3
	comp=Z,12nm,0.8s,baz=194,slow=10,SNR=1.6						
SNAA	Sanae	59.40	161	P	P	10 50 48.2	+1.8
	comp=Z,2.5nm,0.6s,baz=272,slow=8.4,SNR=7.5						
SNAA	Sanae	59.40	161	IAmb	IAmb	10 50 48.9	
	comp=Z,3.7nm,0.8s						
QSPA	South Pole Qui	66.29	180	P	P	10 51 33.7	+1.7
QSPA				IAmb	IAmb	10 51 35.2	
	comp=Z,5.3nm,0.8s						
DBIC	Dimbokro	67.69	72	P	P	10 51 40.8	-0.7
	comp=Z,2.8nm,0.7s,baz=188,slow=5.7,SNR=5.6						
KOWA	Kowa	72.32	65	P	P	10 52 09.2	-0.4
	comp=Z,1.5nm,0.5s,baz=248,slow=7.4,SNR=5.3						
TORD	Torodi Ar. Bea	76.46	69	P	P	10 52 33.2	-0.3
	comp=Z,1.6nm,0.5s,baz=257,slow=5.6,SNR=27						
PDAR	Pinedale Array	77.12	329	P	P	10 52 38.5	+1.6
	comp=Z,0.5nm,0.6s,baz=137,slow=6.3,SNR=5.1						
ULM	Lac du Bonnet	78.17	341	P	P	10 52 43.2	+1.1
	comp=Z,2.3nm,0.5s,baz=157,slow=4.2,SNR=8.6						
ULM	Lac du Bonnet	78.17	341	IAmb	IAmb	10 52 49.5	
	comp=Z,2.2nm,1.1s						
NVAR	Mina Array Bea	78.53	321	P	P	10 52 46.8	+2.1
	comp=Z,0.4nm,0.7s,baz=159,slow=6.2,SNR=4.0						
BOSA	Boshof	80.69	117	P	P	10 52 56.8	+0.1
	comp=Z,2.6nm,0.5s,baz=266,slow=8.2,SNR=13						
MAW	Mawson	81.49	163	P	P	10 53 01.9	+2.0
	comp=Z,4.8nm,0.8s,baz=233,slow=6.0,SNR=4.1						
MAW	Mawson	81.49	163	IAmb	IAmb	10 53 02.5	
	comp=Z,1.4nm,0.8s						
YKA	Yellowknife Ar	94.08	340	P	P	10 54 01.7	+1.4
	comp=Z,0.7nm,0.5s,baz=130,slow=5.6,SNR=29						
ASAR	Alice Springs	128.57	205	PKP	PKiKP	10 59 50.5	+0.6
	comp=Z,1.2nm,0.7s,baz=136,slow=2.0,SNR=19						
WRA	Warramunga Arr	131.74	207	PKP	PKiKP	10 59 56.8	+0.5
	comp=Z,1.1nm,0.6s,baz=159,slow=1.8,SNR=20						
ZALV	Zalesovo Beam	143.28	28	PKhKP	PKPpre	11 00 14.0	
	comp=Z,0.9nm,0.5s,baz=306,slow=5.0,SNR=7.1						
MKAR	Makanchi Array	146.40	39	PKPbc	PKPbc	11 00 22.7	0.0
	comp=Z,1.7nm,0.5s,baz=306,slow=3.1,SNR=20						

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*NEIC **05** 11:10:54.8±0.7, 67.°16N±0.°07×140.°10W±0.°10, h14km±8km, ML2.7/17, ML2.4(AEIC), ML2.6(OTT), Error ellipse: s-maj=9.8km s-min=4.8km az=165.0*

*AEIC **05** 11:10:55.8±1.4, 67.°17N±0.°07×140.°2W±0.°2, h29km±8km, Error ellipse: s-maj=9.7km s-min=8.0km az=160.0*

*PGC **05** 11:10:55.2±1.6, 67.°22N×140.°04W, h10km, ML2.6/2, 242km west of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 05 11:10:52.8±1.2**, 67.°16N**±0.°05×**140.°01W**±0.°06**, h10km, n23, σ2s.15**/32**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPYK	Eagle Plains	1.53	120		Pn	11 11 22.0	+1.9
EPYK				IAML		11 11 44.7	
	comp=N,151nm,0.6s						
EGAK	Eagle	2.44	192		Pn	11 11 34.2	+1.6
EGAK				IAML		11 12 14.0	
	comp=N,34nm,4.1s						
INK	Inuvik	2.72	62	Pn	Pn	11 11 38.5	+2.0
INK				Sn	Sn	11 12 09.8	+0.5
INK	Inuvik	2.72	62		Pn	11 11 38.2	+1.8
DAWY	Dawson	3.12	175	Pn	Pn	11 11 43.9	+1.9
DAWY				Sn	Sn	11 12 22.2	+3.0
DAWY	Dawson	3.12	175		Pn	11 11 43.5	+1.5
DAWY				IAML		11 12 39.2	
	comp=E,19nm,1.2s						
IL31		3.70	233	Pn	Pn	11 11 50.9	+1.1
TOLK	Toolik Lake Re	3.91	297	Pn	Pn	11 11 54.8	+1.9
TOLK				IAML		11 13 03.6	
	comp=E,12nm,4.9s						
TOLK				IAML		11 13 13.3	
	comp=N,14nm,4.9s						
DOT	Dot Lake	3.91	208	Sg	Sg	11 12 55.6	-2.6
COLD	Coldfoot	3.97	276	Pn	Pn	11 11 54.8	+1.2
RIDG	Independent Ri	3.98	213	Pn	Pn	11 11 55.7	+1.8
RIDG				IAML		11 13 15.7	
	comp=N,17nm,3.6s						
CCB	Clear Creek Bu	4.07	235	Pn	Pn	11 11 55.7	+0.6
CCB				IAML		11 12 41.5	
	comp=E,8.2nm,5.0s						
CCB				IAML		11 14 03.8	
	comp=N,7.9nm,5.0s						
WRH	Wood River Hil	4.28	235	Pn	Pn	11 11 60.0	+2.1
WRH				IAML		11 13 34.5	
	comp=E,11nm,4.3s						
BVCY	Beaver Creek	4.78	185	Pn	Pn	11 12 07.6	+2.8
BVCY				Sn	Sn	11 13 01.6	+1.4
YUK1	Sand Pete Hill	5.03	183	Pn	Pn	11 12 10.9	+2.5
YUK1				Sg	Sg	11 13 33.7	-0.5
YUK2	White River	5.41	184	Pn	Pn	11 12 15.9	+2.4
YUK2				Sg	Sg	11 13 45.6	-0.5
YUK3	Moose Creek	5.41	182	Pn	Pn	11 12 15.9	+2.3
YUK3				Sn	Sn	11 13 14.7	-1.2
YUK4	Talbot Arm	5.87	174	Pn	Pn	11 12 21.6	+1.7
YUK4				Sn	Sn	11 13 24.5	-2.8
YUK5	Granite Creek	6.12	170	Pn	Pn	11 12 26.1	+2.8
YUK5				Sg	Sg	11 14 07.5	-1.7
YUK6	Outpost Mounta	6.28	173	Pn	Pn	11 12 28.4	+2.8
C36M	Paulatuk	6.31	62	Pn	Pn	11 12 26.0	+0.3
C36M				Sn	Sn	11 13 35.3	-2.3
YUK7	Dusty Glacier	6.71	172	Pn	Pn	11 12 34.2	+2.8
WHY	Whitehorse	6.90	159	Sg	Sg	11 14 30.5	-3.5

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*MOS **05** 11:11:01.5±1.2, 56.°04N×113.°86E, h5km, mb3.6/2, Error ellipse: s-maj=12.6km s-min=8.5km az=65.9*

*IDC **05** 11:11:02.5±1.7, 56.°15N×114.°00E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.1/57, mbtmp3.3/5, ML3.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/34, Error ellipse: s-maj=40.2km s-min=25.4km az=150.0*

*BYKL **05** 11:11:03.4±0.2, 56.°11N×113.°72E, h5km±3km*

ISC 05 11:11:03.9±0.6**, 56.°12N**±0.°03×**113.°75E**±0.°02**, h10km, n41, σ2s.20**/80**, mb3.5**/3**, 3C-5D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.10	269	⇑iPg	Pg	11 11 05.1	-1.5
SVKR				eSg	Sg	11 11 07.1	-1.5
SVKR	Severomuysk	0.10	269	⇑iPG	Pg	11 11 05.1	-1.5
SVKR				e		11 11 06.9	
SVKR				pmax	pmax		
	comp=Z,12µm,0.3s						
SVKR				smax	smax		
	comp=N,58µm,0.5s						
UKT	Uakit	0.64	186	ePg	Pg	11 11 13.9	-2.3
UKT				eSg	Sg	11 11 22.6	-2.0
UKT				Pmax			
	comp=N,117nm,0.5s						
UKT				Smax			
	comp=N,317nm,0.6s						
YOA	Uoyan	1.13	272	ePg	Pb	11 11 24.2	-1.4
YOA				ePb	Pn	11 11 25.9	+0.1
YOA				eSg	Sg	11 11 39.5	-0.8
YOA				e		11 11 45.6	
YOA				max			
	comp=N,289nm,0.4s						
YOA				max			
	comp=N,2µm,0.6s						
YOA	Uoyan	1.13	272	⇓iPG	Pb	11 11 24.5	-1.1
YOA				e		11 11 41.6	
YOA				pmax	pmax		
	comp=Z,214nm,0.3s						
YOA				smax	smax		
	comp=E,2µm,0.6s						
NLYR	Nelyaty	1.15	70	⇓iPg	Pb	11 11 24.3	-1.6
NLYR				ePb	Pn	11 11 26.5	+0.4
NLYR				eSg	Sb	11 11 40.8	-0.1
NLYR				eSb	Sn	11 11 44.3	+2.4
NLYR				max			
	comp=E,975nm,0.4s						
NLYR				max			
	comp=E,793nm,0.7s						
NLYR	Nelyaty	1.15	70	ePG	Pb	11 11 23.9	-2.0
NLYR				e		11 11 39.5	
NLYR				pmax	pmax		
	comp=Z,977nm,0.4s						
NLYR				smax	smax		
	comp=E,1µm,1.1s						

KMO	**Kumora**	**1.45**	**262**	⇓*i*Pg	**Pn**	**11 11 29.0**	**-1.2**
KMO				*e*		11 11 31.1	
KMO				*e*Sg	**Sn**	**11 11 48.3**	**-0.9**
KMO				*e*		11 11 51.9	
KMO				max			
	comp=E,231nm,0.6s						
KMO				max			
	comp=E,984nm,0.6s						
KMO	**Kumora**	**1.45**	**262**	*e*PG	**Pn**	**11 11 29.0**	**-1.2**
KMO				*e*		11 11 48.3	
KMO				pmax	pmax		
	comp=Z,119nm,0.4s						
KMO				smax	smax		
	comp=E,985nm,0.6s						
BOD	**Bodaibo**	**1.71**	**5**	*e*Pn	**Pn**	**11 11 34.0**	**+0.3**
BOD				*e*Pg	**Pb**	**11 11 34.3**	**-1.1**
BOD				*e*Sg	**Sn**	**11 11 56.4**	**+0.8**
BOD				Pmax			
	comp=E,75nm,0.2s						
BOD				Smax			
	comp=E,660nm,0.4s						
BOD	**Bodaibo**	**1.71**	**5**	*e*PN	**Pn**	**11 11 34.1**	**+0.3**
BOD				*e*		11 11 56.7	
BOD				pmax	pmax		
	comp=Z,223nm,0.6s						
BOD				smax	smax		
	comp=E,660nm,0.4s						
YLYR	**Ulyunkhan**	**1.93**	**231**	⇓*i*Pn	**Pn**	**11 11 37.4**	**+0.7**
YLYR				*e*Pg	**Pb**	**11 11 38.1**	**-1.0**
YLYR				*e*		11 11 40.2	
YLYR				*e*Sg	**Sb**	**11 12 02.9**	**-0.3**
YLYR				max			
	comp=E,99nm,0.5s						
YLYR				Smax			
	comp=E,898nm,0.6s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*PN	**Pn**	**11 11 37.5**	**+0.7**
YLYR				*e*		11 11 38.7	
YLYR				*e*S	**Sn**	**11 12 01.6**	**+0.6**
YLYR				*e*		11 12 02.9	
YLYR				pmax	pmax		
	comp=Z,98nm,0.4s						
YLYR				smax	smax		
	comp=E,901nm,0.5s						
NIZ	**Nizh Angarsk**	**2.39**	**263**	*e*Pn	**Pn**	**11 11 43.2**	**+0.1**
NIZ				*e*Pg	**Pb**	**11 11 45.7**	**-1.3**
NIZ				*e*Sg	**Sb**	**11 12 16.5**	**0.0**
NIZ				Pmax			
	comp=E,45nm,0.7s						
NIZ				Smax			
	comp=E,379nm,0.6s						
CRS	**Chara**	**2.63**	**71**	⇓*i*Pn	**Pn**	**11 11 47.0**	**+0.6**
CRS				*e*Pg	**Pb**	**11 11 51.3**	**+0.3**
CRS				*e*Sn	**Sn**	**11 12 19.7**	**+1.4**
CRS				*e*Sg	**Sb**	**11 12 25.8**	**+2.5**
CRS				Pmax			
	comp=E,409nm,0.9s						
CRS				Smax			
	comp=E,281nm,1.0s						
CRS	**Chara**	**2.63**	**71**	*e*PN	**Pn**	**11 11 46.8**	**+0.4**
CRS				*e*		11 11 50.9	
CRS				*e*		11 12 25.3	
CRS				pmax	pmax		
	comp=Z,244nm,0.6s						
CRS				smax	smax		
	comp=E,281nm,0.8s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pn	**Pn**	**11 11 55.5**	**+0.2**
SYVR				*e*Pg	**Pb**	**11 12 02.3**	**+0.1**
SYVR				*e*Sn	**Sn**	**11 12 32.9**	**-1.5**
SYVR				*e*Sg	**Sb**	**11 12 44.8**	**+2.7**
SYVR				*e*		11 12 52.6	
SYVR				max			
	comp=E,47nm,1.3s						
SYVR				max			
	comp=E,290nm,1.6s						
SYVR	**Suvo**	**3.28**	**223**	*e*PN	**Pn**	**11 11 55.5**	**+0.2**
SYVR				*e*		11 12 02.8	
SYVR				*e*		11 12 44.4	
SYVR				pmax	pmax		
	comp=Z,48nm,0.6s						
SYVR				smax	smax		
	comp=N,304nm,1.4s						
VTMR	**Vitim**	**3.39**	**350**	*e*Pn	**Pn**	**11 11 57.0**	**+0.2**
VTMR				*e*Pg	**Pb**	**11 12 04.7**	**+0.7**
VTMR				*e*Sn	**Sn**	**11 12 37.1**	**+0.1**
VTMR				*e*Sg	**Sb**	**11 12 47.5**	**+2.3**
TUP	**Tupik**	**3.94**	**113**	*e*Pn	**Pn**	**11 12 04.5**	**+0.2**
TUP				*e*Pg	**Pb**	**11 12 15.1**	**+1.8**
TUP				*e*Sn	**Sn**	**11 12 49.7**	**-0.9**
TUP				*e*Sg	**Sb**	**11 13 05.6**	**+4.6**
TUP				*e*SgSg	**Sg**	**11 13 09.9**	**-0.3**
TUP				Pmax			
	comp=N,19nm,0.7s						
TUP				max			
	comp=N,289nm,0.9s						
TUP	**Tupik**	**3.94**	**113**	⇑*i*PN	**Pn**	**11 12 04.5**	**+0.2**
TUP				*e*		11 12 14.0	
TUP				*e*S	**Sn**	**11 12 49.4**	**-1.2**
TUP				*e*		11 13 04.3	
TUP				pmax	pmax		
	comp=Z,19nm,0.5s						
TUP				smax	smax		
	comp=E,290nm,0.9s						
MXMB	**Maximikha**	**4.08**	**227**	*e*Pg	**Pb**	**11 12 17.0**	**+1.3**
MXMB				*e*Sg	**Sb**	**11 13 09.6**	**+4.6**
CIT	**Chita**	**4.11**	**182**	*e*PN	**Pn**	**11 12 04.0**	**-2.7**
CIT				*e*		11 12 16.2	
CIT				*e*S	**Sn**	**11 12 54.8**	**-0.1**
CIT				*e*		11 13 10.2	
CIT				pmax	pmax		
	comp=Z,54nm,1.2s						
CIT				smax	smax		
	comp=E,169nm,1.7s						
OGRR	**Ongureny**	**4.33**	**238**	*e*Pn	**Pn**	**11 12 11.0**	**+1.2**
OGRR				*e*Pg	**Pb**	**11 12 20.6**	**+0.5**
OGRR				*e*Sg	**Sb**	**11 13 16.9**	**+4.5**
OGRR				Pmax			
	comp=E,23nm,1.2s						
OGRR				Smax			
	comp=E,46nm,0.6s						
OGRR	**Ongureny**	**4.33**	**238**	*e*PN	**Pn**	**11 12 10.9**	**+1.2**
OGRR				*e*		11 12 21.9	
OGRR				*e*		11 13 16.5	
OGRR				pmax	pmax		
	comp=Z,25nm,2.0s						
OGRR				smax	smax		
	comp=N,66nm,1.9s						
YKLR	**Yuktali**	**4.42**	**81**	*e*Pn	**Pn**	**11 12 11.3**	**+0.3**
YKLR				*e*Pg	**Pb**	**11 12 22.6**	**+1.0**
YKLR				*e*		11 12 26.4	
YKLR				*e*Sg	**Sb**	**11 13 20.4**	**+5.4**
ZRHB	**Zarechye**	**5.26**	**230**	*e*Sg	**Sb**	**11 13 45.6**	**+6.7**
ZRHB				Smax			
	comp=N,198nm,1.4s						
TRG	**Tyrgan**	**5.47**	**235**	*e*Pg	**Pb**	**11 12 40.9**	**+1.4**
TRG				*e*Sg	**Sb**	**11 13 51.0**	**+5.8**
TRG				Pmax			
	comp=N,21nm,1.4s						
TRG				Smax			
	comp=N,61nm,1.1s						
KPC	**Khapcheranga**	**6.48**	**188**	*e*Pn	**Pn**	**11 12 38.8**	**-0.5**
KPC				*e*		11 12 47.9	
KPC				*e*Pg	**Pb**	**11 13 00.7**	**+4.0**
KPC				*e*Sn	**Sn**	**11 13 50.0**	**-3.3**
KPC				*e*Sg	**Sg**	**11 14 24.0**	**-7.8**
KPC				*e*		11 14 32.5	
KPC				Pmax			
	comp=N,3.0nm,0.9s						
KPC				max			
	comp=N,100nm,1.1s						
KPC	**Khapcheranga**	**6.48**	**188**	*e*PN	**Pn**	**11 12 38.1**	**-1.2**
KPC				*e*		11 12 59.0	
KPC				*e*		11 14 22.7	
KPC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KPC				smax	smax		
	comp=E,100nm,1.2s						
IRK	**Irkutsk**	**6.78**	**239**	*e*PG	Pb	11 13 07.4	+5.6
IRK				*e*		11 14 32.9	
IRK				pmax	pmax		
	comp=Z,197nm,0.1s						
IRK				smax	smax		
	comp=N,135nm,0.8s						
ZAK	**Zakamensk**	**8.50**	**232**	*e*PG	**Pg**	**11 13 45.9**	**-0.7**
ZAK				*e*		11 15 32.9	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZAK				smax	smax		
	comp=N,40nm,1.3s						
MOY	**Mondy**	**8.75**	**245**	*e*PN	**Pn**	**11 13 12.5**	**+2.0**
MOY				*e*		11 13 41.1	
MOY				*e*S	**Sn**	**11 14 47.7**	**-1.4**
MOY				*e*		11 15 33.2	
MOY				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MOY				smax	smax		
	comp=N,46nm,1.7s						
ORL	**Orlik**	**8.90**	**252**	*e*PN	**Pn**	**11 13 13.8**	**+1.3**
ORL				*e*		11 13 43.5	
ORL				*e*S	**Sn**	**11 14 51.4**	**-1.3**
ORL				*e*		11 15 36.9	
ORL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ORL				smax	smax		
	comp=N,16nm,1.9s						
SONM	**Songino Array**	**9.45**	**212**	Pn	**Pn**	**11 13 21.9**	**+1.8**
	comp=N,0.1nm,0.3s,baz=26,slow=12,SNR=2.4						
SONM				Pg		11 13 55.7	
	comp=N,0.2nm,0.3s,baz=8.5,slow=13,SNR=4.8						
SONM				Lg	Lg	11 15 59.2	
	comp=N,1.1nm,0.3s,baz=13,slow=27,SNR=14						
KLR	**Kul'dur**	**12.90**	**115**	Pn	**Pn**	**11 14 04.7**	**-2.4**
	comp=N,0.2nm,0.3s,baz=317,slow=18,SNR=2.2						
KLR				Lg	Lg	11 17 45.8	
	comp=N,0.1nm,0.3s,baz=223,slow=23,SNR=4.6						
KURK	**Kurchatov**	**21.46**	**270**	P	**P**	**11 15 54.1**	**+2.0**
MKAR	**Makanchi Array**	**21.53**	**258**	P	**P**	**11 15 55.1**	**+2.1**
	comp=N,0.7nm,0.8s,baz=55,slow=11,SNR=5.5						
KURBB	**Kurchatov Arra**	**21.55**	**270**	P	**P**	**11 15 54.1**	**+1.0**
	comp=N,1.9nm,0.9s,baz=66,slow=11,SNR=12						
AKTO	**Aktyubinsk**	**33.01**	**284**	LR	LR	11 33 31.9	
	comp=N,29nm,20.9s,baz=358,slow=41						
YKA	**Yellowknife Ar**	**55.88**	**25**	P	**P**	**11 20 40.5**	**-0.5**
	comp=N,0.3nm,0.7s,baz=336,slow=6.8,SNR=4.1						

*BJI **05** 11:19:06.6±0.0, 56°.31N×114°.18E, h4^{km}, mB4.0/1, mb3.9/7, ML4.8/1, Ms4.2/2, Ms7 3.9/1*
*MOS **05** 11:19:08.1±1.4, 56°.09N×113°.80E, h3^{km}, mb4.1/3, MS3.0/4, Error ellipse: s-maj=9.7km s-min=6.6km az=68.5*
*IDC **05** 11:19:10.6±0.9, 56°.16N×113°.76E, h0^{km}, mb3.7/9, mb1 3.8/13, mb1mx3.6/58, mbtmp3.7/13, ML3.6/4, MS3.1/10, Ms1 3.1/10, ms1mx2.9/51, Error ellipse: s-maj=27.3km s-min=14.2km az=151.0*
*BYKL **05** 11:19:10.0±0.2, 56°.12N×113°.72E, h6^{km}±3^{km}*
ISC 05 11:19:09.9±1.1**, 56°.19N**±0°.03×**113°.76E**±0°.02**, h1**^{km}±8^{km}**, n79, σ2^{s}58**/126**, mb3.9**/11**, MS3.0**/8**, 8C-14D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.13**	**236**	⇑*i*Pg	**Pg**	**11 19 12.0**	**-0.5**
SVKR				Pmax		11 19 12.1	
	31µm,0.2s						
SVKR				*e*Sg	**Sg**	**11 19 14.0**	**-0.2**
SVKR				Smax		11 19 14.2	
	88µm,0.2s						
SVKR	**Severomuysk**	**0.13**	**236**	⇑*i*PG	**Pg**	**11 19 12.0**	**-0.5**
SVKR				*e*S	**Sg**	**11 19 13.8**	**-0.4**
UKT	**Uakit**	**0.71**	**186**	*e*Pg	Pg	11 19 20.8	-2.7
UKT				Pmax		11 19 25.3	
	438nm,0.4s						
UKT				*e*Sg	**Sg**	**11 19 29.5**	**-3.1**
UKT				Smax		11 19 36.3	
	2µm,0.6s						
NLYR	**Nelyaty**	**1.12**	**74**	⇓*i*Pg	**Pb**	**11 19 31.2**	**-0.9**
NLYR				*e*Pb	**Pn**	**11 19 33.4**	**+0.6**
NLYR				max		11 19 33.7	
	3µm,0.2s						
NLYR				*e*Sg	**Sb**	**11 19 46.5**	**-0.7**
NLYR				*e*		11 19 51.3	
NLYR				max		11 19 54.9	
	5µm,0.8s						
NLYR	**Nelyaty**	**1.12**	**74**	⇓*i*PG	**Pb**	**11 19 31.2**	**-0.9**
NLYR				*e*		11 19 47.2	
NLYR				pmax	pmax		
	comp=Z,3µm,0.7s						
NLYR				smax	smax		
	comp=E,4µm,1.0s						
YOA	**Uoyan**	**1.14**	**268**	⇓*i*Pg	**Pb**	**11 19 30.6**	**-1.8**
YOA				*e*Pb	**Pn**	**11 19 31.9**	**-1.1**
YOA				max		11 19 34.8	
	comp=E,733nm,0.3s						
YOA				*e*Sg	**Sb**	**11 19 45.4**	**-2.3**
YOA				*e*		11 19 51.5	
YOA				max		11 19 52.6	
	comp=E,5µm,0.4s						
YOA	**Uoyan**	**1.14**	**268**	⇓*i*PG	**Pb**	**11 19 30.6**	**-1.8**
YOA				*e*		11 19 46.2	
YOA				pmax	pmax		
	comp=Z,457nm,0.2s						
YOA				smax	smax		
	comp=N,5µm,0.4s						
KMO	**Kumora**	**1.47**	**259**	⇓*i*Pg	**Pn**	**11 19 35.9**	**-1.6**
KMO				*e*Pb	**Pb**	**11 19 37.4**	**-0.6**
KMO				*e*		11 19 39.1	
KMO				max		11 19 39.4	
	comp=N,863nm,0.5s						
KMO				*e*Sg	**Sn**	**11 19 54.7**	**-2.6**
KMO				*e*Sb	**Sb**	**11 19 57.4**	**+0.3**
KMO				max		11 20 01.0	
	comp=N,3µm,0.6s						
KMO	**Kumora**	**1.47**	**259**	*e*PG	**Pn**	**11 19 35.8**	**-1.7**
KMO				*e*		11 19 54.7	
KMO				pmax	pmax		
	comp=Z,209nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.9s						
BOD	**Bodaibo**	**1.64**	**5**	*e*Pg	**Pb**	**11 19 40.9**	**+0.1**
BOD				Pmax		11 19 43.0	
	comp=N,929nm,0.9s						
BOD				*e*Sg	**Sg**	**11 20 03.4**	**+0.9**
BOD				Smax		11 20 05.6	
	comp=N,3µm,1.5s						
BOD	**Bodaibo**	**1.64**	**5**	*e*PN	**Pb**	**11 19 41.0**	**+0.1**
BOD				*e*		11 20 03.6	
BOD				pmax	pmax		
	comp=Z,926nm,0.9s						
BOD				smax	smax		
	comp=E,2µm,0.8s						
YLYR	**Ulyunkhan**	**1.98**	**229**	⇓*i*Pg	**Pn**	**11 19 44.2**	**-0.3**
YLYR				*e*		11 19 45.9	
YLYR				max		11 19 46.9	
	comp=E,465nm,0.3s						
YLYR				*e*Sg	**Sn**	**11 20 09.5**	**-0.4**
YLYR				Smax		11 20 16.5	
	comp=E,3µm,1.2s						
YLYR	**Ulyunkhan**	**1.98**	**229**	⇓*i*PN	**Pn**	**11 19 44.2**	**-0.3**
YLYR				*e*		11 20 08.4	
YLYR				pmax	pmax		
	comp=Z,475nm,0.3s						
YLYR				smax	smax		
	comp=N,3µm,0.9s						
NIZ	**Nizh Angarsk**	**2.41**	**262**	*e*Pn	**Pn**	**11 19 49.1**	**-1.3**
NIZ				*e*Pg	**Pb**	**11 19 52.3**	**-1.7**
NIZ				Pmax		11 19 54.6	
	comp=N,167nm,0.6s						
NIZ				*e*		11 20 21.0	
NIZ				*e*Sg	**Sb**	**11 20 24.1**	**0.0**
NIZ				Smax		11 20 26.9	
	comp=N,960nm,0.5s						
CRS	**Chara**	**2.60**	**72**	⇓*i*Pn	**Pn**	**11 19 53.9**	**+0.9**
CRS				*e*Pg	**Pb**	**11 19 58.3**	**+1.1**
CRS				Pmax		11 19 58.7	
	comp=N,2µm,1.0s						
CRS				*e*Sn	**Sn**	**11 20 26.0**	**+0.8**
CRS				*e*Sg	**Sg**	**11 20 32.8**	**-0.5**
CRS				Smax		11 20 35.3	
	comp=N,1µm,0.7s						
CRS	**Chara**	**2.60**	**72**	*e*PN	**Pn**	**11 19 53.9**	**+0.9**
CRS				*e*		11 19 57.7	
CRS				*e*		11 20 32.3	
CRS				pmax	pmax		
	comp=Z,966nm,0.5s						
CRS				smax	smax		
	comp=E,1µm,0.7s						
VTMR	**Vitim**	**3.32**	**349**	*e*Pn	**Pn**	**11 20 03.9**	**+1.0**
VTMR				*e*Pg	**Pb**	**11 20 10.3**	**+0.8**
VTMR				*e*Sn	**Sn**	**11 20 42.5**	**-0.5**
VTMR				*e*Sg	**Sb**	**11 20 54.0**	**+3.6**
SYVR	**Suvo**	**3.34**	**222**	*e*Pn	**Pn**	**11 20 02.4**	**-0.8**
SYVR				*e*Pg	**Pb**	**11 20 08.4**	**-1.4**
SYVR				*e*PgPg	**PbPb**	**11 20 12.7**	**-0.3**
SYVR				max		11 20 13.7	
	comp=E,189nm,1.3s						
SYVR				*e*Sn	**Sn**	**11 20 39.3**	**-4.1**
SYVR				*e*Sg	**Sb**	**11 20 51.2**	**+0.3**
SYVR				*e*Sg	**Sg**	**11 20 58.8**	**+1.7**
SYVR				max		11 21 03.2	
	comp=E,2µm,1.6s						
SYVR	**Suvo**	**3.34**	**222**	*e*PN	**Pn**	**11 20 02.1**	**-1.1**
SYVR				*e*		11 20 08.3	
SYVR				*e*		11 20 51.2	
SYVR				pmax	pmax		
	comp=Z,193nm,1.2s						
SYVR				smax	smax		
	comp=N,2µm,1.3s						
TUP	**Tupik**	**3.96**	**114**	*e*Pn	**Pn**	**11 20 11.2**	**-0.5**
TUP				*e*Pg	**Pb**	**11 20 21.3**	**+0.9**
TUP				Pmax		11 20 25.3	
	comp=N,57nm,0.7s						
TUP				*e*Sn	**Sn**	**11 20 56.5**	**-2.2**
TUP				*e*Sg	**Sb**	**11 21 12.1**	**+3.3**
TUP				*e*		11 21 17.0	
TUP				max		11 21 20.3	
	comp=N,1µm,1.0s						
TUP	**Tupik**	**3.96**	**114**	*e*PN	**Pn**	**11 20 11.3**	**-0.5**
TUP				*e*		11 20 21.1	
TUP				*e*S	**Sn**	**11 20 56.5**	**-2.2**
TUP				*e*		11 21 12.0	
TUP				pmax	pmax		
	comp=Z,52nm,0.4s						
TUP				smax	smax		
	comp=E,1µm,1.0s						
MXMB	**Maximikha**	**4.13**	**227**	*e*Pn	**Pn**	**11 20 13.0**	**-1.1**
MXMB				*e*Pg	**Pb**	**11 20 23.1**	**-0.2**
MXMB				*e*Sg	**Sb**	**11 21 16.5**	**+2.8**
CIT	**Chita**	**4.18**	**182**	*e*Pg	**Pb**	**11 20 24.3**	**+0.1**
CIT				Pmax		11 20 28.2	
	comp=E,173nm,0.1s						
CIT				*e*Sn	**Sn**	**11 21 01.1**	**-3.2**
CIT				*e*Sg	**Sb**	**11 21 17.1**	**+1.9**
CIT				Smax		11 21 33.1	
	comp=E,870nm,1.4s						
OGRR	**Ongureny**	**4.38**	**237**	*e*Pn	**Pn**	**11 20 15.4**	**-2.0**
OGRR				*e*Pg	**Pb**	**11 20 27.1**	**-0.4**
OGRR				Pmax		11 20 32.3	
	comp=E,170nm,1.4s						
OGRR				*e*		11 20 59.4	
OGRR				*e*Sg	**Sb**	**11 21 22.8**	**+2.0**
OGRR				Smax		11 21 30.9	
	comp=E,342nm,1.4s						
YKLR	**Yuktali**	**4.41**	**82**	*e*Pg	**Pb**	**11 20 29.0**	**+1.0**
YKLR				*e*Sn	**Sn**	**11 21 08.6**	**-1.1**
YKLR				*e*Sg	**Sb**	**11 21 26.7**	**+5.1**
ZRHB	**Zarechye**	**5.31**	**229**	*e*Pn	**Pn**	**11 20 30.0**	**-0.2**
ZRHB				*e*		11 20 46.2	
ZRHB				max		11 20 51.1	
	comp=E,128nm,0.5s						
ZRHB				*e*Sg	**Sb**	**11 21 53.8**	**+6.2**
ZRHB				Smax		11 22 14.5	
	comp=E,1µm,1.5s						
TRG	**Tyrgan**	**5.52**	**235**	*e*	**Pn**	**11 20 35.6**	**+2.4**
TRG				*e*Pg	**Pb**	**11 20 47.3**	**+0.3**
TRG				*e*		11 20 53.3	
TRG				max		11 20 55.3	
	comp=E,62nm,1.8s						
TRG				*e*Sg	**Sb**	**11 21 57.6**	**+3.9**
TRG				Smax		11 22 15.2	
	comp=E,228nm,1.3s						
TRG	**Tyrgan**	**5.52**	**235**	*e*PN	**Pn**	**11 20 29.9**	**-3.3**
TRG				*e*		11 20 46.8	
TRG				*e*S	**Sn**	**11 21 32.2**	**-5.0**
TRG				*e*		11 21 56.9	
TRG				pmax	pmax		
	comp=Z,62nm,1.5s						
TRG				smax	smax		
	comp=N,228nm,1.3s						
FFNB	**Fofonovo**	**5.84**	**228**	*e*	**Pn**	**11 20 38.3**	**+0.7**
FFNB				*e*Pg	**Pb**	**11 20 53.4**	**+0.9**
FFNB				*e*		11 20 56.8	
FFNB				*e*Sg	**Sb**	**11 22 07.6**	**+4.7**
HRMR	**Khuramsha**	**6.09**	**224**	*e*Pn	**Pn**	**11 20 39.9**	**-1.0**
HRMR				*e*Pg	**Pb**	**11 20 58.3**	**+1.7**
HRMR				Pmax		11 21 09.4	
	comp=N,39nm,0.5s						
HRMR				*e*Sg	**Sb**	**11 22 17.3**	**+7.4**
HRMR				Smax		11 22 41.6	
	comp=N,1µm,1.4s						
IENR	**Iengra**	**6.20**	**85**	*e*Sg	**Sg**	**11 22 22.5**	**-6.2**
BGT	**Bolshoye Golou**	**6.43**	**233**	*e*Pg	**Pb**	**11 21 03.9**	**+1.4**
BGT				Pmax		11 21 08.4	
	comp=N,20nm,0.9s						
BGT				*e*Sg	**Sb**	**11 22 26.2**	**+6.4**
BGT				Smax		11 22 35.5	
	comp=N,118nm,1.4s						
KPC	**Khapcheranga**	**6.55**	**188**	*e*Pn	**Pn**	**11 20 45.5**	**-1.9**
KPC				*e*Pg	**Pb**	**11 21 06.9**	**+2.3**
KPC				Pmax		11 21 12.8	
	comp=N,12nm,0.3s						
KPC				*e*Sg	**Sb**	**11 22 30.1**	**+6.7**
KPC				Smax		11 22 46.0	
	comp=N,450nm,1.8s						
KPC	**Khapcheranga**	**6.55**	**188**	*e*PN	**Pn**	**11 20 45.1**	**-2.3**
KPC				*e*		11 21 05.8	
KPC				*e*		11 22 28.6	
KPC				pmax	pmax		
	comp=Z,20nm,1.0s						
KPC				smax	smax		
	comp=E,449nm,1.6s						
LSTR	**Listvyanka**	**6.81**	**234**	*e*Pg	**Pb**	**11 21 10.9**	**+2.0**
LSTR				Pmax		11 21 15.2	
	comp=E,20nm,0.3s						
LSTR				*e*Sn	**Sn**	**11 22 02.8**	**-6.1**
LSTR				*e*Sg	**Sb**	**11 22 38.4**	**+7.7**
LSTR				Smax		11 22 46.7	
	comp=E,182nm,1.6s						
IRK	**Irkutsk**	**6.82**	**239**	*e*PG	**Pb**	**11 21 11.3**	**+2.1**
IRK				*e*		11 22 37.9	
IRK				pmax	pmax		
	comp=Z,102nm,0.1s						
IRK				smax	smax		
	comp=N,251nm,1.0s						
TLY	**Talaya**	**7.48**	**237**	*e*PG	**Pb**	**11 21 25.2**	**+4.8**
TLY				*e*		11 22 58.3	
TLY				pmax	pmax		
	comp=Z,13nm,0.5s						
TLY				smax	smax		
	comp=E,58nm,0.4s						
HIA	**Hailar**	**7.83**	**150**	*de*PN	**Pn**	**11 21 02.9**	**-1.9**
ARS	**Arshan**	**7.92**	**242**	*e*Pn	**Pn**	**11 21 06.3**	**+0.2**
ARS				*e*Pg	**Pb**	**11 21 32.1**	**+4.2**
ARS				Pmax		11 21 41.1	
	comp=E,33nm,0.8s						
ARS				*e*Sg	Sb	11 23 12.5	+10
ARS				Smax		11 23 24.2	
	comp=E,247nm,1.6s						
ZEA	**Zeya**	**8.14**	**102**	*e*PN	Pn	11 21 14.8	+5.7
ZEA				*e*		11 21 37.0	
ZEA				*e*S	**Sn**	**11 22 41.2**	**-0.5**
ZEA				*e*		11 23 25.0	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA				smax	smax		
	comp=N,200nm,1.0s						
ZEA				smax	smax		
	comp=Z,200nm,1.0s						
ZEA				smax	smax		
	comp=E,300nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,6.0s						
ZAK	**Zakamensk**	**8.55**	**232**	*e*	**Pn**	**11 21 18.6**	**+3.8**
ZAK				*e*Pg	Pg	11 21 43.9	-10
ZAK				Pmax		11 21 54.5	
	comp=Z,12nm,1.2s						
ZAK				*e*Sg	Sg	11 23 33.5	-11
ZAK				Smax		11 23 53.5	
	comp=Z,154nm,1.5s						
ZAK	**Zakamensk**	**8.55**	**232**	*e*PN	**Pn**	**11 21 17.8**	**+3.0**
ZAK				*e*		11 23 39.3	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MOY	**Mondy**	**8.79**	**244**	*e*Pn	**Pn**	**11 21 18.7**	**+0.7**

MOY				e		11 21 30.0	
MOY				max		11 21 31.8	
	comp=Z,47nm,1.4s						
MOY				eSn	Sn	11 22 50.8	-6.9
MOY				eSg	Sg	11 23 40.7	-11
MOY				Smax		11 24 04.9	
	comp=Z,218nm,1.4s						
MOY	Mondy	8.79	244	ePN	Pn	11 21 19.0	+1.0
MOY				e		11 21 48.2	
MOY				e		11 23 40.7	
MOY				pmax	pmax		
	comp=Z,27nm,1.3s						
MOY				smax	smax		
	comp=E,218nm,1.5s						
ORL	Orlik	8.93	252	ePn	Pn	11 21 20.8	+0.9
ORL				e		11 21 29.7	
ORL				max		11 21 33.4	
	comp=E,28nm,1.3s						
ORL				eSn	Sn	11 22 55.0	-6.1
ORL				eSg	Sg	11 23 45.0	-11
ORL				Smax		11 24 11.6	
	comp=E,85nm,1.5s						
ORL	Orlik	8.93	252	ePN	Pn	11 21 20.1	+0.2
ORL				e		11 21 50.8	
ORL				eS	Sn	11 22 55.9	-5.2
ORL				e		11 23 42.6	
ORL				pmax	pmax		
	comp=Z,24nm,1.3s						
ORL				smax	smax		
	comp=N,86nm,2.1s						
ULN	Ulaanbaatar	9.30	209	⇑eP	Pn	11 21 23.5	-1.6
SONM	Songino Array	9.52	211	Pn	Pn	11 21 26.8	-1.3
	comp=N,0.2nm,0.3s,baz=19,slow=14,SNR=3.2						
SONM				Pg		11 22 04.2	
	comp=N,0.7nm,0.3s,baz=14,slow=17,SNR=7.2						
SONM				Lg	Lg	11 24 05.5	
	comp=N,3.1nm,0.3s,baz=24,slow=33,SNR=13						
YAK	Yakutsk	10.05	48	Pn	Pn	11 21 32.3	-2.8
	comp=N,0.1nm,0.3s,baz=356,slow=2.4,SNR=1.5						
YAK				Lg	Lg	11 24 20.4	
	baz=154,slow=23,SNR=7.6						
YAK				LR	LR	11 25 52.6	
	comp=N,21nm,18.8s,baz=32,slow=40						
YAK	Yakutsk	10.05	48	eP	Pn	11 21 34.7	-0.4
YAK				eS	Sn	11 23 29.5	+1.2
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				smax	smax		
	comp=E,11nm,0.5s						
YAK				smax	smax		
	comp=N,17nm,1.2s						
YAK				MLR	MLR		
	comp=Z,84nm,13.0s						
KLR	Kul'dur	12.92	115	Pn	Pn	11 22 14.4	0.0
	comp=Z,0.2nm,0.3s,baz=313,slow=22,SNR=2.8						
KLR				Lg	Lg	11 25 53.4	
	comp=Z,0.2nm,0.3s,baz=37,slow=21,SNR=8.7						
KLR				LR	LR	11 26 57.3	
	comp=Z,39nm,18.4s,baz=353,slow=36						
KLR	Kul'dur	12.92	115	⇓eP	Pn	11 22 14.3	-0.2
KLR				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ZALV	Zalesovo Beam	16.67	274	Pn	Pn	11 23 03.3	-1.2
	comp=Z,0.1nm,0.3s,baz=70,slow=13,SNR=3.6						
ZALV				Lg	Lg	11 27 41.4	
	comp=Z,0.1nm,0.3s,baz=93,slow=22,SNR=2.3						
ZALV				LR	LR	11 29 42.0	
	comp=Z,30nm,20.0s,baz=338,slow=38						
ZALV	Zalesovo Beam	16.67	274	i P	P	11 23 06.5	-0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
USA0B	Ussuriysk Arra	16.68	128	⇓eP	Pn	11 23 05.2	+0.6
USRK	Ussuriysk Ar.	16.68	128	Lg	Lg	11 27 50.3	
	baz=327,slow=27,SNR=7.9						
TIXI	Tiksi	16.78	17	deP	Pn	11 23 04.3	-1.5
DGZ	Jazzator, Alta	17.07	259	⇓eP	Pn	11 23 09.2	-0.6
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NRIK	Noril'sk	17.60	329	P	Pn	11 23 14.2	-1.9
	comp=Z,0.6nm,0.3s,baz=118,slow=10,SNR=5.6						
NRIK				LR	LR	11 30 32.7	
	comp=Z,114nm,18.4s,baz=359,slow=39						
NRIK	Noril'sk	17.60	329	⇑eP	Pn	11 23 15.0	-1.0
SEY	Seymchan	20.43	55	P	Pn	11 23 50.1	-0.1
	comp=Z,1.9nm,0.7s,baz=310,slow=11,SNR=3.6						
SEY				Lg	Lg	11 29 53.3	
	comp=Z,1.4nm,0.8s,baz=348,slow=21,SNR=2.3						
SEY	Seymchan	20.43	55	⇑eP	P	11 23 49.1	+0.9
KSRS	Korea Array	21.02	147	LR	LR	11 32 46.7	
	comp=Z,64nm,19.0s,baz=350,slow=39						
KURK	Kurchatov	21.46	270	⇓iP	P	11 23 59.9	+0.5
KURK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KURK				MLR	MLR		
	comp=Z,50nm,16.0s						
KURBB	Kurchatov Arra	21.56	270	P	P	11 24 01.7	+1.3
	comp=Z,8.7nm,1.0s,baz=67,slow=11,SNR=13						
MK31	Makanchi Array	21.56	257	⇑eP	P	11 24 00.8	+0.3
MKAR	Makanchi Array	21.56	257	P	P	11 24 01.4	+1.0
	comp=Z,2.0nm,1.0s,baz=56,slow=9.2,SNR=12						
MKAR				LR	LR	11 32 39.0	
	comp=Z,116nm,19.3s,baz=40,slow=38						
BVAR	Borovoye Array	25.01	281	P	P	11 24 35.9	+0.9
	comp=Z,1.6nm,1.0s,baz=88,slow=10.0,SNR=6.2						
BRVK	Borovoye	25.05	281	⇑eP	P	11 24 35.6	+0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,37nm,14.0s						
MAJO	Matsushiro	25.66	130	⇑eP	P	11 24 39.1	-1.9
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AAK	Ala-Archa	28.48	258	LR	LR	11 37 11.6	
	comp=Z,39nm,19.1s,baz=22,slow=38						
JHJ	Hachijo jima 2	29.25	131	LR	LR	11 36 22.5	
	comp=Z,38nm,18.5s,baz=329,slow=35						
ARCES	ARCESS Array B	38.54	326	LR	LR	11 47 23.6	
	comp=Z,20nm,20.3s,baz=15,slow=44						
ILAR	Eielson Array	44.75	37	P	P	11 27 25.7	+1.4
	comp=Z,1.4nm,1.0s,baz=300,slow=9.1,SNR=12						
NOA	NORSAR Array B	48.30	320	LR	LR	11 52 40.8	
	comp=Z,31nm,18.2s,baz=295,slow=42						
YKA	Yellowknife Ar	55.81	25	P	P	11 28 47.5	-0.4
	comp=Z,1.1nm,0.7s,baz=336,slow=6.4,SNR=20						
ESDC	Sonseca Array	70.94	314	P	P	11 30 30.8	+2.1
	comp=Z,0.4nm,0.7s,baz=27,slow=6.2,SNR=3.0						
NVAR	Mina Array Bea	75.92	40	P	P	11 30 59.2	+1.0
	comp=Z,0.3nm,0.5s,baz=320,slow=4.1,SNR=2.6						
WRA	Warramunga Arr	77.81	160	P	P	11 31 09.8	+1.3
	comp=Z,1.0nm,1.1s,baz=342,slow=4.6,SNR=2.8						

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*TIF **05** 11:21:40.7, 43.°07N×45.°78E, h34^{km}±3^{km}*

*NORS **05** 11:21:41.7±0.0, 42.°97N×45.°73E, h82^{km}±3^{km}, MPVA4.7*

*IDC **05** 11:21:41.3±1.4, 43.°22N×45.°79E, h58^{km}±20^{km}, mb3.2/6, mb1 3.7/16, mb1mx3.4/49, mbtmp3.8/16, ML4.1/8, MS2.9/1, Ms1 2.9/1, ms1mx1.9/29, Error ellipse: s-maj=23.4km s-min=10.9km az=15.0*

*MOS **05** 11:21:42.2±0.0, 43.°04N×45.°69E, h77^{km}±3^{km}, MPVA4.9*

*MOS **05** 11:21:42.1±0.7, 43.°05N×45.°73E, h84^{km}, mb4.0/1, Error ellipse: s-maj=6.2km s-min=4.7km az=39.8*

*DRS **05** 11:21:47.8±0.0, 43.°05N×45.°63E, h28^{km}*

*NNC **05** 11:21:49.1±4.7, 43.°22N×47.°37E, h0^{km}, mb4.4, Error ellipse: s-maj=45.5km s-min=18.2km az=83.0*

ISC 05 11:21:40.9±0.6, **43.°10N**±0.°03×**45.°74E**±0.°02, **h85**^{km}±5^{km}, **n141**, σ**2**^{s}**.74**/237, **mb3.2**/6, **8C-16D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVE	Vedeno	0.32	116	ePg	Pn	11 21 55.3	+1.4
DVE				eSg	Sn	11 22 04.5	+1.0
DVE	Vedeno	0.32	116	eP	Pn	11 21 55.3	+1.4
DVE				eS	Sn	11 22 04.6	+1.0
BTLR	Botlikh	0.56	140	i Pg	Pn	11 21 57.2	+1.4
	4µm,0.4s						
BTLR				eSg	Sn	11 22 06.5	-0.2
	4µm,0.3s						
BTLR	Botlikh	0.56	140	i P	Pn	11 21 57.3	+1.6
BTLR				eS	Sn	11 22 07.7	+1.0
KMGR	Komgaron	0.64	267	i Pg	Pn	11 21 58.9	+2.5
KMGR				eSg	Sn	11 22 11.3	+3.4
KMGR	Komgaron	0.64	267	i P	Pn	11 21 58.9	+2.5
KMGR				eS	Sn	11 22 11.3	+3.4
DLMR	Dylym	0.66	92	i Pg	Pn	11 21 58.3	+1.8
	211nm,0.3s						
DLMR				eSg	Sn	11 22 08.0	-0.2
	215nm,0.5s						
DLMR	Dylym	0.66	92	⇓eP	Pn	11 21 58.3	+1.8
DLMR				eS	Sn	11 22 09.9	+1.7
VLKR	Vladikavkaz	0.78	267	ePg	Pn	11 22 00.1	+2.3
VLKR				eSg	Sn	11 22 13.4	+3.0
VLKR	Vladikavkaz	0.78	267	eP	Pn	11 22 00.1	+2.3
VLKR				eS	Sn	11 22 13.4	+3.0
DBC	Dubki	0.81	95	i Pg	Pn	11 21 59.8	+1.7
	500nm,0.5s						
DBC				eSg	Sn	11 22 12.5	+1.5
	3µm,0.5s						
DBC	Dubki	0.81	95	⇓iP	Pn	11 21 59.8	+1.7
DBC				e		11 22 12.4	
DBC				pmax	pmax		
	comp=Z,500nm,0.5s						
DBC				smax	smax		
	comp=N,3µm,0.4s						
KRNR	Karanay	0.90	107	i Pg	Pn	11 22 00.8	+1.6
	comp=N,25nm,0.5s						
KRNR				eSg	Sn	11 22 14.0	+1.0
	comp=N,164nm,0.5s						
KRNR	Karanay	0.90	107	eP	Pn	11 22 00.8	+1.6
KRNR				eS	Sn	11 22 13.9	+1.0
XNZR	Khunzakh	0.90	128	ePg	Pn	11 22 01.4	+2.1
XNZR				eSg	Sn	11 22 14.9	+1.8
XNZR	Khunzakh	0.90	128	eP	Pn	11 22 01.4	+2.1
XNZR				eS	Sn	11 22 14.9	+1.8
BTKR	Batakoyurt	0.92	288	ePg	Pn	11 22 01.9	+2.6
BTKR				eSg	Sn	11 22 15.0	+2.0
BTKR	Batakoyurt	0.92	288	⇓eP	Pn	11 22 01.9	+2.6
BTKR				eS	Sn	11 22 15.0	+2.0
TRKR	Terskaya	0.96	311	i Pg	Pn	11 22 02.8	+3.0
TRKR				eSg	Sn	11 22 18.4	+4.5
TRKR	Terskaya	0.96	311	i P	Pn	11 22 02.8	+3.0
TRKR				eS	Sn	11 22 18.4	+4.5
BUJR	Buynaksk	1.04	105	i Pg	Pn	11 22 03.2	+2.4
	comp=N,991nm,0.4s						
BUJR				i Sg	Sn	11 22 19.1	+3.4
	comp=N,5µm,0.4s						
BUJR	Buynaksk	1.04	105	⇑iP	Pn	11 22 03.1	+2.4
BUJR				i		11 22 19.0	
BUJR				pmax	pmax		
	comp=Z,991nm,0.4s						
BUJR				smax	smax		
	comp=N,5µm,0.4s						
ARKR	Arakani	1.05	118	ePg	Pn	11 22 02.7	+1.8
ARKR				eSg	Sn	11 22 17.5	+1.7
ARKR	Arakani	1.05	118	eP	Pn	11 22 02.7	+1.8
ARKR				eS	Sn	11 22 17.5	+1.7
ARNR	Ardon	1.07	275	ePg	Pn	11 22 03.6	+2.6
ARNR				eSg	Sn	11 22 17.9	+1.8
ARNR	Ardon	1.07	275	eP	Pn	11 22 03.6	+2.6
ARNR				eS	Sn	11 22 17.9	+1.8
LACR	Lac	1.09	256	i Pg	Pn	11 22 01.7	+0.3
LACR				eSg	Sn	11 22 16.4	-0.4
LACR	Lac	1.09	256	i P	Pn	11 22 01.7	+0.3
LACR				eS	Sn	11 22 16.4	-0.4
GUDG	Gudauri	1.12	236	P	Pn	11 22 04.6	+2.6
GUDG				S	Sn	11 22 19.9	+2.2
GUDG	Gudauri	1.12	236	i Pg	Pn	11 22 04.5	+2.6
GUDG				eSg	Sn	11 22 19.2	+1.6
GUDG	Gudauri	1.12	236	⇓iP	Pn	11 22 04.5	+2.6
GUDG				eS	Sn	11 22 19.2	+1.6
GNBR	Gunib	1.15	128	i Pg	Pn	11 22 04.2	+2.0
	comp=N,628nm,0.5s						
GNBR				eSg	Sn	11 22 21.1	+3.1
	comp=N,3µm,0.5s						
GNBR	Gunib	1.15	128	⇑iP	Pn	11 22 04.1	+2.0
GNBR				e		11 22 21.0	
GNBR				pmax	pmax		
	comp=Z,628nm,0.5s						
GNBR				smax	smax		
	comp=N,3µm,0.5s						
KORR	Kora	1.22	270	i Pg	Pn	11 22 05.1	+2.2
KORR				eSg	Sn	11 22 21.9	+2.4
KORR	Kora	1.22	270	i P	Pn	11 22 05.1	+2.2
KORR				eS	Sn	11 22 21.9	+2.4
PRTR	Priterechnaya	1.25	302	ePg	Pn	11 22 06.0	+2.8
PRTR				eSg	Sn	11 22 23.8	+3.8
PRTR	Priterechnaya	1.25	302	⇓iP	Pn	11 22 06.1	+2.9
PRTR				eS	Sn	11 22 24.2	+4.3
STDR	Stavd-Durt	1.25	283	ePg	Pn	11 22 05.8	+2.5
STDR				eSg	Sn	11 22 22.8	+2.7
STDR	Stavd-Durt	1.25	283	eP	Pn	11 22 05.8	+2.5
STDR				eS	Sn	11 22 22.8	+2.7
KANR	Karaman	1.29	85	ePg	Pn	11 22 06.6	+2.9
KANR				eSg	Sn	11 22 25.3	+4.5
KANR	Karaman	1.29	85	eP	Pn	11 22 06.6	+2.9
KANR				eS	Sn	11 22 25.3	+4.5
MAK	Makhachkala	1.30	95	ePg	Pn	11 22 06.6	+2.7
MAK				eSg	Sn	11 22 24.9	+3.7
MAK	Makhachkala	1.30	95	eP	Pn	11 22 06.6	+2.7
MAK				eS	Sn	11 22 24.9	+3.7
LGD	Lagodekhi	1.31	163	P	Pn	11 22 05.7	+1.6
LGD				S	Sn	11 22 23.2	+1.6
LGD	Lagodekhi	1.31	163	ePg	Pn	11 22 05.7	+1.6
LGD				eSg	Sn	11 22 23.1	+1.6
LGD	Lagodekhi	1.31	163	eP	Pn	11 22 05.7	+1.6
LGD				eS	Sn	11 22 23.1	+1.6
ZEI	Tsey	1.38	258	ePg	Pn	11 22 06.0	+1.0
ZEI				eSg	Sn	11 22 23.0	-0.3
ZEI	Tsey	1.38	258	eP	Pn	11 22 06.1	+1.0
ZEI				eS	Sn	11 22 23.1	-0.3
LSNR	Lesken	1.41	278	ePg	Pn	11 22 07.5	+2.2
LSNR				eSg	Sn	11 22 25.4	+1.7
LSNR	Lesken	1.41	278	eP	Pn	11 22 07.5	+2.2
LSNR				eS	Sn	11 22 25.4	+1.7
SEAG	Tbilisi Sea	1.50	208	P	Pn	11 22 08.2	+1.8
SEAG				S	Sn	11 22 27.2	+1.5
SEAG	Tbilisi Sea	1.50	208	P	Pn	11 22 08.2	+1.8
SEAG				S	Sn	11 22 27.3	+1.5
SGKR	Sergokala	1.55	114	i Pg	Pn	11 22 10.2	+3.0
SGKR				eSg	Sn	11 22 31.3	+4.4
SGKR	Sergokala	1.55	114	⇓eP	Pn	11 22 10.1	+3.0
SGKR				e		11 22 31.3	
SGKR				pmax	pmax		
	comp=Z,342nm,0.4s						
SGKR				smax	smax		
	comp=N,2µm,0.7s						
BTNK	Botanikuri	1.57	206	P	Pn	11 22 09.7	+2.3
BTNK				S	Sn	11 22 29.2	+1.8
BTNK	Botanikuri	1.57	206	P	Pn	11 22 09.7	+2.3
BTNK				S	Sn	11 22 29.2	+1.8
DIGR	Digorskoe uzhe	1.59	264	ePg	Pn	11 22 08.8	+1.0
DIGR				eSg	Sn	11 22 27.8	-0.3
DIGR	Digorskoe uzhe	1.59	264	eP	Pn	11 22 09.1	+1.3
DIGR				eS	Sn	11 22 28.1	0.0
NCK	Nalchik	1.61	285	ePg	Pn	11 22 10.1	+2.2
NCK				eSg	Sn	11 22 30.5	+2.2
NCK	Nalchik	1.61	285	eP	Pn	11 22 10.1	+2.2
NCK				eS	Sn	11 22 30.5	+2.2
DDFL	Dedoflistskaro	1.67	170	P	Pn	11 22 11.9	+3.1
DDFL				S	Sn	11 22 35.3	+5.5
DDFL	Dedoflistskaro	1.67	170	P	Pn	11 22 11.9	+3.1
DDFL				S	Sn	11 22 35.3	+5.5
URKR	Urkarakh	1.68	123	ePg	Pn	11 22 11.4	+2.5
	comp=N,347nm,0.4s						
URKR				eSg	Sn	11 22 34.7	+4.6
	comp=N,1µm,0.6s						
URKR	Urkarakh	1.68	123	eP	Pn	11 22 11.2	+2.3
URKR				eS	Sn	11 22 34.3	+4.2
KBTC	Kuba-Taba	1.84	294	ePg	Pn	11 22 12.8	+1.9
KBTC				eSg	Sn	11 22 34.5	+0.9
KBTC	Kuba-Taba	1.84	294	eP	Pn	11 22 13.2	+2.3
KBTC				eS	Sn	11 22 36.2	+2.5
KZRT	Kazreti	1.98	211	P	Pn	11 22 13.4	+0.7
KZRT				S	Sn	11 22 37.2	+0.3
KZRT	Kazreti	1.98	211	P	Pn	11 22 13.4	+0.7
KZRT				S	Sn	11 22 37.2	+0.3
BRNG	Burnasheti	2.04	224	P	Pn	11 22 15.7	+2.1
DMNI	Dmanisi	2.11	214	P	Pn	11 22 15.3	+0.8
DMNI				S	Sn	11 22 40.0	0.0
DMNI	Dmanisi	2.11	214	P	Pn	11 22 15.3	+0.8
DMNI				S	Sn	11 22 40.1	0.0
PYA1	Pyatigorsk	2.15	298	i Pg	Pn	11 22 16.6	+1.7
PYA1				eSg	Sn	11 22 41.4	+0.5
PYA1	Pyatigorsk	2.15	298	i P	Pn	11 22 16.6	+1.7
PYA1				eS	Sn	11 22 41.4	+0.5
TKB	Tkibuli	2.15	251	P	Pn	11 22 17.3	+2.3
TKB	Tkibuli	2.15	251	P	Pn	11 22 17.3	+2.3
KBZ	Khabaz	2.16	288	P	Pn	11 22 16.4	+1.4
	comp=N,12nm,0.3s,baz=100,slow=8.1,SNR=290						
KBZ				S	Sn	11 22 40.4	-0.7
	comp=N,16nm,0.3s,baz=103,slow=15,SNR=6.6						
KBZ	Khabaz	2.16	288	ePg	Pn	11 22 16.3	+1.3
KBZ				eSg	Sn	11 22 41.0	-0.2
SEKA	Sheki	2.18	150	P	Pn	11 22 16.3	+0.9
AKT	Akhty	2.19	137	i Pg	Pn	11 22 17.3	+1.7
	comp=N,266nm,0.3s						
AKT				eSg	Sn	11 22 47.5	+5.4
	comp=N,993nm,0.4s						
AKT	Akhty	2.19	137	⇑iP	Pn	11 22 17.3	+1.7
AKT				eS	Sn	11 22 43.6	+1.6
AKT				pmax	pmax		
	comp=Z,188nm,0.2s						
AKT				smax	smax		
	comp=N,480nm,0.3s						
AKT				smax	smax		
	comp=E,885nm,0.3s						
AKT				smax	smax		
	comp=E,664nm,0.3s						
AKT				MLR	MLR		
	comp=Z,104nm,2.0s						
BEYR	Belyy Ugol+	2.31	294	i Pn	Pn	11 22 18.6	+1.5
BEYR				eSn	Sn	11 22 44.8	0.0
BEYR	Belyy Ugol+	2.31	294	i P	Pn	11 22 18.6	+1.5
BEYR				eS	Sn	11 22 44.8	0.0
KVAR	Kislovodsk Arr	2.37	292	P	Pn	11 22 19.3	+1.4
	baz=82,slow=23,SNR=24						
KVAR				S	Sn	11 22 46.6	+0.2
	baz=194,slow=12,SNR=28						
KIV	Kislovodsk	2.38	292	P	Pn	11 22 19.5	+1.5
KIV				S	Sn	11 22 46.0	-0.5
KIV	Kislovodsk	2.38	292	c iP	Pn	11 22 19.5	+1.5
KIV				i S	Sn	11 22 46.3	-0.2
KIV				pmax	pmax		
	comp=Z,25nm,0.8s						
GANJ	Ganja	2.49	170	P	Pn	11 22 20.0	+0.5
ABS	Abastumani	2.54	239	P	Pn	11 22 22.5	+2.2
ABS	Abastumani	2.54	239	P	Pn	11 22 22.5	+2.2
ALER	Alexandrovskoy	2.63	310	ePn	Pn	11 22 24.0	+2.6
ALER				eSn	Sn	11 22 53.8	+1.3
ALER	Alexandrovskoy	2.63	310	eP	Pn	11 22 24.0	+2.6
ALER				eS	Sn	11 22 53.8	+1.3
GOF	Gofitskoye	2.76	316	ePn	Pn	11 22 25.3	+2.3
GOF				eSn	Sn	11 22 57.6	+2.1
GOF	Gofitskoye	2.76	316	⇑iP	Pn	11 22 25.4	+2.3
GOF				i S	Sn	11 22 57.6	+2.1
GOF				pmax	pmax		
	comp=Z,165nm,0.6s						
GOF				smax	smax		
	comp=E,359nm,0.7s						
GOF				smax	smax		
	comp=N,261nm,0.4s						
DOMR	Dombai	3.01	275	eP	Pn	11 22 29.9	+3.3
DOMR				eS	Sn	11 23 04.2	+2.4
GNI	Garni	3.04	195	P	Pn	11 22 28.4	+1.4
	comp=N,3.9nm,0.3s,baz=290,slow=14,SNR=13						
GNI				S	Sn	11 23 00.3	-2.2
	comp=N,11nm,0.3s,baz=166,slow=10,SNR=4.9						
GNI	Garni	3.04	195	eP	Pn	11 22 28.4	+1.4
GNI	Garni	3.04	195	d iP	Pn	11 22 28.5	+1.5
KARS	Kars	3.17	220	eP	Pn	11 22 29.0	+0.3
KARS	Kars	3.17	220	P	Pn	11 22 29.0	+0.3
BATM	Batumi	3.35	245	eP	Pn	11 22 31.1	+0.1
BATM	Batumi	3.35	245	ePn	Pn	11 22 33.6	+2.6
BATM				eSn	Sn	11 23 12.2	+2.5
BATM	Batumi	3.35	245	eP	Pn	11 22 33.6	+2.6
BATM				eS	Sn	11 23 12.2	+2.5
AHMR	Akhmetovskaya	3.57	289	ePn	Pn	11 22 37.3	+3.3
AHMR				eSn	Sn	11 23 17.6	+2.5
SENK	Senkaya-Erzuru	3.58	226	eP	Pn	11 22 34.7	+0.3
LABN	Labinsk	3.94	295	eP	Pn	11 22 42.5	+3.5
LABN				eS	Sn	11 23 27.9	+3.8
RPOR	Krasnaya Polya	4.03	280	c iP	Pn	11 22 44.7	+4.4
AGRB	Hanur-Agry	4.08	211	eP	Pn	11 22 42.3	+1.2
GUZR	Guzeripl'	4.18	284	deP	Pn	11 22 47.2	+4.8
KOPR	Koprukoy-ERZUR	4.25	225	eP	Pn	11 22 44.3	+0.8
ERBR	Yeremizino-Bor	4.58	307	eP	Pn	11 22 50.2	+2.4
LKRN	Lenkeran, Azer	4.95	151	P	Pn	11 22 53.5	+0.7
VRH	Novokhopyorsk	8.56	343	eP	Pn	11 23 43.7	+1.8
VRH				pmax	pmax		
	comp=Z,9.0nm,0.4s						
VSR	Storozhevoye	9.27	333	eP	Pn	11 23 51.5	-0.1
VSR				eS	Sn	11 25 43.9	+10
VSR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR				smax	smax		
	comp=N,40nm,0.9s						
BELG	Belogornoye	9.39	7	P	Pn	11 23 51.3	-1.8
	comp=N,1.3nm,0.3s,baz=78,slow=16,SNR=2.0						
BELG				S	Sn	11 25 30.5	-6.4
	comp=N,5.5nm,0.3s,baz=98,slow=17,SNR=4.3						
BELG	Belogornoye	9.39	7	⇓eP	Pn	11 24 02.2	+9.0
BELG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPSR	Galich'ya Gora	10.55	337	eP	Pn	11 24 09.0	0.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GEYT	Alibeck	10.74	115	P	Pn	11 24 10.7	-1.1
	comp=Z,2.5nm,0.3s,baz=288,slow=14,SNR=13						
GEYT				S	Sn	11 26 07.6	-2.6
	comp=Z,1.2nm,0.3s,baz=305,slow=49,SNR=2.9						
GYA0B	ALIBECK ARRAY	10.74	115	⇓P	Pn	11 24 10.2	-1.6
GYA0B				⇓S	Sn	11 26 02.0	-8.2
AKTO	Aktyubinsk	11.16	45	P	Pn	11 24 16.1	-1.3
	comp=Z,3.8nm,0.3s,baz=207,slow=9.6,SNR=35						
AKTO				S	Sn	11 26 12.3	-7.9
	comp=Z,0.7nm,0.3s,baz=72,slow=23,SNR=2.4						
AKTO	Aktyubinsk	11.16	45	⇓P	Pn	11 24 16.3	-1.0
	comp=Z,4.4nm,0.3s						
AKTO				⇓S	Sn	11 26 15.9	-4.2
	comp=Z,7.2nm,0.6s						
AB31	Akbulak array	11.61	53	⇓P	Pn	11 24 23.3	-0.1
	comp=Z,1.9nm,0.3s,baz=238,slow=11,SNR=209						
AB31				⇓S	Sn	11 26 20.8	-10
	comp=Z,6.1nm,0.4s,baz=243,slow=21,SNR=8.2						
OBN	Obninsk	13.43	337	i P	P	11 24 57.0	+3.0
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKASG	Malin Array Be	13.59	310	P	Pn	11 24 49.0	-0.9
	comp=Z,0.8nm,0.3s,baz=113,slow=14,SNR=4.7						
AKASG	Malin Array Be	13.59	310	P	Pn	11 24 49.0	-0.9
AKBB	Malin Array Si	13.59	310	⇓eP	P	11 24 57.1	+1.2
MLR	Muntele Rosu	14.37	286	P	P	11 25 03.2	-1.6
	comp=Z,0.3nm,0.3s,baz=71,slow=18,SNR=1.9						
ARU	Arti	15.67	27	P	Pn	11 25 14.7	-1.9
	comp=Z,0.0nm,0.3s,baz=229,slow=7.0,SNR=3.7						
ARU				S	Sn	11 27 59.1	-10
	comp=Z,0.0nm,0.3s,baz=175,slow=21,SNR=9.4						
ARU	Arti	15.67	27	P	Pn	11 25 14.8	-1.8
ARU				S	Sn	11 28 02.5	-6.9
MNK	Minsk	16.33	321	i P	Pn	11 25 24.5	-0.3
	comp=E,2.0nm,0.9s						
MNK				i P	Pn	11 25 24.5	-0.3
	comp=N,21nm,0.9s						
MNK				i P	Pn	11 25 24.5	-0.3
	comp=Z,8.0nm,0.9s						
MNK				i PP	P	11 25 33.7	+7.4
MNK				i S	Sn	11 28 21.8	-3.5
MNK				i S	Sn	11 28 21.8	-3.5
MNK				i SS	S	11 28 41.5	+8.7
MNK				i SS	S	11 28 41.5	+8.7
MNK				i LQ	LQ	11 30 16.7	
MNK				i LQ	LQ	11 30 16.7	
MNK				i LR	LR	11 31 31.6	
MNK				i LRM	MLR	11 33 09.2	
	comp=E,19nm,17.4s						
MNK				i LRM	MLR	11 33 12.4	
	comp=Z,191nm,17.4s						
MNK				i LRM	MLR	11 33 16.9	
	comp=N,795nm,17.4s						
SVE	Sverdlovsk	16.70	29	eP	Pn	11 25 28.2	-1.2
SVE				eS	Sn	11 28 25.9	-8.4
SVE				pmax	pmax		
	comp=Z,11nm,0.6s						
BRVK	Borovoye	19.10	50	⇑eP	Pn	11 26 06.2	+7.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	19.15	50	P	Pn	11 25 58.5	-0.5
	comp=Z,0.6nm,0.3s,baz=176,slow=27,SNR=4.6						
BVAR				S	S	11 29 21.1	-8.6
	comp=Z,0.3nm,0.3s,baz=259,slow=22,SNR=3.8						

AAK	Ala-Archa	21.05	81	P	P	11 26 20.5	+2.4
	comp=Z,0.4nm,0.3s,baz=291,slow=14,SNR=1.7						
AAK	Ala-Archa	21.05	81	⇑eP	P	11 26 26.7	+8.7
FINES	FINESS Array B	21.80	334	P	P	11 26 27.3	+1.6
	comp=Z,2.7nm,0.7s,baz=141,slow=9.3,SNR=8.4						
WSAR	Wadi Sarin	22.50	148	LR	LR	11 38 36.9	
	comp=Z,36nm,21.2s,baz=181,slow=45						
GERES	GERESS Array B	22.89	296	P	P	11 26 40.4	+3.0
	comp=Z,0.4nm,0.5s,baz=96,slow=10,SNR=1.5						
KURBB	Kurchatov Arra	23.51	60	P	P	11 26 45.4	+2.3
	comp=Z,0.8nm,0.2s,baz=275,slow=12,SNR=2.7						
CLL	Collm	23.55	302	eP	P	11 26 54.0	+11
KURK	Kurchatov	23.57	60	P	P	11 26 45.4	+1.7
MKAR	Makanchi Array	25.98	69	P	P	11 27 08.6	+3.0
	comp=Z,0.2nm,0.3s,baz=266,slow=8.2,SNR=4.2						
YKA	Yellowknife Ar	73.58	351	P	P	11 33 05.9	+1.5
	comp=Z,0.2nm,0.7s,baz=9.7,slow=5.7,SNR=5.3						

IDC 05 11:38:14.5±3.3**, 3°.68S×133°.63E, h0km, mb3.2**/1**, mb1 3.6**/4**, mb1mx3.4**/34**, mbtmp3.4**/4**, ML3.1**/3**, Error ellipse: s-maj=135.7km s-min=31.0km az=81.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.18	178	Pn	Pn	11 42 01.9	-1.6
	0.0nm,0.3s,baz=354,slow=13,SNR=1.5						
FITZ	Fitzroy Crossi	16.33	208	Pn	Pn	11 42 05.5	+0.1
	0.1nm,0.3s,baz=31,slow=12,SNR=1.6						
ASAR	Alice Springs	19.88	179	P	P	11 42 48.1	+0.6
	0.1nm,0.3s,baz=6.7,slow=11,SNR=14						
MKAR	Makanchi Array	67.54	325	P	P	11 49 12.7	0.0
	0.1nm,0.5s,baz=118,slow=6.6,SNR=2.1						

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*IDC **05** 11:47:39.2±0.6, 2°.14S×139°.68E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.1/40, mbtmp4.0/15, ML4.1/2, MS3.7/11, Ms1 3.7/11, ms1mx3.4/34, Error ellipse: s-maj=17.2km s-min=9.6km az=31.0*

*DJA **05** 11:47:40.9±0.6, 2°S±4°×14°0E±°, h11km±4km, M4.4/17, mB5.0/5, mb4.6/17, MLv4.5/6, Mw(mB)4.3/5*

*NOU **05** 11:47:54.7, 2°.89S×139°.34E, h55km, mb4.5, Near North Coast of Irian Jaya*

ISC 05 11:47:43.9±0.5**, 2°.27S**±0°.06×**139°.76E**±0°.05**, h35km, n60, σ2ˢ.00**/47**, mb4.3**/20**, MS3.5**/8**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.52	129	P	Pn	11 47 53.5	-1.3
JAY	Jayapura	0.97	105	Pg	Pn	11 47 59.3	-1.7
	130nm,0.3s,baz=259,slow=9.7,SNR=131						
JAY				Lg	Lg	11 48 16.1	
	190nm,0.3s,baz=122,slow=20,SNR=10						
JAY				LR	LR	11 48 31.5	
	comp=Z,1μm,18.9s,baz=263,slow=48						
JAY	Jayapura	0.97	105	P	Pn	11 47 59.0	-2.1
JAY				S	Sn	11 48 15.2	+1.5
SMPI	Sarmi	1.09	285	P	Pn	11 48 00.9	-1.7
SMPI				S	Sn	11 48 17.5	+1.0
WAMI	Wamena	1.92	213	P	Pn	11 48 19.7	+5.6
BAKI	Biak	3.81	286	P	Pn	11 48 38.4	-1.7
MMPI	Merauke	6.19	174	P	Pn	11 49 15.0	+2.2
	2.2nm506nm,0.9s						
FAKI	Fak Fak	7.54	265	P	Pn	11 49 26.2	-5.1
PMG	Port Moresby	10.22	134	LR	LR	11 55 29.3	
	comp=Z,465nm,18.2s,baz=58,slow=45						
GUMO	Guam	16.55	18	LR	LR	11 57 27.8	
	comp=Z,272nm,18.5s,baz=200,slow=36						
GTOI	Gorontalo	17.00	280	P	P	11 51 42.3	+1.7
	13nm,1.2s						
SOEI	Soe	17.10	244	P	P	11 51 43.4	+1.4
	130nm,1.1s						
KDI	Kendari	17.20	264	P	Pn	11 51 40.9	-0.7
	112nm,0.6s						
BATI	Baumata	17.83	243	P	Pn	11 51 48.0	-1.4
	0.0nm,0.3s,baz=66,slow=19,SNR=1.3						
BATI	Baumata	17.83	243	P	P	11 51 55.8	+5.9
	3.9nm0.6nm,0.8s						
MRSI	Marisa	18.03	278	P	P	11 51 54.3	+2.3
	22nm,0.9s						
WRA	Warramunga Arr	18.35	196	P	P	11 51 55.3	-0.3
	0.7nm,0.3s,baz=19,slow=12,SNR=27						
WRA				S	Sn	11 55 11.6	-8.2
	0.0nm,0.3s,baz=13,slow=22,SNR=3.1						
WRA				LR	LR	11 59 42.1	
	comp=Z,386nm,19.1s,baz=10.0,slow=39						
CTA	Charters Tower	18.81	161	P	Pn	11 52 02.7	+1.4
	0.3nm,0.3s,baz=321,slow=16,SNR=2.9						
KAPI	Kappang	20.16	262	LR	LR	12 02 04.0	
	comp=Z,104nm,19.4s,baz=74,slow=43						
FITZ	Fitzroy Crossi	20.96	220	P	P	11 52 24.3	+0.3
	9.0nm,0.9s,baz=40,slow=16,SNR=4.4						
FITZ				LR	LR	12 01 26.3	
	comp=Z,367nm,19.0s,baz=44,slow=39						
HNR	Honiara	21.29	110	P	P	11 52 28.7	+1.1
	80nm,0.8s,baz=264,slow=9.2,SNR=2.2						
ASAR	Alice Springs	22.02	194	P	P	11 52 36.3	+1.0
	13nm,1.0s,baz=23,slow=11,SNR=59						
ASAR				S	S	11 56 32.7	-3.9
	1.4nm,1.1s,baz=16,slow=24,SNR=2.6						
JCJ	Chichijima	29.29	4	LR	LR	12 02 57.0	
	comp=Z,126nm,18.8s,baz=78,slow=32						
H11S3	WAKE ISLAND Hy	33.58	51	T	T	12 29 41.0	
	baz=220,slow=74,SNR=30						
H11S2	WAKE ISLAND Hy	33.59	51	T	T	12 29 41.4	
	baz=220,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	33.60	51	T	T	12 29 42.3	
	baz=220,slow=74,SNR=14						
H11N1	WAKE ISLAND Hy	34.45	49	T	T	12 30 42.0	
	baz=233,slow=75,SNR=55						
H11N2	WAKE ISLAND Hy	34.46	49	T	T	12 30 46.0	
	baz=233,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	34.46	49	T	T	12 30 42.4	
	baz=233,slow=75,SNR=30						
JHJ	Hachijo jima 2	35.20	0	LR	LR	12 05 13.7	
	comp=Z,166nm,19.4s,baz=266,slow=30						
JNU	Nakatsue	36.19	347	LR	LR	12 06 19.9	
	comp=Z,81nm,21.4s,baz=161,slow=31						
KSRS	Korea Array	41.02	346	P	P	11 55 21.0	-2.8
	0.9nm,0.7s,baz=216,slow=7.1,SNR=2.1						
TRTT	Trang	41.21	285	P	P	11 55 26.7	+0.9
	11nm,0.8s						
NONG	Nongkai	41.34	301	P	P	11 55 26.0	-0.7
	21μm12nm,0.8s						
CHAI	Chaiyaphum	41.48	297	P	P	11 55 28.0	+0.2
	13nm,0.8s						
PHET	Kaeng Krachan	42.59	292	P	P	11 55 39.0	+2.0
	1μm12nm,1.0s						
UTHA	Uthaitani	43.63	295	P	P	11 55 46.2	+0.9
	10nm,0.8s						
PAYA	Payao	44.70	301	P	P	11 55 54.0	+0.1
	97nm,0.8s						
CM36	Chiang Mai Arr	45.03	299	P	P	11 55 57.0	+0.4
CM04	Chiang Mai Arr	45.09	299	P	P	11 55 58.0	+1.0
	3.6nm,0.8s						
CM02	Chiang Mai Arr	45.13	299	P	P	11 55 58.2	+0.9
	37nm5.0nm,0.8s						
CMAR	Chiang Mai Arr	45.14	299	P	P	11 55 57.8	+0.3
	2.6nm,0.8s,baz=120,slow=6.5,SNR=20						
CM13	Chiang Mai Arr	45.16	299	P	P	11 55 58.0	+0.4
USRK	Ussuriysk Ar.	46.78	352	P	P	11 56 10.4	+0.5
	1.8nm,0.8s,baz=179,slow=5.8,SNR=4.7						
KLR	Kul'dur	51.76	353	P	P	11 56 47.2	-0.7
	1.0nm,0.6s,baz=274,slow=3.5,SNR=3.6						
PETK	Petropavlovsk-	57.19	13	LR	LR	12 23 23.1	
	comp=Z,37nm,18.8s,baz=201,slow=38						
SONM	Songino Array	57.78	334	P	P	11 57 31.3	-0.4
	0.4nm,0.7s,baz=150,slow=6.7,SNR=2.7						
MKAR	Makanchi Array	70.09	322	P	P	11 58 53.2	+0.7
	0.6nm,0.6s,baz=109,slow=6.6,SNR=6.3						
PPT	Papeete	70.89	108	LR	LR	12 26 26.1	
	comp=Z,26nm,21.2s,slow=33						
ZALV	Zalesovo Beam	72.09	329	P	P	11 59 03.1	-1.4
	0.7nm,0.6s,baz=121,slow=7.3,SNR=2.9						
KURBB	Kurchatov Arra	73.98	324	P	P	11 59 15.8	+0.1
	1.2nm,0.9s,baz=113,slow=5.6,SNR=7.6						
VNDA	Vanda	76.13	175	LR	LR	12 33 35.6	
	comp=Z,84nm,18.6s,baz=336,slow=36						
BVAR	Borovoye Array	79.56	325	P	P	11 59 47.9	+0.7
	1.3nm,0.6s,baz=98,slow=7.4,SNR=10.0						
ILAR	Eielson Array	85.00	24	P	P	12 00 15.0	-0.4
	0.9nm,0.7s,baz=258,slow=3.9,SNR=12						
YKA	Yellowknife Ar	99.20	27	P	Pdif	12 01 21.5	-0.1
	0.2nm,0.9s,baz=281,slow=4.1,SNR=2.5						
KIC	Kosan Boka	144.38	278	ePKP1	PKPdf	12 07 17.8	+0.2
	12nm,1.0s						
DBIC	Dimbokro	144.47	278	PKP	PKPdf	12 07 18.0	+0.3
	4.8nm,0.8s,baz=101,slow=2.7,SNR=7.0						
TIC	Toumodi	144.63	278	ePKP1	PKPdf	12 07 18.6	+0.6
LIC	Lamto	144.68	278	ePKP1	PKPdf	12 07 17.8	-0.3
	14nm,1.1s						
CPUP	Villa Florida	147.12	151	PKPbc	PKPab	12 07 25.2	-0.4
	4.3nm,0.8s,baz=222,slow=3.1,SNR=11						

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*IDC **05** 11:51:46.3±3.7, 35°.77N×76°.95E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.2/61, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=59.9km s-min=37.9km az=172.0*

ISC 05 11:51:48.9±1.9**, 35°.8N**±0°.1×**76°.9E**±0°.1**, h10km, n6, σ1ˢ.40**/8**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.76	349	Pn	Pn	11 52 48.8	+1.7
KSH				Sn	Sb	11 53 39.9	-1.3
KSH				smax	smax		
	comp=N,70nm,0.6s						
KSH				smax	smax		
	comp=E,48nm,0.6s						
WMQ	Urumqi	11.50	43	eP	Pn	11 54 33.3	+0.1
WMQ				smax	smax		
	comp=N,61nm,1.1s						
WMQ				smax	smax		
	comp=E,110nm,0.7s						
MKAR	Makanchi Array	11.67	19	Pn	Pn	11 54 36.0	+0.5
	comp=E,0.2nm,0.3s,baz=202,slow=13,SNR=6.2						
MKAR				Sn	Sn	11 56 46.0	+0.2
	comp=E,0.1nm,0.3s,baz=203,slow=23,SNR=6.0						
AKTO	Aktyubinsk	20.00	323	P	P	11 56 22.9	+1.3
	comp=E,0.8nm,0.5s,baz=148,slow=9.5,SNR=2.0						
SONM	Songino Array	24.86	52	P	P	11 57 11.2	-0.5
	comp=E,0.4nm,0.6s,baz=242,slow=9.7,SNR=3.5						
FINES	FINESS Array B	40.74	325	P	P	11 59 27.9	-1.8
	comp=E,2.8nm,0.9s,baz=119,slow=8.1,SNR=1.7						

JMA 05 11:52:05.6±0.2**, 31°.12N×142°.25E, h58km, M3.7, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	2.87	315	P	Pn	11 52 50.0	+1.2
JHJ2				eS	Sn	11 53 23.7	+1.6
BSO1	Boso 1	3.68	343	P	Pn	11 53 01.5	+2.0
BSO3	Boso 3	3.95	339	P	Pn	11 53 05.2	+1.7
BSO4	Boso 4	4.18	338	P	Pn	11 53 08.7	+2.0
BSO4				eS	Sn	11 53 56.6	+2.4
JOD2	Odawara 2	4.91	328	P	Pn	11 53 18.8	+2.0
JOD2				eS	Sn	11 54 13.0	+0.7
JRY	Ryogami san	5.63	331	P	Pn	11 53 28.8	+2.1
JHO	Hitachi	5.65	346	P	Pn	11 53 29.1	+2.1
JAG	Ashikaga	5.78	337	P	Pn	11 53 31.0	+2.2

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*IDC **05** 11:53:58.3±0.5, 34°.91N×26°.35E, h0km, mb4.3/26, mb1 4.4/38, mb1mx4.3/57, mbtmp4.3/38, ML4.0/11, MS3.4/20, Ms1 3.4/20, ms1mx3.3/46, Error ellipse: s-maj=14.1km s-min=8.9km az=169.0*

*ISK **05** 11:53:58.9, 34°.96N×26°.35E, h2km, ML4.3/24*

*THE **05** 11:53:59.8, 34°.97N×26°.32E, h0km, ML4.2/7, Error ellipse: s-maj=1.9km s-min=0.8km az=159.0*

*NEIC **05** 11:53:59.7±2.1, 34°.98N±0°.07×26°.27E±0°.05, h10km±1km, Error ellipse: s-maj=12.8km s-min=7.2km az=165.0*

*MED_RC **05** 11:54:00.0±1.4, 34°.57N×26°.44E, h20km±2km, MW4.5/15, Moment Tensor Solution.Mantle waves: s15,c17; Duration: 1ˢ.0 Moment tensor: Scale 10¹⁵Nm; Mrr4.43±1.05; Mθθ0.12±.60; Mϕϕ-4.55±.62; Mrθ-0.90±.57; Mθϕ4.25±.47; Mϕr-1.46±.77; Best double couple: Mo6.23000×10¹⁵ NP1:ϕs302.00000°, δ48.00000°, λ49.00000°. NP2:ϕs175.00000°, δ56.00000°, λ126.00000°. Principal axes: T 5.3300, Plg61.0000°, Azm143.0000°; N 1.7900, Plg29.0000°, Azm332.0000°; P -7.1200, Plg4.0000°, Azm240.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*DDA **05** 11:54:00.4, 35°.05N×26°.46E, h9km±4km, MW4.4*

*ATH **05** 11:54:01.0, 34°.96N×26°.35E, h4km±1km, ML4.2/17, Error ellipse: s-maj=3.1km s-min=1.2km az=343.0*

*MOS **05** 11:54:01.3±1.2, 34°.97N×26°.17E, h31km, mb4.7/25, Error ellipse: s-maj=6.5km s-min=4.2km az=76.0*

*NIC **05** 11:54:01.8±0.0, 35°.01N×26°.46E, h18km±1km, Ml4.7/3*

*HLW **05** 11:54:02.7, 34°.96N×26°.50E, h25km±25km, Md4.3, Ml4.5*

ISC 05 11:54:00.6±0.8**, 34°.95N**±0°.03×**26°.33E**±0°.02**, h13km**±4km**, n442, σ1ˢ.72**/488**, mb4.5**/88**, MS3.3**/16**, 40C-22D, Fault plane solution: NP1:**ϕs275.89722°**,** δ50.05054°**,** λ43.57603°. **NP2:**ϕs154.47385°**,** δ58.10004°**,** λ130.85739°. **Principal axes:** T Plg55.8635°**,** Azm119.9923°**;** N Plg33.7368°**,** Azm309.9106°**;** P Plg4.6104°**,** Azm216.8234°**; Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.19	331	P	Pg	11 54 04.0	-1.0
ZKR				S	Sg	11 54 06.8	-1.1
ZKR				AML	AML	11 54 07.6	
ZKR				AML	AML	11 54 07.8	
ZKR	Zakros	0.19	331	P	Pg	11 54 03.9	-1.0
ZKR				S	Sg	11 54 07.4	-0.5
	151μm,0.2s						
ZKR	Zakros	0.19	331	PG	Pg	11 54 03.9	-1.0
ZKR				SG	Sg	11 54 06.9	-1.0
STIA	Sitia Lasithi	0.32	322	P	Pg	11 54 06.2	-1.0
STIA				S	Sg	11 54 11.4	-0.2
NPS	Neapolis	0.67	298	P	Pg	11 54 12.9	-0.7
NPS				S	Sg	11 54 22.5	0.0
NPS				AML	AML	11 54 26.6	
	comp=N,53747μm,0.4s						
NPS				AML	AML	11 54 27.2	
	comp=E,76519μm,0.6s						
NPS	Neapolis	0.67	298	P	Pg	11 54 12.5	-1.1
NPS				S	Sg	11 54 22.9	+0.5
	comp=E,33μm,0.5s						
LAST	Lasithi	0.73	287	P	Pg	11 54 13.8	-1.0
LAST				S	Sg	11 54 24.6	+0.1
LAST				AML	AML	11 54 27.6	
	comp=E,33155μm,0.6s						
LAST				AML	AML	11 54 31.1	
	comp=N,28004μm,0.8s						
LAST	Lasithi	0.73	287	P	Pg	11 54 13.7	-1.1
LAST				S	Sb	11 54 25.5	+0.2
	comp=N,15μm,1.5s						
KARP	Karpathos	0.91	48	P	Pb	11 54 17.0	-1.3
KARP				S	Sb	11 54 29.4	-0.9
KARP				AML	AML	11 54 35.5	
	comp=N,50839μm,0.5s						
KARP				AML	AML	11 54 35.5	
	comp=E,46961μm,0.8s						
KARP	Karpathos	0.91	48	P	Pb	11 54 16.7	-1.5
KARP				S	Sn	11 54 31.8	-0.3
	comp=E,26μm,0.7s						
KARP	Karpathos	0.91	48	PG	Pb	11 54 16.9	-1.3
KARP				SG	Sb	11 54 30.1	-0.1
KARP	Karpathos	0.91	48	Pg	Pb	11 54 16.8	-1.5
KARP	Karpathos	0.91	48	⇑P	Pb	11 54 16.9	-1.3
KARP				S	Sb	11 54 28.6	-1.6
KARP				AML	AML	11 54 34.7	
	comp=E,51nm,0.9s						
KARP				AML	AML	11 54 34.7	
	comp=E,51nm,0.9s						
KARP				AML	AML	11 54 35.1	
	comp=E,50nm,0.5s						
KARP				AML	AML	11 54 35.1	
	comp=E,50nm,0.5s						
HRKL	Herakleio	1.07	290	P	Pb	11 54 20.6	-0.4
HRKL				S	Sn	11 54 35.7	-0.4
	comp=E,24μm,0.8s						
HRKL	Herakleio	1.07	290	PN	Pb	11 54 20.6	-0.4
IACM	Heraklion	1.09	290	P	Pb	11 54 20.8	-0.6
IACM	Heraklion	1.09	290	P	Pb	11 54 20.6	-0.8
IACM				S	Sg	11 54 35.9	0.0
IDI	Anoyia	1.23	287	Pn	Pn	11 54 23.2	-0.4
	comp=E,115nm,0.3s,baz=162,slow=9.0,SNR=238						
IDI				Sn	Sg	11 54 41.7	+1.4
	comp=E,335nm,0.3s,baz=5.4,slow=18,SNR=9.0						
IDI	Anoyia	1.23	287	P	Pn	11 54 23.1	-0.4
IDI				AML	AML	11 54 53.2	
	comp=E,10769μm,0.6s						
IDI				AML	AML	11 54 54.8	
	comp=N,9284μm,1.4s						
IDI	Anoyia	1.23	287	P	Pn	11 54 22.3	-1.3
IDI				S	Sn	11 54 40.2	+0.1
	comp=N,5μm,0.7s						
IDI	Anoyia	1.23	287	⇑P	Pn	11 54 22.7	-0.8
IDI	Anoyia	1.23	287	PN	Pn	11 54 23.1	-0.4
IDI				SN	Sg	11 54 41.7	+1.4
IDI	Anoyia	1.23	287	Pn	Pn	11 54 22.4	-1.2
SIVA	Sivas	1.25	274	P	Pn	11 54 23.1	-0.7
SIVA				S	Sg	11 54 40.9	0.0
SIVA				AML	AML	11 54 59.3	
	comp=N,26892μm,0.6s						
SIVA				AML	AML	11 55 02.9	
	comp=E,33143μm,0.6s						
SIVA	Sivas	1.25	274	P	Pn	11 54 23.1	-0.7
SIVA				S	Sg	11 54 41.3	+0.4
	comp=E,14μm,0.6s						
TMBK	Timbaki Herakl	1.29	276	P	Pn	11 54 24.0	-0.3
SANT	Santorini	1.59	334	P	Pn	11 54 28.6	+0.1
SANT				AML	AML	11 54 54.9	
	comp=E,24175μm,0.7s						
SANT				AML	AML	11 54 55.0	
	comp=N,11034μm,0.6s						
SANT	Santorini	1.59	334	⇑P	Pn	11 54 28.9	+0.4
SANT				⇑S	Sb	11 54 49.7	-0.2
SANT	Santorini	1.59	334	PN	Pn	11 54 28.2	-0.3
SANT				SN	Sg	11 54 51.4	-0.4
SANT	Santorini	1.59	334	Pn	Pn	11 54 28.4	-0.1
THR6	Thira Island,	1.60	332	P	Pb	11 54 29.3	-0.7
THR8	Santorini-Mono	1.62	335	P	Pn	11 54 28.8	0.0
THR9	Santorini-Faro	1.62	331	P	Pn	11 54 28.8	0.0
SNT1	Gialos, Santor	1.64	334	P	Pn	11 54 29.4	+0.2
SNT5	Nea Kammeni, S	1.64	333	P	Pn	11 54 29.7	+0.5
THR3	Thira Island,	1.65	333	P	Pb	11 54 30.0	-0.8
THR7	Fira-Santorini	1.65	334	P	Pn	11 54 29.8	+0.5
THR5	Thira Island,	1.67	332	P	Pn	11 54 29.8	+0.2
NISR	Nisiros	1.78	21	P	Pn	11 54 31.6	+0.5
NISR				AML	AML	11 55 07.2	
	comp=N,15551μm,0.8s						
NISR				AML	AML	11 55 17.3	
	comp=E,17019μm,1.1s						
VAM	Vamos	1.81	285	P	Pb	11 54 32.7	-0.8
GVDS	Gavdos	1.85	267	PN	Pb	11 54 33.4	-0.8
GVD	Gavdhos	1.85	267	P	Pb	11 54 34.2	0.0
GVD				AML	AML	11 55 17.1	
	comp=E,7136μm,0.7s						
GVD				AML	AML	11 55 19.4	
	comp=N,6845μm,1.1s						
GVD	Gavdhos	1.85	267	PN	Pn	11 54 33.1	+1.1
KOSK	Kos Island	1.88	16	PN	Pn	11 54 32.8	+0.4
ARG	Arkhangelos	1.94	49	P	Pb	11 54 34.6	-1.2
ARG				AML	AML	11 55 09.5	
	comp=E,9889μm,1.1s						
ARG				AML	AML	11 55 20.9	
	comp=N,9465μm,1.1s						
ARG	Arkhangelos	1.94	49	PN	Pn	11 54 33.8	+0.6
IMMV	Iera Moni Meta	1.99	286	P	Pb	11 54 36.3	-0.4
IMMV				AML	AML	11 55 18.6	
	comp=N,9477μm,1.1s						
IMMV				AML	AML	11 55 26.0	
	comp=E,11540μm,0.9s						
IMMV	Iera Moni Meta	1.99	286	PN	Pb	11 54 35.4	-1.3
APE	Apeiranthos	2.22	343	P	Pn	11 54 37.5	+0.4
APE				AML	AML	11 55 10.3	
	comp=E,4406μm,0.5s						
APE				AML	AML	11 55 11.7	
	comp=N,4518μm,0.8s						
APE	Apeiranthos	2.22	343	⇑P	Pn	11 54 37.8	+0.7
APE				⇑S	Sn	11 55 05.3	+0.9
APE	Apeiranthos	2.22	343	PN	Pn	11 54 37.7	+0.6
APE	Apeiranthos	2.22	343	deP	Pn	11 54 37.3	+0.2
APE	Apeiranthos	2.22	343	P	Pn	11 54 37.3	+0.2
APE				S	Sn	11 55 05.3	+0.9
BODT	Bodrum	2.26	20	PN	Pn	11 54 38.3	+0.7
BDRM	Kayabasi	2.30	23	iP	Pn	11 54 38.2	0.0
MRSB	Marmaris-Mugla	2.33	40	PN	Pn	11 54 39.3	+0.7
MHLO	Agia Marina, M	2.34	319	P	Pn	11 54 40.1	+1.3
MHLO				AML	AML	11 55 18.2	
	comp=N,18839μm,1.0s						
MHLO				AML	AML	11 55 20.5	
	comp=E,14235μm,0.9s						
MHLA	Plaka, Milos I	2.37	320	P	Pn	11 54 41.0	+1.7
MHLA				AML	AML	11 55 25.6	
	comp=E,7262μm,0.8s						
MHLA				AML	AML	11 55 26.2	
	comp=N,11288μm,1.0s						
TURN	Turunc	2.40	40	PN	Pn	11 54 40.5	+1.0
TURN	Turunc	2.40	40	iP	Pn	11 54 41.0	+1.5
DDIM	Aydin, Didim	2.61	16	iP	Pb	11 54 45.0	-2.3
MLSB	Milas	2.62	26	PN	Pn	11 54 44.3	+1.6
ANKY	Antikythira Is	2.64	291	P	Pb	11 54 45.6	-2.1
ANKY				AML	AML	11 55 42.7	
	comp=E,4603μm,0.9s						
ANKY				AML	AML	11 55 52.9	
	comp=N,2641μm,1.1s						
DALY	Dalyan (Mula)	2.65	45	PN	Pn	11 54 44.1	+1.0
DALY	Dalyan (Mula)	2.65	45	iP	Pn	11 54 45.2	+2.2
YER	Yerkesik	2.70	35	PN	Pn	11 54 44.9	+1.2
TNSA	Tinos	2.76	340	P	Pn	11 54 45.0	+0.6
SMG	Samos	2.79	8	P	Pn	11 54 45.4	+0.4
SMG				AML	AML	11 55 50.4	
	comp=N,2322μm,0.7s						
SMG				AML	AML	11 55 51.7	
	comp=E,2662μm,1.5s						
FETY	Fethiye	2.80	52	PN	Pn	11 54 45.7	+0.6
FETY	Fethiye	2.80	52	iP	Pn	11 54 46.0	+0.8
MULA	Mugla, Merkez-	2.81	34	iP	Pn	11 54 47.2	+1.9
GCAM	G?zelcaml?	2.84	15	PN	Pn	11 54 47.2	+1.5
GCAM	G?zelcaml?	2.84	15	iP	Pn	11 54 47.4	+1.7
KSL	Kastellorizon	2.91	65	P	Pn	11 54 47.3	+0.7
KSL	Kastellorizon	2.91	65	⇑P	Pn	11 54 46.4	-0.2
KSL				S	Sn	11 55 20.4	-1.1
AKAS	Kas	2.96	63	PN	Pn	11 54 48.2	+0.8
AKAS	Kas	2.96	63	iP	Pn	11 54 48.0	+0.6
AKAS				iS	Sn	11 55 23.6	+0.7
AKAS	Kas	2.96	63	Pn	Pn	11 54 48.1	+0.6
KTHA	Kythira Island	2.97	297	P	Pn	11 54 47.5	0.0
KTHA				AML	AML	11 55 42.7	
	comp=E,2450μm,0.7s						
KTHA				AML	AML	11 55 51.7	
	comp=N,1747μm,1.0s						
KTHA	Kythira Island	2.97	297	PN	Pn	11 54 48.8	+1.4
MNVA	Monemvasia	3.19	304	P	Pn	11 54 50.5	0.0
CAEL	Denizli, Camel	3.25	47	iP	Pn	11 54 52.8	+1.4
CAEL				iS	Sg	11 55 42.4	-2.7
VLI	Veliai	3.28	304	P	Pn	11 54 52.7	+1.0
ZEYE	Izmir, Urla-Ze	3.29	2	iP	Pn	11 54 49.5	-2.3
URLA	Izmir	3.42	3	PN	Pn	11 54 54.8	+1.2
URLA	Izmir	3.42	3	iP	Pn	11 54 53.9	+0.4
ELL	Elmali	3.42	57	P	Pn	11 54 54.9	+1.2
ELL	Elmali	3.42	57	Pn	Pn	11 54 54.9	+1.2
ELL	Elmali	3.42	57	P	Pn	11 54 54.1	+0.4
KARY	Karystos	3.44	334	P	Pn	11 54 55.1	+1.2
GOLH	Golhisar	3.47	48	iP	Pn	11 54 56.2	+1.8
AKUM	Antalya-Kumluc	3.54	66	iP	Pn	11 54 55.3	0.0
AKUM				iS	Sn	11 55 40.5	+3.4
VLY	Voula,Athens	3.55	326	P	Pn	11 54 57.2	+1.8
SLUM	Salum	3.57	196	P	Pn	11 54 55.7	+0.1
	baz=198						
SLUM				S	Sn	11 55 34.9	-2.9
	baz=198						
ATHU	Athens Univers	3.65	326	P	Pn	11 54 58.1	+1.3
DION	Dionisos Attik	3.67	329	P	Pn	11 54 58.5	+1.4
PTL	Penteli	3.68	328	P	Pn	11 54 58.6	+1.4
ATH	Athens Observa	3.68	326	P	Pn	11 54 59.0	+1.7
EPID	Epidavros	3.72	317	P	Pn	11 54 59.8	+2.1
KORT	Korkueli	3.85	57	PN	Pn	11 55 01.1	+1.4
KORT	Korkueli	3.85	57	iP	Pn	11 55 01.0	+1.4
MANT	Manisa	3.96	26	Pn	Pn	11 55 03.2	+1.9
KULA	Kula-Manisa	4.02	27	PN	Pn	11 55 03.7	+1.7
ZEDA	zmir-Bergama	4.06	8	iP	Pn	11 55 03.4	+1.1
BRDR	BURDUR-Merkez	4.07	47	iP	Pn	11 55 04.6	+1.9
AKHS	Akhisar	4.10	16	iP	Pn	11 55 05.3	+2.3
BUCA	Burdur, Bucak-	4.17	54	iP	Pn	11 55 06.8	+2.8
ITM	Ithomi	4.21	303	PN	Pn	11 55 06.5	+2.0
ITM	Ithomi	4.21	303	Pn	Pn	11 55 02.6	-1.9
BASM	Basmaki-Afyon	4.22	44	PN	Pn	11 55 06.2	+1.5
KHAL	Karahalli	4.26	36	iP	Pn	11 55 06.2	+0.9
SIGR	SIGRI	4.28	355	PN	Pn	11 55 06.8	+1.4

USAK	Uak-Merkez	4.33	29	i P	Pn	11 55 07.6	+1.4
OSC1	CSNet OBS 1	4.34	108	P	Pn	11 55 07.2	+0.9
ISP	Isparta	4.43	48	PN	Pn	11 55 09.4	+1.7
ISP	Isparta	4.43	48	P	Pn	11 55 07.8	+0.1
ISP	Isparta	4.43	48	Pn	Pn	11 55 07.8	+0.1
KZIL	AFYON_Kizioren	4.51	42	i P	Pn	11 55 08.3	-0.4
KOCA	Canakkale, Ayv	4.55	358	i P	Pn	11 55 10.5	+1.3
BUHA	Balikesir, Bur	4.59	7	i P	Pn	11 55 10.2	+0.6
SIMA	Simav-Kutahya	4.64	26	PN	Pn	11 55 11.8	+1.3
KEPZ	Antalya-Kepez	4.70	64	i P	Pn	11 55 12.9	+1.6
KEPZ				i S	Sn	11 56 05.8	0.0
BAGO	Egridir - ISPA	4.70	48	i P	Pn	11 55 13.1	+1.7
BAYC	CANAKKALE_Bayr	4.79	2	i P	Pn	11 55 14.5	+2.1
BALB	Balikesir	4.85	14	PN	Pn	11 55 14.9	+1.7
EZN	Ezine	4.87	360	PN	Pn	11 55 15.1	+1.6
BALY	Balya	4.89	12	i P	Pn	11 55 13.1	-0.9
AKMS	Akamas	4.93	87	P	Pn	11 55 14.7	+0.3
AKMS				S	Sn	11 56 10.6	-0.7
AKMS				AML	AML	11 56 12.6	
	comp=N,1.7nm,0.4s						
AKMS				AML	AML	11 56 12.6	
	comp=N,1.7nm,0.4s						
AKMS				AML	AML	11 56 13.0	
	comp=N,2.6nm,0.7s						
AKMS				AML	AML	11 56 13.0	
	comp=N,2.6nm,0.7s						
SHUT	Suhut-Afyon	4.94	42	PN	Pn	11 55 15.4	+0.7
AFYO	Afyonkarahisar	4.98	39	i P	Pn	11 55 13.0	-2.1
GAZI	Gazipasa	5.04	73	PN	Pn	11 55 17.3	+1.4
GAZI	Gazipasa	5.04	73	i P	Pn	11 55 14.1	-1.9
SEDI	Konya, Seydise	5.05	59	i P	Pn	11 55 18.2	+2.1
SEYD	Seydisehir-KON	5.08	60	PN	Pn	11 55 18.9	+2.3
NATA	Nata	5.13	90	P	Pn	11 55 16.8	-0.3
YVAC	Isparta, Yalva	5.16	49	i P	Pn	11 55 18.1	+0.5
AGG	Agios Georgios	5.18	323	PN	Pn	11 55 20.8	+3.0
AGG	Agios Georgios	5.18	323	P	Pn	11 55 14.5	-3.3
AGG	Agios Georgios	5.18	323	Pn	Pn	11 55 14.5	-3.3
OSC2	CSNet OBS 4	5.27	109	P	Pn	11 55 19.9	+0.9
DOGA	KONYA_Doganhis	5.33	52	i P	Pn	11 55 21.6	+1.6
ANDZ	Kutahya, Merke	5.37	31	i P	Pn	11 55 23.3	+2.8
SZAC	Souni	5.39	90	P	Pn	11 55 20.2	-0.5
SZAC				AML	AML	11 56 24.6	
	comp=N,1.4nm,0.6s						
SZAC				AML	AML	11 56 34.3	
	comp=N,1.3nm,1.1s						
GELI	Tayfur-Gelibol	5.45	1	PN	Pn	11 55 23.6	+2.2
ERMK	Ermenek	5.61	71	i P	Pn	11 55 24.1	+0.2
ASGA	Asgata	5.69	90	P	Pn	11 55 24.4	-0.4
KONT	Konya--Tatoy	5.71	57	i P	Pn	11 55 26.8	+1.7
SWA2		5.73	188	P	Pn	11 55 25.9	+0.5
	baz=190						
CSS	Mathiatis	5.75	88		Pn	11 55 24.2	-1.5
CSS	Mathiatis	5.75	88	⇑P	Pn	11 55 24.7	-0.9
KKBE	Karaman, Kazim	5.81	65	i P	Pn	11 55 28.9	+2.3
ALN	Alexandroupoli	5.95	358	P	Pn	11 55 28.5	+0.2
ALN	Alexandroupoli	5.95	358	Pn	Pn	11 55 28.5	+0.2
LIT	Litokhoron	5.98	330	P	Pn	11 55 27.3	-1.6
LIT	Litokhoron	5.98	330	Pn	Pn	11 55 27.3	-1.6
MVOU	Mavrovouni	5.99	87	⇑P	Pn	11 55 28.7	-0.3
GULN	MERSIN_Gulnar	6.01	76	i P	Pn	11 55 29.9	+0.8
ALIN	Konya, Altinte	6.24	56	i P	Pn	11 55 34.2	+1.7
AUMIH	MIHALICIK	6.40	38	i P	Pn	11 55 36.5	+1.8
HNAT	Natroun	6.42	144	P	Pn	11 55 34.1	-0.8
	baz=145						
MDUB	Mudurnu	6.73	34	Pn	Pn	11 55 40.5	+1.3
KERG	Konya-Eregli	6.77	66	i P	Pn	11 55 39.5	-0.2
HSAF	As Saff	6.91	139	P	Pn	11 55 39.5	-2.1
	baz=139						
ARMN	Kirklareli, Me	6.96	7	i P	Pn	11 55 43.5	+1.3
HHAG	Hagoal	6.96	134	P	Pn	11 55 41.0	-1.4
	baz=135						
HHAG				AMP		11 57 00.0	
	baz=135						
FNA	Florina	7.02	328	P	Pn	11 55 40.9	-2.3
FNA	Florina	7.02	328		Pn	11 55 40.9	-2.3
GLL	Jalalah	7.03	138	P	Pn	11 55 42.0	-1.2
	baz=139						
BR231	Keskin MP Arra	7.08	44		Pn	11 55 44.3	+0.2
GULE	Gulek	7.22	69	i P	Pn	11 55 47.8	+1.7
CMDR	Camlidere-ANKA	7.37	39	i P	Pn	11 55 49.6	+1.6
STIP	Stip	7.48	335	i P	Pn	11 55 53.9	+4.5
BR131	Keskin Array S	7.52	49	c iP	Pn	11 55 52.5	+2.4
BR131	Keskin Array S	7.52	49	Pn	Pn	11 55 52.2	+2.1
BRTR	Keskin Array B	7.52	49	Pn	Pn	11 55 52.0	+1.8
	comp=N,0.8nm,0.3s,baz=225,slow=14,SNR=20						
BRTR				Sn	Sn	11 57 15.8	+0.4
	baz=224,slow=24,SNR=1.8						
BRTR				LR	LR	11 59 34.0	
	comp=N,586nm,18.8s,baz=245,slow=45						
OHR	Ohrid	7.55	326	i P	Pn	11 55 57.2	+6.8
MMAI	Mount Meron Ar	7.78	102	Pn	Pn	11 55 50.7	-2.8
	comp=N,2.3nm,0.3s,baz=48,slow=36,SNR=3.8						
MMAI				Sn	Sn	11 57 20.3	-1.2
	comp=N,6.3nm,0.3s,baz=268,slow=20,SNR=2.3						
TIP	Timpagrande	8.74	302	Pn	Pn	11 56 06.5	-0.3
EIL	Elat	8.99	123	Pn	Pn	11 56 08.9	-1.3
	comp=N,1.5nm,0.3s,baz=334,slow=1.4,SNR=11						
EIL				Sn	Sn	11 57 47.2	-4.1
	comp=N,2.3nm,0.3s,baz=52,slow=19,SNR=2.6						
HBST	Basata	9.13	126	P	Pn	11 56 10.1	-2.0
	baz=127						
HKAT	Jabal Katrina	9.14	132	P	Pn	11 56 11.2	-1.1
	baz=133						
PDG	Podgorica	9.29	326	⇑P	Pn	11 56 15.9	+1.6
PDG	Podgorica	9.29	326		Pn	11 56 12.4	-1.8
HDHB	Dhahab	9.39	129	P	Pn	11 56 14.0	-1.6
	baz=129						
TIRR	Tirgusor	9.63	9	⇑P	Pn	11 56 21.3	+2.4
TIRR	Tirgusor	9.63	9	P	Pn	11 56 19.9	+1.0
TIRR	Tirgusor	9.63	9		Pn	11 56 19.9	+1.0
TLBR	Topalu	9.68	7	⇑P	Pn	11 56 23.0	+3.5
RAFF	Raffo Rosso	9.95	287	Pn	Pn	11 56 23.5	+0.2
VAE	Valguarnera	9.96	288	Pn	Pn	11 56 25.4	+2.0
	comp=N,7.0nm,0.3s,baz=251,slow=19,SNR=3.2						
VAE				Sn	Sn	11 58 13.7	-1.5
	comp=N,3.2nm,0.3s,baz=140,slow=10,SNR=1.9						
CFR	Carcaliu	10.31	7	⇑P	Pn	11 56 30.1	+1.9
DIVS	Divibare	10.37	334		Pn	11 56 30.6	+1.6
STON	Ston	10.38	322	ePn	Pn	11 56 28.7	-0.5
STON				Sn	Sn	11 58 18.1	-7.2
TLCR		10.40	10	⇑P	Pn	11 56 32.7	+3.3
MDVR	Moldovita	10.44	342	⇑P	Pn	11 56 30.8	+0.7
VOIR		10.53	355	⇑P	Pn	11 56 34.4	+3.2
MLR	Muntele Rosu	10.54	359	Pn	Pn	11 56 34.1	+2.7
	comp=N,0.4nm,0.3s,baz=157,slow=8.1,SNR=4.1						
MLR	Muntele Rosu	10.54	359	⇑P	Pn	11 56 34.8	+3.4
MLR	Muntele Rosu	10.54	359		Pn	11 56 31.8	+0.3
SGRT	San Giovanni R	10.73	312	Pn	Pn	11 56 31.9	-2.2
GZR	Gura Zlata	10.78	346	⇓P	Pn	11 56 36.5	+1.8
PLOR	Plostina	10.90	1	⇑P	Pn	11 56 39.6	+3.4
CORL	Corleone	10.90	289	Pn	Pn	11 56 37.1	+0.7
VRI	Vrincioaia	10.91	1	⇑P	Pn	11 56 40.0	+3.6
DOPR	Dopca	11.03	357	⇑P	Pn	11 56 40.4	+2.3
BZS	Buzias	11.25	343	⇑P	Pn	11 56 42.3	+1.3
TESR	Tescani	11.56	1	⇑P	Pn	11 56 47.5	+2.2
SIRR	Siria	11.85	344	⇓P	Pn	11 56 50.4	+1.1
KIJV	Kijevo	11.85	323	ePn	Pn	11 56 47.9	-1.4
KIJV				Sn	Sn	11 58 53.6	-7.8
BIZ	Bicaz	11.98	359	⇑P	Pn	11 56 54.5	+3.5
ZIRJ	Zirje	12.00	320	ePn	Pn	11 56 50.6	-0.6
ZIRJ				Sn	Sn	11 58 58.8	-6.1
MORI	Morici	12.11	321	ePn	Pn	11 56 52.6	-0.2
DRGR		12.15	348	⇓P	Pn	11 56 55.7	+2.3
DUGI	Dugi Otok	12.54	319	Sn	Sn	11 59 11.5	-6.6
UDBI	Udbina	12.55	323	ePn	Pn	11 56 57.4	-1.4
NRCA	Norcia	12.95	311	Pn	Pn	11 57 02.4	-2.0
SORM	Soroca	13.26	6	⇓P	Pn	11 57 10.6	+2.1
SOC	Sochi	13.47	46	eP	Pn	11 57 12.2	+0.8
SOC				e		11 59 43.1	
SOC				MLR	MLR		
	comp=Z,54nm,10.0s						
MPLH	Magyarpolny	13.88	334	ePN	Pn	11 57 19.3	+2.3
KEST	Kesra	13.89	278	Pn	Pn	11 57 20.6	+3.3
	comp=Z,0.4nm,0.3s,baz=31,slow=15,SNR=2.5						
KOLS	Kolonicke sedl	14.30	349	eP	P	11 57 31.4	+1.5
KOLS	Kolonicke sedl	14.30	349	ePN	P	11 57 31.4	+1.5
CASP	Castiglione de	14.36	308	Pn	Pn	11 57 24.3	+0.8
SOKA	Soboth	14.49	327	ePn	Pn	11 57 26.1	+0.7
	comp=Z,5.1nm,0.8s						
OBKA	Obir	14.58	326	ePn	Pn	11 57 27.6	+1.0
	comp=Z,11nm,1.2s						
VYHS	Vyhne	14.64	340	eP	P	11 57 30.9	-2.7
VYHS	Vyhne	14.64	340	ePN	P	11 57 30.9	-2.7
ARSA	Arzberg	14.73	330	ePn	Pn	11 57 29.2	+0.6
	comp=Z,7.4nm,1.0s						
MODS	Modra-Piesok	15.01	336	eP	P	11 57 37.9	+0.1
MODS	Modra-Piesok	15.01	336	ePN	P	11 57 37.9	+0.1
NIE	Niedzica	15.13	345	eP	P	11 57 36.8	-2.4
CONA	Conrad Observa	15.14	332	ePn	Pn	11 57 35.4	+1.2
	comp=Z,8.7nm,1.2s						
ZOU	Zoufplan	15.37	323	Pn	Pn	11 57 38.9	+1.6
ZOU				IAmb	IAmb	11 57 57.3	
	comp=Z,17nm,1.1s						
KIV	Kislovodsk	15.49	50	i P	P	11 57 44.1	+0.9
KIV				i S	Sn	12 00 31.6	+1.4
KIV				pmax	pmax		
	comp=Z,34nm,1.1s						
KIV				MLR	MLR		
	comp=Z,119nm,14.0s						
KIV	Kislovodsk	15.49	50	P	P	11 57 42.4	-0.9
KIV				IAmb	IAmb	11 57 48.4	
	comp=Z,40nm,1.1s						
GNI	Garni	15.49	65	Pn	P	11 57 41.4	-2.0
	comp=Z,0.6nm,0.3s,baz=213,slow=20,SNR=2.6						
GNI				LR	LR	12 05 05.0	
	comp=Z,461nm,20.4s,baz=272,slow=43						
GNI	Garni	15.49	65	⇓eP	P	11 57 41.6	-1.8
KVAR	Kislovodsk Arr	15.49	50	Pn	P	11 57 42.2	-1.1
	baz=31,slow=16,SNR=1.9						
KBZ	Khabaz	15.51	51	Pn	P	11 57 43.8	+0.5
	comp=Z,0.3nm,0.3s,baz=247,slow=7.3,SNR=14						
KBZ				LR	LR	12 05 28.0	
	comp=Z,97nm,19.5s,baz=270,slow=44						
KBZ	Khabaz	15.51	51	⇓eP	P	11 57 44.0	+0.7
KBA	Koelnbreinsper	15.56	325	ePn	P	11 57 44.6	+0.5
	comp=Z,3.3nm,0.6s						
MOA	Molln	15.73	329	ePn	Pn	11 57 42.4	+0.6
	comp=Z,11nm,1.5s						
ABTA	Abfaltersbach	15.73	323	ePn	Pn	11 57 42.7	+0.8
	comp=Z,4.6nm,0.6s						
ZEI	Tsey	15.75	55	eP	P	11 57 45.3	-0.9
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
NCK	Nalchik	15.85	52	⇑eP	P	11 57 49.1	+2.0
AKASG	Malin Array Be	15.89	7	Pn	Pn	11 57 43.9	+0.1
	comp=Z,0.8nm,0.3s,baz=195,slow=11,SNR=6.3						
AKBB	Malin Array Si	15.89	7	P	Pn	11 57 42.7	-1.1
AKBB				pmax	pmax		
	comp=Z,26nm,1.1s						
AKBB	Malin Array Si	15.89	7	Pn	Pn	11 57 42.7	-1.1
AKBB				IAmb	IAmb	11 57 57.5	
	comp=Z,26nm,1.1s						
KRUC	Moravsky	15.90	336	ePN	Pn	11 57 45.7	+1.7
OJC	Ojcow	15.99	345	eP	P	11 57 47.7	-1.0
VRAC	Vranov	16.05	336	Pn	Pn	11 57 46.8	+0.9
	comp=Z,0.5nm,0.3s,baz=184,slow=7.5,SNR=4.1						
VRAC	Vranov	16.05	336	ePN	Pn	11 57 47.3	+1.4
SALO	Salr	16.07	316	P	Pn	11 57 47.1	+0.9
MORC	Moravsky Berou	16.16	339	ePN	Pn	11 57 47.5	+0.1
MORC	Moravsky Berou	16.16	339	P	Pn	11 57 48.7	+1.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MORC	Moravsky Berou	16.16	339	P	Pn	11 57 48.7	+1.3
WTTA	Wattenberg	16.52	323	ePn	Pn	11 57 53.3	+1.2
	comp=Z,24nm,1.5s						
WATA	Walderalm	16.60	323	ePn	Pn	11 57 53.9	+0.8
	comp=Z,13nm,1.3s						
SQTA	Sankt Quirin	16.71	322	ePn	Pn	11 57 55.3	+0.8
	comp=Z,10nm,1.4s						
GEC2	GERESS Array S	16.74	330	Pn	Pn	11 57 53.0	-1.8
GEC2B	GERESS ARRAY S	16.74	330	Pn	Pn	11 57 54.8	0.0
GERES	GERESS Array B	16.74	330	Pn	Pn	11 57 55.8	+1.0
	comp=Z,0.3nm,0.3s,baz=134,slow=13,SNR=4.5						
GERES				LR	LR	12 06 12.9	
	comp=Z,103nm,19.7s,baz=166,slow=44						
FETA	Feichten	16.82	321	ePn	P	11 57 57.9	-0.2
	comp=Z,7.6nm,1.0s						
MOTA	Moosalm	16.84	322	ePn	Pn	11 57 56.7	+0.5
	comp=Z,8.7nm,1.1s						
KHC	Kasperske Hory	17.01	330	eP	Pn	11 57 58.9	+0.7
KHC	Kasperske Hory	17.01	330	eP	Pn	11 57 58.9	+0.7
KHC				ex	x	11 58 04.8	
KHC	Kasperske Hory	17.01	330	P	Pn	11 57 57.9	-0.3
DPC	Dobruska-Polom	17.04	338	eP	P	11 58 00.0	-0.3
DPC	Dobruska-Polom	17.04	338	eP	P	11 58 00.0	-0.3
DPC				epP	pP	11 58 04.5	+0.7
DAVOX	Davos/Dischmat	17.12	319	P	Pn	11 57 59.7	-0.1
	comp=Z,0.2nm,0.3s,baz=153,slow=16,SNR=2.2						
DAVOX				LR	LR	12 05 33.1	
	comp=Z,75nm,21.4s,baz=79,slow=40						
TUE	Stuetta	17.23	317	P	Pn	11 58 01.2	0.0
BTLR	Botlikh	17.29	58	⇑eP	P	11 58 04.5	+1.4
BTLR				pmax	pmax		
	comp=Z,16nm,1.1s						
PRU	Pruhonice	17.33	334	eP	Pn	11 58 01.8	-0.3
PRU	Pruhonice	17.33	334	eP	Pn	11 58 01.8	-0.3
DAVA	Damuels	17.44	320	ePn	Pn	11 58 04.2	+0.5
	comp=Z,0.3nm,0.5s						
KSP	Ksiaz	17.48	338	eP	Pn	11 58 04.1	+0.1
DBC	Dubki	17.83	57	⇑eP	P	11 58 12.3	+3.2
DBC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BRG	Berggiesshubel	18.28	334	eP	P	11 58 16.9	+3.0
BRG				Amp		11 58 20.5	
	comp=Z,16nm,1.3s						
BRG	Berggiesshubel	18.28	334	eP	P	11 58 16.9	+3.0
BRG				pmax	pmax		
	comp=Z,16nm,1.3s						
BRG	Berggiesshubel	18.28	334	eP	P	11 58 16.9	+3.0
BRG				Amp		11 58 20.5	
	comp=Z,16nm,1.3s						
SENIN	Lac Senin/Sane	18.35	314	P	Pn	11 58 14.5	-0.5
SENIN				IAmb	IAmb	11 58 25.6	
	comp=Z,18nm,0.8s						
VSR	Storozhevoye	18.72	26	eP	Pn	11 58 23.6	+4.4
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BFO	Black Forest	18.91	320	P	P	11 58 19.8	-1.1
BFO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BFO	Black Forest	18.91	320	P	P	11 58 19.8	-1.1
CLL	Collm	18.98	334	eP	Pn	11 58 22.4	+0.1
	comp=Z,8.0nm,0.9s						
CLL				ePP	PnPn	11 58 39.0	+4.3
SUW	Suwalki	19.19	354	eP	Pn	11 58 25.3	+0.4
SUW	Suwalki	19.19	354	eP	Pn	11 58 25.5	+0.7
GKP	Gorka Klasztor	19.42	343	eP	Pn	11 58 27.1	-0.5
ECH	Echery	19.46	319	P	P	11 58 25.7	-1.3
ECH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ECH	Echery	19.46	319	P	P	11 58 25.7	-1.3
SSB	Saint Sauveur	19.55	308	P	P	11 58 25.3	-2.6
SSB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SSB	Saint Sauveur	19.55	308	P	P	11 58 25.3	-2.6
MNK	Minsk	19.59	3	i P	P	11 58 27.7	-0.5
	comp=E,2.0nm,0.8s						
MNK				i P	P	11 58 27.7	-0.5
	comp=N,23nm,0.8s						
MNK				i P	P	11 58 27.7	-0.5
	comp=Z,18nm,0.8s						
MNK				i PP	PnPn	11 58 42.9	-0.1
MNK				i S	S	12 02 06.9	-2.0
MNK				i SS	SnSn	12 02 27.9	+4.5
MNK				i PcP	PcP	12 02 45.5	-2.3
MNK				i LQ	LQ	12 04 23.1	
MNK				i LR	LR	12 04 59.9	
MNK				i LRM	MLR	12 07 06.5	
	comp=N,409nm,18.4s						
MNK				i LRM	MLR	12 07 08.4	
	comp=E,19nm,18.4s						
MNK				i LRM	MLR	12 07 09.7	
	comp=Z,102nm,18.4s						
VRH	Novokhopyorsk	19.69	30	eP	P	11 58 29.7	+0.3
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
LPSR	Galich'ya Gora	19.80	23	eP	P	11 58 30.4	-0.2
LPSR				pmax	pmax		
	comp=Z,30nm,1.3s						
NACGM	Naroch	19.96	1	i P	Pn	11 58 37.6	+3.6
NACGM				i P	Pn	11 58 37.6	+3.6
NACGM				i P	Pn	11 58 37.6	+3.6
NACGM				i PP	PnPn	11 58 54.5	+6.3
NACGM				i PPP	PPP	11 59 02.2	
NACGM				i S	Sn	12 02 31.8	+14
NACGM				i SS	SnSn	12 02 42.0	+9.4
NACGM				i SSS	SSS	12 03 00.9	
NACGM				i LQ	LQ	12 04 03.4	
NACGM				i LR	LR	12 06 01.1	
RAYN	Ar Rayn	20.20	119	P	Pn	11 58 36.4	-0.7
RAYN				pmax	pmax		
	comp=Z,34nm,1.5s						
RAYN	Ar Rayn	20.20	119	P	Pn	11 58 36.4	-0.8
RAYN				IAmb	IAmb	11 58 44.5	
	comp=Z,34nm,1.5s						
IDID	Didziasalis	20.37	1	eP	P	11 58 37.6	+0.8
IIGN	Ignalina	20.41	360	eP	P	11 58 37.3	+0.2
IIGN				IAmb	IAmb	11 58 42.1	
	comp=Z,5.5nm,0.6s						
PABE	Paberze	20.62	356	eP	P	11 58 39.1	-0.4
ISAL	Salakas	20.63	360	eP	P	11 58 37.9	-1.6
ISAL				IAmb	IAmb	11 58 42.8	
	comp=Z,8.1nm,0.4s						
WLF	Walferdange	20.86	321	dP	P	11 58 41.8	-0.3
OBN	Obninsk	21.38	16	LR	LR	12 07 43.7	
	comp=Z,30nm,18.8s,baz=162,slow=39						
OBN	Obninsk	21.38	16	i P	P	11 58 50.5	+2.9
OBN				i		11 59 06.7	
OBN				i		11 59 11.6	
OBN				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN				MLR	MLR		
	comp=Z,89nm,16.0s						
BTNL	Ternell	21.44	323	dpP	P	11 58 49.8	+1.4
BCLA	Clavier	21.75	322	dP	P	11 58 50.9	-0.8
TAM	Tamanrasset	21.83	242	P	P	11 58 52.2	-0.7
TAM				pmax	pmax		
	comp=Z,50nm,1.5s						
TAM	Tamanrasset	21.83	242	P	P	11 58 52.2	-0.7
DOU	Dourbes	21.93	320	dP	P	11 58 53.4	-0.2
CLF	Chambon-Foret	22.16	313	P	P	11 58 52.6	-3.5
MOS	Moscow	22.20	17	eP	P	11 58 50.1	-6.3
MOS				eS	S	12 02 53.7	-6.8
MOS				pmax	pmax		
	comp=Z,36nm,0.7s						
BELG	Belogornoye	23.12	35	P	P	11 59 05.9	-0.3
	comp=Z,10nm,0.7s,baz=295,slow=2.1,SNR=3.2						
BELG	Belogornoye	23.12	35	⇑eP	P	11 59 06.9	+0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VSU	Vasula	23.53	1	eP	P	11 59 12.4	+2.2
ESBB	Sonseca Array	24.49	290	P	P	11 59 17.8	-1.8
ESBB				IAmb	IAmb	11 59 27.1	
	comp=Z,7.0nm,0.8s						
ESDC	Sonseca Array	24.49	290	P	P	11 59 19.4	-0.2
	comp=Z,6.1nm,0.8s,baz=81,slow=9.5,SNR=29						
ESDC				PcP	PcP	12 02 58.9	+1.0
	comp=Z,0.6nm,0.9s,baz=71,slow=1.7,SNR=2.6						
ESDC				LR	LR	12 08 42.6	
	comp=Z,54nm,20.6s,baz=340,slow=36						
PAB	San Pablo	24.79	290	P	P	11 59 20.6	-1.7
PAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PAB	San Pablo	24.79	290	P	P	11 59 20.6	-1.7
PAB				IAmb	IAmb	11 59 27.9	
	comp=Z,9.0nm,0.9s						
GEYT	Alibeck	25.68	74	P	P	11 59 29.4	-0.9
	comp=Z,15nm,0.7s,baz=309,slow=9.4,SNR=22						
GYA0B	ALIBECK ARRAY	25.68	74	P	P	11 59 30.8	+0.4
MDT	Midelt	25.73	274	P	P	11 59 30.9	0.0
	comp=Z,4.6nm,0.9s,baz=65,slow=8.6,SNR=12						
MDT				LR	LR	12 12 03.0	
	comp=Z,51nm,19.1s,baz=110,slow=42						
FINES	FINESS Array B	26.52	360	P	P	11 59 38.2	+0.6
	comp=Z,3.3nm,0.8s,baz=163,slow=12,SNR=4.3						
FINES				PcP	PcP	12 03 01.8	-0.2
	comp=Z,3.3nm,0.9s,baz=134,slow=4.0,SNR=1.9						
FINES				LR	LR	12 11 08.9	
	comp=Z,72nm,18.1s,baz=182,slow=39						
PBRG	Braganca	26.70	295	eP	P	11 59 39.2	-0.4
	comp=Z,24nm,1.3s						
MVO	Moncorvo	26.88	293	eP	P	11 59 40.6	-0.6
	comp=Z,29nm,0.9s						
PMRV	Marv??o	27.14	290	eP	P	11 59 42.7	-0.8
	comp=Z,26nm,1.4s						
MTE	Manteigas	27.25	292	eP	P	11 59 45.8	+1.2
	comp=Z,26nm,1.6s						
KLMR	Klimovskoe	27.28	14	eP	P	11 59 44.7	+0.2
KLMR				pmax	pmax		
	comp=Z,17nm,1.0s						
KLMR	Klimovskoe	27.28	14	eP	P	11 59 44.7	+0.2
KLMR				AMP		11 59 51.7	
	comp=Z,17nm,1.0s						
POLO	Lamas de Olo	27.47	294	eP	P	11 59 47.0	+0.5
	comp=Z,10nm,1.7s						
PVAQ	Vaqueiros	27.51	285	eP	P	11 59 45.8	-1.0
PVIS	Viseu	27.52	292	eP	P	11 59 49.0	+2.0
	comp=Z,30nm,1.3s						
PBEJ	Beja	27.58	287	eP	P	11 59 49.0	+1.6
	comp=Z,5.4nm,0.9s						
PCAB	Cabril	27.66	294	eP	P	11 59 47.9	-0.2
	comp=Z,29nm,1.1s						
EVO	Evora	27.66	288	eP	P	11 59 48.1	0.0
	comp=Z,17nm,1.6s						
PBDV	Barranco-do-Ve	27.70	285	eP	P	11 59 48.2	-0.3
	comp=Z,30nm,1.3s						
AKTO	Aktyubinsk	27.70	46	P	P	11 59 46.3	-2.1
	comp=Z,3.5nm,0.6s,baz=249,slow=11,SNR=6.9						
AKTO				LR	LR	12 16 04.2	
	comp=Z,82nm,18.5s,baz=233,slow=48						
PMTG	Montargil	27.80	289	eP	P	11 59 50.9	+1.5
	comp=Z,11nm,1.1s						
NOA	NORSAR Array B	27.86	344	P	P	11 59 49.0	-0.7
	comp=Z,0.4nm,0.7s,baz=148,slow=11,SNR=2.8						
NOA				LR	LR	12 13 38.6	
	comp=Z,44nm,21.1s,baz=145,slow=42						
PNCL	Nicolau / Gran	28.09	287	eP	P	11 59 53.0	+1.0
	comp=Z,21nm,1.4s						
KIRV	Kirov	28.17	26	LR	LR	12 11 42.5	
	comp=Z,73nm,19.5s,baz=216,slow=38						
KIRV	Kirov	28.17	26	⇓eP	P	11 59 52.9	+0.5
ABKAR	Akbulak array	28.48	50	P	P	11 59 55.2	-0.1
ABKAR				IAmb	IAmb	12 00 03.2	
	comp=Z,12nm,1.5s						
EKA	Eskdalemuir Ar	28.77	324	P	P	11 59 56.8	-1.0
	comp=Z,5.5nm,0.8s,baz=105,slow=9.6,SNR=6.6						
ARU	Arti	30.66	36	P	P	12 00 15.4	+0.8
	comp=Z,1.6nm,0.2s,baz=276,slow=15,SNR=1.2						
ARU	Arti	30.66	36	d iP	P	12 00 16.2	+1.6
ARU						12 01 12.1	
ARU				S	S	12 05 19.7	+3.1
ARU				SS	SnSn	12 06 53.7	-0.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.8s						
ARU	Arti	30.66	36	P	P	12 00 15.1	+0.5
ARU				IAmb	IAmb	12 00 26.5	
	comp=Z,6.4nm,1.0s						
TOA0	Torodi Ar. Sit	31.10	232	P	P	12 00 18.8	0.0
TORD	Torodi Ar. Bea	31.10	232	P	P	12 00 19.2	+0.4
	comp=Z,11nm,0.6s,baz=38,slow=9.3,SNR=58						
SVE	Sverdlovsk	31.86	36	eP	P	12 00 31.1	+6.0
SVE				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LVZ	Lovozero	33.34	6	⇑eP	P	12 00 38.4	+0.4
LVZ				pmax	pmax		
	comp=Z,89nm,2.5s						
KOWA	Kowa	34.06	241	P	P	12 00 44.1	-0.6
	comp=Z,2.7nm,0.6s,baz=48,slow=8.7,SNR=8.3						
KOWA	Kowa	34.06	241	P	P	12 00 43.9	-0.9
KOWA				IAmb	IAmb	12 00 45.6	
	comp=Z,3.4nm,0.8s						
IUG	Iuzhnay	34.62	65	eP	P	12 00 49.7	+0.1
	comp=Z,5.6nm,1.1s,baz=65						
IUG	Iuzhnay	34.62	65	eP	P	12 00 49.7	+0.1
IUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARCES	ARCESS Array B	34.65	359	P	P	12 00 47.5	-1.8
	comp=Z,6.5nm,0.9s,baz=178,slow=8.3,SNR=12						
ARCES				PcP	PcP	12 03 22.6	-0.6
	comp=Z,1.6nm,0.7s,baz=172,slow=2.7,SNR=1.6						
ARCES				LR	LR	12 14 25.2	
	comp=Z,57nm,18.5s,baz=290,slow=35						
KK31	Karatay Array	34.94	63	P	P	12 00 52.4	+0.2
KK31				pmax	pmax		
	comp=Z,18nm,1.4s						
KK31	Karatay Array	34.94	63	P	P	12 00 52.4	+0.2
KKAR	Karatay Array	34.94	63	P	P	12 00 52.3	+0.1
KKAR				pmax	pmax		
	comp=Z,18nm,1.4s						
KKAR	Karatay Array	34.94	63	P	P	12 00 52.3	+0.1
DZA	Taraz	35.55	63	eP	P	12 00 59.1	+1.6
	baz=63						
DZA	Taraz	35.55	63	eP	P	12 00 59.1	+1.6

MBAR	Mbarara	35.60	172	*ce*P	P	12 00 52.2	-6.0
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	35.75	46	⇑*e*P	P	12 00 59.2	+0.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AAK	Ala-Archa	37.89	64	P	P	12 01 17.9	+0.3
	comp=Z,6.7nm,1.1s,baz=245,slow=9.7,SNR=7.6						
AAK	Ala-Archa	37.89	64	*c i*P	P	12 01 18.8	+1.2
AAK				pmax	pmax		
	comp=Z,18nm,1.0s						
AAK	Ala-Archa	37.89	64	P	P	12 01 18.1	+0.6
AAK				IAmb	IAmb	12 01 20.4	
	comp=Z,15nm,1.5s						
SGDS	Sogindy	37.93	62	*e*P	P	12 01 18.2	+0.5
	baz=62						
SGDS	Sogindy	37.93	62	*e*P	P	12 01 18.2	+0.5
NIL	Nilore	38.51	78	P	P	12 01 23.2	+0.5
NIL				pmax	pmax		
	comp=Z,23nm,1.3s						
NIL	Nilore	38.51	78	P	P	12 01 23.2	+0.5
KUU	Kurty	39.13	61	*e*P	P	12 01 28.6	+0.7
	comp=Z,8.8nm,1.3s,baz=61						
KUU	Kurty	39.13	61	*e*P	P	12 01 28.5	+0.7
KUU				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH	Kashi	39.39	68	P	P	12 01 29.6	-0.5
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,200nm,4.2s						
CHKK	Chushkaly	39.61	61	*e*P	P	12 01 32.4	+0.6
	baz=61						
CHKK	Chushkaly	39.61	61	*e*P	P	12 01 32.4	+0.6
TNSS	Tian-Shan	39.65	63	*e*P	P	12 01 33.1	+0.5
	baz=63						
TNSS	Tian-Shan	39.65	63	*e*P	P	12 01 33.1	+0.5
MDOK	Medeo	39.71	62	*e*P	P	12 01 33.5	+0.6
	baz=62						
MDOK	Medeo	39.71	62	*e*P	P	12 01 33.4	+0.6
DBIC	Dimbokro	40.19	233	P	P	12 01 36.6	-0.2
	comp=Z,4.9nm,0.5s,baz=14,slow=8.7,SNR=14						
DBIC				LR	LR	12 21 35.5	
	comp=Z,102nm,18.0s,baz=34,slow=41						
DBIC	Dimbokro	40.19	233	P	P	12 01 36.4	-0.5
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DBIC	Dimbokro	40.19	233	P	P	12 01 36.4	-0.5
DBIC				IAmb	IAmb	12 01 38.9	
	comp=Z,9.0nm,0.8s						
TIC	Toumodi	40.32	233	*e*P	P	12 01 35.2	-2.7
KIC	Kosan Boka	40.35	232	*e*P	P	12 01 37.5	-0.7
	comp=Z,21nm,0.7s						
KURBB	Kurchatov Arra	40.51	51	P	P	12 01 39.4	+0.3
	comp=Z,11nm,0.9s,baz=277,slow=8.5,SNR=37						
KURBB				PcP	PcP	12 03 40.7	-0.7
	comp=Z,0.6nm,0.6s,baz=273,slow=4.3,SNR=1.9						
KURK	Kurchatov	40.57	51	P	P	12 01 39.4	-0.2
KURK						12 03 40.7	
KURK	Kurchatov	40.57	51	P	P	12 01 39.1	-0.5
KURK				IAmb	IAmb	12 01 48.0	
	comp=Z,12nm,0.8s						
LIC	Lamto	40.64	233	*e*P	P	12 01 33.4	-7.2
	comp=Z,27nm,0.7s						
SATY	Saty	40.71	62	*e*P	P	12 01 42.0	+0.9
	comp=Z,3.2nm,0.7s,baz=62						
SATY	Saty	40.71	62	*e*P	P	12 01 42.0	+0.9
SATY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	42.88	56	P	P	12 01 57.8	-0.8
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	42.88	56	P	P	12 01 57.8	-0.8
MK31	Makanchi Array	43.09	56	*ce*P	P	12 02 00.9	+0.5
MK31	Makanchi Array	43.09	56	P	P	12 02 00.3	-0.1
MK31				IAmb	IAmb	12 02 12.3	
	comp=Z,12nm,1.3s						
MKAR	Makanchi Array	43.09	56	P	P	12 02 01.0	+0.6
	comp=Z,4.4nm,0.6s,baz=282,slow=6.1,SNR=18						
SPITS	Spitsbergen Ar	43.55	357	LR	LR	12 21 23.7	
	comp=Z,70nm,18.5s,baz=250,slow=38						
ZAA0	Zalesovo Array	44.46	46	P	P	12 02 10.3	-0.9
ZAA0				IAmb	IAmb	12 02 17.4	
	comp=Z,5.7nm,0.8s						
ZALV	Zalesovo Beam	44.46	46	P	P	12 02 11.3	+0.2
	comp=Z,3.8nm,0.5s,baz=266,slow=8.6,SNR=14						
ZALV				LR	LR	12 26 03.1	
	comp=Z,38nm,18.3s,baz=260,slow=43						
DGZ	Jazzator, Alta	46.26	52	⇑*i*P	P	12 02 26.4	+0.7
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMQ	Urumqi	47.28	60	*e*P	P	12 02 35.6	+1.9
WMQ				pP	sP	12 02 39.0	+0.4
WMQ				sP	pwP	12 02 41.7	+2.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						
NRIK	Noril'sk	47.67	25	⇓*e*P	P	12 02 39.3	+3.1
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAK	Zakamensk	56.16	49	*e*P	P	12 03 39.3	-0.7
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA	Gaotai	57.21	62	*e*P	P	12 03 48.3	+0.6
GTA				pP	pP	12 03 51.7	+0.4
GTA				sP	pwP	12 03 54.3	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	58.88	51	P	P	12 03 59.9	+0.7
	comp=Z,1.9nm,0.6s,baz=294,slow=8.2,SNR=14						
SONM				LR	LR	12 35 02.6	
	comp=Z,60nm,18.2s,baz=134,slow=42						
ULN	Ulaanbaatar	59.28	51	*de*P	P	12 04 02.3	+0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TIXI	Tiksi	61.03	21	⇑*e*P	P	12 04 15.3	+1.9
TIXI	Tiksi	61.03	21	P	P	12 04 14.5	+1.1
TIXI				IAmb	IAmb	12 04 18.6	
	comp=Z,5.1nm,0.8s						
LZH	Lanzhou	61.43	64	*e*P	P	12 04 17.3	+0.4
LZH				pP	pP	12 04 20.5	0.0
LZH				sP	sP	12 04 22.1	+0.2
LZH				*e*PP	PP	12 06 34.5	+2.6
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,7.5s						
LZH				LR	LR		
	comp=N,140nm,15.5s						
LZH				LR	LR		
	comp=E,150nm,15.4s						
LZH				LR	LR		
	comp=Z,230nm,18.1s						
MHMT	Maesarieng	64.95	85	P	P	12 04 43.4	+3.0
	comp=Z,10nm,0.7s						
HHC	Hu-ho-hao-te	64.95	57	*e*P	P	12 04 41.7	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
KMI	Kunming	65.43	76	⇓*e*P	P	12 04 42.8	-0.9
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CHTO	Chiang Mai	65.46	84	P	P	12 04 43.2	-0.4
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CHTO	Chiang Mai	65.46	84	P	P	12 04 43.2	-0.4
CHTO				IAmb	IAmb	12 04 52.4	
	comp=Z,6.3nm,1.2s						
CMMT	Chiang Mai	65.46	84	P	P	12 04 45.5	+1.8
	comp=Z,3.1nm,1.8s						
CM15	Chiang Mai Arr	65.63	84	P	P	12 04 48.5	+3.8
	comp=Z,4.5nm,0.6s						
CM13	Chiang Mai Arr	65.63	84	P	P	12 04 47.0	+2.3
	comp=Z,2.3nm,0.8s						
CMAR	Chiang Mai Arr	65.64	84	P	P	12 04 44.5	-0.3
	comp=Z,1.8nm,0.6s,baz=300,slow=8.9,SNR=18						
CMAR				LR	LR	12 38 24.2	
	comp=Z,21nm,21.5s,baz=285,slow=41						
CM02	Chiang Mai Arr	65.65	84	P	P	12 04 47.2	+2.4
	comp=Z,4.6nm,0.9s						
CM05	Chiang Mai Arr	65.67	84	P	P	12 04 46.3	+1.3
	comp=Z,2.9nm,0.9s						
CM01	Chiang Mai Arr	65.67	84	P	P	12 04 50.0	+5.0
	comp=Z,5.0nm,0.9s						
CM09	Chiang Mai Arr	65.69	84	P	P	12 04 47.0	+1.9
	comp=Z,3.4nm,0.7s						
CM04	Chiang Mai Arr	65.70	84	P	P	12 04 47.0	+1.8
	comp=Z,3.9nm,1.4s						
PAYA	Payao	65.94	83	P	P	12 04 48.5	+1.8
	comp=Z,2µmcomp=Z,90nm,0.7s						
XAN	Xi'an	66.06	64	P	P	12 04 49.7	+2.3
XAN				pP	pwP	12 04 57.1	+6.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
LAMP	Lampang	66.17	83	P	P	12 04 50.2	+2.0
	comp=Z,10nm,0.8s						
HIA	Hailar	66.50	45	⇑*e*P	P	12 04 52.1	+2.2
HIA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KLR	Kul'dur	73.30	41	P	P	12 05 30.5	-1.1
	comp=Z,1.2nm,0.8s,baz=358,slow=1.5,SNR=4.6						
USRK	Ussuriysk Ar.	76.31	45	P	P	12 05 48.9	-0.3
	comp=Z,1.3nm,0.6s,baz=305,slow=3.9,SNR=6.6						
KSRS	Korea Array	77.65	53	P	P	12 05 56.8	-0.1
	comp=Z,2.1nm,0.8s,baz=304,slow=4.6,SNR=5.0						
KSRS				LR	LR	12 43 23.7	
	comp=Z,48nm,19.1s,baz=310,slow=38						
YKA	Yellowknife Ar	77.94	343	P	P	12 05 57.0	-1.0
	comp=Z,0.3nm,0.4s,baz=42,slow=5.6,SNR=19						
YKA	Yellowknife Ar	77.94	343	P	P	12 05 57.0	-1.0
MDM	Murphy Dome	80.33	358	P	P	12 06 11.2	+0.1
MDM				IAmb	IAmb	12 06 18.9	
	comp=Z,8.8nm,1.2s						
ILAR	Eielson Array	80.47	357	P	P	12 06 11.8	-0.1
	comp=Z,0.9nm,0.8s,baz=334,slow=3.5,SNR=12						
DAWY	Dawson	80.67	354	P	P	12 06 12.2	-0.7
DAWY				IAmb	IAmb	12 06 20.3	
	comp=Z,6.9nm,1.0s						
WRH	Wood River Hil	80.82	358	P	P	12 06 12.8	-0.9
WRH				IAmb	IAmb	12 06 18.6	
	comp=Z,5.1nm,0.7s						
SKT	Skwentna	83.40	359	P	P	12 06 20.8	-6.5
MJAR	Matsushiro Arr	84.75	49	P	P	12 06 34.4	-0.3
	comp=Z,1.6nm,0.9s,baz=277,slow=1.1,SNR=2.9						
BDFB	Brasilia	86.52	248	LR	LR	12 47 09.0	
	comp=Z,57nm,18.4s,baz=287,slow=37						
PDAR	Pinedale Array	92.78	329	P	P	12 07 11.6	-1.5
	comp=Z,0.3nm,0.6s,baz=42,slow=7.3,SNR=2.8						
WRA	Warramunga Arr	115.61	97	PKP	PKPdf	12 12 41.9	-1.1
	comp=Z,0.2nm,0.4s,baz=321,slow=1.3,SNR=6.9						
ASAR	Alice Springs	117.06	101	PKP	PKiKP	12 12 45.7	0.0
	comp=Z,0.2nm,0.7s,baz=297,slow=1.3,SNR=5.0						

TUL ***05*** *12:14:19.8±1.7, 36°.74N±0°.02×98°.11W±0°.04, h7^{km}±2^{km}, ML3.5, mb_Lg3.4/115(NEIC) Error ellipse: s-maj=4.8km s-min=2.4km az=92.0*

NEIC ***05*** *12:14:20.9±1.6, 36°.75N±0°.02×98°.00W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=338.0*

ANF ***05*** *12:14:20.6±0.4, 36°.67N×98°.07W, h0^{km}, ML4.3/7, Error ellipse: s-maj=5.2km s-min=3.9km az=80.0*

ISC 05 12:14:20.3±1.3**, 36°.72N**±0°.03×**98°.08W**±0°.03**, h2**^{km}±12^{km}**, n87, σ0^{s}97**/67**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.25	21	Pg	Pg	12 14 25.2	0.0
KAN10	Anthony SW Sta	0.40	358	Pg	Pg	12 14 27.6	-0.4
KAN10				Sg	Sg	12 14 33.0	-0.3
KAN08	Anthony NE Sta	0.51	9	Pg	Pg	12 14 29.8	-0.3
KAN13	South Haven SW	0.56	58		Pg	12 14 31.0	-0.1
KAN13				Sg	Sg	12 14 38.5	+0.2
KAN12	Harper NE Stat	0.58	6	Pg	Pg	12 14 30.9	-0.5
U32A	Winter Ranch,	0.82	246	Pg	Pg	12 14 35.1	-0.9
U32A				IAmb_Lg		12 14 45.8	
	comp=Z,515nm,1.1s						
U32A	Winter Ranch,	0.82	246	P		12 14 35.1	
	baz=63						
QUOK	Quay	1.23	116		Pg	12 14 43.5	-0.4
OK031	S. Brethren Rd	1.26	127		Pg	12 14 43.6	-0.8
OK031				Sg	Sg	12 15 01.3	+0.6
OK031				Sn	Sb	12 15 01.8	+0.3
T35A	Sooner Cattle	1.27	81		Pg	12 14 43.9	-0.7
T35A				Sn	Sg	12 15 01.3	+0.2
T35B	Sooner Cattle	1.27	81	P		12 14 43.9	
	baz=263,SNR=260						
T35B				S		12 15 01.6	
	baz=263						
OK025	Westminster Rd	1.28	152	Pn	Pn	12 14 44.1	-1.1
OK025				Sn	Sb	12 15 02.7	+0.6
OK025				IAmb_Lg		12 15 03.4	
	comp=Z,132nm,0.8s						
OK030	Cody Creek RV	1.31	127		Pn	12 14 44.6	-1.0
OKCFA	Oklahoma City	1.40	159	Pn	Pn	12 14 45.8	-1.0
OKCFA				Sn	Sb	12 15 05.6	+0.2
R32A	Long Quarter,	1.77	344		Pn	12 14 51.7	-0.4
R32A				Sn	Sn	12 15 14.6	-0.6
R32A	Long Quarter,	1.77	344	P		12 14 51.7	
	baz=164,SNR=123						
R32A				S		12 15 15.1	
	baz=164						
W35A	Tecumseh	1.84	148		Pn	12 14 53.2	+0.2
WMOK	Wichita Mounta	2.06	196	P	Pn	12 14 55.9	-0.1
	baz=15						
WMOK				S	Sb	12 15 24.3	-0.2
	baz=15						
WMOK	Wichita Mounta	2.06	196		Pn	12 14 56.0	0.0
WMOK	Wichita Mounta	2.06	196	P		12 14 55.7	
	baz=15,SNR=156						
WMOK				S		12 15 24.2	
	baz=15						
CBKS	Cedar Bluff	2.47	328	P	Pn	12 15 02.1	+0.5
	baz=148						
CBKS				S	Sb	12 15 35.9	-0.5
	baz=148						
CBKS	Cedar Bluff	2.47	328	Pn	Pn	12 15 02.7	+1.1
CBKS					Sb	12 15 35.2	-1.2
CBKS	Cedar Bluff	2.47	328	P		12 15 01.9	
	baz=148,SNR=52						
CBKS				S		12 15 33.4	
	baz=148						
KSU1	Kansas State U	2.64	26	P		12 15 03.7	
	baz=207						
KSU1				S		12 15 36.7	
	baz=207						
KSU1	Kansas State U	2.65	26	Pb	Pb	12 15 09.5	+1.1
	baz=207						
KSU1				S	Sb	12 15 41.0	-0.4
	baz=207						
KSU1	Kansas State U	2.65	26		Pn	12 15 05.2	+1.2
U38A	Gravette	2.98	94		Pn	12 15 08.9	+0.2
U38A	Gravette	2.98	94	P		12 15 08.6	
	baz=277,SNR=47						
X37A	Clayton	3.06	133	Pn	Pn	12 15 10.6	+0.9
X37A	Clayton	3.06	133	P		12 15 09.8	
	baz=315						
Z35A	Perchaven, San	3.45	168		Pn	12 15 15.2	+0.1
Z35A	Perchaven, San	3.45	168	P		12 15 15.3	
	baz=349,SNR=6.2						
Z35A				S		12 15 58.2	
	baz=349						
AMTX	Amarillo	3.46	239		Pn	12 15 16.7	+1.4
AMTX	Amarillo	3.46	239	P		12 15 16.5	
	baz=56						
W39A	Magazine	3.80	112	P	Pn	12 15 19.9	0.0
	baz=295						
W39A	Magazine	3.80	112	Pn	Pn	12 15 20.7	+0.8
W39A				IAmb_Lg		12 16 30.9	
	comp=Z,91nm,0.7s						
W39A	Magazine	3.80	112	P		12 15 19.9	
	baz=295,SNR=6.1						
S39A	Bolivar	3.92	74	Pn	Pn	12 15 20.9	-0.6
S39A				IAmb_Lg		12 16 30.1	
	comp=Z,114nm,0.9s						
S39A	Bolivar	3.92	74	P		12 15 21.0	
	baz=258,SNR=42						
S39A				S		12 16 07.4	
	baz=258						
N33A	J Bar K, Exete	4.04	7	Pn	Pn	12 15 22.2	-1.1
U40A	Yellville	4.22	93	P	Pn	12 15 25.4	-0.2
	baz=277						
U40A	Yellville	4.22	93	Pn	Pn	12 15 25.5	-0.2
U40A				IAmb_Lg		12 16 42.8	
	comp=Z,90nm,0.7s						
U40A	Yellville	4.22	93	P		12 15 25.3	
	baz=277,SNR=18						
U40A				P		12 15 25.3	
	baz=277,SNR=18						
MIAR	Mount Ida	4.26	119		Pn	12 15 26.2	0.0
MIAR				IAmb_Lg		12 16 44.7	
	comp=Z,90nm,1.1s						
KSCO	Kaye Shedlock'	4.27	304	P	Pn	12 15 26.5	0.0
	baz=121						
KSCO	Kaye Shedlock'	4.27	304	Pn	Pn	12 15 27.1	+0.6
Z38A	Mt. Pleasant	4.28	143	Pn	Pn	12 15 28.1	+1.6
Z38A				IAmb_Lg		12 16 46.9	
	comp=Z,138nm,0.9s						
ABTX	Abilene, Hawle	4.29	198		Pn	12 15 28.9	+2.3
ABTX				IAmb_Lg		12 16 44.6	
	comp=Z,94nm,1.2s						
N35A	Tabor	4.55	24		Pn	12 15 31.0	+0.8
P38A	Dawn	4.61	50	IAmb_Lg		12 16 49.9	
	comp=Z,62nm,0.8s						
P38A	Dawn	4.61	50	P		12 15 30.7	
	baz=233,SNR=6.6						
MGMO	Mountain Grove	4.67	83		Pn	12 15 31.7	-0.2
MGMO				IAmb_Lg		12 16 56.5	
	comp=Z,59nm,0.8s						
BGNE	Belgrade	4.68	359	Pn	Pn	12 15 30.3	-1.8
MSTX	Muleshoe	4.72	236		Pn	12 15 36.0	+3.3
MSTX				IAmb_Lg		12 16 57.4	
	comp=Z,65nm,0.7s						
WHTX	Lake Whitney,	4.75	174		Pn	12 15 32.4	-0.5
WHTX	Lake Whitney,	4.75	174	P		12 15 32.5	
	baz=354,SNR=22						
X40A	Basin Creek Fa	4.82	116	P	Pn	12 15 33.8	0.0
	baz=299						
X40A	Basin Creek Fa	4.82	116		Pn	12 15 34.0	+0.2
X40A				IAmb_Lg		12 17 01.6	
	comp=Z,115nm,0.8s						
X40A	Basin Creek Fa	4.82	116	P		12 15 33.8	
	baz=299,SNR=17						
X40A				P		12 15 33.8	
	baz=299,SNR=17						
R40A	Maddies Statio	4.88	69		Pn	12 15 34.0	-0.6
R40A				IAmb_Lg		12 17 04.3	
	comp=Z,118nm,0.9s						
R40A	Maddies Statio	4.88	69	P		12 15 33.8	
	baz=253,SNR=10.0						
FCAR	Ozark Folk Cen	4.88	98		Pn	12 15 34.6	-0.1
FCAR				IAmb_Lg		12 17 06.8	
	comp=Z,40nm,0.7s						
W41B	Gary Mavity, V	4.97	106	Pn	Pn	12 15 35.5	-0.5
W41B				IAmb_Lg		12 17 09.7	
	comp=Z,49nm,0.8s						
UALR	University of	5.05	111		Pn	12 15 36.7	-0.4
UALR				IAmb_Lg		12 17 11.0	
	comp=Z,94nm,1.1s						
WLAR	White Oak Lake	5.07	125	Pn	Pn	12 15 39.0	+1.8
WLAR				IAmb_Lg		12 17 09.4	
	comp=Z,63nm,0.9s						
T25A	Trinidad	5.09	277		Pn	12 15 39.2	+1.4
T25A				IAmb_Lg		12 17 14.6	
	comp=Z,128nm,0.9s						
Z41A	Richland Creek	5.54	127	IAmb_Lg		12 17 29.4	
	comp=Z,79nm,1.1s						
N38A	Joes South For	5.55	41	IAmb_Lg		12 17 26.4	
	comp=Z,87nm,0.9s						
CCM	Cathedral Cave	5.60	74	IAmb_Lg		12 17 23.6	
	comp=Z,72nm,0.7s						
LCAR	Lake Charles	5.62	95	IAmb_Lg		12 17 28.4	
	comp=Z,32nm,0.9s						
NATX	Nacogdoches	5.70	149	IAmb_Lg		12 17 31.6	
	comp=Z,30nm,0.8s						
K31A	O'Neill	5.92	355	IAmb_Lg		12 17 31.4	
	comp=Z,48nm,0.7s						
435B	Jarrell	5.94	176		Pn	12 15 49.9	+0.7
435B				IAmb_Lg		12 17 38.6	
	comp=Z,47nm,0.7s						
Q24A	Divide	6.03	294		Pn	12 15 50.6	-0.2
Q24A				IAmb_Lg		12 17 42.9	
	comp=Z,67nm,0.7s						
PBMO	Poplar Bluff	6.14	87	IAmb_Lg		12 17 47.7	
	comp=Z,57nm,0.8s						
SCIA	State Center	6.40	35	IAmb_Lg		12 17 52.6	
	comp=Z,91nm,0.8s						
SLM	Saint Louis	6.50	71	IAmb_Lg		12 17 54.4	
	comp=Z,46nm,0.8s						
ISCO	Idaho Springs	6.68	300		Pn	12 15 56.6	-3.1
ISCO				IAmb_Lg		12 18 06.5	
	comp=Z,32nm,0.7s						
143A	Socs Landing,	6.80	124	IAmb_Lg		12 18 10.1	
	comp=Z,44nm,0.9s						
ANMO	Albuquerque	7.04	258	IAmb_Lg		12 18 19.9	
	comp=Z,15nm,0.9s						
ANMO				IAmb_Lg		12 18 19.9	
	comp=Z,15nm,0.9s						
ECSD	EROS Data Cent	7.09	9	Pn	Pn	12 16 05.0	-0.1
ECSD				IAmb_Lg		12 18 21.4	
	comp=Z,24nm,1.0s						
S44A	Carbondale	7.11	79	IAmb_Lg		12 18 10.3	
	comp=Z,54nm,0.7s						
SIUC	Southern Illin	7.14	79	IAmb_Lg		12 18 18.6	
	comp=Z,58nm,0.7s						
W45A	Hickory Valley	7.38	100	IAmb_Lg		12 18 20.1	
	comp=Z,63nm,0.8s						
OXF	Oxford	7.39	105	IAmb_Lg		12 18 21.5	
	comp=Z,33nm,0.7s						
N23A	Red Feather La	7.42	307	IAmb_Lg		12 18 30.7	
	comp=Z,76nm,0.9s						
SMCO	Snowmass	7.45	292	Pn	Pn	12 16 09.1	-1.2
Y45A	Yeager Farm, C	7.53	110	IAmb_Lg		12 18 29.1	
	comp=Z,36nm,0.7s						
T45A	Paducah	7.56	85	IAmb_Lg		12 18 32.8	
	comp=Z,56nm,0.9s						
Y22D	IRIS PASSCAL I	7.69	253	Pn	Pn	12 16 13.6	+0.1
SUSD	Miller	7.74	355	Pn	Pn	12 16 14.3	+0.3
SUSD				IAmb_Lg		12 18 38.4	
	comp=Z,33nm,0.8s						
MNTX	Cornudas Mount	7.85	233	IAmb_Lg		12 18 41.5	
	comp=Z,25nm,0.8s						
WVT	Waverly	8.28	91	IAmb_Lg		12 18 48.1	
	comp=Z,18nm,0.7s						
O44A	Mansfield	8.28	63	IAmb_Lg		12 18 56.4	
	comp=Z,60nm,0.7s						
USIN	University of	8.38	78	IAmb_Lg		12 18 55.3	
	comp=Z,62nm,1.1s						
JFWS	Jewell Farm	8.63	42	IAmb_Lg		12 19 15.3	
	comp=Z,37nm,0.7s						
PV12	Saucer Basin,	8.67	284	IAmb_Lg		12 19 08.7	
	comp=Z,25nm,1.2s						
RSSD	Black Hills	8.68	330	IAmb_Lg		12 19 09.7	
	comp=Z,22nm,0.8s						
PV11	David Mesa, Pa	8.72	284	IAmb_Lg		12 19 08.1	
	comp=Z,34nm,1.2s						
PV23	Carpenter Ridg	8.85	285	IAmb_Lg		12 19 12.2	
	comp=Z,16nm,0.9s						
I40A	Norwalk	9.15	36	IAmb_Lg		12 19 21.2	
	comp=Z,29nm,0.9s						
SFIN	Lafayette	9.34	64	IAmb_Lg		12 19 31.6	
	comp=Z,50nm,0.8s						
SPMN	Marine on St.	9.38	23	IAmb_Lg		12 19 27.8	
	comp=Z,25nm,0.8s						
WCI	Wyandotte Cave	9.49	77	IAmb_Lg		12 19 40.8	
	comp=Z,44nm,0.8s						

WEL 05 12:20:53.2±0.9**, 38°S**±7°×**18°0E**±°**, h33**^{km}**, M3.5**/23**, ML3.8**/23**, MLv3.5**/23**, Error ellipse: s-maj=0.0km s-min=0.0km az=25.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.06	265	P	Pn	12 21 11.1	-0.6
WMGZ				S	Sn	12 21 25.5	+0.1
MXZ	Matakaoa Point	1.16	278	P	Pn	12 21 12.4	-0.7
PUZ	Puketiti	1.23	254	P	Pn	12 21 13.7	-0.3
PKGZ	Pakihiroa	1.34	263	P	Pn	12 21 15.1	-0.5
CNGZ	Carnagh Statio	1.43	238	P	Pn	12 21 17.6	+0.8
TWGZ	Tauwhareparae	1.47	252	P	Pn	12 21 17.3	-0.1
TWGZ				S	Sn	12 21 36.1	+0.6
HAZ	Te Kaha	1.56	268	P	Pn	12 21 18.5	-0.1
RUGZ	Raukumara Rang	1.66	261	P	Pn	12 21 19.6	-0.5
TKGZ	Te Karaka	1.66	244	P	Pn	12 21 20.1	+0.1
TKGZ				S	Sn	12 21 40.4	+0.3
RIGZ	Rimuhau	1.84	238	P	Pn	12 21 22.8	+0.2
MWZ	Matawai	1.86	250	P	Pn	12 21 22.1	-0.6
PRGZ	Paritu Road	1.89	230	P	Pn	12 21 23.3	+0.1
RAGZ	Rawiri	1.99	247	P	Pn	12 21 24.8	+0.1
MHGZ	Mahia Peninsul	2.03	225	P	Pn	12 21 25.7	+0.6
MHGZ				S	Sn	12 21 51.1	+1.9
KNZ	Kokohu	2.08	231	P	Pn	12 21 25.4	-0.3
KNZ				S	Sn	12 21 51.3	+0.8
URZ	Urewera	2.15	255	P	Pn	12 21 27.3	+0.6
URZ				S	Sn	12 21 51.7	-0.5

SNGZ	**Shannon Statio**	**2.17**	**240**	P	Pn	12 21 27.5	+0.5
RTZ	**Ruatahuna**	**2.35**	**247**	P	Pn	12 21 30.3	+0.7
RTZ				S	Sn	12 21 58.3	+0.8
WHHZ	**Waihua**	**2.39**	**235**	P	Pn	12 21 30.5	+0.5
RAHZ	**Arahi**	**2.41**	**240**	P	Pn	12 21 30.5	+0.2
EDRZ	**Edgecumbe**	**2.41**	**260**	P	Pn	12 21 30.6	+0.3
MUGZ	**Murupara**	**2.47**	**252**	P	Pn	12 21 31.2	+0.1
OPRZ	**Ohinepanea**	**2.54**	**266**	P	Pn	12 21 31.6	-0.4
MTHZ	**Maungataniwha**	**2.55**	**243**	P	Pn	12 21 32.3	+0.1
TARZ	**Mount Tarawera**	**2.61**	**258**	P	Pn	12 21 33.4	+0.2
RRRZ	**Republican Roa**	**2.63**	**256**	P	Pn	12 21 33.7	+0.4
ARHZ	**Aropaoanui**	**2.65**	**234**	P	Pn	12 21 33.9	+0.4
NMHZ	**Naumai**	**2.69**	**239**	P	Pn	12 21 34.5	+0.4
ALRZ	**Allen Road**	**2.81**	**252**	P	Pn	12 21 35.8	-0.1
CKHZ	**Cape Kidnapper**	**2.84**	**227**	P	Pn	12 21 36.2	0.0
MRHZ	**Matea Rd**	**2.84**	**246**	P	Pn	12 21 36.4	0.0
BKZ	**Black Stump Fm**	**2.93**	**240**	P	Pn	12 21 37.4	-0.1
MCHZ	**McNeill Hill**	**2.94**	**234**	P	Pn	12 21 37.9	+0.3
KAHZ	**Kahuranaki**	**3.05**	**227**	P	Pn	12 21 38.7	-0.4
KWHZ	**Kaweka Forest**	**3.11**	**236**	P	Pn	12 21 39.9	0.0
PXZ	**Pawanui**	**3.22**	**224**	P	Pn	12 21 40.2	-1.2
KRHZ	**Kereru**	**3.26**	**233**	P	Pn	12 21 41.3	-0.7
KUZ	**Kuaotunu**	**3.36**	**286**	P	Pn	12 21 43.0	-0.4
TOZ	**Tahuroa Road**	**3.37**	**269**	P	Pn	12 21 43.4	-0.1
BHHZ	**Black Hill Sta**	**3.38**	**238**	P	Pn	12 21 43.6	-0.1
KATZ	**Kakaramea**	**3.42**	**247**	P	Pn	12 21 45.4	+1.1
TMVZ	**Te Maari**	**3.47**	**245**	P	Pn	12 21 45.2	+0.3
ETVZ	**East Tongariro**	**3.47**	**245**	P	Pn	12 21 44.7	-0.3
WPHZ	**Waipukurau**	**3.48**	**227**	P	Pn	12 21 44.0	-0.9
OTVZ	**Oturere**	**3.51**	**245**	P	Pn	12 21 45.3	-0.3
PNHZ	**Pukenui**	**3.53**	**231**	P	Pn	12 21 44.9	-0.8
WTVZ	**West Tongariro**	**3.55**	**246**	P	Pn	12 21 47.8	+1.7
MOVZ	**Moawhango**	**3.55**	**241**	P	Pn	12 21 46.7	+0.7
TUVZ	**Tukino**	**3.56**	**243**	P	Pn	12 21 48.1	+1.8
NGZ	**Ngauruhoe**	**3.56**	**245**	P	Pn	12 21 45.9	-0.4
WNVZ	**Wahianoa**	**3.63**	**243**	P	Pn	12 21 47.3	+0.1
TSZ	**Takapari Road**	**3.76**	**231**	P	Pn	12 21 47.4	-1.5
DVHZ	**Dannevirke**	**3.79**	**226**	P	Pn	12 21 48.2	-1.1
ETAZ	**East Tamaki Re**	**3.92**	**280**	P	Pn	12 21 51.6	+0.6
HIZ	**Hauiti**	**3.94**	**257**	P	Pn	12 21 51.9	+0.6
MBAZ	**Motutapu North**	**3.99**	**282**	P	Pn	12 21 52.6	+0.7
PRWZ	**Pori Road**	**4.07**	**225**	P	Pn	12 21 52.0	-1.1
POWZ	**Post Office Ro**	**4.08**	**228**	P	Pn	12 21 52.5	-0.7
RVAZ	**Riverhead Bore**	**4.24**	**282**	P	Pn	12 21 56.2	+0.8
WAZ	**Wanganui**	**4.24**	**240**	P	Pn	12 21 56.7	+1.2
MRZ	**Mangatainoka R**	**4.37**	**227**	P	Pn	12 21 55.4	-1.8
WCZ	**Waipu Caves**	**4.69**	**291**	P	Pn	12 22 02.8	+1.1
NEZ	**North Egmont**	**4.70**	**249**	P	Pn	12 22 04.0	+2.2
OUZ	**Omahuta**	**5.56**	**295**	P	Pn	12 22 14.8	+1.2
CTZ	**Chatham Island**	**6.60**	**156**	P	Pn	12 22 30.7	+2.9
CTZ				S	Sn	12 23 39.5	-2.3

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*NNC **05** 12:26:42.7±3.2, 48.°56N×77.°53E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=47.1km s-min=15.8km az=84.0, Suspected Mining explosion.*

*IDC **05** 12:26:43.5±1.1, 48.°72N×77.°43E, h0^{km}, mb1 3.3/3, mb1mx3.1/42, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=14.9km s-min=8.0km az=104.0*

ISC 05 12:26:44.6±1.4**, 48.°69N**±0.°05×**77.°51E**±0.°09**, h0^{km}, n12, σ1^{s}18**/14**, 2C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.04**	**19**	Pg	**Pn**	**12 27 20.3**	**+0.2**
	2.3nm,0.3s,baz=201,slow=16,SNR=112						
KURBB				Lg	Lg	12 27 47.4	
	2.0nm,0.3s,baz=205,slow=30,SNR=14						
KURBB	**Kurchatov Arra**	**2.04**	**19**	⇓Pn	**Pn**	**12 27 20.7**	**+0.5**
	12nm,0.3s						
KURBB				⇓Lg	Lg	12 27 48.8	
	24nm,0.4s						
KURK	**Kurchatov**	**2.15**	**19**	⇓Pn	**Pn**	**12 27 22.3**	**+0.7**
	8.5nm,0.4s						
KURK				⇓Lg	Lg	12 27 51.1	
	22nm,0.6s						
MAKZ	**Makanchi**	**3.55**	**120**	⇑Pn	**Pn**	**12 27 40.9**	**-0.1**
	0.9nm,0.3s						
MAKZ				⇑Lg	Lg	12 28 28.7	
	4.5nm,0.5s						
KAPS	**Kapalarasan**	**3.63**	**159**	Pg	**Pn**	**12 27 41.7**	**-0.4**
	2.2nm,0.2s						
KAPS				Lg	Lg	12 28 37.2	
	23nm,0.4s						
MK31	**Makanchi Array**	**3.74**	**119**	Pn	**Pn**	**12 27 43.4**	**-0.2**
	0.4nm,0.2s,baz=310,slow=14,SNR=71						
MK31				⇓Lg	Lg	12 28 35.9	
	1.0nm,0.2s,baz=310,slow=28,SNR=11						
MKAR	**Makanchi Array**	**3.74**	**119**	Pn	**Pn**	**12 27 43.5**	**-0.1**
	0.7nm,0.3s,baz=300,slow=12,SNR=42						
MKAR				Sn	**Sn**	**12 28 29.4**	**+1.0**
	0.9nm,0.3s,baz=298,slow=23,SNR=4.2						
ARXS	**Arharly**	**4.49**	**177**	Pg	**Pn**	**12 27 56.5**	**+2.6**
	2.7nm,0.2s						
ARXS				Lg	Lg	12 29 03.9	
	23nm,0.4s						
KUU	**Kurty**	**4.87**	**190**	Pg	**Pn**	**12 27 59.5**	**+0.4**
	1.4nm,0.2s						
KUU				Lg	Lg	12 29 09.6	
	20nm,0.3s						
AAK	**Ala-Archa**	**6.41**	**200**	Pn	**Pn**	**12 28 21.3**	**+0.9**
	0.7nm,0.3s,baz=16,slow=15,SNR=8.9						
AAK				Sn	**Sn**	**12 29 32.9**	**-1.4**
	0.1nm,0.3s,baz=76,slow=21,SNR=1.7						
AAK				Lg	Lg	12 30 06.7	
	0.3nm,0.3s,baz=156,slow=20,SNR=2.5						
ZALV	**Zalesovo Beam**	**6.97**	**38**	Pn	**Pn**	**12 28 28.9**	**+1.0**
	0.5nm,0.3s,baz=229,slow=14,SNR=8.0						
ZALV				Sn	**Sn**	**12 29 46.4**	**-1.4**
	0.7nm,0.3s,baz=228,slow=21,SNR=7.4						
I46RU	**ZALESOVO INFRA**	**6.97**	**38**	*i*		13 07 20.0	
	baz=221,slow=319,SNR=2.7						

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*NNC **05** 12:43:25.1±3.4, 37.°42N×53.°54E, h0^{km}, mb4.3, Error ellipse: s-maj=31.3km s-min=14.5km az=33.0*

*IDC **05** 12:43:30.6±0.9, 37.°09N×54.°19E, h0^{km}, mb3.8/16, mb1 4.0/22, mb1mx3.9/53, mbtmp3.9/22, ML3.5/4, MS2.7/5, Ms1 2.7/5, ms1mx2.5/45, Error ellipse: s-maj=19.5km s-min=10.6km az=3.0*

*TEH **05** 12:43:33.8, 37.°22N×54.°40E, h19^{km}, ML4.4*

ISC 05 12:43:33.5±0.5**, 37.°28N**±0.°04×**54.°43E**±0.°03**, h10^{km}, n106, σ2^{s}10**/115**, mb3.8**/17**, 3C-3D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMND	**Minoodasht**	**0.78**	**91**	*e*Pg	**Pg**	**12 43 49.4**	**+0.9**
IMND				*e*Sg	**Sb**	**12 44 00.7**	**+1.0**
IMND				*e*		12 44 02.9	
	comp=Z,99nm,0.2s						
IGLO	**Ghaloghah**	**0.91**	**212**	*e*Pg	**Pg**	**12 43 50.8**	**-0.3**
IGLO				*e*Sg	**Sg**	**12 44 02.8**	**-0.2**
IGLO				*e*		12 44 05.2	
	comp=Z,99nm,0.3s						
ISHM	**Shahmirzad**	**1.73**	**212**	*e*		12 44 30.7	
	comp=Z,99nm,0.2s						
ISHM				*e*Pn	**Pn**	**12 44 05.3**	**+1.4**
IANJ	**Anjilo**	**1.85**	**193**	*e*		12 44 31.4	
	comp=Z,99nm,0.3s						
IANJ				*e*Pg	**Pn**	**12 44 06.6**	**+1.0**
IPRN	**Peran**	**1.97**	**239**	*e*		12 44 51.7	
	comp=Z,99nm,0.4s						
IPRN				*e*Pn	**Pn**	**12 44 07.0**	**-0.1**
IFIR	**Firoozkooh**	**2.12**	**220**	*e*		12 44 40.7	
	comp=Z,99nm,0.4s						
IFIR				*e*Pn	**Pn**	**12 44 09.8**	**+0.5**
ILAS	**Lasjerd**	**2.23**	**213**	*e*Pn	**Pn**	**12 44 11.3**	**+0.5**
ILAS				*e*		12 44 26.1	
	comp=Z,99nm,0.2s						
BJRD	**Bojnurd**	**2.40**	**79**	*e*Pn	**Pn**	**12 44 14.0**	**+1.0**
IDMV	**Damavand**	**2.57**	**229**	*e*Pn	**Pn**	**12 44 16.7**	**+1.2**
IDMV				*e*		12 44 32.6	
	comp=Z,99nm,0.3s						
DAMV	**Damavand**	**2.58**	**231**	*e*Pn	**Pn**	**12 44 17.1**	**+1.6**
SBZV	**Sabzevar**	**2.70**	**108**	*e*Pn	**Pn**	**12 44 18.5**	**+1.3**
ISFR	**Sfrayin**	**2.86**	**93**	*e*Pn	**Pn**	**12 44 21.1**	**+1.7**
ISFR				*e*		12 45 15.9	
	comp=Z,99nm,0.6s						
CHTH	**Charan**	**2.99**	**244**	*e*Pn	**Pn**	**12 44 23.3**	**+2.1**
GEYT	**Alibeck**	**3.00**	**76**	Pn	**Pn**	**12 44 22.7**	**+1.6**
	comp=Z,4.2nm,0.3s,baz=245,slow=18,SNR=23						
GEYT				Pg	**Pg**	**12 44 31.3**	**+0.4**
	comp=Z,12nm,0.3s,baz=253,slow=15,SNR=19						
GEYT				Lg	Lg	12 45 14.5	
	comp=Z,13nm,0.3s,baz=333,slow=15,SNR=4.9						
GEYT				LR	LR	12 46 09.4	
	comp=Z,103nm,20.6s,baz=235,slow=49						
GYA0B	**ALIBECK ARRAY**	**3.00**	**76**	⇓P	**Pn**	**12 44 22.8**	**+1.7**
GYA0B				⇑S	**Sg**	**12 45 08.4**	**-1.4**
IHSB	**Hasanabad**	**3.14**	**235**	*e*Pn	**Pn**	**12 44 25.2**	**+2.1**
QALM	**Alamut, Qazvin**	**3.15**	**256**	*e*Pn	**Pn**	**12 44 24.1**	**+0.7**
IVRN	**Varamin**	**3.16**	**225**	*e*Pn	**Pn**	**12 44 24.0**	**+0.6**
THKV	**Tehran--Karaj**	**3.17**	**246**	*e*Pn	**Pn**	**12 44 26.0**	**+2.4**
IMHD	**Mahdasht**	**3.42**	**243**	*e*Pn	**Pn**	**12 44 28.2**	**+1.1**
IGZV	**Ghazvin**	**3.50**	**257**	*e*Pn	**Pn**	**12 44 29.1**	**+0.9**
IAKL	**Akhelmad**	**3.53**	**100**	*e*Pn	**Pn**	**12 44 30.2**	**+1.6**
IQOM	**Qom**	**3.65**	**229**	*e*Pn	**Pn**	**12 44 30.8**	**+0.5**
TNSJ	**Nastanj**	**3.75**	**151**	*e*Pn	**Pn**	**12 44 31.9**	**+0.4**
TNSJ				*e*		12 45 30.9	
	comp=Z,99nm,0.6s						
GHVR	**GHOM**	**3.78**	**223**	*e*Pn	**Pn**	**12 44 33.4**	**+1.5**
KRSH	**Karshahi**	**3.79**	**210**	*e*Pn	**Pn**	**12 44 32.4**	**+0.2**
KRSH				*e*		12 45 39.6	
	comp=Z,99nm,0.8s						
IRAZ	**Razeghan**	**4.09**	**244**	*e*Pn	**Pn**	**12 44 37.3**	**+1.0**
IKRD	**Kardeh**	**4.10**	**95**	*e*Pn	**Pg**	**12 44 38.5**	**+1.7**
ANAR	**Anarak**	**4.12**	**188**	*e*Pn	**Pn**	**12 44 37.1**	**+0.5**
QABG	**Abgarm-Qazvin**	**4.21**	**250**	*e*Pn	**Pn**	**12 44 39.2**	**+1.2**
TABS	**Tabas**	**4.23**	**148**	*e*Pn	**Pn**	**12 44 38.8**	**+0.7**
TKDS	**Koohdasht(Taba**	**4.26**	**148**	*e*Pn	**Pn**	**12 44 39.3**	**+0.7**
TKDS				*e*		12 45 57.7	
	comp=Z,99nm,1.0s						
QAM	**Ghamsar**	**4.27**	**216**	*e*Pn	**Pn**	**12 44 39.1**	**+0.3**
ASAO	**Ashtian**	**4.50**	**234**	*e*Pn	**Pn**	**12 44 43.6**	**+1.7**
IKLH	**Kolahrood**	**4.59**	**211**	*e*Pn	**Pn**	**12 44 43.3**	**+0.1**
TPRV	**Parvadeh(Tabas**	**4.62**	**156**	*e*Pn	**Pn**	**12 44 44.3**	**+0.8**
TPRV				*e*		12 46 08.2	
	comp=Z,99nm,0.6s						
ASTR	**Astara**	**4.64**	**288**	*e*Pn	**Pn**	**12 44 43.0**	**-0.7**
IMYA	**Miami**	**4.64**	**100**	*e*Pn	**Pn**	**12 44 45.4**	**+1.5**
NASN	**Na'in**	**4.66**	**197**	*e*Pn	**Pn**	**12 44 44.5**	**+0.2**
LKRN	**Lenkeran, Azer**	**4.69**	**289**	*e*Pn	**Pn**	**12 44 43.9**	**-0.4**
IZEF	**Zefreh**	**4.70**	**202**	*e*Pn	**Pn**	**12 44 44.8**	**+0.1**
NDR	**Nardaran**	**4.79**	**315**	*e*Pn	**Pn**	**12 44 47.7**	**+2.1**
YZKH	**Yazd**	**4.88**	**178**	*e*Pn	**Pn**	**12 44 47.8**	**+0.8**
JRKH	**Jarkhoshk**	**4.95**	**104**	*e*Pn	**Pn**	**12 44 49.4**	**+1.3**
ICHK	**Chekchek**	**5.02**	**180**	*e*Pn	**Pn**	**12 44 49.8**	**+0.7**
GLBA	**Clilabad**	**5.14**	**294**	*e*Pn	**Pn**	**12 44 50.9**	**+0.4**
IGAR	**Gharneh**	**5.24**	**203**	*e*Pn	**Pn**	**12 44 53.3**	**+1.1**
AFRZ	**Afriz**	**5.37**	**134**	*e*Pn	**Pn**	**12 44 54.8**	**+1.0**
HSRG	**Sareghieh**	**5.37**	**250**	*e*Pn	**Pn**	**12 44 54.2**	**+0.2**
ISAD	**Sadrabad**	**5.39**	**187**	*e*Pn	**Pn**	**12 44 54.7**	**+0.5**
ISRB	**Sarab**	**5.41**	**278**	*e*Pn	**Pn**	**12 44 54.9**	**+0.5**
IPIR	**Pirpir**	**5.43**	**213**	*e*Pn	**Pn**	**12 44 56.4**	**+1.7**
ITEG	**Tejag**	**5.62**	**140**	*e*Pn	**Pn**	**12 44 58.4**	**+1.1**
IRAM	**Ramesheh**	**5.71**	**198**	*e*Pn	**Pn**	**12 44 59.5**	**+0.9**
IHSH	**Hashtrud**	**5.72**	**272**	*e*Pn	**Pn**	**12 44 59.9**	**+0.4**
SIZA	**Siyzn**	**5.73**	**313**	*e*Pn	**Pn**	**12 45 00.6**	**+1.9**
PQL	**Pirkuli**	**5.74**	**309**	*e*Pn	**Pn**	**12 45 00.4**	**+1.5**
IBAF	**Bafgh**	**5.75**	**170**	*e*Pn	**Pn**	**12 44 59.9**	**+0.8**
IMEH	**Mehriz**	**5.87**	**178**	*e*Pn	**Pn**	**12 45 01.8**	**+1.0**
BLQ	**Beylaqan**	**5.92**	**296**	*e*Pn	**Pn**	**12 45 01.1**	**-0.1**
IHRS	**Heris**	**5.95**	**282**	*e*Pn	**Pn**	**12 45 02.2**	**+0.4**
SHRT	**Shahrakht**	**6.00**	**125**	*e*Pn	**Pn**	**12 45 02.4**	**0.0**
ZRD	**Zardab**	**6.07**	**302**	*e*Pn	**Pn**	**12 45 03.9**	**+0.7**
IKOO	**Kooshah**	**6.13**	**141**	*e*Pn	**Pn**	**12 45 05.1**	**+0.8**
QUB	**Quba**	**6.24**	**313**	*e*Pn	**Pn**	**12 45 06.4**	**+0.7**
KLNJ	**Kolanjah**	**6.68**	**201**	*e*Pn	**Pn**	**12 45 12.8**	**+0.8**
IDHR	**Dehrash**	**7.01**	**251**	*e*Pn	**Pn**	**12 45 18.0**	**+1.6**
IMRD	**Marand**	**7.04**	**284**	*e*Pn	**Pn**	**12 45 17.8**	**+1.0**
KHGB	**Koh Gabri**	**7.09**	**166**	*e*Pn	**Pn**	**12 45 18.0**	**+0.5**
NHDN	**Nehbandan**	**7.48**	**140**	*e*Pn	**Pn**	**12 45 23.8**	**+0.9**
NGRK	**Negar Kerman**	**7.85**	**165**	*e*Pn	**Pn**	**12 45 28.8**	**+0.7**
GNI	**Garni**	**8.10**	**294**	Pn	**Pn**	**12 45 30.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=87,slow=16,SNR=1.4						
GNI				LR	LR	12 49 55.3	
	comp=Z,46nm,21.6s,baz=92,slow=48						
KBZ	**Khabaz**	**10.89**	**310**	Pn	**Pn**	**12 46 08.0**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=119,slow=5.2,SNR=18						
KBZ				Sn	Sn	12 48 02.7	-8.4
	comp=Z,0.3nm,0.3s,baz=45,slow=20,SNR=1.5						
KVAR	**Kislovodsk Arr**	**11.13**	**310**	Pn	**Pn**	**12 46 11.6**	**-1.2**
	baz=139,slow=18,SNR=1.3						
KVAR				Sn	Sn	12 48 07.0	-10
	baz=329,slow=19,SNR=1.8						
AB31	**Akbulak array**	**12.62**	**17**	⇓P	Pn	12 46 27.7	-5.3
	comp=Z,2.2nm,0.6s,baz=196,slow=13,SNR=40						
AB31				⇑S	**Sn**	**12 48 49.4**	**-4.2**
	comp=Z,1.4nm,0.4s,baz=192,slow=24,SNR=6.3						
AKTO	**Aktyubinsk**	**13.40**	**10**	Pn	**Pn**	**12 46 42.7**	**-1.0**
	comp=Z,2.5nm,0.3s,baz=190,slow=11,SNR=36						
AKTO				Sn	**Sn**	**12 49 05.2**	**-7.4**
	comp=Z,0.7nm,0.3s,baz=44,slow=23,SNR=5.0						
AKTO				LR	LR	12 52 04.0	
	comp=Z,37nm,18.1s,baz=171,slow=38						
AKTO	**Aktyubinsk**	**13.40**	**10**	⇓P	Pn	12 46 37.4	-6.3
	comp=Z,3.7nm,0.4s						
AKTO				⇑S	**Sn**	**12 49 07.1**	**-5.5**
	comp=Z,5.1nm,1.0s						
BELG	**Belogornoye**	**15.86**	**345**	Pn	**Pn**	**12 47 13.0**	**-3.6**
	comp=Z,3.2nm,0.3s,baz=195,slow=17,SNR=6.0						
AAK	**Ala-Archa**	**16.28**	**65**	Pn	**P**	**12 47 26.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=231,slow=5.4,SNR=8.9						
AAK				LR	LR	12 53 39.4	
	comp=Z,31nm,18.4s,baz=252,slow=37						
KUU	**Kurty**	**17.88**	**61**	*e*P	**P**	**12 47 43.5**	**+0.6**
	baz=62						
EIL	**Elat**	**17.92**	**251**	LR	LR	12 56 21.9	
	comp=Z,33nm,19.5s,baz=96,slow=44						
TNSS	**Tian-Shan**	**18.12**	**64**	*e*P	**P**	**12 47 47.4**	**+1.4**
	baz=64						
AAA	**Alma-Ata**	**18.13**	**64**	*e*P	**P**	**12 47 48.0**	**+2.2**
	baz=64						
SATY	**Saty**	**19.18**	**65**	*e*P	**Pn**	**12 47 59.0**	**+0.7**
	baz=65						
BVAR	**Borovoye Array**	**19.28**	**30**	P	**P**	**12 47 55.4**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=217,slow=30,SNR=3.8						
ARU	**Arti**	**19.36**	**7**	P	**P**	**12 47 58.8**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=238,slow=3.3,SNR=8.3						
SHLS	**Shalkode**	**19.96**	**65**	*e*P	**Pn**	**12 48 11.1**	**+3.6**
	baz=65						
KIRV	**Kirov**	**21.57**	**353**	P	**P**	**12 48 23.9**	**+0.9**
	comp=Z,13nm,0.6s,baz=65,slow=2.1,SNR=3.4						
OBN	**Obninsk**	**21.59**	**331**	P	**P**	**12 48 22.9**	**-0.4**
	comp=Z,3.3nm,0.3s,baz=302,slow=23,SNR=3.1						
KURBB	**Kurchatov Arra**	**21.76**	**45**	P	**P**	**12 48 26.7**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=244,slow=10,SNR=8.0						
AKASG	**Malin Array Be**	**22.43**	**315**	P	**P**	**12 48 31.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=92,slow=7.8,SNR=11						
MKAR	**Makanchi Array**	**22.67**	**56**	P	**P**	**12 48 36.4**	**+1.5**
	comp=Z,1.1nm,0.4s,baz=248,slow=9.3,SNR=25						
MNK	**Minsk**	**25.03**	**322**	*i* P	**P**	**12 49 02.2**	**+4.7**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**12 49 02.2**	**+4.7**
	comp=N,10.0nm,0.9s						
MNK				*i* P	**P**	**12 49 02.2**	**+4.7**
	comp=Z,11nm,0.9s						
MNK				*i* PP	**PnPn**	**12 49 35.4**	**+4.7**
MNK				*i* PPP	PPP	12 49 43.5	
MNK				*i* PcP	**PcP**	**12 52 36.6**	**+4.6**
MNK				*i* S	**S**	**12 53 29.5**	**+8.0**
MNK				*i* SS	**SnSn**	**12 54 17.4**	**+7.3**
MNK				*i* SSS	SSS	12 54 31.1	
MNK				*i* LQ	LQ	12 56 53.1	
MNK				*i* LR	LR	12 58 02.8	
MNK				*i* LRM	MLR	12 59 48.4	
	comp=E,13nm,18.3s						
MNK				*i* LRM	MLR	12 59 51.0	
	comp=N,324nm,18.4s						
MNK				*i* LRM	MLR	12 59 52.2	
	comp=Z,69nm,18.3s						
KLMR	**Klimovskoe**	**25.42**	**343**	P	**P**	**12 49 00.8**	**-0.1**
KLMR				AMP		12 49 13.8	
	comp=Z,9.0nm,1.2s						
KOLS	**Kolonicke sedl**	**26.01**	**307**	*e*P	P	12 49 15.5	+8.9
ZALV	**Zalesovo Beam**	**26.72**	**42**	P	**P**	**12 49 13.8**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=262,slow=10.0,SNR=2.1						
ARCES	**ARCESS Array B**	**35.89**	**343**	P	**P**	**12 50 34.0**	**+0.6**
	comp=Z,6.9nm,1.1s,baz=131,slow=6.6,SNR=4.0						
NOA	**NORSAR Array B**	**35.93**	**325**	P	**P**	**12 50 33.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=116,slow=8.4,SNR=2.2						
SONM	**Songino Array**	**39.03**	**57**	P	**P**	**12 51 00.8**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=279,slow=10,SNR=2.9						
CMAR	**Chiang Mai Arr**	**43.14**	**103**	P	**P**	**12 51 33.5**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=299,slow=8.5,SNR=6.1						
ESDC	**Sonseca Array**	**45.08**	**292**	P	**P**	**12 51 48.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=69,slow=6.6,SNR=2.0						
TORD	**Torodi Ar. Bea**	**52.64**	**257**	P	**P**	**12 52 45.9**	**-2.2**
	comp=Z,0.9nm,0.8s,baz=33,slow=6.9,SNR=5.1						
DBIC	**Dimbokro**	**61.69**	**256**	P	**P**	**12 53 50.1**	**-1.9**
	comp=Z,1.0nm,0.6s,baz=63,slow=4.5,SNR=1.5						
ILAR	**Eielson Array**	**76.91**	**9**	P	**P**	**12 55 25.4**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=326,slow=3.3,SNR=4.1						
YKA	**Yellowknife Ar**	**80.18**	**355**	P	**P**	**12 55 43.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=27,slow=5.9,SNR=7.6						
WRA	**Warramunga Arr**	**94.18**	**112**	P	**P**	**12 56 50.1**	**-2.7**
	comp=Z,0.4nm,1.0s,baz=326,slow=4.3,SNR=2.3						

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*NEIC **05** 12:57:34.8±1.4, 37.°02N±0.°02×98.°09W±0.°05, h5^{km}±2^{km}, mb_Lg3.0/61, Error ellipse: s-maj=6.8km s-min=3.0km az=73.0*

*ANF **05** 12:57:35.2±1.3, 36.°99N×98.°14W, h4^{km}±10^{km}, ML3.8/12, Error ellipse: s-maj=3.8km s-min=3.1km az=35.0*

ISC 05 12:57:34.7±1.0**, 37.°04N**±0.°03×**98.°08W**±0.°03**, h7^{km}**±8^{km}**, n65, σ1^{s}14**/56**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN10	**Anthony SW Sta**	**0.09**	**350**	Pg	**Pg**	**12 57 36.9**	**+0.2**
KAN14	**Manchester OK**	**0.12**	**132**	Pg	**Pg**	**12 57 37.2**	**-0.1**
KAN14				Sg	**Sg**	**12 57 39.7**	**+0.7**
KAN08	**Anthony NE Sta**	**0.21**	**24**	Pg	**Pg**	**12 57 36.6**	**-2.2**
KAN12	**Harper NE Stat**	**0.27**	**13**	Pg	**Pg**	**12 57 37.9**	**-2.0**
KAN13	**South Haven SW**	**0.48**	**93**	Pg	**Pg**	**12 57 44.5**	**+0.5**
U32A	**Winter Ranch,**	**0.99**	**229**	Pg	**Pg**	**12 57 52.1**	**-1.6**
U32A	**Winter Ranch,**	**0.99**	**229**	P		12 57 52.1	
	baz=53						
U32A				S		12 58 04.7	
	baz=53						
T35A	**Sooner Cattle**	**1.26**	**95**		**Pn**	**12 57 58.6**	**-0.1**
QUOK	**Quay**	**1.40**	**128**		**Pb**	**12 58 01.0**	**-0.2**
R32A	**Long Quarter,**	**1.47**	**340**		**Pb**	**12 58 02.1**	**-0.3**
R32A	**Long Quarter,**	**1.47**	**340**	P		12 58 01.8	
	baz=160						
R32A				S		12 58 21.2	
	baz=160						
OK031	**S. Brethren Rd**	**1.47**	**137**	Pn	**Pb**	**12 58 01.8**	**-0.6**
OK030	**Cody Creek RV**	**1.52**	**136**		**Pb**	**12 58 02.9**	**-0.3**
OK025	**Westminster Rd**	**1.57**	**158**		**Pn**	**12 58 03.1**	**+0.1**
OKCFA	**Oklahoma City**	**1.70**	**163**		**Pb**	**12 58 05.6**	**-0.6**
OKCFA				IAmb_Lg		12 58 30.0	
	comp=Z,101nm,0.8s						
W35A	**Tecumseh**	**2.12**	**152**		**Pn**	**12 58 10.8**	**+0.3**
CBKS	**Cedar Bluff**	**2.21**	**324**	P	**Pn**	**12 58 12.6**	**+0.7**
	baz=143						
CBKS				S	**Sb**	**12 58 41.5**	**-1.0**
	baz=143						
CBKS	**Cedar Bluff**	**2.21**	**324**	Pn	**Pn**	**12 58 12.7**	**+0.9**
CBKS	**Cedar Bluff**	**2.21**	**324**	P		12 58 12.2	
	baz=144						
KSU1	**Kansas State U**	**2.36**	**29**	P	**Pn**	**12 58 15.6**	**+1.7**
	baz=208						
KSU1				S	**Sb**	**12 58 48.1**	**+1.1**
	baz=208						
KSU1	**Kansas State U**	**2.36**	**29**		**Pn**	**12 58 15.0**	**+1.1**
KSU1				IAmb_Lg		12 58 50.3	
	comp=Z,71nm,0.8s						
KSU1	**Kansas State U**	**2.36**	**29**	P		12 58 15.6	
	baz=208,SNR=17						
KSU1				S		12 58 46.8	
	baz=208						
WMOK	**Wichita Mounta**	**2.37**	**194**	P	**Pn**	**12 58 14.0**	**0.0**
	baz=15						
WMOK	**Wichita Mounta**	**2.37**	**194**		**Pn**	**12 58 13.9**	**-0.1**
WMOK	**Wichita Mounta**	**2.37**	**194**	P		12 58 14.1	
	baz=15,SNR=24						
U38A	**Gravette**	**3.02**	**100**		**Pn**	**12 58 25.0**	**+2.0**
U38A	**Gravette**	**3.02**	**100**	P		12 58 24.7	
	baz=281,SNR=10						
U38A				S		12 59 03.0	
	baz=281						
X37A	**Clayton**	**3.29**	**137**		**Pn**	**12 58 27.9**	**+1.3**
X37A				IAmb_Lg		12 59 25.6	
	comp=Z,56nm,0.8s						
X37A	**Clayton**	**3.29**	**137**	P		12 58 27.7	
	baz=318						
X37A				S		12 59 08.2	
	baz=318						
AMTX	**Amarillo**	**3.63**	**235**	Pb	**Pb**	**12 58 39.4**	**+0.2**
	baz=54						
AMTX				Sb	**Sb**	**12 59 26.7**	**+3.2**
	baz=54						
AMTX	**Amarillo**	**3.63**	**235**	Pn	**Pn**	**12 58 31.5**	**+0.1**
N33A	**J Bar K, Exete**	**3.73**	**7**	IAmb_Lg		12 59 43.2	
	comp=Z,33nm,1.1s						
S39A	**Bolivar**	**3.84**	**79**		**Pn**	**12 58 35.6**	**+1.4**
S39A	**Bolivar**	**3.84**	**79**	P		12 58 35.8	
	baz=260,SNR=13						
W39A	**Magazine**	**3.93**	**117**	P	**Pn**	**12 58 36.7**	**+1.3**
	baz=299						
W39A				Sb	**Sg**	**12 59 38.6**	**-2.3**
	baz=299						
W39A	**Magazine**	**3.93**	**117**		**Pn**	**12 58 36.4**	**+0.9**
W39A				IAmb_Lg		12 59 45.9	
	comp=Z,53nm,0.9s						
W39A	**Magazine**	**3.93**	**117**	P		12 58 36.8	
	baz=298,SNR=8.9						
KSCO	**Kaye Shedlock'**	**4.10**	**300**	Pb	**Pb**	**12 58 48.3**	**+1.1**
	baz=118						
KSCO	**Kaye Shedlock'**	**4.10**	**300**		**Pn**	**12 58 38.5**	**+0.5**
U40A	**Yellville**	**4.25**	**98**	P	**Pn**	**12 58 41.1**	**+1.2**
	baz=280						
U40A	**Yellville**	**4.25**	**98**		**Pn**	**12 58 39.1**	**-0.8**
U40A	**Yellville**	**4.25**	**98**	P		12 58 41.4	
	baz=280,SNR=11						
U40A				P		12 58 41.4	
	baz=280,SNR=11						
N35A	**Tabor**	**4.26**	**26**		**Pn**	**12 58 40.9**	**+0.8**
BGNE	**Belgrade**	**4.36**	**359**	P	**Pn**	**12 58 42.4**	**+0.9**
	baz=178						
BGNE	**Belgrade**	**4.36**	**359**	P		12 58 42.4	
	baz=179,SNR=6.0						
P38A	**Dawn**	**4.41**	**53**	Pn	**Pn**	**12 58 43.2**	**+1.2**
P38A				IAmb_Lg		12 59 55.5	
	comp=Z,33nm,0.9s						
MIAR	**Mount Ida**	**4.42**	**123**	P	**Pn**	**12 58 43.7**	**+1.5**
	baz=306						
MIAR	**Mount Ida**	**4.42**	**123**	Pn	**Pn**	**12 58 41.9**	**-0.4**
MIAR				IAmb_Lg		13 00 06.0	
	comp=Z,22nm,0.9s						
MIAR	**Mount Ida**	**4.42**	**123**	P		12 58 43.9	
	baz=305,SNR=12						
Z38A	**Mt. Pleasant**	**4.54**	**145**	IAmb_Lg		13 00 04.9	
	comp=Z,22nm,0.7s						
ABTX	**Abilene, Hawle**	**4.59**	**197**	Pn	**Pn**	**12 58 44.6**	**+0.1**
MGMO	**Mountain Grove**	**4.64**	**87**		**Pn**	**12 58 45.5**	**+0.2**
MGMO				IAmb_Lg		13 00 10.8	
	comp=Z,20nm,0.8s						
R40A	**Maddies Statio**	**4.77**	**73**	Pn	**Pn**	**12 58 48.2**	**+1.2**
R40A				IAmb_Lg		13 00 09.5	
	comp=Z,40nm,0.8s						
MSTX	**Muleshoe**	**4.90**	**233**	Pn	**Pn**	**12 58 50.8**	**+1.8**
FCAR	**Ozark Folk Cen**	**4.93**	**102**	Pn	**Pn**	**12 58 48.2**	**-1.0**
X40A	**Basin Creek Fa**	**4.96**	**119**	P	**Pn**	**12 58 51.1**	**+1.4**
	baz=302						
X40A	**Basin Creek Fa**	**4.96**	**119**		**Pn**	**12 58 49.0**	**-0.7**
X40A	**Basin Creek Fa**	**4.96**	**119**	P		12 58 51.0	
	baz=302,SNR=6.3						
X40A				P		12 58 51.0	
	baz=302,SNR=6.3						
WHTX	**Lake Whitney,**	**5.06**	**174**	P	**Pn**	**12 58 50.7**	**-0.3**
	baz=355						
WHTX	**Lake Whitney,**	**5.06**	**174**	Pn	**Pn**	**12 58 50.1**	**-0.9**
WHTX	**Lake Whitney,**	**5.06**	**174**	P		12 58 50.7	
	baz=355,SNR=5.9						
T25A	**Trinidad**	**5.07**	**273**	P	**Pn**	**12 58 50.8**	**-0.5**
	baz=90						
T25A	**Trinidad**	**5.07**	**273**	Pn	**Pn**	**12 58 51.0**	**-0.3**
W41B	**Gary Mavity, V**	**5.07**	**110**		**Pn**	**12 58 51.9**	**+0.8**
W41B				IAmb_Lg		13 00 21.9	
	comp=Z,18nm,0.8s						
L34A	**Svendsen Farm,**	**5.09**	**14**	IAmb_Lg		13 00 24.7	
	comp=Z,41nm,0.8s						
UALR	**University of**	**5.17**	**114**	IAmb_Lg		13 00 24.7	
	comp=Z,20nm,1.1s						
N38A	**Joes South For**	**5.32**	**44**	IAmb_Lg		13 00 27.6	
	comp=Z,34nm,0.8s						
P40A	**Paris**	**5.35**	**60**	IAmb_Lg		13 00 29.4	
	comp=Z,36nm,0.7s						
237A	**Washetta, Mont**	**5.36**	**159**	IAmb_Lg		13 00 33.4	

	comp=Z,19nm,0.8s						
CCM	Cathedral Cave	5.52	77	Pn	Pn	12 58 57.6	+0.3
CCM				IAmb_Lg		13 00 43.8	
	comp=Z,19nm,0.7s						
LCAR	Lake Charles	5.66	98	Pn	Pn	12 58 59.9	+0.8
Q24A	Divide	5.91	291	IAmb_Lg		13 00 48.8	
	comp=Z,14nm,0.7s						
SCIA	State Center	6.14	36	IAmb_Lg		13 01 06.3	
	comp=Z,24nm,0.8s						
435B	Jarrell	6.25	176	IAmb_Lg		13 00 58.0	
	comp=Z,30nm,0.9s						
ISCO	Idaho Springs	6.53	297	IAmb_Lg		13 01 18.0	
	comp=Z,13nm,1.1s						
PARMO	Parma	6.69	91	IAmb_Lg		13 01 18.8	
	comp=Z,31nm,0.8s						
ECSD	EROS Data Cent	6.78	9	Pn	Pn	12 59 13.5	-1.1
K38A	Parkersburg	6.93	34	IAmb_Lg		13 01 24.7	
	comp=Z,24nm,0.8s						
SIUC	Southern Illin	7.09	82	IAmb_Lg		13 01 28.1	
	comp=Z,24nm,0.7s						

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*IDC **05** 13:17:14.0±0.8, 56°.59S×150°.64W, h0^{km}, mb4.2/6, mb1 4.4/6, mb1mx4.2/20, mbtmp4.2/6, MS3.7/4, Ms1 3.7/4, ms1mx3.3/12, Error ellipse: s-maj=30.6km s-min=22.0km az=13.0*

*NEIC **05** 13:17:14.6±2.4, 56°.51S±0°.09×150°.5W±0°.2, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=24.7km s-min=11.5km az=59.0*

ISC 05 13:17:14.8±0.7**, 56°.6S**±0°.2×**150°.5W**±0°.1**, h10**^{km}**, n46, σ1^{s}.02**/23**, mb4.5**/11**, MS3.6**/8**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	26.59	201	P	P	13 22 54.8	+2.1
	4.3nm,1.1s,baz=64,slow=12,SNR=4.9						
VNDA				LR	LR	13 30 42.8	
	comp=Z,118nm,18.7s,baz=90,slow=30						
VNDA	Vanda	26.59	201	IAmb	IAmb	13 23 00.7	
	comp=Z,9.8nm,1.3s						
BKZ	Black Stump Fm	27.78	295	P	P	13 23 03.4	-0.4
BKZ				IAmb	IAmb	13 23 15.2	
	comp=Z,21nm,1.4s						
URZ	Urewera	28.17	297	LR	LR	13 32 44.9	
	comp=Z,73nm,18.8s,baz=212,slow=33						
TBI	Tubuai	33.21	2	*e*LR	LR	13 32 32.4	
	comp=Z,172nm,26.8s						
TBI	Tubuai	33.21	2	*e*T	T	13 58 55.3	
	comp=Z,19nm,0.3s						
QSPA	South Pole Qui	33.56	180	P	P	13 23 54.4	-0.2
	comp=Z,10nm,1.0s,baz=43,slow=12,SNR=22						
QSPA	South Pole Qui	33.56	180	P	P	13 23 54.2	-0.3
RKT	Rikitea	35.32	25	*e*LR	LR	13 33 37.2	
	comp=Z,150nm,32.0s						
TVO	Taravao	38.75	2	*e*T	T	14 05 53.5	
	comp=Z,0.7nm,0.3s						
PPT2	Papeete2	38.94	1	*e*LR	LR	13 35 14.1	
	comp=Z,163nm,25.0s						
PPT	Papeete	38.96	1	LR	LR	13 36 54.6	
	comp=Z,92nm,18.8s,slow=30						
VAH	Vaihoa	41.33	4	*e*T	T	14 09 05.4	
	comp=Z,36nm,0.3s						
TAOE	Nuku Hiva Isla	48.30	14	*e*LR	LR	13 39 32.9	
	comp=Z,102nm,26.9s						
LL01	San Ignacio de	49.91	109	P	P	13 26 06.5	-1.8
SNAA	Sanae	50.03	167	P	P	13 26 07.7	-1.2
SNAA				IAmb	IAmb	13 26 17.8	
	comp=Z,6.4nm,1.3s						
PLCA	Paso Flores	52.07	108	P	P	13 26 26.0	+1.4
	comp=Z,2.5nm,0.9s,baz=241,slow=8.3,SNR=5.2						
H03S2	Juan Fernandez	52.62	96	T	T	14 23 31.4	
	baz=219,slow=74						
H03S1	Juan Fernandez	52.62	96	T	T	14 23 31.2	
	baz=219,slow=74						
H03S3	Juan Fernandez	52.64	96	T	T	14 23 31.4	
	baz=219,slow=74						
H03N3	Juan Fernandez	52.91	96	T	T	14 23 50.5	
	baz=223,slow=72						
H03N2	Juan Fernandez	52.91	96	T	T	14 23 48.8	
	baz=223,slow=72						
H03N1	Juan Fernandez	52.92	96	T	T	14 23 49.1	
	baz=223,slow=72						
MAW	Mawson	53.67	195	LR	LR	13 46 15.0	
	comp=Z,128nm,19.0s,baz=62,slow=32						
FORT	Forrest	60.32	258	P	P	13 27 23.6	0.0
ASAR	Alice Springs	62.69	268	P	P	13 27 39.6	-0.1
	comp=Z,1.7nm,0.7s,baz=139,slow=6.6,SNR=41						
AS31	Alice Springs	62.69	268	P	P	13 27 38.9	-0.8
AC02	Maricunga	63.38	99	P	P	13 27 45.4	+0.6
AC02				IAmb	IAmb	13 27 49.6	
	comp=Z,3.7nm,1.0s						
H01W1	Cape Leeuwin H	64.39	245	T	T	14 37 57.4	
	baz=142,slow=76,SNR=7.0						
H01W2	Cape Leeuwin H	64.40	245	T	T	14 37 58.1	
	baz=142,slow=76,SNR=8.2						
H01W3	Cape Leeuwin H	64.41	245	T	T	14 37 53.4	
	baz=142,slow=76,SNR=6.4						
WR0	Warramunga Arr	65.30	271	P	P	13 27 56.2	-0.7
WRA	Warramunga Arr	65.42	271	P	P	13 27 57.6	-0.1
	comp=Z,0.7nm,0.8s,baz=143,slow=6.0,SNR=5.8						
WB0	Warramunga Arr	65.54	271	P	P	13 27 57.1	-1.4
WB0				IAmb	IAmb	13 27 58.8	
	comp=Z,7.2nm,1.2s						
LVC	Limon Verde	66.86	96	P	P	13 28 05.9	-1.4
LVC				IAmb	IAmb	13 28 20.8	
	comp=Z,5.1nm,0.8s						
CPUP	Villa Florida	70.13	108	P	P	13 28 27.9	+0.6
	comp=Z,2.9nm,0.8s,baz=234,slow=6.0,SNR=7.5						
CPUP	Villa Florida	70.13	108	P	P	13 28 27.7	+0.4
CPUP				IAmb	IAmb	13 28 28.9	
	comp=Z,3.3nm,0.8s						
PSA00	Pilbara Seismi	72.07	258	P	P	13 28 39.5	+0.3
H10N3	ASCENSION HYDR	106.35	134	T	T	15 31 13.9	
	baz=202,slow=75,SNR=22						
H10N1	ASCENSION HYDR	106.35	134	T	T	15 31 01.8	
	baz=202,slow=75,SNR=25						
H10N2	ASCENSION HYDR	106.37	134	T	T	15 31 06.3	
	baz=202,slow=75,SNR=22						
ILAR	Eielson Array	121.07	2	PKP	PKiKP	13 36 07.5	+1.4
	comp=Z,0.9nm,0.7s,baz=229,slow=1.5,SNR=8.9						
YKA	Yellowknife Ar	121.99	19	PKP	PKiKP	13 36 09.0	+1.0
	comp=Z,0.1nm,0.6s,baz=160,slow=2.2,SNR=3.8						
MKAR	Makanchi Array	146.62	276	PKPbc	PKPab	13 36 56.3	-0.5
	comp=Z,5.4nm,0.8s,baz=118,slow=4.7,SNR=60						
ZALV	Zalesovo Beam	149.08	289	PKPbc	PKPbc	13 37 01.6	-0.3
	comp=Z,2.3nm,0.7s,baz=118,slow=4.0,SNR=12						
ESDC	Sonseca Array	152.37	113	PKPbc	PKiKP	13 37 10.8	+0.3
	comp=Z,0.9nm,1.0s,baz=247,slow=1.4,SNR=5.6						

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*IDC **05** 13:42:35.9±0.5, 28°.67N×51°.93E, h0^{km}, mb4.4/29, mb1 4.4/37, mb1mx4.4/45, mbtmp4.3/37, ML4.1/7, MS3.8/8, Ms1 3.8/8, ms1mx3.4/34, Error ellipse: s-maj=12.7km s-min=11.1km az=152.0*

*BJI **05** 13:42:35.0±0.0, 28°.60N×52°.00E, h10^{km}, mB5.1/33, mb4.6/46, Ms4.7/28, Ms7 4.4/28*

*SGS **05** 13:42:36.3, 29°.03N×52°.02E, h8^{km}, Ml4.4*

*MOS **05** 13:42:36.4±1.2, 28°.60N×51°.94E, h17^{km}, mb4.7/44, Error ellipse: s-maj=5.9km s-min=4.4km az=84.9*

*TEH **05** 13:42:36.7, 28°.71N×51°.85E, h10^{km}, ML4.7*

*NEIC **05** 13:42:36.9±1.7, 28°.63N±0°.07×51°.89E±0°.02, h10^{km}±1^{km}, mb4.7/67, Error ellipse: s-maj=12.1km s-min=2.9km az=168.0*

*DSN **05** 13:42:38.4±1.7, 28°.68N×51°.92E, h10^{km}, ML5.4/13, Error ellipse: s-maj=23.2km s-min=6.4km az=4.0*

*OMAN **05** 13:42:40.8±0.1, 28°.57N×51°.98E, h16^{km}, mb6.1/19, ml5.0/11, ms3.7/4, Error ellipse: s-maj=3.6km s-min=1.0km az=249.0*

ISC 05 13:42:38.2±0.3**, 28°.69N**±0°.03×**51°.90E**±0°.03**, h15**^{km}**, n427, σ1^{s}.45**/459**, mb4.6**/124**, MS4.2**/15**, 23C-11D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	AHRAM	0.56	289	*e*Pg	Pg	13 42 46.8	-2.4
KAZ1	Kazerun	0.96	346	*e*Pg	Pb	13 42 55.2	-1.4
KAZ1				*e*		13 43 20.1	
	comp=Z,99nm,0.6s						
QIR1	Qir	1.03	102	*e*Pg	Pb	13 42 57.6	-0.2
QIR1				*e*		13 43 28.9	
	comp=Z,99nm,0.6s						
SHI	Shiraz	1.09	29	*e*Pg	Pb	13 42 57.1	-1.8
JHRM	Jahrom	1.49	97	*e*Pg	Pb	13 43 06.1	+0.5
LMD1	Lamerd	1.75	140	*e*Pn	Pb	13 43 10.3	+0.3
KLNJ	Kolanjah	2.33	354	*e*Pn	Pn	13 43 16.2	-0.1
LAR1	LAR	2.41	114	*e*Pn	Pn	13 43 18.9	+1.7
IRAM	Ramesheh	3.14	8	*e*Pn	Pn	13 43 27.2	-0.1
ISAD	Sadrabad	3.57	25	*e*Pn	Pn	13 43 35.6	+2.3
IMEH	Mehriz	3.58	40	*e*Pn	Pn	13 43 35.1	+1.7
IGAR	Gharneh	3.71	2	*e*Pn	Pn	13 43 36.0	+0.9
KBD	Kabd	3.72	279	*e*P		13 43 35.9	
SHK1	Shahrekord	3.73	347	*e*Pn	Pn	13 43 37.6	+2.1
RDF	Al-Radifah	3.82	275	*e*P		13 43 37.8	
JRN	Qarnain Island	3.83	167	*e*Pn	Pn	13 43 38.0	+1.4
BNDS	Bandar-Abbas	3.99	108	*e*Pn	Pn	13 43 40.7	+1.7
GENO	Geno	3.99	108	*e*Pn	Pn	13 43 42.0	+3.0
SLWS		4.03	196	P	Pn	13 43 40.8	+1.4
IPIR	Pirpir	4.08	348	*e*Pn	Pn	13 43 39.2	-1.1
MIB	Mutribah	4.14	287	*e*P		13 43 41.7	
ICHK	Chekchek	4.15	31	*e*Pn	Pn	13 43 42.5	+1.2
IZEF	Zefreh	4.21	5	*e*Pn	Pn	13 43 42.7	+0.6
SMAN	Sihmah	4.22	235	P	Pn	13 43 43.1	+1.0
IBAF	Bafgh	4.30	47	*e*Pn	Pn	13 43 45.1	+1.9
KHGB	Koh Gabri	4.33	66	*e*Pn	Pn	13 43 45.2	+1.5
KHGB				*e*		13 45 09.1	
	comp=Z,99nm,0.9s						
NGRK	Negar Kerman	4.33	76	*e*Pn	Pn	13 43 45.5	+1.6
NGRK				*e*		13 45 19.0	
	comp=Z,99nm,1.2s						
SHGR	Shooshtar-Gavs	4.33	323	*e*Pn	Pn	13 43 43.8	+0.3
YZKH	Yazd	4.36	32	*e*Pn	Pn	13 43 44.8	+0.8
RST	Umm Al-Ruwaisa	4.37	282	*e*P		13 43 45.0	
KRBR	Kerman	4.44	72	*e*Pn	Pn	13 43 46.5	+1.2
TVBK	TV Kerman	4.44	72	*e*Pn	Pn	13 43 45.1	-0.2
TVBK				*e*		13 44 12.5	
	comp=Z,99nm,0.5s						
QYSM	Um Kedad	4.51	261	P	Pn	13 43 46.7	+0.8
SHME	Shamm	4.60	124	*i* P	Pn	13 43 47.5	+0.3
	SNR=24						
SHME				S	Sn	13 44 42.6	+2.2
SHME	Shamm	4.60	124	*e*Pn	Pn	13 43 47.7	+0.5
SHME	Shamm	4.60	124	P	Pn	13 43 48.1	+0.9
	SNR=26						
SHME				S	Sn	13 44 39.8	-0.6
UMQ	Umm Al-Quwin	4.60	132	P	Pn	13 43 49.4	+2.2
SLWR	Sila	4.60	182	*e*Pn	Pn	13 43 49.1	+1.9
SLWR	Sila	4.60	182	P	Pn	13 43 48.8	+1.5
SLWR				S	Sn	13 44 42.4	+1.9
IKLH	Kolahrood	4.62	357	*e*Pn	Pn	13 43 47.4	-0.4
NHRD	Haradh	4.72	214	P	Pn	13 43 50.6	+1.7
NHRD	Haradh	4.72	214	S	Sn	13 44 47.6	+4.3
ANAR	Anarak	4.75	19	*e*Pn	Pn	13 43 49.2	-0.3
BANOM	Banah	4.79	124	*i* P	Pn	13 43 50.5	+0.7
	SNR=37						
BANOM				S	Sn	13 44 45.1	+0.1
BANOM	Banah	4.79	124	*e*Pn	Pn	13 43 50.7	+0.9
BANOM	Banah	4.79	124	P	Pn	13 43 51.0	+1.2
	SNR=37						
BANOM				P	Pn	13 43 51.0	+1.2
	SNR=46						
BANOM				S	Sn	13 44 44.2	-0.9
AJN	Ajban	4.95	145	*i* P	Pn	13 43 53.4	+1.4
	SNR=13						
AJN	Ajban	4.95	145	*e*Pn	Pn	13 43 53.9	+1.9
AJN	Ajban	4.95	145	P	Pn	13 43 54.0	+1.9
	SNR=13						
AJN				S	Sn	13 44 49.5	+0.5
NAZ	Nazwa, Dubai	4.99	137	*i* P	Pn	13 43 54.0	+1.5
	SNR=21						
NAZ	Nazwa, Dubai	4.99	137	*e*Pn	Pn	13 43 54.0	+1.5
NAZ	Nazwa, Dubai	4.99	137	P	Pn	13 43 54.2	+1.7
	SNR=21						
NAZ				S	Sn	13 44 50.9	+0.9
MASF	Masafi	5.03	130	P	Pn	13 43 54.7	+1.5
	SNR=11						
MASF				S	Sn	13 44 49.5	-1.7
MSFE	Esma-Masafi	5.04	130	*i* P	Pn	13 43 54.2	+0.9
	SNR=28						
MSFE	Esma-Masafi	5.04	130	*e*Pn	Pn	13 43 54.5	+1.2
CHMN	Cheshme madani	5.07	75	*e*Pn	Pn	13 43 55.0	+1.1
CHMN				*e*		13 45 44.5	
	comp=Z,99nm,0.8s						
QAM	Ghamsar	5.07	356	*e*Pn	Pn	13 43 53.8	-0.1
ASUD	Al Ashush, Dub	5.08	142	*i* P	Pn	13 43 55.8	+2.0
	SNR=100						
ASUD	Al Ashush, Dub	5.08	142	*e*Pn	Pn	13 43 56.2	+2.4
ASUD	Al Ashush, Dub	5.08	142	P	Pn	13 43 56.0	+2.2
	SNR=100						
FAQ	Al Faqa, Dubai	5.13	139	*i* P	Pn	13 43 56.1	+1.5
	SNR=26						
FAQ	Al Faqa, Dubai	5.13	139	*e*Pn	Pn	13 43 56.5	+2.0
FAQ	Al Faqa, Dubai	5.13	139	P	Pn	13 43 56.3	+1.8
	SNR=26						
FAQ				S	Sn	13 44 56.2	+2.7
KHNJ	Kahnooj	5.17	97	*e*Pn	Pn	13 43 55.4	+0.3
MDH	Madha	5.18	130	*i* P	Pn	13 43 55.8	+0.6
	SNR=23						
MDH	Madha	5.18	130	*e*Pn	Pn	13 43 56.0	+0.9
MDH	Madha	5.18	130	P	Pn	13 43 57.0	+1.8
	SNR=23						
MDH				S	Sn	13 44 54.8	+0.2
MDH				S	Sn	13 44 54.8	+0.2
MZWR	Madinat Zayed	5.22	160	P	Pn	13 43 56.7	+1.0
KRSH	Karshahi	5.27	2	*e*Pn	Pn	13 43 56.9	+0.3
UOSS	Minazif	5.36	133	*i* P	Pn	13 43 58.0	+0.4
	SNR=23						
UOSS	Minazif	5.36	133	Pn	Pn	13 43 57.6	0.0
UOSS	Minazif	5.36	133		Sn	13 44 57.8	-1.3
UOSS	Minazif	5.36	133	*e*Pn	Pn	13 43 58.2	+0.6
HATD	Hatta, Dubai	5.40	134	*i* P	Pn	13 43 59.1	+0.9
	SNR=16						
HATD	Hatta, Dubai	5.40	134	*e*Pn	Pn	13 43 59.5	+1.3
HATD	Hatta, Dubai	5.40	134	P	Pn	13 44 00.5	+2.3
	SNR=16						
HATD				S	Sn	13 45 00.2	+0.1
RQBS	RQBS	5.42	257	P	Pn	13 43 58.2	-0.3
ASHO	Ashiyiah	5.45	136	*i* P	Pn	13 43 59.9	+0.9
	SNR=67						
ASHO	Ashiyiah	5.45	136	*e*Pn	Pn	13 43 59.9	+0.9
ASHO	Ashiyiah	5.45	136	P	Pn	13 44 00.3	+1.3
	SNR=14						
ASHO				S	Sn	13 45 01.5	0.0
IKMR	Kamar-syah	5.68	329	*e*Pn	Pn	13 44 01.6	-0.4
ALNE	Al Ain	5.76	142	*i* P	Pn	13 44 04.6	+1.3
	SNR=28						
ALNE	Al Ain	5.76	142	*e*Pn	Pn	13 44 04.9	+1.7
ALNE	Al Ain	5.76	142	P	Pn	13 44 05.0	+1.7
	SNR=28						
ALNE				S	Sn	13 45 10.8	+1.7
KBAM	BAM	5.76	84	*e*Pn	Pn	13 44 05.1	+1.8
KBAM				*e*		13 45 22.1	
	comp=Z,99nm,0.7s						
GHVR	GHOM	5.80	355	*e*Pn	Pn	13 44 04.3	+0.6
IKFM	Kafar-mosalman	5.94	325	*e*Pn	Pn	13 44 06.8	+1.2
TPRV	Parvadeh(Tabas	5.97	42	*e*Pn	Pn	13 44 06.2	+0.1
JSK1	Jask	6.05	119	*e*Pn	Pn	13 44 10.0	+2.9
SOHO	SOHO	6.15	136	*i* P	Pn	13 44 08.8	+0.3
	SNR=22						
SOHO	SOHO	6.15	136	*e*Pn	Pn	13 44 09.0	+0.5
SOHO	SOHO	6.15	136	P	Pn	13 44 09.4	+0.9
SOHO				S	Sn	13 45 20.0	+1.4
IQOM	Qom	6.18	354	*e*Pn	Pn	13 44 07.9	-1.2
IVRN	Varamin	6.29	359	*e*Pn	Pn	13 44 10.0	-0.5
TNSJ	Nastanj	6.62	36	*e*Pn	Pn	13 44 16.0	+0.9
IKOM	Komasi	6.63	327	*e*Pn	Pn	13 44 15.9	+0.6
UMZA	Um Al Zommool	6.64	153	*e*Pn	Pn	13 44 16.0	+0.8
UMZA	Um Al Zommool	6.64	153	P	Pn	13 44 16.0	+0.8
UMZA				S	Sn	13 45 30.2	-0.4
TKDS	Koohdasht(Taba	6.64	41	*e*Pn	Pn	13 44 15.9	+0.5
IBZA	Bozab	6.71	330	*e*Pn	Pn	13 44 16.6	+0.1
ARQ	Araqi	6.76	141	P	Pn	13 44 18.0	+1.0
	SNR=69						
ARQ				S	Sn	13 45 33.8	+0.1
IDMV	Damavand	6.87	1	*e*Pn	Pn	13 44 18.2	-0.5
IRAZ	Razeghan	6.90	346	*e*Pn	Pn	13 44 20.0	+1.0
IFIR	Firoozkooh	6.97	6	*e*Pn	Pn	13 44 19.7	-0.3
IANJ	Anjilo	6.97	14	*e*Pn	Pn	13 44 21.0	+1.0
HOQ	Hoqain	7.04	135	P	Pn	13 44 21.6	+0.9
	SNR=21						
HOQ				S	Sn	13 45 40.7	+0.2
IMHD	Mahdasht	7.05	352	*e*Pn	Pn	13 44 22.9	+1.9
IKOO	Kooshah	7.17	57	*e*Pn	Pn	13 44 24.3	+1.5
ISHM	Shahmirzad	7.20	9	*e*Pn	Pn	13 44 24.6	+1.5
HSRG	Sareghieh	7.22	336	*e*Pn	Pn	13 44 23.3	-0.2
ITEG	Tejag	7.23	53	*e*Pn	Pn	13 44 23.9	+0.3
IGHG	Ghaleghazi	7.23	322	*e*Pn	Pn	13 44 23.9	+0.3
QABG	Abgarm-Qazvin	7.27	345	*e*Pn	Pn	13 44 23.9	-0.2
IPRN	Peran	7.54	3	*e*Pn	Pn	13 44 29.0	+1.3
NHDN	Nehbandan	7.56	67	*e*Pn	Pn	13 44 28.9	+0.9
BIDO	Bidbid	7.60	131	P	Pn	13 44 29.5	+1.0
BIDO				P	Pn	13 44 29.5	+1.0
BSY	Bisya	7.61	140	P	Pn	13 44 29.6	+1.0
	SNR=90						
BSY				P	Pn	13 44 29.6	+1.0
	SNR=90						
IDHR	Dehrash	7.61	323	*e*Pn	Pn	13 44 28.5	-0.3
RAYN	Ar Rayn	7.71	230	*i* P	Pn	13 44 28.9	-1.1
	SNR=48						
RAYN	Ar Rayn	7.71	230	P	Pn	13 44 28.9	-1.1
RAYN	Ar Rayn	7.71	230	Pn	Pn	13 44 28.9	-1.1
AFRZ	Afriz	7.72	50	*e*Pn	Pn	13 44 31.1	+0.9
QALM	Alamut, Qazvin	7.79	353	*e*Pn	Pn	13 44 32.3	+1.0
SMDO	Samad	7.88	134	P	Pn	13 44 33.0	+0.6
	SNR=23						
SMDO				P	Pn	13 44 33.0	+0.6
	SNR=23						
SMDO				S	Sn	13 46 01.8	+0.4
SMDO				S	Sn	13 46 01.8	+0.4
QSDN	Sirdan	8.12	344	*e*Pn	Pn	13 44 35.0	-0.8
WSAR	Wadi Sarin	8.13	130	Pn	Pn	13 44 35.5	-0.2
	comp=Z,4.0nm,0.3s,baz=340,slow=6.7,SNR=51						
WSAR				Sn	Sn	13 46 04.0	-3.4
	comp=Z,9.9nm,0.3s,baz=167,slow=20,SNR=13						
WSAR				LR	LR	13 48 30.8	
	comp=Z,906nm,18.1s,baz=326,slow=44						
JMDO	Jabal Madar	8.42	137	P	Pn	13 44 40.2	+0.4
	SNR=16						
WBK	Wadi Bani Khal	8.79	132	P	Pn	13 44 44.3	-0.5
	SNR=20						
WBK				S	Sn	13 46 21.3	-2.4
SBZV	Sabzevar	9.06	31	*e*Pn	Pn	13 44 49.6	+0.9
JLN	Jalan Bani Buh	9.40	132	P	Pn	13 44 52.3	-0.9
	SNR=19						
MHTO	MHTO	9.44	143	P	Pn	13 44 54.1	+0.4
	SNR=122						
MHTO				P	Pn	13 44 54.1	+0.4
	SNR=130						
ISFR	Sfrayin	9.79	30	*e*Pn	Pn	13 45 01.8	+3.1
DQM	DQM	10.12	148	P	Pn	13 45 02.0	-1.0
JRKH	Jarkhoshk	10.14	43	*e*Pn	Pn	13 45 03.9	+0.5
DOK	Doka	10.23	168	P	Pn	13 45 03.1	-1.4
	SNR=14						
IKRD	Kardeh	10.30	37	*e*Pn	Pn	13 45 07.0	+8.2
IMYA	Miami	10.30	40	*e*Pn	Pn	13 45 06.9	+1.3
IHRS	Heris	10.42	338	*e*Pn	Pn	13 45 08.2	+0.9
HRA	Herat	10.49	55	Pn	Pn	13 45 09.8	+1.5
GEYT	Alibeck	10.58	28	Pn	Pn	13 45 10.2	+0.8
	comp=Z,0.9nm,0.3s,baz=204,slow=18,SNR=7.0						
GEYT				LR	LR	13 50 20.5	
	comp=Z,270nm,19.5s,baz=220,slow=44						
GYA0B	ALIBECK ARRAY	10.58	28	Pn	Pn	13 45 10.8	+1.5
WHFO	Wadi Hawf	10.86	170	P	Pn	13 45 11.6	-1.5
	SNR=50						
SHAO	Shalim	11.15	161	P	Pn	13 45 16.1	-1.1
	SNR=15						
DMTO	DMTO	11.27	165	P	Pn	13 45 17.8	-1.0
	SNR=6.6						
RBK	Rabkut	11.33	169	P	Pn	13 45 19.0	-0.6
	SNR=8.5						
ABTO	Aybut	11.35	173	P	Pn	13 45 19.0	-1.0
	SNR=15						
ABTO				P	Pn	13 45 19.0	-1.0
	SNR=15						
GNI	Garni	12.86	335	Pn	Pn	13 45 44.2	+3.6
	comp=Z,0.4nm,0.3s,baz=111,slow=3.5,SNR=3.7						
MAK	Makhachkala	14.68	347	*e*P	Pn	13 46 01.7	-3.5
MAK				*e*S	Sn	13 48 42.9	-4.7
MAK				pmax	pmax		
	comp=Z,130nm,1.0s						
MAK				MLR	MLR		
	comp=Z,122nm,10.0s						
MMAI	Mount Meron Ar	14.81	291	Pn	Pn	13 46 08.4	+1.2
	comp=Z,1.8nm,0.3s,baz=110,slow=16,SNR=5.1						
EIL	Elat	14.84	278	Pn	Pn	13 46 09.2	+1.7
	comp=Z,0.8nm,0.3s,baz=118,slow=10,SNR=4.2						
DBC	Dubki	14.88	345⇓	*e*P	Pn	13 46 09.8	+1.8
DBC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZEI	Tsey	15.48	337	*e*P	Pn	13 46 15.8	-0.4
ZEI				pmax	pmax		
	comp=Z,14nm,0.7s						
KBL	Kabul	15.72	64	P	Pn	13 46 19.1	-0.2
KBL				pmax	pmax		
	comp=Z,62nm,1.5s						
KBL	Kabul	15.72	64	Pn	Pn	13 46 19.1	-0.2
KBL				IAmb	IAmb	13 46 25.5	
	comp=Z,62nm,1.4s						
KBL	Kabul	15.72	64	P	Pn	13 46 19.2	-0.2
	SNR=8.8						
NCK	Nalchik	16.21	338⇓	*e*P	P	13 46 27.8	-0.7
NCK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SOCY	Socotra	16.53	173	Pn	Pn	13 46 25.3	-4.4
KBZ	Khabaz	16.66	337	Pn	P	13 46 33.5	+0.2
	comp=Z,0.2nm,0.3s,baz=158,slow=9.0,SNR=6.1						
KBZ				LR	LR	13 53 37.1	
	comp=Z,347nm,19.8s,baz=156,slow=40						
KIV	Kislovodsk	16.93	337	*e*P	Pn	13 46 33.9	-0.7
KIV				*i* S	Sn	13 49 37.2	-5.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,186nm,17.0s						
KIV	Kislovodsk	16.93	337	P	P	13 46 37.6	+1.1
CSS	Mathiatis	16.96	296	Pn	Pn	13 46 35.0	-0.1
CSS				IAmb	IAmb	13 46 35.6	
	comp=Z,120nm,1.4s						
SOC	Sochi	17.80	330	*e*P	Pn	13 46 44.7	-0.6
SOC				*e*		13 50 05.1	
SOC				MLR	MLR		
	comp=Z,121nm,11.0s						
BR131	Keskin Array S	18.65	311⇑	*e*P	Pn	13 46 56.8	+0.8
BR131	Keskin Array S	18.65	311		P	13 46 55.8	+0.1
BRTR	Keskin Array B	18.65	311	P	Pn	13 46 56.2	+0.3
	comp=Z,0.7nm,0.3s,baz=126,slow=12,SNR=15						
BRTR				LR	LR	13 56 31.5	
	comp=Z,209nm,18.3s,baz=130,slow=45						
NIL	Nilore	18.92	69	P	P	13 46 58.5	0.0
NIL				pmax	pmax		
	comp=Z,29nm,0.8s						
NIL	Nilore	18.92	69	P	P	13 46 58.5	0.0
NIL				IAmb	IAmb	13 47 14.7	
	comp=Z,30nm,0.8s						
ATD	Arta Tunnel	19.05	208	P	Pn	13 47 00.9	+0.1
	comp=Z,1.2nm,0.3s,baz=15,slow=11,SNR=3.6						
ATD	Arta Tunnel	19.05	208	IAmb	IAmb	13 47 16.4	
	comp=Z,43nm,1.5s						
BR231	Keskin MP Arra	19.29	310	P	Pn	13 47 03.4	-0.2
IUG	Iuzhnay	19.91	43	*e*P	P	13 47 09.5	+0.1
	baz=43						
IUG	Iuzhnay	19.91	43	*e*P	P	13 47 09.4	+0.1
ELL	Elmali	20.14	299	P	P	13 47 12.4	+0.5
ELL				pmax	pmax		
	comp=Z,202nm,1.4s						
ELL	Elmali	20.14	299	P	P	13 47 12.4	+0.5
KK31	Karatay Array	20.77	41	P	P	13 47 17.8	-0.8
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
KK31	Karatay Array	20.77	41	P	P	13 47 17.8	-0.8
KKAR	Karatay Array	20.77	41	P	P	13 47 17.7	-0.9
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
KKAR	Karatay Array	20.77	41	P	P	13 47 17.7	-0.9
DZA	Taraz	21.13	43	*e*P	P	13 47 22.2	-0.3
	comp=Z,9.9nm,0.7s,baz=43						
DZA	Taraz	21.13	43	*e*P	P	13 47 22.1	-0.3
DZA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BHK	Bhakra	21.39	77	*e*x	x	13 47 28.2	
ABKAR	Akbulak array	21.45	15	P	P	13 47 24.9	-0.9
KARP	Karpathos	22.01	294	P	P	13 47 31.3	-0.7
AML	Almayashu	22.18	47	P	P	13 47 34.3	+0.1
	SNR=24						
AKTO	Aktyubinsk	22.21	10	P	P	13 47 34.1	+0.2
	comp=Z,6.5nm,0.5s,baz=210,slow=11,SNR=16						
EKS2	Erkin-Say	22.50	46	P	P	13 47 37.2	-0.2
	SNR=7.0						
KSH	Kashi	22.61	55	P	P	13 47 34.2	-4.3
KSH				sP	pP	13 47 39.7	-3.3
KSH				pmax	pmax		
	comp=Z,20nm,0.8s						
KSH				pmax	pmax		

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       comp=Z,350nm,5.4s
KSH                              LR     LR
       comp=Z,1µm,8.3s
KSH                              LR     LR
       comp=Z,1µm,8.1s
KSH                              LR     LR
       comp=Z,1µm,11.1s
UCH    Uchtor          22.76  48   P      P      13 47 39.4 -0.9
       SNR=6.5
AAK    Ala-Archa       22.95  47   P      P      13 47 43.4 +1.3
       comp=Z,7.4nm,0.8s,baz=228,slow=8.6,SNR=27
AAK    Ala-Archa       22.95  47   P      P      13 47 44.0 +1.9
       SNR=9.2
AAK    Ala-Archa       22.95  47⇑eP     P      13 47 42.8 +0.7
AAK                              pmax   pmax
       comp=Z,11nm,1.0s
AAK    Ala-Archa       22.95  47   P      P      13 47 41.8 -0.3
KBK    Karagaybulak    23.25  47   P      P      13 47 46.4 +1.3
       SNR=8.5
USP    Ospenovka       23.27  45   P      P      13 47 45.8 +0.5
       SNR=8.2
CHMS   Chumysh         23.29  46   P      P      13 47 47.2 +1.7
       SNR=7.0
SGDS   Sogindy         23.45  45  eP      P      13 47 47.2 +0.2
       comp=Z,4.3nm,1.2s,baz=45
SGDS   Sogindy         23.45  45  eP      P      13 47 47.2 +0.2
SGDS                             pmax   pmax
       comp=Z,4.0nm,1.2s
VRH    Novokhopyorsk   23.76 344  eP      P      13 47 50.6 +0.8
VRH                               eS      S      13 52 05.4 +0.9
VRH                              pmax   pmax
       comp=Z,130nm,1.5s
VRH                              smax   smax
       comp=E,90nm,1.0s
IDI    Anoyia          23.79 293   P      P      13 47 51.1 +0.7
TKM2   Tokmak 2        23.79  47   P      P      13 47 51.1 +0.5
       SNR=9.8
TKM2   Tokmak 2        23.79  47 i P      P      13 47 51.0 +0.5
TKM2                             pmax   pmax
       comp=Z,11nm,1.1s
BELG   Belogornoye     23.89 354   P      P      13 47 52.0 +0.9
       comp=Z,12nm,0.7s,baz=81,slow=13,SNR=2.7
BELG   Belogornoye     23.89 354⇑eP     P      13 47 54.2 +3.1
BELG                             pmax   pmax
       comp=Z,5.0nm,1.4s
ALN    Alexandroupoli  24.38 307   P      P      13 47 56.3 +0.5
ALN                              pmax   pmax
       comp=Z,26nm,1.1s
ALN    Alexandroupoli  24.38 307   P      P      13 47 56.3 +0.5
ALN                              IAmb   IAmb   13 48 24.6
       comp=Z,26nm,1.1s
TIRR   Tirgusor        24.44 316   P      P      13 47 57.1 +0.8
TIRR                             pmax   pmax
       comp=Z,65nm,1.2s
TIRR   Tirgusor        24.44 316   P      P      13 47 57.1 +0.8
VSR    Storozhevoye    24.46 340  eP      P      13 47 56.6 +0.2
VSR                               eS      S      13 52 16.4 +0.6
VSR                              pmax   pmax
       comp=Z,10.0nm,1.2s
VSR                              smax   smax
       comp=N,50nm,1.0s
KUU    Kurty           24.74  46  eP      P      13 47 59.0 -0.1
       comp=N,16nm,1.1s,baz=46
KUU                              LR     LR     13 58 41.7
       comp=N,845nm,13.8s,baz=46
KUU    Kurty           24.74  46  eP      P      13 47 58.9 -0.1
KUU                              pmax   pmax
       comp=Z,16nm,1.1s
KUU                              MLR    MLR
       comp=Z,845nm,14.0s
AAA    Alma-Ata        24.78  48  eP      P      13 47 59.5 -0.1
       baz=48
AAA                              LR     LR     13 58 26.0
       comp=Z,478nm,14.6s,baz=48
AAA    Alma-Ata        24.78  48  eP      P      13 47 59.4 -0.1
AAA                              MLR    MLR
       comp=Z,478nm,15.0s
MDOK   Medeo           24.85  48  eP      P      13 47 60.0 -0.3
       baz=48
MDOK                             LR     LR     13 58 26.9
       comp=Z,580nm,10.7s,baz=48
MDOK   Medeo           24.85  48  eP      P      13 47 59.9 -0.3
MDOK                             MLR    MLR
       comp=Z,580nm,11.0s
CFR    Carcaliu        25.00 318 ⇑P      P      13 48 01.7 +0.5
CHKK   Chushkaly       25.13  46  eP      P      13 48 02.6  0.0
       baz=46
CHKK   Chushkaly       25.13  46  eP      P      13 48 02.5  0.0
MILM   Milestii Mici   25.61 322 ⇑P      P      13 48 09.0 +2.1
SATY   Saty            25.69  49  eP      P      13 48 08.9 +1.1
       baz=49
SATY   Saty            25.69  49  eP      P      13 48 08.9 +1.1
LPSR   Galich'ya Gora  25.76 342  eP      P      13 48 10.6 +2.5
LPSR                             pmax   pmax
       comp=Z,10.0nm,0.8s
KPKS   Kokpek          26.05  48  eP      P      13 48 11.2 +0.2
       comp=Z,16nm,0.7s,baz=48
KPKS   Kokpek          26.05  48  eP      P      13 48 11.2 +0.2
KPKS                             pmax   pmax
       comp=Z,16nm,0.7s
VRI    Vrincioaia      26.20 318 ⇑P      P      13 48 14.6 +2.4
PLOR   Plostina        26.24 318 ⇑P      P      13 48 14.5 +1.9
SHLS   Shalkode        26.43  50  eP      P      13 48 17.3 +2.7
       baz=50
SHLS   Shalkode        26.43  50  eP      P      13 48 17.2 +2.7
ITM    Ithomi          26.46 296   P      P      13 48 13.3 -1.4
MLR    Muntele Rosu    26.48 316   P      P      13 48 16.9 +2.0
       comp=Z,6.3nm,0.7s,baz=211,slow=9.4,SNR=6.9
MLR    Muntele Rosu    26.48 316 ⇑P      P      13 48 17.2 +2.3
AGG    Agios Georgios  26.53 301   P      P      13 48 16.2 +0.9
AGG                              pmax   pmax
       comp=Z,47nm,1.5s
AGG    Agios Georgios  26.53 301   P      P      13 48 16.2 +0.9
AGG                              IAmb   IAmb   13 48 19.6
       comp=Z,47nm,1.5s
TESR   Tescani         26.60 319 ⇑P      P      13 48 16.0 +0.2
SORM   Soroca          26.61 323 ⇑P      P      13 48 16.3 +0.4
HYB    Hyderabad       26.91 109 i P      P      13 48 19.0 +0.1
VTS    Vitosha         26.97 309 ⇑P      P      13 48 21.1 +1.7
VOIR                   27.00 316 ⇑P      P      13 48 21.9 +2.4
BIZ    Bicaz           27.14 319 ⇑P      P      13 48 20.3 -0.5
PYUN   Piuthan         27.32  84  eP      P      13 48 22.8  0.0
       comp=Z,30nm,0.4s
AKASG  Malin Array Be  27.86 328   P      P      13 48 26.5 -0.6
       comp=Z,0.7nm,0.3s,baz=129,slow=7.5,SNR=11
AKBB   Malin Array Si  27.86 328⇑eP     P      13 48 27.6 +0.5
AKBB   Malin Array Si  27.86 328   P      P      13 48 26.9 -0.2
AKBB                             IAmb   IAmb   13 48 29.0
       comp=Z,7.0nm,0.8s
BRVK   Borovoye        27.87  24⇓eP     P      13 48 26.9 -0.3
BRVK                             pmax   pmax
       comp=Z,17nm,2.5s
BRVK   Borovoye        27.87  24   P      P      13 48 26.8 -0.3
BVAR   Borovoye Array  27.88  24   P      P      13 48 27.2 -0.1
       comp=Z,1.7nm,0.6s,baz=237,slow=6.2,SNR=8.8
KOLN   Koldanda        27.91  84  eP      P      13 48 27.3 -0.7
DANN   Dangsing        27.96  83  eP      P      13 48 28.6  0.0
       comp=Z,101nm,0.9s
BURAR  Bucovina Array  28.02 320 ⇑P      P      13 48 29.8 +1.1
BUR08  Bucovina Ar. S  28.04 320   P      P      13 48 28.4 -0.5
BUR08                            IAmb   IAmb   13 48 52.4
       comp=Z,12nm,1.4s
ARU    Arti            28.13   8   P      P      13 48 30.7 +1.3
       comp=Z,0.6nm,0.3s,baz=198,slow=7.6,SNR=2.0
ARU    Arti            28.13   8d iP      P      13 48 32.4 +3.0
ARU                                             13 49 21.1
ARU                              S      S      13 53 22.3 +8.4
ARU                              SS     SnSn   13 54 39.5  +10
ARU                              pmax   pmax
       comp=Z,10.0nm,1.7s
ARU                              MLR    MLR
       comp=Z,202nm,14.0s
ARU    Arti            28.13   8   P      P      13 48 30.7 +1.3
OBN    Obninsk         28.64 342 i P      P      13 48 33.4 -0.5
OBN                              pmax   pmax
       comp=Z,4.0nm,0.7s
OBN                              MLR    MLR
       comp=Z,168nm,18.0s
GKN    Gorkha          28.77  83  eP      P      13 48 35.0 -0.7
       comp=Z,8.7nm,0.4s
DRGR                   29.07 316 ⇑P      P      13 48 39.9 +1.9
DMN    Daman           29.25  84  eP      P      13 48 39.4 -0.6
       comp=Z,16nm,0.6s
KKN    Kakani          29.37  84  eP      P      13 48 40.7 -0.4
       comp=Z,22nm,0.5s
SIRR   Siria           29.48 315 ⇑P      P      13 48 42.1 +0.5
PKIN   Phulchoki       29.51  84  eP      P      13 48 41.6 -0.8
       comp=Z,20nm,0.8s
PKI    Pulchoki        29.52  84  eP      P      13 48 41.8 -0.7
MAKZ   Makanchi        29.62  44   P      P      13 48 42.7 -0.2
MAKZ                             pmax   pmax
       comp=Z,9.0nm,1.0s
MAKZ   Makanchi        29.62  44   P      P      13 48 42.7 -0.2
MAKZ                             IAmb   IAmb   13 48 47.3
       comp=Z,9.4nm,0.9s
KURBB  Kurchatov Arra  29.73  35   P      P      13 48 43.8 +0.1
       comp=Z,4.3nm,0.8s,baz=235,slow=9.1,SNR=36
KURBB                            PcP    PcP    13 51 48.8 +1.4
       comp=Z,0.6nm,0.6s,baz=236,slow=3.1,SNR=5.0
MK31   Makanchi Array  29.81  44d iP      P      13 48 44.2 -0.3
MK31                             pmax   pmax
       comp=Z,6.0nm,0.7s
MK31   Makanchi Array  29.81  44   P      P      13 48 43.9 -0.6
MKAR   Makanchi Array  29.81  44   P      P      13 48 44.7 +0.2
       comp=Z,5.0nm,0.8s,baz=234,slow=6.7,SNR=47
MKAR                             PcP    PcP    13 51 48.7 +0.9
       comp=Z,0.7nm,0.6s,baz=232,slow=2.7,SNR=2.9
KURK   Kurchatov       29.83  35   P      P      13 48 43.9 -0.7
KURK                             pmax   pmax
       comp=Z,9.0nm,1.1s
KURK   Kurchatov       29.83  35   P      P      13 48 43.9 -0.7
KURK                             IAmb   IAmb   13 48 49.1
       comp=Z,9.0nm,1.1s
GUN    Gumba           29.87  83  eP      P      13 48 45.2 -0.5
       comp=Z,36nm,0.9s
KIRV   Kirov           29.94 357   P      P      13 48 45.7 +0.3
       comp=Z,8.6nm,0.5s,baz=314,slow=1.6,SNR=4.9
KIRV   Kirov           29.94 357⇓eP     P      13 48 45.5 +0.1
KOLS   Kolonicke sedl  30.39 320  eP      P      13 48 51.2 +1.6
KOLS                             pmax   pmax
       comp=Z,11nm,1.3s
KOLS   Kolonicke sedl  30.39 320  eP      P      13 48 51.2 +1.6
CRVS   Cervenica-Dubn  30.83 319  eP      P      13 48 55.6 +2.1
CRVS                             pmax   pmax
       comp=Z,11nm,1.0s
CRVS   Cervenica-Dubn  30.83 319  eP      P      13 48 55.6 +2.1
MNK    Minsk           31.13 333 i P      P      13 48 58.0 +2.0
       comp=E,3.0nm,0.9s
MNK                              i P      P      13 48 58.0 +2.0
       comp=N,28nm,0.9s
MNK                              i P      P      13 48 58.0 +2.0
       comp=Z,3.0nm,0.9s
MNK                              i PP     PnPn   13 49 59.6 +2.0
MNK                              i PPP    PPP    13 50 08.5
MNK                              i PcP    PcP    13 51 52.7 +1.8
MNK                              i S      S      13 54 05.5 +4.5
MNK                              i ScP    ScP    13 55 35.7 +2.3
MNK                              i PcS    PcS    13 55 36.9 +2.2
MNK                              i SS     SnSn   13 55 47.6 +4.9
MNK                              i SSS    SSS    13 56 02.7
MNK                              i LQ     LQ     13 58 22.2
MNK                              i ScS    ScS    13 59 55.0  +25
MNK                              i LR     LR     14 01 08.4
MNK                              i LRM    MLR    14 02 59.6
       comp=Z,76nm,17.4s
MNK                              i LRM    MLR    14 03 00.6
       comp=E,11nm,17.4s
MNK                              i LRM    MLR    14 03 02.2
       comp=N,552nm,17.4s
ODAN   Odare           31.39  85  eP      P      13 48 58.2 -0.7
TAPN   Taplejung       31.57  84  eP      P      13 48 59.7 -0.9
       comp=N,11nm,0.8s
ZSN    Zaisan          31.68  45  eP      P      13 49 00.3 -0.8
       baz=45
ZSN    Zaisan          31.68  45  eP      P      13 49 00.2 -0.8
LANS   Liptovska Anna  32.10 319  eP      P      13 49 07.0 +2.3
LANS                             pmax   pmax
       comp=Z,6.0nm,0.7s
LANS   Liptovska Anna  32.10 319  eP      P      13 49 07.0 +2.3
WMQ    Urumqi          32.29  52  eP      P      13 49 10.0 +3.5
WMQ                              sP     sP     13 49 16.1 +2.7
WMQ                              pmax   pmax
       comp=Z,26nm,0.7s
WMQ                              pmax   pmax
       comp=Z,430nm,4.9s
WMQ                              LR     LR
       comp=Z,660nm,12.1s
WMQ                              LR     LR
       comp=Z,620nm,11.5s
WMQ                              LR     LR
       comp=Z,1µm,22.5s
MPLH   Magyarpolny     32.44 314  eP      P      13 49 09.6 +1.9
KMBO   Kilima Mbogo    32.80 208   LR     LR     14 03 24.5
       comp=Z,315nm,18.9s,baz=304,slow=38
JAVC   Velka Javorina  33.03 317  eP      P      13 49 18.0 +5.1
KLMR   Klimovskoe      33.23 349  eP      P      13 49 12.6 -1.7
KLMR                             pmax   pmax
       comp=Z,13nm,0.8s
KLMR   Klimovskoe      33.23 349  eP      P      13 49 12.7 -1.6
KLMR                             AMP           13 49 20.4
       comp=Z,13nm,0.8s
MORC   Moravsky Berou  33.51 318 ⇑P      P      13 49 18.3 +1.3
MORC   Moravsky Berou  33.51 318  eP      P      13 49 17.4 +0.4
MORC   Moravsky Berou  33.51 318   P      P      13 49 17.0  0.0
MORC                             pmax   pmax
       comp=Z,6.0nm,0.8s
MORC   Moravsky Berou  33.51 318   P      P      13 49 17.0  0.0
MORC                             IAmb   IAmb   13 49 21.5
       comp=Z,5.6nm,0.8s
ARSA   Arzberg         33.75 313  eP      P      13 49 20.7 +1.6
       comp=Z,5.5nm,1.1s
CONA   Conrad Observa  33.77 315  eP      P      13 49 21.0 +1.6
       comp=Z,4.2nm,0.9s
SOKA   Soboth          33.87 312  eP      P      13 49 21.6 +1.3
       comp=Z,3.7nm,1.1s
KRLC   Kraliky         34.08 319  eP      P      13 49 22.4 +0.4
KRLC   Kraliky         34.08 319  eP      P      13 49 22.4 +0.4
OBKA   Obir            34.13 312  eP      P      13 49 24.9 +2.4
       comp=Z,12nm,1.6s
DGZ    Jazzator, Alta  34.16  42⇑iP      P      13 49 23.1 +0.2
DGZ                              pmax   pmax
       comp=Z,7.0nm,1.3s
LSA    Lhasa           34.17  79   P      P      13 49 23.0 -0.5
LSA                              pmax   pmax
       comp=Z,7.0nm,1.0s
LSA    Lhasa           34.17  79   P      P      13 49 23.0 -0.5
LSA                              IAmb   IAmb   13 49 32.6
       comp=Z,6.8nm,1.0s
DPC    Dobruska-Polom  34.46 319  eP      P      13 49 26.4 +1.1
DPC    Dobruska-Polom  34.46 319  eP      P      13 49 26.4 +1.1
CHVC   Chvalec         34.72 319  eP      P      13 49 28.7 +1.2
MOA    Molln           34.75 314  eP      P      13 49 29.0 +1.2
       comp=Z,6.1nm,0.8s
MYKA   Terra Mystica   34.77 312  eP      P      13 49 30.4 +2.3
       comp=Z,4.5nm,1.0s
ZAA0   Zalesovo Array  34.80  34   P      P      13 49 27.4 -0.7
ZAA0                             IAmb   IAmb   13 49 31.8
       comp=Z,9.9nm,0.9s
ZALV   Zalesovo Beam   34.80  34   P      P      13 49 27.6 -0.6
       comp=Z,7.4nm,0.7s,baz=248,slow=7.8,SNR=30
KBA    Koelnbreinsper  35.09 312  eP      P      13 49 32.2 +1.2
       comp=Z,6.2nm,0.7s
GERES  GERESS Array B  35.45 315   P      P      13 49 33.8 -0.1
       comp=Z,0.9nm,0.6s,baz=100,slow=8.2,SNR=5.8
MBAR   Mbarara         35.48 218   P      P      13 49 34.9 +0.3
       comp=Z,2.7nm,0.3s,baz=333,slow=9.0,SNR=3.9
MBAR   Mbarara         35.48 218ceP     P      13 49 35.7 +1.2
MBAR                             pmax   pmax
       comp=Z,2.0nm,0.7s
ABTA   Abfaltersbach   35.54 311  eP      P      13 49 35.7 +1.0
       comp=Z,2.4nm,0.7s
KHC    Kasperske Hory  35.62 316⇓eP     P      13 49 35.3  0.0
KHC                              pmax   pmax
       comp=Z,16nm,1.3s
KHC    Kasperske Hory  35.62 316  eP      P      13 49 36.0 +0.7
KHC    Kasperske Hory  35.62 316   P      P      13 49 35.8 +0.5
WTTA   Wattenberg      36.26 312  eP      P      13 49 41.4 +0.4
       comp=Z,10nm,0.8s
WATA   Walderalm       36.32 312  eP      P      13 49 41.8 +0.3
       comp=Z,12nm,0.9s
SQTA   Sankt Quirin    36.53 312 i P      P      13 49 43.2 -0.1
       comp=Z,8.4nm,0.5s,SNR=5.1
MOTA   Moosalm         36.63 312 i P      P      13 49 44.2 +0.1
       comp=Z,11nm,1.1s,SNR=5.3
CLL    Collm           36.78 319 i P      P      13 49 46.1 +1.0
       comp=Z,8.0nm,1.0s
CLL                               e                13 49 53.0
CLL                               e(PP)            13 51 03.0
CLL    Collm           36.78 319 i P      P      13 49 46.1 +1.0
CLL                              pmax   pmax
       comp=Z,8.0nm,1.0s
CLL    Collm           36.78 319   P      P      13 49 44.7 -0.4
CLL                              IAmb   IAmb   13 49 50.0
       comp=Z,8.1nm,1.0s
FETA   Feichten        36.79 311 i P      P      13 49 45.9 +0.4
       comp=Z,12nm,1.3s,SNR=8.2
RETA   Reutte          36.90 312  eP      P      13 49 46.0 -0.3
       comp=Z,2.4nm,0.5s
FIA1   FINESS Array S  36.98 340   P      P      13 49 45.8 -0.9
FIA1                             IAmb   IAmb   13 49 49.3
       comp=Z,27nm,1.4s
FINES  FINESS Array B  36.98 340   P      P      13 49 45.6 -1.1
       comp=Z,5.0nm,0.5s,baz=145,slow=9.0,SNR=39
DAVA   Damuels         37.42 311  eP      P      13 49 50.5 -0.3
       comp=Z,10nm,0.9s
SENIN  Lac Senin/Sane  38.95 309   P      P      13 50 03.2 -0.6
BNI    Bardonecchia    39.15 307   P      P      13 50 04.1 -1.3
BNI                              pmax   pmax
       comp=Z,12nm,1.0s
BNI    Bardonecchia    39.15 307   P      P      13 50 04.1 -1.3
BNI                              IAmb   IAmb   13 50 11.5
       comp=Z,12nm,1.0s
GTA    Gaotai          40.70  62 ⇓P      P      13 50 19.0 +0.7
GTA                              pP     pP     13 50 23.5 +0.2
GTA                              sP     sP     13 50 25.9 +0.6
GTA                              pmax   pmax
       comp=Z,17nm,0.9s
GTA                              pmax   pmax
       comp=Z,150nm,4.8s
GTA                              LR     LR
       comp=Z,180nm,16.4s
GTA                              LR     LR
       comp=Z,210nm,14.9s
GTA                              LR     LR
       comp=Z,200nm,15.3s
NC602  NORSAR Array S  41.85 332   P      P      13 50 28.5 +1.2
NC405  NORSAR Array S  41.98 332   P      P      13 50 27.0 -1.4
TAM    Tamanrasset     41.98 273   P      P      13 50 28.8 -0.3
TAM                              pmax   pmax
       comp=Z,5.0nm,0.9s
TAM    Tamanrasset     41.98 273   P      P      13 50 28.8 -0.3
NB201  NORSAR Array S  42.12 332   P      P      13 50 27.9 -1.7
NB2    NORSAR Subarra  42.15 332   P      P      13 50 28.0 -1.8
       comp=Z,2.2nm,0.4s,baz=121,slow=8.6
NOA    NORSAR Array B  42.15 332   P      P      13 50 28.7 -1.1
       comp=Z,1.0nm,0.4s,baz=127,slow=9.2,SNR=12
KONO   Kongsberg       42.15 329   P      P      13 50 29.6 -0.2
KONO                             pmax   pmax
       comp=Z,35nm,1.5s
KONO   Kongsberg       42.15 329   P      P      13 50 29.6 -0.2
KONO                             IAmb   IAmb   13 50 44.4
       comp=Z,35nm,1.4s
NC303  NORSAR Array S  42.18 332   P      P      13 50 29.5 -0.5
NC303                            IAmb   IAmb   13 50 40.6
       comp=Z,36nm,1.4s
NBO00  NORSAR Array S  42.32 332   P      P      13 50 30.6 -0.6
NC204  NORSAR Array S  42.46 332   P      P      13 50 31.6 -0.7
MOY    Mondy           42.95  44  eP      P      13 50 37.4 +0.8
MOY                              pmax   pmax
       comp=Z,27nm,1.8s
MHMT   Maesarieng      43.28  94   P      P      13 50 48.0 +8.5
ARCES  ARCESS Array B  43.63 347   P      P      13 50 42.0 +0.4
       comp=Z,0.9nm,0.3s,baz=141,slow=7.8,SNR=16
CM32   Chiang Mai Arr  43.91  92   P      P      13 50 53.0 +8.4
CHTO   Chiang Mai      43.93  92   P      P      13 50 45.0 +0.2
CHTO                             pmax   pmax
       comp=Z,12nm,1.2s
CHTO   Chiang Mai      43.93  92   P      P      13 50 45.0 +0.2
CHTO                             IAmb   IAmb   13 50 48.6
       comp=Z,12nm,1.1s
CM33   Chiang Mai Arr  43.93  92   P      P      13 50 45.0 +0.2
CMMT   Chiang Mai      43.93  92   P      P      13 50 45.8 +1.0
       comp=Z,5.8nm,1.6s
LZH    Lanzhou         44.05  67  eP      P      13 50 45.5 -0.2
LZH                              pP     pP     13 50 48.8 -1.9
LZH                              sP     sP     13 50 53.5 +0.8
LZH                               ePP     PP     13 52 29.6 +1.3
LZH                              pmax   pmax
       comp=Z,26nm,1.3s
LZH                              pmax   pmax
       comp=Z,92nm,5.7s
LZH                              LR     LR
       comp=Z,360nm,13.5s
LZH                              LR     LR
       comp=Z,380nm,13.8s
LZH                              LR     LR
       comp=Z,540nm,17.0s
CM31   Chiang Mai Arr  44.06  93   P      P      13 50 47.0 +1.1
CMAR   Chiang Mai Arr  44.06  93   P      P      13 50 45.3 -0.6
       comp=Z,1.6nm,0.6s,baz=284,slow=9.6,SNR=15
CM02   Chiang Mai Arr  44.08  93   P      P      13 50 47.0 +1.1
       comp=Z,4.7nm,0.9s
CM05   Chiang Mai Arr  44.09  93   P      P      13 50 47.0 +1.0
       comp=Z,3.3nm,1.0s
CM01   Chiang Mai Arr  44.09  93   P      P      13 50 54.5 +8.4
CM34   Chiang Mai Arr  44.10  92   P      P      13 50 47.0 +0.9
CM09   Chiang Mai Arr  44.11  93   P      P      13 50 55.7 +9.5
CM04   Chiang Mai Arr  44.12  93   P      P      13 50 48.8 +2.5
       comp=Z,4.0nm,0.9s
ZAK    Zakamensk       44.12  46  eP      P      13 50 45.8 -0.2
ZAK                              pmax   pmax
       comp=Z,3.0nm,1.0s
CM35   Chiang Mai Arr  44.16  92   P      P      13 50 49.0 +2.4
CM36   Chiang Mai Arr  44.17  93   P      P      13 50 48.0 +1.3
PAYA   Payao           44.54  91   P      P      13 50 52.1 +2.4
       comp=Z,128nm,1.0s
CD2    Chengdu         44.73  74  eP      P      13 50 50.0 -1.1
CD2                              pmax   pmax
       comp=Z,10.0nm,0.5s
KMI    Kunming         45.20  82⇓eP     P      13 50 54.3 -0.8
KMI                              pmax   pmax
       comp=Z,8.0nm,1.2s
NRIK   Noril'sk        45.59  17   P      P      13 50 56.7 -0.6
       comp=Z,2.9nm,0.5s,baz=224,slow=4.9,SNR=5.6
NRIK   Noril'sk        45.59  17⇑eP     P      13 50 57.8 +0.5
NRIK                             pmax   pmax
       comp=Z,11nm,1.4s
NRIK   Noril'sk        45.59  17   P      P      13 50 56.6 -0.7
NRIK                             IAmb   IAmb   13 51 02.1
       comp=Z,8.8nm,1.1s
UTHA   Uthaitani       45.66  96   P      P      13 51 04.3 +5.7
       comp=Z,9.2nm,0.8s
SONM   Songino Array   45.84  50   P      P      13 50 60.0 +0.2
       comp=Z,2.6nm,0.7s,baz=270,slow=6.5,SNR=20
SONM   Songino Array   45.84  50   P      P      13 51 00.0 +0.2
ULN    Ulaanbaatar     46.28  50   P      P      13 51 02.7 -0.6
ULN                              pmax   pmax
       comp=Z,4.0nm,0.7s
ULN    Ulaanbaatar     46.28  50   P      P      13 51 02.7 -0.6
ULN                              IAmb   IAmb   13 51 05.0
       comp=Z,3.7nm,0.7s
ESDC   Sonseca Array   46.83 299   P      P      13 51 07.3 -0.3
       comp=Z,0.7nm,0.5s,baz=76,slow=6.8,SNR=6.8
ESDC                             LR     LR     14 12 14.6
       comp=Z,32nm,20.9s,baz=95,slow=38
PHET   Kaeng Krachan   46.98  99   P      P      13 51 10.4 +1.4
       comp=Z,354nmcomp=Z,20nm,0.9s
PAB    San Pablo       47.13 299   P      P      13 51 09.2 -0.8
PAB                              pmax   pmax
       comp=Z,10.0nm,1.4s
PAB    San Pablo       47.13 299   P      P      13 51 09.2 -0.8
PAB                              IAmb   IAmb   13 51 21.3
       comp=Z,9.7nm,1.4s
NONG   Nongkai         47.90  91   P      P      13 51 16.0 -0.1
       comp=Z,8µmcomp=Z,20nm,0.9s
PATY   Pattaya         48.05  99   P      P      13 51 22.8 +5.6
BTO    Baotou          48.48  60  eP      P      13 51 15.3 -5.1
SRAK   Srakaew         48.59  97   P      P      13 51 26.8 +5.3
       comp=Z,1µmcomp=Z,161nm,0.8s
TOA0   Torodi Ar. Sit  49.02 262   P      P      13 51 23.8 -1.0
TOA0                             IAmb   IAmb   13 51 28.2
       comp=Z,17nm,1.2s
TORD   Torodi Ar. Bea  49.02 262   P      P      13 51 23.9 -0.8
       comp=Z,7.6nm,0.6s,baz=57,slow=7.8,SNR=32
LSZ    Lusaka          49.36 211   P      P      13 51 26.4 -0.9
LSZ                              pmax   pmax
       comp=Z,14nm,1.5s
LSZ    Lusaka          49.36 211   P      P      13 51 26.4 -0.9
LSZ                              IAmb   IAmb   13 51 29.0
       comp=Z,14nm,1.4s
HHC    Hu-ho-hao-te    49.63  59  eP      P      13 51 29.5 +0.3
HHC                              pmax   pmax
       comp=Z,4.0nm,0.8s
HHC                              pmax   pmax
       comp=Z,86nm,6.6s
ENH    Enshi           49.69  73   P      P      13 51 28.7 -1.1
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ENH				IAmb	IAmb	13 51 37.1	
	comp=Z,5.1nm,0.8s						
BOD	Bodaibo	51.44	37	*e*P	P	13 51 41.4	-1.1
BOD				pmax	pmax		
	comp=Z,14nm,1.7s						
KULM	Kulim	51.64	107	P	P	13 51 43.6	-1.0
KULM				IAmb	IAmb	13 51 52.1	
	comp=Z,14nm,1.3s						
SPA0	Spitsbergen Ar	52.07	351	P	P	13 51 46.6	-0.3
SPA0				IAmb	IAmb	13 51 59.3	
	comp=Z,18nm,1.1s						
KOWA	Kowa	53.44	267	P	P	13 51 56.5	-1.4
HIA	Hailar	54.70	48⇓	*e*P	P	13 52 08.0	+1.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NJ2	Nanjing	57.03	69	*e*P	P	13 52 21.9	-1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DBIC	Dimbokro	57.75	259	P	P	13 52 28.3	-0.7
	comp=Z,18nm,0.9s,baz=29,slow=6.1,SNR=21						
DBIC	Dimbokro	57.75	259	P	P	13 52 27.3	-1.6
KIC	Kosan Boka	57.81	259	*e*P	P	13 52 28.5	-0.9
	comp=Z,18nm,0.7s						
TIC	Toumodi	57.91	259	*e*P	P	13 52 29.4	-0.7
LIC	Lamto	58.12	259	*e*P	P	13 52 30.9	-0.7
	comp=Z,39nm,0.6s						
TIXI	Tiksi	58.95	21	P	P	13 52 36.5	0.0
TIXI				IAmb	IAmb	13 52 45.5	
	comp=Z,2.2nm,0.6s						
LBTB	Lobatse	59.08	208	P	P	13 52 36.2	-1.9
LBTB				pmax	pmax		
	comp=Z,11nm,1.0s						
LBTB	Lobatse	59.08	208	P	P	13 52 36.2	-1.9
LBTB				IAmb	IAmb	13 52 40.5	
	comp=Z,11nm,0.9s						
CN2	Changchun	59.37	54	*e*P	P	13 52 39.1	-0.7
CN2				*e*sP	sP	13 52 46.4	-0.5
CN2				*e*S	S	14 00 44.9	-3.2
CN2				LR	LR		
	comp=Z,160nm,14.0s						
CN2				LR	LR		
	comp=Z,240nm,14.0s						
CN2				LR	LR		
	comp=Z,320nm,14.0s						
YAK	Yakutsk	59.42	32⇑	*e*P	P	13 52 40.2	+0.4
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOSA	Boshof	62.42	206	P	P	13 53 02.0	+1.3
	comp=Z,3.4nm,0.7s,baz=18,slow=5.5,SNR=6.6						
BOSA	Boshof	62.42	206	P	P	13 53 00.7	-0.1
BOSA				IAmb	IAmb	13 53 29.7	
	comp=Z,11nm,1.4s						
KLR	Kul'dur	62.48	47⇓	*e*P	P	13 53 00.9	0.0
KLR				pmax	pmax		
	comp=Z,18nm,4.9s						
KS19	Wonju Array Si	62.68	60	P	P	13 53 02.5	+0.1
KSRS	Korea Array	62.74	60	P	P	13 53 01.4	-1.5
	comp=Z,3.7nm,0.6s,baz=274,slow=6.2,SNR=21						
USA0B	Ussuriysk Arra	63.86	52	P	P	13 53 09.6	-0.6
USA0B				pmax	pmax		
	comp=Z,6.0nm,1.0s						
USA0B	Ussuriysk Arra	63.86	52	P	P	13 53 09.6	-0.6
USA0B				IAmb	IAmb	13 53 19.7	
	comp=Z,6.3nm,1.0s						
USRK	Ussuriysk Ar.	63.86	52	P	P	13 53 08.7	-1.4
	comp=Z,1.3nm,0.6s,baz=275,slow=5.4,SNR=9.6						
USRK				LR	LR	14 24 17.6	
	comp=Z,153nm,18.9s,baz=278,slow=39						
LEM	Lembang	64.21	114	LR	LR	14 24 03.5	
	comp=Z,48nm,18.9s,baz=332,slow=39						
TULEG	Thule	68.95	348	P	P	13 53 42.1	-0.1
EUNU	Eureka	69.13	353	P	P	13 53 43.6	+0.3
JWT	Wachi	69.15	60	P	P	13 53 44.0	-0.2
SEY	Seymchan	69.42	29⇑	*e*P	P	13 53 46.3	+1.0
JGF	Kuroka	70.52	60	P	P	13 53 52.3	-0.3
JGF				IAmb	IAmb	13 53 57.7	
	comp=Z,5.8nm,1.1s						
TOLI2	Tolitoli	70.99	99	P	P	13 53 54.9	-0.8
SOEI	Soe	79.52	107	P	P	13 54 43.5	-1.5
TOLK	Toolik Lake Re	81.67	8	P	P	13 54 55.7	+0.1
TOLK				IAmb	IAmb	13 54 59.8	
	comp=Z,4.9nm,1.0s						
ANM	Nome	82.60	15	P	P	13 55 00.7	+0.3
ANM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANM	Nome	82.60	15	P	P	13 55 00.7	+0.3
ANM				IAmb	IAmb	13 55 03.0	
	comp=Z,5.3nm,1.0s						
I23K	Minto, Yukon-K	85.02	9	P	P	13 55 13.2	+0.4
ILAR	Eielson Array	85.70	8	P	P	13 55 17.1	+0.9
	comp=Z,1.3nm,0.6s,baz=323,slow=3.9,SNR=9.8						
DAWY	Dawson	87.13	5	P	P	13 55 23.6	+0.3
DAWY				IAmb	IAmb	13 55 33.2	
	comp=Z,8.2nm,1.3s						
YKA	Yellowknife Ar	88.49	354	P	P	13 55 30.3	+0.5
	comp=Z,0.8nm,0.6s,baz=27,slow=5.5,SNR=16						
WRA	Warramunga Arr	93.05	111	P	P	13 55 52.5	+0.8
	comp=Z,1.1nm,0.7s,baz=310,slow=4.0,SNR=3.5						
ASAR	Alice Springs	94.51	114	P	P	13 55 57.0	-1.3
	comp=Z,0.9nm,0.6s,baz=302,slow=4.2,SNR=19						
PLCA	Paso Flores	131.96	240	PKP	PKPdf	14 01 51.4	+0.2
	comp=Z,1.7nm,0.9s,baz=239,slow=5.9,SNR=3.6						

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*IDC **05** 13:43:51.8±1.2, 28°.77N×51°.86E, h0^{km}, mb4.1/13, mb1 4.3/15, mb1mx4.1/39, mbtmp4.1/15, ML3.5/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/29, Error ellipse: s-maj=29.7km s-min=22.3km az=3.0*

*NEIC **05** 13:43:53.0±1.9, 28°.66N±0°.10×51°.9E±0°.1, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=18.7km s-min=15.9km az=124.0*

ISC 05 13:43:53.8±0.6**, 28°.66N**±0°.09×**51°.95E**±0°.09**, h15^{km}, n39, σ1^{s}.23**/39**, mb4.3**/21**, MS3.8**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAYN	Ar Rayn	7.73	230	Pn	Pn	13 45 45.8	0.0
GEVA	Gevas	12.14	325	Pn	Pn	13 46 48.7	+2.2
SOCY	Socotra	16.50	173		Pn	13 47 43.7	-1.2
SOCY				IAmb	IAmb	13 47 43.7	
	comp=Z,26nm,1.0s						
KBZ	Khabaz	16.70	337	Pn	Pn	13 47 47.1	0.0
	comp=Z,0.1nm,0.3s,baz=132,slow=14,SNR=4.4						
CSS	Mathiatis	17.01	296		Pn	13 47 51.6	+0.3
CSS				IAmb	IAmb	13 47 53.1	
	comp=Z,66nm,1.2s						
BR131	Keskin Array S	18.70	311	P	P	13 48 11.4	-0.3
BRTR	Keskin Array B	18.70	311	P	P	13 48 11.2	-0.5
	comp=Z,0.3nm,0.3s,baz=131,slow=12,SNR=6.0						
MDUB	Mudurnu	20.70	310	P	P	13 48 33.0	-0.5
ABKAR	Akbulak array	21.46	14	P	P	13 48 41.7	+0.2
IDI	Anoyia	23.84	293	P	P	13 49 08.1	+1.6
AKASG	Malin Array Be	27.90	328	P	P	13 49 42.0	-1.1
	comp=Z,0.8nm,0.4s,baz=130,slow=7.4,SNR=4.4						
AKASG				LR	LR	14 04 35.7	
	comp=Z,49nm,18.4s,baz=195,slow=45						
KURK	Kurchatov	29.83	35	P	P	13 50 00.8	+0.7
ZAA0	Zalesovo Array	34.80	34	P	P	13 50 44.2	+0.6
GERES	GERESS Array B	35.49	315	P	P	13 50 49.0	-0.9
	comp=Z,0.3nm,0.4s,baz=98,slow=11,SNR=1.2						
FINES	FINESS Array B	37.02	340	P	P	13 51 01.9	-0.7
	comp=Z,2.8nm,0.5s,baz=149,slow=10,SNR=3.6						
FINES				LR	LR	14 09 08.4	
	comp=Z,147nm,19.9s,baz=156,slow=41						
NC405	NORSAR Array S	42.02	332	P	P	13 51 43.1	-1.2
NC405				IAmb	IAmb	13 52 04.2	
	comp=Z,8.4nm,0.8s						
NB201	NORSAR Array S	42.16	332	P	P	13 51 44.3	-1.2
NB2	NORSAR Subarra	42.19	332	P	P	13 51 44.7	-1.0
	comp=Z,3.0nm,0.7s,baz=123,slow=8.6						
NOA	NORSAR Array B	42.19	332	P	P	13 51 44.5	-1.3
	comp=Z,1.5nm,0.5s,baz=122,slow=8.3,SNR=4.8						
NC303	NORSAR Array S	42.22	332	P	P	13 51 45.7	-0.2
NC303				IAmb	IAmb	13 52 01.8	
	comp=Z,4.6nm,0.8s						
NBO00	NORSAR Array S	42.37	332	P	P	13 51 46.3	-0.8
NC204	NORSAR Array S	42.50	332	P	P	13 51 48.2	-0.1
NC204				IAmb	IAmb	13 52 07.5	
	comp=Z,34nm,1.4s						
ARCES	ARCESS Array B	43.66	347	P	P	13 51 58.3	+0.8
	comp=Z,15nm,1.4s,baz=150,slow=7.3,SNR=1.5						
SONM	Songino Array	45.83	50	P	P	13 52 16.4	+1.2
	comp=Z,0.3nm,0.6s,baz=275,slow=11,SNR=0.8						
ESDC	Sonseca Array	46.88	299	P	P	13 52 22.8	-0.7
	comp=Z,0.5nm,0.5s,baz=75,slow=7.0,SNR=1.9						
TOA0	Torodi Ar. Sit	49.06	263	P	P	13 52 40.6	-0.1
TOA0				IAmb	IAmb	13 52 44.3	
	comp=Z,6.0nm,0.7s						
TORD	Torodi Ar. Bea	49.06	263	P	P	13 52 40.5	-0.1
	comp=Z,5.7nm,0.6s,baz=60,slow=9.5,SNR=6.1						
KOWA	Kowa	53.48	267	P	P	13 53 14.6	+0.8
KOWA				IAmb	IAmb	13 53 17.4	
	comp=Z,6.7nm,0.6s						
DBIC	Dimbokro	57.79	259	P	P	13 53 45.0	+0.2
	comp=Z,6.1nm,0.6s,baz=44,slow=6.9,SNR=2.8						
DBIC	Dimbokro	57.79	259	P	P	13 53 44.8	0.0
DBIC				IAmb	IAmb	13 53 48.6	
	comp=Z,7.1nm,0.7s						
KIC	Kosan Boka	57.84	259	*e*P	P	13 53 48.1	+2.9
	comp=Z,12nm,0.8s						
TIC	Toumodi	57.94	259	*e*P	P	13 53 48.8	+2.9
LIC	Lamto	58.16	259	*e*P	P	13 53 50.3	+2.9
	comp=Z,30nm,0.7s						
SSE	Sheshan	59.17	69	P	P	13 53 52.9	-1.4
KSRS	Korea Array	62.72	60	P	P	13 54 18.0	-0.3
	comp=Z,1.0nm,0.7s,baz=278,slow=7.2,SNR=1.4						
EUNU	Eureka	69.16	353	P	P	13 54 58.9	-0.3
EUNU				IAmb	IAmb	13 55 14.1	
	comp=Z,3.8nm,1.3s						
ILAR	Eielson Array	85.72	8	P	P	13 56 30.9	-1.0
	comp=Z,0.6nm,0.8s,baz=332,slow=5.3,SNR=1.6						
YKA	Yellowknife Ar	88.52	354	P	P	13 56 44.6	-0.9
	comp=Z,0.3nm,0.7s,baz=17,slow=4.7,SNR=1.1						
YKA				LR	LR	14 43 29.3	
	comp=Z,35nm,18.0s,baz=0.0,slow=40						
ASAR	Alice Springs	94.46	114	P	P	13 57 15.3	+1.6
	comp=Z,0.7nm,0.8s,baz=304,slow=4.7,SNR=2.4						

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*DJA **05** 14:04:43.1±1.2, 7°N±9°×12°7E±°, h71^{km}±12^{km}, M4.7/15, mB5.2/7, mb4.7/15, MLv4.9/7, Mw(mB)4.5/7*

*NEIC **05** 14:04:44.6±1.5, 6°.6N±0°.1×126°.23E±0°.08, h83^{km}±9^{km}, mb4.4/22, Error ellipse: s-maj=18.1km s-min=4.9km az=213.0*

*IDC **05** 14:04:44.8±3.8, 6°.51N×126°.17E, h80^{km}±36^{km}, mb3.8/20, mb1 3.8/21, mb1mx3.7/48, mbtmp4.1/21, MS3.0/5, Ms1 3.0/5, ms1mx2.7/39, Error ellipse: s-maj=26.1km s-min=13.4km az=78.0*

*MAN **05** 14:04:45.2, 6°.59N×126°.15E, h23^{km}, MS3.4*

ISC 05 14:04:45.1±0.8**, 6°.49N**±0°.04×**126°.25E**±0°.06**, h82**^{km}±7^{km}**, n80, σ1^{s}.64**/82**, mb4.2**/31**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.66	235	*e*P	Pn	14 04 57.9	-2.5
DDMP				*e*S	Sn	14 05 10.6	-1.3
KCP	Kidapawan	1.26	294⇓	*i*P	Pn	14 05 06.9	-0.7
KCP				*i* S	Sn	14 05 24.3	-0.1
SKMP	Bagumbayan, Su	1.70	271	*e*P	Pn	14 05 11.4	-1.6
SKMP				*e*S	Sn	14 05 31.7	-2.6
BIP	Bislig	1.73	0⇑	*e*P	Pn	14 05 11.4	-2.1
BIP				*i* S	Sn	14 05 33.3	-1.7
BUKP	Musuan	1.82	320	*e*P	Pn	14 05 13.9	-0.8
BUKP				*e*S	Sn	14 05 37.9	+0.7
CGP	Cagayan de Oro	2.49	322⇓	*i*P	Pn	14 05 24.4	+0.8
CGP				*i* S	Sn	14 05 53.9	+0.7
BUTP	Butuan	2.54	346	*e*P	Pn	14 05 25.5	+1.1
BUTP				*e*S	Sn	14 06 00.1	+5.6
SGSI	Sangihe	2.87	195	P	Pn	14 05 30.5	+1.7
PAGZ	Pagadian	3.15	296	*e*P	Pn	14 05 31.4	-1.1
PAGZ				*e*S	Sn	14 06 08.2	-1.0
GLSP	General Luna,	3.28	358	*e*P	Pn	14 05 33.2	-1.0
GLSP				*e*S	Sn	14 06 15.8	+3.5
CNOP	Candoni, Negro	4.88	313	*e*P	Pn	14 05 56.6	+0.6
CNOP				*e*S	Sn	14 06 50.4	-0.8
TNTI	Ternate	5.79	169		Pn	14 06 08.4	0.0
TNTI	Ternate	5.79	169	P	Pn	14 06 08.2	-0.2
	0.5nm1μm80nm,1.3s						
KMSI	Cibinong	6.29	201	P	Pn	14 06 18.7	+3.3
	0.6nm59nm,0.4s						
GTOI	Gorontalo	6.65	209	P	Pn	14 06 20.1	-0.1
	0.2nm810nm45nm,0.7s						
MRSI	Marisa	7.36	216	P	Pn	14 06 31.5	+1.6
	0.3nm972nm59nm,0.6s						
TOLI2	Tolitoli	7.63	226	Pn	Pn	14 06 31.6	-2.0
MYLDM	Lahad Datu	7.82	261		Pn	14 06 30.4	-5.7
LUWI	Luwuk	8.24	205	Pn	Pn	14 06 45.0	+3.0
LUWI	Luwuk	8.24	205	P	Pn	14 06 45.7	+3.7
	83nm,1.0s						
SANI	Sanana	8.48	182	P	Pn	14 06 43.4	-1.9
	2μm134nm,0.9s						
APSI	Ampana	8.66	212	P	Pn	14 06 51.9	+4.2
	21nm,0.5s						
SIJI	Sorong	8.86	145	P	Pn	14 06 51.5	+1.1
	5.6nm,0.3s,baz=323,slow=20,SNR=18						
SIJI				S	Sn	14 08 21.4	-7.3
	0.4nm,0.3s,baz=217,slow=20,SNR=1.1						
FAKI	Fak Fak	11.10	147	Pn	Pn	14 07 20.1	-0.8
TTSI	Tana Toraja	11.44	214	P	Pn	14 07 30.0	+4.4
	14nm,1.0s						
SBUM	Sibu	14.55	255	P	P	14 08 12.6	+1.4
BATI	Baumata	16.78	189	P	P	14 08 38.7	+2.7
	0.0nm,0.3s,baz=222,slow=10,SNR=1.7						
GUMO	Guam	19.64	68	LR	LR	14 17 37.2	
	comp=Z,8.9nm,18.7s,baz=32,slow=39						
MTN	Manton Dam	19.81	166	P	P	14 09 09.5	+0.3
FITZ	Fitzroy Crossi	24.44	181	P	P	14 09 56.3	0.0
	6.3nm,0.7s,baz=345,slow=7.2,SNR=11						
FITZ	Fitzroy Crossi	24.44	181	P	P	14 09 56.5	+0.3
FITZ				IAmb	IAmb	14 09 59.8	
	comp=Z,26nm,1.5s						
IPM	Ipoh	25.19	267	P	P	14 10 02.7	-0.6
IPM				IAmb	IAmb	14 10 07.3	
	comp=Z,11nm,0.8s						
KULM	Kulim	25.49	269	P	P	14 10 04.8	-1.2
KULM				IAmb	IAmb	14 10 10.5	
	comp=Z,14nm,1.1s						
PMG	Port Moresby	26.14	127	LR	LR	14 20 28.1	
	comp=Z,27nm,19.7s,baz=20,slow=36						
COEN	Coen	26.36	140	P	P	14 10 13.8	0.0
COEN				IAmb	IAmb	14 10 22.5	
	comp=Z,9.1nm,1.1s						
WB0	Warramunga Arr	27.29	163	P	P	14 10 21.8	-0.3
WB0				IAmb	IAmb	14 10 28.7	
	comp=Z,7.9nm,0.6s						
WRA	Warramunga Arr	27.44	163	P	P	14 10 23.3	-0.2
	comp=Z,1.8nm,0.5s,baz=337,slow=12,SNR=18						
WB2	Warramunga Arr	27.45	163	P	P	14 10 23.0	-0.5
WB2				IAmb	IAmb	14 10 47.5	
	comp=Z,20nm,1.4s						
PSI	Prapat	27.48	264	P	P	14 10 24.2	+0.1
	comp=Z,1.1nm,0.4s,baz=180,slow=17,SNR=1.7						
WR0	Warramunga Arr	27.52	163	P	P	14 10 23.6	-0.5
RABL	Rabaul	27.96	112	P	P	14 10 26.7	-1.5
CMAR	Chiang Mai Arr	29.14	297	P	P	14 10 41.0	+2.3
	comp=Z,0.3nm,0.4s,baz=122,slow=6.7,SNR=2.2						
CMAR				LR	LR	14 22 24.2	
	comp=Z,21nm,20.4s,baz=95,slow=36						
AS31	Alice Springs	30.89	166	P	P	14 10 53.6	-0.4
ASAR	Alice Springs	30.89	166	P	P	14 10 54.0	0.0
	comp=Z,1.1nm,0.4s,baz=340,slow=6.7,SNR=40						
ASAR				PcP	PcP	14 13 49.9	+0.8
	comp=Z,0.4nm,0.6s,baz=340,slow=2.2,SNR=4.7						
USRK	Ussuriysk Ar.	37.90	7	P	P	14 11 53.9	-0.3
	comp=Z,1.2nm,0.8s,baz=172,slow=10.0,SNR=2.7						
NWAO	Narrogin (SRO)	40.12	192	P	P	14 12 13.3	+0.3
ASAJ	Asahikawa	40.13	18	P	P	14 12 13.0	+0.1
	comp=Z,2.3nm,0.7s,baz=190,slow=12,SNR=1.3						
BBOO	Buckleboo	40.18	167	P	P	14 12 14.1	+0.7
STKA	Stephens Creek	40.86	160	P	P	14 12 19.4	+0.3
H11S3	WAKE ISLAND Hy	41.14	69	T	T	14 56 25.5	
	baz=258,slow=75,SNR=9.4						
H11S1	WAKE ISLAND Hy	41.15	69	T	T	14 56 30.8	
	baz=258,slow=75,SNR=5.8						
H11S2	WAKE ISLAND Hy	41.16	69	T	T	14 56 28.7	
	baz=258,slow=75,SNR=5.9						
H11N1	WAKE ISLAND Hy	41.58	68	T	T	14 57 18.4	
	baz=262						
H11N2	WAKE ISLAND Hy	41.59	68	T	T	14 57 18.5	
	baz=262						
H11N3	WAKE ISLAND Hy	41.60	68	T	T	14 57 21.1	
	baz=262						
ARMA	Armidale	44.03	148	P	P	14 12 46.3	+1.4
ARMA				IAmb	IAmb	14 12 46.8	
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	44.55	341	P	P	14 12 49.2	+0.3
	comp=Z,1.3nm,0.9s,baz=169,slow=26,SNR=5.0						
SONM				PP	PcP	14 14 31.0	+0.2
	comp=Z,1.4nm,0.8s,baz=152,slow=6.5,SNR=2.8						
PETK	Petropavlovsk-	53.09	23	P	P	14 13 53.8	-0.2
	comp=Z,4.2nm,0.9s,baz=181,slow=6.8,SNR=2.4						
MK31	Makanchi Array	55.04	324	P	P	14 14 07.4	-1.0
MK31				IAmb	IAmb	14 14 08.4	
	comp=Z,1.7nm,0.5s						
MKAR	Makanchi Array	55.04	324	P	P	14 14 08.0	-0.4
	comp=Z,2.4nm,0.4s,baz=118,slow=7.4,SNR=67						
MAKZ	Makanchi	55.23	324	P	P	14 14 08.7	-1.1
MAKZ				IAmb	IAmb	14 14 09.7	
	comp=Z,3.3nm,1.1s						
ZALV	Zalesovo Beam	57.93	333	P	P	14 14 27.4	-1.3
	comp=Z,0.5nm,0.4s,baz=133,slow=6.3,SNR=4.6						
ZALV				LR	LR	14 39 43.1	
	comp=Z,23nm,18.5s,baz=88,slow=36						
KURK	Kurchatov	59.18	327	P	P	14 14 36.4	-1.1
KURK				IAmb	IAmb	14 14 37.4	
	comp=Z,3.7nm,0.6s						
KURBB	Kurchatov Arra	59.18	327	P	P	14 14 36.7	-0.8
	comp=Z,2.2nm,0.7s,baz=126,slow=6.1,SNR=25						
BVAR	Borovoye Array	64.77	326	P	P	14 15 13.2	-1.7
	comp=Z,0.4nm,0.5s,baz=101,slow=7.8,SNR=4.8						
BRVK	Borovoye	64.84	326	P	P	14 15 14.1	-1.3
BRVK				IAmb	IAmb	14 15 23.0	
	comp=Z,5.1nm,1.3s						
TIXI	Tiksi	65.11	1	P	P	14 15 14.9	-1.8
NRIK	Noril'sk	67.66	346	P	P	14 15 33.4	+0.3
	comp=Z,6.5nm,0.7s,baz=137,slow=6.4,SNR=11						
NRIK	Noril'sk	67.66	346	P	P	14 15 32.9	-0.1
NRIK				IAmb	IAmb	14 15 34.2	
	comp=Z,7.8nm,0.7s						
ABKAR	Akbulak array	69.73	320	P	P	14 15 44.4	-2.0
AKTO	Aktyubinsk	71.22	321	P	P	14 15 54.3	-1.1
	comp=Z,1.2nm,0.5s,baz=75,slow=9.1,SNR=2.8						
SOCY	Socotra	71.36	281	P	P	14 15 54.8	-2.2
ARU	Arti	72.37	327	P	P	14 16 01.4	-0.7
	comp=Z,0.9nm,0.4s,baz=107,slow=4.6,SNR=6.0						
ILAR	Eielson Array	82.84	26	P	P	14 16 59.9	-0.3
	comp=Z,0.4nm,0.9s,baz=224,slow=6.2,SNR=2.3						
SPITS	Spitsbergen Ar	87.70	349	P	P	14 17 24.5	+0.3
	comp=Z,1.0nm,0.4s,baz=91,slow=8.3,SNR=10						
ARCES	ARCESS Array B	87.71	340	P	P	14 17 23.9	-0.6
	comp=Z,0.8nm,0.4s,baz=83,slow=5.5,SNR=15						
FINES	FINESS Array B	89.19	332	P	P	14 17 31.7	+0.1
	comp=Z,0.4nm,0.4s,baz=47,slow=6.3,SNR=4.1						
NOA	NORSAR Array B	96.12	334	LR	LR	15 04 12.1	
	comp=Z,16nm,20.0s,baz=305,slow=37						
YKA	Yellowknife Ar	97.20	24	P	P	14 18 07.9	-0.4
	comp=Z,0.1nm,0.6s,baz=310,slow=2.3,SNR=1.7						
TORD	Torodi Ar. Bea	121.58	290	PKP	PKPdf	14 23 29.9	-0.4
	comp=Z,0.6nm,0.7s,baz=48,slow=2.1,SNR=2.8						

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*IDC **05** 14:09:11.4±1.1, 6°.57N×126°.26E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.5/49, mbtmp3.9/6, MS3.3/1, Ms1 3.3/1, ms1mx2.4/37, Error ellipse: s-maj=90.8km s-min=17.3km az=70.0*

*MAN **05** 14:09:20.2, 6°.46N×126°.29E, h44^{km}, MS3.4*

*NEIC **05** 14:09:22.7±1.4, 6°.41N±0°.09×125°.97E±0°.06, h92^{km}±10^{km}, mb4.2/15, Error ellipse: s-maj=14.8km s-min=4.8km az=152.0*

ISC 05 14:09:20.9±0.8**, 6°.48N**±0°.04×**126°.24E**±0°.06**, h73**^{km}±7^{km}**, n42, σ1^{s}.79**/44**, mb4.1**/10**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.46	3	*e*P	Pn	14 09 32.1	-1.5
MATI				*e*S	Sn	14 09 41.9	-1.1
DDMP	Don Marcelino,	0.64	234	*e*P	Pn	14 09 34.5	-0.9
DDMP				*e*S	Sn	14 09 46.0	-0.1
KCP	Kidapawan	1.25	295⇑	*i*P	Pn	14 09 43.8	+1.1
SKMP	Bagumbayan, Su	1.68	271	*e*P	Pn	14 09 48.0	-0.3
SKMP				*e*S	Sn	14 10 09.8	+0.6
BIP	Bislig	1.73	0⇑	*e*P	Pn	14 09 48.2	-0.8
BIP				*e*S	Sn	14 10 10.1	-0.3
BUKP	Musuan	1.81	320	*e*P	Pn	14 09 50.5	+0.4
BUKP				*e*S	Sn	14 10 07.5	-4.8
CGP	Cagayan de Oro	2.48	322⇑	*e*P	Pn	14 10 01.2	+2.1
CGP				*e*S	Sn	14 10 33.0	+4.6
BUTP	Butuan	2.54	346	*e*P	Pn	14 10 01.4	+1.4
BUTP				*e*S	Sn	14 10 33.1	+3.2
PAGZ	Pagadian	3.14	296	*e*P	Pn	14 10 08.2	+0.1
PAGZ				*e*S	Sn	14 10 28.9	-16
GLSP	General Luna,	3.28	358	*e*P	Pn	14 10 11.6	+1.6
GLSP				*e*S	Sn	14 10 49.5	+1.6
TNTI	Ternate	5.78	169	Pn	Pn	14 10 45.3	+1.1
TOLI2	Tolitoli	7.62	226	Pn	Pn	14 11 08.1	-1.1
LUWI	Luwuk	8.23	205	Pn	Pn	14 11 22.0	+4.3
FAKI	Fak Fak	11.10	147	Pn	Pn	14 11 59.8	+2.9
MTN	Manton Dam	19.81	166		Pn	14 13 46.5	-1.3
PMBI	Palembang	23.38	247	P	P	14 14 21.1	-2.4
FITZ	Fitzroy Crossi	24.43	181	P	P	14 14 33.2	+0.4
	3.5nm,0.5s,baz=6.1,slow=9.4,SNR=9.4						
FITZ	Fitzroy Crossi	24.43	181	P	P	14 14 32.9	0.0
FITZ				IAmb	IAmb	14 14 41.8	
	comp=Z,6.7nm,0.9s						
COEN	Coen	26.36	140	P	P	14 14 51.7	+1.2
WB0	Warramunga Arr	27.29	163	P	P	14 14 58.2	-0.6
WB0				IAmb	IAmb	14 15 12.0	
	comp=Z,9.8nm,1.3s						
WRA	Warramunga Arr	27.44	163	P	P	14 14 59.9	-0.3
	comp=Z,1.4nm,0.7s,baz=344,slow=11,SNR=7.9						
RPSI	Rantau Prapat	27.48	263	P	P	14 14 57.6	-3.0
RPSI				IAmb	IAmb	14 15 01.7	
	comp=Z,7.0nm,1.1s						
WR0	Warramunga Arr	27.52	163	P	P	14 15 00.0	-0.8
WR0				IAmb	IAmb	14 15 05.0	
	comp=Z,6.2nm,1.1s						
PSA00	Pilbara Seismi	28.58	193	P	P	14 15 09.4	-0.8
ASAR	Alice Springs	30.89	166	P	P	14 15 30.6	-0.1
	comp=Z,0.9nm,0.5s,baz=337,slow=7.3,SNR=12						
ASAR				PcP	PcP	14 18 24.9	-1.1
	comp=Z,0.4nm,0.5s,baz=358,slow=2.6,SNR=5.8						
MJAR	Matsushiro Arr	31.86	18	LR	LR	14 28 14.8	
	comp=Z,52nm,20.4s,baz=300,slow=36						
FORT	Forrest	37.09	177	P	P	14 16 24.7	+0.4
BBOO	Buckleboo	40.18	167	P	P	14 16 50.9	+0.8
STKA	Stephens Creek	40.86	160	P	P	14 16 56.1	+0.3
	baz=330,slow=9.6,SNR=5.7						
H11S3	WAKE ISLAND Hy	41.15	69	T	T	15 01 01.1	
	baz=258,slow=75,SNR=6.1						
H11S1	WAKE ISLAND Hy	41.17	69	T	T	15 01 10.7	
	baz=258,slow=75,SNR=6.7						
H11S2	WAKE ISLAND Hy	41.17	69	T	T	15 01 08.9	
	baz=258,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	41.60	68	T	T	15 02 01.5	
	baz=260						
H11N2	WAKE ISLAND Hy	41.61	68	T	T	15 02 02.6	
	baz=260						
H11N3	WAKE ISLAND Hy	41.62	68	T	T	15 02 02.2	
	baz=260						
MK31	Makanchi Array	55.04	324	P	P	14 18 44.1	-1.0
MKAR	Makanchi Array	55.04	324	P	P	14 18 44.2	-0.9
	comp=Z,0.4nm,0.5s,baz=123,slow=7.3,SNR=6.8						
MAKZ	Makanchi	55.23	324	P	P	14 18 45.7	-0.7
KURBB	Kurchatov Arra	59.18	327	P	P	14 19 13.4	-0.7
	comp=Z,0.4nm,0.6s,baz=120,slow=8.2,SNR=5.3						
KURK	Kurchatov	59.18	327	P	P	14 19 12.8	-1.3
KURK				IAmb	IAmb	14 19 19.1	
	comp=Z,3.8nm,1.4s						
NRIK	Noril'sk	67.66	346	P	P	14 20 10.5	+0.7
	comp=Z,1.3nm,0.4s,baz=167,slow=14,SNR=2.7						
NRIK	Noril'sk	67.66	346	P	P	14 20 10.5	+0.7
NRIK				IAmb	IAmb	14 20 11.1	
	comp=Z,1.9nm,0.5s						

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*NOU **05** 14:20:41.8, 39°.29S×176°.32E, h58^{km}, MLv3.7, North Island, New Zealand*

WEL 05 14:20:42.1, 39°.2S±0°.7×**176°.3E**±0°.8**, h63**^{km}±1^{km}**, M3.6**/45**, ML3.9**/45**, MLv3.6**/45**, Error ellipse: s-maj=0.0km s-min=0.0km az=108.8, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKZ	Black Stump Fm	0.19	81	P	Pn	14 20 52.0	+0.1
BKZ				S	Sn	14 20 59.3	+0.2
KWHZ	Kaweka Forest	0.27	150	P	Pn	14 20 52.6	+0.2
KWHZ				S	Sn	14 21 00.6	+0.7
HATZ	Hinemaiaia	0.33	337	P	Pn	14 20 52.8	0.0
HATZ				S	Sn	14 21 00.1	-0.5
BHHZ	Black Hill Sta	0.33	207	P	Pn	14 20 53.0	+0.1
BHHZ				S	Sn	14 21 01.0	+0.2
RITZ	Rihia Road	0.38	305	P	Pn	14 20 53.6	+0.4
RITZ				S	Sn	14 21 02.0	+0.7

MRHZ	Matea Rd	0.38	20	P	Pn	14 20 53.3	0.0
MRHZ				S	Sn	14 21 01.5	+0.1
MCHZ	McNeill Hill	0.42	126	P	Pn	14 20 54.5	+0.9
MCHZ				S	Sn	14 21 04.6	+2.6
NMHZ	Naumai	0.44	78	P	Pn	14 20 54.9	+1.0
MOVZ	Moawhango	0.44	241	P	Pn	14 20 53.8	-0.1
MOVZ				S	Sn	14 21 01.9	-0.6
KRHZ	Kereru	0.46	169	P	Pn	14 20 54.2	+0.2
KRHZ				S	Sn	14 21 03.4	+0.8
OTVZ	Oturere	0.46	274	P	Pn	14 20 54.4	+0.3
OTVZ				S	Sn	14 21 02.9	+0.1
TUVZ	Tukino	0.47	261	P	Pn	14 20 54.5	+0.3
TUVZ				S	Sn	14 21 03.2	+0.1
KATZ	Kakaramea	0.49	296	P	Pn	14 20 54.7	+0.4
KATZ				S	Sn	14 21 02.6	-0.7
KRVZ	Karewarewa	0.49	282	P	Pn	14 20 54.6	+0.3
KRVZ				S	Sn	14 21 03.7	+0.5
RATZ	Rangitukua	0.50	311	P	Pn	14 20 54.5	+0.1
NGZ	Ngauruhoe	0.51	272	P	Pn	14 20 54.9	+0.3
NGZ				S	Sn	14 21 04.3	+0.7
WTVZ	West Tongariro	0.52	278	P	Pn	14 20 54.9	+0.2
WHVZ	Whangaehu Hut	0.52	260	P	Pn	14 20 55.0	+0.2
WHVZ				S	Sn	14 21 04.0	-0.1
WNVZ	Wahianoa	0.53	255	P	Pn	14 20 54.9	+0.1
WNVZ				S	Sn	14 21 04.1	0.0
DRZ	Dome Shelter	0.54	261	P	Pn	14 20 55.3	+0.2
FWVZ	Far West T-bar	0.55	263	P	Pn	14 20 55.2	+0.1
FWVZ				S	Sn	14 21 04.4	-0.2
MTHZ	Maungataniwha	0.57	53	P	Pn	14 20 55.6	+0.5
MTHZ				S	Sn	14 21 05.6	+0.9
WHTZ	Whakaora	0.57	336	P	Pn	14 20 55.6	+0.4
ARHZ	Aropaoanui	0.58	97	P	Pn	14 20 55.8	+0.7
ALRZ	Allen Road	0.64	6	P	Pn	14 20 55.9	+0.1
ALRZ				S	Sn	14 21 06.4	+0.6
MTVZ	Mangateitei	0.64	252	P	Pn	14 20 56.1	+0.2
MTVZ				S	Sn	14 21 06.2	+0.2
TWVZ	Taurewa	0.65	281	P	Pn	14 20 55.9	-0.2
WPRZ	Whakapapatarin	0.68	354	P	Pn	14 20 56.3	0.0
PRRZ	Plateau Road	0.70	9	P	Pn	14 20 56.6	+0.1
RAHZ	Arahi	0.70	67	P	Pn	14 20 57.4	+0.8
PKVZ	Pokaka	0.71	262	P	Pn	14 20 57.1	+0.4
PNHZ	Pukenui	0.72	183	P	Pn	14 20 56.8	-0.1
KAHZ	Kahuranaki	0.77	141	P	Pn	14 20 57.8	+0.4
WHHZ	Waihua	0.77	82	P	Pn	14 20 58.0	+0.7
KUTZ	Kaahu Road	0.78	334	P	Pn	14 20 57.6	+0.1
CKHZ	Cape Kidnapper	0.79	126	P	Pn	14 20 58.0	+0.4
HRRZ	Handcock Road	0.80	2	P	Pn	14 20 58.0	+0.2
RTZ	Ruatahuna	0.81	45	P	Pn	14 20 58.2	+0.3
MUGZ	Murupara	0.82	30	P	Pn	14 20 57.9	-0.1
GRRZ	Galatos Road	0.85	352	P	Pn	14 20 58.8	+0.4
RRRZ	Republican Roa	0.88	14	P	Pn	14 20 58.8	+0.1
HSRZ	Hossack Road	0.88	360	P	Pn	14 20 59.2	+0.4
WPHZ	Waipukurau	0.88	171	P	Pn	14 20 58.8	0.0
TSZ	Takapari Road	0.89	195	P	Pn	14 20 58.9	0.0
SNGZ	Shannon Statio	0.94	64	P	Pn	14 21 00.0	+0.5
HLRZ	Highlands Stat	0.94	5	P	Pn	14 21 00.3	+0.7
PXZ	Pawanui	0.96	151	P	Pn	14 20 59.6	-0.1
TARZ	Mount Tarawera	0.98	12	P	Pn	14 21 00.5	+0.4
UTU	Utuhina	1.02	357	P	Pn	14 21 00.9	+0.4
TLZ	Tolley Road	1.03	327	P	Pn	14 21 00.7	+0.1
MKRZ	Makatiti	1.07	9	P	Pn	14 21 01.8	+0.5
OMRZ	Omania	1.09	5	P	Pn	14 21 01.6	+0.2
DVHZ	Dannevirke	1.11	183	P	Pn	14 21 01.1	-0.6
PRHZ	Porangahau	1.11	165	P	Pn	14 21 01.5	-0.2
KNZ	Kokohu	1.12	82	P	Pn	14 21 01.5	-0.2
WAZ	Wanganui	1.13	240	P	Pn	14 21 02.9	+1.0
RAGZ	Rawiri	1.14	53	P	Pn	14 21 03.4	+1.2
URZ	Urewera	1.15	36	P	Pn	14 21 02.1	0.0
EDRZ	Edgecumbe	1.15	19	P	Pn	14 21 02.5	+0.2
VRZ	Vera Road	1.17	273	P	Pn	14 21 02.7	+0.4
KARZ	Kaharoa	1.17	360	P	Pn	14 21 02.8	+0.3
LIRZ	Lichensteins R	1.19	5	P	Pn	14 21 02.8	0.0
OHWZ	Ohakea	1.24	215	P	Pn	14 21 04.2	+0.8
MARZ	Manawahe	1.25	15	P	Pn	14 21 03.8	+0.2
POWZ	Post Office Ro	1.25	197	P	Pn	14 21 03.1	-0.5
RIGZ	Rimuhau	1.27	68	P	Pn	14 21 04.0	+0.1
ANWZ	Angora Road	1.28	172	P	Pn	14 21 03.5	-0.4
HIZ	Hauiti	1.29	301	P	Pn	14 21 04.4	+0.4
MHGZ	Mahia Peninsul	1.29	89	P	Pn	14 21 04.0	0.0
PRGZ	Paritu Road	1.30	78	P	Pn	14 21 04.1	-0.1
MWZ	Matawai	1.31	50	P	Pn	14 21 04.5	+0.1
KMRZ	Kaimai	1.37	350	P	Pn	14 21 05.5	+0.4
OPRZ	Ohinepanea	1.37	10	P	Pn	14 21 05.2	+0.1
PRWZ	Pori Road	1.38	189	P	Pn	14 21 04.7	-0.5
WHRZ	Whale Island	1.45	23	P	Pn	14 21 06.8	+0.5
TKGZ	Te Karaka	1.46	59	P	Pn	14 21 06.8	+0.6
LREZ	Lake Rotokare	1.46	259	P	Pn	14 21 07.1	+0.8
TGRZ	Tauranga	1.46	0	P	Pn	14 21 06.7	+0.3
BFZ	Birch Farm	1.49	180	P	Pn	14 21 05.6	-1.1
MHEZ	Mangahewa	1.51	274	P	Pn	14 21 08.2	+1.3
MRZ	Mangatainoka R	1.55	199	P	Pn	14 21 06.5	-1.0
TOZ	Tahuroa Road	1.57	338	P	Pn	14 21 08.3	+0.4
DREZ	Durham Road	1.59	270	P	Pn	14 21 09.3	+1.2
TIWZ	Tintock	1.61	190	P	Pn	14 21 07.3	-1.0
PREZ	Palmer Road	1.63	264	P	Pn	14 21 10.1	+1.4
RUGZ	Raukumara Rang	1.66	43	P	Pn	14 21 09.1	0.0
NEZ	North Egmont	1.68	267	P	Pn	14 21 10.6	+1.2
CNGZ	Carnagh Statio	1.68	66	P	Pn	14 21 09.7	+0.5
TWGZ	Tauwhareparae	1.69	54	P	Pn	14 21 10.1	+0.7
CPWZ	Castlepoint	1.71	181	P	Pn	14 21 09.1	-0.7
KHEZ	Kahui Hut	1.74	266	P	Pn	14 21 11.7	+1.6
PKE	Pukeiti	1.76	269	P	Pn	14 21 11.6	+1.2
HOWZ	Holdsworth Sta	1.79	198	P	Pn	14 21 09.3	-1.6
OGWZ	Otaki Gorge	1.82	207	P	Pn	14 21 10.0	-1.2
NBEZ	Newall Road No	1.85	267	P	Pn	14 21 12.6	+1.0
NMEZ	Namu Road	1.86	262	P	Pn	14 21 13.1	+1.5
HAZ	Te Kaha	1.87	40	P	Pn	14 21 11.3	-0.5
MYRZ	Mayor Island	1.91	360	P	Pn	14 21 13.3	+0.9
PUZ	Puketiti	1.93	55	P	Pn	14 21 12.4	-0.2
TMWZ	Te Maipa	1.93	188	P	Pn	14 21 11.0	-1.7
KIW	Kapiti Island	1.96	211	P	Pn	14 21 11.9	-1.2
MTW	Mount Morrison	2.04	196	P	Pn	14 21 12.1	-2.1
CAW	Cannon Point	2.12	205	P	Pn	14 21 13.3	-1.9
WMGZ	Waiomatatini S	2.18	52	P	Pn	14 21 16.1	0.0
TRWZ	Traveller	2.24	191	P	Pn	14 21 14.8	-2.1
PAWZ	Paruwai Farm	2.27	196	P	Pn	14 21 14.9	-2.4
MXZ	Matakaoa Point	2.29	45	P	Pn	14 21 18.0	+0.5
MSWZ	Moikau Station	2.35	199	P	Pn	14 21 15.7	-2.6
WEL	Wellington	2.38	208	P	Pn	14 21 16.6	-2.1
DUWZ	D'Urville Isla	2.41	227	P	Pn	14 21 17.6	-1.5
BHW	Baring Head	2.45	205	P	Pn	14 21 17.2	-2.5
ETAZ	East Tamaki Re	2.47	335	P	Pn	14 21 20.6	+0.7
AWAZ	Awhitu Peninsu	2.48	329	P	Pn	14 21 21.0	+1.0
KUZ	Kuaotunu	2.48	350	P	Pn	14 21 20.7	+0.6
PLWZ	Palliser	2.49	198	P	Pn	14 21 17.5	-2.8
TCW	Tory Channel	2.52	216	P	Pn	14 21 18.6	-2.1
WIAZ	Waiheke Island	2.56	339	P	Pn	14 21 21.7	+0.6
EPAZ	Eden Park BICE	2.60	332	P	Pn	14 21 22.9	+1.1
WTAZ	Waiatarua	2.62	329	P	Pn	14 21 23.2	+1.2
MBAZ	Motutapu North	2.65	336	P	Pn	14 21 23.1	+0.7
RVAZ	Riverhead Bore	2.76	331	P	Pn	14 21 24.9	+1.0
ABAZ	Army Bay	2.82	336	P	Pn	14 21 25.8	+1.0
TUWZ	Tuamarina	2.85	218	P	Pn	14 21 22.7	-2.3
NNZ	Nelson	2.99	227	P	Pn	14 21 25.1	-1.9
GRZ	Great Barrier	3.00	348	P	Pn	14 21 27.9	+0.6
BSWZ	Blackbirch Sta	3.10	215	P	Pn	14 21 26.0	-2.6
QRZ	Quartz Range	3.29	239	P	Pn	14 21 29.3	-1.9
WCZ	Waipu Caves	3.59	334	P	Pn	14 21 36.3	+1.1
THZ	Tophouse	3.62	224	P	Pn	14 21 33.3	-2.5
KHZ	Kahutara	3.82	212	P	Pn	14 21 34.8	-3.5
DSZ	Denniston Nort	4.24	232	P	Pn	14 21 41.4	-2.8
OUZ	Omahuta	4.50	331	P	Pn	14 21 48.8	+1.1
CTZ	Chatham Island	7.02	133	P	Pn	14 22 21.2	-0.9
JCZ	Jackson Bay	7.42	227	P	Pn	14 22 30.3	+2.6

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*KRNET **05** 14:25:15.2±0.1, 40°.08N×76°.52E, mb2.5*
*SOME **05** 14:25:24.1, 40°.40N×76°.53E, h10^{km}*
ISC 05 14:25:20.8±3.0, **40°.1N**±0°.1×**76°.59E**±0°.06, **h34**^{km}±3^{km}, **n16, σ0^{s}93**/32, **12C-2D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	2.12	12	⇑eP	Pn	14 25 53.4	-0.6
	baz=14						
KDJ				⇑iS	Sn	14 26 21.0	+1.8
	baz=14						
ULHL	Ulahol	2.20	353	⇑eP	Pn	14 25 54.1	-1.1
	baz=55						
ULHL				⇑iS	Sn	14 26 22.6	+1.2
	baz=55						
ARLS	Aral	2.49	317	⇑iP	Pn	14 25 57.4	-1.7
	baz=18						
ARLS				⇑iS	Sn	14 26 28.7	+0.3
	baz=18						
UCH	Uchtor	2.68	325	⇑iP	Pn	14 26 00.7	-1.2
	baz=25						
UCH				⇑iS	Sn	14 26 34.1	+0.7
	baz=25						
KBK	Karagaybulak	2.88	335	⇑iP	Pn	14 26 03.2	-1.2
	baz=36						
KBK				⇑iS	Sn	14 26 38.4	+0.4
	baz=36						
IZV	Izvestkoviy	2.98	0	eP	Pb	14 26 13.0	-0.2
	2.3nm,0.3s						
IZV				eS	Sb	14 26 48.2	-1.0
	3.7nm,0.5s						
AML	Almayashu	3.02	314	⇑eP	Pn	14 26 05.6	-0.9
	baz=15						
AML				⇑iS	Sn	14 26 42.1	+0.4
	baz=15						
KST	Kastek	3.02	351	eP	Pb	14 26 13.8	-0.1
	1.7nm,0.2s						
KST				eS	Sb	14 26 49.7	-0.8
	2.7nm,0.5s						
AAK	Ala-Archa	3.02	329	⇓eP	Pn	14 26 05.7	-0.7
	baz=30						
AAK				⇓iS	Sn	14 26 42.3	+0.8
	baz=30						
MDOK	Medeo	3.12	6	eP	Pb	14 26 15.3	-0.4
	2.0nm,0.4s						
MDOK				eS	Sb	14 26 52.5	-0.9
	6.3nm,1.1s						
KOTS	Kotyrbulak	3.20	7	eP	Pb	14 26 17.0	0.0
	3.4nm,0.4s						
KOTS				eS	Sb	14 26 55.1	-0.5
	16nm,0.5s						
DGS	Degeres	3.24	349	eP	Pb	14 26 17.9	+0.2
	3.2nm,0.5s						
DGS				eS	Sb	14 26 56.6	-0.2
	2.6nm,0.8s						
SATY	Saty	3.29	24	eP	Pb	14 26 19.5	+0.9
	2.0nm,0.3s						
SATY				eS	Sb	14 26 59.3	+1.0
	4.7nm,0.3s						
KTBS	Karatobe	3.65	1	eP	Pb	14 26 24.7	+0.1
	1.2nm,0.4s						
KTBS				eS	Sb	14 27 08.5	0.0
	3.0nm,0.4s						
MRKS	Merke	3.69	318	eP	Pb	14 26 26.5	+1.2
	2.3nm,0.3s						
MRKS				eS	Sb	14 27 11.4	+1.7
	2.6nm,1.2s						
KPKS	Kokpek	3.75	24	eP	Pb	14 26 26.6	+0.3
	2.8nm,0.4s						
KPKS				eS	Sb	14 27 11.5	+0.2
	5.9nm,0.5s						

IDC 05 14:33:19.1±2.2, **7°.22S**×**120°.00E, h414**^{km}±25^{km}, **mb3.3**/4, **mb1 3.3**/7, **mb1mx3.0**/41, **mbtmp4.1**/7, **Error ellipse: s-maj=57.3km s-min=16.9km az=63.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.68	130	P	P	14 34 39.8	+1.3
	0.1nm,0.3s,baz=235,slow=11,SNR=11						
BATI				S	S	14 35 42.4	-0.8
	0.1nm,0.3s,baz=231,slow=12,SNR=4.2						
FITZ	Fitzroy Crossi	12.13	154	P	P	14 36 00.9	+1.0
	0.1nm,0.3s,baz=328,slow=8.9,SNR=1.4						
FITZ				S	S	14 38 26.8	+14
	0.1nm,0.3s,baz=116,slow=22,SNR=1.3						
SIJI	Sorong	12.88	61	P	P	14 36 08.8	+0.5
	1.3nm,0.3s,baz=312,slow=21,SNR=5.6						
WRA	Warramunga Arr	18.80	134	P	P	14 37 11.1	-0.4
	0.4nm,0.3s,baz=311,slow=11,SNR=20						
ASAR	Alice Springs	21.11	142	P	P	14 37 33.1	+0.2
	0.8nm,0.4s,baz=319,slow=8.4,SNR=48						
SONM	Songino Array	56.12	349	P	P	14 42 18.1	+0.5
	0.6nm,0.5s,baz=168,slow=7.9,SNR=7.1						
MKAR	Makanchi Array	63.35	332	P	P	14 43 06.1	0.0
	1.3nm,0.4s,baz=148,slow=7.6,SNR=35						
ZALV	Zalesovo Beam	67.75	338	P	P	14 43 32.9	-0.7
	2.3nm,0.4s,baz=140,slow=5.2,SNR=9.3						

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*UCR **05** 14:35:50.7±2.0, 7°.37N×82°.34W, h21^{km}±19^{km}, MW3.6*
*UPA **05** 14:35:51.9±1.6, 7°.54N×82°.36W, h4^{km}±8^{km}, MW4.1*
ISC 05 14:35:51.5±1.6, **7°.48N**±0°.06×**82°.36W**±0°.04, **h12**^{km}±10^{km}, **n38, σ0^{s}98**/54, **7C-9D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIMO3	Limones	0.79	321	⇑eP	Pb	14 36 07.5	+0.3
LIMO3				i S	Sb	14 36 19.3	+1.4
REME3	Remedios, Chir	0.91	35	⇑eP	Pb	14 36 09.4	+0.2
REME3				i S	Sn	14 36 22.4	-0.7
LOCO3	Loma Colorada,	0.92	357	⇓eP	Pb	14 36 09.8	+0.3
LOCO3				i S	Sb	14 36 22.4	+0.7
PVID3	Puerto Vidal,	0.93	53	⇓eP	Pg	14 36 09.0	-0.5
NANC3	Nancito, Chiri	0.98	40	⇑eP	Pb	14 36 10.0	-0.3
NANC3				eS	Sb	14 36 23.7	+0.5
BAGA3	Bagala, Chiriq	0.99	350	⇓eP	Pb	14 36 10.6	0.0
BAGA3				eS	Sb	14 36 23.2	-0.4
GUAL3	Gualaca, Chiri	1.04	3	eP	Pb	14 36 08.5	-3.0
GMAL	Guarumal, Vera	1.15	76	⇓iP	Pn	14 36 13.2	-0.2
GMAL				i S	Sn	14 36 29.2	+0.1
CDITO	Canoas	1.20	335	⇑iP	Pn	14 36 13.0	-1.0
CDITO				i S	Sb	14 36 29.0	-0.5
CDITO	Canoas	1.20	335	i P	Pn	14 36 12.8	-1.3
CDITO				eS	Sg	14 36 31.2	+1.1
BCO2	Palmira	1.24	352	⇓iP	Pn	14 36 14.2	-0.7
BCO2				eS	Sg	14 36 32.4	+0.9
PIRO	Carate, Puerto	1.33	314	eP	Pn	14 36 14.6	-1.3
PIRO	Carate, Puerto	1.33	314	eP	Pn	14 36 14.4	-1.5
MESA3	La Mesa, Verag	1.34	60	⇓iP	Pn	14 36 15.9	-0.1
MESA3				i S	Sg	14 36 34.8	+0.1
BRU2	Volcan	1.34	346	⇓iP	Pn	14 36 15.4	-0.8
BRU2				i S	Sb	14 36 34.3	+0.4
BRU2	Volcan	1.34	346	eP	Pn	14 36 15.2	-1.1
BRU2				eS	Sg	14 36 35.5	+0.6
BC3P	Paso Ancho	1.35	349	⇑iP	Pn	14 36 15.5	-0.8
BC3P				i S	Sn	14 36 35.1	+0.8
MARI3	Mariato, Verag	1.37	83	eP	Pg	14 36 17.8	0.0
MLIR3	Monte Lirio, C	1.38	341	⇑eP	Pn	14 36 16.9	+0.2
PTJ1	Puerto Jimnez	1.40	318	⇑iP	Pn	14 36 16.0	-0.9
PONU3	Ponuga, Veragu	1.43	74	⇓eP	Pb	14 36 17.9	-0.2
CNAZ3	Canazas, Verag	1.43	53	eP	Pn	14 36 15.7	-1.6
CNAZ3				eS	Sb	14 36 36.5	+0.3
CHGR2	Aguacate	1.46	8	eP	Pn	14 36 17.5	-0.2
CACAO	El Cacao, Vera	1.49	95	⇓eP	Pb	14 36 18.5	-0.7
OCU3	Ocu, Herrera	1.64	74	eP	Pn	14 36 20.5	+0.4
RIOS	Rincon, Osa	1.66	317	eP	Pn	14 36 19.1	-1.4
DRK0	Durika	1.97	334	i P	Pn	14 36 24.8	-0.1
DRK0				i S	Sn	14 36 50.2	+0.5
CHIT3	Chitre	1.98	76	eP	Pb	14 36 27.5	0.0
AZU	Azuero	2.09	81	i P	Pb	14 36 28.2	-1.2
AZU				i S	Sn	14 36 53.3	+0.9
PNME	Penonome	2.25	64	i P	Pn	14 36 28.4	-0.2
VTON	El Valle, Cocl	2.49	63	eP	Pn	14 36 33.3	+1.3
LCR2	La Lucha 2	2.77	324	eP	Pn	14 36 36.1	+0.2
ZANG	Zanguenga, Cho	2.87	59	eP	Pn	14 36 36.4	-0.7
CHOR3	La Chorrera	2.93	61	eP	Pn	14 36 35.3	-2.6
JACO	JACO, Garabito	3.14	314	eP	Pn	14 36 39.8	-1.0
UPA	Univ. de Panam	3.17	62	eP	Pn	14 36 42.2	+1.0
CHPO	Chepo, Panama	3.62	62	eP	Pn	14 36 47.9	+0.5
JTS	Las Juntas de	3.79	318	eP	Pn	14 36 51.0	+1.3

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*JMA **05** 14:42:31.9±0.1, 32°.54N×131°.11E, h130^{km}±1^{km}, M3.9*
Broadband fault plane solution: P waves. NP1: φ$_s$273.00000°, δ25.00000°, λ-172.00000°. NP2: φ$_s$175.00000°, δ87.00000°, λ-66.00000°. Principal axes: T Plg37.0000°, Azm244.0000°; N Plg24.0000°, Azm354.0000°; P Plg43.0000°, Azm109.0000°;
JMA Felt I J1.
*NEIC **05** 14:42:31.5±1.1, 32°.51N±0°.04×131°.07E±0°.08, h133^{km}±4^{km}, mb4.2/20 Error ellipse: s-maj=10.3km s-min=5.4km az=91.0*
*NIED **05** 14:42:32.0, 32°.54N×131°.11E, h130^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.18; M$_{θθ}$0.02; M$_{φφ}$-1.20; M$_{rθ}$-0.15; M$_{θφ}$-0.56; M$_{φr}$2.00; Fault plane solution: M$_0$2.40000×10^{15} NP1: φ$_s$360.00000°, δ75.00000°, λ76.00000°. NP2: φ$_s$223.00000°, δ21.00000°, λ131.00000°.*
*IDC **05** 14:42:32.2±0.7, 32°.51N×131°.01E, h137^{km}±6^{km}, mb3.3/10, mb1 3.6/14, mb1mx3.4/44, mbtmp3.8/14, MS2.3/1, Ms1 2.3/1, ms1mx2.1/22 Error ellipse: s-maj=16.7km s-min=13.0km az=66.0*
ISC 05 14:42:32.0±0.5, **32°.52N**±0°.05×**131°.15E**±0°.04, **h136**^{km}±4^{km}, **n61, σ1^{s}46**/74, **mb4.0**/23, **3C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKIT	Kitakata	0.28	67	⇑P	Pn	14 42 50.3	-0.4
JKIT				eS	Sn	14 43 03.7	-1.2
JIU3	Izumi3	0.28	277	⇓P	Pn	14 42 50.0	-0.7
JIU3				S	Sn	14 43 03.4	-1.5
JTZ	Takazaki	0.61	185	⇓P	Pn	14 42 51.7	-0.7
JTZ				S	Sn	14 43 06.6	-1.2
JNU	Nakatsue	0.64	340	P	Pn	14 42 52.2	-0.4
	119nm,0.3s,baz=231,slow=0.5,SNR=817						
JNU				S	Sn	14 43 07.2	-1.1
	221nm,0.3s,baz=216,slow=19,SNR=28						
JNU				LR	LR	14 43 13.4	
	comp=Z,125nm,20.1s,baz=144,slow=66						
JNU	Nakatsue	0.64	340	Pn	Pn	14 42 51.8	-0.8
JSU	Suzuyama	1.17	210	Pn	Pn	14 42 56.0	-1.0
JTO	Tosashimizu	1.44	76	⇑P	Pn	14 42 58.4	-1.4
JTO				S	Sn	14 43 18.7	-2.3
JSJ	Shimokoshiki	1.47	236	⇓P	Pn	14 42 59.2	-1.0
JSJ				S	Sn	14 43 19.7	-2.0
JNA	Nagahama	1.53	47	⇑P	Pn	14 42 59.5	-1.2
JTU	Tsushima	2.48	324	Pn	Pn	14 43 11.3	-0.8
JMN	Monobe	2.59	61	Pn	Pn	14 43 13.3	-0.2
JHS	Saijyo	2.97	33	Pn	Pn	14 43 17.8	-0.6
JWT	Wachi	4.49	51	Pn	Pn	14 43 38.2	0.0
KSRS	Korea Array	5.59	333	P	Pn	14 43 54.1	+1.2
	0.7nm,0.3s,baz=153,slow=14,SNR=21						
KSRS				LR	LR	14 45 31.3	
	comp=Z,26nm,18.1s,baz=30,slow=32						
INU	Inuyama	5.64	58	Pn	Pn	14 43 53.9	+0.3
KS19	Wonju Array Si	5.65	333	Pn	Pn	14 43 52.9	-0.9
JGF	Kuroka	6.00	57	Pn	Pn	14 43 58.5	-0.1
JOW	Kunigami	6.19	205	Pn	Pn	14 44 00.1	-1.0
JMZ	Minamidaito 2	6.67	179	Pn	Pn	14 44 06.0	-1.6
MAJO	Matsushiro	7.08	53		Pn	14 44 13.8	+0.8
MAT	Matsushiro	7.08	53	P	Pn	14 44 13.1	+0.2
MAT				eS	Sn	14 45 30.7	-1.3
MJAR	Matsushiro Arr	7.08	53	P	Pn	14 44 14.8	+1.9
	0.3nm,0.3s,baz=241,slow=14,SNR=22						
MJAR				S	Sn	14 45 25.0	-7.0
	baz=218,slow=14,SNR=4.7						
JHJ	Hachijo jima 2	7.30	83	P	Pn	14 44 18.3	+2.4
	18nm,0.3s,baz=131,slow=7.1,SNR=6.7						
JHJ2	Mitsune	7.32	83	Pn	Pn	14 44 18.1	+1.8
KLR	Kul'dur	16.70	1	P	P	14 46 20.0	+2.2
	0.1nm,0.3s,baz=183,slow=7.3,SNR=6.1						
HHC	Hu-ho-hao-te	17.75	303	eP	Pn	14 46 31.0	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,43nm,7.6s						
ENH	Enshi	18.62	269	P	P	14 46 38.6	-0.4
ENH				IAmb	IAmb	14 46 45.2	
	comp=Z,11nm,0.9s						
LZH	Lanzhou	22.80	287	⇓P	P	14 47 21.0	-2.3
LZH				pP	pP	14 47 48.1	-0.8
LZH				PP	PnPn	14 47 56.8	+0.6
LZH				sP	sP	14 48 04.5	-1.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,53nm,4.7s						
ULN	Ulaanbaatar	23.82	317	P	P	14 47 31.2	-1.2
ULN				IAmb	IAmb	14 47 34.6	
	comp=Z,6.6nm,0.8s						
SONM	Songino Array	24.18	316	P	P	14 47 35.3	-0.4
	comp=Z,4.6nm,0.8s,baz=132,slow=6.4,SNR=33						
SONM				pP	pP	14 48 04.6	+1.1
	comp=Z,0.4nm,0.7s,baz=129,slow=9.6,SNR=1.5						
GTA	Gaotai	26.19	294	eP	P	14 47 56.3	+2.3
GTA				pP	pP	14 48 22.0	-0.8
GTA				sP	sP	14 48 37.9	-0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	32.12	252	P	P	14 48 46.6	+0.1
	comp=Z,0.5nm,0.3s,baz=58,slow=4.8,SNR=8.2						
WMQ	Urumqi	35.60	301	eP	P	14 49 16.5	0.0
WMQ				pP	pP	14 49 44.9	-1.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.3s						
ZALV	Zalesovo Beam	39.07	317	PcP	PcP	14 51 51.9	-0.6
	comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=4.6						
MK31	Makanchi Array	39.59	306	P	P	14 49 48.9	-1.0
MKAR	Makanchi Array	39.59	306	P	P	14 49 49.1	-0.8
	comp=Z,1.2nm,0.8s,baz=94,slow=10,SNR=13						
MAKZ	Makanchi	39.80	306	P	P	14 49 50.5	-1.2
GSI	Gunungsitoli	44.28	232	P	P	14 50 27.6	-0.7
KSH	Kashi	44.58	295	P	P	14 50 33.8	+3.2
KSH				sP	sP	14 51 20.8	+4.3
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,380nm,4.4s						
MTN	Manton Dam	45.10	180	P	P	14 50 33.9	-0.8
BRVK	Borovoye	47.56	314	P	P	14 50 53.1	-0.4
BRVK				IAmb	IAmb	14 50 53.8	
	comp=Z,5.5nm,1.2s						
KK31	Karatay Array	48.11	301	P	P	14 50 56.8	-1.2
KK31				IAmb	IAmb	14 50 58.4	
	comp=Z,5.8nm,1.3s						
KKAR	Karatay Array	48.11	301	P	P	14 50 57.6	-0.3
KKAR				IAmb	IAmb	14 50 58.4	
	comp=Z,5.8nm,1.3s						
HNR	Honiara	49.96	142	P	P	14 51 12.7	+0.5
FITZ	Fitzroy Crossi	50.60	187	P	P	14 51 16.7	-0.3
FITZ				IAmb	IAmb	14 51 24.0	
	comp=Z,7.6nm,1.1s						
WRA	Warramunga Arr	52.25	176	P	P	14 51 28.3	-1.0
	comp=Z,0.8nm,0.8s,baz=352,slow=7.9,SNR=4.8						
WR0	Warramunga Arr	52.28	176	P	P	14 51 29.1	-0.4
ABKAR	Akbulak array	54.37	310	P	P	14 51 44.6	+0.1
PSA00	Pilbara Seismi	54.86	193	P	P	14 51 47.7	-0.5
ASAR	Alice Springs	55.93	177	P	P	14 51 55.7	-0.2
	comp=Z,0.7nm,0.6s,baz=10.0,slow=14,SNR=14						
ASAR				S	S	14 59 34.8	+1.5
	comp=Z,0.1nm,0.4s,baz=354,slow=3.5,SNR=5.2						
MDM	Murphy Dome	57.13	30	P	P	14 52 05.3	+1.3
MDM				IAmb	IAmb	14 52 17.7	
	comp=Z,5.6nm,1.4s						
SEW	Seward	57.26	36	P	P	14 52 05.3	+0.5
ILAR	Eielson Array	57.73	30	P	P	14 52 08.6	+0.5
	comp=Z,0.2nm,0.6s,baz=291,slow=7.6,SNR=1.7						
C36M	Paulatuk	64.93	22	P	P	14 52 57.1	+0.7
C36M				IAmb	IAmb	14 53 17.3	
	comp=Z,2.4nm,1.2s						
EUNU	Eureka	65.77	7	P	P	14 53 01.5	-0.3
EUNU				IAmb	IAmb	14 53 12.1	
	comp=Z,5.4nm,1.4s						
FINES	FINESS Array B	68.68	330	P	P	14 53 19.0	-1.3
	comp=Z,1.1nm,0.5s,baz=67,slow=5.0,SNR=4.6						
RES	Resolute Bay	68.91	12	P	P	14 53 21.7	+0.2
RES				IAmb	IAmb	14 53 37.7	
	comp=Z,6.6nm,1.4s						
YKA	Yellowknife Ar	71.78	26	P	P	14 53 39.1	-0.1
	comp=Z,0.1nm,0.7s,baz=304,slow=5.6,SNR=2.1						
YKA				pP	pP	14 54 14.5	+1.9
	comp=Z,0.8nm,0.8s,baz=307,slow=5.9,SNR=7.7						
GERES	GERESS Array B	81.70	324	P	P	14 54 34.0	-1.2
	comp=Z,0.8nm,0.7s,baz=23,slow=5.3,SNR=2.6						
NVAR	Mina Array Bea	84.36	48	P	P	14 54 51.0	+1.7
	comp=Z,0.3nm,0.7s,baz=215,slow=47,SNR=2.3						
NVAR				pP	pP	14 55 25.4	+1.4
	comp=Z,0.3nm,0.6s,baz=275,slow=3.8,SNR=4.8						
VNA2	Neumayer--Watz	135.51	198	PKiKP	PKiKP	15 01 37.7	+1.3

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*JMA **05** 14:49:23.0±0.1, 37°.42N×141°.74E, h41^{km}±2^{km}, M3.6*
JMA Felt I J1.
*IDC **05** 14:49:23.9±2.6, 37°.52N×141°.76E, h53^{km}±26^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.1/37, mbtmp3.6/5, ML2.9/3, MS2.6/3, Ms1 2.6/3, ms1mx2.4/23, Error ellipse: s-maj=42.4km*

s-min=17.4km az=99.0

NIED ***05*** *14:49:23.1, 37°.42N×141°.74E, h41^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.43; M$_{\theta\theta}$-0.45; M$_{\phi\phi}$-1.98; M$_{r\theta}$-2.74; M$_{\theta\phi}$1.23; M$_{\phi r}$2.33; Fault plane solution: M$_0$4.41000×10^{14} NP1: ϕ_s314.00000°, δ73.00000°, λ79.00000°. NP2: ϕ_s167.00000°, δ20.00000°, λ122.00000°.*

ISC 05 14:49:21.7±1.9**, 37°.42N**±0°.05×**141°.78E**±0°.09**, h32**^{km}±13^{km}**, n25, σ1^{s}13**/31**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.72**	**266**	P	**Pn**	**14 49 36.4**	**+0.7**
JFK				*e*S	**Sb**	**14 49 45.9**	**+0.4**
JMST	**Minamisoumatoc**	**0.77**	**294**	P	**Pn**	**14 49 37.0**	**+0.7**
JMST				S	**Sb**	**14 49 46.8**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.84**	**248**	P	**Pb**	**14 49 38.0**	**+0.1**
ONAJ				*e*S	**Sb**	**14 49 48.8**	**-0.1**
JMM	**Marumori**	**0.90**	**300**	P	**Pb**	**14 49 39.0**	**+0.2**
JMM				*e*S	**Sb**	**14 49 50.1**	**-0.4**
JIKH	**Ishinomakikobu**	**0.93**	**345**	P	**Pb**	**14 49 39.5**	**+0.3**
JIKH				*e*S	**Sb**	**14 49 51.2**	**0.0**
JIO	**Ouri**	**1.09**	**342**	P	**Pb**	**14 49 41.9**	**-0.1**
JIO				S	**Sn**	**14 49 54.7**	**0.0**
JFT	**Otama**	**1.15**	**275**	P	**Pb**	**14 49 43.2**	**+0.2**
JFT				*e*S	**Sb**	**14 49 57.5**	**-0.2**
JHO	**Hitachi**	**1.26**	**231**	P	**Pn**	**14 49 43.5**	**+0.4**
JOU	**Okura**	**1.29**	**317**	P	**Pb**	**14 49 45.4**	**0.0**
JOU				*e*S	**Sb**	**14 50 01.6**	**-0.1**
JYS	**Shirataka**	**1.57**	**301**	P	**Pb**	**14 49 50.1**	**-0.1**
JMK	**Ichinoseki**	**1.59**	**344**	P	**Pb**	**14 49 49.6**	**-0.9**
JFY	**Yanaizu**	**1.65**	**270**	P	**Pn**	**14 49 50.4**	**+1.9**
JFY				S	**Sb**	**14 50 10.9**	**-1.0**
MJAR	**Matsushiro Arr**	**2.99**	**254**	P	**Pn**	**14 50 09.3**	**+2.4**
	0.3nm,0.3s,baz=77,slow=16,SNR=8.6						
MJAR				S	**Sb**	**14 50 49.6**	**-0.7**
	0.6nm,0.3s,baz=124,slow=16,SNR=5.1						
MJAR				LR	LR	14 51 32.6	
	comp=Z,101nm,19.1s,baz=55,slow=43						
MAT	**Matsushiro**	**2.99**	**254**	P	**Pn**	**14 50 06.2**	**-0.7**
MAT				S	**Sb**	**14 50 47.4**	**-2.9**
JHJ	**Hachijo jima 2**	**4.59**	**201**	P	**Pn**	**14 50 31.0**	**+2.1**
	10nm,0.3s,baz=322,slow=17,SNR=9.6						
JHJ				S	**Sn**	**14 51 20.5**	**-0.6**
	9.8nm,0.3s,baz=284,slow=23,SNR=1.7						
JHJ				LR	LR	14 52 23.3	
	comp=Z,127nm,19.6s,baz=72,slow=38						
ASAJ	**Asahikawa**	**6.72**	**5**	P	**Pn**	**14 51 00.1**	**+2.0**
	0.2nm,0.3s,baz=246,slow=20,SNR=1.0						
ASAJ				S	**Sn**	**14 52 12.5**	**-1.0**
	0.3nm,0.3s,baz=204,slow=22,SNR=1.3						
KSRS	**Korea Array**	**11.02**	**274**	LR	LR	14 55 30.8	
	comp=Z,19nm,21.1s,baz=40,slow=33						
H11N2	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	15 25 18.7	
	baz=314,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	15 25 35.0	
	baz=314,slow=75,SNR=9.5						
H11N3	**WAKE ISLAND Hy**	**28.12**	**122**	T	T	15 25 24.1	
	baz=314,slow=75,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	15 25 39.9	
	baz=316,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	15 25 35.9	
	baz=316,slow=76,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**28.84**	**124**	T	T	15 25 31.8	
	baz=316,slow=76,SNR=6.2						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**14 57 26.3**	**-1.0**
	0.3nm,0.5s,baz=74,slow=9.2,SNR=5.0						
WRA	**Warramunga Arr**	**57.48**	**188**	P	**P**	**14 59 08.5**	**+0.8**
	0.3nm,0.4s,baz=6.4,slow=7.3,SNR=12						

IDC ***05*** *15:10:08.0±2.8, 6°.45S×129°.99E, h138^{km}±36^{km}, mb3.3/2, mb1 3.4/5, mb1mx3.2/33, mbtmp3.8/5, Error ellipse: s-maj=81.6km s-min=21.9km az=92.0*

NOU ***05*** *15:10:19.1, 7°.36S×130°.34E, h162^{km}, mb3.8, Tanimbar Islands Reg., Indonesia*

ISC 05 15:10:06.3±0.8**, 6°.55S**±0°.06×**130°.9E**±0°.3**, h150**^{km}**, n6, σ2^{s}61**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.66**	**4**	P	**Pn**	**15 11 30.3**	**+1.8**
	3.3nm,0.3s,baz=194,slow=22,SNR=15						
SIJI				S	**Sn**	**15 12 29.6**	**-3.2**
	5.8nm,0.3s,baz=271,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**12.56**	**204**	P	**Pn**	**15 12 59.2**	**-0.7**
	0.2nm,0.3s,baz=29,slow=8.4,SNR=6.9						
FITZ				S	Sn	15 15 07.6	-11
	0.6nm,0.3s,baz=184,slow=17,SNR=6.5						
WRA	**Warramunga Arr**	**13.73**	**166**	P	**P**	**15 13 17.3**	**-1.2**
	0.3nm,0.3s,baz=333,slow=14,SNR=14						
WRA				S	**Sn**	**15 15 45.4**	**-1.6**
	0.9nm,0.3s,baz=335,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.27**	**171**	P	**Pn**	**15 14 03.0**	**+4.5**
	0.4nm,0.3s,baz=350,slow=11,SNR=45						
ASAR				S	**S**	**15 17 08.8**	**-1.2**
	0.2nm,0.3s,baz=357,slow=28,SNR=5.3						
SONM	**Songino Array**	**58.30**	**341**	P	**P**	**15 19 46.2**	**+0.8**
	0.2nm,0.4s,baz=163,slow=7.4,SNR=2.0						
MKAR	**Makanchi Array**	**68.33**	**326**	P	**P**	**15 20 50.5**	**-0.8**
	0.5nm,0.3s,baz=115,slow=8.0,SNR=14						

JMA ***05*** *15:10:57.9±0.6, 30°.62N×142°.18E, h37^{km}, M4.0*

IDC ***05*** *15:10:57.3±0.9, 30°.56N×142°.04E, h0^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.6/41, mbtmp3.6/10, ML3.1/3, Error ellipse: s-maj=27.3km s-min=17.5km az=86.0*

NEIC ***05*** *15:10:59.3±1.8, 30°.58N±0°.06×142°.00E±0°.08, h14^{km}±4^{km}, mb4.4/14, Error ellipse: s-maj=10.7km s-min=7.6km az=113.0*

ISC 05 15:10:60.0±0.6**, 30°.59N**±0°.05×**142°.13E**±0°.09**, h23**^{km}**, n39, σ1^{s}49**/43**, mb4.0**/12**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.19**	**323**	P	**Pn**	**15 11 47.4**	**-1.4**
JHJ2	**Mitsune**	**3.19**	**323**	Pn	**Pn**	**15 11 47.8**	**-0.9**
JHJ	**Hachijo jima 2**	**3.22**	**322**	Pn	**Pn**	**15 11 47.1**	**-2.0**
	4.3nm,0.3s,baz=153,slow=18,SNR=2.6						
JHJ				Sn	**Sn**	**15 12 24.6**	**-2.1**
	14nm,0.3s,baz=85,slow=22,SNR=1.3						
JCJ	**Chichijima**	**3.48**	**179**	Pn	**Pn**	**15 11 52.5**	**-0.3**
	5.5nm,0.3s,baz=299,slow=19,SNR=2.0						
JCJ				Sn	**Sn**	**15 12 30.6**	**-2.6**
	7.9nm,0.3s,baz=39,slow=17,SNR=2.3						
JCJ	**Chichijima**	**3.48**	**179**	Pn	**Pn**	**15 11 53.1**	**+0.4**
BSO1	**Boso 1**	**4.17**	**347**	P	**Pn**	**15 12 01.0**	**-0.6**
BSO3	**Boso 3**	**4.42**	**342**	P	**Pn**	**15 12 04.6**	**-0.7**
JYT	**Yasato**	**5.85**	**344**	Pn	**Pn**	**15 12 24.7**	**-0.5**
JRY	**Ryogami san**	**6.05**	**334**	*e*S	**Sn**	**15 13 35.3**	**-1.3**
JHO	**Hitachi**	**6.14**	**348**	P	**Pn**	**15 12 28.3**	**-1.0**
JHO				*e*S	**Sn**	**15 13 35.1**	**-3.8**
JGF	**Kuroka**	**6.40**	**323**	Pn	**Pn**	**15 12 35.1**	**+2.2**
MJAR	**Matsushiro Arr**	**6.78**	**332**	Pn	**Pn**	**15 12 39.5**	**+1.4**
	0.2nm,0.3s,baz=148,slow=11,SNR=13						
MJAR				Sn	**Sn**	**15 13 54.7**	**+0.2**
	0.1nm,0.3s,baz=230,slow=29,SNR=4.3						
MAJO	**Matsushiro**	**6.78**	**332**		**Pn**	**15 12 39.5**	**+1.5**
JMM	**Marumori**	**7.34**	**352**		**Pn**	**15 12 44.8**	**-0.9**
JMK	**Ichinoseki**	**8.38**	**355**	P	**Pn**	**15 12 58.6**	**-1.3**
JTM	**Tenmabayashi**	**10.21**	**355**	Pn	**Pn**	**15 13 25.2**	**+0.1**
ERM	**Erimo**	**11.43**	**4**	Pn	**Pn**	**15 13 38.6**	**-3.2**
YULB	**Yu-li**	**19.88**	**254**	Pn	**Pn**	**15 15 30.3**	**-1.2**
YULB				IAmb	IAmb	15 15 34.6	
	comp=Z,28nm,1.4s						
TPUB	**Ta-pu**	**20.48**	**254**	P	**P**	**15 15 35.4**	**-0.8**
TPUB				IAmb	IAmb	15 16 03.3	
	comp=Z,34nm,1.4s						
CMAR	**Chiang Mai Arr**	**40.88**	**263**	P	**P**	**15 18 39.8**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=27,slow=8.2,SNR=2.2						
HNR	**Honiara**	**43.32**	**154**	P	**P**	**15 19 00.8**	**+0.6**
MK31	**Makanchi Array**	**48.27**	**307**	P	**P**	**15 19 40.1**	**+0.9**
MKAR	**Makanchi Array**	**48.27**	**307**	P	**P**	**15 19 40.5**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=90,slow=9.0,SNR=6.5						
MAKZ	**Makanchi**	**48.49**	**307**	P	**P**	**15 19 41.8**	**+1.0**
WB0	**Warramunga Arr**	**50.62**	**189**	P	**P**	**15 19 57.8**	**+0.6**
WB0				IAmb	IAmb	15 20 10.8	
	comp=Z,9.9nm,1.4s						
WR0	**Warramunga Arr**	**50.78**	**189**	P	**P**	**15 19 59.0**	**+0.5**
WR0				IAmb	IAmb	15 20 10.3	
	comp=Z,6.1nm,1.2s						
WB2	**Warramunga Arr**	**50.80**	**189**	P	**P**	**15 19 59.1**	**+0.6**
WB2				IAmb	IAmb	15 20 19.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**50.80**	**189**	P	**P**	**15 19 59.1**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=7.5,slow=7.7,SNR=13						
GSI	**Gunungsitoli**	**51.26**	**244**	P	**P**	**15 20 00.2**	**-2.1**
PPLA	**Purkeypile**	**52.21**	**32**	P	**P**	**15 20 10.6**	**+1.7**
ASAR	**Alice Springs**	**54.52**	**189**	P	**P**	**15 20 26.7**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=6.8,slow=5.5,SNR=7.7						
ILAR	**Eielson Array**	**54.70**	**30**	P	**P**	**15 20 27.8**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=255,slow=5.5,SNR=3.0						
FORT	**Forrest**	**62.48**	**194**	P	**P**	**15 21 23.2**	**+1.7**
ABKAR	**Akbulak array**	**62.66**	**313**	P	**P**	**15 21 23.6**	**+1.0**
ABKAR				IAmb	IAmb	15 21 26.9	
	comp=Z,0.9nm,0.6s						
EUNU	**Eureka**	**66.46**	**8**	P	**P**	**15 21 48.0**	**+0.9**
EUNU				IAmb	IAmb	15 21 55.0	
	comp=Z,2.6nm,1.2s						
YKA	**Yellowknife Ar**	**69.11**	**29**	P	**P**	**15 22 04.7**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=286,slow=4.4,SNR=2.1						
NLWA	**Neilton Lookou**	**70.69**	**46**	P	**P**	**15 22 12.3**	**-1.7**
NVAR	**Mina Array Bea**	**78.41**	**52**	P	**P**	**15 23 01.2**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=292,slow=5.6,SNR=5.6						
MCMT	**McKenzie Canyo**	**78.65**	**45**	P	**P**	**15 23 01.7**	**+1.2**

BJI ***05*** *15:16:21.9±0.0, 30°.51N×142°.18E, h12^{km}, mB5.3/62, mb5.1/86, Ms5.2/93, Ms7 5.1/89*

IDC ***05*** *15:16:24.9±0.4, 30°.60N×142°.04E, h0^{km}, mb4.9/30, mb1 5.0/34, mb1mx4.9/40, mbtmp4.9/34, ML4.6/4, MS4.8/35, Ms1 4.8/35, ms1mx4.7/41, Error ellipse: s-maj=14.5km s-min=9.2km az=82.0*

JMA ***05*** *15:16:25.5±0.2, 30°.65N×142°.30E, h51^{km}, M5.5*

NIED ***05*** *15:16:25.6, 30°.65N×142°.30E, h51^{km}, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.81; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$-0.80; M$_{r\theta}$-0.44; M$_{\theta\phi}$0.17; M$_{\phi r}$0.43; Fault plane solution: M$_0$1.03000×10^{17} NP1: ϕ_s330.00000°, δ63.00000°, λ73.00000°. NP2: ϕ_s184.00000°, δ31.00000°, λ120.00000°.*

NOU ***05*** *15:16:26.0, 30°.57N×142°.05E, h4^{km}, mb5.4, Southeast of Honshu, Japan*

MOS ***05*** *15:16:27.4±1.5, 30°.60N×142°.04E, h31^{km}, mb5.4/84, MS5.0/21, Error ellipse: s-maj=6.9km s-min=3.6km az=116.1*

NEIC ***05*** *15:16:27.8±1.8, 30°.61N±0°.05×142°.19E±0°.09, h31^{km}±3^{km}, mb5.3/154, Error ellipse: s-maj=11.3km s-min=7.7km az=80.0*

GCMT ***05*** *15:16:28.8±0.1, 30°.52N±0°.01×142°.13E±0°.01, h12^{km}, MW5.2/142, Moment Tensor Solution. s91, c141; s142, c261; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.90±.01; M$_{\theta\theta}$0.08±.01; M$_{\phi\phi}$-0.97±.01; M$_{r\theta}$-0.01±.03; M$_{\theta\phi}$0.09±.01; M$_{\phi r}$0.09±.03; Best double couple: M$_0$0.94300×10^{17} NP1: ϕ_s176.00000°, δ42.00000°, λ90.00000°. NP2: ϕ_s355.00000°, δ48.00000°, λ90.00000°. Principal axes: T 0.9010, Plg87.0000°, Azm260.0000°; N 0.0840, Plg0.0000°, Azm355.0000°; P -0.9840, Plg3.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***05*** *15:16:34.7±0.0, 30°.63N×141°.30E, h33^{km}, mb5.2*

ISC 05 15:16:27.8±0.5**, 30°.61N**±0°.03×**142°.19E**±0°.03**, h29**^{km}±2^{km}**, h28**^{km}**:pP-P, n889, σ1^{s}83**/975**, mb5.3**/269**, MS4.9**/78**, 67C-44D, Fault plane solution: NP1:**ϕ_s179.92879°**,** δ18.33048°, λ95.21579°. **NP2:**ϕ_s354.43585°, δ71.74810°, λ88.27487°. **Principal axes:** T Plg63.2132°, Azm261.7285°**;** N Plg1.6383°, Azm354.9763°**;** P Plg26.7286°**,** Azm85.8016°**; Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**2.78**	**312**	P	**Pn**	**15 17 09.7**	**-0.8**
JHCJ	**Hachijojimakas**	**3.19**	**321**	P	**Pn**	**15 17 14.7**	**-1.4**
JHJ2	**Mitsune**	**3.21**	**322**	P	**Pn**	**15 17 14.8**	**-1.6**
JHJ2				*e*S	**Sn**	**15 17 51.9**	**-1.8**
JHJ2	**Mitsune**	**3.21**	**322**	Pn	**Pn**	**15 17 15.8**	**-0.6**
JHJ	**Hachijo jima 2**	**3.24**	**321**	Pn	**Pn**	**15 17 15.7**	**-1.0**
	78nm,0.3s,baz=283,slow=18,SNR=26						
JHJ				Sn	**Sn**	**15 17 52.5**	**-1.9**
	130nm,0.3s,baz=99,slow=22,SNR=7.1						
JHJ				LR	LR	15 18 34.7	
	comp=Z,12µm,20.1s,baz=138,slow=41						
CBIJ	**Chichi jima**	**3.50**	**180**	P	**Pn**	**15 17 19.3**	**-1.0**
CBIJ				*e*S	**Sn**	**15 17 59.3**	**-1.4**
JCJ	**Chichijima**	**3.50**	**180**	Pn	**Pn**	**15 17 19.7**	**-0.6**
	128nm,0.3s,baz=4.3,slow=18,SNR=28						
JCJ				Sn	**Sn**	**15 17 59.5**	**-1.3**
	257nm,0.3s,baz=240,slow=23,SNR=10.0						
JCJ				LR	LR	15 19 00.2	
	comp=Z,15µm,19.1s,baz=3.5,slow=44						
JCJ	**Chichijima**	**3.50**	**180**	Pn	**Pn**	**15 17 19.3**	**-1.1**
JMKN	**Mikurajimanish**	**3.95**	**327**	P	**Pn**	**15 17 25.3**	**-1.2**
JHH2	**Haha-jima-NKT2**	**3.96**	**180**	P	**Pn**	**15 17 26.9**	**+0.2**
BSO1	**Boso 1**	**4.17**	**346**	P	**Pn**	**15 17 29.2**	**+0.2**
JSG	**Sagara**	**5.28**	**321**		**Pn**	**15 17 44.5**	**-0.3**
JOD2	**Odawara 2**	**5.33**	**331**	P	**Pn**	**15 17 44.9**	**-0.6**
TTO1	**TONANKAI O.B.S**	**5.49**	**305**	P	**Pn**	**15 17 49.4**	**+2.0**
JYT	**Yasato**	**5.85**	**344**	Pn	**Pn**	**15 17 51.3**	**-1.3**
JIE	**Ise**	**5.98**	**311**	P	**Pn**	**15 17 54.6**	**+0.2**
JRY	**Ryogami san**	**6.06**	**334**	P	**Pn**	**15 17 54.9**	**-0.6**
JRY				*e*S	**Sn**	**15 19 03.4**	**-0.5**
JGF	**Kuroka**	**6.42**	**322**	Pn	**Pn**	**15 18 00.9**	**+0.4**
INU	**Inuyama**	**6.42**	**319**	Pn	**Pn**	**15 18 00.8**	**+0.2**
JTNC	**Tanabenakahech**	**6.43**	**302**	P	**Pn**	**15 18 01.0**	**+0.3**
JKT	**Katashina**	**6.62**	**339**	P	**Pn**	**15 18 03.2**	**0.0**
MJAR	**Matsushiro Arr**	**6.79**	**332**	Pn	**Pn**	**15 18 06.5**	**+0.9**
	6.5nm,0.3s,baz=162,slow=11,SNR=377						
MJAR				Sn	**Sn**	**15 19 21.4**	**-0.5**
	0.8nm,0.3s,baz=162,slow=18,SNR=7.2						
MJAR				LR	LR	15 20 34.2	
	comp=Z,6µm,19.3s,baz=150,slow=37						
MAJO	**Matsushiro**	**6.79**	**332**	*c i*P	**Pn**	**15 18 06.4**	**+0.8**
MAJO	**Matsushiro**	**6.79**	**332**	Pn	**Pn**	**15 18 05.4**	**-0.2**
MAT	**Matsushiro**	**6.79**	**332**	S	**Sn**	**15 19 20.6**	**-1.3**
MAT	**Matsushiro**	**6.79**	**332**	P	**Pn**	**15 18 06.6**	**+1.0**
MAT	**Matsushiro**	**6.79**	**332**	P	**Pn**	**15 18 06.3**	**+0.7**
MJB9	**Matsu-Tunnel**	**6.79**	**332**	Pn	**Pn**	**15 18 05.1**	**-0.5**
JGN	**Niukaw**	**6.93**	**325**	P	**Pn**	**15 18 10.0**	**+2.5**
JMM	**Marumori**	**7.33**	**351**	Pn	**Pn**	**15 18 11.1**	**-1.9**
JWT	**Wachi**	**7.37**	**311**	Pn	**Pn**	**15 18 14.8**	**+1.3**
JMN	**Monobe**	**7.71**	**296**		**Pn**	**15 18 19.6**	**+1.4**
JSD	**Sado**	**8.09**	**337**	Pn	**Pn**	**15 18 22.1**	**-1.3**
JMK	**Ichinoseki**	**8.37**	**355**	P	**Pn**	**15 18 25.0**	**-2.1**
JMK				*e*S	**Sn**	**15 19 52.5**	**-8.1**
JHS	**Saijyo**	**8.80**	**302**	P	**Pn**	**15 18 36.8**	**+3.6**
JHS	**Saijyo**	**8.80**	**302**	Pn	**Pn**	**15 18 32.1**	**-1.1**
JNU	**Nakatsue**	**9.94**	**288**	Pn	**Pn**	**15 18 53.0**	**+4.2**
	0.6nm,0.3s,baz=92,slow=8.5,SNR=7.0						
JNU				LR	LR	15 22 19.5	
	comp=Z,4µm,21.1s,baz=102,slow=36						
JSU	**Suzuyama**	**10.11**	**278**		**Pn**	**15 18 51.1**	**0.0**
JTM	**Tenmabayashi**	**10.20**	**355**		**Pn**	**15 18 50.7**	**-1.6**
JMZ	**Minamidaito 2**	**10.79**	**246**	P	**Pn**	**15 19 02.6**	**+2.2**
JMZ	**Minamidaito 2**	**10.79**	**246**		**Pn**	**15 18 59.9**	**-0.5**
JOT	**Ohata**	**10.79**	**355**	P	**Pn**	**15 18 59.4**	**-1.0**
JOT				*e*S	**Sn**	**15 20 54.5**	**-5.7**
JKB	**Kayabe**	**11.30**	**356**	P	**Pn**	**15 19 05.7**	**-1.6**
JKB				*e*S	**Sn**	**15 21 04.0**	**-8.5**
ERM	**Erimo**	**11.41**	**4**	P	**Pn**	**15 19 05.4**	**-3.5**
ERM	**Erimo**	**11.41**	**4**	Pn	**Pn**	**15 19 05.3**	**-3.5**
JEW	**Eniwo**	**12.23**	**357**	Pn	**Pn**	**15 19 17.3**	**-2.6**
NMR	**Nemuro--Hokkai**	**13.05**	**11**	*e*P	**Pn**	**15 19 26.8**	**-4.4**
JKA	**Kamikawa-asahi**	**13.49**	**1**		**Pn**	**15 19 34.0**	**-3.2**
JKA	**Kamikawa-asahi**	**13.49**	**1**		Sn	15 21 55.7	-10
ASAJ	**Asahikawa**	**13.49**	**1**	Pn	**Pn**	**15 19 34.8**	**-2.4**
	2.2nm,0.3s,baz=219,slow=11,SNR=21						
ASAJ				Sn	Sn	15 21 55.7	-10
	1.0nm,0.3s,baz=15,slow=20,SNR=1.7						
ASAJ				LR	LR	15 25 29.6	
	comp=Z,3µm,21.1s,baz=190,slow=40						
TJN	**Taejon**	**13.64**	**299**	⇓*e*P	**Pn**	**15 19 40.8**	**+1.4**
KSRS	**Korea Array**	**13.66**	**304**	Pn	**Pn**	**15 19 41.5**	**+1.9**
	0.6nm,0.3s,baz=112,slow=12,SNR=25						
KSRS				LR	LR	15 24 38.1	
	comp=Z,3µm,20.4s,baz=112,slow=36						
GRPR	**Tuman**	**13.66**	**11**	*e*P	**Pn**	**15 19 35.5**	**-4.1**
GRPR				pmax	pmax		
	comp=Z,67nm,0.4s						
GRPR				pmax	pmax		
	comp=N,57nm,0.1s						
RUSJ	**Misakicho**	**13.69**	**9**	*e*P	**Pn**	**15 19 37.5**	**-2.5**
KS19	**Wonju Array Si**	**13.72**	**304**		**Pn**	**15 19 41.9**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**13.72**	**11**	*e*P	**Pn**	**15 19 36.3**	**-4.0**
YUK				pmax	pmax		
	comp=Z,87µm,0.6s						
YUK				pmax	pmax		
	comp=N,34µm,0.2s						
YUK				pmax	pmax		
	comp=E,49µm,0.3s						
INCN	**Inchon**	**14.60**	**302**	P	**Pn**	**15 19 52.5**	**0.0**
INCN	**Inchon**	**14.60**	**302**	Pn	**Pn**	**15 19 52.5**	**0.0**
INCN	**Inchon**	**14.60**	**302**	P	**P**	**15 19 55.8**	**-2.8**
INCN				P	**P**	**15 19 55.8**	**-2.8**
MSHR	**Mys Shultsa**	**14.86**	**327**	⇑*e*P	**Pn**	**15 19 53.5**	**-2.4**
MSHR				pmax	pmax		
	comp=Z,100nm,1.7s						
TEY	**Ternei**	**15.06**	**345**	⇑*e*P	**Pn**	**15 19 55.1**	**-3.5**
TEY				*e*		15 22 46.1	
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
TEY				MLR	MLR		
	comp=E,300nm,12.0s						
TEY				MLR	MLR		
	comp=N,200nm,13.0s						
TEY				MLR	MLR		
	comp=Z,300nm,14.0s						
KUR	**Kuril'sk**	**15.27**	**15**	P	**Pn**	**15 19 58.5**	**-2.8**
KUR				pmax	pmax		
	comp=Z,69nm,0.7s						
KUR				pmax	pmax		
	comp=Z,1µm,3.0s						
KUR				MLR	MLR		
	comp=Z,3µm,11.0s						
KUR				MLR	MLR		
	comp=N,4µm,10.0s						
KUR				MLR	MLR		
	comp=E,3µm,8.0s						
USA0B	**Ussuriysk Arra**	**15.79**	**332**	⇓*e*P	**Pn**	**15 20 07.1**	**-1.0**
USA0B	**Ussuriysk Arra**	**15.79**	**332**		**Pn**	**15 20 06.3**	**-1.8**
USRK	**Ussuriysk Ar.**	**15.79**	**332**	Pn	**Pn**	**15 20 07.1**	**-1.0**
	baz=149,slow=12,SNR=26						
USRK				LR	LR	15 25 46.7	
	comp=E,2µm,19.8s,baz=138,slow=36						
YSS	**Yuzh-Sakhalins**	**16.33**	**1**	κ*e*P	**Pn**	**15 20 13.0**	**-2.0**
YSS				*e*S	**Sn**	**15 23 18.9**	**+3.7**
YSS				pmax	pmax		
	comp=Z,400nm,2.6s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
YSS				MLR	MLR		
	comp=E,4µm,15.0s						
YSS	**Yuzh-Sakhalins**	**16.33**	**1**	P	**Pn**	**15 20 13.0**	**-2.0**
GUMO	**Guam**	**17.11**	**171**	P	**P**	**15 20 26.5**	**0.0**
	comp=E,3.3nm,0.3s,baz=315,slow=2.7,SNR=11						
GUMO				LR	LR	15 26 45.5	
	comp=E,3µm,18.6s,baz=353,slow=36						
MDJ	**Mudanjiang**	**17.15**	**328**	P	**Pn**	**15 20 22.4**	**-3.0**
MDJ				S	**Sn**	**15 23 34.7**	**-0.5**
MDJ				pmax	pmax		
	comp=E,41nm,2.1s						
MDJ				LR	LR		
	comp=E,2µm,17.4s						
MDJ				LR	LR		
	comp=E,5µm,16.3s						
MDJ				LR	LR		
	comp=E,6µm,19.3s						
MDJ	**Mudanjiang**	**17.15**	**328**	Pn	**Pn**	**15 20 23.3**	**-2.1**
SSE	**Sheshan**	**18.05**	**277**	P	**Pn**	**15 20 36.5**	**0.0**
SSE				S	**Sn**	**15 23 57.3**	**+0.3**
SSE				pmax	pmax		
	comp=E,45nm,0.9s						
SSE				pmax	pmax		
	comp=E,560nm,6.9s						
SSE				LR	LR		
	comp=E,810nm,13.7s						
SSE				LR	LR		
	comp=E,2µm,18.4s						
YOJ	**Yonaguni jima**	**18.07**	**255**	P	**P**	**15 20 37.1**	**0.0**
YOJ				pmax	pmax		
	comp=Z,282nm,1.1s						
YOJ	**Yonaguni jima**	**18.07**	**255**	P	**P**	**15 20 37.1**	**0.0**
YOJ				IAmb	IAmb	15 20 40.0	
	comp=Z,282nm,1.1s						
UGL	**Uglegorsk**	**18.45**	**360**	⇑*i*P	**Pn**	**15 20 44.0**	**+2.7**
UGL				*e*S	**S**	**15 24 11.2**	**+1.2**
UGL				pmax	pmax		
	comp=E,171nm,1.0s						
UGL				pmax	pmax		
	comp=Z,176nm,1.0s						
UGL				pmax	pmax		
	comp=Z,2µm,4.9s						
UGL				pmax	pmax		
	comp=Z,1µm,6.0s						
UGL				smax	smax		
	comp=E,4µm,7.7s						
UGL				smax	smax		
	comp=N,4µm,5.8s						
SNY	**Shenyang**	**18.69**	**312**	⇓P	**P**	**15 20 42.1**	**-1.7**
SNY				S	**Sn**	**15 24 11.3**	**-1.2**
SNY				pmax	pmax		
	comp=N,44nm,1.7s						
SNY				pmax	pmax		
	comp=N,870nm,6.9s						
SNY				LR	LR		
	comp=N,6µm,14.9s						
SNY				LR	LR		
	comp=N,3µm,15.5s						
SNY				LR	LR		
	comp=N,5µm,14.7s						
CN2	**Changchun**	**18.70**	**319**	*e*P	**P**	**15 20 42.6**	**-1.2**
CN2				*e*PP	**pwP**	**15 20 58.8**	**+0.4**
CN2				*e*S	**Sn**	**15 24 08.7**	**-3.9**
CN2				*e*SS	**SnSn**	**15 24 33.7**	**+7.1**
CN2				pmax	pmax		
	comp=N,80nm,1.0s						
CN2				pmax	pmax		
	comp=N,950nm,4.5s						
CN2				LR	LR		
	comp=N,3µm,12.0s						
CN2				LR	LR		
	comp=N,3µm,12.0s						
CN2				LR	LR		
	comp=N,4µm,12.0s						
DL2	**Dalian**	**18.79**	**302**	P	**Pn**	**15 20 46.0**	**+0.5**
DL2				S	**S**	**15 24 19.2**	**+2.2**
DL2				pmax	pmax		
	comp=N,83nm,1.0s						
DL2				pmax	pmax		
	comp=N,1µm,5.8s						
DL2				LR	LR		
	comp=N,3µm,14.4s						
DL2				LR	LR		
	comp=N,5µm,15.0s						
DL2				LR	LR		
	comp=N,6µm,15.8s						
TATO	**Taipei**	**19.15**	**258**	P	**P**	**15 20 48.6**	**-0.3**
TATO				IAmb	IAmb	15 20 54.2	
	comp=Z,333nm,1.1s						
TATO	**Taipei**	**19.15**	**258**	P	**P**	**15 20 48.4**	**-0.5**
TATO				P	**P**	**15 20 48.4**	**-0.5**
YHNB	**Yeheng**	**19.36**	**257**	P	**P**	**15 20 50.3**	**-1.0**
YHNB				IAmb	IAmb	15 20 52.5	
	comp=Z,143nm,0.8s						
NACB	**Ninganchiao**	**19.37**	**256**	P	**P**	**15 20 50.0**	**-1.3**
NACB				IAmb	IAmb	15 20 52.5	
	comp=Z,83nm,0.8s						
YULB	**Yu-li**	**19.94**	**254**	P	**P**	**15 20 57.5**	**-0.1**
YULB				IAmb	IAmb	15 20 59.2	
	comp=Z,133nm,0.8s						
NJ2	**Nanjing**	**19.99**	**280**	⇑P	**P**	**15 20 56.8**	**-1.2**
NJ2				pP	**sP**	**15 21 05.9**	**-0.8**
NJ2				sP	**pwP**	**15 21 10.5**	**-1.4**
NJ2				PP	**PnPn**	**15 21 16.0**	**+1.7**
NJ2				S	**Sn**	**15 24 44.0**	**+0.2**
NJ2				SS	**SnSn**	**15 24 59.7**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,95nm,1.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.6s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,4µm,18.5s						
SSLB	**Suanglung**	**20.06**	**255**	P	**P**	**15 20 59.1**	**+0.2**
KLR	**Kul'dur**	**20.22**	**340**	P	**P**	**15 21 00.3**	**-0.1**

	comp=Z,15nm,0.7s,baz=150,slow=7.7,SNR=31						
TYV	**Tymovskoe**	**20.24**	**1**	*e*P	Pn	15 21 02.6	-0.1
TYV				*e*S	Sn	15 24 50.4	+0.8
TYV				pmax	pmax		
	comp=Z,400nm,2.2s						
TYV				pmax	pmax		
	comp=Z,89nm,1.5s						
TYV				smax	smax		
	comp=N,6.0nm,1.0s						
TYV				MLR	MLR		
	comp=Z,3µm,16.0s						
TWG	**Pinlang**	**20.38**	**253**	P	**P**	**15 21 01.5**	**-0.9**
TWG				IAmb	IAmb	15 21 16.2	
	comp=Z,197nm,1.1s						
TPUB	**Ta-pu**	**20.53**	**254**	P	**P**	**15 21 04.0**	**0.0**
TPUB				IAmb	IAmb	15 21 18.2	
	comp=Z,216nm,1.0s						
GRNR	**Gornyy**	**20.60**	**350**	⇑*i*P	Pn	15 21 06.8	-0.1
GRNR				*e*S	Sn	15 24 58.7	+0.4
GRNR				*e*SS	**SnSn**	**15 25 23.3**	**+10**
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=E,9.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,1µm,12.0s						
GRNR				MLR	MLR		
	comp=N,1µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,720nm,18.0s						
BBP	**Basco**	**20.84**	**246**	*e*P	**P**	**15 21 08.0**	**+0.6**
QZH	**Quanzhou**	**21.61**	**261**	⇑*i*P	**P**	**15 21 14.4**	**-1.2**
QZH				S	**S**	**15 25 13.4**	**-0.3**
QZH				pmax	pmax		
	comp=Z,570nm,5.1s						
QZH				LR	LR		
	comp=Z,940nm,18.9s						
QZH				LR	LR		
	comp=Z,2µm,16.6s						
QZH				LR	LR		
	comp=Z,3µm,18.3s						
TIA	**Tai'an**	**21.63**	**292**	P	**P**	**15 21 11.4**	**-4.4**
TIA				S	**S**	**15 25 17.5**	**+3.5**
TIA				pmax	pmax		
	comp=Z,23nm,2.7s						
TIA				pmax	pmax		
	comp=Z,420nm,6.9s						
TIA				LR	LR		
	comp=Z,3µm,16.1s						
TIA				LR	LR		
	comp=Z,4µm,19.0s						
TIA				LR	LR		
	comp=Z,6µm,16.3s						
KNMB	**Chin-men Tao**	**21.96**	**260**	P	**P**	**15 21 18.9**	**-0.4**
KNMB				IAmb	IAmb	15 21 21.7	
	comp=Z,66nm,0.9s						
SGCP	**Mt. Cagua**	**22.05**	**241**	*e*P	**P**	**15 21 25.0**	**+4.7**
NKL	**Nikolayevsk**	**22.55**	**358**	*e*P	**P**	**15 21 26.6**	**+1.1**
NKL				pmax	pmax		
	comp=N,10.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,45nm,0.7s						
NKL				pmax	pmax		
	comp=Z,53nm,1.1s						
NKL				MLR	MLR		
	comp=N,109nm,15.0s						
NKL				MLR	MLR		
	comp=E,1µm,15.0s						
NKL				MLR	MLR		
	comp=Z,2µm,14.0s						
APYP	**Conner**	**22.88**	**241**	*e*P	**P**	**15 21 27.5**	**-1.7**
BJT	**Baijiatuau**	**23.15**	**301**	P	**P**	**15 21 30.5**	**-1.3**
BJT				pmax	pmax		
	comp=Z,88nm,1.2s						
BJT	**Baijiatuau**	**23.15**	**301**	P	**P**	**15 21 30.5**	**-1.3**
BJT				IAmb	IAmb	15 21 34.4	
	comp=Z,88nm,1.2s						
BJI	**Beijing**	**23.15**	**301**	P	**P**	**15 21 29.6**	**-2.2**
BJI				S	**S**	**15 25 39.2**	**-2.3**
BJI				pmax	pmax		
	comp=Z,48nm,1.0s						
BJI				LR	LR		
	comp=Z,1µm,16.9s						
BJI				LR	LR		
	comp=Z,4µm,16.3s						
BJI				LR	LR		
	comp=Z,3µm,17.3s						
PVCP	**Virac**	**23.73**	**228**	*e*P	**P**	**15 21 37.5**	**-0.2**
WHN	**Wuhan**	**23.95**	**277**	⇓P	**P**	**15 21 38.4**	**-1.3**
WHN				S	**S**	**15 25 53.1**	**-1.5**
WHN				pmax	pmax		
	comp=Z,420nm,1.7s						
WHN				pmax	pmax		
	comp=Z,2µm,4.1s						
WHN				LR	LR		
	comp=Z,3µm,11.1s						
WHN				LR	LR		
	comp=Z,9µm,17.1s						
WHN				LR	LR		
	comp=Z,10µm,17.2s						
SCSP	**San Jose Seism**	**24.10**	**230**	*e*P	**P**	**15 21 42.5**	**+1.4**
JCNP	**Jose Panganiba**	**24.19**	**232**	*e*P	**P**	**15 21 41.9**	**-0.1**
SMPP	**San Manuel, Pa**	**24.37**	**239**	*e*P	**P**	**15 21 40.5**	**-3.1**
POLP	**Polilio Island**	**24.41**	**234**	*e*P	**P**	**15 21 43.0**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**24.79**	**110**	T	T	15 47 58.4	
	baz=306,slow=74,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**24.79**	**110**	T	T	15 47 48.5	
	baz=306,slow=74,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**24.80**	**110**	T	T	15 47 54.0	
	baz=306,slow=74,SNR=4.3						
LQP	**Lukban**	**25.11**	**234**	⇑*e*P	**P**	**15 21 51.2**	**+0.6**
QVP	**Quezon City--P**	**25.14**	**235**	*e*P	P	15 22 11.3	+21
PETK	**Petropavlovsk-**	**25.17**	**22**	P	**P**	**15 21 54.1**	**+3.6**
	comp=Z,8.8nm,0.9s,baz=214,slow=12,SNR=4.8						
PETK				LR	LR	15 32 15.3	
	comp=Z,2µm,20.6s,baz=217,slow=38						
HIA	**Hailar**	**25.21**	**324**	P	**P**	**15 21 50.5**	**-0.5**
HIA				pmax	pmax		
	comp=Z,90nm,1.1s						
HIA	**Hailar**	**25.21**	**324**	P	**P**	**15 21 50.5**	**-0.5**
HIA				IAmb	IAmb	15 21 57.4	
	comp=Z,90nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**25.27**	**113**	T	T	15 48 18.5	
	baz=304,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**25.27**	**113**	T	T	15 48 25.0	
	baz=304,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**25.29**	**113**	T	T	15 48 24.5	
	baz=304,slow=75,SNR=21						
OCLP	**Ormoc**	**25.40**	**224**	*e*P	**P**	**15 21 55.2**	**+2.2**
PET	**Petropavlovsk**	**25.42**	**24**	*e*P	**P**	**15 21 52.4**	**-0.4**
PET				*e*		15 22 28.7	
PET				*e*S	**S**	**15 26 14.7**	**-2.9**
PET				pmax	pmax		
	comp=Z,300nm,14.6s						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
ZEA	**Zeya**	**25.53**	**339**	*e*P	**P**	**15 21 54.6**	**+0.8**
ZEA				*e*		15 22 32.4	
ZEA				*e*S	**S**	**15 26 14.5**	**-4.9**
ZEA				pmax	pmax		
	comp=E,100nm,3.8s						
ZEA				pmax	pmax		
	comp=N,200nm,4.9s						
ZEA				pmax	pmax		
	comp=Z,300nm,5.0s						
ZEA				pmax	pmax		
	comp=N,100nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,500nm,6.6s						
ZEA				smax	smax		
	comp=E,200nm,4.8s						
ZEA				MLR	MLR		
	comp=E,1µm,13.0s						
ZEA				MLR	MLR		
	comp=N,2µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
TGY	**Tagaytay City**	**25.54**	**235**	P	**P**	**15 21 51.6**	**-2.7**
	comp=Z,100nm,0.3s,baz=146,slow=7.3,SNR=2.1						
TGY				S	**S**	**15 26 22.4**	**+2.1**
	comp=Z,205nm,0.4s,baz=280,slow=6.7,SNR=6.6						
TIY	**Taiyuan**	**25.55**	**294**	*e*P	**P**	**15 21 53.0**	**-1.3**
TIY				S	**S**	**15 26 18.5**	**-1.8**
TIY				SS		15 27 20.2	
TIY				pmax	pmax		
	comp=Z,45nm,0.8s						
TIY				pmax	pmax		
	comp=Z,600nm,3.6s						
TIY				LR	LR		
	comp=Z,2µm,14.7s						
TIY				LR	LR		
	comp=Z,2µm,11.9s						
TIY				LR	LR		
	comp=Z,4µm,17.7s						
GLSP	**General Luna,**	**25.56**	**219**	*e*P	**P**	**15 21 52.7**	**-1.7**
MACP	**Maragondon, Ca**	**25.59**	**235**	*e*P	P	15 21 42.9	-12
MSLP	**Maasin**	**25.98**	**222**	*e*P	**P**	**15 21 58.0**	**-0.3**
OTRP	**Odiongan**	**26.03**	**230**	*e*P	**P**	**15 21 58.1**	**-0.6**
SJMP	**San Jose**	**26.57**	**232**	*e*P	**P**	**15 22 05.1**	**+1.6**
HHC	**Hu-ho-hao-te**	**26.76**	**301**	*e*P	**P**	**15 22 03.8**	**-1.5**
HHC				sP	sP	15 22 17.0	+2.5
HHC				S	**S**	**15 26 44.8**	**+5.4**
HHC				pmax	pmax		
	comp=Z,43nm,1.8s						
HHC				pmax	pmax		
	comp=Z,410nm,5.7s						
HHC				LR	LR		
	comp=Z,2µm,14.6s						
HHC				LR	LR		
	comp=Z,5µm,17.3s						
HHC				LR	LR		
	comp=Z,6µm,17.0s						
GUIM	**Jordan**	**26.97**	**227**	*e*P	**P**	**15 22 07.3**	**+0.2**
CNOP	**Candoni, Negro**	**27.55**	**225**	*e*P	**P**	**15 22 08.3**	**-4.0**
CUYO	**Cuyo Island**	**27.81**	**230**	*e*P	P	15 22 27.4	+13
BTO	**Baotou**	**27.86**	**300**	*e*P	**P**	**15 22 14.7**	**-0.4**
BTO				S	**S**	**15 27 05.0**	**+8.3**
MATI	**Mati**	**27.88**	**216**	*e*P	**P**	**15 22 13.8**	**-1.6**
DAV	**Davao City (W)**	**28.12**	**217**	LR	LR	15 31 44.8	
	comp=Z,1µm,21.1s,baz=52,slow=33						
ENH	**Enshi**	**28.15**	**278**	P	**P**	**15 22 15.1**	**-2.6**
XAN	**Xi'an**	**28.25**	**286**	P	**P**	**15 22 17.5**	**-1.1**
XAN				pP	sP	15 22 29.2	+1.4
XAN				pmax	pmax		
	comp=Z,71nm,1.2s						
XAN				pmax	pmax		
	comp=Z,520nm,3.5s						
XAN				LR	LR		
	comp=Z,2µm,15.4s						
XAN				LR	LR		
	comp=Z,2µm,13.5s						
XAN				LR	LR		
	comp=Z,2µm,13.8s						
XAN	**Xi'an**	**28.25**	**286**	P	**P**	**15 22 16.6**	**-2.0**
XAN				pmax	pmax		
	comp=Z,111nm,1.3s						
XAN	**Xi'an**	**28.25**	**286**	P	**P**	**15 22 16.6**	**-2.0**
XAN				IAmb	IAmb	15 22 20.6	
	comp=Z,111nm,1.3s						
KCP	**Kidapawan**	**28.43**	**218**	⇑*e*P	**P**	**15 22 21.0**	**+0.7**
ENPP	**El Nido**	**28.61**	**232**	*e*P	**P**	**15 22 20.5**	**-1.3**
PAGZ	**Pagadian**	**28.68**	**222**	*e*P	**P**	**15 22 21.3**	**-1.2**
MA2	**Magadan**	**29.55**	**9**	⇓*e*P	**P**	**15 22 31.7**	**+2.0**
MA2				pmax	pmax		
	comp=Z,76nm,1.7s						
MA2	**Magadan**	**29.55**	**9**	P	**P**	**15 22 28.3**	**-1.4**
CIT	**Chita**	**30.02**	**324**	*e*P	**P**	**15 22 35.4**	**+1.4**
CIT				*e*		15 22 44.9	
CIT				*e*		15 22 52.7	
CIT				*e*		15 23 31.0	
CIT				pmax	pmax		
	comp=Z,390nm,2.4s						
GYA	**Guiyang**	**31.41**	**271**	⇓P	**P**	**15 22 46.8**	**+0.1**
GYA				S	**S**	**15 27 48.2**	**-4.5**
GYA				pmax	pmax		
	comp=Z,27nm,1.0s						
GYA				LR	LR		
	comp=Z,970nm,12.7s						
GYA				LR	LR		
	comp=Z,920nm,16.1s						
GYA				LR	LR		
	comp=Z,1µm,18.1s						
QIZ	**Qiongzhong**	**31.43**	**256**	P	**P**	**15 22 46.6**	**-0.2**
QIZ				S	**S**	**15 27 53.4**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,330nm,3.3s						
QIZ				LR	LR		
	comp=Z,680nm,11.2s						
QIZ				LR	LR		
	comp=Z,530nm,11.4s						
QIZ				LR	LR		
	comp=Z,1µm,13.1s						
BATP	**Bataraza**	**31.45**	**231**	*e*P	**P**	**15 22 46.7**	**-0.2**
ULN	**Ulaanbaatar**	**31.87**	**313**	*c i*P	**P**	**15 22 51.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,119nm,1.7s						
ULN	**Ulaanbaatar**	**31.87**	**313**	P	**P**	**15 22 50.4**	**-0.1**
ULN	**Ulaanbaatar**	**31.87**	**313**	P	**P**	**15 22 51.5**	**+0.9**
SONM	**Songino Array**	**32.27**	**312**	P	**P**	**15 22 55.6**	**+1.5**
	comp=Z,16nm,0.8s,baz=113,slow=8.2,SNR=48						
SONM				LR	LR	15 36 35.6	
	comp=Z,3µm,18.3s,baz=106,slow=38						
LZH	**Lanzhou**	**32.35**	**290**	⇑P	**P**	**15 22 52.7**	**-2.3**
LZH				sP	sP	15 23 04.9	+0.7
LZH				PP	**PP**	**15 24 05.6**	**-2.6**
LZH				S	**S**	**15 28 04.7**	**-2.7**
LZH				SS	**SnSn**	**15 29 57.4**	**-3.2**
LZH				pmax	pmax		
	comp=Z,40nm,1.0s						
LZH				pmax	pmax		
	comp=Z,410nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,11.3s						
LZH				LR	LR		
	comp=Z,2µm,11.5s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
YAK	**Yakutsk**	**32.48**	**349**	P	**P**	**15 22 55.6**	**+0.2**
	comp=Z,3.2nm,0.3s,baz=142,slow=2.5,SNR=14						
YAK				LR	LR	15 37 37.4	
	comp=Z,2µm,18.3s,baz=156,slow=39						
YAK	**Yakutsk**	**32.48**	**349**	*e*P	**P**	**15 22 55.7**	**+0.2**
YAK				*e**PP	**sP**	**15 23 06.8**	**+3.1**
YAK				*e*		15 24 07.7	
YAK				*e*S	**S**	**15 28 08.7**	**+0.4**
YAK				*e*SS	SS	15 30 09.0	-19
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
YAK				pmax	pmax		
	comp=N,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,32nm,1.0s						
YAK				smax	smax		
	comp=N,239nm,5.0s						
YAK				smax	smax		
	comp=E,174nm,3.8s						
YAK				MLR	MLR		
	comp=Z,3µm,15.0s						
YAK				MLR	MLR		
	comp=N,2µm,15.0s						
YAK				MLR	MLR		
	comp=E,770nm,13.0s						
YAK	**Yakutsk**	**32.48**	**349**	P	**P**	**15 22 54.4**	**-1.1**
YAK				IAmb	IAmb	15 23 12.6	
	comp=Z,41nm,1.0s						
CD2	**Chengdu**	**32.92**	**281**	P	**P**	**15 22 58.7**	**-1.2**
CD2				pP	pP	15 23 04.2	-2.1
CD2				PP	**PnPn**	**15 24 11.7**	**+2.5**
CD2				S	**S**	**15 28 14.5**	**-1.6**
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,350nm,5.9s						
CD2				LR	LR		
	comp=Z,3µm,14.7s						
CD2				LR	LR		
	comp=Z,5µm,16.9s						
CD2				LR	LR		
	comp=Z,4µm,17.8s						
SWI	**Sorong**	**32.98**	**200**	P	**P**	**15 23 00.2**	**-0.1**
	comp=Z,36nm,0.9s						
SEY	**Seymchan**	**33.00**	**9**	P	**P**	**15 23 01.6**	**+1.6**
	comp=Z,13nm,0.8s,baz=194,slow=7.4,SNR=35						
BOD	**Bodaibo**	**33.42**	**333**	*e*P	**P**	**15 23 04.3**	**+0.5**
BOD				pmax	pmax		
	comp=Z,44nm,2.0s						
MYLDM	**Lahad Datu**	**33.72**	**226**	P	**P**	**15 23 06.5**	**-0.3**
KMSI	**Cibinong**	**34.51**	**213**	P	**P**	**15 23 13.3**	**-0.4**
	comp=Z,81nm,1.0s						
GTOI	**Gorontalo**	**34.93**	**215**	P	**P**	**15 23 15.8**	**-1.5**
	comp=Z,760nmcomp=Z,23nm,0.8s						
ZAK	**Zakamensk**	**35.05**	**316**	*e*P	**P**	**15 23 19.5**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,49nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,35nm,1.4s						
IRK	**Irkutsk**	**35.14**	**319**	*e*P	**P**	**15 23 20.2**	**+1.4**
IRK				*e*		15 23 37.5	
IRK				pmax	pmax		
	comp=Z,272nm,3.2s						
KMI	**Kunming**	**35.18**	**271**	⇑*e*P	**P**	**15 23 18.6**	**-1.1**
KMI				pP	sP	15 23 29.3	+0.4
KMI				PP	**PP**	**15 24 39.5**	**-0.2**
KMI				S	**S**	**15 28 49.2**	**-2.2**
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
KMI				pmax	pmax		
	comp=Z,250nm,6.8s						
KMI				LR	LR		
	comp=Z,1µm,15.5s						
KMI				LR	LR		
	comp=Z,970nm,15.7s						
KMI				LR	LR		
	comp=Z,1µm,13.2s						
TLY	**Talaya**	**35.29**	**318**	*c i*P	**P**	**15 23 21.7**	**+1.6**
TLY				*e*S	**S**	**15 28 51.2**	**-1.0**
TLY				pmax	pmax		
	comp=Z,388nm,1.9s						
TLY				MLR	MLR		
	comp=Z,8µm,19.0s						
TLY	**Talaya**	**35.29**	**318**	P	**P**	**15 23 20.4**	**+0.3**
TLY	**Talaya**	**35.29**	**318**	P	**P**	**15 23 22.0**	**+1.9**
SLVN	**Son La**	**35.50**	**264**	P	**P**	**15 23 20.9**	**-1.4**
GTA	**Gaotai**	**35.54**	**296**	⇑P	**P**	**15 23 20.7**	**-1.8**
GTA				pP	sP	15 23 30.8	-1.0
GTA				sP	pwP	15 23 35.4	-2.0
GTA				PP	**PnPn**	**15 24 37.0**	**-4.9**
GTA				PcP	**PcP**	**15 25 53.3**	**+2.0**
GTA				S	**S**	**15 28 50.0**	**-6.5**
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
GTA				pmax	pmax		
	comp=Z,310nm,5.0s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
GTA				LR	LR		
	comp=Z,3µm,18.2s						
GTA				LR	LR		
	comp=Z,4µm,16.0s						
MRSI	**Marisa**	**35.61**	**216**	P	**P**	**15 23 22.2**	**-0.9**
	comp=Z,2µmcomp=Z,85nm,1.4s						
TOLI2	**Tolitoli**	**35.68**	**219**	P	**P**	**15 23 22.4**	**-1.4**
TOLI2				IAmb	IAmb	15 23 26.5	
	comp=Z,54nm,1.3s						
SANI	**Sanana**	**35.96**	**208**	P	**P**	**15 23 24.3**	**-1.9**
	comp=Z,936nmcomp=Z,44nm,0.8s						
DLV	**T Lat**	**36.28**	**247**	P	**P**	**15 23 29.1**	**-0.1**
DLV				IAmb	IAmb	15 23 48.4	
	comp=Z,58nm,1.4s						
MPSI	**Mapaga**	**36.80**	**219**	P	**P**	**15 23 32.5**	**-0.9**
	comp=Z,658nmcomp=Z,14nm,1.1s						
MOY	**Mondy**	**36.83**	**317**	*e*P	**P**	**15 23 34.8**	**+1.3**
MOY				pmax	pmax		
	comp=Z,211nm,3.5s						
APSI	**Ampana**	**36.94**	**216**	P	**P**	**15 23 34.3**	**-0.2**
	comp=Z,626nmcomp=Z,44nm,1.3s						
NONG	**Nongkai**	**37.52**	**260**	P	**P**	**15 23 39.2**	**-0.3**
	comp=Z,8µmcomp=Z,43nm,0.9s						
CHAI	**Chaiyaphum**	**39.51**	**258**	P	**P**	**15 23 55.0**	**-1.2**
	comp=Z,1µmcomp=Z,89nm,0.9s						
TTSI	**Tana Toraja**	**39.70**	**217**	P	**P**	**15 23 58.9**	**+1.2**
	comp=Z,18nm,1.1s						
PAYA	**Payao**	**39.76**	**264**	P	**P**	**15 23 59.0**	**+0.7**
	comp=Z,141nm,0.8s						
SBUM	**Sibu**	**39.85**	**231**	P	**P**	**15 23 57.1**	**-1.9**
SBUM	**Sibu**	**39.85**	**231**	P	**P**	**15 24 00.0**	**+1.0**
UTTA	**Uttaradit**	**39.87**	**261**	P	**P**	**15 23 59.0**	**-0.1**
	comp=Z,374nmcomp=Z,22nm,0.7s						
PMG	**Port Moresby**	**40.07**	**172**	⇓*e*P	**P**	**15 24 03.6**	**+2.9**
PMG				pmax	pmax		
	comp=Z,29nm,1.7s						
PHIT	**Phitsanulok**	**40.23**	**260**	P	**P**	**15 24 06.1**	**+3.8**
	comp=Z,57nm,0.8s						
LAMP	**Lampang**	**40.31**	**263**	P	**P**	**15 24 03.0**	**+0.1**
	comp=Z,374nmcomp=Z,35nm,0.8s						
SRAK	**Srakaew**	**40.40**	**255**	P	**P**	**15 23 59.0**	**-4.6**
	comp=Z,9µmcomp=Z,956nm,0.9s						
SPSI	**Sidrap Palu**	**40.51**	**216**	P	**P**	**15 24 03.9**	**-0.5**
	comp=Z,50nm,0.9s						
CM34	**Chiang Mai Arr**	**40.59**	**263**	P	**P**	**15 24 04.0**	**-1.2**
CM35	**Chiang Mai Arr**	**40.66**	**263**	P	**P**	**15 24 04.0**	**-1.7**
BNSI	**Bone**	**40.71**	**215**	P	**P**	**15 24 06.9**	**+0.8**
	comp=Z,1µmcomp=Z,35nm,1.5s						
MTKI	**Muara Teweh, K**	**40.73**	**225**	P	**P**	**15 24 06.4**	**+0.1**
	comp=Z,108nm,1.1s						
SUKH	**Sukhothai**	**40.77**	**261**	P	**P**	**15 24 08.5**	**+1.8**
	comp=Z,14nm,0.8s						
CM33	**Chiang Mai Arr**	**40.77**	**264**	P	**P**	**15 24 05.0**	**-1.7**
CM36	**Chiang Mai Arr**	**40.77**	**263**	P	**P**	**15 24 06.0**	**-0.7**
CMMT	**Chiang Mai**	**40.77**	**264**	P	**P**	**15 24 05.9**	**-0.8**
	comp=Z,308nmcomp=Z,16nm,1.0s						
CHTO	**Chiang Mai**	**40.78**	**264**	P	**P**	**15 24 04.9**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,22nm,0.8s						
CHTO	**Chiang Mai**	**40.78**	**264**	P	**P**	**15 24 04.9**	**-1.9**
CHTO	**Chiang Mai**	**40.78**	**264**	P	**P**	**15 24 05.0**	**-1.7**
CM09	**Chiang Mai Arr**	**40.90**	**263**	P	**P**	**15 24 08.0**	**+0.3**
	comp=Z,129nmcomp=Z,16nm,0.8s						
CM04	**Chiang Mai Arr**	**40.92**	**263**	P	**P**	**15 24 08.0**	**0.0**
	comp=Z,116nmcomp=Z,11nm,0.8s						
CM32	**Chiang Mai Arr**	**40.93**	**263**	P	**P**	**15 24 08.0**	**0.0**
CM31	**Chiang Mai Arr**	**40.93**	**263**	P	**P**	**15 24 08.1**	**0.0**
	comp=Z,6µmcomp=Z,386nm,0.7s						
CM31	**Chiang Mai Arr**	**40.93**	**263**	P	**P**	**15 24 06.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**40.93**	**263**	P	**P**	**15 24 07.4**	**-0.6**
	comp=Z,6.7nm,0.7s,baz=55,slow=6.8,SNR=62						
CMAR				PcP	**PcP**	**15 26 10.9**	**+2.7**
	comp=Z,13nm,1.1s,baz=44,slow=1.1,SNR=11						
CMAR				LR	LR	15 42 56.1	
	comp=Z,1µm,19.3s,baz=110,slow=39						
CM01	**Chiang Mai Arr**	**40.93**	**263**	P	**P**	**15 24 08.1**	**+0.1**
	comp=Z,121nmcomp=Z,12nm,0.8s						
CM02	**Chiang Mai Arr**	**40.94**	**263**	P	**P**	**15 24 08.0**	**-0.1**
	comp=Z,123nmcomp=Z,13nm,0.8s						
CM15	**Chiang Mai Arr**	**40.95**	**263**	P	**P**	**15 24 08.1**	**-0.1**
	comp=Z,126nmcomp=Z,15nm,0.8s						
CM05	**Chiang Mai Arr**	**40.95**	**263**	P	**P**	**15 24 08.0**	**-0.2**
	comp=Z,105nmcomp=Z,9.0nm,0.8s						
CM13	**Chiang Mai Arr**	**40.98**	**263**	P	**P**	**15 24 08.3**	**-0.1**
	comp=Z,102nmcomp=Z,9.8nm,0.8s						
KAPI	**Kappang**	**41.42**	**215**	P	**P**	**15 24 11.9**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,78nm,1.3s						
KAPI	**Kappang**	**41.42**	**215**	P	**P**	**15 24 11.8**	**-0.1**
KAPI				IAmb	IAmb	15 24 29.6	
	comp=Z,78nm,1.2s						
TIXI	**Tiksi**	**41.73**	**354**	*ce*P	**P**	**15 24 14.5**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,140nm,2.5s						
TIXI	**Tiksi**	**41.73**	**354**	P	**P**	**15 24 13.7**	**-0.2**
UTHA	**Uthaitani**	**41.82**	**259**	P	**P**	**15 24 15.7**	**+0.4**
	comp=Z,333nmcomp=Z,30nm,1.0s						
KSM	**Kuching**	**41.86**	**232**	P	**P**	**15 24 16.0**	**+0.4**
KBKI	**Kotabaru**	**41.88**	**221**	P	**P**	**15 24 15.4**	**-0.4**
	comp=Z,713nmcomp=Z,43nm,1.1s						
MOKO	**MOKOCHONG**	**41.89**	**276**	*e*P	**P**	**15 24 13.9**	**-2.1**
MOKO				IAmb	IAmb	15 24 19.8	
	comp=Z,18nm,0.9s						
MHMT	**Maesarieng**	**41.92**	**263**	P	**P**	**15 24 16.0**	**-0.1**
	comp=Z,768nmcomp=Z,27nm,1.3s						
PATY	**Pattaya**	**41.94**	**254**	P	**P**	**15 24 17.0**	**+0.7**
	comp=Z,48nm,1.1s						
ZIRO	**ZIRO**	**42.11**	**278**	*e*P	**P**	**15 24 16.2**	**-1.7**
ZIRO				IAmb	IAmb	15 24 19.9	
	comp=Z,53nm,1.0s						
SRDT	**SRDT**	**42.68**	**258**	P	**P**	**15 24 26.5**	**+4.2**
	comp=Z,24nm,2.3s						
BBKI	**Banjar Baru**	**42.77**	**222**	P	**P**	**15 24 20.8**	**-2.3**
	comp=Z,22nm,1.0s						

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PHET  Kaeng Krachan   42.98 255   P      P      15 24 25.8 +1.1
      comp=Z,541nmcomp=Z,71nm,1.0s
SOEI  Soe             43.67 206   P      P      15 24 31.0 +0.6
      comp=Z,174nm,1.1s
LSA   Lhasa           43.83 282   P      P      15 24 29.8 -2.3
LSA                               pmax   pmax
      comp=Z,29nm,1.9s
LSA                               LR     LR
      comp=Z,2µm,18.5s
LSA                               LR     LR
      comp=Z,6µm,18.9s
LSA                               LR     LR
      comp=Z,9µm,18.9s
LSA   Lhasa           43.83 282   P      P      15 24 31.6 -0.5
LSA   Lhasa           43.83 282   P      P      15 24 30.1 -2.0
LSA                               pmax   pmax
      comp=Z,8.0nm,1.0s
LSA   Lhasa           43.83 282   P      P      15 24 30.1 -2.0
PBKI  Pangkalan Bun   44.10 227   P      P      15 24 33.8 +0.1
      comp=Z,113nm,1.0s
COEN  Coen            44.31 179   P      P      15 24 33.8 -1.6
COEN                              IAmb   IAmb   15 25 01.3
      comp=Z,35nm,1.2s
SHL   Shillong        44.38 276   P      P      15 24 33.2 -3.0
SHL                               pmax   pmax
      comp=Z,14nm,0.5s
SHL   Shillong        44.38 276  eP      P      15 24 34.1 -2.0
SHL   Shillong        44.38 276   P      P      15 24 33.2 -3.0
SHL   Shillong        44.38 276   P      P      15 24 36.1  0.0
      SNR=6.2
SAIH  SAIHA           44.47 272  eP      P      15 24 34.3 -2.5
MTN   Manton Dam      44.49 195   P      P      15 24 35.4 -1.4
WMQ   Urumqi          44.61 303   P      P      15 24 38.7 +1.1
WMQ                               pP     sP     15 24 47.4 +0.8
WMQ                               sP     pwP    15 24 50.6 -2.6
WMQ                               S      S      15 31 11.7 -0.1
WMQ                               sS     sS     15 31 28.5 +5.7
WMQ                               pmax   pmax
      comp=Z,87nm,1.7s
WMQ                               LR     LR
      comp=Z,2µm,16.5s
WMQ                               LR     LR
      comp=Z,2µm,19.1s
WMQ                               LR     LR
      comp=Z,2µm,22.1s
WMQ   Urumqi          44.61 303   P      P      15 24 37.4 -0.2
WMQ                               pmax   pmax
      comp=Z,101nm,1.3s
WMQ   Urumqi          44.61 303   P      P      15 24 37.4 -0.2
DGZ   Jazzator, Alta  44.91 311c iP      P      15 24 41.0 +1.0
DGZ                               pmax   pmax
      comp=Z,79nm,0.9s
TRTT  Trang           45.70 249   P      P      15 24 47.0 +0.5
      comp=Z,27nm,1.2s
SURT  Suratani        45.79 251   P      P      15 24 50.8 +3.5
      comp=Z,1.6nm,1.1s
KMMI  Kalianget       46.19 221   P      P      15 24 51.1 +0.8
      comp=Z,100nm,1.2s
SRBI  Singaraja       46.37 218   P      P      15 24 53.1 +1.4
      comp=Z,2µmcomp=Z,81nm,1.1s
KULM  Kulim           46.45 246   P      P      15 24 51.1 -1.4
KULM                              IAmb   IAmb   15 24 55.9
      comp=Z,21nm,0.9s
KULM  Kulim           46.45 246   P      P      15 24 52.0 -0.4
ZSN   Zaisan          46.53 308  eP      P      15 24 51.8 -1.0
      comp=Z,27nm,1.1s,baz=308
ZSN                              eS      S      15 31 38.6 -0.8
      baz=308
ZSN   Zaisan          46.53 308  eP      P      15 24 51.7 -1.0
ZSN                              eS      S      15 31 38.6 -0.8
ZSN                               pmax   pmax
      comp=Z,27nm,1.1s
IPM   Ipoh            46.66 244   P      P      15 24 52.4 -1.6
IPM                               IAmb   IAmb   15 24 57.0
      comp=Z,16nm,0.8s
IPM   Ipoh            46.66 244   P      P      15 24 54.0 -0.1
PKDT  Phuket          46.77 250   P      P      15 24 56.0 +1.1
ZAA0  Zalesovo Array  46.89 317   P      P      15 24 54.7 -0.7
ZAA0                              IAmb   IAmb   15 25 22.6
      comp=Z,29nm,1.4s
ZALV  Zalesovo Beam   46.89 317   P      P      15 24 56.2 +0.8
      comp=Z,6.5nm,0.8s,baz=101,slow=7.7,SNR=24
ZALV                              PcP    PcP    15 26 29.2 +1.4
      comp=Z,13nm,0.6s,baz=104,slow=3.3,SNR=9.8
ZALV                              S      S      15 31 48.6 +4.4
      comp=Z,0.3nm,0.3s,baz=75,slow=12,SNR=1.6
ZALV                              LR     LR     15 45 31.4
      comp=Z,2µm,18.3s,baz=92,slow=37
JAGI  Jajag, Banyuwa  47.26 219   P      P      15 24 58.9 +0.2
JAGI  Jajag, Banyuwa  47.26 219   P      P      15 24 59.6 +0.9
      comp=Z,137nm,1.1s
PPBI  Pangkal Pinang  47.35 233   P      P      15 25 00.0 +0.6
TAPN  Taplejung       47.39 280  eP      P      15 24 59.1 -0.9
      comp=Z,47nm,1.1s
ODAN  Odare           47.81 280  eP      P      15 25 01.9 -1.3
      comp=Z,73nm,1.0s
NGJI  Ngawi           47.89 223   P      P      15 25 03.4 -0.2
      comp=Z,65nm,1.1s
PWJI  Pagerwojo       48.22 222   P      P      15 25 05.0 -1.1
      comp=Z,101nm,1.0s
SMRI  Semarang        48.25 224   P      P      15 25 06.2 -0.2
SMRI  Semarang        48.25 224   P      P      15 25 06.5 +0.1
      comp=Z,98nm,1.1s
MK31  Makanchi Array  48.31 307c iP      P      15 25 06.8 +0.2
MK31                              pmax   pmax
      comp=Z,32nm,0.8s
MK31  Makanchi Array  48.31 307   P      P      15 25 06.4 -0.2
MK31                              IAmb   IAmb   15 25 08.7
      comp=Z,23nm,0.8s
MKAR  Makanchi Array  48.31 307   P      P      15 25 07.0 +0.4
      comp=Z,19nm,0.7s,baz=90,slow=9.2,SNR=205
MKAR                              S      S      15 32 03.6 -1.1
      comp=Z,0.6nm,0.9s,baz=110,slow=12,SNR=2.1
MKAR                              LR     LR     15 47 20.8
      comp=Z,988nm,18.4s,baz=86,slow=38
MKAR  Makanchi Array  48.31 307   P      P      15 25 07.0 +0.4
RAMN  Ramite          48.45 280  eP      P      15 25 07.3 -0.9
DGPR  DIGLIPUR        48.49 260  eP      P      15 25 06.6 -1.7
DGPR                              IAmb   IAmb   15 25 14.3
      comp=Z,31nm,0.9s
MAKZ  Makanchi        48.52 307   P      P      15 25 08.1 -0.1
MAKZ                              pmax   pmax
      comp=Z,71nm,1.5s
MAKZ  Makanchi        48.52 307   P      P      15 25 08.1 -0.1
MAKZ                              IAmb   IAmb   15 25 09.8
      comp=Z,71nm,1.4s
GUN   Gumba           48.77 282  eP      P      15 25 09.9 -0.9
      comp=Z,150nm,0.9s
UGM   Wanagama        48.88 224   P      P      15 25 10.5 -0.8
RDOG  Red Dog Mine    49.02  24   P      P      15 25 12.3 +0.6
RDOG                              IAmb   IAmb   15 25 28.6
      comp=Z,39nm,1.2s
PKI   Pulchoki        49.27 281  eP      P      15 25 13.1 -1.5
      comp=Z,54nm,1.1s
PKIN  Phulchoki       49.28 281  eP      P      15 25 13.1 -1.5
      comp=Z,20nm,0.8s
KKN   Kakani          49.31 282  eP      P      15 25 13.4 -1.4
      comp=Z,57nm,0.9s
PSI   Prapat          49.33 244   LR     LR     15 46 02.9
      comp=Z,396nm,18.9s,baz=90,slow=36
KPJI  Karang Pucung   49.39 226   P      P      15 25 14.0 -1.1
      comp=Z,2µmcomp=Z,180nm,1.1s
NRIK  Noril'sk        49.41 338   P      P      15 25 15.8 +1.2
      comp=Z,30nm,0.9s,baz=111,slow=8.5,SNR=42
NRIK                              S      S      15 32 20.0 +0.6
      comp=Z,0.5nm,0.4s,baz=180,slow=18,SNR=1.2
NRIK                              LR     LR     15 46 59.3
      comp=Z,898nm,18.6s,baz=118,slow=37
NRIK  Noril'sk        49.41 338c iP      P      15 25 15.3 +0.7
NRIK                              pmax   pmax
      comp=Z,50nm,1.1s
NRIK  Noril'sk        49.41 338   P      P      15 25 14.8 +0.2
NRIK                              IAmb   IAmb   15 25 17.2
      comp=Z,46nm,1.1s
DMN   Daman           49.51 282  eP      P      15 25 15.0 -1.4
      comp=Z,32nm,0.9s
GKN   Gorkha          49.79 282  eP      P      15 25 17.2 -1.1
      comp=Z,100nm,1.1s
KCSI  Kotacane, Aceh  49.79 246   P      P      15 25 16.1 -2.2
      comp=Z,16nm,1.4s
LEM   Lembang         49.83 228   P      P      15 25 18.8 +0.1
      comp=Z,256nm,1.0s,baz=37,slow=7.2,SNR=19
MNSI  Mandailing Nat  50.10 242   P      P      15 25 19.6 -1.0
      comp=Z,782nmcomp=Z,35nm,0.9s
BOK   Bokaro          50.11 277  eP      P      15 25 20.2 -0.5
KLSI                  50.14 232   P      P      15 25 20.9  0.0
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      comp=Z,580nmcomp=Z,43nm,1.1s
DBJI  Dramaga         50.17 229   P      P      15 25 20.5 -0.6
      comp=Z,29nm,0.4s
CISI  Cisompet, Garu  50.26 227   P      P      15 25 19.4 -2.4
CISI  Cisompet, Garu  50.26 227   P      P      15 25 19.6 -2.2
      comp=Z,105nm,1.1s
BLSI  Bandar Lampung  50.28 231   P      P      15 25 21.7 -0.3
      comp=Z,114nm,0.9s
LHSI  Lahat           50.35 234   P      P      15 25 22.8 +0.3
      comp=Z,2µmcomp=Z,101nm,1.1s
SVW2  Sparrevohn      50.36  34   P      P      15 25 20.3 -1.7
MDSI  Maura Dua       50.37 233   P      P      15 25 21.9 -0.7
      comp=Z,1µmcomp=Z,137nm,1.1s
DANN  Dangsing        50.42 283  eP      P      15 25 22.7 -0.6
      comp=Z,60nm,0.6s
TTA   Tatalina        50.44  32   P      P      15 25 21.6 -1.1
TTA                               pmax   pmax
      comp=Z,29nm,1.3s
TTA   Tatalina        50.44  32   P      P      15 25 21.6 -1.1
TTA                               IAmb   IAmb   15 25 41.0
      comp=Z,28nm,1.3s
CTA   Charters Tower  50.55 175   P      P      15 25 24.8 +1.0
      comp=Z,8.0nm,0.6s,baz=360,slow=8.7,SNR=12
CTAO  Charters Tower  50.55 175   P      P      15 25 23.6 -0.3
CTAO                              pmax   pmax
      comp=Z,34nm,1.3s
CTAO  Charters Tower  50.55 175   P      P      15 25 23.6 -0.3
CTAO                              IAmb   IAmb   15 25 44.7
      comp=Z,34nm,1.3s
PDSI  Padang          50.55 240   P      P      15 25 24.2 +0.1
KURK  Kurchatov       50.58 313c iP      P      15 25 23.7 -0.1
KURK                              pmax   pmax
      comp=Z,56nm,1.3s
KURK  Kurchatov       50.58 313   P      P      15 25 23.5 -0.3
KURK                              IAmb   IAmb   15 25 38.8
      comp=Z,65nm,1.2s
KURK  Kurchatov       50.58 313   P      P      15 25 24.2 +0.4
KRJI  Kerinci         50.61 238   P      P      15 25 25.7 +1.1
      comp=Z,149nm,1.2s
SHLS  Shalkode        50.63 303  eP      P      15 25 20.4 -4.1
      comp=Z,24nm,1.8s,baz=303
SHLS  Shalkode        50.63 303  eP      P      15 25 20.3 -4.1
SHLS                              pmax   pmax
      comp=Z,24nm,1.8s
KURBB Kurchatov Arra  50.64 312   S      S      15 32 28.9 -8.3
      comp=Z,0.4nm,0.8s,baz=55,slow=19,SNR=2.1
WB0   Warramunga Arr  50.64 190   P      P      15 25 23.9 -0.7
KOLN  Koldanda        50.73 282  eP      P      15 25 24.6 -1.0
      comp=Z,128nm,1.2s
MASI  Maura Aman, Be  50.77 236   P      P      15 25 26.3 +0.6
      comp=Z,192nm,1.0s
WR0   Warramunga Arr  50.81 189   P      P      15 25 25.2 -0.6
WRAB  Tennant Creek   50.81 190c iP      P      15 25 25.7 -0.1
WRAB                              pmax   pmax
      comp=Z,160nm,1.3s
WRAB  Tennant Creek   50.81 190   P      P      15 25 25.1 -0.7
WB2   Warramunga Arr  50.82 190   P      P      15 25 25.3 -0.6
WRA   Warramunga Arr  50.82 190   P      P      15 25 25.7 -0.2
      comp=Z,82nm,1.0s,baz=8.6,slow=8.0,SNR=170
WRA                               S      S      15 32 35.8 -4.4
      comp=Z,5.3nm,1.1s,baz=9.1,slow=14,SNR=5.9
WRA                               LR     LR     15 46 11.4
      comp=Z,722nm,20.3s,baz=30,slow=35
LWLI  Liwa            50.83 233   P      P      15 25 25.5 -0.7
      comp=Z,77nm,1.2s
KASI  Kota Agung      50.90 232   P      P      15 25 25.5 -1.1
      comp=Z,86nm,1.0s
FITZ  Fitzroy Crossi  50.98 200   P      P      15 25 26.6 -0.4
PYUN  Piuthan         51.15 283  eP      P      15 25 28.1 -0.6
      comp=Z,92nm,0.8s
KPKS  Kokpek          51.15 303  eP      P      15 25 26.7 -1.7
      comp=Z,29nm,2.1s,baz=303
KPKS                             eS      S      15 32 42.8 -1.9
      baz=303
KPKS  Kokpek          51.15 303  eP      P      15 25 26.6 -1.7
KPKS                             eS      S      15 32 42.7 -1.9
KPKS                              pmax   pmax
      comp=Z,29nm,2.1s
GSI   Gunungsitoli    51.32 244   P      P      15 25 29.1 -0.7
GSI   Gunungsitoli    51.32 244   P      P      15 25 28.6 -1.2
      comp=Z,2µmcomp=Z,108nm,1.6s
SATY  Saty            51.41 303  eP      P      15 25 29.4 -1.0
      comp=Z,21nm,1.9s,baz=303
SATY  Saty            51.41 303  eP      P      15 25 29.3 -1.0
SATY                              pmax   pmax
      comp=Z,21nm,1.9s
KDAK  Kodiak Island   51.59  38   LR     LR     15 45 59.9
      comp=Z,2µm,21.2s,baz=268,slow=34
KDAK  Kodiak Island   51.59  38⇓eP      P      15 25 33.1 +1.9
KDAK                              pmax   pmax
      comp=Z,60nm,1.0s
KDAK  Kodiak Island   51.59  38   P      P      15 25 30.2 -1.0
KDAK                              IAmb   IAmb   15 25 53.2
      comp=Z,49nm,1.1s
SANVU Saraoutou       51.73 149   P      P      15 25 36.1 +3.4
A21K  Barrow          52.16  21   P      P      15 25 34.8 -0.5
      baz=253
CHKK  Chushkaly       52.31 304  eP      P      15 25 35.6 -1.3
      baz=304
CHKK  Chushkaly       52.31 304  eP      P      15 25 35.6 -1.3
MDOK  Medeo           52.38 303  eP      P      15 25 36.5 -1.1
      baz=303
MDOK                             eS      S      15 33 00.5 -1.2
      baz=303
MDOK                              LR     LR     15 47 45.5
      comp=Z,590nm,14.8s,baz=303
MDOK  Medeo           52.38 303  eP      P      15 25 36.4 -1.1
MDOK                             eS      S      15 33 00.5 -1.2
MDOK                              MLR    MLR
      comp=Z,590nm,15.0s
AAA   Alma-Ata        52.47 303  eP      P      15 25 37.8 -0.4
      comp=Z,30nm,0.8s,baz=303
AAA                               LR     LR     15 47 59.1
      comp=Z,586nm,15.5s,baz=303
AAA   Alma-Ata        52.47 303  eP      P      15 25 37.7 -0.4
AAA                               pmax   pmax
      comp=Z,30nm,0.8s
AAA                               MLR    MLR
      comp=Z,586nm,15.0s
TNSS  Tian-Shan       52.47 303  eP      P      15 25 37.8 -0.8
      baz=303
TNSS  Tian-Shan       52.47 303  eP      P      15 25 37.8 -0.8
BRLK  Bradley Lake    52.56  36   P      P      15 25 38.2 -0.2
BRLK                              IAmb   IAmb   15 25 53.4
      comp=Z,37nm,1.2s
KUU   Kurty           52.77 304  eP      P      15 25 38.2 -2.1
      comp=Z,32nm,0.9s,baz=304
KUU                               LR     LR     15 49 02.3
      comp=Z,839nm,14.8s,baz=304
KUU   Kurty           52.77 304  eP      P      15 25 38.2 -2.1
KUU                               pmax   pmax
      comp=Z,32nm,0.9s
KUU                               MLR    MLR
      comp=Z,839nm,15.0s
KTH   Kantishna Hill  52.80  31   P      P      15 25 38.7 -1.6
KTH                               IAmb   IAmb   15 25 46.2
      comp=Z,54nm,1.5s
BPAW  Bear Paw Mtn.   52.83  30   P      P      15 25 39.5 -1.0
BPAW                              IAmb   IAmb   15 25 45.6
      comp=Z,34nm,1.4s
CUT   Chulitna        53.01  33   P      P      15 25 41.0 -0.7
      baz=266
MLY   Manley          53.04  29   P      P      15 25 41.0 -1.0
      baz=264,SNR=14
O22K  Cooper Landing  53.17  35   P      P      15 25 41.7 -1.2
      baz=268
RC01  Rabbit Creek A  53.19  34   P      P      15 25 42.4 -0.7
      baz=267
TKM2  Tokmak 2        53.47 303   P      P      15 25 47.4 +1.8
      SNR=24
TKM2  Tokmak 2        53.47 303  i P     P      15 25 45.9 +0.2
TKM2                              pmax   pmax
      comp=Z,14nm,0.7s
PMR   Palmer          53.50  34   P      P      15 25 43.9 -1.4
PMR                               pmax   pmax
      comp=Z,52nm,1.4s
PMR   Palmer          53.50  34   P      P      15 25 43.9 -1.4
PMR                               IAmb   IAmb   15 25 49.9
      comp=Z,52nm,1.4s
BWN   Browne          53.50  30   P      P      15 25 45.5 +0.1
BWN                               IAmb   IAmb   15 26 03.4
      comp=Z,44nm,1.0s
COLD  Coldfoot        53.52  27   P      P      15 25 44.2 -1.2
      baz=262
I23K  Minto, Yukon-K  53.63  29   P      P      15 25 45.3 -0.9
      baz=265
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MCK   McKinley        53.70  31   P      P      15 25 46.1 -0.8
      baz=266,SNR=14
RND   Reindeer        53.72  31   P      P      15 25 47.7 +0.6
RND                               pmax   pmax
      comp=Z,20nm,0.9s
RND   Reindeer        53.72  31   P      P      15 25 47.7 +0.6
RND                               IAmb   IAmb   15 25 51.0
      comp=Z,20nm,0.9s
KNK   Knik Glacier    53.81  34   P      P      15 25 48.0 +0.3
KNK                               IAmb   IAmb   15 26 06.9
      comp=Z,30nm,1.0s
KSH   Kashi           53.84 299   P      P      15 25 53.0 +4.6
KSH                               pmax   pmax
      comp=Z,180nm,1.2s
KSH                               pmax   pmax
      comp=Z,1µm,8.7s
KSH                               LR     LR
      comp=Z,3µm,17.3s
KSH                               LR     LR
      comp=Z,2µm,16.1s
KSH                               LR     LR
      comp=Z,2µm,20.0s
XMIS  Christmas Isla  53.86 226   P      P      15 25 46.7 -1.9
TOLK  Toolik Lake Re  53.95  25   P      P      15 25 48.0 -0.6
      baz=262
TOLK  Toolik Lake Re  53.95  25   P      P      15 25 48.7 +0.1
TOLK                              IAmb   IAmb   15 26 04.9
      comp=Z,26nm,1.1s
KBK   Karagaybulak    53.98 303   P      P      15 25 51.0 +1.6
      SNR=30
CHMS  Chumysh         54.06 303   P      P      15 25 50.6 +0.8
      SNR=7.8
SGDS  Sogindy         54.07 304  eP      P      15 25 48.6 -1.4
      comp=Z,18nm,2.1s,baz=304
SGDS  Sogindy         54.07 304  eP      P      15 25 48.5 -1.4
SGDS                              pmax   pmax
      comp=Z,18nm,2.1s
USP   Ospenovka       54.20 304   P      P      15 25 51.3 +0.5
      SNR=22
BTLS  Baital          54.21 306  eP      P      15 25 49.2 -1.6
      comp=Z,27nm,0.9s,baz=306
BTLS  Baital          54.21 306  eP      P      15 25 49.2 -1.6
BTLS                              pmax   pmax
      comp=Z,27nm,0.9s
TCOL  CIGO, UAF Yank  54.24  30   P      P      15 25 50.4 -0.3
      baz=266
TCOL  CIGO, UAF Yank  54.24  30   P      P      15 25 50.1 -0.7
COLA  College         54.25  30⇓eP      P      15 25 52.9 +2.2
COLA                              pmax   pmax
      comp=Z,6.0nm,1.1s
COLA  College         54.25  30   P      P      15 25 49.7 -1.0
CCB   Clear Creek Bu  54.26  30   P      P      15 25 50.2 -0.6
AAK   Ala-Archa       54.31 303   LR     LR     15 49 43.0
      comp=Z,1µm,19.3s,baz=76,slow=37
AAK   Ala-Archa       54.31 303   P      P      15 25 53.1 +1.3
      SNR=17
AAK   Ala-Archa       54.31 303  i P     P      15 25 51.7 -0.1
      SNR=26
AAK   Ala-Archa       54.31 303c iP      P      15 25 52.2 +0.4
AAK                               pmax   pmax
      comp=Z,150nm,2.1s
AAK   Ala-Archa       54.31 303   P      P      15 25 51.6 -0.3
AAK   Ala-Archa       54.31 303   P      P      15 25 51.5 -0.3
SCM   Sheep Creek Mo  54.36  33   P      P      15 25 51.4 -0.4
SCM                               pmax   pmax
      comp=Z,41nm,1.0s
SCM   Sheep Creek Mo  54.36  33   P      P      15 25 51.4 -0.4
SCM                               IAmb   IAmb   15 26 11.3
      comp=Z,41nm,1.0s
UCH   Uchtor          54.38 302   P      P      15 25 54.0 +1.3
      SNR=23
POKR  Poker Plat Res  54.44  29   P      P      15 25 51.5 -0.7
      baz=267
POKR  Poker Plat Res  54.44  29   P      P      15 25 52.1 -0.1
POKR                              IAmb   IAmb   15 26 12.8
      comp=Z,40nm,1.5s
AS31  Alice Springs   54.54 189   P      P      15 25 53.0 -0.4
ASAR  Alice Springs   54.55 189   P      P      15 25 53.2 -0.2
      comp=Z,49nm,1.0s,baz=5.8,slow=5.7,SNR=100
ASAR                              S      S      15 33 28.8 -2.2
      comp=Z,2.4nm,1.1s,baz=14,slow=16,SNR=7.1
ASAR                              LR     LR     15 48 17.3
      comp=Z,823nm,20.6s,baz=22,slow=35
DDI   Dehra Dun       54.57 287  eP      P      15 25 54.0 +0.2
DDI                               IAmb   IAmb   15 25 57.5
      comp=Z,26nm,0.5s
HDA   Harding Lake    54.61  30   P      P      15 25 53.0 -0.4
      baz=268,SNR=5.8
HDA   Harding Lake    54.61  30   P      P      15 25 53.3 -0.1
IL31                  54.66  30   P      P      15 25 53.6 -0.1
IL31                              IAmb   IAmb   15 26 08.7
      comp=Z,26nm,1.1s
ILAR  Eielson Array   54.66  30   P      P      15 25 55.1 +1.4
      comp=Z,8.1nm,0.8s,baz=262,slow=5.8,SNR=43
ILAR                              LR     LR     15 47 16.3
      comp=Z,474nm,21.8s,baz=275,slow=34
M24K  Tolsona, Glenn  54.91  33   P      P      15 25 55.3 -0.4
      baz=270
AML   Almayashu       55.00 302   P      P      15 25 58.3 +1.2
      SNR=60
KLU   Klutina         55.03  34   P      P      15 25 56.0 -0.6
KLU                               IAmb   IAmb   15 26 01.4
      comp=Z,53nm,1.5s
SMLA  Simla           55.06 288  eP      P      15 25 56.5 -0.7
SMLA                              IAmb   IAmb   15 25 59.6
      comp=Z,75nm,0.9s
PAX   Paxson          55.24  32   P      P      15 25 57.7 -0.4
PAX                               pmax   pmax
      comp=Z,30nm,1.3s
PAX   Paxson          55.24  32   P      P      15 25 57.7 -0.4
PAX                               IAmb   IAmb   15 26 16.2
      comp=Z,30nm,1.3s
DHRM  DHARAMSHALA     55.43 290  eP      P      15 25 59.4 -0.8
DHRM                              IAmb   IAmb   15 26 02.6
      comp=Z,62nm,1.1s
RIDG  Independent Ri  55.52  31   P      P      15 25 59.7 -0.4
RIDG                              IAmb   IAmb   15 26 18.0
      comp=Z,25nm,1.2s
BRVK  Borovoye        55.56 316c iP      P      15 26 01.3 +0.9
BRVK                              pmax   pmax
      comp=Z,94nm,3.0s
BRVK  Borovoye        55.56 316   P      P      15 26 00.7 +0.2
BRVK                              IAmb   IAmb   15 26 07.6
      comp=Z,30nm,1.1s
BRVK  Borovoye        55.56 316   P      P      15 26 01.4 +0.9
N25K  Chitina, Valde  55.66  34   P      P      15 26 00.4 -0.8
      baz=272
MBWA  Marble Bar      55.81 206   P      P      15 26 08.9 +6.3
DOT   Dot Lake        55.87  31   P      P      15 26 00.0 -2.5
DOT                               IAmb   IAmb   15 26 07.6
      comp=Z,48nm,1.4s
SCRK  Sand Creek      55.90  31   P      P      15 26 01.2 -1.7
      baz=270,SNR=11
MENT  Mentasta        56.04  32   P      P      15 26 03.8  0.0
MENT                              IAmb   IAmb   15 26 09.0
      comp=Z,30nm,1.4s
PSA00 Pilbara Seismi  56.15 205   P      P      15 26 03.0 -1.9
PSA00                             IAmb   IAmb   15 26 08.2
      comp=Z,49nm,1.1s
L26K  Log Cabin Wild  56.21  32   P      P      15 26 03.7 -1.3
      baz=272
DZA   Taraz           56.55 304  eP      P      15 26 07.4 -0.3
      comp=Z,16nm,0.8s,baz=304
DZA   Taraz           56.55 304  eP      P      15 26 07.4 -0.3
DZA                               pmax   pmax
      comp=Z,16nm,0.8s
BALM  Baldy           56.78  34   P      P      15 26 08.1 -1.0
BALM                              IAmb   IAmb   15 26 27.0
      comp=Z,25nm,1.3s
NGP   Nagpur          56.95 277  eP      P      15 26 09.7 -1.2
KK31  Karatay Array   57.09 304   P      P      15 26 11.7 +0.1
KK31                              pmax   pmax
      comp=Z,98nm,1.1s
KK31  Karatay Array   57.09 304   P      P      15 26 11.7 +0.1
KKAR  Karatay Array   57.09 304   P      P      15 26 11.5  0.0
KKAR                              pmax   pmax
      comp=Z,98nm,1.1s
KKAR  Karatay Array   57.09 304   P      P      15 26 11.5  0.0
EGAK  Eagle           57.11  30   P      P      15 26 10.2 -1.1
DZM   Mont Dzumac     57.32 153  eP      P      15 26 15.3 +1.9
      comp=Z,113nm,1.2s
DZM                              eS      S      15 34 06.9 -1.2
      comp=Z,998nm,26.7s
DZM                              eLR     LR     15 43 02.9
      comp=Z,1µm,22.9s
NIL   Nilore          57.46 293   P      P      15 26 14.0 -0.4
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NIL				pmax	pmax		
	comp=Z,80nm,1.0s						
NIL	Nilore	57.46	293	P	P	15 26 14.0	-0.4
BHPL	Bhopal	57.53	280	*e*P	P	15 26 13.5	-1.5
BHPL				IAmb	IAmb	15 26 16.2	
	comp=Z,23nm,0.9s						
BRLS	Borolday	57.58	304	*e*P	P	15 26 16.7	+1.6
	comp=Z,19nm,1.0s,baz=304						
BRLS	Borolday	57.58	304	*e*P	P	15 26 16.7	+1.6
BRLS				pmax	pmax		
	comp=Z,19nm,1.0s						
IUG	Iuzhnay	57.65	303	*e*P	P	15 26 14.7	-0.9
	baz=303						
IUG	Iuzhnay	57.65	303	*e*P	P	15 26 14.7	-0.9
HYB	Hyderabad	58.92	273	*i* P	P	15 26 23.0	-1.8
HYB	Hyderabad	58.92	273	*e*P	P	15 26 23.9	-0.9
HYB				IAmb	IAmb	15 26 28.2	
	comp=Z,32nm,1.3s						
INK	Inuvik	59.85	25	LR	LR	15 54 38.8	
	comp=Z,291nm,20.4s,baz=264,slow=38						
INK	Inuvik	59.85	25	P	P	15 26 30.1	-0.2
INK				pmax	pmax		
	comp=Z,15nm,1.2s						
INK	Inuvik	59.85	25	P	P	15 26 30.1	-0.2
SVE	Sverdlovsk	60.48	321	*de*P	P	15 26 36.1	+1.3
SVE				*e*S	S	15 34 51.3	+3.1
SVE				pmax	pmax		
	comp=Z,85nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s						
KBL	Kabul	60.51	295	P	P	15 26 35.2	-0.5
KBL				pmax	pmax		
	comp=Z,64nm,1.2s						
KBL	Kabul	60.51	295	P	P	15 26 35.2	-0.5
KBL	Kabul	60.51	295	P	P	15 26 36.2	+0.4
	SNR=38						
ARU	Arti	61.68	321	*c i*P	P	15 26 43.6	+0.6
ARU						15 27 25.5	
ARU						15 28 54.9	
ARU				S	S	15 35 06.6	+3.1
ARU						15 36 24.4	
ARU				SS	SS	15 39 01.6	-3.1
ARU				pmax	pmax		
	comp=Z,114nm,1.2s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
ARU	Arti	61.68	321	P	P	15 26 43.2	+0.2
PALK	Pallekele	61.84	261	P	P	15 26 44.2	-0.5
PALK				pmax	pmax		
	comp=Z,28nm,1.2s						
PALK	Pallekele	61.84	261	P	P	15 26 44.2	-0.5
PALK				IAmb	IAmb	15 26 46.6	
	comp=Z,28nm,1.2s						
STKA	Stephens Creek	62.14	181	P	P	15 26 48.7	+2.5
	baz=349,slow=7.4,SNR=18						
STKA	Stephens Creek	62.14	181	*de*P	P	15 26 47.9	+1.6
STKA	Stephens Creek	62.14	181	P	P	15 26 46.7	+0.4
POO	Poona	62.49	276	*e*P	P	15 26 48.1	-0.9
FORT	Forrest	62.51	194	P	P	15 26 48.7	0.0
ABKAR	Akbulak array	62.69	313	P	P	15 26 50.0	+0.1
ABKAR				IAmb	IAmb	15 27 08.6	
	comp=Z,39nm,1.4s						
C36M	Paulatuk	63.02	23	P	P	15 26 50.4	-1.3
	baz=285						
C36M	Paulatuk	63.02	23	P	P	15 26 52.1	+0.4
C36M				IAmb	IAmb	15 27 06.9	
	comp=Z,17nm,1.2s						
BBOO	Buckleboo	63.34	186	P	P	15 26 54.6	+0.4
DLBC	Dease Lake	63.36	36	LR	LR	15 52 37.7	
	comp=Z,832nm,20.8s,baz=262,slow=34						
MORW	Morawa	64.36	205	P	P	15 27 01.0	-0.1
MORW				IAmb	IAmb	15 27 03.9	
	comp=Z,50nm,1.2s						
KIRV	Kirov	65.82	325	*c i*P	P	15 27 11.2	+1.0
HRA	Herat	65.84	297	P	P	15 27 11.4	+0.3
HRA				IAmb	IAmb	15 27 13.8	
	comp=Z,39nm,0.9s						
EUNU	Eureka	66.44	8	P	P	15 27 14.9	+1.0
EUNU				IAmb	IAmb	15 27 18.3	
	comp=Z,19nm,0.8s						
KBS	Kingsbay	67.09	351	P	P	15 27 18.8	+0.8
KBS				pmax	pmax		
	comp=Z,37nm,1.0s						
KBS	Kingsbay	67.09	351	P	P	15 27 18.8	+0.8
KBS				IAmb	IAmb	15 27 23.5	
	comp=Z,37nm,1.0s						
KBS	Kingsbay	67.09	351	*i* P	P	15 27 20.9	+2.8
KBS				IAmb	IAmb	15 27 23.3	
	comp=Z,81nm,1.0s						
NWAO	Narrogin (SRO)	67.46	203	P	P	15 27 22.1	+1.2
	comp=Z,69nm,0.9s,baz=26,slow=6.2,SNR=15						
NWAO	Narrogin (SRO)	67.46	203	P	P	15 27 21.1	+0.2
NWAO				pmax	pmax		
	comp=Z,85nm,1.0s						
NWAO	Narrogin (SRO)	67.46	203	P	P	15 27 21.1	+0.2
GEYT	Alibeck	67.64	302	P	P	15 27 23.6	+1.4
	comp=Z,29nm,0.9s,baz=315,slow=1.0,SNR=32						
GEYT				LR	LR	16 00 08.6	
	comp=Z,679nm,18.7s,baz=50,slow=39						
GYA0B	ALIBECK ARRAY	67.64	302	P	P	15 27 22.8	+0.6
GYA0B				IAmb	IAmb	15 27 26.7	
	comp=Z,34nm,0.9s						
HSPB	Hornsund (broa	67.86	349	*e*P	P	15 27 25.1	+2.2
HSPB				*e*S	S	15 36 20.6	+1.6
TOO	Toolangi	67.89	177	P	P	15 27 24.2	+0.6
TOO				pmax	pmax		
	comp=Z,50nm,1.5s						
TOO	Toolangi	67.89	177	P	P	15 27 24.2	+0.6
TOO				IAmb	IAmb	15 27 28.4	
	comp=Z,50nm,1.4s						
RES	Resolute Bay	68.66	14	P	P	15 27 29.1	+1.2
RES				pmax	pmax		
	comp=Z,19nm,1.3s						
RES	Resolute Bay	68.66	14	P	P	15 27 29.1	+1.2
TMCR	Tamitsa	68.72	333	*e*P	P	15 27 29.3	+0.8
TMCR				pmax	pmax		
	comp=Z,55nm,1.2s						
APA	Apatity	68.82	337	⇑*i*P	P	15 27 29.2	+0.1
APA				pmax	pmax		
	comp=Z,18nm,1.0s						
APA				MLR	MLR		
	comp=Z,800nm,14.0s						
BELG	Belogornoye	69.01	319	P	P	15 27 31.8	+1.3
	comp=Z,46nm,0.9s,baz=132,slow=3.7						
BELG	Belogornoye	69.01	319	*d i*P	P	15 27 32.0	+1.5
BELG				pmax	pmax		
	comp=Z,11nm,1.1s						
YKA	Yellowknife Ar	69.07	29	P	P	15 27 32.4	+1.7
	comp=Z,3.7nm,0.7s,baz=292,slow=5.7,SNR=32						
YKA				LR	LR	16 04 08.3	
	comp=Z,152nm,18.3s,baz=0.0,slow=41						
KLMR	Klimovskoe	69.57	329	*e*P	P	15 27 33.4	-0.4
KLMR				*e*		15 30 08.6	
KLMR				*e*S	S	15 36 40.3	+0.6
KLMR				pmax	pmax		
	comp=Z,66nm,1.4s						
KLMR	Klimovskoe	69.57	329	*e*P	P	15 27 33.4	-0.4
KLMR				AMP		15 27 37.5	
	comp=Z,66nm,1.4s						
KLMR				*e*PP	PP	15 30 08.7	+1.4
KLMR				*e*S	S	15 36 40.3	+0.6
KLMR				*e*S	S	15 36 40.3	+0.6
KLMR				LQ	LQ	15 52 10.9	
KLMR				LQ	LQ	15 52 10.9	
KLMR				LR	LR	15 56 06.9	
ARCES	ARCESS Array B	70.24	340	P	P	15 27 39.5	+1.6
	comp=Z,7.0nm,0.8s,baz=58,slow=3.2,SNR=6.2						
ARCES				LR	LR	16 03 48.3	
	comp=Z,859nm,18.7s,baz=50,slow=40						
TULEG	Thule	71.38	7	P	P	15 27 44.7	+0.1
TULEG				IAmb	IAmb	15 28 01.4	
	comp=Z,32nm,1.1s						
TULEG	Thule	71.38	7	*e*P	P	15 27 46.0	+1.4
E04D	Cinebar	71.80	46	P	P	15 27 45.6	-2.0
	baz=295						
G03D	McMinnville, O	71.94	48	P	P	15 27 47.5	-1.0
	baz=295						
DAG	Danmarks Havn	72.22	355	*i* P	P	15 27 50.0	+0.3
	comp=Z,36nm,1.2s						
DAG	Danmarks Havn	72.22	355	*i* P	P	15 27 50.0	+0.3
DAG				IAmb	IAmb	15 27 52.4	
	comp=Z,36nm,1.2s						
J01E	Myrtle Point	72.38	50	P	P	15 27 50.1	-1.1
	baz=296						
I03D	Drain, OR	72.53	49	P	P	15 27 50.9	-1.3
	baz=296						
K02D	Willamette Mer	72.76	50	P	P	15 27 52.0	-1.6
	baz=296						
F05D	White Salmon	72.79	47	P	P	15 27 52.8	-0.9
	baz=296						
VRH	Novokhopyorsk	72.83	320	*e*P	P	15 27 53.7	0.0
VRH				pmax	pmax		
	comp=Z,20nm,1.2s						
MOS	Moscow	72.83	325	*e*P	P	15 27 53.2	-0.5
MOS				*e*		15 28 10.2	
MOS				*e*S	S	15 37 15.9	-1.8
MOS				pmax	pmax		
	comp=Z,86nm,1.6s						
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
MOS				MLR	MLR		
	comp=E,1µm,17.0s						
MAK	Makhachkala	73.01	310	*e*P	P	15 27 55.6	+0.7
MAK				*e*S	SKiKP	15 37 23.2	-2.4
MAK				pmax	pmax		
	comp=Z,1µm,1.6s						
MAK				MLR	MLR		
	comp=Z,2µm,15.0s						
L02E	Cave Junction	73.04	51	P	P	15 27 53.5	-1.7
	baz=296						
I04A	Tendick Farm,	73.10	49	P	P	15 27 54.3	-1.2
	baz=296						
JLN	Jalan Bani Buh	73.12	286	P	P	15 27 57.0	+1.0
	SNR=14						
WSAR	Wadi Sarin	73.28	287	P	P	15 27 58.8	+1.9
	baz=82,slow=8.7						
WBK	Wadi Bani Khal	73.28	287	P	P	15 27 59.0	+2.1
	SNR=12						
J04D	Umpqua Nationa	73.55	49	P	P	15 27 57.1	-1.3
	baz=297						
I05D	Terrebonne, OR	73.55	48	P	P	15 27 57.3	-0.9
	baz=297						
BIDO	Bidbid	73.57	288	P	P	15 28 01.0	+2.4
	SNR=16						
OBN	Obninsk	73.67	325	*d i*P	P	15 27 58.9	+0.4
OBN				*i*		15 28 09.4	
OBN				*i*		15 30 49.0	
OBN				pmax	pmax		
	comp=Z,33nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
OBN	Obninsk	73.67	325	P	P	15 27 58.9	+0.4
OBN				IAmb	IAmb	15 28 13.9	
	comp=Z,63nm,1.3s						
LPSR	Galich'ya Gora	73.69	322	*e*P	P	15 27 59.5	+0.7
LPSR				pmax	pmax		
	comp=Z,60nm,1.5s						
SMDO	Samad	73.84	287	P	P	15 28 01.0	+0.7
	SNR=10						
L04D	Klamath Falls	73.88	50	P	P	15 27 58.5	-1.7
	baz=297						
M02C	Callahan	73.88	51	P	P	15 27 58.8	-1.4
	baz=297						
BANOM	Banah	73.99	291	*i* P	P	15 28 02.2	+1.2
	SNR=21						
BANOM	Banah	73.99	291	P	P	15 28 02.4	+1.4
	SNR=16						
VORR	Voronezh	73.99	321	P	P	15 27 59.0	-1.6
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
SHME	Shamm	74.06	291	*i* P	P	15 28 02.5	+1.1
	SNR=57						
SHME	Shamm	74.06	291	P	P	15 28 02.8	+1.4
	SNR=27						
J05D	Fort Rock, OR	74.10	49	P	P	15 28 00.2	-1.4
	baz=297						
JMDO	Jabal Madar	74.11	287	P	P	15 28 02.4	+0.7
	SNR=10.0						
N02D	Trinity Center	74.17	52	P	P	15 28 00.5	-1.4
	baz=297						
HOQ	Hoqain	74.21	288	P	P	15 28 03.3	+0.9
	SNR=22						
VSR	Storozhevoye	74.24	320	*e*P	P	15 28 02.6	+0.6
VSR				pmax	pmax		
	comp=Z,50nm,1.5s						
MDH	Madha	74.27	290	*i* P	P	15 28 03.0	+0.3
	SNR=8.1						
VORD	Divnogorie	74.29	320	*e*P	P	15 28 02.5	+0.2
VORD				pmax	pmax		
	comp=Z,20nm,1.5s						
MASF	Masafi	74.35	290	P	P	15 28 04.4	+1.2
	SNR=10						
MSFE	Esma-Masafi	74.35	290	*i* P	P	15 28 03.7	+0.5
	SNR=13						
M04C	Macdoel	74.38	51	P	P	15 28 01.5	-1.7
	baz=297						
O02D	Mt. Diablo Mer	74.47	52	P	P	15 28 02.3	-1.4
	baz=297						
UOSS	Minazif	74.50	290	*i* P	P	15 28 04.5	+0.5
	SNR=11						
UOSS	Minazif	74.50	290	P	P	15 28 03.7	-0.3
UOSS				IAmb	IAmb	15 28 07.8	
	comp=Z,60nm,1.2s						
SOHO	SOHO	74.60	289	*i* P	P	15 28 04.7	+0.1
	SNR=37						
SOHO	SOHO	74.60	289	P	P	15 28 05.1	+0.5
HATD	Hatta, Dubai	74.61	290	*i* P	P	15 28 05.4	+0.7
	SNR=19						
HATD	Hatta, Dubai	74.61	290	P	P	15 28 05.8	+1.1
	SNR=20						
UMQ	Umm Al-Quwin	74.68	291	*i* P	P	15 28 06.7	+1.6
	SNR=5.8						
BSY	Bisya	74.68	288	P	P	15 28 06.1	+1.0
	SNR=20						
DBG	Daneborg	74.71	355	*i* P	P	15 28 05.0	+0.7
ASHO	Ashiyiah	74.74	290	*i* P	P	15 28 05.9	+0.5
	SNR=9.5						
ASHO	Ashiyiah	74.74	290	P	P	15 28 06.6	+1.1
	SNR=13						
FIA1	FINESS Array S	74.81	333	P	P	15 28 05.5	+0.3
FINES	FINESS Array B	74.82	333	P	P	15 28 06.5	+1.4
	comp=Z,17nm,0.8s,baz=60,slow=5.6,SNR=41						
FINES	FINESS Array B	74.82	333	*i* P	P	15 28 06.8	+1.6
FINES				pmax	pmax		
	comp=Z,17nm,0.8s						
MHTO	MHTO	74.84	286	P	P	15 28 06.6	+0.6
	SNR=19						
GOF	Gofitskoye	74.92	314	⇑*e*P	P	15 28 06.9	+0.8
GOF				pmax	pmax		
	comp=Z,45nm,0.9s						
NAZ	Nazwa, Dubai	74.92	290	*i* P	P	15 28 07.0	+0.5
	SNR=7.6						
NAZ	Nazwa, Dubai	74.92	290	P	P	15 28 07.6	+1.1
	SNR=8.8						
ARQ	Araqi	74.97	288	P	P	15 28 08.0	+1.2
	SNR=18						
FAQ	Al Faqa, Dubai	75.09	290	*i* P	P	15 28 08.1	+0.7
	SNR=16						
FAQ	Al Faqa, Dubai	75.09	290	P	P	15 28 08.3	+0.9
	SNR=9.3						
O03E	Paynes Creek	75.09	52	P	P	15 28 05.6	-1.7
	baz=298						
ALNE	Al Ain	75.27	289	*i* P	P	15 28 09.2	+0.7
	SNR=13						
ALNE	Al Ain	75.27	289	P	P	15 28 09.5	+1.0
	SNR=17						
NCK	Nalchik	75.31	312	⇑*e*P	P	15 28 10.2	+1.8
NCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ASUD	Al Ashush, Dub	75.35	290	*i* P	P	15 28 09.8	+0.9
	SNR=17						
ASUD	Al Ashush, Dub	75.35	290	P	P	15 28 10.2	+1.2
	SNR=8.1						
ZEI	Tsey	75.44	311	*e*P	P	15 28 09.6	+0.2
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
KBZ	Khabaz	75.64	312	P	P	15 28 11.5	+1.2
	comp=Z,16nm,0.7s,baz=97,slow=3.7,SNR=18						
KBZ				LR	LR	16 04 03.6	
	comp=Z,760nm,18.6s,baz=70,slow=38						
KBZ	Khabaz	75.64	312	*ce*P	P	15 28 11.8	+1.6
AJN	Ajban	75.66	290	*i* P	P	15 28 11.1	+0.4
	SNR=11						
AJN	Ajban	75.66	290	P	P	15 28 11.2	+0.5
	SNR=11						
KVAR	Kislovodsk Arr	75.66	313	P	P	15 28 14.1	+3.5
	comp=Z,17nm,0.9s,baz=101,slow=23,SNR=5.2						
KIV	Kislovodsk	75.67	313	⇓P	P	15 28 16.5	+6.0
KIV	Kislovodsk	75.67	313	*i* P	P	15 28 11.8	+1.3
	SNR=9.3						
KIV	Kislovodsk	75.67	313	*c i*P	P	15 28 11.9	+1.3
KIV				*i*		15 28 29.2	
KIV				*i*		15 30 58.5	
KIV				*i* S	S	15 37 48.2	-1.9
KIV				pmax	pmax		
	comp=Z,64nm,1.3s						
KIV				MLR	MLR		
	comp=Z,432nm,18.0s						
KIV	Kislovodsk	75.67	313	P	P	15 28 11.4	+0.9
KIV				IAmb	IAmb	15 28 19.2	
	comp=Z,45nm,1.0s						
DQM	DQM	75.69	285	P	P	15 28 11.4	+0.4
GNI	Garni	76.13	308	P	P	15 28 14.7	+1.3
	comp=Z,8.5nm,0.7s,baz=50,slow=4.6,SNR=5.0						
GNI	Garni	76.13	308	⇓*e*P	P	15 28 15.9	+2.5
GNI				pmax	pmax		
	comp=Z,33nm,1.7s						
GNI	Garni	76.13	308	P	P	15 28 12.3	-1.1
GNI				IAmb	IAmb	15 28 26.0	
	comp=Z,64nm,1.2s						
AFDM	Forest Hills D	76.28	53	P	P	15 28 13.7	-0.3
VSU	Vasula	76.34	331	*e*P	P	15 28 15.5	+1.6
VSU	Vasula	76.34	331	*de*P	P	15 28 15.9	+2.0
VSU				pmax	pmax		
	comp=Z,121nm,0.9s						
MSO	Missoula	76.91	43	P	P	15 28 16.8	-0.8
	baz=301						
MZWR	Madinat Zayed	76.92	290	P	P	15 28 17.8	-0.1
NNZ	Nelson	77.06	156	P	P	15 28 18.0	-0.1
SUMG	Summit	77.10	0	*i* P	P	15 28 19.8	+1.3
SUMG	Summit	77.10	0	*i* P	P	15 28 19.8	+1.3
SUMG	Summit	77.10	0	*i* P	P	15 28 19.9	+1.3
CMB	Columbia Colle	77.12	53	P	P	15 28 19.0	+0.2
CMB				pmax	pmax		
	comp=Z,30nm,1.4s						
CMB	Columbia Colle	77.12	53	P	P	15 28 19.0	+0.2
CMB				IAmb	IAmb	15 28 24.5	
	comp=Z,30nm,1.4s						
PNTR	Pine Nut	77.15	52	P	P	15 28 18.5	-0.7
MTSE	Matsula	77.39	332	*e*P	P	15 28 19.0	-0.8
TUWZ	Tuamarina	77.44	156	P	P	15 28 20.4	+0.2
SOC	Sochi	77.72	313	*e*P	P	15 28 20.5	-1.5
SOC				*e*PPP	PPP	15 33 03.1	
SOC				*e*S	S	15 38 09.0	-3.4
SOC				*e*SS	SS	15 43 14.3	+2.4
SOC				*e*SSS	SSS	15 46 37.2	
SOC				MLR	MLR		
	comp=Z,353nm,11.0s						
SHAO	Shalim	78.18	284	*i* P	P	15 28 25.3	+0.4
	SNR=5.2						
SHAO	Shalim	78.18	284	P	P	15 28 25.8	+0.8
MNK	Minsk	78.20	327	*i* P	P	15 28 24.7	+0.2
	comp=E,1.0nm,0.9s						
MNK				*i* P	P	15 28 24.7	+0.2
	comp=N,11nm,0.9s						
MNK				*i* P	P	15 28 24.7	+0.2
	comp=Z,31nm,0.9s						
MNK				*i* PcP	PcP	15 28 33.9	0.0
MNK				*i* PP	PP	15 31 20.9	+0.2
MNK				*i* PPP	PPP	15 33 08.7	
MNK				*i* S	S	15 38 18.9	+1.8
MNK				*i* ScS	ScS	15 38 44.5	+2.1
MNK				*i* SS	SS	15 43 22.7	+4.3
MNK				*i* SSS	SSS	15 46 47.3	
MNK				*i* LQ	LQ	15 57 48.9	
MNK				*i* LQ	LQ	15 57 48.9	
MNK				*i* LR	LR	16 00 17.8	
MNK				*i* LRM	MLR	16 05 23.2	
	comp=Z,867nm,19.7s						
MNK				*i* LRM	MLR	16 05 26.1	
	comp=N,957nm,19.7s						
MNK				*i* LRM	MLR	16 05 40.2	
	comp=E,100nm,19.7s						
MNK	Minsk	78.20	327	*e*P	P	15 28 27.0	+2.5
HRY	Holter Researc	78.21	43	P	P	15 28 23.9	-1.0
IDID	Didziasalis	78.24	328	*e*P	P	15 28 27.1	+2.4
HLID	Hailey	78.31	46	P	P	15 28 23.8	-1.7
	baz=301						
NVAR	Mina Array Bea	78.36	52	P	P	15 28 28.3	+2.4
	comp=E,2.9nm,0.5s,baz=284,slow=6.1,SNR=33						
ISAL	Salakas	78.36	329	*e*P	P	15 28 27.7	+2.4
IIGN	Ignalina	78.45	328	*e*P	P	15 28 28.5	+2.7
NACGM	Naroch	78.47	328	*i* P	P	15 28 27.6	+1.7
NACGM				*i* P	P	15 28 27.6	+1.7
NACGM				*i* P	P	15 28 27.6	+1.7
NACGM				*i* PcP	pwP	15 28 40.3	-2.3
NACGM				*i* PP	PP	15 31 16.8	-6.2
NACGM				*i* PPP	PPP	15 33 08.8	
NACGM				*i* S	S	15 38 03.5	-17
NACGM				*i* S	SKSac	15 38 06.4	-32
NACGM				*i* PS	PnS	15 39 34.7	+31
NACGM				*i* SS	SS	15 42 54.8	-28
NACGM				*i* SSS	SSS	15 46 05.4	
NACGM				*i* LQ	LQ	15 56 32.2	
NACGM				*i* LR	LR	16 02 41.3	
ANN	Anapa	78.50	315	*e*P	P	15 28 23.5	-2.8
ANN				*e*S	S	15 38 19.7	-0.9
ANN				pmax	pmax		
	comp=Z,80nm,0.9s						
BCYI	Bear Canyon	78.54	45	P	P	15 28 26.4	-0.5
SLWR	Sila	78.55	291	P	P	15 28 27.5	+0.6
SMMC	Simmler	78.71	56	P	P	15 28 25.9	-1.9
	baz=300						
FFC	Flin Flon	78.77	32	P	P	15 28 25.9	-1.7
FFC				pmax	pmax		
	comp=Z,13nm,0.9s						
FFC	Flin Flon	78.77	32	P	P	15 28 25.9	-1.7
DMTO	DMTO	78.89	284	P	P	15 28 29.4	+0.5
BOZ	Bozeman (W)	78.93	43	P	P	15 28 26.6	-2.2
	baz=302						
PKM	Mcpherson Peak	79.05	56	P	P	15 28 28.5	-1.3
	baz=300						
VES	Vestal, Richgr	79.10	55	P	P	15 28 28.6	-1.2
	baz=300						
DOK	Doka	79.14	285	P	P	15 28 30.6	+0.4
	SNR=9.9						
MIB	Mutribah	79.22	298	*e*P		15 28 30.9	
ELK	Elko	79.23	49	P	P	15 28 29.9	-0.8
ELK				pmax	pmax		
	comp=Z,23nm,1.5s						
ELK	Elko	79.23	49	P	P	15 28 29.9	-0.8
KBD	Kabd	79.25	297	*e*P		15 28 31.5	
TPH	Tonopah	79.27	52	P	P	15 28 30.1	-0.9
TPH				pmax	pmax		
	comp=Z,125nm,1.4s						
TPH	Tonopah	79.27	52	P	P	15 28 30.1	-0.9
PABE	Paberze	79.36	329	*e*P	P	15 28 32.8	+2.0
FCC	Fort Churchill	79.46	26	P	P	15 28 31.3	0.0
FCC				pmax	pmax		
	comp=Z,17nm,1.4s						
FCC	Fort Churchill	79.46	26	P	P	15 28 31.2	0.0
RDF	Al-Radifah	79.48	297	*e*P		15 28 32.5	
CWC	Cottonwood Cre	79.51	54	P	P	15 28 30.7	-1.6
	baz=300						
RBK	Rabkut	79.61	284	P	P	15 28 33.3	+0.4
	SNR=5.7						
ISA	Isabella, Lake	79.62	55	P	P	15 28 32.0	-0.7
	baz=300						
RST	Umm Al-Ruwaisa	79.62	298	*e*P		15 28 33.1	
WHFO	Wadi Hawf	79.78	285	P	P	15 28 33.9	+0.1
	SNR=6.6						
AKASG	Malin Array Be	79.80	323	P	P	15 28 34.4	+1.1
	comp=Z,2.1nm,0.4s,baz=46,slow=5.8,SNR=32						
AKASG				PP	PP	15 31 34.6	+0.4
	comp=Z,6.1nm,1.0s,baz=51,slow=9.1,SNR=4.0						
AKASG				LR	LR	16 07 00.4	
	comp=Z,2µm,18.5s,baz=55,slow=38						
AKBB	Malin Array Si	79.80	323	⇓*e*P	P	15 28 34.6	+1.3
AKBB	Malin Array Si	79.80	323	P	P	15 28 33.1	-0.2
AKBB				IAmb	IAmb	15 28 45.4	
	comp=Z,42nm,1.4s						
PBUR	Paburge	79.91	330	*e*P	P	15 28 35.8	+2.0
MPMC	Manual Prospec	80.11	54	P	P	15 28 34.7	-0.8
	baz=301,SNR=6.2						
NC405	NORSAR Array S	80.15	338	P	P	15 28 35.6	+0.6
H17A	Grant Village	80.21	44	P	P	15 28 35.7	-0.3
	baz=303						
R11A	Troy Canyon, C	80.24	51	P	P	15 28 35.2	-1.0
	baz=301,SNR=16						
R11A	Troy Canyon, C	80.24	51	P	P	15 28 35.9	-0.3
LRMC	Laurel Mtn Rad	80.27	55	P	P	15 28 35.2	-1.2
	baz=301,SNR=5.5						
NC204	NORSAR Array S	80.33	338	P	P	15 28 37.0	+0.9
NB201	NORSAR Array S	80.33	338	P	P	15 28 37.0	+0.9
EDW2	Edwards Air Fo	80.35	55	P	P	15 28 36.0	-0.7
	baz=301						

NB2	NORSAR Subarra	80.36	338	P	P	15 28 37.0	+0.8
	comp=Z,98nm,1.7s,baz=41,slow=5.6						
NB2	NORSAR Subarra	80.36	338	P	P	15 28 37.0	+0.8
	baz=41,slow=5.6						
NOA	NORSAR Array B	80.36	338	P	P	15 28 37.1	+0.8
	comp=Z,15nm,1.0s,baz=40,slow=5.3,SNR=27						
NOA				LR	LR	16 10 27.6	
	comp=Z,782nm,18.9s,baz=35,slow=40						
ABTO	Aybut	80.44	284	P	P	15 28 37.8	+0.4
	SNR=7.4						
TPNV	Topopah Spring	80.51	53	P	P	15 28 36.0	-1.7
	baz=301,SNR=13						
RLMT	Red Lodge	80.58	43	P	P	15 28 36.0	-1.9
	baz=304						
ICESG	Greenland Ices	80.59	1	*i* P	P	15 28 39.0	+1.3
ICESG				IAmb	IAmb	15 28 41.0	
	comp=Z,61nm,1.4s						
SUW	Suwalki	80.67	328	*e*P	P	15 28 39.1	+1.2
SUW	Suwalki	80.67	328	*e*P	P	15 28 39.5	+1.6
SUW	Suwalki	80.67	328	P	P	15 28 37.9	0.0
SUW				pmax	pmax		
	comp=Z,161nm,1.0s						
SUW	Suwalki	80.67	328	P	P	15 28 37.9	0.0
BFSC	Mount Baldy Ra	80.92	56	P	P	15 28 38.5	-1.3
	baz=301						
GSC	Goldstone, Bar	80.97	54	P	P	15 28 38.4	-1.7
	baz=301						
PRN	Pahroc Range	81.09	52	P	P	15 28 39.1	-1.6
PRN				IAmb	IAmb	15 29 06.7	
	comp=Z,25nm,1.2s						
DUG	Dugway, Tooele	81.09	48	P	P	15 28 39.6	-1.1
DUG				pmax	pmax		
	comp=Z,28nm,1.4s						
DUG	Dugway, Tooele	81.09	48	P	P	15 28 39.6	-1.1
	baz=303,SNR=13						
DUG	Dugway, Tooele	81.09	48	P	P	15 28 39.6	-1.1
DUG				IAmb	IAmb	15 28 46.6	
	comp=Z,28nm,1.4s						
PPT	Papeete	81.20	116	LR	LR	16 01 47.1	
	comp=Z,391nm,18.4s,slow=34						
PPT2	Papeete2	81.21	116	*e*S	S	15 38 42.9	-7.1
	comp=Z,152nm,26.0s						
PPT2	Papeete2	81.21	116	*e*LQ	LQ	15 50 20.7	
	comp=Z,366nm,27.2s						
PPT2				*e*LR	LR	15 53 38.6	
	comp=Z,522nm,22.5s,baz=298						
LAO	LASA Array	81.42	40	P	P	15 28 41.4	-0.8
	baz=306						
SHPR	Sheep Range	81.49	53	P	P	15 28 42.2	-0.6
BW06	Boulder Array	81.72	45	P	P	15 28 43.4	-0.7
	baz=304,SNR=5.7						
BW06	Boulder Array	81.72	45	P	P	15 28 43.3	-0.8
PD31	Pinedale Array	81.72	45	P	P	15 28 43.4	-0.7
PDAR	Pinedale Array	81.72	45	P	P	15 28 46.1	+2.1
	comp=Z,4.1nm,0.8s,baz=317,slow=2.3,SNR=25						
PDAR				LR	LR	16 02 33.7	
	comp=Z,519nm,19.3s,baz=314,slow=34						
SORM	Soroca	81.80	322	⇑P	P	15 28 45.1	+1.1
SORM	Soroca	81.80	322	⇑P	P	15 28 45.1	+1.1
KONO	Kongsberg	81.95	338	⇓*e*P	P	15 28 47.7	+3.1
KONO				pmax	pmax		
	comp=Z,12nm,1.1s						
GMRC	Granite Mounta	82.05	54	P	P	15 28 45.5	-0.3
	baz=302,SNR=5.3						
PFO	Pinyon Flats O	82.09	56	⇓*e*P	P	15 28 48.2	+2.1
PFO				pmax	pmax		
	comp=Z,47nm,1.5s						
PFO	Pinyon Flats O	82.09	56	P	P	15 28 46.0	0.0
	baz=302,SNR=6.0						
PFO	Pinyon Flats O	82.09	56	P	P	15 28 45.4	-0.6
PFO				IAmb	IAmb	15 28 50.6	
	comp=Z,37nm,1.4s						
TPFO	Pinon Flats	82.10	56	P	P	15 28 45.7	-0.4
	baz=302,SNR=7.6						
BELC	Belle Mtn. Jos	82.22	55	P	P	15 28 45.2	-1.6
	baz=302						
SOCY	Socotra	82.38	280	P	P	15 28 47.1	-0.7
MONP2	Monument Peak	82.50	56	P	P	15 28 46.2	-2.1
	baz=302						
IRM	Iron Mountain	82.74	55	P	P	15 28 48.6	-0.7
	baz=302						
BC3	Big Chuckawall	82.78	55	P	P	15 28 48.1	-1.5
	baz=302						
IKP	In-Ko-Pah, Jac	82.85	56	P	P	15 28 48.9	-1.0
	baz=302						
SWSC	Sam W. Stewart	82.91	56	P	P	15 28 49.3	-0.9
	baz=302						
SRU	San Rafael Swe	83.17	48	P	P	15 28 51.8	+0.2
SRU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SRU	San Rafael Swe	83.17	48	P	P	15 28 51.8	+0.2
BEL	Belsk	83.19	328	*e*P	P	15 28 52.5	+1.3
PDMCI	Parker Dam,Lak	83.36	54	P	P	15 28 51.3	-1.1
	baz=303						
BR131	Keskin Array S	83.63	313	*c i*P	P	15 28 55.0	+1.0
BR131	Keskin Array S	83.63	313	P	P	15 28 54.5	+0.5
BRTR	Keskin Array B	83.63	313	P	P	15 28 55.6	+1.7
	comp=Z,14nm,0.9s,baz=99,slow=3.9,SNR=28						
BRTR				LR	LR	16 10 20.7	
	comp=Z,266nm,19.5s,baz=55,slow=39						
TESR	Tescani	83.71	321	⇑P	P	15 28 55.9	+1.9
CFR	Carcaliu	83.71	319	⇑P	P	15 28 55.8	+1.8
CFR	Carcaliu	83.71	319	⇑P	P	15 28 55.8	+1.8
BIZ	Bicaz	83.73	322	⇑P	P	15 28 56.1	+2.0
KWP	Kalwaria Pacla	83.75	325	*e*P	P	15 28 55.4	+1.2
KWP				*e*S	S	15 39 17.0	+1.9
KWP	Kalwaria Pacla	83.75	325	P	P	15 28 54.5	+0.3
KWP				pmax	pmax		
	comp=Z,80nm,1.0s						
KWP	Kalwaria Pacla	83.75	325	P	P	15 28 54.5	+0.3
TPGR	Topolog	83.75	319	⇓P	P	15 28 56.0	+1.7
RAYN	Ar Rayn	83.75	293	*i* P	P	15 28 55.8	+1.1
	SNR=43						
RAYN	Ar Rayn	83.75	293	P	P	15 28 55.4	+0.7
RAYN				pmax	pmax		
	comp=Z,93nm,1.0s						
RAYN	Ar Rayn	83.75	293	P	P	15 28 55.4	+0.7
BURAR	Bucovina Array	83.78	323	⇓P	P	15 28 56.4	+1.9
BURAR	Bucovina Array	83.78	323	⇓P	P	15 28 56.4	+1.9
GKP	Gorka Klasztor	83.78	330	*e*P	P	15 28 55.7	+1.5
GKP	Gorka Klasztor	83.78	330	*e*P	P	15 28 56.4	+2.2
O20A	White River Ci	84.04	47	P	P	15 28 54.1	-2.0
	baz=305						
VRI	Vrincioaia	84.07	321	⇑P	P	15 28 57.4	+1.5
VRI	Vrincioaia	84.07	321	⇑P	P	15 28 57.4	+1.5
PLOR	Plostina	84.12	321	⇑P	P	15 28 58.9	+2.7
PLOR	Plostina	84.12	321	⇑P	P	15 28 58.9	+2.7
RSSD	Black Hills	84.19	41	P	P	15 28 55.3	-1.6
	baz=308						
KOLS	Kolonicke sedl	84.42	325	*e*P	P	15 28 58.7	+1.1
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KOLS	Kolonicke sedl	84.42	325	*e*P	P	15 28 58.7	+1.1
OZUR		84.43	321	⇑P	P	15 29 00.0	+2.3
ULM	Lac du Bonnet	84.51	33	P	P	15 29 01.3	+3.3
	comp=Z,2.2nm,0.8s,baz=325,slow=8.0,SNR=3.5						
ULM				LR	LR	16 05 25.4	
	comp=Z,551nm,21.5s,baz=310,slow=35						
ULM	Lac du Bonnet	84.51	33	⇓*e*P	P	15 29 00.6	+2.6
PV23	Carpenter Ridg	84.51	48	P	P	15 28 57.7	-0.9
PV10	Paradox Valley	84.54	48	P	P	15 28 58.6	-0.1
MUD	Monsted U'grnd	84.56	336	*i* P	P	15 28 58.1	0.0
MUD	Monsted U'grnd	84.56	336	*i* P	P	15 28 58.1	0.0
MUD	Monsted U'grnd	84.56	336	*i* P	P	15 28 58.2	0.0
WUAZ	Wupatki	84.61	52	P	P	15 28 57.4	-1.6
	baz=304						
UZH	Uzhgorod	84.61	325	*e*P	P	15 29 01.5	+3.0
UZH				*e*S	S	15 39 27.5	+3.8
UZH				MLR	MLR		
	comp=N,300nm,19.0s						
UZH				MLR	MLR		
	comp=E,250nm,19.0s						
UZH				MLR	MLR		
	comp=Z,180nm,19.0s						
PV19	Morning Glory	84.61	48	P	P	15 28 58.7	-0.4
PV05	Paradox Valley	84.67	49	P	P	15 28 59.2	-0.2
PV05				IAmb	IAmb	15 29 17.8	
	comp=Z,32nm,1.0s						
TBI	Tubuai	84.68	121	*e*S	S	15 39 19.0	-5.9
	comp=Z,165nm,26.0s						
TBI	Tubuai	84.68	121	*e*LQ	LQ	15 51 50.7	
	comp=Z,267nm,41.5s						
TBI				*e*LR	LR	15 55 20.8	
	comp=Z,723nm,31.0s,baz=306						
MDUB	Mudurnu	84.73	314	P	P	15 28 59.6	+0.2
DOPR	Dopca	84.73	321	⇓P	P	15 29 01.5	+2.2
MLR	Muntele Rosu	84.73	321	⇑P	P	15 28 57.2	-2.2
MLR	Muntele Rosu	84.73	321	⇑P	P	15 28 57.2	-2.2
PV03	Paradox Valley	84.73	48	P	P	15 28 59.3	-0.4
PV03				IAmb	IAmb	15 29 18.6	
	comp=Z,35nm,1.2s						
OJC	Ojcow	84.75	327	*e*P	P	15 29 00.5	+1.2
OJC				*e*S	S	15 39 26.8	+1.7
PV13	Radium Mtn., P	84.80	48	P	P	15 28 59.1	-1.0
PV13				IAmb	IAmb	15 29 18.2	
	comp=Z,22nm,1.1s						
CRVS	Cervenica-Dubn	84.84	325	*e*P	P	15 29 00.9	+1.2
CRVS	Cervenica-Dubn	84.84	325	*e*P	P	15 29 00.9	+1.2
PV01	Paradox Valley	84.98	48	P	P	15 29 00.1	-0.8
PV01				IAmb	IAmb	15 29 05.7	
	comp=Z,19nm,1.0s						
N23A	Red Feather La	85.01	45	P	P	15 28 59.5	-1.5
	baz=307						
NIE	Niedzica	85.06	326	*e*P	P	15 29 02.7	+1.8
MVCO	Mesa Verde	85.56	49	P	P	15 29 02.3	-1.5
	baz=305						
214A	Organ Pipe Nat	85.57	55	P	P	15 29 02.1	-1.7
	baz=304						
KECS	Kecovo	85.60	325	*e*P	P	15 29 05.2	+1.7
KECS	Kecovo	85.60	325	*e*P	P	15 29 05.2	+1.7
DRGR		85.61	323	⇑P	P	15 29 05.6	+1.9
DRGR		85.61	323	⇑P	P	15 29 05.6	+1.9
LANS	Liptovska Anna	85.64	326	*e*P	P	15 29 06.1	+2.3
LANS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LANS	Liptovska Anna	85.64	326	*e*P	P	15 29 06.1	+2.3
OKC	Ostrava-Krasne	85.78	327	AMS	AMS	16 17 20.0	
	comp=Z,1µm,15.2s						
ISCO	Idaho Springs	85.87	46	P	P	15 29 03.7	-1.7
	baz=307						
KSP	Ksiaz	85.92	329	*e*P	P	15 29 06.5	+1.5
KSP				*e*S	S	15 39 38.9	+2.3
W18A	Petrified Fore	85.94	51	P	P	15 29 04.3	-1.4
	baz=305						
MORC	Moravsky Berou	86.11	328	⇓P	P	15 29 07.8	+1.7
MORC	Moravsky Berou	86.11	328	*e*P	P	15 29 06.8	+0.7
MORC	Moravsky Berou	86.11	328	⇓P	P	15 29 07.8	+1.7
MORC	Moravsky Berou	86.11	328	P	P	15 29 05.7	-0.4
OSTC	Ostas	86.15	329	*e*P	P	15 29 10.9	+4.6
OSTC				AMS	AMS	16 10 00.0	
	comp=Z,900nm,19.1s						
KRLC	Kraliky	86.24	328	AMS	AMS	16 10 10.0	
	comp=Z,800nm,18.2s						
MMAI	Mount Meron Ar	86.25	306	P	P	15 29 09.3	+2.2
	comp=Z,20nm,0.9s,baz=50,slow=4.4,SNR=6.5						
DPC	Dobruska-Polom	86.25	329	*e*P	P	15 29 08.5	+1.7
DPC				MLR	MLR		
	comp=Z,800nm,18.9s						
DPC	Dobruska-Polom	86.25	329	*e*P	P	15 29 08.5	+1.7
DPC				AMS	AMS	16 17 50.0	
	comp=Z,800nm,18.9s						
PSZ	Piszkesteto	86.28	325	*e*P	P	15 29 08.8	+1.8
PSZ	Piszkesteto	86.28	325	P	P	15 29 07.0	0.0
PSZ				pmax	pmax		
	comp=Z,15nm,1.1s						
PSZ	Piszkesteto	86.28	325	P	P	15 29 07.0	0.0
PSZ				IAmb	IAmb	15 29 31.0	
	comp=Z,15nm,1.1s						
UPC	Upice	86.28	329	*e*P	P	15 29 08.7	+1.8
UPC				MLR	MLR		
	comp=Z,1µm,16.8s						
UPC	Upice	86.28	329	*e*P	P	15 29 08.7	+1.8
UPC				AMS	AMS	16 16 50.0	
	comp=Z,1µm,16.8s						
S22A	4UR Ranch, Cre	86.32	48	P	P	15 29 05.9	-1.8
	baz=306						
VYHS	Vyhne	86.39	326	*e*P	P	15 29 08.8	+1.3
VYHS				pmax	pmax		
	comp=Z,24nm,1.2s						
VYHS	Vyhne	86.39	326	*e*P	P	15 29 08.8	+1.3
Q24A	Divide	86.66	46	P	P	15 29 07.1	-2.2
	baz=307						
JAVC	Velka Javorina	86.69	327	*e*P	P	15 29 11.0	+2.0
TUC	Tucson	86.80	54	P	P	15 29 08.8	-1.1
	baz=304						
VRAC	Vranov	86.88	328	⇑P	P	15 29 07.5	-2.3
VRAC	Vranov	86.88	328	*e*P	P	15 29 10.9	+1.1
VRAC	Vranov	86.88	328	⇑P	P	15 29 07.5	-2.3
PVCC	Panska Ves	86.90	330	AMS	AMS	16 17 00.0	
	comp=Z,900nm,17.5s						
BRG	Berggiesshubel	86.92	330	*e*P	P	15 29 11.6	+1.7
BRG				Amp		15 29 12.6	
	comp=Z,181nm,2.5s						
BRG				Amp		16 12 14.0	
	comp=N,1.0nm,16.8s						
BRG				Amp		16 12 17.0	
	comp=Z,0.9nm,17.3s						
BRG				Amp		16 12 39.0	
	comp=E,0.3nm,17.3s						
BRG	Berggiesshubel	86.92	330	*e*P	P	15 29 11.6	+1.7
BRG				pmax	pmax		
	comp=Z,181nm,2.6s						
BRG				MLR	MLR		
	comp=N,1µm,16.8s						
BRG				MLR	MLR		
	comp=Z,900nm,17.3s						
BRG	Berggiesshubel	86.92	330	*e*P	P	15 29 11.6	+1.7
BRG				Amp		15 29 12.6	
	comp=Z,181nm,2.5s						
BRG				Amp		16 12 14.0	
	comp=N,1.0nm,16.8s						
BRG				Amp		16 12 17.0	
	comp=Z,0.9nm,17.3s						
BRG				Amp		16 12 39.0	
	comp=E,0.3nm,17.3s						
CLL	Collm	87.00	331	*i* P	P	15 29 10.4	+0.1
	comp=Z,75nm,1.9s						
CLL				*i*		15 29 27.4	
	comp=Z,19nm,1.2s						
CLL				*e*		15 30 09.0	
CLL				*e*PP	PP	15 32 38.0	+5.1
CLL				*e*		15 34 18.0	
CLL				*e*S	S	15 39 51.0	+3.9
CLL				*e*PS		15 40 50.0	
CLL				*e*SS	SS	15 45 35.0	+6.2
CLL				*e*SSS	SSS	15 49 24.0	
CLL	Collm	87.00	331	*i* P	P	15 29 10.4	+0.1
CLL				*i*		15 29 27.4	
CLL				*e*S	S	15 39 51.0	+3.9
CLL				pmax	pmax		
	comp=Z,75nm,1.9s						
CLL	Collm	87.00	331	P	P	15 29 09.4	-0.9
CLL				IAmb	IAmb	15 29 29.0	
	comp=Z,21nm,1.3s						
HERR	Herculane	87.03	322	⇓P	P	15 29 11.5	+0.9
SMOL	Smolenice	87.05	327	*e*P	P	15 29 12.9	+2.2
SMOL				pmax	pmax		
	comp=Z,115nm,2.9s						
SMOL	Smolenice	87.05	327	*e*P	P	15 29 12.8	+2.1
KRUC	Moravsky	87.14	328	*e*P	P	15 29 11.9	+0.8
SDCO	Great Sand Dun	87.17	47	P	P	15 29 10.6	-1.2
	baz=307						
SDCO	Great Sand Dun	87.17	47	P	P	15 29 10.7	-1.2
MODS	Modra-Piesok	87.22	327	*e*P	P	15 29 14.0	+2.5
MODS				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	Modra-Piesok	87.22	327	*e*P	P	15 29 14.0	+2.5
F33A	5 Mile Ranch,	87.30	37	P	P	15 29 10.3	-1.6
F33A				IAmb	IAmb	15 29 31.4	
	comp=Z,22nm,1.2s						
PRA	Prague	87.30	329	AMS	AMS	16 17 50.0	
	comp=Z,600nm,14.9s						
PRU	Pruhonice	87.31	329	*e*P	P	15 29 14.6	+2.7
PRU				MLR	MLR		
	comp=Z,1µm,17.5s						
PRU	Pruhonice	87.31	329	*e*P	P	15 29 14.6	+2.7
PRU				AMS	AMS	16 17 50.0	
	comp=Z,1µm,17.5s						
TREC	Trest	87.39	328	AMS	AMS	16 10 40.0	
	comp=Z,800nm,18.6s						
ZST	Bratislava	87.43	327	*e*P	P	15 29 16.3	+3.8
ZST	Bratislava	87.43	327	*e*P	P	15 29 16.3	+3.8
EGYH	Egyhazaskeszo	87.87	326	*e*P	P	15 29 12.7	-1.9
TIH	Tihany	87.96	325	*e*P	P	15 29 14.8	-0.3
NKC	Novy Kostel	88.03	330	*e*P	P	15 29 18.6	+3.2
NKC				MLR	MLR		
	comp=Z,1µm,19.4s						
NKC	Novy Kostel	88.03	330	*e*P	P	15 29 18.6	+3.2
NKC				AMS	AMS	16 17 20.0	
	comp=Z,1µm,19.4s						
SOP	Sopron	88.05	327	*e*P	P	15 29 14.8	-0.7
CONA	Conrad Observa	88.20	327	*e*P	P	15 29 16.5	+0.2
	comp=Z,9.9nm,1.2s						
CONA				*e*P	PP	15 32 44.2	+1.4
	comp=Z,9.6nm,1.5s						
ANMO	Albuquerque	88.22	50	⇑*e*P	P	15 29 19.5	+2.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ANMO	Albuquerque	88.22	50	P	P	15 29 15.3	-1.5
	baz=307						
T25A	Trinidad	88.23	47	P	P	15 29 15.5	-1.3
	baz=308						
KHC	Kasperske Hory	88.36	329	⇓*e*P	P	15 29 18.0	+1.0
KHC				pmax	pmax		
	comp=Z,31nm,2.5s						
KHC	Kasperske Hory	88.36	329	*e*P	P	15 29 20.9	+3.9
KHC				*e*pP	sP	15 29 25.8	-0.8
KHC				AMS	AMS	16 19 20.0	
	comp=Z,1µm,17.9s						
EIL	Elat	88.45	304	P	P	15 29 19.4	+1.6
	comp=Z,7.3nm,0.9s,baz=56,slow=11,SNR=2.4						
GERES	GERESS Array B	88.52	329	P	P	15 29 18.7	+0.9
	comp=Z,0.6nm,0.6s,baz=22,slow=4.3,SNR=5.1						
GERES				LR	LR	16 11 48.6	
	comp=Z,752nm,19.2s,baz=45,slow=38						
ECSD	EROS Data Cent	88.55	38	P	P	15 29 17.1	-0.8
	baz=313						
121A	Cookes Peak, D	88.75	53	P	P	15 29 18.0	-1.3
	baz=306						
ARSA	Arzberg	88.85	327	*e*P	P	15 29 19.9	+0.6
	comp=Z,3.6nm,0.8s						
ARSA				*e*P	PP	15 32 51.1	+3.2
	comp=Z,6.0nm,1.5s						
GRF	Grafenberg Arr	88.96	331	*e*P	P	15 29 20.8	+1.0
	comp=Z,23nm,1.5s,baz=49,slow=4.3						
GRF				*e*PP	PP	15 32 48.4	-0.3
	baz=34,slow=7.4						
MOA	Molln	89.00	328	*e*P	P	15 29 20.6	+0.6
	comp=Z,9.4nm,1.4s						
MOA				*e*P	PP	15 32 52.1	+3.0
	comp=Z,13nm,2.0s						
SPMN	Marine on St.	89.49	35	P	P	15 29 20.9	-1.4
	baz=315						
SOKA	Soboth	89.50	327	*e*P	P	15 29 22.7	+0.3
	comp=Z,12nm,1.1s						
SOKA				*e*P	PP	15 32 55.5	+2.3
	comp=Z,6.9nm,1.3s						
OBKA	Obir	89.85	327	*e*P	P	15 29 24.2	+0.2
	comp=Z,5.9nm,1.1s						
OBKA				*e*P	PP	15 32 57.4	+1.5
	comp=Z,15nm,1.2s						
KBA	Koelnbreinsper	89.99	328	*e*P	P	15 29 24.7	-0.2
	comp=Z,4.0nm,0.7s						
KBA				*e*P	PP	15 32 56.9	-0.3
	comp=Z,10nm,1.0s						
MYKA	Terra Mystica	90.18	327	*e*P	P	15 29 23.6	-2.0
	comp=Z,4.9nm,0.9s						
MYKA				*e*P	PP	15 33 01.0	+2.4
	comp=Z,14nm,1.2s						
WATA	Walderalm	90.60	329	*e*P	P	15 29 26.5	-1.1
	comp=Z,9.1nm,1.3s						
WATA				*e*P	PP	15 33 01.7	-0.2
	comp=Z,10nm,1.4s						
ABTA	Abfaltersbach	90.62	328	*e*P	P	15 29 27.3	-0.3
	comp=Z,10nm,1.1s						
WTTA	Wattenberg	90.62	329	*e*P	P	15 29 26.2	-1.6
	comp=Z,7.3nm,1.2s						
WTTA				*e*P	PP	15 33 03.1	+0.9
	comp=Z,12nm,1.3s						
MOTA	Moosalm	90.80	329	*e*P	P	15 29 27.6	-0.9
	comp=Z,12nm,1.7s						
MOTA				*e*P	PP	15 33 00.8	-2.8
	comp=Z,6.5nm,1.2s						
RETA	Reutte	90.84	329	*e*P	P	15 29 28.2	-0.5
	comp=Z,8.2nm,1.2s						
RETA				*e*P	PP	15 33 00.5	-3.3
	comp=Z,6.0nm,1.3s						
SQTA	Sankt Quirin	90.85	329	*e*P	P	15 29 29.2	+0.5
	comp=Z,12nm,1.9s						
SQTA				*e*P	PP	15 33 02.7	-1.1
	comp=Z,17nm,1.6s						
MNTX	Cornudas Mount	90.89	52	P	P	15 29 27.9	-1.2
	baz=307						
MNTX	Cornudas Mount	90.89	52	P	P	15 29 27.8	-1.3
STAL	STALIGIAL	90.89	328	P	P	15 29 28.1	-0.7
FETA	Feichten	91.21	329	*e*P	P	15 29 31.0	+0.5
	comp=Z,6.6nm,1.4s						
FETA				*e*P	PP	15 33 02.4	-4.4
	comp=Z,6.7nm,1.4s						
BFO	Black Forest	91.23	331	P	P	15 29 29.6	-0.8
BFO				pmax	pmax		
	comp=Z,22nm,1.2s						
BFO	Black Forest	91.23	331	P	P	15 29 29.6	-0.8
BFO				IAmb	IAmb	15 29 48.3	
	comp=Z,22nm,1.2s						
DAVA	Damuels	91.38	330	*e*P	P	15 29 31.0	-0.3
	comp=Z,13nm,1.2s						
DAVOX	Davos/Dischmat	91.77	329	PP	PP	15 33 14.8	+3.5
	comp=Z,0.7nm,0.5s,baz=29,slow=12,SNR=3.7						
TUE	Stuetta	92.24	330	P	P	15 29 35.1	-0.2
WMOK	Wichita Mounta	93.28	46	P	P	15 29 38.1	-2.0
	baz=311						
ABTX	Abilene, Hawle	94.11	48	P	P	15 29 43.1	-0.9
JCT	Junction City	95.38	50	P	P	15 29 48.7	-1.2
JCT				pmax	pmax		
	comp=Z,17nm,1.3s						
JCT	Junction City	95.38	50	P	P	15 29 48.6	-1.2
JCT				IAmb	IAmb	15 30 08.0	
	comp=Z,17nm,1.2s						
CCM	Cathedral Cave	95.42	40	P	P	15 29 48.7	-1.2
	baz=316						
RKT	Rikitea	95.67	113	*e*LR	LR	16 00 17.3	
	comp=Z,632nm,31.5s						
U40A	Yellville	95.72	42	P	P	15 29 49.4	-1.9
	baz=315						
D61A	St Aubert, Com	97.23	22	P	P	15 29 56.1	-1.7
	baz=332						
E60A	Ste Agathe de	97.56	23	P	P	15 29 57.8	-1.5
	baz=331						
P52A	Corning	98.89	33	P	P	15 30 03.8	-1.7
	baz=322						
G64A	Maxfield	99.42	22	P	Pdif	15 30 06.0	-1.7
	baz=333						
R54A	Victor	100.58	33	P	Pdif	15 30 10.8	-2.3
	baz=323						
ESDC	Sonseca Array	103.33	334	PP	PKiKP	15 34 44.6	+0.3
	comp=Z,1.1nm,0.9s,baz=24,slow=7.1,SNR=2.8						
S61A	Accomac	103.40	30	P	Pdif	15 30 22.5	-3.1
	baz=327						
W61A	Ground Anchor	104.89	32	P	Pdif	15 30 29.6	-2.6
	baz=326						
Y59A	Loris	104.96	34	P	Pdif	15 30 30.0	-2.6
	baz=324						
TOA0	Torodi Ar. Sit	122.25	313		PKPdf	15 35 20.3	-0.4
TORD	Torodi Ar. Bea	122.25	313	PKP	PKiKP	15 35 21.7	+0.8
	comp=Z,3.7nm,0.9s,baz=13,slow=1.9,SNR=11						
TORD				PP	PP	15 36 55.0	-0.4
	comp=Z,2.6nm,1.0s,baz=64,slow=6.8,SNR=3.6						
SYO	Syowa Base	122.71	205	⇓*e*pPdiff	pPdif	15 32 02.2	+4.6
SYO	Syowa Base	122.71	205	⇓*e*PKiKP	PKiKP	15 35 22.1	+2.0
SDV	Santo Domingo	129.66	44	*e*P	PKiKP	15 35 37.8	+1.9
OTAV	Otavalo	130.70	59	*e*P	PKiKP	15 35 39.9	+1.5
DBIC	Dimbokro	131.32	314	PKP	PKiKP	15 35 40.2	+1.2
	comp=Z,1.9nm,0.6s,baz=16,slow=2.2,SNR=4.9						
TIC	Toumodi	131.44	314	*e*P	PKiKP	15 35 39.9	+0.6
KIC	Kosan Boka	131.48	314	*e*P	PKiKP	15 35 39.3	-0.1
	comp=Z,8.1nm,0.8s						
LIC	Lamto	131.77	314	*e*P	PKPdf	15 35 38.1	-0.8
	comp=Z,50nm,1.5s						
SNAA	Sanae	134.76	195	PKPdf	PKiKP	15 35 45.6	+1.3
SNAA	Sanae	134.76	195	⇑*i*PKIKP	PKiKP	15 35 45.6	+1.3
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
VNA2	Neumayer--Watz	136.29	194	PKPdf	PKiKP	15 35 52.3	+4.9
	baz=86,slow=2.8						
PMSA	Palmer Station	142.10	162	*e*P	PKiKP	15 36 00.1	+0.8
ETMB	Extrema	146.43	58	*e*P	PKPab	15 36 07.7	0.0
MCPB	Macapa, AP	147.01	27	*e*P	PKPab	15 36 10.1	+0.2
MALB	Monte Alegre	147.43	32	*e*P	PKPab	15 36 11.0	-0.6
SAML	Samuel	147.99	53	PKIKP	PKPdf	15 36 09.4	+1.3
SAML	Samuel	147.99	53		PKPdf	15 36 09.4	+1.3
SAML	Samuel	147.99	53	*e*P	PKPbc	15 36 11.4	+0.2
ASCN	Ascension	148.54	311	PKPbc	PKPbc	15 36 11.7	-1.0
PB16	IPOC Station P	148.78	74		PKPbc	15 36 12.1	-1.7
ITTB	Itaituba	148.90	36	*e*P	PKPbc	15 36 13.0	-0.6
MNMC	Minye Minye	149.08	76		PKPbc	15 36 12.2	-2.0
TA01	Diego Aracena	149.23	79	PKPab	PKiKP	15 36 16.3	+0.9

PB08	**IPOC Station P**	149.91	77		PKPbc	15 36 14.3	-2.1
PB04	**IPOC Station P**	149.98	82	PKPdf	PKPdf	15 36 09.7	-1.6
TMAB	**Tom-Au,PA,Br**	150.28	21	*e*P	PKPbc	15 36 15.4	-1.6
LC01	**Cunco**	150.94	116	PKPdf	PKPdf	15 36 13.3	+1.2
LC01					pPKPdf	15 36 19.9	+0.9
LVC	**Limon Verde**	151.14	82	*e*P	PKPbc	15 36 17.0	-2.3
NPGB	**Novo Progresso**	151.36	39	*e*P	PKPdf	15 36 16.4	+2.8
PLCA	**Paso Flores**	151.69	120	PKPbc	PKiKP	15 36 22.0	+2.0
	comp=Z,7.6nm,1.0s,baz=200,slow=2.1,SNR=7.7						
PLCA	**Paso Flores**	151.69	120	PKIKP	PKiKP	15 36 22.0	+2.0
PLCA	**Paso Flores**	151.69	120	*e*P	PKPbc	15 36 17.0	-2.6
ROSB	**Rosrio**	151.80	13	*e*P	PKPbc	15 36 17.8	-2.7
VILB	**Vilhena**	152.87	55	*e*P	PKPbc	15 36 19.5	-3.4
PRPB	**Parauapebas**	153.20	27	*e*P	PKPdf	15 36 19.5	+3.3
PTLB	**Pontes e Lacer**	155.31	57	*e*P	PKPdf	15 36 22.7	+3.6
SMTB	**Santa Maria do**	156.52	25	*e*P	PKPdf	15 36 24.1	+3.4
SNDB	**Serra Nova Dou**	157.64	37	*e*P	PKPdf	15 36 24.8	+2.6
ARAG	**Araguaiana, MT**	160.39	44	*e*P	PKPdf	15 36 28.8	+3.4
SDBA	**SAO DESIDERIO**	160.74	21	*e*P	PKPdf	15 36 29.4	+3.6
AQDB	**Aquidauana**	160.99	62	*e*P	PKPdf	15 36 28.6	+2.7
CPUP	**Villa Florida**	162.32	81	PKP	PKPdf	15 36 28.6	+1.5
	comp=Z,2.4nm,1.0s,baz=216,slow=2.0,SNR=4.1						
CPUP	**Villa Florida**	162.32	81	*e*P	PKPdf	15 36 29.6	+2.5
BDFB	**Brasilia**	162.41	34	PKP	PKPdf	15 36 29.3	+1.7
	comp=Z,1.5nm,0.5s,baz=306,slow=3.8,SNR=1.8						
GDU01	**Guandu, BA**	163.12	6	*e*P	PKPdf	15 36 30.5	+2.3
JANB	**Januaria**	163.41	23	*e*P	PKPdf	15 36 31.1	+2.6
ITQB	**Itaqui**	163.69	91	*e*P	PKPdf	15 36 32.1	+3.8
IPMB	**Ipameri, GO**	164.27	39	*e*P	PKPdf	15 36 31.9	+2.7
ITRB	**Iturama**	164.30	49	*e*P	PKPdf	15 36 32.8	+3.6
TRCB	**Terra Rica**	164.65	63	*e*P	PKPdf	15 36 33.0	+3.5
PCMB	**Pacaembu**	164.97	57	*e*P	PKPdf	15 36 33.0	+3.3
PTGB	**Pitanga**	166.07	69	*e*P	PKPdf	15 36 34.5	+3.8
BB19B	**Bebedouro**	166.47	48	*e*P	PKPdf	15 36 35.1	+4.1
CPSB	**Cacapava Do Su**	166.52	93	*e*P	PKPdf	15 36 34.2	+3.5
ITAB	**Concordia**	167.01	79	*e*P	PKPdf	15 36 34.5	+3.3
FRTB	**Fartura**	167.27	58	*e*P	PKPdf	15 36 35.7	+4.2

JMA 05 15:17:06.4, 34°.10N×135°.40E, h6^{km}±1^{km}, M0.1, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWY	**Kouya**	0.20	54	P	Pg	15 17 10.5	+0.1
JWY				S	Sg	15 17 13.5	+0.4
JWM	**Minabe**	0.25	189	S	Sg	15 17 15.0	+0.3
JTNC	**Tanabenakahech**	0.33	148	S	Sg	15 17 17.8	+0.6

IDC 05 15:27:43.4±1.8, 30°.27N×140°.89E, h0^{km}, mb3.6/2, mb1 3.7/5, mb1mx3.2/55, mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=83.6km s-min=19.8km az=78.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	2.99	342	Pn	Pn	15 28 32.9	+0.7
	11nm,0.3s,baz=243,slow=18,SNR=1.3						
JHJ				Sn	Sn	15 29 08.1	-0.6
	7.6nm,0.3s,baz=60,slow=20,SNR=1.7						
JCJ	**Chichijima**	3.36	160	Pn	Pn	15 28 37.6	+0.5
	5.6nm,0.3s,baz=342,slow=23,SNR=1.8						
JCJ				Sn	Sn	15 29 16.2	-1.6
	1.5nm,0.3s,baz=276,slow=19,SNR=1.6						
MJAR	**Matsushiro Arr**	6.64	341	Pn	Pn	15 29 21.9	-0.4
	0.2nm,0.3s,baz=161,slow=11,SNR=13						
WRA	**Warramunga Arr**	50.32	188	P	P	15 36 41.2	-0.8
	0.6nm,0.5s,baz=6.3,slow=7.6,SNR=14						
ASAR	**Alice Springs**	54.04	188	P	P	15 37 10.1	+0.4
	0.5nm,1.0s,baz=5.8,slow=5.7,SNR=8.7						

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*IDC **05** 15:29:58.8±1.5, 39°.41N×51°.81E, h0^{km}, mb3.7/8, mb1 3.8/14, mb1mx3.6/52, mbtmp3.7/14, ML3.2/6, Error ellipse: s-maj=28.5km s-min=12.9km az=22.0*

*AZER **05** 15:30:05.1±0.4, 39°.32N×51°.95E, h50^{km}±158^{km}, ml3.5/26, Error ellipse: s-maj=9.5km s-min=2.7km az=248.0*

*NNC **05** 15:30:06.3±7.7, 39°.89N×52°.66E, h0^{km}, mb4.1, Error ellipse: s-maj=82.2km s-min=23.1km az=62.0*

ISC 05 15:30:05.3±0.7, **39°.40N**±0°.06×**51°.99E**±0°.05, **h41^{km}, n46,** σ1^{s}**78**/66, **mb3.6**/8, **3C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKRN	**Lenkeran, Azer**	2.59	256	P	Pn	15 30 45.6	+0.9
LKRN				S	Sn	15 31 15.5	+0.5
ASTR	**Astara**	2.63	252	P	Pn	15 30 45.8	+0.6
ASTR				S	Sn	15 31 16.6	+0.7
ATGJ	**Altiaghaj**	2.76	303	P	Pn	15 30 48.8	+1.7
	SNR=3.9						
ATGJ				S	Sn	15 31 21.7	+2.4
GLBA	**Clilabad**	2.79	268	P	Pn	15 30 48.9	+1.4
GLBA				S	Sn	15 31 21.1	+1.1
SIZA	**Siyzn**	2.90	306	P	Pn	15 30 50.1	+1.1
	SNR=2.9						
SIZA				S	Sn	15 31 26.0	+3.3
LRK	**Lerik**	2.94	256	P	Pn	15 30 50.7	+1.0
LRK				S	Sn	15 31 23.2	-0.7
PQL	**Pirkuli**	2.95	299	P	Pn	15 30 51.5	+1.7
PQL				S	Sn	15 31 27.6	+3.5
YRD	**Yardimli**	2.95	262	P	Pn	15 30 50.7	+0.8
	SNR=4.5						
YRD				S	Sn	15 31 23.4	-0.8
KDMR	**Kurdemir**	3.08	290	P	Pn	15 30 52.9	+1.4
KDMR				S	Sn	15 31 30.2	+3.1
IML	**Ismayilli**	3.23	297	P	Pn	15 30 54.6	+1.0
	SNR=3.8						
IML				S	Sn	15 31 33.7	+2.7
QUBA	**Quba, Azerbaij**	3.31	307	P	Pn	15 30 56.1	+1.5
QUBA				S	Sn	15 31 34.7	+2.0
ZRD	**Zardab**	3.43	286	P	Pn	15 30 57.6	+1.4
ZRD				S	Sn	15 31 37.2	+1.7
XNQ	**Khinaliq**	3.43	302	P	Pn	15 30 58.0	+1.4
	SNR=8.2						
XNQ				S	Sn	15 31 37.8	+1.7
BLQ	**Beylaqan**	3.44	277	P	Pn	15 30 57.3	+0.9
BLQ				S	Sn	15 31 35.2	-0.6
QBL	**Gabala**	3.54	297	P	Pn	15 30 58.4	+0.7
QBL				S	Sn	15 31 39.3	+1.0
QSAR	**Qusar**	3.54	308	P	Pn	15 30 59.6	+1.7
	SNR=10						
QSAR				S	Sn	15 31 41.0	+2.5
QRD	**Qoradiz**	3.62	272	P	Pn	15 30 58.9	+0.1
QRD				S	Sn	15 31 41.1	+0.8
AGDM	**Agdam**	3.83	282	S	Sn	15 31 47.6	+2.1
SEKA	**Sheki**	4.08	298	P	Pn	15 31 06.0	+0.7
SEKA				S	Sn	15 31 53.1	+1.2
GANJ	**Ganja**	4.53	288	P	Pn	15 31 11.7	+0.4
GANJ				S	Sn	15 32 02.1	-0.6
ZKTA	**Zakatala**	4.66	300	P	Pn	15 31 14.1	+0.9
ZKTA				S	Sn	15 32 06.6	+0.6
ORD	**Ordubad**	4.68	266	P	Pn	15 31 14.4	+0.8
ORD				S	Sn	15 32 04.8	-1.9
GDB	**GEDABAY**	4.96	287	P	Pn	15 31 18.1	+0.6
GDB				S	Sn	15 32 11.9	-1.8
SBZ	**Shahbuz**	4.99	272	P	Pn	15 31 20.0	+2.3
SBZ				S	Sn	15 32 14.2	0.0
GEYT	**Alibeck**	5.02	105	Pn	Pn	15 31 17.4	-0.8
	4.1nm,0.3s,baz=279,slow=16,SNR=32						
GEYT				Sn	Sn	15 32 07.8	-7.1
	1.2nm,0.3s,baz=281,slow=16,SNR=2.0						
GYA0B	**ALIBECK ARRAY**	5.02	105	⇑P	Pn	15 31 17.5	-0.6
GYA0B				⇓S	Sn	15 32 15.1	+0.3
NAX	**Nakhchivan**	5.04	269	S	Sn	15 32 19.6	+4.1
QZX	**Qazax, Azerbai**	5.33	290	P	Pn	15 31 23.5	+1.2
QZX				S	Sn	15 32 21.4	-1.0
KBZ	**Khabaz**	8.07	305	Pn	Pn	15 31 58.9	-1.0
	0.1nm,0.3s,baz=217,slow=20,SNR=0.8						
KBZ				Sn	Sn	15 33 24.7	-5.1
	0.3nm,0.3s,baz=156,slow=13,SNR=1.9						
KVAR	**Kislovodsk Arr**	8.31	306	Sn	Sn	15 33 31.4	-4.5
	baz=229,slow=19,SNR=1.6						
AB31	**Akbulak array**	11.37	27	⇑P	Pn	15 32 41.4	-3.7
	1.3nm,0.6s,baz=203,slow=13,SNR=25						
AB31				S	Sn	15 34 42.8	-7.9
	1.6nm,0.3s,baz=204,slow=23,SNR=12						
AKTO	**Aktyubinsk**	11.83	19	Pn	Pn	15 32 47.6	-3.7
	0.4nm,0.3s,baz=204,slow=11,SNR=11						
AKTO				Sn	Sn	15 34 48.2	-14
	0.4nm,0.3s,baz=221,slow=19,SNR=3.6						
AKTO	**Aktyubinsk**	11.83	19	⇓P	Pn	15 32 47.9	-3.4
	3.9nm,0.8s						
AKTO				⇑S	Sn	15 34 53.5	-8.3
	14nm,0.7s						
BELG	**Belogornoye**	13.34	348	Pn	Pn	15 33 08.4	-3.5
	0.4nm,0.3s,baz=118,slow=9.0,SNR=2.4						
BELG				Sn	Sn	15 35 23.5	-15
	0.1nm,0.3s,baz=16,slow=20,SNR=1.9						
AAK	**Ala-Archa**	17.28	72	P	Pn	15 34 05.4	+1.8
	0.1nm,0.3s,baz=214,slow=11,SNR=2.8						
ARU	**Arti**	17.59	12	P	Pn	15 34 05.4	-1.7
	0.0nm,0.3s,baz=227,slow=6.0,SNR=4.5						
ARU				S	Sn	15 37 05.0	-17
	0.0nm,0.3s,baz=333,slow=21,SNR=6.3						
BVAR	**Borovoye Array**	18.57	37	P	P	15 34 16.3	-2.4
	0.2nm,0.3s,baz=230,slow=12,SNR=8.2						
BVAR				S	Sn	15 37 30.5	-15
	0.1nm,0.3s,baz=221,slow=24,SNR=2.0						
AKASG	**Malin Array Be**	19.57	313	P	P	15 34 29.9	+0.3
	0.9nm,0.3s,baz=117,slow=10,SNR=5.9						
KURBB	**Kurchatov Arra**	21.74	50	P	P	15 34 52.0	-1.0
	1.4nm,0.7s,baz=252,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	23.23	62	P	P	15 35 08.4	-0.4
	3.1nm,0.9s,baz=255,slow=9.3,SNR=13						
ZALV	**Zalesovo Beam**	26.52	46	P	P	15 35 37.1	-1.7
	1.8nm,0.8s,baz=241,slow=15,SNR=5.0						
FINES	**FINESS Array B**	27.21	333	P	P	15 35 43.1	-1.9
	1.4nm,0.9s,baz=150,slow=11,SNR=1.1						
CMAR	**Chiang Mai Arr**	45.50	103	P	P	15 38 21.3	+0.5
	0.2nm,0.4s,baz=274,slow=8.3,SNR=5.7						
USRK	**Ussuriysk Ar.**	57.59	57	P	P	15 39 50.8	0.0
	1.4nm,0.7s,baz=286,slow=5.2,SNR=3.9						
KSRS	**Korea Array**	57.81	66	P	P	15 39 52.5	0.0
	1.6nm,0.7s,baz=289,slow=6.8,SNR=5.8						
YKA	**Yellowknife Ar**	77.88	354	P	P	15 41 58.6	+0.3
	0.2nm,0.6s,baz=22,slow=6.7,SNR=2.7						

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*IDC **05** 15:31:15.2±0.5, 30°.54N×142°.06E, h0^{km}, mb4.4/36, mb1 4.5/41, mb1mx4.4/55, mbtmp4.4/41, ML4.0/4, MS4.1/7, Ms1 4.2/7, ms1mx3.8/38, Error ellipse: s-maj=15.8km s-min=11.1km az=87.0*

*BJI **05** 15:31:16.7±0.0, 30°.52N×142°.13E, h35^{km}, mB5.4/27, mb4.7/59, Ms4.8/21, Ms7 4.7/21*

*MOS **05** 15:31:17.9±0.9, 30°.50N×142°.00E, h33^{km}, mb5.1/54, MS4.3/5, Error ellipse: s-maj=9.8km s-min=4.6km az=121.7*

*NEIC **05** 15:31:18.6±1.6, 30°.54N±0°.05×142°.03E±0°.09, h27^{km}±4^{km}, mb5.0/77, Error ellipse: s-maj=11.5km s-min=7.2km az=81.0*

*NIED **05** 15:31:19.7, 30°.80N×142°.16E, h62^{km}, MW4.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}1.55; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.47; $M_{r\theta}$-1.19; $M_{\theta\phi}$0.35; $M_{\phi r}$1.44; Fault plane solution: $M_0$2.43000×10^{16} NP1: ϕ_s328.00000°, δ71.00000°, λ77.00000°. NP2: ϕ_s182.00000°, δ23.00000°, λ122.00000°.*

*GCMT **05** 15:31:19.6±0.3, 30°.48N±0°.03×142°.09E±0°.02, h12^{km}±1^{km}, MW4.8/90, Moment Tensor Solution. s22,c26; s90,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.04±.14; $M_{\theta\theta}$-0.05±.08; $M_{\phi\phi}$-1.99±.10; $M_{r\theta}$0.41±.27; $M_{\theta\phi}$0.32±.05; $M_{\phi r}$0.13±.21; Best double couple: $M_0$2.08500×10^{16} NP1: ϕ_s160.00000°, δ45.00000°, λ74.00000°. NP2: ϕ_s2.00000°, δ47.00000°, λ106.00000°. Principal axes: T 2.1270, Plg79.0000°, Azm347.0000°; N -0.0880, Plg11.0000°, Azm171.0000°; P -2.0420, Plg1.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JMA **05** 15:31:19.6±0.7, 30°.80N×142°.16E, h62^{km}, M4.3*

ISC 05 15:31:18.2±0.4, **30°.59N**±0°.04×**142°.14E**±0°.06, **h23^{km}, n378,** σ1^{s}**28**/399, **mb4.9**/126, **MS4.6**/9, **18C-13D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	2.76	313	P	Pn	15 32 00.7	-0.3
JHCJ	**Hachijojimakas**	3.17	322	P	Pn	15 32 06.3	-0.5
JHJ2	**Mitsune**	3.19	322	P	Pn	15 32 06.3	-0.8
JHJ2	**Mitsune**	3.19	322	Pn	Pn	15 32 06.3	-0.8
JHJ	**Hachijo jima 2**	3.22	322	Pn	Pn	15 32 06.7	-0.7
	25nm,0.3s,baz=339,slow=24,SNR=12						
JHJ				Sn	Sn	15 32 43.5	-1.6
	67nm,0.3s,baz=265,slow=20,SNR=8.6						
JHJ				LR	LR	15 33 24.9	
	comp=Z,3µm,18.8s,baz=132,slow=40						
JCJ	**Chichijima**	3.49	179	Pn	Pn	15 32 10.1	-1.0
	36nm,0.3s,baz=262,slow=16,SNR=12						
JCJ				Sn	Sn	15 32 51.0	-0.7
	72nm,0.3s,baz=280,slow=22,SNR=7.0						
JCJ				LR	LR	15 33 50.6	
	comp=Z,4µm,18.5s,baz=102,slow=45						
JCJ	**Chichijima**	3.49	179		Pn	15 32 09.8	-1.3
BSO1	**Boso 1**	4.17	347	P	Pn	15 32 19.7	-0.2
JKO	**Kozu shima**	4.39	325	P	Pn	15 32 23.8	+0.3
BSO3	**Boso 3**	4.42	342	P	Pn	15 32 23.3	-0.3
BSO4	**Boso 4**	4.64	341	P	Pn	15 32 26.7	-0.1
JIM2	**Oshima 3**	4.70	332	P	Pn	15 32 26.9	-0.9
JKUC	**kamogawauchiur**	4.84	341	P	Pn	15 32 28.9	-0.7
JIZS	**Izushimoda**	4.95	327	P	Pn	15 32 31.1	0.0
KTJ3	**Kamata3**	5.04	330	P	Pn	15 32 30.9	-1.5
JSG	**Sagara**	5.26	322	Pn	Pn	15 32 35.7	+0.2
JHU	**Hanno**	5.76	336	*e*S	Sn	15 33 45.5	-2.3
JYT	**Yasato**	5.85	344		Pn	15 32 43.3	-0.2
JHO	**Hitachi**	6.14	348	*e*S	Sn	15 33 53.9	-3.2
INU	**Inuyama**	6.40	319		Pn	15 32 51.9	+0.8
JGF	**Kuroka**	6.41	322		Pn	15 32 52.1	+0.9
MJAR	**Matsushiro Arr**	6.78	332	Pn	Pn	15 32 57.2	+0.9
	2.3nm,0.3s,baz=156,slow=11,SNR=92						
MJAR				Sn	Sn	15 34 13.0	+0.2
	0.3nm,0.3s,baz=136,slow=18,SNR=2.1						
MJAR				LR	LR	15 35 55.0	
	comp=Z,1µm,20.5s,baz=150,slow=41						
MAJO	**Matsushiro**	6.78	332	*c i*P	Pn	15 32 57.3	+1.0
MAJO	**Matsushiro**	6.78	332		Pn	15 32 57.1	+0.7
MAT	**Matsushiro**	6.78	332	P	Pn	15 32 57.2	+0.9
MAT				S	Sn	15 34 12.2	-0.6
MJB9	**Matsu-Tunnel**	6.78	332		Pn	15 32 56.8	+0.4
JMM	**Marumori**	7.34	352	Pn	Pn	15 33 03.6	-0.4
JWT	**Wachi**	7.34	311		Pn	15 33 03.8	-0.3
JMN	**Monobe**	7.67	296	Pn	Pn	15 33 08.5	-0.1
JSD	**Sado**	8.09	338	Pn	Pn	15 33 13.1	-1.2
JNU	**Nakatsue**	9.90	288	Pn	Pn	15 33 43.9	+4.6
	0.3nm,0.3s,baz=135,slow=14,SNR=2.7						
JNU				LR	LR	15 37 19.0	
	comp=Z,1µm,18.0s,baz=88,slow=37						
JTM	**Tenmabayashi**	10.21	355		Pn	15 33 41.6	-1.7
ERM	**Erimo**	11.43	4	⇓*e*P	Pn	15 33 56.6	-3.4
ERM	**Erimo**	11.43	4	Pn	Pn	15 33 56.1	-3.9
JEW	**Eniwo**	12.24	358	Pn	Pn	15 34 06.9	-4.1
NMR	**Nemuro--Hokkai**	13.07	12	*e*P	Pn	15 34 18.0	-4.4
JKA	**Kamikawa-asahi**	13.50	1	Pn	Pn	15 34 25.3	-3.1
ASAJ	**Asahikawa**	13.50	1	Pn	Pn	15 34 26.9	-1.5
	1.1nm,0.3s,baz=203,slow=10.0,SNR=12						
ASAJ				Sn	Sn	15 36 47.2	-10
	0.6nm,0.3s,baz=33,slow=18,SNR=2.6						
ASAJ				LR	LR	15 40 20.3	
	comp=Z,766nm,21.1s,baz=178,slow=40						
KSRS	**Korea Array**	13.62	304	Pn	Pn	15 34 33.3	+3.3
	0.2nm,0.3s,baz=116,slow=12,SNR=14						
KSRS				LR	LR	15 39 27.3	
	comp=Z,804nm,18.1s,baz=106,slow=36						
GRPR	**Tuman**	13.68	11	P	Pn	15 34 26.6	-4.2
GRPR				pmax	pmax		
	comp=E,34nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,49nm,0.4s						
RUSJ	**Misakicho**	13.71	9	*e*P	Pn	15 34 29.2	-1.9
YUK	**Yuzh-Kuril'sk**	13.74	11	P	Pn	15 34 27.0	-4.5
YUK				pmax	pmax		
	comp=Z,48nm,0.6s						
YUK				pmax	pmax		
	comp=E,29nm,0.3s						
YUK				pmax	pmax		
	comp=N,15nm,0.5s						
YUK				pmax	pmax		
	comp=Z,116nm,1.3s						
USRK	**Ussuriysk Ar.**	15.78	332	Pn	Pn	15 34 58.5	-0.4
	baz=144,slow=12,SNR=7.0						
USA0B	**Ussuriysk Arra**	15.78	332	⇓*i*P	Pn	15 34 58.8	-0.1
USA0B	**Ussuriysk Arra**	15.78	332	Pn	Pn	15 34 58.0	-0.9
YSS	**Yuzh-Sakhalins**	16.34	1	*e*P	Pn	15 35 04.3	-1.8
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	16.34	1	Pn	Pn	15 35 03.2	-2.9
MDJ	**Mudanjiang**	17.14	328	P	P	15 35 18.5	+0.8
MDJ				pmax	pmax		
	comp=Z,40nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,7.9s						
MDJ	**Mudanjiang**	17.14	328	Pn	Pn	15 35 13.5	-2.7
YOJ	**Yonaguni jima**	18.02	255	P	Pn	15 35 25.9	-1.4
YOJ				pmax	pmax		
	comp=Z,133nm,1.4s						
YOJ	**Yonaguni jima**	18.02	255		Pn	15 35 25.9	-1.4
YOJ				IAmb	IAmb	15 35 31.5	
	comp=Z,133nm,1.4s						
UGL	**Uglegorsk**	18.46	360	P	P	15 35 28.3	-3.9
UGL				S	Sn	15 38 53.2	-4.8
UGL				pmax	pmax		
	comp=Z,30nm,1.2s						
UGL				smax	smax		
	comp=N,1µm,6.4s						
UGL				MLR	MLR		
	comp=Z,2µm,19.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
CN2	**Changchun**	18.68	320	*e*P	P	15 35 33.0	-1.7
CN2				pmax	pmax		
	comp=E,40nm,1.3s						
TATO	**Taipei**	19.10	258	P	P	15 35 37.9	-1.6
TATO				IAmb	IAmb	15 35 43.5	
	comp=Z,77nm,1.0s						
TATO	**Taipei**	19.10	258	P	P	15 35 30.3	-9.2
YHNB	**Yeheng**	19.31	257	P	P	15 35 40.8	-1.1
YHNB				IAmb	IAmb	15 35 45.4	
	comp=Z,41nm,0.7s						
NACB	**Ninganchiao**	19.32	256	P	P	15 35 40.0	-1.8
NACB				IAmb	IAmb	15 35 43.9	
	comp=Z,85nm,1.4s						
YULB	**Yu-li**	19.89	254	P	P	15 35 46.9	-1.3
YULB				IAmb	IAmb	15 36 01.7	
	comp=Z,163nm,1.5s						
NJ2	**Nanjing**	19.94	280	⇓P	P	15 35 48.8	+0.2
NJ2				pmax	pmax		
	comp=Z,34nm,0.6s						
SSLB	**Suanglung**	20.01	255	P	P	15 35 48.4	-1.1
KLR	**Kul'dur**	20.21	340	P	P	15 35 50.6	-0.8
	comp=Z,6.8nm,0.6s,baz=168,slow=8.3,SNR=14						
TYV	**Tymovskoe**	20.25	1	*e*P	Pn	15 35 53.9	+0.1
TYV				pmax	pmax		
	comp=Z,33nm,1.8s						
TYV				MLR	MLR		
	comp=N,2µm,12.0s						
TYV				MLR	MLR		
	comp=Z,1µm,12.0s						
TWG	**Pinlang**	20.33	253	P	P	15 35 51.2	-1.7
TWG				IAmb	IAmb	15 35 58.0	
	comp=Z,60nm,1.0s						
TPUB	**Ta-pu**	20.49	254	Pn	Pn	15 35 55.5	-1.4
TPUB				IAmb	IAmb	15 36 00.9	
	comp=Z,135nm,1.4s						
GRNR	**Gornyy**	20.60	350	⇑*i*P	P	15 35 57.6	+1.9
GRNR				*e*S	Sn	15 39 49.2	-0.4
GRNR				pmax	pmax		
	comp=E,1.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,280nm,13.0s						
GRNR				MLR	MLR		
	comp=N,460nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,660nm,15.0s						
SKR	**Severo-Kuril's**	22.62	24	*e*P	P	15 36 06.4	-11
SKR				*e*S	S	15 40 06.4	-17
SKR				pmax	pmax		
	comp=Z,700nm,5.8s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
SKR				MLR	MLR		
	comp=Z,900nm,17.0s						
BJT	**Baijiatuau**	23.12	301	P	P	15 36 21.2	-1.4
BJT				pmax	pmax		
	comp=Z,67nm,1.4s						
BJT	**Baijiatuau**	23.12	301	P	P	15 36 21.2	-1.4
BJT				IAmb	IAmb	15 36 23.9	
	comp=Z,67nm,1.4s						
HIA	**Hailar**	25.19	324	⇓*e*P	P	15 36 42.8	+0.8
HIA				pmax	pmax		
	comp=Z,47nm,1.4s						
HIA	**Hailar**	25.19	324	P	P	15 36 41.8	-0.2
HIA				IAmb	IAmb	15 37 08.2	
	comp=Z,64nm,1.3s						
H11S3	**WAKE ISLAND Hy**	25.31	113	T	T	16 03 46.2	
	baz=304,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	25.31	113	T	T	16 03 18.5	
	baz=304,slow=75,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	25.32	113	T	T	16 03 46.5	
	baz=304,slow=75,SNR=5.1						
TIY	**Taiyuan**	25.52	294	*e*P	P	15 36 45.0	-0.1
TIY				pmax	pmax		
	comp=Z,30nm,0.4s						
ZEA	**Zeya**	25.52	339	*e*P	P	15 36 45.5	+0.6
ZEA				pmax	pmax		
	comp=N,50nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.4s						
HHC	**Hu-ho-hao-te**	26.73	301	*e*P	P	15 36 55.7	-0.4
HHC				pmax	pmax		
	comp=Z,21nm,1.3s						
HHC				pmax	pmax		
	comp=Z,760nm,6.6s						
HHC				LR	LR		
	comp=Z,650nm,11.0s						
HHC				LR	LR		
	comp=Z,2µm,14.0s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
BTO	**Baotou**	27.83	300	*e*P	P	15 37 06.0	0.0
ENH	**Enshi**	28.11	278	P	P	15 37 06.0	-2.5
XAN	**Xi'an**	28.21	286	P	P	15 37 09.3	-0.1
XAN				pP	pwP	15 37 21.0	-2.0
XAN				pmax	pmax		
	comp=Z,30nm,1.4s						
XAN				pmax	pmax		
	comp=Z,2µm,12.0s						
XAN				LR	LR		
	comp=Z,630nm,13.1s						
XAN				LR	LR		
	comp=Z,850nm,12.1s						
XAN				LR	LR		
	comp=Z,890nm,14.0s						
XAN	**Xi'an**	28.21	286	P	P	15 37 07.8	-1.6
XAN				pmax	pmax		
	comp=Z,38nm,1.3s						
XAN	**Xi'an**	28.21	286	P	P	15 37 07.8	-1.6
XAN				IAmb	IAmb	15 37 10.6	
	comp=Z,38nm,1.3s						
CIT	**Chita**	30.00	324	*e*P	P	15 37 29.6	+4.6
CIT				*e*		15 37 39.2	
CIT				*e*		15 37 43.1	
CIT				pmax	pmax		
	comp=Z,138nm,1.4s						
GYA	**Guiyang**	31.36	271	⇓P	P	15 37 37.4	0.0
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	**Ulaanbaatar**	31.84	313	⇓*e*P	P	15 37 43.0	+1.5
ULN				pmax	pmax		
	comp=Z,30nm,1.3s						
ULN	**Ulaanbaatar**	31.84	313	P	P	15 37 41.7	+0.3
ULN				IAmb	IAmb	15 37 45.0	
	comp=Z,25nm,1.0s						
ULN	**Ulaanbaatar**	31.84	313	P	P	15 37 42.6	+1.1
SONM	**Songino Array**	32.25	312	P	P	15 37 46.5	+1.4
	comp=Z,8.0nm,1.0s,baz=115,slow=5.2,SNR=41						
LZH	**Lanzhou**	32.31	290	*e*P	P	15 37 45.0	-0.8
LZH				pP	pP	15 37 51.0	+0.3
LZH				sP	pwP	15 37 56.1	-3.2
LZH				PP	PnPn	15 38 53.2	+0.8
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH				LR	LR		
	comp=Z,760nm,12.0s						

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LZH                                LR     LR
      comp=Z,1µm,12.3s
LZH                                LR     LR
      comp=Z,1µm,14.7s
YAK   Yakutsk          32.48 349   P      P       15 37 47.4 +0.7
      comp=Z,2.6nm,0.4s,baz=340,slow=1.8,SNR=6.3
YAK   Yakutsk          32.48 349  eP      P       15 37 46.5 -0.2
YAK                               e               15 38 01.1
YAK                                pmax   pmax
      comp=Z,13nm,0.9s
YAK                                pmax   pmax
      comp=N,10.0nm,1.3s
YAK                                pmax   pmax
      comp=E,2.0nm,1.1s
YAK   Yakutsk          32.48 349   P      P       15 37 46.6 -0.1
YAK                                IAmb   IAmb    15 38 07.1
      comp=Z,12nm,0.7s
CD2   Chengdu          32.88 281  eP      P       15 37 49.0 -1.6
SEY   Seymchan         33.02   9   P      P       15 37 52.5 +1.1
      comp=Z,3.5nm,0.7s,baz=187,slow=7.6,SNR=14
ZAK   Zakamensk        35.02 316  eP      P       15 38 10.3 +1.2
ZAK                                pmax   pmax
      comp=Z,30nm,1.4s
IRK   Irkutsk          35.12 319  eP      P       15 38 09.8  0.0
IRK                                pmax   pmax
      comp=Z,126nm,2.4s
KMI   Kunming          35.13 271⇑eP      P       15 38 09.1 -1.4
KMI                                pmax   pmax
      comp=Z,13nm,0.5s
TLY   Talaya           35.27 318c iP      P       15 38 12.4 +1.3
TLY                                pmax   pmax
      comp=Z,51nm,1.4s
TLY   Talaya           35.27 318   P      P       15 38 12.3 +1.2
TLY   Talaya           35.27 318   P      P       15 38 13.7 +2.6
GTA   Gaotai           35.50 296  eP      P       15 38 12.9 -0.5
GTA                                pmax   pmax
      comp=Z,10.0nm,1.1s
TOLI2 Tolitoli         35.64 219   P      P       15 38 13.0 -1.6
NONG  Nongkai          37.47 260   P      P       15 38 31.7 +1.4
      comp=Z,9µmcomp=Z,10nm,0.6s
CHAI  Chaiyaphum       39.46 257   P      P       15 38 50.9 +3.9
      comp=Z,34nm,0.7s
SBUM  Sibu             39.81 231   P      P       15 38 50.0 +0.1
SRAK  Srakaew          40.35 255   P      P       15 38 51.0 -3.4
      comp=Z,3µmcomp=Z,269nm,0.9s
CM35  Chiang Mai Arr   40.61 263   P      P       15 38 56.0 -0.5
MTKI  Muara Teweh, K   40.69 225   P      P       15 38 57.5 +0.3
      comp=Z,34nm,1.2s
CMMT  Chiang Mai       40.73 264   P      P       15 38 57.6 +0.1
      comp=Z,5.8nm,1.2s
CHTO  Chiang Mai       40.73 264   P      P       15 38 55.8 -1.7
CHTO                               pmax   pmax
      comp=Z,8.0nm,0.9s
CHTO  Chiang Mai       40.73 264   P      P       15 38 55.8 -1.7
CMAR  Chiang Mai Arr   40.88 263   P      P       15 38 57.2 -1.6
      comp=Z,1.9nm,0.6s,baz=52,slow=8.1,SNR=17
CMAR                               PP     PnPn    15 40 36.1 -1.4
      comp=Z,1.6nm,1.1s,baz=50,slow=7.4,SNR=4.3
CMAR                               PcP    PcP     15 41 01.8 +2.5
      comp=Z,2.2nm,1.0s,baz=27,slow=1.0,SNR=9.4
CMAR                               LR     LR      15 57 47.0
      comp=Z,271nm,19.2s,baz=99,slow=39
UTHA  Uthaitani        41.77 259   P      P       15 39 07.9 +1.8
      comp=Z,16nm,1.3s
KSM   Kuching          41.81 232   P      P       15 39 08.0 +1.6
PATY  Pattaya          41.89 254   P      P       15 39 09.0 +1.9
      comp=Z,5.6nm,0.6s
PHET  Kaeng Krachan    42.93 255   P      P       15 39 17.1 +1.6
MTN   Manton Dam       44.47 195   P      P       15 39 26.9 -0.8
WMQ   Urumqi           44.57 303   P      P       15 39 29.2 +0.7
WMQ                                sP     pwP     15 39 42.5 +0.4
WMQ                                pmax   pmax
      comp=Z,54nm,1.5s
WMQ                                pmax   pmax
      comp=Z,370nm,6.7s
WMQ   Urumqi           44.57 303   P      P       15 39 27.8 -0.8
WMQ                                pmax   pmax
      comp=Z,77nm,1.4s
WMQ   Urumqi           44.57 303   P      P       15 39 27.8 -0.8
DGZ   Jazzator, Alta   44.88 311c iP      P       15 39 31.8 +0.8
DGZ                                pmax   pmax
      comp=Z,24nm,1.2s
KULM  Kulim            46.40 246   P      P       15 39 45.0 +1.8
ZSN   Zaisan           46.50 308  eP      P       15 39 43.6 -0.1
      comp=Z,33nm,1.8s,baz=308
ZSN   Zaisan           46.50 308  eP      P       15 39 43.6 -0.1
ZSN                                pmax   pmax
      comp=Z,33nm,1.8s
IPM   Ipoh             46.61 244   P      P       15 39 46.0 +1.1
ZAA0  Zalesovo Array   46.87 317   P      P       15 39 45.3 -1.1
ZALV  Zalesovo Beam    46.87 317   P      P       15 39 47.1 +0.7
      comp=Z,0.7nm,0.3s,baz=119,slow=9.0,SNR=6.8
ZALV                               PcP    PcP     15 41 19.4 +0.5
      comp=Z,4.5nm,0.6s,baz=113,slow=3.8,SNR=9.6
ANM   Nome             46.88  28   P      P       15 39 47.1 +0.7
ANM                                pmax   pmax
      comp=Z,7.0nm,0.8s
ANM   Nome             46.88  28   P      P       15 39 47.1 +0.7
TAPN  Taplejung        47.34 280  eP      P       15 39 49.2 -1.7
ODAN  Odare            47.77 280  eP      P       15 39 52.7 -1.4
      comp=Z,8.6nm,0.5s
MK31  Makanchi Array   48.28 307   P      P       15 39 56.8 -0.7
MK31                               pmax   pmax
      comp=Z,25nm,1.5s
MK31  Makanchi Array   48.28 307   P      P       15 39 56.8 -0.7
MK31                               IAmb   IAmb    15 39 59.5
      comp=Z,25nm,1.4s
MKAR  Makanchi Array   48.28 307   P      P       15 39 58.0 +0.5
      comp=Z,4.5nm,0.6s,baz=90,slow=9.0,SNR=49
MKAR  Makanchi Array   48.28 307   P      P       15 39 58.0 +0.5
RAMN  Ramite           48.41 280  eP      P       15 39 57.9 -1.2
      comp=Z,22nm,0.5s
MAKZ  Makanchi         48.49 307   P      P       15 39 58.3 -0.9
MAKZ                               pmax   pmax
      comp=Z,13nm,1.0s
MAKZ  Makanchi         48.49 307   P      P       15 39 58.3 -0.9
MAKZ                               IAmb   IAmb    15 40 02.1
      comp=Z,13nm,1.0s
GUN   Gumba            48.73 282  eP      P       15 40 00.7 -0.9
      comp=Z,21nm,0.5s
RDOG  Red Dog Mine     49.05  24   P      P       15 40 03.2 +0.1
PKI   Pulchoki         49.23 281  eP      P       15 40 04.0 -1.4
      comp=Z,24nm,1.2s
KKN   Kakani           49.27 282  eP      P       15 40 04.6 -1.0
      comp=Z,7.5nm,0.5s
PSI   Prapat           49.29 244   P      P       15 40 04.8 -0.9
      comp=Z,1.6nm,0.4s,baz=1.1,slow=2.5,SNR=4.1
PSI                                PcP    PcP     15 41 29.4 +1.0
      comp=Z,7.9nm,1.2s,baz=356,slow=0.4,SNR=5.4
RPSI  Rantau Prapat    49.35 244   P      P       15 40 04.8 -1.3
NRIK  Noril'sk         49.40 338   P      P       15 40 06.5 +0.8
      comp=Z,15nm,1.1s,baz=118,slow=8.5,SNR=12
NRIK  Noril'sk         49.40 338deP      P       15 40 07.0 +1.3
NRIK  Noril'sk         49.40 338   P      P       15 40 05.7  0.0
NRIK                               IAmb   IAmb    15 40 08.5
      comp=Z,20nm,1.1s
GKN   Gorkha           49.75 282  eP      P       15 40 08.0 -1.2
      comp=Z,41nm,1.3s
KLSI                   50.09 232   P      P       15 40 11.5 -0.2
      comp=Z,16nm,1.4s
CISI  Cisompet, Garu   50.22 227   P      P       15 40 10.7 -2.0
      comp=Z,39nm,0.9s
MDSI  Maura Dua        50.32 233   P      P       15 40 12.5 -0.9
      comp=Z,7µmcomp=Z,585nmcomp=Z,51nm,1.2s
DANN  Dangsing         50.38 283  eP      P       15 40 13.5 -0.7
      comp=Z,21nm,0.6s
KURK  Kurchatov        50.55 313  i P     P       15 40 14.1 -0.7
KURK                               pmax   pmax
      comp=Z,25nm,1.4s
KURK  Kurchatov        50.55 313   P      P       15 40 14.6 -0.2
KURK                               IAmb   IAmb    15 40 18.5
      comp=Z,19nm,1.1s
KURK  Kurchatov        50.55 313   P      P       15 40 15.2 +0.5
KURK                               P      P       15 40 15.2 +0.5
SHLS  Shalkode         50.60 303  eP      P       15 40 12.0 -3.5
      comp=Z,27nm,1.7s,baz=303
SHLS  Shalkode         50.60 303  eP      P       15 40 11.9 -3.5
SHLS                               pmax   pmax
      comp=Z,27nm,1.7s
KURBB Kurchatov Arra   50.62 312   P      P       15 40 15.4 +0.2
      comp=Z,4.6nm,1.0s,baz=94,slow=9.5,SNR=4.5
WB0   Warramunga Arr   50.62 189   P      P       15 40 15.0 -0.6
KOLN  Koldanda         50.69 282  eP      P       15 40 15.7 -0.7
      comp=Z,50nm,1.3s
WR0   Warramunga Arr   50.79 189   P      P       15 40 16.2 -0.6
WRAB  Tennant Creek    50.79 189ceP      P       15 40 16.4 -0.4
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WRAB                               pmax   pmax
      comp=Z,28nm,1.2s
WRAB  Tennant Creek    50.79 189   P      P       15 40 15.5 -1.3
WB2   Warramunga Arr   50.80 189   P      P       15 40 16.4 -0.5
WB2                                IAmb   IAmb    15 40 18.4
      comp=Z,22nm,0.9s
WRA   Warramunga Arr   50.80 189   P      P       15 40 16.4 -0.5
      comp=Z,14nm,0.7s,baz=5.3,slow=7.5,SNR=100
FITZ  Fitzroy Crossi   50.95 200   P      P       15 40 17.6 -0.4
FITZ                               IAmb   IAmb    15 40 19.3
      comp=Z,37nm,1.4s
PYUN  Piuthan          51.10 283  eP      P       15 40 19.0 -0.5
      comp=Z,25nm,0.5s
KPKS  Kokpek           51.12 303  eP      P       15 40 18.5 -0.8
      comp=Z,29nm,1.8s,baz=303
KPKS  Kokpek           51.12 303  eP      P       15 40 18.5 -0.8
KPKS                               pmax   pmax
      comp=Z,29nm,1.8s
GSI   Gunungsitoli     51.27 244   P      P       15 40 19.6 -1.0
GSI   Gunungsitoli     51.27 244   P      P       15 40 20.0 -0.6
      comp=Z,6µmcomp=Z,1µmcomp=Z,34nm,1.3s
SATY  Saty             51.38 303  eP      P       15 40 20.6 -0.7
      comp=Z,27nm,2.1s,baz=303
SATY  Saty             51.38 303  eP      P       15 40 20.6 -0.7
SATY                               pmax   pmax
      comp=Z,27nm,2.1s
KDAK  Kodiak Island    51.62  38   P      P       15 40 24.0 +1.3
      comp=Z,5.0nm,0.7s,baz=266,slow=13,SNR=1.6
KDAK  Kodiak Island    51.62  38   P      P       15 40 24.2 +1.5
A21K  Barrow           52.19  21   P      P       15 40 29.4 +2.7
      baz=253
A21K  Barrow           52.19  21   P      P       15 40 28.4 +1.7
A21K                               IAmb   IAmb    15 40 32.5
      comp=Z,20nm,1.4s
PPLA  Purkeypile       52.20  32   P      P       15 40 28.5 +1.4
PPLA                               IAmb   IAmb    15 40 46.7
      comp=Z,19nm,1.3s
CHKK  Chushkaly        52.28 304  eP      P       15 40 27.5 -0.4
      baz=304
CHKK  Chushkaly        52.28 304  eP      P       15 40 27.5 -0.4
MDOK  Medeo            52.34 303  eP      P       15 40 28.3 -0.2
      baz=303
MDOK  Medeo            52.34 303  eP      P       15 40 28.3 -0.2
AAA   Alma-Ata         52.43 303  eP      P       15 40 28.9 -0.3
      comp=Z,25nm,1.1s,baz=303
AAA   Alma-Ata         52.43 303  eP      P       15 40 28.8 -0.3
AAA                                pmax   pmax
      comp=Z,25nm,1.1s
TNSS  Tian-Shan        52.44 303  eP      P       15 40 29.7 +0.2
      baz=303
TNSS  Tian-Shan        52.44 303  eP      P       15 40 29.7 +0.2
BRLK  Bradley Lake     52.59  36   P      P       15 40 30.9 +1.0
BRLK                               IAmb   IAmb    15 40 43.0
      comp=Z,36nm,1.5s
KUU   Kurty            52.74 304  eP      P       15 40 30.5 -0.8
      comp=Z,66nm,1.7s,baz=304
KUU   Kurty            52.74 304  eP      P       15 40 30.5 -0.8
KUU                                pmax   pmax
      comp=Z,66nm,1.7s
SUA   Susitna One      52.75  34   P      P       15 40 31.0 -0.2
MLY   Manley           53.07  29   P      P       15 40 35.5 +2.1
      baz=264
TRF   Thorofare Moun   53.11  31   P      P       15 40 34.9 +1.0
TKM2  Tokmak 2         53.43 303   P      P       15 40 37.6 +1.0
      SNR=15
TKM2  Tokmak 2         53.43 303  i P     P       15 40 35.9 -0.7
TKM2                               pmax   pmax
      comp=Z,4.0nm,0.9s
MCK   McKinley         53.74  31   P      P       15 40 39.9 +1.5
      baz=266
NEA2  Nenana           53.74  30   P      P       15 40 40.2 +1.9
      baz=266
KSH   Kashi            53.81 299   P      P       15 40 42.4 +3.0
KSH                                sP     pwP     15 40 55.4 +2.4
KSH                                S      S       15 48 14.7 +1.8
KSH                                pmax   pmax
      comp=Z,28nm,0.6s
KSH                                pmax   pmax
      comp=Z,320nm,4.6s
KBK   Karagaybulak     53.95 303   P      P       15 40 41.5 +1.1
      SNR=9.1
TOLK  Toolik Lake Re   53.98  25   P      P       15 40 41.6 +1.6
      baz=262
SGDS  Sogindy          54.04 304  eP      P       15 40 40.1 -0.9
      comp=Z,17nm,1.8s,baz=304
SGDS  Sogindy          54.04 304  eP      P       15 40 40.0 -0.9
SGDS                               pmax   pmax
      comp=Z,17nm,1.8s
MDM   Murphy Dome      54.13  29   P      P       15 40 40.9 -0.2
MDM                                IAmb   IAmb    15 40 43.9
      comp=Z,16nm,1.5s
USP   Ospenovka        54.16 304   P      P       15 40 42.4 +0.6
      SNR=8.6
BTLS  Baital           54.18 306  eP      P       15 40 40.8 -1.0
      comp=Z,18nm,1.3s,baz=306
BTLS  Baital           54.18 306  eP      P       15 40 40.8 -1.0
BTLS                               pmax   pmax
      comp=Z,18nm,1.3s
AAK   Ala-Archa        54.28 303   P      P       15 40 42.8  0.0
      comp=Z,2.2nm,0.5s,baz=119,slow=6.4,SNR=9.6
AAK   Ala-Archa        54.28 303   P      P       15 40 43.9 +1.1
      SNR=6.2
AAK   Ala-Archa        54.28 303  i P     P       15 40 43.5 +0.7
      SNR=7.5
AAK   Ala-Archa        54.28 303⇑eP      P       15 40 43.1 +0.3
AAK                                pmax   pmax
      comp=Z,46nm,1.5s
AAK   Ala-Archa        54.28 303   P      P       15 40 41.8 -1.0
AAK                                IAmb   IAmb    15 40 45.8
      comp=Z,21nm,1.5s
AAK   Ala-Archa        54.28 303   P      P       15 40 43.8 +1.0
AAK                                P      P       15 40 43.8 +1.0
UCH   Uchtor           54.35 302   P      P       15 40 45.6 +1.9
      SNR=8.1
AS31  Alice Springs    54.52 189   P      P       15 40 43.6 -0.8
ASAR  Alice Springs    54.53 189   P      P       15 40 43.9 -0.6
      comp=Z,14nm,1.1s,baz=3.5,slow=4.9,SNR=61
HDA   Harding Lake     54.65  30   P      P       15 40 46.7 +1.9
      baz=268
IL31                   54.69  30   P      P       15 40 45.1  0.0
IL31                               IAmb   IAmb    15 40 51.0
      comp=Z,14nm,1.4s
ILAR  Eielson Array    54.69  30   P      P       15 40 45.6 +0.5
      comp=Z,2.5nm,0.8s,baz=266,slow=6.0,SNR=12
AML   Almayashu        54.96 302   P      P       15 40 49.5 +1.5
      SNR=19
BVAR  Borovoye Array   55.48 316   P      P       15 40 52.0 +0.9
      comp=Z,1.7nm,0.6s,baz=72,slow=9.5,SNR=12
BVAR  Borovoye Array   55.48 316   P      P       15 40 52.0 +0.9
BRVK  Borovoye         55.54 316⇑eP      P       15 40 51.7 +0.2
BRVK                               pmax   pmax
      comp=Z,13nm,1.4s
BRVK  Borovoye         55.54 316   P      P       15 40 51.5  0.0
BRVK                               IAmb   IAmb    15 40 57.0
      comp=Z,16nm,1.4s
BRVK  Borovoye         55.54 316   P      P       15 40 52.3 +0.8
BRVK                               P      P       15 40 52.3 +0.8
RIDG  Independent Ri   55.55  31   P      P       15 40 51.1 -0.4
SCRK  Sand Creek       55.94  31   P      P       15 40 55.7 +1.4
      baz=271
DZA   Taraz            56.51 304  eP      P       15 40 58.4 -0.4
      baz=304
DZA   Taraz            56.51 304  eP      P       15 40 58.3 -0.4
K27K  Chicken          56.77  31   P      P       15 41 02.5 +2.3
      baz=272
KK31  Karatay Array    57.05 304   P      P       15 41 02.0 -0.5
KK31                               pmax   pmax
      comp=Z,17nm,0.9s
KK31  Karatay Array    57.05 304   P      P       15 41 02.0 -0.5
KK31                               IAmb   IAmb    15 41 17.7
      comp=Z,17nm,0.9s
KKAR  Karatay Array    57.05 304   P      P       15 41 02.0 -0.5
KKAR                               pmax   pmax
      comp=Z,17nm,0.9s
KKAR  Karatay Array    57.05 304   P      P       15 41 02.0 -0.5
KKAR                               IAmb   IAmb    15 41 17.7
      comp=Z,17nm,0.9s
NIL   Nilore           57.43 293   P      P       15 41 03.9 -1.4
NIL                                pmax   pmax
      comp=Z,69nm,1.4s
NIL   Nilore           57.43 293   P      P       15 41 03.9 -1.4
IUG   Iuzhnay          57.62 303  eP      P       15 41 06.3 -0.4
      comp=Z,46nm,1.5s,baz=303
IUG   Iuzhnay          57.62 303  eP      P       15 41 06.2 -0.4
IUG                                pmax   pmax
      comp=Z,46nm,1.5s
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BCPM  Bancas Point     58.25  35   P      P       15 41 11.1 +0.5
EPYK  Eagle Plains     58.87  28   P      P       15 41 17.1 +2.2
      baz=276
HYB   Hyderabad        58.88 273  i P     P       15 41 15.0 -0.7
MSVF  Nonsavu          59.18 139   P      P       15 41 16.8 -0.8
MSVF                               pmax   pmax
      comp=Z,31nm,1.5s
MSVF  Nonsavu          59.18 139   P      P       15 41 16.8 -0.8
INK   Inuvik           59.88  25   P      P       15 41 23.4 +1.7
      comp=Z,0.8nm,0.5s,baz=276,slow=7.7,SNR=2.6
INK   Inuvik           59.88  25   P      P       15 41 23.4 +1.7
INK                                pmax   pmax
      comp=Z,8.0nm,1.2s
SVE   Sverdlovsk       60.46 321  eP      P       15 41 26.1 +0.2
SVE                                pmax   pmax
      comp=Z,45nm,1.5s
KBL   Kabul            60.48 295   P      P       15 41 26.3 -0.4
KBL                                pmax   pmax
      comp=Z,30nm,1.3s
KBL   Kabul            60.48 295   P      P       15 41 26.3 -0.4
KBL   Kabul            60.48 295   P      P       15 41 27.3 +0.6
      SNR=14
KBL                                P      P       15 41 27.3 +0.6
      SNR=14
ARU   Arti             61.66 321   P      P       15 41 35.2 +1.1
      comp=Z,3.9nm,0.7s,baz=54,slow=5.7,SNR=18
ARU   Arti             61.66 321c iP      P       15 41 34.0 -0.1
ARU                                               15 43 48.4
ARU                                S      S       15 49 53.8 -1.2
ARU                                pmax   pmax
      comp=Z,55nm,1.3s
ARU   Arti             61.66 321   P      P       15 41 33.6 -0.5
STKA  Stephens Creek   62.13 181   P      P       15 41 38.4 +1.0
      baz=360,slow=9.5,SNR=5.8
STKA  Stephens Creek   62.13 181   P      P       15 41 38.4 +1.0
STKA                               pmax   pmax
      comp=Z,4.0nm,1.4s
STKA  Stephens Creek   62.13 181   IAmb   IAmb    15 41 40.4
      comp=Z,3.9nm,1.4s
FORT  Forrest          62.49 194   P      P       15 41 39.7 -0.1
ABKAR Akbulak array    62.66 313   P      P       15 41 40.7 -0.2
ABKAR                              IAmb   IAmb    15 41 55.4
      comp=Z,18nm,1.4s
C36M  Paulatuk         63.05  23   P      P       15 41 44.1 +1.0
      baz=285
C36M  Paulatuk         63.05  23   P      P       15 41 43.3 +0.2
AKTO  Aktyubinsk       63.53 315   P      P       15 41 46.5 -0.1
      comp=Z,3.9nm,0.8s,baz=55,slow=10,SNR=6.7
MORW  Morawa           64.33 205   P      P       15 41 50.8 -1.2
MORW                               IAmb   IAmb    15 42 03.8
      comp=Z,11nm,1.1s
KIRV  Kirov            65.80 325   P      P       15 42 01.2 -0.1
      comp=Z,10nm,0.5s,baz=64,slow=6.0,SNR=7.7
KIRV  Kirov            65.80 325⇓eP      P       15 42 02.5 +1.2
HRA   Herat            65.81 297   P      P       15 42 00.6 -1.5
HRA                                IAmb   IAmb    15 42 04.7
      comp=Z,15nm,0.9s
EUNU  Eureka           66.45   8   P      P       15 42 06.0 +0.7
EUNU                               IAmb   IAmb    15 42 16.9
      comp=Z,15nm,1.4s
NWAO  Narrogin (SRO)   67.43 203   P      P       15 42 09.6 -2.3
NWAO                               pmax   pmax
      comp=Z,22nm,0.9s
NWAO  Narrogin (SRO)   67.43 203   P      P       15 42 09.6 -2.3
GEYT  Alibeck          67.61 302   P      P       15 42 14.8 +1.5
      comp=Z,17nm,1.2s,baz=37,slow=7.6,SNR=11
HSPB  Hornsund (broa   67.86 349  eP      P       15 42 13.7 -0.5
RES   Resolute Bay     68.68  14   P      P       15 42 18.8 -0.5
RES                                pmax   pmax
      comp=Z,4.0nm,1.1s
RES   Resolute Bay     68.68  14   P      P       15 42 18.8 -0.5
TMCR  Tamitsa          68.71 333  eP      P       15 42 18.8 -0.8
TMCR                               pmax   pmax
      comp=Z,36nm,1.5s
BELG  Belogornoye      68.99 319   P      P       15 42 21.0 -0.6
      comp=Z,20nm,1.0s,baz=79,slow=10,SNR=8.9
BELG  Belogornoye      68.99 319⇓eP      P       15 42 22.3 +0.7
BELG                               pmax   pmax
      comp=Z,7.0nm,1.3s
YKA   Yellowknife Ar   69.10  29   P      P       15 42 22.9 +0.9
      comp=Z,1.5nm,0.8s,baz=293,slow=5.6,SNR=13
YKA   Yellowknife Ar   69.10  29   P      P       15 42 23.0 +0.9
KLMR  Klimovskoe       69.55 329  eP      P       15 42 24.6 -0.3
KLMR                               pmax   pmax
      comp=Z,28nm,1.3s
KLMR  Klimovskoe       69.55 329  eP      P       15 42 24.7 -0.2
KLMR                               AMP            15 42 27.1
      comp=Z,28nm,1.3s
ARCES ARCESS Array B   70.24 340   P      P       15 42 29.6 +0.5
      comp=Z,4.7nm,1.0s,baz=58,slow=8.6,SNR=2.2
DAG   Danmarks Havn    72.23 355  i P     P       15 42 42.0 +1.1
DAG   Danmarks Havn    72.23 355  i P     P       15 42 42.0 +1.1
VRH   Novokhopyorsk    72.81 320  eP      P       15 42 43.7 -1.1
VRH                                pmax   pmax
      comp=Z,20nm,1.6s
MOS   Moscow           72.82 325  eP      P       15 42 44.6 -0.2
MOS                               e               15 42 59.4
JLN   Jalan Bani Buh   73.08 286   P      P       15 42 47.5 +0.5
JLN                                P      P       15 42 47.5 +0.5
WSAR  Wadi Sarin       73.24 287   P      P       15 42 48.8 +0.9
      comp=Z,6.9nm,1.0s,baz=107,slow=3.6,SNR=4.0
WBK   Wadi Bani Khal   73.24 287   P      P       15 42 49.1 +1.2
WBK                                P      P       15 42 49.1 +1.2
BIDO  Bidbid           73.53 288   P      P       15 42 51.6 +2.0
      SNR=7.3
OBN   Obninsk          73.65 325   P      P       15 42 50.6 +1.0
      comp=Z,1.4nm,0.3s,baz=67,slow=8.6,SNR=4.6
OBN   Obninsk          73.65 325  i P     P       15 42 50.0 +0.3
OBN                               i               15 43 02.2
OBN                                pmax   pmax
      comp=Z,29nm,1.2s
OBN   Obninsk          73.65 325   IAmb   IAmb    15 42 51.9
      comp=Z,27nm,1.2s
LPSR  Galich'ya Gora   73.67 322  eP      P       15 42 49.9  0.0
LPSR                               pmax   pmax
      comp=Z,20nm,1.3s
BANOM Banah            73.95 291  i P     P       15 42 53.5 +1.4
      SNR=10.0
BANOM Banah            73.95 291   P      P       15 42 54.2 +2.2
      SNR=8.0
SHME  Shamm            74.02 291  i P     P       15 42 53.8 +1.4
      SNR=16
SHME  Shamm            74.02 291   P      P       15 42 54.0 +1.5
      SNR=13
SHME                               P      P       15 42 54.0 +1.5
      SNR=13
JMDO  Jabal Madar      74.06 287   P      P       15 42 53.5 +0.7
JMDO                               P      P       15 42 53.5 +0.7
HOQ   Hoqain           74.17 288   P      P       15 42 54.2 +0.8
      SNR=11
HOQ                                P      P       15 42 54.2 +0.8
      SNR=11
VSR   Storozhevoye     74.22 320  eP      P       15 42 53.3 +0.2
VSR                                pmax   pmax
      comp=Z,20nm,1.5s
VORD  Divnogorie       74.27 320  eP      P       15 42 54.3 +0.9
VORD                               pmax   pmax
      comp=Z,10.0nm,1.6s
MASF  Masafi           74.31 290   P      P       15 42 55.6 +1.5
MASF                               P      P       15 42 55.6 +1.5
MSFE  Esma-Masafi      74.31 290   P      P       15 42 55.3 +1.1
UOSS  Minazif          74.46 290   P      P       15 42 56.0 +0.9
UOSS  Minazif          74.46 290   P      P       15 42 53.2 -1.8
UOSS                               IAmb   IAmb    15 42 57.0
      comp=Z,28nm,1.3s
SOHO  SOHO             74.56 289  i P     P       15 42 56.2 +0.7
      SNR=12
HATD  Hatta, Dubai     74.57 290  i P     P       15 42 57.0 +1.3
      SNR=6.0
HATD  Hatta, Dubai     74.57 290   P      P       15 42 58.0 +2.3
      SNR=5.4
ASHO  Ashiyiah         74.70 290  i P     P       15 42 57.3 +0.9
      SNR=7.8
ASHO  Ashiyiah         74.70 290   P      P       15 42 57.8 +1.3
      SNR=8.2
MHTO  MHTO             74.80 286   P      P       15 42 58.3 +1.2
      SNR=8.7
MHTO                               P      P       15 42 58.3 +1.2
      SNR=8.7
FIA1  FINESS Array S   74.81 333   P      P       15 42 56.9 +0.6
FINES FINESS Array B   74.81 333   P      P       15 42 57.0 +0.7
      comp=Z,5.8nm,0.8s,baz=63,slow=5.2,SNR=12
NAZ   Nazwa, Dubai     74.88 290   P      P       15 42 59.5 +2.1
      SNR=5.2
ARQ   Araqi            74.93 288   P      P       15 42 59.0 +1.2
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	SNR=8.4						
ARQ				P	P	15 42 59.0	+1.2
	SNR=8.4						
FAQ	Al Faqa, Dubai	75.05	290	P	P	15 42 59.0	+0.6
FAQ	Al Faqa, Dubai	75.05	290	P	P	15 42 59.6	+1.2
FAQ				P	P	15 42 59.6	+1.2
ASUD	Al Ashush, Dub	75.31	290	*i* P	P	15 43 01.1	+1.1
	SNR=6.1						
KBZ	Khabaz	75.62	312	P	P	15 43 03.4	+2.1
	comp=Z,8.3nm,1.0s,baz=88,slow=5.9,SNR=11						
KBZ	Khabaz	75.62	312	⇓*e*P	P	15 43 02.6	+1.3
KBZ				pmax	pmax		
	comp=Z,22nm,1.3s						
KIV	Kislovodsk	75.64	313	*i* P	P	15 43 02.4	+0.8
KIV				*i*		15 43 15.4	
KIV				*i*		15 45 49.8	
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV				MLR	MLR		
	comp=Z,246nm,16.0s						
DQM	DQM	75.64	285	P	P	15 43 02.4	+0.5
WALA	Waterton Lakes	75.83	41	P	P	15 43 01.3	-1.4
GNI	Garni	76.11	308	⇑*e*P	P	15 43 05.8	+1.4
GNI				pmax	pmax		
	comp=Z,31nm,1.7s						
UMZA	Um Al Zommool	76.33	288	P	P	15 43 06.3	+0.6
VSU	Vasula	76.33	331	⇑*e*P	P	15 43 05.4	+0.3
VSU				pmax	pmax		
	comp=Z,85nm,1.3s						
MNK	Minsk	78.19	327	*i* P	P	15 43 16.9	+1.3
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	15 43 16.9	+1.3
	comp=N,16nm,1.0s						
MNK				*i* P	P	15 43 16.9	+1.3
	comp=Z,14nm,1.0s						
MNK				*i* PcP	PcP	15 43 26.1	+1.0
MNK				*i* PP	PP	15 46 13.4	+1.6
MNK				*i* PPP	PPP	15 48 01.5	
MNK				*i* S	S	15 53 12.5	+3.8
MNK				*i* ScS	ScS	15 53 34.1	-0.1
MNK				*i* SS	SS	15 58 12.8	+2.9
MNK				*i* SSS	SSS	16 01 37.8	
MNK				*i* LQ	LQ	16 10 31.1	
MNK				*i* LR	LR	16 14 11.5	
MNK				*i* LRM	MLR	16 19 05.8	
	comp=Z,133nm,18.8s						
MNK				*i* LRM	MLR	16 19 55.4	
	comp=E,46nm,19.1s						
MNK				*i* LRM	MLR	16 19 55.4	
	comp=N,496nm,19.1s						
HRY	Holter Researc	78.25	42	P	P	15 43 16.3	0.0
NVAR	Mina Array Bea	78.40	52	P	P	15 43 19.4	+2.0
	comp=N,2.0nm,0.6s,baz=291,slow=5.2,SNR=2.5						
FFC	Flin Flon	78.81	32	P	P	15 43 19.4	+0.3
FFC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FFC	Flin Flon	78.81	32	P	P	15 43 19.4	+0.3
DMTO	DMTO	78.85	284	P	P	15 43 20.1	+0.2
DOK	Doka	79.10	285	P	P	15 43 21.6	+0.3
DOK				P	P	15 43 21.6	+0.3
WHFO	Wadi Hawf	79.73	285	P	P	15 43 24.9	+0.1
WHFO				P	P	15 43 24.9	+0.1
AKASG	Malin Array Be	79.79	323	P	P	15 43 24.9	+0.5
	comp=Z,2.3nm,0.7s,baz=45,slow=6.0,SNR=17						
AKASG				PP	PP	15 46 26.8	+1.6
	comp=Z,0.2nm,0.2s,baz=48,slow=9.8,SNR=5.3						
AKASG	Malin Array Be	79.79	323	P	P	15 43 25.0	+0.5
AKBB	Malin Array Si	79.79	323	⇑*e*P	P	15 43 24.3	-0.2
AKBB	Malin Array Si	79.79	323	P	P	15 43 23.8	-0.6
AKBB				IAmb	IAmb	15 43 26.4	
	comp=Z,11nm,1.2s						
NB2	NORSAR Subarra	80.36	338	P	P	15 43 27.7	+0.3
	comp=Z,24nm,1.7s,baz=41,slow=5.6						
NOA	NORSAR Array B	80.36	338	P	P	15 43 27.9	+0.5
	comp=Z,2.8nm,0.8s,baz=40,slow=5.3,SNR=11						
NOA	NORSAR Array B	80.36	338	P	P	15 43 28.0	+0.5
ABTO	Aybut	80.40	284	P	P	15 43 29.0	+0.5
ABTO				P	P	15 43 29.0	+0.5
SUW	Suwalki	80.65	328	*e*P	P	15 43 29.5	+0.4
SUW	Suwalki	80.65	328	P	P	15 43 28.8	-0.3
SUW	Suwalki	80.65	328	P	P	15 43 28.8	-0.3
PDAR	Pinedale Array	81.77	45	P	P	15 43 36.8	+1.2
	comp=Z,0.8nm,0.7s,baz=264,slow=3.2,SNR=5.3						
PFO	Pinyon Flats O	82.14	56	⇑*e*P	P	15 43 38.1	+0.6
PFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LCMT	Little Creek M	82.57	51	P	P	15 43 38.6	-1.1
SRU	San Rafael Swe	83.21	48	P	P	15 43 43.1	0.0
SRU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SRU	San Rafael Swe	83.21	48	P	P	15 43 43.1	0.0
BR131	Keskin Array S	83.61	313	⇑*e*P	P	15 43 44.6	-0.5
BRTR	Keskin Array B	83.61	313	P	P	15 43 45.9	+0.8
	comp=Z,7.7nm,1.1s,baz=94,slow=3.7,SNR=11						
TESR	Tescani	83.69	321	⇓P	P	15 43 47.4	+2.2
RAYN	Ar Rayn	83.71	293	*i* P	P	15 43 46.9	+1.2
	SNR=20						
KWP	Kalwaria Pacla	83.73	325	*e*P	P	15 43 45.8	+0.5
BURAR	Bucovina Array	83.76	323	⇑P	P	15 43 47.1	+1.5
VRI	Vrincioaia	84.05	321	⇑P	P	15 43 48.8	+1.8
KOLS	Kolonicke sedl	84.40	325	*e*P	P	15 43 49.4	+0.6
KOLS	Kolonicke sedl	84.40	325	*e*P	P	15 43 49.3	+0.5
PV14	Lion Creek, Pa	84.59	48	P	P	15 43 50.0	-0.3
PV14				IAmb	IAmb	15 43 52.7	
	comp=Z,16nm,1.3s						
PV17	East Wray Mesa	84.69	48	P	P	15 43 51.2	+0.5
MLR	Muntele Rosu	84.71	321	⇓P	P	15 43 50.9	+0.3
OJC	Ojcow	84.73	327	*e*P	P	15 43 51.3	+0.9
CRVS	Cervenica-Dubn	84.82	325	*e*P	P	15 43 53.2	+2.3
CRVS	Cervenica-Dubn	84.82	325	*e*P	P	15 43 53.2	+2.3
NIE	Niedzica	85.04	326	*e*P	P	15 43 51.0	-1.0
VOIR		85.23	321	⇑P	P	15 43 52.6	-0.5
DRGR		85.59	323	⇑P	P	15 43 56.4	+1.6
LANS	Liptovska Anna	85.62	326	*e*P	P	15 43 57.4	+2.5
LANS	Liptovska Anna	85.62	326	*e*P	P	15 43 57.4	+2.5
KSP	Ksiaz	85.90	329	*e*P	P	15 43 56.8	+0.6
VYHS	Vyhne	86.38	326	*e*P	P	15 43 59.8	+1.2
VYHS				pmax	pmax		
	comp=Z,13nm,1.4s						
VYHS	Vyhne	86.38	326	*e*P	P	15 43 59.8	+1.2
VRAC	Vranov	86.86	328	P	P	15 44 02.1	+1.1
	comp=Z,1.6nm,0.4s,baz=330,slow=5.3,SNR=4.6						
CLL	Collm	86.98	331	*i* P	P	15 44 00.9	-0.6
	comp=Z,23nm,1.6s						
CLL	Collm	86.98	331	*i* P	P	15 44 00.9	-0.6
CLL				pmax	pmax		
	comp=Z,23nm,1.6s						
SMOL	Smolenice	87.03	327	*e*P	P	15 44 03.1	+1.2
SMOL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SMOL	Smolenice	87.03	327	*e*P	P	15 44 03.0	+1.2
GERES	GERESS Array B	88.51	329	P	P	15 44 10.6	+1.6
	comp=Z,0.3nm,0.5s,baz=36,slow=5.1,SNR=2.1						
DAVOX	Davos/Dischmat	91.76	329	P	P	15 44 24.4	+0.1
	comp=Z,2.7nm,0.8s,baz=8.8,slow=3.5,SNR=3.3						
TUE	Stuetta	92.23	329	P	P	15 44 25.9	-0.6
TORD	Torodi Ar. Bea	122.22	313	PKP	PKiKP	15 50 12.7	+0.6
	comp=Z,1.1nm,0.9s,baz=27,slow=2.1,SNR=2.9						
SYO	Syowa Base	122.68	205	⇓*e*Pdiff	Pdif	15 46 42.2	+0.7

NEIC ***05*** *15:34:21.6±0.9, 60°.10N±0°.02×152°.61W±0°.08, h98^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=3.2km az=89.0*

AEIC ***05*** *15:34:22.9±1.4, 60°.06N±0°.04×152°.58W±0°.06, h90^{km}±4^{km}, ML3.1/135, ML3.4/98(NEIC), Error ellipse: s-maj=5.2km s-min=4.7km az=202.0*

ANF ***05*** *15:34:24.3±0.5, 60°.20N×151°.96W, h122^{km}±3^{km}, ML3.5/11, Error ellipse: s-maj=5.5km s-min=2.6km az=50.0*

ISC 05 15:34:21.0±1.4**, 60°.08N**±0°.04×**152°.57W**±0°.04**, h105**^{km}±7^{km}**, n174,** σ**0^{s}95**/175**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIM	Iliamna	0.19	271		Pn	15 34 35.6	-0.3
IVE	Iliamna Volcan	0.23	255		Pn	15 34 35.3	-0.7
IVE					Sn	15 34 46.3	-0.9
ILS	Iliamna Low So	0.28	244		Pn	15 34 35.8	-0.4
RED	Redoubt Volcan	0.36	344		Pn	15 34 36.0	-0.5
RED					Sn	15 34 47.3	-0.9
RDSO	Redoubt South	0.39	347		Pn	15 34 36.4	-0.4
RDSO					Sn	15 34 47.6	-1.0
RSO	Redoubt South	0.40	347	Pn	Pn	15 34 36.7	-0.2
NCT	North Crescent	0.52	340		Pn	15 34 37.2	-0.4
NCT					Sn	15 34 48.8	-1.1
DFR	Drift River	0.52	354		Pn	15 34 37.3	-0.2
DFR					Sn	15 34 49.1	-0.8
OPT	Oil Point	0.54	218		Pn	15 34 37.6	0.0
AUL	Augustine Lava	0.82	212		Pn	15 34 40.2	+0.1
AUW	Augustine West	0.84	213		Pn	15 34 40.3	+0.1
CNPM	China Poot	0.87	129		Pn	15 34 40.6	+0.1
CNPM					Sn	15 34 55.5	+0.3
CNPM	China Poot	0.87	129	IAML		15 34 55.8	
	comp=N,1μm,0.4s						
BRLK	Bradley Lake	0.91	110		Pn	15 34 41.0	+0.1
BRLK					Sn	15 34 55.7	-0.1
BRLK	Bradley Lake	0.91	110	IAML		15 34 55.9	
	comp=N,1μm,0.5s						
BRLK				IAML		15 34 56.3	
	comp=E,1μm,0.5s						
BRSE	Bradley Lake S	0.98	109		Pn	15 34 41.8	+0.2
BRSE					Sn	15 34 57.8	+0.7
CAPN	Captain Cook N	0.99	45	P	Pn	15 34 43.7	+2.1
	baz=226						
CAPN				S	Sn	15 34 58.9	+1.8
	baz=226						
CAPN	Captain Cook N	0.99	45		Pn	15 34 43.7	+2.1
SPCN	Chakachatna No	1.17	9		Pn	15 34 44.2	+0.5
BGL	Barrier Glacie	1.19	4		Pn	15 34 44.5	+0.5
SPCP	Crater Peak Br	1.21	10		Pn	15 34 44.8	+0.6
SLKM	Skilak Lake	1.25	69		Pn	15 34 44.5	-0.1
SLKM					Sn	15 35 02.1	-0.2
SPCG	Spurr Capps Gl	1.25	12		Pn	15 34 45.1	+0.5
STLK	Strandline Lak	1.47	14		Pn	15 34 47.8	+0.6
O22K	Cooper Landing	1.48	73	P	Pn	15 34 47.7	+0.5
	baz=255						
O22K				S	Sn	15 35 06.4	-0.6
	baz=255						
O22K	Cooper Landing	1.48	73		Pn	15 34 47.5	+0.3
O22K					Sn	15 35 06.4	-0.6
SEW	Seward	1.56	88		Pn	15 34 48.2	0.0
SEW					Sn	15 35 08.2	-0.7
FIS	Fire Island	1.58	46		Pn	15 34 50.5	+2.1
SUA	Susitna One	1.65	32		Pn	15 34 50.5	+1.0
SUA	Susitna One	1.65	32	IAML		15 35 12.9	
	comp=N,377nm,0.5s						
RC01	Rabbit Creek A	1.73	53	P	Pn	15 34 51.0	+0.7
	baz=235						
RC01				S	Sn	15 35 12.3	-0.2
	baz=235						
RC01	Rabbit Creek A	1.73	53		Pn	15 34 50.9	+0.7
SVW2	Sparrevohn	1.80	306		Pn	15 34 51.1	-0.2
KAHG	Katmai Hook Gl	1.89	213		Pn	15 34 52.9	+0.6
KAHC	Katmai Hardscr	1.90	222		Pn	15 34 52.9	+0.3
SKT	Skwentna	1.97	14		Pn	15 34 54.0	+0.6
KVTA	Katmai Vly 10	2.20	221		Pn	15 34 56.9	+0.5
PWL	Port Wells	2.24	68		Pn	15 34 56.3	-0.5
KBM	Katmai Bkd Mtn	2.26	218		Pn	15 34 58.0	+0.8
PMR	Palmer	2.27	46		Pn	15 34 57.1	0.0
PMR	Palmer	2.27	46	IAML		15 35 25.9	
	comp=N,173nm,0.3s						
KABU	Katmai Buttres	2.29	219		Pn	15 34 58.3	+0.8
KDAK	Kodiak Island	2.30	180		Pn	15 34 56.8	-0.8
KDAK	Kodiak Island	2.30	180	IAML		15 35 33.5	
	comp=N,142nm,0.7s						
KDAK				IAML		15 35 34.6	
	comp=N,169nm,0.6s						
ANCK	Angle Creek	2.41	220		Pn	15 34 59.9	+0.7
KNK	Knik Glacier	2.42	55		Pn	15 34 59.1	-0.1
KNK	Knik Glacier	2.42	55	IAML		15 35 29.6	
	comp=E,230nm,0.5s						
GHO	Glory Hole Cre	2.46	45		Pn	15 34 59.9	+0.1
GHO	Glory Hole Cre	2.46	45	IAML		15 35 31.2	
	comp=N,193nm,0.4s						
GHO				IAML		15 35 31.4	
	comp=E,222nm,0.4s						
CUT	Chulitna	2.59	24	P	Pn	15 35 02.2	+0.8
	baz=206,SNR=19						
CUT				S	Sn	15 35 33.0	+0.8
	baz=206						
CUT	Chulitna	2.59	24		Pn	15 35 02.3	+1.0
SML	Sawmill	2.70	48		Pn	15 35 02.9	0.0
SML	Sawmill	2.70	48	IAML		15 35 36.3	
	comp=N,112nm,0.6s						
SML				IAML		15 35 43.5	
	comp=E,118nm,0.8s						
GLI	Glacier Island	2.83	71		Pn	15 35 04.1	-0.4
GLI	Glacier Island	2.83	71	IAML		15 35 37.6	
	comp=N,122nm,0.4s						
GLI				IAML		15 35 38.3	
	comp=E,158nm,0.7s						
PPLA	Purkeypile	2.83	4		Pn	15 35 06.5	+1.7
OHAK	Old Harbor	2.89	188		Pn	15 35 04.2	-1.2
OHAK	Old Harbor	2.89	188	IAML		15 35 37.9	
	comp=N,84nm,0.3s						
HIN	Hinchinbrook I	3.04	81		Pn	15 35 07.0	-0.5
HIN	Hinchinbrook I	3.04	81	IAML		15 35 43.8	
	comp=E,78nm,0.9s						
HIN				IAML		15 35 50.8	
	comp=N,72nm,1.3s						
PLK3	Peulik 3	3.07	220		Pn	15 35 09.1	+1.3
FID	Port Fidalgo	3.10	75		Pn	15 35 06.5	-1.5
FID	Port Fidalgo	3.10	75	IAML		15 35 42.9	
	comp=N,144nm,0.3s						
FID				IAML		15 35 43.5	
	comp=E,158nm,0.2s						
SCM	Sheep Creek Mo	3.10	53		Pn	15 35 08.5	+0.2
SCM	Sheep Creek Mo	3.10	53	IAML		15 35 49.3	
	comp=E,77nm,0.7s						
SCM				IAML		15 35 56.0	
	comp=N,72nm,0.8s						
Q23K	Middleton Isla	3.21	99	P	Pn	15 35 09.9	+0.2
	baz=284						
Q23K				S	Sn	15 35 44.7	-2.4
	baz=284						
Q23K	Middleton Isla	3.21	99		Pn	15 35 10.6	+0.9
MID	Middleton Isla	3.22	99		Pn	15 35 10.6	+0.9
HUR	Hurricane	3.23	25		Pn	15 35 11.7	+1.8
TT01	Tatalina	3.28	331		Pn	15 35 10.9	+0.3
WAT7	Susitna Watana	3.29	31		Pn	15 35 11.3	+0.5
TTA	Tatalina	3.30	332		Pn	15 35 11.0	+0.1
WAT1	Susitna Watana	3.37	33		Pn	15 35 12.3	+0.5
WAT6	Susitna Watana	3.42	41		Pn	15 35 12.8	+0.2
EYAK	Cordova Ski Ar	3.43	79		Pn	15 35 12.9	+0.4
WAT2	Susitna Watana	3.47	32		Pn	15 35 13.5	+0.4
DIV	Divide	3.51	70		Pn	15 35 14.5	+0.8
TRF	Thorofare Moun	3.55	17		Pn	15 35 14.7	+0.4
TRF	Thorofare Moun	3.55	17	IAML		15 35 59.6	
	comp=N,68nm,0.5s						
TRF				IAML		15 36 00.6	
	comp=E,56nm,0.8s						
KLU	Klutina	3.56	64		Pn	15 35 13.9	-0.4
KLU	Klutina	3.56	64	IAML		15 35 56.5	
	comp=E,62nm,0.5s						
KTH	Kantishna Hill	3.57	12		Pn	15 35 15.5	+1.0
M24K	Tolsona, Glenn	3.71	54	P	Pn	15 35 16.2	-0.2
	baz=239						
M24K				S	Sn	15 35 57.3	-1.9
	baz=239						
M24K	Tolsona, Glenn	3.71	54		Pn	15 35 16.9	+0.5
M24K	Tolsona, Glenn	3.71	54	IAML		15 36 15.5	
	comp=E,68nm,1.2s						
M24K				IAML		15 36 28.4	
	comp=N,51nm,2.9s						
RND	Reindeer	3.78	26		Pn	15 35 17.8	+0.5
CHUM	Lake Minchumin	3.82	2		Pn	15 35 18.7	+0.9
PS12	TAPS Pump St12	3.90	66		Pn	15 35 18.8	-0.1
GOAT	Goat Mountain	3.93	79		Pn	15 35 19.4	+0.1
RAGM	Ragged Mountai	3.95	82	Pn	Pn	15 35 19.8	+0.3
PS11	TAPS Pump St11	3.99	57		Pn	15 35 20.5	+0.4
BMRM	Bremner River	4.04	74		Pn	15 35 19.9	-0.9
MCK	McKinley	4.05	24	P	Pn	15 35 21.8	+0.9
	baz=207,SNR=28						
MCK				S	Sn	15 36 05.5	-1.7
	baz=207						
MCK	McKinley	4.05	24		Pn	15 35 22.0	+1.1
KAIM	Kayak Island	4.10	89		Pn	15 35 21.6	+0.1
BPAW	Bear Paw Mtn.	4.10	10		Pn	15 35 22.5	+0.9
HMT	Hamilton	4.16	83		Pn	15 35 22.5	+0.2
HMT	Hamilton	4.16	83	IAML		15 36 32.2	
	comp=N,62nm,1.5s						
N25K	Chitina, Valde	4.19	65	P	Pn	15 35 22.2	-0.7
	baz=252						
N25K				S	Sn	15 36 08.4	-2.4
	baz=252						
N25K	Chitina, Valde	4.19	65		Pn	15 35 22.5	-0.4
NICHA	Nichawak Mount	4.30	84		Pn	15 35 24.8	+0.5
BWN	Browne	4.36	18		Pn	15 35 26.6	+1.6
BWN	Browne	4.36	18	IAML		15 36 19.7	
	comp=E,35nm,4.1s						
BWN				IAML		15 37 31.8	
	comp=N,34nm,3.7s						
SUCK	Suckling Hills	4.41	86	Pn	Pn	15 35 26.1	+0.5
SUCK				IAML		15 36 38.2	
	comp=N,56nm,2.7s						
SUCK				IAML		15 36 51.6	
	comp=E,49nm,2.8s						
BERG	Berg Lake	4.43	82		Pn	15 35 26.5	+0.5
PAX	Paxson	4.47	46		Pn	15 35 27.1	+0.5
GLB	Gilahina Butte	4.51	69		Pn	15 35 26.5	-0.6
GLB	Gilahina Butte	4.51	69	IAML		15 36 19.5	
	comp=E,25nm,0.6s						
GLB				IAML		15 36 21.2	
	comp=N,24nm,0.7s						
VRDI	Verde Repeater	4.63	72		Pn	15 35 28.1	-0.8
KHIT	Khitrov Hills	4.66	81		Pn	15 35 29.5	+0.4
CRQM	Cirque	4.72	78		Pn	15 35 30.6	+0.4
CRQM				IAML		15 36 30.9	
	comp=N,29nm,1.7s						
CRQM				IAML		15 36 48.4	
	comp=E,22nm,2.5s						
NEA2	Nenana	4.81	18	P	Pn	15 35 31.6	+0.5
	baz=201,SNR=15						
NEA2				S	Sn	15 36 23.7	-2.0
	baz=201						
NEA2	Nenana	4.81	18		Pn	15 35 31.7	+0.5
MCARA	McCarthy VSAT	4.87	70		Pn	15 35 32.1	+0.3
MCARA	McCarthy VSAT	4.87	70	IAML		15 36 31.7	
	comp=N,24nm,0.7s						
MCARA				IAML		15 36 33.0	
	comp=E,28nm,0.4s						
SNH	Sunshine Point	4.87	85		Pn	15 35 32.6	+0.6
TGL	Tana Glacier	4.88	78		Pn	15 35 32.6	+0.5
TGL				IAML		15 38 09.3	
	comp=N,20nm,4.4s						
WRH	Wood River Hil	4.88	23		Pn	15 35 32.5	+0.5
CHGN	Chignik	4.89	222	Pn	Pn	15 35 32.7	+0.5
CHGN				IAML		15 38 12.0	
	comp=N,30nm,2.1s						
CHGN				IAML		15 38 24.4	
	comp=E,39nm,0.8s						
KULT	Kultieth River	4.92	84		Pn	15 35 33.5	+0.8
MLY	Manley	5.04	9	P	Pn	15 35 35.0	+0.7
	baz=190,SNR=11						
MLY	Manley	5.04	9		Pn	15 35 35.8	+1.5
HDA	Harding Lake	5.08	29	P	Pn	15 35 35.1	+0.5
	baz=214,SNR=9.9						
HDA				S	Sn	15 36 29.7	-2.3
	baz=214						
HDA				S	Sn	15 36 29.7	-2.3
	baz=214						
HDA	Harding Lake	5.08	29		Pn	15 35 35.2	+0.5
CCB	Clear Creek Bu	5.09	24		Pn	15 35 35.1	+0.3
CCB	Clear Creek Bu	5.09	24	IAML		15 36 47.5	
	comp=E,15nm,4.8s						
PTPK	Patty Peak	5.10	73		Pn	15 35 36.5	+1.3
ISLE	Juniper Island	5.11	80		Pn	15 35 35.8	+0.5
ISLE	Juniper Island	5.11	80	IAML		15 36 32.9	
	comp=E,22nm,0.8s						
ISLE				IAML		15 36 37.2	
	comp=N,34nm,1.2s						
MENT	Mentasta	5.12	52	Pn	Pn	15 35 35.8	+0.5
MENT				IAML		15 36 54.0	
	comp=E,30nm,0.7s						
MENT				IAML		15 37 08.3	
	comp=N,27nm,3.0s						
KIAG	Kiagna River	5.12	76		Pn	15 35 36.1	+0.7
BALM	Baldy	5.14	75		Pn	15 35 35.9	+0.3
BALM				IAML		15 36 35.5	
	comp=N,20nm,0.6s						
RIDG	Independent Ri	5.18	41		Pn	15 35 36.9	+0.8
RIDG				IAML		15 36 53.6	
	comp=N,28nm,0.6s						
PS08	TAPS Pump Stn8	5.22	28		Pn	15 35 37.0	+0.4
TCOL	CIGO, UAF Yank	5.28	22	P	Pn	15 35 37.8	+0.4
	baz=206,SNR=13						
TCOL				S	Sn	15 36 34.5	-2.4
	baz=206						
TCOL	CIGO, UAF Yank	5.28	22		Pn	15 35 38.2	+0.7
COLA	College	5.29	22		Pn	15 35 38.1	+0.6
MDM	Murphy Dome	5.29	20		Pn	15 35 38.5	+0.8
MDM	Murphy Dome	5.29	20	IAML		15 36 46.1	
	comp=E,13nm,4.0s						
MDM				IAML		15 36 46.3	
	comp=N,14nm,4.0s						
I23K	Minto, Yukon-K	5.30	15	P	Pn	15 35 38.5	+0.8
	baz=198,SNR=14						
I23K				S	Sn	15 36 36.0	-1.3
	baz=198						
I23K	Minto, Yukon-K	5.30	15		Pn	15 35 38.7	+1.0
I23K	Minto, Yukon-K	5.30	15	IAML		15 36 52.3	
	comp=N,16nm,4.6s						
MESA	MESA	5.31	84		Pn	15 35 38.7	+0.6
DOT	Dot Lake	5.39	45	Pn	Pn	15 35 39.8	+0.9
IL31		5.40	27		Pn	15 35 39.2	+0.2
YAH	Yahtse	5.41	82		Pn	15 35 40.6	+1.3
BARN	Barnard Glacie	5.47	75		Pn	15 35 41.4	+1.2
POKR	Poker Plat Res	5.58	23	P	Pn	15 35 42.1	+0.5
	baz=207,SNR=5.7						
POKR				S	Sn	15 36 41.4	-3.0
	baz=207						
POKR	Poker Plat Res	5.58	23		Pn	15 35 42.2	+0.7
SCRK	Sand Creek	5.62	42	P	Pn	15 35 41.7	-0.5
	baz=230,SNR=6.2						
SCRK	Sand Creek	5.62	42		Pn	15 35 42.0	-0.2
CTGM	Chitina Glacie	5.62	76		Pn	15 35 43.5	+1.3
TABL	Table Mountain	5.70	81	Pn	Pn	15 35 44.1	+0.7
LOGN	Logan Glacier	5.78	78		Pn	15 35 45.2	+0.9
PS06	TAPS Pump Stn6	5.94	11		Pn	15 35 47.6	+1.3
BC03		5.96	55		Pn	15 35 46.9	+0.3
IM01	Indian Mountai	5.96	355		Pn	15 35 47.9	+1.2
YUK2	White River	5.97	68		Pn	15 35 47.8	+0.9
PCA	Pinnacle	6.16	84		Pn	15 35 50.5	+1.1
K27K	Chicken	6.33	47		Pn	15 35 52.0	+0.4
BCPM	Bancas Point	6.49	86	Pn	Pn	15 35 54.4	+0.6
PNL	Peninsula	6.65	88		Pn	15 35 56.5	+0.5
YUK4	Talbot Arm	6.95	73		Pn	15 36 01.6	+1.4
EGAK	Eagle	7.08	43		Pn	15 36 02.6	+0.8
COLD	Coldfoot	7.25	7	P	Pn	15 36 05.1	+0.9
	baz=190						
COLD	Coldfoot	7.25	7	Pn	Pn	15 36 05.6	+1.4
DAWY	Dawson	7.36	51		Pn	15 36 06.2	+0.5
ANM	Nome	7.46	313	Pn	Pn	15 36 07.8	+0.8
HYT	Haines Junctio	7.49	78		Pn	15 36 08.5	+0.9
BM03	Burnt Mountain	8.16	22		Pn	15 36 16.1	-0.5
TOLK	Toolik Lake Re	8.69	7	P	Pn	15 36 25.2	+1.5
	baz=190						
TOLK	Toolik Lake Re	8.69	7	Pn	Pn	15 36 25.3	+1.6
WHY	Whitehorse	8.78	79		Pn	15 36 25.4	+0.3
DLBC	Dease Lake	11.64	88	Pn	Pn	15 37 05.6	+2.0

ANF ***05*** *15:35:48.5±0.4, 41°.80N×119°.63W, h0^{km}, ML3.6/16, Error ellipse: s-maj=3.0km s-min=1.9km az=101.0*

NEIC ***05*** *15:35:49.6±1.9, 41°.83N±0°.03×119°.58W±0°.04, h4^{km}±7^{km}, Error ellipse: s-maj=4.3km s-min=3.4km az=148.0*

REN ***05*** *15:35:50.2±1.8, 41°.89N±0°.03×119°.64W±0°.02, h10^{km}±6^{km}, ML3.7/7, ML3.5/40(SEA), ML3.4/65(NEIC), Mwr3.6/25(SLM), Error ellipse: s-maj=4.6km s-min=1.8km az=156.0*

SEA ***05*** *15:35:50.4±2.1, 41°.81N±0°.03×119°.61W±0°.04, h0^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=3.4km az=151.0*

NEIC ***05*** *15:35:50.2, 41°.88N×119°.64W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.46; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$1.74; $M_{r\theta}$-0.94; $M_{\theta\phi}$2.33; $M_{\phi r}$1.83; Fault plane solution: $M_0$3.51000×10^{14} NP1:ϕ_s70.00000°, δ50.00000°, λ-25.00000°. NP2:ϕ_s177.00000°, δ71.00000°, λ-137.00000°. Principal axes: T 3.5045, Plg13.0000°, Azm299.0000°; N -0.0002, Plg44.0000°, Azm196.0000°; P -3.5043, Plg43.0000°, Azm41.0000°;*

ISC 05 15:35:49.6±1.3**, 41°.85N**±0°.03×**119°.61W**±0°.02**, h2**^{km}±11^{km}**, n82,** σ**1^{s}09**/99**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.52	276		Pg	15 36 00.0	+0.5
MOD					Sg	15 36 07.3	+1.1
MOD	Modoc Plateau	0.52	276	IAML		15 36 07.6	
	comp=N,7μm,0.5s						
MOD				IAML		15 36 07.7	
	comp=E,11μm,0.6s						

LKVW	Lakeview	0.67	304		Pg	15 36 02.4	-0.1
LKVW					Sg	15 36 11.6	+0.5
WVOR	Wild Horse Val	0.93	51		Pg	15 36 07.6	+0.1
WVOR					Sn	15 36 23.4	-0.5
WVOR	Wild Horse Val	0.93	51	IAML		15 36 24.3	
	comp=E,2µm,0.8s						
K05A	Summer Lake	1.29	313		Pg	15 36 13.8	-0.5
K05A					Sn	15 36 32.9	0.0
K05A	Summer Lake	1.29	313	IAML		15 36 36.4	
	comp=E,555nm,1.1s						
K05A				IAML		15 36 42.9	
	comp=N,667nm,0.7s						
LASM	Arnica Sink	1.49	261		Pn	15 36 16.9	-0.7
LASM					Sn	15 36 37.9	+0.2
LTIM	Timbered Crate	1.56	245		Pn	15 36 18.2	-0.3
HOG	Hogback Mounta	1.61	285		Pn	15 36 18.6	-0.6
HOG					Sg	15 36 42.1	+0.9
LBCM	Butte Creek Ri	1.65	233		Pn	15 36 19.5	-0.2
M04C	Macdoel	1.66	268	P	Pn	15 36 18.8	-1.1
	baz=86,SNR=211						
M04C				Sb	Sg	15 36 43.2	+0.2
	baz=86						
M04C	Macdoel	1.66	268		Pn	15 36 19.1	-0.7
M04C					Sg	15 36 43.6	+0.5
K04D	Chiloquin, OR	1.77	297	P	Pn	15 36 20.2	-1.1
	baz=115,SNR=65						
K04D				Sb	Sg	15 36 46.6	+0.3
	baz=115						
K04D	Chiloquin, OR	1.77	297		Pn	15 36 20.9	-0.4
J05D	Fort Rock, OR	1.87	321	Pb	Pn	15 36 23.8	+1.0
	baz=140,SNR=344						
J05D				Sb	Sg	15 36 49.9	+0.2
	baz=140						
J05D	Fort Rock, OR	1.87	321		Pn	15 36 23.9	+1.2
LHEM	Herd Peak	1.96	264		Pb	15 36 25.7	-0.5
LHEM					Sg	15 36 53.7	+1.1
LGBM	Gray Butte	2.00	256		Pn	15 36 24.7	+0.1
L04D	Klamath Falls	2.04	281	P	Pn	15 36 23.8	-1.2
	baz=99,SNR=261						
L04D				Sb	Sb	15 36 54.2	+0.9
	baz=99						
L04D	Klamath Falls	2.04	281		Pn	15 36 23.9	-1.1
BEKR	Beckworth	2.06	196		Pn	15 36 25.8	+0.4
BEKR				IAML		15 36 57.2	
	comp=E,393nm,0.4s						
BEKR				IAML		15 36 57.6	
	comp=N,275nm,0.3s						
TMBU	Tom Butte, New	2.08	328		Pb	15 36 28.1	-0.1
PAHR	Pah Rah Range	2.15	175		Pb	15 36 30.2	+0.9
PAHR				IAML		15 37 00.7	
	comp=N,257nm,0.5s						
PAHR				IAML		15 37 00.8	
	comp=E,227nm,0.2s						
SVIC	Surveyors Ice	2.16	327		Pb	15 36 29.2	-0.4
SVIC					Lg	15 36 58.9	
PINE	Pine Mountain	2.17	334	Pn	Pn	15 36 25.9	-1.1
PINE				IAML		15 36 59.3	
	comp=E,208nm,0.7s						
PINE				IAML		15 37 07.7	
	comp=N,193nm,0.7s						
I07A	Izee	2.23	2	Pn	Pn	15 36 27.7	0.0
I07A				IAML		15 37 10.4	
	comp=E,200nm,1.5s						
O03E	Paynes Creek	2.27	228	P	Pn	15 36 27.7	-0.4
	baz=45,SNR=196						
O03E				Sb	Sb	15 36 59.7	0.0
	baz=45						
J04D	Umpqua Nationa	2.31	308	Pb	Pb	15 36 31.3	-0.8
	baz=126,SNR=35						
J04D	Umpqua Nationa	2.31	308		Pb	15 36 31.5	-0.6
YBH	Yreka Blue Hor	2.32	268		Pn	15 36 27.6	-1.2
YBH				IAML		15 37 03.9	
	comp=N,189nm,0.7s						
M02C	Callahan	2.47	260	P	Pn	15 36 29.6	-1.3
	baz=77,SNR=43						
M02C				Sb	Sb	15 37 06.4	+0.7
	baz=77						
N02D	Trinity Center	2.48	250	P	Pn	15 36 29.8	-1.3
	baz=67,SNR=9.6						
N02D				Sg	Sg	15 37 09.1	-0.2
	baz=67						
N02D	Trinity Center	2.48	250		Pb	15 36 33.8	-1.1
WDC	Whiskeytown Da	2.54	241		Pn	15 36 30.9	-0.9
WDC				IAML		15 37 09.2	
	comp=N,189nm,0.5s						
HUMO	Hull Mountain	2.60	288		Pn	15 36 30.9	-1.6
HUMO				IAML		15 37 11.6	
	comp=N,122nm,0.5s						
ORV	Oroville	2.70	213	Pn	Pn	15 36 33.9	-0.1
PNTR	Pine Nut	2.76	180	Pn	Pn	15 36 34.6	-0.3
I05D	Terrebonne, OR	2.79	334	P	Pn	15 36 34.4	-0.9
	baz=153,SNR=20						
I05D				Sb	Sb	15 37 17.1	+2.3
	baz=153						
RUBR	Rubicon Trail	2.82	189	Pn	Pn	15 36 35.9	0.0
RUBR				IAML		15 37 21.9	
	comp=E,181nm,0.5s						
RUBR				IAML		15 37 22.8	
	comp=N,186nm,0.5s						
I04A	Tendick Farm,	2.83	314	Pb	Pb	15 36 40.5	-0.4
	baz=132						
O02D	Mt. Diablo Mer	2.92	236	Pb	Pb	15 36 40.9	-1.6
	baz=53						
O02D				Sb	Sb	15 37 20.2	+1.5
	baz=53						
L02E	Cave Junction	2.99	277	P	Pn	15 36 37.4	-0.5
	baz=94,SNR=24						
L02E				Sb	Sb	15 37 21.3	+0.9
	baz=94						
K02D	Willamette Mer	3.12	287	P	Pn	15 36 39.6	-0.3
	baz=104,SNR=151						
K02D				Sb	Sb	15 37 26.1	+1.6
	baz=104						
K02D	Willamette Mer	3.12	287		Pn	15 36 41.4	+1.5
MFID	Camas Ranch	3.20	59	Pn	Pn	15 36 39.3	-1.8
KRMB	Red Mountain	3.23	266	Pn	Pn	15 36 41.3	-0.2
KRMB				IAML		15 37 39.8	
	comp=N,77nm,2.0s						
KHMM	Horse Mountain	3.25	254	Pn	Pn	15 36 41.5	-0.2
KHMM				IAML		15 37 39.3	
	comp=E,67nm,1.2s						
KHMM				IAML		15 37 43.1	
	comp=N,116nm,1.4s						
I03D	Drain, OR	3.31	305	Pb	Pb	15 36 47.6	-1.4
	baz=122						
RYN	Ryan	3.32	165	Pn	Pn	15 36 43.6	+0.9
RYN				IAML		15 37 39.9	
	comp=N,121nm,0.6s						
BMO	Blue Mountains	3.44	28	Pn	Pn	15 36 44.4	+0.1
KBO	Bosley Butte	3.46	278	Pn	Pn	15 36 44.1	-0.3
ELK	Elko	3.48	107	Pn	Pn	15 36 44.0	-0.9
ELK				IAML		15 37 44.6	
	comp=N,84nm,0.3s						
ELK				IAML		15 37 46.2	
	comp=N,53nm,0.4s						
JCC	Jacoby Creek,	3.48	254	Pn	Pn	15 36 44.4	-0.3
KMRM	Mail Ridge	3.50	244	Pn	Pn	15 36 45.1	+0.1
H04D	Lebanon	3.52	321	Pb	Pb	15 36 52.1	-0.4
	baz=138						
G05D	Wamic, OR	3.61	341	Sb	Sb	15 37 42.3	+3.9
	baz=160						
KEBM	Edson Butte	3.64	288	Pn	Pn	15 36 47.1	0.0
KEBM				IAML		15 37 54.7	
	comp=N,99nm,2.5s						
KEBM				IAML		15 37 56.0	
	comp=E,91nm,0.9s						
LHV	Little Huntoon	3.69	166		Pn	15 36 47.6	0.0
KCPM	Cahto Peak	3.71	236	Pn	Pn	15 36 46.6	-1.3
KCPM				IAML		15 38 07.9	
	comp=E,60nm,1.5s						
CMB	Columbia Colle	3.85	189	Pn	Pn	15 36 50.1	+0.2
CMB				IAML		15 37 53.5	
	comp=E,46nm,0.7s						
LNOR	Lincton Mounta	4.13	13		Pn	15 36 54.9	+1.1
LNOR					Pb	15 37 00.2	-2.9
TPH	Tonopah	4.19	153	Pn	Pn	15 36 54.2	-0.5
HLID	Hailey	4.20	64	Sb	Sb	15 37 58.4	+3.0
	baz=248						
HLID	Hailey	4.20	64	Pn	Pn	15 36 54.1	-0.7
HLID				IAML		15 38 04.8	
	comp=E,60nm,1.1s						
HLID				IAML		15 38 10.0	
	comp=E,42nm,0.9s						
OMMB	Old Mammoth Mi	4.26	173	Pn	Pn	15 36 54.4	-1.3
R11A	Troy Canyon, C	4.66	137		Pn	15 37 01.2	+0.1
R11A				IAML		15 38 22.1	
	comp=E,34nm,0.8s						
R11A				IAML		15 38 22.3	
	comp=N,28nm,0.6s						
BGU	Big Grassy Mou	5.04	98		Pn	15 37 05.5	-0.8
HVU	Hansel Valley	5.11	88		Pn	15 37 07.4	+0.1
BCYI	Bear Canyon	5.17	59	Pn	Pn	15 37 07.4	-0.8
SPUT	South Promonto	5.40	93		Pn	15 37 10.5	-0.8
DUG	Dugway, Tooele	5.40	106		Pn	15 37 10.5	-0.8
SMW	South Mountain	6.08	335		Pb	15 37 33.1	-3.2
TCRU	Three Creeks R	6.37	118		Pn	15 37 23.4	-1.2
MSO	Missoula	6.43	37		Pn	15 37 23.7	-1.6
CCUT	Cedar City	6.45	130	Pn	Pn	15 37 25.2	-0.6
MSU	Marysvale	6.60	118	Pn	Pn	15 37 27.9	+0.1
OSD	Olympics--Snow	6.64	335		Pn	15 37 28.2	-0.1
MTPU	Mount Pierson	6.86	121	Pn	Pn	15 37 30.4	-1.0
TMUT	Trail Mountain	6.89	109		Pn	15 37 30.9	-0.9
KNB	Kanab	7.13	130	Pn	Pn	15 37 34.9	-0.2
HRY	Holter Researc	7.40	46	Pn	Pn	15 37 36.9	-1.8

*IDC **05** 15:39:25.5±2.4, 24°.28N×93°.65E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/46, mbtmp3.5/4, MS4.0/1, Ms1 4.0/1, ms1mx3.3/28, Error ellipse: s-maj=98.8km s-min=25.6km az=70.0*

*NEIC **05** 15:39:33.2±1.7, 24°.3N±0°.2×93°.7E±0°.2, h62^{km}±6^{km}, mb4.2/6, Error ellipse: s-maj=32.9km s-min=15.0km az=55.0*

ISC 05 15:39:31.7±1.0**, 24°.2N**±0°.2×**93°.7E**±0°.2**, h50**^{km}**, n13, σ1^{s}44**/12**, mb3.7**/6**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	2.19	310	Pn	Pn	15 40 05.8	+0.1
LSA	Lhasa	5.99	338	Pn	Pn	15 40 58.9	+0.8
MKAR	Makanchi Array	24.39	341	P	P	15 44 43.8	-1.4
	0.2nm,0.5s,baz=150,slow=12,SNR=2.7						
SONM	Songino Array	25.69	20	P	P	15 44 56.8	-0.3
	0.4nm,0.5s,baz=197,slow=11,SNR=3.9						
ABKAR	Akbulak array	36.41	322	P	P	15 46 31.5	+0.2
ABKAR				IAmb	IAmb	15 46 41.3	
	comp=Z,1.3nm,1.0s						
ASAJ	Asahikawa	44.35	51	LR	LR	16 09 33.0	
	comp=Z,162nm,18.7s,baz=170,slow=41						
SOEI	Soe	45.00	135	P	P	15 47 40.7	-1.9
WB0	Warramunga Arr	58.95	134	P	P	15 49 27.1	+1.0
WRA	Warramunga Arr	59.04	134	P	P	15 49 28.3	+1.5
	comp=Z,0.9nm,0.5s,baz=324,slow=7.5,SNR=10						
WRAB	Tennant Creek	59.04	134	P	P	15 49 28.4	+1.6
WB2	Warramunga Arr	59.05	134	P	P	15 49 27.9	+1.0
WB2				IAmb	IAmb	15 49 28.9	
	comp=Z,3.2nm,0.8s						
WR0	Warramunga Arr	59.18	134	P	P	15 49 29.2	+1.4
ASAR	Alice Springs	61.47	138	P	P	15 49 45.2	+1.8
	comp=Z,0.3nm,0.6s,baz=315,slow=6.2,SNR=5.7						

*NEIC **05** 15:46:00.9±1.2, 51°.77N±0°.09×178°.36E±0°.08, h99^{km}±5^{km}, mb4.0/14, ML3.1/23(AEIC), Error ellipse: s-maj=14.1km s-min=6.1km az=194.0*

*AEIC **05** 15:46:02.4±1.2, 51°.8N±0°.1×178°.46E±0°.08, h97^{km}±4^{km}, Error ellipse: s-maj=15.0km s-min=7.0km az=183.0*

*IDC **05** 15:46:04.2±6.4, 52°.03N×178°.53E, h128^{km}±60^{km}, mb3.1/3, mb1 3.4/5, mb1mx3.0/42, mbtmp3.7/5, Error ellipse: s-maj=49.6km s-min=33.0km az=167.0*

ISC 05 15:46:01.5±0.8**, 51°.8N**±0°.1×**178°.44E**±0°.05**, h99**^{km}±7^{km}**, n42, σ0^{s}79**/46**, mb3.5**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSSA	Little Sitkin	0.16	16		Pn	15 46 15.0	-0.5
LSPA	Little Sitkin	0.18	27		Pn	15 46 15.2	-0.4
LSPA					Sn	15 46 27.1	+1.1
LSNW	Little Sitkin	0.18	15		Pn	15 46 14.9	-0.6
CETU	Semis' Tuman	0.67	75		Pn	15 46 18.8	+0.2
AMKA	Amchitka	0.68	128		Pn	15 46 18.4	-0.3
AMKA					Sn	15 46 31.0	-0.5
CESW	Semis' Southwe	0.70	81		Pn	15 46 18.8	-0.1
CESW					Sn	15 46 31.1	-0.7
CEAP	Semis' Anvil P	0.73	73		Pn	15 46 19.1	-0.1
CERAA	Semis' Rag'd T	0.78	82		Pn	15 46 20.0	+0.4
CERAA					Sn	15 46 34.6	+1.5
TASE	Tanaga Southea	2.19	88		Pn	15 46 36.5	0.0
TAFP	Tanaga Falls P	2.22	86		Pn	15 46 36.6	-0.2
TAFP					Sn	15 47 03.9	0.0
TAPA	Tanaga Point A	2.32	88		Pn	15 46 38.2	0.0
KIMD	Kanaga Island	2.68	89		Pn	15 46 43.3	+0.4
KIKV	Kanaga Island	2.72	87		Pn	15 46 43.6	+0.1
SMY	Shemya	2.83	291		Pn	15 46 44.0	-0.8
ADK	Adak	3.02	86		Pn	15 46 47.3	-0.2
ADAG	Mount Adagdak	3.08	85		Pn	15 46 47.9	-0.3
GSTD	Great Sitkin T	3.36	83		Pn	15 46 51.6	-0.4
GSMY	Great Sitkin M	3.41	84		Pn	15 46 52.6	-0.1
ATKA	Atka Island	4.57	82	Pn	Pn	15 47 08.1	-0.1
AKUT	Akutan	9.81	70	Pn	Pn	15 48 19.8	+0.4
PETK	Petropavlovsk-	12.72	284	P	Pn	15 49 00.3	+1.8
	0.2nm,0.3s,baz=99,slow=19,SNR=7.5						
PETK				S	Sn	15 51 10.1	-8.1
	0.1nm,0.3s,baz=316,slow=10,SNR=1.7						
SDPT	Sand Point	13.01	66	Pn	Pn	15 49 00.6	-1.7
CNBA	Chernabura Isl	13.46	68	Pn	Pn	15 49 07.1	-1.2
CHGN	Chignik	14.29	63	Pn	Pn	15 49 17.8	-1.2
KDAK	Kodiak Island	17.66	59	P	P	15 49 59.1	-1.2
	0.5nm,0.3s,baz=213,slow=1.7,SNR=28						
KDAK	Kodiak Island	17.66	59	IAmb	IAmb	15 50 04.9	
	comp=Z,42nm,1.4s						
CNPM	China Poot	18.63	54	P	P	15 50 11.1	0.0
BRLK	Bradley Lake	18.85	53	P	P	15 50 12.8	-0.7
BRLK				IAmb	IAmb	15 50 41.3	
	comp=Z,24nm,1.4s						
PPLA	Purkeypile	19.15	43	P	P	15 50 16.4	-0.4
PPLA				IAmb	IAmb	15 50 23.5	
	comp=Z,5.9nm,1.2s						
SUA	Susitna One	19.33	48		P	15 50 19.6	+0.8
SUA				IAmb	IAmb	15 50 34.1	
	comp=Z,10.0nm,1.3s						
SEW	Seward	19.63	52	P	P	15 50 21.1	-0.7
SEW				IAmb	IAmb	15 50 26.0	
	comp=Z,22nm,1.4s						
GHO	Glory Hole Cre	20.25	48	P	P	15 50 29.8	+1.2
GHO				IAmb	IAmb	15 50 56.1	
	comp=Z,6.9nm,1.1s						
SCM	Sheep Creek Mo	21.00	48	P	P	15 50 36.7	0.0
SCM				IAmb	IAmb	15 50 37.6	
	comp=Z,12nm,1.2s						
MDM	Murphy Dome	21.55	40	P	P	15 50 43.5	+1.1
KLU	Klutina	21.59	49	P	P	15 50 43.8	+0.8
KLU				IAmb	IAmb	15 51 01.7	
	comp=Z,6.6nm,1.4s						
M24K	Tolsona, Glenn	21.59	48	P	P	15 50 43.7	+0.8
M24K				IAmb	IAmb	15 51 05.4	
	comp=Z,14nm,1.3s						
GLB	Gilahina Butte	22.58	50	P	P	15 50 54.2	+0.9
TOLK	Toolik Lake Re	22.74	30	P	P	15 50 55.9	+1.0
HYT	Haines Junctio	25.58	52	P	P	15 51 21.5	+0.4
MKAR	Makanchi Array	58.41	307	P	P	15 55 45.4	-1.0
	comp=Z,0.1nm,0.3s,baz=51,slow=6.7,SNR=4.2						
WRA	Warramunga Arr	81.16	222	P	P	15 58 06.0	+0.1
	comp=Z,0.3nm,0.8s,baz=32,slow=6.0,SNR=1.8						
ASAR	Alice Springs	84.67	220	P	P	15 58 24.7	+0.7
	comp=Z,0.4nm,0.7s,baz=23,slow=5.8,SNR=5.0						

*IDC **05** 15:58:20.9±2.3, 17°.60S×178°.46W, h553^{km}±20^{km}, mb3.1/7, mb1 3.4/8, mb1mx3.1/29, mbtmp3.9/8, Error ellipse: s-maj=71.9km s-min=16.9km az=145.0*

*NEIC **05** 15:58:21.6±1.2, 17°.5S±0°.3×178°.6W±0°.2, h554^{km}±13^{km}, mb4.3/9, Error ellipse: s-maj=46.3km s-min=22.4km az=150.0*

ISC 05 15:58:20.2±1.5**, 17°.6S**±0°.4×**178°.5W**±0°.3**, h547**^{km}**, n21, σ1^{s}10**/20**, mb3.9**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.33	267	P	P	15 59 38.5	+1.3
	1.4nm,0.3s,baz=134,slow=9.6,SNR=9.3						
MSVF	Nonsavu	3.33	267	P	P	15 59 38.2	+0.9
DZM	Mont Dzumac	14.88	250	P	P	16 01 25.7	-2.9
	0.2nm,0.3s,baz=244,slow=20,SNR=3.5						
COEN	Coen	37.05	270	P	P	16 04 45.5	+1.1
COEN				IAmb	IAmb	16 05 13.5	
	comp=Z,11nm,1.3s						
STKA	Stephens Creek	38.73	241	P	P	16 04 57.2	-0.7
	baz=80,slow=9.5,SNR=7.2						
STKA	Stephens Creek	38.73	241	P	P	16 04 59.4	+1.6
BBOO	Buckleboo	43.51	241	P	P	16 05 36.9	+1.2
BBOO				IAmb	IAmb	16 05 59.0	
	comp=Z,21nm,1.4s						
WR0	Warramunga Arr	44.45	259	P	P	16 05 42.9	-0.3
WR0				IAmb	IAmb	16 05 51.5	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	44.60	259	P	P	16 05 44.0	-0.4
WB0				IAmb	IAmb	16 05 53.6	
	comp=Z,6.9nm,1.2s						
WB2	Warramunga Arr	44.62	259	P	P	16 05 44.5	-0.1
WB2				IAmb	IAmb	16 06 00.3	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	44.63	259	P	P	16 05 44.7	0.0
	comp=Z,0.7nm,0.6s,baz=96,slow=6.7,SNR=25						
AS31	Alice Springs	44.82	254	P	P	16 05 46.9	+0.8
ASAR	Alice Springs	44.82	254	P	P	16 05 46.9	+0.8
	comp=Z,7.2nm,0.5s,baz=89,slow=7.7,SNR=260						
FORT	Forrest	50.09	244	P	P	16 06 25.8	+0.4
JEM	Erimo	69.11	330	P	P	16 08 42.6	+11
NVAR	Mina Array Bea	79.24	44	P	P	16 09 30.2	+0.8
	comp=Z,0.7nm,0.7s,baz=223,slow=7.7,SNR=6.8						
SEY	Seymchan	83.47	347	P	P	16 09 50.2	+0.1
	comp=Z,1.3nm,0.5s,baz=170,slow=6.1,SNR=7.8						
ILAR	Eielson Array	85.61	13	P	P	16 09 59.4	-1.2
	comp=Z,0.4nm,0.4s,baz=227,slow=5.3,SNR=12						
PDAR	Pinedale Array	87.17	43	P	P	16 10 08.3	-0.5
	comp=Z,0.3nm,0.5s,baz=216,slow=2.9,SNR=2.3						
YKA	Yellowknife Ar	94.08	25	P	P	16 10 39.7	-0.2
	comp=Z,0.2nm,0.8s,baz=265,slow=4.3,SNR=4.0						
GERES	GERESS Array B	147.31	345	PKPbc	PKPbc	16 17 02.8	+0.2
	comp=Z,1.0nm,1.0s,baz=285,slow=2.6,SNR=4.5						

*AEIC **05** 16:06:18.9±2.0, 52°.0N±0°.1×179°.75W±0°.07, h192^{km}±4^{km}, Error ellipse: s-maj=15.5km s-min=5.8km az=177.0*

*NEIC **05** 16:06:18.9±1.2, 52°.0N±0°.1×179°.76W±0°.07, h186^{km}±5^{km}, mb4.1/76, ML3.5/33(AEIC), Error ellipse: s-maj=15.7km s-min=6.4km az=177.0*

*IDC **05** 16:06:21.3±2.9, 52°.35N×179°.95W, h199^{km}±27^{km}, mb3.1/8, mb1 3.4/10, mb1mx3.2/34, mbtmp3.7/10, Error ellipse: s-maj=27.2km s-min=12.3km az=165.0*

ISC 05 16:06:18.6±0.6**, 52°.1N**±0°.1×**179°.80W**±0°.04**, h183**^{km}±5^{km}**, n116, σ1^{s}12**/125**, mb4.0**/32**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CERAA	Semis' Rag'd T	0.36	242		Pn	16 06 43.2	-0.1
CEAP	Semis' Anvil P	0.39	260		Pn	16 06 43.5	+0.1
CEAP					Sn	16 07 04.0	+1.5
CESW	Semis' Southwe	0.43	246		Pn	16 06 43.3	-0.2
GALAA	Gareloi Lava P	0.71	116		Pn	16 06 45.3	+0.5
GAEA	Gareloi East	0.71	114		Pn	16 06 45.3	+0.5
GAEA					Sn	16 07 05.6	+0.6
AMKA	Amchitka	0.90	219		Pn	16 06 46.2	+0.3
AMKA					Sn	16 07 05.6	-1.3
LSPA	Little Sitkin	1.01	264		Pn	16 06 47.5	+0.7
LSPA					Sn	16 07 10.1	+1.7
LSNW	Little Sitkin	1.05	265		Pn	16 06 47.3	+0.3
LSSA	Little Sitkin	1.05	264		Pn	16 06 47.7	+0.7
TASE	Tanaga Southea	1.12	102		Pn	16 06 47.5	0.0
TAFP	Tanaga Falls P	1.14	98		Pn	16 06 47.5	-0.2
TAFP					Sn	16 07 09.6	-0.5
KICM	Kanaga Island	1.62	95		Pn	16 06 52.3	+0.4
KIMD	Kanaga Island	1.62	100		Pn	16 06 51.7	-0.2
KIKV	Kanaga Island	1.64	96		Pn	16 06 52.0	-0.1
KINC	Kanaga Island	1.66	94		Pn	16 06 52.3	0.0
KIRH	Kanaga Island	1.68	95		Pn	16 06 52.5	-0.1
ADK	Adak	1.94	94		Pn	16 06 54.8	-0.4
ADK	Adak	1.94	94		Sn	16 07 22.9	-0.7
ADAG	Mount Adagdak	1.98	92		Pn	16 06 55.5	-0.1
GSTD	Great Sitkin T	2.25	89		Pn	16 06 58.2	-0.6
GSTD					Sn	16 07 29.5	-0.4
GSTR	Great Sitkin T	2.31	88		Pn	16 06 59.2	-0.1
GSMY	Great Sitkin M	2.31	89		Pn	16 06 59.2	-0.1
KOKL	Mount Kliuchef	3.45	84		Pn	16 07 13.0	0.0
ATKA	Atka Island	3.45	86		Pn	16 07 12.7	-0.2
ATKA					Sn	16 07 53.9	-1.5
KOFP	Korovin Flat P	3.52	84		Pn	16 07 14.2	+0.5
SMY	Shemya	3.79	282		Pn	16 07 17.9	+0.7
SDPT	Sand Point	11.90	66	Pn	Pn	16 09 02.5	+0.1
PEA0B	Petropavlovsk-	13.71	283	Pn	Pn	16 09 25.3	-0.1
PETK	Petropavlovsk-	13.71	283	P	Pn	16 09 25.2	-0.2
	0.3nm,0.3s,baz=84,slow=15,SNR=2.4						
PETK				S	Sn	16 11 51.6	-6.3
	0.1nm,0.3s,baz=99,slow=22,SNR=1.2						
OHAK	Old Harbor	16.13	61	P	P	16 09 52.9	-1.8
KDAK	Kodiak Island	16.58	59	P	P	16 09 58.4	-1.3
	0.8nm,0.3s,baz=284,slow=2.1,SNR=19						
KDAK				S	S	16 12 51.6	-11
	0.1nm,0.3s,baz=155,slow=20,SNR=1.1						
KDAK	Kodiak Island	16.58	59	P	P	16 09 57.7	-2.0
TTA	Tatalina	16.66	40	P	P	16 10 01.3	+0.7
CNPM	China Poot	17.59	54	P	P	16 10 10.9	+0.1
BRLK	Bradley Lake	17.82	53	P	P	16 10 13.3	0.0
RDOG	Red Dog Mine	17.99	21	P	P	16 10 16.6	+1.5
SKT	Skwentna	18.15	46	Pn	Pn	16 10 19.2	+0.2
SKT				IAmb	IAmb	16 10 22.9	
	comp=Z,9.5nm,1.2s						
PPLA	Purkeypile	18.21	43	Pn	Pn	16 10 20.4	+0.7
PPLA				IAmb	IAmb	16 10 44.2	
	comp=Z,14nm,1.4s						
SEY	Seymchan	18.31	317	P	P	16 10 18.8	+0.3
	comp=Z,0.1nm,0.3s,baz=97,slow=16,SNR=6.3						
SUA	Susitna One	18.33	48	P	P	16 10 20.2	+1.3
SUA				IAmb	IAmb	16 10 28.5	
	comp=Z,9.5nm,1.3s						
SEW	Seward	18.60	53	P	P	16 10 21.3	-0.4
KTH	Kantishna Hill	19.00	42	P	P	16 10 26.9	+0.8
KTH				IAmb	IAmb	16 10 31.5	
	comp=Z,8.1nm,0.9s						
TRF	Thorofare Moun	19.22	42	P	P	16 10 29.1	+0.5
GHO	Glory Hole Cre	19.26	48	P	P	16 10 29.6	+0.7
GHO				IAmb	IAmb	16 10 33.4	
	comp=Z,5.7nm,0.8s						
KNK	Knik Glacier	19.38	49	P	P	16 10 30.6	+0.4
KNK				IAmb	IAmb	16 10 58.1	
	comp=Z,8.1nm,1.2s						
SML	Sawmill	19.54	48	P	P	16 10 32.3	+0.4
SML				IAmb	IAmb	16 10 39.7	
	comp=Z,8.4nm,1.0s						
RND	Reindeer	19.80	43	P	P	16 10 35.5	+0.7
GLI	Glacier Island	19.90	51	P	P	16 10 36.2	+0.5
SCM	Sheep Creek Mo	20.00	48	P	P	16 10 37.1	+0.2
HIN	Hinchinbrook I	20.10	52	P	P	16 10 38.0	+0.1
FID	Port Fidalgo	20.17	51	P	P	16 10 38.0	-0.7
I23K	Minto, Yukon-K	20.29	38	P	P	16 10 41.0	+1.2
I23K				IAmb	IAmb	16 10 42.0	
	comp=Z,9.1nm,1.1s						
EYAK	Cordova Ski Ar	20.49	52	P	P	16 10 42.9	+0.9
EYAK				IAmb	IAmb	16 10 45.1	
	comp=Z,13nm,1.2s						
WRH	Wood River Hil	20.51	41	P	P	16 10 43.3	+1.2
KLU	Klutina	20.58	50	P	P	16 10 43.7	+0.7
KLU				IAmb	IAmb	16 10 49.6	
	comp=Z,4.0nm,0.6s						
M24K	Tolsona, Glenn	20.60	48	P	P	16 10 44.4	+1.1
M24K				IAmb	IAmb	16 10 54.3	
	comp=Z,13nm,1.1s						
MDM	Murphy Dome	20.64	39	P	P	16 10 44.1	+0.5
MDM				IAmb	IAmb	16 10 46.1	
	comp=Z,2.9nm,0.7s						
CCB	Clear Creek Bu	20.69	40	P	P	16 10 44.8	+0.7
HDA	Harding Lake	20.95	41	P	P	16 10 49.2	+2.4
COLD	Coldfoot	20.99	32	P	P	16 10 48.9	+1.6
RAGM	Ragged Mountai	20.99	53	P	P	16 10 49.5	+2.0
POKR	Poker Plat Res	21.02	39	P	P	16 10 48.0	+0.5
IL31		21.10	40	P	P	16 10 49.2	+0.8
IL31				IAmb	IAmb	16 11 01.5	
	comp=Z,7.0nm,1.5s						
ILAR	Eielson Array	21.10	40	P	P	16 10 47.9	-0.6
	comp=Z,0.2nm,0.5s,baz=240,slow=8.0,SNR=12						
PAX	Paxson	21.13	46	P	P	16 10 49.7	+0.8
N25K	Chitina, Valde	21.22	50	P	P	16 10 50.2	+0.3
N25K				IAmb	IAmb	16 11 18.2	
	comp=Z,13nm,1.5s						
GLB	Gilahina Butte	21.57	50	P	P	16 10 54.0	+0.5
GLB				IAmb	IAmb	16 11 21.6	
	comp=Z,5.5nm,1.2s						
RIDG	Independent Ri	21.61	44	P	P	16 10 55.3	+1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIDG				IAmb	IAmb	16 11 19.7	
	comp=Z,4.9nm,0.9s						
VRDI	Verde Repeater	21.70	51	P	P	16 10 55.4	+0.3
VRDI				IAmb	IAmb	16 10 55.8	
	comp=Z,7.7nm,1.2s						
CRQM	Cirque	21.79	52	P	P	16 10 57.0	+1.1
DOT	Dot Lake	21.92	44	P	P	16 10 57.1	0.0
DOT				IAmb	IAmb	16 11 26.0	
	comp=Z,9.8nm,0.9s						
A21K	Barrow	21.93	20	P	P	16 10 57.0	+0.1
MCARA	McCarthy VSAT	21.93	51	P	P	16 10 57.0	-0.1
MCARA				IAmb	IAmb	16 11 12.3	
	comp=Z,9.6nm,1.3s						
TGL	Tana Glacier	21.94	52	P	P	16 10 57.6	+0.3
TGL				IAmb	IAmb	16 11 05.7	
	comp=Z,6.5nm,0.9s						
TOLK	Toolik Lake Re	21.95	30	P	P	16 10 57.5	+0.1
ISLE	Juniper Island	22.17	53	P	P	16 10 59.7	+0.2
BALM	Baldy	22.21	52	P	P	16 10 59.9	-0.1
BALM				IAmb	IAmb	16 11 17.1	
	comp=Z,9.6nm,1.3s						
YAH	Yahtse	22.44	53	P	P	16 11 02.8	+0.6
YAH				IAmb	IAmb	16 11 22.2	
	comp=Z,14nm,1.3s						
BARN	Barnard Glacie	22.54	52	P	P	16 11 03.8	+0.6
BARN				IAmb	IAmb	16 11 04.2	
	comp=Z,4.0nm,0.6s						
CTGM	Chitina Glacie	22.69	52	P	P	16 11 05.1	+0.7
CTGM				IAmb	IAmb	16 11 25.4	
	comp=Z,7.7nm,1.1s						
TABL	Table Mountain	22.74	53	P	P	16 11 05.5	+0.5
K27K	Chicken	22.87	44	P	P	16 11 06.5	+0.7
K27K				IAmb	IAmb	16 11 08.1	
	comp=Z,2.8nm,0.7s						
PCA	Pinnacle	23.16	54	P	P	16 11 08.9	+0.3
EGAK	Eagle	23.44	42	P	P	16 11 11.5	+0.6
EGAK				IAmb	IAmb	16 11 13.6	
	comp=Z,11nm,1.1s						
BCPM	Bancas Point	23.47	55	P	P	16 11 11.5	+0.2
DAWY	Dawson	24.03	44	P	P	16 11 16.6	+0.2
DAWY				IAmb	IAmb	16 11 21.7	
	comp=Z,3.9nm,1.1s						
HYT	Haines Junctio	24.55	53	P	P	16 11 21.9	+0.6
HYT				IAmb	IAmb	16 11 36.0	
	comp=Z,6.5nm,1.3s						
USRK	Ussuriysk Ar.	32.60	276	P	P	16 12 32.9	+0.3
	comp=Z,0.6nm,0.4s,baz=57,slow=10,SNR=7.6						
HON	Honolulu	35.04	143	P	P	16 12 52.3	-1.5
YKA	Yellowknife Ar	35.20	47	P	P	16 12 55.5	+0.7
	comp=Z,0.8nm,0.5s,baz=281,slow=6.7,SNR=20						
YKA				ScP	ScP	16 18 47.5	-1.8
	comp=Z,0.2nm,0.6s,baz=286,slow=2.6,SNR=4.8						
PNTR	Pine Nut	42.88	83	P	P	16 14 01.4	+2.4
PNTR				IAmb	IAmb	16 14 02.4	
	comp=Z,6.9nm,0.7s						
LRM	Limekiln Ridge	43.23	70	P	P	16 14 04.0	+2.3
WAKR	Walker	43.34	84	P	P	16 14 03.6	+1.0
WAKR				IAmb	IAmb	16 14 05.7	
	comp=Z,2.8nm,0.6s						
RYN	Ryan	43.82	83	P	P	16 14 08.5	+2.1
RYN				IAmb	IAmb	16 14 09.0	
	comp=Z,2.8nm,0.6s						
BOZ	Bozeman (W)	43.83	70	P	P	16 14 06.8	+0.4
LHV	Little Huntoon	44.07	83	P	P	16 14 10.3	+2.2
LHV				IAmb	IAmb	16 14 33.9	
	comp=Z,8.9nm,1.5s						
NVAR	Mina Array Bea	44.08	83	P	P	16 14 10.5	+1.9
	comp=Z,2.3nm,0.6s,baz=299,slow=7.3,SNR=23						
YHL	Hebgen Lake	44.51	71	P	P	16 14 11.5	-0.5
YHB	Horse Butte	44.56	71	P	P	16 14 11.4	-0.9
TPH	Tonopah	44.96	82	P	P	16 14 16.7	+1.2
R11A	Troy Canyon, C	45.79	81	P	P	16 14 23.1	+1.1
TPNV	Topopah Spring	46.28	83	P	P	16 14 27.2	+1.4
TPNV				IAmb	IAmb	16 14 28.8	
	comp=Z,4.5nm,0.8s						
DUG	Dugway, Tooele	46.32	77	P	P	16 14 27.3	+1.3
TCUT	Toone Canyon	46.59	75	P	P	16 14 27.2	-1.1
PD31	Pinedale Array	46.69	72	P	P	16 14 29.0	0.0
PDAR	Pinedale Array	46.69	72	P	P	16 14 29.4	+0.4
	comp=Z,0.8nm,0.5s,baz=333,slow=3.8,SNR=18						
GSC	Goldstone, Bar	47.01	85	P	P	16 14 32.2	+0.8
GSC				IAmb	IAmb	16 14 33.9	
	comp=Z,4.4nm,0.8s						
RDMU	Red Mountain	48.03	75	P	P	16 14 40.5	+1.2
SRU	San Rafael Swe	48.37	77	P	P	16 14 43.1	+1.2
U15A	North Rim	49.03	81	P	P	16 14 48.8	+1.7
PV17	East Wray Mesa	49.84	77	P	P	16 14 53.7	+0.6
PV11	David Mesa, Pa	49.88	76	P	P	16 14 54.2	+0.7
PV11				IAmb	IAmb	16 14 54.7	
	comp=Z,4.1nm,0.5s						
PV03	Paradox Valley	49.93	77	P	P	16 14 54.1	+0.4
PV03				IAmb	IAmb	16 14 54.7	
	comp=Z,2.2nm,0.5s						
MKAR	Makanchi Array	59.12	308	P	P	16 15 58.1	-1.4
	comp=Z,0.1nm,0.5s,baz=56,slow=5.4,SNR=1.6						
WRA	Warramunga Arr	82.09	223	P	P	16 18 19.7	+1.3
	comp=Z,0.6nm,0.7s,baz=33,slow=5.7,SNR=5.5						
ASAR	Alice Springs	85.59	222	P	P	16 18 38.1	+2.1
	comp=Z,0.3nm,0.5s,baz=24,slow=5.3,SNR=18						

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*DDA **05** 16:06:20.3, 37°.76N×27°.01E, h16^{km}±1^{km}, ML2.3*
*ISK **05** 16:06:20.9, 37°.80N×27°.03E, h4^{km}, ML2.5/8*
ISC 05 16:06:21.0±0.9, **37°.80N**±0°.03×**27°.05E**±0°.04, **h16**^{km}±6^{km}, **n19**, σ**0^{s}.76**/29, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.17	124	PG	Pg	16 06 25.3	0.0
GCAM				SG	Sg	16 06 28.6	+0.4
GCAM	G?zelcaml?	0.17	124	*i* P	Pg	16 06 25.0	-0.2
GCAM				*i* S	Sg	16 06 28.7	+0.6
GCAM				IAML		16 06 29.0	
	comp=N,933nm,0.3s						
GCAM				IAML		16 06 29.0	
	comp=E,1µm,0.1s						
DDIM	Aydin, Didim	0.37	156	*i* P	Pg	16 06 28.1	-0.5
DDIM				IAML		16 06 33.0	
	comp=E,476nm,0.3s						
DDIM				IAML		16 06 33.0	
	comp=N,362nm,0.3s						
DDIM				*i* S	Sg	16 06 33.3	-0.4
ZEYE	Izmir, Urla-Ze	0.62	316	*i* P	Pn	16 06 35.3	+0.2
ZEYE				*i* S	Sb	16 06 41.7	-0.2
URLA	Izmir	0.67	327	PG	Pb	16 06 34.2	-0.1
URLA	Izmir	0.67	327	*i* P	Pn	16 06 35.3	-0.5
URLA				*i* S	Sb	16 06 43.6	+0.2
BODT	Bodrum	0.76	164	PG	Pb	16 06 36.1	+0.3
MLSB	Milas	0.76	131	PG	Pb	16 06 36.6	+0.8
BDRM	Kayabasi	0.79	157	*i* P	Pg	16 06 35.9	-0.5
BDRM				IAML		16 06 46.0	
	comp=E,112nm,0.5s						
BDRM				*i* S	Sg	16 06 46.4	-0.5
BDRM				IAML		16 06 49.0	
	comp=N,81nm,0.3s						
KOSK	Kos Island	1.04	183	PG	Pn	16 06 41.6	+0.7
MULA	Mugla, Merkez-	1.14	118	*i* P	Pb	16 06 42.3	-0.1
MULA				IAML		16 06 53.0	
	comp=N,30nm,3.1s						
MULA				*i* S	Sb	16 06 55.6	-1.4
ZEDA	zmir-Bergama	1.17	1	*i* P	Pb	16 06 42.6	-0.2
ZEDA				*i* S	Sn	16 06 59.2	+0.9
YER	Yerkesik	1.18	124	PN	Pg	16 06 44.5	+0.7
AKHS	Akhisar	1.24	29	*i* P	Pg	16 06 44.9	+0.1
TURN	Turunc	1.39	137	PN	Pg	16 06 48.0	+0.2
TURN	Turunc	1.39	137	*i* P	Pg	16 06 49.9	+2.1
TURN				*i* S	Sn	16 07 03.2	-0.5
APE	Apeiranthos	1.41	240	PN	Pg	16 06 47.9	-0.3
TAVA	DENIZLI_Tavas	1.51	102	*i* P	Pn	16 06 46.3	-1.1
TAVA				*i* S	Sn	16 07 08.0	+1.1
TAVA				IAML		16 07 27.0	
	comp=N,22nm,2.9s						
DALY	Dalyan (Mula)	1.61	127	PN	Pg	16 06 51.1	-0.8

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*IDC **05** 16:17:07.3±3.3, 21°.06S×171°.19E, h0^{km}, mb4.0/3, mb1 4.3/3, mb1mx3.8/15, mbtmp4.0/3, Error ellipse: s-maj=230.5km s-min=31.8km az=160.0*
*NEIC **05** 16:17:25.0±0.5, 21°.6S±0°.3×171°.11E±0°.07, h156^{km}±13^{km}, mb4.4/8, Error ellipse: s-maj=38.2km s-min=8.1km az=174.0*
ISC 05 16:17:24.1±1.4, **21°.6S**±0°.2×**171°.2E**±0°.2, **h150**^{km}, **n12**, σ**0^{s}.94**/12, **mb4.2**/7, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.41	263	Pn	Pn	16 18 30.2	+0.5
HIZ	Hauiti	17.14	170		Pn	16 21 14.1	-0.5
WR0	Warramunga Arr	34.23	266	P	P	16 23 55.4	-0.4
WR0				IAmb	IAmb	16 24 03.4	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	34.39	259	P	P	16 23 56.9	-0.2
ASAR	Alice Springs	34.39	259	P	P	16 23 57.3	+0.2
	comp=Z,2.0nm,0.8s,baz=88,slow=9.4,SNR=22						
WB0	Warramunga Arr	34.40	266	P	P	16 23 57.2	0.0
WB0				IAmb	IAmb	16 24 12.6	
	comp=Z,5.7nm,1.1s						
WB2	Warramunga Arr	34.41	266	P	P	16 23 57.2	-0.1
WB2				IAmb	IAmb	16 24 03.4	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	34.42	266	P	P	16 23 57.5	+0.1
	comp=Z,0.6nm,0.3s,baz=97,slow=8.5,SNR=29						
MTN	Manton Dam	39.12	276	P	P	16 24 35.2	-1.9
KNRA	Kununurra	40.52	271	P	P	16 24 47.1	-1.5
FITZ	Fitzroy Crossi	42.85	266	P	P	16 25 08.7	+1.0
FITZ				IAmb	IAmb	16 25 22.6	
	comp=Z,24nm,1.4s						
NVAR	Mina Array Bea	89.03	48	P	P	16 30 02.8	+0.4
	comp=Z,0.7nm,0.7s,baz=226,slow=8.7,SNR=7.1						

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*JMA **05** 16:29:42.9±0.1, 39°.91N×142°.28E, h50^{km}±1^{km}, M3.8*
JMA Felt I J1.
*NIED **05** 16:29:42.9, 39°.91N×142°.28E, h50^{km}, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}1.34; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-0.61; $M_{r\theta}$1.36; $M_{\theta\phi}$1.13; $M_{\phi r}$-1.29; Fault plane solution: $M_0$2.45000×10^{14} NP1: ϕ_s133.00000°, δ70.00000°, λ90.00000°. NP2: ϕ_s313.00000°, δ20.00000°, λ90.00000°.*
*IDC **05** 16:29:46.3±4.3, 39°.93N×142°.12E, h86^{km}±39^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.1/30, mbtmp3.4/5 Error ellipse: s-maj=39.7km s-min=23.3km az=98.0*
ISC 05 16:29:42.4±1.2, **39°.97N**±0°.05×**142°.4E**±0°.1, **h50**^{km}, **n23**, σ**1^{s}.57**/26, **mb3.6**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.40	266	P	Pn	16 29 52.5	0.0
JTH				*e*S	Sn	16 29 59.2	-0.5
JKEN	Kujiedanarisaw	0.57	295	P	Pn	16 29 54.2	-0.3
JKEN				S	Sn	16 30 02.5	-0.7
MIYJ	Miyakonagasawa	0.58	228	P	Pn	16 29 53.9	-0.8
MIYJ				S	Sn	16 30 01.7	-1.8
JANG	Nango	0.78	302	P	Pn	16 29 57.0	-0.2
JANG				*e*S	Sn	16 30 07.4	-0.5
JKZ	Kuzumaki	0.81	272	P	Pn	16 29 57.4	-0.2
JKZ				S	Sn	16 30 07.7	-1.0
JOM	Ohasama	0.97	240	P	Pn	16 29 59.0	-0.8
OFUJ	Ofunato	1.04	212	P	Pn	16 30 00.0	-0.7
OFUJ				S	Sn	16 30 12.3	-1.9
JTM	Tenmabayashi	1.30	310	P	Pn	16 30 04.6	+0.5
JTM				*e*S	Sn	16 30 20.5	+0.2
JMK	Ichinoseki	1.35	222	P	Pn	16 30 04.4	-0.5
JMK				S	Sn	16 30 20.4	-1.4
JAH	Hinai	1.36	280	P	Pn	16 30 05.0	0.0
JRG	Rokugo	1.46	248	P	Pn	16 30 06.4	0.0
MAT	Matsushiro	4.74	225	P	Pn	16 30 52.6	+1.2
MAT				*e*S	Sn	16 31 51.1	+6.1
MJAR	Matsushiro Arr	4.74	225	P	Pn	16 30 53.0	+1.7
	0.3nm,0.3s,baz=30,slow=14,SNR=13						
H11N2	WAKE ISLAND Hy	29.14	127	T	T	17 06 21.1	
	baz=319,slow=76,SNR=96						
H11N1	WAKE ISLAND Hy	29.15	127	T	T	17 06 23.1	
	baz=319,slow=76,SNR=81						
H11N3	WAKE ISLAND Hy	29.16	127	T	T	17 06 23.9	
	baz=319,slow=76,SNR=65						
H11S1	WAKE ISLAND Hy	29.95	128	T	T	17 07 31.3	
	baz=321,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	29.95	129	T	T	17 07 29.6	
	baz=321,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	29.97	129	T	T	17 07 33.7	
	baz=321,slow=76,SNR=35						
MKAR	Makanchi Array	43.27	300	P	P	16 37 38.1	-0.8
	0.2nm,0.5s,baz=80,slow=11,SNR=5.4						
ILAR	Eielson Array	46.63	34	P	P	16 38 06.3	+1.1
	0.8nm,0.7s,baz=256,slow=7.5,SNR=6.2						
WRA	Warramunga Arr	60.07	189	P	P	16 39 43.5	-0.8
	0.4nm,0.7s,baz=6.9,slow=7.1,SNR=6.6						
ASAR	Alice Springs	63.80	189	P	P	16 40 09.1	-0.2
	0.4nm,1.0s,baz=359,slow=6.2,SNR=8.9						

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*MDD **05** 16:43:14.7±3.6, 37°.40N×14°.31W, h0^{km}, mb3.7/7, Error ellipse: s-maj=32.9km s-min=29.5km az=62.0, PRXIMO SIN SOLUCIN*
ISC 05 16:43:17.8±4.3, **37°.5N**±0°.1×**14°.0W**±0°.2, **h10**^{km}, **n14**, σ**1^{s}.85**/23, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	3.97	68	P	Pn	16 44 20.3	+1.6
	0.8nm,0.1s,SNR=7.9						
PMAFR	Mafra	3.97	68	*e*Pn	Pn	16 44 20.5	+1.8
PFVI	Vila Bisbo	4.13	94	P	Pn	16 44 20.0	-1.0
	0.9nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.13	94	*e*Pn	Pn	16 44 20.3	-0.7
PNCL	Nicolau / Gran	4.36	81	P	Pn	16 44 26.1	+2.0
PNCL				S	Sn	16 45 17.5	+2.5
	1.1nm,0.5s						
PNCL	Nicolau / Gran	4.36	81	*e*Pn	Pn	16 44 26.1	+2.0
PNCL				*e*Sn	Sn	16 45 17.5	+2.5
PNCL				A	A	16 45 21.1	
	1.1nm,0.5s						
PVAQ	Vaqueiros	4.99	90	P	Pn	16 44 33.0	+0.2
PVAQ				S	Sn	16 45 30.5	0.0
	1.2nm,0.6s						
PVAQ	Vaqueiros	4.99	90	*e*Pn	Pn	16 44 33.0	+0.2
PVAQ				*e*Sn	Sn	16 45 30.5	0.0
PVAQ				A	A	16 45 32.2	
	1.2nm,0.6s						
EGRO	El Granado	5.17	88	P	Pn	16 44 35.0	-0.2
	0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	16 45 35.0	+0.1
	0.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.81	85	P	Pn	16 44 44.7	+0.7
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	16 45 50.3	-0.4
	0.3nm,0.2s,SNR=7.9						
ELOB	Lobios	6.29	45	P	Pn	16 44 50.7	0.0
	0.2nm,0.1s,SNR=4.0						
ELOB				S	Sn	16 46 01.6	-1.2
	0.4nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.81	83	P	Pn	16 44 58.7	+1.0
	0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	16 46 13.5	-1.8
	0.2nm,0.3s,SNR=7.9						
EAGO	Agolada(Pontev	6.93	39	S	Sn	16 46 16.8	-1.6
	0.6nm,0.2s,SNR=7.9						
EADA	Adamuz	7.47	82	P	Pn	16 45 07.6	+0.7
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	16 46 26.2	-5.6
	0.4nm,0.2s,SNR=7.9						

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*IDC **05** 16:53:40.5±0.6, 30°.58N×142°.14E, h0^{km}, mb4.0/23, mb1 4.2/28, mb1mx4.1/46, mbtmp4.0/28, ML3.8/4, MS3.3/10, Ms1 3.3/10, ms1mx3.0/40, Error ellipse: s-maj=19.0km s-min=13.4km az=82.0*
*JMA **05** 16:53:41.0±0.1, 30°.66N×142°.28E, h44^{km}, M4.3*
*NIED **05** 16:53:41.1, 30°.66N×142°.28E, h44^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.68; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.81; $M_{r\theta}$0.84; $M_{\theta\phi}$-0.67; $M_{\phi r}$-0.36; Fault plane solution: $M_0$2.08000×10^{15} NP1: ϕ_s173.00000°, δ52.00000°, λ55.00000°. NP2: ϕ_s41.00000°, δ49.00000°, λ126.00000°.*
*NEIC **05** 16:53:44.1±1.2, 30°.53N±0°.06×141°.95E±0°.10, h24^{km}±5^{km}, mb4.5/34 Error ellipse: s-maj=13.6km s-min=6.4km az=62.0*
ISC 05 16:53:43.5±0.5, **30°.62N**±0°.05×**142°.14E**±0°.08, **h23**^{km}, **n109**, σ**1^{s}.69**/109, **mb4.3**/39, **MS3.3**/9, **1D**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.15	321	P	Pn	16 54 30.3	-1.4
JHJ2	Mitsune	3.17	322	P	Pn	16 54 30.7	-1.3
JHJ2				*e*S	Sn	16 55 07.8	-1.3
JHJ	Hachijo jima 2	3.20	322	Pn	Pn	16 54 32.3	0.0
	14nm,0.3s,baz=195,slow=23,SNR=13						
JHJ				Sn	Sn	16 55 07.4	-2.3
	65nm,0.3s,baz=79,slow=22,SNR=7.4						
JHJ				LR	LR	16 55 39.2	
	comp=Z,343nm,18.3s,baz=82,slow=37						
CBIJ	Chichi jima	3.51	179	*e*S	Sn	16 55 16.2	-1.3
JCJ	Chichijima	3.51	179	Pn	Pn	16 54 37.3	+0.6
	20nm,0.3s,baz=38,slow=21,SNR=12						
JCJ				Sn	Sn	16 55 13.8	-3.7
	26nm,0.3s,baz=291,slow=22,SNR=2.9						
JCJ	Chichijima	3.51	179	Pn	Pn	16 54 35.9	-0.8
JMKN	Mikurajimanish	3.91	327	P	Pn	16 54 40.7	-1.4
BSO1	Boso 1	4.14	347	P	Pn	16 54 43.5	-1.2
BSO3	Boso 3	4.39	342	P	Pn	16 54 47.5	-0.9
JOD2	Odawara 2	5.29	332	P	Pn	16 55 00.4	-0.7
JHU	Hanno	5.74	336	*e*S	Sn	16 56 10.4	-2.0
JYT	Yasato	5.82	344		Pn	16 55 07.6	-0.7
JRY	Ryogami san	6.03	334	*e*S	Sn	16 56 18.2	-1.3
JHO	Hitachi	6.12	348	P	Pn	16 55 11.1	-1.3
JAG	Ashikaga	6.21	340	P	Pn	16 55 12.5	-1.2
JAG				*e*S	Sn	16 56 22.5	-1.4
INU	Inuyama	6.38	319	Pn	Pn	16 55 16.3	+0.2
JGF	Kuroka	6.38	322	Pn	Pn	16 55 15.0	-1.1
MJAR	Matsushiro Arr	6.75	332	Pn	Pn	16 55 22.1	+0.9
	1.0nm,0.3s,baz=152,slow=11,SNR=65						
MJAR				Sn	Sn	16 56 37.7	+0.3
	0.4nm,0.3s,baz=85,slow=15,SNR=6.1						
MAJO	Matsushiro	6.76	332	Pn	Pn	16 55 22.3	+1.0
MAT	Matsushiro	6.76	332	P	Pn	16 55 22.4	+1.2
MAT				S	Sn	16 56 35.7	-1.8
MJB9	Matsu-Tunnel	6.76	332	Pn	Pn	16 55 22.4	+1.1
JFK	Kawauchi	6.81	351	P	Pn	16 55 20.3	-1.7
JFK				*e*S	Sn	16 56 31.4	-7.4
JMM	Marumori	7.31	352	Pn	Pn	16 55 27.5	-1.4
JWT	Wachi	7.33	311	Pn	Pn	16 55 30.5	+1.5
JSD	Sado	8.06	338	Pn	Pn	16 55 37.9	-1.2
JMK	Ichinoseki	8.35	355	P	Pn	16 55 41.0	-2.0
JMK				*e*S	Sn	16 57 09.8	-6.7
JNU	Nakatsue	9.90	287	LR	LR	16 59 23.4	
	comp=Z,211nm,19.5s,baz=97,slow=35						
JNU	Nakatsue	9.90	287	Pn	Pn	16 56 02.9	-1.4
JSU	Suzuyama	10.06	278	Pn	Pn	16 56 04.1	-2.5
JTM	Tenmabayashi	10.18	355	Pn	Pn	16 56 06.4	-1.7
JMZ	Minamidaito 2	10.75	246	Pn	Pn	16 56 11.6	-4.5
ERM	Erimo	11.40	4	Pn	Pn	16 56 21.7	-3.1
JEM	Erimo	11.40	4	Pn	Pn	16 56 50.9	+26
JEW	Eniwo	12.21	358	Pn	Pn	16 56 34.9	-1.0
JOW	Kunigami	12.74	256	Pn	Pn	16 56 40.4	-2.9
ASAJ	Asahikawa	13.47	1	Pn	Pn	16 56 51.8	-1.4
	0.7nm,0.3s,baz=202,slow=7.9,SNR=7.3						
JKA	Kamikawa-asahi	13.47	1	Pn	Pn	16 56 51.1	-2.1
KSRS	Korea Array	13.61	304	Pn	Pn	16 56 58.7	+3.6
	0.1nm,0.3s,baz=111,slow=13,SNR=5.5						
KSRS				LR	LR	17 01 42.3	
	comp=Z,166nm,18.4s,baz=114,slow=35						
USRK	Ussuriysk Ar.	15.75	332	Pn	Pn	16 57 23.8	0.0
	baz=131,slow=11,SNR=5.0						
MDJ	Mudanjiang	17.12	328	P	P	16 57 42.6	-0.1
MDJ				IAmb	IAmb	16 57 44.6	
	comp=Z,26nm,1.1s						
YHNB	Yeheng	19.32	257	P	P	16 58 06.4	-0.7
NACB	Ninganchiao	19.33	256	P	P	16 58 06.3	-0.9
NACB				IAmb	IAmb	16 58 21.1	
	comp=Z,15nm,0.7s						
YULB	Yu-li	19.90	254		P	16 58 12.6	-0.9
YULB				IAmb	IAmb	16 58 26.9	
	comp=Z,58nm,1.5s						
NJ2	Nanjing	19.94	280	*e*P	P	16 58 12.9	-0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SSLB	Suanglung	20.02	255	P	P	16 58 13.5	-1.3
SSLB				IAmb	IAmb	16 58 16.6	
	comp=Z,26nm,1.1s						
KLR	Kul'dur	20.19	340	P	P	16 58 16.7	+0.4
	comp=Z,2.8nm,0.8s,baz=146,slow=8.5,SNR=9.7						
TPUB	Ta-pu	20.50	254	Pn	P	16 58 20.4	+0.4
TPUB				IAmb	IAmb	16 58 48.1	
	comp=Z,49nm,1.4s						
H11N2	WAKE ISLAND Hy	24.84	110	T	T	17 25 36.9	
	baz=300						
H11N1	WAKE ISLAND Hy	24.84	110	T	T	17 25 40.3	
	baz=300						
H11N3	WAKE ISLAND Hy	24.85	110	T	T	17 25 26.6	
	baz=300						
HIA	Hailar	25.17	324	P	P	16 59 06.4	-0.6
HIA				IAmb	IAmb	16 59 27.9	
	comp=Z,8.5nm,0.9s						
H11S3	WAKE ISLAND Hy	25.32	113	T	T	17 26 16.2	
	baz=305						
H11S1	WAKE ISLAND Hy	25.32	113	T	T	17 26 23.1	
	baz=305						
H11S2	WAKE ISLAND Hy	25.33	113	T	T	17 26 15.5	
	baz=305						
HHC	Hu-ho-hao-te	26.72	301	*e*P	P	16 59 22.2	+1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
ENH	Enshi	28.10	278	P	P	16 59 31.0	-2.7
DAV	Davao City (W)	28.11	217	LR	LR	17 09 18.8	
	comp=Z,27nm,20.4s,baz=292,slow=33						
XAN	Xi'an	28.21	286	P	P	16 59 31.7	-2.8
XAN				IAmb	IAmb	16 59 35.2	
	comp=Z,4.2nm,0.6s						
ULN	Ulaanbaatar	31.82	313	P	P	17 00 07.7	+1.2
ULN				IAmb	IAmb	17 00 09.5	
	comp=Z,4.4nm,0.8s						
SONM	Songino Array	32.23	312	P	P	17 00 10.5	+0.4
	comp=Z,2.0nm,0.8s,baz=120,slow=9.1,SNR=8.3						
SONM				LR	LR	17 14 08.3	
	comp=Z,53nm,19.0s,baz=338,slow=38						
LZH	Lanzhou	32.30	290	*e*P	P	17 00 10.5	-0.4
LZH				pP	sP	17 00 18.2	+0.2
LZH				sP	pwP	17 00 21.6	-2.7
LZH				*e*PP	PnPn	17 01 18.3	+0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,5.2s						
LZH				LR	LR		
	comp=N,250nm,12.0s						
LZH				LR	LR		
	comp=E,260nm,12.5s						
LZH				LR	LR		
	comp=Z,370nm,14.8s						
KMI	Kunming	35.13	271⇓	*e*P	P	17 00 34.2	-1.5
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
TLY	Talaya	35.25	318	P	P	17 00 36.9	+0.8
TLY				IAmb	IAmb	17 00 39.1	
	comp=Z,8.7nm,0.9s						
GTA	Gaotai	35.49	296	*e*P	P	17 00 37.9	-0.6
GTA				pP	pP	17 00 44.2	+0.9
GTA				sP	sP	17 00 47.2	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,69nm,5.6s						
GTA				LR	LR		
	comp=N,120nm,13.8s						
GTA				LR	LR		
	comp=E,170nm,12.7s						
GTA				LR	LR		
	comp=Z,81nm,14.2s						
CHTO	Chiang Mai	40.74	264	P	P	17 01 20.8	-2.0
CMAR	Chiang Mai Arr	40.89	263	P	P	17 01 23.3	-0.7
	comp=Z,0.7nm,0.6s,baz=63,slow=5.9,SNR=7.7						
CMAR				LR	LR	17 20 01.3	
	comp=Z,38nm,18.1s,baz=158,slow=39						
MTN	Manton Dam	44.49	195	P	P	17 01 52.2	-1.0
WMQ	Urumqi	44.56	303	*e*P	P	17 01 55.1	+1.5
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.5s						
ZALV	Zalesovo Beam	46.85	317	P	P	17 02 11.9	+0.4
	comp=Z,0.7nm,0.5s,baz=102,slow=13,SNR=4.7						
ZALV				PcP	PcP	17 03 44.9	+0.7
	comp=Z,1.6nm,0.6s,baz=118,slow=3.3,SNR=7.3						
ZALV				LR	LR	17 21 55.5	
	comp=Z,29nm,19.9s,baz=82,slow=36						
MK31	Makanchi Array	48.26	307	P	P	17 02 22.7	+0.1

MKAR	Makanchi Array	48.26	307	P	P	17 02 23.3	+0.7
	comp=Z,1.8nm,0.6s,baz=91,slow=9.7,SNR=29						
MKAR				LR	LR	17 24 09.6	
	comp=Z,30nm,20.0s,baz=16,slow=38						
MAKZ	Makanchi	48.48	307	P	P	17 02 24.3	+0.1
NRIK	Noril'sk	49.37	338	P	P	17 02 31.7	+1.0
	comp=Z,2.8nm,0.8s,baz=108,slow=10,SNR=8.4						
NRIK	Noril'sk	49.37	338	P	P	17 02 31.2	+0.4
NRIK				IAmb	IAmb	17 02 33.1	
	comp=Z,3.9nm,0.8s						
KURK	Kurchatov	50.54	313	P	P	17 02 39.7	-0.2
KURK				IAmb	IAmb	17 02 56.3	
	comp=Z,3.9nm,0.8s						
KURBB	Kurchatov Arra	50.60	312	P	P	17 02 40.1	-0.2
	comp=Z,1.4nm,0.3s,baz=86,slow=7.4,SNR=11						
WB0	Warramunga Arr	50.65	189	P	P	17 02 40.4	-0.6
WR0	Warramunga Arr	50.82	189	P	P	17 02 41.7	-0.6
WRAB	Tennant Creek	50.82	189	P	P	17 02 40.8	-1.5
WB2	Warramunga Arr	50.83	189	P	P	17 02 41.9	-0.4
WRA	Warramunga Arr	50.83	189	P	P	17 02 42.0	-0.4
	comp=Z,4.0nm,0.5s,baz=5.8,slow=7.5,SNR=69						
WRA				LR	LR	17 22 15.7	
	comp=Z,36nm,20.5s,baz=185,slow=34						
FITZ	Fitzroy Crossi	50.98	200	P	P	17 02 43.8	+0.3
	comp=Z,2.4nm,0.7s,baz=12,slow=13,SNR=1.4						
FITZ	Fitzroy Crossi	50.98	200	P	P	17 02 43.6	+0.1
RND	Reindeer	53.73	31	P	P	17 03 04.9	+1.4
RND				IAmb	IAmb	17 03 24.7	
	comp=Z,5.9nm,0.8s						
KSH	Kashi	53.80	299	P	P	17 03 08.9	+4.4
KSH				sP	pwP	17 03 20.7	+2.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,300nm,6.2s						
AAK	Ala-Archa	54.27	303	P	P	17 03 09.4	+1.5
	comp=Z,1.1nm,0.6s,baz=101,slow=3.1,SNR=5.2						
AS31	Alice Springs	54.55	189	P	P	17 03 09.2	-0.6
ASAR	Alice Springs	54.55	189	P	P	17 03 09.8	-0.1
	comp=Z,1.4nm,0.6s,baz=357,slow=4.9,SNR=26						
ILAR	Eielson Array	54.66	30	P	P	17 03 11.2	+1.0
	comp=Z,0.8nm,0.9s,baz=260,slow=5.4,SNR=5.2						
BVAR	Borovoye Array	55.46	316	P	P	17 03 17.0	+0.8
	comp=Z,0.7nm,0.6s,baz=65,slow=12,SNR=8.8						
BRVK	Borovoye	55.52	316	P	P	17 03 17.0	+0.4
KK31	Karatay Array	57.04	304	P	P	17 03 27.5	-0.1
KK31				IAmb	IAmb	17 03 29.2	
	comp=Z,3.5nm,0.8s						
KKAR	Karatay Array	57.04	304	P	P	17 03 27.6	-0.1
KKAR				IAmb	IAmb	17 03 29.2	
	comp=Z,3.5nm,0.8s						
NIL	Nilore	57.42	293	P	P	17 03 29.4	-1.1
NIL				IAmb	IAmb	17 03 43.8	
	comp=Z,6.3nm,0.9s						
INK	Inuvik	59.86	25	P	P	17 03 47.1	+0.4
	comp=Z,1.5nm,1.2s,baz=293,slow=7.7,SNR=1.6						
ARU	Arti	61.64	321	P	P	17 03 59.5	+0.3
STKA	Stephens Creek	62.16	181	P	P	17 04 03.2	+0.4
ABKAR	Akbulak array	62.64	313	P	P	17 04 06.2	+0.2
ABKAR				IAmb	IAmb	17 04 13.7	
	comp=Z,5.7nm,1.2s						
BBOO	Buckleboo	63.35	186	P	P	17 04 12.2	+1.5
GEYT	Alibeck	67.59	302	P	P	17 04 39.9	+1.5
	comp=Z,1.2nm,0.7s,baz=70,slow=6.5,SNR=3.9						
YKA	Yellowknife Ar	69.08	29	P	P	17 04 46.9	-0.2
	comp=Z,0.7nm,1.0s,baz=295,slow=5.8,SNR=5.7						
FINES	FINESS Array B	74.78	333	P	P	17 05 22.9	+1.5
	comp=Z,3.0nm,0.8s,baz=248,slow=31,SNR=7.2						
KBZ	Khabaz	75.60	312	P	P	17 05 29.1	+2.7
	comp=Z,2.3nm,0.8s,baz=99,slow=9.8,SNR=4.1						
KBZ				LR	LR	17 42 42.4	
	comp=Z,33nm,18.1s,baz=174,slow=39						
NVAR	Mina Array Bea	78.38	52	P	P	17 05 44.3	+1.8
	comp=Z,0.5nm,0.5s,baz=298,slow=5.6,SNR=6.3						
AKASG	Malin Array Be	79.77	323	P	P	17 05 50.1	+0.6
	comp=Z,0.3nm,0.4s,baz=49,slow=5.2,SNR=2.2						
NOA	NORSAR Array B	80.33	338	P	P	17 05 53.0	+0.5
	comp=Z,1.4nm,0.9s,baz=41,slow=5.5,SNR=3.3						
PDAR	Pinedale Array	81.75	45	P	P	17 06 01.9	+1.2
	comp=Z,0.5nm,0.6s,baz=353,slow=2.1,SNR=2.9						
BRTR	Keskin Array B	83.59	313	P	P	17 06 12.0	+1.8
	comp=Z,0.8nm,0.5s,baz=60,slow=8.5,SNR=3.5						
RAYN	Ar Rayn	83.70	293	P	P	17 06 11.9	+1.0
RAYN				IAmb	IAmb	17 06 25.6	
	comp=Z,5.0nm,0.8s						

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*IDC **05** 17:25:35.9±3.3, 30°.68N×131°.24E, h59^{km}±34^{km}, mb3.3/7, mb1 3.5/11, mb1mx3.2/41, mbtmp3.6/11, ML3.2/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/16, Error ellipse: s-maj=44.4km s-min=15.1km az=60.0*

ISC 05 17:25:32.6±0.9**, 30°.54N**±0°.10×**131°.1E**±0°.1**, h28^{km}, n12, σ0^{s}.91**/12**, mb3.4**/7**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	2.58	356	P	Pn	17 26 13.9	+1.4
	3.2nm,0.3s,baz=242,slow=7.6,SNR=32						
JNU				S	Sn	17 26 42.9	-0.1
	5.4nm,0.3s,baz=34,slow=19,SNR=18						
KSRS	Korea Array	7.38	340	LR	LR	17 30 02.7	
	comp=Z,58nm,18.6s,baz=185,slow=37						
JHJ	Hachijo jima 2	7.83	69	P	Pn	17 27 25.0	+0.4
	8.4nm,0.3s,baz=80,slow=19,SNR=3.7						
MJAR	Matsushiro Arr	8.43	43	P	Pn	17 27 33.1	+0.3
	0.2nm,0.3s,baz=242,slow=14,SNR=12						
KLR	Kul'dur	18.67	1	P	Pn	17 29 49.1	+0.2
	0.1nm,0.3s,baz=160,slow=6.7,SNR=4.2						
SONM	Songino Array	25.61	319	P	P	17 30 58.8	-0.9
	0.2nm,0.5s,baz=108,slow=9.3,SNR=2.8						
MKAR	Makanchi Array	40.73	308	P	P	17 33 11.7	+0.8
	0.1nm,0.4s,baz=97,slow=9.5,SNR=3.6						
WRA	Warramunga Arr	50.29	176	P	P	17 34 27.0	+0.2
	0.4nm,0.9s,baz=353,slow=8.5,SNR=2.2						
ASAR	Alice Springs	53.97	177	P	P	17 34 55.1	+1.1
	0.3nm,0.8s,baz=12,slow=14,SNR=4.0						
FINES	FINESS Array B	70.37	330	P	P	17 36 42.5	-1.0
	2.5nm,0.9s,baz=80,slow=4.3,SNR=5.0						
AKASG	Malin Array Be	73.90	320	P	P	17 37 03.6	-1.3
	0.7nm,0.5s,baz=58,slow=5.9,SNR=4.4						
BRTR	Keskin Array B	76.38	308	P	P	17 37 19.7	+0.1
	1.0nm,0.7s,baz=84,slow=4.5,SNR=2.8						

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*IDC **05** 17:38:13.9±3.2, 36°.55N×70°.87E, h65^{km}±29^{km}, mb1 3.3/3, mb1mx2.9/28, mbtmp3.4/3, ML3.1/3, Error ellipse: s-maj=57.9km s-min=8.3km az=169.0*

*NNC **05** 17:38:17.1±4.1, 36°.85N×70°.73E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=32.8km s-min=30.3km az=10.0*

ISC 05 17:38:14.0±0.9**, 36°.32N**±0°.08×**70°.97E**±0°.07**, h188^{km}, n22, σ1^{s}.75**/25**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.18	19	P	Pn	17 39 44.5	+0.8
	SNR=26						
UCH	Uchtor	6.51	24	P	Pn	17 39 48.9	+0.9
	SNR=8.3						
EKS2	Erkin-Say	6.70	18	P	Pn	17 39 51.8	+1.6
	SNR=6.4						
KK31	Karatay Array	6.79	357	P	Pn	17 39 52.4	+1.1
	0.4nm,0.2s,baz=176,slow=12,SNR=45						
KK31				⇑S	Sn	17 41 04.3	-4.0
	2.5nm,0.3s,baz=177,slow=17,SNR=10						
AAK	Ala-Archa	6.88	22	P	Pn	17 39 54.2	+1.6
	SNR=15						
AAK	Ala-Archa	6.88	22	⇓P	Pn	17 39 54.0	+1.5
	4.9nm,0.3s						
AAK				⇑S	Sn	17 41 09.2	-1.4
	5.9nm,0.8s						
CHMS	Chumysh	7.28	22	P	Pn	17 39 59.5	+1.7
	SNR=11						
USP	Ospenovka	7.45	20	P	Pn	17 40 00.9	+0.9
	SNR=23						
TKM2	Tokmak 2	7.50	27	P	Pn	17 40 02.9	+2.2
	SNR=11						
TKM2	Tokmak 2	7.50	27	⇑P	Pn	17 40 01.9	+1.1
	4.2nm,0.5s						
GEYT	Alibeck	10.39	283	P	Pn	17 40 38.7	+0.3
	0.3nm,0.3s,baz=104,slow=12,SNR=5.4						
GEYT				S	Sn	17 42 32.3	-1.8
	0.6nm,0.3s,baz=264,slow=28,SNR=5.1						
PYUN	Piuthan	13.06	125	*e*P	Pn	17 41 11.2	-1.6
	7.4nm,0.3s						
DANN	Dangsing	13.41	123	*e*P	Pn	17 41 16.4	-0.9
MKAR	Makanchi Array	13.45	35	P	P	17 41 19.6	-0.8
	0.1nm,0.3s,baz=224,slow=14,SNR=4.4						
GKN	Gorkha	14.23	122	*e*P	Pn	17 41 26.6	-0.8
	6.0nm,0.4s						
KKN	Kakani	14.80	121	*e*P	Pn	17 41 34.2	-0.3
	2.5nm,0.3s						
PKIN	Phulchoki	15.02	121	*e*P	P	17 41 37.5	-0.6
	5.1nm,0.5s						
PKI	Pulchoki	15.03	121	*e*P	P	17 41 37.6	-0.7
GUN	Gumba	15.15	119	*e*P	P	17 41 39.6	0.0
AB31	Akbulak array	15.23	332	P	P	17 41 44.2	+4.2
	0.8nm,0.7s,baz=153,slow=12,SNR=20						
AB31				⇑S	S	17 44 28.7	-0.5
	0.8nm,0.5s,baz=152,slow=24,SNR=7.3						
TAPN	Taplejung	16.78	117	*e*P	Pn	17 42 00.2	+1.6
	6.1nm,0.4s						
ZALV	Zalesovo Beam	20.09	24	P	Pn	17 42 40.1	+2.9
	0.3nm,0.3s,baz=210,slow=9.6,SNR=5.7						

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*BJI **05** 17:48:41.7±0.0, 43°.31S×171°.10E, h11^{km}, mB5.9/33, mb5.3/41, Ms5.3/39, Ms7 5.1/40*

*WEL **05** 17:48:41.8, 43°S±3°×17°1E±°, h5^{km}±2^{km}, M6.0/17, ML6.1/17, MLv6.0/17, Error ellipse: s-maj=0.0km s-min=0.0km az=128.5*

*NEIC **05** 17:48:42.6, 43°.07S×171°.23E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.14; M$_{\theta\theta}$0.76; M$_{\phi\phi}$-0.90; M$_{r\theta}$-0.70; M$_{\theta\phi}$-2.13; M$_{\phi r}$-0.68; Fault plane solution: M$_0$2.49000×10^{17} NP1:φ$_s$347.64000°, δ72.62000°, λ-9.31000°. NP2:φ$_s$80.45000°, δ81.12000°, λ-162.40000°. Principal axes: T 2.2365, Plg6.0000°, Azm213.0000°; N 0.4412, Plg70.0000°, Azm106.0000°; P -2.6777, Plg19.0000°, Azm305.0000°;*

*NEIC **05** 17:48:42.5±2.5, 43°.06S±0°.04×171°.24E±0°.05, h8^{km}±2^{km}, mb5.5/75, Ms_20 5.4/382, Mwb5.5/36, Mwr5.6/46, Mww5.6, Mwc5.6(GCMT) Error ellipse: s-maj=6.4km s-min=5.4km az=160.0*

*NEIC **05** 17:48:42.6, 43°.07S×171°.23E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.00; M$_{\theta\theta}$0.55; M$_{\phi\phi}$-0.56; M$_{r\theta}$-1.07; M$_{\theta\phi}$-2.45; M$_{\phi r}$-0.24; Fault plane solution: M$_0$2.74000×10^{17} NP1:φ$_s$83.84000°, δ88.32000°, λ-156.67000°. NP2:φ$_s$353.12000°, δ66.68000°, λ-1.83000°. Principal axes: T 2.6971, Plg15.0000°, Azm216.0000°; N 0.0897, Plg67.0000°, Azm88.0000°; P -2.7868, Plg17.0000°, Azm311.0000°;*

*NEIC **05** 17:48:43, 43°.07S×171°.24E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.37; M$_{\theta\theta}$0.76; M$_{\phi\phi}$-0.39; M$_{r\theta}$-0.95; M$_{\theta\phi}$-2.88; M$_{\phi r}$-0.55; Fault plane solution: M$_0$3.15000×10^{17} NP1:φ$_s$353.00000°, δ71.00000°, λ-10.00000°. NP2:φ$_s$86.00000°, δ80.00000°, λ-160.00000°. Principal axes: T 3.1641, Plg7.0000°, Azm218.0000°; N -0.0282, Plg68.0000°, Azm111.0000°; P -3.1359, Plg20.0000°, Azm311.0000°;*

*IDC **05** 17:48:44.9±2.1, 43°.08S×171°.18E, h18^{km}±13^{km}, mb5.1/18, mb1 5.1/18, mb1mx5.0/28, mbtmp5.2/18, MS5.0/22, Ms1 5.0/22, ms1mx4.9/28 Error ellipse: s-maj=14.7km s-min=10.5km az=84.0*

*NOU **05** 17:48:44.5, 43°.32S×171°.58E, h23^{km}, mb5.3, South Island, New Zealand*

*MOS **05** 17:48:46.1±1.6, 43°.01S×171°.03E, h32^{km}, mb5.5/18, MS5.2/25, Error ellipse: s-maj=15.6km s-min=9.5km az=120.2*

*GCMT **05** 17:48:46.5±0.1, 42°.98S±0°.01×171°.18E±0°.01, h12^{km}, MW5.6/134, Moment Tensor Solution. s116,c198; s134,c250; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.25±.03; M$_{\theta\theta}$0.69±.03; M$_{\phi\phi}$-0.44±.03; M$_{r\theta}$-0.96±.08; M$_{\theta\phi}$-2.70±.03; M$_{\phi r}$0.12±.08; Best double couple: M$_0$2.91500×10^{17} NP1:φ$_s$355.00000°, δ71.00000°, λ1.00000°. NP2:φ$_s$264.00000°, δ89.00000°, λ161.00000°. Principal axes: T 3.0870, Plg14.0000°, Azm218.0000°; N -0.3440, Plg71.0000°, Azm80.0000°; P -2.7440, Plg12.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 17:48:47, 43°.00S×171°.19E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.25; M$_{\theta\theta}$0.74; M$_{\phi\phi}$-0.49; M$_{r\theta}$-0.59; M$_{\theta\phi}$-2.83; M$_{\phi r}$0.45; Fault plane solution: M$_0$3.00000×10^{17} NP1:φ$_s$355.00000°, δ81.00000°, λ8.00000°. NP2:φ$_s$263.00000°, δ82.00000°, λ171.00000°. Principal axes: T 3.1813, Plg12.0000°, Azm219.0000°; N -0.4095, Plg78.0000°, Azm41.0000°; P -2.7718, Plg0.0000°, Azm309.0000°;*

ISC 05 17:48:43.2±0.6**, 43°.06S**±0°.02×**171°.31E**±0°.02**, h11**^{km}±3^{km}**, n843, σ1^{s}.88**/687**, mb5.5**/129**, MS5.4**/243**, 35C-30D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.35	17	P	Pg	17 48 50.0	-0.1
INZ				S	Sg	17 48 54.9	+0.1
INZ	Inchbonnie	0.35	17	P	Pg	17 48 44.4	-5.7
INZ				S	Sg	17 48 48.9	-6.0
WVZ	Waitaha Valley	0.42	268	P	Pg	17 48 50.8	-0.6
WVZ				S	Sg	17 48 55.7	-1.2
MHCZ	Mount Hutt	0.51	158	P	Pb	17 48 53.8	-0.3
MHCZ				S	Sb	17 49 01.6	0.0
MHCZ	Mount Hutt	0.51	158	P	Pg	17 48 48.2	-4.8
OXZ	Oxford	0.60	117	Pg	Pb	17 48 55.5	-0.2
OXZ	Oxford	0.60	117	P	Pb	17 48 55.8	+0.1
RPZ	Rata Peaks	0.68	196	Pg	Pg	17 48 56.3	0.0
	baz=328,slow=8.8						
RPZ				Lg	Lg	17 49 06.1	
	12µm,0.3s,baz=135,slow=20,SNR=20						
RPZ	Rata Peaks	0.68	196	Pg	Pg	17 48 56.0	-0.3
RPZ	Rata Peaks	0.68	196	P	Pb	17 48 56.9	-0.2
LTZ	Lake Taylor	0.76	69	Pg	Pb	17 48 58.6	+0.2
LTZ	Lake Taylor	0.76	69	P	Pb	17 48 59.0	+0.5
GCSZ	Gaunt Creek Bo	0.76	250	P	Pg	17 48 57.0	-0.9
ARCZ	Arundel	0.89	186	P	Pb	17 49 00.9	+0.2
RACZ	Rakaia	0.90	138	P	Pn	17 49 01.8	0.0
WACZ	Wakanui South	0.96	157	P	Pn	17 49 02.7	+0.1
WACZ				S	Sn	17 49 16.8	+0.4
AMCZ	Amberley	0.99	97	P	Pn	17 49 04.3	+1.2
AMCZ				S	Sn	17 49 18.8	+1.7
MQZ	McQueen's Vall	1.17	124		Pb	17 49 05.2	-0.3
MQZ	McQueen's Vall	1.17	124	P	Pn	17 49 05.5	0.0
FOZ	Fox Glacier	1.19	246	Pn	Pn	17 49 04.5	-1.2
FOZ	Fox Glacier	1.19	246	P	Pn	17 49 05.1	-0.6
GVZ	Greta Valley S	1.27	86	P	Pg	17 49 07.8	+0.2
GVZ				S	Sg	17 49 25.0	+0.9
TMZ	Timaru	1.34	189	P	Pb	17 49 08.1	-0.2
TMZ				S	Sg	17 49 26.2	-0.1
DSZ	Denniston Nort	1.37	16	P	Pb	17 49 09.1	+0.3
AKCZ	Akaroa Harbour	1.42	125	P	Pb	17 49 09.5	-0.2
AKCZ				S	Sb	17 49 27.8	0.0
OKCZ	Okains Bay	1.44	118	P	Pb	17 49 10.4	+0.4
LBZ	Lake Benmore	1.55	211	Pn	Pn	17 49 10.7	-0.2
LBZ	Lake Benmore	1.55	211	P	Pn	17 49 11.0	+0.2
THZ	Tophouse	1.76	43	Pn	Pn	17 49 14.1	+0.5
THZ	Tophouse	1.76	43	P	Pb	17 49 14.7	-0.7
KHZ	Kahutara	1.77	69	Pn	Pn	17 49 14.0	+0.3
KHZ	Kahutara	1.77	69	P	Pn	17 49 14.2	+0.5
ODZ	Otahua Downs	2.04	193	Pn	Pn	17 49 16.8	-0.7
ODZ	Otahua Downs	2.04	193	P	Pn	17 49 17.2	-0.3
JCZ	Jackson Bay	2.09	240	P	Pn	17 49 18.2	-0.1
BSWZ	Blackbirch Sta	2.33	56	Pn	Pn	17 49 21.6	+0.2
BSWZ	Blackbirch Sta	2.33	56	P	Pn	17 49 22.8	+1.4
NNZ	Nelson	2.40	41	Pn	Pn	17 49 23.0	+0.6
NNZ	Nelson	2.40	41	P	Pn	17 49 24.3	+1.9
NNZ				S	Sb	17 49 54.8	-1.3
QRZ	Quartz Range	2.41	23	Pn	Pn	17 49 22.7	+0.1
QRZ	Quartz Range	2.41	23	P	Pn	17 49 23.7	+1.1
WKZ	Wanaka	2.42	222		Pn	17 49 21.5	-1.2
WKZ	Wanaka	2.42	222	P	Pn	17 49 22.6	-0.2
CMWZ	Cape Campbell	2.52	60		Pn	17 49 25.2	+1.2
CMWZ	Cape Campbell	2.52	60	P	Pb	17 49 28.6	+0.2
TUWZ	Tuamarina	2.55	51	Pn	Pn	17 49 25.1	+0.7
TUWZ	Tuamarina	2.55	51	P	Pn	17 49 25.8	+1.4
EAZ	Earnscleugh	2.60	213	P	Pn	17 49 23.7	-1.5
HHSZ	Highcliff Hill	2.87	190	P	Pn	17 49 28.0	-0.9
TCW	Tory Channel	2.88	51	P	Pn	17 49 27.1	-1.9
MSZ	Milford Sound	2.93	235	P	Pn	17 49 28.8	-0.8
DUWZ	D'Urville Isla	2.98	42	P	Pn	17 49 26.9	-3.6
SNZO	South Karori	3.07	56		Pn	17 49 31.2	-0.4
BHW	Baring Head	3.12	59	Pn	Pn	17 49 31.6	-0.7
BHW	Baring Head	3.12	59	P	Pn	17 49 32.0	-0.3
WEL	Wellington	3.12	57	P	Pn	17 49 32.7	+0.3
TUZ	Tuapeka	3.13	202	P	Pn	17 49 31.4	-1.0
MLZ	Mavora Lakes	3.25	224		Pn	17 49 32.5	-1.7
MLZ	Mavora Lakes	3.25	224	P	Pn	17 49 32.5	-1.7
PLWZ	Palliser	3.29	64		Pn	17 49 33.6	-1.0
PLWZ	Palliser	3.29	64	P	Pn	17 49 33.8	-0.8
MSWZ	Moikau Station	3.36	62		Pn	17 49 34.1	-1.5
MSWZ	Moikau Station	3.36	62	P	Pn	17 49 34.9	-0.7
CAW	Cannon Point	3.41	56	P	Pn	17 49 35.6	-0.7
KIW	Kapiti Island	3.47	52	P	Pn	17 49 37.1	-0.1
PAWZ	Paruwai Farm	3.49	63	P	Pn	17 49 36.6	-0.8
OGWZ	Otaki Gorge	3.65	53	P	Pn	17 49 39.1	-0.5
TRWZ	Traveller	3.65	64	P	Pn	17 49 38.8	-0.8
MTW	Mount Morrison	3.65	60	P	Pn	17 49 38.6	-1.1
WHZ	Wether Hill Ro	3.71	219		Pn	17 49 38.0	-2.5
WHZ	Wether Hill Ro	3.71	219	P	Pn	17 49 38.2	-2.3
SYZ	Scrubby Hill	3.80	203	P	Pn	17 49 36.1	-5.6
HOWZ	Holdsworth Sta	3.81	57	P	Pn	17 49 40.5	-1.4
DCZ	Deep Cove	3.83	230	Pn	Pn	17 49 40.3	-1.8
DCZ	Deep Cove	3.83	230	P	Pn	17 49 40.7	-1.4
TMWZ	Te Maipa	3.93	62	P	Pn	17 49 42.6	-0.9
MRZ	Mangatainoka R	3.99	54	P	Pn	17 49 43.0	-1.3
TIWZ	Tintock	4.11	58	P	Pn	17 49 46.5	+0.5
NMEZ	Namu Road	4.13	29	P	Pn	17 49 48.2	+2.1
OHWZ	Ohakea	4.14	48	P	Pn	17 49 49.5	+3.1
CPWZ	Castlepoint	4.23	61	P	Pn	17 49 47.8	+0.2
NBEZ	Newall Road No	4.25	28	P	Pn	17 49 49.7	+1.8
POWZ	Post Office Ro	4.27	53	P	Pn	17 49 47.9	-0.2
KHEZ	Kahui Hut	4.28	29	P	Pn	17 49 45.1	-3.3
LREZ	Lake Rotokare	4.29	34	P	Pn	17 49 50.9	+2.5
PRWZ	Pori Road	4.29	56	P	Pn	17 49 47.0	-1.4
PREZ	Palmer Road	4.29	31	P	Pn	17 49 45.1	-3.3
PREZ				P	Pb	17 49 50.5	-8.2
WAZ	Wanganui	4.31	41	P	Pn	17 49 50.0	+1.3
NEZ	North Egmont	4.33	30	P	Pn	17 49 50.9	+1.8
PKE	Pukeiti	4.36	29	P	Pn	17 49 51.1	+1.7
BFZ	Birch Farm	4.39	59	Pn	Pn	17 49 47.4	-2.4
BFZ	Birch Farm	4.39	59	P	Pn	17 49 47.7	-2.0
DREZ	Durham Road	4.44	30	P	Pn	17 49 52.3	+1.8
APZ	The Paps	4.45	211	P	Pn	17 49 47.7	-2.9
PYZ	Puysegur Point	4.53	225	Pn	Pn	17 49 49.2	-2.5
PYZ	Puysegur Point	4.53	225	P	Pn	17 49 50.3	-1.5
DVHZ	Dannevirke	4.57	54	P	Pn	17 49 50.2	-2.0
MHEZ	Mangahewa	4.59	31	P	Pn	17 49 55.2	+2.8
TSZ	Takapari Road	4.60	51	P	Pn	17 49 51.1	-1.6
ANWZ	Angora Road	4.66	58	P	Pn	17 49 51.6	-1.8
VRZ	Vera Road	4.72	35	P	Pn	17 49 55.7	+1.4
MTVZ	Mangateitei	4.83	42	P	Pn	17 49 56.7	+0.8
PNHZ	Pukenui	4.84	51	P	Pn	17 49 54.2	-1.7
PKVZ	Pokaka	4.85	40	P	Pn	17 49 58.5	+2.4
PRHZ	Porangahau	4.87	57	P	Pn	17 49 54.5	-1.9
WNVZ	Wahianoa	4.94	42	P	Pn	17 49 57.5	0.0
MOVZ	Moawhango	4.96	44	P	Pn	17 49 57.1	-0.6
DRZ	Dome Shelter	4.96	42	P	Pn	17 49 59.0	+1.1
WHVZ	Whangaehu Hut	4.97	42	P	Pn	17 49 58.1	+0.2
FWVZ	Far West T-bar	4.97	42	P	Pn	17 49 58.1	+0.2
TUVZ	Tukino	5.01	42	P	Pn	17 49 58.4	-0.1
BHHZ	Black Hill Sta	5.06	47	P	Pn	17 49 57.9	-1.1
NGZ	Ngauruhoe	5.06	41	P	Pn	17 49 59.2	+0.1
TWVZ	Taurewa	5.06	39	P	Pn	17 49 59.5	+0.4
OTVZ	Oturere	5.10	42	P	Pn	17 49 58.8	-0.8
WTVZ	West Tongariro	5.10	41	P	Pn	17 49 59.7	0.0
KRHZ	Kereru	5.12	50	P	Pn	17 49 57.9	-1.9
KRVZ	Karewarewa	5.14	41	P	Pn	17 50 00.7	+0.5
ETVZ	East Tongariro	5.14	42	P	Pn	17 50 00.1	-0.1
PXZ	Pawanui	5.15	56	P	Pn	17 49 58.2	-2.0
TMVZ	Te Maari	5.15	42	P	Pn	17 50 00.6	+0.2
HIZ	Hauiti	5.28	32	Pn	Pn	17 50 02.0	0.0
HIZ	Hauiti	5.28	32	P	Pn	17 50 02.2	+0.1
KWHZ	Kaweka Forest	5.30	48	P	Pn	17 50 02.6	+0.3
KAHZ	Kahuranaki	5.31	54	P	Pn	17 50 00.4	-2.1
MCHZ	McNeill Hill	5.43	50	P	Pn	17 50 05.0	+0.9
BKZ	Black Stump Fm	5.52	47	Pn	Pn	17 50 05.5	+0.2
BKZ	Black Stump Fm	5.52	47	P	Pn	17 50 03.4	-2.0
WHTZ	Whakaora	5.63	40	P	Pn	17 50 09.8	+2.9
TLZ	Tolley Road	5.72	36	P	Pn	17 50 08.9	+0.8
MRHZ	Matea Rd	5.73	44	P	Pn	17 50 06.0	-2.2
ARHZ	Aropaoanui	5.73	50	P	Pn	17 50 09.4	+1.2
NMHZ	Naumai	5.74	48	P	Pn	17 50 07.1	-1.3
ALRZ	Allen Road	5.90	42	P	Pn	17 50 12.2	+1.7
MTHZ	Maungataniwha	5.93	47	P	Pn	17 50 08.5	-2.5
GRRZ	Galatos Road	5.95	39	P	Pn	17 50 14.2	+2.9
MUGZ	Murupara	6.18	44	P	Pn	17 50 13.2	-1.1
MHGZ	Mahia Peninsul	6.33	54	P	Pn	17 50 14.5	-1.9
URZ	Urewera	6.52	45	Pn	Pn	17 50 16.2	-2.8
	3.5nm,0.3s,baz=241,slow=11,SNR=26						
URZ				Sn	Sn	17 51 30.8	-2.4
	79nm,0.3s,baz=48,slow=15,SNR=11						
URZ				LR	LR	17 53 17.3	
	comp=Z,24µm,20.3s,baz=172,slow=41						
URZ	Urewera	6.52	45	Pn	Pn	17 50 15.0	-4.0
MXZ	Matakaoa Point	7.66	47	Pn	Pn	17 50 31.2	-3.6
OUZ	Omahuta	8.03	14		Pn	17 50 39.8	0.0
NFK	Norfolk Island	14.25	348	P	Pn	17 52 04.4	-0.5
	baz=14						
NFK	Norfolk Island	14.25	348	P	P	17 52 09.4	-2.9
	695nm,1.3s						
RAO	Raoul Island	16.28	36	LR	LR	17 58 38.7	
	comp=Z,18µm,19.1s,baz=195,slow=36						
I05AU	HOBART INFRASO	17.35	264	*i*		19 24 30.0	
	baz=100,slow=287,SNR=1.2						
RIV	Riverview	18.24	294	P	P	17 52 56.5	0.0
	baz=18,SNR=5.6						
MGCD	Mangrove Creek	18.65	295	P	Pn	17 53 02.3	+1.0
	baz=19,SNR=6.3						
CNB	Canberra Magne	18.65	287	P	Pn	17 53 01.6	+0.2
	baz=19,SNR=26						
YNG	Young	19.87	288	P	Pn	17 53 16.3	+0.4
	baz=20,SNR=18						
ARMA	Armidale	20.14	302	P	Pn	17 53 20.0	+0.8
	baz=20,SNR=15						
ARMA	Armidale	20.14	302	Pn	P	17 53 18.3	+0.9
ARMA				IAmb	IAmb	17 53 24.1	
	comp=Z,263nm,1.3s						
TOO	Toolangi	20.40	277	P	Pn	17 53 21.7	-0.5
	baz=20,SNR=30						
TOO	Toolangi	20.40	277	P	P	17 53 20.2	+0.1
TOO				pmax	pmax		
	comp=Z,297nm,1.4s						
TOO				MLR	MLR		
	comp=Z,7µm,18.0s						
TOO	Toolangi	20.40	277	P	P	17 53 20.2	+0.1
TOO				IAmb	IAmb	17 53 42.6	
	comp=Z,297nm,1.4s						
PINNC	Pines Island,	20.64	350	P	Pn	17 53 27.0	+1.9
OUENC	Ouen Island, N	20.92	348	P	Pn	17 53 28.3	0.0
YATNC	Mamie plateau,	21.27	349	P	P	17 53 32.4	+2.9
NOUC	Port Laguerre	21.32	347	P	P	17 53 34.5	+4.5
DZM	Mont Dzumac	21.32	348	P	P	17 53 30.3	+0.1
	comp=Z,50nm,1.1s,baz=154,slow=13,SNR=8.6						
DZM				LR	LR	18 00 32.4	
	comp=Z,2µm,18.4s,baz=140,slow=33						
DZM	Mont Dzumac	21.32	348	*e*P	P	17 53 27.6	-2.6
	comp=Z,410nm,1.2s						
DZM	Mont Dzumac	21.32	348	P	P	17 53 30.8	+0.6
DZM				IAmb	IAmb	17 53 47.5	
	comp=Z,258nm,1.3s						
DZM	Mont Dzumac	21.32	348	P	P	17 53 32.5	+2.3
MARNC	Mare, Loyalty	21.69	352	P	P	17 53 37.3	+3.2
LIFNC	LIFOU	22.48	350	P	P	17 53 45.7	+3.2
KOUNC	Koumac, New Ca	23.21	343	P	P	17 53 53.8	+3.7
ARPS	Mount Arapiles	23.39	276	P	P	17 53 52.7	+0.8
	baz=23,SNR=5.1						
EIDS	Eidsvold	24.21	310	P	P	17 54 01.8	+2.0
	baz=24,SNR=7.5						
EIDS	Eidsvold	24.21	310	P	P	17 53 59.9	0.0
EIDS				IAmb	IAmb	17 54 15.8	
	comp=Z,288nm,1.5s						
EIDS				IAMs_20	IAMs_20	18 01 29.3	
	comp=Z,9µm,19.0s						
RMQ	Roma	24.71	305	P	P	17 54 05.3	+0.8
	baz=25,SNR=15						
MSVF	Nonsavu	25.89	15	P	P	17 54 16.7	+1.5
	comp=Z,29nm,0.9s,baz=138,slow=6.8,SNR=8.7						
MSVF	Nonsavu	25.89	15	P	P	17 54 15.2	0.0
MSVF	Nonsavu	25.89	15	P	P	17 54 17.0	+1.8
STKA	Stephens Creek	25.96	286	P	P	17 54 16.4	+0.6
	baz=26,SNR=21						
STKA	Stephens Creek	25.96	286	P	P	17 54 16.2	+0.5
	baz=125,slow=10,SNR=21						
STKA	Stephens Creek	25.96	286	P	P	17 54 16.3	+0.6

STKA				pmax	pmax		
	comp=Z,12nm,1.2s						
STKA				MLR	MLR		
	comp=Z,700nm,20.0s						
STKA	**Stephens Creek**	**25.96**	**286**	P	**P**	**17 54 16.3**	**+0.5**
HTT	**Hallett**	**27.05**	**280**	P	**P**	**17 54 26.2**	**+0.6**
	baz=27,SNR=7.6						
QLP	**Quilpie**	**27.48**	**298**	P	**P**	**17 54 30.5**	**+1.1**
	baz=28,SNR=11						
SANVU	**Saraoutou**	**27.75**	**351**	P	**P**	**17 54 28.7**	**-3.1**
SANVU				IAmb	IAmb	17 54 36.4	
	comp=Z,140nm,1.3s						
SANVU	**Saraoutou**	**27.75**	**351**	P	**P**	**17 54 34.0**	**+2.2**
BBOO	**Buckleboo**	**29.43**	**278**	P	**P**	**17 54 47.0**	**+0.2**
	baz=30,SNR=7.3						
BBOO	**Buckleboo**	**29.43**	**278**	P	**P**	**17 54 46.5**	**-0.3**
BBOO				IAmb	IAmb	17 54 48.3	
	comp=Z,70nm,1.1s						
CTAO	**Charters Tower**	**31.09**	**310**	P	**P**	**17 55 00.0**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,51nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,5µm,18.0s						
CTAO	**Charters Tower**	**31.09**	**310**	P	**P**	**17 54 60.0**	**-1.6**
RAR	**Rarotonga**	**32.51**	**57**	P	**P**	**17 55 16.2**	**+2.3**
	comp=Z,83nm,1.1s,baz=344,slow=6.6,SNR=7.6						
RAR	**Rarotonga**	**32.51**	**57**	P	**P**	**17 55 11.8**	**-2.1**
RAR	**Rarotonga**	**32.51**	**57**	P	**P**	**17 55 12.1**	**-1.9**
MTSU	**Mount Surprise**	**33.75**	**309**	P	**P**	**17 55 25.6**	**+0.7**
	baz=34,SNR=28						
QIS	**Mount Isa**	**34.73**	**300**	P	**P**	**17 55 33.4**	**0.0**
	baz=35,SNR=16						
VNDA	**Vanda**	**34.78**	**184**	P	**P**	**17 55 34.2**	**+0.9**
	comp=Z,2.1nm,1.0s,baz=6.2,slow=9.2,SNR=11						
VNDA				LR	LR	18 07 24.4	
	comp=Z,8µm,20.6s,baz=18,slow=32						
VNDA	**Vanda**	**34.78**	**184**	P	**P**	**17 55 33.9**	**+0.7**
HNR	**Honiara**	**34.94**	**340**	P	**P**	**17 55 32.7**	**-2.5**
HNR				pmax	pmax		
	comp=Z,224nm,1.2s						
HNR				MLR	MLR		
	comp=Z,5µm,18.0s						
HNR	**Honiara**	**34.94**	**340**	P	**P**	**17 55 32.6**	**-2.5**
HNR	**Honiara**	**34.94**	**340**	IAMs_20	IAMs_20	18 08 36.2	
	comp=Z,5µm,18.0s						
HNR	**Honiara**	**34.94**	**340**	P	**P**	**17 55 38.4**	**+3.2**
SBA	**Scott Base**	**34.95**	**182**	IAMs_20	IAMs_20	18 08 05.9	
	comp=Z,7µm,22.0s						
FORT	**Forrest**	**36.31**	**275**	P	**P**	**17 55 45.6**	**-1.2**
FORT				IAmb	IAmb	17 56 08.6	
	comp=Z,59nm,0.8s						
AS31	**Alice Springs**	**36.35**	**290**	P	**P**	**17 55 46.0**	**-1.3**
ASAR	**Alice Springs**	**36.35**	**290**	P	**P**	**17 55 46.3**	**-1.1**
	comp=Z,47nm,1.0s,baz=129,slow=7.8,SNR=352						
ASAR				ScP	**ScP**	**18 01 54.3**	**-3.9**
	comp=Z,1.6nm,1.0s,baz=130,slow=3.5,SNR=4.3						
ASAR				PKiKP	**PKiKP**	**18 05 28.9**	**-2.0**
	comp=Z,0.3nm,0.8s,baz=127,slow=1.3,SNR=1.5						
ASAR				LR	LR	18 10 04.5	
	comp=Z,4µm,18.7s,baz=139,slow=35						
ASPA	**Alice Springs**	**36.36**	**290**	P	**P**	**17 55 46.5**	**-0.9**
	baz=36						
COEN	**Coen**	**37.76**	**312**	P	**P**	**17 55 57.5**	**-1.8**
TBI	**Tubuai**	**37.83**	**71**	*e*P	**P**	**17 55 58.7**	**-1.1**
	comp=Z,152nm,1.0s						
TBI				*e*S	**S**	**18 01 50.4**	**-0.3**
	comp=Z,884nm,28.0s						
TBI				*e*LR	LR	18 06 07.3	
	comp=Z,3µm,33.8s						
WR0	**Warramunga Arr**	**38.45**	**295**	P	**P**	**17 56 03.9**	**-1.3**
WR0				IAmb	IAmb	17 56 20.4	
	comp=Z,113nm,1.2s						
WR0				IAMs_20	IAMs_20	18 11 25.2	
	comp=Z,6µm,21.0s						
WR8	**Warramunga Arr**	**38.48**	**295**	IAMs_20	IAMs_20	18 11 27.0	
	comp=Z,5µm,20.0s						
WR7	**Warramunga Arr**	**38.50**	**295**	IAMs_20	IAMs_20	18 11 13.4	
	comp=Z,4µm,21.0s						
WR6	**Warramunga Arr**	**38.51**	**295**	IAMs_20	IAMs_20	18 11 27.9	
	comp=Z,5µm,19.0s						
WR3	**Warramunga Arr**	**38.56**	**295**	IAMs_20	IAMs_20	18 11 29.2	
	comp=Z,6µm,19.0s						
WB2	**Warramunga Arr**	**38.59**	**295**	P	**P**	**17 56 05.7**	**-0.6**
	baz=39						
WB2	**Warramunga Arr**	**38.59**	**295**	P	**P**	**17 56 05.0**	**-1.3**
WB2				IAmb	IAmb	17 56 22.3	
	comp=Z,120nm,1.2s						
WB2				IAMs_20	IAMs_20	18 11 30.9	
	comp=Z,6µm,19.0s						
WC2	**Warramunga Arr**	**38.59**	**295**	IAMs_20	IAMs_20	18 11 31.1	
	comp=Z,6µm,20.0s						
WR1	**Warramunga Arr**	**38.60**	**295**	IAMs_20	IAMs_20	18 10 42.3	
	comp=Z,5µm,18.0s						
WRAB	**Tennant Creek**	**38.60**	**295**	*d i*P	**P**	**17 56 05.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,105nm,1.7s						
WRAB				MLR	MLR		
	comp=Z,5µm,16.0s						
WRAB	**Tennant Creek**	**38.60**	**295**	P	**P**	**17 56 05.1**	**-1.3**
WRAB	**Tennant Creek**	**38.60**	**295**	IAMs_20	IAMs_20	18 11 30.9	
	comp=Z,6µm,19.0s						
WRA	**Warramunga Arr**	**38.60**	**295**	P	**P**	**17 56 05.4**	**-0.9**
	comp=Z,22nm,1.0s,baz=134,slow=7.5,SNR=79						
WRA				PcP	**PcP**	**17 58 17.6**	**-1.1**
	comp=Z,4.2nm,0.7s,baz=130,slow=2.8,SNR=6.0						
WRA				ScP	**S**	**18 02 04.5**	**+1.9**
	comp=Z,2.5nm,1.0s,baz=132,slow=3.8,SNR=4.7						
WRA				LR	LR	18 11 52.3	
	comp=Z,5µm,18.9s,baz=130,slow=36						
WRA	**Warramunga Arr**	**38.60**	**295**	P	**P**	**17 56 05.4**	**-0.9**
WRA						18 02 04.5	
WRA						18 58 17.6	
WB3	**Warramunga Arr**	**38.60**	**295**	IAMs_20	IAMs_20	18 11 22.4	
	comp=Z,7µm,20.0s						
WC1	**Warramunga Arr**	**38.61**	**295**	IAMs_20	IAMs_20	18 11 22.6	
	comp=Z,7µm,19.0s						
WB4	**Warramunga Arr**	**38.61**	**295**	IAMs_20	IAMs_20	18 11 31.5	
	comp=Z,6µm,20.0s						
WB6	**Warramunga Arr**	**38.64**	**295**	IAMs_20	IAMs_20	18 11 31.2	
	comp=Z,5µm,19.0s						
WB8	**Warramunga Arr**	**38.66**	**295**	IAMs_20	IAMs_20	18 11 44.8	
	comp=Z,6µm,21.0s						
WB9	**Warramunga Arr**	**38.67**	**295**	IAMs_20	IAMs_20	18 11 24.1	
	comp=Z,7µm,18.0s						
WB0	**Warramunga Arr**	**38.69**	**295**	P	**P**	**17 56 06.1**	**-1.0**
WB0				IAmb	IAmb	17 56 22.3	
	comp=Z,163nm,1.4s						
WB0				IAMs_20	IAMs_20	18 11 32.4	
	comp=Z,5µm,20.0s						
WRKA	**Warakurna**	**39.42**	**283**	P	**P**	**17 56 12.3**	**-1.0**
	baz=40,SNR=28						
PMG	**Port Moresby**	**39.62**	**321**	⇑*e*P	**P**	**17 56 15.1**	**+0.3**
PMG				pmax	pmax		
	comp=Z,103nm,1.0s						
PMG				MLR	MLR		
	comp=Z,4µm,14.0s						
PMG	**Port Moresby**	**39.62**	**321**	P	**P**	**17 56 14.2**	**-0.7**
PMG				IAmb	IAmb	17 56 22.9	
	comp=Z,116nm,0.9s						
PMG	**Port Moresby**	**39.62**	**321**	P	**P**	**17 56 16.6**	**+1.8**
CASY	**Casey**	**39.92**	**213**	P	**P**	**17 56 14.7**	**-2.1**
CASY	**Casey**	**39.92**	**213**	IAMs_20	IAMs_20	18 10 09.6	
	comp=Z,4µm,19.0s						
PAE	**Paea**	**41.64**	**65**	*e*P	**P**	**17 56 30.4**	**-1.1**
	comp=Z,22nm,1.1s						
PPT2	**Papeete2**	**41.69**	**65**	*e*P	**P**	**17 56 31.3**	**-0.8**
	comp=Z,124nm,1.1s						
PPT2				*e*S	**S**	**18 02 47.8**	**-1.1**
	comp=Z,1µm,24.8s						
PPT2				*e*LQ	LQ	18 06 15.9	
	comp=Z,3µm,28.2s						
PPT2				*e*LR	LR	18 08 07.3	
	comp=Z,4µm,25.8s						
PPTF	**Pamatai, Papee**	**41.70**	**65**	P	**P**	**17 56 30.4**	**-1.7**
PPTF				IAmb	IAmb	17 56 38.2	
	comp=Z,168nm,1.1s						
PPT	**Papeete**	**41.71**	**65**	P	**P**	**17 56 34.0**	**+1.9**
	comp=Z,117nm,1.0s,baz=334,slow=7.4,SNR=8.4						
PPT				LR	LR	18 12 07.1	
	comp=Z,2µm,19.1s,slow=34						
TVO	**Taravao**	**41.77**	**65**	*e*P	**P**	**17 56 31.7**	**-1.0**
	comp=Z,22nm,0.9s						
TIAR	**Tiarei**	**41.87**	**65**	*e*P	**P**	**17 56 32.5**	**-1.0**
	comp=Z,26nm,0.9s						
RABL	**Rabaul**	**42.27**	**331**	P	**P**	**17 56 35.6**	**-1.1**
RABL	**Rabaul**	**42.27**	**331**	P	**P**	**17 56 40.3**	**+3.5**
MEH	**Mehetia**	**42.50**	**67**	*e*P	**P**	**17 56 37.8**	**-0.8**
	comp=Z,60nm,1.4s						
KLBR	**Kellerberrin**	**43.43**	**267**	P	**P**	**17 56 46.0**	**-0.1**
	baz=43,SNR=7.3						
TARA	**Tarawa**	**44.24**	**2**	IAMs_20	IAMs_20	18 14 01.4	
	comp=Z,3µm,21.0s						
MUN	**Mundaring**	**44.36**	**265**	P	**P**	**17 56 53.5**	**0.0**
	baz=44,SNR=3.3						
VAH	**Vaihoa**	**44.68**	**64**	*e*P	**P**	**17 56 54.6**	**-1.5**
	comp=Z,163nm,1.1s						
KDU	**Kakadu**	**45.12**	**300**	P	**P**	**17 56 60.0**	**+0.3**
	baz=45,SNR=6.8						
MEEK	**Meekatharra**	**45.50**	**273**	P	**P**	**17 57 01.9**	**-0.8**
	baz=46,SNR=32						
FITZ	**Fitzroy Crossi**	**45.80**	**288**	P	**P**	**17 57 04.3**	**-0.7**
	baz=46,SNR=8.0						
FITZ	**Fitzroy Crossi**	**45.80**	**288**	P	**P**	**17 57 03.8**	**-1.3**
MTN	**Manton Dam**	**45.86**	**299**	P	**P**	**17 57 05.7**	**+0.1**
	baz=46,SNR=6.0						
MTN	**Manton Dam**	**45.86**	**299**	P	**P**	**17 57 05.1**	**-0.4**
MORW	**Morawa**	**46.02**	**269**	P	**P**	**17 57 06.7**	**-0.1**
	baz=46,SNR=6.7						
MORW	**Morawa**	**46.02**	**269**	P	**P**	**17 57 06.2**	**-0.6**
QSPA	**South Pole Qui**	**47.06**	**180**	P	**P**	**17 57 15.9**	**+1.3**
	comp=Z,37nm,1.0s,baz=24,slow=2.7,SNR=60						
QSPA	**South Pole Qui**	**47.06**	**180**	P	**P**	**17 57 17.0**	**+2.4**
QSPA	**South Pole Qui**	**47.06**	**180**	IAMs_20	IAMs_20	18 14 30.0	
	comp=Z,5µm,20.0s						
PSAC2	**Pilbara Seismi**	**47.61**	**280**	IAMs_20	IAMs_20	18 15 46.6	
	comp=Z,6µm,20.0s						
PSA00	**Pilbara Seismi**	**47.65**	**280**	P	**P**	**17 57 18.2**	**-1.3**
PSA00				IAmb	IAmb	17 57 19.7	
	comp=Z,87nm,1.1s						
PSAD1	**Pilbara Seismi**	**47.73**	**280**	IAMs_20	IAMs_20	18 16 14.8	
	comp=Z,6µm,21.0s						
RKT	**Rikitea**	**48.33**	**84**	*e*S	**S**	**18 04 23.9**	**-0.9**
	comp=Z,1µm,26.8s						
RKT				*e*LQ	LQ	18 09 06.8	
	comp=Z,3µm,35.0s						
RKT				*e*LR	LR	18 11 12.5	
	comp=Z,4µm,24.2s						
JAY	**Jayapura**	**48.71**	**317**	P	**P**	**17 57 28.0**	**+0.2**
	comp=Z,33nm,1.1s,baz=104,slow=4.3,SNR=2.9						
JAY				LR	LR	18 19 37.7	
	comp=Z,552nm,19.4s,baz=153,slow=38						
GENI	**Genyem**	**48.91**	**317**	P	**P**	**17 57 31.1**	**+1.8**
	comp=Z,64nm,1.2s						
SAUI	**Saumlaki**	**49.47**	**303**	IAMs_20	IAMs_20	18 21 19.4	
	comp=Z,3µm,18.0s						
GIRL	**Giralia**	**51.06**	**275**	P	**P**	**17 57 44.9**	**-0.7**
	baz=51,SNR=5.4						
GIRL	**Giralia**	**51.06**	**275**	IAMs_20	IAMs_20	18 18 35.9	
	comp=Z,3µm,19.0s						
BAKI	**Biak**	**52.21**	**313**	P	**P**	**17 57 56.0**	**+1.8**
	comp=Z,150nm,1.3s						
SOEI	**Soe**	**52.64**	**295**	P	**P**	**17 57 57.4**	**-0.2**
SOEI	**Soe**	**52.64**	**295**	P	**P**	**17 57 58.7**	**+1.1**
	comp=Z,2µmcomp=Z,228nm,1.1s						
FAKI	**Fak Fak**	**52.93**	**308**	IAMs_20	IAMs_20	18 19 58.2	
	comp=Z,3µm,19.0s						
TAOE	**Nuku Hiva Isla**	**54.30**	**66**	*e*S	**S**	**18 05 44.9**	**-2.7**
	comp=Z,714nm,27.7s						
TAOE				*e*LQ	LQ	18 11 34.7	
	comp=Z,3µm,31.2s						
TAOE				*e*LR	LR	18 13 55.1	
	comp=Z,2µm,25.9s						
MSAI	**Masohi**	**54.55**	**304**	P	**P**	**17 58 13.0**	**+1.5**
	comp=Z,570nmcomp=Z,28nm,1.0s						
MMRI	**Maumere**	**54.81**	**294**	IAMs_20	IAMs_20	18 23 19.7	
	comp=Z,3µm,19.0s						
EDFI	**Ende, Flores**	**55.10**	**293**	P	**P**	**17 58 16.2**	**+0.6**
	comp=Z,684nmcomp=Z,43nm,1.2s						
SIJI	**Sorong**	**55.16**	**308**	P	**P**	**17 58 16.8**	**+0.9**
	comp=Z,48nm,1.0s,baz=65,slow=3.8,SNR=10						
SIJI				LR	LR	18 21 35.9	
	comp=Z,1µm,18.7s,baz=138,slow=36						
SWI	**Sorong**	**55.17**	**308**	P	**P**	**17 58 16.8**	**+0.9**
	comp=Z,82nm,1.1s						
NLAI	**Namlea**	**55.76**	**303**	P	**P**	**17 58 21.5**	**+1.3**
	comp=Z,68nm,2.2s						
MAW	**Mawson**	**57.34**	**206**	P	**P**	**17 58 32.1**	**+1.3**
	comp=Z,33nm,1.0s,baz=116,slow=9.2,SNR=19						
MAW				LR	LR	18 21 29.4	
	comp=Z,4µm,19.8s,baz=100,slow=34						
MAW	**Mawson**	**57.34**	**206**	P	**P**	**17 58 30.9**	**+0.1**
SANI	**Sanana**	**57.37**	**302**	P	**P**	**17 58 33.3**	**+1.6**
	comp=Z,804nmcomp=Z,51nm,1.7s						
PLAI	**Plampang**	**57.71**	**290**	P	**P**	**17 58 35.3**	**+1.2**
	comp=Z,88nm,1.1s						
BELA	**Belgrano 2**	**58.29**	**174**	P	**P**	**17 58 37.5**	**+0.2**
TWSI	**Taliwang, Sumb**	**58.39**	**289**	P	**P**	**17 58 39.6**	**+0.8**
	comp=Z,1µmcomp=Z,78nm,1.1s						
BKSI	**Bulukumba**	**58.66**	**295**	P	**P**	**17 58 41.5**	**+0.8**
	comp=Z,67nm,1.1s						
KAPI	**Kappang**	**59.13**	**295**	P	**P**	**17 58 45.1**	**+1.1**
	comp=Z,94nm,1.1s,baz=181,slow=5.7,SNR=11						
KAPI				LR	LR	18 23 40.0	
	comp=Z,825nm,21.4s,baz=150,slow=36						
KAPI	**Kappang**	**59.13**	**295**	P	**P**	**17 58 43.2**	**-0.8**
KAPI	**Kappang**	**59.13**	**295**	IAMs_20	IAMs_20	18 22 16.3	
	comp=Z,2µm,19.0s						
BNSI	**Bone**	**59.35**	**295**	P	**P**	**17 58 47.2**	**+1.7**
	comp=Z,1µmcomp=Z,82nm,1.4s						
SPSI	**Sidrap Palu**	**59.90**	**295**	P	**P**	**17 58 49.6**	**+0.3**
	comp=Z,1µmcomp=Z,95nm,1.2s						
LUWI	**Luwuk**	**60.17**	**300**	P	**P**	**17 58 51.7**	**+0.6**
LUWI	**Luwuk**	**60.17**	**300**	P	**P**	**17 58 52.3**	**+1.2**
	comp=Z,4µmcomp=Z,309nm,1.3s						
TTSI	**Tana Toraja**	**60.55**	**296**	P	**P**	**17 58 54.3**	**+0.5**
	comp=Z,1µmcomp=Z,62nm,1.3s						
KMSI	**Cibinong**	**60.66**	**303**	P	**P**	**17 58 56.2**	**+1.7**
	comp=Z,2µmcomp=Z,160nm,1.1s						
APSI	**Ampana**	**60.98**	**299**	P	**P**	**17 58 58.2**	**+1.5**
	comp=Z,805nmcomp=Z,34nm,1.0s						
GMJI	**Gumukmas**	**61.11**	**287**	P	**P**	**17 58 58.4**	**+0.8**
	comp=Z,88nm,1.2s						
GTOI	**Gorontalo**	**61.31**	**302**	P	**P**	**17 59 01.4**	**+2.5**
	comp=Z,666nmcomp=Z,24nm,1.1s						
GUMO	**Guam**	**61.36**	**330**	LR	LR	18 24 08.8	
	comp=Z,433nm,19.6s,baz=118,slow=35						
MRSI	**Marisa**	**61.86**	**301**	P	**P**	**17 59 02.3**	**-0.3**
	comp=Z,711nmcomp=Z,61nm,1.2s						
PWJI	**Pagerwojo**	**62.44**	**286**	P	**P**	**17 59 07.7**	**+1.2**
	comp=Z,80nm,1.2s						
SYO	**Syowa Base**	**62.68**	**198**	⇓*e*P	**P**	**17 59 06.6**	**-0.8**
SYO	**Syowa Base**	**62.68**	**198**	⇑*i*sP	sP	17 59 11.2	-1.5
KBKI	**Kotabaru**	**62.80**	**293**	P	**P**	**17 59 09.8**	**+0.9**
	comp=Z,1µmcomp=Z,61nm,1.0s						
MPSI	**Mapaga**	**63.05**	**299**	P	**P**	**17 59 10.8**	**+0.2**
	comp=Z,1µmcomp=Z,95nm,1.3s						
TOLI2	**Tolitoli**	**63.08**	**300**	P	**P**	**17 59 10.0**	**-0.8**
TOLI2				IAmb	IAmb	17 59 12.7	
	comp=Z,58nm,1.1s						
UGM	**Wanagama**	**63.42**	**285**	IAMs_20	IAMs_20	18 28 04.7	
	comp=Z,2µm,20.0s						
BBKI	**Banjar Baru**	**63.58**	**292**	P	**P**	**17 59 14.9**	**+0.8**
	comp=Z,1µmcomp=Z,102nm,1.7s						
BKB	**Balikpapan**	**63.81**	**295**	IAMs_20	IAMs_20	18 29 04.2	
	comp=Z,2µm,19.0s						
DAV	**Davao City (W)**	**64.88**	**308**	P	**P**	**17 59 23.2**	**+0.7**
	comp=Z,165nm,0.4s,baz=93,slow=4.8,SNR=6.2						
DAV				LR	LR	18 28 00.4	
	comp=Z,1µm,19.1s,baz=144,slow=36						
KPJI	**Karang Pucung**	**64.95**	**284**	P	**P**	**17 59 24.0**	**+0.9**
	comp=Z,77nm,1.5s						
XMIS	**Christmas Isla**	**65.16**	**279**	P	**P**	**17 59 22.9**	**-1.6**
MTKI	**Muara Teweh, K**	**65.39**	**294**	P	**P**	**17 59 26.8**	**+0.9**
	comp=Z,1µmcomp=Z,76nm,1.1s						
SNAA	**Sanae**	**65.50**	**182**	P	**P**	**17 59 26.8**	**+0.8**
SNAA	**Sanae**	**65.50**	**182**	*c i*P	**P**	**17 59 26.3**	**+0.3**
SNAA				pmax	pmax		
	comp=Z,37nm,1.3s						
SNAA	**Sanae**	**65.50**	**182**	P	**P**	**17 59 23.3**	**-2.6**
SNAA				IAmb	IAmb	17 59 45.5	
	comp=Z,53nm,1.4s						
NVL	**N'lazarevskaya**	**65.52**	**187**	*e*P	**P**	**17 59 25.5**	**-0.5**
NVL				*e*S	**S**	**18 08 07.1**	**-3.2**
NVL				pmax	pmax		
	comp=Z,96nm,1.3s						
CISI	**Cisompet, Garu**	**65.60**	**283**	P	**P**	**17 59 26.7**	**-0.7**
CISI	**Cisompet, Garu**	**65.60**	**283**	P	**P**	**17 59 28.2**	**+0.8**
	comp=Z,2µmcomp=Z,87nm,0.8s						
VNA3	**Neumayer Olymp**	**66.00**	**180**	P	**P**	**17 59 30.0**	**+0.9**
LEM	**Lembang**	**66.24**	**283**	P	**P**	**17 59 33.0**	**+1.3**
	comp=Z,92nm,1.0s,baz=157,slow=7.8,SNR=19						
LEM				LR	LR	18 28 03.5	
	comp=Z,2µm,18.4s,baz=140,slow=36						
LEM	**Lembang**	**66.24**	**283**	P	**P**	**17 59 33.0**	**+1.3**
VNA2	**Neumayer--Watz**	**66.32**	**180**	P	**P**	**17 59 32.1**	**+0.9**
	baz=170,slow=7.3						
VNA1	**Neumayer--Stat**	**66.60**	**180**	P	**P**	**17 59 34.1**	**+1.2**
DBJI	**Dramaga**	**67.05**	**283**	P	**P**	**17 59 37.4**	**+0.8**
	comp=Z,106nm,1.2s						
MYLDM	**Lahad Datu**	**67.65**	**301**	P	**P**	**17 59 41.8**	**+1.5**
CGJI	**Cibinong**	**67.76**	**282**	P	**P**	**17 59 42.5**	**+1.4**
	comp=Z,67nm,1.1s						
SPMM	**Sapulut**	**68.58**	**299**	P	**P**	**17 59 47.0**	**+0.7**
BLSI	**Bandar Lampung**	**68.94**	**283**	P	**P**	**17 59 49.3**	**+0.8**
KASI	**Kota Agung**	**69.37**	**282**	P	**P**	**17 59 52.4**	**+1.2**
	comp=Z,54nm,0.8s						
SBUM	**Sibu**	**69.68**	**294**	P	**P**	**17 59 52.0**	**-1.0**
SBUM				IAmb	IAmb	17 59 54.5	
	comp=Z,50nm,1.2s						
SBUM				IAMs_20	IAMs_20	18 31 59.1	
	comp=Z,1µm,19.0s						
SBUM	**Sibu**	**69.68**	**294**	P	**P**	**17 59 54.0**	**+0.9**
KKM	**Kota Kinabalu**	**69.76**	**300**	P	**P**	**17 59 52.9**	**-0.7**
KKM				IAmb	IAmb	17 59 54.9	
	comp=Z,74nm,1.1s						
KLSI		**69.78**	**283**	P	**P**	**17 59 54.0**	**+0.3**
	comp=Z,17nm,1.2s						
LWLI	**Liwa**	**70.03**	**282**	P	**P**	**17 59 56.0**	**+0.6**
	comp=Z,1µmcomp=Z,58nm,1.1s						
KIP	**Kipapa**	**70.11**	**30**	⇑*e*P	**P**	**17 59 51.3**	**-4.1**
KIP				pmax	pmax		
	comp=Z,46nm,1.4s						
MDSI	**Maura Dua**	**70.32**	**283**	P	**P**	**17 59 56.7**	**-0.3**
	comp=Z,51nm,1.2s						
PPBI	**Pangkal Pinang**	**70.55**	**286**	P	**P**	**17 59 59.4**	**+1.0**
	comp=Z,6µmcomp=Z,32nm,1.4s						
PMBI	**Palembang**	**70.98**	**284**	IAMs_20	IAMs_20	18 32 47.7	
	comp=Z,1µm,18.0s						
LHSI	**Lahat**	**71.24**	**283**	P	**P**	**18 00 03.5**	**+0.9**
	comp=Z,56nm,1.1s						
KSI	**Kapahiang**	**72.03**	**282**	P	**P**	**18 00 08.6**	**+1.1**
	comp=Z,5µmcomp=Z,95nm,0.9s						
MASI	**Maura Aman, Be**	**72.63**	**282**	P	P	18 00 25.0	+14
TGY	**Tagaytay City**	**73.21**	**309**	P	**P**	**18 00 14.4**	**0.0**
	comp=Z,136nm,0.4s,baz=211,slow=3.7,SNR=3.9						
KRJI	**Kerinci**	**73.92**	**282**	P	**P**	**18 00 19.7**	**+1.0**
	comp=Z,399nm,1.0s						
MYKOM	**Kota Tinggi**	**74.95**	**287**	P	**P**	**18 00 25.4**	**+0.8**
MYKOM				IAMs_20	IAMs_20	18 34 16.3	
	comp=Z,2µm,19.0s						
MYKOM	**Kota Tinggi**	**74.95**	**287**	P	**P**	**18 00 26.0**	**+1.5**
PDSI	**Padang**	**75.45**	**283**	P	**P**	**18 00 26.9**	**-0.6**
	comp=Z,24nm,1.0s						
BKNI	**Bangkinang**	**75.90**	**284**	P	**P**	**18 00 29.1**	**-1.0**
BKNI				IAMs_20	IAMs_20	18 35 44.4	
	comp=Z,1µm,19.0s						
EFI	**East Falkland**	**76.40**	**151**	⇑*e*P	P	18 00 27.3	-5.0
EFI				pmax	pmax		
	comp=Z,78nm,1.3s						
LL01	**San Ignacio de**	**77.50**	**137**	IAMs_20	IAMs_20	18 27 11.6	
	comp=Z,2µm,21.0s						
IPM	**Ipoh**	**78.83**	**287**	P	**P**	**18 00 46.6**	**+0.1**
IPM				IAmb	IAmb	18 00 54.4	
	comp=Z,48nm,1.1s						
IPM				IAMs_20	IAMs_20	18 35 29.1	
	comp=Z,1µm,19.0s						
IPM	**Ipoh**	**78.83**	**287**	P	**P**	**18 00 47.0**	**+0.5**
GSI	**Gunungsitoli**	**79.06**	**282**	P	**P**	**18 00 48.2**	**+0.5**
GSI				IAMs_20	IAMs_20	18 39 24.9	
	comp=Z,2µm,18.0s						
GSI	**Gunungsitoli**	**79.06**	**282**	P	**P**	**18 00 49.5**	**+1.8**
	comp=Z,2µmcomp=Z,146nm,1.1s						
RPSI	**Rantau Prapat**	**79.06**	**284**	P	**P**	**18 00 46.9**	**-0.8**
RPSI				IAmb	IAmb	18 00 55.1	
	comp=Z,44nm,1.0s						
RPSI				IAMs_20	IAMs_20	18 40 27.1	
	comp=Z,1µm,18.0s						
PSI	**Prapat**	**79.13**	**284**	LR	LR	18 38 20.4	
	comp=Z,799nm,18.5s,baz=91,slow=38						
PSI	**Prapat**	**79.13**	**284**	P	**P**	**18 00 46.9**	**-1.4**
PSI				pmax	pmax		
	comp=Z,44nm,1.0s						
PSI				MLR	MLR		
	comp=Z,1µm,18.0s						
DLV	**T Lat**	**79.18**	**298**	P	**P**	**18 00 49.0**	**+0.5**
DLV				IAmb	IAmb	18 01 04.8	
	comp=Z,92nm,1.3s						
PLCA	**Paso Flores**	**79.66**	**137**	P	**P**	**18 00 53.0**	**+2.3**
	comp=Z,19nm,1.0s,baz=208,slow=9.0,SNR=11						
PLCA				LR	LR	18 28 24.6	
	comp=Z,1µm,21.5s,baz=211,slow=30						
PLCA	**Paso Flores**	**79.66**	**137**	P	**P**	**18 00 51.7**	**+0.9**
KULM	**Kulim**	**79.67**	**287**	P	**P**	**18 00 51.3**	**+0.3**
KULM				IAmb	IAmb	18 00 59.2	
	comp=Z,56nm,1.1s						
KULM				IAMs_20	IAMs_20	18 35 32.3	
	comp=Z,1µm,21.0s						
KULM	**Kulim**	**79.67**	**287**	P	**P**	**18 00 52.0**	**+1.0**
TSI	**Tuntungan**	**79.88**	**284**	P	**P**	**18 00 53.5**	**+1.3**
	comp=Z,204nm,1.1s						
LC01	**Cunco**	**80.36**	**135**	P	**P**	**18 00 55.2**	**+0.7**
LC01				IAmb	IAmb	18 01 08.0	
	comp=Z,70nm,1.1s						
KCSI	**Kotacane, Aceh**	**80.46**	**284**	P	**P**	**18 00 56.1**	**+0.8**
	comp=Z,718nmcomp=Z,48nm,1.2s						
TPTI		**80.69**	**283**	P	**P**	**18 00 57.4**	**+0.8**
	comp=Z,413nmcomp=Z,34nm,0.9s						
SSLB	**Suanglung**	**81.06**	**314**	P	**P**	**18 00 56.5**	**-1.7**
YHNB	**Yeheng**	**81.56**	**315**	P	**P**	**18 01 01.9**	**+1.0**
YHNB				IAmb	IAmb	18 01 15.0	
	comp=Z,51nm,1.4s						
MLSI	**Meulaboh, Aceh**	**81.95**	**283**	P	**P**	**18 01 04.4**	**+1.2**
	comp=Z,167nm,1.1s						
QZH	**Quanzhou**	**83.24**	**313**	*e*P	**P**	**18 01 10.6**	**+1.0**
QZH				S	**S**	**18 11 31.5**	**+1.6**
QZH				LR	LR		
	comp=Z,470nm,23.7s						
QZH				LR	LR		
	comp=Z,300nm,22.7s						
QZH				LR	LR		
	comp=Z,780nm,27.5s						
QIZ	**Qiongzhong**	**83.64**	**303**	P	**P**	**18 01 11.5**	**-0.3**
QIZ				S	**S**	**18 11 35.3**	**+1.1**
QIZ				SS	**SS**	**18 16 56.4**	**-5.0**
QIZ				LR	LR		
	comp=Z,160nm,5.9s						
QIZ				LR	LR		
	comp=Z,380nm,17.6s						
QIZ				LR	LR		
	comp=Z,360nm,27.5s						
JMN	**Monobe**	**83.74**	**329**	P	**P**	**18 01 12.0**	**0.0**
BO02	**Sierra Bellavi**	**84.03**	**133**	P	**P**	**18 01 14.6**	**+0.7**
BO02				IAMs_20	IAMs_20	18 29 51.6	
	comp=Z,1µm,20.0s						
INU	**Inuyama**	**84.08**	**332**	P	**P**	**18 01 13.4**	**-0.3**
INU				IAmb	IAmb	18 01 30.5	
	comp=Z,82nm,1.5s						
JNU	**Nakatsue**	**84.37**	**327**	P	**P**	**18 01 15.7**	**+0.4**
	comp=Z,20nm,0.9s,baz=240,slow=2.0,SNR=4.3						
JNU	**Nakatsue**	**84.37**	**327**	P	**P**	**18 01 14.2**	**-1.0**
MJAR	**Matsushiro Arr**	**84.77**	**334**	P	**P**	**18 01 17.8**	**+0.6**
	comp=Z,7.7nm,1.1s,baz=159,slow=5.8,SNR=8.8						
MJAR				LR	LR	18 37 24.9	
	comp=Z,185nm,20.2s,baz=165,slow=34						
MAJO	**Matsushiro**	**84.77**	**334**	⇓*e*P	**P**	**18 01 14.8**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,48nm,1.8s						
MAJO	**Matsushiro**	**84.77**	**334**	P	**P**	**18 01 16.1**	**-1.1**
MAJO				IAmb	IAmb	18 01 31.6	
	comp=Z,37nm,1.4s						
MAT	**Matsushiro**	**84.77**	**334**	P	**P**	**18 01 15.4**	**-1.8**
MAT				S	**S**	**18 11 43.4**	**-1.4**
VA01	**Torpederas**	**84.89**	**131**	P	**P**	**18 01 16.1**	**-2.1**
VA01				IAmb	IAmb	18 01 25.7	
	comp=Z,36nm,1.1s						
MT02	**Curacav**	**84.99**	**132**	P	**P**	**18 01 17.9**	**-0.8**
MT02				IAmb	IAmb	18 01 40.3	
	comp=Z,44nm,1.2s						
ROC1	**El Roble**	**85.27**	**132**	P	**P**	**18 01 18.4**	**-2.0**
PEL	**Peldehue**	**85.33**	**132**	P	**P**	**18 01 20.1**	**-0.4**
PEL				pmax	pmax		
	comp=Z,92nm,1.5s						
PEL	**Peldehue**	**85.33**	**132**	P	**P**	**18 01 20.1**	**-0.4**
PEL				IAmb	IAmb	18 01 34.0	
	comp=Z,92nm,1.5s						
VA03	**San Esteban**	**85.69**	**132**	P	**P**	**18 01 21.3**	**-1.0**
CO02	**Combarbal**	**86.62**	**131**	P	**P**	**18 01 27.0**	**0.0**
CO02				IAmb	IAmb	18 01 40.6	
	comp=Z,35nm,0.9s						
SSE	**Sheshan**	**86.94**	**319**	P	**P**	**18 01 29.9**	**+1.9**

SSE				S	**S**	**18 12 12.7**	**+6.5**
SSE				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,120nm,4.0s						
SSE				LR	LR		
	comp=Z,260nm,17.8s						
SSE				LR	LR		
	comp=Z,210nm,21.4s						
CO03	**El Pedregal**	**87.07**	**130**	P	**P**	**18 01 32.1**	**+2.9**
CO03				IAmb	IAmb	18 01 51.4	
	comp=Z,44nm,1.1s						
GO04	**Tololo Observa**	**87.52**	**130**	P	**P**	**18 01 28.8**	**-2.7**
GO04				IAmb	IAmb	18 01 41.2	
	comp=Z,31nm,1.1s						
ZON	**Zonda**	**87.64**	**132**	P	**P**	**18 01 33.7**	**+1.9**
ZON				pmax	pmax		
	comp=Z,25nm,1.2s						
ZON	**Zonda**	**87.64**	**132**	P	**P**	**18 01 33.7**	**+1.9**
ZON				IAmb	IAmb	18 01 56.6	
	comp=Z,25nm,1.2s						
CO01	**Juntas del Tor**	**88.06**	**130**	P	**P**	**18 01 38.9**	**+4.8**
CO01				IAmb	IAmb	18 02 06.6	
	comp=Z,70nm,1.5s						
ERM	**Erimo**	**88.40**	**339**	⇑*e*P	**P**	**18 01 32.0**	**-2.7**
ERM				pmax	pmax		
	comp=Z,39nm,1.4s						
ERM				MLR	MLR		
	comp=Z,704nm,19.0s						
LCO	**Las Campanas**	**88.45**	**129**	P	**P**	**18 01 38.4**	**+2.4**
LCO				pmax	pmax		
	comp=Z,52nm,1.4s						
LCO	**Las Campanas**	**88.45**	**129**	P	**P**	**18 01 38.4**	**+2.4**
LCO				IAmb	IAmb	18 02 07.2	
	comp=Z,52nm,1.4s						
AC05	**El Transito**	**88.83**	**129**	P	**P**	**18 01 38.4**	**+0.8**
AC04	**Llanos de Chal**	**88.85**	**129**	IAMs_20	IAMs_20	18 31 07.0	
	comp=Z,1µm,21.0s						
NJ2	**Nanjing**	**88.86**	**318**	⇑P	**P**	**18 01 38.1**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,30nm,1.2s						
NJ2				LR	LR		
	comp=Z,530nm,20.1s						
NJ2				LR	LR		
	comp=Z,490nm,16.2s						
NJ2				LR	LR		
	comp=Z,760nm,22.6s						
SLVN	**Son La**	**89.06**	**301**	P	**P**	**18 01 40.3**	**+1.8**
SLVN				IAmb	IAmb	18 01 55.9	
	comp=Z,41nm,1.5s						
KSRS	**Korea Array**	**89.32**	**327**	P	**P**	**18 01 40.4**	**+1.2**
	comp=Z,18nm,1.1s,baz=147,slow=5.8,SNR=15						
KSRS				LR	LR	18 41 52.9	
	comp=Z,298nm,18.4s,baz=149,slow=36						
YUK	**Yuzh-Kuril'sk**	**89.65**	**342**	*e*P	**P**	**18 01 36.0**	**-4.6**
YUK				*i* S	**SKSac**	**18 12 04.8**	**-5.7**
YUK				pmax	pmax		
	comp=Z,232nm,1.4s						
YUK				pmax	pmax		
	comp=E,105nm,1.2s						
YUK				pmax	pmax		
	comp=N,108nm,1.3s						
PBA	**Port Blair**	**89.67**	**286**	IAMs_20	IAMs_20	18 45 52.3	
	comp=Z,1µm,18.0s						
GO03	**Copiap**	**89.80**	**129**		**P**	**18 01 43.3**	**+1.3**
INCN	**Inchon**	**89.87**	**326**	P	**P**	**18 01 42.7**	**+0.9**
INCN				pmax	pmax		
	comp=Z,120nm,1.4s						
INCN				MLR	MLR		
	comp=Z,900nm,22.0s						
INCN	**Inchon**	**89.87**	**326**	P	**P**	**18 01 42.7**	**+0.9**
WHN	**Wuhan**	**89.96**	**314**	⇓P	**P**	**18 01 44.0**	**+1.6**
WHN				S	**S**	**18 12 36.7**	**+1.8**
WHN				pmax	pmax		
	comp=Z,300nm,1.8s						
WHN				LR	LR		
	comp=Z,3µm,37.0s						
CM31	**Chiang Mai Arr**	**90.19**	**295**	P	**P**	**18 01 44.2**	**+0.5**
CM31				IAmb	IAmb	18 02 00.1	
	comp=Z,32nm,1.1s						
CMAR	**Chiang Mai Arr**	**90.19**	**295**	P	**P**	**18 01 44.3**	**+0.5**
	comp=Z,6.9nm,0.7s,baz=151,slow=3.5,SNR=60						
CMAR				LR	LR	18 47 03.1	
	comp=Z,318nm,18.2s,baz=182,slow=39						
CHTO	**Chiang Mai**	**90.44**	**295**	P	**P**	**18 01 45.2**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,29nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,500nm,19.0s						
CHTO	**Chiang Mai**	**90.44**	**295**	P	**P**	**18 01 45.1**	**+0.2**
AC02	**Maricunga**	**91.01**	**129**	IAMs_20	IAMs_20	18 32 05.9	
	comp=Z,1µm,22.0s						
GYA	**Guiyang**	**91.15**	**306**	⇓P	**P**	**18 01 49.9**	**+1.7**
GYA				SKS	**SKSac**	**18 12 15.9**	**-4.5**
GYA				S	**S**	**18 12 47.5**	**+1.1**
GYA				pmax	pmax		
	comp=Z,22nm,1.1s						
GYA				LR	LR		
	comp=Z,290nm,26.8s						
GYA				LR	LR		
	comp=Z,480nm,28.6s						
GYA				LR	LR		
	comp=Z,820nm,27.5s						
GO02	**Mina Guanaco**	**92.03**	**128**	P	**P**	**18 01 52.6**	**-0.2**
GO02				IAMs_20	IAMs_20	18 32 30.9	
	comp=Z,973nm,20.0s						
ENH	**Enshi**	**92.40**	**310**	P	**P**	**18 01 54.4**	**+0.6**
ENH				IAmb	IAmb	18 02 07.8	
	comp=Z,42nm,1.3s						
KMI	**Kunming**	**92.55**	**302**	⇓*e*P	**P**	**18 01 56.5**	**+1.6**
KMI				pP	pP	18 01 58.9	0.0
KMI				sP	sP	18 02 00.2	-0.1
KMI				SKS	**SKSac**	**18 12 28.2**	**-0.4**
KMI				S	**S**	**18 12 56.7**	**-2.5**
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI				pmax	pmax		
	comp=Z,79nm,3.5s						
KMI				LR	LR		
	comp=Z,350nm,20.5s						
KMI				LR	LR		
	comp=Z,220nm,12.2s						
KMI				LR	LR		
	comp=Z,320nm,19.4s						
KMI	**Kunming**	**92.55**	**302**	P	**P**	**18 01 56.2**	**+1.3**
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				MLR	MLR		
	comp=Z,700nm,21.0s						
KMI	**Kunming**	**92.55**	**302**	P	**P**	**18 01 56.2**	**+1.3**
KMI				IAmb	IAmb	18 02 21.3	
	comp=Z,17nm,1.0s						
TIA	**Tai'an**	**93.06**	**319**	P	**P**	**18 01 57.5**	**+0.9**
TIA				pmax	pmax		
	comp=Z,23nm,1.4s						
YSS	**Yuzh-Sakhalins**	**93.13**	**341**	*e*P	**P**	**18 02 00.5**	**+3.9**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=Z,1µm,19.0s						
YSS	**Yuzh-Sakhalins**	**93.13**	**341**	IAMs_20	IAMs_20	18 41 11.9	
	comp=Z,1µm,20.0s						
USRK	**Ussuriysk Ar.**	**93.72**	**333**	P	**P**	**18 02 01.1**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=197,slow=5.8,SNR=4.0						
USRK				LR	LR	18 40 23.6	
	comp=Z,233nm,21.6s,baz=141,slow=33						
SKR	**Severo-Kuril's**	**94.30**	**350**	*e*P	P	18 01 55.0	-6.9
SKR				*e*S	**S**	**18 13 12.1**	**-0.8**
SKR				pmax	pmax		
	comp=Z,1µm,4.9s						
SKR				pmax	pmax		
	comp=Z,500nm,5.0s						
SKR				MLR	MLR		
	comp=Z,600nm,17.0s						
TA01	**Diego Aracena**	**95.18**	**124**	IAMs_20	IAMs_20	18 34 33.7	
	comp=Z,1µm,21.0s						
PALK	**Pallekele**	**95.35**	**275**	IAMs_20	IAMs_20	18 43 25.6	
	comp=Z,1µm,19.0s						
XAN	**Xi'an**	**95.57**	**312**	P	**P**	**18 02 09.0**	**+0.7**
XAN				pP	sP	18 02 15.5	+1.8
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,200nm,4.3s						
XAN				LR	LR		
	comp=Z,480nm,18.3s						
XAN				LR	LR		
	comp=Z,150nm,16.3s						
XAN				LR	LR		
	comp=Z,750nm,20.1s						
XAN	**Xi'an**	**95.57**	**312**	P	**P**	**18 02 06.5**	**-1.8**
XAN				pmax	pmax		
	comp=Z,17nm,1.2s						
XAN				MLR	MLR		
	comp=Z,600nm,20.0s						
XAN	**Xi'an**	**95.57**	**312**	P	**P**	**18 02 06.5**	**-1.8**
PAYG	**Puerto Ayora**	**95.69**	**96**	IAMs_20	IAMs_20	18 36 34.4	
	comp=Z,1µm,19.0s						
CN2	**Changchun**	**95.72**	**329**	*e*P	**P**	**18 02 09.0**	**+0.4**
CN2				*e*PP	**PP**	**18 06 04.4**	**+3.5**
CN2				*e*S	**S**	**18 13 26.3**	**+0.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.7s						
CN2				LR	LR		
	comp=Z,460nm,20.0s						
CN2				LR	LR		
	comp=Z,520nm,20.0s						
CN2				LR	LR		
	comp=Z,780nm,22.0s						
PSGCX	**Pisagua**	**95.95**	**124**	IAMs_20	IAMs_20	18 35 41.2	
	comp=Z,1µm,21.0s						
CD2	**Chengdu**	**96.15**	**307**	P	**P**	**18 02 11.3**	**+0.3**
CD2				S	**S**	**18 13 31.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=Z,440nm,13.7s						
CD2				LR	LR		
	comp=Z,730nm,17.2s						
CD2				LR	LR		
	comp=Z,660nm,18.6s						
PETK	**Petropavlovsk-**	**96.51**	**352**	LR	LR	18 40 51.3	
	comp=Z,497nm,19.9s,baz=166,slow=32						
BJI	**Beijing**	**96.56**	**321**	P	**P**	**18 02 16.2**	**+3.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MNMC	**Minye Minye**	**96.62**	**124**	IAMs_20	IAMs_20	18 35 52.1	
	comp=Z,1µm,21.0s						
NNA	**Nana**	**97.27**	**114**	IAMs_20	IAMs_20	18 37 06.0	
	comp=Z,992nm,20.0s						
CPUP	**Villa Florida**	**97.73**	**137**	LR	LR	18 40 34.0	
	comp=Z,531nm,19.5s,baz=207,slow=32						
SLBS	**Sierra La Lagu**	**98.09**	**65**	IAMs_20	IAMs_20	18 43 46.5	
	comp=Z,1µm,18.0s						
SRIG	**Santa Rosalia**	**99.08**	**61**	IAMs_20	IAMs_20	18 38 49.8	
	comp=Z,1µm,20.0s						
HHC	**Hu-ho-hao-te**	**99.39**	**318**	*e*P	**Pdif**	**18 02 25.2**	**-0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
HHC				LR	LR		
	comp=Z,530nm,19.1s						
HHC				LR	LR		
	comp=Z,620nm,22.7s						
HHC				LR	LR		
	comp=Z,760nm,22.7s						
SPX	**San Pedro Mart**	**99.64**	**56**	IAMs_20	IAMs_20	18 43 45.7	
	comp=Z,1µm,19.0s						
LZH	**Lanzhou**	**99.87**	**311**	*e*P	**Pdif**	**18 02 28.0**	**+0.2**
LZH				pP	pP	18 02 31.0	-0.8
LZH				SKS	**SKSac**	**18 13 03.0**	**-3.3**
LZH				SS	**SS**	**18 20 55.0**	**-0.1**
LZH				pmax	pmax		
	comp=Z,25nm,1.5s						
LZH				pmax	pmax		
	comp=Z,140nm,9.2s						
LZH				LR	LR		
	comp=Z,490nm,16.3s						
LZH				LR	LR		
	comp=Z,450nm,17.3s						
LZH				LR	LR		
	comp=Z,530nm,18.4s						
TKX	**Tecate**	**100.03**	**55**	IAMs_20	IAMs_20	18 41 45.7	
	comp=Z,1µm,21.0s						
BAR	**Barrett**	**100.07**	**55**	IAMs_20	IAMs_20	18 39 06.7	
	comp=Z,1µm,19.0s						
PAGB	**Antelope Grade**	**100.16**	**50**	IAMs_20	IAMs_20	18 39 29.1	
	comp=Z,1µm,20.0s						
PASC	**Pasadena Art C**	**100.23**	**53**	IAMs_20	IAMs_20	18 42 25.0	
	comp=Z,2µm,20.0s						
OSI	**Osito Audit: C**	**100.23**	**52**	IAMs_20	IAMs_20	18 40 43.0	
	comp=Z,1µm,20.0s						
MWC	**Mount Wilson**	**100.34**	**53**	IAMs_20	IAMs_20	18 40 04.9	
	comp=Z,1µm,20.0s						
CPBX	**Cerro Prieto**	**100.71**	**56**	IAMs_20	IAMs_20	18 51 06.7	
	comp=Z,778nm,19.0s						
UABX	**UABC, Campus M**	**100.77**	**55**	IAMs_20	IAMs_20	18 40 47.4	
	comp=Z,1µm,20.0s						
PFO	**Pinyon Flats O**	**100.85**	**54**	IAMs_20	IAMs_20	18 39 40.4	
	comp=Z,2µm,21.0s						
XPFO	**Pion Flat**	**100.85**	**54**	IAMs_20	IAMs_20	18 40 13.4	
	comp=Z,1µm,20.0s						
HSIG		**101.07**	**61**	IAMs_20	IAMs_20	18 39 17.5	
	comp=Z,936nm,20.0s						
ISA	**Isabella, Lake**	**101.12**	**51**	IAMs_20	IAMs_20	18 40 40.6	
	comp=Z,1µm,20.0s						
CMB	**Columbia Colle**	**101.74**	**49**	IAMs_20	IAMs_20	18 44 52.6	
	comp=Z,1µm,19.0s						
GSC	**Goldstone, Bar**	**101.83**	**53**	IAMs_20	IAMs_20	18 41 41.4	
	comp=Z,2µm,20.0s						
113A	**Mohawk Valley,**	**101.88**	**56**	IAMs_20	IAMs_20	18 45 21.8	
	comp=Z,1µm,18.0s						
214A	**Organ Pipe Nat**	**101.91**	**57**	IAMs_20	IAMs_20	18 44 57.6	
	comp=Z,1µm,20.0s						
AFDM	**Forest Hills D**	**102.08**	**48**	IAMs_20	IAMs_20	18 45 34.7	
	comp=Z,2µm,20.0s						
MDPB	**Devils Postpil**	**102.18**	**50**	IAMs_20	IAMs_20	18 45 17.1	
	comp=Z,1µm,20.0s						
OMMB	**Old Mammoth Mi**	**102.21**	**50**	IAMs_20	IAMs_20	18 45 18.9	
	comp=Z,1µm,20.0s						
ORV	**Oroville**	**102.23**	**47**	IAMs_20	IAMs_20	18 45 38.8	
	comp=Z,1µm,19.0s						
WDC	**Whiskeytown Da**	**102.42**	**46**	IAMs_20	IAMs_20	18 41 33.1	
	comp=Z,1µm,20.0s						
ZAIG	**Zacatecas**	**102.48**	**71**	IAMs_20	IAMs_20	18 42 06.9	
	comp=Z,1µm,19.0s						
UNM	**Universidad Na**	**102.59**	**75**	IAMs_20	IAMs_20	18 45 13.8	
	comp=Z,992nm,19.0s						
RUBR	**Rubicon Trail**	**102.60**	**48**	IAMs_20	IAMs_20	18 45 49.3	
	comp=Z,1µm,21.0s						
WAKR	**Walker**	**102.60**	**49**	IAMs_20	IAMs_20	18 45 20.3	
	comp=Z,1µm,19.0s						
PNTR	**Pine Nut**	**102.92**	**48**	IAMs_20	IAMs_20	18 43 08.0	
	comp=Z,1µm,20.0s						
LHV	**Little Huntoon**	**102.94**	**49**	IAMs_20	IAMs_20	18 45 53.1	
	comp=Z,1µm,19.0s						
VCNR	**Virginia City**	**103.05**	**48**	IAMs_20	IAMs_20	18 45 55.2	
	comp=Z,1µm,20.0s						
BEKR	**Beckworth**	**103.07**	**47**	IAMs_20	IAMs_20	18 46 14.7	
	comp=Z,1µm,20.0s						
LSA	**Lhasa**	**103.08**	**298**	P	PKiKP	18 06 54.0	-8.4
LSA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HPIG		**103.13**	**65**	IAMs_20	IAMs_20	18 42 11.0	
	comp=Z,961nm,20.0s						
YBH	**Yreka Blue Hor**	**103.17**	**45**	IAMs_20	IAMs_20	18 46 28.6	
	comp=Z,1µm,20.0s						
NVAR	**Mina Array Bea**	**103.17**	**49**	PKKPbc	PKKPbc	18 18 40.0	+2.2
	comp=Z,0.4nm,0.6s,baz=60,slow=5.3,SNR=2.8						
RYN	**Ryan**	**103.19**	**49**	IAMs_20	IAMs_20	18 45 50.0	
	comp=Z,1µm,19.0s						
TPNV	**Topopah Spring**	**103.30**	**52**	IAMs_20	IAMs_20	18 42 30.3	
	comp=Z,1µm,21.0s						
TUC	**Tucson**	**103.41**	**58**	IAMs_20	IAMs_20	18 43 42.3	
	comp=Z,1µm,20.0s						
W13A	**Hualapai Mount**	**103.41**	**54**	IAMs_20	IAMs_20	18 42 03.3	
	comp=Z,961nm,19.0s						
SHPR	**Sheep Range**	**103.62**	**53**	IAMs_20	IAMs_20	18 44 24.9	
	comp=Z,1µm,20.0s						
HUMO	**Hull Mountain**	**103.68**	**44**	IAMs_20	IAMs_20	18 37 15.8	
	comp=Z,1µm,20.0s						
319A	**Douglas**	**103.73**	**60**	IAMs_20	IAMs_20	18 45 43.8	
	comp=Z,1µm,19.0s						
PRN	**Pahroc Range**	**104.31**	**52**	IAMs_20	IAMs_20	18 43 22.9	
	comp=Z,1µm,20.0s						
X16A	**Lo Mia Camp, P**	**104.42**	**56**	IAMs_20	IAMs_20	18 46 42.1	
	comp=Z,1µm,19.0s						
R11A	**Troy Canyon, C**	**104.65**	**51**	IAMs_20	IAMs_20	18 46 52.9	
	comp=Z,1µm,20.0s						
WUAZ	**Wupatki**	**105.20**	**56**	IAMs_20	IAMs_20	18 42 31.7	
	comp=Z,1µm,21.0s						
U15A	**North Rim**	**105.26**	**54**	IAMs_20	IAMs_20	18 43 33.3	
	comp=Z,1µm,21.0s						
X18A	**Snowflake**	**105.41**	**57**	IAMs_20	IAMs_20	18 47 04.3	
	comp=Z,870nm,19.0s						
H04A	**Detroit Lake**	**105.57**	**43**	IAMs_20	IAMs_20	18 48 10.2	
	comp=Z,1µm,19.0s						
EPT	**El Paso**	**105.76**	**61**	IAMs_20	IAMs_20	18 42 06.7	
	comp=Z,1µm,21.0s						
W18A	**Petrified Fore**	**105.93**	**57**	IAMs_20	IAMs_20	18 47 39.9	
	comp=Z,919nm,18.0s						
SNET	**Serv Nac Est T**	**106.08**	**86**	IAMs_20	IAMs_20	18 40 54.2	
	comp=Z,1µm,20.0s						
MNTX	**Cornudas Mount**	**106.44**	**62**	IAMs_20	IAMs_20	18 43 12.6	
	comp=Z,1µm,20.0s						
MTO3	**Montecristo**	**106.45**	**86**	IAMs_20	IAMs_20	18 46 46.2	
	comp=Z,870nm,20.0s						
Y22D	**IRIS PASSCAL I**	**107.00**	**59**	IAMs_20	IAMs_20	18 43 21.4	
	comp=Z,1µm,20.0s						
SONM	**Songino Array**	**107.06**	**320**	Pdiff	**Pdif**	**18 03 01.1**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=140,slow=7.0,SNR=2.9						
SONM				PP	**PP**	**18 07 21.6**	**-5.0**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=2.1						
SONM				PKKPbc	**PKKPbc**	**18 18 29.4**	**+3.3**
	comp=Z,1.1nm,1.0s,baz=263,slow=3.2,SNR=5.5						
DUG	**Dugway, Tooele**	**107.48**	**51**	IAMs_20	IAMs_20	18 44 42.9	
	comp=Z,893nm,20.0s						
PETF	**Flores**	**107.72**	**83**	IAMs_20	IAMs_20	18 45 15.7	
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**107.85**	**59**	IAMs_20	IAMs_20	18 50 22.0	
	comp=Z,1µm,18.0s						
MVCO	**Mesa Verde**	**108.06**	**56**	IAMs_20	IAMs_20	18 46 46.4	
	comp=Z,923nm,20.0s						
LTY	**Liberty**	**108.14**	**42**	IAMs_20	IAMs_20	18 45 24.2	
	comp=Z,1µm,21.0s						
BMO	**Blue Mountains**	**108.17**	**45**	IAMs_20	IAMs_20	18 49 52.9	
	comp=Z,1µm,20.0s						
833A	**Chaparral WMA,**	**108.25**	**68**	IAMs_20	IAMs_20	18 47 26.8	
	comp=Z,1µm,18.0s						
ESPN	**Las Esperanzas**	**108.72**	**91**	IAMs_20	IAMs_20	18 46 27.9	
	comp=Z,883nm,20.0s						
KVTX	**Kingsville**	**108.79**	**70**	IAMs_20	IAMs_20	18 54 22.0	
	comp=Z,1µm,18.0s						
ANM	**Nome**	**108.84**	**10**	IAMs_20	IAMs_20	18 48 04.0	
	comp=Z,980nm,20.0s						
GLI	**Glacier Island**	**108.98**	**20**	IAMs_20	IAMs_20	18 51 45.4	
	comp=Z,973nm,20.0s						
HWUT	**Hardware Ranch**	**109.12**	**51**	IAMs_20	IAMs_20	18 49 35.3	
	comp=Z,1µm,19.0s						
GHO	**Glory Hole Cre**	**109.31**	**19**	IAMs_20	IAMs_20	18 53 34.6	
	comp=Z,1µm,22.0s						
JCT	**Junction City**	**109.34**	**66**	IAMs_20	IAMs_20	18 44 32.5	
	comp=Z,1µm,21.0s						
S22A	**4UR Ranch, Cre**	**109.42**	**56**	IAMs_20	IAMs_20	18 49 43.4	
	comp=Z,1µm,19.0s						
PPLA	**Purkeypile**	**109.57**	**17**	IAMs_20	IAMs_20	18 48 28.4	
	comp=Z,1µm,22.0s						
MSTX	**Muleshoe**	**109.58**	**62**	IAMs_20	IAMs_20	18 44 29.7	
	comp=Z,1µm,20.0s						
735A	**Kenedy**	**109.67**	**69**	IAMs_20	IAMs_20	18 48 06.3	
	comp=Z,1µm,18.0s						
C09A	**Chrisman Ranch**	**109.69**	**42**	IAMs_20	IAMs_20	18 49 20.2	
	comp=Z,1µm,21.0s						
WRAK	**Wrangell Islan**	**109.87**	**29**	IAMs_20	IAMs_20	18 45 37.1	
	comp=Z,1µm,19.0s						
CRQM	**Cirque**	**109.92**	**22**	IAMs_20	IAMs_20	18 47 39.1	
	comp=Z,1µm,20.0s						
TGL	**Tana Glacier**	**110.00**	**22**	IAMs_20	IAMs_20	18 46 20.1	
	comp=Z,1µm,20.0s						
ISLE	**Juniper Island**	**110.01**	**22**	IAMs_20	IAMs_20	18 53 11.3	
	comp=Z,1µm,19.0s						
AHID	**Auburn Hatcher**	**110.14**	**50**	IAMs_20	IAMs_20	18 50 24.7	
	comp=Z,1µm,20.0s						
SMCO	**Snowmass**	**110.24**	**55**	IAMs_20	IAMs_20	18 45 25.1	
	comp=Z,1µm,20.0s						
BALM	**Baldy**	**110.37**	**22**	IAMs_20	IAMs_20	18 47 40.8	
	comp=Z,1µm,20.0s						
TRF	**Thorofare Moun**	**110.47**	**17**	IAMs_20	IAMs_20	18 50 01.2	
	comp=Z,1µm,20.0s						
MCARA	**McCarthy VSAT**	**110.47**	**22**	IAMs_20	IAMs_20	18 47 40.5	
	comp=Z,1µm,18.0s						
T25A	**Trinidad**	**110.53**	**58**	IAMs_20	IAMs_20	18 46 29.8	
	comp=Z,995nm,20.0s						
NEW	**Newport**	**110.57**	**43**	IAMs_20	IAMs_20	18 49 37.4	
	comp=Z,1µm,20.0s						
BARN	**Barnard Glacie**	**110.58**	**22**	IAMs_20	IAMs_20	18 47 18.3	
	comp=Z,1µm,19.0s						
ABTX	**Abilene, Hawle**	**110.78**	**64**	IAMs_20	IAMs_20	18 47 25.6	
	comp=Z,937nm,20.0s						
AMTX	**Amarillo**	**110.85**	**61**	IAMs_20	IAMs_20	18 50 07.4	
	comp=Z,1µm,19.0s						
LOHW	**Long Hollow**	**110.96**	**50**	IAMs_20	IAMs_20	18 59 27.5	
	comp=Z,795nm,18.0s						
MOOW	**Moose Ponds**	**110.97**	**49**	IAMs_20	IAMs_20	18 46 40.7	
	comp=Z,1µm,19.0s						
ROSC	**El Rosal**	**111.00**	**104**	IAMs_20	IAMs_20	18 47 06.8	
	comp=Z,1µm,19.0s						
BW06	**Boulder Array**	**111.01**	**51**	IAMs_20	IAMs_20	18 50 37.3	
	comp=Z,1µm,19.0s						
PDAR	**Pinedale Array**	**111.01**	**51**	PKKPbc	PKKPbc	18 18 13.8	+0.5
	comp=Z,0.4nm,0.6s,baz=108,slow=5.0,SNR=2.7						
435B	**Jarrell**	**111.02**	**67**	IAMs_20	IAMs_20	18 48 37.0	
	comp=Z,981nm,18.0s						
ISCO	**Idaho Springs**	**111.45**	**55**	IAMs_20	IAMs_20	18 47 05.1	
	comp=Z,1µm,20.0s						
BOZ	**Bozeman (W)**	**111.67**	**47**	IAMs_20	IAMs_20	18 49 33.4	
	comp=Z,726nm,20.0s						
HKT	**Hockley**	**111.69**	**69**	IAMs_20	IAMs_20	18 48 29.1	
	comp=Z,1µm,19.0s						
WHTX	**Lake Whitney,**	**111.85**	**66**	IAMs_20	IAMs_20	18 46 09.9	
	comp=Z,978nm,22.0s						
N23A	**Red Feather La**	**111.93**	**54**	IAMs_20	IAMs_20	18 47 41.9	
	comp=Z,1µm,20.0s						
CCB	**Clear Creek Bu**	**112.05**	**18**	IAMs_20	IAMs_20	18 49 55.4	
	comp=Z,1µm,21.0s						
I23K	**Minto, Yukon-K**	**112.15**	**17**	IAMs_20	IAMs_20	18 51 06.9	
	comp=Z,1µm,21.0s						
TCOL	**CIGO, UAF Yank**	**112.24**	**18**	IAMs_20	IAMs_20	18 50 01.0	
	comp=Z,1µm,20.0s						
COLA	**College**	**112.24**	**18**	IAMs_20	IAMs_20	18 50 01.0	
	comp=Z,1µm,20.0s						
ILAR	**Eielson Array**	**112.37**	**18**	PKiKP	**PKiKP**	**18 07 16.9**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=294,slow=2.9,SNR=8.5						
ILAR				PKKPab	**PKKPab**	**18 18 14.6**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=330,slow=2.8,SNR=5.1						
WALA	**Waterton Lakes**	**112.70**	**43**	IAMs_20	IAMs_20	18 55 32.4	
	comp=Z,859nm,19.0s						
KSCO	**Kaye Shedlock'**	**112.79**	**57**	IAMs_20	IAMs_20	18 53 02.6	
	comp=Z,863nm,18.0s						
SMLA	**Simla**	**113.29**	**291**	*e*P	**PKiKP**	**18 07 19.9**	**-0.9**
NATX	**Nacogdoches**	**113.59**	**68**	IAMs_20	IAMs_20	18 52 09.2	
	comp=Z,994nm,20.0s						
DAWY	**Dawson**	**113.63**	**21**	IAMs_20	IAMs_20	18 53 42.1	
	comp=Z,861nm,19.0s						
EGAK	**Eagle**	**113.75**	**20**	IAMs_20	IAMs_20	18 48 53.0	
	comp=Z,1µm,21.0s						
COLD	**Coldfoot**	**113.79**	**15**	IAMs_20	IAMs_20	18 48 34.8	
	comp=Z,1µm,22.0s						
WMQ	**Urumqi**	**114.23**	**308**	*e*PKP	PKPdf	18 07 22.0	-0.3
WMQ				LR	LR		
	comp=Z,570nm,18.5s						
WMQ				LR	LR		
	comp=Z,440nm,19.1s						
WMQ				LR	LR		
	comp=Z,2µm,23.5s						
Z38A	**Mt. Pleasant**	**114.27**	**67**	IAMs_20	IAMs_20	18 47 47.2	
	comp=Z,1µm,21.0s						
OGNE	**Ogallala**	**114.32**	**56**	IAMs_20	IAMs_20	18 52 57.0	
	comp=Z,848nm,20.0s						
CBKS	**Cedar Bluff**	**114.47**	**59**	IAMs_20	IAMs_20	18 48 22.2	
	comp=Z,1µm,21.0s						
MIAR	**Mount Ida**	**115.97**	**66**	IAMs_20	IAMs_20	18 49 17.2	
	comp=Z,690nm,19.0s						
A21K	**Barrow**	**116.36**	**11**	IAMs_20	IAMs_20	18 53 42.6	
	comp=Z,702nm,20.0s						
SDV	**Santo Domingo**	**116.43**	**103**	IAMs_20	IAMs_20	18 47 17.5	
	comp=Z,787nm,22.0s						
X40A	**Basin Creek Fa**	**116.44**	**67**	IAMs_20	IAMs_20	18 52 36.6	
	comp=Z,1µm,19.0s						
WHAR	**Wooly Hollow**	**117.27**	**66**	IAMs_20	IAMs_20	18 50 51.5	
	comp=Z,1µm,22.0s						
FCAR	**Ozark Folk Cen**	**117.72**	**66**	IAMs_20	IAMs_20	18 49 55.4	
	comp=Z,1µm,21.0s						
DGZ	**Jazzator, Alta**	**117.82**	**313**	⇑*i*PKIKP	**PKiKP**	**18 07 29.4**	**+0.2**
DGZ				MLR	MLR		
	comp=Z,441nm,19.0s						
ZSN	**Zaisan**	**117.95**	**310**	*e*PKP	**PKPdf**	**18 07 28.7**	**-0.6**
	comp=Z,1.6nm,1.2s,baz=310						
ZSN	**Zaisan**	**117.95**	**310**	*e*PKIKP	**PKPdf**	**18 07 28.7**	**-0.6**
ZSN				pmax	pmax		
	comp=Z,2.0nm,1.2s						

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SOCY  Socotra          118.14 260   IAMs_20 IAMs_20  18 55 39.9
      comp=Z,613nm,18.0s
SUSD  Miller           118.19  54   IAMs_20 IAMs_20  18 51 22.3
      comp=Z,973nm,21.0s
TIXI  Tiksi            118.29 346⇑iPKIKP   PKPdf    18 07 26.5  -2.7
TIXI                                pmax    pmax
      comp=Z,61nm,1.3s
TIXI  Tiksi            118.29 346   PKPdf   PKPdf    18 07 27.5  -1.7
INK   Inuvik           118.42  20   PKP     PKiKP    18 07 30.6  +1.1
      comp=Z,6.3nm,0.8s,baz=180,slow=5.0,SNR=8.6
LCAR  Lake Charles     118.47  66   IAMs_20 IAMs_20  18 50 19.3
      comp=Z,873nm,20.0s
HBAR  Harrisburg       118.51  67   IAMs_20 IAMs_20  18 54 44.7
      comp=Z,1µm,19.0s
HDBT  Hernando Brdge   118.69  67   IAMs_20 IAMs_20  18 49 20.2
      comp=Z,1µm,21.0s
KSH   Kashi            118.94 298   PKP     PKiKP    18 07 33.7  +2.1
KSH                                 PP      PP       18 08 57.7  +6.3
KSH                                 AMB     AMB
      comp=Z,280nm,6.2s
Z47A  Carrollton       118.95  70   IAMs_20 IAMs_20  18 52 04.3
      comp=Z,629nm,18.0s
MK31  Makanchi Array   119.06 308⇑iPKIKP   PKPdf    18 07 29.9  -1.6
MK31  Makanchi Array   119.06 308   PKPdf   PKPdf    18 07 29.2  -2.2
MKAR  Makanchi Array   119.06 308   PKP     PKPdf    18 07 29.9  -1.6
      comp=Z,1.0nm,0.4s,baz=219,slow=2.6,SNR=16
MAKZ  Makanchi         119.25 308   PKIKP   PKPdf    18 07 30.0  -1.8
MAKZ  Makanchi         119.25 308   PKPdf   PKPdf    18 07 30.0  -1.8
W45A  Hickory Valley   119.28  68   IAMs_20 IAMs_20  18 52 32.0
      comp=Z,989nm,20.0s
SATY  Saty             119.34 303  ePKP     PKPdf    18 07 31.1  -1.2
      baz=303
SATY  Saty             119.34 303  ePKIKP   PKPdf    18 07 31.0  -1.2
PBMO  Poplar Bluff     119.35  66   IAMs_20 IAMs_20  18 56 46.6
      comp=Z,1µm,20.0s
HALT  Halls            119.60  67   IAMs_20 IAMs_20  18 55 26.3
      comp=Z,1µm,20.0s
GLAT  Glass            119.83  67   IAMs_20 IAMs_20  18 55 32.4
      comp=Z,976nm,19.0s
AAA   Alma-Ata         120.34 302  ePKP     PKPdf    18 07 33.1  -1.0
      baz=302
AAA   Alma-Ata         120.34 302  ePKIKP   PKPdf    18 07 33.1  -1.0
YKA   Yellowknife Ar   120.61  31   PKP     PKPdf    18 07 32.0  -1.9
      comp=Z,4.7nm,0.8s,baz=240,slow=1.3,SNR=23
YKA                                 PKKPbc  PKKPbc   18 17 40.1  +0.4
      comp=Z,2.2nm,1.0s,baz=53,slow=5.4,SNR=12
YKA   Yellowknife Ar   120.61  31   PKIKP   PKPdf    18 07 32.0  -1.9
S44A  Carbondale       120.63  65   IAMs_20 IAMs_20  18 56 44.6
      comp=Z,1µm,20.0s
CHKK  Chushkaly        120.64 303  ePKP     PKPdf    18 07 33.2  -1.4
      baz=303
CHKK  Chushkaly        120.64 303  ePKIKP   PKPdf    18 07 33.2  -1.4
SIUC  Southern Illin   120.67  65   IAMs_20 IAMs_20  18 50 21.1
      comp=Z,1µm,22.0s
WVT   Waverly          120.74  68   IAMs_20 IAMs_20  18 51 13.5
      comp=Z,1µm,21.0s
KUU   Kurty            121.06 303  ePKP     PKPdf    18 07 34.3  -1.1
      comp=Z,5.2nm,0.9s,baz=303
KUU   Kurty            121.06 303  ePKIKP   PKPdf    18 07 34.3  -1.1
KUU                                 pmax    pmax
      comp=Z,5.0nm,0.9s
V48A  Smith Brothers   121.22  69   IAMs_20 IAMs_20  18 53 10.1
      comp=Z,1µm,22.0s
ZAA0  Zalesovo Array   121.48 316   PKPdf   PKPdf    18 07 35.5  -0.3
ZALV  Zalesovo Beam    121.48 316   PKP     PKPdf    18 07 33.7  -2.1
      comp=Z,1.8nm,0.8s,baz=160,slow=3.1,SNR=7.7
AAK   Ala-Archa        121.56 301⇓iPKIKP   PKiKP    18 07 36.9  +0.2
AAK                                 pmax    pmax
      comp=Z,13nm,1.0s
AAK   Ala-Archa        121.56 301   PKPdf   PKPdf    18 07 35.5  -1.1
C36M  Paulatuk         121.64  22   PKPdf   PKPdf    18 07 34.6  -1.1
L40A  Anamosa          121.67  60   IAMs_20 IAMs_20  18 59 33.8
      comp=Z,1µm,19.0s
CLTN  Cedars of Leba   121.74  68   IAMs_20 IAMs_20  18 53 46.0
      comp=Z,942nm,22.0s
USIN  University of    121.84  66   IAMs_20 IAMs_20  19 01 22.3
      comp=Z,992nm,18.0s
FFC   Flin Flon        121.99  43   PKIKP   PKPdf    18 07 36.2  -0.6
FFC                                 MLR     MLR
      comp=Z,492µm,19.0s
FFC   Flin Flon        121.99  43   PKPdf   PKPdf    18 07 36.2  -0.6
ULM   Lac du Bonnet    123.01  50   PKhKP   PKPpre   18 07 36.2
      comp=Z,11nm,0.9s,baz=277,slow=4.5,SNR=8.8
ULM   Lac du Bonnet    123.01  50⇑iPKIKP   PKPdf    18 07 37.7  -1.2
ULM   Lac du Bonnet    123.01  50   PKPdf   PKPdf    18 07 36.7  -2.2
BTLS  Baital           123.06 303  ePKP     PKPdf    18 07 38.2  -1.0
      baz=303
BTLS  Baital           123.06 303  ePKIKP   PKPdf    18 07 38.1  -1.0
KURK  Kurchatov        123.16 311c iPKIKP   PKiKP    18 07 39.6  +0.2
KURK                                pmax    pmax
      comp=Z,13nm,1.0s
KURK                                MLR     MLR
      comp=Z,452nm,21.0s
KURK  Kurchatov        123.16 311   PKPdf   PKPdf    18 07 37.2  -1.9
HODGE Hodges           123.56  72   IAMs_20 IAMs_20  18 58 41.1
      comp=Z,963nm,21.0s
DZA   Taraz            123.69 300  ePKP     PKPdf    18 07 39.5  -1.0
      baz=300
DZA   Taraz            123.69 300  ePKIKP   PKPdf    18 07 39.5  -1.0
IUG   Iuzhnay          124.15 298  ePKP     PKPdf    18 07 40.3  -1.3
      comp=Z,5.0nm,0.9s,baz=298
IUG   Iuzhnay          124.15 298  ePKIKP   PKPdf    18 07 40.2  -1.3
IUG                                 pmax    pmax
      comp=Z,5.0nm,0.9s
KK31  Karatay Array    124.32 299   PKIKP   PKPdf    18 07 40.4  -1.3
KK31  Karatay Array    124.32 299   PKPdf   PKPdf    18 07 40.4  -1.3
KKAR  Karatay Array    124.32 299   PKIKP   PKPdf    18 07 40.4  -1.3
KKAR  Karatay Array    124.32 299   PKPdf   PKPdf    18 07 40.4  -1.3
ATD   Arta Tunnel      125.58 251   IAMs_20 IAMs_20  18 57 02.8
      comp=Z,623nm,20.0s
FURI  Furi             126.51 245   IAMs_20 IAMs_20  19 07 03.0
      comp=Z,686nm,19.0s
NRIK  Noril'sk         127.43 334   PKP     PKPdf    18 07 46.0  -0.8
      comp=Z,12nm,0.9s,baz=132,slow=1.9,SNR=12
NRIK  Noril'sk         127.43 334⇑iPKIKP   PKiKP    18 07 48.6  +1.3
NRIK                                MLR     MLR
      comp=Z,500nm,21.0s
NRIK  Noril'sk         127.43 334   PKPdf   PKPdf    18 07 46.4  -0.4
FCC   Fort Churchill   127.68  41   PKIKP   PKiKP    18 07 48.5  +0.4
FCC                                 MLR     MLR
      comp=Z,1µm,19.0s
FCC   Fort Churchill   127.68  41   PKPdf   PKiKP    18 07 48.5  +0.4
BRVK  Borovoye         128.83 310c iPKIKP   PKiKP    18 07 51.0  +0.4
BRVK                                pmax    pmax
      comp=Z,10.0nm,1.0s
BRVK                                MLR     MLR
      comp=Z,383nm,22.0s
BRVK  Borovoye         128.83 310   PKPdf   PKiKP    18 07 50.7  +0.1
GEYT  Alibeck          130.14 288   PKP     PKPdf    18 07 52.5  -0.5
      comp=Z,4.8nm,1.0s,baz=217,slow=3.6,SNR=4.8
RAYN  Ar Rayn          131.57 264   PKIKP   PKiKP    18 07 57.5  +0.4
RAYN  Ar Rayn          131.57 264   PKPdf   PKiKP    18 07 57.5  +0.4
RES   Resolute Bay     131.97  21   PKIKP   PKiKP    18 07 55.8  -0.5
RES   Resolute Bay     131.97  21   PKPdf   PKiKP    18 07 55.8  -0.5
ABKAR Akbulak array    133.54 303   PKPdf   PKPdf    18 07 57.0  -2.0
SVE   Sverdlovsk       135.28 313 i PKIKP   PKiKP    18 08 08.0  +4.5
SVE                                 pmax    pmax
      comp=Z,13nm,1.2s
SVE                                 MLR     MLR
      comp=Z,749nm,22.0s
ARU   Arti             136.31 312 i PKIKP   PKiKP    18 08 06.1  +0.5
ARU                                                  18 10 44.3
ARU                                 SS      SS       18 28 37.9  -8.6
ARU                                 MLR     MLR
      comp=Z,851nm,24.0s
GNI   Garni            140.50 285⇓iPKIKP   PKiKP    18 08 16.0  +1.1
KIRV  Kirov            141.48 314⇑iPKIKP   PKiKP    18 08 16.9  +0.9
BELG  Belogornoye      141.88 304⇑iPKIKP   PKPdf    18 08 14.3  +0.1
ZEI   Tsey             142.02 288  ePKIKP   PKiKP    18 08 17.3  -0.7
ZEI                                 pmax    pmax
      comp=Z,8.0nm,1.2s
KBZ   Khabaz           143.01 289   PKP     PKiKP    18 08 18.4  -1.3
      comp=Z,11nm,1.1s,baz=201,slow=4.5,SNR=7.1
KBS   Kingsbay         143.14 353  ePKPdf   PKPdf    18 08 16.9  +1.1
KBS   Kingsbay         143.14 353 i P       PKPdf    18 08 16.9  +1.2
LIC   Lamto            143.17 186  ePKP2    PKPbc    18 08 14.3  -0.3
      comp=Z,74nm,1.1s
KIV   Kislovodsk       143.22 290 ⇓P        PKiKP    18 08 19.7  -0.6
KIV   Kislovodsk       143.22 290 i PKIKP   PKPdf    18 08 16.5  -0.5
KIV                                 pmax    pmax
      comp=Z,10.0nm,1.0s
KIC   Kosan Boka       143.28 187  ePKP2    PKPbc    18 08 14.8  -0.1
      comp=Z,33nm,0.8s
GOF   Gofitskoye       143.29 291⇑ePKIKP   PKPdf    18 08 16.0  -1.0
SPA0  Spitsbergen Ar   143.38 352   PKPdf   PKPbc    18 08 14.8  +1.3

SPA0  Spitsbergen Ar   143.38 352  ePKPbc   PKPdf    18 08 16.7  +0.5
SPITS Spitsbergen Ar   143.38 352   PKhKP   PKPpre   18 08 12.7
      baz=0.0,slow=0.4
TIC   Toumodi          143.59 186  ePKP2    PKPbc    18 08 16.0  +0.2
DBIC  Dimbokro         143.60 186   PKhKP   PKPpre   18 08 15.4
      comp=Z,8.0nm,0.8s,baz=168,slow=3.6,SNR=11
KTUT  Trabzon          144.34 284 ⇓P        PKiKP    18 08 22.4  -0.2
HSPB  Hornsund (broa   144.49 351  ePKPdf   PKPab    18 08 15.8  -0.8
HSPB  Hornsund (broa   144.49 351  ePKPdf   PKPdf    18 08 18.2  +0.1
GAZ   Gaziantep        144.75 276   PKPdf   PKPbc    18 08 18.9   0.0
SOC   Sochi            145.18 288  ePKIKP   PKPbc    18 08 18.5  -1.4
SOC                                e                 18 11 39.8
SOC                                eSS      SS       18 30 31.4  +0.6
SOC                                eSSS     SSS      18 35 56.6
SOC                                 MLR     MLR
      comp=Z,190nm,13.0s
VRH   Novokhopyorsk    145.35 301  ePKIKP   PKPbc    18 08 20.0  -0.2
VRH                                 pmax    pmax
      comp=Z,100nm,1.5s
DAG   Danmarks Havn    145.92   4 i P       PKPdf    18 08 19.0  -1.6
DAG   Danmarks Havn    145.92   4 i P       PKPdf    18 08 19.0  -1.6
LVZ   Lovozero         146.25 332⇑iPKP2    PKiKP    18 08 24.7  -1.0
TMCR  Tamitsa          146.27 325  ePKIKP   PKPdf    18 08 19.2  -2.3
TMCR                                pmax    pmax
      comp=Z,65nm,1.0s
KLMR  Klimovskoe       146.34 319  ePKP2    PKPdf    18 08 21.9  +0.2
KLMR                                pmax    pmax
      comp=Z,224nm,1.5s
KLMR  Klimovskoe       146.34 319  ePKPdf   PKPdf    18 08 21.9  +0.2
KLMR                                AMP              18 08 38.0
      comp=Z,224nm,1.5s
KLMR                                LQ      LQ       19 01 23.5
KLMR                                LQ      LQ       19 01 23.5
KLMR                                LR      LR       19 07 49.1
VORD  Divnogorie       146.85 301  ePKP2    PKPbc    18 08 25.0  +0.2
VORD                                pmax    pmax
      comp=Z,50nm,1.3s
VSR   Storozhevoye     146.95 301  ePKP2    PKPbc    18 08 24.6  -0.5
VSR                                 pmax    pmax
      comp=Z,50nm,1.4s
VORR  Voronezh         146.96 302  ePKIKP   PKPdf    18 08 21.0  -2.0
VORR                                pmax    pmax
      comp=Z,250nm,1.8s
ANN   Anapa            147.08 289  ePKHKP   PKPpre   18 08 21.3
ANN                                 pmax    pmax
      comp=Z,138nm,4.4s
SFJD  Kangerlussuaq    147.13  29 i PKIKP   PKPdf    18 08 23.9  +1.1
SFJD  Kangerlussuaq    147.13  29 i P       PKPdf    18 08 23.9  +1.1
SFJD  Kangerlussuaq    147.13  29 i P       PKPdf    18 08 24.0  +1.1
SUMG  Summit           147.18  16 i PKP2    PKPbc    18 08 25.3  -0.3
SUMG                                pmax    pmax
      comp=Z,89nm,0.9s
SUMG  Summit           147.18  16   PKPdf   PKPbc    18 08 24.9  -0.7
SUMG  Summit           147.18  16 i P       PKPbc    18 08 25.3  -0.3
      comp=Z,89nm,0.9s
SUMG  Summit           147.18  16 i P       PKPbc    18 08 25.4  -0.3
SUMG                                IAmb    IAmb     18 08 34.0
      comp=Z,89nm,0.9s
LPSR  Galich'ya Gora   147.19 304  ePKP2    PKPab    18 08 26.8  -0.6
LPSR                                pmax    pmax
      comp=Z,60nm,1.0s
KEV   Kevo             147.67 338   PKIKP   PKPdf    18 08 24.3  +0.6
KEV   Kevo             147.67 338   PKPdf   PKPdf    18 08 24.3  +0.6
MOS   Moscow           147.93 310 i PKP2    PKPbc    18 08 27.6   0.0
MOS                                 pmax    pmax
      comp=Z,57nm,1.2s
HAMF  Hammerfest       147.97 340  ePKPdf   PKPab    18 08 29.9  -0.1
ARCES ARCESS Array B   148.22 338   PKP     PKPdf    18 08 25.4  +0.7
      comp=Z,18nm,0.8s,baz=50,slow=2.8,SNR=29
ARCES                               PKPbc   PKPbc    18 08 27.6  -0.4
      comp=Z,16nm,0.5s,baz=78,slow=1.1,SNR=46
DBG   Daneborg         148.22   6 i P       PKPbc    18 08 27.3  -0.6
BR131 Keskin Array S   148.31 279d iPKP2    PKPbc    18 08 28.8  -0.6
BR131 Keskin Array S   148.31 279           PKPbc    18 08 28.7  -0.6
BRTR  Keskin Array B   148.31 279   PKPbc   PKPbc    18 08 29.2  -0.2
      comp=Z,23nm,0.8s,baz=137,slow=4.3,SNR=25
OBN   Obninsk          148.56 309 i PKP2    PKPbc    18 08 28.5  -0.7
OBN                                 pmax    pmax
      comp=Z,40nm,1.0s
OBN   Obninsk          148.56 309   PKPdf   PKPbc    18 08 27.8  -1.5
TOA0  Torodi Ar. Sit   148.87 200   PKPdf   PKPdf    18 08 26.5  -0.8
TORD  Torodi Ar. Bea   148.87 200   PKP     PKPdf    18 08 27.1  -0.2
      comp=Z,6.4nm,0.5s,baz=124,slow=0.3,SNR=11
TORD                                PKPbc   PKPbc    18 08 31.4  +0.1
      comp=Z,43nm,0.9s,baz=179,slow=1.6,SNR=46
BR231 Keskin MP Arra   148.98 278           PKiKP    18 08 32.9  +0.6
KTK1  Kautokeino       149.18 338  ePKPdf   PKPbc    18 08 29.4  -1.0
ICESG Greenland Ices   149.38  21 i P       PKPbc    18 08 29.5  -1.9
TRO   Tromso           149.84 341  ePKPdf   PKPbc    18 08 30.6  -1.4
AKAS  Kas              149.93 270           PKPbc    18 08 32.7  -0.8
KARP  Karpathos        151.43 267           PKiKP    18 08 37.6  +0.2
NRS   Narsarsuaq       151.62  38   PKIKP   PKPdf    18 08 27.5  -2.7
NRS   Narsarsuaq       151.62  38           PKPdf    18 08 27.4  -2.7
SCO   Scoresbysund     151.70   9 i PKIKP   PKiKP    18 08 38.9  +2.1
SCO                                 pmax    pmax
      comp=Z,35nm,1.0s
SCO   Scoresbysund     151.70   9 i P       PKiKP    18 08 38.9  +2.1
      comp=Z,35nm,1.0s
SCO   Scoresbysund     151.70   9 i P       PKiKP    18 08 39.0  +2.1
SCO                                 IAmb    IAmb     18 08 40.1
      comp=Z,35nm,1.0s
STEI  Steigen          152.01 341  ePKPdf   PKPbc    18 08 35.6  -1.6
LOF   Lofoten          152.25 342  ePKPdf   PKPbc    18 08 35.0  -2.6
ANGG  Ammassalik, Gr   152.28  26 i P       PKiKP    18 08 39.1  +1.1
FIA1  FINESS Array S   152.37 324           PKPbc    18 08 37.5  -0.6
FINES FINESS Array B   152.37 324   PKPbc   PKPbc    18 08 37.0  -1.1
      comp=Z,13nm,0.6s,baz=87,slow=4.1,SNR=24
FAUS  Fauske           152.42 340  ePKPdf   PKPbc    18 08 35.9  -2.2
IDI   Anoyia           152.97 265 ⇓P        PKiKP    18 08 41.4  +0.7
VSU   Vasula           153.21 317  eP       PKiKP    18 08 41.4  +1.2
AKASG Malin Array Be   153.22 300   PKPbc   PKPbc    18 08 39.2  -1.1
      comp=Z,5.3nm,0.6s,baz=68,slow=2.4,SNR=17
AKBB  Malin Array Si   153.22 300   PKIKP   PKPbc    18 08 39.9  -0.5
AKBB  Malin Array Si   153.22 300           PKPbc    18 08 39.9  -0.5
TIRR  Tirgusor         153.31 286 ⇑P        PKiKP    18 08 41.8  +0.9
TIRR  Tirgusor         153.31 286 ⇑PKIKP    PKiKP    18 08 41.8  +0.9
TPGR  Topolog          153.37 287 ⇑P        PKiKP    18 08 43.4  +2.3
MOR8  Moi Rana         153.57 339  ePKPdf   PKPbc    18 08 37.5  -3.3
CFR   Carcaliu         153.62 287 ⇓P        PKPdf    18 08 37.0  +3.4
CFR   Carcaliu         153.62 287 ⇓PKIKP    PKPdf    18 08 37.0  +3.4
MNK   Minsk            153.63 309 i PKP     PKPdf    18 08 32.8  -0.6
      comp=E,6.0nm,1.1s
MNK                               i PKP     PKPdf    18 08 32.8  -0.6
      comp=N,30nm,1.1s
MNK                               i PKP     PKPdf    18 08 32.8  -0.6
      comp=Z,49nm,1.1s
MNK                               i SKP              18 12 06.0
MNK                               i PKS     PP       18 12 07.2   -21
MNK                               i PP      PP       18 12 28.8  +0.2
MNK                               i SKS     SKSdf    18 15 39.9  +0.1
MNK                               i PPP     PPP      18 15 57.0
MNK                               i SKKS    SKKSdf   18 24 20.8  -1.0
MNK                               i SS      SS       18 32 10.7  +6.2
MNK                               i SSS     SSS      18 37 58.0
MNK                               i LQ      LQ       19 10 08.8
MNK                               i LR      LR       19 21 51.5
MNK   Minsk            153.63 309  ePKP2    PKPab    18 08 55.0  +1.1
KONS  Konsvik          153.65 340  ePKPdf   PKPbc    18 08 37.1  -3.7
SORM  Soroca           153.77 294 ⇓P        PKPdf    18 08 36.9  +3.1
SORM  Soroca           153.77 294 ⇓PKIKP    PKPdf    18 08 36.9  +3.1
IDID  Didziasalis      154.10 311  eP       PKiKP    18 08 43.1  +0.9
NACGM Naroch           154.17 310 i PKP     PKPbc    18 08 38.3  -4.0
NACGM                             i PKP     PKPbc    18 08 38.3  -4.0
NACGM                             i PKP     PKPbc    18 08 38.3  -4.0
NACGM                             i PPP     PPP      18 15 54.7
NACGM                             i SKKS             18 18 13.2
NACGM                             i PS               18 21 43.4
NACGM                             i SS      SS       18 31 50.8   -20
NACGM                             i SSS     SSS      18 37 37.1
NACGM                             i LR      LR       19 11 34.3
ISAL  Salakas          154.38 311  eP       PKPbc    18 08 42.4  -0.3
IIGN  Ignalina         154.38 311  eP       PKPbc    18 08 42.1  -0.6
VRI   Vrincioaia       154.69 289 ⇓P        PKiKP    18 08 45.6  +1.8
VRI   Vrincioaia       154.69 289 ⇓PKIKP    PKiKP    18 08 45.6  +1.8
PLOR  Plostina         154.75 289 ⇑P        PKPab    18 08 53.0  -6.0
PLOR  Plostina         154.75 289 ⇑PKIKP    PKPab    18 08 53.0  -6.0
TESR  Tescani          154.81 290 ⇑P        PKiKP    18 08 45.5  +1.5
MLR   Muntele Rosu     155.19 288 ⇑P        PKPdf    18 08 44.2  +8.1
MLR   Muntele Rosu     155.19 288 ⇑PKIKP    PKPdf    18 08 44.2  +8.1
MLR   Muntele Rosu     155.19 288   IAMs_20 IAMs_20  19 33 17.5
      comp=Z,781nm,21.0s
BIZ   Bicaz            155.22 291 ⇓P        PKPdf    18 08 47.3   +11
NSS   Namsos           155.50 338  ePKPdf   PKPdf    18 08 39.7  +4.0

PABE  Paberze          155.58 312  eP       PKPab    18 08 51.0   -11
DOPR  Dopca            155.63 289 ⇑P        PKPab    18 09 04.7  +1.9
VOIR                   155.81 287 ⇑P        PKPab    18 09 02.6  -1.1
VOIR                   155.81 287 ⇑PKP2     PKPab    18 09 02.6  -1.1
BURAR Bucovina Array   155.85 293 ⇓P        PKPdf    18 08 44.2  +7.3
BURAR Bucovina Array   155.85 293 ⇓PKIKP    PKPdf    18 08 44.2  +7.3
SUW   Suwalki          156.43 309  ePKPab   PKPab    18 09 06.8  +1.0
TAM   Tamanrasset      156.59 215   IAMs_20 IAMs_20  19 32 35.3
      comp=Z,729nm,19.0s
LVV   L'vov            156.59 298  ePKP2    PKPab    18 09 18.4   +12
TBLU  Trondheim        156.98 338  ePKPdf   PKPdf    18 08 39.7  +2.0
DEV   Deva             157.35 288 ⇓P        PKPab    18 09 10.5  +0.3
DEV   Deva             157.35 288 ⇓PKP2     PKPab    18 09 10.5  +0.3
KWP   Kalwaria Pacla   157.47 298  ePKPab   PKPab    18 09 11.3  +0.7
HERR  Herculane        157.60 285 ⇓P        PKPab    18 09 11.1  -0.2
KOLS  Kolonicke sedl   157.80 296  ePKIKP   PKPdf    18 08 52.4   +13
KOLS  Kolonicke sedl   157.80 296  e        PKPdf    18 08 52.4   +13
UZH   Uzhgorod         157.80 295  ePKP2    PKPab    18 09 14.0  +2.0
MDVR  Moldovita        158.09 285 ⇓P        PKPab    18 09 08.8  -4.7
LTVH  Ltavrtes, Hu     158.10 292  eP       PKPab    18 09 18.3  +5.0
NC405 NORSAR Array S   158.17 333   PKPab   PKPab    18 09 13.5  +0.4
BZS   Buzias           158.23 287 ⇓P        PKPab    18 09 13.5  -0.5
BZS   Buzias           158.23 287 ⇓PKP2     PKPab    18 09 13.5  -0.5
SIRR  Siria            158.24 289 ⇓P        PKPab    18 09 13.9  -0.1
NC204 NORSAR Array S   158.36 334   PKPab   PKPab    18 09 15.4  +1.4
NB2   NORSAR Subarra   158.39 333   P       PKPab    18 09 13.9  -0.3
      comp=Z,95nm,2.0s,baz=45,slow=4.4
NB2   NORSAR Subarra   158.39 333   PKPab   PKPab    18 09 13.9  -0.3
      baz=45,slow=4.4
NOA   NORSAR Array B   158.39 333   PKPab   PKPab    18 09 14.2   0.0
      comp=Z,4.3nm,1.0s,baz=51,slow=4.2,SNR=19
NIE   Niedzica         159.05 298  ePKPdf   PKPdf    18 08 41.0  +0.3
DIVS  Divibare         159.23 283   IAMs_20 IAMs_20  19 34 56.5
      comp=Z,605nm,20.0s
PSZ   Piszkesteto      159.44 294 ⇑P        PKPab    18 09 17.3  -1.9
PSZ   Piszkesteto      159.44 294  eP       PKPab    18 09 23.3  +4.1
PSZ   Piszkesteto      159.44 294 ⇑PKP2     PKPab    18 09 17.3  -1.9
PSZ   Piszkesteto      159.44 294   IAMs_20 IAMs_20  19 26 05.6
      comp=Z,640nm,20.0s
PDG   Podgorica        159.50 278 ⇑P        PKPab    18 09 19.3  -0.2
BER   Bergen           160.68 339  ePKPdf   PKPdf    18 08 43.8  +1.8
MORC  Moravsky Berou   160.77 300 ⇑P        PKPab    18 09 25.5  +0.6
MORC  Moravsky Berou   160.77 300 ⇑PKP2     PKPab    18 09 25.5  +0.6
SMOL  Smolenice        161.03 296  ePKP2    PKPab    18 09 32.9  +6.8
MPLH  Magyarpolny      161.07 292  eP       PKPab    18 09 28.3  +2.0
MODS  Modra-Piesok     161.15 295  ePKP2    PKPab    18 09 32.3  +5.7
KRLC  Kraliky          161.19 301  ePKIKP   PKPdf    18 08 48.5  +5.4
KRLC                                MLR     MLR
      comp=Z,600nm,22.0s
KRLC  Kraliky          161.19 301  ePKPDF   PKPdf    18 08 48.5  +5.4
KRLC                               ePKPAB   PKPab    18 09 28.5  +1.7
KRLC                                AMS     AMS      19 22 40.0
      comp=Z,600nm,22.0s
KSP   Ksiaz            161.32 303  ePKPab   PKPab    18 09 26.6  -0.7
DPC   Dobruska-Polom   161.42 302  ePKIKP   PKPdf    18 08 48.9  +5.6
DPC                                 MLR     MLR
      comp=Z,700nm,22.0s
DPC   Dobruska-Polom   161.42 302  ePKPDF   PKPdf    18 08 48.9  +5.6
DPC                                ePKPAB   PKPab    18 09 29.4  +1.6
DPC                                 AMS     AMS      19 23 40.0
      comp=Z,700nm,22.0s
VRAC  Vranov           161.46 298 ⇓P        PKPab    18 09 21.9  -6.0
VRAC  Vranov           161.46 298 ⇓PKP2     PKPab    18 09 21.9  -6.0
CHVC  Chvalec          161.53 303  ePKPAB   PKPab    18 09 30.1  +1.9
CHVC                               ex       x        18 09 35.0
KOGS  Kog              161.99 289  ePKPab   PKPab    18 09 32.0  +1.7
CONA  Conrad Observa   162.14 294  eP       PKPdf    18 08 45.6  +1.4
      comp=Z,1.8nm,0.7s
CONA                               eP       pPKPab   18 09 35.7  +0.6
      comp=Z,8.5nm,1.4s
TREC  Trest            162.17 299   AMS     AMS      19 25 10.0
      comp=Z,1µm,22.8s
ARSA  Arzberg          162.44 292  eP       PKPdf    18 08 46.7  +2.2
      comp=Z,2.0nm,0.6s
ARSA                               eP       PKPab    18 09 33.8  +1.4
      comp=Z,15nm,1.4s
PRU   Pruhonice        162.62 302  ePKP2    PKPab    18 09 37.6  +4.6
PRU                                 MLR     MLR
      comp=Z,1µm,19.4s
PRU   Pruhonice        162.62 302  ePKPAB   PKPab    18 09 37.6  +4.6
PRU                                 AMS     AMS      19 30 20.0
      comp=Z,1µm,19.4s
BRG   Berggiesshubel   162.74 305  ePKP2    PKPab    18 09 34.8  +1.4
BRG                                 pmax    pmax
      comp=Z,44nm,1.7s
SOKA  Soboth           162.82 290  eP       PKPdf    18 08 44.6  -0.3
      comp=Z,4.2nm,1.3s
SOKA                               eP       PKPab    18 09 34.9  +0.8
      comp=Z,19nm,1.3s
CLL   Collm            163.15 307 i PKPab   PKPab    18 09 36.3  +1.1
      comp=Z,55nm,1.6s
CLL                                e                 18 09 46.0
CLL                                ePP      PP       18 13 20.0  -0.7
CLL                                ePSKS             18 23 42.0
CLL                                ePPS     PPS      18 27 06.0
CLL                                e                 18 30 06.0
CLL                                eSS      SS       18 33 48.0  +2.2
CLL                                ePSS     PSS      18 34 42.0
CLL                                eSSS     SSS      18 40 00.0
CLL                                e                 18 42 12.0
CLL                                eSSSS             18 44 18.0
CLL                                e                 18 48 30.0
CLL   Collm            163.15 307 i PKP2    PKPab    18 09 36.3  +1.1
CLL                                 pmax    pmax
      comp=Z,55nm,1.6s
CLL   Collm            163.15 307           PKPab    18 09 36.0  +0.7
OBKA  Obir             163.16 290  eP       PKPdf    18 08 45.3  +0.1
      comp=Z,4.0nm,1.1s
OBKA                               eP       PKPab    18 09 34.8  -0.8
      comp=Z,12nm,1.4s
OBKA                               eP       PP       18 13 19.2  -2.0
      comp=Z,7.1nm,1.4s
LJU   Ljubljana        163.20 288  ePKPab   PKPab    18 09 36.4  +0.7
MOA   Molln            163.22 295  eP       PKPdf    18 08 44.2  -1.0
      comp=Z,4.2nm,1.4s
MOA                                eP       pPKPab   18 09 38.2  -1.6
      comp=Z,18nm,1.6s
MOA                                eP       PP       18 13 22.3  +0.9
      comp=Z,8.0nm,1.3s
GEC2  GERESS Array S   163.41 298   PKPab   PKPab    18 09 34.1  -2.5
GERES GERESS Array B   163.41 298   PKP     PKPdf    18 08 47.1  +1.7
      comp=Z,0.8nm,0.9s,baz=82,slow=2.8,SNR=5.4
GERES                               PKPab   PKPab    18 09 37.2  +0.5
      comp=Z,2.5nm,0.9s,baz=73,slow=4.6,SNR=6.4
GERES                               PP      PP       18 13 20.8  -1.6
      comp=Z,0.4nm,0.7s,baz=81,slow=6.1,SNR=1.9
KHC   Kasperske Hory   163.43 299  ePKIKP   PKPdf    18 08 55.5   +10
KHC                                 MLR     MLR
      comp=Z,900nm,20.2s
KHC   Kasperske Hory   163.43 299⇑ePKP     PKPdf    18 08 55.5   +10
KHC                                ePKPAB   pPKPab   18 09 40.4  -0.3
KHC                                 AMS     AMS      19 28 50.0
      comp=Z,900nm,20.2s
MYKA  Terra Mystica    163.78 290  eP       PKPdf    18 08 49.5  +3.7
      comp=Z,3.7nm,0.9s
MYKA                               eP       pPKPab   18 09 41.9  -0.4
      comp=Z,7.1nm,1.0s
NKC   Novy Kostel      163.84 304  ePKP2    PKPab    18 09 39.5  +1.1
NKC   Novy Kostel      163.84 304  ePKPAB   PKPab    18 09 39.5  +1.1
KEST  Kesra            164.27 248   PKPab   PKPab    18 09 42.1  +1.4
      comp=Z,49nm,1.1s,baz=250,slow=7.1,SNR=8.6
ABTA  Abfaltersbach    164.54 291  eP       PKPdf    18 08 48.0  +1.5
      comp=Z,7.9nm,1.0s
ABTA                               eP       PKPab    18 09 41.5  -0.2
      comp=Z,8.2nm,1.2s
ABTA                               eP       PP       18 13 29.5  +1.1
      comp=Z,11nm,1.6s
GRF   Grafenberg Arr   164.76 303  ePKP     PKPab    18 09 43.3  +0.9
      baz=72,slow=3.2
GRF                                eL       L        19 35 58.9
      comp=Z,719nm,18.9s
WTTA  Wattenberg       165.07 293  eP       PKPdf    18 08 49.7  +2.6
      comp=Z,9.7nm,1.1s
WTTA                               eP       PKPab    18 09 43.0  -1.1
      comp=Z,17nm,1.3s
WTTA                               eP       PP       18 13 31.0  -0.3
      comp=Z,7.1nm,1.3s
WATA  Walderalm        165.09 294  eP       PKPdf    18 08 50.2  +3.2
      comp=Z,5.3nm,1.1s
WATA                               eP       PKPab    18 09 45.7  +1.6
      comp=Z,30nm,1.5s
WATA                               eP       PP       18 13 33.9  +2.5
      comp=Z,7.1nm,1.3s
TEOL  Teolo            165.22 286           PKPab    18 09 43.9  -0.7
```

SQTA	**Sankt Quirin**	**165.36**	**293**	*e*P	**PKPab**	**18 09 43.1**	**-2.2**
	comp=Z,23nm,1.5s						
SQTA				*e*P	**PP**	**18 13 34.0**	**+1.2**
	comp=Z,12nm,1.7s						
MOTA	**Moosalm**	**165.41**	**294**	*e*P	**PKPdf**	**18 08 50.2**	**+2.9**
	comp=Z,11nm,1.1s						
MOTA				*e*P	**PKPab**	**18 09 45.1**	**-0.5**
	comp=Z,27nm,1.3s						
MOTA				*e*P	**PP**	**18 13 30.9**	**-2.1**
	comp=Z,10nm,1.6s						
RETA	**Reutte**	**165.61**	**295**	*e*P	**PKPab**	**18 09 47.3**	**+1.0**
	comp=Z,17nm,1.3s						
FETA	**Feichten**	**165.72**	**293**	*e*P	**PKPdf**	**18 08 50.8**	**+3.2**
	comp=Z,7.2nm,1.2s						
FETA				*e*P	**PKPab**	**18 09 46.6**	**-0.3**
	comp=Z,16nm,1.3s						
FETA				*e*P	**PP**	**18 13 34.0**	**-0.7**
	comp=Z,5.2nm,1.3s						
SALO	**Salr**	**166.01**	**287**	PKPab	**PKPab**	**18 09 48.6**	**+0.5**
DAVA	**Damuels**	**166.24**	**294**	*e*P	**PKPdf**	**18 08 51.6**	**+3.6**
	comp=Z,6.0nm,1.1s						
DAVA				*e*P	**PKPab**	**18 09 50.0**	**+0.8**
	comp=Z,32nm,1.4s						
DAVA				*e*P	**PP**	**18 13 39.5**	**+2.1**
	comp=Z,18nm,1.9s						
PMOZ	**Porto Moniz, M**	**167.78**	**144**	*e*LR	LR	19 14 02.3	
SSB	**Saint Sauveur**	**170.24**	**288**	PKP2	**PKPab**	**18 10 07.4**	**+0.6**
SSB	**Saint Sauveur**	**170.24**	**288**	PKPab	**PKPab**	**18 10 07.4**	**+0.6**
PVAQ	**Vaqueiros**	**174.30**	**188**	*e*PKP	**PKPdf**	**18 08 55.8**	**+3.2**
PVAQ	**Vaqueiros**	**174.30**	**188**	*e*SS	SS	18 35 40.4	+4.8
PVAQ	**Vaqueiros**	**174.30**	**188**	*e*LQ	LQ	19 03 33.9	
PVAQ				*e*LR	LR	19 12 01.9	
PCVE	**Castro Verde**	**174.55**	**185**	*e*PKP	**PKPdf**	**18 08 58.3**	**+5.6**
PNCL	**Nicolau / Gran**	**175.05**	**181**	*e*PKP	**PKPdf**	**18 08 58.0**	**+5.2**
ESBB	**Sonseca Array**	**175.09**	**228**		**PKPab**	**18 10 28.9**	**+0.5**
ESDC	**Sonseca Array**	**175.09**	**228**	PKP	**PKPdf**	**18 08 53.5**	**+0.6**
	comp=Z,1.8nm,1.1s,baz=334,slow=1.0,SNR=8.5						
ESDC				PKPab	**PKPab**	**18 10 29.0**	**+0.6**
	comp=Z,7.4nm,1.2s,baz=129,slow=3.0,SNR=12						
PMRV	**Marv??o**	**176.24**	**196**	*e*PKP	**PKPdf**	**18 08 58.2**	**+5.1**
PMRV	**Marv??o**	**176.24**	**196**	*e*SS	SS	18 36 00.1	+5.7
PMRV	**Marv??o**	**176.24**	**196**	*e*LQ	LQ	19 03 26.1	
PMRV	**Marv??o**	**176.24**	**196**	*e*LR	LR	19 14 56.9	
PCBR	**Castelo Branco**	**176.66**	**196**	*e*PKP	**PKPdf**	**18 08 56.6**	**+3.5**
MTE	**Manteigas**	**177.21**	**198**	*i* LQ	LQ	18 32 49.4	
MTE				*e*SS	SS	18 36 14.4	+11
MTE	**Manteigas**	**177.21**	**198**	*e*LQ	LQ	19 03 54.3	
MTE	**Manteigas**	**177.21**	**198**	*e*LR	LR	19 15 11.8	
PVIS	**Viseu**	**177.58**	**195**	*e*PKP	**PKPdf**	**18 08 56.8**	**+3.4**
MVO	**Moncorvo**	**177.74**	**214**	*i* LQ	LQ	18 30 23.4	
MVO				*e*SS	SS	18 36 16.9	+7.6
PVRL	**Vila Real**	**178.07**	**202**	*e*PKP	**PKPdf**	**18 08 56.6**	**+3.2**
POLO	**Lamas de Olo**	**178.19**	**202**	*e*PKP	**PKPdf**	**18 08 57.0**	**+3.5**
PGAV	**Gavieira, Arco**	**178.86**	**196**	*e*SS	SS	18 36 30.4	+11
PGAV	**Gavieira, Arco**	**178.86**	**196**	*e*LQ	LQ	19 01 58.5	
PGAV	**Gavieira, Arco**	**178.86**	**196**	*e*LR	LR	19 13 27.5	

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*IDC **05** 17:59:51.6±1.3, 43°.01S×171°.21E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.8/20, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=33.7km s-min=10.0km az=92.0*

*WEL **05** 17:59:52.3±0.4, 43°S±4°×17°1E±°, h5km, M4.1/29, ML4.3/13, MLv4.1/29, Error ellipse: s-maj=0.0km s-min=0.0km az=137.1*

ISC 05 17:59:52.5±1.1**, 43°.03S**±0°.03×**171°.25E**±0°.03**, h9**km±9km**,**
n81, σ1s.**52**/91**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.34**	**25**	P	**Pb**	**17 59 59.9**	**-0.8**
INZ				S	**Sg**	**18 00 04.3**	**+0.5**
WVZ	**Waitaha Valley**	**0.38**	**263**	P	**Pb**	**18 00 00.4**	**-0.9**
WVZ				S	**Sg**	**18 00 04.8**	**0.0**
MHCZ	**Mount Hutt**	**0.55**	**155**	P	**Pg**	**18 00 03.7**	**+0.4**
MHCZ				S	**Sg**	**18 00 11.0**	**+0.5**
OXZ	**Oxford**	**0.65**	**117**	P	**Pg**	**18 00 05.4**	**+0.4**
OXZ				S	**Sg**	**18 00 14.9**	**+1.3**
RPZ	**Rata Peaks**	**0.70**	**192**	Pg	**Pg**	**18 00 06.0**	**0.0**
	518nm,0.3s,baz=298,slow=3.6,SNR=74						
RPZ				Lg	Lg	18 00 14.8	
	273nm,0.3s,baz=322,slow=18,SNR=15						
RPZ	**Rata Peaks**	**0.70**	**192**	P	**Pg**	**18 00 05.2**	**-0.7**
GCSZ	**Gaunt Creek Bo**	**0.73**	**247**	P	**Pb**	**18 00 06.5**	**-0.9**
LTZ	**Lake Taylor**	**0.79**	**72**	P	**Pb**	**18 00 08.7**	**+0.2**
LTZ				S	**Sg**	**18 00 18.6**	**+0.5**
ARCZ	**Arundel**	**0.92**	**183**	P	**Pg**	**18 00 10.3**	**+0.1**
ARCZ				S	**Sb**	**18 00 24.7**	**+1.8**
RACZ	**Rakaia**	**0.95**	**137**	P	**Pn**	**18 00 12.1**	**+0.1**
RACZ				S	**Sb**	**18 00 25.4**	**+1.6**
WACZ	**Wakanui South**	**1.01**	**155**	P	**Pb**	**18 00 12.9**	**+0.8**
WACZ				S	**Sb**	**18 00 26.0**	**+0.5**
AMCZ	**Amberley**	**1.04**	**98**	P	**Pn**	**18 00 14.0**	**+0.7**
AMCZ				S	**Sb**	**18 00 28.0**	**+1.6**
FOZ	**Fox Glacier**	**1.16**	**244**	P	**Pn**	**18 00 15.4**	**+0.6**
FOZ				S	**Sb**	**18 00 30.0**	**+0.3**
MQZ	**McQueen's Vall**	**1.23**	**124**	P	**Pg**	**18 00 14.6**	**-1.5**
DSZ	**Denniston Nort**	**1.35**	**18**	P	**Pg**	**18 00 17.1**	**-1.3**
TMZ	**Timaru**	**1.36**	**187**	P	**Pn**	**18 00 17.6**	**-0.1**
AKCZ	**Akaroa Harbour**	**1.47**	**125**	P	**Pn**	**18 00 18.7**	**-0.6**
OKCZ	**Okains Bay**	**1.49**	**118**	P	**Pn**	**18 00 18.3**	**-1.2**
LBZ	**Lake Benmore**	**1.56**	**209**	P	**Pn**	**18 00 20.3**	**-0.1**
THZ	**Tophouse**	**1.77**	**45**	P	**Pn**	**18 00 23.2**	**-0.1**
KHZ	**Kahutara**	**1.80**	**71**	P	**Pn**	**18 00 23.9**	**+0.2**
ODZ	**Otahua Downs**	**2.06**	**192**	P	**Pn**	**18 00 26.9**	**-0.3**
JCZ	**Jackson Bay**	**2.07**	**239**	P	**Pn**	**18 00 27.0**	**-0.4**
BSWZ	**Blackbirch Sta**	**2.35**	**57**	P	**Pb**	**18 00 33.4**	**-1.6**
QRZ	**Quartz Range**	**2.40**	**24**	P	**Pn**	**18 00 33.0**	**+1.0**
NNZ	**Nelson**	**2.41**	**42**	P	**Pb**	**18 00 34.3**	**-1.7**
WKZ	**Wanaka**	**2.41**	**221**	P	**Pn**	**18 00 31.3**	**-0.8**
TUWZ	**Tuamarina**	**2.56**	**52**	P	**Pn**	**18 00 35.6**	**+1.4**
MSZ	**Milford Sound**	**2.91**	**235**	P	**Pn**	**18 00 38.7**	**-0.2**
DUWZ	**D'Urville Isla**	**2.99**	**43**	P	**Pn**	**18 00 42.3**	**+2.2**
BHW	**Baring Head**	**3.14**	**60**	P	**Pn**	**18 00 42.6**	**+0.5**
PLWZ	**Palliser**	**3.31**	**65**	P	**Pn**	**18 00 43.9**	**-0.6**
MSWZ	**Moikau Station**	**3.38**	**63**	P	**Pn**	**18 00 45.2**	**-0.3**
CAW	**Cannon Point**	**3.43**	**57**	P	**Pn**	**18 00 46.4**	**+0.2**
KIW	**Kapiti Island**	**3.49**	**53**	P	**Pn**	**18 00 47.5**	**+0.6**
PAWZ	**Paruwai Farm**	**3.52**	**63**	P	**Pn**	**18 00 47.1**	**-0.2**
OGWZ	**Otaki Gorge**	**3.67**	**54**	P	**Pn**	**18 00 50.7**	**+1.3**
MTW	**Mount Morrison**	**3.68**	**61**	P	**Pn**	**18 00 48.6**	**-0.9**
TRWZ	**Traveller**	**3.68**	**65**	P	**Pn**	**18 00 49.8**	**+0.3**
SYZ	**Scrubby Hill**	**3.81**	**202**	P	**Pn**	**18 00 49.8**	**-1.5**
TMWZ	**Te Maipa**	**3.96**	**62**	P	**Pn**	**18 00 53.2**	**-0.1**
MRZ	**Mangatainoka R**	**4.01**	**55**	P	**Pn**	**18 00 53.2**	**-0.9**
NMEZ	**Namu Road**	**4.12**	**30**	P	**Pn**	**18 00 58.0**	**+2.3**
NBEZ	**Newall Road No**	**4.25**	**29**	P	**Pn**	**18 00 59.4**	**+2.0**
KHEZ	**Kahui Hut**	**4.28**	**30**	P	**Pn**	**18 01 00.2**	**+2.3**
LREZ	**Lake Rotokare**	**4.29**	**35**	P	**Pn**	**18 01 01.2**	**+3.3**
POWZ	**Post Office Ro**	**4.29**	**54**	P	**Pb**	**18 01 05.0**	**-3.1**
PREZ	**Palmer Road**	**4.29**	**32**	P	**Pn**	**18 01 00.3**	**+2.3**
PRWZ	**Pori Road**	**4.31**	**57**	P	**Pn**	**18 00 57.3**	**-0.9**
WAZ	**Wanganui**	**4.32**	**42**	P	**Pn**	**18 01 00.9**	**+2.6**
NEZ	**North Egmont**	**4.33**	**31**	P	**Pn**	**18 01 00.9**	**+2.3**
PKE	**Pukeiti**	**4.36**	**29**	P	**Pn**	**18 01 01.2**	**+2.3**
BFZ	**Birch Farm**	**4.41**	**60**	P	**Pn**	**18 00 58.2**	**-1.4**
DREZ	**Durham Road**	**4.44**	**31**	P	**Pn**	**18 01 02.2**	**+2.2**
PYZ	**Puysegur Point**	**4.52**	**225**	P	**Pn**	**18 01 01.4**	**+0.3**
TSZ	**Takapari Road**	**4.62**	**52**	P	**Pn**	**18 01 03.7**	**+1.2**
VRZ	**Vera Road**	**4.72**	**35**	P	**Pn**	**18 01 06.3**	**+2.5**
PNHZ	**Pukenui**	**4.85**	**52**	P	**Pn**	**18 01 07.2**	**+1.5**
PKVZ	**Pokaka**	**4.85**	**41**	P	**Pn**	**18 01 09.1**	**+3.4**
WNVZ	**Wahianoa**	**4.95**	**43**	P	**Pn**	**18 01 09.4**	**+2.3**
MOVZ	**Moawhango**	**4.97**	**45**	P	**Pn**	**18 01 09.1**	**+1.8**
TUVZ	**Tukino**	**5.02**	**43**	P	**Pn**	**18 01 10.7**	**+2.6**
TWVZ	**Taurewa**	**5.07**	**40**	P	**Pn**	**18 01 11.8**	**+3.1**
HIZ	**Hauiti**	**5.28**	**32**	P	**Pn**	**18 01 13.0**	**+1.5**
BKZ	**Black Stump Fm**	**5.53**	**47**	P	**Pn**	**18 01 17.7**	**+2.6**
TLZ	**Tolley Road**	**5.72**	**36**	P	**Pn**	**18 01 19.2**	**+1.6**
TOZ	**Tahuroa Road**	**6.21**	**33**	P	**Pn**	**18 01 25.5**	**+1.2**
AWAZ	**Awhitu Peninsu**	**6.50**	**25**	P	**Pn**	**18 01 30.2**	**+1.8**
URZ	**Urewera**	**6.53**	**45**	Pn	**Pn**	**18 01 27.1**	**-1.5**
	0.4nm,0.3s,baz=300,slow=20,SNR=2.3						
WTAZ	**Waiatarua**	**6.61**	**24**	P	**Pn**	**18 01 31.8**	**+2.1**
ETAZ	**East Tamaki Re**	**6.70**	**26**	P	**Pn**	**18 01 33.1**	**+2.1**
RVAZ	**Riverhead Bore**	**6.76**	**23**	P	**Pn**	**18 01 34.2**	**+2.4**
MBAZ	**Motutapu North**	**6.86**	**25**	P	**Pn**	**18 01 35.2**	**+2.1**
WIAZ	**Waiheke Island**	**6.91**	**27**	P	**Pn**	**18 01 35.9**	**+2.0**
ABAZ	**Army Bay**	**6.99**	**24**	P	**Pn**	**18 01 37.0**	**+2.0**
RUGZ	**Raukumara Rang**	**7.04**	**46**	P	**Pn**	**18 01 35.3**	**-0.6**
KUZ	**Kuaotunu**	**7.16**	**30**	P	**Pn**	**18 01 38.1**	**+0.7**
ASAR	**Alice Springs**	**36.30**	**290**	P	**P**	**18 06 56.0**	**-0.4**
	0.5nm,0.5s,baz=130,slow=8.0,SNR=18						
WRA	**Warramunga Arr**	**38.54**	**295**	P	**P**	**18 07 15.4**	**-0.1**
	0.7nm,0.3s,baz=140,slow=6.5,SNR=5.8						
ARCES	**ARCESS Array B**	**148.17**	**338**	PKPbc	**PKiKP**	**18 19 39.4**	**+0.2**
	3.3nm,0.9s,baz=64,slow=2.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**148.88**	**200**	PKPbc	**PKPbc**	**18 19 40.0**	**-0.9**
	1.1nm,0.7s,baz=183,slow=5.6,SNR=3.1						

WEL 05 18:06:27.0±0.4**, 43°S**±3°×**17°1E**±°**, h5**km**, M3.5**/18**,**
ML3.6/18**, MLv3.5**/18**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=143.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	**0.34**	**264**	P	Pg	18 06 34.4	+0.7
WVZ				S	Sg	18 06 38.9	+0.7
INZ	**Inchbonnie**	**0.36**	**29**	P	Pg	18 06 34.2	+0.3
INZ				S	Sg	18 06 38.8	+0.2
MHCZ	**Mount Hutt**	**0.56**	**152**	P	Pg	18 06 38.0	+0.2
OXZ	**Oxford**	**0.67**	**116**	P	Pg	18 06 40.1	+0.2
RPZ	**Rata Peaks**	**0.69**	**189**	S	Sg	18 06 49.7	+0.6
GCSZ	**Gaunt Creek Bo**	**0.70**	**246**	P	Pg	18 06 40.6	+0.2
LTZ	**Lake Taylor**	**0.82**	**72**	P	Pg	18 06 43.2	+0.4
LTZ				S	Sb	18 06 54.4	-0.8
ARCZ	**Arundel**	**0.91**	**181**	P	Pg	18 06 44.4	-0.1
RACZ	**Rakaia**	**0.97**	**136**	P	Pg	18 06 45.8	+0.2
WACZ	**Wakanui South**	**1.02**	**153**	P	Pg	18 06 46.6	+0.2
AMCZ	**Amberley**	**1.07**	**98**	P	Pn	18 06 48.3	-0.3
FOZ	**Fox Glacier**	**1.13**	**244**	P	Pg	18 06 48.6	-0.1
MQZ	**McQueen's Vall**	**1.25**	**123**	P	Pg	18 06 49.7	-1.3
GVZ	**Greta Valley S**	**1.34**	**88**	P	Pn	18 06 51.6	-0.8
TMZ	**Timaru**	**1.35**	**186**	P	Pn	18 06 51.9	-0.6
DSZ	**Denniston Nort**	**1.37**	**19**	P	Pn	18 06 52.5	-0.3
AKCZ	**Akaroa Harbour**	**1.50**	**124**	P	Pn	18 06 53.3	-1.3
OKCZ	**Okains Bay**	**1.52**	**118**	P	Pn	18 06 54.5	-0.3
LBZ	**Lake Benmore**	**1.54**	**208**	P	Pn	18 06 55.0	-0.1
THZ	**Tophouse**	**1.79**	**45**	P	Pn	18 06 59.1	+0.4
KHZ	**Kahutara**	**1.83**	**71**	P	Pn	18 06 58.6	-0.4
JCZ	**Jackson Bay**	**2.04**	**239**	P	Pn	18 07 02.4	+0.3
ODZ	**Otahua Downs**	**2.05**	**191**	P	Pn	18 07 01.3	-0.8
BSWZ	**Blackbirch Sta**	**2.38**	**57**	P	Pb	18 07 09.0	-1.3
WKZ	**Wanaka**	**2.39**	**221**	P	Pb	18 07 10.9	+0.4
QRZ	**Quartz Range**	**2.42**	**25**	P	Pn	18 07 07.3	+0.1
NNZ	**Nelson**	**2.43**	**42**	P	Pn	18 07 08.7	+1.3
CMWZ	**Cape Campbell**	**2.57**	**61**	P	Pb	18 07 12.7	-0.9
EAZ	**Earnscleugh**	**2.58**	**211**	P	Pb	18 07 14.1	+0.3
TUWZ	**Tuamarina**	**2.59**	**53**	P	Pn	18 07 10.5	+1.0
TCW	**Tory Channel**	**2.92**	**52**	P	Pn	18 07 16.5	+2.4
DUWZ	**D'Urville Isla**	**3.02**	**43**	P	Pn	18 07 16.6	+1.2
BHW	**Baring Head**	**3.17**	**60**	P	Pb	18 07 22.2	-1.6
MSWZ	**Moikau Station**	**3.41**	**63**	P	Pb	18 07 26.5	-1.4
KIW	**Kapiti Island**	**3.52**	**53**	P	Pn	18 07 21.8	-0.5
OGWZ	**Otaki Gorge**	**3.70**	**54**	P	Pb	18 07 30.2	-2.5
MTW	**Mount Morrison**	**3.71**	**61**	P	Pb	18 07 31.5	-1.5
HOWZ	**Holdsworth Sta**	**3.86**	**58**	P	Pb	18 07 33.0	-2.5
MRZ	**Mangatainoka R**	**4.04**	**55**	P	Pn	18 07 27.9	-1.6
NMEZ	**Namu Road**	**4.14**	**30**	P	Pn	18 07 32.7	+1.8
NBEZ	**Newall Road No**	**4.27**	**29**	P	Pn	18 07 33.8	+1.2
KHEZ	**Kahui Hut**	**4.30**	**30**	P	Pn	18 07 34.6	+1.5
LREZ	**Lake Rotokare**	**4.31**	**35**	P	Pn	18 07 35.9	+2.7
PREZ	**Palmer Road**	**4.31**	**32**	P	Pn	18 07 34.7	+1.4
NEZ	**North Egmont**	**4.35**	**31**	P	Pn	18 07 35.5	+1.7
PKE	**Pukeiti**	**4.38**	**30**	P	Pn	18 07 35.5	+1.4
TSZ	**Takapari Road**	**4.65**	**52**	P	Pb	18 07 45.1	-3.9
WNVZ	**Wahianoa**	**4.97**	**43**	P	Pn	18 07 43.2	+0.8
NGZ	**Ngauruhoe**	**5.09**	**42**	P	Pn	18 07 48.1	+4.0
OTVZ	**Oturere**	**5.13**	**43**	P	Pn	18 07 48.3	+3.7
WTVZ	**West Tongariro**	**5.13**	**42**	P	Pn	18 07 48.1	+3.5
ETVZ	**East Tongariro**	**5.17**	**43**	P	Pn	18 07 50.6	+5.4
TMVZ	**Te Maari**	**5.19**	**42**	P	Pn	18 07 50.7	+5.4
HIZ	**Hauiti**	**5.30**	**33**	P	Pn	18 07 47.2	+0.4
TOZ	**Tahuroa Road**	**6.23**	**33**	P	Pn	18 07 59.9	+0.3
AWAZ	**Awhitu Peninsu**	**6.52**	**25**	P	Pn	18 08 04.7	+1.1
MKAZ	**Moumakai**	**6.66**	**28**	P	Pn	18 08 06.0	+0.6
MBAZ	**Motutapu North**	**6.87**	**26**	P	Pn	18 08 09.4	+1.0
WIAZ	**Waiheke Island**	**6.93**	**27**	P	Pn	18 08 10.2	+1.1
WCZ	**Waipu Caves**	**7.49**	**20**	P	Pn	18 08 17.9	+1.0
OUZ	**Omahuta**	**8.02**	**14**	P	Pn	18 08 25.9	+1.7

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*UPP **05** 18:11:19.9±0.1, 67°.07N×20°.93E, h0km, ML2.1, Explosion*

*IDC **05** 18:11:20.1±1.3, 67°.10N×20°.92E, h0km, mb1 3.0/3, mb1mx2.8/44, mbtmp2.8/3, ML2.0/3, Error ellipse: s-maj=23.3km s-min=9.9km az=103.0*

*HEL **05** 18:11:20.7, 67°.12N×21°.09E, h0km, ML2.2, Explosion*

*NAO **05** 18:11:21.6±1.2, 67°.11N×21°.43E, ML2.4*

*BER **05** 18:11:23.2±3.9, 67°.12N×21°.12E, h0km, ML1.9, ML2.4(NAO), Suspected explosion*

ISC 05 18:11:20.2±0.7**, 67°.09N**±0°.02×**20°.99E**±0°.02**, h0**km**, n53,**
σ1s.**22**/78**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.17**	**281**	P	**Pg**	**18 11 23.1**	**-0.3**
DUNU				S	**Sg**	**18 11 24.6**	**-0.9**
DUNU	**Dundret**	**0.17**	**281**	*i* P	**Pg**	**18 11 23.1**	**-0.3**
DUNU				*i* S	**Sg**	**18 11 24.6**	**-0.9**
PAJU	**Pajala**	**0.84**	**94**	P	**Pg**	**18 11 35.9**	**-0.3**
PAJU	**Pajala**	**0.84**	**94**	*e*P	**Pg**	**18 11 35.8**	**-0.4**
	baz=281						
PAJU				*e*S	**Sg**	**18 11 45.5**	**-1.6**
LANU	**Lannavaara**	**1.04**	**21**	P	**Pg**	**18 11 39.5**	**-0.5**
LANU	**Lannavaara**	**1.04**	**21**	*e*P	**Pg**	**18 11 39.5**	**-0.5**
KOVU	**Salmi**	**1.18**	**345**	P	**Pg**	**18 11 42.4**	**-0.4**
KOVU				S	**Sn**	**18 12 00.2**	**-0.6**
KOVU	**Salmi**	**1.18**	**345**	*e*P	**Pg**	**18 11 42.4**	**-0.4**
KOVU				*e*S	**Sn**	**18 12 00.2**	**-0.6**
KALU	**Kalix**	**1.56**	**141**	*e*P	**Pn**	**18 11 48.7**	**-0.5**
KALU				*e*SN	**Sg**	**18 12 12.5**	**+2.3**
TOF	**Tornio**	**1.68**	**126**	*e*P	**Pn**	**18 11 50.6**	**-0.1**
TOF				MSG		18 12 10.5	
	comp=Z,25nm,0.2s						
TOF				*e*SN	**Sg**	**18 12 14.3**	**+0.3**
KIF	**Kilpisjarvi**	**1.92**	**358**	Pn	**Pb**	**18 11 55.5**	**-0.6**
KIF				Sn	**Sg**	**18 12 22.8**	**+0.9**
KIF	**Kilpisjarvi**	**1.92**	**358**	*e*P	**Pb**	**18 11 55.5**	**-0.6**
KIF				*e*S	**Sg**	**18 12 22.9**	**+1.0**
KIF	**Kilpisjarvi**	**1.92**	**358**	*e*P	**Pb**	**18 11 55.4**	**-0.7**
	baz=165						
KIF				MSG		18 12 18.2	
	comp=Z,34nm,0.2s						
KIF				*e*SG	**Sg**	**18 12 23.1**	**+1.2**
RNF	**Rovaniemi**	**2.04**	**101**	*e*P	**Pn**	**18 11 56.7**	**+0.8**
RNF				*e*SG	**Sg**	**18 12 25.8**	**0.0**
KTK1	**Kautokeino**	**2.11**	**23**	Pn	**Pb**	**18 11 59.1**	**-0.2**
KTK1				Sn	**Sn**	**18 12 24.1**	**+0.6**
KTK1	**Kautokeino**	**2.11**	**23**	*e*P	**Pb**	**18 11 58.4**	**-0.8**
N2IH	**Innhavet**	**2.13**	**297**	*e*P	**Pn**	**18 11 58.2**	**+1.3**
N2IH				*e*S	**Sb**	**18 12 26.6**	**+0.1**
SGF	**Sodankyl**	**2.18**	**78**	*e*P	**Pn**	**18 11 58.8**	**+1.1**
	baz=255						
SGF				*e*SG	**Sg**	**18 12 29.6**	**-0.6**
I37NO	**I37NO**	**2.18**	**337**	*i*		18 26 17.2	
	baz=159,slow=330,SNR=8.8						
FAUS	**Fauske**	**2.24**	**280**	*e*P	**Pn**	**18 11 58.7**	**+0.3**
FAUS				*e*S	**Sb**	**18 12 30.8**	**+1.2**
FAUS				IAML		18 12 35.1	
	comp=Z,21nm,0.2s						
STEI	**Steigen**	**2.36**	**294**	*e*P	**Pn**	**18 12 01.0**	**+0.8**
BURU	**Burvik**	**2.52**	**176**	*e*P	**Pn**	**18 12 03.4**	**+1.0**
	baz=358						
NBB28	**Valnes**	**2.55**	**275**	*e*P	**Pn**	**18 12 04.7**	**+2.0**
TRO	**Tromso**	**2.66**	**344**	*e*P	**Pn**	**18 12 06.0**	**+1.7**
MOR8	**Moi Rana**	**2.77**	**254**	*e*P	**Pn**	**18 12 06.0**	**+0.2**
OUL	**Oulu**	**2.84**	**133**	*e*PB	**Pb**	**18 12 09.1**	**-2.6**
	baz=314						
NBB30	**Finnes**	**2.85**	**271**	*e*P	**Pn**	**18 12 07.7**	**+0.9**
OBF0	**Syolatti, Pyha**	**2.93**	**151**	*e*PB	**Pb**	**18 12 11.1**	**-2.1**
	baz=323						
ARA0	**ARCESS Array S**	**2.97**	**32**	Pn	**Pn**	**18 12 09.0**	**+0.4**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**18 12 42.9**	**-2.0**
	baz=208,slow=28						
ARA0				Lg	Lg	18 12 51.7	
	baz=213,slow=28						
ARA0	**ARCESS Array S**	**2.97**	**32**	Pn	**Pn**	**18 12 09.0**	**+0.4**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**18 12 42.9**	**-2.0**
	baz=208,slow=28						
ARA0				Sg	**Sb**	**18 12 51.7**	**+0.8**
	baz=213,slow=28						
ARCES	**ARCESS Array B**	**2.97**	**32**	Pn	**Pn**	**18 12 08.9**	**+0.3**
	baz=214,slow=14,SNR=61						
ARCES				Sn	**Sn**	**18 12 45.5**	**+0.6**
	baz=214,slow=24,SNR=10						
LOF	**Lofoten**	**3.04**	**294**	*e*P	**Pn**	**18 12 09.9**	**+0.5**
OUF	**Merijarvi**	**3.14**	**149**	*e*P	**Pn**	**18 12 12.7**	**+1.9**
	baz=328						
OUF				MSG		18 12 53.2	
	comp=Z,3.0nm,0.2s						
KONS	**Konsvik**	**3.17**	**263**	*e*P	**Pn**	**18 12 12.5**	**+1.2**
KONS				IAML		18 13 05.6	
	comp=Z,5.3nm,0.3s						
N2SV	**S¸rv¥gen**	**3.17**	**288**	*e*P	**Pn**	**18 12 10.8**	**-0.5**
NBB40	**Tonnes**	**3.21**	**263**	*e*P	**Pn**	**18 12 12.3**	**+0.5**
N2VA	**Vr¸y**	**3.26**	**284**	*e*P	**Pn**	**18 12 11.6**	**-0.9**
VRF	**Varrio**	**3.39**	**75**	*e*PB	**Pb**	**18 12 19.3**	**-1.8**
	baz=264						
VRF				*e*SG	**Sg**	**18 13 07.3**	**-1.7**
MSF	**Maaselka**	**3.44**	**106**	*e*P	**Pn**	**18 12 16.7**	**+1.7**
HAMF	**Hammerfest**	**3.70**	**14**	*e*P	**Pn**	**18 12 19.2**	**+0.7**
KU6	**Riekki**	**3.72**	**103**	*e*P	**Pn**	**18 12 20.4**	**+1.6**
HUSU	**Husum**	**3.84**	**192**	*e*P	**Pn**	**18 12 21.9**	**+1.4**
	baz=13						
VAF	**Ylistaro**	**4.13**	**169**	*e*P	**Pn**	**18 12 25.2**	**+0.8**
	baz=347						
NSS	**Namsos**	**4.51**	**239**	*e*P	**Pn**	**18 12 31.1**	**+1.4**
HEMU	**Hemsoen**	**4.61**	**197**	*e*P	**Pn**	**18 12 32.0**	**+1.0**
	baz=15						
APA0	**Apatity Array**	**4.67**	**78**	Pn	**Pn**	**18 12 32.8**	**+0.9**
	baz=265,slow=12						
APA0				Sn	**Sn**	**18 13 26.5**	**-0.2**
	baz=270,slow=28						
APA0				Lg	Lg	18 13 44.2	
APA0	**Apatity Array**	**4.67**	**78**	Pn	**Pn**	**18 12 32.8**	**+0.9**
	baz=265,slow=12						
APA0				Sn	**Sn**	**18 13 26.5**	**-0.2**
	baz=270,slow=28						
APA0				Sg	**Sb**	**18 13 44.2**	**+4.6**
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	**Pn**	**18 12 52.1**	**+0.8**
	baz=344,slow=14						
FIA0				Sn	**Sn**	**18 14 02.1**	**+0.6**
	baz=348,slow=28						
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	**Pn**	**18 12 52.1**	**+0.8**
	baz=344,slow=14						
FIA0				Sn	**Sn**	**18 14 02.1**	**+0.6**
	baz=348,slow=28						
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**18 12 52.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=342,slow=13,SNR=5.9						
FINES				Sn	**Sn**	**18 14 01.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=352,slow=20,SNR=6.3						
NB2	**NORSAR Subarra**	**7.42**	**220**	Pn	**Pn**	**18 13 11.2**	**+1.5**
	baz=27,slow=14						
NB2	**NORSAR Subarra**	**7.42**	**220**	Pn	**Pn**	**18 13 11.2**	**+1.5**
	baz=27,slow=14						
NOA	**NORSAR Array B**	**7.42**	**220**	Pn	**Pn**	**18 13 07.7**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=44,slow=22,SNR=2.5						

WEL 05 18:14:29.7±0.4**, 43°S**±3°×**17°1E**±°**, h5**km**, M3.4**/19**,**
ML3.6/19**, MLv3.4**/19**, Error ellipse: s-maj=0.0km**
s-min=0.0km az=164.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.34**	**22**	P	Pg	18 14 36.7	+0.3
INZ				S	Sg	18 14 41.2	+0.3
WVZ	**Waitaha Valley**	**0.39**	**265**	P	Pg	18 14 37.8	+0.6
WVZ				S	Sg	18 14 42.9	+0.5
MHCZ	**Mount Hutt**	**0.54**	**156**	P	Pg	18 14 40.5	+0.5
OXZ	**Oxford**	**0.63**	**117**	P	Pg	18 14 42.3	+0.5
OXZ				S	Sg	18 14 50.7	+0.7
RPZ	**Rata Peaks**	**0.69**	**193**	P	Pg	18 14 43.3	+0.3
GCSZ	**Gaunt Creek Bo**	**0.74**	**248**	P	Pg	18 14 44.0	0.0
LTZ	**Lake Taylor**	**0.78**	**71**	P	Pg	18 14 45.2	+0.5
LTZ				S	Sg	18 14 55.8	+0.9
ARCZ	**Arundel**	**0.91**	**184**	P	Pg	18 14 47.3	+0.1
RACZ	**Rakaia**	**0.93**	**137**	P	Pb	18 14 48.2	-0.2
WACZ	**Wakanui South**	**0.99**	**155**	P	Pb	18 14 49.3	-0.1
AMCZ	**Amberley**	**1.02**	**98**	P	Pn	18 14 50.4	-0.3
FOZ	**Fox Glacier**	**1.17**	**245**	P	Pg	18 14 51.8	-0.3
MQZ	**McQueen's Vall**	**1.21**	**124**	P	Pg	18 14 52.2	-0.7
MQZ				S	Sg	18 15 08.2	-0.4
GVZ	**Greta Valley S**	**1.30**	**87**	P	Pn	18 14 54.0	-0.5
TMZ	**Timaru**	**1.35**	**188**	P	Pn	18 14 54.7	-0.6
DSZ	**Denniston Nort**	**1.36**	**17**	P	Pn	18 14 55.2	-0.2
AKCZ	**Akaroa Harbour**	**1.46**	**125**	P	Pn	18 14 55.6	-1.0
OKCZ	**Okains Bay**	**1.47**	**118**	P	Pn	18 14 56.4	-0.5
OKCZ				S	Sn	18 15 15.2	-1.4
LBZ	**Lake Benmore**	**1.56**	**210**	P	Pn	18 14 57.7	-0.4
THZ	**Tophouse**	**1.76**	**44**	P	Pn	18 15 01.0	+0.1
KHZ	**Kahutara**	**1.79**	**70**	P	Pn	18 15 01.0	-0.2
ODZ	**Otahua Downs**	**2.05**	**192**	P	Pn	18 15 04.0	-0.8
JCZ	**Jackson Bay**	**2.08**	**239**	P	Pn	18 15 05.2	-0.1
BSWZ	**Blackbirch Sta**	**2.34**	**56**	P	Pb	18 15 12.0	-0.4
NNZ	**Nelson**	**2.41**	**41**	P	Pn	18 15 11.6	+1.9
QRZ	**Quartz Range**	**2.41**	**23**	P	Pn	18 15 10.1	+0.3
WKZ	**Wanaka**	**2.41**	**222**	P	Pn	18 15 08.8	-1.1
TUWZ	**Tuamarina**	**2.56**	**52**	P	Pn	18 15 12.4	+0.6
EAZ	**Earnscleugh**	**2.60**	**212**	P	Pn	18 15 10.7	-1.8
TCW	**Tory Channel**	**2.89**	**52**	P	Pn	18 15 18.4	+2.0
MSZ	**Milford Sound**	**2.92**	**235**	P	Pn	18 15 16.3	-0.4
DUWZ	**D'Urville Isla**	**2.99**	**42**	P	Pn	18 15 19.3	+1.5
TUZ	**Tuapeka**	**3.14**	**201**	P	Pn	18 15 18.6	-1.2
MLZ	**Mavora Lakes**	**3.24**	**223**	P	Pn	18 15 19.9	-1.4
OGWZ	**Otaki Gorge**	**3.66**	**54**	P	Pn	18 15 26.5	-0.5
WHZ	**Wether Hill Ro**	**3.71**	**219**	P	Pn	18 15 25.7	-2.0
SYZ	**Scrubby Hill**	**3.81**	**203**	P	Pn	18 15 27.8	-1.1
HOWZ	**Holdsworth Sta**	**3.82**	**57**	P	Pb	18 15 35.7	-1.9
NBEZ	**Newall Road No**	**4.25**	**28**	P	Pn	18 15 37.0	+1.9
KHEZ	**Kahui Hut**	**4.28**	**30**	P	Pn	18 15 37.1	+1.5
PREZ	**Palmer Road**	**4.29**	**32**	P	Pn	18 15 37.6	+1.9
NEZ	**North Egmont**	**4.33**	**30**	P	Pn	18 15 38.4	+2.1
PKE	**Pukeiti**	**4.36**	**29**	P	Pn	18 15 38.1	+1.5
APZ	**The Paps**	**4.45**	**210**	P	Pn	18 15 35.5	-2.3
OTVZ	**Oturere**	**5.10**	**42**	P	Pn	18 15 50.1	+3.1
WTVZ	**West Tongariro**	**5.10**	**41**	P	Pn	18 15 52.5	+5.5
TMVZ	**Te Maari**	**5.16**	**42**	P	Pn	18 15 52.8	+5.1
HIZ	**Hauiti**	**5.28**	**32**	P	Pn	18 15 49.9	+0.6
MKAZ	**Moumakai**	**6.64**	**28**	P	Pn	18 16 09.1	+1.2
WIAZ	**Waiheke Island**	**6.91**	**27**	P	Pn	18 16 13.2	+1.5

IDC 05 18:20:12.3±1.8**, 8°.03S**×**125°.83E, h0**km**, mb3.6**/1**,**
mb1 3.6/4**, mb1mx3.3**/40**, mbtmp3.4**/4**, ML3.3**/3**, Error**
ellipse: s-maj=40.1km s-min=25.5km az=85.0, Timor
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.04**	**224**	Pn	Pn	18 21 03.2	+1.5
	0.0nm,0.3s,baz=266,slow=16,SNR=5.6						
BATI				Sn	Sn	18 21 38.4	-0.5
	0.0nm,0.3s,baz=211,slow=9.6,SNR=7.4						
FITZ	**Fitzroy Crossi**	**10.01**	**181**	Pn	Pn	18 22 36.9	-0.6
	0.2nm,0.3s,baz=358,slow=11,SNR=9.9						
FITZ				Sn	Sn	18 24 23.3	-7.4
	0.6nm,0.3s,baz=271,slow=22,SNR=9.5						
WRA	**Warramunga Arr**	**14.43**	**146**	Pn	Pn	18 23 36.9	-1.2
	0.2nm,0.3s,baz=322,slow=14,SNR=8.4						
ASAR	**Alice Springs**	**17.37**	**154**	P	Pn	18 24 16.6	+0.2
	0.1nm,0.3s,baz=318,slow=11,SNR=11						
MKAR	**Makanchi Array**	**66.89**	**329**	P	P	18 31 06.3	-0.1
	0.4nm,0.7s,baz=134,slow=6.5,SNR=5.7						

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*IDC **05** 18:21:40.0±0.7, 3°.37S×131°.24E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/37, mbtmp4.1/13, ML3.8/1, Error ellipse: s-maj=32.5km s-min=13.0km az=78.0*

*NOU **05** 18:21:41.3, 3°.59S×131°.13E, h0km, mb4.6, Irian Jaya Region, Indonesia*

*DJA **05** 18:21:44.0±0.4, 3°S±6°×13°1E±°, h10km, M4.3/10, mb4.7/2, MLv4.1/10*

*NEIC **05** 18:21:45.4±2.0, 3°.41S±0°.06×131°.18E±0°.09, h37km±9km, mb4.2/19, Error ellipse: s-maj=13.1km s-min=9.2km az=96.0*

ISC 05 18:21:43.7±0.5**, 3°.51S**±0°.05×**131°.18E**±0°.05**, h30**km**, n48,**
σ2s.**33**/45**, mb4.2**/18**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.22**	**61**	Pn	**Pb**	**18 22 05.2**	**-0.9**
FAKI	**Fak Fak**	**1.22**	**61**	P	**Pb**	**18 22 05.3**	**-0.9**

BNDI	**Bandanaira**	**1.62**	**232**	P	**Pb**	**18 22 14.7**	**+1.7**
MSAI	**Masohi**	**2.25**	**274**	P	**Pb**	**18 22 20.4**	**-3.3**
SIJI	**Sorong**	**2.62**	**2**	Pn	**Pn**	**18 22 22.6**	**-1.5**
	19nm,0.3s,baz=33,slow=22,SNR=93						
SIJI				Sn	**Sn**	**18 22 53.5**	**-1.4**
	33nm,0.3s,baz=236,slow=22,SNR=17						
SWI	**Sorong**	**2.63**	**2**	P	**Pn**	**18 22 22.7**	**-1.4**
NLAI	**Namlea**	**4.08**	**274**	P	**Pn**	**18 22 47.2**	**+3.1**
SAUI	**Saumlaki**	**4.45**	**178**	Pn	Pn	18 22 52.3	+3.2
SANI	**Sanana**	**5.38**	**285**	P	**Pn**	**18 23 02.5**	**+0.5**
	0.3nm28nm,0.5s						
BAKI	**Biak**	**5.44**	**65**	P	**Pn**	**18 23 03.4**	**+0.6**
MTN	**Manton Dam**	**9.28**	**180**	Pn	**Pn**	**18 23 56.5**	**+1.0**
FITZ	**Fitzroy Crossi**	**15.48**	**200**	Pn	**Pn**	**18 25 16.3**	**-3.7**
	0.8nm,0.3s,baz=26,slow=11,SNR=9.6						
FITZ				Sn	**Sn**	**18 28 01.1**	**-10**
	0.5nm,0.3s,baz=180,slow=19,SNR=1.9						
FITZ	**Fitzroy Crossi**	**15.48**	**200**		**Pn**	**18 25 17.5**	**-2.5**
FITZ				IAmb	IAmb	18 25 46.3	
	comp=Z,15nm,1.1s						
COEN	**Coen**	**15.75**	**132**	Pn	**Pn**	**18 25 22.9**	**-0.7**
WB0	**Warramunga Arr**	**16.46**	**169**	Pn	**Pn**	**18 25 29.8**	**-2.9**
WRAB	**Tennant Creek**	**16.62**	**170**	Pn	**Pn**	**18 25 31.5**	**-3.1**
WRAB				IAmb	IAmb	18 25 53.2	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**16.62**	**170**	Pn	**Pn**	**18 25 30.5**	**-4.2**
	comp=Z,0.7nm,0.3s,baz=344,slow=14,SNR=22						
WRA				Sn	Sn	18 28 25.2	-13
	comp=Z,0.3nm,0.3s,baz=301,slow=5.1,SNR=2.5						
WB2	**Warramunga Arr**	**16.63**	**170**		**Pn**	**18 25 31.9**	**-2.9**
WB2				IAmb	IAmb	18 25 48.7	
	comp=Z,20nm,1.3s						
WR0	**Warramunga Arr**	**16.68**	**169**		**Pn**	**18 25 33.7**	**-1.7**
WR0				IAmb	IAmb	18 25 59.0	
	comp=Z,19nm,1.2s						
JAGI	**Jajag, Banyuwa**	**17.63**	**253**	Pn	**P**	**18 25 47.6**	**-0.5**
AS31	**Alice Springs**	**20.21**	**173**	P	Pn	18 26 17.6	-0.8
ASAR	**Alice Springs**	**20.21**	**173**	P	Pn	18 26 17.9	-0.5
	comp=Z,12nm,0.5s,baz=350,slow=10,SNR=103						
CTA	**Charters Tower**	**22.09**	**139**	P	**P**	**18 26 38.9**	**+2.3**
	comp=Z,4.8nm,0.5s,baz=333,slow=11,SNR=5.2						
FORT	**Forrest**	**27.29**	**186**	P	**P**	**18 27 24.8**	**-0.8**
STKA	**Stephens Creek**	**29.87**	**162**	P	**P**	**18 27 51.6**	**+2.9**
	baz=332,slow=12,SNR=5.5						
STKA	**Stephens Creek**	**29.87**	**162**	P	**P**	**18 27 49.7**	**+1.0**
NWAO	**Narrogin (SRO)**	**32.05**	**202**	P	**P**	**18 28 08.5**	**+0.6**
	comp=Z,8.0nm,0.9s,baz=45,slow=10.0,SNR=3.6						
NWAO	**Narrogin (SRO)**	**32.05**	**202**	IAmb	IAmb	18 28 10.6	
	comp=Z,18nm,1.2s						
CMAR	**Chiang Mai Arr**	**38.53**	**306**	P	**P**	**18 29 05.2**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=130,slow=6.7,SNR=12						
CHTO	**Chiang Mai**	**38.71**	**306**	P	**P**	**18 29 06.6**	**+1.2**
CHTO				IAmb	IAmb	18 29 23.2	
	comp=Z,2.6nm,0.8s						
MJAR	**Matsushiro Arr**	**40.38**	**9**	P	**P**	**18 29 18.3**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=196,slow=8.8,SNR=2.1						
USRK	**Ussuriysk Ar.**	**47.50**	**1**	P	**P**	**18 30 15.8**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=184,slow=6.6,SNR=1.9						
GTA	**Gaotai**	**51.55**	**329**	*e*P	**P**	**18 30 48.1**	**+0.9**
GTA				pP	pP	18 30 52.2	-3.9
GTA				sP	sP	18 30 55.1	-4.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**55.55**	**340**	P	**P**	**18 31 16.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=168,slow=8.3,SNR=7.3						
MK31	**Makanchi Array**	**66.00**	**325**	P	**P**	**18 32 28.2**	**+0.8**
MK31				IAmb	IAmb	18 32 31.7	
	comp=Z,4.3nm,1.2s						
MKAR	**Makanchi Array**	**66.00**	**325**	P	**P**	**18 32 28.3**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=118,slow=8.6,SNR=44						
MAKZ	**Makanchi**	**66.18**	**325**	P	**P**	**18 32 29.5**	**+0.9**
MAKZ				IAmb	IAmb	18 32 32.9	
	comp=Z,6.8nm,1.4s						
ZAA0	**Zalesovo Array**	**69.01**	**333**	P	**P**	**18 32 46.0**	**-0.3**
ZAA0				IAmb	IAmb	18 32 49.5	
	comp=Z,3.8nm,1.1s						
ZALV	**Zalesovo Beam**	**69.01**	**333**	P	**P**	**18 32 46.0**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=108,slow=4.8,SNR=8.5						
KURK	**Kurchatov**	**70.19**	**328**	P	**P**	**18 32 54.4**	**+0.8**
KK31	**Karatay Array**	**71.53**	**318**	P	**P**	**18 33 02.6**	**+0.6**
KK31				IAmb	IAmb	18 33 07.3	
	comp=Z,5.4nm,1.4s						
VNDA	**Vanda**	**75.75**	**173**	P	**P**	**18 33 28.0**	**+1.9**
	comp=Z,1.7nm,0.9s,baz=321,slow=6.7,SNR=7.3						
BRVK	**Borovoye**	**75.84**	**327**	P	**P**	**18 33 28.0**	**+1.0**
BRVK				IAmb	IAmb	18 33 36.4	
	comp=Z,4.4nm,0.8s						
ABKAR	**Akbulak array**	**80.53**	**321**	P	**P**	**18 33 55.0**	**+1.9**
ABKAR				IAmb	IAmb	18 34 04.4	
	comp=Z,1.9nm,0.9s						
ILAR	**Eielson Array**	**89.71**	**25**	P	**P**	**18 34 37.8**	**-1.0**
	comp=Z,0.8nm,1.1s,baz=215,slow=7.7,SNR=3.5						
ARCES	**ARCESS Array B**	**98.73**	**340**	P	Pdif	18 35 19.9	-0.1
	comp=Z,2.6nm,1.0s,baz=45,slow=2.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**129.19**	**284**	PKP	**PKiKP**	**18 40 51.9**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=20,slow=2.2,SNR=3.6						
CPUP	**Villa Florida**	**149.22**	**165**	PKPbc	**PKiKP**	**18 41 31.1**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=1.8,slow=2.7,SNR=5.3						

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*IDC **05** 18:23:02.2±1.9, 17°.59S×179°.06W, h547^{km}±17^{km}, mb3.4/8, mb1 3.6/9, mb1mx3.2/48, mbtmp4.3/9, Error ellipse: s-maj=45.9km s-min=19.0km az=146.0*

ISC 05 18:23:01.7±1.7, 17°.4S±0°.3×179°.0W±0°.3, h539^{km}, n13, σ1^{s}.41/12, mb3.7/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.84**	**263**	P	**P**	**18 24 15.8**	**+0.8**
	15nm,0.3s,baz=55,slow=3.3,SNR=118						
DZM	**Mont Dzumac**	**14.47**	**249**	P	**P**	**18 26 08.9**	**+2.9**
	0.2nm,0.3s,baz=135,slow=20,SNR=2.3						
CTA	**Charters Tower**	**32.98**	**260**	P	**P**	**18 28 51.9**	**-0.6**
	3.0nm,0.6s,baz=133,slow=4.4,SNR=1.9						
STKA	**Stephens Creek**	**38.38**	**240**	P	**P**	**18 29 36.5**	**-0.5**
	baz=83,slow=9.6,SNR=9.6						
WRA	**Warramunga Arr**	**44.18**	**259**	P	**P**	**18 30 21.1**	**-2.1**
	1.1nm,0.6s,baz=102,slow=6.9,SNR=3.6						
ASAR	**Alice Springs**	**44.39**	**254**	P	**P**	**18 30 23.6**	**-1.2**
	12nm,0.5s,baz=88,slow=8.2,SNR=62						
SIJI	**Sorong**	**51.59**	**283**	P	**P**	**18 31 18.6**	**0.0**
	13nm,0.6s,baz=142,slow=6.8,SNR=8.3						
FITZ	**Fitzroy Crossi**	**52.56**	**260**	P	**P**	**18 31 24.2**	**-1.3**
	2.5nm,0.7s,baz=114,slow=12,SNR=4.3						
MJAR	**Matsushiro Arr**	**67.19**	**324**	P	**P**	**18 33 02.8**	**+0.4**
	1.5nm,0.6s,baz=134,slow=7.2,SNR=4.3						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**18 34 13.0**	**+0.3**
	0.7nm,0.8s,baz=223,slow=8.4,SNR=5.9						
CMAR	**Chiang Mai Arr**	**88.20**	**290**	P	**P**	**18 34 56.6**	**+0.6**
	0.3nm,0.6s,baz=109,slow=3.2,SNR=4.2						
BRTR	**Keskin Array B**	**144.05**	**315**	PKP	PKPbc	18 41 35.7	-0.2
	0.8nm,0.5s,baz=130,slow=2.5,SNR=3.7						
GERES	**GERESS Array B**	**147.00**	**345**	PKPbc	**PKPbc**	**18 41 43.7**	**-0.4**
	0.6nm,0.6s,baz=46,slow=3.9,SNR=5.0						

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*IDC **05** 18:31:39.2±1.9, 43°.78N×105°.35W, h0^{km}, mb3.6/1, mb1 3.7/3, mb1mx3.4/36, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=52.4km s-min=8.2km az=150.0*

*NEIC **05** 18:31:40.4±1.1, 44°.05N±0°.06×105°.16W±0°.06, h0^{km}±2^{km}, ML3.2/31, Error ellipse: s-maj=10.8km s-min=5.9km az=159.0*

ISC 05 18:31:40.4±0.9, 44°.07N±0°.05×105°.19W±0°.04, h0^{km}, n23, σ1^{s}.41/24, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.83**	**86**	Pn	**Pb**	**18 31 58.1**	**+0.2**
K22A	**Casper**	**1.72**	**215**	Pn	**Pn**	**18 32 09.8**	**-2.0**
K22A				IAML		18 32 40.7	
	comp=E,283nm,0.8s						
RLMT	**Red Lodge**	**3.10**	**291**	Pn	**Pn**	**18 32 30.9**	**+0.2**
RLMT				IAML		18 33 28.0	
	comp=E,57nm,0.8s						
RLMT				IAML		18 33 34.8	
	comp=E,60nm,0.8s						
N23A	**Red Feather La**	**3.22**	**190**	Pn	**Pn**	**18 32 32.1**	**-0.3**
N23A				IAML		18 33 22.9	
	comp=E,54nm,0.8s						
N23A				IAML		18 33 33.7	
	comp=N,54nm,1.0s						
BW06	**Boulder Array**	**3.44**	**249**		**Pn**	**18 32 35.5**	**0.0**
BW06				IAML		18 33 26.3	
	comp=N,52nm,0.8s						
BW06				IAML		18 33 29.1	
	comp=N,55nm,0.7s						
PD31	**Pinedale Array**	**3.44**	**249**	Pn	**Pn**	**18 32 34.9**	**-0.5**
PDAR	**Pinedale Array**	**3.44**	**249**	Pn	**Pn**	**18 32 35.7**	**+0.3**
	comp=N,3.0nm,0.3s,baz=75,slow=15,SNR=29						
PDAR				Pg	**Pb**	**18 32 39.5**	**-2.8**
	comp=N,4.0nm,0.3s,baz=69,slow=18,SNR=35						
PDAR				Lg	Lg	18 33 21.6	
	comp=N,9.3nm,0.3s,baz=74,slow=33,SNR=31						
GCMT	**Greycliff**	**3.62**	**300**	Pn	**Pn**	**18 32 38.5**	**+0.6**
OGNE	**Ogallala**	**3.90**	**142**	Pn	**Pn**	**18 32 41.1**	**-0.5**
LOHW	**Long Hollow**	**3.94**	**265**		**Pb**	**18 32 50.1**	**-0.8**
LOHW				IAML		18 33 47.2	
	comp=N,23nm,0.8s						
MOOW	**Moose Ponds**	**4.03**	**267**		**Pb**	**18 32 53.9**	**+1.6**
YHB	**Horse Butte**	**4.36**	**281**		**Pb**	**18 32 59.5**	**+1.5**
DGMT	**Dagmar**	**4.46**	**9**	Pn	**Pn**	**18 32 47.3**	**-1.9**
AHID	**Auburn Hatcher**	**4.50**	**255**		**Pg**	**18 33 05.4**	**-1.2**
AHID				IAML		18 34 38.8	
	comp=E,28nm,0.8s						
O20A	**White River Ci**	**4.54**	**211**		**Pn**	**18 32 50.6**	**+0.1**
ECR	**Eagle Creek**	**4.61**	**259**		**Pb**	**18 33 04.9**	**+2.7**
RDMU	**Red Mountain**	**4.77**	**224**		**Pn**	**18 32 54.3**	**+0.5**
BOZ	**Bozeman (W)**	**4.83**	**291**		**Pn**	**18 32 52.5**	**-1.9**
BOZ				IAML		18 34 11.2	
	comp=E,11nm,0.9s						
BOZ				IAML		18 34 20.7	
	comp=E,20nm,0.9s						
SMCO	**Snowmass**	**5.07**	**196**		**Pb**	**18 33 12.5**	**+2.3**
SMCO				IAML		18 34 29.9	
	comp=E,19nm,2.1s						
HRY	**Holter Researc**	**5.37**	**302**	Pn	**Pn**	**18 33 02.5**	**+0.6**
PV11	**David Mesa, Pa**	**6.40**	**207**		**Pn**	**18 33 15.8**	**-0.3**
ULM	**Lac du Bonnet**	**8.86**	**42**	Pn	**Pn**	**18 33 50.4**	**+0.9**
	comp=E,1.0nm,0.3s,baz=227,slow=12,SNR=9.4						
ULM				Lg	Lg	18 36 19.9	
	comp=E,0.2nm,0.3s,baz=321,slow=18,SNR=3.4						
MKAR	**Makanchi Array**	**89.28**	**355**	P	**P**	**18 44 38.2**	**0.0**
	comp=E,0.3nm,0.8s,baz=7.3,slow=4.2,SNR=4.0						

WEL 05 18:39:44.7±0.3, 43°S±2°×17°1E±°, h5^{km}, M3.5/28, ML3.7/23, MLv3.5/28, Error ellipse: s-maj=0.0km s-min=0.0km az=130.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.35**	**23**	P	Pg	18 39 51.5	+0.1
INZ				S	Sg	18 39 55.9	0.0
WVZ	**Waitaha Valley**	**0.39**	**265**	P	Pg	18 39 52.9	+0.8
WVZ				S	Sg	18 39 58.0	+0.8
MHCZ	**Mount Hutt**	**0.54**	**155**	P	Pg	18 39 55.3	+0.3
OXZ	**Oxford**	**0.64**	**117**	P	Pg	18 39 57.0	+0.1
RPZ	**Rata Peaks**	**0.69**	**193**	P	Pg	18 39 58.2	+0.2
RPZ				S	Sg	18 40 07.9	+1.1
GCSZ	**Gaunt Creek Bo**	**0.74**	**248**	P	Pg	18 39 59.0	+0.1
LTZ	**Lake Taylor**	**0.79**	**71**	P	Pg	18 39 60.0	+0.2
ARCZ	**Arundel**	**0.91**	**184**	P	Pg	18 40 02.2	+0.1
RACZ	**Rakaia**	**0.94**	**137**	P	Pg	18 40 03.0	+0.3
WACZ	**Wakanui South**	**0.99**	**155**	P	Pg	18 40 04.0	+0.3
AMCZ	**Amberley**	**1.03**	**98**	P	Pb	18 40 05.2	+0.3
FOZ	**Fox Glacier**	**1.16**	**245**	P	Pg	18 40 06.9	-0.1
FOZ				S	Sn	18 40 23.4	-0.5
MQZ	**McQueen's Vall**	**1.21**	**124**	P	Pg	18 40 06.9	-1.0
GVZ	**Greta Valley S**	**1.30**	**87**	P	Pn	18 40 08.7	-0.9
TMZ	**Timaru**	**1.35**	**188**	P	Pn	18 40 09.6	-0.7
TMZ				P	Pb	18 40 09.6	-0.9
DSZ	**Denniston Nort**	**1.36**	**17**	P	Pn	18 40 09.7	-0.7
DSZ				S	Sb	18 40 28.2	-0.1
AKCZ	**Akaroa Harbour**	**1.46**	**125**	P	Pn	18 40 10.4	-1.3
OKCZ	**Okains Bay**	**1.48**	**118**	P	Pn	18 40 11.0	-1.0
LBZ	**Lake Benmore**	**1.55**	**210**	P	Pn	18 40 12.9	-0.1
THZ	**Tophouse**	**1.77**	**44**	P	Pn	18 40 15.8	-0.2
KHZ	**Kahutara**	**1.79**	**70**	P	Pn	18 40 15.7	-0.5
ODZ	**Otahua Downs**	**2.05**	**192**	P	Pn	18 40 19.0	-0.8
JCZ	**Jackson Bay**	**2.07**	**239**	P	Pn	18 40 20.3	+0.1
BSWZ	**Blackbirch Sta**	**2.35**	**56**	P	Pn	18 40 24.8	+0.9
QRZ	**Quartz Range**	**2.41**	**24**	P	Pn	18 40 24.7	-0.1
WKZ	**Wanaka**	**2.41**	**221**	P	Pn	18 40 23.8	-1.0
NNZ	**Nelson**	**2.41**	**42**	P	Pn	18 40 26.0	+1.2
TUWZ	**Tuamarina**	**2.56**	**52**	P	Pn	18 40 27.2	+0.4
EAZ	**Earnscleugh**	**2.60**	**212**	P	Pn	18 40 26.2	-1.2
HHSZ	**Highcliff Hill**	**2.88**	**189**	P	Pn	18 40 31.1	-0.2
TCW	**Tory Channel**	**2.90**	**52**	P	Pn	18 40 31.6	+0.2
DUWZ	**D'Urville Isla**	**2.99**	**42**	P	Pn	18 40 34.0	+1.2
TUZ	**Tuapeka**	**3.13**	**201**	P	Pn	18 40 34.2	-0.6
BHW	**Baring Head**	**3.14**	**60**	P	Pn	18 40 33.7	-1.1
MLZ	**Mavora Lakes**	**3.24**	**223**	P	Pn	18 40 35.3	-0.9
PLWZ	**Palliser**	**3.31**	**65**	P	Pn	18 40 35.7	-1.5
MSWZ	**Moikau Station**	**3.38**	**63**	P	Pn	18 40 36.3	-1.8
CAW	**Cannon Point**	**3.43**	**57**	P	Pn	18 40 37.4	-1.4
KIW	**Kapiti Island**	**3.49**	**53**	P	Pn	18 40 39.2	-0.4
PAWZ	**Paruwai Farm**	**3.51**	**63**	P	Pn	18 40 38.5	-1.5
OGWZ	**Otaki Gorge**	**3.67**	**54**	P	Pn	18 40 41.1	-1.0
MTW	**Mount Morrison**	**3.67**	**61**	P	Pn	18 40 40.0	-2.2
WHZ	**Wether Hill Ro**	**3.71**	**219**	P	Pn	18 40 41.6	-1.0
SYZ	**Scrubby Hill**	**3.81**	**203**	P	Pn	18 40 42.7	-1.2
HOWZ	**Holdsworth Sta**	**3.83**	**57**	P	Pb	18 40 49.9	-2.8
MRZ	**Mangatainoka R**	**4.01**	**55**	P	Pn	18 40 45.1	-1.6
NMEZ	**Namu Road**	**4.13**	**29**	P	Pn	18 40 49.9	+1.5
NBEZ	**Newall Road No**	**4.25**	**28**	P	Pn	18 40 51.0	+0.9
KHEZ	**Kahui Hut**	**4.28**	**30**	P	Pn	18 40 51.7	+1.1
PREZ	**Palmer Road**	**4.29**	**32**	P	Pn	18 40 52.2	+1.5
WAZ	**Wanganui**	**4.32**	**42**	P	Pn	18 40 53.0	+2.0
NEZ	**North Egmont**	**4.33**	**31**	P	Pn	18 40 53.2	+1.9
PKE	**Pukeiti**	**4.36**	**29**	P	Pn	18 40 52.7	+1.1
APZ	**The Paps**	**4.44**	**210**	P	Pn	18 40 51.1	-1.7
TSZ	**Takapari Road**	**4.62**	**51**	P	Pn	18 41 00.1	+4.9
VRZ	**Vera Road**	**4.72**	**35**	P	Pn	18 40 57.3	+0.8
WNVZ	**Wahianoa**	**4.95**	**43**	P	Pn	18 41 05.4	+5.6
TUVZ	**Tukino**	**5.02**	**43**	P	Pn	18 41 03.2	+2.3
NGZ	**Ngauruhoe**	**5.07**	**42**	P	Pn	18 41 04.3	+2.9
OTVZ	**Oturere**	**5.11**	**42**	P	Pn	18 41 03.8	+1.8
ETVZ	**East Tongariro**	**5.15**	**42**	P	Pn	18 41 05.5	+2.9
TMVZ	**Te Maari**	**5.16**	**42**	P	Pn	18 41 05.3	+2.6
HIZ	**Hauiti**	**5.28**	**32**	P	Pn	18 41 04.7	+0.4
AWAZ	**Awhitu Peninsu**	**6.51**	**25**	P	Pn	18 41 22.1	+1.0
URZ	**Urewera**	**6.53**	**45**	P	Pn	18 41 26.9	+5.5
WIAZ	**Waiheke Island**	**6.92**	**27**	P	Pn	18 41 27.5	+0.8
CNGZ	**Carnagh Statio**	**6.97**	**52**	P	Pn	18 41 28.7	+1.4
KUZ	**Kuaotunu**	**7.16**	**30**	P	Pn	18 41 30.0	0.0
WCZ	**Waipu Caves**	**7.48**	**20**	P	Pn	18 41 34.8	+0.3

WEL 05 18:47:25.3±0.4, 43°S±3°×17°1E±°, h5^{km}, M3.4/19, ML3.5/19, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=147.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.34**	**25**	P	Pg	18 47 32.2	+0.4
INZ				S	Sg	18 47 36.4	+0.2
WVZ	**Waitaha Valley**	**0.38**	**263**	P	Pg	18 47 33.3	+0.6
WVZ				S	Sg	18 47 38.4	+0.8
MHCZ	**Mount Hutt**	**0.56**	**155**	P	Pg	18 47 36.1	+0.1
OXZ	**Oxford**	**0.65**	**118**	P	Pg	18 47 37.9	+0.1
RPZ	**Rata Peaks**	**0.70**	**192**	P	Pg	18 47 38.9	+0.1
GCSZ	**Gaunt Creek Bo**	**0.73**	**247**	P	Pg	18 47 39.5	0.0
LTZ	**Lake Taylor**	**0.79**	**72**	P	Pg	18 47 40.9	+0.5
LTZ				S	Sg	18 47 51.4	+0.7
ARCZ	**Arundel**	**0.92**	**183**	P	Pg	18 47 42.9	-0.1
RACZ	**Rakaia**	**0.95**	**137**	P	Pg	18 47 43.8	+0.2
WACZ	**Wakanui South**	**1.01**	**155**	P	Pg	18 47 44.9	+0.2
AMCZ	**Amberley**	**1.04**	**99**	P	Pb	18 47 46.0	+0.3
FOZ	**Fox Glacier**	**1.16**	**244**	P	Pg	18 47 47.5	-0.1
MQZ	**McQueen's Vall**	**1.23**	**124**	P	Pg	18 47 47.8	-1.1
GVZ	**Greta Valley S**	**1.31**	**88**	P	Pn	18 47 49.7	-0.6
DSZ	**Denniston Nort**	**1.35**	**18**	P	Pn	18 47 50.5	-0.3
TMZ	**Timaru**	**1.37**	**187**	P	Pn	18 47 50.4	-0.7
AKCZ	**Akaroa Harbour**	**1.48**	**126**	P	Pn	18 47 51.3	-1.2
OKCZ	**Okains Bay**	**1.49**	**118**	P	Pn	18 47 52.0	-0.8
LBZ	**Lake Benmore**	**1.56**	**209**	P	Pn	18 47 53.5	-0.3
THZ	**Tophouse**	**1.76**	**45**	P	Pn	18 47 57.0	+0.4
KHZ	**Kahutara**	**1.79**	**71**	P	Pn	18 47 56.8	-0.1
ODZ	**Otahua Downs**	**2.06**	**192**	P	Pn	18 47 59.8	-0.8
JCZ	**Jackson Bay**	**2.07**	**239**	P	Pn	18 48 01.0	+0.1
BSWZ	**Blackbirch Sta**	**2.35**	**57**	P	Pn	18 48 05.5	+0.9
QRZ	**Quartz Range**	**2.40**	**24**	P	Pn	18 48 05.6	+0.4
NNZ	**Nelson**	**2.41**	**42**	P	Pn	18 48 06.9	+1.6
WKZ	**Wanaka**	**2.42**	**221**	P	Pn	18 48 04.6	-0.9
TUWZ	**Tuamarina**	**2.56**	**52**	P	Pn	18 48 09.2	+1.8
EAZ	**Earnscleugh**	**2.61**	**212**	P	Pn	18 48 06.7	-1.5
TCW	**Tory Channel**	**2.89**	**52**	P	Pn	18 48 14.7	+2.7
DUWZ	**D'Urville Isla**	**2.99**	**43**	P	Pn	18 48 15.4	+2.1
TUZ	**Tuapeka**	**3.15**	**201**	P	Pn	18 48 15.0	-0.5
MLZ	**Mavora Lakes**	**3.25**	**223**	P	Pn	18 48 16.6	-0.4
OGWZ	**Otaki Gorge**	**3.67**	**54**	P	Pn	18 48 22.1	-0.6
SYZ	**Scrubby Hill**	**3.82**	**202**	P	Pn	18 48 23.7	-1.0
MRZ	**Mangatainoka R**	**4.01**	**55**	P	Pn	18 48 28.5	+1.1
NMEZ	**Namu Road**	**4.12**	**30**	P	Pn	18 48 30.7	+1.8
NBEZ	**Newall Road No**	**4.24**	**29**	P	Pn	18 48 32.4	+1.8
KHEZ	**Kahui Hut**	**4.27**	**30**	P	Pn	18 48 33.0	+1.9
PREZ	**Palmer Road**	**4.29**	**32**	P	Pn	18 48 33.0	+1.8
NEZ	**North Egmont**	**4.33**	**31**	P	Pn	18 48 33.9	+2.1
PKE	**Pukeiti**	**4.35**	**29**	P	Pn	18 48 34.0	+1.8
NGZ	**Ngauruhoe**	**5.06**	**42**	P	Pn	18 48 46.4	+4.5
OTVZ	**Oturere**	**5.10**	**42**	P	Pn	18 48 47.0	+4.4
HIZ	**Hauiti**	**5.28**	**32**	P	Pn	18 48 45.7	+0.9
AWAZ	**Awhitu Peninsu**	**6.50**	**25**	P	Pn	18 49 02.8	+1.3
CNGZ	**Carnagh Statio**	**6.96**	**52**	P	Pn	18 49 08.4	+0.5
WCZ	**Waipu Caves**	**7.47**	**20**	P	Pn	18 49 16.1	+1.1

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*NEIC **05** 18:53:09.5±0.8, 22°.15N±0°.09×144°.1E±0°.1, h87^{km}±6^{km}, mb4.6/113, Error ellipse: s-maj=17.4km s-min=13.0km az=89.0*

*IDC **05** 18:53:10.6±1.9, 22°.19N×144°.13E, h98^{km}±16^{km}, mb4.0/22, mb1 4.2/25, mb1mx4.0/43, mbtmp4.4/25, MS3.6/2, Ms1 3.6/2, ms1mx3.0/51, Error ellipse: s-maj=16.9km s-min=10.0km az=96.0*

*JMA **05** 18:53:12.2±0.2, 22°.66N×144°.39E, h102^{km}±3^{km}*

ISC 05 18:53:11.2±0.4, 22°.32N±0°.05×144°.05E±0°.08, h100^{km}, n184, σ1^{s}.55/190, mb4.5/84, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.62**	**339**	P	**Pn**	**18 54 18.6**	**-0.1**
CBIJ	**Chichi jima**	**5.04**	**341**	P	**Pn**	**18 54 24.1**	**-0.4**
CBIJ				*e*S	**Sn**	**18 55 19.7**	**-1.8**
JCJ	**Chichijima**	**5.04**	**341**	P	**Pn**	**18 54 24.8**	**+0.3**
	102nm,0.3s,baz=6.7,slow=21,SNR=100						
JCJ				S	**Sn**	**18 55 20.2**	**-1.3**
	246nm,0.3s,baz=128,slow=23,SNR=13						
JCJ	**Chichijima**	**5.04**	**341**	Pn	**Pn**	**18 54 24.5**	**0.0**
JHCJ	**Hachijojimakas**	**11.35**	**342**	P	**Pn**	**18 55 50.1**	**0.0**
JHJ2	**Mitsune**	**11.38**	**342**	P	**Pn**	**18 55 50.6**	**+0.1**
JHJ2	**Mitsune**	**11.38**	**342**	Pn	**Pn**	**18 55 51.4**	**+0.9**
JHJ	**Hachijo jima 2**	**11.40**	**342**	P	**Pn**	**18 55 51.4**	**+0.6**
	6.5nm,0.3s,baz=54,slow=22,SNR=9.0						
JHJ				S	**Sn**	**18 57 49.7**	**-6.4**
	9.6nm,0.3s,baz=72,slow=19,SNR=2.2						
BSO1	**Boso 1**	**12.58**	**348**	*e*S	**Sn**	**18 58 19.2**	**-4.7**
BSO3	**Boso 3**	**12.81**	**347**	*e*S	**Sn**	**18 58 27.8**	**-2.2**
BSO4	**Boso 4**	**13.03**	**346**	P	**Pn**	**18 56 11.4**	**-0.9**
BSO4				*e*S	**Sn**	**18 58 31.6**	**-4.0**
JOD2	**Odawara 2**	**13.60**	**342**	P	**Pn**	**18 56 19.2**	**-0.7**
JOD2				*e*S	**Sn**	**18 58 44.7**	**-4.9**
JHU	**Hanno**	**14.11**	**344**	*e*S	**Sn**	**18 58 55.4**	**-6.3**
JYT	**Yasato**	**14.26**	**347**	Pn	**Pn**	**18 56 29.4**	**+1.1**
INU	**Inuyama**	**14.36**	**336**	Pn	**Pn**	**18 56 30.9**	**+1.2**
JRY	**Ryogami san**	**14.36**	**343**	P	**Pn**	**18 56 28.9**	**-0.8**
JRY				*e*S	**Sn**	**18 59 04.0**	**-4.0**
JGF	**Kuroka**	**14.46**	**338**	Pn	**Pn**	**18 56 32.3**	**+1.3**
JAG	**Ashikaga**	**14.61**	**345**	P	**Pn**	**18 56 31.7**	**-1.2**
JAG				*e*S	**Sn**	**18 59 07.9**	**-6.0**
MJAR	**Matsushiro Arr**	**15.05**	**342**	P	**Pn**	**18 56 38.3**	**-0.2**
	0.3nm,0.3s,baz=158,slow=11,SNR=13						
MAJO	**Matsushiro**	**15.05**	**342**		**Pn**	**18 56 39.6**	**+1.1**
MAT	**Matsushiro**	**15.05**	**342**	P	**Pn**	**18 56 38.1**	**-0.4**
MAT				*e*S	**Sn**	**18 59 15.8**	**-8.8**
JFK	**Kawauchi**	**15.24**	**350**	P	**Pn**	**18 56 41.4**	**+0.5**
JMM	**Marumori**	**15.74**	**350**	P	**Pn**	**18 56 47.9**	**+0.8**
JMM				IAmb	IAmb	18 56 49.7	
	comp=Z,51nm,0.9s						
JSD	**Sado**	**16.43**	**344**	Pn	**Pn**	**18 56 55.1**	**-0.6**
KSRS	**Korea Array**	**20.52**	**321**	P	Pn	18 57 46.4	+1.9
	comp=Z,2.8nm,0.7s,baz=132,slow=11,SNR=8.2						
YHNB	**Yeheng**	**20.93**	**281**	P	**P**	**18 57 47.1**	**+1.1**
SSLB	**Suanglung**	**21.30**	**278**	P	**P**	**18 57 52.3**	**+2.4**
SSLB				IAmb	IAmb	18 57 53.8	
	comp=Z,29nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**21.55**	**96**	T	T	19 21 19.4	
	baz=284,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**21.55**	**96**	T	T	19 21 18.4	
	baz=284,slow=75,SNR=37						
H11S2	**WAKE ISLAND Hy**	**21.56**	**96**	T	T	19 21 37.3	
	baz=284,slow=75,SNR=27						
TPUB	**Ta-pu**	**21.61**	**277**	P	**P**	**18 57 53.1**	**-0.1**
TPUB				IAmb	IAmb	18 58 21.0	
	comp=Z,29nm,1.1s						
ASAJ	**Asahikawa**	**21.77**	**357**	P	**P**	**18 57 57.5**	**+2.9**
	comp=Z,8.8nm,1.0s,baz=180,slow=14,SNR=2.1						
ASAJ				LR	LR	19 08 31.7	
	comp=Z,166nm,19.5s,baz=192,slow=42						
KNMB	**Chin-men Tao**	**23.64**	**280**	P	**P**	**18 58 15.2**	**+1.7**
KNMB				IAmb	IAmb	18 58 16.2	
	comp=Z,24nm,0.7s						
USRK	**Ussuriysk Ar.**	**23.98**	**338**	P	**P**	**18 58 18.6**	**+2.2**
	comp=Z,2.3nm,0.7s,baz=130,slow=8.7,SNR=5.8						
JAY	**Jayapura**	**24.90**	**188**	P	**P**	**18 58 23.9**	**-1.0**
	comp=Z,16nm,0.9s,baz=356,slow=15,SNR=2.3						
SIJI	**Sorong**	**26.21**	**210**	P	**P**	**18 58 36.5**	**-0.3**
	comp=Z,9.4nm,0.9s,baz=303,slow=17,SNR=2.3						
KLR	**Kul'dur**	**28.57**	**343**	P	**P**	**18 58 59.1**	**+1.6**
	comp=Z,2.4nm,0.5s,baz=164,slow=7.6,SNR=16						
KLR				LR	LR	19 11 45.5	
	comp=Z,97nm,18.3s,baz=16,slow=39						
PMG	**Port Moresby**	**31.68**	**174**	P	**P**	**18 59 22.3**	**-2.9**
ENH	**Enshi**	**31.89**	**292**	P	**P**	**18 59 27.5**	**+0.4**
COEN	**Coen**	**36.07**	**181**	P	**P**	**19 00 02.3**	**-1.0**
MTN	**Manton Dam**	**37.18**	**201**	P	**P**	**19 00 11.0**	**-1.7**
SLVN	**Son La**	**37.21**	**276**	P	**P**	**19 00 14.2**	**+1.1**
SONM	**Songino Array**	**39.38**	**320**	P	**P**	**19 00 31.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=140,slow=7.2,SNR=7.8						
SONM				ScP	**ScP**	**19 06 16.4**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=120,slow=8.7,SNR=3.6						
SEY	**Seymchan**	**40.98**	**6**	P	**P**	**19 00 45.3**	**+1.5**
	comp=Z,1.1nm,0.4s,baz=168,slow=10.0,SNR=5.0						
UTTA	**Uttaradit**	**41.02**	**272**	P	**P**	**19 00 46.2**	**+1.4**
	comp=Z,8.5nm,0.8s						
GTA	**Gaotai**	**41.17**	**305**	*e*P	**P**	**19 00 47.3**	**+1.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
CM34	**Chiang Mai Arr**	**42.06**	**274**	P	**P**	**19 00 54.0**	**+0.6**
CM35	**Chiang Mai Arr**	**42.10**	**274**	P	**P**	**19 00 54.0**	**+0.4**
CHTO	**Chiang Mai**	**42.26**	**274**	P	**P**	**19 00 55.4**	**+0.4**
CM04	**Chiang Mai Arr**	**42.32**	**273**	P	**P**	**19 00 57.0**	**+1.5**
	comp=Z,48nmcomp=Z,5.2nm,0.6s						
CM01	**Chiang Mai Arr**	**42.34**	**273**	P	**P**	**19 00 57.0**	**+1.4**
	comp=Z,3.7nm,0.7s						
CM31	**Chiang Mai Arr**	**42.34**	**273**	P	**P**	**19 00 55.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**42.34**	**273**	P	**P**	**19 00 56.5**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=61,slow=7.5,SNR=23						
CM05	**Chiang Mai Arr**	**42.35**	**273**	P	**P**	**19 00 57.9**	**+2.1**
	comp=Z,2.7nm,0.6s						
CM15	**Chiang Mai Arr**	**42.36**	**273**	P	**P**	**19 00 57.0**	**+1.2**
	comp=Z,3.1nm,0.7s						
CM13	**Chiang Mai Arr**	**42.39**	**273**	P	**P**	**19 00 58.2**	**+2.3**
	comp=Z,2.6nm,0.7s						
WB0	**Warramunga Arr**	**42.89**	**193**	P	**P**	**19 00 58.1**	**-1.7**
WB0				IAmb	IAmb	19 01 08.5	
	comp=Z,9.8nm,1.1s						
WR0	**Warramunga Arr**	**43.04**	**193**	P	**P**	**19 00 59.6**	**-1.5**
WR0				IAmb	IAmb	19 01 00.5	
	comp=Z,8.9nm,1.1s						
WB2	**Warramunga Arr**	**43.06**	**193**	P	**P**	**19 00 59.6**	**-1.7**
WRA	**Warramunga Arr**	**43.07**	**193**	P	**P**	**19 00 59.8**	**-1.6**
	comp=Z,3.7nm,0.4s,baz=18,slow=8.8,SNR=124						
WRA				ScP	**ScP**	**19 06 30.7**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=12,slow=4.4,SNR=7.0						
PHET	**Kaeng Krachan**	**43.23**	**265**	P	**P**	**19 01 05.1**	**+2.3**
FITZ	**Fitzroy Crossi**	**44.03**	**206**	P	**P**	**19 01 08.4**	**-0.6**
KULM	**Kulim**	**45.21**	**255**	P	**P**	**19 01 19.7**	**+1.1**
KULM				IAmb	IAmb	19 01 20.4	
	comp=Z,7.6nm,0.7s						
AS31	**Alice Springs**	**46.77**	**193**	P	**P**	**19 01 28.7**	**-1.9**
ASAR	**Alice Springs**	**46.77**	**193**	P	**P**	**19 01 28.9**	**-1.8**
	comp=Z,2.2nm,0.4s,baz=15,slow=9.5,SNR=34						
LSA	**Lhasa**	**47.77**	**290**	P	**P**	**19 01 40.6**	**+1.6**
RPSI	**Rantau Prapat**	**47.92**	**253**	P	**P**	**19 01 40.3**	**+0.6**
AKUT	**Akutan**	**49.13**	**37**	P	**P**	**19 01 48.9**	**+0.4**
GSI	**Gunungsitoli**	**49.76**	**252**	P	**P**	**19 01 53.7**	**-0.1**
TAPN	**Taplejung**	**51.02**	**288**	*e*P	**P**	**19 02 04.4**	**+0.8**
ODAN	**Odare**	**51.37**	**287**	*e*P	**P**	**19 02 06.6**	**+0.5**
GUN	**Gumba**	**52.56**	**289**	*e*P	**P**	**19 02 15.7**	**+0.6**

	comp=Z,7.3nm,0.4s						
PKI	Pulchoki	53.02	288	*e*P	P	19 02 18.4	0.0
	comp=Z,4.7nm,0.4s						
PKIN	Phulchoki	53.03	288	*e*P	P	19 02 18.5	+0.1
	comp=Z,4.8nm,0.4s						
KKN	Kakani	53.10	289	*e*P	P	19 02 19.4	+0.5
	comp=Z,6.7nm,0.7s						
DMN	Daman	53.28	288	*e*P	P	19 02 20.2	-0.1
	comp=Z,4.3nm,0.4s						
CHGN	Chignik	53.80	36	P	P	19 02 22.9	-0.4
STKA	Stephens Creek	53.95	183	P	P	19 02 22.8	-1.8
	baz=357,slow=7.8,SNR=36						
STKA	Stephens Creek	53.95	183	P	P	19 02 22.8	-1.8
STKA				IAmb	IAmb	19 02 23.4	
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	54.23	321	P	P	19 02 26.0	-0.4
	comp=Z,1.4nm,0.5s,baz=103,slow=8.3,SNR=6.2						
DANN	Dangsing	54.35	290	*e*P	P	19 02 29.1	+1.0
	comp=Z,68nm,0.5s						
MK31	Makanchi Array	54.87	312	P	P	19 02 32.4	+1.2
MKAR	Makanchi Array	54.87	312	P	P	19 02 32.3	+1.0
	comp=Z,1.2nm,0.5s,baz=86,slow=8.8,SNR=42						
MAKZ	Makanchi	55.09	312	P	P	19 02 33.4	+0.6
BBOO	Buckleboo	55.35	188	P	P	19 02 33.0	-1.8
OHAK	Old Harbor	56.75	35	P	P	19 02 44.8	+0.4
TTA	Tatalina	56.77	28	P	P	19 02 45.0	+0.5
TTA				IAmb	IAmb	19 03 03.4	
	comp=Z,8.2nm,1.4s						
KDAK	Kodiak Island	57.23	35	P	P	19 02 48.0	+0.2
	comp=Z,6.1nm,0.7s,baz=141,slow=0.5,SNR=10						
KDAK	Kodiak Island	57.23	35	P	P	19 02 48.2	+0.4
KURK	Kurchatov	57.57	317	P	P	19 02 51.0	+0.7
KURK				IAmb	IAmb	19 03 17.1	
	comp=Z,3.4nm,0.9s						
MORW	Morawa	57.79	209	P	P	19 02 50.7	-1.4
MORW				IAmb	IAmb	19 03 00.4	
	comp=Z,8.6nm,0.9s						
CNPM	China Poot	58.23	33	P	P	19 02 54.5	-0.3
BRLK	Bradley Lake	58.44	33	P	P	19 02 55.7	-0.7
BPAW	Bear Paw Mtn.	59.24	28	P	P	19 03 02.5	+0.7
TRF	Thorofare Moun	59.41	28	P	P	19 03 03.2	+0.1
GHO	Glory Hole Cre	59.73	30	P	P	19 03 05.5	+0.3
KNK	Knik Glacier	59.89	31	P	P	19 03 06.7	+0.4
SML	Sawmill	60.01	30	P	P	19 03 07.9	+0.8
RND	Reindeer	60.03	29	P	P	19 03 07.9	+0.6
COLD	Coldfoot	60.27	24	P	P	19 03 10.2	+1.5
COLD				IAmb	IAmb	19 03 11.4	
	comp=Z,3.8nm,0.9s						
GLI	Glacier Island	60.47	32	P	P	19 03 10.5	+0.3
SCM	Sheep Creek Mo	60.49	31	P	P	19 03 10.9	+0.5
TOLK	Toolik Lake Re	60.83	23	P	P	19 03 14.2	+1.6
TOLK				IAmb	IAmb	19 03 14.9	
	comp=Z,8.8nm,1.1s						
KLU	Klutina	61.11	31	P	P	19 03 15.3	+0.7
KLU				IAmb	IAmb	19 03 17.4	
	comp=Z,3.8nm,0.8s						
ILAR	Eielson Array	61.12	27	P	P	19 03 13.1	-1.5
	comp=Z,3.4nm,0.8s,baz=261,slow=5.5,SNR=19						
PAX	Paxson	61.49	29	P	P	19 03 17.9	+0.7
PAX				IAmb	IAmb	19 03 18.4	
	comp=Z,11nm,1.4s						
NIL	Nilore	62.47	297	P	P	19 03 24.6	+0.4
NIL				IAmb	IAmb	19 03 26.7	
	comp=Z,5.2nm,0.6s						
BRVK	Borovoye	62.79	319	P	P	19 03 25.9	0.0
BRVK				IAmb	IAmb	19 03 53.3	
	comp=Z,4.9nm,0.8s						
KK31	Karatay Array	63.30	308	P	P	19 03 30.9	+1.3
KKAR	Karatay Array	63.30	308	P	P	19 03 30.8	+1.3
HYT	Haines Junctio	65.16	32	P	P	19 03 42.6	+1.1
HYT				IAmb	IAmb	19 03 44.1	
	comp=Z,5.2nm,1.0s						
EPYK	Eagle Plains	65.46	26	P	P	19 03 44.0	+0.9
EPYK				IAmb	IAmb	19 03 44.8	
	comp=Z,9.7nm,1.1s						
KBL	Kabul	65.74	299	P	P	19 03 46.4	+0.6
KBL				IAmb	IAmb	19 03 47.2	
	comp=Z,5.4nm,0.7s						
INK	Inuvik	66.67	24	P	P	19 03 50.7	-0.1
INK				IAmb	IAmb	19 03 51.9	
	comp=Z,6.4nm,1.1s						
ABKAR	Akbulak array	69.66	316	P	P	19 04 10.0	+0.1
YKA	Yellowknife Ar	75.53	28	P	P	19 04 44.5	+0.2
	comp=Z,3.0nm,0.7s,baz=290,slow=4.7,SNR=43						
RES	Resolute Bay	76.28	14	P	P	19 04 49.2	+0.7
	comp=Z,2.1nm,0.7s,baz=329,slow=4.0,SNR=11						
RES	Resolute Bay	76.28	14	P	P	19 04 49.2	+0.7
PINE	Pine Mountain	78.35	47	P	P	19 05 02.1	+1.3
ARCES	ARCESS Array B	78.58	342	P	P	19 05 02.1	+0.7
	comp=Z,1.9nm,0.8s,baz=81,slow=7.9,SNR=8.8						
K05A	Summer Lake	78.74	48	P	P	19 05 04.4	+1.3
K05A				IAmb	IAmb	19 05 04.8	
	comp=Z,14nm,0.9s						
ORV	Oroville	79.39	52	P	P	19 05 06.6	+0.2
MOD	Modoc Plateau	79.44	49	P	P	19 05 07.4	+0.6
BEKR	Beckworth	80.11	51	P	P	19 05 11.0	+0.4
BEKR				IAmb	IAmb	19 05 11.9	
	comp=Z,12nm,0.8s						
WVOR	Wild Horse Val	80.40	48	P	P	19 05 12.6	+0.6
WVOR				IAmb	IAmb	19 05 13.3	
	comp=Z,6.4nm,0.8s						
BMO	Blue Mountains	80.41	45	P	P	19 05 12.4	+0.5
BMO				IAmb	IAmb	19 05 13.2	
	comp=Z,6.2nm,0.8s						
CMB	Columbia Colle	80.74	53	P	P	19 05 14.3	+0.5
CMB				IAmb	IAmb	19 05 14.9	
	comp=Z,6.3nm,0.8s						
PAHR	Pah Rah Range	80.87	51	P	P	19 05 15.0	+0.4
PNTR	Pine Nut	80.94	52	P	P	19 05 15.8	+0.8
WALA	Waterton Lakes	80.94	41	P	P	19 05 16.0	+1.3
JTMT	Jette	81.24	42	P	P	19 05 17.0	+0.7
JTMT				IAmb	IAmb	19 05 17.6	
	comp=Z,9.1nm,0.9s						
WAKR	Walker	81.27	52	P	P	19 05 17.4	+0.6
WAKR				IAmb	IAmb	19 05 18.5	
	comp=Z,5.8nm,0.7s						
RYN	Ryan	81.89	52	P	P	19 05 20.6	+0.6
RYN				IAmb	IAmb	19 05 21.2	
	comp=Z,4.7nm,0.7s						
MFID	Camas Ranch	81.95	46	P	P	19 05 20.8	+0.7
MFID				IAmb	IAmb	19 05 21.4	
	comp=Z,6.5nm,0.8s						
LHV	Little Huntoon	82.04	52	P	P	19 05 21.6	+1.1
LHV				IAmb	IAmb	19 05 22.3	
	comp=Z,5.5nm,0.7s						
NVAR	Mina Array Bea	82.12	52	P	P	19 05 21.8	+0.5
	comp=Z,6.2nm,0.6s,baz=277,slow=5.5,SNR=66						
KBZ	Khabaz	82.52	314	P	P	19 05 23.6	+0.7
	comp=Z,4.2nm,0.8s,baz=76,slow=5.0,SNR=6.2						
HLID	Hailey	82.83	46	P	P	19 05 25.4	+0.6
FINES	FINESS Array B	82.96	335	P	P	19 05 24.5	-0.3
	comp=Z,2.1nm,0.4s,baz=70,slow=4.9,SNR=24						
TPH	Tonopah	83.04	52	P	P	19 05 26.5	+0.5
HRY	Holter Researc	83.19	42	P	P	19 05 27.1	+0.6
BCYI	Bear Canyon	83.19	45	P	P	19 05 25.0	-1.7
ELK	Elko	83.41	49	P	P	19 05 28.6	+0.7
ELK				IAmb	IAmb	19 05 29.1	
	comp=Z,4.7nm,0.9s						
BOZ	Bozeman (W)	83.79	43	P	P	19 05 29.7	+0.1
R11A	Troy Canyon, C	84.12	51	P	P	19 05 31.5	0.0
TPNV	Topopah Spring	84.20	53	P	P	19 05 32.1	+0.2
TPNV				IAmb	IAmb	19 05 33.4	
	comp=Z,3.9nm,0.8s						
GSC	Goldstone, Bar	84.44	54	P	P	19 05 33.5	+0.5
GSC				IAmb	IAmb	19 05 34.0	
	comp=Z,3.6nm,0.8s						
HVU	Hansel Valley	84.67	47	P	P	19 05 34.5	+0.4
FFC	Flin Flon	84.87	32	P	P	19 05 35.3	+0.6
PRN	Pahroc Range	84.89	52	P	P	19 05 36.0	+0.6
PRN				IAmb	IAmb	19 05 36.7	
	comp=Z,6.1nm,1.0s						
PSUT	Pine Spring	85.28	50	P	P	19 05 37.7	+0.3
DUG	Dugway, Tooele	85.32	48	P	P	19 05 38.0	+0.5
DUG				IAmb	IAmb	19 05 38.6	
	comp=Z,6.2nm,0.6s						
PFO	Pinyon Flats O	85.37	56	P	P	19 05 38.0	+0.2
PFO				IAmb	IAmb	19 05 38.6	
	comp=Z,4.4nm,0.9s						
RLMT	Red Lodge	85.49	43	P	P	19 05 39.4	+1.1
HWUT	Hardware Ranch	85.56	47	P	P	19 05 38.8	+0.1
HWUT				IAmb	IAmb	19 05 39.8	
	comp=Z,6.3nm,0.8s						
CCUT	Cedar City	86.05	51	P	P	19 05 42.0	+0.8
JLU	Jordanelle	86.08	48	P	P	19 05 41.9	+0.5
SZCU	Shurtz Canyon	86.23	51	P	P	19 05 41.5	-0.6
TCRU	Three Creeks R	86.25	50	P	P	19 05 42.8	+0.5
LCMT	Little Creek M	86.36	51	P	P	19 05 42.9	+0.2
PD31	Pinedale Array	86.38	45	P	P	19 05 43.2	+0.4
PDAR	Pinedale Array	86.38	45	P	P	19 05 42.8	0.0
	comp=Z,1.1nm,0.6s,baz=232,slow=2.0,SNR=9.7						
MVU	Marysvale	86.46	50	P	P	19 05 43.9	+0.7
MSU	Marysvale	86.48	50	P	P	19 05 44.0	+0.7
KNB	Kanab	86.67	51	P	P	19 05 45.2	+1.0
MTPU	Mount Pierson	86.68	50	P	P	19 05 45.2	+0.7
Q16A	Castle Valley	87.01	49	P	P	19 05 45.9	0.0
P17A	Butcher Ranch,	87.07	48	P	P	19 05 46.4	+0.3
U15A	North Rim	87.31	52	P	P	19 05 47.4	0.0
U15A				IAmb	IAmb	19 05 48.9	
	comp=Z,3.7nm,0.7s						
SRU	San Rafael Swe	87.38	49	P	P	19 05 47.7	+0.1
AKASG	Malin Array Be	87.47	325	P	P	19 05 46.1	-1.4
	comp=Z,0.5nm,0.5s,baz=52,slow=5.5,SNR=4.7						
PV23	Carpenter Ridg	88.73	49	P	P	19 05 54.5	+0.3
PV23				IAmb	IAmb	19 05 54.8	
	comp=Z,6.1nm,0.8s						
PV14	Lion Creek, Pa	88.76	49	P	P	19 05 54.5	+0.2
PV14				IAmb	IAmb	19 05 55.1	
	comp=Z,5.8nm,0.7s						
PV19	Morning Glory	88.82	49	P	P	19 05 55.0	+0.5
PV19				IAmb	IAmb	19 05 55.4	
	comp=Z,5.9nm,0.7s						
PV05	Paradox Valley	88.84	49	P	P	19 05 55.0	+0.3
PV05				IAmb	IAmb	19 06 08.9	
	comp=Z,3.9nm,0.7s						
PV17	East Wray Mesa	88.85	49	P	P	19 05 54.9	+0.3
PV17				IAmb	IAmb	19 05 55.6	
	comp=Z,4.5nm,0.7s						
PV16	Nyswonger Mesa	88.86	49	P	P	19 05 55.0	+0.3
PV16				IAmb	IAmb	19 05 56.0	
	comp=Z,5.2nm,0.9s						
PV11	David Mesa, Pa	88.90	49	P	P	19 05 55.1	+0.2
PV11				IAmb	IAmb	19 05 57.3	
	comp=Z,4.3nm,0.7s						
PV12	Saucer Basin,	88.94	49	P	P	19 05 55.5	+0.5
PV12				IAmb	IAmb	19 05 56.1	
	comp=Z,6.4nm,1.0s						
PV13	Radium Mtn., P	89.00	49	P	P	19 05 55.6	+0.2
PV13				IAmb	IAmb	19 05 56.0	
	comp=Z,3.3nm,0.7s						
PV02	Paradox Valley	89.04	49	P	P	19 05 55.8	+0.3
PV02				IAmb	IAmb	19 05 56.4	
	comp=Z,3.6nm,0.7s						
PV01	Paradox Valley	89.19	49	P	P	19 05 56.5	+0.2
PV01				IAmb	IAmb	19 05 56.9	
	comp=Z,4.4nm,0.9s						
TORD	Torodi Ar. Bea	128.97	310	PKP	PKPdf	19 12 07.6	-0.5
	comp=Z,0.5nm,0.4s,baz=320,slow=1.2,SNR=5.3						
PLCA	Paso Flores	145.55	130	PKPbc	PKPdf	19 12 37.6	-0.3
	comp=Z,1.7nm,0.6s,baz=249,slow=3.6,SNR=6.2						

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*KRSC **05** 18:54:35.6±1.3, 48°.13N×156°.10E, h51^{km}±24^{km}, ML3.8*
*IDC **05** 18:54:39.5±6.8, 48°.80N×154°.39E, h0^{km}, mb3.8/2, mb1 3.9/4, mb1mx3.4/42, mbtmp3.8/4, ML2.9/2, MS4.2/2, Ms1 4.2/2, ms1mx3.1/63, Error ellipse: s-maj=176.2km s-min=27.9km az=132.0*
ISC 05 18:54:36.9±2.7**, 48°.0N**±0°.2×**155°.8E**±0°.3**, h35^{km}, n24, σ0^{s}.99**/22**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.66	4	*e*P	Pn	18 55 17.0	-0.2
PAU	Pauzhetka	3.50	10	*e*P	Pn	18 55 29.6	+0.8
PAU				*e*S	Sn	18 56 09.8	+0.9
KDTR	Khodutka, Kamc	4.05	20	*e*S	Sn	18 56 22.2	-0.4
ASAK	Asacha	4.56	16	*e*P	Pn	18 55 44.0	+0.6
MTVR	Mutnovka	4.71	18	*e*P	Pn	18 55 45.9	+0.4
MTVR				*e*S	Sn	18 56 38.3	-0.6
GRL	Gorelyy	4.75	17	*e*P	Pn	18 55 46.9	+0.8
KRMR	Karymshinskiy	5.03	16	*e*P	Pn	18 55 50.8	+1.1
PETK	Petropavlovsk-	5.22	13	Pn	Pn	18 55 54.1	+1.6
	0.5nm,0.3s,baz=178,slow=13,SNR=10						
PET	Petropavlovsk	5.32	19	*e*P	Pn	18 55 53.8	+0.1
DALK	Dalny	5.34	19	*e*P	Pn	18 55 53.8	-0.3
DALK				*e*S	Sn	18 56 52.0	-2.3
UGLR	Uglovaya	5.53	19	*e*P	Pn	18 55 56.5	-0.2
AVH	Avacha	5.56	18	*e*P	Pn	18 55 58.6	+1.5
KOK	Koryaka	5.56	18	*e*P	Pn	18 55 58.3	+1.1
SMAR	Somma	5.57	19	*e*P	Pn	18 55 58.5	+1.1
KRX	Arik	5.63	18	*e*P	Pn	18 55 58.8	+0.6
GNL	Ganaly	5.83	13	*e*P	Pn	18 56 01.3	+0.4
ASAJ	Asahikawa	9.98	252	Pn	Pn	18 56 57.0	-0.7
	0.3nm,0.3s,baz=90,slow=11,SNR=4.0						
KSRS	Korea Array	22.93	253	P	P	18 59 38.3	+0.5
	1.0nm,0.8s,baz=46,slow=9.8,SNR=3.3						
H11S1	WAKE ISLAND Hy	30.76	159	T	T	19 33 52.8	
	baz=345,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	30.77	160	T	T	19 33 53.5	
	baz=345,slow=76,SNR=21						
H11S2	WAKE ISLAND Hy	30.77	159	T	T	19 33 51.5	
	baz=345,slow=76,SNR=10						
JAY	Jayapura	52.04	199	LR	LR	19 22 43.9	
	comp=Z,299nm,21.7s,baz=291,slow=32						
FINES	FINESS Array B	63.65	336	P	P	19 05 04.0	0.0
	3.6nm,1.0s,baz=35,slow=10,SNR=4.3						
GEYT	Alibeck	67.50	302	LR	LR	19 39 15.2	
	comp=Z,145nm,18.6s,baz=50,slow=40						

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*NEIC **05** 19:05:54.2±1.2, 16°.4S±0°.1×174°.0W±0°.1, h126^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=19.3km s-min=15.5km az=194.0*
*IDC **05** 19:06:02.2±4.2, 16°.41S×174°.33W, h195^{km}±36^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.4/50, mbtmp4.1/8, Error ellipse: s-maj=27.8km s-min=20.5km az=118.0*
*NOU **05** 19:06:23.7, 14°.16S×172°.29W, h121^{km}, MLv3.5, Samoa Islands*
ISC 05 19:05:52.6±0.8**, 16°.3S**±0°.1×**174°.1W**±0°.1**, h111^{km}, n20, σ1^{s}.09**/19**, mb4.1**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.83	125	Pn	Pn	19 07 03.5	+0.3
MSVF	Nonsavu	7.66	258	P	Pn	19 07 48.7	+7.1
	0.4nm,0.3s,baz=116,slow=13,SNR=7.3						
MSVF	Nonsavu	7.66	258		Pn	19 07 44.1	+2.5
DZM	Mont Dzumac	19.26	250	P	Pn	19 10 10.2	-0.6
	0.3nm,0.3s,baz=54,slow=17,SNR=3.5						
URZ	Urewera	23.21	198	P	P	19 10 49.2	-0.7
	7.3nm,0.3s,baz=302,slow=2.1,SNR=19						
URZ	Urewera	23.21	198	P	P	19 10 49.0	-0.9
URZ				IAmb	IAmb	19 10 50.7	
	comp=Z,12nm,0.8s						
OXZ	Oxford	29.42	201	P	P	19 11 45.6	-0.1
STKA	Stephens Creek	43.02	241	P	P	19 13 40.6	-0.8
	baz=98,slow=11,SNR=13						
STKA	Stephens Creek	43.02	241	P	P	19 13 40.5	-0.9
WRA	Warramunga Arr	49.00	258	P	P	19 14 26.8	-1.7
	comp=Z,0.4nm,0.4s,baz=93,slow=6.9,SNR=19						
AS31	Alice Springs	49.21	253	P	P	19 14 28.5	-1.5
AS31				IAmb	IAmb	19 14 30.8	
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	49.21	253	P	P	19 14 28.6	-1.5
	comp=Z,6.5nm,0.7s,baz=88,slow=8.3,SNR=63						
VNDA	Vanda	62.42	186	P	P	19 16 04.3	+1.0
	comp=Z,1.2nm,0.8s,baz=51,slow=7.0,SNR=5.2						
VNDA	Vanda	62.42	186	P	P	19 16 04.1	+0.7
VNDA				IAmb	IAmb	19 16 09.9	
	comp=Z,2.1nm,1.1s						
QSPA	South Pole Qui	73.75	180	P	P	19 17 14.7	+0.1
QSPA				IAmb	IAmb	19 17 17.6	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	83.37	42	P	P	19 18 07.8	+0.1
	comp=Z,0.4nm,0.7s,baz=194,slow=3.1,SNR=4.1						
ILAR	Eielson Array	83.45	11	P	P	19 18 07.8	+0.4
	comp=Z,0.2nm,0.5s,baz=213,slow=6.5,SNR=4.3						
ARCES	ARCESS Array B	125.40	352	PKP	PKPdf	19 24 39.5	-0.5
	comp=Z,6.2nm,1.0s,baz=14,slow=2.5,SNR=5.5						
BRTR	Keskin Array B	146.43	320	PKPbc	PKPbc	19 25 21.3	+0.1
	comp=Z,1.4nm,0.7s,baz=149,slow=2.2,SNR=3.6						
GERES	GERESS Array B	146.92	351	PKPbc	PKPbc	19 25 22.5	+0.2
	comp=Z,0.4nm,0.6s,baz=7.4,slow=3.1,SNR=4.2						

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*IDC **05** 19:13:13.7±0.6, 3°.42S×131°.17E, h0^{km}, mb4.2/14, mb1 4.3/16, mb1mx4.1/51, mbtmp4.2/16, ML3.3/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/39, Error ellipse: s-maj=27.5km s-min=12.4km az=74.0*
*DJA **05** 19:13:17.7±0.9, 3°S±2°×13°1E±°, h27^{km}±8^{km}, M4.5/19, mB5.0/6, mb4.6/19, MLv4.5/12, Mw(mB)4.3/6*
*NOU **05** 19:13:18.1, 3°.59S×130°.97E, h12^{km}, mb4.9, Seram, Indonesia*
*NEIC **05** 19:13:18.9±1.2, 3°.47S±0°.06×131°.19E±0°.06, h35^{km}±5^{km}, mb4.5/34, Error ellipse: s-maj=9.0km s-min=8.2km az=96.0*
ISC 05 19:13:17.8±0.4**, 3°.53S**±0°.04×**131°.21E**±0°.05**, h30^{km}, n123, σ1^{s}.94**/112**, mb4.4**/30**, MS3.7**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.20	60		Pn	19 13 38.8	+0.1
FAKI	Fak Fak	1.20	60	P	Pn	19 13 39.0	+0.4
FAKI				S	Sb	19 13 55.7	+0.5
BNDI	Bandanaira	1.63	233	P	Pn	19 13 46.6	+2.1
MSAI	Masohi	2.29	275	P	Pn	19 13 53.4	-0.1
SIJI	Sorong	2.64	1	Pn	Pn	19 13 56.4	-2.1
	24nm,0.3s,baz=207,slow=22,SNR=132						
SIJI				Sn	Sn	19 14 26.2	-3.3
	78nm,0.3s,baz=223,slow=22,SNR=16						
SWI	Sorong	2.65	1	P	Pn	19 13 56.2	-2.3
NLAI	Namlea	4.11	274	P	Pn	19 14 19.1	+0.4
SAUI	Saumlaki	4.42	179	Pn	Pn	19 14 25.1	+2.2
SAUI	Saumlaki	4.42	179	P	Pn	19 14 24.7	+1.7
BAKI	Biak	5.42	65	P	Pn	19 14 36.5	-0.1
	273nm,1.0s						
SANI	Sanana	5.42	286	P	Pn	19 14 34.3	-2.3
	0.5nm629nm39nm,0.8s						
TNTI	Ternate	5.75	318	Pn	Pn	19 14 39.5	-1.6
TNTI	Ternate	5.75	318	P	Pn	19 14 39.8	-1.3
	0.2nm39nm,1.1s						
KMSI	Cibinong	8.30	299	P	Pn	19 15 13.2	-3.0
	64nm,0.9s						
LUWI	Luwuk	8.79	286	Pn	Pn	19 15 22.7	-0.2
LUWI	Luwuk	8.79	286	P	Pn	19 15 22.0	-0.9
	734nm59nm,1.1s						
GENI	Genyem	8.99	84	P	Pn	19 15 27.0	+1.2
	72nm,1.0s						
KDU	Kakadu	9.18	172	P	Pn	19 15 28.0	-0.4
	baz=9.3,SNR=75						
KDU				S	Sn	19 17 07.2	-3.5
	baz=9.3						
MTN	Manton Dam	9.25	180	P	Pn	19 15 29.5	+0.1
	baz=9.3,SNR=64						
MTN	Manton Dam	9.25	180	Pn	Pn	19 15 29.4	+0.1
SOEI	Soe	9.26	228	Pn	Pn	19 15 31.9	+2.4
SOEI	Soe	9.26	228	P	Pn	19 15 31.4	+1.9
	139nm,1.0s						
APSI	Ampana	9.90	285	P	Pn	19 15 37.5	-0.7
	544nm46nm,1.0s						
BATI	Baumata	10.00	228	Pn	Pn	19 15 43.4	+3.7
	baz=227,slow=13						
BATI	Baumata	10.00	228	P	Pn	19 15 41.5	+1.8
	5.6nm0.8nm,0.8s						
MRSI	Marisa	10.08	293	P	Pn	19 15 39.4	-1.3
	24nm,0.9s						
TOLI2	Tolitoli	11.40	294	Pn	Pn	19 15 58.7	0.0
FITZ	Fitzroy Crossi	15.47	200	P	Pn	19 16 51.0	-3.1
	baz=16,SNR=18						
FITZ	Fitzroy Crossi	15.47	200	Pn	Pn	19 16 50.7	-3.3
	1.5nm,0.3s,baz=32,slow=14,SNR=30						
FITZ				Sn	Sn	19 19 32.4	-12
	0.5nm,0.3s,baz=264,slow=19,SNR=1.9						
FITZ				LR	LR	19 23 57.0	
	comp=Z,374nm,21.1s,baz=26,slow=41						
FITZ	Fitzroy Crossi	15.47	200	Pn	Pn	19 16 50.9	-3.2
COEN	Coen	15.71	132	P	Pn	19 16 57.2	0.0
	baz=16						
COEN	Coen	15.71	132	Pn	Pn	19 16 56.1	-1.0
BBKI	Banjar Baru	16.34	270	P	P	19 17 13.3	+5.4
WB0	Warramunga Arr	16.43	169	Pn	Pn	19 17 01.7	-4.7
WB0				IAmb	IAmb	19 17 19.2	
	comp=Z,40nm,1.1s						
MTKI	Muara Teweh, K	16.50	279	P	P	19 17 12.2	+2.5
WRAB	Tennant Creek	16.59	170	P	Pn	19 17 04.7	-3.7
WRAB				IAmb	IAmb	19 17 28.8	
	comp=Z,29nm,1.1s						
WRA	Warramunga Arr	16.60	170	Pn	Pn	19 17 03.4	-5.1
	comp=Z,0.7nm,0.3s,baz=351,slow=13,SNR=38						
WRA				Sn	Sn	19 20 01.5	-11
	comp=Z,2.0nm,0.3s,baz=357,slow=24,SNR=6.6						
WB2	Warramunga Arr	16.60	170	Pn	Pn	19 17 04.2	-4.4
WB2				IAmb	IAmb	19 17 26.9	
	comp=Z,66nm,1.4s						
WR0	Warramunga Arr	16.65	169	P	Pn	19 17 04.8	-4.3
WR0				IAmb	IAmb	19 17 28.1	
	comp=Z,52nm,1.3s						
PMG	Port Moresby	16.88	111	Pn	Pn	19 17 14.1	+2.0
	comp=Z,1.4nm,0.3s,baz=352,slow=7.1,SNR=5.7						
PMG	Port Moresby	16.88	111	P	Pn	19 17 14.1	+2.0
PMG				IAmb	IAmb	19 17 36.5	
	comp=Z,55nm,1.2s						
QIS	Mount Isa	18.80	155	P	P	19 17 36.0	+0.9
	baz=19,SNR=18						
MTSU	Mount Surprise	19.38	139	P	Pn	19 17 43.9	+1.3
	baz=20,SNR=28						
AS31	Alice Springs	20.19	173		P	19 17 51.8	+1.6
AS31				IAmb	IAmb	19 17 56.6	
	comp=Z,13nm,0.6s						
ASAR	Alice Springs	20.19	173	P	P	19 17 51.6	+1.4
	comp=Z,28nm,0.7s,baz=352,slow=11,SNR=176						
ASAR				S	S	19 21 28.0	-7.5
	comp=Z,3.1nm,0.7s,baz=356,slow=26,SNR=5.9						
ASPA	Alice Springs	20.19	173	P	P	19 17 51.7	+1.5
	baz=20						
PSA00	Pilbara Seismi	21.06	211	P	P	19 17 58.9	-0.8
PSA00				IAmb	IAmb	19 18 00.6	
	comp=Z,24nm,0.7s						
WRKA	Warakurna	21.57	187	P	P	19 18 05.3	+0.2
	baz=22,SNR=107						
GUMO	Guam	21.75	38	LR	LR	19 25 59.2	
	comp=Z,165nm,20.6s,baz=208,slow=35						
CTA	Charters Tower	22.05	139	P	P	19 18 12.2	+1.9
	comp=Z,6.5nm,0.6s,baz=314,slow=11,SNR=11						
CTAO	Charters Tower	22.05	139	P	P	19 18 09.6	-0.7
CTAO				IAmb	IAmb	19 18 18.5	
	comp=Z,15nm,1.0s						
CISI	Cisompet, Garu	23.62	259	P	P	19 18 24.2	-2.5
LEM	Lembang	23.72	261	LR	LR	19 29 27.3	
	comp=Z,834nm,19.3s,baz=94,slow=41						
MEEK	Meekatharra	25.95	206	P	P	19 18 47.5	-0.4
	baz=26,SNR=9.3						
QLP	Quilpie	26.10	153	P	P	19 18 51.1	+2.0
	baz=26,SNR=4.0						
FORT	Forrest	27.27	186	P	P	19 19 00.3	+0.8
	baz=27,SNR=11						
FORT	Forrest	27.27	186	P	P	19 19 00.4	+0.8
KMBL	Kambalda	29.05	197	P	P	19 19 15.5	0.0
	baz=29,SNR=18						
MORW	Morawa	29.20	208	P	P	19 19 16.6	-0.4
	baz=29,SNR=5.2						
MORW	Morawa	29.20	208	P	P	19 19 16.3	-0.6
MORW				IAmb	IAmb	19 19 38.5	
	comp=Z,6.8nm,1.0s						
BBOO	Buckleboo	29.48	172	P	P	19 19 20.6	+1.2
BBOO				IAmb	IAmb	19 19 46.3	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	29.84	162	P	P	19 19 24.1	+1.5
	baz=30,SNR=5.1						
STKA	Stephens Creek	29.84	162	P	P	19 19 25.1	+2.6
	baz=343,slow=6.1,SNR=7.3						
STKA	Stephens Creek	29.84	162	P	P	19 19 23.5	+1.0
BLDU	Ballidu	30.22	205	P	P	19 19 25.5	-0.5
	baz=30,SNR=10						
KLBR	Kellerberrin	30.65	203	P	P	19 19 29.3	-0.5
	baz=31,SNR=13						
IPM	Ipoh	31.19	285	P	P	19 19 35.5	+0.7
IPM				IAmb	IAmb	19 19 38.5	
	comp=Z,12nm,1.1s						
MUN	Mundaring	31.62	205	P	P	19 19 38.9	+0.7
	baz=32,SNR=3.6						
KULM	Kulim	31.76	286	P	P	19 19 40.0	+0.3
KULM				IAmb	IAmb	19 19 49.4	
	comp=Z,13nm,1.2s						
MNSI	Mandailing Nat	31.90	277	P	P	19 19 39.5	-1.5
	comp=Z,9.4nm,0.8s						
NWAO	Narrogin (SRO)	32.04	203	P	P	19 19 41.8	-0.1
	baz=32,SNR=5.2						
NWAO	Narrogin (SRO)	32.04	203	P	P	19 19 41.4	-0.6
	comp=Z,3.0nm,0.4s,baz=35,slow=8.2,SNR=8.4						
NWAO	Narrogin (SRO)	32.04	203	P	P	19 19 41.8	-0.1
NWAO	Narrogin (SRO)	32.04	203	P	P	19 19 41.8	-0.1
NWAO				IAmb	IAmb	19 20 02.0	
	comp=Z,30nm,1.4s						

JCJ	Chichijima	32.24	19	LR	LR	19 31 32.9	
	comp=Z,181nm,19.9s,baz=161,slow=34						
YNG	Young	34.54	154	P	P	19 20 06.5	+2.7
	baz=35,SNR=11						
CNB	Canberra Magne	35.82	154	P	P	19 20 17.0	+2.2
	baz=36,SNR=6.2						
JHJ	Hachijo jima 2	37.34	12	LR	LR	19 34 34.6	
	comp=Z,239nm,18.6s,baz=127,slow=34						
PAYA	Payao	38.30	308	P	P	19 20 41.8	+5.7
CM36	Chiang Mai Arr	38.48	306	P	P	19 20 45.0	+7.5
CM09	Chiang Mai Arr	38.52	306	P	P	19 20 44.6	+6.7
	comp=Z,4.7nm,0.9s						
CM02	Chiang Mai Arr	38.55	306	P	P	19 20 48.0	+10
	comp=Z,3.5nm,1.2s						
CM31	Chiang Mai Arr	38.57	306	P	P	19 20 45.1	+6.8
	comp=Z,121nm,1.0s						
CMAR	Chiang Mai Arr	38.57	306	P	P	19 20 38.7	+0.4
	comp=Z,1.4nm,0.8s,baz=134,slow=7.6,SNR=14						
CM13	Chiang Mai Arr	38.58	306	P	P	19 20 40.0	+1.6
CM15	Chiang Mai Arr	38.58	306	P	P	19 20 40.0	+1.6
	comp=Z,42nmcomp=Z,3.8nm,0.9s						
CM34	Chiang Mai Arr	38.61	306	P	P	19 20 39.0	+0.4
CM32	Chiang Mai Arr	38.75	306	P	P	19 20 43.0	+3.2
CMMT	Chiang Mai	38.75	306	P	P	19 20 41.0	+1.2
	comp=Z,3.1nm,1.1s						
CHTO	Chiang Mai	38.75	306	P	P	19 20 39.9	0.0
CHTO				IAmb	IAmb	19 20 57.1	
	comp=Z,9.2nm,1.2s						
CM33	Chiang Mai Arr	38.75	306	P	P	19 20 40.0	+0.1
MJAR	Matsushiro Arr	40.40	9	P	P	19 20 51.6	-1.7
	comp=Z,2.1nm,0.8s,baz=183,slow=8.9,SNR=3.5						
MJAR				LR	LR	19 37 14.7	
	comp=Z,113nm,19.7s,baz=205,slow=36						
KSRS	Korea Array	40.89	356	LR	LR	19 38 27.8	
	comp=Z,106nm,19.4s,baz=167,slow=37						
USRK	Ussuriysk Ar.	47.52	1	P	P	19 21 50.0	-0.3
	comp=Z,1.6nm,0.8s,baz=178,slow=7.6,SNR=4.2						
ASAJ	Asahikawa	48.52	11	LR	LR	19 42 52.9	
	comp=Z,59nm,18.6s,baz=178,slow=37						
LSA	Lhasa	50.62	314	P	P	19 22 14.3	-0.6
GTA	Gaotai	51.58	329	eP	P	19 22 21.9	+0.3
GTA				pP	pP	19 22 26.6	-3.9
GTA				sP	sP	19 22 28.9	-5.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,6.0s						
GTA				LR	LR		
	comp=N,140nm,15.6s						
GTA				LR	LR		
	comp=E,100nm,14.5s						
GTA				LR	LR		
	comp=Z,89nm,15.3s						
ULN	Ulaanbaatar	55.39	340	P	P	19 22 50.4	+1.1
ULN				IAmb	IAmb	19 22 57.4	
	comp=Z,5.5nm,1.1s						
SONM	Songino Array	55.58	340	P	P	19 22 50.8	+0.1
	comp=Z,0.6nm,0.8s,baz=158,slow=4.8,SNR=4.7						
PETK	Petropavlovsk-	60.67	18	LR	LR	19 45 53.1	
	comp=Z,90nm,21.9s,baz=358,slow=32						
MA2	Magadan	64.78	11	LR	LR	19 50 27.1	
	comp=Z,44nm,21.6s,baz=187,slow=34						
YAK	Yakutsk	65.39	359	P	P	19 23 57.7	+0.5
	comp=Z,2.5nm,0.3s,baz=108,slow=0.7,SNR=5.6						
YAK	Yakutsk	65.39	359	P	P	19 23 57.4	+0.2
MK31	Makanchi Array	66.03	325	P	P	19 24 01.9	+0.1
MKAR	Makanchi Array	66.03	325	P	P	19 24 01.9	+0.2
	comp=Z,2.0nm,0.6s,baz=118,slow=8.1,SNR=27						
MAKZ	Makanchi	66.22	325	P	P	19 24 03.0	+0.1
MAKZ				IAmb	IAmb	19 24 04.3	
	comp=Z,5.8nm,1.2s						
AAK	Ala-Archa	68.72	319	P	P	19 24 19.1	0.0
	comp=Z,0.3nm,0.4s,baz=184,slow=7.1,SNR=4.2						
ZAA0	Zalesovo Array	69.05	333		P	19 24 19.9	-0.7
ZAA0				IAmb	IAmb	19 24 23.2	
	comp=Z,4.8nm,1.1s						
ZALV	Zalesovo Beam	69.05	333	P	P	19 24 19.9	-0.7
	comp=Z,1.5nm,0.7s,baz=104,slow=6.3,SNR=11						
KURBB	Kurchatov Arra	70.23	327	P	P	19 24 28.1	+0.1
	comp=Z,3.0nm,0.6s,baz=128,slow=5.4,SNR=31						
KURK	Kurchatov	70.23	328		P	19 24 27.9	0.0
KK31	Karatay Array	71.57	318	P	P	19 24 36.7	+0.3
KKAR	Karatay Array	71.57	318		P	19 24 36.6	+0.3
VNDA	Vanda	75.73	173	P	P	19 25 01.6	+1.5
	comp=Z,2.3nm,0.7s,baz=315,slow=8.5,SNR=14						
VNDA	Vanda	75.73	173	P	P	19 25 00.4	+0.3
VNDA				IAmb	IAmb	19 25 24.8	
	comp=Z,3.4nm,0.9s						
BRVK	Borovoye	75.88	327	P	P	19 25 02.0	+0.7
BRVK				IAmb	IAmb	19 25 14.4	
	comp=Z,5.8nm,0.8s						
MAW	Mawson	78.60	201	P	P	19 25 12.1	-4.2
	baz=79,SNR=14						
PPT	Papeete	78.67	107	LR	LR	20 01 24.1	
	comp=Z,20nm,18.0s,slow=37						
ABKAR	Akbulak array	80.57	321	P	P	19 25 29.0	+1.6
TTA	Tatalina	85.36	26	P	P	19 25 52.5	+0.4
ILAR	Eielson Array	89.71	25	P	P	19 26 11.6	-1.3
	comp=Z,0.7nm,0.7s,baz=254,slow=4.7,SNR=7.7						
TORD	Torodi Ar. Bea	129.23	284	PKP	PKPdf	19 32 24.8	+0.5
	comp=Z,0.7nm,0.7s,baz=44,slow=2.0,SNR=3.9						
CPUP	Villa Florida	149.19	165	PKPbc	PKPbc	19 33 03.5	-0.7
	comp=Z,2.7nm,0.8s,baz=304,slow=0.6,SNR=6.2						

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*REN **05** 19:24:27.6±1.8, 41.°86N±0.°02×119.°63W±0.°02, h6^{km}±5^{km}, ML2.5/5, ML2.6/4(SEA), ML2.3/20(NEIC), Error ellipse: s-maj=3.2km s-min=2.0km az=190.0*

*SEA **05** 19:24:28.0±2.3, 41.°83N±0.°03×119.°61W±0.°03, h0^{km}±1^{km}, Error ellipse: s-maj=5.1km s-min=2.6km az=167.0*

NEIC 05 19:24:27.4±2.7**, 41.°80N**±0.°03×**119.°62W**±0.°02**, h8**^{km}±4^{km}**, Error ellipse: s-maj=4.5km s-min=2.1km az=167.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.52	282	Pg	Pg	19 24 37.6	+0.1
MOD	Modoc Plateau	0.52	282		Sg	19 24 44.7	+0.4
LKVW	Lakeview	0.70	308		Pg	19 24 39.9	-0.9
WVOR	Wild Horse Val	0.97	49		Sg	19 24 58.2	-0.5
WVOR	Wild Horse Val	0.97	49		Pg	19 24 45.1	-0.9
WVOR	Wild Horse Val	0.97	49	IAML		19 24 58.3	
	62nm,0.7s						
WVOR				IAML		19 25 01.6	
	107nm,0.5s						
K05A	Summer Lake	1.32	315	Pn	Pn	19 24 51.2	-1.1
K05A				IAML		19 25 12.4	
	comp=N,44nm,1.0s						
K05A				IAML		19 25 21.3	
	comp=E,42nm,2.0s						
K05A	Summer Lake	1.32	315		Sb	19 25 09.0	-0.9
LASM	Arnica Sink	1.48	263		Pn	19 24 54.4	-0.1
LASM					Sg	19 25 15.2	+0.4
HOG	Hogback Mounta	1.62	287		Pn	19 24 56.1	-0.3
J05D	Fort Rock, OR	1.91	322		Pn	19 25 01.3	+1.0
LHEM	Herd Peak	1.95	266		Pb	19 25 03.2	-0.1
BEKR	Beckworth	2.01	196		Pn	19 25 02.1	+0.4
BEKR				IAML		19 25 35.9	
	comp=N,19nm,0.3s						
BEKR				IAML		19 25 36.0	
	comp=E,25nm,0.5s						
PINE	Pine Mountain	2.22	335		Pb	19 25 06.6	-1.2
PINE				IAML		19 25 37.4	
	comp=E,30nm,0.6s						
PINE				IAML		19 25 55.5	
	comp=N,25nm,4.9s						
YBH	Yreka Blue Hor	2.31	269		Pn	19 25 05.4	-0.4
YBH				IAML		19 25 41.6	
	comp=N,15nm,0.7s						
HUMO	Hull Mountain	2.61	289		Pn	19 25 08.9	-0.9
HUMO				IAML		19 25 43.7	
	comp=E,11nm,4.8s						
HUMO				IAML		19 25 46.0	
	comp=N,11nm,4.4s						
ELK	Elko	3.47	106		Pn	19 25 23.1	+1.2
HLID	Hailey	4.23	64		Pn	19 25 32.3	+0.1

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*JMA **05** 19:25:45.9±0.2, 37.°23N×142.°33E, h16^{km}±3^{km}, M3.8*

*NIED **05** 19:25:46.0, 37.°23N×142.°33E, h16^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.85; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$-2.85; $M_{r\theta}$3.31; $M_{\theta\phi}$-2.41; $M_{\phi r}$2.99; Fault plane solution: $M_0$5.75000×10^{14} NP1:ϕ_s47.00000°, δ72.00000°, λ105.00000°. NP2:ϕ_s185.00000°, δ23.00000°, λ51.00000°.*

*IDC **05** 19:25:49.5±3.4, 37.°17N×142.°44E, h42^{km}±27^{km}, mb3.4/5, mb1 3.6/8, mb1mx3.2/58, mbtmp3.7/8, ML3.3/3 Error ellipse: s-maj=45.5km s-min=23.7km az=88.0*

ISC 05 19:25:43.7±3.6**, 37.°21N**±0.°05×**142.°36E**±0.°08**, h0**^{km}±22^{km}**, n29, σ1^{s}46**/33**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.19	278	P	Pn	19 26 07.3	-0.4
JFK				eS	Sb	19 26 22.7	-0.5
ONAJ	Iwakimizuishiy	1.25	266	P	Pn	19 26 08.2	-0.3
JMST	Minamisoumatoc	1.28	294	P	Pn	19 26 08.4	-0.4
JIKH	Ishinomakikobu	1.31	328	P	Pn	19 26 09.0	-0.2
JMM	Marumori	1.41	298	P	Pn	19 26 10.4	-0.2
JIO	Ouri	1.48	328	P	Pn	19 26 11.6	0.0
JFT	Otama	1.64	282	P	Pb	19 26 14.8	0.0
JOU	Okura	1.77	311	P	Pn	19 26 16.4	+0.8
JOU				eS	Sn	19 26 37.5	-1.4
JMK	Ichinoseki	1.96	333	P	Pn	19 26 19.1	+0.9
JMK				eS	Sn	19 26 42.6	-0.9
JYS	Shirataka	2.08	300	P	Pb	19 26 21.7	-0.6
JYS				eS	Sb	19 26 46.8	-1.9
JFY	Yanaizu	2.12	276	P	Pb	19 26 22.1	-1.0
JFY				eS	Sn	19 26 47.8	+0.2
JYK	Kaneyama	2.33	318	P	Pn	19 26 24.3	+1.1
JOM	Ohasama	2.41	340	P	Pn	19 26 25.7	+1.3
JOM				eS	Sn	19 26 54.3	-0.4
JAG	Ashikaga	2.46	252	P	Pn	19 26 26.2	+1.2
JAG				eS	Sn	19 26 55.8	+0.1
MJAR	Matsushiro Arr	3.39	260	P	Pn	19 26 40.9	+3.0
	0.5nm,0.3s,baz=92,slow=16,SNR=19						
MJAR				S	Sb	19 27 25.8	-0.7
	0.5nm,0.3s,baz=102,slow=14,SNR=5.8						
MAT	Matsushiro	3.39	260	P	Pn	19 26 40.3	+2.4
MAT				S	Sn	19 27 21.6	+2.7
JHJ	Hachijo jima 2	4.59	208	P	Pn	19 26 56.1	+1.7
	8.2nm,0.3s,baz=234,slow=19,SNR=1.2						
JHJ				S	Sn	19 27 44.4	-4.0
	14nm,0.3s,baz=73,slow=19,SNR=4.2						
ASAJ	Asahikawa	6.91	1	P	Pn	19 27 28.4	+2.2
	0.9nm,0.3s,baz=217,slow=12,SNR=12						
H11N2	WAKE ISLAND Hy	27.59	122	T	T	20 00 31.1	
	baz=315,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	27.60	122	T	T	20 00 29.6	
	baz=315,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	27.61	122	T	T	20 00 28.1	
	baz=315,slow=75,SNR=12						
SONM	Songino Array	28.32	303	P	P	19 31 39.3	+0.2
	1.0nm,0.8s,baz=102,slow=8.1,SNR=7.0						
H11S1	WAKE ISLAND Hy	28.33	124	T	T	20 01 21.7	
	baz=317,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	28.33	125	T	T	20 01 26.0	
	baz=317,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	28.34	124	T	T	20 01 22.9	
	baz=317,slow=75,SNR=9.7						
ZALV	Zalesovo Beam	42.36	312	P	P	19 33 39.6	+0.3
	0.7nm,0.6s,baz=94,slow=6.2,SNR=4.1						
MKAR	Makanchi Array	44.67	302	P	P	19 33 58.5	+0.4
	0.7nm,0.7s,baz=89,slow=9.8,SNR=8.2						
WRA	Warramunga Arr	57.34	189	P	P	19 35 32.9	-0.7
	0.4nm,0.8s,baz=11,slow=4.4,SNR=1.2						
AKASG	Malin Array Be	74.62	323	P	P	19 37 25.2	+0.7
	0.5nm,0.4s,baz=46,slow=5.8,SNR=4.8						

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*IDC **05** 19:33:07.0±1.6, 3.°65S×131.°78E, h0^{km}, mb3.7/3, mb1 3.9/6, mb1mx3.5/42, mbtmp3.7/6, ML3.3/3, Error ellipse: s-maj=104.2km s-min=22.0km az=78.0*

ISC 05 19:33:11.6±3.5**, 3.°4S**±0.°5×**13°2E**±°**, h35**^{km}**, n7, σ1^{s}26**/7**, mb3.7**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.68	338	Pn	Pn	19 33 52.6	+0.4
	2.8nm,0.3s,baz=223,slow=23,SNR=41						
SIJI				Sn	Sn	19 34 22.1	-1.4
	8.0nm,0.3s,baz=233,slow=23,SNR=16						
FITZ	Fitzroy Crossi	16.02	203	Pn	Pn	19 36 46.7	-7.7
	0.2nm,0.3s,baz=35,slow=14,SNR=6.0						
WRA	Warramunga Arr	16.60	173	Pn	Pn	19 37 00.6	-1.2
	0.1nm,0.3s,baz=352,slow=13,SNR=6.4						
ASAR	Alice Springs	20.24	176	P	P	19 37 45.0	+1.1
	1.6nm,0.4s,baz=349,slow=10,SNR=26						
MKAR	Makanchi Array	66.51	325	P	P	19 43 58.6	+0.7
	0.2nm,0.5s,baz=114,slow=8.4,SNR=7.1						
KURBB	Kurchatov Arra	70.67	327	P	P	19 44 24.6	+0.9
	0.3nm,0.4s,baz=118,slow=5.4,SNR=5.1						
VNDA	Vanda	75.77	174	P	P	19 44 52.7	-0.7
	0.8nm,0.6s,baz=304,slow=7.3,SNR=9.1						

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*BJI **05** 19:41:38.4±0.0, 28.°92N×81.°52E, h10^{km}, mB4.4/17, mb4.3/26, Ms4.0/13, Ms7 3.9/11*

*DMN **05** 19:41:42.9±0.4, 28.°92N×81.°45E, h10^{km}, Ml4.6/6, Error ellipse: s-maj=36.0km s-min=8.2km az=18.0*

*IDC **05** 19:41:42.6±2.8, 28.°91N×81.°69E, h21^{km}±16^{km}, mb4.0/22, mb1 4.1/25, mb1mx3.9/41, mbtmp4.1/25, ML3.8/3, MS3.5/4, Ms1 3.6/4, ms1mx3.1/35, Error ellipse: s-maj=16.2km s-min=13.5km az=36.0*

*NDI **05** 19:41:42.5±3.7, 28.°87N×81.°65E, h10^{km}, ML4.0, mb4.2(NEIC)*

*MOS **05** 19:41:43.2±1.5, 29.°08N×81.°58E, h39^{km}, mb4.5/10, Error ellipse: s-maj=9.5km s-min=4.3km az=103.8*

*NEIC **05** 19:41:44.3±1.6, 28.°9N±0.°1×81.°61E±0.°09, h34^{km}±4^{km}, mb4.2/18, Error ellipse: s-maj=18.8km s-min=10.6km az=198.0*

ISC 05 19:41:44.2±0.4**, 28.°93N**±0.°04×**81.°67E**±0.°04**, h33**^{km}**, n164, σ2^{s}44**/189**, mb4.3**/50**, MS3.7**/3**, 5C-6D, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	1.93	107	ePn	Pn	19 42 17.4	+2.4
DANN				eSn	Sb	19 42 41.8	-0.9
	1µm,0.4s						
DMN	Daman	3.31	113	ePn	Pn	19 42 35.7	+1.8
KKN	Kakani	3.38	109	ePn	Pn	19 42 36.4	+1.5
KKN				eSn	Sn	19 43 16.2	+2.2
	371nm,0.4s						
DDI	Dehra Dun	3.44	295	eP	Pb	19 42 48.6	+4.1
DDI				eS	Sn	19 43 16.6	+1.4
DDI				IAML		19 43 20.8	
	comp=N,1µm,0.3s						
PKIN	Phulchoki	3.55	111	ePn	Pn	19 42 38.5	+1.2
PKIN				eSn	Sn	19 43 20.4	+2.0
	comp=N,340nm,0.3s						
PKI	Pulchoki	3.57	111	ePn	Pn	19 42 38.7	+1.1
PKI				eSn	Sn	19 43 20.4	+1.7
	comp=N,221nm,0.3s						
GUN	Gumba	3.84	104	ePn	Pn	19 42 42.6	+1.2
GUN				eSn	Sn	19 43 27.6	+2.0
	comp=N,232nm,0.3s						
SMLA	Simla	4.48	300	eP	Pn	19 42 50.5	+0.8
SMLA				eS	Sn	19 43 41.3	+0.6
SMLA				IAML		19 43 42.9	
	comp=E,620nm,0.4s						
RAMN	Ramite	4.79	113	ePn	Pn	19 42 56.0	+1.7
RAMN				eSn	Sn	19 43 49.2	+0.4
	comp=E,217nm,0.3s						
ODAN	Odare	5.47	111	ePn	Pn	19 43 05.2	+1.6
TAPN	Taplejung	5.56	105	ePn	Pn	19 43 06.6	+1.6
TAPN				eSn	Sn	19 44 05.0	-2.9
DHRM	DHARAMSHALA	5.69	307	eP	Pn	19 43 07.5	+0.8
DHRM				eS	Sn	19 44 10.1	-0.8
DHRM				IAML		19 44 11.7	
	comp=N,414nm,0.4s						
DHRM				IAML		19 44 12.2	
	comp=E,567nm,0.4s						
GTK	Tadong	6.33	103	eP	Pn	19 43 16.4	+1.0
GTK				eS	Sn	19 44 24.8	-1.8
GTK				IAML		19 44 27.6	
	comp=N,60nm,0.3s						
GTK				IAML		19 44 27.7	
	comp=E,66nm,0.3s						
BOK	Bokaro	6.36	143	eP	Pn	19 43 16.5	+0.8
BOK				eS	Sn	19 44 25.7	-1.5
BOK				IAML		19 44 36.0	
	comp=N,68nm,0.5s						
BOK				IAML		19 44 36.1	
	comp=E,59nm,0.4s						
BHPL	Bhopal	6.83	215	eP	Pn	19 43 20.9	-1.2
BHPL				eS	Sn	19 44 35.8	-3.1
BHPL				IAML		19 44 36.6	
	comp=N,122nm,0.3s						
BHPL				IAML		19 44 37.4	
	comp=E,108nm,0.3s						
NGP	Nagpur	8.10	198	eP	Pn	19 43 37.1	-2.5
LSA	Lhasa	8.31	82	P	Pn	19 43 44.8	+1.9
LSA	Lhasa	8.31	82	Pn	Pn	19 43 44.8	+1.9
SARP	Sargodha	8.32	293	P	Pn	19 43 42.6	+0.1
NIL	Nilore	8.60	305	P	Pn	19 43 46.1	-0.3
NIL	Nilore	8.60	305	Pn	Pn	19 43 46.1	-0.3
THW	Thamme Wali	9.36	297	P	Pn	19 43 56.4	-0.4
CEP	Cherat	9.66	303	P	Pn	19 43 59.6	-1.5
SHL	Shillong	9.69	108	P	Pn	19 43 59.4	-2.1
SHL	Shillong	9.69	108	eP	Pn	19 43 58.8	-2.7
SHL				eS	Sn	19 45 40.6	-8.6
SHL	Shillong	9.69	108	Pn	Pn	19 43 59.4	-2.1
KOHI	KOHIMA	11.51	103	eP	Pn	19 44 25.2	-1.2
KOHI				eS	Sn	19 46 31.6	-2.4
KOHI				IAML		19 46 38.0	
	comp=E,45nm,1.1s						
KOHI				IAML		19 46 44.8	
	comp=N,24nm,0.8s						
MOKO	MOKOCHONG	11.68	100	eP	Pn	19 44 28.2	-0.6
MOKO				eS	Sn	19 46 30.4	-7.8
MOKO				eS		19 46 30.4	
MOKO				IAML		19 46 41.9	
	comp=E,39nm,1.0s						
MOKO				IAML		19 46 42.5	
	comp=N,30nm,0.6s						
HYB	Hyderabad	11.81	195	i P	Pn	19 44 26.0	-4.5
HYB				eS	Sn	19 46 40.0	-1.3
HYB	Hyderabad	11.81	195	eP	Pn	19 44 27.0	-3.5
SAIH	SAIHA	12.05	120	eP	Pn	19 44 33.6	-0.2
SAIH				eS	Sn	19 46 39.8	-7.3
KBL	Kabul	12.11	301	P	Pn	19 44 32.8	-1.9
KBL	Kabul	12.11	301	Pn	Pn	19 44 32.8	-1.9
LKP	Lekhapani	12.61	94	eP	Pn	19 44 38.5	-2.9
LKP				eS	Sn	19 46 54.0	-6.7
LKP				IAML		19 47 03.9	
	comp=E,20nm,0.6s						
LKP				IAML		19 47 05.6	
	comp=N,31nm,0.6s						
SHLS	Shalkode	14.31	353	eP	Pn	19 45 01.1	-3.5
	comp=N,4.3nm,1.0s,baz=355						
SHLS				eS	Sn	19 47 37.0	-5.1
	baz=355						
SHLS	Shalkode	14.31	353	eP	Pn	19 45 01.0	-3.5
SHLS				eS	Sn	19 47 36.9	-5.1
SHLS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SATY	Saty	14.34	350	eP	Pn	19 45 01.7	-3.3
	baz=351						
SATY	Saty	14.34	350	eP	Pn	19 45 01.7	-3.3
PDGK	Podgornoye	14.47	354	i P	Pn	19 45 03.6	-3.2
PDGK				pmax	pmax		
	comp=Z,13nm,0.9s						
UCH	Uchtor	14.48	338	P	Pn	19 45 06.1	-1.1
	SNR=13						
TNSS	Tian-Shan	14.58	346	eP	Pn	19 45 04.3	-4.2
	baz=346						
TNSS	Tian-Shan	14.58	346	eP	Pn	19 45 04.3	-4.2
AML	Almayashu	14.67	336	P	Pn	19 45 07.7	-2.1
	SNR=14						
MDOK	Medeo	14.68	347	eP	Pn	19 45 06.7	-2.9
	baz=347						
MDOK	Medeo	14.68	347	eP	Pn	19 45 06.7	-2.9
KPKS	Kokpek	14.70	351	eP	Pn	19 45 06.2	-3.6
	comp=Z,12nm,1.0s,baz=352						
KPKS				eS	Sn	19 47 46.7	-5.0
	baz=352						
KPKS	Kokpek	14.70	351	eP	Pn	19 45 06.2	-3.6
KPKS				eS	Sn	19 47 46.6	-5.0
KPKS				pmax	pmax		
	comp=Z,12nm,1.0s						
KBK	Karagaybulak	14.73	340	P	Pn	19 45 10.0	-0.4
	SNR=6.0						
AAA	Alma-Ata	14.75	346	eP	Pn	19 45 08.1	-2.5
	comp=Z,4.0nm,0.4s,baz=347						
AAA	Alma-Ata	14.75	346	eP	Pn	19 45 08.0	-2.5
AAA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
TKM2	Tokmak 2	14.79	342	P	Pn	19 45 09.8	-1.4
	SNR=8.3						
TKM2	Tokmak 2	14.79	342	i P	Pn	19 45 08.7	-2.5
TKM2				pmax	pmax		
	comp=Z,14nm,1.1s						
AAK	Ala-Archa	14.85	339	Pn	Pn	19 45 10.4	-1.6
	comp=Z,0.5nm,0.3s,baz=147,slow=5.0,SNR=26						
AAK				Sn	Sn	19 47 46.2	-9.2
	comp=Z,0.2nm,0.3s,baz=196,slow=16,SNR=2.7						
AAK				LR	LR	19 51 30.8	
	comp=Z,257nm,19.8s,baz=26,slow=40						
AAK	Ala-Archa	14.85	339	P	Pn	19 45 11.8	-0.1
	SNR=8.7						
AAK	Ala-Archa	14.85	339	⇑eP	Pn	19 45 11.3	-0.7
AAK				pmax	pmax		
	comp=Z,23nm,0.9s						
CHMS	Chumysh	15.10	340	P	P	19 45 21.1	+1.1
	SNR=5.3						
EKS2	Erkin-Say	15.11	337	P	P	19 45 22.9	+2.7
	SNR=11						
KUU	Kurty	15.53	345	eP	Pn	19 45 17.1	-3.7
	baz=346						
KUU				LR	LR	19 51 07.2	
	comp=Z,78nm,8.7s,baz=346						
KUU	Kurty	15.53	345	eP	Pn	19 45 17.0	-3.7
KUU				MLR	MLR		
	comp=Z,78nm,9.0s						
IUG	Iuzhnay	16.21	327	eP	Pn	19 45 25.8	-3.9
	baz=327						
IUG	Iuzhnay	16.21	327	eP	Pn	19 45 25.7	-3.9
DZA	Taraz	16.23	332	eP	Pn	19 45 26.7	-3.1
	baz=332						
DZA	Taraz	16.23	332	eP	Pn	19 45 26.7	-3.1
KK31	Karatay Array	16.75	331	P	Pn	19 45 33.0	-3.3
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KK31	Karatay Array	16.75	331	Pn	Pn	19 45 33.0	-3.3
KKAR	Karatay Array	16.75	331	P	Pn	19 45 32.9	-3.4
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	Karatay Array	16.75	331	Pn	Pn	19 45 32.9	-3.4
BTLS	Baital	17.18	341	eP	Pn	19 45 38.7	-3.0
	baz=342						
BTLS	Baital	17.18	341	eP	Pn	19 45 38.6	-3.0
HRA	Herat	17.40	293	P	Pn	19 45 44.3	-0.4
MK31	Makanchi Array	17.84	1	deP	Pn	19 45 47.3	-2.5
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK31	Makanchi Array	17.84	1	Pn	Pn	19 45 46.9	-2.9
MK31				IAmb	IAmb	19 45 53.2	
	comp=Z,9.7nm,1.0s						
MKAR	Makanchi Array	17.84	1	P	Pn	19 45 47.8	-2.0
	comp=Z,0.6nm,0.3s,baz=179,slow=12,SNR=31						
MKAR				ScP	ScP	19 53 59.5	+1.2
	comp=Z,0.0nm,0.3s,baz=131,slow=1.1,SNR=4.1						
MAKZ	Makanchi	17.85	1	P	Pn	19 45 47.4	-2.5
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAKZ	Makanchi	17.85	1		Pn	19 45 47.4	-2.5
MAKZ				IAmb	IAmb	19 45 52.7	
	comp=Z,9.8nm,0.8s						
GTA	Gaotai	18.26	50	P	P	19 45 53.5	-1.6
GTA				pP	Pn	19 45 56.8	+1.6
GTA				sP	pP	19 45 59.5	-5.2
GTA				pmax	pmax		
	comp=Z,97nm,5.4s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,15.3s						
ZSN	Zaisan	18.66	7	eP	P	19 45 57.3	-1.9
	baz=7.3						
ZSN	Zaisan	18.66	7	eP	P	19 45 57.3	-1.9
CHTO	Chiang Mai	18.71	119	P	P	19 46 00.5	+0.4
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CHTO	Chiang Mai	18.71	119		P	19 46 00.5	+0.4
CM33	Chiang Mai Arr	18.71	119	P	Pn	19 46 10.0	+9.3
CMMT	Chiang Mai	18.72	119	P	Pn	19 46 10.3	+10
	comp=Z,2.2nm,0.7s						
CM32	Chiang Mai Arr	18.73	119	P	Pn	19 46 11.0	+10
CM34	Chiang Mai Arr	18.85	118	P	Pn	19 46 08.0	+5.7
CM15	Chiang Mai Arr	18.91	120	P	Pn	19 46 05.9	+2.9
	comp=Z,44nmcomp=Z,3.8nm,0.9s						

CM13	**Chiang Mai Arr**	18.92	120	P	Pn	19 46 11.9	+8.8
	comp=Z,38nmcomp=Z,5.1nm,0.9s						
CM31	**Chiang Mai Arr**	18.92	120	P	Pn	19 46 11.8	+8.6
	comp=Z,111nm,0.9s						
CMAR	**Chiang Mai Arr**	18.92	120	P	P	19 46 02.2	-0.1
	comp=Z,0.1nm,0.3s,baz=305,slow=11,SNR=4.8						
CMAR				LR	LR	19 53 47.1	
	comp=Z,42nm,20.3s,baz=305,slow=38						
CMAR				ScP	ScP	19 54 02.2	+1.2
	comp=Z,0.0nm,0.3s,baz=279,slow=4.2,SNR=6.1						
CM02	**Chiang Mai Arr**	18.94	120	P	Pn	19 46 09.5	+6.1
	comp=Z,39nmcomp=Z,4.8nm,1.0s						
CM35	**Chiang Mai Arr**	18.95	119	P	Pn	19 46 09.0	+5.4
CM01	**Chiang Mai Arr**	18.96	120	P	Pn	19 46 11.7	+8.1
	comp=Z,36nmcomp=Z,4.1nm,1.0s						
CM05	**Chiang Mai Arr**	18.96	120	P	Pn	19 46 09.2	+5.7
	comp=Z,29nmcomp=Z,3.4nm,0.8s						
CM36	**Chiang Mai Arr**	19.00	119	P	Pn	19 46 09.0	+4.9
PAYA	**Payao**	19.13	116	P	Pn	19 46 17.1	+11
	comp=Z,61nm,0.7s						
LZH	**Lanzhou**	19.99	63	*e*P	P	19 46 14.4	+0.3
LZH				pP	Pn	19 46 18.2	+2.2
LZH				sP	pP	19 46 19.3	-4.5
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
UTTA	**Uttaradit**	20.58	119	P	Pn	19 46 28.1	+5.3
	comp=Z,12nm,1.0s						
UTHA	**Uthaitani**	21.12	125	P	P	19 46 30.3	+4.0
DGZ	**Jazzator, Alta**	21.20	10	⇓*e*P	P	19 46 27.2	+0.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.4s						
WSAR	**Wadi Sarin**	21.44	260	P	P	19 46 31.5	+1.8
	comp=Z,8.1nm,0.7s,baz=97,slow=11,SNR=12						
SLVN	**Son La**	21.48	106	P	P	19 46 30.2	0.0
SLVN				IAmb	IAmb	19 46 32.7	
	comp=Z,4.8nm,0.9s						
GEYT	**Alibeck**	21.56	301	P	P	19 46 31.6	+0.7
	comp=Z,1.9nm,0.6s,baz=134,slow=10,SNR=5.2						
KURBB	**Kurchatov Arra**	21.79	355	P	P	19 46 32.8	-0.5
	comp=Z,6.3nm,0.6s,baz=180,slow=10,SNR=81						
KURBB				ScP	ScP	19 54 08.1	+0.9
	comp=Z,0.8nm,0.7s,baz=190,slow=2.5,SNR=7.7						
KURK	**Kurchatov**	21.88	355	*ce*P	P	19 46 33.4	-0.7
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	21.88	355	P	P	19 46 33.3	-0.8
KURK				IAmb	IAmb	19 46 34.5	
	comp=Z,11nm,0.6s						
GYA	**Guiyang**	22.26	90	⇓P	P	19 46 39.2	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN	**Xi'an**	23.76	71	P	P	19 46 53.7	0.0
XAN				pP	pP	19 46 59.8	-4.0
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN	**Xi'an**	23.76	71	P	P	19 46 53.7	0.0
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN	**Xi'an**	23.76	71	P	P	19 46 53.7	0.0
XAN				IAmb	IAmb	19 47 00.9	
	comp=Z,12nm,0.9s						
ENH	**Enshi**	24.20	80	P	P	19 46 58.3	+0.4
ENH				IAmb	IAmb	19 47 22.0	
	comp=Z,8.9nm,0.9s						
ZAA0	**Zalesovo Array**	25.10	4	P	P	19 47 06.0	+0.3
ZALV	**Zalesovo Beam**	25.10	4	P	P	19 47 06.1	+0.4
	comp=Z,23nm,0.8s,baz=195,slow=10,SNR=101						
BVAR	**Borovoye Array**	25.47	344	P	P	19 47 08.6	-0.5
	comp=Z,1.5nm,0.6s,baz=139,slow=11,SNR=11						
BRVK	**Borovoye**	25.53	344	P	P	19 47 10.6	+1.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	**Borovoye**	25.53	344	P	P	19 47 10.6	+1.0
BRVK				IAmb	IAmb	19 47 12.4	
	comp=Z,5.1nm,0.8s						
AB31	**Akbulak array**	26.22	327	*i* P	P	19 47 16.9	+1.0
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ABKAR	**Akbulak array**	26.22	327	P	P	19 47 17.6	+1.7
ABKAR				IAmb	IAmb	19 47 34.5	
	comp=Z,5.7nm,0.9s						
SONM	**Songino Array**	26.86	39	P	P	19 47 23.6	+1.7
	comp=Z,3.9nm,0.8s,baz=226,slow=9.2,SNR=23						
MOY	**Mondy**	26.91	27	*e*P	P	19 47 23.9	+1.6
ZAK	**Zakamensk**	26.94	31	*e*P	P	19 47 23.5	+0.9
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ULN	**Ulaanbaatar**	27.24	39	⇓*e*P	P	19 47 27.1	+1.7
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ULN	**Ulaanbaatar**	27.24	39	P	P	19 47 26.8	+1.4
ULN				IAmb	IAmb	19 47 38.5	
	comp=Z,5.1nm,0.9s						
AKTO	**Aktyubinsk**	27.93	327	P	P	19 47 30.8	-0.5
	comp=Z,0.7nm,0.5s,baz=148,slow=6.0,SNR=4.3						
ARU	**Arti**	32.00	336	*c i*P	P	19 48 08.4	+1.2
ARU						19 49 11.7	
ARU				S	S	19 53 20.9	+4.4
ARU				SS	SnSn	19 55 03.1	-3.9
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VRH	**Novokhopyorsk**	37.17	318	*e*P	P	19 48 50.6	-1.3
VRH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VSR	**Storozhevoye**	38.68	317	*e*P	P	19 49 04.6	-0.1
VSR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LPSR	**Galich'ya Gora**	39.28	319	*e*P	P	19 49 11.0	+1.3
LPSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSRS	**Korea Array**	39.30	65	P	P	19 49 09.6	-0.5
	comp=Z,2.3nm,0.8s,baz=274,slow=8.2,SNR=5.8						
KSRS				LR	LR	20 06 38.5	
	comp=Z,111nm,21.4s,baz=323,slow=38						
NRIK	**Noril'sk**	40.59	3	P	P	19 49 20.4	+0.1
	comp=Z,2.8nm,0.6s,baz=155,slow=6.0,SNR=6.3						
NRIK	**Noril'sk**	40.59	3	*ce*P	P	19 49 20.8	+0.5
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NRIK	**Noril'sk**	40.59	3	P	P	19 49 21.0	+0.6
NRIK				IAmb	IAmb	19 49 28.9	
	comp=Z,9.0nm,1.1s						
KLR	**Kul'dur**	42.93	48	P	P	19 49 40.1	+0.4
	comp=Z,1.3nm,0.6s,baz=284,slow=8.9,SNR=7.7						
KLR	**Kul'dur**	42.93	48	⇓*e*P	P	19 49 40.7	+0.9
AKBB	**Malin Array Si**	44.67	314	⇓*e*P	P	19 49 53.9	+0.2
YAK	**Yakutsk**	45.50	29	P	P	19 50 00.0	-0.1
	comp=Z,3.1nm,0.5s,baz=145,slow=4.5,SNR=4.7						
MNK	**Minsk**	46.13	319	*i* P	P	19 50 06.8	+1.5
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	19 50 06.8	+1.5
	comp=N,15nm,1.0s						
MNK				*i* P	P	19 50 06.8	+1.5
	comp=Z,4.0nm,1.0s						
MNK				*i* PcP	PcP	19 51 43.7	+2.8
MNK				*i* PP	PP	19 51 54.4	+0.8
MNK				*i* PPP	PPP	19 52 34.7	
MNK				*i* ScP	ScP	19 55 16.1	-16
MNK				*i* PcS	PcS	19 55 38.0	+3.0
MNK				*i* S	S	19 56 53.6	+4.8
MNK				*i* ScS	ScS	19 59 02.3	-56
MNK				*i* SS	SS	20 00 17.4	+3.4
MNK				*i* SSS	SSS	20 01 07.4	
MNK				*i* LQ	LQ	20 06 02.5	
MNK				*i* LR	LR	20 09 20.2	
MNK				*i* LRM	MLR	20 11 26.4	
	comp=N,506nm,19.1s						
MNK				*i* LRM	MLR	20 11 27.1	
	comp=Z,88nm,19.1s						
MNK				*i* LRM	MLR	20 11 29.9	
	comp=E,37nm,19.1s						
MLR	**Muntele Rosu**	46.42	307	P	P	19 50 10.1	+2.3
MLR				pmax	pmax		
	comp=Z,13nm,1.0s						
MLR	**Muntele Rosu**	46.42	307	P	P	19 50 10.1	+2.3
FINES	**FINESS Array B**	48.69	328	P	P	19 50 25.7	+0.6
	comp=Z,4.5nm,0.7s,baz=111,slow=8.2,SNR=18						
TIXI	**Tiksi**	49.82	18	⇑*e*P	P	19 50 33.4	-0.1
TIXI				pmax	pmax		
	comp=Z,27nm,1.3s						
TIXI	**Tiksi**	49.82	18	P	P	19 50 33.4	-0.1
ARCES	**ARCESS Array B**	51.52	338	P	P	19 50 46.8	+0.4
	comp=Z,3.8nm,0.8s,baz=73,slow=8.2,SNR=6.9						
CONA	**Conrad Observa**	53.29	310	*e*P	P	19 50 59.9	-0.1
	comp=Z,4.3nm,1.0s						
ARSA	**Arzberg**	53.57	309	*e*P	P	19 51 01.7	-0.3
	comp=Z,4.0nm,1.1s						
SOKA	**Soboth**	53.96	309	*e*P	P	19 51 05.9	+1.0
	comp=Z,3.0nm,1.0s						
OBKA	**Obir**	54.31	308	*e*P	P	19 51 08.3	+0.9
	comp=Z,3.8nm,0.8s						
GERES	**GERESS Array B**	54.65	311	P	P	19 51 10.6	+0.7
	comp=Z,0.9nm,0.7s,baz=88,slow=7.3,SNR=8.2						
ABTA	**Abfaltersbach**	55.67	309	*e*P	P	19 51 16.7	-0.6
	comp=Z,2.3nm,0.7s						
NB2	**NORSAR Subarra**	55.73	326	P	P	19 51 17.1	-0.3
	comp=Z,5.9nm,0.8s,baz=89,slow=7.4						
NOA	**NORSAR Array B**	55.73	326	P	P	19 51 17.4	0.0
	comp=Z,2.2nm,0.8s,baz=90,slow=7.1,SNR=8.4						
NOA				LR	LR	20 16 28.5	
	comp=Z,65nm,19.9s,baz=60,slow=37						
WTTA	**Wattenberg**	56.20	310	*e*P	P	19 51 21.2	0.0
	comp=Z,5.5nm,1.2s						
WATA	**Walderalm**	56.23	310	*e*P	P	19 51 22.4	+1.0
	comp=Z,2.5nm,0.7s						
SQTA	**Sankt Quirin**	56.50	310	*e*P	P	19 51 22.9	-0.3
	comp=Z,2.3nm,0.5s						
MOTA	**Moosalm**	56.55	310	*e*P	P	19 51 23.1	-0.5
	comp=Z,2.5nm,0.7s						
FETA	**Feichten**	56.85	309	*e*P	P	19 51 25.0	-0.7
	comp=Z,4.9nm,1.6s						
DAVA	**Damuels**	57.38	310	*e*P	P	19 51 29.7	+0.1
	comp=Z,3.0nm,0.7s						
ESDC	**Sonseca Array**	69.05	305	P	P	19 52 47.2	+0.3
	comp=Z,0.3nm,0.9s,baz=60,slow=7.6,SNR=2.1						
WRA	**Warramunga Arr**	70.31	127	P	P	19 52 54.6	-0.1
	comp=Z,0.9nm,0.6s,baz=322,slow=6.1,SNR=9.0						
ASAR	**Alice Springs**	72.54	131	P	P	19 53 08.0	-0.2
	comp=Z,0.9nm,0.5s,baz=314,slow=6.3,SNR=13						
ASAR	**Alice Springs**	72.54	131	P	P	19 53 08.0	-0.2
TORD	**Torodi Ar. Bea**	75.08	277	P	P	19 53 23.1	-0.2
	comp=Z,0.5nm,0.6s,baz=78,slow=3.7,SNR=1.9						
BOSA	**Boshof**	78.64	228	P	P	19 53 42.0	-1.1
	comp=Z,1.8nm,0.9s,baz=74,slow=3.9,SNR=5.1						
BOSA	**Boshof**	78.64	228	P	P	19 53 40.9	-2.2
ILAR	**Eielson Array**	79.27	19	P	P	19 53 45.0	-0.9
	comp=Z,1.5nm,0.8s,baz=309,slow=5.0,SNR=18						
YKA	**Yellowknife Ar**	87.96	7	P	P	19 54 30.1	-0.4
	comp=Z,0.7nm,0.7s,baz=346,slow=4.6,SNR=15						

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*IDC **05** 20:14:38.8±0.9, 6°.23N×73°.40W, h143^{km}±16^{km}, mb3.0/1, mb1 3.3/2, mb1mx2.9/29, mbtmp3.5/2, Error ellipse: s-maj=71.5km s-min=9.2km az=132.0*

*RSNC **05** 20:14:39.7±1.3, 6°.36N×73°.60W, h109^{km}±5^{km}, ML3.0, Fault plane solution: NP1:φ$_s$53.00000°, δ70.00000°, λ-102.00000°.*

ISC 05 20:14:38.6±1.0**, 6°.37N**±0°.03×**73°.60W**±0°.03**, h116**^{km}±6^{km}**, n30, σ1^{s}02**/57**, 2C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.46	62	⇓*i*P	Pn	20 14 56.9	+0.7
BARC				*i*		20 14 57.0	
	comp=Z,325nm,0.2s						
BARC				*e*S	Sn	20 15 09.4	+0.1
RUSC	**La Rusia**	0.70	133	⇓*i*P	Pn	20 14 58.1	+0.1
RUSC				*e*S	Sn	20 15 12.6	-0.1
RUSC				*i*		20 15 16.0	
	comp=Z,88nm,0.2s						
BRRC	**Barranca, Sant**	0.74	351	*e*P	Pn	20 14 58.4	+0.6
BRRC				*e*S	Sn	20 15 12.2	-0.1
BRRC				*i*		20 15 14.0	
	comp=Z,180nm,0.1s						
SPBC	**San Pablo de B**	0.86	214	⇓*i*P	Pn	20 14 58.9	-0.1
SPBC				*e*S	Sn	20 15 13.7	-0.8
SPBC				*i*		20 15 21.2	
	comp=Z,325nm,0.2s						
PTBC	**PUERTO BERRIO,**	0.87	281	⇑*e*P	Pn	20 14 58.6	-0.4
PTBC				*e*S	Sn	20 15 13.6	-0.9
PTBC				*i*		20 15 16.4	
	comp=Z,370nm,0.1s						
PAMC	**Pamplona, Colo**	1.31	43	*e*P	Pn	20 15 04.5	+0.4
PAMC				*e*S	Sn	20 15 23.8	+0.5
PAMC				*i*		20 15 27.9	
	comp=Z,59nm,0.2s						
NORC	**Norcasia**	1.50	238	⇓*e*P	Pn	20 15 05.4	-0.4
NORC				*e*S	Sn	20 15 26.1	-0.4
NORC				*i*		20 15 31.7	
	comp=Z,229nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.68	312	⇑*i*P	Pn	20 15 08.3	+0.5
ZARC				*e*S	Sn	20 15 30.5	+0.4
ZARC				*i*		20 15 36.0	
	comp=Z,268nm,0.4s						
ROSC	**El Rosal**	1.69	205	P	Pn	20 15 10.1	+1.7
	comp=Z,14nm,0.3s,baz=116,slow=18,SNR=9.6						
ROSC				S	Sn	20 15 34.0	+3.0
	comp=Z,31nm,0.3s,baz=32,slow=23,SNR=12						
ROSC	**El Rosal**	1.69	205	*e*P	Pn	20 15 08.8	+0.4
ROSC				*e*S	Sn	20 15 30.9	-0.1
ROSC				*i*		20 15 35.2	
	comp=Z,68nm,0.3s						
CHIC	**Chingaza**	1.74	184	*e*P	Pn	20 15 08.6	-0.4
CHIC				*e*S	Sn	20 15 32.1	-0.1
CHIC				*i*		20 15 36.6	
	comp=Z,54nm,0.2s						
TAMC	**Tame, Arauca**	1.79	88	*e*P	Pn	20 15 09.6	+0.3
TAMC				*e*S	Sn	20 15 31.1	-1.7
TAMC				*i*		20 15 31.9	
	comp=Z,151nm,0.2s						
OCAC	**Ocana**	1.87	8	*e*P	Pn	20 15 11.8	+1.4
OCAC				*e*S	Sn	20 15 35.6	+0.8
OCAC				*i*		20 15 42.6	
	comp=Z,132nm,0.3s						
HELC	**Santa Helena**	1.93	265	*e*P	Pn	20 15 12.1	+0.8
HELC				*e*S	Sn	20 15 36.8	+0.5
HELC				*i*		20 15 40.8	
	comp=Z,85nm,0.3s						
VILC	**Villavicencio,**	2.25	182	*e*P	Pn	20 15 15.1	0.0
VILC				*e*S	Sn	20 15 42.6	-0.6
VILC				*i*		20 15 47.7	
	comp=Z,83nm,0.3s						
RREF	**El Recreo**	2.28	230	⇓*e*P	Pn	20 15 16.9	+0.9
RREF				*e*S	Sn	20 15 44.8	+0.3
RREF				*i*		20 15 51.0	
	comp=Z,96nm,0.2s						
UREC	**San Jos de Ur**	2.36	306	*e*P	Pn	20 15 15.7	-0.7
UREC				*e*S	Sn	20 15 44.2	-1.3
UREC				*i*		20 15 54.7	
	comp=Z,119nm,0.2s						
CBOC	**Ciudad Bolivar**	2.46	258	*e*P	Pn	20 15 18.6	+0.8
CBOC				*i*		20 15 20.0	
	comp=Z,33nm,0.2s						
CBOC				*e*S	Sn	20 15 47.7	-0.2
SMLC	**San Martn de**	2.46	349	*e*P	Pn	20 15 18.1	+0.4
SMLC				*e*S	Sn	20 15 48.4	+0.7
SMLC				*i*		20 16 00.0	
	comp=Z,74nm,0.3s						
ANIL	**Santa Ana**	2.59	224	*e*P	Pn	20 15 21.1	+1.3
ANIL				*e*S	Sn	20 15 51.3	0.0
DBBC	**Dabeiba**	2.67	284	*e*P	Pn	20 15 21.1	+0.5
DBBC				*i*		20 15 55.9	
	comp=Z,180nm,0.3s						
ORTC	**Ortega, Tolima**	2.95	214	*e*P	Pn	20 15 24.5	+0.3
ORTC				*e*S	Sn	20 15 59.1	-0.2
ORTC				*i*		20 16 05.9	
	comp=Z,27nm,0.2s						
MOTC	**Monteria, Cord**	3.15	319	*e*P	Pn	20 15 25.9	-0.8
MOTC				*i*		20 15 26.6	
	comp=Z,35nm,0.4s						
MOTC				*e*S	Sn	20 16 02.8	-1.1
SOCV	**Socops**	3.31	55	*e*P	Pn	20 15 28.9	0.0
SOCV				*e*S	Sn	20 16 06.9	-1.0
ARGC	**Ariguani, Magd**	3.52	350	*e*P	Pn	20 15 34.2	+2.5
ARGC				*e*S	Sn	20 16 15.2	+2.5
SJCC	**San Jacinto, C**	3.84	336	*e*P	Pn	20 15 34.8	-1.1
SJCC				*e*S	Sn	20 16 18.7	-1.7
SJCC				*i*		20 16 20.9	
	comp=Z,17nm,0.4s						
SDV	**Santo Domingo**	3.85	49	P	Pn	20 15 37.2	+0.9
	comp=Z,3.8nm,0.3s,baz=197,slow=4.1,SNR=15						
SDV				S	Sn	20 16 21.3	+0.4
	comp=Z,2.7nm,0.3s,baz=71,slow=20,SNR=7.1						
SDV	**Santo Domingo**	3.85	49	*e*P	Pn	20 15 37.0	+0.7
SDV				*e*S	Sn	20 16 19.9	-1.1
YKA	**Yellowknife Ar**	63.52	340	P	P	20 24 54.8	-1.5
	comp=Z,0.2nm,0.4s,baz=129,slow=7.6,SNR=7.5						
WRA	**Warramunga Arr**	149.71	241	PKPbc	PKPdf	20 34 12.4	+1.4
	comp=Z,0.7nm,1.0s,baz=108,slow=2.9,SNR=5.2						

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*IDC **05** 20:15:46.2±0.9, 30°.50N×142°.24E, h0^{km}, mb3.8/13, mb1 3.9/16, mb1mx3.7/49, mbtmp3.8/16, ML3.6/3, MS3.4/5, Ms1 3.5/5, ms1mx2.9/51, Error ellipse: s-maj=31.7km s-min=14.3km az=79.0*

*NEIC **05** 20:15:49.5±1.9, 30°.66N±0°.07×142°.6E±0°.1, h35^{km}±6^{km}, mb4.5/11, Error ellipse: s-maj=18.6km s-min=9.6km az=75.0*

*NIED **05** 20:15:49.6, 31°.01N×142°.21E, h0^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.88; M$_{\theta\theta}$0.43; M$_{\phi\phi}$-1.31; M$_{r\theta}$1.15; M$_{\theta\phi}$-0.12; M$_{\phi r}$-1.83; Fault plane solution: M$_0$2.45000×10^{15} NP1: φ$_s$153.00000°, δ79.00000°, λ71.00000°. NP2:φ$_s$34.00000°, δ22.00000°, λ149.00000°.*

*JMA **05** 20:15:49.6±0.2, 31°.01N×142°.21E, h0^{km}, M4.6*

ISC 05 20:15:46.6±0.6**, 30°.64N**±0°.06×**142°.42E**±0°.10**, h10**^{km}**, n51, σ1^{s}76**/56**, mb4.0**/18**, MS3.4**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	3.30	318	*e*S	Sn	20 17 14.0	-3.5
JHJ2	**Mitsune**	3.31	319	Pn	Pn	20 16 38.4	-0.1
JHJ	**Hachijo jima 2**	3.34	318	Pn	Pn	20 16 38.5	-0.3
	9.4nm,0.3s,baz=74,slow=21,SNR=8.2						
JHJ				Sn	Sn	20 17 15.5	-3.0
	30nm,0.3s,baz=101,slow=23,SNR=5.7						
JCJ	**Chichijima**	3.54	183	Pn	Pn	20 16 40.5	-1.1
	11nm,0.3s,baz=360,slow=20,SNR=9.8						
JCJ				Sn	Sn	20 17 21.1	-2.3
	12nm,0.3s,baz=234,slow=19,SNR=1.7						
JMKN	**Mikurajimanish**	4.03	324	*e*S	Sn	20 17 33.0	-2.7
BSO1	**Boso 1**	4.18	343	P	Pn	20 16 50.7	+0.8
BSO3	**Boso 3**	4.45	339	P	Pn	20 16 54.5	+0.6
BSO4	**Boso 4**	4.68	339	P	Pn	20 16 57.7	+0.6
JOD2	**Odawara 2**	5.39	330	P	Pn	20 17 08.7	+1.6
JHU	**Hanno**	5.83	334	*e*S	Sn	20 18 16.9	-3.0
JYT	**Yasato**	5.88	342		Pn	20 17 14.6	+0.9
JRY	**Ryogami san**	6.12	332	P	Pn	20 17 18.4	+1.4
JRY				*e*S	Sn	20 18 26.1	-1.0
JHO	**Hitachi**	6.15	346	P	Pn	20 17 17.8	+0.3
JHO				*e*S	Sn	20 18 24.1	-3.8
JAG	**Ashikaga**	6.28	338	P	Pn	20 17 19.9	+0.7
JAG				*e*S	Sn	20 18 28.2	-2.8
JGF	**Kuroka**	6.52	321	Pn	Pn	20 17 25.1	+2.5
JFK	**Kawauchi**	6.83	350	P	Pn	20 17 27.3	+0.4
MJAR	**Matsushiro Arr**	6.86	330	Pn	Pn	20 17 28.6	+1.4
	0.9nm,0.3s,baz=160,slow=11,SNR=51						
MJAR				Sn	Sn	20 18 43.4	-1.9
	0.3nm,0.3s,baz=95,slow=14,SNR=3.0						
MAJO	**Matsushiro**	6.86	330		Pn	20 17 29.1	+2.0
MAT	**Matsushiro**	6.86	330	P	Pn	20 17 28.9	+1.7
MAT				S	Sn	20 18 41.7	-3.6
JMM	**Marumori**	7.33	350		Pn	20 17 33.9	+0.2
JWT	**Wachi**	7.50	310	Pn	Pn	20 17 37.3	+1.3
JSD	**Sado**	8.14	336	Pn	Pn	20 17 45.0	+0.2
JMK	**Ichinoseki**	8.35	354	P	Pn	20 17 48.2	+0.6
JNU	**Nakatsue**	10.12	287	LR	LR	20 21 53.7	
	comp=Z,180nm,19.3s,baz=348,slow=37						
ASAJ	**Asahikawa**	13.45	1	Pn	Pn	20 18 57.2	-0.3
	0.4nm,0.3s,baz=68,slow=5.4,SNR=3.9						
ASAJ				Sn	Sn	20 21 18.1	-8.9
	0.1nm,0.3s,baz=47,slow=19,SNR=2.7						
KSRS	**Korea Array**	13.80	303	Pn	Pn	20 19 06.0	+3.8
	0.1nm,0.3s,baz=112,slow=13,SNR=3.0						
KSRS				LR	LR	20 23 58.9	
	comp=Z,211nm,19.8s,baz=2.0,slow=36						
KLR	**Kul'dur**	20.25	339	P	Pn	20 20 23.9	+0.1
	1.4nm,0.5s,baz=149,slow=11,SNR=5.6						
SONM	**Songino Array**	32.40	312	P	P	20 22 18.7	+2.1
	0.9nm,0.8s,baz=108,slow=7.5,SNR=5.0						
SONM				LR	LR	20 34 41.8	
	comp=Z,78nm,18.5s,baz=182,slow=35						
CMAR	**Chiang Mai Arr**	41.13	263	P	P	20 23 30.9	-0.1
	0.6nm,0.8s,baz=60,slow=6.4,SNR=7.3						
CMAR				LR	LR	20 40 37.5	
	comp=Z,31nm,20.4s,baz=38,slow=36						
ZALV	**Zalesovo Beam**	47.00	317	P	P	20 24 18.7	+1.0
	0.3nm,0.4s,baz=82,slow=7.2,SNR=2.8						
ZALV				PcP	PcP	20 25 50.7	+0.8
	0.7nm,0.5s,baz=119,slow=4.0,SNR=3.7						
MK31	**Makanchi Array**	48.44	307	P	P	20 24 29.4	+0.2
MKAR	**Makanchi Array**	48.44	307	P	P	20 24 29.7	+0.6
	0.8nm,0.6s,baz=88,slow=8.9,SNR=14						
MAKZ	**Makanchi**	48.66	307	P	P	20 24 30.2	-0.5
MAKZ				IAmb	IAmb	20 24 38.5	
	comp=Z,4.3nm,1.4s						
KURK	**Kurchatov**	50.70	313	P	P	20 24 46.2	0.0
KURBB	**Kurchatov Arra**	50.76	312	P	P	20 24 47.7	+1.0
	comp=Z,0.9nm,0.6s,baz=89,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	50.89	190	P	P	20 24 48.0	+0.1
	comp=Z,2.9nm,0.6s,baz=6.5,slow=7.5,SNR=33						
ILAR	**Eielson Array**	54.53	30	P	P	20 25 17.2	+2.9
	comp=Z,0.7nm,0.9s,baz=256,slow=6.1,SNR=5.7						
ASAR	**Alice Springs**	54.61	190	P	P	20 25 15.4	0.0
	comp=Z,0.8nm,0.8s,baz=352,slow=5.1,SNR=12						
BVAR	**Borovoye Array**	55.62	316	P	P	20 25 23.2	+0.8
	comp=Z,0.6nm,0.6s,baz=50,slow=13,SNR=10						
ARU	**Arti**	61.78	321	P	P	20 26 06.6	+1.4
	comp=Z,0.8nm,0.6s,baz=7.9,slow=7.7,SNR=5.2						
ARU	**Arti**	61.78	321	P	P	20 26 04.7	-0.5
ARU				IAmb	IAmb	20 26 07.7	
	comp=Z,6.6nm,1.2s						
ABKAR	**Akbulak array**	62.80	313	P	P	20 26 12.2	0.0
ABKAR				IAmb	IAmb	20 26 31.1	
	comp=Z,4.5nm,1.4s						
AKTO	**Aktyubinsk**	63.67	315	LR	LR	20 53 20.8	
	comp=Z,39nm,18.0s,baz=22,slow=35						
HRA	**Herat**	66.00	297	P	P	20 26 33.1	-0.6
HRA				IAmb	IAmb	20 26 34.9	
	comp=Z,4.5nm,1.5s						
FINES	**FINESS Array B**	74.87	334	P	P	20 27 28.4	+1.3
	comp=Z,1.4nm,0.8s,baz=64,slow=4.4,SNR=7.0						
VCNR	**Virginia City**	76.84	52	P	P	20 27 37.6	-1.5
RYN	**Ryan**	77.94	52	P	P	20 27 43.5	-1.6
RYN				IAmb	IAmb	20 27 44.7	
	comp=Z,4.6nm,0.6s						
MDPB	**Devils Postpil**	78.04	53	P	P	20 27 44.7	-1.2
NOA	**NORSAR Array B**	80.41	338	P	P	20 27 59.7	+1.6
	comp=Z,0.3nm,0.5s,baz=41,slow=5.3,SNR=3.2						
U15A	**North Rim**	83.31	52		P	20 28 11.0	-3.2
U15A				IAmb	IAmb	20 28 16.6	
	comp=Z,4.2nm,0.7s						
RAYN	**Ar Rayn**	83.92	294	P	P	20 28 16.0	-1.2
RAYN				IAmb	IAmb	20 28 42.9	
	comp=Z,3.0nm,0.7s						

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*IDC **05** 20:16:11.4±1.5, 28°.73N×51°.89E, h0^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.5/45, mbtmp3.7/11, ML3.6/1, Error ellipse: s-maj=30.9km s-min=24.8km az=177.0*

*TEH **05** 20:16:12.6, 28°.71N×51°.92E, h8^{km}, ML3.7*

*KISR **05** 20:16:15.7±0.5, 28°.29N×51°.57E, h41^{km}±999^{km}, ML3.9, Hypocentre not reviewed by the ISC*

*DSN **05** 20:16:17.2±2.7, 28°.39N×52°.04E, h10^{km}, ML3.6/5, Error ellipse: s-maj=53.2km s-min=19.2km az=18.0*

*OMAN **05** 20:16:18.2±0.2, 28°.39N×52°.06E, h11^{km}±2^{km}, mb4.9/6, ml3.5/5, Error ellipse: s-maj=3.5km s-min=1.0km az=248.0*

ISC 05 20:16:13.2±0.7**, 28°.67N**±0°.05×**51°.87E**±0°.06**, h15**^{km}**, n66, σ1^{s}52**/80**, mb3.6**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	**AHRAM**	0.54	291	*e*Pg	Pb	20 16 23.3	-1.1
KAZ1	**Kazerun**	0.97	348	*e*Pg	Pb	20 16 32.1	+0.2
KAZ1				*e*		20 17 05.1	
	comp=Z,99nm,0.6s						
QIR1	**Qir**	1.05	100	*e*Pg	Pn	20 16 32.5	-1.0
QIR1				*e*		20 17 00.5	
	comp=Z,99nm,0.6s						
SHI	**Shiraz**	1.12	30	*e*Pg	Pn	20 16 33.4	-1.2
SHI				*e*Sg	Sb	20 16 47.7	-1.3
JHRM	**Jahrom**	1.51	96	*e*Pg	Pn	20 16 41.1	+1.2
JHRM				*e*		20 17 08.9	
	comp=Z,99nm,0.6s						
LMD1	**Lamerd**	1.75	139	*e*Pg	Pb	20 16 45.9	+0.8
LMD1				*e*		20 17 23.6	
	comp=Z,99nm,0.5s						
KLNJ	**Kolanjah**	2.34	354	*e*Pn	Pn	20 16 52.5	+0.9
LAR1	**LAR**	2.43	114	*e*Pn	Pn	20 16 54.5	+2.1
LAR1				*e*		20 17 56.0	
	comp=Z,99nm,0.8s						
IRAM	**Ramesheh**	3.16	8	*e*Pn	Pn	20 17 04.7	+2.0

ISAD	Sadrabad	3.60	25	*e*Pn	Pn	20 17 10.7	+2.0
IMEH	Mehriz	3.61	41	*e*Pn	Pn	20 17 11.1	+2.2
IGAR	Gharneh	3.73	2	*e*Pn	Pn	20 17 11.7	+1.2
RDF	Al-Radifah	3.80	275	*e*P		20 17 11.9	
JRN	Qarnain Island	3.81	166	*e*Pn	Pn	20 17 13.9	+2.5
IPIR	Pirpir	4.09	348	*e*Pn	Pn	20 17 16.3	+0.8
MIB	Mutribah	4.12	287	*e*P		20 17 17.7	
MIB				*e*S		20 18 04.4	
MIB				IAML		20 18 15.3	
	comp=Z,162nm,0.6s						
ICHK	Chekchek	4.19	31	*e*Pn	Pn	20 17 17.9	+1.1
IZEF	Zefreh	4.23	5	*e*Pn	Pn	20 17 19.2	+1.7
RST	Umm Al-Ruwaisa	4.34	282	*e*P		20 17 20.8	
KHGB	Koh Gabri	4.36	66	*e*Pn	Pn	20 17 19.9	+0.7
NGRK	Negar Kerman	4.36	76	*e*Pn	Pn	20 17 21.2	+1.8
NGRK				*e*		20 18 17.9	
	comp=Z,99nm,0.3s						
YZKH	Yazd	4.39	32	*e*Pn	Pn	20 17 20.7	+1.2
KRBR	Kerman	4.47	72	*e*Pn	Pn	20 17 20.9	+0.1
TVBK	TV Kerman	4.47	72	*e*Pn	Pn	20 17 22.7	+1.9
TVBK				*e*		20 23 38.3	
	comp=Z,99nm,0.4s						
SHME	Shamm	4.61	123	P	Pn	20 17 24.7	+2.3
SHME	Shamm	4.61	123	P	Pn	20 17 25.4	+3.0
IKLH	Kolahrood	4.64	357	*e*Pn	Pn	20 17 25.4	+2.3
BANOM	Banah	4.80	124	P	Pn	20 17 25.3	+0.3
BANOM				S	Sn	20 18 19.6	-0.8
BANOM	Banah	4.80	124	*e*Pn	Pn	20 17 25.5	+0.5
MASF	Masafi	5.04	130	P	Pn	20 17 29.4	+1.0
MASF				S	Sn	20 18 25.9	-0.5
	SNR=5.7						
MSFE	Esma-Masafi	5.05	130	*e*Pn	Pn	20 17 29.1	+0.6
ASUD	Al Ashush, Dub	5.08	142	P	Pn	20 17 30.6	+1.7
ASUD	Al Ashush, Dub	5.08	142	*e*Pn	Pn	20 17 30.8	+1.9
ASUD	Al Ashush, Dub	5.08	142	P	Pn	20 17 31.3	+2.5
ASUD				S	Sn	20 18 26.7	-0.6
FAQ	Al Faqa, Dubai	5.13	139	*e*Pn	Pn	20 17 31.0	+1.4
MDH	Madha	5.18	129	*e*Pn	Pn	20 17 30.4	+0.1
MDH	Madha	5.18	129	P	Pn	20 17 30.5	+0.2
MDH				S	Sn	20 18 28.8	-1.1
UOSS	Minazif	5.36	133	P	Pn	20 17 31.8	-1.0
UOSS	Minazif	5.36	133	*e*Pn	Pn	20 17 33.0	+0.2
UOSS	Minazif	5.36	133	P	Pn	20 17 32.9	+0.2
UOSS				S	Sn	20 18 32.3	-1.9
HATD	Hatta, Dubai	5.40	134	P	Pn	20 17 33.7	+0.4
HATD	Hatta, Dubai	5.40	134	*e*Pn	Pn	20 17 33.9	+0.6
HATD	Hatta, Dubai	5.40	134	P	Pn	20 17 33.8	+0.4
HATD				S	Sn	20 18 34.5	-0.7
ASHO	Ashiyiah	5.46	136	*e*Pn	Pn	20 17 34.8	+0.7
ALNE	Al Ain	5.76	142	*e*Pn	Pn	20 17 39.8	+1.5
ALNE	Al Ain	5.76	142	P	Pn	20 17 39.8	+1.5
ALNE				S	Sn	20 18 44.9	+0.7
KBAM	BAM	5.79	84	*e*Pn	Pn	20 17 40.5	+1.8
TPRV	Parvadeh(Tabas	6.00	42	*e*Pn	Pn	20 17 43.9	+2.2
ASAO	Ashtian	6.07	345	*e*Pn	Pn	20 17 43.7	+1.0
SOHO	SOHO	6.16	136	P	Pn	20 17 43.7	+0.1
SOHO	SOHO	6.16	136	*e*Pn	Pn	20 17 43.8	+0.1
SOHO	SOHO	6.16	136	P	Pn	20 17 44.8	+1.2
SOHO				S	Sn	20 18 54.2	+0.4
TKDS	Koohdasht(Taba	6.68	41	*e*Pn	Pn	20 17 52.4	+1.5
TABS	Tabas	6.70	41	*e*Pn	Pn	20 17 52.1	+0.9
ARQ	Araqi	6.76	141	P	Pn	20 17 53.1	+1.1
	SNR=10						
ARQ				S	Sn	20 19 07.2	-1.6
BSY	Bisya	7.61	140	P	Pn	20 18 04.4	+0.7
BSY				S	Sn	20 19 26.6	-3.1
SMDO	Samad	7.88	134	P	Pn	20 18 08.1	+0.6
SMDO				S	Sn	20 19 34.3	-2.3
WSAR	Wadi Sarin	8.14	130	Pn	Pn	20 18 10.3	-0.6
	comp=Z,0.7nm,0.3s,baz=319,slow=12,SNR=14						
WSAR				Sn	Sn	20 19 38.5	-4.2
	comp=Z,0.7nm,0.3s,baz=15,slow=15,SNR=5.3						
MHTO	MHTO	9.44	143	P	Pn	20 18 29.5	+0.8
MHTO				S	Sn	20 20 09.8	-4.9
AKTO	Aktyubinsk	22.23	10	P	P	20 21 09.4	+0.1
	comp=Z,1.0nm,0.5s,baz=216,slow=14,SNR=3.3						
KURBB	Kurchatov Arra	29.76	35	P	P	20 22 18.2	-0.8
	comp=Z,0.3nm,0.6s,baz=213,slow=9.8,SNR=2.9						
MKAR	Makanchi Array	29.84	44	P	P	20 22 20.7	+0.9
	comp=Z,0.7nm,0.9s,baz=232,slow=7.2,SNR=6.4						
ZALV	Zalesovo Beam	34.83	34	P	P	20 23 03.1	-0.3
	comp=Z,0.8nm,0.6s,baz=234,slow=9.0,SNR=4.6						
FINES	FINESS Array B	36.99	340	P	P	20 23 21.5	-0.3
	comp=Z,1.3nm,0.6s,baz=152,slow=8.7,SNR=6.2						
NOA	NORSAR Array B	42.15	332	P	P	20 24 04.3	-0.5
	comp=Z,0.2nm,0.4s,baz=120,slow=8.3,SNR=2.3						
ARCES	ARCESS Array B	43.64	347	P	P	20 24 17.0	+0.2
	comp=Z,3.3nm,0.9s,baz=139,slow=8.4,SNR=1.9						
SONM	Songino Array	45.87	50	P	P	20 24 35.7	+0.7
	comp=Z,0.2nm,0.3s,baz=262,slow=7.6,SNR=3.0						
TORD	Torodi Ar. Bea	48.99	262	P	P	20 25 01.1	+1.6
	comp=Z,1.0nm,0.9s,baz=56,slow=6.8,SNR=3.9						
YKA	Yellowknife Ar	88.51	354	P	P	20 29 04.0	-0.9
	comp=Z,0.5nm,1.0s,baz=2.5,slow=5.4,SNR=4.9						

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*WEL **05** 20:37:00, 43°.10S×171°.25E, h6^{km}, ML4.0, Mw3.7, Moment Tensor Solution. s5 Moment tensor: Scale 10^{14} Nm; M_{rr}0.56; $M_{\theta\theta}$2.83; $M_{\phi\phi}$-3.39; $M_{r\theta}$-1.18; $M_{\theta\phi}$-1.66; $M_{\phi r}$-0.46; Fault plane solution: $M_0$3.77000×10^{14} NP1: ϕ_s330.00000°, δ69.00000°, λ7.00000°. NP2: ϕ_s238.00000°, δ83.00000°, λ159.00000°. Principal axes: T -39.2900, Plg20.0000°, Azm193.0000°; N 36.0400, Plg68.0000°, Azm40.0000°; P 3.2500, Plg10.0000°, Azm286.0000°;*

*NOU **05** 20:37:23.3, 43°.10S×171°.24E, h11^{km}, MLv3.9, South Island, New Zealand*

WEL 05 20:37:22.4±0.3**, 43˚S**±3˚×**17˚1E**±˚**, h5**^{km}**, M3.8**/19**, ML4.0**/19**, MLv3.8**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=155.6, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.34	23	P	Pg	20 37 29.3	+0.3
INZ				S	Sg	20 37 33.6	+0.2
WVZ	Waitaha Valley	0.39	264	P	Pg	20 37 30.3	+0.5
WVZ				S	Sg	20 37 35.7	+0.9
MHCZ	Mount Hutt	0.54	156	P	Pg	20 37 33.1	+0.3
OXZ	Oxford	0.64	117	P	Pg	20 37 35.0	+0.4
RPZ	Rata Peaks	0.69	192	P	Pg	20 37 35.9	+0.2
GCSZ	Gaunt Creek Bo	0.74	247	P	Pg	20 37 36.6	0.0
LTZ	Lake Taylor	0.79	71	P	Pb	20 37 38.0	-0.5
LTZ				S	Sb	20 37 48.6	-0.9
ARCZ	Arundel	0.91	184	P	Pg	20 37 39.9	0.0
RACZ	Rakaia	0.94	137	P	Pb	20 37 40.9	-0.2
WACZ	Wakanui South	1.00	155	P	Pb	20 37 41.8	-0.3
AMCZ	Amberley	1.03	98	P	Pb	20 37 43.0	+0.4
FOZ	Fox Glacier	1.17	244	P	Pg	20 37 44.4	-0.3
FOZ				S	Sb	20 38 00.4	0.0
MQZ	McQueen's Vall	1.22	124	P	Pg	20 37 44.9	-0.8
MQZ				S	Sg	20 38 00.3	-1.2
GVZ	Greta Valley S	1.30	88	P	Pn	20 37 46.7	-0.5
DSZ	Denniston Nort	1.35	18	P	Pn	20 37 47.5	-0.4
TMZ	Timaru	1.36	188	P	Pn	20 37 47.2	-0.8
AKCZ	Akaroa Harbour	1.46	125	P	Pn	20 37 48.3	-1.1
OKCZ	Okains Bay	1.48	118	P	Pn	20 37 49.3	-0.4
LBZ	Lake Benmore	1.56	210	P	Pn	20 37 50.4	-0.4
THZ	Tophouse	1.76	44	P	Pn	20 37 53.8	+0.2
KHZ	Kahutara	1.79	70	P	Pn	20 37 53.8	-0.1
ODZ	Otahua Downs	2.06	192	P	Pn	20 37 56.7	-0.9
JCZ	Jackson Bay	2.08	239	P	Pn	20 37 57.8	-0.1
BSWZ	Blackbirch Sta	2.34	57	P	Pn	20 38 03.1	+1.6
QRZ	Quartz Range	2.40	24	P	Pn	20 38 02.7	+0.3
NNZ	Nelson	2.41	42	P	Pn	20 38 03.2	+0.9
WKZ	Wanaka	2.41	221	P	Pn	20 38 01.6	-1.0
TUWZ	Tuamarina	2.56	52	P	Pn	20 38 05.3	+0.8
EAZ	Earnscleugh	2.60	212	P	Pn	20 38 03.5	-1.7
HHSZ	Highcliff Hill	2.89	189	P	Pn	20 38 07.7	-1.3
HHSZ				P	Pb	20 38 07.9	-6.5
TCW	Tory Channel	2.89	52	P	Pn	20 38 10.6	+1.5
DUWZ	D'Urville Isla	2.99	43	P	Pn	20 38 12.0	+1.6
BHW	Baring Head	3.14	60	P	Pn	20 38 12.4	0.0
TUZ	Tuapeka	3.14	201	P	Pn	20 38 11.7	-0.8
MLZ	Mavora Lakes	3.25	223	P	Pn	20 38 12.7	-1.3
MSWZ	Moikau Station	3.38	63	P	Pn	20 38 15.5	-0.2
CAW	Cannon Point	3.43	57	P	Pn	20 38 15.6	-0.8
KIW	Kapiti Island	3.48	53	P	Pn	20 38 17.2	-0.1
OGWZ	Otaki Gorge	3.67	54	P	Pn	20 38 19.1	-0.6
MTW	Mount Morrison	3.67	61	P	Pn	20 38 18.5	-1.3
SYZ	Scrubby Hill	3.81	203	P	Pn	20 38 21.0	-0.7
HOWZ	Holdsworth Sta	3.83	57	P	Pn	20 38 22.7	+0.8
MRZ	Mangatainoka R	4.00	55	P	Pn	20 38 23.2	-1.2
NMEZ	Namu Road	4.12	29	P	Pn	20 38 28.0	+2.1
NBEZ	Newall Road No	4.25	28	P	Pn	20 38 29.1	+1.4
KHEZ	Kahui Hut	4.28	30	P	Pn	20 38 29.9	+1.7
LREZ	Lake Rotokare	4.29	35	P	Pn	20 38 30.7	+2.4
PREZ	Palmer Road	4.29	32	P	Pn	20 38 30.1	+1.8
NEZ	North Egmont	4.33	31	P	Pn	20 38 30.6	+1.6
PKE	Pukeiti	4.36	29	P	Pn	20 38 30.9	+1.6
DREZ	Durham Road	4.44	31	P	Pn	20 38 32.0	+1.6
APZ	The Paps	4.45	210	P	Pn	20 38 28.4	-2.1
TSZ	Takapari Road	4.62	51	P	Pn	20 38 33.6	+0.8
VRZ	Vera Road	4.72	35	P	Pn	20 38 36.0	+1.8
PKVZ	Pokaka	4.85	41	P	Pn	20 38 38.6	+2.5
WNVZ	Wahianoa	4.94	43	P	Pn	20 38 40.7	+3.2
MOVZ	Moawhango	4.96	45	P	Pn	20 38 38.9	+1.3
FWVZ	Far West T-bar	4.98	42	P	Pn	20 38 41.7	+3.7
TUVZ	Tukino	5.02	43	P	Pn	20 38 41.9	+3.5
NGZ	Ngauruhoe	5.06	42	P	Pn	20 38 42.2	+3.1
BHHZ	Black Hill Sta	5.07	47	P	Pn	20 38 40.0	+0.9
TWVZ	Taurewa	5.07	40	P	Pn	20 38 41.7	+2.7
OTVZ	Oturere	5.10	42	P	Pn	20 38 41.3	+1.7
WTVZ	West Tongariro	5.10	41	P	Pn	20 38 43.3	+3.7
ETVZ	East Tongariro	5.15	42	P	Pn	20 38 42.9	+2.7
TMVZ	Te Maari	5.16	42	P	Pn	20 38 43.8	+3.4
KATZ	Kakaramea	5.26	41	P	Pn	20 38 46.6	+4.7
HIZ	Hauiti	5.28	32	P	Pn	20 38 42.5	+0.6
BKZ	Black Stump Fm	5.53	47	P	Pn	20 38 47.8	+2.4
TLZ	Tolley Road	5.72	36	P	Pn	20 38 48.9	+1.0
RTZ	Ruatahuna	6.19	46	P	Pn	20 38 55.6	+1.1
TOZ	Tahuroa Road	6.21	33	P	Pn	20 38 55.1	+0.5
AWAZ	Awhitu Peninsu	6.50	25	P	Pn	20 38 59.8	+1.1
WTAZ	Waiatarua	6.61	24	P	Pn	20 39 01.6	+1.5
MKAZ	Moumakai	6.64	28	P	Pn	20 39 01.4	+0.9
MBAZ	Motutapu North	6.86	25	P	Pn	20 39 05.0	+1.5
WIAZ	Waiheke Island	6.91	27	P	Pn	20 39 05.6	+1.3
WCZ	Waipu Caves	7.48	20	P	Pn	20 39 12.7	+0.6
OUZ	Omahuta	8.01	14	P	Pn	20 39 20.2	+0.8

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*IDC **05** 20:44:39.9±1.4, 34°.69N×25°.22E, h0^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.4/55, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=42.1km s-min=24.2km az=141.0*

*ISK **05** 20:44:45.9, 34°.85N×25°.07E, h39^{km}±1^{km}, ML3.6/12*

*ATH **05** 20:44:48.0, 34°.90N×24°.87E, h36^{km}±3^{km}, ML3.1/8, Error ellipse: s-maj=3.5km s-min=1.3km az=346.0*

*THE **05** 20:44:48.5, 34°.89N×24°.89E, h29^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=2.8km s-min=1.1km az=355.0*

*DDA **05** 20:44:50.0, 35°.42N×25°.04E, h15^{km}±532^{km}, ML3.3*

ISC 05 20:44:46.8±0.8**, 34°.92N**±0°.05×**24°.96E**±0°.02**, h43**^{km}±6^{km}**, n58, σ1ˢ.50**/80**, mb3.5**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.16	311	P	Pn	20 44 53.9	-0.2
SIVA				S	Sn	20 44 58.7	-0.5
SIVA				AML	AML	20 45 01.0	
	comp=E,36130µm,0.3s						
SIVA				AML	AML	20 45 02.3	
	comp=N,21567µm,0.7s						
SIVA	Sivas	0.16	311	P	Pn	20 44 53.9	-0.2
SIVA				S	Sn	20 44 59.1	-0.1
	comp=N,14µm,0.3s						
TMBK	Timbaki Herakl	0.22	315	P	Pn	20 44 54.6	+0.1
TMBK				S	Sn	20 45 01.3	+1.3
IDI	Anoyia	0.38	352	P	Pn	20 44 55.9	-0.3
IDI				S	Sn	20 45 03.4	+0.5
IDI				AML	AML	20 45 06.0	
	comp=E,2955µm,0.6s						
IDI				AML	AML	20 45 08.2	
	comp=N,4458µm,0.6s						
IDI	Anoyia	0.38	352	P	Pn	20 44 56.0	-0.3
IDI				S	Sn	20 45 03.4	+0.5
	comp=N,2µm,0.6s						
IDI	Anoyia	0.38	352	PG	Pn	20 44 56.0	-0.3
IDI				SG	Sn	20 45 04.4	+1.5
IACM	Heraklion	0.40	14	P	Pn	20 44 56.9	+0.5
IACM				S	Sn	20 45 04.3	+1.0
IACM				AML	AML	20 45 09.2	
	comp=E,21029µm,0.5s						
IACM				AML	AML	20 45 12.0	
	comp=N,18065µm,0.4s						
IACM	Heraklion	0.40	14	P	Pn	20 44 57.0	+0.5
HRKL	Herakleio	0.41	17	PG	Pn	20 44 56.7	+0.1
LAST	Lasithi	0.49	60	P	Pn	20 44 58.3	+0.6
LAST				S	Sn	20 45 07.6	+2.2
LAST				AML	AML	20 45 09.3	
	comp=N,1651µm,0.8s						
LAST				AML	AML	20 45 15.3	
	comp=E,2220µm,0.5s						
LAST	Lasithi	0.49	60	P	Pn	20 44 58.3	+0.6
LAST				S	Sn	20 45 08.0	+2.6
	comp=E,1µm,0.5s						
NPS	Neapolis	0.64	57	P	Pn	20 45 01.0	+1.5
NPS				S	Sn	20 45 11.0	+2.4
NPS				AML	AML	20 45 13.2	
	comp=E,2615µm,0.6s						
NPS				AML	AML	20 45 15.0	
	comp=N,2078µm,0.5s						
NPS	Neapolis	0.64	57	P	Pn	20 45 01.0	+1.5
NPS				S	Sn	20 45 12.1	+3.4
	comp=N,1µm,0.5s						
GVDS	Gavdos	0.71	265	P	Pn	20 45 01.2	+0.7
GVDS	Gavdos	0.71	265	PG	Pn	20 45 01.5	+1.0
GVDS				SG	Sn	20 45 13.4	+3.0
GVD	Gavdhos	0.72	264	P	Pn	20 45 00.8	+0.3
GVD				S	Sn	20 45 09.1	-1.4
GVD				AML	AML	20 45 15.4	
	comp=N,3890µm,0.4s						
GVD				AML	AML	20 45 16.1	
	comp=E,4332µm,0.5s						
GVD	Gavdhos	0.72	264	P	Pn	20 45 00.8	+0.3
GVD	Gavdhos	0.72	264	PG	Pn	20 45 01.3	+0.8
GVD				SG	Sn	20 45 12.8	+2.4
VAM	Vamos	0.79	309	P	Pn	20 45 02.1	+0.5
VAM				S	Sn	20 45 11.9	-0.3
VAM				AML	AML	20 45 14.6	
	comp=N,2149µm,0.5s						
VAM				AML	AML	20 45 18.3	
	comp=E,1583µm,0.4s						
VAM	Vamos	0.79	309	P	Pn	20 45 02.1	+0.5
VAM				S	Sn	20 45 11.9	-0.3
IMMV	Iera Moni Meta	0.97	305	P	Pn	20 45 04.5	+0.6
IMMV	Iera Moni Meta	0.97	305	P	Pn	20 45 04.5	+0.6
IMMV				S	Sn	20 45 17.8	+1.3
	comp=E,998nm,0.8s						
IMMV	Iera Moni Meta	0.97	305	PN	Pn	20 45 05.4	+1.5
ZKR	Zakros	1.05	79	P	Pn	20 45 07.1	+2.0
ZKR				S	Sn	20 45 21.1	+2.5
ZKR				AML	AML	20 45 26.1	
	comp=E,1832µm,0.8s						
ZKR				AML	AML	20 45 26.2	
	comp=N,722µm,1.3s						
ZKR	Zakros	1.05	79	P	Pn	20 45 07.1	+2.0
ZKR				S	Sn	20 45 22.3	+3.6
	comp=N,630nm,1.0s						
ZKR	Zakros	1.05	79	PG	Pn	20 45 03.8	-1.3
THR6	Thira Island,	1.48	14	P	Pn	20 45 11.9	+0.9
KARP	Karpathos	1.91	70	P	Pn	20 45 18.8	+1.9
KARP	Karpathos	1.91	70	P	Pn	20 45 18.8	+1.9
KARP	Karpathos	1.91	70	PN	Pn	20 45 16.2	-0.7
KTHA	Kythira Island	2.04	311	PN	Pn	20 45 20.8	+2.1
APE	Apeiranthos	2.20	12	PN	Pn	20 45 21.2	+0.3
APE	Apeiranthos	2.20	12	*i* P	Pn	20 45 19.2	-1.7
ARG	Arkhangelos	2.89	62	PN	Pn	20 45 30.9	+0.6
TURN	Turunc	3.25	54	PN	Pn	20 45 35.8	+0.6
TURN	Turunc	3.25	54	*i* P	Pn	20 45 35.9	+0.6
TURN				*i* S	Sn	20 46 12.5	-0.3
ITM	Ithomi	3.34	314	PN	Pn	20 45 39.3	+2.8
DALY	Dalyan (Mula)	3.55	57	PN	Pn	20 45 40.0	+0.6
MULA	Mugla, Merkez-	3.59	48	*i* P	Pn	20 45 41.1	+1.1
FETY	Fethiye	3.77	62	PN	Pn	20 45 42.9	+0.5
AKAS	Kas	4.01	70	PN	Pn	20 45 45.9	+0.1
AKAS	Kas	4.01	70	*i* P	Pn	20 45 44.4	-1.4
TAVA	DENIZLI_Tavas	4.09	50	*i* P	Pn	20 45 48.7	+1.8
CAEL	Denizli, Camel	4.17	57	*i* P	Pn	20 45 47.6	-0.4
CAEL				*i* S	Sn	20 46 33.9	-1.6
CAEL				IAML		20 46 56.0	
	comp=N,90nm,2.6s						
GOLH	Golhisar	4.39	57	*i* P	Pn	20 45 52.1	+1.1
ELL	Elmali	4.42	64	PN	Pn	20 45 52.1	+0.7
AGG	Agios Georgios	4.61	334	PN	Pn	20 45 57.3	+3.4
KORT	Korkueli	4.84	63	PN	Pn	20 45 58.2	+0.9
KORT	Korkueli	4.84	63	*i* P	Pn	20 45 56.9	-0.4
KORT				*i* S	Sn	20 46 48.1	-4.0
KORT				IAML		20 46 55.0	
	comp=N,32nm,2.4s						
KORT				IAML		20 47 15.0	
	comp=E,35nm,2.2s						
SEYD	Seydisehir-KON	6.10	64	PN	Pn	20 46 16.0	+1.5
AKASG	Malin Array Be	16.08	10	Pn	Pn	20 48 29.8	+0.1
	comp=E,1.3nm,0.3s,baz=201,slow=10,SNR=5.2						
GERES	GERESS Array B	16.22	333	Pn	Pn	20 48 33.1	+1.5
	comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=5.4						
KBZ	Khabaz	16.41	52	Pn	Pn	20 48 33.6	-0.3
	comp=E,0.0nm,0.3s,baz=227,slow=19,SNR=1.8						
TORD	Torodi Ar. Bea	30.20	230	P	P	20 50 52.5	-0.8
	comp=E,1.0nm,0.6s,baz=32,slow=8.9,SNR=4.5						
KURBB	Kurchatov Arra	41.41	51	P	P	20 52 27.4	-1.4
	comp=E,0.2nm,0.3s,baz=274,slow=8.4,SNR=2.5						
MKAR	Makanchi Array	44.05	56	P	P	20 52 49.2	-1.1
	comp=E,0.5nm,0.5s,baz=263,slow=7.8,SNR=9.8						
ZALV	Zalesovo Beam	45.29	46	P	P	20 52 58.6	-1.5
	comp=E,0.3nm,0.5s,baz=290,slow=4.2,SNR=1.9						
SONM	Songino Array	59.77	50	P	P	20 54 46.4	-1.0
	comp=E,0.2nm,0.4s,baz=283,slow=8.7,SNR=2.2						

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*BGR **05** 20:48:20.2±0.0, 21°.63S×178°.41W, h554^{km}±3^{km}*

*IDC **05** 20:48:25.3±0.8, 21°.51S×179°.03W, h599^{km}±8^{km}, mb4.0/27, mb1 4.0/31, mb1mx3.9/43, mbtmp4.9/31, Error ellipse: s-maj=10.2km s-min=8.9km az=135.0*

*NEIC **05** 20:48:25.7±1.7, 21°.5S±0°.1×179°.1W±0°.1, h609^{km}±6^{km}, mb4.7/68, Error ellipse: s-maj=17.2km s-min=16.1km az=147.0*

*NOU **05** 20:48:34.2, 22°.77S×175°.32E, h111^{km}, mb5.1, South of Fiji Islands*

ISC 05 20:48:24.9±0.3**, 21°.56S**±0°.06×**179°.02W**±0°.06**, h602**^{km}**, n314, σ1ˢ.03**/351**, mb4.7**/75**, 28C-18D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.70	324	P	P	20 49 55.6	-0.2
	20nm,0.3s,baz=150,slow=7.1,SNR=84						
MSVF				S	S	20 51 11.0	+1.2
	baz=57,slow=22,SNR=2.6						
MSVF	Nonsavu	4.70	324	P	P	20 49 55.5	-0.4
MSVF	Nonsavu	4.70	324	P	P	20 49 55.4	-0.4
NIUE	Niue	8.88	75	P	P	20 50 32.1	-0.7
DZM	Mont Dzumac	13.51	265	P	P	20 51 18.1	-0.9
	1.5nm,0.3s,baz=72,slow=20,SNR=13						
OUZ	Omahuta	15.07	204	P	P	20 51 35.0	+1.5
OUZ				IAmb	IAmb	20 51 37.1	
	comp=Z,25nm,1.1s						
URZ	Urewera	16.98	190	P	P	20 51 49.9	-1.0
	comp=Z,2.5nm,0.3s,baz=311,slow=3.9,SNR=18						
URZ				S	S	20 54 33.0	-5.5
	comp=Z,0.6nm,0.3s,baz=233,slow=20,SNR=2.3						
URZ	Urewera	16.98	190	P	P	20 51 49.1	-1.7
URZ				IAmb	IAmb	20 51 51.3	
	comp=Z,21nm,1.0s						
RAR	Rarotonga	17.93	92	P	P	20 51 59.9	+0.1
	comp=Z,1.5nm,0.3s,baz=217,slow=10,SNR=4.6						
RAR	Rarotonga	17.93	92	P	P	20 51 59.9	+0.1
BKZ	Black Stump Fm	17.97	191	P	P	20 51 58.5	-1.5
BKZ				IAmb	IAmb	20 52 12.3	
	comp=Z,22nm,1.4s						
WHZ	Wether Hill Ro	26.51	201	P	P	20 53 17.7	+1.6
WHZ				IAmb	IAmb	20 53 18.6	
	comp=Z,30nm,1.0s						
EIDS	Eidsvold	27.66	256	P	P	20 53 26.8	+0.4
EIDS				IAmb	IAmb	20 53 27.7	
	comp=Z,21nm,0.7s						
ARMA	Armidale	27.75	245	P	P	20 53 28.4	+1.2
ARMA				IAmb	IAmb	20 53 29.6	
	comp=Z,22nm,0.8s						
PPT	Papeete	28.01	87	P	P	20 53 29.7	+0.2
	comp=Z,15nm,0.6s,baz=52,slow=16,SNR=3.8						
TIAR	Tiarei	28.22	87	*e*P	P	20 53 31.0	-0.4
	comp=Z,7.0nm,0.7s						
TVO	Taravao	28.26	88	*e*P	P	20 53 31.3	-0.5
	comp=Z,11nm,0.7s						
VAH	Vaihoa	30.41	83	*e*P	P	20 53 49.4	-0.8
	comp=Z,61nm,0.9s						
CTA	Charters Tower	32.45	266	P	P	20 54 08.1	+0.6
	comp=Z,23nm,0.4s,baz=91,slow=10,SNR=45						
CTA				PcP	PcP	20 56 36.6	+0.5
	comp=Z,2.9nm,0.6s,baz=90,slow=1.0,SNR=1.8						
CTAO	Charters Tower	32.45	266	P	P	20 54 07.7	+0.1
CTAO				IAmb	IAmb	20 54 08.8	
	comp=Z,33nm,1.0s						
TOO	Toolangi	34.51	235	P	P	20 54 25.4	+0.9
TOO				IAmb	IAmb	20 54 26.3	
	comp=Z,15nm,0.8s						
PMG	Port Moresby	34.67	285	P	P	20 54 26.3	+0.1
	comp=Z,38nm,0.7s,baz=72,slow=6.0,SNR=9.5						
STKA	Stephens Creek	36.48	245	P	P	20 54 41.8	+0.9
	baz=91,slow=9.9,SNR=40						
STKA	Stephens Creek	36.48	245	P	P	20 54 41.6	+0.7
COEN	Coen	36.71	275	P	P	20 54 43.5	+0.5
COEN				IAmb	IAmb	20 54 44.6	
	comp=Z,22nm,0.7s						
BBOO	Buckleboo	41.23	244	P	P	20 55 19.1	+0.1
BBOO				IAmb	IAmb	20 55 20.0	
	comp=Z,28nm,0.8s						
WR0	Warramunga Arr	43.33	263	P	P	20 55 34.9	-0.7
WR0				IAmb	IAmb	20 55 36.8	
	comp=Z,14nm,0.7s						
AS31	Alice Springs	43.35	258	P	P	20 55 35.8	0.0
AS31				IAmb	IAmb	20 55 36.7	
	comp=Z,11nm,0.6s						
ASAR	Alice Springs	43.36	258	P	P	20 55 36.0	+0.2
	comp=Z,48nm,0.8s,baz=95,slow=7.7,SNR=474						
ASAR				PcP	PcP	20 57 11.0	+0.4
	comp=Z,5.9nm,0.6s,baz=115,slow=3.5,SNR=10						
ASAR				ScP	ScP	21 00 08.0	+2.6
	comp=Z,3.1nm,0.9s,baz=99,slow=4.1,SNR=7.6						
ASAR				S	S	21 01 19.5	-1.9
	comp=Z,7.7nm,1.0s,baz=95,slow=15,SNR=20						
JAY	Jayapura	43.49	290	P	P	20 55 37.3	+0.4
	comp=Z,63nm,0.6s,baz=146,slow=3.9,SNR=21						
JAY	Jayapura	43.49	290	P	P	20 55 37.5	+0.6
	comp=Z,52nm,0.8s						
WB0	Warramunga Arr	43.50	264	P	P	20 55 36.3	-0.7
WB2	Warramunga Arr	43.51	263	P	P	20 55 36.4	-0.6
WRAB	Tennant Creek	43.51	263	P	P	20 55 36.4	-0.6
WRA	Warramunga Arr	43.52	263	P	P	20 55 36.8	-0.3
	comp=Z,25nm,0.6s,baz=96,slow=7.4,SNR=154						
WRA				S	S	21 01 20.4	-3.3
	comp=Z,2.8nm,0.9s,baz=98,slow=11,SNR=9.2						
FORT	Forrest	48.00	247	P	P	20 56 10.7	-0.2
MTN	Manton Dam	48.23	272	P	P	20 56 11.9	-0.8
FITZ	Fitzroy Crossi	51.95	263	P	P	20 56 40.2	+0.5
	comp=Z,8.6nm,0.4s,baz=104,slow=6.7,SNR=46						
SIJI	Sorong	52.60	286	P	P	20 56 44.6	+0.1
	comp=Z,131nm,0.7s,baz=99,slow=4.8,SNR=56						
SWI	Sorong	52.61	286	P	P	20 56 44.7	+0.2
	comp=Z,2µmcomp=Z,245nm,0.8s						
MSAI	Masohi	53.65	282	P	P	20 56 56.7	+4.8
SOEI	Soe	55.59	273	P	P	20 57 05.3	-0.2
SOEI	Soe	55.59	273	P	P	20 57 05.7	+0.2
	comp=Z,132nm,0.6s						
PSA00	Pilbara Seismi	56.51	258	P	P	20 57 10.4	-1.2
PSA00				IAmb	IAmb	20 57 12.3	
	comp=Z,41nm,0.9s						
VNDA	Vanda	56.78	185	P	P	20 57 14.9	+2.4
	comp=Z,1.7nm,0.6s,baz=356,slow=6.1,SNR=23						
VNDA				PcP	PcP	20 58 01.1	+1.5
	comp=Z,1.7nm,0.8s,baz=359,slow=6.5,SNR=4.7						
VNDA	Vanda	56.78	185	P	P	20 57 14.5	+2.0
TNTI	Ternate	56.82	286	P	P	20 57 12.6	-1.2
TNTI				IAmb	IAmb	20 57 14.8	
	comp=Z,48nm,0.9s						
SANI	Sanana	56.86	282	P	P	20 57 14.4	+0.3
	comp=Z,36nm,1.1s						
NWAO	Narrogin (SRO)	57.05	244	P	P	20 57 14.7	-0.4
	comp=Z,14nm,0.9s,baz=150,slow=9.9,SNR=7.0						
EDFI	Ende, Flores	58.32	273	P	P	20 57 24.2	+0.1
	comp=Z,34nm,0.8s						
MORW	Morawa	58.55	248	P	P	20 57 24.9	-0.5
LUWI	Luwuk	60.20	282	P	P	20 57 35.9	-0.6
LUWI				IAmb	IAmb	20 57 37.9	
	comp=Z,60nm,1.1s						
LUWI	Luwuk	60.20	282	P	P	20 57 39.1	+2.6
GTOI	Gorontalo	60.68	284	P	P	20 57 41.2	+1.5
	comp=Z,24nm,0.8s						
JCJ	Chichijima	61.23	320	P	P	20 57 42.8	-0.1

	comp=Z,26nm,0.4s,baz=302,slow=21,SNR=4.9						
JCJ	Chichijima	61.23	320	P	P	20 57 42.3	-0.6
APSI	Ampana	61.28	281	P	P	20 57 44.9	+1.3
	comp=Z,30nm,1.0s						
TWSI	Taliwang, Sumb	62.80	271	P	P	20 57 54.2	+0.8
	comp=Z,43nm,1.4s						
TOLI2	Tolitoli	62.90	283	P	P	20 57 53.4	-0.7
TOLI2				IAmb	IAmb	20 57 54.6	
	comp=Z,26nm,0.9s						
MPSI	Mapaga	63.38	282	P	P	20 57 56.9	-0.2
	comp=Z,33nm,0.9s						
JHJ	Hachijo jima 2	67.10	323	P	P	20 58 19.9	0.0
	comp=Z,51nm,0.5s,baz=235,slow=19,SNR=4.6						
PWJI	Pagerwojo	67.77	270	P	P	20 58 24.8	+0.4
	comp=Z,56nm,0.7s						
QSPA	South Pole Qui	68.52	180	P	P	20 58 29.3	+1.1
QSPA				IAmb	IAmb	20 58 30.6	
	comp=Z,14nm,0.8s						
MJAR	Matsushiro Arr	70.50	325	P	P	20 58 40.0	-0.3
	comp=Z,8.6nm,0.6s,baz=159,slow=5.6,SNR=30						
MAJO	Matsushiro	70.50	325	P	P	20 58 40.1	-0.2
MAJO				IAmb	IAmb	20 58 40.6	
	comp=Z,9.5nm,0.6s						
MAT	Matsushiro	70.50	325	P	P	20 58 40.1	-0.2
KPJI	Karang Pucung	70.67	270	P	P	20 58 42.1	+0.3
	comp=Z,39nm,0.6s						
CISI	Cisompet, Garu	71.64	269	P	P	20 58 46.1	-1.4
CISI				IAmb	IAmb	20 58 47.4	
	comp=Z,38nm,1.0s						
JHS	Saijyo	72.29	320	P	P	20 58 50.9	+0.2
JHS				IAmb	IAmb	20 58 52.2	
	comp=Z,33nm,0.8s						
TWG	Pinlang	73.16	303	P	P	20 58 54.5	-1.4
YULB	Yu-li	73.29	304	P	P	20 58 55.8	-0.8
YULB				IAmb	IAmb	20 58 56.4	
	comp=Z,14nm,0.7s						
TPUB	Ta-pu	73.75	304	P	P	20 58 57.8	-1.5
SSLB	Suanglung	73.77	304	P	P	20 58 58.0	-1.4
YHNB	Yeheng	73.92	305	P	P	20 58 59.4	-0.9
YHNB				IAmb	IAmb	20 59 01.9	
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	74.21	332	P	P	20 59 03.0	+1.6
	comp=Z,12nm,0.8s,baz=236,slow=5.7,SNR=10						
PETK	Petropavlovsk-	77.05	346	P	P	20 59 16.6	-0.2
	comp=Z,10nm,0.7s,baz=222,slow=4.0,SNR=22						
KSRS	Korea Array	77.05	319	P	P	20 59 18.3	+1.1
	comp=Z,2.0nm,0.7s,baz=126,slow=5.0,SNR=4.9						
KSI	Kapahiang	77.87	271	P	P	20 59 22.1	-0.2
	comp=Z,58nm,0.8s						
BELA	Belgrano 2	78.64	173	P	P	20 59 25.7	+0.6
USRK	Ussuriysk Ar.	79.31	326	P	P	20 59 30.5	+1.5
	comp=Z,8.2nm,0.7s,baz=132,slow=3.6,SNR=23						
KMRM	Mail Ridge	80.17	40	P	P	20 59 35.8	+1.9
KMRM				IAmb	IAmb	20 59 37.0	
	comp=Z,15nm,0.9s						
MAW	Mawson	80.25	200	P	P	20 59 35.0	+1.3
	comp=Z,4.9nm,0.7s,baz=114,slow=9.5,SNR=6.4						
ISA	Isabella, Lake	80.75	46	P	P	20 59 37.8	+0.8
PDSI	Padang	80.84	273	P	P	20 59 38.0	+0.1
CPBX	Cerro Prieto	81.16	50	P	P	20 59 40.3	+1.3
MDPB	Devils Postpil	81.49	44	P	P	20 59 41.5	+0.6
YBH	Yreka Blue Hor	81.71	39	P	P	20 59 42.8	+1.1
	comp=Z,1.6nm,0.6s,baz=190,slow=2.5,SNR=6.4						
YBH	Yreka Blue Hor	81.71	39	P	P	20 59 43.0	+1.3
WAKR	Walker	81.76	43	P	P	20 59 43.7	+1.5
PNTR	Pine Nut	82.00	43	P	P	20 59 44.2	+0.8
MNSI	Mandailing Nat	82.29	274	P	P	20 59 44.4	-0.8
IPM	Ipoh	82.32	278	P	P	20 59 46.0	+0.6
NVAR	Mina Array Bea	82.45	44	P	P	20 59 46.8	+1.1
	comp=Z,2.8nm,0.8s,baz=225,slow=8.3,SNR=19						
CN2	Changchun	82.56	323	*e*P	P	20 59 44.5	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TPH	Tonopah	82.94	44	P	P	20 59 48.9	+0.8
KLR	Kul'dur	82.95	330	P	P	20 59 48.9	+1.3
	comp=Z,4.9nm,0.8s,baz=302,slow=5.0,SNR=17						
KULM	Kulim	82.98	278	P	P	20 59 49.7	+1.1
KULM				IAmb	IAmb	20 59 50.5	
	comp=Z,22nm,0.8s						
RPSI	Rantau Prapat	83.60	275	P	P	20 59 51.8	+0.1
RPSI				IAmb	IAmb	20 59 52.5	
	comp=Z,19nm,0.8s						
GSI	Gunungsitoli	84.34	274	P	P	20 59 56.3	+1.0
GSI	Gunungsitoli	84.34	274	P	P	20 59 56.5	+1.2
	comp=Z,94nm,0.8s						
TUC	Tucson	84.38	52	P	P	20 59 57.0	+1.8
319A	Douglas	85.04	54	P	P	21 00 00.1	+1.6
U15A	North Rim	85.38	48	P	P	21 00 01.5	+1.3
SYO	Syowa Base	85.49	193	⇓*e*PcP	PcP	21 00 01.8	+0.1
ENH	Enshi	85.85	305	P	P	21 00 02.8	+0.6
ENH				IAmb	IAmb	21 00 04.2	
	comp=Z,22nm,0.8s						
GYA	Guiyang	86.35	300	⇓P	P	21 00 05.5	+0.7
GYA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SLVN	Son La	86.44	294	P	P	21 00 06.7	+1.4
SNAA	Sanae	86.98	179	P	P	21 00 06.6	-0.3
VNA3	Neumayer Olymp	87.15	177	P	P	21 00 07.6	0.0
SEY	Seymchan	87.19	347	P	P	21 00 08.2	+0.5
	comp=Z,8.5nm,0.8s,baz=142,slow=6.0,SNR=24						
VNA2	Neumayer--Watz	87.58	177	P	P	21 00 09.9	+0.3
	baz=167,slow=4.2						
KTH	Kantishna Hill	87.65	12	P	P	21 00 09.0	-0.9
TRF	Thorofare Moun	87.68	12	P	P	21 00 09.6	-0.7
TRF				IAmb	IAmb	21 00 10.6	
	comp=Z,12nm,0.8s						
VNA1	Neumayer--Stat	87.81	177	P	P	21 00 10.9	+0.2
RND	Reindeer	87.94	13	P	P	21 00 11.2	-0.1
RND				IAmb	IAmb	21 00 11.9	
	comp=Z,11nm,0.8s						
XAN	Xi'an	88.02	308	P	P	21 00 13.5	+1.1
XAN				pP	PcP	21 00 20.5	+7.0
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
XAN				pmax	pmax		
	comp=Z,90nm,5.4s						
XAN				LR	LR		
	comp=N,650nm,24.7s						
XAN				LR	LR		
	comp=E,330nm,20.7s						
XAN				LR	LR		
	comp=Z,1µm,25.0s						
XAN	Xi'an	88.02	308	P	P	21 00 13.1	+0.7
XAN				IAmb	IAmb	21 00 14.4	
	comp=Z,13nm,0.8s						
MNTX	Cornudas Mount	88.14	55	P	P	21 00 14.2	+1.2
ANMO	Albuquerque	88.81	52	P	P	21 00 16.9	+0.7
	comp=Z,1.9nm,0.9s,baz=229,slow=9.3,SNR=3.7						
ANMO	Albuquerque	88.81	52	P	P	21 00 16.7	+0.4
WRH	Wood River Hil	89.04	13	P	P	21 00 16.0	-0.3
WRH				IAmb	IAmb	21 00 16.6	
	comp=Z,8.9nm,0.9s						
CCB	Clear Creek Bu	89.25	13	P	P	21 00 16.8	-0.5
CCB				IAmb	IAmb	21 00 17.2	
	comp=Z,3.8nm,0.6s						
MDM	Murphy Dome	89.44	13	P	P	21 00 17.5	-0.7
MDM				IAmb	IAmb	21 00 18.2	
	comp=Z,4.8nm,0.9s						
IL31		89.55	13	P	P	21 00 17.9	-0.7
ILAR	Eielson Array	89.55	13	P	P	21 00 18.1	-0.6
	comp=Z,1.3nm,0.6s,baz=218,slow=5.1,SNR=18						
CM31	Chiang Mai Arr	89.57	290	P	P	21 00 21.5	+1.6
CM31				IAmb	IAmb	21 00 22.8	
	comp=Z,15nm,0.9s						
CMAR	Chiang Mai Arr	89.57	290	P	P	21 00 21.8	+1.9
	comp=Z,12nm,0.8s,baz=133,slow=3.1,SNR=72						
CMAR				PP	PP	21 04 05.8	+2.7
	comp=Z,1.0nm,1.0s,baz=124,slow=5.6,SNR=2.6						
CHTO	Chiang Mai	89.71	290	P	P	21 00 21.9	+1.4
CHTO				IAmb	IAmb	21 00 22.9	
	comp=Z,13nm,0.8s						
PDAR	Pinedale Array	90.38	44	P	P	21 00 23.8	+0.5
	comp=Z,1.2nm,0.8s,baz=208,slow=6.0,SNR=6.8						
N23A	Red Feather La	91.88	47	P	P	21 00 31.1	+0.7
MT05	Renca	92.53	127	P	P	21 00 33.3	-0.1
SONM	Songino Array	95.92	319	P	P	21 00 47.1	-1.3
	comp=Z,0.5nm,0.5s,baz=99,slow=4.8,SNR=5.1						
SONM				PP	PP	21 04 49.8	-1.9
	comp=Z,0.2nm,0.3s,baz=101,slow=3.0,SNR=3.7						
GTA	Gaotai	96.90	310	*e*P	P	21 00 53.0	0.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
ZALV	Zalesovo Beam	110.71	321	PKiKP	PKiKP	21 05 48.8	-1.2
	comp=Z,1.5nm,0.6s,baz=119,slow=0.8,SNR=9.0						
MKAR	Makanchi Array	111.22	313	PKiKP	PKiKP	21 05 50.2	-0.9
	comp=Z,0.8nm,0.4s,baz=187,slow=0.9,SNR=23						
KURK	Kurchatov	114.12	317		PKPdf	21 05 55.6	-1.0
KURBB	Kurchatov Arra	114.17	317	PKP	PKPdf	21 05 55.8	-0.8
	comp=Z,1.4nm,0.5s,baz=102,slow=1.9,SNR=13						
KURBB				SKP	SKPdf	21 08 36.6	+0.8
	comp=Z,0.3nm,0.8s,baz=116,slow=2.9,SNR=1.7						
BVAR	Borovoye Array	119.27	320	PKhKP	PKPpre	21 06 01.6	
	comp=Z,2.5nm,0.5s,baz=64,slow=3.4,SNR=21						
BVAR				PKP	PKPdf	21 06 05.2	-1.2
	comp=Z,1.8nm,0.4s,baz=98,slow=2.0,SNR=30						
BRVK	Borovoye	119.33	320	PKPdf	PKPdf	21 06 05.9	-0.6
KBL	Kabul	119.55	298	PKPdf	PKPdf	21 06 07.7	-0.1
SPITS	Spitsbergen Ar	122.86	356	PKP	PKPdf	21 06 12.2	-0.4
	comp=Z,13nm,0.7s,baz=80,slow=5.2,SNR=21						
DAG	Danmarks Havn	123.88	5	*i* P	PKPdf	21 06 13.5	-1.1
	comp=Z,4.2nm,0.6s						
DAG	Danmarks Havn	123.88	5	*i* P	PKPdf	21 06 13.6	-1.1
DAG				IAmb	IAmb	21 06 14.1	
	comp=Z,4.2nm,0.6s						
SUMG	Summit	124.40	13	*i* P	PKPdf	21 06 16.3	+0.1
	comp=Z,1.3nm,0.5s						
SUMG	Summit	124.40	13	*i* P	PKPdf	21 06 16.3	+0.1
SUMG				IAmb	IAmb	21 06 17.6	
	comp=Z,1.3nm,0.5s						
BOSA	Boshof	124.89	206	PKP	PKiKP	21 06 18.6	-0.1
	comp=Z,1.8nm,0.8s,baz=356,slow=1.0,SNR=3.6						
HRA	Herat	125.13	298	PKPdf	PKPdf	21 06 17.7	-0.9
ARU	Arti	125.52	325	PKP	PKPdf	21 06 18.3	0.0
	comp=Z,2.7nm,0.4s,baz=89,slow=3.3,SNR=21						
ARU	Arti	125.52	325		PKPdf	21 06 18.0	-0.3
ABKAR	Akbulak array	126.19	316		PKPdf	21 06 19.7	0.0
AKTO	Aktyubinsk	127.21	318	PKP	PKiKP	21 06 22.6	+0.3
	comp=Z,2.3nm,0.6s,baz=70,slow=4.9,SNR=8.9						
GEYT	Alibeck	128.54	302	PKP	PKPdf	21 06 24.8	+0.1
	comp=Z,3.5nm,0.7s,baz=224,slow=8.3,SNR=7.1						
KIRV	Kirov	129.40	330	PKP	PKPdf	21 06 25.4	-0.2
	comp=Z,7.0nm,0.5s,baz=51,slow=1.7,SNR=4.2						
ARCES	ARCESS Array B	129.78	349	PKhKP	PKPpre	21 06 14.4	
	comp=Z,6.2nm,1.0s,baz=90,slow=1.2,SNR=3.8						
ARCES				PKP	PKPdf	21 06 25.6	-0.4
	comp=Z,3.1nm,0.5s,baz=68,slow=1.3,SNR=28						
ARCES				SKPab	SKPab	21 08 55.0	+1.8
	comp=Z,3.1nm,0.7s,baz=22,slow=5.0,SNR=11						
FINES	FINESS Array B	136.50	343	PKhKP	PKPpre	21 06 28.9	
	comp=Z,1.5nm,0.6s,baz=222,slow=2.6,SNR=3.3						
FINES				PKP	PKiKP	21 06 40.0	-0.8
	comp=Z,3.2nm,0.6s,baz=107,slow=1.2,SNR=9.7						
FINES				SKP	SKPdf	21 09 16.8	-0.7
	comp=Z,2.0nm,0.6s,baz=64,slow=4.4,SNR=6.3						
KMBO	Kilima Mbogo	138.00	242	PKP	PKiKP	21 06 46.0	+0.4
	comp=Z,1.5nm,0.6s,baz=70,slow=6.5,SNR=4.0						
NB2	NORSAR Subarra	139.90	352	PKP	PKPdf	21 06 37.6	-7.6
	comp=Z,1.4nm,0.5s,baz=15,slow=4.0						
NOA	NORSAR Array B	139.90	352	PKhKP	PKPpre	21 06 37.9	
	comp=Z,0.8nm,0.6s,baz=28,slow=1.2,SNR=11						
NOA				PKP	PKiKP	21 06 46.9	-0.9
	comp=Z,0.7nm,0.5s,baz=13,slow=4.0,SNR=5.1						
HOMB	Homborsund	142.92	353	*i* P	PKPdf	21 06 48.5	-2.0
SNART	Snartemo	142.98	355	*i* P	PKPdf	21 06 48.6	-2.0
AKASG	Malin Array Be	143.46	330	PKP	PKPab	21 06 50.0	-0.5
	comp=Z,7.1nm,0.3s,baz=42,slow=4.4,SNR=102						
AKASG				SKP	SKPdf	21 09 31.4	+1.6
	comp=Z,2.2nm,0.7s,baz=43,slow=2.9,SNR=4.8						
AKBB	Malin Array Si	143.46	330		PKPab	21 06 49.5	-0.9
SUW	Suwalki	143.47	338	*e*PKP	PKPab	21 06 50.4	0.0
SUW	Suwalki	143.47	338		PKPab	21 06 50.2	-0.2
MBAR	Mbarara	143.54	237		PKPdf	21 06 53.4	+0.2
MUD	Monsted U'grnd	144.62	352	*i* P	PKPdf	21 06 53.0	-0.5
	comp=Z,9.7nm,0.6s						
MUD	Monsted U'grnd	144.62	352	*i* P	PKPdf	21 06 53.0	-0.5
MUD				IAmb	IAmb	21 06 54.6	
	comp=Z,9.7nm,0.6s						
COP	Copenhagen	144.86	349	*i* P	PKPbc	21 06 54.8	+0.1
COP	Copenhagen	144.86	349	*i* P	PKPbc	21 06 54.8	+0.1
BSD	Bornholm Skovb	144.89	346	*i* P	PKPbc	21 06 54.5	-0.3
	comp=Z,5.9nm,0.4s						
BSD	Bornholm Skovb	144.89	346	*i* P	PKPbc	21 06 54.5	-0.3
BSD				IAmb	IAmb	21 06 56.1	
	comp=Z,5.9nm,0.4s						
GAZ	Gaziantep	145.04	305	PKPdf	PKPbc	21 06 56.4	+0.5
SORM	Soroca	145.59	327	⇓P	PKPbc	21 06 56.8	-0.3
GKP	Gorka Klasztor	145.98	343	*e*PKP	PKPbc	21 06 57.8	-0.2
BEL	Belsk	146.09	338	*e*PKP	PKPbc	21 06 59.0	+0.7
MILM	Milestii Mici	146.12	325	⇓P	PKPbc	21 06 58.3	-0.3
EKA	Eskdalemuir Ar	146.13	4	PKPbc	PKPbc	21 06 58.1	-0.2
	comp=Z,6.2nm,0.7s,baz=335,slow=2.7,SNR=12						
LNIZ	Loecknitz	146.55	346	*e*PKPbc	PKPbc	21 06 59.9	+0.3
	baz=18,slow=2.3						
BR131	Keskin Array S	146.82	310		PKPbc	21 07 00.5	-0.5
BRTR	Keskin Array B	146.82	310	PKPbc	PKPbc	21 07 00.8	-0.1
	comp=Z,8.4nm,0.6s,baz=134,slow=4.6,SNR=22						
VASR	Vaslui	146.84	325	⇑P	PKPbc	21 07 01.1	+0.6
BSEG	Bad Segeberg	146.90	350	*e*PKPbc	PKPbc	21 07 00.7	+0.3
	baz=18,slow=2.3						
KWP	Kalwaria Pacla	147.12	334	*e*PKP	PKPbc	21 07 01.5	+0.3
KWP	Kalwaria Pacla	147.12	334		PKPbc	21 07 01.3	+0.1
TLCR		147.18	322	⇑P	PKPbc	21 07 01.7	+0.2
BUR08	Bucovina Ar. S	147.48	329		PKPbc	21 07 02.9	+0.6
BURAR	Bucovina Array	147.49	329	⇑P	PKPbc	21 07 03.0	+0.6
BIZ	Bicaz	147.52	327	⇓P	PKiKP	21 07 03.2	-0.7
CFR	Carcaliu	147.57	323	⇓P	PKPbc	21 07 02.5	0.0
TPGR	Topolog	147.60	322	⇑P	PKPbc	21 07 03.1	+0.4
OJC	Ojcow	147.78	337	*e*PKPbc	PKPbc	21 07 02.8	-0.1
OJC				*e*PKPab	PKPab	21 07 07.1	-0.4
OJC	Ojcow	147.78	337		PKPbc	21 07 03.0	+0.1
KOLS	Kolonicke sedl	147.84	333	*e*PKP	PKiKP	21 07 04.0	-0.4
VRI	Vrincioaia	147.91	325	⇑P	PKPbc	21 07 02.4	-0.9
PLOR	Plostina	147.96	325	⇓P	PKPbc	21 07 03.9	+0.4
HARR	Harsova	147.98	322	⇑P	PKPbc	21 07 04.2	+0.6
MANR	Mangalia	148.12	321	⇓P	PKiKP	21 07 05.0	-0.1
MDUB	Mudurnu	148.19	313		PKPbc	21 07 04.1	-0.3
CRVS	Cervenica-Dubn	148.20	334	*e*	PKPab	21 07 09.9	+0.5
CRVS	Cervenica-Dubn	148.20	334	*e*PKP	PKiKP	21 07 04.8	-0.4
NIE	Niedzica	148.25	336	*e*PKP	PKiKP	21 07 04.9	-0.4
OZUR		148.25	326	⇑P	PKPbc	21 07 04.7	+0.5
FLTG	Flechtingen	148.27	348	*e*PKPbc	PKPbc	21 07 03.9	-0.1
	baz=18,slow=2.3						
ARCR	ARCALIA	148.28	329	⇓P	PKPbc	21 07 04.7	+0.5
NRDL	Niedersach Rie	148.32	349	*e*PKPbc	PKPbc	21 07 04.4	+0.3
	baz=18,slow=2.3						
KSP	Ksiaz	148.40	341	*e*PKPab	PKPab	21 07 10.6	+0.5
KSP	Ksiaz	148.40	341	*e*PKPbc	PKPbc	21 07 04.8	+0.3
DOPR	Dopca	148.54	326	⇑P	PKPbc	21 07 05.1	+0.2
MLR	Muntele Rosu	148.57	325	PKPbc	PKPbc	21 07 04.6	-0.6
	comp=Z,8.8nm,0.7s,baz=147,slow=12,SNR=10						
MLR	Muntele Rosu	148.57	325	⇑P	PKPbc	21 07 04.5	-0.6
MLR	Muntele Rosu	148.57	325		PKPbc	21 07 04.3	-0.9
ASSE	Asse, Remlinge	148.57	349	*e*PKPbc	PKPbc	21 07 05.0	+0.3
	baz=18,slow=2.3						
OSTC	Ostas	148.68	341	⇑*e*PKP	PKiKP	21 07 05.7	-0.4
CHVC	Chvalec	148.70	341	⇑*e*PKP	PKiKP	21 07 05.8	-0.4
UPC	Upice	148.78	341	⇑*e*PKP	PKPbc	21 07 05.8	+0.4
UPC				*e*PKPAB	PKPab	21 07 12.5	+0.8
LANS	Liptovska Anna	148.78	336	*e*	PKPab	21 07 12.8	+1.0
LANS	Liptovska Anna	148.78	336	*e*PKP	PKiKP	21 07 06.9	+0.5
SECR		148.80	325	⇑P	PKPbc	21 07 05.9	+0.3
CLL	Collm	148.86	345	*i* PKPab	PKPab	21 07 11.8	-0.1
	comp=Z,9.0nm,0.9s						
CLL	Collm	148.86	345		PKPbc	21 07 05.7	+0.2
CLL	Collm	148.86	345	*e*PKPbc	PKPbc	21 07 05.7	+0.2
	baz=18,slow=2.3						
CLL	Collm	148.86	345	*e*PKPdf	PKPdf	21 07 02.0	+1.3
CLL	Collm	148.86	345	⇓*i*PKPbc	PKPbc	21 07 05.6	+0.2
	comp=Z,29nm,1.1s						
IBBN	Ibbenburen	148.86	352	*e*PKPbc	PKPbc	21 07 05.7	+0.3
	baz=18,slow=2.3						
IBBN				*e*PKPab	PKPab	21 07 11.8	-0.1
	baz=16,slow=4.2						
CLZ	Clausthal	148.90	349	*e*PKPbc	PKPbc	21 07 06.0	+0.3
	baz=18,slow=2.3						
CJR	Cluj-Napoca	148.91	329	⇑P	PKiKP	21 07 06.4	-0.4
KRLC	Kraliky	148.92	340	⇑*e*PKP	PKPbc	21 07 06.2	+0.4
KECS	Kecovo	148.93	335	*e*PKP	PKiKP	21 07 06.8	+0.1
MORC	Moravsky Berou	148.94	339	⇑P	PKPbc	21 07 05.4	-0.4
MORC	Moravsky Berou	148.94	339	*e*	PKPab	21 07 12.6	+0.2
MORC	Moravsky Berou	148.94	339		PKPbc	21 07 05.2	-0.6
MORC	Moravsky Berou	148.94	339	*e*PKP	PKiKP	21 07 06.3	-0.4
BRG	Berggiesshubel	149.03	344	Amp		21 07 07.2	
	comp=Z,30nm,1.3s						
BRG	Berggiesshubel	149.03	344	Amp		21 07 07.2	
	comp=Z,30nm,1.3s						
BRG	Berggiesshubel	149.03	344	*e*PKPbc	PKPbc	21 07 06.3	+0.4
	baz=18,slow=2.3						
BRG	Berggiesshubel	149.03	344	⇓*i*PKP	PKPbc	21 07 06.3	+0.4
BRG	Berggiesshubel	149.03	344	⇓*i*PKP	PKPbc	21 07 06.3	+0.4
VOIR		149.07	326	⇑P	PKPbc	21 07 06.3	0.0
FBE	Freiberg	149.13	345	*e*PKPbc	PKiKP	21 07 06.9	-0.1
	baz=18,slow=2.3						
PVCC	Panska Ves	149.17	343	⇑*e*PKP	PKiKP	21 07 06.8	-0.3
NEUB	Neuenburg	149.22	347	*e*PKPbc	PKPbc	21 07 06.6	+0.3
	baz=18,slow=2.3						
NEUB				*e*PKPab	PKPab	21 07 13.3	-0.2
	baz=16,slow=4.2						
GTTG	Gottingen	149.26	349	*e*PKPbc	PKiKP	21 07 06.9	-0.3
	baz=18,slow=2.3						
GTTG				*e*PKPab	PKPab	21 07 13.4	-0.2
	baz=16,slow=4.2						
DRGR		149.27	330	⇓P	PKPbc	21 07 06.7	0.0
ARR	Arges	149.34	326	⇑P	PKiKP	21 07 08.3	+0.6
MLFH	Mildenfurth	149.55	346	*e*pPKPbc	pPKPbc	21 09 15.0	-9.4
VYHS	Vyhne	149.56	336	*e*PKP	PKiKP	21 07 07.8	-0.2
VYHS				*e*		21 07 15.8	
PSZ	Piszkesteto	149.62	334	⇑P	PKPbc	21 07 07.8	+0.3
PSZ	Piszkesteto	149.62	334		PKPbc	21 07 07.1	-0.4
VRAC	Vranov	149.65	340	PKPbc	PKPbc	21 07 07.4	-0.1
	comp=Z,5.0nm,0.7s,baz=34,slow=1.4,SNR=9.4						
VRAC	Vranov	149.65	340	⇑P	PKPbc	21 07 07.5	0.0
VRAC	Vranov	149.65	340	*e*PKP	PKiKP	21 07 08.0	-0.2
VRAC				*e*		21 07 15.9	
PRU	Pruhonice	149.67	343	⇑*e*PKP	PKPbc	21 07 07.7	+0.2
JAVC	Velka Javorina	149.68	338	*e*PKP	PKiKP	21 07 09.1	+0.8
HUMR	Humele	149.72	325	⇓P	PKPbc	21 07 06.6	-1.2
BUG	Bochum--Univer	149.77	352	*e*PKPbc	PKPbc	21 07 07.6	0.0
	baz=18,slow=2.3						
MOX	Moxa	149.79	346	*e*PKPbc	PKPbc	21 07 08.0	+0.2
	baz=18,slow=2.3						
TANN	Tannenbergstha	149.81	345	*e*PKPbc	PKiKP	21 07 08.2	-0.3
	baz=18,slow=2.3						
ISP	Isparta	149.81	309		PKPbc	21 07 07.3	-1.1
PLN	Plauen	149.82	346	*e*PKPbc	PKPbc	21 07 08.1	+0.3
	baz=18,slow=2.3						
WERD	Werda	149.82	346	*e*PKPbc	PKiKP	21 07 08.3	-0.2
	baz=18,slow=2.3						
KASTN	Kahler Asten	149.84	351	*e*PKPbc	PKPbc	21 07 08.1	+0.2
	baz=18,slow=2.3						
GUNZ	Gunzen	149.89	345	*e*PKPbc	PKiKP	21 07 08.5	-0.2
	baz=18,slow=2.3						
GUNZ				*e*PKPab	PKPab	21 07 16.8	+0.5
	baz=16,slow=4.2						
KRUC	Moravsky	149.93	340	*e*PKP	PKPbc	21 07 08.3	+0.2
KRUC				*e*		21 07 17.0	
WERN	Wernitzgruen	149.95	345	*e*PKPbc	PKiKP	21 07 08.8	0.0
	baz=18,slow=2.3						
WERN				*e*PKPab	PKPab	21 07 16.9	+0.3
	baz=16,slow=4.2						
WERN				*e*pPKPbc	pPKPdf	21 09 16.6	-4.9
NKC	Novy Kostel	149.99	345	⇑*e*PKP	PKiKP	21 07 08.8	0.0
SMOL	Smolenice	150.05	338	*e*PKP	PKiKP	21 07 09.4	+0.4
SMOL				*e*		21 07 18.2	
PBCC	Pribram	150.09	343	⇑*e*PKP	PKiKP	21 07 08.8	-0.3
SIRR	Siria	150.14	331	⇓P	PKiKP	21 07 09.0	-0.3
MODS	Modra-Piesok	150.22	338	*e*PKP	PKPbc	21 07 08.7	-0.2
MODS				*e*		21 07 17.8	
GZR	Gura Zlata	150.25	328	⇓P	PKPbc	21 07 08.7	-0.4
ROTZ	Rotzenmuhle	150.48	345	*e*PKPbc	PKiKP	21 07 09.6	-0.2
	baz=18,slow=2.3						
ROTZ				*e*pPKPbc	pPKPdf	21 09 18.1	-4.2
SRE	Strehaia	150.56	327	⇓P	PKiKP	21 07 10.7	+0.5
BZS	Buzias	150.65	330	⇓P	PKPbc	21 07 09.8	-0.1
KHC	Kasperske Hory	150.71	343	*e*PKPDF	PKPdf	21 07 03.8	0.0
KHC				⇑*e*PKP	PKiKP	21 07 10.3	-0.1
KHC				*e*PKPAB	PKPab	21 07 20.7	+0.9
KHC	Kasperske Hory	150.71	343		PKPbc	21 07 10.1	+0.1
GRF	Grafenberg Arr	150.77	346	*e*PKPbc	PKPbc	21 07 10.3	+0.2
	baz=18,slow=2.3						
GRF				*e*PKPab	PKPab	21 07 20.2	+0.1
	baz=16,slow=4.2						
TNS	Taunus Mts	150.79	350	*e*PKPbc	PKiKP	21 07 10.4	-0.2
	baz=18,slow=2.3						
HERR	Herculane	150.80	328	⇑P	PKPbc	21 07 09.7	-0.6
WET	Wettzell	150.89	344	*e*PKPbc	PKPbc	21 07 10.5	+0.1
	baz=18,slow=2.3						
WET				*e*PKPab	PKPab	21 07 20.9	+0.3
	baz=16,slow=4.2						
WET				*e*pPKPbc	pPKPdf	21 09 19.5	-3.6
GEC2	GERESS Array S	150.94	343		PKPbc	21 07 10.3	-0.3
GEC2	GERESS Array S	150.94	343	*e*PKPbc	PKPbc	21 07 10.6	0.0
	baz=18,slow=2.3						
GERES	GERESS Array B	150.94	343	PKP	PKPdf	21 07 03.8	-0.4
	comp=Z,0.4nm,0.7s,baz=90,slow=0.3,SNR=4.2						
GERES				PKPbc	PKPbc	21 07 10.6	0.0
	comp=Z,7.3nm,0.8s,baz=31,slow=2.3,SNR=49						
GERES				PKPab	PKPab	21 07 21.0	+0.1
	comp=Z,1.1nm,0.6s,baz=20,slow=4.3,SNR=6.3						
CONA	Conrad Observa	151.09	339	*e*P	PKPbc	21 07 11.0	0.0
	comp=Z,12nm,0.7s						
CONA				*e*P	PKPab	21 07 22.1	+0.5
	comp=Z,8.3nm,0.8s						
MDVR	Moldovita	151.22	328	⇑P	PKPbc	21 07 10.4	-0.9
WLF	Walferdange	151.65	353		PKPbc	21 07 12.0	-0.1
WLF	Walferdange	151.65	353	*e*PKPbc	PKiKP	21 07 12.8	+0.5
	baz=18,slow=2.3						
MOA	Molln	151.67	341	*e*P	PKPbc	21 07 12.0	-0.2
	comp=Z,4.0nm,0.7s						
MOA				*e*P	PKPab	21 07 24.6	+0.7
	comp=Z,4.9nm,1.2s						
ARSA	Arzberg	151.79	339	*e*P	PKPbc	21 07 12.3	-0.2
	comp=Z,1.4nm,0.6s						
ARSA				*e*P	PKPab	21 07 24.8	+0.4
	comp=Z,6.9nm,1.3s						
VTS	Vitosha	151.93	324	⇑P	PKiKP	21 07 13.3	0.0
STU	Stuttgart	152.06	348	*e*PKPbc	PKiKP	21 07 13.1	0.0
	baz=18,slow=2.3						
FUR	Furstenfeldbru	152.19	345	*e*PKPbc	PKPbc	21 07 13.2	-0.1
	baz=18,slow=2.3						
FUR				*e*PKPab	PKPab	21 07 26.4	+0.3
	baz=16,slow=4.2						
SOKA	Soboth	152.46	339	*e*P	PKPbc	21 07 13.4	-0.7
	comp=Z,5.6nm,1.0s						
SOKA				*e*P	PKPab	21 07 27.4	0.0
	comp=Z,5.6nm,0.9s						
PERS	Pernice	152.47	339	*i* PKPbc	PKPbc	21 07 13.4	-0.6
PERS				*i* PKPab	PKPab	21 07 27.4	0.0
KBA	Koelnbreinsper	152.64	341	*e*P	PKPbc	21 07 13.9	-0.6
	comp=Z,7.1nm,1.1s						
KBA				*e*P	PKPab	21 07 28.0	-0.2
	comp=Z,5.6nm,0.6s						
BFO	Black Forest	152.64	349		PKiKP	21 07 14.4	0.0
BFO	Black Forest	152.64	349	*e*PKPbc	PKPbc	21 07 14.1	-0.2
	baz=18,slow=2.3						
BFO				*e*PKPab	PKPab	21 07 27.7	-0.3
	baz=16,slow=4.2						
OBKA	Obir	152.77	339	*e*P	PKPbc	21 07 14.1	-0.7
	comp=Z,2.4nm,0.6s						
WATA	Walderalm	152.89	344	*e*P	PKPbc	21 07 14.5	-0.5
	comp=Z,3.1nm,0.5s						
WATA				*e*P	PKPab	21 07 29.6	+0.4
	comp=Z,0.2nm,0.2s						
UBR	Ueberruh	152.92	346	*e*PKPbc	PKPbc	21 07 14.7	-0.3
	baz=18,slow=2.3						
WTTA	Wattenberg	152.94	344	*e*P	PKPbc	21 07 14.9	-0.2
	comp=Z,3.9nm,0.4s						
WTTA				*e*P	PKPab	21 07 29.6	+0.1
	comp=Z,6.6nm,0.6s						
RETA	Reutte	152.95	345	*e*P	PKPbc	21 07 14.4	-0.7
	comp=Z,0.8nm,0.3s						
RETA				*e*P	PKPab	21 07 29.4	0.0
	comp=Z,2.3nm,0.5s						
MYKA	Terra Mystica	152.95	341	*e*P	PKPbc	21 07 15.0	-0.1
	comp=Z,2.6nm,0.5s						
MYKA				*e*P	PKPab	21 07 29.3	-0.1
	comp=Z,2.4nm,0.4s						
MOTA	Moosalm	153.00	345	*e*P	PKPbc	21 07 15.2	-0.1
	comp=Z,7.4nm,1.0s						
MOTA				*e*P	PKPab	21 07 29.7	0.0
	comp=Z,2.4nm,0.5s						
SQTA	Sankt Quirin	153.09	344	*e*P	PKPbc	21 07 15.2	-0.2
	comp=Z,8.7nm,1.0s						
SQTA				*e*P	PKPab	21 07 30.1	+0.1
	comp=Z,7.3nm,1.6s						
ABTA	Abfaltersbach	153.18	342	*e*P	PKPbc	21 07 15.2	-0.4
	comp=Z,7.0nm,0.6s						
ABTA				*e*P	PKPab	21 07 30.0	-0.4
	comp=Z,7.2nm,1.0s						
VISS	Visnje	153.29	338	*i* PKPbc	PKPbc	21 07 15.7	-0.1
VISS				*i* PKPab	PKPab	21 07 30.5	-0.3
DAVA	Damuels	153.34	346	*e*P	PKiKP	21 07 16.1	+0.1
	comp=Z,4.7nm,1.2s						
DAVA				*e*P	PKPab	21 07 30.9	-0.3
	comp=Z,3.7nm,0.8s						

FETA	**Feichten**	**153.40**	**345**	*e*P	**PKPbc**	**21 07 15.9**	**-0.2**
	comp=Z,7.2nm,1.2s						
FETA				*e*P	**PKPab**	**21 07 31.4**	**0.0**
	comp=Z,6.4nm,1.5s						
DAVOX	**Davos/Dischmat**	**153.82**	**346**	PKP	**PKPdf**	**21 07 08.6**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=325,slow=18,SNR=3.7						
DAVOX				PKPbc	**PKiKP**	**21 07 17.3**	**+0.2**
	comp=Z,4.0nm,0.5s,baz=212,slow=2.0,SNR=9.7						
DAVOX				PKPab	**PKPab**	**21 07 33.7**	**+0.4**
	comp=Z,4.3nm,0.6s,baz=319,slow=5.1,SNR=7.7						
FNA	**Florina**	**154.19**	**323**		**PKiKP**	**21 07 17.1**	**-0.8**
ESDC	**Sonseca Array**	**161.45**	**12**	PKPab	**PKPab**	**21 08 06.1**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=341,slow=3.9,SNR=7.0						
KEST	**Kesra**	**164.09**	**334**	PKPab	**PKPab**	**21 08 18.5**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=342,slow=18,SNR=4.3						
DBIC	**Dimbokro**	**164.16**	**158**	PKP	**PKPdf**	**21 07 20.9**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=296,slow=1.7,SNR=5.9						
TORD	**Torodi Ar. Bea**	**171.61**	**185**	PKP	**PKPdf**	**21 07 25.6**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=335,slow=1.3,SNR=5.6						
TORD				PKPab	**PKPab**	**21 08 52.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=169,slow=4.0,SNR=5.7						

ROM 05 21:04:49.3±0.1**,43°.747N**±0°.005×**12°.138E**±0°.006**,**
h9^{km}**,ML1.2**/6**,3C-2D,Error ellipse: s-maj=0.8km**
s-min=0.2km az=220.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARC	**Parchiule**	**0.12**	**143**	⇑P	Pg	21 04 52.6	+0.5
PARC				S	Sg	21 04 54.8	+0.7
PARC				AML	AML		
	comp=E,278μm,0.2s						
PARC				AML	AML		
	comp=N,274μm,0.3s						
SSP9	**Sansepolcro**	**0.17**	**182**	P	Pg	21 04 54.3	+1.4
SSP9				S	Sg	21 04 56.8	+1.4
CRE	**Caprese Michel**	**0.19**	**227**	⇓P	Pg	21 04 53.7	+0.5
CRE				S	Sg	21 04 56.9	+1.1
CRE				AML	AML		
	comp=E,80μm,0.3s						
CRE				AML	AML		
	comp=N,142μm,0.9s						
ASQU	**Asqua**	**0.26**	**281**	⇓P	Pg	21 04 55.2	+0.7
ASQU				S	Sb	21 04 59.6	-1.2
SFI	**Santa Sofia**	**0.26**	**307**	P	Pg	21 04 55.3	+0.8
SFI				S	Sb	21 04 59.9	-1.0
APEC	**Apecchio**	**0.28**	**132**	P	Pg	21 04 55.6	+0.8
APEC				S	Sb	21 05 01.1	-0.2
APEC				AML	AML		
	comp=E,81μm,1.4s						
APEC				AML	AML		
	comp=N,83μm,0.7s						
APEC				AML	AML		
	comp=N,83μm,0.7s						
ATPI	**Pietralunga -**	**0.35**	**147**	P	Pg	21 04 56.9	+0.6
ATPI				S	Sb	21 05 02.6	-0.9
ATPI				AML	AML		
	comp=E,36μm,1.6s						
ATPI				AML	AML		
	comp=N,40μm,0.9s						
PIEI	**Pieia**	**0.36**	**126**	P	Pg	21 04 56.6	+0.3
PIEI				S	Sb	21 05 02.6	-1.0
PIEI				AML	AML		
	comp=N,46μm,1.5s						
PIEI				AML	AML		
	comp=N,46μm,1.5s						
PIEI				AML	AML		
	comp=E,67μm,0.1s						
ATVO	**AVT- Monte Val**	**0.41**	**152**	⇑P	Pb	21 04 58.2	-0.6
ATVO				S	Sb	21 05 04.7	-0.5
ATVO				AML	AML		
	comp=E,80μm,1.5s						
ATVO				AML	AML		
	comp=N,40μm,0.2s						
CAFI	**Castiglion Fio**	**0.44**	**197**	P	Pb	21 04 58.6	-0.6
CAFI				S	Sb	21 05 05.3	-0.5
LMD	**Lutirano**	**0.45**	**317**	P	Pb	21 04 59.0	-0.6
LMD				S	Sb	21 05 06.3	-0.2
RUFI	**Rufina**	**0.46**	**282**	P	Pg	21 04 58.7	+0.4
RUFI				S	Sb	21 05 05.9	-0.8
ARVD	**Arcevia**	**0.63**	**113**	⇑P	Pg	21 05 02.0	+0.4

REY ***05*** *21:53:17.7, 64°.66N×17°.38W, h7*^{km}
MOS ***05*** *21:53:18.6±1.6, 64°.70N×17°.68W, h4*^{km}*, mb5.0/40, MS4.4/23, Error ellipse: s-maj=8.2km s-min=5.4km az=102.1*
IDC ***05*** *21:53:18.8±0.5, 64°.69N×17°.30W, h0*^{km}*, mb4.3/36, mb1 4.4/40, mb1mx4.3/63, mbtmp4.3/40, ML2.8/3, MS4.4/50, Ms1 4.4/50, ms1mx4.4/59, Error ellipse: s-maj=14.0km s-min=9.0km az=26.0*
BGR ***05*** *21:53:18.8±0.0, 64°.00N×18°.79W, h10*^{km}*, mb4.8*
NEIC ***05*** *21:53:20.8±2.3, 64°.64N±0°.07×17°.7W±0°.2, h7*^{km}*±4*^{km}*, mb5.0/138, Error ellipse: s-maj=11.7km s-min=8.7km az=215.0*
BGS ***05*** *21:53:21.5±2.6, 64°.37N×17°.70W, h5*^{km}*, mb5.0(NEIC)*
DNK ***05*** *21:53:25.8±3.7, 64°.86N×16°.60W, h0*^{km}*±174*^{km}*, mb5.0*
GCMT ***05*** *21:53:25.8±0.1, 64°.61N±0°.01×16°.90W±0°.03, h12*^{km}*, MW5.1/140, Moment Tensor Solution. s69,c82; s140,c214; Duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*-4.82±.07;* $M_{\theta\theta}$*3.27±.07;* $M_{\phi\phi}$*1.55±.06;* $M_{r\theta}$*0.37±.22;* $M_{\theta\phi}$*0.03±.06;* $M_{\phi r}$*-3.91±.26; Best double couple:* $M_0 5.08900\times10^{16}$ *NP1:*ϕ_s*124.00000°, δ25.00000°, λ-118.00000°. NP2:*ϕ_s*335.00000°, δ68.00000°, λ-78.00000°. Principal axes: T 3.4880, Plg22.0000°, Azm55.0000°; N 3.2020, Plg12.0000°, Azm150.0000°; P -6.6900, Plg65.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 21:53:21.4±0.2**,64°.60N**±0°.03×**17°.75W**±0°.03**,h10**^{km}**,n656,**
σ**2**^{s}**04**/618**,mb4.9**/173**,MS4.5**/80**,31C-46D,Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHAM	**Hamarinn**	**0.12**	**194**	P	**Pg**	**21 53 22.9**	**-1.6**
	baz=228						
BARD	**Bardarbunga**	**0.14**	**73**	P	Pg	21 53 18.1	-6.7
	baz=243						
IDYN	**Dyngjuhals**	**0.25**	**41**	P	Pg	21 53 20.6	-6.0
	baz=2.2						
ISKR	**Skrokkalda**	**0.28**	**262**	P	**Pg**	**21 53 25.6**	**-1.4**
	baz=258						
ISKR				S	**Sb**	**21 53 32.5**	**-0.7**
	baz=258						
IURH	**Urdarhals**	**0.34**	**49**	P	Pg	21 53 21.6	-6.7
	baz=31						
IJOK	**Jokulheimar**	**0.35**	**216**	P	**Pg**	**21 53 26.4**	**-2.0**
	baz=227						
IJOK				S	**Sb**	**21 53 34.1**	**-1.4**
	baz=227						
IKVE	**Kverkfjoll**	**0.47**	**80**	P	Pg	21 53 23.6	-7.0
	baz=85						
IIEY	**Innrieyrar**	**0.53**	**198**	P	**Pg**	**21 53 29.2**	**-2.6**
	baz=210						
IIEY				S	**Sb**	**21 53 38.7**	**-1.9**
	baz=210						
IKAL	**Kalfafell**	**0.66**	**178**	P	**Pg**	**21 53 30.5**	**-3.6**
	baz=191						
IKAL				S	**Sg**	**21 53 40.6**	**-2.1**
	baz=191						
IKSK	**Karasker**	**0.71**	**128**	P	Pg	21 53 28.3	-6.8
	baz=141						
IKSK				S	**Sg**	**21 53 38.0**	**-6.3**
	baz=141						
IMKO	**Mokollar**	**0.71**	**57**	P	Pg	21 53 27.5	-7.7
	baz=53						
IMKO				S	Sg	21 53 35.6	-8.9
	baz=53						
ISVA	**Svartarkot**	**0.77**	**16**	P	Pg	21 53 29.6	-6.7
	baz=4.3						
ISVA				S	**Sg**	**21 53 39.5**	**-6.7**
	baz=4.3						
IHVE	**Hveravellir**	**0.82**	**290**	P	**Pg**	**21 53 34.3**	**-3.0**
	baz=284						
IFAG	**Fagurholsmyri**	**0.87**	**146**	P	Pg	21 53 32.5	-5.7
	baz=158						
IVSH	**V-Sauoahnukur**	**0.89**	**76**	P	Pg	21 53 30.4	-8.2
	baz=77						
ISNB	**Snabyli**	**0.95**	**204**	P	**Pg**	**21 53 36.7**	**-3.0**
	baz=211						
IADA	**Aoalbol**	**1.02**	**65**	P	Pg	21 53 32.6	-8.4
	baz=64						
IFED	**Fedgar**	**1.02**	**236**	P	**Pg**	**21 53 38.8**	**-2.3**
	baz=239						
IRJU	**Rjupnafell**	**1.07**	**203**	P	**Pg**	**21 53 38.6**	**-3.3**
	baz=209						
IMJO	**Mjoaskard**	**1.07**	**232**	P	**Pg**	**21 53 39.7**	**-2.3**
	baz=235						
IMEL	**Melhnausar**	**1.08**	**25**	P	Pb	21 53 34.4	-7.8
	baz=18						
IMEL				S	Sb	21 53 47.5	-8.7
	baz=18						
IREN	**Reynihlio**	**1.11**	**18**	P	Pb	21 53 35.3	-7.4
	baz=11						
IGYG	**Gygjarholskot**	**1.12**	**254**	P	**Pg**	**21 53 39.9**	**-2.9**
	baz=254						
IKVO	**Krokottuvotn**	**1.18**	**18**	P	Pn	21 53 36.4	-7.6
	baz=11						
IHVO	**Lagu-Hvolar**	**1.18**	**205**	S	**Sn**	**21 54 03.2**	**+3.2**
	baz=210						
IHVO				P	**Pb**	**21 53 40.5**	**-3.4**
	baz=210						
IGRS	**Grimsstaoir**	**1.25**	**33**	P	Pn	21 53 37.0	-7.9
	baz=28						
IALF	**Alftagrof**	**1.28**	**210**	P	**Pn**	**21 53 42.7**	**-2.6**
	baz=215						
ISKI	**Skildingahlsh**	**1.31**	**13**	P	Pn	21 53 38.7	-7.0
	baz=6.7						
ISAU	**Saurbar**	**1.31**	**243**	P	**Pn**	**21 53 42.9**	**-2.8**
	baz=245						
IGRA	**Granastaoir**	**1.32**	**3**	P	Pn	21 53 39.5	-6.5
	baz=356						
IGHA	**Grjothals**	**1.33**	**20**	P	Pn	21 53 38.9	-7.2
	baz=14						
IGHA				S	Sb	21 53 55.1	-8.4
	baz=14						
IMID	**Miomork**	**1.33**	**226**	P	**Pn**	**21 53 43.6**	**-2.4**
	baz=229						
IDIM	**Dimmadalss**	**1.41**	**14**	P	Pn	21 53 40.3	-6.8
	baz=7.9						
IASM	**Asmuli**	**1.47**	**240**	P	**Pn**	**21 53 45.5**	**-2.4**
	baz=241						
IHED	**Heoinshofoi**	**1.50**	**7**	P	Pn	21 53 41.7	-6.6
	baz=1.1						
IBRE	**Brettingsstaoi**	**1.53**	**358**	P	Pn	21 53 42.9	-5.9
	baz=352						
BORG	**Borgarnes**	**1.54**	**277**	P	**Pn**	**21 53 46.9**	**-2.1**
BORG	**Borgarnes**	**1.54**	**277**	Pn	**Pn**	**21 53 46.9**	**-2.1**
ISOL	**Solvholt**	**1.55**	**246**	P	**Pn**	**21 53 46.6**	**-2.4**
	baz=246						
IKRO	**Krokur**	**1.55**	**252**	P	**Pn**	**21 53 46.4**	**-2.6**
	baz=253						
IHEI	**Heioarbar**	**1.57**	**257**	P	**Pn**	**21 53 46.9**	**-2.3**
	baz=256						
IGIL	**Gilhagi**	**1.59**	**21**	P	Pn	21 53 42.8	-6.8
	baz=16						
ISIG	**Siglufjorour**	**1.61**	**343**	P	Pn	21 53 44.8	-5.1
	baz=337						
SCO	**Scoresbysund**	**6.12**	**347**	P	**Pn**	**21 54 50.7**	**-1.1**
SCO	**Scoresbysund**	**6.12**	**347**		**Pn**	**21 54 50.7**	**-1.1**
SCO	**Scoresbysund**	**6.12**	**347**	*i* P	**Pn**	**21 54 55.7**	**+4.0**
	224nm,0.7s						
SCO	**Scoresbysund**	**6.12**	**347**	*i* P	**Pn**	**21 54 55.7**	**+4.0**
SCO				IAmb	IAmb	21 55 07.9	
	comp=Z,224nm,0.7s						
JMIC	**Jan Mayen**	**7.30**	**24**	LR	LR	21 57 28.2	
	comp=Z,4μm,18.9s,baz=275,slow=35						
LEWI	**Lewis, Hebride**	**8.31**	**136**	*e*P	**Pn**	**21 55 19.7**	**-2.1**
ANGG	**Ammassalik, Gr**	**8.44**	**286**	Pn	**Pn**	**21 55 21.8**	**-1.7**
LINV	**Loch Inver, As**	**8.83**	**131**	*e*P	**Pn**	**21 55 27.3**	**-1.6**
BIGH	**Upper Bighouse**	**8.99**	**127**	*e*P	**Pn**	**21 55 30.1**	**-1.1**
ICESG	**Greenland Ices**	**9.69**	**307**	*e*P	Pn	21 55 49.0	+8.0
DBG	**Daneborg**	**9.79**	**356**	*e*P	**Pn**	**21 55 45.4**	**+3.4**
LAWE	**Loch Awe, Argy**	**10.33**	**138**	*e*P	**Pn**	**21 55 47.1**	**-2.4**
INVG	**Invergeldie, C**	**10.60**	**134**	*e*P	**Pn**	**21 55 50.8**	**-2.4**
SUMG	**Summit**	**10.94**	**326**	P	**Pn**	**21 55 57.6**	**-0.4**
SUMG	**Summit**	**10.94**	**326**	Pn	**Pn**	**21 55 57.6**	**-0.4**
SUMG	**Summit**	**10.94**	**326**	*i* P	Pn	21 56 05.0	+7.0
SUMG	**Summit**	**10.94**	**326**	*i* P	Pn	21 56 05.0	+7.0
EDI	**Edinburgh**	**11.28**	**134**	*e*P	**Pn**	**21 56 01.0**	**-1.5**
AKN	**Aaknes**	**11.33**	**91**	*e*P	**Pn**	**21 56 04.0**	**+0.9**
MOL	**Molde**	**11.42**	**89**	*e*P	**Pn**	**21 56 05.4**	**+1.1**
BER	**Bergen**	**11.44**	**101**	*e*P	**Pn**	**21 56 04.4**	**-0.2**
EKA	**Eskdalemuir Ar**	**11.79**	**135**	Pn	**Pn**	**21 56 06.1**	**-3.3**
	baz=320,slow=13,SNR=29						
EKA				Sn	**Sn**	**21 58 19.3**	**-1.5**
	baz=320,slow=26,SNR=2.3						
EKA				LR	LR	22 00 29.7	
	comp=Z,2μm,20.7s,baz=235,slow=37						
ESK	**Eskdalemuir**	**11.79**	**135**	*e*P	**Pn**	**21 56 07.2**	**-2.2**
ESK	**Eskdalemuir**	**11.79**	**135**	P	**Pn**	**21 56 07.9**	**-1.5**
ESK	**Eskdalemuir**	**11.79**	**135**	Pn	**Pn**	**21 56 07.8**	**-1.5**
KMY	**Karmoy**	**12.06**	**106**	*e*P	**Pn**	**21 56 12.5**	**-0.6**
DAG	**Danmarks Havn**	**12.24**	**359**	*i* P	**Pn**	**21 56 17.0**	**+1.6**
	comp=Z,6.4nm,0.9s						
DAG	**Danmarks Havn**	**12.24**	**359**	*i* P	**Pn**	**21 56 17.0**	**+1.6**
DAG				IAmb	IAmb	21 56 19.6	
	comp=Z,6.4nm,0.9s						
ODD1	**Odda**	**12.24**	**101**	*e*P	**Pn**	**21 56 15.2**	**-0.4**
DOMB	**Dombas**	**12.28**	**90**	*e*	**Pn**	**21 56 11.3**	**-4.7**
TBLU	**Trondheim**	**12.35**	**84**	*e*P	**Pn**	**21 56 19.1**	**+2.1**
KESW	**Keswick, Cumbr**	**12.44**	**137**	*e*P	**Pn**	**21 56 17.1**	**-1.2**
BLS5	**Blasjo**	**12.45**	**103**	*e*P	**Pn**	**21 56 16.1**	**-2.3**
SKAR	**Skarslia**	**12.56**	**96**	*e*P	**Pn**	**21 56 20.7**	**+0.7**
EDMD	**Edmundbyers**	**12.58**	**134**	*e*P	**Pn**	**21 56 19.2**	**-1.0**
NSS	**Namsos**	**12.72**	**77**	*e*P	Pn	21 56 27.8	+5.8
DSB	**Dublin**	**12.78**	**148**	Pn	**Pn**	**21 56 23.5**	**+0.5**
KONS	**Konsvik**	**12.85**	**68**	*e*P	**Pn**	**21 56 21.3**	**-2.5**
NC204	**NORSAR Array S**	**13.34**	**91**	Pn	**Pn**	**21 56 27.1**	**-3.4**
SNART	**Snartemo**	**13.41**	**106**	*e*P	**Pn**	**21 56 31.1**	**-0.4**
SNART	**Snartemo**	**13.41**	**106**	*i* P	**Pn**	**21 56 31.0**	**-0.4**
SNART				*e*P	P	21 56 32.6	-8.4
MOR8	**Moi Rana**	**13.42**	**69**	*e*P	**Pn**	**21 56 34.2**	**+2.6**
HPK	**Haverah Park**	**13.43**	**135**	*e*P	**Pn**	**21 56 31.9**	**+0.1**
NBO00	**NORSAR Array S**	**13.46**	**92**	Pn	**Pn**	**21 56 30.2**	**-1.9**
NAO01	**NORSAR Array S**	**13.59**	**93**	Pn	**Pn**	**21 56 34.2**	**+0.2**
SFJD	**Kangerlussuaq**	**13.60**	**295**	LR	LR	22 01 30.8	
	comp=Z,2μm,21.8s,baz=84,slow=36						
NC303	**NORSAR Array S**	**13.62**	**91**	Pn	**Pn**	**21 56 33.6**	**-0.8**
FAUS	**Fauske**	**13.63**	**63**	*e*P	**Pn**	**21 56 35.9**	**+1.4**
NB2	**NORSAR Subarra**	**13.64**	**92**	Pn	Pn	21 56 28.4	-6.3
	comp=Z,28nm,1.4s,baz=298,slow=14						
NOA	**NORSAR Array B**	**13.64**	**92**	Pn	Pn	21 56 27.7	-7.0
	comp=Z,0.0nm,0.3s,baz=303,slow=12,SNR=3.4						
NOA				LR	LR	22 01 46.3	
	comp=Z,1μm,21.0s,baz=295,slow=38						
KONO	**Kongsberg**	**13.65**	**99**	⇑*e*P	**Pn**	**21 56 36.7**	**+1.9**
KONO				pmax	pmax		
	comp=Z,14nm,1.1s						
KONO	**Kongsberg**	**13.65**	**99**	Pn	**Pn**	**21 56 35.9**	**+1.1**
KONO	**Kongsberg**	**13.65**	**99**	*e*P	**Pn**	**21 56 36.0**	**+1.2**
NB201	**NORSAR Array S**	**13.67**	**92**	Pn	**Pn**	**21 56 36.5**	**+1.4**
NC405	**NORSAR Array S**	**13.82**	**91**	Pn	**Pn**	**21 56 36.9**	**-0.3**
LBWR	**Ladybower, Pea**	**13.88**	**136**	*e*P	**Pn**	**21 56 35.6**	**-2.4**
NC602	**NORSAR Array S**	**13.93**	**93**	Pn	**Pn**	**21 56 38.1**	**-0.4**
NC602	**NORSAR Array S**	**13.93**	**93**	*e*P	**Pn**	**21 56 35.5**	**-3.0**
NUUG	**Nuugaatsiaq**	**14.73**	**313**	*i* P	**P**	**21 56 56.1**	**+0.6**
NUUG				IAmb	IAmb	21 57 03.5	
	comp=Z,56nm,1.0s						
MONM	**Monmouth**	**14.96**	**142**	*e*P	**Pn**	**21 56 52.8**	**+0.1**
MUD	**Monsted U'grnd**	**15.45**	**109**	*e*P	**Pn**	**21 57 00.0**	**+1.0**
MUD				pmax	pmax		
	comp=Z,64nm,1.2s						
MUD	**Monsted U'grnd**	**15.45**	**109**	*i* P	**Pn**	**21 57 00.0**	**+1.0**
	comp=Z,64nm,1.2s						
MUD	**Monsted U'grnd**	**15.45**	**109**	*e*P	**Pn**	**21 57 00.0**	**+1.0**
MUD				IAmb	IAmb	21 57 07.0	
	comp=Z,64nm,1.2s						
UPNV	**Upernavik**	**15.85**	**317**	*i* P	P	21 57 14.9	+6.9
HSPB	**Hornsund (broa**	**16.18**	**26**	*e*P	**P**	**21 57 12.1**	**+0.5**
KBS	**Kingsbay**	**16.74**	**19**	⇑*e*P	**Pn**	**21 57 15.8**	**+0.3**
KBS				pmax	pmax		
	comp=Z,71nm,4.1s						
KBS	**Kingsbay**	**16.74**	**19**		**Pn**	**21 57 16.1**	**+0.6**
SPA0	**Spitsbergen Ar**	**16.97**	**23**	Pn	**Pn**	**21 57 17.3**	**-1.2**
SPA0				IAmb	IAmb	21 57 28.1	
	comp=Z,167nm,1.9s						
SPITS	**Spitsbergen Ar**	**16.97**	**23**	Pn	**P**	**21 57 19.5**	**-0.9**
	baz=224,slow=12,SNR=1.1						
SPITS				LR	LR	22 02 14.9	
	comp=Z,2μm,20.5s,baz=215,slow=32						
ARCES	**ARCESS Array B**	**17.25**	**54**	P	**Pn**	**21 57 17.4**	**-4.5**
	baz=275,slow=9.9,SNR=1.7						
ARCES				LR	LR	22 02 45.1	
	comp=Z,2μm,21.5s,baz=280,slow=33						
KEV	**Kevo**	**17.75**	**54**	P	**P**	**21 57 28.7**	**-0.3**
KEV				pmax	pmax		
	comp=Z,34nm,1.0s						
KEV	**Kevo**	**17.75**	**54**		**P**	**21 57 28.7**	**-0.3**
AAL	**Aland**	**17.84**	**87**	*e*P	**P**	**21 57 30.3**	**+0.2**
UCC	**Uccle**	**18.04**	**130**	*d*Pn	**P**	**21 57 33.4**	**+1.0**
UCC				*d*x	x	21 57 38.5	
UCC	**Uccle**	**18.04**	**130**	P	**P**	**21 57 31.9**	**-0.4**
UCC				pmax	pmax		
	comp=Z,41nm,1.3s						
UCC	**Uccle**	**18.04**	**130**		**P**	**21 57 31.9**	**-0.4**
SNF	**Seneffe**	**18.26**	**130**	*d*Pn	**P**	**21 57 34.3**	**-0.5**
SNF				*d*x	x	21 57 39.2	
RGN	**Rugen**	**18.47**	**108**	P	**P**	**21 57 36.2**	**-0.8**
RGN				IAmb	IAmb	21 57 42.3	
	comp=Z,192nm,1.3s						
BEBN	**Eben Emael**	**18.49**	**127**	*d*Pn	**Pn**	**21 57 37.1**	**-0.3**
BEBN				*d*x	x	21 57 41.7	
BMRD	**Maredsous**	**18.60**	**130**	*d*Pn	**P**	**21 57 36.3**	**-2.2**
BSTI	**Sart Tilman**	**18.63**	**128**	*d*Pn	**Pn**	**21 57 38.8**	**-0.3**
BSTI				*d*x	x	21 57 43.1	
BGES	**Gesves**	**18.64**	**129**	*d*Pn	**P**	**21 57 38.1**	**-0.8**
BGES				*d*x	x	21 57 43.4	
BCLA	**Clavier**	**18.68**	**129**	*d*Pn	**Pn**	**21 57 39.3**	**-0.4**
BCLA				*d*x	x	21 58 04.8	
DOU	**Dourbes**	**18.72**	**130**	*d*x	**Pn**	**21 57 44.6**	**+4.4**
BSD	**Bornholm Skovb**	**18.73**	**105**	*e*P	**P**	**21 57 38.9**	**-1.0**
MEM	**Membach**	**18.76**	**127**	*d*Pn	**Pn**	**21 57 40.4**	**-0.2**
MEM				*d*x	x	21 57 46.0	
BTNL	**Ternell**	**18.82**	**127**	*d*Pn	**Pn**	**21 57 41.1**	**-0.3**
RCHB	**Rochefort**	**18.88**	**129**	*d*x	**Pn**	**21 57 43.9**	**+1.8**
BHOU	**Houvegnez**	**18.98**	**127**	*d*x	**Pn**	**21 57 47.6**	**+4.3**
WLF	**Walferdange**	**19.61**	**128**	*d*x	x	21 57 54.8	
WLF	**Walferdange**	**19.61**	**128**	P	**Pn**	**21 57 50.5**	**-0.4**
WLF				pmax	pmax		
	comp=Z,24nm,1.1s						
WLF	**Walferdange**	**19.61**	**128**	P	**Pn**	**21 57 50.5**	**-0.4**
CLF	**Chambon-Foret**	**19.82**	**137**	P	**Pn**	**21 57 52.2**	**-1.2**
CLF				IAmb	IAmb	21 57 57.3	
	comp=Z,166nm,1.5s						
FIA1	**FINESS Array S**	**19.82**	**79**	P	**Pn**	**21 57 54.5**	**+1.2**
FINES	**FINESS Array B**	**19.82**	**79**	P	**P**	**21 57 48.6**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=312,slow=8.8,SNR=2.3						
TULEG	**Thule**	**19.85**	**328**	P	**P**	**21 57 51.2**	**-0.8**
TULEG	**Thule**	**19.85**	**328**	*e*P	**Pn**	**21 57 59.1**	**+5.6**
MTSE	**Matsula**	**20.28**	**87**	*e*P	**P**	**21 57 56.6**	**-0.2**
APA	**Apatity**	**20.45**	**59**	⇑*i*P	**P**	**21 57 59.3**	**+0.7**
APA				*i* S	**S**	**22 01 43.0**	**-4.2**
APA				pmax	pmax		
	comp=Z,13nm,0.7s						
APA				MLR	MLR		
	comp=Z,2μm,18.0s						
CLL	**Collm**	**20.77**	**115**	*e*P	**P**	**21 57 59.0**	**-3.2**
	comp=Z,24nm,1.5s						
CLL				*i* Pmax		21 58 04.0	
	comp=Z,63nm,1.3s						
CLL				*e*Pmax		21 58 09.0	
CLL				*e*		21 59 48.0	
CLL				*e*S	**S**	**22 01 54.0**	**+0.2**
CLL				*e*SSS	SSS	22 02 24.0	
CLL	**Collm**	**20.77**	**115**	P	**P**	**21 58 00.8**	**-1.4**
CLL				pmax	pmax		
	comp=Z,58nm,1.2s						
CLL	**Collm**	**20.77**	**115**	P	**P**	**21 58 00.8**	**-1.4**
LVZ	**Lovozero**	**20.82**	**58**	⇓*e*P	Pn	21 58 04.2	-0.9
LVZ				pmax	pmax		
	comp=Z,120nm,2.2s						
LVZ	**Lovozero**	**20.82**	**58**	P	**P**	**21 58 01.2**	**-1.4**
LVZ				IAmb	IAmb	21 58 41.6	
	comp=Z,92nm,1.3s						
GKP	**Gorka Klasztor**	**21.00**	**106**	*e*P	**P**	**21 58 05.9**	**+1.3**
GKP				*e*PcP	**PcP**	**22 02 14.2**	**+3.0**
GKP	**Gorka Klasztor**	**21.00**	**106**	*e*P	**P**	**21 58 05.5**	**+0.8**
ECH	**Echery**	**21.20**	**129**	P	**P**	**21 58 06.8**	**0.0**
ECH				pmax	pmax		
	comp=Z,38nm,1.0s						
ECH	**Echery**	**21.20**	**129**	P	**P**	**21 58 06.8**	**0.0**
GRA1	**Grafenberg Arr**	**21.39**	**120**	P	**P**	**21 58 09.9**	**+1.0**
GRA1				IAmb	IAmb	21 58 23.9	
	comp=Z,101nm,1.3s						
GRF	**Grafenberg Arr**	**21.39**	**120**	P	**P**	**21 58 09.9**	**+1.0**
GRF				pmax	pmax		
	comp=Z,101nm,1.3s						
GRF	**Grafenberg Arr**	**21.39**	**120**	*e*P	**P**	**21 58 07.0**	**-1.9**
	comp=Z,50nm,1.2s,baz=322,slow=11						
NKC	**Novy Kostel**	**21.41**	**118**	*e*P	**P**	**21 58 07.3**	**-1.9**
NKC				*e*		21 58 13.1	
NKC				MLR	MLR		
	comp=Z,2μm,18.5s						
NKC	**Novy Kostel**	**21.41**	**118**	*e*P	**P**	**21 58 07.3**	**-1.9**
NKC				*e*pP	**sP**	**21 58 13.1**	**-0.8**
NKC				AMS	AMS	22 07 10.0	
	comp=Z,2μm,18.5s						
STU	**Stuttgart**	**21.42**	**125**	P	**P**	**21 58 08.1**	**-1.1**
STU				pmax	pmax		
	comp=Z,94nm,1.0s						
STU	**Stuttgart**	**21.42**	**125**	P	**P**	**21 58 08.1**	**-1.1**
STU				IAmb	IAmb	21 58 17.5	
	comp=Z,94nm,1.0s						
BRG	**Berggiesshubel**	**21.48**	**115**	*i* P	**P**	**21 58 07.2**	**-2.6**
BRG				Amp		21 58 14.9	
	comp=Z,131nm,1.4s						
BRG				S	Sn	22 02 20.0	+4.2
BRG				Amp		22 07 50.0	
	comp=E,0.6nm,20.1s						
BRG				Amp		22 07 53.0	
	comp=Z,1.9nm,15.6s						
BRG				Amp		22 07 57.0	
	comp=N,1.4nm,15.6s						
BRG	**Berggiesshubel**	**21.48**	**115**	*i* P	**P**	**21 58 07.2**	**-2.6**
BRG				S	Sn	22 02 20.0	+4.2
BRG				pmax	pmax		
	comp=Z,131nm,1.4s						
BRG				MLR	MLR		
	comp=Z,2μm,15.6s						
BRG				MLR	MLR		
	comp=N,1μm,15.6s						
BRG	**Berggiesshubel**	**21.48**	**115**	*i* P	**P**	**21 58 07.2**	**-2.6**
BRG				Amp		21 58 14.9	
	comp=Z,131nm,1.4s						
BFO	**Black Forest**	**21.50**	**127**	P	**P**	**21 58 08.3**	**-1.7**
BFO				pmax	pmax		
	comp=Z,216nm,1.9s						
BFO	**Black Forest**	**21.50**	**127**	P	**P**	**21 58 08.3**	**-1.7**
FRB	**Frobisher Bay**	**21.67**	**291**	P	**P**	**21 58 13.2**	**+1.5**
	comp=Z,6.4nm,0.7s,baz=357,slow=0.2,SNR=3.4						
FRB				LR	LR	22 06 22.7	
	comp=Z,1μm,19.3s,baz=66,slow=36						
VSU	**Vasula**	**21.68**	**86**	*e*P	**P**	**21 58 12.9**	**+1.0**
VSU	**Vasula**	**21.68**	**86**	*de*P	**P**	**21 58 13.4**	**+1.5**
VSU				pmax	pmax		
	comp=Z,187nm,0.8s						
PVCC	**Panska Ves**	**22.00**	**114**	*e*P	**P**	**21 58 17.5**	**+2.1**
PVCC				MLR	MLR		
	comp=Z,1μm,18.5s						
PVCC	**Panska Ves**	**22.00**	**114**	*e*P	**P**	**21 58 17.5**	**+2.1**
PVCC				*e*S	Sn	22 02 31.8	+3.5
PVCC				AMS	AMS	22 08 00.0	
	comp=Z,1μm,18.5s						
PRA	**Prague**	**22.31**	**115**	AMS	AMS	22 08 10.0	
	comp=Z,600nm,16.5s						
PABE	**Paberze**	**22.31**	**94**	*e*P	**P**	**21 58 18.8**	**+0.1**
PRU	**Pruhonice**	**22.42**	**115**	*e*P	**P**	**21 58 18.1**	**-1.8**
PRU				*e*		21 58 21.7	
PRU				MLR	MLR		
	comp=Z,1μm,11.1s						
PRU	**Pruhonice**	**22.42**	**115**	*e*P	**P**	**21 58 18.1**	**-1.8**
PRU				*e*pP	**pP**	**21 58 21.7**	**-1.5**
PRU				*e*S	Sn	22 02 38.9	+0.6
PRU				AMS	AMS	22 08 20.0	
	comp=Z,1μm,11.1s						
KSP	**Ksiaz**	**22.44**	**112**	*e*P	**P**	**21 58 17.4**	**-2.7**
KSP				*e*S	**S**	**22 02 30.2**	**+4.0**
PUL	**Pulkovo**	**22.48**	**80**	⇓*e*P	**P**	**21 58 20.7**	**+0.3**
PUL				pmax	pmax		
	comp=Z,71nm,0.9s						
CHVC	**Chvalec**	**22.54**	**112**	*e*P	**P**	**21 58 19.8**	**-1.4**
CHVC				*e*S	Sn	22 02 40.2	-1.1
CHVC				AMS	AMS	22 07 50.0	
	comp=Z,1μm,19.4s						
UPC	**Upice**	**22.59**	**113**	*e*P	**P**	**21 58 23.1**	**+1.4**
UPC				MLR	MLR		
	comp=Z,2μm,17.0s						
UPC	**Upice**	**22.59**	**113**	*e*P	**P**	**21 58 23.1**	**+1.4**
UPC				*e*S	Sn	22 02 38.9	-3.4
UPC				AMS	AMS	22 07 20.0	

Sta	Name	Dist	Azi	Phase	ISC phase	Time	Res
	comp=Z,2µm,17.0s						
OSTC	Ostas	22.63	112	*e*P	P	21 58 21.1	-1.1
OSTC				*e*S	Sn	22 02 40.5	-2.9
OSTC				AMS	AMS	22 07 20.0	
	comp=Z,1µm,21.3s						
KHC	Kasperske Hory	22.74	118	*e*P	P	21 58 21.6	-1.8
KHC				*e*		21 58 26.6	
KHC				MLR	MLR		
	comp=Z,2µm,20.9s						
KHC	Kasperske Hory	22.74	118	*e*P	P	21 58 21.6	-1.8
KHC				*e*pP	sP	21 58 26.6	-1.5
KHC				*e*S	Sn	22 02 43.9	-2.1
KHC				AMS	AMS	22 06 50.0	
	comp=Z,2µm,20.9s						
KHC	Kasperske Hory	22.74	118	P	P	21 58 22.1	-1.2
KHC				IAmb	IAmb	21 58 27.9	
	comp=Z,51nm,1.2s						
DPC	Dobruska-Polom	22.84	112	*e*P	P	21 58 21.0	-3.4
DPC				*e*		21 58 26.6	
DPC				MLR	MLR		
	comp=Z,1µm,18.3s						
DPC	Dobruska-Polom	22.84	112	*e*P	P	21 58 21.0	-3.4
DPC				*e*pP	pP	21 58 26.6	-1.1
DPC				*e*S	Sn	22 02 44.8	-3.5
DPC				AMS	AMS	22 08 00.0	
	comp=Z,1µm,18.3s						
SENIN	Lac Senin/Sane	22.86	131	P	P	21 58 24.5	-0.4
DAVA	Damuels	22.93	126	*i* P	P	21 58 26.8	+1.3
	comp=Z,23nm,1.4s,SNR=9.0						
SSB	Saint Sauveur	22.98	137	P	P	21 58 26.8	+1.0
SSB				pmax	pmax		
	comp=Z,27nm,1.1s						
SSB	Saint Sauveur	22.98	137	P	P	21 58 26.8	+1.0
SUW	Suwalki	22.98	98	*e*P	P	21 58 26.4	+0.6
SUW				*e*S	S	22 02 36.7	+0.9
SUW	Suwalki	22.98	98	*e*P	P	21 58 26.7	+0.9
GEC2	GERESS Array S	23.02	118	P	P	21 58 25.5	-0.8
GERES	GERESS Array B	23.02	118	P	P	21 58 24.5	-1.9
	comp=Z,11nm,1.0s,baz=330,slow=7.7,SNR=32						
GERES				LR	LR	22 07 45.6	
	comp=Z,2µm,21.2s,baz=328,slow=38						
RETA	Reutte	23.07	124	*i* P	P	21 58 26.4	-0.5
	comp=Z,17nm,0.9s,SNR=8.5						
ISAL	Salakas	23.20	92	*e*P	P	21 58 27.2	-0.7
KRLC	Kraliky	23.23	112	*e*P	P	21 58 25.3	-3.2
KRLC				*e*		21 58 29.4	
KRLC				MLR	MLR		
	comp=Z,1µm,18.4s						
KRLC	Kraliky	23.23	112	*e*P	P	21 58 25.3	-3.2
KRLC				*e*pP	pP	21 58 29.4	-2.4
KRLC				*e*S	Sn	22 02 50.9	-6.9
KRLC				AMS	AMS	22 08 00.0	
	comp=Z,1µm,18.4s						
MOTA	Moosalm	23.31	124	*i* P	P	21 58 30.3	+0.9
	comp=Z,26nm,1.2s,SNR=6.1						
PGAV	Gavieira, Arco	23.32	162	*e*P	P	21 58 28.8	-0.7
	comp=Z,57nm,1.6s						
PGAV				*e*S	Sn	22 02 53.1	-7.0
PGAV				*e*LR	LR	22 04 45.6	
	comp=Z,985nm,16.0s						
TREC	Trest	23.34	115	*e*S	Sn	22 02 53.8	-6.6
TREC				AMS	AMS	22 08 50.0	
	comp=Z,1µm,17.7s						
DAVOX	Davos/Dischmat	23.37	127	P	P	21 58 28.5	-1.5
	comp=Z,14nm,0.9s,baz=319,slow=8.3,SNR=22						
DAVOX				LR	LR	22 08 42.8	
	comp=Z,1µm,18.8s,baz=338,slow=40						
IIGN	Ignalina	23.39	92	*e*P	P	21 58 28.3	-1.6
TUE	Stuetta	23.45	128	P	P	21 58 30.5	-0.3
TUE				IAmb	IAmb	21 58 54.5	
	comp=Z,79nm,1.3s						
FETA	Feichten	23.46	125	*e*P	P	21 58 34.5	+3.6
	comp=Z,19nm,1.4s						
SQTA	Sankt Quirin	23.46	124	*i* P	P	21 58 32.0	+1.2
	comp=Z,18nm,0.9s,SNR=5.9						
TMCR	Tamitsa	23.47	65	*e*P	P	21 58 29.9	-0.7
TMCR				*e*S	S	22 02 43.6	-0.2
TMCR				pmax	pmax		
	comp=Z,35nm,0.9s						
WATA	Walderalm	23.49	123	*i* P	P	21 58 31.8	+0.7
	comp=Z,22nm,1.0s,SNR=10						
BEL	Belsk	23.53	104	*e*P	P	21 58 31.4	+0.1
WTTA	Wattenberg	23.57	123	*e*P	P	21 58 29.9	-2.1
	comp=Z,23nm,1.1s						
PCAB	Cabril	23.61	162	*e*P	P	21 58 36.1	+3.9
	comp=Z,45nm,1.8s						
IDID	Didziasalis	23.63	92	*e*P	P	21 58 30.4	-1.9
EUNU	Eureka	23.69	336	P	P	21 58 33.3	+0.6
EUNU				IAmb	IAmb	21 58 40.3	
	comp=Z,62nm,1.2s						
PBRG	Braganca	23.70	159	*e*P	P	21 58 36.7	+3.6
	comp=Z,39nm,1.8s						
VRAC	Vranov	23.77	114	P	P	21 58 32.0	-1.7
	comp=Z,12nm,1.0s,baz=326,slow=12,SNR=5.2						
VRAC				LR	LR	22 09 08.8	
	comp=Z,1µm,18.2s,baz=329,slow=40						
VRAC	Vranov	23.77	114	⇓P	P	21 58 33.9	+0.2
VRAC	Vranov	23.77	114	*e*P	P	21 58 30.8	-2.9
VRAC				*e*S	S	22 02 58.0	+9.2
MORC	Moravsky Berou	23.77	112	⇓P	P	21 58 33.6	-0.2
MORC	Moravsky Berou	23.77	112	*e*P	P	21 58 30.9	-2.9
MORC				*e*S	S	22 02 57.3	+8.3
MORC	Moravsky Berou	23.77	112	P	P	21 58 32.1	-1.7
MORC				pmax	pmax		
	comp=Z,95nm,1.8s						
MORC	Moravsky Berou	23.77	112	P	P	21 58 32.1	-1.7
MORC				IAmb	IAmb	21 58 47.1	
	comp=Z,94nm,1.8s						
BNI	Bardonecchia	23.83	133	P	P	21 58 35.3	+0.8
BNI				pmax	pmax		
	comp=Z,36nm,1.3s						
BNI	Bardonecchia	23.83	133	P	P	21 58 35.3	+0.8
KRUC	Moravsky	23.89	114	*e*P	P	21 58 31.9	-2.9
KRUC				*e*S	S	22 02 58.8	+8.1
NACGM	Naroch	23.92	93	*i* P	P	21 58 32.2	-2.9
NACGM				*i* P	P	21 58 32.2	-2.9
NACGM				*i* P	P	21 58 32.2	-2.9
NACGM				*i* S	S	22 02 59.4	+8.3
NACGM				*i* SS	SnSn	22 03 59.9	+30
NACGM				*i* LQ	LQ	22 06 12.6	
NACGM				*i* LR	LR	22 08 22.7	
POLO	Lamas de Olo	23.97	161	*e*P	P	21 58 39.0	+3.2
	comp=Z,25nm,1.6s						
OKC	Ostrava-Krasne	23.97	111	*e*S	S	22 03 01.6	+10
OKC				AMS	AMS	22 08 30.0	
	comp=Z,900nm,20.1s						
MOA	Molln	24.05	119	*e*P	P	21 58 38.1	+1.7
	comp=Z,31nm,1.4s						
PVRL	Vila Real	24.07	161	*e*P	P	21 58 42.1	+5.4
	comp=Z,40nm,1.7s						
MVO	Moncorvo	24.28	160	*e*P	P	21 58 40.7	+2.0
	comp=Z,44nm,2.3s						
MVO				*e*S	S	22 03 12.1	+15
MVO				*e*LR	LR	22 05 15.3	
	comp=Z,670nm,18.0s						
ABTA	Abfaltersbach	24.33	123	*e*P	P	21 58 42.1	+3.0
	comp=Z,17nm,1.3s						
OJC	Ojcow	24.34	108	*e*P	P	21 58 39.1	0.0
OJC				*e*S	S	22 03 01.1	+3.1
OJC	Ojcow	24.34	108	P	P	21 58 39.3	+0.2
OJC				pmax	pmax		
	comp=Z,90nm,1.6s						
OJC	Ojcow	24.34	108	P	P	21 58 39.3	+0.2
KBA	Koelnbreinsper	24.35	121	*e*P	P	21 58 35.7	-3.7
	comp=Z,19nm,1.3s						
JAVC	Velka Javorina	24.55	113	*e*P	P	21 58 39.4	-1.7
CONA	Conrad Observa	24.60	117	*i* P	P	21 58 41.7	+0.2
	comp=Z,20nm,1.0s,SNR=11						
SALO	Salr	24.60	127	P	P	21 58 42.1	+0.6
SALO				IAmb	IAmb	21 58 53.6	
	comp=Z,54nm,1.1s						
PVIS	Viseu	24.60	162	*e*P	P	21 58 45.3	+3.8
	comp=Z,41nm,1.4s						
CTI	Castel Tesino	24.62	125	P	P	21 58 41.1	-0.6
CTI				pmax	pmax		
	comp=Z,38nm,1.1s						
CTI	Castel Tesino	24.62	125	P	P	21 58 41.1	-0.6
CTI				IAmb	IAmb	21 58 47.5	
	comp=Z,38nm,1.1s						
ZOU	Zoufplan	24.66	122	IAmb	IAmb	21 58 53.9	
	comp=Z,41nm,1.1s						
MNK	Minsk	24.67	92	*i* P	P	21 58 42.5	+0.6
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	21 58 42.5	+0.6
	comp=N,29nm,1.0s						
MNK				*i* P	P	21 58 42.5	+0.6
	comp=Z,39nm,1.0s						
MNK				*i* PP	PnPn	21 59 13.2	-0.1
MNK				*i* S	S	22 03 03.8	+0.7
MNK				*i* SS	SnSn	22 03 49.1	+0.7
MNK				*i* LQ	LQ	22 05 44.4	
MNK				*i* LR	LR	22 06 41.0	
MNK				*i* LRM	MLR	22 07 51.6	
	comp=Z,287nm,17.8s						
MNK				*i* LRM	MLR	22 08 25.9	
	comp=E,55nm,17.8s						
MNK				*i* LRM	MLR	22 08 28.5	
	comp=N,577nm,17.8s						
MNK	Minsk	24.67	92	*e*P	P	21 58 43.0	+1.1
SMOL	Smolenice	24.73	114	*e*P	P	21 58 43.4	+0.8
SMOL				pmax	pmax		
	comp=Z,29nm,1.1s						
SMOL	Smolenice	24.73	114	*e*P	P	21 58 43.4	+0.8
MODS	Modra-Piesok	24.79	114	*e*P	P	21 58 44.3	+1.2
MODS				pmax	pmax		
	comp=Z,195nm,2.0s						
MODS	Modra-Piesok	24.79	114	*e*P	P	21 58 44.3	+1.2
MODS				*e*S	S	22 03 13.0	+7.8
STAL	STALIGIAL	24.82	123	P	P	21 58 43.8	+0.4
MYKA	Terra Mystica	24.84	121	*e*P	P	21 58 45.3	+1.7
	comp=Z,10nm,1.1s						
ZST	Bratislava	24.86	115	*e*S	S	22 03 16.4	+10
MTE	Manteigas	24.96	161	*e*P	P	21 58 46.2	+1.5
	comp=Z,65nm,1.5s						
MTE				*e*S	S	22 03 28.7	+21
MTE				*e*LR	LR	22 05 31.1	
	comp=Z,1µm,18.0s						
MTE	Manteigas	24.96	161	P	P	21 58 46.3	+1.5
MTE				IAmb	IAmb	21 58 50.5	
	comp=Z,49nm,1.2s						
ARSA	Arzberg	25.03	118	*i* P	P	21 58 45.9	+0.6
	comp=Z,17nm,0.9s,SNR=7.0						
COI	Coimbra	25.03	163	P	P	21 58 46.4	+1.0
COI				pmax	pmax		
	comp=Z,59nm,1.3s						
COI	Coimbra	25.03	163	P	P	21 58 46.4	+1.0
LANS	Liptovska Anna	25.04	110	*e*P	P	21 58 45.2	-0.2
LANS				pmax	pmax		
	comp=Z,21nm,1.0s						
LANS	Liptovska Anna	25.04	110	*e*P	P	21 58 45.2	-0.2
SOP	Sopron	25.07	116	*e*P	P	21 58 48.0	+2.4
ROBS	Robic	25.12	122	*e*P	P	21 58 46.0	-0.1
NIE	Niedzica	25.17	109	*e*P	P	21 58 47.3	+0.7
PCAS	Casmilo, Conde	25.18	163	*e*P	P	21 58 48.9	+2.2
	comp=Z,50nm,1.8s						
TEOL	Teolo	25.22	126	IAmb	IAmb	21 58 51.4	
	comp=Z,47nm,1.0s						
PRMA	PARMA	25.27	128	P	P	21 58 47.8	+0.4
PRMA				IAmb	IAmb	21 58 58.5	
	comp=Z,36nm,1.1s						
OBKA	Obir	25.28	120	*e*P	P	21 58 46.2	-1.4
	comp=Z,22nm,1.5s						
VYHS	Vyhne	25.31	112	*e*P	P	21 58 48.5	+0.7
VYHS				pmax	pmax		
	comp=Z,87nm,1.6s						
VYHS	Vyhne	25.31	112	*e*P	P	21 58 48.5	+0.7
VYHS				*e*S	S	22 03 25.8	+12
SOKA	Soboth	25.32	119	*i* P	P	21 58 47.6	-0.4
	comp=Z,11nm,1.1s,SNR=7.7						
PCBR	Castelo Branco	25.52	161	*e*P	P	21 58 53.4	+3.7
	comp=Z,30nm,1.3s						
EGYH	Egyhazaskeszo	25.59	115	*e*P	P	21 58 54.0	+3.7
LJU	Ljubljana	25.66	121	*e*P	P	21 58 51.5	+0.4
KLMR	Klimovskoe	25.73	72	*e*P	P	21 58 50.3	-1.2
KLMR				*e*		22 02 22.6	
KLMR				*e*S	S	22 03 19.9	+0.1
KLMR	Klimovskoe	25.73	72	*e*P	P	21 58 50.4	-1.1
KLMR				AMP		21 58 57.2	
	comp=Z,43nm,1.1s						
KLMR				*e*PcP	PcP	22 02 22.6	+1.7
KLMR				*e*S	S	22 03 20.0	+0.1
KLMR				*e*S	S	22 03 20.0	+0.1
KLMR				LQ	LQ	22 06 11.2	
KLMR				LQ	LQ	22 06 11.2	
KLMR				LR	LR	22 06 40.0	
VLC	Villacollemand	25.83	129	P	P	21 58 53.3	+0.7
ZCCA	Zocca	25.86	128	P	P	21 58 55.5	+2.6
ZCCA				IAmb	IAmb	21 59 00.0	
	comp=Z,40nm,1.0s						
MPLH	Magyarpolny	25.87	115	*e*P	P	21 58 55.0	+2.1
PMRV	Marv??o	25.93	161	*e*P	P	21 58 59.0	+5.4
	comp=Z,50nm,1.4s						
PMRV				*e*S	S	22 03 41.2	+18
PMRV				*e*LR	LR	22 05 52.1	
	comp=Z,1µm,18.0s						
KECS	Kecovo	25.98	110	*e*P	P	21 58 54.5	+0.6
KECS				pmax	pmax		
	comp=Z,12nm,1.0s						
KECS	Kecovo	25.98	110	*e*P	P	21 58 54.5	+0.6
CSKK	Cskako	26.00	114	*e*P	P	21 58 55.7	+1.6
KWP	Kalwaria Pacla	26.00	106	*e*P	P	21 58 53.9	-0.1
CRVS	Cervenica-Dubn	26.05	108	*e*P	P	21 58 56.7	+2.2
CRVS				pmax	pmax		
	comp=Z,206nm,2.1s						
CRVS	Cervenica-Dubn	26.05	108	*e*P	P	21 58 56.7	+2.2
BEHE	Becsehely	26.15	117	*e*P	P	21 59 00.3	+4.8
PSZ	Piszkesteto	26.20	111	⇓P	P	21 58 56.2	+0.3
PSZ	Piszkesteto	26.20	111	*e*P	P	21 58 56.0	+0.1
PSZ	Piszkesteto	26.20	111	IAmb	IAmb	21 59 05.6	
	comp=Z,40nm,1.1s						
BUD	Budapest	26.20	113	*e*P	P	21 58 57.3	+1.5
TIH	Tihany	26.23	115	*e*P	P	21 58 56.3	+0.2
ESDC	Sonseca Array	26.24	155	P	P	21 58 55.1	-1.3
	comp=Z,8.3nm,1.1s,baz=347,slow=8.7,SNR=20						
ESDC				LR	LR	22 09 08.5	
	comp=Z,832nm,18.2s,baz=330,slow=36						
KOLS	Kolonicke sedl	26.36	107	*e*P	P	21 58 59.6	+2.3
KOLS				pmax	pmax		
	comp=Z,38nm,1.3s						
KOLS	Kolonicke sedl	26.36	107	*e*P	P	21 58 59.6	+2.3
LVV	L'vov	26.40	104	*e*P	P	21 58 59.1	+1.4
LVV				*e*S	S	22 03 27.0	-3.8
LVV				pmax	pmax		
	comp=Z,140nm,1.5s						
LVV				MLR	MLR		
	comp=N,400nm,14.0s						
LVV				MLR	MLR		
	comp=E,200nm,14.0s						
LVV				MLR	MLR		
	comp=Z,300nm,14.0s						
RES	Resolute Bay	26.46	324	P	P	21 58 58.3	+0.3
	comp=Z,4.0nm,0.9s,baz=122,slow=7.4,SNR=3.6						
RES	Resolute Bay	26.46	324	P	P	21 58 57.0	-1.0
UZH	Uzhgorod	26.60	108	*e*P	P	21 58 59.2	-0.3
UZH				*i*		21 59 01.0	
UZH				*i*		21 59 04.1	
MURB	Monte Urbino	27.35	127	IAmb	IAmb	21 59 28.1	
	comp=Z,49nm,1.2s						
MESJ	Messejana	27.39	163	*e*P	P	21 59 09.5	+2.8
MESJ				*e*S	S	22 03 50.9	+4.4
MESJ				AMS	AMS	22 09 11.0	
	comp=Z,818nm,18.9s						
MESJ	Messejana	27.39	163	*e*P	P	21 59 09.4	+2.8
MESJ				*e*S	S	22 03 50.8	+4.4
LTVH	Ltavrtes, Hu	27.43	110	*e*P	P	21 59 05.7	-1.3
AMBH	Ambrzfalva	27.80	112	*e*P	P	21 59 12.3	+2.1
MORF	Marmelete	27.87	164	*e*P	P	21 59 14.2	+3.1
MORF				AMS	AMS	22 09 12.3	
	comp=Z,859nm,20.7s						
MORF	Marmelete	27.87	164	*e*P	P	21 59 14.1	+3.1
NRCA	Norcia	27.93	126	P	P	21 59 14.1	+2.5
NRCA				IAmb	IAmb	21 59 17.4	
	comp=Z,24nm,1.2s						
AKASG	Malin Array Be	27.94	97	P	P	21 59 09.1	-2.4
	comp=Z,6.8nm,0.9s,baz=323,slow=9.8,SNR=11						
AKASG				LR	LR	22 10 20.3	
	comp=Z,562nm,21.2s,baz=310,slow=37						
AKASG	Malin Array Be	27.94	97	*ce*P	P	21 59 12.6	+1.1
AKASG				pmax	pmax		
	comp=Z,13nm,1.0s						
AKBB	Malin Array Si	27.94	97	⇓*e*P	P	21 59 12.2	+0.7
AKBB	Malin Array Si	27.94	97	IAmb	IAmb	21 59 17.3	
	comp=Z,28nm,1.4s						
OBN	Obninsk	28.00	84	P	P	21 59 09.6	-2.3
	comp=Z,5.6nm,0.8s,baz=349,slow=3.4,SNR=8.0						
OBN				LR	LR	22 10 44.1	
	comp=Z,167nm,19.4s,baz=306,slow=38						
OBN	Obninsk	28.00	84	⇓P	P	21 59 08.8	-3.1
OBN	Obninsk	28.00	84	*d i*P	P	21 59 13.1	+1.2
OBN				*i*		21 59 18.6	
OBN				*i*		21 59 57.1	
OBN				*i*		22 02 27.1	
OBN				pmax	pmax		
	comp=Z,46nm,1.3s						
OBN				MLR	MLR		
	comp=Z,612nm,18.0s						
OBN	Obninsk	28.00	84	P	P	21 59 11.9	0.0
OBN				IAmb	IAmb	21 59 14.4	
	comp=Z,31nm,0.9s						
MOS	Moscow	28.04	82	*e*P	P	21 59 12.0	-0.3
MOS				*e*		21 59 58.5	
MOS				*e*S	S	22 03 54.8	-1.5
MOS				*e*SS	SnSn	22 05 10.5	-0.1
MOS				pmax	pmax		
	comp=Z,33nm,1.2s						
MOS				MLR	MLR		
	comp=Z,500nm,16.0s						
DRGR		28.24	110	⇑P	P	21 59 13.1	-1.2
SIRR	Siria	28.24	111	⇓P	P	21 59 14.5	+0.3
AQU	L'Aquila	28.46	126	P	P	21 59 16.2	0.0
AQU				pmax	pmax		
	comp=Z,35nm,1.2s						
AQU	L'Aquila	28.46	126	P	P	21 59 16.2	0.0
AQU				IAmb	IAmb	21 59 49.5	
	comp=Z,35nm,1.2s						
BUR08	Bucovina Ar. S	28.58	106	P	P	21 59 18.1	+0.8
BUR08				IAmb	IAmb	21 59 23.0	
	comp=Z,35nm,1.6s						
BURAR	Bucovina Array	28.61	106	⇑P	P	21 59 16.4	-1.2
CJR	Cluj-Napoca	28.66	109	⇑P	P	21 59 17.7	-0.4
BZS	Buzias	28.76	112	⇑P	P	21 59 17.6	-1.2
GZR	Gura Zlata	29.40	111	⇑P	P	21 59 24.2	-0.4
MDVR	Moldovita	29.48	113	⇑P	P	21 59 25.1	-0.2
BIZ	Bicaz	29.52	106	⇑P	P	21 59 25.0	-0.5
SORM	Soroca	29.52	102	⇑P	P	21 59 23.6	-2.0
HERR	Herculane	29.68	112	⇑P	P	21 59 26.0	-1.1
VSL	Villasalto	29.71	135	P	P	21 59 27.9	+0.6
VSL				IAmb	IAmb	21 59 39.6	
	comp=Z,24nm,1.1s						
OZUR		30.06	107	⇑P	P	21 59 29.1	-1.3
TESR	Tescani	30.08	105	⇑P	P	21 59 29.6	-1.0
VOIR		30.29	108	⇑P	P	21 59 32.4	-0.1
MTUR	Matau	30.47	109	⇑P	P	21 59 33.7	-0.4
PDG	Podgorica	30.52	119	⇓P	P	21 59 34.9	+0.5
PDG	Podgorica	30.52	119	IAmb	IAmb	21 59 37.7	
	comp=Z,28nm,1.1s						
MLR	Muntele Rosu	30.61	107	⇑P	P	21 59 34.5	-0.9
MLR	Muntele Rosu	30.61	107	IAmb	IAmb	22 00 02.7	
	comp=Z,20nm,1.2s						
PLOR	Plostina	30.61	106	⇓P	P	21 59 34.2	-1.1
VRI	Vrincioaia	30.63	106	⇑P	P	21 59 33.9	-1.6
LPSR	Galich'ya Gora	30.74	86	*e*P	P	21 59 36.7	+0.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
KIRV	Kirov	31.11	69	P	P	21 59 35.9	-3.5
	comp=Z,11nm,1.0s,baz=237,slow=15,SNR=3.4						
KIRV				LR	LR	22 11 36.7	
	comp=Z,2µm,21.5s,baz=308,slow=36						
KIRV	Kirov	31.11	69	*de*P	P	21 59 40.3	+0.9
CFR	Carcaliu	31.77	105	⇓P	P	21 59 44.4	-1.0
PMOZ	Porto Moniz, M	31.81	179	*e*LR	LR	22 08 20.4	
	comp=Z,534nm,18.0s						
VSR	Storozhevoye	31.84	87	*e*P	P	21 59 46.1	+0.1
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VTS	Vitosha	31.90	114	⇑P	P	21 59 46.5	-0.3
VORD	Divnogorie	32.08	87	*e*P	P	21 59 48.4	+0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HARR	Harsova	32.09	106	⇑P	P	21 59 46.9	-1.3
CHGQ	Chibougamau	32.68	271	P	P	21 59 54.5	+1.1
	baz=42,SNR=5.9						
VRH	Novokhopyorsk	32.95	85	*e*P	P	21 59 56.6	+0.9
VRH				pmax	pmax		
	comp=Z,30nm,1.2s						
KEST	Kesra	33.18	137	P	P	21 59 57.1	-0.9
	comp=Z,3.0nm,0.8s,baz=27,slow=9.0,SNR=1.8						
KEST				LR	LR	22 13 27.8	
	comp=Z,671nm,18.6s,baz=310,slow=36						
LATQ	La Tuque	33.91	266	P	P	22 00 04.0	-0.1
	baz=39						
PKME	Peaks-Kenny Pk	34.09	261	P	P	22 00 05.2	-0.4
	baz=37						
E60A	Ste Agathe de	34.13	264	P	P	22 00 06.0	-0.1
	baz=38						
D58A	Chemin du LacG	34.18	266	P	P	22 00 05.7	-0.8
	baz=39						
MATQ	Matagami	34.20	274	P	P	22 00 06.8	+0.2
	baz=41						
LSQQ	Lebel-sur-Quev	34.44	272	P	P	22 00 07.7	-1.1
	baz=41						
BELG	Belogornoye	34.60	79	P	P	22 00 06.3	-3.7
	comp=Z,20nm,1.0s,baz=122,slow=8.7,SNR=4.2						
BELG				LR	LR	22 14 06.6	
	comp=Z,891nm,21.4s,baz=318,slow=36						
BELG	Belogornoye	34.60	79	*de*P	P	22 00 11.0	+1.0
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
D56A	ZEC Mazanza, M	35.02	268	P	P	22 00 13.6	-0.2
	baz=39						
G61A	St-Isidore-de-	35.02	263	P	P	22 00 12.7	-1.1
	baz=37						
E57A	Chemin Saint G	35.26	267	P	P	22 00 14.4	-1.5
	baz=38						
I64A	Boothbay	35.31	260	P	P	22 00 15.2	-1.0
	baz=36						
D55A	Sainte-Anne-du	35.36	269	P	P	22 00 15.4	-1.2
	baz=39						
G60A	Masonville	35.52	263	P	P	22 00 17.5	-0.5
	baz=37						
E56A	St. Veronique	35.54	268	P	P	22 00 17.0	-1.2
	baz=38						
ANN	Anapa	36.01	96	*e*P	P	22 00 18.1	-4.1
ANN				pmax	pmax		
	comp=Z,84nm,1.3s						
ANN				MLR	MLR		
	comp=Z,1µm,19.0s						
ARU	Arti	36.21	66	P	P	22 00 20.6	-3.2
	comp=Z,1.2nm,0.8s,baz=305,slow=3.8,SNR=5.7						
ARU				LR	LR	22 14 35.6	
	comp=Z,2µm,21.2s,baz=308,slow=36						
ARU	Arti	36.21	66	*d i*P	P	22 00 25.3	+1.5
ARU						22 01 39.8	
ARU				PPP	PPP	22 02 01.9	
ARU				S	S	22 06 08.4	+4.9
ARU				pmax	pmax		
	comp=Z,38nm,2.7s						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s						
ARU	Arti	36.21	66	P	P	22 00 23.9	+0.1
NRIK	Noril'sk	36.57	35	P	P	22 00 22.9	-3.9
	comp=Z,3.1nm,0.8s,baz=270,slow=4.1,SNR=3.1						
NRIK				LR	LR	22 17 31.6	
	comp=Z,441nm,18.1s,baz=328,slow=40						
NRIK	Noril'sk	36.57	35	⇑*e*P	P	22 00 25.2	-1.6
NRIK				pmax	pmax		
	comp=Z,19nm,1.1s						
NRIK	Noril'sk	36.57	35	P	P	22 00 26.3	-0.5
G57A	Newington	36.65	266	P	P	22 00 26.7	-1.0
	baz=37						
SVE	Sverdlovsk	36.74	64	*e*P	P	22 00 30.3	+2.0
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s						
C36M	Paulatuk	36.82	325	P	P	22 00 27.9	-1.0
	baz=44						
C36M	Paulatuk	36.82	325	P	P	22 00 30.0	+1.1
C36M				IAmb	IAmb	22 00 40.3	
	comp=Z,42nm,1.6s						
I59A	Olmsteadville	37.22	264	P	P	22 00 30.6	-2.0
	baz=36						
SOC	Sochi	37.97	95	*e*P	P	22 00 40.9	+2.0
SOC				*e*		22 02 03.2	
SOC				*e*PPP	PPP	22 02 25.1	
SOC				*e*S	S	22 06 33.7	+3.2
SOC				*e*SS	SnSn	22 09 10.9	-1.0
SOC				pmax	pmax		
	comp=Z,53nm,1.0s						
SOC				MLR	MLR		
	comp=Z,268nm,12.0s						
BR131	Keskin Array S	38.57	105	*de*P	P	22 00 46.0	+1.8
BR131	Keskin Array S	38.57	105	IAmb	IAmb	22 00 47.8	
	comp=Z,28nm,1.2s						

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BRTR  Keskin Array B    38.57 105   P     P      22 00 42.1 -2.1
      comp=Z,5.8nm,0.9s,baz=322,slow=9.1,SNR=6.5
BRTR                                LR    LR     22 19 20.3
      comp=Z,130nm,18.2s,baz=304,slow=41
SADO  Sadowa            38.71 270   LR    LR     22 15 25.0
      comp=Z,847nm,21.3s,baz=68,slow=34
KIV   Kislovodsk        38.95  92 i P     P      22 00 47.0 -0.3
KIV                               i                22 03 00.3
KIV                               i S     S      22 06 44.2 -1.3
KIV                                 pmax  pmax
      comp=Z,15nm,1.0s
KIV                                 MLR   MLR
      comp=Z,958nm,24.0s
KIV   Kislovodsk        38.95  92   P     P      22 00 48.8 +1.5
KVAR  Kislovodsk Arr    38.95  92   LR    LR     22 17 36.1
      comp=Z,470nm,18.8s,baz=252,slow=38
YKA   Yellowknife Ar    39.18 313   P     P      22 00 47.9 -1.0
      comp=Z,4.6nm,0.9s,baz=45,slow=8.8,SNR=13
YKA                                 PcP   PcP    22 02 56.1 -1.7
      comp=Z,0.6nm,0.9s,baz=41,slow=3.8,SNR=4.1
YKA                                 LR    LR     22 16 40.9
      comp=Z,653nm,19.8s,baz=0.0,slow=36
KBZ   Khabaz            39.22  92   P     P      22 00 46.8 -2.6
      comp=Z,4.2nm,0.9s,baz=332,slow=10,SNR=4.2
KBZ                                 LR    LR     22 17 20.7
      comp=Z,724nm,21.7s,baz=324,slow=37
KBZ   Khabaz            39.22  92⇑eP    P      22 00 50.1 +0.7
KBZ                                 pmax  pmax
      comp=Z,29nm,1.2s
K56A  Middlesex         39.59 266   P     P      22 00 51.3 -1.3
      baz=36
NCK   Nalchik           39.71  92⇓eP    P      22 00 54.8 +1.3
NCK                                 pmax  pmax
      comp=Z,23nm,1.0s
I51A  Listowel          40.29 270   P     P      22 00 57.0 -1.3
      baz=36
AKTO  Aktyubinsk        40.41  73   P     P      22 00 56.2 -3.0
      comp=Z,11nm,1.0s,baz=311,slow=8.5,SNR=3.8
AKTO                                LR    LR     22 17 35.5
      comp=Z,1μm,19.8s,baz=318,slow=36
ZEI   Tsey              40.41  92  eP     P      22 01 00.4 +0.8
ZEI                                 pmax  pmax
      comp=Z,10.0nm,1.3s
N58A  Sunbury           40.85 264   P     P      22 00 58.8 -4.1
      baz=34
N57A  Milroy            41.28 264   P     P      22 01 06.1 -0.4
      baz=34
A21K  Barrow            41.46 341   P     P      22 01 06.4 -1.1
      baz=25
A21K  Barrow            41.46 341   P     P      22 01 06.8 -0.8
A21K                                IAmb  IAmb   22 01 15.7
      comp=Z,65nm,1.5s
EYMN  Ely               41.49 283   P     P      22 01 08.3 +0.1
      baz=38
ULM   Lac du Bonnet     41.52 289   P     P      22 01 08.7 +0.3
      comp=Z,2.0nm,0.6s,baz=18,slow=10,SNR=1.7
ULM                                 LR    LR     22 17 40.2
      comp=Z,271nm,21.0s,baz=44,slow=35
M54A  Oil Creek Stat    41.57 267   P     P      22 01 08.4 -0.4
      baz=35
O57A  Amberson          41.76 264   P     P      22 01 09.9 -0.6
      baz=34
MAK   Makhachkala       41.83  89  eP     P      22 01 08.2 -2.7
MAK                                eS     S      22 07 24.4 -3.8
MAK                                 pmax  pmax
      comp=Z,259nm,1.2s
MAK                                 MLR   MLR
      comp=Z,602nm,18.0s
ABKAR Akbulak array     42.11  73   P     P      22 01 13.3 +0.1
TIXI  Tiksi             42.12  15⇑eP    P      22 01 12.6 -0.5
TIXI                                pmax  pmax
      comp=Z,92nm,1.0s
TIXI  Tiksi             42.12  15   P     P      22 01 12.5 -0.5
TIXI                                IAmb  IAmb   22 01 19.3
      comp=Z,30nm,0.9s
N54A  Moraine State     42.16 267   P     P      22 01 12.8 -0.9
      baz=34
GAZ   Gaziantep         42.22 103   P     P      22 01 13.3 -1.0
TOLK  Toolik Lake Re    42.76 336   P     P      22 01 18.1 -0.2
      baz=28,SNR=6.6
M51A  Elyria            42.80 269   P     P      22 01 18.2 -0.7
      baz=35
P56A  Dayton Farm, R    42.87 265   P     P      22 01 20.1 +0.7
      baz=34
GNI   Garni             42.94  94   P     P      22 01 17.6 -2.6
      comp=Z,5.1nm,0.9s,baz=243,slow=14,SNR=2.1
GNI   Garni             42.94  94⇓eP    P      22 01 21.6 +1.4
GNI                                 pmax  pmax
      comp=Z,24nm,1.2s
BRVK  Borovoye          43.26  62   P     P      22 01 20.3 -2.2
BRVK                                pmax  pmax
      comp=Z,13nm,1.1s
BRVK  Borovoye          43.26  62   P     P      22 01 20.3 -2.2
R56A  Bull Pasture M    44.02 264   P     P      22 01 28.2 -0.7
      baz=33
ACSO  Alum Creek Sta    44.05 269   P     P      22 01 28.3 -0.7
      baz=34
COLD  Coldfoot          44.13 336   P     P      22 01 29.6 +0.2
      baz=27
P52A  Corning           44.17 268   P     P      22 01 29.2 -0.8
      baz=34
EGAK  Eagle             44.48 329   P     P      22 01 32.3 +0.1
EGAK                                IAmb  IAmb   22 01 39.9
      comp=Z,19nm,1.2s
TAM   Tamanrasset       44.51 149   P     P      22 01 33.9 +0.9
TAM                                 pmax  pmax
      comp=Z,10.0nm,1.2s
TAM   Tamanrasset       44.51 149   P     P      22 01 33.9 +0.9
DAWY  Dawson            44.70 328   IAmb  IAmb   22 01 40.5
      comp=Z,16nm,1.1s
RDOG  Red Dog Mine      45.33 342   IAmb  IAmb   22 01 46.4
      comp=Z,22nm,1.3s
K27K  Chicken           45.33 329   IAmb  IAmb   22 01 47.6
      comp=Z,19nm,1.3s
S54A  Dingess, Beckl    45.35 266   P     P      22 01 39.7 +0.2
      baz=33
S54A  Dingess, Beckl    45.35 266   P     P      22 01 39.8 +0.4
IL31                    45.69 332   P     P      22 01 41.6 -0.1
ILAR  Eielson Array     45.69 332   P     P      22 01 41.3 -0.5
      comp=Z,3.2nm,1.0s,baz=21,slow=5.6,SNR=18
ILAR                                PcP   PcP    22 03 18.6 -0.9
      comp=Z,6.4nm,1.0s,baz=340,slow=3.3,SNR=5.4
ILAR                                LR    LR     22 23 01.7
      comp=Z,458nm,19.5s,baz=34,slow=39
SFIN  Lafayette         45.70 273   P     P      22 01 42.5 +0.3
      baz=34
MDM   Murphy Dome       45.79 333   IAmb  IAmb   22 01 50.3
      comp=Z,21nm,1.2s
SCRK  Sand Creek        45.79 330   P     P      22 01 40.9 -1.8
      baz=29
TCOL  CIGO, UAF Yank    45.80 333   P     P      22 01 42.2 -0.4
      baz=27
TCOL  CIGO, UAF Yank    45.80 333   IAmb  IAmb   22 01 49.5
      comp=Z,24nm,1.1s
I23K  Minto, Yukon-K    45.84 334   P     P      22 01 43.2 +0.2
      baz=27
I23K  Minto, Yukon-K    45.84 334   P     P      22 01 42.7 -0.2
CCB   Clear Creek Bu    45.99 333   P     P      22 01 43.8 -0.3
CCB                                 IAmb  IAmb   22 01 52.6
      comp=Z,28nm,1.7s
MLY   Manley            46.20 335   P     P      22 01 45.8 -0.1
      baz=26,SNR=6.3
NEA2  Nenana            46.28 333   P     P      22 01 45.4 -1.1
      baz=27,SNR=13
L26K  Log Cabin Wild    46.49 329   P     P      22 01 46.8 -1.3
      baz=29
HDIL  Hopedale          46.50 275   P     P      22 01 49.1 +0.7
      baz=34
V56A  Mocksville        46.68 263   P     P      22 01 50.4 +0.5
      baz=32
PAX   Paxson            47.00 330   IAmb  IAmb   22 02 01.0
      comp=Z,16nm,1.4s
ECSD  EROS Data Cent    47.01 284   P     P      22 01 52.3 -0.1
      baz=35
HYT   Haines Junctio    47.03 324   IAmb  IAmb   22 03 31.2
      comp=Z,9.0nm,1.0s
MCK   McKinley          47.03 333   P     P      22 01 51.7 -0.7
      baz=26
DLBC  Dease Lake        47.05 318   LR    LR     22 22 29.1
      comp=Z,346nm,19.1s,baz=28,slow=37
SCIA  State Center      47.06 279   P     P      22 01 53.9 +1.0
      baz=35
WCI   Wyandotte Cave    47.14 270   P     P      22 01 54.7 +1.2
      baz=33
W56A  Indian Trail      47.29 263   P     P      22 01 53.5 -1.1
      baz=31
ZAA0  Zalesovo Array    47.76  51   IAmb  IAmb   22 02 01.5
      comp=Z,8.3nm,0.9s
ZALV  Zalesovo Beam     47.76  51   P     P      22 01 54.5 -3.6
      comp=Z,6.1nm,0.9s,baz=341,slow=7.8,SNR=19
ZALV                                PcP   PcP    22 03 26.5 -0.4
      comp=Z,3.8nm,1.0s,baz=328,slow=5.3,SNR=5.4
ZALV                                LR    LR     22 24 41.0
      comp=Z,246nm,19.2s,baz=316,slow=40
N25K  Chitina, Valde    48.02 329   P     P      22 01 59.4 -0.7
      baz=28
N25K  Chitina, Valde    48.02 329   IAmb  IAmb   22 02 22.0
      comp=Z,10nm,1.1s
X56A  White Oak         48.03 263   P     P      22 02 00.4  0.0
      baz=31
TKL   Tuckaleechee C    48.22 266   LR    LR     22 21 02.6
      comp=Z,699nm,21.9s,baz=44,slow=34
KURK  Kurchatov         48.24  58ceP    P      22 01 59.3 -2.5
KURK                                pmax  pmax
      comp=Z,20nm,1.0s
KURK  Kurchatov         48.24  58   P     P      22 01 59.2 -2.6
KURBB Kurchatov Arra    48.28  58   P     P      22 01 59.4 -2.8
      comp=Z,17nm,1.0s,baz=322,slow=7.2,SNR=24
EGMT  Eagleton          48.81 297   P     P      22 02 06.4  0.0
      baz=35
Z57A  Bowman            48.91 262   P     P      22 02 07.6 +0.4
      baz=30
ANM   Nome              48.97 342   IAmb  IAmb   22 02 15.1
      comp=Z,23nm,1.2s
CCM   Cathedral Cave    49.41 275   P     P      22 02 09.9 -1.1
      baz=33
RC01  Rabbit Creek A    49.58 332   P     P      22 02 11.6 -0.4
      baz=25,SNR=5.2
RSSD  Black Hills       49.76 290   P     P      22 02 14.0 +0.2
      baz=34
GOGA  Godfrey           50.00 264   P     P      22 02 14.4 -1.1
      baz=31
GEYT  Alibeck           50.54  83   P     P      22 02 17.6 -2.0
      comp=Z,4.3nm,0.9s,baz=318,slow=8.4,SNR=2.6
GEYT                                LR    LR     22 26 05.0
      comp=Z,553nm,19.0s,baz=300,slow=39
S39A  Bolivar           50.61 276   P     P      22 02 20.7 +0.5
S39A                                IAmb  IAmb   22 02 27.7
      comp=Z,15nm,0.8s
KSU1  Kansas State U    50.83 280   P     P      22 02 21.2 -0.6
      baz=33
KOWA  Kowa              50.94 163   P     P      22 02 22.6 -0.1
KOWA                                IAmb  IAmb   22 02 25.8
      comp=Z,34nm,1.6s
RLMT  Red Lodge         51.02 294   P     P      22 02 23.0 -0.3
      baz=34
RLMT  Red Lodge         51.02 294   IAmb  IAmb   22 02 32.2
      comp=Z,29nm,1.5s
BTLS  Baital            51.19  65  eP     P      22 02 23.6 -0.8
      comp=Z,5.3nm,1.0s,baz=66
BTLS  Baital            51.19  65  eP     P      22 02 23.6 -0.8
BTLS                                pmax  pmax
      comp=Z,5.0nm,1.0s
NEW   Newport           51.37 302   LR    LR     22 24 02.5
      comp=Z,479nm,18.5s,baz=26,slow=36
YAK   Yakutsk           51.37  19⇑eP    P      22 02 27.2 +1.8
YAK                                 pmax  pmax
      comp=Z,5.0nm,0.5s
MSO   Missoula          51.39 299   P     P      22 02 25.5 -0.5
      baz=33
KK31  Karatay Array     51.40  70   IAmb  IAmb   22 02 32.1
      comp=Z,42nm,1.6s
KKAR  Karatay Array     51.40  70   IAmb  IAmb   22 02 32.1
      comp=Z,42nm,1.6s
U40A  Yellville         51.54 275   P     P      22 02 26.2 -0.9
      baz=32
U40A  Yellville         51.54 275   IAmb  IAmb   22 02 34.8
      comp=Z,14nm,1.1s
BOZ   Bozeman (W)       51.54 297   P     P      22 02 26.5 -0.7
      baz=33,SNR=7.3
BBB   Bella Bella       51.79 313   LR    LR     22 25 09.1
      comp=Z,267nm,18.0s,baz=35,slow=37
LRAL  Lakeview Retre    51.84 267   P     P      22 02 28.4 -0.9
      baz=31
DZA   Taraz             51.91  69  eP     P      22 02 29.5 -0.4
      comp=Z,13nm,1.1s,baz=69
DZA                                 LR    LR     22 23 45.7
      comp=Z,248nm,18.8s,baz=69
DZA   Taraz             51.91  69  eP     P      22 02 29.4 -0.4
DZA                                 pmax  pmax
      comp=Z,13nm,1.1s
DZA                                 MLR   MLR
      comp=Z,247nm,19.0s
K22A  Casper            51.98 291   P     P      22 02 30.8 +0.2
      baz=33
IUG   Iuzhnay           52.01  71  eP     P      22 02 30.2 -0.5
      comp=Z,7.6nm,1.0s,baz=71
IUG   Iuzhnay           52.01  71  eP     P      22 02 30.1 -0.5
IUG                                 pmax  pmax
      comp=Z,8.0nm,1.0s
H17A  Grant Village     52.14 295   P     P      22 02 33.7 +1.9
      baz=33,SNR=5.7
DGZ   Jazzator, Alta    52.21  52⇑eP    P      22 02 32.2 +0.1
DGZ                                 pmax  pmax
      comp=Z,17nm,1.0s
W41B  Gary Mavity, V    52.28 274   P     P      22 02 32.2 -0.4
      baz=32
SEY   Seymchan          52.56   6   P     P      22 02 33.0 -1.3
      comp=Z,8.4nm,1.0s,baz=1.6,slow=5.6,SNR=10
SEY   Seymchan          52.56   6⇓eP    P      22 02 33.3 -1.0
MAKZ  Makanchi          52.73  58   P     P      22 02 36.8 +1.0
MAKZ                                pmax  pmax
      comp=Z,11nm,1.2s
MAKZ  Makanchi          52.73  58   P     P      22 02 36.8 +1.0
MK31  Makanchi Array    52.85  58ceP    P      22 02 34.1 -2.7
MKAR  Makanchi Array    52.85  58   P     P      22 02 34.1 -2.6
      comp=Z,8.3nm,1.0s,baz=325,slow=5.9,SNR=16
USP   Ospenovka         52.86  66   P     P      22 02 36.8 -0.1
      SNR=7.6
KUU   Kurty             53.05  64  eP     P      22 02 37.1 -1.2
      comp=Z,13nm,1.1s,baz=64
KUU                                 LR    LR     22 23 44.1
      comp=Z,719nm,17.1s,baz=64
KUU   Kurty             53.05  64  eP     P      22 02 37.0 -1.2
KUU                                 pmax  pmax
      comp=Z,13nm,1.1s
KUU                                 MLR   MLR
      comp=Z,719nm,17.0s
EKS2  Erkin-Say         53.08  67   P     P      22 02 38.3 -0.3
      SNR=9.8
BW06  Boulder Array     53.10 293   P     P      22 02 37.8 -1.1
      baz=32,SNR=12
BW06  Boulder Array     53.10 293   P     P      22 02 38.3 -0.6
BW06                                IAmb  IAmb   22 02 44.7
      comp=Z,16nm,0.8s
PD31  Pinedale Array    53.10 293   IAmb  IAmb   22 02 44.8
      comp=Z,16nm,0.8s
PDAR  Pinedale Array    53.10 293   P     P      22 02 38.5 -0.4
      comp=Z,12nm,0.8s,baz=47,slow=6.5,SNR=18
PDAR                                PP    PP     22 04 38.7 +0.4
      comp=Z,0.6nm,0.9s,baz=47,slow=9.2,SNR=1.8
PDAR                                LR    LR     22 24 49.9
      comp=Z,630nm,21.9s,baz=30,slow=36
X40A  Basin Creek Fa    53.11 274   P     P      22 02 38.0 -0.8
      baz=31
TOA0  Torodi Ar. Sit    53.13 156   P     P      22 02 38.8 -0.3
TORD  Torodi Ar. Bea    53.13 156   P     P      22 02 37.1 -1.9
      comp=Z,8.7nm,1.0s,baz=344,slow=9.3,SNR=21
TORD                                LR    LR     22 25 12.9
      comp=Z,182nm,19.6s,baz=345,slow=36
CHMS  Chumysh           53.18  66   P     P      22 02 42.7 +3.4
      SNR=6.1
KDAK  Kodiak Island     53.20 332   LR    LR     22 26 57.7
      comp=Z,371nm,20.9s,baz=52,slow=38
N23A  Red Feather La    53.22 289   P     P      22 02 39.8 -0.1
      baz=32,SNR=8.4
ZSN   Zaisan            53.23  56  eP     P      22 02 38.2 -1.4
      baz=56
ZSN   Zaisan            53.23  56  eP     P      22 02 38.1 -1.4
CHKK  Chushkaly         53.34  64  eP     P      22 02 39.9 -0.5
      baz=64
CHKK  Chushkaly         53.34  64  eP     P      22 02 39.8 -0.5
AAK   Ala-Archa         53.38  67   P     P      22 02 39.1 -1.8
      comp=Z,16nm,1.0s,baz=321,slow=0.7,SNR=9.2
AAK   Ala-Archa         53.38  67   P     P      22 02 39.7 -1.2
      SNR=11
AAK   Ala-Archa         53.38  67⇓eP    P      22 02 40.2 -0.7
AAK                                 pmax  pmax
      comp=Z,60nm,1.0s
AAK   Ala-Archa         53.38  67   P     P      22 02 39.1 -1.8
AAK                                 IAmb  IAmb   22 02 45.3
      comp=Z,20nm,1.1s
AML   Almayashu         53.49  68   P     P      22 02 44.7 +2.7
      SNR=10
TKM2  Tokmak 2          53.58  66   P     P      22 02 41.0 -1.4
      SNR=9.8
UCH   Uchtor            53.74  67   P     P      22 02 48.2 +4.3
      SNR=11
AAA   Alma-Ata          53.85  64  eP     P      22 02 43.7 -0.5
      baz=64
AAA                                 LR    LR     22 23 43.2
      comp=Z,494nm,17.8s,baz=64
AAA   Alma-Ata          53.85  64  eP     P      22 02 43.7 -0.5
AAA                                 MLR   MLR
      comp=Z,494nm,18.0s
MDOK  Medeo             53.94  64  eP     P      22 02 44.6 -0.4
      baz=64
MDOK                                LR    LR     22 23 54.7
      comp=Z,407nm,16.0s,baz=64
MDOK  Medeo             53.94  64  eP     P      22 02 44.6 -0.4
MDOK                                MLR   MLR
      comp=Z,407nm,16.0s
ISCO  Idaho Springs     54.01 288   P     P      22 02 44.4 -1.3
      baz=32
KPKS  Kokpek            54.32  63  eP     P      22 02 45.8 -1.8
      baz=63
KPKS  Kokpek            54.32  63  eP     P      22 02 45.8 -1.8
BMO   Blue Mountains    54.32 300   P     P      22 02 47.4 -0.3
BMO                                 pmax  pmax
      comp=Z,6.0nm,0.9s
BMO   Blue Mountains    54.32 300   P     P      22 02 47.4 -0.3
HLID  Hailey            54.32 297   P     P      22 02 46.0 -1.8
      baz=32
Q24A  Divide            54.53 287   P     P      22 02 50.1 +0.6
      baz=32
SATY  Saty              54.56  63 i P     P      22 02 47.6 -1.9
      baz=64
SATY  Saty              54.56  63 i P     P      22 02 47.5 -1.9
MOY   Mondy             54.78  42  eP     P      22 02 49.6 -1.3
MOY                                 pmax  pmax
      comp=Z,51nm,0.9s
O20A  White River Ci    54.80 290   P     P      22 02 49.4 -1.9
      baz=32
SHLS  Shalkode          54.88  63  eP     P      22 02 50.8 -1.0
      comp=Z,10nm,1.0s,baz=62
SHLS  Shalkode          54.88  63  eP     P      22 02 50.7 -1.0
SHLS                                pmax  pmax
      comp=Z,10.0nm,1.0s
HRA   Herat             55.31  82   P     P      22 02 54.6 -0.4
HRA                                 IAmb  IAmb   22 03 00.9
      comp=Z,38nm,1.9s
WMOK  Wichita Mounta    55.45 279   P     P      22 02 55.6 -0.2
WMOK                                pmax  pmax
      comp=Z,19nm,1.3s
WMOK  Wichita Mounta    55.45 279   P     P      22 02 55.6 -0.2
WMOK                                IAmb  IAmb   22 03 02.3
      comp=Z,19nm,1.2s
SPUT  South Promonto    55.48 294   P     P      22 02 56.5 +0.4
TLY   Talaya            55.52  40deP    P      22 02 58.2 +2.1
TLY                                 pmax  pmax
      comp=Z,11nm,1.0s
TLY   Talaya            55.52  40   P     P      22 02 56.4 +0.3
TLY                                 IAmb  IAmb   22 02 59.8
      comp=Z,10nm,1.0s
JLU   Jordanelle        55.69 293   P     P      22 02 57.9 +0.1
SDCO  Great Sand Dun    55.71 287   P     P      22 02 56.5 -1.5
      baz=31
CTU   Camp Tracy        55.73 293   P     P      22 02 57.3 -0.7
MA2   Magadan           55.84   7   P     P      22 02 56.1 -2.1
      comp=Z,1.6nm,0.3s,baz=304,slow=21,SNR=1.6
MA2   Magadan           55.84   7⇑eP    P      22 03 01.6 +3.3
MA2                                 pmax  pmax
      comp=Z,50nm,2.7s
MA2   Magadan           55.84   7   P     P      22 02 58.6 +0.4
MA2                                 IAmb  IAmb   22 03 03.5
      comp=Z,18nm,1.0s
G03D  McMinnville, O    56.18 305   P     P      22 02 59.3 -1.6
      baz=30
S22A  4UR Ranch, Cre    56.26 288   P     P      22 03 01.5 -0.4
      baz=31
DUG   Dugway, Tooele    56.57 294   P     P      22 03 03.2 -0.8
      baz=31
ZAK   Zakamensk         56.58  41  eP     P      22 03 02.0 -1.8
ZAK                                 pmax  pmax
      comp=Z,15nm,1.0s
KSH   Kashi             56.62  68   P     P      22 03 09.0 +4.7
KSH                                 S     S      22 10 59.2 +3.0
KSH                                 pmax  pmax
      comp=Z,50nm,1.1s
KSH                                 pmax  pmax
      comp=Z,1μm,5.2s
KSH                                 LR    LR
      comp=N,560nm,8.0s
KSH                                 LR    LR
      comp=E,440nm,6.2s
KSH                                 LR    LR
      comp=Z,2μm,17.6s
PV03  Paradox Valley    56.65 290   IAmb  IAmb   22 03 12.8
      comp=Z,15nm,0.9s
PV18  Skein Mesa, Pa    56.68 290   P     P      22 03 06.1 +1.3
ELK   Elko              57.05 296   P     P      22 03 06.8 -0.7
      comp=Z,0.8nm,0.8s,baz=37,slow=2.5,SNR=2.4
ELK                                 LR    LR     22 27 21.2
      comp=Z,966nm,20.7s,baz=35,slow=36
J05D  Fort Rock, OR     57.12 302   P     P      22 03 05.4 -2.4
      baz=30
WMQ   Urumqi            57.36  56  eP     P      22 03 09.8 +0.4
WMQ                                 pmax  pmax
      comp=Z,42nm,1.1s
WMQ                                 pmax  pmax
      comp=Z,720nm,4.7s
WMQ                                 LR    LR
      comp=N,690nm,20.9s
WMQ                                 LR    LR
      comp=E,560nm,16.9s
WMQ                                 LR    LR
      comp=Z,1μm,22.3s
MVCO  Mesa Verde        57.40 289   P     P      22 03 07.9 -2.0
      baz=31
J04D  Umpqua Nationa    57.47 303   P     P      22 03 06.8 -3.5
      baz=30
KBL   Kabul             58.05  76   P     P      22 03 13.0 -1.6
KBL                                 pmax  pmax
      comp=Z,12nm,1.3s
KBL   Kabul             58.05  76   P     P      22 03 13.0 -1.6
MTPU  Mount Pierson     58.17 292   P     P      22 03 16.1 +0.5
L04D  Klamath Falls     58.43 302   P     P      22 03 16.3 -0.7
      baz=29
ANMO  Albuquerque       58.50 286   P     P      22 03 18.5 +0.8
      comp=Z,5.0nm,1.2s,baz=162,slow=3.2,SNR=2.8
ANMO  Albuquerque       58.50 286   P     P      22 03 16.0 -1.7
      baz=30
K02D  Willamette Mer    58.51 304   P     P      22 03 15.8 -1.7
      baz=29
DBIC  Dimbokro          58.55 165   P     P      22 03 16.7 -1.3
      comp=Z,11nm,0.9s,baz=336,slow=7.8,SNR=14
DBIC                                LR    LR     22 29 07.1
      comp=Z,304nm,19.1s,baz=344,slow=37
DBIC  Dimbokro          58.55 165   P     P      22 03 18.1 +0.2
DBIC                                pmax  pmax
      comp=Z,15nm,1.0s
DBIC  Dimbokro          58.55 165   P     P      22 03 18.1 +0.2
DBIC                                IAmb  IAmb   22 03 21.4
      comp=Z,15nm,1.0s
TIC   Toumodi           58.56 165  eP     P      22 03 17.3 -0.7
M04C  Macdoel           58.64 302   P     P      22 03 16.1 -2.3
      baz=29
KIC   Kosan Boka        58.87 165  eP     P      22 03 18.7 -1.5
      comp=Z,40nm,1.0s
L02E  Cave Junction     58.95 303   P     P      22 03 18.5 -2.0
      baz=29
LIC   Lamto             58.98 165  eP     P      22 03 19.5 -1.4
      comp=Z,72nm,1.1s
YBH   Yreka Blue Hor    59.00 302   LR    LR     22 27 03.5
      comp=Z,275nm,18.9s,baz=22,slow=34
R11A  Troy Canyon, C    59.25 295   P     P      22 03 22.3 -0.6
      baz=30,SNR=7.0
JCT   Junction City     59.55 277   P     P      22 03 25.4 +0.6
      baz=30,SNR=5.1
N02D  Trinity Center    59.66 302   P     P      22 03 25.1 -0.4
      baz=29
W18A  Petrified Fore    59.71 288   P     P      22 03 25.8 -0.2
      baz=30
SONM  Songino Array     59.76  40   P     P      22 03 23.8 -2.4
      comp=Z,3.2nm,1.0s,baz=332,slow=6.9,SNR=9.3
SONM                                LR    LR     22 31 35.7
      comp=Z,538nm,20.2s,baz=322,slow=39
ULN   Ulaanbaatar       59.91  40⇑eP    P      22 03 25.3 -1.9
ULN                                 pmax  pmax
      comp=Z,9.0nm,1.0s
ULN   Ulaanbaatar       59.91  40   P     P      22 03 25.4 -1.9
```

ULN				IAmb	IAmb	22 03 32.1	
	comp=Z,12nm,1.0s						
O03E	Paynes Creek	59.93	301	P	P	22 03 24.2	-3.1
	baz=29						
WUAZ	Wupatki	60.03	290	P	P	22 03 26.9	-1.3
	baz=30,SNR=9.1						
WUAZ	Wupatki	60.03	290	P	P	22 03 29.4	+1.1
NVAR	Mina Array Bea	60.23	297	P	P	22 03 30.0	+0.4
	comp=Z,1.5nm,1.0s,baz=46,slow=5.2,SNR=3.0						
NIL	Nilore	60.57	73	P	P	22 03 29.3	-2.5
NIL				pmax	pmax		
	comp=Z,38nm,1.1s						
NIL	Nilore	60.57	73	P	P	22 03 29.3	-2.5
WAKR	Walker	60.60	298	P	P	22 03 32.0	-0.1
WAKR				IAmb	IAmb	22 03 40.9	
	comp=Z,13nm,1.3s						
SHPR	Sheep Range	60.69	294	P	P	22 03 33.9	+1.2
SHPR				IAmb	IAmb	22 03 41.7	
	comp=Z,8.1nm,1.0s						
TPNV	Topopah Spring	60.73	295	P	P	22 03 29.7	-3.3
	baz=29						
MNTX	Cornudas Mount	60.86	283	P	P	22 03 30.9	-2.8
	baz=29,SNR=8.1						
UOSS	Minazif	60.88	93	P	P	22 03 34.6	+0.7
UOSS				IAmb	IAmb	22 03 37.7	
	comp=Z,9.2nm,0.9s						
X16A	Lo Mia Camp, P	61.01	289	IAmb	IAmb	22 03 43.8	
	comp=Z,14nm,1.0s						
121A	Cookes Peak, D	61.14	285	P	P	22 03 33.8	-2.0
	baz=29,SNR=5.9						
FURC	Furnace Creek,	61.39	295	P	P	22 03 35.9	-1.3
	baz=29						
CWC	Cottonwood Cre	61.89	296	P	P	22 03 39.2	-1.6
	baz=29						
MPMC	Manual Prospec	61.99	295	P	P	22 03 42.1	+0.5
	baz=29						
PDMCI	Parker Dam,Lak	62.20	292	P	P	22 03 43.2	+0.4
	baz=29						
GMRC	Granite Mounta	62.38	293	P	P	22 03 44.8	+0.6
	baz=29,SNR=5.8						
LRMC	Laurel Mtn Rad	62.57	295	P	P	22 03 45.8	+0.4
	baz=28						
HEC	Hector,Ludlow	62.61	294	P	P	22 03 45.9	+0.3
	baz=29						
ISA	Isabella, Lake	62.72	296	P	P	22 03 43.4	-2.9
	baz=28						
IRM	Iron Mountain	62.73	292	P	P	22 03 44.8	-1.5
	baz=29						
BELC	Belle Mtn. Jos	63.20	293	P	P	22 03 48.4	-1.2
	baz=28						
EDW2	Edwards Air Fo	63.22	295	P	P	22 03 47.2	-2.4
	baz=28						
BC3	Big Chuckawall	63.29	292	P	P	22 03 47.9	-2.2
	baz=28						
BFSC	Mount Baldy Ra	63.65	294	P	P	22 03 48.6	-4.0
	baz=28						
214A	Organ Pipe Nat	63.71	289	P	P	22 03 50.2	-2.7
	baz=28						
PFO	Pinyon Flats O	63.73	293	P	P	22 03 51.9	-1.1
	comp=Z,0.7nm,0.4s,baz=163,slow=19,SNR=2.0						
PFO				LR	LR	22 31 53.0	
	comp=Z,512nm,18.1s,baz=22,slow=36						
PFO	Pinyon Flats O	63.73	293	⇑eP	P	22 03 53.0	-0.1
PFO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PFO	Pinyon Flats O	63.73	293	P	P	22 03 52.1	-1.0
	baz=28						
TPFO	Pinon Flats	63.73	293	P	P	22 03 52.7	-0.4
	baz=28						
MONP2	Monument Peak	64.35	293	P	P	22 03 58.3	+1.0
	baz=28						
IKP	In-Ko-Pah, Jac	64.43	292	P	P	22 03 56.8	-0.9
	baz=28						
SKR	Severo-Kuril's	64.95	4	eP	P	22 03 47.5	-13
SKR				pmax	pmax		
	comp=Z,1μm,3.3s						
SKR				pmax	pmax		
	comp=Z,500nm,3.7s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
GTA	Gaotai	65.42	49	eP	P	22 04 02.0	-2.1
GTA				pP	pP	22 04 06.9	-0.8
GTA				sP	sP	22 04 10.6	+1.5
GTA				PP	PP	22 06 28.3	+0.8
GTA				S	S	22 12 53.7	+5.4
GTA	Gaotai	65.42	49	SS	SS	22 17 11.4	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,350nm,5.8s						
GTA				LR	LR		
	comp=N,250nm,18.9s						
GTA				LR	LR		
	comp=E,300nm,20.0s						
GTA				LR	LR		
	comp=Z,450nm,19.3s						
SDV	Santo Domingo	66.69	239	eP	P	22 04 17.3	+4.8
ATD	Arta Tunnel	67.25	112	LR	LR	22 38 06.6	
	comp=Z,37nm,18.0s,baz=17,slow=40						
HHC	Hu-ho-hao-te	67.63	39	eP	P	22 04 18.2	+0.1
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
USRK	Ussuriysk Ar.	68.97	23	LR	LR	22 35 50.8	
	comp=Z,120nm,18.5s,baz=354,slow=37						
CMIG	Matias Romero	69.18	266	LR	LR	22 34 46.9	
	comp=Z,150nm,22.0s,baz=39,slow=36						
MCPB	Macapa, AP	69.48	217	eP	P	22 04 33.0	+3.3
LPIG	La Paz	69.59	283	LR	LR	22 35 39.1	
	comp=Z,188nm,20.6s,baz=38,slow=36						
LZH	Lanzhou	69.75	47	eP	P	22 04 35.0	+3.5
LZH				pP	sP	22 04 37.6	+1.1
LZH				sP	pP	22 04 39.1	+3.9
LZH				ePP	PP	22 07 11.2	+6.1
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,97nm,5.2s						
LZH				LR	LR		
	comp=N,330nm,16.3s						
LZH				LR	LR		
	comp=E,340nm,16.2s						
LZH				LR	LR		
	comp=Z,430nm,18.6s						
ROSB	Rosrio	70.09	208	eP	P	22 04 36.9	+3.5
MALB	Monte Alegre	71.49	219	eP	P	22 04 47.3	+5.3
ROSC	El Rosal	71.80	241	LR	LR	22 32 48.8	
	comp=Z,214nm,22.0s,baz=0.0,slow=33						
ITTB	Itaituba	74.29	220	eP	P	22 05 03.4	+4.8
CD2	Chengdu	74.49	50	eP	P	22 04 59.0	-0.8
KSRS	Korea Array	74.76	28	P	P	22 05 03.5	+2.3
	comp=Z,2.3nm,0.9s,baz=350,slow=6.2,SNR=4.3						
KSRS				LR	LR	22 39 14.5	
	comp=Z,149nm,21.3s,baz=348,slow=37						
SMTB	Santa Maria do	76.61	210	eP	P	22 05 16.5	+4.6
ENH	Enshi	76.89	45	P	P	22 05 14.5	+0.9
HYB	Hyderabad	77.10	77	i P	P	22 05 18.0	+3.2
OTAV	Otavalo	77.60	243	eP	P	22 05 22.8	+4.7
NJ2	Nanjing	77.86	37	eP	P	22 05 19.8	+1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WHN	Wuhan	78.07	41	⇓P	P	22 05 32.3	+12
KMI	Kunming	79.48	53	⇓eP	P	22 05 28.8	+0.6
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA	Guiyang	79.55	49	⇓P	P	22 05 30.7	+2.3
GYA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PEXB	Peixe	79.91	210	eP	P	22 05 33.7	+3.6
SAML	Samuel	80.82	225	eP	P	22 05 38.6	+3.6
ETMB	Extrema	82.59	228	eP	P	22 05 47.3	+2.9
BDFB	Brasilia	83.27	209	LR	LR	22 36 51.6	
	comp=Z,269nm,21.8s,baz=22,slow=31						
CHTO	Chiang Mai	83.93	58	P	P	22 05 48.7	-2.8
CHTO				pmax	pmax		
	comp=Z,11nm,1.2s						
CHTO	Chiang Mai	83.93	58	P	P	22 05 48.6	-2.8
CHTO				IAmb	IAmb	22 05 54.0	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	84.26	58	P	P	22 05 50.4	-2.8
	comp=Z,2.5nm,1.0s,baz=320,slow=6.5,SNR=11						
CMAR				PP	PP	22 09 03.6	-3.5
	comp=Z,0.9nm,0.7s,baz=325,slow=8.6,SNR=5.6						
CMAR				LR	LR	22 46 16.1	
	comp=Z,132nm,19.9s,baz=351,slow=38						
IPMB	Ipameri, GO	85.59	209	eP	P	22 06 02.0	+2.3
PSI	Prapat	98.60	65	LR	LR	22 55 52.9	
	comp=Z,190nm,20.9s,baz=271,slow=38						
BOSA	Boshof	98.78	143	LR	LR	22 54 13.0	
	comp=Z,268nm,18.2s,baz=340,slow=37						
AC02	Maricunga	99.47	225	P	Pdif	22 07 01.1	-3.4
PPT2	Papeete2	123.05	302	eLR	LR	22 50 16.7	
	comp=Z,184nm,22.5s						
TBI	Tubuai	128.26	299	eLR	LR	22 52 40.9	
	comp=Z,285nm,25.0s						
NVL	N'lazarevskaya	136.63	166	pmax	pmax		
	comp=Z,11nm,0.8s						
DZM	Mont Dzumac	137.40	354	eLR	LR	22 57 03.2	
	comp=Z,333nm,25.1s						
SYO	Syowa Base	139.27	152	⇓epPKPdf	pPKPdf	22 12 50.9	+0.4

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*NEIC **05** 21:54:55.4±1.4, 21°.5N±0°.1×143°.3E±0°.1, h262km±4km, mb4.2/23, Error ellipse: s-maj=19.1km s-min=14.6km az=95.0*

*IDC **05** 21:54:55.3±1.9, 21°.56N×143°.42E, h270km±17km, mb3.4/16, mb1 3.5/20, mb1mx3.3/68, mbtmp4.1/20, Error ellipse: s-maj=24.1km s-min=10.3km az=83.0*

ISC 05 21:54:53.9±0.8**, 21°.54N**±0°.07×**143°.4E**±0°.1**, h250km, n50,** σ0s.98/55**, mb4.0**/24**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.63	349	P	Pn	21 56 18.9	+1.5
	7.2nm,0.3s,baz=92,slow=23,SNR=6.1						
JCJ				S	S	21 57 22.1	-2.1
	18nm,0.3s,baz=274,slow=24,SNR=8.4						
JCJ	Chichijima	5.63	349		Pn	21 56 19.1	+1.6
JHJ	Hachijo jima 2	11.96	345	P	Pn	21 57 38.0	+1.1
	6.5nm,0.3s,baz=94,slow=22,SNR=6.2						
INU	Inuyama	14.84	339	P	Pn	21 58 12.4	+0.4
JGF	Kuroka	14.96	341	P	Pn	21 58 14.3	+0.7
JWT	Wachi	15.37	335	P	Pn	21 58 20.0	+1.6
MJAR	Matsushiro Arr	15.61	344	P	P	21 58 20.2	-0.1
	0.3nm,0.3s,baz=163,slow=11,SNR=13						
MAJO	Matsushiro	15.61	344	P	P	21 58 20.3	-0.1
MAJO				IAmb	IAmb	21 58 22.2	
	comp=Z,6.8nm,0.7s						
MAT	Matsushiro	15.61	344	P	P	21 58 20.4	0.0
JNU	Nakatsue	15.99	319	P	Pn	21 58 25.4	-0.5
	comp=Z,0.7nm,0.3s,baz=148,slow=9.5,SNR=1.1						
JNU	Nakatsue	15.99	319	P	Pn	21 58 25.9	0.0
JSD	Sado	17.02	346	P	P	21 58 36.6	+0.9
JSD				IAmb	IAmb	21 58 38.9	
	comp=Z,17nm,0.8s						
ERM	Erimo	20.42	360	P	P	21 59 14.6	+2.4
YHNB	Yeheng	20.46	283	P	P	21 59 13.7	+0.7
YHNB				IAmb	IAmb	21 59 32.0	
	comp=Z,13nm,1.2s						
KSRS	Korea Array	20.74	323	P	P	21 59 15.9	+0.2
	comp=Z,1.5nm,0.6s,baz=145,slow=9.3,SNR=3.4						
USRK	Ussuriysk Ar.	24.49	340	P	P	21 59 50.4	+0.1
	comp=Z,1.1nm,0.8s,baz=154,slow=8.8,SNR=1.4						
KLR	Kul'dur	29.14	344	P	P	22 00 30.9	-0.8
	comp=Z,1.7nm,0.5s,baz=167,slow=7.4,SNR=9.3						
MTN	Manton Dam	36.22	200	P	P	22 01 32.5	-0.8
SOEI	Soe	36.32	213	P	P	22 01 35.0	+0.7
SONM	Songino Array	39.57	320	P	P	22 02 01.2	+0.1
	comp=Z,1.0nm,0.4s,baz=135,slow=7.3,SNR=34						
CM31	Chiang Mai Arr	41.76	274	P	P	22 02 20.3	+1.1
CMAR	Chiang Mai Arr	41.76	274	P	P	22 02 20.0	+0.8
	comp=Z,0.7nm,0.4s,baz=99,slow=6.1,SNR=7.1						
WB0	Warramunga Arr	41.98	193	P	P	22 02 21.2	+0.4
WB0				IAmb	IAmb	22 02 25.6	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	42.14	192	P	P	22 02 22.5	+0.4
WB2	Warramunga Arr	42.16	193	P	P	22 02 22.8	+0.5
WB2				IAmb	IAmb	22 02 23.0	
	comp=Z,5.8nm,0.4s						
WRA	Warramunga Arr	42.16	193	P	P	22 02 22.6	+0.4
	comp=Z,1.5nm,0.3s,baz=16,slow=9.3,SNR=79						
FITZ	Fitzroy Crossi	43.05	205	P	P	22 02 28.5	-0.9
	comp=Z,2.6nm,0.6s,baz=13,slow=8.3,SNR=6.6						
FITZ	Fitzroy Crossi	43.05	205	P	P	22 02 29.8	+0.4
KULM	Kulim	44.39	255	P	P	22 02 41.4	+1.2
KULM				IAmb	IAmb	22 02 42.2	
	comp=Z,8.8nm,0.5s						
ASAR	Alice Springs	45.87	192	P	P	22 02 50.8	-0.9
	comp=Z,0.9nm,0.6s,baz=17,slow=9.8,SNR=12						
GSI	Gunungsitoli	48.91	252	P	P	22 03 15.4	+0.2
GSI				IAmb	IAmb	22 03 16.0	
	comp=Z,12nm,0.5s						
ZALV	Zalesovo Beam	54.44	322	P	P	22 03 54.2	-1.1
	comp=Z,1.3nm,0.5s,baz=107,slow=7.5,SNR=4.3						
ZALV				PcP	pwP	22 04 54.2	+0.8
	comp=Z,0.7nm,0.4s,baz=98,slow=3.7,SNR=2.6						
MK31	Makanchi Array	54.93	313	P	P	22 03 59.0	0.0
MK31				PcP	pwP	22 04 57.2	0.0
MKAR	Makanchi Array	54.93	313	P	P	22 03 58.5	-0.5
	comp=Z,0.6nm,0.5s,baz=88,slow=8.6,SNR=12						
MKAR				PcP	pwP	22 04 57.1	-0.1
	comp=Z,0.8nm,0.6s,baz=75,slow=5.0,SNR=7.6						
MKAR				ScP	ScP	22 08 29.0	-3.0
	comp=Z,0.4nm,1.0s,baz=90,slow=1.4,SNR=2.2						
MAKZ	Makanchi	55.15	313	P	P	22 04 00.6	0.0
KURK	Kurchatov	57.71	317	P	P	22 04 18.0	-0.4
KURK				IAmb	IAmb	22 04 35.4	
	comp=Z,7.3nm,1.3s						
PPLA	Purkeypile	59.44	29	P	P	22 04 31.6	+1.3
PPLA				IAmb	IAmb	22 04 34.3	
	comp=Z,7.1nm,1.2s						
SUA	Susitna One	59.81	30	P	P	22 04 33.7	+0.8
SUA				IAmb	IAmb	22 04 41.6	
	comp=Z,4.1nm,1.0s						
AAK	Ala-Archa	60.40	308	P	P	22 04 37.6	+0.4
BVAR	Borovoye Array	62.90	320	P	P	22 04 52.6	-0.9
	comp=Z,1.4nm,0.4s,baz=99,slow=7.8,SNR=13						
BRVK	Borovoye	62.97	320	P	P	22 04 53.8	-0.2
BRVK				IAmb	IAmb	22 04 54.5	
	comp=Z,1.8nm,0.6s						
ARU	Arti	69.49	324	P	P	22 05 34.4	-0.8
	comp=Z,0.5nm,0.3s,baz=97,slow=7.1,SNR=4.0						
ARU	Arti	69.49	324	P	P	22 05 34.5	-0.7
ARU				IAmb	IAmb	22 05 41.7	
	comp=Z,7.1nm,1.3s						
ABKAR	Akbulak array	69.78	316	P	P	22 05 36.5	-0.6
ABKAR				IAmb	IAmb	22 05 37.2	
	comp=Z,3.1nm,0.7s						
YKA	Yellowknife Ar	76.51	28	P	P	22 06 16.2	+0.1
	comp=Z,0.3nm,0.6s,baz=290,slow=4.4,SNR=4.5						
ARCES	ARCESS Array B	79.12	342	P	P	22 06 30.1	-0.4
	comp=Z,5.0nm,1.1s,baz=70,slow=7.0,SNR=4.3						
KBZ	Khabaz	82.60	314	P	P	22 06 48.9	-0.3
	comp=Z,3.5nm,0.9s,baz=107,slow=4.4,SNR=5.4						
FINES	FINESS Array B	83.40	335	P	P	22 06 51.4	-1.5
	comp=Z,1.5nm,0.5s,baz=69,slow=5.1,SNR=13						
TORD	Torodi Ar. Bea	128.97	309	PKP	PKPdf	22 13 31.6	-1.1
	comp=Z,0.4nm,0.6s,baz=54,slow=2.0,SNR=1.8						
PLCA	Paso Flores	145.52	131	PKPbc	PKPdf	22 14 01.4	-1.0
	comp=Z,1.1nm,0.4s,baz=250,slow=6.0,SNR=7.1						

IDC 05 22:00:28.3±6.0**, 5°.13S**×**153°.31E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/46**, mbtmp3.3**/3**, Error ellipse: s-maj=184.2km s-min=41.6km az=109.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.61	230	P	P	22 05 42.1	+0.9
	0.3nm,0.5s,baz=54,slow=9.9,SNR=5.3						
ASAR	Alice Springs	26.25	224	P	P	22 06 04.6	-0.9
	0.7nm,0.9s,baz=49,slow=9.1,SNR=4.1						
MKAR	Makanchi Array	80.90	319	P	P	22 12 44.7	+0.1
	0.3nm,0.8s,baz=102,slow=4.9,SNR=2.0						

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*TUL **05** 22:06:43.6±1.4, 36°.26N±0°.01×97°.26W±0°.04, h5km±2km, ML3.3, mb3.8/3(NEIC), mb_Lg3.8/163(NEIC), Mwr3.6/46(NEIC), Error ellipse: s-maj=6.1km s-min=3.0km az=259.0*

*NEIC **05** 22:06:43.6, 36°.26N×97°.26W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.31; $M_{\theta\theta}$2.11; $M_{\phi\phi}$-1.80; $M_{r\theta}$-1.02; $M_{\theta\phi}$2.62; $M_{\phi r}$-0.68; Fault plane solution: $M_0$3.50000×10^{14} NP1:ϕ_s289.64000°, δ76.02000°, λ9.49000°. NP2:ϕ_s197.32000°, δ80.79000°, λ165.84000°. Principal axes: T 3.7866, Plg16.0000°, Azm153.0000°; N -0.6648, Plg73.0000°, Azm345.0000°; P -3.1219, Plg3.0000°, Azm244.0000°;*

*NEIC **05** 22:06:43.8±1.5, 36°.26N±0°.01×97°.28W±0°.04, h5km±2km Error ellipse: s-maj=5.3km s-min=3.0km az=256.0*

*ANF **05** 22:06:44.3±0.3, 36°.20N×97°.21W, h0km, ML4.6/12, Error ellipse: s-maj=3.1km s-min=2.5km az=167.0*

*IDC **05** 22:06:44.5±3.1, 36°.31N×97°.59W, h0km, mb3.5/1, mb1 3.7/4, mb1mx3.3/54, mbtmp3.5/4, ML3.2/3, Error ellipse: s-maj=35.4km s-min=19.1km az=142.0*

ISC 05 22:06:43.8±1.0**, 36°.27N**±0°.02×**97°.26W**±0°.02**, h9**km±8km**, n160,** σ1s.15/129**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.46	102		Pg	22 06 52.7	+0.1
QUOK				Sg	Sg	22 06 59.1	+0.5
OK031	S. Brethren Rd	0.46	133		Pg	22 06 52.8	0.0
OK030	Cody Creek RV	0.51	132		Pg	22 06 53.7	-0.1
OK030				Sg	Sg	22 07 00.8	+0.3
OK005	Luther M Schoo	0.62	175	Pg	Pg	22 06 55.4	-0.3
CROK	Carrier	0.63	292	Pg	Pg	22 06 55.8	-0.2
CROK				Sg	Sg	22 07 04.4	+0.1
OK025	Westminster Rd	0.69	185	Pg	Pg	22 06 56.6	-0.5
OK025				Sg	Sg	22 07 06.2	0.0
GC02	Grant County #	0.76	320	Pg	Pg	22 06 57.8	-0.6
KAN13	South Haven SW	0.76	347	Pg	Pg	22 06 58.3	-0.2
KAN13				Sg	Sg	22 07 08.8	+0.3
OKCFA	Oklahoma City	0.87	191	Pg	Pg	22 06 59.9	-0.6
OKCFA				Sg	Sg	22 07 11.6	-0.2
OKCSW	OKLAHOMA CITY	0.88	190		Pg	22 07 00.3	-0.4
T35A	Sooner Cattle	0.88	43		Pg	22 07 00.4	-0.4
T35B	Sooner Cattle	0.88	43	P		22 07 00.5	
	baz=223,SNR=407						
T35B				S		22 07 12.6	
	baz=223						
KAN14	Manchester OK	0.89	321		Pg	22 07 00.5	-0.5
FNO	Franklin	1.02	187		Pg	22 07 02.5	-0.8
FNO				Sg	Sg	22 07 16.3	-0.2
KAN10	Anthony SW Sta	1.09	322	Pg	Pg	22 07 04.0	-0.6
KAN08	Anthony NE Sta	1.11	329		Pg	22 07 04.6	-0.6
W35A	Tecumseh	1.16	164		Pg	22 07 04.5	-1.5
KAN12	Harper NE Stat	1.19	330		Pg	22 07 06.1	-0.5
TUL1	Leonard	1.24	106	P	Pg	22 07 06.4	-1.2
	baz=287						
TUL1				S	Sg	22 07 23.3	-0.4
	baz=287						
TUL1	Leonard	1.24	106		Pg	22 07 06.3	-1.3
TUL1	Leonard	1.24	106	P		22 07 06.3	
	baz=287						
TUL1				S		22 07 23.7	
	baz=287						
U32A	Winter Ranch,	1.41	275		Pn	22 07 09.2	-0.6
U32A	Winter Ranch,	1.41	275	P		22 07 09.5	
	baz=94						
U32A				S		22 07 28.8	
	baz=94						
WMOK	Wichita Mounta	1.97	220	P	Pn	22 07 18.0	+0.5
	baz=39						
WMOK				S	Sb	22 07 45.2	+0.6
	baz=39						
WMOK	Wichita Mounta	1.97	220		Pn	22 07 18.0	+0.5
WMOK				IAmb_Lg		22 07 47.3	
	comp=Z,456nm,0.8s						
WMOK	Wichita Mounta	1.97	220	P		22 07 18.2	
	baz=39,SNR=102						
WMOK				S		22 07 44.4	
	baz=39						
X37A	Clayton	2.28	137	Pn	Pn	22 07 22.4	+0.7
X37A				IAmb_Lg		22 08 00.0	
	comp=Z,263nm,0.9s						
X37A	Clayton	2.28	137	P		22 07 22.5	
	baz=318						
U38A	Gravette	2.32	85	Pn	Pn	22 07 24.2	+1.9
U38A				IAmb_Lg		22 08 02.1	
	comp=Z,296nm,0.8s						
R32A	Long Quarter,	2.44	332	Pn	Pn	22 07 25.4	+1.5
R32A	Long Quarter,	2.44	332	P		22 07 24.8	
	baz=152,SNR=17						
R32A				S		22 07 55.6	
	baz=152						
HHAR	Hobbs	2.68	89	Pn	Pn	22 07 28.4	+1.2
KSU1	Kansas State U	2.87	10	Pb	Pg	22 07 38.0	-0.9
	baz=190						
KSU1	Kansas State U	2.87	10	Pn	Pn	22 07 31.4	+1.5
KSU1				IAmb_Lg		22 08 18.3	
	comp=Z,202nm,1.0s						
KSU1	Kansas State U	2.87	10	P		22 07 30.9	
	baz=190						
Z35A	Perchaven, San	2.93	180	Pn	Pn	22 07 31.5	+0.9
Z35A	Perchaven, San	2.93	180	P		22 07 31.2	
	baz=360						
Z35A				S		22 08 07.3	
	baz=360						
W39A	Magazine	3.02	110	P	Pn	22 07 32.9	+1.0
	baz=292						
W39A	Magazine	3.02	110	Pn	Pn	22 07 32.4	+0.5
W39A	Magazine	3.02	110	P		22 07 32.9	
	baz=292,SNR=34						
CBKS	Cedar Bluff	3.21	323	Pb	Pb	22 07 43.1	+1.9
	baz=142						
CBKS				Sb	Sg	22 08 26.6	-0.5
	baz=142						
CBKS	Cedar Bluff	3.21	323	Pn	Pn	22 07 36.2	+1.6
CBKS	Cedar Bluff	3.21	323	P		22 07 35.3	
	baz=142						
S39A	Bolivar	3.46	65	Pn	Pn	22 07 39.1	+1.3
S39A				IAmb_Lg		22 08 39.4	
	comp=Z,168nm,0.7s						
S39A	Bolivar	3.46	65	P		22 07 39.1	
	baz=247,SNR=96						
S39A				S		22 08 20.3	
	baz=247						
MIAR	Mount Ida	3.46	119	P	Pn	22 07 39.0	+1.0
	baz=301						
MIAR	Mount Ida	3.46	119	Pn	Pn	22 07 38.8	+0.9
MIAR				IAmb_Lg		22 08 35.0	
	comp=Z,204nm,0.8s						
MIAR	Mount Ida	3.46	119	P		22 07 39.0	
	baz=301,SNR=24						
MIAR				S		22 08 20.5	
	baz=301						
Z38A	Mt. Pleasant	3.54	147	Pn	Pn	22 07 39.5	+0.6
Z38A				IAmb_Lg		22 08 44.0	
	comp=Z,322nm,0.8s						
Z38A	Mt. Pleasant	3.54	147	P		22 07 39.6	
	baz=329						
U40A	Yellville	3.56	87	P	Pn	22 07 40.8	+1.6
	baz=270						
U40A	Yellville	3.56	87	Pn	Pn	22 07 40.1	+0.8
U40A				IAmb_Lg		22 08 38.2	
	comp=Z,282nm,0.8s						
U40A	Yellville	3.56	87	P		22 07 39.6	
	baz=270,SNR=104						
U40A				P		22 07 39.6	
	baz=270,SNR=104						
AMTX	Amarillo	3.86	250	Pn	Pn	22 07 45.9	+2.3
AMTX				IAmb_Lg		22 08 51.5	
	comp=Z,202nm,0.9s						
X40A	Basin Creek Fa	4.03	115	P	Pn	22 07 47.3	+1.6
	baz=297						
X40A	Basin Creek Fa	4.03	115	Pn	Pn	22 07 47.1	+1.4
X40A				IAmb_Lg		22 08 59.1	
	comp=Z,247nm,0.8s						
X40A	Basin Creek Fa	4.03	115	P		22 07 46.2	
	baz=297,SNR=15						
X40A				P		22 07 46.2	
	baz=297,SNR=15						
MGMO	Mountain Grove	4.10	76	Pn	Pn	22 07 48.0	+1.2
MGMO				IAmb_Lg		22 09 01.5	
	comp=Z,168nm,0.7s						
ABTX	Abilene, Hawle	4.14	209	Pb	Pb	22 07 57.0	+0.2
	baz=28						
ABTX				Sb	Sb	22 08 50.7	+3.7
	baz=28						
ABTX	Abilene, Hawle	4.14	209	IAmb_Lg		22 08 54.5	
	comp=Z,137nm,0.9s						
WHAR	Wooly Hollow	4.16	102	Pn	Pn	22 07 49.1	+1.6
FCAR	Ozark Folk Cen	4.17	94	IAmb_Lg		22 08 57.5	
	comp=Z,305nm,0.7s						
W41B	Gary Mavity, V	4.22	104	S	Sn	22 08 38.3	+0.5
	baz=286						
W41B	Gary Mavity, V	4.22	104		Pn	22 07 49.0	+0.6
WLAR	White Oak Lake	4.27	126	Pn	Pn	22 07 49.8	+0.7
WLAR				IAmb_Lg		22 09 03.5	
	comp=Z,208nm,0.7s						
WHTX	Lake Whitney,	4.27	182	S	Sn	22 08 41.6	+2.5

	baz=2.1						
WHTX	Lake Whitney,	4.27	182	Pn	Pn	22 07 49.5	+0.4
WHTX				IAmb_Lg		22 09 00.8	
	comp=Z,120nm,1.3s						
UALR	University of	4.28	109		Pn	22 07 49.2	+0.1
237A	Washetta, Mont	4.42	164	Pn	Pn	22 07 51.0	-0.2
P38A	Dawn	4.46	40	IAmb_Lg		22 09 09.9	
	comp=Z,160nm,1.0s						
R40A	Maddies Statio	4.46	62	Pn	Pn	22 07 52.5	+0.8
R40A				IAmb_Lg		22 09 04.3	
	comp=Z,299nm,1.2s						
R40A	Maddies Statio	4.46	62	P		22 07 51.9	
	baz=244,SNR=30						
N33A	J Bar K, Exete	4.46	358	Pn	Pn	22 07 52.3	+0.6
N33A				IAmb_Lg		22 09 08.0	
	comp=Z,166nm,1.1s						
Z41A	Richland Creek	4.74	128	S	Sn	22 08 51.2	+0.6
	baz=311						
Z41A	Richland Creek	4.74	128	Pn	Pn	22 07 55.5	0.0
Z41A				IAmb_Lg		22 09 24.6	
	comp=Z,192nm,0.8s						
LCAR	Lake Charles	4.94	91	Pn	Pn	22 07 58.8	+0.5
KSCO	Kaye Shedlock’	5.06	304	IAmb_Lg		22 09 38.3	
	comp=Z,145nm,1.1s						
MSTX	Muleshoe	5.07	245	Pn	Pn	22 08 00.1	0.0
CCAR	Cane Creek	5.07	116	IAmb_Lg		22 09 31.5	
	comp=Z,240nm,1.0s						
CCM	Cathedral Cave	5.12	68	Pn	Pn	22 08 02.6	+1.8
CCM				IAmb_Lg		22 09 33.8	
	comp=Z,166nm,0.7s						
BGNE	Belgrade	5.18	353	IAmb_Lg		22 09 39.5	
	comp=Z,207nm,0.9s						
P40A	Paris	5.25	50	Pn	Pn	22 08 05.0	+2.4
P40A				IAmb_Lg		22 09 37.4	
	comp=Z,231nm,1.1s						
435B	Jarrell	5.48	183	IAmb_Lg		22 09 51.0	
	comp=Z,193nm,0.9s						
X43A	Marvell	5.49	107	IAmb_Lg		22 09 40.9	
	comp=Z,193nm,0.8s						
N38A	Joes South For	5.51	34	Pn	Pn	22 08 07.1	+1.1
N38A				IAmb_Lg		22 09 52.7	
	comp=Z,201nm,0.7s						
PBMO	Poplar Bluff	5.52	83	IAmb_Lg		22 09 47.7	
	comp=Z,197nm,0.7s						
FVM	French Village	5.72	71	Pn	Pn	22 08 09.5	+0.5
FVM				IAmb_Lg		22 09 46.0	
	comp=Z,146nm,0.8s						
T25A	Trinidad	5.81	281	Pn	Pn	22 08 11.2	+0.7
T25A				IAmb_Lg		22 09 53.2	
	comp=Z,135nm,1.0s						
OGNE	Ogallala	5.98	323	Pn	Pn	22 08 14.3	+1.6
143A	Socs Landing,	6.00	125	IAmb_Lg		22 10 09.4	
	comp=Z,206nm,0.8s						
SLM	Saint Louis	6.06	65	IAmb_Lg		22 09 57.9	
	comp=Z,124nm,0.8s						
SCIA	State Center	6.45	28	IAmb_Lg		22 10 16.1	
	comp=Z,154nm,0.7s						
K31A	O'Neill	6.45	350	Pn	Pn	22 08 20.2	+1.2
K31A				IAmb_Lg		22 10 18.8	
	comp=Z,176nm,1.0s						
S44A	Carbondale	6.56	75	Pn	Pn	22 08 21.5	+1.0
SIUC	Southern Illin	6.59	75	Pn	Pn	22 08 21.1	+0.1
OXF	Oxford	6.64	103	Pn	Pn	22 08 22.7	+1.0
N41A	Harden Midland	6.70	47	Pn	Pn	22 08 23.8	+1.4
SDCO	Great Sand Dun	6.76	285	Pn	Pn	22 08 25.0	+1.4
SDCO				IAmb_Lg		22 10 20.4	
	comp=Z,94nm,1.0s						
Y45A	Yeager Farm, C	6.76	109	IAmb_Lg		22 10 31.6	
	comp=Z,120nm,0.7s						
Q24A	Divide	6.82	296	Pn	Pn	22 08 26.0	+1.6
Q24A				IAmb_Lg		22 10 23.8	
	comp=Z,62nm,0.9s						
VBMS	Vicksburg	6.89	124	IAmb_Lg		22 10 27.2	
	comp=Z,91nm,1.2s						
P43A	Skaggs, Pawnee	6.98	59	Pn	Pn	22 08 26.4	+0.2
P43A				IAmb_Lg		22 10 26.8	
	comp=Z,165nm,0.8s						
Q44A	Meyer Farm, Va	7.05	66	Pn	Pn	22 08 28.6	+1.4
Q44A				IAmb_Lg		22 10 39.8	
	comp=Z,118nm,0.9s						
735A	Kenedy	7.41	184	IAmb_Lg		22 10 48.9	
	comp=Z,75nm,0.7s						
L40A	Anamosa	7.44	37	Pn	Pn	22 08 33.5	+0.8
ECSD	EROS Data Cent	7.47	4	Pn	Pn	22 08 32.8	-0.3
ECSD				IAmb_Lg		22 10 49.7	
	comp=Z,82nm,1.2s						
ISCO	Idaho Springs	7.48	301	Pn	Pn	22 08 34.1	+0.7
HDIL	Hopedale	7.57	53	Pn	Pn	22 08 35.2	+0.8
HDIL				IAmb_Lg		22 11 01.9	
	comp=Z,120nm,0.7s						
PLAL	Pickwick Lake	7.59	97	IAmb_Lg		22 10 48.6	
	comp=Z,128nm,0.9s						
ANMO	Albuquerque	7.61	263	Pn	Pn	22 08 34.8	-0.4
	comp=Z,0.3nm,0.3s,baz=90,slow=6.1,SNR=1.9						
ANMO				Pg	Pb	22 09 02.5	+6.4
	comp=Z,1.1nm,0.3s,baz=88,slow=19,SNR=11						
ANMO				Sn	Sn	22 09 58.7	-2.9
	comp=Z,0.7nm,0.3s,baz=87,slow=15,SNR=1.6						
ANMO				Lg	Lg	22 10 36.8	
	comp=Z,1.8nm,0.3s,baz=4.4,slow=10,SNR=3.1						
ANMO	Albuquerque	7.61	263	Pn	Pn	22 08 35.9	+0.7
WVT	Waverly	7.62	88	Pn	Pn	22 08 36.1	+1.0
WVT				IAmb_Lg		22 10 48.9	
	comp=Z,69nm,0.8s						
146A	Union	7.68	116	IAmb_Lg		22 11 07.0	
	comp=Z,73nm,0.9s						
O44A	Mansfield	7.93	58	IAmb_Lg		22 10 57.9	
	comp=Z,123nm,0.8s						
BNM	Barren Site	7.96	257		Pn	22 08 38.8	-1.2
833A	Chaparral WMA,	8.13	193	IAmb_Lg		22 11 06.9	
	comp=Z,58nm,0.9s						
MNTX	Cornudas Mount	8.14	238	Pn	Pn	22 08 42.4	+0.2
Z47A	Carrollton	8.16	109	IAmb_Lg		22 11 17.8	
	comp=Z,71nm,0.9s						
Y22D	IRIS PASSCAL I	8.21	257	IAmb_Lg		22 11 10.6	
	comp=Z,89nm,0.9s						
L42A	Oliver, Polo	8.22	44	IAmb_Lg		22 11 12.8	
	comp=Z,88nm,0.8s						
N23A	Red Feather La	8.22	307	IAmb_Lg		22 11 10.8	
	comp=Z,58nm,0.9s						
SUSD	Miller	8.27	352	IAmb_Lg		22 11 07.4	
	comp=Z,116nm,1.2s						
I37A	Lemond, Waseca	8.28	20	IAmb_Lg		22 11 13.7	
	comp=Z,123nm,1.0s						
V48A	Smith Brothers	8.47	91	IAmb_Lg		22 11 13.4	
	comp=Z,119nm,1.2s						
X48A	Hartselle	8.54	99	IAmb_Lg		22 11 20.9	
	comp=Z,86nm,0.8s						
JFWS	Jewell Farm	8.56	37	Pn	Pn	22 08 49.5	+1.5
JFWS				IAmb_Lg		22 11 23.3	
	comp=Z,88nm,0.7s						
P46A	Rosedale	8.61	64	IAmb_Lg		22 11 29.6	
	comp=Z,114nm,0.9s						
M44A	Midewin, Midew	8.82	52	IAmb_Lg		22 11 36.8	
	comp=Z,92nm,0.9s						
CLTN	Cedars of Leba	8.84	88	IAmb_Lg		22 11 43.3	
	comp=Z,65nm,0.9s						
WCI	Wyandotte Cave	8.96	74	IAmb_Lg		22 11 29.3	
	comp=Z,137nm,0.9s						
SFIN	Lafayette	8.97	60	IAmb_Lg		22 11 32.8	
	comp=Z,67nm,0.7s						
BLO	Bloomington	8.98	68	Pn	Pn	22 08 55.5	+1.7
MVCO	Mesa Verde	9.07	279	IAmb_Lg		22 11 43.8	
	comp=Z,45nm,1.2s						
I40A	Norwalk	9.15	32	Pn	Pn	22 08 55.8	-0.3
I40A				IAmb_Lg		22 11 40.7	
	comp=Z,50nm,1.0s						
Y49A	Blount Mountai	9.21	102	IAmb_Lg		22 11 45.1	
	comp=Z,72nm,0.8s						
U49A	Red Boiling Sp	9.26	85	IAmb_Lg		22 11 36.9	
	comp=Z,81nm,1.2s						
RSSD	Black Hills	9.40	329	Pn	Pn	22 09 00.5	+0.9
K43A	Burlington	9.42	44	Pn	Pn	22 09 00.7	+0.9
K43A				IAmb_Lg		22 11 48.2	
	comp=Z,69nm,0.8s						
O20A	White River Ci	9.47	297	Pn	Pn	22 09 01.7	+1.2
PV11	David Mesa, Pa	9.48	286	IAmb_Lg		22 12 08.0	
	comp=Z,49nm,1.2s						
SPMN	Marine on St.	9.56	19	IAmb_Lg		22 11 56.0	
	comp=Z,49nm,1.0s						
K22A	Casper	9.59	314	IAmb_Lg		22 12 04.7	
	comp=Z,50nm,1.1s						
F33A	5 Mile Ranch,	9.59	4	Pn	Pn	22 09 01.4	-0.6
F33A				IAmb_Lg		22 11 50.2	
	comp=Z,69nm,1.2s						
FPAL	Fort Paine	9.66	97	IAmb_Lg		22 11 55.7	
	comp=Z,68nm,0.9s						
W50A	Signal Mountai	9.77	93	IAmb_Lg		22 12 07.5	
	comp=Z,90nm,0.8s						
R49A	Shelbyville	9.84	75	IAmb_Lg		22 11 54.1	
	comp=Z,60nm,1.1s						
P48A	Milroy	9.88	68	IAmb_Lg		22 12 11.5	
	comp=Z,57nm,0.7s						
I42A	Draeger Farm,	9.94	37	Pn	Pn	22 09 07.4	+0.6
I42A				IAmb_Lg		22 11 58.9	
	comp=Z,58nm,0.9s						
F36A	Milaca	9.99	15	Pn	Pn	22 09 06.9	-0.6
F36A				IAmb_Lg		22 12 05.6	
	comp=Z,61nm,1.2s						
N47A	Urbana	10.15	60	Pn	Pn	22 09 09.7	-0.1
G40A	Rib Lake	10.46	29	Pn	Pn	22 09 14.5	+0.5
R50A	Paris	10.50	75	Pn	Pn	22 09 15.5	+1.0
TKL	Tuckaleechee C	10.95	89	Sn	Sn	22 11 23.5	+0.2
	comp=Z,0.4nm,0.3s,baz=303,slow=18,SNR=1.3						
TKL				Lg	Lg	22 12 22.6	
	comp=Z,1.5nm,0.3s,baz=7.1,slow=21,SNR=5.0						
N49A	Columbus Grove	11.23	62	Pn	Pn	22 09 23.1	-1.5
Q51A	Peebles	11.37	72	Pn	Pn	22 09 27.9	+1.4
L48A	N Adams	11.46	56	Pn	Pn	22 09 27.9	+0.2
PDAR	Pinedale Array	11.50	308	Pn	Pn	22 09 26.9	-1.6
	comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=2.1						
PDAR				Lg	Lg	22 12 37.0	
	comp=Z,0.3nm,0.3s,baz=124,slow=29,SNR=1.9						
ACSO	Alum Creek Sta	11.90	66	Pn	Pn	22 09 33.0	-0.6
Q52A	Bidwell	12.19	73	Pn	Pn	22 09 38.2	+0.6
B35A	Bob, Littlefor	12.36	11	Pn	Pn	22 09 38.8	-1.1
R53A	Hurricane	12.36	76	Pn	Pn	22 09 41.5	+1.4
P52A	Corning	12.40	70	Pn	Pn	22 09 41.5	+0.9
EYMN	Ely	12.42	18	Pn	Pn	22 09 39.9	-1.0
E43A	Lone Tree Farm	12.69	34	Pn	Pn	22 09 43.5	-0.9
S54A	Dingess, Beckl	12.84	78	Pn	Pn	22 09 46.1	-0.4
P53A	Whipple	12.94	71	Pn	Pn	22 09 48.4	+0.5
YMP	Mirror Lake Pl	12.95	315	Pn	Pn	22 09 48.6	+0.3
Q54A	Coxs Mills	13.30	73	Pn	Pn	22 09 53.4	+0.6
N53A	Lisbon	13.62	66	Pn	Pn	22 09 54.8	-2.5
ULM	Lac du Bonnet	14.01	4	Pn	Pn	22 09 57.8	-4.6
	comp=Z,0.5nm,0.3s,baz=182,slow=11,SNR=7.7						
ULM				Sn	Sn	22 12 28.2	-10
	comp=Z,1.0nm,0.3s,baz=248,slow=16,SNR=5.6						
ULM				Lg	Lg	22 13 55.5	
	comp=Z,0.1nm,0.3s,baz=240,slow=16,SNR=1.8						
ULM	Lac du Bonnet	14.01	4	Pn	Pn	22 09 59.5	-3.0
N54A	Moraine State	14.29	66	Pn	Pn	22 10 04.8	-1.5
MFID	Camas Ranch	15.93	302	Pn	Pn	22 10 26.2	-2.1
MFID				IAmb	IAmb	22 10 26.6	
	comp=Z,4.9nm,0.6s						
L56A	Greenwood	16.34	63	Pn	Pn	22 10 32.8	-0.7
L56A				IAmb	IAmb	22 10 36.0	
	comp=Z,18nm,1.2s						
KSPA	Keystone Colle	17.52	66	Pn	Pn	22 10 47.0	-1.4
KSPA				IAmb	IAmb	22 10 48.8	
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	40.84	330	P	P	22 14 27.1	+1.5
	comp=Z,0.5nm,0.7s,baz=109,slow=6.7,SNR=8.1						

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*NEIC **05** 22:07:34.6±1.9, 5°.73S±0°.09×147°.7E±0°.1, h35km±2km, mb4.4/10, Error ellipse: s-maj=23.5km s-min=14.8km az=83.0*

*IDC **05** 22:07:38.1±3.3, 5°.93S×147°.92E, h81km±28km, mb3.5/5, mb1 3.8/8, mb1mx3.5/46, mbtmp3.9/8, MS2.9/3, Ms1 2.9/3, ms1mx2.6/29, Error ellipse: s-maj=34.7km s-min=20.3km az=103.0*

*NOU **05** 22:08:16.3, 7°.37S×145°.71E, h247km, mb4.2, Near S. Coast of New Guinea, PNG.*

ISC 05 22:07:37.0±0.8**, 5°.93S**±0°.07×**147°.8E**±0°.1**, h60**km**, n27, σ2ˢ.12**/30**, mb4.4**/10**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.51	190	P	Pn	22 08 30.6	+1.5
	9.7nm,0.3s,baz=13,slow=5.8,SNR=18						
PMG				S	Sn	22 09 08.4	-1.0
	24nm,0.3s,baz=216,slow=21,SNR=17						
PMG				LR	LR	22 09 59.9	
	comp=Z,79nm,19.1s,baz=232,slow=40						
PMG	Port Moresby	3.51	190		Pn	22 08 30.9	+1.8
PMG				Sn	Sn	22 09 09.5	+0.1
JAY	Jayapura	7.81	295	P	Pn	22 09 31.0	+2.8
	0.9nm,0.3s,baz=180,slow=20,SNR=1.4						
COEN	Coen	9.17	209	Pn	Pn	22 09 47.8	+1.1
MTN	Manton Dam	17.78	246	P	P	22 11 41.6	+1.0
MTN				IAmb	IAmb	22 11 43.6	
	comp=Z,32nm,1.1s						
WB0	Warramunga Arr	18.93	222	P	Pn	22 11 53.9	-0.5
WR0	Warramunga Arr	18.97	221	P	P	22 11 53.9	+0.3
WR0				IAmb	IAmb	22 12 05.4	
	comp=Z,19nm,1.4s						
WRAB	Tennant Creek	19.08	222	P	P	22 11 54.5	-0.3
WRAB				IAmb	IAmb	22 11 56.0	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	19.08	222	P	P	22 11 54.8	0.0
WRA	Warramunga Arr	19.09	222	P	P	22 11 54.9	-0.1
	comp=Z,1.5nm,0.3s,baz=48,slow=11,SNR=82						
WRA				S	S	22 15 20.5	-8.0
	comp=Z,0.1nm,0.3s,baz=44,slow=21,SNR=5.0						
AS31	Alice Springs	22.11	216	P	P	22 12 28.2	+0.6
AS31				IAmb	IAmb	22 12 35.1	
	comp=Z,4.3nm,0.4s						
ASAR	Alice Springs	22.11	216	P	P	22 12 28.1	+0.5
	comp=Z,688nm,0.3s,baz=49,slow=9.2,SNR=66						
ASAR				S	S	22 16 25.0	-3.1
	comp=Z,4.1nm,0.8s,baz=32,slow=24,SNR=9.5						
ASAR				LR	LR	22 23 04.7	
	comp=Z,47nm,18.1s,baz=240,slow=42						
ARMA	Armidale	24.63	172	P	P	22 12 55.1	+3.1
ARMA				IAmb	IAmb	22 13 04.1	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	24.75	239	P	P	22 12 54.0	+0.8
	comp=Z,13nm,0.4s,baz=54,slow=8.8,SNR=48						
FITZ	Fitzroy Crossi	24.75	239	P	P	22 12 54.3	+1.1
KAPI	Kappang	27.90	270	LR	LR	22 25 56.1	
	comp=Z,22nm,19.5s,baz=60,slow=39						
BKB	Balikpapan	31.15	277	P	P	22 13 50.9	+0.4
PSA00	Pilbara Seismi	31.17	237	P	P	22 13 51.3	+0.7
MORW	Morawa	37.79	229	P	P	22 14 48.1	+0.4
MORW				IAmb	IAmb	22 14 51.5	
	comp=Z,7.9nm,0.9s						
PETK	Petropavlovsk-	59.41	7	P	P	22 17 33.2	+0.1
	comp=Z,5.7nm,0.8s,baz=144,slow=13,SNR=4.0						
SONM	Songino Array	64.71	330	P	P	22 18 08.3	-0.7
	comp=Z,0.3nm,0.5s,baz=142,slow=7.2,SNR=3.1						
VNDA	Vanda	71.94	177	P	P	22 18 55.1	+1.6
MKAR	Makanchi Array	77.93	320	P	P	22 19 28.4	-0.3
	comp=Z,0.2nm,0.6s,baz=105,slow=7.4,SNR=2.8						
ZALV	Zalesovo Beam	79.36	328	P	P	22 19 34.0	-2.3
	comp=Z,0.3nm,0.4s,baz=110,slow=5.9,SNR=2.4						
ILAR	Eielson Array	85.12	23	P	P	22 20 03.9	-2.3
	comp=Z,0.3nm,0.5s,baz=256,slow=6.2,SNR=6.9						
TORD	Torodi Ar. Bea	145.81	285	PKPbc	PKPdf	22 27 08.7	-1.3
	comp=Z,0.5nm,0.4s,baz=66,slow=3.4,SNR=7.9						
BDFB	Brasilia	153.48	144	PKPbc	PKPbc	22 27 28.3	-1.6
	comp=Z,2.2nm,0.4s,baz=93,slow=2.8,SNR=5.0						

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*NAO **05** 22:12:10.8±0.9, 67°.13N×20°.85E, ML2.9*

*KOLA **05** 22:12:10.1, 67°.97N×20°.27E, h0km, ML2.7, Kiruna Area, Sweden*

*IDC **05** 22:12:11.0±0.8, 67°.13N×20°.90E, h0km, mb1 3.3/4, mb1mx3.0/56, mbtmp3.3/4, ML2.7/4, Error ellipse: s-maj=13.4km s-min=7.3km az=102.0*

*HEL **05** 22:12:11.6±0.1, 67°.18N×20°.64E, h1km, ML2.7, ML2.8(UPP), Confirmed Induced event*

*BER **05** 22:12:13.1±3.0, 67°.13N×20°.89E, h0km, ML2.6, ML2.9(NAO), Suspected explosion*

ISC 05 22:12:09.6±0.6**, 67°.14N**±0°.02×**20°.70E**±0°.02**, h0**km**, n56, σ1ˢ.58**/95**, 1C-6D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.06	252⇑	*i*P	Pg	22 12 12.5	+1.9
DUNU				*i* S	Sg	22 12 13.7	+2.3
RATU	Laukkuluspa	0.81	329⇓	*i*P	Pg	22 12 24.9	-0.2
RATU				*i* S	Sg	22 12 35.2	-0.4
KUA	Kurravaara	0.83	350⇓	*i*P	Pg	22 12 25.2	-0.4
KUA				*i* S	Sg	22 12 36.1	-0.2
SALU	Saltoluokta	0.89	287⇓	*i*P	Pg	22 12 26.9	+0.3
SALU				*i* S	Sg	22 12 38.4	+0.3
PAJU	Pajala	0.95	96	*e*P	Pb	22 12 28.9	-0.1
PAJU				*e*S	Sb	22 12 42.2	+0.1
NIKU	Nikkaluokta	0.97	320⇓	*e*P	Pg	22 12 28.0	-0.3
NIKU				*e*S	Sg	22 12 41.4	+0.5
HARU	Harads	0.99	174⇓	*e*P	Pg	22 12 29.7	+1.2
HARU				*e*S	Sb	22 12 44.1	+1.1
LANU	Lannavaara	1.04	28	*e*P	Pg	22 12 29.4	-0.2
LANU				*e*S	Sg	22 12 42.9	-0.1
KOVU	Salmi	1.11	349	*e*P	Pg	22 12 30.2	-0.7
KOVU				*e*S	Sg	22 12 45.1	-0.1
KALU	Kalix	1.67	139	*e*P	Pg	22 12 42.0	+0.4
KALU				*e*S	Sg	22 13 04.7	+1.5
SJUU	Sjulsmark	1.68	167⇓	*e*P	Pb	22 12 42.0	+0.7
TOF	Tornio	1.79	125	*e*P	Pb	22 12 44.0	+0.7
TOF				*e*S	Sg	22 13 08.4	+1.2
TOF				MSG		22 13 10.0	
	comp=Z,48nm,0.3s						
KIF	Kilpisjarvi	1.88	1	Pn	Pb	22 12 44.3	-0.5
KIF				Sn	Sg	22 13 09.6	-0.2
KIF	Kilpisjarvi	1.88	1	*e*P	Pb	22 12 44.2	-0.5
KIF				*e*S	Sg	22 13 09.2	-0.6
KIF	Kilpisjarvi	1.88	1	*e*P	Pb	22 12 44.2	-0.5
KIF				*e*S	Sg	22 13 09.4	-0.4
KIF				MSG		22 13 11.4	
	comp=Z,95nm,0.2s						
LILU	Lilltraesk	1.89	191	*e*P	Pb	22 12 45.3	+0.3
LILU				*e*S	Sg	22 13 11.1	+0.7
N2ST	Straumen	2.00	278	*e*P	Pb	22 12 46.5	-0.3
N2ST				*e*S	Sb	22 13 13.0	+0.9
N2ST				IAML		22 13 15.0	
	comp=Z,150nm,0.5s						
N2IH	Innhavet	2.01	297	*e*P	Pb	22 12 46.7	-0.3
N2IH				*e*S	Sb	22 13 12.9	+0.4
N2IH				IAML		22 13 15.5	
	comp=Z,142nm,0.5s						
KTK1	Kautokeino	2.11	26	Pn	Pb	22 12 47.8	-0.9
KTK1				Sn	Sb	22 13 15.6	+0.2
KTK1	Kautokeino	2.11	26	*e*P	Pb	22 12 48.1	-0.6
KTK1				*e*S	Sn	22 13 13.7	+0.7
KTK1				IAML		22 13 17.6	
	comp=Z,66nm,0.4s						
KTK1	Kautokeino	2.11	26	*e*P	Pb	22 12 48.2	-0.5
KTK1				*e*S	Sb	22 13 13.9	-1.5
FAUS	Fauske	2.12	279	*e*P	Pb	22 12 48.3	-0.6
FAUS				*e*S	Sb	22 13 16.8	+1.2
FAUS				IAML		22 13 18.2	
	comp=Z,91nm,0.3s						
N2TV	T¥rnvik	2.20	284	*e*P	Pb	22 12 49.9	-0.4
STEI	Steigen	2.24	293	*e*P	Pb	22 12 50.4	-0.5
NBB28	Valnes	2.44	274	*e*P	Pb	22 12 53.5	-0.7
NBB28				IAML		22 13 28.7	
	comp=Z,59nm,0.4s						
TRO	Tromso	2.59	346	*e*P	Pn	22 12 54.4	+1.6
TRO	Tromso	2.59	346	*e*P	Pn	22 12 54.3	+1.6
TRO				*e*S	Sn	22 13 25.8	+0.9
NBB17	Glomfjord B¥r	2.67	266	*e*P	Pb	22 12 57.0	-1.3
MOR8	Moi Rana	2.68	252	*e*P	Pn	22 12 54.9	+0.9
NBB30	Finnes	2.73	270	*e*P	Pn	22 12 55.9	+1.2
LOF	Lofoten	2.91	293	*e*P	Pn	22 12 57.3	+0.1
OBF4	Vikkela, Lumij	2.95	140	MSG		22 13 54.8	
	comp=Z,14nm,0.3s						
ARA0	ARCESS Array S	3.00	34	Pn	Pn	22 12 59.4	+1.1
	baz=209,slow=16						
ARA0				Sn	Sn	22 13 35.9	+1.0
	baz=225,slow=18						
ARA0	ARCESS Array S	3.00	34	Pn	Pn	22 12 59.4	+1.1
	baz=209,slow=16						
ARA0				Sn	Sn	22 13 35.9	+1.0
	baz=225,slow=18						
ARCES	ARCESS Array B	3.00	34	Pn	Pn	22 12 59.4	+1.1
	baz=212,slow=13,SNR=124						
ARCES				Sn	Sn	22 13 35.6	+0.7
	baz=216,slow=24,SNR=8.5						
OBF0	Syolatti, Pyha	3.02	150	MSG		22 13 54.4	
	comp=Z,31nm,0.4s						
KONS	Konsvik	3.07	261	*e*P	Pn	22 13 01.1	+1.9
KONS				IAML		22 13 48.9	
	comp=Z,28nm,0.3s						
STOK	Stokkvaagen	3.16	259	*e*P	Pn	22 13 02.8	+2.3
HAMF	Hammerfest	3.68	16	*e*P	Pn	22 13 10.3	+2.6
NSS	Namsos	4.44	238	*e*P	Pn	22 13 20.5	+2.4
APA0	Apatity Array	4.77	79	Pn	Pn	22 13 22.8	+0.1
	baz=278,slow=14						
APA0				Sn	Sn	22 14 17.4	-1.2
	baz=269,slow=22						
APA0				Lg	Lg	22 14 36.3	
	baz=280,slow=28						
APA0	Apatity Array	4.77	79	Pn	Pn	22 13 22.8	+0.1
	baz=278,slow=14						
APA0				Sn	Sn	22 14 17.4	-1.2
	baz=269,slow=22						
APA0				Sg	Sb	22 14 36.3	+4.4
	baz=280,slow=28						
APA0	Apatity Array	4.77	79	P	Pn	22 13 22.9	+0.3
APA0				S	Sn	22 14 16.9	-1.6
APA	Apatity	4.93	79	S	Sn	22 14 22.2	-0.2
FIA0	FINESS Array S	6.17	155	Pn	Pn	22 13 44.4	+2.5
	baz=345,slow=14						
FIA0				Sn	Sn	22 14 52.2	-0.9
	baz=344,slow=28						
FIA0				Lg	Lg	22 15 22.7	
	baz=342,slow=37						
FIA0	FINESS Array S	6.17	155	Pn	Pn	22 13 44.4	+2.5
	baz=345,slow=14						
FIA0				Sn	Sn	22 14 52.2	-0.9
	baz=344,slow=28						
FIA0				Sg	Sg	22 15 22.7	-5.0
	baz=342,slow=37						
FINES	FINESS Array B	6.17	155	Pn	Pn	22 13 44.0	+2.1
	comp=Z,0.7nm,0.3s,baz=348,slow=14,SNR=24						
FINES				Pg	Pb	22 13 54.3	-3.6
	comp=Z,0.4nm,0.3s,baz=345,slow=13,SNR=8.9						
FINES				Sn	Sn	22 14 52.8	-0.4
	comp=Z,1.1nm,0.3s,baz=346,slow=22,SNR=9.1						
FINES				Lg	Lg	22 15 24.4	
	comp=Z,2.6nm,0.3s,baz=344,slow=28,SNR=8.4						
NB2	NORSAR Subarra	7.39	219	Pn	Pn	22 14 00.5	+1.9
	baz=30,slow=14						
NB2				Sn	Sn	22 15 21.0	-2.1
	baz=31,slow=28						
NB2				Lg	Lg	22 16 01.4	
	baz=31,slow=37						
NB2	NORSAR Subarra	7.39	219	Pn	Pn	22 14 00.5	+1.9
	baz=30,slow=14						
NB2				Sn	Sn	22 15 21.0	-2.1
	baz=31,slow=28						
NB2				Sg	Sg	22 16 01.4	-5.3
	baz=31,slow=37						
NOA	NORSAR Array B	7.39	219	Pn	Pn	22 13 59.0	+0.3
	comp=Z,0.0nm,0.3s,baz=27,slow=11,SNR=6.3						
NOA				Sn	Sn	22 15 20.8	-2.3
	comp=Z,0.0nm,0.3s,baz=36,slow=23,SNR=4.5						
NOA				Lg	Lg	22 16 03.5	
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=5.0						
NC602	NORSAR Array S	7.58	216	*e*P	Pn	22 14 02.8	+1.6
NRA0	NORESS Array S	7.58	216	Pn	Pn	22 14 03.1	+1.9
	baz=24,slow=14						
NRA0				Sn	Sn	22 15 24.6	-3.1
	baz=19,slow=18						
NRA0				Lg	Lg	22 16 10.6	
	baz=30,slow=56						
NRA0	NORESS Array S	7.58	216	Pn	Pn	22 14 03.1	+1.9
	baz=24,slow=14						
NRA0				Sn	Sn	22 15 24.6	-3.1
	baz=19,slow=18						
NRA0				Sg	Sg	22 16 10.6	-2.2
	baz=30,slow=56						
SPA0	Spitsbergen Ar	11.17	355	Pn	Pn	22 14 49.7	-0.5
	baz=159,slow=16						
SPA0	Spitsbergen Ar	11.17	355	Pn	Pn	22 14 49.7	-0.5
	baz=159,slow=16						
SPITS	Spitsbergen Ar	11.17	355	Pn	Pn	22 14 49.8	-0.5
	baz=168,slow=15,SNR=8.9						

WEL 05 22:13:24.0±0.4**, 43°S**±3°×**17°1E**±°**, h5**km**, M3.4**/19**, ML3.5**/19**, MLv3.4**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=133.8, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.35	28	P	Pg	22 13 31.1	+0.4
INZ				S	Sg	22 13 35.6	+0.3
WVZ	Waitaha Valley	0.36	263	P	Pg	22 13 31.8	+0.9
WVZ				S	Sg	22 13 36.6	+1.0
MHCZ	Mount Hutt	0.56	153	P	Pg	22 13 34.9	+0.2

OXZ	Oxford	0.67	116	P	Pg	22 13 37.0	+0.1
RPZ	Rata Peaks	0.69	190	P	Pg	22 13 37.5	+0.1
GCSZ	Gaunt Creek Bo	0.71	246	P	Pg	22 13 38.0	+0.3
LTZ	Lake Taylor	0.81	72	P	Pg	22 13 40.0	+0.4
ARCZ	Arundel	0.91	182	P	Pg	22 13 41.5	-0.1
ARCZ				S	Sg	22 13 53.6	+0.1
RACZ	Rakaia	0.96	136	P	Pg	22 13 42.8	+0.3
RACZ				S	Sb	22 13 56.2	-0.1
WACZ	Wakanui South	1.01	154	P	Pg	22 13 43.7	+0.2
WACZ				S	Sb	22 13 58.0	+0.3
AMCZ	Amberley	1.06	98	P	Pb	22 13 45.0	+0.2
FOZ	Fox Glacier	1.14	244	P	Pg	22 13 45.9	0.0
MQZ	McQueen's Vall	1.24	123	P	Pg	22 13 46.7	-1.1
GVZ	Greta Valley S	1.33	88	P	Pn	22 13 48.5	-0.8
DSZ	Denniston Nort	1.36	19	P	Pn	22 13 49.2	-0.4
TMZ	Timaru	1.36	187	P	Pn	22 13 48.9	-0.8
AKCZ	Akaroa Harbour	1.49	125	P	Pn	22 13 50.2	-1.3
OKCZ	Okains Bay	1.51	118	P	Pn	22 13 51.1	-0.6
LBZ	Lake Benmore	1.55	209	P	Pn	22 13 52.0	-0.3
THZ	Tophouse	1.78	45	P	Pn	22 13 55.5	0.0
KHZ	Kahutara	1.82	71	P	Pn	22 13 55.5	-0.4
JCZ	Jackson Bay	2.05	239	P	Pn	22 13 59.2	-0.1
ODZ	Otahua Downs	2.05	191	P	Pn	22 13 58.3	-0.9
BSWZ	Blackbirch Sta	2.37	57	P	Pn	22 14 04.6	+1.1
WKZ	Wanaka	2.40	221	P	Pn	22 14 04.3	+0.3
QRZ	Quartz Range	2.41	24	P	Pn	22 14 04.3	+0.2
NNZ	Nelson	2.42	42	P	Pn	22 14 04.7	+0.4
TUWZ	Tuamarina	2.58	53	P	Pn	22 14 06.9	+0.5
EAZ	Earnscleugh	2.59	211	P	Pn	22 14 05.2	-1.4
TCW	Tory Channel	2.91	52	P	Pn	22 14 11.7	+0.8
DUWZ	D'Urville Isla	3.00	43	P	Pn	22 14 13.6	+1.3
TUZ	Tuapeka	3.13	201	P	Pn	22 14 12.2	-1.8
BHW	Baring Head	3.16	60	P	Pn	22 14 14.8	+0.4
MLZ	Mavora Lakes	3.23	223	P	Pn	22 14 15.0	-0.4
CAW	Cannon Point	3.45	57	P	Pn	22 14 17.3	-1.1
OGWZ	Otaki Gorge	3.69	54	P	Pn	22 14 20.9	-0.7
MTW	Mount Morrison	3.69	61	P	Pn	22 14 19.9	-1.9
SYZ	Scrubby Hill	3.80	202	P	Pn	22 14 22.5	-0.7
MRZ	Mangatainoka R	4.03	55	P	Pn	22 14 24.9	-1.4
NMEZ	Namu Road	4.13	30	P	Pn	22 14 29.4	+1.7
NBEZ	Newall Road No	4.26	29	P	Pn	22 14 30.8	+1.3
KHEZ	Kahui Hut	4.29	30	P	Pn	22 14 31.5	+1.5
PREZ	Palmer Road	4.30	32	P	Pn	22 14 31.7	+1.5
WAZ	Wanganui	4.33	42	P	Pn	22 14 33.4	+2.9
NEZ	North Egmont	4.34	31	P	Pn	22 14 31.9	+1.2
PKE	Pukeiti	4.37	30	P	Pn	22 14 32.5	+1.5
DREZ	Durham Road	4.45	31	P	Pn	22 14 33.0	+0.8
TSZ	Takapari Road	4.63	52	P	Pn	22 14 35.5	+0.8
VRZ	Vera Road	4.73	36	P	Pn	22 14 37.4	+1.4
NGZ	Ngauruhoe	5.08	42	P	Pn	22 14 44.4	+3.5
OTVZ	Oturere	5.12	42	P	Pn	22 14 43.9	+2.5
HIZ	Hauiti	5.29	33	P	Pn	22 14 44.4	+0.7
PRGZ	Paritu Road	6.50	53	P	Pn	22 15 00.6	+0.3
AWAZ	Awhitu Peninsu	6.51	25	P	Pn	22 15 01.9	+1.4
MKAZ	Moumakai	6.65	28	P	Pn	22 15 03.1	+0.8
MBAZ	Motutapu North	6.86	26	P	Pn	22 15 07.1	+1.8
WIAZ	Waiheke Island	6.92	27	P	Pn	22 15 07.2	+1.2
WCZ	Waipu Caves	7.49	20	P	Pn	22 15 14.6	+0.8
WMGZ	Waiomatatini S	7.56	49	P	Pn	22 15 19.2	+4.4
OUZ	Omahuta	8.02	14	P	Pn	22 15 22.5	+1.4

IDC ***05*** *22:22:57.5±1.1, 71°.44N×2°.95W, h0^{km}, mb3.4/6, mb1 3.7/11, mb1mx3.4/70, mbtmp3.5/11, ML3.2/5, MS3.3/5, Ms1 3.3/5, ms1mx2.8/43, Error ellipse: s-maj=23.3km s-min=19.5km az=68.0*

BER ***05*** *22:23:05.5±1.5, 71°.54N×2°.08W, h10^{km}, ML2.2, Confirmed Earthquake*

ISC 05 22:22:59.1±0.8**, 71°.56N**±0°.07×**2°.42W**±0°.10**, h10^{km}, n34, σ2^{s}.45**/34**, mb3.3**/6**, MS3.3**/3**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOF	Lofoten	6.49	114	*e*P	Pn	22 24 36.5	+2.1
LOF				*e*S	Sn	22 25 43.5	-4.9
LOF				IAML		22 25 55.6	
	comp=Z,5.2nm,0.7s						
N2VI	Vinje	6.56	112	*e*P	Pn	22 24 37.2	+1.8
STEI	Steigen	7.11	112	*e*P	Pn	22 24 44.7	+1.7
STEI				*e*S	Sn	22 25 57.4	-6.3
STEI				IAML		22 26 04.8	
	comp=Z,3.3nm,0.8s						
HSPB	Hornsund (broa	7.28	33	*e*P	Pn	22 24 46.8	+1.5
N2IH	Innhavet	7.29	111	*e*P	Pn	22 24 47.5	+2.0
NBB30	Finnes	7.33	121	*e*P	Pn	22 24 47.5	+1.5
TRO	Tromso	7.35	95	*e*P	Pn	22 24 48.4	+2.2
TRO				*e*S	Sn	22 26 01.7	-7.8
TRO				IAML		22 26 10.4	
	comp=Z,3.0nm,0.7s						
NBB28	Valnes	7.38	118	*e*P	Pn	22 24 47.9	+1.3
FAUS	Fauske	7.48	115	*e*P	Pn	22 24 49.9	+1.9
KONS	Konsvik	7.52	125	*e*P	Pn	22 24 50.5	+2.0
SPA0	Spitsbergen Ar	8.21	28	*e*P	Pn	22 25 00.1	+2.2
SPA0				*e*S	Sn	22 26 26.7	-3.9
SPITS	Spitsbergen Ar	8.21	28	Pn	Pn	22 24 59.8	+1.9
	baz=218,slow=15,SNR=35						
KIF	Kilpisjarvi	8.23	97	*e*P	Pn	22 25 00.4	+2.2
NSS	Namsos	8.85	136	*e*P	Pn	22 25 09.1	+2.3
ARA0	ARCESS Array S	9.48	89	*e*P	Pn	22 25 17.5	+2.0
ARCES	ARCESS Array B	9.48	89	Pn	Pn	22 25 17.4	+1.9
	baz=287,slow=11,SNR=13						
ARCES				LR	LR	22 28 27.0	
	comp=Z,97nm,19.3s,baz=250,slow=34						
NOA	NORSAR Array B	11.85	146	Pn	Pn	22 25 48.6	+0.6
	comp=Z,0.0nm,0.3s,baz=122,slow=12,SNR=3.2						
NOA				LR	LR	22 30 23.5	
	comp=Z,118nm,20.1s,baz=340,slow=38						
FINES	FINESS Array B	15.03	118	Pn	Pn	22 26 32.1	+0.9
	comp=Z,0.1nm,0.3s,baz=320,slow=11,SNR=5.5						
EKA	Eskdalemuir Ar	16.29	182	Pn	Pn	22 26 45.6	-2.0
	baz=354,slow=13,SNR=2.2						
CHVC	Chvalec	22.65	148	*e*P	P	22 28 02.5	+2.5
CHVC				*e*x	x	22 28 07.1	
OSTC	Ostas	22.71	148	*e*P	P	22 28 04.0	+3.4
DPC	Dobruska-Polom	22.93	148	*e*P	P	22 28 04.0	+1.1
PRU	Pruhonice	22.99	151	*e*P	P	22 28 06.2	+2.7
PRU				*e*x	x	22 28 10.7	
KRLC	Kraliky	23.27	148	*e*P	P	22 28 12.7	+6.3
KHC	Kasperske Hory	23.69	153	*e*P	P	22 28 07.0	-3.5
VRAC	Vranov	23.98	148	LR	LR	22 36 23.9	
	comp=Z,60nm,19.3s,baz=329,slow=34						
GERES	GERESS Array B	23.98	153	P	P	22 28 14.2	+0.8
	comp=Z,0.7nm,0.8s,baz=353,slow=9.9,SNR=4.2						
RES	Resolute Bay	24.46	320	LR	LR	22 37 07.6	
	comp=Z,103nm,19.0s,baz=256,slow=35						
AKASG	Malin Array Be	25.32	129	P	P	22 28 25.8	+0.3
	comp=Z,1.7nm,0.7s,baz=335,slow=9.8,SNR=5.1						
MLR	Muntele Rosu	29.45	137	LR	LR	22 41 06.1	
	comp=Z,92nm,18.6s,baz=354,slow=37						
ESDC	Sonseca Array	31.97	182	P	P	22 29 23.6	-1.3
	comp=Z,0.3nm,0.8s,baz=355,slow=9.1,SNR=5.0						
YKA	Yellowknife Ar	38.39	316	P	P	22 30 19.5	-0.3
	comp=Z,0.1nm,0.3s,baz=28,slow=8.4,SNR=2.1						
YKA				PcP	PcP	22 32 31.9	-0.9
	comp=Z,0.7nm,1.0s,baz=29,slow=2.9,SNR=6.7						
MKAR	Makanchi Array	44.85	76	P	P	22 31 13.8	+0.8
	comp=Z,0.2nm,0.7s,baz=335,slow=6.4,SNR=2.4						
TORD	Torodi Ar. Bea	58.44	175	P	P	22 32 53.6	-1.1
	comp=Z,1.3nm,0.9s,baz=351,slow=8.0,SNR=3.1						

IDC ***05*** *22:27:38.9±1.5, 36°.19N×97°.38W, h0^{km}, mb3.5/2, mb1 3.8/7, mb1mx3.5/54, mbtmp3.5/7, ML3.4/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/28, Error ellipse: s-maj=26.4km s-min=10.8km az=10.0*

TUL ***05*** *22:27:39.8±1.3, 36°.26N±0°.02×97°.26W±0°.02, h4^{km}±6^{km}, ML3.8, mb4.1/3(NEIC), mb_Lg3.9/169(NEIC), Mwr3.6/52(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=60.0*

NEIC ***05*** *22:27:39.9±1.4, 36°.255N±0°.008×97°.27W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=3.0km s-min=0.8km az=70.0*

CERI ***05*** *22:27:39.0, 36°.26N×97°.26W, h3^{km}*

NEIC ***05*** *22:27:39.8, 36°.26N×97°.26W, h2^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.41; $M_{\theta\theta}$1.84; $M_{\phi\phi}$-1.43; $M_{r\theta}$-1.05; $M_{\theta\phi}$2.89; $M_{\phi r}$0.47; Fault plane solution: $M_0$3.53000×10^{14} NP1:ϕ_s195.60000°, δ70.47000°, λ-174.13000°. NP2:ϕ_s103.63000°, δ84.47000°, λ-19.63000°. Principal axes: T 3.6393, Plg10.0000°, Azm151.0000°; N -0.2258, Plg70.0000°, Azm269.0000°; P -3.4135, Plg18.0000°, Azm58.0000°;*

ANF ***05*** *22:27:42.1±0.7, 36°.28N×97°.28W, h28^{km}±6^{km}, ML4.8/18 Error ellipse: s-maj=2.1km s-min=2.0km az=2.0*

ISC 05 22:27:39.9±1.0**, 36°.26N**±0°.02×**97°.26W**±0°.03**, h10^{km}**±7^{km}**, n200, σ1^{s}.15**/190**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.46	101		Pg	22 27 48.9	0.0
QUOK				Sg	Sg	22 27 55.3	+0.4
OK031	S. Brethren Rd	0.46	132		Pg	22 27 49.0	+0.1
OK031				Sg	Sg	22 27 55.4	+0.4
OK030	Cody Creek RV	0.51	131		Pg	22 27 50.0	+0.1
OK030				Sg	Sg	22 27 57.0	+0.4
CROK	Carrier	0.63	293	Pg	Pg	22 27 52.1	0.0
CROK				Sg	Sg	22 28 00.8	+0.5
OK025	Westminster Rd	0.68	185		Pb	22 27 53.0	-0.9
OK025				Sg	Sb	22 28 02.4	-1.0
OK009	Oakdale Elemen	0.69	191		Pb	22 27 53.2	-0.8
GC02	Grant County #	0.76	321		Pb	22 27 54.3	-0.9
GC02					Sb	22 28 04.7	-0.9
KAN13	South Haven SW	0.77	347		Pb	22 27 54.7	-0.6
KAN13				Sg	Sg	22 28 05.3	+0.6
OKCFA	Oklahoma City	0.86	190	Pg	Pb	22 27 56.1	-0.8
OKCFA				Sg	Sb	22 28 07.9	-0.5
OKCSW	OKLAHOMA CITY	0.87	189	Pg	Pb	22 27 56.1	-0.9
OKCSW				Sg	Sb	22 28 08.1	-0.6
T35A	Sooner Cattle	0.89	43	Pg	Pb	22 27 56.6	-0.8
T35B	Sooner Cattle	0.89	43	P		22 27 56.9	
	baz=223,SNR=290						
KAN14	Manchester OK	0.89	321	Pg	Pb	22 27 56.8	-0.7
KAN14				Sg	Sb	22 28 09.2	-0.3
FNO	Franklin	1.01	186	Pg	Pb	22 27 58.7	-0.8
FNO				Sg	Sb	22 28 12.5	-0.3
KS21	Milan North St	1.07	343		Pb	22 28 00.1	-0.4
KAN10	Anthony SW Sta	1.09	322	Pg	Pb	22 28 00.5	-0.3
KAN08	Anthony NE Sta	1.12	330		Pb	22 28 00.9	-0.4
W35A	Tecumseh	1.15	164		Pn	22 28 00.6	-1.4
KAN12	Harper NE Stat	1.19	330		Pn	22 28 02.2	-0.4
TUL1	Leonard	1.24	106	P	Pn	22 28 02.6	-0.7
	baz=287,SNR=44						
TUL1				S	Sb	22 28 19.5	0.0
	baz=287						
TUL1	Leonard	1.24	106		Pn	22 28 02.6	-0.7
TUL1	Leonard	1.24	106	P		22 28 02.7	
	baz=286						
TUL1				S		22 28 19.7	
	baz=286						
U32A	Winter Ranch,	1.41	275		Pn	22 28 05.6	0.0
U32A	Winter Ranch,	1.41	275	P		22 28 05.7	
	baz=95						
U32A				S		22 28 25.1	
	baz=95						
WMOK	Wichita Mounta	1.96	220	P	Pn	22 28 14.2	+1.0
	baz=39,SNR=367						
WMOK				Sb	Sb	22 28 41.0	+0.8
	baz=39						
WMOK	Wichita Mounta	1.96	220		Pn	22 28 14.5	+1.3
WMOK				IAmb_Lg		22 28 41.4	
	comp=Z,600nm,0.8s						
WMOK	Wichita Mounta	1.96	220	P		22 28 14.4	
	baz=38,SNR=278						
WMOK				S		22 28 40.7	
	baz=38						
X37A	Clayton	2.27	137		Pn	22 28 18.6	+1.1
X37A	Clayton	2.27	137	P		22 28 18.7	
	baz=318						
X37A				S		22 28 48.2	
	baz=318						
U38A	Gravette	2.33	85	Pn	Pn	22 28 19.9	+1.6
U38A	Gravette	2.33	85	P		22 28 19.9	
	baz=266,SNR=36						
U38A				S		22 28 50.2	
	baz=266						
R32A	Long Quarter,	2.44	332		Pn	22 28 21.0	+1.1
R32A				IAmb_Lg		22 28 56.9	
	comp=Z,431nm,0.7s						
R32A	Long Quarter,	2.44	332	P		22 28 21.0	
	baz=152,SNR=153						
R32A				S		22 28 51.8	
	baz=152						
HHAR	Hobbs	2.69	89		Pn	22 28 24.3	+1.2
HHAR	Hobbs	2.69	89	P		22 28 24.6	
	baz=270						
KSU1	Kansas State U	2.88	10	P	Pn	22 28 27.0	+1.2
	baz=190						
KSU1	Kansas State U	2.88	10	Pn	Pn	22 28 27.6	+1.8
KSU1				IAmb_Lg		22 29 18.7	
	comp=Z,330nm,0.9s						
KSU1	Kansas State U	2.88	10	P		22 28 27.7	
	baz=191,SNR=28						
KSU1				S		22 29 03.7	
	baz=191						
Z35A	Perchaven, San	2.92	180	Pn	Pn	22 28 27.7	+1.2
Z35A	Perchaven, San	2.92	180	P		22 28 27.7	
	baz=360,SNR=15						
Z35A				S		22 29 03.8	
	baz=360						
W39A	Magazine	3.02	110	P	Pn	22 28 28.2	+0.4
	baz=292,SNR=22						
W39A	Magazine	3.02	110	Pn	Pn	22 28 28.6	+0.8
W39A	Magazine	3.02	110	P		22 28 28.9	
	baz=292,SNR=26						
CBKS	Cedar Bluff	3.22	323	P	Pn	22 28 31.2	+0.7
	baz=142,SNR=18						
CBKS				Sb	Sb	22 29 17.8	+1.4
	baz=142						
CBKS	Cedar Bluff	3.22	323	Pn	Pn	22 28 31.4	+0.8
CBKS				IAmb_Lg		22 29 24.5	
	comp=Z,388nm,0.8s						
CBKS	Cedar Bluff	3.22	323	P		22 28 31.5	
	baz=142,SNR=11						
S39A	Bolivar	3.46	65	Pn	Pn	22 28 35.5	+1.7
S39A	Bolivar	3.46	65	P		22 28 35.5	
	baz=247,SNR=35						
MIAR	Mount Ida	3.46	119	P	Pn	22 28 35.2	+1.4
	baz=301,SNR=16						
MIAR				S	Sn	22 29 16.8	+1.8
	baz=301						
MIAR	Mount Ida	3.46	119	Pn	Pn	22 28 35.0	+1.1
MIAR	Mount Ida	3.46	119	P		22 28 35.0	
	baz=301,SNR=70						
Z38A	Mt. Pleasant	3.53	147	Pn	Pn	22 28 35.5	+0.7
Z38A				IAmb_Lg		22 29 41.6	
	comp=Z,283nm,0.8s						
U40A	Yellville	3.56	87	P	Pn	22 28 35.9	+0.7
	baz=270,SNR=16						
U40A				S	Sn	22 29 18.8	+1.4
	baz=270						
U40A	Yellville	3.56	87	Pn	Pn	22 28 36.0	+0.8
U40A				IAmb_Lg		22 29 33.1	
	comp=Z,352nm,0.8s						
U40A	Yellville	3.56	87	P		22 28 37.1	
	baz=270,SNR=48						
U40A				P		22 28 37.1	
	baz=270,SNR=48						
AMTX	Amarillo	3.85	250	S	Sn	22 29 27.2	+2.4
	baz=68						
AMTX	Amarillo	3.85	250	Pn	Pn	22 28 40.6	+1.3
X40A	Basin Creek Fa	4.03	115	P	Pn	22 28 42.9	+1.3
	baz=297						
X40A				S	Sn	22 29 30.3	+1.4
	baz=297						
X40A	Basin Creek Fa	4.03	115	Pn	Pn	22 28 43.2	+1.6
X40A				IAmb_Lg		22 29 49.9	
	comp=Z,453nm,1.0s						
X40A	Basin Creek Fa	4.03	115	P		22 28 43.3	
	baz=297,SNR=18						
X40A				P		22 28 43.3	
	baz=297,SNR=18						
MGMO	Mountain Grove	4.11	76	Pn	Pn	22 28 44.0	+1.3
MGMO				IAmb_Lg		22 29 48.6	
	comp=Z,236nm,0.7s						
ABTX	Abilene, Hawle	4.13	209	P	Pn	22 28 44.1	+1.1
	baz=28						
ABTX				Sb	Sb	22 29 46.6	+4.0
	baz=28						
ABTX	Abilene, Hawle	4.13	209	IAmb_Lg		22 29 52.9	
	comp=Z,264nm,0.8s						
WHAR	Wooly Hollow	4.16	102	Pn	Pn	22 28 44.3	+0.9
WHAR				IAmb_Lg		22 29 59.6	
	comp=Z,359nm,0.8s						
FCAR	Ozark Folk Cen	4.18	94	Pn	Pn	22 28 45.0	+1.3
FCAR				IAmb_Lg		22 29 51.8	
	comp=Z,355nm,0.7s						
W41B	Gary Mavity, V	4.22	103	P	Pn	22 28 45.2	+1.0
	baz=286,SNR=6.9						
W41B				S	Sn	22 29 34.0	+0.4
	baz=286						
W41B	Gary Mavity, V	4.22	103	Pn	Pn	22 28 45.2	+1.0
W41B				IAmb_Lg		22 29 59.5	
	comp=Z,424nm,0.8s						
W41B	Gary Mavity, V	4.22	103	P		22 28 45.2	
	baz=286,SNR=13						
WHTX	Lake Whitney,	4.26	182	P	Pn	22 28 45.5	+0.6
	baz=2.1						
WHTX				S	Sn	22 29 35.5	+0.8
	baz=2.1						
WHTX	Lake Whitney,	4.26	182	Pn	Pn	22 28 46.0	+1.2
WLAR	White Oak Lake	4.27	126	Pn	Pn	22 28 45.8	+0.9
WLAR				IAmb_Lg		22 29 57.3	
	comp=Z,221nm,0.7s						
UALR	University of	4.28	109		Pn	22 28 46.9	+1.9
237A	Washetta, Mont	4.42	164	Pn	Pn	22 28 47.1	+0.1
237A	Washetta, Mont	4.42	164	P		22 28 47.5	
	baz=344,SNR=6.1						
P38A	Dawn	4.47	40	Pn	Pn	22 28 49.4	+1.8
P38A				IAmb_Lg		22 30 05.3	
	comp=Z,223nm,0.7s						
R40A	Maddies Statio	4.47	62	Pn	Pn	22 28 48.5	+0.8
R40A				IAmb_Lg		22 30 03.5	
	comp=Z,212nm,0.9s						
R40A	Maddies Statio	4.47	62	P		22 28 48.8	
	baz=244,SNR=28						
N33A	J Bar K, Exete	4.47	358	Pn	Pn	22 28 48.3	+0.5
Z41A	Richland Creek	4.74	128	P	Pn	22 28 51.5	+0.1
	baz=311						
Z41A				S	Sn	22 29 47.3	+0.9
	baz=311						
Z41A	Richland Creek	4.74	128	Pn	Pn	22 28 51.8	+0.4
Z41A				IAmb_Lg		22 30 21.2	
	comp=Z,196nm,0.8s						
N35A	Tabor	4.76	15	Pn	Pn	22 28 52.7	+1.0
LCAR	Lake Charles	4.95	90	Pn	Pn	22 28 55.0	+0.8
LCAR				IAmb_Lg		22 30 16.2	
	comp=Z,331nm,0.8s						
NATX	Nacogdoches	4.98	154	P	Pn	22 28 55.1	+0.3
	baz=335						
NATX	Nacogdoches	4.98	154	Pn	Pn	22 28 55.1	+0.3
T42A	Van Buren	5.02	79	IAmb_Lg		22 30 17.8	
	comp=Z,250nm,0.8s						
MSTX	Muleshoe	5.06	245	P	Pn	22 28 56.4	+0.5
	baz=62,SNR=7.4						
MSTX				S	Sn	22 29 55.4	+0.8
	baz=62						
MSTX	Muleshoe	5.06	245	Pn	Pn	22 28 56.6	+0.7
MSTX	Muleshoe	5.06	245	P		22 28 56.6	
	baz=62,SNR=9.5						
KSCO	Kaye Shedlock'	5.06	304	P	Pn	22 28 56.1	+0.1
	baz=121						
KSCO				S	Sn	22 29 54.7	+0.1
	baz=121						
KSCO	Kaye Shedlock'	5.06	304	Pn	Pn	22 28 56.8	+0.8
KSCO				IAmb_Lg		22 30 19.3	
	comp=Z,152nm,0.7s						
CCAR	Cane Creek	5.07	116	Pn	Pn	22 28 57.0	+1.1
CCAR				IAmb_Lg		22 30 34.8	
	comp=Z,205nm,1.0s						
CCM	Cathedral Cave	5.13	68	P	Pn	22 28 57.1	+0.3
	baz=251						
CCM	Cathedral Cave	5.13	68	Pn	Pn	22 28 58.7	+1.9
CCM				IAmb_Lg		22 30 30.3	
	comp=Z,200nm,0.7s						
BGNE	Belgrade	5.18	353	P	Pn	22 28 57.8	+0.3
	baz=172						
BGNE				S	Sn	22 29 56.4	-1.0
	baz=172						
BGNE	Belgrade	5.18	353	Pn	Pn	22 28 57.8	+0.3
P40A	Paris	5.26	50	Pn	Pn	22 29 00.1	+1.6
P40A				IAmb_Lg		22 30 30.8	
	comp=Z,156nm,0.7s						
435B	Jarrell	5.47	183	P	Pn	22 29 02.0	+0.5
	baz=2.7						
435B				S	Sn	22 30 03.4	-1.1
	baz=2.7						
435B	Jarrell	5.47	183	Pn	Pn	22 29 02.4	+0.9
435B				IAmb_Lg		22 30 37.3	
	comp=Z,318nm,0.8s						
X43A	Marvell	5.50	107	IAmb_Lg		22 30 47.6	
	comp=Z,189nm,0.8s						
N38A	Joes South For	5.52	34	Pn	Pn	22 29 03.3	+1.2
PBMO	Poplar Bluff	5.53	83	IAmb_Lg		22 30 32.2	
	comp=Z,296nm,0.7s						
FVM	French Village	5.73	71		Pn	22 29 05.4	+0.4
FVM				IAmb_Lg		22 30 42.1	
	comp=Z,218nm,0.9s						
L34A	Svendsen Farm,	5.74	7	Pn	Pn	22 29 06.1	+1.0
T25A	Trinidad	5.81	281	P	Pn	22 29 06.9	+0.6
	baz=97						
T25A				S	Sn	22 30 11.8	-1.3
	baz=97						
T25A	Trinidad	5.81	281	Pn	Pn	22 29 07.4	+1.1
OGNE	Ogallala	5.98	323	P	Pn	22 29 09.3	+0.8
	baz=140,SNR=5.5						
OGNE				S	Sn	22 30 16.1	-1.1
	baz=140						
OGNE	Ogallala	5.98	323	Pn	Pn	22 29 09.8	+1.3
OGNE				IAmb_Lg		22 31 03.9	
	comp=Z,212nm,0.7s						
143A	Socs Landing,	6.00	125	IAmb_Lg		22 31 06.7	
	comp=Z,153nm,0.8s						
MET	Memphis--Engin	6.07	99	IAmb_Lg		22 30 54.0	
	comp=Z,227nm,0.8s						
SLM	Saint Louis	6.07	65	Pn	Pn	22 29 10.8	+1.2
SLM				IAmb_Lg		22 31 04.0	
	comp=Z,142nm,0.9s						
JCT	Junction City	6.15	201	P	Pn	22 29 11.0	+0.2
	baz=19						
JCT				S	Sn	22 30 20.7	-0.4
	baz=19						
JCT	Junction City	6.15	201	Pn	Pn	22 29 11.2	+0.4
CPRX	Cap Rock	6.33	241	Pn	Pn	22 29 13.8	+0.5
HKT	Hockley	6.41	169	Pn	Pn	22 29 14.3	0.0
SCIA	State Center	6.46	28	P	Pn	22 29 15.5	+0.6
	baz=210						
SCIA				S	Sn	22 30 27.5	-1.2
	baz=210						
SCIA	State Center	6.46	28	Pn	Pn	22 29 15.5	+0.6
K31A	O'Neill	6.46	350	Pn	Pn	22 29 15.6	+0.6
S44A	Carbondale	6.57	75	Pn	Pn	22 29 16.8	+0.3
S44A				IAmb_Lg		22 31 19.8	
	comp=Z,230nm,0.8s						
SIUC	Southern Illin	6.60	75	Pn	Pn	22 29 17.3	+0.3
OXF	Oxford	6.65	103	P	Pn	22 29 17.7	0.0
	baz=288						
OXF				S	Sn	22 30 33.0	-0.5
	baz=288						
OXF	Oxford	6.65	103	Pn	Pn	22 29 17.9	+0.2
N41A	Harden Midland	6.70	47	Pn	Pn	22 29 19.4	+1.0
SDCO	Great Sand Dun	6.76	285	P	Pn	22 29 18.2	-1.1
	baz=100						
SDCO				S	Sn	22 30 35.0	-1.5
	baz=100						
SDCO	Great Sand Dun	6.76	285	Pn	Pn	22 29 22.2	+2.9
Y45A	Yeager Farm, C	6.77	108	IAmb_Lg		22 31 33.7	
	comp=Z,157nm,0.7s						
Q24A	Divide	6.81	296	P	Pn	22 29 21.1	+0.9
	baz=111						
Q24A				S	Sn	22 30 37.2	-0.8
	baz=111						
Q24A	Divide	6.81	296	Pn	Pn	22 29 21.1	+0.9
P43A	Skaggs, Pawnee	6.98	59	Pn	Pn	22 29 22.5	+0.3
P43A				IAmb_Lg		22 31 23.4	
	comp=Z,211nm,0.9s						
Q44A	Meyer Farm, Va	7.06	66	Pn	Pn	22 29 23.8	+0.6
K38A	Parkersburg	7.26	27	Pn	Pn	22 29 25.2	-0.8
L40A	Anamosa	7.45	37	Pn	Pn	22 29 28.8	+0.2
ISCO	Idaho Springs	7.47	301	P	Pn	22 29 29.8	+0.6
	baz=116						
ISCO	Idaho Springs	7.47	301	Pn	Pn	22 29 30.1	+0.9
ISCO				IAmb_Lg		22 31 46.1	
	comp=Z,121nm,0.9s						
ECSD	EROS Data Cent	7.48	4	P	Pn	22 29 28.7	-0.3
	baz=184,SNR=9.1						
ECSD	EROS Data Cent	7.48	4	Pn	Pn	22 29 28.7	-0.3
HDIL	Hopedale	7.58	53	P	Pn	22 29 30.1	-0.4
	baz=238						
HDIL	Hopedale	7.58	53	Pn	Pn	22 29 30.3	-0.1
HDIL				IAmb_Lg		22 31 60.0	
	comp=Z,177nm,0.8s						
PLAL	Pickwick Lake	7.59	97	IAmb_Lg		22 31 44.8	
	comp=Z,126nm,0.9s						

ANMO	Albuquerque	7.60	263	Pn	Pn	22 29 31.1	+0.2
	comp=Z,0.4nm,0.3s,baz=81,slow=15,SNR=7.7						
ANMO				Pg	Pb	22 29 59.0	+7.1
	comp=Z,2.0nm,0.3s,baz=90,slow=19,SNR=14						
ANMO				Lg	Lg	22 31 34.5	
	comp=Z,4.1nm,0.3s,baz=355,slow=14,SNR=3.1						
ANMO	Albuquerque	7.60	263	P	Pn	22 29 31.7	+0.8
	baz=77						
ANMO	Albuquerque	7.60	263	Pn	Pn	22 29 32.1	+1.2
WVT	Waverly	7.63	88	IAmb_Lg		22 31 46.9	
	comp=Z,82nm,0.9s						
OLIL	Olney	7.69	69	Pn	Pn	22 29 33.3	+1.4
USIN	University of	7.85	75	IAmb_Lg		22 31 53.7	
	comp=Z,166nm,0.8s						
O44A	Mansfield	7.94	58	Pn	Pn	22 29 35.5	+0.2
O44A				IAmb_Lg		22 32 05.0	
	comp=Z,147nm,0.7s						
BNM	Barren Site	7.95	257	Pn	Pn	22 29 35.7	0.0
833A	Chaparral WMA,	8.12	193	IAmb_Lg		22 32 03.5	
	comp=Z,110nm,1.0s						
MNTX	Cornudas Mount	8.13	238	P	Pn	22 29 37.5	-0.6
	baz=54,SNR=12						
MNTX	Cornudas Mount	8.13	238	Pn	Pn	22 29 37.5	-0.6
N23A	Red Feather La	8.22	307	P	Pn	22 29 39.4	0.0
	baz=122						
N23A	Red Feather La	8.22	307	Pn	Pn	22 29 40.4	+1.0
L42A	Oliver, Polo	8.23	44	Pn	Pn	22 29 38.7	-0.5
L42A				IAmb_Lg		22 32 09.7	
	comp=Z,141nm,0.8s						
SMCO	Snowmass	8.23	294	IAmb_Lg		22 32 20.4	
	comp=Z,87nm,1.1s						
SUSD	Miller	8.27	352	IAmb_Lg		22 32 13.3	
	comp=Z,135nm,0.9s						
I37A	Lemond, Waseca	8.29	20	IAmb_Lg		22 32 11.2	
	comp=Z,185nm,0.9s						
V48A	Smith Brothers	8.48	90	IAmb_Lg		22 32 16.6	
	comp=Z,88nm,0.9s						
X48A	Hartselle	8.54	99	IAmb_Lg		22 32 14.1	
	comp=Z,102nm,0.9s						
JFWS	Jewell Farm	8.57	37	P	Pn	22 29 44.2	+0.3
	baz=221						
JFWS	Jewell Farm	8.57	37	Pn	Pn	22 29 43.1	-0.8
JFWS				IAmb_Lg		22 32 17.1	
	comp=Z,129nm,0.8s						
P46A	Rosedale	8.62	64	IAmb_Lg		22 32 24.9	
	comp=Z,144nm,0.9s						
M44A	Midewin, Midew	8.83	52	IAmb_Lg		22 32 18.5	
	comp=Z,165nm,1.2s						
CLTN	Cedars of Leba	8.84	88	Pn	Pn	22 29 47.0	-0.7
CLTN				IAmb_Lg		22 32 32.7	
	comp=Z,94nm,1.1s						
WCI	Wyandotte Cave	8.96	74	P	Pn	22 29 50.3	+0.9
	baz=261						
WCI	Wyandotte Cave	8.96	74	Pn	Pn	22 29 50.4	+1.0
WCI				IAmb_Lg		22 32 25.4	
	comp=Z,137nm,0.8s						
SFIN	Lafayette	8.98	60	P	Pn	22 29 49.6	0.0
	baz=246						
SFIN	Lafayette	8.98	60	IAmb_Lg		22 32 28.1	
	comp=Z,82nm,0.7s						
BLO	Bloomington	8.99	68	Pn	Pn	22 29 50.7	+0.9
BLO				IAmb_Lg		22 32 36.5	
	comp=Z,158nm,0.8s						
MVCO	Mesa Verde	9.07	279	IAmb_Lg		22 32 32.2	
	comp=Z,70nm,0.8s						
I40A	Norwalk	9.16	32	Pn	Pn	22 29 51.4	-0.7
I40A				IAmb_Lg		22 32 45.3	
	comp=Z,96nm,1.1s						
HQIL	Hanson Quary C	9.17	50	IAmb_Lg		22 32 42.8	
	comp=Z,150nm,1.1s						
Y49A	Blount Mountai	9.21	102	Pn	Pn	22 29 55.8	+3.0
Y49A				IAmb_Lg		22 32 39.3	
	comp=Z,68nm,0.9s						
U49A	Red Boiling Sp	9.26	85	IAmb_Lg		22 32 50.9	
	comp=Z,94nm,1.3s						
SWET	Sewanee	9.27	93	IAmb_Lg		22 32 29.4	
	comp=Z,95nm,0.9s						
RSSD	Black Hills	9.40	329	IAmb_Lg		22 32 52.1	
	comp=Z,71nm,0.9s						
PV13	Radium Mtn., P	9.41	285	IAmb_Lg		22 32 46.0	
	comp=Z,77nm,1.0s						
PV12	Saucer Basin,	9.42	286	IAmb_Lg		22 32 56.7	
	comp=Z,91nm,0.9s						
K43A	Burlington	9.43	44	IAmb_Lg		22 32 43.6	
	comp=Z,97nm,0.8s						
PV03	Paradox Valley	9.45	286	IAmb_Lg		22 32 55.6	
	comp=Z,80nm,1.1s						
RWWY	Rawlins	9.45	308	IAmb_Lg		22 32 57.5	
	comp=Z,100nm,0.9s						
O20A	White River Ci	9.46	297	IAmb_Lg		22 33 05.5	
	comp=Z,65nm,1.1s						
PV11	David Mesa, Pa	9.47	286	IAmb_Lg		22 32 49.1	
	comp=Z,114nm,1.0s						
PV16	Nyswonger Mesa	9.51	286	IAmb_Lg		22 32 45.4	
	comp=Z,96nm,1.2s						
PV20	West Nyswonger	9.55	286	IAmb_Lg		22 32 57.3	
	comp=Z,92nm,1.3s						
SPMN	Marine on St.	9.57	19	IAmb_Lg		22 32 41.4	
	comp=Z,84nm,0.9s						
F33A	5 Mile Ranch,	9.60	4	Pn	Pn	22 29 58.3	+0.3
F33A				IAmb_Lg		22 32 53.0	
	comp=Z,130nm,1.2s						
PV23	Carpenter Ridg	9.61	287	IAmb_Lg		22 32 59.6	
	comp=Z,84nm,0.9s						
PV10	Paradox Valley	9.62	286	IAmb_Lg		22 32 47.9	
	comp=Z,76nm,1.2s						
PV05	Paradox Valley	9.62	284	IAmb_Lg		22 32 47.0	
	comp=Z,115nm,1.3s						
FPAL	Fort Paine	9.67	97	IAmb_Lg		22 32 51.9	
	comp=Z,70nm,0.8s						
W50A	Signal Mountai	9.78	93	IAmb_Lg		22 32 53.1	
	comp=Z,98nm,0.7s						
P48A	Milroy	9.89	68	IAmb_Lg		22 32 57.4	
	comp=Z,145nm,1.2s						
I42A	Draeger Farm,	9.94	37	IAmb_Lg		22 32 58.0	
	comp=Z,76nm,0.9s						
F36A	Milaca	9.99	15	IAmb_Lg		22 32 55.4	
	comp=Z,76nm,1.0s						
TKL	Tuckaleechee C	10.95	89	Pn	Pn	22 30 18.1	+1.5
	comp=Z,0.3nm,0.3s,baz=277,slow=8.1,SNR=1.9						
TKL				Sn	Sn	22 32 19.9	+0.7
	comp=Z,0.6nm,0.3s,baz=280,slow=17,SNR=1.8						
TKL				Lg	Lg	22 33 17.5	
	comp=Z,1.6nm,0.3s,baz=8.5,slow=22,SNR=9.3						
S51A	Beattyville	11.03	79	Pn	Pn	22 30 20.5	+2.8
L48A	N Adams	11.46	56	Pn	Pn	22 30 22.2	-1.4
PDAR	Pinedale Array	11.50	308	Pn	Pn	22 30 24.1	-0.2
	comp=Z,0.3nm,0.3s,baz=118,slow=13,SNR=2.6						
PDAR				Pg		22 31 07.8	
	comp=Z,0.7nm,0.3s,baz=118,slow=16,SNR=4.0						
PDAR				Lg	Lg	22 33 37.0	
	comp=Z,0.8nm,0.3s,baz=118,slow=36,SNR=4.0						
ACSO	Alum Creek Sta	11.91	66	Pn	Pn	22 30 29.9	+0.3
Q52A	Bidwell	12.20	73	Pn	Pn	22 30 34.3	+0.7
B35A	Bob, Littlefor	12.37	11	Pn	Pn	22 30 33.8	-2.1
P52A	Corning	12.41	70	P	Pn	22 30 35.7	-0.9
	baz=259						
P52A	Corning	12.41	70	Pn	Pn	22 30 36.7	+0.2
EYMN	Ely	12.43	18	Pn	Pn	22 30 36.0	-0.8
N51A	Ashland	12.54	64	Pn	Pn	22 30 39.6	+1.3
E43A	Lone Tree Farm	12.70	34	Pn	Pn	22 30 38.6	-1.8
Q53A	Leroy	12.76	74	P	Pn	22 30 40.1	-1.2
	baz=263						
S54A	Dingess, Beckl	12.84	78	Pn	Pn	22 30 42.7	+0.2
P53A	Whipple	12.95	71	Pn	Pn	22 30 44.1	+0.2
GCMT	Greycliff	13.34	319	Pn	Pn	22 30 47.9	-1.4
N53A	Lisbon	13.63	66	Pn	Pn	22 30 50.7	-2.5
ULM	Lac du Bonnet	14.02	4	Pn	Pn	22 30 53.8	-4.7
	comp=Z,0.8nm,0.3s,baz=182,slow=10,SNR=9.7						
ULM				Sn	Sn	22 33 21.6	-12
	comp=Z,1.1nm,0.3s,baz=263,slow=22,SNR=4.9						
ULM				Lg	Lg	22 34 56.4	
	comp=Z,0.6nm,0.3s,baz=127,slow=2.4,SNR=5.9						
ULM	Lac du Bonnet	14.02	4	Pn	Pn	22 30 54.4	-4.1
N54A	Moraine State	14.29	66	Pn	Pn	22 31 00.5	-1.8
SADO	Sadowa	16.16	53	Lg	Lg	22 36 03.1	
	comp=Z,0.5nm,0.3s,baz=184,slow=21,SNR=2.2						
SADO				LR	LR	22 37 51.1	
	comp=Z,146nm,18.7s,baz=202,slow=38						
NVAR	Mina Array Bea	16.87	284	Pn	Pn	22 31 35.5	-0.8
	comp=Z,0.0nm,0.3s,baz=110,slow=6.8,SNR=1.7						
N59A	State Game Lan	17.42	68	P	P	22 31 44.9	+0.6
N59A				IAmb	IAmb	22 31 47.6	
	comp=Z,23nm,1.2s						
BRNJ	Basking Ridge	18.30	69	P	P	22 31 56.2	+2.3
BRNJ				IAmb	IAmb	22 32 13.6	
	comp=Z,17nm,1.0s						
FFC	Flin Flon	18.75	351	P	Pn	22 31 59.4	+0.2
FFC				IAmb	IAmb	22 32 06.0	
	comp=Z,5.8nm,1.4s						
YKA	Yellowknife Ar	28.39	343	P	P	22 33 34.9	+0.8
	comp=Z,0.2nm,0.6s,baz=139,slow=9.5,SNR=2.5						
ILAR	Eielson Array	40.85	330	P	P	22 35 22.9	+1.4
	comp=Z,1.1nm,0.7s,baz=106,slow=7.2,SNR=14						

OMAN 05 22:29:39.5±0.9**, 28°.54N**×**52°.92E, h11^{km}, mb4.9**/3**, ml2.7**/6**, ms3.0**/2**, Mwp5.1**/3**, Error ellipse: s-maj=56.3km s-min=14.9km az=261.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHME	Shamm	3.79	130	P	Pn	22 30 38.2	+0.3
BANOM	Banah	3.98	130	P	Pn	22 30 42.0	+1.4
	SNR=7.3						
MDH	Madha	4.42	136	P	Pn	22 30 47.4	+0.8
ASUD	Al Ashush, Dub	4.46	151	P	Pn	22 30 48.7	+1.6
GHWR	Ruwais	4.56	180	P	Pn	22 30 50.1	+1.6
SLWR	Sila	4.59	194	P	Pn	22 30 50.0	+1.2
SLWR				S	Sn	22 31 44.4	+2.2
UOSS	Minazif	4.63	140	P	Pn	22 30 49.9	+0.4
UOSS				S	Sn	22 31 44.8	+1.5
HATD	Hatta, Dubai	4.69	141	P	Pn	22 30 50.6	+0.4
HATD				S	Sn	22 31 45.9	+1.2
ASHO	Ashiyiah	4.76	143	P	Pn	22 30 54.0	+2.7
	SNR=6.3						
ASHO				S	Sn	22 31 47.2	+0.6
ALNE	Al Ain	5.14	150	P	Pn	22 30 58.1	+1.7
SOHO	SOHO	5.46	143	P	Pn	22 31 01.1	+0.3
SOHO				P	Pb	22 31 01.3	-14
SOHO				S	Sn	22 32 04.6	+0.9
SOHO				S	Sn	22 32 04.6	+0.9
HOQ	Hoqain	6.33	140	P	Pn	22 31 12.2	-0.6
HOQ				S	Sn	22 32 27.0	+1.9
BIDO	Bidbid	6.85	136	P	Pn	22 31 18.4	-1.6
BSY	Bisya	6.95	145	P	Pn	22 31 21.3	0.0
JMDO	Jabal Madar	7.73	142	P	Pn	22 31 30.5	-1.5
WBK	Wadi Bani Khal	8.05	136	P	Pn	22 31 35.4	-1.0
	SNR=8.4						
JLN	Jalan Bani Buh	8.66	136	P	Pn	22 31 42.3	-2.5
MHTO	MHTO	8.81	148	P	Pn	22 31 47.0	+0.1
	SNR=7.9						
MHTO				P	Pn	22 31 47.0	+0.1
	SNR=7.9						
WHFO	Wadi Hawf	10.61	176	P	Pn	22 32 11.0	-0.6
	SNR=8.8						
DMTO	DMTO	10.94	170	P	Pn	22 32 14.9	-1.2
RBK	Rabkut	11.05	174	P	Pn	22 32 16.8	-0.9
ABTO	Aybut	11.14	178	P	Pn	22 32 17.0	-1.9

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*IDC **05** 22:40:51.8±1.6, 3°.57S×131°.10E, h0^{km}, mb3.8/4, mb1 4.0/7, mb1mx3.8/28, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=61.1km s-min=21.2km az=80.0*

*NEIC **05** 22:40:56.6±1.6, 3°.50S±0°.07×131°.16E±0°.09, h34^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=12.4km s-min=10.5km az=89.0*

ISC 05 22:40:55.1±0.8**, 3°.60S**±0°.06×**131°.2E**±0°.1**, h30^{km}, n20, σ2^{s}.90**/21**, mb4.1**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.28	58		Pn	22 41 17.5	+0.5
SIJI	Sorong	2.72	2	Pn	Pn	22 41 36.2	-0.6
	9.0nm,0.3s,baz=180,slow=20,SNR=24						
SIJI				Sn	Sn	22 42 03.5	-5.2
	20nm,0.3s,baz=231,slow=22,SNR=4.0						
MTN	Manton Dam	9.18	180		Pn	22 43 08.1	+2.4
FITZ	Fitzroy Crossi	15.39	200	Pn	Pn	22 44 28.6	-1.7
	0.2nm,0.3s,baz=25,slow=11,SNR=14						
FITZ				Sn	Sn	22 47 15.5	-4.4
	baz=230,slow=10						
FITZ	Fitzroy Crossi	15.39	200		Pn	22 44 30.0	-0.3
COEN	Coen	15.70	132	Pn	Pn	22 44 36.6	+2.3
COEN				IAmb	IAmb	22 44 39.8	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	16.37	169	Pn	Pn	22 44 44.3	+1.4
WB0				IAmb	IAmb	22 44 53.2	
	comp=Z,11nm,1.2s						
WRA	Warramunga Arr	16.53	169	Pn	Pn	22 44 44.4	-0.6
	comp=Z,0.3nm,0.3s,baz=352,slow=11,SNR=14						
WRA				Sn	Sn	22 47 39.2	-8.6
	comp=Z,0.2nm,0.3s,baz=3.0,slow=23,SNR=2.8						
WB2	Warramunga Arr	16.54	169	Pn	Pn	22 44 44.8	-0.2
WB2				IAmb	IAmb	22 44 58.0	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	16.59	169	Pn	Pn	22 44 47.4	+1.8
AS31	Alice Springs	20.12	173	P	Pn	22 45 30.6	+1.8
ASAR	Alice Springs	20.12	173	P	Pn	22 45 29.3	+0.5
	comp=Z,4.4nm,0.6s,baz=351,slow=11,SNR=40						
PSA00	Pilbara Seismi	20.98	211	P	P	22 45 37.3	+1.3
MORW	Morawa	29.12	208	P	P	22 46 55.5	+2.0
CMAR	Chiang Mai Arr	38.57	306	P	P	22 48 16.3	+0.7
	comp=Z,0.2nm,0.3s,baz=144,slow=7.8,SNR=4.2						
MKAR	Makanchi Array	66.07	326	P	P	22 51 40.5	+1.2
	comp=Z,1.0nm,0.6s,baz=119,slow=8.3,SNR=18						
MAKZ	Makanchi	66.25	325	P	P	22 51 41.7	+1.2
MAKZ				IAmb	IAmb	22 51 44.8	
	comp=Z,3.7nm,1.4s						
ZALV	Zalesovo Beam	69.09	333	P	P	22 51 58.3	+0.2
	comp=Z,0.5nm,0.6s,baz=117,slow=5.0,SNR=2.4						
KURK	Kurchatov	70.27	328	P	P	22 52 06.4	+0.9
KURK				IAmb	IAmb	22 52 07.2	
	comp=Z,2.7nm,0.8s						
BRVK	Borovoye	75.92	327	P	P	22 52 40.4	+1.5
BRVK				IAmb	IAmb	22 52 48.6	
	comp=Z,1.8nm,0.8s						

WEL 05 22:41:34.6±0.4**, 43°S**±2°×**17°1E**±°**, h5^{km}, M3.4**/17**, ML3.6**/17**, MLv3.4**/17**, Error ellipse: s-maj=0.0km s-min=0.0km az=139.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.33	24	P	Pg	22 41 41.7	+0.7
INZ				S	Sg	22 41 45.9	+0.6
WVZ	Waitaha Valley	0.39	262	P	Pb	22 41 43.0	-0.9
WVZ				S	Sg	22 41 47.9	+0.8
MHCZ	Mount Hutt	0.56	156	P	Pg	22 41 45.5	+0.2
MHCZ				S	Sg	22 41 52.7	+0.2
OXZ	Oxford	0.64	118	P	Pg	22 41 47.2	+0.3
OXZ				S	Sg	22 41 56.0	+0.7
RPZ	Rata Peaks	0.71	192	P	Pg	22 41 48.3	+0.1
RPZ				S	Sg	22 41 57.8	+0.5
GCSZ	Gaunt Creek Bo	0.74	247	P	Pg	22 41 49.1	+0.2
LTZ	Lake Taylor	0.78	72	P	Pb	22 41 50.1	-0.5
LTZ				S	Sb	22 42 01.1	-0.5
ARCZ	Arundel	0.92	184	P	Pg	22 41 52.3	-0.1
ARCZ				S	Sg	22 42 04.4	+0.1
RACZ	Rakaia	0.95	138	P	Pg	22 41 53.1	+0.3
RACZ				S	Sb	22 42 07.2	+0.8
WACZ	Wakanui South	1.01	156	P	Pg	22 41 54.1	+0.2
WACZ				S	Sb	22 42 08.6	+0.5
AMCZ	Amberley	1.03	99	P	Pn	22 41 55.6	-0.1
FOZ	Fox Glacier	1.17	244	P	Pg	22 41 57.0	0.0
FOZ				S	Sb	22 42 13.0	+0.3
MQZ	McQueen’s Vall	1.22	124	P	Pg	22 41 57.0	-1.0
GVZ	Greta Valley S	1.30	88	P	Pn	22 41 58.7	-0.7
DSZ	Denniston Nort	1.34	18	P	Pn	22 41 59.7	-0.3
TMZ	Timaru	1.37	188	P	Pn	22 41 59.6	-0.8
AKCZ	Akaroa Harbour	1.47	126	P	Pn	22 42 00.5	-1.2
OKCZ	Okains Bay	1.49	119	P	Pn	22 42 01.2	-0.7
LBZ	Lake Benmore	1.57	209	P	Pn	22 42 02.9	-0.2
THZ	Tophouse	1.75	45	P	Pn	22 42 03.2	-2.5
KHZ	Kahutara	1.79	71	P	Pn	22 42 05.8	-0.3
ODZ	Otahua Downs	2.07	192	P	Pn	22 42 09.0	-1.0
JCZ	Jackson Bay	2.08	239	P	Pn	22 42 10.4	+0.1
BSWZ	Blackbirch Sta	2.34	57	P	Pb	22 42 16.7	-0.5
QRZ	Quartz Range	2.39	24	P	Pn	22 42 14.8	+0.4
NNZ	Nelson	2.40	42	P	Pn	22 42 15.2	+0.8
WKZ	Wanaka	2.42	221	P	Pn	22 42 14.4	-0.4
TUWZ	Tuamarina	2.55	52	P	Pb	22 42 18.8	-2.0
EAZ	Earnscleugh	2.62	212	P	Pb	22 42 23.1	+1.2
TCW	Tory Channel	2.88	52	P	Pn	22 42 23.2	+2.0
DUWZ	D’Urville Isla	2.98	43	P	Pn	22 42 23.8	+1.2
TUZ	Tuapeka	3.15	201	P	Pn	22 42 27.5	+2.7
MLZ	Mavora Lakes	3.25	223	P	Pb	22 42 32.1	-0.7
HOWZ	Holdsworth Sta	3.82	58	P	Pb	22 42 40.7	-1.8
MRZ	Mangatainoka R	4.00	55	P	Pb	22 42 42.3	-3.1
NBEZ	Newall Road No	4.24	29	P	Pn	22 42 41.7	+1.9
KHEZ	Kahui Hut	4.27	30	P	Pn	22 42 42.0	+1.8
PREZ	Palmer Road	4.28	32	P	Pn	22 42 42.7	+2.3
PKE	Pukeiti	4.35	29	P	Pn	22 42 43.0	+1.7
OTVZ	Oturere	5.09	42	P	Pn	22 42 55.7	+4.0
WTVZ	West Tongariro	5.09	41	P	Pn	22 42 57.0	+5.3
HIZ	Hauiti	5.27	32	P	Pn	22 42 55.0	+1.0
AWAZ	Awhitu Peninsu	6.49	25	P	Pn	22 43 12.2	+1.5
WCZ	Waipu Caves	7.47	20	P	Pn	22 43 25.0	+0.9

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*IDC **05** 22:50:54.5±3.3, 3°.31S×99°.48E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.6/39, mbtmp3.8/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/36, Error ellipse: s-maj=126.8km s-min=22.5km az=57.0*

*NEIC **05** 22:50:59.5±1.9, 3°.3S±0°.2×99°.5E±0°.2, h35^{km}±7^{km}, mb4.2/5, Error ellipse: s-maj=31.7km s-min=10.3km az=49.0*

ISC 05 22:50:59.1±2.0**, 3°.3S**±0°.3×**99°.5E**±0°.3**, h35^{km}, n21, σ1^{s}.38**/14**, mb4.0**/9**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	3.62	108	Pn	Pn	22 51 52.5	-0.2
GSI	Gunungsitoli	4.92	337	Pn	Pn	22 52 08.4	-2.2
CISI	Cisompet, Garu	9.31	118	Pn	Pn	22 53 08.5	-2.5
CMAR	Chiang Mai Arr	21.57	359	P	P	22 55 45.7	-0.1
	1.6nm,0.6s,baz=189,slow=10,SNR=14						
H08S2	Diego Garcia H	27.23	260	T	T	23 25 57.5	
	baz=81,slow=75,SNR=40						
H08S3	Diego Garcia H	27.24	260	T	T	23 25 50.6	
	baz=81,slow=75,SNR=49						
H08S1	Diego Carcia H	27.25	260	T	T	23 26 18.7	
	baz=81,slow=75,SNR=25						
TGY	Tagaytay City	27.36	50	LR	LR	23 08 34.2	
	comp=Z,123nm,21.3s,baz=11,slow=39						
H01W3	Cape Leeuwin H	34.29	158	T	T	23 34 36.2	
	baz=335,slow=76,SNR=4.2						
H01W2	Cape Leeuwin H	34.30	158	T	T	23 34 28.4	
	baz=335,slow=76,SNR=6.2						
H01W1	Cape Leeuwin H	34.30	158	T	T	23 34 28.8	
	baz=335,slow=76,SNR=3.4						
WRA	Warramunga Arr	37.81	119	P	P	22 58 12.6	0.0
	0.7nm,1.0s,baz=291,slow=8.0,SNR=2.3						
WB2	Warramunga Arr	37.82	119	P	P	22 58 13.8	+1.1
ASAR	Alice Springs	38.94	124	P	P	22 58 22.4	+0.3
	0.6nm,0.9s,baz=296,slow=7.3,SNR=2.4						
SONM	Songino Array	51.23	6	P	P	23 00 01.1	+1.8
	1.0nm,0.8s,baz=192,slow=9.5,SNR=7.8						
MK31	Makanchi Array	52.09	345	P	P	23 00 07.2	+1.4
MKAR	Makanchi Array	52.09	345	P	P	23 00 06.8	+1.1
	1.3nm,0.7s,baz=155,slow=9.0,SNR=18						
MAKZ	Makanchi	52.19	345	P	P	23 00 07.4	+1.0
MAKZ				IAmb	IAmb	23 00 09.2	
	comp=Z,4.6nm,1.5s						
ZAA0	Zalesovo Array	58.30	350	P	P	23 00 51.2	+0.9
ZAA0				IAmb	IAmb	23 00 52.5	
	comp=Z,5.0nm,1.2s						
ZALV	Zalesovo Beam	58.30	350	P	P	23 00 50.9	+0.6
	comp=Z,1.9nm,0.7s,baz=172,slow=5.5,SNR=10						
ABKAR	Akbulak array	62.50	332	P	P	23 01 19.3	+0.3
ABKAR				IAmb	IAmb	23 01 21.3	
	comp=Z,1.2nm,0.9s						

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*MDD **05** 22:55:01.4±0.8, 36°.62N×4°.60W, h77^{km}±10^{km}, mb3.9/1, Error ellipse: s-maj=7.4km s-min=3.8km az=161.0, PRXIMO*

ISC 05 22:54:59.3±1.6**, 36°.62N**±0°.06×**4°.61W**±0°.03**, h91^{km}**±11^{km}**, n25, σ1^{s}.47**/44**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGOR	Sierra Gorda,	0.63	39	P	Pn	22 55 16.0	+0.6
	0.2nm,0.1s,SNR=7.9						
EGOR				S	Sn	22 55 27.4	0.0
	0.2nm,0.1s,SNR=7.9						
EJIF	Jimena Fronter	0.72	257	P	Pn	22 55 15.7	-0.4
	118nm,0.1s,SNR=7.9						
EJIF				S	Sn	22 55 27.5	-1.0
	308nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	0.82	72	P	Pn	22 55 17.3	+0.1
	0.3nm,0.1s,SNR=7.9						
ELGU				S	Sn	22 55 28.8	-1.8
	1.5nm,0.1s,SNR=7.9						
ECEU	Ceuta	0.95	221	P	Pn	22 55 19.7	+1.2
	0.7nm,0.1s,SNR=7.9						
ECEU				S	Sn	22 55 33.4	+0.4
	1.0nm,0.2s,SNR=7.9						
ESPR	Espera	1.03	284	P	Pn	22 55 20.5	+1.1
	0.6nm,0.1s,SNR=5.8						
ESPR				S	Sn	22 55 34.7	+0.1
	0.5nm,0.1s						
EQUE	Quentar	1.10	58	P	Pn	22 55 21.7	+1.3
	0.3nm,0.1s,SNR=7.9						
EQUE				S	Sn	22 55 36.3	+0.2
	0.1nm,0.1s,SNR=4.7						
EBER	Berja	1.41	78	P	Pn	22 55 24.9	+0.8
	0.0nm,0.0s,SNR=7.9						
EBER				S	Sn	22 55 40.8	-2.0
	0.4nm,0.2s,SNR=7.9						
EADA	Adamuz	1.54	1	P	Pn	22 55 27.5	+1.8
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	22 55 44.9	-0.7
	0.8nm,0.1s,SNR=7.9						
ECAB	El Cabril	1.59	336	P	Pn	22 55 28.5	+2.2
	0.1nm,0.0s,SNR=15						
ECAB				S	Sn	22 55 45.4	-1.3
	0.3nm,0.1s,SNR=5.0						
EQES	Quesada	1.70	46	P	Pn	22 55 29.1	+1.3
	0.2nm,0.0s,SNR=18						
EQES				S	Sn	22 55 48.9	-0.4
	0.7nm,0.1s						
EMIN	Mina Concepcio	2.01	305	P	Pn	22 55 32.4	+0.7
	0.3nm,0.0s,SNR=7.9						
EMIN				S	Sn	22 55 54.7	-1.6
	0.3nm,0.0s,SNR=10						
SESP	Santiago Espad	2.22	47	P	Pn	22 55 35.5	+1.0
	0.2nm,0.1s,SNR=7.9						
SESP				S	Sn	22 56 01.2	-0.3
	1.1nm,0.1s,SNR=7.9						
EGRO	El Granado	2.48	292	S	Sn	22 56 05.5	-1.8
	0.3nm,0.0s,SNR=7.9						
PVAQ	Vaqueiros	2.61	288	P	Pn	22 55 40.2	+0.6
PVAQ				S	Sn	22 56 09.2	-1.4
	1.2nm,0.2s						
PVAQ	Vaqueiros	2.61	288	*e*P	Pn	22 55 40.2	+0.6
PVAQ				*e*S	Sn	22 56 09.2	-1.4
PVAQ				A	A	22 56 10.1	
	1.2nm,0.2s						
PBDV	Barranco-do-Ve	2.74	284	S	Sn	22 56 12.9	-0.7
PBDV	Barranco-do-Ve	2.74	284	*e*S	Sn	22 56 12.9	-0.7
PAB	San Pablo	2.93	4	P	Pn	22 55 45.8	+1.9
	0.3nm,0.1s,SNR=7.9						
PAB				S	Sn	22 56 16.4	-1.8
	0.1nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	3.09	9	S	Sn	22 56 20.5	-1.7
	0.1nm,0.1s,baz=186,slow=22,SNR=5.0						
ETOB	Tobarra	3.16	49	P	Pn	22 55 48.4	+1.5
	0.8nm,0.2s,SNR=7.2						
ETOB				S	Sn	22 56 22.7	-1.1
	0.1nm,0.1s,SNR=5.7						
EPLA	Plasencia	3.63	342	S	Sn	22 56 32.9	-2.1
	0.2nm,0.1s,SNR=7.9						
GUD	Guadarrama	4.03	5	P	Pn	22 56 01.0	+2.1
	0.1nm,0.1s,SNR=7.9						
GUD				S	Sn	22 56 42.8	-2.2
	0.3nm,0.3s,SNR=7.9						
ECHE	Chera	4.12	43	P	Pn	22 56 01.2	+1.2
	0.1nm,0.0s,SNR=7.9						
ECHE				S	Sn	22 56 44.3	-2.9
	0.2nm,0.2s,SNR=7.9						
ETOR	Torete	4.64	25	P	Pn	22 56 09.0	+1.9
	1.7nm,0.1s,SNR=7.9						
ETOR				S	Sn	22 56 57.9	-1.9
	1.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.95	40	S	Sn	22 57 05.7	-1.6
	0.2nm,0.2s,SNR=4.0						

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*IDC **05** 22:58:40.0±1.0, 48°.95S×123°.75E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx4.0/24, mbtmp4.1/6, ML2.0/1, MS3.9/11, Ms1 3.9/11, ms1mx3.7/18, Error ellipse: s-maj=55.9km s-min=20.0km az=95.0*

*NEIC **05** 22:58:41.1±0.9, 49°.0S±0°.1×124°.1E±0°.3, h10^{km}±1^{km},* *mb4.6/7, Error ellipse: s-maj=28.3km s-min=19.3km az=277.0*

ISC 05 22:58:41.5±0.6, **48˚.98S**±0˚.09×**124˚.1E**±0˚.2, **h10^{km}**, **n32**, σ**0ˢ81**/21, **mb4.4**/7, **MS3.9**/10, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.86	329	T	T	23 18 31.0	
	baz=156,slow=76,SNR=42						
H01W2	Cape Leeuwin H	15.87	329	T	T	23 18 28.9	
	baz=156,slow=76,SNR=37						
H01W3	Cape Leeuwin H	15.88	329	T	T	23 18 30.7	
	baz=156,slow=76,SNR=49						
NWAO	Narrogin (SRO)	16.83	340	Pn	Pn	23 02 36.5	-0.7
	0.3nm,0.3s,baz=167,slow=18,SNR=2.0						
NWAO				LR	LR	23 07 34.5	
	comp=Z,598nm,20.2s,baz=182,slow=32						
NWAO	Narrogin (SRO)	16.83	340	P	P	23 02 40.7	+1.4
NWAO				IAmb	IAmb	23 02 41.7	
	comp=Z,18nm,1.0s						
ASAR	Alice Springs	26.44	21	P	P	23 04 18.4	-0.1
	comp=Z,1.3nm,0.9s,baz=192,slow=8.1,SNR=5.5						
ASAR				LR	LR	23 13 57.0	
	comp=Z,536nm,20.2s,baz=220,slow=35						
WRA	Warramunga Arr	30.13	20	P	P	23 04 51.7	+0.3
	comp=Z,0.2nm,0.7s,baz=194,slow=7.2,SNR=1.1						
WRA				LR	LR	23 15 52.9	
	comp=Z,541nm,21.5s,baz=195,slow=34						
VNDA	Vanda	32.06	165	P	P	23 05 09.4	+1.6
	comp=Z,3.8nm,1.0s,baz=310,slow=8.8,SNR=8.8						
VNDA				LR	LR	23 16 50.8	
	comp=Z,329nm,21.4s,baz=264,slow=34						
VNDA	Vanda	32.06	165	P	P	23 05 09.7	+1.8
VNDA				IAmb	IAmb	23 05 11.2	
	comp=Z,6.6nm,1.1s						
MAW	Mawson	35.26	216	P	P	23 05 35.5	-0.2
TUWZ	Tuamarina	35.41	97	P	P	23 05 36.6	-0.8
QSPA	South Pole Qui	41.14	180	P	P	23 06 25.5	0.0
QSPA				IAmb	IAmb	23 06 28.1	
	comp=Z,21nm,1.1s						
KAPI	Kappang	43.96	354	LR	LR	23 23 47.7	
	comp=Z,59nm,19.1s,baz=216,slow=34						
SIJI	Sorong	48.33	10	LR	LR	23 27 21.1	
	comp=Z,106nm,20.9s,baz=230,slow=36						
JAY	Jayapura	48.44	23	LR	LR	23 27 31.9	
	comp=Z,214nm,19.3s,baz=166,slow=36						
BELA	Belgrano 2	52.73	186	P	P	23 07 55.0	-0.7
BELA				pwP	pwP	23 08 02.4	+0.4
SNAA	Sanae	53.95	198	P	P	23 08 04.3	-0.5
SNAA	Sanae	53.95	198	P	P	23 08 04.0	-0.8
	comp=Z,14nm,0.9s,baz=146,slow=8.4,SNR=31						
SNAA	Sanae	53.95	198	P	P	23 08 04.0	-0.8
SNAA				pwP	pwP	23 08 11.1	0.0
VNA2	Neumayer--Watz	55.45	197	P	P	23 08 15.2	-0.4
	baz=147,slow=7.6						
VNA3	Neumayer Olymp	55.63	196	P	P	23 08 16.7	-0.2
DAV	Davao City (W)	55.83	2	LR	LR	23 31 45.8	
	comp=Z,58nm,20.3s,baz=164,slow=36						
VNA1	Neumayer--Stat	55.84	197	P	P	23 08 18.2	-0.2
PSI	Prapat	55.99	329	LR	LR	23 28 31.5	
	comp=Z,45nm,19.6s,baz=91,slow=32						
H08S2	Diego Garcia H	59.64	296	T	T	00 12 57.3	
	baz=142,slow=76						
H08S1	Diego Carcia H	59.65	296	T	T	00 12 58.0	
	baz=142						
H08S3	Diego Garcia H	59.66	296	T	T	00 12 59.4	
	baz=142,slow=76						
CMAR	Chiang Mai Arr	70.76	335	P	P	23 09 58.0	+0.2
	comp=Z,1.0nm,0.7s,baz=196,slow=5.1,SNR=3.1						
LSA	Lhasa	83.66	332	P	P	23 11 10.2	-0.4
LSA				IAmb	IAmb	23 11 18.9	
	comp=Z,5.2nm,0.9s						
MJAR	Matsushiro Arr	86.07	11	LR	LR	23 47 46.2	
	comp=Z,44nm,20.1s,baz=35,slow=34						
PLCA	Paso Flores	89.74	169	LR	LR	23 48 11.9	
	comp=Z,60nm,21.6s,baz=163,slow=33						
YKA	Yellowknife Ar	145.63	45	PKPbc	PKPdf	23 18 18.2	-0.5
	comp=Z,1.0nm,0.8s,baz=271,slow=2.2,SNR=8.7						

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*WEL **05** 23:23:00, 43˚.07S×171˚.24E, h6^{km}, ML4.7, Mw4.5, Moment Tensor Solution. s13 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.42; M$_{\theta\theta}$3.60; M$_{\phi\phi}$-2.18; M$_{r\theta}$-1.12; M$_{\theta\phi}$-5.56; M$_{\phi r}$0.45; Fault plane solution: M$_0$6.36000×10^{15} NP1:φ$_s$347.00000°, δ82.00000°, λ4.00000°. NP2: φ$_s$256.00000°, δ86.00000°, λ172.00000°. Principal axes: T 714.7000, Plg9.0000°, Azm212.0000°; N -556.8000, Plg81.0000°, Azm49.0000°; P -157.9000, Plg3.0000°, Azm302.0000°;*

*IDC **05** 23:23:38.0±1.1, 42˚.99S×171˚.31E, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx4.0/23, mbtmp4.2/4, ML3.8/1, MS3.7/3, Ms1 3.7/3, ms1mx3.3/18 Error ellipse: s-maj=32.8km s-min=9.7km az=97.0*

*WEL **05** 23:23:40.1±0.3, 43˚S±3˚×17˚1E±˚, h5^{km}, M4.7/19, ML4.8/19, MLv4.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=158.3*

*NOU **05** 23:23:40.4, 43˚.11S×171˚.36E, h10^{km}, MLv4.7, South Island, New Zealand*

ISC 05 23:23:40.0±0.8, **43˚.05S**±0˚.03×**171˚.28E**±0˚.03, **h12**^{km}±6^{km}, **n149**, σ**1ˢ68**/148, **mb4.2**/3, **MS3.5**/3, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.34	21	P	Pg	23 23 47.1	+0.2
INZ				S	Sb	23 23 52.8	-0.7
WVZ	Waitaha Valley	0.40	266	P	Pg	23 23 47.6	-0.3
WVZ				S	Sg	23 23 52.3	-0.8
MHCZ	Mount Hutt	0.53	156	P	Pg	23 23 50.9	+0.5
MHCZ				S	Sg	23 23 58.2	+0.7
OXZ	Oxford	0.62	117	P	Pb	23 23 53.0	+0.1
OXZ				S	Sb	23 24 02.3	+0.7
RPZ	Rata Peaks	0.69	194	Pg	Pg	23 23 53.2	-0.2
	1μm,0.3s,baz=318,slow=4.4,SNR=890						
RPZ				Lg	Lg	23 24 02.3	
	1μm,0.3s,baz=301,slow=19,SNR=7.8						
RPZ	Rata Peaks	0.69	194	P	Pg	23 23 53.3	-0.2
GCSZ	Gaunt Creek Bo	0.74	248	P	Pg	23 23 53.7	-0.7
LTZ	Lake Taylor	0.78	70	P	Pb	23 23 56.0	+0.5
LTZ				S	Sb	23 24 07.5	+1.5
ARCZ	Arundel	0.90	185	P	Pg	23 23 57.3	-0.2
RACZ	Rakaia	0.93	138	P	Pb	23 23 58.7	+0.7
WACZ	Wakanui South	0.98	156	P	Pb	23 23 59.6	+0.6
WACZ				S	Sn	23 24 14.0	+0.5
AMCZ	Amberley	1.01	98	P	Pn	23 24 00.8	+0.7
FOZ	Fox Glacier	1.17	245	P	Pg	23 24 01.7	-0.9
FOZ				S	Sg	23 24 17.6	-0.3
MQZ	McQueen's Vall	1.20	124	P	Pg	23 24 02.7	-0.4
GVZ	Greta Valley S	1.29	87	P	Pn	23 24 04.6	+0.7
TMZ	Timaru	1.35	188	P	Pn	23 24 04.9	+0.1
DSZ	Denniston Nort	1.36	17	P	Pn	23 24 05.5	+0.7
AKCZ	Akaroa Harbour	1.45	125	P	Pn	23 24 06.2	+0.1
OKCZ	Okains Bay	1.47	118	P	Pn	23 24 07.0	+0.7
LBZ	Lake Benmore	1.56	210	P	Pn	23 24 07.8	+0.3
THZ	Tophouse	1.76	44	P	Pn	23 24 11.8	+1.4
KHZ	Kahutara	1.78	70	P	Pn	23 24 11.7	+1.1
ODZ	Otahua Downs	2.05	193	P	Pn	23 24 14.1	-0.2
JCZ	Jackson Bay	2.08	240	P	Pn	23 24 15.0	+0.2
BSWZ	Blackbirch Sta	2.34	56	P	Pn	23 24 20.4	+2.1
NNZ	Nelson	2.41	41	P	Pn	23 24 20.6	+1.4
QRZ	Quartz Range	2.41	23	P	Pn	23 24 20.3	+1.1
WKZ	Wanaka	2.42	222	P	Pn	23 24 18.8	-0.6
CMWZ	Cape Campbell	2.53	60	P	Pb	23 24 25.4	0.0
TUWZ	Tuamarina	2.56	52	P	Pn	23 24 22.9	+1.7
EAZ	Earnscleugh	2.60	212	P	Pn	23 24 20.9	-1.1
HHSZ	Highcliff Hill	2.88	189	P	Pn	23 24 25.1	-0.6
TCW	Tory Channel	2.89	52	P	Pn	23 24 27.1	+1.3
MSZ	Milford Sound	2.92	235	P	Pn	23 24 26.5	+0.3
DUWZ	D'Urville Isla	2.99	42	P	Pn	23 24 29.3	+2.1
BHW	Baring Head	3.13	60	P	Pn	23 24 29.8	+0.6
TUZ	Tuapeka	3.14	201	P	Pn	23 24 28.9	-0.3
WEL	Wellington	3.14	57	P	Pn	23 24 30.4	+1.2
MLZ	Mavora Lakes	3.25	223	P	Pn	23 24 30.3	-0.5
PLWZ	Palliser	3.30	65	P	Pn	23 24 31.4	-0.1
MSWZ	Moikau Station	3.37	62	P	Pn	23 24 32.6	+0.1
CAW	Cannon Point	3.42	57	P	Pn	23 24 33.4	+0.2
KIW	Kapiti Island	3.48	52	P	Pn	23 24 34.7	+0.7
PAWZ	Paruwai Farm	3.50	63	P	Pn	23 24 34.6	+0.3
OGWZ	Otaki Gorge	3.66	54	P	Pn	23 24 36.6	+0.1
MTW	Mount Morrison	3.67	60	P	Pn	23 24 36.0	-0.6
TRWZ	Traveller	3.67	65	P	Pn	23 24 37.2	+0.6
WHZ	Wether Hill Ro	3.71	219	P	Pn	23 24 35.8	-1.4
SYZ	Scrubby Hill	3.81	203	P	Pn	23 24 37.3	-1.2
HOWZ	Holdsworth Sta	3.82	57	P	Pn	23 24 39.0	+0.3
DCZ	Deep Cove	3.82	229	P	Pn	23 24 37.7	-0.9
DCZ				P	Pb	23 24 38.3	-9.1
TMWZ	Te Maipa	3.94	62	P	Pn	23 24 39.8	-0.6
MRZ	Mangatainoka R	4.00	55	P	Pn	23 24 40.7	-0.4
TIWZ	Tintock	4.12	58	P	Pn	23 24 44.1	+1.3
NMEZ	Namu Road	4.13	29	P	Pn	23 24 45.2	+2.4
OHWZ	Ohakea	4.15	48	P	Pb	23 24 50.1	-2.8
CPWZ	Castlepoint	4.25	61	P	Pn	23 24 45.0	+0.5
NBEZ	Newall Road No	4.25	28	P	Pn	23 24 46.9	+2.3
KHEZ	Kahui Hut	4.28	30	P	Pn	23 24 47.5	+2.4
POWZ	Post Office Ro	4.28	53	P	Pn	23 24 46.0	+1.0
LREZ	Lake Rotokare	4.29	34	P	Pn	23 24 48.3	+3.2
PREZ	Palmer Road	4.29	31	P	Pn	23 24 47.7	+2.5
PRWZ	Pori Road	4.30	56	P	Pn	23 24 44.8	-0.5
WAZ	Wanganui	4.31	42	P	Pn	23 24 47.8	+2.4
NEZ	North Egmont	4.33	30	P	Pn	23 24 48.2	+2.4
PKE	Pukeiti	4.36	29	P	Pn	23 24 48.5	+2.4
BFZ	Birch Farm	4.40	59	P	Pn	23 24 46.0	-0.6
DREZ	Durham Road	4.44	31	P	Pn	23 24 49.6	+2.4
APZ	The Paps	4.45	211	P	Pn	23 24 45.8	-1.5
PYZ	Puysegur Point	4.53	225	P	Pn	23 24 49.2	+0.8
DVHZ	Dannevirke	4.58	55	P	Pn	23 24 49.2	+0.1
TSZ	Takapari Road	4.61	51	P	Pn	23 24 49.0	-0.5
ANWZ	Angora Road	4.67	58	P	Pn	23 24 49.8	-0.5
VRZ	Vera Road	4.72	35	P	Pn	23 24 53.6	+2.6
MTVZ	Mangateitei	4.84	42	P	Pn	23 24 56.2	+3.5
PNHZ	Pukenui	4.84	51	P	Pn	23 24 51.8	-1.0
PKVZ	Pokaka	4.85	41	P	Pn	23 24 56.4	+3.5
PRHZ	Porangahau	4.88	57	P	Pn	23 24 53.1	-0.1
WNVZ	Wahianoa	4.94	43	P	Pn	23 24 55.3	+1.1
MOVZ	Moawhango	4.96	44	P	Pn	23 24 54.8	+0.4
DRZ	Dome Shelter	4.97	42	P	Pb	23 25 01.7	-5.3
WHVZ	Whangaehu Hut	4.97	42	P	Pn	23 24 58.5	+3.8
FWVZ	Far West T-bar	4.98	42	P	Pn	23 24 57.5	+2.7
TUVZ	Tukino	5.02	43	P	Pn	23 24 57.6	+2.3
NGZ	Ngauruhoe	5.06	42	P	Pn	23 24 57.0	+1.1
BHHZ	Black Hill Sta	5.06	47	P	Pn	23 24 55.8	0.0
TWVZ	Taurewa	5.07	40	P	Pn	23 24 59.5	+3.6
OTVZ	Oturere	5.10	42	P	Pn	23 24 57.4	+1.0
WTVZ	West Tongariro	5.10	41	P	Pn	23 24 59.8	+3.4
KRHZ	Kereru	5.12	50	P	Pn	23 24 58.6	+2.0
KRVZ	Karewarewa	5.14	41	P	Pn	23 25 01.2	+4.3
ETVZ	East Tongariro	5.15	42	P	Pn	23 24 58.1	+1.1
TMVZ	Te Maari	5.16	42	P	Pn	23 24 58.3	+1.2
PXZ	Pawanui	5.16	56	P	Pn	23 24 55.9	-1.2
KATZ	Kakaramea	5.26	41	P	Pn	23 25 03.1	+4.5
HIZ	Hauiti	5.28	32	P	Pn	23 25 00.3	+1.6
KWHZ	Kaweka Forest	5.30	49	P	Pn	23 25 00.9	+1.8
KAHZ	Kahuranaki	5.32	54	P	Pn	23 24 58.1	-1.2
RITZ	Rihia Road	5.34	42	P	Pn	23 25 06.1	+6.6
RATZ	Rangitukua	5.39	41	P	Pn	23 25 05.2	+4.9
MCHZ	McNeill Hill	5.44	50	P	Pn	23 25 02.4	+1.4
BKZ	Black Stump Fm	5.53	47	P	Pn	23 25 01.1	-1.1
WHTZ	Whakaora	5.63	41	P	Pn	23 25 10.2	+6.5
KUTZ	Kaahu Road	5.71	39	P	Pn	23 25 08.6	+4.0
TLZ	Tolley Road	5.72	36	P	Pn	23 25 06.4	+1.7
NMHZ	Naumai	5.75	48	P	Pn	23 25 06.7	+1.5
MTHZ	Maungataniwha	5.94	47	P	Pn	23 25 07.9	+0.1
GRRZ	Galatos Road	5.96	40	P	Pn	23 25 11.7	+3.6
RAHZ	Arahi	6.03	49	P	Pn	23 25 12.5	+3.5
MUGZ	Murupara	6.18	44	P	Pn	23 25 12.9	+1.8
RTZ	Ruatahuna	6.19	46	P	Pn	23 25 16.4	+5.2
TOZ	Tahuroa Road	6.21	33	P	Pn	23 25 12.5	+1.0
SNGZ	Shannon Statio	6.26	49	P	Pn	23 25 12.9	+0.6
OMRZ	Omania	6.28	40	P	Pn	23 25 18.7	+6.2
MHGZ	Mahia Peninsul	6.34	54	P	Pn	23 25 13.6	+0.3
PRGZ	Paritu Road	6.48	53	P	Pn	23 25 13.8	-1.4
AWAZ	Awhitu Peninsu	6.51	24	P	Pn	23 25 17.7	+2.1
URZ	Urewera	6.52	45	Pn	Pn	23 25 14.1	-1.6
	1.9nm,0.3s,baz=207,slow=1.6,SNR=3.5						
URZ				Sn	Sn	23 26 25.4	-4.6
	11nm,0.3s,baz=88,slow=16,SNR=10						
URZ				Lg	Lg	23 27 10.4	
	baz=49,slow=15,SNR=1.1						
URZ	Urewera	6.52	45	P	Pn	23 25 15.6	-0.1
TGRZ	Tauranga	6.53	37	P	Pn	23 25 18.1	+2.2
RIGZ	Rimuhau	6.55	51	P	Pn	23 25 16.3	0.0
OPRZ	Ohinepanea	6.57	40	P	Pn	23 25 19.3	+2.8
WTAZ	Waiatarua	6.61	24	P	Pn	23 25 19.1	+2.1
MWZ	Matawai	6.69	47	P	Pn	23 25 18.6	+0.5
ETAZ	East Tamaki Re	6.70	26	P	Pn	23 25 20.5	+2.3
RVAZ	Riverhead Bore	6.76	23	P	Pn	23 25 21.5	+2.4
MBAZ	Motutapu North	6.86	25	P	Pn	23 25 22.6	+2.3
MYRZ	Mayor Island	6.90	35	P	Pn	23 25 23.3	+2.3
WIAZ	Waiheke Island	6.91	27	P	Pn	23 25 23.0	+1.9
ABAZ	Army Bay	7.00	24	P	Pn	23 25 24.9	+2.7
RUGZ	Raukumara Rang	7.04	46	P	Pn	23 25 23.5	+0.5
TWGZ	Tauwhareparae	7.05	49	P	Pn	23 25 22.8	-0.3
KUZ	Kuaotunu	7.16	30	P	Pn	23 25 25.5	+1.0
HAZ	Te Kaha	7.25	45	P	Pn	23 25 24.5	-1.2
PKGZ	Pakihiroa	7.31	47	P	Pn	23 25 25.8	-0.8
WCZ	Waipu Caves	7.48	19	P	Pn	23 25 30.3	+1.3
GRZ	Great Barrier	7.51	27	P	Pn	23 25 31.2	+1.9
OUZ	Omahuta	8.02	14	P	Pn	23 25 38.4	+2.1
DZM	Mont Dzumac	21.30	348	LR	LR	23 35 50.8	
	comp=Z,168nm,18.6s,baz=264,slow=34						
MSVF	Nonsavu	25.88	15	LR	LR	23 37 26.9	
	comp=Z,110nm,20.0s,baz=61,slow=32						
VNDA	Vanda	34.80	184	LR	LR	23 42 21.6	
	comp=Z,196nm,21.5s,baz=341,slow=32						
ASAR	Alice Springs	36.33	290	P	P	23 30 43.3	-0.5
	6.5nm,0.3s,baz=128,slow=7.9,SNR=17						
WRA	Warramunga Arr	38.57	295	P	P	23 31 02.4	-0.4
	0.5nm,0.5s,baz=136,slow=7.6,SNR=15						
CMAR	Chiang Mai Arr	90.16	295	P	P	23 36 40.6	+0.3
	0.5nm,0.4s,baz=134,slow=2.6,SNR=1.2						
MKAR	Makanchi Array	119.03	308	PKP	PKPdf	23 42 26.9	-1.1
	0.2nm,0.8s,baz=111,slow=3.2,SNR=1.5						
ARCES	ARCESS Array B	148.20	338	PKPbc	PKPbc	23 43 24.5	-0.1
	3.0nm,0.7s,baz=62,slow=5.6,SNR=11						
BRTR	Keskin Array B	148.29	279	PKPbc	PKPbc	23 43 26.0	0.0
	0.7nm,0.5s,baz=139,slow=3.1,SNR=1.8						
TORD	Torodi Ar. Bea	148.88	200	PKPbc	PKPdf	23 43 26.4	+2.4
	0.6nm,0.5s,baz=191,slow=1.6,SNR=6.1						
FINES	FINESS Array B	152.34	324	PKPbc	PKPbc	23 43 34.7	0.0
	4.0nm,1.0s,baz=84,slow=4.3,SNR=2.0						

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*NDI **05** 23:25:32.0±3.6, 33˚.10N×92˚.97E, h10^{km}, mb4.8, ML4.3, mb4.6(NEIC)*

*IDC **05** 23:25:34.1±0.6, 32˚.62N×92˚.91E, h0^{km}, mb4.2/22, mb1 4.3/26, mb1mx4.2/46, mbtmp4.2/26, ML3.8/4, MS3.6/15, Ms1 3.6/15, ms1mx3.4/35, Error ellipse: s-maj=17.4km s-min=12.9km az=30.0*

*BJI **05** 23:25:34.7±0.0, 32˚.64N×92˚.86E, h8^{km}, mB4.7/15, mb4.5/26, ML4.5/5, Ms4.2/26, Ms7 3.9/25*

*BGR **05** 23:25:37.9±0.0, 34˚.04N×95˚.57E, h33^{km}, mb4.6*

*NEIC **05** 23:25:38.3±2.5, 32˚.67N±0˚.07×93˚.02E±0˚.08, h28^{km}±5^{km}, mb4.6/42, Error ellipse: s-maj=10.8km s-min=9.0km az=197.0*

ISC 05 23:25:36.6±0.3, **32˚.64N**±0˚.04×**92˚.87E**±0˚.04, **h17**^{km}, **n157**, σ**1ˢ91**/140, **mb4.5**/48, **MS3.6**/13, **2C**, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	3.28	207	Pg	Pb	23 26 33.6	-1.0
LSA				Sg	Sg	23 27 19.1	-3.0
LSA				smax	smax		
	comp=N,2μm,0.6s						
LSA				smax	smax		
	comp=E,4μm,0.8s						
LSA	Lhasa	3.28	207		Pb	23 26 33.4	-1.2
ZIRO	ZIRO	5.17	170	*e*P	Pn	23 26 56.5	+3.1
ZIRO				IAmb	IAmb	23 27 00.8	
	comp=Z,93nm,0.5s						
ZIRO				*e*S	Sn	23 27 58.8	+6.1
ZIRO				IAML		23 28 01.1	
	comp=N,1μm,0.7s						
ZIRO				IAML		23 28 05.6	
	comp=E,1μm,0.5s						
LKP	Lekhapani	5.89	153	*e*P	Pn	23 27 05.2	+2.1
LKP				IAmb	IAmb	23 27 09.4	
	comp=Z,87nm,0.8s						
MOKO	MOKOCHONG	6.46	167	*e*P	Pn	23 27 13.4	+2.3
MOKO				IAmb	IAmb	23 27 17.9	
	comp=Z,52nm,0.6s						
MOKO				*e*S	Sn	23 28 25.3	+0.8
MOKO				IAML		23 28 32.1	
	comp=E,487nm,0.8s						
MOKO				IAML		23 28 36.9	
	comp=N,255nm,0.7s						
GTK	Tadong	6.47	216	*e*P	Pn	23 27 18.7	+7.6
GTK				IAmb	IAmb	23 27 38.3	
	comp=Z,30nm,0.7s						
GUWA	GUWAHATI	6.51	189	*e*P	Pn	23 27 13.6	+2.0
GUWA				IAmb	IAmb	23 27 22.3	
	comp=Z,44nm,0.8s						
TAPN	Taplejung	6.92	222	*e*P	Pn	23 27 19.8	+2.4
	comp=Z,41nm,0.4s						
KOHI	KOHIMA	6.98	171	*e*P	Pn	23 27 20.0	+1.8
KOHI				IAmb	IAmb	23 27 24.2	
	comp=Z,67nm,0.6s						
KOHI				*e*S	Sn	23 28 37.8	+0.5
KOHI				IAML		23 28 38.5	
	comp=E,158nm,1.0s						
KOHI				IAML		23 28 41.1	
	comp=N,313nm,1.0s						
SHL	Shillong	7.10	187	*e*P	Pn	23 27 20.8	+0.9
SHL				IAmb	IAmb	23 27 22.4	
	comp=Z,51nm,0.5s						
SHL				*e*S	Sn	23 28 42.5	+2.1
SHL				IAML		23 28 45.9	
	comp=E,92nm,0.5s						
SHL	Shillong	7.10	187	Pn	Pn	23 27 21.3	+1.4
ODAN	Odare	7.47	221	*e*P	Pn	23 27 26.4	+1.3
	comp=E,51nm,0.4s						
GUN	Gumba	7.67	234	*e*P	Pn	23 27 30.1	+2.3
	comp=E,87nm,0.6s						
KKN	Kakani	8.15	236	*e*P	Pn	23 27 36.4	+2.0
	comp=E,39nm,0.4s						
PKI	Pulchoki	8.20	234	*e*P	Pn	23 27 36.9	+1.8
	comp=E,60nm,0.4s						
PKIN	Phulchoki	8.21	234	*e*P	Pn	23 27 36.8	+1.6
	comp=E,52nm,0.5s						
DMN	Daman	8.39	235	*e*P	Pn	23 27 39.5	+1.9
	comp=E,51nm,0.6s						
GTA	Gaotai	8.79	38	P	Pn	23 27 46.2	+3.3
GTA				pP		23 27 49.3	
GTA				sP		23 27 52.2	
GTA				pmax	pmax		
	comp=E,14nm,1.2s						
GTA				pmax	pmax		
	comp=E,67nm,3.9s						
GTA				LR	LR		
	comp=E,680nm,12.4s						
GTA				LR	LR		
	comp=E,660nm,12.4s						
GTA				LR	LR		
	comp=E,820nm,13.8s						
AGT	Agartala	8.84	190	*e*P	Pn	23 27 45.8	+2.2
AGT				IAmb	IAmb	23 27 47.6	
	comp=Z,60nm,0.8s						
AGT				*e*S	Sn	23 29 24.3	+1.5
DANN	Dangsing	8.95	244	*e*P	Pn	23 27 47.7	+2.4
	comp=Z,62nm,0.4s						
DANN				*e*S	Sn	23 29 29.9	+4.0
CD2	Chengdu	9.43	98	*e*P	Pn	23 27 56.5	+4.8
CD2				S	Sn	23 29 42.6	+5.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,2μm,10.4s						
CD2				LR	LR		
	comp=Z,1μm,8.6s						
CD2				LR	LR		
	comp=Z,2μm,8.2s						
SAIH	SAIHA	10.11	179	*e*P	Pn	23 28 02.5	+1.3
SAIH				IAmb	IAmb	23 28 05.5	
	comp=Z,97nm,0.6s						
SAIH				IAML		23 30 03.0	
	comp=E,171nm,0.8s						
SAIH				IAML		23 30 03.6	
	comp=N,44nm,0.6s						
BOK	Bokaro	10.75	217	*e*P	Pn	23 28 10.1	+0.4
BOK				IAmb	IAmb	23 28 12.6	
	comp=Z,24nm,0.7s						
KMI	Kunming	11.44	128	Pn	Pn	23 28 20.6	+1.3
WMQ	Urumqi	11.88	342	*e*P	Pn	23 28 29.9	+4.7
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.3s						
WMQ				LR	LR		
	comp=Z,1μm,7.1s						
WMQ				LR	LR		
	comp=Z,350nm,6.5s						
WMQ				LR	LR		
	comp=Z,990nm,8.7s						
WMQ	Urumqi	11.88	342	Pn	Pn	23 28 25.8	+0.6
SMLA	Simla	13.43	268	*e*P	Pn	23 28 46.1	-0.2
SMLA				IAmb	IAmb	23 28 50.2	
	comp=Z,53nm,1.0s						
GYA	Guiyang	13.49	114	⇑P	Pn	23 28 46.9	-0.4
GYA				S	Sn	23 31 17.8	+0.8
GYA				pmax	pmax		
	comp=Z,28nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.4s						
GYA				LR	LR		
	comp=Z,230nm,6.2s						
GYA				LR	LR		
	comp=Z,330nm,6.1s						
GYA				LR	LR		
	comp=Z,290nm,8.5s						
XAN	Xi'an	13.49	80	P	P	23 28 50.0	-6.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,79nm,5.9s						
XAN				LR	LR		
	comp=Z,750nm,12.7s						
XAN				LR	LR		
	comp=Z,320nm,15.6s						
XAN				LR	LR		
	comp=Z,540nm,8.8s						
XAN	Xi'an	13.49	80	Pn	Pn	23 28 45.4	-1.9
DHRM	DHARAMSHALA	14.00	273	*e*P	P	23 28 58.9	-3.4
DHRM				IAmb	IAmb	23 29 08.0	
	comp=Z,9.2nm,0.6s						
ENH	Enshi	14.38	95	Pn	Pn	23 28 59.1	-0.3
PAYA	Payao	14.64	153	P	P	23 29 07.5	-1.8
CM33	Chiang Mai Arr	14.81	157	P	Pn	23 29 06.0	+0.7
CHTO	Chiang Mai	14.81	157		Pn	23 29 02.5	-2.8
CMMT	Chiang Mai	14.81	157	P	Pn	23 29 06.4	+1.0
CM34	Chiang Mai Arr	14.85	156	P	P	23 29 10.0	-1.5
CM32	Chiang Mai Arr	14.93	157	P	P	23 29 09.0	-3.4
SLVN	Son La	14.94	136		Pn	23 29 06.4	-0.7
CM35	Chiang Mai Arr	15.01	156	P	Pn	23 29 08.0	0.0
MHMT	Maesarieng	15.11	161	P	P	23 29 17.5	+3.1
	comp=Z,0.1nmcomp=Z,35nm,0.8s						
CM36	Chiang Mai Arr	15.14	157	P	Pn	23 29 10.0	+0.3
CM15	Chiang Mai Arr	15.14	157	P	P	23 29 13.5	-1.3
	comp=Z,0.0nmcomp=Z,7.3nm,0.9s						
CMAR	Chiang Mai Arr	15.14	157	Pn	Pn	23 29 08.0	-1.8
	comp=Z,0.4nm,0.3s,baz=331,slow=12,SNR=21						
CM02	Chiang Mai Arr	15.17	157	P	Pn	23 29 11.1	+1.0
	comp=Z,0.0nmcomp=Z,73nmcomp=Z,7.6nm,0.9s						
CM13	Chiang Mai Arr	15.17	158	P	Pn	23 29 11.1	+1.0
	comp=Z,0.0nmcomp=Z,5.4nm,0.8s						
CM09	Chiang Mai Arr	15.17	157	P	P	23 29 13.0	-2.2
	comp=Z,0.0nmcomp=Z,7.8nm,0.8s						
CM01	Chiang Mai Arr	15.18	157	P	P	23 29 13.0	-2.3
	comp=Z,0.1nmcomp=Z,90nmcomp=Z,10.0nm,1.0s						
CM05	Chiang Mai Arr	15.20	157	P	Pn	23 29 11.4	+0.9
	comp=Z,0.0nmcomp=Z,65nmcomp=Z,9.6nm,0.9s						
CM04	Chiang Mai Arr	15.21	157	P	Pn	23 29 11.2	+0.6
	comp=Z,0.0nmcomp=Z,9.0nm,0.9s						
SUKH	Sukhothai	16.28	156	P	P	23 29 29.2	+1.8
	comp=Z,0.1nmcomp=Z,18nm,0.9s						
MK31	Makanchi Array	16.29	333		Pn	23 29 23.9	-0.5
MKAR	Makanchi Array	16.29	333	Pn	Pn	23 29 23.0	-1.5
	comp=Z,0.2nm,0.3s,baz=140,slow=13,SNR=11						
MKAR				LR	LR	23 36 32.8	
	comp=Z,151nm,20.8s,baz=148,slow=40						
UTTA	Uttaradit	16.37	153	P	P	23 29 34.1	+5.7
MAKZ	Makanchi	16.42	333		Pn	23 29 25.7	-0.5
NIL	Nilore	16.47	279	P	Pn	23 29 26.2	-0.6
BHPL	Bhopal	16.54	239	⇑*e*x	x	23 29 25.1	
BHPL				*e*P	Pn	23 29 25.5	-2.3
BHPL				IAmb	IAmb	23 29 26.6	
	comp=Z,20nm,0.8s						
NONG	Nongkai	17.21	145	P	P	23 29 50.0	+12
AAK	Ala-Archa	17.61	310	P	P	23 29 41.8	-0.4
	comp=Z,0.2nm,0.3s,baz=89,slow=3.4,SNR=6.4						
AAK				LR	LR	23 37 48.3	

	comp=Z,233nm,21.7s,baz=108,slow=42						
AAK	Ala-Archa	17.61	310	P	P	23 29 41.4	-0.9
UTHA	Uthaitani	18.02	159	P	P	23 29 49.0	+2.3
	comp=Z,0.0nmcomp=Z,15nm,0.8s						
SONM	Songino Array	18.31	30	P	P	23 29 49.3	-0.6
	comp=Z,0.1nm,0.3s,baz=216,slow=10,SNR=17						
SONM				LR	LR	23 37 29.4	
	comp=Z,327nm,18.1s,baz=176,slow=39						
ULN	Ulaanbaatar	18.62	31		Pn	23 29 55.2	+1.6
HYB	Hyderabad	19.92	224	*i* P	P	23 30 07.0	-0.6
KBL	Kabul	19.93	282		Pn	23 30 10.2	+0.7
KBL				IAmb	IAmb	23 30 18.4	
	comp=Z,16nm,0.9s						
BJT	Baijiatuau	20.13	62	P	Pn	23 30 09.8	-1.8
BJT				IAmb	IAmb	23 30 28.9	
	comp=Z,59nm,2.0s						
BJI	Beijing	20.14	62	P	Pn	23 30 13.5	+1.8
BJI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SRAK	Srakaew	20.35	154	P	Pn	23 30 18.0	+3.7
	comp=Z,145nm,0.8s						
QIZ	Qiongzhong	20.38	128	P	Pn	23 30 12.7	-2.0
QIZ				S	Sn	23 34 01.6	-2.5
QIZ				LR	LR		
	comp=Z,390nm,11.4s						
QIZ				LR	LR		
	comp=Z,320nm,13.5s						
QIZ				LR	LR		
	comp=Z,300nm,12.6s						
QIZ	Qiongzhong	20.38	128	P	Pn	23 30 13.4	-1.4
QIZ				IAmb	IAmb	23 30 29.4	
	comp=Z,53nm,1.7s						
KK31	Karatay Array	20.45	307		Pn	23 30 14.1	-1.3
KK31				IAmb	IAmb	23 30 21.2	
	comp=Z,16nm,1.1s						
KKAR	Karatay Array	20.45	307	Pn	Pn	23 30 16.5	+1.2
KKAR				IAmb	IAmb	23 30 21.2	
	comp=Z,16nm,1.1s						
TLY	Talaya	20.59	19	P	Pn	23 30 14.2	-2.8
KURBB	Kurchatov Arra	20.85	334	P	Pn	23 30 18.0	-2.0
	comp=Z,11nm,1.0s,baz=138,slow=12,SNR=37						
KURK	Kurchatov	20.90	334	P	Pn	23 30 18.5	-1.9
KURK				IAmb	IAmb	23 30 21.4	
	comp=Z,13nm,0.9s						
PATY	Pattaya	20.95	158	P	Pn	23 30 27.6	+6.3
ZAA0	Zalesovo Array	22.06	347	P	P	23 30 31.1	+0.7
ZALV	Zalesovo Beam	22.06	347	P	P	23 30 31.3	+1.0
	comp=Z,1.7nm,0.6s,baz=171,slow=11,SNR=13						
ZALV				LR	LR	23 39 46.4	
	comp=Z,100nm,19.6s,baz=210,slow=39						
POO	Poona	22.12	235	*e*P	P	23 30 34.0	+2.6
KNMB	Chin-men Tao	23.81	103	P	P	23 30 47.0	-1.6
KNMB				IAmb	IAmb	23 31 02.5	
	comp=Z,23nm,0.7s						
HRA	Herat	25.55	282	P	P	23 31 05.4	+0.6
BVAR	Borovoye Array	26.01	328	P	P	23 31 09.2	+0.7
	comp=Z,0.6nm,0.8s,baz=311,slow=43,SNR=4.4						
HIA	Hailar	26.03	42	P	P	23 31 08.9	+0.2
HIA				IAmb	IAmb	23 31 13.1	
	comp=Z,25nm,1.4s						
BRVK	Borovoye	26.08	328	P	P	23 31 10.2	+1.0
BRVK				IAmb	IAmb	23 31 17.1	
	comp=Z,6.6nm,0.9s						
SSLB	Suanglung	26.21	102	P	P	23 31 08.6	-2.0
SSLB				IAmb	IAmb	23 32 07.8	
	comp=Z,14nm,1.0s						
YULB	Yu-li	26.67	103	P	P	23 31 10.4	-4.3
YULB				IAmb	IAmb	23 31 43.2	
	comp=Z,25nm,1.4s						
GEYT	Alibeck	28.75	290	P	P	23 31 34.5	+1.2
	comp=Z,3.2nm,0.9s,baz=134,slow=6.4,SNR=5.4						
GEYT				LR	LR	23 45 15.6	
	comp=Z,196nm,21.2s,baz=55,slow=41						
KSRS	Korea Array	28.99	71	P	P	23 31 35.2	-0.1
	comp=Z,2.0nm,0.8s,baz=271,slow=12,SNR=4.5						
ABKAR	Akbulak array	29.60	314	P	P	23 31 40.5	-0.1
WSAR	Wadi Sarin	31.55	262	P	P	23 31 58.6	+0.5
	comp=Z,4.4nm,1.1s,baz=19,slow=5.4,SNR=3.7						
USRK	Ussuriysk Ar.	32.46	58	P	P	23 32 06.0	+0.1
	comp=Z,4.1nm,1.0s,baz=260,slow=7.9,SNR=4.7						
KLR	Kul'dur	33.29	49	P	P	23 32 13.3	+0.3
	comp=Z,2.1nm,0.7s,baz=271,slow=11,SNR=8.0						
ARU	Arti	33.54	325	P	P	23 32 16.3	+1.1
ARU				IAmb	IAmb	23 33 10.7	
	comp=Z,24nm,1.8s						
KKM	Kota Kinabalu	34.26	136	P	P	23 32 21.8	-0.1
MYLDM	Lahad Datu	36.31	133	P	P	23 32 36.5	-3.0
INU	Inuyama	36.48	73	P	P	23 32 37.3	-3.5
INU				IAmb	IAmb	23 33 17.6	
	comp=Z,12nm,0.8s						
NRIK	Noril'sk	36.87	357	P	P	23 32 43.9	+0.2
	comp=Z,1.7nm,0.5s,baz=136,slow=8.9,SNR=3.3						
NRIK				LR	LR	23 48 37.7	
	comp=Z,64nm,20.1s,baz=177,slow=38						
NRIK	Noril'sk	36.87	357	IAmb	IAmb	23 32 47.2	
	comp=Z,4.4nm,1.1s						
MAJO	Matsushiro	37.26	71	P	P	23 32 46.9	-0.6
ASAJ	Asahikawa	40.07	59	P	P	23 33 11.4	+0.5
	comp=Z,21nm,1.0s,baz=262,slow=9.8,SNR=4.4						
JKA	Kamikawa-asahi	40.08	59	P	P	23 33 09.2	-1.8
KBZ	Khabaz	40.26	301	LR	LR	23 51 23.7	
	comp=Z,55nm,18.3s,baz=70,slow=38						
ERM	Erimo	40.56	62	P	P	23 33 15.1	+0.1
KLMR	Klimovskoe	44.39	326	*e*	P	23 33 44.3	-1.6
KLMR				AMP		23 33 50.5	
	comp=Z,28nm,1.3s						
AKASG	Malin Array Be	49.27	311	P	P	23 34 24.2	0.0
	comp=Z,5.3nm,0.8s,baz=75,slow=7.0,SNR=13						
AKASG				LR	LR	23 56 54.0	
	comp=Z,65nm,21.2s,baz=265,slow=38						
AKBB	Malin Array Si	49.27	311	P	P	23 34 24.4	+0.1
AKBB				IAmb	IAmb	23 34 28.0	
	comp=Z,8.8nm,1.1s						
MSAI	Masohi	49.47	129	P	P	23 34 30.6	+4.4
PETK	Petropavlovsk-	49.86	46	LR	LR	23 56 41.5	
	comp=Z,62nm,19.4s,baz=214,slow=38						
FINES	FINESS Array B	50.91	325	P	P	23 34 37.2	+0.8
	comp=Z,2.1nm,0.7s,baz=98,slow=7.9,SNR=5.6						
FINES				LR	LR	23 58 12.5	
	comp=Z,138nm,18.8s,baz=94,slow=38						
ARCES	ARCESS Array B	51.92	336	P	P	23 34 45.0	+1.0
	comp=Z,2.6nm,0.8s,baz=56,slow=6.5,SNR=7.3						
ARCES				PcP	PcP	23 35 57.0	+0.6
	comp=Z,2.7nm,0.8s,baz=114,slow=4.4,SNR=3.6						
ARCES				LR	LR	23 57 05.6	
	comp=Z,61nm,18.2s,baz=35,slow=36						
MLR	Muntele Rosu	52.11	305	P	P	23 34 47.2	+1.3
MLR				IAmb	IAmb	23 34 50.6	
	comp=Z,11nm,1.1s						
BUR08	Bucovina Ar. S	52.25	308	P	P	23 34 48.9	+2.0
BUR08				IAmb	IAmb	23 35 30.2	
	comp=Z,19nm,1.9s						
KWP	Kalwaria Pacla	53.56	311	P	P	23 34 56.9	+0.5
MORC	Moravsky Berou	56.82	311	*e*P	P	23 35 22.8	+2.8
MORC	Moravsky Berou	56.82	311	P	P	23 35 21.6	+1.6
MORC				IAmb	IAmb	23 35 25.2	
	comp=Z,3.0nm,0.9s						
JAVC	Velka Javorina	56.95	310	*e*P	P	23 35 25.4	+4.5
KRLC	Kraliky	57.23	312	*e*P	P	23 35 25.7	+2.8
DPC	Dobruska-Polom	57.46	312	*e*P	P	23 35 27.8	+3.3
OSTC	Ostas	57.48	313	*e*P	P	23 35 29.1	+4.5
VRAC	Vranov	57.53	311	*e*P	P	23 35 28.3	+3.3
CHVC	Chvalec	57.57	313	*e*P	P	23 35 28.4	+3.2
UPC	Upice	57.61	313	*e*P	P	23 35 29.2	+3.7
KRUC	Moravsky	57.72	311	*e*P	P	23 35 29.4	+3.1
NB2	NORSAR Subarra	58.09	325	P	P	23 35 28.9	+0.1
	comp=Z,2.1nm,0.7s,baz=80,slow=6.9						
NOA	NORSAR Array B	58.09	325	P	P	23 35 29.2	+0.5
	comp=Z,1.3nm,0.6s,baz=80,slow=6.9,SNR=7.1						
NOA				LR	LR	00 01 20.7	
	comp=Z,50nm,20.4s,baz=245,slow=37						
CONA	Conrad Observa	58.34	310	*e*P	P	23 35 33.3	+2.6
	comp=Z,6.9nm,1.1s						
PRU	Pruhonice	58.66	312	*e*P	P	23 35 35.3	+2.5
SOKA	Soboth	59.22	308	*e*P	P	23 35 39.0	+2.1
	comp=Z,4.2nm,1.0s						
MOA	Molln	59.40	310	*e*P	P	23 35 39.3	+1.2
	comp=Z,3.1nm,1.0s						
GERES	GERESS Array B	59.49	311	P	P	23 35 39.5	+0.8
	comp=Z,2.2nm,1.0s,baz=74,slow=5.7,SNR=9.9						
KHC	Kasperske Hory	59.49	311	*e*P	P	23 35 40.1	+1.5
KBA	Koelnbreinsper	60.22	309	*e*P	P	23 35 48.9	+5.0
	comp=Z,6.2nm,0.9s						
GRF	Grafenberg Arr	60.80	313	*e*P	P	23 35 50.7	+3.0
	comp=Z,5.1nm,1.2s,baz=77,slow=6.1						
ABTA	Abfaltersbach	60.86	309	*e*P	P	23 35 50.0	+1.8
	comp=Z,3.1nm,0.8s						
WTTA	Wattenberg	61.27	310	*e*P	P	23 35 52.3	+1.2
	comp=Z,3.6nm,1.2s						
WATA	Walderalm	61.29	310	*e*P	P	23 35 53.3	+2.2
	comp=Z,5.1nm,1.1s						
SQTA	Sankt Quirin	61.56	310	*e*P	P	23 35 53.3	+0.4
	comp=Z,3.9nm,1.0s						
MOTA	Moosalm	61.59	310	*e*P	P	23 35 55.6	+2.4
	comp=Z,3.6nm,1.3s						
RETA	Reutte	61.77	310	*e*P	P	23 35 56.2	+1.9
	comp=Z,5.0nm,1.4s						
FETA	Feichten	61.94	310	*e*P	P	23 35 55.7	+0.2
	comp=Z,0.1nm,0.3s						
WB0	Warramunga Arr	65.52	137	P	P	23 36 17.9	-1.3
WB0				IAmb	IAmb	23 36 20.2	
	comp=Z,7.1nm,0.8s						
WRA	Warramunga Arr	65.62	137	P	P	23 36 20.0	+0.1
	comp=Z,2.9nm,0.8s,baz=332,slow=6.4,SNR=18						
EUNU	Eureka	67.55	360	P	P	23 36 30.7	-0.7
ASAR	Alice Springs	68.33	140	P	P	23 36 37.5	+0.5
	comp=Z,2.9nm,0.8s,baz=325,slow=6.0,SNR=18						
TOLK	Toolik Lake Re	69.11	20	P	P	23 36 41.3	-0.2
TOLK				IAmb	IAmb	23 36 45.4	
	comp=Z,5.9nm,0.8s						
COLD	Coldfoot	69.78	22	P	P	23 36 45.1	-0.4
COLD				IAmb	IAmb	23 37 06.8	
	comp=Z,20nm,2.0s						
MDM	Murphy Dome	71.81	23	P	P	23 36 58.6	+0.7
MDM				IAmb	IAmb	23 37 01.3	
	comp=Z,18nm,1.8s						
ILAR	Eielson Array	72.37	23	P	P	23 37 01.4	+0.1
	comp=Z,1.3nm,0.7s,baz=301,slow=4.8,SNR=14						
ESDC	Sonseca Array	74.70	307	P	P	23 37 15.7	+0.2
	comp=Z,1.7nm,0.9s,baz=53,slow=6.5,SNR=11						
ESDC				LR	LR	00 13 42.4	
	comp=Z,55nm,18.7s,baz=345,slow=39						
MDT	Midelt	78.64	302	LR	LR	00 18 22.0	
	comp=Z,18nm,19.4s,baz=119,slow=40						
YKA	Yellowknife Ar	82.65	12	P	P	23 37 57.4	-1.3
	comp=Z,0.9nm,0.8s,baz=329,slow=5.1,SNR=12						
TOA0	Torodi Ar. Sit	84.00	282	P	P	23 38 05.1	-1.4
TORD	Torodi Ar. Bea	84.00	282	P	P	23 38 07.2	+0.7
	comp=Z,9.1nm,0.9s,baz=47,slow=4.8,SNR=27						
LBTB	Lobatse	85.99	237	P	P	23 38 17.0	+0.7
KOWA	Kowa	87.96	286	LR	LR	00 22 09.7	
	comp=Z,32nm,18.3s,baz=44,slow=39						
KOWA	Kowa	87.96	286	P	P	23 38 25.5	-0.6
DBIC	Dimbokro	92.91	280	P	P	23 38 49.0	-0.1
	comp=Z,4.1nm,0.9s,baz=40,slow=5.3,SNR=5.9						

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*ECX **05** 23:28:29.8±0.6, 32°.13N×115°.19W, h4^{km}±1^{km}, MD2.6, ML2.8*

*MEX **05** 23:28:29.5±0.5, 32°.14N×114°.93W, h10^{km}, MD3.6*

ISC 05 23:28:27.3±1.4**, 32°.14N**±0°.03×**115°.18W**±0°.05**, h17**^{km}±10^{km}**, n15, σ0^{s}84**/26**, 2C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.27	357	*e*P	Pn	23 28 35.5	-1.0
MBIG				*i* S	Sn	23 28 41.4	-0.7
MBIG	Mexicali	0.27	357	*e*P	Pn	23 28 35.4	-1.0
CPBX	Cerro Prieto	0.30	340	*e*P	Pn	23 28 35.1	-1.8
CPBX				*e*S	Sb	23 28 40.2	+1.3
CPBX				IAML		23 28 42.7	
	comp=N,3μm,0.2s						
CPBX				⇑*e*		23 28 42.7	
CPBX				*e*		23 28 42.9	
CPBX				IAML		23 28 42.9	
	comp=E,4μm,0.3s						
EMSC	East Mesa	0.62	16	*e*P	Pn	23 28 41.0	-0.3
SJX	San Joaquin	0.76	241	⇑*e*P	Pn	23 28 42.0	-1.1
SJX				*e*S	Sg	23 28 50.9	-1.2
RMX	La Rumorosa	0.89	302	*e*P	Pn	23 28 44.5	-0.6
RMX				*e*S	Sb	23 28 55.8	-0.2
IKP	In-Ko-Pah, Jac	0.94	303	*e*P	Pn	23 28 46.1	+0.4
IKP				*e*S	Sn	23 28 58.9	+0.2
SPIG	San Pedro Mart	1.11	193	*e*P	Pg	23 28 48.8	0.0
SPIG				*e*S	Sn	23 29 03.6	+0.2
SPX	San Pedro Mart	1.12	192	*e*P	Pg	23 28 48.9	-0.2
SPX				*e*S	Sn	23 29 04.1	+0.5
SFX	San Felipe	1.13	165	*e*P	Pg	23 28 49.4	+0.2
SFX				*e*S	Sn	23 29 04.7	+1.4
CBX	Cerro Bola	1.27	278	*e*P	Pg	23 28 51.5	-0.2
CBX				*e*S	Sg	23 29 08.9	+0.5
CBX				IAML		23 29 11.7	
	comp=N,254nm,0.3s						
CCX	Cicese	1.29	258	*e*S	Sg	23 29 09.1	+0.2
MONP2	Monument Peak	1.29	306	*e*P	Pg	23 28 52.7	+0.5
TJIG	Tijuana	1.30	284	*e*P	Pg	23 28 52.7	+0.4
TJIG				*i* S	Sg	23 29 10.5	+1.2
BAR	Barrett	1.37	294	*e*P	Pg	23 28 53.3	-0.4
BAR				*e*S	Sg	23 29 11.9	+0.3
BAR				IAML		23 29 12.7	
	comp=N,147nm,0.3s						
BAR				⇓*e*		23 29 12.7	

IDC 06 00:05:09.5±5.7**, 19°.20S**×**178°.64E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/27**, mbtmp3.4**/3**, Error ellipse: s-maj=298.1km s-min=38.9km az=150.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.66	261	P	P	00 12 59.6	-0.5
	0.3nm,0.5s,baz=96,slow=7.7,SNR=6.8						
ASAR	Alice Springs	41.76	256	P	P	00 13 01.0	+0.2
	0.3nm,0.4s,baz=89,slow=8.0,SNR=4.2						
YKA	Yellowknife Ar	96.68	25	P	P	00 18 41.1	-0.1
	0.2nm,0.5s,baz=229,slow=5.6,SNR=6.7						

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*ROM **06** 00:08:03.0±0.3, 38°.72N±0°.04×14°.91E±0°.04, h301^{km}±3^{km}, ML3.3/8, Error ellipse: s-maj=5.6km s-min=1.8km az=143.0*

*IDC **06** 00:08:02.6±1.6, 38°.66N×15°.56E, h278^{km}±19^{km}, mb3.3/2, mb1 2.9/7, mb1mx2.6/45, mbtmp3.5/7, Error ellipse: s-maj=42.6km s-min=28.3km az=133.0*

ISC 06 00:08:04.6±1.1**, 38°.70N**±0°.10×**14°.99E**±0°.08**, h292**^{km}±10^{km}**, n44, σ1^{s}20**/53**, 3C-2D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VPL	Vulcano Piano	0.33	181	P	Pn	00 08 42.0	0.0
IACL	Alicudi	0.52	251	P	Pn	00 08 42.1	-0.3
MSRU	Castanea	0.60	137	P	Pn	00 08 42.5	-0.2
MSRU				S	S	00 09 12.6	-0.2
MPNC	Port Mandanici	0.63	153	P	Pn	00 08 42.8	+0.1
MPNC				S	S	00 09 13.5	+0.5
MCSR	Castroreale	0.67	162	P	Pn	00 08 43.2	+0.2
MCSR				AML	AML		
	comp=E,362μm,0.5s						
MCSR				AML	AML		
	comp=N,330μm,0.3s						
NOV	Novara	0.69	170	P	Pn	00 08 43.6	+0.6
NOV				AML	AML		
	comp=E,254μm,1.2s						
NOV				AML	AML		
	comp=N,193μm,1.5s						
JOPP	Joppolo	0.71	98	P	Pn	00 08 43.2	+0.3
JOPP				S	S	00 09 12.3	-1.0
AIO	Antillo	0.76	165	P	Pn	00 08 43.6	+0.4
MSCL	Scilla	0.79	127	P	Pn	00 08 43.5	+0.2
MSCL				AML	AML		
	comp=E,499μm,1.6s						
MSCL				AML	AML		
	comp=N,390μm,1.6s						
CEL	Celeste	0.84	122	P	Pn	00 08 43.6	+0.2
CEL				S	S	00 09 13.4	-0.9
GMB	Gambarie	0.85	129	P	Pn	00 08 44.6	+0.9
EPZF	Pizzo Felice	0.89	187	P	Pn	00 08 45.3	+1.5
EPZF				AML	AML		
	comp=N,1236μm,1.2s						
EPZF				AML	AML		
	comp=N,1238μm,1.2s						
EPZF				AML	AML		
	comp=E,1090μm,1.6s						
MTTG	Motta San Giov	0.89	141	P	Pn	00 08 44.4	+0.7
GALF	Gagliano Caste	1.05	199	P	Pn	00 08 45.2	+0.7
SOI	Samo	1.05	127	P	Pn	00 08 44.9	+0.5
SOI				S	S	00 09 15.3	-0.7
MPAZ	Palizzi	1.10	133	P	Pn	00 08 45.3	+0.6
MPAZ				S	S	00 09 16.4	0.0
PETRA	Petralia Sopra	1.11	219	P	Pn	00 08 45.0	+0.1
CET2	Cetraro	1.11	42	P	Pn	00 08 44.9	+0.2
CET2				AML	AML		
	comp=N,139μm,0.5s						
CET2				AML	AML		
	comp=E,151μm,1.3s						
GRI	Girifalco	1.12	84	P	Pn	00 08 45.7	+0.9
GRI				S	S	00 09 17.3	+0.7
GRI				AML	AML		
	comp=N,169μm,1.1s						
GRI				AML	AML		
	comp=E,189μm,0.6s						
PLAC	Placanica	1.16	102	⇓P	Pn	00 08 45.8	+0.8
PLAC				S	S	00 09 16.4	-0.7
PLAC				AML	AML		
	comp=N,106μm,1.2s						
PLAC				AML	AML		
	comp=E,132μm,1.4s						
VAE	Valguarnera	1.31	201	P	Pn	00 08 44.0	-1.8
	comp=E,1.3nm,0.3s,baz=114,slow=4.9,SNR=6.9						
VAE				S	S	00 09 16.9	-1.7
	comp=E,0.1nm,0.3s,baz=340,slow=21,SNR=2.5						
HLNI	Lentini	1.36	184	P	Pn	00 08 46.0	-0.1
SERS	Sersale	1.37	75	P	Pn	00 08 47.2	+1.0
SERS				S	S	00 09 19.4	+0.2
SERS				AML	AML		
	comp=E,102μm,0.4s						
SERS				AML	AML		
	comp=N,168μm,0.7s						
CELI	Celico	1.37	59	P	Pn	00 08 47.8	+1.5
TIP	Timpagrande	1.46	70	P	Pn	00 08 47.8	+1.1
TIP				S	S	00 09 19.9	-0.3
TIP				AML	AML		
	comp=E,83μm,1.6s						
TIP				AML	AML		
	comp=N,79μm,0.8s						
CLTA	Licata	1.75	208	P	Pn	00 08 49.0	+0.2
CDRU	Civita di Ruta	1.80	8	P	Pn	00 08 48.6	-0.5
MMGO	Monte Magaggia	1.90	237	⇑P	Pn	00 08 49.2	-0.7
MMGO				S	S	00 09 23.0	-2.9
MSAG	Monte S. Angel	3.09	13	⇑P	Pn	00 09 18.9	+18
MSAG				S	S	00 09 44.0	-1.4
RMP	Rome, Mte Porz	3.56	331	P	Pn	00 09 20.1	+15
FOSV	Fossato di Vic	4.89	341	⇓P	Pn	00 09 26.3	+6.0
ARVD	Arcevia	5.03	343	⇑P	Pn	00 09 38.8	+17
KEST	Kesra	5.39	238	P	Pn	00 09 27.2	+0.7
	comp=N,0.1nm,0.3s,baz=50,slow=20,SNR=1.7						
FETA	Feichten	8.88	341	*e*P	Pn	00 10 10.3	+1.3
	comp=N,7.8nm,0.8s						
WTTA	Wattenberg	8.90	345	*e*P	Pn	00 10 09.9	+0.7
	comp=N,0.7nm,0.4s						
DAVOX	Davos/Dischmat	8.90	337	P	Pn	00 10 09.9	+0.6
	comp=N,0.5nm,0.3s,baz=148,slow=16,SNR=10						
SQTA	Sankt Quirin	8.95	343	*i* P	Pn	00 10 10.7	+1.0
	comp=N,5.4nm,0.4s						
WATA	Walderalm	8.98	345	*e*P	Pn	00 10 11.2	+1.0
	comp=N,2.2nm,0.5s						
RETA	Reutte	9.30	342	*i* P	Pn	00 10 13.8	-0.3
	comp=N,1.6nm,0.5s						
GERES	GERESS Array B	10.18	355	P	Pn	00 10 24.1	-0.8
	comp=N,0.1nm,0.3s,baz=165,slow=11,SNR=5.9						
ESDC	Sonseca Array	14.73	280	P	Pn	00 11 24.6	+4.5
	comp=N,0.0nm,0.3s,baz=81,slow=9.6,SNR=4.7						
AKASG	Malin Array Be	15.66	35	P	P	00 11 26.2	-2.8
	comp=N,0.6nm,0.3s,baz=231,slow=9.3,SNR=3.4						
FINES	FINESS Array B	23.78	13	P	P	00 12 50.1	-0.9
	comp=N,1.6nm,0.8s,baz=187,slow=9.8,SNR=6.3						
ARCES	ARCESS Array B	31.40	7	P	P	00 13 56.7	-1.7
	comp=N,2.2nm,0.8s,baz=191,slow=9.0,SNR=6.1						

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*IDC **06** 00:14:16.4±0.5, 49°.17S×164°.80E, h0^{km}, mb5.3/12, mb1 5.3/14, mb1mx5.1/22, mbtmp5.2/14, ML4.9/2, MS4.5/16, Ms1 4.5/16, ms1mx4.4/18, Error ellipse: s-maj=21.4km s-min=15.9km az=57.0*

*BJI **06** 00:14:19.8±0.0, 49°.21S×164°.82E, h30^{km}, mB5.5/8, mb5.4/22, Ms5.0/5, Ms7 4.7/8*

*NOU **06** 00:14:21.6, 49°.34S×164°.97E, h41^{km}, mb5.3, Auckland Islands, N.Z. Region*

*NEIC **06** 00:14:21.6±2.0, 49°.10S±0°.07×164°.7E±0°.1, h31^{km}±2^{km}, mb5.3/73, Error ellipse: s-maj=12.7km s-min=9.4km az=104.0*

*MOS **06** 00:14:21.3±0.9, 49°.24S×164°.43E, h35^{km}, mb5.4/15, Error ellipse: s-maj=20.7km s-min=9.4km az=110.4*

*GCMT **06** 00:14:24.6±0.2, 49°.13S±0°.01×164°.24E±0°.01, h39^{km}, MW5.2/123, Moment Tensor Solution. s79,c114; s123,c189; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.36±.02; $M_{\theta\theta}$0.39±.01; $M_{\phi\phi}$-0.75±.01; $M_{r\theta}$0.40±.02; $M_{\theta\phi}$0.09±.01; $M_{\phi r}$-0.06±.01; Best double couple: $M_0$0.77200×10^{17} NP1:ϕ_s32.00000°, δ56.00000°, λ149.00000°. NP2:ϕ_s140.00000°, δ65.00000°, λ38.00000°. Principal axes: T 0.7760, Plg44.0000°, Azm359.0000°; N -0.0090, Plg46.0000°, Azm169.0000°; P -0.7680, Plg5.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 00:14:23.5±0.3**, 49°.13S**±0°.05×**164°.75E**±0°.06**, h49**^{km}**, n433, σ1^{s}25**/423**, mb5.3**/61**, MS4.6**/21**, 57C-48D, Fault plane solution: NP1:**ϕ_s142.91721°**,** δ51.08041°**,** λ22.40496°. **NP2:**ϕ_s38.39662°**,** δ72.74975°**,** λ138.86627°. **Principal axes:** T Plg40.8374°**,** Azm353.1403°**;** N Plg45.9965°**,** Azm199.6426°**;** P Plg13.5642°**,** Azm95.1765°**; Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	3.24	24	Pn	Pn	00 15 08.9	-2.9
WHZ	Wether Hill Ro	3.90	35		Pn	00 15 19.7	-1.1
DCZ	Deep Cove	4.02	25		Pn	00 15 19.7	-2.7
MLZ	Mavora Lakes	4.41	33		Pn	00 15 27.1	-0.8
WKZ	Wanaka	5.20	36	Pn	Pn	00 15 38.2	-0.5
ODZ	Otahua Downs	5.74	47		Pn	00 15 44.2	-1.9
LBZ	Lake Benmore	6.04	40		Pn	00 15 47.4	-2.8
MCQ	Macquarie Isla	6.46	212	P	Pn	00 15 50.6	-5.4
	baz=6.3,SNR=23						
MCQ	Macquarie Isla	6.46	212	P	Pn	00 15 53.1	-2.8
MCQ	Macquarie Isla	6.46	212	Pn	Pn	00 15 53.1	-2.8
MCQ	Macquarie Isla	6.46	212	P	Pn	00 15 53.7	-2.2
FOZ	Fox Glacier	6.61	34	Pn	Pn	00 15 57.1	-0.9
RPZ	Rata Peaks	6.95	41	Pn	Pn	00 15 58.7	-4.0
	50nm,0.3s,baz=205,slow=4.5,SNR=98						
RPZ				Sn	Sn	00 17 10.0	-10
	baz=126,slow=19,SNR=1.2						
RPZ				LR	LR	00 18 53.0	
	comp=Z,6μm,19.9s,baz=207,slow=40						
RPZ	Rata Peaks	6.95	41		Pn	00 15 59.0	-3.7
OXZ	Oxford	7.70	44		Pn	00 16 09.8	-3.1
MQZ	McQueen's Vall	7.70	48	Pn	Pn	00 16 10.6	-2.3
LTZ	Lake Taylor	8.23	42	Pn	Pn	00 16 16.9	-3.3
KHZ	Kahutara	9.10	46	Pn	Pn	00 16 30.0	-2.0
THZ	Tophouse	9.33	41	Pn	Pn	00 16 32.0	-3.4
BSWZ	Blackbirch Sta	9.80	44	Pn	Pn	00 16 41.6	-0.1
CMWZ	Cape Campbell	9.93	46	Pn	Pn	00 16 43.5	0.0
QRZ	Quartz Range	9.96	36	Pn	Pn	00 16 41.9	-2.0
NNZ	Nelson	9.98	41	Pn	Pn	00 16 43.6	-0.5
TUWZ	Tuamarina	10.06	43	Pn	Pn	00 16 44.5	-0.7
SNZO	South Karori	10.50	46	Pn	Pn	00 16 50.9	-0.3
BHW	Baring Head	10.51	46	Pn	Pn	00 16 49.4	-1.9
PLWZ	Palliser	10.57	48	Pn	Pn	00 16 51.1	-1.1
MSWZ	Moikau Station	10.68	48		Pn	00 16 53.0	-0.7
BFZ	Birch Farm	11.73	48	Pn	Pn	00 17 06.2	-1.9
HIZ	Hauiti	12.87	38	Pn	Pn	00 17 20.5	-3.1
BKZ	Black Stump Fm	13.04	45	Pn	Pn	00 17 24.7	-1.3
URZ	Urewera	14.05	44	Pn	Pn	00 17 36.5	-3.2
	2.8nm,0.3s,baz=232,slow=9.1,SNR=14						
URZ				Sn	Sn	00 20 06.1	-7.9
	0.5nm,0.3s,baz=38,slow=19,SNR=1.7						
URZ				LR	LR	00 23 35.3	
	comp=Z,3μm,20.7s,baz=232,slow=40						
URZ	Urewera	14.05	44	Pn	Pn	00 17 38.0	-1.7
MXZ	Matakaoa Point	15.17	45	Pn	Pn	00 17 51.7	-2.8
MXZ				IAmb	IAmb	00 18 04.9	
	comp=Z,107nm,0.8s						
OUZ	Omahuta	15.35	28		Pn	00 17 56.8	-0.1
CNB	Canberra Magne	17.85	315	P	Pn	00 18 28.0	-0.3
	baz=18,SNR=19						
TOO	Toolangi	18.10	302	P	Pn	00 18 31.8	+0.6
	baz=18,SNR=70						
TOO	Toolangi	18.10	302	P	Pn	00 18 31.2	0.0

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TOO                                  pmax    pmax
      comp=Z,151nm,0.8s
TOO   Toolangi           18.10 302   P       Pn       00 18 31.2  0.0
TOO                                  IAmb    IAmb     00 18 33.5
      comp=Z,151nm,0.8s
LHI   Lord Howe Isla     18.11 344   P       Pn       00 18 32.2 +0.9
      baz=18,SNR=7.0
LHI   Lord Howe Isla     18.11 344   P       Pn       00 18 32.4 +1.1
LHI                                  IAmb    IAmb     00 18 34.3
      comp=Z,127nm,0.7s
LHI   Lord Howe Isla     18.11 344   P       Pn       00 18 33.2 +1.9
RIV   Riverview          18.32 322   P       P        00 18 32.9 -0.7
      baz=18,SNR=12
MGCD  Mangrove Creek     18.89 322   P       P        00 18 39.9 +0.1
      baz=19,SNR=13
YNG   Young              19.14 315   P       Pn       00 18 43.6 -0.2
      baz=19,SNR=26
ARPS  Mount Arapiles     20.74 298   P       Pn       00 19 01.3 -1.3
      baz=21,SNR=8.3
ARMA  Armidale           21.18 327   P       P        00 19 05.6 +0.8
      baz=21,SNR=9.3
ARMA  Armidale           21.18 327   P       P        00 19 04.9 +0.1
RAO   Raoul Island       23.86  40   LR      LR       00 28 22.3
      comp=Z,2µm,21.7s,baz=210,slow=35
STKA  Stephens Creek     24.49 306   P       P        00 19 38.9 +0.9
      baz=25,SNR=61
STKA  Stephens Creek     24.49 306   P       P        00 19 38.8 +0.9
      comp=Z,74nm,0.9s,baz=133,slow=10,SNR=80
STKA                                 PcP     PcP      00 23 15.6 +0.2
      comp=Z,3.9nm,0.7s,baz=9.3,slow=6.2,SNR=2.9
STKA                                 LR      LR       00 28 08.6
      comp=Z,2µm,18.9s,baz=127,slow=34
STKA  Stephens Creek     24.49 306   P       P        00 19 38.1 +0.2
HTT   Hallett            24.79 300   P       P        00 19 41.1 +0.3
      baz=25,SNR=8.1
RMQ   Roma               25.79 325   P       P        00 19 50.9 +1.0
      baz=26,SNR=30
EIDS  Eidsvold           26.02 331   P       P        00 19 52.4 +0.6
      baz=26,SNR=18
EIDS  Eidsvold           26.02 331   IAmb    IAmb     00 19 54.3
      comp=Z,48nm,0.8s
NOUC  Port Laguerre      27.00   3   P       P        00 20 03.1 +2.4
DZM   Mont Dzumac        27.04   3   P       P        00 20 03.7 +2.5
      comp=Z,50nm,0.6s,baz=199,slow=9.6,SNR=35
DZM                                  LR      LR       00 29 07.5
      comp=Z,1µm,19.3s,baz=263,slow=33
DZM   Mont Dzumac        27.04   3  eP       P        00 20 03.4 +2.2
      comp=Z,251nm,1.3s
DZM                                 eLR      LR       00 26 52.2
      comp=Z,2µm,22.9s
DZM   Mont Dzumac        27.04   3   P       P        00 20 03.0 +1.8
DZM                                  IAmb    IAmb     00 20 04.9
      comp=Z,192nm,1.4s
DZM   Mont Dzumac        27.04   3   P       P        00 20 03.7 +2.5
QLP   Quilpie            27.57 317   P       P        00 20 06.1 +0.4
      baz=28,SNR=7.6
VNDA  Vanda              28.52 181   P       P        00 20 13.7 -0.1
      comp=Z,0.7nm,0.9s,baz=348,slow=7.6,SNR=1.3
VNDA                                 PcP     PcP      00 23 24.3 +0.3
      comp=Z,0.7nm,0.9s,baz=337,slow=3.6,SNR=5.6
VNDA                                 LR      LR       00 29 13.8
      comp=Z,1µm,20.4s,baz=6.5,slow=32
VNDA  Vanda              28.52 181   P       P        00 20 13.7 -0.1
VNDA                                 pmax    pmax
      comp=Z,11nm,1.5s
KOUNC Koumac, New Ca     28.52 359   P       P        00 20 15.1 +0.8
CTAO  Charters Tower     32.55 326   P       P        00 20 50.3 +0.4
CTAO                                 pmax    pmax
      comp=Z,45nm,0.9s
CTAO  Charters Tower     32.55 326   P       P        00 20 50.3 +0.4
CTAO                                 IAmb    IAmb     00 20 51.2
      comp=Z,45nm,0.8s
MSVF  Nonsavu            33.12  24   P       P        00 20 55.1 +0.1
      comp=Z,10nm,0.9s,baz=83,slow=23,SNR=4.1
MSVF  Nonsavu            33.12  24⇓eP       P        00 20 57.9 +2.9
MSVF                                 pmax    pmax
      comp=Z,12nm,1.1s
FORT  Forrest            33.15 290   P       P        00 20 53.7 -1.4
FORT                                 IAmb    IAmb     00 20 55.6
      comp=Z,38nm,0.9s
SANVU Saraoutou          33.65   4   P       P        00 21 00.9 +1.5
SANVU Saraoutou          33.65   4   P       P        00 21 01.0 +1.5
QIS   Mount Isa          34.88 316   P       P        00 21 10.0 -0.1
      baz=35,SNR=22
MTSU  Mount Surprise     35.06 325   P       P        00 21 12.2 +0.5
      baz=35,SNR=31
ASAR  Alice Springs      35.11 305   P       P        00 21 11.6 -0.6
      comp=Z,48nm,0.8s,baz=137,slow=7.9,SNR=382
ASAR                                 PcP     PcP      00 23 42.5 -0.3
      comp=Z,11nm,0.9s,baz=138,slow=3.3,SNR=11
ASAR                                 S       S        00 26 41.7 +0.2
      comp=Z,0.4nm,0.8s,baz=125,slow=17,SNR=4.1
ASAR                                 LR      LR       00 34 36.0
      comp=Z,744nm,19.5s,baz=152,slow=35
AS31  Alice Springs      35.11 305   P       P        00 21 11.7 -0.5
AS31                                 IAmb    IAmb     00 21 12.6
      comp=Z,20nm,0.8s
WRKA  Warakurna          37.20 297   P       P        00 21 29.5 -0.5
      baz=37,SNR=18
WR0   Warramunga Arr     37.83 309   IAmb    IAmb     00 21 35.2
      comp=Z,84nm,1.1s
WRA   Warramunga Arr     37.95 309   P       P        00 21 35.0 -1.3
      comp=Z,56nm,0.9s,baz=146,slow=8.0,SNR=168
WRA                                  PcP     PcP      00 23 51.3 -0.1
      comp=Z,19nm,0.8s,baz=143,slow=2.7,SNR=18
WRA                                  LR      LR       00 36 00.0
      comp=Z,613nm,20.9s,baz=140,slow=34
WRAB  Tennant Creek      37.95 309c iP       P        00 21 35.0 -1.3
WRAB                                 pmax    pmax
      comp=Z,80nm,0.9s
WRAB  Tennant Creek      37.95 309   P       P        00 21 35.2 -1.2
WB0   Warramunga Arr     38.07 309   P       P        00 21 35.4 -1.9
WB0                                  IAmb    IAmb     00 21 37.0
      comp=Z,59nm,1.1s
KLBR  Kellerberrin       39.16 279   P       P        00 21 44.5 -1.9
      baz=39,SNR=6.2
H01W1 Cape Leeuwin H     39.45 272   T       T        01 03 12.2
      baz=127,slow=76,SNR=417
H01W2 Cape Leeuwin H     39.47 272   T       T        01 03 12.2
      baz=127,slow=76,SNR=410
H01W3 Cape Leeuwin H     39.47 272   T       T        01 03 12.2
      baz=127,slow=76,SNR=414
HNR   Honiara            39.78 353   P       P        00 21 51.8 +0.2
      comp=Z,230nm,0.7s,baz=37,slow=0.1,SNR=9.6
HNR   Honiara            39.78 353   P       P        00 21 52.4 +0.8
QSPA  South Pole Qui     40.99 180   P       P        00 22 02.8 +1.5
MORW  Morawa             41.94 280   P       P        00 22 09.3 -0.1
      baz=42,SNR=5.4
MORW  Morawa             41.94 280   P       P        00 22 09.6 +0.2
MEEK  Meekatharra        41.96 285   P       P        00 22 09.2 -0.3
      baz=42,SNR=3.6
PMG   Port Moresby       42.25 334   P       P        00 22 12.8 +0.9
      comp=Z,69nm,1.0s,baz=142,slow=4.6,SNR=7.8
PMG   Port Moresby       42.25 334d iP       P        00 22 13.8 +1.9
PMG                                  pmax    pmax
      comp=Z,85nm,1.1s
PMG   Port Moresby       42.25 334   P       P        00 22 12.0 +0.1
PMG   Port Moresby       42.25 334   P       P        00 22 13.5 +1.6
TBI   Tubuai             44.10  71  eS       S        00 28 59.2 +3.2
      comp=Z,324nm,31.5s
TBI                                 eLQ      LQ       00 32 47.5
      comp=Z,499nm,34.2s
TBI                                 eLR      LR       00 34 38.9
      comp=Z,707nm,28.2s,baz=212
FITZ  Fitzroy Crossi     44.15 301   P       P        00 22 27.2  0.0
      baz=44,SNR=22
FITZ  Fitzroy Crossi     44.15 301   P       P        00 22 26.6 -0.7
PSA00 Pilbara Seismi     44.88 291   P       P        00 22 31.7 -1.4
PSA00                                IAmb    IAmb     00 22 33.4
      comp=Z,38nm,0.9s
KDU   Kakadu             45.05 313   P       P        00 22 33.9 -0.6
      baz=45,SNR=4.1
MTN   Manton Dam         45.57 311   P       P        00 22 37.8 -0.8
      baz=46,SNR=7.1
MTN   Manton Dam         45.57 311   IAmb    IAmb     00 22 38.3
      comp=Z,44nm,0.7s
PPT2  Papeete2           48.38  66  eS       S        00 29 59.0 +1.5
      comp=Z,301nm,32.5s
PPT2                                eLR      LR       00 36 34.8
      comp=Z,841nm,22.5s,baz=227
PPT   Papeete            48.39  66   LR      LR       00 40 33.8
      comp=Z,584nm,19.4s,baz=194,slow=33
MAW   Mawson             49.86 209   LR      LR       00 42 34.5
      comp=Z,852nm,19.6s,baz=106,slow=34
BELA  Belgrano 2         52.70 175   P       P        00 23 32.8 +0.5
FAKI  Fak Fak            53.74 318   P       P        00 23 38.9 -1.9
SANI  Sanana             57.41 312   P       P        00 24 06.9 -0.2
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      comp=Z,56nm,1.1s
KAPI  Kappang            58.12 304   P       P        00 24 11.7 -0.3
      comp=Z,19nm,0.8s,baz=180,slow=6.7,SNR=4.0
KAPI  Kappang            58.12 304   P       P        00 24 11.7 -0.3
KAPI                                 pmax    pmax
      comp=Z,59nm,1.3s
KAPI  Kappang            58.12 304   IAmb    IAmb     00 24 40.9
      comp=Z,59nm,1.2s
NVL   N'lazarevskaya     58.83 190  eP       P        00 24 13.8 -2.5
NVL                                 eS       S        00 32 13.7 -3.9
NVL                                  pmax    pmax
      comp=Z,5.0nm,0.9s
SPSI  Sidrap Palu        58.98 305   P       P        00 24 19.1 +1.0
      comp=Z,646nmcomp=Z,50nm,0.9s
SNAA  Sanae              59.18 185   P       P        00 24 20.1 +1.3
SNAA  Sanae              59.18 185⇑eP       P        00 24 15.1 -3.7
SNAA                                 pmax    pmax
      comp=Z,30nm,5.3s
SNAA  Sanae              59.18 185   P       P        00 24 19.1 +0.3
LUWI  Luwuk              59.88 309   P       P        00 24 23.6 -0.7
VNA2  Neumayer--Watz     60.12 183   P       P        00 24 24.5 -0.7
      baz=164,slow=5.5
PWJI  Pagerwojo          60.23 294   P       P        00 24 32.6 +5.9
PMSA  Palmer Station     60.27 158   P       P        00 24 27.8 +1.6
VNA1  Neumayer--Stat     60.42 183   P       P        00 24 27.5 +0.3
TAOE  Nuku Hiva Isla     60.88  68  eLR      LR       00 42 26.5
      comp=Z,857nm,23.0s
XMIS  Christmas Isla     62.09 287   P       P        00 24 38.0 -1.3
BBKI  Banjar Baru        62.13 300   P       P        00 24 40.4 +0.9
      comp=Z,54nm,0.9s
MPSI  Mapaga             62.53 307   P       P        00 24 42.4 +0.2
      comp=Z,759nmcomp=Z,65nm,1.1s
TOLI2 Tolitoli           62.73 309   P       P        00 24 42.2 -1.3
TOLI2                                IAmb    IAmb     00 24 44.7
      comp=Z,26nm,1.0s
CISI  Cisompet, Garu     63.01 291   P       P        00 24 43.7 -1.8
CISI                                 IAmb    IAmb     00 24 46.7
      comp=Z,28nm,0.9s
MTKI  Muara Teweh, K     64.17 302   P       P        00 24 54.6 +1.6
DBJI  Dramaga            64.45 291   P       P        00 24 55.6 +0.7
      comp=Z,130nm,1.1s
CGJI  Cibinong           65.05 290   P       P        00 24 57.8 -1.0
      comp=Z,51nm,1.2s
KLSI                     67.15 290   P       P        00 25 13.0 +0.7
      comp=Z,8.1nm,1.3s
MYLDM Lahad Datu         67.37 309   P       P        00 25 14.2 +0.6
MYLDM                                IAmb    IAmb     00 25 21.2
      comp=Z,51nm,1.2s
WAKE  Wake Island        68.13   2   P       P        00 25 18.2 +0.1
SBUM  Sibu               68.46 302   P       P        00 25 19.8 -0.6
SBUM                                 IAmb    IAmb     00 25 22.0
      comp=Z,55nm,1.7s
SBUM  Sibu               68.46 302   P       P        00 25 21.0 +0.5
KKM   Kota Kinabalu      69.29 307   P       P        00 25 25.6 -0.1
KKM                                  IAmb    IAmb     00 25 27.1
      comp=Z,30nm,1.0s
MNSI  Mandailing Nat     74.61 290   P       P        00 25 56.8 -0.7
      comp=Z,2µmcomp=Z,9.1nm,0.5s
LL01  San Ignacio de     75.97 140   P       P        00 26 05.0  0.0
GSI   Gunungsitoli       76.25 288   P       P        00 26 07.6 +0.6
GSI                                  IAmb    IAmb     00 26 09.0
      comp=Z,34nm,1.0s
GSI   Gunungsitoli       76.25 288   P       P        00 26 08.8 +1.8
      comp=Z,46nm,1.5s
RPSI  Rantau Prapat      76.50 290   P       P        00 26 06.4 -2.0
PSI   Prapat             76.58 290   P       P        00 26 06.4 -2.6
PSI                                  pmax    pmax
      comp=Z,8.0nm,1.0s
IPM   Ipoh               76.62 293   P       P        00 26 08.2 -0.9
KULM  Kulim              77.49 293   P       P        00 26 14.0 +0.1
PLCA  Paso Flores        78.11 140   P       P        00 26 17.8 +0.6
      comp=Z,5.1nm,0.9s,baz=202,slow=6.7,SNR=7.4
PLCA                                 LR      LR       00 51 41.6
      comp=Z,264nm,21.3s,baz=170,slow=29
PLCA  Paso Flores        78.11 140   P       P        00 26 17.5 +0.3
PLCA                                 pmax    pmax
      comp=Z,10.0nm,1.1s
PLCA  Paso Flores        78.11 140   P       P        00 26 17.5 +0.3
DLV   T  Lat             78.35 304   IAmb    IAmb     00 26 20.1
      comp=Z,27nm,1.0s
LC01  Cunco              79.07 138   P       P        00 26 24.7 +2.2
LC01                                 IAmb    IAmb     00 26 39.7
      comp=Z,51nm,1.8s
H03S2 Juan Fernandez     79.89 131   T       T        01 54 25.3
      baz=216,slow=74,SNR=2.9
H03S1 Juan Fernandez     79.90 131   T       T        01 54 26.6
      baz=216,slow=74,SNR=5.8
H03S3 Juan Fernandez     79.91 131   T       T        01 54 25.8
      baz=216,slow=74,SNR=7.9
YULB  Yu-li              81.93 320   P       P        00 26 35.8 -1.9
BO02  Sierra Bellavi     82.97 137   P       P        00 26 44.7 +1.4
BO02                                 IAmb    IAmb     00 26 46.3
      comp=Z,24nm,0.8s
QIZ   Qiongzhong         83.52 309   P       P        00 26 45.4 -0.7
MT02  Curacav            84.09 136   P       P        00 26 49.9 +0.9
MT02                                 IAmb    IAmb     00 26 51.8
      comp=Z,60nm,1.9s
PEL   Peldehue           84.39 136   P       P        00 26 50.2 -0.4
PEL                                  pmax    pmax
      comp=Z,16nm,0.9s
PEL   Peldehue           84.39 136   P       P        00 26 50.2 -0.4
PEL                                  IAmb    IAmb     00 26 52.9
      comp=Z,16nm,0.9s
QZH   Quanzhou           84.45 319  eP       P        00 26 50.5 -0.1
VA03  San Esteban        84.77 136   IAmb    IAmb     00 26 54.9
      comp=Z,16nm,0.9s
H08S2 Diego Garcia H     85.76 263   T       T        02 00 54.9
      baz=139,slow=76,SNR=1252
H08S1 Diego Carcia H     85.77 263   T       T        02 00 57.8
      baz=139,slow=76,SNR=596
H08S3 Diego Garcia H     85.78 263   T       T        02 00 54.9
      baz=139,slow=76,SNR=525
CO02  Combarbal          85.87 135   IAmb    IAmb     00 27 01.1
      comp=Z,22nm,0.9s
CO03  El Pedregal        86.32 135   P       P        00 27 01.3 +1.0
CO03                                 IAmb    IAmb     00 27 03.1
      comp=Z,18nm,0.8s
ZON   Zonda              86.65 137   P       P        00 27 02.6 +0.8
ZON                                  pmax    pmax
      comp=Z,18nm,1.3s
ZON   Zonda              86.65 137   P       P        00 27 02.6 +0.8
GO04  Tololo Observa     86.83 134   P       P        00 27 02.0 -1.0
JNU   Nakatsue           87.27 332   P       P        00 27 04.6 +0.1
CO01  Juntas del Tor     87.32 135   P       P        00 27 07.2 +1.8
CO01                                 IAmb    IAmb     00 27 08.8
      comp=Z,19nm,1.4s
LCO   Las Campanas       87.85 134   P       P        00 27 08.9 +0.9
LCO                                  pmax    pmax
      comp=Z,16nm,1.1s
LCO   Las Campanas       87.85 134   P       P        00 27 08.8 +0.9
LCO                                  IAmb    IAmb     00 27 10.8
      comp=Z,16nm,1.1s
AC05  El Transito        88.20 134   P       P        00 27 09.5 +0.1
AC05                                 IAmb    IAmb     00 27 12.6
      comp=Z,16nm,0.8s
MJAR  Matsushiro Arr     88.50 339   P       P        00 27 11.2 +0.9
      comp=Z,11nm,0.9s,baz=171,slow=6.1,SNR=6.2
MJAR                                 LR      LR       01 01 45.7
      comp=Z,62nm,21.9s,baz=175,slow=32
MAJO  Matsushiro         88.50 339⇑eP       P        00 27 10.1 -0.1
MAJO                                 pmax    pmax
      comp=Z,39nm,1.2s
MAT   Matsushiro         88.50 339   P       P        00 27 09.8 -0.4
MAT                                 eS       S        00 37 49.2 -2.8
SLVN  Son La             88.53 305   P       P        00 27 11.6 +0.8
SLVN                                 IAmb    IAmb     00 27 13.5
      comp=Z,24nm,1.1s
SSE   Sheshan            88.81 324   P       P        00 27 12.1 +0.4
CMAR  Chiang Mai Arr     88.96 300   P       P        00 27 13.9 +1.1
      comp=Z,14nm,0.8s,baz=159,slow=3.7,SNR=67
CMAR                                 LR      LR       01 08 23.1
      comp=Z,218nm,19.0s,baz=196,slow=36
CMAR  Chiang Mai Arr     88.96 300ceP       P        00 27 13.8 +1.0
CMAR                                 pmax    pmax
      comp=Z,14nm,0.8s
CHTO  Chiang Mai         89.24 300   P       P        00 27 14.6 +0.5
CHTO                                 pmax    pmax
      comp=Z,12nm,0.9s
CHTO  Chiang Mai         89.24 300   P       P        00 27 14.6 +0.5
CHTO                                 IAmb    IAmb     00 27 15.6
      comp=Z,12nm,0.9s
GO03  Copiap             89.26 133   P       P        00 27 14.9 +0.6
GO03                                 IAmb    IAmb     00 27 17.6
      comp=Z,20nm,1.1s
JSD   Sado               89.91 339   P       P        00 27 16.2 -0.5
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AC02  Maricunga          90.42 134   P       P        00 27 19.8 -0.5
AC02                                 IAmb    IAmb     00 27 24.1
      comp=Z,21nm,1.4s
NJ2   Nanjing            90.58 322  eP       P        00 27 23.0 +3.0
NJ2                                  pmax    pmax
      comp=Z,10.0nm,0.5s
WHN   Wuhan              91.15 318 ⇓P       P        00 27 24.0 +1.3
GYA   Guiyang            91.31 310 ⇓P       P        00 27 24.9 +1.2
GYA                                  pmax    pmax
      comp=Z,13nm,0.9s
GYA                                  LR      LR
      comp=Z,210nm,20.9s
TJN   Taejon             91.38 331⇓eP       P        00 27 25.4 +1.8
GO02  Mina Guanaco       91.61 133   P       P        00 27 23.7 -2.0
GO02                                 IAmb    IAmb     00 27 28.3
      comp=Z,10nm,0.8s
KSRS  Korea Array        92.19 331   P       P        00 27 28.6 +1.3
      comp=Z,17nm,0.9s,baz=147,slow=5.7,SNR=26
KSRS                                 LR      LR       01 06 47.5
      comp=Z,160nm,20.2s,baz=165,slow=34
KMI   Kunming            92.23 307   P       P        00 27 28.9 +0.7
KMI                                  pmax    pmax
      comp=Z,19nm,0.5s
KMI   Kunming            92.23 307   P       P        00 27 28.9 +0.7
KS19  Wonju Array Si     92.25 331   P       P        00 27 28.6 +0.9
ERM   Erimo              92.73 344⇑eP       P        00 27 31.4 +1.7
LVC   Limon Verde        94.09 132   P       P        00 27 37.8 +0.6
LVC                                  pmax    pmax
      comp=Z,5.0nm,1.0s
LVC   Limon Verde        94.09 132   P       P        00 27 37.8 +0.6
PB07  IPOC Station P     94.36 130   P       P        00 27 38.3 +0.1
BOSA  Boshof             94.58 215   LR      LR       01 03 40.4
      comp=Z,253nm,19.9s,baz=160,slow=31
CPUP  Villa Florida      96.02 143   P       P        00 27 46.1 +0.7
      comp=Z,4.1nm,0.9s,baz=198,slow=3.4,SNR=7.2
CPUP                                 LR      LR       01 04 30.0
      comp=Z,203nm,20.6s,baz=203,slow=31
CPUP  Villa Florida      96.02 143   P       P        00 27 46.5 +1.1
CD2   Chengdu            96.41 311  eP       P        00 27 49.0 +2.0
XAN   Xi'an              96.53 316   P       P        00 27 48.3 +0.8
XAN                                  pP      pP       00 27 55.3 -5.9
XAN                                  pmax    pmax
      comp=Z,17nm,1.0s
XAN   Xi'an              96.53 316   P       P        00 27 47.5  0.0
XAN                                  pmax    pmax
      comp=Z,10.0nm,0.8s
XAN   Xi'an              96.53 316   P       P        00 27 47.5  0.0
XAN                                  IAmb    IAmb     00 27 49.2
      comp=Z,10nm,0.8s
LZH   Lanzhou           100.57 314  eP       Pdif     00 28 08.0 +2.3
LZH                                  pP      pPdif    00 28 12.6 -6.9
LZH                                  pmax    pmax
      comp=Z,18nm,1.1s
HHC   Hu-ho-hao-te      101.11 322  eP       Pdif     00 28 08.5 +0.6
HHC                                  SKS              00 38 39.9
HHC                                  S       Sdif     00 39 42.0 -0.6
HHC                                  pmax    pmax
      comp=Z,12nm,0.7s
HHC                                  LR      LR
      comp=Z,190nm,17.0s
HHC                                  LR      LR
      comp=Z,180nm,18.2s
HHC                                  LR      LR
      comp=Z,210nm,17.0s
NVAR  Mina Array Bea    110.50  55   PKiKP   PKiKP    00 32 51.2 +1.1
      comp=Z,0.1nm,0.5s,baz=250,slow=3.0,SNR=4.0
WMQ   Urumqi            114.44 309  ePKP     PKiKP    00 32 58.5 +1.2
WMQ                                  LR      LR
      comp=Z,320nm,19.3s
WMQ                                  LR      LR
      comp=Z,300nm,20.5s
KSH   Kashi             117.84 299   PKP     PKiKP    00 33 04.9 +0.9
RND   Reindeer          118.00  22   PKIKP   PKiKP    00 33 04.2 +0.7
RND   Reindeer          118.00  22           PKiKP    00 33 04.2 +0.7
MCK   McKinley          118.26  21   P       PKiKP    00 33 04.6 +0.7
      baz=213
PDAR  Pinedale Array    118.28  56   PKP     PKiKP    00 33 05.3 +0.4
      comp=Z,0.7nm,0.9s,baz=202,slow=4.6,SNR=2.8
SHLS  Shalkode          118.32 304  ePKP     PKPdf    00 33 03.8 -1.0
      baz=304
SHLS  Shalkode          118.32 304  ePKIKP   PKPdf    00 33 03.8 -1.0
ZSN   Zaisan            118.39 311  ePKP     PKPdf    00 33 04.2 -0.5
      baz=310
ZSN   Zaisan            118.39 311  ePKIKP   PKPdf    00 33 04.2 -0.5
KBL   Kabul             118.65 291   PKIKP   PKiKP    00 33 06.1 +0.2
KBL   Kabul             118.65 291   PKPdf   PKiKP    00 33 06.1 +0.2
DGZ   Jazzator, Alta    118.68 314⇓iPKIKP   PKiKP    00 33 05.6 +0.2
KPKS  Kokpek            118.95 304  ePKP     PKPdf    00 33 05.6 -0.5
      baz=304
KPKS  Kokpek            118.95 304  ePKIKP   PKPdf    00 33 05.5 -0.5
MK31  Makanchi Array    119.25 309d iPKIKP   PKPdf    00 33 05.8 -0.6
MKAR  Makanchi Array    119.25 309   PKP     PKPdf    00 33 06.0 -0.3
      comp=Z,4.3nm,0.9s,baz=132,slow=1.8,SNR=32
MKAR                                 PKKPbc  PKKPab   00 43 20.4 +1.2
      comp=Z,0.6nm,0.9s,baz=318,slow=4.9,SNR=3.5
HDA   Harding Lake      119.31  22   P       PKiKP    00 33 06.8 +0.9
      baz=214
MAKZ  Makanchi          119.42 309   PKIKP   PKPdf    00 33 06.0 -0.7
MAKZ  Makanchi          119.42 309   PKPdf   PKPdf    00 33 06.0 -0.7
YNE   Yellowstone No    119.53  54           PKiKP    00 33 07.9 +0.6
ILAR  Eielson Array     119.62  22   PKP     PKiKP    00 33 06.5  0.0
      comp=Z,2.1nm,0.9s,baz=288,slow=3.1,SNR=16
TNSS  Tian-Shan         119.62 303  ePKP     PKPdf    00 33 07.4 -0.3
      baz=302
TNSS  Tian-Shan         119.62 303  ePKIKP   PKPdf    00 33 07.4 -0.3
SCRK  Sand Creek        119.70  23   P       PKiKP    00 33 08.3 +1.4
      baz=216
TDK   Taldyqorghan      120.11 305  ePKP     PKPdf    00 33 07.6 -0.5
      baz=305
TDK   Taldyqorghan      120.11 305  ePKIKP   PKPdf    00 33 07.5 -0.5
CHKK  Chushkaly         120.14 303  ePKP     PKPdf    00 33 06.9 -1.2
      baz=303
CHKK  Chushkaly         120.14 303  ePKIKP   PKPdf    00 33 06.9 -1.2
K27K  Chicken           120.24  24   P       PKiKP    00 33 09.3 +1.6
      baz=218
KUU   Kurty             120.52 303  ePKP     PKPdf    00 33 08.0 -0.9
      baz=303
KUU   Kurty             120.52 303  ePKIKP   PKPdf    00 33 08.0 -0.9
AAK   Ala-Archa         120.73 301   PKP     PKiKP    00 33 09.8 +0.2
      comp=Z,2.0nm,1.0s,baz=186,slow=3.6,SNR=4.7
AAK   Ala-Archa         120.73 301   PKPdf   PKiKP    00 33 10.2 +0.5
DAWY  Dawson            121.01  25           PKiKP    00 33 10.4 +1.0
CBKS  Cedar Bluff       121.33  66   P       PKiKP    00 33 12.2 +1.4
      baz=230
TUL1  Leonard           121.86  71   P       PKiKP    00 33 13.2 +1.3
      baz=230
RSSD  Black Hills       122.22  58   PKIKP   PKiKP    00 33 13.3 +0.7
RSSD  Black Hills       122.22  58           PKiKP    00 33 13.3 +0.7
TOLK  Toolik Lake Re    122.24  18   P       PKiKP    00 33 13.1 +1.5
      baz=214
BTLS  Baital            122.51 303  ePKP     PKPdf    00 33 12.4 -0.2
      baz=303
BTLS  Baital            122.51 303  ePKIKP   PKPdf    00 33 12.4 -0.2
SEM   Semipalatinsk     122.63 311  ePKP     PKPdf    00 33 11.5 -1.5
      baz=311
SEM   Semipalatinsk     122.63 311  ePKIKP   PKPdf    00 33 11.5 -1.5
LAO   LASA Array        122.63  55   P       PKiKP    00 33 14.9 +1.8
      baz=231
DZA   Taraz             122.69 299  ePKP     PKPdf    00 33 12.5 -0.6
      baz=299
DZA   Taraz             122.69 299  ePKIKP   PKPdf    00 33 12.5 -0.6
ZALV  Zalesovo Beam     122.71 316   PKP     PKPdf    00 33 10.9 -1.8
      comp=Z,3.2nm,0.8s,baz=152,slow=2.8,SNR=18
IUG   Iuzhnay           122.98 298  ePKP     PKPdf    00 33 13.5 -0.4
      baz=298
IUG   Iuzhnay           122.98 298  ePKIKP   PKPdf    00 33 13.4 -0.4
TIXI  Tiksi             123.14 347⇓iPKIKP   PKPdf    00 33 12.8 -0.2
KSU1  Kansas State U    123.39  67   P       PKiKP    00 33 15.7 +0.9
      baz=231
KURBB Kurchatov Arra    123.62 310   PKP     PKPdf    00 33 14.2 -0.4
      comp=Z,7.1nm,0.9s,baz=128,slow=1.7,SNR=44
KURK  Kurchatov         123.63 310   PKIKP   PKPdf    00 33 14.2 -0.4
KURK  Kurchatov         123.63 310   PKPdf   PKPdf    00 33 14.4 -0.2
U40A  Yellville         123.98  72   P       PKiKP    00 33 16.1 +0.1
      baz=231
INK   Inuvik            125.75  24   PKP     PKPdf    00 33 17.5 -0.6
      comp=Z,3.6nm,0.8s,baz=224,slow=6.2,SNR=8.5
INK   Inuvik            125.75  24           PKiKP    00 33 18.8 +0.3
ECSD  EROS Data Cent    126.22  63   P       PKiKP    00 33 20.2 -0.1
      baz=234
ECSD  EROS Data Cent    126.22  63           PKiKP    00 33 20.2 -0.1
RAYN  Ar Rayn           126.43 264   PKIKP   PKiKP    00 33 21.8 +0.5
RAYN  Ar Rayn           126.43 264   PKPdf   PKiKP    00 33 21.8 +0.5
WVT   Waverly           127.00  75   P       PKPdf    00 33 21.5  0.0
      baz=232
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SCIA	State Center	127.16	66	P	PKiKP	00 33 22.9	+0.7
	baz=234						
GEYT	Alibeck	127.61	287	PKP	PKPdf	00 33 22.5	-0.2
	comp=Z,3.2nm,0.7s,baz=198,slow=4.2,SNR=6.7						
YKA	Yellowknife Ar	128.19	36	PKP	PKPdf	00 33 22.0	-0.9
	comp=Z,1.3nm,0.8s,baz=235,slow=1.2,SNR=16						
YKA				PP	PP	00 35 36.1	+7.9
	comp=Z,1.2nm,1.1s,baz=246,slow=6.1,SNR=5.8						
C36M	Paulatuk	129.04	26	P	PKiKP	00 33 24.8	-0.2
	baz=233						
BRVK	Borovoye	129.20	309	*d* *i*PKIKP	PKiKP	00 33 25.9	0.0
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	Borovoye	129.20	309	PKPdf	PKiKP	00 33 25.6	-0.3
WCI	Wyandotte Cave	129.25	74	PKIKP	PKiKP	00 33 26.7	+0.3
WCI	Wyandotte Cave	129.25	74	P	PKiKP	00 33 26.4	-0.1
	baz=233						
WCI	Wyandotte Cave	129.25	74		PKiKP	00 33 26.7	+0.3
JFWS	Jewell Farm	129.53	67	P	PKiKP	00 33 26.5	-0.4
	baz=235						
ULM	Lac du Bonnet	130.30	56	PKP	PKPdf	00 33 26.1	-1.2
	comp=Z,2.3nm,0.7s,baz=284,slow=4.3,SNR=4.7						
NRIK	Noril'sk	130.79	333	PKP	PKPdf	00 33 27.9	+0.2
	comp=Z,6.2nm,0.8s,baz=107,slow=3.2,SNR=17						
NRIK				SKPbc	SKPab	00 36 50.8	+3.2
	comp=Z,0.9nm,0.4s,baz=172,slow=14,SNR=14						
NRIK	Noril'sk	130.79	333	*d* *i*PKIKP	PKPdf	00 33 28.1	+0.4
NRIK	Noril'sk	130.79	333	PKPdf	PKiKP	00 33 28.4	-0.2
AKTO	Aktyubinsk	134.48	301	PKhKP	PKPpre	00 33 23.4	
	comp=Z,0.3nm,0.2s,baz=193,slow=20,SNR=1.7						
AKTO				PKP	PKPdf	00 33 35.1	-0.1
	comp=Z,1.2nm,0.8s,baz=183,slow=1.5,SNR=4.0						
SVE	Sverdlovsk	135.88	310	*e*PKIKP	PKiKP	00 33 38.6	-0.7
SVE				pmax	pmax		
	comp=Z,15nm,1.4s						
ARU	Arti	136.78	309	PKP	PKPdf	00 33 39.0	-0.2
	comp=Z,1.3nm,0.7s,baz=286,slow=4.6,SNR=6.0						
ARU	Arti	136.78	309	*i*PKIKP	PKPdf	00 33 39.1	-0.2
ARU						00 36 22.7	
ARU				SS	SS	00 54 28.2	+4.6
ARU	Arti	136.78	309	PKPdf	PKPdf	00 33 38.8	-0.5
DBIC	Dimbokro	136.78	195	PKP	PKPdf	00 33 40.0	-0.7
	comp=Z,6.6nm,0.8s,baz=147,slow=4.6,SNR=9.8						
DBIC	Dimbokro	136.78	195	PKPdf	PKPdf	00 33 41.2	+0.6
AKH	Akhalkalaki	138.87	282	⇑P	PKiKP	00 33 45.7	-0.4
KBZ	Khabaz	140.42	285	PKhKP	PKPpre	00 33 37.7	
	comp=Z,2.0nm,0.8s,baz=138,slow=3.3,SNR=6.5						
BELG	Belogornoye	141.21	299	⇓*i*PKIKP	PKiKP	00 33 49.0	-1.2
TORD	Torodi Ar. Bea	141.49	207	PKhKP	PKPpre	00 33 42.1	
	comp=Z,2.9nm,0.9s,baz=152,slow=1.9,SNR=11						
TORD				PKP	PKPdf	00 33 48.7	-0.5
	comp=Z,5.7nm,0.9s,baz=156,slow=0.9,SNR=11						
KIRV	Kirov	142.14	310	⇓*i*PKIKP	PKiKP	00 33 52.2	+0.2
VRH	Novokhopyorsk	144.23	296	*e*PKIKP	PKPab	00 33 50.7	-0.2
VRH				pmax	pmax		
	comp=Z,70nm,0.8s						
KOWA	Kowa	144.25	199		PKPbc	00 33 52.5	+0.1
BR131	Keskin Array S	144.40	274	*d* *i*PKIKP	PKPab	00 33 52.2	+0.1
BRTR	Keskin Array B	144.40	274	PKP	PKPbc	00 33 52.5	0.0
	comp=Z,20nm,0.9s,baz=144,slow=4.4,SNR=43						
F64A	Sherman	144.58	75	P	PKPdf	00 33 54.2	+0.4
	baz=245						
E63A	Oxbow	144.77	74	P	PKPdf	00 33 54.3	+0.3
	baz=246						
E63A	Oxbow	144.77	74		PKPdf	00 33 54.6	+0.6
H66A	Whiting	144.78	77	P	PKPdf	00 33 54.6	+0.5
	baz=244						
G65A	Princeton	144.80	76	P	PKPdf	00 33 54.9	+0.8
	baz=244						
PQI	Presque Isle	145.13	74		PKPdf	00 33 55.3	+0.7
E64A	Bridgewater	145.14	74	P	PKPdf	00 33 56.0	+1.4
	baz=246						
D63A	Stockholm	145.22	73	P	PKPdf	00 33 55.8	+1.1
	baz=247						
GGN	Saint George	145.22	77		PKPdf	00 33 56.2	+1.4
TULEG	Thule	145.53	19		PKPbc	00 33 54.7	0.0
VORD	Divnogorie	145.60	294	*e*PKIKP	PKPdf	00 33 55.0	-0.3
VORD				pmax	pmax		
	comp=Z,110nm,0.8s						
VSR	Storozhevoye	145.75	295	*e*PKP2	PKPdf	00 33 55.5	0.0
VSR				pmax	pmax		
	comp=Z,200nm,0.9s						
VORR	Voronezh	145.87	295	⇑*i*PKIKP	PKPdf	00 33 54.0	-1.7
VORR				pmax	pmax		
	comp=Z,350nm,1.2s						
LPSR	Galich'ya Gora	146.31	297	*e*PKP2	PKPbc	00 33 57.8	+0.1
LPSR				pmax	pmax		
	comp=Z,70nm,1.0s						
SIM	Simferopol'	146.58	282	PKP2	PKPbc	00 33 58.0	-0.8
KLMR	Klimovskoe	147.46	312	*e*PKIKP	PKPdf	00 33 58.7	+0.6
KLMR				pmax	pmax		
	comp=Z,191nm,1.3s						
KLMR	Klimovskoe	147.46	312	*e*PKPdf	PKPdf	00 33 58.8	+0.6
KLMR				AMP		00 34 02.3	
	comp=Z,191nm,1.3s						
MOS	Moscow	147.79	302	*e*PKP2	PKPbc	00 34 01.3	-0.5
MOS				pmax	pmax		
	comp=Z,48nm,0.8s						
MOS				pmax	pmax		
	comp=Z,200nm,1.6s						
TMCR	Tamitsa	148.20	318	*e*PKIKP	PKPbc	00 34 01.3	-1.3
TMCR				pmax	pmax		
	comp=Z,48nm,0.9s						
OBN	Obninsk	148.26	301	PKPbc	PKPbc	00 34 03.5	+0.5
	comp=Z,12nm,0.6s,baz=289,slow=1.6,SNR=17						
OBN	Obninsk	148.26	301	⇑P	PKiKP	00 34 04.3	-0.4
OBN	Obninsk	148.26	301	*c* *i*PKP2	PKPbc	00 34 03.7	+0.7
OBN				*e*		00 37 35.0	
OBN				*e*SS	SS	00 56 43.2	+6.8
OBN				pmax	pmax		
	comp=Z,126nm,1.3s						
OBN				MLR	MLR		
	comp=Z,140nm,17.0s						
OBN	Obninsk	148.26	301		PKPbc	00 34 03.7	+0.7
SPA0	Spitsbergen Ar	148.56	348		PKiKP	00 34 04.2	-0.5
TAM	Tamanrasset	149.00	219	PKIKP	PKPdf	00 34 02.7	+0.6
TAM	Tamanrasset	149.00	219	PKPdf	PKPdf	00 34 02.7	+0.6
LVZ	Lovozero	149.10	326	⇑*i*PKP2	PKiKP	00 34 06.0	-0.1
LVZ				pmax	pmax		
	comp=Z,96nm,1.3s						
MFTR	Murfatlar	149.94	277	⇓P	PKPbc	00 34 07.9	+0.2
ALN	Alexandroupoli	149.98	270	PKP2	PKPbc	00 34 08.0	+0.2
ALN	Alexandroupoli	149.98	270		PKPbc	00 34 08.0	+0.2
TIRR	Tirgusor	150.06	278	⇑P	PKPbc	00 34 08.2	+0.3
TIRR	Tirgusor	150.06	278	⇑PKP2	PKPbc	00 34 08.2	+0.3
TLCR		150.10	279	⇓P	PKiKP	00 34 08.4	-0.4
TLCR		150.10	279	⇓PKP2	PKiKP	00 34 08.4	-0.4
TLBR	Topalu	150.34	278	⇓P	PKiKP	00 34 09.1	-0.2
HARR	Harsova	150.47	278	⇑P	PKiKP	00 34 09.8	+0.2
HARR	Harsova	150.47	278	⇑PKIKP	PKiKP	00 34 09.8	+0.2
CFR	Carcaliu	150.54	279	⇑P	PKiKP	00 34 09.7	0.0
CFR	Carcaliu	150.54	279	⇑PKIKP	PKiKP	00 34 09.7	0.0
MILM	Milestii Mici	150.76	283	⇓P	PKPbc	00 34 09.7	+0.3
VARL	Varlezi	151.00	280	⇓P	PKiKP	00 34 11.1	+0.4
KEV	Kevo	151.18	331	PKIKP	PKiKP	00 34 10.7	+0.4
KEV	Kevo	151.18	331		PKiKP	00 34 10.7	+0.4
PGOR	Pogoanele	151.18	278	⇓P	PKiKP	00 34 11.3	+0.2
BIR	Birlad	151.28	281	⇑P	PKPbc	00 34 10.7	0.0
BIR	Birlad	151.28	281	⇑PKIKP	PKPbc	00 34 10.7	0.0
VASR	Vaslui	151.31	282	⇑P	PKiKP	00 34 11.1	-0.2
PETR	Petresti	151.34	279	⇓P	PKiKP	00 34 11.9	+0.5
SORM	Soroca	151.46	285	⇓P	PKPbc	00 34 10.8	-0.3
SORM	Soroca	151.46	285	⇓PKIKP	PKPbc	00 34 10.8	-0.3
ODBI	Odobesti	151.47	279	⇓P	PKiKP	00 34 12.2	+0.6
SGRR	Singureni	151.56	276	⇑P	PKPbc	00 34 11.6	+0.1
BISRR	Bisoca	151.61	279	⇑P	PKiKP	00 34 12.4	+0.4
AKASG	Malin Array Be	151.64	290	PKP	PKPdf	00 34 03.6	-1.5
	comp=Z,1.1nm,0.7s,baz=63,slow=1.6,SNR=11						
AKASG				PKPbc	PKPbc	00 34 11.3	-0.1
	comp=Z,27nm,0.7s,baz=80,slow=2.5,SNR=104						
AKASG				PKPab	PKPab	00 34 19.9	-0.5
	comp=Z,2.7nm,0.6s,baz=87,slow=2.8,SNR=4.5						
AKBB	Malin Array Si	151.64	290	PKIKP	PKPdf	00 34 04.8	-0.3
AKBB	Malin Array Si	151.64	290	PKPdf	PKPdf	00 34 04.8	-0.3
IAS	Iasi	151.65	283	⇓P	PKiKP	00 34 11.8	-0.1
IAS	Iasi	151.65	283	⇓PKIKP	PKiKP	00 34 11.8	-0.1
ZIMR		151.72	274	⇓P	PKiKP	00 34 12.3	+0.1
ZIMR		151.72	274	⇓PKIKP	PKiKP	00 34 12.3	+0.1
VRI	Vrincioaia	151.72	279	⇓P	PKPbc	00 34 11.7	-0.1
VRI	Vrincioaia	151.72	279	⇓PKIKP	PKPbc	00 34 11.7	-0.1
ARCES	ARCESS Array B	151.75	331	PKPbc	PKiKP	00 34 12.0	+0.5
	comp=Z,44nm,0.8s,baz=104,slow=2.1,SNR=63						
ARCES				PKPab	pPKPdf	00 34 19.3	+0.6
	comp=Z,31nm,0.9s,baz=95,slow=4.1,SNR=10.0						
PLOR	Plostina	151.76	279	⇓P	PKiKP	00 34 12.4	+0.1
PLOR	Plostina	151.76	279	⇓PKIKP	PKiKP	00 34 12.4	+0.1
SECR		151.83	277	⇓P	PKiKP	00 34 12.6	+0.1
NEHR	Nehoiu	151.83	278	⇑P	PKiKP	00 34 12.9	+0.5
TESR	Tescani	152.00	281	⇑P	PKiKP	00 34 12.7	0.0
MLR	Muntele Rosu	152.08	278	PKPbc	PKPbc	00 34 12.7	-0.1
	comp=Z,20nm,0.6s,baz=286,slow=1.0,SNR=42						
MLR	Muntele Rosu	152.08	278	⇑P	PKiKP	00 34 12.9	-0.1
MLR				⇑P	PKiKP	00 34 13.0	-0.1
HUMR	Humele	152.33	276	⇓P	PKiKP	00 34 13.6	+0.1
OZUR		152.41	279	⇓P	PKiKP	00 34 13.8	+0.1
BIZ	Bicaz	152.50	281	⇑P	PKiKP	00 34 14.3	+0.5
DOPR	Dopca	152.62	279	⇑P	PKiKP	00 34 14.5	+0.4
VOIR		152.65	278	⇓P	PKiKP	00 34 14.1	-0.1
VOIR		152.65	278	⇓PKIKP	PKiKP	00 34 14.1	-0.1
VTS	Vitosha	152.65	271	⇑P	PKPbc	00 34 14.2	0.0
VTS	Vitosha	152.65	271	⇑PKIKP	PKPbc	00 34 14.2	0.0
BAIL	Bailesti	153.19	274	⇓P	PKiKP	00 34 15.9	+0.6
BURAR	Bucovina Array	153.30	282	⇑P	PKiKP	00 34 17.0	+1.5
BURAR	Bucovina Array	153.30	282	⇑PKIKP	PKiKP	00 34 17.0	+1.5
MDB	Medias	153.34	279	⇓P	PKiKP	00 34 17.4	+1.9
MDB	Medias	153.34	279	⇓PKIKP	PKiKP	00 34 17.4	+1.9
SRE	Strehaia	153.55	275	⇑P	PKiKP	00 34 16.8	+0.8
SRE	Strehaia	153.55	275	⇑PKIKP	PKiKP	00 34 16.8	+0.8
ARCR	ARCALIA	153.68	281	⇑P	PKiKP	00 34 16.9	+0.7
NACGM	Naroch	153.81	299	*i*PKP	PKiKP	00 34 16.8	+0.7
NACGM				*i*PKP	PKiKP	00 34 16.8	+0.7
NACGM				*i*PKP	PKiKP	00 34 16.8	+0.7
NACGM				*i*PPP	PPP	00 42 37.1	
NACGM				*i*SKKS		00 44 22.9	
NACGM				*i*PS		00 47 54.4	
NACGM				*i*SSS	SSS	01 05 58.8	
NACGM				*i*LR	LR	01 46 20.9	
IDID	Didziasalis	153.87	300	*e*P	PKiKP	00 34 16.6	+0.4
VSU	Vasula	153.91	307	*e*P	PKPab	00 34 29.5	-0.2
FINES	FINESS Array B	153.94	314	PKPbc	PKiKP	00 34 16.6	+0.5
	comp=Z,12nm,0.7s,baz=96,slow=5.7,SNR=25						
FINES				PKPab	PKPab	00 34 29.8	+0.1
	comp=Z,7.7nm,0.7s,baz=53,slow=6.7,SNR=9.9						
HERR	Herculane	154.15	275	⇑P	PKPbc	00 34 17.0	-0.1
IIGN	Ignalina	154.16	300	*e*P	PKiKP	00 34 17.2	+0.3
DEV	Deva	154.21	277	⇓P	PKiKP	00 34 17.7	+0.4
DEV	Deva	154.21	277	⇓PKIKP	PKiKP	00 34 17.7	+0.4
ISAL	Salakas	154.23	300	*e*P	PKPbc	00 34 16.8	-0.1
MDVR	Moldovita	154.57	274	⇑P	PKiKP	00 34 18.3	+0.1
DRGR		154.65	279	⇓P	PKPbc	00 34 18.1	-0.1
DRGR		154.65	279	⇓PKIKP	PKPbc	00 34 18.1	-0.1
MTSE	Matsula	155.42	308	*e*P	PKPdf	00 34 17.9	+7.7
PABE	Paberze	155.46	300	*e*P	PKPdf	00 34 20.8	+10
SUW	Suwalki	155.84	296	*e*P	PKPab	00 34 37.0	-1.1
KEST	Kesra	157.57	243	PKPab	PKPab	00 34 46.8	+0.6
	comp=Z,4.1nm,0.8s,baz=92,slow=7.0,SNR=3.7						
MODS	Modra-Piesok	158.63	280	*e*PKP2	PKPab	00 34 50.0	-0.4
KRLC	Kraliky	159.30	285	*e*PKP2	PKPab	00 34 53.0	-0.3
KRLC	Kraliky	159.30	285	*e*PKPAB	PKPab	00 34 53.0	-0.3
CONA	Conrad Observa	159.43	278	*e*P	PKPab	00 34 54.0	+0.1
	comp=Z,5.8nm,1.7s						
ARSA	Arzberg	159.47	276	*e*P	PKPab	00 34 54.8	+0.7
	comp=Z,14nm,1.7s						
SOKA	Soboth	159.62	275	P	PKPab	00 34 55.2	+0.4
	comp=Z,10nm,1.6s						
DPC	Dobruska-Polom	159.63	285	*e*PKP2	PKPab	00 34 55.5	+0.8
DPC	Dobruska-Polom	159.63	285	*e*PKPAB	PKPab	00 34 55.5	+0.8
OSTC	Ostas	159.73	286	*e*PKPAB	PKPab	00 34 55.9	+0.8
CHVC	Chvalec	159.84	286	*e*PKPAB	PKPab	00 34 56.2	+0.6
MOA	Molln	160.45	277	*e*P	PKPab	00 34 58.2	-0.1
	comp=Z,3.2nm,1.2s						
NB2	NORSAR Subarra	160.89	319	P	PKPab	00 34 59.1	-0.7
	comp=Z,21nm,1.0s,baz=61,slow=4.4						
NB2	NORSAR Subarra	160.89	319	P	PKPab	00 34 59.1	-0.7
	baz=61,slow=4.4						
NOA	NORSAR Array B	160.89	319	PKPab	PKPab	00 34 59.4	-0.5
	comp=Z,9.6nm,0.9s,baz=61,slow=4.5,SNR=26						
NC204	NORSAR Array S	160.98	319		PKPab	00 35 00.2	-0.1
GEC2	GERESS Array S	161.04	280	PKPab	PKPab	00 35 01.0	0.0
GERES	GERESS Array B	161.04	280	PKP	PKPdf	00 34 16.2	-1.3
	comp=Z,0.7nm,0.9s,baz=292,slow=4.2,SNR=5.1						
GERES				PKPab	PKPab	00 35 00.8	-0.2
	comp=Z,2.6nm,0.8s,baz=108,slow=4.3,SNR=19						
KHC	Kasperske Hory	161.18	281	*e*PKP2	PKPab	00 34 59.8	-1.7
KHC	Kasperske Hory	161.18	281	*e*PKPAB	PKPab	00 34 59.8	-1.7
CLL	Collm	161.84	288	*e*	PKPab	00 34 55.0	-9.2
CLL				*i*PKPab	pPKPab	00 35 04.1	-14
	comp=Z,12nm,1.5s						
CLL				*i*pPKPab	sPKPab	00 35 13.2	-10
CLL				LmH		01 50 00.0	
	comp=N,200nm,19.4s						
CLL				LmH		01 50 00.0	
	comp=E,100nm,18.5s						
CLL				LmV		01 56 00.0	
	comp=Z,200nm,19.0s						
CLL	Collm	161.84	288	*i*PKP2	PKPab	00 35 04.1	-0.1
CLL				pmax	pmax		
	comp=Z,12nm,1.5s						
WTTA	Wattenberg	162.01	274	*e*P	PKPab	00 35 05.2	-0.2
	comp=Z,14nm,1.6s						
WATA	Walderalm	162.07	274	*i*P	PKPab	00 35 04.6	-0.9
	comp=Z,2.6nm,0.6s						
MOTA	Moosalm	162.38	274	*e*P	PKPab	00 35 06.7	-0.2
	comp=Z,11nm,1.8s						
FETA	Feichten	162.54	273	*e*P	PKPab	00 35 07.2	-0.5
	comp=Z,10nm,1.3s						
RETA	Reutte	162.64	274	*e*P	PKPab	00 35 06.6	-1.4
	comp=Z,15nm,1.5s						
GRF	Grafenberg Arr	162.79	282	*e*PKP	PKPab	00 35 06.2	-2.3
	baz=98,slow=4.2						
DAVA	Damuels	163.17	273	*e*P	PKPab	00 35 09.0	-1.4
	comp=Z,8.5nm,1.2s						
ESDC	Sonseca Array	167.58	225	PKP	PKPdf	00 34 22.5	-1.1
	comp=Z,1.3nm,1.2s,baz=358,slow=4.5,SNR=4.4						

BYKL 06 01:05:53.9±0.2, 56°.13N×113°.71E, $h8^{km}\pm3^{km}$, 1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.09	261	⇓*i*Pg	Pg	01 05 55.9	-0.2
SVKR				*e*Sg	Sg	01 05 57.7	0.0
SVKR				Pmax			
	977nm,0.2s						
SVKR				Smax			
	11μm,0.4s						
NLYR	Nelyaty	1.17	71	*e*Pg	Pg	01 06 14.9	-1.4
NLYR				*e*Pb	Pn	01 06 17.0	+0.4
NLYR				*e*		01 06 19.5	
NLYR				*e*Sg	Sg	01 06 30.3	-1.1
NLYR				*e*Sb	Sn	01 06 34.7	+2.0
NLYR				max			
	164nm,0.3s						
NLYR				max			
	285nm,0.8s						
KMO	Kumora	1.43	261	*e*Pg	Pn	01 06 19.8	-0.3
KMO				*e*Pb	Pg	01 06 21.1	-0.2
KMO				*e*Sg	Sn	01 06 39.1	0.0
KMO				*e*		01 06 42.3	
KMO				max			
	55nm,0.3s						
KMO				max			
	244nm,0.6s						
BOD	Bodaibo	1.70	5	*e*Pg	Pn	01 06 24.5	+0.7
BOD				*e*		01 06 28.6	
BOD				*e*Sg	Sb	01 06 46.5	-0.4
BOD				Pmax			
	28nm,0.3s						
BOD				Smax			
	64nm,0.2s						
YLYR	Ulyunkhan	1.92	230	*e*Pn	Pn	01 06 26.8	-0.1
YLYR				*e*Pg	Pb	01 06 28.2	-0.9
YLYR				*e*Sg	Sb	01 06 53.4	+0.2
YLYR				Pmax			
	27nm,0.4s						
YLYR				Smax			
	132nm,0.5s						
NIZ	Nizh Angarsk	2.37	263	*e*Pn	Pn	01 06 33.8	+0.7
NIZ				*e*Pg	Pb	01 06 36.7	-0.1
NIZ				*e*Sn	Sn	01 07 02.8	+0.5
NIZ				*e*Sg	Sb	01 07 06.5	+0.3
NIZ				*e*		01 07 08.7	
NIZ				Pmax			
	9.0nm,0.2s						
NIZ				max			
	63nm,0.5s						
CRS	Chara	2.64	71	*e*Pn	Pn	01 06 37.2	+0.4
CRS				*e*Pg	Pb	01 06 41.7	+0.3
CRS				*e*Sn	Sn	01 07 07.7	-1.3
CRS				*e*Sg	Sb	01 07 16.2	+2.2
CRS				Pmax			
	62nm,0.7s						
CRS				Smax			
	47nm,0.5s						
TUP	Tupik	3.96	113	*e*Pn	Pn	01 06 54.7	-0.2
TUP				*e*Pg	Pb	01 07 04.8	+0.9
TUP				*e*		01 07 11.5	
TUP				*e*Sn	Sn	01 07 40.1	-1.4
TUP				Pmax			
	6.0nm,0.4s						
TUP				Smax			
	49nm,0.8s						

BYKL 06 01:06:44.8±0.2, 56°.16N×113°.65E, $h8^{km}\pm2^{km}$, 2C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.07	230	⇑*i*Pg	Pg	01 06 47.2	+0.4
SVKR				*e*Sg	Sg	01 06 48.8	+0.6
SVKR				Pmax			
	5μm,0.2s						
SVKR				Smax			
	37μm,0.4s						
YOA	Uoyan	1.08	269	*e*Pg	Pg	01 07 03.6	-1.9
YOA				*e*Pb	Pn	01 07 06.2	0.0
YOA				*e*Sg	Sg	01 07 18.0	-1.5
YOA				*e*		01 07 27.0	
YOA				max			
	272nm,0.4s						
YOA				max			
	1μm,0.5s						
NLYR	Nelyaty	1.19	73	*e*Pg	Pb	01 07 05.9	-1.7
NLYR				*e*Pb	Pn	01 07 08.0	+0.2
NLYR				*e*		01 07 13.4	
NLYR				*e*Sg	Sg	01 07 22.0	-1.1
NLYR				*e*Sb	Sn	01 07 25.9	+1.7
NLYR				max			
	418nm,0.4s						
NLYR				max			
	803nm,0.8s						
KMO	Kumora	1.40	260	*e*Pg	Pn	01 07 09.6	-1.1
KMO				*e*		01 07 12.7	
KMO				*e*Sg	Sb	01 07 28.3	-0.9
KMO				*e*		01 07 32.1	
KMO				max			
	123nm,0.5s						
KMO				max			
	773nm,0.8s						
BOD	Bodaibo	1.68	6	*e*Pg	Pn	01 07 14.4	0.0
BOD				*e*		01 07 15.9	
BOD				*e*Sg	Sn	01 07 36.5	+0.5
BOD				max			
	126nm,0.7s						
BOD				Smax			
	310nm,0.8s						
YLYR	Ulyunkhan	1.91	229	*e*Pn	Pn	01 07 18.4	+0.7
YLYR				*e*Pg	Pb	01 07 19.5	-0.4
YLYR				*e*		01 07 20.9	
YLYR				*e*Sg	Sb	01 07 43.9	0.0
YLYR				Pmax			
	109nm,0.5s						
YLYR				Smax			
	440nm,0.8s						
NIZ	Nizh Angarsk	2.34	262	*e*Pn	Pn	01 07 24.0	+0.4
NIZ				*e*Pg	Pb	01 07 26.8	-0.4
NIZ				*e*		01 07 31.1	
NIZ				*e*Sn	Sn	01 07 52.7	+0.2
NIZ				*e*Sg	Sb	01 07 56.8	+0.5
NIZ				max			
	32nm,0.5s						
NIZ				Smax			
	252nm,0.8s						
CRS	Chara	2.66	72	*e*Pn	Pn	01 07 29.1	+1.1
CRS				⇑*i*Pg	Pb	01 07 33.2	+0.5
CRS				*e*		01 07 45.5	
CRS				*e*Sg	Sb	01 08 07.6	+2.0
CRS				Pmax			
	292nm,1.0s						
CRS				Smax			
	156nm,0.5s						
SYVR	Suvo	3.27	222	*e*Pn	Pn	01 07 37.1	+0.7
SYVR				*e*Pg	Pb	01 07 43.9	+0.8
SYVR				*e*		01 07 49.0	
SYVR				*e*Sn	Sn	01 08 15.4	-0.1
SYVR				*e*Sg	Sb	01 08 25.4	+2.3
SYVR				Pmax			
	39nm,0.9s						
SYVR				Smax			
	256nm,1.7s						
VTMR	Vitim	3.34	350	*e*Pg	Pb	01 07 45.2	+1.0
VTMR				*e*Sn	Sn	01 08 16.6	-0.5
VTMR				*e*Sg	Sb	01 08 27.7	+2.7
TUP	Tupik	4.00	113	*e*Pg	Pb	01 07 56.2	+0.7
TUP				*e*Sn	Sn	01 08 34.2	+0.8
TUP				*e*Sg	Sb	01 08 47.6	+3.6
TUP				Pmax			
	35nm,1.0s						
TUP				Smax			
	186nm,1.1s						
MXMB	Maximikha	4.06	226	*e*Pg	Pb	01 07 58.4	+1.8
MXMB				*e*Sn	Sn	01 08 34.6	-0.4
MXMB				*e*Sg	Sg	01 08 51.1	-4.1
OGRR	Ongureny	4.31	237	*e*Pn	Pn	01 07 52.2	+1.6
OGRR				*e*Pg	Pb	01 08 02.8	+2.1
OGRR				*e*		01 08 14.1	
OGRR				*e*Sn	Sn	01 08 41.6	+0.6
OGRR				*e*Sg	Sg	01 08 58.3	-4.8
OGRR				max			
	36nm,1.5s						
OGRR				Smax			
	80nm,1.4s						
YKLR	Yuktali	4.47	81	*e*Pg	Pb	01 08 04.3	+0.8
YKLR				*e*Sg	Sb	01 09 02.1	+4.6
ZRHB	Zarechye	5.24	229	*e*Pn	Pn	01 08 04.4	+1.0
ZRHB				*e*Sg	Sg	01 09 27.5	-5.5
ZRHB				max			
	28nm,0.9s						
ZRHB				Smax			
	193nm,1.2s						
TRG	Tyrgan	5.45	234	*e*Pg	Pb	01 08 22.7	+2.5
TRG				*e*Sn	Sn	01 09 08.4	-0.8
TRG				*e*Sg	Sg	01 09 33.0	-6.7
TRG				Pmax			
	8.0nm,0.9s						
TRG				Smax			
	36nm,1.3s						

BYKL 06 01:07:11.1±0.4, 56°.16N×113°.68E, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.08	238	⇑*i*Pg	Pg	01 07 12.2	-0.4
SVKR				*e*Sg	Sg	01 07 14.2	+0.6
SVKR				Pmax			
	1μm,0.2s						
SVKR				Smax			
	18μm,0.4s						
NLYR	Nelyaty	1.18	73	*e*Sg	Sg	01 07 48.1	-0.7
NLYR				*e*Sb	Sn	01 07 50.9	-0.6
NLYR				max			
	314nm,1.0s						
KMO	Kumora	1.42	260	*e*Pg	Pn	01 07 36.6	-1.5
KMO				*e*Sg	Sg	01 07 55.4	-1.2
KMO				*e*		01 07 58.8	
KMO				Pmax			
	295nm,0.6s						
KMO				max			
	252nm,0.6s						
BOD	Bodaibo	1.67	6	*e*Sg	Sn	01 08 03.3	-0.5
BOD				Smax			
	135nm,0.7s						
YLYR	Ulyunkhan	1.93	229	*e*Sg	Sn	01 08 10.4	+0.4
YLYR				Smax			
	235nm,1.0s						
NIZ	Nizh Angarsk	2.36	262	*e*Sg	Sb	01 08 24.0	-0.1
NIZ				Smax			
	103nm,0.5s						

CRS	Chara	2.65	72	*e*Pg	Pb	01 07 57.9	-1.5
CRS				*e*Sg	Sb	01 08 32.5	+0.1
CRS				Pmax			
	85nm,1.0s						
CRS				Smax			
	88nm,0.5s						
TUP	Tupik	3.99	113	*e*Sg	Sb	01 09 14.5	+3.6
TUP				Smax			
	97nm,1.1s						

IDC 06 01:22:21.0±8.7, 31°.85S×178°.98W, h52^{km}±68^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.7/34, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=67.0km s-min=32.2km az=44.0

NEIC 06 01:22:25.4±0.6, 32°.2S±0°.1×179°.2W±0°.2, h83^{km}±6^{km}, mb4.2/7, Error ellipse: s-maj=27.3km s-min=17.3km az=97.0

WEL 06 01:22:26.2±0.8, 32°S±22°×18°0W±5°3, h171^{km}±24^{km}, M4.4/6, mB4.5/3, MLv4.5/6, Mw(mB)3.7/3, Error ellipse: s-maj=0.1km s-min=0.0km az=112.2

ISC 06 01:22:28.8±0.9, 32°.41S±0°.09×179°.5W±0°.2, h100^{km}, n38, σ3^{s}.06/49, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.42	24	P	Pn	01 23 18.9	-1.2
GLKZ				S	Sn	01 23 58.0	-1.8
MXZ	Matakaoa Point	5.45	199	Pn	Pn	01 23 48.3	+0.8
MXZ				Sn	Sn	01 24 53.0	+4.1
MXZ	Matakaoa Point	5.45	199	P	Pn	01 23 48.9	+1.3
MXZ				S	Sn	01 24 50.2	+1.3
HAZ	Te Kaha	5.78	202	P	Pn	01 23 54.8	+2.7
HAZ				S	Sn	01 25 02.4	+5.4
PKGZ	Pakihiroa	5.82	199	P	Pn	01 23 54.0	+1.4
PKGZ				S	Sn	01 24 59.9	+1.9
MWZ	Matawai	6.39	201	P	Pn	01 24 01.1	+0.7
MWZ				S	Sn	01 25 12.3	+0.4
URZ	Urewera	6.46	204	P	Pn	01 24 02.7	+1.4
	2.1nm,0.3s,baz=262,slow=3.7,SNR=17						
URZ				S	Sn	01 25 14.0	+0.5
	6.0nm,0.3s,baz=257,slow=23,SNR=12						
URZ	Urewera	6.46	204	Pn	Pn	01 24 02.5	+1.2
URZ				Sn	Sn	01 25 17.5	+4.0
BKZ	Black Stump Fm	7.49	205	Pn	Pn	01 24 14.9	-0.4
TWVZ	Taurewa	7.82	210	S	Pn	01 24 23.3	+3.5
PNHZ	Pukenui	8.26	204	P	Pn	01 24 24.2	-1.5
PNHZ				P	Sn	01 25 55.5	-1.8
WPHZ	Waipukurau	8.31	202	P	Sn	01 25 58.8	+0.2
TSZ	Takapari Road	8.47	204	P	Pn	01 24 26.4	-2.2
TSZ				P	Sn	01 26 01.3	-1.2
DVHZ	Dannevirke	8.62	203	P	Sn	01 26 03.8	-2.1
POWZ	Post Office Ro	8.83	204	P	Sn	01 26 09.9	-1.3
PRWZ	Pori Road	8.91	203	P	Sn	01 26 09.8	-3.3
BFZ	Birch Farm	8.94	201	Pn	Pn	01 24 35.8	+0.9
MRZ	Mangatainoka R	9.14	204	P	Pn	01 24 34.0	-3.7
MRZ				P	Sn	01 26 10.2	-8.4
TIWZ	Tintock	9.14	203	P	Sn	01 26 15.3	-3.4
CPWZ	Castlepoint	9.16	201	P	Pn	01 24 34.4	-3.6
CPWZ				P	Sn	01 26 15.2	-4.0
HOWZ	Holdsworth Sta	9.37	204	P	Sn	01 26 19.7	-4.7
TMWZ	Te Maipa	9.44	202	P	Pn	01 24 36.6	-5.2
TMWZ				P	Sn	01 26 18.7	-7.2
MTW	Mount Morrison	9.61	203	P	Sn	01 26 23.7	-6.3
TRWZ	Traveller	9.76	202	P	Sn	01 26 27.6	-6.3
PAWZ	Paruwai Farm	9.83	203	P	Sn	01 26 26.7	-8.9
AS31	Alice Springs	41.76	270	P	P	01 30 09.3	+0.8
ASAR	Alice Springs	41.77	270	P	P	01 30 08.9	+0.5
	1.8nm,0.5s,baz=106,slow=7.4,SNR=17						
WR0	Warramunga Arr	42.76	275	P	P	01 30 16.8	+0.3
WR0				IAmb	IAmb	01 30 17.2	
	comp=Z,2.9nm,0.6s						
WB2	Warramunga Arr	42.93	275	P	P	01 30 18.2	+0.4
WB2				IAmb	IAmb	01 30 18.9	
	comp=Z,5.5nm,0.6s						
WRA	Warramunga Arr	42.94	275	P	P	01 30 18.3	+0.3
	comp=Z,3.1nm,0.5s,baz=114,slow=7.9,SNR=68						
WB0	Warramunga Arr	42.97	275	P	P	01 30 18.2	0.0
WB0				IAmb	IAmb	01 30 19.2	
	comp=Z,5.2nm,0.6s						
VNDA	Vanda	45.98	186	P	P	01 30 43.5	+2.1
	comp=Z,0.6nm,0.8s,baz=9.3,slow=9.2,SNR=1.9						
VNDA	Vanda	45.98	186	P	P	01 30 43.5	+2.1
VNDA				IAmb	IAmb	01 30 53.6	
	comp=Z,1.5nm,0.9s						
MTN	Manton Dam	49.07	282	P	P	01 31 05.4	-0.7
SNAA	Sanae	76.19	179	P	P	01 34 05.7	+0.1
SNAA				IAmb	IAmb	01 34 07.7	
	comp=Z,1.3nm,0.7s						
FINES	FINESS Array B	146.55	338	PKPbc	PKPdf	01 41 54.9	-1.2
	comp=Z,3.1nm,0.5s,baz=42,slow=4.4,SNR=20						
AKASG	Malin Array Be	152.04	319	PKPbc	PKPdf	01 42 08.2	+2.9
	comp=Z,0.1nm,0.2s,baz=62,slow=2.1,SNR=4.4						
TORD	Torodi Ar. Bea	160.80	184	PKPab	PKPab	01 42 59.8	-0.3
	comp=Z,0.7nm,0.6s,baz=198,slow=3.5,SNR=4.0						

KRNET 06 01:49:52.5±0.1, 39°.35N×72°.54E, h10^{km}, mb3.0

SOME 06 01:49:53.4, 39°.40N×72°.57E, h20^{km}

NNC 06 01:49:57.4±1.3, 39°.52N×72°.56E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=10.5km s-min=5.6km az=0.0

ISC 06 01:49:55.2±1.4, 39°.40N±0°.07×72°.51E±0°.03, h10^{km}, n37, σ2^{s}.59/62, 28C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.56	279	⇑*i*P	Pg	01 50 03.9	-2.2
	baz=84						
DRK				⇑*i*S	Sg	01 50 12.3	-1.2
	baz=84						
SFK	Sufi-Kurgan	0.98	51	⇓*i*P	Pg	01 50 11.8	-2.4
	baz=48						
SFK				⇓*i*S	Sg	01 50 25.6	-1.4
	baz=48						
OHH	Osh	1.15	10	⇑*i*P	Pn	01 50 15.6	-1.8
	baz=9.0						
OHH				⇑*i*S	Sb	01 50 31.8	-0.4
	baz=9.0						
BTK	Batken	1.47	297	⇑*i*P	Pn	01 50 20.9	-0.9
	baz=99						
BTK				⇑*i*S	Sg	01 50 41.9	-0.4
	baz=99						
ARSB	Arslanbob	1.96	10	⇑*e*P	Pn	01 50 29.8	+1.1
	baz=10.0						
ARSB				⇑*i*S	Sb	01 50 56.8	+1.1
	baz=10.0						
TRKS	Terek-Say	2.38	334	⇑*i*P	Pn	01 50 34.8	+0.4
	baz=34						
TRKS				⇑*i*S	Sn	01 51 05.5	+1.8
	baz=34						
ARLS	Aral	2.82	29	⇑*i*P	Pn	01 50 41.9	+1.4
	baz=28						
ARLS				⇑*i*S	Sn	01 51 17.8	+3.1
	baz=28						
AML	Almayashu	2.88	18	⇑*i*P	Pn	01 50 42.6	+1.1
	baz=17						
AML				⇑*i*S	Sn	01 51 19.3	+2.9
	baz=17						
MNAS	Manas	3.09	360	⇓*i*P	Pn	01 50 45.5	+1.3
	baz=60						
MNAS				⇓*i*S	Sn	01 51 24.5	+3.3
	baz=60						
UCH	Uchtor	3.21	28	⇑*i*P	Pn	01 50 47.5	+1.4
	baz=27						
UCH				⇑*i*S	Sn	01 51 27.6	+2.9
	baz=27						
IUG	Iuzhnay	3.33	326	*e*P	Pb	01 50 55.8	+1.4
	15nm,0.5s						
IUG				*e*S	Sg	01 51 40.5	-1.7
	28nm,0.4s						
IUG	Iuzhnay	3.33	326	Pg	Pb	01 50 55.9	+1.4
	15nm,0.5s						
IUG				Lg	Lg	01 51 40.5	
	28nm,0.4s						
MRKS	Merke	3.39	9	*e*P	Pb	01 50 56.6	+1.2
	20nm,0.3s						
MRKS				*e*S	Sg	01 51 41.6	-2.5
	18nm,0.4s						
MRKS	Merke	3.39	9	Pg	Pb	01 50 56.7	+1.2
	20nm,0.3s						
MRKS				Lg	Lg	01 51 41.6	
	18nm,0.4s						
EKS2	Erkin-Say	3.40	16	⇑*i*P	Pn	01 50 50.0	+1.6
	baz=15						
EKS2				⇑*i*S	Sn	01 51 31.6	+2.7
	baz=15						
AAK	Ala-Archa	3.57	24	⇑Pn	Pn	01 50 53.7	+2.9
	1.7nm,0.5s						
AAK				⇑Pg	Pg	01 51 01.5	-2.1
	4.7nm,0.5s						
AAK				⇑Lg	Lg	01 51 47.4	
	17nm,0.8s						
KK31	Karatay Array	4.00	339	⇑Pn	Pn	01 50 59.2	+2.6
	2.0nm,0.3s,baz=243,slow=24,SNR=14						
KK31				⇑Sn	Sn	01 51 46.7	+3.2
	4.2nm,0.5s,baz=158,slow=25,SNR=4.1						
BRLS	Borolday	4.16	332	*e*P	Pb	01 51 08.6	+0.2
	25nm,0.2s						
BRLS				*e*S	Sb	01 52 02.3	+3.6
	17nm,0.8s						
BRLS	Borolday	4.16	332	Pg	Pb	01 51 08.6	+0.2
	25nm,0.2s						
BRLS				Lg	Lg	01 52 02.3	
	17nm,0.8s						
TKM2	Tokmak 2	4.22	32	⇑Pn	Pn	01 51 01.4	+1.6
	0.9nm,0.5s						
TKM2				⇑Pg	Pg	01 51 14.2	-1.9
	1.7nm,0.5s						
TKM2				⇑Lg	Lg	01 52 07.2	
	6.6nm,0.5s						
SGDS	Sogindy	4.36	21	Pg	Pb	01 51 13.2	+1.3
	4.1nm,0.5s						
SGDS				Lg	Lg	01 52 10.3	
	7.9nm,0.6s						
KST	Kastek	4.48	34	*e*P	Pb	01 51 15.8	+1.8
	2.0nm,0.4s						
KST				*e*S	Sg	01 52 14.7	-4.3
	13nm,0.7s						
KST	Kastek	4.48	34	Pg	Pb	01 51 15.8	+1.8
	2.0nm,0.4s						
KST				Lg	Lg	01 52 14.7	
	13nm,0.7s						
DGS	Degeres	4.56	32	*e*P	Pb	01 51 18.5	+3.1
	4.0nm,0.4s						
DGS				*e*S	Sg	01 52 19.0	-2.7
	8.4nm,0.6s						
DGS	Degeres	4.56	32	Pg	Pb	01 51 18.5	+3.1
	4.0nm,0.4s						
DGS				Lg	Lg	01 52 19.0	
	8.4nm,0.6s						
IZV	Izvestkoviy	4.77	39	*e*P	Pb	01 51 21.8	+2.7
	2.2nm,0.5s						
IZV				*e*S	Sg	01 52 24.8	-3.7
	9.0nm,0.8s						
IZV	Izvestkoviy	4.77	39	Pg	Pb	01 51 21.8	+2.7
	2.2nm,0.5s						
IZV				Lg	Lg	01 52 24.8	
	9.0nm,0.8s						
MDOK	Medeo	5.08	41	*e*P	Pb	01 51 27.6	+3.2
	1.3nm,0.5s						
MDOK				*e*S	Sg	01 52 34.6	-3.8
	14nm,0.8s						
MDOK	Medeo	5.08	41	Pg	Pb	01 51 27.6	+3.2
	1.3nm,0.5s						
MDOK				Lg	Lg	01 52 34.6	
	14nm,0.8s						
KOTS	Kotyrbulak	5.17	41	*e*P	Pb	01 51 29.4	+3.6
	4.8nm,0.5s						
KOTS				*e*S	Sg	01 52 37.4	-3.7
	36nm,0.5s						
KOTS	Kotyrbulak	5.17	41	Pg	Pb	01 51 29.4	+3.6
	4.8nm,0.5s						
KOTS				Lg	Lg	01 52 37.4	
	36nm,0.5s						
KTBS	Karatobe	5.33	35	*e*P	Pb	01 51 31.3	+2.9
	1.5nm,0.7s						
KTBS				*e*S	Sg	01 52 41.7	-4.5
	12nm,0.8s						
KTBS	Karatobe	5.33	35	Pg	Pb	01 51 31.3	+2.9
	1.5nm,0.7s						
KTBS				Lg	Lg	01 52 41.7	
	12nm,0.8s						
KUU	Kurty	5.33	31	*e*P	Pb	01 51 31.3	+2.9
	1.9nm,0.6s						
KUU				*e*S	Sg	01 52 41.2	-5.1
	5.7nm,0.6s						
KUU	Kurty	5.33	31	Pg	Pb	01 51 31.3	+2.9
	1.9nm,0.6s						
KUU				Lg	Lg	01 52 41.2	
	5.7nm,0.6s						
AB31	Akbulak array	13.33	322	⇑P	Pn	01 53 02.3	-2.1
	0.9nm,0.8s,baz=23,slow=7.7,SNR=25						
AB31				⇑S	Sn	01 55 34.6	+2.1
	0.5nm,0.6s,baz=130,slow=13,SNR=6.8						
AKTO	Aktyubinsk	15.04	322	⇓P	P	01 53 30.4	-2.8
	2.0nm,1.0s						

KRSC 06 01:58:46.1±1.3, 49°.16N×156°.89E, h40^{km}±20^{km}, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.60	342	*e*P	Pn	01 59 12.8	+0.9
SKR				*e*S	Sn	01 59 32.3	+0.9
PAU	Pauzhetka	2.31	359	*e*P	Pn	01 59 24.4	+2.8
PAU				*e*S	Sn	01 59 52.6	+3.8
KDTR	Khodutka, Kamc	2.76	16	*e*P	Pn	01 59 31.2	+3.5
KDTR				*e*S	Sn	02 00 04.4	+4.6
MIPR	Malaya Ipel'ka	3.12	359	*e*P	Pn	01 59 35.7	+3.0
MIPR				*e*S	Sn	02 00 12.8	+4.0
ASAK	Asacha	3.29	11	*e*P	Pn	01 59 39.0	+3.9
ASAK				*e*S	Sn	02 00 18.5	+5.5
MTVR	Mutnovka	3.43	13	*e*P	Pn	01 59 41.1	+4.0
MTVR				*e*S	Sn	02 00 21.6	+5.1
RUS	Russkaya	3.44	17	*e*P	Pn	01 59 40.7	+3.7
RUS				*e*S	Sn	02 00 20.5	+4.0
GRL	Gorelyy	3.48	12	*e*P	Pn	01 59 41.9	+4.1
GRL				*e*S	Sn	02 00 22.4	+4.7
KRMR	Karymshinskiy	3.76	12	*e*P	Pn	01 59 45.3	+3.8
KRMR				*e*S	Sn	02 00 28.4	+4.0
APC	Apacha	3.77	2	*e*P	Pn	01 59 46.3	+4.6
PET	Petropavlovsk	4.03	15	*e*P	Pn	01 59 49.2	+4.1
PET				*e*S	Sn	02 00 35.5	+4.5
DALK	Dalny	4.05	16	*e*P	Pn	01 59 49.5	+4.0
DALK				*e*S	Sn	02 00 36.3	+4.7
UGLR	Uglovaya	4.23	16	*e*P	Pn	01 59 52.8	+4.7
AVH	Avacha	4.27	15	*e*P	Pn	01 59 53.8	+5.2
KOK	Koryaka	4.28	14	*e*P	Pn	01 59 53.9	+5.2
SMAR	Somma	4.28	16	*e*P	Pn	01 59 54.2	+5.3
NLC	Nalytchevo	4.30	20	*e*P	Pn	01 59 52.5	+3.6
KRX	Arik	4.35	14	*e*P	Pn	01 59 54.6	+4.9
KRX				*e*S	Sn	02 00 45.7	+6.5
SPN	Mys Shipunski	4.41	25	*e*P	Pn	01 59 55.0	+4.6
SPN				*e*S	Sn	02 00 45.6	+5.1
GNL	Ganaly	4.59	8	*e*P	Pn	01 59 57.3	+4.3
TUMR	Tumrok	6.45	17	*e*P	Pn	02 00 23.3	+4.8
KBTR	Krutoberegovo	7.92	25	*e*P	Pn	02 00 42.2	+3.6

IDC 06 01:59:12.2±3.9, 71°.23N×3°.91W, h0^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.2/34, mbtmp3.5/5, ML2.3/2, Error ellipse: s-maj=58.5km s-min=38.0km az=148.0

BER 06 01:59:18.3±1.9, 71°.35N×4°.05W, h15^{km}±59^{km}, ML2.3, Confirmed Earthquake

ISC 06 01:59:12.7±1.0, 71°.35N±0°.09×3°.91W±0°.08, h12^{km}, n15, σ3^{s}.10/19, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	Daneborg	5.66	309	*e*P	Pn	02 00 37.5	+1.1
DBG				*e*S	Sn	02 01 36.2	-5.0
LOF	Lofoten	6.85	110	*e*P	Pn	02 00 56.4	+3.6
LOF				IAML		02 02 12.4	
	comp=Z,6.3nm,0.8s						
STEI	Steigen	7.49	108	*e*P	Pn	02 01 04.1	+2.6
STEI				*e*S	Sn	02 02 21.1	-5.1
STEI				IAML		02 02 31.4	
	comp=Z,3.4nm,1.1s						
NBB30	Finnes	7.65	116	*e*P	Pn	02 01 06.9	+3.1
N2IH	Innhavet	7.68	107	*e*P	Pn	02 01 07.1	+3.0
HSPB	Hornsund (broa	7.72	34	*e*P	Pn	02 01 06.3	+1.6
TRO	Tromso	7.81	92	*e*P	Pn	02 01 06.7	+0.8
TRO				IAML		02 02 11.0	
	comp=Z,2.4nm,0.8s						
KBS	Kingsbay	8.58	21	*e*P	Pn	02 01 18.9	+2.4
SPA0	Spitsbergen Ar	8.62	28	*e*P	Pn	02 01 19.5	+2.5
KIF	Kilpisjarvi	8.68	94	*e*P	Pn	02 01 20.0	+2.1
KIF				*e*S	Sn	02 02 50.0	-5.6
ARCES	ARCESS Array B	9.97	86	Pn	Pn	02 01 37.0	+1.5
	baz=289,slow=11,SNR=16						
NOA	NORSAR Array B	11.96	142	Pn	Pn	02 02 02.7	-0.1
	comp=Z,0.0nm,0.3s,baz=333,slow=9.5,SNR=1.8						
NOA				Sn	Sn	02 04 13.0	-3.0
	comp=Z,0.0nm,0.3s,baz=183,slow=10,SNR=2.0						
FINES	FINESS Array B	15.36	115	Pn	Pn	02 02 49.7	+0.8
	baz=316,slow=9.8,SNR=1.5						
AKASG	Malin Array Be	25.57	126	P	P	02 04 41.5	+0.5
	comp=Z,0.4nm,0.4s,baz=340,slow=9.4,SNR=1.7						
TORD	Torodi Ar. Bea	58.27	174	P	P	02 09 07.5	+0.6
	comp=Z,0.3nm,0.4s,baz=1.2,slow=6.2,SNR=1.6						

WEL 06 02:05:26.3, 43°S±2°×17°1E±°, h5^{km}±2^{km}, M2.5/12, mB5.2/1, ML2.5/12, MLv2.5/12, Mw(mB)4.6/1, Error ellipse: s-maj=0.0km s-min=0.0km az=129.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.36	267	P	Pb	02 05 35.2	-0.1
INZ	Inchbonnie	0.37	25	P	Pb	02 05 34.8	-0.6
OXZ	Oxford	0.65	115	P	Pb	02 05 40.7	+0.5
RPZ	Rata Peaks	0.67	191	P	Pb	02 05 40.8	+0.4
GCSZ	Gaunt Creek Bo	0.71	248	P	Pb	02 05 41.3	+0.1
LTZ	Lake Taylor	0.81	70	P	Pb	02 05 43.7	+0.8
ARCZ	Arundel	0.89	183	P	Pn	02 05 44.9	-0.6
RACZ	Rakaia	0.94	136	P	Pn	02 05 46.8	+0.6
FOZ	Fox Glacier	1.14	245	P	Pn	02 05 49.1	+0.3
MQZ	McQueen's Vall	1.22	122	P	Pn	02 05 50.5	+0.5
GVZ	Greta Valley S	1.33	87	P	Pg	02 05 53.7	+2.0
TMZ	Timaru	1.33	187	P	Pg	02 05 52.6	+0.7
DSZ	Denniston Nort	1.38	18	P	Pn	02 05 45.9	-6.4
AKCZ	Akaroa Harbour	1.47	124	P	Pb	02 05 53.9	-0.2
OKCZ	Okains Bay	1.49	117	P	Pg	02 05 55.2	+0.3
LBZ	Lake Benmore	1.53	209	P	Pg	02 05 55.6	0.0
THZ	Tophouse	1.79	44	P	Pb	02 05 59.6	-0.1
KHZ	Kahutara	1.82	70	P	Pb	02 05 59.2	-0.8
ODZ	Otahua Downs	2.03	192	P	Pn	02 06 02.1	+0.9
JCZ	Jackson Bay	2.05	239	P	Pb	02 06 03.9	-0.1
WKZ	Wanaka	2.38	221	P	Pg	02 06 12.4	+0.4
TWVZ	Taurewa	5.10	40	P	Pn	02 06 44.9	+1.5
PKGZ	Pakihiroa	7.34	48	P	Pn	02 07 13.3	-0.9

IDC 06 02:11:11.7±0.6, 56°.64S×150°.59W, h0^{km}, mb4.6/10, mb1 4.7/10, mb1mx4.4/29, mbtmp4.6/10, MS3.9/10, Ms1 3.9/10, ms1mx3.7/18, Error ellipse: s-maj=36.5km s-min=15.9km az=0.0

NEIC 06 02:11:13.6±1.3, 56°.8S±0°.2×150°.5W±0°.2, h10^{km}±1^{km}, mb5.0/33, Error ellipse: s-maj=26.7km s-min=18.0km az=199.0

GCMT 06 02:11:19.6±0.3, 56°.91S±0°.02×150°.59W±0°.07, h20^{km}±1^{km}, MW5.0/65, Moment Tensor Solution. s27,c31; s65,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.53±.24; $M_{\theta\theta}$3.25±.15; $M_{\phi\phi}$0.27±.14; $M_{r\theta}$0.74±.21; $M_{\theta\phi}$-0.08±.09; $M_{\phi r}$-1.27±.36; Best double couple: $M_0$3.66300×10^{16} NP1:ϕ_s77.00000°,δ41.00000°,λ-115.00000°. NP2: ϕ_s288.00000°,δ54.00000°,λ-70.00000°. Principal axes: T 3.3460, Plg7.0000°, Azm4.0000°; N 0.6300, Plg16.0000°, Azm96.0000°; P -3.9810, Plg73.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 02:11:13.5±0.5, 56°.9S±0°.1×150°.51W±0°.10, h10^{km}, n99, σ0^{s}.91/72, mb5.0/24, MS4.0/14, 2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.32	201	P	P	02 16 51.4	+2.4
	3.0nm,1.0s,baz=56,slow=9.5,SNR=9.7						
VNDA				LR	LR	02 24 44.9	
	comp=Z,243nm,18.1s,baz=78,slow=31						
VNDA	Vanda	26.32	201	P	P	02 16 50.1	+1.2
QSPA	South Pole Qui	33.27	180	P	P	02 17 51.3	+0.6
TBI	Tubuai	33.50	2	*e*S	S	02 23 23.0	+8.4
	57nm,24.2s						
TBI				*e*LR	LR	02 26 33.0	
	comp=Z,677nm,28.8s,baz=195						
TBI	Tubuai	33.50	2	*e*T	T	02 52 59.2	
	34nm,0.3s						
MEH	Mehetia	38.98	4	*e*T	T	02 59 50.1	
	9.0nm,0.2s						
PAE	Paea	39.16	1	*e*T	T	03 00 03.3	
	0.8nm,0.3s						
PPT2	Papeete2	39.23	1	*e*S	S	02 24 51.2	+8.9
	99nm,24.5s						
PPT2				*e*LR	LR	02 29 08.5	
	comp=Z,835nm,28.0s,baz=184						
PPT	Papeete	39.25	1	LR	LR	02 31 42.3	
	comp=Z,180nm,18.0s,baz=225,slow=32						
VAH	Vaihoa	41.62	4	*e*T	T	03 03 08.0	
	70nm,0.3s						
ARMA	Armidale	47.67	278	P	P	02 19 51.6	+1.6
ARMA				IAmb	IAmb	02 19 53.7	
	comp=Z,21nm,1.6s						
TAOE	Nuku Hiva Isla	48.59	14	*e*LR	LR	02 33 37.7	
	comp=Z,351nm,27.1s						
VNA3	Neumayer Olymp	49.22	164	P	P	02 20 00.2	-1.1
SNAA	Sanae	49.75	167	P	P	02 20 04.2	-1.3
SNAA	Sanae	49.75	167	LR	LR	02 39 08.2	
	comp=Z,92nm,18.8s,baz=182,slow=34						
SNAA	Sanae	49.75	167	P	P	02 20 07.3	+1.9
VNA2	Neumayer--Watz	49.83	165	P	P	02 20 05.1	-0.9
	baz=208,slow=8.5						
PLCA	Paso Flores	51.97	108	P	P	02 20 23.1	+0.5
	comp=Z,12nm,1.1s,baz=214,slow=7.9,SNR=5.1						
PLCA	Paso Flores	51.97	108	P	P	02 20 22.9	+0.3
PLCA				IAmb	IAmb	02 20 25.1	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	52.05	268	P	P	02 20 23.1	-0.1
	comp=Z,4.7nm,0.7s,baz=116,slow=7.3,SNR=7.3						
STKA				LR	LR	02 40 02.7	
	comp=Z,102nm,18.0s,baz=194,slow=33						
STKA	Stephens Creek	52.05	268	P	P	02 20 22.8	-0.4
H03S2	Juan Fernandez	52.58	96	T	T	03 17 28.7	
	baz=219,slow=74,SNR=101						
H03S1	Juan Fernandez	52.59	96	T	T	03 17 30.0	
	baz=219,slow=74,SNR=127						
H03S3	Juan Fernandez	52.60	96	T	T	03 17 27.7	
	baz=219,slow=74,SNR=123						
LC01	Cunco	52.62	106	P	P	02 20 28.5	+1.2
LC01				IAmb	IAmb	02 20 29.2	
	comp=Z,24nm,1.0s						
H03N3	Juan Fernandez	52.87	96	T	T	03 17 47.9	
	baz=222,slow=72,SNR=138						
H03N2	Juan Fernandez	52.88	96	T	T	03 17 44.0	
	baz=222,slow=72,SNR=124						
H03N1	Juan Fernandez	52.89	96	T	T	03 17 46.2	
	baz=222,slow=72,SNR=95						
MAW	Mawson	53.39	195	LR	LR	02 40 30.4	
	comp=Z,207nm,21.3s,baz=218,slow=33						
SYO	Syowa Base	54.20	184	⇓*e*X	P	02 20 37.0	-1.5
SYO	Syowa Base	54.20	184	⇓*e*X	P	02 20 45.6	+7.1
BO02	Sierra Bellavi	56.26	103	P	P	02 20 54.2	+0.2
BO02				IAmb	IAmb	02 20 56.3	
	comp=Z,13nm,1.1s						
MT02	Curacav	57.24	102	P	P	02 21 01.1	+0.3
MT05	Renca	57.35	102	P	P	02 21 01.8	0.0
ROC1	El Roble	57.52	102	P	P	02 21 02.8	-0.3
PEL	Peldehue	57.57	102	P	P	02 21 03.5	+0.2
PEL				IAmb	IAmb	02 21 04.6	
	comp=Z,16nm,0.9s						
VA03	San Esteban	57.94	102	P	P	02 21 04.6	-1.3
VA03				IAmb	IAmb	02 21 07.2	
	comp=Z,14nm,1.0s						
CO02	Combarbal	58.90	100	P	P	02 21 12.7	0.0
CO03	El Pedregal	59.35	100	P	P	02 21 15.5	-0.2
CO03				IAmb	IAmb	02 21 17.0	
	comp=Z,9.6nm,0.9s						
AC05	El Transito	61.13	99	P	P	02 21 27.7	-0.3
AC05				IAmb	IAmb	02 21 29.3	
	comp=Z,15nm,0.9s						
AS31	Alice Springs	62.68	268	P	P	02 21 39.4	+1.0
ASAR	Alice Springs	62.68	268	P	P	02 21 37.0	-1.4
	comp=Z,4.8nm,0.7s,baz=144,slow=6.2,SNR=31						
ASAR				LR	LR	02 45 12.2	
	comp=Z,86nm,20.6s,baz=162,slow=33						
AC02	Maricunga	63.33	99	P	P	02 21 43.6	+0.4
AC02				IAmb	IAmb	02 21 45.2	
	comp=Z,12nm,0.9s						

H01W1	**Cape Leeuwin H**	64.28	245	T	T	03 31 53.1	
	baz=141,slow=75,SNR=19						
H01W2	**Cape Leeuwin H**	64.28	245	T	T	03 31 53.6	
	baz=141,slow=75,SNR=19						
H01W3	**Cape Leeuwin H**	64.30	245	T	T	03 31 54.5	
	baz=141,slow=75,SNR=18						
PB14	**IPOC Station P**	64.39	96	P	P	02 21 49.7	-0.3
PB14				IAmb	IAmb	02 21 51.0	
	comp=Z,15nm,1.0s						
GO02	**Mina Guanaco**	64.41	97	P	P	02 21 50.4	+0.3
GO02				IAmb	IAmb	02 21 51.2	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	65.43	271	P	P	02 21 55.3	-1.1
WB2				IAmb	IAmb	02 21 58.4	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	65.44	271	P	P	02 21 55.6	-0.9
	comp=Z,2.2nm,0.9s,baz=149,slow=5.8,SNR=9.3						
WRA				LR	LR	02 47 28.0	
	comp=Z,71nm,19.7s,baz=350,slow=33						
LVC	**Limon Verde**	66.82	96	P	P	02 22 05.4	-0.4
PB09	**IPOC Station P**	67.29	95	P	P	02 22 08.2	-0.4
PB01	**IPOC Station P**	67.76	95	P	P	02 22 11.0	-0.4
PB01				IAmb	IAmb	02 22 13.2	
	comp=Z,8.4nm,0.8s						
TA01	**Diego Aracena**	67.77	94	P	P	02 22 12.3	+1.0
PSGCX	**Pisagua**	68.58	93	P	P	02 22 17.7	+1.1
GO01	**Chusmiza**	69.03	94	P	P	02 22 19.4	-0.5
GO01				IAmb	IAmb	02 22 26.6	
	comp=Z,20nm,1.6s						
MNMC	**Minye Minye**	69.25	93	P	P	02 22 20.7	-0.2
PB16	**IPOC Station P**	69.94	93	P	P	02 22 24.9	-0.8
PB16				IAmb	IAmb	02 22 28.0	
	comp=Z,10nm,0.9s						
CPUP	**Villa Florida**	70.04	108	P	P	02 22 25.0	-0.4
	comp=Z,10nm,1.0s,baz=244,slow=6.6,SNR=5.2						
CPUP	**Villa Florida**	70.04	108	P	P	02 22 25.8	+0.4
CPUP				IAmb	IAmb	02 22 26.6	
	comp=Z,13nm,1.0s						
NNA	**Nana**	71.12	83	P	P	02 22 31.7	-0.5
	comp=Z,10nm,0.7s,baz=226,slow=5.7,SNR=5.6						
NNA	**Nana**	71.12	83	P	P	02 22 31.9	-0.3
ATAH	**Atahualpa**	74.31	79	P	P	02 22 53.1	+1.6
	comp=Z,9.5nm,1.0s,baz=157,slow=11,SNR=6.4						
SIV	**San Ignacio**	76.46	98	P	P	02 23 03.2	-0.3
	comp=Z,5.5nm,1.0s,baz=218,slow=5.4,SNR=16						
OTAV	**Otavalo**	80.46	75	P	P	02 23 25.3	-0.8
SAML	**Samuel**	81.11	93	P	P	02 23 29.0	0.0
BDFB	**Brasilia**	83.71	109	P	P	02 23 42.2	-0.6
	comp=Z,1.7nm,0.5s,baz=243,slow=9.0,SNR=3.1						
BDFB				LR	LR	02 57 30.9	
	comp=Z,33nm,18.0s,baz=135,slow=33						
BDFB	**Brasilia**	83.71	109	P	P	02 23 42.7	0.0
BDFB				IAmb	IAmb	02 24 00.4	
	comp=Z,17nm,1.6s						
BOSA	**Boshof**	94.77	176	LR	LR	03 05 36.4	
	comp=Z,50nm,18.1s,baz=199,slow=34						
NVAR	**Mina Array Bea**	98.78	25	LR	LR	03 01 17.2	
	comp=Z,46nm,18.4s,baz=248,slow=30						
H10S3	**ASCENSION HYDR**	105.06	135	T	T	04 23 31.7	
	baz=16,slow=74,SNR=26						
H10S2	**ASCENSION HYDR**	105.06	135	T	T	04 23 30.0	
	baz=204,slow=74,SNR=13						
H10N3	**ASCENSION HYDR**	106.14	134	T	T	04 25 04.6	
	baz=203,slow=75,SNR=67						
H10N1	**ASCENSION HYDR**	106.14	134	T	T	04 25 03.6	
	baz=203,slow=75,SNR=51						
H10N2	**ASCENSION HYDR**	106.16	134	T	T	04 24 51.8	
	baz=203,slow=75,SNR=47						
NJ2	**Nanjing**	116.53	288	*e*PKP	PKiKP	02 29 58.6	+1.6
CCB	**Clear Creek Bu**	121.22	1		PKiKP	02 30 06.3	+1.2
IL31		121.36	2		PKiKP	02 30 05.3	0.0
ILAR	**Eielson Array**	121.36	2	PKP	PKPdf	02 30 04.9	-0.4
	comp=Z,3.8nm,1.0s,baz=230,slow=1.8,SNR=23						
YKA	**Yellowknife Ar**	122.26	19	PKP	PKPdf	02 30 06.4	-0.7
	comp=Z,0.9nm,1.0s,baz=184,slow=1.7,SNR=7.5						
CD2	**Chengdu**	123.72	276	PKP	PKiKP	02 30 12.0	+0.7
HHC	**Hu-ho-hao-te**	127.02	290	*e*PKP	PKPdf	02 30 14.8	-2.3
LZH	**Lanzhou**	127.60	280	*e*PKP	PKiKP	02 30 19.8	+0.8
WMQ	**Urumqi**	141.82	276	*e*PKP	PKiKP	02 30 46.2	-1.2
WMQ				LR	LR		
	comp=Z,340nm,20.1s						
RAYN	**Ar Rayn**	144.69	206	PKPdf	PKPdf	02 30 49.5	-0.7
KBL	**Kabul**	145.20	247		PKPbc	02 30 50.1	-0.5
KSH	**Kashi**	145.30	260	PKPbc	PKiKP	02 30 54.4	-0.4
MK31	**Makanchi Array**	146.66	275		PKPdf	02 30 52.9	+0.1
MKAR	**Makanchi Array**	146.66	275	PKPbc	PKPbc	02 30 53.5	-0.9
	comp=Z,5.3nm,0.8s,baz=113,slow=4.7,SNR=50						
MAKZ	**Makanchi**	146.84	275	PKPdf	PKPbc	02 30 54.0	-1.0
AAK	**Ala-Archa**	148.27	263	PKPdf	PKPdf	02 30 56.3	+0.5
HRA	**Herat**	148.40	239		PKPdf	02 30 56.6	+0.2
ZAA0	**Zalesovo Array**	149.18	288		PKPdf	02 30 57.8	+1.1
ZALV	**Zalesovo Beam**	149.18	288	PKPbc	PKPbc	02 30 59.7	-1.2
	comp=Z,1.7nm,0.6s,baz=126,slow=3.1,SNR=12						
SUMG	**Summit**	149.22	33	PKPdf	PKPdf	02 30 57.8	+1.1
KK31	**Karatay Array**	150.75	260	PKPdf	PKPdf	02 31 00.2	+0.7
KKAR	**Karatay Array**	150.75	260	PKPdf	PKPdf	02 31 00.3	+0.8
KURK	**Kurchatov**	150.88	279	PKPdf	PKPdf	02 31 00.4	+1.0
ESDC	**Sonseca Array**	152.25	114	PKPbc	PKiKP	02 31 09.0	0.0
	comp=Z,1.3nm,0.9s,baz=249,slow=1.4,SNR=9.4						

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*IDC **06** 02:12:09.4±0.8, 30°.73S×71°.87W, h0^{km}, mb4.4/6, mb1 4.3/9, mb1mx4.1/26, mbtmp4.3/9, ML4.0/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/28, Error ellipse: s-maj=27.6km s-min=18.7km az=131.0*
*SJA **06** 02:12:12.2±1.1, 30°.66S×71°.96W, h15^{km}, ML4.2, MW4.4*
*NEIC **06** 02:12:14.6±1.1, 30°.74S±0°.04×71°.98W±0°.07, h35^{km}±3^{km}, mb4.3/5, ML4.3(GUC), Error ellipse: s-maj=8.5km s-min=5.6km az=86.0*
*GUC **06** 02:12:16.3±0.7, 30°.81S×71°.75W, h51^{km}±4^{km}, ML4.3*
ISC 06 02:12:10.3±1.7, **30°.73S**±0°.03×**71°.94W**±0°.04, **h6**^{km}±11^{km}, **n95**, σ**1^{s}.68**/128, **mb4.5**/7, **7C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	0.93	120	⇑*i*P	Pn	02 12 31.2	+1.1
CO02				*i* S	Sb	02 12 41.9	+0.2
CO02				IAML		02 12 45.2	
	comp=N,35µm,0.6s						
CO02	**Combarbal**	0.93	120		Pn	02 12 31.6	+1.5
CO02				Sn	Sn	02 12 43.8	-0.1
CO03	**El Pedregal**	1.08	96	⇑*i*P	Pn	02 12 33.5	+1.4
CO03				*i* S	Sb	02 12 45.9	0.0
CO03				IAML		02 12 49.4	
	comp=N,11µm,0.5s						
CO03	**El Pedregal**	1.08	96	Pn	Pn	02 12 33.6	+1.5
CO03				Sn	Sn	02 12 47.7	+0.2
GO04	**Tololo Observa**	1.13	61	*e*P	Pn	02 12 34.6	+1.7
GO04				*i* S	Sn	02 12 49.5	+0.6
GO04	**Tololo Observa**	1.13	61		Pn	02 12 34.8	+1.9
GO04				Sn	Sn	02 12 49.2	+0.3
GO04	**Tololo Observa**	1.13	61	*e*P	Pn	02 12 35.0	+2.0
GO04				*e*S	Sn	02 12 49.5	+0.6
CO01	**Juntas del Tor**	1.76	65	⇓*i*P	Pg	02 12 44.4	+0.3
CO01				*i* S	Sb	02 13 05.6	-0.1
CO01				IAML		02 13 06.6	
	comp=N,4µm,0.3s						
CO01	**Juntas del Tor**	1.76	65		Pb	02 12 44.2	+1.0
CO01				Sn	Sb	02 13 05.6	-0.1
LCO	**Las Campanas**	2.02	32	Pn	Pn	02 12 47.6	+2.3
LCO				Sn	Sn	02 13 11.3	+0.2
AROD	**Rodeo**	2.20	76	*e*P	Pb	02 12 52.1	+1.3
AROD				*e*S	Sb	02 13 19.1	+0.7
VA01	**Torpederas**	2.30	174	Pn	Pn	02 12 49.9	+1.1
VA03	**San Esteban**	2.34	150	⇑*i*P	Pn	02 12 51.9	+2.4
VA03				*i* S	Sn	02 13 18.5	-0.2
VA03				IAML		02 13 31.0	
	comp=E,3µm,0.6s						
VA03	**San Esteban**	2.34	150		Pn	02 12 52.0	+2.4
ROCH	**El Roble**	2.37	161	⇑*i*P	Pn	02 12 52.0	+2.0
ROCH				*i* S	Sn	02 13 19.2	-0.3
ROCH				IAML		02 13 35.6	
	comp=N,2µm,0.3s						
ROC1	**El Roble**	2.37	161		Pn	02 12 52.0	+2.0
ROC1	**El Roble**	2.37	161	*i* P	Pn	02 12 52.0	+2.0
ROC1				*e*S	Sn	02 13 19.3	-0.3
AC05	**El Transito**	2.38	38	*e*P	Pb	02 12 53.2	-0.5
AC05				*i* S	Sn	02 13 21.7	+2.1
AC05	**El Transito**	2.38	38		Pb	02 12 53.2	-0.5
ACCO	**Cerro Coronel**	2.48	87	*e*P	Pb	02 12 56.3	+0.8
ACCO				*e*S	Sg	02 13 28.0	-2.0
ACCO				IAML		02 13 31.8	
	comp=Z,789nm,0.4s						
ACDV	**Cuesta del Vie**	2.50	78	*e*P	Pb	02 12 56.5	+0.8
ACDV				IAML		02 13 40.8	
	comp=Z,786nm,1.1s						
RTLS	**Leoncito**	2.50	116	*e*P	Pb	02 12 56.5	+0.7
RTLS				*e*S	Sb	02 13 27.6	+0.6
RTLS				IAML		02 13 32.5	
	comp=Z,1µm,0.6s						
MT02	**Curacav**	2.61	165	*e*P	Pn	02 12 54.5	+1.4
MT02				*i* S	Sn	02 13 24.6	-0.6
MT02	**Curacav**	2.61	165		Pn	02 12 54.5	+1.4
AC04	**Llanos de Chal**	2.63	17	Pn	Pn	02 12 55.2	+1.9
PEL	**Peldehue**	2.63	156	⇑*i*P	Pn	02 12 55.8	+2.4
PEL				*i* S	Sn	02 13 25.7	0.0
PEL				IAML		02 13 32.3	
	comp=E,1µm,0.4s						
PEL	**Peldehue**	2.63	156	Pn	Pn	02 12 55.9	+2.4
PEL	**Peldehue**	2.63	156	*e*P	Pn	02 12 56.2	+2.8
PEL				*e*S	Sn	02 13 26.0	+0.3
AUSP	**Uspallata**	2.64	125	*e*P	Pb	02 12 58.3	+0.1
AUSP				*e*S	Sb	02 13 30.6	-0.3
MT05	**Renca**	2.84	159	⇑*i*P	Pn	02 12 58.7	+2.4
MT05				*i* S	Sn	02 13 30.8	-0.1
MT05				IAML		02 13 46.2	
	comp=N,2µm,0.3s						
MT05	**Renca**	2.84	159	Pn	Pn	02 12 58.8	+2.4
ZON	**Zonda**	2.91	107	Pn	Pb	02 13 01.2	-1.5
ZON	**Zonda**	2.91	107	*e*P	Pb	02 13 02.0	-0.7
ZON				*e*S	Sb	02 13 38.0	-0.6
ZON				IAML		02 13 41.8	
	comp=Z,805nm,0.4s						
MT03	**Universidad Ad**	3.01	157	*e*P	Pn	02 13 01.0	+2.3
MT03				*i* S	Sn	02 13 34.6	-0.5
MT03				IAML		02 13 50.5	
	comp=N,2µm,0.4s						
RTLL	**Cerro Villicun**	3.03	102	*e*P	Pb	02 13 03.0	-1.8
RTLL				*e*S	Sb	02 13 39.5	-2.6
RTLL				IAML		02 13 40.9	
	comp=Z,725nm,0.5s						
RTCV	**Cerro Valdivia**	3.12	112	*e*P	Pb	02 13 04.9	-1.3
RTCV				IAML		02 14 06.8	
	comp=Z,402nm,1.0s						
MT09	**Talagante**	3.14	165	⇑*i*P	Pn	02 13 02.9	+2.4
MT09				*i* S	Sn	02 13 38.2	-0.2
MT09				IAML		02 13 50.6	
	comp=N,629nm,0.5s						
ASAL	**Salagasta**	3.23	126	*e*P	Pb	02 13 07.0	-1.2
ASAL				*e*S	Sb	02 13 46.9	-0.9
ASAL				IAML		02 14 03.2	
	comp=Z,1µm,1.7s						
ARCO	**CERRO ARCO**	3.31	130	*e*P	Pb	02 13 08.8	-0.8
ARCO				IAML		02 14 06.0	
	comp=Z,588nm,0.8s						
LMEL	**Las Melosas**	3.44	155	*e*P	Pn	02 13 07.1	+2.5
LMEL				*i* S	Sn	02 13 44.8	-0.9
LMEL				IAML		02 13 52.5	
	comp=N,764nm,0.5s						
GO03	**Copiap**	3.46	26	*e*P	Pn	02 13 07.1	+2.2
GO03				*i* S	Sn	02 13 47.2	+0.9
GO03	**Copiap**	3.46	26		Pn	02 13 06.9	+2.0
GO03	**Copiap**	3.46	26	*e*P	Pn	02 13 07.4	+2.5
GO03				*e*S	Sn	02 13 46.8	+0.4
AAGR	**Agrelo**	3.53	132	*e*P	Pb	02 13 11.6	-1.8
AAGR				IAML		02 14 12.9	
	comp=Z,367nm,1.4s						
VCA	**Vinchina**	3.81	59	*e*P	Pb	02 13 15.4	-2.6
VCA				*e*S	Sb	02 14 00.7	-3.8
VCA				IAML		02 14 21.9	
	comp=Z,452nm,0.3s						
BO02	**Sierra Bellavi**	4.16	167	*e*P	Pn	02 13 16.5	+2.0
BO02				*i* S	Sn	02 14 02.3	-1.3
BO02	**Sierra Bellavi**	4.16	167	Pn	Pn	02 13 16.1	+1.6
AC02	**Maricunga**	4.60	33	Pn	Pn	02 13 23.4	+2.5
AC01	**Pan de Azucar**	4.72	15	Pn	Pn	02 13 22.3	+0.2
LAMA	**Las Malvinas**	4.78	152	*e*P	Pn	02 13 27.6	+4.6
COIS	**El Sosneado**	4.79	156	*e*P	Pn	02 13 23.4	+0.4
RFA	**San Rafael**	4.98	145	*e*P	Pn	02 13 29.0	+3.3
RFA				*e*S	Sb	02 14 41.0	+3.0
CYA	**Choya**	5.81	68	*e*P	Pn	02 13 40.3	+3.2
CYA				*e*S	Sn	02 14 43.8	-0.4
CYA				IAML		02 15 07.0	
	comp=Z,89nm,1.2s						
GO02	**Mina Guanaco**	5.92	21	Pn	Pn	02 13 39.3	+0.4
BI03	**Tigo**	6.16	188		Pn	02 13 42.2	+0.3
PB14	**IPOC Station P**	6.23	13	Pn	Pn	02 13 42.5	-0.7
PB14	**IPOC Station P**	6.23	13	*e*P	Pn	02 13 42.5	-0.7
PB14				*e*S	Sn	02 14 50.0	-5.0
PB14				IAML		02 15 35.4	
	comp=Z,66nm,0.8s						
TCA	**Tanti**	6.33	97	*e*P	Pn	02 13 46.1	+1.7
TCA				*e*S	Sb	02 15 12.3	-4.7
TCA				IAML		02 15 43.0	
	comp=Z,100nm,0.7s						
H03N1	**Juan Fernandez**	6.50	244	Pn	Pn	02 13 48.5	+2.1
	baz=113,slow=19,SNR=104						
H03N1				T	T	02 20 46.8	
	baz=72,slow=72						
H03N3	**Juan Fernandez**	6.52	244	Pn	Pn	02 13 48.5	+1.9
	baz=113,slow=19,SNR=70						
H03N3				T	T	02 20 46.5	
	baz=72,slow=72						
H03N2	**Juan Fernandez**	6.52	244	Pn	Pn	02 13 48.5	+1.9
	baz=113,slow=19,SNR=96						
H03N2				T	T	02 20 47.4	
	baz=72,slow=72						
VA04	**Juan Fernndez**	6.52	242	Pn	Pn	02 13 47.9	+1.0
H03S3	**Juan Fernandez**	6.66	241	Pn	Pn	02 13 49.1	+0.6
	baz=75,slow=27,SNR=19						
H03S1	**Juan Fernandez**	6.67	240	Pn	Pn	02 13 49.1	+0.6
	baz=75,slow=27,SNR=17						
H03S2	**Juan Fernandez**	6.68	241	Pn	Pn	02 13 49.2	+0.5
	baz=75,slow=27,SNR=34						
FSA	**Cafayete**	6.98	50	*e*P	Pn	02 13 56.7	+3.3
LC01	**Cunco**	8.15	180	Pn	Pn	02 14 09.6	+0.4
PB06	**IPOC Station P**	8.27	15	Pn	Pn	02 14 12.3	+1.3
LVC	**Limon Verde**	8.53	19	Pn	Pn	02 14 14.2	-0.6
	comp=Z,0.4nm,0.3s,baz=164,slow=5.3,SNR=6.3						
LVC				LR	LR	02 17 33.3	
	comp=Z,120nm,19.9s,baz=220,slow=38						
LVC	**Limon Verde**	8.53	19	Pn	Pn	02 14 15.3	+0.5
PB07	**IPOC Station P**	9.16	12	Pn	Pn	02 14 24.4	+1.2
PB09	**IPOC Station P**	9.22	16	Pn	Pn	02 14 25.8	+1.6
PLCA	**Paso Flores**	10.04	174	Pn	Pn	02 14 35.6	+0.4
	comp=Z,0.5nm,0.3s,baz=337,slow=11,SNR=13						
PLCA				LR	LR	02 18 24.5	
	comp=Z,109nm,21.6s,baz=345,slow=37						
PLCA	**Paso Flores**	10.04	174	Pn	Pn	02 14 36.4	+1.2
LL01	**San Ignacio de**	11.63	182	Pn	Pn	02 14 57.8	+1.0
CPUP	**Villa Florida**	13.57	75	Pn	Pn	02 15 26.4	+3.0
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=1.7						
CPUP				Lg	Lg	02 19 20.5	
	comp=Z,0.2nm,0.3s,baz=159,slow=19,SNR=1.9						
CPUP				LR	LR	02 21 06.2	
	comp=Z,141nm,20.6s,baz=236,slow=40						
CPUP	**Villa Florida**	13.57	75		Pn	02 15 23.7	+0.3
SIV	**San Ignacio**	17.72	37	P	Pn	02 16 18.8	+0.9
	comp=Z,0.7nm,0.3s,baz=236,slow=9.9,SNR=14						
SIV				LR	LR	02 24 13.6	
	comp=Z,138nm,19.4s,baz=188,slow=41						
SPB	**Sao Paulo**	22.91	78	P	P	02 17 15.8	+0.8
SAML	**Samuel**	23.16	22	P	P	02 17 19.1	+1.4
SAML				IAmb	IAmb	02 17 20.8	
	comp=Z,4.5nm,0.8s						
BDFB	**Brasilia**	26.55	61	P	P	02 17 49.1	-0.2
	comp=Z,4.4nm,0.7s,baz=235,slow=12,SNR=8.3						
BDFB				LR	LR	02 29 09.8	
	comp=Z,92nm,19.1s,baz=157,slow=38						
BDFB	**Brasilia**	26.55	61	P	P	02 17 49.8	+0.4
BDFB				IAmb	IAmb	02 18 05.2	
	comp=Z,8.6nm,1.0s						
OTAV	**Otavalo**	31.42	347	P	P	02 18 31.4	-1.6
DBIC	**Dimbokro**	74.07	72	P	P	02 23 47.4	-0.3
	comp=Z,2.2nm,0.5s,baz=208,slow=7.4,SNR=10						
DBIC	**Dimbokro**	74.07	72	P	P	02 23 47.5	-0.3
DBIC				IAmb	IAmb	02 23 47.6	
	comp=Z,2.8nm,0.6s						
MAW	**Mawson**	76.28	164	P	P	02 23 59.6	+0.1
	comp=Z,2.2nm,0.5s,baz=211,slow=7.7,SNR=6.7						
NVAR	**Mina Array Bea**	81.26	325	P	P	02 24 27.1	-0.5
	comp=Z,0.2nm,0.9s,baz=164,slow=4.6,SNR=3.4						
BOSA	**Boshof**	81.52	118	P	P	02 24 29.1	-0.2
	comp=Z,3.3nm,0.6s,baz=248,slow=3.3,SNR=11						
TORD	**Torodi Ar. Bea**	83.02	70	P	P	02 24 36.8	-0.3
	comp=Z,3.8nm,0.6s,baz=267,slow=4.9,SNR=15						
WRA	**Warramunga Arr**	123.64	210	PKP	PKPdf	02 31 08.3	-1.3
	comp=Z,0.9nm,0.8s,baz=159,slow=1.6,SNR=10						
H11S2	**WAKE ISLAND Hy**	125.84	271	T	T	04 50 04.3	
	baz=115,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	125.85	271	T	T	04 50 05.6	
	baz=115,slow=75,SNR=49						
H11S3	**WAKE ISLAND Hy**	125.86	271	T	T	04 49 57.7	
	baz=115,slow=75,SNR=46						
ZALV	**Zalesovo Beam**	151.38	29	PKPbc	PKPbc	02 32 04.4	-0.2
	comp=Z,7.3nm,0.7s,baz=297,slow=3.2,SNR=17						
SONM	**Songino Array**	162.87	4	PKPab	PKPab	02 33 02.9	+0.5
	comp=Z,0.7nm,0.8s,baz=323,slow=2.3,SNR=4.4						

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*NNC **06** 02:13:51.2±4.4, 40°.82N×71°.74E, h0^{km}, mb3.5, mpv3.4, Error ellipse: s-maj=38.2km s-min=13.6km az=5.0*
*SOME **06** 02:13:51.5, 40°.93N×71°.63E, h15^{km}*
*KRNET **06** 02:13:51.5±0.1, 40°.95N×71°.63E, h15^{km}, mb2.5*
*ISU **06** 02:13:53, 40°.60N×71°.70E, h5^{km}, Hypocentre not reviewed by the ISC*
ISC 06 02:13:50.5±1.2, **40°.95N**±0°.03×**71°.73E**±0°.02, **h5**^{km}±11^{km}, **n32**, σ**1^{s}.66**/57, **24C-13D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANR	**Andizhan**	0.51	112	*e*P		02 14 14.0	
TRKS	**Terek-Say**	0.73	323	⇑*i*P	Pg	02 14 03.0	-1.6
	baz=26						
TRKS				⇑*i*S	Sg	02 14 12.1	-2.0
	baz=26						
OHH	**Osh**	0.91	117	*e*P		02 14 10.0	
OHH				*e*S		02 14 22.0	
ARSB	**Arslanbob**	1.02	68	⇑*i*P	Pn	02 14 12.2	+0.7
	baz=70						
ARSB				⇑*i*S	Sn	02 14 27.2	+1.0
	baz=70						
BTK	**Batken**	1.13	218	⇑*i*P	Pn	02 14 12.4	-0.6
	baz=15						
BTK				⇑*i*S	Sn	02 14 27.5	-1.4
	baz=15						
BTK	**Batken**	1.13	218	*e*P		02 14 12.0	
BTK				*e*S		02 14 26.0	
DRK	**Karamyk**	1.47	178	⇑*i*P	Pg	02 14 19.2	+0.6
	baz=75						
DRK				⇑*i*S	Sn	02 14 39.2	+1.7
	baz=75						
SFK	**Sufi-Kurgan**	1.64	124	⇓*i*P	Pg	02 14 22.9	+1.0
	baz=23						
SFK				⇓*i*S	Sg	02 14 46.5	+3.3
	baz=23						
SFK	**Sufi-Kurgan**	1.64	124	*e*P		02 14 22.0	
SFK				*e*S		02 14 45.0	
MNAS	**Manas**	1.64	20	⇑*i*P	Pg	02 14 22.7	+0.7
	baz=23						
MNAS				⇑*i*S	Sg	02 14 45.2	+1.9
	baz=23						
IUG	**Iuzhnay**	1.75	314	*e*P	Pb	02 14 23.2	+0.1
	43nm,0.2s						
IUG				*e*S	Sb	02 14 46.3	+0.8
	48nm,0.3s						
IUG	**Iuzhnay**	1.75	314	P	Pb	02 14 23.2	+0.1
	43nm,0.2s						
IUG				S	Sb	02 14 46.3	+0.8
	48nm,0.3s						
AML	**Almayashu**	1.89	51	⇑*i*P	Pg	02 14 27.5	+0.8
	baz=52						
AML				⇑*i*S	Sg	02 14 54.0	+2.8
	baz=52						
DZA	**Taraz**	1.97	351	*e*P	Pb	02 14 27.3	+0.6
	50nm,0.1s						
DZA				*e*S	Sb	02 14 52.9	+1.3
	187nm,0.3s						
DZA	**Taraz**	1.97	351	P	Pb	02 14 27.3	+0.6
	50nm,0.1s						
DZA				S	Sb	02 14 52.9	+1.3
	187nm,0.3s						
CHM	**Chimkent**	2.10	311	*e*P	Pg	02 14 30.5	-0.3
	70nm,0.1s						
CHM				*e*S	Sg	02 14 58.7	+0.7
	192nm,0.4s						
MRKS	**Merke**	2.12	31	*e*P	Pg	02 14 31.4	+0.4
	13nm,0.2s						
MRKS				*e*S	Sg	02 15 00.3	+1.9
	16nm,0.2s						
MRKS	**Merke**	2.12	31	Pg	Pg	02 14 31.4	+0.4
	13nm,0.2s						
MRKS				Lg	Lg	02 15 00.3	
	16nm,0.2s						
ARLS	**Aral**	2.15	64	⇑*i*P	Pg	02 14 31.7	0.0
	baz=65						
ARLS				⇑*i*S	Sg	02 15 00.6	+1.0
	baz=65						
EKS2	**Erkin-Say**	2.30	41	⇑*e*P	Pb	02 14 33.0	+0.6
	baz=43						
EKS2				⇑*i*S	Sb	02 15 03.2	+2.0
	baz=43						
KK31	**Karatay Array**	2.34	338	⇑Pn	Pb	02 14 32.6	-0.5
	2.3nm,0.5s,baz=153,slow=12,SNR=28						
UCH	**Uchtor**	2.45	58	⇓*i*P	Pb	02 14 35.4	+0.2
	baz=59						
UCH				⇓*i*S	Sb	02 15 07.9	+2.1
	baz=59						
BRLS	**Borolday**	2.52	326	*e*P	Pb	02 14 34.3	-1.8
	31nm,0.2s						
BRLS				*e*S	Sn	02 15 05.0	+2.0
	12nm,0.2s						
BRLS	**Borolday**	2.52	326	Pg	Pb	02 14 34.3	-1.8
	31nm,0.2s						
BRLS				Lg	Lg	02 15 05.0	
	12nm,0.2s						
AAK	**Ala-Archa**	2.67	50	⇓*i*P	Pb	02 14 38.4	-0.4
	baz=51						
AAK				⇓*i*S	Sb	02 15 12.7	+0.8
	baz=51						
AAK	**Ala-Archa**	2.67	50	⇑Pg	Pg	02 14 40.9	-0.7
	1.6nm,0.5s						
AAK				⇑Lg	Lg	02 15 17.5	
	4.0nm,0.5s						
KBK	**Karagaybulak**	2.95	54	⇓*e*P	Pb	02 14 42.6	-1.0
	baz=54						
KBK				⇓*i*S	Sb	02 15 19.3	-0.7
	baz=54						
USP	**Ospenovka**	3.10	41	⇑*i*P	Pb	02 14 43.9	-2.2
	baz=42						
USP				⇑*i*S	Sb	02 15 22.7	-1.5
	baz=42						
TKM2	**Tokmak 2**	3.49	54	⇑*i*P	Pb	02 14 49.7	-3.2
	baz=55						
TKM2				⇑*i*S	Sb	02 15 32.3	-3.4
	baz=55						
TKM2	**Tokmak 2**	3.49	54	⇓Pg	Pg	02 14 57.5	+0.1
	1.0nm,0.6s						
TKM2				⇑Lg	Lg	02 15 43.8	
	3.1nm,0.7s						
BOOM	**Boomskoye usch**	3.51	63	⇓*i*P	Pb	02 14 49.9	-3.2
	baz=63						
BOOM				⇓*i*S	Sb	02 15 33.0	-3.0
	baz=63						
ULHL	**Ulahol**	3.62	68	⇓*i*P	Pb	02 14 51.9	-3.2
	baz=68						
ULHL				⇓*i*S	Sb	02 15 35.9	-3.5
	baz=68						
DGS	**Degeres**	3.78	51	*e*P	Pg	02 15 01.6	-1.3
	1.2nm,0.5s						
DGS				*e*S	Sg	02 15 51.9	0.0
	2.8nm,0.6s						
DGS	**Degeres**	3.78	51	Pg	Pg	02 15 01.6	-1.3
	1.2nm,0.5s						
DGS				Lg	Lg	02 15 51.8	
	2.8nm,0.6s						
KST	**Kastek**	3.79	55	*e*P	Pg	02 15 02.1	-0.8
	1.5nm,0.3s						
KST				*e*S	Sg	02 15 52.6	+0.6
	4.4nm,0.6s						
KST	**Kastek**	3.79	55	Pg	Pg	02 15 02.1	-0.8
	1.5nm,0.3s						
KST				Lg	Lg	02 15 52.6	
	4.4nm,0.6s						

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*ISK **06** 02:24:55.9, 40°.19N×25°.19E, h8^{km}, ML2.5/10*
*ATH **06** 02:24:57.0, 40°.20N×25°.20E, h15^{km}±2^{km}, ML1.8/2, Error ellipse: s-maj=2.3km s-min=0.9km az=156.0*
ISC 06 02:24:56.3±1.1, **40°.16N**±0°.04×**25°.21E**±0°.03, **h25**^{km}±10^{km}, **n19**, σ**0^{s}.89**/26, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIA	Limnos Island	0.26	184	P	Pb	02 25 03.4	+0.7
LIA				S	Sn	02 25 07.3	-2.4
SMTH	Samothraki Isl	0.40	38	P	Pb	02 25 04.3	-0.5
SMTH				S	Sb	02 25 09.4	-1.2
GADA	Gvkgeada	0.53	86	PG	Pb	02 25 06.9	-0.1
GADA				SG	Sb	02 25 14.6	+0.3
THAS	Thassos island	0.58	321	P	Pb	02 25 07.9	+0.1
THAS				S	Sb	02 25 15.1	-0.6
THAS				AML	AML	02 25 17.2	
	comp=N,238μm,0.1s						
THAS				AML	AML	02 25 17.3	
	comp=E,232μm,0.2s						
BOZC	Bozcaada	0.72	116	PG	Pn	02 25 11.3	+0.4
EZN	Ezine	0.92	111	PG	Pn	02 25 14.2	+0.6
ENEZ	Enez	0.93	51	PG	Pn	02 25 14.3	+0.6
OUR	Ouranopolis	0.95	281	P	Pn	02 25 14.4	+0.4
OUR	Ouranopolis	0.95	281	PG	Pn	02 25 14.2	+0.1
OUR				SG	Sn	02 25 27.9	+1.1
ALN	Alexandroupoli	0.98	41	P	Pn	02 25 14.6	+0.2
ALN				S	Sn	02 25 27.7	+0.2
ALN	Alexandroupoli	0.98	41	PG	Pn	02 25 14.6	+0.2
KAVA	Kavala	0.99	328	P	Pn	02 25 15.0	+0.4
KAVA				S	Sn	02 25 27.1	-0.7
KAVA				AML	AML	02 25 29.1	
	comp=N,92μm,0.2s						
KAVA				AML	AML	02 25 29.6	
	comp=E,197μm,0.1s						
GELI	Tayfur-Gelibol	1.00	76	PG	Pn	02 25 15.4	+0.7
RDO	Rodhopi	1.02	14	P	Pn	02 25 14.7	-0.3
RDO				S	Sn	02 25 28.1	-0.4
RDO	Rodhopi	1.02	14	PG	Pn	02 25 15.2	+0.2
ERIK	Erikli-Kesan	1.12	62	PN	Pn	02 25 17.8	+1.4
KDZ	Kurdzhali	1.50	6	PN	Pn	02 25 23.2	+1.6
RKY	Sarkoy-Tekirda	1.60	70	PN	Pn	02 25 26.8	+3.8
EDRB	Edirne	2.05	34	PN	Pn	02 25 30.1	+0.9

DJA 06 02:28:43.8±0.2,1°S±2°×12°1E±°,h10km,M4.0/11,mb4.6/1, mB5.0/1,MLv3.8/11,Mw(mB)4.3/1,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	Ampana	0.91	76	P	Pg	02 29 00.9	-0.4
APSI				S	Sb	02 29 14.1	+0.4
MPSI	Mapaga	1.70	329	P	Pn	02 29 13.1	-0.4
MRSI	Marisa	1.98	36	P	Pn	02 29 16.9	-0.5
MRSI				S	Sn	02 29 43.1	+0.8
LUWI	Luwuk	2.00	88	P	Pn	02 29 17.6	-0.1
LUWI				S	Sn	02 29 43.4	+0.5
TTSI	Tana Toraja	2.13	207	P	Pn	02 29 19.5	+0.1
TTSI				S	Sn	02 29 46.9	+1.0
GTOI	Gorontalo	2.84	52	P	Pn	02 29 28.8	-0.5
SPSI	Sidrap Palu	2.99	200	P	Pn	02 29 31.4	+0.1
BNSI	Bone	3.32	192	P	Pn	02 29 36.0	+0.2
BKSI	Bulukumba	4.21	189	P	Pn	02 29 47.9	-0.2
KBKI	Kotabaru	5.08	245	P	Pn	02 29 59.6	-0.5

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*AEIC **06** 02:39:12±1.0,67°.62N±0°.08×162°.4W±0°.2,h4km±7km, ML3.6,ML3.7/10(NEIC),Error ellipse: s-maj=12.8km s-min=7.9km az=139.0*

*IDC **06** 02:39:12.8±1.2,67°.99N×162°.51W,h0km,mb3.5/8, mb1 3.9/10,mb1mx3.7/42,mbtmp3.7/10,ML3.6/2,MS3.5/2, Ms1 3.5/2,ms1mx2.7/37,Error ellipse: s-maj=30.0km s-min=18.4km az=38.0*

*NEIC **06** 02:39:14.7±1.1,67°.71N±0°.06×162°.8W±0°.1,h34km±8km, Error ellipse: s-maj=9.5km s-min=6.4km az=150.0*

ISC 06 02:39:13.0±0.7,67°.74N±0°.06×162°.43W±0°.06,h10km,n45, σ1s35/48,mb3.6/7,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDOG	Red Dog Mine	0.36	331		Pb	02 39 21.6	0.0
RDOG					Sb	02 39 28.4	+1.1
RDOG	Red Dog Mine	0.36	331	IAML		02 39 28.6	
	comp=E,4μm,0.4s						
RDOG				IAML		02 39 28.9	
	comp=N,3μm,0.6s						
ANM	Nome	3.41	202		Pn	02 40 05.6	-0.5
ANM					Sn	02 40 45.5	-0.9
IM01	Indian Mountai	3.86	113		Pn	02 40 12.6	+0.3
IM01					Sn	02 40 57.7	+0.1
A21K	Barrow	4.14	27		Pn	02 40 17.0	+1.0
COLD	Coldfoot	4.73	91		Pn	02 40 26.2	+1.9
TOLK	Toolik Lake Re	4.88	73		Pn	02 40 27.5	+1.2
MLY	Manley	5.43	115		Pn	02 40 34.0	+0.1
TTA	Tatalina	5.53	148		Pn	02 40 35.5	+0.2
TT01	Tatalina	5.54	148		Pn	02 40 35.8	+0.4
PS01	TAPS Pump Stn	5.57	57		Pn	02 40 37.0	+1.3
I23K	Minto, Yukon-K	5.85	110		Pn	02 40 40.6	+1.0
BPAW	Bear Paw Mtn.	5.94	123		Pn	02 40 41.3	+0.5
NEA2	Nenana	6.26	114		Pn	02 40 46.1	+0.8
KTH	Kantishna Hill	6.34	126		Pn	02 40 47.0	+0.5
MDM	Murphy Dome	6.36	109		Pn	02 40 47.7	+1.1
PPLA	Purkeypile	6.48	134		Pn	02 40 48.4	0.0
COLA	College	6.54	109		Pn	02 40 48.9	-0.2
POKR	Poker Plat Res	6.56	107		Pn	02 40 50.6	+1.2
TRF	Thorofare Moun	6.62	125		Pn	02 40 50.5	+0.3
CCB	Clear Creek Bu	6.68	111		Pn	02 40 51.8	+0.8
WRH	Wood River Hil	6.68	113		Pn	02 40 51.9	+0.8
BM03	Burnt Mountain	6.82	84		Pn	02 40 53.7	+0.7
MCK	McKinley	6.86	120		Pn	02 40 54.0	+0.6
IL31		6.94	108		Pn	02 40 55.2	+0.6
ILAR	Eielson Array	6.94	108	Pn	Pn	02 40 55.8	+1.2
	comp=N,4.8nm,0.3s,baz=303,slow=14,SNR=276						
ILAR				Sn	Sn	02 42 11.5	-2.0
	comp=N,1.6nm,0.3s,baz=298,slow=23,SNR=19						
RND	Reindeer	7.11	121		Pn	02 40 57.3	+0.4
HDA	Harding Lake	7.12	111	Pn	Pn	02 40 57.5	+0.5
SVW2	Sparrevohn	7.29	153	Pn	Pn	02 40 59.6	+0.1
WAT2	Susitna Watana	7.50	123		Pn	02 41 02.9	+0.5
WAT7	Susitna Watana	7.51	124		Pn	02 41 03.1	+0.6
WAT1	Susitna Watana	7.61	124		Pn	02 41 04.8	+0.9
STLK	Strandline Lak	7.73	139		Pn	02 41 05.6	+0.1
INK	Inuvik	10.80	74	Pn	Pn	02 41 46.8	-0.5
	comp=N,1.0nm,0.3s,baz=289,slow=17,SNR=36						
INK				Sn	Sn	02 43 41.7	-6.3
	comp=N,0.6nm,0.3s,baz=110,slow=8.7,SNR=5.0						
INK	Inuvik	10.80	74	Pn	Pn	02 41 46.6	-0.8
KDAK	Kodiak Island	10.94	151	Pn	Pn	02 41 50.5	+1.1
	comp=N,0.1nm,0.3s,baz=337,slow=7.7,SNR=1.5						
YKA	Yellowknife Ar	20.34	82	P	P	02 43 50.1	+1.2
	comp=N,1.0nm,0.4s,baz=306,slow=9.3,SNR=26						
RES	Resolute Bay	21.56	42	P	P	02 44 03.2	+1.1
	comp=N,0.5nm,0.6s,baz=262,slow=20,SNR=1.7						
PDAR	Pinedale Array	37.36	105	P	P	02 46 27.1	+1.6
	comp=N,0.3nm,0.5s,baz=336,slow=6.6,SNR=4.5						
PDAR				LR	LR	03 03 44.6	
	comp=N,90nm,21.6s,baz=190,slow=39						
NVAR	Mina Array Bea	38.09	118	P	P	02 46 32.6	+0.9
	comp=N,0.6nm,0.8s,baz=320,slow=7.3,SNR=3.9						
ARCES	ARCESS Array B	42.88	356	P	P	02 47 08.0	-2.7
	comp=N,2.5nm,0.8s,baz=5.7,slow=12,SNR=1.6						
MJAR	Matsushiro Arr	45.21	257	LR	LR	03 08 37.5	
	comp=N,38nm,18.2s,baz=175,slow=39						
ZALV	Zalesovo Beam	48.80	314	P	P	02 47 57.7	+0.1
	comp=N,0.6nm,0.4s,baz=32,slow=8.5,SNR=2.1						
MKAR	Makanchi Array	55.94	311	P	P	02 48 50.7	-0.1
	comp=N,0.4nm,0.7s,baz=54,slow=3.7,SNR=3.7						
ESDC	Sonseca Array	71.68	17	P	P	02 50 35.9	+1.3
	comp=N,0.4nm,0.8s,baz=347,slow=7.2,SNR=2.0						

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*NEIC **06** 02:50:44.2±1.4,16°.01S±0°.07×167°.9E±0°.2,h174km±3km, mb4.4/13,Error ellipse: s-maj=22.4km s-min=9.1km az=75.0*

*IDC **06** 02:50:47.3±3.5,16°.11S×167°.79E,h199km±41km,mb3.8/7, mb1 3.9/9,mb1mx3.6/43,mbtmp4.2/9,Error ellipse: s-maj=47.0km s-min=19.9km az=154.0*

ISC 06 02:50:46.9±0.8,16°.10S±0°.07×167°.8E±0°.1,h200km,n25, σ1s88/27,mb4.2/11,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.84	320	Pn	Pn	02 51 09.8	-5.9
SANVU				Sn	Sn	02 51 31.5	-6.5
DZM	Mont Dzumac	6.07	192	P	Pn	02 52 15.2	+0.1
	3.9nm,0.3s,baz=40,slow=14,SNR=27						
DZM				S	Sn	02 53 19.8	-5.2
	baz=117,slow=22,SNR=1.4						
DZM	Mont Dzumac	6.07	192		Pn	02 52 15.4	+0.3
DZM				Sn	Sn	02 53 23.4	-1.6
MSVF	Nonsavu	9.98	101	P	Pn	02 53 06.2	+0.2
	0.6nm,0.3s,baz=217,slow=23,SNR=2.1						
EIDS	Eidsvold	18.10	237	P	P	02 54 44.2	+0.3
EIDS				IAmb	IAmb	02 54 48.4	
	comp=Z,11nm,1.1s						
CTA	Charters Tower	20.82	256	P	P	02 55 14.7	+1.5
	comp=Z,9.2nm,0.8s,baz=87,slow=12,SNR=6.9						
CTAO	Charters Tower	20.82	256	P	P	02 55 14.8	+1.6
CTAO				IAmb	IAmb	02 55 17.5	
	comp=Z,13nm,0.9s						
COEN	Coen	23.84	272	P	P	02 55 42.9	+0.8
COEN				IAmb	IAmb	02 55 46.0	
	comp=Z,12nm,0.8s						
BKZ	Black Stump Fm	24.22	163	P	P	02 55 45.3	0.0
STKA	Stephens Creek	28.49	232	P	P	02 56 24.1	+0.4
	comp=Z,1.8nm,0.4s,baz=74,slow=10,SNR=6.3						
WR0	Warramunga Arr	31.79	258	P	P	02 56 52.7	-0.1
WR0				IAmb	IAmb	02 56 53.8	
	comp=Z,7.2nm,1.1s						
WB0	Warramunga Arr	31.92	258	P	P	02 56 54.2	+0.2
WB0				IAmb	IAmb	02 56 55.0	
	comp=Z,6.4nm,0.6s						
WB2	Warramunga Arr	31.97	258	P	P	02 56 54.7	+0.3
WB2				IAmb	IAmb	02 57 14.2	
	comp=Z,4.3nm,0.9s						
WRA	Warramunga Arr	31.98	258	P	P	02 56 54.5	0.0
	comp=Z,3.0nm,0.7s,baz=79,slow=6.1,SNR=26						
AS31	Alice Springs	32.65	251	P	P	02 57 01.0	+0.6
ASAR	Alice Springs	32.65	251	P	P	02 57 01.3	+0.9
	comp=Z,20nm,0.6s,baz=77,slow=8.9,SNR=291						
BBOO	Buckleboo	33.14	234	P	P	02 57 05.8	+1.3
BBOO				IAmb	IAmb	02 57 06.0	
	comp=Z,9.0nm,0.8s						
FAKI	Fak Fak	37.30	287	P	P	02 57 40.1	-0.1
FITZ	Fitzroy Crossi	40.25	261	P	P	02 58 05.6	+1.1
USRK	Ussuriysk Ar.	68.32	333	P	P	03 01 26.3	-0.1
	comp=Z,1.2nm,0.6s,baz=149,slow=6.7,SNR=2.3						
ULN	Ulaanbaatar	83.52	324	P	P	03 02 51.7	-0.8
SONM	Songino Array	83.88	324	P	P	03 02 55.6	+1.3
	comp=Z,0.2nm,0.4s,baz=134,slow=4.2,SNR=3.5						
MKAR	Makanchi Array	98.52	316	P	P	03 04 03.2	+0.6
	comp=Z,0.2nm,0.6s,baz=93,slow=4.9,SNR=3.8						
ARCES	ARCESS Array B	121.69	345	PKP	PKPdf	03 09 16.9	+0.5
	comp=Z,3.7nm,0.9s,baz=46,slow=3.5,SNR=1.7						
TORD	Torodi Ar. Bea	166.20	260	PKPab	PKPab	03 11 31.1	0.0
	comp=Z,0.5nm,0.8s,baz=72,slow=4.7,SNR=1.8						

IDC 06 02:54:05.3±45.0,16°.14S×173°.80W,h0km,mb4.3/3, mb1 4.4/3,mb1mx3.7/43,mbtmp4.3/3,MS3.0/1,Ms1 3.0/1, ms1mx2.5/32,Error ellipse: s-maj=862.9km s-min=173.1km az=79.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	43.33	241	P	P	03 02 10.1	+0.7
	1.7nm,0.6s,baz=87,slow=6.7,SNR=5.6						
WRA	Warramunga Arr	49.30	257	P	P	03 02 55.8	-0.8
	0.4nm,0.3s,baz=95,slow=8.2,SNR=25						
ASAR	Alice Springs	49.52	253	P	P	03 02 58.1	-0.1
	5.1nm,0.4s,baz=89,slow=8.1,SNR=94						
FITZ	Fitzroy Crossi	57.68	259	LR	LR	03 26 51.2	
	comp=Z,11nm,18.1s,baz=188,slow=34						

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*NEIC **06** 03:16:53.0±1.3,20°.32S±0°.08×177°.7W±0°.2,h554km±9km, mb4.2/17,Error ellipse: s-maj=27.4km s-min=11.4km az=85.0*

*IDC **06** 03:16:53.4±3.9,20°.17S×177°.76W,h550km±28km,mb3.5/7, mb1 3.5/9,mb1mx3.1/44,mbtmp4.4/9,Error ellipse: s-maj=73.0km s-min=23.6km az=140.0*

ISC 06 03:16:52.3±1.3,20°.3S±0°.2×177°.7W±0°.2,h550km,n29, σ0s64/30,mb4.1/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.81	302	P	P	03 18 20.4	-0.3
	3.0nm,0.3s,baz=237,slow=12,SNR=12						
MSVF	Nonsavu	4.81	302	P	P	03 18 20.9	+0.2
DZM	Mont Dzumac	14.94	260	P	P	03 20 02.1	+0.8
	0.4nm,0.3s,baz=90,slow=20,SNR=1.6						
EIDS	Eidsvold	29.21	254	P	P	03 22 09.3	-0.7
ARMA	Armidale	29.44	244	P	P	03 22 12.4	+0.4
CTA	Charters Tower	33.83	264	P	P	03 22 50.1	+0.6
	5.7nm,0.5s,baz=90,slow=12,SNR=7.8						
CTAO	Charters Tower	33.83	264	P	P	03 22 49.0	-0.5
CTAO				IAmb	IAmb	03 22 50.8	
	comp=Z,7.2nm,0.7s						
TOO	Toolangi	36.27	234	P	P	03 23 09.6	0.0
TOO				IAmb	IAmb	03 23 10.9	
	comp=Z,4.7nm,0.9s						
COEN	Coen	37.90	273	P	P	03 23 23.0	-0.2
COEN				IAmb	IAmb	03 23 35.1	
	comp=Z,5.7nm,1.1s						
STKA	Stephens Creek	38.16	244	P	P	03 23 25.8	+0.7
	comp=Z,1.4nm,0.4s,baz=86,slow=7.7,SNR=6.1						
STKA	Stephens Creek	38.16	244	P	P	03 23 25.1	-0.1
BBOO	Buckleboo	42.92	243	P	P	03 24 03.1	0.0
BBOO				IAmb	IAmb	03 24 05.4	
	comp=Z,4.7nm,0.7s						
JAY	Jayapura	44.29	288	P	P	03 24 13.8	-0.2
	comp=Z,24nm,1.0s,baz=165,slow=16,SNR=2.5						
WR0	Warramunga Arr	44.76	262	P	P	03 24 16.7	-0.7
WR0				IAmb	IAmb	03 24 17.1	
	comp=Z,6.0nm,1.1s						
AS31	Alice Springs	44.88	256	P	P	03 24 18.0	-0.3
ASAR	Alice Springs	44.88	256	P	P	03 24 18.8	+0.4
	comp=Z,5.5nm,0.5s,baz=95,slow=7.6,SNR=82						
ASAR				PcP	PcP	03 25 49.6	+1.5
	comp=Z,0.6nm,0.6s,baz=108,slow=4.3,SNR=4.1						
WB0	Warramunga Arr	44.93	262	P	P	03 24 18.9	+0.2
WB0				IAmb	IAmb	03 24 19.4	
	comp=Z,7.2nm,0.7s						
WB2	Warramunga Arr	44.94	262	P	P	03 24 18.8	0.0
WB2				IAmb	IAmb	03 24 19.5	
	comp=Z,7.1nm,0.8s						
WRA	Warramunga Arr	44.95	262	P	P	03 24 18.7	-0.2
	comp=Z,2.4nm,0.4s,baz=96,slow=8.5,SNR=10.0						
MTN	Manton Dam	49.49	270	P	P	03 24 52.9	-0.1
FITZ	Fitzroy Crossi	53.38	262	P	P	03 25 21.9	+0.9
	comp=Z,1.9nm,0.4s,baz=73,slow=3.5,SNR=9.6						
FITZ	Fitzroy Crossi	53.38	262	P	P	03 25 21.3	+0.2
PSA00	Pilbara Seismi	58.03	257	P	P	03 25 52.5	-0.8
PSA00				IAmb	IAmb	03 25 54.0	
	comp=Z,5.1nm,0.6s						
CASY	Casey	64.27	205	P	P	03 26 32.8	-0.6
UGM	Wanagama	70.29	269	P	P	03 27 11.7	+0.5
JWT	Wachi	70.98	321	P	P	03 27 13.9	-0.9
JWT				IAmb	IAmb	03 27 28.9	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	88.06	13	P	P	03 28 44.8	+1.0
	comp=Z,0.2nm,0.5s,baz=212,slow=6.4,SNR=4.7						
AKASG	Malin Array Be	143.00	331	PKP	PKPdf	03 35 22.2	-1.3
	comp=Z,0.5nm,0.5s,baz=47,slow=4.4,SNR=8.7						
GERES	GERESS Array B	150.10	345	PKPbc	PKiKP	03 35 42.0	+0.3
	comp=Z,0.5nm,0.7s,baz=304,slow=2.3,SNR=4.0						

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*ANF **06** 03:30:01.1±0.9,41°.87N×119°.64W,h0km±6km,ML2.9/9, Error ellipse: s-maj=5.1km s-min=2.7km az=106.0*

*REN **06** 03:30:02.2±0.5,41°.84N±0°.03×119°.606W±0°.007, h5km±6km,ML2.8/5,ML3.1/14(SEA),ML2.6/52(NEIC),Error ellipse: s-maj=3.9km s-min=0.8km az=175.0*

*NEIC **06** 03:30:02.2±0.7,41°.84N±0°.03×119°.61W±0°.03,h7km±6km, Error ellipse: s-maj=3.8km s-min=2.8km az=167.0*

*SEA **06** 03:30:03.1±0.8,41°.84N±0°.02×119°.62W±0°.02,h0km±5km, Error ellipse: s-maj=3.0km s-min=2.1km az=137.0*

ISC 06 03:30:02.1±1.2,41°.85N±0°.03×119°.62W±0°.03,h7km±12km, n48,σ0s54/59,Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.52	277		Pg	03 30 12.6	+0.4
MOD					Sg	03 30 19.7	+0.8
MOD	Modoc Plateau	0.52	277	IAML		03 30 19.9	
	comp=N,779nm,0.3s						
MOD				IAML		03 30 20.2	
	comp=E,1μm,0.3s						
LKVW	Lakeview	0.67	305		Pg	03 30 14.9	-0.2
LKVW					Sg	03 30 23.9	+0.1
WVOR	Wild Horse Val	0.94	51		Pg	03 30 20.1	0.0
WVOR					Sg	03 30 32.8	+0.5
WVOR	Wild Horse Val	0.94	51	IAML		03 30 35.9	
	comp=E,162nm,0.3s						
WVOR				IAML		03 30 36.2	
	comp=E,202nm,0.4s						
K05A	Summer Lake	1.29	313		Pn	03 30 26.3	-0.6
K05A					Sb	03 30 44.3	+0.5
LASM	Arnica Sink	1.49	261		Pn	03 30 29.2	-0.3
LTIM	Timbered Crate	1.56	245		Pn	03 30 30.5	+0.1
LTIM					Sg	03 30 52.7	+0.5
LBCM	Butte Creek Ri	1.65	233		Pn	03 30 31.8	+0.1
M04C	Macdoel	1.66	269	P	Pn	03 30 31.5	-0.4
	baz=86,SNR=89						
M04C				Sg	Sg	03 30 55.9	+0.3
	baz=86						
M04C	Macdoel	1.66	269		Pn	03 30 31.4	-0.4
M04C					Sg	03 30 56.3	+0.7
K04D	Chiloquin, OR	1.77	297	Pb	Pb	03 30 34.4	-0.5
	baz=115,SNR=8.8						
K04D				Sg	Sg	03 30 59.1	+0.1
	baz=115						
K04D	Chiloquin, OR	1.77	297		Pb	03 30 34.4	-0.5
J05D	Fort Rock, OR	1.87	321	Pb	Pb	03 30 36.2	-0.5
	baz=139,SNR=61						
J05D				Sb	Sb	03 31 01.2	+0.8
	baz=139						
J05D	Fort Rock, OR	1.87	321		Pb	03 30 36.2	-0.5
L04D	Klamath Falls	2.04	281	P	Pn	03 30 36.3	-0.7
	baz=99,SNR=58						
L04D				Sb	Sb	03 31 06.3	+1.1
	baz=99						
L04D	Klamath Falls	2.04	281		Pn	03 30 36.4	-0.6
BEKR	Beckworth	2.06	196	Pg	Pb	03 30 40.5	+0.5
BEKR				IAML		03 31 09.7	
	comp=N,34nm,0.3s						
BEKR				IAML		03 31 10.5	
	comp=E,46nm,0.6s						
PAHR	Pah Rah Range	2.15	175	Pn	Pn	03 30 38.5	0.0
PAHR				Pg	Pg	03 30 42.5	-0.8
PINE	Pine Mountain	2.17	334	Pn	Pn	03 30 39.2	+0.2
PINE				IAML		03 31 16.3	
	comp=E,47nm,2.6s						
PINE				IAML		03 31 18.7	
	comp=N,32nm,1.2s						
I07A	Izee	2.24	2	Pn	Pn	03 30 40.0	+0.2
I07A				IAML		03 31 13.4	
	comp=N,38nm,0.5s						
I07A				IAML		03 31 14.5	
	comp=E,27nm,0.7s						
O03E	Paynes Creek	2.27	228	P	Pn	03 30 40.4	+0.4
	baz=45,SNR=21						
O03E				Sb	Sg	03 31 13.7	-1.2
	baz=45						
J04D	Umpqua Nationa	2.31	308	Pb	Pb	03 30 43.6	-0.7
	baz=126,SNR=14						
YBH	Yreka Blue Hor	2.32	268	Pn	Pn	03 30 40.1	-0.7
YBH				IAML		03 31 18.2	
	comp=N,22nm,4.6s						
M02C	Callahan	2.47	260	P	Pn	03 30 42.0	-0.9
	baz=78						
N02D	Trinity Center	2.48	250	Pb	Pb	03 30 46.1	-1.0
	baz=68						
WDC	Whiskeytown Da	2.54	241	Pn	Pn	03 30 43.8	0.0
VCNR	Virginia City	2.55	181	Pn	Pn	03 30 44.0	-0.1
VCNR				IAML		03 31 29.1	
	comp=N,39nm,0.8s						
HUMO	Hull Mountain	2.59	288		Pn	03 30 44.0	-0.6
HUMO				IAML		03 31 23.9	
	comp=N,19nm,0.5s						
ORV	Oroville	2.70	213	Pn	Pn	03 30 46.2	+0.2
PNTR	Pine Nut	2.75	180	Pn	Pn	03 30 46.9	0.0
PNTR				IAML		03 31 35.6	
	comp=N,22nm,0.9s						
PNTR				IAML		03 31 50.0	
	comp=E,24nm,4.4s						
I05D	Terrebonne, OR	2.79	334	Pb	Pb	03 30 51.3	-1.1
	baz=152						
RUBR	Rubicon Trail	2.82	189	Pn	Pn	03 30 47.8	-0.1
RUBR				IAML		03 31 07.6	
	comp=N,17nm,4.2s						
RUBR				IAML		03 32 02.5	
	comp=E,24nm,4.3s						
O02D	Mt. Diablo Mer	2.92	236	Pb	Pb	03 30 54.3	-0.3
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	03 30 50.0	+0.1
	baz=94,SNR=12						
L02E				Sb	Sb	03 31 33.6	+1.2
	baz=94						
K02D	Willamette Mer	3.12	287	P	Pn	03 30 52.1	+0.2
	baz=104,SNR=25						
MFID	Camas Ranch	3.21	59	Pn	Pn	03 30 53.0	0.0
KHMM	Horse Mountain	3.25	254	Pn	Pn	03 30 53.7	+0.1
RYN	Ryan	3.32	165	Pn	Pn	03 30 54.5	-0.1
RYN				IAML		03 31 51.6	
	comp=E,11nm,0.7s						
RYN				IAML		03 31 57.9	
	comp=N,11nm,3.9s						
WAKR	Walker	3.34	178	Pn	Pn	03 30 54.9	-0.1
WAKR				IAML		03 31 52.5	
	comp=E,9.9nm,4.9s						
BMO	Blue Mountains	3.45	29	Pn	Pn	03 30 56.4	+0.1
ELK	Elko	3.48	107	Pn	Pn	03 30 56.8	-0.1
ELK				IAML		03 31 56.6	
	comp=E,10.0nm,0.3s						
LHV	Little Huntoon	3.69	166	Pn	Pn	03 30 59.8	+0.2
HLID	Hailey	4.20	64	Pn	Pn	03 31 06.8	0.0
HLID				IAML		03 32 10.5	
	comp=E,9.5nm,4.9s						
HLID				IAML		03 32 16.0	
	comp=E,7.7nm,2.4s						
MDPB	Devils Postpil	4.23	174	Pn	Pn	03 31 07.2	0.0
MDPB				IAML		03 31 44.6	
	comp=E,9.7nm,1.8s						
MDPB				IAML		03 33 25.6	
	comp=N,6.1nm,4.8s						
OMMB	Old Mammoth Mi	4.25	173	Pn	Pn	03 31 07.5	-0.2
OMMB				IAML		03 32 33.3	
	comp=N,5.7nm,4.6s						
HVU	Hansel Valley	5.11	88	Pn	Pn	03 31 18.9	-0.4
BOZ	Bozeman (W)	6.89	54	Pn	Pn	03 31 43.8	0.0

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*SOME **06** 03:30:48.0,39°.90N×77°.65E,h10km*

*KRNET **06** 03:30:49.1±0.1,39°.81N×78°.13E,mb2.8*

*NNC **06** 03:30:50.4±1.5,39°.98N×77°.67E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=10.7km s-min=9.2km az=170.0*

ISC 06 03:30:55.4±2.1,40°.16N±0°.09×77°.67E±0°.04,h10km,n49, σ1s31/76,20C-10D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	2.01	350	⇓*i*P	Pn	03 31 31.0	+1.4
	baz=43						
KDJ				⇓*i*S	Sg	03 32 01.5	+1.6
	baz=43						
ULHL	Ulahol	2.35	333	⇑*i*P	Pn	03 31 36.6	+2.3
	baz=30						
ULHL				⇑*i*S	Sg	03 32 11.1	+0.2
	baz=30						
PRZ	Przheval'sk	2.39	13	⇑*i*P	Pn	03 31 34.7	-0.1
	baz=4.0						
PRZ				⇑*i*S	Sb	03 32 08.2	-0.1
	baz=4.0						
ANVS	Anan'yevo	2.62	360	⇓*i*P	Pn	03 31 38.8	+0.7
	baz=53						
ANVS				⇓*i*S	Sb	03 32 15.0	0.0
	baz=53						
BOOM	Boomskoye usch	2.67	331	⇑*i*P	Pn	03 31 41.0	+2.3
	baz=29						
BOOM				⇑*i*S	Sb	03 32 19.0	+2.7
	baz=29						
SATY	Saty	2.95	11	*e*P	Pb	03 31 47.7	-0.5
	10nm,0.6s						
SATY				*e*S	Sg	03 32 30.8	+0.6
	12nm,0.7s						
SATY	Saty	2.95	11	Pg	Pb	03 31 47.7	-0.5
	10nm,0.6s						
SATY				Lg	Lg	03 32 30.8	
	12nm,0.7s						
IZV	Izvestkoviy	2.98	345	*e*P	Pb	03 31 48.2	-0.5
	6.9nm,0.3s						
IZV				*e*S	Sg	03 32 31.7	+0.4
	23nm,0.6s						
IZV	Izvestkoviy	2.98	345	Pg	Pb	03 31 48.2	-0.5
	6.9nm,0.3s						
IZV				Lg	Lg	03 32 31.7	
	23nm,0.6s						

MDOK	Medeo	3.04	351	eP	Pb	03 31 48.8	-1.0
	3.6nm,0.5s						
MDOK				eS	Sg	03 32 32.6	-0.5
	17nm,0.7s						
MDOK	Medeo	3.04	351	Pg	Pb	03 31 49.6	-0.1
	3.9nm,0.5s,baz=127,slow=26						
MDOK				Lg	Lg	03 32 33.1	
	20nm,0.7s,baz=127,slow=26						
MDOK	Medeo	3.04	351	Pg	Pb	03 31 48.8	-1.0
	3.6nm,0.5s						
MDOK				Lg	Lg	03 32 32.6	
	17nm,0.7s						
ARLS	Aral	3.05	305	⇑iP	Pn	03 31 46.1	+2.2
	baz=7.0						
ARLS				⇑iS	Sb	03 32 28.2	+0.9
	baz=7.0						
KOTS	Kotyrbulak	3.10	352	eP	Pb	03 31 50.5	-0.3
	6.8nm,0.3s						
KOTS				eS	Sg	03 32 35.7	+0.6
	44nm,0.6s						
KOTS	Kotyrbulak	3.10	352	Pg	Pb	03 31 50.5	-0.3
	6.8nm,0.3s						
KOTS				Lg	Lg	03 32 35.7	
	44nm,0.6s						
MTBS	Maitube	3.11	343	eP	Pb	03 31 50.1	-0.8
	4.3nm,0.2s						
MTBS				eS	Sg	03 32 34.8	-0.7
	7.1nm,0.4s						
MTBS	Maitube	3.11	343	Pg	Pb	03 31 50.1	-0.8
	4.3nm,0.2s						
MTBS				Lg	Lg	03 32 34.8	
	7.1nm,0.4s						
UCH	Uchtor	3.15	312	⇑iP	Pn	03 31 48.2	+2.6
	baz=13						
UCH				⇑iS	Sb	03 32 31.2	+0.7
	baz=13						
KST	Kastek	3.16	337	eP	Pb	03 31 50.1	-1.6
	2.4nm,0.5s						
KST				eS	Sg	03 32 35.0	-1.8
	13nm,0.6s						
KST	Kastek	3.16	337	Pg	Pb	03 31 50.1	-1.6
	2.4nm,0.5s						
KST				Lg	Lg	03 32 35.0	
	13nm,0.6s						
UZB	Uzynbulak	3.16	18	eP	Pb	03 31 51.4	-0.3
	2.0nm,0.2s						
UZB				eS	Sg	03 32 37.1	+0.3
	4.3nm,0.4s						
UZB	Uzynbulak	3.16	18	Pg	Pb	03 31 51.4	-0.3
	2.0nm,0.2s						
UZB				Lg	Lg	03 32 37.1	
	4.3nm,0.4s						
TKM2	Tokmak 2	3.17	331	⇓eP	Pn	03 31 48.0	+2.4
	baz=29						
TKM2				⇓iS	Sb	03 32 30.9	+0.1
	baz=29						
TKM2	Tokmak 2	3.17	331	⇓Pn	Pn	03 31 44.8	-0.8
	0.9nm,0.3s,baz=127,slow=26						
TKM2				⇑Lg	Lg	03 32 36.7	
	6.0nm,0.6s,baz=127,slow=26						
KBK	Karagaybulak	3.23	322	⇑eP	Pn	03 31 49.0	+2.6
	baz=21						
KBK				⇑iS	Sb	03 32 32.4	0.0
	baz=21						
SHLS	Shalkode	3.29	24	eP	Pb	03 31 53.4	-0.5
	9.9nm,0.2s						
SHLS				eS	Sg	03 32 40.4	-0.6
	6.8nm,0.7s						
SHLS	Shalkode	3.29	24	Pg	Pb	03 31 53.4	-0.5
	9.9nm,0.2s						
SHLS				Lg	Lg	03 32 40.4	
	6.8nm,0.7s						
KPKS	Kokpek	3.39	13	eP	Pb	03 31 54.4	-1.3
	2.5nm,0.3s						
KPKS				eS	Sg	03 32 42.4	-2.0
	16nm,0.5s						
DGS	Degeres	3.40	336	eP	Pb	03 31 55.5	-0.3
	3.1nm,0.3s						
DGS				eS	Sg	03 32 44.4	-0.1
	7.3nm,0.5s						
DGS	Degeres	3.40	336	Pg	Pb	03 31 55.5	-0.3
	3.1nm,0.3s						
DGS				Lg	Lg	03 32 44.4	
	7.3nm,0.5s						
AAK	Ala-Archa	3.44	317	⇑eP	Pn	03 31 51.9	+2.6
	baz=17						
AAK				⇑iS	Sb	03 32 37.8	-0.7
	baz=17						
AAK	Ala-Archa	3.44	317	⇓Pn	Pn	03 31 48.4	-0.9
	1.4nm,0.6s,baz=127,slow=26						
AAK				⇓Lg	Lg	03 32 44.6	
	7.5nm,0.7s,baz=127,slow=26						
PDGK	Podgornoye	3.45	23	Pg	Pb	03 31 55.9	-0.8
	2.0nm,0.4s						
PDGK				Lg	Lg	03 32 44.8	
	3.7nm,0.8s						
PDGK	Podgornoye	3.45	23	⇓Pn	Pn	03 31 48.7	-0.7
	1.7nm,0.8s,baz=127,slow=26						
PDGK				⇑Pg	Pb	03 31 57.0	+0.3
	1.5nm,0.3s,baz=127,slow=26						
PDGK				⇑Lg	Lg	03 32 44.9	
	7.5nm,0.7s,baz=127,slow=26						
AML	Almayashu	3.59	305	⇑iP	Pn	03 31 54.0	+2.5
	baz=6.0						
AML				⇑iS	Sb	03 32 41.2	-1.9
	baz=6.0						
KTBS	Karatobe	3.63	349	eP	Pb	03 31 59.1	-0.6
	1.6nm,0.3s						
KTBS				eS	Sg	03 32 50.4	-1.6
	9.5nm,0.5s						
KTBS	Karatobe	3.63	349	Pg	Pb	03 31 59.1	-0.6
	1.6nm,0.3s						
KTBS				Lg	Lg	03 32 50.4	
	9.5nm,0.5s						
CHKK	Chushkaly	3.73	352	eP	Pb	03 32 01.6	+0.2
	2.7nm,0.2s						
CHKK				eS	Sg	03 32 54.3	-0.9
	10nm,0.3s						
CHKK	Chushkaly	3.73	352	Pg	Pb	03 32 01.6	+0.2
	2.7nm,0.2s						
CHKK				Lg	Lg	03 32 54.3	
	10nm,0.3s						
KRBS	Karabastau	3.84	338	eP	Pb	03 32 03.3	0.0
	1.0nm,0.4s						
KRBS				eS	Sg	03 32 57.5	-1.1
	3.4nm,0.2s						
KRBS	Karabastau	3.84	338	Pg	Pb	03 32 03.3	0.0
	1.0nm,0.4s						
KRBS				Lg	Lg	03 32 57.5	
	3.4nm,0.2s						
KUU	Kurty	3.86	346	eP	Pb	03 32 03.4	-0.2
	1.3nm,0.5s						
KUU				eS	Sg	03 32 58.0	-1.4
	6.3nm,0.3s						
KUU	Kurty	3.86	346	Pg	Pb	03 32 03.4	-0.2
	1.3nm,0.5s						
KUU				Lg	Lg	03 32 58.0	
	6.3nm,0.3s						
SGDS	Sogindy	4.00	326	Pg	Pb	03 32 05.3	-0.8
	3.4nm,0.5s						
SGDS				Lg	Lg	03 33 00.7	
	2.8nm,0.7s						
ARXS	Arharly	4.06	2	eP	Pb	03 32 06.7	-0.2
	4.8nm,0.5s						
ARXS				eS	Sg	03 33 03.5	-2.1
	5.8nm,0.4s						
ARXS	Arharly	4.06	2	Pg	Pb	03 32 06.7	-0.2
	4.8nm,0.5s						
ARXS				Lg	Lg	03 33 03.5	
	5.8nm,0.4s						
MRKS	Merke	4.22	309	eP	Pb	03 32 08.5	-1.3
	1.7nm,0.3s						
MRKS				eS	Sg	03 33 06.5	-4.6
	2.7nm,0.4s						
MRKS	Merke	4.22	309	Pg	Pb	03 32 08.5	-1.3
	1.7nm,0.3s						
MRKS				Lg	Lg	03 33 06.5	
	2.7nm,0.4s						
KK31	Karatay Array	6.12	301	⇑Lg	Lg	03 34 08.8	
	0.5nm,0.6s,baz=127,slow=26,SNR=2.9						

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*BJI **06** 03:35:06.6±0.0, 33°.24S×179°.13W, h24^{km}, mb5.4/8, Ms4.9/1, Ms7 4.6/1*

*WEL **06** 03:35:07.2±0.7, 33°S±7°×17°8W±1°8, h108^{km}±37^{km}, M4.7/42, mB5.2/37, ML5.6/6, MLv5.2/42, Mw(mB)4.6/37, Error ellipse: s-maj=0.0km s-min=0.0km az=111.1*

*NEIC **06** 03:35:08.1±0.9, 33°.34S±0°.06×179°.2W±0°.1, h33^{km}±4^{km}, mb4.8/37, Error ellipse: s-maj=14.2km s-min=8.0km az=112.0*

*IDC **06** 03:35:11.5±2.5, 33°.11S×179°.23W, h60^{km}±21^{km}, mb4.3/7, mb1 4.6/11, mb1mx4.2/29, mbtmp4.6/11, ML5.0/4, MS3.6/14, Ms1 3.6/14, ms1mx3.4/31, Error ellipse: s-maj=21.5km s-min=18.8km az=135.0*

ISC 06 03:35:09.8±0.4**, 33°.20S**±0°.05×**179°.13W**±0°.08**, h45**^{km}**, n195,** σ1^{s}**98**/183**, mb4.8**/26**, MS3.7**/13**, 1C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.06	15	P	Pn	03 36 08.4	-1.0
GLKZ				S	Sn	03 36 51.8	-3.9
RAO	Raoul Island	4.07	15	P	Pn	03 36 09.8	+0.3
	66nm,0.3s,baz=210,slow=20,SNR=2.0						
RAO				S	Sn	03 36 52.8	-3.1
	140nm,0.3s,baz=126,slow=19,SNR=2.3						
RAO				LR	LR	03 37 44.5	
	comp=Z,635nm,20.8s,baz=151,slow=38						
RAO	Raoul Island	4.07	15	Pn	Pn	03 36 10.4	+0.9
RAO					Sn	03 36 57.3	+1.4
RIZ	Raoul Island	4.08	15	P	Pn	03 36 09.3	-0.3
RIZ				S	Sn	03 36 53.9	-2.1
MXZ	Matakaoa Point	4.83	205	Pn	Pn	03 36 15.4	-4.5
MXZ	Matakaoa Point	4.83	205	P	Pn	03 36 20.3	+0.4
MXZ				S	Sn	03 37 17.6	+3.0
WMGZ	Waiomatatini S	5.03	203	P	Pn	03 36 23.9	+1.3
WMGZ				S	Sn	03 37 23.3	+3.9
HAZ	Te Kaha	5.20	208	P	Pn	03 36 26.0	+1.0
HAZ				S	Sn	03 37 26.7	+3.1
PKGZ	Pakihiroa	5.20	205	P	Pn	03 36 25.5	+0.4
PKGZ				S	Sn	03 37 24.9	+1.1
PUZ	Puketiti	5.31	203	P	Pn	03 36 29.0	+2.5
PUZ				S	Sn	03 37 27.1	+0.7
RUGZ	Raukumara Rang	5.42	208	P	Pn	03 36 28.6	+0.5
RUGZ				S	Sn	03 37 29.3	0.0
TWGZ	Tauwhareparae	5.49	205	P	Pn	03 36 29.7	+0.6
TWGZ				S	Sn	03 37 32.1	+1.1
WHRZ	Whale Island	5.63	213	P	Pn	03 36 35.4	+4.5
WHRZ				S	Sn	03 37 38.7	+4.5
CNGZ	Carnagh Statio	5.70	202	P	Pn	03 36 32.0	+0.2
CNGZ				S	Sn	03 37 36.6	+0.7
TKGZ	Te Karaka	5.78	204	P	Pn	03 36 33.0	+0.1
TKGZ				S	Sn	03 37 36.8	-1.1
MWZ	Matawai	5.80	207	P	Pn	03 36 34.0	+0.8
MWZ				S	Sn	03 37 40.4	+1.9
MARZ	Manawahe	5.87	214	P	Pn	03 36 37.3	+3.1
URZ	Urewera	5.90	210	P	Pn	03 36 35.5	+0.9
	37nm,0.3s,baz=278,slow=2.1,SNR=117						
URZ				S	Sn	03 37 41.0	+0.1
	29nm,0.3s,baz=355,slow=17,SNR=8.3						
URZ				LR	LR	03 38 55.7	
	comp=Z,454nm,21.7s,baz=31,slow=38						
URZ	Urewera	5.90	210		Pn	03 36 31.8	-2.8
URZ				Sn	Sn	03 37 36.6	-4.4
URZ	Urewera	5.90	210	P	Pn	03 36 34.5	-0.2
EDRZ	Edgecumbe	5.94	213	P	Pn	03 36 38.1	+2.9
RAGZ	Rawiri	5.98	207	P	Pn	03 36 37.3	+1.5
RIGZ	Rimuhau	6.04	204	P	Pn	03 36 36.5	-0.1
OMRZ	Omania	6.11	216	P	Pn	03 36 41.8	+4.2
TARZ	Mount Tarawera	6.15	214	P	Pn	03 36 41.2	+3.1
PRGZ	Paritu Road	6.20	202	P	Pn	03 36 37.5	-1.3
MUGZ	Murupara	6.23	211	P	Pn	03 36 38.7	-0.5
HLRZ	Highlands Stat	6.24	215	P	Pn	03 36 46.3	+7.0
RTZ	Ruatahuna	6.26	209	P	Pn	03 36 39.4	-0.3
SNGZ	Shannon Statio	6.26	206	P	Pn	03 36 40.4	+0.8
OUZ	Omahuta	6.36	250	Pn	Pn	03 36 38.9	-2.0
OUZ				Sn	Sn	03 37 49.4	-2.7
KNZ	Kokohu	6.36	203	P	Pn	03 36 39.9	-1.0
MHGZ	Mahia Peninsul	6.41	201	P	Pn	03 36 40.0	-1.6
RAHZ	Arahi	6.47	207	P	Pn	03 36 43.3	+0.7
ALRZ	Allen Road	6.49	213	P	Pn	03 36 45.2	+2.4
MTHZ	Maungataniwha	6.52	209	P	Pn	03 36 43.6	+0.5
WHHZ	Waihua	6.56	206	P	Pn	03 36 45.4	+1.7
MRHZ	Matea Rd	6.68	211	P	Pn	03 36 46.0	+0.6
NMHZ	Naumai	6.74	208	P	Pn	03 36 47.5	+1.3
WHTZ	Whakaora	6.75	215	P	Pn	03 36 49.7	+3.3
ARHZ	Aropaoanui	6.81	206	P	Pn	03 36 46.8	-0.3
WATZ	Wairara	6.89	216	P	Pn	03 36 50.8	+2.4
BKZ	Black Stump Fm	6.92	209		Pn	03 36 45.6	-3.2
BKZ				Sn	Sn	03 38 01.9	-4.3
BKZ	Black Stump Fm	6.92	209	P	Pn	03 36 47.6	-1.1
RATZ	Rangitukua	7.00	215	P	Pn	03 36 52.0	+2.2
RITZ	Rihia Road	7.05	214	P	Pn	03 36 52.1	+1.7
MCHZ	McNeill Hill	7.08	207	P	Pn	03 36 51.3	+0.4
HIZ	Hauiti	7.21	221	P	Pn	03 36 56.3	+3.8
TMVZ	Te Maari	7.23	214	P	Pn	03 36 54.3	+1.2
ETVZ	East Tongariro	7.24	214	P	Pn	03 36 54.3	+1.1
KRVZ	Karewarewa	7.24	214	P	Pn	03 36 54.9	+1.7
WTVZ	West Tongariro	7.29	214	P	Pn	03 36 55.2	+1.5
OTVZ	Oturere	7.29	214	P	Pn	03 36 54.9	+1.1
TWVZ	Taurewa	7.32	215	P	Pn	03 36 56.3	+2.1
KAHZ	Kahuranaki	7.32	205	P	Pn	03 36 52.4	-1.8
NGZ	Ngauruhoe	7.33	214	P	Pn	03 36 55.3	+0.9
TUVZ	Tukino	7.38	213	P	Pn	03 36 56.9	+1.8
BHHZ	Black Hill Sta	7.38	210	P	Pn	03 36 54.9	-0.1
KRHZ	Kereru	7.38	208	P	Pn	03 36 54.0	-1.0
FWVZ	Far West T-bar	7.41	214	P	Pn	03 36 56.8	+1.2
WNVZ	Wahianoa	7.45	213	P	Pn	03 36 56.5	+0.5
PXZ	Pawanui	7.54	204	P	Pn	03 36 56.3	-0.8
PNHZ	Pukenui	7.68	208	P	Pn	03 36 57.4	-1.7
WPHZ	Waipukurau	7.72	206	P	Pn	03 36 58.8	-0.8
TSZ	Takapari Road	7.90	209	P	Pn	03 37 00.1	-2.0
DVHZ	Dannevirke	8.03	207	P	Pn	03 37 01.9	-1.9
BFZ	Birch Farm	8.33	205		Pn	03 37 04.4	-3.6
BFZ				Sn	Sn	03 38 35.9	-4.8
BFZ	Birch Farm	8.33	205	P	Pn	03 37 05.2	-2.7
MSWZ	Moikau Station	9.34	207	Pn	Pn	03 37 18.4	-3.3
SNZO	South Karori	9.47	209	Pn	Pn	03 37 19.7	-3.8
PLWZ	Palliser	9.47	207	Pn	Pn	03 37 20.1	-3.5
BHW	Baring Head	9.48	209	Pn	Pn	03 37 20.2	-3.5
TUWZ	Tuamarina	9.89	212		Pn	03 37 26.0	-3.3
TUWZ					Sn	03 39 12.7	-6.2
NNZ	Nelson	9.98	215	Pn	Pn	03 37 27.5	-3.0
CMWZ	Cape Campbell	10.04	210	Pn	Pn	03 37 27.6	-3.7
QRZ	Quartz Range	10.12	219	Pn	Pn	03 37 29.2	-3.2
BSWZ	Blackbirch Sta	10.15	211	Pn	Pn	03 37 29.5	-3.4
THZ	Tophouse	10.63	214	Pn	Pn	03 37 36.0	-3.5
KHZ	Kahutara	10.87	210	Pn	Pn	03 37 39.4	-3.3
LTZ	Lake Taylor	11.72	213	Pn	Pn	03 37 51.0	-3.3
OXZ	Oxford	12.25	212	Pn	Pn	03 37 55.9	-5.7
MQZ	McQueen’s Vall	12.30	209	Pn	Pn	03 37 56.2	-6.0
RPZ	Rata Peaks	13.00	213	P	Pn	03 38 13.1	+1.3
	1.3nm,0.3s,baz=308,slow=9.9,SNR=1.9						
RPZ				S	Sn	03 40 23.6	-11
	1.0nm,0.3s,baz=336,slow=20,SNR=1.9						
RPZ				LR	LR	03 43 24.9	
	comp=Z,365nm,21.9s,baz=44,slow=38						
RPZ	Rata Peaks	13.00	213	Pn	Pn	03 38 06.0	-5.9
FOZ	Fox Glacier	13.46	217	Pn	Pn	03 38 15.0	-3.1
LBZ	Lake Benmore	13.92	214	Pn	Pn	03 38 20.7	-3.7
ODZ	Otahua Downs	14.23	211	Pn	Pn	03 38 22.7	-5.8
WKZ	Wanaka	14.80	215	Pn	Pn	03 38 32.9	-3.2
MSVF	Nonsavu	15.61	350	P	Pn	03 38 46.5	-0.4
	0.8nm,0.3s,baz=136,slow=12,SNR=4.4						
MSVF	Nonsavu	15.61	350	Pn	Pn	03 38 46.9	+0.1
MLZ	Mavora Lakes	15.63	215	Pn	Pn	03 38 43.9	-3.0
WHZ	Wether Hill Ro	16.10	214	Pn	Pn	03 38 49.9	-3.0
DZM	Mont Dzumac	16.90	307	LR	LR	03 44 11.5	
	comp=Z,389nm,20.3s,baz=270,slow=32						
PYZ	Puysegur Point	16.91	216	Pn	Pn	03 38 59.4	-3.6
PYZ				IAmb	IAmb	03 39 00.5	
	comp=Z,105nm,1.1s						
RAR	Rarotonga	20.91	60	LR	LR	03 48 39.7	
	comp=Z,40nm,18.0s,baz=248,slow=39						
SANVU	Saraoutou	21.58	322	P	P	03 39 55.8	+0.1
SANVU				IAmb	IAmb	03 39 59.6	
	comp=Z,40nm,0.7s						
TBI	Tubuai	27.83	77	eLR	LR	03 48 00.5	
	comp=Z,375nm,28.5s						
TBI	Tubuai	27.83	77	eT	T	04 09 42.6	
	comp=Z,35nm,0.3s						
PAE	Paea	30.71	67	eT	T	04 13 16.4	
	comp=Z,12nm,0.2s						
PPT2	Papeete2	30.75	67	eLR	LR	03 49 20.0	
	comp=Z,358nm,27.5s						
PPT2	Papeete2	30.75	67	eT	T	04 13 20.7	
	comp=Z,14nm,0.3s						
PPT	Papeete	30.77	67	LR	LR	03 50 23.9	
	comp=Z,66nm,20.1s,baz=236,slow=30						
TVO	Taravao	30.89	68	eT	T	04 13 30.2	
	comp=Z,1.6nm,0.3s						
TIAR	Tiarei	30.95	67	eT	T	04 13 35.0	
	comp=Z,1.4nm,0.2s						
MEH	Mehetia	31.76	69	eT	T	04 14 35.5	
	comp=Z,18nm,0.3s						
STKA	Stephens Creek	33.01	261	LR	LR	03 53 28.9	
	comp=Z,214nm,20.4s,baz=38,slow=33						
CTA	Charters Tower	33.42	284	P	P	03 41 45.1	+0.7
	comp=Z,7.2nm,0.8s,baz=123,slow=9.2,SNR=6.8						
CTAO	Charters Tower	33.42	284	P	P	03 41 44.0	-0.4
VAH	Vaihoa	33.65	66	eT	T	04 16 58.0	
	comp=Z,40nm,0.2s						
COEN	Coen	39.22	290	P	P	03 42 33.6	-0.3
AS31	Alice Springs	42.09	271	P	P	03 42 56.9	-0.7
ASAR	Alice Springs	42.09	271	P	P	03 42 57.5	0.0
	comp=Z,4.0nm,0.6s,baz=109,slow=7.5,SNR=47						
ASAR				LR	LR	03 58 35.5	
	comp=Z,44nm,21.8s,baz=132,slow=33						
WR0	Warramunga Arr	43.15	276	P	P	03 43 05.2	-1.0
WB2	Warramunga Arr	43.32	276	P	P	03 43 07.0	-0.6
TAOE	Nuku Hiva Isla	43.33	65	eLR	LR	03 55 07.8	
	comp=Z,199nm,27.3s						
WRA	Warramunga Arr	43.33	276	P	P	03 43 07.3	-0.3
	comp=Z,2.4nm,0.3s,baz=110,slow=8.2,SNR=11						
WB0	Warramunga Arr	43.37	276	P	P	03 43 07.4	-0.5
WB0				IAmb	IAmb	03 43 09.4	
	comp=Z,7.9nm,0.8s						
FORT	Forrest	44.47	258	P	P	03 43 16.4	-0.2
FORT				IAmb	IAmb	03 43 18.0	
	comp=Z,22nm,1.2s						
VNDA	Vanda	45.22	186	LR	LR	03 58 17.2	
	comp=Z,74nm,20.4s,baz=314,slow=31						
JAY	Jayapura	48.41	300	LR	LR	04 02 43.9	
	comp=Z,46nm,18.5s,baz=286,slow=34						
MTN	Manton Dam	49.54	282	P	P	03 43 56.2	-0.2
FITZ	Fitzroy Crossi	51.46	273	LR	LR	04 05 19.1	
	comp=Z,110nm,19.2s,baz=127,slow=35						
FITZ	Fitzroy Crossi	51.46	273	P	P	03 44 10.1	-0.7
FITZ				IAmb	IAmb	03 44 23.9	
	comp=Z,18nm,1.4s						
NWAO	Narrogin (SRO)	52.56	252	LR	LR	04 02 51.3	
	comp=Z,55nm,18.6s,baz=104,slow=32						
QSPA	South Pole Qui	56.92	180	P	P	03 44 49.2	-0.9
QSPA				IAmb	IAmb	03 44 55.0	
	comp=Z,12nm,0.9s						
BELA	Belgrano 2	67.15	172	P	P	03 45 58.0	-0.3
SYO	Syowa Base	74.18	194	⇓eX	P	03 46 35.4	-5.8
SNAA	Sanae	75.39	179	P	P	03 46 49.2	+0.9
VNA3	Neumayer Olymp	75.58	176	P	P	03 46 50.1	+0.8
VNA2	Neumayer--Watz	76.00	177	P	P	03 46 53.0	+1.3
	baz=170,slow=6.0						
VNA1	Neumayer--Stat	76.24	177	P	P	03 46 54.2	+1.2
H03S2	Juan Fernandez	79.72	124	T	T	05 15 42.3	
	baz=236,slow=74						
H03S1	Juan Fernandez	79.73	124	T	T	05 15 49.9	
	baz=236,slow=74						
H03S3	Juan Fernandez	79.74	124	T	T	05 15 48.9	
	baz=236,slow=74						
H03N3	Juan Fernandez	79.93	123	T	T	05 15 47.3	
	baz=240,slow=72						
H03N2	Juan Fernandez	79.93	123	T	T	05 15 48.9	
	baz=240,slow=72						
H03N1	Juan Fernandez	79.95	123	T	T	05 15 50.9	
	baz=240,slow=72						
PLCA	Paso Flores	81.30	133	P	P	03 47 22.9	+1.4
	comp=Z,4.7nm,0.8s,baz=209,slow=5.1,SNR=9.2						
PLCA	Paso Flores	81.30	133	P	P	03 47 21.2	-0.4
PLCA				IAmb	IAmb	03 47 25.0	
	comp=Z,14nm,1.1s						
LC01	Cunco	81.56	131	P	P	03 47 25.8	+2.9
LC01				IAmb	IAmb	03 47 25.8	
	comp=Z,9.7nm,0.9s						
BO02	Sierra Bellavi	84.70	128	P	P	03 47 39.0	-0.3
NJ2	Nanjing	87.35	311	eP	P	03 47 54.4	+2.4
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
ESJX	Sierra Juarez	88.06	49	P	P	03 47 56.2	+0.6
PETK	Petropavlovsk-	88.29	346	P	P	03 47 55.8	-0.1
	comp=Z,2.8nm,0.7s,baz=139,slow=4.8,SNR=2.6						
PFO	Pinyon Flats O	88.80	48	P	P	03 47 59.8	+0.8
	comp=Z,3.1nm,0.8s,baz=232,slow=4.6,SNR=5.5						
PFO	Pinyon Flats O	88.80	48	P	P	03 47 59.7	+0.8
PFO				IAmb	IAmb	03 48 11.5	
	comp=Z,6.7nm,1.2s						
CMB	Columbia Colle	89.48	42	P	P	03 48 03.0	+1.1
CMB				IAmb	IAmb	03 48 04.2	
	comp=Z,6.4nm,0.9s						
SDPT	Sand Point	89.64	11	P	P	03 48 03.7	+1.6
GSC	Goldstone, Bar	89.71	46	P	P	03 48 03.8	+0.6
GSC				IAmb	IAmb	03 48 05.9	
	comp=Z,5.3nm,0.9s						
AFDM	Forest Hills D	89.79	41	P	P	03 48 04.3	+0.9
AFDM				IAmb	IAmb	03 48 06.0	
	comp=Z,5.0nm,1.1s						
WDC	Whiskeytown Da	90.09	39	P	P	03 48 04.9	+0.2
WAKR	Walker	90.34	43	P	P	03 48 06.8	+0.7
WAKR				IAmb	IAmb	03 48 08.3	
	comp=Z,5.9nm,1.1s						
PNTR	Pine Nut	90.65	42	P	P	03 48 08.0	+0.4
LHV	Little Huntoon	90.70	43	P	P	03 48 08.7	+1.2
LHV				IAmb	IAmb	03 48 13.7	
	comp=Z,4.8nm,1.1s						
BEKR	Beckworth	90.77	41	P	P	03 48 08.6	+0.5
BEKR				IAmb	IAmb	03 48 10.0	
	comp=Z,4.0nm,0.6s						
NVAR	Mina Array Bea	90.94	43	P	P	03 48 09.5	+0.5
	comp=Z,2.5nm,0.8s,baz=216,slow=8.0,SNR=16						
TPNV	Topopah Spring	91.15	45	P	P	03 48 10.1	+0.2
TPNV				IAmb	IAmb	03 48 12.6	
	comp=Z,3.7nm,0.8s						
TPH	Tonopah	91.32	44	P	P	03 48 10.9	+0.1
GO02	Mina Guanaco	91.36	121	P	P	03 48 10.3	-1.2
TUC	Tucson	91.60	52	P	P	03 48 12.2	+0.1
TUC				IAmb	IAmb	03 48 15.6	
	comp=Z,3.3nm,1.0s						
GYA	Guiyang	92.12	300	⇓P	P	03 48 17.4	+2.8
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
PRN	Pahroc Range	92.17	46	P	P	03 48 14.9	+0.2
PRN				IAmb	IAmb	03 48 18.4	
	comp=Z,5.4nm,1.1s						
PINE	Pine Mountain	93.20	38	P	P	03 48 19.9	+0.6
KMI	Kunming	94.23	297	⇑eP	P	03 48 27.3	+2.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	97.49	314	eP	Pdif	03 48 39.8	+0.9
PDAR	Pinedale Array	98.81	44	LR	LR	04 25 00.5	
	comp=Z,28nm,21.6s,baz=296,slow=30						
CPUP	Villa Florida	98.98	129	LR	LR	04 24 58.5	
	comp=Z,60nm,19.5s,baz=204,slow=30						
LZH	Lanzhou	99.62	307	eP	Pdif	03 48 48.7	+0.1
LZH				pP	pP	03 48 56.3	-5.0
LZH				sP	pwP	03 49 00.2	-4.5
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ	Urumqi	114.18	308	ePKP	PKiKP	03 53 45.7	+1.6
MKAR	Makanchi Array	118.81	309	PKP	PKPdf	03 53 51.0	-1.9
	comp=Z,0.6nm,0.8s,baz=64,slow=2.8,SNR=4.9						
ZALV	Zalesovo Beam	119.46	318	PKP	PKPdf	03 53 52.4	-1.4
	comp=Z,0.4nm,0.3s,baz=116,slow=3.4,SNR=3.6						
KSH	Kashi	120.81	300	PKP	PKiKP	03 53 58.0	+0.9
KURK	Kurchatov	122.26	313		PKiKP	03 54 00.1	+0.7
KURBB	Kurchatov Arra	122.29	313	PKP	PKPdf	03 53 57.5	-1.8
	comp=Z,1.8nm,0.7s,baz=94,slow=1.7,SNR=11						
BVAR	Borovoye Array	127.70	314	PKP	PKPdf	03 54 08.9	-0.7
	comp=Z,0.4nm,0.5s,baz=73,slow=5.0,SNR=2.2						
ARCES	ARCESS Array B	141.10	346	PKhKP	PKPpre	03 54 27.9	
	comp=Z,1.9nm,0.7s,baz=23,slow=1.7,SNR=8.2						
FINES	FINESS Array B	147.40	338	PKPbc	PKPbc	03 54 46.8	-1.1
	comp=Z,19nm,0.8s,baz=38,slow=4.2,SNR=31						
VSU	Vasula	149.34	333	eP	PKPdf	03 54 49.5	+1.0
MMAI	Mount Meron Ar	151.15	279	PKPbc	PKPbc	03 54 57.4	-0.9
	comp=Z,5.1nm,0.8s,baz=79,slow=7.8,SNR=2.7						
NB2	NORSAR Subarra	151.34	350	PKP	PKPbc	03 54 56.4	-1.4
	comp=Z,4.8nm,0.7s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.34	350	PKPbc	PKPbc	03 54 56.4	-1.4
	comp=Z,1.7nm,0.7s,baz=21,slow=4.8,SNR=28						
NOA				PKPab	pPKPdf	03 55 04.8	+0.1
	comp=Z,1.0nm,0.6s,baz=24,slow=4.4,SNR=4.4						
IDID	Didziasalis	151.45	329	eP	PKPbc	03 54 56.8	-1.3
ISAL	Salakas	151.55	329	eP	PKPbc	03 54 58.0	-0.3
IIGN	Ignalina	151.66	329	eP	PKPbc	03 54 57.7	-0.9
PABE	Paberze	152.49	331	eP	PKPbc	03 54 59.7	-0.8
LIC	Lamto	152.60	167	ePKIKP	PKPbc	03 55 02.3	+0.3

	comp=Z,24nm,1.1s						
KIC	Kosan Boka comp=Z,9.1nm,1.0s	152.79	168	ePKIKP	PKPbc	03 55 02.0	-0.5
AKASG	Malin Array Be comp=Z,3.5nm,0.8s,baz=66,slow=1.9,SNR=7.1	152.85	319	PKPbc	PKPbc	03 55 00.0	-1.4
BRTR	Keskin Array B comp=Z,0.9nm,0.5s,baz=138,slow=2.2,SNR=2.5	152.96	293	PKPbc	PKPbc	03 55 00.4	-1.8
TIC	Toumodi	153.02	167	ePKIKP	PKPbc	03 55 02.3	-0.7
DBIC	Dimbokro comp=Z,0.7nm,0.4s,baz=143,slow=2.0,SNR=4.9	153.07	167	PKPbc	PKPbc	03 55 03.0	-0.1
DBIC	Dimbokro	153.07	167		PKPbc	03 55 02.3	-0.7
CLL	Collm	159.85	337	ePKPab	PKPab	03 55 45.0	+2.4
TORD	Torodi Ar. Bea comp=Z,1.6nm,1.1s,baz=153,slow=4.0,SNR=4.1	160.02	182	PKP	PKPdf	03 55 04.4	-0.2
TORD	comp=Z,6.6nm,1.0s,baz=172,slow=3.3,SNR=13			PKPab	PKPab	03 55 44.7	+0.5
ESDC	Sonseca Array comp=Z,0.5nm,1.0s,baz=335,slow=4.3,SNR=4.9	172.46	30	PKPab	PKPab	03 56 38.5	-0.1

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*JMA **06** 03:39:34.5, 24°.09N×121°.66E, h18^{km}, M2.8*
*TAP **06** 03:39:35.5, 24°.15N×121°.67E, h20^{km}, ML3.8, B*
ISC 06 03:39:34.1±0.9, **24°.13N**±0°.01×**121°.78E**±0°.02, **h16**^{km}±7^{km}, **n131**, σ**0^{s}70**/201, **3C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	Chiawan baz=223	0.17	254	⇑iP	Pb	03 39 39.3	+0.3
TWD	baz=223			iS	Sb	03 39 42.2	0.0
NACB	Ninganchiao baz=293	0.17	286	⇑iP	Pb	03 39 39.1	+0.1
NACB	baz=293			iS	Sg	03 39 41.7	+0.4
HWA	Hwalien baz=206	0.22	226	⇑iP	Pb	03 39 40.8	+1.1
HWA	baz=206			iS	Sb	03 39 44.9	+1.4
ETLH	Xiulin Townshi baz=284	0.28	287	iP	Pg	03 39 40.4	+0.2
ETLH	baz=284			iS	Sg	03 39 44.1	-0.2
ENA	Nanau baz=9.0	0.30	354	P	Pb	03 39 41.9	+0.6
ENA	baz=9.0			eS	Sb	03 39 47.0	+1.0
ENAH	Nanao baz=20	0.32	6	eP	Pn	03 39 42.6	-1.7
ENAH	baz=20			eS	Sb	03 39 47.5	+1.0
ESL	Shilin baz=218	0.44	225	⇓iP	Pb	03 39 43.7	+0.1
ESL	baz=218			eS	Sg	03 39 49.7	+0.6
WHF	Hehuan Shan baz=270	0.47	272	⇓iP	Pg	03 39 43.6	-0.1
WHF	baz=270			iS	Sg	03 39 49.2	-0.9
NNSB	Datong baz=317	0.47	310	⇓iP	Pg	03 39 43.7	+0.1
NNSB	baz=317			iS	Sg	03 39 49.5	-0.4
NNSH	Datong baz=316	0.47	310	⇓iP	Pg	03 39 43.7	+0.2
NNSH	baz=316			iS	Sg	03 39 49.6	-0.4
NNS	Nan Shan baz=317	0.48	310	⇓iP	Pg	03 39 43.9	+0.1
NNS	baz=317			iS	Sg	03 39 50.0	-0.4
TWC	Suao baz=13	0.48	8	eP	Pn	03 39 45.4	-1.1
TWC	baz=13			S	Sn	03 39 52.5	-2.2
FUSS	Fushou baz=291	0.50	284	⇓iP	Pg	03 39 44.4	+0.1
FUSS	baz=291			iS	Sg	03 39 50.5	-0.4
NDT	Datong Townshi baz=335	0.53	333	P	Pb	03 39 45.4	+0.2
NDT	baz=335			iS	Sb	03 39 52.2	-0.4
ENTT	Nioudou baz=342	0.55	339	⇓iP	Pb	03 39 45.7	+0.3
ENTT	baz=342			eS	Sb	03 39 52.7	-0.3
CHGB	Renai baz=255	0.55	263	⇓iP	Pg	03 39 45.1	0.0
CHGB	baz=255			iS	Sg	03 39 51.7	-1.0
EGFH	Guangfu baz=217	0.56	215	P	Pb	03 39 46.2	+0.7
EGFH	baz=217			eS	Sb	03 39 53.7	+0.4
TWT	Tachien baz=283	0.56	283	⇓iP	Pg	03 39 45.6	+0.3
TWT	baz=283			iS	Sg	03 39 52.2	-0.7
TDCB	Techi baz=283	0.58	283	⇓iP	Pg	03 39 45.6	0.0
TDCB	baz=283			iS	Sg	03 39 52.0	-1.3
TWE	Neicheng baz=360	0.60	350	eP	Pn	03 39 47.1	-0.9
TWE	baz=360			eS	Sb	03 39 55.4	+0.8
YHNB	Yeheng baz=332	0.65	326	⇓iP	Pb	03 39 47.2	0.0
YHNB	baz=332			S	Sg	03 39 55.1	-0.5
NSK	Sanguang baz=331	0.67	325	⇓iP	Pb	03 39 47.4	-0.1
NSK	baz=331			S	Sg	03 39 55.5	-0.6
NWLT	Wulai baz=336	0.69	339	eP	Pb	03 39 48.2	+0.3
NWLT	baz=336			S	Sg	03 39 56.7	-0.2
HGSD	Ruisui baz=191	0.71	207	eP	Pn	03 39 49.5	-0.1
HGSD	baz=191			eS	Sn	03 39 60.0	-0.2
NTC	Toucheng baz=2.0	0.73	4	eP	Pn	03 39 49.8	0.0
NTC	baz=2.0			eS	Sn	03 39 59.2	-1.4
EHY	Hungye baz=217	0.74	214	eP	Pb	03 39 48.3	-0.4
EHY	baz=217			eS	Sb	03 39 58.6	-0.1
WPL	Puli Township baz=260	0.76	262	eP	Pb	03 39 48.6	-0.4
WPL	baz=260			eS	Sb	03 39 57.4	-1.7
WHP	Taichung City baz=288	0.77	281	eP	Pb	03 39 49.1	-0.2
WHP	baz=288			S	Sb	03 39 59.2	-0.4
DPDB	Guoxing baz=255	0.78	263	⇓iP	Pb	03 39 49.1	-0.4
DPDB	baz=255			eS	Sb	03 39 58.9	-1.0
SSLB	Suanglung baz=249	0.82	246	⇓iP	Pb	03 39 49.5	-0.6
SSLB	baz=249			iS	Sb	03 39 59.2	-1.9
SMLT	Sun Moon Lake baz=245	0.84	253	⇓iP	Pb	03 39 50.0	-0.5
SMLT	baz=245			S	Sb	03 40 00.5	-1.0
TIPB	Shuangxi baz=359	0.84	3	eP	Pn	03 39 51.7	+0.3
TIPB	baz=359			eS	Sn	03 40 02.8	-0.7
YULB	Yu-li baz=214	0.85	211	eP	Pb	03 39 49.8	-0.8
YULB	baz=214			eS	Sn	03 40 03.6	-0.2
NHDH	Xindian Distri baz=343	0.86	345	eP	Pn	03 39 51.5	-0.2
NHDH	baz=343			eS	Sb	03 40 01.9	-0.2
LIOB	Emei baz=309	0.86	307	eP	Pg	03 39 51.1	+0.2
LIOB	baz=309			eS	Sb	03 40 01.2	-1.1
NSTT	Nanjuang baz=308	0.87	306	eP	Pb	03 39 50.8	-0.1
NSTT	baz=308			eS	Sb	03 40 01.0	-1.3
TWA	Mucha baz=353	0.87	348	eP	Pn	03 39 51.9	+0.2
TWA	baz=353			eS	Sg	03 40 02.7	+0.3
TYC	Yuchr baz=248	0.87	255	eP	Pb	03 39 50.2	-0.7
TYC	baz=248			eS	Sb	03 40 01.0	-1.3
EYUL	Yuli baz=218	0.88	208	eP	Pn	03 39 52.3	+0.4
EYUL	baz=218			eS	Sn	03 40 05.0	+0.6
TATO	Taipei baz=348	0.89	343	eP	Pn	03 39 52.7	+0.7
TWF1	Yuli baz=219	0.89	210	eP	Pg	03 39 51.4	0.0
TWF1	baz=219			eS	Sg	03 40 03.7	+0.7
TWB1	Santiao Chiao baz=10.0	0.90	12	eP	Pn	03 39 52.8	+0.6
TWB1	baz=10.0			eS	Sn	03 40 05.3	+0.4
TAP1	Taipei baz=348	0.94	346	eP	Pn	03 39 52.3	-0.4
TAP1	baz=348			eS	Sg	03 40 04.9	+0.2
NWF	Wu-fen Shan baz=347	0.94	0	eP	Pn	03 39 53.6	+0.7
NWF	baz=347			eS	Sn	03 40 06.6	+0.6
WFSB	Wu-fen Shan baz=357	0.94	0	eP	Pn	03 39 53.6	+0.8
WFSB	baz=357			eS	Sn	03 40 06.8	+0.9
TAP	Taipei baz=348	0.94	345	eP	Pn	03 39 53.9	+1.1
TAP	baz=348			eS	Sn	03 40 05.6	-0.3
TWQ1	Liyutan baz=291	0.94	284	eP	Pn	03 39 52.7	0.0
TWQ1	baz=291			eS	Sn	03 40 05.9	0.0
WHYT	Xinyi Township baz=245	0.95	243	eP	Pb	03 39 52.4	+0.2
WHYT	baz=245			eS	Sb	03 40 04.3	-0.3
HSN1	Hsinchu baz=316	0.95	313	eP	Pn	03 39 52.6	-0.2
HSN1	baz=316			eS	Sg	03 40 05.5	+0.5
NSY	Sanyi baz=288	0.97	287	eP	Pg	03 39 53.6	+0.6
NSY	baz=288			eS	Sb	03 40 04.8	-0.5
NTY	Taoyuan baz=333	0.97	333	eP	Pg	03 39 53.8	+0.8
NTY	baz=333			eS	Sn	03 40 07.8	+1.1
SBCB	Hsinchu baz=315	0.98	313	eP	Pg	03 39 53.4	+0.2
SBCB	baz=315			eS	Sn	03 40 07.6	+0.7
YUS	Yu-Shan baz=226	0.99	230	eP	Pb	03 39 52.6	-0.5
NMLH	Miaoli baz=296	0.99	295	eP	Pg	03 39 54.2	+0.9
NMLH	baz=296			eS	Sg	03 40 06.3	+0.1
WWF	Wufeng baz=261	0.99	265	eP	Pg	03 39 53.9	+0.6
WWF	baz=261			eS	Sn	03 40 07.5	+0.4
NCU	National Centr baz=330	1.00	328	eP	Pg	03 39 54.0	+0.6
NCU	baz=330			eS	Sn	03 40 07.6	+0.3
NCUH	Zhongli baz=330	1.00	327	eP	Pn	03 39 53.2	-0.3
NCUH	baz=330			eS	Sn	03 40 07.4	+0.1
TCU	Taichung baz=271	1.00	271	eP	Pg	03 39 54.5	+0.9
TCU	baz=271			eS	Sn	03 40 07.6	+0.1
WJS	Zhushan baz=250	1.01	253	eP	Pg	03 39 53.9	+0.3
WJS	baz=250			eS	Sg	03 40 06.8	+0.1
TNOU	National Taiwa baz=348	1.02	360	eP	Pb	03 39 53.2	-0.2
TNOU	baz=348			eS	Sg	03 40 07.1	-0.1
TWS1	Kuangyinshan baz=358	1.02	341	eP	Pg	03 39 54.1	+0.2
TWS1	baz=358			eS	Sn	03 40 08.8	+0.9
FULB	Fuli baz=214	1.02	206	eP	Pg	03 39 54.8	+0.9
WNT1	Nantou City baz=255	1.03	258	eP	Pg	03 39 54.6	+0.6
WNT1	baz=255			eS	Sn	03 40 08.4	+0.4
WNT	Mingjian baz=253	1.03	256	eP	Pn	03 39 53.9	0.0
WNT	baz=253			eS	Sg	03 40 08.0	+0.4
YM01	YM01 baz=352	1.03	350	eP	Pg	03 39 54.6	+0.5
YM01	baz=352			eS	Sn	03 40 08.9	+0.7
YM10	YM10 baz=353	1.04	349	eP	Pg	03 39 55.2	+0.9
YM04	YM04 baz=351	1.05	348	eP	Pg	03 39 55.1	+0.7
YM05	YM05 baz=353	1.05	350	eP	Pn	03 39 54.1	-0.2
YM11	YM11 baz=353	1.05	350	eP	Pg	03 39 55.3	+0.8
WDJ	Dajia District baz=282	1.06	282	eP	Pg	03 39 55.2	+0.6
WDJ	baz=282			eS	Sg	03 40 09.8	+1.3
YM08	YM08 baz=354	1.07	351	eP	Pg	03 39 54.5	-0.3
NTST	Danshui baz=359	1.07	344	eP	Pg	03 39 55.6	+0.7
NTST	baz=359			eS	Sg	03 40 10.5	+1.5
ALS	Alishan baz=222	1.08	236	eP	Pn	03 39 54.8	-0.2
ALS	baz=222			eS	Sg	03 40 09.4	+0.1
ANP	Anpu baz=351	1.08	348	eP	Pg	03 39 54.9	-0.2
CHKT	Chengkung baz=215	1.09	200	eP	Pg	03 39 55.5	+0.3
CHKT	baz=215			eS	Sg	03 40 10.0	+0.6
WCHH	Zhanghua baz=267	1.11	268	eP	Pg	03 39 55.9	+0.3
WCHH	baz=267			eS	Sg	03 40 11.8	+1.6
CHN5	Tsauling baz=228	1.14	243	eP	Pg	03 39 56.2	+0.2
CHN5	baz=228			eS	Sg	03 40 11.4	+0.5
TWY	Chenhua baz=355	1.16	352	eP	Pg	03 39 57.5	+1.0
ELDTW	Lidau baz=216	1.16	217	eP	Pn	03 39 55.7	-0.2
ELDTW	baz=216			eS	Sb	03 40 10.7	-0.2
YOJ	Yonaguni jima	1.18	73	P	Pg	03 39 57.7	+0.9
YOJ				eS	Sg	03 40 14.5	+2.3
YOJ	Yonaguni jima baz=75	1.18	73	eP	Pg	03 39 56.5	-0.3
WGK	Gukeng baz=232	1.20	249	eP	Pg	03 39 57.5	+0.3
WDLH	Douliu baz=233	1.21	249	eP	Pb	03 39 57.2	+0.4
EDH	Donghe baz=212	1.23	201	eP	Pn	03 39 56.4	-0.3
CHN4	Tsaushan baz=235	1.33	235	eP	Pg	03 39 59.5	-0.3
CHN4	baz=235			eS	Sg	03 40 17.5	+0.4
TPUB	Ta-pu baz=230	1.33	232	eP	Pb	03 39 59.1	+0.2
TPUB	baz=230			eS	Sb	03 40 16.5	+0.8
STYT	Tauyuan baz=223	1.34	224	eP	Pb	03 39 58.9	-0.1
WTK	Tuku baz=239	1.34	251	eP	Pb	03 39 58.7	-0.3
WTK	baz=239			eS	Sb	03 40 16.7	+0.8
LONT	Longtian baz=190	1.35	206	eP	Pb	03 39 58.6	-0.5
WTP	Ta-pu baz=231	1.38	231	eP	Pb	03 40 00.0	+0.4
WTP	baz=231			eS	Sg	03 40 19.4	+0.6
CHY	Chiayi baz=243	1.39	243	eP	Pb	03 40 00.2	+0.5
CHY	baz=243			eS	Sg	03 40 19.2	+0.2
TWGBT	Beinan baz=191	1.45	206	eP	Pn	03 39 59.1	-0.7
TWG	Pinlang baz=191	1.45	207	eP	Pn	03 40 00.0	+0.2
TWK	Hsinying baz=233	1.46	234	eP	Pb	03 40 01.2	+0.2
LDUT	Ludao baz=191	1.47	191	eP	Pn	03 39 59.7	-0.4
CHN1	Nanshi baz=230	1.48	231	eP	Pb	03 40 01.5	+0.2
SNST	Tainan City baz=233	1.48	233	eP	Pb	03 40 01.5	+0.2
WSF	Szhu baz=251	1.50	251	eP	Pb	03 40 01.8	+0.1
SGST	Jiashian baz=226	1.51	227	eP	Pn	03 40 01.0	+0.4
PCYT	Pengchaiyu baz=11	1.52	10	eP	Pb	03 40 02.3	+0.3
SLGT	Liugui baz=223	1.53	223	eP	Pb	03 40 02.0	-0.2
ICHU	Yijhu baz=241	1.57	241	eP	Pb	03 40 02.7	-0.2
CHN8	Yiju baz=241	1.63	242	eP	Pb	03 40 03.6	-0.3
ECL	Taimali baz=195	1.70	207	eP	Pn	03 40 02.4	-0.8
SCST	Cishan baz=225	1.71	224	eP	Pn	03 40 04.0	+0.8
SSD	Sandimen baz=219	1.73	218	eP	Pb	03 40 05.1	-0.5
SCLT	Jiali baz=238	1.73	237	eP	Pb	03 40 04.7	-0.9
SCLT	baz=238			eS	Sb	03 40 28.0	+0.8
TSMG	Majia baz=219	1.75	217	eP	Pb	03 40 05.8	-0.2
IRIF	Iriomote-Funau	1.80	83	P	Pb	03 40 06.7	0.0
IRIF				eS	Sg	03 40 30.3	-1.7
MASBT	Mashibuluo baz=218	1.84	215	eP	Pn	03 40 05.8	+0.7
HATJ	Hateruma jima	1.85	92	P	Pb	03 40 07.5	-0.2
HATJ				S	Sg	03 40 31.7	-2.2
EAST	Anshuo baz=198	1.93	206	eP	Pb	03 40 08.0	-1.1
JKRS	Kuro-shima	2.04	86	P	Pb	03 40 10.4	-0.5
JKRS				eS	Sb	03 40 36.7	+0.6
SCZT	Fangliau baz=200	2.04	212	eP	Pb	03 40 10.1	-0.8
LAY	Lan-yu baz=185	2.09	186	eP	Pn	03 40 07.8	-0.8
SLIU	Shizi baz=197	2.10	206	eP	Pb	03 40 11.3	-0.7
PHUB	P'eng-hu baz=253	2.11	254	eP	Pn	03 40 08.5	-0.3
PNG	Penghu baz=254	2.11	255	eP	Pn	03 40 08.9	+0.1
WDGT	Dungji baz=246	2.12	246	eP	Pn	03 40 09.5	+0.5
JIJ	Ishigaki jima	2.17	83	P	Pb	03 40 11.5	-1.6
JIJ				S	Sb	03 40 38.3	-1.6
WLCH	Liuqiu baz=235	2.19	216	eP	Pb	03 40 13.0	-0.4
PTTC	Pingtan baz=307	2.28	307	eP	Pn	03 40 10.4	-0.8
VWUC	VWUC baz=292	2.29	293	eP	Pn	03 40 10.6	-0.7
VCHM	Qimei baz=235	2.34	247	eP	Pn	03 40 12.2	+0.2
JISG	Ishigakijimahi	2.36	78	P	Pb	03 40 14.1	-2.1
JISG				S	Sb	03 40 43.4	-1.7
PTMZ	Houxiangcun baz=291	2.58	291	eP	Pn	03 40 14.4	-0.9
MATB	Ma-tsu baz=320	2.61	321	eP	Pn	03 40 14.8	-0.9
JTJ	Tarama	2.72	79	P	Pb	03 40 19.4	-3.0
KNM	Kinmen baz=273	3.06	276	eP	Pn	03 40 22.8	+0.8
KNMB	Chin-men Tao baz=274	3.11	277	eP	Pn	03 40 21.8	-0.8
AXDP	Jialang baz=280	3.55	283	eP	Pn	03 40 28.1	-0.6

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*NEIC **06** 03:50:25.8±0.6, 2°.98N±0°.07×124°.31E±0°.08, h348^{km}±6^{km}, mb4.5/41, Error ellipse: s-maj=11.2km s-min=9.5km az=81.0*
*DJA **06** 03:50:26.4±0.2, 3°N±3°×12°4E±°, h339^{km}±3^{km}, M4.6/29, mB5.0/12, mb4.8/29, MLv4.9/15, Mw(mB)4.4/12*
*KLM **06** 03:50:26, 2°.89N×124°.38E, h355^{km}, mb4.7*
*IDC **06** 03:50:26.8±0.8, 2°.98N×124°.31E, h356^{km}±8^{km}, mb3.7/21, mb1 3.8/26, mb1mx3.5/64, mbtmp4.5/26, Error ellipse: s-maj=12.6km s-min=6.0km az=83.0*
*MAN **06** 03:50:40.4, 4°.03N×124°.49E, h242^{km}, MS4.1*
*NOU **06** 03:50:48.4, 1°.00N×124°.28E, h427^{km}, mb4.7, Minahassa Peninsula, Sulawesi*
ISC 06 03:50:26.2±0.3, **2°.99N**±0°.04×**124°.35E**±0°.06, **h350**^{km}, **n136**, σ**1^{s}06**/142, **mb4.2**/53, **2D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.37	60	P	Pn	03 51 12.3	-1.3
KMSI	Cibinong	2.43	189	P	Pn	03 51 20.7	0.0
GTOI	Gorontalo	2.69	210	P	Pn	03 51 22.1	-0.8
DDMP	Don Marcelino,	3.38	24	eP	Pn	03 51 26.6	-2.5
MRSI	Marisa	3.47	224	P	Pn	03 51 29.7	-0.2
SKMP	Bagumbayan, Su	3.51	3	eP	Pn	03 51 29.9	-0.5
TNTI	Ternate	3.73	126	Pn	Pn	03 51 32.0	-0.5
TNTI				S	S	03 52 22.8	-3.2
TNTI	Ternate	3.73	126	P	Pn	03 51 32.5	-0.1
TOLI2	Tolitoli	4.02	242	Pn	Pn	03 51 34.5	-0.9
KCP	Kidapawan	4.06	10	⇓iP	Pn	03 51 35.6	-0.3
DAV	Davao City (W) 50nm,0.3s,baz=41,slow=5.4,SNR=7.7	4.24	17	P	Pn	03 51 37.7	+0.1
DAV	54nm,0.3s,baz=273,slow=23,SNR=1.5			S	S	03 52 37.4	+2.1
LUWI	Luwuk	4.30	202		Pn	03 51 37.8	-0.6
LUWI	Luwuk	4.30	202	P	Pn	03 51 38.6	+0.2
MATI	Mati	4.37	26	eP	Pn	03 51 37.2	-1.8
APSI	Ampana	4.72	215	P	Pn	03 51 42.7	-0.1
BUKP	Musuan	4.91	8	eP	Pn	03 51 44.3	-0.6
PAGZ	Pagadian	4.92	349	eP	Pn	03 51 43.8	-1.2
MPSI	Mapaga 0.2nm980nm62nm,0.9s	5.17	239	P	Pn	03 51 47.6	-0.1
SANI	Sanana 2.7nm5µm116nm,0.7s	5.27	162	P	Pn	03 51 47.2	-1.6
BUTP	Butuan	6.07	12	eP	Pn	03 51 57.1	-0.8
MYLDM	Lahad Datu	6.23	291	Pn	Pn	03 51 59.0	-0.7
GLSP	General Luna,	6.98	15	eP	Pn	03 52 06.5	-1.9
MSLP	Maasin	7.12	4	eP	Pn	03 52 09.6	-0.4
TTSI	Tana Toraja 0.4nm1µm92nm,0.8s	7.51	217	P	Pn	03 52 15.2	+0.6
SIJI	Sorong 2.7nm,0.3s,baz=341,slow=12,SNR=6.4	7.91	119	P	Pn	03 52 20.4	+1.1
SPMM	Sapulut	8.05	282	P	Pn	03 52 21.0	0.0
SPSI	Sidrap Palu 0.4nm3µm121nm,0.7s	8.29	214	P	Pn	03 52 24.5	+0.7
BNSI	Bone 0.7nm2µm205nm,0.7s	8.48	210	P	P	03 52 27.6	-1.2
KKM	Kota Kinabalu	8.66	291		Pn	03 52 27.3	-1.0
KAPI	Kappang 2.3nm,0.3s,baz=349,slow=4.1,SNR=7.0	9.18	210	P	Pn	03 52 34.1	-0.4
FAKI	Fak Fak	9.84	127	Pn	Pn	03 52 42.1	-0.2
FAKI	Fak Fak 68nm,0.9s	9.84	127	P	P	03 52 44.6	+0.7

KBKI	**Kotabaru**	**10.29**	**233**	P	**P**	**03 52 50.1**	**+1.1**
	4µm221nm,0.9s						
BBKI	**Banjar Baru**	**11.46**	**236**	P	**P**	**03 53 02.5**	**+0.5**
	122nm,1.0s						
EDFI	**Ende, Flores**	**11.96**	**193**	P	**Pn**	**03 53 08.9**	**+1.2**
	50nm,0.7s						
SBUM	**Sibu**	**12.13**	**268**	P	**P**	**03 53 08.9**	**-0.4**
SBUM	**Sibu**	**12.13**	**268**	P	**Pn**	**03 53 11.0**	**+1.4**
SOEI	**Soe**	**12.66**	**180**		**P**	**03 53 14.9**	**-0.5**
SOEI	**Soe**	**12.66**	**180**	P	**Pn**	**03 53 19.5**	**+3.5**
PLAI	**Plampang**	**13.44**	**209**	P	**Pn**	**03 53 27.0**	**+1.9**
	104nm,0.9s						
TWSI	**Taliwang, Sumb**	**13.83**	**213**	P	**Pn**	**03 53 29.8**	**+0.3**
	1µm85nm,1.1s						
PBKI	**Pangkalan Bun**	**13.88**	**246**	P	Pn	03 53 42.0	+12
KSM	**Kuching**	**14.11**	**264**	P	**P**	**03 53 30.8**	**-0.5**
KSM	**Kuching**	**14.11**	**264**	P	**Pn**	**03 53 35.0**	**+2.1**
SMPI	**Sarmi**	**15.18**	**109**	P	**Pn**	**03 53 47.1**	**+1.8**
JAGI	**Jajag, Banyuwa**	**15.26**	**222**		**P**	**03 53 43.5**	**-0.4**
PWJI	**Pagerwojo**	**16.62**	**229**	P	**P**	**03 53 59.7**	**+1.2**
	43nm,0.7s						
GENI	**Genyem**	**16.76**	**109**	P	**Pn**	**03 54 07.9**	**+4.3**
SMRI	**Semarang**	**17.09**	**234**	P	**P**	**03 54 05.1**	**+1.4**
SMRI	**Semarang**	**17.09**	**234**	P	**P**	**03 54 06.2**	**+2.6**
	230nm,0.9s						
MTN	**Manton Dam**	**17.11**	**157**	P	**P**	**03 54 03.6**	**-0.2**
WOJI	**Wonogiri, Jawa**	**17.18**	**231**	P	**P**	**03 54 06.7**	**+2.2**
	65nm,1.2s						
JAY	**Jayapura**	**17.24**	**108**	P	**P**	**03 54 05.7**	**+0.4**
	2.3nm,0.3s,baz=232,slow=16,SNR=4.3						
UGM	**Wanagama**	**17.54**	**232**	P	**P**	**03 54 07.8**	**-0.6**
KPJI	**Karang Pucung**	**18.49**	**236**	P	**P**	**03 54 20.2**	**+1.7**
	78nm,0.8s						
LEM	**Lembang**	**19.34**	**240**	P	**P**	**03 54 27.6**	**-0.1**
	9.9nm,0.3s,baz=19,slow=10,SNR=9.9						
TPUB	**Ta-pu**	**20.51**	**350**	P	**P**	**03 54 38.4**	**-0.6**
TPUB				IAmb	IAmb	03 54 41.1	
	comp=Z,28nm,0.6s						
CGJI	**Cibinong**	**20.93**	**243**	P	**P**	**03 54 42.8**	**0.0**
	comp=Z,2µmcomp=Z,149nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.99**	**177**	P	**P**	**03 54 43.4**	**+0.1**
	comp=Z,69nm,0.4s,baz=5.8,slow=7.7,SNR=225						
FITZ				S	**S**	**03 58 14.0**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=27,slow=11,SNR=1.5						
FITZ	**Fitzroy Crossi**	**20.99**	**177**	P	**P**	**03 54 43.2**	**-0.1**
KLSI		**21.03**	**249**	P	**P**	**03 54 44.4**	**+0.6**
	comp=Z,20nm,0.8s						
WB0	**Warramunga Arr**	**24.67**	**157**	P	**P**	**03 55 16.5**	**-0.2**
PSA00	**Pilbara Seismi**	**24.81**	**190**	P	**P**	**03 55 17.6**	**-0.3**
WRAB	**Tennant Creek**	**24.81**	**157**	P	**P**	**03 55 17.8**	**-0.2**
WRA	**Warramunga Arr**	**24.81**	**157**	P	**P**	**03 55 17.9**	**-0.1**
	comp=Z,21nm,0.4s,baz=335,slow=10,SNR=354						
WRA				S	**S**	**03 59 12.7**	**-1.7**
	comp=Z,5.1nm,0.8s,baz=331,slow=17,SNR=7.0						
WRA				ScP	**ScP**	**04 01 49.0**	**0.0**
	comp=Z,0.4nm,0.3s,baz=327,slow=2.6,SNR=4.6						
WB2	**Warramunga Arr**	**24.82**	**157**	P	**P**	**03 55 17.5**	**-0.5**
WB2				IAmb	IAmb	03 55 19.2	
	comp=Z,33nm,0.6s						
WR0	**Warramunga Arr**	**24.91**	**157**	P	**P**	**03 55 18.7**	**-0.1**
WR0				IAmb	IAmb	03 55 19.6	
	comp=Z,14nm,0.5s						
GSI	**Gunungsitoli**	**26.81**	**267**	P	**P**	**03 55 35.2**	**-0.6**
GSI				IAmb	IAmb	03 55 36.2	
	comp=Z,17nm,0.5s						
AS31	**Alice Springs**	**28.08**	**161**	P	**P**	**03 55 46.5**	**-0.5**
ASAR	**Alice Springs**	**28.08**	**161**	P	**P**	**03 55 47.5**	**+0.5**
	comp=Z,6.2nm,0.5s,baz=342,slow=7.3,SNR=87						
ASAR				S	**S**	**04 00 04.8**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=337,slow=14,SNR=10.0						
ASAR				ScP	**ScP**	**04 01 59.5**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=342,slow=2.7,SNR=6.8						
CMAR	**Chiang Mai Arr**	**29.24**	**304**	ScP	**ScP**	**04 02 02.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=162,slow=3.7,SNR=6.1						
JCJ	**Chichijima**	**29.43**	**34**	P	**P**	**03 55 58.2**	**-0.6**
	comp=Z,61nm,0.5s,baz=286,slow=20,SNR=9.1						
KMI	**Kunming**	**30.29**	**319**	⇓*e*P	**P**	**03 56 08.0**	**+1.4**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MORW	**Morawa**	**32.86**	**193**	P	**P**	**03 56 28.2**	**-0.4**
MORW				IAmb	IAmb	03 56 28.8	
	comp=Z,17nm,0.6s						
FORT	**Forrest**	**33.77**	**174**	P	**P**	**03 56 36.0**	**-0.3**
XAN	**Xi'an**	**34.08**	**337**	P	**P**	**03 56 39.2**	**+0.2**
XAN				pP	pP	03 57 45.9	+1.7
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,94nm,6.5s						
MAT	**Matsushiro**	**35.75**	**19**	P	**P**	**03 56 52.6**	**-0.5**
MJAR	**Matsushiro Arr**	**35.75**	**19**	P	**P**	**03 56 52.5**	**-0.6**
	comp=Z,5.4nm,0.7s,baz=193,slow=9.5,SNR=9.0						
NWAO	**Narrogin (SRO)**	**36.35**	**190**	P	**P**	**03 56 58.0**	**-0.2**
	comp=Z,13nm,0.4s,baz=22,slow=7.9,SNR=22						
NWAO	**Narrogin (SRO)**	**36.35**	**190**	P	**P**	**03 56 57.8**	**-0.4**
NWAO				IAmb	IAmb	03 56 58.7	
	comp=Z,14nm,0.5s						
BBOO	**Buckleboo**	**37.29**	**164**	P	**P**	**03 57 05.9**	**-0.2**
BBOO				IAmb	IAmb	03 57 07.6	
	comp=Z,17nm,0.7s						
LZH	**Lanzhou**	**38.00**	**333**	*e*P	**P**	**03 57 13.0**	**+0.9**
LZH				pP	pwP	03 58 21.6	-3.2
LZH				sP	sP	03 58 57.4	-0.7
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**38.35**	**156**	P	**P**	**03 57 16.0**	**+1.2**
	comp=Z,13nm,0.7s,baz=326,slow=7.6,SNR=28						
STKA	**Stephens Creek**	**38.35**	**156**	P	**P**	**03 57 14.7**	**-0.1**
HHC	**Hu-ho-hao-te**	**39.42**	**345**	*e*P	**P**	**03 57 22.4**	**-1.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,5.4s						
USRK	**Ussuriysk Ar.**	**41.59**	**8**	P	**P**	**03 57 41.6**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=192,slow=8.0,SNR=7.5						
MDJ	**Mudanjiang**	**41.71**	**6**	P	**P**	**03 57 44.4**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,15nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,540nm,3.9s						
GTA	**Gaotai**	**42.56**	**332**	*e*P	**P**	**03 57 49.5**	**+0.5**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ASAJ	**Asahikawa**	**44.02**	**19**	P	**P**	**03 58 01.0**	**+0.7**
	comp=Z,5.3nm,0.4s,baz=172,slow=5.6,SNR=7.1						
JKA	**Kamikawa-asahi**	**44.02**	**19**	P	**P**	**03 57 59.9**	**-0.4**
GUN	**Gumba**	**44.27**	**308**	*e*P	**P**	**03 58 02.6**	**-0.4**
	comp=Z,8.2nm,0.5s						
PKIN	**Phulchoki**	**44.50**	**307**	*e*P	**P**	**03 58 03.4**	**-1.3**
	comp=Z,4.2nm,0.3s						
KOLN	**Koldanda**	**46.02**	**307**	*e*P	**P**	**03 58 15.7**	**-0.8**
	comp=Z,8.5nm,0.5s						
DANN	**Dangsing**	**46.14**	**307**	*e*P	**P**	**03 58 17.2**	**-0.3**
	comp=Z,16nm,0.6s						
PYUN	**Piuthan**	**46.65**	**307**	*e*P	**P**	**03 58 21.5**	**+0.2**
	comp=Z,15nm,0.5s						
DVP	**Devils Point**	**47.86**	**117**	P	P	03 58 40.1	+10
	comp=Z,29µm,0.4s						
WMQ	**Urumqi**	**52.00**	**327**	*e*P	**P**	**03 59 02.4**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,80nm,3.9s						
MK31	**Makanchi Array**	**56.83**	**327**	P	**P**	**03 59 34.9**	**-0.4**
MKAR	**Makanchi Array**	**56.83**	**327**	P	**P**	**03 59 34.9**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=121,slow=7.6,SNR=51						
MKAR				ScP	**ScP**	**04 03 51.2**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=121,slow=4.6,SNR=9.8						
MAKZ	**Makanchi**	**57.01**	**327**	P	**P**	**03 59 36.1**	**-0.4**
PETK	**Petropavlovsk-**	**57.03**	**23**	P	**P**	**03 59 37.2**	**+0.8**
	comp=Z,5.8nm,0.8s,baz=227,slow=1.5,SNR=14						
MA2	**Magadan**	**60.02**	**15**	P	**P**	**03 59 57.5**	**+0.8**
	comp=Z,11nm,0.5s,baz=178,slow=13,SNR=7.9						
MA2	**Magadan**	**60.02**	**15**	P	**P**	**03 59 56.6**	**-0.1**
MA2				IAmb	IAmb	03 59 58.9	
	comp=Z,12nm,0.7s						
ZAA0	**Zalesovo Array**	**60.19**	**334**	P	**P**	**03 59 57.8**	**-0.3**
ZALV	**Zalesovo Beam**	**60.19**	**334**	P	**P**	**03 59 57.9**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=123,slow=5.3,SNR=3.7						
KURBB	**Kurchatov Arra**	**61.10**	**329**	P	**P**	**04 00 04.2**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=124,slow=6.7,SNR=14						
KURK	**Kurchatov**	**61.11**	**329**	P	**P**	**04 00 03.9**	**-0.3**
KURK				IAmb	IAmb	04 00 05.2	
	comp=Z,7.7nm,0.6s						
KK31	**Karatay Array**	**62.17**	**318**	P	**P**	**04 00 11.2**	**-0.3**
KKAR	**Karatay Array**	**62.17**	**318**	P	**P**	**04 00 11.2**	**-0.3**
SEY	**Seymchan**	**63.30**	**14**	P	**P**	**04 00 19.6**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=237,slow=3.7,SNR=4.8						
BVAR	**Borovoye Array**	**66.66**	**328**	P	**P**	**04 00 40.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=1.8						
ATKA	**Atka Island**	**70.46**	**35**	P	**P**	**04 01 02.9**	**-0.5**
NRIK	**Noril'sk**	**70.59**	**347**	P	**P**	**04 01 03.6**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=117,slow=4.3,SNR=4.1						
NRIK	**Noril'sk**	**70.59**	**347**	P	**P**	**04 01 03.7**	**-0.2**
NRIK				IAmb	IAmb	04 01 06.1	
	comp=Z,4.5nm,0.7s						
ABKAR	**Akbulak array**	**71.23**	**321**	P	**P**	**04 01 07.7**	**-0.3**
AKTO	**Aktyubinsk**	**72.77**	**322**	P	**P**	**04 01 16.6**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=107,slow=12,SNR=2.7						
ARU	**Arti**	**74.30**	**328**	P	**P**	**04 01 25.4**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=150,slow=1.4,SNR=4.1						
VNDA	**Vanda**	**83.00**	**172**	P	**P**	**04 02 12.8**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=311,slow=6.3,SNR=6.7						
VNDA	**Vanda**	**83.00**	**172**	P	**P**	**04 02 12.8**	**+0.4**
BRLK	**Bradley Lake**	**84.79**	**30**	P	**P**	**04 02 21.7**	**-0.1**
BRLK				IAmb	IAmb	04 02 35.6	
	comp=Z,9.4nm,1.0s						
SUA	**Susitna One**	**84.95**	**29**	P	**P**	**04 02 22.3**	**-0.3**
SUA				IAmb	IAmb	04 02 39.6	
	comp=Z,5.5nm,1.2s						
COLD	**Coldfoot**	**85.49**	**23**	P	**P**	**04 02 24.9**	**-0.2**
COLD				IAmb	IAmb	04 02 27.0	
	comp=Z,2.4nm,0.8s						
RND	**Reindeer**	**85.91**	**27**	P	**P**	**04 02 27.0**	**-0.3**
CCB	**Clear Creek Bu**	**86.39**	**26**	P	**P**	**04 02 28.9**	**-0.5**
CCB				IAmb	IAmb	04 02 30.0	
	comp=Z,0.9nm,0.5s						
ILAR	**Eielson Array**	**86.79**	**25**	P	**P**	**04 02 29.6**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=261,slow=4.3,SNR=11						
VRDI	**Verde Repeater**	**88.46**	**29**	P	**P**	**04 02 39.1**	**-0.5**
VRDI				IAmb	IAmb	04 02 49.6	
	comp=Z,2.3nm,0.8s						
MCARA	**McCarthy VSAT**	**88.66**	**29**	P	**P**	**04 02 40.1**	**-0.1**
MCARA				IAmb	IAmb	04 02 47.5	
	comp=Z,5.6nm,1.0s						
BALM	**Baldy**	**89.01**	**29**	P	**P**	**04 02 41.7**	**-0.3**
BALM				IAmb	IAmb	04 02 46.5	
	comp=Z,4.1nm,1.0s						
ISLE	**Juniper Island**	**89.05**	**30**	P	**P**	**04 02 41.9**	**-0.3**
ISLE				IAmb	IAmb	04 02 43.0	
	comp=Z,9.3nm,1.1s						
BARN	**Barnard Glacie**	**89.34**	**29**	P	**P**	**04 02 43.2**	**-0.5**
BARN				IAmb	IAmb	04 02 45.3	
	comp=Z,4.1nm,0.7s						
CTGM	**Chitina Glacie**	**89.51**	**29**	P	**P**	**04 02 44.0**	**-0.4**
CTGM				IAmb	IAmb	04 03 03.6	
	comp=Z,3.1nm,1.0s						
KEV	**Kevo**	**89.76**	**340**	P	**P**	**04 02 45.4**	**+0.2**
KEV				IAmb	IAmb	04 02 52.5	
	comp=Z,13nm,1.1s						
ARCES	**ARCESS Array B**	**90.31**	**340**	P	**P**	**04 02 46.3**	**-1.5**
	comp=Z,2.6nm,0.9s,baz=92,slow=4.9,SNR=1.8						
SPITS	**Spitsbergen Ar**	**90.74**	**349**	P	**P**	**04 02 48.1**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=69,slow=7.9,SNR=1.3						
FINES	**FINESS Array B**	**91.35**	**332**	P	**P**	**04 02 50.6**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=70,slow=4.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**120.88**	**287**	PKP	**PKPdf**	**04 08 37.2**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=59,slow=1.8,SNR=2.1						

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*IDC **06** 03:54:19.4±1.3, 56.°02N×114.°03E, h0^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.3/71, mbtmp3.6/8, ML3.3/4, Error ellipse: s-maj=26.8km s-min=22.8km az=147.0*

*MOS **06** 03:54:19.4±1.4, 56.°05N×113.°78E, h7^{km}, mb3.9/6, Error ellipse: s-maj=9.9km s-min=6.6km az=71.6*

MOS Felt (II) at Severomuysk.

*BYKL **06** 03:54:21.6±0.1, 56.°10N×113.°67E, h7^{km}±2^{km}, FELT I=II MSK at Severomuisk*

ISC 06 03:54:20.9±0.8**, 56.°05N**±0.°02×**113.°69E**±0.°02**, h10**^{km}±5^{km}**,**
n59, σ1^{s}88/101**, mb3.7**/8**, 13C-11D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**314**	⇑*i*Pg	**Pg**	**03 54 23.5**	**-0.1**
SVKR				*e*Sg	**Sg**	**03 54 25.5**	**0.0**
SVKR				Pmax			
	30µm,0.3s						
SVKR				Smax			
	96µm,0.5s						
SVKR	**Severomuysk**	**0.10**	**314**	⇑*i*PG	**Pg**	**03 54 23.5**	**-0.1**
SVKR				*e*S	**Sg**	**03 54 25.2**	**-0.3**
UKT	**Uakit**	**0.56**	**183**	⇑*i*Pg	**Pg**	**03 54 32.2**	**+0.3**
UKT				*e*Sg	**Sb**	**03 54 40.6**	**-0.4**
UKT				Pmax			
	457nm,0.4s						
UKT				Smax			
	1µm,0.5s						
YOA	**Uoyan**	**1.10**	**275**	⇑*i*Pg	**Pg**	**03 54 41.8**	**-0.3**
YOA				*e*Pb	**Pn**	**03 54 44.1**	**+1.7**
YOA				*e*Sg	**Sb**	**03 54 56.7**	**+0.2**
YOA				*e*		03 55 03.4	
YOA				max			
	788nm,0.2s						
YOA				max			
	3µm,0.3s						
YOA	**Uoyan**	**1.10**	**275**	*e*PG	**Pg**	**03 54 41.8**	**-0.3**
YOA				*e*		03 54 57.5	
YOA				pmax	pmax		
	comp=Z,526nm,0.2s						
YOA				smax	smax		
	comp=E,3µm,0.3s						
NLYR	**Nelyaty**	**1.21**	**68**	⇑*i*Pg	**Pb**	**03 54 43.3**	**-0.7**
NLYR				*e*Pb	**Pg**	**03 54 45.2**	**+1.0**
NLYR				*e*		03 54 46.9	
NLYR				*e*Sg	**Sb**	**03 54 58.7**	**-0.9**
NLYR				*e*		03 55 03.1	
NLYR				max			
	comp=E,525nm,0.3s						
NLYR				max			
	comp=E,2µm,0.5s						
NLYR	**Nelyaty**	**1.21**	**68**	*e*PG	**Pb**	**03 54 43.2**	**-0.7**
NLYR				*e*		03 54 59.1	
NLYR				pmax	pmax		
	comp=Z,540nm,0.7s						
NLYR				smax	smax		
	comp=N,2µm,0.8s						
KMO	**Kumora**	**1.41**	**264**	⇑*i*Pg	**Pb**	**03 54 47.1**	**-0.2**
KMO				*e*Pb	**Pg**	**03 54 48.6**	**+0.7**
KMO				*e*Sg	**Sb**	**03 55 05.8**	**+0.5**
KMO				*e*		03 55 09.2	
KMO				max			
	comp=N,454nm,0.2s						
KMO				max			
	comp=N,3µm,0.9s						
KMO	**Kumora**	**1.41**	**264**	*e*PG	**Pb**	**03 54 47.2**	**-0.1**
KMO				*e*		03 55 05.9	
KMO				pmax	pmax		
	comp=Z,456nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.9s						
BOD	**Bodaibo**	**1.78**	**5**	*e*Pg	**Pn**	**03 54 52.7**	**+0.9**
BOD				*e*Sg	**Sn**	**03 55 15.3**	**+0.8**
BOD				Pmax			
	comp=N,320nm,0.7s						
BOD				Smax			
	comp=N,1µm,0.6s						
BOD	**Bodaibo**	**1.78**	**5**	⇑*i*PN	**Pb**	**03 54 53.0**	**-0.7**
BOD				*e*		03 55 15.8	
BOD				pmax	pmax		
	comp=Z,310nm,0.5s						
BOD				smax	smax		
	comp=E,1µm,0.6s						
YLYR	**Ulyunkhan**	**1.86**	**232**	⇓*i*Pn	**Pb**	**03 54 55.0**	**+0.1**
YLYR				*e*Pg	**Pg**	**03 54 55.9**	**-0.6**
YLYR				*e*		03 54 58.8	
YLYR				*e*Sg	**Sg**	**03 55 20.8**	**+0.2**
YLYR				*e*		03 55 22.6	
YLYR				Pmax			
	comp=E,281nm,0.3s						
YLYR				max			
	comp=E,1µm,0.4s						
YLYR	**Ulyunkhan**	**1.86**	**232**	⇓*i*PN	**Pb**	**03 54 55.1**	**+0.1**
YLYR				*e*		03 55 20.7	
YLYR				pmax	pmax		
	comp=Z,145nm,0.4s						
YLYR				smax	smax		
	comp=E,1µm,0.3s						
NIZ	**Nizh Angarsk**	**2.35**	**265**	*e*Pn	**Pn**	**03 55 01.5**	**+1.9**
NIZ				*e*Pg	**Pb**	**03 55 03.3**	**0.0**
NIZ				*e*Sn	**Sb**	**03 55 31.4**	**-1.0**
NIZ				*e*Sg	**Sg**	**03 55 33.9**	**-2.5**
NIZ				*e*		03 55 36.5	
NIZ				Pmax			
	comp=E,63nm,0.3s						
NIZ				max			
	comp=E,671nm,0.4s						
CRS	**Chara**	**2.68**	**70**	⇓*i*Pn	**Pn**	**03 55 05.6**	**+1.4**
CRS				*e*Pg	**Pb**	**03 55 10.1**	**+1.1**
CRS				*e*Sg	**Sg**	**03 55 44.6**	**-2.4**
CRS				Pmax			
	comp=E,349nm,1.0s						
CRS				Smax			
	comp=E,365nm,0.6s						
CRS	**Chara**	**2.68**	**70**	*e*PN	**Pn**	**03 55 05.3**	**+1.1**
CRS				*e*		03 55 09.8	
CRS				*e*		03 55 44.2	
CRS				pmax	pmax		
	comp=Z,350nm,0.6s						
CRS				smax	smax		
	comp=E,362nm,0.7s						
SYVR	**Suvo**	**3.21**	**223**	*e*Pn	**Pn**	**03 55 13.2**	**+1.8**
SYVR				*e*		03 55 16.1	
SYVR				*e*Pg	**Pb**	**03 55 19.4**	**+1.5**
SYVR				*e*PgPg	**PbPb**	**03 55 21.7**	**+0.6**
SYVR				*e*Sn	**Sn**	**03 55 51.5**	**+1.9**
SYVR				*e*Sg	**Sg**	**03 56 01.3**	**-2.5**
SYVR				*e*		03 56 12.1	
SYVR				max			
	comp=E,76nm,0.6s						
SYVR				max			
	comp=E,383nm,1.1s						
SYVR	**Suvo**	**3.21**	**223**	*e*PN	**Pn**	**03 55 13.2**	**+1.8**
SYVR				*e*		03 55 20.8	
SYVR				*e*		03 56 01.5	
SYVR				pmax	pmax		
	comp=Z,77nm,0.6s						
SYVR				smax	smax		
	comp=N,391nm,1.1s						
VTMR	**Vitim**	**3.45**	**350**	*e*Pg	**Pb**	**03 55 23.2**	**+1.1**
VTMR				*e*Sn	**Sn**	**03 55 54.8**	**-0.8**
VTMR				*e*Sg	**Sb**	**03 56 06.2**	**+2.1**
TUP	**Tupik**	**3.94**	**112**	*e*Pn	**Pn**	**03 55 22.8**	**+1.3**
TUP				*e*Pg	**Pb**	**03 55 33.4**	**+3.0**
TUP				*e*		03 55 39.6	
TUP				*e*Sn	**Sn**	**03 56 08.9**	**+1.2**
TUP				*e*Sg	**Sg**	**03 56 23.8**	**-3.6**
TUP				*e*		03 56 28.7	
TUP				Pmax			
	comp=N,60nm,0.6s						
TUP				max			
	comp=N,437nm,1.1s						
TUP	**Tupik**	**3.94**	**112**	*e*PN	**Pn**	**03 55 22.7**	**+1.3**
TUP				*e*		03 55 32.6	
TUP				*e*S	**Sn**	**03 56 08.7**	**+1.0**
TUP				*e*		03 56 23.7	
TUP				pmax	pmax		
	comp=Z,60nm,0.6s						
TUP				smax	smax		
	comp=N,437nm,1.0s						
MXMB	**Maximikha**	**4.00**	**228**	*e*Pn	**Pn**	**03 55 24.3**	**+2.0**
MXMB				*e*Pg	**Pg**	**03 55 34.7**	**-2.9**
MXMB				*e*Sn	**Sn**	**03 56 11.5**	**+2.3**
MXMB				*e*Sg	**Sg**	**03 56 27.0**	**-2.4**
CIT	**Chita**	**4.04**	**181**	*e*Pg	**Pb**	**03 55 34.8**	**+2.7**
CIT				*e*Sn	**Sn**	**03 56 12.5**	**+2.4**
CIT				*e*Sg	**Sg**	**03 56 28.2**	**-2.3**
CIT				Pmax			
	comp=N,106nm,0.2s						
CIT				Smax			
	comp=N,483nm,0.6s						
CIT	**Chita**	**4.04**	**181**	*e*PN	**Pn**	**03 55 26.5**	**+3.7**
CIT				*e*		03 55 35.2	
CIT				*e*		03 56 28.8	
CIT				pmax	pmax		
	comp=Z,71nm,1.2s						
CIT				smax	smax		
	comp=E,377nm,1.3s						
OGRR	**Ongureny**	**4.27**	**238**	⇓*i*Pn	**Pn**	**03 55 28.8**	**+2.9**
OGRR				*e*Pg	**Pb**	**03 55 38.3**	**+2.3**
OGRR				*e*		03 55 42.5	
OGRR				*e*Sn	**Sn**	**03 56 16.1**	**+0.4**
OGRR				*e*Sg	**Sg**	**03 56 33.9**	**-3.9**
OGRR				max			
	comp=E,27nm,0.5s						
OGRR				Smax			
	comp=E,105nm,0.5s						
OGRR	**Ongureny**	**4.27**	**238**	⇓*i*PN	**Pn**	**03 55 28.8**	**+2.9**
OGRR				*e*		03 55 39.7	
OGRR				*e*		03 56 34.1	
OGRR				pmax	pmax		
	comp=Z,45nm,2.1s						
OGRR				smax	smax		
	comp=N,107nm,0.7s						
YKLR	**Yuktali**	**4.47**	**80**	*e*Pn	**Pn**	**03 55 29.8**	**+1.1**
YKLR				*e*Pg	**Pb**	**03 55 42.4**	**+3.0**
YKLR				*e*Sn	**Sn**	**03 56 20.3**	**-0.4**
YKLR				*e*Sg	**Sg**	**03 56 39.9**	**-4.4**
TRG	**Tyrgan**	**5.41**	**235**	*e*Pn	**Pn**	**03 55 43.2**	**+1.6**
TRG				*e*Pg	**Pb**	**03 55 58.7**	**+3.3**
TRG				*e*Sn	**Sn**	**03 56 43.3**	**-0.5**
TRG				*e*Sg	**Sg**	**03 57 08.8**	**-5.5**
TRG				*e*		03 57 20.2	
TRG				Pmax			
	comp=N,19nm,0.7s						
TRG				max			
	comp=N,71nm,0.9s						
TRG	**Tyrgan**	**5.41**	**235**	*e*PN	**Pn**	**03 55 42.6**	**+1.0**
TRG				*e*		03 55 58.6	
TRG				*e*S	**Sn**	**03 56 44.4**	**+0.6**
TRG				*e*		03 57 08.7	
TRG				pmax	pmax		
	comp=Z,19nm,0.7s						
TRG				smax	smax		
	comp=E,89nm,1.1s						
KPC	**Khapcheranga**	**6.41**	**188**	*e*Pn	**Pn**	**03 55 56.2**	**+0.9**
KPC				*e*Pg	Pb	03 56 17.7	+5.2
KPC				*e*		03 56 26.0	
KPC				*e*Sn	**Sn**	**03 57 09.1**	**+0.6**
KPC				*e*		03 57 26.4	
KPC				*e*Sg	**Sg**	**03 57 41.5**	**-4.9**
KPC				max			
	comp=E,9.0nm,0.6s						
KPC				Smax			
	comp=E,195nm,1.1s						
KPC	**Khapcheranga**	**6.41**	**188**	*e*PN	**Pn**	**03 55 56.3**	**+0.9**
KPC				*e*		03 56 17.1	
KPC				*e*		03 57 41.3	
KPC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KPC				smax	smax		
	comp=E,195nm,1.8s						
TLY	**Talaya**	**7.37**	**238**	*e*PG	Pg	03 56 36.2	-5.8
TLY				*e*		03 58 09.4	
TLY				pmax	pmax		
	comp=Z,11nm,0.4s						
TLY				smax	smax		
	comp=E,55nm,0.7s						
HIA	**Hailar**	**7.72**	**149**	⇓*e*PN	**Pn**	**03 56 14.6**	**+1.2**
ZEA	**Zeya**	**8.16**	**101**	*e*PG	Pb	03 56 47.5	+5.3
ZAK	**Zakamensk**	**8.43**	**232**	*e*PN	Pn	03 56 30.9	+7.7
ZAK				*e*		03 58 44.8	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MOY	**Mondy**	**8.69**	**245**	*e*PN	**Pn**	**03 56 28.6**	**+1.9**
MOY				*e*S	Sg	03 58 48.4	-11
MOY				smax	smax		
	comp=N,80nm,1.2s						
ORL	**Orlik**	**8.84**	**252**	*e*PN	**Pn**	**03 56 30.5**	**+1.7**
ORL				*e*		03 57 01.6	
ORL				*e*S	**Sn**	**03 58 09.1**	**+0.7**
ORL				*e*		03 58 55.4	
ORL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ORL				smax	smax		
	comp=N,50nm,1.5s						
ULN	**Ulaanbaatar**	**9.16**	**209**	⇑*e*P	**Pn**	**03 56 33.0**	**-0.2**
SONM	**Songino Array**	**9.37**	**212**	Pn	**Pn**	**03 56 37.0**	**+1.0**
	comp=N,0.2nm,0.3s,baz=20,slow=14,SNR=4.9						
SONM				Pg		03 57 13.2	
	comp=N,0.3nm,0.3s,baz=14,slow=15,SNR=3.0						
SONM				Sn	**Sn**	**03 58 23.3**	**+1.8**
	comp=N,0.5nm,0.3s,baz=26,slow=17,SNR=2.2						
SONM				Lg	Lg	03 59 15.0	
	comp=N,1.8nm,0.3s,baz=25,slow=26,SNR=16						

YAK	Yakutsk	10.17	47	Lg	Lg	03 59 31.1	
	comp=N,0.1nm,0.3s,baz=329,slow=23,SNR=7.0						
YAK	Yakutsk	10.17	47	⇓*e*P	Pn	03 56 46.3	-0.5
KLR	Kul'dur	12.90	114	Pn	Pn	03 57 21.1	-3.0
	comp=N,0.1nm,0.3s,baz=322,slow=19,SNR=1.9						
KLR				Lg	Lg	04 00 55.4	
	comp=N,0.2nm,0.3s,baz=131,slow=9.3,SNR=3.2						
KLR	Kul'dur	12.90	114	⇓*e*P	Pn	03 57 22.9	-1.2
ZALV	Zalesovo Beam	16.64	275	Pn	P	03 58 15.7	-0.8
	comp=N,0.2nm,0.3s,baz=198,slow=7.8,SNR=4.4						
TIXI	Tiksi	16.93	17	⇑*e*P	Pn	03 58 17.1	-0.4
DGZ	Jazzator, Alta	17.01	259	⇓*e*P	Pn	03 58 19.1	+0.3
NRIK	Noril'sk	17.70	329	P	Pn	03 58 27.7	+0.6
	comp=N,0.7nm,0.3s,baz=91,slow=11,SNR=6.3						
NRIK	Noril'sk	17.70	329	⇓*e*P	P	03 58 29.0	+1.0
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	21.42	270	⇑*e*P	P	03 59 09.6	+0.9
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK31	Makanchi Array	21.49	258	⇓*e*P	P	03 59 11.5	+2.0
MKAR	Makanchi Array	21.49	258	P	P	03 59 11.2	+1.7
	comp=Z,1.5nm,0.7s,baz=58,slow=9.8,SNR=17						
MKAR	Makanchi Array	21.49	258	*i* P	P	03 59 14.1	+4.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	21.52	270	P	P	03 59 12.3	+2.5
	comp=Z,1.2nm,0.5s,baz=66,slow=9.2,SNR=5.5						
BRVK	Borovoye	25.04	281	⇑*e*P	P	03 59 46.6	+1.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	28.41	259	⇑*e*P	P	04 00 15.6	0.0
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	Arti	29.95	294	⇑*e*P	P	04 00 28.5	-0.3
ARU				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	Yellowknife Ar	55.96	25	P	P	04 03 58.4	-0.2
	comp=Z,0.3nm,0.7s,baz=332,slow=6.5,SNR=4.2						
YKA	Yellowknife Ar	55.96	25	*i* P	P	04 03 58.7	0.0
WRA	Warramunga Arr	77.69	160	P	P	04 06 16.9	-0.6
	comp=Z,0.5nm,0.9s,baz=351,slow=6.1,SNR=1.9						

BYKL 06 03:55:11.9±0.2, 56°.12N×113°.63E, h7^{km}±3^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.04	266	⇑*i*Pg	Pg	03 55 13.3	-0.1
SVKR				*e*Sg	Sg	03 55 15.0	+0.5
SVKR				Pmax			
	11µm,0.2s						
SVKR				Smax			
	17µm,0.5s						
UKT	Uakit	0.63	180	*e*Pg	Pg	03 55 23.0	-1.1
UKT				*e*Sg	Sg	03 55 31.3	-1.0
UKT				Pmax			
	115nm,0.2s						
UKT				Smax			
	270nm,0.2s						
YOA	Uoyan	1.07	271	*e*Sg	Sg	03 55 45.2	-1.0
YOA				Smax			
	2µm,0.5s						
NLYR	Nelyaty	1.21	71	*e*Pg	Pg	03 55 34.1	-1.1
NLYR				*e*		03 55 37.4	
NLYR				*e*Sg	Sg	03 55 49.9	-1.0
NLYR				*e*		03 55 52.7	
NLYR				Pmax			
	157nm,0.3s						
NLYR				Smax			
	370nm,0.8s						
KMO	Kumora	1.38	261	*e*Pg	Pn	03 55 37.0	-0.6
KMO				*e*Pb	Pb	03 55 38.2	+0.1
KMO				*e*Sg	Sb	03 55 54.7	-1.3
KMO				*e*		03 55 58.9	
KMO				max			
	357nm,0.3s						
KMO				max			
	724nm,0.7s						
BOD	Bodaibo	1.72	7	*e*Pg	Pn	03 55 42.6	+0.4
BOD				*e*Sg	Sn	03 56 04.8	+0.5
BOD				Pmax			
	114nm,0.2s						
BOD				Smax			
	273nm,0.3s						
YLYR	Ulyunkhan	1.88	229	*e*Pn	Pn	03 55 44.4	0.0
YLYR				*e*Pg	Pb	03 55 45.3	-1.2
YLYR				*e*Sg	Sb	03 56 10.1	-0.1
YLYR				Pmax			
	98nm,0.3s						
YLYR				Smax			
	386nm,0.3s						
NIZ	Nizh Angarsk	2.33	263	*e*Pg	Pb	03 55 53.8	-0.3
NIZ				*e*Sg	Sb	03 56 24.7	+1.7
NIZ				Pmax			
	101nm,0.5s						
NIZ				Smax			
	190nm,0.4s						
CRS	Chara	2.69	71	*e*Sg	Sb	03 56 35.1	+1.6
CRS				Smax			
	142nm,0.6s						
TUP	Tupik	4.00	113	*e*Sg	Sb	03 57 15.6	+4.5
TUP				Smax			
	92nm,0.6s						

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*WEL **06** 04:04:00, 43°.06S×171°.29E, h8^{km}, ML4.8, Mw4.6, Moment Tensor Solution. s10 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.59; M$_{\theta\theta}$3.10; M$_{\phi\phi}$-4.69; M$_{r\theta}$-4.23; M$_{\theta\phi}$-6.71; M$_{\phi r}$-0.50; Fault plane solution: M$_0$8.95000×10^{15} NP1: ϕ_s347.00000°, δ60.00000°, λ10.00000°. NP2: ϕ_s252.00000°, δ82.00000°, λ150.00000°. Principal axes: T -919.5200, Plg27.0000°, Azm206.0000°; N 869.5700, Plg59.0000°, Azm58.0000°; P 49.9500, Plg15.0000°, Azm303.0000°;*

*IDC **06** 04:04:54.8±1.0, 42°.99S×171°.41E, h0^{km}, mb4.1/2, mb1 4.3/3, mb1mx3.9/21, mbtmp4.1/3, ML3.7/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/21 Error ellipse: s-maj=29.8km s-min=9.6km az=105.0*

*NEIC **06** 04:04:57.0±0.9, 43°.05S±0°.04×171°.25E±0°.04, h10^{km}±3^{km}, mb4.3/8, Mwr4.5/44, Error ellipse: s-maj=6.1km s-min=2.9km az=139.0*

*NEIC **06** 04:04:57.3, 43°.09S×171°.28E, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.93; M$_{\theta\theta}$2.13; M$_{\phi\phi}$-5.06; M$_{r\theta}$-2.67; M$_{\theta\phi}$-5.87; M$_{\phi r}$0.74; Fault plane solution: M$_0$7.84000×10^{15} NP1:ϕ_s249.10000°, δ70.15000°, λ153.10000°. NP2:ϕ_s348.88000°, δ64.81000°, λ22.04000°. Principal axes: T 7.1514, Plg33.0000°, Azm208.0000°; N 1.2372, Plg57.0000°, Azm35.0000°; P -8.3886, Plg3.0000°, Azm300.0000°;*

*NOU **06** 04:04:57.8, 43°.10S×171°.37E, h11^{km}, MLv4.8, South Island, New Zealand*

*WEL **06** 04:04:57.0±0.3, 43°S±2°×17°1E±°, h5^{km}, M4.8/15, ML5.0/15, MLv4.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=140.9*

ISC 06 04:04:56.8±1.0, 43°.08S±0°.02×171°.33E±0°.02, h9^{km}±7^{km}, n170, σ1.^{s}36/167, mb4.3/5, MS3.6/9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.36	14	P	Pg	04 05 03.9	-0.1
INZ				S	Sg	04 05 08.3	-0.5
WVZ	Waitaha Valley	0.43	270	P	Pg	04 05 05.2	-0.1
WVZ				S	Sg	04 05 10.3	-0.8
MHCZ	Mount Hutt	0.49	159	P	Pb	04 05 07.7	+0.1
OXZ	Oxford	0.57	116		Pb	04 05 09.3	+0.2
OXZ				Sg	Sn	04 05 19.2	-1.5
OXZ	Oxford	0.57	116	P	Pb	04 05 09.3	+0.2
RPZ	Rata Peaks	0.67	197	Pg	Pg	04 05 10.3	+0.6
	2µm,0.3s,baz=332,slow=4.3,SNR=6275						
RPZ				Lg	Lg	04 05 19.8	
	baz=349,slow=16						
RPZ	Rata Peaks	0.67	197	Pg	Pb	04 05 10.5	-0.2
RPZ				Sg	Sg	04 05 19.2	+0.7
RPZ	Rata Peaks	0.67	197	P	Pb	04 05 10.5	-0.2
LTZ	Lake Taylor	0.75	67	Pg	Pb	04 05 12.4	+0.2
LTZ				Sg	Sb	04 05 22.8	+0.3
LTZ	Lake Taylor	0.75	67	P	Pb	04 05 12.3	+0.2
LTZ				S	Sb	04 05 22.5	0.0
GCSZ	Gaunt Creek Bo	0.77	252	P	Pg	04 05 11.3	-0.4
ARCZ	Arundel	0.88	187	P	Pb	04 05 14.5	+0.2
RACZ	Rakaia	0.88	138	P	Pn	04 05 15.3	-0.1
MQZ	McQueen's Vall	1.15	124		Pn	04 05 19.2	+0.1
MQZ	McQueen's Vall	1.15	124	P	Pn	04 05 19.1	+0.1
MQZ				S	Sn	04 05 35.2	+0.3
FOZ	Fox Glacier	1.20	247	Pn	Pb	04 05 19.1	-0.5
FOZ				Sn	Sb	04 05 35.4	+0.2
FOZ	Fox Glacier	1.20	247	P	Pg	04 05 19.9	+0.1
FOZ				S	Sn	04 05 35.8	-0.2
GVZ	Greta Valley S	1.26	86	P	Pg	04 05 21.1	+0.2
TMZ	Timaru	1.33	190	P	Pn	04 05 21.7	+0.1
DSZ	Denniston Nort	1.38	15	P	Pb	04 05 22.6	-0.2
DSZ				S	Sg	04 05 40.7	-0.4
AKCZ	Akaroa Harbour	1.40	125	P	Pn	04 05 22.7	+0.2
AKCZ				S	Sg	04 05 41.6	-0.2
OKCZ	Okains Bay	1.42	118	P	Pb	04 05 23.3	-0.1
OKCZ				S	Sb	04 05 41.9	+0.3
LBZ	Lake Benmore	1.55	212	Pn	Pn	04 05 24.9	+0.3
LBZ	Lake Benmore	1.55	212	P	Pn	04 05 24.9	+0.3
KHZ	Kahutara	1.76	69	Pn	Pn	04 05 28.1	+0.7
KHZ	Kahutara	1.76	69	P	Pn	04 05 28.0	+0.7
THZ	Tophouse	1.76	42	Pn	Pb	04 05 28.2	-1.1
THZ	Tophouse	1.76	42	P	Pn	04 05 28.1	+0.6
THZ				S	Sg	04 05 52.4	-0.9
ODZ	Otahua Downs	2.03	194		Pn	04 05 31.2	0.0
ODZ	Otahua Downs	2.03	194	P	Pn	04 05 31.1	0.0
ODZ				S	Sn	04 05 57.0	+0.4
JCZ	Jackson Bay	2.10	241	P	Pn	04 05 32.6	+0.3
BSWZ	Blackbirch Sta	2.33	55		Pn	04 05 36.1	+0.9
BSWZ	Blackbirch Sta	2.33	55	P	Pn	04 05 36.7	+1.5
NNZ	Nelson	2.40	40	Pn	Pn	04 05 36.9	+0.6
NNZ	Nelson	2.40	40	P	Pn	04 05 37.2	+0.9
NNZ				S	Sb	04 06 09.2	-0.8
WKZ	Wanaka	2.42	223	Pn	Pn	04 05 35.9	-0.6
WKZ	Wanaka	2.42	223	P	Pn	04 05 36.1	-0.4
QRZ	Quartz Range	2.42	22		Pn	04 05 36.6	+0.1
QRZ	Quartz Range	2.42	22	P	Pn	04 05 37.0	+0.5
CMWZ	Cape Campbell	2.52	59		Pn	04 05 37.9	0.0
CMWZ	Cape Campbell	2.52	59	P	Pb	04 05 43.3	+1.1
TUWZ	Tuamarina	2.54	51		Pn	04 05 38.8	+0.5
TUWZ	Tuamarina	2.54	51	P	Pn	04 05 39.6	+1.3
EAZ	Earnscleugh	2.60	213	P	Pn	04 05 38.1	-0.9
HHSZ	Highcliff Hill	2.85	190	P	Pn	04 05 42.6	+0.1
TCW	Tory Channel	2.88	51	P	Pn	04 05 43.5	+0.7
MSZ	Milford Sound	2.93	236	P	Pn	04 05 43.2	-0.3
DUWZ	D'Urville Isla	2.98	41	P	Pn	04 05 45.8	+1.4
SNZO	South Karori	3.07	56		Pn	04 05 46.1	+0.7
BHW	Baring Head	3.11	59	Pn	Pn	04 05 46.7	+0.6
BHW	Baring Head	3.11	59	P	Pn	04 05 46.1	+0.1
WEL	Wellington	3.12	56	P	Pn	04 05 47.5	+1.3
TUZ	Tuapeka	3.12	202	P	Pn	04 05 46.2	0.0
MLZ	Mavora Lakes	3.25	224		Pn	04 05 46.7	-1.3
MLZ	Mavora Lakes	3.25	224	P	Pn	04 05 47.1	-0.9
PLWZ	Palliser	3.28	64		Pn	04 05 49.0	+0.7
PLWZ	Palliser	3.28	64	P	Pn	04 05 47.8	-0.6
MSWZ	Moikau Station	3.35	62		Pn	04 05 50.0	+0.6
MSWZ	Moikau Station	3.35	62	P	Pn	04 05 48.8	-0.6
CAW	Cannon Point	3.41	56	P	Pn	04 05 49.9	-0.2
KIW	Kapiti Island	3.47	52	P	Pn	04 05 51.4	+0.5
PAWZ	Paruwai Farm	3.48	62	P	Pn	04 05 51.0	-0.2
TRWZ	Traveller	3.65	64	P	Pn	04 05 53.3	-0.1
OGWZ	Otaki Gorge	3.65	53	P	Pn	04 05 53.1	-0.3
MTW	Mount Morrison	3.65	60	P	Pn	04 05 52.5	-0.9
WHZ	Wether Hill Ro	3.71	220		Pn	04 05 54.0	-0.3
WHZ	Wether Hill Ro	3.71	220	P	Pn	04 05 52.7	-1.6
SYZ	Scrubby Hill	3.79	203	P	Pn	04 05 54.6	-0.8
HOWZ	Holdsworth Sta	3.81	56	P	Pn	04 05 55.3	-0.3
DCZ	Deep Cove	3.83	230	Pn	Pn	04 05 55.1	-0.8
DCZ	Deep Cove	3.83	230	P	Pn	04 05 55.3	-0.6
TMWZ	Te Maipa	3.92	61	P	Pn	04 05 57.0	-0.3
MRZ	Mangatainoka R	3.99	54	P	Pn	04 05 57.1	-0.9
TIWZ	Tintock	4.10	57	P	Pn	04 05 59.8	+0.1
NMEZ	Namu Road	4.13	29	P	Pn	04 06 02.4	+2.3
OHWZ	Ohakea	4.14	47	P	Pn	04 06 02.6	+2.4
NBEZ	Newall Road No	4.26	28	P	Pn	04 06 03.7	+1.9
POWZ	Post Office Ro	4.27	53	P	Pn	04 06 04.7	+2.7
KHEZ	Kahui Hut	4.29	29	P	Pn	04 06 04.0	+1.7
PRWZ	Pori Road	4.29	56	P	Pn	04 06 01.4	-0.8
LREZ	Lake Rotokare	4.29	34	P	Pn	04 06 05.4	+3.2
PREZ	Palmer Road	4.30	31	P	Pn	04 06 04.6	+2.2
WAZ	Wanganui	4.31	41	P	Pn	04 06 06.7	+4.2
NEZ	North Egmont	4.34	30	P	Pn	04 06 05.5	+2.5
PKE	Pukeiti	4.37	28	P	Pn	04 06 05.4	+2.0
BFZ	Birch Farm	4.38	59		Pn	04 06 03.7	+0.1
BFZ	Birch Farm	4.38	59	P	Pn	04 06 02.5	-1.0
APZ	The Paps	4.44	211	P	Pn	04 06 02.4	-1.9
DREZ	Durham Road	4.45	30	P	Pn	04 06 06.5	+2.0
PYZ	Puysegur Point	4.53	225		Pn	04 06 05.2	-0.4
PYZ	Puysegur Point	4.53	225	P	Pn	04 06 06.8	+1.2
DVHZ	Dannevirke	4.56	54	P	Pn	04 06 05.8	-0.2
MHEZ	Mangahewa	4.59	31	P	Pn	04 06 09.8	+3.4
TSZ	Takapari Road	4.60	51	P	Pn	04 06 06.3	-0.2
ANWZ	Angora Road	4.65	58	P	Pn	04 06 07.0	-0.2
VRZ	Vera Road	4.72	34	P	Pn	04 06 10.5	+2.3
MTVZ	Mangateitei	4.83	42	P	Pn	04 06 14.6	+4.8
PNHZ	Pukenui	4.83	51	P	Pn	04 06 09.4	-0.4
PKVZ	Pokaka	4.85	40	P	Pb	04 06 16.0	-6.0
WPHZ	Waipukurau	4.87	54	P	Pn	04 06 14.7	+4.4
WNVZ	Wahianoa	4.94	42	P	Pn	04 06 12.7	+1.3
MOVZ	Moawhango	4.96	44	P	Pn	04 06 13.3	+1.9
WHVZ	Whangaehu Hut	4.97	42	P	Pn	04 06 14.9	+3.1
FWVZ	Far West T-bar	4.97	41	P	Pn	04 06 16.8	+4.9
TUVZ	Tukino	5.01	42	P	Pn	04 06 17.6	+5.3
BHHZ	Black Hill Sta	5.06	46	P	Pn	04 06 12.4	-0.4
NGZ	Ngauruhoe	5.06	41	P	Pn	04 06 15.0	+2.1
TWVZ	Taurewa	5.07	39	P	Pn	04 06 17.2	+4.2
OTVZ	Oturere	5.10	41	P	Pn	04 06 14.0	+0.5
WTVZ	West Tongariro	5.10	41	P	Pn	04 06 17.4	+3.9
KRHZ	Kereru	5.11	50	P	Pn	04 06 15.1	+1.5
KRVZ	Karewarewa	5.14	41	P	Pn	04 06 18.2	+4.1
ETVZ	East Tongariro	5.14	42	P	Pn	04 06 16.8	+2.7
PXZ	Pawanui	5.15	56	P	Pn	04 06 12.8	-1.2
TMVZ	Te Maari	5.16	41	P	Pn	04 06 16.2	+2.0
KATZ	Kakaramea	5.26	40	P	Pn	04 06 21.1	+5.3
HIZ	Hauiti	5.29	32		Pn	04 06 16.4	+0.5
HIZ	Hauiti	5.29	32	P	Pn	04 06 16.8	+0.9
KWHZ	Kaweka Forest	5.30	48	P	Pn	04 06 17.4	+1.2
KAHZ	Kahuranaki	5.30	54	P	Pn	04 06 15.8	-0.4
RITZ	Rihia Road	5.34	41	P	Pb	04 06 23.6	-6.7
RATZ	Rangitukua	5.38	40	P	Pn	04 06 23.3	+6.0
WATZ	Wairara	5.49	39	P	Pn	04 06 24.3	+5.5
BKZ	Black Stump Fm	5.52	47		Pn	04 06 20.2	+1.0
BKZ	Black Stump Fm	5.52	47	P	Pn	04 06 19.9	+0.7
WHTZ	Whakaora	5.63	40	P	Pb	04 06 27.8	-7.5
TLZ	Tolley Road	5.72	35	P	Pn	04 06 24.0	+2.1
ARHZ	Aropaoanui	5.73	50	P	Pn	04 06 23.6	+1.6
NMHZ	Naumai	5.74	48	P	Pn	04 06 23.2	+1.0
ALRZ	Allen Road	5.90	42	P	Pn	04 06 25.6	+1.2
MTHZ	Maungataniwha	5.93	47	P	Pn	04 06 25.7	+0.9
TOZ	Tahuroa Road	6.22	32	P	Pn	04 06 29.7	+1.0
MHGZ	Mahia Peninsul	6.33	54	P	Pn	04 06 30.2	-0.1
PRGZ	Paritu Road	6.46	52	P	Pn	04 06 31.2	-1.0
RAGZ	Rawiri	6.50	47	P	Pn	04 06 33.2	+0.6
URZ	Urewera	6.52	44	Pn	Pn	04 06 31.9	-0.9
	1.7nm,0.3s,baz=232,slow=7.0,SNR=9.0						
URZ				Sn	Sn	04 07 44.4	-2.8
	9.9nm,0.3s,baz=101,slow=4.6,SNR=7.7						
URZ				LR	LR	04 09 30.1	
	comp=Z,680nm,19.1s,baz=215,slow=43						
URZ	Urewera	6.52	44		Pn	04 06 32.6	-0.2
AWAZ	Awhitu Peninsu	6.52	24	P	Pn	04 06 34.1	+1.2
TGRZ	Tauranga	6.53	37	P	Pn	04 06 35.3	+2.3
RIGZ	Rimuhau	6.54	50	P	Pn	04 06 32.3	-0.9
WTAZ	Waiatarua	6.62	23	P	Pn	04 06 36.1	+1.8
MXZ	Matakaoa Point	7.66	46	Pn	Pn	04 06 49.2	+0.6
OUZ	Omahuta	8.04	13		Pn	04 06 54.0	+0.2
RAO	Raoul Island	16.28	36	LR	LR	04 14 51.8	
	comp=Z,473nm,18.4s,baz=150,slow=37						
TOO	Toolangi	20.41	277		P	04 09 33.4	-0.8
TOO				IAmb	IAmb	04 09 50.9	
	comp=Z,10nm,1.1s						
DZM	Mont Dzumac	21.34	347	P	P	04 09 43.8	-0.5
DZM				IAmb	IAmb	04 09 52.3	
	comp=Z,14nm,1.1s						
MSVF	Nonsavu	25.90	15	LR	LR	04 18 51.5	
	comp=Z,98nm,21.3s,baz=164,slow=32						
STKA	Stephens Creek	25.98	286	LR	LR	04 19 07.1	
	comp=Z,141nm,18.9s,baz=186,slow=33						
VNDA	Vanda	34.77	184	LR	LR	04 23 27.6	
	comp=Z,232nm,20.8s,baz=360,slow=32						
ASAR	Alice Springs	36.37	290	P	P	04 12 01.0	-0.4
	comp=Z,1.7nm,0.5s,baz=130,slow=7.9,SNR=19						
ASAR				LR	LR	04 26 35.9	
	comp=Z,85nm,18.2s,baz=144,slow=36						
WR0	Warramunga Arr	38.47	295	P	P	04 12 19.7	+0.5
WB2	Warramunga Arr	38.61	295	P	P	04 12 20.4	+0.1
WB2				IAmb	IAmb	04 12 28.4	
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	38.62	295	P	P	04 12 19.9	-0.5
	comp=Z,1.3nm,0.5s,baz=138,slow=7.5,SNR=17						
WRA				PcP	PcP	04 14 32.7	+0.1
	comp=Z,0.8nm,0.8s,baz=135,slow=2.8,SNR=3.4						
WB0	Warramunga Arr	38.71	295	P	P	04 12 21.1	-0.1
PMG	Port Moresby	39.64	321	LR	LR	04 28 00.0	
	comp=Z,85nm,19.2s,baz=180,slow=35						
QSPA	South Pole Qui	47.05	180	P	P	04 13 28.6	+0.2
KAPI	Kappang	59.16	295	LR	LR	04 38 51.8	
	comp=Z,32nm,21.9s,baz=139,slow=34						
SNAA	Sanae	65.48	182	LR	LR	04 42 40.7	
	comp=Z,87nm,18.8s,baz=180,slow=35						
SNAA	Sanae	65.48	182	P	P	04 15 41.1	+1.4
SNAA				IAmb	IAmb	04 15 52.8	
	comp=Z,2.5nm,1.0s						
PLCA	Paso Flores	79.64	137	LR	LR	04 47 00.1	
	comp=Z,89nm,20.5s,baz=182,slow=32						
LC01	Cunco	80.34	135	P	P	04 17 10.9	+2.6
CMAR	Chiang Mai Arr	90.21	295	LR	LR	05 01 30.9	
	comp=Z,15nm,19.4s,baz=196,slow=38						
HHC	Hu-ho-hao-te	99.41	318	*e*P	Pdif	04 18 42.6	+3.2
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,6.1s						
DBIC	Dimbokro	143.58	186	PKP	PKPbc	04 24 29.9	+0.3
	comp=Z,1.5nm,0.6s,baz=105,slow=1.3,SNR=4.5						
DBIC	Dimbokro	143.58	186		PKPbc	04 24 30.2	+0.6
ARCES	ARCESS Array B	148.24	338	PKPbc	PKPbc	04 24 41.6	-0.4
	comp=Z,3.0nm,0.5s,baz=66,slow=2.3,SNR=18						
BRTR	Keskin Array B	148.33	279	PKPbc	PKPbc	04 24 42.0	-1.3
	comp=Z,2.2nm,0.7s,baz=121,slow=4.8,SNR=5.5						
TORD	Torodi Ar. Bea	148.86	200	PKPbc	PKPbc	04 24 44.4	-0.7
	comp=Z,5.7nm,0.7s,baz=179,slow=1.6,SNR=17						
FINES	FINESS Array B	152.39	324	PKPbc	PKPbc	04 24 49.9	-2.2
	comp=Z,1.4nm,0.7s,baz=57,slow=3.6,SNR=7.8						
AKASG	Malin Array Be	153.24	300	PKPbc	PKPbc	04 24 52.7	-1.7
	comp=Z,0.3nm,0.3s,baz=72,slow=3.2,SNR=1.9						

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*NOU **06** 04:28:13.2, 43°.10S×171°.24E, h9^{km}, MLv3.7, South Island, New Zealand*

WEL 06 04:28:12.5±0.4, 43°S±3°×17°1E±°, h5^{km}, M3.9/65, ML3.9/17, MLv3.9/65, Error ellipse: s-maj=0.0km s-min=0.0km az=157.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.35	29	P	Pg	04 28 19.7	+0.5
INZ				S	Sg	04 28 24.2	+0.4
WVZ	Waitaha Valley	0.35	262	P	Pg	04 28 20.2	+0.8
WVZ				S	Sg	04 28 24.7	+0.7
MHCZ	Mount Hutt	0.56	153	P	Pg	04 28 23.4	0.0
OXZ	Oxford	0.67	117	P	Pg	04 28 25.6	+0.2
RPZ	Rata Peaks	0.70	190	P	Pg	04 28 25.8	-0.1
GCSZ	Gaunt Creek Bo	0.71	246	P	Pg	04 28 26.3	+0.1
GCSZ				S	Sg	04 28 36.5	+1.0
LTZ	Lake Taylor	0.81	73	P	Pb	04 28 28.7	-0.5
LTZ				S	Sg	04 28 39.4	+0.7
ARCZ	Arundel	0.92	182	P	Pg	04 28 29.9	-0.3
RACZ	Rakaia	0.97	136	P	Pg	04 28 31.4	+0.3
RACZ				S	Sb	04 28 45.4	+0.5
WACZ	Wakanui South	1.02	154	P	Pg	04 28 32.2	+0.1
WACZ				S	Sb	04 28 46.0	-0.4
AMCZ	Amberley	1.06	99	P	Pb	04 28 33.4	+0.1
FOZ	Fox Glacier	1.14	243	P	Pg	04 28 34.2	-0.2
FOZ				S	Sb	04 28 50.3	+0.4
MQZ	McQueen's Vall	1.25	123	P	Pg	04 28 35.2	-1.2
GVZ	Greta Valley S	1.33	88	P	Pn	04 28 37.2	-0.6
DSZ	Denniston Nort	1.35	19	P	Pn	04 28 37.8	-0.3
TMZ	Timaru	1.36	186	P	Pn	04 28 37.3	-0.9
AKCZ	Akaroa Harbour	1.49	125	P	Pn	04 28 38.7	-1.4
OKCZ	Okains Bay	1.51	118	P	Pn	04 28 39.3	-1.0
LBZ	Lake Benmore	1.55	209	P	Pn	04 28 40.2	-0.6
THZ	Tophouse	1.78	45	P	Pn	04 28 44.3	+0.3
KHZ	Kahutara	1.82	71	P	Pn	04 28 44.2	-0.2
JCZ	Jackson Bay	2.05	239	P	Pn	04 28 47.7	-0.1
ODZ	Otahua Downs	2.06	191	P	Pn	04 28 46.7	-1.1
BSWZ	Blackbirch Sta	2.37	57	P	Pn	04 28 53.2	+1.2
WKZ	Wanaka	2.40	221	P	Pn	04 28 51.3	-1.2
QRZ	Quartz Range	2.41	24	P	Pn	04 28 52.9	+0.3
NNZ	Nelson	2.42	42	P	Pn	04 28 53.2	+0.4
TUWZ	Tuamarina	2.58	53	P	Pn	04 28 55.5	+0.6
EAZ	Earnscleugh	2.60	211	P	Pn	04 28 53.7	-1.5
HHSZ	Highcliff Hill	2.89	189	P	Pn	04 28 57.6	-1.6
MSZ	Milford Sound	2.89	234	P	Pn	04 28 59.1	-0.1
TCW	Tory Channel	2.91	52	P	Pn	04 29 00.2	+0.7
DUWZ	D'Urville Isla	3.00	43	P	Pn	04 29 02.2	+1.4
TUZ	Tuapeka	3.14	201	P	Pn	04 29 01.6	-1.0
BHW	Baring Head	3.16	60	P	Pn	04 29 02.8	-0.1
MLZ	Mavora Lakes	3.23	223	P	Pn	04 29 02.8	-1.1
PLWZ	Palliser	3.33	65	P	Pn	04 29 04.7	-0.7
MSWZ	Moikau Station	3.40	63	P	Pn	04 29 05.1	-1.1
KIW	Kapiti Island	3.50	53	P	Pn	04 29 07.2	-0.4
PAWZ	Paruwai Farm	3.53	64	P	Pn	04 29 07.7	-0.4
OGWZ	Otaki Gorge	3.69	54	P	Pn	04 29 09.3	-0.9
MTW	Mount Morrison	3.69	61	P	Pn	04 29 08.6	-1.7
SYZ	Scrubby Hill	3.81	202	P	Pn	04 29 10.5	-1.3
HOWZ	Holdsworth Sta	3.85	58	P	Pn	04 29 16.2	+3.8
MRZ	Mangatainoka R	4.03	55	P	Pn	04 29 13.4	-1.4
NMEZ	Namu Road	4.13	30	P	Pn	04 29 17.9	+1.7
NBEZ	Newall Road No	4.26	29	P	Pn	04 29 19.3	+1.3
KHEZ	Kahui Hut	4.29	30	P	Pn	04 29 20.0	+1.5
LREZ	Lake Rotokare	4.30	35	P	Pn	04 29 21.1	+2.6
PREZ	Palmer Road	4.30	32	P	Pn	04 29 20.1	+1.5
WAZ	Wanganui	4.33	42	P	Pn	04 29 22.0	+3.0
NEZ	North Egmont	4.34	31	P	Pn	04 29 20.6	+1.4
PKE	Pukeiti	4.36	30	P	Pn	04 29 21.1	+1.6
BFZ	Birch Farm	4.43	60	P	Pn	04 29 19.6	-0.7
DREZ	Durham Road	4.45	31	P	Pn	04 29 22.2	+1.6
TSZ	Takapari Road	4.63	52	P	Pn	04 29 24.7	+1.5
VRZ	Vera Road	4.73	36	P	Pn	04 29 26.2	+1.8
PKVZ	Pokaka	4.86	41	P	Pn	04 29 28.9	+2.5
WNVZ	Wahianoa	4.96	43	P	Pn	04 29 28.9	+1.1
TUVZ	Tukino	5.03	43	P	Pn	04 29 32.4	+3.6
NGZ	Ngauruhoe	5.08	42	P	Pn	04 29 33.0	+3.6
TWVZ	Taurewa	5.08	40	P	Pn	04 29 32.0	+2.6
OTVZ	Oturere	5.12	43	P	Pn	04 29 33.2	+3.3
WTVZ	West Tongariro	5.12	42	P	Pn	04 29 33.6	+3.6
KRVZ	Karewarewa	5.16	42	P	Pn	04 29 29.9	-0.6
ETVZ	East Tongariro	5.16	43	P	Pn	04 29 32.7	+2.1
TMVZ	Te Maari	5.17	42	P	Pn	04 29 32.9	+2.2
HIZ	Hauiti	5.29	33	P	Pn	04 29 32.8	+0.6
BKZ	Black Stump Fm	5.55	48	P	Pn	04 29 37.6	+1.9
TLZ	Tolley Road	5.73	36	P	Pn	04 29 38.1	-0.2
TOZ	Tahuroa Road	6.22	33	P	Pn	04 29 45.4	+0.5
AWAZ	Awhitu Peninsu	6.51	25	P	Pn	04 29 50.0	+1.1
WTAZ	Waiatarua	6.61	24	P	Pn	04 29 52.0	+1.6
WIAZ	Waiheke Island	6.92	27	P	Pn	04 29 55.1	+0.6

IDC 06 05:33:28.4±3.3, 16°.46S×178°.80W, h405^{km}±29^{km}, mb2.7/3, mb1 3.0/4, mb1mx2.8/30, mbtmp3.4/4, Error ellipse: s-maj=331.1km s-min=28.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.27	247	P	P	05 34 34.3	+0.1
	2.5nm,0.3s,baz=140,slow=12,SNR=19						
WRA	Warramunga Arr	44.55	258	P	P	05 41 01.4	-1.0
	0.3nm,0.7s,baz=93,slow=8.0,SNR=4.8						
ASAR	Alice Springs	44.84	253	P	P	05 41 05.8	+1.1
	0.5nm,0.8s,baz=98,slow=8.2,SNR=2.9						
NVAR	Mina Array Bea	78.64	44	P	P	05 44 47.3	0.0
	0.4nm,0.7s,baz=214,slow=7.7,SNR=4.0						

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*NEIC **06** 05:38:26.1±1.5, 11°.66S±0°.10×166°.8E±0°.2, h197^{km}±8^{km}, mb4.7/21, Error ellipse: s-maj=23.1km s-min=14.1km az=87.0*

*IDC **06** 05:38:31.4±3.5, 11°.80S×166°.67E, h244^{km}±34^{km}, mb3.7/12, mb1 3.9/14, mb1mx3.6/37, mbtmp4.3/14, Error* *ellipse: s-maj=21.2km s-min=16.3km az=74.0*

ISC 06 05:38:26.9±0.5**,11°.71S**±0°.07×**166°.6E**±0°.1**,h200^{km},n60, σ1^s.17**/61**,mb4.4**/21**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.76	172		Pn	05 39 27.7	+2.0
DZM	Mont Dzumac	10.31	181	P	P	05 40 54.6	-3.2
	6.2nm,0.3s,baz=356,slow=11,SNR=50						
DZM				S	Sn	05 42 45.5	+0.1
	0.9nm,0.3s,baz=293,slow=23,SNR=1.5						
DZM	Mont Dzumac	10.31	181		P	05 40 54.4	-3.4
MSVF	Nonsavu	12.55	120	P	P	05 41 22.6	-0.2
	1.1nm,0.3s,baz=291,slow=20,SNR=7.6						
MSVF	Nonsavu	12.55	120	P	Pn	05 41 20.4	+1.5
EIDS	Eidsvold	20.03	225	P	P	05 42 46.2	+1.5
ARMA	Armidale	23.25	215	P	P	05 43 17.3	+0.6
ARMA				IAmb	IAmb	05 43 19.2	
	comp=Z,17nm,1.1s						
OUZ	Omahuta	24.25	166	P	P	05 43 25.7	+0.2
OUZ				IAmb	IAmb	05 43 27.7	
	comp=Z,13nm,0.8s						
OMRZ	Omania	27.69	163	P	P	05 43 59.2	+2.8
HAZ	Te Kaha	27.80	161	P	P	05 43 56.4	-0.9
RUGZ	Raukumara Rang	27.95	161	P	P	05 43 58.3	-0.6
URZ	Urewera	28.05	162	P	P	05 43 58.8	-0.8
	comp=Z,7.2nm,0.3s,baz=251,slow=2.1,SNR=16						
URZ	Urewera	28.05	162	P	P	05 43 58.5	-1.0
URZ				IAmb	IAmb	05 44 09.4	
	comp=Z,27nm,1.3s						
URZ	Urewera	28.05	162	P	P	05 43 59.6	+0.1
MUGZ	Murupara	28.15	163	P	P	05 44 01.6	+1.1
TWGZ	Tauwhareparae	28.24	161	P	P	05 44 01.9	+0.6
RTZ	Ruatahuna	28.34	163	P	P	05 44 02.5	+0.3
MRHZ	Matea Rd	28.39	164	P	P	05 44 03.4	+0.8
TMVZ	Te Maari	28.46	165	P	P	05 44 06.1	+2.7
OTVZ	Oturere	28.50	165	P	P	05 44 05.3	+1.6
MTHZ	Maungataniwha	28.52	163	P	P	05 44 03.6	-0.2
TUVZ	Tukino	28.59	165	P	P	05 44 06.8	+2.2
SNGZ	Shannon Statio	28.60	162	P	P	05 44 04.5	0.0
WNVZ	Wahianoa	28.64	165	P	P	05 44 07.2	+2.3
RIGZ	Rimuhau	28.66	162	P	P	05 44 04.9	-0.1
BKZ	Black Stump Fm	28.72	164	P	P	05 44 05.2	-0.3
NMHZ	Naumai	28.74	163	P	P	05 44 06.1	+0.4
ARHZ	Aropaoanui	28.95	163	P	P	05 44 07.5	0.0
QRZ	Quartz Range	29.47	171	P	P	05 44 13.2	+1.2
NNZ	Nelson	29.99	170	P	P	05 44 17.2	+0.5
BFZ	Birch Farm	30.08	165	P	P	05 44 16.5	-1.0
BFZ				IAmb	IAmb	05 44 18.7	
	comp=Z,44nm,1.2s						
TUWZ	Tuamarina	30.30	169	P	P	05 44 19.5	+0.1
SNZO	South Karori	30.33	168	P	P	05 44 18.8	-0.9
THZ	Tophouse	30.44	171	P	P	05 44 20.9	+0.2
THZ				IAmb	IAmb	05 44 24.3	
	comp=Z,10nm,0.6s						
BHW	Baring Head	30.46	168	P	P	05 44 19.9	-0.9
MSWZ	Moikau Station	30.55	167	P	P	05 44 20.4	-1.2
LTZ	Lake Taylor	31.35	172	P	P	05 44 28.5	-0.2
LTZ				IAmb	IAmb	05 44 29.2	
	comp=Z,18nm,0.6s						
FOZ	Fox Glacier	31.83	176	P	P	05 44 32.9	+0.1
OXZ	Oxford	31.85	173	P	P	05 44 33.0	0.0
OXZ				IAmb	IAmb	05 45 02.2	
	comp=Z,14nm,1.2s						
WB0	Warramunga Arr	32.01	251	P	P	05 44 34.8	0.0
WRA	Warramunga Arr	32.09	251	P	P	05 44 34.9	-0.5
	comp=Z,0.5nm,0.8s,baz=85,slow=9.3,SNR=2.2						
RPZ	Rata Peaks	32.12	174	P	P	05 44 35.3	-0.1
	comp=Z,17nm,0.5s,baz=311,slow=2.6,SNR=12						
RPZ	Rata Peaks	32.12	174	P	P	05 44 35.4	0.0
RPZ				IAmb	IAmb	05 44 36.2	
	comp=Z,19nm,0.7s						
MQZ	McQueen's Vall	32.31	172	P	P	05 44 37.0	+0.1
MQZ				IAmb	IAmb	05 44 37.1	
	comp=Z,32nm,1.1s						
LBZ	Lake Benmore	32.71	175	P	P	05 44 39.8	-0.6
LBZ				IAmb	IAmb	05 45 03.0	
	comp=Z,22nm,1.3s						
ASAR	Alice Springs	33.30	245	P	P	05 44 45.3	-0.6
	comp=Z,0.4nm,0.4s,baz=69,slow=9.7,SNR=4.9						
ODZ	Otahua Downs	33.40	175	P	P	05 44 46.6	+0.2
ODZ				IAmb	IAmb	05 45 05.1	
	comp=Z,10nm,1.1s						
USRK	Ussuriysk Ar.	63.93	333	P	P	05 48 39.2	+0.7
	comp=Z,2.5nm,0.9s,baz=120,slow=17,SNR=2.1						
PETK	Petropavlovsk-	65.01	354	P	P	05 48 45.9	+0.6
	comp=Z,3.9nm,0.9s,baz=137,slow=13,SNR=1.7						
VNDA	Vanda	65.85	181	P	P	05 48 50.4	-0.1
	comp=Z,1.8nm,0.7s,baz=355,slow=6.8,SNR=9.5						
VNDA	Vanda	65.85	181	IAmb	IAmb	05 48 51.4	
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	73.18	293	P	P	05 49 37.8	+1.5
	comp=Z,0.6nm,0.3s,baz=125,slow=5.4,SNR=4.6						
SONM	Songino Array	79.72	324	P	P	05 50 12.6	+0.1
	comp=Z,1.1nm,0.7s,baz=144,slow=7.0,SNR=7.3						
IL31		83.86	18	P	P	05 50 32.7	-0.8
ILAR	Eielson Array	83.86	18	P	P	05 50 32.8	-0.8
	comp=Z,2.6nm,0.7s,baz=238,slow=5.0,SNR=42						
MK31	Makanchi Array	94.60	317	P	P	05 51 24.7	-0.2
MKAR	Makanchi Array	94.60	317	P	P	05 51 24.7	-0.2
	comp=Z,1.9nm,0.7s,baz=86,slow=6.4,SNR=9.7						
YKA	Yellowknife Ar	95.15	27	P	P	05 51 25.2	-1.8
	comp=Z,0.3nm,0.4s,baz=252,slow=3.8,SNR=7.8						
KEST	Kesra	148.47	323	PKPbc	PKPbc	05 57 50.9	+0.4
	comp=Z,3.3nm,0.9s,baz=235,slow=22,SNR=2.4						
ESDC	Sonseca Array	150.93	345	PKPbc	PKPbc	05 57 56.1	-0.1
	comp=Z,0.5nm,0.8s,baz=5.7,slow=1.5,SNR=4.8						
ESDC				PKPab	PKPab	05 58 04.1	-0.1
	comp=Z,0.8nm,0.7s,baz=7.5,slow=4.3,SNR=11						

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*SOME **06** 05:45:36.2, 41°.42N×83°.37E, h10^{km}*

*NNC **06** 05:45:40.0±2.6, 41°.78N×83°.44E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=18.4km s-min=11.3km az=146.0*

ISC 06 05:45:41.7±2.6**,41°.7N**±0°.1×**83°.20E**±0°.09**,h10^{km},n23, σ2^s.26**/35**,5C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	3.14	299	*e*P	Pn	05 46 33.6	+2.3
	4.9nm,0.3s						
SHLS				*e*S	Sb	05 47 14.9	-1.1
	33nm,0.6s						
SHLS	Shalkode	3.14	299	Pg	Pn	05 46 33.6	+2.3
	4.9nm,0.3s						
SHLS				Lg	Lg	05 47 14.9	
	33nm,0.6s						
PDGK	Podgornoye	3.20	302	Pg	Pg	05 46 41.3	-1.8
	1.1nm,0.4s						
PDGK				Lg	Lg	05 47 28.5	
	8.1nm,0.5s						
PDGK	Podgornoye	3.20	302	⇑Pn	Pn	05 46 33.6	+1.4
	2.1nm,0.5s						
PDGK				⇑Lg	Lg	05 47 24.7	
	6.7nm,0.5s						
UZB	Uzynbulak	3.42	297	*e*P	Pb	05 46 42.5	0.0
	1.3nm,0.5s						
UZB				*e*S	Sg	05 47 30.1	-1.6
	12nm,0.4s						
UZB	Uzynbulak	3.42	297	Pg	Pb	05 46 42.5	0.0
	1.3nm,0.5s						
UZB				Lg	Lg	05 47 30.1	
	12nm,0.4s						
DJR	Jarkent	3.65	318	*e*P	Pb	05 46 48.6	+2.3
	3.4nm,0.5s						
DJR				*e*S	Sg	05 47 40.8	+2.0
	6.3nm,0.6s						
DJR	Jarkent	3.65	318	Pg	Pb	05 46 48.6	+2.3
	3.4nm,0.5s						
DJR				Lg	Lg	05 47 40.8	
	6.3nm,0.6s						
KPKS	Kokpek	3.78	300	*e*P	Pb	05 46 48.8	+0.1
	4.2nm,0.4s						
KPKS				*e*S	Sg	05 47 41.0	-2.2
	30nm,0.6s						
SATY	Saty	3.81	293	*e*P	Pg	05 46 52.6	-2.1
	6.2nm,0.4s						
SATY				*e*S	Sg	05 47 47.8	+3.8
	19nm,0.5s						
SATY	Saty	3.81	293	Pg	Pg	05 46 52.6	-2.1
	6.2nm,0.4s						
SATY				Lg	Lg	05 47 47.8	
	19nm,0.5s						
MNBS	Baschi	4.27	306	*e*P	Pb	05 46 58.9	+2.0
	1.6nm,0.2s						
MNBS				*e*S	Sg	05 47 58.5	-0.1
	16nm,0.6s						
MNBS	Baschi	4.27	306	Pg	Pb	05 46 58.9	+2.0
	1.6nm,0.2s						
MNBS				Lg	Lg	05 47 58.5	
	16nm,0.6s						
KAPS	Kapalarasan	4.56	324	*e*P	Pg	05 47 06.6	-2.5
	2.2nm,0.4s						
KAPS				*e*S	Sg	05 48 11.3	+3.0
	4.7nm,0.5s						
KAPS	Kapalarasan	4.56	324	Pg	Pg	05 47 06.6	-2.5
	2.2nm,0.4s						
KAPS				Lg	Lg	05 48 11.3	
	4.7nm,0.5s						
ARXS	Arharly	4.69	305	*e*P	Pg	05 47 08.6	-2.9
	3.1nm,0.5s						
ARXS				*e*S	Sg	05 48 14.7	+2.5
	8.2nm,0.6s						
ARXS	Arharly	4.69	305	Pg	Pg	05 47 08.6	-2.9
	3.1nm,0.5s						
ARXS				Lg	Lg	05 48 14.6	
	8.2nm,0.6s						
KOTS	Kotyrbulak	4.76	291	*e*P	Pb	05 47 07.6	+2.2
	4.7nm,0.4s						
KOTS				*e*S	Sg	05 48 13.8	-0.8
	9.3nm,0.8s						
KOTS	Kotyrbulak	4.76	291	Pg	Pb	05 47 07.6	+2.2
	4.7nm,0.4s						
KOTS				Lg	Lg	05 48 13.8	
	9.3nm,0.8s						
MK31	Makanchi Array	5.16	353	⇓Pg	Pb	05 47 12.5	+0.4
	0.5nm,0.4s,baz=174,slow=15,SNR=4.1						
MK31				⇓Sn	Sn	05 47 56.8	-1.9
	1.3nm,0.6s,baz=171,slow=25,SNR=3.6						
MK31				⇑Lg	Lg	05 48 21.4	
	2.6nm,0.6s,baz=176,slow=26,SNR=4.1						
MAKZ	Makanchi	5.21	351	⇑Pg	Pb	05 47 14.1	+1.3
	1.0nm,0.7s						
MAKZ				⇑Sn	Sn	05 47 58.1	-1.7
	1.6nm,0.6s						
MAKZ				⇓Lg	Lg	05 48 21.3	
	3.1nm,0.8s						
KTBS	Karatobe	5.21	295	*e*P	Pg	05 47 18.1	-3.5
	1.1nm,0.3s						
KTBS				*e*S	Sg	05 48 31.6	+2.5
	12nm,0.6s						
KTBS	Karatobe	5.21	295	Pg	Pg	05 47 18.0	-3.5
	1.1nm,0.3s						
KTBS				Lg	Lg	05 48 31.6	
	12nm,0.6s						

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*IDC **06** 05:53:32.0±2.1, 50°.55N×130°.54W, h0^{km}, mb3.4/1, mb1 3.4/9, mb1mx3.3/55, mbtmp3.2/9, ML3.4/7, MS3.1/5, Ms1 3.1/5, ms1mx2.8/27, Error ellipse: s-maj=32.5km s-min=14.4km az=62.0*

*PGC **06** 05:53:34.6±0.1, 50°.74N×130°.58W, h10^{km}, MLSn3.3/23, Mw3.9/23, 222km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

ISC 06 05:53:34.2±1.1**,50°.75N**±0°.06×**130°.53W**±0°.07**,h14^{km},n58, σ1^s.81**/63**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.53	93	Pn	Pn	05 53 59.7	-1.4
HOLB				Sn	Sn	05 54 18.1	-2.7
HG4B	Hotspring	1.60	345	Pn	Pn	05 54 00.7	-1.5
HG4B				Sn	Sn	05 54 20.3	-2.3
PHC	Port Hardy	1.97	90	Pn	Pn	05 54 06.3	-0.8
PHC				Sn	Sn	05 54 28.9	-2.6
BBB	Bella Bella	2.09	45	Pn	Pn	05 54 08.3	-0.5
	23nm,0.3s,baz=257,slow=8.4,SNR=105						
BBB				Sn	Sn	05 54 30.6	-3.9
	128nm,0.3s,baz=325,slow=22,SNR=15						
BBB	Bella Bella	2.09	45	Pn	Pn	05 54 08.2	-0.6
BBB				Sn	Sn	05 54 31.3	-3.2
MAYB	Maynard	2.17	98	Pn	Pn	05 54 09.1	-0.9
FHRB	Fair Harbour	2.29	106	Pn	Pn	05 54 10.5	-1.0
EDB	Eliza Dome	2.35	110	Pn	Pn	05 54 11.7	-0.7
TLCB	Telegraph Cove	2.36	93	Pn	Pn	05 54 12.3	-0.2
TLCB				Sn	Sn	05 54 39.8	-1.4
MOBC	Moresby Island	2.56	340	Pn	Pn	05 54 14.7	-0.6
WOSB	Woss	2.60	102	Pn	Pn	05 54 15.6	-0.3
DIB	Dawson Inlet,	2.74	335	Pn	Pn	05 54 17.5	-0.2
DIB				Sn	Sn	05 54 47.6	-3.0
H02S1	DAWSON INLET T	2.74	335	Pn	Pn	05 54 18.4	+0.7
H02S1				Sn	Sn	05 54 46.5	-4.0
	SNR=212						
BNAB	Bonilla	2.75	359	Pn	Pn	05 54 16.1	-1.8
BNAB				Sn	Sn	05 54 48.7	-2.2
NCRB	Newcastle Ridg	2.87	95	Pn	Pn	05 54 19.2	-0.5
ETB	Estevan Point	2.92	117	Pn	Pn	05 54 19.6	-0.5
GDR	Gold River	3.04	107	Pn	Pn	05 54 21.5	-0.4
GRNB	Grenville Isla	3.12	6	Pn	Pn	05 54 22.9	-0.1
GRNB				Sn	Sn	05 54 58.6	-1.5
CBB	Campbell River	3.38	100	Pn	Pn	05 54 26.5	0.0
CBB				Sn	Sn	05 55 05.5	-1.0
BTB	Buttle Lake	3.47	110	Pn	Pn	05 54 27.7	-0.2
RUBB	Prince Rupert	3.59	3	Pn	Pn	05 54 29.8	+0.4
TXB	Texada	4.05	103	Pn	Pn	05 54 35.9	+0.1
MGB	Mount Grey	4.16	113	Pn	Pn	05 54 36.9	-0.4
SHB	Sechelt	4.43	102	Pn	Pn	05 54 41.5	+0.4
WPB	Watts Point	4.83	100	Pn	Pn	05 54 46.9	+0.5
BIB	Bowen Island	4.84	103	Pn	Pn	05 54 48.4	+1.8
GOBB	Galiano Island	4.88	109	Pn	Pn	05 54 49.8	+2.6
WSLR	Whistler	4.90	94	Pn	Pn	05 54 48.5	+1.0
B010	North Saanich	5.05	112	Pn	Pn	05 54 51.6	+2.2
PGC	Sidney	5.05	112	Pn	Pn	05 54 51.1	+1.7
B009	North Saanich	5.05	112	Pn	Pn	05 54 51.1	+1.7
FSB	Fort Saint Jam	5.31	43	Pn	Pn	05 54 54.4	+1.2
MCW	Mount Constitu	5.41	110	Pn	Pn	05 54 56.7	+2.3
LLLB	Lillooet	5.50	88	Pn	Pn	05 54 57.3	+1.6
MBW	Mount Baker	5.93	106	Pn	Pn	05 55 04.4	+2.7
CMW	Cultus Mountai	5.94	110	Pn	Pn	05 55 04.0	+2.2
JCW	Jim Creek	6.16	111	Pn	Pn	05 55 07.4	+2.6
FMW	Mount Fremont	6.98	120	Pn	Pn	05 55 19.2	+3.0
BMBC	Bull Mountain	7.30	40	Pn	Pn	05 55 22.7	+2.3
DLBC	Dease Lake	7.71	2	Pn	Pn	05 55 29.2	+3.2
	0.3nm,0.3s,baz=188,slow=12,SNR=7.0						
DLBC				Sn	Sn	05 56 54.9	+1.8
	0.3nm,0.3s,baz=24,slow=16,SNR=3.4						
DLBC				LR	LR	05 58 33.1	
	comp=Z,108nm,18.9s,baz=274,slow=38						
DLBC	Dease Lake	7.71	2	Pn	Pn	05 55 29.1	+3.0
NBC4	NorthernBC 4	7.71	46	Pn	Pn	05 55 28.0	+1.9
NBC5	NorthernBC 5	8.20	31	Pn	Pn	05 55 34.9	+2.1
NEW	Newport	9.07	101	Pn	Pn	05 55 44.2	-0.5
	0.1nm,0.3s,baz=277,slow=6.2,SNR=1.5						
NEW				LR	LR	05 59 00.4	
	comp=Z,147nm,18.2s,baz=284,slow=36						
YBH	Yreka Blue Hor	10.51	146	Pn	Pn	05 56 04.1	-0.4
	0.0nm,0.3s,baz=114,slow=9.3,SNR=3.3						
YKA	Yellowknife Ar	14.62	30	Pn	Pn	05 57 00.1	-0.3
	0.1nm,0.3s,baz=222,slow=12,SNR=7.8						
NVAR	Mina Array Bea	15.06	140	Pn	Pn	05 57 05.2	-1.4
	0.1nm,0.3s,baz=77,slow=13,SNR=2.0						
PDAR	Pinedale Array	16.40	111	Pn	Pn	05 57 23.0	-1.1
	0.1nm,0.3s,baz=315,slow=13,SNR=1.7						
PDAR				LR	LR	06 03 41.6	
	comp=Z,34nm,20.2s,baz=344,slow=37						
ILAR	Eielson Array	16.46	335	Pn	P	05 57 27.0	-0.1
	0.0nm,0.3s,baz=320,slow=32,SNR=4.5						
ULM	Lac du Bonnet	21.93	78	P	P	05 58 27.7	+0.7
	0.7nm,0.4s,baz=303,slow=12,SNR=1.5						
ANMO	Albuquerque	23.53	123	P	P	05 58 46.0	+2.0
	0.2nm,0.3s,baz=329,slow=10,SNR=4.1						
ANMO				LR	LR	06 08 36.8	
	comp=Z,37nm,19.3s,baz=340,slow=39						
CMIG	Matias Romero	44.00	127	LR	LR	06 20 03.7	
	comp=Z,58nm,20.2s,baz=152,slow=36						
H11N2	WAKE ISLAND Hy	57.67	262	T	T	07 06 03.3	
	baz=42,slow=76,SNR=84						
H11N3	WAKE ISLAND Hy	57.67	262	T	T	07 06 03.5	
	baz=42,slow=76,SNR=96						
H11N1	WAKE ISLAND Hy	57.69	262	T	T	07 06 02.8	
	baz=42,slow=76,SNR=86						
H11S1	WAKE ISLAND Hy	58.70	261	T	T	07 07 15.0	
	baz=346,slow=76,SNR=5.7						
H11S2	WAKE ISLAND Hy	58.71	261	T	T	07 07 20.8	
	baz=344,slow=76,SNR=5.3						
H11S3	WAKE ISLAND Hy	58.72	261	T	T	07 07 13.5	

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*IDC **06** 05:54:34.9±0.7, 29°.12S×112°.49W, h0^{km}, mb4.2/11, mb1 4.3/12, mb1mx4.2/37, mbtmp4.2/12, ML4.4/1, MS4.5/22, Ms1 4.5/22, ms1mx4.4/26, Error ellipse: s-maj=25.3km s-min=21.9km az=90.0*

*NEIC **06** 05:54:36.0±1.9, 29°.4S±0°.1×112°.23W±0°.07, h10^{km}±1^{km}, mb4.9/77, Error ellipse: s-maj=17.1km s-min=10.1km az=185.0*

*BJI **06** 05:54:39.0±0.0, 29°.20S×112°.20W, h10^{km}, mB5.2/1*

*GCMT **06** 05:54:40.0±0.1, 29°.51S±0°.01×112°.60W±0°.01, h12^{km}, MW5.2/131, Moment Tensor Solution. s76,c109; s131,c200; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.11; $M_{\theta\theta}$-4.96±.11; $M_{\phi\phi}$5.45±.10; $M_{r\theta}$-1.42±.29; $M_{\theta\phi}$-3.72±.10; $M_{\phi r}$0.54±.28; Best double couple: $M_0$6.58100×10^{16} NP1:ϕ_s27.00000°,δ76.00000°, λ-3.00000°. NP2:ϕ_s118.00000°,δ87.00000°, λ-166.00000°. Principal axes: T 6.7680, Plg8.0000°, Azm252.0000°; N -0.3710, Plg76.0000°, Azm129.0000°; P -6.3940, Plg11.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 05:54:37.6±0.5**,29°.2S**±0°.1×**112°.24W**±0°.10**,h10^{km},n220, σ1^s.27**/178**,mb4.8**/41**,MS4.6**/25**,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.29	52	Pn	Pn	05 55 29.1	0.0
	35nm,0.3s,baz=235,slow=10,SNR=21						
RPN				Sn	Sb	05 56 14.8	-1.2
	baz=212,slow=23,SNR=1.0						
RPN	Rapa Nui	3.29	52		Pn	05 55 29.4	+0.2
H03N2	Juan Fernandez	28.70	107	T	T	06 30 54.4	
	baz=273,slow=74,SNR=340						
H03S2	Juan Fernandez	28.70	108	T	T	06 31 01.9	
	baz=259,slow=74,SNR=19						
H03N3	Juan Fernandez	28.71	107	T	T	06 30 57.0	
	baz=273,slow=74,SNR=487						
H03N1	Juan Fernandez	28.72	107	T	T	06 30 57.0	
	baz=273,slow=74,SNR=416						
H03S3	Juan Fernandez	28.72	108	T	T	06 31 03.4	
	baz=259,slow=74,SNR=15						
H03S1	Juan Fernandez	28.72	108	T	T	06 31 03.9	
	baz=259,slow=74,SNR=14						
TBI	Tubuai	33.78	271	*e*S	S	06 06 31.8	-12
	88nm,28.0s						
TBI				*e*LQ	LQ	06 08 36.4	
	2μm,27.8s						
TBI				*e*LR	LR	06 09 56.4	
	comp=Z,2μm,26.8s,baz=106						
MEH	Mehetia	34.59	281	*e*T	T	06 37 21.3	
	8.1nm,0.2s						
PLCA	Paso Flores	35.75	120	LR	LR	06 12 34.9	
	comp=Z,322nm,18.0s,baz=274,slow=30						
PLCA	Paso Flores	35.75	120	P	P	06 01 33.3	-3.5
TIAR	Tiarei	35.83	281	*e*T	T	06 38 53.9	
	2.2nm,0.3s						
PPT2	Papeete2	36.01	280	*e*S	S	06 07 07.6	-11
	341nm,25.2s						
PPT2				*e*LQ	LQ	06 09 31.6	
	1μm,28.8s						
PPT2				*e*LR	LR	06 10 55.8	
	comp=Z,2μm,27.5s,baz=117						
PPT	Papeete	36.02	280	LR	LR	06 11 49.3	
	comp=Z,558nm,20.6s,baz=105,slow=29						
NNA	Nana	37.10	70	LR	LR	06 13 04.4	
	comp=Z,1μm,21.0s,baz=228,slow=30						
ATAH	Atahualpa	38.69	62	LR	LR	06 14 07.0	
	comp=Z,1μm,18.2s,baz=237,slow=30						
LVC	Limon Verde	39.36	91	P	P	06 02 08.5	+0.7
	2.2nm,0.7s,baz=312,slow=5.9,SNR=3.8						
LVC				LR	LR	06 14 18.9	
	comp=Z,1μm,19.6s,baz=252,slow=30						
RAR	Rarotonga	43.50	269	LR	LR	06 15 24.0	
	comp=Z,508nm,19.9s,baz=108,slow=29						
OTAV	Otavalo	43.55	54	P	P	06 02 42.0	-0.4
PMSA	Palmer Station	46.52	154	LR	LR	06 17 14.0	
	comp=Z,605nm,21.1s,baz=312,slow=29						
JTS	Las Juntas de	47.26	38	LR	LR	06 18 14.4	
	comp=Z,304nm,20.0s,baz=220,slow=30						
CPUP	Villa Florida	48.31	100	P	P	06 03 20.8	+1.4
	2.6nm,1.0s,baz=310,slow=20,SNR=2.1						
CPUP				LR	LR	06 20 10.0	
	comp=Z,451nm,20.6s,baz=259,slow=32						
TLIG	Tlapa	48.31	18	P	P	06 03 20.4	+1.0
ROSC	El Rosal	49.70	53	P	P	06 03 30.8	+0.2
	5.1nm,0.8s,baz=126,slow=8.1,SNR=4.0						
ROSC				LR	LR	06 21 02.6	
	comp=Z,711nm,20.2s,baz=234,slow=32						
ROSC	El Rosal	49.70	53	P	P	06 03 30.6	0.0
ROSC				IAmb	IAmb	06 03 45.9	
	comp=Z,26nm,1.4s						
SAML	Samuel	50.13	77	P	P	06 03 34.0	+0.6
SDV	Santo Domingo	55.14	53	P	P	06 04 10.8	+0.2
SDV				IAmb	IAmb	06 04 12.7	
	comp=Z,14nm,1.3s						
HSIG		57.89	1	P	P	06 04 27.8	-1.9
HSIG				IAmb	IAmb	06 04 30.9	
	comp=Z,9.9nm,1.0s						
BELA	Belgrano 2	59.08	166	P	P	06 04 34.5	-3.0
SPX	San Pedro Mart	59.97	357	P	P	06 04 44.1	-0.4
SPX				IAmb	IAmb	06 04 45.8	
	comp=Z,16nm,1.5s						
BDFB	Brasilia	60.24	92	LR	LR	06 27 36.3	
	comp=Z,263nm,20.8s,baz=272,slow=33						
319A	Douglas	60.29	3	P	P	06 04 45.5	-0.9
319A				IAmb	IAmb	06 04 48.4	
	comp=Z,9.2nm,0.9s						
JCT	Junction City	60.51	12	P	P	06 04 47.4	-0.4
	baz=192						
JCT	Junction City	60.51	12	P	P	06 04 47.8	-0.1
JCT				IAmb	IAmb	06 04 54.7	
	comp=Z,14nm,1.1s						
214A	Organ Pipe Nat	60.81	359	P	P	06 04 49.9	0.0
	baz=179						
214A	Organ Pipe Nat	60.81	359	P	P	06 04 50.2	+0.3
214A				IAmb	IAmb	06 04 51.3	
	comp=Z,9.5nm,0.9s						
VNDA	Vanda	60.85	194	P	P	06 04 48.0	-1.6
	comp=Z,3.0nm,1.1s,baz=92,slow=5.5,SNR=6.5						
VNDA				LR	LR	06 26 54.5	
	comp=Z,190nm,18.2s,baz=90,slow=32						
VNDA	Vanda	60.85	194	P	P	06 04 47.5	-2.1
MNTX	Cornudas Mount	60.90	7	P	P	06 04 50.2	-0.3
	baz=187						
MNTX	Cornudas Mount	60.90	7	P	P	06 04 50.2	-0.3
QSPA	South Pole Qui	60.99	180	P	P	06 04 47.1	-3.9
TUC	Tucson	61.17	1	P	P	06 04 52.1	-0.4
	baz=181						
TUC	Tucson	61.17	1	P	P	06 04 52.9	+0.5
GDL2	Guadalupe Moun	61.51	8	P	P	06 04 54.6	-0.1
121A	Cookes Peak, D	61.52	4	P	P	06 04 54.8	-0.1
	baz=184						
121A	Cookes Peak, D	61.52	4	P	P	06 04 55.1	+0.1
121A				IAmb	IAmb	06 04 56.3	
	comp=Z,6.8nm,1.1s						
IKP	In-Ko-Pah, Jac	61.61	356	P	P	06 04 55.0	-0.3
	baz=176						
113A	Mohawk Valley,	61.63	359	P	P	06 04 55.2	-0.2
SWSC	Sam W. Stewart	61.88	357	P	P	06 04 57.2	+0.1
	baz=176						
SCI2	San Clemente I	62.11	354	P	P	06 04 58.9	+0.2
	baz=174						
BANI	BANI	62.22	46	P	P	06 04 57.0	-2.8
WHTX	Lake Whitney,	62.44	14	P	P	06 05 00.8	0.0
	baz=194						
BC3	Big Chuckawall	62.57	357	P	P	06 05 02.1	+0.3
	baz=177,SNR=8.3						
TPFO	Pinon Flats	62.58	356	P	P	06 05 02.2	+0.3
	baz=176						
PFO	Pinyon Flats O	62.58	356	P	P	06 05 00.1	-1.9
	comp=Z,4.1nm,1.1s,baz=284,slow=7.1,SNR=5.0						
PFO	Pinyon Flats O	62.58	356	P	P	06 05 02.2	+0.3
	baz=176						
MURC	Murrieta	62.62	355	P	P	06 05 02.0	-0.1
	baz=175						
BELC	Belle Mtn. Jos	62.94	356	P	P	06 05 04.9	+0.6
	baz=176,SNR=10						
IRM	Iron Mountain	63.06	357	P	P	06 05 05.1	+0.1
	baz=177						
LENM	Lemitar	63.20	5	P	P	06 05 04.9	-1.2
BFSC	Mount Baldy Ra	63.29	355	P	P	06 05 06.6	-0.1
	baz=175						
MWC	Mount Wilson	63.31	355	P	P	06 05 06.1	-0.8
MWC				IAmb	IAmb	06 05 08.2	
	comp=Z,7.2nm,0.8s						
X18A	Snowflake	63.41	2	P	P	06 05 06.6	-0.9
X18A				IAmb	IAmb	06 05 20.8	

	comp=Z,13nm,1.4s						
MSTX	**Muleshoe**	**63.45**	**9**	P	**P**	**06 05 07.4**	**-0.3**
	baz=189						
MSTX	**Muleshoe**	**63.45**	**9**	P	**P**	**06 05 07.2**	**-0.5**
GMRC	**Granite Mounta**	**63.71**	**357**	P	**P**	**06 05 09.8**	**+0.4**
	baz=177,SNR=7.2						
HEC	**Hector,Ludlow**	**63.79**	**356**	P	**P**	**06 05 09.8**	**-0.1**
	baz=176						
EDW2	**Edwards Air Fo**	**63.95**	**355**	P	**P**	**06 05 10.6**	**-0.3**
	baz=174						
W13A	**Hualapai Mount**	**63.96**	**358**	P	**P**	**06 05 11.7**	**+0.5**
ANMO	**Albuquerque**	**64.02**	**5**	P	**P**	**06 05 09.9**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=147,slow=3.0,SNR=3.5						
ANMO	**Albuquerque**	**64.02**	**5**	P	**P**	**06 05 11.5**	**0.0**
	baz=186						
PKM	**Mcpherson Peak**	**64.13**	**353**	P	**P**	**06 05 12.5**	**+0.2**
	baz=173						
GSC	**Goldstone, Bar**	**64.29**	**356**	P	**P**	**06 05 13.3**	**+0.1**
	baz=176,SNR=9.2						
GSC	**Goldstone, Bar**	**64.29**	**356**	P	**P**	**06 05 12.8**	**-0.3**
WUAZ	**Wupatki**	**64.36**	**1**	P	**P**	**06 05 13.8**	**0.0**
	baz=181						
WUAZ	**Wupatki**	**64.36**	**1**	P	**P**	**06 05 12.5**	**-1.2**
WUAZ				IAmb	IAmb	06 05 25.2	
	comp=Z,9.2nm,1.2s						
AMTX	**Amarillo**	**64.50**	**10**	P	**P**	**06 05 14.3**	**-0.3**
	baz=190						
LRMC	**Laurel Mtn Rad**	**64.52**	**355**	P	**P**	**06 05 15.2**	**+0.4**
	baz=175						
ISA	**Isabella, Lake**	**64.77**	**354**	P	**P**	**06 05 16.4**	**+0.1**
	baz=174						
ISA	**Isabella, Lake**	**64.77**	**354**	P	**P**	**06 05 15.1**	**-1.2**
SHOC	**Shoshone, Teco**	**64.85**	**356**	P	**P**	**06 05 17.1**	**+0.4**
	baz=176,SNR=9.5						
VES	**Vestal, Richgr**	**65.00**	**354**	P	**P**	**06 05 17.6**	**-0.1**
	baz=173						
PAGB	**Antelope Grade**	**65.01**	**353**	P	**P**	**06 05 16.1**	**-1.7**
PAGB				IAmb	IAmb	06 05 18.8	
	comp=Z,6.1nm,0.9s						
MPMC	**Manual Prospec**	**65.08**	**355**	P	**P**	**06 05 18.5**	**+0.1**
	baz=175,SNR=18						
SHPR	**Sheep Range**	**65.40**	**357**	P	**P**	**06 05 21.0**	**+0.5**
SHPR				IAmb	IAmb	06 05 27.9	
	comp=Z,12nm,1.1s						
FURC	**Furnace Creek,**	**65.45**	**356**	P	**P**	**06 05 20.8**	**+0.3**
	baz=176,SNR=7.3						
CWC	**Cottonwood Cre**	**65.51**	**355**	P	**P**	**06 05 21.4**	**+0.3**
	baz=174						
MIAR	**Mount Ida**	**65.80**	**17**	P	**P**	**06 05 23.1**	**+0.3**
	baz=198						
KNB	**Kanab**	**65.86**	**359**	P	**P**	**06 05 23.7**	**+0.3**
TPNV	**Topopah Spring**	**65.89**	**356**	P	**P**	**06 05 23.8**	**+0.1**
	baz=176,SNR=7.4						
TPNV	**Topopah Spring**	**65.89**	**356**	P	**P**	**06 05 24.4**	**+0.7**
GRAC	**Grapevine Rang**	**66.01**	**356**	P	**P**	**06 05 25.0**	**+0.8**
	baz=175						
MVCO	**Mesa Verde**	**66.14**	**3**	P	**P**	**06 05 25.5**	**+0.2**
	baz=184						
PKCU	**Pink Cliffs**	**66.28**	**360**	P	**P**	**06 05 24.9**	**-1.4**
PRN	**Pahroc Range**	**66.30**	**358**	P	**P**	**06 05 25.9**	**-0.3**
PRN				IAmb	IAmb	06 05 40.9	
	comp=Z,10nm,1.2s						
LRAL	**Lakeview Retre**	**66.35**	**23**	P	**P**	**06 05 26.4**	**0.0**
	baz=204						
W39A	**Magazine**	**66.36**	**16**	P	**P**	**06 05 26.7**	**+0.2**
	baz=198						
CCUT	**Cedar City**	**66.39**	**359**	P	**P**	**06 05 27.0**	**+0.1**
SZCU	**Shurtz Canyon**	**66.44**	**359**	P	**P**	**06 05 27.8**	**+0.6**
TUL1	**Leonard**	**66.58**	**15**	P	**P**	**06 05 28.1**	**+0.2**
	baz=196						
VNA3	**Neumayer Olymp**	**66.58**	**160**	P	**P**	**06 05 25.2**	**-2.4**
W41B	**Gary Mavity, V**	**66.73**	**18**	P	**P**	**06 05 29.6**	**+0.7**
	baz=199						
OMMB	**Old Mammoth Mi**	**66.75**	**354**	P	**P**	**06 05 29.1**	**-0.2**
OMMB				IAmb	IAmb	06 05 52.2	
	comp=Z,7.6nm,1.3s						
S22A	**4UR Ranch, Cre**	**66.77**	**5**	P	**P**	**06 05 30.1**	**+0.7**
	baz=185						
SDCO	**Great Sand Dun**	**66.88**	**6**	P	**P**	**06 05 30.3**	**+0.2**
	baz=186						
OXF	**Oxford**	**66.93**	**20**	P	**P**	**06 05 30.7**	**+0.6**
	baz=202						
TPH	**Tonopah**	**67.07**	**356**	P	**P**	**06 05 30.8**	**-0.4**
R11A	**Troy Canyon, C**	**67.26**	**357**	P	**P**	**06 05 32.8**	**+0.5**
	baz=177,SNR=5.8						
R11A	**Troy Canyon, C**	**67.26**	**357**	P	**P**	**06 05 32.4**	**+0.1**
R11A				IAmb	IAmb	06 05 33.9	
	comp=Z,10nm,1.4s						
PV14	**Lion Creek, Pa**	**67.27**	**3**	IAmb	IAmb	06 05 46.8	
	comp=Z,9.7nm,1.2s						
CMB	**Columbia Colle**	**67.30**	**353**	P	**P**	**06 05 31.2**	**-1.3**
CMB				IAmb	IAmb	06 05 38.8	
	comp=Z,12nm,1.4s						
LHV	**Little Huntoon**	**67.34**	**355**	P	**P**	**06 05 33.1**	**+0.5**
MSU	**Marysvale**	**67.35**	**0**	P	**P**	**06 05 33.8**	**+0.8**
PSUT	**Pine Spring**	**67.38**	**359**	P	**P**	**06 05 36.3**	**+3.1**
VNA2	**Neumayer--Watz**	**67.39**	**160**	P	**P**	**06 05 30.6**	**-2.1**
	baz=275,slow=6.3						
NV11	**Mina Array Sit**	**67.49**	**355**	P	**P**	**06 05 32.5**	**-1.4**
NVAR	**Mina Array Bea**	**67.50**	**355**	P	**P**	**06 05 33.9**	**0.0**
	comp=Z,6.4nm,0.8s,baz=187,slow=8.2,SNR=39						
NVAR				LR	LR	06 28 46.2	
	comp=Z,773nm,18.7s,baz=170,slow=30						
WAKR	**Walker**	**67.67**	**354**	P	**P**	**06 05 35.2**	**+0.2**
U40A	**Yellville**	**67.70**	**17**	P	**P**	**06 05 35.0**	**0.0**
	baz=198						
RYN	**Ryan**	**67.72**	**355**	P	**P**	**06 05 35.2**	**0.0**
GOGA	**Godfrey**	**67.96**	**26**	P	**P**	**06 05 36.3**	**-0.4**
	baz=207						
PNTR	**Pine Nut**	**68.27**	**354**	P	**P**	**06 05 38.7**	**-0.1**
PNTR				IAmb	IAmb	06 05 40.0	
	comp=Z,5.2nm,0.9s						
AFDM	**Forest Hills D**	**68.27**	**353**	P	**P**	**06 05 37.8**	**-0.7**
AFDM				IAmb	IAmb	06 05 44.6	
	comp=Z,14nm,1.5s						
RUBR	**Rubicon Trail**	**68.28**	**353**	P	**P**	**06 05 38.6**	**-0.2**
P17A	**Butcher Ranch,**	**68.32**	**1**	P	**P**	**06 05 38.4**	**-0.6**
SNAA	**Sanae**	**68.39**	**161**	P	**P**	**06 05 36.7**	**-2.4**
SNAA	**Sanae**	**68.39**	**161**	P	P	06 05 35.5	-3.5
SNAA				IAmb	IAmb	06 05 37.8	
	comp=Z,8.6nm,1.1s						
WVT	**Waverly**	**68.91**	**21**	P	**P**	**06 05 41.6**	**-0.9**
	baz=203						
ORV	**Oroville**	**68.93**	**352**	P	**P**	**06 05 42.1**	**-0.5**
ORV				IAmb	IAmb	06 05 53.4	
	comp=Z,8.9nm,1.4s						
DUG	**Dugway, Tooele**	**69.03**	**360**	P	**P**	**06 05 43.4**	**0.0**
	baz=179						
BEKR	**Beckworth**	**69.11**	**353**	IAmb	IAmb	06 05 50.9	
	comp=Z,11nm,1.4s						
Z58A	**St. Stephen**	**69.36**	**29**	P	**P**	**06 05 45.5**	**+0.1**
	baz=210						
JLU	**Jordanelle**	**69.44**	**1**	P	**P**	**06 05 45.8**	**-0.3**
ELK	**Elko**	**69.63**	**358**	P	**P**	**06 05 45.9**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=206,slow=3.7,SNR=2.6						
O02D	**Mt. Diablo Mer**	**69.70**	**351**	P	**P**	**06 05 48.1**	**+0.6**
	baz=170						
CCM	**Cathedral Cave**	**69.72**	**18**	P	**P**	**06 05 47.6**	**+0.1**
	baz=199						
BGU	**Big Grassy Mou**	**69.76**	**359**	P	**P**	**06 05 47.5**	**-0.4**
X56A	**White Oak**	**69.86**	**27**	P	**P**	**06 05 49.1**	**+0.6**
	baz=209						
WDC	**Whiskeytown Da**	**70.07**	**352**	IAmb	IAmb	06 05 55.1	
	comp=Z,12nm,1.2s						
KMSC	**Kings Mountain**	**70.31**	**27**	P	**P**	**06 05 51.8**	**+0.6**
	baz=208						
N02D	**Trinity Center**	**70.48**	**352**	P	**P**	**06 05 52.0**	**-0.2**
	baz=170,SNR=9.1						
KHMM	**Horse Mountain**	**70.52**	**351**	P	**P**	**06 05 52.8**	**+0.2**
M02C	**Callahan**	**70.91**	**352**	P	**P**	**06 05 54.8**	**-0.1**
	baz=170						
W58A	**Raeford**	**71.05**	**28**	P	**P**	**06 05 55.8**	**+0.1**
	baz=210						
MOD	**Modoc Plateau**	**71.12**	**354**	P	**P**	**06 05 55.7**	**-0.5**
MOD				IAmb	IAmb	06 06 03.0	
	comp=Z,9.7nm,1.0s						
M04C	**Macdoel**	**71.17**	**352**	P	**P**	**06 05 56.1**	**-0.4**
	baz=171,SNR=6.7						
WVOR	**Wild Horse Val**	**71.51**	**355**	IAmb	IAmb	06 06 05.1	
	comp=Z,9.1nm,1.1s						
V57A	**Coltrane Farms**	**71.58**	**27**	P	**P**	**06 05 58.4**	**-0.6**
	baz=210						
BW06	**Boulder Array**	**71.64**	**2**	P	P	06 05 55.9	-3.6
BW06				IAmb	IAmb	06 06 12.1	
	comp=Z,12nm,1.4s						
PD31	**Pinedale Array**	**71.64**	**2**	P	**P**	**06 05 57.8**	**-1.6**
PD31				IAmb	IAmb	06 06 12.1	
	comp=Z,11nm,1.4s						
PDAR	**Pinedale Array**	**71.64**	**2**	P	**P**	**06 05 57.1**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=182,slow=5.6,SNR=6.4						
PDAR				LR	LR	06 32 45.1	
	comp=Z,224nm,18.6s,baz=184,slow=32						
L04D	**Klamath Falls**	**71.65**	**352**	P	**P**	**06 05 59.3**	**-0.2**
	baz=171						
L02E	**Cave Junction**	**71.76**	**351**	P	**P**	**06 06 00.3**	**+0.5**
	baz=170						
ECR	**Eagle Creek**	**71.89**	**1**	P	**P**	**06 06 00.2**	**-0.7**
K05A	**Summer Lake**	**72.00**	**353**	P	**P**	**06 06 01.1**	**-0.5**
HUMO	**Hull Mountain**	**72.12**	**352**	IAmb	IAmb	06 06 08.1	
	comp=Z,18nm,1.4s						
K02D	**Willamette Mer**	**72.30**	**351**	P	**P**	**06 06 03.4**	**+0.2**
	baz=170						
DZM	**Mont Dzumac**	**72.32**	**254**	*e*S	S	06 15 17.8	-10
	comp=Z,203nm,26.9s						
DZM	**Mont Dzumac**	**72.32**	**254**	*e*LR	LR	06 27 48.5	
	comp=Z,1μm,27.8s						
HLID	**Hailey**	**72.42**	**358**	P	**P**	**06 06 04.1**	**+0.1**
	baz=178						
HLID	**Hailey**	**72.42**	**358**	P	**P**	**06 06 02.5**	**-1.5**
HLID				IAmb	IAmb	06 06 20.6	
	comp=Z,11nm,1.1s						
J05D	**Fort Rock, OR**	**72.59**	**353**	P	**P**	**06 06 04.7**	**-0.3**
	baz=172,SNR=6.8						
T57A	**Hurt**	**72.75**	**27**	P	**P**	**06 06 05.7**	**-0.2**
	baz=210						
PINE	**Pine Mountain**	**73.06**	**353**	IAmb	IAmb	06 06 14.2	
	comp=Z,17nm,1.3s						
I07A	**Izee**	**73.21**	**355**	P	**P**	**06 06 08.4**	**-0.3**
I07A				IAmb	IAmb	06 06 22.5	
	comp=Z,8.8nm,1.0s						
I04A	**Tendick Farm,**	**73.22**	**352**	P	**P**	**06 06 08.3**	**-0.3**
	baz=171						
YHH	**Holmes Hill**	**73.63**	**1**	P	**P**	**06 06 10.0**	**-1.3**
YNE	**Yellowstone No**	**73.86**	**2**	P	**P**	**06 06 13.2**	**+0.6**
ECSD	**EROS Data Cent**	**73.97**	**12**	P	**P**	**06 06 13.3**	**+0.4**
	baz=194						
P52A	**Corning**	**73.98**	**24**	P	**P**	**06 06 13.1**	**0.0**
	baz=207						
G05D	**Wamic, OR**	**74.53**	**353**	P	**P**	**06 06 16.6**	**+0.3**
	baz=172						
P56A	**Dayton Farm, R**	**75.08**	**26**	P	**P**	**06 06 19.8**	**+0.3**
	baz=210						
MSO	**Missoula**	**75.67**	**359**	P	**P**	**06 06 22.9**	**0.0**
	baz=178						
O56A	**Blue Knob Stat**	**75.85**	**26**	P	**P**	**06 06 24.2**	**+0.2**
	baz=210						
N54A	**Moraine State**	**75.92**	**25**	P	**P**	**06 06 24.6**	**+0.3**
	baz=209						
N56A	**West Decatur**	**76.51**	**26**	P	**P**	**06 06 27.7**	**0.0**
	baz=210						
D03D	**Eldon**	**76.99**	**352**	P	**P**	**06 06 30.5**	**+0.4**
	baz=170						
NEW	**Newport**	**77.22**	**357**	P	**P**	**06 06 31.8**	**+0.3**
	baz=176						
M61A	**Granite Spring**	**78.66**	**29**	P	**P**	**06 06 40.8**	**+1.2**
	baz=214						
ULM	**Lac du Bonnet**	**80.41**	**11**	P	**P**	**06 06 47.7**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=196,slow=9.3,SNR=5.0						
ULM				LR	LR	06 38 36.8	
	comp=Z,180nm,20.1s,baz=194,slow=33						
MAW	**Mawson**	**83.44**	**178**	LR	LR	06 40 38.8	
	comp=Z,325nm,20.3s,baz=200,slow=33						
HNR	**Honiara**	**83.57**	**263**	LR	LR	06 35 41.5	
	comp=Z,309nm,21.9s,baz=127,slow=30						
STKA	**Stephens Creek**	**87.26**	**235**	LR	LR	06 38 48.4	
	comp=Z,143nm,20.5s,baz=125,slow=30						
YKA	**Yellowknife Ar**	**91.38**	**359**	P	**P**	**06 07 41.7**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=165,slow=4.9,SNR=13						
YKA				LR	LR	06 44 07.2	
	comp=Z,611nm,18.9s,baz=0.0,slow=33						
H11N3	**WAKE ISLAND Hy**	**91.82**	**291**	T	T	07 49 14.7	
H11N1	**WAKE ISLAND Hy**	**91.83**	**291**	T	T	07 49 10.3	
	baz=272,slow=74,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**91.83**	**291**	T	T	07 49 16.7	
	baz=122,slow=74,SNR=3.7						
DOT	**Dot Lake**	**95.89**	**346**	P	**P**	**06 08 04.4**	**+0.5**
ILAR	**Eielson Array**	**97.47**	**346**	LR	LR	06 43 03.8	
	comp=Z,104nm,20.5s,baz=146,slow=30						
ASAR	**Alice Springs**	**97.50**	**238**	LR	LR	06 45 26.3	
	comp=Z,202nm,20.8s,baz=142,slow=31						
WRA	**Warramunga Arr**	**99.35**	**241**	LR	LR	06 46 53.4	
	comp=Z,680nm,21.7s,baz=130,slow=32						
H01W1	**Cape Leeuwin H**	**102.68**	**218**	T	T	08 03 03.2	
	baz=138,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**102.69**	**218**	T	T	08 03 08.2	
	baz=138,slow=75,SNR=18						
H01W3	**Cape Leeuwin H**	**102.70**	**218**	T	T	08 03 08.1	
	baz=138,slow=75,SNR=13						
TORD	**Torodi Ar. Bea**	**117.08**	**90**	PKP	**PKPdf**	**06 13 24.4**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=307,slow=5.4,SNR=4.8						
NJ2	**Nanjing**	**136.27**	**287**	*e*PKP	**PKPdf**	**06 13 59.0**	**-0.6**
HHC	**Hu-ho-hao-te**	**142.64**	**300**	*e*PKP	**PKPdf**	**06 14 07.4**	**-3.7**
AKASG	**Malin Array Be**	**144.03**	**42**	PKP	**PKPab**	**06 14 09.8**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=284,slow=3.5,SNR=8.6						
SONM	**Songino Array**	**144.96**	**313**	PKP	**PKPab**	**06 14 12.4**	**-1.9**
	comp=Z,4.5nm,0.7s,baz=99,slow=2.4,SNR=21						
CD2	**Chengdu**	**148.87**	**282**	PKPbc	**PKPdf**	**06 14 20.5**	**-1.5**
LZH	**Lanzhou**	**148.97**	**292**	*e*PKPbc	**PKPdf**	**06 14 17.3**	**-4.8**
LZH				pPKP	PKiKP	06 14 29.5	+2.0
CM36	**Chiang Mai Arr**	**149.52**	**257**	P	**PKPab**	**06 14 35.0**	**+2.2**
CM04	**Chiang Mai Arr**	**149.57**	**256**	P	**PKPab**	**06 14 35.0**	**+2.0**
	comp=Z,6.2nm,1.3s						
CM01	**Chiang Mai Arr**	**149.60**	**256**	P	**PKPab**	**06 14 35.0**	**+1.9**
	comp=Z,4.1nm,0.8s						
CM05	**Chiang Mai Arr**	**149.60**	**256**	P	**PKPab**	**06 14 35.0**	**+1.9**
	comp=Z,5.6nm,1.1s						
CM02	**Chiang Mai Arr**	**149.61**	**256**	P	**PKPab**	**06 14 35.3**	**+2.2**
	comp=Z,81nmcomp=Z,7.7nm,1.3s						
CM34	**Chiang Mai Arr**	**149.62**	**257**	P	**PKPab**	**06 14 35.0**	**+1.8**
CMAR	**Chiang Mai Arr**	**149.63**	**256**	PKPbc	**PKPdf**	**06 14 28.0**	**+4.5**
	comp=Z,1.0nm,0.3s,baz=154,slow=0.9,SNR=6.9						
CM13	**Chiang Mai Arr**	**149.64**	**256**	P	**PKPab**	**06 14 34.1**	**+0.9**
	comp=Z,62nmcomp=Z,5.5nm,1.2s						
CMMT	**Chiang Mai**	**149.78**	**257**	P	**PKiKP**	**06 14 33.9**	**+4.5**
	comp=Z,6.2nm,1.1s						
BRTR	**Keskin Array B**	**150.13**	**60**	PKPbc	**PKPdf**	**06 14 26.4**	**+2.6**
	comp=Z,2.2nm,0.8s,baz=204,slow=2.7,SNR=5.4						
GTA	**Gaotai**	**151.75**	**300**	PKPbc	**PKPdf**	**06 14 31.4**	**+5.1**
ZALV	**Zalesovo Beam**	**152.31**	**338**	PKPbc	**PKPdf**	**06 14 31.0**	**+4.5**
	comp=Z,2.1nm,0.8s,baz=27,slow=3.2,SNR=8.2						
KURK	**Kurchatov**	**156.99**	**342**		**PKPdf**	**06 14 31.2**	**-1.9**
KURK	**Kurchatov**	**156.99**	**342**		**PKPab**	**06 15 02.0**	**-1.2**
KURBB	**Kurchatov Arra**	**157.10**	**342**	PKP	**PKPdf**	**06 14 31.2**	**-2.0**
	comp=Z,0.8nm,1.0s,baz=22,slow=1.0,SNR=4.0						
KURBB				PKPab	**PKPab**	**06 15 01.0**	**-2.6**
	comp=Z,1.6nm,0.9s,baz=24,slow=4.1,SNR=6.6						
WMQ	**Urumqi**	**158.40**	**318**	*e*PKP	**PKPdf**	**06 14 35.4**	**+0.2**
MKAR	**Makanchi Array**	**159.08**	**331**	PKPab	**PKPab**	**06 15 10.8**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=30,slow=1.7,SNR=2.9						
KSH	**Kashi**	**167.67**	**329**	PKP	**PKPdf**	**06 14 45.8**	**+1.5**

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*NEIC **06** 06:08:48.4±2.2, 18°.70S±0°.06×69°.78W±0°.08, h90^{km}±7^{km}, Error ellipse: s-maj=11.3km s-min=8.4km az=75.0*

*IDC **06** 06:08:48.7±1.9, 18°.66S×69°.49W, h96^{km}±19^{km}, mb3.8/8, mb1 3.8/12, mb1mx3.7/37, mbtmp4.1/12, Error ellipse: s-maj=22.0km s-min=15.9km az=91.0*

*GUC **06** 06:08:48.7±0.8, 18°.64S×69°.75W, h89^{km}±3^{km}, ML4.2*

*VAO **06** 06:08:49.8±0.3, 18°.57S×69°.63W, h104^{km}, mb4.1*

ISC 06 06:08:47.4±0.6, **18°.65S**±0°.04×**69°.80W**±0°.06, **h94**^{km}±6^{km}, **n83**, σ1^{s}**40**/93, **mb4.0**/7, **6C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.42**	**42**	⇓*i*P	**Pn**	**06 09 03.5**	**+0.8**
PB16				*i* S	**Sn**	**06 09 15.1**	**+1.0**
PB16				IAML		06 09 16.9	
	comp=N,17μm,0.5s						
PB16	**IPOC Station P**	**0.42**	**42**	Pn	**Pn**	**06 09 03.5**	**+0.8**
MNMC	**Minye Minye**	**0.52**	**158**	⇑*i*P	**Pn**	**06 09 03.5**	**+0.4**
MNMC				*i* S	**Sn**	**06 09 14.7**	**-0.1**
MNMC				IAML		06 09 18.4	
	comp=E,18μm,0.4s						
MNMC	**Minye Minye**	**0.52**	**158**	Pn	**Pn**	**06 09 03.5**	**+0.4**
AP01	**Chacalluta**	**0.58**	**298**	⇑*i*P	**Pn**	**06 09 04.3**	**+1.0**
AP01				*e*S	**Sn**	**06 09 15.9**	**+0.8**
AP01	**Chacalluta**	**0.58**	**298**	Pn	**Pn**	**06 09 04.2**	**+1.0**
PSGC	**Pisagua**	**0.99**	**198**	⇑*i*P	**Pn**	**06 09 07.5**	**0.0**
PSGC				*i* S	**Sn**	**06 09 22.4**	**-0.2**
PSGC				IAML		06 09 25.8	
	comp=E,5μm,0.4s						
PSGCX	**Pisagua**	**0.99**	**198**	Pn	**Pn**	**06 09 07.8**	**+0.4**
GO01	**Chusmiza**	**1.17**	**151**	⇑*i*P	**Pn**	**06 09 10.9**	**+1.1**
GO01				*e*S	**Sn**	**06 09 27.7**	**+1.0**
GO01				IAML		06 09 32.6	
	comp=E,6μm,0.2s						
GO01	**Chusmiza**	**1.17**	**151**	Pn	**Pn**	**06 09 10.5**	**+0.6**
PB08	**IPOC Station P**	**1.61**	**158**	⇑*i*P	**Pn**	**06 09 16.2**	**+1.1**
PB08				*i* S	**Sn**	**06 09 37.0**	**+0.9**
PB08				IAML		06 09 39.3	
	comp=E,3μm,0.4s						
PB08	**IPOC Station P**	**1.61**	**158**	Pn	**Pn**	**06 09 16.5**	**+1.4**
HMBC	**Humberstone**	**1.63**	**183**	⇓*i*P	**Pn**	**06 09 15.3**	**+0.2**
HMBC				*e*S	**Sn**	**06 09 36.9**	**+0.8**
HMBC				IAML		06 09 39.8	
	comp=E,3μm,0.2s						
TA02	**Huaiquique**	**1.65**	**191**	*e*P	**Pn**	**06 09 15.4**	**+0.2**
TA02				*e*S	**Sn**	**06 09 37.0**	**+0.6**
TA02				IAML		06 09 44.0	
	comp=N,5μm,0.1s						
TA01	**Diego Aracena**	**1.94**	**190**	*e*P	**Pn**	**06 09 18.8**	**-0.3**
TA01				*i* S	**Sn**	**06 09 43.6**	**+0.5**
TA01				IAML		06 09 49.4	
	comp=N,2μm,0.2s						
TA01	**Diego Aracena**	**1.94**	**190**	Pn	**Pn**	**06 09 19.1**	**+0.1**
PATCX	**Punta Patache**	**2.19**	**189**	⇑*i*P	**Pn**	**06 09 22.8**	**+0.5**
PATCX				*e*S	**Sn**	**06 09 49.8**	**+0.7**
PATCX				IAML		06 09 59.8	
	comp=E,1μm,0.6s						
PATCX	**Punta Patache**	**2.19**	**189**	Pn	**Pn**	**06 09 22.6**	**+0.3**
PB01	**IPOC Station P**	**2.40**	**173**	*i* P	**Pn**	**06 09 25.7**	**+0.5**
PB01				*e*S	**Sn**	**06 09 55.4**	**+1.3**
PB01				IAML		06 10 03.3	
	comp=N,2μm,0.2s						
PB01	**IPOC Station P**	**2.40**	**173**	Pn	**Pn**	**06 09 26.2**	**+1.0**
PB07	**IPOC Station P**	**3.07**	**181**	*e*P	**Pn**	**06 09 35.2**	**+1.1**
PB07				*e*S	**Sn**	**06 10 13.4**	**+3.3**
PB07				IAML		06 10 23.5	
	comp=E,1μm,0.3s						
PB07	**IPOC Station P**	**3.07**	**181**	Pn	**Pn**	**06 09 37.3**	**+3.2**
PB09	**IPOC Station P**	**3.18**	**171**	*e*P	**Pn**	**06 09 36.9**	**+1.3**
PB09				*i* S	**Sn**	**06 10 14.6**	**+1.9**
PB09	**IPOC Station P**	**3.18**	**171**	Pn	**Pn**	**06 09 36.7**	**+1.1**
PB03	**IPOC Station P**	**3.39**	**179**	*e*P	**Pn**	**06 09 39.2**	**+0.8**
PB03				*e*S	**Sn**	**06 10 22.5**	**+4.7**
PB03				IAML		06 10 29.8	
	comp=E,595nm,0.3s						
PB04	**IPOC Station P**	**3.68**	**185**	*e*P	**Pn**	**06 09 43.1**	**+0.7**
PB04				*i* S	**Sn**	**06 10 26.2**	**+1.3**
PB04	**IPOC Station P**	**3.68**	**185**	Pn	**Pn**	**06 09 42.5**	**+0.1**
LVC	**Limon Verde**	**4.03**	**168**	P	**Pn**	**06 09 48.6**	**+1.4**
	comp=E,12nm,0.3s,baz=10,slow=7.0,SNR=34						
LVC				S	**Sn**	**06 10 33.2**	**-0.5**
	comp=E,13nm,0.3s,baz=8.9,slow=15,SNR=1.8						
LVC	**Limon Verde**	**4.03**	**168**		**Pn**	**06 09 48.2**	**+0.9**
PB06	**IPOC Station P**	**4.05**	**177**	Pn	**Pn**	**06 09 47.1**	**-0.2**
PB15	**IPOC Station P**	**4.55**	**176**	Pn	**Pn**	**06 09 54.3**	**+0.1**
PB10	**IPOC Station P**	**4.89**	**188**		**Pn**	**06 09 57.1**	**-1.5**
PB14	**IPOC Station P**	**5.98**	**185**		**Pn**	**06 10 12.6**	**-1.0**
GO02	**Mina Guanaco**	**6.49**	**178**		**Pn**	**06 10 19.5**	**-1.1**
SIV	**San Ignacio**	**8.75**	**74**	P	**Pn**	**06 10 50.0**	**-1.1**
	comp=E,6.8nm,0.3s,baz=267,slow=10,SNR=126						
ETMB	**Extrema**	**9.44**	**22**	*e*P	**Pn**	**06 11 00.7**	**+0.1**
NNA	**Nana**	**9.48**	**313**	P	Pn	06 11 05.4	+4.3
	comp=E,0.6nm,0.3s,baz=31,slow=8.6,SNR=1.8						
NNA				S	**Sn**	**06 12 44.0**	**-2.0**
	comp=E,1.4nm,0.3s,baz=321,slow=20,SNR=1.9						
AC05	**El Transito**	**10.15**	**182**	Pn	**Pn**	**06 11 06.8**	**-3.5**
LCO	**Las Campanas**	**10.35**	**184**	Pn	**Pn**	**06 11 09.2**	**-4.0**
VILB	**Vilhena**	**10.84**	**60**	*e*P	**Pn**	**06 11 19.5**	**-0.1**
SAML	**Samuel**	**11.58**	**35**		**Pn**	**06 11 28.2**	**-1.4**
SAML	**Samuel**	**11.58**	**35**	*e*P	**Pn**	**06 11 31.4**	**+1.7**
AQDB	**Aquidauana**	**13.42**	**100**	*e*P	**Pn**	**06 11 53.3**	**-0.8**
CPUP	**Villa Florida**	**13.83**	**126**	P	**Pn**	**06 11 56.5**	**-2.8**
	comp=E,0.1nm,0.3s,baz=120,slow=3.3,SNR=2.8						
CPUP	**Villa Florida**	**13.83**	**126**	*e*P	**Pn**	**06 12 01.3**	**+2.0**
VA03	**San Esteban**	**14.08**	**183**	Pn	**P**	**06 12 04.0**	**-3.3**
PP1B	**Ponte de Pedra**	**14.23**	**88**	*e*P	**Pn**	**06 12 03.8**	**-0.8**
MT02	**Curacav**	**14.60**	**184**	Pn	**Pn**	**06 12 09.4**	**+0.1**
TRCB	**Terra Rica**	**16.58**	**107**	*e*P	**P**	**06 12 35.4**	**+0.2**
ARAG	**Araguaiana, MT**	**17.44**	**83**	*e*P	**P**	**06 12 44.6**	**0.0**
PTGB	**Pitanga**	**17.55**	**113**	*e*P	**Pn**	**06 12 46.8**	**+0.7**
MACA	**Manacapuru-AM**	**17.79**	**31**	*e*P	**Pn**	**06 12 48.8**	**-0.2**
NPGB	**Novo Progresso**	**18.18**	**53**	*e*P	**P**	**06 12 51.4**	**-1.4**
ITAB	**Concordia**	**18.37**	**121**	*e*P	**Pn**	**06 12 55.4**	**-0.5**
ITRB	**Iturama**	**18.40**	**96**	*e*P	**Pn**	**06 12 56.1**	**-0.3**
CPSB	**Cacapava Do Su**	**18.91**	**131**	*e*P	**P**	**06 13 00.1**	**-0.6**
SNDB	**Serra Nova Dou**	**19.04**	**72**	*e*P	**P**	**06 13 02.0**	**-0.2**
ITTB	**Itaituba**	**19.76**	**46**	*e*P	**P**	**06 13 09.6**	**-0.5**
BB19B	**Bebedouro**	**20.16**	**100**	*e*P	**P**	**06 13 13.6**	**-0.8**
PTGA	**Pitinga**	**20.25**	**30**	P	**P**	**06 13 14.6**	**-0.7**
	comp=E,4.7nm,0.3s,baz=329,slow=24,SNR=15						
IPMB	**Ipameri, GO**	**20.51**	**92**	*e*P	**P**	**06 13 17.1**	**-1.1**
OTAV	**Otavalo**	**20.60**	**335**	*e*P	**P**	**06 13 19.7**	**+0.1**
BDFB	**Brasilia**	**21.03**	**85**	P	**P**	**06 13 21.9**	**-2.0**
	comp=E,0.8nm,0.4s,baz=224,slow=7.1,SNR=3.1						
PLCA	**Paso Flores**	**22.02**	**182**	P	**P**	**06 13 35.5**	**+1.4**
	comp=E,4.3nm,0.8s,baz=0.8,slow=9.8,SNR=11						
PLCA	**Paso Flores**	**22.02**	**182**	*e*P	**P**	**06 13 36.9**	**+2.7**
SMTB	**Santa Maria do**	**23.64**	**69**	*e*P	**P**	**06 13 51.1**	**+0.8**
JANB	**Januaria**	**24.65**	**86**	*e*P	**P**	**06 13 59.6**	**+0.2**
SDBA	**SAO DESIDERIO**	**24.76**	**79**	*e*P	**P**	**06 14 00.8**	**+0.2**
MCPB	**Macapa, AP**	**25.18**	**46**	*e*P	**P**	**06 14 05.8**	**+1.5**
GDU01	**Guandu, BA**	**29.42**	**85**	*e*P	**P**	**06 14 41.7**	**-0.5**
DBIC	**Dimbokro**	**68.77**	**75**	P	**P**	**06 19 41.4**	**-0.4**
	comp=E,1.6nm,0.7s,baz=225,slow=7.3,SNR=4.3						
ULM	**Lac du Bonnet**	**72.36**	**343**	P	**P**	**06 20 02.9**	**0.0**
	comp=E,2.7nm,0.8s,baz=176,slow=8.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**77.22**	**71**	P	**P**	**06 20 30.2**	**-1.5**
	comp=E,1.7nm,0.5s,baz=253,slow=5.2,SNR=10						
ESDC	**Sonseca Array**	**84.41**	**45**	P	**P**	**06 21 10.9**	**+1.4**
	comp=E,0.9nm,0.7s,baz=255,slow=5.8,SNR=8.5						
YKA	**Yellowknife Ar**	**88.23**	**341**	P	**P**	**06 21 29.7**	**+2.1**
	comp=E,1.0nm,0.7s,baz=131,slow=5.4,SNR=19						
H11S2	**WAKE ISLAND Hy**	**126.63**	**280**	T	T	08 46 59.6	
	baz=100,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**126.64**	**280**	T	T	08 46 54.2	
	baz=100,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**126.64**	**281**	T	T	08 47 18.8	
	baz=101,slow=74,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	**126.65**	**280**	T	T	08 46 59.0	
	baz=100,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**126.66**	**281**	T	T	08 47 18.1	
	baz=101,slow=74,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**126.66**	**281**	T	T	08 46 57.1	
	baz=101,slow=74,SNR=6.5						
MKAR	**Makanchi Array**	**143.76**	**33**	PKP	**PKPdf**	**06 28 10.6**	**-0.9**
	comp=E,0.4nm,0.9s,baz=15,slow=6.0,SNR=2.8						
SONM	**Songino Array**	**150.72**	**5**	PKPbc	**PKiKP**	**06 28 31.0**	**+1.6**
	comp=E,1.1nm,0.6s,baz=337,slow=1.8,SNR=7.7						

IDC 06 06:31:30.1±1.6, **2°.87S**×**138°.49E, h0**^{km}, **mb3.4**/2, **mb1 3.7**/4, **mb1mx3.5**/22, **mbtmp3.5**/4, **ML3.6**/2, **MS3.1**/2, **Ms1 3.1**/2, **ms1mx2.7**/18, **Error ellipse: s-maj=36.6km s-min=28.2km az=110.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.24**	**81**	Pn	Pn	06 32 09.0	+0.5
	18nm,0.3s,baz=248,slow=21,SNR=30						
JAY				Sn	Sn	06 32 30.8	-6.1
	21nm,0.3s,baz=170,slow=2.1,SNR=5.2						
JAY				LR	LR	06 32 51.8	
	comp=Z,192nm,18.1s,baz=178,slow=36						
WRA	**Warramunga Arr**	**17.45**	**193**	P	Pn	06 35 34.9	-0.2
	0.2nm,0.3s,baz=12,slow=13,SNR=14						
ASAR	**Alice Springs**	**21.15**	**192**	P	P	06 36 17.1	+0.1
	1.1nm,0.6s,baz=28,slow=9.5,SNR=14						
USRK	**Ussuriysk Ar.**	**47.22**	**354**	LR	LR	06 58 36.8	
	comp=Z,42nm,19.8s,baz=121,slow=34						
SONM	**Songino Array**	**57.77**	**335**	P	P	06 41 22.9	-0.3
	0.3nm,0.5s,baz=121,slow=5.6,SNR=3.8						

BYKL 06 06:37:36.8±0.2, **56°.10N**×**113°.73E, h4**^{km}±4^{km}, **2C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**280**	⇑*i*Pg	Pg	06 37 38.8	0.0
SVKR				*e*Sg	Sg	06 37 40.9	+0.7
SVKR				Pmax			
	5μm,0.1s						
SVKR				Smax			
	8μm,0.2s						

UKT	**Uakit**	**0.61**	**185**	⇑*i*Pg	Pg	06 37 47.5	-1.1
UKT				*e*Sg	Sg	06 37 55.2	-1.4
UKT				Pmax			
	28nm,0.1s						
UKT				Smax			
	155nm,0.4s						
YOA	**Uoyan**	**1.12**	**273**	*e*Pg	Pg	06 37 57.3	-1.0
YOA				*e*Sg	Sg	06 38 12.8	-0.1
YOA				Pmax			
	124nm,0.2s						
YOA				Smax			
	591nm,0.3s						
NLYR	**Nelyaty**	**1.17**	**70**	*e*Pg	Pg	06 37 58.1	-1.1
NLYR				*e*Pb	Pn	06 38 00.3	+0.4
NLYR				*e*Sg	Sg	06 38 12.8	-1.5
NLYR				*e*		06 38 17.8	
NLYR				max			
	46nm,0.4s						
NLYR				max			
	176nm,0.4s						
KMO	**Kumora**	**1.44**	**262**	*e*Pg	Pn	06 38 02.6	-1.0
KMO				*e*Pb	Pb	06 38 03.8	-0.3
KMO				*e*Sg	Sb	06 38 21.3	-1.5
KMO				*e*		06 38 24.8	
KMO				max			
	97nm,0.3s						
KMO				max			
	455nm,0.8s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	06 38 07.4	-0.2
BOD				*e*Sg	Sn	06 38 30.0	-0.1
BOD				Pmax			
	22nm,0.1s						
BOD				Smax			
	128nm,0.3s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Pn	Pn	06 38 10.5	+0.4
YLYR				*e*Pg	Pb	06 38 11.1	-1.1
YLYR				*e*Sg	Sb	06 38 36.2	-0.1
YLYR				Pmax			
	73nm,0.2s						
YLYR				Smax			
	218nm,0.3s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pn	Pn	06 38 17.1	+0.5
NIZ				*e*Pg	Pb	06 38 19.3	-0.9
NIZ				*e*Sn	Sn	06 38 47.0	+0.8
NIZ				*e*Sg	Sb	06 38 51.0	+1.1
NIZ				Pmax			
	13nm,0.5s						
NIZ				Smax			
	128nm,0.5s						
CRS	**Chara**	**2.64**	**70**	*e*Pg	Pb	06 38 24.9	+0.2
CRS				*e*PgPg	PbPb	06 38 27.7	-0.1
CRS				*e*Sn	Sn	06 38 52.4	-0.3
CRS				*e*Sg	Sg	06 38 59.5	-2.1
CRS				max			
	31nm,1.0s						
CRS				Smax			
	57nm,0.6s						
TUP	**Tupik**	**3.94**	**113**	*e*Pn	Pn	06 38 37.6	-0.4
TUP				*e*Pg	Pb	06 38 47.4	+0.7
TUP				*e*Sn	Sn	06 39 24.0	-0.6
TUP				*e*Sg	Sg	06 39 39.2	-3.9
TUP				Pmax			
	7.0nm,0.4s						
TUP				max			
	65nm,0.9s						

BYKL 06 06:38:30.8±0.2**, 56.°18N×113.°58E, h6^{km}**±3^{km}**, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.06**	**191**	*e*Pg	Pg	06 38 31.6	-0.9
SVKR				*e*Sg	Sg	06 38 33.1	-0.6
UKT	**Uakit**	**0.69**	**178**	*e*Pg	Pg	06 38 43.8	-0.3
UKT				*e*Sg	Sg	06 38 53.1	0.0
UKT				Pmax			
	87nm,0.4s						
UKT				Smax			
	194nm,0.5s						
YOA	**Uoyan**	**1.04**	**268**	*e*Pg	Pg	06 38 49.8	-0.9
YOA				*e*Sg	Sg	06 39 03.9	-0.3
YOA				Pmax			
	237nm,0.2s						
YOA				Smax			
	944nm,0.3s						
NLYR	**Nelyaty**	**1.22**	**74**	*e*Pg	Pg	06 38 52.7	-1.5
NLYR				*e*Sg	Sg	06 39 09.4	-0.7
NLYR				*e*		06 39 10.7	
NLYR				Pmax			
	315nm,0.3s						
NLYR				max			
	286nm,0.6s						
KMO	**Kumora**	**1.37**	**259**	*e*Pg	Pn	06 38 54.9	-1.5
KMO				*e*		06 38 57.1	
KMO				*e*Sg	Sb	06 39 13.1	-1.4
KMO				*e*		06 39 18.2	
KMO				max			
	149nm,0.5s						
KMO				max			
	520nm,0.6s						
BOD	**Bodaibo**	**1.66**	**8**	*e*Pg	Pn	06 39 00.0	-0.4
BOD				*e*Sg	Sb	06 39 22.7	-0.2
BOD				Pmax			
	84nm,0.9s						
BOD				Smax			
	253nm,1.1s						
YLYR	**Ulyunkhan**	**1.90**	**227**	*e*Pn	Pn	06 39 03.9	+0.2
YLYR				*e*Pg	Pb	06 39 04.6	-1.2
YLYR				*e*Sg	Sb	06 39 29.7	0.0
YLYR				Pmax			
	42nm,0.2s						
YLYR				Smax			
	382nm,0.3s						
NIZ	**Nizh Angarsk**	**2.31**	**262**	*e*Pg	Pb	06 39 12.1	-0.7
NIZ				*e*Sg	Sb	06 39 42.3	+0.8
NIZ				Pmax			
	27nm,0.6s						
NIZ				Smax			
	204nm,1.0s						
CRS	**Chara**	**2.69**	**73**	*e*Sg	Sb	06 39 53.4	+0.7
CRS				Smax			
	127nm,0.7s						
SYVR	**Suvo**	**3.27**	**221**	*e*Pg	Pb	06 39 29.0	-0.1
SYVR				*e*Sn	Sn	06 40 01.1	-0.5
SYVR				*e*Sg	Sb	06 40 11.4	+2.3
SYVR				Pmax			
	32nm,0.8s						
SYVR				Smax			
	127nm,0.9s						
VTMR	**Vitim**	**3.31**	**351**	*e*Sg	Sb	06 40 13.0	+2.5
TUP	**Tupik**	**4.04**	**113**	*e*Pg	Pb	06 39 43.7	+1.3
TUP				*e*		06 39 52.3	
TUP				*e*Sg	Sg	06 40 36.1	-4.5
TUP				max			
	58nm,1.5s						
TUP				Smax			
	126nm,1.0s						
MXMB	**Maximikha**	**4.05**	**226**	*e*Sg	Sg	06 40 36.2	-4.5
CIT	**Chita**	**4.17**	**180**	*e*Sg	Sg	06 40 39.9	-4.6
CIT				Smax			
	201nm,0.3s						
OGRR	**Ongureny**	**4.29**	**236**	*e*Pn	Pn	06 39 37.2	+0.7
OGRR				*e*Pg	Pb	06 39 47.7	+1.2
OGRR				*e*Sg	Sb	06 40 43.2	+4.7
OGRR				Pmax			
	27nm,0.8s						
OGRR				Smax			
	45nm,1.2s						
YKLR	**Yuktali**	**4.51**	**81**	*e*Sg	Sg	06 40 50.1	-5.3
TRG	**Tyrgan**	**5.43**	**234**	*e*Sg	Sg	06 41 18.5	-6.6
TRG				Smax			
	20nm,0.6s						

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*BGR **06** 06:55:26.7±0.7, 53.°31N×6.°67E, h3^{km}, ML2.7/3, Error ellipse: s-maj=11.1km s-min=6.7km az=89.0*
BGR Felt III EMS.
*LDG **06** 06:55:28.6±0.1, 53.°33N×6.°71E, h3^{km}, Md2.6/2, Ml2.8/10, Error ellipse: s-maj=3.1km s-min=2.0km az=120.0*
ISC 06 06:55:26.2±1.1**, 53.°22N**±0.°06×**6.°63E**±0.°05**, h0^{km}, n21, σ1.^{s}67**/34**, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBBN	**Ibbenburen**	**1.14**	**143**	*e*Pg	**Pn**	**06 55 51.5**	**+2.1**
IBBN				*e*Sg	**Sn**	**06 56 08.1**	**+2.4**
HLG	**Helgoland**	**1.22**	**37**	*e*Pg	**Pg**	**06 55 50.2**	**+0.6**
HLG				*e*Sg	**Sg**	**06 56 05.5**	**+0.1**
WTSB	**Winterswijk**	**1.26**	**175**	*e*Pg	**Pn**	**06 55 51.8**	**+0.8**
NRDL	**Niedersach Rie**	**2.23**	**108**	*e*Sn	**Sn**	**06 56 30.9**	**-1.6**
CLZ	**Clausthal**	**2.67**	**120**	*e*Pn	**Pn**	**06 56 11.3**	**+0.8**
CLZ				*e*Sn	**Sn**	**06 56 41.2**	**-2.3**
FLTG	**Flechtingen**	**2.93**	**106**	*e*Pn	**Pn**	**06 56 13.6**	**-0.5**
FLTG				*e*Sn	**Sn**	**06 56 46.3**	**-3.6**
GIVF	**Givet**	**3.32**	**201**	*e*Pn	**Pn**	**06 56 21.3**	**+1.9**
GIVF				*e*Sn	**Sn**	**06 56 59.7**	**+0.2**
	5.1nm,0.2s						
BAIF	**Baives**	**3.51**	**206**	*e*Pn	**Pn**	**06 56 24.0**	**+2.1**
BAIF				*e*Sn	**Sn**	**06 57 04.1**	**0.0**
	4.9nm,0.4s						
PAGF	**Fort de Pagny**	**4.70**	**187**	*e*Pn	**Pn**	**06 56 39.5**	**+1.1**
PAGF				*e*Sn	**Sn**	**06 57 32.3**	**-1.4**
	3.8nm,0.4s						
CDF	**Champ du Feu**	**4.83**	**175**	*e*Pn	**Pn**	**06 56 40.9**	**+0.7**
CDF				*e*Sn	**Sn**	**06 57 35.1**	**-1.8**
	1.0nm,0.3s						
LOR	**Lormes**	**6.22**	**198**	*e*Pn	**Pn**	**06 57 00.3**	**+1.1**
	baz=20						
LOR				*e*Sn	**Sn**	**06 58 08.8**	**-2.1**
	1.0nm,0.3s						
LDF	**La Druitiere**	**6.30**	**225**	*e*Pn	**Pn**	**06 57 00.2**	**-0.1**
FLN	**La Foliniere**	**6.33**	**228**	*e*Pn	**Pn**	**06 57 01.4**	**+0.7**
FLN				*e*Sn	**Sn**	**06 58 11.7**	**-2.0**
	0.4nm,0.1s						
HYF	**Humbligny**	**6.48**	**205**	*e*Pn	**Pn**	**06 57 04.2**	**+1.3**
SSF	**Saint Saulge**	**6.48**	**199**	*e*Pn	**Pn**	**06 57 03.7**	**+0.9**
CABF	**La Chapelle**	**6.62**	**183**	*e*Pn	**Pn**	**06 57 06.0**	**+1.1**
GRR	**Gorron**	**6.77**	**227**	*e*Pn	**Pn**	**06 57 08.2**	**+1.4**
GRR				*e*Sn	**Sn**	**06 58 22.6**	**-2.0**
	0.8nm,0.2s						
SMF	**Signal de Mont**	**6.82**	**196**	*e*Pn	**Pn**	**06 57 08.8**	**+1.3**
SMF				*e*Sn	**Sn**	**06 58 23.2**	**-2.6**
	1.2nm,0.2s						
BGF	**Bois d'Agland**	**7.10**	**202**	*e*Pn	**Pn**	**06 57 12.0**	**+0.7**
BGF				*e*Sn	**Sn**	**06 58 29.9**	**-2.8**
	3.1nm,0.4s						
SGMF	**Saint Gilles**	**7.66**	**233**	*e*Pn	**Pn**	**06 57 19.8**	**+0.8**
ROSF	**Rostrenen**	**7.95**	**236**	*e*Pn	**Pn**	**06 57 23.9**	**+0.9**

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*WEL **06** 06:55:00, 43.°11S×171.°25E, h9^{km}, ML3.7, Mw3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M_{rr}1.17; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-1.25; $M_{r\theta}$-0.81; $M_{\theta\phi}$-2.53; $M_{\phi r}$-0.25; Fault plane solution: $M_0$2.78000×10^{14} NP1: ϕ_s354.00000°, δ65.00000°, λ13.00000°. NP2: ϕ_s259.00000°, δ79.00000°, λ155.00000°. Principal axes: T -33.0300, Plg26.0000°, Azm215.0000°; N 22.6200, Plg63.0000°, Azm57.0000°; P 10.4200, Plg9.0000°, Azm309.0000°;*
WEL 06 06:55:46.9±0.4**, 43°S**±3°×**17°1E**±°**, h5^{km}, M3.6**/17**, ML3.8**/17**, MLv3.6**/17 **Error ellipse: s-maj=0.0km s-min=0.0km az=133.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.34**	**25**	P	Pg	06 55 53.9	+0.4
INZ				S	Sg	06 55 58.4	+0.4
WVZ	**Waitaha Valley**	**0.38**	**264**	P	Pg	06 55 55.0	+0.9
WVZ				S	Sg	06 55 59.9	+0.8
MHCZ	**Mount Hutt**	**0.55**	**155**	P	Pg	06 55 57.7	+0.2
OXZ	**Oxford**	**0.65**	**117**	P	Pg	06 55 59.5	+0.1
RPZ	**Rata Peaks**	**0.69**	**192**	P	Pg	06 56 00.4	+0.2
GCSZ	**Gaunt Creek Bo**	**0.73**	**247**	P	Pg	06 56 01.1	+0.2
LTZ	**Lake Taylor**	**0.79**	**72**	P	Pg	06 56 02.5	+0.4
LTZ				S	Sg	06 56 12.8	+0.3
ARCZ	**Arundel**	**0.91**	**183**	P	Pg	06 56 04.4	0.0
ARCZ				S	Sg	06 56 16.3	0.0
RACZ	**Rakaia**	**0.95**	**137**	P	Pg	06 56 05.4	+0.3
RACZ				S	Sb	06 56 19.0	+0.2
WACZ	**Wakanui South**	**1.00**	**155**	P	Pg	06 56 06.4	+0.2
WACZ				S	Sb	06 56 20.3	0.0
AMCZ	**Amberley**	**1.04**	**98**	P	Pb	06 56 07.6	+0.3
FOZ	**Fox Glacier**	**1.16**	**244**	P	Pg	06 56 08.9	-0.2
MQZ	**McQueen's Vall**	**1.23**	**124**	P	Pg	06 56 09.4	-1.1
GVZ	**Greta Valley S**	**1.31**	**88**	P	Pn	06 56 11.4	-0.6
DSZ	**Denniston Nort**	**1.35**	**18**	P	Pn	06 56 12.2	-0.3
TMZ	**Timaru**	**1.36**	**187**	P	Pn	06 56 11.8	-0.8
AKCZ	**Akaroa Harbour**	**1.47**	**125**	P	Pn	06 56 12.9	-1.2
OKCZ	**Okains Bay**	**1.49**	**118**	P	Pn	06 56 13.6	-0.8
LBZ	**Lake Benmore**	**1.56**	**209**	P	Pn	06 56 14.9	-0.4
THZ	**Tophouse**	**1.77**	**45**	P	Pn	06 56 18.4	+0.1
KHZ	**Kahutara**	**1.80**	**71**	P	Pn	06 56 18.5	-0.1
ODZ	**Otahua Downs**	**2.06**	**192**	P	Pn	06 56 21.1	-1.0
JCZ	**Jackson Bay**	**2.07**	**239**	P	Pn	06 56 22.5	+0.1
BSWZ	**Blackbirch Sta**	**2.35**	**57**	P	Pb	06 56 28.9	-0.9
QRZ	**Quartz Range**	**2.41**	**24**	P	Pn	06 56 27.3	+0.3
WKZ	**Wanaka**	**2.41**	**221**	P	Pn	06 56 26.0	-1.0
NNZ	**Nelson**	**2.41**	**42**	P	Pn	06 56 28.8	+1.8
CMWZ	**Cape Campbell**	**2.55**	**61**	P	Pb	06 56 32.6	-0.5
TUWZ	**Tuamarina**	**2.57**	**52**	P	Pn	06 56 30.6	+1.5
EAZ	**Earnscleugh**	**2.60**	**212**	P	Pn	06 56 28.0	-1.7
TCW	**Tory Channel**	**2.90**	**52**	P	Pn	06 56 35.7	+2.0
MSZ	**Milford Sound**	**2.91**	**235**	P	Pn	06 56 33.6	-0.2
DUWZ	**D'Urville Isla**	**2.99**	**43**	P	Pn	06 56 37.0	+2.0
TUZ	**Tuapeka**	**3.14**	**201**	P	Pn	06 56 35.7	-1.3
BHW	**Baring Head**	**3.15**	**60**	P	Pn	06 56 40.0	+2.9
MLZ	**Mavora Lakes**	**3.24**	**223**	P	Pn	06 56 37.2	-1.2
CAW	**Cannon Point**	**3.44**	**57**	P	Pn	06 56 40.1	-1.0
KIW	**Kapiti Island**	**3.49**	**53**	P	Pn	06 56 41.6	-0.3
OGWZ	**Otaki Gorge**	**3.67**	**54**	P	Pn	06 56 45.2	+0.9
MTW	**Mount Morrison**	**3.68**	**61**	P	Pn	06 56 43.4	-1.1
WHZ	**Wether Hill Ro**	**3.71**	**218**	P	Pn	06 56 43.2	-1.6
SYZ	**Scrubby Hill**	**3.81**	**202**	P	Pn	06 56 44.6	-1.6
DCZ	**Deep Cove**	**3.81**	**229**	P	Pn	06 56 45.0	-1.2
HOWZ	**Holdsworth Sta**	**3.83**	**58**	P	Pb	06 56 53.7	-1.3
MRZ	**Mangatainoka R**	**4.01**	**55**	P	Pn	06 56 49.4	+0.4
NMEZ	**Namu Road**	**4.13**	**30**	P	Pn	06 56 52.8	+2.2
NBEZ	**Newall Road No**	**4.25**	**29**	P	Pn	06 56 53.9	+1.6
KHEZ	**Kahui Hut**	**4.28**	**30**	P	Pn	06 56 52.4	-0.4
LREZ	**Lake Rotokare**	**4.29**	**35**	P	Pn	06 56 57.7	+4.8
PREZ	**Palmer Road**	**4.29**	**32**	P	Pn	06 56 55.1	+2.2
WAZ	**Wanganui**	**4.32**	**42**	P	Pn	06 56 56.7	+3.5
NEZ	**North Egmont**	**4.33**	**31**	P	Pn	06 56 55.2	+1.7
PKE	**Pukeiti**	**4.36**	**29**	P	Pn	06 56 55.6	+1.8
ANWZ	**Angora Road**	**4.68**	**58**	P	Pn	06 56 58.9	+0.7
VRZ	**Vera Road**	**4.72**	**35**	P	Pn	06 57 00.6	+1.8
MTVZ	**Mangateitei**	**4.84**	**43**	P	Pb	06 57 07.1	-5.2
WNVZ	**Wahianoa**	**4.95**	**43**	P	Pn	06 57 07.3	+5.2
NGZ	**Ngauruhoe**	**5.07**	**42**	P	Pn	06 57 08.2	+4.5
OTVZ	**Oturere**	**5.11**	**42**	P	Pn	06 57 07.2	+3.0
WTVZ	**West Tongariro**	**5.11**	**41**	P	Pn	06 57 08.6	+4.4
ETVZ	**East Tongariro**	**5.15**	**42**	P	Pn	06 57 10.3	+5.5
TMVZ	**Te Maari**	**5.17**	**42**	P	Pn	06 57 09.7	+4.7
HIZ	**Hauiti**	**5.28**	**32**	P	Pn	06 57 07.4	+0.9
KAHZ	**Kahuranaki**	**5.33**	**54**	P	Pn	06 57 05.3	-1.8
BKZ	**Black Stump Fm**	**5.54**	**47**	P	Pn	06 57 14.5	+4.5
MTHZ	**Maungataniwha**	**5.95**	**47**	P	Pn	06 57 14.2	-1.5
TOZ	**Tahuroa Road**	**6.21**	**33**	P	Pn	06 57 19.9	+0.7
WTAZ	**Waiatarua**	**6.61**	**24**	P	Pn	06 57 26.6	+1.9
MKAZ	**Moumakai**	**6.64**	**28**	P	Pn	06 57 26.5	+1.3
WIAZ	**Waiheke Island**	**6.91**	**27**	P	Pn	06 57 30.2	+1.3
PUZ	**Puketiti**	**7.28**	**49**	P	Pn	06 57 32.6	-1.4
WCZ	**Waipu Caves**	**7.48**	**20**	P	Pn	06 57 38.0	+1.3
OUZ	**Omahuta**	**8.01**	**14**	P	Pn	06 57 45.0	+1.0

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*IDC **06** 07:23:01.6±1.4, 49.°98N×78.°81E, h0^{km}, mb1 2.8/2, mb1mx2.8/44, mbtmp2.8/2, ML2.1/1, Error ellipse: s-maj=18.0km s-min=8.6km az=64.0*
*NNC **06** 07:23:03.1±0.4, 50.°01N×78.°69E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=7.7km s-min=2.0km az=78.0, Suspected Mining explosion.*
ISC 06 07:22:59.9±0.9**, 49.°95N**±0.°04×**78.°75E**±0.°06**, h0^{km}, n19, σ1.^{s}06**/26**, 13C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.65**	**347**	⇑P	**Pb**	**07 23 14.4**	**+0.2**
KUR07				⇑S	**Sb**	**07 23 23.0**	**-0.9**
KUR06	**Kurchatov Arra**	**0.67**	**348**	⇑P	**Pb**	**07 23 14.7**	**+0.1**
KUR06				⇑S	**Sb**	**07 23 23.0**	**-1.4**
KUR14	**Kurchatov Arra**	**0.68**	**352**	⇑P	**Pb**	**07 23 14.8**	**+0.2**
KUR14				⇑S	**Sb**	**07 23 23.5**	**-1.1**
KUR15	**Kurchatov Arra**	**0.68**	**350**	⇓P	**Pb**	**07 23 14.7**	**-0.1**
KUR15				⇑S	**Sb**	**07 23 24.0**	**-0.7**
KURBB	**Kurchatov Arra**	**0.69**	**348**	Pg	**Pb**	**07 23 15.2**	**+0.3**
	1.9nm,0.3s,baz=165,slow=19,SNR=48						
KURBB				Lg	Lg	07 23 23.5	
	3.4nm,0.3s,baz=178,slow=29,SNR=13						
KURBB	**Kurchatov Arra**	**0.69**	**348**	⇑P	**Pb**	**07 23 15.2**	**+0.3**
	17nm,0.4s						
KURBB				⇑S	**Sb**	**07 23 24.0**	**-1.0**
	88nm,0.6s						
KUR16	**Kurchatov Arra**	**0.70**	**347**	⇑P	**Pb**	**07 23 15.1**	**+0.1**
KUR16				⇓S	**Sb**	**07 23 24.4**	**-0.8**
KUR05	**Kurchatov Arra**	**0.71**	**349**	⇑P	**Pb**	**07 23 15.1**	**0.0**
KUR05				⇓S	**Sb**	**07 23 24.4**	**-1.1**
KUR17	**Kurchatov Arra**	**0.71**	**345**	⇓P	**Pb**	**07 23 15.3**	**+0.1**
KUR17				⇓S	**Sb**	**07 23 24.5**	**-0.9**
SEM	**Semipalatinsk**	**1.07**	**64**	P	**Pn**	**07 23 23.9**	**+1.5**
	4.7nm,0.1s						
SEM				S	**Sn**	**07 23 38.9**	**+0.8**
	42nm,0.3s						
BRZS	**Berezniki**	**3.92**	**273**	Pg	**Pg**	**07 24 14.4**	**-0.6**
	2.7nm,0.3s						
BRZS				Lg	Lg	07 25 05.9	
	10nm,0.5s						
MK31	**Makanchi Array**	**3.94**	**142**	Pn	**Pb**	**07 24 07.5**	**-2.7**
	0.1nm,0.2s,baz=282,slow=6.4,SNR=12						
MK31				⇑Pg	**Pg**	**07 24 15.3**	**-0.1**
	2.2nm,0.6s						
MK31				⇓Lg	Lg	07 25 10.1	
	5.9nm,0.6s,baz=329,slow=26,SNR=16						
MKAR	**Makanchi Array**	**3.94**	**142**	Pn	**Pn**	**07 24 03.8**	**+2.2**
	0.1nm,0.3s,baz=150,slow=9.8,SNR=3.8						
MKAR				Lg	Lg	07 25 07.2	
	1.5nm,0.3s,baz=329,slow=26,SNR=17						
KAPS	**Kapalarasan**	**4.68**	**175**	Pg	**Pg**	**07 24 30.8**	**+1.2**
	1.2nm,0.4s						
KAPS				Lg	Lg	07 25 33.5	
	7.7nm,0.4s						
ZALV	**Zalesovo Beam**	**5.49**	**41**	Pn	**Pn**	**07 24 22.3**	**-0.6**
	baz=161,slow=28,SNR=1.2						
ZALV				Lg	Lg	07 25 55.5	
	0.1nm,0.3s,baz=259,slow=21,SNR=1.3						
I46RU	**ZALESOVO INFRA**	**5.49**	**41**	*i*		07 55 50.0	
	baz=226,slow=324,SNR=0.9						
MNBS	**Baschi**	**5.88**	**182**	Pg	**Pg**	**07 24 52.9**	**+0.5**
	2.1nm,0.2s						
MNBS				Lg	Lg	07 26 11.3	
	14nm,0.5s						
PDGK	**Podgornoye**	**6.64**	**175**	⇑Lg	Lg	07 26 36.4	
	3.4nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**198**	⇓Lg	Lg	07 26 56.0	
	2.7nm,0.9s						

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*IDC **06** 07:28:59.8±3.0, 8.°93N×122.°90E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/45, mbtmp3.5/4, MS3.1/3, Ms1 3.1/3, ms1mx2.6/36, Error ellipse: s-maj=402.3km s-min=23.9km az=64.0*
ISC 06 07:29:01.1±1.3**, 10.°64N**±0.°05×**126.°4E**±0.°1**, h50^{km}, n11, σ1.^{s}68**/13**, mb3.6**/4**, MS2.9**/3**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.90**	**199**	*e*P	**Pn**	**07 29 15.7**	**-1.8**
GLSP				*e*S	**Sn**	**07 29 26.6**	**-2.9**
BESP	**Borongan**	**1.35**	**315**	*e*P	**Pn**	**07 29 22.2**	**-1.4**
BESP				*e*S	**Sn**	**07 29 40.4**	**0.0**
MSLP	**Maasin**	**1.61**	**252**	*e*P	**Pn**	**07 29 25.8**	**-1.3**
MSLP				*e*S	**Sn**	**07 29 46.9**	**0.0**
CNP	**Catarman**	**2.53**	**317**	*e*P	**Pn**	**07 29 39.4**	**-0.3**
BUKP	**Musuan**	**3.06**	**206**	*e*P	**Pn**	**07 29 48.5**	**+1.6**
BUKP				*e*S	**Sn**	**07 30 24.8**	**+2.5**
KSRS	**Korea Array**	**26.73**	**3**	LR	LR	07 48 14.3	
	comp=Z,27nm,18.2s,baz=315,slow=40						
MJAR	**Matsushiro Arr**	**27.90**	**21**	LR	LR	07 49 23.4	
	comp=Z,23nm,18.0s,baz=315,slow=40						
WRA	**Warramunga Arr**	**31.38**	**166**	P	**P**	**07 35 16.2**	**-1.2**
	0.4nm,0.9s,baz=333,slow=9.4,SNR=1.6						
ASAR	**Alice Springs**	**34.88**	**168**	P	**P**	**07 35 48.3**	**+0.4**
	0.2nm,0.4s,baz=350,slow=7.0,SNR=1.4						
ASAR				LR	LR	07 49 50.2	
	comp=Z,80nm,21.9s,baz=180,slow=37						
MKAR	**Makanchi Array**	**51.82**	**323**	P	**P**	**07 38 05.0**	**+0.9**
	0.7nm,0.6s,baz=114,slow=9.7,SNR=7.2						
KURBB	**Kurchatov Arra**	**55.85**	**325**	P	**P**	**07 38 34.8**	**+1.3**
	0.5nm,0.6s,baz=125,slow=7.2,SNR=4.9						

IDC 06 07:33:56.8±4.7**, 50.°12S×120.°33E, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/22**, mbtmp3.9**/3**, MS3.2**/3**, Ms1 3.2**/3**, ms1mx2.9**/24**, Error ellipse: s-maj=233.4km s-min=27.1km az=95.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.87**	**341**	T	T	07 53 50.8	
	baz=164,slow=73,SNR=17						
H01W1	**Cape Leeuwin H**	**15.88**	**341**	T	T	07 53 55.7	
	baz=164,slow=73,SNR=16						
H01W3	**Cape Leeuwin H**	**15.89**	**341**	T	T	07 53 56.3	
	baz=164,slow=73,SNR=15						
STKA	**Stephens Creek**	**24.14**	**49**	LR	LR	07 47 12.1	
	comp=Z,20nm,20.6s,baz=206,slow=33						
ASAR	**Alice Springs**	**28.46**	**27**	P	P	07 39 53.5	+0.2
	1.8nm,0.9s,baz=197,slow=7.9,SNR=12						
VNDA	**Vanda**	**31.59**	**164**	P	P	07 40 20.7	+0.1
	1.7nm,0.9s,baz=299,slow=9.8,SNR=7.9						
VNDA				LR	LR	07 51 45.8	
	comp=Z,131nm,19.6s,baz=326,slow=34						
WRA	**Warramunga Arr**	**32.11**	**25**	P	P	07 40 25.5	-0.1
	1.0nm,1.0s,baz=192,slow=12,SNR=2.0						
CMAR	**Chiang Mai Arr**	**70.85**	**339**	LR	LR	08 14 37.3	
	comp=Z,10nm,19.4s,baz=315,slow=34						
YKA	**Yellowknife Ar**	**148.16**	**46**	PKPbc	PKPbc	07 53 42.2	-0.9
	0.6nm,0.9s,baz=283,slow=2.1,SNR=6.2						

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*IDC **06** 07:34:08.2±3.2, 38.°28N×69.°73E, h0^{km}, mb4.0/2, mb1 3.6/9, mb1mx3.3/44, mbtmp3.5/9, ML3.2/7, Error ellipse: s-maj=48.1km s-min=15.1km az=158.0*
*NNC **06** 07:34:17.7±2.5, 38.°96N×69.°47E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=19.6km s-min=13.5km az=3.0*
ISC 06 07:34:12.5±1.5**, 38.°6N**±0.°1×**69.°48E**±0.°07**, h12^{km}, n18, σ2.^{s}68**/25**, 7C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.55**	**7**	Pg	**Pg**	**07 35 17.7**	**-2.7**
	157nm,0.5s						
IUG				Lg	Lg	07 35 56.2	
	170nm,0.8s						
BRLS	**Borolday**	**4.41**	**3**	Pg	**Pb**	**07 35 29.5**	**-0.4**
	36nm,0.3s						
BRLS				Lg	Lg	07 36 16.1	
	72nm,0.6s						
KK31	**Karatay Array**	**4.55**	**10**	Pn	**Pn**	**07 35 23.8**	**+2.7**
	0.8nm,0.2s,baz=202,slow=15,SNR=40						
KK31				Pg	**Pb**	**07 35 35.6**	**+3.4**
	14nm,0.4s,baz=193,slow=16,SNR=42						
KK31				⇑Lg	Lg	07 36 33.1	
	48nm,0.8s,baz=191,slow=28,SNR=5.6						
MRKS	**Merke**	**5.01**	**33**	Pg	**Pg**	**07 35 45.7**	**-2.7**
	26nm,0.6s						
MRKS				Lg	Lg	07 36 43.9	
	20nm,0.6s						
AAK	**Ala-Archa**	**5.54**	**42**	Pn	**Pn**	**07 35 36.8**	**+1.9**
	1.5nm,0.3s,baz=199,slow=6.5,SNR=6.6						
AAK				Sn	**Sn**	**07 36 41.1**	**+2.6**
	0.6nm,0.3s,baz=37,slow=22,SNR=1.9						
AAK				Lg	Lg	07 37 05.9	
	1.1nm,0.3s,baz=347,slow=23,SNR=1.9						
AAK	**Ala-Archa**	**5.54**	**42**	⇓Pn	**Pn**	**07 35 37.2**	**+2.4**
	4.5nm,0.6s						
AAK				⇑Pg	**Pg**	**07 35 54.7**	**-3.8**
	7.5nm,0.6s						
AAK				⇑Sn	**Sn**	**07 36 42.1**	**+3.6**
	12nm,0.6s						
AAK				⇓Lg	Lg	07 37 06.8	
	23nm,0.8s						
TKM2	**Tokmak 2**	**6.33**	**45**	⇑Pn	**Pn**	**07 35 46.6**	**+0.8**
	3.5nm,0.6s						
TKM2				⇑Pg	Pg	07 36 08.3	-5.3
	5.9nm,0.8s						
TKM2				⇓Sn	**Sn**	**07 37 01.6**	**+3.6**
	14nm,0.6s						

PDGK	**Podgornoye**	**8.91**	**55**	⇓Lg	Lg	07 38 56.3	
	8.4nm,1.1s						
GEYT	**Alibeck**	**8.96**	**269**	Pn	**Pn**	**07 36 20.8**	**-1.0**
	0.5nm,0.3s,baz=269,slow=36,SNR=2.8						
GEYT				Sn	**Sn**	**07 38 04.2**	**+1.6**
	0.6nm,0.3s,baz=108,slow=14,SNR=2.4						
MKAR	**Makanchi Array**	**12.46**	**45**	Pn	**Pn**	**07 37 07.0**	**-2.6**
	0.0nm,0.3s,baz=232,slow=14,SNR=1.9						
AB31	**Akbulak array**	**12.65**	**330**	⇑Pn	**Pn**	**07 37 13.5**	**+1.4**
	1.0nm,0.3s,baz=162,slow=10,SNR=126						
AB31				⇑Sn	**Sn**	**07 39 34.8**	**+2.1**
	0.9nm,0.5s,baz=154,slow=23,SNR=4.1						
KURBB	**Kurchatov Arra**	**13.61**	**25**	Pn	**Pn**	**07 37 22.4**	**-2.8**
	0.0nm,0.3s,baz=213,slow=11,SNR=1.9						
AKTO	**Aktyubinsk**	**14.34**	**329**	Pn	**Pn**	**07 37 35.9**	**+0.6**
	0.4nm,0.3s,baz=155,slow=14,SNR=3.8						
AKTO				Sn	**Sn**	**07 40 09.3**	**-4.8**
	0.0nm,0.3s,baz=107,slow=11,SNR=1.4						
AKTO	**Aktyubinsk**	**14.34**	**329**	⇓Pn	**Pn**	**07 37 36.5**	**+1.2**
	6.0nm,1.1s						
BVAR	**Borovoye Array**	**14.42**	**2**	Pn	**Pn**	**07 37 32.7**	**-3.7**
	0.1nm,0.3s,baz=153,slow=45,SNR=1.9						
ZALV	**Zalesovo Beam**	**18.57**	**29**	P	**P**	**07 38 27.2**	**-2.0**
	0.2nm,0.3s,baz=240,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**35.05**	**325**	P	**P**	**07 41 05.0**	**+0.2**
	1.9nm,0.9s,baz=116,slow=9.7,SNR=1.6						
ARCES	**ARCESS Array B**	**38.73**	**337**	P	**P**	**07 41 37.0**	**+1.0**
	1.6nm,0.7s,baz=104,slow=7.5,SNR=6.7						

IDC 06 07:38:51.1±2.8,**48°.68N×77°.55E,h0**^{km}**,mb1 2.7**/2,**mb1mx2.7**/36,**mbtmp2.7**/2,**ML2.2**/2,**1C-3D,Error ellipse: s-maj=34.1km s-min=12.5km az=78.0,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.05**	**18**	Pg	Pb	07 39 28.1	-1.1
	0.9nm,0.3s,baz=198,slow=16,SNR=53						
KURBB				Lg	Lg	07 39 55.7	
	0.6nm,0.3s,baz=200,slow=28,SNR=9.8						
KURBB	**Kurchatov Arra**	**2.05**	**18**	⇓Pn	Pb	07 39 28.7	-0.5
	8.1nm,0.5s						
KURBB				⇓Sn	Sg	07 39 56.5	-0.4
	22nm,0.7s						
MK31	**Makanchi Array**	**3.72**	**119**	⇑Pn	Pn	07 39 50.0	+0.2
	0.3nm,0.3s,baz=57,slow=22,SNR=6.8						
MK31				⇓Lg	Lg	07 40 41.6	
	1.7nm,0.4s,baz=313,slow=27,SNR=17						
MKAR	**Makanchi Array**	**3.72**	**119**	Pn	Pn	07 39 50.3	+0.5
	0.2nm,0.3s,baz=298,slow=13,SNR=7.9						
MKAR				Lg	Lg	07 40 40.1	
	1.1nm,0.3s,baz=311,slow=30,SNR=14						
I46RU	**ZALESOVO INFRA**	**6.97**	**38**	*i*		08 21 00.0	
	baz=220,slow=322,SNR=2.1						
ZALV	**Zalesovo Beam**	**6.97**	**38**	Pn	Pn	07 40 36.1	+1.7
	0.3nm,0.3s,baz=232,slow=15,SNR=2.7						
ZALV				Sn	Sn	07 41 54.7	+0.4
	0.2nm,0.3s,baz=228,slow=22,SNR=5.5						
ZALV				Lg	Lg	07 42 32.9	
	0.1nm,0.3s,baz=223,slow=25,SNR=1.8						

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*THE **06** 07:48:57.8,41°.05N×22°.12E,h4^{km}±1^{km},ML2.3/9,Error ellipse: s-maj=1.9km s-min=0.4km az=170.0*
*SKO **06** 07:48:57.5,41°.02N×22°.16E,h15^{km}*
*SOF **06** 07:48:57.2,41°.00N×22°.17E,h7^{km},MD2.6*
*ATH **06** 07:48:58.6,40°.96N×22°.16E,h10^{km}±31^{km},ML2.2/2,Error ellipse: s-maj=31.6km s-min=1.0km az=0.0*
*BEO **06** 07:48:58.7±0.3,41°.00N×22°.16E,h0^{km},ML2.3/7*
ISC 06 07:48:58.2±0.9,**40°.99N**±0°.02×**22°.14E**±0°.02,**h13**^{km}±7^{km},**n40,**σ**0**^{s}**.72**/64,**2C-2D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRG	**Griva**	**0.20**	**100**	P	**Pg**	**07 49 02.5**	**-0.1**
GRG				S	**Sg**	**07 49 06.3**	**+0.7**
	5µm,0.3s						
GRG	**Griva**	**0.20**	**100**	⇑*i*Pg	**Pg**	**07 49 02.5**	**-0.1**
GRG				*i*Sg	**Sg**	**07 49 06.4**	**+0.7**
KNT	**Kendrikon**	**0.59**	**73**	P	**Pg**	**07 49 09.7**	**-0.1**
KNT				S	**Sg**	**07 49 17.9**	**+0.2**
KNT				AML	AML	07 49 19.1	
	comp=N,941µm,0.2s						
KNT				AML	AML	07 49 19.7	
	comp=E,415µm,0.3s						
KNT	**Kendrikon**	**0.59**	**73**	P	**Pg**	**07 49 09.7**	**-0.1**
KNT				S	**Sg**	**07 49 18.1**	**+0.4**
	comp=E,340nm,0.2s						
KNT	**Kendrikon**	**0.59**	**73**	⇓*i*Pg	**Pg**	**07 49 09.8**	**-0.1**
KNT				*i*Sg	**Sb**	**07 49 18.2**	**-0.6**
FNA	**Florina**	**0.62**	**251**	P	**Pg**	**07 49 09.6**	**-0.6**
FNA				S	**Sg**	**07 49 18.2**	**-0.2**
	comp=E,312nm,0.5s						
FNA	**Florina**	**0.62**	**251**	*e*Pg	**Pg**	**07 49 09.9**	**-0.3**
FNA				*e*Sg	**Sg**	**07 49 17.2**	**-1.2**
FNA	**Florina**	**0.62**	**251**	*i*Pg	**Pg**	**07 49 10.1**	**-0.2**
STIP	**Stip**	**0.70**	**3**	⇑*i*Pg	**Pb**	**07 49 12.7**	**+0.4**
STIP				*i*Sg	**Sn**	**07 49 24.1**	**-0.6**
THE	**Thessaloniki**	**0.72**	**120**	P	**Pg**	**07 49 11.7**	**-0.4**
THE	**Thessaloniki**	**0.72**	**120**	*i*Pg	**Pg**	**07 49 11.8**	**-0.3**
KZN	**Kozani**	**0.74**	**203**	P	**Pg**	**07 49 12.1**	**-0.4**
KZN				S	**Sg**	**07 49 21.6**	**-0.7**
KZN				AML	AML	07 49 29.6	
	comp=E,519µm,0.4s						
KZN				AML	AML	07 49 30.4	
	comp=N,274µm,0.7s						
KZN	**Kozani**	**0.74**	**203**	P	**Pg**	**07 49 12.1**	**-0.4**
KZN				S	**Sb**	**07 49 23.6**	**+0.5**
	comp=N,178nm,0.5s						
HORT	**Hortiatis**	**0.83**	**118**	P	**Pg**	**07 49 13.6**	**-0.6**
HORT	**Hortiatis**	**0.83**	**118**	P	**Pg**	**07 49 14.2**	**0.0**
HORT				S	**Sn**	**07 49 27.2**	**-0.5**
	comp=N,352nm,0.5s						
LIT	**Litokhoron**	**0.93**	**163**	P	**Pg**	**07 49 15.2**	**-0.9**
LIT	**Litokhoron**	**0.93**	**163**	P	**Pg**	**07 49 16.3**	**+0.2**
LIT				S	**Sn**	**07 49 31.1**	**+0.9**
	comp=N,102nm,0.4s						
SOH	**Sokhos**	**0.93**	**100**	P	**Pg**	**07 49 15.8**	**-0.4**
SOH				S	**Sn**	**07 49 29.6**	**-0.7**
	comp=N,630nm,0.5s						
SOH	**Sokhos**	**0.93**	**100**	*i*Pg	**Pg**	**07 49 15.8**	**-0.4**
NEST	**Nestorio**	**1.01**	**236**	P	**Pb**	**07 49 17.2**	**-0.5**
NEST	**Nestorio**	**1.01**	**236**	P	**Pb**	**07 49 17.2**	**-0.5**
NEST				S	**Sn**	**07 49 32.3**	**-0.1**
	comp=N,132nm,0.8s						
OHR	**Ohrid**	**1.02**	**277**	⇓*i*Pg	**Pb**	**07 49 17.2**	**-0.6**
OHR				*i*Sg	**Sb**	**07 49 32.0**	**+0.8**
OHR				*e*Lg	Lg	07 49 32.1	
	comp=N,97nm,0.6s						
OHR				*e*Lg	Lg	07 49 32.5	
	comp=E,67nm,0.5s						
SRS	**Serrai**	**1.10**	**83**	P	**Pb**	**07 49 18.4**	**-0.7**
SRS				S	**Sn**	**07 49 34.4**	**-0.1**
SRS	**Serrai**	**1.10**	**83**	*e*Pg	**Pb**	**07 49 18.5**	**-0.7**
SRS				*e*Sg	**Sb**	**07 49 33.0**	**-0.4**
SRS	**Serrai**	**1.10**	**83**	*i*Pg	**Pb**	**07 49 18.4**	**-0.7**
SKO	**Skopje**	**1.11**	**332**	*i*Pg	**Pb**	**07 49 18.6**	**-0.7**
SKO				*i*Sg	**Sg**	**07 49 34.3**	**+0.2**
KKB	**Krupnik**	**1.12**	**39**	*i*P	**Pb**	**07 49 19.3**	**-0.2**
PLG	**Polygyros**	**1.17**	**122**	P	**Pg**	**07 49 20.6**	**0.0**
PLG				S	**Sn**	**07 49 38.1**	**+2.0**
KPRO	**Kipourio**	**1.19**	**210**	P	**Pn**	**07 49 20.5**	**-0.2**
KPRO	**Kipourio**	**1.19**	**210**	P	**Pn**	**07 49 20.8**	**+0.1**
KPRO				S	**Sn**	**07 49 39.1**	**+2.3**
MMB	**Musomiste**	**1.33**	**63**	*i*P	**Pn**	**07 49 22.6**	**0.0**
NVR	**Nevrokopi**	**1.35**	**74**	P	**Pn**	**07 49 23.0**	**+0.3**
NVR				S	**Sg**	**07 49 41.6**	**0.0**
	comp=E,78nm,0.4s						
BOSS	**Bosilegrad**	**1.52**	**9**	*e*Pg	**Pb**	**07 49 26.4**	**+0.1**
BOSS				*e*Sg	**Sg**	**07 49 46.6**	**-0.7**
VTS	**Vitosha**	**1.82**	**26**	*i*P	**Pb**	**07 49 30.6**	**-0.8**
VTS	**Vitosha**	**1.82**	**26**	*i*Pg	**Pb**	**07 49 30.6**	**-0.8**
VTS				*i*Sg	**Sb**	**07 49 53.3**	**-0.9**
IGT	**Igoumenitsa**	**2.01**	**224**	*e*Sg	**Pg**	**07 49 36.2**	**-0.5**
IGT	**Igoumenitsa**	**2.01**	**224**	*e*Pg	**Sg**	**07 50 03.6**	**+0.8**
ZAPS	**Zavoj**	**2.31**	**9**	*e*Pn	**Pn**	**07 49 37.8**	**+1.8**
ZAPS				*e*Sg	**Sg**	**07 50 11.8**	**-0.6**
ZAGS	**Zajecar**	**2.82**	**1**	*e*Pn	**Pn**	**07 49 43.8**	**+0.8**
DIVS	**Divibare**	**3.49**	**334**	*e*Pn	**Pn**	**07 49 53.3**	**+1.1**

IDC 06 07:51:51.1±5.6,**20°.82S×175°.64W,h0**^{km}**,mb3.7**/3,**mb1 4.0**/3,**mb1mx3.7**/28,**mbtmp3.7**/3,**Error ellipse: s-maj=266.8km s-min=35.5km az=147.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.59**	**257**	P	P	08 00 22.1	+0.8
	0.7nm,0.7s,baz=99,slow=8.1,SNR=10						
WRA	**Warramunga Arr**	**46.74**	**262**	P	P	08 00 21.8	-0.6
	0.9nm,0.8s,baz=96,slow=8.0,SNR=19						
ILAR	**Eielson Array**	**88.16**	**12**	P	P	08 04 45.0	+1.7
	0.3nm,0.4s,baz=221,slow=6.0,SNR=5.3						
GERES	**GERESS Array B**	**151.06**	**347**	PKPbc	PKPbc	08 11 43.6	-2.6
	0.3nm,0.5s,baz=48,slow=1.5,SNR=4.1						

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*NNC **06** 07:59:19.3±3.9,54°.41N×91°.36E,h0^{km},mb3.6,mpv3.4, Error ellipse: s-maj=31.2km s-min=21.6km az=24.0, Suspected Mining explosion.*
IDC 06 07:59:35.4±3.2,**53°.80N×90°.92E,h0**^{km}**,mb1 3.5**/2,**mb1mx3.0**/48,**mbtmp3.5**/2,**ML3.0**/2,**3C-2D,Error ellipse: s-maj=27.3km s-min=22.6km az=47.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.61**	**275**	*i*		08 23 00.0	
	baz=92,slow=316,SNR=2.6						
ZAA0	**Zalesovo Array**	**3.61**	**275**	⇑Lg	Lg	08 01 24.8	
	13nm,0.8s,baz=68,slow=24						
ZALV	**Zalesovo Beam**	**3.61**	**275**	Pg	Pb	08 00 39.4	-0.7
	2.6nm,0.3s,baz=87,slow=17,SNR=11						
ZALV				Lg	Lg	08 01 29.7	
	1.8nm,0.3s,baz=93,slow=25,SNR=10						
KURBB	**Kurchatov Arra**	**8.24**	**252**	Pn	Pn	08 01 35.9	-0.2
	0.2nm,0.3s,baz=64,slow=14,SNR=13						
KURBB				Sn	Sn	08 03 09.1	-0.8
	0.1nm,0.3s,baz=69,slow=27,SNR=14						
KURBB				Lg	Lg	08 03 56.5	
	0.1nm,0.3s,baz=64,slow=33,SNR=6.6						
KURBB	**Kurchatov Arra**	**8.24**	**252**	⇑Pn	Pn	08 01 25.7	-10
	0.3nm,0.2s,baz=57,slow=13						
KURBB				Sn	Sn	08 03 04.6	-5.2
	37nm,0.8s,baz=68,slow=24						
KURBB				Lg	Lg	08 03 57.5	
	74nm,0.8s						
MK31	**Makanchi Array**	**8.92**	**222**	⇓Pn	Pn	08 01 38.9	-6.5
	0.6nm,0.5s,baz=33,slow=12,SNR=10						
MK31				⇑Sn	Sn	08 03 27.2	+0.6
	3.6nm,0.9s,baz=33,slow=21,SNR=2.5						
MK31				⇓Lg	Lg	08 04 21.1	
	18nm,1.1s,baz=42,slow=30,SNR=4.7						
MKAR	**Makanchi Array**	**8.92**	**222**	Pn	Pn	08 01 46.0	+0.6
	0.2nm,0.3s,baz=30,slow=12,SNR=10						
MKAR				Sn	Sn	08 03 26.2	-0.4
	0.1nm,0.3s,baz=29,slow=21,SNR=6.2						
MKAR				Lg	Lg	08 04 14.5	
	0.1nm,0.3s,baz=29,slow=30,SNR=3.5						
SONM	**Songino Array**	**11.46**	**115**	Lg	Lg	08 05 35.2	
	0.1nm,0.3s,baz=301,slow=28,SNR=11						

IDC 06 08:09:34.3±3.3,**54°.29N×87°.11E,h0**^{km}**,mb1 2.8**/2,**mb1mx2.7**/39,**mbtmp2.8**/2,**ML2.5**/2,**Error ellipse: s-maj=31.3km s-min=19.4km az=52.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**257**	*i*		08 19 20.0	
	baz=76,slow=334,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.39**	**257**	Pg	Pg	08 09 58.8	-2.1
	1.0nm,0.3s,baz=70,slow=15,SNR=7.8						
ZALV				Lg	Lg	08 10 18.4	
	0.9nm,0.3s,baz=79,slow=31,SNR=4.3						
KURBB	**Kurchatov Arra**	**6.40**	**238**	Pn	Pn	08 11 10.9	+1.1
	0.1nm,0.3s,baz=55,slow=14,SNR=4.8						
MKAR	**Makanchi Array**	**8.11**	**204**	Pn	Pn	08 11 34.4	+1.2
	0.1nm,0.3s,baz=27,slow=14,SNR=6.1						

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*SJA **06** 08:19:54.8±0.7,24°.21S×66°.98W,h200^{km}±5^{km},ML4.2, MW4.2*
*NEIC **06** 08:19:54.1±1.7,24°.18S±0°.06×66°.9W±0°.1,h216^{km}±12^{km}, Error ellipse: s-maj=19.6km s-min=8.7km az=91.0*
*IDC **06** 08:19:54.4±1.2,24°.06S×66°.73W,h178^{km}±9^{km},mb3.8/9, mb1 3.9/15,mb1mx3.8/25,mbtmp4.3/15,MS2.3/1, Ms1 2.3/1,ms1mx2.3/19,Error ellipse: s-maj=20.0km s-min=12.7km az=18.0*
*GUC **06** 08:19:56.4±0.5,24°.12S×67°.25W,h225^{km}±13^{km},ML4.6*
*VAO **06** 08:19:58.4±1.2,24°.22S×67°.04W,h260^{km}±10^{km},mb4.2*
ISC 06 08:19:55.1±0.6,**24°.23S**±0°.04×**67°.04W**±0°.04,**h201**^{km}±6^{km},**n116,**σ**1**^{s}**.44**/136,**mb4.2**/11,**5C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.48**	**109**	*e*P	Pn	08 20 28.9	0.0
SLA				*e*S	S	08 20 54.1	-0.6
AZAP	**Zapla**	**1.81**	**90**	*e*P	Pn	08 20 31.2	-0.7
AZAP				*e*S	S	08 20 58.9	-1.1
AZAP				IAML		08 21 01.8	
	comp=Z,607nm,1.0s						
FSA	**Cafayete**	**2.10**	**153**	*e*P	**Pn**	**08 20 35.4**	**+0.5**
FSA				*e*S	S	08 21 04.6	-0.8
LVC	**Limon Verde**	**2.35**	**313**	P	**Pn**	**08 20 38.6**	**+0.8**
	comp=Z,46nm,0.3s,baz=118,slow=7.9,SNR=844						
LVC				LR	LR	08 21 02.9	
	comp=Z,70nm,21.2s,baz=46,slow=28						
LVC				S	**S**	**08 21 09.5**	**-0.9**
	comp=Z,38nm,0.3s,baz=79,slow=2.7,SNR=7.1						
LVC	**Limon Verde**	**2.35**	**313**	*e*P	**Pn**	**08 20 38.7**	**+0.9**
ASTB	**Santa Barbara**	**2.38**	**84**	*e*P	Pn	08 20 37.0	-0.9
ASTB				*e*S	**S**	**08 21 11.4**	**+0.9**
PB15	**IPOC Station P**	**2.45**	**294**		**Pn**	**08 20 40.0**	**+1.3**
GO02	**Mina Guanaco**	**2.50**	**248**	⇓*i*P	**Pn**	**08 20 41.0**	**+1.8**
GO02				*i*S	**S**	**08 21 15.4**	**+2.4**
GO02				IAML		08 21 17.9	
	comp=N,4µm,0.4s						
GO02	**Mina Guanaco**	**2.50**	**248**		**Pn**	**08 20 41.1**	**+1.8**
PB06	**IPOC Station P**	**2.77**	**303**		**Pn**	**08 20 43.6**	**+1.3**
AHML	**Horco Molle**	**2.97**	**149**	*e*P	**Pn**	**08 20 44.9**	**+0.5**
AHML				*e*S	**S**	**08 21 22.5**	**-0.1**
PB14	**IPOC Station P**	**3.09**	**262**	*e*P	**Pn**	**08 20 47.2**	**+1.1**
PB14				*i*S	**S**	**08 21 25.6**	**+0.3**
PB14				IAML		08 21 27.6	
	comp=E,513nm,0.1s						
PB14	**IPOC Station P**	**3.09**	**262**		**Pn**	**08 20 47.1**	**+1.0**
PB14	**IPOC Station P**	**3.09**	**262**	*e*P	**Pn**	**08 20 47.4**	**+1.3**
PB14				*e*S	**S**	**08 21 25.9**	**+0.6**
PB14				IAML		08 21 27.8	
	comp=Z,619nm,0.2s						
PB09	**IPOC Station P**	**3.16**	**320**	⇑*i*P	**Pn**	**08 20 47.6**	**+0.8**
PB09				*i*S	**S**	**08 21 26.7**	**0.0**
PB09				IAML		08 21 30.0	
	comp=N,497nm,0.1s						
PB09	**IPOC Station P**	**3.16**	**320**	Pn	**Pn**	**08 20 47.7**	**+0.8**
PB09	**IPOC Station P**	**3.16**	**320**	*e*P	**Pn**	**08 20 47.8**	**+0.9**
PB09				*e*S	**S**	**08 21 26.8**	**+0.2**
PB09				IAML		08 21 29.7	
	comp=Z,429nm,0.2s						
AC02	**Maricunga**	**3.21**	**216**		**Pn**	**08 20 49.5**	**+1.9**
PB05	**IPOC Station P**	**3.21**	**295**	⇑*i*P	**Pn**	**08 20 47.8**	**+0.5**
PB05				*i*S	**S**	**08 21 26.2**	**-1.3**
PB05	**IPOC Station P**	**3.21**	**295**	*e*P	**Pn**	**08 20 48.2**	**+0.8**
PB05				*e*S	**S**	**08 21 27.4**	**-0.1**
PB05				IAML		08 21 30.2	
	comp=Z,285nm,0.2s						
PB10	**IPOC Station P**	**3.29**	**282**	*e*P	**Pn**	**08 20 49.2**	**+0.9**
PB10				*i*S	**S**	**08 21 28.6**	**-0.5**
PB10	**IPOC Station P**	**3.29**	**282**	Pn	**Pn**	**08 20 49.4**	**+1.2**
PB10	**IPOC Station P**	**3.29**	**282**	*e*P	**Pn**	**08 20 49.4**	**+1.2**
PB10				*e*S	**S**	**08 21 29.4**	**+0.3**
PB10				IAML		08 21 33.7	
	comp=Z,424nm,1.2s						
PB03	**IPOC Station P**	**3.31**	**311**	⇑*i*P	**Pn**	**08 20 48.8**	**+0.2**
PB03				*i*S	**S**	**08 21 28.3**	**-1.5**
PB03	**IPOC Station P**	**3.31**	**311**	*e*P	**Pn**	**08 20 49.0**	**+0.4**
PB03				*e*S	**S**	**08 21 28.4**	**-1.5**
PB03				IAML		08 21 29.7	
	comp=Z,826nm,0.2s						
PB04	**IPOC Station P**	**3.42**	**303**	⇑*i*P	**Pn**	**08 20 50.3**	**+0.3**
PB04				*i*S	**S**	**08 21 31.2**	**-1.2**
PB04	**IPOC Station P**	**3.42**	**303**		**Pn**	**08 20 50.3**	**+0.3**
PB04	**IPOC Station P**	**3.42**	**303**	*e*P	**Pn**	**08 20 50.4**	**+0.3**
PB04				*e*S	**S**	**08 21 31.6**	**-0.7**
PB04				IAML		08 21 35.3	
	comp=Z,740nm,0.3s						
PB07	**IPOC Station P**	**3.62**	**313**	⇑*i*P	**Pn**	**08 20 52.4**	**0.0**
PB07				*i*S	**S**	**08 21 34.6**	**-2.0**
PB07	**IPOC Station P**	**3.62**	**313**		**Pn**	**08 20 52.5**	**+0.1**
AC01	**Pan de Azucar**	**3.74**	**239**		**Pn**	**08 20 54.3**	**+0.6**
PB01	**IPOC Station P**	**3.90**	**324**	*e*P	**Pn**	**08 20 55.2**	**-0.5**
PB01				*i*S	**S**	**08 21 41.0**	**-1.7**
PB01	**IPOC Station P**	**3.90**	**324**		**Pn**	**08 20 55.2**	**-0.5**
CYA	**Choya**	**4.34**	**165**	*e*P	**Pn**	**08 21 02.2**	**+1.1**
CYA				*e*S	**S**	**08 21 52.5**	**-0.2**
GO03	**Copiap**	**4.41**	**220**	Pn	**Pn**	**08 21 02.4**	**+0.3**
GO03	**Copiap**	**4.41**	**220**	*e*P	**Pn**	**08 21 02.8**	**+0.7**
GO03				*e*S	**S**	**08 21 54.5**	**+0.3**
PATCX	**Punta Patache**	**4.45**	**319**		**Pn**	**08 21 01.5**	**-1.1**
PB08	**IPOC Station P**	**4.52**	**334**	*e*P	**Pn**	**08 21 03.7**	**-0.1**
PB08				*i*S	**S**	**08 21 56.5**	**-0.7**
PB08	**IPOC Station P**	**4.52**	**334**	Pn	**Pn**	**08 21 03.7**	**-0.1**
TA01	**Diego Aracena**	**4.66**	**321**	*e*P	**Pn**	**08 21 03.5**	**-1.8**
TA01				*i*S	**S**	**08 21 57.3**	**-2.7**
TA01	**Diego Aracena**	**4.66**	**321**	Pn	**Pn**	**08 21 04.2**	**-1.1**
HMBC	**Humberstone**	**4.74**	**326**	*e*P	**Pn**	**08 21 04.5**	**-1.8**
HMBC				*i*S	**S**	**08 21 58.3**	**-3.6**
GO01	**Chusmiza**	**4.96**	**336**	Pn	**Pn**	**08 21 09.0**	**-0.5**
AC04	**Llanos de Chal**	**5.36**	**222**	Pn	**Pn**	**08 21 14.2**	**+0.1**
AC05	**El Transito**	**5.42**	**212**		**Pn**	**08 21 16.0**	**+1.0**
PSGCX	**Pisagua**	**5.43**	**328**	Pn	**Pn**	**08 21 12.4**	**-2.7**
MNMC	**Minye Minye**	**5.60**	**334**		**Pn**	**08 21 16.2**	**-1.4**
LCO	**Las Campanas**	**5.78**	**214**	Pn	**Pn**	**08 21 19.7**	**+0.1**
ACDV	**Cuesta del Vie**	**6.20**	**197**	*e*P	**Pn**	**08 21 27.4**	**+2.4**
PB16	**IPOC Station P**	**6.30**	**338**	Pn	**Pn**	**08 21 25.9**	**-0.9**
CO01	**Juntas del Tor**	**6.33**	**205**		**Pn**	**08 21 28.0**	**+1.2**
ACCO	**Cerro Coronel**	**6.58**	**195**	*e*P	**Pn**	**08 21 31.5**	**+1.4**
ACCO				*e*S	**S**	**08 22 45.7**	**+0.4**
ACCO				IAML		08 22 47.6	
	comp=Z,40nm,1.1s						
GO04	**Tololo Observa**	**6.80**	**209**		**Pn**	**08 21 32.1**	**-0.7**
RTLL	**Cerro Villicun**	**7.18**	**190**	*e*P	**Pn**	**08 21 38.4**	**+0.7**
RTLL				*e*S	**S**	**08 22 56.5**	**-2.6**
RTLL				IAML		08 22 59.0	
	comp=Z,35nm,0.9s						
CO03	**El Pedregal**	**7.33**	**205**	Pn	**Pn**	**08 21 39.2**	**-0.5**
TCA	**Tanti**	**7.40**	**164**	*e*P	**Pn**	**08 21 40.2**	**-0.4**
TCA				*e*S	S	08 23 00.8	-3.6
RTCV	**Cerro Valdivia**	**7.71**	**190**	*e*P	**Pn**	**08 21 45.1**	**+0.5**
RTCV				*e*S	**S**	**08 23 08.0**	**-3.8**
RTCV				IAML		08 23 10.7	
	comp=Z,13nm,0.5s						
CO02	**Combarbal**	**7.78**	**206**	Pn	**Pn**	**08 21 45.8**	**+0.3**
AUSP	**Uspallata**	**8.22**	**194**	*e*P	**Pn**	**08 21 53.2**	**+1.7**
AUSP				*e*S	**S**	**08 23 20.7**	**-3.5**
CPUP	**Villa Florida**	**9.04**	**105**	P	Pn	08 21 58.0	-3.8
	comp=Z,0.4nm,0.3s,baz=268,slow=12,SNR=8.1						
CPUP	**Villa Florida**	**9.04**	**105**	Pn	Pn	08 21 58.5	-3.3
VA03	**San Esteban**	**9.04**	**199**		**Pn**	**08 22 00.8**	**-1.1**
ROC1	**El Roble**	**9.38**	**201**	Pn	**Pn**	**08 22 09.0**	**+2.5**
MT02	**Curacav**	**9.68**	**201**	Pn	**Pn**	**08 22 10.0**	**-0.1**
SIV	**San Ignacio**	**9.93**	**35**	P	Pn	08 22 09.1	-4.4
	comp=Z,0.6nm,0.3s,baz=224,slow=9.5,SNR=15						
SIV				S	S	08 23 50.0	-15
	comp=Z,0.2nm,0.3s,baz=244,slow=16,SNR=3.1						
AQDB	**Aquidauana**	**11.14**	**73**	*e*P	**Pn**	**08 22 31.8**	**+2.8**
VILB	**Vilhena**	**12.95**	**31**	*e*P	**Pn**	**08 22 53.5**	**+1.4**
TRCB	**Terra Rica**	**13.30**	**87**	*e*P	**Pn**	**08 22 58.2**	**+1.9**
CPSB	**Cacapava Do Su**	**13.56**	**120**	*e*P	**Pn**	**08 22 59.2**	**-0.3**
PTGB	**Pitanga**	**13.65**	**95**	*e*P	**Pn**	**08 23 02.0**	**+1.3**
ITAB	**Concordia**	**13.77**	**106**	*e*P	**Pn**	**08 23 04.0**	**+1.9**
NNA	**Nana**	**15.32**	**321**	P	**P**	**08 23 21.9**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=164,slow=9.0,SNR=4.7						
SAML	**Samuel**	**15.64**	**14**	P	**P**	**08 23 23.5**	**-1.6**
SAML				IAmb	IAmb	08 23 25.7	
	comp=Z,4.6nm,0.7s						
SAML	**Samuel**	**15.64**	**14**	*e*P	**P**	**08 23 24.0**	**-1.1**
FRTB	**Fartura**	**16.03**	**90**	*e*P	**P**	**08 23 29.4**	**+0.1**
ITRB	**Iturama**	**16.12**	**77**	*e*P	**P**	**08 23 30.4**	**0.0**
ARAG	**Araguaiana, MT**	**16.63**	**62**	*e*P	**P**	**08 23 36.5**	**+0.5**
PLCA	**Paso Flores**	**16.71**	**189**	P	**Pn**	**08 23 40.9**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=17,slow=12,SNR=7.8						
PLCA	**Paso Flores**	**16.71**	**189**		**Pn**	**08 23 38.2**	**+0.3**
CZSB	**Cruzeiro do Su**	**17.28**	**341**	*e*P	**Pn**	**08 23 42.7**	**-2.0**
BB19B	**Bebedouro**	**17.38**	**83**	*e*P	**P**	**08 23 44.2**	**0.0**
VAO	**Valinhos**	**18.44**	**90**	*e*P	**P**	**08 23 55.3**	**-0.5**
IPMB	**Ipameri, GO**	**18.63**	**74**	*e*P	**P**	**08 23 57.5**	**-0.4**
LL01	**San Ignacio de**	**18.64**	**193**	P	**P**	**08 23 54.6**	**-3.0**
LL01				IAmb	IAmb	08 24 03.8	
	comp=Z,8.0nm,0.5s						
SNDB	**Serra Nova Dou**	**19.28**	**54**	*e*P	**P**	**08 24 03.1**	**-1.8**
PARB	**Paraibuna**	**19.62**	**92**	*e*P	**P**	**08 24 08.4**	**-0.2**
BDFB	**Brasilia**	**19.81**	**68**	P	**P**	**08 24 09.3**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=242,slow=10,SNR=55						
BDFB	**Brasilia**	**19.81**	**68**	P	**P**	**08 24 08.1**	**-2.5**
NPGB	**Novo Progresso**	**20.44**	**35**	*e*P	**P**	**08 24 14.1**	**-3.1**
BSCB	**Bom Sucesso**	**20.80**	**86**	*e*P	**P**	**08 24 20.7**	**-0.5**
ITTB	**Itaituba**	**22.56**	**31**	*e*P	**P**	**08 24 36.6**	**-1.9**
JANB	**Januaria**	**23.24**	**71**	*e*P	**P**	**08 24 43.2**	**-1.6**
SDBA	**SAO DESIDERIO**	**24.04**	**65**	*e*P	**P**	**08 24 50.3**	**-1.7**
SMTB	**Santa Maria do**	**24.06**	**54**	*e*P	**P**	**08 24 50.4**	**-1.7**
PTGA	**Pitinga**	**24.35**	**17**	P	**P**	**08 24 52.9**	**-1.8**
	comp=Z,2.0nm,0.3s,baz=322,slow=22,SNR=7.6						
MALB	**Monte Alegre**	**25.45**	**31**	*e*P	**P**	**08 25 02.7**	**-2.0**
NAN01	**Guarapari, ES**	**25.89**	**81**	*e*P	**P**	**08 25 07.1**	**-1.6**
GDU01	**Guandu, BA**	**27.95**	**73**	*e*P	**P**	**08 25 25.1**	**-2.0**
LIC	**Lamto**	**67.55**	**72**	*e*P	**P**	**08 30 28.8**	**-1.4**
	comp=Z,4.3nm,0.4s						
TIC	**Toumodi**	**67.76**	**71**	*e*P	**P**	**08 30 28.8**	**-2.8**
KIC	**Kosan Boka**	**67.86**	**72**	*e*P	**P**	**08 30 30.8**	**-1.4**
	comp=Z,5.8nm,0.7s						
DBIC	**Dimbokro**	**67.91**	**71**	P	**P**	**08 30 31.5**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=265,slow=11,SNR=1.9						
TORD	**Torodi Ar. Bea**	**76.69**	**69**	P	**P**	**08 31 23.9**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=255,slow=5.2,SNR=18						
PDAR	**Pinedale Array**	**77.33**	**329**	P	**P**	**08 31 29.6**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=134,slow=7.7,SNR=10						
ULM	**Lac du Bonnet**	**78.44**	**342**	P	**P**	**08 31 34.6**	**+1.3**
	comp=Z,4.0nm,0.5s,baz=164,slow=6.6,SNR=16						
NVAR	**Mina Array Bea**	**78.69**	**321**	P	P	08 31 38.3	+3.0
	comp=Z,0.9nm,0.7s,baz=152,slow=6.2,SNR=7.0						
BOSA	**Boshof**	**80.66**	**117**	P	**P**	**08 31 46.8**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=231,slow=4.0,SNR=4.1						
ESDC	**Sonseca Array**	**86.59**	**44**	P	**P**	**08 32 17.4**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=244,slow=4.8,SNR=8.8						
YKA	**Yellowknife Ar**	**94.33**	**340**	P	**P**	**08 32 52.8**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=127,slow=5.7,SNR=40						
ASAR	**Alice Springs**	**128.23**	**205**	PKP	**PKiKP**	**08 38 39.6**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=135,slow=2.0,SNR=21						
WRA	**Warramunga Arr**	**131.40**	**207**	PKP	**PKiKP**	**08 38 46.4**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=158,slow=1.8,SNR=33						
SEY	**Seymchan**	**133.28**	**336**	PKP	**PKiKP**	**08 38 48.6**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=47,slow=2.7,SNR=5.3						
PETK	**Petropavlovsk-**	**135.77**	**323**	PKP	**PKiKP**	**08 38 54.3**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=82,slow=3.3,SNR=6.4						
ZALV	**Zalesovo Beam**	**143.62**	**28**	PKP	**PKPdf**	**08 39 04.9**	**-0.7**
	comp=Z,5.0nm,0.5s,baz=292,slow=4.0,SNR=28						
MKAR	**Makanchi Array**	**146.73**	**40**	PKPbc	**PKPab**	**08 39 13.1**	**-1.8**
	comp=Z,9.9nm,0.7s,baz=316,slow=1.4,SNR=82						
SONM	**Songino Array**	**155.87**	**11**	PKPab	**PKPab**	**08 39 53.6**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=336,slow=3.3,SNR=4.1						

IDC 06 08:20:00.2±3.4,**54°.27N×87°.54E,h0**^{km}**,mb1 2.6**/2,**mb1mx2.6**/43,**mbtmp2.6**/2,**ML2.4**/2,**Error ellipse: s-maj=29.1km s-min=19.9km az=41.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.64**	**260**	*i*		08 30 00.0	
	baz=78,slow=333,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.64**	**260**	Pg	Pn	08 20 28.6	-1.7
	1.6nm,0.3s,baz=79,slow=17,SNR=17						
ZALV				Lg	Lg	08 20 52.6	
	1.0nm,0.3s,baz=81,slow=27,SNR=6.5						
KURBB	**Kurchatov Arra**	**6.61**	**240**	Pn	Pn	08 21 39.2	+0.6
	0.1nm,0.3s,baz=55,slow=13,SNR=5.3						
KURBB				Lg	Lg	08 23 31.7	
	0.0nm,0.3s,baz=47,slow=31,SNR=2.9						
MKAR	**Makanchi Array**	**8.20**	**206**	Pn	Pn	08 22 01.8	+1.4
	0.1nm,0.3s,baz=27,slow=14,SNR=2.2						

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*NNC **06** 08:29:18.0±2.6,54°.75N×86°.39E,h0^{km},mb2.8,mpv2.6, Error ellipse: s-maj=96.0km s-min=14.6km az=141.0,* *Suspected Mining explosion.*

*IDC **06** 08:29:20.6±2.9, 54°.57N×86°.37E, h0km, mb1 2.9/2, mb1mx2.8/39, mbtmp2.9/2, ML2.8/2, Error ellipse: s-maj=22.9km s-min=14.6km az=49.0*

ISC 06 08:29:15.6±3.7, 55°.2N±0°.2×84°.2E±0°.1, h0km, n7, σ2s.01/9, 2C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.30	163	*i*		08 38 00.0	
	baz=55,slow=331,SNR=1.6						
ZAA0	Zalesovo Array	1.30	163	⇓P	Pg	08 29 40.6	0.0
	0.4nm,0.3s						
ZAA0				⇑S	Sg	08 29 57.7	+0.2
	0.9nm,0.2s						
ZALV	Zalesovo Beam	1.30	163	Pg	Pg	08 29 40.6	0.0
	3.3nm,0.3s,baz=55,slow=16,SNR=28						
ZALV				Lg	Lg	08 29 56.0	
	5.4nm,0.3s,baz=57,slow=27,SNR=18						
KURBB	Kurchatov Arra	5.70	219	Pn	Pb	08 30 54.2	-1.7
	0.2nm,0.3s,baz=50,slow=14,SNR=14						
KURBB				Lg	Lg	08 32 41.1	
	0.0nm,0.3s,baz=56,slow=31,SNR=6.0						
KURBB	Kurchatov Arra	5.70	219	⇓Pn	Pb	08 30 54.2	-1.7
	0.7nm,0.3s						
KURBB				⇓Sn	Sb	08 32 07.3	+2.5
	3.0nm,0.8s						
KURBB				⇑Lg	Lg	08 32 39.8	
	3.6nm,0.6s						
MK31	Makanchi Array	8.49	189	⇓Pn	Pn	08 31 21.2	+1.4
	0.2nm,0.5s,baz=27,slow=13,SNR=9.3						
MKAR	Makanchi Array	8.49	189	Pn	Pn	08 31 21.6	+1.8
	0.2nm,0.3s,baz=22,slow=13,SNR=8.5						
MKAR				Sn	Sn	08 32 53.7	-2.6
	0.1nm,0.3s,baz=26,slow=28,SNR=6.0						
MKAR				Lg	Lg	08 33 44.1	
	0.0nm,0.3s,baz=24,slow=28,SNR=5.1						

*IDC **06** 08:45:57.0±4.6, 5°.29N×127°.36E, h111km±47km, mb3.4/6, mb1 3.5/7, mb1mx3.3/32, mbtmp3.8/7, MS3.8/1, Ms1 3.8/1, ms1mx2.4/40, Error ellipse: s-maj=46.9km s-min=21.7km az=72.0*

ISC 06 08:45:56.5±0.8, 5°.3N±0°.1×127°.6E±0°.1, h100km, n12, σ2s.34/14, mb4.1/7, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.03	293	*e*P	Pn	08 46 31.4	+1.8
DDMP				*e*S	Sn	08 46 52.6	-2.2
KCP	Kidapawan	3.01	304	⇑*e*P	Pn	08 46 45.3	+2.8
KCP				*i* S	Sn	08 47 22.6	+4.7
SKMP	Bagumbayan, Su	3.27	292	*e*P	Pn	08 46 47.0	+1.2
SKMP				*e*S	Sn	08 47 21.4	-2.5
SIJI	Sorong	7.14	149	P	Pn	08 47 39.9	+1.5
	2.2nm,0.3s,baz=336,slow=13,SNR=4.1						
WRA	Warramunga Arr	25.95	165	P	P	08 51 20.9	+1.1
	0.3nm,0.9s,baz=343,slow=11,SNR=2.0						
ASAR	Alice Springs	29.44	168	P	P	08 51 50.0	-1.0
	0.4nm,0.9s,baz=351,slow=7.1,SNR=1.7						
JHJ	Hachijo jima 2	29.92	21	LR	LR	09 05 17.9	
	comp=Z,185nm,19.2s,baz=97,slow=39						
SONM	Songino Array	46.11	340	P	P	08 54 09.7	-1.1
	0.6nm,0.5s,baz=153,slow=7.1,SNR=4.8						
PETK	Petropavlovsk-	53.66	22	P	P	08 55 08.6	+0.9
	1.6nm,0.6s,baz=182,slow=4.2,SNR=2.1						
MKAR	Makanchi Array	56.78	324	P	P	08 55 28.8	-1.5
	1.4nm,0.5s,baz=124,slow=8.1,SNR=14						
ZALV	Zalesovo Beam	59.60	332	P	P	08 55 47.6	-2.2
	0.5nm,0.3s,baz=123,slow=7.3,SNR=3.9						
ILAR	Eielson Array	83.33	25	P	P	08 58 10.9	-1.2
	5.1nm,0.3s,baz=241,slow=5.7,SNR=6.8						

*IDC **06** 08:49:45.0±3.7, 9°.59N×127°.31E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/33, mbtmp3.4/3, Error ellipse: s-maj=281.7km s-min=27.5km az=66.0*

*MAN **06** 08:49:50.5, 9°.12N×126°.66E, h32km, MS2.8*

ISC 06 08:49:52.1±1.8, 9°.10N±0°.05×126°.6E±0°.1, h36km±3km, n10, σ1s.54/16, mb3.3/3, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.81	327	*e*P	Pn	08 50 07.3	+0.2
GLSP				*e*S	Sn	08 50 17.2	-0.7
BIP	Bislig	0.93	201	⇑*e*P	Pn	08 50 08.8	+0.2
BIP				*e*S	Sn	08 50 20.2	-0.5
BUTP	Butuan	0.95	262	*e*P	Pn	08 50 08.1	-0.8
BUTP				*e*S	Sn	08 50 19.2	-2.1
BUKP	Musuan	1.93	231	*e*P	Pn	08 50 23.4	+1.0
BUKP				*e*S	Sn	08 50 47.1	+1.7
CGP	Cagayan de Oro	1.97	251	⇑*e*P	Pn	08 50 22.8	-0.1
CGP				*e*S	Sn	08 50 48.3	+2.0
MSLP	Maasin	1.98	301	*e*P	Pn	08 50 23.5	+0.4
MSLP				*e*S	Sn	08 50 47.7	+1.0
KCP	Kidapawan	2.55	215	⇓*e*P	Sn	08 50 57.6	-3.1
WRA	Warramunga Arr	29.85	165	P	P	08 55 56.8	+0.6
	0.6nm,1.0s,baz=348,slow=9.5,SNR=1.5						
ASAR	Alice Springs	33.34	168	P	P	08 56 28.0	+1.1
	0.2nm,0.5s,baz=349,slow=7.4,SNR=4.6						
MKAR	Makanchi Array	53.14	323	P	P	08 59 04.9	-1.4
	0.8nm,0.7s,baz=129,slow=7.3,SNR=7.7						

*IDC **06** 08:52:51.2±16.0, 35°.24N×21°.39E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/34, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=324.8km s-min=36.4km az=34.0*

*ATH **06** 08:53:07.2, 36°.35N×22°.20E, h9km±2km, ML3.0/6, Error ellipse: s-maj=3.1km s-min=1.1km az=33.0*

*THE **06** 08:53:07.0, 36°.36N×22°.18E, h0km±2km, ML3.0/8, Error ellipse: s-maj=2.7km s-min=0.6km az=222.0*

ISC 06 08:53:02.8±0.9, 36°.29N±0°.05×21°.96E±0°.04, h10km, n49, σ2s.19/66, mb4.0/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.63	344	P	Pn	08 53 19.2	+1.5
PYL				S	Sn	08 53 28.9	+1.0
PYL				AML	AML	08 53 30.2	
	comp=N,2510μm,0.5s						
PYL				AML	AML	08 53 32.8	
	comp=E,2727μm,0.4s						
PYL	PYLOS	0.63	344	P	Pn	08 53 19.4	+1.6
PYL				S	Sn	08 53 28.9	+1.0
	comp=E,1μm,0.3s						
ITM	Ithomi	0.89	358	P	Pn	08 53 22.6	+1.3
ITM				S	Sn	08 53 34.7	+0.4
ITM				AML	AML	08 53 38.6	
	comp=E,2543μm,0.4s						
ITM				AML	AML	08 53 38.9	
	comp=N,1629μm,0.2s						
ITM	Ithomi	0.89	358	P	Pn	08 53 22.7	+1.3
ITM				S	Sn	08 53 35.2	+0.9
	comp=N,1μm,0.3s						
KTHA	Kythira Island	0.89	92	P	Pg	08 53 20.3	+0.4
KTHA				S	Sg	08 53 30.8	-0.8
KTHA				AML	AML	08 53 32.7	
	comp=N,1779μm,0.5s						
KTHA				AML	AML	08 53 37.1	
	comp=E,3694μm,0.6s						
KTHA	Kythira Island	0.89	92	P	Pg	08 53 20.9	+1.0
KTHA				S	Sg	08 53 31.1	-0.5
	comp=E,1μm,0.6s						
VLI	Veliai	0.90	61	P	Pg	08 53 20.4	+0.4
VLI				S	Sg	08 53 30.2	-1.5
VLI				AML	AML	08 53 35.5	
	comp=E,2298μm,0.7s						
VLI				AML	AML	08 53 39.1	
	comp=N,1781μm,0.4s						
VLI	Veliai	0.90	61	P	Pg	08 53 20.4	+0.4
VLI				S	Sg	08 53 31.1	-0.6
	comp=N,968nm,0.5s						
MNVA	Monemvasia	0.95	65	P	Pg	08 53 21.6	+0.5
VLX	Vlachokerasia	1.13	17	P	Pn	08 53 26.0	+1.3
VLX				S	Sn	08 53 41.8	+1.4
	comp=N,862nm,0.4s						
ANKY	Antikythira Is	1.17	111	P	Pb	08 53 26.1	+1.1
ANKY				AML	AML	08 53 45.1	
	comp=E,2165μm,0.6s						
ANKY				AML	AML	08 53 46.3	
	comp=N,2342μm,0.5s						
ANKY	Antikythira Is	1.17	111	P	Pn	08 53 27.1	+2.0
ANKY				S	Sg	08 53 41.5	+1.2
	comp=N,1μm,0.5s						
AMT	Artemida-Makis	1.25	351	P	Pg	08 53 29.4	+2.5
AMT	Artemida-Makis	1.25	351	P	Pg	08 53 29.8	+2.9
AMT				S	Sn	08 53 48.7	+5.3
	comp=N,1μm,0.5s						
TRIP	Tripoli	1.26	11	P	Pg	08 53 28.3	+1.4
TRIP	Tripoli	1.26	11	P	Pg	08 53 28.4	+1.4
TRIP				S	Sn	08 53 46.4	+2.9
	comp=N,712nm,0.5s						
EPID	Epidavros	1.61	35	P	Pg	08 53 34.2	+0.5
DRO	Drossia	1.67	353	P	Pg	08 53 36.8	+2.0
DRO				AML	AML	08 54 08.8	
	comp=N,996μm,0.7s						
DRO				AML	AML	08 54 14.4	
	comp=E,443μm,0.7s						
DRO	Drossia	1.67	353	P	Pg	08 53 36.8	+2.0
KLV	Kalavryta, Ach	1.75	5	P	Pg	08 53 36.9	+0.4
RLS	Riolos of Patr	1.81	348	P	Pg	08 53 38.0	+0.6
IMMV	Iera Moni Meta	1.84	116	P	Pn	08 53 36.3	+1.9
VAM	Vamos	2.02	115	P	Pn	08 53 39.1	+2.2
KALE	Kalithea	2.10	4	P	Pb	08 53 41.3	+0.3
EFP	Efpalio	2.13	359	P	Pb	08 53 42.8	+1.3
VLY	Voula,Athens	2.14	43	P	Pn	08 53 39.3	+0.7
DSF	Desfina	2.16	12	P	Pb	08 53 42.2	+0.1
VLS	Valsamata	2.18	330	P	Pb	08 53 43.1	+0.9
VIL2	Platees	2.18	28	P	Pn	08 53 41.4	+2.2
ATHU	Athens Univers	2.22	41	P	Pn	08 53 40.8	+1.1
DION	Dionisos Attik	2.38	41	P	Pn	08 53 42.8	+0.9
PDO	Prodromos	2.38	345	P	Pb	08 53 46.4	+0.6
EVGI	Lefkada island	2.55	336	P	Pn	08 53 47.6	+3.4
LKD2	Lefkada island	2.70	338	P	Pb	08 53 50.9	-0.3
AGG	Agios Georgios	2.74	6	P	Pb	08 53 50.9	-1.1
STON	Ston	7.35	335	*e*Pn	Pn	08 54 50.8	+0.7
STON				Sn	Sn	08 56 09.4	-4.0
MAKA	Makarska	7.95	333	Sn	Sn	08 56 24.5	-3.8
KIJV	Kijevo	8.80	333	*e*Pn	Pn	08 55 11.4	+1.4
KIJV				Sn	Sn	08 56 46.0	-3.2
ZIRJ	Zirje	8.80	329	*e*Pn	Pn	08 55 12.3	+2.2
ZIRJ				Sn	Sn	08 56 43.5	-5.8
MORI	Morici	8.95	330	*e*Pn	Pn	08 55 14.0	+1.9
MORI				Sn	Sn	08 56 48.7	-4.2
DUGI	Dugi Otok	9.33	328	Sn	Sn	08 56 57.2	-5.0
UDBI	Udbina	9.48	332	*e*Pn	Pn	08 55 22.6	+3.2
UDBI				Sn	Sn	08 57 02.7	-3.4
NVLJ	Novalja	9.87	329	Sn	Sn	08 57 11.5	-3.9
GERES	GERESS Array B	13.93	337	Pn	Pn	08 56 21.8	+1.6
	comp=E,0.1nm,0.3s,baz=160,slow=15,SNR=2.5						
FINES	FINESS Array B	25.31	5	P	P	08 58 28.6	-0.6
	comp=E,0.8nm,0.4s,baz=148,slow=12,SNR=10.0						
NOA	NORSAR Array B	25.70	348	P	P	08 58 31.0	-1.9
	comp=E,0.3nm,0.6s,baz=147,slow=7.9,SNR=1.3						
ARCES	ARCESS Array B	33.36	2	P	P	08 59 40.1	-0.6
	comp=E,1.5nm,0.7s,baz=201,slow=6.6,SNR=4.3						
MKAR	Makanchi Array	45.34	57	P	P	09 01 19.1	-1.8
	comp=E,0.7nm,0.3s,baz=266,slow=7.8,SNR=25						
ZALV	Zalesovo Beam	46.12	47	P	P	09 01 24.4	-2.5
	comp=E,0.9nm,0.4s,baz=286,slow=10,SNR=2.5						

IDC 06 09:03:40.6±29.0, 26°.93N×95°.54E, h0km, mb3.4/3, mb1 3.4/3, mb1mx3.3/41, mbtmp3.4/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=451.1km s-min=78.6km az=175.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.42	336	P	P	09 08 40.9	0.0
	0.2nm,0.5s,baz=136,slow=11,SNR=1.8						
SONM	Songino Array	22.54	19	P	P	09 08 42.3	+0.1
	0.7nm,0.6s,baz=202,slow=11,SNR=4.7						
ZALV	Zalesovo Beam	28.13	347	P	P	09 09 34.1	-0.1
	0.7nm,0.5s,baz=174,slow=7.8,SNR=4.0						
SIJI	Sorong	44.12	123	LR	LR	09 31 07.9	
	comp=Z,35nm,19.6s,baz=226,slow=37						

*IDC **06** 09:04:49.3±2.3, 6°.77S×129°.55E, h122km±26km, mb3.8/5, mb1 4.0/9, mb1mx3.6/35, mbtmp4.2/9, Error ellipse: s-maj=41.0km s-min=15.7km az=94.0*

*DJA **06** 09:04:51.6±0.5, 7°S±3°×13°0E±°, h220km±12km, M4.5/13, mb4.5/7, mB5.0/6, MLv4.6/13, Mw(mB)4.3/6*

*NOU **06** 09:05:05.4, 7°.82S×129°.90E, h170km, mb4.1, Banda Sea*

ISC 06 09:04:55.0±0.8, 6°.87S±0°.07×129°.70E±0°.10, h200km, n17, σ2s.69/16, mb3.8/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.94	125	P	Pn	09 05 31.4	-1.5
BNDI	Bandanaira	2.34	5	P	Pn	09 05 34.8	-2.4
MSAI	Masohi	3.58	348	P	Pn	09 05 49.2	-2.5
NLAI	Namlea	4.44	324	P	Pn	09 05 59.5	-2.8
FAKI	Fak Fak	4.67	33	P	Pn	09 06 01.5	-3.8
SANI	Sanana	6.05	322	P	Pn	09 06 20.1	-2.9
	0.1nm29nm,0.9s						
SOEI	Soe	6.09	242	P	Pn	09 06 20.6	-3.1
	1.0nm4μm161nm,0.8s						
SIJI	Sorong	6.16	15	P	Pn	09 06 18.9	-5.5
	5.8nm,0.3s,baz=139,slow=24,SNR=3.6						
SIJI				S	Sn	09 07 25.6	-10
	13nm,0.3s,baz=271,slow=24,SNR=14						
SWI	Sorong	6.16	15	P	Pn	09 06 20.6	-3.9
	0.5nm1μm24nm,0.4s						
FITZ	Fitzroy Crossi	11.85	199	P	Pn	09 07 33.4	-4.7
	1.8nm,0.3s,baz=32,slow=11,SNR=38						
FITZ				S	Sn	09 09 36.2	-14
	3.9nm,0.3s,baz=78,slow=22,SNR=9.5						
WRA	Warramunga Arr	13.76	161	P	Pn	09 08 00.3	-1.7
	2.8nm,0.3s,baz=332,slow=12,SNR=42						
WRA				S	S	09 10 25.2	-10
	3.4nm,0.3s,baz=332,slow=22,SNR=14						
ASAR	Alice Springs	17.19	167	P	Pn	09 08 45.1	+1.5
	1.1nm,0.3s,baz=339,slow=9.9,SNR=108						
ASAR				S	S	09 11 48.6	-2.2
	0.8nm,0.3s,baz=351,slow=28,SNR=4.4						
CMAR	Chiang Mai Arr	39.42	310	P	P	09 12 06.8	+0.9
	1.9nm,0.6s,baz=144,slow=7.0,SNR=11						
SONM	Songino Array	58.22	342	P	P	09 14 30.3	+1.8
	0.7nm,0.5s,baz=159,slow=6.4,SNR=5.4						
MKAR	Makanchi Array	67.95	327	P	P	09 15 34.1	+1.7
	3.0nm,0.5s,baz=116,slow=8.1,SNR=43						
ZALV	Zalesovo Beam	71.33	334	P	P	09 15 53.1	+0.3
	0.6nm,0.3s,baz=105,slow=5.1,SNR=4.4						
SEY	Seymchan	71.73	11	P	P	09 15 57.8	+2.8
	1.0nm,0.5s,baz=113,slow=17,SNR=2.4						

WEL 06 09:06:17.0, 43°S±2°×17°1E±°, h5km±2km, M2.6/12, mB4.4/1, ML2.5/12, MLv2.6/12, Mw(mB)3.5/1, Error ellipse: s-maj=0.0km s-min=0.0km az=113.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.36	23	P	Pb	09 06 25.4	-0.6
WVZ	Waitaha Valley	0.38	268	P	Pb	09 06 26.2	-0.1
OXZ	Oxford	0.63	115	P	Pb	09 06 31.1	+0.5
RPZ	Rata Peaks	0.67	192	P	Pb	09 06 31.7	+0.5
GCSZ	Gaunt Creek Bo	0.72	249	P	Pb	09 06 32.3	+0.2
LTZ	Lake Taylor	0.80	70	P	Pb	09 06 34.2	+0.8
ARCZ	Arundel	0.89	184	P	Pn	09 06 35.7	-0.5
FOZ	Fox Glacier	1.15	245	P	Pn	09 06 41.0	+1.3
MQZ	McQueen’s Vall	1.21	123	P	Pn	09 06 41.4	+0.9
TMZ	Timaru	1.33	188	P	Pg	09 06 43.1	+0.5
DSZ	Denniston Nort	1.38	17	P	Pg	09 06 43.4	0.0
AKCZ	Akaroa Harbour	1.45	124	P	Pg	09 06 46.9	+2.0
OKCZ	Okains Bay	1.47	117	P	Pg	09 06 45.2	-0.1
LBZ	Lake Benmore	1.53	210	P	Pg	09 06 46.8	+0.4
THZ	Tophouse	1.78	44	P	Pb	09 06 50.1	-0.2
ODZ	Otahua Downs	2.03	192	P	Pn	09 06 52.6	+0.7
QRZ	Quartz Range	2.43	24	P	Pn	09 06 58.6	+1.2
KWHZ	Kaweka Forest	5.33	49	P	Pn	09 07 38.3	+1.1
TLZ	Tolley Road	5.74	36	P	Pn	09 07 45.3	+2.4

*DDA **06** 09:16:16.5, 39°.31N×27°.86E, h7km±1km, MW3.4*

*ISK **06** 09:16:16.3, 39°.32N×27°.87E, h9km, ML3.5/42*

*THE **06** 09:16:17.7, 39°.27N×27°.91E, h8km±3km, ML3.2/7, Error ellipse: s-maj=3.2km s-min=0.8km az=105.0*

*ATH **06** 09:16:18.8, 39°.35N×27°.80E, h10km±31km, ML3.2/5, Error ellipse: s-maj=31.6km s-min=2.8km az=0.0*

ISC 06 09:16:16.9±1.0, 39°.30N±0°.02×27°.87E±0°.02, h7km±8km, n92, σ0s.60/120, 8C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.14	302	*i* P	Pg	09 16 19.6	-0.3
STEP				*i* S	Sg	09 16 22.1	+0.1
BALB	Balikesir	0.34	1	PG	Pg	09 16 23.6	0.0
BALB				SG	Sg	09 16 28.8	+0.8
BALY	Balya	0.48	336	*i* P	Pg	09 16 26.0	-0.2
BALY				*i* S	Sg	09 16 32.9	+0.3
DURS	Dursunbey	0.55	57	*i* P	Pg	09 16 27.5	-0.1
DURS				*i* S	Sg	09 16 35.5	+0.7
GOMA	Golmarmara-Man	0.59	177	PG	Pg	09 16 28.2	-0.2
BUHA	Balikesir, Bur	0.65	288	*i* P	Pg	09 16 28.9	-0.5
DST	Dursunbey	0.65	62	PG	Pg	09 16 29.2	-0.3
DST				SG	Sg	09 16 38.3	+0.3
DEMI	Demirci	0.70	111	*i* P	Pg	09 16 30.5	0.0
DEMI				*i* S	Sg	09 16 40.5	+0.8
ZEDA	zmir-Bergama	0.70	242	*i* P	Pg	09 16 30.1	-0.4
ZEDA				*i* S	Sg	09 16 40.0	+0.3
GONE	Gonen-Balikesi	0.76	349	PG	Pg	09 16 31.2	-0.3
GONE				SG	Sg	09 16 41.6	+0.2
DKL	Dikili	0.79	253	PG	Pg	09 16 32.0	-0.1
DKL				SG	Sg	09 16 43.2	+0.9
SIMA	Simav-Kutahya	0.89	104	PG	Pg	09 16 34.2	+0.2
AYVA	Ayvalik	0.92	271	*i* P	Pg	09 16 34.1	-0.5
AYVA				*i* S	Sb	09 16 48.0	+0.4
MANT	Manisa	0.97	146	*i* P	Pg	09 16 35.6	+0.1
MANT				*i* S	Sg	09 16 48.2	+0.1
KULA	Kula-Manisa	1.00	142	P	Pg	09 16 36.0	0.0
KULA				S	Sg	09 16 48.9	-0.1
KULA	Kula-Manisa	1.00	142	PG	Pg	09 16 36.1	0.0
EDC	Edincik	1.04	360	PG	Pg	09 16 36.4	-0.6
EDC				SG	Sg	09 16 50.7	+0.2
FOCM	Foa	1.07	237	PG	Pg	09 16 37.2	-0.2
FOCM				SG	Sg	09 16 51.5	+0.2
USAK	Uak-Merkez	1.07	123	*i* P	Pg	09 16 37.1	-0.3
USAK				*i* S	Sg	09 16 51.1	-0.2
ORLT	Orhaneli	1.08	46	PG	Pg	09 16 37.5	-0.2
SHAP	Saphane-Kutahy	1.08	104	PN	Pg	09 16 37.8	+0.1
BAYC	CANAKKALE_Bayr	1.12	294	*i* P	Pb	09 16 38.8	+0.2
BAYC				*i* S	Sn	09 16 55.4	+0.7
KRBG	Karabiga-Canak	1.18	338	PN	Pg	09 16 39.1	-0.4
GEDZ	Gediz	1.22	102	PN	Pg	09 16 40.2	-0.2
PRK	Paraskevi	1.25	268	P	Pn	09 16 41.3	+0.6
PRK				S	Sg	09 16 56.8	-0.2
PRK				AML	AML	09 17 01.0	
	comp=E,5075μm,0.6s						
PRK				AML	AML	09 17 05.3	
	comp=N,2629μm,0.4s						
PRK	Paraskevi	1.25	268	P	Pn	09 16 41.0	+0.2
PRK				S	Sn	09 16 59.0	+1.2
	comp=N,2μm,0.5s						
EZN	Ezine	1.31	294	P	Pn	09 16 41.0	-0.7
EZN				S	Sn	09 16 59.4	+0.1
	comp=N,652nm,0.3s						
EZN	Ezine	1.31	294	PN	Pn	09 16 40.9	-0.7
MRMT	Marmara Adasi	1.32	351	PN	Pn	09 16 41.3	-0.6
MDNY	Mudanya-Bursa	1.32	36	PN	Pn	09 16 41.4	-0.4
LPK	Lapseki	1.37	322	PN	Pn	09 16 41.9	-0.6
URLA	Izmir	1.37	227	PN	Pn	09 16 42.1	-0.4
MAR2	Marsite Statio	1.48	343	PN	Pn	09 16 43.4	-0.6
RKY	Sarkoy-Tekirda	1.48	339	PN	Pn	09 16 43.7	-0.4
BOZC	Bozcaada	1.51	292	PN	Pn	09 16 43.9	-0.5
GEMT	Gemlik	1.52	41	PN	Pn	09 16 44.4	-0.1
GELI	Tayfur-Gelibol	1.54	316	PN	Pn	09 16 44.4	-0.4
MAR4	Marsite Statio	1.55	344	PN	Pn	09 16 44.5	-0.5
SIGR	SIGRI	1.57	267	P	Pn	09 16 44.6	-0.6
SIGR				S	Sn	09 17 04.8	-1.0
SIGR				AML	AML	09 17 08.8	
	comp=N,2300μm,0.4s						
SIGR				AML	AML	09 17 11.7	
	comp=E,1653μm,0.5s						
SIGR	SIGRI	1.57	267	P	Pn	09 16 44.4	-0.8
SIGR				S	Sb	09 17 06.8	+0.4
	comp=E,978nm,0.5s						
SIGR	SIGRI	1.57	267	PN	Pn	09 16 44.6	-0.6
TRML	Termal-Yalova	1.64	37	PN	Pn	09 16 45.4	-0.9
GCAM	G?zelcaml?	1.68	198	PN	Pn	09 16 46.6	-0.1
TKR	Tekirdag	1.71	351	PN	Pn	09 16 46.2	-0.9
ERIK	Erikli-Kesan	1.72	323	PN	Pn	09 16 46.9	-0.4
GADA	Gvkgeada	1.76	301	P	Pn	09 16 47.5	-0.4
GADA				S	Sn	09 17 11.2	+0.6
GADA	Gvkgeada	1.76	301	PN	Pn	09 16 47.5	-0.4
AUBOZ	BOZOYUK	1.77	69	PN	Pn	09 16 47.9	-0.2
SMG	Samos	1.79	207	P	Pb	09 16 49.4	-0.6
SMG				AML	AML	09 17 20.9	
	comp=N,1042μm,0.4s						
SMG				AML	AML	09 17 23.1	
	comp=E,970μm,0.4s						
SMG	Samos	1.79	207	P	Pn	09 16 47.9	-0.3
SMG				S	Sn	09 17 10.0	-1.2
	comp=E,425nm,0.4s						
CRLT	Corlu	1.83	357	PN	Pn	09 16 48.5	-0.3
SLVT	Silivri	1.94	7	PN	Pn	09 16 48.8	-1.6
ENEZ	Enez	1.95	318	P	Pn	09 16 50.8	+0.3
ENEZ				S	Sn	09 17 15.4	+0.2
	comp=E,938nm,0.5s						
ENEZ	Enez	1.95	318	PN	Pn	09 16 50.1	-0.4
KAVV	Kandilli-Istan	1.98	27	PN	Pn	09 16 49.9	-1.0
ISK	Istanbul-Kandi	1.98	27	P	Pn	09 16 49.9	-1.0
ISK				S	Sb	09 17 17.3	-0.9
ISK	Istanbul-Kandi	1.98	27	PN	Pn	09 16 49.7	-1.2
CTKS	Kestanelik-??a	1.99	14	PN	Pn	09 16 50.3	-0.7
BGKT	Bogazkoy	2.00	20	PN	Pn	09 16 50.3	-0.8
HRT	Hereke	2.05	42	PN	Pn	09 16 50.1	-1.8
BORA	Eskisehir	2.08	73	PN	Pn	09 16 51.7	-0.6
ALN	Alexandroupoli	2.12	319	P	Pn	09 16 52.5	-0.3
ALN				AML	AML	09 17 25.1	
	comp=N,420μm,0.4s						
ALN				AML	AML	09 17 25.4	
	comp=E,494μm,0.3s						
ALN	Alexandroupoli	2.12	319	P	Pn	09 16 52.6	-0.3
ALN				S	Sn	09 17 19.5	0.0
	comp=E,228nm,0.3s						
ALN	Alexandroupoli	2.12	319	PN	Pn	09 16 52.5	-0.3
KLYT	Kilyos	2.14	24	PN	Pn	09 16 53.1	0.0
SMTH	Samothraki Isl	2.15	304	P	Pn	09 16 53.0	-0.2
SMTH				AML	AML	09 17 25.5	
	comp=N,442μm,0.4s						
SMTH				AML	AML	09 17 28.6	
	comp=E,378μm,0.4s						
SMTH	Samothraki Isl	2.15	304	P	Pn	09 16 53.1	-0.1
SMTH				S	Sn	09 17 20.8	+0.7
	comp=E,202nm,0.4s						
LIA	Limnos Island	2.16	287	P	Pn	09 16 53.2	-0.1
LIA	Limnos Island	2.16	287	P	Pn	09 16 53.7	+0.3
LIA				S	Sn	09 17 20.9	+0.5
YER	Yerkesik	2.19	171	P	Pn	09 16 53.1	-0.7
YER	Yerkesik	2.19	171	PN	Pn	09 16 53.1	-0.7
BASM	Basmaki-Afyon	2.19	128	PN	Pn	09 16 53.9	0.0
CTYL	Yalikoy Yolu	2.19	8	PN	Pn	09 16 52.9	-0.9
SHUT	Suhut-Afyon	2.22	109	PN	Pn	09 16 54.1	-0.2
SRCK	Saricakaya, Es	2.25	70	PN	Pn	09 16 55.7	+1.1
SILT	Sile	2.29	36	PN	Pn	09 16 54.8	-0.4
CIFT	Cifteler, Eski	2.47	88	PN	Pn	09 16 58.1	+0.3
RDO	Rodhopi	2.57	317	P	Pn	09 16 59.3	+0.3
RDO	Rodhopi	2.57	317	PN	Pn	09 16 59.1	+0.1
EDRB	Edirne	2.68	342	PN	Pn	09 16 59.9	-0.7
THAS	Thassos island	2.75	299	P	Pn	09 17 00.6	-0.9
MDUB	Mudurnu	2.81	64	PN	Pn	09 17 02.7	+0.3
VTS	Vitosha	4.83	315	⇑P	Pn	09 17 31.4	+1.2
CFR	Carcaliu	5.88	2	⇑P	Pn	09 17 44.1	-0.3
MLR	Muntele Rosu	6.35	348	⇑P	Pn	09 17 52.3	+1.2
PLOR	Plostina	6.61	353	⇑P	Pn	09 17 54.9	+0.4
VRI	Vrincioaia	6.62	353	⇑P	Pn	09 17 55.8	+1.2
DOPR	Dopca	6.91	345	⇓P	Pn	09 17 59.5	+0.9
OZUR		6.96	348	⇑P	Pn	09 18 00.3	+0.9
MDVR	Moldovita	7.14	322	P	Pn	09 18 02.1	+0.2
BZS	Buzias	7.82	326	⇑P	Pn	09 18 10.8	-0.4
DRGR		8.38	335	⇑P	Pn	09 18 19.1	+0.1

*NAO **06** 09:23:28.2±2.5, 71°.39N×3°.65W, ML4.1*

*IDC **06** 09:23:30.4±0.7, 71°.53N×3°.37W, h0km, mb4.0/17, mb1 4.1/22, mb1mx3.9/51, mbtmp4.0/22, ML3.3/4, MS3.6/30, Ms1 3.6/30, ms1mx3.5/47, Error ellipse: s-maj=17.1km s-min=13.3km az=75.0*

*BER **06** 09:23:31.9±4.0, 71°.50N×3°.87W, h12km±26km, ML2.4, ML4.1(NAO), Confirmed Earthquake*

*NEIC **06** 09:23:32.5±1.5, 71°.6N±0°.1×3°.3W±0°.1, h10km±1km, mb4.3/9, Error ellipse: s-maj=17.5km s-min=6.7km*

az=183.0

BGR ***06*** *09:23:33.9±0.0, 71.°60N×4.°34W, h33^{km}, mb4.1*

DNK ***06*** *09:23:34.5±2.0, 71.°87N×4.°85W, h0^{km}±87^{km}, ML2.8*

ISC 06 09:23:31.1±0.4**, 71.°71N**±0.°05×**3.°55W**±0.°05**, h10**^{km}**, n123,**
σ**2.ˢ33**/129**, mb4.1**/31**, MS3.6**/26**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	Daneborg	5.53	306	Pn	Pn	09 24 52.3	-0.9
DBG				Sn	Sn	09 25 51.2	-5.5
DBG	Daneborg	5.53	306	Pn	Pn	09 24 52.3	-0.9
DBG				Sn	Sn	09 25 51.2	-5.5
DBG				IAML		09 26 05.7	
	comp=Z,5.9nm,0.4s						
DBG	Daneborg	5.53	306	*i* P	Pn	09 24 52.2	-0.9
DBG				*i* S	Sn	09 25 50.6	-6.1
DBG				IAML		09 26 05.7	
	comp=Z,5.9nm,0.4s						
SCO	Scoresbysund	6.10	267	Pn	Pn	09 25 00.9	-0.1
DAG	Danmarks Havn	6.51	328	*e*	Pn	09 25 05.5	-1.2
	baz=138,slow=18						
DAG				*i* P	Pn	09 25 06.8	0.0
DAG				*i* S	Sn	09 26 12.0	-8.9
DAG				IAML		09 26 16.3	
	comp=Z,6.3nm,0.4s						
DAG	Danmarks Havn	6.51	328	*e*	Pn	09 25 05.5	-1.2
	baz=138,slow=18						
DAG				*i* P	Pn	09 25 06.8	0.0
DAG				*i* S	Sn	09 26 12.0	-8.9
DAG				IAML		09 26 16.3	
	comp=Z,6.3nm,0.4s						
LOF	Lofoten	6.88	113	Pn	Pn	09 25 08.8	-2.9
LOF	Lofoten	6.88	113	*e*P	Pn	09 25 10.3	-1.4
N2RO	R¸st	6.89	120	*e*P	Pn	09 25 10.5	-1.3
N2VA	Vr¸y	6.95	118	*e*P	Pn	09 25 10.3	-2.4
N2VI	Vinje	6.95	111	*e*P	Pn	09 25 11.1	-1.7
BJO1	Bjornoya	7.11	56	Pn	Pn	09 25 17.2	+2.3
BJO1	Bjornoya	7.11	56	Pn	Pn	09 25 17.2	+2.3
HSPB	Hornsund (broa	7.36	35	Pn	Pn	09 25 19.9	+1.6
HSPB	Hornsund (broa	7.36	35	Pn	Pn	09 25 19.9	+1.6
STEI	Steigen	7.50	111	*e*P	Pn	09 25 18.6	-1.7
STEI				*e*S	Sn	09 26 34.8	-10
STEI				IAML		09 26 41.0	
	comp=Z,12nm,0.7s						
N2IH	Innhavet	7.69	110	*e*P	Pn	09 25 21.5	-1.3
NBB30	Finnes	7.72	120	*e*P	Pn	09 25 20.9	-2.4
TRO	Tromso	7.72	95	Pn	Pn	09 25 20.7	-2.6
TRO	Tromso	7.72	95	Pn	Pn	09 25 20.7	-2.6
NBB28	Valnes	7.77	117	*e*P	Pn	09 25 21.7	-2.2
NBB40	Tonnes	7.86	123	*e*P	Pn	09 25 23.1	-2.1
FAUS	Fauske	7.87	114	*e*P	Pn	09 25 24.2	-1.2
KBS	Kingsbay	8.20	21	Pn	Pn	09 25 32.4	+2.5
KBS	Kingsbay	8.20	21	Pn	Pn	09 25 32.4	+2.5
KBS				*e*S	Sn	09 27 00.5	-1.9
KBS	Kingsbay	8.20	21	*i* P	Pn	09 25 32.6	+2.7
KBS				*e*S	Sn	09 27 00.5	-1.9
SPA0	Spitsbergen Ar	8.24	29	Pn	Pn	09 25 33.4	+3.0
	baz=218,slow=16						
SPA0	Spitsbergen Ar	8.24	29	Pn	Pn	09 25 33.8	+3.3
SPA0	Spitsbergen Ar	8.24	29	Pn	Pn	09 25 33.4	+3.0
	baz=218,slow=16						
SPITS	Spitsbergen Ar	8.24	29	Pn	Pn	09 25 32.4	+1.9
	baz=217,slow=15,SNR=84						
SPITS				LR	LR	09 27 54.2	
	comp=Z,131nm,20.1s,baz=155,slow=32						
MOR8	Moi Rana	8.50	122	*e*P	Pn	09 25 32.9	-1.1
KIF	Kilpisjarvi	8.60	97	Pn	Pn	09 25 33.6	-1.7
KIF				Sn	Sn	09 27 05.4	-6.9
KIF	Kilpisjarvi	8.60	97	Pn	Pn	09 25 33.6	-1.7
KIF				Sn	Sn	09 27 05.4	-6.9
HOPEN	Hopen	9.09	45	Pn	Pn	09 25 45.0	+3.0
HOPEN	Hopen	9.09	45	Pn	Pn	09 25 45.0	+3.0
BORG	Borgarnes	9.57	232	LR	LR	09 28 45.0	
	comp=Z,158nm,20.9s,baz=4.6,slow=33						
ARA0	ARCESS Array S	9.84	89	Pn	Pn	09 25 50.6	-1.7
	baz=284,slow=11						
ARA0	ARCESS Array S	9.84	89	Pn	Pn	09 25 50.6	-1.7
	baz=284,slow=11						
ARCES	ARCESS Array B	9.84	89	Pn	Pn	09 25 51.0	-1.3
	baz=288,slow=10.0,SNR=65						
ARCES				Sn	Sn	09 27 36.4	-6.3
	baz=300,slow=21,SNR=2.0						
ARCES				LR	LR	09 29 12.8	
	comp=Z,218nm,20.3s,baz=265,slow=35						
KEV	Kevo	10.22	86	Pn	Pn	09 25 56.6	-0.9
AKN	Aaknes	10.40	152	Pn	Pn	09 25 57.3	-2.8
AKN				Sn	Sn	09 27 45.9	-11
AKN	Aaknes	10.40	152	Pn	Pn	09 25 57.3	-2.8
AKN				Sn	Sn	09 27 45.9	-11
SUMG	Summit	10.65	291	Pn	Pn	09 26 08.0	+4.3
NC204	NORSAR Array S	11.88	145	Pn	Pn	09 26 18.6	-1.7
NOA	NORSAR Array B	12.18	144	Pn	Pn	09 26 22.3	-2.1
	comp=Z,0.0nm,0.3s,baz=228,slow=3.9,SNR=3.4						
NOA				LR	LR	09 30 48.0	
	comp=Z,426nm,21.0s,baz=335,slow=36						
NC405	NORSAR Array S	12.21	143	Pn	Pn	09 26 23.1	-1.7
APA0	Apatity Array	13.19	90	Pn	Pn	09 26 36.4	-1.7
	baz=307,slow=11						
APA0	Apatity Array	13.19	90	Pn	Pn	09 26 36.4	-1.7
	baz=307,slow=11						
FIA0	FINESS Array S	15.42	117	P	Pn	09 27 06.0	-2.3
	baz=330,slow=14						
FIA0	FINESS Array S	15.42	117	P	Pn	09 27 06.0	-2.3
	baz=330,slow=14						
FINES	FINESS Array B	15.42	117	Pn	Pn	09 27 05.4	-2.9
	comp=Z,0.2nm,0.3s,baz=330,slow=13,SNR=12						
FINES				LR	LR	09 32 24.3	
	comp=Z,346nm,19.6s,baz=322,slow=35						
EKA	Eskdalemuir Ar	16.44	179	Pn	Pn	09 27 19.0	-2.5
	baz=353,slow=12,SNR=3.8						
SFJD	Kangerlussuaq	16.86	277	LR	LR	09 33 13.0	
	comp=Z,264nm,18.6s,baz=44,slow=34						
EUNU	Eureka	19.74	329	P	Pn	09 28 03.7	+1.7
EUNU				IAmb	IAmb	09 28 10.6	
	comp=Z,15nm,1.4s						
KLMR	Klimovskoe	19.90	101	*e*P	P	09 28 01.3	-0.9
KLMR				AMP		09 28 03.2	
	comp=Z,17nm,0.8s						
SUW	Suwalki	21.19	133	*e*P	P	09 28 18.1	+1.8
SUW	Suwalki	21.19	133	P	P	09 28 16.3	+0.1
NACGM	Naroch	21.25	126	*i* P	P	09 28 16.9	0.0
NACGM				*i* P	P	09 28 16.9	0.0
NACGM				*i* P	P	09 28 16.9	0.0
NACGM				*i* PP	PnPn	09 28 37.7	+1.5
NACGM				*i* S	S	09 32 14.2	+1.4
NACGM				*i* SS	SnSn	09 32 39.8	+5.4
NACGM				*i* SSS	SSS	09 32 58.1	
NACGM				*i* LQ	LQ	09 34 45.2	
NACGM				*i* LR	LR	09 35 33.6	
CLL	Collm	21.78	151	*e*P	P	09 28 22.0	-0.6
CLL				Lm	MLR	09 35 00.0	
	comp=Z,200nm,20.3s						
MNK	Minsk	21.90	125	*i* P	P	09 28 19.9	-3.9
	comp=E,3.0nm,1.2s						
MNK				*i* P	P	09 28 19.9	-3.9
	comp=N,27nm,1.2s						
MNK				*i* P	P	09 28 19.9	-3.9
	comp=Z,23nm,1.2s						
MNK				*i* PP	PnPn	09 28 38.6	-6.3
MNK				*i* S	S	09 32 14.3	-11
MNK				*i* SS	Sn	09 32 36.9	+1.7
MNK				*i* LQ	LQ	09 34 43.2	
MNK				*i* LR	LR	09 35 32.2	
MNK				*i* LRM	MLR	09 36 14.2	
	comp=N,292nm,18.4s						
MNK				*i* LRM	MLR	09 36 14.8	
	comp=Z,181nm,14.3s						
MNK				*i* LRM	MLR	09 36 39.0	
	comp=E,20nm,17.2s						
BRG	Berggiesshubel	22.35	150	*e*P	P	09 28 28.8	+0.1
BRG				Amp		09 28 30.5	
	comp=Z,7.3nm,0.9s						
BRG	Berggiesshubel	22.35	150	*e*P	P	09 28 28.8	+0.1
BRG				Amp		09 28 30.5	
	comp=Z,7.3nm,0.9s						
NKC	Novy Kostel	22.75	153	*e*P	P	09 28 33.8	+0.8
KSP	Ksiaz	22.77	146	*e*P	P	09 28 32.5	-0.7
CHVC	Chvalec	22.98	147	*e*P	P	09 28 35.4	0.0
OSTC	Ostas	23.03	147	*e*P	P	09 28 35.3	-0.7
GRF	Grafenberg Arr	23.11	155	*e*P	P	09 28 36.7	0.0
	comp=Z,7.2nm,1.2s,baz=347,slow=9.3						
DPC	Dobruska-Polom	23.25	147	*e*P	P	09 28 37.7	-0.5
PRU	Pruhonice	23.30	150	*e*P	P	09 28 40.1	+1.4
KRLC	Kraliky	23.60	146	*e*P	P	09 28 40.1	-1.6
KHC	Kasperske Hory	23.99	152	*e*P	P	09 28 46.0	+0.6
MORC	Moravsky Berou	24.02	145	*e*P	P	09 28 45.2	-0.5
MORC	Moravsky Berou	24.02	145	P	P	09 28 45.1	-0.6
OJC	Ojcow	24.02	141	*e*P	P	09 28 42.7	-3.0
RES	Resolute Bay	24.11	319	LR	LR	09 37 53.1	
	comp=Z,209nm,21.1s,baz=194,slow=36						
GERES	GERESS Array B	24.28	152	P	P	09 28 48.0	-0.3
	comp=Z,1.3nm,0.7s,baz=356,slow=9.4,SNR=9.6						
GERES				LR	LR	09 37 09.8	
	comp=Z,143nm,18.0s,baz=342,slow=34						
VRAC	Vranov	24.30	147	P	P	09 28 47.9	-0.4
	comp=Z,3.5nm,0.7s,baz=353,slow=7.9,SNR=4.2						
VRAC				LR	LR	09 38 40.1	
	comp=Z,115nm,18.3s,baz=332,slow=38						
VRAC	Vranov	24.30	147	*e*P	P	09 28 48.4	+0.1
KRUC	Moravsky	24.51	147	*e*P	P	09 28 49.6	-0.5
FRB	Frobisher Bay	24.60	285	LR	LR	09 37 59.4	
	comp=Z,182nm,20.3s,baz=28,slow=35						
KIRV	Kirov	24.79	94	P	P	09 28 52.5	-0.1
	comp=Z,7.9nm,0.6s,baz=142,slow=22,SNR=4.4						
RETA	Reutte	25.21	157	*i* P	P	09 28 57.8	+1.2
	comp=Z,4.3nm,1.3s						
DAVA	Damuels	25.30	158	*i* P	P	09 28 59.1	+1.6
	comp=Z,11nm,1.1s						
MODS	Modra-Piesok	25.32	146	*e*P	P	09 28 59.1	+1.6
MOA	Molln	25.34	151	*i* P	P	09 28 57.7	0.0
	comp=Z,6.1nm,1.5s						
MOTA	Moosalm	25.39	156	*i* P	P	09 28 59.7	+1.4
	comp=Z,9.4nm,1.4s						
WATA	Walderalm	25.46	156	*i* P	P	09 28 59.5	+0.5
	comp=Z,10nm,1.1s						
VYHS	Vyhne	25.49	144	*e*P	P	09 29 00.9	+1.9
CONA	Conrad Observa	25.52	149	*i* P	P	09 29 00.6	+1.2
	comp=Z,7.1nm,0.7s						
WTTA	Wattenberg	25.54	156	*i* P	P	09 29 01.8	+2.1
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	25.70	127	P	P	09 28 59.1	-1.8
	comp=Z,6.6nm,0.6s,baz=337,slow=9.6,SNR=12						
AKASG				LR	LR	09 38 45.3	
	comp=Z,248nm,18.6s,baz=310,slow=36						
DAVOX	Davos/Dischmat	25.80	158	LR	LR	09 40 43.3	
	comp=Z,102nm,18.1s,baz=51,slow=40						
SENIN	Lac Senin/Sane	25.94	163	P	P	09 29 03.2	-0.2
SENIN				IAmb	IAmb	09 29 06.2	
	comp=Z,7.6nm,0.9s						
KBA	Koelnbreinsper	25.96	153	*i* P	P	09 29 04.4	+0.9
	comp=Z,3.0nm,0.9s						
ARSA	Arzberg	26.12	150	*i* P	P	09 29 05.4	+0.6
	comp=Z,4.2nm,0.8s						
NRIK	Noril'sk	27.76	50	P	P	09 29 20.5	+1.2
	comp=Z,4.2nm,1.1s,baz=221,slow=19,SNR=3.9						
MLR	Muntele Rosu	29.80	136	LR	LR	09 42 00.5	
	comp=Z,240nm,18.7s,baz=348,slow=38						
ESDC	Sonseca Array	32.11	181	P	P	09 29 57.7	-0.4
	comp=Z,1.2nm,0.9s,baz=358,slow=9.4,SNR=6.8						
ESDC				LR	LR	09 42 06.8	
	comp=Z,56nm,18.2s,baz=355,slow=35						
AKTO	Aktyubinsk	34.35	95	LR	LR	09 44 04.9	
	comp=Z,126nm,18.2s,baz=330,slow=36						
KBZ	Khabaz	35.78	116	P	P	09 30 31.2	+1.4
	comp=Z,3.3nm,1.0s,baz=346,slow=6.0,SNR=4.2						
KBZ				LR	LR	09 44 21.7	
	comp=Z,57nm,19.1s,baz=334,slow=35						
ABKAR	Akbulak array	35.99	94	P	P	09 30 31.5	-0.1
ABKAR				IAmb	IAmb	09 30 37.4	
	comp=Z,5.3nm,1.2s						
KEST	Kesra	36.67	162	P	P	09 30 37.7	0.0
	comp=Z,4.2nm,0.5s,baz=12,slow=2.6,SNR=4.9						
KEST				LR	LR	09 45 27.1	
	comp=Z,107nm,19.6s,baz=266,slow=36						
BRTR	Keskin Array B	37.06	129	P	P	09 30 41.2	+0.2
	comp=Z,1.1nm,0.5s,baz=10,slow=10,SNR=4.1						
BRTR				LR	LR	09 46 41.9	
	comp=Z,38nm,19.9s,baz=341,slow=38						
YKA	Yellowknife Ar	38.03	315	P	P	09 30 50.3	+1.6
	comp=Z,1.2nm,0.9s,baz=32,slow=9.1,SNR=9.6						
YKA				PcP	PcP	09 33 05.6	+1.9
	comp=Z,2.0nm,0.9s,baz=27,slow=3.1,SNR=18						
YKA				LR	LR	09 45 57.7	
	comp=Z,123nm,19.0s,baz=0.0,slow=35						
MDT	Midelt	38.96	181	LR	LR	09 45 34.9	
	comp=Z,56nm,19.8s,baz=4.5,slow=34						
ZALV	Zalesovo Beam	39.59	68	P	P	09 31 03.0	+1.1
	comp=Z,0.3nm,0.3s,baz=318,slow=10,SNR=1.0						
KURK	Kurchatov	40.56	76	P	P	09 31 11.4	+1.4
KURK				IAmb	IAmb	09 31 11.7	
	comp=Z,3.1nm,0.9s						
I23K	Minto, Yukon-K	41.45	339	P	P	09 31 20.5	+3.4
ILAR	Eielson Array	41.52	337	P	P	09 31 20.1	+2.3
	comp=Z,0.6nm,0.9s,baz=11,slow=7.8,SNR=5.7						
ILAR				LR	LR	09 51 34.9	
	comp=Z,47nm,18.6s,baz=17,slow=40						
YAK	Yakutsk	42.71	30	LR	LR	09 49 01.7	
	comp=Z,34nm,20.1s,baz=250,slow=36						
ULM	Lac du Bonnet	44.00	293	LR	LR	09 49 27.4	
	comp=Z,71nm,18.2s,baz=327,slow=35						
MK31	Makanchi Array	45.16	75	P	P	09 31 48.7	+1.3
MKAR	Makanchi Array	45.16	75	P	P	09 31 48.8	+1.4
	comp=Z,1.0nm,0.7s,baz=347,slow=6.8,SNR=13						
MKAR				PcP	PcP	09 33 28.2	+0.7
	comp=Z,0.5nm,0.8s,baz=5.5,slow=4.5,SNR=3.8						
MKAR				LR	LR	09 52 59.8	
	comp=Z,64nm,18.9s,baz=325,slow=39						
GEYT	Alibeck	45.63	103	LR	LR	09 52 36.0	
	comp=Z,98nm,18.1s,baz=230,slow=38						
SONM	Songino Array	51.05	55	P	P	09 32 35.1	+2.0
	comp=Z,0.3nm,0.4s,baz=294,slow=4.7,SNR=4.8						
PDAR	Pinedale Array	54.70	300	LR	LR	09 56 16.8	
	comp=Z,120nm,18.5s,baz=42,slow=36						
TORD	Torodi Ar. Bea	58.62	174	P	P	09 33 27.7	-0.2
	comp=Z,1.5nm,0.8s,baz=357,slow=6.9,SNR=6.7						
TORD				LR	LR	09 58 32.1	
	comp=Z,58nm,18.2s,baz=255,slow=36						
NVAR	Mina Array Bea	61.09	305	LR	LR	09 59 23.3	
	comp=Z,65nm,19.7s,baz=14,slow=35						
DBIC	Dimbokro	64.97	181	P	P	09 34 09.8	-0.9
	comp=Z,2.9nm,0.8s,baz=340,slow=6.4,SNR=3.4						
DBIC				LR	LR	10 02 03.7	
	comp=Z,27nm,18.1s,baz=354,slow=36						
KSRS	Korea Array	65.91	41	LR	LR	10 05 14.4	
	comp=Z,19nm,18.9s,baz=45,slow=38						
CMAR	Chiang Mai Arr	76.48	72	P	P	09 35 21.6	+0.8
	comp=Z,0.8nm,0.3s,baz=319,slow=7.1,SNR=7.6						
WRA	Warramunga Arr	122.82	49	PKP	PKPdf	09 42 26.6	-0.1
	comp=Z,0.2nm,0.6s,baz=328,slow=2.5,SNR=1.7						
ASAR	Alice Springs	126.30	50	PKP	PKPdf	09 42 33.2	0.0
	comp=Z,0.5nm,0.7s,baz=351,slow=1.9,SNR=8.4						

DJA ***06*** *09:24:10.3±0.4, 2°S±3°×12°6E±°, h10^{km}±3^{km}, M4.4/18, mb4.5/7, mB5.0/4, MLv4.3/18, Mw(mB)4.4/4*

IDC ***06*** *09:24:13.7±2.4, 2.°26S×125.°71E, h44^{km}±27^{km}, mb3.7/6, mb1 4.0/10, mb1mx3.7/42, mbtmp4.1/10, ML4.2/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/36, Error ellipse: s-maj=19.7km s-min=16.9km az=113.0*

ISC 06 09:24:12.1±0.7**, 2.°16S**±0.°06×**125.°64E**±0.°06**, h32**^{km}**, n28,**
σ**1.ˢ00**/29**, mb4.0**/6**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	0.36	72	P	Pb	09 24 19.2	-1.4
SANI				S	Sb	09 24 25.1	-1.3
NLAI	Namlea	1.81	126	P	Pn	09 24 42.1	+1.1
NLAI				S	Sn	09 25 03.8	+0.9
LUWI	Luwuk	3.08	291	P	Pn	09 24 58.3	-0.2
KMSI	Cibinong	3.18	329	P	Pn	09 25 00.4	+0.4
TNTI	Ternate	3.38	31	P	Pn	09 25 03.6	+0.8
MSAI	Masohi	3.49	110	P	Pn	09 25 04.8	+0.6
APSI	Ampana	4.18	287	P	Pn	09 25 13.3	-0.4
MRSI	Marisa	4.53	305	P	Pn	09 25 18.3	-0.3
SWI	Sorong	5.76	77	P	Pn	09 25 37.0	+1.6
	0.3nm19nm,0.7s						
SIJI	Sorong	5.77	77	P	Pn	09 25 35.9	+0.3
	5.9nm,0.3s,baz=166,slow=22,SNR=18						
SIJI				S	Sn	09 26 41.6	+0.9
	6.4nm,0.3s,baz=75,slow=20,SNR=16						
TTSI	Tana Toraja	5.88	261	P	Pn	09 25 36.7	-0.4
	0.2nm18nm,0.6s						
BNSI	Bone	5.96	248	P	Pn	09 25 38.7	+0.5
	0.2nm20nm,1.4s						
SPSI	Sidrap Palu	6.13	253	P	Pn	09 25 40.7	+0.1
	0.4nm2µm81nm,0.6s						
MPSI	Mapaga	6.26	293	P	Pn	09 25 41.4	-0.9
	0.1nm19nm,0.5s						
BKSI	Bulukumba	6.34	240	P	Pn	09 25 44.0	+0.6
	0.4nm1µm85nm,0.5s						
KAPI	Kappang	6.53	244	P	Pn	09 25 47.7	+1.8
	10nm,0.3s,baz=150,slow=2.6,SNR=14						
KAPI				LR	LR	09 28 23.7	
	comp=Z,117nm,19.2s,baz=69,slow=38						
FAKI	Fak Fak	6.64	97	P	Pn	09 25 48.8	+1.2
	0.2nm21nm,0.9s						
EDFI	Ende, Flores	7.64	211	P	Pn	09 26 01.7	+0.4
FITZ	Fitzroy Crossi	15.84	180	P	Pn	09 27 50.8	-2.1
	0.2nm,0.3s,baz=352,slow=7.1,SNR=1.1						
WRA	Warramunga Arr	19.61	155	P	P	09 28 37.0	-1.1
	1.0nm,0.3s,baz=331,slow=13,SNR=44						
ASAR	Alice Springs	22.83	160	P	P	09 29 11.9	-0.7
	2.7nm,0.7s,baz=346,slow=12,SNR=40						
PSI	Prapat	27.16	280	LR	LR	09 42 12.0	
	comp=Z,24nm,21.7s,baz=170,slow=40						
STKA	Stephens Creek	33.16	155	P	P	09 30 45.5	-0.3
	1.7nm,0.5s,baz=325,slow=9.2,SNR=5.3						
SONM	Songino Array	52.56	344	P	P	09 33 23.7	+1.0
	0.8nm,0.7s,baz=169,slow=10,SNR=2.7						
PETK	Petropavlovsk-	61.27	21	P	P	09 34 24.1	-0.1
	2.8nm,1.0s,baz=168,slow=6.2,SNR=4.4						
MKAR	Makanchi Array	61.83	328	P	P	09 34 28.8	+0.6
	0.6nm,0.5s,baz=119,slow=8.8,SNR=7.0						
ZALV	Zalesovo Beam	65.37	335	P	P	09 34 52.6	+1.4
	0.4nm,0.3s,baz=138,slow=7.1,SNR=1.2						
NRIK	Noril'sk	75.87	347	LR	LR	10 13 50.1	
	comp=Z,37nm,19.6s,baz=1.5,slow=39						

CNRM ***06*** *09:40:41.5, 32.°96N×13.°53W, h119^{km}, Hypocentre not reviewed by the ISC*

IDC ***06*** *09:40:41.9±4.6, 32.°92N×13.°03W, h0^{km}, mb3.4/3, mb1 3.9/5, mb1mx3.4/47, mbtmp3.7/5, ML4.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/33, Error ellipse: s-maj=86.9km s-min=29.9km az=99.0*

MDD ***06*** *09:40:42.4±0.6, 32.°73N×13.°24W, h99^{km}±38^{km}, mb4.1/32, Error ellipse: s-maj=9.9km s-min=4.9km az=124.0, PRXIMO*

IGIL ***06*** *09:40:42.3, 32.°78N×13.°22W, h17^{km}, ML3.5*

INMG ***06*** *09:40:46.3±2.4, 32.°76N×13.°20W, h10^{km}, ML3.2, Error ellipse: s-maj=5.4km s-min=2.7km az=135.0*

ISC 06 09:40:39.1±0.8**, 32.°74N**±0.°05×**13.°30W**±0.°05**, h10**^{km}**, n96,**
σ**1.ˢ80**/103**, 2D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPS	Porto Santo	2.57	278	P	Pn	09 41 23.6	+2.8
PMPS				S	Sn	09 41 50.5	-1.5
	28nm,0.2s						
PMPS	Porto Santo	2.57	278	*e*Pn	Pn	09 41 23.8	+3.0
PMPS				*e*Sn	Sn	09 41 50.6	-1.5
PMPS				A	A	09 42 00.8	
	35nm,0.2s						
PMPST	Porto Santo, M	2.57	278	*e*Pn	Pn	09 41 23.6	+2.8
PMPST				*e*Sn	Sn	09 41 50.5	-1.6
PMPST				A	A	09 42 00.2	
	56nm,0.2s						
PMAR	Madeira	3.04	271	P	Pn	09 41 30.7	+3.2
PMAR				S	Sn	09 42 02.9	-1.1
	51nm,0.1s						
PMAR	Madeira	3.04	271	*e*Pn	Pn	09 41 30.7	+3.2
PMAR				*e*Sn	Sn	09 42 02.9	-1.1
PMAR				A	A	09 42 12.7	
	102nm,0.1s						
PMOZ	Porto Moniz, M	3.28	273	P	Pn	09 41 33.3	+2.6
	32nm,0.3s,SNR=7.9						
PMOZ				S	Sn	09 42 08.5	-1.3
	10.0nm,0.2s,SNR=4.0						
PMOZ	Porto Moniz, M	3.28	273	*e*Pn	Pn	09 41 33.8	+3.1
PMOZ				*e*Sn	Sn	09 42 08.7	-1.1
PMOZ				A	A	09 42 25.3	
	89nm,0.3s						
EFAM	Famara	3.61	183	P	Pn	09 41 36.8	+1.8
	18nm,0.3s,SNR=7.9						
EFAM				S	Sn	09 42 14.7	-3.0
	66nm,0.3s,SNR=7.9						
CLOB	Isla de Lobos,	3.99	186	P	Pn	09 41 43.0	+2.7
	12nm,0.1s,SNR=4.0						
CLOB				S	Sn	09 42 25.2	-1.8
	16nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	4.12	188	P	Pn	09 41 42.6	+0.5
	26nm,0.1s,SNR=7.9						
CFUE				S	Sn	09 42 26.2	-4.0
	248nm,0.3s,SNR=7.9						
EBAJ	Bajamar	4.94	213	P	Pn	09 41 53.0	-0.4
	5.3nm,0.2s,SNR=28						
EBAJ				S	Sn	09 42 45.6	-4.9
	12nm,0.2s,SNR=10						
AVE	Averroes	4.98	82	⇓*i*P	Pn	09 41 56.2	+2.2
AVE				*e*S	Sn	09 42 45.9	-5.7
GGC	Guia, Gran Can	5.03	204	P	Pn	09 41 56.3	+1.7
	11nm,0.2s,SNR=4.0						
GGC				S	Sn	09 42 46.9	-5.9
	21nm,0.2s,SNR=7.9						
CGUI	Guimar, Teneri	5.17	212	P	Pn	09 41 56.0	-0.6
	12nm,0.2s,SNR=4.0						
CGUI				S	Sn	09 42 51.7	-4.6
	70nm,0.2s,SNR=7.9						
MACI	Morro de la Ar	5.26	213	P	Pn	09 41 57.4	-0.6
	2.3nm,0.1s,SNR=7.9						
MACI				S	Sn	09 42 53.1	-5.7
	11nm,0.2s,SNR=7.9						
CCAN	Las Canadas	5.33	213	P	Pn	09 41 58.0	-1.0
	3.5nm,0.1s,SNR=7.9						
CCAN				S	Sn	09 42 53.6	-7.0
	SNR=4.0						
ZHG	ZHG	5.64	81	P		09 42 04.0	
TBT	Taburiente	5.67	226	P	Pn	09 42 02.6	-0.8
	3.1nm,0.2s,SNR=7.9						
TBT				S	Sn	09 43 01.7	-6.9
	SNR=7.9						
EGOM	La Gomera	5.67	217	P	Pn	09 42 02.3	-1.2
	2.9nm,0.1s,SNR=9.8						
EGOM				S	Sn	09 43 02.9	-5.8
	20nm,0.1s,SNR=6.1						
EHIG	Higuera	5.69	224	S	Sn	09 43 02.0	-7.3
	14nm,0.1s,SNR=4.0						
PFVI	Vila Bisbo	5.72	39	P	Pn	09 42 03.3	-0.7
	6.5nm,0.1s,SNR=16						
PFVI				S	Sn	09 43 00.7	-9.1
	11nm,0.2s,SNR=6.0						
PFVI	Vila Bisbo	5.72	39	*e*Pn	Pn	09 42 03.4	-0.7
PFVI				*e*Sn	Sn	09 43 02.6	-7.2
PFVI				A	A	09 43 10.8	
	19nm,0.4s						
PFVI	Vila Bisbo	5.72	39	P		09 42 03.3	
OUZM	OUZ	5.86	106	P		09 42 09.0	
MORF	Marmelete	5.94	39	*e*P	Pn	09 42 06.5	-0.7
MORF				*e*S	Sn	09 43 07.9	-7.5
MORF				AML	AML	09 43 11.7	
	comp=E,58nm,0.3s						
MORF	Marmelete	5.94	39	P	Pn	09 42 06.5	-0.7
MORF				S	Sn	09 43 07.9	-7.5
	comp=E,58nm,0.3s						
MORF	Marmelete	5.94	39	*e*Pn	Pn	09 42 06.5	-0.7
MORF				*e*Sn	Sn	09 43 08.6	-6.8
MORF				A	A	09 43 16.3	
	comp=E,24nm,0.3s						
PTEO	Sao Teotonio	6.09	37	P	Pn	09 42 08.4	-0.7
PTEO				S	Sn	09 43 11.7	-7.1
	comp=E,9.9nm,0.6s						
PTEO	Sao Teotonio	6.09	37	*e*Pn	Pn	09 42 08.4	-0.7
PTEO				*e*Sn	Sn	09 43 11.7	-7.1
PTEO				A	A	09 43 26.8	
	comp=E,20nm,0.6s						
PBDV	Barranco-do-Ve	6.29	43	P	Pn	09 42 12.0	0.0
PBDV				S	Sn	09 43 16.3	-7.7
	comp=E,13nm,0.5s						
PBDV	Barranco-do-Ve	6.29	43	*e*Pn	Pn	09 42 12.0	0.0
PBDV				*e*Sn	Sn	09 43 16.3	-7.7
PBDV				A	A	09 43 31.9	
	comp=E,13nm,0.5s						
CTIG	El Hierro	6.35	220	P	Pn	09 42 13.5	+0.8
	comp=E,3.3nm,0.1s,SNR=7.9						
CTIG				S	Sn	09 43 21.2	-4.1
	comp=E,6.1nm,0.2s,SNR=7.9						
PCVE	Castro Verde	6.51	40	P	Pn	09 42 14.7	-0.3
PCVE				S	Sn	09 43 21.5	-7.8
	comp=E,18nm,0.4s						
PCVE	Castro Verde	6.51	40	*e*Pn	Pn	09 42 14.7	-0.3
PCVE				*e*Sn	Sn	09 43 21.5	-7.8
PCVE				A	A	09 43 27.7	
	comp=E,18nm,0.4s						
PVAQ	Vaqueiros	6.53	43	P	Pn	09 42 15.0	-0.2
PVAQ				S	Sn	09 43 20.3	-9.4

	comp=E,8.7nm,0.4s						
PVAQ	**Vaqueiros**	**6.53**	**43**	*e*Pn	**Pn**	**09 42 15.0**	**-0.2**
PVAQ				*e*Sn	Sn	09 43 20.3	-9.4
PVAQ				A	A	09 43 35.2	
	comp=E,8.7nm,0.4s						
PVAQ	**Vaqueiros**	**6.53**	**43**	P		09 42 14.8	
PNCL	**Nicolau / Gran**	**6.63**	**35**	P	**Pn**	**09 42 15.7**	**-0.8**
PNCL				S	Sn	09 43 25.0	-7.1
	comp=E,10nm,0.4s						
PNCL	**Nicolau / Gran**	**6.63**	**35**	*e*Pn	**Pn**	**09 42 15.7**	**-0.8**
PNCL				*e*Sn	Sn	09 43 25.0	-7.1
PNCL				A	A	09 43 29.9	
	comp=E,10nm,0.4s						
EGRO	**El Granado**	**6.75**	**43**	P	**Pn**	**09 42 18.1**	**-0.2**
	comp=E,13nm,0.2s,SNR=37						
EGRO				S	Sn	09 43 24.7	-11
	comp=E,13nm,0.3s						
PBEJ	**Beja**	**6.89**	**39**	P	**Pn**	**09 42 20.1**	**-0.1**
PBEJ				S	Sn	09 43 31.7	-7.0
	comp=E,2.3nm,0.3s						
PBEJ	**Beja**	**6.89**	**39**	*e*Pn	**Pn**	**09 42 20.1**	**-0.1**
PBEJ				*e*Sn	Sn	09 43 31.7	-7.0
PBEJ				A	A	09 43 36.8	
	comp=E,4.6nm,0.3s						
IFR	**Ifrane**	**6.90**	**81**	*e*P	Pn	09 42 15.9	-4.7
IFR				*e*S	Sn	09 43 30.3	-8.9
PMAFR	**Mafra**	**7.01**	**27**	P	**Pn**	**09 42 21.5**	**-0.4**
	comp=E,2.3nm,0.2s,SNR=4.0						
PMAFR				S	Sn	09 43 32.4	-9.2
	comp=E,22nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**7.01**	**27**⇓	*e*Pn	**Pn**	**09 42 21.4**	**-0.4**
PMAFR				*e*Sn	Sn	09 43 33.7	-7.9
PMAFR				A	A	09 43 38.4	
	comp=E,18nm,0.4s						
ZGR	**Zagora**	**7.07**	**110**	P		09 42 26.0	
EVO	**Evora**	**7.21**	**35**	P	**Pn**	**09 42 23.2**	**-1.3**
EVO				S	Sn	09 43 32.8	-14
EVO	**Evora**	**7.21**	**35**	*e*P	**Pn**	**09 42 23.2**	**-1.3**
EVO				*e*S	Sn	09 43 32.8	-14
EVO	**Evora**	**7.21**	**35**	*e*Sn	Sn	09 43 35.3	-11
EVO				A	A	09 43 44.2	
	comp=E,7.0nm,0.2s						
ECEU	**Ceuta**	**7.28**	**62**	P	**Pn**	**09 42 27.2**	**+1.7**
	comp=E,5.0nm,0.2s,SNR=4.0						
CEU	**Ceuta**	**7.28**	**62**	P	**Pn**	**09 42 27.4**	**+1.9**
CEU				S	Sn	09 43 40.1	-8.0
CEU	**Ceuta**	**7.28**	**62**	*e*P	**Pn**	**09 42 27.4**	**+1.9**
CEU				*e*S	Sn	09 43 40.1	-8.0
MDT	**Midelt**	**7.33**	**87**	Pn	**Pn**	**09 42 26.8**	**+0.5**
	comp=E,3.6nm,0.3s,baz=297,slow=6.8,SNR=60						
MDT				Sn	Sn	09 43 41.6	-7.9
	comp=E,3.9nm,0.3s,baz=25,slow=21,SNR=14						
MDT	**Midelt**	**7.33**	**87**	P		09 42 27.7	
ESPR	**Espera**	**7.38**	**54**	P	**Pn**	**09 42 26.5**	**-0.4**
	comp=E,15nm,0.2s,SNR=78						
ESPR				S	Sn	09 43 43.8	-6.9
	comp=E,10nm,0.3s						
EMIN	**Mina Concepcio**	**7.39**	**45**	P	**Pn**	**09 42 26.3**	**-0.7**
	comp=E,15nm,0.3s,SNR=60						
EMIN				S	Sn	09 43 40.2	-11
	comp=E,6.7nm,0.3s,SNR=5.9						
EJIF	**Jimena Fronter**	**7.45**	**58**	P	**Pn**	**09 42 28.4**	**+0.6**
	comp=E,33μm,0.5s,SNR=7.9						
EJIF				S	**Sn**	**09 43 48.7**	**-3.6**
	comp=E,7μm,0.4s,SNR=4.0						
PMTG	**Montargil**	**7.54**	**32**	P	**Pn**	**09 42 28.3**	**-0.8**
PMTG				S	Sn	09 43 45.5	-9.1
	comp=E,7.7nm,0.4s						
PMTG	**Montargil**	**7.54**	**32**	*e*Pn	**Pn**	**09 42 28.3**	**-0.8**
PMTG				*e*Sn	Sn	09 43 45.5	-9.1
PMTG				A	A	09 43 48.8	
	comp=E,7.7nm,0.4s						
PESTR	**Estremoz**	**7.67**	**36**	*e*Pn	**Pn**	**09 42 30.4**	**-0.6**
PESTR				*e*Sn	Sn	09 43 49.8	-8.2
PESTR				A	A	09 44 11.4	
	comp=E,5.7nm,0.5s						
PVLZ	**Peæn de**	**7.86**	**70**	P	**Pn**	**09 42 35.4**	**+1.8**
PVLZ				S	Sn	09 43 53.1	-9.5
PVLZ	**Peæn de**	**7.86**	**70**	*e*P	**Pn**	**09 42 35.4**	**+1.8**
PVLZ				*e*S	Sn	09 43 53.1	-9.5
PMRV	**Marv??o**	**8.21**	**34**	P	**Pn**	**09 42 37.5**	**-0.8**
PMRV				S	Sn	09 44 02.3	-8.9
	comp=E,8.9nm,0.4s						
PMRV	**Marv??o**	**8.21**	**34**	*e*Pn	**Pn**	**09 42 37.5**	**-0.8**
PMRV				*e*Sn	Sn	09 44 02.3	-8.9
PMRV				A	A	09 44 04.6	
	comp=E,8.9nm,0.4s						
PCAS	**Casmilo, Conde**	**8.26**	**27**	S	Sn	09 44 02.4	-10
	comp=E,6.1nm,0.5s						
PCAS	**Casmilo, Conde**	**8.26**	**27**	*e*Sn	Sn	09 44 02.4	-10
PCAS				A	A	09 44 06.1	
	comp=E,6.1nm,0.5s						
HORN	**Hornachuelos**	**8.32**	**50**	P		09 42 39.7	
EMAL	**Malaga-Limoner**	**8.33**	**59**	P	**Pn**	**09 42 40.5**	**+0.5**
EMAL				S	Sn	09 44 05.7	-8.4
EMAL	**Malaga-Limoner**	**8.33**	**59**	*e*P	**Pn**	**09 42 40.5**	**+0.5**
EMAL				*e*S	Sn	09 44 05.7	-8.4
ECAB	**El Cabril**	**8.35**	**48**	P	**Pn**	**09 42 39.7**	**-0.5**
	comp=E,8.5nm,0.4s,SNR=56						
ECAB				S	Sn	09 44 05.5	-9.1
	comp=E,4.7nm,0.3s						
PCBR	**Castelo Branco**	**8.50**	**32**	P	**Pn**	**09 42 41.6**	**-0.7**
PCBR	**Castelo Branco**	**8.50**	**32**	*e*Pn	**Pn**	**09 42 41.6**	**-0.7**
PCBR				A	A	09 44 15.1	
	comp=E,4.4nm,0.4s						
EGOR	**Sierra Gorda,**	**8.72**	**57**	P	**Pn**	**09 42 46.2**	**+0.8**
	comp=E,7.9nm,0.3s,SNR=7.9						
EGOR				S	Sn	09 44 16.0	-7.8
	comp=E,2.8nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**8.94**	**30**	P	**Pn**	**09 42 48.8**	**+0.5**
MTE	**Manteigas**	**8.94**	**30**	*e*Pn	**Pn**	**09 42 48.8**	**+0.5**
MTE				A	A	09 44 26.1	
	comp=E,7.6nm,0.4s						
EADA	**Adamuz**	**8.94**	**50**	P	**Pn**	**09 42 47.8**	**-0.6**
	comp=E,8.6nm,0.2s,SNR=34						
EADA				S	Sn	09 44 17.4	-12
	comp=E,2.7nm,0.2s						
ELGU	**Los Guajares,**	**8.96**	**60**	P	**Pn**	**09 42 49.6**	**+1.0**
	comp=E,5.7nm,0.3s,SNR=7.9						
ELGU				S	Sn	09 44 19.8	-10
	comp=E,6.3nm,0.3s,SNR=4.0						
JBK	**JBK**	**9.10**	**77**	P		09 42 50.3	
EQUE	**Quentar**	**9.24**	**58**	P	**Pn**	**09 42 52.4**	**0.0**
	comp=E,4.3nm,0.3s,SNR=17						
EQUE				S	Sn	09 44 27.2	-9.4
	comp=E,3.7nm,0.3s						
EPLA	**Plasencia**	**9.34**	**36**	P	**Pn**	**09 42 52.4**	**-1.4**
	comp=E,3.8nm,0.4s,SNR=8.1						
EPLA				S	Sn	09 44 28.3	-11
	comp=E,3.5nm,0.3s						
EBER	**Berja**	**9.51**	**61**	P	**Pn**	**09 42 55.5**	**-0.9**
	comp=E,2.1nm,0.3s,SNR=8.2						
EBER				S	Sn	09 44 32.6	-11
	comp=E,1.9nm,0.3s,SNR=4.6						
EQES	**Quesada**	**9.77**	**56**	P	**Pn**	**09 42 59.3**	**-0.4**
	comp=E,4.7nm,0.3s,SNR=12						
EQES				S	Sn	09 44 39.8	-10
	comp=E,2.3nm,0.3s,SNR=10.0						
MVO	**Moncorvo**	**9.79**	**29**	P	**Pn**	**09 42 59.5**	**-0.5**
	comp=E,0.9nm,0.1s,SNR=4.0						
MVO				S	Sn	09 44 40.1	-10
	comp=E,3.1nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**9.79**	**29**	*e*Pn	**Pn**	**09 43 00.1**	**+0.1**
MVO				*e*Sn	Sn	09 44 40.9	-9.1
MVO				A	A	09 44 45.5	
	comp=E,5.8nm,0.5s						
PAB	**San Pablo**	**9.92**	**44**	P	**Pn**	**09 43 00.1**	**-1.7**
	comp=E,3.9nm,0.3s,SNR=7.9						
PAB				S	Sn	09 44 40.3	-13
	comp=E,1.6nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**9.92**	**44**	P		09 43 00.6	
ELOB	**Lobios**	**10.02**	**23**	P	**Pn**	**09 43 02.1**	**-1.1**
	comp=E,0.8nm,0.3s,SNR=7.9						
ELOB				S	Sn	09 44 44.3	-11
	comp=E,2.5nm,0.3s,SNR=7.9						
EZAM	**Zamans**	**10.08**	**20**	P	**Pn**	**09 43 04.0**	**+0.1**
	comp=E,0.8nm,0.2s,SNR=7.9						
EZAM				S	Sn	09 44 43.2	-14
	comp=E,3.4nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**10.23**	**45**	Pn	**Pn**	**09 43 05.7**	**-0.4**
	comp=E,1.2nm,0.3s,baz=235,slow=13,SNR=62						
ESDC				Sn	Sn	09 44 51.3	-10
	comp=E,0.5nm,0.3s,baz=236,slow=24,SNR=9.5						
ESDC	**Sonseca Array**	**10.23**	**45**	P	**Pn**	**09 43 04.4**	**-1.6**
	comp=E,8.3nm,0.5s,baz=230,slow=14,SNR=48						
ESDC				S	Sn	09 44 48.6	-12
	comp=E,0.2nm,0.2s,baz=231,slow=24,SNR=10						
SESP	**Santiago Espad**	**10.29**	**56**	P	**Pn**	**09 43 05.6**	**-1.3**
	comp=E,12nm,0.4s,SNR=7.9						
SESP				S	Sn	09 44 51.7	-11
	comp=E,3.3nm,0.3s,SNR=4.0						
SESP	**Santiago Espad**	**10.29**	**56**	P		09 43 06.4	
ECAL	**Calabor**	**10.56**	**28**	P	**Pn**	**09 43 09.6**	**-1.1**
	comp=E,2.2nm,0.3s,SNR=7.2						
ECAL				S	Sn	09 44 57.1	-12
	comp=E,1.9nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**10.75**	**17**	S	Sn	09 44 57.5	-16
	comp=E,1.6nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**10.77**	**40**	P	**Pn**	**09 43 12.4**	**-1.1**
	comp=E,4.3nm,0.4s,SNR=15						
GUD				S	Sn	09 45 02.6	-12
	comp=E,1.6nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**10.86**	**21**	P	**Pn**	**09 43 14.3**	**-0.3**
	comp=E,0.4nm,0.2s,SNR=4.0						
EAGO				S	Sn	09 45 02.2	-14
	comp=E,0.8nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**11.06**	**44**	P	**Pn**	**09 43 16.3**	**-1.1**
UCM				S	Sn	09 45 11.6	-10
UCM	**Universidad Co**	**11.06**	**44**	*e*P	**Pn**	**09 43 16.3**	**-1.1**
UCM				*e*S	Sn	09 45 11.6	-10
EMUR	**La Murta**	**11.09**	**59**	P	Pn	09 43 13.9	-3.9
	comp=E,2.4nm,0.3s,SNR=4.0						
ETOB	**Tobarra**	**11.22**	**55**	P	**Pn**	**09 43 18.0**	**-1.7**
	comp=E,1.8nm,0.1s,SNR=16						
ETOB				S	Sn	09 45 11.9	-13
	comp=E,0.4nm,0.4s,SNR=6.9						
ETOR	**Torete**	**12.09**	**45**	P	**Pn**	**09 43 30.7**	**-0.8**
	comp=E,10.0nm,0.3s,SNR=19						
ETOR				S	Sn	09 45 35.0	-11
	comp=E,3.2nm,0.4s,SNR=6.7						
EMOS	**Mosqueruela**	**12.81**	**50**	P	**Pn**	**09 43 41.6**	**+0.2**
	comp=E,1.0nm,0.3s,SNR=7.9						
EMOS				S	Sn	09 45 53.3	-11
	comp=E,1.2nm,0.5s,SNR=4.0						
KOWA	**Kowa**	**20.04**	**153**	P	**Pn**	**09 45 16.2**	**+2.1**
	comp=E,1.0nm,0.4s,baz=334,slow=5.4,SNR=2.2						
TORD	**Torodi Ar. Bea**	**23.84**	**141**	P	**P**	**09 45 57.6**	**+5.0**
	comp=E,0.9nm,0.8s,baz=331,slow=12,SNR=3.6						
GERES	**GERESS Array B**	**25.83**	**44**	P	**P**	**09 46 12.5**	**+1.9**
	comp=E,0.5nm,0.9s,baz=239,slow=8.9,SNR=2.7						
JMIC	**Jan Mayen**	**38.39**	**3**	LR	LR	10 03 13.7	
	comp=E,53nm,18.4s,baz=204,slow=35						

*CNRM **06** 09:48:36.7, 32°.55N×14°.63W, h30^{km}, Hypocentre not reviewed by the ISC*

*MDD **06** 09:48:50.6±1.5, 32°.76N×13°.30W, h27^{km}±14^{km}, mbLg3.5/30, Error ellipse: s-maj=10.7km s-min=3.9km az=130.0, PRXIMO*

*IGIL **06** 09:48:52.7, 32°.98N×13°.26W, h11^{km}, ML3.3*

*INMG **06** 09:48:55.4±2.1, 32°.83N×13°.21W, h10^{km}, ML3.0, Error ellipse: s-maj=7.4km s-min=3.4km az=150.0*

ISC 06 09:48:46.2±0.9**, 32°.74N**±0°.05×**13°.26W**±0°.05**, h10**^{km}**, n87, σ2^{s}41**/97**, 1C, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**2.61**	**278**	P	**Pn**	**09 49 32.5**	**+4.1**
PMPS				S	**Sn**	**09 49 59.4**	**-0.7**
	20nm,0.2s						
PMPS	**Porto Santo**	**2.61**	**278**	*e*Pn	**Pn**	**09 49 32.5**	**+4.1**
PMPS				*e*Sn	**Sn**	**09 49 59.4**	**-0.7**
PMPS				A	A	09 50 08.9	
	30nm,0.2s						
PMPST	**Porto Santo, M**	**2.61**	**278**	*e*Pn	**Pn**	**09 49 32.5**	**+4.0**
PMPST				*e*Sn	**Sn**	**09 49 59.4**	**-0.8**
PMPST				A	A	09 50 08.9	
	40nm,0.2s						
PMAR	**Madeira**	**3.08**	**271**	S	**Sn**	**09 50 11.5**	**-0.6**
	38nm,0.2s						
PMAR	**Madeira**	**3.08**	**271**	*e*Sn	**Sn**	**09 50 11.5**	**-0.6**
PMAR				A	A	09 50 20.1	
	75nm,0.2s						
PMOZ	**Porto Moniz, M**	**3.32**	**273**	P	**Pn**	**09 49 42.4**	**+4.1**
	6.9nm,0.2s,SNR=7.9						
PMOZ				S	**Sn**	**09 50 16.7**	**-1.1**
	20nm,0.2s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**3.32**	**273**	*e*Pn	**Pn**	**09 49 42.4**	**+4.1**
PMOZ				*e*Sn	**Sn**	**09 50 17.4**	**-0.5**
PMOZ				A	A	09 50 34.4	
	38nm,0.4s						
EFAM	**Famara**	**3.60**	**184**	P	**Pn**	**09 49 44.8**	**+2.7**
	10nm,0.2s,SNR=7.9						
EFAM				S	**Sn**	**09 50 24.2**	**-0.5**
	25nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	**4.12**	**188**	P	**Pn**	**09 49 52.0**	**+2.8**
	31nm,0.1s,SNR=7.9						
CFUE				S	**Sn**	**09 50 35.2**	**-2.2**
	140nm,0.3s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**4.65**	**117**	P		09 49 58.5	
AVE	**Averroes**	**4.94**	**82**	*e*S	**Sn**	**09 50 54.3**	**-3.4**
EBAJ	**Bajamar**	**4.96**	**213**	P	**Pn**	**09 50 02.1**	**+1.4**
	3.4nm,0.1s,SNR=20						
EBAJ				S	**Sn**	**09 50 54.4**	**-3.7**
	7.2nm,0.2s,SNR=7.9						
GGC	**Guia, Gran Can**	**5.04**	**205**	P	**Pn**	**09 50 04.9**	**+3.0**
	4.1nm,0.1s,SNR=7.9						
GGC				S	**Sn**	**09 50 56.0**	**-4.2**
	25nm,0.2s,SNR=7.9						
CGUI	**Guimar, Teneri**	**5.19**	**213**	P	**Pn**	**09 50 05.2**	**+1.2**
	7.0nm,0.1s,SNR=7.9						
CGUI				S	**Sn**	**09 51 00.9**	**-3.0**
	35nm,0.2s,SNR=7.9						
MACI	**Morro de la Ar**	**5.28**	**213**	P	**Pn**	**09 50 06.6**	**+1.3**
	2.7nm,0.1s,SNR=7.9						
MACI				S	**Sn**	**09 51 02.3**	**-4.0**
	4.2nm,0.2s,SNR=7.9						
CCAN	**Las Canadas**	**5.35**	**214**	P	**Pn**	**09 50 07.7**	**+1.4**
	2.6nm,0.2s,SNR=7.9						
CCAN				S	**Sn**	**09 51 04.6**	**-3.5**
	SNR=7.9						
ZHG	**ZHG**	**5.60**	**81**	P		09 50 13.0	
TBT	**Taburiente**	**5.69**	**226**	P	**Pn**	**09 50 11.7**	**+0.9**
	1.9nm,0.2s,SNR=7.9						
TBT				S	Sn	09 51 11.5	-4.8
	4.9nm,0.2s,SNR=7.9						
EGOM	**La Gomera**	**5.70**	**218**	P	**Pn**	**09 50 11.7**	**+0.9**
	2.7nm,0.1s,SNR=6.1						
EGOM				S	**Sn**	**09 51 12.0**	**-4.3**
	13nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.70**	**38**	P	**Pn**	**09 50 12.2**	**+1.4**
	8.1nm,0.1s,SNR=24						
PFVI				S	Sn	09 51 11.0	-5.3
	13nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.70**	**38**⇑	*e*Pn	**Pn**	**09 50 12.3**	**+1.4**
PFVI				*e*Sn	Sn	09 51 10.2	-6.2
PFVI				A	A	09 51 18.7	
	11nm,0.3s						
PFVI	**Vila Bisbo**	**5.70**	**38**	P		09 50 12.0	
MORF	**Marmelete**	**5.92**	**38**	*e*P	**Pn**	**09 50 15.5**	**+1.5**
MORF				*e*S	Sn	09 51 16.1	-5.8
MORF				AML	AML	09 51 20.6	
	comp=E,33nm,0.2s						
MORF	**Marmelete**	**5.92**	**38**	P	**Pn**	**09 50 15.5**	**+1.5**
MORF				S	Sn	09 51 17.1	-4.9
	comp=E,18nm,0.1s						
MORF	**Marmelete**	**5.92**	**38**	*e*Pn	**Pn**	**09 50 15.5**	**+1.5**
MORF				*e*Sn	Sn	09 51 17.1	-4.9
MORF				A	A	09 51 24.4	
	comp=E,18nm,0.1s						
PTEO	**Sao Teotonio**	**6.07**	**36**	S	Sn	09 51 17.8	-7.6
	comp=E,6.3nm,0.2s						
PTEO	**Sao Teotonio**	**6.07**	**36**	*e*Sn	Sn	09 51 17.8	-7.6
PTEO				A	A	09 51 24.4	
	comp=E,13nm,0.2s						
PBDV	**Barranco-do-Ve**	**6.27**	**43**	P	**Pn**	**09 50 20.7**	**+1.9**
PBDV				S	Sn	09 51 25.4	-5.1
	comp=E,7.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**6.27**	**43**	*e*Pn	**Pn**	**09 50 20.7**	**+1.9**
PBDV				*e*Sn	Sn	09 51 25.4	-5.1
PBDV				A	A	09 51 35.8	
	comp=E,7.2nm,0.3s						
CTIG	**El Hierro**	**6.37**	**220**	P	**Pn**	**09 50 20.8**	**+0.6**
	comp=E,4.6nm,0.2s,SNR=7.9						
CTIG				S	**Sn**	**09 51 30.9**	**-2.1**
	comp=E,5.3nm,0.2s,SNR=4.0						
PCVE	**Castro Verde**	**6.49**	**40**	P	**Pn**	**09 50 23.6**	**+1.8**
PCVE				S	Sn	09 51 30.5	-5.4
	comp=E,8.1nm,0.3s						
PCVE	**Castro Verde**	**6.49**	**40**	*e*Pn	**Pn**	**09 50 23.6**	**+1.8**
PCVE				*e*Sn	Sn	09 51 30.5	-5.4
PCVE				A	A	09 51 36.2	
	comp=E,8.1nm,0.3s						
PVAQ	**Vaqueiros**	**6.50**	**43**	P	**Pn**	**09 50 23.8**	**+1.8**
PVAQ				S	Sn	09 51 31.5	-4.7
	comp=E,9.8nm,0.2s						
PVAQ	**Vaqueiros**	**6.50**	**43**	*e*Pn	**Pn**	**09 50 23.8**	**+1.8**
PVAQ				*e*Sn	Sn	09 51 31.5	-4.7
PVAQ				A	A	09 51 35.6	
	comp=E,9.8nm,0.2s						
PVAQ	**Vaqueiros**	**6.50**	**43**	P		09 50 23.8	
MESJ	**Messejana**	**6.55**	**38**	*e*P	**Pn**	**09 50 24.0**	**+1.4**
MESJ	**Messejana**	**6.55**	**38**	P	**Pn**	**09 50 24.0**	**+1.4**
PNCL	**Nicolau / Gran**	**6.61**	**34**	P	**Pn**	**09 50 24.6**	**+1.2**
PNCL				S	Sn	09 51 33.6	-5.1
	comp=E,6.9nm,0.1s						
PNCL	**Nicolau / Gran**	**6.61**	**34**	*e*Pn	**Pn**	**09 50 24.6**	**+1.2**
PNCL				*e*Sn	Sn	09 51 33.6	-5.1
PNCL				A	A	09 51 40.2	
	comp=E,6.9nm,0.1s						
EGRO	**El Granado**	**6.73**	**43**	P	**Pn**	**09 50 27.0**	**+1.9**
	comp=E,5.7nm,0.1s,SNR=40						
EGRO				S	**Sn**	**09 51 37.3**	**-4.5**
	comp=E,9.1nm,0.2s,SNR=7.9						
IFR	**Ifrane**	**6.87**	**81**	*e*P	Pn	09 50 27.1	0.0
IFR				*e*S	Sn	09 51 39.2	-6.2
PBEJ	**Beja**	**6.87**	**38**	P	**Pn**	**09 50 28.5**	**+1.5**
PBEJ				S	Sn	09 51 40.6	-4.7
	comp=E,2.2nm,0.1s						
PBEJ	**Beja**	**6.87**	**38**	*e*Pn	**Pn**	**09 50 28.5**	**+1.5**
PBEJ				*e*Sn	Sn	09 51 40.6	-4.7
PBEJ				A	A	09 51 43.5	
	comp=E,4.5nm,0.1s						
PMAFR	**Mafra**	**6.99**	**26**	P	**Pn**	**09 50 29.9**	**+1.2**
	comp=E,3.8nm,0.1s,SNR=7.9						
PMAFR				S	Sn	09 51 42.4	-5.9
	comp=E,16nm,0.1s,SNR=7.8						
PMAFR	**Mafra**	**6.99**	**26**	*e*Pn	**Pn**	**09 50 30.3**	**+1.6**
PMAFR				*e*Sn	Sn	09 51 42.6	-5.7
PMAFR				A	A	09 51 43.4	
	comp=E,16nm,0.2s						
EVO	**Evora**	**7.19**	**35**	P	**Pn**	**09 50 32.4**	**+1.0**
EVO				S	Sn	09 51 47.6	-5.4
	comp=E,14nm,0.1s						
EVO	**Evora**	**7.19**	**35**	*e*Pn	**Pn**	**09 50 32.4**	**+1.0**
EVO				*e*Sn	Sn	09 51 47.6	-5.4
EVO				A	A	09 51 52.1	
	comp=E,14nm,0.1s						
CEU	**Ceuta**	**7.25**	**62**	P	**Pn**	**09 50 36.7**	**+4.5**
CEU				S	Sn	09 51 49.6	-4.9
CEU	**Ceuta**	**7.25**	**62**	*e*P	**Pn**	**09 50 36.7**	**+4.5**
CEU				*e*S	Sn	09 51 49.6	-4.9
MDT	**Midelt**	**7.29**	**87**	P		09 50 36.7	
ESPR	**Espera**	**7.35**	**54**	P	**Pn**	**09 50 35.4**	**+1.8**
	comp=E,14nm,0.1s,SNR=63						
ESPR				S	**Sn**	**09 51 53.4**	**-3.7**
	comp=E,8.8nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.36**	**45**	P	**Pn**	**09 50 35.4**	**+1.6**
	comp=E,9.2nm,0.2s,SNR=56						
EMIN				S	Sn	09 51 51.8	-5.5
	comp=E,2.6nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**7.41**	**58**	P	**Pn**	**09 50 37.9**	**+3.4**
	SNR=7.9						
PMTG	**Montargil**	**7.52**	**31**	P	**Pn**	**09 50 37.0**	**+1.1**
PMTG				S	Sn	09 51 55.2	-6.1
	comp=E,4.4nm,0.2s						
PMTG	**Montargil**	**7.52**	**31**	*e*Pn	**Pn**	**09 50 37.0**	**+1.1**
PMTG				*e*Sn	Sn	09 51 55.2	-6.1
PMTG				A	A	09 52 00.2	
	comp=E,4.4nm,0.2s						
PESTR	**Estremoz**	**7.66**	**35**	*e*Pn	**Pn**	**09 50 38.7**	**+0.9**
PESTR				*e*Sn	Sn	09 51 57.9	-6.7
PESTR				A	A	09 52 06.2	
	comp=E,3.2nm,0.3s						
PSBE	**So Bento**	**7.67**	**27**	*e*Sn	**Sn**	**09 52 00.3**	**-4.6**
PVLZ	**Peæn de**	**7.83**	**69**	P	**Pn**	**09 50 43.5**	**+3.4**
PVLZ				S	Sn	09 52 02.5	-6.3
PVLZ	**Peæn de**	**7.83**	**69**	*e*P	**Pn**	**09 50 43.5**	**+3.4**
PVLZ				*e*S	Sn	09 52 02.5	-6.3
PMRV	**Marv??o**	**8.19**	**34**	P	**Pn**	**09 50 46.3**	**+1.1**
PMRV				S	Sn	09 52 09.8	-8.0
	comp=E,4.4nm,0.2s						
PMRV	**Marv??o**	**8.19**	**34**	*e*Pn	**Pn**	**09 50 46.3**	**+1.1**
PMRV				*e*Sn	Sn	09 52 09.8	-8.0
PMRV				A	A	09 52 15.6	
	comp=E,4.4nm,0.2s						
HORN	**Hornachuelos**	**8.29**	**50**	P		09 50 48.5	
EMAL	**Malaga-Limoner**	**8.30**	**59**	P	**Pn**	**09 50 49.3**	**+2.7**
EMAL				S	Sn	09 52 12.1	-8.4
EMAL	**Malaga-Limoner**	**8.30**	**59**	*e*P	**Pn**	**09 50 49.3**	**+2.7**
EMAL				*e*S	Sn	09 52 12.1	-8.4
ECAB	**El Cabril**	**8.32**	**48**	P	**Pn**	**09 50 48.9**	**+1.9**
	comp=E,3.4nm,0.1s,SNR=40						
ECAB				S	Sn	09 52 14.8	-6.2
	comp=E,1.7nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**8.69**	**57**	P	**Pn**	**09 50 55.1**	**+3.1**
	comp=E,2.6nm,0.2s,SNR=7.9						
EGOR				S	Sn	09 52 24.9	-5.2
	comp=E,1.9nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**8.91**	**50**	P	**Pn**	**09 50 56.9**	**+1.8**
	comp=E,5.6nm,0.2s,SNR=21						
EADA				S	Sn	09 52 28.7	-6.9
	comp=E,4.7nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**8.93**	**60**	P	**Pn**	**09 50 57.5**	**+2.2**
	comp=E,2.1nm,0.1s,SNR=4.0						
ELGU				S	Sn	09 52 29.8	-6.2
	comp=E,2.2nm,0.2s,SNR=7.9						
JBK	**JBK**	**9.07**	**77**	P		09 50 59.4	
EQUE	**Quentar**	**9.21**	**58**	P	**Pn**	**09 51 02.5**	**+3.3**
	comp=E,1.7nm,0.1s,SNR=15						
EQUE				S	Sn	09 52 36.1	-6.7
	comp=E,1.0nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**9.32**	**36**	P	**Pn**	**09 51 01.9**	**+1.3**
	comp=E,2.6nm,0.2s,SNR=5.8						
EPLA				S	Sn	09 52 36.7	-8.9
	comp=E,1.4nm,0.1s,SNR=7.9						
EBER	**Berja**	**9.48**	**61**	P	**Pn**	**09 51 04.5**	**+1.5**
	comp=E,1.4nm,0.2s,SNR=6.6						
EBER				S	Sn	09 52 41.0	-8.7
	comp=E,1.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**9.74**	**56**	S	Sn	09 52 49.7	-6.3
	comp=E,1.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**9.78**	**29**	P	**Pn**	**09 51 08.1**	**+1.2**
	comp=E,1.7nm,0.1s,SNR=7.9						
MVO				S	Sn	09 52 49.5	-7.2
	comp=E,1.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**9.78**	**29**	*e*Pn	**Pn**	**09 51 09.3**	**+2.4**
MVO				*e*Sn	Sn	09 52 49.7	-7.0
MVO				A	A	09 53 07.7	
	comp=E,2.6nm,0.6s						
PAB	**San Pablo**	**9.90**	**44**	P	**Pn**	**09 51 09.4**	**+0.7**
	comp=E,1.4nm,0.1s,SNR=7.9						
PAB				S	Sn	09 52 52.3	-7.5
	comp=E,0.5nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**10.01**	**23**	P	**Pn**	**09 51 10.8**	**+0.7**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB				S	Sn	09 52 53.5	-9.0
	comp=E,2.1nm,0.3s,SNR=5.2						
PGAV	**Gavieira, Arco**	**10.03**	**22**	P	**Pn**	**09 51 12.2**	**+1.8**
PGAV				S	Sn	09 52 54.9	-8.1
	comp=E,2.4nm,0.3s						
PGAV	**Gavieira, Arco**	**10.03**	**22**	*e*P	**Pn**	**09 51 12.2**	**+1.8**
PGAV				*e*S	Sn	09 52 54.9	-8.1
PGAV				A	A	09 53 00.4	
	comp=E,2.4nm,0.3s						
EZAM	**Zamans**	**10.07**	**20**	P	**Pn**	**09 51 13.0**	**+2.1**
	comp=E,0.6nm,0.1s,SNR=7.9						
EZAM				S	Sn	09 52 52.7	-11
	SNR=7.9						
ESDC	**Sonseca Array**	**10.21**	**45**	P	**Pn**	**09 51 14.7**	**+1.8**
	comp=E,1.4nm,0.2s,baz=229,slow=13,SNR=29						
ESDC				S	Sn	09 53 01.4	-6.0
	comp=E,1.6nm,0.4s,baz=232,slow=23,SNR=6.7						
SESP	**Santiago Espad**	**10.26**	**55**	P	**Pn**	**09 51 15.2**	**+1.7**
	comp=E,4.2nm,0.2s,SNR=7.9						
SESP				S	Sn	09 52 59.2	-9.5
	comp=E,2.8nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**10.26**	**55**	P		09 51 16.0	
ECAL	**Calabor**	**10.55**	**28**	P	**Pn**	**09 51 18.5**	**+1.0**
	comp=E,1.1nm,0.2s,SNR=4.0						
ECAL				S	Sn	09 53 07.1	-8.7
	comp=E,2.0nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**10.75**	**40**	P	**Pn**	**09 51 21.6**	**+1.3**
	comp=E,2.0nm,0.2s,SNR=7.9						
GUD				S	Sn	09 53 14.3	-6.4
	comp=E,1.0nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**10.85**	**21**	P	**Pn**	**09 51 21.9**	**+0.4**

	comp=E,0.4nm,0.1s,SNR=7.9						
EAGO				S	Sn	09 53 12.0	-11
	comp=E,1.3nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**11.04**	**44**	S	Sn	09 53 20.3	-7.4
UCM	**Universidad Co**	**11.04**	**44**	*e*P	Pn	09 51 15.3	-8.9
UCM				*e*S	Sn	09 53 20.3	-7.4
EMUR	**La Murta**	**11.06**	**59**	P	**Pn**	**09 51 26.5**	**+2.0**
	comp=E,1.3nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**11.19**	**55**	P	**Pn**	**09 51 27.5**	**+1.1**
	comp=E,2.3nm,0.1s,SNR=17						
ETOB				S	Sn	09 53 23.8	-7.8
	comp=E,1.5nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**11.61**	**23**	P	**Pn**	**09 51 32.8**	**+0.8**
	comp=E,0.1nm,0.3s,SNR=7.9						
EPON				S	Sn	09 53 31.6	-10
	comp=E,1.0nm,0.3s,SNR=7.9						
ETOR	**Torete**	**12.06**	**45**	P	**Pn**	**09 51 39.9**	**+1.7**
	comp=E,9.9nm,0.3s,SNR=13						
ETOR				S	Sn	09 53 44.6	-8.3
	comp=E,2.1nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**12.30**	**29**	P	**Pn**	**09 51 45.7**	**+4.2**
	comp=E,0.0nm,0.1s,SNR=7.9						
EARI				S	Sn	09 53 51.4	-7.2
	comp=E,0.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**12.78**	**50**	P	**Pn**	**09 51 51.6**	**+3.4**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMOS				S	Sn	09 54 03.2	-7.4
	comp=E,0.5nm,0.4s,SNR=7.9						
ECHI	**Chisagues Biel**	**14.53**	**43**	P	**Pn**	**09 52 14.4**	**+2.4**
	comp=E,0.1nm,0.1s,SNR=7.9						

ANF ***06*** *09:49:14.8±0.1, 34°.29N×116°.45W, h13^{km}±1^{km}, ML2.9/27, Error ellipse: s-maj=0.8km s-min=0.7km az=61.0*

PAS ***06*** *09:49:15.9±1.1, 34°.302N±0°.009×116°.448W±0°.010, h9^{km}±5^{km}, ML3.0/154, ML2.7/48(NEIC), Error ellipse: s-maj=1.3km s-min=1.3km az=203.0*

SCEDC ***06*** *09:49:15.9, 34°.30N×116°.45W, h4^{km}*

NEIC ***06*** *09:49:15.5±1.1, 34°.300N±0°.008×116°.46W±0°.01, h5^{km}±6^{km}, Error ellipse: s-maj=1.5km s-min=1.2km az=63.0*

ISC 06 09:49:15.0±0.9**, 34°.29N**±0°.01×**116°.45W**±0°.01**, h15**^{km}±8^{km}**, n128, σ0^{s}.62**/182**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EW2	**E Wide Canyon**	**0.35**	**174**		**Pb**	**09 49 22.8**	**-0.1**
EW2					**Sb**	**09 49 28.0**	**-0.2**
DEVC	**Devers**	**0.36**	**197**		**Pb**	**09 49 23.4**	**+0.2**
DEVC					**Sb**	**09 49 28.8**	**+0.1**
TPC	**Twentynine Pal**	**0.38**	**118**		**Pb**	**09 49 23.3**	**-0.2**
BBRC	**Big Bear Solar**	**0.39**	**267**	P	**Pb**	**09 49 23.3**	**-0.4**
	baz=84,SNR=299						
BBRC				S	**Sg**	**09 49 28.6**	**+0.2**
	baz=84						
BBRC	**Big Bear Solar**	**0.39**	**267**		**Pb**	**09 49 23.4**	**-0.4**
BBRC					**Sg**	**09 49 28.8**	**+0.4**
BTL	**Butler Peak**	**0.46**	**267**		**Pb**	**09 49 24.7**	**-0.2**
BTL					**Sg**	**09 49 30.9**	**+0.4**
BELC	**Belle Mtn. Jos**	**0.47**	**127**	P	**Pb**	**09 49 24.9**	**-0.2**
	baz=309,SNR=267						
BELC				S	**Sg**	**09 49 31.2**	**+0.4**
	baz=309						
BELC	**Belle Mtn. Jos**	**0.47**	**127**		**Pb**	**09 49 24.9**	**-0.2**
BELC					**Sb**	**09 49 31.8**	**-0.1**
HEC	**Hector,Ludlow**	**0.55**	**10**	P	**Pg**	**09 49 25.9**	**0.0**
	baz=190,SNR=97						
HEC				S	**Sg**	**09 49 33.4**	**+0.1**
	baz=190						
HEC	**Hector,Ludlow**	**0.55**	**10**		**Pg**	**09 49 25.9**	**0.0**
HEC					**Sg**	**09 49 32.8**	**-0.5**
SVD	**Seven Oaks Dam**	**0.56**	**252**		**Pb**	**09 49 26.4**	**-0.2**
SVD					**Sb**	**09 49 34.2**	**-0.3**
BBSC	**Beaumont Base**	**0.57**	**231**		**Pb**	**09 49 27.0**	**+0.3**
CFT	**Crafton Hills**	**0.60**	**246**		**Pb**	**09 49 27.3**	**+0.1**
CFT					**Sb**	**09 49 35.6**	**0.0**
PMD	**Palm Desert**	**0.64**	**174**		**Pb**	**09 49 27.7**	**-0.1**
PMD					**Sb**	**09 49 36.7**	**+0.1**
GVDA	**Garner Valley**	**0.64**	**197**		**Pb**	**09 49 27.9**	**-0.1**
PFO	**Pinyon Flats O**	**0.67**	**181**	P	**Pb**	**09 49 28.4**	**-0.1**
	baz=0.6,SNR=86						
PFO				S	**Sb**	**09 49 37.5**	**-0.2**
	baz=0.6						
PFO	**Pinyon Flats O**	**0.67**	**181**		**Pb**	**09 49 28.4**	**-0.1**
PFO					**Sb**	**09 49 37.9**	**+0.3**
PFO	**Pinyon Flats O**	**0.67**	**181**	Pg	**Pb**	**09 49 28.4**	**-0.1**
PFO				IAML		09 49 38.1	
	287nm,0.2s						
PFO				IAML		09 49 41.8	
	290nm,0.2s						
XPFO	**Pion Flat**	**0.67**	**180**		**Pb**	**09 49 28.4**	**-0.1**
XPFO					**Sb**	**09 49 37.6**	**-0.1**
PEC	**Perris**	**0.71**	**236**		**Pb**	**09 49 29.1**	**+0.1**
CFSC	**Central Fire S**	**0.71**	**256**		**Pb**	**09 49 29.6**	**+0.5**
POB	**Polly Butte**	**0.71**	**213**		**Pb**	**09 49 29.3**	**+0.1**
POB					**Sb**	**09 49 38.9**	**+0.1**
DNR	**Dunn Ranch,Anz**	**0.73**	**192**		**Pb**	**09 49 29.7**	**+0.2**
DNR					**Sb**	**09 49 40.1**	**+0.7**
HMTC	**Hemet**	**0.74**	**219**		**Pb**	**09 49 29.6**	**+0.1**
HMTC					**Sb**	**09 49 39.5**	**+0.1**
CTCC	**Cactus City**	**0.74**	**148**		**Pb**	**09 49 30.1**	**+0.5**
CTCC					**Sb**	**09 49 40.0**	**+0.6**
RRX	**Edison Barstow**	**0.74**	**323**	P	**Pb**	**09 49 29.5**	**-0.1**
	baz=142,SNR=17						
RRX				S	**Sb**	**09 49 39.5**	**0.0**
	baz=142						
RRX	**Edison Barstow**	**0.74**	**323**		**Pb**	**09 49 29.6**	**-0.1**
RRX					**Sb**	**09 49 39.8**	**+0.3**
SNDA	**J Saunders Pla**	**0.74**	**190**		**Pb**	**09 49 29.9**	**+0.2**
SNDA					**Sb**	**09 49 39.9**	**+0.2**
CRY	**Cary Ranch**	**0.76**	**198**		**Pb**	**09 49 30.0**	**+0.1**
CRY					**Sb**	**09 49 40.4**	**+0.4**
CTW	**Cottonwood Mou**	**0.78**	**141**		**Pn**	**09 49 30.8**	**-0.6**
CTW					**Sb**	**09 49 41.2**	**+0.7**
VTV	**Victorville**	**0.78**	**291**		**Pb**	**09 49 30.0**	**-0.2**
VTV					**Sb**	**09 49 40.4**	**-0.2**
RSBC	**Riverside Bore**	**0.79**	**247**		**Pb**	**09 49 30.9**	**+0.4**
RSBC					**Sb**	**09 49 41.1**	**+0.2**
FRD	**Ford Ranch, An**	**0.80**	**189**		**Pb**	**09 49 30.8**	**+0.2**
FRD					**Sb**	**09 49 41.6**	**+0.3**
FRD	**Ford Ranch, An**	**0.80**	**189**		**Pb**	**09 49 30.8**	**+0.2**
FRD					**Sb**	**09 49 41.6**	**+0.3**
BZNA	**Buzz No.'s Pla**	**0.81**	**193**		**Pb**	**09 49 31.2**	**+0.3**
BZNA					**Sb**	**09 49 42.1**	**+0.5**
RVR	**Riverside**	**0.82**	**249**		**Pb**	**09 49 30.9**	**0.0**
GMRC	**Granite Mounta**	**0.82**	**52**	P	**Pg**	**09 49 30.6**	**-0.3**
	baz=234,SNR=95						
GMRC				S	**Sb**	**09 49 41.7**	**-0.3**
	baz=234						
GMRC	**Granite Mounta**	**0.82**	**52**		**Pg**	**09 49 30.7**	**-0.3**
GMRC					**Sb**	**09 49 41.9**	**-0.2**
BACC	**Bachelor Mtn.**	**0.83**	**216**		**Pb**	**09 49 31.2**	**+0.1**
BACC					**Sb**	**09 49 42.3**	**+0.2**
ADO	**Adelanto Recei**	**0.85**	**288**		**Pb**	**09 49 31.8**	**+0.2**
HAY	**Hayfield**	**0.86**	**132**		**Pn**	**09 49 32.6**	**0.0**
SS2	**San Sevaine**	**0.87**	**265**		**Pb**	**09 49 32.1**	**+0.3**
SME	**Santa Rosa Min**	**0.88**	**239**		**Pb**	**09 49 32.0**	**0.0**
SME					**Sb**	**09 49 43.7**	**+0.1**
DSCC	**Desert Studies**	**0.90**	**18**		**Pg**	**09 49 32.1**	**-0.3**
DSCC					**Sn**	**09 49 45.3**	**-0.6**
MURC	**Murrieta**	**0.92**	**222**	P	**Pb**	**09 49 32.8**	**+0.2**
	baz=41,SNR=87						
MURC				S	**Sb**	**09 49 45.2**	**+0.4**
	baz=41						
MURC	**Murrieta**	**0.92**	**222**		**Pb**	**09 49 32.8**	**+0.2**
MURC					**Sb**	**09 49 45.1**	**+0.4**
DANC	**Danby, Needles**	**0.95**	**68**		**Pb**	**09 49 33.5**	**+0.3**
DANC					**Sn**	**09 49 46.6**	**-0.6**
MLSC	**Mira Loma**	**0.96**	**253**		**Pg**	**09 49 33.4**	**-0.2**
MLSC					**Sb**	**09 49 46.5**	**+0.6**
PLM	**Palomar**	**0.99**	**200**		**Pn**	**09 49 34.3**	**-0.2**
BFSC	**Mount Baldy Ra**	**1.00**	**268**	P	**Pb**	**09 49 34.1**	**0.0**
	baz=86,SNR=90						
BFSC				S	**Sb**	**09 49 47.6**	**+0.5**
	baz=86						
BFSC	**Mount Baldy Ra**	**1.00**	**268**		**Pb**	**09 49 34.0**	**0.0**
BFSC					**Sb**	**09 49 47.9**	**+0.8**
BORC	**Borrego Spring**	**1.01**	**178**		**Pn**	**09 49 34.6**	**0.0**
ELS	**Elsinore Mount**	**1.03**	**232**		**Pb**	**09 49 34.6**	**0.0**
ELS					**Sb**	**09 49 48.1**	**+0.2**
SSK	**Sunset Peak**	**1.03**	**266**		**Pg**	**09 49 34.8**	**-0.2**
BC3	**Big Chuckawall**	**1.04**	**127**	P	**Pg**	**09 49 34.9**	**-0.2**
	baz=308,SNR=55						
BC3				S	**Sn**	**09 49 49.3**	**-0.2**
	baz=308						
BC3	**Big Chuckawall**	**1.04**	**127**		**Pn**	**09 49 35.3**	**+0.2**
GSC	**Goldstone, Bar**	**1.05**	**344**	P	**Pg**	**09 49 35.0**	**-0.4**
	baz=164,SNR=69						
GSC				S	**Sg**	**09 49 49.2**	**0.0**
	baz=164						
GSC	**Goldstone, Bar**	**1.05**	**344**		**Pg**	**09 49 35.2**	**-0.2**
GSC	**Goldstone, Bar**	**1.05**	**344**		**Pn**	**09 49 35.5**	**+0.2**
GSC				IAML		09 49 51.7	
	comp=N,197nm,0.3s						
GSC				IAML		09 49 52.1	
	comp=E,453nm,0.4s						
CHNC	**Chino**	**1.06**	**255**		**Pn**	**09 49 35.4**	**+0.1**
HYS	**Haystack Butte**	**1.09**	**302**		**Pb**	**09 49 35.5**	**-0.1**
HYS					**Sg**	**09 49 49.9**	**-0.3**
IRM	**Iron Mountain**	**1.09**	**96**	P	**Pb**	**09 49 35.1**	**-0.5**
	baz=278,SNR=116						
IRM				S	**Sg**	**09 49 50.3**	**0.0**
	baz=278						
IRM	**Iron Mountain**	**1.09**	**96**		**Pb**	**09 49 35.5**	**-0.1**
MATG	**Mataguay Scout**	**1.10**	**189**		**Pn**	**09 49 36.3**	**+0.4**
SLH	**Sleepy Hollow**	**1.10**	**171**		**Pg**	**09 49 36.4**	**+0.1**
FRK	**Frink**	**1.11**	**142**		**Pb**	**09 49 35.5**	**-0.4**
PSRC	**Puddingstone R**	**1.14**	**261**		**Pg**	**09 49 36.8**	**-0.2**
XTL	**Crystal Lake,**	**1.17**	**271**		**Pn**	**09 49 37.1**	**+0.2**
PEM	**Pine Mountain**	**1.18**	**265**		**Pg**	**09 49 37.4**	**-0.3**
TUQ	**Turquoise Moun**	**1.23**	**21**		**Pb**	**09 49 38.0**	**+0.1**
JNH	**Juniper Hills**	**1.25**	**278**		**Pb**	**09 49 38.6**	**+0.2**
GORC	**Green Oak Ranc**	**1.30**	**210**		**Pb**	**09 49 39.1**	**-0.1**
CHFC	**Chilao Flat St**	**1.30**	**273**		**Pb**	**09 49 39.4**	**+0.1**
LRRC	**Littlerock Res**	**1.32**	**281**		**Pb**	**09 49 39.8**	**+0.3**
HWB	**Hans Werner Br**	**1.33**	**199**		**Pb**	**09 49 39.7**	**+0.1**
MWC	**Mount Wilson**	**1.33**	**268**		**Pg**	**09 49 40.3**	**-0.3**
DPP	**Dos Picos Cty**	**1.35**	**198**		**Pb**	**09 49 40.0**	**+0.1**
MONP2	**Monument Peak**	**1.39**	**179**	P	**Pb**	**09 49 40.5**	**-0.2**
	baz=359,SNR=19						
MONP2				Sb	**Sg**	**09 49 59.9**	**0.0**
	baz=359						
MONP2	**Monument Peak**	**1.39**	**179**		**Pg**	**09 49 41.9**	**+0.2**
EDW2	**Edwards Air Fo**	**1.40**	**295**	P	**Pn**	**09 49 39.7**	**-0.4**
	baz=114						
EDW2				S	**Sb**	**09 49 59.1**	**+0.4**
	baz=114						
EDW2	**Edwards Air Fo**	**1.40**	**295**		**Pg**	**09 49 41.3**	**-0.7**
CJV	**Casa Juvan**	**1.42**	**280**		**Pg**	**09 49 41.8**	**-0.6**
PASC	**Pasadena Art C**	**1.44**	**266**		**Pg**	**09 49 42.1**	**-0.6**
PASC				IAML		09 50 03.5	
	comp=E,131nm,0.4s						
SWSC	**Sam W. Stewart**	**1.44**	**158**	P	**Pn**	**09 49 40.2**	**-0.4**
	baz=338						
CCCA	**Chr Cany lake**	**1.45**	**329**		**Pg**	**09 49 42.9**	**+0.1**
109C	**Camp Elliot, M**	**1.50**	**202**	P	**Pb**	**09 49 42.2**	**-0.3**
	baz=21,SNR=13						
109C				S	**Sb**	**09 50 01.6**	**+0.3**
	baz=21						
109C	**Camp Elliot, M**	**1.50**	**202**		**Pb**	**09 49 42.4**	**-0.1**
CPE	**Camp Elliot**	**1.50**	**202**		**Pb**	**09 49 42.4**	**-0.1**
DTP	**Desert Tortois**	**1.51**	**311**		**Pg**	**09 49 43.5**	**-0.5**
CCAC	**Calif City Air**	**1.55**	**304**		**Pg**	**09 49 44.5**	**-0.3**
DECC	**Green Verdugo**	**1.56**	**269**	Pg	**Pg**	**09 49 44.4**	**-0.6**
	baz=88						
DECC				Sb	**Sg**	**09 50 04.8**	**-0.4**
	baz=88						
DECC	**Green Verdugo**	**1.56**	**269**		**Pg**	**09 49 44.4**	**-0.6**
LRMC	**Laurel Mtn Rad**	**1.56**	**320**	P	**Pn**	**09 49 42.3**	**-0.1**
	baz=139,SNR=11						
LRMC				Sb	**Sg**	**09 50 04.9**	**-0.5**
	baz=139						
TPO	**Tropico Hills**	**1.58**	**292**		**Pg**	**09 49 44.6**	**-0.8**
NEE2	**Needles Airpor**	**1.59**	**72**	P	**Pn**	**09 49 42.4**	**-0.1**
	baz=253,SNR=26						
NEE2				Sb	**Sg**	**09 50 05.3**	**-0.9**
	baz=253						
NEE2	**Needles Airpor**	**1.59**	**72**		**Pg**	**09 49 44.7**	**-0.8**
SDRC	**San Diego Road**	**1.60**	**195**		**Pb**	**09 49 44.2**	**0.0**
BAR	**Barrett**	**1.61**	**187**	Pn	**Pn**	**09 49 43.6**	**+0.6**
SHOC	**Shoshone, Teco**	**1.62**	**5**	Pg	**Pg**	**09 49 45.6**	**-0.5**
	baz=185						
SHOC				Sb	**Sg**	**09 50 06.6**	**-0.5**
	baz=185						
FMP	**Fort Macarthur**	**1.63**	**250**	Pg	**Pg**	**09 49 46.3**	**-0.1**
	baz=68						
FMP				Sb	**Sg**	**09 50 06.6**	**-1.0**
	baz=68						
IKP	**In-Ko-Pah, Jac**	**1.66**	**170**	P	**Pn**	**09 49 43.8**	**+0.3**
	baz=350						
IKP	**In-Ko-Pah, Jac**	**1.66**	**170**		**Pn**	**09 49 43.9**	**+0.3**
OSI	**Osito Audit: C**	**1.91**	**281**	Pb	**Pb**	**09 49 49.9**	**+0.4**
	baz=99						
OSI	**Osito Audit: C**	**1.91**	**281**		**Pb**	**09 49 49.5**	**+0.1**
OSI				IAML		09 50 20.3	
	comp=E,55nm,0.5s						
OSI				IAML		09 50 20.7	
	comp=N,70nm,0.6s						
PDMCI	**Parker Dam,Lak**	**1.91**	**89**	Pb	**Pb**	**09 49 50.0**	**+0.5**
	baz=270						
MPMC	**Manual Prospec**	**1.96**	**335**	P	**Pn**	**09 49 47.8**	**-0.1**
	baz=154						
MPMC				Sb	**Sg**	**09 50 16.8**	**-1.4**
	baz=154						
CBX	**Cerro Bola**	**1.98**	**185**		**Pb**	**09 49 49.9**	**-0.8**
CBX				IAML		09 50 18.2	
	comp=E,63nm,0.2s						
ARVC	**Arvin**	**2.13**	**294**	Pb	**Pb**	**09 49 54.0**	**+0.7**
	baz=112						
ISA	**Isabella, Lake**	**2.15**	**310**	P	**Pn**	**09 49 50.5**	**+0.1**
	baz=129						
ISA	**Isabella, Lake**	**2.15**	**310**		**Pb**	**09 49 52.6**	**-1.2**
ISA				IAML		09 50 25.4	
	comp=E,38nm,0.5s						
SCI2	**San Clemente I**	**2.18**	**234**	Sb	**Sb**	**09 50 22.5**	**+1.5**
	baz=52						
W13A	**Hualapai Mount**	**2.27**	**68**	Pn	**Pb**	**09 49 55.8**	**+0.1**
W13A				IAML		09 50 31.5	
	comp=N,44nm,0.5s						
ESJX	**Sierra Juarez**	**2.31**	**169**		**Pn**	**09 49 53.0**	**+0.3**
ESJX				IAML		09 50 28.7	
	comp=E,35nm,0.2s						
CCX	**Cicese**	**2.42**	**184**		**Pb**	**09 49 56.3**	**-1.9**
CCX				IAML		09 50 38.8	
	comp=E,29nm,0.6s						
SHPR	**Sheep Range**	**2.45**	**25**		**Pn**	**09 49 56.3**	**+1.7**
CWC	**Cottonwood Cre**	**2.53**	**329**	Pg	**Pg**	**09 50 02.9**	**-0.6**
	baz=148						
TPNV	**Topopah Spring**	**2.66**	**3**		**Pn**	**09 49 59.7**	**+2.2**
TPNV				IAML		09 50 41.7	
	comp=E,28nm,0.5s						
TPNV				IAML		09 50 42.2	
	comp=E,25nm,0.8s						
113A	**Mohawk Valley,**	**2.71**	**123**		**Pn**	**09 49 58.9**	**+1.0**
PRN	**Pahroc Range**	**3.32**	**20**		**Pn**	**09 50 07.9**	**+1.5**
PRN				IAML		09 51 08.9	
	comp=N,20nm,0.8s						
PRN				IAML		09 51 17.6	
	comp=E,21nm,4.4s						
LCMT	**Little Creek M**	**3.77**	**43**		**Pn**	**09 50 13.9**	**+1.2**
MDPB	**Devils Postpil**	**3.96**	**328**		**Pn**	**09 50 17.9**	**+2.5**
MDPB				IAML		09 51 35.0	
	comp=N,10nm,4.9s						
U15A	**North Rim**	**4.02**	**57**		**Pn**	**09 50 17.4**	**+1.2**
KNB	**Kanab**	**4.02**	**46**	Pn	**Pn**	**09 50 16.7**	**+0.5**
CCUT	**Cedar City**	**4.11**	**37**	Pn	**Pn**	**09 50 21.6**	**+4.1**
X16A	**Lo Mia Camp, P**	**4.15**	**87**	Pn	**Pn**	**09 50 18.2**	**+0.3**
X16A				IAML		09 51 36.7	
	comp=E,8.1nm,4.8s						
X16A				IAML		09 51 38.1	
	comp=N,10nm,4.8s						
WUAZ	**Wupatki**	**4.35**	**72**		**Pn**	**09 50 22.7**	**+2.0**
WUAZ				IAML		09 51 21.3	
	comp=N,12nm,4.9s						
WUAZ				IAML		09 51 53.1	
	comp=N,10.0nm,4.8s						
PSUT	**Pine Spring**	**4.73**	**26**		**Pn**	**09 50 25.7**	**-0.3**
MVU	**Marysvale**	**5.42**	**38**		**Pn**	**09 50 34.8**	**-0.8**

NEIC ***06*** *09:56:56.9±1.5, 38°.46N±0°.02×119°.21W±0°.03, h1^{km}±9^{km}, Error ellipse: s-maj=4.0km s-min=2.5km az=57.0*

REN ***06*** *09:56:56.7±2.6, 38°.44N±0°.03×119°.26W±0°.04, h12^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=46.0*

NCEDC ***06*** *09:56:56.9±2.6, 38°.44N±0°.02×119°.26W±0°.04, h11^{km}±6^{km}, ML3.2/28, ML3.1/14(REN), ML3.0/72(NEIC), Error ellipse: s-maj=4.8km s-min=2.4km az=67.0*

ANF ***06*** *09:56:57.2±0.5, 38°.47N×119°.10W, h0^{km}, ML3.4/11, Error ellipse: s-maj=6.8km s-min=3.7km az=69.0*

ISC 06 09:56:56.6±1.2**, 38°.43N**±0°.02×**119°.27W**±0°.02**, h4**^{km}±13^{km}**, n84, σ1^{s}.12**/89**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAKR	**Walker**	**0.15**	**299**		**Pg**	**09 57 00.6**	**+1.0**
WAKR				IAML		09 57 03.5	
	comp=E,3µm,0.9s						
WAKR				IAML		09 57 06.5	
	comp=N,3µm,0.4s						
LUL	**Lundy Lake**	**0.39**	**169**		**Pg**	**09 57 04.9**	**+0.9**
RYN	**Ryan**	**0.62**	**71**	Pg	**Pg**	**09 57 09.0**	**+0.6**
RYN				IAML		09 57 19.1	
	comp=N,1µm,0.4s						
LHV	**Little Huntoon**	**0.63**	**106**		**Pg**	**09 57 09.4**	**+0.7**
LHV				IAML		09 57 19.3	
	comp=N,823nm,0.3s						
LHV				IAML		09 57 19.4	
	comp=E,814nm,0.3s						
PNTR	**Pine Nut**	**0.71**	**339**		**Pg**	**09 57 10.5**	**+0.3**
PNTR				IAML		09 57 20.7	
	comp=N,657nm,0.6s						
PNTR				IAML		09 57 22.8	
	comp=E,851nm,0.8s						
MDCM	**Deadman Creek**	**0.74**	**166**		**Pg**	**09 57 11.2**	**+0.4**
MDPB	**Devils Postpil**	**0.81**	**169**		**Pg**	**09 57 12.3**	**+0.2**
MDPB				IAML		09 57 23.5	
	comp=N,594nm,0.2s						
MDPB				IAML		09 57 24.6	
	comp=E,854nm,0.2s						
OMMB	**Old Mammoth Mi**	**0.84**	**165**	Pg	**Pg**	**09 57 13.1**	**+0.3**
OMMB				IAML		09 57 24.7	
	comp=N,792nm,0.2s						
MRDM	**Red Cones**	**0.85**	**169**		**Pg**	**09 57 13.2**	**+0.4**
MDRNC	**Doe Ridge**	**0.86**	**156**		**Pg**	**09 57 13.6**	**+0.5**
MLAC	**Mammoth, Mammo**	**0.87**	**157**	P	**Pg**	**09 57 13.7**	**+0.5**
	baz=338						
MLAC				S	**Sb**	**09 57 26.2**	**-0.3**
	baz=338						
NV11	**Mina Array Sit**	**0.88**	**90**		**Pg**	**09 57 11.8**	**-1.5**
BONR	**Boundary Peak**	**0.90**	**122**		**Pg**	**09 57 14.4**	**+0.6**
BENR	**Benton**	**0.90**	**142**		**Pg**	**09 57 14.1**	**+0.2**
VCNR	**Virginia City**	**0.91**	**341**		**Pg**	**09 57 14.2**	**+0.1**
RUBR	**Rubicon Trail**	**0.93**	**312**		**Pg**	**09 57 14.7**	**+0.3**
RUBR				IAML		09 57 28.3	
	comp=N,340nm,0.6s						
RUBR				IAML		09 57 29.3	
	comp=E,588nm,0.5s						
ORC	**Owens River**	**0.93**	**148**		**Pg**	**09 57 14.7**	**+0.3**
CMB	**Columbia Colle**	**0.96**	**246**		**Pg**	**09 57 14.9**	**-0.1**
CMB				IAML		09 57 28.1	
	comp=N,699nm,0.4s						
CMB				IAML		09 57 28.5	
	comp=E,688nm,0.3s						
CMB	**Columbia Colle**	**0.96**	**246**		**Sg**	**09 57 27.6**	**+0.1**
RCCR	**Rock Creek Can**	**1.04**	**155**		**Pg**	**09 57 16.6**	**+0.1**
MLNR	**Milner Canyon**	**1.11**	**138**		**Pb**	**09 57 18.0**	**-0.5**
VPK	**Verdi Peak**	**1.20**	**330**		**Pb**	**09 57 19.6**	**-0.5**
MTUM	**Tungsten Hills**	**1.21**	**152**		**Pn**	**09 57 19.8**	**-0.7**
PAHR	**Pah Rah Range**	**1.28**	**356**		**Pn**	**09 57 20.7**	**-0.6**
PAHR				IAML		09 57 40.9	
	comp=E,165nm,0.9s						
IND	**Independence**	**1.28**	**322**		**Pb**	**09 57 21.1**	**-0.3**
PEAR	**Peavine Mounta**	**1.29**	**336**		**Pb**	**09 57 21.3**	**-0.3**
KBF	**Kyburz Flat**	**1.30**	**326**		**Pb**	**09 57 21.4**	**-0.3**
POCCA	**Poleta Canyon**	**1.32**	**143**		**Pn**	**09 57 21.5**	**-0.5**
AFDM	**Forest Hills D**	**1.43**	**292**		**Pn**	**09 57 23.2**	**-0.1**
LOY	**Loyalton**	**1.44**	**329**		**Pb**	**09 57 23.5**	**-0.5**
TIN	**Tinemaha, Big**	**1.60**	**149**	S	**Sg**	**09 57 49.5**	**+1.4**
	baz=330						
TPH	**Tonopah**	**1.65**	**102**		**Pn**	**09 57 26.1**	**-0.4**
BEKR	**Beckworth**	**1.67**	**330**		**Pb**	**09 57 27.6**	**-0.3**
BEKR				IAML		09 57 50.9	
	comp=N,131nm,0.6s						
HELL	**Mitchell Peak,**	**1.76**	**173**		**Pb**	**09 57 28.8**	**-0.6**
ORV	**Oroville**	**2.07**	**304**		**Pn**	**09 57 32.9**	**+0.8**
GRAC	**Grapevine Rang**	**2.08**	**133**	Pg	**Pg**	**09 57 36.2**	**-0.2**
	baz=314						
BDM	**Black Diamond**	**2.10**	**258**		**Pb**	**09 57 34.4**	**-0.8**
VOG	**Valley Oaks Go**	**2.11**	**182**	P	**Pb**	**09 57 35.2**	**-0.1**
	baz=2.6						
VOG				S	**Sg**	**09 58 03.3**	**-1.0**
	baz=2.6						
SUTB	**Sutter Butte**	**2.12**	**293**		**Pb**	**09 57 35.5**	**-0.1**
WENL	**Wente Vineyard**	**2.12**	**248**		**Pb**	**09 57 35.8**	**+0.2**
PACP	**Pacheco Peak**	**2.14**	**229**		**Pn**	**09 57 34.2**	**+1.1**
MHC	**Mount Hamilton**	**2.17**	**241**		**Pb**	**09 57 35.1**	**-1.3**
GHS	**Gilroy Hot Spr**	**2.18**	**233**		**Pb**	**09 57 35.0**	**-1.6**
CWC	**Cottonwood Cre**	**2.20**	**154**	Pb	**Pb**	**09 57 37.8**	**+0.7**
	baz=335						
CWC				Sb	**Sg**	**09 58 07.3**	**0.0**
	baz=335						
HFEM	**San Felipe**	**2.22**	**230**		**Pb**	**09 57 35.6**	**-1.7**
BLRM	**Lewis Ranch**	**2.37**	**223**		**Pb**	**09 57 38.0**	**-1.8**
BKS	**Berkeley--Byer**	**2.40**	**258**		**Pb**	**09 57 38.5**	**-1.8**
VAK	**Adit at Lawren**	**2.41**	**258**		**Pb**	**09 57 40.0**	**-0.6**
LRV	**Little Rabbit**	**2.44**	**215**		**Pb**	**09 57 39.1**	**-1.9**
SCZ	**Santa Cruz**	**2.49**	**223**		**Pn**	**09 57 38.8**	**+0.9**
CVS	**Carmenet Viney**	**2.51**	**269**		**Pb**	**09 57 40.6**	**-1.6**
MNRC	**McLaughlin Min**	**2.52**	**281**		**Pb**	**09 57 40.6**	**-1.9**
PMPB	**Monarch Peak**	**2.52**	**209**		**Pb**	**09 57 41.1**	**-1.4**
BJCM	**Johnson Can.**	**2.53**	**223**		**Pn**	**09 57 39.2**	**+0.9**
VES	**Vestal, Richgr**	**2.59**	**177**	S	**Sb**	**09 58 17.1**	**+1.4**
	baz=357						
PKD	**Bear Valley Ra**	**2.68**	**203**		**Pb**	**09 57 43.5**	**-1.6**
O03E	**Paynes Creek**	**2.70**	**314**	P	**Pn**	**09 57 42.4**	**+1.5**
	baz=132						
GDXM	**Geysers**	**2.79**	**279**		**Pb**	**09 57 44.4**	**-2.6**
PAGB	**Antelope Grade**	**2.81**	**196**		**Pn**	**09 57 41.8**	**-0.4**
PAGB				IAML		09 58 28.3	
	comp=N,71nm,0.7s						
PAGB				IAML		09 58 28.9	
	comp=E,73nm,0.5s						
TPNV	**Topopah Spring**	**2.82**	**121**	P	**Pn**	**09 57 42.6**	**+0.1**
	baz=303						
TPNV	**Topopah Spring**	**2.82**	**121**		**Pn**	**09 57 42.7**	**+0.1**
TPNV				IAML		09 58 34.5	
	comp=E,32nm,0.8s						
TPNV				IAML		09 58 39.2	
	comp=E,57nm,1.6s						
ISA	**Isabella, Lake**	**2.84**	**167**	Pb	**Pb**	**09 57 48.5**	**+0.7**
	baz=348						
ISA				Sb	**Sb**	**09 58 25.2**	**+2.3**
	baz=348						
ISA	**Isabella, Lake**	**2.84**	**167**		**Pb**	**09 57 46.0**	**-1.7**
R11A	**Troy Canyon, C**	**2.90**	**90**	P	**Pn**	**09 57 43.1**	**-0.6**
	baz=273						
R11A				Sb	**Sg**	**09 58 27.5**	**-2.2**
	baz=273						
R11A	**Troy Canyon, C**	**2.90**	**90**		**Pn**	**09 57 44.4**	**+0.7**
R11A				IAML		09 58 28.6	
	comp=N,31nm,1.2s						
SMMC	**Simmler**	**3.17**	**191**	P	**Pb**	**09 57 50.3**	**-3.1**
	baz=10						
WDC	**Whiskeytown Da**	**3.32**	**311**		**Pn**	**09 57 50.9**	**+1.7**
PRN	**Pahroc Range**	**3.49**	**106**		**Pn**	**09 57 51.5**	**-0.3**
PRN				IAML		09 58 56.7	
	comp=E,22nm,0.6s						
PRN				IAML		09 58 59.6	
	comp=N,28nm,0.8s						
MOD	**Modoc Plateau**	**3.56**	**347**		**Pn**	**09 57 51.7**	**-1.0**
GSC	**Goldstone, Bar**	**3.70**	**147**		**Pn**	**09 57 55.6**	**+1.1**
GSC				IAML		09 59 11.8	
	comp=N,17nm,4.4s						
GSC				IAML		09 59 14.8	
	comp=E,20nm,4.3s						
SHPR	**Sheep Range**	**3.79**	**119**	Pn	**Pn**	**09 57 56.9**	**+1.0**
ELK	**Elko**	**3.88**	**52**	Pn	**Pn**	**09 57 56.7**	**-0.5**
ELK				IAML		09 59 01.0	
	comp=E,20nm,0.5s						
ELK				IAML		09 59 01.4	
	comp=E,15nm,0.5s						
WVOR	**Wild Horse Val**	**4.03**	**7**		**Pn**	**09 58 01.7**	**+2.5**
WVOR				IAML		09 59 09.1	
	comp=E,13nm,3.3s						
WVOR				IAML		09 59 30.3	
	comp=E,13nm,4.2s						
PSUT	**Pine Spring**	**4.25**	**87**		**Pn**	**09 58 02.9**	**+0.6**
JCC	**Jacoby Creek,**	**4.38**	**304**	Pn	**Pn**	**09 58 01.9**	**-1.9**
JCC				IAML		10 00 29.9	
	comp=N,26nm,4.8s						
CCUT	**Cedar City**	**4.75**	**99**		**Pn**	**09 58 09.7**	**+0.6**

SZCU	**Shurtz Canyon**	**4.95**	**98**		**Pn**	**09 58 12.6**	**+0.6**
LCMT	**Little Creek M**	**4.98**	**105**		**Pn**	**09 58 13.2**	**+0.9**
KNB	**Kanab**	**5.30**	**103**		**Pn**	**09 58 18.0**	**+1.3**
BGU	**Big Grassy Mou**	**5.42**	**61**	Pn	**Pn**	**09 58 18.6**	**+0.3**
MVU	**Marysvale**	**5.54**	**87**		**Pn**	**09 58 22.3**	**+2.2**
MTPU	**Mount Pierson**	**5.59**	**92**		**Pn**	**09 58 22.0**	**+1.2**
U15A	**North Rim**	**5.90**	**108**		**Pn**	**09 58 25.4**	**+0.4**
ESJX	**Sierra Juarez**	**6.96**	**156**		**Pn**	**09 58 40.0**	**+0.5**

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*IDC **06** 09:59:06.9±1.4, 71°.49N×3°.44W, h0^{km}, mb3.4/5, mb1 3.6/9, mb1mx3.4/54, mbtmp3.5/9, ML2.9/3, MS3.4/6, Ms1 3.4/6, ms1mx2.9/37, Error ellipse: s-maj=27.6km s-min=22.0km az=60.0*
*BER **06** 09:59:09.0±3.4, 71°.63N×3°.84W, h10^{km}, ML2.1, ML3.3(NAO), Confirmed Earthquake*
*NAO **06** 09:59:12.6±9.9, 71°.62N×1°.74W, ML3.3*
ISC 06 09:59:06.6±0.8, **71°.72N**±0°.09×**4°.11W**±0°.08, **h12**^{km}, **n35**, σ**2**^{s}**82**/38, **mb3.5**/5, **MS3.3**/4, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	**Daneborg**	**5.38**	**306**	*e*P	**Pn**	**10 00 29.1**	**+2.6**
DBG				*i* S	**Sn**	**10 01 26.1**	**-2.1**
DBG				IAML		10 01 43.4	
	comp=Z,3.2nm,0.4s						
DBG	**Daneborg**	**5.38**	**306**	*i* P	**Pn**	**10 00 29.0**	**+2.5**
DBG				*i* S	**Sn**	**10 01 26.1**	**-2.1**
DBG				IAML		10 01 43.4	
	comp=Z,3.2nm,0.4s						
DAG	**Danmarks Havn**	**6.42**	**329**	*e*	**Pn**	**10 00 41.8**	**+1.1**
	baz=132,slow=16						
DAG				*i* P	**Pn**	**10 00 42.9**	**+2.2**
DAG				*i*		10 00 44.1	
DAG				*e*S	**Sn**	**10 01 47.5**	**-6.2**
DAG				IAML		10 01 52.9	
	comp=Z,4.8nm,0.4s						
DAG	**Danmarks Havn**	**6.42**	**329**	*e*	**Pn**	**10 00 41.8**	**+1.1**
	baz=132,slow=16						
DAG				*i* P	**Pn**	**10 00 42.9**	**+2.2**
DAG				*i*		10 00 44.1	
DAG				*e*S	**Sn**	**10 01 47.5**	**-6.2**
DAG				IAML		10 01 52.9	
	comp=Z,4.8nm,0.4s						
LOF	**Lofoten**	**7.04**	**112**	Pn	**Pn**	**10 00 45.7**	**-3.7**
LOF	**Lofoten**	**7.04**	**112**	*e*P	**Pn**	**10 00 46.8**	**-2.5**
BJO1	**Bjornoya**	**7.25**	**57**	Pn	**Pn**	**10 00 51.7**	**-0.5**
BJO1	**Bjornoya**	**7.25**	**57**	Pn	**Pn**	**10 00 51.7**	**-0.5**
STEI	**Steigen**	**7.67**	**110**	*e*P	**Pn**	**10 00 55.3**	**-2.6**
FAUS	**Fauske**	**8.04**	**113**	*e*P	**Pn**	**10 01 00.1**	**-2.8**
KONS	**Konsvik**	**8.05**	**122**	*e*P	**Pn**	**10 01 01.3**	**-1.9**
KBS	**Kingsbay**	**8.26**	**22**	Pn	**Pn**	**10 01 09.2**	**+3.2**
KBS	**Kingsbay**	**8.26**	**22**	Pn	**Pn**	**10 01 09.2**	**+3.2**
SPA0	**Spitsbergen Ar**	**8.33**	**30**	Pn	**Pn**	**10 01 10.2**	**+3.3**
	baz=222,slow=14						
SPA0	**Spitsbergen Ar**	**8.33**	**30**	Pn	**Pn**	**10 01 10.2**	**+3.3**
	baz=222,slow=14						
SPITS	**Spitsbergen Ar**	**8.33**	**30**	Pn	**Pn**	**10 01 09.9**	**+3.0**
	baz=214,slow=13,SNR=96						
KIF	**Kilpisjarvi**	**8.78**	**96**	Pn	**Pn**	**10 01 10.4**	**-2.7**
KIF	**Kilpisjarvi**	**8.78**	**96**	*e*P	**Pn**	**10 01 10.4**	**-2.7**
NSS	**Namsos**	**9.35**	**132**	*e*P	**Pn**	**10 01 18.6**	**-2.3**
ARA0	**ARCESS Array S**	**10.02**	**88**	Pn	**Pn**	**10 01 27.5**	**-2.5**
	baz=285,slow=11						
ARA0	**ARCESS Array S**	**10.02**	**88**	Pn	**Pn**	**10 01 27.5**	**-2.5**
	baz=285,slow=11						
ARCES	**ARCESS Array B**	**10.02**	**88**	Pn	**Pn**	**10 01 28.0**	**-2.0**
	baz=292,slow=12,SNR=29						
NOA	**NORSAR Array B**	**12.29**	**143**	Pn	**Pn**	**10 01 57.4**	**-3.8**
	comp=Z,0.0nm,0.3s,baz=335,slow=13,SNR=2.4						
NOA				LR	LR	10 06 24.1	
	comp=Z,92nm,20.4s,baz=325,slow=36						
FIA0	**FINESS Array S**	**15.58**	**116**	P	**Pn**	**10 02 46.0**	**+0.3**
	baz=333,slow=14						
FIA0	**FINESS Array S**	**15.58**	**116**	P	**Pn**	**10 02 46.0**	**+0.3**
	baz=333,slow=14						
FINES	**FINESS Array B**	**15.58**	**116**	Pn	**Pn**	**10 02 43.3**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=326,slow=9.6,SNR=5.4						
FINES				LR	LR	10 08 00.6	
	comp=Z,112nm,18.4s,baz=288,slow=35						
KLMR	**Klimovskoe**	**20.07**	**100**	*e*Pn	**P**	**10 03 37.9**	**-1.5**
KLMR				AMP		10 03 39.1	
	comp=Z,20nm,1.4s						
RES	**Resolute Bay**	**23.99**	**319**	LR	LR	10 13 38.4	
	comp=Z,99nm,18.7s,baz=171,slow=36						
GERES	**GERESS Array B**	**24.38**	**151**	P	**P**	**10 04 25.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=328,slow=12,SNR=4.5						
GERES				LR	LR	10 12 54.0	
	comp=Z,86nm,18.3s,baz=254,slow=34						
VRAC	**Vranov**	**24.41**	**146**	LR	LR	10 12 17.0	
	comp=Z,77nm,18.8s,baz=334,slow=33						
AKASG	**Malin Array Be**	**25.84**	**127**	P	**P**	**10 04 36.3**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=336,slow=9.5,SNR=4.1						
YKA	**Yellowknife Ar**	**37.90**	**315**	P	**P**	**10 06 26.5**	**+3.6**
	comp=Z,0.2nm,0.7s,baz=32,slow=9.2,SNR=3.2						
MKAR	**Makanchi Array**	**45.33**	**75**	P	**P**	**10 07 25.4**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=342,slow=6.9,SNR=4.8						
PDAR	**Pinedale Array**	**54.54**	**299**	LR	LR	10 31 51.7	
	comp=Z,47nm,20.5s,baz=11,slow=36						
TORD	**Torodi Ar. Bea**	**58.65**	**173**	P	**P**	**10 09 04.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=349,slow=6.0,SNR=2.7						

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*IDC **06** 09:59:55.3±3.1, 21°.63S×178°.86W, h583^{km}±26^{km}, mb3.1/9, mb1 3.3/10, mb1mx3.1/40, mbtmp4.1/10, Error ellipse: s-maj=56.7km s-min=17.5km az=145.0*
ISC 06 09:59:57.9±1.4, **21°.3S**±0°.3×**179°.1W**±0°.2, **h602**^{km}, **n14**, σ**0**^{s}**80**/14, **mb3.6**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**322**	P	**P**	**10 01 26.1**	**-1.3**
	3.9nm,0.3s,baz=113,slow=23,SNR=20						
ASAR	**Alice Springs**	**43.38**	**258**	P	**P**	**10 07 08.9**	**0.0**
	1.5nm,0.5s,baz=93,slow=7.8,SNR=21						
ASAR				PcP	**PcP**	**10 08 43.5**	**-0.1**
	0.1nm,0.3s,baz=99,slow=3.8,SNR=4.6						
WRA	**Warramunga Arr**	**43.52**	**263**	P	**P**	**10 07 09.0**	**-1.1**
	0.6nm,0.3s,baz=96,slow=7.4,SNR=32						
FITZ	**Fitzroy Crossi**	**51.95**	**263**	P	**P**	**10 08 12.7**	**-0.1**
	4.1nm,1.0s,baz=79,slow=5.2,SNR=1.7						
SIJI	**Sorong**	**52.51**	**286**	P	**P**	**10 08 17.5**	**+0.7**
	3.7nm,0.4s,baz=198,slow=20,SNR=2.3						
PETK	**Petropavlovsk-**	**76.83**	**346**	P	**P**	**10 10 49.5**	**+0.9**
	4.7nm,1.1s,baz=172,slow=3.1,SNR=8.5						
NVAR	**Mina Array Bea**	**82.30**	**44**	P	**P**	**10 11 17.3**	**-0.6**
	0.3nm,0.5s,baz=219,slow=9.6,SNR=4.3						
SEY	**Seymchan**	**86.96**	**347**	P	**P**	**10 11 40.9**	**+1.2**
	0.4nm,0.3s,baz=79,slow=23,SNR=8.9						
ILAR	**Eielson Array**	**89.34**	**13**	P	**P**	**10 11 50.2**	**-0.5**
	0.3nm,0.6s,baz=216,slow=5.9,SNR=2.5						
PDAR	**Pinedale Array**	**90.24**	**44**	P	**P**	**10 11 55.9**	**+0.2**
	0.3nm,0.8s,baz=250,slow=2.6,SNR=2.0						
MKAR	**Makanchi Array**	**111.05**	**313**	PKiKP	**PKiKP**	**10 17 23.1**	**-0.8**
	0.1nm,0.4s,baz=226,slow=1.2,SNR=1.6						
ARCES	**ARCESS Array B**	**129.55**	**349**	PKP	**PKPdf**	**10 17 58.6**	**-0.1**
	6.4nm,1.1s,baz=11,slow=1.9,SNR=5.7						
AKASG	**Malin Array Be**	**143.25**	**330**	PKP	PKPbc	10 18 22.4	-0.6
	0.7nm,0.3s,baz=43,slow=4.3,SNR=9.2						
GERES	**GERESS Array B**	**150.72**	**343**	PKPbc	**PKPbc**	**10 18 43.2**	**+0.1**
	0.4nm,0.6s,baz=5.7,slow=2.7,SNR=4.3						

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*IDC **06** 10:08:41.2±28.0, 43°.81N×149°.26E, h104^{km}±49^{km}, mb3.3/2, mb1 3.3/5, mb1mx3.0/48, mbtmp3.7/5, Error ellipse: s-maj=532.9km s-min=30.8km az=152.0*
*MOS **06** 10:08:44.1±0.9, 44°.82N×148°.91E, h100^{km}, mb4.2/1, Error ellipse: s-maj=35.8km s-min=15.9km az=162.6*
*SKHL **06** 10:08:49.1±0.9, 44°.73N×148°.59E, h76^{km}±4^{km}, mb4.9/3*
*JMA **06** 10:08:50.2±0.6, 44°.47N×148°.47E, h87^{km}, M4.0*
ISC 06 10:08:46.2±1.6, **44°.69N**±0°.10×**148°.7E**±0°.1, **h84**^{km}±11^{km}, **n27**, σ**1**^{s}**70**/41, **1C**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.81**	**312**	*i* P	**Pn**	**10 09 03.2**	**-0.1**
KUR				AMB	AMB	10 09 03.6	
	2µm,0.6s						
KUR				*i* S	**Sn**	**10 09 14.3**	**-1.9**
KUR				A	A	10 09 15.0	
	2µm,0.4s						
KUR				A	A	10 09 15.0	
	620nm,0.4s						
KUR	**Kuril'sk**	**0.81**	**312***c*	*i*PN	**Pn**	**10 09 03.3**	**-0.1**
KUR				*i* S	**Sn**	**10 09 14.3**	**-1.9**
KUR				pmax	pmax		
	comp=N,174nm,0.2s						
KUR				pmax	pmax		
	comp=E,494nm,0.2s						
KUR				pmax	pmax		
	comp=Z,609nm,0.2s						
KUR				smax	smax		
	comp=N,1µm,0.2s						
KUR				smax	smax		
	comp=E,791nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.15**	**253**	*e*P	**Pn**	**10 09 22.0**	**+1.8**
YUK				AMB	AMB	10 09 25.0	
	comp=E,250nm,0.3s						
YUK				*i* S	**Sn**	**10 09 46.0**	**-0.2**
YUK				A	A	10 09 49.2	
	comp=E,674nm,0.5s						
YUK				A	A	10 09 49.2	
	comp=E,865nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.15**	**253**	PN	**Pn**	**10 09 22.4**	**+2.2**
YUK				*i* S	**Sn**	**10 09 46.7**	**+0.5**
YUK				pmax	pmax		
	comp=Z,252nm,0.3s						
GRPR	**Tuman**	**2.23**	**253**	*e*P	**Pn**	**10 09 22.9**	**+1.6**
GRPR				AMB	AMB	10 09 25.0	
	comp=Z,82nm,0.3s						
GRPR				*i* S	**Sn**	**10 09 47.5**	**-0.5**
GRPR				A	A	10 09 52.0	
	comp=Z,562nm,0.3s						
GRPR				A	A	10 09 52.0	
	comp=Z,449nm,0.3s						
GRPR	**Tuman**	**2.23**	**253**	*e*PN	**Pn**	**10 09 21.9**	**+0.6**
GRPR				*i* S	**Sn**	**10 09 47.1**	**-0.9**
GRPR				pmax	pmax		
	comp=N,40nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,82nm,0.2s						
GRPR				pmax	pmax		
	comp=E,25nm,0.1s						
GRPR				smax	smax		
	comp=N,562nm,0.3s						
GRPR				smax	smax		
	comp=E,449nm,0.3s						
NEM2	**Nemuro 2**	**2.53**	**239**	P	**Pn**	**10 09 26.0**	**+0.8**
NEM2				*e*S	**Sn**	**10 09 53.1**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.53**	**240**	*e*P	**Pn**	**10 09 26.0**	**+0.8**
NMR				*i* S	**Sn**	**10 09 54.0**	**-1.3**
NMR	**Nemuro--Hokkai**	**2.53**	**240**	*e*PN	**Pn**	**10 09 26.1**	**+0.8**
NMR				*i* S	**Sn**	**10 09 54.2**	**-1.1**
RUSJ	**Misakicho**	**2.56**	**258**	*e*PN	**Pn**	**10 09 28.7**	**+3.1**
RUSJ				*i* S	**Sn**	**10 09 59.8**	**+3.9**
JNSB	**Nemuroshibetsu**	**2.83**	**252**	P	**Pn**	**10 09 31.4**	**+2.2**
JNK	**Nakash**	**3.09**	**250**	P	**Pn**	**10 09 34.3**	**+1.5**
JAK	**Akkeshi**	**3.37**	**241**	P	**Pn**	**10 09 37.4**	**+0.8**
JAK				*e*S	**Sn**	**10 10 14.1**	**-1.4**
JTKR	**Abashiri--Toko**	**3.53**	**260**	P	**Pn**	**10 09 39.8**	**+1.1**
JAR	**Ashorobuto**	**3.84**	**250**	P	**Pn**	**10 09 45.0**	**+2.1**
JAR				*e*S	**Sn**	**10 10 28.1**	**+1.2**
JKK2	**Kamakawa 2**	**4.37**	**261**	P	**Pn**	**10 09 51.7**	**+1.5**
JCH	**Churui**	**4.41**	**244**	P	**Pn**	**10 09 51.9**	**+1.2**
JCH				*e*S	**Sn**	**10 10 38.6**	**-2.2**
JKA	**Kamikawa-asahi**	**4.42**	**265**	*e*P	**Pn**	**10 09 51.9**	**+1.0**
ASAJ	**Asahikawa**	**4.43**	**265**	P	**Pn**	**10 09 51.9**	**+0.9**
	comp=E,3.0nm,0.3s,baz=87,slow=17,SNR=12						
JNBK	**Urakawa-nobuka**	**4.97**	**243**	P	**Pn**	**10 09 58.7**	**+0.4**
JKB	**Kayabe**	**6.27**	**246**	P	**Pn**	**10 10 16.5**	**+0.4**
JOT	**Ohata**	**6.52**	**242**	P	**Pn**	**10 10 19.3**	**-0.2**
JOT				*e*S	**Sn**	**10 11 28.4**	**-4.0**
PETK	**Petropavlovsk-**	**10.28**	**32**	P	**Pn**	**10 11 13.1**	**+2.5**
	comp=E,0.1nm,0.3s,baz=200,slow=9.0,SNR=5.6						
USRK	**Ussuriysk Ar.**	**11.97**	**274**	P	**Pn**	**10 11 33.9**	**+0.2**
	baz=84,slow=14,SNR=4.9						
MKAR	**Makanchi Array**	**45.15**	**297**	P	**P**	**10 16 52.9**	**-1.4**
	comp=E,0.3nm,0.9s,baz=77,slow=9.1,SNR=2.2						
MKAR	**Makanchi Array**	**45.15**	**297**	*e*P	**P**	**10 16 53.0**	**-1.2**
FINES	**FINESS Array B**	**64.54**	**333**	P	**P**	**10 19 12.9**	**-0.9**
	comp=E,1.2nm,0.6s,baz=42,slow=8.8,SNR=7.3						

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*IDC **06** 10:09:56.9±0.6, 23°.86S×176°.05W, h0^{km}, mb4.7/17, mb1 4.8/18, mb1mx4.6/33, mbtmp4.6/18, ML5.3/2, MS3.7/17, Ms1 3.8/17, ms1mx3.7/31, Error ellipse: s-maj=19.6km s-min=15.9km az=120.0*
*NEIC **06** 10:10:02.1±1.9, 23°.9S±0°.1×176°.2W±0°.2, h35^{km}±2^{km}, mb4.9/41, Error ellipse: s-maj=25.8km s-min=16.6km az=115.0*
ISC 06 10:10:00.9±0.4, **24°.02S**±0°.06×**175°.83W**±0°.08, **h31**^{km}, **n129**, σ**1**^{s}**96**/114, **mb4.9**/41, **MS3.9**/15, **1C-1D**, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.53**	**199**	Pn	**Pn**	**10 11 23.0**	**+1.9**
	348nm,0.3s,baz=99,slow=23,SNR=6.8						
RAO				Sn	**Sn**	**10 12 27.8**	**+4.2**
	186nm,0.3s,baz=55,slow=20,SNR=4.1						
RAO				LR	LR	10 12 47.8	
	comp=Z,214nm,19.6s,baz=108,slow=30						
RAO	**Raoul Island**	**5.53**	**199**	Pn	**Pn**	**10 11 22.2**	**+1.1**
MSVF	**Nonsavu**	**8.48**	**316**	Pn	**Pn**	**10 12 03.3**	**+1.6**
	3.1nm,0.3s,baz=114,slow=15,SNR=23						
MSVF				LR	LR	10 15 06.7	
	comp=Z,1µm,18.4s,baz=157,slow=38						
TWGZ	**Tauwhareparae**	**15.06**	**199**	P	**P**	**10 13 39.4**	**+2.9**
RAR	**Rarotonga**	**15.09**	**82**	Pn	**Pn**	**10 13 27.0**	**-4.9**
	7.2nm,0.3s,baz=249,slow=7.8,SNR=15						
RAR				LR	LR	10 20 50.4	
	comp=Z,196nm,18.3s,baz=268,slow=43						
CNGZ	**Carnagh Statio**	**15.28**	**198**	P	**P**	**10 13 41.5**	**+2.6**
URZ	**Urewera**	**15.41**	**201**	Pn	**Pn**	**10 13 38.1**	**+2.0**
	3.0nm,0.3s,baz=0.6,slow=4.1,SNR=11						
URZ				Sn	**Sn**	**10 16 17.0**	**-8.9**
	1.5nm,0.3s,baz=19,slow=23,SNR=7.9						
URZ	**Urewera**	**15.41**	**201**	P	**P**	**10 13 39.7**	**-0.7**
URZ	**Urewera**	**15.41**	**201**	P	**P**	**10 13 39.2**	**-1.2**
RIGZ	**Rimuhau**	**15.62**	**199**	P	**Pn**	**10 13 40.6**	**+1.8**
MUGZ	**Murupara**	**15.73**	**202**	P	**P**	**10 13 42.5**	**-1.4**
NMHZ	**Naumai**	**16.27**	**201**	P	**Pn**	**10 13 48.6**	**+1.3**
DZM	**Mont Dzumac**	**16.43**	**273**	LR	LR	10 17 35.3	
	comp=Z,103nm,19.2s,baz=48,slow=28						
DZM	**Mont Dzumac**	**16.43**	**273**	*e*LR	LR	10 18 10.0	
	comp=Z,274nm,23.0s						
BKZ	**Black Stump Fm**	**16.44**	**202**	Pn	**Pn**	**10 13 50.5**	**+1.2**
BKZ	**Black Stump Fm**	**16.44**	**202**	P	**Pn**	**10 13 47.4**	**-1.9**
HIZ	**Hauiti**	**16.48**	**207**	P	**P**	**10 13 52.5**	**+0.3**
HIZ				IAmb	IAmb	10 14 06.2	
	comp=Z,65nm,1.4s						
MCHZ	**McNeill Hill**	**16.62**	**201**	P	**Pn**	**10 13 51.7**	**+0.1**
OTVZ	**Oturere**	**16.73**	**204**	P	**Pn**	**10 13 50.7**	**-2.4**
BHHZ	**Black Hill Sta**	**16.88**	**202**	P	**Pn**	**10 13 55.4**	**+0.6**
KAHZ	**Kahuranaki**	**16.89**	**200**	P	**Pn**	**10 13 52.0**	**-2.9**
PXZ	**Pawanui**	**17.11**	**199**	P	**Pn**	**10 13 56.1**	**-1.5**
PRHZ	**Porangahau**	**17.39**	**200**	P	**Pn**	**10 13 58.8**	**-2.4**
BFZ	**Birch Farm**	**17.89**	**200**	Pn	**Pn**	**10 14 06.7**	**-0.7**
TUWZ	**Tuamarina**	**19.34**	**204**	P	**P**	**10 14 18.1**	**-5.6**
KHZ	**Kahutara**	**20.35**	**203**	P	**P**	**10 14 31.5**	**-3.2**
RPZ	**Rata Peaks**	**22.40**	**206**	LR	LR	10 23 23.0	
	comp=Z,442nm,20.6s,baz=26,slow=36						
TBI	**Tubuai**	**24.15**	**94**	*e*LQ	LQ	10 19 42.7	
	comp=Z,366nm,28.5s						
TBI				*e*LR	LR	10 20 54.6	
	comp=Z,239nm,23.8s						
TBI	**Tubuai**	**24.15**	**94**	*e*T	T	10 40 00.2	
	comp=Z,7.7nm,0.3s						
PAE	**Paea**	**25.31**	**81**	*e*T	T	10 41 16.3	
	comp=Z,2.9nm,0.3s						
PPT2	**Papeete2**	**25.34**	**80**	*e*S	**S**	**10 19 45.0**	**-4.8**
	comp=Z,61nm,25.2s						
PPT2				*e*LQ	LQ	10 20 15.6	
	comp=Z,254nm,21.5s						
PPT2				*e*LR	LR	10 21 28.6	
	comp=Z,263nm,23.2s						
PPT2	**Papeete2**	**25.34**	**80**	*e*T	T	10 41 19.3	
	comp=Z,3.3nm,0.3s						
PPT	**Papeete**	**25.35**	**80**	LR	LR	10 22 43.7	
	comp=Z,140nm,20.6s,baz=252,slow=30						
TVO	**Taravao**	**25.57**	**81**	*e*T	T	10 41 36.2	
	comp=Z,0.9nm,0.4s						
MEH	**Mehetia**	**26.61**	**82**	*e*T	T	10 42 55.2	
	comp=Z,15nm,0.3s						
HNR	**Honiara**	**27.29**	**298**	LR	LR	10 25 49.4	
	comp=Z,98nm,18.7s,baz=158,slow=35						
ARMA	**Armidale**	**29.56**	**250**	P	**P**	**10 16 02.5**	**-0.6**
CTA	**Charters Tower**	**35.29**	**269**	P	**P**	**10 16 53.0**	**-0.2**
	comp=Z,9.6nm,0.3s,baz=95,slow=10,SNR=29						
CTAO	**Charters Tower**	**35.29**	**269**	P	**P**	**10 16 52.3**	**-0.9**
CTAO				IAmb	IAmb	10 16 54.9	
	comp=Z,32nm,1.0s						
PMG	**Port Moresby**	**38.17**	**286**	P	**P**	**10 17 16.0**	**-1.8**
	comp=Z,29nm,0.8s,baz=110,slow=8.0,SNR=6.7						
PMG	**Port Moresby**	**38.17**	**286**	P	**P**	**10 17 13.8**	**-4.0**
STKA	**Stephens Creek**	**38.22**	**248**	P	**P**	**10 17 16.6**	**-1.5**
	comp=Z,2.5nm,0.5s,baz=87,slow=11,SNR=12						
STKA				LR	LR	10 30 30.0	
	comp=Z,222nm,21.1s,baz=33,slow=32						
STKA	**Stephens Creek**	**38.22**	**248**	P	**P**	**10 17 15.3**	**-2.8**
BBOO	**Buckleboo**	**42.91**	**247**	P	**P**	**10 17 56.0**	**-0.8**
BBOO				IAmb	IAmb	10 17 56.4	
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**45.77**	**260**	P	**P**	**10 18 19.2**	**-0.7**
ASAR	**Alice Springs**	**45.77**	**260**	P	**P**	**10 18 18.4**	**-1.5**
	comp=Z,3.8nm,0.5s,baz=93,slow=6.7,SNR=42						
ASAR				LR	LR	10 36 44.7	
	comp=Z,146nm,18.7s,baz=106,slow=35						
WR0	**Warramunga Arr**	**46.01**	**265**	P	**P**	**10 18 20.0**	**-1.8**
WR0				IAmb	IAmb	10 18 41.0	
	comp=Z,50nm,1.9s						
WB2	**Warramunga Arr**	**46.19**	**265**	P	**P**	**10 18 21.4**	**-1.8**
WB2				IAmb	IAmb	10 18 23.9	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**46.19**	**265**	P	**P**	**10 18 21.4**	**-1.8**
WRAB				IAmb	IAmb	10 18 23.8	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**46.19**	**265**	P	**P**	**10 18 22.2**	**-1.0**
WB0				IAmb	IAmb	10 18 22.9	
	comp=Z,12nm,0.6s						
WRA	**Warramunga Arr**	**46.20**	**265**	P	**P**	**10 18 21.3**	**-2.0**
	comp=Z,6.9nm,0.6s,baz=92,slow=8.4,SNR=101						
FORT	**Forrest**	**49.84**	**249**	P	**P**	**10 18 49.8**	**-1.5**
FORT				IAmb	IAmb	10 18 58.0	
	comp=Z,20nm,0.8s						
VNDA	**Vanda**	**54.61**	**186**	P	**P**	**10 19 28.6**	**+2.6**
	comp=Z,3.3nm,0.9s,baz=5.9,slow=7.3,SNR=14						
VNDA				LR	LR	10 40 42.1	
	comp=Z,48nm,19.9s,baz=327,slow=34						
VNDA	**Vanda**	**54.61**	**186**	P	**P**	**10 19 28.2**	**+2.2**
VNDA				IAmb	IAmb	10 19 30.5	
	comp=Z,6.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**54.62**	**264**	P	**P**	**10 19 27.3**	**+0.4**
SIJI	**Sorong**	**56.11**	**286**	P	**P**	**10 19 36.7**	**-1.1**
	comp=Z,9.8nm,0.6s,baz=59,slow=8.2,SNR=6.3						
MORW	**Morawa**	**60.40**	**249**	P	**P**	**10 20 07.0**	**-0.7**
CASY	**Casey**	**61.67**	**206**	P	**P**	**10 20 16.7**	**+1.2**
QSPA	**South Pole Qui**	**66.06**	**180**	P	**P**	**10 20 46.8**	**+2.2**
QSPA				IAmb	IAmb	10 20 48.1	
	comp=Z,17nm,0.8s						
MJAR	**Matsushiro Arr**	**74.22**	**323**	LR	LR	10 49 04.2	
	comp=Z,64nm,22.0s,baz=105,slow=32						
BELA	**Belgrano 2**	**75.82**	**172**	P	**P**	**10 21 44.2**	**+0.7**
MAW	**Mawson**	**78.94**	**199**	P	**P**	**10 22 02.9**	**+1.8**
	comp=Z,5.0nm,0.5s,baz=124,slow=4.6,SNR=7.4						
PETK	**Petropavlovsk-**	**80.18**	**344**	P	**P**	**10 22 09.0**	**+1.1**
	comp=Z,7.4nm,0.9s,baz=112,slow=6.8,SNR=11						
PETK				LR	LR	10 51 10.1	
	comp=Z,86nm,20.6s,baz=136,slow=31						
KSRS	**Korea Array**	**80.84**	**318**	LR	LR	10 53 17.2	
	comp=Z,46nm,19.4s,baz=122,slow=32						
PNTR	**Pine Nut**	**81.88**	**41**	P	**P**	**10 22 18.9**	**+1.4**
NVAR	**Mina Array Bea**	**82.24**	**42**	P	**P**	**10 22 20.6**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=223,slow=8.5,SNR=9.7						
H03S2	**Juan Fernandez**	**82.36**	**124**	T	T	11 53 57.9	
	baz=245,slow=74,SNR=32						
H03S1	**Juan Fernandez**	**82.38**	**124**	T	T	11 53 41.3	
	baz=245,slow=74,SNR=40						
H03S3	**Juan Fernandez**	**82.38**	**124**	T	T	11 54 11.8	
	baz=245,slow=74,SNR=32						
H03N2	**Juan Fernandez**	**82.52**	**123**	T	T	11 53 44.0	
	baz=244,slow=74,SNR=28						
H03N3	**Juan Fernandez**	**82.52**	**123**	T	T	11 53 36.6	
	baz=264,slow=74,SNR=34						
H03N1	**Juan Fernandez**	**82.53**	**123**	T	T	11 54 17.1	
	SNR=25						
USRK	**Ussuriysk Ar.**	**82.99**	**325**	P	**P**	**10 22 22.9**	**0.0**
	comp=Z,4.3nm,0.9s,baz=132,slow=8.0,SNR=5.5						
W13A	**Hualapai Mount**	**83.06**	**47**		**P**	**10 22 24.8**	**+1.0**
W13A				IAmb	IAmb	10 23 07.3	
	comp=Z,12nm,1.9s						
K05A	**Summer Lake**	**83.49**	**37**		**P**	**10 22 26.8**	**+1.0**
K05A				IAmb	IAmb	10 22 42.3	
	comp=Z,8.6nm,1.1s						
SYO	**Syowa Base**	**83.73**	**192**⇑	*e*P	**P**	**10 22 23.2**	**-3.3**
X16A	**Lo Mia Camp, P**	**84.32**	**49**		**P**	**10 22 31.6**	**+1.4**
X16A				IAmb	IAmb	10 22 32.9	
	comp=Z,5.9nm,0.9s						
SNAA	**Sanae**	**84.44**	**178**	P	**P**	**10 22 31.6**	**+1.4**
SNAA	**Sanae**	**84.44**	**178**	P	**P**	**10 22 31.3**	**+1.2**
	comp=Z,14nm,0.8s,baz=167,slow=2.6,SNR=38						
SNAA	**Sanae**	**84.44**	**178**	P	**P**	**10 22 30.8**	**+0.7**
VNA3	**Neumayer Olymp**	**84.50**	**176**	P	**P**	**10 22 31.7**	**+1.3**
U15A	**North Rim**	**84.88**	**46**		**P**	**10 22 34.8**	**+1.7**
U15A				IAmb	IAmb	10 22 36.4	
	comp=Z,7.6nm,0.9s						
VNA2	**Neumayer--Watz**	**84.96**	**176**	P	**P**	**10 22 34.3**	**+1.6**
	baz=180,slow=5.4						
I07A	**Izee**	**85.14**	**37**		**P**	**10 22 35.2**	**+1.2**
I07A				IAmb	IAmb	10 22 36.0	
	comp=Z,3.9nm,0.9s						
VNA1	**Neumayer--Stat**	**85.18**	**176**	P	**P**	**10 22 35.5**	**+1.8**
X18A	**Snowflake**	**85.41**	**49**		**P**	**10 22 36.9**	**+1.2**
X18A				IAmb	IAmb	10 22 38.3	
	comp=Z,5.0nm,0.9s						
MNTX	**Cornudas Mount**	**87.18**	**54**		**P**	**10 22 45.5**	**+1.2**
MNTX				IAmb	IAmb	10 22 46.4	
	comp=Z,4.4nm,0.8s						
TMUT	**Trail Mountain**	**87.21**	**45**	P	**P**	**10 22 45.9**	**+1.3**
MA2	**Magadan**	**87.71**	**344**	LR	LR	10 54 49.6	
	comp=Z,61nm,21.8s,baz=100,slow=31						
ANMO	**Albuquerque**	**88.07**	**50**		**P**	**10 22 49.4**	**+0.7**
TTA	**Tatalina**	**88.08**	**9**	P	**P**	**10 22 48.6**	**+0.7**
GHO	**Glory Hole Cre**	**88.19**	**12**	P	**P**	**10 22 49.7**	**+1.2**
GHO				IAmb	IAmb	10 22 50.3	
	comp=Z,14nm,1.0s						
BARN	**Barnard Glacie**	**89.18**	**16**	P	**P**	**10 22 54.7**	**+1.5**
CTGM	**Chitina Glacie**	**89.19**	**16**	P	**P**	**10 22 54.7**	**+1.4**
CTGM				IAmb	IAmb	10 22 58.0	
	comp=Z,10nm,1.0s						
KTH	**Kantishna Hill**	**89.46**	**11**	P	**P**	**10 22 54.6**	**+0.3**
TRF	**Thorofare Moun**	**89.48**	**11**		**P**	**10 22 54.5**	**-0.1**
TRF				IAmb	IAmb	10 22 56.1	
	comp=Z,9.7nm,0.8s						
PDAR	**Pinedale Array**	**90.17**	**42**	P	**P**	**10 22 58.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=242,slow=3.2,SNR=5.2						
SEY	**Seymchan**	**90.25**	**346**	P	**P**	**10 22 58.3**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=88,slow=6.7,SNR=6.1						
ILAR	**Eielson Array**	**91.31**	**12**	P	**P**	**10 23 03.0**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=217,slow=5.7,SNR=10						
ILAR				LR	LR	11 01 04.7	
	comp=Z,46nm,19.3s,baz=208,slow=34						
DAWY	**Dawson**	**92.30**	**15**	P	**P**	**10 23 08.8**	**+1.3**
DAWY				IAmb	IAmb	10 23 09.9	
	comp=Z,8.6nm,1.1s						
LAMP	**Lampang**	**92.59**	**289**	P	**P**	**10 23 12.7**	**+2.8**
	comp=Z,374nmcomp=Z,36nm,0.9s						
PAYA	**Payao**	**92.73**	**290**	P	**P**	**10 23 13.0**	**+2.4**
	comp=Z,20µmcomp=Z,131nm,0.9s						
CM04	**Chiang Mai Arr**	**93.11**	**289**	P	**P**	**10 23 14.0**	**+1.7**
	comp=Z,80nmcomp=Z,11nm,0.9s						
CM09	**Chiang Mai Arr**	**93.11**	**289**	P	**P**	**10 23 15.2**	**+2.9**
	comp=Z,80nmcomp=Z,10nm,0.9s						
CM01	**Chiang Mai Arr**	**93.13**	**289**	P	**P**	**10 23 15.3**	**+2.9**
	comp=Z,67nmcomp=Z,8.6nm,1.1s						
CM02	**Chiang Mai Arr**	**93.15**	**289**	P	**P**	**10 23 15.3**	**+2.8**
	comp=Z,76nmcomp=Z,9.7nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.16**	**289**	P	**P**	**10 23 13.8**	**+1.3**
	comp=Z,8.2nm,0.9s,baz=135,slow=3.3,SNR=31						
CMMT	**Chiang Mai**	**93.30**	**289**	P	**P**	**10 23 15.3**	**+2.1**
CHTO	**Chiang Mai**	**93.31**	**289**		**P**	**10 23 13.6**	**+0.4**
YKA	**Yellowknife Ar**	**98.87**	**24**	P	**P**	**10 23 37.0**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=238,slow=4.0,SNR=8.2						
YKA				LR	LR	11 04 04.9	
	comp=Z,62nm,18.9s,baz=0.0,slow=33						
SONM	**Songino Array**	**99.71**	**318**	LR	LR	11 03 59.6	
	comp=Z,28nm,19.3s,baz=262,slow=33						
MKAR	**Makanchi Array**	**115.05**	**312**	PKP	**PKPdf**	**10 28 38.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=100,slow=1.5,SNR=5.7						
MKAR				PKKPbc	**PKKPbc**	**10 39 15.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=251,slow=3.7,SNR=4.5						
ARCES	**ARCESS Array B**	**132.73**	**350**	PKP	**PKPdf**	**10 29 11.6**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=349,slow=2.5,SNR=5.8						
AKASG	**Malin Array Be**	**147.05**	**330**	PKPbc	**PKPbc**	**10 29 40.0**	**-0.4**

	comp=Z,2.5nm,0.4s,baz=38,slow=3.6,SNR=20						
KWP	**Kalwaria Pacla**	**150.61**	**335**	*e*PKP	**PKiKP**	**10 29 50.1**	**-0.1**
BRTR	**Keskin Array B**	**150.65**	**309**	PKPbc	**PKiKP**	**10 29 50.7**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=96,slow=2.5,SNR=6.3						
OJC	**Ojcow**	**151.16**	**339**	*e*PKP	**PKiKP**	**10 29 51.3**	**0.0**
KOLS	**Kolonicke sedl**	**151.34**	**335**	*e*PKP	**PKiKP**	**10 29 52.5**	**+0.7**
KSP	**Ksiaz**	**151.63**	**344**	*e*PKP	**PKiKP**	**10 29 52.8**	**+0.5**
NIE	**Niedzica**	**151.67**	**338**	*e*PKP	**PKiKP**	**10 29 52.4**	**-0.1**
OSTC	**Ostas**	**151.91**	**344**	*e*PKP	**PKiKP**	**10 29 53.5**	**+0.6**
OSTC				*e*x	x	10 30 11.8	
CHVC	**Chvalec**	**151.92**	**344**	*e*PKP	**PKiKP**	**10 29 53.7**	**+0.7**
CLL	**Collm**	**151.92**	**348**	⇓*i*PKPbc	**PKiKP**	**10 29 52.9**	**0.0**
	comp=Z,10.0nm,1.0s						
CLL				*i*		10 29 59.2	
CLL				*i* PKPab	**sPKPbc**	**10 30 04.0**	**-1.3**
	comp=Z,7.0nm,1.0s						
UPC	**Upice**	**152.00**	**344**	*e*PKP	**PKiKP**	**10 29 53.3**	**+0.2**
DPC	**Dobruska-Polom**	**152.07**	**343**	*e*PKP	**PKiKP**	**10 29 53.3**	**0.0**
DPC				*e*x	x	10 30 06.6	
KRLC	**Kraliky**	**152.19**	**342**	*e*PKP	**PKiKP**	**10 29 54.1**	**+0.5**
KHC	**Kasperske Hory**	**153.87**	**346**	*e*PKP	**PKiKP**	**10 29 57.3**	**+0.2**
KHC				*e*x	x	10 30 12.3	
GERES	**GERESS Array B**	**154.11**	**345**	PKPbc	**PKPbc**	**10 29 57.5**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=64,slow=3.1,SNR=4.1						
GERES				PKPab	**sPKPbc**	**10 30 10.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=75,slow=1.5,SNR=2.1						
TORD	**Torodi Ar. Bea**	**168.93**	**167**	PKP	**PKPdf**	**10 30 04.7**	**-1.0**
	comp=Z,2.1nm,1.1s,baz=297,slow=1.0,SNR=3.8						
TORD				PKPab	**PKPab**	**10 31 17.7**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=186,slow=3.6,SNR=8.5						

NNC 06 10:17:11.4±0.5**, 50°.95N×73°.78E, h0^{km}, mb3.7, mpv3.5, 7C-5D, Error ellipse: s-maj=7.1km s-min=3.3km az=35.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRVK	**Borovoye**	**3.02**	**316**	⇑Pg	Pb	10 18 06.4	+0.3
	8.2nm,0.8s						
BRVK				⇑Lg	Lg	10 18 47.5	
	218nm,1.0s						
KURBB	**Kurchatov Arra**	**3.03**	**94**	⇑Pg	Pb	10 18 07.2	+0.9
	6.5nm,0.5s						
KURBB				⇓Lg	Lg	10 18 47.2	
	126nm,0.8s						
TDK	**Taldyqorghan**	**6.71**	**151**	Pg	Pg	10 20 12.0	+52
	20nm,0.2s						
TDK				Lg	Lg	10 20 47.6	
	53nm,0.4s						
KAPS	**Kapalarasan**	**6.79**	**144**	Pg	Pg	10 20 10.5	+49
	1.6nm,0.7s						
KAPS				Lg	Lg	10 20 45.2	
	20nm,0.8s						
MAKZ	**Makanchi**	**6.81**	**124**	⇑Lg	Lg	10 20 47.0	
	33nm,1.1s						
MK31	**Makanchi Array**	**6.99**	**123**	⇓Lg	Lg	10 20 53.6	
	17nm,0.8s,baz=323,slow=25,SNR=5.8						
MNBS	**Baschi**	**7.55**	**154**	Pg	Pg	10 20 25.6	+50
	1.6nm,0.9s						
MNBS				Lg	Lg	10 21 11.3	
	19nm,0.8s						
DJR	**Jarkent**	**7.76**	**146**	Pg	Pg	10 20 27.9	+48
	1.8nm,0.8s						
DJR				Lg	Lg	10 21 15.1	
	6.2nm,0.7s						
TKM2	**Tokmak 2**	**8.13**	**171**	⇓Lg	Lg	10 21 29.4	
	35nm,0.9s						
KK31	**Karatay Array**	**8.16**	**197**	⇑Lg	Lg	10 21 30.1	
	7.6nm,0.8s,baz=20,slow=24,SNR=4.5						
AAK	**Ala-Archa**	**8.33**	**176**	⇑Lg	Lg	10 21 37.8	
	34nm,1.1s						
PDGK	**Podgornoye**	**8.56**	**151**	Pg	Pg	10 20 45.3	+50
	1.2nm,2.0s						
PDGK				Lg	Lg	10 21 45.1	
	5.5nm,1.6s						
PDGK	**Podgornoye**	**8.56**	**151**	⇑Lg	Lg	10 21 43.6	
	29nm,1.1s						
AB31	**Akbulak array**	**9.05**	**265**	⇓Lg	Lg	10 21 58.9	
	11nm,1.1s						
AKTO	**Aktyubinsk**	**10.02**	**273**	⇓Lg	Lg	10 22 29.7	
	10nm,1.1s						

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*ANF **06** 11:03:49.0±0.3, 41°.86N×119°.64W, h0^{km}, ML3.5/17, Error ellipse: s-maj=2.9km s-min=2.5km az=6.0*

*REN **06** 11:03:50.3±2.3, 41°.90N±0°.04×119°.65W±0°.06, h10^{km}±6^{km}, ML3.4/5, ML3.3/39(SEA), ML3.3/32(NEIC), Error ellipse: s-maj=6.7km s-min=5.1km az=90.0*

*SEA **06** 11:03:50.7±2.6, 41°.85N±0°.04×119°.64W±0°.06, h0^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=5.4km az=47.0*

*NEIC **06** 11:03:51.1±2.4, 41°.94N±0°.04×119°.65W±0°.03, h10^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=2.1km az=152.0*

ISC 06 11:03:50.5±1.3**, 41°.90N**±0°.03×**119°.67W**±0°.02**, h2**^{km}±13^{km}**, n61, σ1^{s}.09**/73**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.48**	**270**		**Pg**	**11 04 00.2**	**+0.6**
MOD					**Sg**	**11 04 07.3**	**+1.5**
LKVW	**Lakeview**	**0.61**	**302**		**Pg**	**11 04 02.5**	**+0.3**
WVOR	**Wild Horse Val**	**0.93**	**55**		**Pg**	**11 04 08.0**	**-0.4**
WVOR	**Wild Horse Val**	**0.93**	**55**		**Sg**	**11 04 20.7**	**+0.2**
WVOR	**Wild Horse Val**	**0.93**	**55**	IAML		11 04 24.4	
	1μm,0.8s						
WVOR				IAML		11 04 24.5	
	735nm,0.8s						
K05A	**Summer Lake**	**1.23**	**313**		**Pn**	**11 04 14.1**	**-0.8**
K05A	**Summer Lake**	**1.23**	**313**	IAML		11 04 36.5	
	comp=E,367nm,0.7s						
K05A				IAML		11 04 43.0	
	comp=N,424nm,0.7s						
LASM	**Arnica Sink**	**1.46**	**259**		**Pn**	**11 04 17.1**	**-1.0**
LASM					**Sg**	**11 04 38.3**	**+0.8**
LTIM	**Timbered Crate**	**1.55**	**243**		**Pn**	**11 04 18.3**	**-0.9**
LTIM					**Sg**	**11 04 40.8**	**+0.6**
HOG	**Hogback Mounta**	**1.56**	**283**		**Pn**	**11 04 18.7**	**-0.7**
M04C	**Macdoel**	**1.63**	**267**	P	**Pn**	**11 04 19.1**	**-1.2**
	baz=85						
M04C				Sb	**Sg**	**11 04 43.4**	**+0.6**
	baz=85						
M04C	**Macdoel**	**1.63**	**267**		**Pn**	**11 04 19.2**	**-1.1**
LBCM	**Butte Creek Ri**	**1.65**	**231**		**Pn**	**11 04 19.7**	**-1.0**
K04D	**Chiloquin, OR**	**1.71**	**296**	P	**Pn**	**11 04 20.4**	**-1.0**
	baz=114,SNR=62						
K04D				Sb	**Sg**	**11 04 46.0**	**+0.6**
	baz=114						
J05D	**Fort Rock, OR**	**1.81**	**321**	Pb	**Pb**	**11 04 23.8**	**-0.6**
	baz=139						
J05D				Sb	**Sg**	**11 04 48.9**	**+0.5**
	baz=139						
J05D	**Fort Rock, OR**	**1.81**	**321**		**Pb**	**11 04 23.9**	**-0.4**
M03C	**McCloud**	**1.95**	**252**		**Pn**	**11 04 23.6**	**-1.1**
L04D	**Klamath Falls**	**1.99**	**280**	P	**Pn**	**11 04 23.9**	**-1.4**
	baz=98,SNR=69						
L04D				Sb	**Sb**	**11 04 53.6**	**+0.8**
	baz=98						
L04D	**Klamath Falls**	**1.99**	**280**		**Pn**	**11 04 24.2**	**-1.1**
TMBU	**Tom Butte, New**	**2.02**	**328**		**Pb**	**11 04 27.2**	**-0.8**
BEKR	**Beckworth**	**2.10**	**195**		**Pn**	**11 04 27.4**	**+0.6**
BEKR				IAML		11 04 57.7	
	comp=N,223nm,0.3s						
PINE	**Pine Mountain**	**2.11**	**334**	Pn	**Pb**	**11 04 28.5**	**-1.1**
J04D	**Umpqua Nationa**	**2.25**	**307**	Pb	**Pb**	**11 04 31.3**	**-0.7**
	baz=126,SNR=24						
O03E	**Paynes Creek**	**2.28**	**226**	P	**Pn**	**11 04 28.0**	**-1.2**
	baz=45,SNR=96						
O03E				Sb	**Sb**	**11 05 01.2**	**+0.3**
	baz=45						
YBH	**Yreka Blue Hor**	**2.28**	**267**	Pn	**Pn**	**11 04 27.9**	**-1.4**
M02C	**Callahan**	**2.44**	**259**	P	**Pn**	**11 04 29.7**	**-1.7**
	baz=77,SNR=38						
M02C				Sb	**Sb**	**11 05 06.3**	**+0.6**
	baz=77						
N02D	**Trinity Center**	**2.46**	**249**	P	**Pn**	**11 04 30.1**	**-1.6**
	baz=67,SNR=64						
N02D				Sb	**Sb**	**11 05 08.1**	**+1.7**
	baz=67						
HUMO	**Hull Mountain**	**2.54**	**287**	Pn	**Pn**	**11 04 31.1**	**-1.7**
I05D	**Terrebonne, OR**	**2.73**	**334**	Pb	**Pb**	**11 04 39.6**	**-0.4**
	baz=153,SNR=22						
I04A	**Tendick Farm,**	**2.77**	**314**	Pb	**Pb**	**11 04 40.4**	**-0.3**
	baz=132,SNR=29						
I04A				Sb	**Sb**	**11 05 16.8**	**+1.8**
	baz=132						
O02D	**Mt. Diablo Mer**	**2.92**	**235**	P	**Pn**	**11 04 36.5**	**-1.6**
	baz=53						
O02D				Sb	**Sb**	**11 05 20.8**	**+1.2**
	baz=53						
L02E	**Cave Junction**	**2.94**	**276**	P	**Pn**	**11 04 38.2**	**-0.1**
	baz=94,SNR=16						
L02E				Sb	**Sb**	**11 05 21.2**	**+1.1**
	baz=94						
K02D	**Willamette Mer**	**3.07**	**286**	P	**Pn**	**11 04 39.6**	**-0.5**
	baz=104,SNR=32						
KRMB	**Red Mountain**	**3.20**	**265**		**Pn**	**11 04 41.8**	**-0.1**
KRMB				IAML		11 05 39.2	
	comp=N,58nm,2.1s						
MFID	**Camas Ranch**	**3.21**	**61**	Pn	**Pn**	**11 04 40.6**	**-1.4**
KHMM	**Horse Mountain**	**3.23**	**253**	Pn	**Pn**	**11 04 41.1**	**-1.2**
KHMM				IAML		11 05 43.8	
	comp=N,85nm,1.6s						
KHMM				IAML		11 05 44.3	
	comp=E,59nm,4.0s						
I03D	**Drain, OR**	**3.25**	**305**	Pb	**Pb**	**11 04 48.2**	**-0.7**
	baz=122,SNR=12						
H04A	**Detroit Lake**	**3.34**	**327**		**Pn**	**11 04 43.5**	**-0.2**
RYN	**Ryan**	**3.38**	**165**		**Pn**	**11 04 43.9**	**-0.6**
RYN				IAML		11 05 40.0	
	comp=N,92nm,0.4s						
J01E	**Myrtle Point**	**3.40**	**293**	P	**Pn**	**11 04 45.3**	**+0.8**
	baz=110						
WAKR	**Walker**	**3.40**	**177**		**Pn**	**11 04 46.0**	**+1.4**
WAKR				IAML		11 05 39.2	
	comp=N,47nm,0.5s						
WAKR				IAML		11 05 44.5	
	comp=E,49nm,0.9s						
KBO	**Bosley Butte**	**3.41**	**277**		**Pn**	**11 04 44.2**	**-0.6**
G08A	**Pilot Rock**	**3.43**	**8**	Pn	**Pn**	**11 04 43.5**	**-1.5**
H04D	**Lebanon**	**3.45**	**320**	Pb	**Pb**	**11 04 51.7**	**-0.6**
	baz=138,SNR=10						
JCC	**Jacoby Creek,**	**3.46**	**253**		**Pn**	**11 04 42.8**	**-2.5**
ELK	**Elko**	**3.53**	**108**	Pn	**Pn**	**11 04 47.0**	**+0.5**
ELK				IAML		11 05 44.7	
	comp=E,56nm,0.3s						
ELK				IAML		11 05 46.3	
	comp=E,37nm,0.5s						
KEBM	**Edson Butte**	**3.59**	**287**		**Pn**	**11 04 47.7**	**+0.4**
KEBM				IAML		11 05 58.1	
	comp=N,63nm,3.6s						
HLID	**Hailey**	**4.21**	**65**	P	**Pn**	**11 04 54.6**	**-1.2**
	baz=248						
HLID				Sb	**Sb**	**11 05 58.6**	**+1.9**
	baz=248						
HLID	**Hailey**	**4.21**	**65**	Pn	**Pn**	**11 04 55.4**	**-0.5**
HLID				IAML		11 06 04.9	
	comp=N,42nm,1.7s						
HLID				IAML		11 06 10.1	
	comp=N,29nm,0.9s						
R11A	**Troy Canyon, C**	**4.73**	**137**	Pg	**Pg**	**11 05 18.8**	**-2.3**
	baz=320						
BGU	**Big Grassy Mou**	**5.08**	**99**		**Pn**	**11 05 07.9**	**0.0**
BCYI	**Bear Canyon**	**5.18**	**60**	Pn	**Pn**	**11 05 09.3**	**+0.2**
SPUT	**South Promonto**	**5.44**	**94**		**Pn**	**11 05 13.4**	**+0.7**
DUG	**Dugway, Tooele**	**5.45**	**106**	Pn	**Pn**	**11 05 14.0**	**+1.1**
PRN	**Pahroc Range**	**5.73**	**140**	Pn	**Pn**	**11 05 18.2**	**+1.6**
MCMT	**McKenzie Canyo**	**5.77**	**57**	Pn	**Pn**	**11 05 16.9**	**-0.4**
JLU	**Jordanelle**	**6.33**	**99**		**Pn**	**11 05 25.6**	**+0.6**
AHID	**Auburn Hatcher**	**6.41**	**79**		**Pn**	**11 05 24.4**	**-1.6**
MSO	**Missoula**	**6.41**	**38**		**Pn**	**11 05 27.3**	**+1.3**
TCRU	**Three Creeks R**	**6.42**	**118**		**Pn**	**11 05 26.2**	**-0.2**
MSU	**Marysvale**	**6.66**	**118**	Pn	**Pn**	**11 05 28.1**	**-1.4**

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*IDC **06** 11:26:40.4±1.4, 32°.37S×179°.77E, h341^{km}±19^{km}, mb3.1/2, mb1 3.4/5, mb1mx3.2/27, mbtmp4.1/5, Error ellipse: s-maj=39.4km s-min=17.4km az=118.0*

*WEL **06** 11:26:41.8±0.7, 32°S±9°×18°0W±2°2, h262^{km}±12^{km}, M4.0/38, mB4.6/20, MLv4.6/38, Mw(mB)3.8/20, Error ellipse: s-maj=0.0km s-min=0.0km az=109.7*

*NOU **06** 11:27:23.4, 36°.01S×178°.60E, h322^{km}, MLv4.1, Off E. Coast of N. Island, N.Z.*

ISC 06 11:26:37.8±0.9**, 32°.43S**±0°.07×**179°.7W**±0°.2**, h350**^{km}**, n61, σ2^{s}.50**/66**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.49**	**26**	S	**S**	**11 28 26.7**	**-6.5**
RAO	**Raoul Island**	**3.50**	**26**	P	**Pn**	**11 27 45.7**	**+3.8**
	212nm,0.3s,baz=216,slow=20,SNR=5.4						
MXZ	**Matakaoa Point**	**5.39**	**198**	P	**Pn**	**11 28 02.5**	**+0.9**
MXZ				S	**S**	**11 29 08.0**	**-1.4**
WMGZ	**Waiomatatini S**	**5.61**	**196**	P	**Pn**	**11 28 05.5**	**+1.5**
WMGZ				S	**S**	**11 29 12.3**	**-1.7**
HAZ	**Te Kaha**	**5.72**	**201**	P	**Pn**	**11 28 06.9**	**+1.6**
HAZ				S	**S**	**11 29 13.6**	**-2.6**
PKGZ	**Pakihiroa**	**5.76**	**198**	P	**Pn**	**11 28 07.7**	**+1.9**
PKGZ				S	**S**	**11 29 13.3**	**-3.9**
PUZ	**Puketiti**	**5.89**	**196**	P	**Pn**	**11 28 09.2**	**+1.9**
PUZ				S	**S**	**11 29 18.0**	**-1.7**
RUGZ	**Raukumara Rang**	**5.94**	**201**	P	**Pn**	**11 28 09.3**	**+1.4**
RUGZ				S	**S**	**11 29 18.1**	**-2.9**
TWGZ	**Tauwhareparae**	**6.05**	**198**	P	Pn	11 28 13.9	+4.7
TWGZ				S	**S**	**11 29 22.9**	**-0.3**
OPRZ	**Ohinepanea**	**6.23**	**209**	P	Pn	11 28 15.8	+4.7
CNGZ	**Carnagh Statio**	**6.29**	**196**	P	**Pn**	**11 28 13.9**	**+2.1**
MWZ	**Matawai**	**6.33**	**201**	P	**Pn**	**11 28 13.7**	**+1.4**
MWZ				S	**S**	**11 29 27.2**	**-1.8**
TKGZ	**Te Karaka**	**6.34**	**198**	P	**Pn**	**11 28 13.7**	**+1.4**
TKGZ				S	**S**	**11 29 29.0**	**-0.1**
URZ	**Urewera**	**6.39**	**204**	P	**Pn**	**11 28 15.2**	**+2.2**
	1.9nm,0.3s,baz=256,slow=4.9,SNR=63						
URZ				S	**S**	**11 29 28.7**	**-1.5**
	6.2nm,0.3s,baz=37,slow=22,SNR=15						
URZ	**Urewera**	**6.39**	**204**	P	**Pn**	**11 28 13.6**	**+0.6**
RAGZ	**Rawiri**	**6.51**	**201**	P	**Pn**	**11 28 17.9**	**+3.5**
RIGZ	**Rimuhau**	**6.61**	**198**	P	**Pn**	**11 28 18.5**	**+3.0**
TOZ	**Tahuroa Road**	**6.62**	**216**	P	**Pn**	**11 28 19.8**	**+4.2**
MUGZ	**Murupara**	**6.71**	**205**	P	**Pn**	**11 28 17.6**	**+1.0**
RTZ	**Ruatahuna**	**6.76**	**203**	P	**Pn**	**11 28 19.8**	**+2.5**
PRGZ	**Paritu Road**	**6.79**	**196**	P	**Pn**	**11 28 20.7**	**+3.2**
SNGZ	**Shannon Statio**	**6.80**	**200**	P	**Pn**	**11 28 19.7**	**+2.0**
KNZ	**Kokohu**	**6.93**	**198**	P	**Pn**	**11 28 22.0**	**+2.8**
ALRZ	**Allen Road**	**6.94**	**207**	P	**Pn**	**11 28 22.4**	**+3.1**
MHGZ	**Mahia Peninsul**	**7.00**	**196**	P	Pn	11 28 24.4	+4.4
RAHZ	**Arahi**	**7.00**	**201**	P	**Pn**	**11 28 22.7**	**+2.7**
MTHZ	**Maungataniwha**	**7.02**	**203**	P	**Pn**	**11 28 24.1**	**+3.9**
TLZ	**Tolley Road**	**7.08**	**212**	P	Pn	11 28 26.0	+5.0
WHHZ	**Waihua**	**7.10**	**200**	P	**Pn**	**11 28 24.7**	**+3.5**
MRHZ	**Matea Rd**	**7.15**	**205**	P	**Pn**	**11 28 23.6**	**+1.8**
NMHZ	**Naumai**	**7.25**	**202**	P	**Pn**	**11 28 26.3**	**+3.3**
HATZ	**Hinemaiaia**	**7.32**	**207**	P	**Pn**	**11 28 26.4**	**+2.6**
ARHZ	**Aropaoanui**	**7.34**	**201**	P	**Pn**	**11 28 25.7**	**+1.6**
BKZ	**Black Stump Fm**	**7.42**	**204**	P	**Pn**	**11 28 26.0**	**+1.0**
HIZ	**Hauiti**	**7.54**	**215**	P	Pn	11 28 31.5	+5.0
KATZ	**Kakaramea**	**7.55**	**209**	P	**Pn**	**11 28 30.4**	**+3.8**
MCHZ	**McNeill Hill**	**7.60**	**202**	P	**Pn**	**11 28 29.7**	**+2.6**
TMVZ	**Te Maari**	**7.67**	**208**	P	**Pn**	**11 28 30.6**	**+2.6**
KWHZ	**Kaweka Forest**	**7.67**	**203**	P	**Pn**	**11 28 30.4**	**+2.4**
ETVZ	**East Tongariro**	**7.68**	**208**	P	**Pn**	**11 28 30.1**	**+2.0**
CKHZ	**Cape Kidnapper**	**7.69**	**199**	P	**Pn**	**11 28 30.6**	**+2.5**
WTVZ	**West Tongariro**	**7.71**	**209**	P	**Pn**	**11 28 30.9**	**+2.3**
OTVZ	**Oturere**	**7.72**	**208**	P	**Pn**	**11 28 30.4**	**+1.7**
NGZ	**Ngauruhoe**	**7.76**	**208**	P	**Pn**	**11 28 31.5**	**+2.4**
TUVZ	**Tukino**	**7.82**	**208**	P	**Pn**	**11 28 31.9**	**+2.1**
BHHZ	**Black Hill Sta**	**7.86**	**205**	P	**Pn**	**11 28 31.4**	**+1.2**
KAHZ	**Kahuranaki**	**7.87**	**200**	P	**Pn**	**11 28 31.9**	**+1.6**
KRHZ	**Kereru**	**7.89**	**203**	P	**Pn**	**11 28 32.3**	**+1.8**
WNVZ	**Wahianoa**	**7.89**	**208**	P	**Pn**	**11 28 32.4**	**+1.8**
PKVZ	**Pokaka**	**7.96**	**209**	P	**P**	**11 28 33.5**	**+2.1**
VRZ	**Vera Road**	**8.08**	**213**	P	**P**	**11 28 35.9**	**+0.2**
PXZ	**Pawanui**	**8.09**	**199**	P	**Pn**	**11 28 33.7**	**+0.9**
WPHZ	**Waipukurau**	**8.25**	**201**	P	**P**	**11 28 36.9**	**-0.7**
NEZ	**North Egmont**	**8.51**	**215**	P	**P**	**11 28 42.5**	**+1.9**
ANWZ	**Angora Road**	**8.60**	**200**	P	**P**	**11 28 41.4**	**-0.1**
CTZ	**Chatham Island**	**11.54**	**169**	P	P	11 29 38.9	+25
RPZ	**Rata Peaks**	**13.43**	**210**	P	**Pn**	**11 29 35.6**	**-0.6**
	1.2nm,0.3s,baz=24,slow=2.8,SNR=7.2						
RPZ				S	**S**	**11 31 55.3**	**-6.5**
	0.6nm,0.3s,baz=146,slow=22,SNR=7.5						
MSVF	**Nonsavu**	**14.78**	**351**	P	**Pn**	**11 29 52.1**	**-0.2**
	0.5nm,0.3s,baz=296,slow=22,SNR=4.1						
ASAR	**Alice Springs**	**41.64**	**270**	P	**P**	**11 33 52.8**	**-0.5**
	0.4nm,0.5s,baz=102,slow=7.4,SNR=11						
WRA	**Warramunga Arr**	**42.82**	**275**	P	**P**	**11 34 01.9**	**-0.8**
	1.2nm,0.3s,baz=112,slow=8.1,SNR=44						
FINES	**FINESS Array B**	**146.52**	**338**	PKPbc	**PKPab**	**11 45 39.5**	**0.0**
	1.8nm,0.8s,baz=53,slow=4.7,SNR=12						

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*PGC **06** 11:27:14.7±0.3, 50°.78N×130°.51W, h10^{km}, MLSn2.8/6, Mw3.4/6, 217km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **06** 11:27:17.9±3.2, 50°.59N×129°.87W, h0^{km}, mb3.4/1, mb1 3.5/5, mb1mx3.4/43, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=53.8km s-min=23.1km az=63.0*

ISC 06 11:27:19.3±1.5**, 50°.86N**±0°.08×**129°.8W**±0°.1**, h10**^{km}**, n17, σ0^{s}.86**/15**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.10**	**101**	Pn	**Pg**	**11 27 39.8**	**-0.5**
PHC	**Port Hardy**	**1.52**	**95**	Pn	**Pn**	**11 27 45.9**	**-0.7**
PHC				Sn	**Sg**	**11 28 08.6**	**+0.3**
HG4B	**Hotspring**	**1.67**	**330**	Pn	Pn	11 27 40.3	-8.3
HG4B				Sn	Sn	11 27 59.3	-11
BBB	**Bella Bella**	**1.70**	**38**	Pn	**Pn**	**11 27 48.0**	**-1.0**
BBB				Sn	**Sn**	**11 28 10.8**	**+0.1**
MAYB	**Maynard**	**1.75**	**104**	Pn	**Pn**	**11 27 48.8**	**-1.0**
FHRB	**Fair Harbour**	**1.91**	**114**	Pn	**Pn**	**11 27 50.3**	**-1.5**
TLCB	**Telegraph Cove**	**1.93**	**98**	Pn	**Pn**	**11 27 52.1**	**+0.1**
WOSB	**Woss**	**2.19**	**107**	Pn	**Pn**	**11 27 55.2**	**-0.6**
NCRB	**Newcastle Ridg**	**2.44**	**99**	Pn	**Pn**	**11 27 59.7**	**+0.4**
YKA	**Yellowknife Ar**	**14.29**	**30**	Pn	**Pn**	**11 30 40.9**	**-0.5**
	0.0nm,0.3s,baz=220,slow=11,SNR=2.2						
NVAR	**Mina Array Bea**	**14.87**	**142**	Pn	**Pn**	**11 30 49.7**	**+0.1**
	0.1nm,0.3s,baz=346,slow=14,SNR=2.0						
PDAR	**Pinedale Array**	**16.02**	**112**	Pn	**Pn**	**11 31 05.5**	**+0.6**
	0.0nm,0.3s,baz=312,slow=9.5,SNR=6.2						
ILAR	**Eielson Array**	**16.55**	**334**	Pn	**P**	**11 31 14.4**	**+0.6**
	0.0nm,0.3s,baz=141,slow=10,SNR=1.8						
ULM	**Lac du Bonnet**	**21.47**	**78**	P	**P**	**11 32 09.2**	**+1.5**
	1.2nm,0.7s,baz=306,slow=14,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**58.13**	**262**	T	T	12 39 35.9	
	baz=42,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**58.13**	**262**	T	T	12 39 40.3	
	baz=42,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**58.15**	**262**	T	T	12 39 35.4	
	baz=42,slow=75,SNR=40						

BYKL 06 11:44:37.2±0.2**, 56°.13N×113°.71E, 1C-4D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.09**	**261**	⇓*i*Pg	Pg	11 44 39.0	+0.2
SVKR				*e*Sg	Sg	11 44 40.7	+0.8
SVKR				Pmax			
	2μm,0.2s						
SVKR				Smax			
	46μm,0.4s						
UKT	**Uakit**	**0.64**	**184**	⇑*i*Pg	Pg	11 44 48.0	-1.5
UKT				*e*Sg	Sg	11 44 57.1	-0.7
YOA	**Uoyan**	**1.11**	**271**	*e*Pg	Pg	11 44 57.6	-0.9
YOA				*e*Pb	Pb	11 44 59.1	-0.2
YOA				Pmax			
	312nm,0.3s						
YOA				Smax			
	4μm,0.5s						
NLYR	**Nelyaty**	**1.17**	**71**	⇓*i*Pg	Pg	11 44 57.9	-1.7
NLYR				*e*Pb	Pb	11 45 00.1	-0.2
NLYR				*e*Sb	Sn	11 45 17.7	+0.2
NLYR				max			
	247nm,0.3s						
NLYR				max			
	1μm,0.7s						
KMO	**Kumora**	**1.43**	**261**	⇓*i*Pg	Pn	11 45 02.8	-1.6
KMO				*e*Pb	Pg	11 45 04.1	-0.5
KMO				*e*Sg	Sg	11 45 20.8	-2.3
KMO				max			
	185nm,0.4s						
KMO				Smax			
	2μm,0.8s						
BOD	**Bodaibo**	**1.70**	**5**	*e*Pg	Pn	11 45 07.8	-0.3
BOD				*e*Sg	Sn	11 45 30.4	-0.2
BOD				Pmax			
	104nm,0.3s						
BOD				Smax			
	242nm,0.3s						
YLYR	**Ulyunkhan**	**1.92**	**230**	⇓*i*Pn	Pn	11 45 11.1	0.0
YLYR				*e*Pg	Pb	11 45 12.0	-1.0
YLYR				*e*Sg	Sb	11 45 37.1	-0.4
YLYR				Pmax			
	50nm,0.3s						
YLYR				Smax			
	398nm,0.3s						
NIZ	**Nizh Angarsk**	**2.37**	**263**	*e*Pn	Pn	11 45 17.5	+0.2
NIZ				*e*Pg	Pb	11 45 19.8	-1.0
NIZ				Sg	Sb	11 45 51.5	+1.0
NIZ				Pmax			
	50nm,0.5s						
NIZ				Smax			
	282nm,0.5s						
CRS	**Chara**	**2.64**	**71**	*e*Pg	Pb	11 45 25.0	-0.4
CRS				Sg	Sb	11 45 59.8	+1.4
CRS				Pmax			
	181nm,0.5s						
CRS				Smax			
	418nm,0.7s						
SYVR	**Suvo**	**3.27**	**222**	*e*Sg	Sb	11 46 19.1	+2.6
SYVR				Smax			
	248nm,0.9s						
VTMR	**Vitim**	**3.38**	**350**	*e*Pg	Pb	11 45 37.6	-0.3
VTMR				*e*Sg	Sb	11 46 21.1	+1.7
TUP	**Tupik**	**3.96**	**113**	*e*Pn	Pn	11 45 40.0	+0.8
TUP				*e*Pg	Pb	11 45 48.0	+0.2
TUP				max			
	93nm,0.7s						
TUP				Smax			
	243nm,1.0s						
MXMB	**Maximikha**	**4.07**	**227**	*e*Pg	Pb	11 45 49.8	+0.1
MXMB				*e*Sg	Sb	11 46 42.4	+3.1
OGRR	**Ongureny**	**4.32**	**237**	*e*Pg	Pb	11 45 54.3	+0.3
OGRR				Pmax			
	27nm,0.5s						
OGRR				Smax			
	98nm,0.4s						
TRG	**Tyrgan**	**5.46**	**235**	*e*Sg	Sg	11 47 27.2	-5.3
TRG				Smax			
	101nm,1.0s						
KPC	**Khapcheranga**	**6.49**	**188**	*e*Pg	Pb	11 46 34.5	+3.6
KPC				*e*Sg	Sg	11 47 58.9	-6.5
KPC				Pmax			
	9.0nm,0.6s						
KPC				Smax			
	69nm,1.1s						

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*MOS **06** 11:44:52.1±1.4, 56°.13N×113°.73E, h4^{km}, mb4.4/6, Error ellipse: s-maj=9.8km s-min=6.7km az=64.7*

MOS Felt (III-IV) at Severomuysk.

*BYKL **06** 11:44:52.5±0.1, 56°.12N×113°.73E, h7^{km}±2^{km}*

*BJI **06** 11:44:53.3±0.0, 56°.00N×114°.05E, h7^{km}, mb4.0/5*

*IDC **06** 11:44:53.5±1.0, 56°.10N×113°.73E, h0^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.5/56, mbtmp3.7/12, ML3.3/4, MS3.7/4, Ms1 3.7/4, ms1mx2.9/49, Error ellipse: s-maj=21.9km s-min=17.0km az=159.0*

ISC 06 11:44:53.2±0.8**, 56°.12N**±0°.03×**113°.68E**±0°.02**, h7**^{km}±5^{km}**, n76, σ3^{s}.04**/106**, mb4.0**/12**, MS3.7**/6**, 2C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.07**	**271**	⇓*i*Pg	**Pg**	**11 44 54.7**	**-0.4**
SVKR				Pmax		11 44 55.5	
	8μm,0.2s						
SVKR				*e*Sg	**Sg**	**11 44 56.4**	**-0.1**
SVKR				Smax		11 44 56.8	
	154μm,0.7s						
SVKR	**Severomuysk**	**0.07**	**271**	*e*PG	**Pg**	**11 44 54.4**	**-0.7**
SVKR				*e*S	**Sg**	**11 44 56.6**	**+0.1**
UKT	**Uakit**	**0.63**	**183**	*e*Pg	**Pg**	**11 45 03.8**	**-1.5**
UKT				Pmax		11 45 04.0	
	454nm,0.8s						
UKT				*e*Sg	**Sg**	**11 45 12.4**	**-1.1**
UKT				Smax		11 45 12.8	
	1μm,0.7s						
YOA	**Uoyan**	**1.10**	**272**	*e*Pg	**Pg**	**11 45 13.2**	**-1.0**
YOA				Pmax		11 45 16.7	

	2µm,0.4s						
YOA				*e*Sg	**Sg**	**11 45 28.1**	**-0.4**
YOA				Smax		11 45 34.3	
	7µm,0.7s						
YOA	**Uoyan**	**1.10**	**272**	*e*PG	**Pg**	**11 45 13.4**	**-0.8**
YOA				pmax	pmax		
	comp=Z,1µm,0.5s						
YOA				smax	smax		
	comp=N,17µm,0.6s						
NLYR	**Nelyaty**	**1.19**	**71**	*e*Pg	**Pg**	**11 45 13.8**	**-2.1**
NLYR				*e*Sg	**Sg**	**11 45 29.2**	**-2.1**
NLYR				Smax		11 45 34.0	
	comp=N,3µm,1.0s						
NLYR	**Nelyaty**	**1.19**	**71**	*e*PG	**Pn**	**11 45 15.8**	**-0.4**
NLYR				pmax	pmax		
	comp=Z,2µm,0.8s						
NLYR				smax	smax		
	comp=E,7µm,1.0s						
KMO	**Kumora**	**1.41**	**262**	Pmax		11 45 16.1	
	comp=E,415nm,0.4s						
KMO				*e*Pg	**Pn**	**11 45 18.7**	**-0.6**
KMO				Sg	**Sb**	**11 45 38.2**	**+0.1**
KMO				Smax		11 45 42.0	
	comp=E,3µm,0.8s						
KMO	**Kumora**	**1.41**	**262**	*e*PG	**Pb**	**11 45 19.7**	**-0.2**
KMO				pmax	pmax		
	comp=Z,379nm,0.4s						
KMO				smax	smax		
	comp=E,7µm,0.5s						
BOD	**Bodaibo**	**1.72**	**6**	*e*Pg	**Pb**	**11 45 23.5**	**-1.5**
BOD				Pmax		11 45 23.7	
	comp=E,516nm,0.8s						
BOD				*e*Sg	**Sb**	**11 45 45.6**	**-1.2**
BOD				Smax		11 45 47.3	
	comp=E,938nm,1.1s						
BOD	**Bodaibo**	**1.72**	**6**	*e*PG	**Pn**	**11 45 23.2**	**-0.3**
BOD				*e*		11 45 46.4	
BOD				pmax	pmax		
	comp=Z,713nm,0.5s						
BOD				smax	smax		
	comp=E,3µm,1.4s						
YLYR	**Ulyunkhan**	**1.90**	**230**	*e*Pg	**Pb**	**11 45 27.1**	**-1.0**
YLYR				Pmax		11 45 28.0	
	comp=E,113nm,0.2s						
YLYR				*e*Sg	**Sb**	**11 45 52.7**	**+0.7**
YLYR				Smax		11 45 56.7	
	comp=E,1µm,0.4s						
YLYR	**Ulyunkhan**	**1.90**	**230**	*e*PN	**Pb**	**11 45 27.4**	**-0.7**
YLYR				*e*S	**Sb**	**11 45 52.1**	**+0.1**
YLYR				*e*		11 45 53.7	
YLYR				pmax	pmax		
	comp=Z,678nm,0.7s						
YLYR				smax	smax		
	comp=E,5µm,0.3s						
NIZ	**Nizh Angarsk**	**2.35**	**263**	*e*Pg	**Pb**	**11 45 35.2**	**-0.7**
NIZ				Pmax		11 45 37.7	
	comp=E,210nm,0.8s						
NIZ				*e*Sg	**Sb**	**11 46 06.5**	**+1.4**
CRS	**Chara**	**2.66**	**71**	*e*Pg	**Pb**	**11 45 40.6**	**-0.5**
CRS				Pmax		11 45 41.7	
	comp=E,835nm,1.1s						
CRS				*e*Sg	**Sb**	**11 46 14.4**	**+0.4**
CRS				Smax		11 46 19.3	
	comp=E,859nm,0.8s						
SYVR	**Suvo**	**3.25**	**222**	*e*Pg	**Pb**	**11 45 51.4**	**+0.2**
SYVR				Pmax		11 45 56.9	
	comp=E,232nm,0.7s						
SYVR				*e*Sg	**Sb**	**11 46 33.8**	**+2.8**
SYVR				Smax		11 46 37.2	
	comp=E,862nm,1.0s						
VTMR	**Vitim**	**3.39**	**350**	*e*Pn	**Pn**	**11 45 46.6**	**+0.2**
VTMR				*e*Pg	**Pb**	**11 45 54.0**	**+0.5**
VTMR				*e*Sg	**Sb**	**11 46 37.0**	**+2.2**
TUP	**Tupik**	**3.97**	**113**	*e*Pn	**Pn**	**11 45 53.7**	**-0.7**
TUP				*e*Pg	**Pb**	**11 46 03.2**	**-0.2**
TUP				Pmax		11 46 07.4	
	comp=E,84nm,0.6s						
TUP				*e*Sg	**Sb**	**11 46 54.4**	**+2.9**
TUP	**Tupik**	**3.97**	**113**	*e*PN	**Pn**	**11 45 53.7**	**-0.7**
TUP				*e*		11 46 04.3	
TUP				*e*S	**Sn**	**11 46 40.6**	**-0.5**
TUP				pmax	pmax		
	comp=Z,143nm,0.8s						
TUP				smax	smax		
	comp=E,1µm,0.9s						
MXMB	**Maximikha**	**4.05**	**227**	*e*Pg	**Pb**	**11 46 05.2**	**+0.5**
MXMB				*e*Sn	**Sn**	**11 46 41.1**	**-2.0**
MXMB				*e*Sg	**Sb**	**11 46 58.4**	**+4.6**
OGRR	**Ongureny**	**4.30**	**237**	*e*Pn	**Pn**	**11 45 59.6**	**+0.6**
OGRR				*e*Pg	**Pb**	**11 46 10.8**	**+1.7**
OGRR				*e*Sg	**Sg**	**11 47 06.8**	**-4.4**
OGRR				Smax		11 47 14.1	
	comp=E,279nm,0.5s						
YKLR	**Yuktali**	**4.46**	**81**	*e*Pn	**Pn**	**11 46 00.3**	**-0.8**
YKLR				*e*Pg	**Pb**	**11 46 11.5**	**-0.2**
YKLR				*e*Sg	**Sg**	**11 47 09.6**	**-6.7**
TRG	**Tyrgan**	**5.44**	**235**	*e*Pn	**Pn**	**11 46 15.0**	**+0.3**
TRG				*e*Pg	**Pb**	**11 46 31.0**	**+2.5**
TRG				Pmax		11 46 33.7	
	comp=E,32nm,0.8s						
TRG				*e*Sg	**Sg**	**11 47 42.0**	**-5.8**
TRG				Smax		11 47 47.5	
	comp=E,299nm,0.6s						
TRG	**Tyrgan**	**5.44**	**235**	*e*PN	**Pn**	**11 46 14.7**	**0.0**
TRG				*e*		11 46 30.5	
TRG				*e*		11 47 40.4	
TRG				pmax	pmax		
	comp=Z,47nm,1.4s						
TRG				smax	smax		
	comp=N,354nm,1.1s						
FFNB	**Fofonovo**	**5.76**	**228**	*e*Pn	**Pn**	**11 46 19.2**	**+0.2**
FFNB				*e*Pg	**Pb**	**11 46 37.0**	**+3.1**
FFNB				*e*Sg	**Sg**	**11 47 52.0**	**-6.0**
KAB	**Kabansk**	**5.80**	**228**	*e*Pg	**Pb**	**11 46 37.0**	**+2.3**
KAB				Pmax		11 46 38.5	
	comp=N,41nm,0.2s						
KAB				*e*Sg	**Sg**	**11 47 52.6**	**-6.8**
KAB				Smax		11 47 57.4	
	comp=N,179nm,1.2s						
HRMR	**Khuramsha**	**6.00**	**224**	Pg	**Pb**	**11 46 40.7**	**+2.7**
HRMR				Pmax		11 46 44.9	
	comp=N,87nm,0.6s						
HRMR				Smax		11 47 57.4	
	comp=N,757nm,0.9s						
HRMR				*e*Sg	**Sg**	**11 47 58.8**	**-7.0**
IENR	**Iengra**	**6.24**	**84**	*e*Sg	**Sg**	**11 48 05.4**	**-8.1**
BGT	**Bolshoye Golou**	**6.35**	**233**	*e*Pg	**Pb**	**11 46 46.9**	**+3.0**
BGT				*e*Sg	**Sg**	**11 48 09.1**	**-7.8**
BGT				Smax		11 48 15.7	
	comp=N,140nm,0.7s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*Pn	**Pn**	**11 46 28.7**	**-0.1**
KPC				*e*Pg	**Pb**	**11 46 48.9**	**+2.9**
KPC				Pmax		11 46 52.9	
	comp=N,16nm,0.8s						
KPC				*e*Sg	**Sg**	**11 48 13.3**	**-7.5**
KPC				Smax		11 48 18.3	
	comp=N,215nm,1.1s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*PN	**Pn**	**11 46 30.6**	**+1.8**
KPC				*e*		11 46 50.7	
KPC				*e*		11 48 13.5	
KPC				pmax	pmax		
	comp=Z,24nm,0.7s						
KPC				smax	smax		
	comp=E,476nm,1.5s						
LSTR	**Listvyanka**	**6.73**	**234**	*e*Pg	**Pb**	**11 46 53.3**	**+2.9**
LSTR				Pmax		11 46 54.2	
	comp=E,41nm,1.6s						
LSTR				*e*Sg	**Sg**	**11 48 21.1**	**-8.0**
LSTR				Smax		11 48 22.2	
	comp=E,52nm,0.9s						
IRK	**Irkutsk**	**6.75**	**239**	*e*PG	**Pb**	**11 46 54.3**	**+3.6**
IRK				*e*		11 48 21.7	
IRK				pmax	pmax		
	comp=Z,70nm,0.1s						
IRK				smax	smax		
	comp=N,390nm,1.1s						
IVK	**Ivanovka**	**6.97**	**236**	*e*Pg	**Pb**	**11 46 58.9**	**+4.4**
IVK				*e*Sg	Sb	11 48 27.2	+9.4
TLY	**Talaya**	**7.41**	**237**	*e*Pn	**Pn**	**11 46 42.0**	**+0.4**
TLY				*e*Pg	**Pb**	**11 47 05.7**	**+3.8**
TLY				Pmax		11 47 08.0	
	comp=N,13nm,1.3s						
TLY				*e*Sg	Sg	11 48 41.8	-9.0
TLY				Smax		11 48 47.2	
	comp=N,94nm,1.1s						
TLY	**Talaya**	**7.41**	**237**	*e*PG	**Pb**	**11 47 05.6**	**+3.7**
TLY				*e*		11 48 40.3	
TLY				pmax	pmax		
	comp=Z,21nm,0.9s						
TLY				smax	smax		
	comp=E,172nm,1.4s						
HIA	**Hailar**	**7.78**	**149**	*i* PN	**Pn**	**11 46 48.1**	**+1.3**
ARS	**Arshan**	**7.85**	**242**	*e*Pg	Pb	11 47 14.1	+4.6
ARS				Pmax		11 47 17.8	
	comp=E,31nm,0.8s						
ARS				*e*Sg	Sg	11 48 55.9	-9.0
ARS				Smax		11 48 58.2	
	comp=E,144nm,1.0s						
ARS	**Arshan**	**7.85**	**242**	*e*PN	Pn	11 46 52.3	+4.6
ARS				*e*		11 48 56.2	
ARS				pmax	pmax		
	comp=Z,31nm,0.7s						
ARS				smax	smax		
	comp=E,401nm,0.7s						
ZEA	**Zeya**	**8.17**	**101**	*e*PN	**Pn**	**11 46 55.5**	**+3.5**
ZEA				*e*		11 47 22.4	
ZEA				*e*S	**Sn**	**11 48 27.9**	**+3.4**
ZEA				*e*		11 49 10.5	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				smax	smax		
	comp=N,110nm,0.9s						
ZAK	**Zakamensk**	**8.47**	**232**	*e*Pg	Pb	11 47 25.9	+5.8
ZAK				Pmax		11 47 26.0	
	comp=N,4.0nm,0.5s						
ZAK				*e*Sg	Sg	11 49 14.5	-10
ZAK				Smax		11 49 15.0	
	comp=N,22nm,1.1s						
ZAK	**Zakamensk**	**8.47**	**232**	*e*PN	**Pn**	**11 46 59.0**	**+2.7**
ZAK				*e*		11 47 27.1	
ZAK				*e*		11 49 16.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZAK				smax	smax		
	comp=N,179nm,1.4s						
MOY	**Mondy**	**8.72**	**245**	*e*PN	**Pn**	**11 47 00.2**	**+0.6**
MOY				*e*		11 47 27.9	
MOY				*e*S	**Sn**	**11 48 33.0**	**-5.1**
MOY				*i*		11 49 31.3	
ORL	**Orlik**	**8.86**	**252**	*e*Pn	**Pn**	**11 47 03.1**	**+1.5**
ORL				max		11 47 15.6	
	comp=N,27nm,1.6s						
ORL				Pg	Pg	11 47 32.3	-10
ORL				*e*Sg	Sg	11 49 26.5	-11
ORL				Smax		11 49 27.6	
	comp=N,45nm,1.4s						
ORL	**Orlik**	**8.86**	**252**	*e*PN	**Pn**	**11 47 03.9**	**+2.3**
ORL				*e*		11 49 28.8	
ORL				pmax	pmax		
	comp=Z,31nm,0.8s						
ORL				smax	smax		
	comp=N,170nm,1.5s						
ULN	**Ulaanbaatar**	**9.21**	**209**	*i* P	**Pn**	**11 47 10.6**	**+4.1**
SONM	**Songino Array**	**9.43**	**211**	Pn	**Pn**	**11 47 11.6**	**+2.1**
	comp=N,0.2nm,0.3s,baz=50,slow=12,SNR=2.5						
SONM				Pg		11 47 42.4	
	comp=N,0.6nm,0.3s,baz=17,slow=12,SNR=3.8						
SONM				Lg	Lg	11 49 51.5	
	comp=N,6.4nm,0.3s,baz=24,slow=26,SNR=11						
YAK	**Yakutsk**	**10.13**	**48**	*i* P	**Pn**	**11 47 18.5**	**-0.3**
KLR	**Kul'dur**	**12.93**	**115**	Pn	**Pn**	**11 47 58.0**	**+0.8**
	comp=N,0.3nm,0.3s,baz=307,slow=13,SNR=7.7						
KLR				Lg	Lg	11 51 40.8	
	comp=N,0.3nm,0.3s,baz=16,slow=8.6,SNR=5.7						
KLR	**Kul'dur**	**12.93**	**115**	*i* P	**Pn**	**11 47 57.6**	**+0.5**
ZALV	**Zalesovo Beam**	**16.64**	**275**	Pn	**P**	**11 48 49.5**	**+0.5**
	comp=N,0.1nm,0.3s,baz=72,slow=16,SNR=4.4						
ZALV				Sn	**Sn**	**11 51 42.2**	**-9.0**
	comp=N,0.1nm,0.3s,baz=45,slow=16,SNR=1.8						
TIXI	**Tiksi**	**16.87**	**17**	*i* P	**Pn**	**11 48 47.4**	**-1.9**
DGZ	**Jazzator, Alta**	**17.02**	**259**	*i* P	**Pn**	**11 48 51.4**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NRIK	**Noril'sk**	**17.64**	**329**	P	**Pn**	**11 48 58.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=69,slow=13,SNR=2.8						
NRIK	**Noril'sk**	**17.64**	**329**	*i* P	**Pn**	**11 48 59.0**	**-0.1**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SEY	**Seymchan**	**20.51**	**55**	P	Pn	11 49 34.2	+0.6
	comp=Z,1.0nm,0.5s,baz=76,slow=23,SNR=4.1						
KURK	**Kurchatov**	**21.42**	**270**	*i* P	**P**	**11 49 43.6**	**+2.2**
KURK				pmax	pmax		
	comp=Z,14nm,1.4s						
MK31	**Makanchi Array**	**21.50**	**258**	*i* P	**P**	**11 49 43.5**	**+1.2**
MKAR	**Makanchi Array**	**21.50**	**258**	P	**P**	**11 49 44.6**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=46,slow=7.0,SNR=12						
MKAR	**Makanchi Array**	**21.50**	**258**	*i* P	**P**	**11 49 45.7**	**+3.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**21.52**	**270**	P	**P**	**11 49 44.8**	**+2.4**
	comp=Z,5.4nm,0.9s,baz=67,slow=12,SNR=12						
BRVK	**Borovoye**	**25.02**	**281**	*i* P	**P**	**11 50 18.7**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AAK	**Ala-Archa**	**28.43**	**258**	*i* P	**P**	**11 50 51.6**	**+3.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	**Obninsk**	**41.43**	**302**	⇑*e*P	**P**	**11 52 40.6**	**+0.8**
OBN				*e*		11 54 13.9	
OBN				*e*S	**S**	**11 58 49.4**	**-5.3**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
OBN				MLR	MLR		
	comp=Z,80nm,14.0s						
FINES	**FINESS Array B**	**42.46**	**315**	P	**P**	**11 52 50.0**	**+1.8**
	comp=Z,4.0nm,1.0s,baz=28,slow=8.6,SNR=4.1						
FINES	**FINESS Array B**	**42.46**	**315**	*i* P	**P**	**11 52 51.0**	**+2.8**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**44.83**	**37**	P	**P**	**11 53 10.4**	**+3.2**
	comp=Z,0.2nm,0.5s,baz=195,slow=10,SNR=5.1						
KIV	**Kislovodsk**	**45.19**	**286**	⇑*e*P	**P**	**11 53 10.3**	**-0.2**
KIV				*e*		11 54 54.1	
KIV				*e*S	S	12 00 05.4	+15
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,68nm,15.0s						
BRTR	**Keskin Array B**	**52.98**	**288**	LR	LR	12 21 48.5	
	comp=Z,30nm,19.1s,baz=134,slow=42						
VRAC	**Vranov**	**54.47**	**307**	LR	LR	12 20 11.2	
	comp=Z,114nm,18.8s,baz=24,slow=39						
YKA	**Yellowknife Ar**	**55.90**	**25**	P	**P**	**11 54 30.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=335,slow=6.9,SNR=4.7						
YKA	**Yellowknife Ar**	**55.90**	**25**	*i* P	**P**	**11 54 34.4**	**+3.5**
GERES	**GERESS Array B**	**56.10**	**308**	LR	LR	12 20 20.0	
	comp=Z,78nm,19.3s,baz=335,slow=38						
MMAI	**Mount Meron Ar**	**56.99**	**281**	LR	LR	12 23 02.3	
	comp=Z,51nm,19.1s,baz=355,slow=40						
ESDC	**Sonseca Array**	**70.96**	**314**	P	**P**	**11 56 11.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=32,slow=6.5,SNR=5.5						
ASAR	**Alice Springs**	**81.30**	**161**	P	**P**	**11 57 10.8**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=8.7,slow=6.7,SNR=1.6						

BYKL 06 11:44:55.1±0.1, 56°.10N×113°.74E, h7$^{\text{km}}$±2$^{\text{km}}$, FELT I=IV MSK at Severomuisk, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**280**	*e*Pg	Pg	11 44 57.5	0.0
SVKR				Pmax		11 44 58.0	
	28µm,0.2s						
SVKR				*e*Sg	Sg	11 44 59.5	+0.4
SVKR				Smax		11 44 59.9	
	214µm,0.5s						
UKT	**Uakit**	**0.62**	**186**	*e*Pg	Pg	11 45 06.1	-0.9
UKT				Pmax		11 45 07.8	
	907nm,0.6s						
UKT				*e*Sg	Sg	11 45 14.6	-0.4
UKT				Smax		11 45 15.9	
	2µm,0.4s						
YOA	**Uoyan**	**1.13**	**273**	*e*Pg	Pg	11 45 15.5	-1.2
YOA				Pmax		11 45 22.0	
	2µm,0.3s						
YOA				*e*Sg	Sg	11 45 30.6	-0.8
YOA				*e*		11 45 36.6	
YOA				max		11 45 39.4	
	18µm,0.4s						
NLYR	**Nelyaty**	**1.16**	**69**	*e*	Pn	11 45 18.8	+1.0
NLYR				max		11 45 19.0	
	2µm,0.5s						
NLYR				*e*Sg	Sg	11 45 31.7	-0.7
NLYR				*e*		11 45 36.0	
NLYR				max		11 45 37.2	
	7µm,1.0s						
KMO	**Kumora**	**1.44**	**263**	*e*Pg	Pn	11 45 21.6	0.0
KMO				*e*Pb	Pg	11 45 23.1	+0.4
KMO				max		11 45 23.5	
	1µm,0.4s						
KMO				*e*Sg	Sn	11 45 40.5	-0.3
KMO				*e*		11 45 43.8	
KMO				max		11 45 44.9	
	7µm,0.5s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	11 45 25.9	+0.3
BOD				Pmax		11 45 27.3	
	837nm,0.9s						
BOD				*e*Sg	Sb	11 45 49.2	+0.1
BOD				Smax		11 45 50.7	
	3µm,1.3s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Pn	Pn	11 45 29.0	+0.9
YLYR				*e*Pg	Pb	11 45 29.9	-0.4
YLYR				Pmax		11 45 30.1	
	674nm,0.5s						
YLYR				*e*		11 45 37.9	
YLYR				*e*Sg	Sg	11 45 55.6	-0.9
YLYR				*e*		11 45 57.6	
YLYR				max		11 45 58.0	
	5µm,0.2s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pg	Pb	11 45 38.6	+0.3
NIZ				Pmax		11 45 43.1	
	284nm,0.7s						
NIZ				*e*Sg	Sg	11 46 09.9	-1.7
NIZ				Smax		11 46 12.4	
	2µm,0.6s						
CRS	**Chara**	**2.64**	**70**	*e*Pn	Pn	11 45 39.5	+1.4
CRS				*e*Pg	Pb	11 45 42.8	+0.2
CRS				Pmax		11 45 44.5	
	2µm,1.1s						
CRS				*e*Sg	Sb	11 46 16.5	+1.3
CRS				Smax		11 46 19.9	
	873nm,1.1s						
SYVR	**Suvo**	**3.27**	**223**	*e*Pn	Pn	11 45 46.7	0.0
SYVR				*e*Pg	Pb	11 45 54.1	+0.8
SYVR				Pmax		11 46 00.5	
	283nm,0.8s						
SYVR				*e*Sg	Sb	11 46 36.5	+3.3
SYVR				Smax		11 46 46.3	
	2µm,1.7s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pn	Pn	11 45 48.8	+0.2
VTMR				*e*Pg	Pb	11 45 56.1	+0.3
VTMR				*e*PgPg	PbPb	11 45 57.9	-1.0
VTMR				*e*		11 46 05.7	
VTMR				*e*Sg	Sb	11 46 39.7	+2.3
TUP	**Tupik**	**3.93**	**113**	*e*Pn	Pn	11 45 56.2	+0.4
TUP				*e*Pg	Pb	11 46 05.2	+0.5
TUP				Pmax		11 46 13.8	
	143nm,0.8s						
TUP				*e*Sn	Sn	11 46 41.6	-0.6
TUP				*e*Sg	Sg	11 46 57.0	-4.2
TUP				Smax		11 47 02.4	
	1µm,0.9s						
TUP				*e*		11 47 11.5	
MXMB	**Maximikha**	**4.06**	**228**	*e*Pg	Pb	11 46 08.3	+1.4
MXMB				*e*Sn	Sn	11 46 45.2	-0.1
MXMB				*e*Sg	Sg	11 47 00.8	-4.6
MXMB				*e*		11 47 07.7	
CIT	**Chita**	**4.09**	**182**	*e*Pg	Pb	11 46 08.5	+1.1
CIT				Pmax		11 46 11.6	
	129nm,0.1s						
CIT				*e*Sn	Sn	11 46 46.0	-0.1
CIT				*e*Sg	Sb	11 47 01.6	+4.6
CIT				Smax		11 47 08.3	
	1µm,0.7s						
OGRR	**Ongureny**	**4.32**	**238**	*e*Pn	Pn	11 46 02.1	+0.9
OGRR				*e*Pg	Pb	11 46 13.1	+1.8
OGRR				Pmax		11 46 14.4	
	146nm,0.8s						
OGRR				*e*Sn	Sn	11 46 50.3	-1.4
OGRR				*e*Sg	Sg	11 47 09.2	-4.5
OGRR				Smax		11 47 15.8	
	729nm,1.0s						
YKLR	**Yuktali**	**4.43**	**80**	*e*Pn	Pn	11 46 03.8	+1.1
YKLR				*e*Pg	Pb	11 46 14.6	+1.4
YKLR				*e*Sn	Sn	11 46 53.4	-1.1
YKLR				*e*Sg	Sg	11 47 12.1	-5.2
ZRHB	**Zarechye**	**5.24**	**230**	*e*Pn	Pn	11 46 13.9	+0.1
ZRHB				*e*Pg	Pb	11 46 29.3	+2.3
ZRHB				Pmax		11 46 33.6	
	166nm,0.9s						
ZRHB				*e*Sn	Sn	11 47 12.6	-1.9
ZRHB				*e*Sg	Sg	11 47 37.5	-5.8
ZRHB				Smax		11 48 14.0	
	2µm,1.1s						
TRG	**Tyrgan**	**5.46**	**235**	*e*Pn	Pn	11 46 18.3	+1.5
TRG				*e*Pg	Pb	11 46 33.0	+2.3
TRG				Pmax		11 46 41.4	
	47nm,1.4s						
TRG				*e*Sn	Sn	11 47 19.1	-0.8
TRG				*e*Sg	Sg	11 47 44.0	-6.2
TRG				Smax		11 47 57.3	
	400nm,1.4s						
FFNB	**Fofonovo**	**5.77**	**228**	*e*Sn	Sn	11 47 25.3	-2.3
FFNB				*e*Sg	Sg	11 47 54.3	-6.0
KAB	**Kabansk**	**5.82**	**229**	*e*Pg	Pb	11 46 40.5	+3.7
KAB				Pmax		11 47 02.4	
	158nm,1.2s						
KAB				*e*Sn	Sn	11 47 26.5	-2.1
KAB				*e*Sg	Sg	11 47 56.0	-5.7
KAB				*e*		11 48 13.2	
KAB				max		11 48 24.0	
	2µm,1.3s						
STDB	**Stepnoy Dvoret**	**5.86**	**231**	*e*Sg	Sg	11 47 56.4	-6.5
HRMR	**Khuramsha**	**6.01**	**225**	*e*Pn	Pn	11 46 25.0	+0.6
HRMR				*e*Pg	Pb	11 46 42.4	+2.2
HRMR				Pmax		11 46 47.7	
	143nm,0.7s						
HRMR				*e*Sn	Sn	11 47 31.8	-1.7
HRMR				*e*Sg	Sg	11 48 02.0	-6.0
HRMR				Smax		11 48 17.4	
	1µm,0.8s						
IENR	**Iengra**	**6.21**	**84**	*e*Sg	Sg	11 48 07.7	-6.7
BGT	**Bolshoye Golou**	**6.37**	**234**	*e*Pn	Pn	11 46 29.2	-0.1
BGT				*e*Pg	Pb	11 46 49.6	+3.5
BGT				Pmax		11 47 32.2	
	27nm,0.7s						
BGT				*e*Sn	Sn	11 47 40.5	-1.6
BGT				*e*Sg	Sg	11 48 11.6	-7.7
BGT				Smax		11 48 25.3	
	216nm,1.3s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pg	Pb	11 46 51.3	+3.5
KPC				Pmax		11 47 14.1	
	31nm,0.9s						
KPC				*e*Sn	Sn	11 47 41.9	-2.7
KPC				*e*Sg	Sg	11 48 15.6	-6.7
KPC				Smax		11 48 25.9	
	481nm,1.5s						
LSTR	**Listvyanka**	**6.75**	**235**	*e*Pg	Pb	11 46 56.0	+3.4
LSTR				Pmax		11 47 20.6	
	45nm,2.2s						
LSTR				*e*Sn	Sn	11 47 50.0	-1.5
LSTR				*e*Sg	Sg	11 48 23.9	-7.7
LSTR				Smax		11 48 30.7	
	288nm,1.5s						
IRK	**Irkutsk**	**6.77**	**239**	*e*Sg	Sg	11 48 24.1	-8.1
IRK				Smax		11 48 28.5	
	389nm,0.9s						
IVK	**Ivanovka**	**6.99**	**236**	*e*Pg	Pb	11 47 00.7	+4.0
IVK				Pmax		11 47 05.9	
	36nm,1.7s						
IVK				*e*Sn	Sn	11 47 54.6	-2.8
IVK				*e*Sg	Sg	11 48 30.9	-8.3
IVK				Smax		11 48 40.0	
	289nm,1.6s						
TLY	**Talaya**	**7.43**	**238**	*e*Pn	Pn	11 46 44.8	+1.0
TLY				*e*Pg	Pb	11 47 09.5	+5.3
TLY				Pmax		11 47 17.4	
	21nm,0.9s						
TLY				*e*Sn	Sn	11 48 05.8	-2.4
TLY				*e*Sg	Sg	11 48 44.8	-8.5
TLY				Smax		11 48 53.5	
	172nm,1.4s						
ARS	**Arshan**	**7.87**	**243**	*e*Pn	Pn	11 46 51.5	+1.6

ARS				*e*Pg	Pb	11 47 17.1	+5.3
ARS				Pmax		11 47 51.9	
	35nm,0.5s						
ARS				*e*Sn	Sn	11 48 15.4	-3.8
ARS				*e*Sg	Sg	11 48 58.8	-8.7
ARS				Smax		11 49 05.1	
	400nm,0.7s						
ZAK	**Zakamensk**	**8.49**	**232**	*e*Pg	Pb	11 47 28.1	+5.8
ZAK				Pmax		11 47 43.2	
	17nm,1.7s						
ZAK				*e*Sn	Sn	11 48 31.0	-3.5
ZAK				*e*Sg	Sg	11 49 17.0	-10
ZAK				Smax		11 49 32.2	
	179nm,0.8s						
MOY	**Mondy**	**8.74**	**245**	*e*Pg	Pg	11 47 32.5	-10
MOY				Pmax		11 47 46.8	
	29nm,1.0s						
MOY				*e*Sn	Sn	11 48 36.3	-4.3
MOY				*e*Sg	Sg	11 49 24.9	-10
MOY				Smax		11 49 31.9	
	313nm,1.4s						
ORL	**Orlik**	**8.89**	**252**	*e*Pg	Pg	11 47 35.8	-9.3
ORL				Pmax		11 47 38.3	
	36nm,2.2s						
ORL				*e*Sn	Sn	11 48 41.1	-3.2
ORL				*e*Sg	Sg	11 49 30.5	-10
ORL				Smax		11 49 37.6	
	170nm,1.1s						

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*IDC **06** 11:44:58.8±1.0, 11°.57S×165°.43E, h0^{km}, mb4.2/9, mb1 4.4/11, mb1mx4.1/42, mbtmp4.2/11, ML4.4/2, MS3.2/7, Ms1 3.2/7, ms1mx3.0/30, Error ellipse: s-maj=33.5km s-min=20.6km az=138.0*

ISC 06 11:45:02.4±0.8**, 11°.6S**±0°.1×**165°.4E**±0°.1**, h24^{km}, n16, σ1^{s}08**/12**, mb4.2**/9**, MS3.3**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.79**	**291**	Pn	**Pn**	**11 46 27.0**	**+0.1**
	12nm,0.3s,baz=130,slow=7.3,SNR=4.3						
DZM	**Mont Dzumac**	**10.49**	**175**	Pn	**Pn**	**11 47 31.7**	**+0.2**
	2.1nm,0.3s,baz=223,slow=4.6,SNR=29						
DZM				LR	LR	11 50 58.7	
	comp=Z,68nm,20.8s,baz=252,slow=34						
MSVF	**Nonsavu**	**13.66**	**118**	LR	LR	11 52 22.6	
	comp=Z,61nm,20.9s,baz=225,slow=32						
PMG	**Port Moresby**	**18.09**	**275**	LR	LR	11 55 34.6	
	comp=Z,72nm,20.9s,baz=121,slow=35						
STKA	**Stephens Creek**	**29.85**	**224**	P	**P**	**11 51 08.0**	**0.0**
	1.8nm,0.8s,baz=27,slow=9.3,SNR=3.0						
STKA				LR	LR	12 02 31.1	
	comp=Z,68nm,19.2s,baz=23,slow=35						
WRA	**Warramunga Arr**	**31.02**	**251**	P	**P**	**11 51 18.2**	**-0.3**
	5.9nm,0.8s,baz=83,slow=8.8,SNR=22						
ASAR	**Alice Springs**	**32.28**	**244**	P	**P**	**11 51 28.4**	**-1.2**
	1.3nm,0.8s,baz=66,slow=9.8,SNR=8.8						
ASAR				LR	LR	12 03 24.1	
	comp=Z,59nm,19.2s,baz=58,slow=34						
SIJI	**Sorong**	**35.53**	**285**	LR	LR	12 07 57.3	
	comp=Z,39nm,18.3s,baz=61,slow=39						
FITZ	**Fitzroy Crossi**	**38.95**	**256**	LR	LR	12 07 58.9	
	comp=Z,40nm,18.8s,baz=108,slow=35						
CMAR	**Chiang Mai Arr**	**72.04**	**294**	P	**P**	**11 56 26.6**	**+1.6**
	0.9nm,0.7s,baz=117,slow=3.9,SNR=5.3						
ILAR	**Eielson Array**	**84.10**	**19**	P	**P**	**11 57 31.2**	**+0.3**
	1.5nm,0.6s,baz=234,slow=5.4,SNR=25						
NVAR	**Mina Array Bea**	**86.59**	**50**	P	**P**	**11 57 45.0**	**+0.7**
	1.3nm,0.9s,baz=236,slow=7.2,SNR=8.2						
MKAR	**Makanchi Array**	**93.69**	**317**	P	**P**	**11 58 16.9**	**-0.1**
	0.8nm,0.8s,baz=110,slow=6.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**93.80**	**324**	P	**P**	**11 58 15.9**	**-1.5**
	1.1nm,0.8s,baz=84,slow=15,SNR=2.0						
YKA	**Yellowknife Ar**	**95.58**	**27**	P	**P**	**11 58 23.8**	**-1.6**
	0.3nm,0.6s,baz=244,slow=3.3,SNR=6.0						
ESDC	**Sonseca Array**	**150.47**	**343**	PKPbc	**PKiKP**	**12 04 54.1**	**+0.9**
	0.7nm,0.9s,baz=18,slow=2.3,SNR=5.3						

BYKL 06 11:47:19.1±0.3**, 56°.10N**×**113°.70E, 2C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.08**	**282**	⇑*i*Pg	Pg	11 47 20.8	+0.2
SVKR				*e*Sg	Sg	11 47 22.7	+1.0
SVKR				Pmax			
	5µm,0.2s						
SVKR				Smax			
	23µm,0.4s						
UKT	**Uakit**	**0.61**	**184**	*e*Pg	Pg	11 47 30.1	-0.7
UKT				*e*Sg	Sg	11 47 38.0	-0.8
UKT				Pmax			
	147nm,0.5s						
UKT				Smax			
	220nm,0.8s						
YOA	**Uoyan**	**1.11**	**273**	Pg	Pg	11 47 39.3	-1.0
YOA				*e*Sg	Sg	11 47 53.1	-1.5
YOA				Pmax			
	804nm,0.8s						
YOA				Smax			
	1µm,0.7s						
NLYR	**Nelyaty**	**1.18**	**70**	⇑*i*Pg	Pg	11 47 40.2	-1.6
NLYR				*e*Pb	Pb	11 47 42.3	-0.1
NLYR				*e*Sg	Sg	11 47 56.3	-0.8
NLYR				max			
	390nm,0.3s						
NLYR				Smax			
	355nm,0.6s						
KMO	**Kumora**	**1.42**	**262**	*e*Pg	Pn	11 47 45.1	-1.1
KMO				*e*		11 47 46.8	
KMO				*e*Sg	Sg	11 48 04.3	-0.4
KMO				Pmax			
	111nm,0.6s						
KMO				Smax			
	395nm,0.8s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	11 47 50.0	-0.4
BOD				*e*Sg	Sn	11 48 12.3	-0.9
BOD				Pmax			
	67nm,0.3s						
BOD				Smax			
	364nm,0.3s						
YLYR	**Ulyunkhan**	**1.90**	**231**	*e*Pg	Pn	11 47 53.3	+0.6
YLYR				*e*		11 47 55.4	
YLYR				*e*Sg	Sn	11 48 17.3	0.0
YLYR				max			
	90nm,0.4s						
YLYR				Smax			
	1µm,1.4s						

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*MOS **06** 11:47:45.3±1.1, 56°.11N×113°.74E, h9^{km}, mb4.2/6, Error ellipse: s-maj=10.7km s-min=7.0km az=70.1*

*BYKL **06** 11:47:46.7±0.1, 56°.12N×113°.74E, h4^{km}±3^{km}*

*IDC **06** 11:47:46.9±1.6, 56°.21N×113°.53E, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.7/49, mbtmp3.8/10, ML4.0/2, MS3.5/8, Ms1 3.5/8, ms1mx3.0/53, Error ellipse: s-maj=41.8km s-min=20.3km az=167.0*

ISC 06 11:47:47.2±0.5**, 56°.07N**±0°.02×**113°.63E**±0°.02**, h10^{km}, n78, σ2^{s}66**/125**, mb4.0**/12**, MS3.6**/9**, 5C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.06**	**322**	⇑*i*Pg	**Pg**	**11 47 48.4**	**-1.0**
SVKR				Pmax		11 47 49.2	
	14µm,0.2s						
SVKR				*e*Sg	**Sg**	**11 47 50.4**	**-0.6**
SVKR				Smax		11 47 52.5	
	160µm,1.1s						
SVKR	**Severomuysk**	**0.06**	**322**	⇑*i*PG	**Pg**	**11 47 48.4**	**-1.0**
SVKR				*e*S	**Sg**	**11 47 49.8**	**-1.2**
UKT	**Uakit**	**0.58**	**180**	*e*Pg	**Pg**	**11 47 58.3**	**-0.1**
UKT				Pmax		11 48 00.9	
	332nm,0.2s						
UKT				*e*Sg	**Sb**	**11 48 06.5**	**-1.3**
UKT				Smax		11 48 27.4	
	3µm,1.4s						
YOA	**Uoyan**	**1.07**	**274**	*e*Pg	**Pg**	**11 48 07.3**	**-0.4**
YOA				Pmax		11 48 13.1	
	2µm,0.5s						
YOA				*e*Sg	**Sn**	**11 48 23.0**	**-0.1**
YOA				*e*Sb	**Sb**	**11 48 28.5**	**+6.7**
YOA				max		11 48 30.5	
	8µm,0.4s						
YOA	**Uoyan**	**1.07**	**274**	*e*PG	**Pb**	**11 48 07.5**	**-0.2**
YOA				*e*		11 48 23.7	
YOA				pmax	pmax		
	comp=Z,1µm,0.3s						
YOA				smax	smax		
	comp=E,8µm,0.5s						
NLYR	**Nelyaty**	**1.23**	**69**	⇓*i*Pg	**Pn**	**11 48 07.4**	**-3.1**
NLYR				*e*Pb	**Pb**	**11 48 09.8**	**-0.8**
NLYR				max		11 48 10.0	
	comp=E,3µm,0.3s						
NLYR				*e*Sg	**Sb**	**11 48 23.1**	**-3.4**
NLYR				*e*		11 48 27.3	
NLYR				max		11 48 28.3	
	comp=E,15µm,1.2s						
NLYR	**Nelyaty**	**1.23**	**69**	*e*PG	**Pn**	**11 48 07.1**	**-3.4**
NLYR				*e*		11 48 22.5	
NLYR				pmax	pmax		
	comp=Z,4µm,0.7s						
NLYR				smax	smax		
	comp=N,15µm,1.1s						
KMO	**Kumora**	**1.38**	**263**	*e*Pg	**Pb**	**11 48 12.6**	**-0.4**
KMO				*e*Pb	**Pg**	**11 48 14.0**	**+0.4**
KMO				max		11 48 17.0	
	comp=N,745nm,0.3s						
KMO				*e*Sg	**Sg**	**11 48 31.7**	**+0.3**
KMO				*e*		11 48 35.0	
KMO				max		11 48 36.0	
	comp=N,5µm,0.8s						
KMO	**Kumora**	**1.38**	**263**	*e*PG	**Pb**	**11 48 12.5**	**-0.4**
KMO				*e*		11 48 32.6	
KMO				pmax	pmax		
	comp=Z,310nm,0.2s						
KMO				smax	smax		
	comp=N,5µm,0.8s						
BOD	**Bodaibo**	**1.77**	**7**	*e*Pg	**Pn**	**11 48 17.1**	**-0.7**
BOD				Pmax		11 48 19.7	
	comp=N,2µm,1.2s						
BOD				*e*Sg	**Sn**	**11 48 39.1**	**-1.2**
BOD				Smax		11 48 42.6	
	comp=N,4µm,0.8s						
BOD	**Bodaibo**	**1.77**	**7**	*e*PN	**Pn**	**11 48 16.7**	**-1.1**
BOD				*e*		11 48 39.3	
BOD				pmax	pmax		
	comp=Z,2µm,1.2s						
BOD				smax	smax		
	comp=E,4µm,0.6s						
YLYR	**Ulyunkhan**	**1.84**	**231**	*e*Pn	**Pb**	**11 48 20.7**	**-0.2**
YLYR				*e*Pg	**Pg**	**11 48 21.5**	**-1.0**
YLYR				Pmax		11 48 24.0	
	comp=E,535nm,0.7s						
YLYR				*e*		11 48 27.7	
YLYR				*e*Sg	**Sg**	**11 48 46.4**	**+0.1**
YLYR				Smax		11 48 54.8	
	comp=E,4µm,1.4s						
YLYR	**Ulyunkhan**	**1.84**	**231**	*e*PN	**Pn**	**11 48 18.7**	**-0.2**
YLYR				*e*		11 48 20.6	
YLYR				*e*S	**Sb**	**11 48 44.5**	**+0.5**
YLYR				*e*		11 48 46.8	
YLYR				pmax	pmax		
	comp=Z,547nm,0.7s						
YLYR				smax	smax		
	comp=N,4µm,0.8s						
NIZ	**Nizh Angarsk**	**2.32**	**264**	*e*Pn	**Pn**	**11 48 26.3**	**+0.9**
NIZ				*e*Pg	**Pb**	**11 48 29.6**	**+0.6**
NIZ				*e*PgPg	**PnPn**	**11 48 33.2**	**+0.8**
NIZ				max		11 48 33.9	
	comp=N,342nm,1.1s						
NIZ				*e*Sn	**Sb**	**11 48 55.5**	**-2.2**
NIZ				*e*Sg	**Sg**	**11 49 01.1**	**-0.5**
NIZ				Smax		11 49 03.2	
	comp=N,1µm,0.6s						
CRS	**Chara**	**2.71**	**70**	*e*Pn	**Pn**	**11 48 30.3**	**-0.4**
CRS				⇑*i*Pg	**Pb**	**11 48 34.6**	**-1.1**
CRS				Pmax		11 48 35.4	
	comp=N,3µm,1.0s						
CRS				*e*Sg	**Sb**	**11 49 08.6**	**-0.3**
CRS				Smax		11 49 10.8	
	comp=N,2µm,0.5s						
SYVR	**Suvo**	**3.20**	**222**	*e*Pn	**Pn**	**11 48 39.6**	**+2.1**
SYVR				*e*Pg	**Pb**	**11 48 45.0**	**+1.0**
SYVR				*e*		11 48 50.4	
SYVR				Pmax		11 48 50.6	
	comp=N,249nm,1.5s						
SYVR				*e*Sn	**Sn**	**11 49 17.2**	**+1.6**
SYVR				*e*Sg	**Sg**	**11 49 28.0**	**-1.8**
SYVR				*e*		11 49 37.7	
SYVR				max		11 49 40.2	
	comp=N,2µm,1.8s						
SYVR	**Suvo**	**3.20**	**222**	*e*PN	**Pn**	**11 48 39.1**	**+1.6**
SYVR				*e*		11 48 46.1	
SYVR				*e*		11 49 28.3	
SYVR				pmax	pmax		
	comp=Z,256nm,0.8s						
SYVR				smax	smax		
	comp=E,2µm,1.2s						
VTMR	**Vitim**	**3.43**	**351**	*e*Pn	**Pn**	**11 48 40.1**	**-0.5**
VTMR				*e*Pg	**Pb**	**11 48 47.7**	**-0.3**
VTMR				*e*Sn	**Sn**	**11 49 20.2**	**-1.1**
VTMR				*e*Sg	**Sb**	**11 49 30.6**	**+0.9**
TUP	**Tupik**	**3.98**	**112**	*e*Pn	**Pn**	**11 48 47.5**	**-0.7**
TUP				*e*Pg	**Pb**	**11 48 57.4**	**+0.1**
TUP				Pmax		11 48 59.2	
	comp=E,152nm,1.0s						
TUP				*e*Sg	**Sb**	**11 49 48.9**	**+3.5**
TUP				*e*		11 49 52.5	
TUP				max		11 49 56.3	
	comp=E,2µm,1.0s						
TUP				*e*		11 50 18.6	
TUP	**Tupik**	**3.98**	**112**	*e*PN	**Pn**	**11 48 47.5**	**-0.7**
TUP				*e*		11 48 57.4	
TUP				*e*S	**Sn**	**11 49 33.7**	**-1.2**
TUP				*e*		11 49 48.6	
TUP				pmax	pmax		
	comp=Z,142nm,0.7s						
TUP				smax	smax		
	comp=E,2µm,1.0s						
MXMB	**Maximikha**	**3.99**	**227**	*e*Pn	**Pn**	**11 48 51.0**	**+2.6**
MXMB				*e*Pg	**Pg**	**11 49 00.6**	**-3.0**
MXMB				*e*		11 49 19.5	
MXMB				*e*Sg	**Sg**	**11 49 53.5**	**-1.7**
CIT	**Chita**	**4.05**	**181**	*e*Pg	**Pb**	**11 49 00.7**	**+2.0**
CIT				Pmax		11 49 01.7	
	comp=E,162nm,0.2s						
CIT				*e*Sn	**Sn**	**11 49 36.6**	**-0.2**
CIT				*e*Sg	**Sg**	**11 49 54.3**	**-3.0**
CIT				Smax		11 49 59.4	
	comp=E,476nm,0.3s						
CIT				*e*		11 50 00.1	
CIT	**Chita**	**4.05**	**181**	*e*PN	**Pn**	**11 48 51.0**	**+1.7**
CIT				*e*		11 49 00.0	
CIT				*e*S	**Sn**	**11 49 35.1**	**-1.7**
CIT				*e*		11 49 54.5	
CIT				pmax	pmax		
	comp=Z,181nm,1.6s						
CIT				smax	smax		
	comp=E,662nm,1.4s						
OGRR	**Ongureny**	**4.25**	**238**	*e*Pn	**Pn**	**11 48 54.0**	**+2.1**
OGRR				*e*Pg	**Pb**	**11 49 04.1**	**+2.2**
OGRR				Pmax		11 49 08.8	
	comp=E,220nm,1.7s						
OGRR				*e*Sn	**Sn**	**11 49 41.9**	**+0.4**
OGRR				*e*Sg	**Sg**	**11 49 59.9**	**-3.6**
OGRR				Smax		11 50 07.9	
	comp=E,635nm,1.7s						
OGRR	**Ongureny**	**4.25**	**238**	*e*PN	**Pn**	**11 48 50.8**	**-1.1**
OGRR				*e*		11 49 02.8	
OGRR				*e*		11 50 00.4	
OGRR				pmax	pmax		
	comp=Z,220nm,1.7s						
OGRR				smax	smax		
	comp=N,638nm,2.0s						
YKLR	**Yuktali**	**4.50**	**80**	*e*Pg	**Pb**	**11 49 05.5**	**-0.7**
YKLR				*e*Sn	**Sn**	**11 49 44.6**	**-3.1**
YKLR				*e*Sg	**Sb**	**11 50 02.9**	**+2.5**
ZRHB	**Zarechye**	**5.17**	**230**	*e*Pg	**Pb**	**11 49 21.0**	**+3.3**
ZRHB				Pmax		11 49 23.5	
	comp=N,165nm,0.8s						
ZRHB				*e*Sn	**Sn**	**11 50 04.4**	**+0.1**
ZRHB				*e*Sg	**Sg**	**11 50 28.6**	**-4.5**
ZRHB				Smax		11 50 53.1	
	comp=N,1µm,2.0s						
TRG	**Tyrgan**	**5.39**	**235**	*e*Pg	**Pg**	**11 49 25.6**	**-4.7**
TRG				Pmax		11 49 38.4	
	comp=N,93nm,1.5s						
TRG				*e*Sn	**Sn**	**11 50 10.3**	**+0.7**
TRG				*e*Sg	**Sg**	**11 50 36.2**	**-3.8**
TRG				Smax		11 50 51.1	
	comp=N,345nm,1.5s						
TRG	**Tyrgan**	**5.39**	**235**	*e*PN	**Pn**	**11 49 07.2**	**-0.4**
TRG				*e*		11 49 23.7	
TRG				*e*S	**Sn**	**11 50 10.0**	**+0.4**
TRG				*e*		11 50 34.2	
TRG				pmax	pmax		
	comp=Z,92nm,1.5s						
TRG				smax	smax		
	comp=E,344nm,1.6s						
FFNB	**Fofonovo**	**5.71**	**228**	*e*Pg	**Pb**	**11 49 30.7**	**+4.0**
FFNB				*e*Sn	**Sn**	**11 50 17.6**	**+0.2**
FFNB				*e*Sg	**Sg**	**11 50 45.7**	**-4.5**
KAB	**Kabansk**	**5.75**	**228**	*e*Sn	**Sn**	**11 50 19.3**	**+0.8**
KAB				*e*Sg	**Sg**	**11 50 47.4**	**-4.2**
KAB				Smax		11 51 22.2	
	comp=E,1µm,1.5s						
HRMR	**Khuramsha**	**5.95**	**224**	*e*Pg	Pg	11 49 35.5	-5.5
HRMR				Pmax		11 49 49.3	
	comp=E,80nm,0.7s						
HRMR				*e*Sn	**Sn**	**11 50 24.0**	**+0.6**
HRMR				*e*Sg	**Sg**	**11 50 52.7**	**-5.2**
HRMR				Smax		11 51 17.1	
	comp=E,1µm,1.7s						
IENR	**Iengra**	**6.28**	**84**	*e*Sg	**Sb**	**11 50 58.7**	**+7.1**
BGT	**Bolshoye Golou**	**6.30**	**234**	*e*Pg	Pb	11 49 41.2	+4.4
BGT				Pmax		11 49 52.1	
	comp=E,52nm,1.3s						
BGT				*e*Sn	**Sn**	**11 50 32.1**	**+0.2**
BGT				*e*Sg	**Sg**	**11 51 04.4**	**-4.7**
BGT				Smax		11 51 12.1	
	comp=E,181nm,1.4s						
KPC	**Khapcheranga**	**6.42**	**187**	*e*Pn	**Pn**	**11 49 23.0**	**+1.2**
KPC				*e*Pg	Pg	11 49 44.1	-5.9
KPC				Pmax		11 50 08.7	
	comp=E,62nm,1.9s						
KPC				*e*Sn	**Sn**	**11 50 34.7**	**-0.4**
KPC				*e*Sg	**Sg**	**11 51 07.4**	**-5.7**
KPC				Smax		11 51 16.9	
	comp=E,528nm,1.8s						
KPC				*e*		11 51 21.7	
LSTR	**Listvyanka**	**6.68**	**235**	*e*Pg	Pg	11 49 49.2	-5.7
LSTR				Pmax		11 49 53.6	
	comp=E,56nm,1.7s						
LSTR				*e*Sn	**Sn**	**11 50 40.8**	**-0.5**
LSTR				*e*Sg	**Sg**	**11 51 16.0**	**-5.3**
LSTR				Smax		11 51 22.7	
	comp=E,267nm,1.8s						
IVK	**Ivanovka**	**6.92**	**236**	*e*Sg	**Sg**	**11 51 22.7**	**-6.2**
IVK				Smax		11 51 29.8	
	comp=E,228nm,1.8s						
TLY	**Talaya**	**7.36**	**237**	Pg	Pg	11 50 01.0	-6.9
TLY				Pmax		11 50 25.5	
	comp=E,51nm,1.7s						
TLY				*e*Sn	**Sn**	**11 50 57.8**	**-0.2**
TLY				*e*Sg	**Sg**	**11 51 37.1**	**-5.9**
TLY				Smax		11 51 43.0	
	comp=E,132nm,1.8s						
TLY	**Talaya**	**7.36**	**237**	*i* PN	**Pn**	**11 49 35.9**	**+1.4**
HIA	**Hailar**	**7.76**	**149**	*i* PN	**Pn**	**11 49 40.5**	**+0.4**
ARS	**Arshan**	**7.80**	**242**	*e*Pg	Pg	11 50 09.0	-7.4
ARS				Pmax		11 50 09.6	
	comp=E,65nm,0.7s						
ARS				*e*Sn	**Sn**	**11 51 08.2**	**-0.8**
ARS				*e*Sg	**Sg**	**11 51 50.8**	**-6.4**
ARS				Smax		11 52 13.3	
	comp=E,309nm,1.0s						
ZEA	**Zeya**	**8.19**	**101**	*e*PG	Pb	11 50 14.2	+5.2
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=E,300nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,5.0s						
ZAK	**Zakamensk**	**8.42**	**232**	*e*Sg	**Sg**	**11 52 10.1**	**-7.0**
ZAK				Smax		11 53 21.5	
	comp=Z,183nm,1.8s						
MOY	**Mondy**	**8.67**	**245**	Pg	Pg	11 50 25.4	-7.5
MOY				Pmax		11 50 38.0	
	comp=Z,71nm,1.9s						
MOY				*e*Sn	**Sn**	**11 51 27.7**	**-2.7**
MOY				*e*Sg	**Sg**	**11 52 16.9**	**-8.1**
MOY				Smax		11 52 37.1	
	comp=Z,310nm,1.9s						
ORL	**Orlik**	**8.82**	**252**	*e*Pg	Pg	11 50 28.1	-7.7
ORL				Pmax		11 50 29.7	
	comp=Z,64nm,1.6s						
ORL				*e*Sn	**Sn**	**11 51 32.9**	**-1.2**
ORL				*e*Sg	**Sg**	**11 52 21.5**	**-8.4**
ORL				Smax		11 52 55.2	
	comp=Z,117nm,1.5s						
ULN	**Ulaanbaatar**	**9.16**	**209**	*i* P	**Pn**	**11 50 00.7**	**+1.3**
SONM	**Songino Array**	**9.37**	**211**	Lg	Lg	11 52 43.1	
	comp=Z,2.4nm,0.3s,baz=19,slow=29,SNR=6.4						
YAK	**Yakutsk**	**10.18**	**48**	*i* P	**Pn**	**11 50 13.4**	**+0.2**
KLR	**Kul'dur**	**12.94**	**114**	Pn	**Pn**	**11 50 51.6**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=292,slow=11,SNR=3.6						
KLR				Lg	Lg	11 54 31.6	
	comp=Z,0.2nm,0.3s,baz=46,slow=14,SNR=4.2						
KLR	**Kul'dur**	**12.94**	**114**	*i* P	**Pn**	**11 50 51.3**	**+0.4**
TIXI	**Tiksi**	**16.92**	**17**	*i* P	**Pn**	**11 51 40.5**	**-3.1**
DGZ	**Jazzator, Alta**	**16.98**	**259**	*i* P	**P**	**11 51 46.3**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NRIK	**Noril'sk**	**17.67**	**329**	P	**Pn**	**11 51 51.3**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=120,slow=11,SNR=6.1						
NRIK				LR	LR	11 59 00.4	
	comp=Z,172nm,18.0s,baz=146,slow=38						
NRIK	**Noril'sk**	**17.67**	**329**	*i* P	**Pn**	**11 51 51.2**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SEY	**Seymchan**	**20.56**	**55**	P	**P**	**11 52 26.5**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=274,slow=16,SNR=2.5						
SEY	**Seymchan**	**20.56**	**55**	*i* P	**P**	**11 52 26.1**	**+0.5**
KSRS	**Korea Array**	**20.96**	**147**	LR	LR	12 01 23.0	
	comp=Z,70nm,21.8s,baz=338,slow=39						
KURK	**Kurchatov**	**21.39**	**270**	*i* P	**P**	**11 52 36.4**	**+1.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MK31	**Makanchi Array**	**21.46**	**258**	*i* P	**P**	**11 52 37.6**	**+2.1**
MKAR	**Makanchi Array**	**21.46**	**258**	P	**P**	**11 52 35.4**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=57,slow=9.0,SNR=5.2						
MKAR				LR	LR	12 01 06.4	
	comp=Z,227nm,18.2s,baz=62,slow=37						
MKAR	**Makanchi Array**	**21.46**	**258**	*i* P	**P**	**11 52 38.4**	**+2.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**21.48**	**270**	P	**P**	**11 52 37.0**	**+1.4**
	comp=Z,8.6nm,1.1s,baz=69,slow=12,SNR=9.9						
BRVK	**Borovoye**	**25.00**	**281**	*i* P	**P**	**11 53 13.0**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PETK	**Petropavlovsk-**	**25.38**	**78**	LR	LR	12 03 33.6	
	comp=Z,87nm,19.6s,baz=303,slow=37						
JNU	**Nakatsue**	**25.88**	**145**	LR	LR	12 04 35.8	
	comp=Z,78nm,18.9s,baz=342,slow=39						
AAK	**Ala-Archa**	**28.39**	**258**	*i* P	**P**	**11 53 43.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**39.15**	**202**	LR	LR	12 10 59.7	
	comp=Z,51nm,18.2s,baz=350,slow=36						
CMAR	**Chiang Mai Arr**	**39.15**	**202**	*i* P	**P**	**11 55 16.7**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	**Obninsk**	**41.42**	**302**	⇑*e*P	**P**	**11 55 33.2**	**-0.1**
OBN				*e*		11 57 10.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,80nm,14.0s						
FINES	**FINESS Array B**	**42.47**	**315**	P	**P**	**11 55 41.5**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=54,slow=7.2,SNR=3.0						
KIV	**Kislovodsk**	**45.18**	**286**	⇑*e*P	**P**	**11 56 04.4**	**+0.5**
KIV				*e*		11 57 48.2	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KIV				MLR	MLR		
	comp=Z,68nm,15.0s						
INK	**Inuvik**	**46.56**	**28**	P	**P**	**11 56 15.6**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=194,slow=2.0,SNR=3.7						
WSAR	**Wadi Sarin**	**51.63**	**254**	LR	LR	12 21 20.3	
	comp=Z,57nm,20.7s,baz=300,slow=39						
BORG	**Borgarnes**	**54.69**	**338**	LR	LR	12 22 24.0	

	comp=Z,53nm,20.8s,baz=42,slow=38						
YKA	Yellowknife Ar	55.95	25	P	P	11 57 23.5	-1.4
	comp=Z,0.8nm,0.8s,baz=335,slow=6.6,SNR=7.9						
YKA	Yellowknife Ar	55.95	25	*i* P	P	11 57 26.0	+1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	70.97	314	P	P	11 59 05.7	+1.0
	comp=Z,0.5nm,0.8s,baz=23,slow=7.8,SNR=5.0						
NVAR	Mina Array Bea	76.06	40	P	P	11 59 37.6	+2.8
	comp=Z,0.2nm,0.6s,baz=328,slow=6.4,SNR=2.9						

WEL 06 11:55:02.6,43°S±1°×17°1E±°,h5^{km}±2^{km},M2.4/11, mB5.1/1,ML2.3/10,MLv2.4/11,Mw(mB)4.4/1,Error ellipse: s-maj=0.0km s-min=0.0km az=120.7,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INZ	Inchbonnie	0.36	20	P	Pb	11 55 10.9	-0.5
WVZ	Waitaha Valley	0.40	268	P	Pb	11 55 12.0	0.0
OXZ	Oxford	0.62	116	P	Pb	11 55 16.3	+0.5
RPZ	Rata Peaks	0.67	194	P	Pb	11 55 17.3	+0.5
GCSZ	Gaunt Creek Bo	0.74	250	P	Pb	11 55 18.1	+0.2
LTZ	Lake Taylor	0.78	69	P	Pb	11 55 19.3	+0.7
ARCZ	Arundel	0.89	185	P	Pn	11 55 21.4	-0.3
RACZ	Rakaia	0.92	137	P	Pn	11 55 22.3	+0.2
FOZ	Fox Glacier	1.17	246	P	Pn	11 55 26.1	+0.6
MQZ	McQueen's Vall	1.19	123	P	Pn	11 55 26.5	+0.6
TMZ	Timaru	1.34	188	P	Pg	11 55 29.2	+1.0
DSZ	Denniston Nort	1.37	17	P	Pg	11 55 29.4	+0.6
AKCZ	Akaroa Harbour	1.44	125	P	Pn	11 55 22.9	-6.4
LBZ	Lake Benmore	1.54	211	P	Pg	11 55 32.6	+0.4
THZ	Tophouse	1.77	43	P	Pb	11 55 35.8	+0.3
ODZ	Otahua Downs	2.04	193	P	Pn	11 55 38.5	+1.1
WKZ	Wanaka	2.41	222	P	Pg	11 55 49.7	+1.0
WMGZ	Waiomatatini S	7.55	48	P	Pn	11 56 55.5	+2.3

IDC 06 12:14:17.5±542.0,31°.72N×38°.33E,h0^{km},Error ellipse: s-maj=274.9km s-min=149.8km az=148.0,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	23.73	32	*i*		14 38 00.0	
	baz=225,slow=324,SNR=0.8						
I43RU	DUBNA INFRASON	25.01	359	*i*		14 49 10.0	
	baz=180,slow=352						
I26DE	FREYUNG INFRAS	25.23	320	*i*		14 46 00.0	
	baz=128,slow=330,SNR=1.6						
I17CI	DIMBOKRO INFRA	47.34	248	*i*		17 08 00.0	
	baz=59,slow=314,SNR=0.7						

IDC 06 12:17:24.1±9.6,32°.98N×73°.36E,h0^{km},mb3.4/2, mb1 3.4/5,mb1mx3.2/40,mbtmp3.3/5,ML2.8/3,Error ellipse: s-maj=171.8km s-min=53.5km az=145.0

ISC 06 12:17:23.1±2.1,32°.7N±0°.2×73°.6E±0°.2,h10^{km},n10, σ1^{s}.34/10,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYUN	Piuthan	9.32	117	*e*P	Pn	12 19 39.1	+1.3
	7.2nm,0.3s						
DANN	Dangsing	9.79	114	*e*P	Pn	12 19 44.7	+0.5
	2.9nm,0.2s						
AAK	Ala-Archa	9.96	4	Pn	Pn	12 19 47.7	+1.3
	0.2nm,0.3s,baz=200,slow=15,SNR=2.0						
DMN	Daman	11.19	114	*e*P	Pn	12 20 03.3	-0.1
	3.1nm,0.2s						
PKIN	Phulchoki	11.43	113	*e*P	Pn	12 20 06.0	-0.7
	3.4nm,0.2s						
PKI	Pulchoki	11.44	113	*e*P	Pn	12 20 05.9	-1.0
	3.3nm,0.3s						
MKAR	Makanchi Array	15.59	23	Pn	Pn	12 21 03.3	+0.4
	0.1nm,0.3s,baz=205,slow=9.5,SNR=2.0						
KURBB	Kurchatov Arra	18.29	10	P	Pn	12 21 34.1	-2.7
	0.0nm,0.3s,baz=199,slow=12,SNR=4.7						
ZALV	Zalesovo Beam	22.72	17	P	P	12 22 24.9	-0.1
	0.7nm,0.4s,baz=203,slow=9.7,SNR=5.7						
NOA	NORSAR Array B	48.71	325	P	P	12 26 07.4	-0.1
	0.2nm,0.4s,baz=98,slow=8.4,SNR=1.6						

IDC 06 12:29:50.8±2.5,4°.46N×127°.73E,h0^{km},mb3.3/3, mb1 3.5/3,mb1mx3.3/28,mbtmp3.3/3,Error ellipse: s-maj=169.4km s-min=29.4km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.11	165	P	P	12 35 17.2	-0.3
	0.4nm,0.4s,baz=345,slow=10,SNR=7.4						
ASAR	Alice Springs	28.60	168	P	P	12 35 49.3	+0.3
	0.2nm,0.6s,baz=354,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	57.53	325	P	P	12 39 42.1	-0.1
	0.2nm,0.6s,baz=119,slow=7.7,SNR=2.0						

IDC 06 12:39:47.1±8.9,8°.13S×119°.43E,h123^{km}±95^{km},mb3.6/3, mb1 3.7/6,mb1mx3.4/40,mbtmp4.0/6,ML4.2/3,MS3.1/1, Ms1 3.1/1,ms1mx2.3/35,Error ellipse: s-maj=70.9km s-min=38.3km az=83.0

DJA 06 12:39:53.4±1.2,8°S±2°×12°0E±°,h18^{km}±10^{km},M4.2/12, mb4.5/2,mB4.8/1,MLv4.0/12,Mw(mB)4.1/1

ISC 06 12:39:50.1±0.8,8°.36S±0°.05×119°.62E±0°.05,h164^{km}±9^{km}, n19,σ1^{s}.54/24,mb3.9/3,Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	1.46	153	P	Pn	12 40 21.5	+1.1
WSI				S	Sn	12 40 43.6	-0.1
PLAI	Plampang	1.88	256	P	Pn	12 40 25.4	+0.6
PLAI				S	Sn	12 40 50.0	-1.5
BASI	Baing, Sumba	2.07	153	P	Pn	12 40 28.0	+1.1
BASI				S	Sn	12 40 56.5	+1.0
EDFI	Ende, Flores	2.08	101	P	Pn	12 40 28.3	+1.2
EDFI				S	Sn	12 40 55.8	+0.1
BSSI	Bau Bau, Buton	2.37	21	P	Pn	12 40 30.4	0.0
TWSI	Taliwang, Sumb	2.73	262	P	Pn	12 40 35.3	+0.6
TWSI				S	Sn	12 41 09.7	+0.4
BKSI	Bulukumba	3.06	9	P	Pn	12 40 39.2	+0.4
BNSI	Bone	3.96	7	P	Pn	12 40 52.4	+2.1
SPSI	Sidrap Palu	4.37	2	P	Pn	12 40 55.8	+0.2
TTSI	Tana Toraja	5.29	2	P	Pn	12 41 09.5	+1.9
	0.1nm1μm33nm,1.0s						
JAGI	Jajag, Banyuwa	5.41	268	P	Pn	12 41 10.5	+1.3
FITZ	Fitzroy Crossi	11.31	149	P	Pn	12 42 29.1	+2.0
	0.8nm,0.3s,baz=336,slow=12,SNR=11						
FITZ				S	Sn	12 44 28.2	-4.3
	1.2nm,0.3s,baz=176,slow=20,SNR=11						
SIJI	Sorong	13.78	58	P	Pn	12 42 57.4	-1.5
	0.9nm,0.3s,baz=52,slow=19,SNR=5.0						
WRA	Warramunga Arr	18.32	130	P	Pn	12 43 55.1	+1.2
	1.1nm,0.3s,baz=304,slow=12,SNR=9.8						
ASAR	Alice Springs	20.46	140	S	S	12 47 56.0	+0.6
	1.8nm,0.8s,baz=312,slow=18,SNR=4.8						
USRK	Ussuriysk Ar.	53.50	11	LR	LR	13 13 36.4	
	comp=Z,16nm,18.9s,baz=105,slow=38						
SONM	Songino Array	57.16	349	P	P	12 49 20.6	+0.7
	0.6nm,0.4s,baz=162,slow=10.0,SNR=2.3						
MKAR	Makanchi Array	64.17	332	P	P	12 50 07.0	-0.2
	0.8nm,0.5s,baz=145,slow=7.3,SNR=12						
ZALV	Zalesovo Beam	68.67	339	P	P	12 50 34.0	-1.5
	0.7nm,0.3s,baz=144,slow=5.1,SNR=7.1						

NOU 06 12:41:27.2,26°.79S×132°.98E,h0^{km},mb4.2,South Australia

AUST 06 12:41:29.2±2.1,26°.86S×133°.07E,h4^{km}±14^{km},Error ellipse: s-maj=6.9km s-min=6.0km az=43.0

IDC 06 12:41:29.2±3.5,26°.78S×133°.18E,h0^{km},mb1 4.1/3, mb1mx3.7/21,mbtmp3.9/3,ML3.9/3,Error ellipse: s-maj=35.9km s-min=21.3km az=72.0

ISC 06 12:41:29.1±0.8,26°.83S±0°.05×133°.10E±0°.05,h10^{km},n19, σ1^{s}.85/31,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OOD	Oodnadatta	2.50	113	P	Pn	12 42 12.5	+2.6
	baz=2.5						
OOD				S	Sn	12 42 43.5	+3.1
	baz=2.5						
ASPA	Alice Springs	3.23	13	P	Pn	12 42 21.4	+1.5
	baz=3.3						
ASPA				S	Sn	12 43 02.3	+3.7
	baz=3.3						
ASAR	Alice Springs	3.23	13	Pn	Pn	12 42 21.3	+1.3
	1.6nm,0.3s,baz=197,slow=12,SNR=109						
ASAR				Pg	Pb	12 42 27.8	+1.1
	3.7nm,0.3s,baz=193,slow=15,SNR=27						
ASAR				Sn	Sn	12 43 01.1	+2.6
	6.1nm,0.3s,baz=194,slow=15,SNR=5.4						
ASAR				Lg	Lg	12 43 08.8	
	24nm,0.3s,baz=192,slow=27,SNR=21						
MULG	Mulgathing	3.55	166	P	Pn	12 42 24.8	+0.5
	baz=3.5						
MULG				S	Sn	12 43 08.5	+2.2
	baz=3.5						
WRKA	Warakurna	4.67	291	P	Pn	12 42 41.3	+1.5
	baz=4.7						
WRKA				S	Sn	12 43 37.9	+3.7
	baz=4.7						
LCRK	Leigh Creek	5.77	130	P	Pn	12 42 56.4	+1.6
	baz=5.8						
LCRK				S	Sn	12 44 02.5	+1.5
	baz=5.8						
FORT	Forrest	5.92	227	P	Pn	12 42 56.6	-0.2
	baz=5.9						
FORT				S	Sn	12 44 04.6	-0.2
	baz=5.9						
BBOO	Buckleboo	6.50	157	P	Pn	12 43 05.5	+0.7
	baz=6.5						
BBOO				S	Sn	12 44 18.7	-0.3
	baz=6.5						
INKA	Innaminka	6.87	99	P	Pn	12 43 11.7	+1.8
	baz=6.9						
INKA				S	Sn	12 44 30.0	+1.8
	baz=6.9						
WRA	Warramunga Arr	6.95	10	Pn	Pn	12 43 12.0	+0.9
	1.4nm,0.3s,baz=192,slow=14,SNR=210						
WRA				Sn	Sn	12 44 27.8	-2.4
	4.4nm,0.3s,baz=193,slow=24,SNR=17						
WRA				Lg	Lg	12 45 06.7	
	3.5nm,0.3s,baz=188,slow=29,SNR=9.9						
WB2	Warramunga Arr	6.95	10	P	Pn	12 43 11.8	+0.7
	baz=7.0						
HTT	Hallett	8.29	144	P	Pn	12 43 30.0	+0.5
	baz=8.3,SNR=4.2						
QIS	Mount Isa	8.63	45	P	Pn	12 43 34.1	-0.1
	baz=8.7						
STKA	Stephens Creek	8.96	126	P	Pn	12 43 38.2	-0.4
	baz=9.0						
STKA	Stephens Creek	8.96	126	Pn	Pn	12 43 38.5	-0.2
	2.8nm,0.3s,baz=304,slow=12,SNR=46						
STKA				Sn	Sn	12 45 17.3	-2.4
	2.9nm,0.3s,baz=38,slow=11,SNR=6.6						
QLP	Quilpie	9.96	91	P	Pn	12 43 53.0	+0.6
	baz=10.0,SNR=11						
KMBL	Kambalda	10.80	243	P	Pn	12 44 03.5	-0.3
	baz=11						
MTSU	Mount Surprise	13.50	52	P	Pn	12 44 38.8	-2.0
	baz=14,SNR=7.3						
RMQ	Roma	14.01	92	P	Pn	12 44 46.4	-1.5
	baz=14						

NEIC 06 12:54:49.6±0.8,39°.41N±0°.01×119°.78W±0°.02,h5^{km}±1^{km}, Error ellipse: s-maj=2.1km s-min=1.7km az=63.0

REN 06 12:54:49.7±1.0,39°.42N±0°.01×119°.77W±0°.02,h3^{km}±3^{km}, ML2.1/8,ML2.0/26(NEIC),Error ellipse: s-maj=1.9km s-min=1.6km az=53.0,Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCNR	Virginia City	0.15	142		Pg	12 54 55.4	+2.6
VPK	Verdi Peak	0.21	286		Pg	12 54 54.0	+0.2
PEAR	Peavine Mounta	0.24	323		Pg	12 54 54.5	+0.1
KBF	Kyburz Flat	0.35	285		Pg	12 54 56.5	0.0
PNTR	Pine Nut	0.35	158	Sg	Sg	12 55 00.6	-0.6
IND	Independence	0.40	273		Pg	12 54 57.5	+0.1
PAHR	Pah Rah Range	0.42	46		Sg	12 55 03.8	+0.6
LOY	Loyalton	0.43	304		Pg	12 54 57.9	-0.1
RUBR	Rubicon Trail	0.47	219		Pg	12 54 58.8	+0.1
RUBR				Sg	Sg	12 55 04.9	+0.1
RUBR				IAML		12 55 06.8	
	comp=N,185nm,0.3s						
WVA	Winnemucca Val	0.53	356		Pg	12 54 59.7	-0.2
BEKR	Beckworth	0.64	315	Sg	Sg	12 55 10.2	0.0
WAKR	Walker	0.95	164		Pg	12 55 07.5	-0.3
WAKR				Sg	Sg	12 55 20.6	+0.5
AFDM	Forest Hills D	1.04	244		Pg	12 55 09.1	-0.6
AFDM				IAML		12 55 25.7	
	comp=N,24nm,0.7s						
AFDM				IAML		12 55 26.3	
	comp=E,28nm,0.3s						
RYN	Ryan	1.25	129		Pg	12 55 13.2	-0.4
RYN				Sg	Sg	12 55 29.6	-0.3
RYN				IAML		12 55 32.8	
	comp=E,29nm,0.5s						
RYN				IAML		12 55 33.2	
	comp=N,38nm,0.3s						
LHV	Little Huntoon	1.53	139		Pb	12 55 18.4	-0.3
LHV				IAML		12 55 40.9	
	comp=E,18nm,1.0s						
LHV				IAML		12 55 45.4	
	comp=N,19nm,3.3s						
NV11	Mina Array Sit	1.60	127	Pn	Pn	12 55 17.7	-1.4
MDPB	Devils Postpil	1.86	163		Pn	12 55 22.5	-0.2
MDPB				IAML		12 56 14.7	
	comp=E,7.8nm,2.6s						
MDPB				IAML		12 56 25.6	
	comp=N,7.5nm,4.3s						
OMMB	Old Mammoth Mi	1.90	161	Pn	Pn	12 55 22.0	-1.3
OMMB				IAML		12 55 38.6	
	comp=E,10nm,4.5s						
TPH	Tonopah	2.40	123		Pn	12 55 29.7	-0.4

IDC 06 13:05:13.7±2.5,37°.83N×144°.42E,h0^{km},mb3.5/3, mb1 3.6/5,mb1mx3.3/54,mbtmp3.5/5,ML3.1/2,Error ellipse: s-maj=57.5km s-min=31.2km az=81.0

JMA 06 13:05:19.3±0.2,37°.92N×143°.97E,h44^{km},M3.5

ISC 06 13:05:18.8±1.3,37°.97N±0°.07×144°.17E±0°.08,h35^{km},n18, σ1^{s}.62/28,mb3.7/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.16	280	P	Pn	13 05 51.8	-0.4
OFUJ	Ofunato	2.25	300	P	Pn	13 05 53.8	+0.2
OFUJ				*e*S	Sn	13 06 19.5	-0.6
JIO	Ouri	2.27	283	P	Pn	13 05 53.6	-0.2
JIO				S	Sn	13 06 18.8	-1.8
JKMT	Kesennumamotoy	2.28	293	P	Pn	13 05 53.8	-0.1
JKMT				S	Sn	13 06 19.6	-1.1
JMK	Ichinoseki	2.51	294	P	Pn	13 05 57.6	+0.5
JMK				S	Sn	13 06 26.2	-0.3
JOM	Ohasama	2.71	305	P	Pn	13 06 00.8	+1.0
JOM				*e*S	Sn	13 06 30.9	-0.4
JFT	Otama	3.07	263	*e*S	Sn	13 06 38.7	-1.6
JYK	Kaneyama	3.14	289	P	Pn	13 06 06.7	+1.0
JYK				*e*S	Sn	13 06 42.5	+0.6
JOT	Ohata	4.17	326	*e*S	Sn	13 07 05.7	-1.8
JRY	Ryogami san	4.64	247	P	Pn	13 06 25.6	-0.8
JRY				*e*S	Sn	13 07 15.1	-4.0
JCH	Churui	4.69	353	P	Pn	13 06 27.9	+0.9
JCH				*e*S	Sn	13 07 19.1	-1.0
MJAR	Matsushiro Arr	4.96	255	Pn	Pn	13 06 31.1	+0.3
	0.1nm,0.3s,baz=71,slow=16,SNR=5.4						
NEM2	Nemuro 2	5.53	12	P	Pn	13 06 38.0	-0.5
NEM2				*e*S	Sn	13 07 37.5	-3.3
JTKR	Abashiri--Toko	6.00	358	P	Pn	13 06 45.6	+0.5
JTKR				*e*S	Sn	13 07 48.9	-3.6
ASAJ	Asahikawa	6.26	350	Pn	Pn	13 06 49.5	+0.9
	0.9nm,0.3s,baz=167,slow=26,SNR=7.4						
MKAR	Makanchi Array	45.48	302	P	P	13 13 36.8	+2.3
	0.2nm,0.6s,baz=81,slow=9.5,SNR=1.6						
KURBB	Kurchatov Arra	47.16	308	P	P	13 13 49.3	+1.7
	0.5nm,0.5s,baz=80,slow=7.9,SNR=3.2						
WRA	Warramunga Arr	58.34	191	P	P	13 15 09.8	-0.6
	0.7nm,0.9s,baz=9.9,slow=7.0,SNR=3.0						

NEIC 06 13:26:54.7±1.5,17°.04N±0°.05×98°.87W±0°.03,h36^{km}±15^{km}, mb4.1/38,Md4.3/24(MEX),Error ellipse: s-maj=6.7km s-min=3.8km az=169.0

MEX 06 13:26:56.4±0.9,17°.06N×98°.84W,h45^{km}±9^{km},MD4.3

IDC 06 13:26:59.1±6.3,17°.11N×98°.54W,h87^{km}±59^{km},mb3.5/4, mb1 3.8/6,mb1mx3.4/39,mbtmp3.7/6,ML3.3/2,MS3.3/2, Ms1 3.3/2,ms1mx2.8/20,Error ellipse: s-maj=97.1km s-min=39.7km az=17.0

ISC 06 13:26:54.9±0.9,17°.05N±0°.03×98°.84W±0°.03,h42^{km}±10^{km}, n72,σ0^{s}.79/91,mb4.0/10,Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	Cruz Grande	0.42	221	*i* P	Pn	13 27 04.8	+0.1
CRIG				*i* S	Sn	13 27 12.6	+0.9
TLIG	Tlapa	0.57	27	*i* P	Pn	13 27 06.2	-0.6
TLIG				*i* S	Sn	13 27 14.4	-0.9
TLIG	Tlapa	0.57	27		Pn	13 27 06.2	-0.6
TLIG					Sn	13 27 14.4	-0.9
PNIG	Pinotepa	0.95	134	*i* P	Pn	13 27 11.6	-0.2
PNIG				*i* S	Sn	13 27 23.9	-0.3
PNIG	Pinotepa	0.95	134		Pn	13 27 11.6	-0.2
PNIG					Sn	13 27 23.9	-0.3
ACP2	Acapulco	1.01	260	*i* P	Pn	13 27 12.2	-0.5
ACP2				*i* S	Sn	13 27 24.8	-1.0
ACP2	Acapulco	1.01	260		Pn	13 27 12.2	-0.5
ACP2					Sn	13 27 24.8	-1.0
TXIG	Tlaxiaco	1.05	79	*i* P	Pn	13 27 13.3	-0.1
TXIG				*i* S	Sn	13 27 26.8	-0.2
FTIG	Fresnillo de T	1.09	38	*e*P	Pn	13 27 13.7	-0.1
FTIG				*i* S	Sn	13 27 27.3	-0.5
MEIG	Mezcala	1.14	320	*e*P	Pn	13 27 14.5	0.0
MEIG				*i* S	Sn	13 27 27.8	-1.2
MEIG	Mezcala	1.14	320		Pn	13 27 14.5	0.0
MEIG					Sn	13 27 27.8	-1.2
HLIG	Huajuapan de L	1.26	52	*i* P	Pn	13 27 15.9	-0.3
HLIG				*i* S	Sn	13 27 30.8	-1.3
CAIG	El Cayaco	1.36	270	*i* P	Pn	13 27 16.9	-0.6
CAIG				*i* S	Sn	13 27 33.3	-1.1
CAIG	El Cayaco	1.36	270		Pn	13 27 16.9	-0.6
CAIG					Sn	13 27 33.3	-1.1
PLIG	Platanillo	1.47	335	*i* P	Pn	13 27 19.3	+0.2
PLIG				*i* S	Sn	13 27 37.1	-0.1
PLIG	Platanillo	1.47	335		Pn	13 27 19.3	+0.2
PLIG					Sn	13 27 37.1	-0.1
ARIG	Puente Sto Nin	1.88	311	*i* P	Pn	13 27 25.3	+0.6
ARIG				*i* S	Sn	13 27 47.1	-0.1
ARIG	Puente Sto Nin	1.88	311		Pn	13 27 25.3	+0.6
ARIG					Sn	13 27 47.1	-0.1
UNM	Universidad Na	2.29	352	Pn	Pn	13 27 30.8	+0.4
ZIIG	Zihuatanejo	2.56	283	*i* P	Pn	13 27 34.3	+0.3
ZIIG				*i* S	Sn	13 28 03.0	-1.0
ZIIG	Zihuatanejo	2.56	283		Pn	13 27 34.3	+0.3
ZIIG					Sn	13 28 03.0	-1.0
MOIG	Morelia	3.43	320	Pn	Pn	13 27 47.3	+1.2
CMIG	Matias Romero	3.79	89	P	Pn	13 27 51.1	+0.4
	1.6nm,0.3s,baz=261,slow=11,SNR=15						
CMIG				S	Sn	13 28 32.2	-1.9
	4.1nm,0.3s,baz=63,slow=17,SNR=6.3						
CCIG	Comitan	6.47	96	Pn	Pn	13 28 29.5	+1.7
WHTX	Lake Whitney,	14.93	5	Pn	Pn	13 30 24.6	+1.4
342A	Flagon Creek P	15.44	21	P	P	13 30 32.9	-0.8
ABTX	Abilene, Hawle	15.52	357	P	P	13 30 34.6	-0.1
ABTX				IAmb	IAmb	13 30 37.0	
	comp=Z,13nm,0.9s						
MNTX	Cornudas Mount	15.74	339	P	P	13 30 37.5	+0.4
GDL2	Guadalupe Moun	15.89	343	P	P	13 30 39.7	+0.8
344A	Westbrook Farm	16.12	26	P	P	13 30 40.5	-0.8
344A				IAmb	IAmb	13 30 42.8	
	comp=Z,12nm,0.8s						
Z35A	Perchaven, San	16.27	5	P	P	13 30 42.2	-0.8
Z35A				IAmb	IAmb	13 30 43.7	
	comp=Z,15nm,0.7s						
Z38A	Mt. Pleasant	16.51	11	P	P	13 30 45.2	-0.4
Z38A				IAmb	IAmb	13 30 46.0	
	comp=Z,14nm,0.7s						
143A	Socs Landing,	16.97	22		Pn	13 30 49.9	+0.6
143A				IAmb	IAmb	13 30 51.1	
	comp=Z,25nm,1.0s						
319A	Douglas	17.13	328	P	P	13 30 53.1	+0.5
MSTX	Muleshoe	17.21	349		Pn	13 30 52.9	+0.5
MSTX				IAmb	IAmb	13 30 54.8	
	comp=Z,9.9nm,1.0s						
121A	Cookes Peak, D	17.41	334	P	P	13 30 56.1	+0.4
X37A	Clayton	17.74	9		Pn	13 30 58.7	-0.1
AMTX	Amarillo	17.94	352	P	Pn	13 31 00.8	-0.5
AMTX				IAmb	IAmb	13 31 02.0	
	comp=Z,8.8nm,0.6s						
CCAR	Cane Creek	17.95	19	P	P	13 31 01.7	+0.1
MIAR	Mount Ida	18.05	14	P	P	13 31 03.0	+0.5
MIAR				IAmb	IAmb	13 31 20.4	
	comp=Z,16nm,1.5s						
W39A	Magazine	18.62	13	P	P	13 31 08.9	-0.1
TUL1	Leonard	18.98	8	P	P	13 31 11.5	-1.3
TUL1				IAmb	IAmb	13 31 13.6	
	comp=Z,16nm,1.1s						
ANMO	Albuquerque	19.07	341	P	Pn	13 31 14.8	-0.3
	comp=Z,0.1nm,0.3s,baz=164,slow=11,SNR=7.8						
ANMO				LR	LR	13 39 06.2	
	comp=Z,82nm,21.7s,baz=154,slow=38						
ANMO	Albuquerque	19.07	341	P	P	13 31 14.7	+0.6
DWPF	Disney Wildern	19.45	53	P	P	13 31 18.5	+0.4
T35A	Sooner Cattle	19.89	5	P	P	13 31 21.4	-1.4
T35A				IAmb	IAmb	13 31 25.1	
	comp=Z,13nm,0.8s						
U40A	Yellville	19.95	14	P	P	13 31 22.2	-1.2
U40A				IAmb	IAmb	13 31 40.6	
	comp=Z,8.9nm,1.1s						
T25A	Trinidad	20.60	347	P	P	13 31 31.4	+0.6
T25A				IAmb	IAmb	13 31 49.7	
	comp=Z,13nm,1.4s						
X16A	Lo Mia Camp, P	20.65	329	P	Pn	13 31 33.0	-0.8
X16A				IAmb	IAmb	13 31 37.5	
	comp=Z,9.7nm,1.1s						
GOGA	Godfrey	21.37	37	P	P	13 31 38.2	-0.6
GOGA				IAmb	IAmb	13 31 39.5	
	comp=Z,10nm,1.2s						
WUAZ	Wupatki	21.51	331	P	P	13 31 40.8	+0.3
WUAZ				IAmb	IAmb	13 31 45.7	
	comp=Z,12nm,0.9s						
MVCO	Mesa Verde	21.81	339	P	P	13 31 43.8	0.0
CCM	Cathedral Cave	21.96	16	P	P	13 31 44.7	-0.4
CCM				IAmb	IAmb	13 31 49.1	
	comp=Z,5.2nm,0.8s						
FVM	French Village	22.12	18	P	P	13 31 45.6	-1.3
U15A	North Rim	22.68	331	P	P	13 31 53.9	+0.7
U15A				IAmb	IAmb	13 31 56.6	
	comp=Z,5.2nm,1.1s						
PV12	Saucer Basin,	22.92	340	P	P	13 31 55.6	+0.1
PV04	Paradox Valley	23.02	339	P	P	13 31 57.5	+1.0
PV04				IAmb	IAmb	13 31 59.1	
	comp=Z,4.4nm,0.8s						
KNB	Kanab	23.41	331		P	13 32 01.1	+0.7
MTPU	Mount Pierson	23.97	333	P	P	13 32 06.9	+1.1
MSU	Marysvale	24.36	334	P	P	13 32 11.2	+1.9
DUG	Dugway, Tooele	26.05	335	P	P	13 32 25.5	+1.0
JFWS	Jewell Farm	26.80	14	P	P	13 32 31.7	+0.6
BW06	Boulder Array	27.21	343	P	P	13 32 35.3	+0.2
BW06				IAmb	IAmb	13 32 39.2	
	comp=Z,5.0nm,1.3s						
PDAR	Pinedale Array	27.21	343	P	P	13 32 35.4	+0.4
	comp=Z,0.7nm,0.6s,baz=152,slow=8.9,SNR=7.7						
NVAR	Mina Array Bea	27.28	325	P	P	13 32 36.9	+1.2
	comp=Z,0.8nm,0.7s,baz=147,slow=9.4,SNR=7.9						
HVU	Hansel Valley	27.39	337	P	P	13 32 37.5	+0.9
ELK	Elko	27.53	332	LR	LR	13 44 49.4	
	comp=Z,67nm,18.8s,baz=166,slow=39						
BCYI	Bear Canyon	29.82	339	P	P	13 32 59.4	+1.2
DLMT	Dillon	30.48	341	P	P	13 33 05.3	+1.3
YKA	Yellowknife Ar	46.72	350	P	P	13 35 18.9	-0.6
	comp=Z,1.3nm,0.7s,baz=154,slow=7.5,SNR=17						
PCA	Pinnacle	52.29	335	P	P	13 36 02.0	-0.1
ILAR	Eielson Array	57.49	338	P	P	13 36 39.4	-0.2
	comp=Z,1.3nm,1.1s,baz=155,slow=4.1,SNR=6.5						

BGR 06 13:36:16.7±0.0,64°.65N×19°.80W,h33^{km},mb4.3

REY 06 13:36:21.7,64°.68N×17°.36W,h8^{km}

IDC 06 13:36:22.1±0.7,64°.58N×17°.57W,h0^{km},mb3.8/11, mb1 4.0/14,mb1mx3.8/41,mbtmp3.8/14,ML3.1/3,MS3.2/1, Ms1 3.2/1,ms1mx2.5/39,Error ellipse: s-maj=23.1km s-min=10.3km az=17.0

NEIC 06 13:36:22.4±2.2,64°.48N±0°.09×17°.8W±0°.1,h8^{km}±5^{km}, mb4.4/21,Error ellipse: s-maj=13.2km s-min=6.3km az=177.0

ISC 06 13:36:22.7±0.4,64°.67N±0°.02×17°.38W±0°.03,h10^{km},n74,

σ2^{s}05/85,mb4.1/20,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.12	3	P	Pg	13 36 24.1	-1.5
	baz=359						
IURH	Urdarhals	0.18	34	P	Pg	13 36 25.2	-1.4
	baz=32						
IHAM	Hamarinn	0.27	225	P	Pg	13 36 27.7	-0.6
	baz=226						
IKVE	Kverkfjoll	0.30	89	P	Pg	13 36 27.6	-1.2
	baz=89						
IKRE	Kreppuhraun	0.44	75	P	Pg	13 36 29.6	-1.8
	baz=75						
IKRE				S	Sg	13 36 36.6	-0.6
	baz=75						
IASK	Askja	0.49	39	P	Pg	13 36 30.4	-1.9
	baz=38						
IASK				S	Sg	13 36 37.1	-1.7
	baz=38						
IJOK	Jokulheimar	0.51	226	P	Pg	13 36 30.8	-1.9
	baz=226						
IMKO	Mokollar	0.54	55	P	Pg	13 36 31.4	-1.8
	baz=55						
IKSK	Karasker	0.65	142	P	Pg	13 36 32.4	-2.8
	baz=143						
IKSK				S	Sg	13 36 42.1	-1.7
	baz=143						
IIEY	Innrieyrar	0.67	209	P	Pg	13 36 32.7	-2.8
	baz=210						
IIEY				S	Sg	13 36 43.5	-0.8
	baz=210						
ISVA	Svartarkot	0.67	5	P	Pg	13 36 33.3	-2.3
	baz=3.9						
ISVA				S	Sg	13 36 43.2	-1.1
	baz=3.9						
IVSH	V-Sauoahnukur	0.72	79	P	Pg	13 36 34.2	-2.4
	baz=78						
IVSH				S	Sg	13 36 44.1	-2.0
	baz=78						
IKAL	Kalfafell	0.74	191	P	Pg	13 36 34.2	-2.7
	baz=191						
IADA	Aoalbol	0.85	65	P	Pg	13 36 36.2	-2.7
	baz=65						
IADA				S	Sg	13 36 47.5	-2.5
	baz=65						
IFAG	Fagurholsmyri	0.86	158	P	Pg	13 36 36.5	-2.8
	baz=159						
IFAG				S	Sg	13 36 48.5	-1.9
	baz=159						
IMEL	Melhnausar	0.95	18	P	Pg	13 36 38.0	-3.0
	baz=18						
IMEL				S	Sg	13 36 50.2	-3.1
	baz=18						
IREN	Reynihlio	1.00	11	P	Pg	13 36 38.8	-3.0
	baz=11						
IKVO	Krokottuvotn	1.06	11	P	Pg	13 36 39.9	-3.3
	baz=11						
IGRS	Grimsstaoir	1.10	28	P	Pb	13 36 40.7	-3.2
	baz=28						
IRJU	Rjupnafell	1.20	209	P	Pn	13 36 42.5	-3.0
	baz=209						
ISKI	Skildingahlsh	1.21	7	P	Pb	13 36 42.3	-3.4
	baz=6.6						
IGHA	Grjothals	1.21	14	P	Pb	13 36 42.2	-3.5
	baz=14						
IMJO	Mjoaskard	1.25	234	P	Pn	13 36 43.3	-2.9
	baz=234						
IGRA	Granastaoir	1.25	356	P	Pn	13 36 42.9	-3.3
	baz=356						
IGYG	Gygjarholskot	1.29	253	P	Pn	13 36 43.4	-3.3
	baz=254						
IDIM	Dimmadalss	1.31	8	P	Pn	13 36 43.9	-3.1
	baz=7.8						
IHVO	Lagu-Hvolar	1.32	210	P	Pn	13 36 44.6	-2.5
	baz=210						
BORG	Borgarnes	1.70	274	Pg	Pn	13 36 50.5	-1.8
	14nm,0.3s,baz=104,slow=7.3,SNR=22						
BORG				Lg	Lg	13 37 13.3	
	6.7nm,0.3s,baz=63,slow=14,SNR=4.0						
BORG	Borgarnes	1.70	274	Pn	Pn	13 36 50.1	-2.2
SCO	Scoresbysund	6.09	345	Pn	Pn	13 37 54.9	+2.3
SCO	Scoresbysund	6.09	345	*e*	Pn	13 37 48.6	-4.0
	baz=164,slow=9.3						
SCO				*i* P	Pn	13 37 54.0	+1.4
SCO				*i* S	Sn	13 39 02.7	+0.5
SCO				IAML		13 39 18.0	
	comp=Z,1.3nm,0.5s						
EKA	Eskdalemuir Ar	11.73	136	Pn	Pn	13 39 09.8	-0.1
	baz=324,slow=13,SNR=2.4						
NOA	NORSAR Array B	13.48	92	Pn	Pn	13 39 34.2	+0.3
	comp=Z,0.0nm,0.3s,baz=292,slow=14,SNR=2.9						
SFJD	Kangerlussuaq	13.71	295	LR	LR	13 44 16.4	
	comp=Z,94nm,20.9s,baz=126,slow=35						
FINES	FINESS Array B	19.65	79	P	Pn	13 40 53.2	+0.5
	comp=Z,0.1nm,0.3s,baz=309,slow=14,SNR=2.5						
CLL	Collm	20.66	116	*i* P	P	13 41 03.4	+1.1
	comp=Z,25nm,1.7s						
CLL				*i*		13 41 11.2	
GRA1	Grafenberg Arr	21.29	121	P	P	13 41 10.7	+1.6
GRA1				IAmb	IAmb	13 41 28.6	
	comp=Z,20nm,1.3s						
GRF	Grafenberg Arr	21.29	121	*e*P	P	13 41 09.6	+0.5
	comp=Z,17nm,1.4s,baz=323,slow=11						
STU	Stuttgart	21.34	126	P	P	13 41 11.0	+1.4
BRG	Berggiesshubel	21.37	115	*e*P	P	13 41 11.1	+1.2
BRG				Amp		13 41 13.7	
	comp=Z,13nm,1.2s						
BRG	Berggiesshubel	21.37	115	*e*P	P	13 41 11.1	+1.2
BRG				Amp		13 41 13.7	
	comp=Z,13nm,1.2s						
KHC	Kasperske Hory	22.63	119	*e*P	P	13 41 26.8	+3.3
DPC	Dobruska-Polom	22.72	113	*e*P	P	13 41 27.2	+2.8
GEC2	GERESS Array S	22.91	119	P	P	13 41 27.3	+0.8
GEC2				IAmb	IAmb	13 41 34.7	
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	22.91	119	P	P	13 41 27.2	+0.6
	comp=Z,0.9nm,0.9s,baz=323,slow=8.0,SNR=3.9						
TEOL	Teolo	25.13	126	P	P	13 41 48.6	+1.1
TEOL				IAmb	IAmb	13 42 05.3	
	comp=Z,8.5nm,1.0s						
KWP	Kalwaria Pacla	25.86	106	P	P	13 41 56.0	+1.9
PSZ	Piszkesteto	26.07	112	P	P	13 41 56.2	+0.1
PSZ				IAmb	IAmb	13 42 02.3	
	comp=Z,10nm,1.1s						
ESDC	Sonseca Array	26.24	156	P	P	13 41 59.0	+1.4
	comp=Z,0.9nm,0.8s,baz=346,slow=9.2,SNR=7.2						
AKASG	Malin Array Be	27.79	98	P	P	13 42 11.4	0.0
	comp=Z,0.2nm,0.3s,baz=322,slow=10,SNR=1.6						
PMOZ	Porto Moniz, M	31.88	180	P	P	13 42 45.6	-2.3
NRIK	Noril'sk	36.42	35	P	P	13 43 28.1	+1.4
KBZ	Khabaz	39.06	93	P	P	13 43 52.2	+2.9
	comp=Z,3.6nm,1.0s,baz=328,slow=12,SNR=3.7						
YKA	Yellowknife Ar	39.24	313	P	P	13 43 51.8	+1.1
	comp=Z,1.0nm,1.0s,baz=36,slow=8.8,SNR=8.3						
YKA				PcP	PcP	13 46 00.2	+0.9
	comp=Z,0.5nm,0.9s,baz=52,slow=3.8,SNR=4.0						
INK	Inuvik	39.86	329	P	P	13 43 57.0	+1.3
	comp=Z,2.3nm,1.1s,baz=30,slow=5.9,SNR=4.0						
INK	Inuvik	39.86	329	IAmb	IAmb	13 43 59.7	
	comp=Z,6.1nm,1.3s						
A21K	Barrow	41.44	341	P	P	13 44 08.9	+0.2
A21K				IAmb	IAmb	13 44 14.7	
	comp=Z,17nm,1.5s						
TIXI	Tiksi	42.01	15	P	P	13 44 15.7	+2.3
TIXI				IAmb	IAmb	13 44 19.0	
	comp=Z,7.4nm,1.1s						
BRVK	Borovoye	43.08	62	P	P	13 44 24.7	+2.4
O54A	Avella	43.13	267	P	P	13 44 20.1	-2.8
ILAR	Eielson Array	45.70	332	P	P	13 44 45.4	+2.3
	comp=Z,2.4nm,1.1s,baz=26,slow=5.0,SNR=11						
ILAR				PcP	PcP	13 46 21.8	+1.0
	comp=Z,1.0nm,1.0s,baz=302,slow=2.1,SNR=5.8						
KURK	Kurchatov	48.06	58	P	P	13 45 02.1	+0.4
KURK				IAmb	IAmb	13 45 05.4	
	comp=Z,3.4nm,0.9s						
BESE	Bessie Mountai	48.31	322	P	P	13 45 05.4	+1.7
EGMT	Eagleton	48.92	297	P	P	13 45 08.0	-0.4
RAGM	Ragged Mountai	49.15	329	P	P	13 45 10.0	-0.1
GCMT	Greycliff	50.73	295	P	P	13 45 23.2	+0.8
MK31	Makanchi Array	52.68	58	P	P	13 45 37.1	+0.3
MKAR	Makanchi Array	52.68	58	P	P	13 45 37.8	+1.1
	comp=Z,1.0nm,0.9s,baz=347,slow=5.0,SNR=9.1						
TORD	Torodi Ar. Bea	53.13	157	P	P	13 45 40.9	+0.6
	comp=Z,0.8nm,0.9s,baz=346,slow=7.8,SNR=3.2						
AAK	Ala-Archa	53.21	67	P	P	13 45 42.5	+1.6
AAK				IAmb	IAmb	13 45 43.6	
	comp=Z,5.9nm,1.4s						
BW06	Boulder Array	53.22	293	P	P	13 45 40.3	-0.8
BW06				IAmb	IAmb	13 45 45.2	
	comp=Z,11nm,1.4s						
PDAR	Pinedale Array	53.22	293	P	P	13 45 41.9	+0.8
	comp=Z,2.6nm,1.1s,baz=53,slow=5.9,SNR=11						
PV13	Radium Mtn., P	56.84	290	P	P	13 46 05.1	-2.2
PV13				IAmb	IAmb	13 46 12.1	
	comp=Z,9.2nm,1.3s						
CMAR	Chiang Mai Arr	84.08	59	P	P	13 48 54.8	+1.3
	comp=Z,0.4nm,0.3s,baz=322,slow=7.0,SNR=5.6						

IDC 06 14:07:40.4±10.0**, 53°.54N×158°.99E, h0^{km}, Error ellipse: s-maj=77.9km s-min=19.6km az=61.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	0.88	241	*i*		14 13 00.0	
	baz=60,slow=324,SNR=9.3						
PETK	Petropavlovsk-	0.89	241	Pg	Pg	14 07 57.4	0.0
	0.3nm,0.3s,baz=69,slow=19,SNR=10						
I45RU	USSURIYSK INFR	19.97	253	*i*		16 15 40.0	
	baz=50,slow=342,SNR=1.6						
I53US	FAIRBANKS INFR	28.55	46	*i*		17 05 50.0	
	baz=273,slow=345,SNR=1.5						
I10CA	LAC DU BONNET	58.96	46	*i*		20 10 50.0	
	baz=322,slow=332,SNR=2.3						

IDC ***06*** *14:18:32.2±4.6, 12°.56N×125°.16E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/22, Error ellipse: s-maj=375.2km s-min=30.3km az=64.0*

MAN ***06*** *14:18:33.3, 12°.26N×123°.85E, h8^{km}, MS3.8*

MAN INTENSITY II - MASBATE CITY.

ISC 06 14:18:34.5±1.8**, 12°.26N**±0°.03×**123°.90E**±0°.05**, h11^{km}**±13^{km}**, n19, σ1^{s}56**/27**, mb3.4**/3**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.78	71	*e*P	Pb	14 18 50.0	-0.1
CNP				*e*S	Sn	14 19 03.0	-0.2
PVCP	Virac	1.35	10	*e*P	Pn	14 18 57.2	-2.1
PVCP				*e*S	Sg	14 19 17.9	-0.2
OCLP	Ormoc	1.39	150	*e*P	Pn	14 18 58.6	-1.2
OCLP				*e*S	Sg	14 19 19.3	+0.1
SCSP	San Jose Seism	1.44	345	*e*P	Pn	14 18 59.1	-1.4
SCSP				*e*S	Sg	14 19 22.4	+1.6
OTRP	Odiongan	1.84	273	*e*P	Pn	14 19 03.1	-2.9
LLP	Lapu-Lapu	1.93	178	⇓*e*P	Pn	14 19 06.4	-0.9
LLP				*e*S	Sn	14 19 32.4	+0.8
GUIM	Jordan	2.07	219	*e*P	Pn	14 19 07.9	-1.4
GUIM				*e*S	Sn	14 19 35.2	+0.2
MSLP	Maasin	2.31	156	*e*P	Pn	14 19 12.0	-0.5
MSLP				*e*S	Sn	14 19 40.3	-0.6
JCNP	Jose Panganiba	2.33	330	*e*P	Pn	14 19 10.1	-2.8
BOAC	Boac	2.34	301	*e*P	Pn	14 19 10.7	-2.1
BOAC				*e*S	Sn	14 19 39.4	-2.1
CNOP	Candoni, Negro	2.72	207	*e*P	Pn	14 19 17.1	-1.0
CNOP				*e*S	Sn	14 19 51.0	0.0
SJMP	San Jose	2.73	274	*e*P	Pn	14 19 17.9	-0.4
LQP	Lukban	2.95	309	⇑*e*P	Pn	14 19 21.2	-0.2
LQP				*e*S	Sn	14 19 58.0	+1.0
SMPP	San Manuel, Pa	4.97	321	*e*P	Pn	14 19 50.0	+0.8
KSRS	Korea Array	25.34	7	LR	LR	14 33 39.1	
	comp=Z,14nm,20.6s,baz=140,slow=36						
WRA	Warramunga Arr	33.61	162	P	P	14 25 13.5	-1.6
	0.3nm,0.7s,baz=345,slow=8.7,SNR=1.8						
ASAR	Alice Springs	37.02	165	P	P	14 25 44.0	-0.5
	0.8nm,0.7s,baz=346,slow=7.5,SNR=6.2						
MKAR	Makanchi Array	49.05	323	P	P	14 27 24.9	+3.3
	0.2nm,0.7s,baz=134,slow=8.3,SNR=2.8						
NRIK	Noril'sk	61.53	346	LR	LR	14 55 59.8	
	comp=Z,47nm,18.6s,baz=276,slow=36						

IDC 06 14:32:37.8±6.5**, 12°.97N×142°.76E, h132^{km}**±90^{km}**, mb3.0**/3**, mb1 3.2**/4**, mb1mx3.0**/48**, mbtmp3.4**/4**, Error ellipse: s-maj=99.3km s-min=27.8km az=85.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.15	73	P	Pn	14 33 15.5	+1.9
	20nm,0.3s,baz=339,slow=22,SNR=31						
GUMO				S	Sn	14 33 41.1	0.0
	29nm,0.3s,baz=145,slow=22,SNR=7.0						
WRA	Warramunga Arr	33.74	194	P	P	14 39 06.2	-0.7
	0.6nm,0.6s,baz=13,slow=9.4,SNR=7.4						
ASAR	Alice Springs	37.43	193	P	P	14 39 38.6	+0.2
	0.3nm,0.7s,baz=13,slow=13,SNR=7.4						
MKAR	Makanchi Array	60.52	317	P	P	14 42 34.0	-0.1
	0.1nm,0.5s,baz=89,slow=7.8,SNR=2.0						

IDC ***06*** *14:38:47.1±1.7, 30°.44S×177°.84W, h0^{km}, mb4.1/4, mb1 4.2/5, mb1mx3.9/19, mbtmp4.1/5, ML3.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/19, Error ellipse: s-maj=45.0km s-min=18.0km az=112.0*

NEIC ***06*** *14:38:55.3±0.3, 30°.1S±0°.1×178°.0W±0°.2, h58^{km}±5^{km}, mb4.5/9, Error ellipse: s-maj=31.5km s-min=16.7km az=77.0*

ISC 06 14:38:53.6±1.1**, 30°.40S**±0°.08×**178°.0W**±0°.2**, h46^{km}, n23, σ1^{s}49**/23**, mb4.4**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.15	2	Pn	Pn	14 39 11.2	-2.0
	333nm,0.3s,baz=86,slow=12,SNR=11						
RAO				Sn	Sn	14 39 27.0	-0.8
	634nm,0.3s,baz=210,slow=20,SNR=6.6						
RAO	Raoul Island	1.15	2		Pn	14 39 11.9	-1.3
URZ	Urewera	8.83	206	Pn	Pn	14 40 56.2	-2.4
	0.3nm,0.3s,baz=18,slow=20,SNR=1.4						
URZ				Sn	Sn	14 42 36.3	-0.5
	1.8nm,0.3s,baz=251,slow=2.8,SNR=8.5						
BKZ	Black Stump Fm	9.86	206	Pn	Pn	14 41 10.3	-2.4
MSVF	Nonsavu	13.13	343	LR	LR	14 45 43.8	
	comp=Z,75nm,18.1s,baz=88,slow=32						
LTZ	Lake Taylor	14.62	210	Pn	Pn	14 42 15.3	-2.2
DZM	Mont Dzumac	16.26	297	LR	LR	14 47 33.2	
	comp=Z,96nm,20.4s,baz=29,slow=32						
CTAO	Charters Tower	33.84	279	P	P	14 45 32.7	+1.0
STKA	Stephens Creek	34.52	257	P	P	14 45 38.8	+1.3
	1.8nm,0.3s,baz=118,slow=9.1,SNR=5.3						
STKA				LR	LR	14 57 16.0	
	comp=Z,46nm,20.2s,baz=282,slow=32						
BBOO	Buckleboo	39.01	254	P	P	14 46 16.7	+1.0
BBOO				IAmb	IAmb	14 46 24.5	
	comp=Z,8.4nm,1.1s						
AS31	Alice Springs	43.15	267	P	P	14 46 51.2	+1.3
ASAR	Alice Springs	43.15	267	P	P	14 46 50.2	+0.4
	comp=Z,0.7nm,0.6s,baz=105,slow=7.5,SNR=31						
WR0	Warramunga Arr	43.95	272	P	P	14 46 56.7	+0.3
WR0				IAmb	IAmb	14 47 25.4	
	comp=Z,9.7nm,1.4s						
WB2	Warramunga Arr	44.13	272	P	P	14 46 57.9	+0.1
WB2				IAmb	IAmb	14 47 19.3	
	comp=Z,8.5nm,1.1s						
WRAB	Tennant Creek	44.13	272	P	P	14 46 57.6	-0.2
WRAB				IAmb	IAmb	14 47 05.4	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	44.14	272	P	P	14 46 57.9	+0.1
	comp=Z,1.7nm,0.4s,baz=111,slow=8.1,SNR=41						
WB0	Warramunga Arr	44.16	272	P	P	14 46 58.1	+0.1
WB0				IAmb	IAmb	14 47 15.9	
	comp=Z,13nm,1.4s						
QSPA	South Pole Qui	59.71	180	P	P	14 48 55.8	+2.5
JAGI	Jajag, Banyuwa	66.71	274	P	P	14 49 39.6	-0.6
PETK	Petropavlovsk-	85.83	346	P	P	14 51 30.3	+2.6
	comp=Z,2.3nm,1.0s,baz=120,slow=7.6,SNR=4.5						
FINES	FINESS Array B	145.16	340	PKPbc	PKPdf	14 58 24.4	-0.9
	comp=Z,1.9nm,0.5s,baz=51,slow=3.1,SNR=16						
NOA	NORSAR Array B	148.76	351	PKPbc	PKPbc	14 58 35.0	-0.2
	comp=Z,0.6nm,0.5s,baz=16,slow=4.3,SNR=1.8						
AKASG	Malin Array Be	151.33	323	PKPbc	PKiKP	14 58 41.2	-1.0
	comp=Z,0.7nm,0.5s,baz=48,slow=3.1,SNR=4.2						

ISU ***06*** *15:37:40, 41°.76N×70°.63E, h10^{km}, Hypocentre not reviewed by the ISC*

KRNET ***06*** *15:37:40.8±0.1, 41°.76N×70°.73E, h13^{km}, mb3.3*

NNC ***06*** *15:37:41.8±0.8, 41°.81N×70°.72E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=6.3km s-min=3.0km az=18.0*

SOME ***06*** *15:37:41.1, 41°.75N×70°.75E, h10^{km}*

ISC 06 15:37:39.1±1.2**, 41°.78N**±0°.02×**70°.75E**±0°.02**, h4^{km}**±10^{km}**, n61, σ1^{s}74**/94**, 34C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.39	130	⇑*i*P	Pb	15 37 49.3	+0.6
	baz=32						
TRKS				⇑*i*S	Sb	15 37 55.6	+0.5
	baz=32						
CHMG	Chimgan	0.60	247	*e*P		15 37 51.0	
CHMG				*e*S		15 37 58.0	
IUG	Iuzhnay	0.65	305	*e*P	Pb	15 37 53.0	-0.1
	170nm,0.2s						
IUG				*e*S	Sb	15 38 02.0	-0.5
	780nm,0.2s						
IUG	Iuzhnay	0.65	305	P	Pb	15 37 53.0	-0.1
	170nm,0.2s						
IUG				S	Sb	15 38 02.0	-0.5
	780nm,0.2s						
CHM	Chimkent	1.01	303	*e*P	Pn	15 38 00.5	+0.4
	3.4nm,0.2s						
CHM				*e*S	Sn	15 38 13.9	-0.8
	788nm,0.4s						
TAS	Tashkent	1.18	248	⇓*i*P	Pn	15 38 02.2	-0.2
	baz=49						
TAS				⇓*i*S	Sn	15 38 18.9	-0.1
	baz=49						
DZA	Taraz	1.19	21	*e*P	Pn	15 38 05.1	+2.4
	72nm,0.1s						
DZA				*e*S	Sn	15 38 22.5	+3.2
	514nm,0.3s						
DZA	Taraz	1.19	21	P	Pn	15 38 05.1	+2.4
	72nm,0.1s						
DZA				S	Sn	15 38 22.5	+3.2
	514nm,0.3s						
KK31	Karatay Array	1.33	353	⇑P	Pg	15 38 06.1	+1.4
	8.6nm,0.3s,baz=180,slow=18,SNR=140						
KK31				S	Sn	15 38 23.8	+1.1
	16nm,0.3s,baz=180,slow=30,SNR=30						
BRLS	Borolday	1.42	332	*e*P	Pg	15 38 05.9	-0.4
	270nm,0.2s						
BRLS				*e*S	Sg	15 38 24.5	-0.1
	616nm,0.4s						
BRLS	Borolday	1.42	332	P	Pg	15 38 05.9	-0.4
	270nm,0.2s						
BRLS				S	Sg	15 38 24.5	-0.1
	616nm,0.4s						
MNAS	Manas	1.49	61	⇑*i*P	Pg	15 38 08.7	+1.1
	baz=60						
MNAS				⇑*i*S	Sg	15 38 29.4	+2.5
	baz=60						
BTK	Batken	1.72	178	⇓*i*P	Pg	15 38 12.3	+0.2
	baz=78						
BTK				⇓*i*S	Sg	15 38 35.6	+1.1
	baz=78						
BTK	Batken	1.72	178	*e*P		15 38 18.0	
BTK				*e*S		15 38 45.0	
ARSB	Arslanbob	1.74	105	⇑*i*P	Pg	15 38 13.1	+0.6
	baz=4.0						
ARSB				⇑*i*S	Sg	15 38 36.8	+1.8
	baz=4.0						
ARSB	Arslanbob	1.74	105	*e*P		15 38 13.0	
ARSB				*e*S		15 38 41.0	
OHH	Osh	1.99	129	⇓*i*P	Pg	15 38 17.5	+0.3
	baz=28						
OHH				⇓*i*S	Sg	15 38 44.2	+1.2
	baz=28						
OHH	Osh	1.99	129	*e*P		15 38 18.0	
OHH				*e*S		15 38 45.0	
MRKS	Merke	2.08	62	*e*P	Pg	15 38 20.8	+1.9
	15nm,0.1s						
MRKS				*e*S	Sg	15 38 49.6	+3.8
	60nm,0.2s						
MRKS	Merke	2.08	62	Pg	Pg	15 38 20.8	+1.9
	15nm,0.1s						
MRKS				Lg	Lg	15 38 49.6	
	60nm,0.2s						
AML	Almayashu	2.23	80	⇑*i*P	Pg	15 38 21.5	-0.3
	baz=79						
AML				⇑*i*S	Sg	15 38 50.8	+0.1
	baz=79						
AML	Almayashu	2.23	80	P	Pg	15 38 22.9	+1.1
	SNR=44						
EKS2	Erkin-Say	2.42	68	⇑*i*P	Pg	15 38 24.1	-1.3
	baz=67						
EKS2				⇑*i*S	Sg	15 38 55.1	-1.7
	baz=67						
EKS2	Erkin-Say	2.42	68	P	Pg	15 38 26.4	+0.9
	SNR=11						
DRK	Karamyk	2.44	160	⇑*i*P	Pb	15 38 23.5	-0.2
	baz=60						
DRK				⇑*i*S	Sb	15 38 54.3	+0.2
	baz=60						
ARLS	Aral	2.67	87	⇑*i*P	Pb	15 38 27.5	-0.2
	baz=87						
ARLS				⇑*i*S	Sb	15 39 00.7	-0.2
	baz=87						
UCH	Uchtor	2.84	80	⇑*i*P	Pb	15 38 30.2	-0.5
	baz=79						
UCH				⇑*i*S	Sb	15 39 05.0	-1.0
	baz=79						
UCH	Uchtor	2.84	80	P	Pg	15 38 34.3	+0.7
	SNR=11						
AAK	Ala-Archa	2.91	72	⇑*i*P	Pb	15 38 30.7	-1.0
	baz=71						
AAK				⇑*i*S	Sb	15 39 06.7	-1.1
	baz=71						
AAK	Ala-Archa	2.91	72	P	Pg	15 38 34.8	-0.2
	SNR=14						
AAK	Ala-Archa	2.91	72	⇑Pg	Pg	15 38 35.4	+0.5
	5.8nm,0.5s						
AAK				Lg	Lg	15 39 15.1	
	30nm,0.8s						
USP	Ospenovka	3.15	61	⇑*i*P	Pb	15 38 33.8	-1.8
	baz=60						
USP				⇑*i*S	Sb	15 39 12.7	-1.7
	baz=60						
USP	Ospenovka	3.15	61	P	Pg	15 38 39.3	-0.1
	SNR=6.6						
CHMS	Chumysh	3.21	66	⇑*i*P	Pb	15 38 34.6	-2.1
	baz=66						
CHMS				⇑*i*S	Sb	15 39 13.8	-2.3
	baz=66						
KBK	Karagaybulak	3.24	73	⇓*i*P	Pb	15 38 35.3	-2.0
	baz=73						
KBK				⇓*i*S	Sb	15 39 14.7	-2.5
	baz=73						
KBK	Karagaybulak	3.24	73	P	Pg	15 38 42.2	+0.9
	SNR=9.8						
SGDS	Sogindy	3.32	58	Pg	Pg	15 38 41.9	-0.8
	4.6nm,0.3s						
SGDS				Lg	Lg	15 39 25.6	
	16nm,0.4s						
TKM2	Tokmak 2	3.77	71	⇑*i*P	Pb	15 38 42.6	-3.8
	baz=70						
TKM2				⇑*i*S	Sb	15 39 27.4	-5.1
	baz=70						
TKM2	Tokmak 2	3.77	71	P	Pg	15 38 50.5	-0.9
	SNR=9.1						
TKM2	Tokmak 2	3.77	71	⇓Pg	Pg	15 38 50.2	-1.2
	3.7nm,0.7s						
TKM2				⇓Lg	Lg	15 39 41.7	
	15nm,0.5s						
BOOM	Boomskoye usch	3.93	78	⇑*i*P	Pb	15 38 44.6	-4.4
	baz=78						
BOOM				⇑*i*S	Sb	15 39 31.4	-5.6
	baz=78						
BTLS	Baital	4.05	35	*e*P	Pg	15 38 58.0	+1.4
	3.2nm,0.2s						
BTLS				*e*S	Sg	15 39 52.7	+3.6
	6.3nm,0.4s						
BTLS	Baital	4.05	35	Pg	Pg	15 38 58.0	+1.4
	3.2nm,0.2s						
BTLS				Lg	Lg	15 39 52.7	
	6.3nm,0.4s						
KST	Kastek	4.06	70	*e*P	Pg	15 38 55.7	-1.3
	5.2nm,0.4s						
KST				*e*S	Sg	15 39 49.1	-0.5
	36nm,0.7s						
KST	Kastek	4.06	70	Pg	Pg	15 38 55.7	-1.3
	5.2nm,0.4s						
KST				Lg	Lg	15 39 49.1	
	36nm,0.7s						
KRBS	Karabastau	4.10	61	*e*P	Pg	15 38 56.5	-1.2
	2.4nm,0.6s						

KRBS				eS	Sg	15 39 50.5	-0.4
	12nm,0.4s						
KRBS	Karabastau	4.10	61	Pg	Pg	15 38 56.5	-1.2
	2.4nm,0.6s						
KRBS				Lg	Lg	15 39 50.5	
	12nm,0.4s						
ULHL	Ulahol	4.12	82	⇑iP	Pb	15 38 47.4	-5.0
	baz=81						
ULHL				⇑iS	Sn	15 39 36.1	+4.3
	baz=81						
ULHL	Ulahol	4.12	82	P	Pg	15 38 56.9	-1.2
	SNR=6.5						
MTBS	Maitube	4.42	70	eP	Pg	15 39 03.2	-0.5
	4.1nm,0.2s						
MTBS				eS	Sg	15 40 01.7	+0.8
	20nm,0.4s						
MTBS	Maitube	4.42	70	Pg	Pg	15 39 03.2	-0.5
	4.1nm,0.2s						
MTBS				Lg	Lg	15 40 01.7	
	20nm,0.4s						
IZV	Izvestkoviy	4.52	72	eP	Pg	15 39 04.4	-1.4
	3.6nm,0.4s						
IZV				eS	Sg	15 40 04.0	-0.3
	12nm,0.5s						
IZV	Izvestkoviy	4.52	72	Pg	Pg	15 39 04.4	-1.4
	3.6nm,0.4s						
IZV				Lg	Lg	15 40 04.0	
	12nm,0.5s						
KUU	Kurty	4.62	61	eP	Pg	15 39 07.7	0.0
	2.7nm,0.5s						
KUU				eS	Sg	15 40 10.0	+2.4
	18nm,0.5s						
KUU	Kurty	4.62	61	Pg	Pg	15 39 07.7	0.0
	2.7nm,0.5s						
KUU				Lg	Lg	15 40 10.0	
	18nm,0.5s						
PKMR	Pachkamar	4.65	227	eP		15 37 46.0	
PKMR				eS		15 37 50.0	
TNSS	Tian-Shan	4.76	73	eP	Pg	15 39 09.3	-1.0
	2.9nm,0.3s						
TNSS				eS	Sg	15 40 12.3	+0.3
	9.2nm,0.5s						
TNSS	Tian-Shan	4.76	73	Pg	Pg	15 39 09.3	-1.0
	2.9nm,0.3s						
TNSS				Lg	Lg	15 40 12.3	
	9.2nm,0.5s						
MDOK	Medeo	4.86	71	eP	Pg	15 39 11.0	-1.3
	3.5nm,0.3s						
MDOK				eS	Sg	15 40 15.0	-0.2
	27nm,0.6s						
MDOK	Medeo	4.86	71	⇑Pg	Pg	15 39 10.4	-1.8
	6.0nm,0.7s						
MDOK				⇑Lg	Lg	15 40 18.1	
	34nm,0.8s						
MDOK	Medeo	4.86	71	Pg	Pg	15 39 11.0	-1.3
	3.5nm,0.3s						
MDOK				Lg	Lg	15 40 15.0	
	27nm,0.6s						
KOTS	Kotyrbulak	4.92	71	eP	Pg	15 39 12.4	-1.0
	5.2nm,0.4s						
KOTS				eS	Sg	15 40 17.7	+0.5
	15nm,0.7s						
KOTS	Kotyrbulak	4.92	71	Pg	Pg	15 39 12.4	-1.0
	5.2nm,0.4s						
KOTS				Lg	Lg	15 40 17.7	
	15nm,0.7s						
PDGK	Podgornoye	6.64	74	⇓Lg	Lg	15 41 14.8	
	7.8nm,1.2s						
MK31	Makanchi Array	9.67	55	⇑Lg	Lg	15 42 51.4	
	1.2nm,0.6s						
AB31	Akbulak array	10.64	318	⇑Pn	Pn	15 40 11.2	-1.0
	0.3nm,0.4s,baz=130,slow=14,SNR=20						

DJA ***06*** *15:40:10.5±0.5, 4°S±8°×10°5E±°, h240^{km}±5^{km}, M3.9/11, mb4.1/3, mB4.5/1, MLv3.8/11, Mw(mB)3.7/1, MwMwp5.2/1, Mwp5.4/1*

IDC ***06*** *15:40:12.2±3.6, 4°.41S×104°.28E, h248^{km}±46^{km}, mb3.1/6, mb1 3.3/7, mb1mx3.0/53, mbtmp3.8/7, Error ellipse: s-maj=139.5km s-min=13.3km az=53.0*

ISC 06 15:40:11.4±0.8**, 4°.5S**±0°.2×**104°.4E**±0°.2**, h250**^{km}**, n20, σ1^{s}.72**/22**, mb3.4**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLSI		0.40	115	P	Pn	15 40 42.7	-1.3
KLSI				S	S	15 40 59.8	-10
LWLI	Liwa	0.58	212	P	Pn	15 40 44.8	+0.1
LWLI				S	S	15 41 09.0	-1.9
KASI	Kota Agung	1.01	173	P	Pn	15 40 45.9	-0.6
LHSI	Lahat	1.09	309	P	Pn	15 40 45.2	-1.7
BLSI	Bandar Lampung	1.22	134	P	Pn	15 40 47.0	-0.7
BLSI				S	S	15 41 13.2	-3.1
KSI	Kapahiang	1.97	296	P	Pn	15 40 54.5	+0.8
CGJI	Cibinong	2.46	148	P	Pn	15 40 56.7	-1.6
DBJI	Dramaga	3.12	131	P	Pn	15 41 04.8	-0.4
CISI	Cisompet, Garu	4.57	132	P	Pn	15 41 19.0	-3.0
CMJI	Cimerak	5.20	129	P	Pn	15 41 27.3	-2.3
	0.1nm949nm25nm,1.1s						
PDSI	Padang	5.30	312	P	Pn	15 41 31.7	+0.8
KPJI	Karang Pucung	5.33	122	P	Pn	15 41 31.5	+0.2
MNSI	Mandailing Nat	7.12	318	P	Pn	15 41 53.0	-0.7
PSI	Prapat	9.08	323	P	Pn	15 42 16.3	-2.2
	0.5nm,0.3s,baz=180,slow=10,SNR=4.5						
CMAR	Chiang Mai Arr	23.45	347	P	P	15 44 58.9	+0.1
	0.4nm,0.4s,baz=183,slow=8.5,SNR=5.1						
WRA	Warramunga Arr	32.97	120	P	P	15 46 24.9	+1.8
	0.5nm,0.5s,baz=298,slow=8.9,SNR=8.1						
ASAR	Alice Springs	34.26	127	P	P	15 46 36.6	+2.4
	0.7nm,0.4s,baz=297,slow=7.6,SNR=32						
STKA	Stephens Creek	44.24	132	P	P	15 47 58.1	+1.7
	1.0nm,0.3s,baz=307,slow=10,SNR=3.0						
MKAR	Makanchi Array	54.70	342	P	P	15 49 15.4	+0.5
	0.3nm,0.5s,baz=149,slow=8.6,SNR=6.3						
ZALV	Zalesovo Beam	60.51	347	P	P	15 49 54.3	-0.8
	0.3nm,0.3s,baz=162,slow=6.2,SNR=3.5						

NAO ***06*** *15:42:56.1±1.8, 71°.50N×3°.47W, ML3.9*

IDC ***06*** *15:42:57.5±1.0, 71°.51N×3°.21W, h0^{km}, mb3.8/10, mb1 4.0/15, mb1mx3.7/58, mbtmp3.8/15, ML3.5/5, MS3.4/28, Ms1 3.4/28, ms1mx3.3/52, Error ellipse: s-maj=21.0km s-min=17.8km az=65.0*

NEIC ***06*** *15:42:58.7±2.2, 71°.45N±0°.09×3°.5W±0°.2, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=16.2km s-min=9.9km az=194.0*

DNK ***06*** *15:43:00.7±1.1, 71°.86N×4°.59W, h6^{km}±60^{km}, ML2.8*

BER ***06*** *15:43:00.1±3.5, 71°.68N×3°.54W, h10^{km}, ML2.5, ML3.9(NAO), Confirmed Earthquake*

ISC 06 15:42:59.2±0.6**, 71°.50N**±0°.07×**2°.76W**±0°.06**, h10**^{km}**, n121, σ1^{s}.71**/105**, mb4.1**/22**, MS3.4**/24**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.93	257	eP	Pn	15 43 31.3	-0.6
DBG	Daneborg	5.86	307	Pn	Pn	15 44 18.9	-7.0
DBG	Daneborg	5.86	307	eP	Pn	15 44 19.1	-6.8
DBG				e		15 44 24.4	
DBG				eS	Sn	15 45 15.4	-18
DBG				IAML		15 45 30.4	
	comp=Z,5.4nm,0.4s						
DBG	Daneborg	5.86	307	i P	Pn	15 44 18.6	-7.3
DBG				IAML		15 45 30.4	
	comp=Z,5.4nm,0.4s						
SCO	Scoresbysund	6.34	270	Pn	Pn	15 44 27.0	-5.6
SCO	Scoresbysund	6.34	270	i P	Pn	15 44 27.0	-5.6
SCO	Scoresbysund	6.34	270	i P	Pn	15 44 27.0	-5.6
SCO	Scoresbysund	6.34	270	i P	Pn	15 44 27.0	-5.6
LOF	Lofoten	6.56	113	Pn	Pn	15 44 35.9	+0.3
LOF	Lofoten	6.56	113	eP	Pn	15 44 37.3	+1.7
LOF				eS	Sn	15 45 48.1	-2.2
LOF				IAML		15 45 59.6	
	comp=Z,6.6nm,0.6s						
N2VI	Vinje	6.64	110	eP	Pn	15 44 38.3	+1.6
DAG	Danmarks Havn	6.83	328	e	Pn	15 44 29.2	-10
	baz=131,slow=18						
DAG				i P	Pn	15 44 33.0	-6.2
DAG				i S	Sn	15 45 39.7	-17
DAG				IAML		15 45 49.0	
	comp=Z,6.5nm,0.4s						
DAG	Danmarks Havn	6.83	328	e	Pn	15 44 29.2	-10
	baz=131,slow=18						
DAG				i P	Pn	15 44 33.0	-6.2
DAG				i S	Sn	15 45 39.7	-17
DAG				IAML		15 45 49.0	
	comp=Z,6.5nm,0.4s						
BJO1	Bjornoya	7.03	55	Pn	Pn	15 44 45.3	+3.4
BJO1	Bjornoya	7.03	55	eP	Pn	15 44 45.1	+3.3
STEI	Steigen	7.19	111	eP	Pn	15 44 45.1	+0.9
STEI				eS	Sn	15 46 03.6	-2.2
N2IH	Innhavet	7.38	110	eP	Pn	15 44 49.1	+2.3
NBB30	Finnes	7.39	120	eP	Pn	15 44 48.0	+1.0
NBB30				eS	Sn	15 46 07.4	-3.4
NBB30				IAML		15 46 08.7	
	comp=Z,8.4nm,0.7s						
HSPB	Hornsund (broa	7.39	34	Pn	Pn	15 44 46.5	-0.4
HSPB	Hornsund (broa	7.39	34	eP	Pn	15 44 46.5	-0.4
NBB28	Valnes	7.45	117	eP	Pn	15 44 48.4	+0.7
TRO	Tromso	7.45	94	Pn	Pn	15 44 47.2	-0.5
TRO	Tromso	7.45	94	eP	Pn	15 44 47.4	-0.3
FAUS	Fauske	7.55	114	eP	Pn	15 44 50.0	+0.8
FAUS				eS	Sn	15 46 12.2	-2.5
KONS	Konsvik	7.57	124	eP	Pn	15 44 50.2	+0.8
KONS				eS	Sn	15 46 11.2	-4.0
KONS				IAML		15 46 19.5	
	comp=Z,6.8nm,0.7s						
STOK	Stokkvaagen	7.67	125	eP	Pn	15 44 52.4	+1.6
STOK				eS	Sn	15 46 13.2	-4.4
STOK				IAML		15 46 18.3	
	comp=E,10.0nm,0.4s						
BRBA	Barentsburg A	7.92	26	Pn	Pn	15 44 53.5	-0.5
BRBA	Barentsburg A	7.92	26	Pn	Pn	15 44 53.5	-0.5
JETT	Jettan, Norway	7.96	93	Pn	Pn	15 44 55.1	+0.3
MOR8	Moi Rana	8.18	122	eP	Pn	15 44 59.2	+1.5
MOR8				eS	Sn	15 46 27.4	-2.6
SPA0	Spitsbergen Ar	8.31	28	Pn	Pn	15 44 59.8	+0.2
	baz=223,slow=16						
SPA0	Spitsbergen Ar	8.31	28	Pn	Pn	15 44 59.9	+0.2
SPA0	Spitsbergen Ar	8.31	28	Pn	Pn	15 44 59.8	+0.2
	baz=223,slow=16						
SPITS	Spitsbergen Ar	8.31	28	Pn	Pn	15 44 58.9	-0.6
	baz=215,slow=14,SNR=59						
SPITS				LR	LR	15 47 21.3	
	comp=E,93nm,18.5s,baz=195,slow=32						
KIF	Kilpisjarvi	8.33	96	eP	Pn	15 45 00.7	+0.9
KIF				eS	Sn	15 46 30.2	-3.5
NSS	Namsos	8.88	135	eP	Pn	15 45 08.6	+1.3
HOPEN	Hopen	9.07	44	eP	Pn	15 45 11.5	+1.6
KTK1	Kautokeino	9.10	93	eP	Pn	15 45 11.5	+1.1
KTK1				eS	Sn	15 46 48.2	-4.5
ARA0	ARCESS Array S	9.59	88	Pn	Pn	15 45 17.4	+0.3
	baz=288,slow=12						
ARA0	ARCESS Array S	9.59	88	Pn	Pn	15 45 17.4	+0.3
	baz=288,slow=12						
ARA0				eP	Pn	15 45 17.7	+0.6
ARCES	ARCESS Array B	9.59	88	Pn	Pn	15 45 17.4	+0.3
	baz=288,slow=11,SNR=35						
ARCES				LR	LR	15 48 38.7	
	comp=E,117nm,18.7s,baz=300,slow=35						
KEV	Kevo	9.98	86	Pn	Pn	15 45 23.1	+0.8
AKN	Aaknes	10.10	153	Pn	Pn	15 45 24.2	+0.2
AKN	Aaknes	10.10	153	eP	Pn	15 45 24.5	+0.5
NOD	Norderasen	10.48	132	eP	Pn	15 45 30.9	+1.7
DOMB	Dombas	10.55	148	eP	Pn	15 45 31.7	+1.5
HYA	Hoyanger	10.96	157	eP	Pn	15 45 36.5	+0.7
NC204	NORSAR Array S	11.56	146	Pn	Pn	15 45 44.4	+0.3
NC303	NORSAR Array S	11.72	144	Pn	Pn	15 45 47.0	+0.8
SKAR	Skarslia	11.72	152	eP	Pn	15 45 46.3	+0.1
NB2	NORSAR Subarra	11.86	145	Pn	Pn	15 45 49.3	+1.1
	baz=327,slow=16						
NB2	NORSAR Subarra	11.86	145	Pn	Pn	15 45 49.3	+1.1
	baz=327,slow=16						
NOA	NORSAR Array B	11.86	145	Pn	Pn	15 45 48.2	0.0
	comp=E,0.0nm,0.3s,baz=334,slow=12,SNR=3.2						
NOA				LR	LR	15 50 14.8	
	comp=E,259nm,20.9s,baz=330,slow=37						
NB201	NORSAR Array S	11.87	145	Pn	Pn	15 45 49.6	+1.3
NC405	NORSAR Array S	11.89	144	Pn	Pn	15 45 50.1	+1.6
ODD1	Odda	12.23	157	eP	Pn	15 45 54.3	+1.0
BLS5	Blasjo	12.69	158	e	Pn	15 45 59.1	-0.4
APA0	Apatity Array	12.94	90	Pn	Pn	15 46 03.5	+0.7
	baz=308,slow=12						
APA0	Apatity Array	12.94	90	Pn	Pn	15 46 03.5	+0.7
	baz=308,slow=12						
FIA0	FINESS Array S	15.10	117	P	Pn	15 46 32.8	+0.6
FIA0	FINESS Array S	15.10	117	P	Pn	15 46 32.8	+0.6
FINES	FINESS Array B	15.10	117	Pn	Pn	15 46 32.1	-0.1
	comp=E,0.3nm,0.3s,baz=353,slow=10,SNR=4.2						
FINES				LR	LR	15 51 50.5	
	comp=E,212nm,18.8s,baz=310,slow=35						
EKA	Eskdalemuir Ar	16.23	181	Pn	Pn	15 46 45.5	-1.5
	baz=353,slow=11,SNR=3.6						
EKA	Eskdalemuir Ar	16.23	181	P	Pn	15 46 46.8	-0.2
EKA	Eskdalemuir Ar	16.23	181	P	Pn	15 46 46.8	-0.2
KLMR	Klimovskoe	19.61	101	ePn	P	15 47 27.4	+0.2
KLMR				AMP		15 47 33.6	
	comp=Z,33nm,1.2s						
CLL	Collm	21.47	152	eP	P	15 47 48.0	+0.5
BRG	Berggiesshubel	22.04	151	i P	P	15 47 56.1	+2.5
BRG				Amp		15 47 57.6	
	comp=Z,8.5nm,1.0s						
BRG				ex	x	15 48 01.9	
BRG				Amp		15 48 03.0	
	comp=Z,7.9nm,1.2s						
BRG	Berggiesshubel	22.04	151	i P	P	15 47 56.1	+2.5
BRG				Amp		15 47 57.6	
	comp=Z,8.5nm,1.0s						
BRG				ex	x	15 48 01.9	
BRG				Amp		15 48 03.0	
	comp=Z,7.9nm,1.2s						
NKC	Novy Kostel	22.44	154	eP	P	15 48 00.2	+2.3
CHVC	Chvalec	22.66	148	eP	P	15 48 01.9	+1.7
DPC	Dobruska-Polom	22.93	147	eP	P	15 48 04.3	+1.2
KRLC	Kraliky	23.28	147	eP	P	15 48 07.6	+1.0
OBN	Obninsk	23.43	114	LR	LR	15 57 37.1	
	comp=Z,18nm,19.6s,baz=350,slow=37						
KHC	Kasperske Hory	23.68	153	eP	P	15 48 11.1	+0.5
OJC	Ojcow	23.70	142	P	P	15 48 11.4	+0.6
OJC				IAmb	IAmb	15 48 38.4	
	comp=Z,4.6nm,1.0s						
MORC	Moravsky Berou	23.70	146	eP	P	15 48 11.4	+0.6
MORC	Moravsky Berou	23.70	146	P	P	15 48 11.1	+0.2
ECH	Echery	23.81	163	P	P	15 48 13.6	+1.7
ECH				IAmb	IAmb	15 48 15.5	
	comp=Z,4.3nm,0.9s						
GEC2	GERESS Array S	23.98	153	P	P	15 48 15.0	+1.5
GERES	GERESS Array B	23.98	153	P	P	15 48 15.4	+1.8
	comp=Z,0.6nm,0.5s,baz=359,slow=9.5,SNR=7.2						
GERES				LR	LR	15 57 21.0	
	comp=Z,127nm,18.3s,baz=344,slow=36						
VRAC	Vranov	23.98	148	LR	LR	15 56 38.5	
	comp=Z,131nm,18.9s,baz=334,slow=34						
RES	Resolute Bay	24.44	320	LR	LR	15 57 19.7	
	comp=Z,146nm,19.6s,baz=60,slow=35						
KIRV	Kirov	24.52	94	LR	LR	15 56 41.9	
	comp=Z,102nm,20.1s,baz=319,slow=33						
FRB	Frobisher Bay	24.90	286	LR	LR	15 56 26.1	
	comp=Z,96nm,18.6s,baz=20,slow=33						
DAVA	Damuels	25.01	159	eP	P	15 48 26.1	+3.1
	comp=Z,8.0nm,0.9s						
MOTA	Moosalm	25.10	157	eP	P	15 48 26.4	+2.6
	comp=Z,10.0nm,1.4s						
WATA	Walderalm	25.16	157	eP	P	15 48 27.0	+2.6
	comp=Z,10nm,1.2s						
CONA	Conrad Observa	25.20	150	eP	P	15 48 27.8	+3.1
	comp=Z,6.2nm,0.7s						
SQTA	Sankt Quirin	25.23	157	eP	P	15 48 28.1	+3.1
	comp=Z,7.2nm,1.0s						
WTTA	Wattenberg	25.24	157	eP	P	15 48 28.6	+3.5
	comp=Z,9.6nm,0.9s						
AKASG	Malin Array Be	25.37	128	P	P	15 48 26.7	+0.7
	comp=Z,3.3nm,0.5s,baz=337,slow=9.6,SNR=13						
AKASG				LR	LR	15 58 03.2	
	comp=Z,152nm,19.0s,baz=310,slow=36						
AKBB	Malin Array Si	25.37	128		P	15 48 26.2	+0.2
AKBB				IAmb	IAmb	15 48 31.3	
	comp=Z,6.9nm,0.8s						
DAVOX	Davos/Dischmat	25.51	160	LR	LR	15 57 45.9	
	comp=Z,68nm,18.6s,baz=272,slow=35						
SENIN	Lac Senin/Sane	25.66	164	P	P	15 48 30.5	+1.5
SENIN				IAmb	IAmb	15 48 32.8	
	comp=Z,5.8nm,0.9s						
ARSA	Arzberg	25.81	151	eP	P	15 48 34.2	+4.1
	comp=Z,2.8nm,0.7s						
SSB	Saint Sauveur	26.53	168	P	P	15 48 37.7	+1.1
BELG	Belogornoye	29.12	104	LR	LR	16 00 04.3	
	comp=Z,84nm,21.8s,baz=320,slow=35						
ARU	Arti	29.18	88	P	P	15 49 01.0	+0.8
	comp=Z,0.3nm,0.3s,baz=24,slow=12,SNR=3.4						
ARU				LR	LR	15 59 53.6	
	comp=Z,66nm,20.6s,baz=297,slow=35						
ARU	Arti	29.18	88	IAmb	IAmb	15 49 09.3	
	comp=Z,3.9nm,1.0s						
MLR	Muntele Rosu	29.48	137	LR	LR	16 02 06.1	
	comp=Z,197nm,18.2s,baz=330,slow=39						
ESDC	Sonseca Array	31.90	182	P	P	15 49 24.8	+0.4
	comp=Z,1.4nm,1.1s,baz=1.1,slow=8.7,SNR=5.3						
KBZ	Khabaz	35.46	117	P	P	15 49 57.3	+2.1
	comp=Z,2.3nm,0.9s,baz=357,slow=6.1,SNR=3.8						
KBZ				LR	LR	16 05 37.6	
	comp=Z,36nm,20.4s,baz=308,slow=38						
INK	Inuvik	36.66	332	LR	LR	16 06 06.7	
	comp=Z,55nm,19.0s,baz=98,slow=38						
BRTR	Keskin Array B	36.73	130	P	P	15 50 08.0	+1.6
	comp=Z,2.0nm,0.8s,baz=327,slow=6.3,SNR=5.0						
BRTR				LR	LR	16 05 04.7	
	comp=Z,25nm,20.0s,baz=302,slow=36						
YKA	Yellowknife Ar	38.36	316	P	P	15 50 17.8	-1.9
	comp=Z,0.6nm,0.8s,baz=34,slow=9.3,SNR=4.8						
YKA				PcP	PcP	15 52 32.3	-0.6
	comp=Z,0.5nm,0.5s,baz=16,slow=3.4,SNR=9.3						
YKA				LR	LR	16 05 13.4	
	comp=Z,62nm,19.7s,baz=0.0,slow=35						
ZALV	Zalesovo Beam	39.43	68	LR	LR	16 10 14.0	
	comp=Z,19nm,20.4s,baz=308,slow=41						
ILAR	Eielson Array	41.81	338	LR	LR	16 09 45.8	
	comp=Z,30nm,19.3s,baz=124,slow=38						
DOT	Dot Lake	42.54	336	P	P	15 50 53.2	-1.1
PAX	Paxson	43.37	336	P	P	15 51 00.9	-0.2
PAX				IAmb	IAmb	15 51 06.1	
	comp=Z,5.0nm,1.3s						
ULM	Lac du Bonnet	44.32	293	LR	LR	16 08 54.3	
	comp=Z,91nm,19.2s,baz=336,slow=35						
MKAR	Makanchi Array	44.97	76	P	P	15 51 15.4	+1.4
	comp=Z,0.6nm,0.7s,baz=350,slow=6.6,SNR=7.5						
GEYT	Alibeck	45.34	104	LR	LR	16 12 11.3	
	comp=Z,60nm,18.1s,baz=0.0,slow=39						
HMT	Hamilton	45.75	334	P	P	15 51 19.9	-0.2
KDAK	Kodiak Island	49.28	339	LR	LR	16 15 51.2	
	comp=Z,40nm,18.6s,baz=55,slow=40						
LRM	Limekiln Ridge	52.97	304	P	P	15 52 15.2	-0.4
PDAR	Pinedale Array	55.03	301	LR	LR	16 15 23.6	
	comp=Z,52nm,18.2s,baz=74,slow=36						
TORD	Torodi Ar. Bea	58.38	175	P	P	15 52 53.4	-1.0
	comp=Z,1.0nm,0.8s,baz=346,slow=6.6,SNR=2.9						
TORD				LR	LR	16 17 13.4	
	comp=Z,30nm,19.1s,baz=15,slow=35						
USRK	Ussuriysk Ar.	60.22	36	LR	LR	16 22 23.8	
	comp=Z,16nm,18.3s,baz=342,slow=39						
NVAR	Mina Array Bea	61.41	306	LR	LR	16 19 43.6	
	comp=Z,50nm,18.4s,baz=20,slow=36						
CMAR	Chiang Mai Arr	76.31	73	P	P	15 54 48.8	+0.8
	comp=Z,0.4nm,0.3s,baz=320,slow=6.6,SNR=6.3						

IDC 06 15:46:39.6±4.3**, 11°.40S**×**116°.67E, h0**^{km}**, mb3.1**/2**, mb1 3.5**/4**, mb1mx3.2**/47**, mbtmp3.3**/4**, ML3.1**/2**, Error ellipse: s-maj=268.3km s-min=27.7km az=46.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.93	129	Pn	Pn	15 49 15.7	-1.6
	0.1nm,0.3s,baz=319,slow=14,SNR=1.6						
FITZ				Sn	Sn	15 51 09.1	-11
	0.4nm,0.3s,baz=54,slow=8.0,SNR=2.4						
WRA	Warramunga Arr	19.00	119	P	Pn	15 51 03.8	+0.2
	0.1nm,0.3s,baz=295,slow=13,SNR=2.0						
ASAR	Alice Springs	20.43	129	P	P	15 51 19.1	+0.4
	0.4nm,0.9s,baz=304,slow=8.9,SNR=1.7						
MKAR	Makanchi Array	65.59	335	P	P	15 57 25.1	-0.1
	0.3nm,0.7s,baz=144,slow=7.5,SNR=3.6						

IDC ***06*** *15:50:58.3±1.0, 6°.46S×131°.27E, h0^{km}, mb3.7/4, mb1 4.4/11, mb1mx3.9/45, mbtmp4.2/11, ML4.5/6, Error ellipse: s-maj=30.0km s-min=19.5km az=62.0*

NEIC ***06*** *15:51:03.8±1.8, 6°.23S±0°.05×131°.2E±0°.1, h122^{km}±17^{km}, mb4.5/4, Error ellipse: s-maj=19.2km s-min=7.0km az=100.0*

DJA ***06*** *15:51:05.4±0.3, 6°S±2°×13°2E±°, h119^{km}±8^{km}, M4.8/11, mb4.9/6, mB5.5/6, MLv4.7/11, Mw(mB)5.0/6*

NOU ***06*** *15:51:06.7, 6°.54S×131°.58E, h44^{km}, mb4.5, Tanimbar Islands Reg., Indonesia*

ISC 06 15:51:04.3±0.7**, 6°.32S**±0°.05×**131°.71E**±0°.07**, h100**^{km}**, n36, σ3^{s}.16**/38**, mb3.6**/5**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.70	194	Pn	Pn	15 51 34.7	+1.6
SAUI	Saumlaki	1.70	194	P	Pn	15 51 35.0	+1.9
SAUI				S	Sn	15 51 59.3	+4.3
BNDI	Bandanaira	2.54	315	P	Pn	15 51 45.5	+1.5
BNDI				S	Sn	15 52 14.6	+0.2
FAKI	Fak Fak	3.42	9		Pn	15 51 56.5	+0.6
FAKI	Fak Fak	3.42	9	P	Pn	15 51 56.6	+0.8
MSAI	Masohi	4.05	317	P	Pn	15 52 04.9	+0.6
MSAI				S	Sn	15 52 48.6	-2.2
SIJI	Sorong	5.43	355	Pn	Pn	15 52 22.9	-0.2
	40nm,0.3s,baz=44,slow=7.1,SNR=255						
SIJI				Sn	Sn	15 53 18.5	-5.8
	32nm,0.3s,baz=236,slow=22,SNR=23						
SWI	Sorong	5.44	355	P	Pn	15 52 22.8	-0.3
	2.0nm11µm154nm,0.6s						
NLAI	Namlea	5.52	303	P	Pn	15 52 26.5	+2.3
MTN	Manton Dam	6.50	185		Pn	15 52 38.3	+0.8
SANI	Sanana	7.11	306	P	Pn	15 52 47.9	+2.1
	0.2nm46nm,0.5s						
SOEI	Soe	8.12	245	Pn	Pn	15 53 00.6	+0.8
SOEI	Soe	8.12	245	P	Pn	15 53 00.5	+0.8
	86nm,1.1s						
JAY	Jayapura	9.73	68	Pn	Pn	15 53 25.5	+4.0
	2.4nm,0.3s,baz=220,slow=13,SNR=8.2						
KNRA	Kununurra	9.74	197	Pn	Pn	15 53 19.1	-2.4
KAPI	Kappang	11.97	276	Pn	Pn	15 53 42.7	-9.1
FITZ	Fitzroy Crossi	13.12	206	Pn	Pn	15 54 03.4	-3.4
	5.6nm,0.3s,baz=30,slow=11,SNR=61						
FITZ				Sn	Sn	15 56 19.6	-12
	4.5nm,0.3s,baz=162,slow=15,SNR=6.8						
FITZ	Fitzroy Crossi	13.12	206		Pn	15 54 05.3	-1.6
COEN	Coen	13.59	125		Pn	15 54 13.4	+0.3
WB0	Warramunga Arr	13.62	169		Pn	15 54 10.7	-2.7
WRAB	Tennant Creek	13.77	170		Pn	15 54 12.5	-2.9
WRA	Warramunga Arr	13.78	170	Pn	Pn	15 54 13.9	-1.6
	2.4nm,0.3s,baz=345,slow=14,SNR=20						
WRA				Sn	Sn	15 56 39.0	-8.2
	3.1nm,0.3s,baz=356,slow=23,SNR=8.1						
WB2	Warramunga Arr	13.78	170		Pn	15 54 13.0	-2.5
WR0	Warramunga Arr	13.83	169		Pn	15 54 14.0	-2.2
PMG	Port Moresby	15.61	102	Pn	P	15 54 44.4	+3.5
	1.0nm,0.3s,baz=279,slow=11,SNR=3.5						
PMG	Port Moresby	15.61	102		P	15 54 42.8	+1.9
PMG				IAmb	IAmb	15 54 45.4	
	comp=Z,40nm,1.1s						
PMG	Port Moresby	15.61	102	P	P	15 54 45.2	+4.3
AS31	Alice Springs	17.37	173		P	15 54 60.0	-0.5
ASAR	Alice Springs	17.37	173	P	Pn	15 55 01.2	+0.6
	comp=Z,1.4nm,0.3s,baz=343,slow=8.7,SNR=98						
ASAR				S	Sn	15 58 06.0	-8.1
	comp=Z,1.0nm,0.3s,baz=352,slow=19,SNR=11						
CTA	Charters Tower	19.66	135	P	Pn	15 55 31.2	+3.4
	comp=Z,0.2nm,0.3s,baz=309,slow=13,SNR=1.7						
BBOO	Buckleboo	26.66	172	P	P	15 56 32.6	-1.3
BBOO				IAmb	IAmb	15 56 33.3	
	comp=Z,9.4nm,1.0s						
CMAR	Chiang Mai Arr	40.63	308	P	P	15 58 39.2	+4.3
	comp=Z,0.7nm,0.5s,baz=132,slow=7.1,SNR=6.3						
PEA0B	Petropavlovsk-	63.17	17	P	P	16 01 19.8	-1.8
MKAR	Makanchi Array	68.61	326	P	P	16 02 02.3	+5.6
	comp=Z,0.5nm,0.6s,baz=120,slow=7.7,SNR=12						
ZALV	Zalesovo Beam	71.74	333	P	P	16 02 21.2	+5.6
	comp=Z,0.3nm,0.4s,baz=96,slow=7.8,SNR=2.3						
KURBB	Kurchatov Arra	72.84	328	P	P	16 02 27.7	+5.5
	comp=Z,0.2nm,0.4s,baz=137,slow=5.7,SNR=2.0						

NEIC ***06*** *15:57:05.3±1.1, 2°.13N±0°.09×128°.50E±0°.10, h243^{km}±7^{km}, mb4.2/18, Error ellipse: s-maj=16.2km s-min=10.4km az=50.0*

IDC ***06*** *15:57:06.1±2.0, 2°.17N×128°.65E, h250^{km}±21^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.1/40, mbtmp3.8/7, Error ellipse: s-maj=64.9km s-min=13.8km az=63.0*

ISC 06 15:57:05.9±0.7**, 2°.12N**±0°.09×**128°.5E**±0°.1**, h250^{km}, n30,** σ**0^{s}.81**/30**, mb4.1**/13**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.75	220	Pn	Pn	15 57 45.7	-0.6
SIJI	Sorong	4.06	137	P	Pn	15 58 10.8	+0.2
	0.8nm,0.3s,baz=162,slow=22,SNR=2.4						
FAKI	Fak Fak	6.26	143	Pn	Pn	15 58 37.8	+0.5
LUWI	Luwuk	6.52	241	Pn	Pn	15 58 41.1	+0.4
TOLI2	Tolitoli	7.77	263	Pn	Pn	15 58 56.2	-0.2
BKB	Balikpapan	12.07	254	Pn	Pn	15 59 49.2	-1.3
MTN	Manton Dam	15.09	170	P	P	16 00 26.6	-0.3
SBUM	Sibu	16.26	271	Pn	Pn	16 00 43.3	+2.0
SBUM				IAmb	IAmb	16 00 54.4	
	comp=Z,9.6nm,1.4s						
KNRA	Kununurra	17.68	179	P	P	16 00 54.9	-0.4
TPUB	Ta-pu	22.39	341	P	P	16 01 43.1	-0.6
WB0	Warramunga Arr	22.51	165	P	P	16 01 44.1	-0.6
WB0				IAmb	IAmb	16 01 45.7	
	comp=Z,9.4nm,1.1s						
WRA	Warramunga Arr	22.66	166	P	P	16 01 46.1	-0.1
	comp=Z,1.2nm,0.3s,baz=345,slow=11,SNR=5.7						
WB2	Warramunga Arr	22.66	166	P	P	16 01 46.5	+0.4
WR0	Warramunga Arr	22.73	165	P	P	16 01 46.8	+0.1
WR0				IAmb	IAmb	16 01 53.5	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	26.16	169	P	P	16 02 17.7	0.0
ASAR	Alice Springs	26.16	169	P	P	16 02 17.6	-0.2
	comp=Z,0.6nm,0.6s,baz=355,slow=9.3,SNR=3.0						
ASAR				ScP	ScP	16 08 55.1	+1.2
	comp=Z,0.2nm,0.6s,baz=350,slow=2.8,SNR=4.7						
CMAR	Chiang Mai Arr	33.20	301	P	P	16 03 22.1	+2.3
	comp=Z,0.3nm,0.7s,baz=125,slow=7.8,SNR=1.5						
BBOO	Buckleboo	35.47	169	P	P	16 03 39.4	+0.5
BBOO				IAmb	IAmb	16 03 55.0	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	36.02	161	P	P	16 03 43.7	0.0
	comp=Z,1.0nm,0.4s,baz=322,slow=14,SNR=4.4						
STKA	Stephens Creek	36.02	161	IAmb	IAmb	16 03 49.6	
	comp=Z,1.6nm,1.4s						
JSD	Sado	36.85	13	P	P	16 03 50.1	-0.5
PALK	Pallekele	47.88	278	P	P	16 05 18.7	-0.9
PALK				IAmb	IAmb	16 05 27.4	
	comp=Z,17nm,1.1s						
ULN	Ulaanbaatar	49.20	341	P	P	16 05 28.7	-0.5
TLY	Talaya	53.61	341	P	P	16 06 00.9	-0.7
MK31	Makanchi Array	59.88	325	P	P	16 06 45.7	+0.1
MK31				IAmb	IAmb	16 06 46.3	
	comp=Z,1.2nm,0.5s						
MKAR	Makanchi Array	59.88	325	P	P	16 06 46.0	+0.4
	comp=Z,1.2nm,0.3s,baz=114,slow=8.0,SNR=36						
MAKZ	Makanchi	60.06	325	P	P	16 06 47.1	+0.2
KURBB	Kurchatov Arra	64.04	327	P	P	16 07 13.0	-0.1
	comp=Z,2.2nm,0.5s,baz=127,slow=6.1,SNR=29						
KURK	Kurchatov	64.04	327	P	P	16 07 13.0	-0.1
KURK				IAmb	IAmb	16 07 13.8	
	comp=Z,3.7nm,0.8s						
UOSS	Minazif	73.06	295	P	P	16 08 08.5	-0.8
UOSS				IAmb	IAmb	16 08 30.3	
	comp=Z,6.5nm,1.2s						

IDC 06 16:19:37.5±2.4**, 6°.74S**×**129°.42E, h0^{km}, mb3.3**/1**, mb1 3.6**/3**, mb1mx3.3**/38**, mbtmp3.4**/3**, ML3.5**/2**, Error ellipse: s-maj=127.8km s-min=33.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.97	160	Pn	Pn	16 22 57.8	+0.9
	0.2nm,0.3s,baz=340,slow=12,SNR=2.4						
WRA				Sn	Sn	16 25 20.6	-12
	0.9nm,0.3s,baz=334,slow=22,SNR=8.3						
ASAR	Alice Springs	17.37	166	P	Pn	16 23 41.0	-0.7
	0.1nm,0.3s,baz=340,slow=11,SNR=12						
ASAR				S	Sn	16 26 40.9	-15
	0.2nm,0.3s,baz=57,slow=15,SNR=4.6						
MKAR	Makanchi Array	67.69	327	P	P	16 30 36.8	+0.1
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.2						

GCMT 06 16:22:49.0±0.4**, 35°.51S**±0°.06×**15°.02W**±0°.03**, h17^{km}**±1^{km}**, MW4.9**/75**, Moment Tensor Solution. s17,c17; s75,c87; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-2.20±.21; $M_{\theta\theta}$0.45±.12; $M_{\phi\phi}$1.75±.13; $M_{r\theta}$-1.69±.51; $M_{\theta\phi}$0.08±.08; $M_{\phi r}$-0.27±.29; **Best double couple:** $M_0$2.42700×10^{16} **NP1:**ϕ_s170.00000°**,** δ40.00000°, λ-128.00000°. **NP2:**ϕ_s36.00000°**,** δ59.00000°, λ-62.00000°. **Principal axes:** T 1.8230**,** Plg10.0000°, Azm106.0000°**;** N 1.2100**,** Plg24.0000°, Azm201.0000°**;** P -3.0310**,** Plg64.0000°, Azm354.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Tristan da Cunha region**

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*KLM **06** 16:34:32, 6°.55S×129°.94E, h122^{km}, mb4.8*
*IDC **06** 16:34:33.2±1.7, 6°.64S×129°.72E, h152^{km}±17^{km}, mb4.0/20, mb1 4.1/25, mb1mx4.0/42, mbtmp4.5/25, Error ellipse: s-maj=15.3km s-min=9.9km az=70.0*
*DJA **06** 16:34:34.6±0.2, 7°S±2°×13°0E±°, h155^{km}±3^{km}, M4.8/44, mb4.9/44, mB5.2/17, MLv5.1/13, Mw(mB)4.6/17, MwMwp6.7/1, Mwp6.5/1*
*NEIC **06** 16:34:34.6±1.4, 6°.60S±0°.07×129°.83E±0°.07, h168^{km}±7^{km}, mb4.6/50, Error ellipse: s-maj=10.9km s-min=9.5km az=66.0*
*NOU **06** 16:34:45.1, 7°.52S×129°.99E, h186^{km}, mb4.9, Banda Sea*
ISC 06 16:34:34.3±0.3**, 6°.73S**±0°.04×**129°.81E**±0°.05**, h168^{km}, n194,** σ**1^{s}.53**/197**, mb4.6**/59**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.93	130	Pn	Pn	16 35 10.9	+1.0
SAUI	Saumlaki	1.93	130	P	Pn	16 35 11.1	+1.2
SAUI				S	Sn	16 35 34.6	-2.8
BNDI	Bandanaira	2.19	2	P	Pn	16 35 11.7	-1.1
BNDI				S	Sn	16 35 41.8	-0.8
MSAI	Masohi	3.47	345	P	Pn	16 35 29.2	+0.8
MSAI				S	Sn	16 36 10.0	-0.5
NLAI	Namlea	4.39	322	P	Pn	16 35 42.0	+1.8
FAKI	Fak Fak	4.49	33	Pn	Pn	16 35 38.2	-3.3
FAKI	Fak Fak	4.49	33	P	Pn	16 35 38.5	-3.0
SIJI	Sorong	6.00	14	P	Pn	16 35 58.0	-3.3
	24nm,0.3s,baz=57,slow=11,SNR=146						
SIJI				S	Sn	16 36 56.5	-13
	6.7nm,0.3s,baz=120,slow=3.6,SNR=5.2						
SWI	Sorong	6.00	14	P	Pn	16 35 58.1	-3.2
	1.7nm3µm76nm,0.4s						
SANI	Sanana	6.01	320	P	Pn	16 36 02.2	+0.8
	0.4nm1µm135nm,0.9s						
MTN	Manton Dam	6.22	168	P	Pn	16 36 04.2	+0.1
	baz=6.3,SNR=323						
MTN				S	Sn	16 37 12.0	-2.8
	baz=6.3						
MTN	Manton Dam	6.22	168	Pn	Pn	16 36 04.2	+0.1
SOEI	Soe	6.26	241	Pn	Pn	16 36 06.3	+1.5
SOEI	Soe	6.26	241	P	Pn	16 36 06.7	+1.9
	2.3nm5µm559nm,0.8s						
KDU	Kakadu	6.48	156	P	Pn	16 36 07.3	-0.2
	baz=6.5,SNR=228						
KDU				S	Sn	16 37 16.9	-4.0
	baz=6.5						
MMRI	Maumere	7.74	255	Pn	Pn	16 36 25.9	+1.5
MMRI	Maumere	7.74	255	P	Pn	16 36 27.5	+3.1
	0.7nm152nm,0.6s						
TNTI	Ternate	7.84	342	Pn	Pn	16 36 25.0	-0.6
TNTI	Ternate	7.84	342	P	Pn	16 36 25.1	-0.5
	0.2nm36nm,0.7s						
EDFI	Ende, Flores	8.30	255	P	Pn	16 36 33.0	+1.2
	51nm,0.9s						
BAKI	Biak	8.34	49	P	Pn	16 36 32.0	-0.3
	3µm468nm,0.9s						
KNRA	Kununurra	8.96	187	P	Pn	16 36 40.1	-0.2
	baz=9.1,SNR=4.2						
KNRA				S	Sn	16 38 14.6	-5.6
	baz=9.1						
KNRA	Kununurra	8.96	187	Pn	Pn	16 36 40.0	-0.4
WAMI	Wamena	9.30	73	P	Pn	16 36 47.3	+2.4
	2µm179nm,0.8s						
BASI	Baing, Sumba	9.77	249	P	Pn	16 36 52.5	+1.4
	204nm,1.0s						
WSI	Waingapu	9.86	252	P	Pn	16 36 51.7	-0.6
	13µm644nm,0.5s						
BNSI	Bone	9.93	283	P	Pn	16 37 08.0	+15
APSI	Ampana	9.98	305	P	Pn	16 36 57.6	+3.7
	650nm37nm,1.0s						
SPSI	Sidrap Palu	10.37	285	P	P	16 37 09.3	+1.5
TTSI	Tana Toraja	10.61	290	P	P	16 37 12.7	+2.2
MRSI	Marisa	10.62	312	P	Pn	16 37 04.7	+2.3
	566nm58nm,1.0s						
GENI	Genyem	11.11	69	P	Pn	16 37 09.0	+0.4
	71nm,0.8s						
JAY	Jayapura	11.63	69	P	Pn	16 37 16.1	+0.6
	1.5nm,0.3s,baz=221,slow=12,SNR=8.8						
FITZ	Fitzroy Crossi	12.01	199	P	Pn	16 37 20.0	-0.3
	baz=12,SNR=20						
FITZ				S	Sn	16 39 24.5	-9.2
	baz=12						
FITZ	Fitzroy Crossi	12.01	199	P	Pn	16 37 19.0	-1.4
	4.8nm,0.3s,baz=32,slow=11,SNR=50						
FITZ				S	Sn	16 39 24.4	-9.2
	14nm,0.3s,baz=87,slow=22,SNR=8.4						
FITZ	Fitzroy Crossi	12.01	199	Pn	Pn	16 37 19.3	-1.0
PLAI	Plampang	12.11	259	P	Pn	16 37 20.3	-1.3
	2µm119nm,0.6s						
MPSI	Mapaga	12.13	305	P	P	16 37 25.8	-1.7
	22nm,1.1s						
TWSI	Taliwang, Sumb	12.97	260	P	Pn	16 37 31.7	-0.9
	32nm,0.7s						
WB0	Warramunga Arr	13.71	161	Pn	Pn	16 37 39.2	-2.7
WRAB	Tennant Creek	13.85	162	P	Pn	16 37 40.7	-3.1
WRA	Warramunga Arr	13.86	162	P	Pn	16 37 40.9	-2.9
	5.6nm,0.3s,baz=347,slow=13,SNR=42						
WRA				S	Sn	16 40 08.2	-10
	15nm,0.3s,baz=348,slow=23,SNR=12						
WB2	Warramunga Arr	13.86	162	Pn	Pn	16 37 40.9	-2.9
WR0	Warramunga Arr	13.93	161		Pn	16 37 42.9	-1.9
KBKI	Kotabaru	14.01	283	P	P	16 37 48.8	+0.3
	62nm,1.0s						
COEN	Coen	14.97	120	Pn	Pn	16 37 57.4	-0.3
COEN				IAmb	IAmb	16 38 01.7	
	comp=Z,37nm,0.8s						
BBKI	Banjar Baru	15.26	282	P	P	16 38 05.2	+2.9
	comp=Z,134nm,0.8s						
JAGI	Jajag, Banyuwa	15.62	263	Pn	Pn	16 38 04.8	-0.9
MTKI	Muara Teweh, K	15.95	290	P	P	16 38 13.6	+3.6
	comp=Z,738nmcomp=Z,13nm,0.7s						
QIS	Mount Isa	16.71	146	P	P	16 38 18.7	+0.4
	baz=17,SNR=97						
AS31	Alice Springs	17.30	167	P	Pn	16 38 26.4	+0.5
AS31				IAmb	IAmb	16 38 29.4	
	comp=Z,33nm,0.6s						
ASAR	Alice Springs	17.30	167	P	P	16 38 25.6	+0.8
	comp=Z,9.7nm,0.3s,baz=340,slow=7.9,SNR=496						
ASAR				S	S	16 41 31.6	-4.9
	comp=Z,3.3nm,0.3s,baz=357,slow=26,SNR=5.4						
PMG	Port Moresby	17.38	100	P	Pn	16 38 28.4	+1.5
	comp=Z,0.4nm,0.3s,baz=296,slow=11,SNR=1.7						
PMG	Port Moresby	17.38	100		P	16 38 26.5	+0.8
PMG				IAmb	IAmb	16 38 45.7	
	comp=Z,40nm,1.1s						
PSA00	Pilbara Seismi	17.63	212		Pn	16 38 30.2	+0.3
PWJI	Pagerwojo	17.91	265	P	Pn	16 38 33.1	-0.1
	comp=Z,64nm,0.7s						
MTSU	Mount Surprise	18.13	130	P	P	16 38 35.6	+1.7
	baz=18,SNR=23						
WRKA	Warakurna	18.27	184	P	Pn	16 38 37.4	0.0
	baz=18,SNR=194						
PBKI	Pangkalan Bun	18.51	282	P	Pn	16 38 41.1	+0.8
	comp=Z,196nm,0.9s						
KKM	Kota Kinabalu	18.57	313		P	16 38 38.6	-0.3
KKM				IAmb	IAmb	16 39 06.5	
	comp=Z,42nm,1.5s						
UGM	Wanagama	19.17	265	P	P	16 38 45.0	-0.3
SBUM	Sibu	19.79	297	P	Pn	16 38 53.2	-2.1
SBUM				IAmb	IAmb	16 38 55.4	
	comp=Z,42nm,1.2s						
SBUM	Sibu	19.79	297	P	Pn	16 38 55.0	-0.3
KPJI	Karang Pucung	20.73	267	P	P	16 39 02.4	+0.4
	comp=Z,25nm,0.6s						
CTA	Charters Tower	20.76	131	P	P	16 39 03.8	+1.6
	comp=Z,33nm,0.8s,baz=303,slow=11,SNR=30						
CTAO	Charters Tower	20.76	131	P	P	16 39 03.7	+1.5
CTAO				IAmb	IAmb	16 39 06.5	
	comp=Z,31nm,0.8s						
KSM	Kuching	21.10	292	P	P	16 39 06.3	+0.3
KSM				IAmb	IAmb	16 39 08.3	
	comp=Z,12nm,0.9s						
KSM	Kuching	21.10	292	P	P	16 39 08.0	+2.0
GIRL	Giralia	21.82	222	P	P	16 39 15.6	+2.2
	baz=22,SNR=4.2						
GIRL	Giralia	21.82	222	P	P	16 39 14.9	+1.6
CISI	Cisompet, Garu	21.84	266	P	P	16 39 12.1	-1.7
CISI	Cisompet, Garu	21.84	266	P	P	16 39 12.3	-1.5
	comp=Z,2µmcomp=Z,162nm,1.0s						
LEM	Lembang	22.04	268	P	P	16 39 14.7	-1.2
	comp=Z,79nm,0.9s,baz=19,slow=4.7,SNR=12						
LEM	Lembang	22.04	268	P	P	16 39 15.6	-0.3
	comp=Z,40nm,1.0s						
MEEK	Meekatharra	22.49	207	P	P	16 39 21.3	+1.4
	baz=23,SNR=9.3						
CBJI	Citeko	22.81	269	P	P	16 39 23.2	+0.2
	comp=Z,105nm,0.8s						
DBJI	Dramaga	22.91	269	P	P	16 39 25.3	+1.4
CGJI	Cibinong	23.96	269	P	P	16 39 32.3	-1.1
	comp=Z,83nm,0.8s						
FORT	Forrest	23.99	184	P	P	16 39 34.9	+1.4
	baz=24,SNR=24						
FORT	Forrest	23.99	184	P	P	16 39 34.7	+1.2
PPBI	Pangkal Pinang	24.03	280	P	P	16 39 38.5	+4.4
QLP	Quilpie	24.05	147	P	P	16 39 35.3	+1.1
	baz=24,SNR=42						
KMBL	Kambalda	25.61	196	P	P	16 39 49.7	+1.4
	baz=26,SNR=10						
BBOO	Buckleboo	26.60	168	P	P	16 39 57.9	+0.8
	baz=27,SNR=25						
BBOO	Buckleboo	26.60	168	P	P	16 39 57.7	+0.7
RMQ	Roma	26.68	140	P	P	16 39 59.1	+1.2
	baz=27,SNR=7.1						
KLBR	Kellerberrin	27.19	203	P	P	16 40 04.0	+1.7
	baz=27,SNR=5.1						
MYKOM	Kota Tinggi	27.26	287	P	P	16 40 06.0	+2.8
STKA	Stephens Creek	27.34	158	P	P	16 40 04.8	+1.1
	baz=28,SNR=78						
STKA	Stephens Creek	27.34	158	P	P	16 40 04.7	+1.1
	comp=Z,21nm,0.4s,baz=339,slow=8.2,SNR=88						
STKA	Stephens Creek	27.34	158	P	P	16 40 04.6	+0.9
STKA				IAmb	IAmb	16 40 05.1	
	comp=Z,5.2nm,0.5s						
HTT	Hallett	27.89	164	P	P	16 40 09.9	+1.3
	baz=28,SNR=20						
NWAO	Narrogin (SRO)	28.57	203	P	P	16 40 16.5	+1.9
	baz=29,SNR=4.4						
NWAO	Narrogin (SRO)	28.57	203	P	P	16 40 15.3	+0.7
	comp=Z,4.9nm,0.6s,baz=41,slow=8.0,SNR=7.3						
NWAO	Narrogin (SRO)	28.57	203	P	P	16 40 16.1	+1.5
IPM	Ipoh	30.82	290	P	P	16 40 38.0	+3.3
MNSI	Mandailing Nat	31.08	283	P	P	16 40 39.2	+2.2
	comp=Z,25nm,0.9s						
ARMA	Armidale	31.23	142	P	P	16 40 39.9	+1.7
	baz=31,SNR=9.7						
ARMA	Armidale	31.23	142	P	P	16 40 40.1	+1.9
ARMA				IAmb	IAmb	16 40 41.1	
	comp=Z,12nm,0.9s						
KULM	Kulim	31.46	292	P	P	16 40 39.3	-1.0
KULM				IAmb	IAmb	16 40 42.1	
	comp=Z,10nm,1.1s						
KULM	Kulim	31.46	292	P	P	16 40 39.0	-1.3
ARPS	Mount Arapiles	31.86	162	P	P	16 40 45.5	+2.0
	baz=32,SNR=120						
RPSI	Rantau Prapat	32.22	286	P	P	16 40 47.0	-0.1
PSI	Prapat	32.25	286	P	P	16 40 47.0	-0.5
	comp=Z,15nm,0.8s,baz=180,slow=3.5,SNR=12						
YNG	Young	32.37	150	P	P	16 40 49.9	+1.8
	baz=32,SNR=47						
MGCD	Mangrove Creek	32.94	146	P	P	16 40 55.6	+2.5
	baz=33,SNR=9.4						
GSI	Gunungsitoli	33.15	283	P	P	16 40 53.0	-2.1
GSI				IAmb	IAmb	16 40 57.0	
	comp=Z,10nm,0.7s						
CNB	Canberra Magne	33.66	150	P	P	16 41 01.1	+1.8
	baz=34,SNR=28						
TOO	Toolangi	33.86	157	P	P	16 41 03.3	+2.4
	baz=34,SNR=6.4						
TOO	Toolangi	33.86	157	P	P	16 41 03.5	+2.5
TOO				IAmb	IAmb	16 41 04.6	
	comp=Z,12nm,0.7s						
PBKT	Sadao Pong	36.74	309	P	P	16 41 24.9	-0.8
PBKT				IAmb	IAmb	16 41 25.6	
	comp=Z,22nm,1.4s						
UTTA	Uttaradit	37.76	310	P	P	16 41 34.6	+0.2
SUKH	Sukhothai	38.31	309	P	P	16 41 45.4	+6.5
CM09	Chiang Mai Arr	39.37	310	P	P	16 41 54.1	+6.4
CM01	Chiang Mai Arr	39.38	310	P	P	16 41 48.3	+0.4
CM02	Chiang Mai Arr	39.40	310	P	P	16 41 48.0	0.0
CM31	Chiang Mai Arr	39.41	310	P	P	16 41 47.9	-0.3
CMAR	Chiang Mai Arr	39.41	310	P	P	16 41 48.0	-0.2
	comp=Z,2.0nm,0.6s,baz=135,slow=7.0,SNR=22						
CMAR				ScP	ScP	16 47 25.9	-0.1
	comp=Z,0.5nm,0.5s,baz=157,slow=3.8,SNR=5.5						
CM13	Chiang Mai Arr	39.42	310	P	P	16 41 48.0	-0.2
CM34	Chiang Mai Arr	39.49	311	P	P	16 41 48.0	-0.8
CMMT	Chiang Mai	39.62	310	P	P	16 41 49.8	-0.1
CHTO	Chiang Mai	39.62	310	P	P	16 41 48.6	-1.3
NJ2	Nanjing	39.95	345	*e*P	P	16 41 53.0	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI	Kunming	41.19	321⇓	*e*P	P	16 42 03.3	+0.4
KMI				pP	pP	16 42 36.2	-1.9
KMI				sP	sP	16 42 57.0	+0.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JWT	Wachi	42.11	7	P	P	16 42 09.3	-0.6
MJB9	Matsu-Tunnel	43.76	10	P	P	16 42 23.1	-0.1
KSRS	Korea Array	43.98	358	P	P	16 42 24.0	-0.9
	comp=Z,1.4nm,0.8s,baz=177,slow=8.7,SNR=2.0						
LZH	Lanzhou	49.08	332	*e*P	P	16 43 03.2	-1.6
LZH				pP	pP	16 43 39.8	-1.4
LZH				sP	sP	16 43 57.4	-1.9
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
OUZ	Omahuta	49.16	132	P	P	16 43 06.0	+0.6
OUZ				IAmb	IAmb	16 43 26.2	
	comp=Z,21nm,1.4s						
HHC	Hu-ho-hao-te	50.23	342	*e*P	P	16 43 12.5	-0.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,270nm,7.4s						
FOZ	Fox Glacier	50.72	143	P	P	16 43 18.0	+1.1
USRK	Ussuriysk Ar.	50.73	2	P	P	16 43 15.8	-1.1
	comp=Z,0.8nm,0.6s,baz=159,slow=6.2,SNR=5.5						
THZ	Tophouse	51.70	139	P	P	16 43 25.0	+0.6
THZ				IAmb	IAmb	16 43 46.8	
	comp=Z,21nm,1.1s						
LSA	Lhasa	51.87	316	P	P	16 43 25.7	-0.6
TUWZ	Tuamarina	52.21	139	P	P	16 43 28.7	+0.6
KHZ	Kahutara	52.43	140	P	P	16 43 30.7	+1.0
KHZ				IAmb	IAmb	16 43 36.7	
	comp=Z,10.0nm,1.0s						
SNZO	South Karori	52.66	138	P	P	16 43 31.7	+0.3
BHW	Baring Head	52.81	138	P	P	16 43 32.4	-0.1
BKZ	Black Stump Fm	52.92	135	P	P	16 43 33.9	+0.4
BKZ				IAmb	IAmb	16 43 34.3	
	comp=Z,13nm,1.2s						
ODAN	Odare	52.94	311	*e*P	P	16 43 33.6	-0.3
	comp=Z,16nm,0.5s						
TAPN	Taplejung	52.97	312	*e*P	P	16 43 33.5	-0.7
	comp=Z,18nm,0.4s						
RAMN	Ramite	53.58	311	*e*P	P	16 43 38.6	0.0
	comp=Z,44nm,0.5s						
GTA	Gaotai	53.64	331	*e*P	P	16 43 37.7	-1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GUN	Gumba	54.63	311	*e*P	P	16 43 45.8	-0.6
	comp=Z,30nm,0.5s						
PKI	Pulchoki	54.81	311	*e*P	P	16 43 46.7	-0.9
	comp=Z,9.2nm,0.5s						
PKIN	Phulchoki	54.82	311	*e*P	P	16 43 46.5	-1.1
	comp=Z,8.6nm,0.5s						
KKN	Kakani	55.02	311	*e*P	P	16 43 48.3	-0.7
	comp=Z,12nm,0.5s						
GKN	Gorkha	55.61	311	*e*P	P	16 43 52.6	-0.6
	comp=Z,24nm,0.4s						
HYB	Hyderabad	56.03	296	*i* P	P	16 43 54.0	-2.1
KOLN	Koldanda	56.28	310	*e*P	P	16 43 56.5	-1.5
	comp=Z,12nm,0.5s						
DANN	Dangsing	56.46	310	*e*P	P	16 43 58.6	-0.7
	comp=Z,4.8nm,0.4s						
PYUN	Piuthan	56.91	310	*e*P	P	16 44 02.1	-0.3
	comp=Z,12nm,0.4s						
ULN	Ulaanbaatar	57.95	342	P	P	16 44 08.9	-0.3
SONM	Songino Array	58.12	342	P	P	16 44 10.8	+0.4
	comp=Z,0.7nm,0.6s,baz=162,slow=8.5,SNR=3.6						
WMQ	Urumqi	63.06	327	*e*P	P	16 44 44.8	+0.9
WMQ				pP	pP	16 45 22.8	+0.8
WMQ				pmax	pmax		
	comp=Z,32nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.5s						
PETK	Petropavlovsk-	64.12	18	P	P	16 44 51.3	+0.8
	comp=Z,1.6nm,0.9s,baz=188,slow=7.2,SNR=4.4						
KSH	Kashi	67.69	318	P	P	16 45 15.0	+1.2
KSH				sP	pwP	16 45 57.3	-0.9
KSH				pmax	pmax		
	comp=Z,34nm,1.7s						
MK31	Makanchi Array	67.89	327	P	P	16 45 15.1	+0.3
MK31				IAmb	IAmb	16 45 15.9	
	comp=Z,13nm,0.8s						
MKAR	Makanchi Array	67.89	327	P	P	16 45 15.1	+0.3
	comp=Z,19nm,0.6s,baz=123,slow=8.0,SNR=185						
MAKZ	Makanchi	68.07	327	P	P	16 45 16.1	+0.2
MAKZ				IAmb	IAmb	16 45 16.9	
	comp=Z,13nm,0.8s						
YAK	Yakutsk	68.55	360	P	P	16 45 17.5	-0.9
YAK				IAmb	IAmb	16 45 18.7	
	comp=Z,9.0nm,0.8s						
TKM2	Tokmak 2	69.66	321	P	P	16 45 26.5	+0.5
	SNR=15						
KBK	Karagaybulak	69.93	320	P	P	16 45 28.4	+0.7
	SNR=6.4						
UCH	Uchtor	70.00	319	P	P	16 45 29.6	+1.3
	SNR=7.5						
AAK	Ala-Archa	70.21	320	P	P	16 45 30.5	+1.2
	comp=Z,5.8nm,0.7s,baz=125,slow=4.8,SNR=27						
AAK	Ala-Archa	70.21	320	P	P	16 45 30.5	+1.2
	SNR=8.2						
AAK	Ala-Archa	70.21	320	P	P	16 45 30.2	+0.8
AAK				IAmb	IAmb	16 45 31.1	
	comp=Z,6.2nm,0.8s						
AML	Almayashu	70.48	319	P	P	16 45 32.0	+0.7
	SNR=12						
USP	Ospenovka	70.52	320	P	P	16 45 31.6	+0.6
	SNR=12						
EKS2	Erkin-Say	70.69	320	P	P	16 45 33.2	+1.1
	SNR=15						
ZALV	Zalesovo Beam	71.25	334	P	P	16 45 34.2	-0.9
	comp=Z,1.9nm,0.7s,baz=113,slow=4.0,SNR=9.3						
KURBB	Kurchatov Arra	72.18	329	P	P	16 45 40.5	-0.2
	comp=Z,3.0nm,0.5s,baz=129,slow=5.0,SNR=37						
KURK	Kurchatov	72.19	329	P	P	16 45 40.6	-0.2
KURK				IAmb	IAmb	16 45 41.7	
	comp=Z,16nm,1.5s						
VNDA	Vanda	72.74	173	P	P	16 45 44.8	+1.1
	comp=Z,3.0nm,0.8s,baz=324,slow=6.6,SNR=24						
VNDA	Vanda	72.74	173	P	P	16 45 44.4	+0.7
KK31	Karatay Array	73.01	319	P	P	16 45 45.8	-0.1
KK31				IAmb	IAmb	16 45 47.0	
	comp=Z,7.6nm,1.1s						
KKAR	Karatay Array	73.01	319	P	P	16 45 45.8	0.0
KKAR				IAmb	IAmb	16 45 47.0	
	comp=Z,7.6nm,1.1s						
WSAR	Wadi Sarin	75.58	296	P	P	16 46 00.9	-0.2
	comp=Z,5.7nm,0.6s,baz=156,slow=5.6,SNR=7.9						
HRA	Herat	75.64	308	P	P	16 46 01.6	+0.1
SOCY	Socotra	77.68	284	P	P	16 46 12.8	-0.3
SOCY				IAmb	IAmb	16 46 21.9	
	comp=Z,36nm,1.4s						
BVAR	Borovoye Array	77.73	328	P	P	16 46 11.4	-1.1
	comp=Z,1.0nm,0.8s,baz=209,slow=46,SNR=6.6						
BRVK	Borovoye	77.81	328	P	P	16 46 12.4	-0.6
UOSS	Minazif	78.13	297	P	P	16 46 16.0	+0.6
TIXI	Tiksi	78.22	360	P	P	16 46 14.0	-0.8
GEYT	Alibeck	79.89	310	P	P	16 46 24.4	-0.3
	comp=Z,2.6nm,0.5s,baz=106,slow=3.2,SNR=5.1						
ABKAR	Akbulak array	82.18	322	P	P	16 46 35.7	-0.8
QSPA	South Pole Qui	83.25	180	P	P	16 46 42.2	+0.3
AKTO	Aktyubinsk	83.74	322	P	P	16 46 44.1	-0.4
	comp=Z,1.3nm,0.7s,baz=129,slow=4.7,SNR=4.3						
ARU	Arti	85.38	328	P	P	16 46 51.9	-0.6
	comp=Z,0.4nm,0.3s,baz=217,slow=5.0,SNR=4.2						
RAYN	Ar Rayn	87.47	294	P	P	16 47 03.6	+0.1

RAYN				IAmb	IAmb	16 47 04.8	
	comp=Z,9.9nm,0.7s						
PDAR	Pinedale Array	116.83	45	PKKPbc	PKKPbc	17 03 31.6	+4.1
	comp=Z,0.6nm,0.9s,baz=34,slow=3.9,SNR=3.7						
TORD	Torodi Ar. Bea	128.57	281	SKPbc	SKPbc	16 56 26.1	
	comp=Z,0.9nm,0.7s,baz=48,slow=2.2,SNR=3.9						
DBIC	Dimbokro	134.99	273	SKPbc	SKPbc	16 56 48.5	-1.2
	comp=Z,1.7nm,0.9s,baz=173,slow=4.1,SNR=5.5						
CPUP	Villa Florida	146.42	168	PKPbc	PKPbc	16 53 56.9	+0.5
	comp=Z,2.3nm,0.8s,baz=208,slow=6.0,SNR=7.3						

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*NEIC **06** 16:34:44.7±2.9, 33°.62N±0°.02×48°.99E±0°.05, h10^{km}±1^{km}, mb4.4/22, mb_Lg4.1(TEH), Error ellipse: s-maj=7.1km s-min=3.3km az=70.0*

*TEH **06** 16:34:44.2, 33°.72N×48°.80E, h7^{km}, ML4.2*

*ISN **06** 16:34:44.0±1.4, 33°.77N×48°.80E, h0^{km}±147^{km}, ML3.7*

*IDC **06** 16:34:45.3±0.9, 33°.76N×48°.85E, h0^{km}, mb3.9/18, mb1 4.0/20, mb1mx3.8/42, mbtmp3.9/20, ML3.7/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/50, Error ellipse: s-maj=22.0km s-min=15.3km az=162.0*

*DSN **06** 16:34:48.1±1.6, 33°.48N×49°.21E, h10^{km}, mb5.8/1, Error ellipse: s-maj=41.2km s-min=12.4km az=39.0*

*OMAN **06** 16:34:49.9±2.9, 33°.01N×48°.76E, h10^{km}, mb5.4/21, ms3.0/3, Error ellipse: s-maj=65.8km s-min=28.2km az=38.0*

ISC 06 16:34:45.2±0.4**, 33°.51N**±0°.03×**48°.81E**±0°.03**, h13^{km}, n161, σ1^{s}.91**/183**, mb4.2**/31**, 8C-2D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKMR	Kamar-syah	0.36	271	ePg	Pb	16 34 53.2	-0.3
IKFM	Kafar-mosalman	0.81	271	ePg	Pb	16 35 01.0	-0.1
IKFM				eSg	Sg	16 35 10.7	-0.7
KHMZ	Khomeyn	0.98	76	ePg	Pb	16 35 00.5	-3.8
IKOM	Komasi	1.27	302		Pn	16 35 06.9	-1.9
IKOM	Komasi	1.27	302	e		16 35 32.8	
	comp=Z,99nm,0.8s						
IKOM				ePg	Pn	16 35 07.1	-1.7
SHGR	Shooshtar-Gavs	1.40	180	ePn	Pg	16 35 12.8	+0.7
ASAO	Ashtian	1.45	44	ePg	Pn	16 35 08.6	-2.7
IALM	Almabolaq	1.45	339	ePg	Pn	16 35 09.2	-2.2
KER	Kermanshah	1.65	302	ePg	Pg	16 35 16.2	-0.6
KCHF	Cheshme Sefid,	1.66	298	ePg	Pb	16 35 15.8	+0.1
KCHF				e		16 35 44.5	
	comp=Z,99nm,0.7s						
HSRG	Sareghieh	1.78	346		Pn	16 35 13.9	-2.1
HSRG					Sn	16 35 35.7	-3.0
HSRG	Sareghieh	1.78	346	ePg	Pn	16 35 14.1	-1.9
HSRG				e		16 35 44.6	
	comp=Z,99nm,0.6s						
AMIS	Naft Sefid	1.88	168	ePn	Pg	16 35 21.7	+0.3
AMIS				e		16 36 17.0	
	comp=Z,99nm,0.8s						
IVIS	Veis	1.92	302		Pb	16 35 20.0	-0.1
IVIS				Sg	Sg	16 35 46.6	-0.3
IVIS	Veis	1.92	302	ePn	Pb	16 35 19.1	-1.0
IVIS				e		16 35 58.6	
	comp=Z,99nm,0.7s						
IPIR	Pirpir	1.93	115	ePn	Pb	16 35 19.8	-0.7
IPIR				e		16 35 55.8	
	comp=Z,99nm,0.4s						
SNGE	Sanandaj	1.99	323	ePn	Pn	16 35 19.5	+0.7
IGHG	Ghaleghazi	2.04	294	Pn	Pb	16 35 22.0	-0.2
IGHG	Ghaleghazi	2.04	294	ePn	Pb	16 35 20.9	-1.3
IGHG				e		16 36 29.1	
	comp=Z,99nm,0.8s						
ILIN	Lien	2.08	313	ePn	Pn	16 35 20.7	+0.7
ILIN				e		16 35 24.6	
	comp=Z,99nm,0.8s						
IRAZ	Razeghan	2.10	26	ePn	Pn	16 35 19.7	-0.7
IRAZ				e		16 36 00.2	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	2.11	124	ePn	Pb	16 35 23.9	+0.5
SHK1				e		16 36 02.6	
	comp=Z,99nm,0.5s						
AHWZ	Ahwaz	2.18	184	ePn	Pg	16 35 26.2	-0.8
QAM	Ghamsar	2.21	83	ePn	Pn	16 35 22.5	+0.7
GHVR	GHOM	2.28	64	ePn	Pn	16 35 21.5	-1.2
QABG	Abgarm-Qazvin	2.28	16	ePn	Pn	16 35 21.7	-1.1
IQOM	Qom	2.30	54	ePn	Pn	16 35 23.3	+0.2
IQOM				e		16 36 09.8	
	comp=Z,99nm,0.8s						
IKLH	Kolahrood	2.32	94	ePn	Pn	16 35 25.5	+2.1
IKLH				e		16 36 03.8	
	comp=Z,99nm,0.4s						
IDHR	Dehrash	2.33	301	ePn	Pb	16 35 25.7	-1.6
IDHR				e		16 35 55.1	
	comp=Z,99nm,0.5s						
IBDR	Badra	2.44	261	ePn	Pb	16 35 27.0	-2.0
IBDR				eSn	Sb	16 35 59.0	-0.1
IBDR				AML	AML	16 36 16.1	
	comp=E,416nm,0.7s						
IBDR				AML	AML	16 36 17.0	
	comp=N,508nm,0.5s						
IMHD	Mahdasht	2.66	35	ePn	Pn	16 35 28.9	+1.0
IMHD				e		16 36 04.0	
	comp=Z,99nm,0.5s						
IHSB	Hasanabad	2.80	46	ePn	Pn	16 35 31.2	+1.4
KRSH	Karshahi	2.81	80	ePn	Pn	16 35 32.1	+2.1
IVRN	Varamin	2.83	58	ePn	Pn	16 35 31.3	+1.0
IGAR	Gharneh	2.93	111	ePn	Pn	16 35 35.0	+3.2
IGAR				e		16 36 26.1	
	comp=Z,99nm,0.4s						
QSDN	Sirdan	3.00	6	ePn	Pn	16 35 33.7	+1.0
IZEF	Zefreh	3.01	101	ePn	Pn	16 35 35.8	+2.9
IZEF				e		16 36 26.5	
	comp=Z,99nm,0.8s						
QALM	Alamut, Qazvin	3.28	27	ePn	Pn	16 35 36.7	+0.1
IDMV	Damavand	3.36	51	ePn	Pn	16 35 39.1	+1.3
NSR	Nassriya	3.37	223	ePn	Pb	16 35 42.0	-2.8
NSR				eSn	Sb	16 36 23.5	-2.1
NSR				AML	AML	16 36 25.3	
	comp=E,304nm,0.2s						
KLNJ	Kolanjah	3.43	136	ePn	Pn	16 35 41.9	+3.1
IRAM	Ramesheh	3.46	118	ePn	Pn	16 35 42.0	+3.0
BHD	Baghdad	3.71	268	ePn	Pn	16 35 45.0	+2.7
BHD				eSn	Sb	16 36 30.0	-5.6
BHD				AML	AML	16 36 36.0	
	comp=E,380nm,0.4s						
IFIR	Firoozkooh	3.89	56	ePn	Pn	16 35 46.5	+1.6
ILAS	Lasjerd	3.90	60	ePn	Pn	16 35 46.0	+0.9
MIB	Mutribah	3.90	199	eP		16 35 49.5	
IPRN	Peran	3.98	46	ePn	Pn	16 35 46.4	+0.3
UMR	Umm Al-Rimmam	4.06	194	eP		16 35 51.4	
MAHB	Mahabad	4.13	323	ePn	Pn	16 35 49.1	+1.0
ANAR	Anarak	4.13	93	ePn	Pn	16 35 50.9	+2.8
RST	Umm Al-Ruwaisa	4.29	202	eP		16 35 54.8	
ISHM	Shahmirzad	4.35	57	ePn	Pn	16 35 51.9	+0.6
ISRB	Sarab	4.40	348	ePn	Pn	16 35 52.6	+0.6
KBD	Kabd	4.43	193	eP		16 35 56.9	
IANJ	Anjilo	4.64	64	ePn	Pn	16 35 57.2	+1.9
RDF	Al-Radifah	4.70	194	eP		16 36 00.5	
QRN	Al-Qurain	4.81	189	eP		16 36 02.1	
ICHK	Chekchek	4.88	103	ePn	Pn	16 36 00.3	+1.8
IHRS	Heris	5.01	344	ePn	Pn	16 35 59.8	-0.5
ITBZ	Tabriz	5.18	336	ePn	Pn	16 36 02.8	+0.1
IMEH	Mehriz	5.34	112	ePn	Pn	16 36 07.1	+2.2
TNSJ	Nastanj	6.51	84	ePn	Pn	16 36 23.4	+2.5
TPRV	Parvadeh(Tabas	6.61	92	ePn	Pn	16 36 24.4	+2.1
TKDS	Koohdasht(Taba	6.94	87	ePn	Pn	16 36 28.7	+2.0
GNI	Garni	7.38	335	LR	LR	16 38 48.0	
	comp=E,67nm,19.9s,baz=178,slow=34						
ITEG	Tejag	8.35	91	ePn	Pn	16 36 48.6	+2.4
AFRZ	Afriz	8.53	88	ePn	Pn	16 36 49.5	+0.9
IKOO	Kooshah	8.63	94	ePn	Pn	16 36 52.8	+2.7
SLWR	Sila	9.74	164	P	Pn	16 37 06.5	+1.4
SLWR				S	Sn	16 38 51.9	-2.4
SHME	Shamm	9.79	138	P	Pn	16 37 05.2	-0.5
SHME	Shamm	9.79	138	P	Pn	16 37 06.8	+1.1
BANOM	Banah	9.97	137	i P	Pn	16 37 08.4	+0.1
	SNR=24						
BANOM				S	Sn	16 38 58.9	-1.2
BANOM	Banah	9.97	137	P	Pn	16 37 09.0	+0.7
	SNR=24						
BANOM				S	Sn	16 38 57.0	-3.1
MASF	Masafi	10.33	140	P	Pn	16 37 13.9	+0.7
	SNR=7.7						
MASF				S	Sn	16 39 07.4	-1.5
MSFE	Esma-Masafi	10.34	140	i P	Pn	16 37 13.8	+0.5
	SNR=7.5						
RAYN	Ar Rayn	10.37	197		Pn	16 37 14.1	+0.4
NAZ	Nazwa, Dubai	10.38	143	i P	Pn	16 37 16.2	+2.3
	SNR=5.3						
NAZ	Nazwa, Dubai	10.38	143	P	Pn	16 37 16.4	+2.5
AJN	Ajban	10.42	147	P	Pn	16 37 17.0	+2.6
MDH	Madha	10.46	139	P	Pn	16 37 15.1	+0.1
MDH	Madha	10.46	139	P	Pn	16 37 15.3	+0.3
	SNR=6.2						
MDH				S	Sn	16 39 09.4	-2.8
ASUD	Al Ashush, Dub	10.53	146	i P	Pn	16 37 17.4	+1.5
	SNR=11						
ASUD	Al Ashush, Dub	10.53	146	P	Pn	16 37 18.0	+2.1
	SNR=11						
ASUD				S	Sn	16 39 12.9	-0.7
FAQ	Al Faqa, Dubai	10.55	144	P	Pn	16 37 17.1	+0.9
FAQ	Al Faqa, Dubai	10.55	144	P	Pn	16 37 18.2	+1.9
FAQ				S	Sn	16 39 11.8	-2.5
MZWR	Madinat Zayed	10.68	154	P	Pn	16 37 20.1	+2.1
MZWR				S	Sn	16 39 12.6	-4.9
UOSS	Minazif	10.70	141	i P	Pn	16 37 18.1	-0.1
	SNR=12						
UOSS	Minazif	10.70	141	Pn	Pn	16 37 18.1	-0.1
HATD	Hatta, Dubai	10.76	142	i P	Pn	16 37 19.7	+0.6
	SNR=8.3						
HATD	Hatta, Dubai	10.76	142	P	Pn	16 37 20.1	+1.1
HATD				S	Sn	16 39 17.2	-2.2
ASHO	Ashiyiah	10.84	142	i P	Pn	16 37 20.2	+0.1
	SNR=13						
ASHO	Ashiyiah	10.84	142	P	Pn	16 37 20.8	+0.6
	SNR=13						
ASHO				S	Sn	16 39 18.5	-2.9
KBZ	Khabaz	11.20	337	LR	LR	16 40 56.2	
	comp=E,66nm,19.8s,baz=154,slow=34						
MMAI	Mount Meron Ar	11.24	271	Pn	Pn	16 37 26.9	+1.3
	comp=E,0.6nm,0.3s,baz=81,slow=18,SNR=2.5						
SOHO	SOHO	11.53	142	i P	Pn	16 37 28.3	-1.3
	SNR=6.7						
SOHO	SOHO	11.53	142	P	Pn	16 37 29.0	-0.6
SOHO				S	Sn	16 39 34.7	-3.6
UMZA	Um Al Zommool	12.12	151	P	Pn	16 37 38.1	+0.4
UMZA				S	Sn	16 39 50.9	-1.9
ARQ	Araqi	12.19	144	P	Pn	16 37 39.5	+0.8
	SNR=10						
ARQ				S	Sn	16 39 52.3	-2.3
HOQ	Hoqain	12.39	141	P	Pn	16 37 41.3	0.0
HOQ				P	Pn	16 37 41.3	0.0
BSY	Bisya	13.03	143	P	Pn	16 37 49.7	-0.4
SMDO	Samad	13.21	140	P	Pn	16 37 51.3	-1.3
SMDO				P	Pn	16 37 51.3	-1.3
WSAR	Wadi Sarin	13.39	137	Pn	Pn	16 37 55.3	+0.3
	comp=E,1.8nm,0.3s,baz=333,slow=9.2,SNR=21						
BRTR	Keskin Array B	13.67	301	LR	LR	16 43 22.5	
	comp=E,44nm,18.5s,baz=121,slow=38						
JMDO	Jabal Madar	13.80	141	P	Pn	16 37 59.8	-0.8
WBK	Wadi Bani Khal	14.07	138	P	Pn	16 38 03.4	-1.0
	SNR=6.7						
ANTO	Ankara	14.32	301	P	P	16 38 14.7	-0.2
JLN	Jalan Bani Buh	14.69	138	P	Pn	16 38 11.4	-1.3
JLN				P	Pn	16 38 11.4	-1.3
JLN				S	Sn	16 40 50.3	-5.0
JLN				S	Sn	16 40 50.3	-5.0
MHTO	MHTO	14.89	145	P	Pn	16 38 14.1	-1.4
MHTO				S	Sn	16 40 56.2	-4.1
DOK	Doka	15.58	161	P	Pn	16 38 23.1	-1.5
DOK				S	Sn	16 41 10.4	-6.7
WHFO	Wadi Hawf	16.15	163	P	Pn	16 38 31.0	-1.1
	SNR=20						
WHFO				S	Sn	16 41 24.6	-6.6
SHAO	Shalim	16.59	157	i P	P	16 38 39.4	-0.7
	SNR=6.0						
AKTO	Aktyubinsk	18.22	19	P	Pn	16 38 56.7	-1.0
	comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=3.9						
ALN	Alexandroupoli	19.54	299	P	Pn	16 39 14.6	+0.8
ALN				IAmb	IAmb	16 39 15.0	
	comp=Z,31nm,1.2s						
IDI	Anoyia	19.81	282	P	P	16 39 15.6	0.0
NIL	Nilore	20.36	83	P	P	16 39 22.0	+0.5
NIL				IAmb	IAmb	16 39 25.7	
	comp=Z,7.4nm,0.7s						
SORM	Soroca	21.19	320	⇑P	P	16 39 31.7	+1.3
MLR	Muntele Rosu	21.24	311	P	P	16 39 31.4	+0.4
	comp=Z,2.5nm,0.7s,baz=159,slow=22,SNR=2.5						
MLR				LR	LR	16 49 21.7	
	comp=Z,179nm,18.2s,baz=284,slow=42						
MLR	Muntele Rosu	21.24	311	⇓P	P	16 39 34.3	+3.3
MLR	Muntele Rosu	21.24	311	P	P	16 39 30.9	-0.1
TESR	Tescani	21.28	314	⇓P	P	16 39 33.7	+2.4
SOCY	Socotra	21.75	166	P	P	16 39 34.5	-2.1
SOCY				IAmb	IAmb	16 39 38.8	
	comp=Z,40nm,1.1s						
VOIR		21.78	310	⇑P	P	16 39 38.3	+1.5
DOPR	Dopca	21.80	312	⇑P	P	16 39 38.2	+1.3
AGG	Agios Georgios	22.01	292	P	P	16 39 39.7	+0.4
AGG				IAmb	IAmb	16 39 46.7	
	comp=Z,34nm,1.3s						
VTS	Vitosha	22.03	302	⇑P	P	16 39 40.1	+0.6
LIT	Litokhoron	22.03	295	P	P	16 39 40.2	+0.8
LIT				IAmb	IAmb	16 39 52.7	
	comp=Z,39nm,1.2s						
ITM	Ithomi	22.20	287	P	P	16 39 40.6	-0.8
AKASG	Malin Array Be	22.38	326	P	P	16 39 42.7	-0.4
	comp=Z,3.7nm,0.8s,baz=131,slow=12,SNR=6.4						
AKBB	Malin Array Si	22.38	326	P	P	16 39 41.5	-1.6
BURAR	Bucovina Array	22.68	315	⇑P	P	16 39 46.8	+0.3
FNA	Florina	22.98	296	P	P	16 39 49.4	-0.2
FNA				IAmb	IAmb	16 40 17.5	
	comp=Z,7.3nm,0.8s						
GZR	Gura Zlata	23.23	308	⇑P	P	16 39 51.3	-0.9
OBN	Obninsk	23.24	342	P	P	16 39 51.2	-0.7
	comp=Z,2.8nm,0.6s,baz=15,slow=20,SNR=4.3						
OBN	Obninsk	23.24	342	IAmb	IAmb	16 39 56.5	
	comp=Z,10nm,0.8s						
MDVR	Moldovita	23.73	306	⇑P	P	16 39 46.4	-11
DRGR		23.82	312	⇑P	P	16 39 55.7	-2.3
BVAR	Borovoye Array	24.87	32	P	P	16 40 06.2	-1.2
	comp=Z,1.0nm,0.6s,baz=333,slow=5.6,SNR=8.3						
KOLS	Kolonicke sedl	25.04	316	eP	P	16 40 13.3	+4.3
KURBB	Kurchatov Arra	27.65	43	P	P	16 40 33.7	+1.2
	comp=Z,0.6nm,0.8s,baz=245,slow=9.4,SNR=4.4						
KURK	Kurchatov	27.74	43	P	P	16 40 33.7	+0.3
MK31	Makanchi Array	28.59	52	P	P	16 40 40.9	-0.1
MKAR	Makanchi Array	28.59	52	P	P	16 40 42.2	+1.2
	comp=Z,0.5nm,0.6s,baz=80,slow=9.0,SNR=8.2						
SQTA	Sankt Quirin	31.43	307	eP	P	16 41 06.1	-0.2
	comp=Z,1.9nm,0.5s						
MOTA	Moosalm	31.53	307	eP	P	16 41 08.8	+1.7
	comp=Z,6.5nm,1.1s						
FINES	FINESS Array B	31.55	339	P	P	16 41 07.0	0.0
	comp=Z,1.3nm,0.6s,baz=169,slow=8.2,SNR=4.8						
FETA	Feichten	31.71	307	eP	P	16 41 08.0	-0.7
	comp=Z,4.2nm,0.8s						
DAVOX	Davos/Dischmat	32.24	306	P	P	16 41 15.1	+1.6
	comp=Z,1.2nm,0.5s,baz=148,slow=15,SNR=4.2						
DAVA	Damuels	32.33	307	eP	P	16 41 13.8	-0.4
	comp=Z,2.1nm,0.5s						
ZALV	Zalesovo Beam	32.57	40	P	P	16 41 16.5	+0.5
	comp=Z,0.8nm,0.5s,baz=244,slow=9.1,SNR=5.0						
BNI	Bardonecchia	34.23	302	P	P	16 41 30.9	+0.1
BNI				IAmb	IAmb	16 41 31.7	
	comp=Z,12nm,1.2s						
LSA	Lhasa	36.08	84	P	P	16 41 47.5	+0.2
LSA				IAmb	IAmb	16 41 51.9	
	comp=Z,2.7nm,0.8s						
NOA	NORSAR Array B	36.66	330	P	P	16 41 53.1	+1.7
	comp=Z,0.9nm,0.7s,baz=121,slow=8.4,SNR=3.4						
NOA				LR	LR	16 57 24.6	
	comp=Z,55nm,19.1s,baz=295,slow=37						
ARCES	ARCESS Array B	38.35	347	P	P	16 42 05.6	+0.1
	comp=Z,3.6nm,0.9s,baz=339,slow=6.5,SNR=3.5						
GTA	Gaotai	40.99	67	eP	P	16 42 31.0	+2.9
GTA				pP	sP	16 42 35.4	+0.8
GTA				sP	pP	16 42 38.1	+5.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NRIK	Noril'sk	41.84	19	P	P	16 42 32.4	-2.1
	comp=Z,2.3nm,0.4s,baz=324,slow=3.0,SNR=9.9						
NRIK	Noril'sk	41.84	19	P	P	16 42 32.3	-2.1
NRIK				IAmb	IAmb	16 42 32.9	
	comp=Z,3.2nm,0.6s						
ESDC	Sonseca Array	42.31	294	P	P	16 42 39.0	+0.3
	comp=Z,0.6nm,0.6s,baz=69,slow=8.0,SNR=5.5						
TORD	Torodi Ar. Bea	47.31	256	P	P	16 43 21.9	+3.1
	comp=Z,1.2nm,0.7s,baz=66,slow=8.3,SNR=4.2						
KOWA	Kowa	51.27	262	P	P	16 43 49.9	+0.7
KOWA				IAmb	IAmb	16 43 53.8	
	comp=Z,3.8nm,0.7s						
RER	Riviere de l'E	54.77	172	P	P	16 44 17.1	+2.4
LBTB	Lobatse	62.25	204	P	P	16 45 07.1	+0.1
KSRS	Korea Array	62.72	62	P	P	16 45 11.4	+1.4
	comp=Z,1.3nm,0.6s,baz=285,slow=6.9,SNR=4.6						
USA0B	Ussuriysk Arra	63.05	53	P	P	16 45 11.4	-0.7
USRK	Ussuriysk Ar.	63.05	53	P	P	16 45 12.6	+0.5
	comp=Z,1.9nm,0.6s,baz=284,slow=6.1,SNR=8.8						
EUNU	Eureka	64.02	352	P	P	16 45 18.6	+0.6
EUNU				IAmb	IAmb	16 45 21.4	
	comp=Z,2.8nm,0.9s						
BOSA	Boshof	65.70	203	P	P	16 45 33.0	+3.4
	comp=Z,1.9nm,0.7s,baz=7.0,slow=8.1,SNR=5.3						
ILAR	Eielson Array	81.27	7	P	P	16 47 03.0	+2.3
	comp=Z,0.3nm,0.6s,baz=309,slow=3.9,SNR=5.5						

IDC 06 17:32:35.3±3.6**, 3°.17S**×**98°.80E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.2**/47**, mbtmp3.4**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/28**, Error ellipse: s-maj=148.8km s-min=30.1km az=59.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.49	0	P	P	17 37 26.1	+0.3
	0.8nm,0.8s,baz=189,slow=9.3,SNR=8.7						
H08S2	Diego Garcia H	26.56	259	T	T	18 07 09.3	
	baz=80,slow=75,SNR=11						
H08S3	Diego Garcia H	26.57	259	T	T	18 07 09.3	
	baz=80,slow=75,SNR=21						
H08S1	Diego Carcia H	26.58	259	T	T	18 07 07.1	
	baz=80,slow=75,SNR=3.0						
ASAR	Alice Springs	39.56	124	P	P	17 40 08.5	-0.1
	0.2nm,0.8s,baz=299,slow=7.5,SNR=1.3						
MKAR	Makanchi Array	51.84	346	P	P	17 41 45.2	0.0
	0.3nm,0.5s,baz=150,slow=9.0,SNR=6.1						
MJAR	Matsushiro Arr	53.93	39	LR	LR	18 06 12.5	
	comp=Z,31nm,18.5s,baz=315,slow=37						
ZALV	Zalesovo Beam	58.10	350	P	P	17 42 30.1	-0.3
	0.6nm,0.5s,baz=180,slow=11,SNR=4.5						

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*IDC **06** 17:40:30.4±1.2, 32°.90N×89°.06E, h0^{km}, mb3.6/4, mb1 3.5/8, mb1mx3.3/54, mbtmp3.3/8, ML2.9/3, MS2.6/1, Ms1 2.8/1, ms1mx2.4/45, Error ellipse: s-maj=45.1km s-min=21.3km az=65.0*

ISC 06 17:40:35.7±0.8**, 33°.12N**±0°.08×**89°.4E**±0°.1**, h35^{km}, n18, σ1^{s}.14**/18**, mb3.7**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	5.92	194	eP	Pn	17 42 02.5	+1.2
	5.2nm,0.4s						
GUN	Gumba	6.00	211	eP	Pn	17 42 03.3	+1.0
	12nm,0.5s						
KKN	Kakani	6.37	215	eP	Pn	17 42 08.1	+0.7
	6.4nm,0.5s						
ODAN	Odare	6.47	196	eP	Pn	17 42 08.9	+0.2
	12nm,0.5s						
PKI	Pulchoki	6.50	213	eP	Pn	17 42 10.1	+0.9
	7.2nm,0.3s						
PKIN	Phulchoki	6.50	213	eP	Pn	17 42 10.0	+0.9
	12nm,0.4s						
GKN	Gorkha	6.53	220	eP	Pn	17 42 10.8	+1.4
	9.0nm,0.4s						
RAMN	Ramite	6.60	202	eP	Pn	17 42 10.6	+0.1
	13nm,0.4s						
DMN	Daman	6.61	215	eP	Pn	17 42 12.8	+2.2
	3.8nm,0.3s						
DANN	Dangsing	6.77	227	eP	Pn	17 42 12.4	-0.5
	7.4nm,0.4s						
MKAR	Makanchi Array	14.68	341	Pn	Pn	17 44 00.1	-0.8
	0.0nm,0.3s,baz=154,slow=9.5,SNR=3.0						
CMAR	Chiang Mai Arr	16.95	147	Pn	Pn	17 44 28.2	-1.9
	0.1nm,0.3s,baz=330,slow=11,SNR=1.9						
CMAR				LR	LR	17 51 24.9	
	comp=Z,18nm,18.0s,baz=260,slow=39						
KURBB	Kurchatov Arra	19.22	339	P	P	17 44 56.9	+0.3
	0.0nm,0.3s,baz=145,slow=12,SNR=3.1						
SONM	Songino Array	19.53	36	P	Pn	17 45 03.1	+1.4
	baz=226,slow=11,SNR=1.3						
ZALV	Zalesovo Beam	21.07	353	P	P	17 45 17.4	+0.7
	0.9nm,0.5s,baz=160,slow=14,SNR=6.0						
WRA	Warramunga Arr	68.03	134	P	P	17 51 32.0	+0.2
	0.4nm,0.4s,baz=325,slow=6.3,SNR=2.2						
ASAR	Alice Springs	70.65	137	P	P	17 51 48.2	+0.3
	0.3nm,0.6s,baz=319,slow=5.6,SNR=6.5						
TORD	Torodi Ar. Bea	81.01	280	P	P	17 52 46.4	-1.0
	0.6nm,0.5s,baz=64,slow=4.3,SNR=2.5						

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*NNC **06** 17:44:59.1±1.5, 37°.66N×71°.58E, h162^{km}±33^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=16.0km s-min=7.8km az=22.0*

ISC 06 17:44:51.0±1.3**, 37°.18N**±0°.09×**71°.5E**±0°.1**, h150^{km}, n23, σ2^{s}.02**/25**, 6C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.22	18	P	Pn	17 46 09.7	+2.0
	SNR=30						
UCH	Uchtor	5.54	24	P	Pn	17 46 13.2	+1.2
	SNR=9.0						
EKS2	Erkin-Say	5.74	17	P	Pn	17 46 16.8	+2.5
	SNR=19						
AAK	Ala-Archa	5.91	22	P	Pn	17 46 19.0	+2.5
	SNR=15						
AAK	Ala-Archa	5.91	22	⇑P	Pn	17 46 18.9	+2.3
	4.2nm,0.3s						
AAK				⇑S	Sn	17 47 21.9	-1.6
	9.2nm,0.5s						
KK31	Karatay Array	5.97	353	⇑P	Pn	17 46 19.2	+2.0
	4.5nm,0.4s,baz=186,slow=15,SNR=215						
KK31				S	Sn	17 47 22.3	-2.5
	6.9nm,0.3s,baz=170,slow=21,SNR=19						
CHMS	Chumysh	6.32	22	P	Pn	17 46 24.0	+2.1
	SNR=9.8						
USP	Ospenovka	6.49	20	P	Pn	17 46 26.0	+1.8
	SNR=5.7						
TKM2	Tokmak 2	6.53	27	P	Pn	17 46 27.1	+2.2
	SNR=13						
TKM2	Tokmak 2	6.53	27	⇑P	Pn	17 46 27.0	+2.2
	5.7nm,0.5s						
TKM2				⇑S	Sn	17 47 36.5	-1.8
	2.5nm,0.6s						
SGDS	Sogindy	6.70	20	Lg	Lg	17 47 37.9	
	4.8nm,0.6s						
KST	Kastek	6.77	29	Lg	Lg	17 47 39.5	
	3.4nm,0.3s						
DGS	Degeres	6.87	27	P	Pn	17 46 31.1	+1.8
	5.7nm,0.5s						
IZV	Izvestkoviy	7.03	32	P	Pn	17 46 33.5	+2.1
	2.8nm,0.3s						
KRBS	Karabastau	7.24	25	P	Pn	17 46 35.7	+1.6
	2.5nm,0.3s						
KOTS	Kotyrbulak	7.40	33	P	Pn	17 46 39.7	+3.2
	12nm,0.3s						
GKN	Gorkha	14.32	126	eP	Pn	17 48 05.7	-1.4
	4.5nm,0.3s						
AB31	Akbulak array	14.72	329	P	P	17 48 15.5	+1.7
	0.4nm,0.3s,baz=134,slow=12,SNR=44						
AB31				⇑S	Sn	17 50 52.5	-2.4
	1.2nm,0.6s,baz=152,slow=23,SNR=5.4						
KKN	Kakani	14.89	125	eP	Pn	17 48 13.1	-1.1
	3.9nm,0.4s						
PKIN	Phulchoki	15.11	125	eP	Pn	17 48 16.4	-0.6
	3.4nm,0.2s						
PKI	Pulchoki	15.12	125	eP	Pn	17 48 16.6	-0.6
	2.5nm,0.3s						
GUN	Gumba	15.20	123	eP	Pn	17 48 17.6	-0.7
	1.7nm,0.2s						
TAPN	Taplejung	16.80	121	eP	P	17 48 36.6	-0.8
	1.7nm,0.3s						

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*IDC **06** 17:49:51.4±2.3, 1°.42N×99°.25E, h149^{km}±10^{km}, mb3.4/4, mb1 3.4/5, mb1mx3.0/52, mbtmp3.7/5, Error ellipse: s-maj=79.0km s-min=16.0km az=57.0*

*DJA **06** 17:49:54.3±0.5, 2°N±3°×9°9E±°, h138^{km}±5^{km}, M3.5/11, MLv3.5/11*

ISC 06 17:49:52.8±0.9**, 1°.65N**±0°.07×**99°.40E**±0°.08**, h166^{km}, n14, σ1^{s}.39**/17**, mb3.7**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.87	168	P	Pn	17 50 17.8	-0.4
MNSI				S	Sn	17 50 35.5	-2.2
PSI	Prapat	1.24	337	P	Pn	17 50 19.9	-1.4

	27nm,0.3s,baz=180,slow=7.7,SNR=84						
PSI				LR	LR	17 50 35.9	
	comp=Z,46nm,19.7s,baz=273,slow=34						
PSI				S	**Sn**	**17 50 40.2**	**-3.1**
	4.2nm,0.3s,baz=180,slow=21,SNR=16						
GSI	**Gunungsitoli**	**1.86**	**259**	P	**Pn**	**17 50 27.5**	**+0.1**
GSI				S	**Sn**	**17 50 52.5**	**-1.6**
TSI	**Tuntungan**	**2.02**	**335**	P	**Pn**	**17 50 29.0**	**-0.2**
BKNI	**Bangkinang**	**2.10**	**129**	P	**Pn**	**17 50 29.9**	**-0.2**
KCSI	**Kotacane, Aceh**	**2.47**	**319**	P	**Pn**	**17 50 34.1**	**-0.3**
TPTI		**2.73**	**306**	P	**Pn**	**17 50 37.9**	**+0.3**
PDSI	**Padang**	**2.76**	**157**	P	**Pn**	**17 50 38.0**	**+0.1**
MLSI	**Meulaboh, Aceh**	**3.96**	**311**	P	**Pn**	**17 50 52.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**16.71**	**358**	P	**Pn**	**17 53 38.5**	**+1.1**
	baz=204,slow=11,SNR=1.5						
WRA	**Warramunga Arr**	**40.43**	**124**	P	**P**	**17 57 15.2**	**0.0**
	2.8nm,0.6s,baz=302,slow=9.1,SNR=13						
ASAR	**Alice Springs**	**41.94**	**129**	P	**P**	**17 57 27.1**	**-0.5**
	0.3nm,0.6s,baz=302,slow=7.6,SNR=11						
MKAR	**Makanchi Array**	**47.37**	**344**	P	**P**	**17 58 11.8**	**+1.6**
	0.6nm,0.4s,baz=155,slow=8.5,SNR=18						
ZALV	**Zalesovo Beam**	**53.49**	**349**	P	**P**	**17 58 57.8**	**+1.9**
	0.8nm,0.4s,baz=163,slow=6.7,SNR=5.1						

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*MOS **06** 17:55:49.0±1.2, 54°.85N×111°.73E, h4^{km}, mb3.6/1, Error ellipse: s-maj=14.9km s-min=10.4km az=65.8*

*BYKL **06** 17:55:50.2±0.1, 54°.89N×111°.74E, h5^{km}±3^{km}*

*IDC **06** 17:55:51.8±1.6, 54°.82N×111°.60E, h0^{km}, mb3.1/3, mb1 3.4/6, mb1mx3.2/51, mbtmp3.4/6, ML3.1/3, Error ellipse: s-maj=29.9km s-min=22.1km az=153.0*

ISC 06 17:55:51.4±0.6, 54°.92N±0°.02×111°.80E±0°.02, h10^{km}, n46, σ2^{s}.28/106, 5C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.37**	**263**	⇑*i*Pg	**Pg**	**17 55 56.5**	**-2.1**
YLYR				*e*Sg	**Sg**	**17 56 01.2**	**-2.4**
YLYR				Pmax			
	456nm,0.2s						
YLYR				Smax			
	8µm,0.5s						
YLYR	**Ulyunkhan**	**0.37**	**263**	⇑*i*PG	**Pg**	**17 55 56.6**	**-2.1**
YLYR				*e*		17 56 01.3	
YLYR				pmax	pmax		
	comp=Z,457nm,0.1s						
YLYR				smax	smax		
	comp=N,8µm,0.9s						
KMO	**Kumora**	**1.02**	**341**	⇓*i*Pg	**Pg**	**17 56 09.0**	**-2.1**
KMO				*e*Sg	**Sg**	**17 56 22.4**	**-2.0**
KMO				Pmax			
	comp=N,114nm,0.5s						
KMO				Smax			
	comp=N,747nm,1.1s						
KMO	**Kumora**	**1.02**	**341**	*e*PG	**Pg**	**17 56 08.7**	**-2.4**
KMO				*e*		17 56 19.5	
KMO				pmax	pmax		
	comp=Z,74nm,0.6s						
KMO				smax	smax		
	comp=N,593nm,0.8s						
UKT	**Uakit**	**1.19**	**61**	*e*Pg	**Pb**	**17 56 12.4**	**-1.7**
UKT				*e*		17 56 15.0	
UKT				*e*Sg	**Sb**	**17 56 28.6**	**-1.1**
UKT				*e*		17 56 33.5	
UKT				max			
	comp=N,117nm,0.5s						
UKT				max			
	comp=N,1µm,0.5s						
YOA	**Uoyan**	**1.21**	**358**	*e*Pg	**Pn**	**17 56 13.1**	**-1.3**
YOA				*e*Sg	**Sb**	**17 56 28.9**	**-1.3**
YOA				Pmax			
	comp=N,228nm,0.2s						
YOA				Smax			
	comp=N,2µm,0.5s						
NIZ	**Nizh Angarsk**	**1.55**	**305**	*e*Pg	**Pn**	**17 56 17.8**	**-1.2**
NIZ				*e*Sg	**Sn**	**17 56 38.1**	**-1.0**
NIZ				*e*		17 56 41.7	
NIZ				Pmax			
	comp=N,56nm,0.6s						
NIZ				max			
	comp=N,250nm,0.5s						
SVKR	**Severomuysk**	**1.56**	**39**	*e*Pg	**Pn**	**17 56 20.1**	**+0.8**
SVKR				*e*Sg	**Sb**	**17 56 41.4**	**+1.2**
SVKR				Pmax			
	comp=N,238nm,0.5s						
SVKR				Smax			
	comp=N,2µm,0.8s						
SYVR	**Suvo**	**1.65**	**220**	⇓*i*Pg	**Pn**	**17 56 19.4**	**-1.0**
SYVR				*e*Sg	**Sn**	**17 56 41.0**	**-0.6**
SYVR				Pmax			
	comp=N,231nm,0.3s						
SYVR				Smax			
	comp=N,753nm,1.1s						
SYVR	**Suvo**	**1.65**	**220**	⇓*i*PG	**Pn**	**17 56 19.3**	**-1.1**
SYVR				*e*		17 56 41.3	
SYVR				pmax	pmax		
	comp=Z,233nm,0.4s						
SYVR				smax	smax		
	comp=N,791nm,1.1s						
MXMB	**Maximikha**	**2.45**	**228**	*e*Pn	**Pn**	**17 56 30.6**	**-0.8**
MXMB				*e*Pg	**Pb**	**17 56 33.4**	**-2.1**
MXMB				*e*Sn	**Sn**	**17 57 00.2**	**-1.1**
MXMB				*e*Sg	**Sb**	**17 57 05.2**	**-0.5**
NLYR	**Nelyaty**	**2.71**	**53**	*e*Pn	**Pn**	**17 56 36.0**	**+1.0**
NLYR				*e*Pg	**Pb**	**17 56 39.3**	**-0.7**
NLYR				*e*Sn	**Sn**	**17 57 09.0**	**+1.1**
NLYR				*e*Sg	**Sb**	**17 57 15.9**	**+2.6**
NLYR				Pmax			
	comp=N,62nm,1.0s						
NLYR				Smax			
	comp=N,815nm,1.1s						
NLYR	**Nelyaty**	**2.71**	**53**	*e*PN	**Pn**	**17 56 37.1**	**+2.1**
NLYR				*e*		17 57 14.9	
NLYR				pmax	pmax		
	comp=Z,48nm,2.0s						
NLYR				smax	smax		
	comp=E,812nm,1.1s						
OGRR	**Ongureny**	**2.78**	**244**	⇑*i*Pn	**Pn**	**17 56 36.1**	**+0.2**
OGRR				*e*Pg	**Pb**	**17 56 39.5**	**-1.5**
OGRR				*e*Sn	**Sn**	**17 57 08.8**	**-0.6**
OGRR				*e*Sg	**Sb**	**17 57 15.6**	**+0.5**
OGRR				Pmax			
	comp=E,29nm,0.3s						
OGRR				Smax			
	comp=E,258nm,0.3s						
OGRR	**Ongureny**	**2.78**	**244**	⇓*i*PN	**Pn**	**17 56 36.2**	**+0.3**
OGRR				*e*		17 56 40.7	
OGRR				*e*		17 57 15.5	
OGRR				pmax	pmax		
	comp=Z,28nm,0.4s						
OGRR				smax	smax		
	comp=E,336nm,1.0s						
CIT	**Chita**	**3.09**	**159**	*e*Pn	**Pn**	**17 56 39.2**	**-1.0**
CIT				*e*Pg	**Pb**	**17 56 45.4**	**-1.0**
CIT				*e*Sg	**Sb**	**17 57 25.2**	**+1.0**
CIT				Pmax			
	comp=E,56nm,0.1s						
CIT				Smax			
	comp=E,896nm,0.2s						
BOD	**Bodaibo**	**3.15**	**22**	*e*Pn	**Pn**	**17 56 41.2**	**+0.2**
BOD				*e*Pg	**Pb**	**17 56 47.2**	**-0.3**
BOD				*e*PgPg	**PnPn**	**17 56 50.1**	**+1.8**
BOD				*e*Sn	**Sn**	**17 57 18.9**	**+0.2**
BOD				*e*Sg	**Sb**	**17 57 28.2**	**+2.3**
BOD				*e*SgSg	**Sg**	**17 57 35.4**	**+2.8**
BOD				max			
	comp=E,39nm,0.9s						
BOD				Smax			
	comp=E,147nm,0.7s						
ZRHB	**Zarechye**	**3.64**	**231**	*e*Pn	**Pn**	**17 56 47.3**	**-0.4**
ZRHB				*e*Pg	**Pb**	**17 56 55.0**	**-0.7**
ZRHB				*e*Sn	**Sn**	**17 57 28.2**	**-2.5**
ZRHB				*e*Sg	**Sb**	**17 57 41.5**	**+1.6**
ZRHB				Pmax			
	comp=E,81nm,0.7s						
ZRHB				Smax			
	comp=E,397nm,0.8s						
TRG	**Tyrgan**	**3.89**	**238**	*e*Pn	**Pn**	**17 56 50.2**	**-0.9**
TRG				*e*Pg	**Pb**	**17 56 59.6**	**-0.4**
TRG				*e*Sn	**Sn**	**17 57 34.9**	**-1.9**
TRG				*e*Sg	**Sb**	**17 57 48.3**	**+1.2**
TRG				*e*		17 57 58.2	
TRG				Pmax			
	comp=E,17nm,0.3s						
TRG				Smax			
	comp=E,136nm,0.4s						
TRG	**Tyrgan**	**3.89**	**238**	*e*PN	**Pn**	**17 56 50.3**	**-0.9**
TRG				*e*		17 56 59.3	
TRG				*e*S	**Sn**	**17 57 34.8**	**-2.0**
TRG				*e*		17 57 48.5	
TRG				pmax	pmax		
	comp=Z,11nm,0.3s						
TRG				smax	smax		
	comp=E,137nm,0.5s						
CRS	**Chara**	**4.15**	**59**	*e*Pn	**Pn**	**17 56 56.0**	**+1.3**
CRS				*e*Pg	**Pb**	**17 57 05.2**	**+0.8**
CRS				*e*Sn	**Sn**	**17 57 43.5**	**+0.3**
CRS				*e*Sg	**Sg**	**17 58 00.3**	**-4.1**
CRS				Pmax			
	comp=E,48nm,0.8s						
CRS				Smax			
	comp=E,241nm,0.5s						
FFNB	**Fofonovo**	**4.16**	**228**	*e*Pn	**Pn**	**17 56 53.6**	**-1.3**
FFNB				*e*Pg	**Pb**	**17 57 03.8**	**-0.9**
FFNB				*e*Sn	**Sn**	**17 57 42.3**	**-1.3**
FFNB				*e*Sg	**Sb**	**17 57 58.0**	**+3.0**
KAB	**Kabansk**	**4.21**	**229**	*e*Sg	**Sb**	**17 58 00.0**	**+3.7**
KAB				Smax			
	comp=E,480nm,0.7s						
STDB	**Stepnoy Dvoret**	**4.25**	**232**	*e*Sg	**Sb**	**17 58 01.1**	**+3.5**
HRMR	**Khuramsha**	**4.40**	**223**	*e*Pn	**Pn**	**17 56 57.4**	**-0.8**
HRMR				*e*		17 57 05.8	
HRMR				*e*Pg	**Pb**	**17 57 07.9**	**-0.8**
HRMR				*e*Sn	**Sn**	**17 57 47.4**	**-2.0**
HRMR				*e*Sg	**Sb**	**17 58 06.0**	**+4.3**
HRMR				Pmax			
	comp=E,85nm,0.5s						
HRMR				Smax			
	comp=E,534nm,0.7s						
VTMR	**Vitim**	**4.55**	**5**	*e*Pg	**Pb**	**17 57 12.5**	**+1.3**
VTMR				*e*Sn	**Sn**	**17 57 52.2**	**-0.8**
VTMR				*e*Sg	**Sb**	**17 58 12.2**	**+6.2**
TUP	**Tupik**	**4.76**	**93**	⇑*i*Pn	**Pn**	**17 57 03.2**	**0.0**
TUP				*e*		17 57 06.2	
TUP				*e*Pg	**Pb**	**17 57 15.8**	**+0.9**
TUP				*e*Sn	**Sn**	**17 57 56.6**	**-1.8**
TUP				*e*Sg	**Sb**	**17 58 17.8**	**+5.6**
TUP				Pmax			
	comp=E,28nm,0.5s						
TUP				Smax			
	comp=E,133nm,0.9s						
TUP	**Tupik**	**4.76**	**93**	⇑*i*PN	**Pn**	**17 57 03.1**	**-0.1**
TUP				*e*		17 57 15.7	
TUP				*e*		17 58 18.2	
TUP				pmax	pmax		
	comp=Z,15nm,0.6s						
TUP				smax	smax		
	comp=E,113nm,0.6s						
BGT	**Bolshoye Golou**	**4.78**	**236**	*e*Pn	**Pn**	**17 57 02.3**	**-1.1**
BGT				*e*Pg	**Pb**	**17 57 15.5**	**+0.3**
BGT				*e*Sg	**Sb**	**17 58 15.8**	**+3.1**
BGT				Pmax			
	comp=E,13nm,0.6s						
BGT				Smax			
	comp=E,71nm,0.7s						
LSTR	**Listvyanka**	**5.17**	**237**	*e*Pn	**Pn**	**17 57 08.2**	**-0.5**
LSTR				*e*Pg	**Pb**	**17 57 22.5**	**+0.7**
LSTR				*e*Sn	**Sn**	**17 58 05.4**	**-3.0**
LSTR				*e*Sg	**Sb**	**17 58 27.9**	**+4.0**
LSTR				Pmax			
	comp=E,11nm,0.7s						
LSTR				Smax			
	comp=E,50nm,0.9s						
IRK	**Irkutsk**	**5.22**	**242**	*e*Sg	**Sb**	**17 58 29.5**	**+4.0**
IRK				Smax			
	comp=E,22nm,0.6s						
KPC	**Khapcheranga**	**5.24**	**176**	*e*Pn	**Pn**	**17 57 08.8**	**-1.0**
KPC				*e*Pg	**Pb**	**17 57 23.6**	**+0.6**
KPC				*e*Sn	**Sn**	**17 58 06.5**	**-3.7**
KPC				*e*Sg	**Sb**	**17 58 31.0**	**+5.0**
KPC				Pmax			
	comp=E,15nm,0.7s						
KPC				Smax			
	comp=E,364nm,1.5s						
KPC	**Khapcheranga**	**5.24**	**176**	*e*PN	**Pn**	**17 57 08.6**	**-1.2**
KPC				*e*		17 57 23.6	
KPC				*e*		17 58 29.8	
KPC				pmax	pmax		
	comp=Z,14nm,0.7s						
KPC				smax	smax		
	comp=E,364nm,1.7s						
IVK	**Ivanovka**	**5.41**	**238**	*e*Pg	**Pb**	**17 57 26.2**	**+0.2**
IVK				*e*Sn	**Sn**	**17 58 11.4**	**-3.0**
IVK				*e*		17 58 32.3	
IVK				*e*Sg	**Sb**	**17 58 36.2**	**+5.3**
IVK				Pmax			
	comp=E,28nm,1.5s						
IVK				Smax			
	comp=E,85nm,1.2s						
YKLR	**Yuktali**	**5.81**	**69**	*e*Pn	**Pn**	**17 57 18.2**	**+0.6**
YKLR				*e*Pg	**Pb**	**17 57 36.0**	**+3.2**
YKLR				*e*Sn	**Sn**	**17 58 23.0**	**-1.2**
YKLR				*e*Sg	**Sg**	**17 58 51.7**	**-6.1**
TLY	**Talaya**	**5.87**	**240**	*e*Pg	**Pb**	**17 57 34.8**	**+1.1**
TLY				*e*		17 57 38.2	
TLY				*e*Sn	**Sn**	**17 58 22.5**	**-3.1**
TLY				*e*Sg	**Sb**	**17 58 49.0**	**+5.0**
TLY				max			
	comp=E,11nm,0.8s						
TLY				Smax			
	comp=E,57nm,1.0s						
ARS	**Arshan**	**6.36**	**246**	*e*PG	**Pb**	**17 57 45.2**	**+3.1**
ARS				*e*		17 59 02.5	
ARS				pmax	pmax		
	comp=Z,16nm,0.6s						
ARS				smax	smax		
	comp=E,247nm,0.8s						
ZAK	**Zakamensk**	**6.89**	**232**	*e*PG	**Pb**	**17 57 54.2**	**+3.0**
ZAK				*e*		17 59 22.0	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAK				smax	smax		
	comp=N,54nm,1.5s						
ORL	**Orlik**	**7.50**	**256**	*e*PN	**Pn**	**17 57 40.3**	**-0.5**
ORL				*e*		17 58 06.5	
ORL				*e*S	**Sn**	**17 59 01.6**	**-4.3**
ORL				*e*		17 59 39.2	
ORL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ORL				smax	smax		
	comp=N,82nm,1.5s						
SONM	**Songino Array**	**7.86**	**208**	Pn	**Pn**	**17 57 44.8**	**-1.0**
	comp=N,0.8nm,0.3s,baz=27,slow=11,SNR=7.7						
SONM				Lg	Lg	17 59 59.1	
	comp=N,1.7nm,0.3s,baz=20,slow=26,SNR=11						
KLR	**Kul'dur**	**13.51**	**107**	Pn	**Pn**	**17 59 03.4**	**+0.5**
	comp=N,0.1nm,0.3s,baz=309,slow=16,SNR=1.9						
KLR				Lg	Lg	18 03 04.9	
	comp=N,0.1nm,0.3s,baz=40,slow=19,SNR=3.6						
ZALV	**Zalesovo Beam**	**15.69**	**278**	Pn	**Pn**	**17 59 32.5**	**+0.1**
	comp=N,0.1nm,0.3s,baz=82,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**20.20**	**259**	P	**P**	**18 00 26.9**	**+0.8**
	comp=N,0.5nm,1.1s,baz=48,slow=8.7,SNR=2.1						
KURK	**Kurchatov**	**20.37**	**272**	P	**P**	**18 00 28.9**	**+1.1**
KURBB	**Kurchatov Arra**	**20.46**	**272**	P	**P**	**18 00 28.9**	**+0.1**
	comp=N,0.5nm,0.3s,baz=71,slow=12,SNR=4.6						
YKA	**Yellowknife Ar**	**57.43**	**24**	P	**P**	**18 05 43.0**	**+3.5**
	comp=N,0.1nm,0.4s,baz=337,slow=5.5,SNR=3.1						

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*IDC **06** 17:56:39.4±1.0, 51°.68N×174°.24W, h0^{km}, mb3.9/16, mb1 4.0/19, mb1mx3.8/52, mbtmp3.9/19, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/46, Error ellipse: s-maj=30.7km s-min=15.5km az=171.0*

*NEIC **06** 17:56:44.1±2.3, 51°.48N±0°.07×174°.24W±0°.09, h41^{km}±8^{km}, mb4.1/38, ML3.5(AEIC), Error ellipse: s-maj=11.1km s-min=6.8km az=153.0*

*AEIC **06** 17:56:44±3.6, 51°.46N±0°.08×174°.36W±0°.05, h18^{km}±5^{km}, Error ellipse: s-maj=12.0km s-min=4.1km az=175.0*

ISC 06 17:56:43.9±0.6, 51°.42N±0°.08×174°.21W±0°.05, h35^{km}, n93, σ1^{s}.31/92, mb4.2/24, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.78**	**1**		**Sn**	**17 57 07.9**	**-1.0**
ATKA	**Atka Island**	**0.78**	**1**		**Pn**	**17 56 58.6**	**+0.2**
KOKL	**Mount Kliuchef**	**0.91**	**0**		**Pn**	**17 57 00.8**	**+0.6**
KOKL					**Sn**	**17 57 13.4**	**+1.4**
GSMY	**Great Sitkin M**	**1.31**	**299**		**Pn**	**17 57 05.2**	**-0.4**
GSTR	**Great Sitkin T**	**1.33**	**301**		**Pn**	**17 57 06.0**	**0.0**
GSTD	**Great Sitkin T**	**1.36**	**299**		**Pn**	**17 57 06.0**	**-0.4**
GSTD					**Sn**	**17 57 25.0**	**+1.7**
ADAG	**Mount Adagdak**	**1.59**	**292**		**Pn**	**17 57 09.9**	**+0.4**
ADK	**Adak**	**1.61**	**288**		**Pn**	**17 57 09.5**	**-0.2**
ADK				Sn	**Sn**	**17 57 30.7**	**+1.5**
KIKV	**Kanaga Island**	**1.90**	**285**		**Pn**	**17 57 13.7**	**-0.1**
KIMD	**Kanaga Island**	**1.92**	**281**		**Pn**	**17 57 13.8**	**-0.1**
KICM	**Kanaga Island**	**1.93**	**286**		**Pn**	**17 57 14.6**	**+0.5**
TAFP	**Tanaga Falls P**	**2.40**	**283**		**Pn**	**17 57 21.5**	**+0.9**
TAFP					**Sn**	**17 57 50.1**	**+1.4**
NIKH	**Nikolski High**	**3.64**	**63**		**Pn**	**17 57 38.8**	**+1.1**
AMKA	**Amchitka**	**4.06**	**272**	Pn	**Pn**	**17 57 42.9**	**-0.6**
UNV	**Unalaska Valle**	**5.28**	**60**	Pn	**Pn**	**17 58 00.3**	**+0.2**
CNBA	**Chernabura Isl**	**9.43**	**63**	Pn	**Pn**	**17 58 57.6**	**+0.6**
CHGN	**Chignik**	**10.52**	**56**	Pn	**Pn**	**17 59 13.9**	**+2.0**
OHAK	**Old Harbor**	**13.49**	**56**	Pn	**Pn**	**17 59 51.0**	**-1.5**
ANM	**Nome**	**13.97**	**16**		**Pn**	**18 00 01.5**	**+2.5**
KDAK	**Kodiak Island**	**14.02**	**55**	Pn	**Pn**	**17 59 58.5**	**-1.2**
	0.4nm,0.3s,baz=17,slow=17,SNR=2.2						
KDAK	**Kodiak Island**	**14.02**	**55**		**Pn**	**17 59 59.8**	**+0.1**
SVW2	**Sparrevohn**	**14.13**	**39**	Pn	**Pn**	**18 00 02.4**	**+1.2**
RSO	**Redoubt South**	**14.98**	**45**		**Pn**	**18 00 11.8**	**-1.1**
TTA	**Tatalina**	**15.11**	**33**		**P**	**18 00 16.7**	**-2.6**
TTA				IAmb	IAmb	18 00 46.5	
	comp=Z,6.5nm,1.1s						
CNPM	**China Poot**	**15.28**	**49**	P	**Pn**	**18 00 16.9**	**+0.2**
BRLK	**Bradley Lake**	**15.54**	**48**	P	**Pn**	**18 00 19.7**	**-0.3**
SUA	**Susitna One**	**16.31**	**43**	P	**Pn**	**18 00 30.6**	**+0.5**
SEW	**Seward**	**16.33**	**48**	P	**Pn**	**18 00 28.8**	**-1.4**
SEW				IAmb	IAmb	18 00 30.9	
	comp=Z,34nm,1.3s						
PPLA	**Purkeypile**	**16.47**	**37**		**Pn**	**18 00 31.2**	**-0.9**
PPLA				IAmb	IAmb	18 00 50.8	
	comp=Z,37nm,1.5s						
GHO	**Glory Hole Cre**	**17.23**	**43**	P	**Pn**	**18 00 41.1**	**-0.4**
GHO				IAmb	IAmb	18 01 10.5	
	comp=Z,20nm,1.5s						
PEA0B	**Petropavlovsk-**	**17.23**	**287**	P	**Pn**	**18 00 38.8**	**-2.8**
PETK	**Petropavlovsk-**	**17.23**	**287**	P	**Pn**	**18 00 40.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=91,slow=16,SNR=1.1						
KNK	**Knik Glacier**	**17.29**	**45**	P	**Pn**	**18 00 40.4**	**-1.8**
KNK				IAmb	IAmb	18 00 42.0	
	comp=Z,21nm,1.4s						
KTH	**Kantishna Hill**	**17.31**	**37**	P	**P**	**18 00 43.1**	**-0.6**
KTH				IAmb	IAmb	18 01 07.0	
	comp=Z,11nm,1.2s						
TRF	**Thorofare Moun**	**17.49**	**37**	P	**Pn**	**18 00 44.8**	**-0.1**
SML	**Sawmill**	**17.50**	**44**		**Pn**	**18 00 44.2**	**-0.7**
SML				IAmb	IAmb	18 01 15.4	
	comp=Z,30nm,1.5s						
HIN	**Hinchinbrook I**	**17.82**	**49**		**Pn**	**18 00 46.9**	**-1.8**
SCM	**Sheep Creek Mo**	**17.95**	**44**	P	**Pn**	**18 00 50.0**	**-0.4**
SCM				IAmb	IAmb	18 01 11.8	
	comp=Z,37nm,1.5s						
RND	**Reindeer**	**18.02**	**39**	P	**Pn**	**18 00 50.3**	**-1.1**
RND				IAmb	IAmb	18 01 08.4	
	comp=Z,13nm,1.5s						
BWN	**Browne**	**18.19**	**36**	P	**P**	**18 00 53.3**	**0.0**
BWN				IAmb	IAmb	18 01 00.2	
	comp=Z,15nm,1.1s						
DHY	**Denali Highway**	**18.45**	**40**	P	**P**	**18 00 55.0**	**-1.4**
M24K	**Tolsona, Glenn**	**18.56**	**44**	P	**P**	**18 00 56.5**	**-0.9**
M24K				IAmb	IAmb	18 01 03.0	
	comp=Z,29nm,1.3s						
I23K	**Minto, Yukon-K**	**18.78**	**33**	P	**Pn**	**18 00 60.0**	**-0.4**
I23K				IAmb	IAmb	18 01 18.9	
	comp=Z,5.4nm,0.6s						
WRH	**Wood River Hil**	**18.86**	**36**	P	**P**	**18 00 59.5**	**-1.1**
HMT	**Hamilton**	**18.87**	**50**	P	**P**	**18 01 00.5**	**-0.2**
CCB	**Clear Creek Bu**	**19.06**	**36**	P	**P**	**18 01 01.4**	**-1.4**
MDM	**Murphy Dome**	**19.07**	**35**	P	**P**	**18 01 01.9**	**-1.0**
N25K	**Chitina, Valde**	**19.08**	**46**	P	**P**	**18 01 02.6**	**-0.5**
HDA	**Harding Lake**	**19.25**	**37**	P	**P**	**18 01 02.4**	**-2.6**
HDA				IAmb	IAmb	18 01 12.0	
	comp=Z,8.7nm,1.0s						
IL31		**19.46**	**36**	P	**P**	**18 01 06.5**	**-0.6**
ILAR	**Eielson Array**	**19.46**	**36**	P	**P**	**18 01 05.2**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=244,slow=9.6,SNR=48						
CRQM	**Cirque**	**19.51**	**49**	P	**P**	**18 01 03.4**	**-4.6**
TGL	**Tana Glacier**	**19.66**	**49**	P	**P**	**18 01 04.8**	**-4.7**
TGL				IAmb	IAmb	18 01 25.4	
	comp=Z,16nm,1.2s						
COLD	**Coldfoot**	**19.80**	**28**	P	**P**	**18 01 11.2**	**+0.3**
ISLE	**Juniper Island**	**19.86**	**50**	P	**P**	**18 01 09.4**	**-2.3**
DOT	**Dot Lake**	**20.05**	**41**	P	**P**	**18 01 12.1**	**-1.6**
DOT				IAmb	IAmb	18 01 55.9	
	comp=Z,11nm,1.0s						
CTGM	**Chitina Glacie**	**20.42**	**49**	P	**P**	**18 01 17.3**	**-0.5**
CTGM				IAmb	IAmb	18 01 49.7	
	comp=Z,7.7nm,1.0s						
PCA	**Pinnacle**	**20.77**	**52**	P	**P**	**18 01 21.3**	**-0.3**
EGAK	**Eagle**	**21.66**	**39**	P	**P**	**18 01 31.4**	**+0.5**
EGAK				IAmb	IAmb	18 01 38.2	
	comp=Z,11nm,0.8s						
EPYK	**Eagle Plains**	**23.96**	**37**	P	**P**	**18 01 54.0**	**-0.5**
EPYK				IAmb	IAmb	18 02 34.9	
	comp=Z,8.2nm,1.4s						
DIB	**Dawson Inlet,**	**25.32**	**69**	P	**P**	**18 02 07.6**	**+0.7**
INK	**Inuvik**	**25.80**	**34**	P	**P**	**18 02 08.7**	**-2.5**
	comp=Z,0.9nm,0.5s,baz=271,slow=7.9,SNR=5.6						
INK	**Inuvik**	**25.80**	**34**	P	**P**	**18 02 11.0**	**-0.2**
INK				IAmb	IAmb	18 02 17.6	
	comp=Z,9.1nm,1.4s						
USRK	**Ussuriysk Ar.**	**36.13**	**280**	P	**P**	**18 03 42.0**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=50,slow=9.8,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**36.15**	**212**	T	T	18 42 52.9	
	baz=20,slow=76,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**36.16**	**212**	T	T	18 42 54.4	
	baz=20,slow=76,SNR=7.6						
H11S3	**WAKE ISLAND Hy**	**36.16**	**212**	T	T	18 42 52.5	
	baz=20,slow=76,SNR=4.4						
NVAR	**Mina Array Bea**	**40.69**	**86**	P	**P**	**18 04 21.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=282,slow=6.1,SNR=2.8						
PDAR	**Pinedale Array**	**43.54**	**75**	P	**P**	**18 04 45.4**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=288,slow=5.0,SNR=4.8						
ULM	**Lac du Bonnet**	**47.23**	**59**	P	**P**	**18 05 13.5**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=311,slow=11,SNR=2.4						
SONM	**Songino Array**	**49.17**	**299**	P	**P**	**18 05 28.0**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=54,slow=11,SNR=2.1						
GUMO	**Guam**	**50.05**	**236**	LR	LR	18 28 46.3	
	comp=Z,17nm,18.2s,baz=104,slow=38						
HHC	**Hu-ho-hao-te**	**50.42**	**289**	*e*P	**P**	**18 05 37.3**	**-0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.8s						
ARCES	**ARCESS Array B**	**58.50**	**352**	P	**P**	**18 06 35.1**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=34,slow=8.8,SNR=5.6						
KURBB	**Kurchatov Arra**	**61.14**	**316**	P	**P**	**18 06 53.7**	**-0.5**
	comp=Z,1.4nm,0.2s,baz=44,slow=6.6,SNR=1.3						
WMQ	**Urumqi**	**61.70**	**306**	*e*P	**P**	**18 06 58.4**	**+0.2**
MKAR	**Makanchi Array**	**62.22**	**311**	P	**P**	**18 07 01.2**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=50,slow=6.2,SNR=7.7						
BVAR	**Borovoye Array**	**62.67**	**322**	P	**P**	**18 07 04.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=46,slow=13,SNR=5.9						
FINES	**FINESS Array B**	**66.32**	**350**	P	**P**	**18 07 27.1**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=18,slow=6.8,SNR=3.6						
AAK	**Ala-Archa**	**69.00**	**313**	P	**P**	**18 07 45.0**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=110,slow=4.4,SNR=4.7						
AAK	**Ala-Archa**	**69.00**	**313**	IAmb	IAmb	18 07 48.0	
	comp=Z,3.8nm,1.6s						
CMAR	**Chiang Mai Arr**	**73.86**	**279**	P	**P**	**18 08 16.8**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=28,slow=6.7,SNR=5.7						
TAPN	**Taplejung**	**73.86**	**294**	*e*P	**P**	**18 08 16.5**	**+1.2**
	comp=Z,11nm,0.9s						
GUN	**Gumba**	**74.47**	**295**	*e*P	**P**	**18 08 20.4**	**+1.4**
	comp=Z,8.9nm,0.4s						
PKI	**Pulchoki**	**75.00**	**295**	*e*P	**P**	**18 08 22.1**	**+0.1**
PKIN	**Phulchoki**	**75.00**	**295**	*e*P	**P**	**18 08 22.1**	**+0.1**
	comp=Z,2.9nm,0.5s						
GKN	**Gorkha**	**75.10**	**296**	*e*P	**P**	**18 08 23.4**	**+1.0**
	comp=Z,3.3nm,0.4s						
DANN	**Dangsing**	**75.33**	**297**	*e*P	**P**	**18 08 25.0**	**+1.2**
	comp=Z,14nm,0.8s						
PYUN	**Piuthan**	**75.95**	**297**	*e*P	**P**	**18 08 28.4**	**+1.1**
AKASG	**Malin Array Be**	**76.33**	**345**	P	**P**	**18 08 27.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=18,slow=6.2,SNR=4.3						
GERES	**GERESS Array B**	**79.88**	**355**	P	**P**	**18 08 49.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=19,slow=5.7,SNR=6.4						
ASAR	**Alice Springs**	**87.53**	**226**	P	**P**	**18 09 28.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=17,slow=5.7,SNR=5.9						
BOSA	**Boshof**	**152.94**	**320**	PKPbc	**PKiKP**	**18 16 38.5**	**+1.1**

comp=Z,3.7nm,0.9s,baz=62,slow=4.6,SNR=3.1

WEL 06 18:04:35.3,43°S±1°×**17°1E**±°,**h5**^{km}±2^{km},**M2.4**/12, **mB5.8**/1,**ML2.4**/11,**MLv2.4**/12,**Mw(mB)5.4**/1,**Error ellipse: s-maj=0.0km s-min=0.0km az=108.2,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	0.33	29	P	Pb	18 04 43.0	-0.7
WVZ	**Waitaha Valley**	0.36	261	P	Pb	18 04 44.1	-0.1
OXZ	**Oxford**	0.67	118	P	Pb	18 04 50.0	+0.6
RPZ	**Rata Peaks**	0.71	190	P	Pb	18 04 50.7	+0.5
GCSZ	**Gaunt Creek Bo**	0.72	245	P	Pb	18 04 50.6	+0.2
LTZ	**Lake Taylor**	0.80	73	P	Pb	18 04 52.5	+0.7
ARCZ	**Arundel**	0.93	182	P	Pn	18 04 54.8	-0.2
FOZ	**Fox Glacier**	1.15	243	P	Pn	18 04 60.0	+1.9
MQZ	**McQueen's Vall**	1.25	124	P	Pn	18 05 00.2	+0.8
GVZ	**Greta Valley S**	1.33	88	P	Pg	18 05 02.9	+2.1
DSZ	**Denniston Nort**	1.34	19	P	Pg	18 05 01.9	+0.9
TMZ	**Timaru**	1.38	187	P	Pg	18 05 02.5	+0.9
AKCZ	**Akaroa Harbour**	1.50	125	P	Pg	18 05 05.8	+1.8
LBZ	**Lake Benmore**	1.56	209	P	Pg	18 05 05.8	+0.6
THZ	**Tophouse**	1.77	45	P	Pg	18 05 08.9	-0.3
PRHZ	**Porangahau**	4.90	58	P	Pn	18 05 55.1	+5.6
ARHZ	**Aropaoanui**	5.75	51	P	Pn	18 06 01.0	-0.2

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*NEIC **06** 18:10:40.2±2.2,19°.24N±0°.07×96°.26W±0°.06,h33^{km}±10^{km}, mb4.1/22,Md4.4/36(MEX),Error ellipse: s-maj=9.9km s-min=7.8km az=179.0*

*MEX **06** 18:10:41.1±0.5,19°.28N×96°.26W,h17^{km}±25^{km},MD4.4*

ISC 06 18:10:36.7±2.0,**19°.24N**±0°.05×**96°.30W**±0°.05,**h5**^{km}±15^{km}, **n54,**σ**1ˢ44**/63,**Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPIG	**Tehuac#an**	1.29	231	*e*P	Pn	18 11 02.1	+0.6
TPIG				*i* S	Sg	18 11 18.3	+0.1
TPIG	**Tehuac#an**	1.29	231		Pn	18 11 02.1	+0.6
TPIG					Sg	18 11 18.3	+0.1
TOIG	**Toxpalan**	1.34	213	*i* P	Pb	18 11 02.9	+0.5
TOIG				*e*S	Sg	18 11 19.1	-0.8
HLIG	**Huajuapan de L**	2.00	226	*e*P	Pn	18 11 12.7	+1.5
HLIG				*e*S	Sn	18 11 36.2	-0.5
FTIG	**Fresnillo de T**	2.18	233	*i* P	Pn	18 11 15.4	+1.7
VHO	**Vista Hermosa**	2.19	191	*e*P	Pn	18 11 15.2	+1.3
VHO				*i* S	Sn	18 11 41.3	-0.2
PPM	**Popocatepetl**	2.20	266	*i* P	Pn	18 11 15.8	+1.4
PPM				*i* S	Sn	18 11 41.1	-1.2
TXIG	**Tlaxiaco**	2.41	215	*e*P	Pn	18 11 18.5	+1.4
TXIG				*i* S	Sn	18 11 47.0	-0.1
CMIG	**Matias Romero**	2.52	147	*e*P	Pn	18 11 18.6	+0.3
CMIG	**Matias Romero**	2.52	147		Pn	18 11 18.6	+0.3
YAIG	**Yautepec**	2.64	262	*i* P	Pn	18 11 22.4	+2.3
YAIG	**Yautepec**	2.64	262		Pn	18 11 22.4	+2.3
YOIG	**Yosondua**	2.65	207	*e*P	Pn	18 11 21.6	+1.4
MAVM	**Malinalco, Edo**	3.03	265	*e*P	Pn	18 11 20.9	-4.6
PNIG	**Pinotepa**	3.32	212	*e*P	Pn	18 11 28.9	-0.4
PNIG	**Pinotepa**	3.32	212		Pn	18 11 28.9	-0.4
MEIG	**Mezcala**	3.41	248	*e*P	Pn	18 11 30.9	+0.4
MEIG				*i* S	Sn	18 12 11.8	+0.4
MEIG	**Mezcala**	3.41	248		Pn	18 11 30.9	+0.4
MEIG					Sn	18 12 11.8	+0.4
HUIG	**Huatulco**	3.45	177	*e*P	Pn	18 11 32.2	+1.1
HUIG				*i* S	Sn	18 12 12.1	-0.3
HUIG	**Huatulco**	3.45	177		Pn	18 11 32.2	+1.1
HUIG					Sn	18 12 12.1	-0.3
CAIG	**El Cayaco**	4.35	241	*e*P	Pn	18 11 42.5	-1.0
CAIG	**El Cayaco**	4.35	241		Pn	18 11 42.5	-1.0
MOIG	**Morelia**	4.63	276	Pn	Pn	18 11 53.0	+5.4
CCIG	**Comitan**	4.94	126	Pn	Pn	18 11 55.6	+3.9
RTAL	**Retalhuleu**	6.43	136		Pn	18 12 14.0	+1.9
PETF	**Flores**	6.54	110	Pn	Pn	18 12 14.8	+1.2
TEIG	**Tepich**	7.62	81	Pn	Pn	18 12 28.8	+0.3
CRIN	**San Cristobal**	11.02	125	Pn	Pn	18 13 17.7	+2.6
435B	**Jarrell**	11.56	354		Pn	18 13 21.8	-0.5
WHTX	**Lake Whitney,**	12.74	356	Pn	Pn	18 13 37.1	-1.5
346A	**Big Creek Wild**	13.58	26	Pn	Pn	18 13 46.4	-3.6
Z38A	**Mt. Pleasant**	14.02	5	Pn	Pn	18 13 55.8	-0.2
X37A	**Clayton**	15.32	3	Pn	Pn	18 14 14.1	+0.5
X37A	comp=Z,22nm,1.4s			IAmb	IAmb	18 14 27.4	
MIAR	**Mount Ida**	15.44	8		Pn	18 14 15.1	-0.2
MIAR	comp=Z,17nm,1.4s			IAmb	IAmb	18 14 16.4	
CBCY	**The Bluff, Cay**	15.61	85	Pn	Pn	18 14 17.2	-0.3
061Z	**Ochoppi**	15.67	62	Pn	Pn	18 14 16.3	-2.0
Z47A	**Carrollton**	15.74	26	Pn	Pn	18 14 16.3	-2.8
Z47A	comp=Z,11nm,0.8s			IAmb	IAmb	18 14 37.6	
Y45A	**Yeager Farm, C**	15.77	21	Pn	Pn	18 14 17.6	-1.9
W39A	**Magazine**	16.05	7	Pn	Pn	18 14 20.4	-2.8
W39A	comp=Z,23nm,1.6s			IAmb	IAmb	18 14 49.5	
WHAR	**Wooly Hollow**	16.38	12	Pn	Pn	18 14 27.0	-0.4
WHAR	comp=Z,21nm,1.4s			IAmb	IAmb	18 14 37.9	
OXF	**Oxford**	16.40	21	Pn	Pn	18 14 25.6	-2.0
OXF	comp=Z,16nm,1.1s			IAmb	IAmb	18 14 30.4	
152A	**Waverly Hall**	16.94	36		Pn	18 14 31.2	-3.2
LPAR	**Lepanto**	17.14	17	P	P	18 14 38.7	0.0
LCAR	**Lake Charles**	17.37	14	P	Pn	18 14 40.5	+0.6
T35A	**Sooner Cattle**	17.62	359	P	P	18 14 44.5	+0.6
255A	**Hazlehurst**	17.73	42	P	Pn	18 14 43.0	-1.4
154A	**Montrose**	17.82	39	P	Pn	18 14 43.5	-1.9
SWET	**Sewanee**	18.38	28	P	Pn	18 14 52.1	-0.3
SWET	comp=Z,19nm,1.5s			IAmb	IAmb	18 14 56.3	
WVT	**Waverly**	18.41	22	P	P	18 14 53.2	+0.5
V48A	**Smith Brothers**	18.45	25	P	Pn	18 14 54.3	+1.1
W50A	**Signal Mountai**	18.64	29	P	P	18 14 55.4	0.0
W50A	comp=Z,21nm,1.6s			IAmb	IAmb	18 15 10.1	
CPCT	**Cooper Cave**	19.22	30	P	P	18 15 01.9	+0.2
CPCT	comp=Z,20nm,1.4s			IAmb	IAmb	18 15 18.3	
V53A	**Saluda**	20.24	33	P	P	18 15 11.7	-1.2
T50A	**Nancy**	20.37	27	P	P	18 15 15.1	+0.9
T50A	comp=Z,10nm,1.4s			IAmb	IAmb	18 15 42.0	

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*NNC **06** 18:22:31.9±4.2,36°.75N×70°.61E,h150^{km}±93^{km},mb2.9, mpv3.7,Error ellipse: s-maj=42.3km s-min=27.4km az=32.0*

ISC 06 18:22:33.1±3.5,**36°.8N**±0°.2×**70°.8E**±0°.2,**h200**^{km},**n9,** σ**0ˢ60**/11,**3C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=54	5.77	22	P	Pn	18 23 57.4	-0.3
UCH	**Uchtor** SNR=11	6.13	27	P	Pn	18 24 01.6	-0.8
KK31	**Karatay Array** 1.5nm,0.3s,baz=186,slow=18,SNR=30	6.27	358	⇑P	Pn	18 24 03.9	+0.1
KK31	1.1nm,0.5s,baz=183,slow=22,SNR=4.2			⇑S	Sn	18 25 14.9	-0.8
EKS2	**Erkin-Say** SNR=7.1	6.28	21	P	Pn	18 24 04.2	+0.3
AAK	**Ala-Archa** SNR=6.2	6.48	25	P	Pn	18 24 06.9	+0.2
AAK	**Ala-Archa** 2.2nm,0.5s	6.48	25	⇑P	Pn	18 24 06.6	-0.1
AAK	2.1nm,0.5s			⇓S	Sn	18 25 21.8	+1.0
TKM2	**Tokmak 2** SNR=6.1	7.14	30	P	Pn	18 24 15.0	-0.3
TKM2	**Tokmak 2** 3.5nm,0.4s	7.14	30	⇓P	Pn	18 24 14.7	-0.5
AB31	**Akbulak array** 0.4nm,0.5s,baz=157,slow=11,SNR=12	14.70	331	⇓P	P	18 25 52.7	+0.2

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*SOME **06** 19:42:16.7,41°.28N×75°.33E,h5^{km}*

*NNC **06** 19:42:16.9±0.8,41°.22N×75°.36E,h0^{km},mb3.6,mpv3.4, Error ellipse: s-maj=5.7km s-min=3.6km az=174.0*

*KRNET **06** 19:42:16.6±0.1,41°.20N×75°.34E,h20^{km},mb2.6*

*KNET **06** 19:42:17.9±1.2,41°.34N×75°.26E,h0^{km},ml2.1,Error ellipse: s-maj=7.3km s-min=4.2km az=172.0*

ISC 06 19:42:17.6±1.5,**41°.23N**±0°.03×**75°.28E**±0°.02,**h3**^{km}±12^{km}, **n79,**σ**1ˢ35**/130,**38C-30D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral** baz=11	0.96	312	⇑*i*P	Pb	19 42 34.7	-2.2
ARLS	baz=11			⇑*i*S	Sb	19 42 48.2	-1.9
UCH	**Uchtor** baz=29	1.15	330	⇑*i*P	Pb	19 42 38.9	-1.6
UCH	baz=29			⇑*i*S	Sb	19 42 55.2	-0.8
UCH	**Uchtor** 18nm,0.1s,SNR=50	1.15	330	⇓P	Pb	19 42 39.1	-1.4
UCH	46nm,0.2s			⇑S	Sb	19 42 55.3	-0.7
ULHL	**Ulahol** baz=33	1.25	35	⇑*i*P	Pn	19 42 39.4	-2.8
ULHL	baz=33			⇑*i*S	Sb	19 42 55.8	-2.7
ULHL	**Ulahol** 7.0nm,0.1s,SNR=20	1.25	35	⇑P	Pn	19 42 39.5	-2.7
ULHL	22nm,0.2s			⇑S	Sb	19 42 55.9	-2.6
BOOM	**Boomskoye usch** baz=19	1.36	21	⇑*i*P	Pn	19 42 41.8	-1.8
BOOM	baz=19			⇑*i*S	Sn	19 43 00.0	-2.3
KBK	**Karagaybulak** baz=49	1.45	350	⇑*i*P	Pn	19 42 43.9	-1.0
KBK	baz=49			⇑*i*S	Sn	19 43 03.7	-0.9
KBK	**Karagaybulak** 18nm,0.1s,SNR=41	1.45	350	⇑P	Pn	19 42 44.3	-0.7
KBK	92nm,0.2s			⇑S	Sn	19 43 04.5	-0.1
AML	**Almayashu** baz=7.0	1.49	308	⇓*i*P	Pn	19 42 44.8	-0.9
AML	baz=7.0			⇓*i*S	Sn	19 43 05.7	-0.2
AML	**Almayashu** 6.3nm,0.1s,SNR=13	1.49	308	⇑P	Pn	19 42 44.9	-0.8
AML	21nm,0.2s			⇓S	Sn	19 43 05.1	-0.8
AAK	**Ala-Archa** baz=36	1.53	338	⇑*i*P	Pn	19 42 45.0	-1.0
AAK	baz=36			⇑*i*S	Sn	19 43 06.1	-0.3
AAK	**Ala-Archa** 9.6nm,0.1s,SNR=14	1.53	338	⇓P	Pn	19 42 45.7	-0.3
AAK	13nm,0.2s			⇓S	Sn	19 43 06.2	-0.3
AAK	**Ala-Archa** 5.5nm,0.6s	1.53	338	⇓Pn	Pn	19 42 45.6	-0.3
AAK	9.1nm,0.3s			⇓Lg	Lg	19 43 06.5	
FRU1	**Bishkek** baz=42	1.65	343	⇓*i*P	Pn	19 42 47.4	-0.2
FRU1	baz=42			⇓*i*S	Sb	19 43 09.9	-0.2
KDJ	**Kajisay** baz=56	1.69	57	⇑*i*P	Pn	19 42 46.7	-1.5
KDJ	baz=56			⇑*i*S	Sn	19 43 08.8	-1.6
TKM2	**Tokmak 2** baz=6.0	1.71	8	⇑*i*P	Pn	19 42 48.1	-0.4
TKM2	baz=6.0			⇑*i*S	Sn	19 43 10.9	-0.1
TKM2	**Tokmak 2** 7.7nm,0.1s,SNR=6.9	1.71	8	⇓P	Pn	19 42 48.6	0.0
TKM2	30nm,0.2s			⇓S	Sb	19 43 11.8	0.0
TKM2	**Tokmak 2** 5.0nm,0.5s	1.71	8	⇑Pn	Pn	19 42 48.5	0.0
TKM2	17nm,0.4s			⇑Lg	Lg	19 43 11.6	
ARSB	**Arslanbob** baz=75	1.73	274	⇓*i*P	Pn	19 42 49.1	+0.3
ARSB	baz=75			⇓*i*S	Sb	19 43 12.7	+0.3
CHMS	**Chumysh** baz=46	1.81	348	⇑*i*P	Pn	19 42 50.0	+0.2
CHMS	baz=46			⇑*i*S	Sb	19 43 14.1	-0.5
CHMS	**Chumysh** 4.7nm,0.2s,SNR=7.3	1.81	348	⇑P	Pn	19 42 50.9	+1.1
CHMS	36nm,0.3s			⇓S	Sb	19 43 15.2	+0.6
SFK	**Sufi-Kurgan** baz=30	1.81	229	⇓*i*P	Pn	19 42 49.9	-0.1
SFK	baz=30			⇓*i*S	Sb	19 43 13.8	-1.1
EKS2	**Erkin-Say** baz=22	1.82	323	⇑*i*P	Pn	19 42 50.3	+0.3
EKS2	baz=22			⇑*i*S	Sb	19 43 14.5	-0.4
EKS2	**Erkin-Say** 3.9nm,0.3s,SNR=9.3	1.82	323	⇓P	Pn	19 42 51.1	+1.1
KST	**Kastek** 11nm,0.2s	1.89	15	⇓*i*P	Pn	19 42 52.1	+1.2
KST	27nm,0.7s			⇓*i*S	Sb	19 43 17.6	+0.8
KST	**Kastek** 11nm,0.2s	1.89	15	P	Pn	19 42 52.1	+1.2
KST	27nm,0.7s			S	Sb	19 43 17.6	+0.8
OHH	**Osh** baz=52	2.02	250	⇑*i*P	Pn	19 42 52.6	0.0
OHH	baz=52			⇑*i*S	Sb	19 43 19.4	-1.1
DGS	**Degeres** 14nm,0.4s	2.05	10	*e*P	Pb	19 42 54.8	-0.7
DGS	35nm,0.6s			*e*S	Sb	19 43 22.3	+0.9
DGS	**Degeres** 14nm,0.4s	2.05	10	Pg	Pb	19 42 54.8	-0.7
DGS	35nm,0.6s			Lg	Lg	19 43 22.3	
IZV	**Izvestkoviy** 7.8nm,0.4s	2.06	28	*e*P	Pb	19 42 54.9	-0.9
IZV	16nm,0.3s			*e*S	Sb	19 43 22.3	+0.4
IZV	**Izvestkoviy** 7.8nm,0.4s	2.06	28	Pg	Pb	19 42 54.9	-0.9
IZV	16nm,0.3s			Lg	Lg	19 43 22.3	
MTBS	**Maitube** 8.0nm,0.1s	2.08	24	*e*P	Pb	19 42 55.3	-0.8
MTBS	25nm,0.2s			⇑*i*S	Sb	19 43 23.1	+0.6
MTBS	**Maitube** 8.0nm,0.1s	2.08	24	Pg	Pb	19 42 55.3	-0.8
MTBS	25nm,0.2s			Lg	Lg	19 43 23.1	
MRKS	**Merke** 9.5nm,0.2s	2.15	315	*e*P	Pb	19 42 56.8	-0.5
MRKS	20nm,0.1s			*e*S	Sb	19 43 25.5	+1.0
MRKS	**Merke** 9.5nm,0.2s	2.15	315	Pg	Pb	19 42 56.8	-0.5
MRKS	20nm,0.1s			Lg	Lg	19 43 25.5	
SGDS	**Sogindy** 11nm,0.3s	2.27	348	Pg	Pb	19 42 58.5	-0.9
SGDS	68nm,0.3s			Lg	Lg	19 43 28.3	
MDOK	**Medeo** 5.9nm,0.3s	2.34	34	*e*P	Pb	19 42 59.6	-0.9
MDOK	5.5nm,0.3s			*e*S	Sb	19 43 30.4	+0.5
MDOK	**Medeo** 6.6nm,1.1s	2.34	34	⇓Pg	Pb	19 42 59.6	-0.9
MDOK	6.2nm,0.6s			⇑Lg	Lg	19 43 30.4	
MDOK	**Medeo** 5.9nm,0.3s	2.34	34	Pg	Pb	19 42 59.6	-0.9
MDOK	5.5nm,0.3s			Lg	Lg	19 43 30.4	
ANVS	**Anan'yevo** baz=47	2.36	48	⇑*i*P	Pn	19 42 56.8	-0.7
ANVS	baz=47			⇑*i*S	Sn	19 43 26.4	-0.7
KOTS	**Kotyrbulak** 12nm,0.4s	2.42	34	*e*P	Pb	19 43 01.7	-0.3
KOTS	31nm,0.4s			*e*S	Sb	19 43 33.9	+1.6
KOTS	**Kotyrbulak** 12nm,0.4s	2.42	34	Pg	Pb	19 43 01.7	-0.3
KOTS	31nm,0.4s			Lg	Lg	19 43 33.9	
MNAS	**Manas** baz=2.0	2.42	302	⇓*i*P	Pn	19 42 58.7	+0.4
MNAS	baz=2.0			⇓*i*S	Sn	19 43 29.4	+0.8
PRZ	**Przheval'sk** baz=59	2.65	61	⇓*i*P	Pn	19 43 00.8	-0.6
PRZ	baz=59			⇓*i*S	Sn	19 43 33.4	-0.8
KTBS	**Karatobe** 5.1nm,0.2s	2.69	22	*e*P	Pb	19 43 06.1	-0.4
KTBS	44nm,0.5s			*e*S	Sb	19 43 41.8	+1.8
KTBS	**Karatobe** 5.1nm,0.2s	2.69	22	Pg	Pb	19 43 06.1	-0.4
KTBS	44nm,0.5s			Lg	Lg	19 43 41.8	
KUU	**Kurty** 4.1nm,0.2s	2.78	16	⇓*i*P	Pb	19 43 07.1	-0.8
KUU	29nm,0.4s			⇓*i*S	Sb	19 43 43.4	+1.0
KUU	**Kurty** 4.1nm,0.2s	2.78	16	Pg	Pb	19 43 07.1	-0.8
KUU	29nm,0.4s			Lg	Lg	19 43 43.4	
CHKK	**Chushkaly** 2.3nm,0.1s	2.91	25	*e*P	Pb	19 43 10.1	-0.1
CHKK	19nm,0.2s			*e*S	Sb	19 43 48.6	+2.4
CHKK	**Chushkaly** 2.3nm,0.1s	2.91	25	Pg	Pb	19 43 10.1	-0.1
CHKK	19nm,0.2s			Lg	Lg	19 43 48.6	
SATY	**Saty** 2.0nm,0.1s	2.96	51	*e*P	Pb	19 43 10.2	-0.9
SATY	8.5nm,0.2s			*e*S	Sb	19 43 48.6	+0.9
SATY	**Saty** 2.0nm,0.1s	2.96	51	Pg	Pb	19 43 10.2	-0.9
SATY	8.5nm,0.2s			Lg	Lg	19 43 48.6	
ZHN	**Zhinishke** 101nm,0.5s	3.04	49	*e*P	Pb	19 43 11.1	-1.4
ZHN	6.6nm,0.2s			*e*S	Sb	19 43 50.3	+0.2
ZHN	**Zhinishke** 101nm,0.5s	3.04	49	Pg	Pb	19 43 11.1	-1.4
ZHN	6.6nm,0.2s			Lg	Lg	19 43 50.3	
TRKS	**Terek-Say** baz=76	3.13	277	⇓*i*P	Pn	19 43 08.5	+0.5
TRKS	baz=76			⇓*i*S	Sn	19 43 45.5	-0.5
DRK	**Karamyk** baz=39	3.18	238	⇑*i*P	Pn	19 43 08.9	+0.1
DRK	baz=39			⇑*i*S	Sn	19 43 47.1	-0.3
KPKS	**Kokpek** 4.4nm,0.3s	3.37	47	*e*P	Pb	19 43 17.2	-0.9
KPKS	8.8nm,0.6s			*e*S	Sb	19 44 00.7	+1.1
DZA	**Taraz** 43nm,0.1s	3.38	301	*e*P	Pb	19 43 18.4	+0.3
DZA	80nm,0.1s			*e*S	Sb	19 44 02.7	+3.1
DZA	**Taraz** 43nm,0.1s	3.38	301	Pg	Pb	19 43 18.4	+0.3
DZA	80nm,0.1s			Lg	Lg	19 44 02.7	
UZB	**Uzynbulak** 2.2nm,0.2s	3.38	54	*e*P	Pb	19 43 17.0	-1.2
UZB	5.8nm,0.2s			*e*S	Sb	19 44 00.5	+0.7
UZB	**Uzynbulak** 2.2nm,0.2s	3.38	54	Pg	Pb	19 43 17.0	-1.2
UZB	5.8nm,0.2s			Lg	Lg	19 44 00.5	
ARXS	**Arharly** 9.0nm,0.6s	3.53	31	*e*P	Pb	19 43 19.7	-1.0
ARXS	13nm,0.3s			*e*S	Sb	19 44 04.7	+0.7
ARXS	**Arharly** 9.0nm,0.6s	3.53	31	Pg	Pb	19 43 19.7	-1.0
ARXS	13nm,0.3s			Lg	Lg	19 44 04.7	
SHLS	**Shalkode** 3.3nm,0.5s	3.66	57	*e*P	Pg	19 43 27.1	-0.6
SHLS	6.9nm,0.3s			*e*S	Sg	19 44 17.7	+2.6
SHLS	**Shalkode** 3.2nm,0.5s	3.66	57	Pg	Pg	19 43 27.1	-0.6
SHLS	6.9nm,0.3s			Lg	Lg	19 44 17.7	
MNBS	**Baschi** 1.1nm,0.2s	3.67	38	*e*P	Pb	19 43 23.6	+0.5
MNBS	9.1nm,0.3s			*e*S	Sb	19 44 11.7	+3.8
MNBS	**Baschi** 1.1nm,0.2s	3.67	38	Pg	Pb	19 43 23.5	+0.5
MNBS	9.1nm,0.3s			Lg	Lg	19 44 11.7	
PDGK	**Podgornoye** 1.0nm,0.6s	3.77	55	Pg	Pb	19 43 25.0	+0.2
PDGK	1.8nm,0.6s			Lg	Lg	19 44 14.1	
PDGK	**Podgornoye** 2.1nm,1.0s	3.77	55	⇑Pg	Pb	19 43 24.1	-0.7
PDGK	5.4nm,0.9s			⇓Lg	Lg	19 44 13.8	
BTLS	**Baital** 1.8nm,0.3s	3.92	347	*e*P	Pb	19 43 27.8	+0.4
BTLS	7.0nm,0.3s			*e*S	Sb	19 44 18.9	+3.8
BTLS	**Baital** 1.8nm,0.3s	3.92	347	Pg	Pb	19 43 27.7	+0.4
BTLS	7.0nm,0.3s			Lg	Lg	19 44 18.9	
IUG	**Iuzhnay** 1.9nm,0.4s	4.04	285	*e*P	Pb	19 43 31.6	+2.2
IUG	7.0nm,0.2s			*e*S	Sg	19 44 25.4	-1.8
IUG	**Iuzhnay** 1.9nm,0.4s	4.04	285	Pg	Pb	19 43 31.6	+2.2
IUG	7.0nm,0.2s			Lg	Lg	19 44 25.4	
KTMS	**Ketmen** 1.1nm,0.1s	4.37	58	*e*P	Pb	19 43 35.9	+0.9
KTMS	1.7nm,0.2s			*e*S	Sb	19 44 32.9	+4.7
KTMS	**Ketmen** 1.1nm,0.1s	4.37	58	Pg	Pb	19 43 35.9	+0.9
KTMS	1.7nm,0.2s			Lg	Lg	19 44 32.9	
DJR	**Jarkent** 1.3nm,0.3s	4.54	45	*e*P	Pb	19 43 38.5	+0.4
DJR	2.0nm,0.2s			*e*S	Sb	19 44 37.3	+4.0
DJR	**Jarkent** 1.3nm,0.3s	4.54	45	Pg	Pb	19 43 38.5	+0.4
DJR	2.0nm,0.2s			Lg	Lg	19 44 37.3	
KAPS	**Kapalarasan** 1.0nm,0.3s	5.03	35	*e*P	Pb	19 43 46.7	+0.4
KAPS	2.3nm,0.3s			*e*S	Sb	19 44 51.2	+4.0
KAPS	**Kapalarasan** 1.0nm,0.3s	5.03	35	Pg	Pb	19 43 46.7	+0.4
KAPS	2.3nm,0.3s			Lg	Lg	19 44 51.2	

BYKL 06 20:01:27.1±0.1,**56°.07N**×**113°.67E,1C-5D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	0.08	307	⇓*i*Pg	Pg	20 01 29.1	+0.5
SVKR				*e*Sg	Sg	20 01 31.1	+1.5
SVKR	4μm,0.1s			Pmax			
SVKR	14μm,0.3s			Smax			
UKT	**Uakit**	0.58	182	⇓*i*Pg	Pg	20 01 37.5	-0.7
UKT				*e*Sg	Sg	20 01 45.0	-0.8
UKT				Pmax			

	48nm,0.2s						
UKT				Smax			
	356nm,0.6s						
YOA	**Uoyan**	**1.09**	**274**	*e*Pg	Pg	20 01 47.3	-0.7
YOA				*e*Pb	Pb	20 01 48.7	-0.2
YOA				*e*Sg	Sg	20 02 02.3	+0.2
YOA				max			
	349nm,0.2s						
YOA				Smax			
	956nm,0.3s						
NLYR	**Nelyaty**	**1.21**	**69**	*e*Pg	Pg	20 01 49.0	-1.3
NLYR				*e*Pb	Pb	20 01 50.4	-0.5
NLYR				*e*Sg	Sg	20 02 05.1	-0.8
NLYR				max			
	189nm,0.4s						
NLYR				max			
	515nm,0.8s						
KMO	**Kumora**	**1.40**	**263**	⇓*i*Pg	Pn	20 01 52.3	-1.6
KMO				*e*Pb	Pg	20 01 54.0	+0.1
KMO				*e*Sg	Sg	20 02 10.9	-1.1
KMO				*e*		20 02 18.0	
KMO				max			
	233nm,0.3s						
KMO				max			
	560nm,1.0s						
BOD	**Bodaibo**	**1.76**	**6**	*e*Pg	Pn	20 01 58.6	-0.3
BOD				*e*		20 02 00.5	
BOD				*e*Sg	Sn	20 02 21.0	-1.0
BOD				max			
	42nm,0.3s						
BOD				Smax			
	204nm,0.3s						
YLYR	**Ulyunkhan**	**1.86**	**231**	⇓*i*Pn	Pn	20 02 00.4	+0.1
YLYR				*e*Pg	Pb	20 02 01.0	-1.0
YLYR				*e*		20 02 02.3	
YLYR				*e*Sg	Sn	20 02 25.1	+0.6
YLYR				Pmax			
	146nm,0.4s						
YLYR				Smax			
	221nm,0.2s						
NIZ	**Nizh Angarsk**	**2.34**	**264**	⇑*i*Pn	Pn	20 02 07.1	+0.3
NIZ				*e*Pg	Pb	20 02 09.2	-1.0
NIZ				*e*Sg	Sb	20 02 39.0	-0.6
NIZ				*e*		20 02 41.1	
NIZ				Pmax			
	24nm,0.5s						
NIZ				max			
	202nm,0.4s						
CRS	**Chara**	**2.68**	**70**	*e*Pn	Pn	20 02 11.3	-0.2
CRS				*e*Pg	Pb	20 02 15.9	-0.1
CRS				*e*Sn	Sn	20 02 44.4	-0.3
CRS				*e*Sg	Sb	20 02 50.9	+1.5
CRS				Pmax			
	63nm,0.6s						
CRS				Smax			
	238nm,0.6s						
SYVR	**Suvo**	**3.22**	**223**	*e*Pn	Pn	20 02 18.8	0.0
SYVR				*e*Pg	Pb	20 02 25.5	+0.5
SYVR				*e*Sn	Sn	20 02 55.1	-2.7
SYVR				*e*Sg	Sb	20 03 06.6	+1.9
SYVR				Pmax			
	28nm,0.6s						
SYVR				Smax			
	121nm,1.3s						
VTMR	**Vitim**	**3.43**	**350**	*e*Pn	Pn	20 02 22.2	+0.4
VTMR				*e*Pg	Pb	20 02 29.1	+0.4
VTMR				*e*PgPg	PbPb	20 02 31.0	-0.8
VTMR				*e*Sn	Sn	20 03 02.3	-0.8
VTMR				*e*Sg	Sb	20 03 12.4	+1.5
TUP	**Tupik**	**3.96**	**112**	⇓*i*Pn	Pn	20 02 28.6	-0.4
TUP				*e*Pg	Pb	20 02 38.4	+0.7
TUP				*e*Sg	Sb	20 03 29.7	+3.7
TUP				*e*		20 03 34.4	
TUP				Pmax			
	25nm,0.3s						
TUP				max			
	129nm,1.2s						
MXMB	**Maximikha**	**4.01**	**228**	*e*Pg	Pb	20 02 39.5	+0.9
MXMB				*e*Sn	Sn	20 03 15.4	-2.0
MXMB				*e*Sg	Sb	20 03 30.5	+2.9
CIT	**Chita**	**4.06**	**181**	*e*Sg	Sb	20 03 32.9	+3.9
CIT				Smax			
	100nm,0.3s						
OGRR	**Ongureny**	**4.27**	**238**	*e*Pn	Pn	20 02 34.3	+1.0
OGRR				*e*Pg	Pb	20 02 43.9	+0.9
OGRR				*e*Sn	Sn	20 03 22.2	-1.6
OGRR				*e*Sg	Sb	20 03 39.2	+4.1
OGRR				*e*		20 03 40.8	
OGRR				Pmax			
	16nm,1.0s						
OGRR				max			
	53nm,1.5s						
YKLR	**Yuktali**	**4.47**	**80**	*e*Pn	Pn	20 02 37.1	+1.0
YKLR				*e*Pg	Pb	20 02 47.8	+1.3
YKLR				*e*Sn	Sn	20 03 25.8	-3.0
YKLR				*e*Sg	Sb	20 03 44.6	+3.7
ZRHB	**Zarechye**	**5.19**	**230**	*e*Sg	Sg	20 04 08.3	-5.5
ZRHB				Smax			
	146nm,1.2s						
TRG	**Tyrgan**	**5.41**	**235**	*e*Sn	Sn	20 03 48.8	-3.1
TRG				*e*Sg	Sg	20 04 14.4	-6.3
TRG				Smax			
	32nm,1.3s						
KPC	**Khapcheranga**	**6.42**	**188**	*e*Pn	Pn	20 03 04.5	+1.5
KPC				*e*Pg	Pb	20 03 22.9	+3.2
KPC				*e*		20 03 25.9	
KPC				*e*Sn	Sn	20 04 13.9	-3.1
KPC				*e*Sg	Sg	20 04 45.4	-7.9
KPC				max			
	10.0nm,1.2s						
KPC				Smax			
	52nm,1.3s						

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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**299**	*e*Pg	Pg	20 01 49.4	+0.2
SVKR				*e*Sg	Sg	20 01 51.5	+1.3
SVKR				Pmax			
	2μm,0.1s						
SVKR				Smax			
	14μm,0.7s						
UKT	**Uakit**	**0.59**	**183**	*e*Sg	Sg	20 02 05.5	-1.2
UKT				Smax			
	217nm,0.8s						
YOA	**Uoyan**	**1.10**	**274**	*e*Sg	Sg	20 02 21.8	-1.1
YOA				Smax			
	854nm,0.6s						
NLYR	**Nelyaty**	**1.20**	**69**	*e*Pg	Pg	20 02 09.2	-1.5
NLYR				*e*		20 02 11.8	
NLYR				*e*Sg	Sg	20 02 24.5	-1.7
NLYR				*e*		20 02 29.5	
NLYR				max			
	212nm,0.4s						
NLYR				max			
	483nm,0.8s						
KMO	**Kumora**	**1.41**	**263**	*e*Pg	Pn	20 02 12.6	-2.0
KMO				*e*Sg	Sg	20 02 31.6	-1.2
KMO				*e*		20 02 34.9	
KMO				Pmax			
	146nm,0.4s						
KMO				max			
	707nm,1.0s						
BOD	**Bodaibo**	**1.75**	**6**	*e*Sg	Sn	20 02 41.9	-0.4
BOD				Smax			
	151nm,0.5s						
YLYR	**Ulyunkhan**	**1.87**	**231**	*e*Pg	Pn	20 02 21.2	+0.2
YLYR				*e*		20 02 22.6	
YLYR				*e*Sg	Sb	20 02 46.1	-0.6
YLYR				max			
	50nm,0.2s						
YLYR				Smax			
	218nm,0.3s						
NIZ	**Nizh Angarsk**	**2.35**	**264**	*e*Pg	Pb	20 02 29.7	-1.2
NIZ				*e*Sg	Sb	20 03 00.5	+0.1
NIZ				Pmax			
	19nm,0.4s						
NIZ				Smax			
	218nm,0.8s						
CRS	**Chara**	**2.67**	**70**	*e*Pg	Pb	20 02 35.6	-0.8
CRS				*e*Sg	Sb	20 03 11.0	+1.2
CRS				Pmax			
	60nm,0.8s						
CRS				Smax			
	140nm,0.6s						
TUP	**Tupik**	**3.96**	**112**	Sg	Sb	20 03 50.3	+3.7
TUP				Smax			
	77nm,0.8s						

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*IDC **06** 20:21:44.6±3.1, 36.°07N×70.°84E, h72^{km}±28^{km}, mb3.8/18, mb1 3.9/22, mb1mx3.6/51, mbtmp4.2/22, Error ellipse: s-maj=20.0km s-min=13.7km az=179.0*

*MOS **06** 20:21:47.1±1.2, 36.°39N×71.°02E, h101^{km}, mb4.4/9, Error ellipse: s-maj=8.5km s-min=4.0km az=76.4*

*NEIC **06** 20:21:49.2±2.4, 36.°35N±0.°05×70.°93E±0.°08, h109^{km}±5^{km}, mb4.4/30, Error ellipse: s-maj=9.8km s-min=7.5km az=100.0*

*NNC **06** 20:21:50.5±1.1, 36.°66N×70.°76E, h114^{km}±16^{km}, mb4.0, mpv4.5, Error ellipse: s-maj=10.3km s-min=6.4km az=171.0*

ISC 06 20:21:48.3±0.3, 36.°36N±0.°04×71.°01E±0.°04, h100^{km}, n194, σ2.^{s}20/217, mb4.2/39, 21C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.42**	**222**	PN	**Pn**	**20 22 28.1**	**+1.5**
KBL						20 22 57.5	
KBL	**Kabul**	**2.42**	**222**		**Pn**	**20 22 28.1**	**+1.5**
KBL				Sn	**Sn**	**20 22 57.5**	**+1.6**
CEP	**Cherat**	**2.64**	**164**	P	**Pn**	**20 22 31.2**	**+1.9**
CEP				S	**Sn**	**20 23 03.0**	**+2.2**
NIL	**Nilore**	**3.27**	**145**	PN	**Pn**	**20 22 39.7**	**+2.0**
NIL	**Nilore**	**3.27**	**145**	Pn	**Pn**	**20 22 39.6**	**+2.0**
THW	**Thamme Wali**	**3.61**	**170**	P	**Pn**	**20 22 43.7**	**+1.5**
SARP	**Sargodha**	**4.64**	**162**	P	**Pn**	**20 22 56.1**	**0.0**
KSH	**Kashi**	**5.03**	**50**	P	**Pn**	**20 22 58.7**	**-2.8**
KSH				pmax	pmax		
	comp=Z,340nm,1.2s						
KSH				pmax	pmax		
	comp=Z,500nm,4.0s						
IUG	**Iuzhnay**	**5.83**	**353**	*e*P	**Pn**	**20 23 12.5**	**+0.2**
	comp=Z,3.0nm,0.4s,baz=352						
IUG				*e*S	**Sn**	**20 24 15.6**	**-2.2**
	baz=352						
IUG	**Iuzhnay**	**5.83**	**353**	*e*PN	**Pn**	**20 23 12.4**	**+0.2**
IUG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
DHRM	**DHARAMSHALA**	**6.00**	**132**	⇑*i*P	**Pn**	**20 23 14.7**	**0.0**
DHRM				*e*S	**Sn**	**20 24 19.5**	**-2.6**
DHRM				IAML		20 24 22.0	
	comp=N,583nm,0.2s						
DHRM				IAML		20 24 22.1	
	comp=N,558nm,0.2s						
DHRM				IAML		20 24 22.3	
	comp=E,438nm,0.4s						
DHRM				IAML		20 24 22.4	
	comp=E,438nm,0.4s						
AML	**Almayashu**	**6.13**	**19**	P	**Pn**	**20 23 17.6**	**+1.0**
	SNR=125						
UCH	**Uchtor**	**6.46**	**24**	P	**Pn**	**20 23 22.1**	**+1.0**
	SNR=55						
DZA	**Taraz**	**6.53**	**2**	*e*P	**Pn**	**20 23 21.0**	**-0.7**
	comp=E,25nm,0.4s,baz=1.3						
DZA				*e*S	**Sn**	**20 24 31.8**	**-2.9**
	baz=1.3						
DZA	**Taraz**	**6.53**	**2**	*e*PN	**Pn**	**20 23 21.0**	**-0.7**
DZA				pmax	pmax		
	comp=Z,25nm,0.4s						
EKS2	**Erkin-Say**	**6.64**	**18**	P	**Pn**	**20 23 24.6**	**+1.2**
	SNR=31						
KK31	**Karatay Array**	**6.75**	**357**	⇑P	**Pn**	**20 23 24.4**	**-0.2**
	comp=Z,13nm,0.3s,baz=192,slow=19,SNR=125						
KK31				⇑S	**Sn**	**20 24 35.4**	**-4.6**
	comp=Z,18nm,0.5s,baz=182,slow=21,SNR=5.9						
KK31	**Karatay Array**	**6.75**	**357**	PN	**Pn**	**20 23 25.2**	**+0.5**
KK31	**Karatay Array**	**6.75**	**357**	Pn	**Pn**	**20 23 25.2**	**+0.5**
KKAR	**Karatay Array**	**6.75**	**357**	PN	**Pn**	**20 23 25.3**	**+0.6**
KKAR	**Karatay Array**	**6.75**	**357**	Pn	**Pn**	**20 23 25.2**	**+0.6**
AAK	**Ala-Archa**	**6.82**	**22**	P	**Pn**	**20 23 26.5**	**+0.7**
	comp=Z,11nm,0.3s,baz=196,slow=4.3,SNR=145						
AAK				S	**Sn**	**20 24 40.8**	**-1.2**
	comp=Z,7.0nm,0.3s,baz=319,slow=24,SNR=16						
AAK	**Ala-Archa**	**6.82**	**22**	P	**Pn**	**20 23 27.0**	**+1.2**
	SNR=80						
AAK	**Ala-Archa**	**6.82**	**22**	⇓P	**Pn**	**20 23 25.8**	**0.0**
	comp=Z,26nm,0.5s						
AAK				⇓S	**Sn**	**20 24 39.5**	**-2.5**
	comp=Z,99nm,0.8s						
AAK	**Ala-Archa**	**6.82**	**22**	*i* PN	**Pn**	**20 23 26.8**	**+1.0**
AAK				pmax	pmax		
	comp=Z,26nm,0.4s						
AAK	**Ala-Archa**	**6.82**	**22**	Pn	**Pn**	**20 23 26.7**	**+0.9**
KBK	**Karagaybulak**	**6.98**	**25**	P	**Pn**	**20 23 29.7**	**+1.7**
	SNR=14						
ULHL	**Ulahol**	**7.14**	**33**	P	**Pn**	**20 23 31.0**	**+0.8**
	SNR=15						
CHMS	**Chumysh**	**7.23**	**22**	P	**Pn**	**20 23 32.1**	**+0.9**
	SNR=20						
SMLA	**Simla**	**7.31**	**134**	*e*P	**Pn**	**20 23 32.2**	**-0.2**
SMLA				*e*S	**Sn**	**20 24 48.9**	**-4.9**
SMLA				IAML		20 24 52.1	
	comp=N,200nm,0.2s						
SMLA				IAML		20 24 52.2	
	comp=E,216nm,0.2s						
HRA	**Herat**	**7.43**	**257**	Pn	**Pn**	**20 23 34.9**	**+0.8**
TKM2	**Tokmak 2**	**7.44**	**27**	P	**Pn**	**20 23 35.1**	**+0.8**
	SNR=17						
TKM2	**Tokmak 2**	**7.44**	**27**	⇓P	**Pn**	**20 23 35.1**	**+0.8**
	comp=E,32nm,0.7s						
TKM2				⇑S	**Sn**	**20 24 56.1**	**-1.1**
	comp=E,52nm,0.8s						
TKM2	**Tokmak 2**	**7.44**	**27**	*i* PN	**Pn**	**20 23 35.1**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,32nm,0.6s						
SGDS	**Sogindy**	**7.61**	**20**	*e*P	**Pn**	**20 23 36.0**	**-0.5**
	comp=Z,6.7nm,0.3s,baz=20						
SGDS				*e*S	**Sn**	**20 24 57.7**	**-3.3**
	baz=20						
SGDS	**Sogindy**	**7.61**	**20**	*e*PN	**Pn**	**20 23 35.9**	**-0.5**
SGDS				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MTBS	**Maitube**	**7.94**	**30**	*e*P	**Pn**	**20 23 40.7**	**-0.3**
	baz=30						
MTBS				*e*S	**Sn**	**20 25 06.1**	**-3.1**
	baz=30						
MTBS	**Maitube**	**7.94**	**30**	P	**Pn**	**20 23 41.9**	**+0.9**
	comp=Z,25nm,0.6s						
MTBS	**Maitube**	**7.94**	**30**	*e*PN	**Pn**	**20 23 40.7**	**-0.3**
TNSS	**Tian-Shan**	**8.08**	**33**	*e*P	**Pn**	**20 23 42.9**	**-0.4**
	baz=33						
TNSS	**Tian-Shan**	**8.08**	**33**	*e*PN	**Pn**	**20 23 42.8**	**-0.4**
KRBS	**Karabastau**	**8.15**	**25**	P	**Pn**	**20 23 44.8**	**+1.0**
	comp=Z,12nm,0.5s						
AAA	**Alma-Ata**	**8.21**	**32**	*e*P	**Pn**	**20 23 45.0**	**+0.4**
	comp=Z,8.7nm,0.8s,baz=32						
AAA	**Alma-Ata**	**8.21**	**32**	*e*PN	**Pn**	**20 23 45.0**	**+0.4**
AAA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDOK	**Medeo**	**8.23**	**33**	*e*P	**Pn**	**20 23 45.0**	**0.0**
	baz=33						
MDOK				*e*S	**Sn**	**20 25 13.5**	**-2.8**
	baz=33						
MDOK	**Medeo**	**8.23**	**33**	⇓P	**Pn**	**20 23 45.7**	**+0.8**
	comp=Z,12nm,0.5s						
MDOK	**Medeo**	**8.23**	**33**	*e*PN	**Pn**	**20 23 44.9**	**0.0**
KOTS	**Kotyrbulak**	**8.31**	**32**	Lg	Lg	20 25 15.8	
	comp=Z,30nm,0.3s						
KTBS	**Karatobe**	**8.53**	**29**	P	**Pn**	**20 23 48.9**	**-0.1**
	comp=Z,4.1nm,0.3s						
KUU	**Kurty**	**8.56**	**27**	Lg	Lg	20 25 19.5	
	comp=Z,11nm,1.0s						
CHKK	**Chushkaly**	**8.77**	**30**	*e*P	**Pn**	**20 23 51.8**	**-0.4**
	baz=30						
CHKK	**Chushkaly**	**8.77**	**30**	P	**Pn**	**20 23 53.1**	**+1.0**
	comp=Z,14nm,0.3s						
CHKK	**Chushkaly**	**8.77**	**30**	*e*PN	**Pn**	**20 23 51.7**	**-0.4**
SATY	**Saty**	**8.78**	**38**	*e*P	**Pn**	**20 23 51.5**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=39						
SATY	**Saty**	**8.78**	**38**	P	**Pn**	**20 23 53.1**	**+0.6**
	comp=Z,6.5nm,0.4s						
SATY	**Saty**	**8.78**	**38**	*e*PN	**Pn**	**20 23 51.5**	**-0.9**
SATY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BTLS	**Baital**	**8.97**	**14**	*e*P	**Pn**	**20 23 53.6**	**-1.3**
	baz=14						
BTLS	**Baital**	**8.97**	**14**	Lg	Lg	20 25 29.2	
	comp=Z,5.2nm,0.5s						
BTLS	**Baital**	**8.97**	**14**	*e*PN	**Pn**	**20 23 53.6**	**-1.3**
UZB	**Uzynbulak**	**9.16**	**40**	P	**Pn**	**20 23 57.6**	**0.0**
	comp=Z,15nm,0.5s						
KPKS	**Kokpek**	**9.22**	**37**	*e*P	**Pn**	**20 23 57.3**	**-1.1**
	comp=Z,7.1nm,0.9s,baz=38						
KPKS	**Kokpek**	**9.22**	**37**	*e*P	**Pn**	**20 23 57.3**	**-1.1**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NDI	**New Delhi**	**9.27**	**144**	*e*S	**Sn**	**20 25 37.0**	**-4.6**
SHLS	**Shalkode**	**9.40**	**41**	*e*P	**Pn**	**20 24 03.2**	**+2.3**
	comp=Z,3.8nm,0.5s,baz=43						
SHLS	**Shalkode**	**9.40**	**41**	P	**Pn**	**20 24 04.4**	**+3.6**
	comp=Z,17nm,0.6s						
SHLS	**Shalkode**	**9.40**	**41**	*e*P	**Pn**	**20 24 03.1**	**+2.3**
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARXS	**Arharly**	**9.41**	**31**	P	**Pn**	**20 23 60.0**	**-0.9**
	comp=Z,22nm,0.4s						
PDGK	**Podgornoye**	**9.53**	**41**	P	**Pn**	**20 24 02.7**	**0.0**
	comp=Z,8.2nm,0.8s						
PDGK	**Podgornoye**	**9.53**	**41**	⇑P	**Pn**	**20 24 02.1**	**-0.5**
	comp=Z,27nm,1.0s						
PDGK				⇓S	**Sn**	**20 25 48.6**	**+0.7**
	comp=Z,42nm,1.0s						
PDGK	**Podgornoye**	**9.53**	**41**	*i* P	**Pn**	**20 24 02.1**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,27nm,1.0s						
MNBS	**Baschi**	**9.55**	**34**	P	**Pn**	**20 24 02.8**	**-0.2**
	comp=Z,11nm,0.5s						
KTMS	**Ketmen**	**10.07**	**43**	P	**Pn**	**20 24 09.5**	**-0.5**
	comp=Z,1.5nm,0.2s						
TDK	**Taldyqorghan**	**10.29**	**31**	*e*P	**Pn**	**20 24 11.7**	**-1.1**
	comp=Z,4.2nm,0.5s,baz=31						
TDK	**Taldyqorghan**	**10.29**	**31**	P	**Pn**	**20 24 12.9**	**+0.1**
	comp=Z,18nm,0.5s						
TDK	**Taldyqorghan**	**10.29**	**31**	*e*P	**Pn**	**20 24 11.7**	**-1.1**
TDK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GEYT	**Alibeck**	**10.41**	**282**	P	Pn	20 24 10.2	-4.3
	comp=Z,1.7nm,0.3s,baz=120,slow=8.3,SNR=18						
GEYT				S	**Sn**	**20 26 03.0**	**-6.3**
	comp=Z,4.5nm,0.3s,baz=135,slow=15,SNR=4.5						
GYA0B	**ALIBECK ARRAY**	**10.41**	**282**	⇑P	**Pn**	**20 24 12.6**	**-2.0**
GYA0B				⇓S	**Sn**	**20 26 05.1**	**-4.1**
GYA0B	**ALIBECK ARRAY**	**10.41**	**282**	Pn	**Pn**	**20 24 12.4**	**-2.2**
KAPS	**Kapalarasan**	**10.92**	**33**	P	**Pn**	**20 24 21.0**	**-0.4**
	comp=Z,3.1nm,0.6s						
MAKZ	**Makanchi**	**13.26**	**35**	⇓P	**Pn**	**20 24 50.5**	**-2.0**
	comp=Z,9.4nm,0.7s						
MAKZ	**Makanchi**	**13.26**	**35**	P	**Pn**	**20 24 51.0**	**-1.5**
MAKZ	**Makanchi**	**13.26**	**35**	Pn	**Pn**	**20 24 51.0**	**-1.5**
MK31	**Makanchi Array**	**13.40**	**35**	⇑P	**Pn**	**20 24 54.5**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=225,slow=14,SNR=104						
MK31	**Makanchi Array**	**13.40**	**35**	*i* P	**Pn**	**20 24 53.9**	**-0.4**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MK31	**Makanchi Array**	**13.40**	**35**	Pn	**Pn**	**20 24 52.8**	**-1.5**
MKAR	**Makanchi Array**	**13.40**	**35**	P	**Pn**	**20 24 53.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=221,slow=13,SNR=33						
DANN	**Dangsing**	**13.40**	**123**	*e*P	**Pn**	**20 24 50.9**	**-3.8**
	comp=Z,15nm,0.3s						
WMQ	**Urumqi**	**14.77**	**55**	*e*P	**P**	**20 25 13.9**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,6.1s						
WMQ	**Urumqi**	**14.77**	**55**	P	**Pn**	**20 25 10.2**	**-1.8**
WMQ	**Urumqi**	**14.77**	**55**	Pn	**Pn**	**20 25 10.2**	**-1.8**
DMN	**Daman**	**14.79**	**122**	*e*P	**Pn**	**20 25 09.4**	**-3.2**
	comp=Z,16nm,0.5s						
KKN	**Kakani**	**14.80**	**121**	*e*P	**Pn**	**20 25 09.2**	**-3.4**
	comp=Z,14nm,0.5s						
PKIN	**Phulchoki**	**15.01**	**122**	*e*P	**Pn**	**20 25 11.8**	**-3.6**
	comp=Z,15nm,0.5s						
PKI	**Pulchoki**	**15.02**	**122**	*e*P	**Pn**	**20 25 11.9**	**-3.7**
	comp=Z,7.5nm,0.2s						
GUN	**Gumba**	**15.14**	**120**	*e*P	**Pn**	**20 25 13.2**	**-3.9**
	comp=Z,7.8nm,0.3s						
AB31	**Akbulak array**	**15.21**	**331**	P	**Pn**	**20 25 15.5**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=146,slow=13,SNR=153						
AB31				⇑S	**Sn**	**20 27 55.9**	**-9.3**
	comp=Z,6.1nm,0.6s,baz=151,slow=22,SNR=18						
ABKAR	**Akbulak array**	**15.21**	**331**	Pn	**Pn**	**20 25 16.3**	**-1.1**
KURBB	**Kurchatov Arra**	**15.25**	**18**	P	**Pn**	**20 25 15.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=206,slow=10,SNR=30						
KURK	**Kurchatov**	**15.36**	**19**	⇓P	**Pn**	**20 25 18.0**	**-1.3**
	comp=Z,6.7nm,0.7s						
KURK	**Kurchatov**	**15.36**	**19**	*i* P	**Pn**	**20 25 19.6**	**+0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**15.36**	**19**	Pn	**Pn**	**20 25 20.6**	**+1.2**
SEM	**Semipalatinsk**	**15.54**	**23**	*e*P	**Pn**	**20 25 21.9**	**0.0**
	baz=23						
SEM	**Semipalatinsk**	**15.54**	**23**	*e*P	**Pn**	**20 25 21.9**	**0.0**
RAMN	**Ramite**	**16.23**	**121**	*e*P	**Pn**	**20 25 27.6**	**-3.1**
	comp=Z,8.6nm,0.4s						
BVAR	**Borovoye Array**	**16.67**	**359**	P	**Pn**	**20 25 32.5**	**-3.1**
	comp=Z,0.7nm,0.3s,baz=156,slow=15,SNR=15						
BRVK	**Borovoye**	**16.70**	**358**	⇑P	**Pn**	**20 25 33.4**	**-2.6**
	comp=Z,4.1nm,1.0s						
BRVK	**Borovoye**	**16.70**	**358**	*c**e*P	**Pn**	**20 25 35.7**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,15nm,2.5s						
BRVK	**Borovoye**	**16.70**	**358**		**Pn**	**20 25 35.8**	**-0.2**
TAPN	**Taplejung**	**16.77**	**118**	*e*P	**Pn**	**20 25 34.4**	**-3.0**
	comp=Z,8.5nm,0.4s						
ODAN	**Odare**	**16.84**	**120**	*e*P	**Pn**	**20 25 35.1**	**-3.1**
	comp=Z,13nm,0.6s						
AKTO	**Aktyubinsk**	**16.91**	**330**	P	**Pn**	**20 25 39.3**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=141,slow=10.0,SNR=48						
AKTO				S	**Sn**	**20 28 36.9**	**-9.3**
	comp=Z,0.4nm,0.3s,baz=242,slow=20,SNR=5.6						
AKTO	**Aktyubinsk**	**16.91**	**330**	⇑P	**Pn**	**20 25 37.9**	**-0.6**
	comp=Z,19nm,0.9s						
AKTO				⇑S	**Sn**	**20 28 38.0**	**-8.2**
	comp=Z,6.6nm,0.7s						
UOSS	**Minazif**	**17.06**	**232**	P	**Pn**	**20 25 41.0**	**+0.5**
DGZ	**Jazzator, Alta**	**17.89**	**37**	⇑*e*P	**P**	**20 25 49.4**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,21nm,0.5s						
LSA	**Lhasa**	**18.13**	**106**	P	**P**	**20 25 52.8**	**-0.2**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**18.13**	**106**		**P**	**20 25 52.8**	**-0.2**
HYB	**Hyderabad**	**20.02**	**159**	*i* P	**Pn**	**20 26 16.0**	**+0.2**
ZAA0	**Zalesovo Array**	**20.04**	**24**	⇑P	**P**	**20 26 12.8**	**-0.3**
	comp=Z,5.5nm,0.9s						
ZAA0	**Zalesovo Array**	**20.04**	**24**	P	**P**	**20 26 13.0**	**-0.1**
ZAA0				IAmb	IAmb	20 26 15.3	
	comp=Z,28nm,0.8s						
ZALV	**Zalesovo Beam**	**20.04**	**24**	P	**P**	**20 26 13.3**	**+0.2**
	comp=Z,23nm,0.6s,baz=219,slow=11,SNR=72						
ZALV	**Zalesovo Beam**	**20.04**	**24**	*i* P	**P**	**20 26 12.8**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,23nm,0.6s						
MIB	**Mutribah**	**20.86**	**259**	*e*P		20 26 21.9	
GNI	**Garni**	**20.95**	**288**	P	**P**	**20 26 22.0**	**-1.2**
	comp=Z,3.4nm,0.7s,baz=228,slow=19,SNR=1.8						
GNI	**Garni**	**20.95**	**288**	*c**e*P	**P**	**20 26 27.3**	**+4.1**
GNI				pmax	pmax		
	comp=Z,11nm,0.6s						
GNI	**Garni**	**20.95**	**288**	P	**P**	**20 26 26.4**	**+3.2**
GNI				IAmb	IAmb	20 26 33.4	
	comp=Z,21nm,0.9s						
RDF	**Al-Radifah**	**21.07**	**256**	*e*P		20 26 23.7	
ZIRO	**ZIRO**	**21.25**	**108**	*e*P	**P**	**20 26 26.4**	**-0.2**
RST	**Umm Al-Ruwaisa**	**21.26**	**258**	*e*P		20 26 25.9	
SVE	**Sverdlovsk**	**21.63**	**344**	*e*P	**P**	**20 26 33.8**	**+3.7**
SVE				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARU	**Arti**	**21.77**	**341**	P	**P**	**20 26 31.9**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=143,slow=6.8,SNR=12						
ARU	**Arti**	**21.77**	**341**	*c* *i*P	**P**	**20 26 32.9**	**+1.3**
ARU						20 26 58.0	
ARU				S	**S**	**20 30 23.9**	**-2.4**
ARU				SS	**SnSn**	**20 31 04.7**	**+4.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**21.77**	**341**	P	**P**	**20 26 33.1**	**+1.5**
ARU				IAmb	IAmb	20 26 36.2	
	comp=Z,7.7nm,0.8s						
NCK	**Nalchik**	**22.14**	**297**	*i* P	**P**	**20 26 39.6**	**+3.9**
NCK				pmax	pmax		
	comp=Z,4.0nm,0.3s						

MOKO	MOKOCHONG	22.38	110	eP	P	20 26 40.1	+1.6
KOHI	KOHIMA	22.40	112	eP	P	20 26 39.9	+1.2
KBZ	Khabaz	22.67	298	P	P	20 26 40.5	-0.6
	comp=Z,2.3nm,0.8s,baz=198,slow=12,SNR=2.7						
KIV	Kislovodsk	22.86	298	⇑eP	P	20 26 48.5	+5.3
KIV				e*PP	pP	20 27 10.1	+6.7
KIV				eS	S	20 30 44.9	-0.2
KIV				pmax	pmax		
	comp=Z,17nm,1.5s						
LKP	Lekhapani	22.89	106	eP	P	20 26 43.7	+0.3
GTA	Gaotai	22.89	74	eP	P	20 26 44.2	+0.6
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BELG	Belogornoye	23.00	322	P	P	20 26 44.9	+0.6
	comp=Z,6.4nm,0.5s,baz=317,slow=9.5,SNR=3.9						
RAYN	Ar Rayn	25.45	247	P	P	20 27 06.1	-0.9
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
RAYN	Ar Rayn	25.45	247	P	P	20 27 06.1	-0.9
KIRV	Kirov	26.37	334	ceP	P	20 27 17.9	+3.1
ANN	Anapa	26.71	299	eP	P	20 27 18.8	+0.8
ANN				e*PP	sP	20 27 48.7	-3.8
ANN				eS	S	20 31 47.5	+1.4
ANN				pmax	pmax		
	comp=Z,90nm,1.1s						
SONM	Songino Array	28.41	55	P	P	20 27 34.5	+1.1
	comp=Z,2.3nm,0.7s,baz=267,slow=9.3,SNR=12						
KMI	Kunming	29.36	103	⇓eP	P	20 27 45.3	+3.2
KMI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
OBN	Obninsk	30.05	320	⇓eP	P	20 27 47.1	-0.5
OBN				e*PP	pP	20 28 14.0	+3.4
OBN				e		20 28 49.0	
OBN				i S	S	20 32 44.2	+5.9
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	30.38	118	i P	P	20 27 48.0	-2.9
HHC	Hu-ho-hao-te	31.80	69	eP	P	20 28 04.7	+1.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,7.4s						
AKASG	Malin Array Be	33.04	309	P	P	20 28 14.2	+0.3
	comp=Z,2.1nm,0.6s,baz=81,slow=7.1,SNR=9.6						
AKBB	Malin Array Si	33.04	309	P	P	20 28 14.4	+0.5
AKBB				pmax	pmax		
	comp=Z,11nm,1.4s						
AKBB	Malin Array Si	33.04	309	P	P	20 28 14.3	+0.5
AKBB				IAmb	IAmb	20 28 16.9	
	comp=Z,11nm,1.4s						
TIRR	Tirgusor	33.12	297	P	P	20 28 13.9	-0.8
TIRR				pmax	pmax		
	comp=Z,117nm,1.4s						
TIRR	Tirgusor	33.12	297	P	P	20 28 13.9	-0.8
NRIK	Noril'sk	34.26	10	P	P	20 28 26.5	+2.3
	comp=Z,8.2nm,0.6s,baz=194,slow=4.9,SNR=12						
NRIK	Noril'sk	34.26	10	ceP	P	20 28 26.3	+2.1
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NRIK	Noril'sk	34.26	10	P	P	20 28 25.9	+1.7
FINES	FINESS Array B	37.60	326	P	P	20 28 54.2	+1.4
	comp=Z,1.1nm,0.5s,baz=116,slow=9.3,SNR=12						
ARCES	ARCESS Array B	41.28	338	P	P	20 29 25.1	+1.8
	comp=Z,6.4nm,1.0s,baz=117,slow=6.9,SNR=7.5						
ZEA	Zeya	42.16	47	eP	P	20 29 33.4	+2.8
CLL	Collm	43.29	309	eP	P	20 29 39.0	-0.8
CLL	Collm	43.29	309	eP	P	20 29 39.0	-0.8
YAK	Yakutsk	44.07	35	ceP	P	20 29 46.5	+0.6
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
YAK	Yakutsk	44.07	35	P	P	20 29 46.1	+0.2
YAK				IAmb	IAmb	20 29 47.3	
	comp=Z,10nm,0.8s						
AQU	L'Aquila	44.22	296	P	P	20 29 47.7	+0.3
AQU				pmax	pmax		
	comp=Z,28nm,1.4s						
AQU	L'Aquila	44.22	296	P	P	20 29 47.7	+0.3
NC405	NORSAR Array S	44.26	323	P	P	20 29 48.1	+0.6
NC405				IAmb	IAmb	20 30 12.3	
	comp=Z,12nm,1.1s						
NC303	NORSAR Array S	44.44	323	P	P	20 29 50.0	+1.1
NB2	NORSAR Subarra	44.50	323	P	P	20 29 49.4	0.0
	comp=Z,0.9nm,0.6s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.50	323	P	P	20 29 49.1	-0.3
	comp=Z,0.8nm,0.5s,baz=97,slow=7.9,SNR=5.6						
NC204	NORSAR Array S	44.74	323	P	P	20 29 51.9	+0.5
TEOL	Teolo	44.86	301	P	P	20 29 53.0	+0.6
TEOL				IAmb	IAmb	20 30 01.2	
	comp=Z,9.9nm,1.3s						
KSRS	Korea Array	44.92	71	P	P	20 29 54.0	+1.1
	comp=Z,1.7nm,0.7s,baz=259,slow=6.9,SNR=5.0						
TIXI	Tiksi	45.90	22	ceP	P	20 30 01.6	+1.4
TIXI	Tiksi	45.90	22	P	P	20 30 00.6	+0.3
TIXI				IAmb	IAmb	20 30 02.4	
	comp=Z,12nm,1.4s						
KBS	Kingsbay	48.75	347	P	P	20 30 23.5	+1.2
KBS				pmax	pmax		
	comp=Z,102nm,1.4s						
KBS	Kingsbay	48.75	347	P	P	20 30 23.5	+1.2
SUMG	Summit	61.20	341	P	P	20 31 54.7	+2.3
SUMG				pmax	pmax		
	comp=Z,12nm,1.4s						
SUMG	Summit	61.20	341	P	P	20 31 54.7	+2.3
SUMG				IAmb	IAmb	20 32 20.6	
	comp=Z,12nm,1.4s						
EUNU	Eureka	63.15	356	P	P	20 32 07.5	+2.6
TOA0	Torodi Ar. Sit	65.72	269	P	P	20 32 20.8	-1.8
TOA0				IAmb	IAmb	20 32 21.1	
	comp=Z,1.9nm,0.7s						
TORD	Torodi Ar. Bea	65.72	269	P	P	20 32 20.0	-2.6
	comp=Z,1.8nm,0.5s,baz=48,slow=6.0,SNR=9.1						
COLD	Coldfoot	72.10	16	P	P	20 33 02.4	+1.1
COLD				IAmb	IAmb	20 33 08.2	
	comp=Z,6.4nm,1.6s						
C36M	Paulatuk	74.02	6	P	P	20 33 12.5	0.0
C36M				IAmb	IAmb	20 33 14.1	
	comp=Z,3.5nm,0.4s						
INK	Inuvik	74.04	9	P	P	20 33 13.2	+0.6
INK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
INK	Inuvik	74.04	9	P	P	20 33 13.2	+0.6
INK				IAmb	IAmb	20 33 40.0	
	comp=Z,8.4nm,1.6s						
LBTB	Lobatse	74.58	222	P	P	20 33 16.1	-0.4
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LBTB	Lobatse	74.58	222	P	P	20 33 16.1	-0.4
LBTB				IAmb	IAmb	20 33 17.4	
	comp=Z,3.1nm,0.8s						
DBIC	Dimbokro	74.70	267	P	P	20 33 14.1	-3.3
	comp=Z,1.1nm,0.5s,baz=200,slow=11,SNR=2.0						
DBIC	Dimbokro	74.70	267	P	P	20 33 15.1	-2.3
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DBIC	Dimbokro	74.70	267	P	P	20 33 15.1	-2.3
DBIC				IAmb	IAmb	20 33 38.9	
	comp=Z,6.9nm,1.2s						
PPLA	Purkeypile	75.21	19	P	P	20 33 21.2	+1.5
BOSA	Boshof	77.65	220	P	P	20 33 31.8	-2.0
	comp=Z,2.0nm,0.8s,baz=80,slow=5.5,SNR=3.1						
BOSA	Boshof	77.65	220	P	P	20 33 32.8	-1.0
BOSA				IAmb	IAmb	20 33 55.8	
	comp=Z,22nm,1.6s						
YKA	Yellowknife Ar	81.38	3	P	P	20 33 53.8	+0.3
	comp=Z,0.9nm,0.6s,baz=354,slow=5.3,SNR=18						
WRA	Warramunga Arr	81.91	122	P	P	20 33 56.9	0.0
	comp=Z,0.6nm,0.5s,baz=323,slow=5.0,SNR=7.1						
ASAR	Alice Springs	84.17	125	P	P	20 34 08.7	+0.2
	comp=Z,0.8nm,0.7s,baz=307,slow=5.2,SNR=14						

IDC 06 20:39:57.5±3.0, 4°.48S×132°.74E, h0^{km}, mb3.1/1, mb1 3.6/5, mb1mx3.4/40, mbtmp3.4/5, ML3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/16, Error ellipse: s-maj=135.8km s-min=25.4km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.88	338	Pn	Pn	20 40 56.8	-1.5
	1.6nm,0.3s,baz=150,slow=20,SNR=12						
SIJI				Sn	Sn	20 41 37.6	-7.0
	4.0nm,0.3s,baz=283,slow=24,SNR=13						
FITZ	Fitzroy Crossi	15.22	207	Pn	Pn	20 43 33.4	-0.4
	0.3nm,0.3s,baz=36,slow=12,SNR=1.9						
FITZ				Sn	Sn	20 46 17.1	-6.0
	0.6nm,0.3s,baz=207,slow=14,SNR=5.8						
WRA	Warramunga Arr	15.45	174	Pn	Pn	20 43 36.6	-0.3
	0.1nm,0.3s,baz=357,slow=13,SNR=1.6						
WRA				Sn	Sn	20 46 21.3	-7.6
	0.2nm,0.3s,baz=358,slow=23,SNR=3.0						
ASAR	Alice Springs	19.11	177	P	P	20 44 21.9	-0.2
	0.1nm,0.3s,baz=352,slow=12,SNR=7.4						
ASAR				S	Sn	20 47 53.8	-3.9
	0.1nm,0.3s,baz=359,slow=27,SNR=4.7						
LEM	Lembang	25.11	264	LR	LR	20 56 00.7	
	comp=Z,32nm,18.6s,baz=266,slow=38						
MKAR	Makanchi Array	67.68	325	P	P	20 50 57.3	+0.7
	0.1nm,0.3s,baz=119,slow=5.1,SNR=1.5						

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*IDC **06** 20:42:46.8±1.2, 3°.48S×152°.87E, h222^{km}±11^{km}, mb4.0/21, mb1 4.1/24, mb1mx3.9/42, mbtmp4.6/24, Error ellipse: s-maj=14.7km s-min=8.4km az=88.0*

*DJA **06** 20:42:46.8±0.8, 3°S±5°×15°3E±°, h217^{km}±4^{km}, M4.7/13, mB5.1/3, mb4.7/13, MLv4.8/2, Mw(mB)4.5/3*

*NEIC **06** 20:42:47.2±2.2, 3°.56S±0°.08×152°.86E±0°.08, h226^{km}±5^{km}, mb4.8/95, Error ellipse: s-maj=12.3km s-min=10.7km az=53.0*

ISC 06 20:42:46.9±0.3, 3°.50S±0°.05×152°.82E±0°.06, h222^{km}, n162, σ1^{s}07/172, mb4.7/77, 1C-3D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.95	224		Pn	20 43 18.7	0.0
RABL				S	S	20 43 43.1	-0.4
KRVT	Keravat (AS076	1.13	225	P	Pn	20 43 19.9	+0.1
	827nm,0.3s,baz=200,slow=1.6,SNR=137						
KRVT				S	S	20 43 44.5	-0.9
	206nm,0.3s,baz=201,slow=18,SNR=8.5						
MANU	Manus Island	5.64	285	Pn	Pn	20 44 10.3	+0.3
PMG	Port Moresby	8.13	224	P	Pn	20 44 41.0	-0.8
	14nm,0.3s,baz=51,slow=4.5,SNR=26						
PMG				S	S	20 46 16.7	+2.8
	11nm,0.3s,baz=297,slow=22,SNR=5.7						
PMG	Port Moresby	8.13	224	Pn	Pn	20 44 41.2	-0.6
PMG				S	S	20 46 11.7	-2.3
HNR	Honiara	9.21	130		Pn	20 44 53.8	-2.0
JAY	Jayapura	12.14	274	P	Pn	20 45 32.9	-0.2
	2.4nm,0.3s,baz=130,slow=1.1,SNR=8.5						
JAY	Jayapura	12.14	274	P	Pn	20 45 33.8	+0.7
	34nm,1.1s						
COEN	Coen	14.09	222		P	20 45 58.9	+0.4
CTA	Charters Tower	17.69	201	P	Pn	20 46 39.4	-0.9
	3.4nm,0.3s,baz=27,slow=12,SNR=25						
CTAO	Charters Tower	17.69	201	P	Pn	20 46 39.4	-0.9
CTAO				IAmb	IAmb	20 46 45.5	
	comp=Z,22nm,0.6s						
GUMO	Guam	18.72	335	P	P	20 46 50.1	+0.9
FAKI	Fak Fak	20.55	271	P	P	20 47 10.0	+1.1
FAKI				IAmb	IAmb	20 47 11.9	
	comp=Z,37nm,0.9s						
FAKI	Fak Fak	20.55	271	P	P	20 47 10.3	+1.4
	comp=Z,55nm,1.6s						
SIJI	Sorong	21.69	276	P	P	20 47 21.7	+1.1
	comp=Z,10nm,0.4s,baz=83,slow=15,SNR=5.3						
EIDS	Eidsvold	21.81	184	P	P	20 47 27.3	+5.8
EIDS				IAmb	IAmb	20 47 54.4	
	comp=Z,27nm,1.4s						
DZM	Mont Dzumac	22.71	146	P	P	20 47 30.6	+0.6
	comp=Z,15nm,0.5s,baz=267,slow=8.5,SNR=27						
DZM	Mont Dzumac	22.71	146	P	P	20 47 30.2	+0.3
DZM				IAmb	IAmb	20 47 43.8	
	comp=Z,28nm,1.1s						
DZM				pP	pP	20 48 08.8	+0.2
MTN	Manton Dam	23.37	245	P	P	20 47 35.9	0.0
WB0	Warramunga Arr	24.18	227	P	P	20 47 43.1	-0.2
WB0				IAmb	IAmb	20 47 45.4	
	comp=Z,43nm,0.8s						
WR0	Warramunga Arr	24.20	226	P	P	20 47 43.4	-0.1
WRAB	Tennant Creek	24.32	226	P	P	20 47 44.6	0.0
WB2	Warramunga Arr	24.32	226	P	P	20 47 44.5	0.0
WRA	Warramunga Arr	24.33	226	P	P	20 47 44.8	+0.1
	comp=Z,88nm,0.4s,baz=47,slow=9.7,SNR=416						
WRA				S	S	20 51 45.8	-1.7
	comp=Z,5.5nm,0.7s,baz=48,slow=14,SNR=8.8						
ARMA	Armidale	26.80	182	P	P	20 48 07.9	+1.1
ARMA				IAmb	IAmb	20 48 30.9	
	comp=Z,19nm,1.3s						
AS31	Alice Springs	27.13	221	P	P	20 48 09.3	-0.4
AS31				IAmb	IAmb	20 48 37.3	
	comp=Z,5.8nm,0.3s						
ASAR	Alice Springs	27.13	221	P	P	20 48 09.8	0.0
	comp=Z,5.1nm,0.4s,baz=55,slow=9.0,SNR=107						
ASAR				S	S	20 52 28.8	-2.9
	comp=Z,2.4nm,0.6s,baz=50,slow=14,SNR=7.1						
LHI	Lord Howe Isla	28.49	169	P	P	20 48 22.6	+1.0
SOEI	Soe	29.02	256	P	P	20 48 26.0	-0.8
STKA	Stephens Creek	30.14	199	P	P	20 48 35.8	-0.4
	comp=Z,1.6nm,0.4s,baz=31,slow=13,SNR=9.1						
STKA	Stephens Creek	30.14	199	P	P	20 48 36.0	-0.2
FITZ	Fitzroy Crossi	30.31	239	P	P	20 48 37.0	-1.0
	comp=Z,5.8nm,0.4s,baz=46,slow=10.0,SNR=3.4						
FITZ	Fitzroy Crossi	30.31	239	P	P	20 48 36.5	-1.4
FITZ				IAmb	IAmb	20 49 10.2	
	comp=Z,48nm,1.6s						
TOLI2	Tolitoli	32.35	278	P	P	20 48 54.9	-0.9
KAPI	Kappang	33.01	266		P	20 49 01.2	-0.3
KAPI				IAmb	IAmb	20 49 30.9	
	comp=Z,39nm,1.2s						
BBOO	Buckleboo	33.12	206		P	20 49 01.9	-0.3
MPSI	Mapaga	33.12	276	P	P	20 49 02.1	-0.4
	comp=Z,16nm,0.7s						
KNTN	Kanton	35.41	90	P	P	20 49 20.8	-1.4
FORT	Forrest	35.81	218	P	P	20 49 25.2	-0.1
FORT				IAmb	IAmb	20 49 25.7	
	comp=Z,14nm,0.7s						
JMZ	Minamidaito 2	35.88	326	P	P	20 49 26.7	+0.7
PSA00	Pilbara Seismi	36.72	238	P	P	20 49 32.5	-0.6
PSA00				IAmb	IAmb	20 50 01.0	
	comp=Z,40nm,1.4s						
OUZ	Omahuta	36.97	151	P	P	20 49 37.0	+1.9
OUZ				IAmb	IAmb	20 49 39.4	
	comp=Z,31nm,1.6s						
KKM	Kota Kinabalu	37.76	284	P	P	20 49 42.8	+0.7
KKM				IAmb	IAmb	20 50 21.7	
	comp=Z,57nm,1.2s						
NIUE	Niue	39.55	116	P	P	20 49 56.1	-0.7
YOJ	Yonaguni jima	40.16	315	P	P	20 50 02.0	+0.3
HIZ	Hauiti	40.23	153	P	P	20 50 04.7	+2.6
TWG	Pinlang	40.56	312	P	P	20 50 04.0	-1.0
TWG				IAmb	IAmb	20 50 04.2	
	comp=Z,35nm,1.1s						
YULB	Yu-li	40.73	313	P	P	20 50 06.6	+0.2
YULB				IAmb	IAmb	20 50 08.3	
	comp=Z,30nm,0.7s						
NACB	Ninganchiao	40.98	314	P	P	20 50 08.9	+0.4
NACB				IAmb	IAmb	20 50 09.9	
	comp=Z,30nm,0.8s						
URZ	Urewera	41.10	150	P	P	20 50 09.4	+0.2
	comp=Z,5.9nm,0.6s,baz=264,slow=3.0,SNR=2.3						
URZ	Urewera	41.10	150	P	P	20 50 09.9	+0.8
JMN	Monobe	41.12	336	P	P	20 50 09.4	-0.1
TPUB	Ta-pu	41.17	312	P	P	20 50 09.7	-0.3
TPUB				IAmb	IAmb	20 50 10.3	
	comp=Z,36nm,0.8s						
SSLB	Suanglung	41.22	313	P	P	20 50 10.7	+0.3
SSLB				IAmb	IAmb	20 50 18.6	
	comp=Z,77nm,1.7s						
YHNB	Yeheng	41.45	314	P	P	20 50 13.5	+1.2
YHNB				IAmb	IAmb	20 50 13.9	
	comp=Z,48nm,0.9s						
JGF	Kuroka	41.51	341	P	P	20 50 12.5	-0.1
JGF				IAmb	IAmb	20 50 49.9	
	comp=Z,57nm,1.6s						
BKZ	Black Stump Fm	41.51	152	P	P	20 50 12.7	+0.1
BKZ				pP	pP	20 51 01.1	+3.1
NNZ	Nelson	41.85	157	P	P	20 50 17.1	+1.9
NNZ				IAmb	IAmb	20 50 41.8	
	comp=Z,69nm,1.5s						
JWT	Wachi	41.90	338	P	P	20 50 14.1	-1.6
JWT				IAmb	IAmb	20 50 18.1	
	comp=Z,115nm,1.8s						
JNU	Nakatsue	41.93	332	P	P	20 50 14.9	-1.1
	comp=Z,26nm,0.8s,baz=256,slow=1.1,SNR=9.4						
JNU	Nakatsue	41.93	332	P	P	20 50 14.6	-1.4
JNU				IAmb	IAmb	20 50 16.5	
	comp=Z,44nm,1.0s						
MJAR	Matsushiro Arr	42.10	342	P	P	20 50 15.1	-2.3
	comp=Z,2.1nm,0.6s,baz=163,slow=9.6,SNR=6.1						
UGM	Wanagama	42.30	262	P	P	20 50 18.2	-1.1
SNZO	South Karori	42.47	155	P	P	20 50 21.6	+1.4
JHS	Saijyo	42.53	336	P	P	20 50 20.5	-0.4
BFZ	Birch Farm	42.62	153	P	P	20 50 21.8	+0.4
BHW	Baring Head	42.62	155	P	P	20 50 21.9	+0.5
JMM	Marumori	42.64	346	P	P	20 50 21.8	+0.1
JMM				IAmb	IAmb	20 50 43.2	
	comp=Z,98nm,1.4s						
KSM	Kuching	42.78	276	P	P	20 50 23.8	+0.6
LTZ	Lake Taylor	42.78	159	P	P	20 50 24.1	+1.3
MSWZ	Moikau Station	42.79	155	P	P	20 50 23.7	+0.9
KHZ	Kahutara	42.94	157	P	P	20 50 25.1	+1.1
KHZ				IAmb	IAmb	20 51 00.9	
	comp=Z,41nm,1.6s						
MORW	Morawa	43.18	230	P	P	20 50 25.3	-0.9
MORW				IAmb	IAmb	20 50 36.5	
	comp=Z,52nm,1.8s						
RPZ	Rata Peaks	43.18	161	P	P	20 50 27.2	+1.2
RPZ				IAmb	IAmb	20 50 37.1	
	comp=Z,89nm,1.8s						
LBZ	Lake Benmore	43.51	162	P	P	20 50 29.2	+0.8
LBZ				IAmb	IAmb	20 50 57.7	
	comp=Z,70nm,1.4s						
KNMB	Chin-men Tao	43.51	312	P	P	20 50 29.5	+0.8
KNMB				IAmb	IAmb	20 50 45.0	
	comp=Z,44nm,0.8s						
DCZ	Deep Cove	43.64	165	P	P	20 50 30.6	+1.1
DCZ				IAmb	IAmb	20 50 57.5	
	comp=Z,59nm,1.5s						
MQZ	McQueen's Vall	43.72	159	P	P	20 50 31.8	+1.6
MQZ				IAmb	IAmb	20 50 33.7	
	comp=Z,41nm,1.4s						
MLZ	Mavora Lakes	43.80	164	P	P	20 50 32.0	+1.1
MLZ				IAmb	IAmb	20 50 34.7	
	comp=Z,52nm,1.4s						
ODZ	Otahua Downs	44.24	162	P	P	20 50 35.0	+0.7
ODZ				IAmb	IAmb	20 50 45.2	
	comp=Z,64nm,1.5s						
WHZ	Wether Hill Ro	44.24	165	P	P	20 50 35.4	+1.1
WHZ				IAmb	IAmb	20 50 52.5	
	comp=Z,44nm,1.3s						
NWAO	Narrogin (SRO)	44.32	224	P	P	20 50 34.7	-0.5
NWAO				IAmb	IAmb	20 51 05.0	
	comp=Z,82nm,1.6s						
CISI	Cisompet, Garu	44.96	263	P	P	20 50 38.9	-1.7
JTM	Tenmabayashi	45.37	347	P	P	20 50 42.8	-0.4
KSRS	Korea Array	46.86	333	P	P	20 50 55.0	+0.2
	comp=Z,5.1nm,0.8s,baz=146,slow=7.5,SNR=12						
JEW	Eniwo	47.26	349	P	P	20 50 58.8	+1.0
XMIS	Christmas Isla	47.28	259	P	P	20 50 59.9	+1.3
XMIS				IAmb	IAmb	20 51 13.1	
	comp=Z,112nm,1.7s						
INCN	Inchon	47.48	332	P	P	20 50 59.7	-0.1
INCN				IAmb	IAmb	20 51 01.0	
	comp=Z,48nm,0.9s						
JKA	Kamikawa-asahi	48.28	350	P	P	20 51 05.6	0.0
JKA				IAmb	IAmb	20 51 34.7	
	comp=Z,67nm,1.4s						
YSS	Yuzh-Sakhalins	51.02	351	P	P	20 51 25.7	-0.5
YSS				IAmb	IAmb	20 51 31.8	
	comp=Z,102nm,1.8s						
USA0B	Ussuriysk Arra	51.03	341	P	P	20 51 26.7	+0.3
USRK	Ussuriysk Ar.	51.03	341	P	P	20 51 26.9	+0.6
	comp=Z,5.4nm,0.7s,baz=173,slow=6.0,SNR=14						
MDJ	Mudanjiang	52.22	339	P	P	20 51 35.5	+0.3
MDJ				IAmb	IAmb	20 52 14.1	
	comp=Z,41nm,1.5s						
IPM	Ipoh	52.35	278	P	P	20 51 36.8	0.0
IPM				PcP	PcP	20 52 44.9	+0.1
KULM	Kulim	52.84	279	P	P	20 51 40.0	-0.3
KULM				PcP	PcP	20 52 47.0	+0.5
ENH	Enshi	53.30	312	P	P	20 51 43.3	0.0
ENH				IAmb	IAmb	20 51 44.7	
	comp=Z,22nm,0.8s						
GYA	Guiyang	53.63	307	⇓P	P	20 51 47.3	+1.3
GYA				pmax	pmax		
	comp=Z,22nm,0.9s						
SLVN	Son La	53.87	300	P	P	20 51 49.2	+1.5
GSI	Gunungsitoli	55.42	274	P	P	20 51 57.7	-1.3
GSI				IAmb	IAmb	20 51 58.4	
	comp=Z,12nm,0.7s						
XAN	Xi'an	55.70	316	P	P	20 52 00.5	-0.1
XAN				pmax	pmax		
	comp=Z,23nm,0.7s						
XAN				pmax	pmax		
	comp=Z,220nm,4.4s						
XAN	Xi'an	55.70	316	P	P	20 51 59.3	-1.3
XAN				IAmb	IAmb	20 52 01.1	
	comp=Z,14nm,0.6s						
KMI	Kunming	56.29	303	⇑eP	P	20 52 06.8	+1.7
KMI				pmax	pmax		
	comp=Z,14nm,1.3s						
LHMI	Lhok Sumawe	56.48	279	P	P	20 52 07.7	+1.2
PEA0B	Petropavlovsk-	56.55	4	P	P	20 52 06.7	+0.5
PEA0B				IAmb	IAmb	20 52 19.1	
	comp=Z,45nm,1.4s						
PETK	Petropavlovsk-	56.55	4	P	P	20 52 06.3	+0.2
	comp=Z,2.1nm,0.6s,baz=159,slow=6.9,SNR=23						
CM31	Chiang Mai Arr	57.35	294	P	P	20 52 13.4	+0.9
CMAR	Chiang Mai Arr	57.35	294	P	P	20 52 13.8	+1.4
	comp=Z,4.3nm,0.7s,baz=110,slow=5.2,SNR=41						
CHTO	Chiang Mai	57.45	295	P	P	20 52 13.8	+0.6
HIA	Hailar	59.86	336	P	P	20 52 28.5	-0.7
HIA				IAmb	IAmb	20 52 30.2	
	comp=Z,15nm,1.1s						
LZH	Lanzhou	60.32	315	eP	P	20 52 34.1	+1.3
LZH				pP	pP	20 53 23.3	+0.2
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
ATKA	Atka Island	62.13	22	P	P	20 52 45.6	+1.3
MA2	Magadan	62.90	359	P	P	20 52 48.4	-1.0
	comp=Z,12nm,0.6s,baz=164,slow=6.8,SNR=11						
MA2	Magadan	62.90	359	P	P	20 52 48.8	-0.5
MA2				IAmb	IAmb	20 52 49.9	
	comp=Z,14nm,0.7s						
GTA	Gaotai	64.72	317	⇓P	P	20 53 02.7	+0.9
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
NIKH	Nikolski High	64.83	24	P	P	20 53 03.4	+1.4
ULN	Ulaanbaatar	64.91	328	P	P	20 53 03.2	+0.3
ULN				IAmb	IAmb	20 53 04.5	
	comp=Z,12nm,1.0s						
SONM	Songino Array	65.24	327	P	P	20 53 05.4	+0.4
	comp=Z,6.1nm,0.6s,baz=146,slow=5.7,SNR=35						
SEY	Seymchan	66.25	360	P	P	20 53 10.4	-0.4
	comp=Z,3.0nm,0.3s,baz=82,slow=1.2,SNR=29						
LSA	Lhasa	67.53	304	P	P	20 53 20.9	+0.7
TAPN	Taplejung	69.76	301	eP	P	20 53 33.7	-0.1
	comp=Z,20nm,0.9s						
ODAN	Odare	69.91	300	eP	P	20 53 35.1	+0.4
	comp=Z,9.6nm,0.5s						
GUN	Gumba	71.47	301	eP	P	20 53 44.5	+0.3
	comp=Z,6.2nm,0.5s						
PKI	Pulchoki	71.79	300	eP	P	20 53 45.6	-0.5
PKIN	Phulchoki	71.81	300	eP	P	20 53 45.5	-0.6
KKN	Kakani	71.96	301	eP	P	20 53 47.1	+0.2
	comp=Z,4.5nm,0.5s						
DMN	Daman	72.06	300	eP	P	20 53 47.6	0.0
	comp=Z,9.4nm,0.6s						
DANN	Dangsing	73.39	301	eP	P	20 53 55.0	-0.5
	comp=Z,9.0nm,0.8s						
VNDA	Vanda	74.12	178	P	P	20 53 58.2	-0.2
	comp=Z,2.5nm,0.6s,baz=322,slow=5.6,SNR=6.3						
VNDA	Vanda	74.12	178	P	P	20 53 58.2	-0.2
WMQ	Urumqi	74.81	317	eP	P	20 54 04.2	+1.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.7s						
WMQ				LR	LR		
	comp=N,1μm,29.2s						
WMQ				LR	LR		
	comp=E,2μm,29.2s						
WMQ				LR	LR		
	comp=Z,470nm,29.1s						
MK31	Makanchi Array	79.36	319	P	P	20 54 27.6	-0.7
MKAR	Makanchi Array	79.36	319	P	P	20 54 28.2	-0.1
	comp=Z,3.3nm,0.9s,baz=101,slow=6.3,SNR=21						
SCM	Sheep Creek Mo	79.37	25	P	P	20 54 27.3	-0.8
SCM				IAmb	IAmb	20 54 37.7	
	comp=Z,29nm,1.5s						
MAKZ	Makanchi	79.58	319	P	P	20 54 28.9	-0.5
HMT	Hamilton	80.01	27	P	P	20 54 32.9	+1.4
ZAA0	Zalesovo Array	80.09	326		P	20 54 30.6	-1.3
ZALV	Zalesovo Beam	80.09	326	P	P	20 54 31.0	-0.9

	comp=Z,3.6nm,0.6s,baz=107,slow=5.9,SNR=20						
ILAR	Eielson Array	80.95	22	P	P	20 54 34.5	-1.8
	comp=Z,0.1nm,0.6s,baz=263,slow=26,SNR=2.7						
KURK	Kurchatov	82.76	322		P	20 54 45.2	-0.8
NIL	Nilore	83.26	304	P	P	20 54 48.9	-0.2
NIL				IAmb	IAmb	20 54 50.0	
	comp=Z,26nm,1.6s						
AAK	Ala-Archa	83.79	313	P	P	20 54 51.4	-0.3
NRIK	Noril'sk	84.75	341	P	P	20 54 55.4	-0.3
	comp=Z,3.5nm,0.6s,baz=144,slow=4.1,SNR=6.5						
NRIK	Noril'sk	84.75	341	P	P	20 54 55.2	-0.5
MAW	Mawson	86.77	203	P	P	20 55 05.1	-0.5
	comp=Z,2.6nm,0.5s,baz=302,slow=15,SNR=2.1						
BRVK	Borovoye	88.28	323	P	P	20 55 11.7	-1.4
SYO	Syowa Base	94.89	199⇓	*e*P	P	20 55 42.0	-1.4
CRVS	Cervenica-Dubn	118.73	326	*e*PKP	PKiKP	21 01 09.5	+0.7
BOSA	Boshof	120.41	234	PKP	PKPdf	21 01 11.6	-1.1
	comp=Z,1.0nm,0.4s,baz=103,slow=5.0,SNR=3.7						
PLCA	Paso Flores	120.80	143	PKP	PKPdf	21 01 12.7	-0.4
	comp=Z,2.5nm,1.0s,baz=267,slow=5.1,SNR=1.5						
CONA	Conrad Observa	122.38	327	*e*P	PKPdf	21 01 15.3	-0.5
	comp=Z,1.2nm,0.5s						
GERES	GERESS Array B	122.96	329	PKP	PKPdf	21 01 16.6	-0.4
	comp=Z,1.1nm,0.5s,baz=60,slow=1.7,SNR=14						
ABTA	Abfaltersbach	124.90	328	*i* P	PKPdf	21 01 19.9	-0.9
	comp=Z,4.1nm,1.2s						
WATA	Walderalm	125.02	329	*e*P	PKPdf	21 01 20.4	-0.7
	comp=Z,1.5nm,0.6s						
WTTA	Wattenberg	125.03	329	*e*P	PKPdf	21 01 20.7	-0.4
	comp=Z,2.1nm,0.6s						
MOTA	Moosalm	125.26	329	*e*P	PKPdf	21 01 20.9	-0.6
	comp=Z,2.8nm,0.6s						
SQTA	Sankt Quirin	125.28	329	*i* P	PKPdf	21 01 21.0	-0.6
	comp=Z,2.2nm,0.6s						
FETA	Feichten	125.66	329	*i* P	PKPdf	21 01 22.2	-0.1
	comp=Z,4.7nm,1.2s						
TORD	Torodi Ar. Bea	149.90	290	PKPbc	PKPbc	21 02 11.1	-0.9
	comp=Z,8.7nm,0.5s,baz=63,slow=2.0,SNR=78						
KIC	Kosan Boka	157.47	278	*e*PKP2	PKPab	21 02 50.1	-0.4
	comp=Z,9.3nm,0.5s						
DBIC	Dimbokro	157.54	279	PKPab	PKPab	21 02 50.5	-0.3
	comp=Z,5.6nm,0.7s,baz=70,slow=4.3,SNR=11						
TIC	Toumodi	157.71	279	*e*PKP2	PKPab	21 02 51.1	-0.4
LIC	Lamto	157.76	278	*e*PKP2	PKPab	21 02 51.3	-0.5
	comp=Z,3.1nm,0.3s						

*IDC **06** 21:04:34.6±1.4, 10°.39S×120°.57E, h0^{km}, mb4.0/6, mb1 4.0/9, mb1mx3.8/43, mbtmp3.9/9, ML3.8/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=70.0km s-min=21.8km az=56.0*

*DJA **06** 21:04:39.0±1.5, 11°S±10°×12°0E±°, h17^{km}±7^{km}, M4.0/7, mb4.1/1, MLv3.9/7*

*NEIC **06** 21:04:39.7±2.6, 10°.59S±0°.09×120°.38E±0°.08, h45^{km}±11^{km}, mb4.1/7, Error ellipse: s-maj=12.8km s-min=11.2km az=195.0*

ISC 06 21:04:38.4±0.6**, 10°.68S**±0°.05×**120°.46E**±0°.07**, h31**^{km}**, n34, σ1^s.91**/36**, mb4.1**/9**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	Baing, Sumba	0.47	14	P	Pb	21 04 48.1	-0.3
BASI				S	Sn	21 04 56.8	+0.5
WSI	Waingapu	1.02	351	P	Pb	21 04 57.5	0.0
EDFI	Ende, Flores	2.27	32	P	Pn	21 05 14.6	+0.7
MMRI	Maumere	2.68	41	Pn	Pn	21 05 20.2	+0.8
MMRI	Maumere	2.68	41	P	Pn	21 05 20.2	+0.8
PLAI	Plampang	3.22	305	P	Pn	21 05 27.7	+0.8
SOEI	Soe	3.86	77	Pn	Pn	21 05 39.0	+3.2
SOEI	Soe	3.86	77	P	Pn	21 05 39.6	+3.9
TWSI	Taliwang, Sumb	4.02	298	P	Pn	21 05 38.2	+0.3
BKSI	Bulukumba	5.33	356	P	Pn	21 05 57.8	+1.9
KAPI	Kappang	5.67	353	LR	LR	21 08 32.1	
	comp=Z,139nm,19.4s,baz=234,slow=44						
JAGI	Jajag, Banyuwa	6.60	289	Pn	Pn	21 06 12.6	-0.7
FITZ	Fitzroy Crossi	8.92	146	Pn	Pn	21 06 46.1	+1.0
	1.0nm,0.3s,baz=353,slow=9.7,SNR=16						
FITZ				Sn	Sn	21 08 22.2	-2.4
	2.0nm,0.3s,baz=178,slow=16,SNR=12						
FITZ	Fitzroy Crossi	8.92	146		Pn	21 06 46.2	+1.1
UGM	Wanagama	10.19	285	Pn	Pn	21 07 02.0	-0.6
MTN	Manton Dam	10.67	103	Pn	Pn	21 07 10.2	+1.0
PSA00	Pilbara Seismi	10.85	183	Pn	Pn	21 07 13.7	+2.1
CISI	Cisompet, Garu	12.87	283	Pn	Pn	21 07 37.5	-1.8
GIRL	Giralia	13.30	206	Pn	Pn	21 07 46.6	+1.5
WB0	Warramunga Arr	16.19	126	Pn	Pn	21 08 23.5	-0.2
WB0				IAmb	IAmb	21 08 32.1	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	16.24	126	Pn	Pn	21 08 24.0	-0.4
	comp=Z,0.3nm,0.3s,baz=296,slow=13,SNR=1.6						
WRA				Sn	Sn	21 11 14.7	-8.9
	comp=Z,0.3nm,0.3s,baz=294,slow=22,SNR=4.9						
AS31	Alice Springs	18.19	137	P	P	21 08 50.5	+1.7
ASAR	Alice Springs	18.19	137	P	Pn	21 08 51.8	+3.0
	comp=Z,0.4nm,0.3s,baz=318,slow=13,SNR=44						
ASAR				S	Sn	21 12 04.9	-6.1
	comp=Z,0.2nm,0.3s,baz=312,slow=24,SNR=5.9						
MORW	Morawa	18.75	192	P	Pn	21 08 57.8	+2.3
MORW				IAmb	IAmb	21 09 13.9	
	comp=Z,23nm,1.3s						
BBOO	Buckleboo	26.29	149	P	P	21 10 11.4	+0.2
USRK	Ussuriysk Ar.	55.62	10	P	P	21 14 08.0	-3.1
	comp=Z,1.6nm,0.8s,baz=185,slow=8.0,SNR=4.6						
SONM	Songino Array	59.58	349	P	P	21 14 39.1	-0.2
	comp=Z,0.7nm,0.6s,baz=167,slow=7.6,SNR=2.9						
MK31	Makanchi Array	66.60	332	P	P	21 15 25.4	-0.3
MK31				IAmb	IAmb	21 15 35.1	
	comp=Z,2.5nm,1.5s						
MKAR	Makanchi Array	66.60	332	P	P	21 15 25.6	-0.1
	comp=Z,1.1nm,0.5s,baz=154,slow=7.4,SNR=21						
KURBB	Kurchatov Arra	71.11	333	P	P	21 15 53.4	-0.2
	comp=Z,0.6nm,0.6s,baz=141,slow=5.6,SNR=13						
ZAA0	Zalesovo Array	71.12	339	P	P	21 15 52.6	-1.0
ZAA0				IAmb	IAmb	21 15 53.5	
	comp=Z,1.9nm,0.7s						
ZALV	Zalesovo Beam	71.12	339	P	P	21 15 52.9	-0.7
	comp=Z,2.3nm,0.6s,baz=141,slow=4.9,SNR=12						
KURK	Kurchatov	71.13	333	P	P	21 15 52.9	-0.9
KURK				IAmb	IAmb	21 16 08.5	
	comp=Z,3.0nm,1.4s						
SEY	Seymchan	77.41	14	P	P	21 16 31.1	+1.0
	comp=Z,0.6nm,0.5s,baz=217,slow=20						

*DDA **06** 21:08:07.4, 39°.30N×27°.02E, h7^{km}±4^{km}, ML2.1*

*ISK **06** 21:08:07.8, 39°.31N×27°.05E, h5^{km}, ML2.6/15*

ISC 06 21:08:07.8±0.9**, 39°.32N**±0°.02×**27°.05E**±0°.03**, h12**^{km}±7^{km}**, n21, σ0^s.43**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUHA	Balikesir, Bur	0.19	7	*i* P	Pg	21 08 12.2	+0.3
BUHA				*i* S	Sg	21 08 14.7	-0.1
BUHA				IAML		21 08 16.0	
	comp=N,505nm,0.2s						
BUHA				IAML		21 08 16.0	
	comp=E,422nm,0.2s						
DKL	Dikili	0.27	204	PG	Pg	21 08 13.5	+0.1
DKL				SG	Sg	21 08 17.7	+0.6
AYVA	Ayvalik	0.28	269	*i* P	Pg	21 08 12.3	-1.2
AYVA				*i* S	Sg	21 08 17.3	-0.1
ZEDA	zmir-Bergama	0.35	176	*i* P	Pg	21 08 15.1	+0.2
ZEDA				*i* S	Sg	21 08 19.4	-0.1
ZEDA				IAML		21 08 21.0	
	comp=N,494nm,0.4s						
BAYC	CANAKKALE_Bayr	0.57	318	*i* P	Pb	21 08 20.0	+0.1
BAYC				*i* S	Sg	21 08 26.6	-0.1
BAYC				IAML		21 08 29.0	
	comp=N,107nm,0.1s						
BAYC				IAML		21 08 29.0	
	comp=E,111nm,0.1s						
BALY	Balya	0.61	46	*i* P	Pg	21 08 20.1	+0.3
BALY				*i* S	Sg	21 08 27.1	-0.8
FOCM	Foa	0.65	202	PG	Pb	21 08 21.1	0.0
BALB	Balikesir	0.72	63	PG	Pb	21 08 22.2	-0.1
BALB				SG	Sb	21 08 31.8	-0.4
KOCA	Canakkale, Ayv	0.73	285	*i* P	Pn	21 08 24.6	+0.7
KOCA				*i* S	Sb	21 08 32.3	-0.1
EZN	Ezine	0.76	313	PG	Pg	21 08 22.7	+0.2
EZN				SG	Sb	21 08 33.8	+0.6
GONE	Gonen-Balikesi	0.88	34	PG	Pb	21 08 25.2	+0.1
GONE				SG	Sn	21 08 38.1	-0.7
BOZC	Bozcaada	0.93	305	PG	Pb	21 08 26.3	+0.4
SIGR	SIGRI	0.93	264	PG	Pn	21 08 26.6	-0.1
URLA	Izmir	1.02	200	PG	Pn	21 08 27.9	-0.1
LPK	Lapseki	1.08	348	PG	Pn	21 08 29.0	+0.2
GELI	Tayfur-Gelibol	1.17	338	PN	Pg	21 08 30.6	+0.3
MRMT	Marmara Adasi	1.35	18	PN	Pg	21 08 33.9	+0.1
ERIK	Erikli-Kesan	1.41	343	PN	Pb	21 08 34.5	+0.3
KULA	Kula-Manisa	1.49	122	PN	Pb	21 08 35.8	+0.3
ENEZ	Enez	1.58	334	PN	Pb	21 08 36.8	-0.1
ALN	Alexandroupoli	1.76	334	PN	Pb	21 08 39.7	-0.3

*NEIC **06** 21:10:31.6±0.4, 32°.84N±0°.04×96°.90W±0°.04, h6^{km}±7^{km}, mb_Lg3.5/99, Error ellipse: s-maj=6.1km s-min=3.4km az=218.0*

*ANF **06** 21:10:31.3±0.5, 32°.84N×96°.89W, h5^{km}±4^{km}, ML4.3/16, Error ellipse: s-maj=1.9km s-min=1.6km az=148.0*

*IDC **06** 21:10:39.6±6.2, 34°.01N×96°.86W, h0^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.5/50, mbtmp3.4/6, ML3.5/4, Error ellipse: s-maj=99.4km s-min=32.7km az=169.0*

ISC 06 21:10:31.3±1.3**, 32°.83N**±0°.03×**96°.88W**±0°.04**, h4**^{km}±10^{km}**, n113, σ0^s.69**/100**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Z35A	Perchaven, San	0.59	328		Pg	21 10 42.0	-0.5
Z35A				Sg	Sg	21 10 49.6	-0.6
Z35A	Perchaven, San	0.59	328	P		21 10 42.2	
	baz=149,SNR=190						
Z35A				S		21 10 49.8	
	baz=149						
WHTX	Lake Whitney,	0.97	210	P	Pg	21 10 50.1	+0.3
	baz=29						
WHTX				S	Sg	21 11 03.0	+0.5
	baz=29						
WHTX	Lake Whitney,	0.97	210		Pg	21 10 50.0	+0.1
WHTX	Lake Whitney,	0.97	210	P		21 10 50.1	
	baz=29,SNR=314						
WHTX				S		21 11 03.0	
	baz=29						
237A	Washetta, Mont	1.23	132		Pb	21 10 55.4	+0.4
237A				IAmb_Lg		21 11 10.3	
	comp=Z,261nm,0.8s						
237A	Washetta, Mont	1.23	132	P		21 10 55.4	
	baz=312,SNR=88						
237A				S		21 11 14.2	
	baz=312						
Z38A	Mt. Pleasant	1.65	74	Pn	Pn	21 11 01.1	+0.1
Z38A				IAmb_Lg		21 11 25.8	
	comp=Z,213nm,0.9s						
Z38A	Mt. Pleasant	1.65	74	P		21 11 01.1	
	baz=256,SNR=26						
Z38A				S		21 11 23.6	
	baz=256						
435B	Jarrell	2.13	197	P	Pn	21 11 07.7	0.0
	baz=16						
435B				Sb	Sg	21 11 39.1	-0.6
	baz=16						
435B	Jarrell	2.13	197	Pn	Pn	21 11 07.6	0.0
435B	Jarrell	2.13	197	P		21 11 07.8	
	baz=16						
X37A	Clayton	2.16	35	Pn	Pn	21 11 08.9	+0.8
X37A	Clayton	2.16	35	P		21 11 08.9	
	baz=216						
X37A				S		21 11 36.4	
	baz=216						
NATX	Nacogdoches	2.16	119	P	Pn	21 11 08.2	+0.2
	baz=300						
NATX				S	Sn	21 11 36.4	+1.1
	baz=300						
NATX	Nacogdoches	2.16	119		Pn	21 11 08.4	+0.3
NATX	Nacogdoches	2.16	119	P		21 11 08.4	
	baz=300						
W35A	Tecumseh	2.31	0		Pn	21 11 10.6	+0.4
ABTX	Abilene, Hawle	2.34	266	P	Pn	21 11 10.2	-0.4
	baz=84						
ABTX				S	Sn	21 11 40.2	+0.5
	baz=84						
ABTX	Abilene, Hawle	2.34	266	Pn	Pn	21 11 10.3	-0.3
ABTX	Abilene, Hawle	2.34	266	P		21 11 10.4	
	baz=84,SNR=207						
FNO	Franklin	2.46	350		Pn	21 11 11.2	-1.0
WMOK	Wichita Mounta	2.47	321	P	Pn	21 11 12.6	+0.2
	baz=140						
WMOK				S	Sn	21 11 43.7	+0.6
	baz=140						
WMOK	Wichita Mounta	2.47	321		Pn	21 11 12.6	+0.2
WMOK	Wichita Mounta	2.47	321	P		21 11 12.9	
	baz=140,SNR=316						
OKCSW	OKLAHOMA CITY	2.61	350		Pn	21 11 14.5	+0.3
OKCFA	Oklahoma City	2.62	350		Pn	21 11 14.9	+0.5
OKCFA				IAmb_Lg		21 11 53.8	
	comp=Z,211nm,0.7s						
OK025	Westminster Rd	2.77	352		Pn	21 11 16.4	-0.1
OK025				IAmb_Lg		21 11 58.7	
	comp=Z,229nm,0.8s						
HKT	Hockley	3.01	162	Pn	Pn	21 11 20.0	+0.4
HKT	Hockley	3.01	162	P		21 11 20.0	
	baz=343,SNR=14						
OK030	Cody Creek RV	3.09	1		Pn	21 11 21.0	+0.2
OK031	S. Brethren Rd	3.11	1		Pn	21 11 21.1	-0.1
TUL1	Leonard	3.20	16	P	Pn	21 11 22.5	+0.1
	baz=197						
TUL1				Sb	Sb	21 12 10.8	+2.8
	baz=197						
TUL1	Leonard	3.20	16		Pn	21 11 22.3	0.0
TUL1	Leonard	3.20	16	P		21 11 22.6	
	baz=197						
MIAR	Mount Ida	3.24	57	P	Pn	21 11 22.5	-0.4
	baz=239						
MIAR				S	Sn	21 11 59.9	-2.0
	baz=239						
MIAR	Mount Ida	3.24	57	Pn	Pn	21 11 22.5	-0.4
MIAR	Mount Ida	3.24	57	P		21 11 22.5	
	baz=239,SNR=54						
WLAR	White Oak Lake	3.27	74	Pn	Pn	21 11 23.7	+0.4
WLAR				IAmb_Lg		21 12 19.1	
	comp=Z,109nm,0.7s						
QUOK	Quay	3.33	2		Pn	21 11 24.4	+0.1
JCT	Junction City	3.42	228	P	Pn	21 11 25.3	-0.1
	baz=46						
JCT				S	Sn	21 12 06.6	+0.1
	baz=46						
JCT	Junction City	3.42	228	Pn	Pn	21 11 25.4	-0.1
JCT	Junction City	3.42	228	P		21 11 25.6	
	baz=46,SNR=42						
Z41A	Richland Creek	3.45	82	P	Pn	21 11 25.9	+0.1
	baz=264						
Z41A				S	Sn	21 12 06.8	-0.3
	baz=264						
Z41A	Richland Creek	3.45	82		Pn	21 11 25.9	+0.1
Z41A				IAmb_Lg		21 12 19.4	
	comp=Z,108nm,0.8s						
Z41A	Richland Creek	3.45	82	P		21 11 26.2	
	baz=264,SNR=11						
Z41A				P		21 11 26.2	
	baz=264,SNR=11						
W39A	Magazine	3.49	47	P	Pn	21 11 26.4	+0.1
	baz=228						
W39A				S	Sn	21 12 09.0	+0.9
	baz=228						
W39A	Magazine	3.49	47		Pn	21 11 27.5	+1.2
W39A				IAmb_Lg		21 12 28.5	
	comp=Z,148nm,0.9s						
W39A	Magazine	3.49	47	P		21 11 27.4	
	baz=228,SNR=35						
X40A	Basin Creek Fa	3.75	63	P	Pn	21 11 29.8	-0.2
	baz=245						
X40A	Basin Creek Fa	3.75	63		Pn	21 11 29.8	-0.2
X40A	Basin Creek Fa	3.75	63	P		21 11 29.8	
	baz=245,SNR=28						
X40A				P		21 11 29.8	
	baz=245,SNR=28						
441A	DeRidder	3.77	122		Pn	21 11 30.5	+0.4
441A				IAmb_Lg		21 12 36.6	
	comp=Z,84nm,1.2s						
441A	DeRidder	3.77	122	P		21 11 31.1	
	baz=304,SNR=15						
CROK	Carrier	3.77	346	Pn	Pn	21 11 30.1	-0.2
U32A	Winter Ranch,	3.95	334		Pn	21 11 32.6	0.0
U32A	Winter Ranch,	3.95	334	P		21 11 33.1	
	baz=153						
735A	Kenedy	4.04	192	Pn	Pn	21 11 33.4	-0.6
735A				IAmb_Lg		21 12 46.8	
	comp=Z,148nm,0.8s						
T35A	Sooner Cattle	4.08	4	Pn	Pn	21 11 34.4	-0.1
T35A				IAmb_Lg		21 12 51.6	
	comp=Z,164nm,0.9s						
T35B	Sooner Cattle	4.08	4	P		21 11 34.6	
	baz=185,SNR=14						
GC02	Grant County #	4.09	349		Pn	21 11 34.4	-0.2
342A	Flagon Creek P	4.13	109		Pn	21 11 35.3	+0.2
342A				IAmb_Lg		21 12 41.0	
	comp=Z,103nm,0.8s						
U38A	Gravette	4.14	29	Pn	Pn	21 11 35.3	0.0
U38A				IAmb_Lg		21 12 47.7	
	comp=Z,120nm,0.8s						
U38A	Gravette	4.14	29	P		21 11 35.4	
	baz=211,SNR=6.7						
KAN13	South Haven SW	4.20	353		Pn	21 11 35.9	-0.2
HHAR	Hobbs	4.21	34		Pn	21 11 36.4	+0.2
KAN14	Manchester OK	4.21	348		Pn	21 11 36.0	-0.3
KAN10	Anthony SW Sta	4.40	347		Pn	21 11 38.5	-0.4
CCAR	Cane Creek	4.41	74		Pn	21 11 39.0	+0.1
CCAR				IAmb_Lg		21 13 03.8	
	comp=Z,149nm,1.0s						
AMTX	Amarillo	4.49	298	P	Pn	21 11 40.6	+0.4
	baz=116						
AMTX	Amarillo	4.49	298	Pn	Pn	21 11 40.5	+0.4
AMTX	Amarillo	4.49	298	P		21 11 40.7	
	baz=116,SNR=30						
W41B	Gary Mavity, V	4.50	57	P	Pn	21 11 40.5	+0.3
	baz=240						
W41B	Gary Mavity, V	4.50	57	Pn	Pn	21 11 40.7	+0.5
W41B	Gary Mavity, V	4.50	57	P		21 11 40.7	
	baz=240,SNR=26						
WHAR	Wooly Hollow	4.53	56	Pn	Pn	21 11 41.2	+0.6
143A	Socs Landing,	4.61	90	IAmb_Lg		21 12 59.3	
	comp=Z,61nm,0.9s						
143A	Socs Landing,	4.61	90	P		21 11 41.6	
	baz=273,SNR=12						
U40A	Yellville	4.83	42	P	Pn	21 11 45.2	+0.4
	baz=225						
U40A	Yellville	4.83	42	IAmb_Lg		21 13 16.3	
	comp=Z,61nm,0.8s						
U40A	Yellville	4.83	42	P		21 11 45.2	
	baz=225,SNR=27						
U40A				P		21 11 45.2	
	baz=225,SNR=27						
833A	Chaparral WMA,	4.99	206	P	Pn	21 11 47.2	+0.3
	baz=25						
833A				S	Sn	21 12 43.4	-1.7
	baz=25						
833A	Chaparral WMA,	4.99	206	IAmb_Lg		21 13 10.2	
	comp=Z,109nm,0.9s						
833A	Chaparral WMA,	4.99	206	P		21 11 47.5	
	baz=25,SNR=6.9						
MSTX	Muleshoe	5.06	285	P	Pn	21 11 47.7	-0.3
	baz=101						
X43A	Marvell	5.28	70	IAmb_Lg		21 13 19.8	
	comp=Z,53nm,0.8s						
S39A	Bolivar	5.65	30	Pn	Pn	21 11 57.4	+1.3
S39A				IAmb_Lg		21 13 40.7	
	comp=Z,56nm,0.8s						
MGMO	Mountain Grove	5.74	40	IAmb_Lg		21 13 39.8	
	comp=Z,120nm,1.1s						
R32A	Long Quarter,	5.77	346		Pn	21 11 56.8	-1.0
R32A				IAmb_Lg		21 13 41.3	
	comp=Z,65nm,0.8s						
CPRX	Cap Rock	5.88	274		Pn	21 11 59.1	-0.2
CLNB	Carlsbad	5.94	266		Pn	21 11 59.9	-0.3
LPAR	Lepanto	6.11	61	IAmb_Lg		21 13 40.6	
	comp=Z,52nm,0.8s						
Y45A	Yeager Farm, C	6.22	78	Pn	Pn	21 12 03.7	-0.2
Y45A				IAmb_Lg		21 13 52.7	
	comp=Z,44nm,0.8s						
KSU1	Kansas State U	6.26	2	P	Pn	21 12 03.7	-0.7
	baz=182						
KSU1	Kansas State U	6.26	2		Pn	21 12 03.2	-1.2
GDL2	Guadalupe Moun	6.35	266		Pn	21 12 04.9	-1.0
CBKS	Cedar Bluff	6.40	340	P	Pn	21 12 05.7	-0.7
	baz=158						
CBKS	Cedar Bluff	6.40	340	Pn	Pn	21 12 05.1	-1.3
CBKS				IAmb_Lg		21 14 11.0	
	comp=Z,71nm,0.8s						
CBKS	Cedar Bluff	6.40	340	P		21 12 05.7	
	baz=158,SNR=15						
OXF	Oxford	6.45	73	Pn	Pn	21 12 06.6	-0.4
PBMO	Poplar Bluff	6.61	52		Pn	21 12 08.7	-0.4
R40A	Maddies Statio	6.62	33		Pn	21 12 09.0	-0.3
R40A				IAmb_Lg		21 14 05.6	
	comp=Z,64nm,1.0s						
CCM	Cathedral Cave	6.95	40	P	Pn	21 12 13.7	-0.2
	baz=223						
CCM	Cathedral Cave	6.95	40	Pn	Pn	21 12 14.6	+0.7
CCM				IAmb_Lg		21 14 08.8	
	comp=Z,42nm,0.9s						
MNTX	Cornudas Mount	7.29	263	P	Pn	21 12 18.0	-0.6
	baz=79						
MNTX	Cornudas Mount	7.29	263	IAmb_Lg		21 14 32.3	
	comp=Z,90nm,0.7s						
MNTX	Cornudas Mount	7.29	263	P		21 12 18.0	
	baz=79,SNR=21						
P38A	Dawn	7.30	21	IAmb_Lg		21 14 32.1	
	comp=Z,48nm,0.8s						
FVM	French Village	7.36	44		Pn	21 12 19.1	-0.4
T25A	Trinidad	7.53	307	P	Pn	21 12 21.3	-0.7
	baz=123						
T25A	Trinidad	7.53	307	Pn	Pn	21 12 21.1	-0.9
KSCO	Kaye Shedlock'	7.73	325	P	Pn	21 12 24.5	-0.2
	baz=141						
KSCO	Kaye Shedlock'	7.73	325	IAmb_Lg		21 14 48.3	
	comp=Z,62nm,0.8s						
P40A	Paris	7.74	29		Pn	21 12 24.8	+0.1
P40A				IAmb_Lg		21 14 44.0	
	comp=Z,69nm,0.8s						
S44A	Carbondale	7.90	50	IAmb_Lg		21 14 46.3	
	comp=Z,30nm,0.8s						
N33A	J Bar K, Exete	7.90	357	IAmb_Lg		21 14 54.9	
	comp=Z,81nm,1.1s						
SLM	Saint Louis	7.92	41	IAmb_Lg		21 14 52.7	
	comp=Z,45nm,1.0s						
SIUC	Southern Illin	7.93	50	IAmb_Lg		21 14 54.0	
	comp=Z,33nm,0.7s						
T45A	Paducah	7.95	56	IAmb_Lg		21 14 43.7	
	comp=Z,40nm,0.7s						
WVT	Waverly	8.16	64	P	Pn	21 12 29.7	-0.8
	baz=249						
ANMO	Albuquerque	8.24	287	Pn	Pn	21 12 38.7	+6.9
	comp=Z,0.4nm,0.3s,baz=102,slow=17,SNR=3.5						
ANMO				Pg	Pb	21 13 01.1	+6.5
	comp=Z,1.4nm,0.3s,baz=112,slow=15,SNR=6.0						
ANMO				Lg	Lg	21 14 48.9	
	comp=Z,8.8nm,0.3s,baz=13,slow=16,SNR=11						
ANMO	Albuquerque	8.24	287	IAmb_Lg		21 15 00.9	
	comp=Z,92nm,1.2s						
ANMO				IAmb_Lg		21 15 00.9	
	comp=Z,93nm,1.2s						
SDCO	Great Sand Dun	8.58	307	P	Pn	21 12 37.4	+0.8
	baz=122						
SDCO	Great Sand Dun	8.58	307	IAmb_Lg		21 15 10.4	
	comp=Z,33nm,0.8s						
P43A	Skaggs, Pawnee	9.02	39	IAmb_Lg		21 15 20.3	
	comp=Z,65nm,1.0s						
Q24A	Divide	9.08	315	IAmb_Lg		21 15 22.2	
	comp=Z,71nm,1.1s						
OGNE	Ogallala	9.09	334	IAmb_Lg		21 15 28.8	
	comp=Z,58nm,0.8s						
N41A	Harden Midland	9.22	30	IAmb_Lg		21 15 36.3	
	comp=Z,57nm,0.8s						
OLIL	Olney	9.25	48	IAmb_Lg		21 15 35.1	
	comp=Z,46nm,1.1s						
SCIA	State Center	9.51	17	IAmb_Lg		21 15 40.2	
	comp=Z,56nm,0.9s						
ISCO	Idaho Springs	9.89	317	P	Pn	21 12 54.3	-0.3
	baz=132						
ISCO	Idaho Springs	9.89	317	IAmb_Lg		21 15 53.7	
	comp=Z,28nm,0.8s						
O44A	Mansfield	9.96	40	IAmb_Lg		21 16 03.5	
	comp=Z,39nm,1.0s						
N23A	Red Feather La	10.83	321	P	Pn	21 13 07.7	+0.4
	baz=135						
SFIN	Lafayette	10.88	43	P	Pn	21 13 08.1	+0.3
	baz=229						
PDAR	Pinedale Array	14.08	318	Pn	Pn	21 13 50.9	-0.9
	comp=Z,0.1nm,0.3s,baz=126,slow=18,SNR=3.2						
ELK	Elko	16.67	303	Pn	P	21 14 28.6	+0.1
	comp=Z,0.1nm,0.3s,baz=82,slow=10.0,SNR=3.7						
NVAR	Mina Array Bea	18.27	294	P	P	21 14 47.8	+1.6
	comp=Z,0.1nm,0.3s,baz=101,slow=11,SNR=4.2						
YKA	Yellowknife Ar	31.76	344	P	P	21 16 54.5	-1.8
	comp=Z,0.1nm,0.5s,baz=139,slow=11,SNR=6.4						
ILAR	Eielson Array	43.99	332	P	P	21 18 39.6	+0.2
	comp=Z,0.3nm,0.8s,baz=116,slow=6.7,SNR=4.7						

ISN ***06*** *21:20:43.5±1.2, 33°.73N×48°.84E, h0^{km}±130^{km}, ML3.2*
TEH ***06*** *21:20:44.6, 33°.73N×48°.83E, h8^{km}, ML3.5*
ISC 06 21:20:45.8±0.8**, 33°.73N**±0°.04×**48°.87E**±0°.02**, h13**^{km}**, n45, σ1^{s}82**/49**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKMR	**Kamar-syah**	**0.46**	**243**	*e*Pg	**Pg**	**21 20 53.2**	**-1.6**
IKMR				*e*		21 21 03.2	
	comp=Z,99nm,0.5s						
IKFM	**Kafar-mosalman**	**0.87**	**257**	*e*Pg	**Pg**	**21 21 01.0**	**-1.7**
IKFM				*e*Sg	**Sg**	**21 21 13.6**	**-0.5**
KHMZ	**Khomeyn**	**0.91**	**89**	*e*Pg	**Pg**	**21 21 00.6**	**-2.8**
IBZA	**Bozab**	**1.12**	**312**	*e*		21 21 27.5	
	comp=Z,99nm,0.7s						
IBZA				*e*Pg	**Pb**	**21 21 06.0**	**-1.1**
IKOM	**Komasi**	**1.21**	**292**	*e*		21 21 32.9	
	comp=Z,99nm,0.7s						
IKOM				*e*Pg	**Pn**	**21 21 07.3**	**-1.3**
ASAO	**Ashtian**	**1.26**	**49**	*e*Pg	**Pn**	**21 21 08.3**	**-1.1**
IALM	**Almabolaq**	**1.27**	**333**	*e*Pg	**Pn**	**21 21 09.1**	**-0.4**
KER	**Kermanshah**	**1.58**	**295**	*e*Pg	**Pb**	**21 21 15.3**	**+0.3**
HSRG	**Sareghieh**	**1.59**	**342**	*e*Pg	**Pn**	**21 21 14.2**	**+0.3**
HSRG				*e*		21 21 39.4	
	comp=Z,99nm,0.5s						
KCHF	**Cheshme Sefid,**	**1.61**	**290**	*e*Pn	**Pb**	**21 21 15.1**	**-0.4**
KCHF				*e*		21 21 44.9	
	comp=Z,99nm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.61**	**182**	*e*Pn	**Pn**	**21 21 14.1**	**+0.2**
IVIS	**Veis**	**1.85**	**296**	*e*Pn	**Pb**	**21 21 19.7**	**+0.1**
IVIS				*e*		21 21 58.8	
	comp=Z,99nm,0.8s						
SNGE	**Sanandaj**	**1.85**	**318**	*e*Pn	**Pb**	**21 21 19.4**	**-0.3**
IRAZ	**Razeghan**	**1.89**	**27**	*e*Pn	**Pn**	**21 21 19.4**	**+1.4**
IRAZ				*e*		21 22 00.3	
	comp=Z,99nm,0.8s						
IPIR	**Pirpir**	**1.99**	**121**	*e*Pn	**Pn**	**21 21 19.6**	**+0.2**
IPIR				*e*		21 21 57.2	
	comp=Z,99nm,0.6s						
IGHG	**Ghaleghazi**	**2.00**	**288**	*e*Pn	**Pn**	**21 21 20.6**	**+1.1**
IGHG				*e*		21 22 03.3	
	comp=Z,99nm,0.8s						
QABG	**Abgarm-Qazvin**	**2.06**	**16**	*e*Pn	**Pn**	**21 21 21.1**	**+0.7**
AMIS	**Naft Sefid**	**2.08**	**170**	*e*Pn	**Pn**	**21 21 21.9**	**+1.4**
AMIS				*e*		21 22 07.0	
	comp=Z,99nm,0.8s						
IQOM	**Qom**	**2.14**	**58**	*e*Pn	**Pb**	**21 21 23.8**	**-0.7**
IQOM				*e*		21 22 02.5	
	comp=Z,99nm,0.8s						
QAM	**Ghamsar**	**2.15**	**88**	*e*Pn	**Pn**	**21 21 22.8**	**+1.3**
GHVR	**GHOM**	**2.15**	**69**	*e*Pn	**Pn**	**21 21 21.0**	**-0.4**
SHK1	**Shahrekord**	**2.19**	**129**	*e*Pn	**Pn**	**21 21 23.8**	**+1.6**
SHK1				*e*		21 22 00.5	
	comp=Z,99nm,0.5s						
IDHR	**Dehrash**	**2.27**	**296**	*e*Pn	**Pb**	**21 21 26.0**	**-0.8**
IDHR				*e*		21 22 09.4	
	comp=Z,99nm,0.4s						
IKLH	**Kolahrood**	**2.30**	**99**	*e*Pn	**Pn**	**21 21 25.6**	**+1.9**
IKLH				*e*		21 22 00.7	
	comp=Z,99nm,0.4s						
AHWZ	**Ahwaz**	**2.40**	**185**	*e*Pn	**Pn**	**21 21 26.5**	**+1.8**
IMHD	**Mahdasht**	**2.46**	**37**	*e*	**Sg**	**21 22 04.4**	**-0.3**
	comp=Z,99nm,0.7s						
IBDR	**Badra**	**2.53**	**257**	*e*Pn	**Pn**	**21 21 27.0**	**+0.4**
IBDR				*e*Sn	**Sn**	**21 21 59.0**	**+1.7**
IBDR				AML	AML	21 22 12.1	
	comp=N,128nm,0.7s						
IBDR				AML	AML	21 22 17.8	
	comp=E,178nm,0.5s						
IHSB	**Hasanabad**	**2.62**	**49**	*e*Pn	**Pn**	**21 21 30.1**	**+2.2**
IVRN	**Varamin**	**2.69**	**61**	*e*Pn	**Pb**	**21 21 32.2**	**-1.5**
IVRN				*e*		21 22 26.5	
	comp=Z,99nm,0.4s						
KRSH	**Karshahi**	**2.73**	**84**	*e*Pn	**Pb**	**21 21 32.6**	**-2.0**
QSDN	**Sirdan**	**2.78**	**5**	*e*Pn	**Pn**	**21 21 32.4**	**+2.1**
IGAR	**Gharneh**	**2.97**	**115**	*e*Pn	**Pn**	**21 21 35.4**	**+2.5**
IGAR				*e*		21 22 29.3	
	comp=Z,99nm,0.6s						
IZEF	**Zefreh**	**3.02**	**105**	*e*Pn	**Pn**	**21 21 36.8**	**+3.3**
QALM	**Alamut, Qazvin**	**3.07**	**28**	*e*Pn	**Pn**	**21 21 37.4**	**+3.2**
IDMV	**Damavand**	**3.20**	**54**	*e*Pn	**Pn**	**21 21 38.3**	**+2.3**
NSR	**Nassriya**	**3.56**	**221**	*e*Pn	**Pn**	**21 21 41.0**	**+0.3**
NSR				*e*Sn	**Sn**	**21 22 23.0**	**+0.4**
KLNJ	**Kolanjah**	**3.56**	**139**	*e*Pn	**Pn**	**21 21 42.7**	**+1.7**
IFIR	**Firoozkooh**	**3.73**	**58**	*e*Pn	**Pn**	**21 21 46.8**	**+3.5**
ILAS	**Lasjerd**	**3.76**	**63**	*e*Pn	**Pn**	**21 21 46.2**	**+2.5**
BHD	**Baghdad**	**3.78**	**264**	*e*Pn	**Pn**	**21 21 45.0**	**+1.3**
BHD				*e*Sn	**Sn**	**21 22 30.0**	**+2.0**
ANAR	**Anarak**	**4.10**	**96**	*e*Pn	**Pn**	**21 21 50.9**	**+2.6**
MIB	**Mutribah**	**4.12**	**199**	*e*P		21 21 50.4	
ISHM	**Shahmirzad**	**4.19**	**59**	*e*Pn	**Pn**	**21 21 53.0**	**+3.3**
ISRB	**Sarab**	**4.21**	**347**	*e*Pn	**Pn**	**21 21 52.4**	**+2.6**
RST	**Umm Al-Ruwaisa**	**4.50**	**201**	*e*P		21 21 55.4	
IANJ	**Anjilo**	**4.51**	**66**	*e*Pn	**Pn**	**21 21 57.0**	**+3.0**
RDF	**Al-Radifah**	**4.92**	**194**	*e*P		21 22 01.2	
TPRV	**Parvadeh(Tabas**	**6.58**	**94**	*e*Pn	**Pn**	**21 22 24.3**	**+2.0**

IDC ***06*** *21:24:21.5±1.9, 9°.96S×121°.19E, h0^{km}, mb3.9/4, mb1 3.8/6, mb1mx3.5/39, mbtmp3.7/6, ML3.4/2, Error ellipse: s-maj=209.4km s-min=21.7km az=54.0*
ISC 06 21:24:27.3±1.4**, 9°.9S**±0°.5×**121°.7E**±0°.5**, h35**^{km}**, n6, σ3^{s}46**/8**, mb3.8**/4**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.76**	**131**	Pn	**Pn**	**21 28 09.4**	**+2.7**
	0.1nm,0.3s,baz=306,slow=15,SNR=2.6						
WRA				Sn	**Sn**	**21 30 58.4**	**-2.1**
	0.1nm,0.3s,baz=310,slow=26,SNR=1.5						
ASAR	**Alice Springs**	**17.98**	**141**	P	**P**	**21 28 38.0**	**+3.1**
	0.2nm,0.3s,baz=318,slow=13,SNR=24						
ASAR				S	**Sn**	**21 31 48.5**	**-5.8**
	0.1nm,0.3s,baz=311,slow=23,SNR=3.2						
STKA	**Stephens Creek**	**28.60**	**143**	P	**P**	**21 30 20.9**	**+0.6**
	0.5nm,0.3s,baz=320,slow=7.9,SNR=1.8						
MKAR	**Makanchi Array**	**66.48**	**332**	P	**P**	**21 35 12.0**	**-1.3**
	0.6nm,0.5s,baz=155,slow=7.3,SNR=11						
ZALV	**Zalesovo Beam**	**70.83**	**338**	P	**P**	**21 35 39.1**	**-1.1**
	1.3nm,0.6s,baz=140,slow=5.2,SNR=7.1						
KURBB	**Kurchatov Arra**	**70.96**	**333**	P	**P**	**21 35 39.6**	**-1.4**
	0.3nm,0.5s,baz=142,slow=5.5,SNR=6.5						

ANF ***06*** *21:55:18.4±0.6, 32°.81N×100°.90W, h0^{km}±4^{km}, ML4.6/12, Error ellipse: s-maj=3.2km s-min=2.0km az=39.0*
NEIC ***06*** *21:55:19.1±1.3, 32°.87N±0°.05×100°.87W±0°.03, h4^{km}±7^{km}, mb_Lg3.5/99, Error ellipse: s-maj=7.8km s-min=3.7km az=187.0*
ISC 06 21:55:19.6±1.4**, 32°.88N**±0°.05×**100°.81W**±0°.03**, h5**^{km}±12^{km}**, n80, σ1^{s}36**/64**, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTX	**Abilene, Hawle**	**1.01**	**105**	P	**Pg**	**21 55 39.0**	**-0.1**
	baz=286						
ABTX				S	**Sg**	**21 55 53.3**	**+1.1**
	baz=286						
ABTX	**Abilene, Hawle**	**1.01**	**105**		**Pg**	**21 55 39.0**	**-0.1**
ABTX				Sg	**Sg**	**21 55 53.4**	**+1.2**
ABTX	**Abilene, Hawle**	**1.01**	**105**	P		21 55 39.1	
	baz=286,SNR=149						
ABTX				S		21 55 53.5	
	baz=286						
MSTX	**Muleshoe**	**1.97**	**304**	P	**Pn**	**21 55 52.9**	**-1.0**
	baz=123						
MSTX				S	**Sn**	**21 56 18.5**	**-0.5**
	baz=123						
MSTX	**Muleshoe**	**1.97**	**304**		**Pn**	**21 55 52.7**	**-1.1**
MSTX	**Muleshoe**	**1.97**	**304**	P		21 55 52.9	
	baz=123,SNR=208						
MSTX				S		21 56 18.8	
	baz=123						
AMTX	**Amarillo**	**2.12**	**340**	P	**Pn**	**21 55 56.4**	**+0.4**
	baz=160						
AMTX				S	**Sb**	**21 56 25.6**	**+0.2**
	baz=160						
AMTX	**Amarillo**	**2.12**	**340**		**Pn**	**21 55 56.1**	**+0.1**
AMTX	**Amarillo**	**2.12**	**340**	P		21 55 56.4	
	baz=160,SNR=904						
WMOK	**Wichita Mounta**	**2.50**	**42**	P	**Pn**	**21 55 58.3**	**-2.8**
	baz=224						
WMOK				S	**Sb**	**21 56 35.2**	**-1.1**
	baz=224						
WMOK	**Wichita Mounta**	**2.50**	**42**	Pn	**Pn**	**21 55 58.8**	**-2.3**
WMOK				IAmb_Lg		21 56 40.1	
	comp=Z,164nm,0.8s						
WMOK	**Wichita Mounta**	**2.50**	**42**	P		21 55 58.4	
	baz=224,SNR=16						
JCT	**Junction City**	**2.54**	**160**	P	**Pn**	**21 56 01.0**	**-0.7**
	baz=340						
JCT				S	**Sn**	**21 56 32.6**	**-0.5**
	baz=340						
JCT	**Junction City**	**2.54**	**160**		**Pn**	**21 56 00.9**	**-0.7**
JCT	**Junction City**	**2.54**	**160**	P		21 56 01.1	
	baz=340,SNR=66						
JCT				S		21 56 33.3	
	baz=340						
CPRX	**Cap Rock**	**2.58**	**274**		**Pn**	**21 56 01.4**	**-0.9**
CLNB	**Carlsbad**	**2.67**	**257**		**Pn**	**21 56 01.6**	**-1.8**
WHTX	**Lake Whitney,**	**2.97**	**107**	P	**Pn**	**21 56 07.6**	**+0.2**
	baz=289						
WHTX				Sb	**Sb**	**21 56 52.8**	**+3.1**
	baz=289						
WHTX	**Lake Whitney,**	**2.97**	**107**		**Pn**	**21 56 07.6**	**+0.2**
WHTX				IAmb_Lg		21 57 02.3	
	comp=Z,160nm,0.8s						
WHTX	**Lake Whitney,**	**2.97**	**107**	P		21 56 07.7	
	baz=289,SNR=32						
Z35A	**Perchaven, San**	**3.01**	**81**	P		21 56 08.9	
	baz=263						
GDL2	**Guadalupe Moun**	**3.08**	**258**		**Pn**	**21 56 08.5**	**-0.7**
435B	**Jarrell**	**3.45**	**127**	S	**Sn**	**21 56 55.7**	**+0.4**
	baz=308						
435B	**Jarrell**	**3.45**	**127**		**Pn**	**21 56 16.4**	**+2.3**
435B	**Jarrell**	**3.45**	**127**	P		21 56 15.7	
	baz=308						
435B				S		21 56 55.9	
	baz=308						
MNTX	**Cornudas Mount**	**4.05**	**254**	P	**Pn**	**21 56 20.6**	**-1.8**
	baz=71						
MNTX	**Cornudas Mount**	**4.05**	**254**		**Pn**	**21 56 21.1**	**-1.3**
MNTX				IAmb_Lg		21 57 31.6	
	comp=Z,121nm,0.8s						
MNTX	**Cornudas Mount**	**4.05**	**254**	P		21 56 20.7	
	baz=71,SNR=73						
MNTX				S		21 57 09.4	
	baz=71						
237A	**Washetta, Mont**	**4.32**	**100**		**Pn**	**21 56 26.1**	**+0.1**
OK031	**S. Brethren Rd**	**4.49**	**46**	IAmb_Lg		21 57 45.8	
	comp=Z,73nm,0.8s						
OK030	**Cody Creek RV**	**4.50**	**46**	IAmb_Lg		21 57 48.3	
	comp=Z,80nm,0.7s						
833A	**Chaparral WMA,**	**4.71**	**165**	P	**Pn**	**21 56 30.0**	**-1.3**
	baz=345						
833A	**Chaparral WMA,**	**4.71**	**165**		**Pn**	**21 56 30.0**	**-1.3**
833A				IAmb_Lg		21 57 55.9	
	comp=Z,104nm,0.8s						
QUOK	**Quay**	**4.71**	**45**	IAmb_Lg		21 57 54.2	
	comp=Z,84nm,0.9s						
735A	**Kenedy**	**4.77**	**147**	Pn	**Pn**	**21 56 31.6**	**-0.7**
X37A	**Clayton**	**4.84**	**68**	Pn	**Pn**	**21 56 33.4**	**+0.3**
X37A				IAmb_Lg		21 58 06.8	
	comp=Z,124nm,0.8s						
Z38A	**Mt. Pleasant**	**4.90**	**84**	IAmb_Lg		21 58 09.8	
	comp=Z,110nm,1.0s						
BNM	**Barren Site**	**5.03**	**286**		**Pn**	**21 56 35.0**	**-1.0**
KS21	**Milan North St**	**5.09**	**30**	IAmb_Lg		21 58 06.4	
	comp=Z,78nm,0.7s						
ANMO	**Albuquerque**	**5.13**	**295**	Pb	**Pb**	**21 56 48.3**	**-1.7**
	baz=112						
ANMO				Sb	**Sb**	**21 57 53.0**	**+1.0**
	baz=112						
ANMO	**Albuquerque**	**5.13**	**295**		**Pn**	**21 56 36.5**	**-0.8**
HKT	**Hockley**	**5.16**	**123**	IAmb_Lg		21 58 09.5	
	comp=Z,68nm,1.0s						
T25A	**Trinidad**	**5.17**	**326**	P	**Pn**	**21 56 37.6**	**-0.4**
	baz=144						
T25A				Sb	**Sb**	**21 57 56.6**	**+3.2**
	baz=144						
T25A	**Trinidad**	**5.17**	**326**	Pn	**Pn**	**21 56 37.6**	**-0.4**
T25A				IAmb_Lg		21 58 08.7	
	comp=Z,115nm,0.8s						
Y22D	**IRIS PASSCAL I**	**5.25**	**285**	Sb	**Sb**	**21 57 57.1**	**+1.7**
	baz=101						
NATX	**Nacogdoches**	**5.32**	**101**	IAmb_Lg		21 58 21.4	
	comp=Z,108nm,0.9s						
T35A	**Sooner Cattle**	**5.35**	**40**	IAmb_Lg		21 58 25.1	
	comp=Z,66nm,0.8s						
R32A	**Long Quarter,**	**5.78**	**17**	IAmb_Lg		21 58 38.5	
	comp=Z,90nm,0.7s						
121A	**Cookes Peak, D**	**5.89**	**268**		**Pn**	**21 56 46.9**	**-0.9**
121A				IAmb_Lg		21 58 38.6	
	comp=Z,58nm,0.8s						
CBKS	**Cedar Bluff**	**5.98**	**8**	P	**Pn**	**21 56 49.1**	**+0.2**
	baz=189						
CBKS	**Cedar Bluff**	**5.98**	**8**	Pn	**Pn**	**21 56 49.9**	**+0.9**
CBKS				IAmb_Lg		21 58 41.0	
	comp=Z,58nm,0.8s						
SDCO	**Great Sand Dun**	**6.18**	**323**	Sb	**Sb**	**21 58 28.1**	**+5.6**
	baz=140						
SDCO	**Great Sand Dun**	**6.18**	**323**		**Pn**	**21 56 52.5**	**+0.6**
SDCO				IAmb_Lg		21 58 41.7	
	comp=Z,75nm,0.9s						
MIAR	**Mount Ida**	**6.25**	**73**	P	**Pn**	**21 56 53.2**	**+0.7**
	baz=257						
MIAR				S	**Sn**	**21 58 04.2**	**-0.2**
	baz=257						
MIAR	**Mount Ida**	**6.25**	**73**	Pn	**Pn**	**21 56 53.3**	**+0.8**
MIAR	**Mount Ida**	**6.25**	**73**	P		21 56 53.2	
	baz=257,SNR=6.1						
W39A	**Magazine**	**6.27**	**66**	P	**Pn**	**21 56 53.1**	**+0.3**
	baz=251						
W39A				S	**Sn**	**21 58 04.5**	**-0.4**
	baz=251						
W39A	**Magazine**	**6.27**	**66**	IAmb_Lg		21 58 45.7	
	comp=Z,68nm,0.8s						
KSCO	**Kaye Shedlock’**	**6.29**	**347**	P	**Pn**	**21 56 52.7**	**-0.6**
	baz=166						
KSCO	**Kaye Shedlock’**	**6.29**	**347**		**Pn**	**21 56 52.3**	**-0.9**
KSCO				IAmb_Lg		21 58 40.4	
	comp=Z,57nm,0.8s						
U38A	**Gravette**	**6.37**	**54**	IAmb_Lg		21 58 43.4	
	comp=Z,90nm,0.7s						
WLAR	**White Oak Lake**	**6.49**	**81**	Pn	**Pn**	**21 56 55.0**	**-0.9**
WLAR				IAmb_Lg		21 59 00.8	
	comp=Z,65nm,0.8s						
HHAR	**Hobbs**	**6.60**	**57**	IAmb_Lg		21 59 02.3	
	comp=Z,46nm,0.8s						
Z41A	**Richland Creek**	**6.73**	**85**	Pb	**Pb**	**21 57 16.4**	**-0.7**
	baz=269						
Z41A	**Richland Creek**	**6.73**	**85**	IAmb_Lg		21 59 14.0	
	comp=Z,82nm,1.3s						
S22A	**4UR Ranch, Cre**	**6.91**	**316**	Pn	**Pn**	**21 57 02.4**	**+0.4**
Q24A	**Divide**	**7.01**	**331**		**Pn**	**21 57 03.2**	**-0.1**
Q24A				IAmb_Lg		21 59 10.9	
	comp=Z,45nm,0.8s						
U40A	**Yellville**	**7.41**	**60**	IAmb_Lg		21 59 22.0	
	comp=Z,50nm,0.8s						
W41B	**Gary Mavity, V**	**7.46**	**70**	P	**Pn**	**21 57 09.1**	**-0.1**
	baz=255						
W41B	**Gary Mavity, V**	**7.46**	**70**		**Pn**	**21 57 08.9**	**-0.3**
W41B	**Gary Mavity, V**	**7.46**	**70**	P		21 57 08.8	
	baz=255,SNR=6.8						
WHAR	**Wooly Hollow**	**7.46**	**69**		**Pn**	**21 57 09.2**	**0.0**
WHAR				IAmb_Lg		21 59 30.2	
	comp=Z,40nm,1.0s						
CCAR	**Cane Creek**	**7.62**	**80**		**Pn**	**21 57 11.2**	**-0.3**
CCAR				IAmb_Lg		21 59 35.6	
	comp=Z,40nm,0.7s						
W18A	**Petrified Fore**	**7.74**	**289**		**Pn**	**21 57 12.2**	**-1.0**
S39A	**Bolivar**	**7.77**	**50**	IAmb_Lg		21 59 36.4	
	comp=Z,42nm,0.7s						
FCAR	**Ozark Folk Cen**	**7.78**	**65**		**Pn**	**21 57 13.4**	**-0.1**
ISCO	**Idaho Springs**	**7.92**	**332**	Pn	**Pn**	**21 57 16.4**	**+0.7**
ISCO				IAmb_Lg		21 59 39.3	
	comp=Z,48nm,1.2s						
OGNE	**Ogallala**	**8.11**	**353**		**Pn**	**21 57 17.1**	**-1.1**
MGMO	**Mountain Grove**	**8.20**	**56**	Pn	**Pn**	**21 57 20.8**	**+1.5**
MGMO				IAmb_Lg		21 59 49.5	
	comp=Z,54nm,0.7s						
TUC	**Tucson**	**8.44**	**269**	IAmb_Lg		21 59 58.1	
	comp=Z,7.1nm,0.8s						
TUC	**Tucson**	**8.44**	**269**	IAmb_Lg		21 59 58.1	
	comp=Z,7.2nm,0.8s						
PV18	**Skein Mesa, Pa**	**8.50**	**311**	IAmb_Lg		22 00 02.9	
	comp=Z,29nm,1.2s						
PV17	**East Wray Mesa**	**8.55**	**311**	IAmb_Lg		22 00 00.9	
	comp=Z,35nm,1.2s						
PV14	**Lion Creek, Pa**	**8.64**	**312**	IAmb_Lg		22 00 12.6	
	comp=Z,32nm,1.3s						
PV10	**Paradox Valley**	**8.65**	**312**	IAmb_Lg		21 59 51.8	
	comp=Z,40nm,1.1s						
R40A	**Maddies Statio**	**8.80**	**50**	IAmb_Lg		22 00 00.5	
	comp=Z,52nm,0.9s						
N23A	**Red Feather La**	**8.99**	**334**	IAmb_Lg		22 00 17.2	
	comp=Z,41nm,0.8s						
WUAZ	**Wupatki**	**9.14**	**290**	IAmb_Lg		22 00 04.7	
	comp=Z,28nm,0.9s						
PHWY	**Pilot Hill**	**9.19**	**337**	IAmb_Lg		22 00 34.9	
	comp=Z,34nm,0.9s						
FVM	**French Village**	**9.88**	**56**	IAmb_Lg		22 00 38.5	
	comp=Z,29nm,0.8s						
N38A	**Joes South For**	**9.95**	**35**	IAmb_Lg		22 01 05.4	
	comp=Z,52nm,0.8s						

IDC ***06*** *22:09:11.9±0.5, 55°.22N×163°.11E, h0^{km}, mb4.6/40, mb1 4.8/44, mb1mx4.7/57, mbtmp4.6/44, ML4.6/3, MS5.3/42, Ms1 5.3/42, ms1mx5.2/56, Error ellipse: s-maj=13.4km s-min=9.7km az=162.0*
KRSC ***06*** *22:09:12.8±1.1, 55°.11N×163°.58E, h57^{km}±24^{km}, ML5.2*
BJI ***06*** *22:09:12.4±0.0, 55°.59N×162°.61E, h11^{km}, mB5.5/60, mb4.7/53, Ms6.3/78, Ms7 6.1/70*
NEIC ***06*** *22:09:13.2±1.3, 55°.21N±0°.07×163°.2E±0°.1, h10^{km}±1^{km}, mb5.4/212, Ms_20 5.5/694, Mwb5.6/78, Mwc5.5(GCMT), Error ellipse: s-maj=12.5km s-min=10.3km az=159.0*
NEIC ***06*** *22:09:13.3, 55°.21N×163°.25E, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.29; $M_{\theta\theta}$-1.89; $M_{\phi\phi}$-0.41; $M_{r\theta}$0.63; $M_{\theta\phi}$-1.29; $M_{\phi r}$1.94; Fault plane solution: $M_0$3.21000×10^{17} NP1:ϕ_s261.80000°, δ33.39000°, λ130.74000°. NP2:ϕ_s35.91000°, δ65.36000°, λ66.72000°. Principal axes: T 3.3051, Plg62.0000°, Azm269.0000°; N -0.1938, Plg21.0000°, Azm46.0000°; P -3.1113, Plg17.0000°, Azm143.0000°;*
MOS ***06*** *22:09:16.3±1.2, 55°.18N×163°.20E, h50^{km}, mb5.2/46, MS5.5/83 Error ellipse: s-maj=4.6km s-min=3.2km az=86.7*
NEIC ***06*** *22:09:17, 55°.13N×164°.00E, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.58; $M_{\theta\theta}$-0.41; $M_{\phi\phi}$-1.16; $M_{r\theta}$0.61; $M_{\theta\phi}$-0.89; $M_{\phi r}$1.23; Fault plane solution: $M_0$2.16000×10^{17} NP1:ϕ_s219.00000°, δ26.00000°, λ100.00000°. NP2:ϕ_s29.00000°, δ65.00000°, λ85.00000°. Principal axes: T 2.0784, Plg70.0000°, Azm289.0000°; N 0.1600, Plg4.0000°, Azm31.0000°; P -2.2384, Plg20.0000°, Azm122.0000°;*
GCMT ***06*** *22:09:17.2±0.1, 55°.15N±0°.01×163°.96E±0°.01, h12^{km}, MW5.5/155, Moment Tensor Solution. s132, c250; s155, c303; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.58±.02; $M_{\theta\theta}$-0.50±.02; $M_{\phi\phi}$-1.08±.02; $M_{r\theta}$0.54±.05; $M_{\theta\phi}$-0.86±.01; $M_{\phi r}$0.89±.05; Best double couple: $M_0$1.94200×10^{17} NP1:ϕ_s219.00000°, δ29.00000°, λ95.00000°. NP2:ϕ_s33.00000°, δ61.00000°, λ87.00000°. Principal axes: T 1.8850, Plg74.0000°, Azm296.0000°; N 0.1180, Plg2.0000°, Azm34.0000°; P -1.9990, Plg16.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***06*** *22:09:20.1±0.0, 56°.01N×164°.02E, h33^{km}, mb5.4, Ms5.7*
ISC 06 22:09:16.6±0.3**, 55°.17N**±0°.03×**163°.39E**±0°.03**, h39**^{km}±2^{km}**, n1440, σ1^{s}71**/1253**, mb5.2**/321**, MS5.5**/467**, 40C-24D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.09**	**343**	PN	**Pn**	**22 09 33.1**	**-2.2**
KBTR	**Krutoberegovo**	**1.09**	**343**	*e*P	**Pn**	**22 09 33.1**	**-2.2**
KBG	**Krutoberegovo**	**1.15**	**341**	PN	**Pn**	**22 09 34.8**	**-1.4**
KBG				S	**Sn**	**22 09 50.7**	**0.0**
KBG	**Krutoberegovo**	**1.15**	**341**	*e*P	**Pn**	**22 09 33.9**	**-2.3**
KBG				*e*S	**Sn**	**22 09 50.7**	**0.0**
BKI	**Bering**	**1.48**	**88**	PN	**Pn**	**22 09 37.6**	**-3.1**
BKI	**Bering**	**1.48**	**88**	*e*P	**Pn**	**22 09 37.6**	**-3.1**
BKI				*e*S	**Sn**	**22 09 55.6**	**-3.2**
CIRR	**Tsirk**	**1.77**	**303**	PN	**Pn**	**22 09 45.6**	**+0.8**
KZV	**Kizimen**	**1.78**	**269**	PN	**Pn**	**22 09 44.8**	**-0.1**
KZV	**Kizimen**	**1.78**	**269**	*e*P	**Pn**	**22 09 44.8**	**-0.1**
SMKR	**Semkarok**	**1.78**	**323**	PN	**Pn**	**22 09 44.3**	**-0.6**
SMKR	**Semkarok**	**1.78**	**323**	*e*P	**Pn**	**22 09 44.3**	**-0.6**
BZMR	**Bezymyannaya**	**1.82**	**296**	PN	**Pn**	**22 09 44.9**	**-0.6**
BZMR	**Bezymyannaya**	**1.82**	**296**	*e*P	**Pn**	**22 09 44.9**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.83**	**297**	PN	**Pn**	**22 09 46.0**	**+0.4**
BZWR	**Bezymyannyi-We**	**1.83**	**297**	*e*P	**Pn**	**22 09 46.0**	**+0.4**
TUMR	**Tumrok**	**1.86**	**275**	PN	**Pn**	**22 09 46.7**	**+0.7**
TUMR	**Tumrok**	**1.86**	**275**	*e*P	**Pn**	**22 09 46.7**	**+0.7**
BDR	**Baidarnaya**	**1.86**	**320**	PN	**Pn**	**22 09 46.2**	**+0.1**
BDR	**Baidarnaya**	**1.86**	**320**	*e*P	**Pn**	**22 09 46.2**	**+0.1**
KMNR	**Kamenistaya**	**1.89**	**289**	PN	**Pn**	**22 09 47.3**	**+0.9**
KMNR	**Kamenistaya**	**1.89**	**289**	*e*P	**Pn**	**22 09 47.3**	**+0.9**
KIRR	**Kirishev**	**1.90**	**296**	PN	**Pn**	**22 09 47.0**	**+0.4**
KIRR				S	**Sn**	**22 10 12.6**	**+3.2**
KIRR	**Kirishev**	**1.90**	**296**	*e*P	**Pn**	**22 09 47.0**	**+0.4**
KIRR				*e*S	**Sn**	**22 10 12.6**	**+3.2**
KRSR	**Krestovskiy**	**1.91**	**304**	PN	**Pn**	**22 09 46.7**	**0.0**
KRSR	**Krestovskiy**	**1.91**	**304**	*e*P	**Pn**	**22 09 46.7**	**0.0**
KLY	**Klyuchi**	**1.93**	**308**	PN	**Pn**	**22 09 45.5**	**-1.3**
KLY				S	**Sn**	**22 10 09.9**	**+0.2**
KLY	**Klyuchi**	**1.93**	**308**	*e*P	**Pn**	**22 09 45.5**	**-1.3**
KLY				*e*S	**Sn**	**22 10 09.9**	**+0.2**
SRKR	**Sorokina**	**1.94**	**321**	PN	**Pn**	**22 09 46.6**	**-0.5**
SRKR	**Sorokina**	**1.94**	**321**	*e*P	**Pn**	**22 09 46.6**	**-0.5**
KOZ	**Kozyrevsk**	**2.18**	**295**	PN	**Pn**	**22 09 52.2**	**+1.8**
KOZ	**Kozyrevsk**	**2.18**	**295**	*e*P	**Pn**	**22 09 52.2**	**+1.8**
SRDR	**Sredinnyy**	**2.37**	**300**	PN	**Pn**	**22 09 53.6**	**+0.6**
SRDR	**Sredinnyy**	**2.37**	**300**	*e*P	**Pn**	**22 09 53.6**	**+0.6**
KII	**Karymskiy**	**2.56**	**245**	PN	**Pn**	**22 09 56.0**	**+0.4**
KII	**Karymskiy**	**2.56**	**245**	*e*P	**Pn**	**22 09 56.0**	**+0.4**
ESO	**Esso**	**2.77**	**288**	PN	**Pn**	**22 09 59.3**	**+0.9**
ESO	**Esso**	**2.77**	**288**	*e*P	**Pn**	**22 09 59.3**	**+0.9**
SPN	**Mys Shipunski**	**2.87**	**225**	PN	**Pn**	**22 09 58.8**	**-1.0**
SPN				S	**Sn**	**22 10 32.3**	**-0.7**
SPN	**Mys Shipunski**	**2.87**	**225**	*e*P	**Pn**	**22 09 58.3**	**-1.5**
SPN				*e*S	**Sn**	**22 10 32.3**	**-0.7**
NLC	**Nalytchevo**	**3.11**	**232**	PN	**Pn**	**22 10 02.7**	**-0.3**
NLC				S	**Sn**	**22 10 40.9**	**+2.0**
NLC	**Nalytchevo**	**3.11**	**232**	*e*P	**Pn**	**22 10 02.7**	**-0.3**
NLC				*e*S	**Sn**	**22 10 40.9**	**+2.0**
SMAR	**Somma**	**3.30**	**237**	PN	**Pn**	**22 10 05.9**	**0.0**
SMAR	**Somma**	**3.30**	**237**	*e*P	**Pn**	**22 10 05.9**	**0.0**
KRER	**Koryakskii**	**3.30**	**237**	PN	**Pn**	**22 10 06.7**	**+0.8**
KRER	**Koryakskii**	**3.30**	**237**	*e*P	**Pn**	**22 10 06.7**	**+0.8**
KRX	**Arik**	**3.32**	**239**	PN	**Pn**	**22 10 06.7**	**+0.6**
KRX	**Arik**	**3.32**	**239**	*e*P	**Pn**	**22 10 06.7**	**+0.6**
UGLR	**Uglovaya**	**3.33**	**236**	PN	**Pn**	**22 10 06.3**	**+0.2**
UGLR	**Uglovaya**	**3.33**	**236**	*e*P	**Pn**	**22 10 06.3**	**+0.2**
AVH	**Avacha**	**3.33**	**237**	PN	**Pn**	**22 10 06.6**	**+0.4**
AVH	**Avacha**	**3.33**	**237**	*e*P	**Pn**	**22 10 06.6**	**+0.4**
KOK	**Koryaka**	**3.37**	**238**	PN	**Pn**	**22 10 07.0**	**+0.3**
KOK	**Koryaka**	**3.37**	**238**	*e*P	**Pn**	**22 10 07.0**	**+0.3**
DALK	**Dalny**	**3.47**	**234**	PN	**Pn**	**22 10 07.9**	**-0.1**
DALK	**Dalny**	**3.47**	**234**	*e*P	**Pn**	**22 10 07.9**	**-0.1**
DALK				*e*S	**Sn**	**22 10 48.5**	**+0.7**
GNL	**Ganaly**	**3.51**	**247**	PN	**Pn**	**22 10 09.7**	**+1.0**
GNL	**Ganaly**	**3.51**	**247**	*e*P	**Pn**	**22 10 09.7**	**+1.0**
PET	**Petropavlovsk**	**3.52**	**234**α	*i*PN	**Pn**	**22 10 07.8**	**-0.9**
PET				*e*S	**Sn**	**22 10 48.6**	**-0.5**
PET				pmax	pmax		
	comp=Z,267nm,0.6s						
PET				smax	smax		
	comp=E,4µm,0.9s						
PET				smax	smax		
	comp=N,3µm,0.7s						
PET				MLR	MLR		
	comp=Z,141µm,12.0s						
PET				MLR	MLR		
	comp=Z,171µm,13.0s						
PET	**Petropavlovsk**	**3.52**	**234**	*e*P	**Pn**	**22 10 08.6**	**-0.1**
PET				*e*S	**Sn**	**22 10 50.0**	**+0.9**
PET	**Petropavlovsk**	**3.52**	**234**		**Pn**	**22 10 07.9**	**-0.8**
KRMR	**Karymshinskiy**	**3.89**	**235**	PN	**Pn**	**22 10 14.5**	**+0.7**
KRMR	**Karymshinskiy**	**3.89**	**235**	*e*P	**Pn**	**22 10 14.5**	**+0.7**
PEA0B	**Petropavlovsk-**	**3.93**	**241**	PN	**Pn**	**22 10 14.5**	**+0.1**
PEA0B	**Petropavlovsk-**	**3.93**	**241**	Pn	**Pn**	**22 10 14.5**	**+0.1**
PETK	**Petropavlovsk-**	**3.93**	**241**	Pn	**Pn**	**22 10 13.8**	**-0.6**
	comp=Z,13nm,0.3s,baz=71,slow=18,SNR=127						
PETK				Sn	**Sn**	**22 11 02.7**	**+3.5**
	comp=Z,9.4nm,0.3s,baz=60,slow=25,SNR=5.6						

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RUS   Russkaya          3.98 229  PN    Pn      22 10 15.3 +0.2
RUS   Russkaya          3.98 229 eP     Pn      22 10 15.3 +0.2
MTVR  Mutnovka          4.09 231  PN    Pn      22 10 16.9 +0.2
MTVR  Mutnovka          4.09 231 eP     Pn      22 10 16.9 +0.2
OSSR  Ossora            4.09 358  PN    Pn      22 10 16.3 -0.3
OSSR  Ossora            4.09 358 eP     Pn      22 10 16.3 -0.3
GRL   Gorelyy           4.10 232  PN    Pn      22 10 17.7 +0.9
GRL   Gorelyy           4.10 232 eP     Pn      22 10 17.7 +0.9
ASAK  Asacha            4.29 232  PN    Pn      22 10 20.3 +0.9
ASAK  Asacha            4.29 232 eP     Pn      22 10 20.3 +0.9
APC   Apacha            4.31 241  PN    Pn      22 10 19.8 +0.3
APC   Apacha            4.31 241 eP     Pn      22 10 19.8 +0.3
PALN  Palana            4.35 336  PN    Pn      22 10 24.7 +4.6
PALN  Palana            4.35 336 eP     Pn      22 10 24.7 +4.6
KDTR  Khodutka, Kamc    4.62 225  PN    Pn      22 10 23.8 -0.1
KDTR  Khodutka, Kamc    4.62 225 eP     Pn      22 10 23.8 -0.1
KDTR                             eS     Sn      22 11 15.3 -1.0
MIPR  Malaya Ipel'ka    4.89 236  PN    Pn      22 10 28.4 +0.9
MIPR  Malaya Ipel'ka    4.89 236 eP     Pn      22 10 28.4 +0.9
PAU   Pauzhetka         5.41 229  PN    Pn      22 10 35.2 +0.5
PAU   Pauzhetka         5.41 229 eP     Pn      22 10 35.2 +0.5
TILK  Tilichiki         5.49  14  PN    Pn      22 10 37.3 +1.6
TILK  Tilichiki         5.49  14 eP     Pn      22 10 37.3 +1.6
SKR   Severo-Kuril's    6.29 227 ePN    Pn      22 10 46.2 -0.5
SKR                               pmax  pmax
      comp=Z,2µm,7.1s
SKR                               pmax  pmax
      comp=Z,1µm,7.7s
SKR                               MLR   MLR
      comp=Z,26µm,15.0s
SKR                               MLR   MLR
      comp=Z,28µm,15.0s
SMY   Shemya            6.78 107  PN    Pn      22 10 54.0 +0.6
SMY   Shemya            6.78 107  Pn    Pn      22 10 54.0 +0.6
KMSK  Kamenskaya        7.46  10  PN    Pn      22 11 03.5 +0.8
KMSK  Kamenskaya        7.46  10 eP     Pn      22 11 03.5 +0.8
MA2   Magadan           8.12 308  Pn    Pn      22 11 12.3 +0.5
      comp=Z,0.5nm,0.3s,baz=191,slow=19,SNR=3.3
MA2                               LR    LR      22 14 45.2
      comp=Z,17µm,18.3s,baz=113,slow=42
MA2   Magadan           8.12 308 i PN   Pn      22 11 09.9 -1.9
MA2   Magadan           8.12 308        Pn      22 11 10.2 -1.6
SEY   Seymchan          9.62 328  Pn    Pn      22 11 31.9 -0.3
      comp=Z,0.1nm,0.3s,baz=102,slow=23,SNR=2.4
SEY                               LR    LR      22 15 19.5
      comp=Z,20µm,18.8s,baz=128,slow=39
SEY   Seymchan          9.62 328 i PN   Pn      22 11 33.1 +0.9
OKH   Okha             12.04 271c iPN   Pn      22 12 08.9 +3.5
OKH                               pmax  pmax
      comp=Z,4µm,10.8s
OKH                               MLR   MLR
      comp=N,40µm,13.0s
OKH                               MLR   MLR
      comp=E,82µm,13.0s
OKH                               MLR   MLR
      comp=Z,69µm,13.0s
ADK   Adak             12.30  97  PN    Pn      22 12 10.0 +1.1
ADK   Adak             12.30  97  Pn    Pn      22 12 10.0 +1.1
GSTR  Great Sitkin T   12.57  96  Pn    Pn      22 12 13.3 +0.6
TYV   Tymovskoe        13.19 259 ePN    Pn      22 12 23.6 +2.5
TYV                              eS     Sn      22 14 51.0 +4.7
TYV                               pmax  pmax
      comp=Z,15nm,1.1s
TYV                               pmax  pmax
      comp=Z,1µm,2.5s
TYV                               smax  smax
      comp=N,10.0nm,1.6s
TYV                               MLR   MLR
      comp=E,32µm,12.0s
TYV                               MLR   MLR
      comp=Z,41µm,12.0s
NKL   Nikolayevsk      13.45 271 ePN    Pn      22 12 27.2 +2.6
NKL                               pmax  pmax
      comp=E,82nm,1.0s
NKL                               pmax  pmax
      comp=N,5.0nm,0.8s
NKL                               pmax  pmax
      comp=Z,122nm,1.2s
NKL                               MLR   MLR
      comp=Z,30µm,13.0s
ATKA  Atka Island      13.60  93  Pn    Pn      22 12 27.0 +0.3
UGL   Uglegorsk        14.42 254 eP     Pn      22 12 36.5 -1.3
UGL                               S     Sn      22 15 12.7 -3.5
UGL                               pmax  pmax
      comp=Z,6µm,6.6s
UGL                               MLR   MLR
      comp=Z,28µm,13.0s
UGL                               MLR   MLR
      comp=N,29µm,10.0s
UGL                               MLR   MLR
      comp=E,21µm,12.0s
GAMB  Gambell          15.21  45  Pn    Pn      22 12 49.6 +1.3
GAMB                              IAmb  IAmb    22 13 24.5
      comp=Z,180nm,1.2s
YSS   Yuzh-Sakhalins   15.31 246⇑eP     Pn      22 12 50.7 +1.0
YSS                              eS     Sn      22 15 35.4 -2.6
YSS                               pmax  pmax
      comp=Z,110nm,1.0s
YSS                               MLR   MLR
      comp=Z,57µm,13.0s
YSS                               MLR   MLR
      comp=E,30µm,14.0s
YSS   Yuzh-Sakhalins   15.31 246        Pn      22 12 49.9 +0.1
YUK   Yuzh-Kuril'sk    15.86 233 eP     Pn      22 12 56.3 -0.5
YUK                              eS     Sn      22 15 51.6 +0.2
YUK                               pmax  pmax
      comp=Z,95nm,1.0s
YUK                               pmax  pmax
      comp=N,57nm,1.1s
YUK                               pmax  pmax
      comp=E,112nm,0.6s
YUK                               pmax  pmax
      comp=Z,873nm,1.8s
YUK                               MLR   MLR
      comp=Z,12µm,13.0s
YUK                               MLR   MLR
      comp=E,9µm,11.0s
YUK                               MLR   MLR
      comp=N,7µm,9.0s
GRNR  Gornyy           16.78 266⇓iP     P       22 13 11.0 +0.7
GRNR                             eS     Sn      22 16 17.9 +4.3
GRNR                              pmax  pmax
      comp=E,30nm,0.7s
GRNR                              pmax  pmax
      comp=N,30nm,0.8s
GRNR                              pmax  pmax
      comp=Z,40nm,0.6s
GRNR                              smax  smax
      comp=N,7.0nm,0.6s
GRNR                              MLR   MLR
      comp=E,6µm,10.0s
GRNR                              MLR   MLR
      comp=N,15µm,13.0s
GRNR                              MLR   MLR
      comp=Z,18µm,12.0s
JKA   Kamikawa-asahi   17.35 239  P     Pn      22 13 15.0 -0.6
ASAJ  Asahikawa        17.35 239  P     Pn      22 13 15.1 -0.6
      comp=Z,1.5nm,0.3s,baz=33,slow=5.9,SNR=18
ASAJ                              LR    LR      22 19 40.0
      comp=Z,19µm,18.5s,baz=47,slow=36
ASAJ  Asahikawa        17.35 239  P     Pn      22 13 15.0 -0.6
ASAJ                              pmax  pmax
      comp=Z,133nm,1.1s
ANM   Nome             18.09  46  P     P       22 13 26.1 +1.5
ANM                               pmax  pmax
      comp=Z,146nm,1.6s
ANM   Nome             18.09  46  P     P       22 13 26.1 +1.5
ERM   Erimo            18.68 234  P     P       22 13 29.6 -1.6
ERM                               pmax  pmax
      comp=Z,198nm,1.4s
ERM   Erimo            18.68 234  P     P       22 13 29.6 -1.6
YAK   Yakutsk          18.68 305  P     P       22 13 30.2 -0.9
      comp=Z,0.2nm,0.3s,baz=281,slow=20,SNR=56
YAK                               LR    LR      22 20 52.4
      comp=Z,9µm,18.9s,baz=110,slow=38
YAK   Yakutsk          18.68 305 eP     P       22 13 29.5 -1.6
YAK                              eS     Sn      22 16 57.0 -2.3
YAK                               pmax  pmax
      comp=Z,147nm,1.1s
YAK                               pmax  pmax
      comp=N,22nm,1.1s
YAK                               pmax  pmax
      comp=E,109nm,1.1s
YAK                               pmax  pmax
      comp=Z,1µm,3.8s
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YAK                               pmax  pmax
      comp=N,265nm,4.0s
YAK                               pmax  pmax
      comp=E,1µm,3.3s
YAK                               smax  smax
      comp=N,3µm,7.3s
YAK                               smax  smax
      comp=E,2µm,7.6s
YAK                               MLR   MLR
      comp=Z,18µm,14.0s
YAK   Yakutsk          18.68 305  P     P       22 13 29.9 -1.1
TEY   Ternei           19.83 250⇑eP     P       22 13 41.7 -2.1
TEY                               pmax  pmax
      comp=Z,20nm,1.2s
TEY                               MLR   MLR
      comp=N,2µm,13.0s
TEY                               MLR   MLR
      comp=E,2µm,13.0s
TEY                               MLR   MLR
      comp=Z,2µm,14.0s
KLR   Kul'dur          20.16 266  P     P       22 13 45.8 -1.6
      comp=Z,5.4nm,0.8s,baz=64,slow=8.9,SNR=9.6
KLR                               LR    LR      22 22 33.1
      comp=Z,7µm,21.0s,baz=62,slow=40
KLR   Kul'dur          20.16 266ceP     P       22 13 46.2 -1.2
KLR                               pmax  pmax
      comp=Z,8.0nm,0.8s
RDOG  Red Dog Mine     20.22  37  P     P       22 13 48.0 +0.2
ZEA   Zeya             20.92 281 eP     P       22 13 51.5 -4.0
ZEA                              e              22 14 28.3
ZEA                              eSS    Sn      22 17 58.5 +5.3
ZEA                              e              22 18 09.5
ZEA                               pmax  pmax
      comp=Z,10.0nm,1.0s
ZEA                               pmax  pmax
      comp=Z,1µm,12.4s
ZEA                               MLR   MLR
      comp=E,19µm,14.0s
ZEA                               MLR   MLR
      comp=Z,23µm,14.0s
CHGN  Chignik          21.36  71  P     P       22 14 01.1 +1.0
CHGN                              IAmb  IAmb    22 14 17.3
      comp=Z,148nm,1.1s
TTA   Tatalina         21.94  53  P     P       22 14 06.7 +0.3
TTA                               pmax  pmax
      comp=Z,96nm,1.2s
TTA                               MLR   MLR
      comp=Z,7µm,18.0s
TTA   Tatalina         21.94  53  P     P       22 14 06.7 +0.3
TIXI  Tiksi            22.09 331ceP     P       22 14 07.6 -0.3
TIXI  Tiksi            22.09 331  P     P       22 14 07.6 -0.3
TIXI                              IAmb  IAmb    22 14 38.2
      comp=Z,148nm,1.2s
TIXI                              IAMs_20 IAMs_20 22 23 10.2
      comp=Z,19µm,18.0s
USA0B Ussuriysk Arra   22.89 254  P     P       22 14 14.6 -2.1
USA0B                             pmax  pmax
      comp=Z,53nm,1.5s
USA0B                             MLR   MLR
      comp=Z,24µm,19.0s
USA0B Ussuriysk Arra   22.89 254  P     P       22 14 14.6 -2.1
USA0B                             IAMs_20 IAMs_20 22 23 24.0
      comp=Z,24µm,19.0s
USRK  Ussuriysk Ar.    22.89 254  P     P       22 14 14.4 -2.3
      comp=Z,4.3nm,0.7s,baz=51,slow=12,SNR=11
USRK                              LR    LR      22 23 43.6
      comp=Z,23µm,18.4s,baz=47,slow=38
JMM   Marumori         23.09 231  P     P       22 14 18.9 +0.1
JMM                               IAmb  IAmb    22 14 51.6
      comp=Z,139nm,1.0s
A21K  Barrow           23.51  31  P     P       22 14 22.1 -0.4
      baz=248
A21K  Barrow           23.51  31  P     P       22 14 22.0 -0.6
A21K                              IAmb  IAmb    22 15 04.4
      comp=Z,132nm,1.4s
RSO   Redoubt South    23.59  59  P     P       22 14 24.1 +0.4
PPLA  Purkeypile       23.68  53  P     P       22 14 25.2 +0.7
OHAK  Old Harbor       23.89  67  P     P       22 14 25.7 -0.5
OHAK                              IAmb  IAmb    22 15 13.4
      comp=Z,128nm,1.3s
MDJ   Mudanjiang       23.96 258  P     P       22 14 24.0 -3.1
MDJ                               PP    PnPn    22 14 56.2 -0.2
MDJ                               S     S       22 18 41.0  0.0
MDJ                               pmax  pmax
      comp=Z,18nm,1.0s
MDJ                               pmax  pmax
      comp=Z,650nm,6.4s
MDJ                               LR    LR
      comp=Z,33µm,17.5s
MDJ                               LR    LR
      comp=Z,23µm,16.9s
MDJ                               LR    LR
      comp=Z,17µm,17.9s
MDJ   Mudanjiang       23.96 258  IAMs_20 IAMs_20 22 24 01.4
      comp=Z,13µm,18.0s
SKT   Skwentna         24.04  55  P     P       22 14 28.0 +0.4
SKT                               IAmb  IAmb    22 15 08.0
      comp=Z,104nm,1.3s
KDAK  Kodiak Island    24.13  66  P     P       22 14 29.5 +1.0
      comp=Z,23nm,0.9s,baz=312,slow=13,SNR=7.5
KDAK                              LR    LR      22 23 48.9
      comp=Z,5µm,19.8s,baz=282,slow=36
KDAK  Kodiak Island    24.13  66  P     P       22 14 28.4 -0.1
KDAK                              pmax  pmax
      comp=Z,152nm,1.6s
KDAK                              MLR   MLR
      comp=Z,13µm,18.0s
KDAK  Kodiak Island    24.13  66  P     P       22 14 28.4 -0.1
KDAK                              IAmb  IAmb    22 15 00.9
      comp=Z,152nm,1.6s
KDAK  Kodiak Island    24.13  66  IAMs_20 IAMs_20 22 25 33.6
      comp=Z,13µm,18.0s
BPAW  Bear Paw Mtn.    24.21  50  P     P       22 14 30.1 +0.9
BPAW                              IAmb  IAmb    22 14 47.0
      comp=Z,151nm,1.4s
KTH   Kantishna Hill   24.24  51  P     P       22 14 30.7 +1.2
KTH                               IAmb  IAmb    22 15 09.6
      comp=Z,158nm,1.5s
MLY   Manley           24.33  48  P     P       22 14 31.2 +0.8
      baz=268,SNR=14
CAPN  Captain Cook N   24.34  58  P     P       22 14 30.6 +0.3
      baz=277
CNPM  China Poot       24.48  61  P     P       22 14 31.8 +0.1
CNPM                              IAmb  IAmb    22 14 59.1
      comp=Z,115nm,1.1s
TRF   Thorofare Moun   24.53  52  P     P       22 14 32.8 +0.5
CUT   Chulitna         24.60  54  P     P       22 14 33.1 +0.4
      baz=274,SNR=6.8
BRLK  Bradley Lake     24.62  60  P     P       22 14 32.5 -0.5
BRLK                              IAmb  IAmb    22 14 58.9
      comp=Z,91nm,1.1s
COLD  Coldfoot         24.71  42  P     P       22 14 34.1 +0.4
      baz=264,SNR=35
COLD  Coldfoot         24.71  42  P     P       22 14 33.1 -0.6
COLD                              IAmb  IAmb    22 14 54.8
      comp=Z,59nm,0.9s
I23K  Minto, Yukon-K   24.92  47  P     P       22 14 35.5 -0.1
      baz=269,SNR=55
RC01  Rabbit Creek A   24.98  57  P     P       22 14 36.6 +0.4
      baz=278
NEA2  Nenana           25.04  49  P     P       22 14 37.1 +0.4
      baz=270,SNR=7.7
O22K  Cooper Landing   25.08  59  P     P       22 14 36.3 -0.7
      baz=279
MCK   McKinley         25.12  51  P     P       22 14 37.4 -0.1
      baz=272,SNR=21
SEW   Seward           25.27  59  P     P       22 14 38.4 -0.4
SEW                               IAmb  IAmb    22 15 03.9
      comp=Z,102nm,1.1s
GHO   Glory Hole Cre   25.29  55  P     P       22 14 38.2 -0.8
MJB9  Matsu-Tunnel     25.35 233  P     P       22 14 39.6 -0.2
MAJO  Matsushiro       25.35 233  P     P       22 14 39.2 -0.6
MAJO                              pmax  pmax
      comp=Z,226nm,1.2s
MAJO                              MLR   MLR
      comp=Z,12µm,21.0s
MAJO  Matsushiro       25.35 233  P     P       22 14 39.2 -0.6
MAJO  Matsushiro       25.35 233  IAMs_20 IAMs_20 22 24 45.2
      comp=Z,12µm,21.0s
MAT   Matsushiro       25.35 233  P     P       22 14 40.1 +0.3
MAT                               S     S       22 19 06.0 +2.6
MJAR  Matsushiro Arr   25.35 233  P     P       22 14 40.5 +0.7
      comp=Z,80nm,0.9s,baz=26,slow=8.2,SNR=87
MJAR                              LR    LR      22 25 28.8
      comp=Z,10µm,19.9s,baz=60,slow=39
TCOL  CIGO, UAF Yank   25.56  48  P     P       22 14 41.7 +0.3
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      baz=271
COLA  College          25.56  48  P     P       22 14 41.4  0.0
COLA                              pmax  pmax
      comp=Z,75nm,1.3s
COLA                              MLR   MLR
      comp=Z,4µm,20.0s
COLA  College          25.56  48  P     P       22 14 41.4  0.0
COLA                              IAmb  IAmb    22 15 05.6
      comp=Z,75nm,1.2s
CCB   Clear Creek Bu   25.59  49  P     P       22 14 41.6  0.0
CCB                               IAmb  IAmb    22 15 06.4
      comp=Z,81nm,1.2s
POKR  Poker Plat Res   25.73  48  P     P       22 14 43.3 +0.3
      baz=271,SNR=7.6
POKR  Poker Plat Res   25.73  48  P     P       22 14 43.4 +0.4
POKR                              IAmb  IAmb    22 15 30.7
      comp=Z,132nm,1.6s
HDA   Harding Lake     25.97  49  P     P       22 14 44.5 -0.7
      baz=273,SNR=11
IL31                   25.98  48  P     P       22 14 44.9 -0.3
IL31                              IAmb  IAmb    22 15 33.4
      comp=Z,177nm,1.8s
ILAR  Eielson Array    25.98  48  P     P       22 14 45.2  0.0
      comp=Z,17nm,1.0s,baz=262,slow=7.7,SNR=81
ILAR                              LR    LR      22 25 36.5
      comp=Z,4µm,18.2s,baz=276,slow=38
SCM   Sheep Creek Mo   26.03  55  P     P       22 14 46.3 +0.5
SCM                               pmax  pmax
      comp=Z,168nm,1.2s
SCM                               MLR   MLR
      comp=Z,6µm,18.0s
SCM   Sheep Creek Mo   26.03  55  P     P       22 14 46.3 +0.5
JGF   Kuroka           26.52 233  P     P       22 14 50.1 -0.3
JGF                               IAMs_20 IAMs_20 22 25 43.2
      comp=Z,10µm,20.0s
M24K  Tolsona, Glenn   26.53  54  P     P       22 14 50.8 +0.5
      baz=278,SNR=7.9
M24K  Tolsona, Glenn   26.53  54  P     P       22 14 51.0 +0.6
INU   Inuyama          26.88 233  P     P       22 14 52.9 -0.7
INU                               IAmb  IAmb    22 14 58.4
      comp=Z,66nm,1.0s
INU                               IAMs_20 IAMs_20 22 27 00.7
      comp=Z,9µm,19.0s
BOD   Bodaibo          26.90 296 eP     P       22 14 51.2 -2.4
BOD                               pmax  pmax
      comp=Z,44nm,2.2s
HIA   Hailar           27.03 276  P     P       22 14 54.1 -0.8
HIA                               pmax  pmax
      comp=Z,9.0nm,0.7s
HIA                               MLR   MLR
      comp=Z,13µm,18.0s
HIA   Hailar           27.03 276  P     P       22 14 54.1 -0.8
HIA   Hailar           27.03 276  IAMs_20 IAMs_20 22 27 16.7
      comp=Z,13µm,18.0s
SCRK  Sand Creek       27.29  50  P     P       22 14 56.2 -1.0
      baz=276,SNR=16
N25K  Chitina, Valde   27.35  55  P     P       22 14 57.6 -0.1
      baz=280
JHJ   Hachijo jima 2   27.55 227  LR    LR      22 26 21.5
      comp=Z,3µm,18.4s,baz=179,slow=38
JWT   Wachi            27.69 236  P     P       22 15 00.9 +0.1
JWT                               IAMs_20 IAMs_20 22 26 06.3
      comp=Z,11µm,20.0s
L26K  Log Cabin Wild   27.70  52  P     P       22 15 00.2 -0.5
      baz=278
KAIM  Kayak Island     27.78  59  IAMs_20 IAMs_20 22 27 32.8
      comp=Z,13µm,18.0s
K27K  Chicken          28.12  50  P     P       22 15 04.1 -0.4
      baz=278
K27K  Chicken          28.12  50  P     P       22 15 04.6 +0.2
K27K                              IAmb  IAmb    22 15 28.4
      comp=Z,68nm,1.2s
CRQM  Cirque           28.21  57  P     P       22 15 06.3 +0.8
CRQM                              IAmb  IAmb    22 15 19.1
      comp=Z,76nm,1.3s
EGAK  Eagle            28.42  48  P     P       22 15 05.5 -1.6
MESA  MESA             28.92  57  IAMs_20 IAMs_20 22 28 41.9
      comp=Z,10µm,18.0s
JHS   Saijyo           29.02 239        P       22 15 11.7 -1.1
JHS                               IAmb  IAmb    22 15 24.9
      comp=Z,128nm,1.5s
SNY   Shenyang         29.12 259 ⇓P     P       22 15 16.4 +2.9
SNY                               pmax  pmax
      comp=Z,1µm,14.9s
SNY                               LR    LR
      comp=Z,31µm,16.4s
SNY                               LR    LR
      comp=Z,17µm,16.4s
SNY                               LR    LR
      comp=Z,28µm,13.1s
CIT   Chita            29.24 285 eP     P       22 15 22.7 +8.2
CIT                              e              22 16 04.5
JMN   Monobe           29.68 236  P     P       22 15 18.6  0.0
JMN                               IAmb  IAmb    22 15 23.1
      comp=Z,141nm,1.5s
KSRS  Korea Array      29.79 248  P     P       22 15 18.8 -0.7
      comp=Z,3.4nm,0.8s,baz=37,slow=9.7,SNR=8.2
INK   Inuvik           31.03  40  LR    LR      22 30 06.3
      comp=Z,4µm,18.3s,baz=281,slow=40
INK   Inuvik           31.03  40  P     P       22 15 31.2 +1.1
INK                               pmax  pmax
      comp=Z,61nm,1.5s
INK                               MLR   MLR
      comp=Z,6µm,18.0s
INK   Inuvik           31.03  40  P     P       22 15 31.2 +1.1
INK                               IAmb  IAmb    22 15 47.2
      comp=Z,61nm,1.5s
JNU   Nakatsue         31.63 239  P     P       22 15 35.3 -0.5
DL2   Dalian           32.20 257  P     P       22 15 45.3 +4.6
DL2                               PP    PP      22 16 55.3 +1.6
DL2                               S     S       22 21 03.6  +13
DL2                               sS    ScP     22 21 47.5  -21
DL2                               SS    SnSn    22 22 54.4  +11
DL2                               pmax  pmax
      comp=Z,730nm,10.4s
DL2                               LR    LR
      comp=N,14µm,13.5s
DL2                               LR    LR
      comp=E,21µm,14.7s
DL2                               LR    LR
      comp=Z,21µm,13.5s
SKAG  Skagway          32.33  57  IAMs_20 IAMs_20 22 31 15.5
      comp=Z,6µm,18.0s
JSU   Suzuyama         33.15 238  P     P       22 15 48.7 -0.4
JSU                               IAMs_20 IAMs_20 22 29 33.9
      comp=Z,6µm,19.0s
C36M  Paulatuk         34.23  37  P     P       22 15 58.1 +0.1
      baz=283,SNR=10
C36M  Paulatuk         34.23  37  P     P       22 15 58.9 +0.9
BJI   Beijing          34.51 264  P     P       22 15 58.4 -2.4
BJI                               LR    LR
      comp=Z,42µm,14.8s
BJI                               LR    LR
      comp=Z,30µm,14.3s
BJI                               LR    LR
      comp=Z,9µm,17.2s
BJT   Baijiatuau       34.53 264  P     P       22 16 00.4 -0.6
BJT                               pmax  pmax
      comp=Z,25nm,1.8s
BJT                               MLR   MLR
      comp=Z,15µm,18.0s
BJT   Baijiatuau       34.53 264  P     P       22 16 00.4 -0.6
TLY   Talaya           34.82 290c iP    P       22 16 00.9 -2.5
TLY                              e              22 17 24.0
TLY                              eS     S       22 21 31.5 +0.2
TLY                               pmax  pmax
      comp=Z,39nm,1.3s
TLY                               MLR   MLR
      comp=Z,62µm,15.0s
ULN   Ulaanbaatar      34.95 282  P     P       22 16 04.3 -0.4
ULN                               pmax  pmax
      comp=Z,14nm,1.4s
ULN                               MLR   MLR
      comp=Z,4µm,20.0s
ULN   Ulaanbaatar      34.95 282  P     P       22 16 04.3 -0.4
WRAK  Wrangell Islan   34.98  61  IAMs_20 IAMs_20 22 31 06.1
      comp=Z,6µm,18.0s
DLBC  Dease Lake       35.26  57  P     P       22 16 10.0 +2.8
      comp=Z,11nm,0.9s,baz=282,slow=13,SNR=11
DLBC                              LR    LR      22 31 00.8
      comp=Z,4µm,18.1s,baz=306,slow=37
DLBC  Dease Lake       35.26  57  P     P       22 16 09.0 +1.8
SONM  Songino Array    35.33 282  P     P       22 16 06.3 -1.7
      comp=Z,0.8nm,0.4s,baz=64,slow=7.4,SNR=8.2
SONM                              PcP   PcP     22 18 38.2 +0.7
      comp=Z,2.4nm,0.7s,baz=80,slow=1.1,SNR=4.5
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SONM				ScP	**ScP**	**22 22 27.2**	**+7.3**
	comp=Z,2.8nm,1.1s,baz=49,slow=4.5,SNR=4.8						
SONM				LR	LR	22 31 51.1	
	comp=Z,3µm,20.0s,baz=66,slow=39						
NRIK	**Noril'sk**	**35.36**	**324**	P	**P**	**22 16 08.2**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=57,slow=9.4,SNR=5.2						
NRIK				LR	LR	22 31 13.9	
	comp=Z,7µm,20.6s,baz=74,slow=38						
NRIK	**Noril'sk**	**35.36**	**324**	*ce*P	**P**	**22 16 07.2**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,11nm,1.5s						
NRIK	**Noril'sk**	**35.36**	**324**	P	**P**	**22 16 07.8**	**0.0**
NRIK				IAMs_20	IAMs_20	22 31 03.9	
	comp=Z,9µm,19.0s						
H11N2	**WAKE ISLAND Hy**	**35.48**	**174**	T	T	22 55 16.2	
	baz=359,slow=76,SNR=720						
H11N3	**WAKE ISLAND Hy**	**35.49**	**174**	T	T	22 55 17.8	
	baz=359,slow=76,SNR=53						
H11N1	**WAKE ISLAND Hy**	**35.50**	**174**	T	T	22 55 17.5	
	baz=359,slow=76,SNR=618						
ZAK	**Zakamensk**	**35.68**	**288**	*e*P	**P**	**22 16 08.9**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MOY	**Mondy**	**36.26**	**291**	*e*P	**P**	**22 16 13.5**	**-2.4**
MOY				pmax	pmax		
	comp=Z,31nm,2.5s						
HHC	**Hu-ho-hao-te**	**36.62**	**269**	*e*P	**P**	**22 16 18.9**	**-0.1**
HHC				pP	pP	22 16 27.0	-1.7
HHC				S	**S**	**22 21 55.9**	**-3.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,750nm,7.1s						
HHC				LR	LR		
	comp=Z,28µm,13.9s						
HHC				LR	LR		
	comp=Z,23µm,13.5s						
HHC				LR	LR		
	comp=Z,22µm,12.6s						
JMZ	**Minamidaito 2**	**37.58**	**232**	IAMs_20	IAMs_20	22 31 09.2	
	comp=Z,6µm,19.0s						
BTO	**Baotou**	**37.66**	**270**	*e*P	**P**	**22 16 24.6**	**-3.3**
TIY	**Taiyuan**	**38.23**	**264**	*e*P	**P**	**22 16 33.7**	**+1.0**
TIY				S	**S**	**22 22 28.4**	**+4.8**
TIY				pmax	pmax		
	comp=Z,390nm,9.9s						
TIY				LR	LR		
	comp=Z,32µm,14.6s						
TIY				LR	LR		
	comp=Z,15µm,14.3s						
TIY				LR	LR		
	comp=Z,10µm,14.8s						
SSE	**Sheshan**	**38.23**	**249**	P	**P**	**22 16 34.5**	**+1.9**
SSE				S	**S**	**22 22 19.9**	**-3.7**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,560nm,10.8s						
SSE				LR	LR		
	comp=Z,1µm,14.8s						
SSE				LR	LR		
	comp=Z,4µm,16.0s						
SSE	**Sheshan**	**38.23**	**249**	IAMs_20	IAMs_20	22 32 22.5	
	comp=Z,8µm,18.0s						
NJ2	**Nanjing**	**38.75**	**252**	*e*P	**P**	**22 16 36.0**	**-1.0**
NJ2				pP	pP	22 16 38.4	-8.4
NJ2				PP	**PP**	**22 18 06.6**	**+0.5**
NJ2				PcP	**PcP**	**22 18 48.5**	**+0.6**
NJ2				S	**S**	**22 22 31.2**	**-0.2**
NJ2				sS	**sS**	**22 22 43.0**	**-4.2**
NJ2				SS	**SnSn**	**22 25 10.1**	**-12**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,16µm,14.3s						
NJ2				LR	LR		
	comp=Z,13µm,13.1s						
NJ2				LR	LR		
	comp=Z,22µm,14.3s						
BBB	**Bella Bella**	**39.21**	**65**	LR	LR	22 32 52.7	
	comp=Z,3µm,18.1s,baz=306,slow=36						
EUNU	**Eureka**	**39.45**	**15**	P	**P**	**22 16 43.4**	**+0.9**
EUNU				IAmb	IAmb	22 16 55.8	
	comp=Z,131nm,1.6s						
EUNU				IAMs_20	IAMs_20	22 35 39.7	
	comp=Z,5µm,18.0s						
YKA	**Yellowknife Ar**	**40.32**	**45**	P	**P**	**22 16 51.0**	**+1.3**
	comp=Z,4.1nm,0.6s,baz=300,slow=7.4,SNR=47						
YKA	**Yellowknife Ar**	**40.32**	**45**	P	**P**	**22 16 51.0**	**+1.3**
ALE	**Alert**	**40.59**	**8**	IAMs_20	IAMs_20	22 36 24.5	
	comp=Z,5µm,18.0s						
RES	**Resolute Bay**	**40.66**	**24**	LR	LR	22 36 28.1	
	comp=Z,3µm,18.1s,baz=300,slow=40						
RES	**Resolute Bay**	**40.66**	**24**	P	**P**	**22 16 53.2**	**+0.9**
RES				pmax	pmax		
	comp=Z,26nm,1.0s						
RES				MLR	MLR		
	comp=Z,4µm,18.0s						
RES	**Resolute Bay**	**40.66**	**24**	P	**P**	**22 16 53.2**	**+0.9**
WHN	**Wuhan**	**42.38**	**255**	⇓P	**P**	**22 17 07.4**	**+0.4**
WHN				S	**S**	**22 23 30.0**	**+4.5**
WHN				LR	LR		
	comp=Z,18µm,14.5s						
WHN				LR	LR		
	comp=Z,43µm,14.7s						
WHN				LR	LR		
	comp=Z,23µm,13.6s						
YOJ	**Yonaguni jima**	**42.65**	**241**	IAMs_20	IAMs_20	22 34 52.7	
	comp=Z,5µm,22.0s						
XAN	**Xi'an**	**42.84**	**264**	P	**P**	**22 17 08.3**	**-2.5**
XAN				pP	pP	22 17 14.9	-5.7
XAN				PcP	**PcP**	**22 19 02.1**	**+0.9**
XAN				S	**S**	**22 23 29.5**	**-2.9**
XAN				SS	SS	22 26 33.0	-11
XAN				ScS	**ScS**	**22 27 03.0**	**-5.2**
XAN				pmax	pmax		
	comp=Z,820nm,14.2s						
XAN				LR	LR		
	comp=Z,26µm,14.7s						
XAN				LR	LR		
	comp=Z,31µm,14.7s						
XAN				LR	LR		
	comp=Z,19µm,15.7s						
XAN	**Xi'an**	**42.84**	**264**	IAMs_20	IAMs_20	22 37 38.3	
	comp=Z,9µm,22.0s						
TATO	**Taipei**	**42.99**	**243**	IAMs_20	IAMs_20	22 37 40.8	
	comp=Z,7µm,19.0s						
ZAA0	**Zalesovo Array**	**43.29**	**302**	P	**P**	**22 17 13.6**	**-0.5**
ZAA0				IAMs_20	IAMs_20	22 36 17.4	
	comp=Z,6µm,18.0s						
ZALV	**Zalesovo Beam**	**43.29**	**302**	P	**P**	**22 17 12.5**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=64,slow=7.4,SNR=10						
ZALV				PP	**PP**	**22 18 56.7**	**+1.9**
	comp=Z,4.3nm,0.9s,baz=32,slow=8.5,SNR=6.3						
ZALV				LR	LR	22 36 29.2	
	comp=Z,6µm,18.3s,baz=34,slow=38						
NACB	**Ninganchiao**	**43.60**	**242**	IAMs_20	IAMs_20	22 35 38.0	
	comp=Z,5µm,21.0s						
NLWA	**Neilton Lookou**	**44.23**	**68**	P	**P**	**22 17 23.3**	**+1.6**
NLWA				IAmb	IAmb	22 18 07.7	
	comp=Z,129nm,1.9s						
NLWA				IAMs_20	IAMs_20	22 38 33.1	
	comp=Z,5µm,18.0s						
SSLB	**Suanglung**	**44.24**	**242**	P	**P**	**22 17 22.1**	**0.0**
SSLB				IAmb	IAmb	22 17 38.3	
	comp=Z,83nm,1.5s						
LZH	**Lanzhou**	**44.29**	**270**	*e*P	**P**	**22 17 18.5**	**-4.0**
LZH				*e*S	**S**	**22 23 56.8**	**+3.1**
LZH				sS	sS	22 24 03.6	-5.6
LZH				pmax	pmax		
	comp=Z,110nm,1.0s						
LZH				pmax	pmax		
	comp=Z,420nm,4.6s						
LZH				LR	LR		
	comp=Z,28µm,13.8s						
LZH				LR	LR		
	comp=Z,16µm,13.8s						
LZH				LR	LR		
	comp=Z,20µm,14.9s						
GTA	**Gaotai**	**44.30**	**277**	*e*P	**P**	**22 17 20.2**	**-2.3**
GTA				pP	pP	22 17 24.8	-7.5
GTA				sP	sP	22 17 28.1	-8.8
GTA				pmax	pmax		
	comp=Z,560nm,10.0s						
GTA				LR	LR		
	comp=Z,22µm,14.3s						
GTA				LR	LR		
	comp=Z,24µm,15.1s						
GTA				LR	LR		
	comp=Z,40µm,15.1s						
YULB	**Yu-li**	**44.40**	**242**	P	**P**	**22 17 23.0**	**-0.3**
YULB				IAmb	IAmb	22 17 57.6	
	comp=Z,78nm,1.3s						
TULEG	**Thule**	**44.45**	**15**	P	**P**	**22 17 24.8**	**+1.8**
DGZ	**Jazzator, Alta**	**44.50**	**296**	*c i*P	**P**	**22 17 23.1**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,35nm,1.3s						
QZH	**Quanzhou**	**44.51**	**246**	⇑*i*P	**P**	**22 17 24.3**	**+0.1**
QZH				pmax	pmax		
	comp=Z,930nm,9.5s						
QZH				LR	LR		
	comp=Z,6µm,14.2s						
QZH				LR	LR		
	comp=Z,4µm,13.4s						
QZH				LR	LR		
	comp=Z,8µm,14.5s						
D03D	**Eldon**	**44.55**	**68**	P	**P**	**22 17 24.6**	**+0.3**
	baz=308						
B05A	**Bryant**	**44.62**	**66**	P	**P**	**22 17 26.3**	**+1.5**
	baz=308						
B06A	**Marblemount**	**44.79**	**66**	P	**P**	**22 17 27.4**	**+1.3**
B06A				IAmb	IAmb	22 18 07.0	
	comp=Z,96nm,1.6s						
TPUB	**Ta-pu**	**44.81**	**242**	IAMs_20	IAMs_20	22 36 18.1	
	comp=Z,8µm,20.0s						
E03A	**Lebam**	**44.92**	**69**	P	**P**	**22 17 28.9**	**+1.7**
E03A				IAmb	IAmb	22 17 40.3	
	comp=Z,65nm,1.1s						
D04E	**Lakebay**	**44.94**	**68**	P	**P**	**22 17 29.1**	**+1.7**
	baz=309						
TWG	**Pinlang**	**44.99**	**241**	IAMs_20	IAMs_20	22 37 26.8	
	comp=Z,6µm,19.0s						
KBS	**Kingsbay**	**45.08**	**353**	IAMs_20	IAMs_20	22 35 37.6	
	comp=Z,5µm,20.0s						
ENH	**Enshi**	**45.31**	**259**	P	**P**	**22 17 28.8**	**-1.7**
ENH				IAmb	IAmb	22 19 12.2	
	comp=Z,96nm,2.0s						
D05A	**Enumclaw**	**45.35**	**68**	P	**P**	**22 17 32.2**	**+1.6**
D05A				IAmb	IAmb	22 18 28.9	
	comp=Z,69nm,1.2s						
SPA0	**Spitsbergen Ar**	**45.40**	**351**	P	**P**	**22 17 31.1**	**+0.5**
E04D	**Cinebar**	**45.44**	**69**	P	**P**	**22 17 32.9**	**+1.6**
	baz=309						
I02D	**Swisshome**	**46.33**	**72**	P	**P**	**22 17 37.9**	**-0.4**
	baz=311						
F05D	**White Salmon**	**46.46**	**69**	P	**P**	**22 17 40.3**	**+0.8**
	baz=310						
H04D	**Lebanon**	**46.66**	**71**	P	**P**	**22 17 43.0**	**+2.0**
	baz=311						
I03D	**Drain, OR**	**46.87**	**72**	P	**P**	**22 17 44.4**	**+1.8**
	baz=311						
KEBM	**Edson Butte**	**46.87**	**74**	P	**P**	**22 17 44.5**	**+1.7**
J01E	**Myrtle Point**	**46.90**	**73**	P	**P**	**22 17 44.7**	**+1.8**
	baz=311						
G05D	**Wamic, OR**	**46.96**	**69**	P	**P**	**22 17 44.8**	**+1.5**
	baz=311						
HAWA	**Hanford**	**47.16**	**67**	P	**P**	**22 17 46.2**	**+1.3**
HAWA				IAmb	IAmb	22 18 05.3	
	comp=Z,29nm,1.3s						
NEW	**Newport**	**47.21**	**64**	LR	LR	22 36 10.4	
	comp=Z,3µm,21.6s,baz=303,slow=34						
NEW	**Newport**	**47.21**	**64**	P	**P**	**22 17 46.1**	**+0.8**
NEW				pmax	pmax		
	comp=Z,17nm,1.1s						
NEW				MLR	MLR		
	comp=Z,3µm,19.0s						
NEW	**Newport**	**47.21**	**64**	P	**P**	**22 17 46.5**	**+1.2**
	baz=310						
NEW	**Newport**	**47.21**	**64**	P	**P**	**22 17 46.1**	**+0.8**
ZSN	**Zaisan**	**47.23**	**295**	*e*P	**P**	**22 17 42.1**	**-3.4**
	baz=294						
ZSN	**Zaisan**	**47.23**	**295**	*e*P	**P**	**22 17 42.9**	**-2.6**
I04A	**Tendick Farm,**	**47.31**	**71**	P	**P**	**22 17 47.3**	**+1.2**
	baz=311,SNR=6.3						
K02D	**Willamette Mer**	**47.36**	**73**	P	**P**	**22 17 47.5**	**+0.9**
	baz=312						
SEM	**Semipalatinsk**	**47.68**	**301**	*e*P	**P**	**22 17 45.5**	**-3.6**
	comp=Z,21nm,1.4s,baz=300						
SEM				*e*S	**S**	**22 24 37.0**	**-5.2**
	baz=300						
SEM				LR	LR	22 38 11.1	
	comp=Z,4µm,13.4s,baz=300						
SEM	**Semipalatinsk**	**47.68**	**301**	*e*P	**P**	**22 17 45.5**	**-3.6**
SEM				*e*S	**S**	**22 24 37.0**	**-5.2**
SEM				pmax	pmax		
	comp=Z,21nm,1.4s						
SEM				MLR	MLR		
	comp=Z,4µm,13.0s						
L02E	**Cave Junction**	**47.75**	**74**	P	**P**	**22 17 51.5**	**+2.0**
	baz=312,SNR=9.0						
J04D	**Umpqua Nationa**	**47.85**	**72**	P	**P**	**22 17 51.7**	**+1.2**
	baz=312,SNR=8.3						
CD2	**Chengdu**	**48.09**	**265**	⇓P	**P**	**22 17 51.0**	**-1.3**
CD2				pP	pP	22 17 54.7	-7.5
CD2				S	**S**	**22 24 49.1**	**+1.0**
CD2				sS	sS	22 24 57.4	-6.4
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,1µm,8.6s						
CD2				LR	LR		
	comp=Z,24µm,19.6s						
CD2				LR	LR		
	comp=Z,25µm,17.6s						
CD2				LR	LR		
	comp=Z,24µm,14.7s						
WMQ	**Urumqi**	**48.11**	**290**	*e*P	**P**	**22 17 52.2**	**-0.1**
WMQ				sP	pP	22 18 03.5	+1.2
WMQ				ScP	**ScP**	**22 23 16.0**	**+5.5**
WMQ				S	**S**	**22 24 52.5**	**+4.4**
WMQ				pmax	pmax		
	comp=Z,73nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,1µm,6.9s						
WMQ				LR	LR		
	comp=Z,25µm,14.7s						
WMQ				LR	LR		
	comp=Z,17µm,14.7s						
WMQ				LR	LR		
	comp=Z,26µm,16.1s						
WMQ	**Urumqi**	**48.11**	**290**	P	**P**	**22 17 51.5**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,81nm,1.3s						
WMQ				MLR	MLR		
	comp=Z,7µm,19.0s						
WMQ	**Urumqi**	**48.11**	**290**	P	**P**	**22 17 51.5**	**-0.8**
WMQ	**Urumqi**	**48.11**	**290**	IAMs_20	IAMs_20	22 38 23.4	
	comp=Z,7µm,19.0s						
PINE	**Pine Mountain**	**48.11**	**70**	P	**P**	**22 17 54.1**	**+1.6**
PINE				IAmb	IAmb	22 18 12.8	
	comp=Z,42nm,1.1s						
KURK	**Kurchatov**	**48.28**	**302**	*ce*P	**P**	**22 17 51.5**	**-1.9**
KURK				pmax	pmax		
	comp=Z,67nm,1.2s						
KURK	**Kurchatov**	**48.28**	**302**	P	**P**	**22 17 51.7**	**-1.7**
J05D	**Fort Rock, OR**	**48.29**	**71**	P	**P**	**22 17 55.1**	**+1.3**
	baz=312,SNR=22						
DAG	**Danmarks Havn**	**48.32**	**1**	*i* P	**P**	**22 17 52.0**	**-1.4**
DAG				pmax	pmax		
	comp=Z,12nm,0.9s						
DAG				MLR	MLR		
	comp=Z,5µm,17.0s						
DAG	**Danmarks Havn**	**48.32**	**1**	*i* P	**P**	**22 17 52.0**	**-1.4**
	comp=Z,12nm,0.9s						
	comp=Z,5µm,17.0s						
DAG	**Danmarks Havn**	**48.32**	**1**	*i* P	**P**	**22 17 52.0**	**-1.4**
DAG				IAmb	IAmb	22 17 55.7	
	comp=Z,12nm,0.9s						
DAG				IAMs_20	IAMs_20	22 42 53.8	
	comp=Z,5µm,17.0s						
WALA	**Waterton Lakes**	**48.33**	**61**	P	**P**	**22 17 54.8**	**+0.8**
WALA				IAMs_20	IAMs_20	22 35 54.2	
	comp=Z,4µm,19.0s						
JCC	**Jacoby Creek,**	**48.42**	**75**	P	**P**	**22 17 56.4**	**+1.7**
JCC				IAmb	IAmb	22 18 10.9	
	comp=Z,46nm,1.2s						
L04D	**Klamath Falls**	**48.42**	**73**	P	**P**	**22 17 56.7**	**+1.9**
	baz=312,SNR=21						
K04D	**Chiloquin, OR**	**48.45**	**72**	P	**P**	**22 17 56.7**	**+1.6**
	baz=312						
YBH	**Yreka Blue Hor**	**48.53**	**74**	LR	LR	22 36 45.4	
	comp=Z,2µm,18.7s,baz=316,slow=34						
KHMM	**Horse Mountain**	**48.55**	**75**	P	**P**	**22 17 58.0**	**+2.2**
KHMM				IAmb	IAmb	22 18 13.9	
	comp=Z,44nm,1.2s						
M02C	**Callahan**	**48.68**	**74**	P	**P**	**22 17 59.1**	**+2.3**
	baz=313,SNR=15						
GZH	**Guangzhou**	**48.80**	**250**	P	P	22 17 53.1	-4.7
GZH				S	**S**	**22 24 53.6**	**-4.5**
GZH				LR	LR		
	comp=Z,7µm,17.1s						
GZH				LR	LR		
	comp=Z,13µm,17.3s						
M04C	**Macdoel**	**48.97**	**73**	P	**P**	**22 18 01.4**	**+2.3**
	baz=313,SNR=12						
MK31	**Makanchi Array**	**49.00**	**296**	*i* P	**P**	**22 17 56.7**	**-2.4**
MK31				pmax	pmax		
	comp=Z,33nm,1.3s						
MK31	**Makanchi Array**	**49.00**	**296**	P	**P**	**22 17 57.1**	**-2.0**
MKAR	**Makanchi Array**	**49.00**	**296**	P	**P**	**22 17 57.1**	**-1.9**
	comp=Z,13nm,1.1s,baz=54,slow=6.2,SNR=47						
MKAR				S	**S**	**22 24 59.2**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=49,slow=17,SNR=3.6						
MKAR				LR	LR	22 39 17.9	
	comp=Z,7µm,19.4s,baz=40,slow=37						
MKAR	**Makanchi Array**	**49.00**	**296**	*i* P	**P**	**22 17 57.0**	**-2.1**
MKAR				pmax	pmax		
	comp=Z,13nm,1.1s						
JTMT	**Jette**	**49.00**	**62**	P	**P**	**22 18 00.3**	**+1.1**
JTMT				IAmb	IAmb	22 18 13.8	
	comp=Z,48nm,1.1s						
JTMT				IAMs_20	IAMs_20	22 38 52.0	
	comp=Z,3µm,18.0s						
N02D	**Trinity Center**	**49.05**	**74**	P	**P**	**22 18 02.1**	**+2.5**
	baz=313,SNR=17						
MAKZ	**Makanchi**	**49.15**	**296**	P	**P**	**22 17 58.3**	**-2.0**
MAKZ				pmax	pmax		
	comp=Z,39nm,1.3s						
MAKZ				MLR	MLR		
	comp=Z,7µm,20.0s						
MAKZ	**Makanchi**	**49.15**	**296**	P	**P**	**22 17 58.2**	**-2.0**
MAKZ				IAmb	IAmb	22 18 00.3	
	comp=Z,39nm,1.2s						
MAKZ				IAMs_20	IAMs_20	22 39 11.1	
	comp=Z,7µm,20.0s						
BMO	**Blue Mountains**	**49.35**	**67**	P	**P**	**22 18 03.0**	**+1.1**
BMO				pmax	pmax		
	comp=Z,27nm,1.4s						
BMO				MLR	MLR		
	comp=Z,2µm,20.0s						
BMO	**Blue Mountains**	**49.35**	**67**	P	**P**	**22 18 03.0**	**+1.1**
O02D	**Mt. Diablo Mer**	**49.55**	**75**	P	**P**	**22 18 06.0**	**+2.5**
	baz=314,SNR=14						
MSO	**Missoula**	**49.78**	**63**	P	**P**	**22 18 06.5**	**+1.4**
	baz=312						
MSO	**Missoula**	**49.78**	**63**	P	**P**	**22 18 06.1**	**+0.9**
GYA	**Guiyang**	**49.82**	**259**	⇓P	**P**	**22 18 07.8**	**+2.1**
GYA				S	**S**	**22 25 10.0**	**-2.7**
GYA				pmax	pmax		
	comp=Z,12nm,1.3s						
GYA				pmax	pmax		
	comp=Z,810nm,12.0s						
GYA				LR	LR		
	comp=Z,11µm,17.1s						
GYA				LR	LR		
	comp=Z,11µm,16.2s						
GYA				LR	LR		
	comp=Z,11µm,16.9s						
O03E	**Paynes Creek**	**50.01**	**74**	P	**P**	**22 18 08.4**	**+1.4**
	baz=314,SNR=33						
FFC	**Flin Flon**	**50.19**	**49**	P	**P**	**22 18 09.0**	**+1.0**
FFC				pmax	pmax		
	comp=Z,59nm,1.9s						
FFC				MLR	MLR		
	comp=Z,3µm,18.0s						
FFC	**Flin Flon**	**50.19**	**49**	P	**P**	**22 18 09.0**	**+1.0**
FFC				IAmb	IAmb	22 18 40.0	
	comp=Z,59nm,1.9s						
HOPS	**Hopland Field**	**50.21**	**77**	P	**P**	**22 18 09.9**	**+1.5**
HOPS				IAmb	IAmb	22 18 30.3	
	comp=Z,44nm,1.2s						
WVOR	**Wild Horse Val**	**50.27**	**70**	P	**P**	**22 18 10.6**	**+1.6**
WVOR				pmax	pmax		
	comp=Z,24nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,2µm,18.0s						
WVOR	**Wild Horse Val**	**50.27**	**70**	P	**P**	**22 18 10.6**	**+1.6**
GDXM	**Geysers**	**50.49**	**77**	IAMs_20	IAMs_20	22 41 41.2	
	comp=Z,5µm,18.0s						
BVAR	**Borovoye Array**	**50.61**	**309**	P	**P**	**22 18 09.5**	**-1.7**
	comp=Z,1.1nm,0.5s						
BVAR				S	**S**	**22 25 22.2**	**-0.6**
	comp=Z,1.5nm,1.2s,baz=252,slow=17,SNR=4.0						
BRVK	**Borovoye**	**50.63**	**309**	*i* P	**P**	**22 18 09.0**	**-2.4**
BRVK				pmax	pmax		
	comp=Z,14nm,1.2s						
BRVK	**Borovoye**	**50.63**	**309**	P	**P**	**22 18 10.1**	**-1.3**
BRVK	**Borovoye**	**50.63**	**309**	IAMs_20	IAMs_20	22 40 19.5	
	comp=Z,4µm,18.0s						
FCC	**Fort Churchill**	**50.64**	**41**	P	**P**	**22 18 12.1**	**+0.8**
FCC				pmax	pmax		
	comp=Z,31nm,1.0s						
FCC				MLR	MLR		
	comp=Z,4µm,18.0s						
FCC	**Fort Churchill**	**50.64**	**41**	P	**P**	**22 18 12.1**	**+0.8**
FCC				IAmb	IAmb	22 18 14.0	
	comp=Z,31nm,1.0s						
FCC				IAMs_20	IAMs_20	22 41 22.7	
	comp=Z,4µm,18.0s						
ORV	**Oroville**	**50.69**	**75**	P	**P**	**22 18 13.3**	**+1.3**
ORV				pmax	pmax		
	comp=Z,20nm,1.1s						
ORV	**Oroville**	**50.69**	**75**	P	**P**	**22 18 13.3**	**+1.3**
DBG	**Daneborg**	**50.78**	**1**	*i* P	**P**	**22 18 12.2**	**+0.1**
DBG				IAmb	IAmb	22 18 14.2	
	comp=Z,22nm,1.1s						
DBG				IAMs_20	IAMs_20	22 40 46.6	
	comp=Z,6µm,18.7s						
HRY	**Holter Researc**	**50.93**	**62**	P	**P**	**22 18 15.4**	**+1.5**
EGMT	**Eagleton**	**51.08**	**59**	P	**P**	**22 18 15.9**	**+0.9**
	baz=313						
EGMT	**Eagleton**	**51.08**	**59**	IAMs_20	IAMs_20	22 40 37.0	
	comp=Z,5µm,19.0s						
LVZ	**Lovozero**	**51.52**	**338**	P	**P**	**22 18 18.5**	**+0.6**
LVZ				pmax	pmax		
	comp=Z,221nm,1.9s						
LVZ				MLR	MLR		
	comp=Z,6µm,21.0s						
LVZ	**Lovozero**	**51.52**	**338**	P	**P**	**22 18 18.5**	**+0.6**
LVZ				IAMs_20	IAMs_20	22 42 45.2	
	comp=Z,6µm,21.0s						
BRZS	**Berezniki**	**51.62**	**305**	*e*P	**P**	**22 18 16.0**	**-2.8**
	comp=Z,24nm,1.5s,baz=304						
BRZS	**Berezniki**	**51.62**	**305**	*e*P	**P**	**22 18 16.0**	**-2.8**
BRZS				pmax	pmax		
	comp=Z,24nm,1.5s						
SUMG	**Summit**	**51.64**	**8**	P	**P**	**22 18 19.6**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,56nm,1.2s						
SUMG				MLR	MLR		
	comp=Z,6µm,18.0s						
SUMG	**Summit**	**51.64**	**8**	P	**P**	**22 18 19.6**	**+0.5**
SUMG				IAmb	IAmb	22 18 54.8	
	comp=Z,56nm,1.2s						
SUMG	**Summit**	**51.64**	**8**	*i* P	**P**	**22 18 19.9**	**+0.8**
	comp=Z,87nm,1.1s						
SUMG	**Summit**	**51.64**	**8**	*i* P	**P**	**22 18 20.0**	**+0.8**
SUMG				IAmb	IAmb	22 18 23.9	
	comp=Z,87nm,1.1s						
HLID	**Hailey**	**51.75**	**66**	P	**P**	**22 18 21.0**	**+0.9**
	baz=314						
HLID	**Hailey**	**51.75**	**66**	P	**P**	**22 18 21.2**	**+1.1**
BCYI	**Bear Canyon**	**51.76**	**65**	P	**P**	**22 18 21.1**	**+0.9**
BOZ	**Bozeman (W)**	**51.80**	**63**	P	**P**	**22 18 21.8**	**+1.4**
BOZ				pmax	pmax		
	comp=Z,79nm,2.0s						
BOZ				MLR	MLR		
	comp=Z,2µm,18.0s						
BOZ	**Bozeman (W)**	**51.80**	**63**	P	**P**	**22 18 21.4**	**+1.0**
	baz=313						
BOZ	**Bozeman (W)**	**51.80**	**63**	P	**P**	**22 18 21.8**	**+1.4**
BOZ				IAmb	IAmb	22 19 00.4	
	comp=Z,79nm,1.9s						
ARCES	**ARCESS Array B**	**51.90**	**343**	P	**P**	**22 18 20.6**	**-0.1**
	comp=Z,7.7nm,0.8s,baz=27,slow=8.3,SNR=10.0						
ARCES				LR	LR	22 43 49.6	
	comp=Z,6µm,18.4s,baz=60,slow=40						
APA	**Apatity**	**52.06**	**338**	⇑*i*P	**P**	**22 18 24.2**	**+2.4**
APA				*i*		22 20 24.0	

APA				*i* S	**S**	**22 25 44.0**	**+1.7**
APA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,6µm,17.0s						
SVE	**Sverdlovsk**	**52.08**	**317**	*e*P	**P**	**22 18 23.1**	**+1.0**
SVE				*e*S	**S**	**22 25 43.8**	**+0.9**
SVE				pmax	pmax		
	comp=Z,14nm,1.6s						
SVE				MLR	MLR		
	comp=Z,24µm,14.0s						
TDK	**Taldyqorghan**	**52.21**	**297**	*e*P	**P**	**22 18 20.9**	**-2.4**
	comp=Z,53nm,1.6s,baz=296						
TDK				*e*S	**S**	**22 25 40.5**	**-4.5**
	baz=296						
TDK				LR	LR	22 41 32.6	
	comp=Z,5µm,13.9s,baz=296						
TDK	**Taldyqorghan**	**52.21**	**297**	*e*P	**P**	**22 18 20.9**	**-2.4**
TDK				*e*S	**S**	**22 25 40.5**	**-4.5**
TDK				pmax	pmax		
	comp=Z,53nm,1.6s						
TDK				MLR	MLR		
	comp=Z,5µm,14.0s						
CMB	**Columbia Colle**	**52.38**	**76**	P	**P**	**22 18 26.6**	**+1.9**
CMB				pmax	pmax		
	comp=Z,69nm,2.0s						
CMB				MLR	MLR		
	comp=Z,3µm,18.0s						
CMB	**Columbia Colle**	**52.38**	**76**	P	**P**	**22 18 26.6**	**+1.9**
CMB				IAmb	IAmb	22 18 36.0	
	comp=Z,69nm,1.9s						
PDGK	**Podgornoye**	**52.81**	**294**	*i* P	**P**	**22 18 25.5**	**-2.4**
PDGK				pmax	pmax		
	comp=Z,22nm,1.4s						
SHLS	**Shalkode**	**52.94**	**294**	*e*P	**P**	**22 18 25.1**	**-3.8**
	comp=Z,37nm,1.4s,baz=293						
SHLS	**Shalkode**	**52.94**	**294**	*e*P	**P**	**22 18 25.0**	**-3.8**
SHLS				pmax	pmax		
	comp=Z,37nm,1.4s						
KMI	**Kunming**	**53.08**	**261**⇓	*e*P	**P**	**22 18 29.5**	**-0.7**
KMI				pP	pP	22 18 32.5	-7.8
KMI				sP	sP	22 18 34.1	-10
KMI				S	**S**	**22 25 55.2**	**-2.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,830nm,13.3s						
KMI				LR	LR		
	comp=Z,17µm,16.6s						
KMI				LR	LR		
	comp=Z,11µm,16.6s						
KMI				LR	LR		
	comp=Z,9µm,17.4s						
KMI	**Kunming**	**53.08**	**261**	P	**P**	**22 18 28.7**	**-1.5**
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI				MLR	MLR		
	comp=Z,9µm,18.0s						
KMI	**Kunming**	**53.08**	**261**	P	**P**	**22 18 28.7**	**-1.5**
KPKS	**Kokpek**	**53.13**	**295**	*e*P	**P**	**22 18 27.6**	**-2.7**
	comp=Z,21nm,1.5s,baz=294						
KPKS	**Kokpek**	**53.13**	**295**	*e*P	**P**	**22 18 27.5**	**-2.7**
KPKS				pmax	pmax		
	comp=Z,21nm,1.5s						
LKWY	**Lake**	**53.14**	**63**	P	**P**	**22 18 33.5**	**+3.0**
LKWY				pmax	pmax		
	comp=Z,25nm,1.1s						
LKWY				MLR	MLR		
	comp=Z,4µm,21.0s						
LKWY	**Lake**	**53.14**	**63**	P	**P**	**22 18 33.5**	**+3.0**
LKWY				IAMs_20	IAMs_20	22 39 37.6	
	comp=Z,4µm,21.0s						
H17A	**Grant Village**	**53.17**	**63**	P	**P**	**22 18 33.6**	**+2.9**
	baz=314,SNR=6.3						
H17A	**Grant Village**	**53.17**	**63**	IAMs_20	IAMs_20	22 42 33.4	
	comp=Z,5µm,20.0s						
ARU	**Arti**	**53.17**	**318**	P	**P**	**22 18 30.0**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=33,slow=8.3,SNR=6.2						
ARU	**Arti**	**53.17**	**318**	*d i*P	**P**	**22 18 30.1**	**-0.1**
ARU						22 19 36.8	
ARU				S	**S**	**22 25 56.0**	**-1.8**
ARU						22 28 15.3	
ARU				pmax	pmax		
	comp=Z,14nm,1.6s						
ARU				MLR	MLR		
	comp=Z,15µm,15.0s						
ARU	**Arti**	**53.17**	**318**	P	**P**	**22 18 30.1**	**-0.1**
NVAR	**Mina Array Bea**	**53.25**	**74**	P	**P**	**22 18 34.1**	**+2.8**
	comp=Z,15nm,1.0s,baz=296,slow=7.4,SNR=53						
NVAR				LR	LR	22 38 05.0	
	comp=Z,2µm,21.4s,baz=313,slow=32						
ELK	**Elko**	**53.28**	**70**	LR	LR	22 40 20.8	
	comp=Z,2µm,19.4s,baz=330,slow=35						
ELK	**Elko**	**53.28**	**70**	P	**P**	**22 18 33.1**	**+1.6**
ELK				pmax	pmax		
	comp=Z,12nm,0.3s						
ELK				MLR	MLR		
	comp=Z,2µm,18.0s						
ELK	**Elko**	**53.28**	**70**	P	**P**	**22 18 33.1**	**+1.6**
ELK				IAmb	IAmb	22 18 57.0	
	comp=Z,12nm,0.3s						
RLMT	**Red Lodge**	**53.33**	**62**	P	**P**	**22 18 33.6**	**+1.8**
	baz=314,SNR=8.2						
RLMT	**Red Lodge**	**53.33**	**62**	IAMs_20	IAMs_20	22 43 04.5	
	comp=Z,4µm,18.0s						
NV11	**Mina Array Sit**	**53.33**	**74**	P	**P**	**22 18 33.8**	**+2.0**
NV11				IAmb	IAmb	22 19 15.8	
	comp=Z,46nm,1.4s						
DGMT	**Dagmar**	**53.47**	**56**	P	**P**	**22 18 33.8**	**+1.3**
DGMT				IAmb	IAmb	22 19 09.8	
	comp=Z,39nm,1.4s						
DGMT	**Dagmar**	**53.47**	**56**	IAMs_20	IAMs_20	22 40 38.9	
	comp=Z,4µm,20.0s						
MLAC	**Mammoth, Mammo**	**53.53**	**75**	P	**P**	**22 18 36.1**	**+2.7**
	baz=316						
SATY	**Saty**	**53.56**	**295**	*e*P	**P**	**22 18 31.2**	**-2.3**
	comp=Z,13nm,1.6s,baz=294						
SATY	**Saty**	**53.56**	**295**	*e*P	**P**	**22 18 31.1**	**-2.3**
SATY				pmax	pmax		
	comp=Z,13nm,1.6s						
CHKK	**Chushkaly**	**53.73**	**296**	*e*P	**P**	**22 18 31.4**	**-3.2**
	baz=296						
CHKK	**Chushkaly**	**53.73**	**296**	*e*P	**P**	**22 18 31.4**	**-3.2**
LAO	**LASA Array**	**53.74**	**59**	P	**P**	**22 18 38.0**	**+3.3**
	baz=315,SNR=7.3						
LAO	**LASA Array**	**53.74**	**59**	P	**P**	**22 18 36.4**	**+1.7**
LAO				IAmb	IAmb	22 18 39.6	
	comp=Z,32nm,0.9s						
LAO				IAMs_20	IAMs_20	22 42 40.4	
	comp=Z,4µm,18.0s						
REDW	**Red Top Meadow**	**53.75**	**64**	IAMs_20	IAMs_20	22 45 22.9	
	comp=Z,3µm,18.0s						
TMCR	**Tamitsa**	**53.79**	**334**	*e*P	**P**	**22 18 33.1**	**-1.5**
TMCR				pmax	pmax		
	comp=Z,46nm,1.2s						
QIZ	**Qiongzhong**	**53.99**	**250**	P	**P**	**22 18 35.4**	**-1.2**
QIZ				PP	**PP**	**22 20 36.4**	**-1.7**
QIZ				S	**S**	**22 26 10.6**	**+0.9**
QIZ				SS	**SS**	**22 29 53.5**	**+2.3**
QIZ				pmax	pmax		
	comp=Z,320nm,3.9s						
QIZ				LR	LR		
	comp=Z,10µm,15.1s						
QIZ				LR	LR		
	comp=Z,4µm,14.9s						
QIZ				LR	LR		
	comp=Z,11µm,15.8s						
QIZ	**Qiongzhong**	**53.99**	**250**	IAMs_20	IAMs_20	22 42 33.9	
	comp=Z,3µm,18.0s						
KUU	**Kurty**	**54.04**	**297**	*e*P	**P**	**22 18 33.4**	**-3.5**
	comp=Z,34nm,1.5s,baz=296						
KUU	**Kurty**	**54.04**	**297**	*e*P	**P**	**22 18 33.3**	**-3.5**
KUU				pmax	pmax		
	comp=Z,34nm,1.5s						
MDOK	**Medeo**	**54.19**	**296**	*e*P	**P**	**22 18 35.6**	**-2.5**
	baz=295						
MDOK				LR	LR	22 41 59.9	
	comp=Z,7µm,13.6s,baz=295						
MDOK	**Medeo**	**54.19**	**296**	*e*P	**P**	**22 18 35.5**	**-2.5**
MDOK				MLR	MLR		
	comp=Z,7µm,14.0s						
AAA	**Alma-Ata**	**54.23**	**296**	*e*P	**P**	**22 18 36.2**	**-2.1**
	baz=295						
AAA				LR	LR	22 41 33.8	
	comp=Z,5µm,14.5s,baz=295						
AAA	**Alma-Ata**	**54.23**	**296**	*e*P	**P**	**22 18 36.1**	**-2.1**
AAA				MLR	MLR		
	comp=Z,5µm,15.0s						
TIN	**Tinemaha, Big**	**54.28**	**75**	P	**P**	**22 18 41.3**	**+2.5**
	baz=316						
TNSS	**Tian-Shan**	**54.33**	**296**	*e*P	**P**	**22 18 36.8**	**-2.6**
	baz=295						
TNSS	**Tian-Shan**	**54.33**	**296**	*e*P	**P**	**22 18 36.8**	**-2.6**
BTLS	**Baital**	**54.39**	**299**	*e*P	**P**	**22 18 36.6**	**-2.7**
	comp=Z,14nm,1.3s,baz=299						
BTLS	**Baital**	**54.39**	**299**	*e*P	**P**	**22 18 36.6**	**-2.7**
BTLS				pmax	pmax		
	comp=Z,14nm,1.3s						
MTBS	**Maitube**	**54.53**	**296**	*e*P	**P**	**22 18 39.1**	**-1.4**
	baz=296						
MTBS	**Maitube**	**54.53**	**296**	*e*P	**P**	**22 18 39.1**	**-1.4**
SMMC	**Simmler**	**54.55**	**78**	P	**P**	**22 18 42.8**	**+2.1**
	baz=317,SNR=6.4						
HWUT	**Hardware Ranch**	**54.62**	**66**	IAMs_20	IAMs_20	22 44 05.3	
	comp=Z,3µm,18.0s						
VES	**Vestal, Richgr**	**54.68**	**76**	P	**P**	**22 18 43.3**	**+1.8**
	baz=317,SNR=6.2						
GRAC	**Grapevine Rang**	**54.80**	**74**	P	**P**	**22 18 45.0**	**+2.6**
	baz=316,SNR=8.6						
R11A	**Troy Canyon, C**	**54.80**	**72**	P	**P**	**22 18 44.4**	**+1.8**
	baz=316,SNR=14						
CWC	**Cottonwood Cre**	**54.80**	**75**	P	**P**	**22 18 44.4**	**+1.8**
	baz=317						
BW06	**Boulder Array**	**54.84**	**64**	P	**P**	**22 18 44.6**	**+1.7**
	baz=316,SNR=5.6						
BW06	**Boulder Array**	**54.84**	**64**	IAMs_20	IAMs_20	22 44 45.7	
	comp=Z,3µm,18.0s						
PD31	**Pinedale Array**	**54.84**	**64**	P	**P**	**22 18 44.4**	**+1.5**
PDAR	**Pinedale Array**	**54.84**	**64**	P	**P**	**22 18 44.6**	**+1.7**
	comp=Z,3.7nm,0.8s,baz=337,slow=3.4,SNR=14						
PDAR				LR	LR	22 43 13.3	
	comp=Z,1µm,18.1s,baz=340,slow=37						
KIRV	**Kirov**	**54.86**	**324**	P	**P**	**22 18 43.5**	**+1.1**
	comp=Z,6.9nm,0.8s,baz=69,slow=6.4,SNR=4.8						
KIRV				PcP	**PcP**	**22 19 45.2**	**+1.1**
	comp=Z,8.6nm,0.6s,baz=38,slow=12,SNR=4.0						
KIRV	**Kirov**	**54.86**	**324**	*ce*P	**P**	**22 18 42.2**	**-0.2**
ICESG	**Greenland Ices**	**54.91**	**10**	*i* P	**P**	**22 18 42.8**	**-0.3**
ICESG				IAmb	IAmb	22 18 45.5	
	comp=Z,15nm,0.9s						
PKM	**Mcpherson Peak**	**54.97**	**78**	P	**P**	**22 18 46.0**	**+2.2**
	baz=317,SNR=13						
DUG	**Dugway, Tooele**	**54.97**	**68**	P	**P**	**22 18 46.0**	**+2.3**
	baz=316,SNR=12						
ISA	**Isabella, Lake**	**55.15**	**76**	P	**P**	**22 18 46.4**	**+1.4**
ISA				pmax	pmax		
	comp=Z,23nm,1.2s						
ISA				MLR	MLR		
	comp=Z,2µm,18.0s						
ISA	**Isabella, Lake**	**55.15**	**76**	P	**P**	**22 18 46.1**	**+1.1**
	baz=317,SNR=13						
ISA	**Isabella, Lake**	**55.15**	**76**	P	**P**	**22 18 46.4**	**+1.4**
SGDS	**Sogindy**	**55.23**	**298**	*e*P	**P**	**22 18 43.4**	**-2.0**
	comp=Z,22nm,1.5s,baz=297						
SGDS	**Sogindy**	**55.23**	**298**	*e*P	**P**	**22 18 43.4**	**-2.0**
SGDS				pmax	pmax		
	comp=Z,22nm,1.5s						
LKP	**Lekhapani**	**55.32**	**269**	*e*P	**P**	**22 18 46.5**	**+0.3**
LKP				IAmb	IAmb	22 18 51.3	
	comp=Z,22nm,0.4s						
SLVN	**Son La**	**55.40**	**257**	P	**P**	**22 18 47.0**	**+0.1**
MPMC	**Manual Prospec**	**55.41**	**75**	P	**P**	**22 18 48.9**	**+1.9**
	baz=317,SNR=20						
USP	**Ospenovka**	**55.42**	**298**	P	**P**	**22 18 46.2**	**-0.6**
	SNR=36						
TPNV	**Topopah Spring**	**55.45**	**74**	P	**P**	**22 18 48.5**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,56nm,1.1s						
TPNV				MLR	MLR		
	comp=Z,2µm,19.0s						
TPNV	**Topopah Spring**	**55.45**	**74**	P	**P**	**22 18 49.6**	**+2.4**
	baz=317,SNR=24						
TPNV	**Topopah Spring**	**55.45**	**74**	P	**P**	**22 18 48.5**	**+1.3**
TPNV				IAmb	IAmb	22 19 08.6	
	comp=Z,56nm,1.1s						
FURC	**Furnace Creek,**	**55.46**	**74**	P	**P**	**22 18 49.5**	**+2.4**
	baz=317,SNR=10						
CHMS	**Chumysh**	**55.49**	**297**	P	**P**	**22 18 46.4**	**-0.9**
	SNR=15						
SFJD	**Kangerlussuaq**	**55.51**	**15**	P	**P**	**22 18 47.9**	**+0.9**
SFJD				pmax	pmax		
	comp=Z,63nm,1.5s						
SFJD	**Kangerlussuaq**	**55.51**	**15**	P	**P**	**22 18 47.9**	**+0.9**
SFJD				IAmb	IAmb	22 19 29.9	
	comp=Z,63nm,1.5s						
KBK	**Karagaybulak**	**55.63**	**297**	P	**P**	**22 18 47.1**	**-1.4**
	SNR=13						
SCZ2	**Santa Cruz Isl**	**55.72**	**78**	P	**P**	**22 18 51.0**	**+1.9**
	baz=318						
LRMC	**Laurel Mtn Rad**	**55.72**	**76**	P	**P**	**22 18 51.1**	**+1.9**
	baz=317,SNR=19						
DIBR	**DIBRUGARH**	**55.75**	**270**	*e*P	**P**	**22 18 49.9**	**+0.6**
PRN	**Pahroc Range**	**55.77**	**72**	IAMs_20	IAMs_20	22 42 08.8	
	comp=Z,3µm,18.0s						
OSI	**Osito Audit: C**	**55.78**	**77**	P	**P**	**22 18 51.2**	**+1.8**
	baz=317						
AAK	**Ala-Archa**	**55.88**	**297**	P	**P**	**22 18 49.9**	**-0.4**
	SNR=23						
AAK	**Ala-Archa**	**55.88**	**297**	*i* P	**P**	**22 18 49.2**	**-1.1**
	SNR=30						
AAK	**Ala-Archa**	**55.88**	**297**	P	**P**	**22 18 49.2**	**-1.1**
AAK				pmax	pmax		
	comp=Z,26nm,1.1s						
AAK				MLR	MLR		
	comp=Z,6µm,19.0s						
AAK	**Ala-Archa**	**55.88**	**297**	P	**P**	**22 18 49.2**	**-1.1**
EDW2	**Edwards Air Fo**	**55.99**	**76**	P	**P**	**22 18 52.9**	**+1.8**
	baz=317,SNR=18						
ULM	**Lac du Bonnet**	**55.99**	**50**	P	**P**	**22 18 52.6**	**+1.9**
	comp=Z,17nm,1.1s,baz=301,slow=8.0,SNR=12						
ULM				LR	LR	22 44 56.3	
	comp=Z,2µm,19.0s,baz=324,slow=38						
ULM	**Lac du Bonnet**	**55.99**	**50**	*i* P	**P**	**22 18 51.1**	**+0.4**
ULM	**Lac du Bonnet**	**55.99**	**50**	IAMs_20	IAMs_20	22 44 35.6	
	comp=Z,3µm,19.0s						
MDND	**Maddock**	**56.07**	**54**	P	**P**	**22 18 53.0**	**+1.7**
	baz=317						
MDND	**Maddock**	**56.07**	**54**	IAMs_20	IAMs_20	22 45 59.9	
	comp=Z,3µm,19.0s						
KLMR	**Klimovskoe**	**56.10**	**331**	*e*P	**P**	**22 18 48.9**	**-2.5**
KLMR				*e*		22 20 54.3	
KLMR				*e*S	**S**	**22 26 32.8**	**-4.2**
KLMR				*e*SS	**SS**	**22 30 20.6**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,36nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,16µm,15.0s						
KLMR	**Klimovskoe**	**56.10**	**331**	*e*P	**P**	**22 18 48.9**	**-2.5**
KLMR				AMP		22 19 06.3	
	comp=Z,36nm,1.4s						
KLMR				*e*PP	**PP**	**22 20 54.3**	**-1.8**
KLMR				*e*S	**S**	**22 26 32.9**	**-4.1**
KLMR				*e*S	**S**	**22 26 32.9**	**-4.1**
KLMR				*e*SS	**SS**	**22 30 20.6**	**-2.1**
KLMR				*e*SS	**SS**	**22 30 20.6**	**-2.1**
KLMR				LQ	LQ	22 38 50.9	
KLMR				LQ	LQ	22 38 50.9	
KLMR				LR	LR	22 42 46.9	
KLMR				AMP		22 47 05.1	
	comp=Z,16µm,14.7s						
UCH	**Uchtor**	**56.17**	**297**	P	**P**	**22 18 52.4**	**-0.3**
	SNR=5.5						
SHOC	**Shoshone, Teco**	**56.20**	**74**	P	**P**	**22 18 54.6**	**+2.1**
	baz=317						
LSA	**Lhasa**	**56.22**	**275**	P	**P**	**22 18 53.9**	**+0.7**
LSA	**Lhasa**	**56.22**	**275**	P	**P**	**22 18 52.2**	**-1.0**
LSA	**Lhasa**	**56.22**	**275**	P	**P**	**22 18 52.9**	**-0.3**
LSA				pmax	pmax		
	comp=Z,52nm,1.8s						
LSA				MLR	MLR		
	comp=Z,5µm,18.0s						
LSA	**Lhasa**	**56.22**	**275**	P	**P**	**22 18 52.9**	**-0.3**
LSA				IAmb	IAmb	22 19 29.0	
	comp=Z,52nm,1.8s						
LSA				IAMs_20	IAMs_20	22 44 34.7	
	comp=Z,5µm,18.0s						
EKS2	**Erkin-Say**	**56.23**	**297**	P	**P**	**22 18 52.1**	**-0.6**
	SNR=18						
DECC	**Green Verdugo**	**56.26**	**77**	P	**P**	**22 18 54.7**	**+1.8**
	baz=318						
ZIRO	**ZIRO**	**56.31**	**271**	*e*P	**P**	**22 18 54.6**	**+1.0**
SNCC	**San Nicolas Is**	**56.33**	**79**	P	**P**	**22 18 54.9**	**+1.5**
	baz=318						
GSC	**Goldstone, Bar**	**56.34**	**75**	P	**P**	**22 18 55.6**	**+2.0**
	baz=317,SNR=14						
K22A	**Casper**	**56.48**	**62**	P	**P**	**22 18 56.5**	**+2.0**
	baz=317						
K22A	**Casper**	**56.48**	**62**	IAMs_20	IAMs_20	22 43 10.9	
	comp=Z,3µm,18.0s						
E28A	**Huff**	**56.48**	**55**	P	**P**	**22 18 56.3**	**+1.9**
E28A				IAMs_20	IAMs_20	22 44 33.7	
	comp=Z,4µm,19.0s						
BFSC	**Mount Baldy Ra**	**56.65**	**77**	P	**P**	**22 18 57.6**	**+1.8**
	baz=318						
AML	**Almayashu**	**56.66**	**297**	P	**P**	**22 18 55.4**	**-0.7**
	SNR=10						
RSSD	**Black Hills**	**56.66**	**59**	P	**P**	**22 18 57.5**	**+1.6**
RSSD				pmax	pmax		
	comp=Z,20nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,2µm,20.0s						
RSSD	**Black Hills**	**56.66**	**59**	P	**P**	**22 18 57.4**	**+1.6**
	baz=317						
RSSD	**Black Hills**	**56.66**	**59**	P	**P**	**22 18 57.5**	**+1.6**
MOKO	**MOKOCHONG**	**56.85**	**269**	*e*P	**P**	**22 18 57.3**	**-0.1**
MOKO				IAmb	IAmb	22 19 00.5	
	comp=Z,16nm,1.0s						
HEC	**Hector,Ludlow**	**56.95**	**75**	P	**P**	**22 18 59.8**	**+1.9**
	baz=318,SNR=8.9						
BBRC	**Big Bear Solar**	**57.04**	**76**	P	**P**	**22 19 00.4**	**+1.7**
	baz=318						
DZA	**Taraz**	**57.30**	**299**	*e*P	**P**	**22 18 58.6**	**-1.6**
	baz=299						
DZA	**Taraz**	**57.30**	**299**	*e*P	**P**	**22 18 58.5**	**-1.6**
GMRC	**Granite Mounta**	**57.36**	**75**	P	**P**	**22 19 02.8**	**+2.0**
	baz=318,SNR=15						
MURC	**Murrieta**	**57.38**	**77**	P	**P**	**22 19 02.7**	**+1.8**
	baz=318						
KSH	**Kashi**	**57.38**	**293**	P	**P**	**22 19 03.9**	**+3.0**
KSH				sP	pP	22 19 11.4	+0.3
KSH				S	**S**	**22 26 59.9**	**+5.1**
KSH				ScS	**ScS**	**22 28 48.9**	**+1.9**
KSH				pmax	pmax		
	comp=Z,87nm,1.3s						
KSH				pmax	pmax		
	comp=Z,1µm,8.4s						
KSH				LR	LR		
	comp=Z,3µm,9.5s						
KSH				LR	LR		
	comp=Z,7µm,10.5s						
KSH				LR	LR		
	comp=Z,12µm,15.2s						
O20A	**White River Ci**	**57.43**	**65**	P	**P**	**22 19 03.1**	**+1.8**
	baz=317,SNR=6.7						
O20A	**White River Ci**	**57.43**	**65**	IAMs_20	IAMs_20	22 41 46.2	
	comp=Z,2µm,18.0s						
AGMN	**Agassiz Nation**	**57.44**	**51**	P	**P**	**22 19 02.1**	**+1.1**
AGMN				IAMs_20	IAMs_20	22 43 13.6	
	comp=Z,3µm,20.0s						
KOHI	**KOHIMA**	**57.55**	**269**	*e*P	**P**	**22 19 00.5**	**-1.8**
KOHI				IAmb	IAmb	22 19 09.2	
	comp=Z,29nm,1.4s						
KK31	**Karatay Array**	**57.55**	**300**	P	**P**	**22 19 00.9**	**-1.1**
KK31				pmax	pmax		
	comp=Z,38nm,1.2s						
KK31	**Karatay Array**	**57.55**	**300**	P	**P**	**22 19 00.8**	**-1.1**
KK31				IAmb	IAmb	22 19 02.1	
	comp=Z,38nm,1.1s						
KKAR	**Karatay Array**	**57.55**	**300**	P	**P**	**22 19 01.0**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,38nm,1.2s						
KKAR	**Karatay Array**	**57.55**	**300**	P	**P**	**22 19 01.0**	**-0.9**
KKAR				IAmb	IAmb	22 19 02.1	
	comp=Z,38nm,1.1s						
BELC	**Belle Mtn. Jos**	**57.75**	**76**	P	**P**	**22 19 05.1**	**+1.5**
	baz=318						
D32A	**Dogwood Acres,**	**57.78**	**53**	IAMs_20	IAMs_20	22 46 33.2	
	comp=Z,3µm,18.0s						
PFO	**Pinyon Flats O**	**57.78**	**76**⇑	*i*P	**P**	**22 19 05.9**	**+2.1**
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	**Pinyon Flats O**	**57.78**	**76**	P	**P**	**22 19 05.5**	**+1.7**
	baz=318,SNR=5.7						
PFO	**Pinyon Flats O**	**57.78**	**76**	P	**P**	**22 19 05.3**	**+1.4**
PFO				IAMs_20	IAMs_20	22 43 34.1	
	comp=Z,3µm,18.0s						
XPFO	**Pion Flat**	**57.78**	**76**	IAMs_20	IAMs_20	22 43 26.1	
	comp=Z,2µm,18.0s						
TPFO	**Pinon Flats**	**57.79**	**76**	P	**P**	**22 19 05.5**	**+1.7**
	baz=318,SNR=5.8						
AKTO	**Aktyubinsk**	**57.83**	**313**	P	**P**	**22 19 03.5**	**-0.2**
	comp=Z,8.7nm,1.1s,baz=54,slow=5.2,SNR=12						
ABKAR	**Akbulak array**	**57.90**	**311**	P	**P**	**22 19 03.9**	**-0.3**
VALR	**Valaam**	**57.93**	**335**	*i* P	**P**	**22 19 05.9**	**+1.7**
VALR				pmax	pmax		
	comp=Z,95nm,1.2s						
N23A	**Red Feather La**	**58.06**	**63**	P	**P**	**22 19 07.7**	**+1.9**
	baz=318,SNR=15						
IRM	**Iron Mountain**	**58.10**	**75**	P	**P**	**22 19 08.0**	**+2.0**
	baz=318,SNR=12						
BC3	**Big Chuckawall**	**58.31**	**76**	P	**P**	**22 19 08.5**	**+1.0**
	baz=318						
B35A	**Bob, Littlefor**	**58.33**	**50**	IAMs_20	IAMs_20	22 47 05.7	
	comp=Z,4µm,19.0s						
MONP2	**Monument Peak**	**58.34**	**77**	P	**P**	**22 19 10.4**	**+2.6**
	baz=318,SNR=6.4						
PV19	**Morning Glory**	**58.38**	**67**	IAMs_20	IAMs_20	22 46 27.7	
	comp=Z,3µm,18.0s						
PV11	**David Mesa, Pa**	**58.44**	**67**	IAMs_20	IAMs_20	22 46 48.2	
	comp=Z,3µm,18.0s						
PV18	**Skein Mesa, Pa**	**58.46**	**67**	IAMs_20	IAMs_20	22 46 32.0	
	comp=Z,3µm,18.0s						
PV12	**Saucer Basin,**	**58.47**	**67**	IAMs_20	IAMs_20	22 46 41.1	
	comp=Z,4µm,18.0s						
PV03	**Paradox Valley**	**58.49**	**67**	IAMs_20	IAMs_20	22 46 31.7	
	comp=Z,3µm,18.0s						
IUG	**Iuzhnay**	**58.49**	**299**	*e*P	**P**	**22 19 06.9**	**-1.8**
	comp=Z,48nm,1.6s,baz=299						
IUG	**Iuzhnay**	**58.49**	**299**	*e*P	**P**	**22 19 06.8**	**-1.8**
IUG				pmax	pmax		
	comp=Z,48nm,1.6s						
PDMCI	**Parker Dam,Lak**	**58.55**	**74**	P	**P**	**22 19 11.1**	**+2.1**
	baz=318,SNR=9.0						
GUWA	**GUWAHATI**	**58.57**	**271**	*e*P	**P**	**22 19 07.6**	**-1.7**
GUWA				IAmb	IAmb	22 19 11.9	
	comp=Z,6.7nm,1.0s						
PV13	**Radium Mtn., P**	**58.58**	**67**	IAMs_20	IAMs_20	22 46 53.9	
	comp=Z,2µm,18.0s						
PV15	**Paradox Valley**	**58.62**	**67**	IAMs_20	IAMs_20	22 44 52.1	
	comp=Z,3µm,19.0s						
SWSC	**Sam W. Stewart**	**58.64**	**76**	P	**P**	**22 19 11.0**	**+1.3**
	baz=318						
IKP	**In-Ko-Pah, Jac**	**58.69**	**77**	P	**P**	**22 19 12.2**	**+2.1**
	baz=319,SNR=5.5						
PV01	**Paradox Valley**	**58.73**	**67**	IAMs_20	IAMs_20	22 44 46.9	
	comp=Z,3µm,20.0s						
SMCO	**Snowmass**	**58.79**	**65**	P	**P**	**22 19 12.8**	**+1.7**
SMCO				IAmb	IAmb	22 19 26.3	
	comp=Z,30nm,1.1s						
SUSD	**Miller**	**58.88**	**56**	P	**P**	**22 19 12.5**	**+1.2**
	baz=318						
SUSD	**Miller**	**58.88**	**56**	IAMs_20	IAMs_20	22 45 29.2	
	comp=Z,3µm,19.0s						
FIA1	**FINESS Array S**	**58.96**	**338**	P	**P**	**22 19 12.0**	**+0.6**
FIA1				IAmb	IAmb	22 19 13.4	
	comp=Z,42nm,1.1s						
FINES	**FINESS Array B**	**58.96**	**338**	P	**P**	**22 19 11.8**	**+0.4**
	comp=Z,14nm,0.8s,baz=36,slow=5.2,SNR=19						
FINES				LR	LR	22 47 32.9	
	comp=Z,5µm,19.3s,baz=28,slow=39						
ISCO	**Idaho Springs**	**59.04**	**64**	P	**P**	**22 19 15.1**	**+2.4**
ISCO				pmax	pmax		
	comp=Z,36nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,3µm,18.0s						
ISCO	**Idaho Springs**	**59.04**	**64**	P	**P**	**22 19 15.2**	**+2.4**
	baz=318,SNR=17						
ISCO	**Idaho Springs**	**59.04**	**64**	P	**P**	**22 19 15.1**	**+2.4**
ISCO				IAmb	IAmb	22 19 28.6	
	comp=Z,36nm,1.1s						
ISCO				IAMs_20	IAMs_20	22 46 38.8	
	comp=Z,3µm,18.0s						
GLA	**Glamis**	**59.11**	**76**	P	**P**	**22 19 14.8**	**+1.8**
	baz=319						
GLA	**Glamis**	**59.11**	**76**	IAMs_20	IAMs_20	22 44 10.2	
	comp=Z,2µm,18.0s						
WUAZ	**Wupatki**	**59.16**	**71**	P	**P**	**22 19 15.9**	**+2.3**
	baz=318,SNR=9.8						
WUAZ	**Wupatki**	**59.16**	**71**	P	**P**	**22 19 15.8**	**+2.3**

WUAZ				IAmb	IAmb	22 19 56.8	
	comp=Z,30nm,1.2s						
PAYA	**Payao**	59.24	260	P	P	22 19 15.7	+1.7
	comp=Z,2µmcomp=Z,223nm,0.9s						
MVCO	**Mesa Verde**	59.45	68	P	P	22 19 17.5	+2.0
	baz=318,SNR=6.6						
MVCO	**Mesa Verde**	59.45	68	IAMs_20	IAMs_20	22 48 41.1	
	comp=Z,2µm,18.0s						
EYMN	**Ely**	59.62	49	P	P	22 19 17.5	+1.3
	baz=320,SNR=6.0						
EYMN	**Ely**	59.62	49	IAMs_20	IAMs_20	22 46 46.7	
	comp=Z,4µm,18.0s						
RABL	**Rabaul**	59.88	193	P	P	22 19 19.7	+1.3
RABL				IAMs_20	IAMs_20	22 39 08.9	
	comp=Z,3µm,21.0s						
Q24A	**Divide**	59.90	64	P	P	22 19 20.4	+1.8
	baz=319						
Q24A	**Divide**	59.90	64	IAMs_20	IAMs_20	22 47 26.6	
	comp=Z,3µm,18.0s						
S22A	**4UR Ranch, Cre**	59.93	66	P	P	22 19 20.4	+1.5
	baz=319,SNR=20						
TAPN	**Taplejung**	59.97	275	*e*P	P	22 19 19.1	-0.2
OGNE	**Ogallala**	60.00	61	P	P	22 19 20.7	+1.7
	baz=319						
OGNE	**Ogallala**	60.00	61	P	P	22 19 20.9	+1.8
OGNE				IAMs_20	IAMs_20	22 44 01.0	
	comp=Z,3µm,19.0s						
KRVT	**Keravat (AS076**	60.01	193	LR	LR	22 40 33.3	
	comp=Z,2µm,21.1s,baz=9.1,slow=31						
LAMP	**Lampang**	60.04	259	P	P	22 19 23.3	+3.8
	comp=Z,333nmcomp=Z,35nm,1.1s						
UTTA	**Uttaradit**	60.15	258	P	P	22 19 23.5	+3.3
	comp=Z,250nmcomp=Z,30nm,0.9s						
CM33	**Chiang Mai Arr**	60.20	260	P	P	22 19 20.0	-0.6
CMMT	**Chiang Mai**	60.20	260	P	P	22 19 21.1	+0.5
	comp=Z,442nmcomp=Z,10nm,1.3s						
CHTO	**Chiang Mai**	60.20	260	P	P	22 19 19.9	-0.7
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,5µm,18.0s						
CHTO	**Chiang Mai**	60.20	260	P	P	22 19 19.9	-0.7
F36A	**Milaca**	60.32	52	P	P	22 19 21.8	+0.7
F36A				IAmb	IAmb	22 19 23.8	
	comp=Z,21nm,1.1s						
F36A				IAMs_20	IAMs_20	22 45 01.4	
	comp=Z,3µm,22.0s						
K31A	**O'Neill**	60.35	57	IAMs_20	IAMs_20	22 45 08.0	
	comp=Z,4µm,19.0s						
W18A	**Petrified Fore**	60.35	70	P	P	22 19 23.7	+2.0
	baz=319						
W18A	**Petrified Fore**	60.35	70	IAMs_20	IAMs_20	22 43 32.0	
	comp=Z,3µm,20.0s						
BELG	**Belogornoye**	60.37	321	⇓*i*P	P	22 19 21.1	-0.1
BELG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
JAY	**Jayapura**	60.45	206	LR	LR	22 41 45.8	
	comp=Z,2µm,22.0s,baz=24,slow=32						
CM09	**Chiang Mai Arr**	60.47	260	P	P	22 19 24.0	+1.6
	comp=Z,160nmcomp=Z,17nm,1.2s						
CM31	**Chiang Mai Arr**	60.48	260	P	P	22 19 25.6	+3.1
	comp=Z,4µmcomp=Z,391nm,0.9s						
CM31	**Chiang Mai Arr**	60.48	260	P	P	22 19 22.7	+0.1
CMAR	**Chiang Mai Arr**	60.48	260	P	P	22 19 22.9	+0.4
	comp=Z,4.3nm,0.8s,baz=19,slow=6.8,SNR=24						
CMAR				LR	LR	22 47 10.8	
	comp=Z,4µm,18.3s,baz=86,slow=38						
CMAR	**Chiang Mai Arr**	60.48	260	P	P	22 19 23.0	+0.4
CM15	**Chiang Mai Arr**	60.50	260	P	P	22 19 24.6	+2.0
	comp=Z,122nmcomp=Z,11nm,1.0s						
CM02	**Chiang Mai Arr**	60.50	260	P	P	22 19 24.4	+1.7
	comp=Z,122nmcomp=Z,13nm,1.0s						
CM01	**Chiang Mai Arr**	60.51	260	P	P	22 19 24.0	+1.3
	comp=Z,143nmcomp=Z,16nm,1.0s						
CM04	**Chiang Mai Arr**	60.51	260	P	P	22 19 24.4	+1.7
	comp=Z,148nmcomp=Z,18nm,1.0s						
ODAN	**Odare**	60.52	275	*e*P	P	22 19 22.5	-0.5
	comp=Z,30nm,0.9s						
ECSD	**EROS Data Cent**	60.53	55	P	P	22 19 23.8	+1.2
	baz=320,SNR=10						
ECSD	**EROS Data Cent**	60.53	55	P	P	22 19 23.5	+0.9
ECSD				IAmb	IAmb	22 19 40.1	
	comp=Z,32nm,1.2s						
ECSD	**EROS Data Cent**	60.53	55	IAMs_20	IAMs_20	22 46 28.6	
	comp=Z,4µm,18.0s						
CM05	**Chiang Mai Arr**	60.53	260	P	P	22 19 24.5	+1.7
	comp=Z,111nmcomp=Z,13nm,1.0s						
CM13	**Chiang Mai Arr**	60.53	260	P	P	22 19 24.8	+1.9
	comp=Z,112nmcomp=Z,12nm,1.1s						
DLV	**T Lat**	60.58	247	P	P	22 19 23.4	+0.1
DLV				IAMs_20	IAMs_20	22 49 41.6	
	comp=Z,3µm,20.0s						
GUN	**Gumba**	60.58	277	*e*P	P	22 19 22.8	-0.7
	comp=Z,42nm,0.5s						
AGT	**Agartala**	60.60	270	*e*P	P	22 19 23.6	+0.3
AGT				IAmb	IAmb	22 19 29.3	
	comp=Z,27nm,0.7s						
E38A	**The Farm, Brul**	60.63	50	IAMs_20	IAMs_20	22 47 07.3	
	comp=Z,3µm,19.0s						
SDCO	**Great Sand Dun**	60.63	65	P	P	22 19 25.3	+1.6
	baz=319,SNR=15						
SDCO	**Great Sand Dun**	60.63	65	P	P	22 19 25.3	+1.6
SDCO				IAMs_20	IAMs_20	22 48 15.0	
	comp=Z,3µm,18.0s						
SAIH	**SAIHA**	60.69	268	IAmb	IAmb	22 19 26.0	
	comp=Z,14nm,0.9s						
CHAI	**Chaiyaphum**	60.84	255	P	P	22 19 26.0	+1.1
	comp=Z,499nmcomp=Z,39nm,0.9s						
SUKH	**Sukhothai**	60.88	258	P	P	22 19 37.9	+13
RAMN	**Ramite**	60.91	276	*e*P	P	22 19 26.0	+0.4
	comp=Z,33nm,0.5s						
MOS	**Moscow**	60.93	328	*e*P	P	22 19 35.4	+10
MOS				*e*		22 20 05.5	
MOS				*e*S	S	22 27 58.5	+19
MOS				pmax	pmax		
	comp=Z,30nm,1.0s						
MOS				MLR	MLR		
	comp=E,8µm,15.0s						
MOS				MLR	MLR		
	comp=Z,10µm,15.0s						
BELO	**BELONIA**	60.98	269	*e*P	P	22 19 24.1	-1.8
KKN	**Kakani**	61.01	278	*e*P	P	22 19 25.9	-0.4
	comp=Z,20nm,0.6s						
214A	**Organ Pipe Nat**	61.05	75	P	P	22 19 28.1	+1.8
	baz=319,SNR=9.7						
PKI	**Pulchoki**	61.11	277	*e*P	P	22 19 26.4	-0.7
	comp=Z,53nm,1.1s						
PKIN	**Phulchoki**	61.11	277	*e*P	P	22 19 26.3	-0.7
	comp=Z,28nm,0.5s						
SPMN	**Marine on St.**	61.14	52	P	P	22 19 28.0	+1.4
	baz=321						
SPMN	**Marine on St.**	61.14	52	P	P	22 19 27.8	+1.1
SPMN				IAmb	IAmb	22 19 29.7	
	comp=Z,49nm,1.1s						
SPMN				IAMs_20	IAMs_20	22 45 50.0	
	comp=Z,3µm,22.0s						
KSCO	**Kaye Shedlock'**	61.16	63	P	P	22 19 28.8	+1.8
	baz=319						
KSCO	**Kaye Shedlock'**	61.16	63	IAMs_20	IAMs_20	22 46 18.8	
	comp=Z,2µm,20.0s						
MHMT	**Maesarieng**	61.28	260	P	P	22 19 31.2	+3.3
	comp=Z,1µmcomp=Z,31nm,1.1s						
DANN	**Dangsing**	61.45	279	*e*P	P	22 19 29.0	-0.3
	comp=Z,70nm,0.6s						
VSU	**Vasula**	61.48	336	*e*P	P	22 19 27.6	-1.1
VSU	**Vasula**	61.48	336	*c i*P	P	22 19 29.1	+0.4
VSU				pmax	pmax		
	comp=Z,231nm,1.4s						
D41A	**Chassel**	61.56	48	IAMs_20	IAMs_20	22 48 54.9	
	comp=Z,4µm,18.0s						
BGNE	**Belgrade**	61.56	58	P	P	22 19 30.7	+1.0
	baz=320,SNR=7.7						
BGNE	**Belgrade**	61.56	58	IAMs_20	IAMs_20	22 49 49.2	
	comp=Z,4µm,18.0s						
T25A	**Trinidad**	61.66	65	P	P	22 19 32.0	+1.5
	baz=319,SNR=10						
T25A	**Trinidad**	61.66	65	P	P	22 19 32.2	+1.7
T25A				IAmb	IAmb	22 19 45.7	
	comp=Z,29nm,1.1s						
T25A				IAMs_20	IAMs_20	22 46 34.2	
	comp=Z,3µm,18.0s						
OBN	**Obninsk**	61.78	329	P	P	22 19 30.5	-0.3
	comp=Z,1.5nm,0.4s,baz=30,slow=23,SNR=4.4						
OBN	**Obninsk**	61.78	329	*ce*P	P	22 19 30.3	-0.5
OBN				*e*		22 20 12.1	
OBN				*e*S	S	22 27 51.8	+1.1
OBN				pmax	pmax		
	comp=Z,36nm,1.7s						
OBN				MLR	MLR		
	comp=Z,7µm,15.0s						
OBN	**Obninsk**	61.78	329	P	P	22 19 30.7	0.0
I37A	**Lemond, Waseca**	61.80	53	IAMs_20	IAMs_20	22 47 58.6	
	comp=Z,4µm,19.0s						
NC303	**NORSAR Array S**	61.86	345	P	P	22 19 31.3	0.0
TUC	**Tucson**	61.90	73	P	P	22 19 33.4	+1.3
TUC				pmax	pmax		
	comp=Z,22nm,1.5s						
TUC				MLR	MLR		
	comp=Z,2µm,19.0s						
TUC	**Tucson**	61.90	73	P	P	22 19 34.0	+1.9
	baz=320						
TUC	**Tucson**	61.90	73	P	P	22 19 33.4	+1.3
MTSE	**Matsula**	61.92	337	*e*P	P	22 19 27.6	-4.0
L34A	**Svendsen Farm,**	61.99	56	IAMs_20	IAMs_20	22 47 22.4	
	comp=Z,3µm,19.0s						
NB2	**NORSAR Subarra**	62.06	345	P	P	22 19 32.6	-0.1
	comp=Z,81nm,1.7s,baz=19,slow=6.9						
NB2	**NORSAR Subarra**	62.06	345	P	P	22 19 32.6	-0.1
	baz=19,slow=6.9						
NOA	**NORSAR Array B**	62.06	345	P	P	22 19 32.7	0.0
	comp=Z,10.0nm,0.8s,baz=18,slow=6.9,SNR=17						
NOA				LR	LR	22 50 20.2	
	comp=Z,2µm,18.2s,baz=45,slow=40						
ANMO	**Albuquerque**	62.24	68	*ce*P	P	22 19 36.0	+1.5
ANMO				pmax	pmax		
	comp=Z,15nm,1.0s						
ANMO	**Albuquerque**	62.24	68	P	P	22 19 36.4	+1.9
	baz=320						
ANMO	**Albuquerque**	62.24	68	P	P	22 19 36.5	+2.0
G40A	**Rib Lake**	62.26	50	IAMs_20	IAMs_20	22 45 27.6	
	comp=Z,2µm,19.0s						
SRAK	**Srakaew**	62.35	254	P	P	22 19 34.0	-1.1
	comp=Z,7µmcomp=Z,626nm,0.8s						
N33A	**J Bar K, Exete**	62.42	58	IAMs_20	IAMs_20	22 47 32.8	
	comp=Z,3µm,20.0s						
UTHA	**Uthaitani**	62.53	257	P	P	22 19 37.9	+1.6
	comp=Z,541nmcomp=Z,45nm,1.0s						
DHRM	**DHARAMSHALA**	62.64	288	*e*P	P	22 19 35.9	-1.3
DHRM				IAmb	IAmb	22 19 41.0	
	comp=Z,50nm,0.8s						
Y22D	**IRIS PASSCAL I**	62.66	69	IAMs_20	IAMs_20	22 45 27.0	
	comp=Z,3µm,22.0s						
CBKS	**Cedar Bluff**	62.77	61	P	P	22 19 38.6	+0.9
CBKS				pmax	pmax		
	comp=Z,46nm,0.9s						
CBKS				MLR	MLR		
	comp=Z,3µm,21.0s						
CBKS	**Cedar Bluff**	62.77	61	P	P	22 19 38.5	+0.7
	baz=320,SNR=12						
CBKS	**Cedar Bluff**	62.77	61	P	P	22 19 38.6	+0.9
CBKS				IAMs_20	IAMs_20	22 46 08.2	
	comp=Z,3µm,21.0s						
E43A	**Lone Tree Farm**	62.77	47	IAMs_20	IAMs_20	22 47 47.8	
	comp=Z,3µm,18.0s						
F42A	**Maple Grove Fa**	62.77	48	IAMs_20	IAMs_20	22 48 03.0	
	comp=Z,4µm,18.0s						
SMLA	**Simla**	63.02	286	*e*P	P	22 19 38.1	-1.3
DDI	**Dehra Dun**	63.14	285	*e*P	P	22 19 38.4	-1.9
DDI				IAmb	IAmb	22 19 43.1	
	comp=Z,61nm,0.8s						
I40A	**Norwalk**	63.16	51	IAMs_20	IAMs_20	22 46 51.4	
	comp=Z,4µm,21.0s						
LPSR	**Galich'ya Gora**	63.19	326	*e*P	P	22 19 39.6	-0.6
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,8µm,14.0s						
N35A	**Tabor**	63.19	57	P	P	22 19 41.6	+1.1
N35A				IAMs_20	IAMs_20	22 48 44.3	
	comp=Z,4µm,19.0s						
NIL	**Nilore**	63.22	291	P	P	22 19 40.0	-0.8
NIL				pmax	pmax		
	comp=Z,47nm,1.1s						
NIL				MLR	MLR		
	comp=Z,3µm,18.0s						
NIL	**Nilore**	63.22	291	P	P	22 19 40.0	-0.8
NIL	**Nilore**	63.22	291	IAMs_20	IAMs_20	22 49 11.1	
	comp=Z,3µm,18.0s						
FAKI	**Fak Fak**	63.32	215	IAMs_20	IAMs_20	22 47 56.4	
	comp=Z,3µm,19.0s						
121A	**Cookes Peak, D**	63.37	71	P	P	22 19 44.3	+2.3
	baz=320,SNR=11						
VRH	**Novokhopyorsk**	63.44	323	*e*P	P	22 19 40.4	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRH				MLR	MLR		
	comp=Z,16µm,14.0s						
SCIA	**State Center**	63.52	54	P	P	22 19 43.3	+0.6
	baz=322,SNR=5.5						
R32A	**Long Quarter,**	63.58	60	IAMs_20	IAMs_20	22 46 52.8	
	comp=Z,3µm,20.0s						
KONO	**Kongsberg**	63.63	346	IAMs_20	IAMs_20	22 52 24.5	
	comp=Z,4µm,18.0s						
MATQ	**Matagami**	63.69	39	P	P	22 19 43.2	-0.4
	baz=326						
E46A	**Sault Ste Mari**	63.89	46	IAMs_20	IAMs_20	22 48 41.4	
	comp=Z,4µm,18.0s						
PATY	**Pattaya**	63.89	254	P	P	22 19 47.0	+1.7
	comp=Z,36nm,0.9s						
H43A	**Windswept, Lux**	63.95	49	IAMs_20	IAMs_20	22 49 39.2	
	comp=Z,4µm,19.0s						
TOLI2	**Tolitoli**	64.03	229	P	P	22 19 46.7	+0.5
TOLI2				IAmb	IAmb	22 19 48.3	
	comp=Z,28nm,1.1s						
JFWS	**Jewell Farm**	64.09	52	P	P	22 19 46.6	+0.2
	baz=322						
JFWS	**Jewell Farm**	64.09	52	IAMs_20	IAMs_20	22 47 19.2	
	comp=Z,3µm,19.0s						
KSU1	**Kansas State U**	64.09	58	P	P	22 19 47.0	+0.6
	baz=321,SNR=6.8						
KSU1	**Kansas State U**	64.09	58	P	P	22 19 47.0	+0.6
KSU1	**Kansas State U**	64.09	58	IAMs_20	IAMs_20	22 48 27.2	
	comp=Z,3µm,18.0s						
MRSI	**Marisa**	64.10	227	P	P	22 19 48.3	+1.6
	comp=Z,2µmcomp=Z,1µmcomp=Z,38nm,1.7s						
VSR	**Storozhevoye**	64.29	325	*e*P	P	22 19 45.5	-2.0
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,8µm,14.0s						
IDID	**Didziasalis**	64.31	334	*e*P	P	22 19 47.2	-0.4
HSIG		64.32	76	P	P	22 19 49.9	+1.8
HSIG				IAmb	IAmb	22 20 03.2	
	comp=Z,18nm,1.0s						
N38A	**Joes South For**	64.39	55	IAMs_20	IAMs_20	22 48 47.8	
	comp=Z,4µm,19.0s						
IIGN	**Ignalina**	64.40	334	*e*P	P	22 19 48.0	-0.2
VORD	**Divnogorie**	64.46	325	*e*P	P	22 19 48.3	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD				MLR	MLR		
	comp=Z,11µm,16.0s						
LSQQ	**Lebel-sur-Quev**	64.51	39	P	P	22 19 49.2	+0.1
	baz=327						
PHET	**Kaeng Krachan**	64.58	256	P	P	22 19 51.0	+1.1
NACGM	**Naroch**	64.67	334	*i* P	P	22 19 50.5	+0.6
NACGM				*i* P	P	22 19 50.5	+0.6
NACGM				*i* P	P	22 19 50.5	+0.6
NACGM				*i* PPP	PPP	22 23 50.6	
NACGM				*i* S	S	22 28 36.3	+10
NACGM				*i* SS	SS	22 32 48.2	+11
NACGM				*i* SSS	SSS	22 36 07.8	
NACGM				*i* LQ	LQ	22 45 08.3	
NACGM				*i* LR	LR	22 47 48.1	
MNK	**Minsk**	64.75	333	*i* P	P	22 19 51.7	+1.3
	comp=E,7.0nm,1.5s						
MNK				*i* P	P	22 19 51.7	+1.3
	comp=N,59nm,1.3s						
MNK				*i* P	P	22 19 51.7	+1.3
	comp=Z,55nm,1.3s						
MNK				*i* pP	pwP	22 20 05.8	-0.6
MNK				*i* PP	PP	22 22 16.0	+3.5
MNK				*i* PPP	PPP	22 23 49.5	
MNK				*i* S	S	22 28 31.4	+3.6
MNK				*i* SS	SS	22 32 48.3	+10
MNK				*i* SSS	SSS	22 35 54.8	
MNK				*i* LQ	LQ	22 43 53.2	
MNK				*i* LR	LR	22 48 52.1	
MNK				*i* LRM	MLR	22 51 00.4	
	comp=E,601nm,15.5s						
MNK				*i* LRM	MLR	22 51 00.4	
	comp=N,10µm,16.2s						
MNK				*i* LRM	MLR	22 51 00.4	
	comp=Z,9µm,16.0s						
MNK	**Minsk**	64.75	333	*e*P	P	22 19 51.0	+0.6
MNK				*e*		22 20 02.0	
MNK				*e*		22 20 20.0	
MNK				*e*		22 22 23.0	
MNK				*e*S	S	22 28 26.0	-1.7
MNK				*e*		22 28 40.0	
MNK				*e*		22 32 39.0	
MNK				*e*		22 35 28.0	
MNK				MLR	MLR		
	comp=Z,23µm,14.0s						
MNK				MLR	MLR		
	comp=N,10µm,14.0s						
MNK				MLR	MLR		
	comp=E,8µm,14.0s						
KBL	**Kabul**	64.76	294	P	P	22 19 49.0	-2.1
KBL				pmax	pmax		
	comp=Z,35nm,1.1s						
KBL				MLR	MLR		
	comp=Z,2µm,18.0s						
KBL	**Kabul**	64.76	294	P	P	22 19 49.0	-2.1
KBL				IAmb	IAmb	22 19 50.2	
	comp=Z,35nm,1.1s						
KBL				IAMs_20	IAMs_20	22 53 11.4	
	comp=Z,2µm,18.0s						
SANI	**Sanana**	64.76	222	P	P	22 19 52.6	+1.6
	comp=Z,2µmcomp=Z,949nmcomp=Z,33nm,1.0s						
PBUR	**Paburge**	64.80	337	*e*P	P	22 19 50.4	-0.3
AMTX	**Amarillo**	64.80	65	P	P	22 19 52.1	+0.9
	baz=321						
AMTX	**Amarillo**	64.80	65	IAMs_20	IAMs_20	22 47 05.4	
	comp=Z,2µm,19.0s						
PABE	**Paberze**	64.81	336	*e*P	P	22 19 49.3	-1.5
NDI	**New Delhi**	64.87	284	*e*P	P	22 19 50.0	-1.6
MSTX	**Muleshoe**	64.94	66	P	P	22 19 53.3	+1.1
	baz=321,SNR=17						
MSTX	**Muleshoe**	64.94	66	P	P	22 19 53.4	+1.1
KS21	**Milan North St**	64.98	60	IAMs_20	IAMs_20	22 47 47.9	
	comp=Z,3µm,21.0s						
GLMI	**Grayling**	65.01	47	P	P	22 19 53.4	+1.1
	baz=324						
U32A	**Winter Ranch,**	65.02	62	IAMs_20	IAMs_20	22 50 44.9	
	comp=Z,3µm,19.0s						
L42A	**Oliver, Polo**	65.08	52	IAMs_20	IAMs_20	22 52 21.2	
	comp=Z,4µm,18.0s						
MPSI	**Mapaga**	65.10	229	P	P	22 19 55.4	+2.2
	comp=Z,2µmcomp=Z,844nmcomp=Z,12nm,1.4s						
K43A	**Burlington**	65.11	50	IAMs_20	IAMs_20	22 52 59.1	
	comp=Z,3µm,18.0s						
VLDQ	**Val d'Or**	65.13	40	P	P	22 19 52.0	-1.0
MNTX	**Cornudas Mount**	65.31	70	P	P	22 19 55.9	+1.4
	baz=321,SNR=38						
CROK	**Carrier**	65.43	61	IAMs_20	IAMs_20	22 51 31.3	
	comp=Z,4µm,19.0s						
N41A	**Harden Midland**	65.56	53	IAMs_20	IAMs_20	22 49 23.2	
	comp=Z,3µm,19.0s						
L44A	**Lake County Fo**	65.72	51	P	P	22 19 58.0	+1.1
	baz=324						
PMG	**Port Moresby**	65.76	198	LR	LR	22 44 01.4	
	comp=Z,1µm,21.7s,baz=5.0,slow=32						
PMG	**Port Moresby**	65.76	198	IAMs_20	IAMs_20	22 43 16.5	
	comp=Z,2µm,20.0s						
T35A	**Sooner Cattle**	65.84	60	IAMs_20	IAMs_20	22 48 44.7	
	comp=Z,3µm,20.0s						
P40A	**Paris**	65.94	55	IAMs_20	IAMs_20	22 47 32.9	
	comp=Z,3µm,20.0s						
HQIL	**Hanson Quary C**	66.05	51	IAMs_20	IAMs_20	22 51 04.9	
	comp=Z,4µm,18.0s						
J47A	**Sunmer**	66.21	48	IAMs_20	IAMs_20	22 50 14.9	
	comp=Z,3µm,20.0s						
M44A	**Midewin, Midew**	66.30	51	IAMs_20	IAMs_20	22 48 37.5	
	comp=Z,3µm,19.0s						
SUW	**Suwalki**	66.36	336	*e*P	P	22 20 00.8	0.0
SUW	**Suwalki**	66.36	336	*e*P	P	22 19 58.5	-2.3
SUW	**Suwalki**	66.36	336	P	P	22 20 00.9	+0.1
SUW				pmax	pmax		
	comp=Z,81nm,1.1s						
SUW				MLR	MLR		
	comp=Z,7µm,19.0s						
SUW	**Suwalki**	66.36	336	P	P	22 20 00.9	+0.1
WMOK	**Wichita Mounta**	66.41	63	P	P	22 20 02.0	+0.5
WMOK				pmax	pmax		
	comp=Z,44nm,0.9s						
WMOK				MLR	MLR		
	comp=Z,2µm,22.0s						
WMOK	**Wichita Mounta**	66.41	63	P	P	22 20 02.2	+0.6
	baz=322,SNR=42						
WMOK	**Wichita Mounta**	66.41	63	P	P	22 20 02.0	+0.5
OK031	**S. Brethren Rd**	66.44	61	IAMs_20	IAMs_20	22 48 18.4	
	comp=Z,2µm,20.0s						
OK025	**Westminster Rd**	66.48	61	IAMs_20	IAMs_20	22 49 30.6	
	comp=Z,2µm,18.0s						
OK030	**Cody Creek RV**	66.48	61	IAMs_20	IAMs_20	22 52 23.7	
	comp=Z,3µm,18.0s						
OKCFA	**Oklahoma City**	66.55	62	IAMs_20	IAMs_20	22 50 08.5	
	comp=Z,2µm,20.0s						
L46A	**Eue Claire**	66.56	50	IAMs_20	IAMs_20	22 52 11.5	
	comp=Z,3µm,19.0s						
ALGO	**Algonquin Park**	66.71	42	P	P	22 20 03.2	0.0
	baz=327						
SBUM	**Sibu**	66.78	238	P	P	22 20 05.5	+1.5
SBUM				IAMs_20	IAMs_20	22 53 45.1	
	comp=Z,3µm,19.0s						
S39A	**Bolivar**	66.79	57	IAMs_20	IAMs_20	22 49 05.6	
	comp=Z,2µm,20.0s						
TUL1	**Leonard**	66.99	60	P	P	22 20 06.4	+1.2
	baz=322						
TUL1	**Leonard**	66.99	60	IAMs_20	IAMs_20	22 49 29.1	
	comp=Z,4µm,19.0s						
P43A	**Skaggs, Pawnee**	67.03	53	IAMs_20	IAMs_20	22 51 33.0	
	comp=Z,4µm,18.0s						
E55A	**Montcerf-Lytto**	67.04	40	P	P	22 20 05.9	+0.6
	baz=328						
O44A	**Mansfield**	67.10	52	IAMs_20	IAMs_20	22 52 01.8	
	comp=Z,4µm,19.0s						
G54A	**Lake Saint Pet**	67.16	42	P	P	22 20 06.6	+0.5
	baz=327						
U38A	**Gravette**	67.27	59	IAMs_20	IAMs_20	22 47 39.3	
	comp=Z,2µm,20.0s						
SADO	**Sadowa**	67.27	43	IAMs_20	IAMs_20	22 50 20.7	
	comp=Z,3µm,18.0s						
E56A	**St. Veronique**	67.34	40	P	P	22 20 07.8	+0.6
	baz=328						
L48A	**N Adams**	67.43	48	IAMs_20	IAMs_20	22 52 30.2	
	comp=Z,3µm,18.0s						
AAM	**Ann Arbor**	67.47	48	P	P	22 20 09.0	+1.0
	baz=325						
AAM	**Ann Arbor**	67.47	48	IAMs_20	IAMs_20	22 52 42.2	
	comp=Z,3µm,18.0s						
CCM	**Cathedral Cave**	67.50	55	P	P	22 20 09.1	+0.7
CCM				pmax	pmax		
	comp=Z,48nm,1.1s						
CCM				MLR	MLR		
	comp=Z,3µm,22.0s						
CCM	**Cathedral Cave**	67.50	55	P	P	22 20 08.9	+0.6
	baz=323						
CCM	**Cathedral Cave**	67.50	55	P	P	22 20 09.1	+0.7
CCM	**Cathedral Cave**	67.50	55	IAMs_20	IAMs_20	22 48 19.1	
	comp=Z,3µm,22.0s						
SLM	**Saint Louis**	67.50	54	IAMs_20	IAMs_20	22 53 39.2	
	comp=Z,4µm,18.0s						
SFIN	**Lafayette**	67.53	51	P	P	22 20 09.0	+0.4
	baz=324						
SFIN	**Lafayette**	67.53	51	IAMs_20	IAMs_20	22 49 16.2	
	comp=Z,3µm,20.0s						
GEYT	**Alibeck**	67.55	304	P	P	22 20 07.8	-0.9
	comp=Z,10nm,0.8s,baz=341,slow=3.1,SNR=20						
GEYT				LR	LR	22 53 52.6	
	comp=Z,5µm,18.4s,baz=45,slow=40						
GYA0B	**ALIBECK ARRAY**	67.55	304	P	P	22 20 08.4	-0.3
GYA0B				IAmb	IAmb	22 20 36.1	
	comp=Z,27nm,1.1s						
HHAR	**Hobbs**	67.61	58	IAMs_20	IAMs_20	22 51 54.4	
	comp=Z,2µm,18.0s						
ABTX	**Abilene, Hawle**	67.62	65	P	P	22 20 09.4	+0.1
	baz=322,SNR=7.6						
ABTX	**Abilene, Hawle**	67.62	65	IAMs_20	IAMs_20	22 52 04.1	
	comp=Z,3µm,19.0s						
D58A	**Chemin du LacG**	67.64	38	P	P	22 20 09.2	0.0
	baz=329						
MGMO	**Mountain Grove**	67.73	57	IAMs_20	IAMs_20	22 49 15.3	
	comp=Z,3µm,19.0s						
E57A	**Chemin Saint G**	67.77	39	P	P	22 20 10.1	+0.1
	baz=329						
TRQ	**Mont Tremblant**	67.79	39	P	P	22 20 10.2	+0.1
AKASG	**Malin Array Be**	67.80	330	P	P	22 20 09.7	-0.4
	comp=Z,4.8nm,0.6s,baz=30,slow=6.5,SNR=30						

AKASG				LR	LR	22 53 05.7	
	comp=Z,7µm,18.7s,baz=10.0,slow=39						
AKBB	**Malin Array Si**	**67.80**	**330**	*ce*P	**P**	**22 20 10.0**	**0.0**
AKBB	**Malin Array Si**	**67.80**	**330**	P	**P**	**22 20 09.6**	**-0.4**
AKBB				IAmb	IAmb	22 20 45.1	
	comp=Z,32nm,1.2s						
Q44A	**Meyer Farm, Va**	**67.85**	**53**	IAMs_20	IAMs_20	22 52 35.8	
	comp=Z,3µm,19.0s						
FVM	**French Village**	**67.94**	**55**	IAMs_20	IAMs_20	22 49 07.8	
	comp=Z,3µm,19.0s						
DELO	**Deloro Mine**	**68.08**	**42**	IAMs_20	IAMs_20	22 53 48.0	
	comp=Z,3µm,18.0s						
U40A	**Yellville**	**68.08**	**58**	P	**P**	**22 20 12.1**	**0.0**
	baz=323,SNR=19						
U40A	**Yellville**	**68.08**	**58**	IAMs_20	IAMs_20	22 49 28.8	
	comp=Z,3µm,19.0s						
P46A	**Rosedale**	**68.10**	**52**	IAMs_20	IAMs_20	22 51 45.3	
	comp=Z,4µm,18.0s						
E58A	**La Victoria**	**68.12**	**39**	P	**P**	**22 20 12.4**	**+0.3**
	baz=329,SNR=6.0						
DGPR	**DIGLIPUR**	**68.13**	**262**	*e*P	**P**	**22 20 12.7**	**+0.1**
DGPR				IAmb	IAmb	22 20 14.1	
	comp=Z,86nm,1.0s						
MAK	**Makhachkala**	**68.14**	**315**	*e*P	**P**	**22 20 11.5**	**-0.8**
MAK				*e*		22 22 39.1	
MAK				*e*S	**S**	**22 29 09.4**	**+0.2**
MAK				MLR	MLR		
	comp=Z,13µm,15.0s						
Z35A	**Perchaven, San**	**68.30**	**63**	IAMs_20	IAMs_20	22 49 26.8	
	comp=Z,2µm,21.0s						
HRA	**Herat**	**68.36**	**299**	P	**P**	**22 20 13.5**	**-0.6**
HRA				IAmb	IAmb	22 20 15.2	
	comp=Z,29nm,1.1s						
GKP	**Gorka Klasztor**	**68.37**	**339**	*e*P	**P**	**22 20 14.0**	**+0.5**
GKP	**Gorka Klasztor**	**68.37**	**339**	*e*P	**P**	**22 20 12.4**	**-1.1**
N49A	**Columbus Grove**	**68.37**	**49**	IAMs_20	IAMs_20	22 53 22.3	
	comp=Z,3µm,20.0s						
OLIL	**Olney**	**68.41**	**53**	IAMs_20	IAMs_20	22 52 34.6	
	comp=Z,4µm,19.0s						
M50A	**Fremont**	**68.47**	**48**	IAMs_20	IAMs_20	22 51 36.6	
	comp=Z,3µm,18.0s						
D60A	**Saint Jean D’O**	**68.48**	**37**	P	**P**	**22 20 15.2**	**+0.9**
	baz=330						
D61A	**St Aubert, Com**	**68.48**	**36**	P	**P**	**22 20 15.1**	**+0.7**
	baz=330						
MTKI	**Muara Teweh, K**	**68.48**	**234**	P	**P**	**22 20 15.9**	**+1.1**
	comp=Z,2µmcomp=Z,23nm,1.1s						
W39A	**Magazine**	**68.55**	**59**	P	**P**	**22 20 16.1**	**+1.1**
	baz=323,SNR=8.9						
W39A	**Magazine**	**68.55**	**59**	IAMs_20	IAMs_20	22 55 00.3	
	comp=Z,3µm,19.0s						
KSM	**Kuching**	**68.57**	**239**	P	**P**	**22 20 16.2**	**+0.9**
KSM				IAmb	IAmb	22 20 18.6	
	comp=Z,40nm,1.0s						
G57A	**Newington**	**68.58**	**40**	P	**P**	**22 20 15.9**	**+0.9**
	baz=328						
S44A	**Carbondale**	**68.72**	**54**	IAMs_20	IAMs_20	22 52 11.4	
	comp=Z,3µm,18.0s						
SIUC	**Southern Illin**	**68.72**	**54**	IAMs_20	IAMs_20	22 54 17.3	
	comp=Z,3µm,18.0s						
J54A	**Appleton**	**68.72**	**44**	IAMs_20	IAMs_20	22 55 55.2	
	comp=Z,3µm,18.0s						
F59A	**Saint Guilaume**	**68.74**	**39**	P	**P**	**22 20 16.6**	**+0.5**
	baz=329						
BLO	**Bloomington**	**68.77**	**52**	IAMs_20	IAMs_20	22 52 07.0	
	comp=Z,3µm,18.0s						
FCAR	**Ozark Folk Cen**	**68.81**	**57**	P	**P**	**22 20 17.0**	**+0.4**
FCAR				IAMs_20	IAMs_20	22 51 31.0	
	comp=Z,3µm,19.0s						
G58A	**Ormstown**	**68.89**	**40**	P	**P**	**22 20 16.7**	**-0.2**
	baz=329						
MEDO	**Medina**	**68.89**	**44**	IAMs_20	IAMs_20	22 52 10.5	
	comp=Z,3µm,20.0s						
PBMO	**Poplar Bluff**	**68.91**	**56**	IAMs_20	IAMs_20	22 49 02.4	
	comp=Z,3µm,20.0s						
O49A	**Covington**	**68.91**	**49**	IAMs_20	IAMs_20	22 49 09.5	
	comp=Z,2µm,20.0s						
BEL	**Belsk**	**68.93**	**336**	*e*P	**P**	**22 20 18.2**	**+1.1**
F60A	**Warwick**	**68.94**	**38**	P	**P**	**22 20 17.5**	**+0.3**
	baz=330						
D62A	**Allapoint, All**	**68.97**	**35**	P	**P**	**22 20 17.5**	**+0.2**
	baz=331						
D62A	**Allapoint, All**	**68.97**	**35**	P	**P**	**22 20 18.7**	**+1.3**
D62A				IAmb	IAmb	22 20 38.6	
	comp=Z,47nm,1.2s						
D62A				IAMs_20	IAMs_20	22 52 26.0	
	comp=Z,3µm,21.0s						
H57A	**Richville**	**68.97**	**41**	P	**P**	**22 20 17.7**	**+0.2**
	baz=328						
BHPL	**Bhopal**	**68.99**	**281**	*e*P	**P**	**22 20 16.5**	**-1.4**
BHPL				IAmb	IAmb	22 20 17.7	
	comp=Z,120nm,1.1s						
BSEG	**Bad Segeberg**	**69.02**	**343**	*e*P	**P**	**22 20 18.7**	**+1.1**
	comp=Z,36nm,1.3s,baz=16,slow=6.0						
P48A	**Milroy**	**69.03**	**51**	IAMs_20	IAMs_20	22 55 03.7	
	comp=Z,3µm,19.0s						
E61A	**Lac Etchemin**	**69.05**	**37**	P	**P**	**22 20 18.2**	**+0.2**
	baz=330						
J55A	**Hilton**	**69.05**	**43**	IAMs_20	IAMs_20	22 52 22.9	
	comp=Z,3µm,19.0s						
LCAR	**Lake Charles**	**69.13**	**57**	IAMs_20	IAMs_20	22 51 51.5	
	comp=Z,3µm,19.0s						
ERPA	**Erie**	**69.15**	**45**	P	**P**	**22 20 19.0**	**+0.4**
	baz=327						
L53A	**Girard**	**69.17**	**46**	P	**P**	**22 20 19.4**	**+0.6**
	baz=327						
MIAR	**Mount Ida**	**69.17**	**59**	P	**P**	**22 20 20.1**	**+1.2**
MIAR				pmax	pmax		
	comp=Z,45nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,2µm,19.0s						
MIAR	**Mount Ida**	**69.17**	**59**	P	**P**	**22 20 19.9**	**+1.0**
	baz=323,SNR=15						
MIAR	**Mount Ida**	**69.17**	**59**	P	**P**	**22 20 20.1**	**+1.2**
MIAR				IAmb	IAmb	22 20 29.2	
	comp=Z,45nm,1.1s						
MIAR				IAMs_20	IAMs_20	22 51 36.8	
	comp=Z,2µm,19.0s						
KIV	**Kislovodsk**	**69.21**	**318**	⇑P	**P**	**22 20 19.0**	**-0.1**
KIV	**Kislovodsk**	**69.21**	**318**	P	**P**	**22 20 19.8**	**+0.8**
KIV	**Kislovodsk**	**69.21**	**318**	⇓*e*P	**P**	**22 20 18.4**	**-0.7**
KIV				*e*		22 20 37.3	
KIV				*e*		22 22 50.4	
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	**Kislovodsk**	**69.21**	**318**	P	**P**	**22 20 19.9**	**+0.8**
KIV				IAmb	IAmb	22 20 59.4	
	comp=Z,27nm,1.0s						
WHAR	**Wooly Hollow**	**69.21**	**58**	IAMs_20	IAMs_20	22 50 13.6	
	comp=Z,3µm,19.0s						
JCT	**Junction City**	**69.23**	**66**	P	**P**	**22 20 20.4**	**+1.1**
JCT				pmax	pmax		
	comp=Z,32nm,0.9s						
JCT				MLR	MLR		
	comp=Z,2µm,20.0s						
JCT	**Junction City**	**69.23**	**66**	P	**P**	**22 20 20.0**	**+0.6**
	baz=323,SNR=8.2						
JCT	**Junction City**	**69.23**	**66**	P	**P**	**22 20 20.4**	**+1.1**
JCT				IAmb	IAmb	22 20 29.6	
	comp=Z,32nm,0.9s						
JCT				IAMs_20	IAMs_20	22 49 58.9	
	comp=Z,2µm,20.0s						
USIN	**University of**	**69.23**	**53**	IAMs_20	IAMs_20	22 53 08.9	
	comp=Z,3µm,19.0s						
WHTX	**Lake Whitney,**	**69.25**	**64**	P	**P**	**22 20 20.3**	**+0.9**
	baz=323						
WHTX	**Lake Whitney,**	**69.25**	**64**	IAMs_20	IAMs_20	22 54 04.2	
	comp=Z,3µm,19.0s						
EKB10	**Eskdalemuir Ar**	**69.26**	**352**	P	**P**	**22 20 20.3**	**+1.2**
F61A	**St Evariste**	**69.27**	**37**	P	**P**	**22 20 19.5**	**+0.1**
	baz=330						
P49A	**Miami Univ. Ec**	**69.28**	**50**	P	**P**	**22 20 20.4**	**+0.9**
	baz=325,SNR=11						
P49A	**Miami Univ. Ec**	**69.28**	**50**	IAMs_20	IAMs_20	22 55 07.3	
	comp=Z,3µm,19.0s						
D63A	**Stockholm**	**69.32**	**35**	P	**P**	**22 20 20.1**	**+0.5**
	baz=331						
I57A	**Carthage**	**69.32**	**41**	P	**P**	**22 20 20.1**	**+0.4**
	baz=328						
KBZ	**Khabaz**	**69.32**	**318**	P	**P**	**22 20 19.8**	**+0.2**
	comp=Z,15nm,0.8s,baz=322,slow=2.5,SNR=13						
KBZ				LR	LR	22 53 17.5	
	comp=Z,7µm,19.7s,baz=15,slow=38						
W41B	**Gary Mavity, V**	**69.32**	**58**	P	**P**	**22 20 20.1**	**+0.3**
	baz=324,SNR=21						
W41B	**Gary Mavity, V**	**69.32**	**58**	IAMs_20	IAMs_20	22 50 15.6	
	comp=Z,3µm,19.0s						
FRNY	**Flat Rock**	**69.33**	**40**	IAMs_20	IAMs_20	22 48 09.8	
	comp=Z,2µm,20.0s						
MOQ	**Mont Orford**	**69.40**	**38**	P	**P**	**22 20 21.5**	**+1.3**
J56A	**Wolcott**	**69.42**	**43**	P	**P**	**22 20 19.3**	**-1.0**
	baz=328						
J56A	**Wolcott**	**69.42**	**43**	IAMs_20	IAMs_20	22 54 30.5	
	comp=Z,3µm,19.0s						
M53A	**WI Miller and**	**69.43**	**46**	P	**P**	**22 20 20.3**	**-0.1**
	baz=327,SNR=5.5						
M53A	**WI Miller and**	**69.43**	**46**	IAMs_20	IAMs_20	22 52 01.1	
	comp=Z,4µm,19.0s						
H59A	**Cadyville**	**69.45**	**40**	P	**P**	**22 20 20.5**	**+0.1**
	baz=329						
ACSO	**Alum Creek Sta**	**69.46**	**49**	P	**P**	**22 20 20.5**	**-0.1**
	baz=326,SNR=7.2						
ACSO	**Alum Creek Sta**	**69.46**	**49**	IAMs_20	IAMs_20	22 51 18.0	
	comp=Z,3µm,19.0s						
WVNY	**West Valley, N**	**69.46**	**44**	IAMs_20	IAMs_20	22 52 17.8	
	comp=Z,4µm,19.0s						
H58A	**Gabriels**	**69.47**	**40**	P	**P**	**22 20 20.1**	**-0.5**
	baz=329						
PBA	**Port Blair**	**69.47**	**261**	*e*P	P	22 20 21.3	+0.4
PBA				IAmb	IAmb	22 20 22.2	
	comp=Z,149nm,1.4s						
Z38A	**Mt. Pleasant**	**69.50**	**61**	IAMs_20	IAMs_20	22 50 28.6	
	comp=Z,3µm,20.0s						
PVMO	**Portageville**	**69.55**	**55**	IAMs_20	IAMs_20	22 49 22.4	
	comp=Z,4µm,21.0s						
T45A	**Paducah**	**69.55**	**54**	P	**P**	**22 20 22.3**	**+1.1**
T45A				IAMs_20	IAMs_20	22 54 43.5	
	comp=Z,3µm,18.0s						
G60A	**Masonville**	**69.55**	**39**	P	**P**	**22 20 20.7**	**-0.4**
	baz=330						
X40A	**Basin Creek Fa**	**69.59**	**59**	P	**P**	**22 20 22.5**	**+1.0**
	baz=324,SNR=10						
X40A	**Basin Creek Fa**	**69.59**	**59**	IAMs_20	IAMs_20	22 56 32.7	
	comp=Z,2µm,20.0s						
J57A	**Williamstown**	**69.64**	**42**	IAMs_20	IAMs_20	22 54 52.3	
	comp=Z,3µm,18.0s						
WCI	**Wyandotte Cave**	**69.64**	**52**	P	**P**	**22 20 22.6**	**+0.9**
WCI				pmax	pmax		
	comp=Z,25nm,0.9s						
WCI				MLR	MLR		
	comp=Z,4µm,18.0s						
WCI	**Wyandotte Cave**	**69.64**	**52**	P	**P**	**22 20 22.3**	**+0.6**
	baz=325						
WCI	**Wyandotte Cave**	**69.64**	**52**	P	**P**	**22 20 22.6**	**+0.9**
WCI				IAmb	IAmb	22 20 34.3	
	comp=Z,25nm,0.9s						
PQI	**Presque Isle**	**69.67**	**35**	IAMs_20	IAMs_20	22 53 04.5	
	comp=Z,2µm,20.0s						
K56A	**Middlesex**	**69.73**	**43**	P	**P**	**22 20 22.5**	**+0.3**
	baz=328						
ZEI	**Tsey**	**69.73**	**317**	*e*P	**P**	**22 20 21.8**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,19nm,1.1s						
E63A	**Oxbow**	**69.75**	**35**	P	**P**	**22 20 22.7**	**+0.4**
	baz=331						
GNAR	**Gosnell**	**69.76**	**56**	IAMs_20	IAMs_20	22 52 43.0	
	comp=Z,4µm,18.0s						
M54A	**Oil Creek Stat**	**69.79**	**46**	P	**P**	**22 20 23.1**	**+0.4**
	baz=327						
M54A	**Oil Creek Stat**	**69.79**	**46**	IAMs_20	IAMs_20	22 51 21.5	
	comp=Z,3µm,19.0s						
RUE	**Ruedersdorf**	**69.80**	**341**	*e*P	**P**	**22 20 23.3**	**+0.9**
	comp=Z,60nm,1.3s,baz=16,slow=6.0						
E64A	**Bridgewater**	**69.95**	**35**	P	**P**	**22 20 24.3**	**+0.8**
	baz=332						
J58A	**Remsen**	**69.95**	**42**	P	**P**	**22 20 24.6**	**+1.0**
	baz=329						
LVV	**L'vov**	**70.00**	**333**	*e*P	**P**	**22 20 24.1**	**+0.4**
LVV				*e*		22 22 56.1	
LVV				*e*PPP	PPP	22 24 40.7	
LVV				*e*S	**S**	**22 29 30.1**	**-0.9**
LVV				*e*PS	**PnS**	**22 29 55.6**	**-5.1**
LVV				*e*SS	**SS**	**22 34 04.8**	**+5.3**
LVV				*e*SSS	SSS	22 37 08.6	
LVV				pmax	pmax		
	comp=Z,70nm,1.4s						
LVV				MLR	MLR		
	comp=N,10µm,15.0s						
LVV				MLR	MLR		
	comp=E,10µm,15.0s						
LVV				MLR	MLR		
	comp=Z,12µm,15.0s						
K57A	**Scipio Center**	**70.01**	**43**	P	**P**	**22 20 25.1**	**+1.1**
	baz=328						
O52A	**Adamsville**	**70.04**	**48**	IAMs_20	IAMs_20	22 52 59.4	
	comp=Z,2µm,18.0s						
P51A	**Williamsport**	**70.05**	**49**	IAMs_20	IAMs_20	22 52 27.5	
	comp=Z,2µm,18.0s						
G62A	**West of Eustis**	**70.08**	**37**	P	**P**	**22 20 25.7**	**+1.3**
	baz=331						
G62A	**West of Eustis**	**70.08**	**37**	IAMs_20	IAMs_20	22 52 54.8	
	comp=Z,4µm,20.0s						
237A	**Washetta, Mont**	**70.09**	**63**	IAMs_20	IAMs_20	22 50 01.2	
	comp=Z,3µm,22.0s						
WLAR	**White Oak Lake**	**70.09**	**60**	IAMs_20	IAMs_20	22 48 44.1	
	comp=Z,3µm,21.0s						
L56A	**Greenwood**	**70.11**	**44**	P	**P**	**22 20 25.6**	**+1.0**
	baz=328						
N54A	**Moraine State**	**70.11**	**46**	P	**P**	**22 20 25.2**	**+0.6**
	baz=327						
435B	**Jarrell**	**70.14**	**65**	P	**P**	**22 20 26.2**	**+1.2**
	baz=323						
435B	**Jarrell**	**70.14**	**65**	IAMs_20	IAMs_20	22 50 21.9	
	comp=Z,3µm,21.0s						
J59A	**Piesco**	**70.16**	**41**	IAMs_20	IAMs_20	22 53 30.0	
	comp=Z,2µm,19.0s						
H61A	**Lyndonville**	**70.19**	**39**	P	**P**	**22 20 26.2**	**+1.2**
	baz=330						
M55A	**Ridgway**	**70.19**	**45**	IAMs_20	IAMs_20	22 52 16.0	
	comp=Z,3µm,18.0s						
O53A	**New Philadelph**	**70.20**	**47**	P	**P**	**22 20 26.0**	**+0.8**
	baz=327,SNR=5.7						
O53A	**New Philadelph**	**70.20**	**47**	IAMs_20	IAMs_20	22 52 49.4	
	comp=Z,4µm,19.0s						
F64A	**Sherman**	**70.27**	**36**	P	**P**	**22 20 26.4**	**+1.0**
	baz=332						
I60A	**Shoreham**	**70.28**	**40**	P	**P**	**22 20 25.6**	**0.0**
	baz=330						
Q51A	**Peebles**	**70.30**	**49**	IAMs_20	IAMs_20	22 49 42.3	
	comp=Z,2µm,18.0s						
P52A	**Corning**	**70.32**	**48**	P	**P**	**22 20 26.3**	**+0.4**
	baz=326						
P52A	**Corning**	**70.32**	**48**	IAMs_20	IAMs_20	22 54 17.7	
	comp=Z,4µm,18.0s						
K58A	**Earlville**	**70.32**	**42**	P	**P**	**22 20 26.3**	**+0.4**
	baz=329						
K58A	**Earlville**	**70.32**	**42**	IAMs_20	IAMs_20	22 57 01.4	
	comp=Z,4µm,18.0s						
KULM	**Kulim**	**70.32**	**250**	P	**P**	**22 20 25.5**	**-0.7**
KULM				IAmb	IAmb	22 20 42.2	
	comp=Z,23nm,1.0s						
SORM	**Soroca**	**70.35**	**330**	⇓P	**P**	**22 20 26.1**	**+0.2**
FLTG	**Flechtingen**	**70.40**	**342**	*e*P	**P**	**22 20 26.5**	**+0.4**
	comp=Z,26nm,1.4s,baz=16,slow=6.0						
ANN	**Anapa**	**70.41**	**322**	*e*P	P	22 20 20.6	-5.7
ANN				*e**PP	pP	22 20 37.9	+1.4
ANN				*e*S	**S**	**22 29 34.4**	**-1.4**
ANN				pmax	pmax		
	comp=Z,92nm,1.2s						
ANN				MLR	MLR		
	comp=E,10µm,16.0s						
ANN				MLR	MLR		
	comp=Z,6µm,15.0s						
M56A	**Emporium**	**70.41**	**45**	P	**P**	**22 20 27.1**	**+0.7**
	baz=328						
M56A	**Emporium**	**70.41**	**45**	IAMs_20	IAMs_20	22 52 47.9	
	comp=Z,4µm,18.0s						
SANVU	**Saraoutou**	**70.41**	**176**	IAMs_20	IAMs_20	22 54 43.7	
	comp=Z,3µm,18.0s						
H62A	**Milan**	**70.43**	**38**	P	**P**	**22 20 27.2**	**+0.7**
	baz=330						
H62A	**Milan**	**70.43**	**38**	P	**P**	**22 20 27.8**	**+1.3**
NRDL	**Niedersach Rie**	**70.44**	**343**	*e*P	**P**	**22 20 27.1**	**+0.9**
	comp=Z,22nm,1.3s,baz=16,slow=6.0						
LBNH	**Lisbon**	**70.44**	**39**	P	**P**	**22 20 27.5**	**+1.0**
	baz=330						
LBNH	**Lisbon**	**70.44**	**39**	IAMs_20	IAMs_20	22 55 55.3	
	comp=Z,2µm,19.0s						
MET	**Memphis--Engin**	**70.48**	**56**	IAMs_20	IAMs_20	22 52 32.2	
	comp=Z,3µm,19.0s						
R50A	**Paris**	**70.48**	**51**	IAMs_20	IAMs_20	22 53 57.2	
	comp=Z,3µm,18.0s						
L57A	**Andrews Acres**	**70.50**	**43**	P	**P**	**22 20 27.1**	**+0.1**
	baz=328						
KWP	**Kalwaria Pacla**	**70.51**	**334**	*e*P	**P**	**22 20 27.7**	**+0.7**
KWP				*e*S	**S**	**22 29 41.4**	**+4.4**
KWP	**Kalwaria Pacla**	**70.51**	**334**	P	**P**	**22 20 27.6**	**+0.7**
KWP				pmax	pmax		
	comp=Z,130nm,1.2s						
KWP				MLR	MLR		
	comp=Z,5µm,21.0s						
KWP	**Kalwaria Pacla**	**70.51**	**334**	P	**P**	**22 20 27.6**	**+0.7**
X43A	**Marvell**	**70.51**	**57**	IAMs_20	IAMs_20	22 52 40.1	
	comp=Z,3µm,19.0s						
CCAR	**Cane Creek**	**70.57**	**58**	IAMs_20	IAMs_20	22 51 26.6	
	comp=Z,3µm,20.0s						
Z41A	**Richland Creek**	**70.59**	**60**	IAMs_20	IAMs_20	22 50 07.3	
	comp=Z,3µm,19.0s						
I61A	**Oroboro, Fairl**	**70.61**	**39**	P	**P**	**22 20 27.6**	**+0.1**
	baz=330						
K59A	**Cooperstown**	**70.62**	**42**	P	**P**	**22 20 27.9**	**+0.2**
	baz=329						
SOC	**Sochi**	**70.64**	**320**	*e*P	**P**	**22 20 28.2**	**+0.5**
SOC				*e*		22 23 00.2	
SOC				*e*PPP	PPP	22 24 50.3	
SOC				*e*S	**S**	**22 29 38.4**	**-0.2**
SOC				*e*SS	**SS**	**22 34 09.7**	**+0.1**
SOC				pmax	pmax		
	comp=Z,47nm,1.0s						
SOC				MLR	MLR		
	comp=Z,10µm,13.0s						
WVT	**Waverly**	**70.65**	**54**	P	**P**	**22 20 28.9**	**+1.0**
WVT				pmax	pmax		
	comp=Z,38nm,1.0s						
WVT				MLR	MLR		
	comp=Z,3µm,18.0s						
WVT	**Waverly**	**70.65**	**54**	P	**P**	**22 20 29.3**	**+1.3**
	baz=325						
WVT	**Waverly**	**70.65**	**54**	P	**P**	**22 20 28.9**	**+1.0**
WVT				IAmb	IAmb	22 20 38.5	
	comp=Z,38nm,0.9s						
WVT	**Waverly**	**70.65**	**54**	IAMs_20	IAMs_20	22 55 24.6	
	comp=Z,3µm,18.0s						
OJC	**Ojcow**	**70.67**	**336**	*e*P	**P**	**22 20 28.6**	**+0.8**
OJC				*e*S	**S**	**22 29 38.8**	**0.0**
OJC	**Ojcow**	**70.67**	**336**	P	**P**	**22 20 28.3**	**+0.5**
OJC				pmax	pmax		
	comp=Z,47nm,1.1s						
OJC	**Ojcow**	**70.67**	**336**	P	**P**	**22 20 28.3**	**+0.5**
OJC				IAmb	IAmb	22 20 31.0	
	comp=Z,47nm,1.1s						
G64A	**Maxfield**	**70.67**	**36**	P	**P**	**22 20 29.0**	**+1.1**
	baz=331						
BINY	**Binghamton**	**70.67**	**43**	P	**P**	**22 20 28.7**	**+0.7**
	baz=329						
BINY	**Binghamton**	**70.67**	**43**	IAMs_20	IAMs_20	22 55 16.7	
	comp=Z,3µm,18.0s						
ASSE	**Asse, Remlinge**	**70.69**	**343**	*e*P	**P**	**22 20 28.8**	**+1.0**
	comp=Z,40nm,1.3s,baz=16,slow=6.0						
BBKI	**Banjar Baru**	**70.73**	**232**	P	**P**	**22 20 30.6**	**+2.0**
	comp=Z,2µmcomp=Z,46nm,1.6s						
H63A	**New Sharon**	**70.74**	**37**	P	**P**	**22 20 29.5**	**+1.1**
	baz=331						
J60A	**Lant Hill Farm**	**70.75**	**40**	P	**P**	**22 20 28.8**	**+0.3**
	baz=330						
IPM	**Ipoh**	**70.80**	**249**	P	**P**	**22 20 29.4**	**+0.3**
IPM				IAmb	IAmb	22 20 44.5	
	comp=Z,20nm,0.9s						
W45A	**Hickory Valley**	**70.81**	**56**	IAMs_20	IAMs_20	22 55 06.8	
	comp=Z,3µm,20.0s						
Q52A	**Bidwell**	**70.82**	**49**	IAMs_20	IAMs_20	22 50 31.0	
	comp=Z,2µm,19.0s						
N56A	**West Decatur**	**70.84**	**45**	P	**P**	**22 20 29.9**	**+0.8**
	baz=328						
KSP	**Ksiaz**	**70.85**	**339**	*e*P	**P**	**22 20 29.5**	**+0.5**
KSP				*e*S	**S**	**22 29 41.2**	**+0.3**
L58A	**Harry Jones Me**	**70.86**	**43**	P	**P**	**22 20 29.7**	**+0.5**
	baz=329						
NATX	**Nacogdoches**	**70.86**	**62**	P	**P**	**22 20 30.8**	**+1.5**
	baz=324						
NATX	**Nacogdoches**	**70.86**	**62**	IAMs_20	IAMs_20	22 51 36.7	
	comp=Z,3µm,19.0s						
COEN	**Coen**	**70.95**	**201**	IAMs_20	IAMs_20	22 46 52.0	
	comp=Z,2µm,21.0s						
M57A	**Sunshine Farm,**	**70.96**	**44**	P	**P**	**22 20 31.1**	**+1.4**
	baz=328						
I62A	**Tamworth**	**70.97**	**39**	P	**P**	**22 20 30.9**	**+1.1**
	baz=330						
J61A	**Chester**	**70.99**	**40**	P	**P**	**22 20 30.5**	**+0.7**
	baz=330						
IBBN	**Ibbenburen**	**71.00**	**344**	*e*P	**P**	**22 20 30.6**	**+0.9**
	comp=Z,109nm,1.6s,baz=16,slow=6.0						
CLZ	**Clausthal**	**71.02**	**343**	*e*P	**P**	**22 20 31.2**	**+1.2**
	comp=Z,62nm,1.3s,baz=16,slow=6.0						
H64A	**Troy**	**71.04**	**37**	P	**P**	**22 20 30.4**	**+0.2**
	baz=331						
L59A	**Walton**	**71.05**	**42**	P	**P**	**22 20 31.0**	**+0.7**
	baz=329						
L59A	**Walton**	**71.05**	**42**	IAMs_20	IAMs_20	22 57 39.7	
	comp=Z,4µm,18.0s						
AKH	**Akhalkalaki**	**71.06**	**316**	⇓P	**P**	**22 20 30.2**	**-0.4**
AKH	**Akhalkalaki**	**71.06**	**316**	P	**P**	**22 20 31.4**	**+0.8**
AKH				pmax	pmax		
	comp=Z,191nm,1.7s						
AKH				MLR	MLR		
	comp=Z,24µm,19.0s						
AKH	**Akhalkalaki**	**71.06**	**316**	P	**P**	**22 20 31.4**	**+0.8**
CLL	**Collm**	**71.06**	**341**	⇑*i*P	**P**	**22 20 30.4**	**+0.2**
	comp=Z,47nm,1.1s						
CLL				*i* sP	**pP**	**22 20 37.1**	**-3.4**
CLL				*e*		22 21 04.0	
CLL				*e*PP	PP	22 23 15.0	+7.7
CLL				*e*S	**S**	**22 29 50.0**	**+6.7**
CLL				*e*SS	**SS**	**22 34 22.0**	**+6.3**
CLL				*e*		22 35 30.0	
CLL				*e*SSSS		22 38 54.0	
CLL	**Collm**	**71.06**	**341**	⇑*i*P	**P**	**22 20 30.4**	**+0.2**
CLL				*e*S	**S**	**22 29 50.0**	**+6.7**
CLL				pmax	pmax		
	comp=Z,47nm,1.1s						
CLL	**Collm**	**71.06**	**341**	P	**P**	**22 20 30.6**	**+0.4**
CLL				IAmb	IAmb	22 20 32.6	
	comp=Z,51nm,1.2s						
CLL				IAMs_20	IAMs_20	22 53 31.0	
	comp=Z,4µm,20.0s						
CLL	**Collm**	**71.06**	**341**	*e*P	**P**	**22 20 30.6**	**+0.4**
	comp=Z,47nm,1.1s,baz=16,slow=6.0						
I63A	**Otisfield**	**71.08**	**38**	P	**P**	**22 20 31.1**	**+0.7**
	baz=331						
G65A	**Princeton**	**71.11**	**35**	P	**P**	**22 20 32.5**	**+1.9**
	baz=332						
OSTC	**Ostas**	**71.14**	**339**	*e*P	**P**	**22 20 31.3**	**+0.6**
OSTC				*e*S	**S**	**22 29 47.4**	**+3.1**
OSTC				AMS	AMS	22 57 30.0	
	comp=Z,9µm,14.6s						
CHVC	**Chvalec**	**71.14**	**339**	*e*P	**P**	**22 20 31.3**	**+0.6**
CHVC				AMS	AMS	22 56 00.0	
	comp=Z,8µm,17.0s						
833A	**Chaparral WMA,**	**71.15**	**68**	P	**P**	**22 20 32.9**	**+1.8**
	baz=323						
833A	**Chaparral WMA,**	**71.15**	**68**	IAMs_20	IAMs_20	22 52 34.0	
	comp=Z,2µm,21.0s						
M58A	**Price’s Panora**	**71.19**	**43**	P	**P**	**22 20 31.5**	**+0.3**
	baz=328						
Q53A	**Leroy**	**71.22**	**48**	P	**P**	**22 20 32.2**	**+0.8**
	baz=327,SNR=6.9						
OXF	**Oxford**	**71.23**	**56**	P	**P**	**22 20 32.6**	**+1.1**
	baz=325,SNR=8.1						
UPC	**Upice**	**71.23**	**339**	*e*P	**P**	**22 20 32.0**	**+0.8**
UPC				*e*S	**S**	**22 29 49.3**	**+4.0**
UPC				MLR	MLR		
	comp=Z,10µm,14.5s						
UPC	**Upice**	**71.23**	**339**	*e*P	**P**	**22 20 32.0**	**+0.8**
UPC				*e*S	**S**	**22 29 49.3**	**+4.0**
UPC				AMS	AMS	22 57 20.0	
	comp=Z,10µm,14.5s						
KIS	**Kishinev**	**71.25**	**329**	*e*P	**P**	**22 20 28.0**	**-3.4**
KIS	**Kishinev**	**71.25**	**329**	*e*P	**P**	**22 20 28.0**	**-3.4**
KIS				*e*		22 30 14.0	
KIS				*e*PS	PnS	22 30 33.0	+16
KIS				MLR	MLR		
	comp=N,5µm,14.0s						
KIS				MLR	MLR		
	comp=Z,5µm,14.0s						
SSPA	**Standing Stone**	**71.25**	**45**	P	**P**	**22 20 32.0**	**+0.5**
SSPA				IAmb	IAmb	22 20 43.7	
	comp=Z,38nm,1.3s						
SSPA	**Standing Stone**	**71.25**	**45**	IAMs_20	IAMs_20	22 53 23.9	
	comp=Z,3µm,18.0s						
KOLS	**Kolonicke sedl**	**71.26**	**334**	*e*P	**P**	**22 20 32.6**	**+1.1**

KOLS				pmax	pmax		
	comp=Z,30nm,1.4s						
KOLS	Kolonicke sedl	71.26	334	eP	P	22 20 32.6	+1.1
KOLS				eL	L	22 56 58.9	
MCWV	Mont Chateau	71.27	47	P	P	22 20 32.4	+0.7
	baz=327						
MCWV	Mont Chateau	71.27	47	IAMs_20	IAMs_20	22 56 28.7	
	comp=Z,2µm,18.0s						
N57A	Milroy	71.28	45	P	P	22 20 32.5	+0.8
	baz=328,SNR=6.5						
O56A	Blue Knob Stat	71.28	45	P	P	22 20 31.5	-0.2
	baz=328						
O56A	Blue Knob Stat	71.28	45	IAMs_20	IAMs_20	22 53 17.0	
	comp=Z,3µm,18.0s						
U49A	Red Boiling Sp	71.29	53	IAMs_20	IAMs_20	22 54 14.6	
	comp=Z,3µm,18.0s						
BRG	Berggiesshubel	71.30	340	⇑iP	P	22 20 32.2	+0.5
BRG				Amp		22 20 34.3	
	comp=Z,51nm,1.6s						
BRG				ex	x	22 20 39.6	
BRG				Amp		22 20 40.6	
	comp=Z,17nm,1.2s						
BRG	Berggiesshubel	71.30	340	S	S	22 29 54.0	+8.0
BRG	Berggiesshubel	71.30	340	⇑iP	P	22 20 32.1	+0.5
BRG				pmax	pmax		
	comp=Z,51nm,1.6s						
BRG				MLR	MLR		
	comp=E,6µm,14.1s						
BRG				MLR	MLR		
	comp=N,5µm,14.1s						
BRG				MLR	MLR		
	comp=Z,6µm,18.1s						
BRG	Berggiesshubel	71.30	340	⇑iP	P	22 20 32.2	+0.5
BRG				Amp		22 20 34.3	
	comp=Z,51nm,1.6s						
BRG				ex	x	22 20 39.6	
BRG				Amp		22 20 40.6	
	comp=Z,17nm,1.2s						
BRG	Berggiesshubel	71.30	340	S	S	22 29 54.0	+8.0
BRG	Berggiesshubel	71.30	340	eP	P	22 20 32.3	+0.7
	comp=Z,51nm,1.6s,baz=16,slow=6.0						
K61A	Williamstown	71.31	41	P	P	22 20 31.7	-0.1
	baz=330						
KSPA	Keystone Colle	71.31	43	IAMs_20	IAMs_20	22 55 38.4	
	comp=Z,3µm,18.0s						
DPC	Dobruska-Polom	71.31	338	eP	P	22 20 32.8	+1.0
DPC				eS	S	22 29 47.0	+0.7
DPC				MLR	MLR		
	comp=Z,9µm,14.3s						
DPC	Dobruska-Polom	71.31	338	eP	P	22 20 32.8	+1.0
DPC				eS	S	22 29 47.0	+0.7
DPC				AMS	AMS	22 57 40.0	
	comp=Z,9µm,14.3s						
MILM	Milestii Mici	71.32	329	⇓P	P	22 20 32.3	+0.6
H65A	Eastbrook	71.33	36	P	P	22 20 32.4	+0.5
	baz=332						
S51A	Beattyville	71.34	50	IAMs_20	IAMs_20	22 56 25.9	
	comp=Z,3µm,18.0s						
J62A	Henniker	71.36	39	P	P	22 20 32.1	0.0
	baz=330						
FBE	Freiberg	71.37	341	eP	P	22 20 33.0	+1.0
	comp=Z,43nm,1.2s,baz=16,slow=6.0						
GTTG	Gottingen	71.38	343	eP	P	22 20 33.1	+1.0
	comp=Z,55nm,1.5s,baz=16,slow=6.0						
OKC	Ostrava-Krasne	71.40	337	eS	S	22 29 50.0	+2.8
OKC				AMS	AMS	22 55 50.0	
	comp=Z,10µm,16.4s						
Q54A	Coxs Mills	71.42	48	P	P	22 20 33.5	+1.0
Q54A				IAmb	IAmb	22 21 06.5	
	comp=Z,39nm,1.1s						
Q54A				IAMs_20	IAMs_20	22 53 41.7	
	comp=Z,3µm,21.0s						
M59A	Waymart	71.45	43	P	P	22 20 32.4	-0.4
	baz=329						
KRLC	Kraliky	71.47	338	eP	P	22 20 33.8	+1.0
KRLC				eS	S	22 29 53.9	+5.7
KRLC				MLR	MLR		
	comp=Z,7µm,13.4s						
KRLC	Kraliky	71.47	338	eP	P	22 20 33.8	+1.0
KRLC				eS	S	22 29 53.9	+5.7
KRLC				AMS	AMS	22 57 50.0	
	comp=Z,7µm,13.4s						
PLAL	Pickwick Lake	71.48	55	IAMs_20	IAMs_20	22 50 41.4	
	comp=Z,3µm,22.0s						
R53A	Hurricane	71.48	49	IAMs_20	IAMs_20	22 51 15.5	
	comp=Z,3µm,21.0s						
CRVS	Cervenica-Dubn	71.49	335	eP	P	22 20 33.6	+0.7
CRVS				MLR	MLR		
	comp=Z,6µm,21.2s						
CRVS	Cervenica-Dubn	71.49	335	eP	P	22 20 33.6	+0.7
CRVS				eS	S	22 29 57.6	+9.2
CRVS				eL	L	22 53 19.9	
PVCC	Panska Ves	71.50	340	AMS	AMS	22 58 00.0	
	comp=Z,11µm,14.0s						
L60A	Shokan	71.53	42	P	P	22 20 33.4	+0.2
	baz=329						
UZH	Uzhgorod	71.54	334	eP	P	22 20 33.0	-0.1
UZH				i		22 20 48.0	
UZH				e		22 20 54.2	
UZH				e		22 25 03.0	
UZH				eS	S	22 29 47.0	-1.9
UZH				e		22 30 34.0	
UZH				e		22 37 25.4	
UZH				MLR	MLR		
	comp=N,3µm,15.0s						
UZH				MLR	MLR		
	comp=E,2µm,15.0s						
UZH				MLR	MLR		
	comp=Z,1µm,15.0s						
N58A	Sunbury	71.54	44	P	P	22 20 33.6	+0.4
	baz=328						
N58A	Sunbury	71.54	44	IAMs_20	IAMs_20	22 53 32.8	
	comp=Z,3µm,18.0s						
H66A	Whiting	71.56	36	P	P	22 20 34.1	+0.8
	baz=332						
735A	Kenedy	71.57	66	IAMs_20	IAMs_20	22 51 01.8	
	comp=Z,3µm,19.0s						
MORC	Moravsky Berou	71.59	337	⇑P	P	22 20 33.5	0.0
MORC	Moravsky Berou	71.59	337	eP	P	22 20 34.4	+0.9
MORC	Moravsky Berou	71.59	337	P	P	22 20 34.3	+0.9
MORC				pmax	pmax		
	comp=Z,50nm,1.3s						
MORC				MLR	MLR		
	comp=Z,4µm,21.0s						
MORC	Moravsky Berou	71.59	337	P	P	22 20 34.3	+0.9
MORC				IAmb	IAmb	22 20 36.0	
	comp=Z,50nm,1.3s						
L61A	Hillsdale 1, H	71.61	41	P	P	22 20 34.3	+0.7
	baz=330						
GNI	Garni	71.63	315	P	P	22 20 35.0	+1.0
	comp=Z,18nm,1.1s,baz=160,slow=1.4,SNR=6.3						
GNI	Garni	71.63	315	P	P	22 20 35.1	+1.0
GNI	Garni	71.63	315	ceP	P	22 20 35.2	+1.2
GNI				pmax	pmax		
	comp=Z,84nm,2.5s						
GNI	Garni	71.63	315	P	P	22 20 34.7	+0.7
BUR08	Bucovina Ar. S	71.69	332	P	P	22 20 34.5	+0.3
Y45A	Yeager Farm, C	71.69	57	IAMs_20	IAMs_20	22 52 24.2	
	comp=Z,2µm,19.0s						
O57A	Amberson	71.71	45	P	P	22 20 35.2	+0.9
	baz=328,SNR=7.1						
L61B	Northampton	71.71	40	P	P	22 20 34.9	+0.7
	baz=330						
HKT	Hockley	71.72	64	P	P	22 20 36.1	+1.7
HKT				pmax	pmax		
	comp=Z,25nm,1.3s						
HKT				MLR	MLR		
	comp=Z,2µm,18.0s						
HKT	Hockley	71.72	64	P	P	22 20 36.1	+1.7
HKT	Hockley	71.72	64	IAMs_20	IAMs_20	22 54 52.1	
	comp=Z,2µm,18.0s						
143A	Socs Landing,	71.73	59	IAMs_20	IAMs_20	22 50 06.4	
	comp=Z,2µm,22.0s						
LANS	Liptovska Anna	71.74	336	eP	P	22 20 36.7	+2.3
LANS				pmax	pmax		
	comp=Z,22nm,1.0s						
LANS	Liptovska Anna	71.74	336	eP	P	22 20 36.7	+2.3
P56A	Dayton Farm, R	71.81	46	P	P	22 20 36.0	+1.1
	baz=328,SNR=6.3						
N59A	State Game Lan	71.85	43	P	P	22 20 35.6	+0.4
	baz=329						
N59A	State Game Lan	71.85	43	IAMs_20	IAMs_20	22 55 55.9	
	comp=Z,3µm,18.0s						
BUG	Bochum--Univer	71.91	345	eP	P	22 20 35.9	+0.6
	comp=Z,38nm,1.3s,baz=16,slow=6.0						
K63A	Dunstable	71.93	39	P	P	22 20 34.9	-0.7
	baz=330						
M60A	Port Jervis	71.95	42	P	P	22 20 36.4	+0.7
	baz=329						
MOX	Moxa	71.95	342	eP	P	22 20 36.5	+0.9
	comp=Z,38nm,1.3s,baz=16,slow=6.0						
KASTN	Kahler Asten	71.97	344	eP	P	22 20 36.6	+0.9
	comp=Z,45nm,1.5s,baz=16,slow=6.0						
PRA	Prague	71.97	340	eP	P	22 20 36.8	+1.2
PRA				eS	S	22 29 57.9	+4.2
PRA				MLR	MLR		
	comp=Z,5µm,13.1s						
PRA	Prague	71.97	340	eP	P	22 20 36.8	+1.2
PRA				eS	S	22 29 57.9	+4.2
PRA				AMS	AMS	22 58 10.0	
	comp=Z,5µm,13.1s						
PLN	Plauen	72.01	341	eP	P	22 20 36.9	+1.0
	comp=Z,51nm,1.4s,baz=16,slow=6.0						
WERD	Werda	72.02	341	eP	P	22 20 37.0	+1.0
	comp=Z,51nm,1.3s,baz=16,slow=6.0						
TANN	Tannenbergstha	72.02	341	eP	P	22 20 37.2	+1.1
	comp=Z,41nm,1.5s,baz=16,slow=6.0						
R54A	Victor	72.02	48	P	P	22 20 37.6	+1.4
	baz=327,SNR=5.7						
PRU	Pruhonice	72.02	339	eP	P	22 20 36.9	+0.9
PRU				eS	S	22 29 49.0	-5.4
PRU				MLR	MLR		
	comp=Z,9µm,13.3s						
PRU	Pruhonice	72.02	339	eP	P	22 20 36.9	+0.9
PRU				eS	S	22 29 49.0	-5.4
PRU				AMS	AMS	22 58 10.0	
	comp=Z,9µm,13.3s						
Q56A	Snyder Ridge,	72.06	47	P	P	22 20 36.7	+0.3
	baz=328						
PAGS	Pennsylvania G	72.06	44	IAMs_20	IAMs_20	22 54 05.6	
	comp=Z,3µm,18.0s						
O58A	Lewisberry	72.07	44	P	P	22 20 36.7	+0.3
	baz=328						
UBBA	Unterbreizbach	72.07	343	eP	P	22 20 37.2	+1.1
	comp=Z,54nm,1.6s,baz=16,slow=6.0						
BIZ	Bicaz	72.08	331	⇑P	P	22 20 35.6	-0.8
GUNZ	Gunzen	72.09	341	eP	P	22 20 37.5	+1.1
	comp=Z,39nm,1.3s,baz=16,slow=6.0						
KECS	Kecovo	72.12	335	eP	P	22 20 38.1	+1.5
KECS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KECS	Kecovo	72.12	335	eP	P	22 20 38.1	+1.5
N60A	Cedar Hill Far	72.15	43	P	P	22 20 36.3	-0.6
	baz=329						
WERN	Wernitzgruen	72.16	341	eP	P	22 20 38.0	+1.1
	comp=Z,36nm,1.1s,baz=16,slow=6.0						
ODNJ	Ogdensburg	72.16	42	IAMs_20	IAMs_20	22 58 07.1	
	comp=Z,3µm,19.0s						
P57A	Homestead Farm	72.17	46	IAMs_20	IAMs_20	22 53 38.6	
	comp=Z,3µm,18.0s						
NKC	Novy Kostel	72.20	341	eP	P	22 20 37.6	+0.5
NKC				MLR	MLR		
	comp=Z,6µm,15.6s						
NKC	Novy Kostel	72.20	341	eP	P	22 20 37.6	+0.5
NKC				AMS	AMS	22 58 30.0	
	comp=Z,6µm,15.6s						
S54A	Dingess, Beckl	72.20	49	P	P	22 20 36.8	-0.5
	baz=327						
S54A	Dingess, Beckl	72.20	49	IAMs_20	IAMs_20	22 51 13.6	
	comp=Z,2µm,20.0s						
O59A	Robesonia	72.20	44	P	P	22 20 37.5	+0.3
	baz=329						
VRAC	Vranov	72.24	338	P	P	22 20 37.5	+0.2
	comp=Z,20nm,1.0s,baz=12,slow=7.5,SNR=17						
VRAC	Vranov	72.24	338	⇑P	P	22 20 39.0	+1.7
VRAC	Vranov	72.24	338	eP	P	22 20 38.5	+1.2
VRAC				eS	S	22 29 57.9	+0.9
TRNY	Table Rock, Ra	72.26	42	IAMs_20	IAMs_20	22 57 54.5	
	comp=Z,3µm,18.0s						
TZTN	Tazewell	72.27	51	P	P	22 20 38.6	+0.9
	baz=326						
LUPA	Lehigh Univers	72.28	43	IAMs_20	IAMs_20	22 53 26.2	
	comp=Z,3µm,19.0s						
SWET	Sewanee	72.28	54	P	P	22 20 38.7	+0.8
SWET				IAmb	IAmb	22 20 48.2	
	comp=Z,40nm,0.9s						
M61A	Granite Spring	72.29	42	P	P	22 20 37.9	+0.1
	baz=330						
R55A	Marlinton	72.31	48	P	P	22 20 38.8	+0.8
	baz=328						
342A	Flagon Creek P	72.35	60	IAMs_20	IAMs_20	22 56 59.9	
	comp=Z,3µm,20.0s						
Q57A	Strasburg	72.39	46	P	P	22 20 39.5	+1.1
	baz=328						
LHMI	Lhok Sumawe	72.39	253	IAMs_20	IAMs_20	22 54 42.1	
	comp=Z,3µm,19.0s						
X48A	Hartselle	72.39	55	IAMs_20	IAMs_20	22 51 21.7	
	comp=Z,3µm,19.0s						
MVL	Millersville	72.40	44	IAMs_20	IAMs_20	22 57 59.6	
	comp=Z,3µm,19.0s						
PBCC	Pribram	72.42	340	eP	P	22 20 38.9	+0.5
JAVC	Velka Javorina	72.42	337	eP	P	22 20 40.6	+2.1
P58A	Pank, Wackersv	72.46	45	P	P	22 20 39.6	+0.9
	baz=328						
TREC	Trest	72.49	339	eP	P	22 20 39.8	+1.0
TREC				eS	SKiKP	22 30 05.5	-4.5
TREC				MLR	MLR		
	comp=Z,11µm,13.9s						
TREC	Trest	72.49	339	eP	P	22 20 39.8	+1.0
TREC				eS	SKiKP	22 30 05.5	-4.5
TREC				AMS	AMS	22 58 20.0	
	comp=Z,11µm,13.9s						
PAL	Palisades	72.50	42	P	P	22 20 39.8	+0.8
	baz=330						
PAL	Palisades	72.50	42	IAMs_20	IAMs_20	22 53 09.9	
	comp=Z,2µm,18.0s						
VYHS	Vyhne	72.50	336	eP	P	22 20 40.0	+1.1
VYHS				pmax	pmax		
	comp=Z,29nm,1.4s						
VYHS	Vyhne	72.50	336	eP	P	22 20 40.0	+1.1
VYHS				eS	SKiKP	22 30 07.5	-2.5
VYHS				eSS	SS	22 35 13.1	+35
VYHS				eL	L	22 57 51.7	
R56A	Bull Pasture M	72.50	47	P	P	22 20 39.8	+0.7
	baz=328						
M62A	Hamden	72.50	41	P	P	22 20 39.3	+0.3
	baz=330						
O60A	Telford	72.51	43	P	P	22 20 39.8	+0.7
	baz=329						
KRUC	Moravsky	72.51	338	eP	P	22 20 40.0	+1.0
KRUC				eS	SKiKP	22 30 10.3	+0.3
V51A	Loudon	72.52	52	IAMs_20	IAMs_20	22 57 17.3	
	comp=Z,3µm,18.0s						
VBMS	Vicksburg	72.56	59	P	P	22 20 40.5	+1.1
	baz=325						
VBMS	Vicksburg	72.56	59	IAMs_20	IAMs_20	22 55 01.3	
	comp=Z,3µm,18.0s						
KVTX	Kingsville	72.57	67	IAMs_20	IAMs_20	22 57 10.4	
	comp=Z,3µm,20.0s						
YLE	Yale	72.60	41	IAMs_20	IAMs_20	22 55 08.6	
	comp=Z,3µm,18.0s						
L63A	North Scituate	72.62	40	P	P	22 20 39.6	-0.1
	baz=331						
ROTZ	Rotzenmuhle	72.69	341	eP	P	22 20 41.2	+1.2
	comp=Z,35nm,1.3s,baz=16,slow=6.0						
P59A	Jarrettsville	72.70	44	P	P	22 20 40.6	+0.4
	baz=329						
WUPA	West Chester U	72.76	44	IAMs_20	IAMs_20	22 54 28.9	
	comp=Z,2µm,18.0s						
Q58A	Fox Den Farm,	72.77	46	P	P	22 20 41.6	+1.0
	baz=328,SNR=6.4						
LTVH	Ltavrtes, Hu	72.79	334	eP	P	22 20 43.3	+2.7
PSZ	Piszkesteto	72.79	335	⇑P	P	22 20 42.3	+1.5
PSZ	Piszkesteto	72.79	335	eP	P	22 20 42.0	+1.3
PSZ	Piszkesteto	72.79	335	P	P	22 20 41.5	+0.8
PSZ				pmax	pmax		
	comp=Z,43nm,1.5s						
PSZ				MLR	MLR		
	comp=Z,6µm,19.0s						
PSZ	Piszkesteto	72.79	335	P	P	22 20 41.5	+0.8
PSZ				IAmb	IAmb	22 20 43.6	
	comp=Z,43nm,1.5s						
SMOL	Smolenice	72.81	337	eP	P	22 20 42.4	+1.7
SMOL				pmax	pmax		
	comp=Z,15nm,1.3s						
SMOL	Smolenice	72.81	337	eP	P	22 20 42.4	+1.7
AHRW	Bad Neuenahr-A	72.82	344	eP	P	22 20 41.7	+1.0
	comp=Z,46nm,1.4s,baz=16,slow=6.0						
V52A	Sevierville	72.83	52	IAMs_20	IAMs_20	22 54 49.4	
	comp=Z,4µm,19.0s						
L64A	Middleborough	72.84	39	P	P	22 20 41.0	0.0
	baz=331						
M63A	Gales Ferry	72.86	40	P	P	22 20 41.7	+0.6
	baz=330						
TKL	Tuckaleechee C	72.90	52	P	P	22 20 42.4	+0.9
	comp=Z,6.3nm,0.9s,baz=12,slow=9.2,SNR=4.9						
TKL	Tuckaleechee C	72.90	52	P	P	22 20 42.6	+1.1
TKL				pmax	pmax		
	comp=Z,36nm,1.3s						
TKL				MLR	MLR		
	comp=Z,3µm,18.0s						
TKL	Tuckaleechee C	72.90	52	P	P	22 20 42.5	+1.1
TKL				IAmb	IAmb	22 21 14.6	
	comp=Z,36nm,1.3s						
TKL				IAMs_20	IAMs_20	22 54 41.3	
	comp=Z,3µm,18.0s						
TNS	Taunus Mts	72.91	343	eP	P	22 20 42.2	+0.8
	comp=Z,31nm,1.4s,baz=16,slow=6.0						
MEM	Membach	72.91	345	dP	P	22 20 40.1	-1.2
	comp=Z,41nm,1.3s						
BTNL	Ternell	72.92	345	dP	P	22 20 42.1	+0.8
	comp=Z,39nm,1.4s						
146A	Union	72.92	57	IAMs_20	IAMs_20	22 52 19.0	
	comp=Z,3µm,18.0s						
OZUR		72.94	331	⇑P	P	22 20 42.2	+0.6
Z47A	Carrollton	72.94	56	IAMs_20	IAMs_20	22 56 30.3	
	comp=Z,3µm,18.0s						
GRA1	Grafenberg Arr	72.94	342	P	P	22 20 42.8	+1.3
GRF	Grafenberg Arr	72.94	342	P	P	22 20 42.8	+1.3
GRF				pmax	pmax		
	comp=Z,69nm,1.3s						
GRF				MLR	MLR		
	comp=Z,4µm,19.0s						
GRF	Grafenberg Arr	72.94	342	eP	P	22 20 42.8	+1.3
	comp=Z,73nm,1.3s,baz=16,slow=6.0						
GRF				eL	L	22 54 49.0	
	comp=Z,4µm,19.5s						
HYB	Hyderabad	72.96	276	i P	P	22 20 40.0	-2.1
HYB	Hyderabad	72.96	276	eP	P	22 20 41.2	-0.9
HYB				IAmb	IAmb	22 20 42.3	
	comp=Z,73nm,1.3s						
R57A	Stanardsville	72.97	47	P	P	22 20 42.3	+0.5
	baz=328						
MODS	Modra-Piesok	72.97	337	eP	P	22 20 42.5	+0.8
MODS				pmax	pmax		
	comp=Z,41nm,1.4s						
MODS	Modra-Piesok	72.97	337	eP	P	22 20 42.5	+0.8
MODS				eS	S	22 30 07.8	+2.4
MODS				eSS	SS	22 35 14.4	+29
MODS				eL	L	22 56 58.4	
CJR	Cluj-Napoca	72.97	332	⇓P	P	22 20 43.1	+1.4
FPAL	Fort Paine	72.99	54	IAMs_20	IAMs_20	22 52 13.8	
	comp=Z,2µm,20.0s						
BSTI	Sart Tilman	73.00	345	dP	P	22 20 43.1	+1.3
KHC	Kasperske Hory	73.03	340	eP	P	22 20 43.4	+1.3
KHC				e		22 20 59.5	
KHC				eS	S	22 30 07.1	+1.0
KHC				MLR	MLR		
	comp=Z,8µm,13.1s						
KHC	Kasperske Hory	73.03	340	eP	P	22 20 43.4	+1.3
KHC				epP	pP	22 20 50.0	-2.4
KHC				ePCP	PcP	22 20 59.5	+0.7
KHC				eS	S	22 30 07.1	+1.0
KHC				AMS	AMS	22 58 30.0	
	comp=Z,8µm,13.1s						
KHC	Kasperske Hory	73.03	340	P	P	22 20 42.9	+0.8
KHC				IAmb	IAmb	22 20 44.8	
	comp=Z,52nm,1.3s						
O61A	Allentown	73.03	43	P	P	22 20 42.7	+0.5
	baz=330						
L65A	Cape Cod Natio	73.04	39	P	P	22 20 42.2	0.0
	baz=331						
U54A	Nelsons Funny	73.05	50	P	P	22 20 43.4	+0.9
	baz=327						
U54A	Nelsons Funny	73.05	50	IAMs_20	IAMs_20	22 56 02.7	
	comp=Z,3µm,20.0s						
S56A	Natural Bridge	73.05	48	P	P	22 20 43.3	+1.0
	baz=328						
344A	Westbrook Farm	73.07	59	IAMs_20	IAMs_20	22 52 12.1	
	comp=Z,3µm,21.0s						
BLA	Blacksburg	73.08	48	P	P	22 20 43.3	+0.7
	baz=328						
DRGR		73.13	333	⇓P	P	22 20 42.3	-0.5
WET	Wettzell	73.16	340	eP	P	22 20 44.2	+1.4
	comp=Z,46nm,1.3s,baz=16,slow=6.0						
DOPR	Dopca	73.17	331	⇑P	P	22 20 43.7	+0.8
ZST	Bratislava	73.18	337	eP	P	22 20 44.7	+1.8
ZST				pmax	pmax		
	comp=Z,155nm,1.7s						
ZST	Bratislava	73.18	337	eP	P	22 20 44.7	+1.8
ZST				eS	S	22 30 09.4	+1.8
R58A	Rapidan	73.18	46	P	P	22 20 43.4	+0.3
	baz=328						
Y49A	Blount Mountai	73.18	55	IAMs_20	IAMs_20	22 51 54.5	
	comp=Z,3µm,21.0s						
BCLA	Clavier	73.20	346	dP	P	22 20 43.4	+0.4
M65A	Busby, Falmout	73.23	39	P	P	22 20 43.1	-0.2
	baz=331						
S57A	Dark Hollow, R	73.24	47	P	P	22 20 44.7	+1.2
	baz=328,SNR=5.6						
S57A	Dark Hollow, R	73.24	47	P	P	22 20 44.3	+0.9
S57A				IAmb	IAmb	22 20 53.9	
	comp=Z,41nm,1.1s						
Q59A	Harwood	73.25	45	P	P	22 20 44.6	+1.1
	baz=329						
SRO	Srobarova	73.26	336	eP	P	22 20 45.3	+1.9
SRO				pmax	pmax		
	comp=Z,17nm,1.1s						
SRO	Srobarova	73.26	336	eP	P	22 20 45.2	+1.9
BGES	Gesves	73.26	346	dP	P	22 20 43.1	-0.2
GEC2	GERESS Array S	73.28	340	P	P	22 20 44.2	+0.6
GEC2	GERESS Array S	73.28	340	eP	P	22 20 44.6	+0.9
	comp=Z,23nm,1.1s,baz=16,slow=6.0						
GERES	GERESS Array B	73.28	340	P	P	22 20 44.5	+0.9
	comp=Z,13nm,1.0s,baz=35,slow=4.9,SNR=45						
GERES				LR	LR	22 57 19.9	
	comp=Z,3µm,18.2s,baz=26,slow=40						
SRO2	Moca	73.29	336	eP	P	22 20 44.6	+1.1
SRO2				pmax	pmax		
	comp=Z,19nm,1.0s						
SRO2	Moca	73.29	336	eP	P	22 20 44.6	+1.1
P61A	Hammonton	73.30	43	IAMs_20	IAMs_20	22 58 38.3	
	comp=Z,3µm,18.0s						
W52A	Murphy	73.30	52	IAMs_20	IAMs_20	22 52 59.9	
	comp=Z,3µm,20.0s						
BHUJ	Bhuj	73.31	287	eP	P	22 20 43.2	-0.8
BMRD	Maredsous	73.39	346	dP	P	22 20 43.6	-0.4
T56A	Rocky Mt	73.40	48	P	P	22 20 45.5	+1.1
	baz=328						
BUD	Budapest	73.41	336	eP	P	22 20 47.3	+3.1
MLR	Muntele Rosu	73.45	330	P	P	22 20 45.3	+0.6
	comp=Z,9.4nm,0.8s,baz=219,slow=11,SNR=8.0						
MLR	Muntele Rosu	73.45	330	⇑P	P	22 20 44.5	-0.2
MLR	Muntele Rosu	73.45	330	P	P	22 20 44.5	-0.2
MLR				pmax	pmax		
	comp=Z,19nm,1.0s						
MLR				MLR	MLR		
	comp=Z,7µm,19.0s						
MLR	Muntele Rosu	73.45	330	P	P	22 20 44.5	-0.2
R58B	Mineral	73.52	46	P	P	22 20 45.8	+0.8
	baz=328						
R58B	Mineral	73.52	46	IAMs_20	IAMs_20	22 54 19.2	
	comp=Z,3µm,18.0s						
CBN	Corbin Frederi	73.52	46	P	P	22 20 45.6	+0.6
	baz=329						
LRAL	Lakeview Retre	73.58	56	P	P	22 20 46.3	+0.8
	baz=326						
LRAL	Lakeview Retre	73.58	56	IAMs_20	IAMs_20	22 51 55.3	
	comp=Z,2µm,21.0s						
DOU	Dourbes	73.61	346	dP	P	22 20 43.9	-1.5
R59A	King George, V	73.63	46	P	P	22 20 46.7	+1.0
	baz=329						
CSKK	Cskako	73.70	336	eP	P	22 20 46.3	+0.4
CONA	Conrad Observa	73.70	338	eP	P	22 20 47.6	+1.5
	comp=Z,38nm,1.4s,SNR=16						
346A	Big Creek Wild	73.75	58	IAMs_20	IAMs_20	22 53 35.9	
	comp=Z,3µm,19.0s						
VOIR		73.75	331	⇑P	P	22 20 47.0	+0.5
T57A	Hurt	73.76	48	P	P	22 20 46.9	+0.5
	baz=328						
SOP	Sopron	73.78	337	eP	P	22 20 48.0	+1.5
R60A	Leonardtown, M	73.79	45	P	P	22 20 47.6	+1.0
	baz=329						
WLF	Walferdange	73.81	345	eP	P	22 20 47.4	+0.8
	comp=Z,70nm,2.0s,baz=16,slow=6.0						
U56A	King	73.82	49	P	P	22 20 48.2	+1.2
	baz=328						
U56A	King	73.82	49	IAMs_20	IAMs_20	22 54 43.5	

	comp=Z,2µm,18.0s						
EGYH	Egyhazaskeszo	73.86	337	eP	P	22 20 43.3	-3.6
ARR	Arges	73.93	331	⇓P	P	22 20 48.7	+1.2
S59A	Mechanicsville	73.93	46	P	P	22 20 48.5	+1.0
	baz=329						
MPLH	Magyarpolny	74.05	337	eP	P	22 20 49.3	+1.3
AMBH	Ambrzfalva	74.05	334	eP	P	22 20 49.0	+1.0
T58A	Grand View Acr	74.11	47	P	P	22 20 49.0	+0.5
	baz=328						
MOA	Molln	74.11	339	i P	P	22 20 49.7	+1.3
	comp=Z,29nm,1.4s,SNR=8.5						
STU	Stuttgart	74.19	343	P	P	22 20 48.8	0.0
STU				pmax	pmax		
	comp=Z,34nm,1.2s						
STU				MLR	MLR		
	comp=Z,3µm,20.0s						
STU	Stuttgart	74.19	343	P	P	22 20 48.8	0.0
STU				IAmb	IAmb	22 20 51.5	
	comp=Z,34nm,1.2s						
STU				IAMs_20	IAMs_20	22 56 44.7	
	comp=Z,3µm,20.0s						
STU	Stuttgart	74.19	343	eP	P	22 20 49.5	+0.7
	comp=Z,37nm,1.2s,baz=16,slow=6.0						
U57A	Blanch	74.20	48	P	P	22 20 50.1	+1.0
	baz=328						
TIH	Tihany	74.22	336	eP	P	22 20 49.0	0.0
V56A	Mocksville	74.23	49	P	P	22 20 49.9	+0.6
	baz=328						
BKNI	Bangkinang	74.28	247	P	P	22 20 50.4	+0.6
FUR	Furstenfeldbru	74.40	341	eP	P	22 20 51.1	+1.0
	comp=Z,64nm,1.4s,baz=16,slow=6.0						
GZR	Gura Zlata	74.41	332	⇑P	P	22 20 50.4	+0.1
ARSA	Arzberg	74.42	338	eP	P	22 20 51.7	+1.5
	comp=Z,24nm,1.3s,SNR=8.0						
KMSC	Kings Mountain	74.42	50	P	P	22 20 50.7	+0.3
	baz=328						
V57A	Coltrane Farms	74.47	49	P	P	22 20 50.6	-0.1
	baz=328						
T59A	Double "B" Far	74.50	47	P	P	22 20 51.2	+0.5
	baz=329						
BZS	Buzias	74.51	333	⇑P	P	22 20 51.3	+0.6
U58A	Oxford	74.57	48	P	P	22 20 52.0	+0.8
	baz=328						
S61A	Accomac	74.66	45	IAMs_20	IAMs_20	22 55 30.4	
	comp=Z,3µm,18.0s						
MNSI	Mandailing Nat	74.66	248	P	P	22 20 51.8	-0.2
	comp=Z,879nmcomp=Z,8.8nm,0.4s						
TOKA	Tokat	74.66	321	IAMs_20	IAMs_20	22 58 25.3	
	comp=Z,3µm,19.0s						
T60A	Surry	74.69	46	IAMs_20	IAMs_20	22 56 18.3	
	comp=Z,3µm,18.0s						
POO	Poona	74.75	280	eP	P	22 20 51.0	-1.5
POO				eP	P	22 20 52.3	-0.2
POO				IAmb	IAmb	22 20 56.0	
	comp=Z,36nm,0.9s						
W56A	Indian Trail	74.76	50	P	P	22 20 52.7	+0.4
	baz=328						
BFO	Black Forest	74.76	343	P	P	22 20 52.5	+0.3
BFO				pmax	pmax		
	comp=Z,32nm,1.2s						
BFO				MLR	MLR		
	comp=Z,3µm,19.0s						
BFO	Black Forest	74.76	343	P	P	22 20 52.5	+0.3
BFO				IAmb	IAmb	22 20 54.8	
	comp=Z,32nm,1.2s						
BFO				IAMs_20	IAMs_20	22 57 03.9	
	comp=Z,3µm,19.0s						
BFO	Black Forest	74.76	343	eP	P	22 20 52.8	+0.6
	comp=Z,34nm,1.2s,baz=16,slow=6.0						
250A	Grady	74.80	56	IAMs_20	IAMs_20	22 52 44.5	
	comp=Z,2µm,22.0s						
V58A	Windy Hill, Pi	74.84	48	IAMs_20	IAMs_20	23 00 04.3	
	comp=Z,2µm,18.0s						
BEHE	Becsehely	74.88	337	eP	P	22 20 57.7	+4.8
GOGA	Godfrey	74.91	53	P	P	22 20 53.9	+0.7
	baz=327						
U59A	Littleton	74.92	47	P	P	22 20 53.7	+0.5
	baz=329						
HERR	Herculane	74.98	332	⇑P	P	22 20 53.8	+0.3
W57A	Gilead	75.00	49	IAMs_20	IAMs_20	22 56 09.7	
	comp=Z,2µm,18.0s						
KOGS	Kog	75.02	337	eP	P	22 20 54.3	+0.6
KOGS				eS	S	22 30 35.0	+6.6
KBA	Koelnbreinsper	75.04	339	eP	P	22 20 55.8	+1.8
	comp=Z,80nm,1.4s,SNR=24						
ECH	Echery	75.06	344	P	P	22 20 54.4	+0.5
ECH				pmax	pmax		
	comp=Z,35nm,1.2s						
ECH				MLR	MLR		
	comp=Z,2µm,22.0s						
ECH	Echery	75.06	344	P	P	22 20 54.4	+0.5
ECH				IAmb	IAmb	22 20 56.5	
	comp=Z,35nm,1.2s						
ECH				IAMs_20	IAMs_20	22 58 25.9	
	comp=Z,2µm,22.0s						
SOKA	Soboth	75.07	338	i P	P	22 20 55.0	+1.0
	comp=Z,26nm,1.2s,SNR=9.5						
BISS	Bistriski jare	75.08	338	eP	P	22 20 55.2	+1.2
UBR	Ueberruh	75.08	342	eP	P	22 20 55.1	+1.0
	comp=Z,56nm,1.4s,baz=16,slow=6.0						
U60A	Pendleton	75.09	47	P	P	22 20 55.7	+1.5
	baz=329						
BRAL	Brewton	75.10	57	IAMs_20	IAMs_20	22 55 42.5	
	comp=Z,3µm,18.0s						
X56A	White Oak	75.10	50	P	P	22 20 55.4	+1.1
	baz=328						
PMBI	Palembang	75.12	242	IAMs_20	IAMs_20	22 55 36.7	
	comp=Z,2µm,19.0s						
WATA	Walderalm	75.14	341	i P	P	22 20 55.4	+0.9
	comp=Z,32nm,1.2s,SNR=20						
RETA	Reutte	75.15	341	eP	P	22 20 55.3	+0.8
	comp=Z,24nm,1.3s,SNR=5.8						
WTTA	Wattenberg	75.20	341	eP	P	22 20 56.2	+1.2
	comp=Z,36nm,1.2s,SNR=19						
MOTA	Moosalm	75.22	341	eP	P	22 20 56.0	+1.0
	comp=Z,28nm,1.1s,SNR=16						
V59A	Middlesex	75.23	48	P	P	22 20 56.0	+1.0
	baz=329						
MDVR	Moldovita	75.26	333	⇑P	P	22 20 55.4	+0.3
GSI	Gunungsitoli	75.31	251	P	P	22 20 56.3	+0.5
GSI	Gunungsitoli	75.31	251	P	P	22 20 57.0	+1.2
	comp=Z,3µmcomp=Z,2µmcomp=Z,54nm,1.4s						
SQTA	Sankt Quirin	75.32	341	eP	P	22 20 56.6	+1.0
	comp=Z,38nm,1.1s,SNR=21						
OBKA	Obir	75.33	338	eP	P	22 20 56.9	+1.3
	comp=Z,57nm,1.2s,SNR=16						
MYKA	Terra Mystica	75.41	339	eP	P	22 20 57.0	+1.0
	comp=Z,24nm,1.3s,SNR=7.8						
W58A	Raeford	75.44	49	P	P	22 20 57.0	+0.7
	baz=328						
MDRS	Chennai	75.48	272	eP	P	22 20 57.1	+0.4
MDRS				ex	x	22 20 59.5	
MDRS				IAmb	IAmb	22 20 59.5	
	comp=Z,36nm,1.1s						
DAVA	Damuels	75.50	342	eP	P	22 20 56.9	+0.3
	comp=Z,22nm,1.4s,SNR=6.2						
U61A	Possum Corner	75.50	46	IAMs_20	IAMs_20	22 57 33.8	
	comp=Z,3µm,18.0s						
ABTA	Abfaltersbach	75.52	340	eP	P	22 20 57.6	+0.9
	comp=Z,53nm,1.3s,SNR=16						
KAD	Karad	75.54	279	i P	P	22 20 56.3	-0.8
FETA	Feichten	75.60	341	i P	P	22 20 57.0	-0.2
	comp=Z,28nm,1.1s,SNR=30						
ZOU	Zoufplan	75.61	339	P	P	22 20 57.2	-0.1
ZOU				IAmb	IAmb	22 20 59.5	
	comp=Z,33nm,1.4s						
V60A	Jim Taylor Roa	75.65	47	P	P	22 20 58.5	+1.1
	baz=329						
CADS	Cadrg	75.77	339	eP	P	22 20 58.3	+0.3
CADS				eS	S	22 30 40.9	+4.1
LJU	Ljubljana	75.78	338	i P	P	22 20 58.7	+0.7
X58A	Rowland	75.79	49	IAMs_20	IAMs_20	22 53 24.7	
	comp=Z,2µm,21.0s						
ROBS	Robic	75.80	339	i P	P	22 20 58.1	-0.1
352A	Blakely	75.85	55	IAMs_20	IAMs_20	22 53 28.2	
	comp=Z,2µm,21.0s						
V61A	Roper	75.91	47	P	P	22 20 58.7	-0.2
	baz=329						
Z56A	Williston	75.94	51	IAMs_20	IAMs_20	22 56 45.6	
	comp=Z,3µm,18.0s						
CLF	Chambon-Foret	75.96	347	P	P	22 20 59.9	+0.9
DAVOX	Davos/Dischmat	75.99	342	P	P	22 21 00.6	+1.1
	comp=Z,14nm,0.9s,baz=341,slow=4.2,SNR=24						
W60A	Pink Hill	76.06	48	P	P	22 20 59.3	-0.5
	baz=329						
451A	Vernon	76.18	56	IAMs_20	IAMs_20	22 58 33.0	
	comp=Z,2µm,18.0s						
BRTR	Keskin Array B	76.20	322	P	P	22 21 01.3	+0.6
	comp=Z,3.2nm,0.9s,baz=234,slow=1.2,SNR=2.9						
BRTR				LR	LR	23 00 42.7	
	comp=Z,2µm,18.4s,baz=19,slow=41						
DIVS	Divibare	76.34	334	P	P	22 21 01.5	+0.1
CTI	Castel Tesino	76.36	340	P	P	22 21 01.8	+0.3
CTI				pmax	pmax		
	comp=Z,34nm,1.2s						
CTI				MLR	MLR		
	comp=Z,6µm,18.0s						
CTI	Castel Tesino	76.36	340	P	P	22 21 01.8	+0.3
CTI				IAmb	IAmb	22 21 04.4	
	comp=Z,34nm,1.2s						
V62A	Hyde County Ai	76.37	46	IAMs_20	IAMs_20	22 57 10.7	
	comp=Z,3µm,21.0s						
CTAO	Charters Tower	76.37	197	P	P	22 21 02.9	+1.3
CTAO				pmax	pmax		
	comp=Z,25nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s						
CTAO	Charters Tower	76.37	197	P	P	22 21 02.9	+1.3
CTAO				IAmb	IAmb	22 21 13.6	
	comp=Z,25nm,1.1s						
TUE	Stuetta	76.38	342	P	P	22 21 02.6	+0.8
TUE				IAmb	IAmb	22 21 06.5	
	comp=Z,44nm,1.1s						
Y59A	Loris	76.47	49	IAMs_20	IAMs_20	22 59 15.7	
	comp=Z,3µm,19.0s						
TIGA	Tifton	76.51	54	P	P	22 21 03.2	+0.8
	baz=327						
Z58A	St. Stephen	76.62	50	P	P	22 21 03.8	+0.8
	baz=328						
Y60A	Bolivia	76.74	49	IAMs_20	IAMs_20	22 56 57.9	
	comp=Z,2µm,18.0s						
SENIN	Lac Senin/Sane	76.84	343	P	P	22 21 04.9	+0.6
VTS	Vitosha	76.86	331	⇑P	P	22 21 04.2	-0.2
DZM	Mont Dzumac	76.97	177	eS	S	22 30 53.6	+3.3
	comp=Z,469nm,23.8s						
DZM	Mont Dzumac	76.97	177	eLR	LR	22 45 08.4	
	comp=Z,2µm,22.1s						
DZM	Mont Dzumac	76.97	177	IAMs_20	IAMs_20	22 48 43.5	
	comp=Z,2µm,20.0s						
SALO	Salr	76.99	341	P	P	22 21 05.3	+0.4
TEOL	Teolo	77.02	340	P	P	22 21 05.7	+0.6
GOA	Goa	77.20	279	eP	P	22 21 05.5	-0.9
GOA				IAmb	IAmb	22 21 06.8	
	comp=Z,163nm,1.8s						
257A	Skidaway Islan	77.23	52	IAMs_20	IAMs_20	22 55 28.9	
	comp=Z,3µm,20.0s						
MNAI	Manna	77.27	243	IAMs_20	IAMs_20	22 58 02.2	
	comp=Z,2µm,19.0s						
PRMA	PARMA	77.85	341	P	P	22 21 11.3	+1.6
PDG	Podgorica	78.09	334	⇓P	P	22 21 11.3	+0.2
PDG	Podgorica	78.09	334	P	P	22 21 11.5	+0.5
PDG				IAmb	IAmb	22 21 12.6	
	comp=Z,45nm,1.2s						
ZCCA	Zocca	78.12	340	P	P	22 21 12.7	+1.3
SHME	Shamm	78.19	299	P	P	22 21 11.6	-0.3
SHME	Shamm	78.19	299	P	P	22 21 11.6	-0.3
SHME				P	P	22 21 11.6	-0.3
BANOM	Banah	78.21	298	i P	P	22 21 11.6	-0.5
	SNR=8.3						
BANOM	Banah	78.21	298	P	P	22 21 11.8	-0.3
BNI	Bardonecchia	78.22	343	P	P	22 21 12.7	+0.8
BNI				pmax	pmax		
	comp=Z,72nm,1.6s						
BNI				MLR	MLR		
	comp=Z,4µm,18.0s						
BNI	Bardonecchia	78.22	343	P	P	22 21 12.7	+0.8
BNI				IAmb	IAmb	22 21 30.1	
	comp=Z,72nm,1.6s						
SSB	Saint Sauveur	78.33	345	P	P	22 21 13.5	+1.0
SSB				pmax	pmax		
	comp=Z,30nm,1.3s						
SSB				MLR	MLR		
	comp=Z,2µm,20.0s						
SSB	Saint Sauveur	78.33	345	P	P	22 21 13.5	+1.0
SSB				IAmb	IAmb	22 21 14.9	
	comp=Z,30nm,1.3s						
SSB	Saint Sauveur	78.33	345	IAMs_20	IAMs_20	23 00 01.3	
	comp=Z,2µm,20.0s						
VLC	Villacollemand	78.42	341	P	P	22 21 14.0	+1.1
MSSA	Maissana	78.44	341	P	P	22 21 13.4	+0.3
MSSA				IAmb	IAmb	22 21 16.0	
	comp=Z,29nm,0.9s						
WB0	Warramunga Arr	78.62	208	P	P	22 21 14.5	+0.4
WB0				IAmb	IAmb	22 21 58.4	
	comp=Z,53nm,1.6s						
WB0				IAMs_20	IAMs_20	22 52 39.0	
	comp=Z,2µm,21.0s						
WB8	Warramunga Arr	78.67	208	IAMs_20	IAMs_20	22 52 27.3	
	comp=Z,2µm,20.0s						
WB6	Warramunga Arr	78.72	208	IAMs_20	IAMs_20	22 52 51.4	
	comp=Z,2µm,21.0s						
MDH	Madha	78.73	298	P	P	22 21 14.3	-0.6
MDH	Madha	78.73	298	P	P	22 21 14.2	-0.6
MDH				P	P	22 21 14.2	-0.6
656A	Willston	78.73	54	IAMs_20	IAMs_20	22 58 09.6	
	comp=Z,2µm,18.0s						
MASF	Masafi	78.74	298	P	P	22 21 14.4	-0.6
MASF				P	P	22 21 14.4	-0.6
MSFE	Esma-Masafi	78.75	298	P	P	22 21 14.7	-0.4
WR0	Warramunga Arr	78.77	208	IAMs_20	IAMs_20	22 53 28.8	
	comp=Z,2µm,21.0s						
WR8	Warramunga Arr	78.78	208	IAMs_20	IAMs_20	22 53 17.0	
	comp=Z,2µm,22.0s						
WR7	Warramunga Arr	78.78	208	IAMs_20	IAMs_20	22 53 20.2	
	comp=Z,2µm,20.0s						
WB3	Warramunga Arr	78.78	208	IAMs_20	IAMs_20	22 52 41.2	
	comp=Z,2µm,22.0s						
WR6	Warramunga Arr	78.79	208	IAMs_20	IAMs_20	22 52 42.3	
	comp=Z,2µm,22.0s						
WC1	Warramunga Arr	78.79	208	IAMs_20	IAMs_20	22 53 08.3	
	comp=Z,2µm,21.0s						
WRAB	Tennant Creek	78.79	208	IAMs_20	IAMs_20	22 52 55.4	
	comp=Z,2µm,22.0s						
WR4	Warramunga Arr	78.80	208	IAMs_20	IAMs_20	22 52 40.5	
	comp=Z,2µm,22.0s						
WR3	Warramunga Arr	78.80	208	IAMs_20	IAMs_20	22 52 53.6	
	comp=Z,2µm,21.0s						
WB2	Warramunga Arr	78.80	208	P	P	22 21 16.3	+1.2
WB2				IAmb	IAmb	22 21 38.4	
	comp=Z,53nm,1.5s						
WB2				IAMs_20	IAMs_20	22 52 43.7	
	comp=Z,2µm,22.0s						
WR1	Warramunga Arr	78.81	208	IAMs_20	IAMs_20	22 52 54.8	
	comp=Z,2µm,22.0s						
WRA	Warramunga Arr	78.81	208	P	P	22 21 16.0	+0.9
	comp=Z,5.3nm,1.1s,baz=16,slow=5.8,SNR=6.6						
WRA				LR	LR	22 54 13.2	
	comp=Z,1µm,21.9s,baz=65,slow=34						
WC4	Warramunga Arr	78.82	208	IAMs_20	IAMs_20	22 52 55.3	
	comp=Z,2µm,21.0s						
MURB	Monte Urbino	78.86	339	P	P	22 21 17.0	+1.6
UMQ	Umm Al-Quwin	78.86	299	P	P	22 21 14.4	-1.2
OSSC	Osservatorio P	78.87	340	P	P	22 21 16.3	+0.9
OSSC				IAmb	IAmb	22 21 39.5	
	comp=Z,46nm,1.2s						
UOSS	Minazif	79.07	298	i P	P	22 21 15.8	-1.0
	SNR=6.6						
UOSS	Minazif	79.07	298	P	P	22 21 15.4	-1.4
UOSS				IAmb	IAmb	22 21 17.0	
	comp=Z,50nm,1.3s						
UOSS	Minazif	79.07	298	IAMs_20	IAMs_20	22 59 46.8	
	comp=Z,2µm,18.0s						
NRCA	Norcia	79.14	338	P	P	22 21 18.5	+1.5
TAOE	Nuku Hiva Isla	79.17	123	eS	S	22 31 13.0	-1.3
	comp=Z,542nm,25.6s						
TAOE	Nuku Hiva Isla	79.17	123	eLR	LR	22 45 55.5	
	comp=Z,3µm,29.3s						
HATD	Hatta, Dubai	79.20	298	i P	P	22 21 17.3	-0.3
	SNR=9.7						
HATD	Hatta, Dubai	79.20	298	P	P	22 21 18.0	+0.5
	SNR=7.2						
HATD				P	P	22 21 18.0	+0.5
	SNR=7.2						
WSAR	Wadi Sarin	79.23	295	P	P	22 21 17.8	+0.1
	comp=Z,7.6nm,0.8s,baz=78,slow=5.5,SNR=6.9						
WSAR				LR	LR	23 00 46.9	
	comp=Z,2µm,18.1s,baz=64,slow=39						
BIDO	Bidbid	79.26	296	P	P	22 21 18.4	+0.6
BIDO				P	P	22 21 18.4	+0.6
MIB	Mutribah	79.28	307	eP		22 21 17.3	
NAZ	Nazwa, Dubai	79.31	298	i P	P	22 21 17.5	-0.6
	SNR=6.9						
NAZ	Nazwa, Dubai	79.31	298	P	P	22 21 18.1	0.0
	SNR=6.6						
ASHO	Ashiyiah	79.36	298	i P	P	22 21 18.1	-0.3
	SNR=8.9						
ASHO	Ashiyiah	79.36	298	P	P	22 21 19.0	+0.6
	SNR=5.8						
ASHO				P	P	22 21 19.0	+0.6
	SNR=5.8						
AQU	L'Aquila	79.54	338	P	P	22 21 20.2	+1.0
AQU				pmax	pmax		
	comp=Z,51nm,1.2s						
AQU				MLR	MLR		
	comp=Z,5µm,18.0s						
AQU	L'Aquila	79.54	338	P	P	22 21 20.1	+1.0
AQU				IAmb	IAmb	22 21 55.9	
	comp=Z,51nm,1.2s						
FAQ	Al Faqa, Dubai	79.54	298	P	P	22 21 18.9	-0.4
WBK	Wadi Bani Khal	79.57	294	P	P	22 21 20.1	+0.5
WBK				P	P	22 21 20.1	+0.5
SOHO	SOHO	79.57	297	i P	P	22 21 18.4	-1.1
	SNR=5.4						
SOHO	SOHO	79.57	297	P	P	22 21 18.9	-0.6
SOHO				P	P	22 21 18.9	-0.6
HOQ	Hoqain	79.63	296	P	P	22 21 20.0	+0.1
	SNR=7.6						
HOQ				P	P	22 21 20.0	+0.1
	SNR=7.6						
LATE	Laterza	79.63	339	P	P	22 21 19.7	+0.1
SMDO	Samad	79.68	295	P	P	22 21 21.0	+0.7
	SNR=7.0						
SMDO				P	P	22 21 21.0	+0.7
	SNR=7.0						
RST	Umm Al-Ruwaisa	79.69	307	eP		22 21 19.1	
JLN	Jalan Bani Buh	79.71	294	P	P	22 21 22.0	+1.7
	SNR=7.2						
JLN				P	P	22 21 22.0	+1.7
	SNR=7.2						
INTR	Introdacqua	79.76	337	P	P	22 21 20.8	+0.5
ASUD	Al Ashush, Dub	79.77	298	i P	P	22 21 21.0	+0.4
	SNR=7.1						
ASUD	Al Ashush, Dub	79.77	298	P	P	22 21 21.0	+0.4
	SNR=5.8						
ASUD				P	P	22 21 21.0	+0.4
	SNR=5.8						
PALK	Pallekele	79.89	268	P	P	22 21 21.5	+0.1
PALK				pmax	pmax		
	comp=Z,39nm,1.3s						
PALK				MLR	MLR		
	comp=Z,2µm,18.0s						
PALK	Pallekele	79.89	268	P	P	22 21 21.5	+0.1
PALK				IAmb	IAmb	22 22 02.9	
	comp=Z,39nm,1.3s						
PALK	Pallekele	79.89	268	IAMs_20	IAMs_20	23 01 12.8	
	comp=Z,2µm,18.0s						
RDF	Al-Radifah	79.93	307	eP		22 21 20.9	
AJN	Ajban	80.00	299	P	P	22 21 21.6	-0.2
	SNR=5.2						
ALNE	Al Ain	80.03	298	i P	P	22 21 21.8	-0.2
	SNR=6.3						
ALNE	Al Ain	80.03	298	P	P	22 21 21.7	-0.4
	SNR=11						
JMDO	Jabal Madar	80.22	295	P	P	22 21 23.1	+0.1
	SNR=8.1						
JMDO				P	P	22 21 23.1	+0.1
	SNR=8.1						
ARQ	Araqi	80.23	297	P	P	22 21 24.0	+0.8
	SNR=7.7						
ARQ				P	P	22 21 24.0	+0.8
	SNR=7.7						
DWPF	Disney Wildern	80.31	54	P	P	22 21 23.9	+0.5
	baz=328						
DWPF	Disney Wildern	80.31	54	IAMs_20	IAMs_20	23 00 23.3	
	comp=Z,2µm,18.0s						
BSY	Bisya	80.38	296	P	P	22 21 24.0	+0.1
	SNR=8.4						
BSY				P	P	22 21 24.0	+0.1
	SNR=8.4						
AKAS	Kas	80.73	324	IAMs_20	IAMs_20	22 58 25.9	
	comp=Z,2µm,21.0s						
EIDS	Eidsvold	80.90	191	IAMs_20	IAMs_20	23 02 43.0	
	comp=Z,2µm,18.0s						
MZWR	Madinat Zayed	81.22	299	P	P	22 21 26.1	-2.2
MHTO	MHTO	81.43	294	P	P	22 21 28.9	-0.6
MHTO				P	P	22 21 28.9	-0.6
MHTO				P	PcP	22 21 30.0	-5.5
	SNR=11						
MHTO				P	PcP	22 21 30.0	-5.5
	SNR=11						
TIP	Timpagrande	81.78	334	P	P	22 21 32.3	+1.1
SLWR	Sila	82.05	301	P	P	22 21 31.0	-1.7
061Z	Ochoppi	82.46	55	IAMs_20	IAMs_20	22 59 42.3	
	comp=Z,2µm,18.0s						
AS31	Alice Springs	82.47	207	P	P	22 21 36.5	+1.7
ASAR	Alice Springs	82.47	207	P	P	22 21 35.6	+0.9
	comp=Z,5.8nm,0.9s,baz=14,slow=5.3,SNR=22						
ASAR				LR	LR	22 56 38.7	
	comp=Z,1µm,21.9s,baz=14,slow=34						
DQM	DQM	82.53	294	P	P	22 21 34.2	-1.0
PPT	Papeete	82.69	135	LR	LR	22 50 28.8	
	comp=Z,975nm,21.0s,baz=320,slow=30						
PPT2	Papeete2	82.71	135	eS	S	22 31 50.4	-0.5
	comp=Z,2µm,25.5s						
PPT2	Papeete2	82.71	135	eLR	LR	22 47 31.6	
	comp=Z,3µm,23.2s,baz=334						
VSL	Villasalto	83.12	340	P	P	22 21 39.0	+1.0
VSL				IAmb	IAmb	22 21 41.0	
	comp=Z,40nm,1.2s						
VSL				IAMs_20	IAMs_20	23 02 35.0	
	comp=Z,3µm,19.0s						
IDI	Anoyia	83.14	327	IAMs_20	IAMs_20	22 59 24.5	
	comp=Z,2µm,20.0s						
PVRL	Vila Real	83.63	353	eP	P	22 21 43.3	+2.6
	comp=Z,60nm,1.6s						
PVIS	Viseu	84.19	353	eP	P	22 21 45.0	+1.4
	comp=Z,59nm,1.5s						
MTE	Manteigas	84.48	353	eP	P	22 21 46.2	+1.1
	comp=Z,60nm,1.6s						
ES07	SONSECA Array	84.89	350	IAMs_20	IAMs_20	23 04 33.1	
	comp=Z,3µm,20.0s						
PCAS	Casmilo, Conde	84.89	354	eP	P	22 21 48.4	+1.3
	comp=Z,74nm,1.5s						
ESBB	Sonseca Array	84.91	350	P	P	22 21 48.1	+0.9
ESDC	Sonseca Array	84.91	350	P	P	22 21 48.6	+1.3
	comp=Z,14nm,1.0s,baz=0.2,slow=5.0,SNR=53						
ES04	SONSECA Array	84.92	350	IAMs_20	IAMs_20	23 04 34.9	
	comp=Z,3µm,19.0s						
PCBR	Castelo Branco	85.04	353	eP	P	22 21 49.1	+1.3
	comp=Z,52nm,1.3s						
PAB	San Pablo	85.07	351	P	P	22 21 48.8	+0.7
PAB				pmax	pmax		
	comp=Z,30nm,1.3s						
PAB	San Pablo	85.07	351	P	P	22 21 48.8	+0.7
PAB				IAmb	IAmb	22 21 50.7	
	comp=Z,30nm,1.3s						
SHAO	Shalim	85.11	295	P	P	22 21 47.6	-0.9
SHAO	Shalim	85.11	295	P	P	22 21 46.1	-2.4
SHAO				P	P	22 21 46.1	-2.4
DOK	Doka	85.39	296	P	P	22 21 47.7	-2.1
DOK				P	P	22 21 47.7	-2.1
RAYN	Ar Rayn	85.48	306	i P	P	22 21 49.5	-0.9
	SNR=5.5						
RAYN	Ar Rayn	85.48	306	P	P	22 21 49.7	-0.7
RAYN				pmax	pmax		
	comp=Z,33nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,5µm,19.0s						
RAYN	Ar Rayn	85.48	306	P	P	22 21 49.7	-0.7
RAYN				IAmb	IAmb	22 22 30.8	
	comp=Z,33nm,1.1s						
DMTO	DMTO	85.71	295	P	P	22 21 48.5	-3.0
ARMA	Armidale	85.84	190	IAMs_20	IAMs_20	23 00 45.8	
	comp=Z,2µm,19.0s						
PMTG	Montargil	85.86	353	eP	P	22 21 53.2	+1.3
WHFO	Wadi Hawf	86.15	296	P	P	22 21 51.3	-2.4
WHFO				P	P	22 21 51.3	-2.4
EVO	Evora	86.38	353	eP	P	22 21 56.4	+1.9
	comp=Z,26nm,2.4s						
KEST	Kesra	86.76	339	P	P	22 21 57.0	+0.5
	comp=Z,5.5nm,0.9s,baz=304,slow=4.4,SNR=3.8						
KEST				LR	LR	23 05 25.0	
	comp=Z,3µm,18.4s,baz=334,slow=39						
ABTO	Aybut	86.87	296	P	P	22 21 55.1	-2.1
ABTO				P	P	22 21 55.1	-2.1
TBI	Tubuai	87.95	138	eS	S	22 32 42.1	-0.1
	comp=Z,1µm,26.8s						
TBI	Tubuai	87.95	138	eLR	LR	22 49 58.0	
	comp=Z,2µm,25.0s,baz=330						

SFS	San Fernando	88.29	352	IAMs_20	IAMs_20	23 06 51.1	
	comp=Z,2μm,20.0s						
STKA	Stephens Creek	88.69	198	P	P	22 22 06.6	+1.2
	comp=Z,3.1nm,0.7s,baz=338,slow=10,SNR=5.2						
STKA				LR	LR	22 58 04.1	
	comp=Z,1μm,22.0s,baz=9.2,slow=33						
STKA	Stephens Creek	88.69	198	P	P	22 22 06.3	+0.9
STKA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
STKA				MLR	MLR		
	comp=Z,300nm,19.0s						
STKA	Stephens Creek	88.69	198	P	P	22 22 06.3	+0.9
GTBY	Guantanamo Bay	90.26	53	IAMs_20	IAMs_20	23 01 53.2	
	comp=Z,2μm,21.0s						
OUZ	Omahuta	90.45	172	IAMs_20	IAMs_20	23 01 05.7	
	comp=Z,2μm,19.0s						
MTDJ	Mount Denham	90.59	56	IAMs_20	IAMs_20	23 09 29.9	
	comp=Z,2μm,18.0s						
GRTK	Grand Turk	90.66	49	IAMs_20	IAMs_20	23 03 30.4	
	comp=Z,2μm,19.0s						
FORT	Forrest	90.81	210	IAMs_20	IAMs_20	23 01 18.8	
	comp=Z,2μm,19.0s						
SOCY	Socotra	90.83	293	IAMs_20	IAMs_20	23 06 39.9	
	comp=Z,2μm,20.0s						
SC01	Santiago de lo	92.67	50	IAMs_20	IAMs_20	23 03 04.8	
	comp=Z,2μm,18.0s						
SDDR	Presa de Saban	92.81	51	IAMs_20	IAMs_20	23 10 13.7	
	comp=Z,2μm,18.0s						
TOO	Toolangi	93.64	194	IAMs_20	IAMs_20	23 00 56.2	
	comp=Z,2μm,20.0s						
URZ	Urewera	93.80	169	IAMs_20	IAMs_20	23 11 03.5	
	comp=Z,2μm,18.0s						
HIZ	Hauiti	93.83	171	IAMs_20	IAMs_20	23 07 10.2	
	comp=Z,2μm,19.0s						
BKZ	Black Stump Fm	94.63	170	IAMs_20	IAMs_20	23 03 19.5	
	comp=Z,2μm,20.0s						
SJG	San Juan	95.80	47	IAMs_20	IAMs_20	23 13 20.4	
	comp=Z,1μm,18.0s						
BFZ	Birch Farm	96.11	170	IAMs_20	IAMs_20	23 04 41.5	
	comp=Z,1μm,20.0s						
NNZ	Nelson	96.39	172	IAMs_20	IAMs_20	22 58 25.0	
	comp=Z,2μm,21.0s						
DGAR	Diego Garcia	96.56	267	IAMs_20	IAMs_20	23 09 30.5	
	comp=Z,2μm,20.0s						
SNZO	South Karori	96.59	171	IAMs_20	IAMs_20	23 11 31.2	
	comp=Z,1μm,18.0s						
THZ	Tophouse	96.90	173	IAMs_20	IAMs_20	23 08 29.4	
	comp=Z,2μm,18.0s						
ATD	Arta Tunnel	97.07	302	IAMs_20	IAMs_20	23 08 55.1	
	comp=Z,2μm,21.0s						
LTZ	Lake Taylor	97.87	173	IAMs_20	IAMs_20	23 12 28.0	
	comp=Z,2μm,20.0s						
ANWB	Willy Bob	97.96	43	IAMs_20	IAMs_20	23 13 53.4	
	comp=Z,2μm,18.0s						
MQZ	McQueen's Vall	98.82	173	IAMs_20	IAMs_20	23 12 04.1	
	comp=Z,2μm,19.0s						
LBZ	Lake Benmore	99.35	175	IAMs_20	IAMs_20	23 09 19.1	
	comp=Z,2μm,20.0s						
WKZ	Wanaka	99.74	176	IAMs_20	IAMs_20	23 12 10.3	
	comp=Z,2μm,20.0s						
ODZ	Otahua Downs	100.03	175	IAMs_20	IAMs_20	23 15 47.1	
	comp=Z,2μm,19.0s						
SDV	Santo Domingo	101.97	55	IAMs_20	IAMs_20	23 09 43.2	
	comp=Z,1μm,20.0s						
TOC2	Torodi Ar. Sit	110.20	341	IAMs_20	IAMs_20	23 17 11.2	
	comp=Z,2μm,20.0s						
TOC7	Torodi Ar. Sit	110.20	341	IAMs_20	IAMs_20	23 18 43.2	
	comp=Z,2μm,18.0s						
TOA0	Torodi Ar. Sit	110.21	341	IAMs_20	IAMs_20	23 17 11.6	
	comp=Z,2μm,20.0s						
TOC3	Torodi Ar. Sit	110.22	341	IAMs_20	IAMs_20	23 17 11.7	
	comp=Z,2μm,20.0s						
TOB3	Torodi Ar. Sit	110.22	341	IAMs_20	IAMs_20	23 17 21.8	
	comp=Z,2μm,19.0s						
TOB4	Torodi Ar. Sit	110.22	341	IAMs_20	IAMs_20	23 17 20.9	
	comp=Z,2μm,19.0s						
TOC4	Torodi Ar. Sit	110.23	341	IAMs_20	IAMs_20	23 17 21.2	
	comp=Z,2μm,20.0s						
SAML	Samuel	121.08	57	IAMs_20	IAMs_20	23 26 03.9	
	comp=Z,1μm,18.0s						
RCBR	Riachuelo	128.42	25	IAMs_20	IAMs_20	23 25 50.9	
	comp=Z,983nm,18.0s						
BDFB	Brasilia	133.73	44	IAMs_20	IAMs_20	23 31 12.4	
	comp=Z,1μm,18.0s						
VA03	San Esteban	136.53	82	IAMs_20	IAMs_20	23 16 08.7	
	comp=Z,1μm,20.0s						
ZON	Zonda	136.68	79	IAMs_20	IAMs_20	23 32 37.6	
	comp=Z,1μm,22.0s						
LC01	Cunco	140.11	90	IAMs_20	IAMs_20	23 41 58.4	
	comp=Z,964nm,18.0s						
SPB	Sao Paulo	141.07	48	IAMs_20	IAMs_20	23 35 00.5	
	comp=Z,915nm,18.0s						
QSPA	South Pole Qui	144.92	180		PKPab	22 28 47.2	-0.1
QSPA	South Pole Qui	144.92	180	IAMs_20	IAMs_20	23 33 10.5	
	comp=Z,1μm,20.0s						
SYO	Syowa Base	151.53	219	⇓ epPKPdf	PKiKP	22 29 05.4	+0.2
SYO	Syowa Base	151.53	219	⇑ epPKPbc	PKPab	22 29 11.4	-2.1
NVL	N'lazarevskaya	160.04	208	ePKP2	PKPab	22 29 59.6	+10
NVL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SNAA	Sanae	162.42	194	PKPdf	PKPdf	22 29 13.1	+0.7
SNAA	Sanae	162.42	194	PKIKP	PKPdf	22 29 14.2	+1.8
SNAA	Sanae	162.42	194	PKPdf	PKPdf	22 29 14.2	+1.8
VNA2	Neumayer--Watz	163.68	191	PKPdf	PKPdf	22 29 15.6	+2.1

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*DDA **06** 22:16:44.6, 36°.95N×34°.40E, h14$^{km}\pm$1^{km}, MW4.1*
*IDC **06** 22:16:44.6±0.8, 36°.99N×34°.65E, h0^{km}, mb3.8/10, mb1 3.9/14, mb1mx3.7/49, mbtmp3.8/14, ML3.9/4, MS4.7/1, Ms1 4.7/1, ms1mx2.8/45, Error ellipse: s-maj=19.7km s-min=15.3km az=89.0*
*ISK **06** 22:16:44.4, 36°.97N×34°.40E, h5^{km}, ML3.9/25*
*NEIC **06** 22:16:45.1±1.6, 36°.93N±0°.04×34°.44E±0°.05, h7$^{km}\pm$3^{km}, Error ellipse: s-maj=7.0km s-min=4.4km az=132.0*
*NIC **06** 22:16:46.8±0.0, 36°.77N×34°.57E, h3$^{km}\pm$31^{km}, Ml4.2/6*
ISC 06 22:16:45.4±1.0**, 36°.93N**±0°.02×**34°.44E**±0°.02**, h8**$^{km}\pm$7^{km}**, n136, σ1^{s}.24**/187**, mb4.0**/14**, 9C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GULE	Gulek	0.44	37	⇑ iP	Pg	22 16 53.7	-0.3
GULE				iS	Sg	22 17 00.0	+0.2
KIZK	Mersin	0.51	208	PG	Pg	22 16 55.5	+0.2
KIZK				SG	Sg	22 17 03.0	+1.1
KIZK	Mersin	0.51	208	⇑ iP	Pg	22 16 55.4	+0.1
KIZK				iS	Sg	22 17 03.1	+1.1
KARA	Karaisali	0.59	56	PG	Pg	22 16 56.2	-0.6
KARA				SG	Sg	22 17 05.2	+0.7
SILI	Silifke-Mersin	0.70	216	PG	Pg	22 16 58.8	-0.1
SILI				SG	Sb	22 17 09.0	-0.7
CMRD	Camardi-Nigde	0.85	31	PG	Pg	22 17 00.4	-1.3
CMRD				SG	Sg	22 17 12.7	-0.1
KRTD	Karatas-Adana	0.85	113	PG	Pb	22 17 02.5	+0.1
KRTD				SG	Sb	22 17 14.9	+0.9
IKL	Isikli	0.92	221	PG	Pg	22 17 02.5	-0.6
IKL				SG	Sb	22 17 15.9	-0.1
TEVE	Tevekalti-Mers	0.94	239	PG	Pg	22 17 02.9	-0.6
YURE	YUREGIR	0.96	96	PG	Pb	22 17 04.1	-0.2
KRMN	Karaman	0.97	285	PG	Pg	22 17 02.9	-1.2
YESI	Yesilovacik-Me	0.98	221	PG	Pg	22 17 03.6	-0.6
TISA	Tisan-Mersin	0.98	219	PG	Pg	22 17 03.9	-0.4
TISA	Tisan-Mersin	0.98	219	Pg	Pg	22 17 03.9	-0.4
TEPK	Tepekoy-MERSIN	1.01	226	PG	Pg	22 17 04.3	-0.5
TEPK	Tepekoy-MERSIN	1.01	226	Pg	Pg	22 17 04.3	-0.5
GULN	MERSIN_Gulnar	1.04	224	⇓ iP	Pg	22 17 04.3	-1.0
GULN				iS	Sg	22 17 18.8	-0.1
AKKU	Akkuyu-Mersin	1.05	223	PG	Pg	22 17 05.0	-0.6
AKKU	Akkuyu-Mersin	1.05	223	Pg	Pg	22 17 05.0	-0.6
AKK1	Akkuyu-Mersin	1.07	223	PN	Pg	22 17 04.7	-1.3
AKK1	Akkuyu-Mersin	1.07	223	Pg	Pg	22 17 04.7	-1.3
AKK2	Akkuyu-Mersin	1.07	222	PN	Pg	22 17 05.2	-0.8
AKK2	Akkuyu-Mersin	1.07	222	Pg	Pg	22 17 05.2	-0.8
OREN	Orenkoy-Mersin	1.07	228	PG	Pg	22 17 05.5	-0.5
OREN	Orenkoy-Mersin	1.07	228	Pg	Pg	22 17 05.7	-0.3
NIDE	Nigde/Merkez-G	1.10	14	⇑ iP	Pg	22 17 04.8	-1.7
NIDE				iS	Sg	22 17 20.6	-0.2
BERE	Bereket-Mersin	1.14	240	PN	Pg	22 17 06.8	-0.5
BERE	Bereket-Mersin	1.14	240	Pn	Pg	22 17 06.8	-0.5
YORU	Yoruktepe-Mers	1.14	227	PN	Pg	22 17 06.9	-0.4
YORU	Yoruktepe-Mers	1.14	227	Pn	Pg	22 17 07.1	-0.2
NIG	Nigde	1.18	6	PN	Pg	22 17 06.6	-1.5
NIG	Nigde	1.18	6	Pn	Pg	22 17 06.6	-1.5
KKBE	Karaman, Kazim	1.23	284	⇑ iP	Pb	22 17 08.2	-0.9
KKBE				iS	Sn	22 17 25.6	-0.3
KOZT	Kozan	1.23	63	PN	Pb	22 17 08.7	-0.3
KOZT				SN	Sn	22 17 26.3	+0.5
KOZT	Kozan	1.23	63	Pn	Pg	22 17 09.1	0.0
ERMK	Ermenek	1.26	257	iP	Pn	22 17 08.7	-0.8
ERMK				iS	Sn	22 17 27.3	+0.5
TEKE	Tekeli-Mersin	1.33	234	PN	Pn	22 17 09.7	-0.6
TEKE	Tekeli-Mersin	1.33	234	Pn	Pn	22 17 09.7	-0.6
YAHY	KAYSERI_Yahyal	1.37	32	iP	Pn	22 17 09.7	-1.3
YAHY				iS	Sg	22 17 29.5	0.0
EREN	Erenkoy	1.42	189	PN	Pg	22 17 12.3	-0.3
EREN	Erenkoy	1.42	189	iP	Pn	22 17 11.7	+0.2
EREN				iS	Sg	22 17 31.9	+1.0
GULA	Gulagac	1.42	353	PN	Pn	22 17 11.0	-0.6
GULA	Gulagac	1.42	353	Pn	Pn	22 17 11.0	-0.6
BOZY	Bozyazi-Mersin	1.44	235	PN	Pn	22 17 10.8	-1.0
BOZY	Bozyazi-Mersin	1.44	235	Pn	Pn	22 17 10.8	-1.0
ANDN	Andirin	1.65	66	iP	Pn	22 17 14.1	-0.7
ANDN				iS	Sg	22 17 38.5	+0.1
SAIM	ADANA	1.67	51	iP	Pn	22 17 15.1	0.0
SAIM				iS	Sg	22 17 41.5	+2.4
AKSY	AKSARAY - Alti	1.80	343	iP	Pn	22 17 15.4	-1.4
AKSY				iS	Sb	22 17 41.0	-0.3
KAMA	Osmaniye	1.80	81	iP	Pn	22 17 17.0	+0.1
KAMA				iS	Sb	22 17 40.6	-0.7
ALIN	Konya, Altinte	1.84	318	⇑ iP	Pn	22 17 17.9	+0.5
ALIN				iS	Sg	22 17 44.4	-0.3
GAZI	Gazipasa	1.85	248	⇑ iP	Pb	22 17 18.6	-0.8
GAZI				iS	Sg	22 17 44.6	-0.1
AVNS	Nevsehir-Avano	1.90	10	iP	Pb	22 17 19.2	-1.2
AVNS				iS	Sg	22 17 46.1	-0.3
KONT	Konya--Tatoy	1.94	302	PN	Pn	22 17 18.5	-0.2
KONT	Konya--Tatoy	1.94	302	⇑ iP	Pn	22 17 19.7	+1.0
KONT				iS	Sg	22 17 52.5	+4.8
ATHAL	Athalassa	1.98	206	P	Pn	22 17 18.7	-0.5
ATHAL				S	Sn	22 17 44.7	+0.5
HCB	Kahramanmara	2.01	78	iP	Pn	22 17 19.9	+0.2
HCB				iS	Sn	22 17 45.9	+0.8
MVOU	Mavrovouni	2.02	199	P	Pn	22 17 17.5	-2.2
MVOU				S	Sn	22 17 42.8	-2.4
MVOU				AML	AML	22 17 50.0	
	2.5nm,0.3s						
MVOU				AML	AML	22 17 50.0	
	2.5nm,0.3s						
MVOU				AML	AML	22 17 55.7	
	1.8nm,0.6s						
MVOU				AML	AML	22 17 55.7	
	1.8nm,0.6s						
CHBY	Cihanbeyli	2.05	324	PN	Pn	22 17 20.1	-0.2
YAYX	Yaylak	2.06	346	PN	Pn	22 17 20.0	-0.5
KAHM	Kahramanmaras,	2.11	73	iP	Pn	22 17 21.2	+0.1
KAHM				iS	Sn	22 17 47.9	+0.3
KUZU	Kuzuini	2.12	94	⇓ iP	Pn	22 17 21.5	+0.3
KUZU				iS	Sn	22 17 48.4	+0.7
SERE	Sereflikochisa	2.13	341	PN	Pn	22 17 21.1	-0.2
CSS	Mathiatis	2.16	205		Pn	22 17 20.2	-1.6
CSS	Mathiatis	2.16	205	P	Pn	22 17 19.9	-1.8
CSS				S	Sb	22 17 53.1	+1.3
CSS				AML	AML	22 17 57.2	
	1.1nm,0.7s						
CSS				AML	AML	22 17 57.2	
	1.1nm,0.7s						
CSS				AML	AML	22 17 57.5	
	0.8nm,0.7s						
CSS				AML	AML	22 17 57.5	
	0.8nm,0.7s						
GUNE	Kayseri	2.18	25	iP	Pb	22 17 24.0	-1.1
GUNE				iS	Sn	22 17 49.0	-0.3
SEDI	Konya, Seydise	2.21	284	⇑ iP	Pb	22 17 24.0	-1.6
SEDI				iS	Sb	22 17 53.6	+0.5
BNN	Bunyan	2.21	30	PN	Pn	22 17 23.0	+0.4
KHMN	Narli-Kahraman	2.22	77	PN	Pn	22 17 22.9	+0.4
GAZ	Gaziantep	2.23	83	PN	Pn	22 17 23.2	+0.5
GAZ	Gaziantep	2.23	83		Pn	22 17 22.6	-0.1
GAZ	Gaziantep	2.23	83	P	Pn	22 17 22.6	-0.1
GAZ				S	Sn	22 17 51.7	+1.2
KIRS	Kırehir-Merke	2.23	349	iP	Pn	22 17 22.4	-0.4
KIRS				iS	Sn	22 17 47.5	-3.1
ASGA	Asgata	2.35	205	P	Pb	22 17 27.4	-0.7
ASGA				S	Sg	22 18 00.9	0.0
ASGA				AML	AML	22 18 01.8	
	3.9nm,1.1s						
ASGA				AML	AML	22 18 01.8	
	3.9nm,1.1s						
ASGA				AML	AML	22 18 01.9	
	2.8nm,0.6s						
ASGA				AML	AML	22 18 01.9	
	2.8nm,0.6s						
KDHN	Kadinhani	2.43	311	iP	Pn	22 17 26.0	+0.5
KDHN				iS	Sb	22 18 01.1	+1.5
SIRC	Yozgat	2.46	13	iP	Pn	22 17 26.8	+0.8
SIRC				iS	Sg	22 18 02.4	-2.2
DOGA	KONYA_Doganhis	2.50	299	⇑ iP	Pn	22 17 27.6	+1.2
DOGA				iS	Sg	22 18 07.5	+1.9
SZAC	Souni	2.52	211	P	Pb	22 17 29.8	-1.0
SZAC				S	Sb	22 18 02.9	+1.0
SZAC				AML	AML	22 18 04.6	
	4.1nm,0.5s						
SZAC				AML	AML	22 18 04.6	
	4.1nm,0.5s						
SZAC				AML	AML	22 18 06.2	
	3.8nm,0.6s						
SZAC				AML	AML	22 18 06.2	
	3.8nm,0.6s						
GZT	Gaziantep	2.53	79	iP	Pn	22 17 26.9	0.0
GZT				iS	Sn	22 17 55.0	-3.0
ELBS	KAHRAMANMARAS_	2.55	56	⇓ iP	Pn	22 17 28.5	+1.4
ELBS				iS	Sn	22 17 59.7	+1.2
AKMS	Akamas	2.56	222	P	Pb	22 17 30.0	-1.6
AKMS				S	Sb	22 18 02.2	-1.2
AKMS				AML	AML	22 18 09.7	
	2.2nm,0.6s						
AKMS				AML	AML	22 18 09.7	
	2.2nm,0.6s						
NATA	Nata	2.63	216	P	Pb	22 17 30.8	-2.0
NATA				S	Sb	22 18 07.1	+1.8
NATA				AML	AML	22 18 14.5	
	11nm,0.7s						
NATA				AML	AML	22 18 14.5	
	11nm,0.7s						
NATA				AML	AML	22 18 15.8	
	8.7nm,0.6s						
NATA				AML	AML	22 18 15.8	
	8.7nm,0.6s						
CDAG	Cicekdag	2.69	359	iP	Pn	22 17 30.2	+1.1
CDAG				iS	Sb	22 18 05.7	-1.3
BBAL	Bala	2.80	339	iP	Pn	22 17 31.7	+1.0
BBAL				iS	Sg	22 18 20.4	+4.9
BR131	Keskin Array S	2.86	347		Pn	22 17 31.8	+0.3
BRTR	Keskin Array B	2.86	347	Pn	Pn	22 17 32.9	+1.4
	3.5nm,0.3s,baz=249,slow=15,SNR=48						
BRTR				Sn	Sn	22 18 04.5	-1.7
	5.8nm,0.3s,baz=176,slow=20,SNR=5.6						
CUSAR	Sarkisla-SIVAS	2.86	29	iP	Pn	22 17 33.1	+1.7
CUSAR				iS	Sg	22 18 18.5	+1.2
CUGUR	Gurin_SVAS	2.87	51	iP	Pn	22 17 33.2	+1.7
YVAC	Isparta, Yalva	2.87	299	iP	Pn	22 17 32.5	+0.9
YVAC				iS	Sg	22 18 21.5	+3.9
HWQ	Hawqa	2.92	155	eP	Pn	22 17 32.7	+0.5
CUALT	Altinyayla-SIV	2.96	37	iP	Pn	22 17 34.7	+1.8
AKCD	Akcadag	3.08	63	iP	Pn	22 17 35.8	+1.3
DELI	KIRIKKALE	3.09	353	iP	Pn	22 17 35.4	+0.8
BAGO	Egridir - ISPA	3.09	291	iP	Pn	22 17 36.2	+1.6
BAGO				iS	Sg	22 18 26.3	+1.6
BUCA	Burdur, Bucak-	3.13	278	iP	Pn	22 17 37.7	+2.6
BUCA				iS	Sg	22 18 25.8	0.0
BHL	Bhannes	3.18	162	eP	Pn	22 17 36.1	+0.3
BR231	Keskin MP Arra	3.19	336		Pn	22 17 36.3	+0.4
CKRK	Yozgat, Cekere	3.24	15	iP	Pn	22 17 38.5	+1.8
ISP	Isparta	3.25	287		Pn	22 17 37.1	+0.4
KORT	Korkueli	3.28	272	iP	Pn	22 17 37.7	+0.5
KORT				iS	Sb	22 18 22.9	-1.0
SURC	SANLIURFA_SURC	3.34	90	iP	Pn	22 17 38.3	+0.3
AKUM	Antalya-Kumluc	3.35	261	iP	Pb	22 17 42.5	-2.6
AKUM				iS	Sg	22 18 30.6	-2.5
CUKAN	kangal_SIVAS	3.37	44	iP	Pn	22 17 40.4	+1.9
RCY	Rachaya	3.61	161	eP	Pn	22 17 42.2	+0.4
TOKA	Tokat	3.74	25	iP	Pn	22 17 46.4	+2.9
AKAS	Kas	3.95	261		Pn	22 17 48.9	+2.5
KEMA	Kemaliye	3.96	53	iP	Pn	22 17 47.1	+0.7
MMAI	Mount Meron Ar	3.99	168	Pn	Pn	22 17 46.9	0.0
	48nm,0.3s,baz=353,slow=13,SNR=205						
MMAI				Sn	Sn	22 18 32.1	-1.8
	39nm,0.3s,baz=333,slow=27,SNR=9.2						
MDUB	Mudurnu	4.35	325		Pn	22 17 53.3	+1.4
MMLI	Mount Malkishu	4.56	170	P	Pn	22 17 55.9	+1.2
MMLI				S	Sn	22 18 46.6	-1.3
MARD	Mardin	5.08	84		Pn	22 18 02.3	+0.4
KARP	Karpathos	6.04	259	Pn	Pn	22 18 16.2	+1.1
EIL	Elat	7.26	176	Pn	Pn	22 18 32.5	+0.7
	0.7nm,0.3s,baz=211,slow=14,SNR=5.6						
ALN	Alexandroupoli	7.65	304	Pn	Pn	22 18 37.9	+0.8
IDI	Anoyia	7.90	261	Pn	Pn	22 18 42.2	+1.5
NIE	Niedzica	16.15	325	eP	Pn	22 20 33.0	+0.3
NRCA	Norcia	17.38	296	P	P	22 20 50.0	+0.4
GERES	GERESS Array B	19.23	315	P	Pn	22 21 11.1	+0.2
	0.3nm,0.3s,baz=106,slow=8.2,SNR=9.3						
KEST	Kesra	20.24	274	P	Pn	22 21 25.2	+2.2
	2.7nm,0.8s,baz=9.7,slow=10,SNR=4.5						
KIRV	Kirov	23.78	20	LR	LR	22 31 36.8	
	comp=Z,2μm,21.7s,baz=210,slow=38						
FINES	FINESS Array B	25.09	351	P	P	22 22 09.6	-0.6
	2.5nm,0.5s,baz=156,slow=11,SNR=7.0						
FIA1	FINESS Array S	25.09	351	P	P	22 22 09.9	-0.3
CLF	Chambon-Foret	26.01	305	P	P	22 22 19.8	+1.1
CLF				IAmb	IAmb	22 22 31.2	
	comp=Z,12nm,1.0s						
ARCES	ARCESS Array B	33.02	354	P	P	22 23 20.6	-0.2
	comp=Z,1.2nm,0.7s,baz=173,slow=8.9,SNR=8.0						
PVAQ	Vaqueiros	33.40	284	P	P	22 23 25.5	+1.2
PVAQ				IAmb	IAmb	22 23 34.5	
	comp=Z,12nm,1.1s						
MAKZ	Makanchi	36.25	59	P	P	22 23 48.9	-0.1
MK31	Makanchi Array	36.47	59	P	P	22 23 50.5	-0.3
MK31				IAmb	IAmb	22 23 52.3	
	comp=Z,3.4nm,1.4s						
MKAR	Makanchi Array	36.47	59	P	P	22 23 50.1	-0.7
	comp=Z,5.1nm,1.3s,baz=264,slow=11,SNR=4.2						
TOA0	Torodi Ar. Sit	37.65	240	P	P	22 24 00.9	-0.2
TOA0				IAmb	IAmb	22 24 13.8	
	comp=Z,3.0nm,1.1s						
TORD	Torodi Ar. Bea	37.65	240	P	P	22 24 04.2	+3.1
	comp=Z,1.4nm,0.7s,baz=30,slow=9.5,SNR=5.7						
ZALV	Zalesovo Beam	38.31	47	P	P	22 24 06.6	+0.3
	comp=Z,0.5nm,0.4s,baz=246,slow=11,SNR=2.0						
KOWA	Kowa	40.84	247	P	P	22 24 27.6	-0.2
KOWA				IAmb	IAmb	22 24 28.0	
	comp=Z,6.8nm,1.4s						
SONM	Songino Array	52.46	54	P	P	22 25 59.2	+0.5
	comp=Z,0.2nm,0.4s,baz=278,slow=9.8,SNR=1.6						
CMAR	Chiang Mai Arr	58.96	89	P	P	22 26 44.6	-0.9
	comp=Z,0.5nm,0.6s,baz=297,slow=7.6,SNR=5.2						
BOSA	Boshof	65.77	189	P	P	22 27 31.0	0.0
	comp=Z,1.6nm,0.7s,baz=6.4,slow=5.7,SNR=6.0						
BOSA	Boshof	65.77	189	P	P	22 27 31.3	+0.3
YKA	Yellowknife Ar	77.83	346	P	P	22 28 41.7	-1.2
	comp=Z,0.2nm,0.5s,baz=30,slow=5.0,SNR=3.0						

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*NOU **06** 22:38:58.4, 10°.79S×120°.51E, h58^{km}, mb4.2, Sumba Region, Indonesia*
*IDC **06** 22:38:58.5±3.5, 10°.57S×120°.62E, h56$^{km}\pm$34^{km}, mb3.7/6, mb1 3.9/10, mb1mx3.5/44, mbtmp4.0/10, ML3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx3.1/25, Error ellipse: s-maj=69.3km s-min=22.6km az=62.0*
ISC 06 22:38:57.4±1.0**, 10°.4S**±0°.2×**121°.0E**±0°.2**, h35**^{km}**, n11, σ2^{s}.19**/13**, mb4.1**/6**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	5.54	347	P	Pn	22 40 19.5	+2.1
	2.0nm,0.3s,baz=92,slow=7.8,SNR=4.5						
FITZ	Fitzroy Crossi	8.83	150	P	Pn	22 41 04.1	+1.5
	1.4nm,0.3s,baz=332,slow=8.5,SNR=18						
FITZ				S	Sn	22 42 40.1	-0.8
	2.5nm,0.3s,baz=176,slow=14,SNR=9.6						
LEM	Lembang	13.74	284	LR	LR	22 48 22.4	
	comp=Z,510nm,18.0s,baz=34,slow=42						
WRA	Warramunga Arr	15.93	128	P	Pn	22 42 40.9	+1.7
	0.4nm,0.3s,baz=296,slow=13,SNR=8.7						
WRA				S	Sn	22 45 31.4	-3.4
	0.2nm,0.3s,baz=292,slow=25,SNR=3.4						
ASAR	Alice Springs	17.99	139	P	P	22 43 08.5	+3.3
	0.5nm,0.3s,baz=317,slow=13,SNR=49						
ASAR				S	Sn	22 46 23.2	-1.5
	0.2nm,0.3s,baz=306,slow=23,SNR=6.3						
USRK	Ussuriysk Ar.	55.28	10	P	P	22 48 27.4	+0.1
	1.3nm,0.6s,baz=188,slow=5.6,SNR=5.0						
SONM	Songino Array	59.45	349	P	P	22 48 56.2	-0.7
	0.4nm,0.3s,baz=161,slow=7.7,SNR=3.7						
MKAR	Makanchi Array	66.65	332	P	P	22 49 43.0	-1.6
	1.3nm,0.5s,baz=145,slow=7.3,SNR=20						
AAK	Ala-Archa	67.80	325	P	P	22 49 50.5	-1.6
	1.1nm,0.7s,baz=104,slow=7.8,SNR=4.1						
ZALV	Zalesovo Beam	71.10	338	P	P	22 50 09.9	-2.1
	2.5nm,0.6s,baz=135,slow=4.6,SNR=15						
KURBB	Kurchatov Arra	71.14	333	P	P	22 50 10.6	-1.8
	0.5nm,0.5s,baz=144,slow=5.7,SNR=12						

IDC 06 23:04:39.0±1.8**, 10°.12S**×**121°.03E, h0**^{km}**, mb3.8**/2**, mb1 3.8**/5**, mb1mx3.6**/31**, mbtmp3.7**/5**, ML3.6**/3**, Error ellipse: s-maj=167.1km s-min=23.6km az=56.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.11	151	Pn	Pn	23 06 51.0	-0.9
	0.7nm,0.3s,baz=346,slow=7.8,SNR=21						
FITZ				Sn	Sn	23 08 25.8	-9.3
	0.9nm,0.3s,baz=300,slow=20,SNR=3.3						
WRA	Warramunga Arr	16.13	129	Pn	Pn	23 08 27.2	-0.2
	0.2nm,0.3s,baz=306,slow=15,SNR=6.0						
WRA				Sn	Sn	23 11 17.1	-10
	0.1nm,0.3s,baz=313,slow=28,SNR=4.7						
ASAR	Alice Springs	18.24	139	P	P	23 08 54.6	+0.6
	0.2nm,0.3s,baz=318,slow=13,SNR=13						
MKAR	Makanchi Array	66.37	332	P	P	23 15 29.9	+0.2
	0.4nm,0.5s,baz=154,slow=6.6,SNR=7.3						
ZALV	Zalesovo Beam	70.80	338	P	P	23 15 57.0	-0.2
	0.9nm,0.6s,baz=151,slow=3.4,SNR=4.7						

BYKL 06 23:25:44.1±0.1**, 56°.15N**×**113°.76E, h4**$^{km}\pm$3^{km}**, 3C-5D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.12	254	⇓ iPg	Pg	23 25 46.0	-0.5
SVKR				eSg	Sg	23 25 47.9	-0.2
SVKR				Pmax			
	5μm,0.1s						
SVKR				Smax			
	10μm,0.4s						
UKT	Uakit	0.67	187	⇑ iPg	Pg	23 25 55.6	-1.3
UKT				eSg	Sg	23 26 04.2	-1.3
UKT				Pmax			
	79nm,0.3s						
UKT				Smax			
	409nm,1.0s						
NLYR	Nelyaty	1.14	72	⇓ iPg	Pg	23 26 04.4	-1.4
NLYR				ePb	Pn	23 26 06.8	0.0
NLYR				eSg	Sg	23 26 19.8	-0.7
NLYR				e		23 26 24.3	
NLYR				max			
	302nm,0.3s						
NLYR				max			
	491nm,0.7s						
YOA	Uoyan	1.14	270	ePg	Pg	23 26 05.1	-0.8
YOA				eSg	Sg	23 26 20.5	-0.2
YOA				Pmax			
	226nm,0.3s						
YOA				Smax			
	1μm,0.1s						
KMO	Kumora	1.46	261	⇓ iPg	Pn	23 26 10.4	-0.8
KMO				ePb	Pb	23 26 11.7	-0.1
KMO				eSg	Sb	23 26 29.8	-0.9
KMO				e		23 26 33.2	
KMO				max			
	124nm,0.5s						
KMO				max			
	761nm,0.8s						
BOD	Bodaibo	1.68	4	⇑ iPg	Pn	23 26 14.2	0.0
BOD				eSg	Sn	23 26 36.2	0.0
BOD				Pmax			
	57nm,0.2s						
BOD				Smax			
	227nm,0.3s						
YLYR	Ulyunkhan	1.95	230	⇓ iPn	Pn	23 26 18.9	+0.9

YLYR				*e*Pg	Pb	23 26 19.3	-0.9
YLYR				*e*Sg	Sb	23 26 45.0	+0.1
YLYR				Pmax			
	62nm,0.4s						
YLYR				Smax			
	330nm,0.4s						
NIZ	**Nizh Angarsk**	**2.40**	**263**	*e*Pn	Pn	23 26 25.0	+0.8
NIZ				*e*Pg	Pb	23 26 27.1	-0.8
NIZ				*e*		23 26 31.4	
NIZ				*e*Sg	Sb	23 26 57.3	-0.5
NIZ				*e*		23 26 59.6	
NIZ				Pmax			
	24nm,0.5s						
NIZ				Smax			
	125nm,0.5s						
CRS	**Chara**	**2.61**	**71**	*e*Pn	Pn	23 26 27.3	+0.3
CRS				⇑*i*Pg	Pb	23 26 31.5	+0.1
CRS				*e*Sg	Sb	23 27 05.6	+1.8
CRS				Pmax			
	85nm,0.7s						
CRS				Smax			
	107nm,0.7s						
SYVR	**Suvo**	**3.31**	**223**	*e*Pn	Pn	23 26 36.9	+0.3
SYVR				*e*Pg	Pb	23 26 44.3	+1.0
SYVR				*e*Sn	Sn	23 27 15.2	-1.2
SYVR				*e*Sg	Sb	23 27 26.4	+2.5
SYVR				Pmax			
	37nm,1.0s						
SYVR				Smax			
	239nm,1.5s						
VTMR	**Vitim**	**3.36**	**349**	*e*Pn	Pn	23 26 37.4	+0.1
VTMR				*e*Pg	Pb	23 26 45.1	+0.9
VTMR				*e*Sn	Sn	23 27 18.0	+0.4
VTMR				*e*Sg	Sb	23 27 27.8	+2.4
TUP	**Tupik**	**3.94**	**113**	⇓*i*Pn	Pn	23 26 45.1	-0.2
TUP				*e*Pg	Pb	23 26 55.4	+1.3
TUP				*e*Sn	Sn	23 27 30.2	-1.8
TUP				*e*Sg	Sb	23 27 46.3	+4.2
TUP				Pmax			
	18nm,0.4s						
TUP				Smax			
	86nm,1.0s						
MXMB	**Maximikha**	**4.10**	**227**	*e*Pn	Pn	23 26 47.7	+0.2
MXMB				*e*Pg	Pb	23 26 57.7	+0.9
MXMB				*e*		23 27 06.1	
MXMB				*e*Sn	Sn	23 27 33.7	-2.2
MXMB				*e*Sg	Sb	23 27 50.5	+3.8
CIT	**Chita**	**4.14**	**182**	*e*Sg	Sg	23 27 53.0	-3.9
CIT				Smax			
	95nm,0.3s						
OGRR	**Ongureny**	**4.36**	**237**	*e*Pn	Pn	23 26 52.0	+1.0
OGRR				*e*Pg	Pb	23 27 02.3	+1.2
OGRR				*e*		23 27 04.3	
OGRR				*e*Sn	Sn	23 27 41.1	-1.1
OGRR				*e*Sg	Sg	23 27 59.0	-4.9
OGRR				max			
	19nm,1.3s						
OGRR				Smax			
	65nm,1.4s						
YKLR	**Yuktali**	**4.41**	**81**	*e*Pn	Pn	23 26 51.7	-0.1
YKLR				*e*Pg	Pb	23 27 02.5	+0.4
YKLR				*e*Sn	Sn	23 27 41.4	-2.2
YKLR				*e*Sg	Sb	23 28 00.0	+4.4
ZRHB	**Zarechye**	**5.28**	**230**	*e*Sg	Sg	23 28 28.3	-5.3
ZRHB				Smax			
	227nm,1.6s						
TRG	**Tyrgan**	**5.50**	**235**	*e*Pg	Pb	23 27 22.4	+1.8
TRG				*e*Sn	Sn	23 28 07.5	-2.9
TRG				*e*Sg	Sg	23 28 34.3	-6.2
TRG				Pmax			
	11nm,0.8s						
TRG				Smax			
	32nm,0.6s						
KPC	**Khapcheranga**	**6.51**	**188**	*e*Pn	Pn	23 27 21.2	+0.5
KPC				*e*Pg	Pb	23 27 42.0	+4.1
KPC				*e*Sn	Sn	23 28 33.2	-2.2
KPC				*e*Sg	Sg	23 29 05.7	-7.3
KPC				Pmax			
	5.0nm,0.7s						
KPC				Smax			
	47nm,1.5s						

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*MOS **06** 23:27:48.3±1.2, 56°.11N×113°.79E, h4^{km}, mb4.3/4, Error ellipse: s-maj=8.9km s-min=6.0km az=65.5*
MOS Felt (II-III) at Severomuysk.
*BJI **06** 23:27:49.2±0.0, 56°.15N×113°.91E, h9^{km}, mB4.5/3, mb4.1/13, Ms4.7/2, Ms7 4.4/2*
*BYKL **06** 23:27:50.2±0.1, 56°.10N×113°.73E, h2^{km}±2^{km}, FELT I=IV MSK at Severomuisk*
*IDC **06** 23:27:50.2±0.9, 56°.25N×113°.64E, h0^{km}, mb3.9/14, mb1 4.1/17, mb1mx3.8/49, mbtmp3.9/17, ML3.1/3, Error ellipse: s-maj=26.7km s-min=14.3km az=161.0*
*NEIC **06** 23:27:51.1±1.5, 56°.11N±0°.05×113°.9E±0°.2, h10^{km}±2^{km}, mb4.1/10, Error ellipse: s-maj=17.7km s-min=4.9km az=118.0*
ISC 06 23:27:50.9±0.4**, 56°.16N**±0°.02×**113°.72E**±0°.02**, h10^{km}, n101,** σ**2^{s}.84**/168**, mb4.0**/18**, 7C-6D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**244**	⇑*i*Pg	**Pg**	**23 27 52.1**	**-1.5**
SVKR				Pmax		23 27 52.5	
	30μm,0.2s						
SVKR				*e*Sg	**Sg**	**23 27 54.2**	**-1.3**
SVKR				Smax		23 28 00.5	
	125μm,0.7s						
SVKR	**Severomuysk**	**0.10**	**244**	⇑*i*PG	**Pg**	**23 27 52.3**	**-1.3**
SVKR				*e*S	**Sg**	**23 27 54.1**	**-1.4**
UKT	**Uakit**	**0.68**	**185**	*e*Pg	**Pg**	**23 28 01.0**	**-3.0**
UKT				Pmax		23 28 02.3	
	539nm,0.4s						
UKT				*e*Sg	**Sg**	**23 28 09.2**	**-3.7**
UKT				Smax		23 28 16.5	
	6μm,0.7s						
UKT	**Uakit**	**0.68**	**185**	*e*PG	**Pg**	**23 28 01.1**	**-3.0**
UKT				*e*S	**Sg**	**23 28 10.2**	**-2.7**
YOA	**Uoyan**	**1.12**	**269**	*e*Pg	**Pb**	**23 28 11.1**	**-1.3**
YOA				*e*Pb	**Pg**	**23 28 13.0**	**+0.6**
YOA				max		23 28 16.0	
	2μm,0.3s						
YOA				*e*Sg	**Sg**	**23 28 26.1**	**-0.8**
YOA				*e*		23 28 31.6	
YOA				max		23 28 40.3	
	13μm,0.9s						
YOA	**Uoyan**	**1.12**	**269**	*e*PG	**Pb**	**23 28 11.1**	**-1.3**
YOA				*e*		23 28 26.7	
YOA				pmax	pmax		
	comp=Z,930nm,0.2s						
YOA				smax	smax		
	comp=N,13μm,0.4s						
NLYR	**Nelyaty**	**1.15**	**72**	⇓*i*Pg	**Pb**	**23 28 11.1**	**-1.8**
NLYR				*e*		23 28 13.8	
NLYR				Pmax		23 28 15.4	
	comp=N,2μm,0.4s						
NLYR				*e*Sg	**Sb**	**23 28 27.1**	**-0.8**
NLYR				*e*		23 28 31.4	
NLYR				max		23 28 33.8	
	comp=N,9μm,0.8s						
NLYR	**Nelyaty**	**1.15**	**72**	*e*PG	**Pb**	**23 28 10.9**	**-2.0**
NLYR				*e*		23 28 28.8	
NLYR				pmax	pmax		
	comp=Z,2μm,0.4s						
NLYR				smax	smax		
	comp=E,9μm,1.0s						
KMO	**Kumora**	**1.44**	**260**	⇓*i*Pg	**Pn**	**23 28 16.2**	**-0.9**
KMO				*e*		23 28 18.1	
KMO				max		23 28 18.9	
	comp=E,2μm,0.9s						
KMO				*e*Sg	**Sn**	**23 28 35.5**	**-0.6**
KMO				*e*		23 28 38.4	
KMO				max		23 28 39.9	
	comp=E,11μm,0.8s						
KMO	**Kumora**	**1.44**	**260**	⇓*i*PG	**Pn**	**23 28 16.2**	**-0.9**
KMO				*e*		23 28 35.1	
KMO				pmax	pmax		
	comp=Z,419nm,0.4s						
KMO				smax	smax		
	comp=N,11μm,0.8s						
BOD	**Bodaibo**	**1.67**	**5**	Pmax		23 27 52.5	
	comp=N,1μm,1.0s						
BOD				Smax		23 28 00.5	
	comp=N,4μm,1.3s						
BOD				⇑*i*Pn	**Pn**	**23 28 21.3**	**+1.0**
BOD				*e*Pg	**Pb**	**23 28 21.6**	**-0.1**
BOD				*e*Sg	**Sb**	**23 28 43.8**	**+1.0**
BOD	**Bodaibo**	**1.67**	**5**	*e*PN	**Pn**	**23 28 21.2**	**+1.0**
BOD				*e*		23 28 43.4	
BOD				pmax	pmax		
	comp=Z,1μm,1.0s						
BOD				smax	smax		
	comp=E,4μm,1.3s						
YLYR	**Ulyunkhan**	**1.94**	**230**	⇓*i*Pg	**Pn**	**23 28 24.4**	**+0.4**
YLYR				Pmax		23 28 26.0	
	comp=E,1μm,0.8s						
YLYR				*e*Sg	**Sb**	**23 28 50.1**	**-0.6**
YLYR				Smax		23 28 54.1	
	comp=E,9μm,1.0s						
YLYR	**Ulyunkhan**	**1.94**	**230**	⇓*i*PN	**Pn**	**23 28 24.4**	**+0.4**
YLYR				*e*		23 28 48.7	
YLYR				pmax	pmax		
	comp=Z,1μm,0.7s						
YLYR				smax	smax		
	comp=N,9μm,0.9s						
NIZ	**Nizh Angarsk**	**2.38**	**262**	*e*Pn	**Pn**	**23 28 31.3**	**+1.3**
NIZ				*e*Pg	**Pb**	**23 28 33.0**	**-0.9**
NIZ				Pmax		23 28 33.8	
	comp=N,362nm,0.9s						
NIZ				*e*Sg	**Sb**	**23 29 03.4**	**+0.1**
NIZ				*e*		23 29 05.4	
NIZ				max		23 29 06.8	
	comp=N,3μm,0.8s						
CRS	**Chara**	**2.62**	**72**	*e*Pn	**Pn**	**23 28 34.2**	**+0.8**
CRS				⇓*i*Pg	**Pb**	**23 28 38.2**	**+0.2**
CRS				Pmax		23 28 39.3	
	comp=N,2μm,0.9s						
CRS				*e*Sn	**Sn**	**23 29 07.0**	**+1.7**
CRS				*e*Sg	**Sb**	**23 29 12.8**	**+2.5**
CRS				Smax		23 29 15.9	
	comp=N,2μm,0.6s						
CRS	**Chara**	**2.62**	**72**	*e*PN	**Pn**	**23 28 34.1**	**+0.7**
CRS				*e*		23 28 38.1	
CRS				*e*		23 29 12.6	
CRS				pmax	pmax		
	comp=Z,2μm,0.9s						
CRS				smax	smax		
	comp=E,2μm,1.1s						
SYVR	**Suvo**	**3.30**	**222**	*e*Pn	**Pn**	**23 28 42.7**	**0.0**
SYVR				*e*Pg	**Pb**	**23 28 49.1**	**-0.5**
SYVR				*e*		23 28 50.5	
SYVR				max		23 28 53.6	
	comp=E,533nm,0.9s						
SYVR				*e*Sn	**Sn**	**23 29 21.7**	**-0.3**
SYVR				*e*Sg	**Sb**	**23 29 31.3**	**+1.5**
SYVR				*e*SgSg	**Sg**	**23 29 37.9**	**+1.0**
SYVR				max		23 29 43.2	
	comp=E,3μm,1.6s						
SYVR	**Suvo**	**3.30**	**222**	*e*PN	**Pn**	**23 28 42.5**	**-0.2**
SYVR				*e*		23 28 49.1	
SYVR				*e*		23 29 31.1	
SYVR				pmax	pmax		
	comp=Z,538nm,1.0s						
SYVR				smax	smax		
	comp=N,3μm,1.6s						
VTMR	**Vitim**	**3.35**	**350**	*e*Pn	**Pn**	**23 28 44.4**	**+1.2**
VTMR				*e*Pg	**Pb**	**23 28 51.9**	**+1.6**
VTMR				*e*Sg	**Sb**	**23 29 34.9**	**+3.9**
TUP	**Tupik**	**3.96**	**113**	*e*Pn	**Pn**	**23 28 51.4**	**-0.4**
TUP				*e*Pg	**Pb**	**23 29 01.5**	**+0.7**
TUP				Pmax		23 29 20.8	
	comp=N,166nm,1.2s						
TUP				*e*Sn	**Sn**	**23 29 36.8**	**-1.5**
TUP				*e*Sg	**Sb**	**23 29 53.0**	**+4.2**
TUP				Smax		23 29 58.0	
	comp=N,2μm,1.0s						
TUP				*e*		23 30 07.0	
TUP	**Tupik**	**3.96**	**113**	*e*PN	**Pn**	**23 28 51.4**	**-0.4**
TUP				*e*		23 29 01.3	
TUP				*e*S	**Sn**	**23 29 37.7**	**-0.6**
TUP				*e*		23 29 52.7	
TUP				pmax	pmax		
	comp=Z,128nm,0.6s						
TUP				smax	smax		
	comp=E,2μm,1.0s						
MXMB	**Maximikha**	**4.09**	**227**	*e*Pn	**Pn**	**23 28 53.0**	**-0.5**
MXMB				*e*Pg	**Pb**	**23 29 03.2**	**+0.1**
MXMB				*e*Sn	**Sn**	**23 29 40.2**	**-1.3**
MXMB				*e*Sg	**Sb**	**23 29 55.6**	**+3.0**
CIT	**Chita**	**4.15**	**181**	*e*Pn	**Pn**	**23 28 53.4**	**-0.9**
CIT				*e*Pg	**Pb**	**23 29 03.7**	**-0.3**
CIT				Pmax		23 29 05.3	
	comp=E,233nm,0.3s						
CIT				*e*Sn	**Sn**	**23 29 39.6**	**-3.3**
CIT				*e*Sg	**Sb**	**23 29 56.2**	**+2.0**
CIT				Smax		23 30 13.0	
	comp=E,2μm,1.6s						
CIT	**Chita**	**4.15**	**181**	*e*PN	**Pn**	**23 28 51.4**	**-2.9**
CIT				*e*		23 29 03.2	
CIT				*e*S	**Sn**	**23 29 42.6**	**-0.3**
CIT				*e*		23 29 57.3	
CIT				pmax	pmax		
	comp=Z,255nm,1.0s						
CIT				smax	smax		
	comp=E,2μm,2.1s						
OGRR	**Ongureny**	**4.34**	**237**	*e*Pn	**Pn**	**23 28 58.2**	**+1.2**
OGRR				*e*Pg	**Pb**	**23 29 08.4**	**+1.1**
OGRR				Pmax		23 29 11.1	
	comp=E,262nm,1.3s						
OGRR				*e*		23 29 14.5	
OGRR				*e*Sn	**Sn**	**23 29 46.0**	**-1.6**
OGRR				Smax		23 30 16.5	
	comp=E,747nm,1.0s						
OGRR	**Ongureny**	**4.34**	**237**	*e*PN	**Pn**	**23 28 58.2**	**+1.2**
OGRR				*e*		23 29 09.2	
OGRR				*e*		23 30 03.7	
OGRR				pmax	pmax		
	comp=Z,260nm,1.1s						
OGRR				smax	smax		
	comp=N,849nm,1.8s						
YKLR	**Yuktali**	**4.43**	**81**	*e*Pg	**Pb**	**23 29 08.7**	**-0.1**
YKLR				*e*Sn	**Sn**	**23 29 49.4**	**-0.3**
YKLR				*e*Sg	**Sb**	**23 30 07.1**	**+4.9**
ZRHB	**Zarechye**	**5.27**	**229**	*e*Pg	**Pb**	**23 29 25.2**	**+2.1**
ZRHB				Pmax		23 29 30.0	
	comp=N,315nm,0.9s						
ZRHB				*e*Sn	**Sn**	**23 30 09.1**	**-1.4**
ZRHB				*e*Sg	**Sb**	**23 30 33.3**	**+6.8**
ZRHB				Smax		23 30 55.5	
	comp=N,4μm,1.3s						
TRG	**Tyrgan**	**5.49**	**235**	*e*Pn	**Pn**	**23 29 13.1**	**+0.4**
TRG				*e*Pg	**Pb**	**23 29 28.0**	**+1.2**
TRG				Pmax		23 29 34.6	
	comp=N,106nm,1.3s						
TRG				*e*Sn	**Sn**	**23 30 12.7**	**-3.1**
TRG				*e*Sg	**Sb**	**23 30 38.7**	**+6.1**
TRG				Smax		23 30 53.5	
	comp=N,505nm,1.3s						
TRG	**Tyrgan**	**5.49**	**235**	*e*PN	**Pn**	**23 29 12.3**	**-0.4**
TRG				*e*		23 29 28.4	
TRG				*e*S	**Sn**	**23 30 15.0**	**-0.8**
TRG				*e*		23 30 38.6	
TRG				pmax	pmax		
	comp=Z,106nm,1.6s						
TRG				smax	smax		
	comp=E,506nm,1.4s						
FFNB	**Fofonovo**	**5.81**	**228**	*e*Pn	**Pn**	**23 29 17.5**	**+0.4**
FFNB				*e*Pg	**Pb**	**23 29 33.8**	**+1.6**
FFNB				*e*		23 29 36.7	
FFNB				*e*Sn	**Sn**	**23 30 21.8**	**-1.9**
FFNB				*e*Sg	**Sb**	**23 30 47.7**	**+5.9**
KAB	**Kabansk**	**5.85**	**228**	*e*Pn	**Pn**	**23 29 18.3**	**+0.6**
KAB				*e*		23 29 37.9	
KAB				max		23 29 51.0	
	comp=E,303nm,0.9s						
KAB				*e*Sg	**Sb**	**23 30 49.6**	**+6.5**
KAB				*e*		23 30 57.3	
KAB				max		23 31 22.6	
	comp=E,3μm,1.4s						
STDB	**Stepnoy Dvoret**	**5.89**	**230**	*e*Sg	**Sb**	**23 30 51.5**	**+7.4**
HRMR	**Khuramsha**	**6.05**	**224**	*e*Pn	**Pn**	**23 29 20.6**	**+0.2**
HRMR				*e*Pg	**Pb**	**23 29 38.1**	**+1.7**
HRMR				Pmax		23 29 42.5	
	comp=E,151nm,0.6s						
HRMR				*e*Sn	**Sn**	**23 30 26.3**	**-3.4**
HRMR				*e*Sg	**Sb**	**23 30 56.0**	**+7.2**
HRMR				Smax		23 31 10.1	
	comp=E,3μm,0.8s						
IENR	**Iengra**	**6.22**	**85**	*e*Sg	**Sb**	**23 31 02.4**	**+8.8**
BGT	**Bolshoye Golou**	**6.39**	**233**	*e*Pg	**Pb**	**23 29 44.0**	**+1.8**
BGT				Pmax		23 29 46.5	
	comp=E,44nm,1.0s						
BGT				*e*Sn	**Sn**	**23 30 36.3**	**-1.8**
BGT				*e*Sg	**Sb**	**23 31 06.4**	**+7.7**
BGT				Smax		23 31 15.8	
	comp=E,405nm,1.2s						
KPC	**Khapcheranga**	**6.52**	**188**	*e*Pn	**Pn**	**23 29 26.2**	**-0.7**
KPC				*e*Pg	**Pb**	**23 29 46.5**	**+2.1**
KPC				Pmax		23 29 53.7	
	comp=E,36nm,0.7s						
KPC				*e*Sn	**Sn**	**23 30 37.9**	**-3.4**
KPC				*e*Sg	**Sb**	**23 31 10.9**	**+8.6**
KPC				Smax		23 31 26.9	
	comp=E,1μm,1.5s						
LSTR	**Listvyanka**	**6.78**	**234**	*e*Pn	**Pn**	**23 29 30.8**	**+0.5**
LSTR				*e*Pg	**Pb**	**23 29 51.5**	**+2.8**
LSTR				Pmax		23 30 15.4	
	comp=E,58nm,2.2s						
LSTR				*e*Sn	**Sn**	**23 30 46.1**	**-1.4**
LSTR				*e*Sg	**Sb**	**23 31 18.2**	**+8.6**
LSTR				Smax		23 31 26.2	
	comp=E,446nm,1.6s						
IRK	**Irkutsk**	**6.79**	**239**	*e*Sg	**Sg**	**23 31 20.1**	**-8.6**
IRK				Smax		23 31 33.5	
	comp=E,721nm,1.0s						
IRK	**Irkutsk**	**6.79**	**239**	*e*PG	**Pb**	**23 29 52.3**	**+3.3**
IRK				*e*		23 31 19.5	
IRK				pmax	pmax		
	comp=Z,74nm,0.2s						
IRK				smax	smax		
	comp=N,719nm,1.1s						
IVK	**Ivanovka**	**7.01**	**235**	*e*Pg	**Pb**	**23 29 55.6**	**+2.9**
IVK				Pmax		23 30 26.8	
	comp=N,36nm,1.9s						
IVK				*e*Sn	**Sn**	**23 30 50.0**	**-3.3**
IVK				*e*Sg	Sg	23 31 26.4	-9.4
IVK				Smax		23 31 35.7	
	comp=N,288nm,1.3s						
TLY	**Talaya**	**7.45**	**237**	*e*Pg	**Pb**	**23 30 03.1**	**+2.9**
TLY				Pmax		23 30 22.0	
	comp=N,24nm,1.2s						
TLY				*e*Sn	**Sn**	**23 31 00.6**	**-3.5**
TLY				*e*		23 31 35.2	
TLY				*e*Sg	Sb	23 31 39.1	+10
TLY				*e*		23 31 46.6	
TLY				max		23 31 47.1	
	comp=N,222nm,1.2s						
TLY	**Talaya**	**7.45**	**237**	*e*PG	**Pb**	**23 30 04.9**	**+4.7**
TLY				*e*		23 31 39.4	
TLY				pmax	pmax		
	comp=Z,15nm,0.6s						
TLY	**Talaya**	**7.45**	**237**	Pn	**Pn**	**23 29 39.3**	**-0.3**
HIA	**Hailar**	**7.81**	**150**	PN	**Pn**	**23 29 43.2**	**-1.4**
HIA	**Hailar**	**7.81**	**150**	Pn	**Pn**	**23 29 43.2**	**-1.4**
ARS	**Arshan**	**7.89**	**242**	*e*Pn	**Pn**	**23 29 45.6**	**-0.1**
ARS				*e*Pg	**Pb**	**23 30 12.0**	**+4.3**
ARS				max		23 30 14.4	
	comp=Z,53nm,0.7s						
ARS				*e*Sn	**Sn**	**23 31 11.6**	**-3.4**
ARS				*e*Sg	Sb	23 31 52.2	+11
ARS				Smax		23 31 58.4	
	comp=Z,771nm,0.9s						
ZEA	**Zeya**	**8.16**	**102**	*e*PN	**Pn**	**23 29 50.2**	**+0.9**
ZEA				*e*S	**Sn**	**23 31 15.2**	**-6.2**
ZEA				*e*		23 32 07.0	
ZEA				smax	smax		
	comp=N,30nm,0.7s						
ZEA				smax	smax		
	comp=E,40nm,0.7s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*Pn	**Pn**	**23 29 55.2**	**+0.9**
ZAK				max		23 29 59.5	
	comp=E,23nm,1.7s						
ZAK				*e*		23 30 31.1	
ZAK				*e*Sn	**Sn**	**23 31 26.1**	**-4.4**
ZAK				*e*Sg	Sg	23 32 11.8	-12
ZAK				*e*		23 32 19.9	
ZAK				*e*		23 32 29.6	
ZAK				max		23 32 32.9	
	comp=E,398nm,1.4s						
ZAK	**Zakamensk**	**8.52**	**232**	*e*PN	**Pn**	**23 29 57.4**	**+3.1**
ZAK				*e*S	**Sg**	**23 32 15.6**	**-8.5**
ZAK				smax	smax		
	comp=N,400nm,1.4s						
MOY	**Mondy**	**8.76**	**244**	*e*Pn	**Pn**	**23 29 57.5**	**-0.1**
MOY				*e*		23 30 09.7	
MOY				*e*		23 30 13.1	
	comp=N,84nm,1.4s						
MOY				Pg	Pg	23 30 28.5	-10
MOY				*e*Sn	**Sn**	**23 31 32.6**	**-3.7**
MOY				*e*Sg	Sg	23 32 20.2	-11
MOY				Smax		23 32 43.5	
	comp=N,499nm,1.6s						
MOY	**Mondy**	**8.76**	**244**	*e*PN	**Pn**	**23 29 57.8**	**+0.2**
MOY				*e*		23 30 27.0	
MOY				*e*S	**Sn**	**23 31 31.2**	**-5.1**
MOY				*e*		23 32 20.2	
ORL	**Orlik**	**8.90**	**252**	*e*Pn	**Pn**	**23 30 00.4**	**+0.9**
ORL				*e*Pg	Pg	23 30 31.4	-10
ORL				*e*Pg	Pg	23 30 34.2	-6.9
	comp=N,46nm,1.4s						
ORL				*e*Sn	**Sn**	**23 31 35.8**	**-4.0**
ORL				*e*Sg	Sg	23 32 24.4	-12
ORL				Smax		23 32 54.0	
	comp=N,253nm,1.5s						
ORL	**Orlik**	**8.90**	**252**	*e*PN	**Pn**	**23 30 00.0**	**+0.5**
ORL				*e*		23 30 30.2	
ORL				*e*S	**Sn**	**23 31 37.7**	**-2.1**
ORL				*e*		23 32 23.3	
ORL				pmax	pmax		
	comp=Z,49nm,1.0s						
ORL				smax	smax		
	comp=N,159nm,1.0s						
ULN	**Ulaanbaatar**	**9.27**	**209**	P	**Pn**	**23 30 07.7**	**+3.1**
ULN	**Ulaanbaatar**	**9.27**	**209**	Pn	**Pn**	**23 30 07.7**	**+3.1**
SONM	**Songino Array**	**9.48**	**211**	Pn	**Pn**	**23 30 07.2**	**-0.3**
	comp=N,0.3nm,0.3s,baz=18,slow=13,SNR=7.5						
SONM				Pg		23 30 43.8	
	comp=N,0.7nm,0.3s,baz=22,slow=23,SNR=6.2						
SONM				Lg	Lg	23 32 48.4	
	comp=N,5.9nm,0.3s,baz=29,slow=28,SNR=16						
YAK	**Yakutsk**	**10.08**	**48**	Lg	Lg	23 33 01.3	
	comp=N,0.1nm,0.3s,baz=160,slow=22,SNR=7.0						
YAK	**Yakutsk**	**10.08**	**48**	*ce*P	**Pn**	**23 30 14.7**	**-0.9**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLR	**Kul'dur**	**12.93**	**115**	Pn	**Pn**	**23 30 54.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=304,slow=14,SNR=8.8						
KLR				Lg	Lg	23 34 34.0	
	comp=Z,0.4nm,0.3s,baz=64,slow=18,SNR=7.5						
KLR	**Kul'dur**	**12.93**	**115**	*e*P	**Pn**	**23 30 53.9**	**-0.6**
ZAA0	**Zalesovo Array**	**16.65**	**274**	P	**Pn**	**23 31 44.0**	**-0.1**
ZALV	**Zalesovo Beam**	**16.65**	**274**	Pn	**Pn**	**23 31 43.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=7.7						
ZALV				Lg	Lg	23 36 33.2	
	comp=Z,0.1nm,0.3s,baz=86,slow=21,SNR=6.8						
USRK	**Ussuriysk Ar.**	**16.67**	**128**	Lg	Lg	23 36 38.9	
	baz=324,slow=29,SNR=7.2						
TIXI	**Tiksi**	**16.82**	**17**	*i* P	**Pn**	**23 31 42.8**	**-3.3**
TIXI	**Tiksi**	**16.82**	**17**	P	**Pn**	**23 31 42.7**	**-3.4**
TIXI				IAmb	IAmb	23 31 51.9	
	comp=Z,12nm,0.8s						
DGZ	**Jazzator, Alta**	**17.05**	**259**	*i* P	**Pn**	**23 31 48.8**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**17.61**	**329**	P	**Pn**	**23 31 51.6**	**-4.4**
	comp=Z,0.5nm,0.3s,baz=129,slow=13,SNR=8.7						
NRIK	**Noril'sk**	**17.61**	**329**	*i* P	**Pn**	**23 31 54.3**	**-1.8**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRIK	**Noril'sk**	**17.61**	**329**	P	**Pn**	**23 31 51.4**	**-4.7**
NRIK				IAmb	IAmb	23 32 08.5	
	comp=Z,8.8nm,0.8s						
SEY	**Seymchan**	**20.46**	**55**	P	**P**	**23 32 28.7**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=273,slow=8.1,SNR=5.8						
SEY				Lg	Lg	23 38 37.7	
	comp=Z,1.1nm,0.5s,baz=282,slow=23,SNR=5.7						
SEY	**Seymchan**	**20.46**	**55**	*i* P	**P**	**23 32 29.8**	**+1.5**
KURK	**Kurchatov**	**21.44**	**270**	*ce*P	**P**	**23 32 39.8**	**+0.8**
KURK				pmax	pmax		
	comp=Z,21nm,1.1s						

KURK	**Kurchatov**	21.44	270	P	P	23 32 40.8	+1.8
MK31	**Makanchi Array**	21.53	258	*ce*P	P	23 32 40.4	+0.4
MK31	**Makanchi Array**	21.53	258	P	P	23 32 41.3	+1.3
MKAR	**Makanchi Array**	21.53	258	P	P	23 32 40.3	+0.3
	comp=Z,4.0nm,0.9s,baz=57,slow=9.0,SNR=20						
MKAR	**Makanchi Array**	21.53	258	*i* P	P	23 32 40.9	+0.9
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	**Kurchatov Arra**	21.54	270	P	P	23 32 40.2	+0.2
	comp=Z,16nm,0.9s,baz=68,slow=11,SNR=19						
MAKZ	**Makanchi**	21.69	258	P	P	23 32 42.3	+0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAKZ	**Makanchi**	21.69	258	P	P	23 32 42.3	+0.6
MAKZ				IAmb	IAmb	23 32 46.4	
	comp=Z,9.0nm,1.0s						
BRVK	**Borovoye**	25.04	281	*ce*P	P	23 33 15.8	+0.9
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRVK	**Borovoye**	25.04	281	P	P	23 33 16.3	+1.4
PETK	**Petropavlovsk-**	25.31	78	P	P	23 33 18.0	+0.7
	comp=Z,1.7nm,0.7s,baz=355,slow=7.7,SNR=2.7						
AAK	**Ala-Archa**	28.46	258	P	P	23 33 48.2	+2.2
	comp=Z,4.6nm,1.2s,baz=20,slow=2.7,SNR=4.7						
AAK	**Ala-Archa**	28.46	258	P	P	23 33 48.8	+2.9
AAK				IAmb	IAmb	23 33 50.9	
	comp=Z,7.1nm,1.3s						
KK31	**Karatay Array**	30.35	263	P	P	23 34 03.4	+0.9
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KK31	**Karatay Array**	30.35	263	P	P	23 34 03.4	+0.9
KK31				IAmb	IAmb	23 34 05.2	
	comp=Z,2.6nm,1.1s						
KKAR	**Karatay Array**	30.35	263	P	P	23 34 04.0	+1.4
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KKAR	**Karatay Array**	30.35	263	P	P	23 34 04.0	+1.4
KKAR				IAmb	IAmb	23 34 05.2	
	comp=Z,2.6nm,1.1s						
ARCES	**ARCESS Array B**	38.55	326	P	P	23 35 12.6	-0.5
	comp=Z,8.9nm,1.2s,baz=66,slow=9.0,SNR=2.3						
FINES	**FINESS Array B**	42.44	315	P	P	23 35 44.6	-0.8
	comp=Z,1.7nm,0.7s,baz=54,slow=9.7,SNR=5.0						
FINES	**FINESS Array B**	42.44	315	*i* P	P	23 35 47.5	+2.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	44.78	37	P	P	23 36 04.3	+0.2
	comp=Z,1.6nm,1.0s,baz=300,slow=6.7,SNR=9.2						
AKASG	**Malin Array Be**	47.64	301	P	P	23 36 24.9	-1.9
	comp=Z,0.1nm,0.2s,baz=42,slow=8.6,SNR=1.6						
YKA	**Yellowknife Ar**	55.85	25	P	P	23 37 28.2	+0.3
	comp=Z,1.4nm,0.8s,baz=333,slow=6.7,SNR=14						
GERES	**GERESS Array B**	56.09	308	P	P	23 37 30.6	+0.7
	comp=Z,0.6nm,0.8s,baz=39,slow=6.7,SNR=2.8						
ESDC	**Sonseca Array**	70.95	314	P	P	23 39 09.2	+1.0
	comp=Z,0.9nm,0.9s,baz=22,slow=7.0,SNR=5.8						
PDAR	**Pinedale Array**	74.88	32	P	P	23 39 33.0	+1.2
	comp=Z,0.4nm,0.8s,baz=33,slow=3.5,SNR=2.8						
NVAR	**Mina Array Bea**	75.95	40	P	P	23 39 39.7	+1.8
	comp=Z,0.6nm,0.8s,baz=311,slow=3.5,SNR=3.7						

BYKL 06 23:29:16.6±2.8, 56°.08N×113°.80E, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.14	285	⇑*i*Pg	Pg	23 29 20.3	+1.0
SVKR				*e*Sg	Sg	23 29 22.3	+1.2
SVKR				Pmax			
	1μm,0.3s						
SVKR				Smax			
	6μm,0.2s						
UKT	**Uakit**	0.60	189	*e*Sg	Sg	23 29 35.4	-0.4
UKT				Smax			
	352nm,0.7s						
NLYR	**Nelyaty**	1.14	68	Sg	Sg	23 29 51.9	-1.2
YLYR	**Ulyunkhan**	1.93	232	Sg	Sn	23 30 16.1	+0.5
YLYR				Smax			
	196nm,0.3s						

BYKL 06 23:30:00.7±0.4, 56°.12N×113°.70E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.08	268	*e*Pg	Pg	23 30 02.1	-0.1
SVKR				*e*Sg	Sg	23 30 04.0	+0.8
SVKR				Pmax			
	2μm,0.2s						
SVKR				Smax			
	11μm,0.2s						
UKT	**Uakit**	0.63	184	*e*Pg	Pg	23 30 11.8	-1.0
UKT				*e*Sg	Sg	23 30 20.8	-0.2
UKT				Pmax			
	31nm,0.1s						
UKT				Smax			
	168nm,0.5s						
NLYR	**Nelyaty**	1.18	71	*e*Pg	Pg	23 30 21.5	-1.7
NLYR				*e*Pb	Pb	23 30 23.6	-0.3
NLYR				*e*Sg	Sg	23 30 37.1	-1.4
NLYR				max			
	221nm,0.2s						
NLYR				Smax			
	129nm,0.5s						
BOD	**Bodaibo**	1.71	5	*e*Pg	Pn	23 30 31.4	-0.4
BOD				*e*Sg	Sn	23 30 54.4	+0.1
BOD				Pmax			
	46nm,0.3s						
BOD				Smax			
	355nm,1.2s						
YLYR	**Ulyunkhan**	1.91	230	*e*Pg	Pn	23 30 34.7	+0.2
YLYR				*e*Sg	Sb	23 31 00.2	-0.5
YLYR				Pmax			
	41nm,0.3s						
YLYR				Smax			
	140nm,0.4s						

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*MOS **06** 23:37:21.2±1.5, 47°.00N×141°.90E, h7^{km}, mb4.2/1, Error ellipse: s-maj=14.8km s-min=9.7km az=104.8*

MOS Felt (IV) at Kholmsk, (III-IV) at Yablochnoye, (III) at Bambuchki, Kostromskoye, Chaplanovo.

*SKHL **06** 23:37:22.9±0.5, 47°.12N×142°.00E, h10^{km}±5^{km}, mb5.0/5*

SKHL Felt (IV) at Kholmsk; (III-IV) at Yablochnoe; (III) at Bambuchki, Kostromskoe, Chaplanovo.

*IDC **06** 23:37:22.5±0.8, 47°.05N×141°.93E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/45, mbtmp3.6/12, ML4.0/1, MS3.9/2, Ms1 4.0/2, ms1mx3.1/44, Error ellipse: s-maj=21.1km s-min=18.2km az=120.0*

*JMA **06** 23:37:23.3±0.8, 47°.19N×142°.02E, h28^{km}, M3.8*

ISC 06 23:37:23.4±0.9, 47°.07N±0°.03×141°.98E±0°.05, h8^{km}±5^{km}, n36, σ1^{s}42/46, mb3.7/10, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHLM	**Kholmsk**	0.05	103	*i* Pg	Pg	23 37 25.4	+0.3
KHLM				AMB	AMB	23 37 25.5	
	132μm,0.2s						
KHLM				*e*Sg	Sg	23 37 26.7	+0.3
KHLM				A	A	23 37 27.0	
	684μm,0.4s						
KHLM				A	A	23 37 27.0	
	780μm,0.4s						
YSS	**Yuzh-Sakhalins**	0.54	102	*i* Pg	Pg	23 37 33.8	-0.1
YSS				AMB	AMB	23 37 34.1	
	950nm,0.5s						
YSS				*e*Sg	Sb	23 37 41.1	-1.9
YSS				A	A	23 37 41.9	
	7μm,0.4s						
YSS	**Yuzh-Sakhalins**	0.54	102	⇓*i*PN	Pg	23 37 33.8	-0.1
YSS				*e*		23 37 41.5	
YSS				pmax	pmax		
	comp=E,70nm,0.4s						
YSS				pmax	pmax		
	comp=Z,1μm,0.4s						
YSS				smax	smax		
	comp=N,7μm,0.4s						
JWK2	**Keihoku**	1.75	182	P	Pn	23 37 54.3	+0.3
JWK2				*e*S	Sb	23 38 17.8	-0.1
JRBN	**Rebuntou**	1.76	202	P	Pn	23 37 53.7	-0.5
JRBN				*e*S	Sn	23 38 17.4	+0.7
JRR	**Rishiri**	1.98	194	P	Pb	23 37 59.0	-0.7
UGL	**Uglegorsk**	2.01	2	*e*Pg	Pg	23 38 01.6	-0.4
UGL				AMB	AMB	23 38 05.9	
	comp=N,200nm,0.8s						
UGL				*e*S	Sn	23 38 21.7	-1.3
UGL				S	Sg	23 38 27.1	-1.0
	comp=N,200nm,0.7s						
UGL				S	Sg	23 38 27.1	-1.0
	comp=N,440nm,0.7s						
UGL	**Uglegorsk**	2.01	2	PN	Pb	23 37 59.5	-0.8
UGL				*e*S	Sb	23 38 25.4	0.0
UGL				smax	smax		
	comp=E,453nm,0.8s						
JSE	**Soyaes**	2.15	169	P	Pn	23 37 59.5	0.0
ASAJ	**Asahikawa**	2.98	171	Pn	Pn	23 38 11.1	+0.1
	comp=E,14nm,0.3s,baz=13,slow=13,SNR=34						
ASAJ				Sn	Sn	23 38 50.0	+3.1
	comp=E,8.0nm,0.3s,baz=85,slow=32,SNR=6.7						
ASAJ	**Asahikawa**	2.98	171	P	Pn	23 38 11.4	+0.4
ASAJ				*e*S	Sn	23 38 49.6	+2.7
JKK2	**Kamakawa 2**	3.24	170	P	Pn	23 38 15.0	+0.5
JHR	**Hokuryu**	3.33	183	P	Pn	23 38 18.4	+2.7
JTKR	**Abashiri--Toko**	3.38	156	P	Pn	23 38 15.5	-0.9
JTKR				*e*S	Sn	23 38 54.8	-1.8
TYV	**Tymovskoe**	3.83	6	*e*P	Pn	23 38 22.6	0.0
TYV				*e*Sg	Sg	23 39 28.8	+2.6
TYV	**Tymovskoe**	3.83	6	*e*PN	Pn	23 38 25.0	+2.4
TYV				*e*S	Sn	23 39 10.7	+3.0
TYV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TYV				smax	smax		
	comp=E,16nm,0.9s						
JAR	**Ashorobuto**	3.98	161	P	Pn	23 38 25.0	+0.4
YUK	**Yuzh-Kuril'sk**	4.08	137	*i* PN	Pn	23 38 25.0	-1.0
KUR	**Kuril'sk**	4.48	112	*i* PN	Pn	23 38 30.1	-1.4
KLR	**Kul'dur**	7.18	291	Lg	Lg	23 41 18.6	
	comp=E,0.5nm,0.3s,baz=336,slow=18,SNR=4.8						
KLR	**Kul'dur**	7.18	291	*i* PN	Pn	23 39 07.4	-1.2
USRK	**Ussuriysk Ar.**	7.57	251	Pn	Pn	23 39 14.3	+0.4
	baz=79,slow=16,SNR=2.7						
USRK				Lg	Lg	23 41 27.8	
	baz=54,slow=28,SNR=5.7						
EKMR	**Ekimchan**	8.36	319	*e*Pg	Sn	23 40 56.8	-2.4
EKMR				AMB	AMB	23 41 11.0	
	comp=E,4.0nm,0.5s						
EKMR				*e*Sg	Sg	23 42 02.5	+11
EKMR				A	A	23 42 10.1	
	comp=E,14nm,0.9s						
EKMR				A	A	23 42 10.1	
	comp=E,6.0nm,0.9s						
EKMR				A	A	23 42 10.1	
	comp=E,4.0nm,0.9s						
YAK	**Yakutsk**	16.56	339	*i* P	Pn	23 41 12.7	-2.9
YAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SONM	**Songino Array**	23.95	285	P	P	23 42 38.2	+0.2
	comp=Z,1.1nm,0.8s,baz=66,slow=9.2,SNR=5.0						
MKAR	**Makanchi Array**	39.88	292	P	P	23 44 57.5	0.0
	comp=Z,0.5nm,0.8s,baz=83,slow=10.0,SNR=4.6						
ILAR	**Eielson Array**	41.05	38	P	P	23 45 07.2	+0.3
	comp=Z,0.4nm,0.7s,baz=280,slow=9.9,SNR=5.7						
DAV	**Davao City (W)**	42.26	205	LR	LR	00 03 40.2	
	comp=Z,74nm,18.0s,baz=71,slow=37						
INK	**Inuvik**	45.42	31	P	P	23 45 44.1	+2.0
	comp=Z,0.6nm,0.5s,baz=323,slow=4.4,SNR=4.1						
YKA	**Yellowknife Ar**	55.05	33	P	P	23 46 55.5	+0.4
	comp=Z,0.5nm,0.8s,baz=298,slow=5.9,SNR=5.2						
FINES	**FINESS Array B**	60.23	330	P	P	23 47 31.3	-0.2
	comp=Z,1.2nm,0.7s,baz=40,slow=9.9,SNR=6.4						
AKASG	**Malin Array Be**	66.73	320	P	P	23 48 15.1	+0.4
	comp=Z,0.1nm,0.3s,baz=39,slow=6.1,SNR=4.0						
NVAR	**Mina Array Bea**	68.83	56	P	P	23 48 28.9	+0.5
	comp=Z,0.3nm,0.5s,baz=289,slow=5.4,SNR=3.4						
PDAR	**Pinedale Array**	70.47	48	P	P	23 48 38.8	+0.3
	comp=Z,0.6nm,0.7s,baz=303,slow=3.5,SNR=4.4						
ASAR	**Alice Springs**	70.78	188	P	P	23 48 40.0	-0.1
	comp=Z,1.4nm,1.0s,baz=1.8,slow=5.6,SNR=7.6						
ESDC	**Sonseca Array**	88.45	334	LR	LR	00 33 28.9	
	comp=Z,125nm,21.2s,baz=185,slow=38						

IDC 06 23:43:28.5±2.9, 7°.13S×129°.68E, h147^{km}±40^{km}, mb2.9/1, mb1 3.2/5, mb1mx3.0/41, mbtmp3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.7/11, Error ellipse: s-maj=70.8km s-min=21.4km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	6.42	14	P	Pn	23 45 01.3	+0.4
	0.7nm,0.3s,baz=172,slow=22,SNR=6.5						
SIJI				S	Sn	23 46 06.6	-6.6
	0.7nm,0.3s,baz=244,slow=23,SNR=1.4						
FITZ	**Fitzroy Crossi**	11.59	200	P	Pn	23 46 07.7	-1.8
	0.1nm,0.3s,baz=38,slow=17,SNR=3.1						
FITZ				S	Sn	23 48 11.3	-6.3
	0.2nm,0.3s,baz=269,slow=17,SNR=2.4						
FITZ				LR	LR	23 52 14.1	
	comp=Z,59nm,18.4s,baz=288,slow=45						
WRA	**Warramunga Arr**	13.51	161	P	Pn	23 46 34.7	+0.3
	0.1nm,0.3s,baz=350,slow=13,SNR=5.2						
WRA				S	Sn	23 48 58.6	-5.4
	0.2nm,0.3s,baz=336,slow=22,SNR=2.0						
ASAR	**Alice Springs**	16.93	167	P	Pn	23 47 17.9	+1.1
	0.1nm,0.3s,baz=338,slow=9.6,SNR=7.6						
MKAR	**Makanchi Array**	68.17	327	P	P	23 54 12.8	-0.1
	0.2nm,0.4s,baz=109,slow=6.9,SNR=4.9						

ECX 06 23:48:25.0±0.8, 32°.34N×115°.43W, h4^{km}±5^{km}, MD2.0, ML2.2, 6C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	0.13	54	*e*P	Pg	23 48 27.3	-0.3
CPBX				IAML		23 48 35.3	
	comp=E,3μm,0.4s						
CPBX				⇓*e*		23 48 35.3	
CPBX				IAML		23 48 38.0	
	comp=N,3μm,0.2s						
CPBX				*e*		23 48 38.0	
CPBX	**Cerro Prieto**	0.13	54	*e*P	Pg	23 48 27.4	-0.2
CPBX				*e*		23 48 38.0	
CPBX				IAML		23 48 38.0	
	comp=N,3μm,0.2s						
CPBX				IAML		23 48 38.8	
	comp=E,3μm,0.3s						
CPBX				⇑*e*		23 48 38.8	
SGL	**Mount Signal**	0.39	321	⇓*i*P	Pg	23 48 32.3	-0.3
SGL				*i* S	Sg	23 48 38.0	+0.2
COA	**Coachella**	0.58	26	*e*P	Pg	23 48 36.2	+0.1
RMX	**La Rumorosa**	0.61	295	*e*P	Pg	23 48 34.7	-2.0
RMX				*e*S	Sg	23 48 42.3	-2.3
RMX	**La Rumorosa**	0.61	295	*e*P	Pg	23 48 34.7	-1.9
RMX				*e*S	Sg	23 48 42.3	-2.2
IKP	**In-Ko-Pah, Jac**	0.65	298	*e*P	Pg	23 48 36.6	-0.9
IKP				*e*S	Sg	23 48 45.5	-0.5
IKP	**In-Ko-Pah, Jac**	0.65	298	*e*P	Pg	23 48 36.7	-0.9
IKP				*e*S	Sg	23 48 45.5	-0.4
SWSC	**Sam W. Stewart**	0.68	333	*e*P	Pg	23 48 37.4	-0.6
SJX	**San Joaquin**	0.73	218	*e*P	Pg	23 48 34.2	-4.9
SJX				*e*S	Sg	23 48 41.9	-6.7
SJX				IAML		23 48 44.6	
	comp=N,148nm,0.1s						
SJX				⇑*e*		23 48 44.6	
SJX				⇑*e*		23 48 44.7	
SJX				IAML		23 48 44.7	
	comp=E,216nm,0.1s						
SJX	**San Joaquin**	0.73	218	*e*P	Pg	23 48 34.2	-4.9
SJX				*e*S	Sg	23 48 42.2	-6.4
SJX				IAML		23 48 44.6	
	comp=N,152nm,0.1s						
SJX				⇑*e*		23 48 44.6	
SJX				⇑*e*		23 48 44.7	
SJX				IAML		23 48 44.7	
	comp=E,213nm,0.1s						
ECBX	**El Chinero**	0.93	160	*e*P	Pg	23 48 41.6	-1.1
ECBX				*e*S	Sg	23 48 54.0	-0.8
ECBX	**El Chinero**	0.93	160	*e*P	Pg	23 48 41.6	-1.1
ECBX				*e*S	Sg	23 48 54.4	-0.4
VTX	**Valle De La Tr**	1.00	198	*e*P	Pg	23 48 42.0	-2.1
VTX				*e*S	Sg	23 48 55.7	-1.3
VTX	**Valle De La Tr**	1.00	198	*e*P	Pg	23 48 42.3	-1.8
VTX				*e*S	Sg	23 48 55.4	-1.6
MONP2	**Monument Peak**	1.00	303	*e*P	Pg	23 48 42.9	-1.3
MONP2				*e*S	Sg	23 48 56.3	-0.9
MONP2	**Monument Peak**	1.00	303	*e*P	Pg	23 48 42.9	-1.3
MONP2				*e*S	Sg	23 48 55.8	-1.4
CBX	**Cerro Bola**	1.05	269	*e*P	Pg	23 48 43.7	-1.4
CBX				*e*S	Sg	23 48 57.7	-0.9
CBX	**Cerro Bola**	1.05	269	*e*P	Pg	23 48 43.5	-1.5
CBX				*e*S	Sg	23 48 57.9	-0.8
CBX				⇑*e*		23 49 04.1	
CBX				IAML		23 49 04.1	
	comp=N,41nm,0.5s						
TJIG	**Tijuana**	1.06	275	*e*P	Pg	23 48 43.6	-1.7
TJIG				*e*S	Sg	23 48 57.6	-1.4
BAR	**Barrett**	1.10	288	*e*P	Pg	23 48 44.5	-1.6
BAR				*e*S	Sg	23 48 58.9	-1.6
BAR	**Barrett**	1.10	288	*e*P	Pg	23 48 44.6	-1.5
BAR				*e*S	Sg	23 48 58.9	-1.6
SPIG	**San Pedro Mart**	1.29	181	*e*P	Pg	23 48 47.9	-2.0
SPX	**San Pedro Mart**	1.30	181	*e*P	Pg	23 48 47.8	-2.2
SPX				*e*S	Sg	23 49 04.9	-2.1
SQX	**San Quintin**	1.80	192	IAML		23 49 22.1	
	comp=E,32nm,0.4s						
SQX				⇓*e*		23 49 22.1	

KRNET 07 00:00:38.5±0.1, 41°.15N×75°.23E, h19^{km}, mb2.2, 23C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	0.98	316	⇑*i*P	Pb	00 00 57.2	+0.2
	baz=16						
ARLS				⇑*i*S	Sg	00 01 10.4	-0.2
	baz=16						
UCH	**Uchtor**	1.20	334	⇑*i*P	Pb	00 01 01.1	+0.2
	baz=34						
UCH				⇑*i*S	Sg	00 01 17.8	+0.2
	baz=34						
ULHL	**Ulahol**	1.33	34	⇑*i*P	Pb	00 01 03.0	+0.1
	baz=34						
ULHL				⇑*i*S	Sg	00 01 21.8	+0.2
	baz=34						
BOOM	**Boomskoye usch**	1.44	21	⇑*i*P	Pb	00 01 05.3	+0.5
	baz=21						
AML	**Almayashu**	1.51	311	⇑*i*P	Pb	00 01 06.8	+0.6
	baz=11						
AML				⇑*i*S	Sg	00 01 27.4	-0.1
	baz=11						
KBK	**Karagaybulak**	1.52	352	⇑*i*P	Pb	00 01 06.8	+0.7
	baz=52						
KBK				⇑*i*S	Sg	00 01 27.4	-0.2
	baz=52						
AAK	**Ala-Archa**	1.58	340	⇑*i*P	Pb	00 01 07.7	+0.5
	baz=40						
ARSB	**Arslanbob**	1.71	276	⇑*i*P	Pb	00 01 09.7	+0.4
	baz=76						
SFK	**Sufi-Kurgan**	1.74	230	⇓*i*P	Pb	00 01 10.9	+0.9
	baz=30						
KDJ	**Kajisay**	1.76	56	⇑*i*P	Pg	00 01 11.3	-1.0
	baz=56						
KDJ				⇑*i*S	Sg	00 01 35.2	0.0
	baz=56						
EKS2	**Erkin-Say**	1.86	325	⇑*i*P	Pb	00 01 12.7	+0.8
	baz=25						
EKS2				⇑*i*S	Sg	00 01 37.7	-0.7
	baz=25						
CHMS	**Chumysh**	1.88	349	⇑*i*P	Pb	00 01 13.0	+0.8
	baz=49						
CHMS				⇑*i*S	Sg	00 01 38.2	-0.8
	baz=49						
OHH	**Osh**	1.96	252	⇑*e*P	Pb	00 01 14.6	+1.0
	baz=52						
OHH				⇑*i*S	Sg	00 01 40.3	-1.4
	baz=52						
USP	**Ospenovka**	2.18	346	⇑*e*P	Pb	00 01 17.2	-0.2
	baz=46						
USP				⇑*i*S	Sb	00 01 46.3	+2.3
	baz=46						

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*SOME **07** 00:01:00.0, 41°.25N×75°.25E, h5^{km}*

*NNC **07** 00:01:03.2±1.8, 41°.33N×75°.33E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=12.1km s-min=8.0km az=168.0*

KRNET 07 00:00:59.7±0.1, 41°.23N×75°.34E, h17^{km}, mb2.4, 33C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	0.99	310	⇑*i*P	Pb	00 01 18.5	0.0
	baz=10.0						
ARLS				⇑*i*S	Sg	00 01 31.9	0.0
	baz=10.0						
UCH	**Uchtor**	1.17	328	⇑*i*P	Pb	00 01 22.1	+0.3
	baz=28						
UCH				⇑*i*S	Sg	00 01 38.4	+0.6
	baz=28						
ULHL	**Ulahol**	1.22	33	⇑*i*P	Pb	00 01 22.8	+0.3
	baz=33						
ULHL				⇑*i*S	Sg	00 01 39.7	+0.4
	baz=33						
BOOM	**Boomskoye usch**	1.33	20	⇑*i*P	Pg	00 01 25.0	-0.5
	baz=20						
BOOM				⇑*i*S	Sg	00 01 43.4	+0.4
	baz=20						
BOOM	**Boomskoye usch**	1.33	20	⇑*i*S	Pg	00 01 25.0	-0.5
	baz=21						
KBK	**Karagaybulak**	1.45	349	⇑*e*P	Pb	00 01 26.8	+0.4
	baz=49						
KBK				⇑*i*S	Sg	00 01 46.8	+0.1
	baz=49						
AML	**Almayashu**	1.52	307	⇑*i*P	Pb	00 01 28.2	+0.4
	baz=7.0						
AML				⇑*i*S	Sg	00 01 49.3	+0.3
	baz=7.0						
AAK	**Ala-Archa**	1.54	336	⇑*i*P	Pb	00 01 28.5	+0.6
	baz=36						
AAK				⇑*i*S	Sg	00 01 49.7	+0.3
	baz=36						
AAK	**Ala-Archa**	1.54	336	⇓P	Pg	00 01 29.0	-0.4
	1.0nm,0.3s						
AAK				⇑S	Sg	00 01 49.6	+0.2
	2.2nm,0.5s						
AAK	**Ala-Archa**	1.54	336	⇑*i*S	Pg	00 01 29.3	-0.1
	baz=40						
KDJ	**Kajisay**	1.65	56	⇑*e*P	Pg	00 01 30.6	-0.8
	baz=57						
KDJ				⇑*i*S	Sg	00 01 53.4	+0.5
	baz=57						
TKM2	**Tokmak 2**	1.70	6	⇑*i*P	Pb	00 01 31.5	+0.8
	baz=6.0						
TKM2				⇑*i*S	Sg	00 01 54.6	+0.1
	baz=6.0						
TKM2	**Tokmak 2**	1.70	6	⇑P	Pg	00 01 31.6	-0.8
	1.1nm,0.3s						
TKM2				⇑S	Sg	00 01 55.0	+0.4
	3.8nm,0.4s						
ARSB	**Arslanbob**	1.78	274	⇓*i*P	Pb	00 01 32.8	+0.9
	baz=74						
ARSB				⇓*i*S	Sg	00 01 56.8	-0.2
	baz=74						
ARSB	**Arslanbob**	1.78	274	⇑*i*S	Pb	00 01 33.0	+1.1
	baz=76						
CHMS	**Chumysh**	1.82	346	⇑*i*P	Pb	00 01 33.5	+0.9
	baz=46						
CHMS				⇑*i*S	Sg	00 01 58.1	-0.2
	baz=46						
EKS2	**Erkin-Say**	1.84	321	⇑*i*P	Pb	00 01 33.7	+0.7
	baz=21						
EKS2				⇑*i*S	Sg	00 01 58.7	-0.4
	baz=21						
SFK	**Sufi-Kurgan**	1.85	229	⇓*e*P	Pb	00 01 34.2	+0.9
	baz=30						
SFK				⇓*i*S	Sg	00 01 59.2	-0.3
	baz=30						
SFK	**Sufi-Kurgan**	1.85	229	⇓*i*S	Pb	00 01 34.4	+1.1
	baz=30						
KST	**Kastek**	1.87	14	*e*P	Pg	00 01 35.8	+0.1
	2.4nm,0.2s						
KST				*e*S	Sg	00 02 00.9	+1.0
	5.1nm,0.4s						
KST	**Kastek**	1.87	14	P	Pg	00 01 35.7	0.0
	2.4nm,0.2s						
KST				S	Sg	00 02 01.0	+1.0
	5.1nm,0.4s						
DGS	**Degeres**	2.03	9	*e*P	Pg	00 01 38.4	-0.4
	4.0nm,0.3s						
DGS				*e*S	Sg	00 02 05.6	+0.4
	7.5nm,0.2s						
DGS	**Degeres**	2.03	9	Pg	Pg	00 01 38.4	-0.4
	4.0nm,0.3s						
DGS				Lg	Lg	00 02 05.6	
	7.5nm,0.2s						

IZV	Izvestkoviy 0.9nm,0.2s	2.04	27	eP	Pg	00 01 39.5	+0.6
IZV	2.4nm,0.2s			eS	Sg	00 02 07.3	+2.0
IZV	Izvestkoviy 0.9nm,0.2s	2.04	27	Pg	Pg	00 01 39.5	+0.6
IZV	2.4nm,0.2s			Lg	Lg	00 02 07.3	
OHH	Osh baz=51	2.06	251	⇓iP	Pb	00 01 37.4	+0.7
OHH	baz=51			⇓iS	Sg	00 02 04.9	-1.2
USP	Ospenovka baz=43	2.13	343	⇑eP	Pb	00 01 38.2	+0.4
USP	baz=43			⇑iS	Sg	00 02 06.3	-1.8
TNSS	Tian-Shan 1.2nm,0.2s	2.16	33	eP	Pg	00 01 40.9	-0.4
TNSS	1.8nm,0.4s			eS	Sg	00 02 09.6	+0.2
TNSS	Tian-Shan 1.2nm,0.2s	2.16	33	Pg	Pg	00 01 40.9	-0.4
TNSS	1.8nm,0.4s			Lg	Lg	00 02 09.6	
MRKS	Merke 2.4nm,0.2s	2.18	315	eP	Pg	00 01 40.4	-1.2
MRKS	6.6nm,0.2s			eS	Sg	00 02 09.1	-0.9
MRKS	Merke 2.4nm,0.2s	2.18	315	Pg	Pb	00 01 40.2	+1.4
MRKS	6.6nm,0.2s			Lg	Lg	00 02 09.3	
SGDS	Sogindy 3.0nm,0.2s	2.28	347	Pg	Pg	00 01 42.8	-0.7
SGDS	12nm,0.4s			Lg	Lg	00 02 13.1	
MDOK	Medeo 1.5nm,0.5s	2.31	33	eP	Pg	00 01 43.3	-0.8
MDOK	3.8nm,0.9s			eS	Sg	00 02 13.9	-0.2
KOTS	Kotyrbulak 2.5nm,0.4s	2.40	33	eP	Pg	00 01 44.3	-1.4
KOTS	2.9nm,0.5s			eS	Sg	00 02 15.7	-1.1
KOTS	Kotyrbulak 2.5nm,0.4s	2.40	33	Pg	Pg	00 01 44.8	-0.9
KOTS	2.9nm,0.5s			Lg	Lg	00 02 16.0	
MNAS	Manas baz=2.0	2.46	302	⇑iP	Pb	00 01 42.8	-0.8
MNAS	baz=2.0			⇑iS	Sb	00 02 14.6	+1.0
KRBS	Karabastau 4.6nm,0.4s	2.47	6	eP	Pg	00 01 46.1	-1.1
KRBS	13nm,0.3s			eS	Sg	00 02 18.8	-0.5
KRBS	Karabastau 4.6nm,0.4s	2.47	6	Pg	Pg	00 01 46.1	-1.1
KRBS	13nm,0.3s			Lg	Lg	00 02 18.8	
KTBS	Karatobe 1.0nm,0.2s	2.67	21	eP	Pg	00 01 49.7	-1.2
KTBS	12nm,0.3s			eS	Sg	00 02 25.3	-0.3
KTBS	Karatobe 1.5nm,0.3s	2.67	21	Pg	Pg	00 01 49.5	-1.5
KTBS	12nm,0.3s			Lg	Lg	00 02 25.3	
KUU	Kurty 0.8nm,0.4s	2.76	15	eP	Pb	00 01 50.3	+1.7
KUU	6.0nm,0.4s			eS	Sg	00 02 26.2	-2.2
CHKK	Chushkaly 0.9nm,0.1s	2.89	24	eP	Pg	00 01 53.6	-1.5
CHKK	5.2nm,0.2s			eS	Sg	00 02 31.8	-0.8
CHKK	Chushkaly 0.9nm,0.1s	2.89	24	Pg	Pg	00 01 53.6	-1.5
CHKK	5.2nm,0.2s			Lg	Lg	00 02 31.8	
SATY	Saty 2.7nm,0.5s	2.92	50	eP	Pg	00 01 55.5	-0.2
SATY	2.8nm,0.1s			eS	Sg	00 02 34.9	+1.3
ARXS	Arharly 2.7nm,0.6s	3.50	31	eP	Pg	00 02 04.0	-2.7
ARXS	4.4nm,0.5s			eS	Sg	00 02 49.9	-2.2
ARXS	Arharly 2.7nm,0.6s	3.50	31	Pg	Pg	00 02 04.0	-2.7
ARXS	4.4nm,0.5s			Lg	Lg	00 02 49.9	
MNBS	Baschi 0.4nm,0.3s	3.63	37	eP	Pg	00 02 06.8	-2.6
MNBS	6.5nm,0.3s			eS	Sg	00 02 54.5	-1.9
MNBS	Baschi 0.4nm,0.2s	3.63	37	Pg	Pg	00 02 06.7	-2.6
MNBS	6.5nm,0.3s			Lg	Lg	00 02 54.8	
KK31	Karatay Array 0.3nm,0.6s,baz=110,slow=17	4.04	299	⇓Pn	Pb	00 02 11.7	+1.2
KK31	1.0nm,0.6s,baz=104,slow=28,SNR=5.4			⇑Lg	Lg	00 03 07.4	
KAPS	Kapalarasan 0.2nm,0.2s	5.00	35	Pg	Pg	00 02 34.9	-0.6

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*IDC **07** 00:03:36.4±6.3, 24°.18N×122°.19E, h0^{km}, mb3.8/5,*
mb1 3.9/5, mb1mx3.5/42, mbtmp3.8/5, Error ellipse:
s-maj=155.7km s-min=111.8km az=30.0
*TAP **07** 00:03:58.2, 24°.94N×121°.82E, h125^{km}, ML3.8, B*
*JMA **07** 00:03:59.0±0.2, 24°.89N×121°.82E, h114^{km}±2^{km}, M3.0*
ISC 07 00:03:57.6±0.8, **24°.96N**±0°.03×**121°.81E**±0°.03, **h129**^{km}±4^{km},
n111, σ**0^{s}.71**/202, **mb3.6**/5, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIPB	Shuangxi baz=5.0	0.02	48	i P	Pn	00 04 15.3	+0.2
TIPB	baz=5.0			S	Sn	00 04 28.2	-0.1
NTC	Toucheng baz=181	0.10	168	i P	Pn	00 04 15.2	+0.1
NTC	baz=181			i S	Sn	00 04 28.5	+0.2
NWF	Wu-fen Shan baz=352	0.12	348	i P	Pn	00 04 15.4	+0.2
NWF	baz=352			eS	Sn	00 04 28.2	-0.3
WFSB	Wu-fen Shan baz=352	0.12	348	P	Pn	00 04 15.2	+0.1
WFSB	baz=352			eS	Sn	00 04 28.2	-0.1
EGS	baz=119	0.16	134	eP	Pn	00 04 12.9	-2.2
TWB1	Santiao Chiao baz=82	0.17	73	i P	Pn	00 04 15.5	+0.3
TWB1	baz=82			i S	Sn	00 04 28.2	-0.2
TNOU	National Taiwa baz=354	0.20	351	eP	Pn	00 04 13.4	-1.8
TNOU	baz=354			S	Sn	00 04 27.6	-1.1
ILA	Ilan baz=203	0.20	196	P	Pn	00 04 15.8	+0.5
ILA	baz=203			i S	Sn	00 04 30.1	+1.5
TWA	Mucha baz=266	0.20	277	i P	Pn	00 04 15.7	+0.4
TWA	baz=266			i S	Sn	00 04 28.7	+0.1
NHDH	Xindian Distri baz=264	0.26	272	P	Pn	00 04 15.7	+0.4
NHDH	baz=264			i S	Sn	00 04 28.3	-0.5
TWE	Neicheng baz=225	0.27	209	i P	Pn	00 04 15.9	+0.4
TWE	baz=225			i S	Sn	00 04 28.9	0.0
TAP	Taipei baz=297	0.28	287	P	Pn	00 04 15.9	+0.4
TAP	baz=297			S	Sn	00 04 28.8	-0.2
YM01	YM01 baz=322	0.29	311	P	Pn	00 04 15.5	-0.1
YM01	baz=322			S	Sn	00 04 28.9	-0.2
TATO	Taipei baz=268	0.29	274	P	Pn	00 04 15.4	0.0
TATO	baz=268			S	Sn	00 04 28.0	-1.0
YM11	YM11 baz=315	0.30	315	P	Pn	00 04 16.1	+0.4
YM11	baz=315			eS	Sn	00 04 28.6	-0.7
YM10	YM10 baz=319	0.30	312	P	Pn	00 04 15.9	+0.3
YM10	baz=319			S	Sn	00 04 29.3	+0.1
YM05	YM05 baz=321	0.30	313	P	Pn	00 04 15.8	+0.2
YM08	YM08 baz=320	0.30	320	P	Pn	00 04 15.4	-0.2
YM04	YM04 baz=310	0.31	309	P	Pn	00 04 15.7	+0.1
YM04	baz=310			S	Sn	00 04 29.3	0.0
NWLT	Wulai baz=236	0.33	237	i P	Pn	00 04 15.6	-0.1
NWLT	baz=236			i S	Sn	00 04 27.8	-1.6
YM03	YM03 baz=317	0.33	313	P	Pn	00 04 15.9	+0.2
BACT	New Taipei Cit baz=272	0.33	277	eP	Pn	00 04 14.9	-0.7
ANP	Anpu baz=316	0.35	311	i P	Pn	00 04 16.1	+0.2
TWC	Suao baz=166	0.35	174	i P	Pn	00 04 16.6	+0.9
TWC	baz=166			S	Sn	00 04 29.8	+0.4
TWY	Chenhua baz=323	0.37	329	i P	Pn	00 04 16.3	+0.5
TWY	baz=323			i S	Sn	00 04 29.8	+0.2
TWS1	Kuangyinshan baz=294	0.38	292	i P	Pn	00 04 16.5	+0.6
TWS1	baz=294			i S	Sn	00 04 29.9	+0.2
ENTT	Nioudou baz=226	0.38	215	i P	Pn	00 04 16.3	+0.3
ENTT	baz=226			i S	Sn	00 04 29.4	-0.3
NSM	Shimen baz=325	0.39	329	eS	Sn	00 04 30.2	+0.5
NTST	Danshui baz=303	0.39	303	i P	Pn	00 04 16.4	+0.5
NTST	baz=303			i S	Sn	00 04 30.0	+0.3
NDT	Datong Townshi baz=229	0.44	217	i P	Pn	00 04 16.3	+0.1
NDT	baz=229			i S	Sn	00 04 29.9	-0.4
NTY	Taoyuan baz=278	0.46	275	P	Pn	00 04 16.4	+0.2
NTY	baz=278			S	Sn	00 04 30.5	+0.1
YHNB	Yeheng baz=238	0.48	234	P	Pn	00 04 16.4	-0.2
YHNB	baz=238			i S	Sn	00 04 29.9	-0.9
NSK	Sanguang baz=238	0.49	236	i P	Pn	00 04 16.3	-0.3
NSK	baz=238			i S	Sn	00 04 29.9	-1.0
ENAH	Nanao baz=173	0.51	180	P	Pn	00 04 17.1	+0.6
ENAH	baz=173			S	Sn	00 04 32.4	+1.6
ENA	Nanau baz=199	0.53	187	i P	Pn	00 04 18.3	+1.6
ENA	baz=199			i S	Sn	00 04 32.6	+1.5
NCU	National Centr baz=273	0.56	272	i P	Pn	00 04 17.4	+0.6
NCU	baz=273			S	Sn	00 04 31.1	-0.3
NCUH	Zhongli baz=273	0.56	271	i P	Pn	00 04 17.1	+0.3
NCUH	baz=273			S	Sn	00 04 31.1	-0.3
NNS	Nan Shan baz=221	0.65	218	i P	Pn	00 04 18.3	+0.7
NNS	baz=221			S	Sn	00 04 32.9	+0.2
NNSB	Datong baz=216	0.65	216	P	Pn	00 04 17.9	+0.2
NNSB	baz=216			S	Sn	00 04 32.3	-0.5
NNSH	Datong baz=221	0.65	216	i P	Pn	00 04 17.9	+0.2
NNSH	baz=221			S	Sn	00 04 32.2	-0.5
PCYT	Pengchaiyu baz=16	0.71	20	P	Pn	00 04 18.3	+0.4
HSN1	Hsinchu baz=258	0.74	256	P	Pn	00 04 18.6	+0.6
HSN1	baz=258			S	Sn	00 04 33.2	-0.4
SBCB	Hsinchu baz=260	0.76	258	P	Pn	00 04 18.6	+0.4
SBCB	baz=260			S	Sn	00 04 33.9	-0.1
HSN	Hsinchu baz=257	0.78	259	eP	Pn	00 04 18.2	-0.1
HSN	baz=257			i S	Sn	00 04 33.7	-0.3
LIOB	Emei baz=244	0.78	247	i P	Pn	00 04 18.9	+0.5
LIOB	baz=244			S	Sn	00 04 33.2	-1.1
NSTT	Nanjuang baz=245	0.80	246	i P	Pn	00 04 18.8	+0.2
NSTT	baz=245			i S	Sn	00 04 34.0	-0.5
ETLH	Xiulin Townshi baz=209	0.80	202	P	Pn	00 04 18.9	+0.2
ETLH	baz=209			S	Sn	00 04 34.6	-0.1
NACB	Ninganchiao baz=204	0.80	194	P	Pn	00 04 18.2	-0.4
NACB	baz=204			S	Sn	00 04 34.5	-0.1
FUSS	Fushou baz=214	0.87	216	i P	Pn	00 04 20.7	+1.2
FUSS	baz=214			i S	Sn	00 04 36.1	+0.1
TWD	Chiawan baz=202	0.89	192	i P	Pn	00 04 18.9	-0.5
TWD	baz=202			i S	Sn	00 04 35.5	-0.4
TWT	Tachien baz=229	0.91	220	i P	Pn	00 04 20.5	+0.8
TWT	baz=229			i S	Sn	00 04 37.1	+0.7
TDCB	Techi baz=230	0.92	220	P	Pn	00 04 20.5	+0.7
TDCB	baz=230			S	Sn	00 04 36.5	0.0
WHF	Hehuan Shan baz=211	0.95	212	i P	Pn	00 04 21.1	+0.8
WHF	baz=211			i S	Sn	00 04 37.7	+0.2
HWA	Hwalien baz=201	0.99	191	eS	Sn	00 04 38.4	+1.0
NMLH	Miaoli baz=248	1.01	246	P	Pn	00 04 20.7	+0.2
NMLH	baz=248			i S	Sn	00 04 37.5	-0.3
WHP	Taichung City baz=232	1.03	229	i P	Pn	00 04 21.4	+0.6
WHP	baz=232			i S	Sn	00 04 38.1	-0.2
CHGB	Renai baz=211	1.06	213	P	Pn	00 04 22.3	+1.0
CHGB	baz=211			S	Sn	00 04 39.8	+0.7
NSY	Sanyi baz=242	1.09	241	i P	Pn	00 04 22.2	+1.0
NSY	baz=242			i S	Sn	00 04 39.4	+0.1
TWQ1	Liyutan baz=239	1.12	237	P	Pn	00 04 22.2	+0.7
TWQ1	baz=239			i S	Sn	00 04 39.5	-0.2
JYNG	Yonagunijimaku	1.15	116	P	Pn	00 04 22.3	+0.5
JYNG				S	Sn	00 04 39.9	-0.3
ESL	Shilin baz=202	1.19	197	i P	Pn	00 04 22.3	+0.1
ESL	baz=202			i S	Sn	00 04 40.5	-0.4
YOJ	Yonaguni jima	1.20	114	P	Pn	00 04 22.8	+0.5
YOJ				eS	Sn	00 04 40.7	-0.4
YOJ	Yonaguni jima baz=118	1.20	114	P	Pn	00 04 22.8	+0.5
YOJ	baz=118			S	Sn	00 04 40.1	-1.0
WPL	Puli Township baz=227	1.22	220	P	Pn	00 04 23.6	+1.0
WPL	baz=227			S	Sn	00 04 41.8	+0.3
DPDB	Guoxing baz=228	1.22	221	P	Pn	00 04 23.3	+0.7
DPDB	baz=228			S	Sn	00 04 42.3	+0.7
WDJ	Dajia District baz=237	1.22	241	P	Pn	00 04 22.7	+0.2
WDJ	baz=237			S	Sn	00 04 41.4	-0.1
TCU	Taichung baz=234	1.31	232	eP	Pn	00 04 22.9	-0.5
TCU	baz=234			S	Sn	00 04 43.4	+0.3
EGFH	Guangfu baz=201	1.33	195	S	Sn	00 04 42.8	-0.8
SMLT	Sun Moon Lake baz=220	1.35	218	i P	Pn	00 04 24.9	+0.8
SMLT	baz=220			i S	Sn	00 04 44.4	+0.2
TYC	Yuchr baz=220	1.36	220	i P	Pn	00 04 24.7	+0.7
TYC	baz=220			i S	Sn	00 04 44.2	+0.1
WWF	Wufeng baz=237	1.36	228	eS	Sn	00 04 44.5	+0.3
SSLB	Suanglung baz=223	1.40	214	P	Pn	00 04 25.2	+0.7
SSLB	baz=223			S	Sn	00 04 45.3	+0.3
WNT	Mingjian baz=233	1.48	224	eP	Pn	00 04 27.1	+1.7
WNT	baz=233			i S	Sn	00 04 46.7	+0.1
WJS	Zhushan baz=230	1.50	221	S	Sn	00 04 46.5	-0.3
HGSD	Ruisui baz=196	1.50	194	P	Pn	00 04 25.4	-0.2
HGSD	baz=196			S	Sn	00 04 46.4	-0.5
EHY	Hungye baz=190	1.51	197	i P	Pn	00 04 26.4	+0.7
EHY	baz=190			S	Sn	00 04 45.6	-1.6
WHYT	Xinyi Township baz=222	1.53	215	i P	Pn	00 04 26.8	+0.8
WHYT	baz=222			i S	Sn	00 04 47.5	-0.1
YULB	Yu-li baz=191	1.62	197	P	Pn	00 04 26.1	-0.9
YULB	baz=191			S	Sn	00 04 47.5	-2.0
YUS	Yu-Shan baz=219	1.66	208	i P	Pn	00 04 28.4	+0.5
YUS	baz=219			S	Sn	00 04 51.6	+0.6
EYUL	Yuli baz=198	1.66	196	P	Pn	00 04 27.5	+0.1
EYUL	baz=198			eS	Sn	00 04 49.3	-0.9
TWF1	Yuli baz=192	1.66	196	i P	Pn	00 04 28.3	+0.8
TWF1	baz=192			S	Sn	00 04 47.8	-2.5
CHN5	Tsauling baz=227	1.70	218	i P	Pn	00 04 28.3	+0.3
CHN5	baz=227			S	Sn	00 04 51.4	+0.3
ALS	Alishan baz=222	1.71	213	i P	Pn	00 04 29.2	+0.9
ALS	baz=222			i S	Sn	00 04 52.6	+0.9
WDLH	Douliu baz=225	1.71	223	eP	Pn	00 04 29.1	+1.0
WDLH	baz=225			S	Sn	00 04 52.4	+1.1
WTK	Tuku baz=228	1.81	226	eP	Pn	00 04 29.4	+0.2
WTK	baz=228			S	Sn	00 04 52.8	-0.4
FULB	Fuli baz=197	1.81	195	i P	Pn	00 04 28.5	-0.8
FULB	baz=197			S	Sn	00 04 53.1	-0.3
IRIF	Iriomote-Funau	1.86	109	P	Pn	00 04 29.9	+0.2
IRIF				eS	Sn	00 04 54.0	-0.3
CHKT	Chengkung baz=187	1.89	192	S	Sn	00 04 54.2	-0.9
ELDTW	Lidau baz=205	1.90	202	i P	Pn	00 04 31.3	+0.9
ELDTW	baz=205			i S	Sn	00 04 56.8	+1.2
CHY	Chiayi baz=229	1.92	221	S	Sn	00 04 56.3	+0.6
CHN4	Tsaushan baz=217	1.94	215	i P	Pn	00 04 31.6	+0.8
CHN4	baz=217			S	Sn	00 04 56.6	+0.4
TPUB	Ta-pu baz=216	1.97	213	P	Pn	00 04 30.6	-0.5
TPUB	baz=216			S	Sn	00 04 56.3	-0.5
WTP	Ta-pu baz=213	2.02	213	i P	Pn	00 04 32.3	+0.5
WTP	baz=213			i S	Sn	00 04 57.7	-0.3
STYT	Tauyuan baz=211	2.03	208	eP	Pn	00 04 32.7	+0.8
STYT	baz=211			i S	Sn	00 04 58.0	-0.1
EDH	Donghe baz=188	2.03	193	i P	Pn	00 04 31.6	-0.2
EDH	baz=188			S	Sn	00 04 55.5	-2.5
HATJ	Hateruma jima	2.03	116	P	Pn	00 04 32.6	+0.8
HATJ				eS	Sn	00 04 57.4	-0.6
MATB	Ma-tsu baz=303	2.06	306	P	Pn	00 04 31.9	-0.3
MATB	baz=303			eS	Sn	00 04 59.8	+1.1
TWK	Hsinying baz=218	2.07	216	i P	Pn	00 04 33.0	+0.6
TWK	baz=218			i S	Sn	00 04 58.1	-0.9
MSUT	Lienchiang baz=304	2.09	306	eP	Pn	00 04 32.4	-0.1
MSUT	baz=304			eS	Sn	00 04 59.2	-0.1
SNST	Tainan City baz=217	2.10	215	S	Sn	00 04 59.6	-0.1
CHN1	Nanshi baz=216	2.12	214	i P	Pn	00 04 33.7	+0.7
CHN1	baz=216			i S	Sn	00 04 59.7	-0.3
JKRS	Kuro-shima	2.13	109	P	Pn	00 04 33.8	+0.8
JKRS				eS	Sn	00 04 59.6	-0.6
VWUC	VWUC baz=272	2.14	271	P	Pn	00 04 32.9	-0.3
VWUC	baz=272			S	Sn	00 04 59.6	-0.8
JIJ	Ishigaki jima	2.21	105	P	Pn	00 04 34.2	+0.2
JIJ				S	Sn	00 05 00.7	-1.2
JISG	Ishigakijimahi	2.31	99	P	Pn	00 04 35.9	+0.7
JISG				eS	Sn	00 05 03.9	-0.2
JTJ	Tarama	2.65	96	P	Pn	00 04 41.1	+1.5
JTJ				S	Sn	00 05 13.0	+1.1
SONM	Songino Array 0.3nm,0.7s,baz=160,slow=8.5,SNR=2.4	25.89	336	P	P	00 09 17.9	+0.4
MKAR	Makanchi Array 0.4nm,0.6s,baz=103,slow=9.5,SNR=4.8	38.19	315	P	P	00 11 04.7	0.0
ZALV	Zalesovo Beam 0.5nm,0.5s,baz=105,slow=11,SNR=2.9	39.91	326	P	P	00 11 18.3	-0.5
ARCES	ARCESS Array B 4.9nm,0.9s,baz=59,slow=9.6,SNR=2.5	69.04	338	P	P	00 14 49.3	+0.3

FINES	**FINESS Array B**	**71.07**	**330**	P	**P**	**00 15 00.8**	**-0.7**
	0.6nm,0.4s,baz=64,slow=6.6,SNR=8.4						

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*ISN **07** 00:32:04.9±1.3, 32°.72N×47°.51E, h6^{km}±8^{km}, ML3.2*
*KISR **07** 00:32:05.7±0.5, 32°.62N×47°.43E, h149^{km}±60^{km}, ML3.5, Hypocentre not reviewed by the ISC*
*TEH **07** 00:32:05.8, 32°.78N×47°.54E, h8^{km}, ML3.4*
ISC 07 00:32:06.9±0.9**, 32°.77N**±0°.04×**47°.51E**±0°.04**, h15**^{km}**, n39, σ**1^{s}**.20**/43**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.80**	**21**	*e*Pg	**Pg**	**00 32 20.9**	**-1.7**
IKMR	**Kamar-syah**	**1.04**	**44**	*e*Pg	**Pb**	**00 32 25.9**	**-0.8**
IKMR				*e*Sg	**Sb**	**00 32 40.5**	**+0.3**
IKMR				*e*		00 32 44.4	
	comp=Z,99nm,0.7s						
SHGR	**Shooshtar-Gavs**	**1.28**	**121**	*e*Pn	**Pn**	**00 32 31.1**	**+0.9**
IBDR	**Badra**	**1.37**	**285**	*e*Pg	**Pn**	**00 32 31.0**	**-0.5**
IBDR				*e*Sg	**Sg**	**00 32 51.0**	**-0.1**
IBDR				AML	AML	00 32 54.0	
	comp=N,341nm,0.3s						
IBDR				AML	AML	00 32 54.5	
	comp=E,550nm,0.4s						
IKOM	**Komasi**	**1.40**	**0**	*e*Pg	**Pn**	**00 32 32.3**	**+0.2**
IKOM				*e*		00 32 37.3	
	comp=Z,99nm,0.4s						
KCHF	**Cheshme Sefid,**	**1.55**	**346**	*e*Pg	**Pb**	**00 32 35.3**	**-0.2**
KCHF				*e*		00 33 04.3	
	comp=Z,99nm,0.3s						
KER	**Kermanshah**	**1.64**	**349**	*e*Pg	**Pb**	**00 32 37.0**	**0.0**
AHWZ	**Ahwaz**	**1.73**	**146**	*e*Pg	**Pb**	**00 32 38.8**	**+0.4**
IGHG	**Ghaleghazi**	**1.74**	**333**	*e*Pn	**Pb**	**00 32 38.7**	**-0.1**
IGHG				*e*		00 33 12.5	
	comp=Z,99nm,0.8s						
IVIS	**Veis**	**1.84**	**343**	*e*Pn	**Pb**	**00 32 40.1**	**-0.2**
IVIS				*e*		00 33 12.8	
	comp=Z,99nm,0.8s						
AMIS	**Naft Sefid**	**1.87**	**126**	*e*Pn	**Pn**	**00 32 38.9**	**+0.5**
AMIS				*e*		00 33 09.3	
	comp=Z,99nm,0.3s						
NSR	**Nassriya**	**2.11**	**214**	*e*Pn	**Pn**	**00 32 42.0**	**+0.4**
NSR				*e*Sn	**Sn**	**00 33 07.0**	**-0.5**
NSR				AML	AML	00 33 18.5	
	comp=E,178nm,0.3s						
IDHR	**Dehrash**	**2.14**	**334**	*e*Pn	**Pb**	**00 32 44.3**	**-1.2**
IDHR				*e*		00 33 24.1	
	comp=Z,99nm,0.4s						
KHMZ	**Khomeyn**	**2.27**	**64**	*e*Pn	**Pb**	**00 32 46.5**	**-1.2**
SNGE	**Sanandaj**	**2.32**	**357**	*e*Pn	**Pb**	**00 32 47.4**	**-1.2**
HSRG	**Sareghieh**	**2.55**	**14**	*e*Pn	**Pn**	**00 32 49.2**	**+1.2**
HSRG				*e*		00 33 33.9	
	comp=Z,99nm,0.7s						
BHD	**Baghdad**	**2.67**	**282**	*e*Pn	**Pn**	**00 32 50.0**	**+0.6**
BHD				*e*Sn	**Sn**	**00 33 24.0**	**+2.4**
BHD				AML	AML	00 33 35.3	
	comp=E,145nm,0.5s						
ASAO	**Ashtian**	**2.75**	**49**	*e*Pn	**Pn**	**00 32 53.4**	**+2.7**
IPIR	**Pirpir**	**2.85**	**91**	*e*Pn	**Pn**	**00 32 53.5**	**+1.3**
IPIR				*e*		00 33 41.0	
	comp=Z,99nm,0.4s						
SHK1	**Shahrekord**	**2.88**	**98**	*e*Pn	**Pn**	**00 32 53.2**	**+0.6**
SHK1				*e*		00 33 01.6	
	comp=Z,99nm,0.8s						
MIB	**Mutribah**	**2.96**	**183**	*e*P		00 32 53.4	
UMR	**Umm Al-Rimmam**	**3.21**	**177**	*e*P		00 32 56.4	
RST	**Umm Al-Ruwaisa**	**3.29**	**188**	*e*P		00 32 57.3	
IRAZ	**Razeghan**	**3.31**	**37**	*e*Pn	**Pn**	**00 33 00.0**	**+1.6**
QABG	**Abgarm-Qazvin**	**3.40**	**30**	*e*Pn	**Pn**	**00 33 00.9**	**+1.3**
QAM	**Ghamsar**	**3.44**	**72**	*e*Pn	**Pn**	**00 33 02.2**	**+2.0**
IKLH	**Kolahrood**	**3.46**	**80**	*e*		00 33 04.1	
	comp=Z,99nm,0.3s						
IKLH				*e*Pn	**Pn**	**00 33 02.4**	**+1.9**
GHVR	**GHOM**	**3.59**	**61**	*e*Pn	**Pn**	**00 33 04.1**	**+2.0**
IQOM	**Qom**	**3.61**	**54**	*e*Pn	**Pn**	**00 33 03.5**	**+0.9**
RDF	**Al-Radifah**	**3.83**	**179**	*e*P		00 33 05.1	
RDF				*e*S		00 33 49.4	
RDF				IAML		00 33 50.6	
	comp=Z,64nm,0.3s						
IGAR	**Gharneh**	**3.84**	**94**	*e*		00 33 08.6	
	comp=Z,99nm,0.3s						
IGAR				*e*Pn	**Pn**	**00 33 06.5**	**+0.7**
KLNJ	**Kolanjah**	**3.89**	**116**	*e*Pn	**Pn**	**00 33 06.5**	**0.0**
KLNJ				*e*		00 34 03.1	
	comp=Z,99nm,0.4s						
KRSH	**Karshahi**	**4.05**	**72**	*e*Pn	**Pn**	**00 33 10.0**	**+1.4**
IZEF	**Zefreh**	**4.06**	**87**	*e*Pn	**Pn**	**00 33 09.8**	**+1.0**
IVRN	**Varamin**	**4.15**	**57**	*e*Pn	**Pn**	**00 33 11.0**	**+1.2**
IRAM	**Ramesheh**	**4.24**	**102**	*e*Pn	**Pn**	**00 33 11.3**	**+0.1**
QALM	**Alamut, Qazvin**	**4.48**	**34**	*e*Pn	**Pn**	**00 33 15.7**	**+1.2**
IDMV	**Damavand**	**4.68**	**52**	*e*Pn	**Pn**	**00 33 18.2**	**+0.9**
ILAS	**Lasjerd**	**5.22**	**59**	*e*Pn	**Pn**	**00 33 26.7**	**+2.0**
ANAR	**Anarak**	**5.24**	**84**	*e*Pn	**Pn**	**00 33 24.8**	**-0.1**
IANJ	**Anjilo**	**5.96**	**61**	*e*Pn	**Pn**	**00 33 36.0**	**+1.2**
TPRV	**Parvadeh(Tabas**	**7.72**	**86**	*e*Pn	**Pn**	**00 33 59.9**	**+1.0**
TKDS	**Koohdasht(Taba**	**8.10**	**81**	*e*Pn	**Pn**	**00 34 04.5**	**+0.4**

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*ANF **07** 00:40:25.4±0.6, 36°.90N×104°.86W, h0^{km}±5^{km}, ML4.0/14, Error ellipse: s-maj=3.0km s-min=2.8km az=135.0*
*IDC **07** 00:40:25.2±1.6, 36°.91N×104°.86W, h0^{km}, mb3.1/2, mb1 3.5/5, mb1mx3.3/64, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=28.4km s-min=14.1km az=102.0*
*NEIC **07** 00:40:26.6±2.0, 36°.88N±0°.04×104°.75W±0°.07, h4^{km}±6^{km}, mb_Lg3.5/108, ML3.7/62, Error ellipse: s-maj=8.1km s-min=5.1km az=83.0*
ISC 07 00:40:26.6±0.6**, 36°.89N**±0°.03×**104°.82W**±0°.03**, h10**^{km}**, n99, σ**1^{s}**.36**/100**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T25A	**Trinidad**	**0.41**	**52**	P	**Pg**	**00 40 33.8**	**-0.9**
	baz=226						
T25A				S	**Sg**	**00 40 39.8**	**-0.4**
	baz=226						
T25A	**Trinidad**	**0.41**	**52**		**Pg**	**00 40 33.8**	**-0.9**
T25A				Sg	**Sg**	**00 40 39.8**	**-0.4**
SDCO	**Great Sand Dun**	**1.02**	**328**	P	**Pg**	**00 40 44.6**	**-1.7**
	baz=145						
SDCO				S	**Sg**	**00 40 58.2**	**-1.2**
	baz=145						
SDCO	**Great Sand Dun**	**1.02**	**328**		**Pg**	**00 40 44.5**	**-1.7**
SDCO				Sg	**Sg**	**00 40 58.3**	**-1.1**
SDCO	**Great Sand Dun**	**1.02**	**328**	P		00 40 44.6	
	baz=145						
SDCO				S		00 40 58.2	
	baz=145						
S22A	**4UR Ranch, Cre**	**1.82**	**299**	Pb	**Pn**	**00 40 59.4**	**+1.1**
	baz=117						
S22A	**4UR Ranch, Cre**	**1.82**	**299**		**Pn**	**00 40 59.2**	**+1.0**
S22A				IAML		00 41 25.5	
	comp=N,625nm,0.1s						
Q24A	**Divide**	**2.09**	**353**	Pb	**Pn**	**00 41 04.2**	**+2.2**
	baz=171						
Q24A				Sb	**Sb**	**00 41 31.7**	**+0.7**
	baz=171						
Q24A	**Divide**	**2.09**	**353**		**Pn**	**00 41 04.2**	**+2.2**
Q24A				IAML		00 41 33.3	
	comp=N,439nm,0.3s						
Q24A				IAML		00 41 33.5	
	comp=E,614nm,0.2s						
ANMO	**Albuquerque**	**2.35**	**215**	Pn	**Pn**	**00 41 05.7**	**+0.2**
	comp=E,20nm,0.3s,baz=43,slow=16,SNR=212						
ANMO				Pg	**Pb**	**00 41 07.6**	**-1.6**
	comp=E,20nm,0.3s,baz=41,slow=16,SNR=120						
ANMO				Sn	**Sn**	**00 41 35.3**	**+0.8**
	comp=E,7.6nm,0.3s,baz=36,slow=6.6,SNR=3.3						
ANMO	**Albuquerque**	**2.35**	**215**	P	**Pn**	**00 41 05.5**	**0.0**
	baz=35						
ANMO				S	**Sn**	**00 41 35.8**	**+1.3**
	baz=35						
ANMO	**Albuquerque**	**2.35**	**215**	Pn	**Pn**	**00 41 05.4**	**-0.1**
ANMO	**Albuquerque**	**2.35**	**215**	P		00 41 05.5	
	baz=35						
ANMO				S		00 41 35.8	
	baz=35						
KSCO	**Kaye Shedlock’**	**2.73**	**39**	P	**Pn**	**00 41 12.4**	**+1.7**
	baz=219						
KSCO				Sb	**Sb**	**00 41 50.5**	**+1.2**
	baz=219						
KSCO	**Kaye Shedlock’**	**2.73**	**39**	Pn	**Pn**	**00 41 12.2**	**+1.5**
KSCO	**Kaye Shedlock’**	**2.73**	**39**	P		00 41 12.4	
	baz=219						
KSCO				S		00 41 50.3	
	baz=219						
SMCO	**Snowmass**	**2.85**	**324**	Pn	**Pn**	**00 41 13.7**	**+1.2**
MVCO	**Mesa Verde**	**2.96**	**277**	Pb	**Pb**	**00 41 20.0**	**+0.3**
	baz=95						
MVCO				Sb	**Sb**	**00 41 57.3**	**+1.2**
	baz=95						
MVCO	**Mesa Verde**	**2.96**	**277**	Pn	**Pn**	**00 41 15.2**	**+1.3**
MVCO				IAML		00 42 01.6	
	comp=E,291nm,0.5s						
ISCO	**Idaho Springs**	**2.97**	**348**	Sb	**Sb**	**00 41 58.6**	**+2.2**
	baz=167						
ISCO	**Idaho Springs**	**2.97**	**348**	Pn	**Pn**	**00 41 16.1**	**+2.0**
ISCO	**Idaho Springs**	**2.97**	**348**	P		00 41 16.2	
	baz=167						
BNM	**Barren Site**	**3.11**	**209**	Pn	**Pn**	**00 41 16.6**	**+0.7**
PV01	**Paradox Valley**	**3.23**	**294**	Pn	**Pn**	**00 41 18.7**	**+1.1**
AMTX	**Amarillo**	**3.24**	**127**	Pb	**Pb**	**00 41 24.5**	**+0.2**
	baz=310						
AMTX	**Amarillo**	**3.24**	**127**	Pn	**Pn**	**00 41 17.4**	**-0.2**
AMTX				IAmb_Lg		00 42 11.7	
	comp=Z,108nm,0.8s						
AMTX	**Amarillo**	**3.24**	**127**	P		00 41 17.5	
	baz=310						
LENM	**Lemitar**	**3.24**	**214**	Pn	**Pn**	**00 41 19.9**	**+2.2**
Y22D	**IRIS PASSCAL I**	**3.29**	**212**	Sb	**Sb**	**00 42 06.8**	**+1.4**
	baz=32						
Y22D	**IRIS PASSCAL I**	**3.29**	**212**	S		00 42 06.6	
	baz=32						
MSTX	**Muleshoe**	**3.36**	**150**	Pb	**Pb**	**00 41 25.6**	**-0.7**
	baz=332						
MSTX	**Muleshoe**	**3.36**	**150**	Pn	**Pn**	**00 41 18.7**	**-0.5**
MSTX				IAmb_Lg		00 42 16.9	
	comp=Z,154nm,0.7s						
MSTX	**Muleshoe**	**3.36**	**150**	S		00 42 07.2	
	baz=332						
PV07	**Paradox Valley**	**3.41**	**298**	Pn	**Pn**	**00 41 21.3**	**+1.2**
PV07				IAML		00 42 17.5	
	comp=E,133nm,1.0s						
PV07				IAML		00 42 21.3	
	comp=N,116nm,0.9s						
PV13	**Radium Mtn., P**	**3.43**	**293**	Pn	**Pn**	**00 41 21.4**	**+1.1**
PV13				IAML		00 42 25.4	
	comp=N,125nm,0.8s						
Y22A	**Socorro**	**3.43**	**211**	S		00 42 10.2	
	baz=31						
PV18	**Skein Mesa, Pa**	**3.52**	**294**	Pn	**Pn**	**00 41 24.2**	**+2.6**
PV18				IAML		00 42 29.3	
	comp=N,146nm,1.0s						
PV20	**West Nyswonger**	**3.60**	**295**	Pn	**Pn**	**00 41 23.3**	**+0.6**
CPRX	**Cap Rock**	**3.93**	**168**	Pn	**Pn**	**00 41 28.7**	**+1.6**
N23A	**Red Feather La**	**4.10**	**348**	Pn	**Pn**	**00 41 32.0**	**+2.4**
N23A				IAML		00 42 42.1	
	comp=E,96nm,0.8s						
N23A				IAML		00 42 46.5	
	comp=N,79nm,0.8s						
O20A	**White River Ci**	**4.21**	**321**	Pn	**Pn**	**00 41 32.8**	**+1.8**
O20A				IAML		00 42 46.2	
	comp=E,58nm,0.9s						
O20A				IAML		00 42 48.6	
	comp=N,72nm,0.8s						
W18A	**Petrified Fore**	**4.36**	**248**	Pn	**Pn**	**00 41 36.6**	**+3.5**
W18A				IAML		00 42 43.7	
	comp=E,92nm,0.7s						
PHWY	**Pilot Hill**	**4.43**	**354**	Pn	**Pn**	**00 41 35.2**	**+0.9**
PHWY				IAML		00 42 46.2	
	comp=E,70nm,0.7s						
PHWY				IAML		00 43 01.8	
	comp=E,47nm,0.4s						
CBKS	**Cedar Bluff**	**4.45**	**63**	P	**Pn**	**00 41 34.7**	**+0.4**
	baz=246						
CBKS	**Cedar Bluff**	**4.45**	**63**	Pn	**Pn**	**00 41 34.5**	**+0.2**
CBKS				IAmb_Lg		00 42 51.6	
	comp=Z,101nm,0.8s						
CBKS	**Cedar Bluff**	**4.46**	**63**	P		00 41 34.7	
	baz=246						
OGNE	**Ogallala**	**4.59**	**27**	P	**Pn**	**00 41 37.8**	**+1.6**
	baz=208						
OGNE	**Ogallala**	**4.59**	**27**	Pn	**Pn**	**00 41 37.6**	**+1.4**
OGNE	**Ogallala**	**4.59**	**27**	P		00 41 37.7	
	baz=208						
U32A	**Winter Ranch,**	**4.70**	**94**	Pn	**Pn**	**00 41 38.4**	**+0.8**
U32A				IAmb_Lg		00 43 06.2	
	comp=Z,66nm,1.0s						
X18A	**Snowflake**	**4.80**	**242**		**Pn**	**00 41 40.2**	**+1.1**
X18A				IAML		00 42 58.1	
	comp=E,58nm,0.8s						
X18A				IAML		00 43 02.8	
	comp=N,71nm,0.7s						
121A	**Cookes Peak, D**	**4.99**	**210**	Pn	**Pn**	**00 41 41.0**	**-0.7**
121A				IAML		00 43 01.1	
	comp=E,40nm,0.7s						
121A				IAML		00 43 04.0	
	comp=N,42nm,0.7s						
121A	**Cookes Peak, D**	**4.99**	**210**	P		00 41 41.7	
	baz=29						
121A				Sb		00 42 59.2	
	baz=29						
SRU	**San Rafael Swe**	**5.03**	**298**	Pn	**Pn**	**00 41 43.1**	**+0.9**
R32A	**Long Quarter,**	**5.08**	**71**	Pn	**Pn**	**00 41 42.8**	**-0.1**
R32A				IAmb_Lg		00 43 16.4	
	comp=Z,78nm,0.9s						
MNTX	**Cornudas Mount**	**5.20**	**185**	Pb	**Pb**	**00 41 57.9**	**+0.2**
	baz=5.6						
MNTX	**Cornudas Mount**	**5.20**	**185**	Pn	**Pn**	**00 41 46.4**	**+2.0**
MNTX				IAML		00 43 09.1	
	comp=Z,48nm,1.0s						
RDMU	**Red Mountain**	**5.23**	**316**	Pn	**Pn**	**00 41 47.3**	**+2.3**
WMOK	**Wichita Mounta**	**5.35**	**112**	Pn	**Pn**	**00 41 47.2**	**+0.7**
WMOK				IAmb_Lg		00 43 19.1	
	comp=Z,56nm,0.9s						
WMOK	**Wichita Mounta**	**5.35**	**112**	P		00 41 46.0	
	baz=296						
WUAZ	**Wupatki**	**5.48**	**257**	Pn	**Pn**	**00 41 48.9**	**+0.5**
CROK	**Carrier**	**5.50**	**92**	IAmb_Lg		00 43 22.2	
	comp=Z,75nm,0.8s						
GC02	**Grant County #**	**5.58**	**88**	Pn	**Pn**	**00 41 50.2**	**+0.6**
TMUT	**Trail Mountain**	**5.59**	**297**	Pn	**Pn**	**00 41 52.1**	**+2.0**
X16A	**Lo Mia Camp, P**	**5.93**	**247**	Pn	**Pn**	**00 41 54.5**	**-0.1**
PKCU	**Pink Cliffs**	**6.01**	**278**	Pn	**Pn**	**00 41 57.0**	**+1.1**
ABTX	**Abilene, Hawle**	**6.02**	**133**	Pn	**Pn**	**00 41 54.8**	**-0.9**
ABTX	**Abilene, Hawle**	**6.02**	**133**	P		00 41 55.2	
	baz=317						
U15A	**North Rim**	**6.03**	**268**	Pn	**Pn**	**00 41 57.1**	**+1.0**
MSU	**Marysvale**	**6.06**	**288**	Pn	**Pn**	**00 41 58.3**	**+1.8**
MVU	**Marysvale**	**6.08**	**288**	Pn	**Pn**	**00 41 57.3**	**+0.5**
OK025	**Westminster Rd**	**6.18**	**100**	Pn	**Pn**	**00 41 57.7**	**-0.3**
MPU	**Maple Canyon**	**6.20**	**302**	Pn	**Pn**	**00 42 00.9**	**+2.6**
FNO	**Franklin**	**6.22**	**103**	Pn	**Pn**	**00 41 59.9**	**+1.4**
KNB	**Kanab**	**6.41**	**274**	Pn	**Pn**	**00 42 01.1**	**-0.2**
QUOK	**Quay**	**6.57**	**94**	Pn	**Pn**	**00 42 05.7**	**+2.5**
QUOK				IAmb_Lg		00 43 58.9	
	comp=Z,48nm,1.3s						
319A	**Douglas**	**6.63**	**215**	Pn	**Pn**	**00 42 05.7**	**+1.5**
T35A	**Sooner Cattle**	**6.65**	**87**	Pn	**Pn**	**00 42 05.0**	**+0.6**
W35A	**Tecumseh**	**6.66**	**103**	Pn	**Pn**	**00 42 06.0**	**+1.4**
BGNE	**Belgrade**	**6.87**	**47**	Pn	**Pn**	**00 42 08.0**	**+0.6**
PD31	**Pinedale Array**	**6.91**	**330**	Pn	**Pn**	**00 42 09.8**	**+1.6**
PDAR	**Pinedale Array**	**6.91**	**330**	Pn	**Pn**	**00 42 09.9**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=6.4						
PDAR				Lg	Lg	00 44 01.6	
	comp=Z,0.6nm,0.3s,baz=128,slow=35,SNR=3.9						
N33A	**J Bar K, Exete**	**6.92**	**54**	IAmb_Lg		00 44 08.1	
	comp=Z,48nm,0.9s						
Z35A	**Perchaven, San**	**7.14**	**118**	IAmb_Lg		00 44 28.2	
	comp=Z,46nm,1.0s						
RSSD	**Black Hills**	**7.25**	**4**	Pn	**Pn**	**00 42 13.5**	**+0.7**
TUL1	**Leonard**	**7.34**	**95**	Pn	**Pn**	**00 42 14.1**	**+0.2**
PSUT	**Pine Spring**	**7.35**	**286**	Pn	**Pn**	**00 42 16.2**	**+2.0**
JCT	**Junction City**	**7.63**	**145**	Pn	**Pn**	**00 42 19.6**	**+1.6**
JCT				IAmb_Lg		00 44 40.6	
	comp=Z,62nm,1.0s						
WHTX	**Lake Whitney,**	**7.80**	**127**	Pn	**Pn**	**00 42 18.8**	**-1.3**
REDW	**Red Top Meadow**	**7.95**	**326**	Pn	**Pn**	**00 42 23.8**	**+1.4**
N35A	**Tabor**	**8.18**	**58**	Pn	**Pn**	**00 42 25.8**	**+0.4**
N35A				IAmb_Lg		00 44 56.3	
	comp=Z,72nm,0.8s						
U38A	**Gravette**	**8.39**	**90**	Pn	**Pn**	**00 42 28.2**	**-0.1**
U38A				IAmb_Lg		00 44 53.7	
	comp=Z,40nm,0.9s						
HHAR	**Hobbs**	**8.77**	**91**	Pn	**Pn**	**00 42 32.9**	**-0.6**
HHAR				IAmb_Lg		00 45 03.5	
	comp=Z,52nm,0.9s						
W39A	**Magazine**	**9.09**	**97**	Pn	**Pn**	**00 42 37.5**	**-0.4**
W39A				IAmb_Lg		00 45 21.3	
	comp=Z,36nm,0.8s						
S39A	**Bolivar**	**9.20**	**82**	Pn	**Pn**	**00 42 39.4**	**+0.1**
YHB	**Horse Butte**	**9.22**	**330**	Pn	**Pn**	**00 42 41.3**	**+1.5**
ECSD	**EROS Data Cent**	**9.27**	**40**	Pn	**Pn**	**00 42 39.7**	**-0.6**
P38A	**Dawn**	**9.29**	**69**	Pn	**Pn**	**00 42 38.9**	**-1.6**
MIAR	**Mount Ida**	**9.43**	**101**	Pn	**Pn**	**00 42 40.9**	**-1.7**
U40A	**Yellville**	**9.63**	**90**	IAmb_Lg		00 45 35.2	
	comp=Z,36nm,1.0s						
833A	**Chaparral WMA,**	**9.68**	**150**	IAmb_Lg		00 45 50.6	
	comp=Z,29nm,0.7s						
NATX	**Nacogdoches**	**9.83**	**118**	IAmb_Lg		00 46 01.6	
	comp=Z,28nm,0.9s						
N38A	**Joes South For**	**9.84**	**63**	IAmb_Lg		00 45 42.2	
	comp=Z,38nm,0.7s						
MGMO	**Mountain Grove**	**10.04**	**85**	IAmb_Lg		00 45 49.6	
	comp=Z,39nm,1.0s						
WHAR	**Wooly Hollow**	**10.26**	**95**	Pn	**Pn**	**00 42 54.7**	**+0.8**
W41B	**Gary Mavity, V**	**10.32**	**96**	Pn	**Pn**	**00 42 54.3**	**-0.4**
P40A	**Paris**	**10.39**	**71**	Pn	**Pn**	**00 42 53.7**	**-1.9**
NVAR	**Mina Array Bea**	**10.80**	**282**	Pg	Pn	00 43 49.7	+48
	comp=Z,0.2nm,0.3s,baz=103,slow=20,SNR=3.7						
CCM	**Cathedral Cave**	**10.85**	**80**	Pn	**Pn**	**00 43 01.5**	**-0.4**
ULM	**Lac du Bonnet**	**14.83**	**23**	Pn	**Pn**	**00 43 53.3**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=196,slow=13,SNR=3.8						
YKA	**Yellowknife Ar**	**26.34**	**350**	P	**P**	**00 46 02.4**	**0.0**
	comp=Z,0.1nm,0.5s,baz=155,slow=11,SNR=3.4						
ILAR	**Eielson Array**	**37.34**	**332**	P	**P**	**00 47 39.6**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=125,slow=7.8,SNR=4.3						

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*NEIC **07** 00:44:55.4±1.4, 30°.43S±0°.09×178°.1W±0°.2, h94^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=19.2km s-min=12.5km az=100.0*
*IDC **07** 00:44:56.4±5.5, 30°.45S×178°.18W, h101^{km}±34^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.4/38, mbtmp3.9/2, Error ellipse: s-maj=92.1km s-min=38.6km az=144.0*
ISC 07 00:44:50.8±2.2**, 30°.73S**±0°.10×**177°.5W**±0°.3**, h100**^{km}**, n14, σ**1^{s}**.46**/13**, mb4.2**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.53**	**345**	P	**Pn**	**00 45 18.9**	**+1.5**
	266nm,0.3s,baz=74,slow=5.7,SNR=9.0						
RAO				S	**Sn**	**00 45 36.6**	**-1.0**
	652nm,0.3s,baz=88,slow=21,SNR=6.9						
RAO	**Raoul Island**	**1.53**	**345**		**Pn**	**00 45 18.8**	**+1.3**
RAO				Sn	**Sn**	**00 45 34.2**	**-3.4**
URZ	**Urewera**	**8.74**	**209**	Pn	Pn	00 46 59.1	+4.8
TUWZ	**Tuamarina**	**12.73**	**211**	Pn	**P**	**00 47 53.6**	**-1.6**
CTAO	**Charters Tower**	**34.31**	**279**	P	**P**	**00 51 28.9**	**+1.1**
BBOO	**Buckleboo**	**39.32**	**254**	P	P	00 52 13.3	+3.1
ASAR	**Alice Springs**	**43.55**	**267**	P	**P**	**00 52 45.4**	**+0.4**
	0.5nm,0.5s,baz=104,slow=6.8,SNR=5.5						
WR0	**Warramunga Arr**	**44.39**	**272**	P	**P**	**00 52 52.0**	**+0.4**
WR0				IAmb	IAmb	00 53 03.4	
	comp=Z,5.2nm,1.1s						
WB2	**Warramunga Arr**	**44.56**	**272**	P	**P**	**00 52 53.6**	**+0.5**
WB2				IAmb	IAmb	00 53 07.5	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**44.57**	**272**	P	**P**	**00 52 53.5**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=110,slow=8.2,SNR=13						
WB0	**Warramunga Arr**	**44.59**	**272**	P	**P**	**00 52 53.4**	**+0.1**
WB0				IAmb	IAmb	00 52 54.3	
	comp=Z,3.3nm,0.8s						
STCH	**Steam Cracks**	**54.26**	**26**	P	P	00 54 11.7	+5.0
STCH				IAmb	IAmb	00 54 14.4	
	comp=Z,1.1nm,0.8s						
FIA1	**FINESS Array S**	**145.61**	**340**	PKPbc	**PKiKP**	**01 04 21.3**	**+0.6**
FINES	**FINESS Array B**	**145.62**	**340**	PKPbc	**PKiKP**	**01 04 20.1**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=52,slow=3.3,SNR=19						

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*AEIC **07** 00:51:27.3±2.6, 52°.36N±0°.08×167°.20W±0°.09, h40^{km}±9^{km}, ML3.0/15, mb4.0/13(NEIC), Error ellipse: s-maj=12.4km s-min=7.0km az=163.0*
NEIC 07 00:51:24.3±2.4**, 52°.3N**±0°.1×**167°.21W**±0°.09**, h10**^{km}±12^{km}**, Error ellipse: s-maj=17.7km s-min=6.2km az=160.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**1.14**	**325**		Pn	00 51 46.8	+0.5
OKFG	**Magazine Ridge**	**1.17**	**339**		Pg	00 51 47.4	+0.7
OKFG					Sn	00 52 03.2	+0.7
OKSO	**Okmok South**	**1.18**	**331**		Pg	00 51 47.4	+0.5
NIKH	**Nikolski High**	**1.19**	**303**		Sn	00 52 03.5	+0.2
NIKH	**Nikolski High**	**1.19**	**303**		Pg	00 51 47.7	+0.5
MGOD	**Makushin Gods**	**1.48**	**8**		Pb	00 51 51.5	-0.4
MGOD					Sn	00 52 10.6	+0.1
MAPS	**Pakushin South**	**1.49**	**6**		Pb	00 51 51.7	-0.3
MAPS					Sn	00 52 10.8	+0.1
MREP	**Makushin Rep’t**	**1.51**	**11**		Pb	00 51 52.1	-0.3
UNV	**Unalaska Valle**	**1.58**	**15**	Pn	Pb	00 51 53.8	+0.2
MNAT	**Makushin Natee**	**1.59**	**11**		Pb	00 51 53.3	-0.5
MSW	**Makushin Switc**	**1.61**	**9**		Pb	00 51 53.6	-0.5
AKUT	**Akutan**	**2.01**	**25**	Pn	Pn	00 51 58.8	+0.6
DT1	**Dutton Round H**	**4.04**	**44**		Pn	00 52 26.9	+0.8
ATKA	**Atka Island**	**4.29**	**271**	Pn	Pn	00 52 31.0	+1.4
SDPT	**Sand Point**	**5.00**	**50**	Pn	Pn	00 52 39.8	+0.4
CNBA	**Chernabura Isl**	**5.18**	**58**	Pn	Pn	00 52 41.5	-0.3
ADK	**Adak**	**5.86**	**269**	Pn	Pn	00 52 53.2	+2.2
CHGN	**Chignik**	**6.50**	**49**	Pn	Pn	00 53 00.6	+0.7
OHAK	**Old Harbor**	**9.41**	**53**	Pn	Pn	00 53 39.7	-0.1
KDAK	**Kodiak Island**	**10.00**	**51**	Pn	Pn	00 53 47.0	-0.8
CNPM	**China Poot**	**11.48**	**45**	Pn	Pn	00 54 07.5	-0.6
SEW	**Seward**	**12.55**	**45**	Pn	Pn	00 54 21.3	-1.3
SUA	**Susitna One**	**12.80**	**38**	Pn	Pn	00 54 25.9	-0.3
PPLA	**Purkeypile**	**13.26**	**31**	Pn	P	00 54 37.6	-4.9
KNK	**Knik Glacier**	**13.66**	**41**	Pn	Pn	00 54 37.2	-0.6
GHO	**Glory Hole Cre**	**13.68**	**39**	Pn	Pn	00 54 37.1	-1.0
HIN	**Hinchinbrook I**	**13.98**	**47**	Pn	Pn	00 54 39.7	-2.6
KTH	**Kantishna Hill**	**14.13**	**31**	Pn	Pn	00 54 47.1	+2.7
FID	**Port Fidalgo**	**14.15**	**45**	Pn	Pn	00 54 41.5	-3.1
SCM	**Sheep Creek Mo**	**14.34**	**41**	Pn	Pn	00 54 46.2	-1.0
EYAK	**Cordova Ski Ar**	**14.39**	**47**	Pn	Pn	00 54 45.7	-2.0
KLU	**Klutina**	**14.74**	**43**	Pn	Pn	00 54 50.3	-2.4
RAGM	**Ragged Mountai**	**14.80**	**48**	Pn	Pn	00 54 52.0	-1.5
M24K	**Tolsona, Glenn**	**14.95**	**41**	Pn	Pn	00 54 53.3	-2.2
HMT	**Hamilton**	**14.98**	**49**	Pn	Pn	00 54 54.5	-1.3
N25K	**Chitina, Valde**	**15.36**	**44**	Pn	Pn	00 54 58.1	-2.8
N25K				IAmb	IAmb	00 55 12.6	
	comp=Z,14nm,1.5s						
GLB	**Gilahina Butte**	**15.62**	**45**	Pn	Pn	00 55 01.9	-2.5
GLB				IAmb	IAmb	00 55 12.8	
	comp=Z,4.8nm,0.8s						
VRDI	**Verde Repeater**	**15.69**	**46**	Pn	Pn	00 55 03.2	-2.2
VRDI				IAmb	IAmb	00 55 09.0	
	comp=Z,12nm,1.4s						
TGL	**Tana Glacier**	**15.79**	**48**	Pn	Pn	00 55 06.2	-0.3
TGL				IAmb	IAmb	00 55 14.8	
	comp=Z,16nm,1.1s						
ISLE	**Juniper Island**	**15.96**	**49**	Pn	Pn	00 55 06.6	-2.2
BALM	**Baldy**	**16.11**	**48**	Pn	Pn	00 55 09.4	-1.3
IL31		**16.26**	**32**	Pn	Pn	00 55 12.0	-0.5
BARN	**Barnard Glacie**	**16.43**	**48**	Pn	Pn	00 55 15.0	+0.1
BARN				IAmb	IAmb	00 55 18.4	
	comp=Z,18nm,1.4s						
TABL	**Table Mountain**	**16.47**	**50**	Pn	Pn	00 55 15.2	-0.1
CTGM	**Chitina Glacie**	**16.55**	**48**	Pn	Pn	00 55 16.0	-0.3
CTGM				IAmb	IAmb	00 55 19.2	
	comp=Z,19nm,1.4s						
HYT	**Haines Junctio**	**18.30**	**51**	Pn	P	00 55 39.5	+1.3
HYT				IAmb	IAmb	00 55 53.0	
	comp=Z,15nm,1.4s						
PEA0B	**Petropavlovsk-**	**21.15**	**286**	P	P	00 56 09.7	+0.5
INK	**Inuvik**	**22.66**	**32**	P	P	00 56 24.2	-1.1

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*ANF **07** 00:52:08.7±0.9, 32°.88N×96°.88W, h8^{km}±7^{km}, ML4.4/17, Error ellipse: s-maj=3.3km s-min=2.8km az=3.0*
*IDC **07** 00:52:08.7±1.5, 32°.88N×96°.91W, h0^{km}, mb3.8/6, mb1 4.0/13, mb1mx3.7/53, mbtmp3.8/13, ML3.4/7, MS3.3/2, Ms1 3.3/2, ms1mx2.8/44, Error ellipse: s-maj=26.9km s-min=14.0km az=7.0*
*NEIC **07** 00:52:09.1±1.1, 32°.85N±0°.03×96°.89W±0°.04, h5^{km}±2^{km}, mb_Lg3.6/99, Error ellipse: s-maj=6.2km s-min=4.0km az=234.0*
ISC 07 00:52:08.5±1.2**, 32°.87N**±0°.03×**96°.86W**±0°.03**, h6**^{km}±9^{km}**, n158, σ**1^{s}**.38**/166**, mb3.6**/6**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.56	324	Pg	Pg	00 52 19.8	+0.3
Z35A				Sg	Sg	00 52 27.3	+0.5
Z35A	Perchaven, San	0.56	324	P		00 52 19.7	
	baz=148,SNR=329						
Z35A				S		00 52 27.4	
	baz=148						
WHTX	Lake Whitney,	1.01	210	P	Pg	00 52 27.7	-0.3
	baz=28,SNR=141						
WHTX				S	Sg	00 52 40.6	-0.6
	baz=28						
WHTX	Lake Whitney,	1.01	210		Pg	00 52 27.6	-0.4
WHTX				Sg	Sg	00 52 40.5	-0.6
WHTX	Lake Whitney,	1.01	210	P		00 52 27.8	
	baz=29						
WHTX				S		00 52 40.6	
	baz=29						
237A	Washetta, Mont	1.24	134		Pg	00 52 33.0	+0.6
237A				IAmb_Lg		00 52 49.6	
	comp=Z,301nm,0.8s						
237A	Washetta, Mont	1.24	134	P		00 52 33.1	
	baz=313,SNR=145						
237A				S		00 52 51.3	
	baz=313						
Z38A	Mt. Pleasant	1.62	76		Pn	00 52 38.8	+1.2
Z38A				IAmb_Lg		00 53 00.6	
	comp=Z,293nm,0.8s						
Z38A	Mt. Pleasant	1.62	76	P		00 52 38.8	
	baz=256,SNR=24						
Z38A				S		00 53 00.4	
	baz=256						
X37A	Clayton	2.11	35	Pn	Pb	00 52 46.5	-0.7
X37A	Clayton	2.11	35	P		00 52 46.5	
	baz=216						
X37A				S		00 53 14.1	
	baz=216						
NATX	Nacogdoches	2.17	120	P	Pn	00 52 45.7	+0.7
	baz=300						
NATX				S	Sn	00 53 13.9	+1.7
	baz=300						
NATX	Nacogdoches	2.17	120	Pn	Pn	00 52 45.8	+0.7
435B	Jarrell	2.17	197	P	Pn	00 52 45.4	+0.2
	baz=16						
435B				Sb	Sb	00 53 16.0	+0.6
	baz=16						
435B	Jarrell	2.17	197	Pn	Pn	00 52 45.4	+0.2
435B				IAmb_Lg		00 53 17.7	
	comp=Z,296nm,0.8s						
435B	Jarrell	2.17	197	P		00 52 45.4	
	baz=16						
435B				S		00 53 14.7	
	baz=16						
W35A	Tecumseh	2.27	360	Pn	Pn	00 52 48.3	+1.7
ABTX	Abilene, Hawle	2.36	265	P	Pn	00 52 47.8	0.0
	baz=84						
ABTX				S	Sn	00 53 16.5	-0.6
	baz=84						
ABTX	Abilene, Hawle	2.36	265	Pn	Pn	00 52 47.6	-0.2
ABTX	Abilene, Hawle	2.36	265	P		00 52 48.0	
	baz=84						
ABTX				S		00 53 17.5	
	baz=84						
FNO	Franklin	2.42	349	Pn	Pn	00 52 50.3	+1.7
WMOK	Wichita Mounta	2.46	320	P	Pn	00 52 50.1	+1.1
	baz=140						
WMOK				S	Sn	00 53 21.1	+1.7
	baz=140						
WMOK	Wichita Mounta	2.46	320		Pn	00 52 50.2	+1.1
OKCSW	OKLAHOMA CITY	2.57	349		Pn	00 52 51.6	+0.9
OKCFA	Oklahoma City	2.58	349	Pn	Pn	00 52 52.4	+1.6
OKCFA				IAmb_Lg		00 53 37.9	
	comp=Z,231nm,0.8s						
OK025	Westminster Rd	2.73	352	Pn	Pn	00 52 54.4	+1.5
OK025				IAmb_Lg		00 53 41.3	
	comp=Z,247nm,0.8s						
HKT	Hockley	3.04	163	Pn	Pn	00 52 58.3	+1.2
OK030	Cody Creek RV	3.05	1	Pn	Pn	00 52 58.7	+1.5
OK031	S. Brethren Rd	3.07	0	Pn	Pn	00 52 58.5	+0.9
TUL1	Leonard	3.16	16	P	Pn	00 52 59.9	+1.2
	baz=197,SNR=5.5						
TUL1				S	Sn	00 53 38.1	+1.4
	baz=197						
TUL1	Leonard	3.16	16	Pn	Pn	00 52 60.0	+1.2
TUL1				IAmb_Lg		00 53 54.7	
	comp=Z,129nm,0.9s						
TUL1	Leonard	3.16	16	P		00 53 00.1	
	baz=197,SNR=26						
TUL1				S		00 53 38.2	
	baz=197						
MIAR	Mount Ida	3.20	58	P	Pn	00 52 60.0	+0.6
	baz=239						
MIAR				S	Sn	00 53 36.8	-1.1
	baz=239						
MIAR	Mount Ida	3.20	58	Pn	Pn	00 52 59.9	+0.6
WLAR	White Oak Lake	3.24	74	Pn	Pn	00 53 00.9	+1.0
WLAR				IAmb_Lg		00 54 02.3	
	comp=Z,162nm,0.8s						
QUOK	Quay	3.29	2	Pn	Pn	00 53 02.2	+1.6
Z41A	Richland Creek	3.43	82	P	Pn	00 53 03.4	+1.0
	baz=264,SNR=8.3						
Z41A				S	Sn	00 53 43.7	+0.4
	baz=264						
Z41A	Richland Creek	3.43	82		Pn	00 53 03.6	+1.2
Z41A				IAmb_Lg		00 54 04.6	
	comp=Z,129nm,0.7s						
Z41A	Richland Creek	3.43	82	P		00 53 03.5	
	baz=264,SNR=17						
Z41A				P		00 53 03.5	
	baz=264,SNR=17						
Z41A				S		00 53 44.2	
	baz=264						
Z41A				S		00 53 44.2	
	baz=264						
W39A	Magazine	3.45	47	P	Pn	00 53 04.8	+2.1
	baz=229,SNR=38						
W39A				S	Sn	00 53 45.8	+1.9
	baz=229						
W39A	Magazine	3.45	47	Pn	Pn	00 53 05.2	+2.5
W39A	Magazine	3.45	47	P		00 53 04.8	
	baz=228,SNR=47						
JCT	Junction City	3.46	227	P	Pn	00 53 03.1	+0.1
	baz=45						
JCT				S	Sn	00 53 43.4	-0.9
	baz=45						
JCT	Junction City	3.46	227	Pn	Pn	00 53 03.0	+0.1
JCT				IAmb_Lg		00 54 06.0	
	comp=Z,217nm,0.7s						
X40A	Basin Creek Fa	3.72	63	P	Pn	00 53 07.2	+0.7
	baz=245,SNR=11						
X40A				S	Sn	00 53 48.8	-1.8
	baz=245						
X40A	Basin Creek Fa	3.72	63	Pn	Pn	00 53 06.8	+0.3
X40A	Basin Creek Fa	3.72	63	P		00 53 07.3	
	baz=245,SNR=28						
X40A				P		00 53 07.3	
	baz=245,SNR=28						
CROK	Carrier	3.74	346	Pn	Pn	00 53 07.7	+1.0
441A	DeRidder	3.77	123	Pn	Pn	00 53 08.8	+1.6
441A	DeRidder	3.77	123	P		00 53 08.6	
	baz=304,SNR=13						
U32A	Winter Ranch,	3.92	334	Pn	Pn	00 53 10.1	+0.8
U32A	Winter Ranch,	3.92	334	P		00 53 10.7	
	baz=153						
T35A	Sooner Cattle	4.04	4	Pn	Pn	00 53 12.0	+1.1
T35A				IAmb_Lg		00 54 25.2	
	comp=Z,161nm,1.0s						
T35B	Sooner Cattle	4.04	4	P		00 53 12.0	
	baz=184,SNR=18						
GC02	Grant County #	4.05	349	Pn	Pn	00 53 11.9	+0.8
735A	Kenedy	4.09	192	IAmb_Lg		00 54 21.7	
	comp=Z,189nm,1.3s						
735A	Kenedy	4.09	192	P		00 53 13.5	
	baz=11						
U38A	Gravette	4.10	29	P		00 53 12.9	
	baz=210						
U38A	Gravette	4.10	29	Pn	Pn	00 53 13.0	+1.3
U38A				IAmb_Lg		00 54 25.6	
	comp=Z,107nm,0.7s						
342A	Flagon Creek P	4.13	110	Pn	Pn	00 53 13.0	+1.0
342A				IAmb_Lg		00 54 24.7	
	comp=Z,120nm,0.8s						
342B	Flagon Creek P	4.13	110	P		00 53 12.9	
	baz=292						
KAN13	South Haven SW	4.16	353	Pn	Pn	00 53 13.7	+1.1
HHAR	Hobbs	4.17	34	Pn	Pn	00 53 14.3	+1.7
KAN14	Manchester OK	4.17	348	Pn	Pn	00 53 13.4	+0.6
KAN10	Anthony SW Sta	4.36	347	Pn	Pn	00 53 16.5	+1.2
CCAR	Cane Creek	4.38	75	Pn	Pn	00 53 17.2	+1.7
CCAR				IAmb_Lg		00 54 41.3	
	comp=Z,172nm,1.0s						
W41B	Gary Mavity, V	4.46	58	P	Pn	00 53 18.1	+1.4
	baz=240,SNR=6.9						
W41B				S	Sn	00 54 08.8	-0.1
	baz=240						
W41B	Gary Mavity, V	4.46	58	Pn	Pn	00 53 18.3	+1.6
W41B	Gary Mavity, V	4.46	58	P		00 53 17.9	
	baz=240,SNR=41						
AMTX	Amarillo	4.49	298	P	Pn	00 53 18.0	+0.9
	baz=116						
AMTX	Amarillo	4.49	298	Pn	Pn	00 53 18.2	+1.1
AMTX	Amarillo	4.49	298	P		00 53 18.2	
	baz=116,SNR=10						
WHAR	Wooly Hollow	4.49	56	Pn	Pn	00 53 19.1	+2.0
143A	Socs Landing,	4.60	91	Pn	Pn	00 53 19.1	+0.6
143A	Socs Landing,	4.60	91	P		00 53 19.2	
	baz=273,SNR=9.8						
U40A	Yellville	4.79	42	P	Pn	00 53 22.7	+1.4
	baz=225,SNR=11						
U40A				S	Sn	00 54 16.4	-0.7
	baz=225						
U40A	Yellville	4.79	42	Pn	Pn	00 53 22.8	+1.5
U40A				IAmb_Lg		00 54 53.9	
	comp=Z,82nm,0.7s						
U40A	Yellville	4.79	42	P		00 53 22.8	
	baz=224,SNR=36						
U40A				P		00 53 22.8	
	baz=224,SNR=36						
FCAR	Ozark Folk Cen	4.94	51	Pn	Pn	00 53 24.5	+1.3
833A	Chaparral WMA,	5.03	206	P	Pn	00 53 25.1	+0.5
	baz=25						
833A				S	Sn	00 54 21.1	-1.9
	baz=25						
833A	Chaparral WMA,	5.03	206	Pn	Pn	00 53 24.8	+0.3
833A				IAmb_Lg		00 54 46.4	
	comp=Z,94nm,0.9s						
833A	Chaparral WMA,	5.03	206	P		00 53 25.3	
	baz=25						
MSTX	Muleshoe	5.07	284	P	Pn	00 53 25.1	0.0
	baz=101,SNR=22						
MSTX				S	Sn	00 54 21.1	-2.8
	baz=101						
MSTX	Muleshoe	5.07	284	Pn	Pn	00 53 25.5	+0.4
MSTX	Muleshoe	5.07	284	P		00 53 25.6	
	baz=101						
X43A	Marvell	5.25	70	P	Pn	00 53 28.2	+0.8
	baz=253						
X43A				S	Sn	00 54 28.4	+0.2
	baz=253						
X43A	Marvell	5.25	70	Pn	Pn	00 53 29.1	+1.6
X43A	Marvell	5.25	70	P		00 53 28.6	
	baz=253						
344A	Westbrook Farm	5.38	104	Pn	Pn	00 53 30.3	+1.0
344A				IAmb_Lg		00 55 05.3	
	comp=Z,65nm,1.1s						
344A	Westbrook Farm	5.38	104	P		00 53 30.1	
	baz=286						
S39A	Bolivar	5.61	30	Pn	Pn	00 53 33.5	+1.0
LCAR	Lake Charles	5.69	54	Pn	Pn	00 53 34.4	+0.8
MGMO	Mountain Grove	5.69	40	Pn	Pn	00 53 35.2	+1.6
MGMO				IAmb_Lg		00 55 17.4	
	comp=Z,124nm,1.0s						
R32A	Long Quarter,	5.74	345	Pn	Pn	00 53 34.5	+0.2
R32A				IAmb_Lg		00 55 26.2	
	comp=Z,73nm,0.8s						
CPRX	Cap Rock	5.89	273	Pn	Pn	00 53 36.5	0.0
Y45A	Yeager Farm, C	6.20	79	Pn	Pn	00 53 41.7	+1.1
Y45A				IAmb_Lg		00 55 45.3	
	comp=Z,53nm,0.8s						
Y45A	Yeager Farm, C	6.20	79	P		00 53 41.8	
	baz=262,SNR=8.5						
KSU1	Kansas State U	6.22	2	P	Pn	00 53 41.1	+0.3
	baz=182						
KSU1	Kansas State U	6.22	2	IAmb_Lg		00 55 34.5	
	comp=Z,145nm,1.1s						
T42A	Van Buren	6.29	47		Pn	00 53 43.3	+1.5
CBKS	Cedar Bluff	6.37	339	P	Pn	00 53 43.1	+0.2
	baz=158,SNR=9.1						
CBKS	Cedar Bluff	6.37	339	Pn	Pn	00 53 43.2	+0.2
CBKS				IAmb_Lg		00 55 36.3	
	comp=Z,61nm,0.8s						
CBKS	Cedar Bluff	6.37	339	P		00 53 43.2	
	baz=158,SNR=15						
GDL2	Guadalupe Moun	6.37	266	Pn	Pn	00 53 44.3	+1.2
OXF	Oxford	6.42	73	P	Pn	00 53 44.3	+0.7
	baz=257						
OXF	Oxford	6.42	73	Pn	Pn	00 53 44.8	+1.2
PBMO	Poplar Bluff	6.57	52	Pn	Pn	00 53 46.7	+1.2
PBMO				IAmb_Lg		00 55 47.4	
	comp=Z,56nm,0.9s						
R40A	Maddies Statio	6.57	33	Pn	Pn	00 53 46.7	+1.1
R40A				IAmb_Lg		00 55 48.3	
	comp=Z,60nm,0.8s						
R40A	Maddies Statio	6.57	33	P		00 53 47.2	
	baz=216,SNR=8.4						
PEBM	Pemiscott Bayo	6.62	59	IAmb_Lg		00 55 56.3	
	comp=Z,74nm,0.9s						
W45A	Hickory Valley	6.77	68	Pn	Pn	00 53 48.5	+0.2
CCM	Cathedral Cave	6.91	40	P	Pn	00 53 50.9	+0.7
	baz=223						
CCM	Cathedral Cave	6.91	40	Pn	Pn	00 53 50.9	+0.7
CCM				IAmb_Lg		00 55 58.4	
	comp=Z,54nm,0.8s						
CCM	Cathedral Cave	6.91	40	P		00 53 51.4	
	baz=223,SNR=14						
P38A	Dawn	7.25	21	IAmb_Lg		00 56 06.3	
	comp=Z,77nm,1.1s						
HICK	Hickman	7.27	58	IAmb_Lg		00 56 19.2	
	comp=Z,54nm,0.8s						
MNTX	Cornudas Mount	7.31	263	P	Pn	00 53 55.6	-0.2
	baz=79						
MNTX	Cornudas Mount	7.31	263	Pn	Pn	00 53 55.9	0.0
FVM	French Village	7.32	44	Pn	Pn	00 53 57.3	+1.4
FVM				IAmb_Lg		00 56 07.2	
	comp=Z,53nm,1.1s						
T25A	Trinidad	7.52	307	P	Pn	00 53 58.9	+0.1
	baz=123						
T25A	Trinidad	7.52	307	Pn	Pn	00 53 59.8	+0.9
P40A	Paris	7.70	29	Pn	Pn	00 54 01.8	+0.7
P40A				IAmb_Lg		00 56 23.5	
	comp=Z,84nm,0.8s						
KSCO	Kaye Shedlock’	7.71	324	P	Pn	00 54 01.4	+0.1
	baz=141						
KSCO				S	Sn	00 55 25.2	-3.8
	baz=141						
KSCO	Kaye Shedlock’	7.71	324	Pn	Pn	00 54 01.6	+0.3
KSCO				IAmb_Lg		00 56 21.9	
	comp=Z,73nm,0.9s						
KSCO	Kaye Shedlock’	7.71	324	P		00 54 01.7	
	baz=141,SNR=11						
S44A	Carbondale	7.86	50	Pn	Pn	00 54 04.2	+0.9
S44A				IAmb_Lg		00 56 35.2	
	comp=Z,38nm,0.9s						
SLM	Saint Louis	7.88	41	IAmb_Lg		00 56 17.3	
	comp=Z,45nm,0.7s						
SIUC	Southern Illin	7.89	50	IAmb_Lg		00 56 20.8	
	comp=Z,40nm,0.7s						
T45A	Paducah	7.91	56	IAmb_Lg		00 56 29.8	
	comp=Z,46nm,0.8s						
WVT	Waverly	8.13	64	P	Pn	00 54 07.1	+0.1
	baz=249						
WVT				S	Sn	00 55 35.4	-3.8
	baz=249						
WVT	Waverly	8.13	64	Pn	Pn	00 54 07.1	+0.1
ANMO	Albuquerque	8.24	287	Pn	Pn	00 54 09.9	+1.1
	comp=Z,0.2nm,0.3s,baz=102,slow=18,SNR=3.5						
ANMO				Lg	Lg	00 56 24.1	
	comp=Z,8.7nm,0.3s,baz=11,slow=16,SNR=11						
ANMO				LR	LR	00 57 32.2	
	comp=Z,69nm,20.4s,baz=115,slow=40						
ANMO	Albuquerque	8.24	287		Pn	00 54 10.1	+1.3
ANMO				IAmb_Lg		00 56 28.1	
	comp=Z,48nm,0.7s						
BNM	Barren Site	8.26	282	Pn	Pn	00 54 09.4	+0.4
LRAL	Lakeview Retre	8.29	86	P	Pn	00 54 09.2	-0.1
	baz=271						
LRAL				S	Sn	00 55 41.3	-1.9
	baz=271						
LRAL	Lakeview Retre	8.29	86	Pn	Pn	00 54 09.1	-0.1
X48A	Hartselle	8.33	76	Pn	Pn	00 54 10.8	+1.0
N38A	Joes South For	8.42	19	Pn	Pn	00 54 11.3	+0.3
SDCO	Great Sand Dun	8.57	307	Pn	Pn	00 54 15.0	+1.6
SDCO				IAmb_Lg		00 56 48.5	
	comp=Z,35nm,0.8s						
BGNE	Belgrade	8.58	353	P	Pn	00 54 12.9	-0.4
	baz=173						
BGNE				S	Sn	00 55 45.0	-5.4
	baz=173						
Q44A	Meyer Farm, Va	8.76	44	IAmb_Lg		00 57 12.5	
	comp=Z,64nm,1.2s						
P43A	Skaggs, Pawnee	8.98	39	IAmb_Lg		00 56 58.4	
	comp=Z,65nm,0.9s						
OGNE	Ogallala	9.06	334	P	Pn	00 54 19.5	-0.3
	baz=152						
OGNE	Ogallala	9.06	334	Pn	Pn	00 54 19.4	-0.5
OGNE				IAmb_Lg		00 57 06.4	
	comp=Z,63nm,0.8s						
N41A	Harden Midland	9.18	30	IAmb_Lg		00 57 13.9	
	comp=Z,58nm,0.9s						
OLIL	Olney	9.21	48	IAmb_Lg		00 57 05.3	
	comp=Z,55nm,1.2s						
SWET	Sewanee	9.36	73	Pn	Pn	00 54 23.9	-0.1
SCIA	State Center	9.47	17	IAmb_Lg		00 57 26.9	
	comp=Z,50nm,0.8s						
S22A	4UR Ranch, Cre	9.49	304	Pn	Pn	00 54 26.8	+0.8
HDIL	Hopedale	9.78	36	P	Pn	00 54 30.5	+0.9
	baz=221						
ISCO	Idaho Springs	9.88	317	P	Pn	00 54 30.9	-0.4
	baz=132,SNR=5.4						
ISCO	Idaho Springs	9.88	317	Pn	Pn	00 54 31.7	+0.4
O44A	Mansfield	9.91	41	IAmb_Lg		00 57 41.8	
	comp=Z,43nm,0.9s						
P46A	Rosedale	10.29	46	Pn	Pn	00 54 37.3	+0.6
CPCT	Cooper Cave	10.54	72	Pn	Pn	00 54 40.3	+0.2
N23A	Red Feather La	10.81	320	P	Pn	00 54 44.6	+0.6
	baz=135						
N23A	Red Feather La	10.81	320	Pn	Pn	00 54 44.7	+0.6
SFIN	Lafayette	10.84	44	P	Pn	00 54 44.9	+0.7
	baz=229						
SFIN	Lafayette	10.84	44	Pn	Pn	00 54 44.7	+0.5
ECSD	EROS Data Cent	10.85	1	P	Pn	00 54 42.3	-1.9
	baz=181						
ECSD	EROS Data Cent	10.85	1	Pn	Pn	00 54 42.6	-1.6
PHWY	Pilot Hill	10.85	323	Pn	Pn	00 54 43.8	-0.8
TKL	Tuckaleechee C	11.18	72	Pn	Pn	00 54 48.6	-0.2
	comp=Z,0.2nm,0.3s,baz=245,slow=14,SNR=2.3						
TKL				Sn	Sn	00 56 49.3	-4.8
	comp=Z,0.6nm,0.3s,baz=108,slow=20,SNR=2.0						
JFWS	Jewell Farm	11.30	26	P	Pn	00 54 51.0	+0.5
	baz=210						
N47A	Urbana	11.98	45		Pn	00 54 58.7	-1.1
RSSD	Black Hills	12.55	336	P	Pn	00 55 07.2	-0.6
	baz=151						
RSSD	Black Hills	12.55	336	Pn	Pn	00 55 06.7	-1.1
I42A	Draeger Farm,	12.63	27		Pn	00 55 06.0	-2.7
SPMN	Marine on St.	12.73	13	Pn	Pn	00 55 07.1	-2.9
656A	Willston	12.76	102	Pn	Pn	00 55 09.1	-1.3
N49A	Columbus Grove	12.93	48	Pn	Pn	00 55 13.1	+0.3
F36A	Milaca	13.22	10	Pn	Pn	00 55 13.0	-3.8
ACSO	Alum Creek Sta	13.35	53	Pn	Pn	00 55 21.6	+3.2
L48A	N Adams	13.39	44	Pn	Pn	00 55 19.9	+0.9
G40A	Rib Lake	13.41	21	Pn	Pn	00 55 17.6	-1.6
J47A	Sunmer	14.02	39	Pn	Pn	00 55 30.6	+3.0
PDAR	Pinedale Array	14.07	318	Pn	Pn	00 55 29.0	+0.5
	comp=Z,0.1nm,0.3s,baz=120,slow=13,SNR=3.4						
PDAR				Lg	Lg	00 59 32.1	
	comp=Z,0.1nm,0.3s,baz=116,slow=29,SNR=2.1						
CMIG	Matias Romero	15.81	173	Pn	Pn	00 55 52.6	+0.7
	comp=Z,0.4nm,0.3s,baz=17,slow=14,SNR=1.9						
ULM	Lac du Bonnet	17.38	2	Pn	Pn	00 56 08.9	-2.6
	comp=Z,0.3nm,0.3s,baz=182,slow=14,SNR=3.0						
ULM				Sn	Sn	00 59 11.7	-13
	comp=Z,0.0nm,0.3s,baz=288,slow=20,SNR=1.6						
SADO	Sadowa	18.17	44	P	Pn	00 56 21.1	-0.2
	comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=1.4						
NVAR	Mina Array Bea	18.27	294	P	P	00 56 24.4	+1.3
	comp=Z,0.1nm,0.3s,baz=108,slow=9.0,SNR=4.5						
NEW	Newport	21.66	321	P	P	00 57 01.4	+1.8
	comp=Z,1.9nm,0.7s,baz=150,slow=7.2,SNR=4.5						
YKA	Yellowknife Ar	31.73	344	P	P	00 58 33.0	+0.2
	comp=Z,0.3nm,0.5s,baz=146,slow=9.5,SNR=7.7						
ILAR	Eielson Array	43.97	332	P	P	01 00 17.9	+1.9
	comp=Z,0.6nm,0.9s,baz=113,slow=8.0,SNR=7.3						
ARCES	ARCESS Array B	69.68	18	P	P	01 03 18.9	+0.4
	comp=Z,5.8nm,1.0s,baz=303,slow=5.5,SNR=4.9						
FINES	FINESS Array B	75.29	25	P	P	01 03 53.0	+1.0
	comp=Z,2.8nm,1.0s,baz=335,slow=8.4,SNR=3.4						
GERES	GERESS Array B	77.86	39	P	P	01 04 07.7	+0.7
	comp=Z,0.2nm,0.4s,baz=354,slow=5.4,SNR=4.0						
AKTO	Aktyubinsk	94.12	16	LR	LR	01 51 21.6	
	comp=Z,38nm,18.1s,baz=3.2,slow=38						

IDC 07 00:55:47.0±2.3**, 3°.45S**×**135°.35E, h0^{km}, mb3.6**/2**, mb1 3.9**/4**, mb1mx3.5**/30**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=59.0km s-min=16.3km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.82	302	Pn	Pn	00 57 01.8	+0.9
	3.5nm,0.3s,baz=238,slow=23,SNR=9.5						
SIJI				Sn	Sn	00 57 57.7	+0.2
	6.9nm,0.3s,baz=294,slow=22,SNR=8.8						
WRA	Warramunga Arr	16.43	183	Pn	Pn	00 59 38.0	-1.1
	0.2nm,0.3s,baz=1.7,slow=12,SNR=6.0						
WRA				Sn	Sn	01 02 34.7	-7.5
	0.2nm,0.3s,baz=7.1,slow=22,SNR=2.5						
ASAR	Alice Springs	20.15	184	P	Pn	01 00 24.4	-0.5
	4.6nm,0.6s,baz=12,slow=12,SNR=36						
ASAR				S	S	01 04 11.1	+0.8
	1.1nm,0.8s,baz=4.7,slow=29,SNR=3.5						
MKAR	Makanchi Array	68.36	324	P	P	01 06 50.1	-0.3
	0.2nm,0.5s,baz=113,slow=7.9,SNR=2.6						

IDC 07 01:03:29.5±408.0**, 45°.67N**×**27°.71E, h0^{km}, Error ellipse: s-maj=198.0km s-min=185.7km az=6.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I26DE	FREYUNG INFRAS	10.04	294	*i*		02 04 40.0	
	baz=104,slow=334,SNR=7.0						
I43RU	DUBNA INFRASON	12.55	25	*i*		02 22 10.0	
	baz=210,slow=338,SNR=1.6						
I31KZ	AKTYUBINSK INF	20.74	66	*i*		03 11 45.0	
	baz=270,slow=299						

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*IDC **07** 01:42:17.6±62.0, 22°.06S×178°.48W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.8/27, mbtmp3.9/3, Error ellipse: s-maj=1127.0km s-min=166.8km az=85.0*

*NEIC **07** 01:43:24.8±0.7, 24°.3S±0°.2×179°.7E±0°.2, h574^{km}±24^{km}, mb4.3/12, Error ellipse: s-maj=22.7km s-min=19.3km az=144.0*

ISC 07 01:43:25.4±1.3**, 24°.4S**±0°.1×**179°.5E**±0°.2**, h550^{km}, n22, σ0^{s}.81**/22**, mb4.2**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.39	155	P	P	01 44 58.1	-0.4
MSVF	Nonsavu	6.73	348	P	P	01 45 12.3	+1.2
OUZ	Omahuta	11.97	204	P	P	01 46 04.9	+1.5
DZM	Mont Dzumac	12.21	278	P	P	01 46 06.7	+0.5
SANVU	Saraoutou	14.55	305	P	P	01 46 29.4	-1.0
BKZ	Black Stump Fm	14.98	189	P	P	01 46 35.0	+0.4
BKZ				IAmb	IAmb	01 46 52.1	
	comp=Z,16nm,1.4s						
BFZ	Birch Farm	16.50	189	P	P	01 46 48.7	-0.7
BFZ				IAmb	IAmb	01 47 01.8	
	comp=Z,20nm,1.3s						
QRZ	Quartz Range	17.42	198	P	P	01 46 58.4	+0.6
CTAO	Charters Tower	31.01	271	P	P	01 48 59.2	+0.4
STKA	Stephens Creek	34.12	249	P	P	01 49 25.1	+0.2
	comp=Z,0.7nm,0.4s,baz=74,slow=10,SNR=2.9						
STKA	Stephens Creek	34.12	249	P	P	01 49 25.1	+0.2
BBOO	Buckleboo	38.83	247	P	P	01 50 02.3	-1.4
BBOO				IAmb	IAmb	01 50 03.2	
	comp=Z,8.9nm,1.1s						
AS31	Alice Springs	41.50	261	P	P	01 50 24.9	-0.3
ASAR	Alice Springs	41.50	261	P	P	01 50 24.8	-0.4
	comp=Z,0.3nm,0.3s,baz=91,slow=7.2,SNR=11						
ASAR	Alice Springs	41.50	261	P	P	01 50 24.8	-0.4
WR0	Warramunga Arr	41.72	267	P	P	01 50 26.3	-0.6
WB2	Warramunga Arr	41.90	267	P	P	01 50 27.4	-0.9
WRAB	Tennant Creek	41.90	267	P	P	01 50 27.6	-0.7
WRAB				IAmb	IAmb	01 50 43.2	

	comp=Z,8.0nm,1.1s						
WB0	Warramunga Arr	41.91	267	P	P	01 50 27.6	-0.7
WB0				IAmb	IAmb	01 50 41.1	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	41.91	267	P	P	01 50 27.8	-0.7
	comp=Z,0.8nm,0.3s,baz=96,slow=8.3,SNR=20						
WRA	Warramunga Arr	41.91	267	P	P	01 50 27.8	-0.7
FORT	Forrest	45.71	250	P	P	01 50 56.9	-0.8
FORT				IAmb	IAmb	01 51 14.6	
	comp=Z,13nm,1.1s						

*IDC **07** 02:10:15.2±5.1, 5°.42S×146°.90E, h153^{km}±58^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.3/26, mbtmp3.9/6, Error ellipse: s-maj=60.5km s-min=24.6km az=137.0*

*NEIC **07** 02:10:16.1±0.5, 5°.40S±0°.10×146°.9E±0°.2, h163^{km}±10^{km}, mb4.1/6, Error ellipse: s-maj=26.7km s-min=9.6km az=116.0*

ISC 07 02:10:19.3±1.1, **5°.7S**±0°.1×**146°.9E**±0°.2, **h195**^{km}, **n14**, σ**1^{s}20**/15, **mb3.6**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.72	176	P	Pn	02 11 16.4	-1.0
	2.0nm,0.3s,baz=259,slow=16,SNR=1.4						
PMG				S	Sn	02 12 02.1	-1.1
	2.9nm,0.3s,baz=37,slow=17,SNR=6.9						
PMG	Port Moresby	3.72	176		Pn	02 11 16.6	-0.9
WB0	Warramunga Arr	18.57	220	P	P	02 14 22.6	+0.8
WB0				IAmb	IAmb	02 14 33.4	
	comp=Z,10nm,1.2s						
WR0	Warramunga Arr	18.62	219	P	P	02 14 23.3	+1.0
WR0				IAmb	IAmb	02 14 23.5	
	comp=Z,6.2nm,0.5s						
WRAB	Tennant Creek	18.72	220	P	P	02 14 24.2	+0.8
WRAB				IAmb	IAmb	02 14 25.6	
	comp=Z,3.7nm,0.6s						
WB2	Warramunga Arr	18.73	220	P	P	02 14 24.4	+0.9
WB2				IAmb	IAmb	02 14 29.4	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	18.73	220	P	P	02 14 24.2	+0.7
	comp=Z,0.7nm,0.3s,baz=45,slow=9.7,SNR=33						
AS31	Alice Springs	21.84	214	P	P	02 14 58.0	+1.4
ASAR	Alice Springs	21.84	214	P	P	02 14 58.0	+1.5
	comp=Z,1.1nm,0.6s,baz=48,slow=8.0,SNR=11						
FITZ	Fitzroy Crossi	24.17	237	P	P	02 15 19.2	+1.3
	comp=Z,7.2nm,0.6s,baz=45,slow=8.0,SNR=8.5						
FITZ	Fitzroy Crossi	24.17	237	P	P	02 15 16.8	-1.1
TUWZ	Tuamarina	43.00	150	P	P	02 18 00.8	+1.4
MKAR	Makanchi Array	77.19	320	P	P	02 21 50.4	-1.2
	comp=Z,0.3nm,0.8s,baz=96,slow=7.1,SNR=2.7						
ILAR	Eielson Array	85.21	23	P	P	02 22 33.5	+0.1
	comp=Z,0.7nm,0.6s,baz=246,slow=4.9,SNR=13						

*CRAAG **07** 02:16:23.1, 36°.30N×0°.82E, Ml2.4*

*MDD **07** 02:16:24.3±0.4, 36°.28N×0°.77E, h19^{km}±14^{km}, mb3.5/8, Error ellipse: s-maj=15.2km s-min=5.1km az=165.0, PRXIMO*

ISC 07 02:16:23.1±1.0, **36°.27N**±0°.07×**0°.78E**±0°.04, **h30**^{km}±11^{km}, **n28**, σ**1^{s}31**/45, **1D**, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKGL	Djebel Kef Gue	0.25	207	⇓P	Pb	02 16 29.9	-0.1
	205nm,0.2s,SNR=18						
OKGL				S	Sb	02 16 34.0	-0.7
	460nm,0.2s,SNR=7.9						
EANR	'Ain N'Sour	0.41	141	P	Pb	02 16 32.7	+0.6
EANR	'Ain N'Sour	0.41	141	P	Pb	02 16 32.7	+0.6
ECHF	Ech Chlef	0.46	103	P	Pb	02 16 33.0	0.0
ECHA	Ech Chlef	0.49	103	P	Pb	02 16 33.0	-0.3
EBNR	Beni Rached	0.60	87	P	Pn	02 16 36.3	+0.6
ETRV	Los Montesinos	2.14	325	P	Pn	02 16 57.3	+0.5
	3.2nm,0.1s,SNR=7.9						
ETRV				S	Sn	02 17 22.2	-0.2
	5.2nm,0.1s,SNR=7.9						
EMUR	La Murta	2.26	315	P	Pn	02 16 58.9	+0.4
	1.5nm,0.3s,SNR=5.0						
EMUR				S	Sn	02 17 24.8	-0.5
	1.3nm,0.3s,SNR=7.9						
EMUR				T	T	02 18 30.9	
	SNR=8.8						
ENIJ	Nijar	2.51	287	P	Pn	02 17 02.7	+0.9
	1.3nm,0.1s,SNR=7.9						
ENIJ				S	Sn	02 17 28.9	-2.5
	1.6nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	2.53	342	P	Pn	02 17 03.3	+1.2
	1.3nm,0.1s,SNR=7.9						
EBEN2				S	Sn	02 17 31.6	-0.4
	2.7nm,0.1s,SNR=7.9						
AFON	Font Roja	2.62	337	P	Pn	02 17 04.7	+1.2
	SNR=7.9						
AFON				S	Sn	02 17 32.8	-1.5
	SNR=7.9						
EIBI	Ibiza	2.79	9	P	Pn	02 17 07.0	+1.3
	10nm,1.1s,SNR=7.8						
EIBI				S	Sn	02 17 36.3	-2.1
	2.0nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.01	323	P	Pn	02 17 10.3	+1.5
	1.9nm,0.6s,SNR=39						
ETOB				S	Sn	02 17 43.1	-0.9
	1.0nm,0.2s,SNR=7.9						
EBER	Berja	3.02	283	P	Pn	02 17 10.7	+1.6
	6.7nm,1.1s,SNR=9.1						
EBER				S	Sn	02 17 43.1	-1.3
	3.9nm,0.3s,SNR=7.9						
SESP	Santiago Espad	3.24	306	P	Pn	02 17 13.4	+1.3
	2.7nm,0.1s,SNR=7.9						
SESP				S	Sn	02 17 50.1	+0.4
	2.3nm,0.3s,SNR=7.9						
EQES	Quesada	3.44	298	P	Pn	02 17 16.9	+2.1
	5.4nm,0.2s,SNR=63						
EQES				S	Sn	02 17 54.8	+0.1
	1.2nm,0.2s,SNR=29						
EQUE	Quentar	3.52	287	P	Pn	02 17 17.7	+1.9
	0.5nm,0.2s,SNR=7.9						
ECHE	Chera	3.60	338	P	Pn	02 17 18.5	+1.6
	0.1nm,0.1s,SNR=7.9						
ECHE				S	Sn	02 17 57.8	-0.6
	1.1nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	3.60	281	P	Pn	02 17 17.5	+0.5
	0.5nm,0.1s,SNR=7.9						
ELGU				S	Sn	02 17 56.5	-1.9
	0.5nm,0.1s,SNR=7.9						
ETOS	Mallorca	3.85	24	P	Pn	02 17 21.2	+0.9
	0.2nm,0.1s,SNR=7.9						
ETOS				S	Sn	02 18 03.8	-0.7
	0.7nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	4.02	284	P	Pn	02 17 25.2	+2.4
	0.2nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.21	347	P	Pn	02 17 26.7	+1.3
	0.3nm,0.1s,SNR=7.9						
EMOS				S	Sn	02 18 12.4	-1.2
	SNR=7.9						
EADA	Adamuz	4.68	296	P	Pn	02 17 32.3	+0.5
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	02 18 23.0	-2.1
	0.2nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.70	356	P	Pn	02 17 34.0	+2.0
	0.1nm,0.2s,SNR=7.9						
ERTA				S	Sn	02 18 23.5	-2.0
	1.3nm,0.3s,SNR=7.9						
EPOB	Poblet	5.09	3	S	Sn	02 18 33.9	-1.2
	1.8nm,0.3s,SNR=7.9						
PAB	San Pablo	5.21	310	P	Pn	02 17 39.6	+0.5
	0.1nm,0.1s,SNR=7.9						
ECAB	El Cabril	5.27	292	P	Pn	02 17 40.1	+0.3
	0.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	6.15	286	P	Pn	02 17 53.0	+1.1
	0.2nm,0.1s,SNR=7.9						

IDC 07 02:18:50.0±2.7, **14°.50S**×**121°.58E**, **h0**^{km}, **mb3.8**/1, **mb1 3.5**/4, **mb1mx3.4**/24, **mbtmp3.4**/4, **ML3.2**/3, **Error ellipse: s-maj=166.3km s-min=27.3km az=45.0, Northwest of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	5.29	133	Pn	Pn	02 20 09.1	-1.3
	0.6nm,0.3s,baz=306,slow=9.1,SNR=31						
FITZ				Sn	Sn	02 20 59.0	-13
	1.4nm,0.3s,baz=22,slow=21,SNR=13						
WRA	Warramunga Arr	13.34	116	Pn	Pn	02 22 01.7	+1.0
	0.1nm,0.3s,baz=295,slow=14,SNR=2.7						
WRA				Sn	Sn	02 24 15.9	-14
	0.2nm,0.3s,baz=269,slow=23,SNR=4.4						
ASAR	Alice Springs	14.78	130	Pn	Pn	02 22 21.7	+1.2
	0.1nm,0.3s,baz=310,slow=14,SNR=5.2						
MKAR	Makanchi Array	70.47	333	P	P	02 30 06.4	0.0
	0.8nm,0.8s,baz=120,slow=5.2,SNR=6.2						

*IDC **07** 02:31:40.9±1.8, 29°.42S×112°.43W, h0^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.8/27, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=54.9km s-min=37.2km az=8.0*

ISC 07 02:31:42.6±1.7, **29°.3S**±0°.3×**112°.4W**±0°.2, **h10**^{km}, **n10**, σ**1^{s}01**/8, **mb3.7**/4, **Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	3.47	52	Pn	Pn	02 32 36.2	-0.5
	8.5nm,0.3s,baz=232,slow=14,SNR=6.5						
RPN				T	T	02 36 18.7	
	5.4nm,0.3s,baz=118,slow=21,SNR=2.0						
SIV	San Ignacio	48.82	86	P	P	02 40 29.2	+0.7
	1.1nm,0.9s,baz=288,slow=9.6,SNR=4.1						
NVAR	Mina Array Bea	67.63	355	P	P	02 42 41.5	+1.7
	1.6nm,0.8s,baz=185,slow=9.2,SNR=12						
PDAR	Pinedale Array	71.78	2	P	P	02 43 04.8	-0.5
	0.2nm,0.7s,baz=174,slow=9.1,SNR=1.9						
YKA	Yellowknife Ar	91.51	359	P	P	02 44 48.6	-0.1
	0.1nm,0.5s,baz=171,slow=5.0,SNR=5.1						
H01W1	Cape Leeuwin H	102.49	218	T	T	04 40 07.5	
	baz=138,slow=75,SNR=5.2						
H01W2	Cape Leeuwin H	102.50	218	T	T	04 40 07.2	
	baz=138,slow=75,SNR=4.7						
H01W3	Cape Leeuwin H	102.51	218	T	T	04 40 08.0	
	baz=138,slow=75,SNR=4.5						
SONM	Songino Array	144.96	313	PKP	PKPdf	02 51 19.0	-1.0
	1.6nm,0.8s,baz=99,slow=2.4,SNR=12						
ZALV	Zalesovo Beam	152.39	338	PKPbc	PKPbc	02 51 38.0	-0.5
	0.3nm,0.4s,baz=20,slow=4.6,SNR=2.8						
ZALV				PKPab	PKPab	02 51 48.5	0.0
	0.3nm,0.3s,baz=57,slow=4.3,SNR=3.6						

IDC 07 02:36:26.3±1.6, **2°.33N**×**127°.61E**, **h0**^{km}, **mb3.5**/4, **mb1 3.6**/4, **mb1mx3.5**/23, **mbtmp3.5**/4, **Error ellipse: s-maj=160.0km s-min=20.6km az=70.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.09	164	P	P	02 41 32.6	-1.3
	1.6nm,1.2s,baz=344,slow=11,SNR=3.5						
ASAR	Alice Springs	26.55	167	P	P	02 42 07.2	+1.2
	0.5nm,0.7s,baz=351,slow=11,SNR=3.1						
SONM	Songino Array	48.90	341	P	P	02 45 14.7	+0.6
	0.2nm,0.5s,baz=165,slow=7.2,SNR=3.0						
MKAR	Makanchi Array	59.20	325	P	P	02 46 28.7	-0.6
	0.7nm,0.5s,baz=117,slow=8.8,SNR=16						

*ISK **07** 02:59:40.6, 38°.90N×26°.25E, h9^{km}, ML3.3/20*

*ATH **07** 02:59:41.6, 38°.89N×26°.23E, h18^{km}±1^{km}, ML2.8/6, Error ellipse: s-maj=2.0km s-min=1.0km az=269.0*

*THE **07** 02:59:41.4, 38°.88N×26°.19E, h8^{km}±1^{km}, ML2.9/7, Error ellipse: s-maj=1.6km s-min=0.7km az=69.0*

*DDA **07** 02:59:41.1, 38°.92N×26°.32E, h3^{km}±4^{km}, ML3.2*

ISC 07 02:59:40.4±1.0, **38°.91N**±0°.02×**26°.29E**±0°.02, **h18**^{km}±5^{km}, **n60**, σ**1^{s}24**/96, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.34	358	P	Pb	02 59 48.8	+0.9
PRK				S	Sb	02 59 54.2	+1.2
PRK				AML	AML	02 59 59.4	
	comp=N,6073µm,0.2s						
PRK				AML	AML	02 59 59.5	
	comp=E,4135µm,0.2s						
PRK	Paraskevi	0.34	358	P	Pb	02 59 48.8	+0.9
PRK				S	Sb	02 59 54.2	+1.2
	comp=E,3µm,0.2s						
SIGR	SIGRI	0.45	312	P	Pb	02 59 50.0	+0.1
SIGR				S	Sg	02 59 55.8	0.0
SIGR				AML	AML	02 59 57.3	
	comp=N,4937µm,0.4s						
SIGR				AML	AML	02 59 57.5	
	comp=E,3426µm,0.5s						
SIGR	SIGRI	0.45	312	P	Pb	02 59 50.0	+0.1
SIGR				S	Sg	02 59 55.3	-0.5
	comp=E,2µm,0.5s						
AYVA	Ayvalik	0.51	38	*i* P	Pg	02 59 51.2	+0.6
AYVA				*i* S	Sg	02 59 56.0	-1.5
DKL	Dikili	0.51	71	PG	Pb	02 59 51.7	+0.9
DKL				SG	Sb	02 59 59.2	+1.3
CESE	eme	0.58	179	PG	Pb	02 59 52.2	+0.2
URLA	Izmir	0.60	156	PG	Pg	02 59 52.9	+0.5
URLA				SG	Sb	03 00 01.8	+1.3
URLA	Izmir	0.60	156	*i* P	Pg	02 59 52.8	+0.5
URLA				*i* S	Sg	02 59 59.8	-0.5
KOCA	Canakkale, Ayv	0.60	349	*i* P	Pb	02 59 52.6	+0.2
KOCA				*i* S	Sg	02 59 59.8	-0.7
KOCA				IAML		03 00 06.0	
	comp=N,1µm,0.3s						
ZEDA	zmir-Bergama	0.62	84	*i* P	Pg	02 59 53.6	+1.0
ZEDA				*i* S	Sb	03 00 01.0	0.0
PSRA	Psara	0.67	237	P	Pg	02 59 53.9	+0.2
PSRA				S	Sb	03 00 02.2	-0.4
ZEYE	Izmir, Urla-Ze	0.69	166	*i* P	Pg	02 59 54.6	+0.6
ZEYE				*i* S	Sb	03 00 02.6	-0.5
ZEYE				IAML		03 00 07.0	
	comp=E,3µm,0.4s						
ZEYE				IAML		03 00 08.0	
	comp=N,1µm,0.2s						
BUHA	Balikesir, Bur	0.85	46	*i* P	Pb	02 59 57.3	+0.6
BUHA				*i* S	Sb	03 00 06.5	-1.3
BUHA				IAML		03 00 13.0	
	comp=E,1µm,0.6s						
BAYC	CANAKKALE_Bayr	0.85	14	*i* P	Pn	02 59 58.0	+0.3
BAYC				*i* S	Sb	03 00 08.5	+0.6
BAYC				IAML		03 00 12.0	
	comp=E,782nm,0.2s						
EZN	Ezine	0.92	2	P	Pb	02 59 58.4	+0.6
EZN				S	Sn	03 00 13.1	+2.0
	comp=E,2µm,0.3s						
EZN	Ezine	0.92	2	PG	Pn	02 59 58.9	+0.5
EZN				SG	Sn	03 00 12.6	+1.5
BOZC	Bozcaada	0.95	349	PG	Pb	02 59 58.7	+0.4
BOZC				SG	Sn	03 00 12.7	+0.7
BOZC	Bozcaada	0.95	349	*i* P	Pb	02 59 58.7	+0.4
BOZC				*i* S	Sb	03 00 09.1	-1.5
BOZC				IAML		03 00 13.0	
	comp=N,640nm,0.3s						
BOZC				IAML		03 00 14.0	
	comp=E,522nm,0.6s						
ECEA	Canakkale, Ece	1.14	356	*i* P	Pg	03 00 03.0	+0.6
ECEA				*i* S	Sb	03 00 14.7	-1.3
ECEA				IAML		03 00 20.0	
	comp=E,712nm,0.5s						
ECEA				IAML		03 00 21.0	
	comp=N,526nm,0.4s						
AKHS	Akhisar	1.19	91	*i* P	Pg	03 00 03.7	+0.2
AKHS				*i* S	Sb	03 00 17.1	-0.5
STEP	BALIKESIR_Sava	1.21	67	*i* P	Pg	03 00 04.2	+0.5
STEP				*i* S	Sb	03 00 17.1	-1.0
STEP				IAML		03 00 23.0	
	comp=E,629nm,0.5s						
STEP				IAML		03 00 24.0	
	comp=N,544nm,0.3s						
SMG	Samos	1.27	160	P	Pn	03 00 03.8	+0.5
SMG				S	Sb	03 00 19.1	-0.9
SMG				AML	AML	03 00 25.3	
	comp=N,2419µm,0.3s						
SMG				AML	AML	03 00 25.9	
	comp=E,2939µm,0.4s						
SMG	Samos	1.27	160	P	Pb	03 00 04.0	+0.1
SMG				S	Sg	03 00 22.3	+0.6
	comp=E,1µm,0.4s						
LIA	Limnos Island	1.31	319	P	Pn	03 00 04.3	+0.5
LIA				S	Sn	03 00 19.9	-0.9
LIA				AML	AML	03 00 25.0	
	comp=E,669µm,0.3s						
LIA				AML	AML	03 00 26.4	
	comp=N,399µm,0.4s						
LIA	Limnos Island	1.31	319	P	Pb	03 00 04.5	+0.1
LIA				S	Sg	03 00 22.5	-0.2
	comp=N,302nm,0.6s						
GOKA	anakkale-Gk	1.31	347	*i* P	Pb	03 00 05.5	+0.9
GOKA				*i* S	Sn	03 00 18.0	-3.0
GOKA				IAML		03 00 23.0	
	comp=E,568nm,0.3s						
GOKA				IAML		03 00 31.0	
	comp=N,378nm,0.4s						
GADA	Gvkgeada	1.31	347	P	Pb	03 00 05.4	+0.8
GADA				S	Sg	03 00 23.0	0.0
	comp=N,240nm,0.3s						
GADA	Gvkgeada	1.31	347	PN	Pb	03 00 05.4	+0.8
BALY	Balya	1.33	51	*i* P	Pb	03 00 05.8	+1.0
BALY				*i* S	Sn	03 00 21.3	0.0
BALY				IAML		03 00 27.0	
	comp=N,350nm,0.4s						
GCAM	G?zelcaml?	1.42	148	PN	Pb	03 00 06.3	0.0
BALB	Balikesir	1.44	59	PN	Pb	03 00 07.3	+0.7
GELI	Tayfur-Gelibol	1.49	5	PN	Pb	03 00 08.2	+0.6
LPK	Lapseki	1.51	14	PN	Pb	03 00 08.4	+0.5
GONE	Gonen-Balikesi	1.57	43	PN	Pb	03 00 09.5	+0.6
SMTH	Samothraki Isl	1.67	340	P	Pn	03 00 09.5	+0.8
SMTH				S	Sn	03 00 28.5	-1.1
SMTH				AML	AML	03 00 37.3	
	comp=E,134µm,0.2s						
SMTH				AML	AML	03 00 42.7	
	comp=N,170µm,0.5s						
SMTH	Samothraki Isl	1.67	340	P	Pb	03 00 10.5	-0.1
ERIK	Erikli-Kesan	1.77	6	PN	Pb	03 00 11.9	-0.4
ENEZ	Enez	1.83	357	P	Pb	03 00 13.0	-0.4
ENEZ				S	Sb	03 00 36.1	+0.2
ENEZ	Enez	1.83	357	PN	Pb	03 00 12.9	-0.4
DURS	Dursunbey	1.83	67	*i* P	Pn	03 00 12.8	+1.6
DURS				*i* S	Sn	03 00 28.6	-5.4
EDC	Edincik	1.88	40	PN	Pb	03 00 13.6	-0.7
DEMI	Demirci	1.90	85	*i* P	Pg	03 00 17.4	+0.5
DEMI				*i* S	Sn	03 00 36.3	+0.8
DEMI				IAML		03 00 46.0	
	comp=E,191nm,0.4s						
KULA	Kula-Manisa	1.90	101	PN	Pb	03 00 13.9	-0.7
RKY	Sarkoy-Tekirda	1.90	21	PN	Pb	03 00 14.2	-0.5
SART	Tekirdag	1.91	21	*i* P	Pb	03 00 14.6	-0.1
SART				*i* S	Sn	03 00 34.5	-1.2
APE	Apeiranthos	1.93	198	P	Pn	03 00 12.0	-0.4
KESN	Edirne-Kesan	1.94	9	*i* P	Pb	03 00 15.0	-0.4
KESN				*i* S	Sn	03 00 30.8	-6.1
DST	Dursunbey	1.94	68	PN	Pb	03 00 14.8	-0.5
MRMT	Marmara Adasi	1.97	30	PN	Pb	03 00 15.2	-0.6
ALN	Alexandroupoli	2.00	355	P	Pn	03 00 14.5	+1.3
ALN				S	Sn	03 00 38.2	+0.4
ALN				AML	AML	03 00 47.1	
	comp=E,242µm,0.3s						
ALN				AML	AML	03 00 47.1	
	comp=N,137µm,0.3s						
ALN	Alexandroupoli	2.00	355	P	Pn	03 00 14.7	+1.5
ALN				S	Sb	03 00 40.1	-0.6
	comp=N,98nm,0.3s						
BODT	Bodrum	2.01	156	PN	Pn	03 00 14.8	+1.3
THAS	Thassos island	2.08	325	P	Pn	03 00 15.0	+0.6
SIMA	Simav-Kutahya	2.11	84	PN	Pb	03 00 17.4	-0.8
RDO	Rodhopi	2.31	346	P	Pn	03 00 19.0	+1.5
RDO	Rodhopi	2.31	346	P	Pn	03 00 19.2	+1.7
YER	Yerkesik	2.37	138	PN	Pn	03 00 20.8	+2.3
MDNY	Mudanya-Bursa	2.48	53	PN	Pb	03 00 22.7	-1.7
NVR	Nevrokopi	3.07	323	P	Pn	03 00 28.1	+0.1

*IDC **07** 03:06:40.2±0.6, 35°.37S×102°.87W, h0^{km}, mb4.3/11, mb1 4.5/12, mb1mx4.4/25, mbtmp4.4/12, ML3.7/1, MS5.1/13, Ms1 5.1/13, ms1mx4.8/21, Error ellipse: s-maj=22.2km s-min=19.9km az=31.0*

*BJI **07** 03:06:43.6±0.0, 36°.43S×103°.17W, h12^{km}, mB5.5/12, Ms5.7/21, Ms7 5.6/20*

*MOS **07** 03:06:44.5±1.3, 36°.16S×103°.61W, h11^{km}, mb5.3/15, Error ellipse: s-maj=18.4km s-min=12.1km az=91.0*

*NEIC **07** 03:06:45.4±0.7, 36°.32S±0°.10×103°.7W±0°.2, h10^{km}±1^{km}, mb5.2/144, Ms_20 5.5/239, Error ellipse: s-maj=22.7km s-min=14.8km az=248.0*

*GCMT **07** 03:06:46.4±0.1, 35°.88S×103°.37W, h20^{km}, MW6.0/171, Moment Tensor Solution. s169,c367; s171,c383; Duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.06±.01; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$0.29±.01; $M_{r\theta}$0.07±.01; $M_{\theta\phi}$-1.08±.01; $M_{\phi r}$-0.16±.02; Best double couple: $M_0$1.12500×10^{18} NP1:ϕ_s97.00000°,δ82.00000°, λ176.00000°. NP2:ϕ_s187.00000°,δ86.00000°,λ8.00000°. Principal axes: T 1.1660, Plg8.0000°, Azm52.0000°; N -0.0820, Plg82.0000°, Azm212.0000°; P -1.0840, Plg3.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 03:06:41.8±0.3, **35°.72S**±0°.06×**103°.69W**±0°.06, **h10**^{km}, **n551**, σ**2^{s}10**/300, **mb5.2**/85, **MS5.5**/139, **4C-1D**, **Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	9.83	329	Pn	Pn	03 09 05.0	+1.8
	0.7nm,0.3s,baz=150,slow=20,SNR=3.2						
RPN				LR	LR	03 11 56.1	
	comp=Z,49µm,20.7s,baz=105,slow=32						
RPN	Rapa Nui	9.83	329	P	Pn	03 09 13.9	+11
RPN						03 11 09.5	
RPN	Rapa Nui	9.83	329	Pn	Pn	03 09 13.9	+11
RPN				Sn	Sn	03 11 09.5	+16
H03S2	Juan Fernandez	20.41	92	T	T	03 32 39.2	
	baz=264,slow=73,SNR=71						
H03S1	Juan Fernandez	20.43	92	T	T	03 32 38.0	
	baz=264,slow=73,SNR=54						
H03S3	Juan Fernandez	20.43	92	T	T	03 32 38.4	
	baz=264,slow=73,SNR=47						
H03N2	Juan Fernandez	20.50	91	T	T	03 32 39.0	
	baz=247,slow=72,SNR=17						
H03N3	Juan Fernandez	20.50	91	T	T	03 32 36.8	
	baz=247,slow=72,SNR=16						
H03N1	Juan Fernandez	20.51	91	T	T	03 32 46.4	
	baz=247,slow=72,SNR=18						
LL01	San Ignacio de	25.09	115	P	P	03 12 07.5	+1.0
LC01	Cunco	25.43	107	P	P	03 12 17.6	+7.9
PLCA	Paso Flores	26.41	111	P	P	03 12 14.7	-4.0
	4.2nm,0.9s,baz=274,slow=8.9,SNR=6.2						
PLCA	Paso Flores	26.41	111	P	P	03 12 15.2	-3.5
PLCA				pmax	pmax		
	comp=Z,26nm,1.1s						
PLCA	Paso Flores	26.41	111	P	P	03 12 15.2	-3.5
MT05	Renca	27.17	95	P	P	03 12 25.3	-0.2
MT05				IAmb	IAmb	03 12 35.4	
	comp=Z,74nm,1.6s						
PEL	Peldehue	27.27	94	P	P	03 12 30.1	+3.7
PEL				pmax	pmax		
	comp=Z,24nm,1.2s						
PEL	Peldehue	27.27	94	P	P	03 12 30.1	+3.7
VA03	San Esteban	27.48	94	P	P	03 12 28.7	+0.4
CO02	Combarbal	27.57	90	P	P	03 12 32.8	+3.6
CO02				IAmb	IAmb	03 12 50.6	
	comp=Z,90nm,1.6s						
CO03	El Pedregal	27.93	89	P	P	03 12 35.0	+2.6
GO04	Tololo Observa	28.07	88	P	P	03 12 37.7	+3.9
GO04				IAmb	IAmb	03 12 54.6	
	comp=Z,81nm,1.4s						
LCO	Las Campanas	28.56	86	P	P	03 12 42.4	+4.2
LCO				pmax	pmax		
	comp=Z,59nm,1.7s						
LCO	Las Campanas	28.56	86	P	P	03 12 42.4	+4.2
LCO				IAmb	IAmb	03 12 44.0	
	comp=Z,59nm,1.7s						
CO01	Juntas del Tor	28.71	88	P	P	03 12 39.2	-0.3
ZON	Zonda	29.35	92	P	P	03 12 44.9	-0.1
ZON				pmax	pmax		
	comp=Z,22nm,1.1s						
ZON	Zonda	29.35	92	P	P	03 12 44.9	-0.1
RKT	Rikitea	29.87	286	*e*S	S	03 17 46.2	-0.5
	comp=Z,4µm,29.8s						
RKT				*e*LQ	LQ	03 19 17.9	
	comp=Z,17µm,32.0s						
AC02	Maricunga	30.71	83	P	P	03 12 59.4	+1.9
MG01	Puerto William	31.32	139	IAMs_20	IAMs_20	03 22 02.5	
	comp=Z,7µm,21.0s						
LVC	Limon Verde	32.88	76	P	P	03 13 10.4	-6.1
	comp=Z,2.6nm,0.8s,baz=193,slow=16,SNR=2.8						
PB01	IPOC Station P	33.26	73	P	P	03 13 24.8	+5.3
PB01				IAmb	IAmb	03 13 35.0	
	comp=Z,27nm,1.3s						
PSGCX	Pisagua	33.59	70	P	P	03 13 27.9	+5.5

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NNA   Nana             33.86  52  IAMs_20 IAMs_20 03 23 16.0
      comp=Z,6µm,21.0s
PB16  IPOC Station P   34.80  69          P       03 13 38.5 +5.0
PAYG  Puerto Ayora     37.03  23  IAMs_20 IAMs_20 03 24 50.0
      comp=Z,6µm,19.0s
PMSA  Palmer Station   37.47 153  IAMs_20 IAMs_20 03 24 42.1
      comp=Z,4µm,18.0s
CPUP  Villa Florida    40.50  90  P       P       03 14 15.6  -5.4
      comp=Z,0.9nm,0.4s,baz=217,slow=5.1,SNR=1.4
CPUP                              LR      LR      03 28 07.9
      comp=Z,830nm,22.0s,baz=248,slow=32
TBI   Tubuai           41.35 275 eS       S       03 20 41.5  -1.1
      comp=Z,680nm,25.0s
TBI                              eLQ      LQ      03 24 02.3
      comp=Z,27µm,34.0s
TBI                              eLR      LR      03 25 49.7
      comp=Z,7µm,23.5s
TBI   Tubuai           41.35 275 eT       T       03 58 16.0
      comp=Z,7.9nm,0.3s
PLTB  Pedras Altas     41.47  99 eP       P       03 14 38.8  +10
TAOE  Nuku Hiva Isla   42.64 300 eS       S       03 21 03.6 +1.6
      comp=Z,3µm,25.4s
TAOE                             eLQ      LQ      03 24 43.2
      comp=Z,18µm,25.8s
TAOE                             eLR      LR      03 26 33.2
      comp=Z,13µm,24.2s,baz=143
SIV   San Ignacio      42.68  74  P       P       03 14 32.7  -6.4
      comp=Z,4.8nm,1.1s,baz=249,slow=7.5,SNR=8.5
OTAV  Otavalo          42.80  39  P       P       03 14 47.2 +6.7
OTAV                              pmax    pmax
      comp=Z,55nm,1.8s
OTAV  Otavalo          42.80  39  P       P       03 14 47.2 +6.7
OTAV  Otavalo          42.80  39 eP       P       03 14 37.3  -3.1
MEH   Mehetia          43.01 282 eT       T       04 00 29.8
      comp=Z,60nm,0.3s
TVO   Taravao          44.01 282 eT       T       04 01 44.4
      comp=Z,1.2nm,0.3s
VAH   Vaihoa           44.16 286 eP       P       03 14 50.6  -0.3
      comp=Z,50nm,1.0s
TIAR  Tiarei           44.20 282 eP       P       03 14 50.5  -0.8
      comp=Z,12nm,1.1s
TIAR  Tiarei           44.20 282 eT       T       04 01 59.0
      comp=Z,4.8nm,0.3s
PAE   Paea             44.33 282 eP       P       03 14 51.2  -1.1
      comp=Z,7.7nm,1.1s
PPTF  Pamatai, Papee   44.36 282  IAMs_20 IAMs_20 03 28 20.7
      comp=Z,4µm,18.0s
PPT2  Papeete2         44.37 282 eP       P       03 14 52.0  -0.7
      comp=Z,51nm,1.4s
PPT2                             eS       S       03 21 25.6  -1.7
      comp=Z,6µm,26.5s
PPT2                             eLQ      LQ      03 24 48.6
      comp=Z,13µm,27.8s
PPT2                             eLR      LR      03 27 15.8
      comp=Z,3µm,28.2s
PTLB  Pontes e Lacer   44.51  75 eP       P       03 14 52.3  -1.5
PTLC  Puerto Leguiza   44.70  43 eP       P       03 14 47.3  -7.9
BBAC  Balboa, Cauca    44.94  39 eP       P       03 14 55.7  -1.7
PTGB  Pitanga          45.48  91 eP       P       03 15 07.2 +5.7
PCON  Cinco Dias       45.64  40 eP       P       03 14 57.9  -5.4
MARP  Paez Belalcaza   46.31  40 eP       P       03 15 13.7 +5.4
BETC  Betania          46.44  41 eP       P       03 15 10.7 +1.6
MACC  Macarena, Meta   46.86  43 eP       P       03 15 10.7  -1.6
YOTC  Yotoco, Valle    47.08  39 eP       P       03 15 10.6  -3.5
ORTC  Ortega, Tolima   47.58  40 eP       P       03 15 15.3  -2.6
PLMC  San Jos del P    47.90  38 eP       P       03 15 17.3  -3.1
ANIL  Santa Ana        47.99  39 eP       P       03 15 27.6 +6.2
FRTB  Fartura          48.14  91 eP       P       03 15 29.3 +7.1
RREF  El Recreo        48.37  39 eP       P       03 15 25.4 +0.7
ROSC  El Rosal         48.85  40  P       P       03 15 25.4  -2.7
      comp=Z,11nm,0.8s,baz=85,slow=8.9,SNR=5.1
ROSC                              LR      LR      03 32 15.2
      comp=Z,4µm,21.6s,baz=222,slow=32
ROSC  El Rosal         48.85  40  P       P       03 15 34.9 +6.7
ROSC                              pmax    pmax
      comp=Z,149nm,1.5s
ROSC  El Rosal         48.85  40  P       P       03 15 34.9 +6.7
ROSC                              IAMs_20 IAMs_20 03 31 52.9
      comp=Z,4µm,22.0s
ROSC  El Rosal         48.85  40 eP       P       03 15 23.8  -4.4
CBOC  Ciudad Bolivar   48.86  38 eP       P       03 15 21.8  -6.2
CHIC  Chingaza         48.99  41 eP       P       03 15 26.7  -2.5
JTS   Las Juntas de    49.06  25  IAMs_20 IAMs_20 03 31 09.7
      comp=Z,3µm,21.0s
NORC  Norcasia         49.18  39 eP       P       03 15 32.8 +2.5
HELC  Santa Helena     49.38  38 eP       P       03 15 29.8  -2.3
SPBC  San Pablo de B   49.67  40 eP       P       03 15 27.1  -7.0
DBBC  Dabeiba          49.75  37 eP       P       03 15 32.7  -2.0
SPB   Sao Paulo        49.76  92  P       P       03 15 37.4 +2.8
SPB                               IAmb    IAmb    03 15 48.7
      comp=Z,47nm,1.2s
BCIP  Isla Barro Col   49.99  31  IAMs_20 IAMs_20 03 31 10.5
      comp=Z,4µm,20.0s
BCIP  Isla Barro Col   49.99  31 eP       P       03 15 42.8 +6.4
PTBC  PUERTO BERRIO,   50.22  39 eP       P       03 15 34.4  -3.7
RUSC  La Rusia         50.40  41 eP       P       03 15 42.0 +2.0
ACON  Acoyapa          50.55  24  P       P       03 15 48.4 +7.8
ACON                              IAMs_20 IAMs_20 03 32 42.4
      comp=Z,3µm,19.0s
UREC  San Jos de Ur    50.72  37 eP       P       03 15 40.0  -1.9
RAR   Rarotonga        50.75 271  LR      LR      03 32 42.1
      comp=Z,934nm,21.2s,baz=126,slow=30
ZARC  Zaragoza, Cauc   50.83  38 eP       P       03 15 39.8  -3.0
BARC  Barichara        50.93  41 eP       P       03 15 40.1  -3.7
BELA  Belgrano 2       50.98 165  P       P       03 15 42.7  -0.4
SNET  Serv Nac Est T   51.01  18  IAMs_20 IAMs_20 03 31 38.9
      comp=Z,3µm,19.0s
BRRC  Barranca, Sant   51.09  40 eP       P       03 15 48.0 +3.3
MOTC  Monteria, Cord   51.54  36 eP       P       03 15 51.5 +3.4
SMLC  San Martn de     52.35  38 eP       P       03 15 53.9  -0.1
SJCC  San Jacinto, C   52.75  36 eP       P       03 16 00.4 +3.3
BSCB  Bom Sucesso      53.16  91 eP       P       03 16 09.9  +10
TLIG  Tlapa            53.21   6  IAmb    IAmb    03 16 09.6
      comp=Z,50nm,1.2s
BDFB  Brasilia         53.28  83  P       P       03 15 54.1  -7.2
      comp=Z,3.5nm,0.9s,baz=318,slow=8.4,SNR=3.0
BDFB                              LR      LR      03 36 34.2
      comp=Z,604nm,20.5s,baz=238,slow=34
BDFB  Brasilia         53.28  83  P       P       03 16 05.4 +4.2
BDFB                              pmax    pmax
      comp=Z,24nm,1.3s
BDFB  Brasilia         53.28  83  P       P       03 16 05.4 +4.1
SDV   Santo Domingo    54.21  42 eP       P       03 16 04.8  -3.2
SDV   Santo Domingo    54.21  42 eP       P       03 16 11.8 +3.8
QSPA  South Pole Qui   54.49 180  P       P       03 16 08.6  -0.9
QSPA                              IAmb    IAmb    03 16 17.1
      comp=Z,42nm,1.2s
SBA   Scott Base       55.30 195  IAMs_20 IAMs_20 03 34 06.5
      comp=Z,3µm,22.0s
VNDA  Vanda            56.39 195  P       P       03 16 24.9 +2.1
      comp=Z,4.2nm,1.2s,baz=106,slow=7.8,SNR=3.4
VNDA                              LR      LR      03 35 10.9
      comp=Z,3µm,20.9s,baz=98,slow=30
VNDA  Vanda            56.39 195  P       P       03 16 25.1 +2.3
MALB  Monte Alegre     56.79  65 eP       P       03 16 29.2 +2.8
SJMB  Sao Joao De Ma   57.22  90 eP       P       03 16 40.3  +11
PRPB  Parauapebas      57.38  72 eP       P       03 16 35.2 +4.6
BSFB  Barra de Sao F   57.43  91 eP       P       03 16 41.7  +11
SMTB  Santa Maria do   57.49  77 eP       P       03 16 36.9 +5.5
SDBA  SAO DESIDERIO    57.58  82 eP       P       03 16 37.7 +5.6
VNA3  Neumayer Olymp   57.89 158  P       P       03 16 30.3  -3.2
ZAIG  Zacatecas        58.18   1  P       P       03 16 43.7 +7.4
ZAIG                              IAmb    IAmb    03 17 01.5
      comp=Z,42nm,1.5s
VNA1  Neumayer--Stat   58.51 157  P       P       03 16 36.9  -0.8
NAN01 Guarapari, ES    58.53  90 eP       P       03 16 48.2  +10
VNA2  Neumayer--Watz   58.70 158  P       P       03 16 36.0  -3.1
      baz=259,slow=5.4
MCPB  Macapa, AP       59.42  66 eP       P       03 16 48.6 +3.8
SNAA  Sanae            59.81 159  P       P       03 16 44.0  -2.9
SNAA  Sanae            59.81 159  P       P       03 16 46.8  -0.1
SNAA                              pmax    pmax
      comp=Z,37nm,1.3s
SNAA  Sanae            59.81 159  P       P       03 16 46.8  -0.1
SNAA                              IAmb    IAmb    03 16 51.8
      comp=Z,37nm,1.3s
SNAA                              IAMs_20 IAMs_20 03 37 26.4
      comp=Z,2µm,22.0s
RAO   Raoul Island     61.59 253  IAMs_20 IAMs_20 03 36 33.6
      comp=Z,4µm,20.0s
GRGR  Grenville        61.98  48  IAMs_20 IAMs_20 03 40 43.3
      comp=Z,3µm,22.0s
KHZ   Kahutara         62.20 236  IAMs_20 IAMs_20 03 36 45.6
      comp=Z,4µm,22.0s
MQZ   McQueen’s Vall   62.27 235  IAMs_20 IAMs_20 03 37 14.9
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      comp=Z,4µm,20.0s
HPIG                   62.34 358  P       P       03 17 12.0 +7.4
HPIG                              IAmb    IAmb    03 17 25.1
      comp=Z,39nm,1.4s
OXZ   Oxford           62.83 235  IAMs_20 IAMs_20 03 37 52.9
      comp=Z,4µm,21.0s
THZ   Tophouse         62.90 237  IAMs_20 IAMs_20 03 37 22.2
      comp=Z,4µm,21.0s
LTZ   Lake Taylor      62.90 235  IAMs_20 IAMs_20 03 37 53.9
      comp=Z,4µm,21.0s
HIZ   Hauiti           62.92 241  IAMs_20 IAMs_20 03 37 48.9
      comp=Z,6µm,22.0s
ODZ   Otahua Downs     63.03 232  IAMs_20 IAMs_20 03 37 59.6
      comp=Z,5µm,21.0s
LBZ   Lake Benmore     63.61 233  IAMs_20 IAMs_20 03 37 03.9
      comp=Z,5µm,21.0s
833A  Chaparral WMA,   63.83   4  P       P       03 17 13.4  -0.8
      baz=184
833A  Chaparral WMA,   63.83   4  P       P       03 17 21.9 +7.6
833A                              IAmb    IAmb    03 17 38.6
      comp=Z,33nm,1.2s
WKZ   Wanaka           64.17 232  IAMs_20 IAMs_20 03 38 55.7
      comp=Z,5µm,20.0s
NVL   N'lazarevskaya   64.39 161 eP       P       03 17 21.6 +4.1
NVL                              eS       S       03 25 55.3  -0.3
NVL                               pmax    pmax
      comp=Z,11nm,0.7s
061Z  Ochoppi          64.93  23  IAMs_20 IAMs_20 03 39 35.3
      comp=Z,2µm,22.0s
PYZ   Puysegur Point   65.07 230  IAMs_20 IAMs_20 03 38 24.8
      comp=Z,5µm,21.0s
SEUS  St. Eustatius    65.48  43  IAMs_20 IAMs_20 03 42 25.8
      comp=Z,2µm,21.0s
JCT   Junction City    65.95   4  P       P       03 17 28.5 +0.5
      baz=183
060A  Indiantown       66.19  23  IAMs_20 IAMs_20 03 40 34.7
      comp=Z,2µm,21.0s
435B  Jarrell          66.40   6  P       P       03 17 31.1 +0.2
      baz=185
435B  Jarrell          66.40   6  P       P       03 17 38.6 +7.7
DWPF  Disney Wildern   66.87  21  P       P       03 17 32.1  -1.9
      baz=199
DWPF  Disney Wildern   66.87  21  IAMs_20 IAMs_20 03 41 01.8
      comp=Z,2µm,22.0s
MNTX  Cornudas Mount   67.08 358  P       P       03 17 35.0  -0.3
      baz=178
WHTX  Lake Whitney,    67.61   6  P       P       03 17 37.9  -0.7
      baz=185
237A  Washetta, Mont   67.77   7          P       03 17 46.9 +7.4
214A  Organ Pipe Nat   67.86 352  P       P       03 17 39.9  -0.4
      baz=172
214A  Organ Pipe Nat   67.86 352  P       P       03 17 47.4 +7.1
214A                              IAmb    IAmb    03 18 03.9
      comp=Z,41nm,1.6s
TUC   Tucson           68.00 354  P       P       03 17 42.0 +0.9
      baz=174
121A  Cookes Peak, D   68.00 356  P       P       03 17 41.7 +0.4
      baz=176
121A  Cookes Peak, D   68.00 356  P       P       03 17 48.5 +7.2
121A                              IAmb    IAmb    03 18 05.2
      comp=Z,28nm,1.4s
ABTX  Abilene, Hawle   68.09   4  P       P       03 17 41.1  -0.5
      baz=184
ESJX  Sierra Juarez    68.34 349  P       P       03 17 50.6 +7.2
BRAL  Brewton          68.35  15  P       P       03 17 43.4 +0.2
      baz=194
CBX   Cerro Bola       68.76 348  P       P       03 17 53.1 +7.2
RMX   La Rumorosa      68.95 349  P       P       03 17 53.9 +6.7
RMX                               IAmb    IAmb    03 18 00.7
      comp=Z,18nm,1.0s
Z35A  Perchaven, San   68.95   6  P       P       03 17 54.5 +7.6
IKP   In-Ko-Pah, Jac   69.00 349  P       P       03 17 47.5 +0.1
      baz=169
TJX   Tijuana          69.02 348  IAMs_20 IAMs_20 03 39 41.6
      comp=Z,2µm,21.0s
BAR   Barrett          69.12 348          P       03 17 54.4 +6.4
MONP2 Monument Peak    69.29 349  P       P       03 17 49.2  -0.2
      baz=169
250A  Grady            69.30  16  IAMs_20 IAMs_20 03 42 38.7
      comp=Z,2µm,22.0s
MSTX  Muleshoe         69.33   1  P       P       03 17 49.4  -0.1
      baz=181
SCI2  San Clemente I   69.74 347  P       P       03 17 52.1 +0.2
      baz=167
BC3   Big Chuckawall   69.89 350  P       P       03 17 54.2 +1.4
      baz=170
TPFO  Pinon Flats      69.99 349  P       P       03 17 54.5 +0.9
      baz=169
PFO   Pinyon Flats O   70.00 349  P       P       03 18 00.8 +7.2
PFO                               pmax    pmax
      comp=Z,28nm,1.5s
PFO   Pinyon Flats O   70.00 349  P       P       03 17 54.5 +0.9
      baz=169
PFO   Pinyon Flats O   70.00 349  P       P       03 18 00.8 +7.2
PFO                               IAmb    IAmb    03 18 20.4
      comp=Z,28nm,1.4s
MURC  Murrieta         70.11 348  P       P       03 17 53.8  -0.4
      baz=168
X16A  Lo Mia Camp, P   70.15 353  IAMs_20 IAMs_20 03 42 33.0
      comp=Z,2µm,19.0s
LRAL  Lakeview Retre   70.16  15  P       P       03 17 54.3  -0.1
      baz=194
WMOK  Wichita Mounta   70.24   4  P       P       03 17 51.9  -3.0
      baz=184
AMTX  Amarillo         70.26   2  P       P       03 17 55.6 +0.5
      baz=182
BELC  Belle Mtn. Jos   70.31 349  P       P       03 17 55.7 +0.2
      baz=170
IRM   Iron Mountain    70.33 350  P       P       03 17 56.1 +0.6
      baz=170
PDMCI Parker Dam,Lak   70.34 351  P       P       03 17 55.7 +0.2
      baz=171
ANMO  Albuquerque      70.35 358  P       P       03 17 55.5  -0.3
      baz=178
MSVF  Nonsavu          70.50 262  P       P       03 18 03.3 +6.1
MSVF  Nonsavu          70.50 262  IAMs_20 IAMs_20 03 41 27.1
      comp=Z,3µm,19.0s
MIAR  Mount Ida        70.54   9  P       P       03 18 04.1 +7.4
MIAR                              pmax    pmax
      comp=Z,19nm,1.3s
MIAR  Mount Ida        70.54   9  P       P       03 17 55.6  -1.2
      baz=189
MIAR  Mount Ida        70.54   9  P       P       03 18 04.1 +7.4
MIAR                              IAmb    IAmb    03 18 16.4
      comp=Z,19nm,1.2s
BFSC  Mount Baldy Ra   70.81 348  P       P       03 17 58.0  -0.5
      baz=168
MWC   Mount Wilson     70.86 347  P       P       03 18 05.1 +6.1
MWC                               pmax    pmax
      comp=Z,27nm,1.3s
MWC   Mount Wilson     70.86 347  P       P       03 18 05.1 +6.1
MWC                               IAmb    IAmb    03 18 22.7
      comp=Z,27nm,1.3s
GMRC  Granite Mounta   71.03 350  P       P       03 18 01.3 +1.4
      baz=170
Y49A  Blount Mountai   71.08  15  IAMs_20 IAMs_20 03 43 56.8
      comp=Z,2µm,21.0s
W13A  Hualapai Mount   71.09 351  P       P       03 18 07.1 +6.7
W13A                              IAmb    IAmb    03 18 09.0
      comp=Z,24nm,1.7s
W39A  Magazine         71.15   9  P       P       03 18 00.4  -0.1
      baz=188
HEC   Hector,Ludlow    71.17 349  P       P       03 18 01.6 +1.0
      baz=169
WUAZ  Wupatki          71.23 353  P       P       03 18 00.7  -0.4
      baz=174
WUAZ  Wupatki          71.23 353  P       P       03 18 08.1 +6.9
WUAZ                              IAmb    IAmb    03 18 25.0
      comp=Z,50nm,1.6s
GOGA  Godfrey          71.33  18  P       P       03 18 00.7  -0.9
      baz=197
W41B  Gary Mavity, V   71.33  10  P       P       03 18 01.7 +0.2
      baz=190
W41B  Gary Mavity, V   71.33  10  IAmb    IAmb    03 18 20.9
      comp=Z,43nm,1.4s
EDW2  Edwards Air Fo   71.50 348  P       P       03 18 03.3 +0.7
      baz=168
TUL1  Leonard          71.64   7  P       P       03 18 04.0 +0.6
      baz=187
GSC   Goldstone, Bar   71.71 349  P       P       03 18 04.6 +0.7
      baz=169
PKM   Mcpherson Peak   71.84 346  P       P       03 18 05.2 +0.4
      baz=166
LRMC  Laurel Mtn Rad   72.03 348  P       P       03 18 06.5 +0.6
      baz=168
SYO   Syowa Base       72.11 167⇑eP       P       03 18 05.9  0.0
SYO   Syowa Base       72.11 167⇑esP      sP      03 18 10.4 +1.9
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SYO   Syowa Base       72.11 167⇓ePcP     PcP     03 18 22.5  -1.8
U15A  North Rim        72.22 353  IAmb    IAmb    03 18 26.4
      comp=Z,22nm,1.2s
SMMC  Simmler          72.29 346  P       P       03 18 08.5 +1.1
      baz=166
ISA   Isabella, Lake   72.34 347  P       P       03 18 07.6  -0.1
      baz=168
ISA   Isabella, Lake   72.34 347  IAmb    IAmb    03 18 29.8
      comp=Z,39nm,1.6s
ISA                               IAMs_20 IAMs_20 03 41 58.5
      comp=Z,3µm,21.0s
U40A  Yellville        72.41   9  P       P       03 18 07.7  -0.3
      baz=189
T25A  Trinidad         72.49 359  P       P       03 18 07.3  -1.4
      baz=179
MPMC  Manual Prospec   72.56 348  P       P       03 18 09.2 +0.1
      baz=168
T35A  Sooner Cattle    72.57   6  IAmb    IAmb    03 18 16.8
      comp=Z,27nm,1.2s
KAN13 South Haven SW   72.59   5  P       P       03 18 16.3 +7.3
VES   Vestal, Richgr   72.62 347  P       P       03 18 09.4 +0.2
      baz=167
MVCO  Mesa Verde       72.70 356  P       P       03 18 09.3  -0.7
      baz=176
Y57A  Sumter           72.71  20  IAMs_20 IAMs_20 03 45 23.8
      comp=Z,2µm,21.0s
PAGB  Antelope Grade   72.74 346  P       P       03 18 17.2 +7.2
PAGB                              IAMs_20 IAMs_20 03 42 35.0
      comp=Z,3µm,20.0s
KAN12 Harper NE Stat   72.84   5  P       P       03 18 17.7 +7.1
FURC  Furnace Creek,   72.86 349  P       P       03 18 11.2 +0.6
      baz=169
KNB   Kanab            72.86 352  P       P       03 18 18.1 +7.2
KNB                               pmax    pmax
      comp=Z,35nm,1.4s
KNB   Kanab            72.86 352          P       03 18 18.1 +7.2
LCMT  Little Creek M   72.91 352  P       P       03 18 18.2 +7.1
X56A  White Oak        72.98  19  P       P       03 18 10.1  -1.3
      baz=199
WVT   Waverly          72.99  13  P       P       03 18 10.9  -0.5
      baz=193
CWC   Cottonwood Cre   73.03 348  P       P       03 18 12.0 +0.1
      baz=168
SDCO  Great Sand Dun   73.11 358  P       P       03 18 10.4  -2.1
      baz=178
Y59A  Loris            73.12  21  P       P       03 18 11.1  -1.1
      baz=201
S22A  4UR Ranch, Cre   73.15 357  P       P       03 18 11.2  -1.6
      baz=177
TPNV  Topopah Spring   73.24 350  P       P       03 18 12.1  -1.0
      baz=170
PRN   Pahroc Range     73.52 351          P       03 18 21.3 +6.6
PRN                               IAmb    IAmb    03 18 38.9
      comp=Z,39nm,1.5s
PRN                               IAMs_20 IAMs_20 03 43 24.0
      comp=Z,2µm,20.0s
PV13  Radium Mtn., P   73.66 356  IAmb    IAmb    03 18 40.1
      comp=Z,32nm,1.5s
S39A  Bolivar          73.67   9  IAmb    IAmb    03 18 32.4
      comp=Z,48nm,1.8s
PV02  Paradox Valley   73.70 356  P       P       03 18 22.9 +7.0
PV02                              IAmb    IAmb    03 18 32.2
      comp=Z,21nm,1.2s
PV03  Paradox Valley   73.76 356  P       P       03 18 23.3 +7.1
PV03                              IAmb    IAmb    03 18 24.4
      comp=Z,36nm,1.7s
PV11  David Mesa, Pa   73.80 356  P       P       03 18 23.2 +6.7
PV11                              IAmb    IAmb    03 18 35.9
      comp=Z,18nm,1.0s
MTPU  Mount Pierson    73.81 353          P       03 18 23.5 +6.8
PV16  Nyswonger Mesa   73.82 356  P       P       03 18 23.6 +7.0
PV20  West Nyswonger   73.85 356          P       03 18 23.8 +7.0
PV20                              IAmb    IAmb    03 18 32.9
      comp=Z,29nm,1.6s
PV07  Paradox Valley   73.93 356  P       P       03 18 24.3 +7.1
PV07                              IAmb    IAmb    03 18 42.8
      comp=Z,28nm,1.4s
PV23  Carpenter Ridg   73.97 356  IAmb    IAmb    03 18 30.3
      comp=Z,15nm,0.8s
W58A  Raeford          73.98  21  P       P       03 18 16.2  -1.1
      baz=200
CBKS  Cedar Bluff      74.25   3  P       P       03 18 26.2 +7.3
CBKS                              pmax    pmax
      comp=Z,53nm,1.3s
CBKS  Cedar Bluff      74.25   3  P       P       03 18 18.6  -0.2
      baz=183
CBKS  Cedar Bluff      74.25   3  P       P       03 18 26.2 +7.3
CBKS                              IAmb    IAmb    03 18 39.1
      comp=Z,53nm,1.3s
MSU   Marysvale        74.28 353  P       P       03 18 26.2 +6.9
MSU   Marysvale        74.28 353  P       P       03 18 26.2 +7.0
TZTN  Tazewell         74.30  17  P       P       03 18 18.9  -0.2
      baz=197
CCM   Cathedral Cave   74.31  10  P       P       03 18 18.5  -0.6
      baz=190
MLAC  Mammoth, Mammo74.32 348     P       P       03 18 20.3 +0.8
      baz=167
OMMB  Old Mammoth Mi   74.33 347  P       P       03 18 26.4 +6.7
OMMB                              IAmb    IAmb    03 18 45.5
      comp=Z,30nm,1.6s
OMMB                              IAMs_20 IAMs_20 03 43 42.3
      comp=Z,2µm,21.0s
KSCO  Kaye Shedlock’   74.36   1  P       P       03 18 19.1  -0.5
      baz=181
KSCO  Kaye Shedlock’   74.36   1  P       P       03 18 26.9 +7.2
KSCO                              IAmb    IAmb    03 18 39.6
      comp=Z,41nm,1.3s
MDPB  Devils Postpil   74.37 347  IAMs_20 IAMs_20 03 43 33.1
      comp=Z,2µm,22.0s
PSUT  Pine Spring      74.48 352  P       P       03 18 27.5 +7.1
R11A  Troy Canyon, C   74.52 350  P       P       03 18 19.7  -0.9
      baz=170
V57A  Coltrane Farms   74.64  20  P       P       03 18 20.0  -1.1
      baz=200
KSU1  Kansas State U   74.73   6  P       P       03 18 21.8 +0.2
      baz=186
KSU1  Kansas State U   74.73   6  P       P       03 18 28.5 +6.9
KSU1                              IAmb    IAmb    03 18 34.1
      comp=Z,26nm,1.3s
CASY  Casey            74.97 194  IAmb    IAmb    03 18 44.3
      comp=Z,32nm,1.1s
CASY  Casey            74.97 194  IAMs_20 IAMs_20 03 46 19.9
      comp=Z,2µm,21.0s
NVAR  Mina Array Bea   75.01 348  P       P       03 18 22.3  -1.2
      comp=Z,3.2nm,0.8s,baz=185,slow=7.7,SNR=18
NVAR                              LR      LR      03 44 01.5
      comp=Z,1µm,19.6s,baz=174,slow=30
ISCO  Idaho Springs    75.17 358  P       P       03 18 23.4  -1.0
      baz=178
ISCO  Idaho Springs    75.17 358  IAmb    IAmb    03 18 47.5
      comp=Z,50nm,1.8s
RYN   Ryan             75.24 348          pP      03 18 31.4 +4.7
RYN                               IAmb    IAmb    03 18 38.9
      comp=Z,18nm,1.0s
WAKR  Walker           75.28 347  IAmb    IAmb    03 18 36.1
      comp=Z,42nm,1.8s
WCI   Wyandotte Cave   75.32  14  P       P       03 18 24.3  -0.7
      baz=194
V61A  Roper            75.49  22  IAMs_20 IAMs_20 03 45 59.1
      comp=Z,3µm,22.0s
O20A  White River Ci   75.60 356  P       P       03 18 26.5  -0.3
      baz=176
O20A  White River Ci   75.60 356  IAmb    IAmb    03 18 39.9
      comp=Z,18nm,1.1s
U59A  Littleton        75.64  21  P       P       03 18 24.6  -2.3
      baz=201
MPU   Maple Canyon     75.72 354  P       P       03 18 34.4 +6.9
PNTR  Pine Nut         75.88 347  P       P       03 18 35.2 +6.7
PNTR                              IAmb    IAmb    03 18 42.7
      comp=Z,39nm,1.5s
PNTR                              IAMs_20 IAMs_20 03 44 19.1
      comp=Z,3µm,22.0s
RUBR  Rubicon Trail    75.94 347  P       P       03 18 35.6 +6.8
RUBR                              IAMs_20 IAMs_20 03 44 29.8
      comp=Z,2µm,20.0s
AFDM  Forest Hills D   75.99 346  IAmb    IAmb    03 18 42.7
      comp=Z,18nm,1.0s
AFDM                              IAMs_20 IAMs_20 03 44 15.1
      comp=Z,2µm,21.0s
DUG   Dugway, Tooele   76.01 353  P       P       03 18 27.9  -1.2
      baz=172
U61A  Possum Corner    76.03  22  IAMs_20 IAMs_20 03 46 03.4
      comp=Z,3µm,21.0s
VCNR  Virginia City    76.08 347  IAmb    IAmb    03 18 51.7
      comp=Z,26nm,1.5s
GDXM  Geysers          76.23 345  IAMs_20 IAMs_20 03 44 11.3
      comp=Z,2µm,22.0s
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N23A	**Red Feather La**	**76.27**	**358**	P	**P**	**03 18 30.2**	**-0.5**
	baz=178						
N23A	**Red Feather La**	**76.27**	**358**	IAmb	IAmb	03 18 54.0	
	comp=Z,23nm,1.2s						
OGNE	**Ogallala**	**76.31**	**1**	P	**P**	**03 18 31.3**	**+0.6**
	baz=181						
S56A	**Natural Bridge**	**76.38**	**19**	P	**P**	**03 18 29.5**	**-1.6**
	baz=200						
CTU	**Camp Tracy**	**76.40**	**354**		P	03 18 38.3	+7.0
PAHR	**Pah Rah Range**	**76.44**	**348**	IAmb	IAmb	03 18 45.8	
	comp=Z,20nm,1.2s						
HOPS	**Hopland Field**	**76.47**	**345**	P	P	03 18 38.5	+6.9
R54A	**Victor**	**76.48**	**18**	P	**P**	**03 18 30.4**	**-1.2**
	baz=199						
MAW	**Mawson**	**76.49**	**175**	P	**P**	**03 18 34.1**	**+2.7**
	comp=Z,12nm,0.9s,baz=276,slow=3.9,SNR=5.6						
MAW				LR	LR	03 49 54.7	
	comp=Z,1µm,19.9s,baz=188,slow=34						
T60A	**Surry**	**76.69**	**22**	IAMs_20	IAMs_20	03 47 52.9	
	comp=Z,2µm,20.0s						
TCUT	**Toone Canyon**	**76.79**	**354**	P	P	03 18 40.2	+6.5
R55A	**Marlinton**	**76.80**	**19**	P	**P**	**03 18 32.9**	**-0.6**
	baz=199						
ELK	**Elko**	**76.83**	**351**	P	P	03 18 40.8	+7.0
ELK				pmax	pmax		
	comp=Z,21nm,1.4s						
ELK	**Elko**	**76.83**	**351**	P	P	03 18 40.8	+6.9
ELK				IAmb	IAmb	03 18 57.3	
	comp=Z,21nm,1.4s						
ELK				IAMs_20	IAMs_20	03 45 00.7	
	comp=Z,2µm,22.0s						
Q53A	**Leroy**	**76.98**	**18**	P	**P**	**03 18 33.3**	**-1.2**
	baz=198						
R56A	**Bull Pasture M**	**77.11**	**19**	P	**P**	**03 18 34.6**	**-0.7**
	baz=200						
R58B	**Mineral**	**77.11**	**21**	P	**P**	**03 18 33.0**	**-2.2**
	baz=201						
S60A	**Water View**	**77.24**	**22**	P	**P**	**03 18 33.6**	**-2.2**
	baz=202						
DZM	**Mont Dzumac**	**77.36**	**252**	*e*S	**S**	**03 28 22.2**	**-5.7**
	comp=Z,2µm,25.6s						
DZM				*e*SS	**SS**	**03 33 21.4**	**-4.5**
	comp=Z,1µm,27.6s						
DZM				*e*LQ	LQ	03 39 07.4	
	comp=Z,3µm,30.5s						
DZM				*e*LR	LR	03 42 23.5	
	comp=Z,13µm,27.9s						
R58A	**Rapidan**	**77.39**	**20**	P	**P**	**03 18 34.3**	**-2.4**
	baz=201						
O03E	**Paynes Creek**	**77.46**	**346**	P	**P**	**03 18 36.0**	**-1.2**
	baz=165,SNR=5.8						
S61A	**Accomac**	**77.51**	**22**	P	**P**	**03 18 35.2**	**-2.2**
	baz=203						
S61A	**Accomac**	**77.51**	**22**	IAMs_20	IAMs_20	03 47 07.6	
	comp=Z,4µm,22.0s						
O02D	**Mt. Diablo Mer**	**77.55**	**345**	P	**P**	**03 18 37.5**	**-0.1**
	baz=164						
ACSO	**Alum Creek Sta**	**77.95**	**16**	P	**P**	**03 18 39.3**	**-0.5**
	baz=197						
K22A	**Casper**	**78.04**	**358**	P	**P**	**03 18 39.6**	**-0.9**
	baz=178						
Q58A	**Fox Den Farm,**	**78.08**	**20**	P	**P**	**03 18 38.2**	**-2.4**
	baz=201						
BW06	**Boulder Array**	**78.30**	**356**	P	**P**	**03 18 41.6**	**-0.4**
	baz=175						
N02D	**Trinity Center**	**78.30**	**345**	P	**P**	**03 18 41.5**	**-0.3**
	baz=164,SNR=10						
PDAR	**Pinedale Array**	**78.30**	**356**	P	**P**	**03 18 39.6**	**-2.3**
	comp=Z,6.5nm,0.9s,baz=166,slow=4.7,SNR=15						
AHID	**Auburn Hatcher**	**78.40**	**354**	IAmb	IAmb	03 19 06.3	
	comp=Z,32nm,1.4s						
KHMM	**Horse Mountain**	**78.42**	**345**	IAmb	IAmb	03 18 57.0	
	comp=Z,24nm,0.9s						
Q60A	**Greensboro**	**78.68**	**22**	IAMs_20	IAMs_20	03 47 57.5	
	comp=Z,3µm,22.0s						
P58A	**Pank, Wackersv**	**78.70**	**21**	P	**P**	**03 18 43.8**	**-0.2**
	baz=201						
M02C	**Callahan**	**78.73**	**345**	P	**P**	**03 18 43.9**	**-0.3**
	baz=164						
M04C	**Macdoel**	**78.90**	**346**	P	**P**	**03 18 45.1**	**-0.2**
	baz=165,SNR=12						
P59A	**Jarrettsville**	**79.06**	**21**	P	**P**	**03 18 44.5**	**-1.4**
	baz=202						
O56A	**Blue Knob Stat**	**79.07**	**19**	P	**P**	**03 18 44.7**	**-1.4**
	baz=200						
O57A	**Amberson**	**79.27**	**20**	P	**P**	**03 18 45.7**	**-1.4**
	baz=201						
ECSD	**EROS Data Cent**	**79.34**	**5**	P	**P**	**03 18 47.6**	**+0.1**
	baz=186						
N54A	**Moraine State**	**79.35**	**18**	P	**P**	**03 18 45.9**	**-1.7**
	baz=199						
O58A	**Lewisberry**	**79.39**	**21**	P	**P**	**03 18 47.1**	**-0.7**
	baz=202						
L04D	**Klamath Falls**	**79.41**	**346**	P	**P**	**03 18 47.6**	**-0.4**
	baz=165,SNR=5.8						
RSSD	**Black Hills**	**79.47**	**360**	P	**P**	**03 18 48.3**	**-0.1**
	baz=180						
P60A	**Greenville**	**79.48**	**22**	IAMs_20	IAMs_20	03 47 58.8	
	comp=Z,3µm,22.0s						
HLID	**Hailey**	**79.51**	**352**	P	**P**	**03 18 48.3**	**-0.3**
	baz=171						
SSPA	**Standing Stone**	**79.60**	**20**	IAmb	IAmb	03 19 04.6	
	comp=Z,75nm,1.7s						
WUPA	**West Chester U**	**79.60**	**22**	IAMs_20	IAMs_20	03 48 14.0	
	comp=Z,2µm,22.0s						
P61A	**Hammonton**	**79.61**	**22**	IAMs_20	IAMs_20	03 48 54.2	
	comp=Z,2µm,19.0s						
L02E	**Cave Junction**	**79.62**	**345**	P	**P**	**03 18 49.3**	**+0.3**
	baz=164						
K05A	**Summer Lake**	**79.64**	**347**	P	P	03 18 55.9	+6.6
PSUB	**Penn St. - Bra**	**79.65**	**22**	IAMs_20	IAMs_20	03 48 02.1	
	comp=Z,3µm,22.0s						
K04D	**Chiloquin, OR**	**79.70**	**347**	P	**P**	**03 18 49.8**	**+0.2**
	baz=165						
O59A	**Robesonia**	**79.78**	**21**	P	**P**	**03 18 46.9**	**-3.0**
	baz=202						
N57A	**Milroy**	**79.81**	**20**	P	**P**	**03 18 49.6**	**-0.4**
	baz=201						
N58A	**Sunbury**	**80.12**	**20**	P	**P**	**03 18 50.2**	**-1.5**
	baz=202						
K02D	**Willamette Mer**	**80.15**	**345**	P	**P**	**03 18 52.1**	**+0.2**
	baz=164						
J05D	**Fort Rock, OR**	**80.24**	**347**	P	**P**	**03 18 52.7**	**+0.2**
	baz=166,SNR=12						
YMR	**Madison River**	**80.28**	**355**	P	P	03 18 59.7	+6.9
LUPA	**Lehigh Univers**	**80.29**	**21**	IAMs_20	IAMs_20	03 48 35.1	
	comp=Z,2µm,20.0s						
J04D	**Umpqua Nationa**	**80.36**	**346**	P	**P**	**03 18 52.9**	**-0.3**
	baz=165						
YHH	**Holmes Hill**	**80.39**	**355**	P	P	03 19 00.3	+6.8
ERPA	**Erie**	**80.44**	**18**	P	**P**	**03 18 52.9**	**-0.5**
	baz=199						
N59A	**State Game Lan**	**80.46**	**21**	P	**P**	**03 18 52.3**	**-1.3**
	baz=202						
RLMT	**Red Lodge**	**80.62**	**356**	P	**P**	**03 18 53.7**	**-0.9**
	baz=175						
PINE	**Pine Mountain**	**80.68**	**347**	IAmb	IAmb	03 19 09.1	
	comp=Z,30nm,0.9s						
I07A	**Izee**	**80.72**	**349**	IAMs_20	IAMs_20	03 48 20.4	
	comp=Z,2µm,19.0s						
CPNY	**Central Park**	**80.89**	**22**	IAMs_20	IAMs_20	03 49 50.1	
	comp=Z,2µm,19.0s						
I04A	**Tendick Farm,**	**80.95**	**346**	P	**P**	**03 18 55.5**	**-0.6**
	baz=165						
ODNJ	**Ogdensburg**	**80.96**	**22**	IAMs_20	IAMs_20	03 49 25.9	
	comp=Z,2µm,19.0s						
I03D	**Drain, OR**	**81.04**	**346**	P	**P**	**03 18 55.3**	**-1.3**
	baz=164						
L56A	**Greenwood**	**81.09**	**19**	P	**P**	**03 18 55.2**	**-1.8**
	baz=201						
PAL	**Palisades**	**81.10**	**22**	P	**P**	**03 18 55.2**	**-1.8**
	baz=204						
PAL	**Palisades**	**81.10**	**22**	IAMs_20	IAMs_20	03 49 27.7	
	comp=Z,3µm,20.0s						
DLMT	**Dillon**	**81.11**	**354**	P	P	03 19 04.0	+6.9
TRNY	**Table Rock, Ra**	**81.13**	**22**	IAmb	IAmb	03 19 06.8	
	comp=Z,31nm,1.3s						
TRNY				IAMs_20	IAMs_20	03 51 12.5	
	comp=Z,2µm,20.0s						
M59A	**Waymart**	**81.14**	**21**	P	**P**	**03 18 55.1**	**-2.1**
	baz=203						
BMO	**Blue Mountains**	**81.14**	**350**	IAmb	IAmb	03 19 20.6	
	comp=Z,47nm,1.9s						
L57A	**Andrews Acres**	**81.16**	**20**	P	**P**	**03 18 56.1**	**-1.1**
	baz=202						
SPMN	**Marine on St.**	**81.17**	**8**	P	**P**	**03 18 56.7**	**-0.5**
	baz=189						
M60A	**Port Jervis**	**81.18**	**22**	P	**P**	**03 18 56.0**	**-1.4**
	baz=203						
BOZ	**Bozeman (W)**	**81.26**	**354**	P	**P**	**03 18 57.2**	**-0.7**
	baz=174						
I05D	**Terrebonne, OR**	**81.28**	**347**	P	**P**	**03 18 58.5**	**+0.6**
	baz=166						
I02D	**Swisshome**	**81.54**	**345**	P	**P**	**03 18 59.5**	**+0.4**
	baz=164						
H04D	**Lebanon**	**81.72**	**346**	P	**P**	**03 18 59.0**	**-1.1**
	baz=165						
H04A	**Detroit Lake**	**81.77**	**347**	IAmb	IAmb	03 19 13.5	
	comp=Z,20nm,1.1s						
MEDO	**Medina**	**81.81**	**18**	IAMs_20	IAMs_20	03 52 50.8	
	comp=Z,1µm,19.0s						
L59A	**Walton**	**81.85**	**21**	P	**P**	**03 18 58.0**	**-3.0**
	baz=203						
LAO	**LASA Array**	**82.06**	**358**	P	**P**	**03 19 00.5**	**-1.5**
	baz=178						
CAN	**Canberra**	**82.16**	**232**	IAmb	IAmb	03 19 09.2	
	comp=Z,29nm,1.1s						
F10A	**Beach Ranch, E**	**82.23**	**351**	IAmb	IAmb	03 19 18.9	
	comp=Z,22nm,1.1s						
J56A	**Wolcott**	**82.34**	**19**	IAMs_20	IAMs_20	03 49 32.6	
	comp=Z,2µm,22.0s						
HRY	**Holter Researc**	**82.38**	**354**	P	P	03 19 10.7	+7.0
MSO	**Missoula**	**82.69**	**353**	P	**P**	**03 19 03.4**	**-1.9**
	baz=172						
MSO	**Missoula**	**82.69**	**353**	IAmb	IAmb	03 19 28.0	
	comp=Z,33nm,1.6s						
K61A	**Williamstown**	**82.82**	**22**	P	**P**	**03 19 04.4**	**-1.5**
	baz=204						
E09A	**Wood Farm, Sta**	**82.89**	**350**	P	P	03 19 13.1	+6.9
E09A				IAmb	IAmb	03 19 28.4	
	comp=Z,37nm,1.6s						
TOO	**Toolangi**	**82.93**	**228**	P	**P**	**03 19 07.9**	**+0.8**
TOO				pmax	pmax		
	comp=Z,17nm,1.0s						
TOO	**Toolangi**	**82.93**	**228**	P	**P**	**03 19 07.9**	**+0.8**
TOO				IAmb	IAmb	03 19 13.4	
	comp=Z,17nm,1.0s						
TOO				IAMs_20	IAMs_20	03 48 47.1	
	comp=Z,2µm,20.0s						
E08A	**Dider Farm, El**	**83.00**	**349**	P	P	03 19 13.8	+7.0
J59A	**Piesco**	**83.17**	**21**	IAMs_20	IAMs_20	03 50 48.5	
	comp=Z,2µm,20.0s						
I58A	**Old Forge**	**83.24**	**21**	P	**P**	**03 19 07.6**	**-0.6**
	baz=203						
I57A	**Carthage**	**83.28**	**20**	P	**P**	**03 19 07.2**	**-1.1**
	baz=202						
J60A	**Lant Hill Farm**	**83.29**	**22**	P	**P**	**03 19 06.9**	**-1.5**
	baz=204						
ACCN	**Adirondack Com**	**83.35**	**22**	IAMs_20	IAMs_20	03 51 00.1	
	comp=Z,2µm,20.0s						
ARMA	**Armidale**	**83.42**	**237**	IAMs_20	IAMs_20	03 52 55.6	
	comp=Z,2µm,18.0s						
D08A	**Wollman Farm,**	**83.53**	**350**		P	03 19 16.4	+6.8
D08A				IAmb	IAmb	03 19 36.0	
	comp=Z,31nm,1.4s						
JTMT	**Jette**	**83.63**	**353**	P	P	03 19 17.1	+6.8
JTMT				IAmb	IAmb	03 19 32.1	
	comp=Z,29nm,1.3s						
E04D	**Cinebar**	**83.64**	**347**	P	**P**	**03 19 09.7**	**-0.4**
	baz=165						
J62A	**Henniker**	**83.77**	**23**	P	**P**	**03 19 10.4**	**-0.5**
	baz=205						
I60A	**Shoreham**	**83.88**	**22**	P	**P**	**03 19 11.5**	**+0.1**
	baz=204						
EYMN	**Ely**	**84.00**	**8**	P	**P**	**03 19 11.7**	**-0.3**
	baz=190						
H58A	**Gabriels**	**84.14**	**21**	P	**P**	**03 19 11.1**	**-1.7**
	baz=204						
LONY	**Lake Ozonia**	**84.21**	**20**	P	**P**	**03 19 12.0**	**-1.1**
	baz=203						
I61A	**Oroboro, Fairl**	**84.29**	**22**	P	**P**	**03 19 13.3**	**-0.1**
	baz=205						
NEW	**Newport**	**84.47**	**351**	P	P	03 19 21.0	+6.7
NEW	**Newport**	**84.47**	**351**	P	**P**	**03 19 13.3**	**-1.0**
	baz=169						
H59A	**Cadyville**	**84.49**	**21**	P	**P**	**03 19 12.4**	**-2.1**
	baz=204						
ALGO	**Algonquin Park**	**84.53**	**18**	P	**P**	**03 19 11.3**	**-3.4**
	baz=200						
D03D	**Eldon**	**84.68**	**347**	P	**P**	**03 19 13.3**	**-2.1**
	baz=164						
NLWA	**Neilton Lookou**	**84.69**	**346**	IAmb	IAmb	03 19 29.1	
	comp=Z,22nm,0.9s						
H60A	**Morristown**	**84.71**	**22**	P	**P**	**03 19 14.4**	**-1.2**
	baz=205						
G58A	**Ormstown**	**84.84**	**21**	P	**P**	**03 19 14.6**	**-1.7**
	baz=204						
B08A	**Colville Reser**	**84.86**	**350**	IAmb	IAmb	03 19 39.1	
	comp=Z,37nm,1.6s						
H61A	**Lyndonville**	**84.92**	**22**	P	**P**	**03 19 14.3**	**-2.4**
	baz=205						
B05A	**Bryant**	**85.21**	**348**	P	**P**	**03 19 16.5**	**-1.5**
	baz=165						
E55A	**Montcerf-Lytto**	**85.50**	**19**	P	**P**	**03 19 18.5**	**-1.0**
	baz=202						
H63A	**New Sharon**	**85.63**	**23**	P	**P**	**03 19 18.4**	**-1.7**
	baz=207						
G61A	**St-Isidore-de-**	**85.71**	**22**	P	**P**	**03 19 19.5**	**-1.1**
	baz=205						
E56A	**St. Veronique**	**85.85**	**19**	P	**P**	**03 19 19.1**	**-2.1**
	baz=203						
H64A	**Troy**	**85.88**	**24**	P	**P**	**03 19 19.6**	**-1.8**
	baz=207						
ULM	**Lac du Bonnet**	**85.88**	**5**	LR	LR	03 54 37.4	
	comp=Z,457nm,18.8s,baz=179,slow=34						
D55A	**Sainte-Anne-du**	**86.17**	**19**	P	**P**	**03 19 21.0**	**-1.8**
	baz=202						
E58A	**La Victoria**	**86.18**	**21**	P	**P**	**03 19 21.0**	**-1.9**
	baz=204						
F60A	**Warwick**	**86.20**	**22**	P	**P**	**03 19 20.2**	**-2.8**
	baz=205						
D56A	**ZEC Mazanza, M**	**86.39**	**19**	P	**P**	**03 19 20.1**	**-3.8**
	baz=203						
H66A	**Whiting**	**86.65**	**25**	P	**P**	**03 19 21.4**	**-3.8**
	baz=209						
D58A	**Chemin du LacG**	**86.95**	**21**	P	**P**	**03 19 24.0**	**-2.7**
	baz=204						
D60A	**Saint Jean D’O**	**87.36**	**22**	P	**P**	**03 19 25.3**	**-3.3**
	baz=206						
LSQQ	**Lebel-sur-Quev**	**87.68**	**17**	P	**P**	**03 19 27.0**	**-3.1**
	baz=201						
MATQ	**Matagami**	**88.18**	**17**	P	**P**	**03 19 28.7**	**-3.8**
	baz=201						
STKA	**Stephens Creek**	**89.08**	**231**	P	**P**	**03 19 39.7**	**+2.2**
	comp=Z,1.0nm,0.4s,baz=105,slow=12,SNR=3.7						
STKA				LR	LR	03 53 23.9	
	comp=Z,4µm,19.1s,baz=146,slow=31						
STKA	**Stephens Creek**	**89.08**	**231**	P	**P**	**03 19 38.7**	**+1.2**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
STKA	**Stephens Creek**	**89.08**	**231**	P	**P**	**03 19 38.7**	**+1.2**
STKA				IAMs_20	IAMs_20	03 53 02.7	
	comp=Z,1µm,20.0s						
HNR	**Honiara**	**89.68**	**259**	IAMs_20	IAMs_20	03 50 32.2	
	comp=Z,2µm,20.0s						
CTAO	**Charters Tower**	**93.66**	**242**	IAMs_20	IAMs_20	03 55 59.5	
	comp=Z,2µm,20.0s						
FORT	**Forrest**	**97.91**	**223**	IAMs_20	IAMs_20	03 55 24.3	
	comp=Z,3µm,21.0s						
YKA	**Yellowknife Ar**	**98.27**	**355**	P	**P**	**03 20 16.5**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=161,slow=4.4,SNR=3.8						
YKA				PKKP	**PKKPdf**	**03 36 56.0**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=359,slow=2.5,SNR=3.7						
YKA				LR	LR	04 00 09.2	
	comp=Z,856nm,18.8s,baz=0.0,slow=33						
RABL	**Rabaul**	**98.99**	**258**	IAMs_20	IAMs_20	03 56 32.9	
	comp=Z,1µm,21.0s						
KRVT	**Keravat (AS076**	**99.03**	**258**	LR	LR	03 57 50.8	
	comp=Z,924nm,21.9s,baz=148,slow=31						
ASAR	**Alice Springs**	**99.67**	**232**	P	**Pdif**	**03 20 28.4**	**+2.2**
	comp=Z,1.5nm,0.9s,baz=138,slow=3.8,SNR=6.4						
PMG	**Port Moresby**	**99.73**	**251**	IAMs_20	IAMs_20	03 55 09.3	
	comp=Z,2µm,21.0s						
BOSA	**Boshof**	**99.95**	**136**	LR	LR	03 57 45.6	
	comp=Z,743nm,21.8s,baz=222,slow=31						
H11S2	**WAKE ISLAND Hy**	**100.25**	**285**	T	T	05 12 26.0	
	baz=126,slow=75,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**100.26**	**285**	T	T	05 12 28.4	
	baz=126,slow=75,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**100.27**	**285**	T	T	05 12 27.4	
	baz=126,slow=75,SNR=4.7						
MESA	**MESA**	**100.61**	**342**	IAMs_20	IAMs_20	03 55 40.7	
	comp=Z,1µm,21.0s						
H01W1	**Cape Leeuwin H**	**101.38**	**211**	T	T	05 14 15.2	
	baz=149,slow=76,SNR=242						
H01W2	**Cape Leeuwin H**	**101.38**	**211**	T	T	05 14 15.5	
	baz=149,slow=76,SNR=205						
H01W3	**Cape Leeuwin H**	**101.39**	**211**	T	T	05 14 16.5	
	baz=149,slow=76,SNR=189						
NWAO	**Narrogin (SRO)**	**101.69**	**214**	IAMs_20	IAMs_20	03 56 13.1	
	comp=Z,3µm,21.0s						
WR2	**Warramunga Arr**	**102.00**	**235**	IAMs_20	IAMs_20	04 14 09.1	
	comp=Z,2µm,21.0s						
N25K	**Chitina, Valde**	**102.51**	**341**	IAMs_20	IAMs_20	03 57 22.9	
	comp=Z,908nm,21.0s						
RND	**Reindeer**	**105.12**	**341**	IAMs_20	IAMs_20	03 58 04.9	
	comp=Z,2µm,21.0s						
SVW2	**Sparrevohn**	**105.31**	**337**	IAMs_20	IAMs_20	03 58 27.0	
	comp=Z,1µm,20.0s						
MORW	**Morawa**	**105.48**	**215**	IAMs_20	IAMs_20	03 58 37.8	
	comp=Z,2µm,22.0s						
KNRA	**Kununurra**	**108.76**	**234**	IAMs_20	IAMs_20	04 04 11.8	
	comp=Z,2µm,20.0s						
RDOG	**Red Dog Mine**	**112.46**	**340**	IAMs_20	IAMs_20	04 03 03.8	
	comp=Z,1µm,20.0s						
ES12	**SONSECA Array**	**118.40**	**60**	IAMs_20	IAMs_20	04 09 46.9	
	comp=Z,1µm,22.0s						
ESDC	**Sonseca Array**	**118.40**	**60**	PKP	**PKPdf**	**03 25 26.8**	**-2.7**
	comp=Z,0.6nm,0.9s,baz=261,slow=2.2,SNR=2.8						
ES04	**SONSECA Array**	**118.41**	**60**	IAMs_20	IAMs_20	04 06 58.1	
	comp=Z,2µm,21.0s						
LUWI	**Luwuk**	**123.37**	**240**	IAMs_20	IAMs_20	04 14 00.9	
	comp=Z,1µm,21.0s						
JAGI	**Jajag, Banyuwa**	**123.41**	**227**	IAMs_20	IAMs_20	04 17 54.9	
	comp=Z,2µm,20.0s						
MBAR	**Mbarara**	**124.30**	**120**	IAMs_20	IAMs_20	04 10 45.3	
	comp=Z,852nm,22.0s						
UGM	**Wanagama**	**125.95**	**223**	IAMs_20	IAMs_20	04 23 33.3	
	comp=Z,1µm,20.0s						
TOLI2	**Tolitoli**	**126.28**	**240**	IAMs_20	IAMs_20	04 13 27.3	
	comp=Z,1µm,22.0s						
BKB	**Balikpapan**	**127.24**	**235**	IAMs_20	IAMs_20	04 18 04.7	
	comp=Z,2µm,20.0s						
BNI	**Bardonecchia**	**127.64**	**57**	IAMs_20	IAMs_20	04 08 57.9	
	comp=Z,1µm,19.0s						
MA2	**Magadan**	**127.68**	**322**	IAMs_20	IAMs_20	04 12 05.8	
	comp=Z,2µm,20.0s						
CISI	**Cisompet, Garu**	**127.73**	**221**	IAMs_20	IAMs_20	04 17 53.5	
	comp=Z,893nm,20.0s						
CLTB	**Caltabellotta**	**130.20**	**68**	IAMs_20	IAMs_20	04 18 47.5	
	comp=Z,494nm,19.0s						
DAVA	**Damuels**	**130.33**	**55**	*e*P	**PKiKP**	**03 25 57.1**	**+4.1**
	comp=Z,5.7nm,1.1s						
MYLDM	**Lahad Datu**	**130.74**	**242**	IAMs_20	IAMs_20	04 17 18.0	
	comp=Z,2µm,22.0s						
FETA	**Feichten**	**130.85**	**55**	*e*P	**PKiKP**	**03 25 59.5**	**+5.4**
	comp=Z,12nm,1.7s						
TEOL	**Teolo**	**131.14**	**58**	IAMs_20	IAMs_20	04 16 08.4	
	comp=Z,1µm,21.0s						
MOTA	**Moosalm**	**131.16**	**55**	*e*P	**PKiKP**	**03 25 59.8**	**+5.1**
	comp=Z,8.9nm,0.9s						
SQTA	**Sankt Quirin**	**131.21**	**55**	*e*P	**PKiKP**	**03 25 59.6**	**+4.8**
	comp=Z,3.8nm,0.8s						
WATA	**Walderalm**	**131.47**	**55**	*e*P	**PKiKP**	**03 26 01.6**	**+6.3**
	comp=Z,3.7nm,1.1s						
WTTA	**Wattenberg**	**131.50**	**55**	P	**PKiKP**	**03 25 59.5**	**+4.1**
	comp=Z,6.9nm,1.3s						
GRF	**Grafenberg Arr**	**131.65**	**52**	*e*PKP	**PKiKP**	**03 25 59.5**	**+4.0**
	baz=260,slow=1.5						
GRF				*e*L	L	04 10 32.9	
	comp=Z,1µm,36.5s						
AQU	**L'Aquila**	**131.67**	**62**	IAMs_20	IAMs_20	04 17 42.6	
	comp=Z,591nm,22.0s						
INTR	**Introdacqua**	**131.95**	**63**	IAMs_20	IAMs_20	04 15 38.8	
	comp=Z,786nm,22.0s						
KBA	**Koelnbreinsper**	**132.61**	**56**	*e*P	**PKiKP**	**03 26 00.4**	**+2.7**
	comp=Z,3.3nm,0.7s						
KKM	**Kota Kinabalu**	**132.97**	**241**	IAMs_20	IAMs_20	04 19 29.6	
	comp=Z,1µm,22.0s						
CLL	**Collm**	**132.99**	**50**	*e*(PKPdf)	**PKiKP**	**03 25 58.0**	**0.0**
CLL				*e*		03 26 10.0	
CLL				*e*PP	PP	03 28 30.0	+6.7
CLL				*e*PPPP		03 33 36.0	
CLL				*e*PPS	PPS	03 40 24.0	
CLL				*e*SS	SS	03 46 30.0	+24
CLL				*e*		03 47 42.0	
CLL				*e*SSS	SSS	03 50 54.0	
CLL				*e*		03 53 18.0	
CLL				*e*SSSS		03 54 30.0	
CLL	**Collm**	**132.99**	**50**	*e*PKIKP	**PKiKP**	**03 25 58.0**	**0.0**
KHC	**Kasperske Hory**	**133.09**	**53**	*e*PKIKP	**PKPdf**	**03 25 55.9**	**-1.3**
KHC				*e*		03 26 00.2	
KHC	**Kasperske Hory**	**133.09**	**53**	*e*PKPpre	PKPpre	03 25 55.9	
KHC				*e*PKPDF	sPKPdf	03 26 00.2	+0.3
SBUM	**Sibu**	**133.09**	**233**	IAMs_20	IAMs_20	04 20 39.6	
	comp=Z,913nm,20.0s						
GERES	**GERESS Array B**	**133.13**	**53**	PKP	**PKPdf**	**03 25 54.5**	**-2.9**
	comp=Z,0.6nm,0.8s,baz=226,slow=3.5,SNR=5.2						
TIP	**Timpagrande**	**133.33**	**67**	IAMs_20	IAMs_20	04 20 43.4	
	comp=Z,632nm,22.0s						
KSM	**Kuching**	**133.57**	**230**	IAMs_20	IAMs_20	04 17 52.3	
	comp=Z,1µm,22.0s						
ARSA	**Arzberg**	**134.11**	**56**	*e*P	**PKiKP**	**03 26 04.5**	**+4.0**
	comp=Z,2.0nm,0.7s						
OSTC	**Ostas**	**134.94**	**51**	*e*PKPDF	**PKiKP**	**03 26 05.3**	**+3.2**
TIXI	**Tiksi**	**135.07**	**339**	IAMs_20	IAMs_20	04 24 03.4	
	comp=Z,578nm,19.0s						
VYHS	**Vyhne**	**136.47**	**55**	*e*PKIKP	**PKiKP**	**03 26 10.7**	**+5.5**
VYHS	**Vyhne**	**136.47**	**55**	*e*PKP	**PKiKP**	**03 26 10.7**	**+5.5**
MYKOM	**Kota Tinggi**	**137.67**	**223**	IAMs_20	IAMs_20	04 26 05.8	
	comp=Z,1µm,20.0s						
YAK	**Yakutsk**	**137.86**	**326**	IAMs_20	IAMs_20	04 19 33.3	
	comp=Z,951nm,20.0s						
BKNI	**Bangkinang**	**137.94**	**219**		**PKiKP**	**03 26 08.6**	**-0.8**
FINES	**FINESS Array B**	**139.45**	**35**	PKP	**PKPdf**	**03 26 06.5**	**-2.0**
	comp=Z,3.0nm,0.9s,baz=216,slow=6.9,SNR=2.5						
MLR	**Muntele Rosu**	**141.10**	**60**	IAMs_20	IAMs_20	04 22 59.4	
	comp=Z,698nm,20.0s						
IPM	**Ipoh**	**141.45**	**222**	IAMs_20	IAMs_20	04 24 43.6	
	comp=Z,1µm,22.0s						
KULM	**Kulim**	**142.33**	**222**	IAMs_20	IAMs_20	04 25 48.9	
	comp=Z,887nm,21.0s						
DLV	**T Lat**	**142.52**	**239**	IAMs_20	IAMs_20	04 24 36.3	
	comp=Z,748nm,22.0s						
AKASG	**Malin Array Be**	**143.22**	**51**	PKhKP	PKPpre	03 26 06.8	
	comp=Z,0.4nm,0.5s,baz=269,slow=4.2,SNR=2.1						
AKASG				PKP	**PKPdf**	**03 26 13.6**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=275,slow=3.3,SNR=4.1						
DL2	**Dalian**	**144.10**	**289**	PKP	**PKPdf**	**03 26 17.3**	**-0.3**
DL2				PP	**PP**	**03 29 38.3**	**+5.7**
DL2				SS	SS	03 48 28.6	+11
DL2				AMB	AMB		
	comp=Z,460nm,5.9s						
DL2				LR	LR		
	comp=Z,540nm,21.2s						
DL2				LR	LR		
	comp=Z,730nm,20.3s						
DL2				LR	LR		
	comp=Z,780nm,17.5s						
DAMY	**Dhamar**	**144.50**	**118**	IAMs_20	IAMs_20	04 25 15.1	
	comp=Z,554nm,22.0s						
NJ2	**Nanjing**	**144.69**	**277**	*e*PKPbc	**PKiKP**	**03 26 21.5**	**-1.1**
NJ2				LR	LR		
	comp=Z,860nm,20.2s						
NJ2				LR	LR		
	comp=Z,710nm,20.0s						
NJ2				LR	LR		
	comp=Z,1µm,18.6s						
KLMR	**Klimovskoe**	**145.67**	**31**	*e*PKHKP	PKPpre	03 26 18.4	
KLMR				pmax	pmax		
	comp=Z,79nm,1.3s						
KLMR	**Klimovskoe**	**145.67**	**31**	*e*	**PKPdf**	**03 26 18.5**	**-1.1**
KLMR				AMP		03 26 27.8	
	comp=Z,79nm,1.3s						
HIA	**Hailar**	**145.72**	**307**	PKP2	**PKiKP**	**03 26 24.9**	**+0.7**
HIA	**Hailar**	**145.72**	**307**		**PKiKP**	**03 26 24.9**	**+0.7**
NRIK	**Noril'sk**	**145.75**	**353**	PKPbc	**PKPab**	**03 26 20.1**	**-0.3**
	comp=Z,5.8nm,0.8s,baz=33,slow=2.8,SNR=9.3						
NRIK	**Noril'sk**	**145.75**	**353**	IAMs_20	IAMs_20	04 27 39.6	
	comp=Z,934nm,21.0s						
QIZ	**Qiongzhong**	**146.11**	**250**	PKPbc	**PKPbc**	**03 26 23.0**	**+0.4**
QIZ				PP	**PP**	**03 29 45.8**	**+1.3**
QIZ				SS	SS	03 48 40.4	-0.2
QIZ				LR	LR		
	comp=Z,310nm,28.4s						
QIZ				LR	LR		
	comp=Z,520nm,27.3s						
QIZ				LR	LR		
	comp=Z,1µm,31.4s						
QIZ	**Qiongzhong**	**146.11**	**250**	IAMs_20	IAMs_20	04 25 20.6	
	comp=Z,813nm,22.0s						
BRTR	**Keskin Array B**	**146.24**	**70**	PKPbc	**PKPdf**	**03 26 20.1**	**-1.4**
	comp=Z,3.2nm,0.8s,baz=211,slow=3.4,SNR=5.4						

OBN	Obninsk	146.64	42	PKPbc	PKPdf	03 26 20.9	-0.5
	comp=Z,6.3nm,1.0s,baz=79,slow=12,SNR=3.1						
OBN	Obninsk	146.64	42	⇑ePKHKP	PKPpre	03 26 20.8	
OBN				i		03 26 27.4	
OBN				e		03 30 00.9	
OBN				eSS	SS	03 48 49.7	+4.4
OBN				pmax	pmax		
	comp=Z,23nm,0.9s						
OBN				pmax	pmax		
	comp=Z,28nm,0.7s						
BOD	Bodaibo	146.68	323	ePKP2	PKiKP	03 26 27.1	+1.3
BOD				pmax	pmax		
	comp=Z,70nm,1.6s						
MOS	Moscow	146.99	40	ePKP2	PKiKP	03 26 28.1	+1.6
MOS				pmax	pmax		
	comp=Z,58nm,1.6s						
TIA	Tai'an	147.13	283	PKPbc	PKiKP	03 26 29.7	+2.2
BJI	Beijing	148.43	290	PKPbc	PKPab	03 26 31.6	-0.1
BJI				SS	SS	03 49 14.3	+7.4
BJI				LR	LR		
	comp=Z,450nm,20.4s						
BJI				LR	LR		
	comp=Z,590nm,21.6s						
BJI				LR	LR		
	comp=Z,750nm,22.7s						
BJT	Baijiatuau	148.43	290	PKIKP	PKPbc	03 26 28.6	+0.1
BJT	Baijiatuau	148.43	290	PKPdf	PKPbc	03 26 28.6	+0.1
BJT	Baijiatuau	148.43	290	IAMs_20	IAMs_20	04 27 14.7	
	comp=Z,542nm,20.0s						
LPSR	Galich'ya Gora	148.75	46	ePKHKP	PKPpre	03 26 26.9	
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
CIT	Chita	149.01	313	ePKIKP	PKPbc	03 26 29.2	-0.4
CIT				e		03 26 38.6	
SOCY	Socotra	149.08	134	IAMs_20	IAMs_20	04 33 26.7	
	comp=Z,769nm,20.0s						
VSR	Storozhevoye	149.30	48	ePKIKP	PKPbc	03 26 28.7	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
RAYN	Ar Rayn	150.71	106	PKIKP	PKPbc	03 26 32.0	-2.7
RAYN	Ar Rayn	150.71	106	PKPdf	PKPbc	03 26 32.0	-2.7
RAYN				IAMs_20	IAMs_20	04 38 00.8	
	comp=Z,520nm,20.0s						
VRH	Novokhopyorsk	150.84	47	ePKIKP	PKPbc	03 26 31.1	-2.9
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
KIRV	Kirov	151.07	29	PKPbc	PKPdf	03 26 30.8	+2.3
	comp=Z,8.1nm,0.6s,baz=247,slow=4.5,SNR=4.0						
PALK	Pallekele	151.40	189	IAMs_20	IAMs_20	04 25 37.2	
	comp=Z,1µm,22.0s						
MARD	Mardin	151.50	76	PKPdf	PKPbc	03 26 33.8	-2.4
KOPT	Kop Dagi	151.53	70	PKPdf	PKPbc	03 26 33.7	-2.7
KOPT				IAMs_20	IAMs_20	04 32 13.3	
	comp=Z,427nm,20.0s						
ENH	Enshi	151.74	268	PKPdf	PKPdf	03 26 33.4	+2.9
HHC	Hu-ho-hao-te	151.98	291	ePKPbc	PKPbc	03 26 36.0	-1.2
HHC				LR	LR		
	comp=Z,330nm,18.7s						
HHC				LR	LR		
	comp=Z,650nm,17.0s						
HHC				LR	LR		
	comp=Z,1µm,17.0s						
KIV	Kislovodsk	153.05	62	ePKIKP	PKPbc	03 26 36.2	-3.2
KIV				e		03 30 28.5	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GOF	Gofitskoye	153.16	59	⇑ePKIKP	PKiKP	03 26 44.0	+4.4
GOF				pmax	pmax		
	comp=Z,18nm,0.9s						
KBZ	Khabaz	153.22	62	PKPbc	PKPbc	03 26 38.1	-1.5
	comp=Z,5.0nm,0.9s,baz=226,slow=5.6,SNR=4.6						
XAN	Xi'an	153.26	276	IAMs_20	IAMs_20	04 33 23.1	
	comp=Z,729nm,22.0s						
CMAR	Chiang Mai Arr	153.62	235	PKP	PKPdf	03 26 35.5	+2.0
	comp=Z,1.1nm,0.3s,baz=226,slow=1.9,SNR=7.1						
CHTO	Chiang Mai	153.87	236	IAMs_20	IAMs_20	04 32 03.6	
	comp=Z,1µm,21.0s						
ULN	Ulaanbaatar	154.24	308	IAMs_20	IAMs_20	04 33 58.9	
	comp=Z,775nm,20.0s						
SONM	Songino Array	154.68	308	PKP	PKPdf	03 26 35.4	+1.1
	comp=Z,1.0nm,1.1s,baz=16,slow=1.4,SNR=3.8						
KMI	Kunming	154.96	252	IAMs_20	IAMs_20	04 38 08.9	
	comp=Z,658nm,21.0s						
ZAK	Zakamensk	155.62	315	ePKIKP	PKPab	03 26 55.4	-6.2
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
ARU	Arti	156.04	25	PKP	PKPdf	03 26 35.7	0.0
	comp=Z,0.3nm,0.2s,baz=307,slow=22,SNR=1.4						
ARU	Arti	156.04	25	PKIKP	PKPdf	03 26 35.5	-0.2
CD2	Chengdu	156.60	266	PKP	PKPdf	03 26 39.5	+2.2
CD2				PP	PP	03 30 46.2	+1.3
CD2				AMB	AMB		
	comp=Z,470nm,5.9s						
CD2				LR	LR		
	comp=Z,800nm,16.2s						
CD2				LR	LR		
	comp=Z,820nm,20.6s						
CD2				LR	LR		
	comp=Z,620nm,21.1s						
LZH	Lanzhou	157.72	279	ePKP	PKPdf	03 26 36.0	-2.7
LZH				pPKP	sPKPdf	03 26 44.5	+3.1
LZH				sPKP		03 26 47.7	
LZH				PKPab	PKPab	03 27 12.4	+1.1
AKTO	Aktyubinsk	160.21	36	PKP	PKPdf	03 26 41.4	+0.4
	comp=Z,1.9nm,1.0s,baz=30,slow=5.1,SNR=3.8						
ZALV	Zalesovo Beam	160.83	345	PKP	PKPdf	03 26 41.6	+0.1
	comp=Z,0.8nm,0.7s,baz=153,slow=0.3,SNR=6.1						
GTA	Gaotai	161.02	288	ePKP	PKPdf	03 26 45.6	+3.2
GTA				LR	LR		
	comp=Z,710nm,22.7s						
GTA				LR	LR		
	comp=Z,250nm,23.1s						
GTA				LR	LR		
	comp=Z,230nm,21.5s						
HYB	Hyderabad	161.66	187	i PKP	PKPab	03 27 33.0	+4.6
KURBB	Kurchatov Arra	165.02	355	PKP	PKPdf	03 26 46.0	+0.4
	comp=Z,0.6nm,0.8s,baz=201,slow=0.9,SNR=2.5						
MKAR	Makanchi Array	168.06	340	PKP	PKPdf	03 26 49.8	+1.5
	comp=Z,0.4nm,1.0s,baz=270,slow=2.3,SNR=2.1						
WMQ	Urumqi	168.09	316	ePKP	PKPdf	03 26 51.7	+3.3
WMQ				LR	LR		
	comp=Z,800nm,9.1s						
WMQ				LR	LR		
	comp=Z,480nm,16.3s						
WMQ				LR	LR		
	comp=Z,3µm,19.9s						
KSH	Kashi	176.20	4	PKP	PKPdf	03 26 58.1	+5.8

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*SOME **07** 03:16:15.0, 40°.32N×77°.42E, h10^{km}*
*KRNET **07** 03:16:15.6±0.1, 40°.34N×77°.60E, mb3.7*
*NNC **07** 03:16:16.4±0.8, 40°.34N×77°.47E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=5.2km s-min=3.9km az=173.0*
ISC 07 03:16:19.5±1.9**, 40°.31N**±0°.09×**77°.52E**±0°.04**, h10^{km}, n80, σ1^{s}.90**/118**, 18C-21D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.84	352	⇑eP	Pn	03 16 49.6	-1.7
	baz=50						
KDJ				⇑iS	Sn	03 17 14.1	-0.7
	baz=50						
ULHL	Ulahol	2.17	334	⇑eP	Pn	03 16 54.8	-1.0
	baz=32						
ULHL				⇑iS	Sn	03 17 24.0	+1.2
	baz=32						
ULHL	Ulahol	2.17	334	P	Pn	03 16 56.0	+0.2
	SNR=21						
PRZ	Przheval'sk	2.27	17	⇓iP	Pn	03 16 56.4	-0.9
	baz=15						
PRZ				⇓iS	Sn	03 17 26.0	+0.6
	baz=15						
ANVS	Anan'yevo	2.48	2	⇑iP	Pn	03 16 59.3	-0.8
	baz=1.0						
ANVS				⇑iS	Sn	03 17 30.8	+0.3
	baz=1.0						
BOOM	Boomskoye usch	2.49	332	⇓iP	Pn	03 16 59.5	-0.7
	baz=30						
BOOM				⇓iS	Sn	03 17 31.6	+0.9
	baz=30						
TNSS	Tian-Shan	2.76	351	eP	Pb	03 17 06.8	-2.4
	69nm,0.4s						
TNSS				eS	Sb	03 17 44.3	+1.1
	70nm,0.5s						
TNSS	Tian-Shan	2.76	351	Pg	Pb	03 17 06.3	-2.9
	69nm,0.4s						
TNSS				Lg	Lg	03 17 44.2	
	70nm,0.5s						
IZV	Izvestkoviy	2.81	346	eP	Pb	03 17 07.7	-2.2
	28nm,0.5s						
IZV				eS	Sb	03 17 45.4	+1.0
	130nm,0.4s						
IZV	Izvestkoviy	2.81	346	Pg	Pb	03 17 07.7	-2.2
	28nm,0.5s						
IZV				Lg	Lg	03 17 45.4	
	130nm,0.4s						
SATY	Saty	2.83	13	eP	Pb	03 17 08.5	-1.6
	56nm,0.3s						
SATY				eS	Sb	03 17 47.2	+2.3
	114nm,0.5s						
SATY	Saty	2.83	13	Pg	Pb	03 17 08.5	-1.6
	56nm,0.3s						
SATY				Lg	Lg	03 17 47.2	
	114nm,0.5s						
ARLS	Aral	2.88	304	⇓iP	Pn	03 17 04.7	-0.8
	baz=2.0						
ARLS				⇓iS	Sn	03 17 41.3	+1.0
	baz=2.0						
MDOK	Medeo	2.88	353	eP	Pb	03 17 08.0	-3.0
	40nm,0.3s						
MDOK				eS	Sb	03 17 46.3	0.0
	118nm,0.5s						
MDOK	Medeo	2.88	353	⇓Pg	Pb	03 17 07.9	-3.1
	25nm,0.5s						
MDOK				⇓Lg	Lg	03 17 47.0	
	166nm,0.5s						
MDOK	Medeo	2.88	353	Pg	Pb	03 17 08.0	-3.0
	40nm,0.3s						
MDOK				Lg	Lg	03 17 46.3	
	118nm,0.5s						
AAA	Alma-Ata	2.94	351	eP	Pb	03 17 10.3	-1.6
	79nm,0.3s						
AAA				eS	Sb	03 17 49.8	+1.9
	172nm,0.7s						
AAA	Alma-Ata	2.94	351	Pg	Pb	03 17 10.3	-1.6
	79nm,0.3s						
AAA				Lg	Lg	03 17 49.8	
	172nm,0.7s						
MTBS	Maitube	2.94	344	eP	Pb	03 17 09.2	-2.8
	23nm,0.3s						
MTBS				eS	Sb	03 17 48.3	+0.3
	108nm,0.3s						
KNDC	Almaty	2.94	352	⇑Lg	Lg	03 17 50.3	
	334nm,0.5s						
ZHN	Zhinishke	2.94	13	eP	Pb	03 17 10.0	-2.0
	12nm,0.3s						
ZHN				eS	Sb	03 17 49.9	+1.8
	47nm,0.8s						
ZHN	Zhinishke	2.94	13	Pg	Pb	03 17 09.8	-2.3
	59nm,0.4s						
ZHN				Lg	Lg	03 17 49.9	
	47nm,0.8s						
KOTS	Kotyrbulak	2.94	354	eP	Pb	03 17 09.9	-2.2
	116nm,0.3s						
KOTS				eS	Sb	03 17 49.2	+1.1
	432nm,0.5s						
KOTS	Kotyrbulak	2.94	354	Pg	Pb	03 17 09.9	-2.2
	116nm,0.3s						
KOTS				Lg	Lg	03 17 49.3	
	432nm,0.5s						
UCH	Uchtor	2.97	311	⇑eP	Pn	03 17 07.1	0.0
	baz=10.0						
UCH				⇑iS	Sn	03 17 44.9	+1.8
	baz=10.0						
UCH	Uchtor	2.97	311	P	Pn	03 17 06.9	-0.2
	SNR=9.5						
KST	Kastek	2.97	337	eP	Pb	03 17 09.9	-2.7
	14nm,0.4s						
KST				eS	Sb	03 17 49.4	+0.3
	73nm,0.5s						
KST	Kastek	2.97	337	Pg	Pb	03 17 09.9	-2.7
	14nm,0.4s						
KST				Lg	Lg	03 17 49.4	
	73nm,0.5s						
TKM2	Tokmak 2	2.99	332	⇑iP	Pn	03 17 06.6	-0.5
	baz=30						
TKM2				⇑iS	Sn	03 17 43.8	+0.8
	baz=30						
TKM2	Tokmak 2	2.99	332	P	Pb	03 17 10.8	-2.0
	SNR=6.1						
TKM2	Tokmak 2	2.99	332	⇓Pg	Pb	03 17 10.3	-2.6
	10nm,0.6s						
TKM2				⇓Lg	Lg	03 17 50.2	
	112nm,0.8s						
KBK	Karagaybulak	3.04	321	⇓iP	Pn	03 17 07.4	-0.4
	baz=20						
KBK				⇓iS	Sn	03 17 45.4	+1.0
	baz=20						
KBK	Karagaybulak	3.04	321	P	Pb	03 17 11.6	-2.2
	SNR=9.0						
UZB	Uzynbulak	3.05	21	eP	Pb	03 17 12.6	-1.4
	22nm,0.4s						
UZB				eS	Sb	03 17 53.8	+2.4
	35nm,0.3s						
UZB	Uzynbulak	3.05	21	Pg	Pb	03 17 12.2	-1.8
	22nm,0.4s						
UZB				Lg	Lg	03 17 53.8	
	35nm,0.3s						
SHLS	Shalkode	3.20	26	eP	Pb	03 17 16.5	+0.1
	48nm,0.5s						
SHLS				eS	Sg	03 18 01.1	-1.1
	63nm,0.4s						
SHLS	Shalkode	3.20	26	Pg	Pb	03 17 16.5	+0.1
	48nm,0.5s						
SHLS				Lg	Lg	03 18 01.1	
	63nm,0.4s						
DGS	Degeres	3.21	337	eP	Pb	03 17 14.6	-2.1
	23nm,0.4s						
DGS				eS	Sb	03 17 57.3	+1.4
	86nm,0.5s						
DGS	Degeres	3.21	337	Pg	Pb	03 17 14.6	-2.1
	23nm,0.4s						
DGS				Lg	Lg	03 17 57.3	
	86nm,0.5s						
KURS	Kuram	3.22	8	eP	Pb	03 17 14.7	-2.0
	30nm,0.5s						
KURS				eS	Sb	03 17 57.7	+1.7
	49nm,0.5s						
KURS	Kuram	3.22	8	Pg	Pb	03 17 14.7	-2.0
	30nm,0.5s						
KURS				Lg	Lg	03 17 57.7	
	49nm,0.5s						
AAK	Ala-Archa	3.26	317	⇓iP	Pn	03 17 10.8	0.0
	baz=15						
AAK				⇓iS	Sn	03 17 50.8	+1.1
	baz=15						
AAK	Ala-Archa	3.26	317	P	Pb	03 17 14.6	-2.9
	SNR=26						
AAK	Ala-Archa	3.26	317	⇑Pg	Pb	03 17 13.9	-3.5
	12nm,0.5s						
AAK				⇑Lg	Lg	03 17 57.5	
	53nm,0.7s						
KPKS	Kokpek	3.27	15	eP	Pb	03 17 15.4	-2.4
	46nm,0.3s						
KPKS				eS	Sb	03 17 58.6	+0.9
	141nm,0.5s						
PDGK	Podgornoye	3.36	25	Pg	Pb	03 17 16.5	-2.7
	23nm,0.3s						
PDGK				Lg	Lg	03 18 00.8	
	31nm,0.4s						
PDGK	Podgornoye	3.36	25	⇓Pn	Pn	03 17 10.8	-1.3
	27nm,0.5s						
PDGK				⇑Lg	Lg	03 18 01.1	
	39nm,0.5s						
CHMS	Chumysh	3.40	323	⇓eP	Pn	03 17 12.4	-0.2
	baz=22						
CHMS				⇓iS	Sn	03 17 53.9	+0.9
	baz=22						
CHMS	Chumysh	3.40	323	P	Sb	03 18 02.4	+1.2
	SNR=7.3						
AML	Almayashu	3.42	304	⇑eP	Pn	03 17 13.2	0.0
	baz=2.0						
AML				⇑eS	Sn	03 17 55.3	+1.4
	baz=2.0						
AML	Almayashu	3.42	304	P	Pn	03 17 12.9	-0.3
	SNR=24						
KTBS	Karatobe	3.46	350	eP	Pb	03 17 18.4	-2.5
	10nm,0.4s						
KTBS				eS	Sb	03 18 03.9	+0.9
	58nm,0.6s						
KTBS	Karatobe	3.46	350	Pg	Pb	03 17 18.4	-2.5
	10nm,0.4s						
KTBS				Lg	Lg	03 18 03.9	
	58nm,0.6s						
CHKK	Chushkaly	3.57	354	eP	Pb	03 17 20.5	-2.1
	15nm,0.4s						
CHKK				eS	Sb	03 18 07.8	+1.8
	72nm,0.3s						
CHKK	Chushkaly	3.57	354	Pg	Pb	03 17 20.5	-2.1
	15nm,0.4s						
CHKK				Lg	Lg	03 18 07.8	
	72nm,0.3s						
KRBS	Karabastau	3.66	338	eP	Pb	03 17 22.0	-2.3
	8.3nm,0.3s						
KRBS				eS	Sb	03 18 10.0	+1.4
	37nm,0.4s						
KRBS	Karabastau	3.66	338	Pg	Pb	03 17 22.0	-2.3
	8.3nm,0.3s						
KRBS				Lg	Lg	03 18 10.0	
	37nm,0.4s						
EKS2	Erkin-Say	3.67	311	⇓iP	Pn	03 17 16.5	+0.1
	baz=10.0						
EKS2				⇓iS	Sn	03 18 00.8	+1.0
	baz=10.0						
EKS2	Erkin-Say	3.67	311	P	Pn	03 17 18.2	+1.9
	SNR=5.3						
KUU	Kurty	3.69	347	eP	Pb	03 17 22.9	-1.9
	1.8nm,0.1s						
KUU				eS	Sb	03 18 11.6	+2.0
	76nm,0.6s						
USP	Ospenovka	3.72	324	P	Pb	03 17 22.7	-2.6
	SNR=13						
KTMS	Ketmen	3.78	33	eP	Pb	03 17 24.5	-1.9
	11nm,0.2s						
KTMS				eS	Sb	03 18 14.4	+2.1
	41nm,0.8s						
KTMS	Ketmen	3.78	33	Pg	Pb	03 17 24.5	-1.9
	11nm,0.2s						
KTMS				Lg	Lg	03 18 14.4	
	41nm,0.8s						
SGDS	Sogindy	3.81	326	Pg	Pb	03 17 24.3	-2.6
	7.2nm,0.5s						
SGDS				Lg	Lg	03 18 14.4	
	33nm,0.6s						
MNBS	Baschi	3.83	10	eP	Pb	03 17 25.7	-1.5
	16nm,0.5s						
MNBS				eS	Sb	03 18 16.6	+3.0
	87nm,0.3s						
MNBS	Baschi	3.83	10	Pg	Pb	03 17 25.7	-1.5
	16nm,0.5s						
MNBS				Lg	Lg	03 18 16.6	
	87nm,0.3s						
ARXS	Arharly	3.91	3	eP	Pb	03 17 27.4	-1.1
	28nm,0.5s						
ARXS				eS	Sb	03 18 19.3	+3.3
	34nm,0.5s						
ARXS	Arharly	3.91	3	Pg	Pb	03 17 27.5	-1.1
	28nm,0.5s						
ARXS				Lg	Lg	03 18 19.3	
	34nm,0.5s						
MRKS	Merke	4.04	308	eP	Pb	03 17 28.7	-2.1
	7.7nm,0.6s						
MRKS				eS	Sb	03 18 21.4	+1.6
	7.1nm,0.5s						
MRKS	Merke	4.04	308	Pg	Pb	03 17 28.7	-2.1
	7.7nm,0.6s						
MRKS				Lg	Lg	03 18 21.4	
	7.1nm,0.5s						
DJR	Jarkent	4.36	22	eP	Pb	03 17 35.3	-0.9
	11nm,0.4s						
DJR				eS	Sb	03 18 32.8	+3.9
	18nm,0.4s						
DJR	Jarkent	4.36	22	Pg	Pb	03 17 35.3	-0.9
	11nm,0.4s						
DJR				Lg	Lg	03 18 32.8	
	18nm,0.4s						
TDK	Taldyqorghan	4.74	8	eP	Pb	03 17 40.9	-1.7
	42nm,0.4s						
TDK				eS	Sb	03 18 42.9	+3.2
	79nm,0.5s						
TDK	Taldyqorghan	4.74	8	Pg	Pb	03 17 40.9	-1.7
	42nm,0.4s						
TDK				Lg	Lg	03 18 42.9	
	79nm,0.5s						
KAPS	Kapalarasan	5.16	15	eP	Pb	03 17 48.8	-0.9
	6.5nm,0.8s						
KAPS				eS	Sb	03 18 56.2	+4.5
	7.2nm,0.5s						
KAPS	Kapalarasan	5.16	15	Pg	Pb	03 17 48.8	-0.9
	6.5nm,0.8s						
KAPS				Lg	Lg	03 18 56.9	
	7.2nm,0.5s						
BTLS	Baital	5.38	333	eP	Pb	03 17 52.5	-1.1
	4.3nm,0.6s						
BTLS				eS	Sb	03 19 02.2	+4.0
	14nm,0.8s						
BTLS	Baital	5.38	333	Pg	Pb	03 17 52.5	-1.1
	4.3nm,0.6s						
BTLS				Lg	Lg	03 19 02.2	
	14nm,0.8s						
KK31	Karatay Array	5.95	300	⇑Pg	Pb	03 18 03.4	+0.2
	3.1nm,0.8s,baz=123,slow=18,SNR=11						
KK31				⇓Lg	Lg	03 19 24.8	
	3.0nm,0.6s,baz=114,slow=26,SNR=4.9						
MK31	Makanchi Array	7.35	27	⇓Pn	Pn	03 18 05.1	-1.7
	0.1nm,0.2s,baz=203,slow=14,SNR=11						
MK31				⇑Lg	Lg	03 20 04.3	
	1.2nm,0.5s						

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*NOU **07** 03:22:53.4, 36°.73S×177°.36E, h323^{km}, MLv4.5, Off E. Coast of N. Island, N.Z.*
*IDC **07** 03:22:59.0±1.0, 37°.32S×177°.25E, h283^{km}±9^{km}, mb3.4/2, mb1 3.8/3, mb1mx3.4/21, mbtmp4.3/3, Error ellipse: s-maj=39.2km s-min=24.0km az=141.0*
*WEL **07** 03:23:01.9±0.9, 37°S±8°×17°7E±°, h238^{km}±7^{km}, M3.9/41, MLv3.9/41, Error ellipse: s-maj=0.0km s-min=0.0km az=29.0*
ISC 07 03:22:58.9±1.0**, 37°.04S**±0°.08×**176°.99E**±0°.07**, h283^{km}**±6^{km}**, n167, σ1^{s}.58**/181**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYRZ	Mayor Island	0.65	248	P	Pn	03 23 35.5	-0.5
WHRZ	Whale Island	0.82	181	P	Pn	03 23 37.5	+0.9
WHRZ				S	S	03 24 06.5	0.0
OPRZ	Ohinepanea	0.88	203	P	Pn	03 23 36.9	+0.1
TGRZ	Tauranga	0.90	220	P	Pn	03 23 37.1	+0.3
HAZ	Te Kaha	0.96	139	P	Pn	03 23 36.4	-0.7
HAZ				S	S	03 24 03.6	-3.9
MARZ	Manawahe	0.98	195	P	Pn	03 23 37.8	+0.6
KUZ	Kuaotunu	1.06	285	P	Pn	03 23 36.1	-1.6
RUGZ	Raukumara Rang	1.08	150	P	Pn	03 23 37.0	-0.9
RUGZ				S	S	03 24 03.6	-5.3
LIRZ	Lichensteins R	1.08	206	P	Pn	03 23 39.3	+1.6
EDRZ	Edgecumbe	1.09	190	P	Pn	03 23 38.8	+0.9
EDRZ				S	S	03 24 10.3	+1.5
KARZ	Kaharoa	1.15	211	P	Pn	03 23 39.2	+1.0
KMRZ	Kaimai	1.16	226	P	Pn	03 23 38.9	+0.7
MXZ	Matakaoa Point	1.18	117	P	Pn	03 23 37.5	-0.7
MXZ				S	S	03 24 06.5	-3.0
MKRZ	Makatiti	1.18	200	P	Pn	03 23 40.8	+2.4
OMRZ	Omania	1.18	204	P	Pn	03 23 39.3	+1.0
PKGZ	Pakihiroa	1.21	135	P	Pn	03 23 38.7	+0.2
PKGZ				S	S	03 24 07.4	-2.6
URZ	Urewera	1.23	176	P	Pn	03 23 38.4	-0.1
	145nm,0.3s,baz=265,slow=3.2,SNR=508						
URZ				S	S	03 24 07.7	-2.3
	173nm,0.3s,baz=1.3,slow=23,SNR=21						
URZ	Urewera	1.23	176	P	Pn	03 23 38.5	-0.1
URZ				S	S	03 24 08.4	-1.6
NGRZ	Ngongotaha	1.24	211	P	Pn	03 23 40.1	+1.3
TARZ	Mount Tarawera	1.26	198	P	Pn	03 23 40.0	+1.2
UTU	Utuhina	1.30	209	P	Pn	03 23 40.7	+1.6
HLRZ	Highlands Stat	1.32	202	P	Pn	03 23 40.4	+1.3
RRRZ	Republican Roa	1.35	196	P	Pn	03 23 40.1	+0.7
MWZ	Matawai	1.36	162	P	Pn	03 23 39.6	+0.2
MWZ				S	S	03 24 10.3	-1.3
TOZ	Tahuroa Road	1.37	239	P	Pn	03 23 40.2	+0.8
WMGZ	Waiomatatini S	1.38	125	P	Pn	03 23 39.5	0.0
WMGZ				S	S	03 24 08.4	-3.3
TWGZ	Tauwhareparae	1.39	146	P	Pn	03 23 40.5	+0.9
TWGZ				S	S	03 24 11.3	-0.6
PUZ	Puketiti	1.44	136	P	Pn	03 23 40.1	+0.1
PUZ				S	S	03 24 10.3	-2.2
MUGZ	Murupara	1.45	187	P	Pn	03 23 40.3	+0.4
MUGZ				S	S	03 24 10.3	-2.3
GRZ	Great Barrier	1.46	302	P	Pn	03 23 38.0	-2.1
HRRZ	Handcock Road	1.46	202	P	Pn	03 23 40.3	+0.2

MKAZ	**Moumakai**	1.46	267	P	Pn	03 23 39.8	-0.3
GRRZ	**Galatos Road**	1.49	208	P	Pn	03 23 41.8	+1.6
RAGZ	**Rawiri**	1.50	167	P	Pn	03 23 41.3	+0.9
WIAZ	**Waiheke Island**	1.51	279	P	Pn	03 23 39.6	-0.7
PRRZ	**Plateau Road**	1.54	198	P	Pn	03 23 41.6	+1.0
TKGZ	**Te Karaka**	1.56	154	P	Pn	03 23 41.5	+0.8
RTZ	**Ruatahuna**	1.58	180	P	Pn	03 23 41.5	+0.6
ALRZ	**Allen Road**	1.61	198	P	Pn	03 23 42.2	+1.1
WPRZ	**Whakapapatarin**	1.62	204	P	Pn	03 23 43.2	+2.0
ETAZ	**East Tamaki Re**	1.65	272	P	Pn	03 23 41.2	-0.2
MBAZ	**Motutapu North**	1.70	278	P	Pn	03 23 41.2	-0.5
KUTZ	**Kaahu Road**	1.72	212	P	Pn	03 23 43.6	+1.7
TLZ	**Tolley Road**	1.73	221	P	Pn	03 23 43.9	+1.9
CNGZ	**Carnagh Statio**	1.74	147	P	Pn	03 23 43.3	+1.3
SNGZ	**Shannon Statio**	1.77	171	P	Pn	03 23 43.3	+1.1
RIGZ	**Rimuhau**	1.78	160	P	Pn	03 23 43.6	+1.3
ABAZ	**Army Bay**	1.79	283	P	Pn	03 23 41.8	-0.6
MTHZ	**Maungataniwha**	1.82	184	P	Pn	03 23 43.4	+0.8
WHTZ	**Whakaora**	1.82	206	P	Pn	03 23 44.7	+2.0
MRHZ	**Matea Rd**	1.85	194	P	Pn	03 23 43.9	+1.0
AWAZ	**Awhitu Peninsu**	1.88	268	P	Pn	03 23 42.9	-0.2
RAHZ	**Arahi**	1.88	178	P	Pn	03 23 44.5	+1.4
WTAZ	**Waiatarua**	1.94	272	P	Pn	03 23 42.8	-0.8
WATZ	**Wairara**	1.94	210	P	Pn	03 23 45.3	+1.7
HATZ	**Hinemaiaia**	1.98	201	P	Pn	03 23 45.3	+1.4
PRGZ	**Paritu Road**	2.01	160	P	Pn	03 23 45.7	+1.5
WHHZ	**Waihua**	2.05	175	P	Pn	03 23 46.0	+1.5
KNZ	**Kokohu**	2.06	165	P	Pn	03 23 45.4	+1.0
NMHZ	**Naumai**	2.06	184	P	Pn	03 23 46.7	+2.0
RATZ	**Rangitukua**	2.07	207	P	Pn	03 23 46.2	+1.6
RITZ	**Rihia Road**	2.13	204	P	Pn	03 23 47.0	+1.8
BKZ	**Black Stump Fm**	2.16	190	P	Pn	03 23 46.3	+0.8
KATZ	**Kakaramea**	2.19	207	P	Pn	03 23 47.6	+1.8
ARHZ	**Aropaoanui**	2.23	180	P	Pn	03 23 47.6	+1.7
MHGZ	**Mahia Peninsul**	2.23	161	P	Pn	03 23 47.5	+1.5
HIZ	**Hauiti**	2.24	228	P	Pn	03 23 48.4	+2.3
TMVZ	**Te Maari**	2.31	206	P	Pn	03 23 48.5	+1.6
KRVZ	**Karewarewa**	2.31	207	P	Pn	03 23 48.6	+1.7
ETVZ	**East Tongariro**	2.33	205	P	Pn	03 23 48.7	+1.7
WTVZ	**West Tongariro**	2.35	208	P	Pn	03 23 48.8	+1.5
OTVZ	**Oturere**	2.37	206	P	Pn	03 23 49.1	+1.6
TWVZ	**Taurewa**	2.37	211	P	Pn	03 23 49.1	+1.6
WCZ	**Waipu Caves**	2.40	296	P	Pn	03 23 46.2	-1.3
NGZ	**Ngauruhoe**	2.40	207	P	Pn	03 23 49.4	+1.6
MCHZ	**McNeill Hill**	2.42	185	P	Pn	03 23 49.6	+1.9
KWHZ	**Kaweka Forest**	2.43	190	P	Pn	03 23 49.3	+1.4
TUVZ	**Tukino**	2.46	205	P	Pn	03 23 49.9	+1.6
FWVZ	**Far West T-bar**	2.49	207	P	Pn	03 23 50.0	+1.4
WHVZ	**Whangaehu Hut**	2.50	206	P	Pn	03 23 50.2	+1.4
DRZ	**Dome Shelter**	2.50	206	P	Pn	03 23 50.8	+1.9
TRVZ	**Turoa**	2.53	206	P	Pn	03 23 50.7	+1.7
WNVZ	**Wahianoa**	2.54	205	P	Pn	03 23 50.4	+1.4
BHHZ	**Black Hill Sta**	2.56	196	P	Pn	03 23 50.1	+1.1
MOVZ	**Moawhango**	2.56	202	P	Pn	03 23 50.1	+1.0
PKVZ	**Pokaka**	2.60	209	P	Pn	03 23 51.1	+1.6
CKHZ	**Cape Kidnapper**	2.62	179	P	Pn	03 23 51.1	+1.6
MTVZ	**Mangateitei**	2.63	207	P	Pn	03 23 51.4	+1.6
KRHZ	**Kereru**	2.65	190	P	Pn	03 23 51.1	+1.2
VRZ	**Vera Road**	2.73	219	P	Pn	03 23 53.2	+2.5
KAHZ	**Kahuranaki**	2.76	182	P	Pn	03 23 52.6	+1.6
MHEZ	**Mangahewa**	2.93	225	P	Pn	03 23 56.6	+3.9
PNHZ	**Pukenui**	2.94	192	P	Pn	03 23 53.9	+1.1
WPHZ	**Waipukurau**	3.06	188	P	Pn	03 23 53.2	-0.8
DREZ	**Durham Road**	3.08	225	P	Pn	03 23 57.7	+3.5
TSZ	**Takapari Road**	3.12	195	P	Pn	03 23 55.7	+1.0
WAZ	**Wanganui**	3.14	209	P	Pn	03 23 56.5	+1.7
LREZ	**Lake Rotokare**	3.16	219	P	Pn	03 23 57.8	+2.7
NEZ	**North Egmont**	3.19	225	P	Pn	03 23 58.7	+3.3
PKE	**Pukeiti**	3.20	227	P	Pn	03 23 59.0	+3.5
PREZ	**Palmer Road**	3.21	223	P	Pn	03 23 58.7	+3.1
PRHZ	**Porangahau**	3.24	185	P	Pn	03 23 57.1	+1.3
KHEZ	**Kahui Hut**	3.25	225	P	Pn	03 23 59.2	+3.1
OUZ	**Omahuta**	3.29	302	P	Pn	03 23 55.0	-1.5
NBEZ	**Newall Road No**	3.32	227	P	Pn	03 24 00.2	+3.5
DVHZ	**Dannevirke**	3.32	191	P	Pn	03 23 57.6	+0.8
NMEZ	**Namu Road**	3.41	225	P	Pn	03 24 00.7	+3.1
OHWZ	**Ohakea**	3.43	202	P	Pn	03 23 59.7	+1.9
ANWZ	**Angora Road**	3.44	187	P	Pn	03 23 59.3	+1.4
POWZ	**Post Office Ro**	3.48	196	P	Pn	03 23 59.5	+1.1
PRWZ	**Pori Road**	3.60	192	P	Pn	03 24 01.0	+1.3
BFZ	**Birch Farm**	3.69	189	P	Pn	03 24 01.7	+1.0
MRZ	**Mangatainoka R**	3.78	196	P	Pn	03 24 02.3	+0.6
TIWZ	**Tintock**	3.83	193	P	Pn	03 24 03.4	+1.1
CPWZ	**Castlepoint**	3.92	189	P	Pn	03 24 04.8	+1.7
HOWZ	**Holdsworth Sta**	4.03	196	P	Pn	03 24 05.1	+0.7
OGWZ	**Otaki Gorge**	4.03	200	P	Pn	03 24 05.3	+0.8
KIW	**Kapiti Island**	4.15	202	P	Pn	03 24 06.3	+0.5
TMWZ	**Te Maipa**	4.16	192	P	Pn	03 24 07.0	+1.1
MTW	**Mount Morrison**	4.28	195	P	Pn	03 24 07.8	+0.6
CAW	**Cannon Point**	4.33	200	P	Pn	03 24 08.4	+0.5
DUWZ	**D'Urville Isla**	4.46	212	P	Pn	03 24 09.7	+0.3
TRWZ	**Traveller**	4.47	193	P	Pn	03 24 10.5	+1.0
PAWZ	**Paruwai Farm**	4.51	195	P	Pn	03 24 10.5	+0.6
MSWZ	**Moikau Station**	4.58	197	P	Pn	03 24 11.0	+0.2
WEL	**Wellington**	4.58	201	P	Pn	03 24 11.4	+0.7
BHW	**Baring Head**	4.67	200	P	Pn	03 24 12.0	+0.3
TCW	**Tory Channel**	4.67	206	P	Pn	03 24 12.2	+0.4
PLWZ	**Palliser**	4.72	196	P	Pn	03 24 12.9	+0.5
TUWZ	**Tuamarina**	4.99	207	P	Pn	03 24 15.7	+0.2
NNZ	**Nelson**	5.03	213	P	Pn	03 24 16.2	+0.2
QRZ	**Quartz Range**	5.14	221	P	Pn	03 24 17.0	-0.3
BSWZ	**Blackbirch Sta**	5.26	206	P	Pn	03 24 19.5	+0.8
THZ	**Tophouse**	5.68	213	P	Pn	03 24 24.0	+0.1
KHZ	**Kahutara**	6.00	205	P	Pn	03 24 28.3	+0.8
DSZ	**Denniston Nort**	6.18	219	P	Pn	03 24 29.3	-0.6
GVZ	**Greta Valley S**	6.66	206	P	Pn	03 24 36.6	+1.0
LTZ	**Lake Taylor**	6.79	211	P	Pn	03 24 37.7	+0.5
AMCZ	**Amberley**	6.98	207	P	Pn	03 24 40.4	+0.9
INZ	**Inchbonnie**	7.10	215	P	Pn	03 24 41.6	+0.5
OKCZ	**Okains Bay**	7.32	203	P	Pn	03 24 45.0	+1.2
OXZ	**Oxford**	7.34	210	P	Pn	03 24 43.9	-0.1
MQZ	**McQueen's Vall**	7.44	205	P	Pn	03 24 45.3	+0.1
AKCZ	**Akaroa Harbour**	7.50	203	P	Pn	03 24 46.9	+0.8
RACZ	**Rakaia**	7.64	207	P	Pn	03 24 48.0	+0.3
WVZ	**Waitaha Valley**	7.70	217	P	Pn	03 24 48.6	+0.1
RPZ	**Rata Peaks**	8.06	212	P	Pn	03 24 53.3	+0.3
	18nm,0.3s,baz=228,slow=1.6,SNR=67						
RPZ				S	S	03 26 20.9	-4.4
	6.9nm,0.3s,baz=312,slow=23,SNR=13						
RPZ	**Rata Peaks**	8.06	212	P	Pn	03 24 52.6	-0.3
GCSZ	**Gaunt Creek Bo**	8.08	217	P	Pn	03 24 53.2	0.0
ARCZ	**Arundel**	8.20	211	P	Pn	03 24 54.5	-0.2
FOZ	**Fox Glacier**	8.49	218	P	Pn	03 24 57.8	-0.5
TMZ	**Timaru**	8.63	210	P	Pn	03 25 00.5	+0.5
LBZ	**Lake Benmore**	8.97	213	P	Pn	03 25 04.4	+0.1
ODZ	**Otahua Downs**	9.32	209	P	Pn	03 25 09.8	+1.2
JCZ	**Jackson Bay**	9.40	219	P	Pn	03 25 08.5	-1.2
WKZ	**Wanaka**	9.84	215	P	Pn	03 25 14.6	-0.4
EAZ	**Earnscleugh**	10.03	213	P	Pn	03 25 17.5	+0.2
HHSZ	**Highcliff Hill**	10.05	206	P	Pn	03 25 20.8	+3.2
MSZ	**Milford Sound**	10.26	219	P	Pn	03 25 20.6	+0.5
MLZ	**Mavora Lakes**	10.67	216	P	Pn	03 25 26.2	+0.9
WHZ	**Wether Hill Ro**	11.14	215	P	Pn	03 25 31.6	+0.5
SYZ	**Scrubby Hill**	11.15	209	P	Pn	03 25 33.8	+2.7
APZ	**The Paps**	11.85	212	P	Pn	03 25 41.5	+1.7
ASAR	**Alice Springs**	39.17	277	P	P	03 30 02.5	+2.5
	1.5nm,0.5s,baz=120,slow=8.0,SNR=29						
WRA	**Warramunga Arr**	40.80	283	P	P	03 30 15.2	+1.8
	1.1nm,0.4s,baz=120,slow=7.6,SNR=16						
ARCES	**ARCESS Array B**	143.97	343	PKP	PKPdf	03 41 58.7	-0.8
	2.3nm,0.8s,baz=46,slow=3.5,SNR=8.4						
FINES	**FINESS Array B**	149.54	333	PKPbc	PKiKP	03 42 14.3	-0.5
	7.0nm,1.1s,baz=52,slow=2.2,SNR=12						

ROM 07 03:24:29.4±0.1**,43°.325N**±0°.003×**12°.566E**±0°.005**, h7^{km},ML0.5**/1**,2C,Error ellipse: s-maj=0.4km s-min=0.1km az=66.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	0.04	6	⇑P	Pg	03 24 31.1	0.0
ATFO				S	Sg	03 24 32.4	+0.1
MURB	**Monte Urbino**	0.07	206	P	Pg	03 24 31.4	+0.1
MURB				S	Sg	03 24 32.9	+0.2
ATVO	**AVT- Monte Val**	0.13	296	⇑P	Pg	03 24 32.5	+0.2
ATVO				S	Sg	03 24 34.9	+0.7
ATVO				AML	AML		
	comp=E,34µm,0.2s						
ATVO				AML	AML		
	comp=N,41µm,0.2s						
ATVO				AML	AML		
	comp=E,34µm,0.2s						
FOSV	**Fossato di Vic**	0.15	102	P	Pg	03 24 33.0	+0.5
FOSV				S	Sg	03 24 35.4	+0.8
ATCC	**AVT- Casa Cast**	0.15	159	P	Pg	03 24 33.1	+0.5
ATCC				S	Sg	03 24 36.2	+1.5
ATPI	**Pietralunga -**	0.17	317	P	Pg	03 24 33.5	+0.6
ATPI				S	Sg	03 24 36.7	+1.3
SSFR	**Montelago di S**	0.19	55	P	Pg	03 24 33.8	+0.5
SSFR				S	Sg	03 24 37.2	+1.2
PIEI	**Pieia**	0.21	354	P	Pg	03 24 34.5	+0.8
PIEI				S	Sg	03 24 38.8	+2.2
FRON	**Frontone**	0.23	31	P	Pg	03 24 34.4	+0.5
FRON				S	Sg	03 24 38.5	+1.5
NARO	**Abbazia di Nar**	0.29	2	P	Pg	03 24 35.8	+0.7
NARO				S	Sb	03 24 40.5	-1.4

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*BJI **07** 03:36:19.8±0.0, 32°.95N×106°.21E, h7^{km}, ML3.8/15*

*IDC **07** 03:36:20.6±1.1, 32°.78N×106°.38E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.4/45, mbtmp3.5/5, ML3.0/1, Error ellipse: s-maj=42.7km s-min=20.5km az=59.0*

ISC 07 03:36:20.3±0.7**,32°.71N**±0°.04×**106°.23E**±0°.04**,h10^{km},n14,** σ**2^{s}12**/23**,mb3.7**/4**,2C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XAN	**Xi'an**	2.62	59	Pn	Pn	03 37 02.8	+0.1
XAN				Pg	Pb	03 37 06.0	-1.3
XAN				Sn	Sn	03 37 31.6	-3.0
XAN				Sg	Sb	03 37 39.1	-0.4
XAN				smax	smax		
	comp=N,1µm,0.6s						
XAN				smax	smax		
	comp=E,1µm,0.5s						
CD2	**Chengdu**	2.76	230	Pn	Pb	03 37 08.2	-1.7
CD2				Pg	Pg	03 37 14.3	+1.0
CD2				Sn	Sb	03 37 43.4	-0.4
CD2				Sg	Sg	03 37 51.0	+1.9
CD2				smax	smax		
	comp=N,800nm,0.8s						
CD2				smax	smax		
	comp=E,560nm,0.7s						
LZH	**Lanzhou**	3.91	330	*e*Pn	Pn	03 37 20.3	-0.3
LZH				Pg	Pb	03 37 27.6	-1.8
LZH				Sn	Sn	03 38 04.0	-2.5
LZH				Sg	Sb	03 38 14.6	-2.2
LZH				smax	smax		
	comp=N,490nm,0.8s						
LZH				smax	smax		
	comp=E,540nm,0.8s						
GYA	**Guiyang**	6.24	176	⇑Pn	Pb	03 38 05.4	-3.8
GYA				Pg	Pg	03 38 34.4	+15
GYA				Sn	Sb	03 39 22.3	-1.6
GYA				smax	smax		
	comp=N,120nm,0.7s						
GYA				smax	smax		
	comp=E,120nm,1.3s						
GYA				LR	LR		
	comp=Z,130nm,3.8s						
KMI	**Kunming**	8.15	203	⇑*e*P	Pn	03 38 24.9	+5.9
KMI				pP	Pb	03 38 31.8	-10
BTO	**Baotou**	8.45	20	*e*Pg	Pb	03 38 50.7	+4.0
BTO				Sg	Sn	03 39 47.2	-11
GTA	**Gaotai**	8.47	324	*e*P	Pn	03 38 21.3	-1.9
GTA				smax	smax		
	comp=Z,16nm,0.9s						
GTA				smax	smax		
	comp=Z,16nm,0.9s						
SONM	**Songino Array**	15.11	0	Pn	Pn	03 39 55.9	+2.0
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=2.4						
WMQ	**Urumqi**	18.26	313	*e*P	Pn	03 40 32.4	-1.4
MKAR	**Makanchi Array**	23.05	315	P	P	03 41 26.5	+0.7
	comp=Z,0.4nm,0.7s,baz=108,slow=9.4,SNR=5.2						
KLR	**Kul'dur**	25.20	42	P	P	03 41 46.1	+0.2
	comp=Z,0.7nm,0.4s,baz=258,slow=9.3,SNR=3.7						
KURBB	**Kurchatov Arra**	27.12	319	P	P	03 42 06.1	+2.8
	baz=122,slow=10						
WRA	**Warramunga Arr**	58.85	149	P	P	03 46 20.9	+1.5
	comp=Z,0.6nm,0.7s,baz=340,slow=7.5,SNR=3.4						
ASAR	**Alice Springs**	61.97	151	P	P	03 46 42.8	+2.1
	comp=Z,0.5nm,0.8s,baz=340,slow=6.4,SNR=3.0						

IDC 07 03:36:55.6±2.8**,6°.75S**×**129°.73E,h141^{km}**±36^{km}**,mb3.6**/2**, mb1 3.4**/6**,mb1mx3.2**/41**,mbtmp3.8**/6**,Error ellipse: s-maj=70.5km s-min=20.4km az=89.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	6.04	15	P	Pn	03 38 23.0	+0.2
	1.1nm,0.3s,baz=128,slow=4.6,SNR=24						
SIJI				S	Sn	03 39 25.3	-5.6
	3.1nm,0.3s,baz=246,slow=23,SNR=6.3						
FITZ	**Fitzroy Crossi**	11.97	199	P	Pn	03 39 41.8	0.0
	0.3nm,0.3s,baz=27,slow=13,SNR=1.4						
FITZ				S	Sn	03 41 47.0	-7.0
	0.3nm,0.3s,baz=60,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	13.86	162	P	Pn	03 40 04.3	-2.0
	0.2nm,0.3s,baz=344,slow=12,SNR=2.5						
WRA				S	Sn	03 42 27.9	-12
	0.3nm,0.3s,baz=351,slow=20,SNR=4.1						
ASAR	**Alice Springs**	17.30	167	P	Pn	03 40 49.4	+0.7
	0.5nm,0.3s,baz=347,slow=9.7,SNR=24						
ASAR				S	S	03 43 54.5	-6.6
	0.1nm,0.3s,baz=351,slow=24,SNR=3.2						
MKAR	**Makanchi Array**	67.86	327	P	P	03 47 39.1	+0.4
	1.1nm,0.3s,baz=123,slow=7.9,SNR=22						
KURBB	**Kurchatov Arra**	72.15	329	P	P	03 48 04.1	-0.7
	0.4nm,0.5s,baz=125,slow=5.1,SNR=5.1						

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*ROM **07** 03:41:20.0±0.2, 44°.329N±0°.009×7°.28E±0°.02, h11^{km}±1^{km}, ML2.1/15, Error ellipse: s-maj=1.4km s-min=0.7km az=229.0*

*LDG **07** 03:41:20.4±0.1, 44°.35N×7°.30E, h10^{km}, Md2.3/2, Ml2.6/27, Error ellipse: s-maj=1.2km s-min=1.0km az=61.0*

*STR **07** 03:41:20.2±0.3, 44°N±1°×°±°, h4^{km}±2^{km}, MLv2.2/12, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*GEN **07** 03:41:20.4, 44°.33N×7°.29E, h11^{km}±2^{km}, Ml2.0*

ISC 07 03:41:19.4±0.8**,44°.35N**±0°.01×**7°.34E**±0°.01**,h17^{km}**±3^{km}**, n160,**σ**1^{s}51**/185**,11C-10D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STV	**Sant Anna di V**	0.11	187	P	Pg	03 41 23.3	+0.1
STV				S	Sb	03 41 24.9	-0.5
STV	**Sant Anna di V**	0.11	187	P	Pg	03 41 23.2	+0.1
STV				S	Sb	03 41 24.9	-0.5
STV				AML	AML		
	comp=E,7165µm,0.1s						
STV				AML	AML		
	comp=N,5965µm,0.2s						
STV	**Sant Anna di V**	0.11	187	AML	AML		
	comp=N,5965µm,0.2s						
STV	**Sant Anna di V**	0.11	187	AML	AML		
	comp=E,7165µm,0.1s						
STV	**Sant Anna di V**	0.11	187	P	Pg	03 41 23.1	-0.1
ENR	**Entracque**	0.14	156	P	Pb	03 41 23.9	+0.3
ENR				S	Sg	03 41 26.1	-0.2
ENR	**Entracque**	0.14	156	P	Pb	03 41 23.9	+0.3
ENR				S	Sg	03 41 26.1	-0.2
ENR				AML	AML		
	comp=N,6375µm,0.2s						
ENR				AML	AML		
	comp=E,7125µm,0.2s						
ENR	**Entracque**	0.14	156	AML	AML		
	comp=E,7125µm,0.2s						
ENR	**Entracque**	0.14	156	AML	AML		
	comp=N,6375µm,0.2s						
PZZ	**Stroppo**	0.23	314	P	Pb	03 41 25.1	0.0
PZZ				S	Sg	03 41 28.2	-0.3
PZZ	**Stroppo**	0.23	314	⇑P	Pb	03 41 25.1	0.0
PZZ				S	Sg	03 41 28.2	-0.3
PZZ				AML	AML		
	comp=N,1605µm,0.1s						
PZZ				AML	AML		
	comp=E,1620µm,0.2s						
PZZ	**Stroppo**	0.23	314	AML	AML		
	comp=N,1605µm,0.1s						
PZZ	**Stroppo**	0.23	314	AML	AML		
	comp=E,1620µm,0.2s						
ISO	**Isola**	0.27	231	Pg	Pg	03 41 25.3	-0.1
ISO				Sg	Sg	03 41 28.4	-1.2
GBOS	**Grotte di Boss**	0.37	107	P	Pb	03 41 28.4	+0.8
GBOS				S	Sb	03 41 33.8	+0.7
GBOS	**Grotte di Boss**	0.37	107	P	Pb	03 41 28.4	+0.8
GBOS				S	Sb	03 41 33.9	+0.8
GBOS				AML	AML		
	comp=E,460µm,0.2s						
GBOS				AML	AML		
	comp=N,440µm,0.5s						
GBOS	**Grotte di Boss**	0.37	107	AML	AML		
	comp=N,440µm,0.5s						
GBOS	**Grotte di Boss**	0.37	107	AML	AML		
	comp=E,460µm,0.2s						
GBOS	**Grotte di Boss**	0.37	107	⇑P	Pb	03 41 28.5	+0.8
TURF	**col de Turini**	0.38	175	Pg	Pb	03 41 27.9	+0.1
TURF				Sg	Sg	03 41 32.9	+0.2
SAOF	**Saorge**	0.40	157	Pg	Pb	03 41 28.3	+0.3
SAOF				Sg	Sg	03 41 33.1	0.0
SAOF	**Saorge**	0.40	157	⇓P	Pb	03 41 28.3	+0.3
SAOF				S	Sb	03 41 33.6	-0.2
SAOF	**Saorge**	0.40	157	⇓P	Pb	03 41 28.3	+0.3
SAOF	**Saorge**	0.40	157	⇓P	Pb	03 41 28.3	+0.3
SAOF	**Saorge**	0.40	157	AML	AML		
	comp=E,246µm,1.2s						
SAOF				AML	AML		
	comp=N,252µm,0.5s						
SAOF	**Saorge**	0.40	157	AML	AML		
	comp=N,252µm,0.5s						
SAOF	**Saorge**	0.40	157	AML	AML		
	comp=E,246µm,1.2s						
SAOF	**Saorge**	0.40	157	⇓P	Pb	03 41 28.3	+0.3
MGRO	**Montegrosso**	0.46	133	P	Pb	03 41 29.7	+0.6
MGRO				S	Sb	03 41 36.1	+0.5
MGRO	**Montegrosso**	0.46	133	⇓P	Pb	03 41 29.7	+0.6
MGRO				S	Sb	03 41 36.1	+0.5
MGRO				AML	AML		
	comp=N,216µm,0.4s						
MGRO				AML	AML		
	comp=E,204µm,0.3s						
MGRO				AML	AML		
	comp=N,216µm,0.4s						
MGRO	**Montegrosso**	0.46	133	AML	AML		
	comp=E,204µm,0.3s						
MGRO	**Montegrosso**	0.46	133	AML	AML		
	comp=N,216µm,0.4s						
MGRO	**Montegrosso**	0.46	133	AML	AML		
	comp=N,216µm,0.4s						
BHB	**Bricherasio**	0.49	353	P	Pg	03 41 29.2	-0.1
SBF	**Sospel**	0.49	172	*e*Pg	Pb	03 41 30.0	+0.3
SBF				*e*Sg	Sb	03 41 36.3	-0.3
	comp=N,74nm,0.2s						
ESCA	**l'Escarene**	0.52	178	Pg	Pb	03 41 30.4	+0.3
ESCA				Sg	Sb	03 41 37.2	-0.1
MBDF	**Montbardon**	0.56	313	*e*Pg	Pb	03 41 30.8	0.0
MBDF				*e*Sg	Sb	03 41 38.3	-0.2
	comp=N,179nm,0.3s						
OGAG	**Argentiere**	0.58	280	Pg	Pn	03 41 33.7	+0.6
OGAG				Sg	Sn	03 41 43.5	+1.2
IMI	**Imperia**	0.59	138	P	Pb	03 41 32.0	+0.7
IMI				S	Sb	03 41 40.0	+0.6
IMI	**Imperia**	0.59	138	P	Pb	03 41 32.1	+0.7
IMI				S	Sb	03 41 40.0	+0.6
IMI				AML	AML		
	comp=E,161µm,0.5s						
IMI				AML	AML		
	comp=N,188µm,0.5s						
IMI	**Imperia**	0.59	138	AML	AML		
	comp=N,188µm,0.5s						
IMI	**Imperia**	0.59	138	AML	AML		
	comp=E,161µm,0.5s						
IMI	**Imperia**	0.59	138	P	Pb	03 41 32.1	+0.7
MON	**Monaco**	0.62	175	Pg	Pg	03 41 31.1	-0.6
MON				Sg	Sb	03 41 40.9	+0.7
CALF	**Calern**	0.67	207	Pg	Pb	03 41 32.9	+0.2
CALF				Sg	Sg	03 41 41.4	-0.2
FINB	**Finale Ligure**	0.73	104	P	Pn	03 41 34.8	0.0
FINB				S	Sn	03 41 44.4	-1.1
FINB				AML	AML		
	comp=N,125µm,0.3s						
FINB				AML	AML		
	comp=E,108µm,0.8s						
FINB	**Finale Ligure**	0.73	104	AML	AML		
	comp=N,125µm,0.3s						
FINB	**Finale Ligure**	0.73	104	AML	AML		
	comp=E,108µm,0.8s						
FINB	**Finale Ligure**	0.73	104	⇑P	Pn	03 41 34.8	0.0
OGDI	**Digne**	0.79	252	Pg	Pn	03 41 36.6	+0.8
OGDI				Sg	Sn	03 41 47.6	+0.4
RSP	**Reno Superiore**	0.80	356	P	Pb	03 41 34.1	-0.8
RSP				S	Sg	03 41 46.2	+0.6
RSP	**Reno Superiore**	0.80	356	P	Pb	03 41 34.5	-0.4
RSP				S	Sg	03 41 46.1	+0.4
RSP				AML	AML		
	comp=E,74µm,0.2s						
RSP				AML	AML		
	comp=N,104µm,0.2s						
RSP	**Reno Superiore**	0.80	356	⇑P	Pb	03 41 34.1	-0.8
RSP	**Reno Superiore**	0.80	356	AML	AML		
	comp=N,104µm,0.2s						
RSP	**Reno Superiore**	0.80	356	AML	AML		
	comp=E,74µm,0.2s						
EILF	**Villa Eilenroc**	0.82	191	Pg	Pg	03 41 35.5	+0.1
EILF				Sg	Sb	03 41 45.7	-0.1
MONC	**Moncucco Torin**	0.83	30	P	Pn	03 41 36.6	+0.2
MONC				AML	AML		
	comp=E,185µm,0.2s						
MONC				AML	AML		
	comp=N,167µm,1.4s						
MONC	**Moncucco Torin**	0.83	30	⇓P	Pn	03 41 37.3	+0.9
MONC	**Moncucco Torin**	0.83	30	AML	AML		
	comp=E,185µm,0.2s						
MONC	**Moncucco Torin**	0.83	30	AML	AML		
	comp=N,167µm,1.4s						
BNI	**Bardonecchia**	0.85	326	P	Pg	03 41 36.0	0.0
BNI				S	Sb	03 41 46.6	-0.2
BNI				AML	AML		
	comp=N,29µm,0.5s						
BNI				AML	AML		
	comp=E,44µm,1.5s						
BNI	**Bardonecchia**	0.85	326	P	Pb	03 41 34.7	-1.0
BNI	**Bardonecchia**	0.85	326	AML	AML		
	comp=N,29µm,0.5s						
BNI	**Bardonecchia**	0.85	326	AML	AML		
	comp=E,44µm,1.5s						
ROTM	**Rocchetta Tana**	0.88	55	P	Pn	03 41 38.4	+1.5
ROTM	**Rocchetta Tana**	0.88	55	⇑P	Pn	03 41 38.5	+1.5
ROTM				AML	AML		
	comp=E,420µm,0.5s						
ROTM				AML	AML		
	comp=N,537µm,0.2s						
ROTM	**Rocchetta Tana**	0.88	55	AML	AML		
	comp=E,420µm,0.5s						
ROTM	**Rocchetta Tana**	0.88	55	AML	AML		
	comp=N,537µm,0.2s						
PCP	**Piancastagn**	0.88	77	P	Pn	03 41 37.7	+0.6
PCP				S	Sn	03 41 49.7	+0.3
PCP	**Piancastagn**	0.88	77	P	Pn	03 41 37.6	+0.6
PCP				S	Sn	03 41 50.2	+0.7
PCP				AML	AML		
	comp=E,141µm,0.3s						
PCP				AML	AML		
	comp=N,124µm,0.2s						
PCP	**Piancastagn**	0.88	77	⇑P	Pn	03 41 37.7	+0.6
PCP	**Piancastagn**	0.88	77	AML	AML		
	comp=E,141µm,0.3s						
PCP	**Piancastagn**	0.88	77	AML	AML		
	comp=N,124µm,0.2s						
FRF	**La Foret Royal**	0.94	213	*e*Pg	Pb	03 41 37.2	0.0
FRF				*e*Sg	Sb	03 41 48.9	-0.4
	comp=N,127nm,0.2s						
OGMO	**Fort Saint-Gob**	0.98	332	Pg	Pn	03 41 39.0	+0.6
OGMO				Sg	Sg	03 41 51.1	-0.1
BLAF	**les Blancs**	1.02	247	Pg	Pg	03 41 39.6	+0.5
BLAF				Pn	Pn	03 41 40.7	+1.8
BLAF				Sg	Sg	03 41 52.4	-0.1
LSD	**Lago del Serru**	1.12	352	P	Pg	03 41 41.4	+0.3
LSD				AML	AML		
	comp=N,56µm,0.3s						
LSD				AML	AML		
	comp=E,70µm,0.5s						
LSD	**Lago del Serru**	1.12	352	⇑P	Pg	03 41 42.6	+1.5
LSD	**Lago del Serru**	1.12	352	AML	AML		
	comp=N,56µm,0.3s						

LSD	**Lago del Serru**	**1.12**	**352**	AML	AML		
	comp=E,70µm,0.5s						
LMR	**La Mourre**	**1.18**	**211**	*e*Pg	**Pg**	**03 41 41.9**	**-0.4**
LMR				*e*Sg	**Sb**	**03 41 56.5**	**+0.1**
	comp=E,140nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.19**	**299**	Pg	**Pg**	**03 41 42.1**	**-0.3**
ORIF				Sg	**Sn**	**03 41 57.0**	**-0.1**
ORIF	**Oris-en-Rattie**	**1.19**	**299**	*e*Pg	**Pg**	**03 41 42.0**	**-0.4**
ORIF				*e*Sg	**Sb**	**03 41 56.3**	**-0.4**
	comp=E,29nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.19**	**299**	P	**Pg**	**03 41 42.1**	**-0.3**
ORIF				AML	AML		
	comp=E,63µm,1.1s						
ORIF				AML	AML		
	comp=N,38µm,1.5s						
ORIF	**Oris-en-Rattie**	**1.19**	**299**	P	**Pg**	**03 41 42.1**	**-0.3**
ORIF	**Oris-en-Rattie**	**1.19**	**299**	AML	AML		
	comp=N,38µm,1.5s						
ORIF	**Oris-en-Rattie**	**1.19**	**299**	AML	AML		
	comp=E,63µm,1.1s						
MLYF	**Mely**	**1.19**	**253**	Pg	**Pg**	**03 41 43.0**	**+0.6**
MLYF				Sg	**Sg**	**03 41 59.0**	**+0.9**
TRAV	**Traversella**	**1.20**	**14**	⇑P	**Pn**	**03 41 40.7**	**-0.8**
TRAV	**Traversella**	**1.20**	**14**	AML	AML		
	comp=N,31µm,1.0s						
TRAV				AML	AML		
	comp=E,29µm,1.1s						
TRAV	**Traversella**	**1.20**	**14**	AML	AML		
	comp=N,31µm,1.0s						
TRAV	**Traversella**	**1.20**	**14**	AML	AML		
	comp=E,29µm,1.1s						
LPG	**La Plagne**	**1.22**	**340**	*e*Pn	**Pg**	**03 41 42.6**	**-0.5**
LPG				*e*Sn	**Sn**	**03 41 57.9**	**-0.3**
	comp=E,16nm,0.3s						
LPL	**La Plagne**	**1.24**	**340**	*e*Pn	**Pb**	**03 41 42.7**	**+0.2**
LPL				*e*Sn	**Sn**	**03 41 58.8**	**+0.1**
	comp=E,18nm,0.4s						
CIRO	**Champorcher**	**1.26**	**7**	⇓P	**Pn**	**03 41 41.4**	**-1.1**
BSTF	**la Bastide-des**	**1.31**	**250**	Pn	**Pg**	**03 41 45.0**	**+0.3**
BSTF				Pg	**Pb**	**03 41 45.8**	**+2.2**
BSTF				Sg	**Sg**	**03 42 02.3**	**+0.5**
SMRF	**Simiane la Rot**	**1.33**	**254**	*e*Pg	**Pg**	**03 41 45.0**	**0.0**
SMRF				*e*Sg	**Sg**	**03 42 01.6**	**-0.8**
	comp=E,38nm,0.2s						
ARTF	**Artigues**	**1.35**	**236**	Pg	**Pb**	**03 41 44.7**	**+0.5**
ARTF				Pn	**Pg**	**03 41 45.3**	**-0.2**
ARTF				Sg	**Sg**	**03 42 02.5**	**-0.5**
RUSF	**Rustrel**	**1.40**	**254**	Pn	**Pg**	**03 41 46.1**	**-0.3**
RUSF				Sn	**Sg**	**03 42 05.8**	**+1.1**
RSL	**Roselend**	**1.43**	**339**	Pn	**Pg**	**03 41 47.0**	**0.0**
RSL				Sn	**Sg**	**03 42 06.4**	**+0.8**
GRN	**Grenoble**	**1.45**	**309**	Pn	**Pg**	**03 41 47.5**	**+0.3**
GRN				Sg	**Sg**	**03 42 06.6**	**+0.5**
MSSA	**Maissana**	**1.56**	**91**	P	**Pg**	**03 41 48.9**	**-0.5**
SATI	**Passo dei Sala**	**1.57**	**14**	P	**Pn**	**03 41 46.4**	**-0.4**
OGSM	**Saint Maurice**	**1.72**	**318**	Pn	**Pg**	**03 41 51.9**	**-0.6**
OGSM				Sn	**Sg**	**03 42 14.6**	**-0.2**
VIVF	**Saint-Julien-l**	**1.97**	**286**	*e*P	**Pb**	**03 41 53.7**	**-1.2**
VIVF				*e*Sn	**Sn**	**03 42 14.9**	**-1.5**
	comp=E,12nm,0.3s						
PGF	**Pioggiola**	**2.17**	**146**	*e*Pn	**Pn**	**03 41 55.2**	**+0.4**
PGF				*e*Sn	**Sn**	**03 42 20.3**	**-1.0**
	comp=E,3.3nm,0.2s						
CABF	**La Chapelle**	**2.43**	**339**	*e*P	**Pb**	**03 42 01.7**	**-0.9**
CABF				*e*Sn	**Sn**	**03 42 26.7**	**-0.9**
	comp=E,0.7nm,0.2s						
LASF	**Ste Croix**	**2.52**	**265**	*e*Pn	**Pn**	**03 41 59.8**	**+0.2**
LASF				*e*Sn	**Sn**	**03 42 27.6**	**-2.3**
	comp=E,6.8nm,0.4s						
LBL	**Lubilhac**	**3.05**	**288**	Pn	**Pn**	**03 42 08.7**	**+1.8**
SMF	**Signal de Mont**	**3.37**	**314**	*e*P	**Pn**	**03 42 13.9**	**+2.7**
SMF				*e*Sn	**Sn**	**03 42 48.3**	**-2.4**
	comp=E,3.3nm,0.3s						
HINF	**Hinteralfeld**	**3.48**	**355**	*e*P	**Pn**	**03 42 15.7**	**+2.9**
HINF				*e*Sn	**Sn**	**03 42 52.0**	**-1.6**
	comp=E,1.9nm,0.2s						
AVF	**Avril sur Loir**	**3.71**	**312**	*e*P	**Pn**	**03 42 18.7**	**+2.8**
AVF				*e*Sn	**Sn**	**03 42 56.6**	**-2.7**
	comp=E,1.8nm,0.2s						
HAU	**Haudompre**	**3.72**	**350**	*e*Pn	**Pn**	**03 42 17.6**	**+1.6**
HAU				*e*Sn	**Sn**	**03 43 00.6**	**+1.2**
	comp=E,4.4nm,0.3s						
SJAF	**Saint Jean de**	**3.75**	**242**	Pn	**Pn**	**03 42 17.3**	**+0.9**
LOR	**Lormes**	**3.80**	**321**	*e*P	**Pn**	**03 42 19.9**	**+2.8**
	baz=142						
LOR				*e*Sn	**Sn**	**03 42 59.0**	**-2.4**
	comp=E,3.1nm,0.3s,baz=142						
CAF	**Calviac**	**3.81**	**280**	*e*P	**Pn**	**03 42 18.7**	**+1.4**
CAF				*e*Sn	**Sn**	**03 42 58.7**	**-3.0**
	comp=E,1.3nm,0.2s						
SSF	**Saint Saulge**	**3.82**	**317**	*e*P	**Pn**	**03 42 20.0**	**+2.6**
SSF				*e*Sn	**Sn**	**03 42 59.1**	**-2.7**
	comp=E,3.5nm,0.5s						
MTLF	**Montolieu**	**3.84**	**257**	*e*P	**Pn**	**03 42 19.0**	**+1.3**
MTLF				*e*Sn	**Sn**	**03 42 58.9**	**-3.6**
	comp=E,2.2nm,0.3s						
BGF	**Bois d'Agland**	**3.86**	**306**	*e*P	**Pn**	**03 42 20.6**	**+2.7**
BGF				*e*Sn	**Sn**	**03 42 59.9**	**-2.9**
	comp=E,3.5nm,0.3s						
ATCC	**AVT- Casa Cast**	**4.01**	**105**	⇓P	**Pg**	**03 42 36.9**	**+0.7**
ATCC	**AVT- Casa Cast**	**4.01**	**105**	S	Pg	03 42 41.4	+5.2
ATCC	**AVT- Casa Cast**	**4.01**	**105**	END			
CDF	**Champ du Feu**	**4.06**	**359**	*e*P	**Pn**	**03 42 24.7**	**+3.9**
CDF				*e*Sn	**Sn**	**03 43 06.8**	**-1.2**
	comp=E,0.9nm,0.2s						
FNEB	**Nbias**	**4.07**	**251**	Pn	**Pn**	**03 42 22.5**	**+1.7**
ASSB	**Assisi San Ben**	**4.07**	**107**	⇓P	**Pg**	**03 42 34.7**	**-2.6**
ASSB	**Assisi San Ben**	**4.07**	**107**	S	**Pg**	**03 42 37.8**	**+0.4**
ASSB	**Assisi San Ben**	**4.07**	**107**	END			
MOMA	**Monte Martano**	**4.10**	**110**	P	**Pg**	**03 42 37.6**	**-0.3**
MOMA	**Monte Martano**	**4.10**	**110**	P	**Pg**	**03 42 37.4**	**-0.6**
SFTF	**Sexfontaines**	**4.17**	**338**	*e*P	**Pn**	**03 42 25.4**	**+3.2**
	baz=158						
SFTF				*e*Sn	**Sn**	**03 43 08.3**	**-2.3**
	comp=E,1.6nm,0.2s						
SNTG	**Esanatoglia**	**4.20**	**103**	⇑P	**Pg**	**03 42 37.1**	**-2.7**
SNTG	**Esanatoglia**	**4.20**	**103**	S	**Pg**	**03 42 41.3**	**+1.6**
SNTG	**Esanatoglia**	**4.20**	**103**	P	**Pg**	**03 42 37.0**	**-2.8**
SNTG	**Esanatoglia**	**4.20**	**103**	END			
CESI	**CESI - Serrava**	**4.25**	**107**	P	**Pb**	**03 42 33.4**	**-0.4**
CESI	**CESI - Serrava**	**4.25**	**107**	S	**Pb**	**03 42 34.8**	**+1.0**
CESI	**CESI - Serrava**	**4.25**	**107**	END			
RJF	**Les Rejaudoux**	**4.25**	**285**	*e*P	**Pn**	**03 42 25.9**	**+2.5**
RJF				*e*Sn	**Sn**	**03 43 09.0**	**-3.6**
	comp=E,0.9nm,0.3s						
EL6	**Elcito**	**4.29**	**102**	⇑P	**Pg**	**03 42 38.9**	**-2.7**
EL6	**Elcito**	**4.29**	**102**	P	**Pg**	**03 42 38.9**	**-2.7**
PAGF	**Fort de Pagny**	**4.35**	**346**	*e*P	**Pn**	**03 42 28.5**	**+3.8**
PAGF				*e*Sn	**Sn**	**03 43 12.5**	**-2.5**
	comp=E,4.8nm,0.5s						
FDMO	**Fiordimonte**	**4.37**	**106**	⇑P	**Pb**	**03 42 34.9**	**-0.7**
FDMO	**Fiordimonte**	**4.37**	**106**	S	Pg	03 42 37.9	-5.1
FDMO	**Fiordimonte**	**4.37**	**106**	P	**Pb**	**03 42 35.0**	**-0.7**
FDMO	**Fiordimonte**	**4.37**	**106**	END			
HYF	**Humbligny**	**4.40**	**313**	*e*P	**Pn**	**03 42 28.7**	**+3.4**
CSP1	**Cessapalombo**	**4.43**	**104**	P	**Pb**	**03 42 36.9**	**0.0**
CSP1	**Cessapalombo**	**4.43**	**104**	S	**Pg**	**03 42 41.2**	**-3.0**
CSP1	**Cessapalombo**	**4.43**	**104**	P	**Pb**	**03 42 36.8**	**0.0**
NRCA	**Norcia**	**4.46**	**108**	⇓P	**Pb**	**03 42 36.2**	**-1.0**
NRCA	**Norcia**	**4.46**	**108**	S	**Pg**	**03 42 40.0**	**-4.7**
NRCA	**Norcia**	**4.46**	**108**	END			
LFF	**La Frestale**	**4.75**	**279**	*e*P	**Pn**	**03 42 32.6**	**+2.5**
LFF				*e*Sn	**Sn**	**03 43 20.8**	**-4.0**
	comp=E,0.4nm,0.2s						
EPF	**Esparros**	**5.25**	**258**	*e*Pn	**Pn**	**03 42 36.6**	**-0.5**
DUGI	**Dugi Otok**	**5.56**	**91**	*e*Pg	**Pb**	**03 42 55.2**	**-0.8**
DUGI				Sg	**Pg**	**03 43 08.0**	**+2.1**
MFF	**Saint Martin d**	**5.73**	**296**	*e*P	**Pn**	**03 42 46.5**	**+2.9**
ETSF	**Etsaut**	**5.92**	**259**	*e*P	**Pn**	**03 42 50.8**	**+4.5**
LDF	**La Druitiere**	**6.67**	**312**	*e*P	**Pn**	**03 42 59.7**	**+3.1**
GRR	**Gorron**	**6.96**	**308**	*e*P	**Pn**	**03 43 03.5**	**+3.0**
FLN	**La Foliniere**	**6.97**	**312**	*e*P	**Pn**	**03 43 03.2**	**+2.6**
	baz=132						

ROM 07 03:42:30.8±0.1**, 42°.984N**±0°.005×**12°.869E**±0°.005**,**
h10km, Md1.4/6**, Error ellipse: s-maj=0.6km**
s-min=0.4km az=193.0, Central Italy

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*IDC **07** 04:08:27.9±2.7, 36°.35N×70°.89E, h210km±23km, mb3.5/14, mb1 3.6/19, mb1mx3.3/64, mbtmp4.1/19, Error ellipse: s-maj=19.5km s-min=15.2km az=173.0*

*NEIC **07** 04:08:30.1±1.7, 36°.60N±0°.06×70°.8E±0°.1, h223km±7km, mb4.0/11, Error ellipse: s-maj=12.7km s-min=7.5km az=109.0*

*NNC **07** 04:08:32.7±7.8, 36°.90N×70°.56E, h193km±85km, mb3.1, mpv3.9, Error ellipse: s-maj=75.2km s-min=43.2km az=175.0*

ISC 07 04:08:28.3±0.5**, 36°.54N**±0°.05×**70°.88E**±0°.06**, h200km, n78,**
σ1s.71/88**, mb3.9**/16**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.49**	**217**	Pn	Pn	04 09 15.7	+3.3
KBL				S	**Sn**	**04 09 50.4**	**+3.7**
CEP	**Cherat**	**2.84**	**162**	P	Pn	04 09 20.3	+4.0
DRK	**Karamyk**	**3.02**	**14**	Pn	**Pn**	**04 09 21.8**	**+3.2**
DRK				S	**Sn**	**04 10 00.7**	**+2.8**
NIL	**Nilore**	**3.48**	**145**	Pn	**Pn**	**04 09 27.6**	**+3.8**
NIL				S	**Sn**	**04 10 11.6**	**+4.4**
THW	**Thamme Wali**	**3.80**	**169**	P	**Pn**	**04 09 31.1**	**+3.3**
SARP	**Sargodha**	**4.84**	**162**	P	**Pn**	**04 09 43.4**	**+2.6**
TAS	**Tashkent**	**4.94**	**346**	Pn	**Pn**	**04 09 43.0**	**+1.2**
TAS				S	**Sn**	**04 10 38.3**	**-1.6**
ARSB	**Arslanbob**	**5.05**	**18**		**Pn**	**04 09 45.5**	**+2.0**
AML	**Almayashu**	**5.99**	**20**	P	**Pn**	**04 09 57.9**	**+2.1**
	SNR=79						
DHRM	**DHARAMSHALA**	**6.20**	**132**	*e*P	**Pn**	**04 10 01.0**	**+2.6**
DHRM				*e*S	**Sn**	**04 11 09.4**	**-0.1**
DHRM				IAML		04 11 11.4	
	comp=N,554nm,0.3s						
UCH	**Uchtor**	**6.34**	**25**	P	**Pn**	**04 10 02.1**	**+1.8**
	SNR=13						
EKS2	**Erkin-Say**	**6.51**	**19**	P	**Pn**	**04 10 05.6**	**+3.3**
	SNR=17						
KK31	**Karatay Array**	**6.56**	**358**	P	**Pn**	**04 10 03.8**	**+1.0**
	comp=N,3.7nm,0.3s,baz=184,slow=13,SNR=39						
KK31				⇓S	**Sn**	**04 11 15.6**	**-2.2**
	comp=N,14nm,0.4s,baz=184,slow=22,SNR=3.8						
KK31	**Karatay Array**	**6.56**	**358**	Pn	**Pn**	**04 10 04.1**	**+1.3**
KKAR	**Karatay Array**	**6.56**	**358**	Pn	**Pn**	**04 10 04.1**	**+1.3**
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**04 10 06.5**	**+1.8**
	comp=N,2.9nm,0.3s,baz=194,slow=3.2,SNR=31						
AAK				S	**Sn**	**04 11 20.7**	**-0.5**
	comp=N,2.3nm,0.3s,baz=331,slow=22,SNR=19						
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**04 10 07.0**	**+2.3**
	SNR=12						
AAK	**Ala-Archa**	**6.70**	**24**	⇑P	**Pn**	**04 10 06.5**	**+1.8**
	comp=N,3.2nm,0.3s						
AAK				⇓S	**Sn**	**04 11 21.2**	**0.0**
	comp=N,20nm,0.6s						
AAK	**Ala-Archa**	**6.70**	**24**	Pn	**Pn**	**04 10 06.5**	**+1.8**
AAK					**Sn**	**04 11 22.3**	**+1.1**
BOOM	**Boomskoye usch**	**7.11**	**32**	Pn	**Pn**	**04 10 11.8**	**+1.6**
TKM2	**Tokmak 2**	**7.33**	**28**	P	**Pn**	**04 10 14.8**	**+1.8**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.33**	**28**	P	**Pn**	**04 10 14.1**	**+1.0**
	comp=N,4.2nm,0.5s						
TKM2				S	**Sn**	**04 11 34.6**	**-1.6**
	comp=N,18nm,0.8s						
KDJ	**Kajisay**	**7.41**	**39**	Pn	**Pn**	**04 10 15.8**	**+1.8**
SMLA	**Simla**	**7.51**	**134**	*i* P	**Pn**	**04 10 17.2**	**+2.0**
SMLA				*e*S	**Sn**	**04 11 38.7**	**-1.6**
SMLA				IAML		04 11 40.8	
	comp=N,125nm,0.5s						
SMLA				IAML		04 11 41.9	
	comp=E,279nm,0.3s						
GEYT	**Alibeck**	**10.27**	**282**	P	**Pn**	**04 10 52.0**	**+0.9**
	comp=E,0.7nm,0.3s,baz=90,slow=11,SNR=2.8						
MAKZ	**Makanchi**	**13.18**	**35**	Pn	**Pn**	**04 11 28.6**	**+0.7**
PYUN	**Piuthan**	**13.24**	**126**	*e*P	**Pn**	**04 11 29.7**	**+0.6**
	comp=E,18nm,0.2s						
MK31	**Makanchi Array**	**13.31**	**36**	P	**Pn**	**04 11 30.3**	**+0.7**
	comp=E,0.8nm,0.5s,baz=218,slow=13,SNR=24						
MK31	**Makanchi Array**	**13.31**	**36**	Pn	**Pn**	**04 11 30.9**	**+1.2**
MKAR	**Makanchi Array**	**13.31**	**36**	P	**Pn**	**04 11 30.2**	**+0.6**
	comp=E,0.4nm,0.3s,baz=221,slow=14,SNR=15						
DANN	**Dangsing**	**13.59**	**123**	*e*P	**Pn**	**04 11 34.1**	**+0.6**
	comp=E,16nm,0.3s						
KOLN	**Koldanda**	**13.87**	**125**	*e*P	**Pn**	**04 11 37.5**	**+0.6**
	comp=E,7.9nm,0.3s						
GKN	**Gorkha**	**14.41**	**122**	*e*P	**Pn**	**04 11 43.1**	**-0.4**
	comp=E,20nm,0.3s						
BHPL	**Bhopal**	**14.41**	**155**	*e*P	**P**	**04 11 47.1**	**+2.3**
BHPL				*e*S	**S**	**04 14 17.3**	**-6.4**
DMN	**Daman**	**14.98**	**122**	*e*P	**Pn**	**04 11 51.2**	**+0.6**
	comp=E,36nm,0.5s						
KKN	**Kakani**	**14.98**	**122**	*e*P	**Pn**	**04 11 51.1**	**+0.5**
	comp=E,65nm,0.5s						
AB31	**Akbulak array**	**15.00**	**331**	⇑P	**Pn**	**04 11 49.8**	**-0.6**
	comp=E,1.1nm,0.3s,baz=145,slow=11,SNR=132						
ABKAR	**Akbulak array**	**15.00**	**331**		**P**	**04 11 50.2**	**-0.8**
AB02	**Akbulak array**	**15.00**	**331**		**Pn**	**04 11 50.0**	**-0.5**
AB05	**Akbulak array**	**15.02**	**331**		**Pn**	**04 11 50.1**	**-0.5**
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**Pn**	**04 11 51.5**	**-0.2**
	comp=E,0.3nm,0.3s,baz=208,slow=10,SNR=25						
PKIN	**Phulchoki**	**15.20**	**122**	*e*P	**Pn**	**04 11 53.6**	**+0.4**
	comp=E,14nm,0.4s						
PKI	**Pulchoki**	**15.21**	**122**	*e*P	**Pn**	**04 11 53.8**	**+0.3**
	comp=E,44nm,0.4s						
KURK	**Kurchatov**	**15.22**	**19**		**Pn**	**04 11 52.8**	**-0.3**
KURK				IAmb	IAmb	04 11 54.6	
	comp=Z,3.0nm,0.8s						
GUN	**Gumba**	**15.32**	**120**	*e*P	**Pn**	**04 11 55.1**	**+0.3**
	comp=Z,11nm,0.3s						
RAMN	**Ramite**	**16.42**	**121**	*e*P	**Pn**	**04 12 08.5**	**+0.5**
	comp=Z,16nm,0.3s						
BVAR	**Borovoye Array**	**16.49**	**359**	P	**P**	**04 12 05.2**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=65,slow=8.1,SNR=10						
BRVK	**Borovoye**	**16.52**	**359**	⇑P	**Pn**	**04 12 09.5**	**+0.8**
	comp=Z,3.5nm,0.5s						
BRVK	**Borovoye**	**16.52**	**359**	Pn	**Pn**	**04 12 08.8**	**+0.1**
BRVK				IAmb	IAmb	04 12 11.9	
	comp=Z,9.8nm,1.1s						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**Pn**	**04 12 11.0**	**+0.2**
	comp=Z,4.5nm,0.3s,baz=140,slow=9.4,SNR=67						
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑P	**Pn**	**04 12 10.8**	**0.0**
	comp=Z,9.2nm,0.5s						
TAPN	**Taplejung**	**16.95**	**118**	*e*P	**Pn**	**04 12 15.5**	**+1.1**
	comp=Z,39nm,0.6s						
ODAN	**Odare**	**17.02**	**120**	*e*P	**Pn**	**04 12 16.4**	**+1.2**
	comp=Z,27nm,0.4s						
ZAA0	**Zalesovo Array**	**19.92**	**25**	P	**P**	**04 12 44.6**	**0.0**
ZAA0				IAmb	IAmb	04 12 45.7	
	comp=Z,3.8nm,0.7s						
ZALV	**Zalesovo Beam**	**19.92**	**25**	P	**P**	**04 12 45.0**	**+0.4**
	comp=Z,4.5nm,0.5s,baz=217,slow=10,SNR=21						
ARU	**Arti**	**21.56**	**341**	P	**P**	**04 13 02.6**	**+0.7**
	comp=Z,2.5nm,0.2s,baz=170,slow=7.8,SNR=8.1						
KIRV	**Kirov**	**26.16**	**334**	P	**P**	**04 13 45.0**	**+1.2**
	comp=Z,9.9nm,0.5s,baz=201,slow=1.3,SNR=5.6						
AKASG	**Malin Array Be**	**32.84**	**309**	P	**P**	**04 14 42.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=82,slow=7.4,SNR=2.9						
NRIK	**Noril'sk**	**34.10**	**10**	P	**P**	**04 14 54.4**	**+0.9**
	comp=Z,3.7nm,0.5s,baz=195,slow=6.6,SNR=6.8						
NRIK	**Noril'sk**	**34.10**	**10**	P	**P**	**04 14 53.4**	**-0.2**
NRIK				IAmb	IAmb	04 14 55.1	
	comp=Z,3.8nm,0.6s						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**04 15 21.8**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=133,slow=8.1,SNR=6.8						
KEV	**Kevo**	**40.73**	**338**	P	**P**	**04 15 48.7**	**-0.4**
KEV				IAmb	IAmb	04 15 50.4	
	comp=Z,4.2nm,0.8s						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**04 15 52.3**	**+0.4**
	comp=Z,14nm,1.0s,baz=113,slow=8.4,SNR=34						
NRCA	**Norcia**	**44.15**	**297**	P	**P**	**04 16 16.4**	**-0.7**
NC303	**NORSAR Array S**	**44.23**	**323**	P	**P**	**04 16 17.4**	**0.0**
NB201	**NORSAR Array S**	**44.25**	**323**	P	**P**	**04 16 17.3**	**-0.4**
NB2	**NORSAR Subarra**	**44.29**	**323**	P	**P**	**04 16 17.2**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**04 16 17.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=96,slow=7.8,SNR=5.2						
TIXI	**Tiksi**	**45.77**	**22**	P	**P**	**04 16 29.3**	**-0.1**
TOA0	**Torodi Ar. Sit**	**65.62**	**269**	P	**P**	**04 18 49.0**	**-2.2**
TOA0				IAmb	IAmb	04 18 49.6	
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.62**	**269**	P	**P**	**04 18 49.1**	**-2.1**
	comp=Z,0.8nm,0.4s,baz=48,slow=5.9,SNR=12						
INK	**Inuvik**	**73.88**	**9**	P	**P**	**04 19 40.7**	**0.0**
	comp=Z,0.8nm,0.5s,baz=351,slow=7.0,SNR=5.7						
INK	**Inuvik**	**73.88**	**9**	P	**P**	**04 19 40.1**	**-0.6**
ILAR	**Eielson Array**	**74.77**	**16**	P	**P**	**04 19 44.0**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=300,slow=5.3,SNR=4.9						
YKA	**Yellowknife Ar**	**81.21**	**3**	P	**P**	**04 20 21.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=3.8,slow=5.1,SNR=26						
WRA	**Warramunga Arr**	**82.09**	**122**	P	**P**	**04 20 25.0**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=315,slow=6.8,SNR=7.2						
WB2	**Warramunga Arr**	**82.10**	**122**	P	**P**	**04 20 25.2**	**-1.5**
WB2				IAmb	IAmb	04 20 42.7	
	comp=Z,3.9nm,1.1s						
ASAR	**Alice Springs**	**84.36**	**125**	P	**P**	**04 20 36.9**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=322,slow=7.0,SNR=2.4						

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*JMA **07** 04:11:04.0, 24°.21N×121°.64E, h35km±1km, M2.8*
*TAP **07** 04:11:05.0, 24°.28N×121°.68E, h23km, ML3.6, B*

ISC 07 04:11:04.8±0.9**, 24°.24N**±0°.02×**121°.70E**±0°.02**, h27**km±5km**,**
n107, σ0s.81/179**, 3C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.12**	**237**	⇓P	**Pb**	**04 11 10.1**	**+0.2**
	baz=216						
NACB				S	**Sb**	**04 11 14.0**	**+0.6**
	baz=216						
TWD	**Chiawan**	**0.18**	**212**	*i* P	**Pn**	**04 11 10.9**	**-1.0**
	baz=198						
TWD				*i* S	**Sb**	**04 11 15.3**	**+0.9**
	baz=198						
ENA	**Nanau**	**0.19**	**11**	⇑*i*P	**Pb**	**04 11 10.6**	**-0.1**
	baz=23						
ENA				*i* S	**Sb**	**04 11 15.0**	**+0.3**
	baz=23						
ETLH	**Xiulin Townshi**	**0.20**	**261**	⇑P	**Pn**	**04 11 11.1**	**-1.1**
	baz=248						
ETLH				S	**Sb**	**04 11 15.5**	**+0.5**
	baz=248						
ENAH	**Nanao**	**0.23**	**25**	⇑*i*P	**Pb**	**04 11 11.1**	**-0.1**
	baz=35						
ENAH				*i* S	**Sb**	**04 11 15.8**	**+0.4**
	baz=35						
HWA	**Hwalien**	**0.28**	**199**	*i* P	**Pn**	**04 11 12.4**	**-0.7**
	baz=190						
HWA				S	**Sn**	**04 11 18.5**	**+0.2**
	baz=190						
NNSB	**Datong**	**0.35**	**303**	⇓P	**Pb**	**04 11 12.7**	**-0.2**
	baz=299						
NNSB				S	**Sb**	**04 11 18.1**	**-0.2**
	baz=299						
NNSH	**Datong**	**0.35**	**303**	*i* P	**Pb**	**04 11 12.6**	**-0.2**
	baz=299						
NNSH				*i* S	**Sn**	**04 11 18.3**	**-2.0**
	baz=299						
NNS	**Nan Shan**	**0.36**	**304**	⇓*i*P	**Pb**	**04 11 12.8**	**-0.3**
	baz=300						
NNS				*i* S	**Sb**	**04 11 18.2**	**-0.5**
	baz=300						
TWC	**Suao**	**0.39**	**20**	*i* P	**Pb**	**04 11 13.4**	**0.0**
	baz=26						
TWC				*i* S	**Sb**	**04 11 19.7**	**+0.4**
	baz=26						
NDT	**Datong Townshi**	**0.40**	**335**	*i* P	**Pb**	**04 11 13.4**	**-0.2**
	baz=335						
NDT				S	**Sb**	**04 11 19.4**	**-0.2**
	baz=335						
WHF	**Hehuan Shan**	**0.41**	**257**	⇓*i*P	**Pn**	**04 11 13.9**	**-1.4**
	baz=250						
WHF				*i* S	**Sn**	**04 11 20.3**	**-2.0**
	baz=250						
FUSS	**Fushou**	**0.42**	**271**	⇓*i*P	**Pn**	**04 11 14.2**	**-1.1**
	baz=265						
FUSS				*i* S	**Sn**	**04 11 20.7**	**-1.5**
	baz=265						
ENTT	**Nioudou**	**0.42**	**343**	⇓*i*P	**Pb**	**04 11 13.5**	**-0.4**
	baz=345						
ENTT				*i* S	**Sb**	**04 11 19.9**	**-0.1**
	baz=345						
TWT	**Tachien**	**0.48**	**272**	*i* P	**Pn**	**04 11 15.2**	**-0.8**
	baz=266						
TWT				*i* S	**Sn**	**04 11 22.4**	**-1.4**
	baz=266						
TWE	**Neicheng**	**0.48**	**356**	*i* P	**Pb**	**04 11 14.5**	**-0.3**
TWE				*i* S	**Sb**	**04 11 21.8**	**+0.1**
ESL	**Shilin**	**0.49**	**210**	P	**Pn**	**04 11 15.9**	**-0.2**
	baz=204						
TDCB	**Techi**	**0.50**	**272**	⇓P	**Pn**	**04 11 15.2**	**-1.0**
	baz=266						
TDCB				S	**Sn**	**04 11 22.3**	**-1.8**
	baz=266						
CHGB	**Renai**	**0.51**	**250**	P	**Pn**	**04 11 15.4**	**-1.2**
	baz=244						
CHGB				S	**Sn**	**04 11 23.1**	**-1.5**
	baz=244						
YHNB	**Yeheng**	**0.52**	**325**	⇓P	**Pb**	**04 11 15.2**	**-0.4**
	baz=324						
YHNB				S	**Sb**	**04 11 22.4**	**-0.5**
	baz=324						
ILA	**Ilan**	**0.53**	**5**	S	**Sb**	**04 11 23.3**	**+0.4**
	baz=8.0						
NSK	**Sanguang**	**0.54**	**324**	⇓*i*P	**Pb**	**04 11 15.3**	**-0.5**
	baz=324						
NSK				*i* S	**Sb**	**04 11 22.7**	**-0.6**
	baz=324						
NWLT	**Wulai**	**0.57**	**341**	*i* P	**Pb**	**04 11 15.7**	**-0.6**
	baz=342						
NWLT				*i* S	**Sb**	**04 11 23.6**	**-0.5**
	baz=342						
EGFH	**Guangfu**	**0.62**	**204**	*e*P	**Pb**	**04 11 16.6**	**-0.5**
	baz=200						
EGFH				*e*S	**Sn**	**04 11 26.5**	**-0.3**
	baz=200						
NTC	**Toucheng**	**0.62**	**11**	*e*P	**Pb**	**04 11 17.2**	**0.0**
	baz=13						
NTC				*e*S	**Sb**	**04 11 26.0**	**+0.3**
	baz=13						
EGS		**0.64**	**19**	S	**Sn**	**04 11 27.8**	**+0.4**
	baz=23						
WHP	**Taichung City**	**0.69**	**273**	*i* P	**Pn**	**04 11 18.7**	**-0.2**
	baz=270						
WHP				*i* S	**Sn**	**04 11 28.1**	**-0.7**
	baz=270						
WPL	**Puli Township**	**0.72**	**252**	*e*P	**Pn**	**04 11 18.6**	**-0.5**
	baz=248						
WPL				*e*S	**Sn**	**04 11 28.2**	**-1.1**
	baz=248						
DPDB	**Guoxing**	**0.74**	**254**	*e*P	**Pn**	**04 11 19.1**	**-0.4**
	baz=250						
DPDB				*e*S	**Sn**	**04 11 30.4**	**+0.5**
	baz=250						
NHDH	**Xindian Distri**	**0.74**	**347**	*e*P	**Pn**	**04 11 19.1**	**-0.4**
	baz=348						
NHDH				*e*S	**Sn**	**04 11 28.8**	**-1.1**
	baz=348						
TIPB	**Shuangxi**	**0.74**	**9**	*i* P	**Pb**	**04 11 18.9**	**-0.3**
	baz=11						
TIPB				S	**Sb**	**04 11 29.0**	**+0.1**
	baz=11						
LIOB	**Emei**	**0.74**	**303**	*i* P	**Pn**	**04 11 19.7**	**+0.1**
	baz=301						
LIOB				S	**Sn**	**04 11 29.2**	**-0.9**
	baz=301						
NJD	**Zhudong**	**0.75**	**312**	P	**Pn**	**04 11 19.7**	**+0.1**
	baz=310						
NJD				S	**Sn**	**04 11 30.8**	**+0.7**
	baz=310						
TWA	**Mucha**	**0.75**	**352**	*i* P	**Pn**	**04 11 19.5**	**-0.1**
	baz=353						
TWA				*i* S	**Sn**	**04 11 29.1**	**-1.0**
	baz=353						
NSTT	**Nanjuang**	**0.75**	**302**	P	**Pn**	**04 11 19.1**	**-0.6**
	baz=299						
NSTT				*i* S	**Sn**	**04 11 29.4**	**-0.7**
	baz=299						
TATO	**Taipei**	**0.76**	**345**	P	**Pn**	**04 11 19.4**	**-0.3**
	baz=346						
TATO				S	**Sn**	**04 11 29.3**	**-1.0**
	baz=346						
HGSD	**Ruisui**	**0.79**	**199**	*e*P	**Pn**	**04 11 19.9**	**-0.2**
	baz=196						
HGSD				*e*S	**Sn**	**04 11 32.7**	**+1.8**
	baz=196						
BACT	**New Taipei Cit**	**0.79**	**343**	*e*S	**Sn**	**04 11 31.6**	**+0.4**
	baz=343						
TWB1	**Santiao Chiao**	**0.81**	**19**	*i* P	**Pb**	**04 11 20.6**	**+0.3**
	baz=21						
TWB1				S	**Sb**	**04 11 30.8**	**-0.1**
	baz=21						
SMLT	**Sun Moon Lake**	**0.81**	**244**	P	**Pn**	**04 11 19.9**	**-0.7**
	baz=240						
SMLT				S	**Sn**	**04 11 32.1**	**+0.2**
	baz=240						
TAP	**Taipei**	**0.82**	**347**	*e*P	**Pb**	**04 11 22.1**	**+1.6**
	baz=348						
TAP				*e*S	**Sn**	**04 11 31.9**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=348						
SSLB	**Suanglung** baz=233	0.82	237	*e*P	Pn	04 11 20.1	-0.5
SSLB	baz=233			*e*S	Sn	04 11 31.6	-0.3
HSN1	**Hsinchu** baz=309	0.82	311	*e*P	Pb	04 11 21.0	+0.4
HSN1	baz=309			*e*S	Sn	04 11 31.5	-0.4
NWF	**Wu-fen Shan** baz=6.0	0.83	5	P	Pb	04 11 20.6	-0.2
NWF	baz=6.0			S	Sn	04 11 31.7	-0.6
WFSB	**Wu-fen Shan** baz=6.0	0.83	5	*e*P	Pb	04 11 20.9	+0.1
WFSB	baz=6.0			S	Sn	04 11 31.9	-0.3
NTY	**Taoyuan** baz=334	0.84	334	*e*P	Pb	04 11 20.6	-0.3
NTY	baz=334			*e*S	Sn	04 11 31.9	-0.5
SBCB	**Hsinchu** baz=309	0.85	310	P	Pb	04 11 22.0	+0.9
SBCB	baz=309			*e*S	Sn	04 11 34.3	+1.6
TWQ1	**Liyutan** baz=274	0.85	278	P	Pb	04 11 21.9	+0.8
TWQ1	baz=274			*i* S	Sn	04 11 33.4	+0.7
NCUH	**Zhongli** baz=326	0.86	327	P	Pb	04 11 21.2	0.0
NCUH	baz=326			S	Sn	04 11 34.5	+1.5
NCU	**National Centr** baz=327	0.87	327	P	Pb	04 11 20.8	-0.5
NCU	baz=327			*i* S	Sn	04 11 34.2	+1.2
HSN	**Hsinchu** baz=312	0.87	310	P	Pb	04 11 21.5	+0.1
HSN	baz=312			S	Sn	04 11 34.3	+1.2
NSY	**Sanyi** baz=279	0.88	282	P	Pb	04 11 22.1	+0.6
NSY	baz=279			S	Sn	04 11 34.9	+1.6
NJN	**Zhunan** baz=298	0.88	300	*e*P	Pb	04 11 22.6	+1.1
NJN	baz=298			*e*S	Sn	04 11 34.9	+1.7
NMLH	**Miaoli** baz=287	0.88	290	P	Pb	04 11 22.8	+1.2
NMLH	baz=287			*e*S	Sn	04 11 34.4	+1.0
TWS1	**Kuangyinshan** baz=344	0.90	343	*i* P	Pb	04 11 21.2	-0.6
TWS1	baz=344			*i* S	Sn	04 11 34.7	+0.9
TNOU	**National Taiwa** baz=5.0	0.91	4	P	Pn	04 11 21.5	-0.4
TNOU	baz=5.0			*e*S	Sb	04 11 33.2	-0.6
YM01	**YM01** baz=353	0.91	352	P	Pb	04 11 21.9	-0.2
YM01	baz=353			S	Sn	04 11 34.2	+0.1
YULB	**Yu-li** baz=201	0.92	204	*e*P	Pb	04 11 21.6	-0.6
YM10	**YM10** baz=353	0.92	352	P	Pb	04 11 22.3	0.0
YM10	baz=353			S	Sn	04 11 34.0	-0.4
YM04	**YM04** baz=351	0.92	351	P	Pb	04 11 22.3	+0.1
YM04	baz=351			*e*S	Sn	04 11 34.2	-0.2
YM11	**YM11** baz=353	0.93	353	*e*P	Pb	04 11 22.4	0.0
YM11	baz=353			*e*S	Sb	04 11 36.1	+1.6
WWF	**Wufeng** baz=255	0.94	258	*e*P	Pb	04 11 22.6	+0.2
TCU	**Taichung** baz=261	0.94	265	*e*P	Pb	04 11 22.6	0.0
TCU	baz=261			*e*S	Sn	04 11 35.1	+0.3
WHYT	**Xinyi Township** baz=232	0.95	235	*e*P	Pb	04 11 22.8	+0.1
YM03	**YM03** baz=352	0.95	351	P	Pb	04 11 22.8	0.0
YM08	**YM08** baz=354	0.95	354	*e*P	Pn	04 11 21.9	-0.5
TWF1	**Yuli** baz=200	0.96	203	*e*P	Pb	04 11 22.3	-0.5
ANP	**Anpu** baz=351	0.96	350	*e*P	Pb	04 11 22.3	-0.6
ANP	baz=351			*e*S	Sb	04 11 36.0	+0.7
NHW	**Xinwu Township** baz=321	0.97	322	*e*P	Pb	04 11 23.0	-0.1
NHW	baz=321			*e*S	Sb	04 11 36.4	+1.0
WDJ	**Dajia District** baz=274	0.97	277	*e*P	Pb	04 11 23.2	+0.1
WDJ	baz=274			*e*S	Sb	04 11 37.7	+2.1
WJS	**Zhushan** baz=242	0.98	245	*e*P	Pb	04 11 23.4	+0.2
WNT1	**Nantou City** baz=247	0.99	251	*e*P	Pb	04 11 24.5	+1.1
WNT	**Mingjian** baz=246	1.00	249	*e*P	Pb	04 11 24.3	+0.8
WNT	baz=246			*e*S	Sb	04 11 38.8	+2.6
TWY	**Chenhua** baz=356	1.04	355	*e*P	Pb	04 11 23.5	-0.6
TWY	baz=356			*e*S	Sn	04 11 36.5	-0.7
WCHH	**Zhanghua** baz=259	1.06	262	*e*P	Pb	04 11 24.9	+0.4
WCHH	baz=259			*e*S	Sb	04 11 40.1	+2.2
ALS	**Alishan** baz=225	1.09	229	*e*P	Pb	04 11 25.1	-0.2
FULB	**Fuli** baz=198	1.10	200	*e*P	Pb	04 11 24.7	-0.6
CHN5	**Tsauling** baz=233	1.13	236	*e*P	Pb	04 11 26.0	+0.1
JYNG	**Yonagunijimaku**	1.15	79	P	Pn	04 11 25.2	0.0
JYNG				*e*S	Sn	04 11 40.4	+0.3
CHKT	**Chengkung** baz=193	1.18	195	*e*P	Pn	04 11 25.1	-0.3
WDLH	**Douliu** baz=240	1.20	243	*e*P	Pb	04 11 27.3	+0.4
YOJ	**Yonaguni jima**	1.21	79	P	Pn	04 11 26.0	0.0
YOJ				*e*S	Sn	04 11 42.0	+0.4
YOJ	**Yonaguni jima** baz=81	1.21	79	*e*P	Pn	04 11 25.8	-0.2
ELDTW	**Lidau** baz=208	1.22	211	P	Pn	04 11 25.6	-0.6
CHN4	**Tsaushan** baz=227	1.35	229	*e*P	Pb	04 11 29.0	-0.4
TPUB	**Ta-pu** baz=224	1.35	227	*e*P	Pb	04 11 29.5	-0.1
STYT	**Tauyuan** baz=216	1.38	219	*e*P	Pb	04 11 29.7	-0.3
CHY	**Chiayi** baz=235	1.38	238	*e*P	Pb	04 11 30.1	+0.1
WTP	**Ta-pu** baz=223	1.40	225	*e*P	Pb	04 11 29.9	-0.5
WTP	baz=223			*e*S	Sb	04 11 49.4	+1.5
LONT	**Longtian** baz=200	1.43	202	*e*P	Pb	04 11 30.1	-0.7
TWK	**Hsinying** baz=226	1.47	229	*e*P	Pb	04 11 30.6	-1.1
TWK	baz=226			*e*S	Sb	04 11 50.7	+0.8
SNST	**Tainan City** baz=225	1.50	228	*e*P	Pb	04 11 31.9	-0.2
CHN1	**Nanshi** baz=224	1.50	226	*e*P	Pb	04 11 32.1	0.0
TWGBT	**Beinan** baz=200	1.52	202	*e*P	Pb	04 11 31.4	-1.0
SGST	**Jiashian** baz=219	1.54	222	*e*P	Pn	04 11 30.6	0.0
ICHU	**Yijhu** baz=234	1.57	236	*e*P	Pb	04 11 32.7	-0.5
SLGT	**Liugui** baz=216	1.57	218	*e*P	Pb	04 11 32.5	-0.8
ECL	**Taimali** baz=201	1.77	203	*e*P	Pb	04 11 34.7	-2.0
SSD	**Sandimen** baz=211	1.78	214	*e*P	Pb	04 11 35.3	-1.5
TSMG	**Majia** baz=211	1.81	213	*e*P	Pb	04 11 36.0	-1.3
IRIF	**Iriomote-Funau**	1.85	87	P	Pn	04 11 34.6	-0.2
IRIF				*e*S	Sn	04 11 57.0	-0.3
HATJ	**Hateruma jima**	1.93	95	P	Pn	04 11 36.5	+0.7
HATJ				*e*S	Sn	04 12 00.7	+1.5
JKRS	**Kuro-shima**	2.11	90	P	Pn	04 11 38.9	+0.6
JKRS				*e*S	Sn	04 12 04.4	+0.8
JIJ	**Ishigaki jima**	2.23	86	P	Pn	04 11 39.9	-0.1
JIJ				S	Sn	04 12 05.6	-1.1
JISG	**Ishigakijimahi**	2.40	81	P	Pn	04 11 41.6	-0.8
JISG				S	Sn	04 12 10.9	0.0
JTJ	**Tarama**	2.76	81	*e*S	Sn	04 12 19.2	-0.6
JIRB	**Irabujima**	3.21	79	S	Sn	04 12 31.4	+0.4

IDC ***07*** *04:18:12.5±1.6, 40°.26N×77°.68E, h0^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.4/51, mbtmp3.6/8, ML3.3/4, Error ellipse: s-maj=24.5km s-min=17.7km az=145.0*
SOME ***07*** *04:18:13.1, 40°.35N×77°.35E, h10^{km}*
BJI ***07*** *04:18:13.3±0.0, 40°.24N×77°.56E, h6^{km}, mb4.0/4, ML3.8/9*
KRNET ***07*** *04:18:15.0±0.1, 40°.33N×77°.34E, mb3.8*
NNC ***07*** *04:18:15.7±0.9, 40°.39N×77°.47E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=6.8km s-min=5.1km az=163.0*
ISC 07 04:18:15.8±0.8, **40°.38N**±0°.05×**77°.52E**±0°.03, **h10**^{km}, **n98, σ1^{s}82**/148, **mb3.5**/4, **33C-25D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	**Kajisay** baz=57	1.77	352	⇑*i*P	Pb	04 18 48.1	-0.3
KDJ	baz=57			⇑*i*S	Sg	04 19 12.7	0.0
ULHL	**Ulahol** baz=37	2.10	333	⇑*e*P	Pn	04 18 52.8	+1.6
ULHL	baz=37			⇑*e*S	Sb	04 19 20.3	0.0
ULHL	**Ulahol** SNR=44	2.10	333	P	Pb	04 18 54.4	+0.3
PRZ	**Przheval'sk** baz=20	2.21	17	⇑*i*P	Pb	04 18 56.1	+0.2
PRZ	baz=20			⇑*i*S	Sg	04 19 25.7	-1.0
ANVS	**Anan'yevo** baz=6.0	2.41	3	⇑*i*P	Pb	04 18 58.2	-1.1
ANVS	baz=6.0			⇑*i*S	Sb	04 19 29.2	+0.1
BOOM	**Boomskoye usch** baz=35	2.42	331	⇑*i*P	Pn	04 18 57.2	+1.6
BOOM	baz=35			⇑*i*S	Sb	04 19 27.9	-1.6
TNSS	**Tian-Shan** 222nm,0.4s	2.69	351	*e*P	Pb	04 19 05.0	+0.8
TNSS	232nm,0.7s			*e*S	Sg	04 19 42.3	0.0
TNSS	**Tian-Shan** 222nm,0.4s	2.69	351	Pg	Pb	04 19 04.9	+0.6
TNSS	232nm,0.7s			Lg	Lg	04 19 42.6	
IZV	**Izvestkoviy** 86nm,0.5s	2.74	346	*e*P	Pb	04 19 05.3	+0.3
IZV	319nm,0.5s			*e*S	Sg	04 19 42.9	-1.0
IZV	**Izvestkoviy** 86nm,0.5s	2.74	346	Pg	Pb	04 19 05.3	+0.3
IZV	319nm,0.5s			Lg	Lg	04 19 43.8	
MDOK	**Medeo** 125nm,0.3s	2.81	353	*e*P	Pb	04 19 06.7	+0.6
MDOK	688nm,0.5s			*e*S	Sg	04 19 45.2	-0.7
MDOK	**Medeo** 86nm,0.5s	2.81	353	⇑Pn	Pn	04 19 03.2	+2.3
MDOK	726nm,0.7s			⇑Lg	Lg	04 19 45.2	
MDOK	**Medeo** 125nm,0.3s	2.81	353	Pg	Pb	04 19 06.8	+0.7
MDOK	688nm,0.5s			Lg	Lg	04 19 45.6	
ARLS	**Aral** baz=5.0	2.83	303	⇓*i*P	Pn	04 19 01.9	+0.7
ARLS	baz=5.0			⇓*i*S	Sn	04 19 36.1	+0.6
AAA	**Alma-Ata** 243nm,0.3s	2.87	351	*e*P	Pb	04 19 08.5	+1.4
AAA	551nm,0.7s			*e*S	Sg	04 19 48.1	+0.3
AAA	**Alma-Ata** 243nm,0.3s	2.87	351	Pg	Pb	04 19 07.8	+0.8
AAA	551nm,0.7s			Lg	Lg	04 19 48.1	
KNDC	**Almaty** 168nm,0.6s	2.87	352	⇑Pn	Pn	04 19 04.4	+2.7
KNDC	1µm,0.7s			⇑Lg	Lg	04 19 48.1	
MTBS	**Maitube** 56nm,0.3s	2.87	344	*e*P	Pb	04 19 07.8	+0.7
MTBS	334nm,0.3s			*e*S	Sg	04 19 47.0	-0.9
KOTS	**Kotyrbulak** 340nm,0.3s	2.87	354	*e*P	Pb	04 19 07.8	+0.7
KOTS	1µm,0.5s			*e*S	Sg	04 19 47.4	-0.6
KOTS	**Kotyrbulak** 340nm,0.3s	2.87	354	Pg	Pb	04 19 07.8	+0.7
KOTS	1µm,0.5s			Lg	Lg	04 19 47.3	
ZHN	**Zhinishke** 33nm,0.3s	2.87	13	*e*P	Pb	04 19 08.1	+0.9
ZHN	61nm,0.3s			*e*S	Sg	04 19 48.1	+0.1
ZHN	**Zhinishke** 33nm,0.3s	2.87	13	Pg	Pb	04 19 08.1	+0.9
ZHN	61nm,0.3s			Lg	Lg	04 19 48.1	
KST	**Kastek** 37nm,0.3s	2.91	337	*e*P	Pb	04 19 08.3	+0.5
KST	247nm,0.5s			*e*S	Sg	04 19 48.1	-1.0
KST	**Kastek** 37nm,0.3s	2.91	337	Pg	Pb	04 19 08.3	+0.5
KST	247nm,0.5s			Lg	Lg	04 19 48.1	
TKM2	**Tokmak 2** baz=34	2.92	331	⇓*e*P	Pn	04 19 04.1	+1.6
TKM2	baz=34			⇓*i*S	Sn	04 19 40.0	+2.2
TKM2	**Tokmak 2** SNR=22	2.92	331	P	Pn	04 19 05.5	+3.0
TKM2	**Tokmak 2** 40nm,0.8s	2.92	331	⇓Pn	Pn	04 19 05.3	+2.8
TKM2	492nm,1.0s			⇑Lg	Lg	04 19 48.2	
UCH	**Uchtor** baz=13	2.92	310	⇓*i*P	Pn	04 19 03.6	+0.8
UCH	baz=13			⇓*i*S	Sn	04 19 39.0	+0.8
UCH	**Uchtor** SNR=22	2.92	310	P	Pn	04 19 05.0	+2.2
KBK	**Karagaybulak** baz=23	2.99	321	⇓*i*P	Pn	04 19 04.5	+1.1
KBK	baz=23			⇓*i*S	Sn	04 19 40.7	+1.4
KBK	**Karagaybulak** SNR=52	2.99	321	P	Pb	04 19 09.2	+0.1
UZB	**Uzynbulak** 72nm,0.3s	2.99	22	*e*P	Pb	04 19 10.7	+1.5
UZB	104nm,0.5s			*e*S	Sg	04 19 52.0	+0.2
UZB	**Uzynbulak** 72nm,0.3s	2.99	22	Pg	Pb	04 19 10.7	+1.5
UZB	104nm,0.5s			Lg	Lg	04 19 51.9	
SFK	**Sufi-Kurgan** baz=65	3.10	265	⇓*e*P	Pn	04 19 04.5	-0.4
SFK	baz=65			⇓*i*S	Sn	04 19 41.1	-1.1
SHLS	**Shalkode** 158nm,0.7s	3.13	27	*e*P	Pg	04 19 14.7	-1.1
SHLS	197nm,0.5s			*e*S	Sg	04 19 59.2	+2.7
SHLS	**Shalkode** 158nm,0.7s	3.13	27	Pg	Pg	04 19 14.7	-1.1
SHLS	197nm,0.5s			Lg	Lg	04 19 59.2	
DGS	**Degeres** 65nm,0.4s	3.15	336	*e*P	Pb	04 19 12.5	+0.7
DGS	278nm,0.5s			*e*S	Sg	04 19 55.3	-1.5
DGS	**Degeres** 65nm,0.4s	3.15	336	Pg	Pb	04 19 12.5	+0.7
DGS	278nm,0.5s			Lg	Lg	04 19 55.3	
KURS	**Kuram** 107nm,0.5s	3.15	9	*e*P	Pb	04 19 12.8	+0.9
KURS	142nm,0.4s			*e*S	Sg	04 19 55.8	-1.1
KURS	**Kuram** 107nm,0.5s	3.15	9	Pg	Pb	04 19 12.8	+0.9
KURS	142nm,0.4s			Lg	Lg	04 19 55.8	
AAK	**Ala-Archa** 11nm,0.3s,baz=141,slow=12,SNR=32	3.20	316	Pn	Pn	04 19 09.3	+3.0
AAK	15nm,0.3s,baz=133,slow=10,SNR=39			Pg	Pb	04 19 12.9	+0.1
AAK	20nm,0.3s,baz=266,slow=22,SNR=14			Lg	Lg	04 19 56.7	
AAK	**Ala-Archa** baz=18	3.20	316	⇑*i*P	Pn	04 19 07.4	+1.1
AAK	baz=18			⇑*i*S	Sn	04 19 45.8	+1.2
AAK	**Ala-Archa** SNR=30	3.20	316	P	Pn	04 19 09.0	+2.7
AAK	**Ala-Archa** 30nm,0.5s	3.20	316	⇓Pg	Pb	04 19 12.3	-0.6
AAK	312nm,1.0s			⇑Lg	Lg	04 19 55.5	
KPKS	**Kokpek** 139nm,0.3s	3.21	15	*e*P	Pb	04 19 13.4	+0.5
KPKS	411nm,0.5s			*e*S	Sg	04 19 56.8	-1.9
FRU1	**Bishkek** baz=22	3.26	319	⇓*i*P	Pn	04 19 08.1	+1.1
FRU1	baz=22			⇓*i*S	Sn	04 19 47.0	+1.2
PDGK	**Podgornoye** 70nm,0.4s	3.30	26	Pg	Pb	04 19 14.6	+0.2
PDGK	87nm,0.5s			Lg	Lg	04 19 59.0	
PDGK	**Podgornoye** 30nm,0.6s	3.30	26	⇑Pn	Pn	04 19 09.2	+1.6
PDGK	89nm,0.5s			⇑Pg	Pb	04 19 14.5	+0.1
PDGK	122nm,0.5s			⇓Lg	Lg	04 19 59.0	
CHMS	**Chumysh** baz=25	3.34	323	⇓*i*P	Pn	04 19 09.4	+1.3
CHMS	baz=25			⇓*i*S	Sn	04 19 49.1	+1.3
CHMS	**Chumysh** SNR=8.5	3.34	323	P	Pn	04 19 10.9	+2.8
AML	**Almayashu** baz=4.0	3.38	303	⇓*i*P	Pn	04 19 09.4	+0.5
AML	baz=4.0			⇓*i*S	Sn	04 19 49.7	+0.5
AML	**Almayashu** SNR=44	3.38	303	P	Pn	04 19 10.8	+1.9
KTBS	**Karatobe** 28nm,0.4s	3.39	350	*e*P	Pb	04 19 16.7	+0.7
KTBS	324nm,0.5s			*e*S	Sg	04 20 02.5	-2.1
KTBS	**Karatobe** 28nm,0.4s	3.39	350	Pg	Pb	04 19 16.7	+0.7
KTBS	324nm,0.5s			Lg	Lg	04 20 02.5	
CHKK	**Chushkaly** 51nm,0.4s	3.50	354	*e*P	Pb	04 19 18.5	+0.7
CHKK	178nm,0.3s			*e*S	Sg	04 20 06.0	-2.0
CHKK	**Chushkaly** 51nm,0.4s	3.50	354	Pg	Pb	04 19 18.5	+0.7
CHKK	178nm,0.3s			Lg	Lg	04 20 06.0	
ARSB	**Arslanbob** baz=88	3.57	287	⇓*i*P	Pn	04 19 11.8	+0.5
ARSB	baz=88			⇓*i*S	Sn	04 19 53.0	-0.7
KRBS	**Karabastau** 24nm,0.3s	3.59	338	*e*P	Pb	04 19 20.2	+0.8
KRBS	142nm,0.4s			*e*S	Sg	04 20 08.5	-2.6
KRBS	**Karabastau** 24nm,0.3s	3.59	338	Pg	Pb	04 19 20.2	+0.8
KRBS	142nm,0.4s			Lg	Lg	04 20 08.5	
OHH	**Osh** baz=75	3.62	274	⇑*i*P	Pn	04 19 12.1	+0.2
OHH	baz=75			⇑*i*S	Sn	04 19 53.6	-1.1
EKS2	**Erkin-Say** baz=12	3.62	310	⇑*i*P	Pn	04 19 13.1	+1.1
EKS2	baz=12			⇑*i*S	Sn	04 19 55.3	+0.4
EKS2	**Erkin-Say** SNR=7.8	3.62	310	P	Pn	04 19 14.9	+2.9
KUU	**Kurty** 8.1nm,0.4s	3.62	346	*e*P	Pb	04 19 20.6	+0.7
KUU	325nm,0.8s			*e*S	Sg	04 20 09.1	-3.0
KTMS	**Ketmen** 36nm,0.3s	3.72	34	*e*P	Pb	04 19 21.8	+0.1
KTMS	89nm,0.5s			*e*S	Sb	04 20 11.3	+4.4
KTMS	**Ketmen** 36nm,0.3s	3.72	34	Pg	Pb	04 19 21.8	+0.1
KTMS	89nm,0.5s			Lg	Lg	04 20 11.3	
SGDS	**Sogindy** 24nm,0.5s	3.75	326	Pg	Pb	04 19 21.9	-0.3
SGDS	119nm,0.7s			Lg	Lg	04 20 11.5	
MNBS	**Baschi** 47nm,0.3s	3.76	10	*e*P	Pb	04 19 24.1	+1.9
MNBS	226nm,0.3s			*e*S	Sg	04 20 15.3	-1.1
MNBS	**Baschi** 47nm,0.3s	3.76	10	Pg	Pb	04 19 24.1	+1.9
MNBS	226nm,0.3s			Lg	Lg	04 20 15.3	
ARXS	**Arharly** 88nm,0.4s	3.84	3	*e*P	Pb	04 19 25.2	+1.6
ARXS	95nm,0.6s			*e*S	Sg	04 20 17.4	-1.7
ARXS	**Arharly** 88nm,0.4s	3.84	3	Pg	Pb	04 19 25.2	+1.6
ARXS	95nm,0.6s			Lg	Lg	04 20 17.4	
MRKS	**Merke** 26nm,0.3s	4.00	308	*e*P	Pb	04 19 26.6	+0.3
MRKS	18nm,0.4s			*e*S	Sb	04 20 19.5	+4.7
MRKS	**Merke** 26nm,0.3s	4.00	308	Pg	Pb	04 19 26.6	+0.3
MRKS	18nm,0.4s			Lg	Lg	04 20 19.5	
DJR	**Jarkent** 49nm,0.6s	4.29	22	*e*P	Pb	04 19 32.9	+1.5
DJR	55nm,0.4s			*e*S	Sg	04 20 30.2	-3.4
DJR	**Jarkent** 49nm,0.6s	4.29	22	Pg	Pb	04 19 32.9	+1.5
DJR	55nm,0.4s			Lg	Lg	04 20 30.2	
MNAS	**Manas** baz=2.0	4.32	301	⇑*i*P	Pn	04 19 22.4	+0.7
MNAS	baz=2.0			⇑*i*S	Sn	04 20 11.8	-0.4
DRK	**Karamyk** baz=61	4.49	260	⇑*i*P	Pn	04 19 24.1	0.0
DRK	baz=61			⇑*i*S	Sn	04 20 14.7	-1.8
TDK	**Taldyqorghan** 90nm,0.6s	4.67	8	*e*P	Pb	04 19 39.9	+2.2
TDK	220nm,0.5s			*e*S	Sg	04 20 42.0	-3.6
TDK	**Taldyqorghan** 90nm,0.6s	4.67	8	Pg	Pb	04 19 39.9	+2.2
TDK	220nm,0.5s			Lg	Lg	04 20 42.0	

TRKS	Terek-Say baz=86	4.97	285	⇑iP	Pn	04 19 30.3	-0.3
TRKS	baz=86			⇑iS	Sn	04 20 25.4	-2.7
KAPS	Kapalarasan 21nm,0.8s	5.09	15	eP	Pb	04 19 48.1	+3.2
KAPS	26nm,0.5s			eS	Sg	04 20 56.4	-2.7
KAPS	Kapalarasan 21nm,0.8s	5.09	15	Pg	Pb	04 19 48.1	+3.2
KAPS	26nm,0.5s			Lg	Lg	04 20 56.4	
BTLS	Baital 11nm,0.7s	5.32	332	eP	Pb	04 19 50.7	+2.0
BTLS	9.5nm,0.7s			eS	Sg	04 21 01.1	-5.4
BTLS	Baital 11nm,0.7s	5.32	332	Pg	Pb	04 19 50.7	+2.0
BTLS	9.5nm,0.7s			Lg	Lg	04 21 01.1	
KK31	Karatay Array 0.6nm,0.3s,baz=125,slow=12,SNR=8.4	5.91	300	Pn	Pn	04 19 45.3	+1.9
KK31	11nm,0.8s,baz=122,slow=16,SNR=20			⇑Pg	Pb	04 20 00.7	+1.9
KK31	10nm,0.6s,baz=124,slow=27,SNR=4.7			⇓Lg	Lg	04 21 20.9	
IUG	Iuzhnay 20nm,0.7s	5.91	290	eP	Pb	04 20 00.4	+1.4
IUG	24nm,1.0s			eS	Sb	04 21 17.5	+7.6
IUG	Iuzhnay 20nm,0.7s	5.91	290	Pg	Pb	04 20 00.4	+1.4
IUG	24nm,1.0s			Lg	Lg	04 21 17.5	
BRLS	Borolday 28nm,0.3s	6.33	297	Pg	Pb	04 20 10.5	+4.5
BRLS	21nm,0.5s			Lg	Lg	04 21 35.0	
MK31	Makanchi Array 0.5nm,0.3s,baz=205,slow=12,SNR=32	7.29	27	⇓Pn	Pn	04 20 03.2	+0.9
MK31	1.9nm,0.6s,baz=204,slow=14,SNR=4.1			⇓Pg	Pg	04 20 32.6	-2.7
MK31	3.3nm,0.6s,baz=201,slow=17,SNR=3.6			⇑Lg	Lg	04 22 09.3	
MKAR	Makanchi Array 0.6nm,0.3s,baz=204,slow=15,SNR=27	7.29	27	Pn	Pn	04 20 03.0	+0.7
MKAR	0.8nm,0.3s,baz=216,slow=28,SNR=3.6			Lg	Lg	04 22 04.9	
WMQ	Urumqi	8.31	62	eP	Pn	04 20 15.9	-0.5
WMQ				S	Sn	04 21 52.1	+1.8
WMQ	comp=N,21nm,0.5s			smax	smax		
WMQ	comp=E,26nm,0.7s			smax	smax		
KURBB	Kurchatov Arra 0.3nm,0.3s,baz=192,slow=12,SNR=29	10.27	4	Pn	Pn	04 20 43.1	0.0
KURBB	0.1nm,0.3s,baz=185,slow=29,SNR=6.8			Lg	Lg	04 23 40.1	
BRVK	Borovoye 24nm,1.0s	13.61	341	⇑Lg	Lg	04 25 19.5	
ZALV	Zalesovo Beam 0.1nm,0.3s,baz=206,slow=13,SNR=8.1	14.44	18	Pn	Pn	04 21 39.1	-1.0
SONM	Songino Array 0.4nm,0.7s,baz=250,slow=8.6,SNR=4.5	21.94	61	P	P	04 23 06.7	-2.8
GYA	Guiyang	27.86	111	⇓P	P	04 24 09.6	+3.9
GERES	GERESS Array B 1.6nm,1.1s,baz=66,slow=9.8,SNR=4.0	45.00	303	P	P	04 26 30.3	-1.0
TORD	Torodi Ar. Bea 0.9nm,0.5s,baz=48,slow=5.4,SNR=9.0	70.85	271	P	P	04 29 33.4	+0.4
YKA	Yellowknife Ar 0.1nm,0.4s,baz=356,slow=5.3,SNR=7.0	77.01	6	P	P	04 30 05.5	-2.9

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*BGR **07** 04:48:29.6±0.0, 24°.23N×122°.97E, h33^{km}, mb4.9*

*BJI **07** 04:48:30.2±0.0, 24°.25N×121°.70E, h10^{km}, mB5.3/48, mb4.8/66, ML5.0/12, Ms5.0/69, Ms7 4.8/66*

*NIED **07** 04:48:32.0, 24°.18N×121°.64E, h33^{km}, MW5.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.64; M$_{\theta\theta}$-3.03; M$_{\phi\phi}$-0.61; M$_{r\theta}$3.05; M$_{\theta\phi}$-2.06; M$_{\phi r}$3.27; Fault plane solution: M$_0$5.96000×10^{16} NP1:φ$_s$47.00000°, δ70.00000°, λ79.00000°. NP2:φ$_s$256.00000°, δ23.00000°, λ117.00000°.*

*NEIC **07** 04:48:32.7±0.8, 24°.27N±0°.02×121°.66E±0°.04, h34^{km}±4^{km} Error ellipse: s-maj=5.0km s-min=3.4km az=104.0*

*MOS **07** 04:48:32.6±1.0, 24°.33N×121°.73E, h45^{km}, mb5.2/62, MS4.6/12, Error ellipse: s-maj=7.5km s-min=4.3km az=118.0*

*JMA **07** 04:48:32.0, 24°.18N×121°.64E, h33^{km}±1^{km}, M5.0*

*TAP **07** 04:48:32.8, 24°.26N×121°.69E, h30^{km}, ML5.5, B*

*NEIC **07** 04:48:32.7, 24°.28N×121°.66E, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.39; M$_{\theta\theta}$-1.47; M$_{\phi\phi}$1.08; M$_{r\theta}$3.19; M$_{\theta\phi}$-1.34; M$_{\phi r}$4.00; Fault plane solution: M$_0$5.45000×10^{16} NP1:φ$_s$36.04000°, δ86.22000°, λ72.72000°. NP2:φ$_s$294.06000°, δ17.68000°, λ167.45000°. Principal axes: T 5.0147, Plg46.0000°, Azm288.0000°; N 0.7918, Plg17.0000°, Azm37.0000°; P -5.8065, Plg39.0000°, Azm142.0000°;*

*ASIES **07** 04:48:33.5, 24°.26N×121°.70E, h26^{km}, MW4.8*

*IDC **07** 04:48:34.0±1.4, 24°.30N×121°.86E, h44^{km}±12^{km}, mb4.6/38, mb1 4.6/40, mb1mx4.4/59, mbtmp4.8/40, ML3.6/2, MS4.4/22, Ms1 4.4/22, ms1mx4.1/61, Error ellipse: s-maj=12.5km s-min=9.4km az=62.0*

*NOU **07** 04:48:33.0, 24°.20N×121°.68E, h19^{km}, mb5.1, Taiwan*

ISC 07 04:48:32.9±0.4, **24°.26N**±0°.01×**121°.73E**±0°.02, **h35**^{km}±2^{km}, **h36**^{km}**:pP-P, n731,** σ**1^{s}52**/850, **mb5.0**/210, **MS4.6**/36, **82C-48D, Fault plane solution: NP1:**φ$_s$17.38149°, δ81.53442°, λ46.89571°. **NP2:**φ$_s$278.44244°, δ43.76721°, λ167.71223°. **Principal axes:** T Plg37.9329°, Azm249.6029°; N Plg42.5228°, Azm25.2264°; P Plg23.9880°, Azm139.3102°; **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	Ninganchiao baz=226	0.15	236	⇓iP	Pb	04 48 38.3	-1.0
NACB	baz=226			iS	Sb	04 48 42.3	-1.4
NACB	Ninganchiao	0.15	236		Pb	04 48 37.4	-1.9
NACB				Sg	Sb	04 48 42.2	-1.4
ENA	Nanau baz=17	0.17	4	⇑iP	Pb	04 48 38.8	-0.7
ENA	baz=17			eS	Sb	04 48 43.7	-0.3
ENAH	Nanao baz=27	0.20	21	⇑iP	Pb	04 48 39.2	-0.6
ENAH	baz=27			S	Sn	04 48 44.1	+1.4
TWD	Chiawan baz=211	0.21	215	⇑iP	Pb	04 48 39.0	-0.9
TWD	baz=211			eS	Sb	04 48 43.5	-1.1
ETLH	Xiulin Townshi baz=248	0.23	257	⇓iP	Pb	04 48 39.2	-0.9
ETLH	baz=248			iS	Sb	04 48 43.3	-1.8
HWA	Hwalien baz=203	0.30	202	⇑iP	Pb	04 48 40.6	-0.2
HWA	baz=203			eS	Sb	04 48 46.9	+0.6
NNSB	Datong baz=301	0.36	298	⇓iP	Pb	04 48 40.9	-0.9
NNSB	baz=301			iS	Sb	04 48 46.5	-1.3
NNSH	Datong baz=300	0.36	298	⇓iP	Pb	04 48 40.9	-0.9
NNSH	baz=300			eS	Sb	04 48 46.7	-1.1
TWC	Suao baz=20	0.37	17	iP	Pb	04 48 41.7	0.0
TWC	baz=20			iS	Sn	04 48 47.9	+0.2
NNS	Nan Shan baz=302	0.37	299	⇓iP	Pb	04 48 41.0	-1.0
NNS	baz=302			S	Sb	04 48 47.1	-1.0
NDT	Datong Townshi baz=337	0.40	330	⇓iP	Pb	04 48 41.5	-0.7
NDT	baz=337			iS	Sb	04 48 47.6	-0.9
ENTT	Nioudou baz=343	0.41	339	⇓iP	Pb	04 48 41.8	-0.6
ENTT	baz=343			eS	Sb	04 48 47.9	-0.9
WHF	Hehuan Shan baz=260	0.44	255	⇓iP	Pb	04 48 42.3	-0.8
WHF	baz=260			iS	Sb	04 48 48.5	-1.6
FUSS	Fushou baz=268	0.44	269	⇓iP	Pb	04 48 42.4	-0.7
FUSS	baz=268			iS	Sb	04 48 48.6	-1.4
TWE	Neicheng baz=355	0.47	353	⇓iP	Pb	04 48 42.7	-0.4
TWE	baz=355			eS	Sb	04 48 49.7	-0.5
TWT	Tachien baz=265	0.51	270	⇓iP	Pb	04 48 43.5	-0.4
TWT	baz=265			iS	Sb	04 48 50.6	-0.7
ILA	Ilan	0.51	2	⇓iP	Pb	04 48 43.6	-0.1
ILA				eS	Sn	04 48 51.4	+0.2
ESL	Shilin baz=218	0.52	212	P	Pb	04 48 42.5	-1.4
ESL	baz=218			eS	Sb	04 48 49.8	-1.7
TDCB	Techi baz=266	0.52	270	⇓iP	Pb	04 48 43.5	-0.6
TDCB	baz=266			iS	Sb	04 48 50.4	-1.3
YHNB	Yeheng baz=316	0.52	322	⇓iP	Pb	04 48 43.4	-0.6
YHNB	baz=316			iS	Sb	04 48 50.6	-1.1
YHNB	Yeheng	0.52	322	Pg	Pb	04 48 42.8	-1.2
YHNB				Sg	Sb	04 48 50.4	-1.3
NSK	Sanguang baz=316	0.54	321	⇓iP	Pb	04 48 43.6	-0.7
NSK	baz=316			S	Sb	04 48 51.1	-1.0
CHGB	Renai baz=242	0.54	249	iP	Pb	04 48 43.8	-0.7
CHGB	baz=242			iS	Sb	04 48 49.9	-2.5
NWLT	Wulai baz=335	0.56	338	⇓iP	Pb	04 48 43.9	-0.7
NWLT	baz=335			iS	Sb	04 48 51.5	-1.0
NTC	Toucheng baz=11	0.60	9	⇓iP	Pn	04 48 45.4	+0.4
NTC	baz=11			S	Sn	04 48 53.7	+0.1
EGS	baz=21	0.61	17	P	Pn	04 48 45.8	+0.6
EGFH	Guangfu baz=211	0.65	205	eP	Pb	04 48 44.6	-1.4
WHP	Taichung City baz=276	0.71	272	⇓iP	Pn	04 48 47.0	+0.3
WHP	baz=276			iS	Sb	04 48 56.6	-0.3
TIPB	Shuangxi baz=1.0	0.72	7	⇓iP	Pn	04 48 47.0	+0.3
TIPB	baz=1.0			eS	Sn	04 48 57.0	+0.6
NHDH	Xindian Distri baz=337	0.73	345	⇓iP	Pn	04 48 47.1	+0.3
NHDH	baz=337			iS	Sb	04 48 56.6	-0.4
TWA	Mucha baz=352	0.73	350	⇓iP	Pn	04 48 47.1	+0.3
TWA	baz=352			eS	Sn	04 48 57.8	+0.9
WPL	Puli Township baz=250	0.75	251	iP	Pn	04 48 47.1	0.0
WPL	baz=250			S	Sb	04 48 56.7	-0.9
TATO	Taipei baz=344	0.75	343	⇓iP	Pn	04 48 47.4	+0.3
TATO	baz=344			iS	Sb	04 48 57.6	-0.1
TATO	Taipei	0.75	343		Pn	04 48 47.2	+0.1
TATO				Sn	Sb	04 48 56.0	-1.7
LIOB	Emei baz=301	0.76	301	⇓iP	Pn	04 48 47.8	+0.6
LIOB	baz=301			iS	Sb	04 48 57.9	0.0
NSTT	Nanjuang baz=300	0.76	299	⇓iP	Pn	04 48 47.6	+0.4
NSTT	baz=300			S	Sb	04 48 57.7	-0.3
DPDB	Guoxing baz=247	0.77	253	⇑iP	Pn	04 48 47.4	0.0
DPDB	baz=247			iS	Sb	04 48 57.4	-0.9
BACT	New Taipei Cit baz=352	0.78	341	eP	Pb	04 48 48.6	+0.3
BACT	baz=352			eS	Sn	04 48 59.3	+1.3
TWB1	Santiao Chiao baz=19	0.78	17	⇓iP	Pb	04 48 48.4	+0.1
TWB1	baz=19			iS	Sn	04 48 59.7	+1.7
TAP	Taipei baz=347	0.80	345	P	Pb	04 48 48.5	-0.1
TAP	baz=347			iS	Sb	04 49 00.1	+0.9
NWF	Wu-fen Shan baz=351	0.81	3	P	Pb	04 48 49.0	+0.2
NWF	baz=351			eS	Sn	04 49 00.8	+1.9
WFSB	Wu-fen Shan baz=353	0.81	3	⇓iP	Pb	04 48 48.8	0.0
WFSB	baz=353			S	Sb	04 48 59.7	+0.2
HGSD	Ruisui baz=211	0.81	200	eP	Pn	04 48 48.0	0.0
HGSD	baz=211			eS	Sb	04 49 00.3	+0.8
HSN1	Hsinchu baz=316	0.83	309	⇓iP	Pb	04 48 49.7	+0.7
HSN1	baz=316			S	Sb	04 49 01.3	+1.4
EHY	Hungye baz=205	0.84	207	eP	Pn	04 48 46.6	-1.6
NTY	Taoyuan baz=333	0.84	332	⇓iP	Pb	04 48 49.3	+0.2
NTY	baz=333			iS	Sb	04 49 01.9	+1.7
SMLT	Sun Moon Lake baz=239	0.84	244	eP	Pn	04 48 48.5	0.0
SMLT	baz=239			eS	Sn	04 49 00.2	+0.5
SSLB	Suanglung baz=231	0.85	237	⇑iP	Pn	04 48 48.2	-0.3
SSLB	baz=231			eS	Sn	04 48 58.2	-1.5
SSLB	Suanglung	0.85	237		Pn	04 48 47.4	-1.1
SSLB				Sn	Sn	04 48 59.0	-0.8
SBCB	Hsinchu baz=309	0.86	308	⇑iP	Pb	04 48 50.0	+0.4
SBCB	baz=309			iS	Sb	04 49 01.9	+1.0
NCU	National Centr baz=326	0.86	325	eP	Pb	04 48 49.7	+0.1
NCU	baz=326			S	Sb	04 49 02.0	+1.1
NCUH	Zhongli baz=326	0.86	325	⇑iP	Pn	04 48 49.5	+0.9
NCUH	baz=326			iS	Sb	04 49 02.0	+1.0
TYC	Yuchr baz=242	0.87	246	eP	Pn	04 48 48.9	+0.1
TYC	baz=242			eS	Sn	04 49 00.2	0.0
HSN	Hsinchu baz=312	0.88	308	iP	Pb	04 48 50.0	+0.2
HSN	baz=312			S	Sb	04 49 02.5	+1.2
TWS1	Kuangyinshan baz=352	0.89	341	eP	Pb	04 48 49.9	-0.1
TWS1	baz=352			eS	Sb	04 49 02.5	+0.9
TNOU	National Taiwa baz=353	0.89	3	eP	Pn	04 48 47.7	-1.3
NSY	Sanyi baz=280	0.90	280	⇑iP	Pb	04 48 50.7	+0.6
NSY	baz=280			eS	Sb	04 49 03.2	+1.4
YM01	YM01 baz=342	0.90	351	eP	Pn	04 48 49.9	+0.7
YM01	baz=342			eS	Sb	04 49 02.2	+0.3
NMLH	Miaoli baz=296	0.90	288	⇑iP	Pb	04 48 50.6	+0.4
NMLH	baz=296			iS	Sb	04 49 02.6	+0.6
YM10	YM10 baz=341	0.91	350	eP	Pn	04 48 49.7	+0.4
YM10	baz=341			eS	Sn	04 49 00.9	-0.3
YM04	YM04 baz=349	0.91	349	P	Pn	04 48 50.0	+0.7
YM04	baz=349			eS	Sn	04 49 01.0	-0.2
YM11	YM11 baz=342	0.92	351	eP	Pn	04 48 49.8	+0.4
YM11	baz=342			eS	Sn	04 49 02.0	+0.6
YM03	YM03 baz=351	0.93	349	eP	Pn	04 48 50.3	+0.7
YM03	baz=351			eS	Sn	04 49 02.4	+0.5
YM08	YM08 baz=339	0.94	352	eP	Pn	04 48 49.8	+0.2
NTST	Danshui baz=354	0.94	344	eP	Pn	04 48 50.4	+0.7
NTST	baz=354			eS	Sb	04 49 04.3	+1.3
ANP	Anpu baz=350	0.94	348	eP	Pn	04 48 50.7	+0.8
ANP	baz=350			eS	Sn	04 49 02.3	+0.2
YULB	Yu-li baz=203	0.95	205	P	Pn	04 48 48.0	-1.8
YULB	Yu-li	0.95	205		Pn	04 48 47.9	-1.8
YULB				Sn	Sn	04 49 02.1	0.0
WWF	Wufeng baz=253	0.97	257	⇑iP	Pb	04 48 51.9	+0.6
WWF	baz=253			eS	Sb	04 49 05.5	+1.7
TCU	Taichung baz=263	0.97	264	⇑iP	Pb	04 48 51.6	+0.3
TCU	baz=263			iS	Sb	04 49 05.0	+1.1
WHYT	Xinyi Township baz=233	0.98	235	P	Pn	04 48 51.0	+0.7
WHYT	baz=233			eS	Sn	04 49 03.9	+1.0
EYUL	Yuli baz=210	0.98	203	eP	Pn	04 48 51.3	+1.1
TWF1	Yuli baz=211	0.98	204	eP	Pn	04 48 48.6	-1.7
WDJ	Dajia District baz=275	1.00	275	⇑iP	Pn	04 48 51.8	+1.4
WDJ	baz=275			S	Sb	04 49 06.3	+1.6
WJS	Zhushan baz=244	1.01	245	⇑iP	Pn	04 48 52.0	+1.3
WJS	baz=244			eS	Sb	04 49 06.1	+0.9
WNT1	Nantou City baz=250	1.02	250	P	Pb	04 48 52.4	+0.2
WNT1	baz=250			eS	Sb	04 49 05.8	+0.5
WNT	Mingjian baz=248	1.03	249	P	Pn	04 48 52.3	+1.4
WNT	baz=248			eS	Sb	04 49 06.8	+1.2
NSM	Shimen baz=353	1.03	353	eP	Pb	04 48 52.7	+0.3
YUS	Yu-Shan baz=212	1.04	223	iP	Pn	04 48 51.6	+0.1
YUS	baz=212			eS	Sn	04 49 05.2	0.0
WCHH	Zhanghua baz=260	1.08	261	⇑iP	Pn	04 48 53.1	+1.4
WCHH	baz=260			S	Sb	04 49 07.8	+0.7
ALS	Alishan baz=218	1.13	229	P	Pn	04 48 53.4	+0.9
JYNG	Yonagunijimaku	1.13	80	P	Pb	04 48 53.4	-0.6
JYNG				S	Sb	04 49 09.1	+0.8
FULB	Fuli baz=209	1.13	201	eP	Pn	04 48 52.4	+0.1
CHN5	Tsauling baz=236	1.17	236	iP	Pn	04 48 54.3	+1.4
CHN5	baz=236			iS	Sn	04 49 09.5	+1.9
YOJ	Yonaguni jima	1.19	80	P	Pn	04 48 54.2	+1.2
YOJ				S	Sb	04 49 09.9	-0.2
YOJ	Yonaguni jima baz=79	1.19	80	⇓iP	Pn	04 48 54.3	+1.2
YOJ	baz=79			iS	Sb	04 49 10.0	0.0
YOJ	Yonaguni jima	1.19	80	P	Pn	04 48 54.0	+1.0
YOJ						04 49 09.9	
YOJ	Yonaguni jima	1.19	80	Pn	Pn	04 48 54.0	+1.0
YOJ					Sb	04 49 09.8	-0.2
CHKT	Chengkung baz=208	1.20	196	eP	Pn	04 48 52.9	-0.3
CHKT	baz=208			eS	Sn	04 49 08.9	+0.6
WGK	Gukeng baz=242	1.21	242	P	Pn	04 48 55.1	+1.7
WGK	baz=242			eS	Sb	04 49 11.8	+1.0
WDLH	Douliu baz=243	1.23	243	P	Pb	04 48 55.7	0.0
WDLH	baz=243			eS	Sn	04 49 11.1	+2.1
ELDTW	Lidau baz=201	1.25	212	eP	Pn	04 48 53.5	-0.5
RLNB	Erlin baz=253	1.30	254	⇑iP	Pn	04 48 56.0	+1.3
RLNB	baz=253			S	Sb	04 49 14.2	+0.8
EDH	Donghe baz=200	1.34	197	eP	Pn	04 48 55.2	+0.1
EDH	baz=200			eS	Sn	04 49 11.3	-0.4
WTK	Tuku baz=245	1.35	245	eP	Pn	04 48 56.9	+1.6
WTK	baz=245			eS	Sb	04 49 16.1	+1.3
CHN2	Minshiung baz=238	1.36	238	eP	Pb	04 48 57.4	-0.4
CHN2	baz=238			eS	Sb	04 49 17.1	+2.3
CHN4	Tsaushan baz=221	1.38	229	P	Pn	04 48 57.7	+2.0
CHN4	baz=221			eS	Sb	04 49 17.4	+1.9
TPUB	Ta-pu baz=217	1.39	227	⇑iP	Pn	04 48 57.5	+1.6
TPUB	baz=217			eS	Sn	04 49 15.4	+2.4
TPUB	Ta-pu	1.39	227	Pn	Pn	04 48 56.4	+0.5
PCYT	Pengchaiyu baz=356	1.40	13	eP	Pn	04 48 57.0	+1.0
PCYT	baz=356			eS	Sb	04 49 16.2	0.0
STYT	Tauyuan baz=214	1.41	219	eP	Pn	04 48 57.5	+1.3
STYT	baz=214			eS	Sn	04 49 15.0	+1.4
CHY	Chiayi baz=238	1.41	238	⇑iP	Pb	04 48 58.5	-0.3
CHY	baz=238			eS	Sb	04 49 16.4	-0.1
WTP	Ta-pu baz=214	1.44	226	P	Pn	04 48 58.4	+1.8
WTP	baz=214			eS	Sb	04 49 16.9	-0.3
WMLT	Mailiao baz=252	1.45	252	eP	Pn	04 48 58.0	+1.3
WMLT	baz=252			eS	Sb	04 49 18.0	+0.5
LONT	Longtian baz=191	1.45	202	eP	Pn	04 48 55.8	-0.9
TWK	Hsinying baz=220	1.50	229	⇑iP	Pn	04 48 59.6	+2.0
TWK	baz=220			eS	Sb	04 49 19.4	+0.2
WSF	Szhu baz=246	1.51	246	iP	Pn	04 48 59.3	+1.8
WSF	baz=246			iS	Sb	04 49 19.3	0.0
WLGB	Puzi baz=240	1.52	240	⇑iP	Pn	04 48 58.8	+1.1

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WLGB                                iS    Sb     04 49 19.2  -0.4
      baz=240
SNST  Tainan City          1.53 228 iP    Pn     04 48 59.9  +2.1
      baz=219
SNST                                eS    Sn     04 49 19.2  +2.7
      baz=219
CHN1  Nanshi               1.53 226 eP    Pn     04 48 59.9  +2.1
      baz=227
TWG   Pinlang              1.55 203       Pn     04 48 57.1  -1.0
TWGBT Beinan               1.55 203 eP    Pn     04 48 56.5  -1.7
      baz=192
SGST  Jiashian             1.57 222⇑iP    Pn     04 48 59.6  +1.2
      baz=212
SGST                                S     Sn     04 49 19.6  +2.1
      baz=212
TTN   Taitung              1.59 200 eP    Pn     04 48 59.5  +0.9
      baz=201
LDUT  Ludao                1.59 189 eP    Pn     04 48 57.3  -1.4
      baz=183
LDUT                                eS    Sn     04 49 17.7  -0.4
      baz=183
ICHU  Yijhu                1.60 236 eP    Pn     04 49 01.0  +2.2
      baz=225
ICHU                                eS    Sb     04 49 22.6  +0.8
      baz=225
SLGT  Liugui               1.60 219 iP    Pn     04 49 00.8  +2.0
      baz=221
SLGT                                S     Sb     04 49 21.3  -0.6
      baz=221
CHN8  Yiju                 1.66 237 P     Pn     04 49 01.4  +1.8
      baz=226
CHN8                                eS    Sb     04 49 23.3  -0.2
      baz=226
CHN3  Shinhua              1.72 227 eP    Pb     04 49 03.1  -0.8
      baz=230
CHN3                                eS    Sb     04 49 27.0  +1.9
      baz=230
SCLT  Jiali                1.77 233 eP    Pn     04 49 02.3  +1.2
      baz=223
SCLT                                eS    Sb     04 49 26.8   0.0
      baz=223
SCST  Cishan               1.77 220 eP    Pn     04 49 03.7  +2.5
      baz=223
SCST                                eS    Sb     04 49 27.2  +0.4
      baz=223
ECL   Taimali              1.80 203 eP    Pn     04 49 02.0  +0.5
      baz=197
ECL                                 eS    Sn     04 49 23.1  -0.1
      baz=197
SSD   Sandimen             1.81 214 eP    Pn     04 49 03.9  +2.2
      baz=206
SSD                                 eS    Sn     04 49 26.4  +2.9
      baz=206
IRIF  Iriomote-Funau       1.83  87 P     Pn     04 49 02.7  +0.8
IRIF                                S     Sn     04 49 25.5  +1.7
TAI1  Yung-k'ang           1.83 229 eP    Pn     04 49 04.6  +2.7
      baz=231
TAI1                                eS    Sb     04 49 29.0  +0.5
      baz=231
TSMG  Majia                1.84 213⇑iP    Pn     04 49 04.2  +2.1
      baz=205
TSMG                                iS    Sn     04 49 26.2  +2.2
      baz=205
TWM1  Shoushan             1.86 220 eP    Pb     04 49 05.3  -1.1
      baz=223
TWM1                                eS    Sb     04 49 30.3  +0.9
      baz=223
SGLT  Jiouru               1.90 217 eP    Pb     04 49 06.0  -1.0
      baz=222
SGLT                                eS    Sb     04 49 32.6  +2.2
      baz=222
HATJ  Hateruma jima        1.91  96 P     Pn     04 49 04.3  +1.3
HATJ                                eS    Sn     04 49 27.8  +2.0
MASBT Mashibuluo           1.92 212 eP    Pn     04 49 04.2  +0.9
      baz=217
MASBT                               eS    Sn     04 49 28.7  +2.5
      baz=217
TSPT  Pingtung City        1.94 216 eP    Pb     04 49 06.4  -1.2
      baz=208
TSPT                                eS    Sb     04 49 31.3  -0.2
      baz=208
SNJT  Kaohsiung City       1.97 221 eP    Pn     04 49 06.2  +2.4
      baz=225
SNJT                                eS    Sb     04 49 31.9  -0.5
      baz=225
EAST  Anshuo               2.03 204 eP    Pn     04 49 06.1  +1.3
      baz=197
TAW   Tawu                 2.04 202 eP    Pn     04 49 06.4  +1.6
      baz=198
TAW                                 eS    Sn     04 49 30.7  +1.6
      baz=198
SSPT  Xinbi                2.06 211 eP    Pn     04 49 08.0  +2.9
      baz=215
JKRS  Kuro-shima           2.08  90 P     Pn     04 49 07.0  +1.6
JKRS                                eS    Sn     04 49 32.1  +2.0
PNG   Penghu               2.10 251 P     Pn     04 49 06.3  +0.6
      baz=250
PNG                                 eS    Sn     04 49 31.6  +0.9
      baz=250
PHUB  P'eng-hu             2.11 250 P     Pn     04 49 06.1  +0.3
      baz=249
PHUB                                eS    Sn     04 49 30.8   0.0
      baz=249
SCZT  Fangliau             2.14 209 eP    Pn     04 49 08.2  +2.1
      baz=214
SCZT                                eS    Sn     04 49 32.8  +1.4
      baz=214
WDGT  Dungji               2.14 243 P     Pn     04 49 07.1  +0.9
      baz=242
WDGT                                eS    Sn     04 49 33.1  +1.6
      baz=242
VWUC  VWUC                 2.20 290 eP    Pn     04 49 06.8  -0.2
      baz=289
JIJ   Ishigaki jima        2.21  87 P     Pn     04 49 07.7  +0.6
JIJ                                 eS    Sn     04 49 33.9  +0.8
SLIU  Shizi                2.21 203 eP    Pn     04 49 09.0  +1.9
      baz=198
LAY   Lan-yu               2.21 184 eP    Pn     04 49 06.1  -1.1
      baz=178
WLCH  Liuqiu               2.27 213 eP    Pn     04 49 10.8  +2.9
      baz=218
TWP   Hsiaoliuchiu         2.28 214 eP    Pb     04 49 11.7  -1.8
      baz=229
VCHM  Qimei                2.35 244 P     Pn     04 49 09.8  +0.7
      baz=244
VCHM                                eS    Sn     04 49 37.4  +0.6
      baz=244
JISG  Ishigakijimahi       2.38  82 P     Pn     04 49 10.0  +0.6
JISG                                S     Sn     04 49 38.2  +0.8
HEN   Hengchun             2.42 202 eP    Pn     04 49 12.4  +2.3
      baz=195
TWK1  Hengchun             2.46 200 eP    Pn     04 49 12.0  +1.4
      baz=196
TWKBT Hengchun             2.46 200 eP    Pn     04 49 11.7  +1.1
      baz=198
TWKBT                               eS    Sn     04 49 39.8  +0.5
      baz=198
SNW   Nanwan               2.46 202 eP    Pn     04 49 13.0  +2.5
      baz=195
TSEB  Hengchuen, Pin       2.47 198 eP    Pn     04 49 13.2  +2.5
      baz=193
MATB  Ma-tsu               2.48 320 eP    Pn     04 49 10.1  -0.9
      baz=318
MSUT  Lienchiang           2.51 320 eP    Pn     04 49 11.1  -0.2
      baz=319
JTJ   Tarama               2.74  81 P     Pn     04 49 16.1  +1.7
JTJ                                 S     Sn     04 49 48.0  +1.8
QZH   Quanzhou             2.94 284⇑iPn   Pn     04 49 16.9  -0.2
QZH                                 Sn    Sn     04 49 49.7  -1.5
QZH                                 smax  smax
      comp=N,4µm,0.9s
QZH                                 smax  smax
      comp=E,1µm,0.8s
KNM   Kinmen               3.01 274⇑eP    Pn     04 49 19.8  +1.6
      baz=272
KNMB  Chin-men Tao         3.05 275 eP    Pn     04 49 18.8   0.0
      baz=273
KNMB  Chin-men Tao         3.05 275 Pn    Pn     04 49 17.9  -0.9
JIRB  Irabujima            3.19  79 P     Pn     04 49 22.0  +1.4
JIRB                                eS    Sn     04 49 58.7  +1.3
JIKM  Ikemajima            3.27  78 P     Pn     04 49 23.7  +2.0
JIKM                                S     Sn     04 50 02.6  +3.2
JMJ   Miyako jima 2        3.29  80 eP    Pn     04 49 24.2  +2.2
      baz=80
JMJ2  Miyako jima3         3.31  81 P     Pn     04 49 24.7  +2.4
JMJ2                                eS    Sn     04 50 04.0  +3.5
JOGS  Gusukube             3.39  81 P     Pn     04 49 26.8  +3.5
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JOGS                                eS    Sn     04 50 06.6  +4.3
VDOS  Pratas Island        5.82 234 eP    Pn     04 49 59.6  +2.8
      baz=229
CVP   Callao Caves         6.52 179⇑iP    Pn     04 50 07.4  +0.9
CVP                                 iS    Sn     04 51 18.2  -1.5
SSE   Sheshan              6.83 356 P     Pn     04 50 12.0  +1.4
SSE                                 S     Sn     04 51 24.5  -2.6
SSE                                 smax  smax
      comp=N,340nm,1.4s
SSE                                 smax  smax
      comp=E,290nm,1.0s
SSE                                 LR    LR
      comp=N,780nm,4.8s
SSE                                 LR    LR
      comp=E,2µm,5.2s
SSE   Sheshan              6.83 356 Pn    Pn     04 50 10.4  -0.2
HKPS  Hong Kong Po S       7.25 256 eP    Pn     04 50 16.6  +0.2
      baz=247
GZH   Guangzhou            7.77 263 P     Pn     04 50 19.4  -4.2
GZH                                 S     Sn     04 51 45.3  -5.2
GZH                                 smax  smax
      comp=N,610nm,1.0s
GZH                                 smax  smax
      comp=E,480nm,1.1s
NJ2   Nanjing              8.17 343⇓iP    Pn     04 50 28.3  -0.7
NJ2                                 pP           04 50 34.9
NJ2                                 sP           04 50 40.2
NJ2                                 S     Sn     04 51 55.7  -4.4
NJ2                                 pmax  pmax
      comp=Z,100nm,0.8s
NJ2                                 pmax  pmax
      comp=Z,750nm,5.0s
NJ2                                 smax  smax
      comp=N,1µm,0.9s
NJ2                                 smax  smax
      comp=E,1µm,1.0s
NJ2                                 LR    LR
      comp=N,5µm,12.3s
NJ2                                 LR    LR
      comp=E,5µm,9.2s
NJ2                                 LR    LR
      comp=Z,6µm,12.8s
JMZ   Minamidaito 2        8.75  78 Pn    Pn     04 50 34.9  -2.1
WHN   Wuhan                9.06 315 ⇓P    Pn     04 50 40.4  -0.9
WHN                                 pmax  pmax
      comp=Z,86nm,0.7s
WHN                                 LR    LR
      comp=Z,16µm,10.9s
TGY   Tagaytay City       10.13 184 P     Pn     04 50 59.6  +3.5
      82nm,0.3s,baz=145,slow=4.4,SNR=4.4
TGY                                 LR    LR     04 55 13.0
      comp=Z,708nm,21.8s,baz=48,slow=39
JNU   Nakatsue            11.93  40 P     Pn     04 51 19.2  -1.4
      0.5nm,0.3s,baz=224,slow=3.1,SNR=6.7
JNU   Nakatsue            11.93  40       Pn     04 51 20.9  +0.2
QIZ   Qiongzhong          12.21 247 P     Pn     04 51 23.2  -1.3
QIZ                                 S     Sn     04 53 38.5  -1.0
QIZ                                 LR    LR
      comp=N,2µm,17.4s
QIZ                                 LR    LR
      comp=E,950nm,17.0s
QIZ                                 LR    LR
      comp=Z,1µm,17.1s
GYA   Guiyang             13.80 282 ⇓P    Pn     04 51 39.6  -6.6
GYA                                 pP    P      04 51 43.5   -11
GYA                                 S     Sn     04 54 11.0  -7.3
GYA                                 pmax  pmax
      comp=Z,57nm,1.0s
GYA                                 pmax  pmax
      comp=Z,230nm,4.7s
GYA                                 LR    LR
      comp=Z,5µm,13.2s
INCN  Inchon              13.84  17 P     Pn     04 51 48.5  +1.9
INCN  Inchon              13.84  17       Pn     04 51 48.5  +1.9
KSRS  Korea Array         14.18  21 P     Pn     04 51 54.3  +3.0
      comp=Z,0.6nm,0.3s,baz=202,slow=13,SNR=76
KSRS                                LR    LR     04 57 37.5
      comp=Z,525nm,20.0s,baz=208,slow=39
KS19  Wonju Array Si      14.21  20 Pn    Pn     04 51 51.7   0.0
MSLP  Maasin              14.36 167 eP    P      04 52 00.9  +0.6
JHS   Saijyo              14.57  40 Pn    Pn     04 51 56.7  +0.1
DL2   Dalian              14.61 360 P     P      04 52 06.6  +3.6
DL2                                 eS    S      04 54 53.2  -2.8
DL2                                 pmax  pmax
      comp=Z,92nm,0.9s
DL2                                 LR    LR
      comp=N,910nm,17.8s
DL2                                 LR    LR
      comp=E,3µm,19.0s
DL2                                 LR    LR
      comp=Z,3µm,14.2s
XAN   Xi'an               14.83 314 P     Pn     04 51 59.0  -1.1
XAN                                 pP    P      04 52 05.1  -0.4
XAN                                 PP    PnPn   04 52 10.8  +2.5
XAN                                 S     Sn     04 54 37.7  -5.5
XAN                                 pmax  pmax
      comp=Z,26nm,1.2s
XAN                                 LR    LR
      comp=Z,4µm,4.1s
XAN                                 LR    LR
      comp=Z,4µm,5.5s
XAN                                 LR    LR
      comp=Z,6µm,14.7s
XAN   Xi'an               14.83 314 P     Pn     04 51 59.3  -0.8
XAN   Xi'an               14.83 314 Pn    Pn     04 51 59.3  -0.8
TIY   Taiyuan             15.59 332 eP    P      04 52 14.9  +0.9
TIY                                 sP    pP     04 52 23.7  +0.3
TIY                                 PP    sP     04 52 29.1  +1.4
TIY                                 S     Sn     04 55 01.8  +0.1
TIY                                 pmax  pmax
      comp=Z,37nm,0.6s
TIY                                 pmax  pmax
      comp=Z,520nm,3.5s
TIY                                 LR    LR
      comp=Z,2µm,9.0s
TIY                                 LR    LR
      comp=Z,950nm,6.0s
TIY                                 LR    LR
      comp=Z,3µm,15.1s
PAGZ  Pagadian            16.39 174 eP    P      04 52 23.9  +0.9
BJT   Baijiatuau          16.40 345 P     Pn     04 52 19.8  -0.6
BJT                                 pmax  pmax
      comp=Z,24nm,1.0s
BJT   Baijiatuau          16.40 345 Pn    Pn     04 52 19.8  -0.6
BJI   Beijing             16.42 345 P     P      04 52 24.7  +1.6
BJI                                 S     Sn     04 55 20.1  -1.6
BJI                                 pmax  pmax
      comp=Z,18nm,1.2s
BJI                                 pmax  pmax
      comp=Z,490nm,6.0s
BJI                                 LR    LR
      comp=Z,2µm,14.8s
BJI                                 LR    LR
      comp=Z,2µm,18.8s
BJI                                 LR    LR
      comp=Z,950nm,22.8s
BUKP  Musuan              16.60 168 eP    P      04 52 27.1  +1.9
SLVN  Son La              16.69 264       Pn     04 52 23.4  -0.9
SLVN                                      PcP    04 57 13.3  +0.7
CD2   Chengdu             17.25 297 P     Pn     04 52 31.7  +0.5
CD2                                 S     Sn     04 55 42.4  +0.4
CD2                                 pmax  pmax
      comp=Z,40nm,0.6s
CD2                                 LR    LR
      comp=Z,3µm,7.1s
CD2                                 LR    LR
      comp=Z,5µm,12.2s
CD2                                 LR    LR
      comp=Z,6µm,12.9s
KMI   Kunming             17.28 277⇑eP    P      04 52 34.5  +1.5
KMI                                 pP    pP     04 52 43.1  +0.3
KMI                                 PP    sP     04 52 48.0  +2.0
KMI                                 S     Sn     04 55 44.8  +1.6
KMI                                 pmax  pmax
      comp=Z,24nm,1.5s
KMI                                 pmax  pmax
      comp=Z,270nm,3.7s
KMI                                 LR    LR
      comp=Z,4µm,6.7s
KMI                                 LR    LR
      comp=Z,5µm,12.4s
KMI                                 LR    LR
      comp=Z,6µm,11.7s
KCP   Kidapawan           17.45 169⇓eP    P      04 52 37.4  +2.6
DAV   Davao City (W)      17.48 167 LR    LR     04 58 59.6
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      comp=Z,772nm,21.1s,baz=330,slow=36
SKMP  Bagumbayan, Su      17.84 171 eP    P      04 52 50.4   +11
JHJ   Hachijo jima 2      18.11  57 LR    LR     04 59 20.2
      comp=Z,1µm,21.1s,baz=82,slow=36
NONG  Nongkai             18.39 254 P     Pn     04 52 49.4  +4.1
      comp=Z,51nm,0.9s
HHC   Hu-ho-hao-te        18.61 335 eP    Pn     04 52 51.1  +3.2
HHC                                 pP    pP     04 52 57.5  +0.6
HHC                                 S     S      04 56 18.1  +0.4
HHC                                 SS    SnSn   04 56 36.0  +6.9
HHC                                 pmax  pmax
      comp=Z,21nm,1.2s
HHC                                 pmax  pmax
      comp=Z,1µm,6.0s
HHC                                 LR    LR
      comp=Z,2µm,11.9s
HHC                                 LR    LR
      comp=Z,1µm,13.6s
HHC                                 LR    LR
      comp=Z,2µm,12.8s
JCJ   Chichijima          18.65  77 LR    LR     04 59 42.3
      comp=Z,1µm,19.4s,baz=284,slow=36
MJAR  Matsushiro Arr      18.73  45 P     P      04 52 49.0  +0.4
      comp=Z,0.1nm,0.3s,baz=308,slow=43,SNR=1.8
MJAR                                LR    LR     05 00 58.8
      comp=Z,988nm,21.0s,baz=215,slow=40
KKM   Kota Kinabalu       18.87 197 P     P      04 52 50.0  -0.4
BTO   Baotou              19.03 332 eP    Pn     04 52 56.7  +3.7
MYLDM Lahad Datu          19.22 190       P      04 52 54.0  -0.2
MYLDM                               IAmb  IAmb   04 53 10.4
      comp=Z,103nm,1.1s
LZH   Lanzhou             19.41 312 eP    Pn     04 52 58.9  +1.3
LZH                                 pP    pP     04 53 02.2  -3.8
LZH                                 sP    sP     04 53 03.7  -5.5
LZH                                 SS    Sn     04 57 02.0   +28
LZH                                 pmax  pmax
      comp=Z,430nm,1.0s
LZH                                 pmax  pmax
      comp=Z,1µm,4.9s
LZH                                 LR    LR
      comp=Z,2µm,7.6s
LZH                                 LR    LR
      comp=Z,4µm,10.0s
LZH                                 LR    LR
      comp=Z,4µm,13.8s
CN2   Changchun           19.73   8 eP    P      04 53 00.6  +1.0
CN2                                 eS    S      04 56 32.5  -7.6
CN2                                 pmax  pmax
      comp=Z,20nm,1.2s
CN2                                 pmax  pmax
      comp=Z,440nm,4.3s
CN2                                 LR    LR
      comp=Z,2µm,15.0s
CN2                                 LR    LR
      comp=Z,680nm,15.0s
CN2                                 LR    LR
      comp=Z,2µm,15.0s
SPMM  Sapulut             20.09 195 P     Pn     04 53 09.0  +3.4
CHAI  Chaiyaphum          20.30 250 P     P      04 53 08.0  +2.0
      comp=Z,603nmcomp=Z,47nm,0.9s
UTTA  Uttaradit           20.79 256 P     Pn     04 53 14.0  +0.1
      comp=Z,18nm,1.0s
PAYA  Payao               20.86 261 P     Pn     04 53 15.0  +0.3
      comp=Z,3µmcomp=Z,306nm,1.4s
PHIT  Phitsanulok         21.12 255 P     P      04 53 17.0  +2.2
      comp=Z,177nm,0.9s
SRAK  Srakaew             21.18 245 P     P      04 53 13.0  -2.5
      comp=Z,3µmcomp=Z,391nm,1.1s
MDJ   Mudanjiang          21.30  16 P     P      04 53 17.5  +1.0
MDJ                                 pP    pP     04 53 25.2  -0.6
MDJ                                 sP    sP     04 53 28.9  -1.2
MDJ                                 S     S      04 57 13.2  +2.0
MDJ                                 pmax  pmax
      comp=Z,67nm,0.9s
MDJ                                 pmax  pmax
      comp=Z,900nm,5.4s
MDJ                                 LR    LR
      comp=Z,1µm,18.5s
MDJ                                 LR    LR
      comp=Z,3µm,19.2s
MDJ                                 LR    LR
      comp=Z,2µm,15.7s
MDJ   Mudanjiang          21.30  16 P     P      04 53 16.4  -0.1
MDJ                                 IAmb  IAmb   04 53 20.1
      comp=Z,44nm,0.8s
LAMP  Lampang             21.34 259 P     P      04 53 19.9  +2.7
      comp=Z,562nmcomp=Z,58nm,1.0s
USA0B Ussuriysk Arra      21.59  20 P     P      04 53 19.9  +0.2
USA0B                               pmax  pmax
      comp=Z,18nm,0.9s
USA0B Ussuriysk Arra      21.59  20 P     P      04 53 19.9  +0.2
USRK  Ussuriysk Ar.       21.59  20 P     P      04 53 20.6  +1.0
      comp=Z,18nm,0.8s,baz=208,slow=10,SNR=23
CM34  Chiang Mai Arr      21.67 260 P     P      04 53 23.0  +2.3
SUKH  Sukhothai           21.71 256 P     P      04 53 23.6  +2.5
      comp=Z,43nm,1.2s
CM35  Chiang Mai Arr      21.72 260 P     P      04 53 23.0  +1.7
CM36  Chiang Mai Arr      21.82 259 P     P      04 53 24.0  +1.6
CM33  Chiang Mai Arr      21.86 260 P     P      04 53 24.0  +1.2
CMMT  Chiang Mai          21.86 260 P     P      04 53 25.0  +2.2
      comp=Z,15nm,1.5s
CHTO  Chiang Mai          21.86 260 P     P      04 53 22.1  -0.7
CHTO                                pmax  pmax
      comp=Z,31nm,1.1s
CHTO  Chiang Mai          21.86 260 P     P      04 53 22.1  -0.7
CM09  Chiang Mai Arr      21.94 259 P     P      04 53 26.2  +2.5
      comp=Z,15nm,1.1s
CM04  Chiang Mai Arr      21.97 259 P     P      04 53 26.3  +2.4
      comp=Z,208nmcomp=Z,24nm,1.1s
CM01  Chiang Mai Arr      21.98 259 P     P      04 53 26.0  +2.0
      comp=Z,482nmcomp=Z,25nm,1.1s
CM31  Chiang Mai Arr      21.98 259 P     P      04 53 27.9  +3.9
      comp=Z,414nm,0.6s
CMAR  Chiang Mai Arr      21.98 259 P     P      04 53 25.9  +1.8
      comp=Z,4.7nm,0.5s,baz=60,slow=8.4,SNR=43
CMAR                                LR    LR     05 02 30.0
      comp=Z,1µm,20.0s,baz=106,slow=38
CMAR  Chiang Mai Arr      21.98 259ceP    P      04 53 26.1  +2.0
CMAR                                pmax  pmax
      comp=Z,13nm,1.0s
CM02  Chiang Mai Arr      21.98 259 P     P      04 53 26.8  +2.6
      comp=Z,154nmcomp=Z,24nm,1.0s
CM05  Chiang Mai Arr      22.00 259 P     P      04 53 26.6  +2.4
      comp=Z,127nmcomp=Z,14nm,1.1s
CM15  Chiang Mai Arr      22.00 259 P     P      04 53 27.1  +2.8
      comp=Z,768nmcomp=Z,30nm,0.5s
CM32  Chiang Mai Arr      22.00 260 P     P      04 53 26.0  +1.7
CM13  Chiang Mai Arr      22.02 259 P     P      04 53 26.9  +2.4
      comp=Z,124nmcomp=Z,15nm,0.9s
UTHA  Uthaitani           22.64 252 P     P      04 53 34.0  +2.8
      comp=Z,354nmcomp=Z,35nm,1.0s
MHMT  Maesarieng          22.98 259 P     P      04 53 37.1  +2.4
      comp=Z,1µmcomp=Z,31nm,2.3s
TOLI2 Tolitoli            23.03 182 P     P      04 53 34.9  -0.3
TOLI2                               IAmb  IAmb   04 53 39.6
      comp=Z,47nm,1.0s
GTOI  Gorontalo           23.52 177 P     P      04 53 37.4  -2.5
      comp=Z,30nm,1.2s
SBUM  Sibu                23.55 204 P     P      04 53 40.0  -0.2
SBUM                                IAmb  IAmb   04 53 44.5
      comp=Z,55nm,0.9s
SBUM  Sibu                23.55 204 P     P      04 53 40.0  -0.2
MRSI  Marisa              23.64 179 P     P      04 53 43.2  +2.1
      comp=Z,1µmcomp=Z,59nm,1.2s
PHET  Kaeng Krachan       23.75 246 P     P      04 53 47.0  +4.7
      comp=Z,14nm,0.8s
MPSI  Mapaga              23.84 185 P     P      04 53 42.7  -0.4
      comp=Z,52nm,1.1s
GTA   Gaotai              23.89 314 ⇑P    P      04 53 43.9  +0.4
GTA                                 pP    pP     04 53 52.8  -0.8
GTA                                 sP    sP     04 53 57.3  -0.3
GTA                                 S     S      04 57 52.5  -5.1
GTA                                 sS    pS     04 58 08.5  +0.4
GTA                                 SS    SnSn   04 58 48.3   +10
GTA                                 pmax  pmax
      comp=Z,33nm,1.2s
GTA                                 pmax  pmax
      comp=Z,550nm,10.4s
GTA                                 LR    LR
      comp=Z,720nm,13.5s
GTA                                 LR    LR
      comp=Z,2µm,15.1s
GTA                                 LR    LR
      comp=Z,2µm,13.9s
GUMO  Guam                24.29 112 P     P      04 53 45.5  -1.7
      comp=Z,110nm,0.7s,baz=197,slow=11,SNR=4.8
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GUMO                                LR      LR      05 03 08.0
         comp=Z,556nm,18.9s,baz=294,slow=36
HIA    Hailar             25.01 357  P       P       04 53 53.4  -0.1
HIA                                 pmax    pmax
         comp=Z,24nm,0.9s
HIA    Hailar             25.01 357  P       P       04 53 53.4  -0.1
APSI   Ampana             25.02 180  P       P       04 53 53.2  -0.6
         comp=Z,54nm,1.0s
KSM    Kuching            25.20 208  P       P       04 53 55.1  -0.4
KSM                                 IAmb    IAmb    04 53 57.7
         comp=Z,39nm,1.0s
KSM    Kuching            25.20 208  P       P       04 53 56.0  +0.5
BKB    Balikpapan         25.80 191  P       P       04 54 03.8  +2.9
KLR    Kul'dur            26.14  15  P       P       04 54 03.6  -0.1
         comp=Z,62nm,1.0s,baz=230,slow=7.8,SNR=56
KLR                                 PcP     PcP     04 57 28.4  -2.0
         comp=Z,1.4nm,0.6s,baz=217,slow=2.8,SNR=4.2
KLR    Kul'dur            26.14  15 i P      P       04 54 03.6  -0.1
KLR                                 pmax    pmax
         comp=Z,42nm,0.8s
ASAJ   Asahikawa          26.14  36  P       P       04 54 02.8  -1.1
         comp=Z,8.8nm,0.5s,baz=260,slow=6.1,SNR=2.3
ASAJ                                LR      LR      05 05 29.5
         comp=Z,422nm,20.6s,baz=179,slow=39
ULN    Ulaanbaatar        26.29 337  P       P       04 54 04.8  -0.5
ULN                                 pmax    pmax
         comp=Z,32nm,1.0s
ULN    Ulaanbaatar        26.29 337  P       P       04 54 04.8  -0.5
ULN                                 IAmb    IAmb    04 54 18.8
         comp=Z,32nm,0.9s
SONM   Songino Array      26.50 336  P       P       04 54 07.3  +0.2
         comp=Z,14nm,0.8s,baz=153,slow=9.5,SNR=52
SONM                                ScP     ScP     05 01 09.3  +0.5
         comp=Z,2.4nm,1.0s,baz=146,slow=4.5,SNR=7.4
SONM                                LR      LR      05 05 48.2
         comp=Z,2µm,18.6s,baz=155,slow=39
SURT   Suratani           26.66 239  P       P       04 54 14.7  +5.9
KULM   Kulim              27.69 230  P       P       04 54 21.0  +3.0
LSA    Lhasa              27.74 288  P       P       04 54 20.9  +2.0
LSA                                 pmax    pmax
         comp=Z,67nm,0.8s
LSA                                 LR      LR
         comp=Z,3µm,18.5s
LSA                                 LR      LR
         comp=Z,7µm,14.9s
LSA                                 LR      LR
         comp=Z,10µm,16.4s
LSA    Lhasa              27.74 288  P       P       04 54 17.9  -1.0
LSA                                 pmax    pmax
         comp=Z,22nm,0.9s
LSA    Lhasa              27.74 288  P       P       04 54 17.9  -1.0
NLAI   Namlea             27.83 168  P       P       04 54 19.4  +0.3
         comp=Z,3µmcomp=Z,71nm,1.0s
YUK    Yuzh-Kuril'sk      27.90  39 eP       P       04 54 18.3  -1.3
YUK                                ePPP     PPP     04 55 11.9
YUK                                eS       S       04 59 02.5  +1.7
YUK                                eSS      SnSn    05 00 18.7  +2.5
YUK                                 pmax    pmax
         comp=Z,89nm,1.0s
YUK                                 pmax    pmax
         comp=N,69nm,0.9s
YUK                                 pmax    pmax
         comp=E,91nm,1.0s
YUK                                 pmax    pmax
         comp=Z,754nm,1.6s
YUK                                 MLR     MLR
         comp=Z,345nm,16.0s
YUK                                 MLR     MLR
         comp=N,270nm,13.0s
IPM    Ipoh               28.00 229  P       P       04 54 20.3  -0.6
IPM    Ipoh               28.00 229  P       P       04 54 22.0  +1.2
YSS    Yuzh-Sakhalins     28.21  31 eP       P       04 54 24.7  +2.4
YSS                                 MLR     MLR
         comp=Z,2µm,17.0s
BBKI   Banjar Baru        28.36 195  P       P       04 54 25.7  +1.8
         comp=Z,5µmcomp=Z,37nm,0.8s
GRNR   Gornyy             28.81  20⇑iP       P       04 54 25.7  -1.9
GRNR                                pmax    pmax
         comp=N,8.0nm,1.1s
GRNR                                pmax    pmax
         comp=Z,4.0nm,1.2s
GRNR                                MLR     MLR
         comp=E,930nm,27.0s
GRNR                                MLR     MLR
         comp=N,460nm,25.0s
GRNR                                MLR     MLR
         comp=Z,510nm,20.0s
ZEA    Zeya               29.73   7 eP       P       04 54 36.0  +0.2
ZEA                                 pmax    pmax
         comp=Z,50nm,1.0s
ZEA                                 MLR     MLR
         comp=N,600nm,15.0s
ZEA                                 MLR     MLR
         comp=Z,500nm,12.0s
ZAK    Zakamensk          29.75 336 eP       P       04 54 35.4  -0.7
ZAK                                e                05 01 19.4
ZAK                                 pmax    pmax
         comp=Z,8.0nm,1.1s
ZAK                                 pmax    pmax
         comp=Z,4.0nm,1.3s
PSI    Prapat             30.66 229  P       P       04 54 45.4  +0.9
         comp=Z,15nm,1.1s,baz=180,slow=10,SNR=8.3
TLY    Talaya             30.69 338 eP       P       04 54 45.2  +0.9
TLY                                 pmax    pmax
         comp=Z,63nm,1.9s
TLY                                 MLR     MLR
         comp=Z,4µm,17.0s
TLY    Talaya             30.69 338  P       P       04 54 44.1  -0.2
TAPN   Taplejung          30.73 283 eP       P       04 54 46.1  +0.8
         comp=Z,73nm,1.0s
ODAN   Odare              31.03 282 eP       P       04 54 49.0  +1.1
         comp=Z,80nm,0.9s
MOY    Mondy              31.65 335 eP       P       04 54 53.6  +0.7
MOY                                 pmax    pmax
         comp=Z,28nm,3.3s
RAMN   Ramite             31.73 282 eP       P       04 54 55.5  +1.4
         comp=Z,69nm,1.0s
GUN    Gumba              32.33 284 eP       P       04 55 00.4  +1.0
         comp=Z,75nm,0.9s
JAY    Jayapura           32.38 143  LR      LR      05 05 43.3
         comp=Z,685nm,21.5s,baz=1.0,slow=32
PKI    Pulchoki           32.76 284 eP       P       04 55 03.7  +0.5
         comp=Z,31nm,1.0s
PKIN   Phulchoki          32.77 284 eP       P       04 55 03.5  +0.3
         comp=Z,20nm,0.7s
EDFI   Ende, Flores       32.81 180  P       P       04 55 01.9  -1.4
         comp=Z,43nm,1.0s
KKN    Kakani             32.87 284 eP       P       04 55 04.6  +0.6
         comp=Z,46nm,0.8s
NGJI   Ngawi              32.99 199  P       P       04 55 08.5  +3.7
DMN    Daman              33.03 284 eP       P       04 55 06.1  +0.7
         comp=Z,31nm,0.8s
KLSI                      33.20 212  P       P       04 55 10.1  +3.5
GKN    Gorkha             33.43 285 eP       P       04 55 09.0  +0.2
         comp=Z,85nm,1.0s
PWJI   Pagerwojo          33.51 198  P       P       04 55 10.0  +0.7
         comp=Z,51nm,1.1s
WOJI   Wonogiri, Jawa     33.60 200  P       P       04 55 12.4  +2.3
         comp=Z,51nm,1.4s
WMQ    Urumqi             33.97 314 eP       P       04 55 15.1  +1.9
WMQ                                 sP      sP      04 55 30.2  +2.8
WMQ                                 pmax    pmax
         comp=Z,35nm,1.1s
WMQ                                 pmax    pmax
         comp=Z,70nm,3.7s
WMQ                                 LR      LR
         comp=Z,1µm,14.7s
WMQ                                 LR      LR
         comp=Z,2µm,13.7s
WMQ                                 LR      LR
         comp=Z,1µm,18.5s
BOD    Bodaibo            33.99 353 eP       P       04 55 11.8  -1.3
BOD                                 pmax    pmax
         comp=Z,7.0nm,1.6s
DANN   Dangsing           34.19 285 eP       P       04 55 16.4  +0.8
         comp=Z,66nm,0.9s
KOLN   Koldanda           34.35 284 eP       P       04 55 17.7  +0.8
         comp=Z,45nm,0.9s
PYUN   Piuthan            34.88 285 eP       P       04 55 22.4  +1.0
         comp=Z,66nm,0.8s
DGZ    Jazzator, Alta     36.84 322 i P      P       04 55 38.0  +0.1
DGZ                                 pmax    pmax
         comp=Z,14nm,1.6s
ZSN    Zaisan             37.28 318 eP       P       04 55 40.2  -1.4
         baz=317
ZSN    Zaisan             37.28 318 eP       P       04 55 40.1  -1.4
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YAK    Yakutsk            38.14   6  P       P       04 55 47.2  -1.3
         comp=Z,13nm,0.7s,baz=5.2,slow=12,SNR=11
YAK    Yakutsk            38.14   6 eP       P       04 55 46.7  -1.8
YAK                                e*PP     pP      04 55 58.5  -0.4
YAK                                e                04 58 01.5
YAK                                eS       S       05 01 37.9  -1.2
YAK                                e*SS     sS      05 01 55.7  -0.2
YAK                                eSS      SnSn    05 04 09.9   -14
YAK                                eSSS     SSS     05 04 44.2
YAK                                e                05 06 01.1
YAK                                 pmax    pmax
         comp=Z,16nm,0.8s
YAK                                 pmax    pmax
         comp=N,6.0nm,0.9s
YAK                                 pmax    pmax
         comp=E,6.0nm,1.4s
YAK                                 pmax    pmax
         comp=Z,239nm,4.2s
YAK                                 pmax    pmax
         comp=N,75nm,4.0s
YAK                                 pmax    pmax
         comp=E,205nm,4.3s
YAK                                 smax    smax
         comp=N,265nm,4.8s
YAK                                 smax    smax
         comp=E,80nm,4.8s
YAK    Yakutsk            38.14   6  P       P       04 55 47.6  -0.9
YAK                                 IAmb    IAmb    04 55 50.9
         comp=Z,48nm,1.0s
MK31   Makanchi Array     38.63 316ceP       P       04 55 53.3  +0.4
MK31                                pmax    pmax
         comp=Z,21nm,0.8s
MK31   Makanchi Array     38.63 316  P       P       04 55 53.2  +0.2
MKAR   Makanchi Array     38.63 316  P       P       04 55 53.5  +0.5
         comp=Z,22nm,0.8s,baz=109,slow=9.7,SNR=193
MKAR                                PcP     PcP     04 58 04.6  -0.1
         comp=Z,3.0nm,0.8s,baz=77,slow=3.4,SNR=4.5
MKAR                                ScP     ScP     05 01 50.1  -0.1
         comp=Z,0.4nm,0.6s,baz=104,slow=4.6,SNR=3.8
MKAR                                LR      LR      05 13 12.5
         comp=Z,1µm,18.5s,baz=89,slow=38
MAKZ   Makanchi           38.84 316  P       P       04 55 55.5  +0.9
MAKZ                                pmax    pmax
         comp=Z,26nm,0.9s
MAKZ   Makanchi           38.84 316  P       P       04 55 55.5  +0.9
MAKZ                                IAmb    IAmb    04 55 56.4
         comp=Z,26nm,0.8s
SHLS   Shalkode           39.40 309 eP       P       04 55 57.6  -2.0
         comp=Z,10nm,0.9s,baz=309
SHLS   Shalkode           39.40 309 eP       P       04 55 57.5  -2.0
SHLS                                pmax    pmax
         comp=Z,10.0nm,0.9s
PETK   Petropavlovsk-     39.53  34  LR      LR      05 14 05.1
         comp=Z,154nm,19.0s,baz=244,slow=39
PET    Petropavlovsk      39.97  34 eP       P       04 56 03.1  -0.8
PET                                eS       S       05 02 04.8  -2.1
PET                                                 05 05 37.6
PET                                 pmax    pmax
         comp=Z,16nm,0.8s
PET                                 MLR     MLR
         comp=Z,800nm,15.0s
KPKS   Kokpek             40.03 309 eP       P       04 56 05.1  +0.3
         comp=Z,11nm,1.1s,baz=309
KPKS   Kokpek             40.03 309 eP       P       04 56 05.0  +0.3
KPKS                                pmax    pmax
         comp=Z,11nm,1.1s
ZAA0   Zalesovo Array     40.45 327  P       P       04 56 07.6  -0.4
ZALV   Zalesovo Beam      40.45 327  P       P       04 56 07.5  -0.4
         comp=Z,20nm,0.8s,baz=111,slow=7.9,SNR=31
ZALV                                ScP     ScP     05 01 55.3  -1.8
         comp=Z,1.0nm,0.8s,baz=108,slow=4.8,SNR=4.0
ZALV                                LR      LR      05 14 03.2
         comp=Z,1µm,18.7s,baz=118,slow=38
TDK    Taldyqorghan       40.62 312 eP       P       04 56 10.6  +1.1
         comp=Z,29nm,0.9s,baz=311
TDK                                 LR      LR      05 13 22.6
         comp=Z,297nm,12.5s,baz=311
TDK    Taldyqorghan       40.62 312 eP       P       04 56 10.6  +1.1
TDK                                 pmax    pmax
         comp=Z,29nm,0.9s
TDK                                 MLR     MLR
         comp=Z,297nm,12.0s
HYB    Hyderabad          40.80 269 i P      P       04 56 12.0  +0.7
MDOK   Medeo              41.12 309 eP       P       04 56 14.8  +1.0
         baz=308
MDOK                               eS       S       05 02 27.0  +2.3
         baz=308
MDOK                                LR      LR      05 13 37.5
         comp=Z,424nm,12.4s,baz=308
MDOK   Medeo              41.12 309 eP       P       04 56 14.8  +1.0
MDOK                               eS       S       05 02 27.0  +2.3
MDOK                                MLR     MLR
         comp=Z,424nm,12.0s
TNSS   Tian-Shan          41.16 308 eP       P       04 56 15.6  +1.1
         baz=308
TNSS   Tian-Shan          41.16 308 eP       P       04 56 15.6  +1.1
AAA    Alma-Ata           41.23 309 eP       P       04 56 15.5  +0.9
         comp=Z,7.5nm,0.7s,baz=308
AAA                                 LR      LR      05 13 53.2
         comp=Z,428nm,14.8s,baz=308
AAA    Alma-Ata           41.23 309 eP       P       04 56 15.5  +0.9
AAA                                 pmax    pmax
         comp=Z,8.0nm,0.7s
AAA                                 MLR     MLR
         comp=Z,428nm,15.0s
KSH    Kashi              41.28 303  P       P       04 56 19.3  +4.2
KSH                                 S       S       05 02 25.4  -1.6
KSH                                 pmax    pmax
         comp=Z,50nm,1.2s
KSH                                 pmax    pmax
         comp=Z,280nm,5.8s
KSH                                 LR      LR
         comp=Z,1µm,11.4s
KSH                                 LR      LR
         comp=Z,960nm,7.8s
KSH                                 LR      LR
         comp=Z,3µm,13.1s
SEM    Semipalatinsk      41.28 320 eP       P       04 56 14.4  -0.8
         baz=320
SEM    Semipalatinsk      41.28 320 eP       P       04 56 14.3  -0.8
CHKK   Chushkaly          41.32 310 eP       P       04 56 15.4  +0.1
         baz=309
CHKK   Chushkaly          41.32 310 eP       P       04 56 15.3  +0.1
PMG    Port Moresby       41.67 140  P       P       04 56 19.1  +0.8
         comp=Z,51nm,0.9s,baz=328,slow=8.0,SNR=4.8
PMG    Port Moresby       41.67 140  P       P       04 56 18.5  +0.2
PMG                                 pmax    pmax
         comp=Z,73nm,1.1s
PMG    Port Moresby       41.67 140  P       P       04 56 18.5  +0.2
PMG                                 IAmb    IAmb    04 56 20.8
         comp=Z,73nm,1.1s
PMG    Port Moresby       41.67 140  P       P       04 56 20.2  +1.9
KUU    Kurty              41.78 309 eP       P       04 56 19.8  +0.7
         comp=Z,22nm,1.1s,baz=309
KUU    Kurty              41.78 309 eP       P       04 56 19.7  +0.7
KUU                                 pmax    pmax
         comp=Z,22nm,1.1s
TKM2   Tokmak 2           42.11 308  P       P       04 56 23.5  +1.5
         SNR=7.3
KURK   Kurchatov          42.36 320c iP      P       04 56 23.3  -0.3
KURK                                pmax    pmax
         comp=Z,5.0nm,1.2s
KURK   Kurchatov          42.36 320  P       P       04 56 23.4  -0.3
KURBB  Kurchatov Arra     42.37 320  P       P       04 56 24.1  +0.4
         comp=Z,3.3nm,0.6s,baz=118,slow=7.1,SNR=27
KBK    Karagaybulak       42.53 307  P       P       04 56 27.0  +1.6
         SNR=9.8
CHMS   Chumysh            42.74 308  P       P       04 56 28.2  +1.3
         SNR=7.5
UCH    Uchtor             42.77 307  P       P       04 56 29.8  +2.0
         SNR=17
AAK    Ala-Archa          42.86 307  P       P       04 56 29.1  +1.1
         comp=Z,4.5nm,0.8s,baz=122,slow=7.9,SNR=16
AAK                                 LR      LR      05 17 09.4
         comp=Z,920nm,18.7s,baz=86,slow=40
AAK    Ala-Archa          42.86 307  P       P       04 56 29.8  +1.8
         SNR=5.4
AAK    Ala-Archa          42.86 307ceP       P       04 56 29.4  +1.4
AAK                                 pmax    pmax
         comp=Z,5.0nm,0.7s
AAK    Ala-Archa          42.86 307  P       P       04 56 27.4  -0.6
SGDS   Sogindy            42.91 308 eP       P       04 56 28.4  +0.1
         comp=Z,13nm,1.3s,baz=308
SGDS   Sogindy            42.91 308 eP       P       04 56 28.4  +0.1
SGDS                                pmax    pmax
         comp=Z,13nm,1.3s
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USP    Ospenovka          42.97 308  P       P       04 56 29.9  +1.1
         SNR=8.6
AML    Almayashu          43.36 306  P       P       04 56 34.0  +1.6
         SNR=16
EKS2   Erkin-Say          43.38 307  P       P       04 56 33.3  +1.1
         SNR=11
BTLS   Baital             43.63 311 eP       P       04 56 34.2  +0.1
         comp=Z,8.1nm,0.9s,baz=310
BTLS   Baital             43.63 311 eP       P       04 56 34.1  +0.1
BTLS                                pmax    pmax
         comp=Z,8.0nm,0.9s
SEY    Seymchan           43.74  20  LR      LR      05 15 35.4
         comp=Z,308nm,21.5s,baz=207,slow=37
SEY    Seymchan           43.74  20⇑iP       P       04 56 34.4  -0.2
ARSB   Arslanbob          43.78 305  P       P       04 56 34.8  -0.6
ARSB   Arslanbob          43.78 305  P       P       04 56 34.8  -0.6
POO    Poona              44.78 272 eP       P       04 56 44.0  +0.4
DZA    Taraz              45.20 307 eP       P       04 56 47.0  +0.4
         baz=307
DZA    Taraz              45.20 307 eP       P       04 56 47.0  +0.4
PSA00  Pilbara Seismi     45.59 182  P       P       04 56 48.5  -1.3
PSA00                               IAmb    IAmb    04 56 49.6
         comp=Z,40nm,0.9s
WRA    Warramunga Arr     45.62 163  P       P       04 56 49.0  -1.1
         comp=Z,6.5nm,0.6s,baz=344,slow=8.5,SNR=6.0
WRA                                 ScP     ScP     05 02 14.6  -3.7
         comp=Z,1.7nm,1.0s,baz=343,slow=5.3,SNR=3.3
WRA    Warramunga Arr     45.62 163ceP       P       04 56 51.2  +1.1
WRA                                 pmax    pmax
         comp=Z,7.0nm,0.6s
BRZS   Berezniki          45.72 317 eP       P       04 56 50.7   0.0
         comp=Z,9.4nm,1.0s,baz=317
BRZS   Berezniki          45.72 317 eP       P       04 56 50.6   0.0
BRZS                                pmax    pmax
         comp=Z,9.0nm,1.0s
KK31   Karatay Array      45.82 307  P       P       04 56 51.2  -0.4
KK31                                pmax    pmax
         comp=Z,10.0nm,0.8s
KK31   Karatay Array      45.82 307  P       P       04 56 51.2  -0.4
KKAR   Karatay Array      45.82 307  P       P       04 56 51.1  -0.5
KKAR                                pmax    pmax
         comp=Z,10.0nm,0.8s
KKAR   Karatay Array      45.82 307  P       P       04 56 51.1  -0.5
IUG    Iuzhnay            46.06 306 eP       P       04 56 54.2  +0.6
         comp=Z,11nm,0.5s,baz=306
IUG    Iuzhnay            46.06 306 eP       P       04 56 54.2  +0.6
IUG                                 pmax    pmax
         comp=Z,11nm,0.5s
KBL    Kabul              46.58 295  P       P       04 56 56.9  -1.0
KBL                                 pmax    pmax
         comp=Z,17nm,0.9s
KBL    Kabul              46.58 295  P       P       04 56 56.9  -1.0
KBL                                 IAmb    IAmb    04 57 01.1
         comp=Z,17nm,0.9s
GIRL   Giralia            47.19 189  P       P       04 57 02.0  -0.3
TIXI   Tiksi              47.59   3 i P      P       04 57 02.4  -2.5
BRVK   Borovoye           48.00 321ceP       P       04 57 08.4   0.0
BRVK                                pmax    pmax
         comp=Z,10.0nm,0.7s
BRVK   Borovoye           48.00 321  P       P       04 57 08.2  -0.2
BRVK                                IAmb    IAmb    04 57 12.2
         comp=Z,13nm,0.8s
ASAR   Alice Springs      49.08 165  P       P       04 57 16.2  -0.8
         comp=Z,4.9nm,0.9s,baz=340,slow=6.5,SNR=12
ASAR                                ScP     ScP     05 02 30.6  -2.3
         comp=Z,2.6nm,0.9s,baz=347,slow=2.4,SNR=9.2
NRIK   Noril'sk           49.46 345  P       P       04 57 18.0  -1.4
         comp=Z,8.1nm,0.7s,baz=127,slow=8.3,SNR=15
NRIK                                LR      LR      05 19 55.1
         comp=Z,626nm,21.0s,baz=142,slow=38
NRIK   Noril'sk           49.46 345  P       P       04 57 19.5  +0.1
NRIK                                pmax    pmax
         comp=Z,11nm,0.9s
NRIK   Noril'sk           49.46 345  P       P       04 57 19.5  +0.1
NRIK                                IAmb    IAmb    04 57 20.1
         comp=Z,11nm,0.8s
CTA    Charters Tower     50.13 149  P       P       04 57 25.6  +0.6
         comp=Z,17nm,0.9s,baz=335,slow=9.6,SNR=6.0
CTAO   Charters Tower     50.13 149  P       P       04 57 25.1   0.0
CTAO                                pmax    pmax
         comp=Z,30nm,1.1s
CTAO   Charters Tower     50.13 149  P       P       04 57 25.1   0.0
CTAO                                IAmb    IAmb    04 57 27.7
         comp=Z,30nm,1.1s
HRA    Herat              52.20 296  P       P       04 57 40.0  -0.8
ABKAR  Akbulak array      53.75 314  P       P       04 57 51.5  -0.2
ABKAR                               IAmb    IAmb    04 57 53.4
         comp=Z,23nm,0.9s
SVE    Sverdlovsk         54.28 324⇑eP       P       04 57 56.0  +0.6
SVE                                 pmax    pmax
         comp=Z,21nm,0.8s
SVE                                 MLR     MLR
         comp=Z,660nm,16.0s
AKTO   Aktyubinsk         55.07 316  P       P       04 58 01.5  +0.2
         comp=Z,7.2nm,0.7s,baz=91,slow=7.6,SNR=24
GEYT   Alibeck            55.19 300  P       P       04 58 04.2  +1.8
         comp=Z,20nm,0.8s,baz=92,slow=7.9,SNR=22
GYA0B  ALIBECK ARRAY      55.19 300  P       P       04 58 01.9  -0.5
GYA0B                               IAmb    IAmb    04 58 05.3
         comp=Z,33nm,0.9s
ARU    Arti               55.35 323  P       P       04 58 02.3  -0.9
         comp=Z,3.1nm,0.6s,baz=119,slow=10,SNR=3.3
ARU    Arti               55.35 323c iP      P       04 58 02.7  -0.5
ARU                                 S       S       05 05 46.5  +1.6
ARU                                 SS      SS      05 09 28.5  -0.9
ARU                                 pmax    pmax
         comp=Z,41nm,1.7s
ARU    Arti               55.35 323  P       P       04 58 02.7  -0.5
ARU                                 IAmb    IAmb    04 58 06.6
         comp=Z,15nm,0.8s
NWAO   Narrogin (SRO)     57.03 185  P       P       04 58 18.7  +3.4
         comp=Z,13nm,0.7s,baz=354,slow=5.6,SNR=3.5
BBOO   Buckleboo          58.37 166  P       P       04 58 24.1  -0.7
STKA   Stephens Creek     58.96 160  P       P       04 58 28.2  -0.7
         comp=Z,6.9nm,0.8s,baz=346,slow=7.0,SNR=9.0
STKA   Stephens Creek     58.96 160  P       P       04 58 28.8  -0.1
STKA                                pmax    pmax
         comp=Z,2.0nm,1.0s
STKA   Stephens Creek     58.96 160  P       P       04 58 28.8  -0.1
KIRV   Kirov              60.45 325  P       P       04 58 38.2  -0.6
         comp=Z,20nm,0.6s,baz=119,slow=3.6,SNR=11
KIRV   Kirov              60.45 325 i P      P       04 58 37.9  -0.9
ANM    Nome               61.03  28  P       P       04 58 43.1  +0.4
ANM                                 pmax    pmax
         comp=Z,13nm,1.1s
ANM    Nome               61.03  28  P       P       04 58 43.1  +0.4
ANM                                 IAmb    IAmb    04 58 44.5
         comp=Z,13nm,1.1s
BELG   Belogornoye        61.57 318c iP      P       04 58 46.2  -0.4
BELG                                pmax    pmax
         comp=Z,9.0nm,0.9s
DZM    Mont Dzumac        63.32 133  LR      LR      05 21 40.7
         comp=Z,261nm,20.4s,baz=302,slow=31
A21K   Barrow             64.57  21  P       P       04 59 06.2   0.0
         baz=270
A21K   Barrow             64.57  21  P       P       04 59 06.6  +0.5
GNI    Garni              65.17 305  P       P       04 59 12.4  +1.5
         comp=Z,12nm,0.9s,baz=288,slow=1.4,SNR=4.3
GNI                                 LR      LR      05 31 11.9
         comp=Z,285nm,21.9s,baz=7.0,slow=39
TTA    Tatalina           65.19  30  P       P       04 59 11.0  +0.5
TTA                                 pmax    pmax
         comp=Z,11nm,0.8s
TTA    Tatalina           65.19  30  P       P       04 59 11.0  +0.5
TTA                                 IAmb    IAmb    04 59 11.9
         comp=Z,11nm,0.8s
ZEI    Tsey               65.28 308 eP       P       04 59 11.2  -0.4
ZEI                                 pmax    pmax
         comp=Z,39nm,1.0s
VRH    Novokhopyorsk      65.34 317 eP       P       04 59 11.1  -0.5
VRH                                 pmax    pmax
         comp=Z,60nm,0.7s
KLMR   Klimovskoe         65.37 328 eP       P       04 59 09.7  -1.8
KLMR                                pmax    pmax
         comp=Z,57nm,1.4s
KLMR   Klimovskoe         65.37 328 eP       P       04 59 09.8  -1.8
KLMR                                AMP             04 59 12.7
         comp=Z,57nm,1.4s
MIB    Mutribah           65.45 293 eP               04 59 12.3
GOF    Gofitskoye         65.47 310⇑eP       P       04 59 13.6  +1.0
GOF                                 pmax    pmax
         comp=Z,47nm,0.9s
RDF    Al-Radifah         65.50 292 eP               04 59 12.9
TMCR   Tamitsa            65.72 331 eP       P       04 59 13.3  -0.5
TMCR                                pmax    pmax
         comp=Z,47nm,1.5s
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RST	Umm Al-Ruwaisa	65.81	293	*e*P		04 59 14.4	
KBZ	Khabaz	65.82	309	P	P	04 59 15.9	+1.1
	comp=Z,23nm,0.9s,baz=105,slow=5.0,SNR=24						
KBZ	Khabaz	65.82	309	*i* P	P	04 59 15.4	+0.6
KBZ				pmax	pmax		
	comp=Z,20nm,0.8s						
KVAR	Kislovodsk Arr	65.92	309	P	P	04 59 16.5	+0.9
	comp=Z,7.1nm,0.7s,baz=35,slow=12,SNR=3.6						
KVAR				LR	LR	05 30 38.5	
	comp=Z,395nm,19.2s,baz=214,slow=38						
KIV	Kislovodsk	65.93	309	⇑*i*P	P	04 59 16.3	+0.7
KIV				*e*		05 01 41.2	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,229nm,16.0s						
KIV	Kislovodsk	65.93	309	P	P	04 59 14.3	-1.3
LPSR	Galich'ya Gora	66.83	319	*e*P	P	04 59 20.4	-0.7
LPSR				pmax	pmax		
	comp=Z,50nm,0.7s						
VORD	Divnogorie	66.89	317	*e*P	P	04 59 20.5	-1.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	66.92	317	*e*P	P	04 59 20.8	-0.9
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
PPLA	Purkeypile	66.94	30	P	P	04 59 22.1	+0.3
PPLA				IAmb	IAmb	04 59 23.3	
	comp=Z,18nm,0.8s						
MOS	Moscow	67.05	322	*e*P	P	04 59 20.5	-1.9
MOS				*e*		04 59 41.1	
MOS				pmax	pmax		
	comp=Z,38nm,0.7s						
MOS				MLR	MLR		
	comp=Z,600nm,19.0s						
COLD	Coldfoot	67.15	25	P	P	04 59 23.1	+0.2
	baz=278						
COLD	Coldfoot	67.15	25	P	P	04 59 23.4	+0.5
APA	Apatity	67.20	335	⇓*i*P	P	04 59 17.5	-5.7
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,20.0s						
MLY	Manley	67.26	27	P	P	04 59 23.7	0.0
	baz=279,SNR=9.7						
SKT	Skwentna	67.38	31	P	P	04 59 24.3	-0.2
SKT				IAmb	IAmb	04 59 24.9	
	comp=Z,12nm,0.8s						
KTH	Kantishna Hill	67.41	29	P	P	04 59 24.9	+0.2
KTH				IAmb	IAmb	04 59 25.9	
	comp=Z,18nm,0.8s						
TRF	Thorofare Moun	67.70	29	P	P	04 59 27.1	+0.4
TRF				IAmb	IAmb	04 59 29.1	
	comp=Z,16nm,0.8s						
OBN	Obninsk	67.75	322	P	P	04 59 26.4	-0.5
	comp=Z,3.2nm,0.6s,baz=197,slow=10,SNR=7.6						
OBN	Obninsk	67.75	322	⇑*i*P	P	04 59 26.2	-0.7
OBN				*i*		04 59 45.6	
OBN				*i*		05 01 53.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,411nm,19.0s						
OBN	Obninsk	67.75	322	P	P	04 59 26.6	-0.2
OBN				IAmb	IAmb	04 59 28.1	
	comp=Z,21nm,0.8s						
CAPN	Captain Cook N	67.76	32	P	P	04 59 25.5	-1.4
	baz=280						
I23K	Minto, Yukon-K	67.81	27	P	P	04 59 27.1	0.0
	baz=280,SNR=7.8						
I23K	Minto, Yukon-K	67.81	27	P	P	04 59 27.6	+0.5
I23K				IAmb	IAmb	04 59 29.3	
	comp=Z,12nm,1.0s						
SUA	Susitna One	67.83	31	P	P	04 59 27.3	-0.2
CUT	Chulitna	67.89	30	P	P	04 59 27.1	-0.6
	baz=280						
NEA2	Nenana	68.03	28	P	P	04 59 28.8	+0.3
	baz=280,SNR=8.7						
BRLK	Bradley Lake	68.07	33	P	P	04 59 28.0	-0.9
SOC	Sochi	68.11	309	*e*P	P	04 59 27.3	-2.1
SOC				*e*PPP	PPP	05 03 44.9	
SOC				*e*S	S	05 08 24.9	-1.9
SOC				*e*SS	SS	05 12 48.7	-0.6
MCK	McKinley	68.25	29	P	P	04 59 30.4	+0.5
	baz=281,SNR=10						
MDM	Murphy Dome	68.32	27	P	P	04 59 30.6	+0.2
RND	Reindeer	68.35	29	P	P	04 59 30.4	-0.2
RND				pmax	pmax		
	comp=Z,65nm,0.8s						
RND	Reindeer	68.35	29	P	P	04 59 30.4	-0.2
RC01	Rabbit Creek A	68.38	32	P	P	04 59 30.6	-0.2
	baz=281						
WRH	Wood River Hil	68.47	28	P	P	04 59 31.8	+0.6
WRH				IAmb	IAmb	04 59 33.6	
	comp=Z,20nm,0.9s						
TCOL	CIGO, UAF Yank	68.49	27	P	P	04 59 31.2	-0.1
	baz=281						
TCOL	CIGO, UAF Yank	68.49	27	P	P	04 59 31.6	+0.3
TCOL				IAmb	IAmb	04 59 33.5	
	comp=Z,14nm,0.8s						
COLA	College	68.50	27	P	P	04 59 31.7	+0.3
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
COLA	College	68.50	27	P	P	04 59 31.7	+0.3
COLA				IAmb	IAmb	04 59 33.4	
	comp=Z,14nm,0.8s						
O22K	Cooper Landing	68.51	32	P	P	04 59 30.6	-0.9
	baz=281						
CCB	Clear Creek Bu	68.56	28	P	P	04 59 31.3	-0.5
PMR	Palmer	68.57	31	P	P	04 59 31.7	-0.2
PMR				pmax	pmax		
	comp=Z,28nm,1.0s						
PMR	Palmer	68.57	31	P	P	04 59 31.7	-0.2
PMR				IAmb	IAmb	04 59 32.2	
	comp=Z,28nm,1.0s						
POKR	Poker Plat Res	68.62	27	P	P	04 59 32.4	+0.2
	baz=282,SNR=15						
POKR	Poker Plat Res	68.62	27	P	P	04 59 32.4	+0.2
GHO	Glory Hole Cre	68.63	31	P	P	04 59 32.0	-0.4
GHO				IAmb	IAmb	04 59 33.1	
	comp=Z,17nm,1.0s						
SEW	Seward	68.71	33	P	P	04 59 33.0	+0.2
MARD	Mardin	68.83	302	P	P	04 59 33.5	-0.7
SML	Sawmill	68.90	31	P	P	04 59 34.2	+0.2
IL31		68.92	27	P	P	04 59 33.1	-0.9
ILAR	Eielson Array	68.92	27	P	P	04 59 32.9	-1.2
	comp=Z,4.8nm,0.7s,baz=281,slow=4.9,SNR=40						
KNK	Knik Glacier	68.92	31	P	P	04 59 34.4	+0.2
HDA	Harding Lake	68.97	28	P	P	04 59 33.5	-0.9
	baz=282,SNR=10						
HDA	Harding Lake	68.97	28	P	P	04 59 33.8	-0.6
HDA				IAmb	IAmb	04 59 34.8	
	comp=Z,19nm,0.9s						
MSVF	Nonsavu	68.98	122	P	P	04 59 35.0	-0.2
MSVF				pmax	pmax		
	comp=Z,43nm,1.1s						
MSVF	Nonsavu	68.98	122	P	P	04 59 35.0	-0.2
MSVF	Nonsavu	68.98	122	P	P	04 59 37.9	+2.7
SCM	Sheep Creek Mo	69.36	30	P	P	04 59 37.2	+0.2
SCM				pmax	pmax		
	comp=Z,49nm,0.7s						
SCM	Sheep Creek Mo	69.36	30	P	P	04 59 37.2	+0.2
ANN	Anapa	69.42	311	*e*P	P	04 59 32.1	-5.4
ANN				*e*S	S	05 08 34.8	-7.5
ANN				*e*SS	SS	05 13 08.0	-1.5
ANN				pmax	pmax		
	comp=Z,76nm,1.2s						
ARCES	ARCESS Array B	69.66	338	P	P	04 59 38.2	-0.4
	comp=Z,2.0nm,0.7s,baz=68,slow=3.3,SNR=6.8						
GLI	Glacier Island	69.69	31	P	P	04 59 39.1	+0.2
M24K	Tolsona, Glenn	69.83	30	P	P	04 59 40.1	+0.3
	baz=284						
M24K	Tolsona, Glenn	69.83	30	P	P	04 59 40.1	+0.3
PAX	Paxson	69.94	29	IAmb	IAmb	04 59 41.4	
	comp=Z,12nm,0.8s						
RIDG	Independent Ri	70.02	28	IAmb	IAmb	04 59 42.0	
	comp=Z,21nm,1.0s						
KLU	Klutina	70.09	31	IAmb	IAmb	04 59 58.6	
	comp=Z,25nm,1.1s						
SCRK	Sand Creek	70.33	28	P	P	04 59 42.4	-0.5
	baz=285,SNR=10						
N25K	Chitina, Valde	70.68	30	P	P	04 59 44.5	-0.6
	baz=285						
N25K	Chitina, Valde	70.68	30	IAmb	IAmb	04 59 48.5	
	comp=Z,12nm,0.9s						
L26K	Log Cabin Wild	70.86	29	P	P	04 59 46.0	0.0
	baz=286						
VRDI	Verde Repeater	71.31	31	IAmb	IAmb	04 59 50.0	
	comp=Z,16nm,0.8s						
GAZ	Gaziantep	71.61	303	IAmb	IAmb	04 59 52.8	
	comp=Z,28nm,1.1s						
FINES	FINESS Array B	71.63	330	P	P	04 59 50.8	+0.1
	comp=Z,14nm,0.9s,baz=66,slow=4.9,SNR=16						
FINES	FINESS Array B	71.63	330	*ce*P	P	04 59 50.5	-0.2
FINES				pmax	pmax		
	comp=Z,14nm,0.9s						
TGL	Tana Glacier	71.73	31	IAmb	IAmb	04 59 52.4	
	comp=Z,28nm,0.9s						
BARN	Barnard Glacie	72.19	30	IAmb	IAmb	04 59 55.7	
	comp=Z,19nm,0.8s						
MNK	Minsk	72.77	322	*i* P	P	04 59 55.4	-2.3
	comp=E,3.0nm,1.1s						
MNK				*i* P	P	04 59 55.4	-2.3
	comp=N,7.0nm,0.8s						
MNK				*i* P	P	04 59 55.4	-2.3
	comp=Z,49nm,1.1s						
MNK				*i* PP	PP	05 02 37.3	-2.1
MNK				*i* PPP	PPP	05 04 22.0	
MNK				*i* S	S	05 09 18.4	-2.4
MNK				*i* SS	SS	05 14 00.7	+0.3
MNK				*i* SSS	SSS	05 17 21.7	
MNK				*i* LQ	LQ	05 27 03.1	
MNK				*i* LR	LR	05 32 35.7	
MNK				*i* LRM	MLR	05 34 33.2	
	comp=E,40nm,15.0s						
MNK				*i* LRM	MLR	05 34 36.7	
	comp=N,77nm,11.2s						
MNK				*i* LRM	MLR	05 34 39.0	
	comp=Z,420nm,14.7s						
MNK	Minsk	72.77	322	*e*P	P	04 59 56.0	-1.6
INK	Inuvik	72.97	22	IAmb	IAmb	04 59 59.1	
	comp=Z,24nm,0.8s						
AKASG	Malin Array Be	73.15	318	P	P	04 59 59.1	-0.8
	comp=Z,13nm,0.8s,baz=59,slow=6.2,SNR=46						
AKBB	Malin Array Si	73.15	318	P	P	04 59 59.6	-0.3
AKBB				pmax	pmax		
	comp=Z,16nm,0.9s						
AKBB	Malin Array Si	73.15	318	P	P	04 59 59.6	-0.3
AKBB				IAmb	IAmb	05 00 00.2	
	comp=Z,16nm,0.9s						
IDID	Didziasalis	73.15	323	*e*P	P	05 00 00.3	+0.4
NACGM	Naroch	73.26	323	*i* P	P	05 00 00.8	+0.3
NACGM				*i* P	P	05 00 00.8	+0.3
NACGM				*i* P	P	05 00 00.8	+0.3
NACGM				*i* PP	PP	05 02 36.4	-7.1
NACGM				*i* PPP	PPP	05 04 45.5	
NACGM				*i* S	S	05 09 21.2	-5.1
NACGM				*i* SSS	SSS	05 17 33.2	
NACGM				*i* LQ	LQ	05 26 41.5	
NACGM				*i* LR	LR	05 33 07.0	
ISAL	Salakas	73.40	324	*e*P	P	05 00 00.7	-0.6
IIGN	Ignalina	73.42	324	*e*P	P	05 00 01.0	-0.5
BR131	Keskin Array S	73.53	307	*i* P	P	05 00 03.1	+0.4
BRTR	Keskin Array B	73.53	307	P	P	05 00 03.5	+0.9
	comp=Z,19nm,0.9s,baz=101,slow=6.4,SNR=38						
BRTR	Keskin Array B	73.53	307	*ce*P	P	05 00 03.0	+0.4
BRTR				pmax	pmax		
	comp=Z,19nm,0.9s						
BR231	Keskin MP Arra	74.12	307	IAmb	IAmb	05 00 07.5	
	comp=Z,28nm,0.8s						
HYT	Haines Junctio	74.18	30	IAmb	IAmb	05 00 09.6	
	comp=Z,33nm,1.2s						
MMAI	Mount Meron Ar	74.30	299	LR	LR	05 37 19.3	
	comp=Z,574nm,21.4s,baz=45,slow=39						
SORM	Soroca	74.50	316	⇑P	P	05 00 07.0	-0.9
SORM	Soroca	74.50	316	⇑P	P	05 00 07.0	-0.9
PABE	Paberze	74.58	324	*e*P	P	05 00 08.4	+0.2
WHY	Whitehorse	75.44	30	IAmb	IAmb	05 00 16.6	
	comp=Z,24nm,0.9s						
SUW	Suwalki	75.54	323	*e*P	P	05 00 13.4	-0.4
SUW	Suwalki	75.54	323	*e*P	P	05 00 13.4	-0.4
TPGR	Topolog	75.54	313	⇓P	P	05 00 14.6	+0.6
C36M	Paulatuk	75.57	20	P	P	05 00 13.0	-0.7
	baz=301						
C36M	Paulatuk	75.57	20	IAmb	IAmb	05 00 13.6	
	comp=Z,18nm,0.7s						
CFR	Carcaliu	75.62	313	⇑P	P	05 00 14.4	0.0
CFR	Carcaliu	75.62	313	⇑P	P	05 00 14.4	0.0
SKAG	Skagway	75.71	31	IAmb	IAmb	05 00 24.8	
	comp=Z,31nm,1.0s						
EIL	Elat	75.77	296	LR	LR	05 38 58.9	
	comp=Z,642nm,18.9s,baz=208,slow=40						
TESR	Tescani	76.14	315	⇑P	P	05 00 17.0	-0.3
VRI	Vrincioaia	76.31	314	⇓P	P	05 00 17.9	-0.5
VRI	Vrincioaia	76.31	314	⇓P	P	05 00 17.9	-0.5
BIZ	Bicaz	76.33	315	⇑P	P	05 00 18.4	-0.1
JIS	Juneau Island	76.64	32	IAmb	IAmb	05 00 21.9	
	comp=Z,30nm,0.9s						
BURAR	Bucovina Array	76.66	316	⇑P	P	05 00 20.5	+0.1
BURAR	Bucovina Array	76.66	316	⇑P	P	05 00 20.5	+0.1
OZUR		76.84	315	⇑P	P	05 00 20.9	-0.5
MLR	Muntele Rosu	76.96	314	P	P	05 00 22.7	+0.5
	comp=Z,18nm,0.9s,baz=167,slow=2.3,SNR=14						
MLR	Muntele Rosu	76.96	314	⇑P	P	05 00 23.0	+0.8
MLR	Muntele Rosu	76.96	314	⇑P	P	05 00 23.0	+0.8
MLR	Muntele Rosu	76.96	314	P	P	05 00 21.7	-0.5
MLR				IAmb	IAmb	05 00 23.9	
	comp=Z,16nm,0.8s						
DOPR	Dopca	77.15	315	⇑P	P	05 00 23.4	+0.3
KWP	Kalwaria Pacla	77.45	319	*e*P	P	05 00 25.0	+0.3
VOIR		77.56	314	⇑P	P	05 00 25.4	-0.1
VOIR		77.56	314	⇑P	P	05 00 25.4	-0.1
BEL	Belsk	77.71	321	*e*P	P	05 00 26.4	+0.4
ARR	Arges	77.86	314	⇑P	P	05 00 28.1	+0.9
KOLS	Kolonicke sedl	77.98	318	*e*P	P	05 00 28.2	+0.5
KOLS	Kolonicke sedl	77.98	318	*e*P	P	05 00 28.2	+0.5
KOLS				*e*		05 20 50.4	
UZH	Uzhgorod	78.09	318	*e*P	P	05 00 28.4	+0.2
UZH				*e*		05 00 33.9	
UZH				*e*		05 00 43.1	
NB2	NORSAR Subarra	78.39	332	P	P	05 00 28.2	-1.6
	comp=Z,40nm,1.7s,baz=62,slow=5.6						
NB2	NORSAR Subarra	78.39	332	P	P	05 00 28.2	-1.6
	baz=62,slow=5.6						
NOA	NORSAR Array B	78.39	332	P	P	05 00 29.1	-0.7
	comp=Z,2.4nm,0.7s,baz=59,slow=5.5,SNR=9.1						
CRVS	Cervenica-Dubn	78.48	318	*e*P	P	05 00 30.8	+0.3
CRVS				pmax	pmax		
	comp=Z,92nm,2.5s						
CRVS	Cervenica-Dubn	78.48	318	*e*P	P	05 00 30.8	+0.3
DRGR		78.55	316	⇓P	P	05 00 31.6	+0.6
DRGR		78.55	316	⇓P	P	05 00 31.6	+0.6
DLBC	Dease Lake	78.63	31	IAmb	IAmb	05 00 33.2	
	comp=Z,18nm,0.8s						
LTVH	Ltavrtes, Hu	78.82	317	*e*P	P	05 00 42.8	+10
OJC	Ojcow	78.94	320	*e*P	P	05 00 33.0	0.0
OJC	Ojcow	78.94	320	IAmb	IAmb	05 00 34.2	
	comp=Z,23nm,0.8s						
NIE	Niedzica	78.97	319	*e*P	P	05 00 33.6	+0.4
GZR	Gura Zlata	79.06	315	⇑P	P	05 00 34.6	+0.8
GZR	Gura Zlata	79.06	315	⇑P	P	05 00 34.6	+0.8
KECS	Kecovo	79.25	318	*e*P	P	05 00 35.0	+0.3
KECS	Kecovo	79.25	318	*e*P	P	05 00 35.0	+0.3
SIRR	Siria	79.42	316	⇑P	P	05 00 36.5	+0.8
HERR	Herculane	79.50	314	⇑P	P	05 00 36.6	+0.5
LANS	Liptovska Anna	79.58	319	*e*P	P	05 00 38.0	+1.5
LANS	Liptovska Anna	79.58	319	*e*P	P	05 00 38.0	+1.5
PSZ	Piszkesteto	79.84	318	*e*P	P	05 00 39.2	+1.2
MDVR	Moldovita	79.99	315	⇑P	P	05 00 39.4	+0.5
VYHS	Vyhne	80.24	319	*e*P	P	05 00 40.4	+0.3
VYHS				pmax	pmax		
	comp=Z,23nm,1.0s						
VYHS	Vyhne	80.24	319	*e*P	P	05 00 40.4	+0.3
MORC	Moravsky Berou	80.44	320	*e*P	P	05 00 41.3	+0.1
KSP	Ksiaz	80.68	322	*e*P	P	05 00 42.4	0.0
JAVC	Velka Javorina	80.77	320	*e*P	P	05 00 44.4	+1.4
OSTC	Ostas	80.86	321	*e*P	P	05 00 44.3	+1.0
DPC	Dobruska-Polom	80.89	321	*e*P	P	05 00 43.8	+0.2
DPC	Dobruska-Polom	80.89	321	*e*P	P	05 00 43.8	+0.2
SMOL	Smolenice	81.07	319	*e*P	P	05 00 45.6	+1.1
SMOL	Smolenice	81.07	319	*e*P	P	05 00 45.6	+1.1
VRAC	Vranov	81.20	320	P	P	05 00 45.5	+0.3
	comp=Z,5.0nm,0.9s,baz=75,slow=6.9,SNR=5.5						
VRAC	Vranov	81.20	320	*e*P	P	05 00 45.3	+0.1
ZST	Bratislava	81.41	319	*e*P	P	05 00 46.9	+0.6
ZST	Bratislava	81.41	319	*e*P	P	05 00 46.9	+0.6
KRUC	Moravsky	81.43	320	*e*P	P	05 00 46.4	0.0
MPLH	Magyarpolny	81.60	318	*e*P	P	05 00 46.8	-0.5
CONA	Conrad Observa	82.27	319	*e*P	P	05 00 50.6	-0.3
	comp=Z,10nm,1.4s						
CLL	Collm	82.29	323	*e*P	P	05 00 50.0	-0.9
	comp=Z,12nm,1.3s						
CLL	Collm	82.29	323	P	P	05 00 50.6	-0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	82.29	323	P	P	05 00 50.6	-0.3
PBCC	Pribram	82.53	321	*e*P	P	05 00 53.0	+0.8
YKA	Yellowknife Ar	82.71	23	P	P	05 00 52.2	-0.6
	comp=Z,12nm,0.9s,baz=318,slow=4.5,SNR=118						
YKA	Yellowknife Ar	82.71	23	*ce*P	P	05 00 52.2	-0.6
YKA				pmax	pmax		
	comp=Z,13nm,0.9s						
ARSA	Arzberg	82.79	319	*e*P	P	05 00 52.2	-1.4
	comp=Z,4.5nm,1.3s						
KHC	Kasperske Hory	83.03	321	P	P	05 00 55.1	+0.3
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KHC	Kasperske Hory	83.03	321	*e*P	P	05 00 54.9	+0.1
KHC				*e*pP	pP	05 01 06.3	+0.1
KHC	Kasperske Hory	83.03	321	P	P	05 00 55.1	+0.3
GEC2	GERESS Array S	83.10	321	P	P	05 00 54.9	-0.3
GERES	GERESS Array B	83.10	321	P	P	05 00 55.5	+0.2
	comp=Z,4.2nm,0.9s,baz=57,slow=4.9,SNR=25						
MOA	Molln	83.25	320	*e*P	P	05 00 55.3	-0.7
	comp=Z,6.5nm,1.0s						
SOKA	Soboth	83.36	318	*e*P	P	05 00 56.3	-0.3
	comp=Z,4.5nm,1.1s						
GRF	Grafenberg Arr	84.09	322	*e*P	P	05 00 59.9	-0.3
	comp=Z,11nm,1.3s,baz=63,slow=4.6						
STAL	STALIGIAL	84.96	319	P	P	05 01 04.3	-0.4
STAL				IAmb	IAmb	05 01 17.8	
	comp=Z,13nm,1.2s						
WTTA	Wattenberg	85.09	320	*e*P	P	05 01 05.1	-0.5
	comp=Z,3.9nm,0.7s						
KMBO	Kilima Mbogo	85.42	267	P	P	05 01 09.2	+1.3
	comp=Z,3.7nm,0.7s,baz=44,slow=8.9,SNR=11						
KMBO	Kilima Mbogo	85.42	267	*ce*P	P	05 01 09.3	+1.5
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RETA	Reutte	85.48	321	*e*P	P	05 01 06.8	-0.6
	comp=Z,8.9nm,2.2s						
FETA	Feichten	85.75	320	*e*P	P	05 01 07.8	-1.0
	comp=Z,4.5nm,1.1s						
DAVA	Damuels	86.10	321	*e*P	P	05 01 09.7	-0.8
	comp=Z,6.0nm,1.2s						
NLWA	Neilton Lookou	87.50	38	IAmb	IAmb	05 01 20.6	
	comp=Z,19nm,1.0s						
D03D	Eldon	87.86	38	P	P	05 01 19.3	+0.4
	baz=304,SNR=8.0						
B05A	Bryant	88.00	37	P	P	05 01 20.3	+0.8
	baz=305,SNR=6.8						
D04E	Lakebay	88.24	38	P	P	05 01 21.8	+1.2
	baz=305						
E04D	Cinebar	88.71	38	P	P	05 01 23.6	+0.7
	baz=305						
F04D	Rainier, OR	88.72	39	P	P	05 01 23.9	+0.9
	baz=304						
LON	Longmire	89.03	38	P	P	05 01 24.6	+0.1
LON				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LON	Longmire	89.03	38	P	P	05 01 24.6	+0.1
LON				IAmb	IAmb	05 01 26.9	
	comp=Z,8.5nm,0.8s						
G03D	McMinnville, O	89.07	40	P	P	05 01 25.5	+0.9
	baz=304						
I02D	Swisshome	89.34	41	P	P	05 01 27.5	+1.6
	baz=304						
LTY	Liberty	89.37	37	IAmb	IAmb	05 01 27.8	
	comp=Z,7.6nm,0.7s						
B08A	Colville Reser	89.44	36	IAmb	IAmb	05 01 28.2	
	comp=Z,15nm,0.9s						
F05D	White Salmon	89.72	39	P	P	05 01 29.1	+1.4
	baz=306						
H04D	Lebanon	89.77	40	P	P	05 01 29.4	+1.5
	baz=305						
J01E	Myrtle Point	89.82	42	P	P	05 01 29.2	+1.1
	baz=304						
I03D	Drain, OR	89.87	41	P	P	05 01 29.6	+1.2
	baz=304						
H04A	Detroit Lake	90.00	40	IAmb	IAmb	05 01 31.1	
	comp=Z,9.4nm,0.9s						
G05D	Wamic, OR	90.18	39	P	P	05 01 31.2	+1.4
	baz=306						
K02D	Willamette Mer	90.24	42	P	P	05 01 31.2	+1.0
	baz=304						
I04A	Tendick Farm,	90.37	41	P	P	05 01 32.1	+1.3
	baz=305,SNR=7.2						
HAWA	Hanford	90.51	37	IAmb	IAmb	05 01 33.8	
	comp=Z,16nm,0.9s						
L02E	Cave Junction	90.58	43	P	P	05 01 32.8	+1.0
	baz=304						
NEW	Newport	90.66	35	P	P	05 01 32.7	+0.6
	baz=309						
NEW	Newport	90.66	35	IAmb	IAmb	05 01 33.5	
	comp=Z,7.2nm,1.1s						
I05D	Terrebonne, OR	90.69	40	P	P	05 01 33.7	+1.4
	baz=306,SNR=7.8						
E08A	Dider Farm, El	90.71	37	IAmb	IAmb	05 01 34.7	
	comp=Z,11nm,0.9s						
HUMO	Hull Mountain	90.72	42	P	P	05 01 32.3	-0.1
J04D	Umpqua Nationa	90.87	41	P	P	05 01 34.8	+1.4
	baz=305,SNR=10						
E09A	Wood Farm, Sta	91.20	37	IAmb	IAmb	05 01 37.0	
	comp=Z,20nm,1.2s						
L04D	Klamath Falls	91.34	42	P	P	05 01 36.8	+1.4
	baz=305,SNR=17						
J05D	Fort Rock, OR	91.37	41	P	P	05 01 37.3	+1.7
	baz=306,SNR=11						
K04D	Chiloquin, OR	91.44	41	P	P	05 01 37.6	+1.7
	baz=305,SNR=5.5						
M02C	Callahan	91.47	43	P	P	05 01 37.1	+1.0
	baz=305,SNR=10						
WALA	Waterton Lakes	91.78	33	IAmb	IAmb	05 01 40.4	
	comp=Z,15nm,1.1s						
N02D	Trinity Center	91.80	43	P	P	05 01 38.7	+1.2
	baz=305,SNR=5.9						
M04C	Macdoel	91.87	42	P	P	05 01 39.3	+1.3
	baz=305,SNR=20						
I07A	Izee	91.91	39	IAmb	IAmb	05 01 40.8	
	comp=Z,8.1nm,1.0s						
FCC	Fort Churchill	92.12	18	P	P	05 01 38.1	-0.4
FCC				pmax	pmax		
	comp=Z,12nm,1.0s						
FCC	Fort Churchill	92.12	18	P	P	05 01 38.1	-0.4
FCC				IAmb	IAmb	05 01 39.6	
	comp=Z,12nm,0.9s						
WDC	Whiskeytown Da	92.12	43	P	P	05 01 38.8	-0.2
WDC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WDC	Whiskeytown Da	92.12	43	P	P	05 01 38.8	-0.2
WDC				IAmb	IAmb	05 01 41.6	
	comp=Z,9.0nm,0.8s						
O02D	Mt. Diablo Mer	92.20	44	P	P	05 01 41.1	+1.7
	baz=305,SNR=14						
BMO	Blue Mountains	92.69	38	IAmb	IAmb	05 01 44.2	
	comp=Z,9.1nm,1.1s						
O03E	Paynes Creek	92.75	43	P	P	05 01 42.6	+0.6
	baz=305,SNR=10						
FFC	Flin Flon	92.86	24	P	P	05 01 42.1	+0.1
FFC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FFC	Flin Flon	92.86	24	P	P	05 01 42.1	+0.1
FFC				IAmb	IAmb	05 01 49.2	
	comp=Z,6.3nm,0.8s						
GDXM	Geysers	92.97	45	IAmb	IAmb	05 01 45.5	
	comp=Z,7.5nm,1.0s						
MSO	Missoula	93.23	35	P	P	05 01 44.7	+0.6
	baz=311						
MSO	Missoula	93.23	35	P	P	05 01 45.0	+0.9
ORV	Oroville	93.37	44	IAmb	IAmb	05 01 46.1	
	comp=Z,9.5nm,0.8s						
WVOR	Wild Horse Val	93.41	40	IAmb	IAmb	05 01 47.4	
	comp=Z,7.7nm,1.1s						
AFDM	Forest Hills D	94.05	44	IAmb	IAmb	05 01 49.6	
	comp=Z,8.9nm,1.0s						
MFID	Camas Ranch	94.42	38	P	P	05 01 50.9	+1.3
EGMT	Eagleton	94.52	32	P	P	05 01 50.5	+0.6
	baz=314						
PAHR	Pah Rah Range	94.60	43	IAmb	IAmb	05 01 53.1	
	comp=Z,12nm,0.9s						
VCNR	Virginia City	94.68	43	IAmb	IAmb	05 01 53.6	
	comp=Z,11nm,0.8s						
PNTR	Pine Nut	94.83	43	IAmb	IAmb	05 01 54.5	
	comp=Z,9.9nm,0.9s						
DLMT	Dillon	94.91	35	P	P	05 01 53.5	+1.6

CMB	Columbia Colle	94.96	44	IAmb	IAmb	05 01 54.3	
	comp=Z,13nm,1.0s						
HLID	Hailey	95.11	37	P	P	05 01 54.0	+1.1
	baz=311						
HLID	Hailey	95.11	37	P	P	05 01 54.6	+1.7
BOZ	Bozeman (W)	95.25	34	P	P	05 01 54.7	+1.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BOZ	Bozeman (W)	95.25	34	P	P	05 01 53.8	+0.3
	baz=313						
BOZ	Bozeman (W)	95.25	34	P	P	05 01 54.7	+1.3
WAKR	Walker	95.28	44	IAmb	IAmb	05 01 56.0	
	comp=Z,8.5nm,1.0s						
PMPB	Monarch Peak	95.75	46	IAmb	IAmb	05 01 59.4	
	comp=Z,8.4nm,0.7s						
RYN	Ryan	95.78	43	IAmb	IAmb	05 01 58.2	
	comp=Z,8.7nm,1.0s						
LHV	Little Huntoon	96.02	43	IAmb	IAmb	05 02 00.2	
	comp=Z,16nm,1.2s						
MDPB	Devils Postpil	96.03	44	IAmb	IAmb	05 01 59.8	
	comp=Z,6.7nm,1.1s						
NVAR	Mina Array Bea	96.04	43	P	P	05 01 58.5	+1.2
	comp=Z,4.9nm,0.8s,baz=284,slow=5.6,SNR=35						
OMMB	Old Mammoth Mi	96.09	44	IAmb	IAmb	05 01 59.6	
	comp=Z,6.4nm,1.1s						
MLAC	Mammoth, Mammo	96.18	44	P	P	05 01 59.7	+1.7
	baz=307						
YMR	Madison River	96.23	35	P	P	05 01 59.9	+1.9
H17A	Grant Village	96.62	35	P	P	05 02 01.5	+1.7
	baz=314						
RLMT	Red Lodge	96.79	34	P	P	05 02 01.1	+0.6
	baz=314						
SMMC	Simmler	96.81	46	P	P	05 02 01.9	+1.4
	baz=306						
VES	Vestal, Richgr	97.09	46	P	P	05 02 02.3	+0.5
	baz=307						
LAO	LASA Array	97.15	31	P	P	05 02 01.3	-0.6
	baz=317						
PKM	Mcpherson Peak	97.17	47	P	P	05 02 03.2	+0.7
	baz=306						
CWC	Cottonwood Cre	97.38	45	P	P	05 02 03.5	+0.2
	baz=307						
ISA	Isabella, Lake	97.60	45	P	P	05 02 04.1	-0.1
	baz=307						
ISA	Isabella, Lake	97.60	45	IAmb	IAmb	05 02 05.6	
	comp=Z,4.3nm,1.1s						
R11A	Troy Canyon, C	97.77	42	P	P	05 02 05.2	+0.2
	baz=309						
MPMC	Manual Prospec	98.00	45	P	P	05 02 06.3	+0.2
	baz=308						
FURC	Furnace Creek,	98.14	44	P	Pdif	05 02 07.3	+0.8
	baz=308						
DUG	Dugway, Tooele	98.22	39	P	P	05 02 07.4	+0.4
	baz=311						
LRMC	Laurel Mtn Rad	98.22	45	P	P	05 02 07.7	+0.6
	baz=308						
TPNV	Topopah Spring	98.23	43	P	Pdif	05 02 08.6	+1.4
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TPNV	Topopah Spring	98.23	43	P	Pdif	05 02 08.3	+1.1
	baz=309						
TPNV	Topopah Spring	98.23	43	P	Pdif	05 02 08.6	+1.5
PDAR	Pinedale Array	98.28	35	P	P	05 02 08.1	+0.8
	comp=Z,0.5nm,0.7s,baz=159,slow=1.3,SNR=5.1						
EDW2	Edwards Air Fo	98.38	46	P	P	05 02 08.3	+0.6
	baz=307						
SHOC	Shoshone, Teco	98.87	44	P	P	05 02 10.1	+0.3
	baz=309						
GSC	Goldstone, Bar	98.90	45	P	P	05 02 10.3	+0.3
	baz=308						
BFSC	Mount Baldy Ra	98.99	46	P	P	05 02 11.1	+0.6
	baz=308						
GMRC	Granite Mounta	99.95	45	P	Pdif	05 02 15.2	+0.4
	baz=309						
PFO	Pinyon Flats O	100.16	46	P	Pdif	05 02 15.7	0.0
	baz=308						
TPFO	Pinon Flats	100.17	46	P	Pdif	05 02 15.3	-0.5
	baz=308						
MONP2	Monument Peak	100.63	47	P	Pdif	05 02 18.0	+0.1
	baz=308						
SYO	Syowa Base	109.64	202	⇑epPdiff	pPdif	05 03 08.0	+0.2
H62A	Milan	110.50	10	P	PKiKP	05 07 02.2	+0.4
	baz=348						
TORD	Torodi Ar. Bea	110.65	296	PP	PP	05 07 38.5	-0.7
	comp=Z,1.2nm,0.9s,baz=62,slow=6.7,SNR=3.0						
K59A	Cooperstown	111.57	13	P	PKiKP	05 07 03.7	-0.2
	baz=344						
N59A	State Game Lan	113.15	14	P	PKiKP	05 07 07.3	+0.3
	baz=343						
WVT	Waverly	113.76	26	P	PKiKP	05 07 07.6	-0.6
	baz=331						
T58A	Grand View Acr	116.20	18	P	PKiKP	05 07 12.0	-0.9
	baz=340						
LRAL	Lakeview Retre	116.79	27	P	PKPdf	05 07 12.5	-1.6
	baz=331						
V59A	Middlesex	117.38	18	P	PKPdf	05 07 14.5	-0.7
	baz=340						
GOGA	Godfrey	117.83	24	P	PKPdf	05 07 15.8	-0.4
	baz=334						
W60A	Pink Hill	118.20	18	P	PKPdf	05 07 16.6	-0.1
	baz=340						
Y60A	Bolivia	119.03	19	P	PKPdf	05 07 17.7	-0.7
	baz=339						
SDV	Santo Domingo	144.92	22	PKP	PKPab	05 08 06.6	0.0
	comp=Z,88nm,0.8s,baz=338,slow=1.8,SNR=85						
SDV	Santo Domingo	144.92	22		PKPab	05 08 06.4	-0.2
PCRV	Puerto La Cruz	145.22	11	PKPbc	PKPbc	05 08 06.0	-1.5
	comp=Z,9.3nm,0.7s,baz=27,slow=2.3,SNR=3.8						
ROSC	El Rosal	147.12	30	PKPbc	PKPbc	05 08 13.7	0.0
	comp=Z,10.0nm,0.5s,baz=54,slow=5.8,SNR=9.4						
ROSC	El Rosal	147.12	30	PKP2	PKPdf	05 08 12.4	+0.9
ROSC	El Rosal	147.12	30		PKPdf	05 08 12.4	+0.9
OTAV	Otavalo	148.76	42	PKIKP	PKPdf	05 08 15.2	+0.8
OTAV	Otavalo	148.76	42		PKPdf	05 08 15.2	+0.8
ATAH	Atahualpa	154.27	52	PKPbc	PKPbc	05 08 31.6	+0.8
	comp=Z,9.2nm,1.0s,baz=312,slow=7.6,SNR=4.3						
SIV	San Ignacio	171.37	18	PKPab	PKPab	05 09 58.6	-0.1
	comp=Z,1.5nm,0.8s,baz=336,slow=6.1,SNR=3.9						

IDC ***07*** *04:50:19.1±2.8, 6°.09S×130°.34E, h111^{km}±30^{km}, mb3.8/5, mb1 4.1/9, mb1mx3.7/46, mbtmp4.4/9 Error ellipse: s-maj=59.0km s-min=16.0km az=79.0*

NEIC ***07*** *04:50:20.1±2.5, 6°.04S±0°.06×130°.6E±0°.1, h132^{km}±10^{km}, mb4.2/7, Error ellipse: s-maj=16.1km s-min=9.3km az=85.0*

NOU ***07*** *04:50:25.9, 6°.47S×130°.57E, h132^{km}, mb4.2, Banda Sea*

DJA ***07*** *04:50:31.1±0.6, 5°S±5°×13°1E±°, h126^{km}±14^{km}, M4.4/10, mb4.7/4, mB5.3/1, MLv4.3/10, Mw(mB)4.7/1*

ISC 07 04:50:19.0±0.7**, 6°.07S**±0°.05×**130°.68E**±0°.07**, h124^{km}, n33, σ2^{s}.39**/37**, mb4.1**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.72	333	P	Pn	04 50 52.7	+3.4
SAUI	Saumlaki	2.00	162	Pn	Pn	04 50 54.8	+2.0
SAUI					Sn	04 51 20.5	+2.0
SAUI	Saumlaki	2.00	162	P	Sn	04 51 17.3	-1.2
MSAI	Masohi	3.21	327	P	Pn	04 51 10.5	+2.2
FAKI	Fak Fak	3.50	27	Pn	Pn	04 51 13.9	+1.9
FAKI	Fak Fak	3.50	27	P	Pn	04 51 13.9	+1.9
NLAI	Namlea	4.54	308	P	Pn	04 51 30.8	+4.9
SIJI	Sorong	5.20	7	P	Pn	04 51 35.7	+1.0
	34nm,0.3s,baz=111,slow=24,SNR=67						
SIJI				S	Sn	04 52 29.1	-4.5
	18nm,0.3s,baz=35,slow=24,SNR=8.9						
SWI	Sorong	5.20	6	P	Pn	04 51 34.8	0.0
RKPI	Ransiki, Papua	5.72	38	P	Pn	04 51 44.4	+2.7
	4µm194nm,0.7s						
SANI	Sanana	6.15	310	P	Pn	04 51 50.4	+2.9
	0.1nm18nm,0.5s						
MTN	Manton Dam	6.75	176	Pn	Pn	04 51 57.4	+1.8
MTN				Sn	Sn	04 53 11.9	+0.7
BAKI	Biak	7.27	48	P	Pn	04 52 06.6	+4.0
SOEI	Soe	7.33	240	Pn	Pn	04 52 05.9	+2.3
SOEI					Sn	04 53 25.8	+0.3
FITZ	Fitzroy Crossi	12.93	202	P	Pn	04 53 16.7	-1.6
	3.2nm,0.3s,baz=33,slow=10,SNR=45						
FITZ				S	Sn	04 55 31.7	-9.2
	1.5nm,0.3s,baz=18,slow=19,SNR=5.7						
WB0	Warramunga Arr	14.09	165	Pn	Pn	04 53 31.5	-1.8
WRAB	Tennant Creek	14.24	166	Pn	Pn	04 53 33.5	-1.7
WRA	Warramunga Arr	14.24	166	P	Pn	04 53 35.6	+0.4
	2.1nm,0.3s,baz=340,slow=14,SNR=35						
WRA				S	Sn	04 56 04.3	-8.4
	2.6nm,0.3s,baz=348,slow=23,SNR=7.7						
WB2	Warramunga Arr	14.25	166	Pn	Pn	04 53 34.1	-1.1
WR0	Warramunga Arr	14.31	165	Pn	Pn	04 53 36.5	+0.4
AS31	Alice Springs	17.77	170	Pn	Pn	04 54 21.0	+2.3
AS31				IAmb	IAmb	04 54 21.9	
	comp=Z,5.8nm,0.5s						
ASAR	Alice Springs	17.77	170	P	Pn	04 54 20.1	+1.4
	comp=Z,2.5nm,0.3s,baz=349,slow=10,SNR=142						
STKA	Stephens Creek	27.63	160	P	P	04 55 57.1	+2.1
	comp=Z,1.7nm,0.3s,baz=345,slow=8.6,SNR=7.9						
STKA	Stephens Creek	27.63	160	P	P	04 55 56.9	+1.8
KMI	Kunming	41.23	320	P	P	04 57 50.5	-1.7
ULN	Ulaanbaatar	57.59	341	P	P	04 59 55.9	-0.1
ULN				IAmb	IAmb	04 59 57.9	
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	57.78	341	P	P	04 59 58.1	+0.7
	comp=Z,0.3nm,0.4s,baz=164,slow=7.0,SNR=5.7						
MK31	Makanchi Array	67.82	326	P	P	05 01 03.4	-0.4
MK31				IAmb	IAmb	05 01 05.3	
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	67.82	326	P	P	05 01 04.6	+0.8
	comp=Z,3.7nm,0.4s,baz=113,slow=8.3,SNR=59						
MAKZ	Makanchi	68.00	326	P	P	05 01 05.0	+0.1
MAKZ				IAmb	IAmb	05 01 06.3	
	comp=Z,3.2nm,0.6s						
ZALV	Zalesovo Beam	71.05	333	P	P	05 01 23.5	+0.1
	comp=Z,0.5nm,0.5s,baz=186,slow=1.3,SNR=2.0						
KURBB	Kurchatov Arra	72.07	328	P	P	05 01 30.0	+0.3
	comp=Z,1.2nm,0.4s,baz=128,slow=5.3,SNR=6.4						
KURK	Kurchatov	72.08	328	P	P	05 01 29.7	0.0
KURK				IAmb	IAmb	05 01 46.3	
	comp=Z,2.1nm,1.0s						

TAP ***07*** *04:51:49.9, 24°.26N×121°.69E, h30^{km}, ML3.9, C*

JMA ***07*** *04:51:50.1±0.1, 24°.26N×121°.72E, h27^{km}±1^{km}, M3.2*

ISC 07 04:51:50.1±0.9**, 24°.24N**±0°.01×**121°.73E**±0°.02**, h26**^{km}±5^{km}**, n115, σ0^{s}.92**/224**, 3C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.14	242	⇑P	Pb	04 51 55.4	+0.2
	baz=226						
NACB				S	Sb	04 51 59.4	+0.7
	baz=226						
ENA	Nanau	0.18	2	⇑iP	Pb	04 51 55.7	0.0
	baz=17						
ENA				iS	Sb	04 52 00.4	+0.9
	baz=17						
TWD	Chiawan	0.20	218	iP	Pb	04 51 56.0	+0.2
	baz=211						
TWD				S	Sb	04 52 00.7	+0.9
	baz=211						
ENAH	Nanao	0.22	19	⇑P	Pb	04 51 56.1	+0.1
	baz=27						
ENAH				S	Sb	04 52 00.8	+0.7
	baz=27						
ETLH	Xiulin Townshi	0.23	261	eP	Pb	04 51 56.2	-0.1
	baz=248						
ETLH				eS	Sb	04 52 00.6	0.0
	baz=248						
HWA	Hwalien	0.29	204	P	Pn	04 51 58.0	-0.7
	baz=203						
HWA				eS	Sn	04 52 04.0	-0.2
	baz=203						
NNSB	Datong	0.37	300	⇓eP	Pb	04 51 57.8	-0.6
	baz=300						
NNSB				eS	Sb	04 52 03.3	-0.6
	baz=300						
NNSH	Datong	0.37	300	P	Pb	04 51 57.8	-0.5
	baz=304						
NNSH				S	Sb	04 52 03.4	-0.5
	baz=304						
TWC	Suao	0.38	16	iP	Pb	04 51 58.6	+0.2
	baz=19						
TWC				iS	Sn	04 52 05.3	-1.1
	baz=19						
NNS	Nan Shan	0.38	301	⇓iP	Pb	04 51 58.0	-0.6
	baz=301						
NNS				S	Sb	04 52 04.2	-0.1
	baz=301						
NDT	Datong Townshi	0.41	331	⇓P	Pb	04 51 58.5	-0.4
	baz=337						
NDT				S	Sb	04 52 04.8	-0.1
	baz=337						
ENTT	Nioudou	0.42	339	P	Pb	04 51 58.6	-0.5
	baz=342						
ENTT				S	Sb	04 52 05.4	+0.1
	baz=342						
WHF	Hehuan Shan	0.44	257	P	Pb	04 51 59.2	-0.4
	baz=260						
WHF				S	Sb	04 52 05.9	-0.2
	baz=260						
FUSS	Fushou	0.45	271	⇓P	Pb	04 51 59.3	-0.3
	baz=268						
FUSS				S	Sb	04 52 05.9	-0.2
	baz=268						
TWE	Neicheng	0.48	353	P	Pb	04 51 59.5	-0.5
	baz=354						
TWE				S	Sb	04 52 06.1	-0.7
	baz=354						
ESL	Shilin	0.51	213	P	Pb	04 51 59.9	-0.6
	baz=218						
ESL				S	Sb	04 52 07.7	+0.2
	baz=218						
TWT	Tachien	0.51	271	P	Pb	04 52 00.5	-0.1
	baz=265						
TWT				S	Sb	04 52 07.8	+0.1
	baz=265						
ILA	Ilan	0.52	2	eP	Pb	04 52 00.8	+0.1
	baz=360						
ILA				eS	Sn	04 52 08.7	-1.2
	baz=360						
TDCB	Techi	0.52	271	eP	Pb	04 52 00.6	-0.2
	baz=266						
TDCB				eS	Sb	04 52 07.7	-0.4
	baz=266						
YHNB	Yeheng	0.54	323	⇓eP	Pb	04 52 00.4	-0.6
	baz=323						
YHNB				eS	Sb	04 52 07.6	-0.8
	baz=323						
CHGB	Renai	0.54	251	eP	Pb	04 52 01.0	-0.2
	baz=242						
CHGB				eS	Sb	04 52 08.6	-0.1
	baz=242						
NSK	Sanguang	0.55	322	iP	Pb	04 52 00.4	-0.8
	baz=315						
NSK				S	Sb	04 52 07.8	-1.0
	baz=315						
NWLT	Wulai	0.57	339	P	Pb	04 52 00.8	-0.8
	baz=335						
NWLT				S	Sb	04 52 08.6	-0.8
	baz=335						
NTC	Toucheng	0.62	8	eP	Pb	04 52 02.3	0.0
	baz=11						
NTC				S	Sn	04 52 11.7	-0.6
	baz=11						
EGS		0.63	17	eP	Pn	04 52 03.0	-0.3
	baz=21						
EGS				eS	Sn	04 52 12.1	-0.4
	baz=21						
EGFH	Guangfu	0.64	206	eP	Pb	04 52 02.5	-0.1
	baz=212						
EGFH				eS	Sb	04 52 10.9	-0.2
	baz=212						
WHP	Taichung City	0.72	273	P	Pn	04 52 03.8	-0.8
	baz=271						
WHP				S	Sn	04 52 13.4	-1.5
	baz=271						
TIPB	Shuangxi	0.73	7	P	Pb	04 52 04.1	-0.2
	baz=1.0						
TIPB				S	Sn	04 52 14.4	-0.7
	baz=1.0						
NHDH	Xindian Distri	0.74	345	P	Pn	04 52 04.2	-0.7
	baz=337						
NHDH				S	Sn	04 52 14.1	-1.2
	baz=337						
WPL	Puli Township	0.74	252	eP	Pb	04 52 03.7	-0.7
	baz=250						
WPL				eS	Sb	04 52 14.2	0.0
	baz=250						
TWA	Mucha	0.75	350	P	Pn	04 52 04.6	-0.4
	baz=352						
TWA				S	Sn	04 52 14.7	-0.9
	baz=352						
TATO	Taipei	0.76	343	eP	Pn	04 52 05.2	+0.1
	baz=344						
TATO				S	Sn	04 52 14.7	-1.1
	baz=344						
DPDB	Guoxing	0.77	254	eP	Pb	04 52 04.4	-0.4
	baz=252						
DPDB				eS	Sn	04 52 14.9	-1.1
	baz=252						
LIOB	Emei	0.77	302	P	Pn	04 52 04.8	-0.5
	baz=301						
LIOB				S	Sn	04 52 14.8	-1.2
	baz=301						
NSTT	Nanjuang	0.77	300	P	Pn	04 52 04.8	-0.5
	baz=300						
NSTT				S	Sn	04 52 14.9	-1.1
	baz=300						
BACT	New Taipei Cit	0.80	341	eP	Pn	04 52 06.3	+0.7
	baz=341						
BACT				eS	Sn	04 52 16.6	-0.1
	baz=341						
TWB1	Santiao Chiao	0.80	17	P	Pn	04 52 05.2	-0.4
	baz=19						
TWB1				S	Sn	04 52 16.7	0.0
	baz=19						
HGSD	Ruisui	0.80	201	eP	Pn	04 52 05.0	-0.6
	baz=212						
TAP	Taipei	0.82	345	P	Pn	04 52 06.8	+0.9
	baz=347						
TAP				S	Sn	04 52 16.7	-0.5
	baz=347						
EHY	Hungye	0.82	207	eP	Pn	04 52 04.5	-1.5
	baz=215						
EHY				eS	Sn	04 52 17.2	-0.2
	baz=215						
NWF	Wu-fen Shan	0.83	3	eP	Pn	04 52 06.2	0.0
	baz=351						
NWF				eS	Sn	04 52 17.9	+0.3
	baz=351						
WFSB	Wu-fen Shan	0.83	3	eP	Pb	04 52 05.7	-0.1
	baz=351						
WFSB				eS	Sn	04 52 18.3	+0.9
	baz=351						
HSN1	Hsinchu	0.84	309	eP	Pb	04 52 06.6	+0.5
	baz=316						
HSN1				eS	Sn	04 52 19.1	+1.3
	baz=316						
SMLT	Sun Moon Lake	0.84	245	P	Pb	04 52 06.2	+0.1
	baz=239						
SMLT				eS	Sn	04 52 17.2	-0.7
	baz=239						
SSLB	Suanglung	0.84	238	eP	Pn	04 52 05.6	-0.7
	baz=230						
SSLB				eS	Sn	04 52 18.1	+0.2
	baz=230						
NTY	Taoyuan	0.85	332	eP	Pb	04 52 06.5	+0.2
	baz=333						
NTY				eS	Sn	04 52 18.7	+0.7
	baz=333						
TYC	Yuchr	0.87	247	eP	Pb	04 52 06.2	-0.3
	baz=241						
TYC				S	Sb	04 52 17.4	-0.3
	baz=241						
SBCB	Hsinchu	0.87	309	eP	Pb	04 52 07.0	+0.4
	baz=315						
SBCB				eS	Sn	04 52 19.9	+1.3
	baz=315						
NCU	National Centr	0.88	326	P	Pb	04 52 06.7	0.0
	baz=326						
NCU				S	Sn	04 52 19.6	+0.9
	baz=326						
NCUH	Zhongli	0.88	326	P	Pb	04 52 06.5	-0.1
	baz=325						
NCUH				S	Sn	04 52 19.6	+0.9
	baz=325						
HSN	Hsinchu	0.89	309	P	Pb	04 52 07.3	+0.4
	baz=311						
HSN				S	Sn	04 52 19.4	+0.4
	baz=311						
TWS1	Kuangyinshan	0.90	342	P	Pb	04 52 07.0	-0.1
	baz=352						
TWS1				S	Sn	04 52 19.6	+0.3
	baz=352						
NSY	Sanyi	0.90	281	eP	Pb	04 52 08.0	+0.9
	baz=280						
NSY				S	Sn	04 52 20.6	+1.2
	baz=280						
TNOU	National Taiwa	0.90	2	eP	Pn	04 52 06.0	-1.1
	baz=352						
TNOU				eS	Sn	04 52 19.6	+0.2
	baz=352						
NMLH	Miaoli	0.91	289	eP	Pb	04 52 07.4	+0.2
	baz=296						
NMLH				eS	Sn	04 52 20.6	+1.2
	baz=296						
YM01	YM01	0.91	351	eP	Pb	04 52 07.5	+0.2
	baz=340						
YM01				eS	Sn	04 52 19.5	-0.1
	baz=340						
YM10	YM10	0.92	350	eP	Pb	04 52 07.6	+0.1
	baz=341						
YM10				eS	Sn	04 52 19.7	-0.2
	baz=341						
YM04	YM04	0.93	349	eP	Pb	04 52 07.0	-0.5
	baz=349						
YM04				S	Sn	04 52 19.4	-0.5
	baz=349						
YM11	YM11	0.93	351	eP	Pb	04 52 08.0	+0.4
	baz=341						
YM11				eS	Sn	04 52 20.3	+0.1
	baz=341						
YULB	Yu-li	0.94	205	eP	Pn	04 52 06.1	-1.5
	baz=205						
YULB				eS	Sn	04 52 18.4	-1.8
	baz=205						
YM03	YM03	0.95	349	eP	Pb	04 52 08.0	0.0
	baz=350						
YM03				eS	Sn	04 52 20.9	+0.3
	baz=350						
YM08	YM08	0.95	352	eP	Pn	04 52 07.0	-0.8
	baz=344						
YM08				eS	Sn	04 52 19.6	-1.0
	baz=344						
NTST	Danshui	0.95	344	eP	Pb	04 52 08.4	+0.5
	baz=354						
NTST				eS	Sn	04 52 21.4	+0.9
	baz=354						
ANP	Anpu	0.96	348	eP	Pn	04 52 07.4	-0.6
	baz=350						
ANP				eS	Sb	04 52 18.7	-1.7
	baz=350						
WWF	Wufeng	0.96	258	eP	Pb	04 52 09.2	+1.0
	baz=253						
WWF				eS	Sb	04 52 23.8	+3.3
	baz=253						
EYUL	Yuli	0.97	203	eP	Pn	04 52 06.7	-1.3
	baz=212						
TCU	Taichung	0.97	265	P	Pb	04 52 08.3	+0.1
	baz=263						
TCU				S	Sb	04 52 23.2	+2.6
	baz=263						
WHYT	Xinyi Township	0.97	236	eP	Pn	04 52 07.8	-0.2
	baz=234						
TWF1	Yuli	0.97	204	P	Pn	04 52 07.3	-0.8
	baz=204						
TWF1				eS	Sn	04 52 19.4	-1.6
	baz=204						
WDJ	Dajia District	1.00	276	P	Pb	04 52 09.9	+1.1
	baz=275						
WDJ				S	Sb	04 52 23.5	+1.9
	baz=275						
WJS	Zhushan	1.01	246	eP	Pb	04 52 10.1	+1.2
	baz=244						
WJS				eS	Sb	04 52 25.4	+3.6
	baz=244						
WNT1	Nantou City	1.02	251	eP	Pb	04 52 10.8	+1.7
	baz=250						
WNT1				eS	Sb	04 52 25.2	+3.2
	baz=250						
WNT	Mingjian	1.02	249	P	Pb	04 52 10.0	+0.8
	baz=248						
WNT				S	Sb	04 52 24.5	+2.3
	baz=248						
YUS	Yu-Shan	1.04	224	eP	Pn	04 52 09.2	-0.2
	baz=212						
YUS				S	Sb	04 52 23.0	0.0
	baz=212						
WCHH	Zhanghua	1.08	262	eP	Pb	04 52 10.9	+0.8
	baz=260						
WCHH				S	Sb	04 52 25.9	+2.0
	baz=260						
FULB	Fuli	1.11	201	eP	Pn	04 52 09.6	-0.4
	baz=213						

FULB	baz=213			eS	Sn	04 52 24.6	+0.1
ALS	Alishan baz=219	1.12	230	eP	Pb	04 52 10.7	-0.3
ALS	baz=219			eS	Sb	04 52 25.2	0.0
CHN5	Tsauling baz=236	1.16	237	eP	Pb	04 52 11.6	+0.1
CHN5	baz=236			eS	Sb	04 52 27.5	+1.3
YOJ	Yonaguni jima	1.19	79	P	Pn	04 52 11.3	+0.3
YOJ				eS	Sb	04 52 27.2	+0.3
YOJ	Yonaguni jima baz=80	1.19	79	eP	Pn	04 52 11.3	+0.3
YOJ	baz=80			eS	Sb	04 52 27.9	+1.0
CHKT	Chengkung baz=209	1.19	197	eP	Pb	04 52 12.3	+0.4
CHKT	baz=209			eS	Sb	04 52 27.0	+0.2
WGK	Gukeng baz=242	1.21	243	eP	Pb	04 52 12.7	+0.5
WGK	baz=242			eS	Sb	04 52 29.9	+2.4
WDLH	Douliu baz=242	1.22	243	eP	Pb	04 52 13.2	+0.6
WDLH	baz=242			eS	Sb	04 52 30.9	+3.0
ELDTW	Lidau baz=212	1.24	212	eP	Pn	04 52 11.4	-0.4
ELDTW	baz=212			eS	Sn	04 52 27.9	+0.1
RLNB	Erlin baz=253	1.30	255	eP	Pb	04 52 13.9	0.0
RLNB	baz=253			eS	Sb	04 52 31.4	+1.2
EDH	Donghe baz=212	1.32	197	eP	Pn	04 52 12.6	-0.3
EDH	baz=212			eS	Sn	04 52 29.6	-0.1
WTK	Tuku baz=245	1.35	246	eP	Pb	04 52 14.2	-0.4
WTK	baz=245			eS	Sb	04 52 32.0	+0.5
CHN2	Minshiung baz=238	1.35	239	eP	Pb	04 52 14.7	0.0
CHN2	baz=238			eS	Sb	04 52 33.0	+1.5
CHN4	Tsaushan baz=221	1.37	230	P	Pb	04 52 15.2	+0.1
CHN4	baz=221			S	Sb	04 52 34.5	+2.3
TPUB	Ta-pu baz=218	1.38	227	eP	Pb	04 52 15.3	+0.1
TPUB	baz=218			eS	Sb	04 52 33.6	+1.2
STYT	Tauyuan baz=213	1.40	220	P	Pb	04 52 14.8	-0.7
STYT	baz=213			eS	Sb	04 52 32.9	-0.1
CHY	Chiayi baz=238	1.41	239	eP	Pb	04 52 15.5	-0.2
CHY	baz=238			eS	Sb	04 52 34.7	+1.5
WTP	Ta-pu baz=214	1.43	226	P	Pb	04 52 16.6	+0.6
WTP	baz=214			S	Sb	04 52 35.2	+1.4
TWK	Hsinying baz=219	1.50	230	eP	Pb	04 52 17.2	-0.1
TWK	baz=219			eS	Sb	04 52 37.2	+1.3
WSF	Szhu baz=246	1.51	247	eP	Pb	04 52 16.1	-1.2
WSF	baz=246			S	Sb	04 52 37.0	+0.9
WLGB	Puzi baz=239	1.52	240	eS	Sb	04 52 37.2	+0.9
SNST	Tainan City baz=218	1.52	228	eS	Sb	04 52 37.4	+0.9
CHN1	Nanshi baz=228	1.52	227	eP	Pb	04 52 18.1	+0.4
CHN1	baz=228			S	Sb	04 52 38.1	+1.5
TWGBT	Beinan baz=195	1.54	203	eP	Pn	04 52 14.8	-1.1
TWGBT	baz=195			eS	Sn	04 52 34.8	-0.2
SGST	Jiashian baz=213	1.56	223	eP	Pn	04 52 16.6	+0.4
SGST	baz=213			eS	Sb	04 52 37.5	-0.2
TTN	Taitung baz=202	1.58	200	eP	Pn	04 52 16.6	+0.2
TTN	baz=202			eS	Sn	04 52 35.8	-0.1
LDUT	Ludao baz=182	1.58	189	eS	Sn	04 52 36.6	+0.6
ICHU	Yijhu baz=224	1.59	237	eP	Pb	04 52 18.3	-0.6
ICHU	baz=224			eS	Sb	04 52 39.5	+1.0
CHN8	Yiju baz=226	1.66	238	P	Pn	04 52 17.4	0.0
CHN8	baz=226			S	Sb	04 52 41.6	+1.3
SSD	Sandimen baz=205	1.80	214	eP	Pb	04 52 21.2	-1.2
SSD	baz=205			eS	Sb	04 52 44.4	-0.1
IRIF	Iriomote-Funau	1.82	87	P	Pn	04 52 20.1	+0.3
IRIF				S	Sn	04 52 42.0	-0.1
TSMG	Majia baz=205	1.83	213	eP	Pb	04 52 21.7	-1.1
TSMG	baz=205			eS	Sb	04 52 45.0	-0.3
MASBT	Mashibuluo baz=217	1.91	212	eP	Pb	04 52 23.0	-1.3
MASBT	baz=217			eS	Sb	04 52 46.3	-1.4
EAST	Anshuo baz=199	2.02	204	eP	Pn	04 52 22.5	0.0
EAST	baz=199			eS	Sn	04 52 46.8	-0.2
SSPT	Xinbi baz=204	2.05	212	eP	Pb	04 52 25.1	-1.5
SSPT	baz=204			eS	Sb	04 52 51.4	-0.4
JKRS	Kuro-shima	2.08	90	P	Pn	04 52 24.5	+1.2
JKRS				eS	Sn	04 52 49.8	+1.5
PHUB	P'eng-hu baz=249	2.11	250	eP	Pn	04 52 23.0	-0.7
PHUB	baz=249			eS	Sn	04 52 47.8	-1.2
SCZT	Fangliau baz=214	2.12	209	eP	Pb	04 52 27.4	-0.5
SCZT	baz=214			S	Sb	04 52 52.8	-1.0
JIJ	Ishigaki jima	2.20	86	P	Pn	04 52 25.4	+0.4
JIJ				eS	Sn	04 52 51.3	-0.1
JISG	Ishigakijimahi	2.38	81	P	Pn	04 52 27.2	-0.2
JISG				eS	Sn	04 52 56.2	+0.5

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*TAP **07** 04:54:00.8, 24°.27N × 121°.68E, h24^{km}, ML3.1, C*
*JMA **07** 04:54:00.9±0.2, 24°.26N × 121°.68E, h27^{km}±2^{km}*
ISC 07 04:54:01.1±0.9**, 24°.26N**±0°.02×**121°.69E**±0°.03**, h27**^{km}±5^{km}**,**
n71, σ0^{s}.51/100**, 1C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao baz=216	0.12	223	⇓P	Pb	04 54 05.8	-0.4
NACB	baz=216			S	Sb	04 54 09.7	+0.1
ENA	Nanau baz=23	0.17	17	⇑iP	Pb	04 54 06.4	-0.3
ENA	baz=23			eS	Sb	04 54 11.7	+1.2
ETLH	Xiulin Townshi baz=249	0.19	253	P	Pb	04 54 06.5	-0.5
ETLH	baz=249			S	Sb	04 54 10.8	-0.2
TWD	Chiawan baz=198	0.20	204	P	Pb	04 54 06.7	-0.3
TWD	baz=198			eS	Sb	04 54 11.0	+0.1
ENAH	Nanao baz=34	0.22	32	P	Pb	04 54 07.0	-0.2
ENAH	baz=34			eS	Sb	04 54 11.7	+0.3
HWA	Hwalien baz=190	0.29	194	P	Pb	04 54 08.2	0.0
HWA	baz=190			eS	Sb	04 54 13.7	+0.7
NNSB	Datong baz=300	0.32	301	P	Pb	04 54 08.4	-0.3
NNSB	baz=300			S	Sb	04 54 13.9	0.0
NNSH	Datong baz=300	0.32	301	eP	Pb	04 54 08.4	-0.3
NNSH	baz=300			eS	Sb	04 54 14.0	+0.1
NNS	Nan Shan baz=301	0.34	302	P	Pb	04 54 08.5	-0.4
NDT	Datong Townshi baz=335	0.37	335	P	Pb	04 54 09.3	-0.1
NDT	baz=335			S	Sb	04 54 15.3	+0.3
TWC	Suao baz=26	0.38	23	P	Pb	04 54 09.3	-0.1
TWC	baz=26			eS	Sb	04 54 15.7	+0.6
ENTT	Nioudou baz=345	0.39	344	P	Pb	04 54 09.4	-0.3
ENTT	baz=345			S	Sb	04 54 15.8	+0.3
WHF	Hehuan Shan baz=250	0.40	253	P	Pb	04 54 09.5	-0.6
WHF	baz=250			eS	Sb	04 54 15.9	-0.3
FUSS	Fushou baz=266	0.40	268	P	Pb	04 54 09.8	-0.2
FUSS	baz=266			S	Sb	04 54 16.3	+0.2
TWE	Neicheng	0.46	358	P	Pb	04 54 10.6	-0.1
TDCB	Techi baz=267	0.48	269	P	Pb	04 54 11.1	-0.1
TDCB	baz=267			eS	Sb	04 54 18.1	0.0
YHNB	Yeheng baz=325	0.49	325	⇓P	Pb	04 54 11.1	-0.3
YHNB	baz=325			eS	Sb	04 54 18.4	+0.1
ESL	Shilin baz=204	0.50	207	eP	Pb	04 54 10.8	-0.6
CHGB	Renai baz=245	0.51	247	P	Pb	04 54 11.5	-0.2
CHGB	baz=245			S	Sb	04 54 19.4	+0.5
NSK	Sanguang baz=324	0.51	324	P	Pb	04 54 11.2	-0.4
NSK	baz=324			eS	Sb	04 54 18.5	-0.2
NWLT	Wulai baz=342	0.54	342	eP	Pb	04 54 11.8	-0.3
NWLT	baz=342			eS	Sb	04 54 19.9	+0.3
NTC	Toucheng baz=13	0.60	13	eP	Pn	04 54 13.4	-0.6
NTC	baz=13			eS	Sb	04 54 21.5	+0.2
EGFH	Guangfu baz=200	0.64	202	eP	Pb	04 54 13.5	-0.2
WHP	Taichung City baz=270	0.67	271	eP	Pn	04 54 14.6	-0.4
WHP	baz=270			S	Sn	04 54 24.0	-0.7
WPL	Puli Township baz=248	0.71	250	eP	Pn	04 54 14.9	-0.5
NHDH	Xindian Distri baz=348	0.71	348	eP	Pn	04 54 15.5	+0.1
NHDH	baz=348			S	Sn	04 54 24.9	-0.6
TIPB	Shuangxi baz=11	0.72	10	eP	Pb	04 54 14.8	-0.2
TIPB	baz=11			S	Sn	04 54 25.1	-0.6
LIOB	Emei baz=301	0.72	302	eP	Pn	04 54 15.5	0.0
LIOB	baz=301			eS	Sn	04 54 25.6	-0.1
TWA	Mucha baz=353	0.72	353	eP	Pn	04 54 15.6	0.0
TWA	baz=353			eS	Sn	04 54 25.3	-0.4
NSTT	Nanjuang baz=300	0.72	301	eP	Pn	04 54 15.2	-0.3
NSTT	baz=300			eS	Sn	04 54 25.2	-0.6
DPDB	Guoxing baz=250	0.73	252	eS	Sn	04 54 25.4	-0.6
TWB1	Santiao Chiao baz=21	0.79	20	eP	Pn	04 54 16.6	0.0
TWB1	baz=21			eS	Sn	04 54 27.0	-0.4
HGSD	Ruisui baz=196	0.80	197	eP	Pn	04 54 17.5	+0.9
NWF	Wu-fen Shan baz=6.0	0.81	6	eP	Pn	04 54 16.6	-0.2
NWF	baz=6.0			eS	Sn	04 54 28.1	0.0
WFSB	Wu-fen Shan baz=6.0	0.81	6	eP	Pn	04 54 17.6	+0.9
WFSB	baz=6.0			eS	Sn	04 54 28.1	+0.2
SMLT	Sun Moon Lake baz=240	0.81	242	eP	Pn	04 54 16.7	-0.2
SMLT	baz=240			eS	Sn	04 54 27.8	-0.3
SSLB	Suanglung baz=233	0.82	235	eP	Pb	04 54 16.4	-0.4
EHY	Hungye baz=202	0.82	204	eP	Pb	04 54 16.5	-0.3
TYC	Yuchr baz=243	0.84	245	eP	Pb	04 54 16.5	-0.5
NCUH	Zhongli baz=327	0.84	327	eP	Pn	04 54 17.5	+0.3
NSY	Sanyi baz=279	0.86	280	eP	Pn	04 54 17.3	-0.1
TWS1	Kuangyinshan baz=344	0.87	344	eS	Sn	04 54 29.9	+0.5
YM01	YM01 baz=353	0.89	353	eP	Pn	04 54 18.0	+0.1
TNOU	National Taiwa baz=5.0	0.89	5	eP	Pb	04 54 17.4	-0.6
YM10	YM10 baz=353	0.90	353	eP	Pn	04 54 18.1	+0.1
YM04	YM04 baz=351	0.90	351	eP	Pn	04 54 18.1	+0.1
YM11	YM11 baz=354	0.91	354	eP	Pn	04 54 19.0	+0.8
YM08	YM08 baz=355	0.93	355	eP	Pb	04 54 18.6	0.0
WWF	Wufeng baz=255	0.93	257	eP	Pb	04 54 19.8	+1.2
TCU	Taichung baz=262	0.93	263	eS	Sn	04 54 32.6	+1.8
ANP	Anpu baz=351	0.93	351	eP	Pn	04 54 18.1	-0.4
YULB	Yu-li baz=201	0.94	202	eP	Pb	04 54 18.7	-0.1
WDJ	Dajia District baz=274	0.96	275	eS	Sn	04 54 33.5	+1.9
TWF1	Yuli baz=200	0.97	201	eP	Pn	04 54 18.7	-0.3
WJS	Zhushan baz=242	0.98	244	eP	Pb	04 54 19.7	+0.2
WNT	Mingjian baz=246	0.99	247	eP	Pb	04 54 20.6	+0.9
ALS	Alishan baz=226	1.10	227	eP	Pb	04 54 21.8	+0.2
FULB	Fuli baz=198	1.12	199	eP	Pb	04 54 21.5	-0.4
CHN5	Tsauling baz=233	1.14	234	eP	Pb	04 54 22.4	+0.2
WDLH	Douliu baz=240	1.19	242	eP	Pn	04 54 22.1	+0.1
YOJ	Yonaguni jima	1.23	80	eS	Sn	04 54 38.2	0.0
ELDTW	Lidau baz=208	1.23	210	eP	Pb	04 54 23.2	-0.6
EDH	Donghe baz=194	1.33	195	eP	Pn	04 54 23.9	0.0
CHN4	Tsaushan baz=227	1.35	228	eP	Pb	04 54 25.7	-0.1
TPUB	Ta-pu baz=224	1.36	225	eP	Pb	04 54 25.2	-0.8
STYT	Tauyuan baz=216	1.39	218	eP	Pb	04 54 26.0	-0.4
WTP	Ta-pu baz=223	1.41	224	eP	Pb	04 54 26.0	-0.8
TWK	Hsinying baz=227	1.48	228	eP	Pb	04 54 28.0	+0.1
SGST	Jiashian baz=219	1.55	221	eP	Pn	04 54 27.2	+0.2
SLGT	Liugui baz=216	1.58	217	eP	Pb	04 54 28.5	-1.2
TSMG	Majia baz=211	1.82	212	eP	Pn	04 54 30.9	+0.2

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*SNET **07** 05:07:01.4±0.9, 5°.52N × 82°.70W, h0^{km}±999^{km}, ML6.4*
*RSNC **07** 05:07:03.6±0.4, 5°.81N × 82°.79W, h32^{km}±13^{km}, ML5.2, Mw6.6*
*IDC **07** 05:07:05.1±0.5, 5°.82N × 82°.82W, h0^{km}, mb4.8/27, mb1 5.0/33, mb1mx4.9/44, mbtmp4.9/33, ML4.1/6, MS5.6/21, Ms1 5.6/21, ms1mx5.3/29, Error ellipse: s-maj=19.6km s-min=10.0km az=48.0*
*UPA **07** 05:07:06.0±1.8, 6°.39N × 82°.68W, h0^{km}±8^{km}, MW5.7, Fault plane solution: NP1:ϕ_s282.88000°, δ70.71000°, λ-5.38000°.*
*NEIC **07** 05:07:07.5±2.4, 5°.90N±0°.06 × 82°.66W±0°.07, h8^{km}±1^{km}, mb5.6/555, Ms_20 5.6/736, Mwb6.3/37, Mwc6.5/54, Mww6.5, Mwc6.5(GCMT), Error ellipse: s-maj=12.2km s-min=10.1km az=240.0*
*MOS **07** 05:07:07.1±1.8, 6°.00N × 82°.82W, h10^{km}, mb5.7/23, MS5.7/17, Error ellipse: s-maj=9.4km s-min=6.4km az=103.6*
*UCR **07** 05:07:07.7±1.5, 6°.39N × 82°.51W, h20^{km}, ML5.1, MW5.7, mb6.5(NEIC)*
*BJI **07** 05:07:08.6±0.0, 5°.80N × 82°.45W, h20^{km}, mB6.0/40, Ms6.1/49, Ms7 5.9/48*
*NEIC **07** 05:07:08.5, 5°.84N × 82°.64W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.04; $M_{\theta\theta}$0.04; $M_{\phi\phi}$0.00; $M_{r\theta}$-0.11; $M_{\theta\phi}$3.14; $M_{\phi r}$-0.39; Fault plane solution: $M_0$3.17000×10^{18} NP1:ϕ_s180.07000°, δ88.22000°, λ173.02000°. NP2:ϕ_s270.28000°, δ83.03000°, λ1.79000°. Principal axes: T 3.2005, Plg6.0000°, Azm135.0000°; N -0.0663, Plg83.0000°, Azm346.0000°; P -3.1342, Plg4.0000°, Azm225.0000°;*
*GCMT **07** 05:07:17.5±0.0, 5°.59N × 82°.64W, h23^{km}, MW6.5/171, Moment Tensor Solution. s168,c406; s171,c755; Duration: 4^{s}.1 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08±.02; $M_{\theta\theta}$0.01±.02; $M_{\phi\phi}$0.06±.02; $M_{r\theta}$0.53±.04; $M_{\theta\phi}$6.04±.02; $M_{\phi r}$0.07±.04; Best double couple: $M_0$6.06400×10^{18} NP1:ϕ_s360.00000°, δ85.00000°, λ179.00000°. NP2:ϕ_s90.00000°, δ89.00000°, λ5.00000°. Principal axes: T 6.1110, Plg4.0000°, Azm315.0000°; N -0.0950, Plg85.0000°, Azm96.0000°; P -6.0160, Plg3.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **07** 05:07:18, 5°.59N × 82°.61W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.24; $M_{\theta\theta}$0.02; $M_{\phi\phi}$0.22; $M_{r\theta}$0.51; $M_{\theta\phi}$6.09; $M_{\phi r}$0.20; Fault plane solution: $M_0$6.12000×10^{18} NP1:ϕ_s359.00000°, δ85.00000°, λ178.00000°. NP2:ϕ_s90.00000°, δ88.00000°, λ5.00000°. Principal axes: T 6.2495, Plg4.0000°, Azm315.0000°; N -0.2705, Plg85.0000°, Azm108.0000°; P -5.9790, Plg2.0000°, Azm224.0000°;*
*NEIC **07** 05:07:20, 5°.73N × 82°.25W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.16; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-0.26; $M_{r\theta}$1.99; $M_{\theta\phi}$6.60; $M_{\phi r}$-0.15; Fault plane solution: $M_0$6.91000×10^{18} NP1:ϕ_s2.00000°, δ73.00000°, λ-178.00000°. NP2:ϕ_s271.00000°, δ89.00000°, λ-16.00000°. Principal axes: T 6.9468, Plg11.0000°, Azm318.0000°; N -0.0841, Plg73.0000°, Azm87.0000°; P -6.8627, Plg13.0000°, Azm225.0000°;*
*NEIC **07** 05:07:33.9, 5°.62N × 81°.89W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.04; $M_{\theta\theta}$0.07; $M_{\phi\phi}$0.98; $M_{r\theta}$-0.83; $M_{\theta\phi}$6.82; $M_{\phi r}$-1.69; Fault plane solution: $M_0$7.05000×10^{18} NP1:ϕ_s177.84000°, δ86.13000°, λ167.41000°. NP2:ϕ_s268.70000°, δ77.44000°, λ3.96000°. Principal axes: T 7.7275, Plg12.0000°, Azm133.0000°; N -1.3551, Plg77.0000°, Azm341.0000°; P -6.3724, Plg6.0000°, Azm224.0000°;*
ISC 07 05:07:06.2±0.6**, 6°.11N**±0°.02×**82°.66W**±0°.02**, h8**^{km}±3^{km}**, n1497, σ2^{s}.66**/746**, mb5.6**/339**, MS5.6**/418**, 12C-25D, Fault plane solution: NP1:**ϕ_s271.20212°**,** δ61.70166°**,** λ-9.06188°. **NP2:**ϕ_s5.52599°**,** δ82.02863°**,** λ-151.40025°. **Principal axes:** T Plg13.7185°**,** Azm135.2477°**;** N Plg60.4008°**,** Azm19.7969°**;** P Plg25.6755°**,** Azm231.9873°**; South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	2.17	55	iP	Pn	05 07 38.0	-4.6
CACAO				eS	Sb	05 08 07.8	-5.0
GMAL	Guarumal, Vera	2.17	41	eP	Pn	05 07 38.6	-4.1
GMAL				eS	Sb	05 08 07.4	-5.5
PVID3	Puerto Vidal,	2.19	28	eP	Pn	05 07 39.4	-3.6
PVID3				eS	Sg	05 08 08.2	-8.5
MARI3	Mariato, Verag	2.25	47	eP	Pn	05 07 40.6	-3.3
MARI3				eS	Sb	05 08 09.3	-6.1
REME3	Remedios, Chir	2.26	21	eP	Pn	05 07 40.7	-3.3
LESP3	La Esperanza,	2.29	357	eP	Pn	05 07 40.8	-3.5
LOCO3	Loma Colorada,	2.30	6	eP	Pn	05 07 41.4	-3.1
NANC3	Nancito, Chiri	2.31	23	eP	Pn	05 07 41.0	-3.7
MAPC	Malpelo	2.34	153	eP	Pn	05 07 36.6	-8.5
MAPC				eS	Sn	05 08 01.9	-12
MAPC	comp=Z,14µm,0.7s			i		05 08 04.2	
BAGA3	Bagala, Chiriq	2.35	3	⇑eP	Pn	05 07 41.9	-3.2
PIRO	Carate, Puerto	2.38	344	eP	Pn	05 07 41.5	-4.1
PIRO				eS	Sg	05 08 14.8	-7.9
PONU3	Ponuga, Veragu	2.43	43	⇓eP	Pn	05 07 43.4	-2.9
GUAL3	Gualaca, Chiri	2.43	8	eP	Pn	05 07 43.6	-2.7
CDITO	Canoas	2.46	355	eP	Pn	05 07 42.6	-4.1
CDITO	Canoas	2.46	355	eP	Pn	05 07 42.3	-4.4
PTJ1	Puerto Jimnez	2.50	345	eP	Pn	05 07 44.1	-3.1
PTJ1	Puerto Jimnez	2.50	345	eP	Pn	05 07 44.1	-3.1
PTJ1				eS	Sb	05 08 15.0	-7.3
MESA3	La Mesa, Verag	2.50	36	eP	Pn	05 07 43.7	-3.5
BCO2	Palmira	2.60	3	eP	Pn	05 07 45.4	-3.4
BCO2				eS	Sb	05 08 16.9	-8.4
OCU3	Ocu, Herrera	2.61	46	eP	Pn	05 07 45.6	-3.2
CNAZ3	Canazas, Verag	2.65	33	⇓eP	Pn	05 07 45.5	-3.8
BRU2	Volcan	2.67	359	eP	Pn	05 07 46.4	-3.3
BRU2	Volcan	2.67	359	eP	Pn	05 07 46.2	-3.5
BC3P	Paso Ancho	2.69	1	eP	Pn	05 07 47.3	-2.8
EDSV	San Vito	2.71	353	eP	Pn	05 07 47.8	-2.4
CHGR2	Aguacate	2.86	10	eP	Pn	05 07 49.7	-2.5
CHIT3	Chitre	2.88	50	eP	Pn	05 07 50.0	-2.5
AZU	Azuero	2.90	55	⇓eP	Pn	05 07 48.8	-3.9
AZU				iS	Sb	05 08 27.4	-6.4
AZU	Azuero	2.90	55	eP	Pn	05 07 48.7	-4.0
AZU	Azuero	2.90	55	⇓eP	Pn	05 07 48.7	-4.0
AZU	comp=Z,5µm,0.4s			i		05 08 19.6	
AZU				eS	Sb	05 08 27.6	-6.3
EDPN	Palmar Norte	2.94	344	eP	Pn	05 07 49.9	-3.5
EDBA	Buenos Aires	3.10	349	eP	Pn	05 07 53.3	-2.2
DRK0	Durika	3.19	350	eP	Pn	05 07 54.2	-2.7
DRK0	Durika	3.19	350	eP	Pn	05 07 54.0	-2.9
EDLM	Las Mercedes	3.28	344	eP	Pn	05 07 54.8	-3.3
PNME	Penonome	3.31	44	eP	Pn	05 07 56.4	-1.9
PNME	Penonome	3.31	44	eP	Pn	05 07 56.6	-1.7
EDDO	Dominical	3.34	339	eP	Pn	05 07 55.4	-3.5
PEZE	Perez Zeledon,	3.41	343	eP	Pn	05 07 56.1	-3.7
RGM0	Gandoca	3.46	1	eP	Pn	05 07 57.7	-2.8
RIMA	Rio Macho	3.83	342	eP	Pn	05 08 01.8	-3.9
LCR2	La Lucha 2	3.85	340	eP	Pn	05 08 01.8	-4.3
ZANG	Zanguenga, Cho	3.96	44	eP	Pn	05 08 05.0	-2.3
CHOR3	La Chorrera	3.99	46	eP	Pn	05 08 06.0	-1.7
BATAN	Batan	4.03	350	eP	Pn	05 08 07.6	-0.7
BATAN	Batan	4.03	350	eP	Pn	05 08 06.3	-1.9
CVTR	Volcan Turrial	4.04	344	eP	Pn	05 08 05.8	-3.0
SJS	Escuela Geolog	4.05	340	eP	Pn	05 08 05.5	-3.2
TABO3	Taboga, Panama	4.07	49	eP	Pn	05 08 07.2	-1.7

ARRA3	Arraijan, Pana	4.11	46	eP	Pn	05 08 07.3	-2.2
BCIP	Isla Barro Col	4.13	42	⇓eP	Pn	05 08 07.4	-2.3
BCIP				eP	Pn	05 08 07.4	-2.3
BCIP	Isla Barro Col	4.13	42	P	Pn	05 08 07.7	-1.9
BCIP	Isla Barro Col	4.13	42	Pn	Pn	05 08 07.7	-1.9
BCIP	Isla Barro Col	4.13	42	eP	Pn	05 08 07.2	-2.5
BCIP				i		05 08 40.2	
	comp=Z,854nm,0.5s						
HDC	Heredia	4.13	340	⇑iP	Pn	05 08 07.2	-2.6
HDC				eP	Pb	05 08 07.2	-12
HDC	Heredia	4.13	340	eP	Pn	05 08 07.0	-2.8
HDC	Heredia	4.13	340	Pn	Pn	05 08 09.9	+0.1
FLAM	Flamenco Islan	4.16	48	eP	Pn	05 08 08.7	-1.5
UPA	Univ. de Panam	4.21	47	eP	Pn	05 08 08.8	-2.0
UPA				eS	Sn	05 08 56.1	-4.1
UPA	Univ. de Panam	4.21	47	eP	Pn	05 08 08.8	-2.0
SRA1	San Ramn	4.34	336	eP	Pn	05 08 08.9	-3.8
CHPO	Chepo, Panama	4.64	49	eP	Pn	05 08 14.7	-2.0
JTS	Las Juntas de	4.74	331	Pn	Pn	05 08 17.4	-0.7
	comp=Z,45nm,0.3s,baz=134,slow=4.7,SNR=134						
JTS	Las Juntas de	4.74	331	⇑iP	Pn	05 08 14.4	-3.7
JTS				eP	Pb	05 08 15.1	-15
JTS	Las Juntas de	4.74	331	P	Pn	05 08 17.8	-0.3
JTS	Las Juntas de	4.74	331	Pn	Pn	05 08 17.8	-0.3
JTS	Las Juntas de	4.74	331	eP	Pn	05 08 15.3	-2.8
CASO	Castillo	4.76	335	eP	Pn	05 08 16.9	-1.5
FORC	Fortuna	4.77	335	eP	Pn	05 08 16.9	-1.6
ARE1	Arenal 1	4.78	335	eP	Pn	05 08 15.8	-2.8
CEDE	Laguna Cedeo	4.80	335	eP	Pn	05 08 17.5	-1.5
CNTA3	Canitas, Panam	4.85	50	eP	Pn	05 08 17.3	-2.3
COVE	Coope Vega, Sa	4.89	339	eP	Pn	05 08 17.6	-2.6
PTAC	Punta Ardita,	4.93	78	eP	Pn	05 08 17.5	-3.2
ACAL	Aguas Claras	5.07	333	eP	Pn	05 08 21.3	-1.4
PTEN	Parque Tenorio	5.12	333	eP	Pn	05 08 22.2	-1.3
CUI	Cuipilapa	5.16	331	eP	Pn	05 08 22.4	-1.4
UPD2	Meteti	5.20	62	eP	Pn	05 08 25.0	+0.6
HORNC	Hornillas	5.21	332	eP	Pn	05 08 22.9	-1.8
SOLC	Bahia Solano	5.22	88	eP	Pn	05 08 21.2	-3.5
SOLC				eS	Sn	05 09 21.2	-3.9
SOLC				i		05 09 32.6	
	comp=Z,1µm,0.4s						
LIM1	Limonal	5.23	331	eP	Pn	05 08 23.0	-1.9
GPS1	Guardaparques	5.35	330	eP	Pn	05 08 25.8	-0.8
LAPC	Finca la Perla	5.38	330	eP	Pn	05 08 25.6	-1.4
PIZC	Pizarro, Choco	5.39	102	eP	Pn	05 08 22.5	-4.6
PIZC				eS	Sn	05 09 23.4	-6.0
GBS3	Finca Las Img	5.41	329	eP	Pn	05 08 26.0	-1.3
GB1A	Borinquen Arri	5.41	330	eP	Pn	05 08 26.6	-0.7
HZTE	Horizontes, Gu	5.42	328	eP	Pn	05 08 25.9	-1.5
MALC	Bahia Malaga	5.70	111	eP	Pn	05 08 27.7	-3.6
MALC				i		05 08 57.2	
	comp=Z,2µm,0.5s						
TUMC	Tumaco	5.79	137	eP	Pn	05 08 28.6	-3.9
CAP2	Capurgana	5.83	64	eP	Pn	05 08 32.7	-0.4
CAPC	Capurgana	5.83	64	eP	Pn	05 08 32.2	-0.9
ESPN	Las Esperanzas	6.26	345	Pn	Pn	05 08 42.2	+3.3
ACON	Acoyapa	6.33	337	Pn	Pn	05 08 39.9	0.0
PLMC	San Jos del P	6.46	100	eP	Pn	05 08 39.0	-2.8
PLMC				eS	Sn	05 09 51.7	-4.1
PLMC				i		05 10 07.3	
	comp=Z,1µm,0.5s						
CBOC	Ciudad Bolivar	6.61	92	eP	Pn	05 08 41.4	-2.6
CBOC				eS	Sn	05 10 00.4	+0.6
CBOC				i		05 10 17.9	
	comp=Z,255nm,0.4s						
YOTC	Yotoco, Valle	6.63	108	eP	Pn	05 08 41.4	-2.9
BBAC	Balboa, Cauca	6.75	127	eP	Pn	05 08 41.2	-4.7
BBAC				eS	Sn	05 09 55.7	-7.6
BBAC				i		05 10 08.3	
	comp=Z,1µm,0.5s						
PAC1	Pacto, Paraso	6.97	146	eP	Pn	05 08 45.0	-3.9
HELC	Santa Helena	7.09	89	eP	Pn	05 08 51.7	+1.0
HELC	Santa Helena	7.09	89	eP	Pn	05 08 50.0	-0.7
HELC				eS	Sn	05 10 14.4	+2.7
HELC				i		05 10 25.6	
	comp=Z,228nm,0.4s						
CUSE	Cuicocha Este	7.16	143	eP	Pn	05 08 48.1	-3.7
OTAV	Otavalo	7.19	144	⇑iP	Pn	05 08 48.1	-4.1
OTAV	Otavalo	7.19	144	P	Pn	05 08 48.6	-3.5
OTAV	Otavalo	7.19	144	Pn	Pn	05 08 48.6	-3.6
OTAV	Otavalo	7.19	144	eP	Pn	05 08 46.6	-5.5
OTAV	Otavalo	7.19	144	eP	Pn	05 08 47.5	-4.7
UREC	San Jos de Ur	7.26	77	eP	Pn	05 08 55.2	+2.5
PCON	Cinco Dias	7.29	121	eP	Pn	05 08 52.8	-0.8
PCON				eS	Sn	05 10 14.9	-2.0
PCON				i		05 10 27.2	
	comp=Z,2µm,0.5s						
RREF	El Recreo	7.38	99	eP	Pn	05 08 54.9	0.0
RREF				eS	Sn	05 10 19.0	-0.1
RREF				i		05 10 44.2	
	comp=Z,445nm,0.6s						
ANIL	Santa Ana	7.40	102	eP	Pn	05 08 53.5	-1.5
ANIL				eS	Sn	05 10 21.6	+2.3
ANIL				i		05 10 47.0	
	comp=Z,143nm,0.4s						
MOTC	Monteria, Cord	7.42	69	eP	Pn	05 08 55.5	+0.5
MOTC				i		05 10 49.3	
	comp=Z,378nm,0.5s						
MONA	Monteria	7.42	69	⇑eP	Pn	05 08 55.5	+0.4
MARP	Paez Belalcaza	7.43	116	eP	Pn	05 08 54.5	-0.8
MARP				eS	Sn	05 10 12.3	-7.7
ORTC	Ortega, Tolima	7.70	106	eP	Pn	05 08 57.3	-1.6
ORTC				eS	Sn	05 10 24.6	-1.7
ORTC				i		05 10 42.6	
	comp=Z,1µm,0.7s						
NORC	Norcasia	7.77	94	eP	Pn	05 09 02.5	+2.8
NORC				eS	Sn	05 10 30.0	+2.0
NORC				i		05 10 49.3	
	comp=Z,256nm,0.5s						
CRIN	San Cristobal	7.85	327		Pn	05 09 02.3	+1.4
ZARC	Zaragoza, Cauc	7.87	79	eP	Pn	05 09 01.9	+0.8
ZARC				eS	Sn	05 10 27.7	-2.7
ZARC				i		05 10 57.4	
	comp=Z,643nm,0.6s						
BETC	Betania	7.96	115	eP	Pn	05 09 02.1	-0.3
BETC				eS	Sn	05 10 32.1	-0.6
BETC				i		05 10 42.7	
	comp=Z,180nm,0.6s						
GARC	Garzon, Huila	8.14	118	eP	Pn	05 09 05.0	0.0
GARC				eS	Sn	05 10 32.6	-4.8
GARC				i		05 10 46.8	
	comp=Z,671nm,0.6s						
PTBC	PUERTO BERRIO,	8.16	87	eP	Pn	05 09 07.1	+2.0
PTBC				i		05 10 51.0	
	comp=Z,206nm,0.5s						
PUAC	Puerto Asis, P	8.21	132	eP	Pn	05 09 03.5	-2.3
SJCC	San Jacinto, C	8.31	63	eP	Pn	05 09 07.4	+0.2
SJCC	San Jacinto, C	8.31	63	eP	Pn	05 09 07.4	+0.2
ROSC	El Rosal	8.39	98	Pn	Pn	05 09 10.8	+2.2
	comp=Z,21nm,0.3s,baz=278,slow=7.5,SNR=25						
ROSC				Sn	Sn	05 10 44.6	+0.6
	comp=Z,9.0nm,0.3s,baz=342,slow=20,SNR=1.4						
ROSC				LR	LR	05 11 59.3	
	comp=Z,57µm,21.5s,baz=286,slow=34						
ROSC	El Rosal	8.39	98	P	Pn	05 09 11.2	+2.5
ROSC	El Rosal	8.39	98		Pn	05 09 11.2	+2.5
ROSC	El Rosal	8.39	98	eP	Pn	05 09 12.6	+3.9
SPBC	San Pablo de B	8.55	93	eP	Pn	05 09 13.1	+2.6
SPBC				eS	Sn	05 10 48.0	+0.6
LCND	La Caada	8.82	325	eP	Pn	05 09 16.1	+2.0
LCND	La Caada	8.82	325	eP	Pn	05 09 16.1	+2.0
LCND				eS	Sn	05 11 03.1	+9.3
SMLC	San Martn de	8.92	72	eP	Pn	05 09 16.9	+1.3
SMLC				eS	Sn	05 11 00.6	+4.2
SMLC				i		05 11 25.0	
	comp=Z,321nm,0.6s						
CHIC	Chingaza	9.01	99	eP	Pn	05 09 16.0	-1.1
CHIC				eS	Sn	05 11 02.0	+3.0
TGUH	Tegucigalpa,Un	9.11	330	eP	Pn	05 09 21.1	+2.8
TGUH	Tegucigalpa,Un	9.11	330	eP	Pn	05 09 21.1	+2.8
TGUH	Tegucigalpa,Un	9.11	330	Pn	Pn	05 09 20.2	+1.9
ARGC	Ariguani, Magd	9.12	65	eP	Pn	05 09 20.1	+1.8
ARGC				i		05 09 45.7	
	comp=Z,516nm,0.4s						
VILC	Villavicencio,	9.15	102	eP	Pn	05 09 20.4	+1.6
PACA	Pacayal	9.20	323	eS	Sn	05 11 12.0	+8.7
TECA	Tecapa	9.33	322	eP	Pn	05 09 23.5	+2.2
TECA	Tecapa	9.33	322	eP	Pn	05 09 23.5	+2.2
BARC	Barichara	9.43	87	eP	Pn	05 09 23.7	+1.0
OCAC	Ocana	9.50	77	i		05 04 25.5	
OCAC				eP	Pn	05 09 28.4	+4.7
RUSC	La Rusia	9.53	91	eP	Pn	05 09 27.8	+3.5
RUSC				i		05 12 03.4	
	comp=Z,120nm,0.7s						
MACC	Macarena, Meta	9.63	114	eP	Pn	05 09 25.1	-0.2
COEG	Centro de Oper	9.66	321	eP	Pn	05 09 28.2	+2.5
COEG				IAML		05 09 57.3	
	comp=Z,928nm,0.4s						
COEG	Centro de Oper	9.66	321	eP	Pn	05 09 28.2	+2.5
COEG				IAML		05 09 57.3	
	comp=Z,928nm,0.4s						
COEG				eS	Sn	05 11 23.5	+9.0
SMRC	Santa Marta, M	9.73	58	eP	Pn	05 09 31.1	+4.5
PTLC	Puerto Leguiza	9.81	127	eP	Pn	05 09 28.1	+0.3
PTLC				i		05 09 54.5	
	comp=Z,282nm,0.5s						
OPAM	Oficina de Pla	9.93	320	eP	Pn	05 09 31.1	+1.7
OPAM	Oficina de Pla	9.93	320	eP	Pn	05 09 31.1	+1.7
SNET	Serv Nac Est T	9.93	320		Pn	05 09 33.9	+4.4
PAYG	Puerto Ayora	10.17	229	⇓iP	Pn	05 09 34.6	+1.9
PAYG	Puerto Ayora	10.17	229	Pn	Pn	05 09 32.1	-0.6
MTO3	Montecristo	10.55	322	eP	Pn	05 09 40.8	+2.7
MTO3	Montecristo	10.55	322	eP	Pn	05 09 40.8	+2.7
MTO3	Montecristo	10.55	322	Pn	Pn	05 09 42.3	+4.2
GUVC	San Jose del G	10.61	109	eP	Pn	05 09 38.6	-0.1
PTGC	Puerto Gaitan,	10.65	100	eP	Pn	05 09 40.4	+1.1
PTGC				i		05 11 54.9	
	comp=Z,177nm,0.7s						
ESQI	Esquipulas	10.66	322		Pn	05 09 44.6	+5.1
TAMC	Tame, Arauca	10.81	88	eP	Pn	05 09 43.3	+1.9
RTAL	Retalhuleu	12.20	314		Pn	05 10 05.4	+4.9
SDV	Santo Domingo	12.24	76	Pn	Pn	05 10 03.3	+2.1
	comp=Z,2.4nm,0.3s,baz=290,slow=13,SNR=6.9						
SDV				Sn	Sn	05 12 20.9	+2.9
	comp=Z,6.4nm,0.3s,baz=61,slow=19,SNR=1.6						
SDV				LR	LR	05 15 47.9	
	comp=Z,27µm,20.6s,baz=240,slow=42						
SDV	Santo Domingo	12.24	76	Pn	Pn	05 10 04.8	+3.6
SDV	Santo Domingo	12.24	76	eP	Pn	05 09 59.9	-1.2
SDV				i		05 12 48.3	
	comp=Z,100nm,0.7s						
SDV	Santo Domingo	12.24	76	eP	Pn	05 10 04.2	+3.0
HUEH	Huehuetenango	12.62	317	Pn	Pn	05 10 08.9	+2.5
PETF	Flores	12.85	327		Pn	05 10 13.0	+3.6
MTDJ	Mount Denham	13.04	22	Pn	Pn	05 10 16.0	+3.9
LCCY	Blossom Villag	13.71	10	Pn	P	05 10 23.8	-6.1
CCIG	Comitan	13.73	318		P	05 10 25.1	-5.3
ATAH	Atahualpa	13.83	162	Pn	Pn	05 10 20.8	-2.3
	comp=Z,2.4nm,0.3s,baz=356,slow=11,SNR=31						
ATAH				Sn	Sn	05 12 49.1	-8.1
	comp=Z,0.7nm,0.3s,baz=344,slow=17,SNR=1.4						
ATAH				LR	LR	05 15 04.8	
	comp=Z,361µm,20.2s,baz=336,slow=35						
CBCY	The Bluff, Cay	13.84	11		P	05 10 36.8	+5.5
BAUV	El Baul	14.76	78	eP	Pn	05 10 36.9	+1.4
GTBY	Guantanamo Bay	15.57	27	Pn	P	05 10 50.0	-0.5
LGNH	Logne	15.75	38	Pn	P	05 10 49.2	-3.3
CMIG	Matias Romero	16.19	313	Pn	P	05 10 55.2	-2.3
	comp=Z,0.2nm,0.3s,baz=104,slow=12,SNR=2.6						
CMIG				LR	LR	05 16 21.8	
	comp=Z,32µm,20.9s,baz=120,slow=34						
SDDR	Presa de Saban	16.92	40	Pn	P	05 11 05.7	+0.1
SDDR				IAmb	IAmb	05 11 34.7	
	comp=Z,1µm,1.5s						
CZSB	Cruzeiro do Su	16.96	144	eP	Pn	05 10 59.6	-4.5
BANI	BANI	17.12	43		P	05 11 08.6	+0.7
SC01	Santiago de lo	17.61	40	P	P	05 11 16.3	+3.1
DR12	Loma Pena Alta	18.06	45	P	P	05 11 22.1	+3.9
PCRV	Puerto La Cruz	18.29	76	P	P	05 11 24.2	+3.4
	comp=Z,1.1nm,0.3s,baz=258,slow=2.4,SNR=11						
PCRV				LR	LR	05 20 11.1	
	comp=Z,20µm,19.8s,slow=42						
NNA	Nana	18.89	162	P	P	05 11 25.6	-1.8
	comp=Z,3.8nm,0.3s,baz=337,slow=9.3,SNR=87						
NNA				S	Sn	05 14 48.7	-11
	comp=Z,1.2nm,0.3s,baz=210,slow=20,SNR=2.7						
NNA				LR	LR	05 17 57.7	
	comp=Z,68µm,19.4s,baz=317,slow=35						
NNA	Nana	18.89	162	eP	P	05 11 24.9	-2.4
NNA				pmax	pmax		
	comp=Z,800nm,0.9s						
NNA	Nana	18.89	162	P	P	05 11 25.4	-2.0
TLIG	Tlapa	19.27	308	P	Pn	05 11 35.0	+2.4
TLIG				IAmb	IAmb	05 12 17.3	
	comp=Z,359nm,0.9s						
MLPR	Magueyes Islan	19.27	51	P	Pn	05 11 36.8	+4.3
ORIV	Oritupano	19.30	80	eP	Pn	05 11 34.9	+1.9
ORIV	Oritupano	19.30	80	eS	S	05 15 16.2	+5.4
MPR	Mayaguez	19.34	50	P	Pn	05 11 35.7	+2.4
MPR				IAmb	IAmb	05 12 01.9	
	comp=Z,683nm,1.2s						
AGPR	Aguadilla, PR	19.51	50	P	Pn	05 11 37.6	+2.2
ICMP	Isla Caja de M	19.62	52	P	Pn	05 11 38.8	+2.1
OBIP	Obispado Ponce	19.65	51	P	Pn	05 11 39.5	+2.5
AOPR	Arecibo Observ	19.71	50	P	Pn	05 11 39.6	+1.8
SJG	San Juan	20.05	52	P	Pn	05 11 42.4	+0.7
	comp=Z,20nm,0.8s,baz=233,slow=7.0,SNR=4.7						
SJG				S	S	05 15 19.1	-6.5
	comp=Z,11nm,0.9s,baz=342,slow=6.4,SNR=1.4						
SJG				LR	LR	05 20 20.4	
	comp=Z,7µm,18.4s,baz=220,slow=39						
SJG	San Juan	20.05	52	P	Pn	05 11 42.8	+1.1
SJG				pmax	pmax		
	comp=Z,1µm,1.2s						
SJG				MLR	MLR		
	comp=Z,10µm,20.0s						
SJG	San Juan	20.05	52	P	Pn	05 11 42.8	+1.1
PDPR	Patillas Dam,	20.09	52	P	Pn	05 11 44.1	+1.8
PDPR				IAmb	IAmb	05 12 04.1	
	comp=Z,299nm,0.9s						
HUMP	Col San Antoni	20.30	52		Pn	05 11 46.1	+1.3
CBYP	Canovanas	20.37	52	P	Pn	05 11 46.9	+1.3
MTP	Monte Pirata	20.51	53	P	Pn	05 11 47.4	+0.2
UNM	Universidad Na	20.76	311	IAMs_20	IAMs_20	05 18 42.4	
	comp=Z,20µm,19.0s						
CUPR	Culebra, Puert	20.84	53	P	Pn	05 11 51.5	+0.4
CDVI	St. Croix	20.96	55	eP	Pn	05 11 53.8	+1.4
CDVI	St. Croix	20.96	55	P	Pn	05 11 55.0	+2.6
TRN	Trinidad (W)	21.50	76	eP	P	05 12 09.0	+13
TRN	Trinidad (W)	21.50	76	eS	Sn	05 16 00.4	-2.2
GRGR	Grenville	21.57	72	eP	P	05 12 07.5	+11
GRGR	Grenville	21.57	72	P	P	05 11 57.8	+1.2
GCMP	Grenada, Carri	21.88	72	eP	P	05 12 08.8	+9.0
GCMP	Grenada, Carri	21.88	72	eS	Sn	05 16 16.8	+5.0
DWPF	Disney Wildern	21.91	3	P	P	05 12 02.5	+2.4
	baz=183						
DWPF	Disney Wildern	21.91	3	P	P	05 12 02.2	+2.2
SVB	Belmont	22.25	70	eP	P	05 12 14.1	+10
SVB	Belmont	22.25	70	eS	Sn	05 16 22.3	+1.5
SVB	Belmont	22.25	70	P	P	05 12 06.1	+2.1
SVV	Soufriere Volc	22.30	70	eP	P	05 12 14.7	+10
SEUS	St. Eustatius	22.31	58	eP	P	05 12 15.9	+11
SEUS	St. Eustatius	22.31	58	P	P	05 12 06.8	+2.3
SKI	Saint Kitts	22.44	58	eP	P	05 12 16.8	+11
SKI	Saint Kitts	22.44	58	P	P	05 12 07.7	+1.8
SKI				pmax	pmax		
	comp=Z,391nm,1.0s						
SKI	Saint Kitts	22.44	58	P	P	05 12 07.7	+1.8
MOIG	Morelia	22.51	309	P	P	05 12 08.3	+1.5
MOIG				IAmb	IAmb	05 12 32.8	
	comp=Z,318nm,1.1s						
SLDE	Delcer	22.59	69	eP	P	05 12 18.5	+11
SLB	Belfond	22.61	69	eP	P	05 12 17.3	+10
MLYT	Lee's Yard	22.64	61	eP	P	05 12 18.6	+11
MLYT	Lee's Yard	22.64	61	eS	Sn	05 16 34.1	+4.1
MCLT	Moule a Chique	22.67	69	eP	P	05 12 15.6	+7.2
MCLT	Moule a Chique	22.67	69	eS	Sn	05 16 31.1	+0.3
SLBI	Saint Lucia, B	22.73	68	eP	P	05 12 16.9	+7.9
SLBI	Saint Lucia, B	22.73	68	eS	Sn	05 16 27.2	-5.0
SLPA	Patience	22.73	69	eP	P	05 12 22.1	+13
TDBA	Terre de Bas,	22.77	63	eP	P	05 12 15.9	+6.5
ETMB	Extrema	22.77	134	eP	P	05 12 06.4	-3.0
MDN	Morne-Daniel	22.79	65	eP	P	05 12 19.2	+10
FDF	Fort de France	22.80	66	eP	P	05 12 16.6	+6.8
FDF	Fort de France	22.80	66	eS	Sn	05 16 35.0	+1.1
FDF	Fort de France	22.80	66	P	P	05 12 11.7	+1.9
FDF				pmax	pmax		
	comp=Z,445nm,1.0s						
FDF	Fort de France	22.80	66	P	P	05 12 11.7	+1.9
BIM	Bigot	22.80	67	eP	P	05 12 18.5	+8.7
BIM	Bigot	22.80	67	eS	Sn	05 16 27.9	-6.1
DSLB	Salisbury	22.81	64	eP	P	05 12 14.9	+5.2
DSLB	Salisbury	22.81	64	eS	Sn	05 16 36.0	+2.0
CBE	Ff, Capester	22.88	63	eP	P	05 12 20.5	+10
CBE	Ff, Capester	22.88	63	eS	Sn	05 16 33.4	-2.4
DLPL	La Plaine	22.93	65	eP	P	05 12 26.5	+15
MPOM	Morne Pois Mar	22.97	67	eP	P	05 12 19.6	+8.1
MPOM	Morne Pois Mar	22.97	67	eS	Sn	05 16 30.0	-8.0
ILAM	Ilet Lapin Mar	23.07	66	eP	P	05 12 17.5	+5.0
ILAM	Ilet Lapin Mar	23.07	66	eS	Sn	05 16 40.4	+0.2
MAGL	Barre de l’ile	23.12	63	eP	P	05 12 20.5	+7.4
MAGL	Barre de l’ile	23.12	63	eS	Sn	05 16 41.3	-0.2
656A	Willston	23.14	0	P	P	05 12 16.4	+3.4
656A				IAmb	IAmb	05 12 39.2	
	comp=Z,156nm,1.1s						
ANBD	Bethesda, Anti	23.15	60	eP	P	05 12 23.6	+10
ANBD	Bethesda, Anti	23.15	60	eS	Sn	05 16 36.8	-5.3
ABD	La Joyeuse, An	23.15	62	eP	P	05 12 20.5	+7.2
ANWB	Willy Bob	23.40	59	P	P	05 12 17.3	+1.5
BCHC	Barbados, Cave	23.74	71	eP	P	05 12 31.5	+12
MACA	Manacapuru-AM	23.80	112	eP	P	05 12 19.1	-0.7
BBGH	Gun Hill	23.81	71	eP	P	05 12 35.0	+15
BBGH	Gun Hill	23.81	71	IAMs_20	IAMs_20	05 20 30.8	
	comp=Z,32µm,21.0s						
BBSP	Saint Philip	23.89	71	eP	P	05 12 35.7	+15
SAML	Samuel	24.51	127	P	P	05 12 22.9	-3.5
SAML				pmax	pmax		
	comp=Z,704nm,1.2s						
SAML				MLR	MLR		
	comp=Z,84µm,18.0s						
SAML	Samuel	24.51	127	P	P	05 12 22.9	-3.5
SAML	Samuel	24.51	127	eP	P	05 12 23.8	-2.6
451A	Vernon	24.55	354	P	P	05 12 30.1	+3.5
545A	Edgard	24.93	344	IAMs_20	IAMs_20	05 20 37.5	
	comp=Z,20µm,18.0s						
TIGA	Tifton	25.21	358	P	P	05 12 35.4	+2.8
	baz=178,SNR=12						
TIGA	Tifton	25.21	358	IAmb	IAmb	05 12 46.1	
	comp=Z,168nm,1.1s						
BRAL	Brewton	25.27	351	P	P	05 12 36.9	+3.8
	baz=170,SNR=17						
ZAIG	Zacatecas	25.36	313	P	P	05 12 36.7	+2.4
ZAIG				IAmb	IAmb	05 12 44.4	
	comp=Z,135nm,1.3s						
ZAIG				IAMs_20	IAMs_20	05 23 13.2	
	comp=Z,15µm,18.0s						
KVTX	Kingsville	25.77	328	P	P	05 12 40.9	+3.2
KVTX				IAmb	IAmb	05 13 03.2	
	comp=Z,207nm,1.0s						
KVTX				IAMs_20	IAMs_20	05 22 20.4	
	comp=Z,16µm,20.0s						
346A	Big Creek Wild	25.95	347	P	P	05 12 43.3	+4.1
346A				IAmb	IAmb	05 13 04.8	
	comp=Z,135nm,1.1s						
250A	Grady	25.96	353	IAmb	IAmb	05 13 08.4	
	comp=Z,235nm,1.1s						
441A	DeRidder	26.43	339	IAmb	IAmb	05 13 16.0	
	comp=Z,150nm,1.1s						
157A	Early Branch	26.48	3	P	P	05 12 48.4	+4.3
	baz=184						
158A	Hollywood	26.59	5	P	P	05 12 49.2	+4.2
	baz=185						
342A	Flagon Creek P	26.72	341	IAmb	IAmb	05 13 42.6	
	comp=Z,137nm,1.3s						
HKT	Hockley	26.77	334	i P	P	05 12 50.4	+3.8
HKT	Hockley	26.77	334	P	P	05 12 47.8	+1.2
HKT				IAmb	IAmb	05 13 42.7	
	comp=Z,368nm,1.7s						
NHSC	New Hope	26.96	5	P	P	05 12 52.3	+4.0
	baz=185						
VBMS	Vicksburg	27.00	345	IAmb	IAmb	05 13 15.1	
	comp=Z,134nm,1.2s						
146A	Union	27.06	348	P	P	05 12 49.6	+0.3
LRAL	Lakeview Retre	27.09	352	P	P	05 12 53.4	+3.8
	baz=171,SNR=19						
LRAL	Lakeview Retre	27.09	352	P	P	05 12 53.4	+3.8
LRAL				IAmb	IAmb	05 13 14.6	
	comp=Z,125nm,0.8s						
Z56A	Williston	27.11	2	P	P	05 12 53.0	+3.3
	baz=183						
Z56A	Williston	27.11	2	P	P	05 12 52.1	+2.4
Z56A				IAmb	IAmb	05 13 04.1	
	comp=Z,159nm,1.2s						
Z57A	Bowman	27.11	4	P	P	05 12 53.8	+4.1
	baz=184						
Z51A	Franklin	27.17	355	IAmb	IAmb	05 13 15.4	
	comp=Z,91nm,1.0s						
GOGA	Godfrey	27.18	359	P	P	05 12 55.0	+4.7
GOGA				pmax	pmax		
	comp=Z,71nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,6µm,22.0s						
GOGA	Godfrey	27.18	359	P	P	05 12 54.3	+4.0
	baz=178,SNR=10						
GOGA	Godfrey	27.18	359	P	P	05 12 55.0	+4.7
833A	Chaparral WMA,	27.20	326	P	P	05 12 53.6	+3.0
	baz=142						
Z58A	St. Stephen	27.22	5	P	P	05 12 55.1	+4.4
	baz=186						
PB16	IPOC Station P	27.54	152	P	P	05 12 52.7	-1.7
Y56A	Pelion	27.57	2	P	P	05 12 58.5	+4.6
	baz=183						
143A	Socs Landing,	27.69	344	P	P	05 12 58.0	+3.1
Y58A	Scranton	27.80	5	P	P	05 12 59.8	+3.9
	baz=186						
Y57A	Sumter	27.85	4	P	P	05 13 00.9	+4.5
	baz=185						
Y57A	Sumter	27.85	4	P	P	05 12 59.4	+3.1
NATX	Nacogdoches	27.88	338	P	P	05 12 59.6	+2.9
	baz=154,SNR=5.1						
NATX	Nacogdoches	27.88	338	P	P	05 12 59.8	+3.1
Y59A	Loris	27.96	7	P	P	05 13 02.0	+4.6
	baz=188						
Y59A	Loris	27.96	7	IAMs_20	IAMs_20	05 26 02.9	
	comp=Z,10µm,18.0s						
HODGE	Hodges	27.99	1	IAmb	IAmb	05 13 17.0	
	comp=Z,78nm,1.0s						
Y60A	Bolivia	28.06	8	P	P	05 13 02.4	+4.1
	baz=189						
435B	Jarrell	28.27	332	P	P	05 13 03.0	+2.9
	baz=148,SNR=8.6						
435B	Jarrell	28.27	332	IAmb	IAmb	05 13 20.4	
	comp=Z,182nm,1.2s						
X56A	White Oak	28.29	3	P	P	05 13 03.5	+3.3
	baz=183,SNR=6.4						
X57A	Johnson Farm,	28.32	4	P	P	05 13 03.9	+3.4
	baz=185						
PSGCX	Pisagua	28.37	154	P	P	05 13 00.3	-0.9
X51A	Calhoun	28.39	356	IAmb	IAmb	05 13 25.9	
	comp=Z,92nm,1.0s						
X58A	Rowland	28.47	6	IAMs_20	IAMs_20	05 25 21.4	
	comp=Z,10µm,18.0s						
237A	Washetta, Mont	28.54	336	IAmb	IAmb	05 13 57.3	
	comp=Z,199nm,1.4s						
PAULI	Pauline	28.58	1	P	P	05 13 06.7	+3.8
ITTB	Itaituba	28.83	111	eP	P	05 13 04.2	-1.2
KMSC	Kings Mountain	28.92	2	P	P	05 13 08.8	+2.9
	baz=183,SNR=8.2						
CCAR	Cane Creek	28.93	344	IAmb	IAmb	05 13 12.1	
	comp=Z,206nm,1.5s						
OXF	Oxford	28.95	348	P	P	05 13 08.7	+2.6
	baz=166,SNR=5.1						
OXF	Oxford	28.95	348	IAmb	IAmb	05 13 24.5	
	comp=Z,184nm,1.2s						
W56A	Indian Trail	28.95	4	P	P	05 13 08.9	+2.7
	baz=184						
W57A	Gilead	29.01	5	P	P	05 13 09.3	+2.6
	baz=185						
JCT	Junction City	29.11	328	P	P	05 13 09.6	+1.9
	baz=143,SNR=9.6						
JCT	Junction City	29.11	328	IAmb	IAmb	05 13 40.3	
	comp=Z,125nm,1.4s						
SWET	Sewanee	29.12	354	IAmb	IAmb	05 13 32.2	
	comp=Z,71nm,0.9s						
TA01	Diego Aracena	29.21	155	P	P	05 13 09.7	+1.2
TA01				IAmb	IAmb	05 13 22.4	
	comp=Z,154nm,1.0s						
WHTX	Lake Whitney,	29.23	334	P	P	05 13 10.6	+1.9
	baz=149,SNR=15						
WHTX	Lake Whitney,	29.23	334	P	P	05 13 09.9	+1.2
WHTX				IAmb	IAmb	05 13 32.7	
	comp=Z,85nm,1.0s						
CPCT	Cooper Cave	29.25	357	IAmb	IAmb	05 13 28.4	
	comp=Z,78nm,1.1s						
VILB	Vilhena	29.27	130	eP	P	05 13 07.4	-1.8
X43A	Marvell	29.28	346	P	P	05 13 11.6	+2.6
	baz=163						
X43A	Marvell	29.28	346	IAmb	IAmb	05 13 42.9	
	comp=Z,103nm,1.1s						
Z38A	Mt. Pleasant	29.35	339	IAmb	IAmb	05 13 34.0	
	comp=Z,75nm,0.8s						

TKL	**Tuckaleechee C**	**29.43**	**358**	P	P	05 13 13.6	+3.2
	comp=Z,23nm,0.9s,baz=169,slow=10,SNR=12						
TKL				LR	LR	05 23 55.9	
	comp=Z,6µm,20.5s,baz=176,slow=34						
TKL	**Tuckaleechee C**	**29.43**	**358**	IAmb	IAmb	05 13 34.0	
	comp=Z,81nm,1.1s						
MALB	**Monte Alegre**	**29.43**	**105**	*e*P	**P**	**05 13 11.2**	**+0.5**
V51A	**Loudon**	**29.59**	**357**	P	P	05 13 15.1	+3.2
V51A				IAmb	IAmb	05 13 37.0	
	comp=Z,144nm,1.1s						
V52A	**Sevierville**	**29.60**	**358**	IAmb	IAmb	05 13 31.2	
	comp=Z,70nm,0.9s						
V56A	**Mocksville**	**29.63**	**4**	P	P	05 13 15.0	+2.8
	baz=184						
V58A	**Windy Hill, Pi**	**29.72**	**6**	P	P	05 13 15.0	+2.0
	baz=187,SNR=7.1						
V58A	**Windy Hill, Pi**	**29.72**	**6**	IAmb	IAmb	05 13 48.8	
	comp=Z,70nm,1.0s						
V57A	**Coltrane Farms**	**29.75**	**5**	P	P	05 13 15.7	+2.3
	baz=186,SNR=7.2						
X40A	**Basin Creek Fa**	**29.77**	**343**	P	P	05 13 15.7	+2.3
	baz=160						
V59A	**Middlesex**	**29.79**	**7**	P	P	05 13 16.2	+2.6
	baz=189						
MDP	**Montagnes des**	**29.89**	**90**	P	**P**	**05 13 16.8**	**+2.1**
	comp=Z,32nm,1.1s,baz=283,slow=11,SNR=3.8						
MDP				S	S	05 18 02.0	-10
	comp=Z,6.0nm,0.9s,baz=240,slow=20,SNR=1.7						
UALR	**University of**	**29.90**	**344**	IAmb	IAmb	05 13 38.3	
	comp=Z,74nm,0.9s						
PB01	**IPOC Station P**	**29.92**	**155**	IAmb	IAmb	05 13 28.8	
	comp=Z,148nm,1.3s						
V60A	**Jim Taylor Roa**	**29.93**	**9**	P	P	05 13 17.9	+3.1
	baz=191						
V62A	**Hyde County Ai**	**29.95**	**11**	IAMs_20	IAMs_20	05 25 02.5	
	comp=Z,9µm,20.0s						
CLTN	**Cedars of Leba**	**30.03**	**354**	IAmb	IAmb	05 13 40.2	
	comp=Z,74nm,0.9s						
MIAR	**Mount Ida**	**30.05**	**342**	P	P	05 13 17.8	+1.9
	baz=158,SNR=9.5						
HPIG		**30.15**	**316**	P	P	05 13 21.1	+4.0
U56A	**King**	**30.17**	**4**	P	P	05 13 19.3	+2.3
	baz=184,SNR=7.5						
U56A	**King**	**30.17**	**4**	IAmb	IAmb	05 13 44.7	
	comp=Z,90nm,1.1s						
NPGB	**Novo Progresso**	**30.21**	**115**	*e*P	**P**	**05 13 15.5**	**-2.1**
W41B	**Gary Mavity, V**	**30.25**	**344**	P	P	05 13 20.4	+2.8
	baz=161,SNR=14						
W41B	**Gary Mavity, V**	**30.25**	**344**	IAmb	IAmb	05 13 41.5	
	comp=Z,58nm,0.9s						
WVT	**Waverly**	**30.25**	**352**	P	P	05 13 20.5	+2.8
WVT				pmax	pmax		
	comp=Z,75nm,0.8s						
WVT	**Waverly**	**30.25**	**352**	P	P	05 13 20.2	+2.4
	baz=170						
WVT	**Waverly**	**30.25**	**352**	P	P	05 13 20.5	+2.8
WVT				IAmb	IAmb	05 13 41.2	
	comp=Z,75nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**30.28**	**297**	T	T	05 45 33.1	
	SNR=85						
U54A	**Nelsons Funny**	**30.28**	**1**	P	P	05 13 21.2	+3.2
	baz=182,SNR=9.1						
U54A	**Nelsons Funny**	**30.28**	**1**	IAmb	IAmb	05 13 52.0	
	comp=Z,63nm,0.8s						
H06S1	**SOCORRO T**	**30.29**	**297**	T	T	05 45 30.7	
	SNR=36						
TZTN	**Tazewell**	**30.30**	**359**	P	P	05 13 21.1	+2.9
	baz=178,SNR=11						
TZTN	**Tazewell**	**30.30**	**359**	IAmb	IAmb	05 13 41.7	
	comp=Z,106nm,1.2s						
U57A	**Blanch**	**30.33**	**5**	P	P	05 13 21.0	+2.6
	baz=186,SNR=7.4						
PB07	**IPOC Station P**	**30.36**	**156**	IAmb	IAmb	05 14 07.2	
	comp=Z,166nm,1.2s						
WHAR	**Wooly Hollow**	**30.37**	**344**	IAmb	IAmb	05 13 42.4	
	comp=Z,84nm,0.8s						
U58A	**Oxford**	**30.38**	**7**	P	P	05 13 21.6	+2.8
	baz=188						
U49A	**Red Boiling Sp**	**30.40**	**355**	IAmb	IAmb	05 13 43.5	
	comp=Z,86nm,1.1s						
U59A	**Littleton**	**30.43**	**8**	P	P	05 13 22.0	+2.8
	baz=190						
U59A	**Littleton**	**30.43**	**8**	IAmb	IAmb	05 13 46.6	
	comp=Z,114nm,1.4s						
U59A				IAMs_20	IAMs_20	05 25 41.2	
	comp=Z,10µm,20.0s						
GNAR	**Gosnell**	**30.47**	**348**	P	P	05 13 23.4	+3.8
U61A	**Possum Corner**	**30.61**	**10**	IAMs_20	IAMs_20	05 25 34.0	
	comp=Z,9µm,21.0s						
SIV	**San Ignacio**	**30.64**	**136**	P	**P**	**05 13 18.7**	**-2.7**
	comp=Z,56nm,1.0s,baz=319,slow=8.6,SNR=39						
PB09	**IPOC Station P**	**30.69**	**155**	IAmb	IAmb	05 14 27.7	
	comp=Z,121nm,1.0s						
W39A	**Magazine**	**30.71**	**342**	P	P	05 13 24.9	+3.1
	baz=158,SNR=14						
ABTX	**Abilene, Hawle**	**30.77**	**331**	P	P	05 13 25.2	+2.8
	baz=146,SNR=7.5						
LCAR	**Lake Charles**	**30.82**	**346**	P	P	05 13 25.2	+2.5
T56A	**Rocky Mt**	**30.87**	**4**	P	P	05 13 27.3	+4.2
	baz=185,SNR=7.1						
HICK	**Hickman**	**30.88**	**350**	P	P	05 13 26.6	+3.4
FCAR	**Ozark Folk Cen**	**30.89**	**345**	IAmb	IAmb	05 13 46.8	
	comp=Z,72nm,0.8s						
T57A	**Hurt**	**30.90**	**5**	P	P	05 13 27.5	+4.1
	baz=186,SNR=5.9						
T57A	**Hurt**	**30.90**	**5**	IAmb	IAmb	05 13 58.9	
	comp=Z,126nm,1.2s						
T57A				IAMs_20	IAMs_20	05 27 43.7	
	comp=Z,11µm,20.0s						
T58A	**Grand View Acr**	**30.92**	**6**	P	P	05 13 26.8	+3.1
	baz=188						
BLA	**Blacksburg**	**31.02**	**3**	P	P	05 13 28.7	+4.1
	baz=184,SNR=7.1						
BLA	**Blacksburg**	**31.02**	**3**	IAmb	IAmb	05 13 52.1	
	comp=Z,85nm,1.1s						
T59A	**Double "B" Far**	**31.07**	**8**	P	P	05 13 27.6	+2.7
	baz=190,SNR=6.3						
T59A	**Double "B" Far**	**31.07**	**8**	IAmb	IAmb	05 13 52.2	
	comp=Z,137nm,1.4s						
T59A				IAMs_20	IAMs_20	05 26 09.1	
	comp=Z,9µm,19.0s						
MCPB	**Macapa, AP**	**31.21**	**101**	*e*P	**P**	**05 13 26.8**	**+0.3**
PBMO	**Poplar Bluff**	**31.34**	**348**	IAmb	IAmb	05 13 54.3	
	comp=Z,54nm,0.9s						
S51A	**Beattyville**	**31.40**	**359**	IAmb	IAmb	05 13 37.0	
	comp=Z,124nm,0.9s						
S51A				IAMs_20	IAMs_20	05 27 59.9	
	comp=Z,8µm,19.0s						
U40A	**Yellville**	**31.52**	**344**	P	P	05 13 32.1	+3.2
	baz=160,SNR=12						
U40A	**Yellville**	**31.52**	**344**	IAmb	IAmb	05 13 52.8	
	comp=Z,57nm,1.0s						
SLBS	**Sierra La Lagu**	**31.53**	**307**	P	**P**	**05 13 31.6**	**+2.4**
SLBS				IAmb	IAmb	05 13 53.1	
	comp=Z,77nm,1.0s						
SLBS	**Sierra La Lagu**	**31.53**	**307**	IAMs_20	IAMs_20	05 23 53.6	
	comp=Z,8µm,19.0s						
S56A	**Natural Bridge**	**31.55**	**5**	P	P	05 13 32.5	+3.3
	baz=186						
LVC	**Limon Verde**	**31.55**	**155**	P	**P**	**05 13 28.1**	**-1.7**
	comp=Z,65nm,1.1s,baz=320,slow=6.5,SNR=28						
LVC				S	S	05 18 32.2	-6.8
	comp=Z,3.6nm,0.9s,baz=337,slow=18,SNR=1.3						
LVC	**Limon Verde**	**31.55**	**155**	*e*P	**P**	**05 13 29.3**	**-0.5**
LVC	**Limon Verde**	**31.55**	**155**	P	**P**	**05 13 29.3**	**-0.5**
LVC	**Limon Verde**	**31.55**	**155**	*e*P	**P**	**05 13 29.4**	**-0.3**
S54A	**Dingess, Beckl**	**31.57**	**2**	P	P	05 13 32.8	+3.4
	baz=182						
S54A	**Dingess, Beckl**	**31.57**	**2**	IAmb	IAmb	05 13 56.5	
	comp=Z,90nm,1.1s						
S54A				IAMs_20	IAMs_20	05 27 43.4	
	comp=Z,9µm,20.0s						
S58A	**Poland Farm, P**	**31.64**	**7**	P	P	05 13 33.2	+3.3
	baz=189						
S58A	**Poland Farm, P**	**31.64**	**7**	IAmb	IAmb	05 14 07.9	
	comp=Z,87nm,1.4s						
S58A				IAMs_20	IAMs_20	05 26 27.2	
	comp=Z,9µm,18.0s						
S57A	**Dark Hollow, R**	**31.69**	**6**	P	P	05 13 33.5	+3.1
	baz=187						
S57A	**Dark Hollow, R**	**31.69**	**6**	IAMs_20	IAMs_20	05 28 05.5	
	comp=Z,8µm,18.0s						
PB10	**IPOC Station P**	**31.73**	**159**	IAmb	IAmb	05 14 26.7	
	comp=Z,143nm,1.1s						
S59A	**Mechanicsville**	**31.88**	**8**	P	P	05 13 35.3	+3.2
	baz=190						
S60A	**Water View**	**31.92**	**9**	P	P	05 13 35.9	+3.5
	baz=191						
R54A	**Victor**	**31.96**	**2**	P	P	05 13 36.2	+3.4
	baz=183,SNR=10						
R58B	**Mineral**	**32.01**	**7**	P	P	05 13 36.5	+3.4
	baz=189						
R58B	**Mineral**	**32.01**	**7**	IAmb	IAmb	05 13 47.3	
	comp=Z,143nm,1.8s						
R58B				IAMs_20	IAMs_20	05 26 38.9	
	comp=Z,10µm,19.0s						
TUL1	**Leonard**	**32.02**	**340**	P	P	05 13 36.1	+2.8
	baz=155,SNR=7.8						
TUL1	**Leonard**	**32.02**	**340**	IAmb	IAmb	05 13 56.6	
	comp=Z,226nm,1.9s						
U38A	**Gravette**	**32.04**	**342**	P	**P**	**05 13 34.8**	**+1.3**
R50A	**Paris**	**32.06**	**358**	IAmb	IAmb	05 13 58.2	
	comp=Z,101nm,1.1s						
R53A	**Hurricane**	**32.08**	**1**	IAmb	IAmb	05 13 53.3	
	comp=Z,80nm,0.9s						
R53A				IAMs_20	IAMs_20	05 27 51.0	
	comp=Z,8µm,20.0s						
R55A	**Marlinton**	**32.11**	**4**	P	P	05 13 37.2	+3.1
	baz=185						
R55A	**Marlinton**	**32.11**	**4**	IAmb	IAmb	05 14 01.8	
	comp=Z,117nm,1.3s						
WCI	**Wyandotte Cave**	**32.14**	**355**	P	P	05 13 37.2	+2.8
WCI				pmax	pmax		
	comp=Z,121nm,1.1s						
WCI	**Wyandotte Cave**	**32.14**	**355**	P	P	05 13 37.4	+3.0
	baz=173						
WCI	**Wyandotte Cave**	**32.14**	**355**	P	P	05 13 37.2	+2.8
WCI				IAmb	IAmb	05 13 51.3	
	comp=Z,121nm,1.1s						
WMOK	**Wichita Mounta**	**32.15**	**335**	P	P	05 13 37.4	+2.9
	baz=149,SNR=13						
R57A	**Stanardsville**	**32.26**	**6**	P	P	05 13 38.3	+2.9
	baz=188						
R56A	**Bull Pasture M**	**32.29**	**5**	P	P	05 13 38.6	+2.9
	baz=186,SNR=5.6						
OK025	**Westminster Rd**	**32.29**	**337**	P	P	05 13 38.3	+2.6
OK025				IAmb	IAmb	05 13 58.6	
	comp=Z,207nm,1.9s						
CBN	**Corbin Frederi**	**32.31**	**8**	IAmb	IAmb	05 14 11.7	
	comp=Z,97nm,1.1s						
R58A	**Rapidan**	**32.32**	**7**	P	P	05 13 39.9	+4.0
	baz=189,SNR=7.6						
OK030	**Cody Creek RV**	**32.39**	**338**	IAmb	IAmb	05 13 59.5	
	comp=Z,66nm,1.0s						
OK031	**S. Brethren Rd**	**32.43**	**338**	IAmb	IAmb	05 13 59.9	
	comp=Z,77nm,0.9s						
FVM	**French Village**	**32.51**	**349**	IAmb	IAmb	05 14 03.6	
	comp=Z,158nm,1.2s						
QUOK	**Quay**	**32.58**	**339**	P	P	05 13 40.7	+2.5
QUOK				IAmb	IAmb	05 14 01.2	
	comp=Z,61nm,0.8s						
Q53A	**Leroy**	**32.62**	**2**	P	P	05 13 41.8	+3.2
	baz=182,SNR=13						
Q52A	**Bidwell**	**32.71**	**1**	IAmb	IAmb	05 14 02.6	
	comp=Z,106nm,0.9s						
Q52A				IAMs_20	IAMs_20	05 29 13.6	
	comp=Z,8µm,21.0s						
CCM	**Cathedral Cave**	**32.74**	**347**	P	P	05 13 42.2	+2.6
	baz=164						
Q54A	**Coxs Mills**	**32.77**	**3**	IAmb	IAmb	05 13 59.6	
	comp=Z,85nm,1.1s						
Q56A	**Snyder Ridge,**	**32.94**	**5**	P	P	05 13 43.7	+2.4
	baz=186,SNR=6.5						
Q56A	**Snyder Ridge,**	**32.94**	**5**	IAmb	IAmb	05 14 01.1	
	comp=Z,179nm,1.4s						
Q58A	**Fox Den Farm,**	**32.99**	**7**	P	P	05 13 44.6	+2.8
	baz=189						
Q57A	**Strasburg**	**33.00**	**6**	P	P	05 13 44.6	+2.8
	baz=188						
SLM	**Saint Louis**	**33.10**	**349**	P	P	05 13 45.2	+2.5
SLM				pmax	pmax		
	comp=Z,169nm,0.8s						
SLM	**Saint Louis**	**33.10**	**349**	P	P	05 13 45.2	+2.5
MNTX	**Cornudas Mount**	**33.16**	**323**	P	**P**	**05 13 42.5**	**-0.9**
	baz=136,SNR=22						
MNTX	**Cornudas Mount**	**33.16**	**323**	IAmb	IAmb	05 14 07.7	
	comp=Z,120nm,1.6s						
T35A	**Sooner Cattle**	**33.18**	**339**	IAmb	IAmb	05 14 06.9	
	comp=Z,89nm,1.2s						
P51A	**Williamsport**	**33.23**	**359**	IAmb	IAmb	05 14 02.4	
	comp=Z,79nm,0.9s						
P53A	**Whipple**	**33.25**	**2**	P	**P**	**05 13 45.8**	**+1.8**
P53A				IAmb	IAmb	05 13 53.4	
	comp=Z,65nm,0.8s						
P48A	**Milroy**	**33.30**	**356**	IAmb	IAmb	05 14 08.0	
	comp=Z,100nm,0.8s						
P48A				IAMs_20	IAMs_20	05 27 57.2	
	comp=Z,9µm,19.0s						
Q60A	**Greensboro**	**33.32**	**10**	IAMs_20	IAMs_20	05 27 14.7	
	comp=Z,10µm,20.0s						
P49A	**Miami Univ. Ec**	**33.33**	**357**	P	**P**	**05 13 45.0**	**+0.3**
	baz=176,SNR=9.6						
P49A	**Miami Univ. Ec**	**33.33**	**357**	IAmb	IAmb	05 13 52.8	
	comp=Z,56nm,0.8s						
CROK	**Carrier**	**33.35**	**337**	IAmb	IAmb	05 14 07.8	
	comp=Z,101nm,0.8s						
P52A	**Corning**	**33.38**	**1**	P	**P**	**05 13 45.8**	**+0.6**
	baz=181,SNR=8.6						
P52A	**Corning**	**33.38**	**1**	IAMs_20	IAMs_20	05 29 43.4	
	comp=Z,7µm,20.0s						
MSTX	**Muleshoe**	**33.41**	**329**	P	**P**	**05 13 44.4**	**-1.2**
	baz=142,SNR=8.4						
MSTX	**Muleshoe**	**33.41**	**329**	IAmb	IAmb	05 14 17.1	
	comp=Z,74nm,1.2s						
P56A	**Dayton Farm, R**	**33.43**	**5**	P	**P**	**05 13 46.4**	**+0.8**
	baz=187,SNR=10						
P57A	**Homestead Farm**	**33.49**	**7**	P	**P**	**05 13 47.4**	**+1.3**
	baz=188,SNR=8.9						
MCWV	**Mont Chateau**	**33.50**	**4**	P	P	05 13 48.0	+1.9
	baz=185						
MCWV	**Mont Chateau**	**33.50**	**4**	P	P	05 13 49.4	+3.2
P58A	**Pank, Wackersv**	**33.58**	**8**	P	P	05 13 49.1	+2.2
	baz=190						
AMTX	**Amarillo**	**33.59**	**331**	P	**P**	**05 13 48.0**	**+0.8**
	baz=144						
AMTX	**Amarillo**	**33.59**	**331**	IAMs_20	IAMs_20	05 28 56.5	
	comp=Z,8µm,22.0s						
P46A	**Rosedale**	**33.61**	**354**	IAmb	IAmb	05 14 01.0	
	comp=Z,70nm,0.8s						
U32A	**Winter Ranch,**	**33.65**	**336**	IAMs_20	IAMs_20	05 28 42.2	
	comp=Z,10µm,22.0s						
KAN14	**Manchester OK**	**33.74**	**338**	P	P	05 13 51.4	+3.0
P59A	**Jarrettsville**	**33.82**	**9**	P	P	05 13 50.9	+1.9
	baz=191						
O52A	**Adamsville**	**33.87**	**1**	IAmb	IAmb	05 14 08.6	
	comp=Z,94nm,1.1s						
EPT	**El Paso**	**33.90**	**322**	IAMs_20	IAMs_20	05 28 13.3	
	comp=Z,8µm,19.0s						
O49A	**Covington**	**33.96**	**358**	P	**P**	**05 13 51.0**	**+0.7**
O49A				IAmb	IAmb	05 13 58.5	
	comp=Z,62nm,0.8s						
ACSO	**Alum Creek Sta**	**33.98**	**360**	P	P	05 13 52.4	+2.1
	baz=179						
O54A	**Avella**	**33.99**	**3**	IAmb	IAmb	05 14 08.6	
	comp=Z,96nm,1.1s						
O54A				IAMs_20	IAMs_20	05 29 36.4	
	comp=Z,12µm,21.0s						
O53A	**New Philadelph**	**34.02**	**2**	P	P	05 13 52.6	+1.8
	baz=182,SNR=6.9						
O53A	**New Philadelph**	**34.02**	**2**	IAmb	IAmb	05 14 29.7	
	comp=Z,114nm,1.2s						
AC01	**Pan de Azucar**	**34.13**	**160**	P	**P**	**05 13 51.9**	**0.0**
AC01				IAmb	IAmb	05 13 59.1	
	comp=Z,133nm,1.2s						
P60A	**Greenville**	**34.15**	**10**	IAMs_20	IAMs_20	05 30 14.5	
	comp=Z,10µm,18.0s						
O56A	**Blue Knob Stat**	**34.21**	**6**	P	**P**	**05 13 54.0**	**+1.5**
	baz=187,SNR=7.8						
O56A	**Blue Knob Stat**	**34.21**	**6**	IAmb	IAmb	05 14 24.6	
	comp=Z,156nm,1.4s						
MVL	**Millersville**	**34.22**	**9**	P	P	05 13 56.3	+3.9
MVL				IAmb	IAmb	05 14 20.1	
	comp=Z,140nm,1.2s						
O57A	**Amberson**	**34.25**	**7**	P	P	05 13 54.9	+2.1
	baz=189						
O58A	**Lewisberry**	**34.26**	**8**	P	P	05 13 54.9	+2.1
	baz=190,SNR=6.4						
PSUB	**Penn St. - Bra**	**34.29**	**10**	IAmb	IAmb	05 14 20.4	
	comp=Z,64nm,1.1s						
PSUB				IAMs_20	IAMs_20	05 27 44.3	
	comp=Z,9µm,20.0s						
O44A	**Mansfield**	**34.30**	**352**	IAmb	IAmb	05 14 07.1	
	comp=Z,104nm,0.9s						
P40A	**Paris**	**34.33**	**347**	IAmb	IAmb	05 14 15.4	
	comp=Z,106nm,1.1s						
SFIN	**Lafayette**	**34.35**	**354**	P	P	05 13 55.8	+2.2
	baz=172,SNR=7.8						
SFIN	**Lafayette**	**34.35**	**354**	IAmb	IAmb	05 14 16.6	
	comp=Z,81nm,0.8s						
PAGS	**Pennsylvania G**	**34.39**	**8**	IAmb	IAmb	05 14 13.3	
	comp=Z,95nm,1.1s						
O59A	**Robesonia**	**34.55**	**9**	P	P	05 13 57.5	+2.2
	baz=191						
N53A	**Lisbon**	**34.59**	**2**	IAmb	IAmb	05 14 29.7	
	comp=Z,134nm,1.4s						
N53A				IAMs_20	IAMs_20	05 29 57.3	
	comp=Z,8µm,22.0s						
SSPA	**Standing Stone**	**34.64**	**6**	P	P	05 13 59.8	+3.7
SSPA				IAmb	IAmb	05 14 31.6	
	comp=Z,104nm,1.1s						
N51A	**Ashland**	**34.66**	**0**	P	P	05 13 59.3	+3.0
N51A				IAmb	IAmb	05 14 15.0	
	comp=Z,156nm,1.1s						
N51A				IAMs_20	IAMs_20	05 29 32.3	
	comp=Z,9µm,21.0s						
O60A	**Telford**	**34.68**	**10**	P	**P**	**05 13 58.2**	**+1.8**
	baz=193						
N49A	**Columbus Grove**	**34.69**	**358**	IAmb	IAmb	05 14 04.8	
	comp=Z,66nm,0.8s						
N47A	**Urbana**	**34.73**	**356**	IAmb	IAmb	05 14 12.6	
	comp=Z,63nm,0.9s						
N47A				IAMs_20	IAMs_20	05 28 39.1	
	comp=Z,7µm,19.0s						
N54A	**Moraine State**	**34.78**	**4**	P	P	05 13 60.0	+2.6
	baz=185						
N54A	**Moraine State**	**34.78**	**4**	IAmb	IAmb	05 14 29.6	
	comp=Z,86nm,1.2s						
N54A				IAMs_20	IAMs_20	05 29 59.5	
	comp=Z,7µm,21.0s						
N57A	**Milroy**	**34.80**	**7**	P	P	05 14 00.2	+2.7
	baz=189						
N56A	**West Decatur**	**34.88**	**6**	P	P	05 14 00.7	+2.4
	baz=188						
LUPA	**Lehigh Univers**	**34.96**	**10**	IAMs_20	IAMs_20	05 28 04.0	
	comp=Z,10µm,21.0s						
PRPB	**Parauapebas**	**34.98**	**110**	*e*P	**P**	**05 13 59.1**	**-0.3**
N58A	**Sunbury**	**34.99**	**8**	P	P	05 14 02.1	+3.0
	baz=190						
N58A	**Sunbury**	**34.99**	**8**	IAmb	IAmb	05 14 34.1	
	comp=Z,75nm,1.1s						
HSIG		**35.12**	**314**	P	P	05 14 03.0	+2.5
HSIG				IAMs_20	IAMs_20	05 26 51.3	
	comp=Z,17µm,21.0s						
M50A	**Fremont**	**35.15**	**359**	IAmb	IAmb	05 14 19.1	
	comp=Z,68nm,0.9s						
SRIG	**Santa Rosalia**	**35.15**	**310**	IAMs_20	IAMs_20	05 28 04.8	
	comp=Z,9µm,22.0s						
BRNJ	**Basking Ridge**	**35.18**	**11**	IAMs_20	IAMs_20	05 27 47.9	
	comp=Z,9µm,21.0s						
KSU1	**Kansas State U**	**35.18**	**341**	P	**P**	**05 14 02.6**	**+1.8**
	baz=156						
KSU1	**Kansas State U**	**35.18**	**341**	IAmb	IAmb	05 14 24.2	
	comp=Z,55nm,0.8s						
N59A	**State Game Lan**	**35.20**	**9**	P	P	05 14 03.4	+2.4
	baz=192						
N59A	**State Game Lan**	**35.20**	**9**	IAmb	IAmb	05 14 28.7	
	comp=Z,79nm,1.1s						
121A	**Cookes Peak, D**	**35.21**	**322**	P	**P**	**05 14 01.8**	**+0.4**
	baz=133,SNR=53						
121A	**Cookes Peak, D**	**35.21**	**322**	IAMs_20	IAMs_20	05 29 03.0	
	comp=Z,12µm,18.0s						
M53A	**WI Miller and**	**35.23**	**3**	IAMs_20	IAMs_20	05 30 15.2	
	comp=Z,9µm,19.0s						
N60A	**Cedar Hill Far**	**35.27**	**10**	P	P	05 14 04.2	+2.7
	baz=193						
N61A	**South Mountain**	**35.30**	**11**	P	P	05 14 04.2	+2.4
	baz=194						
R32A	**Long Quarter,**	**35.31**	**338**	P	**P**	**05 14 03.1**	**+1.2**
M54A	**Oil Creek Stat**	**35.35**	**4**	P	P	05 14 04.8	+2.6
	baz=185						
M54A	**Oil Creek Stat**	**35.35**	**4**	IAmb	IAmb	05 14 21.6	
	comp=Z,130nm,1.4s						
M54A				IAMs_20	IAMs_20	05 26 54.5	
	comp=Z,9µm,22.0s						
M55A	**Ridgway**	**35.38**	**5**	IAmb	IAmb	05 14 37.1	
	comp=Z,113nm,1.1s						
M55A				IAMs_20	IAMs_20	05 28 48.3	
	comp=Z,7µm,19.0s						
319A	**Douglas**	**35.40**	**319**	P	P	05 14 08.9	+6.0
319A				IAmb	IAmb	05 14 50.0	
	comp=Z,207nm,1.5s						
319A				IAMs_20	IAMs_20	05 28 24.9	
	comp=Z,16µm,19.0s						
CPNY	**Central Park**	**35.40**	**11**	IAMs_20	IAMs_20	05 28 59.7	
	comp=Z,8µm,22.0s						
M57A	**Sunshine Farm,**	**35.42**	**7**	P	P	05 14 05.0	+2.1
	baz=189,SNR=9.5						
M57A	**Sunshine Farm,**	**35.42**	**7**	P	P	05 14 04.9	+2.0
M57A				IAmb	IAmb	05 14 33.9	
	comp=Z,104nm,0.9s						
M57A				IAMs_20	IAMs_20	05 29 01.4	
	comp=Z,6µm,19.0s						
M44A	**Midewin, Midew**	**35.46**	**353**	IAmb	IAmb	05 14 24.3	
	comp=Z,91nm,1.0s						
ALLY	**Alegheny Colle**	**35.46**	**3**	IAMs_20	IAMs_20	05 27 34.4	
	comp=Z,8µm,21.0s						
TMAB	**Tom-Au,PA,Br**	**35.52**	**103**	*e*P	**P**	**05 14 02.5**	**-1.6**
M58A	**Price’s Panora**	**35.55**	**8**	P	P	05 14 06.7	+2.8
	baz=190						
ODNJ	**Ogdensburg**	**35.56**	**10**	IAMs_20	IAMs_20	05 27 58.9	
	comp=Z,7µm,21.0s						
TRNY	**Table Rock, Ra**	**35.69**	**11**	IAMs_20	IAMs_20	05 30 50.4	
	comp=Z,7µm,19.0s						
L48A	**N Adams**	**35.72**	**358**	IAmb	IAmb	05 14 13.1	
	comp=Z,61nm,0.9s						
L48A				IAMs_20	IAMs_20	05 29 52.3	
	comp=Z,8µm,22.0s						
Y22D	**IRIS PASSCAL I**	**35.76**	**324**	P	**P**	**05 14 06.5**	**+0.4**
	baz=136,SNR=5.2						
Y22D	**IRIS PASSCAL I**	**35.76**	**324**	P	**P**	**05 14 07.5**	**+1.4**
Y22D				IAMs_20	IAMs_20	05 30 01.8	
	comp=Z,7µm,19.0s						
M60A	**Port Jervis**	**35.79**	**10**	P	P	05 14 08.8	+2.7
	baz=194						
HQIL	**Hanson Quary C**	**35.84**	**353**	IAmb	IAmb	05 14 29.5	
	comp=Z,140nm,1.1s						
M59A	**Waymart**	**35.87**	**9**	P	P	05 14 09.3	+2.6
	baz=192						
WSPT	**Westport, CT**	**35.89**	**12**	IAMs_20	IAMs_20	05 28 13.7	
	comp=Z,10µm,22.0s						
AC04	**Llanos de Chal**	**35.90**	**162**	IAmb	IAmb	05 14 21.6	
	comp=Z,291nm,2.0s						
ERPA	**Erie**	**35.94**	**3**	IAMs_20	IAMs_20	05 28 10.0	
	comp=Z,7µm,22.0s						
SNDB	**Serra Nova Dou**	**35.99**	**120**	*e*P	**P**	**05 14 05.8**	**-2.3**
CBKS	**Cedar Bluff**	**36.04**	**337**	P	**P**	**05 14 10.2**	**+1.9**
	baz=150						
CBKS	**Cedar Bluff**	**36.04**	**337**	IAmb	IAmb	05 14 32.5	
	comp=Z,105nm,0.9s						
AAM	**Ann Arbor**	**36.05**	**359**	P	P	05 14 11.0	+2.7
	baz=178						
AAM	**Ann Arbor**	**36.05**	**359**	IAmb	IAmb	05 15 14.2	
	comp=Z,96nm,1.3s						
L57A	**Andrews Acres**	**36.11**	**7**	P	**P**	**05 14 10.6**	**+1.8**
	baz=190,SNR=7.6						
YLE	**Yale**	**36.12**	**12**	IAMs_20	IAMs_20	05 28 20.6	
	comp=Z,8µm,22.0s						
ANMO	**Albuquerque**	**36.13**	**326**	P	**P**	**05 14 09.5**	**+0.3**
	comp=Z,33nm,1.1s,baz=140,slow=12,SNR=7.8						
ANMO	**Albuquerque**	**36.13**	**326**	P	**P**	**05 14 09.4**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,103nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,7µm,21.0s						
ANMO	**Albuquerque**	**36.13**	**326**	P	**P**	**05 14 09.9**	**+0.6**
	baz=138						
ANMO	**Albuquerque**	**36.13**	**326**	P	**P**	**05 14 09.4**	**+0.2**
ANMO				IAmb	IAmb	05 14 34.5	
	comp=Z,103nm,1.2s						
ANMO	**Albuquerque**	**36.13**	**326**	IAMs_20	IAMs_20	05 30 10.5	
	comp=Z,7µm,21.0s						
PP1B	**Ponte de Pedra**	**36.16**	**131**	*e*P	**P**	**05 14 09.0**	**-0.5**
L56A	**Greenwood**	**36.16**	**6**	P	P	05 14 11.3	+2.1
	baz=188						
L56A	**Greenwood**	**36.16**	**6**	IAmb	IAmb	05 14 36.7	
	comp=Z,101nm,1.2s						
L42A	**Oliver, Polo**	**36.28**	**351**	IAmb	IAmb	05 14 32.2	
	comp=Z,124nm,0.9s						
L58A	**Harry Jones Me**	**36.29**	**9**	P	P	05 14 12.3	+1.9
	baz=191,SNR=7.7						
WVNY	**West Valley, N**	**36.33**	**5**	IAmb	IAmb	05 14 45.7	
	comp=Z,183nm,1.2s						
WVNY				IAMs_20	IAMs_20	05 29 16.3	
	comp=Z,8µm,20.0s						

M63A	Gales Ferry	36.40	14	P	P	05 14 13.9	+2.7
	baz=198						
BINY	Binghamton	36.42	8	P	P	05 14 14.3	+2.8
	baz=191						
BINY	Binghamton	36.42	8	P	P	05 14 14.7	+3.2
BINY				IAmb	IAmb	05 14 38.7	
	comp=Z,158nm,1.2s						
N35A	Tabor	36.50	343	IAmb	IAmb	05 14 38.1	
	comp=Z,104nm,0.8s						
L60A	Shokan	36.51	11	P	P	05 14 14.8	+2.6
	baz=194						
K50A	Casco	36.52	0	IAMs_20	IAMs_20	05 31 30.3	
	comp=Z,9µm,21.0s						
L59A	Walton	36.56	10	P	P	05 14 15.0	+2.3
	baz=193						
L59A	Walton	36.56	10	IAmb	IAmb	05 14 40.1	
	comp=Z,131nm,1.1s						
L59A				IAMs_20	IAMs_20	05 28 41.5	
	comp=Z,9µm,21.0s						
T25A	Trinidad	36.72	330	P	P	05 14 14.3	0.0
	baz=142,SNR=44						
T25A	Trinidad	36.72	330	IAmb	IAmb	05 14 39.8	
	comp=Z,164nm,1.3s						
T25A				IAMs_20	IAMs_20	05 30 52.3	
	comp=Z,8µm,22.0s						
AC05	El Transito	36.73	162	P	P	05 14 14.2	-0.2
AC05				IAmb	IAmb	05 14 27.9	
	comp=Z,172nm,1.1s						
K56A	Middlesex	36.74	7	P	P	05 14 16.4	+2.2
	baz=189						
LCO	Las Campanas	36.77	162	*e*P	P	05 14 14.0	-0.8
LCO	Las Campanas	36.77	162	P	P	05 14 15.0	+0.2
LCO				IAmb	IAmb	05 14 35.0	
	comp=Z,330nm,1.9s						
LCO	Las Campanas	36.77	162	IAMs_20	IAMs_20	05 29 45.1	
	comp=Z,18µm,22.0s						
L61A	Hillsdale 1, H	36.83	11	P	P	05 14 17.5	+2.6
	baz=195						
SCIA	State Center	36.87	347	P	P	05 14 18.1	+2.9
K57A	Scipio Center	36.88	8	P	P	05 14 16.8	+1.5
	baz=190						
N33A	J Bar K, Exete	36.94	341	IAmb	IAmb	05 14 25.1	
	comp=Z,173nm,1.1s						
TUC	Tucson	36.98	318	P	P	05 14 16.9	+0.5
TUC				pmax	pmax		
	comp=Z,48nm,1.2s						
TUC				MLR	MLR		
	comp=Z,19µm,20.0s						
TUC	Tucson	36.98	318	P	P	05 14 17.0	+0.6
	baz=129						
TUC	Tucson	36.98	318	P	P	05 14 16.9	+0.5
K58A	Earlville	37.03	9	P	P	05 14 18.4	+1.8
	baz=192						
K58A	Earlville	37.03	9	IAmb	IAmb	05 14 43.5	
	comp=Z,108nm,1.1s						
MEDO	Medina	37.09	5	IAMs_20	IAMs_20	05 29 50.5	
	comp=Z,10µm,20.0s						
K59A	Cooperstown	37.16	10	P	P	05 14 19.6	+1.9
	baz=193						
QUA2	Belchertown	37.16	13	IAMs_20	IAMs_20	05 29 01.3	
	comp=Z,9µm,21.0s						
J54A	Appleton	37.18	5	IAMs_20	IAMs_20	05 29 52.9	
	comp=Z,10µm,20.0s						
L61B	Northampton	37.26	12	P	P	05 14 21.1	+2.6
	baz=196						
JFWS	Jewell Farm	37.26	351	P	P	05 14 21.2	+2.6
	baz=168						
JFWS	Jewell Farm	37.26	351	IAmb	IAmb	05 14 35.9	
	comp=Z,91nm,0.9s						
TRY	Troy	37.33	11	IAmb	IAmb	05 14 46.8	
	comp=Z,176nm,1.2s						
TRY				IAMs_20	IAMs_20	05 29 58.8	
	comp=Z,7µm,20.0s						
J56A	Wolcott	37.37	7	IAmb	IAmb	05 14 44.2	
	comp=Z,101nm,1.0s						
KSCO	Kaye Shedlock’	37.40	334	P	P	05 14 20.3	+0.4
	baz=146,SNR=8.8						
KSCO	Kaye Shedlock’	37.40	334	IAmb	IAmb	05 14 44.7	
	comp=Z,144nm,0.9s						
AQDB	Aquidauana	37.41	136	*e*P	P	05 14 17.5	-2.6
ARAG	Araguaiana, MT	37.45	126	*e*P	P	05 14 18.5	-2.0
K38A	Parkersburg	37.47	348	IAmb	IAmb	05 14 24.8	
	comp=Z,140nm,1.0s						
K62A	Royalston	37.56	13	P	P	05 14 24.0	+2.9
	baz=197						
K62A	Royalston	37.56	13	P	P	05 14 23.7	+2.7
K62A				IAmb	IAmb	05 14 48.8	
	comp=Z,94nm,1.1s						
K62A				IAMs_20	IAMs_20	05 29 12.7	
	comp=Z,9µm,20.0s						
I51A	Listowel	37.57	2	P	P	05 14 24.6	+3.5
	baz=183						
J57A	Williamstown	37.61	8	IAMs_20	IAMs_20	05 32 25.2	
	comp=Z,7µm,20.0s						
J58A	Remsen	37.67	9	P	P	05 14 25.7	+3.7
	baz=192						
J58A	Remsen	37.67	9	P	P	05 14 25.2	+3.2
J58A				IAmb	IAmb	05 14 49.3	
	comp=Z,129nm,1.1s						
J58A				IAMs_20	IAMs_20	05 30 42.7	
	comp=Z,6µm,21.0s						
SDCO	Great Sand Dun	37.73	330	P	P	05 14 24.7	+1.7
	baz=141						
SDCO	Great Sand Dun	37.73	330	IAmb	IAmb	05 14 48.5	
	comp=Z,128nm,1.1s						
GO04	Tololo Observa	37.83	163	P	P	05 14 22.6	-1.1
GO04				IAmb	IAmb	05 14 39.2	
	comp=Z,182nm,1.1s						
GO04				IAMs_20	IAMs_20	05 32 09.1	
	comp=Z,15µm,19.0s						
CO01	Juntas del Tor	37.85	162	IAmb	IAmb	05 14 39.1	
	comp=Z,128nm,1.2s						
J60A	Lant Hill Farm	37.87	11	P	P	05 14 27.2	+3.5
	baz=195						
J59A	Piesco	37.89	10	P	P	05 14 27.3	+3.4
	baz=193						
J59A	Piesco	37.89	10	IAmb	IAmb	05 14 49.7	
	comp=Z,149nm,1.5s						
J59A				IAMs_20	IAMs_20	05 29 28.7	
	comp=Z,7µm,20.0s						
I45A	Fountain	37.91	356	IAMs_20	IAMs_20	05 30 36.2	
	comp=Z,7µm,19.0s						
ACCN	Adirondack Com	37.96	11	P	P	05 14 27.7	+3.2
ACCN				IAmb	IAmb	05 14 51.7	
	comp=Z,95nm,1.1s						
SMTB	Santa Maria do	37.99	113	*e*P	P	05 14 23.4	-1.8
I42A	Draeger Farm,	38.03	353	IAmb	IAmb	05 14 38.6	
	comp=Z,135nm,1.0s						
I58A	Old Forge	38.04	9	P	P	05 14 27.0	+1.9
	baz=192						
214A	Organ Pipe Nat	38.13	316	P	P	05 14 25.5	-0.7
	baz=126,SNR=8.5						
214A	Organ Pipe Nat	38.13	316	IAmb	IAmb	05 14 50.6	
	comp=Z,101nm,1.1s						
J61A	Chester	38.14	12	P	P	05 14 28.3	+2.3
	baz=196						
W18A	Petrified Fore	38.15	323	P	P	05 14 26.8	+0.3
	baz=133,SNR=23						
W18A	Petrified Fore	38.15	323	IAmb	IAmb	05 14 51.8	
	comp=Z,187nm,1.0s						
W18A				IAMs_20	IAMs_20	05 30 53.0	
	comp=Z,14µm,19.0s						
I57A	Carthage	38.18	8	P	P	05 14 28.4	+2.2
	baz=191						
J62A	Henniker	38.19	13	P	P	05 14 28.9	+2.5
	baz=197						
PIX	Pinacate	38.35	315	P	P	05 14 30.3	+2.3
PIX				IAMs_20	IAMs_20	05 28 52.0	
	comp=Z,7µm,22.0s						
S22A	4UR Ranch, Cre	38.41	329	P	P	05 14 29.1	+0.4
	baz=139,SNR=40						
S22A	4UR Ranch, Cre	38.41	329	IAMs_20	IAMs_20	05 32 11.0	
	comp=Z,7µm,20.0s						
FFD	Franklin Falls	38.45	13	IAMs_20	IAMs_20	05 29 49.4	
	comp=Z,9µm,19.0s						
H43A	Windswept, Lux	38.47	354	IAmb	IAmb	05 14 42.0	
	comp=Z,146nm,0.8s						
H43A				IAMs_20	IAMs_20	05 31 53.1	
	comp=Z,5µm,19.0s						
I60A	Shoreham	38.48	11	P	P	05 14 31.5	+2.7
	baz=195						
H53A	Bobcaygeon	38.48	5	P	P	05 14 32.0	+3.2
	baz=186						
CO03	El Pedregal	38.48	163	IAmb	IAmb	05 14 42.4	
	comp=Z,176nm,1.1s						
CO03				IAMs_20	IAMs_20	05 24 30.5	
	comp=Z,15µm,20.0s						
DELO	Deloro Mine	38.51	6	IAMs_20	IAMs_20	05 30 33.1	
	comp=Z,6µm,18.0s						
Q24A	Divide	38.51	331	P	P	05 14 29.6	0.0
	baz=143,SNR=9.5						
Q24A	Divide	38.51	331	IAMs_20	IAMs_20	05 32 35.9	
	comp=Z,8µm,21.0s						
GLMI	Grayling	38.60	358	P	P	05 14 33.1	+3.2
	baz=177						
GLMI	Grayling	38.60	358	IAmb	IAmb	05 14 37.0	
	comp=Z,109nm,0.9s						
SADO	Sadowa	38.63	4	IAMs_20	IAMs_20	05 30 38.3	
	comp=Z,7µm,21.0s						
X16A	Lo Mia Camp, P	38.74	321	IAMs_20	IAMs_20	05 30 33.5	
	comp=Z,14µm,19.0s						
I61A	Oroboro, Fairl	38.77	12	P	P	05 14 34.2	+2.9
	baz=197						
OGNE	Ogallala	38.77	336	P	P	05 14 34.6	+3.1
	baz=148						
OGNE	Ogallala	38.77	336	P	P	05 14 34.5	+3.0
OGNE				IAMs_20	IAMs_20	05 32 50.9	
	comp=Z,7µm,22.0s						
G45A	Suttons Bay	38.87	357	IAMs_20	IAMs_20	05 32 19.6	
	comp=Z,6µm,20.0s						
H58A	Gabriels	38.87	10	P	P	05 14 34.8	+2.6
	baz=193						
MVCO	Mesa Verde	38.91	326	P	P	05 14 34.6	+1.8
	baz=137						
MVCO	Mesa Verde	38.91	326	IAmb	IAmb	05 14 57.8	
	comp=Z,247nm,1.4s						
MVCO				IAMs_20	IAMs_20	05 31 53.1	
	comp=Z,7µm,20.0s						
I62A	Tamworth	38.91	13	P	P	05 14 35.1	+2.6
	baz=198						
LONY	Lake Ozonia	39.01	9	P	P	05 14 35.8	+2.6
	baz=193						
LONY	Lake Ozonia	39.01	9	IAMs_20	IAMs_20	05 30 04.1	
	comp=Z,7µm,20.0s						
VT1	Waterbury	39.05	11	IAmb	IAmb	05 15 01.2	
	comp=Z,181nm,1.1s						
VT1				IAMs_20	IAMs_20	05 31 10.9	
	comp=Z,9µm,21.0s						
K31A	O'Neill	39.06	341	P	P	05 14 36.1	+2.3
LBNH	Lisbon	39.13	12	P	P	05 14 37.0	+2.7
	baz=197						
LBNH	Lisbon	39.13	12	IAmb	IAmb	05 15 01.7	
	comp=Z,169nm,1.4s						
H59A	Cadyville	39.18	10	P	P	05 14 37.7	+3.0
	baz=194						
I63A	Otisfield	39.25	14	P	P	05 14 38.3	+3.1
	baz=199						
H60A	Morristown	39.28	11	P	P	05 14 37.8	+2.3
	baz=196						
G54A	Lake Saint Pet	39.34	5	P	P	05 14 38.3	+2.3
	baz=187						
FRNY	Flat Rock	39.38	10	P	P	05 14 39.7	+3.4
ISCO	Idaho Springs	39.39	332	P	P	05 14 36.8	-0.1
	baz=143,SNR=11						
H61A	Lyndonville	39.41	12	P	P	05 14 38.8	+2.1
	baz=197						
WUAZ	Wupatki	39.41	322	P	P	05 14 38.0	+0.9
	baz=132						
WUAZ	Wupatki	39.41	322	IAmb	IAmb	05 15 02.0	
	comp=Z,101nm,0.9s						
WUAZ				IAMs_20	IAMs_20	05 30 31.3	
	comp=Z,9µm,20.0s						
G57A	Newington	39.41	9	P	P	05 14 37.8	+1.1
	baz=192,SNR=8.0						
ECSD	EROS Data Cent	39.43	344	P	P	05 14 39.0	+2.2
	baz=158						
H03N2	Juan Fernandez	39.49	175	T	T	05 55 56.5	
	baz=354,slow=76,SNR=314						
H03N1	Juan Fernandez	39.49	175	T	T	05 55 57.2	
	baz=354,slow=76,SNR=406						
SPX	San Pedro Mart	39.50	313	IAMs_20	IAMs_20	05 28 48.3	
	comp=Z,7µm,22.0s						
ROSB	Rosrio	39.50	102	*e*P	P	05 14 38.2	+0.3
H03N3	Juan Fernandez	39.51	175	T	T	05 55 48.1	
	baz=354,slow=76,SNR=293						
SMCO	Snowmass	39.57	330	IAMs_20	IAMs_20	05 32 59.8	
	comp=Z,6µm,21.0s						
G58A	Ormstown	39.61	10	P	P	05 14 41.0	+2.8
	baz=193						
H62A	Milan	39.61	13	P	P	05 14 41.0	+2.7
	baz=198						
H62A	Milan	39.61	13	P	P	05 14 44.1	+5.8
H62A				IAmb	IAmb	05 15 09.4	
	comp=Z,268nm,2.0s						
PV01	Paradox Valley	39.62	327	IAMs_20	IAMs_20	05 33 32.9	
	comp=Z,7µm,21.0s						
G59A	Clarenceville	39.69	11	P	P	05 14 41.8	+2.9
	baz=195						
PV15	Paradox Valley	39.72	328	IAmb	IAmb	05 15 04.9	
	comp=Z,140nm,1.1s						
PV15				IAMs_20	IAMs_20	05 31 54.7	
	comp=Z,9µm,21.0s						
ZON	Zonda	39.75	161	IAmb	IAmb	05 14 46.4	
	comp=Z,356nm,1.8s						
PV13	Radium Mtn., P	39.77	327	IAmb	IAmb	05 15 05.0	
	comp=Z,112nm,0.8s						
PV03	Paradox Valley	39.85	327	IAMs_20	IAMs_20	05 32 36.2	
	comp=Z,7µm,21.0s						
G60A	Masonville	39.87	11	P	P	05 14 42.8	+2.4
	baz=196						
PV12	Saucer Basin,	39.88	327	IAmb	IAmb	05 15 05.9	
	comp=Z,209nm,0.9s						
PV12				IAMs_20	IAMs_20	05 32 37.8	
	comp=Z,9µm,21.0s						
PV07	Paradox Valley	39.88	328	P	P	05 14 40.9	0.0
PV07				IAmb	IAmb	05 15 07.1	
	comp=Z,124nm,1.2s						
PV07				IAMs_20	IAMs_20	05 33 02.0	
	comp=Z,9µm,21.0s						
PV18	Skein Mesa, Pa	39.88	327	IAmb	IAmb	05 15 06.8	
	comp=Z,136nm,1.0s						
PV18				IAMs_20	IAMs_20	05 32 26.9	
	comp=Z,7µm,19.0s						
ALGO	Algonquin Park	39.90	5	P	P	05 14 42.9	+2.3
	baz=187						
PV11	David Mesa, Pa	39.90	327	IAmb	IAmb	05 14 59.8	
	comp=Z,164nm,1.2s						
PV11				IAMs_20	IAMs_20	05 32 36.4	
	comp=Z,8µm,21.0s						
PV16	Nyswonger Mesa	39.93	327	IAmb	IAmb	05 15 07.3	
	comp=Z,122nm,1.0s						
PV16				IAMs_20	IAMs_20	05 32 27.3	
	comp=Z,7µm,19.0s						
PV17	East Wray Mesa	39.93	327	IAmb	IAmb	05 15 07.2	
	comp=Z,119nm,1.0s						
PV17				IAMs_20	IAMs_20	05 32 36.3	
	comp=Z,8µm,20.0s						
SPMN	Marine on St.	39.95	349	P	P	05 14 41.5	+0.4
	baz=164,SNR=16						
SPMN	Marine on St.	39.95	349	IAmb	IAmb	05 14 58.0	
	comp=Z,147nm,1.1s						
H63A	New Sharon	39.96	14	P	P	05 14 43.2	+2.0
	baz=200						
PV19	Morning Glory	39.97	327	IAMs_20	IAMs_20	05 32 29.2	
	comp=Z,7µm,19.0s						
PV20	West Nyswonger	39.98	327	IAmb	IAmb	05 15 07.6	
	comp=Z,137nm,1.3s						
PV04	Paradox Valley	39.99	327	P	P	05 14 41.5	-0.3
PV04				IAMs_20	IAMs_20	05 32 40.6	
	comp=Z,9µm,22.0s						
PV14	Lion Creek, Pa	40.03	327	IAMs_20	IAMs_20	05 32 40.0	
	comp=Z,9µm,20.0s						
PV10	Paradox Valley	40.05	327	P	P	05 14 43.6	+1.2
PV10				IAmb	IAmb	05 15 07.5	
	comp=Z,111nm,1.0s						
PV10				IAMs_20	IAMs_20	05 32 28.6	
	comp=Z,9µm,20.0s						
PV23	Carpenter Ridg	40.09	327	IAMs_20	IAMs_20	05 33 33.4	
	comp=Z,6µm,19.0s						
CPBX	Cerro Prieto	40.13	315	IAMs_20	IAMs_20	05 29 33.0	
	comp=Z,7µm,20.0s						
E46A	Sault Ste Mari	40.13	358	IAMs_20	IAMs_20	05 33 36.0	
	comp=Z,9µm,20.0s						
GLA	Glamis	40.15	316	P	P	05 14 43.1	+0.1
	baz=125						
GLA	Glamis	40.15	316	IAmb	IAmb	05 15 07.3	
	comp=Z,102nm,1.0s						
GLA				IAMs_20	IAMs_20	05 30 54.7	
	comp=Z,9µm,19.0s						
G61A	St-Isidore-de-	40.21	12	P	P	05 14 44.6	+1.3
	baz=197						
E43A	Lone Tree Farm	40.29	355	IAmb	IAmb	05 14 59.9	
	comp=Z,100nm,1.1s						
E43A				IAMs_20	IAMs_20	05 32 09.0	
	comp=Z,7µm,22.0s						
VA03	San Esteban	40.34	164	IAmb	IAmb	05 14 58.0	
	comp=Z,200nm,0.9s						
UABX	UABC, Campus M	40.34	315	IAMs_20	IAMs_20	05 30 40.8	
	comp=Z,7µm,21.0s						
ESJX	Sierra Juarez	40.36	314	IAMs_20	IAMs_20	05 29 41.1	
	comp=Z,6µm,22.0s						
G62A	West of Eustis	40.37	13	P	P	05 14 45.3	+0.7
	baz=199,SNR=7.3						
G62A	West of Eustis	40.37	13	P	P	05 14 50.0	+5.4
G62A				IAmb	IAmb	05 15 12.8	
	comp=Z,184nm,1.1s						
N23A	Red Feather La	40.41	332	P	P	05 14 44.6	-0.7
	baz=143,SNR=10						
PDMCI	Parker Dam,Lak	40.42	318	P	P	05 14 44.6	-0.6
	baz=127,SNR=6.7						
H65A	Eastbrook	40.45	16	P	P	05 14 46.8	+1.6
	baz=202						
G63A	Kingsbury	40.48	14	P	P	05 14 47.6	+2.1
	baz=200						
F59A	Saint Guilaume	40.51	11	P	P	05 14 47.7	+2.0
	baz=195						
CPUP	Villa Florida	40.54	144	P	P	05 14 43.5	-2.7
	comp=Z,31nm,0.9s,baz=326,slow=8.6,SNR=31						
CPUP				S	S	05 20 49.9	-5.9
	comp=Z,2.1nm,0.9s,baz=252,slow=20,SNR=2.3						
CPUP				LR	LR	05 32 16.8	
	comp=Z,38µm,21.3s,baz=322,slow=37						
CPUP	Villa Florida	40.54	144	P	P	05 14 44.9	-1.3
CPUP				pmax	pmax		
	comp=Z,78nm,1.2s						
CPUP	Villa Florida	40.54	144	P	P	05 14 44.9	-1.3
CPUP	Villa Florida	40.54	144	*e*P	P	05 14 44.9	-1.3
BDFB	Brasilia	40.55	123	P	P	05 14 44.9	-1.7
	comp=Z,22nm,1.0s,baz=296,slow=9.4,SNR=11						
BDFB				S	S	05 20 52.1	-4.4
	comp=Z,4.6nm,0.7s,baz=155,slow=20,SNR=2.2						
BDFB				LR	LR	05 31 26.5	
	comp=Z,53µm,21.5s,baz=292,slow=36						
BDFB	Brasilia	40.55	123	P	P	05 14 45.2	-1.4
BDFB				pmax	pmax		
	comp=Z,62nm,1.1s						
BDFB				MLR	MLR		
	comp=Z,56µm,22.0s						
BDFB	Brasilia	40.55	123	P	P	05 14 45.2	-1.4
U15A	North Rim	40.57	322	IAmb	IAmb	05 15 12.1	
	comp=Z,141nm,1.3s						
U15A				IAMs_20	IAMs_20	05 32 10.0	
	comp=Z,11µm,18.0s						
TRQ	Mont Tremblant	40.57	9	P	P	05 14 50.0	+3.7
E55A	Montcerf-Lytto	40.60	7	P	P	05 14 48.3	+1.9
	baz=190						
MT02	Curacav	40.65	165	P	P	05 14 44.7	-2.3
MT02				IAmb	IAmb	05 15 00.2	
	comp=Z,221nm,1.6s						
PEL	Peldehue	40.66	165	P	P	05 14 47.6	+0.4
PEL				pmax	pmax		
	comp=Z,226nm,1.4s						
PEL	Peldehue	40.66	165	P	P	05 14 47.6	+0.4
PEL				IAmb	IAmb	05 15 12.7	
	comp=Z,226nm,1.4s						
PKME	Peaks-Kenny Pk	40.70	14	P	P	05 14 49.7	+2.3
	baz=200						
PKME	Peaks-Kenny Pk	40.70	14	P	P	05 14 52.3	+5.0
PKME				IAmb	IAmb	05 15 14.7	
	comp=Z,206nm,1.6s						
W13A	Hualapai Mount	40.73	319	IAMs_20	IAMs_20	05 30 27.2	
	comp=Z,10µm,22.0s						
SUSD	Miller	40.76	342	P	P	05 14 50.3	+2.4
	baz=155						
SUSD	Miller	40.76	342	P	P	05 14 50.6	+2.7
SUSD				IAmb	IAmb	05 15 13.3	
	comp=Z,154nm,1.2s						
SWSC	Sam W. Stewart	40.77	315	P	P	05 14 47.6	-0.5
	baz=124,SNR=6.0						
F60A	Warwick	40.78	11	P	P	05 14 49.8	+1.8
	baz=196						
H66A	Whiting	40.79	17	P	P	05 14 50.1	+2.1
	baz=204						
E56A	St. Veronique	40.82	8	P	P	05 14 49.1	+0.8
	baz=192,SNR=7.3						
IKP	In-Ko-Pah, Jac	40.83	315	P	P	05 14 47.3	-1.3
	baz=124,SNR=12						
ITRB	Iturama	40.84	130	*e*P	P	05 14 48.0	-0.9
MT05	Renca	40.88	165	P	P	05 14 48.6	-0.5
E58A	La Victoria	40.92	10	P	P	05 14 50.5	+1.4
	baz=194,SNR=6.1						
BC3	Big Chuckawall	40.93	316	P	P	05 14 50.0	+0.4
	baz=125						
O20A	White River Ci	40.93	330	P	P	05 14 49.4	-0.2
	baz=139,SNR=13						
O20A	White River Ci	40.93	330	IAmb	IAmb	05 15 14.7	
	comp=Z,189nm,1.5s						
F61A	St Evariste	40.98	12	P	P	05 14 51.5	+1.9
	baz=198						
E38A	The Farm, Brul	41.07	351	IAmb	IAmb	05 15 14.4	
	comp=Z,220nm,1.7s						
TRCB	Terra Rica	41.08	135	*e*P	P	05 14 49.5	-1.3
G65A	Princeton	41.10	16	P	P	05 14 52.5	+1.9
	baz=203						
D41A	Chassel	41.12	354	IAmb	IAmb	05 15 09.4	
	comp=Z,151nm,1.1s						
D41A				IAMs_20	IAMs_20	05 33 23.1	
	comp=Z,6µm,20.0s						
TKX	Tecate	41.14	314	IAMs_20	IAMs_20	05 31 19.6	
	comp=Z,8µm,21.0s						
MONP2	Monument Peak	41.18	315	P	P	05 14 51.7	0.0
	baz=123,SNR=8.9						
GGN	Saint George	41.23	17	P	P	05 14 54.0	+2.4
BAR	Barrett	41.24	314	IAMs_20	IAMs_20	05 31 26.4	
	comp=Z,8µm,20.0s						
E60A	Ste Agathe de	41.26	12	P	P	05 14 53.7	+1.8
	baz=197,SNR=6.7						
PCMB	Pacaembu	41.31	133	*e*P	P	05 14 50.7	-2.0
D56A	ZEC Mazanza, M	41.35	8	P	P	05 14 54.2	+1.5
	baz=192						
TJX	Tijuana	41.42	314	IAMs_20	IAMs_20	05 30 23.2	
	comp=Z,6µm,20.0s						
BELC	Belle Mtn. Jos	41.50	316	P	P	05 14 53.6	-0.7
	baz=125,SNR=12						
F64A	Sherman	41.50	15	P	P	05 14 55.7	+1.8
	baz=202						
F64A	Sherman	41.50	15	IAmb	IAmb	05 15 21.0	
	comp=Z,165nm,1.4s						
E61A	Lac Etchemin	41.52	13	P	P	05 14 56.0	+1.8
	baz=198						
IPMB	Ipameri, GO	41.58	126	*e*P	P	05 14 53.2	-1.8
TPFO	Pinon Flats	41.59	316	P	P	05 14 54.6	-0.5
	baz=124,SNR=7.4						
XPFO	Pion Flat	41.59	316	IAMs_20	IAMs_20	05 31 35.8	
	comp=Z,7µm,19.0s						
PFO	Pinyon Flats O	41.60	316	*e*P	P	05 14 55.0	-0.1
PFO				pmax	pmax		
	comp=Z,109nm,1.5s						
PFO	Pinyon Flats O	41.60	316	P	P	05 14 54.5	-0.6
	baz=124,SNR=8.0						
PFO	Pinyon Flats O	41.60	316	P	P	05 14 54.7	-0.4
PFO	Pinyon Flats O	41.60	316	IAMs_20	IAMs_20	05 31 35.8	
	comp=Z,7µm,19.0s						
RWWY	Rawlins	41.63	332	IAmb	IAmb	05 15 20.3	
	comp=Z,95nm,1.0s						
109C	Camp Elliot, M	41.66	314	P	P	05 14 55.4	0.0
	baz=123						
109C	Camp Elliot, M	41.66	314	IAMs_20	IAMs_20	05 31 38.5	
	comp=Z,8µm,20.0s						
D58A	Chemin du LacG	41.69	10	P	P	05 14 57.0	+1.6
	baz=195						
GMRC	Granite Mounta	41.72	318	P	P	05 14 55.2	-0.8
	baz=126,SNR=6.6						
SDBA	SAO DESIDERIO	41.80	116	*e*P	P	05 14 55.8	-1.1
D60A	Saint Jean D’O	41.89	12	P	P	05 14 58.2	+1.1
	baz=198,SNR=12						
MSU	Marysvale	41.89	325	P	P	05 14 58.8	+1.3
MSU	Marysvale	41.89	325	P	P	05 14 58.8	+1.3
RPN	Rapa Nui	41.93	217	P	P	05 14 59.3	+1.7
RPN				pmax	pmax		
	comp=Z,187nm,1.3s						
RPN	Rapa Nui	41.93	217	P	P	05 14 59.3	+1.7
RPN				IAmb	IAmb	05 15 12.2	
	comp=Z,187nm,1.2s						
LATQ	La Tuque	41.99	10	P	P	05 14 58.4	+0.6
	baz=195,SNR=7.8						
E63A	Oxbow	42.00	15	P	P	05 14 59.0	+1.0
	baz=201						
E63A	Oxbow	42.00	15	P	P	05 15 03.2	+5.2
E63A				IAMs_20	IAMs_20	05 32 31.3	
	comp=Z,8µm,22.0s						
K22A	Casper	42.08	334	P	P	05 14 57.7	-1.2
	baz=143,SNR=13						

K22A	**Casper**	**42.08**	**334**	IAmb	IAmb	05 15 23.6	
	comp=Z,114nm,1.2s						
K22A				IAMs_20	IAMs_20	05 35 03.2	
	comp=Z,7µm,21.0s						
VLDQ	**Val d'Or**	**42.09**	**5**	P	P	05 15 02.5	+3.8
VLDQ				IAMs_20	IAMs_20	05 32 52.1	
	comp=Z,11µm,19.0s						
MURC	**Murrieta**	**42.11**	**315**	P	**P**	**05 14 58.7**	**-0.4**
	baz=123,SNR=7.4						
E64A	**Bridgewater**	**42.15**	**15**	P	**P**	**05 15 00.9**	**+1.7**
	baz=202						
HEC	**Hector,Ludlow**	**42.20**	**317**	P	**P**	**05 14 59.0**	**-0.9**
	baz=125,SNR=9.2						
BO02	**Sierra Bellavi**	**42.20**	**165**	IAmb	IAmb	05 15 23.0	
	comp=Z,94nm,1.0s						
RSSD	**Black Hills**	**42.25**	**337**	P	**P**	**05 14 59.5**	**-0.8**
RSSD				pmax	pmax		
	comp=Z,61nm,0.8s						
RSSD				MLR	MLR		
	comp=Z,6µm,21.0s						
RSSD	**Black Hills**	**42.25**	**337**	P	**P**	**05 15 00.8**	**+0.5**
	baz=148						
RSSD	**Black Hills**	**42.25**	**337**	P	**P**	**05 14 59.5**	**-0.8**
RSSD	**Black Hills**	**42.25**	**337**	IAMs_20	IAMs_20	05 35 38.9	
	comp=Z,5µm,21.0s						
D61A	**St Aubert, Com**	**42.32**	**13**	P	**P**	**05 15 01.3**	**+0.7**
	baz=198,SNR=13						
PQI	**Presque Isle**	**42.34**	**15**	IAmb	IAmb	05 15 28.6	
	comp=Z,161nm,1.4s						
PQI				IAMs_20	IAMs_20	05 32 41.2	
	comp=Z,7µm,22.0s						
EYMN	**Ely**	**42.37**	**351**	P	**P**	**05 15 01.9**	**+0.9**
	baz=167,SNR=6.8						
SHPR	**Sheep Range**	**42.41**	**320**	P	**P**	**05 15 01.7**	**-0.1**
SHPR				IAMs_20	IAMs_20	05 32 12.6	
	comp=Z,7µm,20.0s						
D62A	**Allapoint, All**	**42.47**	**14**	P	**P**	**05 15 03.4**	**+1.6**
	baz=200,SNR=8.4						
LMN	**Caledonia Moun**	**42.51**	**18**	IAmb	IAmb	05 15 29.6	
	comp=Z,197nm,1.4s						
D63A	**Stockholm**	**42.66**	**15**	P	**P**	**05 15 04.2**	**+0.9**
	baz=202						
D32A	**Dogwood Acres,**	**42.70**	**346**	IAmb	IAmb	05 15 28.6	
	comp=Z,189nm,1.6s						
PTGB	**Pitanga**	**42.73**	**137**	*e*P	**P**	**05 15 03.0**	**-1.3**
SCI2	**San Clemente I**	**42.74**	**313**	P	**P**	**05 15 04.4**	**+0.1**
	baz=121						
SHOC	**Shoshone, Teco**	**42.77**	**319**	P	**P**	**05 15 04.2**	**-0.3**
	baz=126,SNR=11						
BFSC	**Mount Baldy Ra**	**42.78**	**316**	P	**P**	**05 15 04.6**	**0.0**
	baz=123						
GSC	**Goldstone, Bar**	**42.78**	**317**	P	**P**	**05 15 04.0**	**-0.7**
	baz=125,SNR=8.9						
GSC	**Goldstone, Bar**	**42.78**	**317**	IAmb	IAmb	05 16 06.9	
	comp=Z,150nm,1.7s						
GSC				IAMs_20	IAMs_20	05 33 20.3	
	comp=Z,8µm,18.0s						
PRN	**Pahroc Range**	**42.90**	**321**	IAMs_20	IAMs_20	05 33 06.5	
	comp=Z,10µm,20.0s						
BB19B	**Bebedouro**	**43.03**	**130**	*e*P	**P**	**05 15 05.0**	**-1.8**
MWC	**Mount Wilson**	**43.05**	**315**	IAMs_20	IAMs_20	05 32 22.2	
	comp=Z,6µm,21.0s						
LSQQ	**Lebel-sur-Quev**	**43.07**	**5**	P	**P**	**05 15 07.6**	**+0.9**
	baz=188						
PASC	**Pasadena Art C**	**43.11**	**315**	P	**P**	**05 15 07.9**	**+0.7**
PASC				IAmb	IAmb	05 15 33.4	
	comp=Z,118nm,1.4s						
PASC	**Pasadena Art C**	**43.11**	**315**	IAMs_20	IAMs_20	05 32 22.8	
	comp=Z,7µm,21.0s						
E28A	**Huff**	**43.21**	**342**	IAmb	IAmb	05 15 31.2	
	comp=Z,115nm,1.0s						
EDW2	**Edwards Air Fo**	**43.36**	**316**	P	**P**	**05 15 08.8**	**-0.5**
	baz=124,SNR=8.8						
TPNV	**Topopah Spring**	**43.38**	**320**	P	**P**	**05 15 09.5**	**-0.1**
	baz=127,SNR=9.9						
TPNV	**Topopah Spring**	**43.38**	**320**	IAmb	IAmb	05 15 52.9	
	comp=Z,121nm,1.4s						
TPNV				IAMs_20	IAMs_20	05 32 29.2	
	comp=Z,11µm,22.0s						
DUG	**Dugway, Tooele**	**43.40**	**326**	P	**P**	**05 15 09.0**	**-0.6**
	baz=134,SNR=8.7						
DUG	**Dugway, Tooele**	**43.40**	**326**	IAMs_20	IAMs_20	05 33 47.1	
	comp=Z,12µm,20.0s						
BATG	**Bathurst New B**	**43.42**	**16**	IAMs_20	IAMs_20	05 35 24.8	
	comp=Z,8µm,20.0s						
JANB	**Januaria**	**43.44**	**119**	*e*P	**P**	**05 15 08.4**	**-1.8**
LRMC	**Laurel Mtn Rad**	**43.47**	**317**	P	**P**	**05 15 09.1**	**-1.2**
	baz=124,SNR=10						
ITQB	**Itaqui**	**43.48**	**146**	*e*P	**P**	**05 15 09.0**	**-1.3**
FURC	**Furnace Creek,**	**43.49**	**319**	P	**P**	**05 15 09.1**	**-1.1**
	baz=126,SNR=11						
BW06	**Boulder Array**	**43.57**	**331**	P	**P**	**05 15 09.6**	**-1.5**
	baz=140,SNR=23						
BW06	**Boulder Array**	**43.57**	**331**	IAMs_20	IAMs_20	05 36 05.7	
	comp=Z,7µm,20.0s						
PDAR	**Pinedale Array**	**43.57**	**331**	P	**P**	**05 15 10.4**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=141,slow=7.3,SNR=12						
PDAR				LR	LR	05 35 08.4	
	comp=Z,5µm,20.0s,baz=146,slow=38						
SNCC	**San Nicolas Is**	**43.59**	**313**	P	**P**	**05 15 11.4**	**+0.3**
SNCC				IAmb	IAmb	05 15 34.4	
	comp=Z,81nm,1.1s						
SNCC				IAMs_20	IAMs_20	05 31 46.4	
	comp=Z,6µm,22.0s						
FRTB	**Fartura**	**43.61**	**133**	*e*P	**P**	**05 15 09.4**	**-2.0**
MPMC	**Manual Prospec**	**43.67**	**318**	P	**P**	**05 15 09.9**	**-2.1**
	baz=125,SNR=22						
MATQ	**Matagami**	**43.71**	**5**	P	**P**	**05 15 11.7**	**-0.1**
	baz=187						
HWUT	**Hardware Ranch**	**43.72**	**328**	IAmb	IAmb	05 15 36.1	
	comp=Z,92nm,0.8s						
HWUT				IAMs_20	IAMs_20	05 34 34.6	
	comp=Z,9µm,20.0s						
OSI	**Osito Audit: C**	**43.72**	**315**	IAMs_20	IAMs_20	05 32 41.0	
	comp=Z,5µm,22.0s						
R11A	**Troy Canyon, C**	**43.81**	**322**	P	**P**	**05 15 12.4**	**-0.7**
	baz=129,SNR=15						
R11A	**Troy Canyon, C**	**43.81**	**322**	IAMs_20	IAMs_20	05 33 48.9	
	comp=Z,11µm,19.0s						
BGU	**Big Grassy Mou**	**44.02**	**327**	P	**P**	**05 15 14.4**	**-0.3**
MDND	**Maddock**	**44.04**	**344**	P	**P**	**05 15 16.0**	**+1.5**
	baz=156,SNR=10						
MDND	**Maddock**	**44.04**	**344**	P	P	05 15 16.7	+2.2
ARVC	**Arvin**	**44.07**	**316**	P	**P**	**05 15 14.4**	**-0.6**
	baz=123,SNR=8.1						
ISA	**Isabella, Lake**	**44.11**	**317**	P	**P**	**05 15 15.1**	**-0.3**
	baz=124,SNR=10.0						
ISA	**Isabella, Lake**	**44.11**	**317**	IAMs_20	IAMs_20	05 33 00.5	
	comp=Z,6µm,22.0s						
CWC	**Cottonwood Cre**	**44.28**	**318**	P	**P**	**05 15 16.8**	**0.0**
	baz=125						
AHID	**Auburn Hatcher**	**44.32**	**330**	IAmb	IAmb	05 15 45.3	
	comp=Z,100nm,1.4s						
AHID				IAMs_20	IAMs_20	05 34 34.6	
	comp=Z,6µm,21.0s						
ITAB	**Concordia**	**44.39**	**140**	*e*P	**P**	**05 15 16.3**	**-1.3**
VES	**Vestal, Richgr**	**44.63**	**317**	P	**P**	**05 15 19.1**	**-0.3**
	baz=123,SNR=11						
PKM	**Mcpherson Peak**	**44.63**	**315**	P	**P**	**05 15 18.4**	**-1.2**
	baz=122,SNR=18						
REDW	**Red Top Meadow**	**44.64**	**331**	IAMs_20	IAMs_20	05 35 54.1	
	comp=Z,7µm,19.0s						
LOHW	**Long Hollow**	**44.71**	**331**	IAMs_20	IAMs_20	05 36 30.8	
	comp=Z,7µm,20.0s						
TIN	**Tinemaha, Big**	**44.73**	**319**	P	**P**	**05 15 21.0**	**+0.7**
	baz=125						
MOOW	**Moose Ponds**	**44.88**	**331**	IAMs_20	IAMs_20	05 36 36.3	
	comp=Z,7µm,20.0s						
SMMC	**Simmler**	**44.98**	**315**	P	**P**	**05 15 22.4**	**+0.1**
	baz=122,SNR=22						
ELK	**Elko**	**45.14**	**325**	P	**P**	**05 15 23.3**	**-0.4**
ELK				pmax	pmax		
	comp=Z,34nm,0.8s						
ELK				MLR	MLR		
	comp=Z,10µm,22.0s						
ELK	**Elko**	**45.14**	**325**	P	**P**	**05 15 23.3**	**-0.4**
ELK				IAMs_20	IAMs_20	05 34 07.1	
	comp=Z,10µm,22.0s						
LAO	**LASA Array**	**45.24**	**337**	P	**P**	**05 15 22.4**	**-1.8**
	baz=146,SNR=12						
LAO	**LASA Array**	**45.24**	**337**	IAmb	IAmb	05 15 48.2	
	comp=Z,98nm,1.1s						
RLMT	**Red Lodge**	**45.24**	**333**	P	**P**	**05 15 23.2**	**-1.2**
	baz=141,SNR=14						
RLMT	**Red Lodge**	**45.24**	**333**	IAMs_20	IAMs_20	05 37 06.0	
	comp=Z,5µm,21.0s						
H17A	**Grant Village**	**45.28**	**332**	P	**P**	**05 15 23.8**	**-1.0**
	baz=139,SNR=11						
SPB	**Sao Paulo**	**45.32**	**132**	P	**P**	**05 15 25.7**	**+0.6**
SPB				IAmb	IAmb	05 15 39.6	
	comp=Z,128nm,1.6s						
SPB	**Sao Paulo**	**45.32**	**132**	*e*P	**P**	**05 15 24.3**	**-0.7**
VAO	**Valinhos**	**45.33**	**131**	*e*P	**P**	**05 15 23.5**	**-1.7**
LKWY	**Lake**	**45.33**	**332**	IAmb	IAmb	05 16 10.9	
	comp=Z,60nm,1.1s						
PAGB	**Antelope Grade**	**45.37**	**316**	IAmb	IAmb	05 15 49.0	
	comp=Z,163nm,1.4s						
PAGB				IAMs_20	IAMs_20	05 33 57.7	
	comp=Z,4µm,19.0s						
ULM	**Lac du Bonnet**	**45.37**	**348**	P	**P**	**05 15 22.1**	**-2.9**
	comp=Z,9.4nm,0.6s,baz=159,slow=7.6,SNR=12						
ULM	**Lac du Bonnet**	**45.37**	**348**	*i* P	P	05 15 27.4	+2.3
ULM	**Lac du Bonnet**	**45.37**	**348**	IAmb	IAmb	05 15 29.1	
	comp=Z,62nm,0.8s						
NV11	**Mina Array Sit**	**45.47**	**320**	IAmb	IAmb	05 15 50.4	
	comp=Z,65nm,0.9s						
NV11				IAMs_20	IAMs_20	05 35 07.7	
	comp=Z,9µm,18.0s						
OMMB	**Old Mammoth Mi**	**45.55**	**319**	P	**P**	**05 15 27.6**	**+0.5**
OMMB				IAmb	IAmb	05 15 53.8	
	comp=Z,80nm,1.0s						
OMMB				IAMs_20	IAMs_20	05 33 29.6	
	comp=Z,11µm,22.0s						
NVAR	**Mina Array Bea**	**45.56**	**320**	P	**P**	**05 15 27.1**	**0.0**
	comp=Z,1.0nm,0.6s,baz=134,slow=5.2,SNR=10						
NVAR				LR	LR	05 35 19.8	
	comp=Z,9µm,18.9s,baz=120,slow=37						
LHV	**Little Huntoon**	**45.59**	**320**	IAmb	IAmb	05 15 51.5	
	comp=Z,102nm,0.9s						
LHV				IAMs_20	IAMs_20	05 34 39.8	
	comp=Z,9µm,19.0s						
MDPB	**Devils Postpil**	**45.61**	**319**	IAMs_20	IAMs_20	05 33 31.2	
	comp=Z,9µm,21.0s						
YHH	**Holmes Hill**	**45.71**	**332**	P	**P**	**05 15 28.3**	**+0.1**
RYN	**Ryan**	**45.82**	**320**	IAmb	IAmb	05 15 52.8	
	comp=Z,44nm,0.9s						
RYN				IAMs_20	IAMs_20	05 35 17.9	
	comp=Z,8µm,18.0s						
CPSB	**Cacapava Do Su**	**45.85**	**144**	*e*P	**P**	**05 15 27.6**	**-1.6**
PET01	**Itanhaem-SP**	**45.85**	**133**	*e*P	**P**	**05 15 29.2**	**0.0**
LC01	**Cunco**	**45.88**	**168**	P	**P**	**05 15 28.0**	**-1.2**
BSCB	**Bom Sucesso**	**45.92**	**127**	*e*P	**P**	**05 15 29.6**	**-0.4**
PMPB	**Monarch Peak**	**46.00**	**316**	P	P	05 15 34.0	+3.6
PMPB				IAmb	IAmb	05 15 53.5	
	comp=Z,74nm,1.1s						
PMPB				IAMs_20	IAMs_20	05 34 54.5	
	comp=Z,6µm,18.0s						
WAKR	**Walker**	**46.34**	**320**	P	**P**	**05 15 34.3**	**+1.1**
WAKR				IAmb	IAmb	05 15 57.1	
	comp=Z,69nm,0.8s						
WAKR				IAMs_20	IAMs_20	05 35 25.5	
	comp=Z,11µm,20.0s						
PARB	**Paraibuna**	**46.53**	**130**	*e*P	**P**	**05 15 34.2**	**-0.5**
HLID	**Hailey**	**46.59**	**328**	P	**P**	**05 15 33.1**	**-1.9**
	baz=134,SNR=12						
CNLB	**Canela**	**46.64**	**141**	*e*P	**P**	**05 15 34.4**	**-1.0**
BOZ	**Bozeman (W)**	**46.68**	**332**	P	**P**	**05 15 34.7**	**-1.0**
	baz=139,SNR=38						
BOZ	**Bozeman (W)**	**46.68**	**332**	IAMs_20	IAMs_20	05 37 29.0	
	comp=Z,8µm,22.0s						
CMB	**Columbia Colle**	**46.69**	**318**	IAMs_20	IAMs_20	05 33 47.9	
	comp=Z,6µm,22.0s						
SAO	**San Andreas Ge**	**46.73**	**316**	IAmb	IAmb	05 16 16.7	
	comp=Z,169nm,2.0s						
SAO				IAMs_20	IAMs_20	05 35 15.8	
	comp=Z,6µm,18.0s						
PLTB	**Pedras Altas**	**46.76**	**145**	*e*P	**P**	**05 15 35.2**	**-1.1**
PNTR	**Pine Nut**	**46.77**	**320**	IAmb	IAmb	05 16 00.8	
	comp=Z,45nm,0.8s						
PNTR				IAMs_20	IAMs_20	05 38 43.1	
	comp=Z,6µm,20.0s						
VCNR	**Virginia City**	**46.92**	**320**	IAMs_20	IAMs_20	05 38 58.1	
	comp=Z,5µm,19.0s						
DLMT	**Dillon**	**46.96**	**331**	P	P	05 15 40.2	+2.3
DLMT				IAmb	IAmb	05 16 13.1	
	comp=Z,57nm,1.3s						
DLMT				IAMs_20	IAMs_20	05 37 35.5	
	comp=Z,5µm,18.0s						
LPA	**La Plata**	**46.99**	**152**	*e*P	P	05 15 33.0	-5.0
LPA				PCP	PcP	05 16 59.0	-11
LPA				PP	**PP**	**05 17 28.9**	**+0.3**
LPA				S	S	05 22 19.7	-10
LPA				PKIKP	**PKiKP**	**05 24 11.5**	**+7.2**
LPA				S	**SS**	**05 26 01.5**	**+4.6**
LPA				SSS	SSS	05 26 46.6	
LPA				SKIKS		05 31 14.8	
PAHR	**Pah Rah Range**	**46.99**	**321**	IAmb	IAmb	05 16 35.8	
	comp=Z,110nm,1.7s						
PAHR				IAMs_20	IAMs_20	05 36 10.0	
	comp=Z,6µm,18.0s						
GDU01	**Guandu, BA**	**47.09**	**115**	*e*P	**P**	**05 15 39.3**	**+0.2**
RUBR	**Rubicon Trail**	**47.11**	**320**	IAMs_20	IAMs_20	05 36 00.9	
	comp=Z,11µm,20.0s						
MFID	**Camas Ranch**	**47.24**	**327**	IAmb	IAmb	05 16 27.8	
	comp=Z,102nm,1.5s						
MFID				IAMs_20	IAMs_20	05 35 46.7	
	comp=Z,10µm,22.0s						
AFDM	**Forest Hills D**	**47.58**	**319**	P	**P**	**05 15 45.0**	**+2.4**
AFDM				IAmb	IAmb	05 16 23.5	
	comp=Z,86nm,1.9s						
AFDM				IAMs_20	IAMs_20	05 37 20.3	
	comp=Z,4µm,20.0s						
VAS01	**Vassouras-RJ**	**47.64**	**128**	*e*P	**P**	**05 15 42.1**	**-1.3**
BEKR	**Beckworth**	**47.70**	**320**	IAMs_20	IAMs_20	05 36 34.6	
	comp=Z,7µm,21.0s						
EGMT	**Eagleton**	**47.73**	**336**	P	**P**	**05 15 42.6**	**-1.1**
	baz=142,SNR=12						
SJMB	**Sao Joao De Ma**	**47.74**	**122**	*e*P	**P**	**05 15 41.5**	**-2.6**
BSFB	**Barra de Sao F**	**48.08**	**122**	*e*P	**P**	**05 15 46.4**	**-0.4**
RCBR	**Riachuelo**	**48.15**	**103**	P	**P**	**05 15 46.8**	**-0.7**
	comp=Z,37nm,1.1s,baz=5.1,slow=0.5,SNR=4.7						
RCBR	**Riachuelo**	**48.15**	**103**	P	**P**	**05 15 47.8**	**+0.3**
RCBR				pmax	pmax		
	comp=Z,83nm,1.4s						
RCBR				MLR	MLR		
	comp=Z,22µm,20.0s						
RCBR	**Riachuelo**	**48.15**	**103**	P	**P**	**05 15 47.8**	**+0.3**
RCBR				IAmb	IAmb	05 15 50.9	
	comp=Z,83nm,1.4s						
RCBR	**Riachuelo**	**48.15**	**103**	*e*P	**P**	**05 15 47.0**	**-0.6**
WVOR	**Wild Horse Val**	**48.18**	**324**	IAMs_20	IAMs_20	05 37 15.5	
	comp=Z,8µm,18.0s						
ORV	**Oroville**	**48.25**	**319**	P	**P**	**05 15 48.5**	**+0.6**
ORV				pmax	pmax		
	comp=Z,74nm,1.1s						
ORV				MLR	MLR		
	comp=Z,5µm,20.0s						
ORV	**Oroville**	**48.25**	**319**	P	**P**	**05 15 48.5**	**+0.6**
ORV				IAmb	IAmb	05 16 11.7	
	comp=Z,74nm,1.1s						
ORV				IAMs_20	IAMs_20	05 36 12.3	
	comp=Z,5µm,20.0s						
NAN01	**Guarapari, ES**	**48.26**	**120**	*e*P	**P**	**05 15 47.4**	**-0.8**
MCCM	**Marconi Confer**	**48.42**	**317**	IAMs_20	IAMs_20	05 35 12.5	
	comp=Z,5µm,22.0s						
MSO	**Missoula**	**48.67**	**332**	P	**P**	**05 15 50.2**	**-0.9**
	baz=137,SNR=9.9						
MSO	**Missoula**	**48.67**	**332**	IAmb	IAmb	05 16 08.1	
	comp=Z,64nm,1.2s						
MSO				IAMs_20	IAMs_20	05 37 31.7	
	comp=Z,11µm,22.0s						
RIB01	**Linhares ES**	**48.68**	**122**	*e*P	**P**	**05 15 49.8**	**-1.6**
GDXM	**Geysers**	**48.70**	**318**	IAMs_20	IAMs_20	05 36 37.1	
	comp=Z,8µm,19.0s						
CAM01	**Campos-RJ**	**48.83**	**126**	*e*P	**P**	**05 15 52.4**	**-0.1**
MOD	**Modoc Plateau**	**48.84**	**323**	IAMs_20	IAMs_20	05 36 18.0	
	comp=Z,9µm,21.0s						
O03E	**Paynes Creek**	**48.85**	**320**	P	**P**	**05 15 53.4**	**+0.8**
	baz=124						
HOPS	**Hopland Field**	**48.99**	**318**	IAmb	IAmb	05 16 17.1	
	comp=Z,65nm,1.3s						
HOPS				IAMs_20	IAMs_20	05 36 54.6	
	comp=Z,7µm,21.0s						
BMO	**Blue Mountains**	**48.99**	**328**	IAMs_20	IAMs_20	05 36 51.1	
	comp=Z,7µm,22.0s						
ALF01	**Guarapari-ES**	**49.01**	**124**	*e*P	**P**	**05 15 53.4**	**-0.5**
LL01	**San Ignacio de**	**49.15**	**170**	IAmb	IAmb	05 16 06.8	
	comp=Z,87nm,1.1s						
O02D	**Mt. Diablo Mer**	**49.42**	**319**	P	**P**	**05 15 57.2**	**+0.3**
	baz=123						
WDC	**Whiskeytown Da**	**49.48**	**320**	P	P	05 15 59.9	+2.6
WDC				pmax	pmax		
	comp=Z,41nm,1.7s						
WDC	**Whiskeytown Da**	**49.48**	**320**	P	P	05 15 59.9	+2.6
WDC				IAMs_20	IAMs_20	05 35 56.8	
	comp=Z,6µm,22.0s						
JTMT	**Jette**	**49.50**	**332**	IAMs_20	IAMs_20	05 38 41.6	
	comp=Z,10µm,21.0s						
K05A	**Summer Lake**	**49.68**	**323**	IAMs_20	IAMs_20	05 37 09.2	
	comp=Z,9µm,22.0s						
KCPM	**Cahto Peak**	**49.68**	**318**	IAMs_20	IAMs_20	05 37 30.1	
	comp=Z,5µm,21.0s						
F10A	**Beach Ranch, E**	**49.70**	**329**	IAmb	IAmb	05 16 56.3	
	comp=Z,134nm,1.9s						
F10A				IAMs_20	IAMs_20	05 37 52.8	
	comp=Z,9µm,21.0s						
M04C	**Macdoel**	**49.71**	**322**	P	**P**	**05 15 59.3**	**+0.1**
	baz=125						
N02D	**Trinity Center**	**49.80**	**320**	P	**P**	**05 16 00.5**	**+0.7**
	baz=123						
KMRM	**Mail Ridge**	**50.05**	**319**	P	P	05 16 06.3	+4.6
KMRM				IAMs_20	IAMs_20	05 37 46.4	
	comp=Z,7µm,22.0s						
M02C	**Callahan**	**50.12**	**321**	P	**P**	**05 16 02.8**	**+0.6**
	baz=124						
K04D	**Chiloquin, OR**	**50.14**	**323**	P	**P**	**05 16 03.8**	**+1.4**
	baz=126						
G08A	**Pilot Rock**	**50.16**	**327**	IAMs_20	IAMs_20	05 37 45.1	
	comp=Z,4µm,21.0s						
J05D	**Fort Rock, OR**	**50.22**	**324**	P	**P**	**05 16 04.0**	**+1.0**
	baz=126						
YBH	**Yreka Blue Hor**	**50.22**	**321**	P	**P**	**05 16 04.1**	**+1.1**
	comp=Z,4.1nm,0.8s,baz=65,slow=6.0,SNR=5.2						
YBH	**Yreka Blue Hor**	**50.22**	**321**	P	**P**	**05 16 04.1**	**+1.1**
YBH				pmax	pmax		
	comp=Z,19nm,1.0s						
YBH				MLR	MLR		
	comp=Z,8µm,20.0s						
YBH	**Yreka Blue Hor**	**50.22**	**321**	IAMs_20	IAMs_20	05 37 54.4	
	comp=Z,9µm,20.0s						
L04D	**Klamath Falls**	**50.24**	**322**	P	**P**	**05 16 03.8**	**+0.6**
	baz=125						
WALA	**Waterton Lakes**	**50.30**	**334**	IAMs_20	IAMs_20	05 40 04.8	
	comp=Z,7µm,19.0s						
PINE	**Pine Mountain**	**50.34**	**324**	P	**P**	**05 16 04.3**	**+0.2**
PINE				IAMs_20	IAMs_20	05 37 21.8	
	comp=Z,9µm,21.0s						
KHMM	**Horse Mountain**	**50.40**	**320**	IAMs_20	IAMs_20	05 36 26.2	
	comp=Z,6µm,20.0s						
E09A	**Wood Farm, Sta**	**50.53**	**329**	IAmb	IAmb	05 16 49.7	
	comp=Z,129nm,1.4s						
E09A				IAMs_20	IAMs_20	05 39 40.9	
	comp=Z,8µm,19.0s						
JCC	**Jacoby Creek,**	**50.57**	**319**	IAMs_20	IAMs_20	05 40 54.4	
	comp=Z,5µm,20.0s						
J04D	**Umpqua Nationa**	**50.71**	**323**	P	**P**	**05 16 06.9**	**+0.1**
	baz=126						
HUMO	**Hull Mountain**	**50.86**	**322**	IAMs_20	IAMs_20	05 37 31.3	
	comp=Z,7µm,21.0s						
KRMB	**Red Mountain**	**50.86**	**320**	IAmb	IAmb	05 16 31.0	
	comp=Z,112nm,1.1s						
KRMB				IAMs_20	IAMs_20	05 38 48.3	
	comp=Z,5µm,19.0s						
I05D	**Terrebonne, OR**	**50.90**	**325**	P	**P**	**05 16 08.5**	**+0.5**
	baz=127						
FFC	**Flin Flon**	**50.92**	**346**	*e*P	P	05 16 10.5	+2.6
FFC	**Flin Flon**	**50.92**	**346**	P	P	05 16 10.7	+2.8
FFC				IAMs_20	IAMs_20	05 39 14.3	
	comp=Z,4µm,20.0s						
E08A	**Dider Farm, El**	**50.99**	**328**	P	P	05 16 11.2	+2.5
E08A				IAMs_20	IAMs_20	05 39 44.1	
	comp=Z,5µm,20.0s						
L02E	**Cave Junction**	**51.01**	**321**	P	**P**	**05 16 10.2**	**+1.3**
	baz=123						
HAWA	**Hanford**	**51.18**	**328**	IAMs_20	IAMs_20	05 39 29.0	
	comp=Z,6µm,22.0s						
I04A	**Tendick Farm,**	**51.21**	**324**	P	**P**	**05 16 09.3**	**-1.1**
	baz=126,SNR=5.8						
NEW	**Newport**	**51.21**	**331**	P	**P**	**05 16 11.4**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=177,slow=4.7,SNR=3.6						
NEW	**Newport**	**51.21**	**331**	P	**P**	**05 16 11.4**	**+1.1**
NEW				pmax	pmax		
	comp=Z,70nm,1.8s						
NEW				MLR	MLR		
	comp=Z,8µm,22.0s						
NEW	**Newport**	**51.21**	**331**	P	**P**	**05 16 10.7**	**+0.4**
	baz=134						
NEW	**Newport**	**51.21**	**331**	IAMs_20	IAMs_20	05 38 48.9	
	comp=Z,8µm,22.0s						
K02D	**Willamette Mer**	**51.34**	**322**	P	**P**	**05 16 10.7**	**-0.8**
	baz=124,SNR=6.2						
KBO	**Bosley Butte**	**51.43**	**321**	IAMs_20	IAMs_20	05 41 30.4	
	comp=Z,4µm,20.0s						
G05D	**Wamic, OR**	**51.44**	**326**	P	**P**	**05 16 11.9**	**-0.2**
	baz=128,SNR=8.3						
E07A	**Sunnyside**	**51.46**	**328**	IAmb	IAmb	05 16 35.5	
	comp=Z,93nm,1.5s						
E07A				IAMs_20	IAMs_20	05 39 32.3	
	comp=Z,5µm,20.0s						
H04A	**Detroit Lake**	**51.59**	**325**	IAMs_20	IAMs_20	05 37 57.9	
	comp=Z,9µm,22.0s						
J01E	**Myrtle Point**	**51.76**	**322**	P	**P**	**05 16 14.3**	**-0.2**
	baz=124						
H04D	**Lebanon**	**51.82**	**324**	P	**P**	**05 16 16.0**	**+1.2**
	baz=126						
KEBM	**Edson Butte**	**51.85**	**322**	IAmb	IAmb	05 16 45.3	
	comp=Z,137nm,1.3s						
KEBM				IAMs_20	IAMs_20	05 38 29.6	
	comp=Z,6µm,21.0s						
F05D	**White Salmon**	**51.91**	**326**	P	**P**	**05 16 15.4**	**-0.1**
	baz=128,SNR=5.4						
COR	**Corvallis**	**52.19**	**324**	IAMs_20	IAMs_20	05 40 40.5	
	comp=Z,5µm,19.0s						
I02D	**Swisshome**	**52.24**	**323**	P	**P**	**05 16 19.0**	**+1.0**
	baz=124						
LTY	**Liberty**	**52.33**	**328**	P	P	05 16 21.3	+2.5
LTY				IAmb	IAmb	05 17 03.3	
	comp=Z,104nm,1.6s						
LTY				IAMs_20	IAMs_20	05 41 22.4	
	comp=Z,5µm,21.0s						
B08A	**Colville Reser**	**52.36**	**330**	IAMs_20	IAMs_20	05 39 05.3	
	comp=Z,6µm,20.0s						
G03D	**McMinnville, O**	**52.52**	**325**	P	**P**	**05 16 21.6**	**+1.5**
	baz=126						
LON	**Longmire**	**52.63**	**327**	IAMs_20	IAMs_20	05 40 27.2	
	comp=Z,8µm,19.0s						
E04D	**Cinebar**	**52.92**	**326**	P	**P**	**05 16 24.5**	**+1.5**
	baz=127						
D05A	**Enumclaw**	**52.99**	**327**	IAmb	IAmb	05 16 39.5	
	comp=Z,95nm,1.1s						
D05A				IAMs_20	IAMs_20	05 40 49.9	
	comp=Z,6µm,19.0s						
FCC	**Fort Churchill**	**53.26**	**353**	P	**P**	**05 16 26.8**	**+1.6**
FCC				pmax	pmax		
	comp=Z,65nm,1.2s						
FCC				MLR	MLR		
	comp=Z,6µm,21.0s						
FCC	**Fort Churchill**	**53.26**	**353**	P	**P**	**05 16 26.8**	**+1.6**
FCC				IAmb	IAmb	05 16 45.2	
	comp=Z,65nm,1.2s						
FCC				IAMs_20	IAMs_20	05 41 45.3	
	comp=Z,6µm,21.0s						
D04E	**Lakebay**	**53.41**	**327**	P	**P**	**05 16 28.0**	**+1.4**
	baz=127						
E03A	**Lebam**	**53.47**	**326**	P	P	05 16 31.3	+4.3
E03A				IAMs_20	IAMs_20	05 41 52.6	
	comp=Z,7µm,19.0s						
B06A	**Marblemount**	**53.56**	**329**	IAMs_20	IAMs_20	05 41 38.9	
	comp=Z,4µm,21.0s						
B05A	**Bryant**	**53.72**	**328**	P	**P**	**05 16 30.1**	**+1.3**
	baz=129						
D03D	**Eldon**	**53.80**	**327**	P	**P**	**05 16 30.5**	**+1.0**
	baz=127						
A04D	**Lummi Island**	**54.32**	**328**	P	**P**	**05 16 34.4**	**+1.2**
	baz=128						
SACV	**Santiago Islan**	**58.57**	**76**	IAMs_20	IAMs_20	05 44 42.6	
	comp=Z,4µm,20.0s						
ROSA	**Rosais**	**58.77**	**48**	*e*LQ	LQ	05 32 24.7	
ROSA				*e*LR	LR	05 34 53.3	
RKT	**Rikitea**	**58.78**	**238**	*e*S	**S**	**05 25 03.6**	**-7.5**
	comp=Z,25µm,31.8s						
RKT				*e*LQ	LQ	05 31 45.0	
	comp=Z,17µm,29.0s						
RKT				*e*LR	LR	05 34 11.6	
	comp=Z,68µm,27.2s						
PGRA	**Graciosa**	**59.06**	**48**	*e*LQ	LQ	05 32 32.3	
PGRA				*e*LR	LR	05 35 01.4	
BBB	**Bella Bella**	**59.15**	**329**	IAMs_20	IAMs_20	05 44 50.9	
	comp=Z,4µm,20.0s						
TAOE	**Nuku Hiva Isla**	**59.20**	**256**	*e*S	**S**	**05 25 13.0**	**-4.2**
	comp=Z,9µm,27.9s						
TAOE				*e*SS	**SS**	**05 29 10.6**	**-1.2**

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      comp=Z,3µm,29.8s
TAOE                              eLQ      LQ       05 31 58.4
      comp=Z,57µm,31.9s
TAOE                              eLR      LR       05 34 27.2
      comp=Z,14µm,25.5s
PAGU  Agualva, Azore     59.57  48 eLQ      LQ       05 32 38.8
PAGU                              eLR      LR       05 35 16.0
PSET  Sete Cidades       60.38  50 eLQ      LQ       05 32 56.1
PSET                              eLR      LR       05 35 37.7
CMLA  Cha da Macela      60.52  50 eLR      LR       05 35 48.0
PSMN  Pico do Norte,     60.66  51 eLR      LR       05 35 54.0
YKA   Yellowknife Ar     60.96 344  P       P        05 17 20.5 +0.8
      comp=Z,16nm,0.8s,baz=137,slow=7.4,SNR=36
YKA                                LR      LR       05 47 50.8
      comp=Z,2µm,18.4s,baz=0.0,slow=40
DIB   Dawson Inlet,      61.94 329  IAMs_20 IAMs_20  05 45 57.6
      comp=Z,6µm,20.0s
NUUK  Nuuk               62.06  15 i P       P        05 17 31.5 +4.5
NUUK                               IAmb    IAmb     05 17 33.6
      comp=Z,97nm,1.2s
CRAG  Craig              63.43 331  IAMs_20 IAMs_20  05 47 21.0
      comp=Z,4µm,18.0s
WRAK  Wrangell Islan     63.55 332  IAMs_20 IAMs_20  05 46 52.3
      comp=Z,4µm,21.0s
DLBC  Dease Lake         63.63 334  P       P        05 17 39.5 +1.7
      comp=Z,14nm,1.1s,baz=120,slow=3.0,SNR=9.9
DLBC  Dease Lake         63.63 334  P       P        05 17 39.2 +1.4
SFJD  Kangerlussuaq      64.63  13 i P       P        05 17 47.1 +3.0
SFJD  Kangerlussuaq      64.63  13  P       P        05 17 45.9 +1.8
SFJD  Kangerlussuaq      64.63  13 i P       P        05 17 47.1 +3.0
SFJD  Kangerlussuaq      64.63  13 i P       P        05 17 47.1 +3.1
MBO   M'Bour             65.00  77  IAMs_20 IAMs_20  05 44 08.9
      comp=Z,5µm,21.0s
SIT   Sitka              65.29 331  IAMs_20 IAMs_20  05 47 07.2
      comp=Z,7µm,22.0s
JIS   Juneau Island      65.47 333  IAMs_20 IAMs_20  05 48 35.0
      comp=Z,3µm,20.0s
ILULI Ilulissat          66.34  12 i P       P        05 17 58.6 +3.5
ILULI Ilulissat          66.34  12  P       P        05 17 59.9 +4.8
ILULI Ilulissat          66.34  12 i P       P        05 17 58.6 +3.5
ILULI Ilulissat          66.34  12 i P       P        05 17 58.6 +3.5
SKAG  Skagway            66.50 334  IAMs_20 IAMs_20  05 49 29.1
      comp=Z,3µm,19.0s
ISOG  Isortoq, Green     66.71  18 i P       P        05 18 00.8 +3.3
ISOG                               IAmb    IAmb     05 18 03.7
      comp=Z,108nm,1.3s
WHY   Whitehorse         66.92 335  IAmb    IAmb     05 18 45.6
      comp=Z,88nm,1.9s
WHY                                IAMs_20 IAMs_20  05 49 57.4
      comp=Z,4µm,21.0s
ANGG  Ammassalik, Gr     67.17  19 eP       P        05 18 05.7 +5.2
VAH   Vaihoa             67.76 251 eP       P        05 18 03.8 -1.3
      comp=Z,99nm,1.2s
NUUG  Nuugaatsiaq        67.91  10 i P       P        05 18 08.4 +3.4
HYT   Haines Junctio     68.12 334  P       P        05 18 10.8 +4.0
HYT                                IAmb    IAmb     05 18 22.7
      comp=Z,36nm,1.1s
HYT                                IAMs_20 IAMs_20  05 48 23.1
      comp=Z,5µm,22.0s
UPNV  Upernavik          68.54   8 i P       P        05 18 12.2 +3.3
BCPM  Bancas Point       68.65 333  IAMs_20 IAMs_20  05 51 00.1
      comp=Z,5µm,20.0s
C36M  Paulatuk           68.69 345  P       P        05 18 10.8 +0.9
      baz=135,SNR=14
C36M  Paulatuk           68.69 345  IAMs_20 IAMs_20  05 53 08.2
      comp=Z,3µm,20.0s
MEH   Mehetia            68.79 248 eP       P        05 18 10.2 -1.4
      comp=Z,58nm,1.4s
RES   Resolute Bay       68.89 357  P       P        05 18 13.3 +2.2
      comp=Z,8.7nm,0.8s,baz=186,slow=9.7,SNR=11
RES   Resolute Bay       68.89 357  IAmb    IAmb     05 18 36.0
      comp=Z,33nm,1.1s
RES                                IAMs_20 IAMs_20  05 49 22.4
      comp=Z,5µm,21.0s
ICESG Greenland Ices     68.92  15 i P       P        05 18 14.5 +2.6
PCA   Pinnacle           68.99 333  IAMs_20 IAMs_20  05 51 11.1
      comp=Z,5µm,19.0s
TABL  Table Mountain     69.54 333  IAMs_20 IAMs_20  05 51 28.7
      comp=Z,6µm,20.0s
YAH   Yahtse             69.78 333  IAMs_20 IAMs_20  05 50 37.0
      comp=Z,6µm,22.0s
CTGM  Chitina Glacie     69.85 334  IAmb    IAmb     05 18 46.7
      comp=Z,101nm,1.4s
CTGM                               IAMs_20 IAMs_20  05 51 51.9
      comp=Z,6µm,21.0s
TVO   Taravao            69.86 249 eP       P        05 18 16.7 -1.6
      comp=Z,40nm,1.5s
TIAR  Tiarei             69.90 249 eP       P        05 18 17.0 -1.4
      comp=Z,22nm,1.1s
BARN  Barnard Glacie     70.03 334  IAmb    IAmb     05 18 45.6
      comp=Z,40nm,0.9s
BARN                               IAMs_20 IAMs_20  05 51 56.7
      comp=Z,6µm,20.0s
PPT   Papeete            70.11 249  LR      LR       05 42 10.1
      comp=Z,10µm,18.0s,baz=78,slow=30
PPT2  Papeete2           70.12 249 eP       P        05 18 18.5 -1.4
      comp=Z,87nm,1.4s
PPT2                              eS       S        05 27 27.1 -4.7
      comp=Z,13µm,28.8s
PPT2                              eSS      SS       05 31 56.8 -5.0
      comp=Z,7µm,29.0s
PPT2                              eLQ      LQ       05 36 33.4
      comp=Z,12µm,25.8s
PPT2                              eLR      LR       05 39 29.9
      comp=Z,23µm,24.8s
PAE   Paea               70.14 249 eP       P        05 18 18.5 -1.4
      comp=Z,48nm,1.5s
ISLE  Juniper Island     70.15 333  P       P        05 18 21.1 +1.7
ISLE                               IAmb    IAmb     05 18 35.5
      comp=Z,64nm,1.0s
ISLE                               IAMs_20 IAMs_20  05 50 47.7
      comp=Z,5µm,22.0s
TGL   Tana Glacier       70.43 333  IAMs_20 IAMs_20  05 50 57.1
      comp=Z,5µm,22.0s
CRQM  Cirque             70.57 333  IAmb    IAmb     05 18 47.7
      comp=Z,73nm,1.1s
CRQM                               IAMs_20 IAMs_20  05 51 00.2
      comp=Z,4µm,22.0s
INK   Inuvik             70.64 342  P       P        05 18 21.9 -0.1
      comp=Z,37nm,1.0s,baz=109,slow=7.3,SNR=14
MCARA McCarthy VSAT      70.77 334  P       P        05 18 26.4 +3.4
TULEG Thule              70.79   3  P       P        05 18 25.5 +2.7
TULEG                              IAMs_20 IAMs_20  05 47 42.6
      comp=Z,4µm,20.0s
TULEG Thule              70.79   3 i P       P        05 18 25.2 +2.4
TULEG                              IAmb    IAmb     05 18 39.3
      comp=Z,73nm,1.3s
VRDI  Verde Repeater     70.90 333  IAmb    IAmb     05 18 42.5
      comp=Z,48nm,1.0s
VRDI                               IAMs_20 IAMs_20  05 55 45.5
      comp=Z,4µm,20.0s
GLB   Gilahina Butte     71.14 334  IAmb    IAmb     05 18 41.5
      comp=Z,79nm,1.2s
GLB                                IAMs_20 IAMs_20  05 53 06.0
      comp=Z,3µm,20.0s
TBI   Tubuai             71.44 243 eS       S        05 27 41.8 -5.0
      comp=Z,6µm,33.5s
TBI                               eSS      SS       05 32 17.0 -4.8
      comp=Z,4µm,27.8s
TBI                               eLQ      LQ       05 37 04.9
      comp=Z,29µm,33.2s
TBI                               eLR      LR       05 40 05.4
      comp=Z,56µm,30.0s
TBI   Tubuai             71.44 243 eT       T        06 36 09.3
      comp=Z,3.5nm,0.2s
EGAK  Eagle              71.45 337  IAmb    IAmb     05 19 06.3
      comp=Z,87nm,1.2s
EGAK                               IAMs_20 IAMs_20  05 53 57.1
      comp=Z,3µm,21.0s
N25K  Chitina, Valde     71.55 334  P       P        05 18 28.5 +0.7
      baz=112,SNR=7.3
N25K  Chitina, Valde     71.55 334  P       P        05 18 30.6 +2.8
N25K                               IAmb    IAmb     05 18 59.9
      comp=Z,87nm,1.3s
N25K                               IAMs_20 IAMs_20  05 52 09.8
      comp=Z,4µm,22.0s
L26K  Log Cabin Wild     71.58 335  P       P        05 18 28.9 +1.1
      baz=114,SNR=13
SUMG  Summit             71.61  13 i P       P        05 18 32.0 +3.7
SUMG                               pmax    pmax
      comp=Z,210nm,1.2s
SUMG  Summit             71.61  13 i P       P        05 18 32.0 +3.7
      comp=Z,210nm,1.2s
SUMG  Summit             71.61  13 i P       P        05 18 32.0 +3.7
SUMG                               IAmb    IAmb     05 18 34.9
      comp=Z,211nm,1.2s
EYAK  Cordova Ski Ar     71.68 332  IAmb    IAmb     05 18 51.6
      comp=Z,78nm,1.1s
MENT  Mentasta           71.69 335  IAmb    IAmb     05 18 49.3
      comp=Z,53nm,1.1s
MENT                               IAMs_20 IAMs_20  05 52 31.6
      comp=Z,5µm,20.0s
FID   Port Fidalgo       72.09 332  IAMs_20 IAMs_20  05 51 45.3
      comp=Z,3µm,22.0s
KLU   Klutina            72.10 333  IAmb    IAmb     05 18 51.8
      comp=Z,84nm,1.1s
KLU                                IAMs_20 IAMs_20  05 53 13.3
      comp=Z,4µm,21.0s
DOT   Dot Lake           72.12 336  IAmb    IAmb     05 18 54.0
      comp=Z,65nm,1.0s
DOT                                IAMs_20 IAMs_20  05 53 28.0
      comp=Z,3µm,20.0s
SCRK  Sand Creek         72.22 336  P       P        05 18 32.3 +0.5
      baz=114,SNR=20
GLI   Glacier Island     72.42 332  IAMs_20 IAMs_20  05 54 32.7
      comp=Z,2µm,19.0s
M24K  Tolsona, Glenn     72.43 334  P       P        05 18 33.8 +0.7
      baz=111
M24K  Tolsona, Glenn     72.43 334  IAMs_20 IAMs_20  05 52 39.1
      comp=Z,4µm,19.0s
PAX   Paxson             72.44 335  IAmb    IAmb     05 18 55.4
      comp=Z,62nm,1.3s
PAX                                IAMs_20 IAMs_20  05 53 07.4
      comp=Z,3µm,21.0s
RIDG  Independent Ri     72.48 336  P       P        05 18 35.9 +2.6
RIDG                               IAmb    IAmb     05 18 56.1
      comp=Z,72nm,1.1s
RIDG                               IAMs_20 IAMs_20  05 53 30.3
      comp=Z,4µm,18.0s
SCM   Sheep Creek Mo     72.85 333  IAMs_20 IAMs_20  05 51 38.1
      comp=Z,5µm,22.0s
KNK   Knik Glacier       73.22 333  IAMs_20 IAMs_20  05 55 06.9
      comp=Z,4µm,20.0s
SEW   Seward             73.28 331  P       P        05 18 42.9 +4.9
SEW                                IAmb    IAmb     05 18 53.1
      comp=Z,68nm,1.0s
SEW                                IAMs_20 IAMs_20  05 49 53.4
      comp=Z,5µm,21.0s
SML   Sawmill            73.29 333  IAMs_20 IAMs_20  05 53 51.7
      comp=Z,4µm,21.0s
PFVI  Vila Bisbo         73.45  53 eP       P        05 18 45.7 +6.2
      comp=Z,200nm,1.8s
PFVI  Vila Bisbo         73.45  53  IAMs_20 IAMs_20  05 54 54.0
      comp=Z,3µm,21.0s
O22K  Cooper Landing     73.52 332  IAMs_20 IAMs_20  05 51 35.8
      comp=Z,3µm,19.0s
GHO   Glory Hole Cre     73.54 333  IAmb    IAmb     05 18 48.4
      comp=Z,72nm,0.8s
GHO                                IAMs_20 IAMs_20  05 57 09.5
      comp=Z,4µm,19.0s
PTEO  Sao Teotonio       73.57  53 eP       P        05 18 47.0 +6.8
      comp=Z,148nm,2.0s
PMR   Palmer             73.58 333  IAMs_20 IAMs_20  05 57 12.5
      comp=Z,4µm,22.0s
HDA   Harding Lake       73.59 336  P       P        05 18 40.2 +0.5
      baz=111,SNR=20
HDA   Harding Lake       73.59 336  IAmb    IAmb     05 19 15.5
      comp=Z,103nm,1.3s
HDA                                IAMs_20 IAMs_20  05 54 04.6
      comp=Z,4µm,20.0s
MORF  Marmelete          73.61  53 eP       P        05 18 46.1 +5.6
MORF                               AMb     AMB      05 19 11.1
      comp=Z,174nm,1.7s
MORF                              eS       SKiKP    05 28 18.3 +6.8
MORF  Marmelete          73.61  53 eP       P        05 18 46.1 +5.6
MORF                              eS       SKiKP    05 28 18.3 +6.8
MORF                               pmax    pmax
      comp=Z,174nm,1.7s
MORF  Marmelete          73.61  53 eP       P        05 18 46.8 +6.3
      comp=Z,164nm,1.2s
IL31                     73.69 336  P       P        05 18 40.5 +0.2
IL31                               IAmb    IAmb     05 19 00.6
      comp=Z,84nm,1.4s
ILAR  Eielson Array      73.69 336  P       P        05 18 39.9 -0.5
      comp=Z,14nm,0.9s,baz=118,slow=3.9,SNR=33
ILAR                               LR      LR       05 54 49.5
      comp=Z,4µm,19.0s,baz=116,slow=39
PSBE  So Bento           73.69  51 eP       P        05 18 47.5 +6.6
      comp=Z,174nm,1.9s
RC01  Rabbit Creek A     73.70 332  P       P        05 18 41.2 +0.7
      baz=108
FYU   Fort Yukon         73.74 338  IAMs_20 IAMs_20  05 54 12.6
      comp=Z,5µm,21.0s
PNCL  Nicolau / Gran     73.77  52 eP       P        05 18 48.6 +7.2
      comp=Z,142nm,1.7s
BRLK  Bradley Lake       73.87 331  IAmb    IAmb     05 18 50.2
      comp=Z,65nm,0.9s
BRLK                               IAMs_20 IAMs_20  05 49 44.2
      comp=Z,4µm,22.0s
EUNU  Eureka             73.94 359  IAmb    IAmb     05 19 06.3
      comp=Z,89nm,1.4s
PCAS  Casmilo, Conde     73.97  50 eP       P        05 18 49.0 +6.4
      comp=Z,231nm,2.1s
CNPM  China Poot         73.97 330  IAMs_20 IAMs_20  05 49 33.9
      comp=Z,5µm,22.0s
MESJ  Messejana          73.99  53 eP       P        05 18 48.4 +5.8
MESJ                               AMb     AMB      05 19 08.0
      comp=Z,80nm,1.0s
MESJ                              eS       S        05 28 22.5 +6.9
MESJ  Messejana          73.99  53 eP       P        05 18 48.4 +5.7
MESJ                              eS       S        05 28 22.4 +6.9
MESJ                               pmax    pmax
      comp=Z,80nm,1.0s
CCB   Clear Creek Bu     74.02 336  IAMs_20 IAMs_20  05 54 26.0
      comp=Z,4µm,20.0s
POKR  Poker Plat Res     74.03 337  P       P        05 18 43.9 +1.5
      baz=111
POKR  Poker Plat Res     74.03 337  IAMs_20 IAMs_20  05 55 00.4
      comp=Z,4µm,20.0s
RND   Reindeer           74.04 335  P       P        05 18 43.4 +0.9
RND                                pmax    pmax
      comp=Z,112nm,1.1s
RND                                MLR     MLR
      comp=Z,4µm,20.0s
RND   Reindeer           74.04 335  P       P        05 18 43.4 +0.9
RND                                IAMs_20 IAMs_20  05 54 06.6
      comp=Z,4µm,20.0s
COI   Coimbra            74.05  50 eP       P        05 18 49.3 +6.3
      comp=Z,221nm,1.4s
COI   Coimbra            74.05  50  IAMs_20 IAMs_20  05 44 44.1
      comp=Z,5µm,22.0s
WRH   Wood River Hil     74.07 336  IAMs_20 IAMs_20  05 51 56.5
      comp=Z,5µm,22.0s
PMTG  Montargil          74.09  51 eP       P        05 18 49.5 +6.3
      comp=Z,108nm,2.0s
COLA  College            74.11 336 eP       P        05 18 47.3 +4.5
COLA  College            74.11 336  P       P        05 18 47.3 +4.5
COLA  College            74.11 336  IAMs_20 IAMs_20  05 54 49.7
      comp=Z,4µm,19.0s
PCVE  Castro Verde       74.12  53 eP       P        05 18 48.6 +5.2
      comp=Z,87nm,2.0s
TCOL  CIGO, UAF Yank     74.12 336  IAMs_20 IAMs_20  05 54 49.7
      comp=Z,5µm,19.0s
MCK   McKinley           74.18 335  P       P        05 18 44.3 +1.1
      baz=109,SNR=20
EVO   Evora              74.21  52 eS       S        05 28 29.3  +11
EVO   Evora              74.21  52 eP       P        05 18 49.3 +5.3
      comp=Z,90nm,2.0s
KDAK  Kodiak Island      74.21 328  IAMs_20 IAMs_20  05 53 14.1
      comp=Z,3µm,20.0s
SUA   Susitna One        74.28 332  IAmb    IAmb     05 18 51.2
      comp=Z,47nm,0.7s
SUA                                IAMs_20 IAMs_20  05 52 15.0
      comp=Z,4µm,22.0s
MDM   Murphy Dome        74.30 336  IAmb    IAmb     05 19 15.3
      comp=Z,67nm,1.2s
MDM                                IAMs_20 IAMs_20  05 52 38.0
      comp=Z,5µm,22.0s
AVE   Averroes           74.34  57⇓iP       P        05 18 48.4 +3.6
AVE                               eS       S        05 28 26.1 +6.4
PVAQ  Vaqueiros          74.35  53 eP       P        05 18 47.3 +2.5
      comp=Z,80nm,1.9s
PVAQ  Vaqueiros          74.35  53  IAMs_20 IAMs_20  05 46 35.0
      comp=Z,3µm,20.0s
OHAK  Old Harbor         74.45 328  P       P        05 18 50.1 +5.2
PVIS  Viseu              74.49  50 eP       P        05 18 50.8 +5.2
      comp=Z,112nm,1.5s
NEA2  Nenana             74.51 336  P       P        05 18 45.6 +0.4
      baz=109
BWN   Browne             74.54 335  IAMs_20 IAMs_20  05 54 23.0
      comp=Z,3µm,21.0s
PESTR Estremoz           74.57  51  P       P        05 18 49.1 +3.0
PESTR                              IAmb    IAmb     05 19 14.6
      comp=Z,46nm,1.0s
POLO  Lamas de Olo       74.63  49 eP       P        05 18 51.3 +4.8
      comp=Z,45nm,1.5s
TRF   Thorofare Moun     74.66 334  IAMs_20 IAMs_20  05 54 47.1
      comp=Z,4µm,21.0s
MTE   Manteigas          74.73  50 eP       P        05 18 52.4 +5.4
      comp=Z,95nm,1.8s
MTE   Manteigas          74.73  50  IAMs_20 IAMs_20  05 47 54.0
      comp=Z,3µm,19.0s
PCBR  Castelo Branco     74.73  50 eP       P        05 18 50.1 +3.1
      comp=Z,130nm,1.7s
PMRV  Marv??o            74.77  51 eP       P        05 18 50.2 +3.0
      comp=Z,98nm,2.1s
SKT   Skwentna           74.79 333  IAmb    IAmb     05 19 08.9
      comp=Z,109nm,1.2s
SKT                                IAMs_20 IAMs_20  05 57 59.3
      comp=Z,3µm,21.0s
I23K  Minto, Yukon-K     74.81 336  P       P        05 18 46.9  0.0
      baz=109,SNR=20
I23K  Minto, Yukon-K     74.81 336  IAmb    IAmb     05 19 18.6
      comp=Z,153nm,1.5s
I23K                               IAMs_20 IAMs_20  05 52 41.0
      comp=Z,5µm,21.0s
KTH   Kantishna Hill     74.97 334  IAMs_20 IAMs_20  05 54 46.0
      comp=Z,4µm,21.0s
BPAW  Bear Paw Mtn.      75.15 335  IAMs_20 IAMs_20  05 54 42.0
      comp=Z,5µm,22.0s
MLY   Manley             75.33 336  P       P        05 18 50.1 +0.1
      baz=108
PPLA  Purkeypile         75.33 334  P       P        05 18 50.7 +0.6
PPLA                               IAMs_20 IAMs_20  05 55 06.7
      comp=Z,3µm,22.0s
PBRG  Braganca           75.46  49 eP       P        05 18 52.4 +1.2
      comp=Z,47nm,1.5s
SFS   San Fernando       75.50  54 eS       S        05 28 38.6 +6.1
COLD  Coldfoot           75.80 338  P       P        05 18 52.1 -0.5
      baz=109,SNR=22
COLD  Coldfoot           75.80 338  IAmb    IAmb     05 19 25.0
      comp=Z,71nm,1.2s
CEU   Ceuta              76.15  55 eP       P        05 19 07.8  +13
CEU                               eS       S        05 28 41.5 +1.8
IFR   Ifrane             76.26  57 eP       P        05 19 10.7  +15
IFR                               eS       S        05 28 48.5 +7.1
MDT   Midelt             76.68  58  P       P        05 18 59.9 +1.5
      comp=Z,7.8nm,1.2s,baz=250,slow=3.3,SNR=4.0
DBG   Daneborg           76.88  14 i P       P        05 19 01.4 +2.8
EMAL  Malaga-Limoner     76.94  54 eP       P        05 19 05.3 +5.6
EMAL                              eS       S        05 28 53.3 +4.9
PVLZ  Peæn de            77.00  55 eP       P        05 19 10.1  +10
PVLZ                              eS       S        05 28 53.5 +4.6
TTA   Tatalina           77.04 333  IAmb    IAmb     05 19 21.0
      comp=Z,79nm,1.4s
TTA                                IAMs_20 IAMs_20  05 54 08.8
      comp=Z,4µm,22.0s
TIC   Toumodi            77.08  85 ePKP2    P        05 19 03.1 +2.2
LIC   Lamto              77.10  85 ePKP2    P        05 19 03.2 +2.2
      comp=Z,182nm,1.2s
PAB   San Pablo          77.12  51  P       P        05 19 02.4 +1.7
PAB                                pmax    pmax
      comp=Z,68nm,1.4s
PAB   San Pablo          77.12  51  P       P        05 19 02.4 +1.7
PAB                                IAmb    IAmb     05 19 25.2
      comp=Z,68nm,1.4s
PAB   San Pablo          77.12  51  IAMs_20 IAMs_20  05 46 00.3
      comp=Z,3µm,22.0s
DBIC  Dimbokro           77.24  85  P       P        05 19 03.1 +1.4
      comp=Z,11nm,0.8s,baz=258,slow=6.3,SNR=9.1
DBIC  Dimbokro           77.24  85  P       P        05 19 04.3 +2.5
DBIC                               pmax    pmax
      comp=Z,50nm,1.0s
DBIC  Dimbokro           77.24  85  P       P        05 19 04.2 +2.5
DBIC                               IAmb    IAmb     05 19 19.1
      comp=Z,50nm,0.9s
KIC   Kosan Boka         77.38  85 ePKP2    P        05 19 02.1 -0.4
      comp=Z,136nm,1.2s
ES15  SONSECA Array      77.40  51  IAMs_20 IAMs_20  05 45 16.6
      comp=Z,2µm,21.0s
ES16  SONSECA Array      77.40  51  IAMs_20 IAMs_20  05 45 18.7
      comp=Z,2µm,21.0s
ES14  SONSECA Array      77.41  51  IAMs_20 IAMs_20  05 45 18.8
      comp=Z,2µm,20.0s
ES17  SONSECA Array      77.42  51  IAMs_20 IAMs_20  05 50 06.2
      comp=Z,3µm,22.0s
ES13  SONSECA Array      77.42  51  IAMs_20 IAMs_20  05 45 19.3
      comp=Z,2µm,20.0s
ESDC  Sonseca Array      77.43  51  P       P        05 19 03.1 +0.7
      comp=Z,5.2nm,1.1s,baz=265,slow=4.6,SNR=20
ESDC                               LR      LR       05 48 50.2
      comp=Z,2µm,21.7s,baz=260,slow=32
ESBB  Sonseca Array      77.43  51  IAMs_20 IAMs_20  05 59 31.4
      comp=Z,3µm,20.0s
ES05  SONSECA Array      77.43  51  IAMs_20 IAMs_20  05 46 28.4
      comp=Z,3µm,22.0s
ES06  SONSECA Array      77.44  51  IAMs_20 IAMs_20  05 46 23.6
      comp=Z,3µm,22.0s
ES07  SONSECA Array      77.44  51  IAMs_20 IAMs_20  05 55 22.6
      comp=Z,2µm,20.0s
ES01  SONSECA Array      77.44  51  IAMs_20 IAMs_20  05 45 27.7
      comp=Z,3µm,20.0s
ES03  SONSECA Array      77.45  51  IAMs_20 IAMs_20  05 46 10.2
      comp=Z,3µm,22.0s
ES11  SONSECA Array      77.46  51  IAMs_20 IAMs_20  05 48 42.2
      comp=Z,3µm,21.0s
ES10  SONSECA Array      77.47  51  IAMs_20 IAMs_20  05 49 00.6
      comp=Z,3µm,20.0s
ES09  SONSECA Array      77.48  51  IAMs_20 IAMs_20  05 46 23.7
      comp=Z,3µm,22.0s
KOWA  Kowa               77.53  77  P       P        05 19 04.1 +0.7
UCM   Universidad Co     78.00  50 eP       P        05 19 15.6  +10
UCM                               eS       SKiKP    05 28 29.3  +11
MELI  Melilla            78.12  55 eP       P        05 19 15.1 +8.9
MELI                              eS       S        05 29 06.2 +5.2
DAG   Danmarks Havn      78.27  12 i P       P        05 19 08.7 +2.4
DAG   Danmarks Havn      78.27  12 i P       P        05 19 08.7 +2.4
DAG   Danmarks Havn      78.27  12 i P       P        05 19 08.7 +2.4
EKA   Eskdalemuir Ar     79.03  35  P       P        05 19 14.3 +3.5
      comp=Z,21nm,1.1s,baz=260,slow=4.7,SNR=11
A21K  Barrow             79.13 342  P       P        05 19 11.6 +0.5
      baz=103,SNR=12
A21K  Barrow             79.13 342  IAmb    IAmb     05 19 31.5
      comp=Z,110nm,1.4s
A21K                               IAMs_20 IAMs_20  05 58 03.0
      comp=Z,4µm,21.0s
CART  Cartagena          79.70  53 eS       S        05 29 17.1 -0.8
CART  Cartagena          79.70  53  IAMs_20 IAMs_20  05 50 33.4
      comp=Z,2µm,19.0s
RDOG  Red Dog Mine       80.72 338  P       P        05 19 21.7 +1.9
ANM   Nome               81.39 334  P       P        05 19 28.1 +4.7
ANM                                pmax    pmax
      comp=Z,58nm,1.5s
ANM                                MLR     MLR
      comp=Z,5µm,22.0s
ANM   Nome               81.39 334  P       P        05 19 28.1 +4.7
ANM                                IAMs_20 IAMs_20  05 56 59.7
      comp=Z,5µm,22.0s
CLF   Chambon-Foret      82.10  42  IAMs_20 IAMs_20  05 48 39.1
      comp=Z,4µm,22.0s
TORD  Torodi Ar. Bea     83.15  78  P       P        05 19 35.3 +1.6
      comp=Z,7.5nm,1.0s,baz=287,slow=5.1,SNR=16
TORD                               LR      LR       05 56 53.8
      comp=Z,3µm,20.1s,baz=240,slow=36
SNF   Seneffe            83.38  40 dPcP     PcP      05 19 39.1 +0.6
SNF                               dx       x        05 19 53.3
DOU   Dourbes            83.59  40 dPcP     PcP      05 19 40.8 +1.4
DOU                               dx       x        05 19 52.8
MAHO  Mahon              83.77  51 eS       S        05 30 05.0 +5.1
BGES  Gesves             83.90  40 dPcP     PcP      05 19 42.2 +1.4
BGES                              dx       x        05 19 56.2
BCLA  Clavier            84.04  40 dPcP     PcP      05 19 45.7 +4.3
BCLA                              dx       x        05 19 56.1
BCLA                              dx       x        05 19 59.6
GAMB  Gambell            84.14 333  IAMs_20 IAMs_20  06 00 35.6
      comp=Z,2µm,21.0s
MEM   Membach            84.48  40 dPcP     PcP      05 19 44.2 +0.8
MEM                               dx       x        05 19 57.9
BHOU  Houvegnez          84.49  40 dPcP     PcP      05 19 44.7 +1.3
BHOU                              dx       x        05 19 58.1
WLF   Walferdange        84.62  41 dPcP     PcP      05 19 44.6 +0.6
WLF                               dx       x        05 19 54.3
WLF                               dx       x        05 19 60.0
WLF   Walferdange        84.62  41  P       P        05 19 42.8 +2.3
WLF                                pmax    pmax
      comp=Z,61nm,1.1s
WLF   Walferdange        84.62  41  P       P        05 19 42.8 +2.3
WLF                                IAmb    IAmb     05 20 10.2
      comp=Z,61nm,1.1s
WLF                                IAMs_20 IAMs_20  05 52 02.8
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	comp=Z,4µm,21.0s						
BNI	**Bardonecchia**	85.25	45	IAMs_20	IAMs_20	06 01 21.6	
	comp=Z,3µm,22.0s						
ECH	**Echery**	85.37	42	IAmb	IAmb	05 20 11.7	
	comp=Z,68nm,1.2s						
ECH				IAMs_20	IAMs_20	05 53 35.7	
	comp=Z,3µm,22.0s						
SENIN	**Lac Senin/Sane**	85.60	44	IAmb	IAmb	05 20 20.8	
	comp=Z,100nm,1.8s						
KONO	**Kongsberg**	85.92	31	IAMs_20	IAMs_20	05 48 26.2	
	comp=Z,3µm,21.0s						
HSPB	**Hornsund (broa**	85.93	13	*e*P	**P**	**05 19 48.8**	**+2.3**
HSPB				*e*L	L	05 48 33.6	
	comp=Z,10µm,52.6s						
MUD	**Monsted U'grnd**	85.97	34	*i* P	P	05 19 57.1	+10
MUD	**Monsted U'grnd**	85.97	34	*i* P	P	05 19 57.1	+10
MUD	**Monsted U'grnd**	85.97	34	*i* P	P	05 19 57.1	+10
TAM	**Tamanrasset**	86.00	68	IAMs_20	IAMs_20	05 59 28.5	
	comp=Z,3µm,19.0s						
BFO	**Black Forest**	86.14	42	P	P	05 19 52.7	+4.5
BFO				pmax	pmax		
	comp=Z,26nm,1.1s						
BFO	**Black Forest**	86.14	42	P	P	05 19 52.7	+4.6
BFO				IAMs_20	IAMs_20	05 51 03.1	
	comp=Z,3µm,21.0s						
NB2	**NORSAR Subarra**	86.58	29	P	P	05 19 53.2	+3.2
	comp=Z,301nm,2.5s,baz=278,slow=4.8						
NB2	**NORSAR Subarra**	86.58	29	P	P	05 19 53.2	+3.2
	baz=278,slow=4.8						
NOA	**NORSAR Array B**	86.58	29	P	P	05 19 53.4	+3.4
	comp=Z,12nm,1.1s,baz=277,slow=4.5,SNR=7.7						
NOA				LR	LR	05 54 47.2	
	comp=Z,884nm,21.6s,baz=280,slow=33						
STU	**Stuttgart**	86.67	41	IAMs_20	IAMs_20	05 51 20.2	
	comp=Z,3µm,22.0s						
TUE	**Stuetta**	87.00	44	P	**P**	**05 19 54.5**	**+1.9**
TUE				IAMs_20	IAMs_20	06 05 54.8	
	comp=Z,3µm,19.0s						
DAVA	**Damuels**	87.28	43	*e*P	**P**	**05 19 56.4**	**+2.5**
	comp=Z,33nm,1.2s						
MSSA	**Maissana**	87.33	46	IAMs_20	IAMs_20	05 55 03.6	
	comp=Z,2µm,21.0s						
VSL	**Villasalto**	87.73	51	IAmb	IAmb	05 20 17.8	
	comp=Z,56nm,1.3s						
VSL				IAMs_20	IAMs_20	05 51 11.0	
	comp=Z,2µm,22.0s						
RETA	**Reutte**	87.85	43	*e*P	**P**	**05 19 59.6**	**+3.0**
	comp=Z,13nm,1.3s						
BELA	**Belgrano 2**	87.86	171	P	**P**	**05 19 54.4**	**-1.5**
FETA	**Feichten**	87.89	43	*e*P	P	05 20 02.6	+5.7
	comp=Z,15nm,1.2s						
GRA1	**Grafenberg Arr**	87.90	40	IAmb	IAmb	05 20 16.2	
	comp=Z,47nm,1.3s						
GRA1				IAMs_20	IAMs_20	05 53 09.5	
	comp=Z,4µm,22.0s						
GRF	**Grafenberg Arr**	87.90	40	*e*P	**P**	**05 19 59.8**	**+3.2**
	comp=Z,99nm,2.1s,baz=277,slow=5.8						
GRF				*e*L	L	05 53 41.1	
	comp=Z,4µm,22.0s						
KEST	**Kesra**	88.10	54	P	**P**	**05 19 60.0**	**+2.0**
	comp=Z,3.0nm,1.1s,baz=280,slow=16,SNR=1.5						
KEST	**Kesra**	88.10	54	IAMs_20	IAMs_20	06 03 38.8	
	comp=Z,2µm,20.0s						
MOTA	**Moosalm**	88.10	43	*e*P	**P**	**05 20 00.0**	**+2.2**
	comp=Z,12nm,1.3s						
SQTA	**Sankt Quirin**	88.19	43	*e*P	**P**	**05 20 01.5**	**+3.3**
	comp=Z,17nm,1.2s						
WATA	**Walderalm**	88.42	43	*e*P	P	05 20 04.8	+5.5
	comp=Z,8.5nm,1.2s						
WTTA	**Wattenberg**	88.47	43	*e*P	P	05 20 04.2	+4.6
	comp=Z,14nm,1.4s						
NKC	**Novy Kostel**	88.61	40	*e*P	P	05 20 05.7	+5.7
NKC				*e*		05 20 14.5	
NKC				*e*		05 30 40.2	
NKC				MLR	MLR		
	comp=Z,5µm,21.8s						
NKC	**Novy Kostel**	88.61	40	*e*P	P	05 20 05.7	+5.7
NKC				*e*x	x	05 20 14.5	
NKC				*e*SKS	**S**	**05 30 40.2**	**-6.7**
NKC				AMS	AMS	05 53 50.0	
	comp=Z,5µm,21.8s						
CTI	**Castel Tesino**	88.63	44	IAmb	IAmb	05 20 21.6	
	comp=Z,40nm,1.4s						
CTI				IAMs_20	IAMs_20	06 03 40.0	
	comp=Z,2µm,19.0s						
CLL	**Collm**	88.81	39	*e*P	**P**	**05 20 03.0**	**+2.1**
CLL				*i* P(2)		05 20 06.0	
	comp=Z,28nm,1.4s						
CLL				*i*		05 20 15.8	
	comp=Z,63nm,1.8s						
CLL				*e*PP	**PP**	**05 23 34.0**	**+4.2**
CLL				*e*SKSac	**SKSac**	**05 30 33.0**	**+2.2**
CLL				*e*S	**ScS**	**05 30 49.0**	**-5.0**
CLL				*e*		05 31 21.0	
CLL				*e*PS	**PS**	**05 32 01.0**	**+7.8**
CLL				*e*		05 33 05.0	
CLL				*e*SS	SS	05 36 51.0	+11
CLL				*e*SSS	SSS	05 40 30.0	
CLL	**Collm**	88.81	39	*e*P	**P**	**05 20 03.0**	**+2.1**
CLL				*e*		05 30 33.0	
CLL				*e*S	**ScS**	**05 30 49.0**	**-5.0**
CLL				pmax	pmax		
	comp=Z,28nm,1.4s						
CLL	**Collm**	88.81	39	IAmb	IAmb	05 20 29.3	
	comp=Z,106nm,2.0s						
CLL				IAMs_20	IAMs_20	05 54 31.7	
	comp=Z,2µm,22.0s						
ABTA	**Abfaltersbach**	89.13	43	*e*P	P	05 20 08.1	+5.4
	comp=Z,13nm,1.1s						
BRG	**Berggiesshubel**	89.46	39	*e*P	P	05 20 09.2	+5.2
BRG				Amp		05 20 11.6	
	comp=Z,17nm,1.5s						
BRG				*e*x	x	05 20 25.0	
BRG				Amp		05 20 26.7	
	comp=Z,40nm,1.4s						
BRG	**Berggiesshubel**	89.46	39	SKS	S	05 30 45.0	-10
BRG	**Berggiesshubel**	89.46	39	SS	SS	05 37 03.0	+13
BRG				Amp		05 51 44.0	
	comp=E,3.9nm,26.2s						
BRG				Amp		05 51 48.0	
	comp=N,1.5nm,26.2s						
BRG				Amp		05 51 52.0	
	comp=Z,5.8nm,29.3s						
BRG	**Berggiesshubel**	89.46	39	*e*P	P	05 20 09.2	+5.2
BRG				pmax	pmax		
	comp=Z,17nm,1.5s						
BRG				pmax	pmax		
	comp=Z,40nm,1.4s						
BRG	**Berggiesshubel**	89.46	39	*e*P	P	05 20 09.2	+5.2
BRG				Amp		05 20 11.6	
	comp=Z,17nm,1.5s						
BRG				*e*x	x	05 20 25.0	
BRG				Amp		05 20 26.7	
	comp=Z,40nm,1.4s						
BRG	**Berggiesshubel**	89.46	39	SKS	S	05 30 45.0	-10
BRG	**Berggiesshubel**	89.46	39	SS	SS	05 37 03.0	+13
BRG				Amp		05 51 44.0	
	comp=E,3.9nm,26.2s						
BRG				Amp		05 51 48.0	
	comp=N,1.5nm,26.2s						
BRG				Amp		05 51 52.0	
	comp=Z,5.8nm,29.3s						
ZOU	**Zoufplan**	89.47	43	IAMs_20	IAMs_20	06 04 10.3	
	comp=Z,3µm,20.0s						
KHC	**Kasperske Hory**	89.50	41	*e*P	P	05 20 09.1	+4.9
KHC				*e*		05 20 18.0	
KHC				*e*		05 30 40.1	
KHC				MLR	MLR		
	comp=Z,6µm,25.9s						
KHC	**Kasperske Hory**	89.50	41	*e*P	P	05 20 09.1	+4.9
KHC				*e*x	x	05 20 18.0	
KHC				*e*SKS	**SKSac**	**05 30 40.1**	**+5.0**
KHC				AMS	AMS	05 52 00.0	
	comp=Z,6µm,25.9s						
GEC2	**GERESS Array S**	89.62	41	IAMs_20	IAMs_20	05 53 11.2	
	comp=Z,3µm,22.0s						
GERES	**GERESS Array B**	89.62	41	P	**P**	**05 20 07.2**	**+2.3**
	comp=Z,2.9nm,0.9s,baz=258,slow=2.6,SNR=13						
GERES				LR	LR	05 56 58.8	
	comp=Z,1µm,18.9s,baz=266,slow=33						
KBA	**Koelnbreinsper**	89.65	43	*e*P	P	05 20 10.8	+5.6
	comp=Z,10nm,1.1s						
PRA	**Prague**	89.90	40	AMS	AMS	05 54 40.0	
	comp=Z,2µm,22.4s						
PVCC	**Panska Ves**	89.91	39	AMS	AMS	05 54 50.0	
	comp=Z,5µm,23.2s						
MYKA	**Terra Mystica**	89.92	43	*e*P	P	05 20 10.4	+4.1
	comp=Z,26nm,1.6s						
PRU	**Pruhonice**	89.98	40	*e*SKS	**SKSac**	**05 30 41.8**	**+4.0**
PRU				AMS	AMS	05 52 10.0	
	comp=Z,6µm,23.5s						
TRI	**Trieste**	90.14	44	IAMs_20	IAMs_20	06 05 06.0	
	comp=Z,2µm,21.0s						
MOA	**Molln**	90.15	42	*e*P	P	05 20 12.7	+5.4
	comp=Z,7.4nm,1.5s						
VNA3	**Neumayer Olymp**	90.34	162	P	**P**	**05 20 09.0**	**+1.4**
AQU	**L'Aquila**	90.39	47	IAMs_20	IAMs_20	05 54 37.6	
	comp=Z,2µm,22.0s						
ARCES	**ARCESS Array B**	90.58	20	P	**P**	**05 20 11.7**	**+2.9**
	comp=Z,6.0nm,1.0s,baz=256,slow=7.2,SNR=3.7						
ARCES				LR	LR	05 59 30.5	
	comp=Z,812nm,19.4s,baz=285,slow=35						
VNA1	**Neumayer--Stat**	90.60	161	P	**P**	**05 20 09.7**	**+1.0**
TREC	**Trest**	90.71	40	*e*SKS	**SKSac**	**05 30 41.3**	**-0.8**
TREC				AMS	AMS	05 52 40.0	
	comp=Z,6µm,24.5s						
UPC	**Upice**	90.82	39	*e*SKS	**SKSac**	**05 30 49.0**	**+6.4**
UPC				AMS	AMS	05 55 10.0	
	comp=Z,4µm,23.6s						
CHVC	**Chvalec**	90.83	39	*e*P	P	05 20 15.4	+5.0
SOKA	**Soboth**	90.86	43	*e*P	P	05 20 16.0	+5.3
	comp=Z,5.0nm,1.2s						
KSP	**Ksiaz**	90.94	39	*e*P	P	05 20 15.7	+4.9
KSP				*e*SS	SS	05 37 29.6	+19
KSP				*e*L	L	05 52 25.4	
	comp=Z,5µm,29.3s						
OSTC	**Ostas**	90.94	39	*e*P	P	05 20 14.4	+3.5
OSTC				AMS	AMS	05 53 20.0	
	comp=Z,4µm,25.4s						
CLTB	**Caltabellotta**	90.95	52	IAMs_20	IAMs_20	06 06 56.4	
	comp=Z,2µm,20.0s						
VNA2	**Neumayer--Watz**	90.96	161	P	**P**	**05 20 10.5**	**+0.1**
	baz=298,slow=5.5						
CORL	**Corleone**	90.98	52	IAMs_20	IAMs_20	06 05 49.0	
	comp=Z,3µm,20.0s						
DPC	**Dobruska-Polom**	91.05	39	*e*P	P	05 20 17.0	+5.6
DPC				MLR	MLR		
	comp=Z,4µm,22.4s						
DPC	**Dobruska-Polom**	91.05	39	*e*P	P	05 20 17.0	+5.6
DPC				*e*SKS	**SKSac**	**05 30 52.8**	**+8.8**
DPC				AMS	AMS	05 55 20.0	
	comp=Z,4µm,22.4s						
CONA	**Conrad Observa**	91.19	42	*e*P	P	05 20 18.0	+5.7
	comp=Z,13nm,1.1s						
KRUC	**Moravsky**	91.33	41	*e*P	**P**	**05 20 15.9**	**+3.2**
KRLC	**Kraliky**	91.39	39	AMS	AMS	05 55 30.0	
	comp=Z,4µm,22.0s						
VRAC	**Vranov**	91.42	40	*e*P	**P**	**05 20 16.4**	**+3.3**
RAFF	**Raffo Rosso**	91.91	52	IAMs_20	IAMs_20	05 59 03.7	
	comp=Z,3µm,21.0s						
MORC	**Moravsky Berou**	91.93	40	*e*P	**P**	**05 20 18.3**	**+2.7**
MORC	**Moravsky Berou**	91.93	40	P	P	05 20 20.7	+5.1
MORC				pmax	pmax		
	comp=Z,57nm,2.0s						
MORC	**Moravsky Berou**	91.93	40	P	P	05 20 20.7	+5.2
MORC				IAmb	IAmb	05 21 06.8	
	comp=Z,57nm,2.0s						
MODS	**Modra-Piesok**	92.04	41	*e*P	P	05 20 33.5	+17
JAVC	**Velka Javorina**	92.20	41	*e*P	**P**	**05 20 20.0**	**+3.2**
OKC	**Ostrava-Krasne**	92.30	40	AMS	AMS	05 54 40.0	
	comp=Z,4µm,21.8s						
SNAA	**Sanae**	92.56	162	P	**P**	**05 20 16.2**	**-1.8**
SNAA	**Sanae**	92.56	162	*i* P	**P**	**05 20 16.6**	**-1.4**
SNAA				pmax	pmax		
	comp=Z,24nm,1.2s						
SNAA	**Sanae**	92.56	162	P	**P**	**05 20 17.2**	**-0.7**
SNAA				IAmb	IAmb	05 20 27.0	
	comp=Z,25nm,1.2s						
CEL	**Celeste**	92.94	51	IAMs_20	IAMs_20	05 55 38.9	
	comp=Z,1µm,21.0s						
VYHS	**Vyhne**	93.03	41	*e*P	P	05 20 26.5	+5.9
VYHS				*e*S	**S**	**05 31 20.4**	**-7.0**
VYHS	**Vyhne**	93.03	41	*e*P	P	05 20 26.5	+5.9
VYHS				*e*		05 20 39.0	
VYHS	**Vyhne**	93.03	41	*e*S	**S**	**05 31 20.4**	**-7.0**
VYHS				*e*L	L	05 51 52.9	
OJC	**Ojcow**	93.25	39	*e*P	**P**	**05 20 21.4**	**-0.2**
OJC				*e*SS	SS	05 38 07.7	+23
OJC				*e*L	L	05 53 47.9	
	comp=Z,6µm,28.5s						
LANS	**Liptovska Anna**	93.29	40	*e*P	P	05 20 29.6	+7.8
LANS	**Liptovska Anna**	93.29	40	*e*P	P	05 20 29.6	+7.8
LANS				*e*		05 20 45.1	
TIP	**Timpagrande**	93.44	50	IAMs_20	IAMs_20	05 55 28.1	
	comp=Z,3µm,22.0s						
FINES	**FINESS Array B**	93.48	27	LR	LR	06 01 26.1	
	comp=Z,928nm,18.7s,baz=286,slow=35						
PSZ	**Piszkesteto**	93.85	41	IAMs_20	IAMs_20	06 10 27.0	
	comp=Z,2µm,21.0s						
APA	**Apatity**	94.02	20⇑	*i*P	**P**	**05 20 24.6**	**-0.1**
APA				*i*		05 24 10.9	
APA				*i*		05 31 03.0	
APA				*i* S	**S**	**05 31 33.0**	**-2.2**
APA				*i* SS	SS	05 38 10.0	+16
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SUW	**Suwalki**	94.29	35	IAMs_20	IAMs_20	05 59 54.6	
	comp=Z,3µm,22.0s						
CRVS	**Cervenica-Dubn**	94.62	40	*e*L	L	05 52 44.9	
CRVS	**Cervenica-Dubn**	94.62	40	*e*S	S	05 31 21.2	-20
CRVS	**Cervenica-Dubn**	94.62	40	*e*		05 33 09.9	
CRVS	**Cervenica-Dubn**	94.62	40	*e*SS	SS	05 38 14.8	+11
DIVS	**Divibare**	94.79	45	IAMs_20	IAMs_20	06 10 15.0	
	comp=Z,1µm,20.0s						
KOLS	**Kolonicke sedl**	95.13	40	*e*P	P	05 20 40.5	+10
KOLS				*e*S	**S**	**05 31 39.2**	**-6.6**
KOLS				*e*SS	**SS**	**05 38 17.3**	**+6.1**
KOLS	**Kolonicke sedl**	95.13	40	*e*S	**S**	**05 31 39.1**	**-6.7**
KOLS				*e*SS	**SS**	**05 38 17.3**	**+6.1**
KOLS				*e*L	L	05 52 55.1	
KOLS	**Kolonicke sedl**	95.13	40	*e*PDIFF	P	05 20 40.5	+10
KWP	**Kalwaria Pacla**	95.22	39	IAMs_20	IAMs_20	05 58 23.3	
	comp=Z,2µm,22.0s						
UZH	**Uzhgorod**	95.23	40	*e*P	**P**	**05 20 32.6**	**+1.9**
UZH				*e*		05 24 28.7	
UZH				*e*		05 31 12.6	
UZH				*i* S	**S**	**05 31 42.6**	**-3.9**
LVV	**L'vov**	95.99	39	*e*P	**P**	**05 20 37.4**	**+3.2**
LVV				*e*		05 24 33.9	
LVV				*e*S	S	05 31 43.1	-10
LVV				*e*SS	SS	05 38 42.1	+19
QSPA	**South Pole Qui**	96.12	180	P	**P**	**05 20 34.8**	**+0.4**
FNA	**Florina**	96.56	48	IAMs_20	IAMs_20	06 01 20.1	
	comp=Z,2µm,21.0s						
MNK	**Minsk**	96.76	33	*i* P	**P**	**05 20 40.2**	**+2.7**
	comp=E,4.0nm,1.2s						
MNK				*i* P	**P**	**05 20 40.2**	**+2.7**
	comp=N,26nm,1.2s						
MNK				*i* P	**P**	**05 20 40.2**	**+2.7**
	comp=Z,3.0nm,0.6s						
MNK				*i* PP	**PP**	**05 24 35.5**	**+3.5**
MNK				*i* PPP	PPP	05 26 40.3	
MNK				*i* S	**SKSac**	**05 31 17.3**	**+2.5**
MNK				*i* SS	SS	05 38 42.6	+8.9
MNK				*i* SSS	SSS	05 42 28.2	
MNK				*i* LQ	LQ	05 58 35.6	
MNK				*i* LR	LR	06 04 12.7	
MNK				*i* LRM	MLR	06 05 08.7	
	comp=E,90nm,19.7s						
MNK				*i* LRM	MLR	06 05 12.3	
	comp=Z,665nm,18.4s						
MNK				*i* LRM	MLR	06 05 27.8	
	comp=N,431nm,18.4s						
NVL	**N'lazarevskaya**	97.21	161	*e*P	P	05 20 44.5	+5.4
NVL				*e*		05 24 47.0	
NVL				*e*S	**SKSac**	**05 31 15.0**	**-1.4**
NVL				*e*SS	**SS**	**05 38 45.8**	**+5.9**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
TMCR	**Tamitsa**	97.32	22	*e*P	Pdif	05 20 44.2	+4.3
TMCR				pmax	pmax		
	comp=Z,12nm,0.9s						
MLR	**Muntele Rosu**	98.51	42	IAMs_20	IAMs_20	06 13 49.3	
	comp=Z,2µm,21.0s						
AKASG	**Malin Array Be**	98.86	37	LR	LR	06 02 12.7	
	comp=Z,999nm,20.9s,baz=290,slow=33						
AKBB	**Malin Array Si**	98.86	37	IAMs_20	IAMs_20	06 12 17.6	
	comp=Z,2µm,20.0s						
SEY	**Seymchan**	99.59	338	*i* P	**Pdif**	**05 20 53.5**	**+3.5**
KLMR	**Klimovskoe**	99.62	25	*e*P	**Pdif**	**05 20 57.2**	**+7.1**
KLMR				*e*		05 25 05.6	
KLMR				pmax	pmax		
	comp=Z,23nm,1.3s						
KLMR	**Klimovskoe**	99.62	25	*e*P	**Pdif**	**05 20 57.3**	**+7.1**
KLMR				AMP		05 21 08.6	
	comp=Z,23nm,1.3s						
KLMR				*e*PP	PKiKP	05 25 05.6	-13
TIXI	**Tiksi**	99.68	350	*i* P	**Pdif**	**05 20 53.3**	**+3.0**
TIXI	**Tiksi**	99.68	350	IAMs_20	IAMs_20	06 14 51.4	
	comp=Z,3µm,22.0s						
IDI	**Anoyia**	100.63	53	IAMs_20	IAMs_20	05 55 10.6	
	comp=Z,3µm,22.0s						
MSVF	**Nonsavu**	100.66	253	IAMs_20	IAMs_20	06 04 54.8	
	comp=Z,3µm,18.0s						
SANT	**Santorini**	100.79	51	IAMs_20	IAMs_20	06 08 19.7	
	comp=Z,2µm,22.0s						
OBN	**Obninsk**	101.09	31	IAMs_20	IAMs_20	06 04 12.4	
	comp=Z,2µm,22.0s						
PET	**Petropavlovsk**	101.78	327	*e*P	**Pdif**	**05 21 13.0**	**+13**
PET				*e*		05 31 42.5	
PET				*e*S	**Sdif**	**05 32 44.3**	**+2.4**
PET				*e*SS	SS	05 39 56.6	+13
PET				MLR	MLR		
	comp=Z,2µm,20.0s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET	**Petropavlovsk**	101.78	327	IAMs_20	IAMs_20	06 01 14.1	
	comp=Z,1µm,21.0s						
PEA0B	**Petropavlovsk-**	102.25	328	IAMs_20	IAMs_20	06 05 51.5	
	comp=Z,2µm,21.0s						
SKR	**Severo-Kuril's**	104.26	326	*i* P	**Pdif**	**05 21 23.8**	**+13**
SKR				MLR	MLR		
	comp=Z,1µm,20.0s						
NRIK	**Noril'sk**	104.42	4	IAMs_20	IAMs_20	06 12 21.9	
	comp=Z,2µm,22.0s						
H11N3	**WAKE ISLAND Hy**	106.95	293	T	T	07 21 43.5	
	baz=79,slow=75,SNR=107						
H11N2	**WAKE ISLAND Hy**	106.96	293	T	T	07 21 45.2	
	baz=79,slow=75,SNR=106						
H11N1	**WAKE ISLAND Hy**	106.97	293	T	T	07 21 48.4	
	baz=79,slow=75,SNR=138						
CSS	**Mathiatis**	107.31	51	IAMs_20	IAMs_20	06 01 54.5	
	comp=Z,1µm,20.0s						
H11S2	**WAKE ISLAND Hy**	107.41	291	T	T	07 21 51.3	
	baz=77,slow=75,SNR=48						
H11S1	**WAKE ISLAND Hy**	107.42	291	T	T	07 21 49.6	
	baz=77,slow=75,SNR=48						
H11S3	**WAKE ISLAND Hy**	107.43	291	T	T	07 21 52.4	
	baz=77,slow=75,SNR=58						
YAK	**Yakutsk**	107.63	345	IAMs_20	IAMs_20	06 17 12.2	
	comp=Z,2µm,18.0s						
GAZ	**Gaziantep**	109.39	47	IAMs_20	IAMs_20	06 19 11.3	
	comp=Z,1µm,22.0s						
KIV	**Kislovodsk**	110.02	39	*i* PKIKP	**PKiKP**	**05 25 38.8**	**-0.1**
KIV				*e*		05 26 13.1	
KIV				*i* PS	**PS**	**05 35 37.2**	**-3.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KIV	**Kislovodsk**	110.02	39	IAMs_20	IAMs_20	06 06 50.8	
	comp=Z,2µm,22.0s						
ARU	**Arti**	110.04	22	IAMs_20	IAMs_20	06 11 18.9	
	comp=Z,2µm,21.0s						
DZM	**Mont Dzumac**	111.62	249	*e*SKSac	**SKSac**	**05 32 20.1**	**-4.6**
	comp=Z,878nm,33.9s						
DZM				*e*SP	**SP**	**05 35 49.9**	**-5.8**
	comp=Z,2µm,35.9s						
DZM				*e*SS	**SS**	**05 41 56.7**	**-3.8**
	comp=Z,10µm,31.3s						
DZM	**Mont Dzumac**	111.62	249	*e*LQ	LQ	05 54 09.0	
	comp=Z,13µm,35.0s						
DZM				*e*LR	LR	05 58 45.6	
	comp=Z,9µm,26.7s						
MARD	**Mardin**	111.90	46	IAMs_20	IAMs_20	06 14 00.9	
	comp=Z,1µm,21.0s						
MAK	**Makhachkala**	113.52	38	*e*P	**Pdif**	**05 21 46.4**	**-6.0**
MAK				*i*		05 25 44.2	
MAK				*e*		05 26 41.4	
MAK				*e*SSS	SSS	05 46 43.7	
MAK				pmax	pmax		
	comp=Z,606nm,1.4s						
MAW	**Mawson**	114.32	166	IAMs_20	IAMs_20	06 14 03.5	
	comp=Z,1µm,22.0s						
BRVK	**Borovoye**	116.76	18	IAMs_20	IAMs_20	06 10 20.3	
	comp=Z,2µm,21.0s						
ZAA0	**Zalesovo Array**	119.25	8	PKPdf	**PKiKP**	**05 25 55.8**	**-0.3**
ZAA0				IAMs_20	IAMs_20	06 21 48.9	
	comp=Z,2µm,21.0s						
ZALV	**Zalesovo Beam**	119.25	8	PKP	**PKiKP**	**05 25 56.9**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=321,slow=2.1,SNR=10						
BRZS	**Berezniki**	120.17	18	*e*PKP	**PKiKP**	**05 26 00.3**	**+2.2**
	baz=18						
BRZS				*e*PP	PP	05 27 27.7	+5.5
	baz=18						
BRZS	**Berezniki**	120.17	18	*e*PKIKP	**PKiKP**	**05 26 00.3**	**+2.2**
BRZS				*e*		05 27 27.6	
KURK	**Kurchatov**	121.14	14	IAMs_20	IAMs_20	06 22 57.1	
	comp=Z,2µm,20.0s						
KURBB	**Kurchatov Arra**	121.20	14	PKKPbc	PKKPbc	05 36 01.1	-2.5
	comp=Z,0.8nm,1.0s,baz=161,slow=3.0,SNR=4.2						
RAYN	**Ar Rayn**	121.47	58	IAMs_20	IAMs_20	06 15 50.1	
	comp=Z,2µm,22.0s						
HIA	**Hailar**	121.49	343	IAMs_20	IAMs_20	06 19 32.7	
	comp=Z,2µm,22.0s						
MDJ	**Mudanjiang**	121.78	333	PKP	**PKiKP**	**05 26 02.2**	**+0.8**
MDJ				SKS	**SKSdf**	**05 33 13.8**	**0.0**
MDJ				AMB	AMB		
	comp=Z,430nm,3.7s						
MDJ				LR	LR		
	comp=Z,2µm,25.6s						
MDJ				LR	LR		
	comp=Z,3µm,22.1s						
MDJ				LR	LR		
	comp=Z,5µm,37.7s						
MDJ	**Mudanjiang**	121.78	333	IAMs_20	IAMs_20	06 23 16.8	
	comp=Z,2µm,22.0s						
SEM	**Semipalatinsk**	121.80	13	*e*PKP	**PKiKP**	**05 26 01.8**	**+0.2**
	baz=13						
SEM				LR	LR	06 20 43.5	
	comp=Z,540nm,19.3s,baz=13						
SEM	**Semipalatinsk**	121.80	13	*e*PKIKP	**PKiKP**	**05 26 01.7**	**+0.2**
TLY	**Talaya**	122.19	355	IAMs_20	IAMs_20	06 22 04.8	
	comp=Z,2µm,21.0s						
GEYT	**Alibeck**	122.99	37	PKP	**PKiKP**	**05 26 06.2**	**+2.2**
	comp=Z,2.1nm,0.5s,baz=292,slow=9.1,SNR=5.2						
GYA0B	**ALIBECK ARRAY**	122.99	37	IAMs_20	IAMs_20	06 27 14.9	
	comp=Z,1µm,20.0s						
ASHT	**Ashkhabad**	123.14	36	IAMs_20	IAMs_20	06 27 27.8	
	comp=Z,1µm,22.0s						
ZAK	**Zakamensk**	123.50	355	*e*PKIKP	**PKiKP**	**05 26 06.8**	**+2.0**
ZAK				*e*		05 27 57.6	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CN2	**Changchun**	124.21	336	*e*PKP	**PKiKP**	**05 26 07.1**	**+0.9**
CN2				LR	LR		
	comp=Z,830nm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
CN2				LR	LR		
	comp=Z,1µm,25.0s						
BTLS	**Baital**	124.96	20	*e*PKP	**PKiKP**	**05 26 09.1**	**+1.3**
	baz=20						
BTLS				*e*PP	**PP**	**05 27 59.6**	**+5.0**
	baz=20						
BTLS	**Baital**	124.96	20	*e*PKIKP	**PKiKP**	**05 26 09.0**	**+1.3**
BTLS				*e*		05 27 59.6	
JWT	**Wachi**	125.44	322	IAMs_20	IAMs_20	06 31 02.4	
	comp=Z,2µm,19.0s						
ZSN	**Zaisan**	125.54	10	*e*PKP	**PKiKP**	**05 26 11.4**	**+2.6**
	baz=10						
ZSN	**Zaisan**	125.54	10	*e*PKIKP	**PKiKP**	**05 26 11.4**	**+2.6**
MAKZ	**Makanchi**	125.58	13	PKIKP	**PKiKP**	**05 26 10.2**	**+1.3**
MAKZ	**Makanchi**	125.58	13	PKPdf	**PKiKP**	**05 26 10.2**	**+1.3**
MAKZ				IAMs_20	IAMs_20	06 25 02.5	
	comp=Z,2µm,22.0s						
ULN	**Ulaanbaatar**	125.58	352	IAMs_20	IAMs_20	06 29 39.6	
	comp=Z,2µm,20.0s						
MK31	**Makanchi Array**	125.66	13	PKIKP	**PKiKP**	**05 26 10.3**	**+1.2**
MK31	**Makanchi Array**	125.66	13	PKPdf	**PKiKP**	**05 26 10.3**	**+1.2**
MKAR	**Makanchi Array**	125.66	13	PKP	**PKiKP**	**05 26 10.2**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=350,slow=1.4,SNR=12						
SONM	**Songino Array**	125.70	352	PKP	**PKiKP**	**05 26 10.1**	**+0.8**
	comp=Z,5.0nm,0.9s,baz=328,slow=1.3,SNR=14						
TDK	**Taldyqorghan**	126.36	17	LR	LR	06 21 45.9	
	comp=Z,740nm,17.6s,baz=16						
SGDS	**Sogindy**	126.55	20	*e*PKP	**PKiKP**	**05 26 12.4**	**+1.4**
	baz=20						
SGDS	**Sogindy**	126.55	20	*e*PKIKP	**PKiKP**	**05 26 12.4**	**+1.4**

KUU	Kurty	126.73	19	ePKP	PKiKP	05 26 12.6	+1.2
	baz=19						
KUU	Kurty	126.73	19	ePKIKP	PKiKP	05 26 12.5	+1.2
CHKK	Chushkaly	126.98	18	ePKP	PKiKP	05 26 14.2	+2.4
	baz=18						
CHKK	Chushkaly	126.98	18	ePKIKP	PKiKP	05 26 14.2	+2.4
JHS	Saijyo	127.01	323	IAMs_20	IAMs_20	06 17 48.0	
	comp=Z,2µm,21.0s						
FRU1	Bishkek	127.12	21	IAMs_20	IAMs_20	06 24 38.5	
	comp=Z,2µm,22.0s						
AAK	Ala-Archa	127.22	21	PKP	PKiKP	05 26 14.1	+1.6
	comp=Z,6.1nm,1.0s,baz=167,slow=1.9,SNR=8.5						
AAK	Ala-Archa	127.22	21	PKIKP	PKiKP	05 26 17.0	+4.5
AAK	Ala-Archa	127.22	21	PKPdf	PKiKP	05 26 17.0	+4.5
AAK	Ala-Archa	127.22	21	IAMs_20	IAMs_20	06 30 17.2	
	comp=Z,2µm,21.0s						
JMN	Monobe	127.41	321	IAMs_20	IAMs_20	06 13 24.5	
	comp=Z,1µm,20.0s						
AAA	Alma-Ata	127.53	19	ePKP	PKiKP	05 26 14.7	+1.7
	baz=19						
AAA	Alma-Ata	127.53	19	ePKIKP	PKiKP	05 26 14.7	+1.7
MDOK	Medeo	127.62	19	ePKP	PKiKP	05 26 15.3	+2.0
	baz=18						
MDOK	Medeo	127.62	19	ePKIKP	PKiKP	05 26 15.3	+2.0
TNSS	Tian-Shan	127.70	19	ePKP	PKiKP	05 26 15.4	+1.7
	baz=19						
TNSS	Tian-Shan	127.70	19	ePKIKP	PKiKP	05 26 15.4	+1.7
HRA	Herat	127.84	37	IAMs_20	IAMs_20	06 34 14.3	
	comp=Z,2µm,21.0s						
KPKS	Kokpek	127.84	17	ePKP	PKiKP	05 26 15.4	+1.7
	baz=17						
KPKS	Kokpek	127.84	17	ePKIKP	PKiKP	05 26 15.3	+1.7
KSRS	Korea Array	128.12	329	PKP	PKiKP	05 26 15.1	+0.9
	comp=Z,5.8nm,0.8s,baz=349,slow=1.2,SNR=12						
SATY	Saty	128.13	18	ePKP	PKiKP	05 26 16.8	+2.5
	baz=17						
SATY	Saty	128.13	18	ePKIKP	PKiKP	05 26 16.7	+2.5
INCN	Inchon	128.75	330	IAMs_20	IAMs_20	06 29 50.7	
	comp=Z,2µm,21.0s						
UOSS	Minazif	129.46	51	IAMs_20	IAMs_20	06 34 28.9	
	comp=Z,2µm,22.0s						
JTU	Tsushima	129.51	325	IAMs_20	IAMs_20	06 29 21.0	
	comp=Z,2µm,21.0s						
WMQ	Urumqi	129.54	9	PKP	PKiKP	05 26 18.0	+1.0
WMQ				SS	SS	05 45 56.2	+10
WMQ				AMB	AMB		
	comp=Z,330nm,11.6s						
WMQ				LR	LR		
	comp=Z,2µm,29.3s						
WMQ				LR	LR		
	comp=Z,3µm,25.9s						
WMQ				LR	LR		
	comp=Z,8µm,28.7s						
WMQ	Urumqi	129.54	9	IAMs_20	IAMs_20	06 27 27.6	
	comp=Z,2µm,22.0s						
JNU	Nakatsue	129.65	323	IAMs_20	IAMs_20	06 20 51.8	
	comp=Z,2µm,22.0s						
DL2	Dalian	129.87	335	SS	SS	05 46 04.7	+13
DL2				AMB	AMB		
	comp=Z,330nm,9.6s						
DL2				LR	LR		
	comp=N,1µm,24.6s						
DL2				LR	LR		
	comp=E,1µm,18.6s						
DL2				LR	LR		
	comp=Z,3µm,24.1s						
KSH	Kashi	130.49	22	PKP	PKiKP	05 26 24.4	+5.3
KSH				PKS	PKSdf	05 29 57.9	+3.0
BJI	Beijing	130.91	341	PKP	PKiKP	05 26 32.3	+13
BJI	Beijing	130.91	341	SS	SS	05 46 10.4	+6.8
BJI				LR	LR		
	comp=N,1µm,21.0s						
BJI				LR	LR		
	comp=E,2µm,24.7s						
BJI				LR	LR		
	comp=Z,3µm,27.5s						
BJT	Baijiatuau	130.93	341	IAMs_20	IAMs_20	06 30 45.6	
	comp=Z,2µm,21.0s						
STKA	Stephens Creek	131.42	232	PKP	PKiKP	05 26 21.4	+0.4
	comp=Z,1.5nm,0.3s,baz=118,slow=6.6,SNR=5.0						
STKA	Stephens Creek	131.42	232	PKIKP	PKiKP	05 26 21.6	+0.6
STKA	Stephens Creek	131.42	232	PKPdf	PKiKP	05 26 21.6	+0.6
STKA				IAMs_20	IAMs_20	06 14 34.0	
	comp=Z,791nm,20.0s						
HHC	Hu-ho-hao-te	131.48	346	ePKP	PKiKP	05 26 25.4	+4.4
HHC				SKKS	SKKSac	05 35 37.8	+2.0
HHC				AMB	AMB		
	comp=Z,890nm,7.7s						
HHC				LR	LR		
	comp=Z,2µm,19.6s						
HHC				LR	LR		
	comp=Z,2µm,20.4s						
HHC				LR	LR		
	comp=Z,2µm,19.6s						
KBL	Kabul	131.54	32	IAMs_20	IAMs_20	06 27 44.0	
	comp=Z,1µm,20.0s						
BTO	Baotou	132.07	347	eP	PKiKP	05 26 31.1	+8.9
NIL	Nilore	134.34	28	IAMs_20	IAMs_20	06 25 00.3	
	comp=Z,1µm,21.0s						
GTA	Gaotai	134.65	357	ePKP	PKiKP	05 26 27.4	-0.1
GTA				PP	PP	05 29 06.4	+8.7
GTA				SS	SS	05 46 53.7	+4.7
GTA				AMB	AMB		
	comp=Z,430nm,9.2s						
GTA				LR	LR		
	comp=Z,1µm,23.5s						
GTA				LR	LR		
	comp=Z,1µm,23.1s						
GTA				LR	LR		
	comp=Z,2µm,23.1s						
SSE	Sheshan	136.54	330	PKP	PKPdf	05 26 26.0	-3.7
SSE				LR	LR		
	comp=Z,370nm,27.5s						
SSE				LR	LR		
	comp=Z,820nm,29.0s						
SSE				LR	LR		
	comp=Z,800nm,23.7s						
NJ2	Nanjing	136.87	333	ePKP	PKiKP	05 26 30.3	-1.7
NJ2				LR	LR		
	comp=Z,1µm,20.6s						
NJ2				LR	LR		
	comp=Z,1µm,20.5s						
NJ2				LR	LR		
	comp=Z,2µm,21.1s						
DHRM	DHARAMSHALA	136.91	26	eP	PKiKP	05 26 34.8	+2.4
LZH	Lanzhou	137.59	352	ePKP	PKiKP	05 26 35.8	+2.2
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,14.9s						
LZH				LR	LR		
	comp=Z,2µm,15.5s						
SMLA	Simla	138.25	26	eP	PKiKP	05 26 36.2	+1.3
SMLA				IAmb	IAmb	05 26 51.0	
	comp=Z,58nm,1.1s						
XAN	Xi'an	138.59	345	PKP	PKiKP	05 26 38.2	+2.6
XAN				PP	PP	05 29 35.2	+13
XAN				SKS	SKSdf	05 33 44.3	-0.5
XAN				SKKS	SKKSac	05 36 22.0	+3.2
XAN				AMB	AMB		
	comp=Z,620nm,11.8s						
XAN				LR	LR		
	comp=Z,950nm,25.5s						
XAN				LR	LR		
	comp=Z,2µm,22.6s						
XAN				LR	LR		
	comp=Z,3µm,24.0s						
XAN	Xi'an	138.59	345	IAMs_20	IAMs_20	06 32 38.5	
	comp=Z,2µm,22.0s						
AS31	Alice Springs	140.76	240		PKPdf	05 26 33.4	-4.3
ASAR	Alice Springs	140.76	240	PKhKP	PKPpre	05 26 30.4	
	comp=Z,2.1nm,0.8s,baz=122,slow=3.1,SNR=15						
ASAR				PKP	PKPdf	05 26 38.4	+0.7
	comp=Z,5.5nm,0.9s,baz=112,slow=2.4,SNR=15						
YHNB	Yeheng	141.48	323	IAMs_20	IAMs_20	06 28 11.1	
	comp=Z,2µm,22.0s						
WB0	Warramunga Arr	141.53	246	PKPdf	PKPdf	05 26 38.1	-1.0
WRA	Warramunga Arr	141.54	246	PKhKP	PKPpre	05 26 32.8	
	comp=Z,4.8nm,0.9s,baz=107,slow=3.4,SNR=13						
WRA				PKP	pPKPdf	05 26 40.1	-0.4
	comp=Z,7.5nm,0.9s,baz=109,slow=2.5,SNR=14						
NACB	Ninganchiao	141.72	323	IAMs_20	IAMs_20	06 36 23.6	
	comp=Z,2µm,21.0s						
ENH	Enshi	142.00	343	IAMs_20	IAMs_20	06 42 14.4	
	comp=Z,1µm,21.0s						
YULB	Yu-li	142.49	322	IAMs_20	IAMs_20	06 21 42.9	
	comp=Z,1µm,19.0s						
CD2	Chengdu	142.68	351	PKP	PKiKP	05 26 41.5	-2.6
CD2				sPKP		05 26 46.2	
CD2				PP	PP	05 29 54.4	+7.0
CD2				SKS	SKSdf	05 33 51.2	-0.3
CD2				SS	SS	05 48 29.2	+5.5
CD2				AMB	AMB		
	comp=Z,2µm,9.0s						
CD2				LR	LR		
	comp=Z,5µm,28.4s						
CD2				LR	LR		
	comp=Z,3µm,27.0s						
CD2				LR	LR		
	comp=Z,4µm,24.5s						
QZH	Quanzhou	142.85	327	PKP	PKiKP	05 26 43.7	-0.7
QZH				PP	PP	05 29 57.6	+8.7
QZH				LR	LR		
	comp=Z,2µm,23.2s						
QZH				LR	LR		
	comp=Z,1µm,20.4s						
QZH				LR	LR		
	comp=Z,2µm,20.8s						
TPUB	Ta-pu	142.96	323	IAMs_20	IAMs_20	06 33 47.3	
	comp=Z,2µm,20.0s						
TWG	Pinlang	143.05	322	IAMs_20	IAMs_20	06 34 12.7	
	comp=Z,2µm,21.0s						
PYUN	Piuthan	143.28	21	eP	PKPdf	05 26 42.4	+0.1
DANN	Dangsing	143.32	20	eP	PKPdf	05 26 42.5	0.0
	comp=Z,38nm,0.7s						
KOLN	Koldanda	143.80	21	eP	PKPdf	05 26 42.1	-1.1
	comp=Z,209nm,1.3s						
LSA	Lhasa	143.90	9	PKP	PKiKP	05 26 45.3	-1.8
LSA				LR	LR		
	comp=Z,2µm,16.4s						
LSA				LR	LR		
	comp=Z,2µm,17.1s						
LSA				LR	LR		
	comp=Z,4µm,17.1s						
GKN	Gorkha	143.94	19	eP	PKPdf	05 26 42.7	-0.7
	comp=Z,57nm,0.8s						
KKN	Kakani	144.34	19	eP	PKPdf	05 26 43.8	-0.4
	comp=Z,157nm,0.8s						
GUN	Gumba	144.41	18	eP	PKPdf	05 26 44.2	-0.3
	comp=Z,575nm,1.5s						
DMN	Daman	144.45	19	eP	PKPdf	05 26 44.1	-0.3
	comp=Z,232nm,0.8s						
PKIN	Phulchoki	144.58	18	eP	PKPdf	05 26 44.1	-0.6
	comp=Z,204nm,1.1s						
PKI	Pulchoki	144.59	18	eP	PKPdf	05 26 44.2	-0.6
BHPL	Bhopal	144.93	33	eP	PKiKP	05 26 48.0	-0.9
BHPL				IAmb	IAmb	05 27 04.6	
	comp=Z,106nm,1.2s						
TAPN	Taplejung	145.46	15	eP	PKPdf	05 26 45.3	-0.9
	comp=Z,366nm,1.3s						
RAMN	Ramite	145.53	17	eP	PKPbc	05 26 44.2	-2.1
	comp=Z,418nm,1.3s						
GTK	Tadong	145.71	14	eP	PKiKP	05 26 48.8	-1.8
GTK				IAmb	IAmb	05 26 53.9	
	comp=Z,311nm,1.3s						
ODAN	Odare	145.84	16	eP	PKPdf	05 26 44.8	-2.0
POO	Poona	146.29	43	eP	PKiKP	05 26 53.6	+1.8
POO				IAmb	IAmb	05 26 59.1	
	comp=Z,33nm,1.1s						
POO	Poona	146.29	43	eP	PKiKP	05 26 53.0	+1.2
GYA	Guiyang	146.39	345	PKPbc	PKiKP	05 26 53.0	+1.1
ZIRO	ZIRO	146.39	6	eP	PKiKP	05 26 50.1	-1.9
ZIRO				IAmb	IAmb	05 26 55.4	
	comp=Z,32nm,0.8s						
LKP	Lekhapani	146.72	2	eP	PKiKP	05 26 52.3	-0.1
GZH	Guangzhou	147.03	332	PKPbc	PKPbc	05 26 48.5	-2.0
GZH				SS	SS	05 49 11.6	-2.7
GZH				LR	LR		
	comp=Z,2µm,20.8s						
GZH				LR	LR		
	comp=Z,2µm,20.4s						
JORH	JORHAT	147.21	5	eP	PKiKP	05 26 52.9	-0.5
JORH				IAmb	IAmb	05 26 57.6	
	comp=Z,772nm,0.2s						
H01W1	Cape Leeuwin H	147.42	206	T	T	08 11 43.3	
	baz=150,slow=76,SNR=16						
GUWA	GUWAHATI	147.43	9	eP	PKiKP	05 26 53.6	-0.3
GUWA				IAmb	IAmb	05 27 01.6	
	comp=Z,168nm,1.4s						
H01W2	Cape Leeuwin H	147.43	206	T	T	08 11 38.9	
	baz=150,slow=76,SNR=14						
H01W3	Cape Leeuwin H	147.44	206	T	T	08 11 49.7	
	baz=150,slow=76,SNR=18						
NGP	Nagpur	147.50	33	eP	PKiKP	05 26 52.9	-1.2
NWAO	Narrogin (SRO)	147.52	212	PKP2	PKPbc	05 26 52.5	+0.8
NWAO	Narrogin (SRO)	147.52	212		PKPbc	05 26 52.5	+0.8
MOKO	MOKOCHONG	147.65	5	eP	PKiKP	05 26 53.8	-0.8
MOKO				IAmb	IAmb	05 27 04.0	
	comp=Z,139nm,0.9s						
SHL	Shillong	148.07	9	eP	PKPbc	05 26 52.6	-1.0
SHL				IAmb	IAmb	05 26 58.7	
	comp=Z,59nm,1.1s						
KOHI	KOHIMA	148.21	6	eP	PKPab	05 26 55.0	-1.8
KOHI				IAmb	IAmb	05 27 11.4	
	comp=Z,97nm,0.8s						
BOK	Bokaro	148.24	20	eP	PKPab	05 26 56.8	0.0
BOK				IAmb	IAmb	05 27 08.9	
	comp=Z,132nm,1.3s						
KMI	Kunming	148.51	351	PKPbc	PKPbc	05 26 54.2	-0.6
KMI	Kunming	148.51	351	PKP2	PKPab	05 27 00.4	+2.4
KMI				MLR	MLR		
	comp=Z,2µm,22.0s						
KMI	Kunming	148.51	351		PKPab	05 27 00.4	+2.4
KMI	Kunming	148.51	351	IAMs_20	IAMs_20	06 35 26.8	
	comp=Z,2µm,22.0s						
IMP	Imphal	149.07	6	eP	PKiKP	05 26 57.1	-0.2
IMP				IAmb	IAmb	05 27 20.0	
	comp=Z,143nm,1.4s						
HYB	Hyderabad	150.15	38	i PKP	PKPbc	05 26 57.0	-1.9
HYB	Hyderabad	150.15	38	eP	PKiKP	05 26 58.9	-0.8
HYB				IAmb	IAmb	05 27 11.1	
	comp=Z,62nm,1.3s						
SAIH	SAIHA	151.26	8	eP	PKiKP	05 27 00.6	-1.4
SAIH				IAmb	IAmb	05 27 14.4	
	comp=Z,133nm,1.3s						
SLVN	Son La	151.98	347		PKPab	05 27 07.3	-4.8
QIZ	Qiongzhong	152.15	334	PKPbc	PKPdf	05 26 56.7	-0.1
QIZ				PP	PP	05 30 45.7	+2.4
QIZ				SS	SS	05 50 16.1	+4.8
QIZ				LR	LR		
	comp=Z,2µm,23.0s						
QIZ				LR	LR		
	comp=Z,1µm,23.6s						
QIZ				LR	LR		
	comp=Z,3µm,22.8s						
CM34	Chiang Mai Arr	155.13	356	P		05 27 06.0	
CM33	Chiang Mai Arr	155.18	356	P		05 27 06.0	
CMMT	Chiang Mai	155.19	356	P		05 27 06.5	
CM35	Chiang Mai Arr	155.31	356	P	PKPdf	05 27 06.0	+4.7
NONG	Nongkai	155.31	347	P	PKPab	05 27 19.0	-7.2
	comp=Z,0.3nmcomp=Z,44nm,0.9s						
CM32	Chiang Mai Arr	155.35	357	P	PKPdf	05 27 07.0	+5.6
CM36	Chiang Mai Arr	155.47	356	P	PKPdf	05 27 07.0	+5.4
TOLI2	Tolitoli	155.52	286	IAMs_20	IAMs_20	06 42 59.5	
	comp=Z,2µm,21.0s						
CMAR	Chiang Mai Arr	155.54	356	PKP	PKPdf	05 27 04.0	+2.3
	comp=Z,2.6nm,0.8s,baz=303,slow=2.3,SNR=17						
CMAR				PKPbc	sPKPbc	05 27 14.5	+1.7
	comp=Z,1.7nm,0.4s,baz=306,slow=2.4,SNR=7.4						
CMAR				PKPab	sPKPab	05 27 28.7	-0.4
	comp=Z,11nm,1.0s,baz=313,slow=1.9,SNR=9.6						
CMAR	Chiang Mai Arr	155.54	356	PKIKP	PKPdf	05 27 04.0	+2.3
CM09	Chiang Mai Arr	155.55	356	P	PKPdf	05 27 08.0	+6.3
CM02	Chiang Mai Arr	155.56	356	P	PKPdf	05 27 07.0	+5.3
CM01	Chiang Mai Arr	155.57	356	P	PKPdf	05 27 08.0	+6.2
CM13	Chiang Mai Arr	155.58	356	P	PKPdf	05 27 07.7	+5.9
CM04	Chiang Mai Arr	155.59	356	P	PKPdf	05 27 07.0	+5.3
CM05	Chiang Mai Arr	155.59	356	P	PKPdf	05 27 07.7	+6.0
MHMT	Maesarieng	155.86	359	P	PKPdf	05 27 09.8	+7.7
UTTA	Uttaradit	156.09	352	P	PKPab	05 27 16.9	-13
SUKH	Sukhothai	156.45	355	P	PKPdf	05 27 09.0	+6.2
PBKT	Sadao Pong	157.18	351	P	PKPab	05 27 24.9	-9.3
	comp=Z,0.0nmcomp=Z,134nmcomp=Z,6.5nm,1.5s						
CHAI	Chaiyaphum	157.65	348	P	PKPab	05 27 31.0	-5.2
	comp=Z,0.1nmcomp=Z,27nm,1.1s						
UTHA	Uthaitani	158.37	354	P	PKPdf	05 27 17.1	+12
SRAK	Srakaew	159.47	347	P	PKPab	05 27 49.3	+5.2

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*IDC **07** 05:09:41.4±1.4, 54°.92N×163°.97E, h0^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.4/69, mbtmp3.7/5, ML2.4/1 Error ellipse: s-maj=46.7km s-min=24.7km az=141.0*

*KRSC **07** 05:09:42.0±0.9, 55°.15N×163°.37E, h41^{km}±23^{km}, ML3.9*

ISC 07 05:09:45.2±1.0, **55°.23N**±0°.04×**163°.44E**±0°.04, **h35^{km}, n41, σ1^{s}.44**/44, **mb3.7**/4, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.04	340	eP	Pn	05 10 01.0	-2.3
KBTR				eS	Sn	05 10 15.5	-1.2
KBG	Krutoberegovo	1.11	338	eP	Pn	05 10 02.5	-1.7
BKI	Bering	1.45	90	eP	Pn	05 10 07.5	-1.4
BKI				eS	Sn	05 10 25.2	-1.4
SMKR	Semkarok	1.76	321	eP	Pn	05 10 13.2	0.0
KZV	Kizimen	1.81	268	eP	Pn	05 10 12.9	-1.1
BDR	Baidarnaya	1.84	318	eP	Pn	05 10 14.0	-0.4
TUMR	Tumrok	1.89	273	eP	Pn	05 10 14.4	-0.6
TUMR				eS	Sn	05 10 34.7	-3.0
KMNR	Kamenistaya	1.90	288	eP	Pn	05 10 15.4	+0.2
KLY	Klyuchi	1.92	306	eP	Pn	05 10 13.2	-2.1
SRKR	Sorokina	1.92	319	eP	Pn	05 10 15.5	+0.1
KOZ	Kozyrevsk	2.19	294	eP	Pn	05 10 19.9	+0.8
SRDR	Sredinnyy	2.37	299	eP	Pn	05 10 22.3	+0.7
KII	Karymskiy	2.61	244	eP	Pn	05 10 24.4	-0.5
SPN	Mys Shipunski	2.93	225	eP	Pn	05 10 28.3	-1.0
SPN				eS	Sn	05 10 59.0	-4.2
NLC	Nalytchevo	3.17	231	eS	Sn	05 11 07.0	-2.0
SDLR	Sedlovina	3.31	236	eP	Pn	05 10 34.6	0.0
KRER	Koryakskii	3.36	237	eP	Pn	05 10 35.2	-0.1
SMAR	Somma	3.36	236	eP	Pn	05 10 34.9	-0.5
KRX	Arik	3.38	238	eP	Pn	05 10 33.5	-2.0
UGLR	Uglovaya	3.38	235	eP	Pn	05 10 35.5	-0.1
AVH	Avacha	3.39	236	eP	Pn	05 10 35.8	+0.2
KOK	Koryaka	3.42	237	eP	Pn	05 10 36.4	+0.3
DALK	Dalny	3.53	233	eP	Pn	05 10 36.9	-0.5
DALK				eS	Sn	05 11 16.5	-1.4
GNL	Ganaly	3.56	247	eP	Pn	05 10 37.8	-0.2
PET	Petropavlovsk	3.58	234	eP	Pn	05 10 38.0	-0.1
PET				eS	Sn	05 11 16.1	-3.1
KRMR	Karymshinskiy	3.95	235	eP	Pn	05 10 43.3	+0.1
PETK	Petropavlovsk-	3.99	240	Pn	Pn	05 10 43.8	0.0
	1.2nm,0.3s,baz=66,slow=15,SNR=26						
PETK				Sn	Sn	05 11 31.6	+2.3
	2.1nm,0.3s,baz=86,slow=20,SNR=4.9						
OSSR	Ossora	4.04	357	eP	Pn	05 10 46.3	+1.9
RUS	Russkaya	4.05	228	eP	Pn	05 10 45.3	+0.8
MTVR	Mutnovka	4.15	231	eP	Pn	05 10 46.8	+0.6
GRL	Gorelyy	4.16	232	eP	Pn	05 10 46.4	+0.2
ASAK	Asacha	4.35	231	eP	Pn	05 10 49.3	+0.5
APC	Apacha	4.36	241	eP	Pn	05 10 49.6	+0.7
KDTR	Khodutka, Kamc	4.69	225	eP	Pn	05 10 54.0	+0.6
MJAR	Matsushiro Arr	25.41	233	P	P	05 15 09.8	+0.5
	10nm,1.0s,baz=21,slow=8.3,SNR=8.0						
ILAR	Eielson Array	25.92	48	P	P	05 15 13.6	0.0
	0.8nm,0.9s,baz=273,slow=9.7,SNR=5.8						
H11N2	WAKE ISLAND Hy	35.53	174	T	T	05 55 55.1	
	baz=359,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	35.55	174	T	T	05 55 59.3	
	baz=359,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	35.55	174	T	T	05 55 54.3	
	baz=359,slow=76,SNR=32						
KURBB	Kurchatov Arra	48.38	302	P	P	05 18 28.6	+5.4
	0.6nm,0.5s,baz=56,slow=7.9,SNR=6.6						
ASAR	Alice Springs	82.54	207	P	P	05 22 06.5	+2.4
	0.4nm,0.8s,baz=21,slow=6.4,SNR=3.2						

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*ASRS **07** 05:17:02.3±0.5, 49°N±3°×8°8E±°, h10^{km}, MLh3.5/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

*NNC **07** 05:17:05.5±5.1, 49°.39N×87°.99E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=40.8km s-min=27.1km az=68.0*

ISC 07 05:17:00.7±1.1, **49°.48N**±0°.05×**88°.49E**±0°.03, **h10^{km}, n22, σ1^{s}.86**/44, **7C-2D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	Chagan-Uzun	0.63	352	Pg	Pg	05 17 12.7	-0.2
CUR				Sg	Sb	05 17 22.7	-0.1
DGZ	Jazzator, Alta	0.72	288	Pg	Pg	05 17 12.5	-2.3
DGZ				Sg	Sg	05 17 22.4	-1.8
CHBI	Chibit, Altay	1.05	323	Pg	Pg	05 17 20.0	-0.9
CHBI				Sg	Sb	05 17 35.0	+0.1
ULGR	Ulagan, Altay	1.19	343	Pg	Pn	05 17 22.8	-0.8
ULGR				Sg	Sn	05 17 40.4	+0.4
TEL	Teeli	1.89	35	Pg	Pg	05 17 35.5	-1.5
TEL				Sg	Sg	05 18 02.9	+1.5
ARTR	Artybash	2.44	342	Pg	Pb	05 17 45.2	+0.5
ARTR				Sg	Sg	05 18 19.5	+0.2
UKR	Ust'-Kan	2.80	303	Pg	Pb	05 17 50.7	-0.2
UKR				Sg	Sg	05 18 28.4	-2.2
GALT	Gorno-Altaysk,	2.96	328	Pg	Pb	05 17 54.5	+1.0
GALT				Sg	Sg	05 18 34.6	-1.2
TASR	Tashtagol	3.31	354	Pg	Pb	05 18 00.8	+1.4
TASR				Sg	Sg	05 18 46.4	-0.4
DJO	Djoy, Khakassi	3.72	26	Pg	Pg	05 18 09.1	-3.0
DJO				Sg	Sg	05 18 59.5	-0.7
TBTR	Tabat	3.73	21	Pg	Pg	05 18 09.9	-2.1
TBTR				Sg	Sg	05 19 01.0	+0.8
DJOS	Djoyskaya Sosn	3.79	28	Pg	Pg	05 18 12.9	-0.3
DJOS				Sg	Sg	05 19 01.3	-1.0
CERR	Cheremushki	3.84	27	Pg	Pg	05 18 12.2	-2.2
CERR				Sg	Sg	05 19 03.1	-1.0
VEH	Verkhnyaya Baz	3.95	16	Pg	Pg	05 18 15.4	-0.8
VEH				Sg	Sg	05 19 05.4	-2.0
ELT	Eltsovka	4.04	340	Pg	Pg	05 18 17.1	-1.0
ELT				Sg	Sg	05 19 08.2	-2.2
LUZB	Luzhba, Kemero	4.19	3	Pg	Pg	05 18 18.4	-2.6
LUZB				Sg	Sg	05 19 17.4	+2.1
BLRR	Bol’shaya Rech	4.33	33	Pg	Pg	05 18 22.5	-1.2
BLRR				Sg	Sg	05 19 18.4	-1.4
ARDR	Aradan	4.40	43	Pg	Pg	05 18 20.9	-4.0
ARDR				Sg	Sg	05 19 25.8	+4.0
KZLR	Kyzyl	4.40	57	Pg	Pg	05 18 21.5	-3.4
KZLR				Sg	Sg	05 19 22.4	+0.5
MAKZ	Makanchi	5.12	241	⇓Pn	Pn	05 18 17.6	+0.2
	0.3nm,0.3s						
MAKZ				⇑Pg	Pb	05 18 31.5	+1.2
	7.9nm,0.5s						
MAKZ				⇑Lg	Lg	05 19 36.7	
	13nm,0.6s						
KURK	Kurchatov	6.47	285	⇑Pn	Pn	05 18 38.9	+2.9
	2.3nm,0.8s						
KURK				⇑Sn	Sn	05 19 50.0	+0.2
	8.0nm,0.6s						
KURK				⇑Lg	Lg	05 20 21.4	
	32nm,0.7s						
KURBB	Kurchatov Arra	6.52	284	⇑Pn	Pn	05 18 40.7	+4.1
	1.3nm,0.4s,baz=97,slow=14						
KURBB				⇑Sn	Sn	05 19 51.3	+0.4
	21nm,0.6s,baz=92,slow=27						
KURBB				⇓Lg	Lg	05 20 23.6	
	53nm,0.6s,baz=98,slow=31						

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*UCR **07** 05:36:05.9±1.6, 5°.44N×82°.55W, h10^{km}, MW4.9, mb5.0(NEIC)*

*IDC **07** 05:36:05.4±0.6, 5°.34N×82°.67W, h0^{km}, mb4.5/19, mb1 4.7/25, mb1mx4.6/38, mbtmp4.6/25, ML3.7/6, MS4.4/2, Ms1 4.4/2, ms1mx3.9/31, Error ellipse: s-maj=21.3km s-min=10.7km az=56.0*

*BJI **07** 05:36:06.0±0.0, 5°.40N×82°.60W, h12^{km}, mB5.9/8, Ms6.0/5, Ms7 5.9/3*

*RSNC **07** 05:36:07.9±0.7, 5°.21N×82°.53W, h32^{km}±25^{km}, ML4.1, Mw4.5*

*NEIC **07** 05:36:07.2±1.9, 5°.38N±0°.06×82°.55W±0°.07, h10^{km}±1^{km}, mb5.0/333, Error ellipse: s-maj=11.2km s-min=10.6km az=253.0*

*UPA **07** 05:36:08.6±2.4, 5°.72N×82°.62W, h0^{km}±17^{km}, MW5.2*

ISC 07 05:36:06.9±0.3, **5°.34N**±0°.03×**82°.59W**±0°.04, **h10^{km}, n721, σ1^{s}.66**/633, **mb5.0**/163, **15C-25D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAPC	Malpelo	1.65	143	⇑iP	Pn	05 36 32.1	-4.0
MAPC				eS	Sn	05 36 50.4	-7.0
MAPC				i		05 36 58.3	
	comp=Z,901nm,0.6s						
CACAO	El Cacao, Vera	2.63	41	⇓iP	Pn	05 36 47.3	-2.2
CACAO				i S	Sn	05 37 17.6	-3.9

GMAL	Guarumal, Vera	2.76	29	⇓iP	Pn	05 36 49.0	-2.3
GMAL				iS	Sn	05 37 20.3	-4.4
MARI3	Mariato, Verag	2.79	35	⇓iP	Pn	05 36 49.8	-2.0
PVID3	Puerto Vidal,	2.86	20	⇑iP	Pn	05 36 50.6	-2.1
PVID3				iS	Sn	05 37 23.3	-3.9
REME3	Remedios, Chir	2.96	15	⇓eP	Pn	05 36 51.6	-2.5
REME3				eS	Sn	05 37 28.5	-1.3
PONU3	Ponuga, Veragu	2.99	32	⇑iP	Pn	05 36 52.8	-1.8
PONU3				iS	Sn	05 37 25.5	-5.0
NANC3	Nancito, Chiri	3.00	16	⇑iP	Pn	05 36 52.2	-2.5
LESP3	La Esperanza,	3.05	356	⇓iP	Pn	05 36 52.2	-3.1
LOCO3	Loma Colorada,	3.05	3	⇑eP	Pn	05 36 52.9	-2.4
BAGA3	Bagala, Chiriq	3.11	1	⇑iP	Pn	05 36 53.8	-2.3
MESA3	La Mesa, Verag	3.12	27	⇓iP	Pn	05 36 54.1	-2.1
MESA3				eS	Sn	05 37 28.8	-4.8
PIRO	Carate, Puerto	3.13	346	eP	Pn	05 36 52.8	-3.6
PIRO	Carate, Puerto	3.13	346	eP	Pn	05 36 52.9	-3.6
OCU3	Ocu, Herrera	3.15	35	⇓eP	Pn	05 36 55.0	-1.7
GUAL3	Gualaca, Chiri	3.18	5	⇑iP	Pn	05 36 54.9	-2.3
CDITO	Canoas	3.22	355	⇑iP	Pn	05 36 54.4	-3.2
CDITO	Canoas	3.22	355	eP	Pn	05 36 54.2	-3.5
PTJ1	Puerto Jimnez	3.25	348	⇓eP	Pn	05 36 55.4	-2.7
PTJ1				eS	Sn	05 37 32.7	-4.2
PTJ1	Puerto Jimnez	3.25	348	eP	Pn	05 36 54.3	-3.8
PTJ1				eS	Sn	05 37 34.3	-2.5
CNAZ3	Canazas, Verag	3.29	25	⇓iP	Pn	05 36 56.4	-2.2
CNAZ3				eS	Sn	05 37 32.8	-5.0
AZU	Azuero	3.35	43	⇓iP	Pn	05 36 57.9	-1.5
AZU				iS	Sn	05 37 37.2	-2.1
AZU	Azuero	3.35	43	eP	Pn	05 36 57.3	-2.1
AZU	Azuero	3.35	43	⇓iP	Pn	05 36 57.8	-1.5
AZU				eS	Sn	05 37 36.6	-2.7
AZU				i		05 37 38.0	
	comp=Z,996nm,0.6s						
BCO2	Palmira	3.36	1	⇑iP	Pn	05 36 57.2	-2.5
BCO2				eS	Sn	05 37 37.7	-2.0
CHIT3	Chitre	3.38	40	⇓iP	Pn	05 36 58.3	-1.5
BRU2	Volcan	3.43	358	⇑iP	Pn	05 36 58.1	-2.5
BRU2				eS	Sn	05 37 37.3	-4.3
BRU2	Volcan	3.43	358	eP	Pn	05 36 57.7	-3.0
BC3P	Paso Ancho	3.45	360	⇓iP	Pn	05 36 58.5	-2.5
RIOS	Rincon, Osa	3.46	345	eP	Pn	05 36 56.8	-4.2
EDSV	San Vito	3.48	354	eP	Pn	05 36 58.5	-2.7
CHGR2	Aguacate	3.60	7	iP	Pn	05 37 01.4	-1.5
EDPN	Palmar Norte	3.70	347	eP	Pn	05 37 01.2	-3.0
PNME	Penonome	3.85	36	eP	Pn	05 37 05.0	-1.3
PNME	Penonome	3.85	36	eP	Pn	05 37 05.4	-0.9
PNME				eS	Sn	05 37 50.2	-1.4
PNME				i		05 37 55.3	
	comp=Z,326nm,0.3s						
EDBA	Buenos Aires	3.86	350	eP	Pn	05 37 04.2	-2.3
DRK0	Durika	3.95	351	⇓iP	Pn	05 37 05.4	-2.4
DRK0	Durika	3.95	351	eP	Pn	05 37 05.1	-2.7
EDLM	Las Mercedes	4.04	346	eP	Pn	05 37 06.0	-2.9
EDDO	Dominical	4.09	342	eP	Pn	05 37 06.3	-3.3
PEZE	Perez Zeledon,	4.16	345	eP	Pn	05 37 08.0	-2.6
RGM0	Gandoca	4.22	360	eP	Pn	05 37 11.4	0.0
ZANG	Zanguenga, Cho	4.50	37	⇑eP	Pn	05 37 16.1	+0.9
CHOR3	La Chorrera	4.51	38	eP	Pn	05 37 16.2	+0.8
CHOR3				eS	Sn	05 38 04.6	-3.4
TABO3	Taboga, Panama	4.57	41	⇓eP	Pn	05 37 16.4	+0.2
TABO3				iS	Sn	05 38 07.8	-1.5
RIMA	Rio Macho	4.57	344	eP	Pn	05 37 13.9	-2.5
LCR2	La Lucha 2	4.59	342	eP	Pn	05 37 13.8	-2.9
ARRA3	Arraijan, Pana	4.63	39	⇑iP	Pn	05 37 18.0	+1.0
ARRA3				eS	Sn	05 38 07.5	-3.5
FLAM	Flamenco Islan	4.67	40	⇓eP	Pn	05 37 17.5	0.0
BCIP	Isla Barro Col	4.68	36	⇑eP	Pn	05 37 17.5	-0.2
BCIP				iP	Pn	05 37 18.4	+0.6
BCIP				iS	Sn	05 38 06.7	-5.4
BCIP	Isla Barro Col	4.68	36	Pn	Pn	05 37 17.4	-0.3
BCIP	Isla Barro Col	4.68	36	eP	Pn	05 37 16.6	-1.1
BCIP				eS	Sn	05 38 08.7	-3.5
BCIP				i		05 38 32.9	
	comp=Z,149nm,0.7s						
UPA	Univ. de Panam	4.72	40	⇓iP	Pn	05 37 17.4	-0.8
JACO	JACO, Garabito	4.76	335	eP	Pn	05 37 15.4	-3.4
BATAN	Batan	4.79	351	⇓eP	Pn	05 37 18.6	-0.6
BATAN	Batan	4.79	351	eP	Pn	05 37 17.7	-1.6
SJS	Escuela Geolog	4.79	342	eP	Pn	05 37 17.4	-2.0
HDC	Heredia	4.87	342	⇑eP	Pn	05 37 18.4	-2.0
HDC				⇑iP	Pn	05 37 18.5	-2.0
HDC				eS	Sn	05 38 12.2	-4.8
HDC	Heredia	4.87	342	eP	Pn	05 37 18.1	-2.3
HDC	Heredia	4.87	342		Pn	05 37 18.0	-2.5
SRA1	San Ramn	5.07	338	eP	Pn	05 37 20.0	-3.2
PTAC	Punta Ardita,	5.08	69	eS	Sn	05 38 18.6	-3.5
CHPO	Chepo, Panama	5.13	42	⇓eP	Pn	05 37 23.8	-0.1
PIZC	Pizarro, Choco	5.22	94	eP	Pn	05 37 22.3	-2.9
PIZC				i		05 38 32.7	
	comp=Z,183nm,0.3s						
SOLC	Bahia Solano	5.23	80	eP	Pn	05 37 23.8	-1.5
SOLC				eS	Sn	05 38 21.0	-4.7
SOLC				i		05 38 26.7	
	comp=Z,171nm,0.3s						
CNTA3	Canitas, Panam	5.32	43	⇓eP	Pn	05 37 26.4	-0.1
MALC	Bahia Malaga	5.40	104	eP	Pn	05 37 28.3	+0.7
MALC				eS	Sn	05 38 30.3	+0.3
MALC				i		05 38 32.8	
	comp=Z,217nm,0.3s						
JTS	Las Juntas de	5.45	335	Pn	Pn	05 37 25.7	-2.5
	comp=Z,211nm,0.3s,baz=182,slow=8.9,SNR=206						
JTS				Sn	Sn	05 38 27.6	-3.4
	comp=Z,108nm,0.3s,baz=351,slow=22,SNR=17						
JTS				LR	LR	05 38 45.0	
	comp=Z,3µm,21.1s,baz=227,slow=29						
JTS	Las Juntas de	5.45	335	⇓iP	Pn	05 37 26.0	-2.3
JTS	Las Juntas de	5.45	335	eP	Pn	05 37 25.8	-2.5
JTS	Las Juntas de	5.45	335	Pn	Pn	05 37 25.6	-2.7
JTS	Las Juntas de	5.45	335	eP	Pn	05 37 25.9	-2.4
JTS				eS	Sn	05 38 27.5	-3.5
CASO	Castillo	5.49	337	eP	Pn	05 37 27.8	-1.1
FORC	Fortuna	5.49	338	eP	Pn	05 37 27.2	-1.7
ARE1	Arenal 1	5.51	338	eP	Pn	05 37 27.2	-1.9
DUNO	Dulce Nombre,	5.52	329	eP	Pn	05 37 26.3	-2.9
CEDE	Laguna Cedeo	5.52	338	eP	Pn	05 37 28.5	-0.8
UPD2	Meteti	5.55	55	⇓iP	Pn	05 37 32.4	+2.7
COVE	Coope Vega, Sa	5.64	342	eP	Pn	05 37 28.6	-2.3
PLVR	Palo Verde	5.68	331	eP	Pn	05 37 28.3	-3.2
ORTG	Ortega, Santa	5.74	331	eP	Pn	05 37 29.1	-3.3
ACAL	Aguas Claras	5.79	335	eP	Pn	05 37 31.2	-1.8
PTEN	Parque Tenorio	5.84	336	eP	Pn	05 37 33.2	-0.6
CUI	Cuipilapa	5.86	334	eP	Pn	05 37 33.3	-0.8
HORNC	Hornillas	5.92	335	eP	Pn	05 37 33.3	-1.6
GUAB	Guayabo de Bag	5.94	334	eP	Pn	05 37 33.8	-1.3
LIM1	Limonal	5.94	334	eP	Pn	05 37 34.0	-1.1
GPS2	Hotel Rincn d	6.03	333	eP	Pn	05 37 35.7	-0.6
GPS3	Bodega del ICE	6.04	333	eP	Pn	05 37 35.8	-0.6
GPS1	Guardaparques	6.05	333	eP	Pn	05 37 34.0	-2.6
LAPC	Finca la Perla	6.08	333	eP	Pn	05 37 36.0	-1.0
GBS3	Finca Las Img	6.10	333	eP	Pn	05 37 36.4	-1.0
GB1A	Borinquen Arri	6.11	333	eP	Pn	05 37 37.1	-0.3
HZTE	Horizontes, Gu	6.11	331	eP	Pn	05 37 35.3	-2.1
BUAI	Buenos Aires	6.13	334	eP	Pn	05 37 36.8	-1.0
CAP2	Capurgana	6.15	57	⇓iP	Pn	05 37 39.7	+1.8
CAP2				eP	Pn	05 37 40.0	+2.1
CAPC	Capurgana	6.15	58	eP	Pn	05 37 39.8	+2.0
BBAC	Balboa, Cauca	6.27	122	eP	Pn	05 37 38.4	-1.4
PLMC	San Jos del P	6.30	94	eP	Pn	05 37 40.4	+0.4
PAC1	Pacto, Paraso	6.31	143	eP	Pn	05 37 39.3	-1.0
RAC02	Cali,SGC	6.35	108	eP	Pn	05 37 44.8	+4.0
YOTC	Yotoco, Valle	6.37	102	eP	Pn	05 37 41.5	+0.4
CUSE	Cuicocha Este	6.52	140	eP	Pn	05 37 43.8	+0.4
OTAV	Otavalo	6.54	141	Pn	Pn	05 37 41.7	-2.1
OTAV	Otavalo	6.54	141	eP	Pn	05 37 42.5	-1.2
OTAV	Otavalo	6.54	141	eP	Pn	05 37 41.5	-2.2
DBBC	Dabeiba	6.56	75	eP	Pn	05 37 45.8	+2.2
CBOC	Ciudad Bolivar	6.57	85	eP	Pn	05 37 41.9	-2.0
PCON	Cinco Dias	6.87	116	eP	Pn	05 37 50.2	+1.9
ESPN	Las Esperanzas	7.02	346		Pn	05 37 47.7	-2.2
ACON	Acoyapa	7.06	339		Pn	05 37 48.3	-2.2
MARP	Paez Belalcaza	7.07	110	eP	Pn	05 37 53.2	+2.4
HELC	Santa Helena	7.08	83	eP	Pn	05 37 52.9	+1.9
HELC	Santa Helena	7.08	83	eP	Pn	05 37 53.1	+2.1
ANIL	Santa Ana	7.21	96	eP	Pn	05 37 54.7	+1.9
RREF	El Recreo	7.23	93	eP	Pn	05 37 55.7	+2.4
CIBA1	Ibague, SGC	7.38	97	eP	Pn	05 37 57.8	+2.7
UREC	San Jos de Ur	7.41	71	eP	Pn	05 37 58.0	+2.7
ORTC	Ortega, Tolima	7.46	101	eP	Pn	05 37 58.2	+2.2
BETC	Betania	7.61	110	eP	Pn	05 38 00.9	+2.9
PUAC	Puerto Asis, P	7.67	128	eP	Pn	05 38 00.6	+1.7
MOTC	Monteria, Cord	7.68	63	eP	Pn	05 38 01.6	+2.7
MONA	Monteria	7.68	63	iP	Pn	05 37 56.1	-2.9
NORC	Norcasia	7.69	88	eP	Pn	05 38 02.6	+3.4
GARC	Garzon, Huila	7.75	114	eP	Pn	05 38 02.0	+1.9
ZARC	Zaragoza, Cauc	7.98	74	⇓eP	Pn	05 38 05.6	+2.6
PTBC	PUERTO BERRIO,	8.18	81	eP	Pn	05 38 09.4	+3.5
ROSC	El Rosal	8.26	93	Pn	Pn	05 38 08.9	+1.7
	comp=Z,3.1nm,0.3s,baz=57,slow=13,SNR=6.0						
ROSC	El Rosal	8.26	93	Pn	Pn	05 38 08.7	+1.5
ROSC	El Rosal	8.26	93	eP	Pn	05 38 11.8	+4.6
CRIN	San Cristobal	8.53	329		Pn	05 38 08.6	-2.1
SJCC	San Jacinto, C	8.63	58	⇓iP	Pn	05 38 14.7	+2.6
SJCC	San Jacinto, C	8.63	58	eP	Pn	05 38 14.7	+2.6
CHIC	Chingaza	8.86	94	eP	Pn	05 38 18.8	+3.3
VILC	Villavicencio,	8.95	97	eP	Pn	05 38 19.8	+3.2
BRRC	Barranca, Sant	9.00	78	eP	Pn	05 38 21.3	+4.2
SMLC	San Martn de	9.13	67	eP	Pn	05 38 21.3	+2.5
MACC	Macarena, Meta	9.29	110	eP	Pn	05 38 22.6	+1.6
PTLC	Puerto Leguiza	9.32	123	eP	Pn	05 38 26.6	+5.1
ARGC	Ariguani, Magd	9.41	61	eP	Pn	05 38 26.2	+3.5
RUSC	La Rusia	9.48	86	eP	Pn	05 38 27.7	+3.6
OCAC	Ocana	9.65	72	eP	Pn	05 38 29.5	+3.4
PAYG	Puerto Ayora	9.73	232	Pn	Pn	05 38 28.4	+1.3
TGUH	Tegucigalpa,Un	9.81	332	Pn	Pn	05 38 27.6	-0.7
PAMC	Pamplona, Colo	10.03	78	eP	Pn	05 38 35.8	+4.1
SMRC	Santa Marta, M	10.10	55	eP	Pn	05 38 34.8	+2.6
PTGC	Puerto Gaitan,	10.48	96	eP	Pn	05 38 38.5	+1.0
SNET	Serv Nac Est T	10.56	322	Pn	Pn	05 38 40.1	+1.5
TAMC	Tame, Arauca	10.80	84	eP	Pn	05 38 43.5	+1.7
MTO3	Montecristo	11.20	324		Pn	05 38 48.9	+1.4
ESQI	Esquipulas	11.31	325		Pn	05 38 51.5	+2.6
SDV	Santo Domingo	12.38	73	Pn	Pn	05 39 06.2	+2.6
	comp=Z,2.3nm,0.3s,baz=250,slow=9.9,SNR=42						
SDV				Sn	Sn	05 41 20.1	-1.7
	comp=Z,3.3nm,0.3s,baz=3.4,slow=14,SNR=3.5						
SDV	Santo Domingo	12.38	73	Pn	Pn	05 39 05.5	+1.9
SDV	Santo Domingo	12.38	73	eP	Pn	05 39 06.0	+2.4
SDV	Santo Domingo	12.38	73	eP	Pn	05 39 04.8	+1.2
ATAH	Atahualpa	13.08	161	Pn	Pn	05 39 14.9	+1.5
	comp=Z,0.8nm,0.3s,baz=346,slow=9.6,SNR=7.9						
HUEH	Huehuetenango	13.23	319		Pn	05 39 15.6	+0.4
FSCY	Frank Sound, G	13.96	6		Pn	05 39 27.6	+2.8
CCIG	Comitan	14.35	320		Pn	05 39 32.5	+2.0
TEIG	Tepich	15.79	340	Pn	Pn	05 39 50.5	+0.9
TEIG				IAmb	IAmb	05 39 58.7	
	comp=Z,169nm,1.8s						
CZSB	Cruzeiro do Su	16.31	143	eP	Pn	05 39 55.6	-0.7
CMIG	Matias Romero	16.77	315	Pn	Pn	05 40 00.8	-1.3
	comp=Z,0.4nm,0.3s,baz=160,slow=11,SNR=6.7						
CMIG				LR	LR	05 45 39.9	
	comp=Z,2µm,19.2s,baz=111,slow=34						
SDDR	Presa de Saban	17.48	38	P	Pn	05 40 11.4	+0.4
SDDR				IAmb	IAmb	05 40 15.3	
	comp=Z,235nm,1.7s						
BANI	BANI	17.64	42	P	P	05 40 14.3	+0.3
NNA	Nana	18.14	162	P	P	05 40 20.8	+1.3
	comp=Z,0.9nm,0.3s,baz=333,slow=9.2,SNR=21						
NNA	Nana	18.14	162	P	P	05 40 20.1	+0.6
NNA				IAmb	IAmb	05 40 23.5	
	comp=Z,86nm,1.0s						
SC01	Santiago de lo	18.16	39	P	P	05 40 20.7	+1.1
PCRV	Puerto La Cruz	18.43	74	P	Pn	05 40 24.4	+1.7
	comp=Z,0.9nm,0.3s,baz=231,slow=6.5,SNR=5.1						
DR12	Loma Pena Alta	18.57	43	P	Pn	05 40 25.3	+0.9
MLPR	Magueyes Islan	19.71	49		Pn	05 40 37.6	-0.5
MLPR				IAmb	IAmb	05 40 45.1	
	comp=Z,176nm,1.2s						
MPR	Mayaguez	19.79	48	IAmb	IAmb	05 40 51.7	
	comp=Z,58nm,0.8s						
TLIG	Tlapa	19.79	309	P	Pn	05 40 39.1	-0.2
OBIP	Obispado Ponce	20.08	50	P	Pn	05 40 42.1	-0.5
OBIP				IAmb	IAmb	05 40 48.2	
	comp=Z,162nm,1.2s						
SJG	San Juan	20.47	50	P	Pn	05 40 47.3	+0.1
	comp=Z,92nm,0.9s,baz=238,slow=4.9,SNR=17						
SJG	San Juan	20.47	50	P	P	05 40 45.8	+0.8
GCPR	Guaynabo City	20.64	50	IAmb	IAmb	05 40 49.5	
	comp=Z,113nm,0.9s						
MTP	Monte Pirata	20.93	51	P	P	05 40 51.0	+1.1
CUPR	Culebra, Puert	21.26	51	P	P	05 40 54.4	+0.9
ETMB	Extrema	22.20	133	eP	P	05 41 02.8	-1.0
DWPF	Disney Wildern	22.67	3	P	P	05 41 09.9	+1.3
	baz=183						
DWPF	Disney Wildern	22.67	3	P	P	05 41 09.4	+0.8
DWPF				IAmb	IAmb	05 41 12.9	
	comp=Z,106nm,1.1s						
MACA	Manacapuru-AM	23.46	111	eP	P	05 41 17.2	+0.4
SAML	Samuel	24.00	126	P	P	05 41 21.4	-0.7
ZAIG	Zacatecas	25.93	314	P	P	05 41 40.2	+0.3
ZAIG				IAmb	IAmb	05 41 45.5	
	comp=Z,76nm,1.9s						
TIGA	Tifton	25.98	358	P	P	05 41 40.5	+0.5
	baz=178						
TIGA	Tifton	25.98	358	P	P	05 41 39.7	-0.2
TIGA				IAmb	IAmb	05 41 57.7	
	comp=Z,76nm,1.5s						
BRAL	Brewton	26.03	351	P	P	05 41 40.9	+0.5
	baz=170						
352A	Blakely	26.09	355	IAmb	IAmb	05 41 42.4	
	comp=Z,40nm,1.0s						
PB16	IPOC Station P	26.83	152	P	P	05 41 49.7	+1.3
PB16				IAmb	IAmb	05 41 53.8	
	comp=Z,38nm,1.2s						
154A	Montrose	27.14	359	IAmb	IAmb	05 41 53.9	
	comp=Z,37nm,0.8s						
157A	Early Branch	27.24	3	P	P	05 41 52.1	+0.8
	baz=184						
152A	Waverly Hall	27.26	356	IAmb	IAmb	05 41 52.6	
	comp=Z,95nm,1.8s						
342A	Flagon Creek P	27.46	342	IAmb	IAmb	05 42 44.0	
	comp=Z,68nm,1.6s						
MNMC	Minye Minye	27.48	153	IAmb	IAmb	05 42 00.8	
	comp=Z,38nm,1.0s						
HKT	Hockley	27.48	334	P	P	05 41 53.5	+0.1
HKT				IAmb	IAmb	05 42 39.5	
	comp=Z,34nm,1.5s						
146A	Union	27.82	348	IAmb	IAmb	05 41 58.0	
	comp=Z,51nm,1.0s						
LRAL	Lakeview Retre	27.86	352	P	P	05 41 56.4	-0.4
	baz=171,SNR=12						
LRAL	Lakeview Retre	27.86	352	IAmb	IAmb	05 41 57.9	
	comp=Z,28nm,0.9s						
Z56A	Williston	27.87	2	P	P	05 41 58.2	+1.3
	baz=183						
833A	Chaparral WMA,	27.87	327	P	P	05 41 57.1	+0.1
	baz=142						
Z57A	Bowman	27.87	3	P	P	05 41 58.1	+1.2
	baz=184						
Z59A	Georgetown, SC	27.93	6	P	P	05 41 58.3	+0.9
	baz=187						
Z51A	Franklin	27.94	355	IAmb	IAmb	05 41 58.7	
	comp=Z,89nm,1.8s						
GOGA	Godfrey	27.94	358	P	P	05 41 57.7	+0.1
	baz=178						
Z58A	St. Stephen	27.97	5	P	P	05 41 58.1	+0.3
	baz=186						
GO01	Chusmiza	28.13	152	IAmb	IAmb	05 42 29.8	
	comp=Z,29nm,1.2s						
Y52A	Lilburn	28.41	357	IAmb	IAmb	05 42 09.6	
	comp=Z,78nm,2.0s						
Y58A	Scranton	28.55	5	P	P	05 42 03.0	0.0
	baz=186						
Y49A	Blount Mountai	28.60	353	IAmb	IAmb	05 42 12.1	
	comp=Z,82nm,1.9s						
Y57A	Sumter	28.61	4	P	P	05 42 04.0	+0.5
	baz=185						
NATX	Nacogdoches	28.61	338	P	P	05 42 03.8	+0.2
	baz=154						
Y59A	Loris	28.71	6	P	P	05 42 05.1	+0.7
	baz=188						
VILB	Vilhena	28.73	129	eP	P	05 42 04.9	+0.1
Y60A	Bolivia	28.81	8	P	P	05 42 05.8	+0.6
	baz=189						
JSC	Jenkinsville	28.82	2	IAmb	IAmb	05 42 11.4	
	comp=Z,37nm,1.7s						
435B	Jarrell	28.97	333	P	P	05 42 06.9	0.0
	baz=148						
435B	Jarrell	28.97	333	IAmb	IAmb	05 42 10.8	
	comp=Z,28nm,1.2s						
X56A	White Oak	29.04	3	P	P	05 42 07.8	+0.4
	baz=183,SNR=5.6						
X51A	Calhoun	29.16	356	IAmb	IAmb	05 42 14.0	
	comp=Z,49nm,1.6s						
MALB	Monte Alegre	29.18	103	eP	P	05 42 09.4	+0.5
BIRD	Birdtown, Kers	29.23	4	IAmb	IAmb	05 43 07.2	
	comp=Z,54nm,1.7s						
X58A	Rowland	29.23	6	P	P	05 42 09.1	+0.1
	baz=187						
Z41A	Richland Creek	29.36	342	P	P	05 42 10.1	-0.1
	baz=159						
X60A	Albert Glenn T	29.41	8	P	P	05 42 11.6	+1.0
	baz=190						
KMSC	Kings Mountain	29.68	2	P	P	05 42 13.4	+0.4
	baz=183						
KMSC	Kings Mountain	29.68	2	IAmb	IAmb	05 42 16.3	
	comp=Z,18nm,0.8s						
W58A	Raeford	29.70	6	P	P	05 42 13.0	-0.1
	baz=187						
OXF	Oxford	29.71	349	P	P	05 42 12.5	-0.8
	baz=166,SNR=5.8						
OXF	Oxford	29.71	349	IAmb	IAmb	05 42 13.8	
	comp=Z,46nm,1.1s						
W56A	Indian Trail	29.71	3	P	P	05 42 13.0	-0.3
	baz=184						
W57A	Gilead	29.76	4	P	P	05 42 13.1	-0.7
	baz=185						
JCT	Junction City	29.80	329	P	P	05 42 13.4	-0.8
	baz=144						
NPGB	Novo Progresso	29.83	114	eP	P	05 42 14.4	-0.3
SWET	Sewanee	29.89	355	IAmb	IAmb	05 42 15.4	
	comp=Z,29nm,1.2s						
W60A	Pink Hill	29.91	8	P	P	05 42 15.0	0.0
	baz=190						
PLAL	Pickwick Lake	29.93	351	IAmb	IAmb	05 42 15.4	
	comp=Z,23nm,1.2s						
WHTX	Lake Whitney,	29.94	334	P	P	05 42 14.7	-0.7
	baz=149,SNR=5.8						
WHTX	Lake Whitney,	29.94	334	IAmb	IAmb	05 42 16.3	
	comp=Z,64nm,1.6s						
SIV	San Ignacio	30.05	135	P	P	05 42 17.2	+0.6
	comp=Z,9.0nm,1.0s,baz=319,slow=9.4,SNR=27						
V53A	Saluda	30.18	360	IAmb	IAmb	05 42 41.7	
	comp=Z,26nm,1.4s						
TKL	Tuckaleechee C	30.19	358	P	P	05 42 17.6	0.0
	comp=Z,9.1nm,0.8s,baz=184,slow=9.8,SNR=9.7						
TKL	Tuckaleechee C	30.19	358	IAmb	IAmb	05 42 18.6	
	comp=Z,62nm,1.6s						
V56A	Mocksville	30.38	3	P	P	05 42 18.7	-0.6
	baz=184						
V58A	Windy Hill, Pi	30.48	6	P	P	05 42 20.3	+0.2
	baz=187						
V58A	Windy Hill, Pi	30.48	6	IAmb	IAmb	05 42 23.0	
	comp=Z,24nm,1.0s						
V48A	Smith Brothers	30.50	353	IAmb	IAmb	05 42 20.9	
	comp=Z,32nm,0.8s						
V57A	Coltrane Farms	30.51	5	P	P	05 42 21.5	+1.1
	baz=186,SNR=5.1						
V59A	Middlesex	30.54	7	P	P	05 42 20.9	+0.2
	baz=189						
UALR	University of	30.65	344	IAmb	IAmb	05 42 21.7	
	comp=Z,18nm,0.9s						
V60A	Jim Taylor Roa	30.67	9	P	P	05 42 22.1	+0.4
	baz=190						
V62A	Hyde County Ai	30.69	11	P	P	05 42 22.2	+0.3
	baz=193						
H06E1	SOCORRO T-PHAS	30.69	298	T	T	06 14 24.5	
	SNR=29						
MIAR	Mount Ida	30.79	342	P	P	05 42 22.3	-0.6
	baz=158						
MIAR	Mount Ida	30.79	342	IAmb	IAmb	05 42 25.2	
	comp=Z,22nm,1.3s						
CLTN	Cedars of Leba	30.80	354	IAmb	IAmb	05 42 23.5	
	comp=Z,47nm,1.4s						
LVC	Limon Verde	30.84	155	P	P	05 42 24.3	+0.5
	comp=Z,7.2nm,0.9s,baz=345,slow=9.7,SNR=4.8						
LVC	Limon Verde	30.84	155	P	P	05 42 24.9	+1.1
LVC				IAmb	IAmb	05 43 10.2	
	comp=Z,44nm,1.6s						
LVC	Limon Verde	30.84	155	eP	P	05 42 22.2	-1.6
U56A	King	30.93	3	P	P	05 42 24.2	+0.2
	baz=184,SNR=5.4						
U56A	King	30.93	3	P	P	05 42 23.9	-0.1
W41B	Gary Mavity, V	31.00	345	P	P	05 42 23.6	-1.1
	baz=161,SNR=5.9						
W41B	Gary Mavity, V	31.00	345	IAmb	IAmb	05 42 26.8	
	comp=Z,14nm,0.9s						
Z35A	Perchaven, San	31.01	336	IAmb	IAmb	05 42 25.7	
	comp=Z,26nm,0.8s						
WVT	Waverly	31.02	352	P	P	05 42 23.9	-0.9
	baz=170						
WVT	Waverly	31.02	352	P	P	05 42 23.2	-1.6
WVT				IAmb	IAmb	05 42 24.5	
	comp=Z,23nm,0.7s						
U54A	Nelsons Funny	31.04	1	P	P	05 42 24.8	-0.3
	baz=182						
U54A	Nelsons Funny	31.04	1	IAmb	IAmb	05 42 27.7	
	comp=Z,21nm,1.0s						
TZTN	Tazewell	31.07	359	P	P	05 42 25.1	-0.2
	baz=178						
TZTN	Tazewell	31.07	359	IAmb	IAmb	05 42 26.4	
	comp=Z,31nm,1.2s						
U57A	Blanch	31.09	5	P	P	05 42 25.3	-0.1
	baz=186						
WHAR	Wooly Hollow	31.12	345	IAmb	IAmb	05 42 28.2	
	comp=Z,18nm,0.9s						
U58A	Oxford	31.13	6	P	P	05 42 26.3	+0.5
	baz=188						
U59A	Littleton	31.18	7	P	P	05 42 26.8	+0.6
	baz=189						
W39A	Magazine	31.46	342	P	P	05 42 28.2	-0.6
	baz=158						
ABTX	Abilene, Hawle	31.47	332	P	P	05 42 28.3	-0.6
	baz=146						
T50A	Nancy	31.60	357	IAmb	IAmb	05 42 30.6	
	comp=Z,20nm,1.1s						
T56A	Rocky Mt	31.63	4	P	P	05 42 30.5	+0.3
	baz=185						
FCAR	Ozark Folk Cen	31.64	345	IAmb	IAmb	05 42 30.1	
	comp=Z,16nm,0.9s						
T57A	Hurt	31.66	5	P	P	05 42 30.6	+0.1
	baz=186						
T57A	Hurt	31.66	5	IAmb	IAmb	05 42 33.6	
	comp=Z,16nm,0.9s						
T58A	Grand View Acr	31.67	6	P	P	05 42 30.9	+0.2
	baz=188						
BLA	Blacksburg	31.78	3	P	P	05 42 31.9	+0.3
	baz=184,SNR=7.1						
BLA	Blacksburg	31.78	3	IAmb	IAmb	05 42 34.6	
	comp=Z,37nm,1.1s						
PB14	IPOC Station P	32.06	159	P	P	05 42 35.4	+0.9
PBMO	Poplar Bluff	32.10	348	IAmb	IAmb	05 42 34.4	
	comp=Z,20nm,1.2s						
U40A	Yellville	32.27	344	P	P	05 42 34.8	-1.1
	baz=161,SNR=5.7						
U40A	Yellville	32.27	344	IAmb	IAmb	05 42 37.6	
	comp=Z,20nm,1.2s						
S56A	Natural Bridge	32.30	4	P	P	05 42 36.0	-0.2
	baz=186						
S54A	Dingess, Beckl	32.33	2	P	P	05 42 36.6	+0.1
	baz=182						
S58A	Poland Farm, P	32.39	7	P	P	05 42 36.8	-0.1
	baz=188						
S57A	Dark Hollow, R	32.44	5	P	P	05 42 37.6	+0.2
	baz=187						
S59A	Mechanicsville	32.63	8	P	P	05 42 39.2	+0.3
	baz=190						
R54A	Victor	32.72	2	P	P	05 42 40.3	+0.5
	baz=183						
R58B	Mineral	32.76	7	P	P	05 42 40.2	+0.1
	baz=189						
TUL1	Leonard	32.76	340	P	P	05 42 39.3	-0.9
	baz=155						
R53A	Hurricane	32.84	1	IAmb	IAmb	05 42 43.6	
	comp=Z,23nm,0.7s						
GO02	Mina Guanaco	32.85	158	IAmb	IAmb	05 42 47.6	
	comp=Z,36nm,1.1s						
WMOK	Wichita Mounta	32.86	335	P	P	05 42 40.0	-1.2
	baz=149,SNR=10						
R55A	Marlinton	32.87	4	P	P	05 42 40.7	-0.4
	baz=185						
MGMO	Mountain Grove	32.88	346	IAmb	IAmb	05 42 41.4	
	comp=Z,25nm,0.8s						
WCI	Wyandotte Cave	32.91	355	P	P	05 42 41.0	-0.4
	baz=173						
WCI	Wyandotte Cave	32.91	355	P	P	05 42 40.3	-1.1
R57A	Stanardsville	33.01	6	P	P	05 42 42.3	0.0
	baz=188						
R56A	Bull Pasture M	33.04	5	P	P	05 42 42.8	+0.1
	baz=186						
CBN	Corbin Frederi	33.06	8	P	P	05 42 43.2	+0.5
	baz=190						
R58A	Rapidan	33.07	7	P	P	05 42 43.3	+0.5

	baz=188						
FVM	French Village	33.27	349	IAmb	IAmb	05 42 45.3	
	comp=Z,33nm,1.1s						
Q53A	Leroy	33.38	2	P	P	05 42 45.4	-0.2
	baz=182,SNR=6.0						
Q52A	Bidwell	33.47	0	P	P	05 42 45.6	-0.8
R61A	Willards	33.49	10	P	P	05 42 46.7	+0.1
	baz=193						
CCM	Cathedral Cave	33.50	348	P	P	05 42 45.9	-0.8
	baz=164						
CCM	Cathedral Cave	33.50	348	P	P	05 42 45.7	-1.0
Q54A	Coxs Mills	33.53	2	IAmb	IAmb	05 42 48.2	
	comp=Z,36nm,1.4s						
S39A	Bolivar	33.66	345	IAmb	IAmb	05 42 47.9	
	comp=Z,21nm,0.8s						
Q56A	Snyder Ridge,	33.69	5	P	P	05 42 50.0	+1.8
	baz=186,SNR=7.0						
Q56A	Snyder Ridge,	33.69	5	P	P	05 42 48.9	+0.6
Q56A				IAmb	IAmb	05 42 52.6	
	comp=Z,25nm,1.0s						
Q58A	Fox Den Farm,	33.74	7	P	P	05 42 48.8	+0.1
	baz=189						
Q57A	Strasburg	33.76	6	P	P	05 42 49.0	+0.2
	baz=188						
MNTX	Cornudas Mount	33.81	324	P	P	05 42 49.3	-0.2
	baz=136,SNR=16						
MNTX	Cornudas Mount	33.81	324	IAmb	IAmb	05 42 51.4	
	comp=Z,18nm,1.2s						
P53A	Whipple	34.01	2	P	P	05 42 50.5	-0.5
P53A				IAmb	IAmb	05 42 54.0	
	comp=Z,22nm,0.7s						
P48A	Milroy	34.06	356	IAmb	IAmb	05 42 51.2	
	comp=Z,29nm,0.8s						
CROK	Carrier	34.08	338	IAmb	IAmb	05 42 52.2	
	comp=Z,24nm,0.7s						
MSTX	Muleshoe	34.09	329	P	P	05 42 51.3	-0.7
	baz=142						
MSTX	Muleshoe	34.09	329	IAmb	IAmb	05 43 08.5	
	comp=Z,19nm,1.2s						
P49A	Miami Univ. Ec	34.09	357	P	P	05 42 50.7	-1.1
	baz=176						
P52A	Corning	34.14	1	P	P	05 42 51.3	-0.8
	baz=181						
P56A	Dayton Farm, R	34.18	5	P	P	05 42 53.3	+0.8
	baz=187,SNR=7.7						
P57A	Homestead Farm	34.24	6	P	P	05 42 53.9	+0.9
	baz=188						
MCWV	Mont Chateau	34.25	4	P	P	05 42 53.6	+0.4
	baz=185						
AMTX	Amarillo	34.29	331	P	P	05 42 53.4	-0.2
	baz=145						
AMTX	Amarillo	34.29	331	IAmb	IAmb	05 42 56.0	
	comp=Z,13nm,0.6s						
SDMD	Soldier's Deli	34.31	8	P	P	05 42 54.2	+0.6
P58A	Pank, Wackersv	34.33	7	P	P	05 42 54.1	+0.3
	baz=189						
AC02	Maricunga	34.54	158	IAmb	IAmb	05 43 01.0	
	comp=Z,29nm,1.1s						
P59A	Jarrettsville	34.57	8	P	P	05 42 56.0	+0.1
	baz=191						
ACSO	Alum Creek Sta	34.74	359	P	P	05 42 57.7	+0.4
	baz=179						
ACSO	Alum Creek Sta	34.74	359	IAmb	IAmb	05 42 59.7	
	comp=Z,25nm,0.8s						
O54A	Avella	34.74	3	IAmb	IAmb	05 42 58.1	
	comp=Z,52nm,1.4s						
O53A	New Philadelph	34.78	2	P	P	05 42 58.1	+0.4
	baz=182						
MVL	Millersville	34.96	8	P	P	05 42 59.8	+0.6
MVL				IAmb	IAmb	05 43 01.9	
	comp=Z,25nm,1.3s						
O56A	Blue Knob Stat	34.96	5	P	P	05 42 59.5	+0.1
	baz=187						
O56A	Blue Knob Stat	34.96	5	IAmb	IAmb	05 43 01.9	
	comp=Z,58nm,1.4s						
O57A	Amberson	35.00	7	P	P	05 42 59.8	+0.2
	baz=189						
O58A	Lewisberry	35.00	8	P	P	05 42 59.9	+0.3
	baz=190						
P40A	Paris	35.09	347	IAmb	IAmb	05 43 00.0	
	comp=Z,30nm,0.9s						
PAGS	Pennsylvania G	35.13	8	IAmb	IAmb	05 43 05.7	
	comp=Z,34nm,1.1s						
O59A	Robesonia	35.29	8	P	P	05 43 02.8	+0.6
	baz=191						
O61A	Allentown	35.35	11	P	P	05 43 03.3	+0.7
	baz=194						
SSPA	Standing Stone	35.39	6	P	P	05 43 04.8	+1.8
SSPA				IAmb	IAmb	05 43 05.2	
	comp=Z,27nm,1.1s						
O60A	Telford	35.42	10	P	P	05 43 04.0	+0.8
	baz=192						
P38A	Dawn	35.53	345	P	P	05 43 02.5	-1.6
N54A	Moraine State	35.54	3	P	P	05 43 04.7	+0.4
	baz=184						
N57A	Milroy	35.55	7	P	P	05 43 04.9	+0.5
	baz=189						
SNDB	Serra Nova Dou	35.56	119	*e*P	P	05 43 04.5	-0.3
N56A	West Decatur	35.63	6	P	P	05 43 05.4	+0.4
	baz=187						
N58A	Sunbury	35.73	8	P	P	05 43 06.4	+0.4
	baz=190						
N58A	Sunbury	35.73	8	IAmb	IAmb	05 43 12.2	
	comp=Z,18nm,1.1s						
121A	Cookes Peak, D	35.85	322	P	P	05 43 09.0	+1.7
	baz=134,SNR=17						
121A	Cookes Peak, D	35.85	322	IAmb	IAmb	05 43 12.9	
	comp=Z,24nm,1.0s						
KSU1	Kansas State U	35.92	341	P	P	05 43 06.6	-1.0
	baz=156						
KSU1	Kansas State U	35.92	341	IAmb	IAmb	05 43 07.1	
	comp=Z,13nm,0.8s						
N59A	State Game Lan	35.95	9	P	P	05 43 07.8	+0.1
	baz=192						
M53A	WI Miller and	35.98	2	P	P	05 43 08.7	+0.6
	baz=183						
N41A	Harden Midland	35.99	349	P	P	05 43 05.8	-2.3
AC05	El Transito	35.99	161	P	P	05 43 09.5	+1.1
AC05				IAmb	IAmb	05 43 12.3	
	comp=Z,26nm,1.1s						
N60A	Cedar Hill Far	36.01	10	P	P	05 43 08.6	+0.3
	baz=193						
319A	Douglas	36.02	319	P	P	05 43 08.7	+0.1
N61A	South Mountain	36.03	11	P	P	05 43 08.6	+0.1
	baz=194						
M54A	Oil Creek Stat	36.11	4	P	P	05 43 09.3	+0.2
	baz=185						
M57A	Sunshine Farm,	36.17	7	P	P	05 43 09.9	+0.2
	baz=189,SNR=6.2						
M57A	Sunshine Farm,	36.17	7	P	P	05 43 09.4	-0.3
M57A				IAmb	IAmb	05 43 13.4	
	comp=Z,35nm,0.9s						
M58A	Price's Panora	36.29	8	P	P	05 43 11.2	+0.5
	baz=190						
BNM	Barren Site	36.31	325	P	P	05 43 11.6	+0.4
PAL	Palisades	36.35	11	P	P	05 43 12.0	+0.8
	baz=195						
Y22D	IRIS PASSCAL I	36.42	325	P	P	05 43 12.9	+0.8
	baz=136						
M60A	Port Jervis	36.53	10	P	P	05 43 13.7	+1.0
	baz=193						
M59A	Waymart	36.61	9	P	P	05 43 14.0	+0.6
	baz=192						
CBKS	Cedar Bluff	36.77	337	P	P	05 43 14.8	-0.1
	baz=151,SNR=5.1						
CBKS	Cedar Bluff	36.77	337	P	P	05 43 14.4	-0.5
CBKS				IAmb	IAmb	05 43 15.9	
	comp=Z,26nm,0.9s						
ANMO	Albuquerque	36.80	326	P	P	05 43 16.0	+0.7
	baz=138						
ANMO	Albuquerque	36.80	326	P	P	05 43 14.4	-1.0
ANMO				IAmb	IAmb	05 43 18.1	
	comp=Z,28nm,1.3s						
AQDB	Aquidauana	36.83	135	*e*P	P	05 43 15.4	-0.1
L57A	Andrews Acres	36.86	7	P	P	05 43 15.4	-0.2
	baz=190,SNR=5.4						
L56A	Greenwood	36.91	6	P	P	05 43 16.4	+0.4
	baz=188						
ARAG	Araguaiana, MT	36.96	125	*e*P	P	05 43 16.1	-0.6
L58A	Harry Jones Me	37.04	8	P	P	05 43 17.4	+0.3
	baz=191						
L42A	Oliver, Polo	37.05	351	IAmb	IAmb	05 43 16.3	
	comp=Z,41nm,0.8s						
GO04	Tololo Observa	37.08	163	IAmb	IAmb	05 43 23.3	
	comp=Z,29nm,1.1s						
CO01	Juntas del Tor	37.11	162	P	P	05 43 18.9	+0.9
BINY	Binghamton	37.17	8	P	P	05 43 18.9	+0.7
	baz=191						
L60A	Shokan	37.25	10	P	P	05 43 19.9	+1.1
	baz=194						
L59A	Walton	37.30	9	P	P	05 43 20.3	+0.9
	baz=192						
T25A	Trinidad	37.41	331	P	P	05 43 21.5	+0.9
	baz=143,SNR=10						
L61A	Hillsdale 1, H	37.57	11	P	P	05 43 22.4	+0.9
	baz=195						
TUC	Tucson	37.60	319	P	P	05 43 22.8	+0.8
	baz=130						
TUC	Tucson	37.60	319	P	P	05 43 20.6	-1.4
TUC				IAmb	IAmb	05 43 24.6	
	comp=Z,35nm,1.7s						
K57A	Scipio Center	37.62	7	P	P	05 43 23.2	+1.2
	baz=190						
SMTB	Santa Maria do	37.64	112	*e*P	P	05 43 22.7	+0.1
CO03	El Pedregal	37.73	163	P	P	05 43 23.9	+0.8
CO03				IAmb	IAmb	05 43 26.8	
	comp=Z,29nm,1.1s						
K58A	Earlville	37.77	8	P	P	05 43 24.2	+1.0
	baz=191						
K59A	Cooperstown	37.91	9	P	P	05 43 24.9	+0.5
	baz=193						
CO02	Combarbal	37.99	164	P	P	05 43 26.0	+0.7
JFWS	Jewell Farm	38.03	351	P	P	05 43 23.5	-1.9
KSCO	Kaye Shedlock'	38.12	334	P	P	05 43 26.8	+0.4
	baz=147						
KSCO	Kaye Shedlock'	38.12	334	IAmb	IAmb	05 43 27.7	
	comp=Z,22nm,0.8s						
K38A	Parkersburg	38.23	348	IAmb	IAmb	05 43 26.4	
	comp=Z,58nm,1.1s						
J58A	Remsen	38.41	9	P	P	05 43 29.5	+0.9
	baz=192						
SDCO	Great Sand Dun	38.42	330	P	P	05 43 30.3	+1.1
	baz=142,SNR=35						
SDCO	Great Sand Dun	38.42	330	P	P	05 43 29.5	+0.3
SDCO				IAmb	IAmb	05 43 32.0	
	comp=Z,33nm,1.1s						
K63A	Dunstable	38.47	13	P	P	05 43 30.0	+0.9
	baz=198						
J60A	Lant Hill Farm	38.61	11	P	P	05 43 31.6	+1.3
	baz=195						
J59A	Piesco	38.63	9	P	P	05 43 31.6	+1.1
	baz=193						
H03N2	Juan Fernandez	38.72	175	T	T	06 24 41.1	
	baz=354,slow=76,SNR=9.6						
H03N1	Juan Fernandez	38.73	175	T	T	06 24 40.2	
	baz=354,slow=76,SNR=10.0						
214A	Organ Pipe Nat	38.73	317	P	P	05 43 32.9	+1.3
	baz=127,SNR=11						
214A	Organ Pipe Nat	38.73	317	P	P	05 43 32.4	+0.8
214A				IAmb	IAmb	05 43 34.4	
	comp=Z,67nm,1.6s						
H03N3	Juan Fernandez	38.74	175	T	T	06 24 39.3	
	baz=354,slow=76,SNR=12						
W18A	Petrified Fore	38.80	323	P	P	05 43 34.2	+2.0
	baz=134,SNR=7.7						
W18A	Petrified Fore	38.80	323	P	P	05 43 31.8	-0.5
W18A				IAmb	IAmb	05 43 35.4	
	comp=Z,40nm,1.1s						
J61A	Chester	38.88	12	P	P	05 43 34.5	+2.0
	baz=196						
J62A	Henniker	38.92	13	P	P	05 43 35.0	+2.1
	baz=197						
I57A	Carthage	38.92	8	P	P	05 43 34.1	+1.2
	baz=191						
S22A	4UR Ranch, Cre	39.09	329	P	P	05 43 35.9	+1.1
	baz=140,SNR=14						
J63A	Strafford	39.13	13	P	P	05 43 36.8	+2.1
	baz=198						
I60A	Shoreham	39.21	11	P	P	05 43 37.2	+1.9
	baz=195						
Q24A	Divide	39.22	332	P	P	05 43 37.1	+1.3
	baz=143						
OGNE	Ogallala	39.50	337	P	P	05 43 38.5	+0.6
	baz=149,SNR=5.8						
I61A	Oroboro, Fairl	39.51	12	P	P	05 43 39.1	+1.3
	baz=196						
MVCO	Mesa Verde	39.58	327	P	P	05 43 39.9	+1.1
	baz=137,SNR=21						
MVCO	Mesa Verde	39.58	327	IAmb	IAmb	05 43 41.4	
	comp=Z,31nm,0.9s						
VA03	San Esteban	39.58	164	IAmb	IAmb	05 43 42.9	
	comp=Z,28nm,0.9s						
H58A	Gabriels	39.62	9	P	P	05 43 40.6	+1.9
	baz=193						
LONY	Lake Ozonia	39.75	9	P	P	05 43 40.8	+1.0
	baz=193						
VT1	Waterbury	39.78	11	P	P	05 43 39.9	-0.3
VT1				IAmb	IAmb	05 43 41.7	
	comp=Z,60nm,1.4s						
LBNH	Lisbon	39.86	12	P	P	05 43 42.1	+1.3
	baz=197						
CPUP	Villa Florida	39.89	143	P	P	05 43 40.5	-0.7
	comp=Z,5.3nm,1.0s,baz=318,slow=9.8,SNR=5.7						
H59A	Cadyville	39.92	10	P	P	05 43 42.7	+1.4
	baz=194						
I63A	Otisfield	39.98	14	P	P	05 43 43.6	+1.9
	baz=199						
H60A	Morristown	40.02	11	P	P	05 43 43.7	+1.6
	baz=196						
WUAZ	Wupatki	40.06	322	P	P	05 43 44.0	+1.3
	baz=132,SNR=12						
SPX	San Pedro Mart	40.07	314	P	P	05 43 43.6	+0.5
BDFB	Brasilia	40.09	122	P	P	05 43 42.4	-0.8
	comp=Z,4.1nm,0.9s,baz=274,slow=10.0,SNR=5.6						
BDFB	Brasilia	40.09	122	P	P	05 43 41.7	-1.5
G54A	Lake Saint Pet	40.09	5	P	P	05 43 43.3	+0.6
	baz=187						
ISCO	Idaho Springs	40.10	332	P	P	05 43 44.0	+0.9
	baz=143,SNR=9.0						
MT05	Renca	40.13	165	P	P	05 43 44.0	+0.9
MT05				IAmb	IAmb	05 43 47.1	
	comp=Z,28nm,0.9s						
H61A	Lyndonville	40.14	12	P	P	05 43 44.3	+1.2
	baz=197						
G57A	Newington	40.16	8	P	P	05 43 43.9	+0.7
	baz=192						
ECSD	EROS Data Cent	40.19	344	P	P	05 43 41.5	-2.0
	baz=158,SNR=5.6						
ITRB	Iturama	40.31	129	*e*P	P	05 43 44.3	-0.6
H62A	Milan	40.34	13	P	P	05 43 45.8	+1.1
	baz=198						
G58A	Ormstown	40.35	9	P	P	05 43 46.1	+1.4
	baz=193						
PV15	Paradox Valley	40.40	328	IAmb	IAmb	05 43 48.5	
	comp=Z,34nm,1.0s						
G59A	Clarenceville	40.43	10	P	P	05 43 46.3	+0.9
	baz=195						
PV02	Paradox Valley	40.44	328	IAmb	IAmb	05 43 48.5	
	comp=Z,34nm,0.9s						
PV13	Radium Mtn., P	40.45	328	IAmb	IAmb	05 43 48.5	
	comp=Z,40nm,0.9s						
PV03	Paradox Valley	40.53	328	IAmb	IAmb	05 43 49.0	
	comp=Z,29nm,0.9s						
PV05	Paradox Valley	40.54	327	IAmb	IAmb	05 43 48.9	
	comp=Z,29nm,1.0s						
PV12	Saucer Basin,	40.55	328	P	P	05 43 46.9	0.0
PV12				IAmb	IAmb	05 43 52.7	
	comp=Z,48nm,0.9s						
PV18	Skein Mesa, Pa	40.56	328	P	P	05 43 47.2	+0.3
PV18				IAmb	IAmb	05 43 51.3	
	comp=Z,29nm,0.8s						
PV07	Paradox Valley	40.56	328	IAmb	IAmb	05 43 49.5	
	comp=Z,31nm,1.1s						
PV11	David Mesa, Pa	40.58	328	IAmb	IAmb	05 43 50.2	
	comp=Z,88nm,1.6s						
G60A	Masonville	40.60	11	P	P	05 43 48.0	+1.1
	baz=196						
ALGO	Algonquin Park	40.65	5	P	P	05 43 46.5	-0.7
	baz=187						
H63A	New Sharon	40.68	14	P	P	05 43 49.4	+1.9
	baz=199						
PV14	Lion Creek, Pa	40.71	328	P	P	05 43 49.5	+1.2
PV14				IAmb	IAmb	05 43 50.4	
	comp=Z,28nm,1.2s						
SPMN	Marine on St.	40.72	349	P	P	05 43 45.3	-2.5
	baz=164,SNR=6.3						
SPMN	Marine on St.	40.72	349	IAmb	IAmb	05 43 46.8	
	comp=Z,32nm,0.9s						
GLA	Glamis	40.75	317	P	P	05 43 49.3	+1.0
	baz=126						
GLA	Glamis	40.75	317	IAmb	IAmb	05 43 51.0	
	comp=Z,91nm,1.9s						
G61A	St-Isidore-de-	40.94	12	P	P	05 43 51.6	+1.9
	baz=197						
ESJX	Sierra Juarez	40.94	315	P	P	05 43 49.8	-0.3
PDMCI	Parker Dam,Lak	41.03	319	P	P	05 43 51.6	+1.0
	baz=128,SNR=5.4						
IPMB	Ipameri, GO	41.08	125	*e*P	P	05 43 51.4	+0.1
G62A	West of Eustis	41.09	13	P	P	05 43 52.9	+2.0
	baz=198						
G62A	West of Eustis	41.09	13	P	P	05 43 51.5	+0.5
G62A				IAmb	IAmb	05 43 55.2	
	comp=Z,76nm,1.6s						
N23A	Red Feather La	41.12	333	P	P	05 43 52.6	+1.0
	baz=143						
H65A	Eastbrook	41.16	16	P	P	05 43 53.5	+2.0
	baz=202						
G63A	Kingsbury	41.21	14	P	P	05 43 54.0	+2.1
	baz=200						
F59A	Saint Guilaume	41.25	10	P	P	05 43 54.0	+1.8
	baz=195						
SWSC	Sam W. Stewart	41.36	316	P	P	05 43 54.2	+0.9
	baz=125						
SDBA	SAO DESIDERIO	41.41	115	*e*P	P	05 43 53.6	-0.4
IKP	In-Ko-Pah, Jac	41.41	315	P	P	05 43 54.8	+1.0
	baz=124,SNR=6.5						
PKME	Peaks-Kenny Pk	41.43	14	P	P	05 43 55.5	+1.9
	baz=200						
PKME	Peaks-Kenny Pk	41.43	14	IAmb	IAmb	05 43 57.4	
	comp=Z,59nm,1.4s						
F36A	Milaca	41.47	348	IAmb	IAmb	05 43 53.4	
	comp=Z,86nm,1.9s						
H66A	Whiting	41.50	16	P	P	05 43 55.8	+1.5
	baz=203						
F60A	Warwick	41.51	11	P	P	05 43 55.9	+1.5
	baz=196						
BC3	Big Chuckawall	41.53	317	P	P	05 43 55.8	+1.0
	baz=126,SNR=7.3						
G64A	Maxfield	41.55	15	P	P	05 43 56.2	+1.5
	baz=201						
E56A	St. Veronique	41.56	8	P	P	05 43 54.9	+0.1
	baz=191						
IRM	Iron Mountain	41.61	318	P	P	05 43 56.5	+1.0
	baz=126,SNR=9.4						
CBX	Cerro Bola	41.62	314	P	P	05 43 54.0	-1.6
O20A	White River Ci	41.62	330	P	P	05 43 56.8	+1.1
	baz=140,SNR=8.8						
E58A	La Victoria	41.66	10	P	P	05 43 57.0	+1.4
	baz=194						
F61A	St Evariste	41.71	12	P	P	05 43 56.8	+0.7
	baz=198						
MONP2	Monument Peak	41.77	315	P	P	05 43 57.7	+0.8
	baz=124,SNR=5.0						
E60A	Ste Agathe de	42.00	12	P	P	05 43 59.3	+1.0
	baz=197						
SRU	San Rafael Swe	42.05	327	P	P	05 43 59.5	+0.3
F33A	5 Mile Ranch,	42.06	346	IAmb	IAmb	05 43 57.5	
	comp=Z,19nm,0.8s						
BELC	Belle Mtn. Jos	42.10	317	P	P	05 44 00.4	+0.8
	baz=125,SNR=11						
D56A	ZEC Mazanza, M	42.10	8	P	P	05 44 00.1	+1.0
	baz=192						
PTGB	Pitanga	42.13	136	*e*P	P	05 43 59.2	-0.7
TPFO	Pinon Flats	42.19	316	P	P	05 44 01.3	+1.1
	baz=124,SNR=9.1						
PFO	Pinyon Flats O	42.19	316	P	P	05 44 01.4	+1.1
	baz=124,SNR=8.7						
PFO	Pinyon Flats O	42.19	316	P	P	05 44 01.5	+1.2
F64A	Sherman	42.22	15	P	P	05 44 00.8	+0.6
	baz=201						
109C	Camp Elliot, M	42.24	315	P	P	05 44 01.5	+0.9
	baz=123						
E61A	Lac Etchemin	42.26	12	P	P	05 44 00.8	+0.4
	baz=198						
GMRC	Granite Mounta	42.33	318	P	P	05 44 02.3	+0.9
	baz=126,SNR=6.4						
D58A	Chemin du LacG	42.43	10	P	P	05 44 02.5	+0.6
	baz=194						
SZCU	Shurtz Canyon	42.47	323	P	P	05 44 02.6	0.0
BB19B	Bebedouro	42.49	129	*e*P	P	05 44 02.1	-0.7
D59A	Saint-Raymond	42.53	11	P	P	05 44 04.0	+1.3
	baz=196						
MSU	Marysvale	42.55	325	P	P	05 44 04.3	+1.0
D60A	Saint Jean D'O	42.62	12	P	P	05 44 04.1	+0.7
	baz=197						
MURC	Murrieta	42.70	316	P	P	05 44 05.0	+0.7
	baz=124,SNR=5.1						
E63A	Oxbow	42.73	14	P	P	05 44 06.2	+2.0
	baz=201						
E63A	Oxbow	42.73	14	P	P	05 44 08.0	+3.7
E63A				IAmb	IAmb	05 44 08.3	
	comp=Z,28nm,1.1s						
LATQ	La Tuque	42.73	10	P	P	05 44 04.9	+0.7
	baz=194						
LATQ	La Tuque	42.73	10	P	P	05 44 05.0	+0.7
K22A	Casper	42.79	334	P	P	05 44 05.7	+0.6
	baz=144						
K22A	Casper	42.79	334	IAmb	IAmb	05 44 07.1	
	comp=Z,26nm,1.2s						
HEC	Hector,Ludlow	42.80	318	P	P	05 44 06.5	+1.3
	baz=126,SNR=9.1						
ITQB	Itaqui	42.82	146	*e*P	P	05 44 05.3	+0.1
BBRC	Big Bear Solar	42.87	317	P	P	05 44 07.1	+1.2
	baz=125						
RSSD	Black Hills	42.98	337	P	P	05 44 07.9	+1.2
	baz=148						
RSSD	Black Hills	42.98	337	P	P	05 44 05.2	-1.4
RSSD				IAmb	IAmb	05 44 08.8	
	comp=Z,80nm,1.7s						
JANB	Januaria	43.01	119	*e*P	P	05 44 06.6	-0.5
SHPR	Sheep Range	43.04	321	P	P	05 44 07.2	0.0
D61A	St Aubert, Com	43.05	12	P	P	05 44 09.8	+2.9
	baz=198,SNR=7.2						
D62A	Allapoint, All	43.19	14	P	P	05 44 10.1	+2.1
	baz=200						
D62A	Allapoint, All	43.19	14	IAmb	IAmb	05 44 11.3	
	comp=Z,64nm,1.6s						
LMN	Caledonia Moun	43.22	18	IAmb	IAmb	05 44 12.2	
	comp=Z,43nm,1.1s						
SCI2	San Clemente I	43.32	314	P	P	05 44 10.3	+1.0
	baz=122						
BFSC	Mount Baldy Ra	43.37	316	P	P	05 44 10.7	+0.8
	baz=124,SNR=8.2						
GSC	Goldstone, Bar	43.39	318	P	P	05 44 11.1	+1.2
	baz=126,SNR=10.0						
SHOC	Shoshone, Teco	43.39	319	P	P	05 44 10.8	+0.9
	baz=127						
PRN	Pahroc Range	43.53	322	P	P	05 44 11.8	+0.7
PSUT	Pine Spring	43.54	324	P	P	05 44 11.9	+0.6
MWC	Mount Wilson	43.64	316	P	P	05 44 12.5	+0.4
DECC	Green Verdugo	43.84	316	P	P	05 44 13.7	+0.1
	baz=123						
EDW2	Edwards Air Fo	43.95	317	P	P	05 44 15.3	+0.8
	baz=124,SNR=9.4						
TPNV	Topopah Spring	44.00	320	P	P	05 44 16.2	+1.3
	baz=128,SNR=9.6						
DUG	Dugway, Tooele	44.07	326	P	P	05 44 16.4	+0.9
	baz=134,SNR=5.8						
DUG	Dugway, Tooele	44.07	326	P	P	05 44 15.3	-0.1
LRMC	Laurel Mtn Rad	44.08	318	P	P	05 44 16.6	+1.1
	baz=125,SNR=10						
FURC	Furnace Creek,	44.11	319	P	P	05 44 16.7	+1.1
	baz=126,SNR=15						
PD31	Pinedale Array	44.27	331	IAmb	IAmb	05 44 18.7	
	comp=Z,37nm,1.8s						
PDAR	Pinedale Array	44.27	331	P	P	05 44 17.1	+0.1
	comp=Z,4.3nm,0.8s,baz=127,slow=11,SNR=38						
PDAR				PcP	PcP	05 46 01.5	0.0
	comp=Z,1.4nm,1.0s,baz=153,slow=5.0,SNR=3.4						
BW06	Boulder Array	44.27	331	P	P	05 44 17.3	+0.2
	baz=140,SNR=11						
BW06	Boulder Array	44.27	331	IAmb	IAmb	05 44 18.7	
	comp=Z,41nm,1.8s						
MPMC	Manual Prospec	44.28	318	P	P	05 44 17.9	+0.7
	baz=126,SNR=7.3						
HWUT	Hardware Ranch	44.40	329	IAmb	IAmb	05 44 19.8	
	comp=Z,23nm,0.9s						
R11A	Troy Canyon, C	44.46	322	P	P	05 44 19.4	+0.7
	baz=129,SNR=5.9						
R11A	Troy Canyon, C	44.46	322	P	P	05 44 17.1	-1.5
ARVC	Arvin	44.66	316	P	P	05 44 21.2	+1.1
	baz=123						
ISA	Isabella, Lake	44.71	317	P	P	05 44 21.7	+1.1
	baz=124,SNR=6.2						
ISA	Isabella, Lake	44.71	317	P	P	05 44 22.2	+1.6
GRAC	Grapevine Rang	44.75	320	P	P	05 44 21.8	+1.0
	baz=126						
MDND	Maddock	44.79	344	P	P	05 44 20.5	-0.4
	baz=156						
CWC	Cottonwood Cre	44.89	318	P	P	05 44 22.9	+0.8
	baz=125						
LC01	Cunco	45.12	168	P	P	05 44 24.1	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LC01				IAmb	IAmb	05 44 26.5	
	comp=Z,22nm,0.8s						
CPSB	Cacapava Do Su	45.19	144	eP	P	05 44 24.3	-0.1
PKM	Mcpherson Peak	45.21	316	P	P	05 44 25.5	+0.8
	baz=122,SNR=13						
VES	Vestal, Richgr	45.23	317	P	P	05 44 25.9	+1.4
	baz=124,SNR=5.3						
REDW	Red Top Meadow	45.34	331	IAmb	IAmb	05 44 27.5	
	comp=Z,36nm,1.1s						
LOHW	Long Hollow	45.41	331	P	P	05 44 25.3	-0.9
SMMC	Simmler	45.57	316	P	P	05 44 28.4	+1.1
	baz=122,SNR=8.5						
RLMT	Red Lodge	45.96	334	P	P	05 44 30.6	+0.2
	baz=142,SNR=11						
RLMT	Red Lodge	45.96	334	IAmb	IAmb	05 44 31.4	
	comp=Z,10nm,0.8s						
PAGB	Antelope Grade	45.96	316	IAmb	IAmb	05 44 36.3	
	comp=Z,13nm,1.0s						
LAO	LASA Array	45.97	337	P	P	05 44 30.5	+0.2
	baz=146,SNR=9.6						
H17A	Grant Village	45.99	332	P	P	05 44 31.5	+0.8
	baz=140						
H17A	Grant Village	45.99	332	IAmb	IAmb	05 44 38.9	
	comp=Z,35nm,1.8s						
LKWY	Lake	46.04	332	P	P	05 44 30.9	-0.2
PLTB	Pedras Altas	46.09	145	eP	P	05 44 31.6	+0.2
NV11	Mina Array Sit	46.10	321	IAmb	IAmb	05 44 34.1	
	comp=Z,11nm,0.9s						
ULM	Lac du Bonnet	46.13	348	P	P	05 44 29.7	-1.7
	comp=Z,9.5nm,0.7s,baz=155,slow=8.6,SNR=18						
ULM				PcP	PcP	05 46 06.9	-0.6
	comp=Z,1.9nm,0.7s,baz=163,slow=6.7,SNR=2.9						
ULM	Lac du Bonnet	46.13	348	IAmb	IAmb	05 44 30.5	
	comp=Z,12nm,0.8s						
OMMB	Old Mammoth Mi	46.16	319	IAmb	IAmb	05 44 34.6	
	comp=Z,19nm,1.1s						
NVAR	Mina Array Bea	46.19	321	P	P	05 44 33.6	+1.2
	comp=Z,9.6nm,0.7s,baz=130,slow=7.3,SNR=103						
LHV	Little Huntoon	46.22	320	IAmb	IAmb	05 44 35.2	
	comp=Z,17nm,0.9s						
MDPB	Devils Postpil	46.23	319	IAmb	IAmb	05 44 35.0	
	comp=Z,21nm,0.9s						
YHH	Holmes Hill	46.41	332	P	P	05 44 34.3	+0.1
PMPB	Monarch Peak	46.60	316	IAmb	IAmb	05 44 36.6	
	comp=Z,13nm,1.1s						
WAKR	Walker	46.96	320	IAmb	IAmb	05 44 40.8	
	comp=Z,12nm,0.8s						
PLCA	Paso Flores	47.16	168	P	P	05 44 39.6	-0.1
	comp=Z,8.1nm,1.0s,baz=180,slow=24,SNR=11						
PLCA	Paso Flores	47.16	168	IAmb	IAmb	05 44 42.5	
	comp=Z,26nm,1.2s						
PLCA	Paso Flores	47.16	168	eP	P	05 44 39.0	-0.7
HLID	Hailey	47.27	329	P	P	05 44 41.3	+0.5
	baz=134,SNR=14						
HLID	Hailey	47.27	329	P	P	05 44 39.9	-0.8
BOZ	Bozeman (W)	47.39	332	P	P	05 44 42.2	+0.7
	baz=139,SNR=23						
BOZ	Bozeman (W)	47.39	332	IAmb	IAmb	05 44 43.6	
	comp=Z,26nm,1.2s						
PNTR	Pine Nut	47.40	320	IAmb	IAmb	05 44 46.2	
	comp=Z,9.0nm,0.8s						
PAHR	Pah Rah Range	47.63	321	IAmb	IAmb	05 44 45.9	
	comp=Z,33nm,1.9s						
MFID	Camas Ranch	47.92	327	P	P	05 44 44.9	-0.8
MFID				IAmb	IAmb	05 44 47.6	
	comp=Z,15nm,1.3s						
LL01	San Ignacio de	48.39	170	IAmb	IAmb	05 44 53.2	
	comp=Z,20nm,1.2s						
EGMT	Eagleton	48.45	336	P	P	05 44 50.4	+0.6
	baz=143,SNR=9.2						
EGMT	Eagleton	48.45	336	P	P	05 44 49.5	-0.2
EGMT				IAmb	IAmb	05 44 50.9	
	comp=Z,24nm,1.1s						
ORV	Oroville	48.88	320	IAmb	IAmb	05 44 55.4	
	comp=Z,14nm,1.0s						
MSO	Missoula	49.38	332	P	P	05 44 56.6	-0.2
	baz=137,SNR=8.5						
MSO	Missoula	49.38	332	IAmb	IAmb	05 44 58.3	
	comp=Z,17nm,1.3s						
O03E	Paynes Creek	49.48	321	P	P	05 44 57.4	-0.4
	baz=124						
O02D	Mt. Diablo Mer	50.05	320	P	P	05 45 01.3	-0.7
	baz=123						
KCPM	Cahto Peak	50.30	319	P	P	05 45 04.3	+0.3
M04C	Macdoel	50.35	322	P	P	05 45 04.5	+0.1
	baz=125						
N02D	Trinity Center	50.43	321	P	P	05 45 03.7	-1.3
	baz=124						
KMRM	Mail Ridge	50.66	319	P	P	05 45 06.6	-0.1
KMRM				IAmb	IAmb	05 45 09.0	
	comp=Z,40nm,1.3s						
M02C	Callahan	50.76	321	P	P	05 45 06.7	-0.7
	baz=124						
J05D	Fort Rock, OR	50.87	324	P	P	05 45 08.0	-0.3
	baz=127						
L04D	Klamath Falls	50.88	322	P	P	05 45 07.9	-0.5
	baz=125,SNR=5.3						
WALA	Waterton Lakes	51.01	334	P	P	05 45 09.7	+0.4
J04D	Umpqua Nationa	51.36	323	P	P	05 45 11.7	-0.3
	baz=126,SNR=5.4						
KRMB	Red Mountain	51.49	321	IAmb	IAmb	05 45 14.8	
	comp=Z,41nm,1.4s						
I05D	Terrebonne, OR	51.56	325	P	P	05 45 13.4	0.0
	baz=127						
I04A	Tendick Farm,	51.86	324	P	P	05 45 15.3	-0.3
	baz=126						
NEW	Newport	51.91	331	P	P	05 45 15.7	-0.2
	baz=134						
K02D	Willamette Mer	51.98	322	P	P	05 45 16.6	0.0
	baz=124						
KBO	Bosley Butte	52.06	321	P	P	05 45 17.6	+0.4
E07A	Sunnyside	52.14	328	IAmb	IAmb	05 45 19.6	
	comp=Z,66nm,1.9s						
I03D	Drain, OR	52.36	323	P	P	05 45 19.2	0.0
	baz=125						
J01E	Myrtle Point	52.41	322	P	P	05 45 20.3	+0.7
	baz=124						
H04D	Lebanon	52.48	324	P	P	05 45 20.3	+0.2
	baz=126						
F05D	White Salmon	52.58	327	P	P	05 45 21.9	+1.1
	baz=128						
I02D	Swisshome	52.89	323	P	P	05 45 23.7	+0.5
	baz=125						
B08A	Colville Reser	53.05	330	IAmb	IAmb	05 47 18.5	
	comp=Z,29nm,2.0s						
G03D	McMinnville, O	53.19	325	P	P	05 45 25.4	+0.1
	baz=126						
F04D	Rainier, OR	53.56	326	P	P	05 45 28.5	+0.5
	baz=127						
E04D	Cinebar	53.60	327	P	P	05 45 28.5	+0.2
	baz=128						
D04E	Lakebay	54.09	327	P	P	05 45 32.1	+0.2
	baz=128						
B05A	Bryant	54.40	328	P	P	05 45 34.3	+0.1
	baz=129						
D03D	Eldon	54.47	327	P	P	05 45 35.0	+0.3
	baz=128						
YKA	Yellowknife Ar	61.71	344	P	P	05 46 24.9	-0.3
	comp=Z,13nm,0.8s,baz=137,slow=6.7,SNR=138						
NRS	Narsarsuaq	62.25	19	P	P	05 46 30.6	+1.8
DLBC	Dease Lake	64.35	335	P	P	05 46 43.4	+0.5
	comp=Z,10nm,0.8s,baz=158,slow=5.4,SNR=9.7						
DLBC	Dease Lake	64.35	335	IAmb	IAmb	05 46 45.2	
	comp=Z,18nm,1.1s						
ICESG	Greenland Ices	69.64	15	i P	P	05 47 15.6	-1.1
RES	Resolute Bay	69.66	357	P	P	05 47 15.9	-0.4
	comp=Z,3.0nm,1.1s,baz=159,slow=5.9,SNR=2.7						
INK	Inuvik	71.39	342	P	P	05 47 27.6	+0.6
	comp=Z,4.3nm,0.8s,baz=113,slow=8.7,SNR=11						
INK	Inuvik	71.39	342	P	P	05 47 27.2	+0.3
INK				IAmb	IAmb	05 47 29.1	
	comp=Z,35nm,1.8s						
L26K	Log Cabin Wild	72.30	335	P	P	05 47 33.0	+0.5
	baz=114						
SUMG	Summit	72.33	13	P	P	05 47 33.2	+0.1
SUMG				IAmb	IAmb	05 47 35.3	
	comp=Z,19nm,1.0s						
SUMG	Summit	72.33	13	i P	P	05 47 33.4	+0.3
	comp=Z,162nm,1.3s						
SUMG	Summit	72.33	13	i P	P	05 47 33.4	+0.3
SUMG				IAmb	IAmb	05 47 38.9	
	comp=Z,162nm,1.3s						
SCRK	Sand Creek	72.95	336	P	P	05 47 36.9	+0.4
	baz=114						
SCM	Sheep Creek Mo	73.56	333	P	P	05 47 40.1	-0.1
KNK	Knik Glacier	73.93	333	P	P	05 47 42.4	+0.1
MORF	Marmelete	74.01	53	eP	P	05 47 44.2	+0.9
MORF				AMb	AMB	05 47 49.5	
	comp=Z,40nm,2.0s						
MORF	Marmelete	74.01	53	eP	P	05 47 44.6	+1.3
	comp=Z,40nm,2.0s						
GHO	Glory Hole Cre	74.25	333	P	P	05 47 44.5	+0.4
GHO				IAmb	IAmb	05 47 49.6	
	comp=Z,18nm,1.0s						
HDA	Harding Lake	74.31	336	P	P	05 47 44.4	0.0
	baz=111						
HDA	Harding Lake	74.31	336	IAmb	IAmb	05 47 45.1	
	comp=Z,12nm,1.1s						
RC01	Rabbit Creek A	74.41	332	P	P	05 47 44.6	-0.4
	baz=108						
PCAS	Casmilo, Conde	74.41	50	eP	P	05 47 46.2	+0.7
	comp=Z,68nm,1.9s						
IL31		74.42	336	IAmb	IAmb	05 47 46.1	
	comp=Z,20nm,1.6s						
ILAR	Eielson Array	74.42	336	P	P	05 47 45.0	0.0
	comp=Z,3.0nm,0.8s,baz=118,slow=4.4,SNR=26						
ILAR				PP	PP	05 50 34.9	+3.7
	comp=Z,0.9nm,1.0s,baz=118,slow=5.3,SNR=4.3						
PCVE	Castro Verde	74.53	53	eP	P	05 47 48.0	+1.8
EVO	Evora	74.63	52	eP	P	05 47 47.1	+0.3
	comp=Z,26nm,1.9s						
RND	Reindeer	74.75	335	IAmb	IAmb	05 47 50.6	
	comp=Z,18nm,1.0s						
POKR	Poker Plat Res	74.76	337	P	P	05 47 46.9	-0.1
	baz=111						
MCK	McKinley	74.89	335	P	P	05 47 48.1	+0.3
	baz=109						
CAPN	Captain Cook N	74.98	332	P	P	05 47 50.2	+1.9
	baz=106						
SUA	Susitna One	74.99	333	P	P	05 47 49.0	+0.4
CUT	Chulitna	75.05	334	P	P	05 47 49.5	+0.8
	baz=108						
PMRV	Marv??o	75.20	51	eP	P	05 47 51.5	+1.4
NEA2	Nenana	75.23	336	P	P	05 47 49.9	+0.1
	baz=109						
SKT	Skwentna	75.49	333	P	P	05 47 51.6	+0.3
SKT				IAmb	IAmb	05 47 52.5	
	comp=Z,14nm,1.0s						
I23K	Minto, Yukon-K	75.53	336	P	P	05 47 51.6	+0.2
	baz=109						
KTH	Kantishna Hill	75.68	335	P	P	05 47 51.7	-0.7
KTH				IAmb	IAmb	05 47 55.2	
	comp=Z,14nm,1.1s						
PPLA	Purkeypile	76.04	334	P	P	05 47 54.6	0.0
MLY	Manley	76.05	336	P	P	05 47 55.2	+0.8
	baz=108						
COLD	Coldfoot	76.54	338	P	P	05 47 57.7	+0.6
	baz=109						
COLD	Coldfoot	76.54	338	P	P	05 47 58.8	+1.7
TIC	Toumodi	77.09	84	eP	P	05 48 02.1	+0.8
LIC	Lamto	77.11	85	eP	P	05 48 02.2	+0.8
	comp=Z,5.9nm,0.4s						
DBIC	Dimbokro	77.25	84	P	P	05 48 03.0	+0.9
	comp=Z,6.1nm,0.9s,baz=259,slow=16,SNR=3.4						
KIC	Kosan Boka	77.38	85	eP	P	05 48 03.9	+1.0
	comp=Z,9.7nm,0.7s						
KOWA	Kowa	77.64	76	P	P	05 48 05.0	+0.6
KOWA				IAmb	IAmb	05 48 17.0	
	comp=Z,12nm,1.1s						
TTA	Tatalina	77.75	333	P	P	05 48 03.2	-0.9
TTA				IAmb	IAmb	05 48 07.2	
	comp=Z,15nm,1.3s						
ESDC	Sonseca Array	77.86	51	P	P	05 48 06.0	+0.8
	comp=Z,1.5nm,0.7s,baz=271,slow=5.2,SNR=9.9						
A21K	Barrow	79.87	342	P	P	05 48 14.6	-0.9
	baz=104						
TOA0	Torodi Ar. Sit	83.25	77	P	P	05 48 34.9	+0.3
TOA0				IAmb	IAmb	05 48 40.1	
	comp=Z,22nm,1.6s						
TORD	Torodi Ar. Bea	83.25	77	P	P	05 48 33.2	-1.4
	comp=Z,2.1nm,0.7s,baz=277,slow=4.8,SNR=7.1						
CLL	Collm	89.37	39	eP	P	05 49 02.0	-1.8
CLL				ePP	PP	05 52 36.0	+1.4
CLL				Lm	MLR	13 38 00.0	
	comp=Z,200nm,18.9s						
VNA3	Neumayer Olymp	89.59	162	P	P	05 49 05.4	+0.9
VNA1	Neumayer--Stat	89.86	161	P	P	05 49 07.4	+1.7
GERES	GERESS Array B	90.15	41	P	P	05 49 07.6	-0.2
	comp=Z,0.2nm,0.5s,baz=348,slow=9.2,SNR=3.6						
VNA2	Neumayer--Watz	90.21	161	P	P	05 49 07.2	-0.1
	baz=288,slow=5.6						
DUGI	Dugi Otok	91.81	46	Sg	S	06 00 08.4	-8.4
SNAA	Sanae	91.82	162	P	P	05 49 13.2	-1.7
H11N3	WAKE ISLAND Hy	107.31	292	T	T	07 50 18.0	
	baz=79,slow=75,SNR=8.3						
H11N2	WAKE ISLAND Hy	107.31	292	T	T	07 50 17.3	
	baz=79,slow=75,SNR=7.6						
H11N1	WAKE ISLAND Hy	107.32	292	T	T	07 50 20.9	
	baz=79,slow=75,SNR=8.4						
H11S2	WAKE ISLAND Hy	107.75	291	T	T	07 50 50.9	
	baz=77,slow=75,SNR=14						
H11S1	WAKE ISLAND Hy	107.75	291	T	T	07 50 50.1	
	baz=77,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	107.77	291	T	T	07 50 53.2	
	baz=77,slow=75,SNR=8.5						
ZALV	Zalesovo Beam	119.99	9	PKP	PKPdf	05 54 57.8	-0.1
	comp=Z,0.9nm,0.7s,baz=186,slow=4.3,SNR=4.7						
MDJ	Mudanjiang	122.49	333	PKP	PKPdf	05 55 02.2	-0.8
MKAR	Makanchi Array	126.39	13	PKP	PKPdf	05 55 10.1	-0.4
	comp=Z,0.5nm,0.6s,baz=47,slow=2.3,SNR=5.5						
SONM	Songino Array	126.46	352	PKP	PKPdf	05 55 10.0	-0.7
	comp=Z,0.7nm,0.8s,baz=314,slow=1.3,SNR=3.8						
SONM				PP	PP	05 57 05.8	+0.8
	comp=Z,0.6nm,0.9s,baz=358,slow=4.5,SNR=3.9						
WMQ	Urumqi	130.28	9	ePKP	PKPdf	05 55 17.8	-0.2
WMQ				AMB	AMB		
	comp=Z,470nm,5.1s						
WMQ				LR	LR		
	comp=Z,4μm,29.2s						
WMQ				LR	LR		
	comp=Z,3μm,26.1s						
KSH	Kashi	131.17	22	PKP	PKiKP	05 55 21.1	+0.3
HHC	Hu-ho-hao-te	132.23	345	ePKP	PKiKP	05 55 23.1	+0.2
HHC				PP	PP	05 57 49.2	+6.5
HHC				SS	SS	06 15 18.3	-1.8
HHC				AMB	AMB		
	comp=Z,590nm,8.6s						
HHC				LR	LR		
	comp=Z,680nm,17.9s						
HHC				LR	LR		
	comp=Z,890nm,17.9s						
HHC				LR	LR		
	comp=Z,770nm,19.6s						
NJ2	Nanjing	137.57	333	ePKP	PKPdf	05 55 30.8	-1.1
ASAR	Alice Springs	140.43	239	PKhKP	PKPpre	05 55 27.8	
	comp=Z,0.4nm,0.7s,baz=114,slow=3.0,SNR=4.8						
ASAR				PKP	PKPdf	05 55 36.2	-1.2
	comp=Z,1.1nm,0.8s,baz=122,slow=2.3,SNR=6.8						
WRA	Warramunga Arr	141.27	245	PKP	PKPdf	05 55 38.1	-0.9
	comp=Z,1.4nm,0.7s,baz=97,slow=2.3,SNR=9.3						
CD2	Chengdu	143.45	351	PKP	PKPbc	05 55 41.0	+1.3
DANN	Dangsing	144.01	21	eP	PKPbc	05 55 42.7	+0.9
	comp=Z,13nm,0.7s						
KOLN	Koldanda	144.49	21	eP	PKPbc	05 55 43.3	+0.1
KKN	Kakani	145.04	19	eP	PKPbc	05 55 44.8	-0.2
	comp=Z,35nm,0.7s						
GUN	Gumba	145.12	18	eP	PKPbc	05 55 45.3	-0.1
	comp=Z,54nm,0.9s						
DMN	Daman	145.15	19	eP	PKPbc	05 55 43.6	-1.8
	comp=Z,32nm,0.8s						
PKIN	Phulchoki	145.28	19	eP	PKPbc	05 55 44.1	-1.7
PKI	Pulchoki	145.29	19	eP	PKPbc	05 55 44.9	-1.0
	comp=Z,18nm,0.6s						
TAPN	Taplejung	146.18	16	eP	PKPbc	05 55 48.3	-0.4
RAMN	Ramite	146.24	18	eP	PKPdf	05 55 46.1	-1.7
HYB	Hyderabad	150.71	39	i PKP	PKPab	05 56 05.0	-2.3
QIZ	Qiongzhong	152.86	333	PKPbc	PKPdf	05 55 56.2	-2.0
QIZ				PP	PP	05 59 48.0	+0.2
QIZ				SS	SS	06 19 19.6	+0.2
CMAR	Chiang Mai Arr	156.30	356	PKP	PKPdf	05 56 03.1	+0.1
	comp=Z,1.2nm,0.3s,baz=320,slow=1.8,SNR=4.4						
CMAR				PKPab	PKPab	05 56 29.6	-1.1
	comp=Z,2.0nm,0.3s,baz=340,slow=3.1,SNR=5.0						

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*IGIL **07** 05:51:31.3, 37°.25N×13°.46W, h7^{km}, ML2.2*
*MDD **07** 05:51:31.5±1.8, 37°.24N×13°.35W, h0^{km}, mb4.3/3, Error ellipse: s-maj=17.0km s-min=13.7km az=35.0, PRXIMO*
*INMG **07** 05:51:32.9±0.9, 37°.07N×13°.74W, h10^{km}, ML2.5, Error ellipse: s-maj=5.0km s-min=4.2km az=52.0*
ISC 07 05:51:30.2±3.5**, 37°.31N**±0°.10×**13°.4W**±0°.2**, h10^{km}, n47, σ1s.60**/86**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	3.62	62	P	Pn	05 52 28.4	+2.1
	2.1nm,0.1s,SNR=7.9						
PMAFR				S	Sn	05 53 09.9	+0.8
	6.3nm,0.1s,SNR=7.9						
PMAFR	Mafra	3.62	62	ePn	Pn	05 52 28.5	+2.1
PMAFR				eSn	Sn	05 53 10.2	+1.0
PMAFR				A	A	05 53 10.5	
	21nm,0.7s						
PFVI	Vila Bisbo	3.63	91	P	Pn	05 52 26.9	+0.4
	1.0nm,0.1s,SNR=7.9						
PFVI				S	Sn	05 53 07.4	-2.0
	9.5nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.63	91	ePn	Pn	05 52 26.9	+0.4
PFVI				eSn	Sn	05 53 07.9	-1.5
PFVI				A	A	05 53 11.3	
	8.8nm,0.4s						
PTEO	Sao Teotonio	3.71	85	S	Sn	05 53 10.2	-1.1
	3.6nm,0.5s						
PTEO	Sao Teotonio	3.71	85	eSn	Sn	05 53 10.2	-1.1
PTEO				A	A	05 53 23.5	
	7.2nm,0.5s						
MORF	Marmelete	3.76	89	eP	Pn	05 52 29.1	+0.7
MORF				eS	Sn	05 53 11.3	-1.4
MORF				AML	AML	05 53 13.2	
	comp=E,7.3nm,0.1s						
MORF	Marmelete	3.76	89	P	Pn	05 52 29.1	+0.7
MORF				S	Sn	05 53 11.7	-1.1
	comp=E,5.4nm,0.1s						
MORF	Marmelete	3.76	89	ePn	Pn	05 52 29.1	+0.7
MORF				eSn	Sn	05 53 11.7	-1.1
MORF				A	A	05 53 15.3	
	comp=E,5.4nm,0.1s						
PNCL	Nicolau / Gran	3.92	77	P	Pn	05 52 31.9	+1.4
PNCL				S	Sn	05 53 16.1	-0.5
	comp=E,4.4nm,0.4s						
PNCL	Nicolau / Gran	3.92	77	ePn	Pn	05 52 31.9	+1.4
PNCL				eSn	Sn	05 53 16.1	-0.5
PNCL				A	A	05 53 21.7	
	comp=E,4.4nm,0.4s						
MESJ	Messejana	4.13	81	eS	Sn	05 53 19.8	-1.8
MESJ				AML	AML	05 53 25.2	
	comp=E,3.1nm,0.1s						
MESJ	Messejana	4.13	81	S	Sn	05 53 19.8	-1.8
	comp=E,3.1nm,0.1s						
PSBE	So Bento	4.22	57	ePn	Pn	05 52 36.5	+1.9
PSBE				A	A	05 53 32.2	
	comp=E,5.8nm,0.8s						
PCVE	Castro Verde	4.25	84	P	Pn	05 52 36.2	+1.1
PCVE				S	Sn	05 53 23.0	-1.8
	comp=E,2.6nm,0.7s						
PCVE	Castro Verde	4.25	84	ePn	Pn	05 52 36.2	+1.1
PCVE				eSn	Sn	05 53 23.0	-1.8
PCVE				A	A	05 53 25.2	
	comp=E,2.6nm,0.7s						
PBDV	Barranco-do-Ve	4.34	89	P	Pn	05 52 38.1	+1.8
PBDV				S	Sn	05 53 25.2	-1.7
	comp=E,3.3nm,0.6s						
PBDV	Barranco-do-Ve	4.34	89	ePn	Pn	05 52 38.1	+1.8
PBDV				eSn	Sn	05 53 25.2	-1.7
PBDV				A	A	05 53 32.0	
	comp=E,3.3nm,0.6s						
EVO	Evora	4.41	72	P	Pn	05 52 38.9	+1.7
EVO				S	Sn	05 53 27.8	-0.8
	comp=E,5.3nm,0.4s						
EVO	Evora	4.41	72	ePn	Pn	05 52 38.9	+1.7
EVO				eSn	Sn	05 53 27.8	-0.8
EVO				A	A	05 53 32.8	
	comp=E,5.3nm,0.4s						
PMTG	Montargil	4.42	65	P	Pn	05 52 38.6	+1.3
PMTG				S	Sn	05 53 28.5	-0.4
	comp=E,4.9nm,0.8s						
PMTG	Montargil	4.42	65	ePn	Pn	05 52 38.6	+1.3
PMTG				eSn	Sn	05 53 28.5	-0.4
PMTG				A	A	05 53 38.2	
	comp=E,4.9nm,0.8s						
PBEJ	Beja	4.43	79	P	Pn	05 52 39.1	+1.7
PBEJ				S	Sn	05 53 27.8	-1.2
PBEJ	Beja	4.43	79	ePn	Pn	05 52 39.1	+1.7
PBEJ				eSn	Sn	05 53 27.8	-1.2
PVAQ	Vaqueiros	4.51	87	P	Pn	05 52 39.7	+1.2
PVAQ				S	Sn	05 53 28.9	-2.1
	comp=E,3.7nm,0.8s						
PVAQ	Vaqueiros	4.51	87	ePn	Pn	05 52 39.7	+1.2
PVAQ				eSn	Sn	05 53 28.9	-2.1
PVAQ				A	A	05 53 39.9	
	comp=E,3.7nm,0.8s						
EGRO	El Granado	4.69	85	P	Pn	05 52 42.3	+1.2
	comp=E,0.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	05 53 34.4	-1.2
	comp=E,1.3nm,0.1s,SNR=7.9						
PCAS	Casmilo, Conde	4.70	53	P	Pn	05 52 42.7	+1.5
PCAS				S	Sn	05 53 35.5	-0.2
	comp=E,2.4nm,0.5s						
PCAS	Casmilo, Conde	4.70	53	ePn	Pn	05 52 42.7	+1.5
PCAS				eSn	Sn	05 53 35.5	-0.2
PCAS				A	A	05 53 49.0	
	comp=E,2.4nm,0.5s						
PESTR	Estremoz	4.82	69	ePn	Pn	05 52 44.9	+2.0
PESTR				eSn	Sn	05 53 38.9	+0.1
PESTR				A	A	05 53 46.5	
	comp=E,7.9nm,0.7s						
PMRV	Marv??o	5.16	64	P	Pn	05 52 48.8	+1.3
PMRV				S	Sn	05 53 46.2	-0.8
	comp=E,1.9nm,0.7s						
PMRV	Marv??o	5.16	64	ePn	Pn	05 52 48.8	+1.3
PMRV				eSn	Sn	05 53 46.2	-0.8
PMRV				A	A	05 53 50.7	
	comp=E,1.9nm,0.7s						
EMIN	Mina Concepcio	5.34	83	P	Pn	05 52 52.3	+2.2
	comp=E,0.1nm,0.1s,SNR=4.0						
EMIN				S	Sn	05 53 49.9	-1.8
	comp=E,0.4nm,0.1s,SNR=7.9						
MTE	Manteigas	5.50	54	S	Sn	05 53 54.9	-0.6
	comp=E,1.1nm,0.7s						
MTE	Manteigas	5.50	54	eSn	Sn	05 53 54.9	-0.6
MTE				A	A	05 54 07.8	
	comp=E,2.1nm,0.7s						
PGAV	Gavieira, Arco	6.09	39	P	Pn	05 53 02.7	+2.3
PGAV				S	Sn	05 54 08.3	-2.0
PGAV	Gavieira, Arco	6.09	39	ePn	Pn	05 53 02.7	+2.3
PGAV				eSn	Sn	05 54 08.3	-2.0
ELOB	Lobios	6.13	40	P	Pn	05 53 02.0	+1.1
	comp=E,0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	05 54 09.1	-2.0
	comp=E,0.6nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.25	50	P	Pn	05 53 04.0	+1.4
	comp=E,0.2nm,0.1s,SNR=7.9						
MVO				S	Sn	05 54 12.8	-1.3
	comp=E,0.4nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.25	50	ePn	Pn	05 53 03.9	+1.4
MVO				eSn	Sn	05 54 12.6	-1.5
EPLA	Plasencia	6.33	62	P	Pn	05 53 05.7	+2.0
	comp=E,0.3nm,0.1s,SNR=4.0						
EPLA				S	Sn	05 54 15.5	-0.6
	comp=E,0.6nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.35	81	P	Pn	05 53 05.3	+1.4
	comp=E,0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	05 54 14.8	-1.8
	comp=E,0.2nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.56	29	P	Pn	05 53 07.9	+1.1
	comp=E,1.6nm,0.1s,SNR=7.9						
EMAZ				S	Sn	05 54 17.6	-4.1
	comp=E,1.0nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.82	35	P	Pn	05 53 11.3	+1.0
	comp=E,0.6nm,0.1s,SNR=7.9						
EAGO				S	Sn	05 54 23.5	-4.6
	comp=E,0.5nm,0.1s,SNR=7.9						
ECAL	Calabor	6.90	46	P	Pn	05 53 12.8	+1.3
	comp=E,1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	05 54 28.9	-1.3
	comp=E,0.4nm,0.2s,SNR=7.9						
EADA	Adamuz	7.02	80	P	Pn	05 53 14.6	+1.5
	comp=E,0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	05 54 31.6	-1.5
	comp=E,0.2nm,0.1s,SNR=7.9						
PAB	San Pablo	7.43	70	S	Sn	05 54 40.5	-2.6
	comp=E,0.3nm,0.2s,SNR=7.9						

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*IDC **07** 06:05:16.2±1.8, 55°.72N×162°.78E, h0^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.2/39, mbtmp3.1/4, ML2.5/1, Error ellipse: s-maj=70.8km s-min=22.0km az=148.0*

KRSC ***07*** *06:05:16.3±1.1, 55°.17N×163°.42E, h48^{km}±24^{km}, ML4.0*

ISC 07 06:05:19.0±0.9**, 55°.23N**±0°.04×**163°.47E**±0°.04**, h35^{km}, n41, σ1^{s}.37**/46**, mb3.1**/3**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.04	340	eP	Pn	06 05 35.3	-1.8
KBTR				eS	Sn	06 05 49.7	-0.7
KBG	Krutoberegovo	1.11	337	eP	Pn	06 05 36.5	-1.5
BKI	Bering	1.44	90	eP	Pn	06 05 41.7	-0.7
BKI				eS	Sn	06 06 00.0	0.0
KZV	Kizimen	1.82	268	eP	Pn	06 05 47.6	-0.3
BZWR	Bezymyannyi-We	1.84	295	eP	Pn	06 05 49.0	+0.8
BDR	Baidarnaya	1.85	317	eP	Pn	06 05 48.3	+0.1
TUMR	Tumrok	1.90	273	eP	Pn	06 05 49.0	0.0
KMNR	Kamenistaya	1.91	287	eP	Pn	06 05 49.7	+0.6
KIRR	Kirishev	1.92	293	eP	Pn	06 05 50.4	+1.2
KLY	Klyuchi	1.92	305	eP	Pn	06 05 47.6	-1.5
SRKR	Sorokina	1.92	319	eP	Pn	06 05 48.5	-0.7
KOZ	Kozyrevsk	2.20	294	eP	Pn	06 05 54.3	+1.3
SRDR	Sredinnyy	2.38	299	eP	Pn	06 05 56.3	+0.8
ESO	Esso	2.79	286	eP	Pn	06 06 01.6	+0.5
SPN	Mys Shipunski	2.95	225	eP	Pn	06 06 01.2	-2.0
SPN				eS	Sn	06 06 34.1	-3.2
NLC	Nalytchevo	3.18	231	eS	Sn	06 06 41.2	-1.9
SDLR	Sedlovina	3.33	236	eP	Pn	06 06 08.9	+0.4
KRER	Koryakskii	3.38	237	eP	Pn	06 06 10.1	+0.8
SMAR	Somma	3.38	236	eP	Pn	06 06 09.5	+0.2
SMAR				eS	Sn	06 06 48.1	-0.1
KRX	Arik	3.39	238	eP	Pn	06 06 10.4	+0.9
UGLR	Uglovaya	3.40	235	eP	Pn	06 06 09.9	+0.4
AVH	Avacha	3.40	237	eP	Pn	06 06 10.5	+0.9
KOK	Koryaka	3.44	238	eP	Pn	06 06 11.0	+1.0
DALK	Dalny	3.54	233	eP	Pn	06 06 11.2	-0.2
DALK				eS	Sn	06 06 50.7	-1.3
GNL	Ganaly	3.57	247	eP	Pn	06 06 12.7	+0.8
PET	Petropavlovsk	3.59	234	eP	Pn	06 06 11.8	-0.3
PET				eS	Sn	06 06 52.1	-1.2
KRMR	Karymshinskiy	3.96	235	eP	Pn	06 06 18.1	+1.0
PETK	Petropavlovsk-	4.00	240	Pn	Pn	06 06 18.4	+0.7
	1.4nm,0.3s,baz=61,slow=15,SNR=23						
PETK				Sn	Sn	06 07 06.2	+2.8
	2.7nm,0.3s,baz=47,slow=15,SNR=5.6						
OSSR	Ossora	4.03	357	eP	Pn	06 06 18.9	+0.8
RUS	Russkaya	4.06	228	eP	Pn	06 06 20.8	+2.3
MTVR	Mutnovka	4.17	231	eP	Pn	06 06 21.2	+1.1
GRL	Gorelyy	4.17	232	eP	Pn	06 06 20.8	+0.7
ASAK	Asacha	4.36	231	eP	Pn	06 06 23.3	+0.5
APC	Apacha	4.38	241	eP	Pn	06 06 24.1	+1.3
KDTR	Khodutka, Kamc	4.70	225	eP	Pn	06 06 27.8	+0.5
KDTR				eS	Sn	06 07 17.3	-3.2
ILAR	Eielson Array	25.90	48	P	P	06 10 49.6	+2.5
	0.3nm,0.7s,baz=265,slow=7.8,SNR=3.3						
H11N2	WAKE ISLAND Hy	35.54	174	T	T	06 51 25.5	
	baz=359,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	35.55	174	T	T	06 51 32.0	
	baz=359,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	35.56	174	T	T	06 51 27.8	
	baz=359,slow=76,SNR=13						
YKA	Yellowknife Ar	40.24	45	P	P	06 12 53.0	+1.3
	0.2nm,0.6s,baz=301,slow=6.6,SNR=3.5						
MKAR	Makanchi Array	49.01	296	P	P	06 13 59.9	-2.0
	0.2nm,0.4s,baz=57,slow=6.8,SNR=4.5						

IDC 07 06:35:34.1±4.8**, 29°.22S×178°.71W, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/15**, mbtmp3.9**/3**, Error ellipse: s-maj=209.2km s-min=55.6km az=154.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.16	255	P	P	06 42 21.4	+0.3
	3.0nm,0.8s,baz=94,slow=11,SNR=7.3						
ASAR	Alice Springs	42.56	266	P	P	06 43 31.1	-0.9
	0.5nm,0.7s,baz=105,slow=7.0,SNR=4.7						
WRA	Warramunga Arr	43.44	271	P	P	06 43 39.4	+0.2
	1.5nm,0.7s,baz=112,slow=7.9,SNR=3.9						
AKASG	Malin Array Be	149.99	323	PKPbc	PKPbc	06 55 25.8	-0.4
	1.0nm,0.7s,baz=48,slow=2.5,SNR=5.0						

AZER ***07*** *06:44:26.2±0.1, 40°.30N×46°.47E, h10^{km}, ml3.5/31, Error ellipse: s-maj=0.8km s-min=0.7km az=328.0*

NSSP ***07*** *06:44:26.5, 40°.33N×46°.43E, h10^{km}, Ms3.0*

TIF ***07*** *06:44:27.9, 40°.28N×46°.54E, h27^{km}±1^{km}*

DDA ***07*** *06:44:30.0, 40°.44N×46°.17E, h2^{km}±11^{km}, ML3.3*

ISC 07 06:44:27.0±1.1**, 40°.31N**±0°.02×**46°.51E**±0°.01**, h1**^{km}±10^{km}**, n56, σ0^{s}.96**/110**, 2C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GANJ	Ganja	0.37	338	P	Pb	06 44 35.4	-0.9
	SNR=135						
GANJ				S	Sb	06 44 40.8	-1.7
AGDM	Agdam	0.50	113	P	Pg	06 44 37.6	+1.0
	SNR=1144						
AGDM				S	Sb	06 44 45.8	-0.6
BRDA	Brd	0.52	95	P	Pb	06 44 38.6	-0.2
	SNR=240						
BRDA				S	Sb	06 44 48.2	+1.4
MNGR	Mingechevir, A	0.64	43	P	Pb	06 44 41.1	+0.2
	SNR=23						
MNGR				S	Sb	06 44 51.4	+1.1
GDB	GEDABAY	0.71	306	P	Pg	06 44 41.1	+0.6
	SNR=20						
GDB				S	Sg	06 44 50.7	+1.0
ZRD	Zardab	0.90	91	P	Pg	06 44 45.3	+1.1
	SNR=55						
ZRD				S	Sn	06 44 59.8	-0.5
BLQ	Beylaqan	1.00	126	P	Pg	06 44 45.6	-0.5
	SNR=10						
BLQ				S	Sg	06 44 59.5	+0.5
SEKA	Sheki	1.04	30	P	Pg	06 44 47.0	0.0
	SNR=55						
SEKA				S	Sb	06 45 01.6	-0.5
QRD	Qoradiz	1.05	143	P	Pg	06 44 46.8	-0.3
	SNR=93						
QRD				S	Sg	06 45 00.5	-0.3
QZX	Qazax, Azerbai	1.14	311	P	Pg	06 44 49.1	+0.2
	SNR=737						
QZX				S	Sb	06 45 04.7	-0.2
SBZ	Shahbuz	1.17	219	P	Pg	06 44 49.7	+0.4
	SNR=22						
SBZ				S	Sb	06 45 05.6	0.0
DDFL	Dedoflistskaro	1.18	346	P	Pn	06 44 51.4	+0.8
DDFL				S	Sn	06 45 08.4	+1.1
DDFL	Dedoflistskaro	1.18	346	i P	Pn	06 44 51.4	+0.8
DDFL				i S	Sn	06 45 10.3	+3.1
QBL	Gabala	1.20	57	P	Pg	06 44 50.0	+0.1
	SNR=8.7						
QBL				S	Sb	06 45 06.8	+0.3
KDMR	Kurdemir	1.28	86	P	Pn	06 44 51.3	-0.7
	SNR=8.3						
KDMR				S	Sn	06 45 10.1	+0.3
ZKTA	Zakatala	1.33	4	P	Pn	06 44 52.3	-0.4
	SNR=29						
ZKTA				S	Sn	06 45 11.3	+0.2
GNI	Garni	1.36	264	⇓iP	Pg	06 44 53.2	+0.2
IML	Ismayilli	1.37	69	P	Pn	06 44 52.3	-0.9
	SNR=7.0						
IML				S	Sb	06 45 10.9	-0.4
NAX	Nakhchivan	1.37	215	P	Pg	06 44 53.6	+0.3
	SNR=7.4						
NAX				S	Sn	06 45 12.9	+0.8
KAPZ	Kaputan	1.38	271	⇓iP	Pg	06 44 53.8	+0.4
KAPZ				⇓iS	Sn	06 45 12.9	+0.5
HYR	Heyderabad	1.40	246	P	Pg	06 44 54.2	+0.4
	SNR=13						
HYR				Sn	Sn	06 45 13.2	+0.4
ORD	Ordubad	1.43	196	P	Pn	06 44 53.1	-0.9
	SNR=31						
ORD				Sn	Sb	06 45 12.9	-0.3
NRKZ	NAREK	1.45	258	eP	Pg	06 44 54.8	+0.1
NRKZ				eS	Sg	06 45 14.5	+1.1
XNQ	Khinaliq	1.51	55	Pn	Pn	06 44 54.0	-1.3
	SNR=10						
XNQ				Sn	Sn	06 45 15.0	-0.8
SAAT	Saatly	1.54	106	Pn	Pn	06 44 53.2	-2.2
SAAT				Sn	Sn	06 45 13.1	-2.9
LGD	Lagodekhi	1.54	353	P	Pn	06 44 55.5	0.0
LGD				S	Sg	06 45 17.0	+0.6
PQL	Pirkuli	1.66	72	Pg	Pn	06 44 57.0	-0.3
	SNR=8.4						
PQL				Sn	Sn	06 45 19.3	0.0
STE	Stepanavan	1.77	294	⇑iP	Pb	06 44 59.8	-0.4
STE				⇑S	Sg	06 45 23.1	-0.6
QSAR	Qusar	1.80	47	Pg	Pn	06 44 59.1	0.0
	SNR=17						
QSAR				Sn	Sb	06 45 24.2	+0.5
GLBA	Clilabad	1.80	126	Pn	Pn	06 44 58.4	-0.7
	SNR=11						
GLBA				Sn	Sn	06 45 22.8	+0.2
QUBA	Quba, Azerbaij	1.84	55	Pg	Pn	06 45 00.4	+0.7
	SNR=4.4						
QUBA				Sn	Sb	06 45 25.7	+0.9
METS	Metsamor	1.86	266	i P	Pb	06 45 01.2	-0.6
METS				S	Sg	06 45 26.6	-0.2
BTNK	Botanikuri	1.89	317	P	Pb	06 45 01.8	-0.4
BTNK				S	Sg	06 45 27.0	-0.6
BTNK	Botanikuri	1.89	317	i P	Pb	06 45 01.8	-0.4
BTNK				i S	Sg	06 45 26.6	-1.0
BTNK				IAML		06 45 28.0	
	comp=E,405nm,0.1s						
IGDI	IGDIR	1.91	258	i P	Pb	06 45 02.1	-0.6
IGDI				i S	Sg	06 45 28.6	+0.1
KZRT	Kazreti	1.93	305	P	Pb	06 45 01.9	-1.0
KZRT				S	Sb	06 45 26.6	-0.9
KZRT	Kazreti	1.93	305	i P	Pb	06 45 01.9	-1.0
KZRT				i S	Sb	06 45 26.5	-1.0
YRD	Yardimli	1.93	135	Pg	Pn	06 45 02.0	+1.0
	SNR=15						
YRD				Sn	Sn	06 45 26.8	+0.8
ATGJ	Altiaghaj	1.93	73	Pg	Pn	06 45 02.0	+1.0
	SNR=4.1						
ATGJ				Sn	Sb	06 45 27.6	-0.1
SEAG	Tbilisi Sea	1.94	319	P	Pb	06 45 02.2	-0.9
SEAG				S	Sb	06 45 28.3	+0.4
ALIB	Äli-Bayra	1.95	99	Pg	Pb	06 45 02.5	-0.7
ALIB				Sn	Sb	06 45 27.2	-0.7
SIZA	Siyzn	1.98	66	Pg	Pn	06 45 02.6	+1.0
	SNR=5.5						
SIZA				Sn	Sb	06 45 29.6	+0.8
DMNI	Dmanisi	2.03	301	P	Pb	06 45 03.6	-1.1
DMNI				S	Sb	06 45 29.9	-0.6
VNNZ	Vanand	2.06	265	eP	Pb	06 45 05.2	0.0
VNNZ				eS	Sg	06 45 33.0	-0.3
LRK	Lerik	2.19	139	Pn	Pn	06 45 04.8	+0.2
	SNR=7.2						
LRK				Sn	Sn	06 45 33.7	+1.4
EAK	Akyaka	2.24	281	i P	Pg	06 45 09.2	-0.7
EAK				i S	Sg	06 45 40.6	+1.6
LKRN	Lenkeran, Azer	2.37	131	Pg	Pn	06 45 08.4	+1.5
LKRN				Sn	Sn	06 45 37.8	+1.2
ASTR	Astara	2.48	134	Pn	Pn	06 45 08.7	+0.2
ASTR				Sn	Sb	06 45 42.1	-1.3
AKH	Akhalkalaki	2.54	297	P	Pb	06 45 12.9	-0.4
AKH				S	Sb	06 45 45.8	+0.6
KOTA	Agri, Merkez-K	2.58	260	i P	Pb	06 45 15.0	+0.9
GUDG	Gudauri	2.64	325	P	Pb	06 45 14.0	-1.2
GUDG				S	Sb	06 45 47.7	-0.5
BKRG	Bakuriani	2.68	304	P	Pb	06 45 14.4	-1.4
BKRG				S	Sb	06 45 50.2	+0.9
ABS	Abastumani	3.15	299	P	Pb	06 45 23.4	-0.4
ABS				S	Sb	06 46 04.8	+2.2
TKB	Tkibuli	3.34	309	P	Pb	06 45 25.2	-1.8
TKB				S	Sb	06 46 08.4	+0.3
DAGI	Agillar	3.58	284	i P	Pg	06 45 33.3	-2.2
DAGI				i S	Sg	06 46 22.6	+0.8
DBAD	Bademkaya	3.73	283	i P	Pg	06 45 37.2	-1.2
DBAD				i S	Sg	06 46 28.7	+2.0

ANF ***07*** *06:59:02.8±0.3, 32°.84N×96°.89W, h3^{km}±2^{km}, ML4.0/16, Error ellipse: s-maj=1.5km s-min=1.4km az=167.0*

NEIC ***07*** *06:59:03.3±1.5, 32°.84N±0°.02×96°.91W±0°.03, h5^{km}±2^{km}, mb_Lg3.1/65, Error ellipse: s-maj=4.7km s-min=3.0km az=290.0*

ISC 07 06:59:02.8±1.3**, 32°.84N**±0°.03×**96°.89W**±0°.04**, h2**^{km}±11^{km}**, n73, σ0^{s}.72**/76**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Z35A	Perchaven, San	0.57	328	Pg	Pg	06 59 13.7	-0.1
Z35A				Sg	Sg	06 59 20.7	-0.6
Z35A	Perchaven, San	0.57	328	P		06 59 13.8	
	baz=150,SNR=169						
Z35A				S		06 59 21.5	
	baz=150						
WHTX	Lake Whitney,	0.98	210	P	Pg	06 59 21.6	+0.1
	baz=28						
WHTX				S	Sg	06 59 34.8	+0.6
	baz=28						
WHTX	Lake Whitney,	0.98	210	Pg	Pg	06 59 21.6	+0.1
WHTX				Sg	Sg	06 59 34.0	-0.2
WHTX	Lake Whitney,	0.98	210	P		06 59 21.9	
	baz=28						
WHTX				S		06 59 34.8	
	baz=28						
237A	Washetta, Mont	1.24	132		Pb	06 59 27.1	+0.2
237A	Washetta, Mont	1.24	132	P		06 59 27.2	
	baz=312,SNR=152						
237A				S		06 59 44.5	
	baz=312						
Z38A	Mt. Pleasant	1.65	75		Pn	06 59 32.7	0.0
Z38A				Sn	Sn	06 59 54.7	+0.2
Z38A				IAmb_Lg		06 59 56.0	
	comp=Z,70nm,0.7s						
Z38A	Mt. Pleasant	1.65	75	P		06 59 32.9	
	baz=256,SNR=14						
Z38A				S		06 59 55.2	
	baz=256						
435B	Jarrell	2.14	196	P	Pn	06 59 39.5	0.0
	baz=15						
435B				Sb	Sg	07 00 11.0	-0.5
	baz=15						
435B	Jarrell	2.14	196		Pn	06 59 39.4	-0.1
435B				Sn	Sn	07 00 06.9	+0.3
X37A	Clayton	2.15	36		Pn	06 59 40.6	+1.0
X37A				Sn	Sn	07 00 08.1	+1.2
X37A	Clayton	2.15	36	P		06 59 40.1	
	baz=217						
X37A				S		07 00 07.8	
	baz=217						
NATX	Nacogdoches	2.17	119	P	Pn	06 59 39.8	-0.1
	baz=300						
NATX				S	Sn	07 00 08.5	+1.0
	baz=300						
NATX	Nacogdoches	2.17	119		Pn	06 59 39.9	-0.1
NATX				Sn	Sn	07 00 08.1	+0.7
NATX	Nacogdoches	2.17	119	P		06 59 39.9	
	baz=300,SNR=14						
NATX				S		07 00 08.5	
	baz=300						
W35A	Tecumseh	2.30	0		Pn	06 59 43.1	+1.4
ABTX	Abilene, Hawle	2.33	265	P	Pn	06 59 41.8	-0.3
	baz=84						
ABTX				S	Sn	07 00 11.7	+0.3
	baz=84						
ABTX	Abilene, Hawle	2.33	265		Pn	06 59 41.9	-0.3
WMOK	Wichita Mounta	2.46	321	P	Pn	06 59 44.0	+0.1
	baz=140						
WMOK				S	Sn	07 00 15.2	+0.6
	baz=140						
WMOK	Wichita Mounta	2.46	321		Pn	06 59 44.6	+0.7
OKCSW	OKLAHOMA CITY	2.60	350		Pn	06 59 47.5	+1.7
OKCFA	Oklahoma City	2.61	350		Pn	06 59 46.7	+0.7
OK025	Westminster Rd	2.76	352		Pn	06 59 48.7	+0.7
HKT	Hockley	3.02	162	Pn	Pn	06 59 52.9	+1.3
HKT	Hockley	3.02	162	P		06 59 51.8	
	baz=343,SNR=12						
HKT				S		07 00 27.8	
	baz=343						
OK030	Cody Creek RV	3.08	2		Pn	06 59 53.8	+1.4
OK031	S. Brethren Rd	3.10	1		Pn	06 59 53.1	+0.3
TUL1	Leonard	3.19	16	P	Pn	06 59 53.9	-0.1
	baz=197						
TUL1	Leonard	3.19	16	Pn	Pn	06 59 53.7	-0.3
TUL1				IAmb_Lg		07 00 52.9	
	comp=Z,37nm,0.7s						
MIAR	Mount Ida	3.24	58	P	Pn	06 59 54.1	-0.5
	baz=239						
MIAR	Mount Ida	3.24	58	Pn	Pn	06 59 54.1	-0.5
MIAR	Mount Ida	3.24	58	P		06 59 54.2	
	baz=239,SNR=24						
WLAR	White Oak Lake	3.27	74		Pn	06 59 55.1	0.0
WLAR				IAmb_Lg		07 00 47.7	
	comp=Z,46nm,0.8s						
QUOK	Quay	3.32	3		Pn	06 59 56.4	+0.6
JCT	Junction City	3.42	227	P	Pn	06 59 57.2	-0.1
	baz=45						
JCT				S	Sn	07 00 37.4	-1.0
	baz=45						
JCT	Junction City	3.42	227		Pn	06 59 57.1	-0.1
JCT	Junction City	3.42	227	P		06 59 57.2	
	baz=45,SNR=38						
Z41A	Richland Creek	3.46	82	P	Pn	06 59 57.4	-0.2
	baz=264						
Z41A				S	Sn	07 00 38.1	-1.0
	baz=264						
Z41A	Richland Creek	3.46	82		Pn	06 59 57.6	0.0
Z41A				IAmb_Lg		07 01 01.5	
	comp=Z,44nm,0.9s						
Z41A	Richland Creek	3.46	82	P		06 59 57.7	
	baz=264,SNR=7.2						
Z41A				P		06 59 57.7	
	baz=264,SNR=7.2						
W39A	Magazine	3.48	47	S	Sn	07 00 40.5	+0.6
	baz=229						
W39A	Magazine	3.48	47		Pn	06 59 59.4	+1.4
W39A				IAmb_Lg		07 00 59.7	
	comp=Z,67nm,0.8s						
X40A	Basin Creek Fa	3.76	63	P	Pn	07 00 01.4	-0.4
	baz=245						
X40A				S	Sn	07 00 44.5	-2.0
	baz=245						
X40A	Basin Creek Fa	3.76	63	Pn	Pn	07 00 01.5	-0.2
X40A	Basin Creek Fa	3.76	63	P		07 00 01.4	
	baz=245,SNR=16						
X40A				P		07 00 01.4	
	baz=245,SNR=16						
CROK	Carrier	3.76	346	Pn	Pn	07 00 01.7	-0.1
441A	DeRidder	3.78	123		Pn	07 00 02.6	+0.6
441A	DeRidder	3.78	123	P		07 00 02.9	
	baz=304,SNR=8.8						
U32A	Winter Ranch,	3.93	334		Pn	07 00 04.3	+0.1
T35A	Sooner Cattle	4.08	4		Pn	07 00 06.4	+0.2
GC02	Grant County #	4.08	349	Pn	Pn	07 00 05.8	-0.4
U38A	Gravette	4.14	29	Pn	Pn	07 00 08.6	+1.6
U38A				IAmb_Lg		07 01 19.2	
	comp=Z,52nm,0.8s						
342A	Flagon Creek P	4.14	110		Pn	07 00 06.8	-0.2
342A				IAmb_Lg		07 01 24.6	
	comp=Z,38nm,0.8s						
KAN13	South Haven SW	4.19	354		Pn	07 00 07.0	-0.7
KAN14	Manchester OK	4.20	348	Pn	Pn	07 00 08.0	+0.2
HHAR	Hobbs	4.20	35		Pn	07 00 08.6	+0.7
UALR	University of	4.25	62		Pn	07 00 08.6	+0.2
CCAR	Cane Creek	4.41	75	IAmb_Lg		07 01 34.9	
	comp=Z,46nm,0.8s						
AMTX	Amarillo	4.48	298	P	Pn	07 00 12.0	+0.3
	baz=116						
AMTX	Amarillo	4.48	298		Pn	07 00 12.3	+0.6
W41B	Gary Mavity, V	4.50	58	P	Pn	07 00 12.1	+0.2
	baz=240						
W41B				S	Sn	07 01 03.3	-1.6
	baz=240						
W41B	Gary Mavity, V	4.50	58	P		07 00 12.4	
	baz=240,SNR=25						
WHAR	Wooly Hollow	4.53	56		Pn	07 00 13.0	+0.6
143A	Socs Landing,	4.62	90	IAmb_Lg		07 01 38.1	
	comp=Z,28nm,0.9s						
U40A	Yellville	4.83	42	P	Pn	07 00 16.6	+0.1
	baz=225						
U40A	Yellville	4.83	42	IAmb_Lg		07 01 47.5	
	comp=Z,30nm,0.8s						
FCAR	Ozark Folk Cen	4.97	51		Pn	07 00 19.1	+0.6
833A	Chaparral WMA,	5.00	206	P	Pn	07 00 19.2	+0.5
	baz=25						
833A	Chaparral WMA,	5.00	206	P		07 00 19.2	
	baz=25,SNR=8.3						
MSTX	Muleshoe	5.05	284	P	Pn	07 00 19.4	-0.3
	baz=101						
X43A	Marvell	5.28	70	IAmb_Lg		07 01 56.6	
	comp=Z,26nm,0.9s						
344A	Westbrook Farm	5.40	103	IAmb_Lg		07 01 59.8	
	comp=Z,26nm,1.1s						
S39A	Bolivar	5.65	30	IAmb_Lg		07 02 08.4	
	comp=Z,26nm,0.7s						
MGMO	Mountain Grove	5.73	40	IAmb_Lg		07 02 05.9	
	comp=Z,41nm,0.9s						
KSU1	Kansas State U	6.25	2	IAmb_Lg		07 02 28.5	
	comp=Z,74nm,1.3s						
CBKS	Cedar Bluff	6.39	340	P	Pn	07 00 37.3	-0.7
	baz=158						
PBMO	Poplar Bluff	6.60	52	IAmb_Lg		07 02 41.8	
	comp=Z,22nm,1.0s						
R40A	Maddies Statio	6.61	33	IAmb_Lg		07 02 38.4	
	comp=Z,24nm,0.8s						
MNTX	Cornudas Mount	7.28	263	P	Pn	07 00 49.7	-0.5
	baz=79						
MNTX	Cornudas Mount	7.28	263		Pn	07 00 50.1	-0.2
T25A	Trinidad	7.51	307		Pn	07 00 53.3	-0.3
T45A	Paducah	7.95	56	IAmb_Lg		07 03 33.2	
	comp=Z,20nm,0.7s						
WVT	Waverly	8.16	64	P	Pn	07 01 01.2	-1.1
	baz=249						
ANMO	Albuquerque	8.23	287	IAmb_Lg		07 03 22.1	
	comp=Z,22nm,0.8s						
SDCO	Great Sand Dun	8.57	307		Pn	07 01 09.1	+0.9
ISCO	Idaho Springs	9.88	317		Pn	07 01 25.1	-1.0

IDC ***07*** *07:08:25.3±0.6, 6°.84S×72°.18E, h0^{km}, mb4.1/16, mb1 4.2/16, mb1mx4.0/47, mbtmp4.1/16, Error ellipse: s-maj=19.0km s-min=17.2km az=4.0*

NEIC ***07*** *07:08:26.6±1.4, 6°.85S±0°.05×72°.2E±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=22.5km s-min=2.9km az=248.0*

ISC 07 07:08:27.9±0.6**, 6°.89S**±0°.09×**72°.2E**±0°.1**, h18^{km}, n37, σ0^{s}.90**/32**, mb4.4**/19**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	0.57	154		Pb	07 08 38.8	-0.6
H08S3	Diego Garcia H	0.78	159	Pn	Pb	07 08 42.3	-0.6
H08S3				T	T	07 08 54.7	
	baz=337,slow=21						
H08S1	Diego Carcia H	0.80	160	Pn	Pb	07 08 42.6	-0.5
H08S1				T	T	07 08 55.8	
	baz=337,slow=21						
H08S2	Diego Garcia H	0.80	159	Pn	Pb	07 08 42.7	-0.4
H08S2				T	T	07 08 56.4	
	baz=337,slow=21						
CMAR	Chiang Mai Arr	36.47	46	P	P	07 15 33.6	+1.4
	1.1nm,0.4s,baz=241,slow=11,SNR=3.0						
MATP	Matopo	44.40	248	P	P	07 16 38.9	+0.9
	4.0nm,0.8s,baz=77,slow=8.8,SNR=7.7						
H01W3	Cape Leeuwin H	47.54	132	T	T	08 07 48.4	
	baz=296,slow=75,SNR=192						
H01W2	Cape Leeuwin H	47.54	132	T	T	08 07 48.8	
	baz=296,slow=75,SNR=187						
H01W1	Cape Leeuwin H	47.56	132	T	T	08 07 49.7	
	baz=296,slow=75,SNR=136						
BOSA	Boshof	49.25	238	P	P	07 17 16.1	+0.2
	2.2nm,0.6s,baz=73,slow=9.3,SNR=7.6						
MAKZ	Makanchi	54.16	8	P	P	07 17 51.4	-0.7
MK31	Makanchi Array	54.20	9	P	P	07 17 50.1	-2.2
MK31				IAmb	IAmb	07 17 57.8	
	comp=Z,7.0nm,1.2s						
MKAR	Makanchi Array	54.20	9	P	P	07 17 51.5	-0.8
	comp=Z,2.6nm,1.1s,baz=188,slow=8.7,SNR=15						
ABKAR	Akbulak array	56.93	350	P	P	07 18 10.0	-1.9
ABKAR				IAmb	IAmb	07 18 17.5	
	comp=Z,6.4nm,0.9s						
KBZ	Khabaz	56.94	335	P	P	07 18 12.6	+0.5
	comp=Z,3.8nm,0.8s,baz=189,slow=9.1,SNR=5.3						
KURBB	Kurchatov Arra	57.54	5	P	P	07 18 15.4	-0.8
	comp=Z,4.3nm,0.9s,baz=200,slow=7.1,SNR=4.8						
KURK	Kurchatov	57.64	5	P	P	07 18 15.4	-1.5
KURK	Kurchatov	57.64	5	IAmb	IAmb	07 18 22.5	
	comp=Z,6.1nm,0.9s						
ASAR	Alice Springs	61.37	113	P	P	07 18 43.6	+0.3
	comp=Z,1.5nm,0.7s,baz=277,slow=6.4,SNR=18						
WRA	Warramunga Arr	61.51	109	P	P	07 18 44.8	+0.5
	comp=Z,2.2nm,0.8s,baz=282,slow=6.9,SNR=11						
WB2	Warramunga Arr	61.52	109	P	P	07 18 44.5	+0.1
ZALV	Zalesovo Beam	61.54	8	P	P	07 18 43.4	-0.3
	comp=Z,4.1nm,0.9s,baz=172,slow=12,SNR=4.5						
WB0	Warramunga Arr	61.55	109	P	P	07 18 44.6	+0.1
WR0	Warramunga Arr	61.70	109	P	P	07 18 45.4	-0.2

SONM	Songino Array	62.27	25	P	P	07 18 49.5	+0.6
	comp=Z,3.0nm,1.1s,baz=223,slow=6.3,SNR=6.5						
AKASG	Malin Array Be	68.29	332	P	P	07 19 26.6	-1.1
	comp=Z,2.0nm,0.7s,baz=132,slow=5.6,SNR=11						
AKBB	Malin Array Si	68.29	332	P	P	07 19 27.3	-0.4
STKA	Stephens Creek	68.90	121	P	P	07 19 32.4	+0.3
	comp=Z,2.3nm,0.8s,baz=326,slow=7.1,SNR=4.9						
KLR	Kul'dur	76.12	36	P	P	07 20 14.5	-0.1
	comp=Z,3.9nm,1.0s,baz=287,slow=11,SNR=3.1						
DBIC	Dimbokro	78.05	278	P	P	07 20 25.9	-0.3
	comp=Z,1.6nm,0.9s,baz=79,slow=10,SNR=2.6						
DBIC	Dimbokro	78.05	278	IAmb	IAmb	07 20 51.9	
	comp=Z,8.3nm,1.5s						
NOA	NORSAR Array B	82.52	335	P	P	07 20 51.1	+1.8
	comp=Z,1.1nm,0.8s,baz=54,slow=1.8,SNR=3.5						
ESDC	Sonseca Array	83.83	311	P	P	07 20 57.1	+0.4
	comp=Z,0.9nm,0.9s,baz=82,slow=2.7,SNR=4.2						
YKA	Yellowknife Ar	124.28	4	PKP	PKiKP	07 27 25.1	-0.6
	comp=Z,0.4nm,0.9s,baz=342,slow=3.9,SNR=4.7						
PDAR	Pinedale Array	144.24	2	PKP	PKPdf	07 28 03.8	+0.3
	comp=Z,0.4nm,0.8s,baz=74,slow=2.2,SNR=3.9						
ELK	Elko	145.64	10	PKPbc	PKPab	07 28 06.4	0.0
	comp=Z,1.6nm,0.9s,baz=242,slow=19,SNR=4.4						
NVAR	Mina Array Bea	147.19	15	PKPbc	PKPab	07 28 11.6	-0.8
	comp=Z,1.5nm,0.8s,baz=265,slow=4.5,SNR=10.0						

NNC 07 07:23:39.3±12.0, 37°.01N×70°.44E, h0^{km}, mb3.5, mpv3.1, 1C-3D, Error ellipse: s-maj=131.6km s-min=66.7km az=148.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.09	1	P	Pn	07 25 15.4	+4.9
	0.1nm,0.2s,baz=221,slow=5.5,SNR=9.1						
KK31				⇓S	Sn	07 26 25.2	+4.2
	2.3nm,0.5s,baz=182,slow=24,SNR=3.6						
AAK	Ala-Archa	6.43	28	⇓P	Pn	07 25 16.1	+0.6
	2.8nm,0.5s						
AAK				⇑S	Sn	07 26 29.1	-0.5
	5.2nm,0.7s						
AB31	Akbulak array	14.42	331	P	Pn	07 27 03.4	-1.2
	0.4nm,0.6s,baz=146,slow=12,SNR=9.4						
AKTO	Aktyubinsk	16.11	330	⇓P	Pn	07 27 21.6	-5.5
	1.1nm,0.6s						

IDC 07 08:16:58.6±3.0, 6°.55S×129°.38E, h101^{km}±40^{km}, mb3.2/1, mb1 3.3/5, mb1mx3.1/41, mbtmp3.6/5, Error ellipse: s-maj=65.5km s-min=22.3km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.95	19	P	Pn	08 18 23.9	-0.5
	1.1nm,0.3s,baz=198,slow=20,SNR=3.9						
SIJI				S	Sn	08 19 24.4	-6.7
	1.1nm,0.3s,baz=180,slow=20,SNR=2.9						
FITZ	Fitzroy Crossi	12.04	197	P	Pn	08 19 48.2	+1.3
	0.0nm,0.3s,baz=41,slow=11,SNR=2.4						
FITZ				S	Sn	08 21 55.9	-3.5
	0.2nm,0.3s,baz=210,slow=20,SNR=2.6						
WRA	Warramunga Arr	14.16	161	P	Pn	08 20 15.5	+0.9
	0.2nm,0.3s,baz=337,slow=12,SNR=5.0						
WRA				S	Sn	08 22 33.6	-17
	0.2nm,0.3s,baz=349,slow=20,SNR=4.3						
ASAR	Alice Springs	17.57	166	P	P	08 20 54.9	-1.9
	0.1nm,0.3s,baz=349,slow=9.3,SNR=8.9						
ASAR				S	Sn	08 24 00.0	-13
	0.1nm,0.3s,baz=356,slow=28,SNR=3.4						
MKAR	Makanchi Array	67.52	327	P	P	08 27 44.1	+0.2
	0.3nm,0.5s,baz=113,slow=8.5,SNR=3.9						

IDC 07 08:18:00.4±2.5, 2°.10N×96°.06E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/61, mbtmp3.5/5, ML3.5/2, Error ellipse: s-maj=62.5km s-min=28.0km az=44.0

DJA 07 08:18:00.6±0.6, 2°N±11°×9°7E±3°2, h23^{km}±37^{km}, M3.2/4, MLv3.2/4

ISC 07 08:18:01.8±1.3, 1°.98N±0°.07×96°.58E±0°.07, h28^{km}, n12, σ1^{s}65/12, mb3.4/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.50	329	P	Pn	08 18 12.5	-0.7
SNSI				S	Sn	08 18 20.3	-0.6
GSI	Gunungsitoli	1.20	124	P	Pn	08 18 21.2	-1.5
GSI				S	Sn	08 18 36.7	-1.3
TPTI		1.41	25	P	Pn	08 18 23.8	-1.9
TPTI				S	Sn	08 18 41.8	-1.5
KCSI	Kotacane, Aceh	1.94	38	P	Pn	08 18 31.1	-1.9
PSI	Prapat	2.48	71	Pn	Pb	08 18 48.4	+2.5
	0.7nm,0.3s,baz=180,slow=12,SNR=7.7						
PSI				Sn	Sb	08 19 17.1	+1.1
	1.0nm,0.3s,baz=180,slow=8.8,SNR=4.6						
CMAR	Chiang Mai Arr	16.54	8	Pn	P	08 21 53.4	-1.0
	0.3nm,0.3s,baz=200,slow=10,SNR=3.1						
H08S2	Diego Garcia H	25.86	248	T	T	08 50 18.2	
	baz=69,slow=74,SNR=108						
H08S3	Diego Garcia H	25.86	248	T	T	08 50 16.9	
	baz=69,slow=74,SNR=79						
H08S1	Diego Carcia H	25.88	248	T	T	08 50 21.4	
	baz=69						
WRA	Warramunga Arr	42.97	122	P	P	08 26 05.6	+6.6
	0.5nm,0.6s,baz=301,slow=9.0,SNR=2.1						
MKAR	Makanchi Array	46.35	346	P	P	08 26 25.8	+0.3
	0.4nm,0.5s,baz=160,slow=7.9,SNR=5.4						
KURBB	Kurchatov Arra	50.83	345	P	P	08 27 01.1	+1.2
	0.2nm,0.6s,baz=162,slow=6.7,SNR=3.1						

BJI 07 08:27:24.6±0.0, 8°.64S×158°.58E, h93^{km}, mB5.1/22, mb5.0/29

NOU 07 08:27:25.0, 8°.32S×158°.66E, h79^{km}, mb4.8, Solomon Islands

IDC 07 08:27:26.1±0.4, 8°.52S×159°.01E, h102^{km}±4^{km}, mb4.3/19, mb1 4.5/21, mb1mx4.4/32, mbtmp4.6/21, MS3.2/5, Ms1 3.2/5, ms1mx2.9/32, Error ellipse: s-maj=12.8km s-min=6.9km az=52.0

NEIC 07 08:27:26.3±1.7, 8°.47S±0°.09×159°.0E±0°.1, h103^{km}±5^{km}, mb4.7/74, Error ellipse: s-maj=16.5km s-min=10.4km az=50.0

ISC 07 08:27:26.3±0.4, 8°.44S±0°.05×159°.01E±0°.06, h104^{km}±4^{km}, h104^{km}:pP-P, n232, σ0^{s}93/225, mb4.7/63, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.35	137	P	Pn	08 27 49.7	-1.3
	881nm,0.3s,baz=208,slow=5.2,SNR=143						
HNR				S	Sn	08 28 07.8	-1.9
	2µm,0.3s,baz=239,slow=4.7,SNR=30						
HNR	Honiara	1.35	137	P	Pn	08 27 51.0	0.0
RABL	Rabaul	8.01	301		Pn	08 29 20.6	+0.6
KRVT	Keravat (AS076	8.06	300	LR	LR	08 32 03.2	
	comp=Z,156nm,21.2s,baz=105,slow=34						
SANVU	Saraoutou	10.62	132	Pn	Pn	08 29 54.4	-1.1
SANVU	Saraoutou	10.62	132	P	Pn	08 29 59.0	+3.6
KOUNC	Koumac, New Ca	13.08	158	P	Pn	08 30 31.1	+2.9
PATS	Pohnpei	15.19	357	Pn	Pn	08 30 53.9	-1.4
NOUC	Port Laguerre	15.29	153	P	P	08 31 00.4	+1.3
DZM	Mont Dzumac	15.33	153	P	P	08 31 00.1	+0.5
	0.8nm,0.3s,baz=328,slow=16,SNR=7.7						
DZM	Mont Dzumac	15.33	153	*e*P	Pn	08 30 57.7	+0.5
	62nm,1.4s						
DZM	Mont Dzumac	15.33	153		Pn	08 30 57.9	+0.7
DZM	Mont Dzumac	15.33	153	P	P	08 31 00.8	+1.2
YATNC	Mamie plateau,	15.52	152	P	P	08 31 03.1	+1.4
OUENC	Ouen Island, N	15.81	152	P	P	08 31 06.3	+1.5
COEN	Coen	16.47	249	P	P	08 31 14.1	+1.9
CTA	Charters Tower	16.93	225	P	P	08 31 17.2	0.0
	1.1nm,0.3s,baz=52,slow=12,SNR=14						
CTAO	Charters Tower	16.93	225	P	P	08 31 17.9	+0.7
EIDS	Eidsvold	18.46	203	P	Pn	08 31 34.6	-0.7
JAY	Jayapura	19.14	287	P	P	08 31 40.8	-0.9
	1.7nm,0.3s,baz=119,slow=11,SNR=4.7						
KWAJ	Kwajalein Atol	19.15	27	P	Pn	08 31 43.6	0.0
MSVF	Nonsavu	20.70	118	P	P	08 31 59.8	+1.3
	2.8nm,0.4s,baz=244,slow=11,SNR=4.9						
ARMA	Armidale	22.93	197	P	P	08 32 21.9	+0.1
ARMA				IAmb	IAmb	08 32 23.6	
	comp=Z,38nm,0.8s						
GUMO	Guam	26.00	327	LR	LR	08 42 57.1	
	comp=Z,44nm,21.6s,baz=110,slow=36						
WR0	Warramunga Arr	26.30	242	P	P	08 32 52.0	-0.5
WR0				IAmb	IAmb	08 32 53.0	
	comp=Z,33nm,1.1s						
WB0	Warramunga Arr	26.36	242	P	P	08 32 52.6	-0.4
WB0				IAmb	IAmb	08 32 53.5	
	comp=Z,38nm,1.1s						
WRAB	Tennant Creek	26.46	242	P	P	08 32 53.6	-0.3
WRAB				IAmb	IAmb	08 32 54.2	
	comp=Z,32nm,1.1s						
WB2	Warramunga Arr	26.46	242	P	P	08 32 53.5	-0.4
WB2				IAmb	IAmb	08 32 54.4	
	comp=Z,34nm,1.1s						
WRA	Warramunga Arr	26.47	242	P	P	08 32 53.5	-0.5
	comp=Z,6.8nm,0.3s,baz=66,slow=9.3,SNR=76						
WRA				PcP	PcP	08 36 16.0	-0.7
	comp=Z,2.7nm,0.9s,baz=67,slow=2.4,SNR=5.3						
MTN	Manton Dam	27.74	258	P	P	08 33 05.5	+0.1
MTN				IAmb	IAmb	08 33 14.6	
	comp=Z,29nm,1.1s						
H11S2	WAKE ISLAND Hy	27.81	16	T	T	09 01 56.2	
	baz=198,slow=76,SNR=801						
H11S3	WAKE ISLAND Hy	27.81	16	T	T	09 01 51.6	
	baz=198,slow=76,SNR=650						
H11S1	WAKE ISLAND Hy	27.83	16	T	T	09 01 58.3	
	baz=198,slow=76,SNR=395						
STKA	Stephens Creek	28.39	212	P	P	08 33 10.9	-0.1
	comp=Z,7.0nm,0.5s,baz=44,slow=15,SNR=26						
STKA				LR	LR	08 44 51.5	
	comp=Z,51nm,19.9s,baz=22,slow=37						
STKA	Stephens Creek	28.39	212	P	P	08 33 10.9	-0.1
STKA					pP	08 33 33.5	-0.1
AS31	Alice Springs	28.41	235	P	P	08 33 10.2	-1.1
AS31				IAmb	IAmb	08 33 10.8	
	comp=Z,6.2nm,0.4s						
ASAR	Alice Springs	28.41	235	P	P	08 33 10.2	-1.1
	comp=Z,12nm,0.6s,baz=62,slow=9.6,SNR=202						
ASAR				LR	LR	08 43 59.9	
	comp=Z,51nm,18.3s,baz=33,slow=35						
H11N1	WAKE ISLAND Hy	29.03	15	T	T	09 03 26.0	
	baz=196,slow=76,SNR=180						
H11N3	WAKE ISLAND Hy	29.04	15	T	T	09 03 26.7	
	baz=196,slow=76,SNR=182						
H11N2	WAKE ISLAND Hy	29.05	15	T	T	09 03 27.4	
	baz=196,slow=76,SNR=130						
OUZ	Omahuta	29.82	156	P	P	08 33 23.1	-0.5
OUZ				IAmb	IAmb	08 33 41.4	
	comp=Z,21nm,1.4s						
TOO	Toolangi	31.48	201	P	P	08 33 39.0	+0.7
TOO				IAmb	IAmb	08 33 39.6	
	comp=Z,12nm,0.8s						
BBOO	Buckleboo	32.24	218	P	P	08 33 45.1	+0.1
FITZ	Fitzroy Crossi	33.81	250	LR	LR	08 47 15.8	
	comp=Z,54nm,18.1s,baz=190,slow=35						
FITZ	Fitzroy Crossi	33.81	250	P	P	08 33 57.5	-1.4
URZ	Urewera	33.88	154	P	P	08 33 59.5	+0.4
	comp=Z,3.9nm,0.6s,baz=330,slow=8.1,SNR=1.8						
BKZ	Black Stump Fm	34.39	156	P	P	08 34 02.4	-1.2
BKZ				IAmb	IAmb	08 34 17.0	
	comp=Z,24nm,1.5s						
FORT	Forrest	36.45	228	P	P	08 34 20.6	-0.7
TVO	Taravao	51.10	106	*e*P	P	08 36 18.2	-0.7
	comp=Z,7.0nm,0.8s						
MEH	Mehetia	52.23	106	*e*P	P	08 36 26.7	-0.5
	comp=Z,10.0nm,0.9s						
VAH	Vaihoa	52.56	103	*e*P	P	08 36 29.0	-0.6
	comp=Z,23nm,0.9s						
KSRS	Korea Array	54.13	330	P	P	08 36 41.0	+0.3
	comp=Z,2.0nm,0.8s,baz=143,slow=7.7,SNR=4.6						
NJ2	Nanjing	55.59	318	*e*P	P	08 36 52.2	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	57.82	337	P	P	08 37 08.0	+1.1
	comp=Z,4.0nm,0.9s,baz=157,slow=12,SNR=4.3						
USRK				pP	pP	08 37 33.1	+1.2
	comp=Z,8.8nm,0.8s,baz=144,slow=6.9,SNR=8.3						
PETK	Petropavlovsk-	61.31	359	P	P	08 37 31.0	+0.3
	comp=Z,1.6nm,0.5s,baz=159,slow=7.4,SNR=13						
PETK				pP	pP	08 37 56.4	0.0
	comp=Z,3.6nm,0.7s,baz=166,slow=7.6,SNR=4.1						
XAN	Xi'an	63.52	315	P	P	08 37 45.6	-0.3
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,8.4s						
XAN	Xi'an	63.52	315	P	P	08 37 46.0	+0.1
XAN					pwP	08 38 13.6	+0.2
CMAR	Chiang Mai Arr	65.00	295	P	P	08 37 56.0	+0.2
	comp=Z,2.2nm,0.3s,baz=117,slow=4.9,SNR=12						
CMAR				pP	pP	08 38 21.4	+0.5
	comp=Z,2.6nm,0.8s,baz=111,slow=4.5,SNR=2.1						
HHC	Hu-ho-hao-te	65.63	322	*e*P	P	08 37 59.2	-0.4
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
LZH	Lanzhou	68.14	314	*e*P	P	08 38 17.5	+1.8
LZH				pP	pP	08 38 42.0	+0.9
LZH				sP	sP	08 38 54.6	+2.4
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
VNDA	Vanda	69.07	179	P	P	08 38 20.9	+0.3
	comp=Z,3.1nm,0.8s,baz=339,slow=6.3,SNR=10						
VNDA	Vanda	69.07	179	P	P	08 38 20.9	+0.4
ULN	Ulaanbaatar	72.38	326	P	P	08 38 42.4	+1.1
GTA	Gaotai	72.52	316	P	P	08 38 42.7	+0.4
GTA				pP	pwP	08 39 10.8	+0.4
GTA				pmax	pmax		
	comp=Z,19nm,0.7s						
SONM	Songino Array	72.72	326	P	P	08 38 44.1	+0.9
	comp=Z,19nm,0.7s,baz=141,slow=6.0,SNR=92						
SONM				pP	pP	08 39 10.2	+1.2
	comp=Z,5.5nm,0.7s,baz=134,slow=5.5,SNR=5.3						
TLY	Talaya	76.35	328	P	P	08 39 04.3	+0.2
TLY				IAmb	IAmb	08 39 05.5	
	comp=Z,8.3nm,0.9s						
O22K	Cooper Landing	79.63	23	P	P	08 39 22.3	+0.3
	baz=232						
RC01	Rabbit Creek A	80.01	23	P	P	08 39 24.3	+0.3
	baz=232						
KTH	Kantishna Hill	81.14	20	IAmb	IAmb	08 39 31.4	
	comp=Z,9.0nm,0.8s						
TRF	Thorofare Moun	81.29	21	P	P	08 39 30.4	-0.6
TRF				IAmb	IAmb	08 39 33.7	
	comp=Z,11nm,0.9s						
QSPA	South Pole Qui	81.55	180	P	P	08 39 31.8	-0.6
RND	Reindeer	81.77	21	P	P	08 39 33.8	+0.3
RND				IAmb	IAmb	08 39 35.6	
	comp=Z,10nm,1.1s						
MCK	McKinley	81.94	21	P	P	08 39 33.7	-0.6
	baz=232,SNR=7.9						
M24K	Tolsona, Glenn	81.98	23	P	P	08 39 34.7	+0.1
	baz=235						
NEA2	Nenana	82.43	20	P	P	08 39 36.8	+0.1
	baz=232						
WMQ	Urumqi	82.60	316	*e*P	P	08 39 39.7	+1.5
I23K	Minto, Yukon-K	82.68	20	P	P	08 39 38.1	+0.1
	baz=231						
CCB	Clear Creek Bu	82.89	20	IAmb	IAmb	08 39 39.4	
	comp=Z,9.0nm,1.2s						
TCOL	CIGO, UAF Yank	83.01	20	P	P	08 39 39.6	-0.2
	baz=233						
HDA	Harding Lake	83.05	21	P	P	08 39 39.9	-0.1
	baz=234,SNR=5.2						
HDA	Harding Lake	83.05	21	P	P	08 39 39.9	-0.1
HDA				IAmb	IAmb	08 39 40.8	
	comp=Z,7.2nm,0.8s						
TABL	Table Mountain	83.12	26	P	P	08 39 41.5	+0.8
BARN	Barnard Glacie	83.22	25	P	P	08 39 42.0	+0.9
BARN				IAmb	IAmb	08 39 44.0	
	comp=Z,6.7nm,0.6s						
IL31		83.29	20	IAmb	IAmb	08 39 43.3	
	comp=Z,7.5nm,1.0s						
ILAR	Eielson Array	83.29	20	P	P	08 39 40.9	-0.3
	comp=Z,4.0nm,0.7s,baz=254,slow=4.8,SNR=48						
POKR	Poker Plat Res	83.31	20	P	P	08 39 41.4	+0.1
	baz=233						
L26K	Log Cabin Wild	83.58	23	P	P	08 39 43.3	+0.6
	baz=237						
COLD	Coldfoot	83.73	18	P	P	08 39 44.0	+0.6
	baz=230						
SCRK	Sand Creek	83.87	22	P	P	08 39 44.4	+0.1
	baz=236,SNR=6.3						
A21K	Barrow	84.84	13	P	P	08 39 49.3	+0.4
	baz=224						
A21K	Barrow	84.84	13	IAmb	IAmb	08 39 50.2	
	comp=Z,9.5nm,0.8s						
EGAK	Eagle	85.33	22	P	P	08 39 52.6	+1.2
EGAK				IAmb	IAmb	08 39 53.4	
	comp=Z,6.5nm,0.8s						
L02E	Cave Junction	86.38	47	P	P	08 39 58.4	+1.2
	baz=255						
K02D	Willamette Mer	86.47	46	P	P	08 39 58.8	+1.1
	baz=255						
O02D	Mt. Diablo Mer	86.48	49	P	P	08 39 59.0	+1.1
	baz=256						
I02D	Swisshome	86.70	45	P	P	08 40 00.7	+2.0
	baz=255						
M02C	Callahan	86.73	48	P	P	08 40 00.5	+1.5
	baz=256						
N02D	Trinity Center	86.74	48	P	P	08 40 00.5	+1.4
	baz=256						
YBH	Yreka Blue Hor	86.92	47	P	P	08 40 01.5	+1.5
I03D	Drain, OR	86.95	45	P	P	08 40 01.2	+1.3
	baz=255						
HUMO	Hull Mountain	86.95	46	P	P	08 40 01.7	+1.6
MK31	Makanchi Array	87.12	318	P	P	08 40 00.4	-0.3
MK31				IAmb	IAmb	08 40 01.3	
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	87.12	318	P	P	08 40 00.5	-0.3
	comp=Z,8.0nm,0.7s,baz=98,slow=6.0,SNR=88						
O03E	Paynes Creek	87.25	49	P	P	08 40 02.3	+0.8
	baz=256						
L04D	Klamath Falls	87.33	47	P	P	08 40 03.2	+1.2
	baz=256						
MAKZ	Makanchi	87.33	318	P	P	08 40 01.3	-0.4
MAKZ				IAmb	IAmb	08 40 02.3	
	comp=Z,7.7nm,0.8s						
MAKZ					pP	08 40 25.6	-2.6
PAGB	Antelope Grade	87.43	53	IAmb	IAmb	08 40 06.5	
	comp=Z,7.2nm,0.9s						
SNCC	San Nicolas Is	87.51	56	P	P	08 40 04.5	+1.6
	baz=258						
M04C	Macdoel	87.56	47	P	P	08 40 04.4	+1.3
	baz=256						
AFDM	Forest Hills D	87.56	50	P	P	08 40 03.5	+0.4
AFDM				IAmb	IAmb	08 40 05.2	
	comp=Z,7.5nm,1.2s						
H04D	Lebanon	87.58	45	P	P	08 40 04.1	+1.1
	baz=256						
PKM	Mcpherson Peak	87.61	54	P	P	08 40 04.3	+0.8
	baz=258						
ZALV	Zalesovo Beam	87.61	325	P	P	08 40 01.7	-1.1
	comp=Z,3.0nm,0.6s,baz=109,slow=5.9,SNR=13						
J04D	Umpqua Nationa	87.71	46	P	P	08 40 04.9	+1.0
	baz=256						
SCI2	San Clemente I	88.26	56	P	P	08 40 07.2	+0.8
	baz=259						
J05D	Fort Rock, OR	88.34	46	P	P	08 40 07.8	+1.0
	baz=257						
I05D	Terrebonne, OR	88.51	45	P	P	08 40 08.5	+1.1
	baz=257						
PNTR	Pine Nut	88.64	50	P	P	08 40 07.3	-1.1
PNTR				IAmb	IAmb	08 40 10.8	
	comp=Z,5.0nm,0.8s						
VCNR	Virginia City	88.64	50	P	P	08 40 08.7	+0.3
ISA	Isabella, Lake	88.83	54	P	P	08 40 10.1	+0.9
	baz=259						
MWC	Mount Wilson	88.89	55	P	P	08 40 10.5	+0.9
PAHR	Pah Rah Range	88.93	50	P	P	08 40 09.8	+0.2
PAHR				IAmb	IAmb	08 40 11.9	
	comp=Z,3.8nm,0.8s						
EDW2	Edwards Air Fo	89.07	55	P	P	08 40 11.3	+1.0
	baz=259,SNR=8.9						
BFSC	Mount Baldy Ra	89.22	55	P	P	08 40 11.8	+0.6
	baz=259						
CWC	Cottonwood Cre	89.30	53	P	P	08 40 12.0	+0.6
	baz=259						
RYN	Ryan	89.37	51	P	P	08 40 11.8	+0.1
109C	Camp Elliot, M	89.43	57	P	P	08 40 12.9	+1.0
	baz=260						
LRMC	Laurel Mtn Rad	89.43	54	P	P	08 40 13.2	+1.1
	baz=259						
MURC	Murrieta	89.48	56	P	P	08 40 13.5	+1.3
	baz=260						
NVAR	Mina Array Bea	89.50	51	P	P	08 40 14.1	+1.6
	comp=Z,2.6nm,0.8s,baz=238,slow=6.2,SNR=17						
KDJ	Kajisay	89.59	313	P	P	08 40 11.9	-0.8
NV11	Mina Array Sit	89.62	51	P	P	08 40 13.0	+0.1
NV11				IAmb	IAmb	08 40 15.2	
	comp=Z,4.9nm,1.1s						
INK	Inuvik	89.67	20	P	P	08 40 12.4	+0.2
	comp=Z,1.3nm,0.5s,baz=292,slow=6.7						
MPMC	Manual Prospec	89.69	54	P	P	08 40 14.4	+1.1
	baz=259						
KSH	Kashi	89.98	310	P	P	08 40 16.5	+2.0
KSH				pmax	pmax		
	comp=Z,18nm,1.2s						
KSH				pmax	pmax		
	comp=Z,450nm,5.7s						
MONP2	Monument Peak	90.00	57	P	P	08 40 16.0	+1.2
	baz=260,SNR=6.6						
PFO	Pinyon Flats O	90.09	56	P	P	08 40 16.1	+0.9
	baz=260						
TPFO	Pinon Flats	90.09	56	P	P	08 40 15.9	+0.7
	baz=260						
GSC	Goldstone, Bar	90.11	54	P	P	08 40 16.2	+1.1
	baz=260						
IKP	In-Ko-Pah, Jac	90.22	57	P	P	08 40 16.6	+0.9
	baz=260						
ESJX	Sierra Juarez	90.24	58	P	P	08 40 16.3	+0.3
ESJX				IAmb	IAmb	08 40 18.1	
	comp=Z,5.4nm,1.1s						
FURC	Furnace Creek,	90.27	53	P	P	08 40 16.7	+1.0
	baz=260,SNR=8.7						
HEC	Hector,Ludlow	90.40	55	P	P	08 40 17.6	+1.0
	baz=260						
KURK	Kurchatov	90.43	321	P	P	08 40 15.0	-1.1
KURK				IAmb	IAmb	08 40 16.1	
	comp=Z,9.8nm,1.2s						
SWSC	Sam W. Stewart	90.52	57	P	P	08 40 18.1	+1.1
	baz=260						
BELC	Belle Mtn. Jos	90.54	56	P	P	08 40 18.1	+0.8
	baz=260,SNR=9.8						
SHOC	Shoshone, Teco	90.64	54	P	P	08 40 18.3	+0.8
	baz=260						
TPNV	Topopah Spring	90.83	53	P	P	08 40 19.8	+1.2
	baz=260,SNR=6.7						
TPNV	Topopah Spring	90.83	53	IAmb	IAmb	08 40 20.9	
	comp=Z,5.2nm,0.8s						
BC3	Big Chuckawall	90.93	56	P	P	08 40 19.9	+0.8
	baz=260						
GMRC	Granite Mounta	90.94	55	P	P	08 40 19.9	+0.7
	baz=260,SNR=8.4						
IRM	Iron Mountain	91.26	56	P	P	08 40 21.3	+0.8
	baz=261,SNR=6.6						
NRIK	Noril'sk	91.41	340	P	P	08 40 19.8	-0.5
	comp=Z,0.9nm,0.5s,baz=96,slow=5.7,SNR=2.0						
BMO	Blue Mountains	91.43	45	P	P	08 40 21.3	+0.2
BMO				IAmb	IAmb	08 40 22.5	
	comp=Z,3.8nm,0.7s						
R11A	Troy Canyon, C	91.59	52	P	P	08 40 23.1	+1.0
	baz=260,SNR=7.7						
R11A	Troy Canyon, C	91.59	52	P	P	08 40 22.6	+0.5
R11A				IAmb	IAmb	08 40 24.5	
	comp=Z,3.3nm,0.9s						
SHPR	Sheep Range	91.62	54	IAmb	IAmb	08 40 25.0	
	comp=Z,4.4nm,1.0s						
AAK	Ala-Archa	91.64	313	P	P	08 40 22.1	-0.1
AAK				IAmb	IAmb	08 40 22.7	
	comp=Z,2.7nm,0.7s						
F10A	Beach Ranch, E	91.69	44	P	P	08 40 22.3	0.0
PRN	Pahroc Range	91.86	53	P	P	08 40 24.8	+1.5
NEW	Newport	92.17	42	P	P	08 40 24.7	+0.4
	baz=260						
ELK	Elko	92.24	49	P	P	08 40 25.9	+0.7
W13A	Hualapai Mount	92.43	55	IAmb	IAmb	08 40 28.7	
	comp=Z,3.1nm,0.8s						
C36M	Paulatuk	93.26	20	P	P	08 40 29.2	+0.4
	baz=255						
C36M	Paulatuk	93.26	20	P	P	08 40 28.7	-0.1
HLID	Hailey	93.28	47	P	P	08 40 31.1	+1.4
	baz=262						
HLID	Hailey	93.28	47	IAmb	IAmb	08 40 32.0	
	comp=Z,5.0nm,1.1s						
HVU	Hansel Valley	94.23	49	P	P	08 40 35.8	+1.6
BOZ	Bozeman (W)	95.51	45	P	P	08 40 40.6	+0.7
	baz=264						
YKA	Yellowknife Ar	95.75	28	P	P	08 40 40.5	+0.2
	comp=Z,2.9nm,0.8s,baz=254,slow=4.1,SNR=52						
YKA				pP	pP	08 41 06.6	-1.0
	comp=Z,1.6nm,0.8s,baz=254,slow=4.2,SNR=6.9						
BRVK	Borovoye	95.91	323	P	P	08 40 39.9	-1.4
BW06	Boulder Array	96.71	48	P	P	08 40 45.7	+0.2
	baz=265						

PDAR	Pinedale Array	96.71	48	P	P	08 40 46.0	+0.5
	comp=Z,1.8nm,0.8s,baz=235,slow=2.6,SNR=15						
PDAR				pP	pP	08 41 13.6	+0.8
	comp=Z,0.9nm,0.8s,baz=240,slow=3.1,SNR=4.2						
LAO	LASA Array	99.34	44	P	Pdif	08 40 57.5	+0.5
	baz=268						
R55A	Marlinton	119.30	51	P	PKPdf	08 46 02.9	-1.1
	baz=283						
BLA	Blacksburg	119.31	52	P	PKPdf	08 46 03.0	-1.0
	baz=282						
Q56A	Snyder Ridge,	119.83	50	P	PKiKP	08 46 05.1	+0.2
	baz=284						
Z57A	Bowman	119.83	56	P	PKPdf	08 46 03.9	-1.1
	baz=280						
O56A	Blue Knob Stat	119.98	48	P	PKPdf	08 46 04.3	-0.9
	baz=285						
W57A	Gilead	120.07	54	P	PKPdf	08 46 04.3	-1.1
	baz=282						
U57A	Blanch	120.32	53	P	PKPdf	08 46 04.7	-1.2
	baz=283						
Y58A	Scranton	120.58	56	P	PKPdf	08 46 06.1	-0.3
	baz=281						
N57A	Milroy	120.59	47	P	PKPdf	08 46 05.5	-0.7
	baz=286						
V58A	Windy Hill, Pi	120.64	53	P	PKPdf	08 46 05.8	-0.7
	baz=282						
W58A	Raeford	120.70	54	P	PKiKP	08 46 06.5	-0.3
	baz=282						
M57A	Sunshine Farm,	120.73	47	P	PKPdf	08 46 05.5	-1.0
	baz=287						
L57A	Andrews Acres	120.73	46	P	PKPdf	08 46 05.5	-1.1
	baz=288						
T58A	Grand View Acr	120.83	52	P	PKPdf	08 46 05.5	-1.4
	baz=284						
R58A	Rapidan	120.91	50	P	PKPdf	08 46 06.3	-0.7
	baz=285						
Q58A	Fox Den Farm,	120.99	49	P	PKPdf	08 46 06.2	-0.9
	baz=285						
AKASG	Malin Array Be	121.00	325	PKP	PKPdf	08 46 05.5	-1.3
	comp=Z,2.1nm,0.6s,baz=49,slow=2.6,SNR=9.1						
N58A	Sunbury	121.17	47	P	PKPdf	08 46 06.7	-0.7
	baz=287						
O58A	Lewisberry	121.23	48	P	PKPdf	08 46 06.7	-0.9
	baz=287						
X59A	McDuffie Farm,	121.31	55	P	PKPdf	08 46 06.8	-1.0
	baz=282						
O59A	Robesonia	121.72	48	P	PKPdf	08 46 08.0	-0.4
	baz=287						
X60A	Albert Glenn T	121.81	55	P	PKPdf	08 46 07.8	-1.0
	baz=282						
N59A	State Game Lan	121.83	47	P	PKPdf	08 46 08.0	-0.7
	baz=288						
M59A	Waymart	121.88	46	P	PKPdf	08 46 07.9	-0.9
	baz=289						
S60A	Water View	122.10	51	P	PKPdf	08 46 08.5	-0.7
	baz=285						
V60A	Jim Taylor Roa	122.11	53	P	PKPdf	08 46 08.4	-0.8
	baz=284						
O60A	Telford	122.28	47	P	PKPdf	08 46 08.8	-0.7
	baz=288						
NB2	NORSAR Subarra	122.33	342	PKPdf	PKPdf	08 46 07.9	-1.1
	comp=Z,1.1nm,0.8s,baz=36,slow=1.6						
Q60A	Greensboro	122.35	49	P	PKPdf	08 46 09.1	-0.5
	baz=287						
N61A	South Mountain	122.95	47	P	PKPdf	08 46 09.9	-0.8
	baz=289						
L61A	Hillsdale 1, H	122.98	45	P	PKPdf	08 46 10.2	-0.6
	baz=290						
K61A	Williamstown	123.02	44	P	PKPdf	08 46 10.6	-0.3
	baz=291						
PAL	Palisades	123.14	46	P	PKPdf	08 46 10.2	-0.9
	baz=290						
E61A	Lac Etchemin	123.34	39	P	PKPdf	08 46 10.9	-0.5
	baz=296						
J62A	Henniker	123.80	43	P	PKPdf	08 46 11.1	-1.3
	baz=293						
D63A	Stockholm	124.53	37	P	PKiKP	08 46 13.6	-0.3
	baz=298						
H64A	Troy	124.93	40	P	PKPdf	08 46 14.2	-0.2
	baz=296						
F64A	Sherman	124.93	39	P	PKPdf	08 46 14.2	-0.2
	baz=297						
GERES	GERESS Array B	130.30	330	PKP	PKPdf	08 46 24.6	-0.1
	comp=Z,1.0nm,0.7s,baz=58,slow=3.3,SNR=5.9						
DAVOX	Davos/Dischmat	133.59	331	PKP	PKPdf	08 46 31.1	-0.1
	comp=Z,1.9nm,0.5s,baz=59,slow=5.9,SNR=3.9						
BDFB	Brasilia	144.10	132	PKP	PKPab	08 46 48.4	-0.4
	comp=Z,1.4nm,0.3s,baz=313,slow=2.0,SNR=4.0						
PBRG	Braganca	144.46	342	*e*PKP	PKPbc	08 46 49.7	+0.1
PGAV	Gavieira, Arco	144.77	343	*e*PKP	PKPdf	08 46 51.0	-0.5
MVO	Moncorvo	145.13	341	*e*PKP	PKPdf	08 46 52.2	+0.1
POLO	Lamas de Olo	145.17	342	*e*PKP	PKPdf	08 46 52.6	+0.4
PVRL	Vila Real	145.24	342	*e*PKP	PKPab	08 46 52.5	+0.2
ESDC	Sonseca Array	145.36	337	PKPbc	PKPab	08 46 52.9	+0.1
	comp=Z,9.4nm,0.9s,baz=13,slow=3.8,SNR=37						
PVIS	Viseu	145.81	342	*e*PKP	PKPab	08 46 54.4	0.0
MTE	Manteigas	145.99	341	*e*PKP	PKPab	08 46 55.1	0.0
PCBR	Castelo Branco	146.47	341	*e*PKP	PKPab	08 46 56.3	-0.6
PMRV	Marv??o	146.82	341	*e*PKP	PKPab	08 46 57.8	-0.5
PMTG	Montargil	147.41	341	*e*PKP	PKPbc	08 46 58.6	+0.1
EVO	Evora	147.84	341	*e*PKP	PKPbc	08 47 00.1	+0.4
PNCL	Nicolau / Gran	148.38	341	*e*PKP	PKiKP	08 47 01.7	-1.0
PCVE	Castro Verde	148.66	340	*e*PKP	PKiKP	08 47 02.5	-0.8
PFVI	Vila Bisbo	149.37	341	*e*PKP	PKPbc	08 47 03.3	-0.3
MDT	Midelt	151.39	330	PKPbc	PKiKP	08 47 09.1	-0.1
	comp=Z,5.2nm,0.9s,baz=51,slow=1.8,SNR=8.4						
MDT				PKPab	PKPab	08 47 16.2	-0.9
	comp=Z,3.9nm,0.8s,baz=32,slow=12,SNR=7.4						
TORD	Torodi Ar. Bea	157.24	284	PKPab	PKPab	08 47 41.6	-0.9
	comp=Z,0.8nm,0.8s,baz=76,slow=3.6,SNR=3.2						

IDC 07 08:36:43.9±3.5**, 6°.40S**×**148°.76E, h0**^{km}**, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.4**/34**, mbtmp3.5**/4**, ML2.6**/2**, Error ellipse: s-maj=103.3km s-min=34.9km az=110.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.38	208	Pn	Pn	08 37 39.6	+1.6
	6.5nm,0.3s,baz=326,slow=6.8,SNR=11						
PMG				Sn	Sn	08 38 18.7	-0.2
	18nm,0.3s,baz=318,slow=23,SNR=12						
WRA	Warramunga Arr	19.43	225	P	P	08 41 12.6	+0.5
	0.1nm,0.3s,baz=50,slow=11,SNR=3.4						
ASAR	Alice Springs	22.34	218	P	P	08 41 42.9	-0.7
	0.4nm,0.5s,baz=56,slow=9.4,SNR=5.8						
FITZ	Fitzroy Crossi	25.37	241	P	P	08 42 13.0	-0.1
	6.9nm,1.1s,baz=54,slow=14,SNR=3.0						
TORD	Torodi Ar. Bea	146.89	284	PKPbc	PKPbc	08 56 28.5	-0.9
	0.5nm,0.4s,baz=56,slow=3.3,SNR=3.3						

IDC ***07*** *09:01:07.6±1.6, 22°.23N×142°.98E, h192*^{km}*±14*^{km}*, mb4.0/20, mb1 4.1/22, mb1mx3.9/42, mbtmp4.5/22, Error ellipse: s-maj=15.5km s-min=9.1km az=92.0*

NEIC ***07*** *09:01:08.0±1.2, 22°.19N±0°.09×143°.0E±0°.1, h194*^{km}*±7*^{km}*, mb4.5/82, Error ellipse: s-maj=18.9km s-min=12.4km az=84.0*

ISC 07 09:01:08.4±0.4**, 22°.23N**±0°.06×**142°.99E**±0°.09**, h200**^{km}**, n196, σ0^{s}83**/201**, mb4.5**/66**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	4.90	352	P	Pn	09 02 21.0	-0.6
	160nm,0.3s,baz=91,slow=10,SNR=23						
JCJ				S	Sn	09 03 16.1	-3.2
	22nm,0.3s,baz=270,slow=20,SNR=2.1						
JCJ	Chichijima	4.90	352	Pn	Pn	09 02 21.2	-0.3
JMN	Monobe	13.99	327	P	P	09 04 20.3	+0.2
INU	Inuyama	14.08	340	P	Pn	09 04 19.8	+0.5
JYT	Yasato	14.16	351	Pn	Pn	09 04 19.5	-0.8
JGF	Kuroka	14.20	341	Pn	Pn	09 04 20.2	-0.7
JWT	Wachi	14.60	335	Pn	Pn	09 04 25.1	-0.6
MJAR	Matsushiro Arr	14.86	345	P	Pn	09 04 28.1	-0.8
	0.3nm,0.3s,baz=167,slow=9.6,SNR=9.0						
MAJO	Matsushiro	14.86	345		Pn	09 04 29.0	+0.1
MAT	Matsushiro	14.86	345	P	Pn	09 04 27.5	-1.4
MAT				*e*S	S	09 07 14.2	+0.3
JMM	Marumori	15.70	354	P	P	09 04 38.7	-0.3
JTM	Tenmabayashi	18.58	355	P	P	09 05 10.5	+0.1
YHNB	Yeheng	19.97	281	P	P	09 05 25.4	-0.3
KSRS	Korea Array	19.98	323	P	Pn	09 05 28.9	-1.0
	1.3nm,0.3s,baz=145,slow=8.7,SNR=28						
JEW	Eniwo	20.60	357	P	P	09 05 32.2	+0.2
JKA	Kamikawa-asahi	21.83	359	P	P	09 05 45.9	+1.0
ASAJ	Asahikawa	21.84	359	P	P	09 05 46.3	+1.4
	12nm,0.4s,baz=105,slow=19,SNR=2.5						
NJ2	Nanjing	23.55	300	*e*P	P	09 06 00.7	-0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MDJ	Mudanjiang	24.91	337	P	P	09 06 14.1	+1.1
MDJ				pmax	pmax		
	comp=Z,14nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.7s						
RABL	Rabaul	27.75	160		S	09 11 02.6	-3.9
KLR	Kul'dur	28.38	344	P	P	09 06 44.5	+0.5
	comp=Z,7.9nm,0.6s,baz=161,slow=6.7,SNR=42						
HHC	Hu-ho-hao-te	32.34	312	*e*P	P	09 07 19.6	+0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,280nm,5.2s						
LZH	Lanzhou	36.62	301	*e*P	P	09 07 55.9	+0.1
LZH				pP	pP	09 08 31.6	-5.2
LZH				sP	sP	09 08 55.3	-4.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	Songino Array	38.82	320	P	P	09 08 14.5	+0.5
	comp=Z,1.2nm,0.4s,baz=146,slow=8.8,SNR=16						
GTA	Gaotai	40.42	305	*e*P	P	09 08 28.2	+0.8
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	41.18	7	P	P	09 08 34.1	+1.1
	comp=Z,4.5nm,0.5s,baz=192,slow=8.6,SNR=28						
WB0	Warramunga Arr	42.57	192	P	P	09 08 44.7	-0.1
WB2	Warramunga Arr	42.75	192	P	P	09 08 46.2	-0.1
WB2				IAmb	IAmb	09 08 48.7	
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	42.75	192	P	P	09 08 45.9	-0.5
	comp=Z,0.9nm,0.3s,baz=17,slow=8.8,SNR=24						
FITZ	Fitzroy Crossi	43.52	204	P	P	09 08 52.3	-0.1
	comp=Z,2.4nm,0.5s,baz=32,slow=10,SNR=1.8						
FITZ	Fitzroy Crossi	43.52	204	P	P	09 08 52.4	-0.1
FITZ				IAmb	IAmb	09 09 18.5	
	comp=Z,30nm,1.4s						
ATKA	Atka Island	44.38	37	P	P	09 08 59.0	+0.1
AS31	Alice Springs	46.46	192	P	P	09 09 16.4	+0.8
ASAR	Alice Springs	46.46	192	P	P	09 09 15.1	-0.6
	comp=Z,0.6nm,0.3s,baz=12,slow=6.8,SNR=22						
ASAR				ScP	ScP	09 14 21.2	0.0
	comp=Z,0.6nm,0.8s,baz=14,slow=3.8,SNR=5.5						
UNV	Unalaska Valle	49.30	37	P	P	09 09 36.8	-0.1
AKUT	Akutan	49.80	37	P	P	09 09 40.7	0.0
WMQ	Urumqi	50.10	309	*e*P	P	09 09 44.6	+1.3
TIXI	Tiksi	50.11	354	P	P	09 09 42.8	0.0
ZAA0	Zalesovo Array	53.68	321	P	P	09 10 09.9	+0.5
ZAA0				IAmb	IAmb	09 10 10.4	
	comp=Z,10nm,1.4s						
ZALV	Zalesovo Beam	53.68	321	P	P	09 10 09.4	0.0
	comp=Z,4.5nm,0.6s,baz=109,slow=7.5,SNR=19						
ZALV				PcP	PcP	09 11 11.7	-1.3
	comp=Z,0.9nm,0.4s,baz=120,slow=5.2,SNR=3.0						
STKA	Stephens Creek	53.81	181	P	P	09 10 11.2	+0.6
	comp=Z,3.0nm,0.6s,baz=360,slow=7.7,SNR=9.5						
STKA	Stephens Creek	53.81	181	P	P	09 10 10.0	-0.6
ANM	Nome	54.02	25	P	P	09 10 12.4	+0.7
ANM				IAmb	IAmb	09 10 35.5	
	comp=Z,17nm,1.4s						
MK31	Makanchi Array	54.21	312	P	P	09 10 13.7	+0.3
MKAR	Makanchi Array	54.21	312	P	P	09 10 14.2	+0.8
	comp=Z,2.4nm,0.6s,baz=87,slow=8.8,SNR=26						
MKAR				PcP	PcP	09 11 14.9	-0.3
	comp=Z,1.8nm,0.6s,baz=83,slow=5.6,SNR=11						
MAKZ	Makanchi	54.42	312	P	P	09 10 15.3	+0.3
MAKZ				IAmb	IAmb	09 10 16.6	
	comp=Z,10nm,1.4s						
CHGN	Chignik	54.46	36	P	P	09 10 14.0	-0.9
RDOG	Red Dog Mine	56.45	21	P	P	09 10 30.1	+1.1
RDOG				IAmb	IAmb	09 10 31.1	
	comp=Z,9.7nm,0.9s						
KURK	Kurchatov	56.97	317	P	P	09 10 33.0	+0.1
KURK				IAmb	IAmb	09 10 33.7	
	comp=Z,8.8nm,1.0s						
NRIK	Noril'sk	57.44	340	P	P	09 10 35.8	-0.1
	comp=Z,3.3nm,0.5s,baz=104,slow=8.7,SNR=12						
NRIK	Noril'sk	57.44	340	P	P	09 10 35.7	-0.3
KDAK	Kodiak Island	57.87	35	P	P	09 10 39.3	+0.2
	comp=Z,9.1nm,0.4s,baz=277,slow=3.1,SNR=21						
KDAK	Kodiak Island	57.87	35	P	P	09 10 39.3	+0.2
BOOM	Boomskoye usch	58.64	307	P	P	09 10 46.2	+1.2
BOOM				IAmb	IAmb	09 10 46.8	
	comp=Z,9.4nm,0.6s						
KSH	Kashi	58.78	304	P	P	09 10 49.9	+4.0
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,4.6s						
AAK	Ala-Archa	59.70	307	P	P	09 10 52.6	+0.4
A21K	Barrow	59.77	19	P	P	09 10 52.8	+0.9
	baz=249						
A21K	Barrow	59.77	19	P	P	09 10 53.3	+1.4
BPAW	Bear Paw Mtn.	59.79	28	P	P	09 10 53.1	+0.9
RC01	Rabbit Creek A	59.83	31	P	P	09 10 52.7	+0.1
	baz=261						
TRF	Thorofare Moun	59.97	28	P	P	09 10 53.7	0.0
TRF				IAmb	IAmb	09 10 54.5	
	comp=Z,13nm,0.9s						
MLY	Manley	60.08	27	P	P	09 10 53.4	-0.9
	baz=258						
MCK	McKinley	60.61	28	P	P	09 10 57.9	0.0
	baz=261						
I23K	Minto, Yukon-K	60.68	27	P	P	09 10 58.9	+0.7
	baz=259						
NEA2	Nenana	60.70	27	P	P	09 10 58.6	+0.2
	baz=260						
COLD	Coldfoot	60.76	24	P	P	09 10 59.5	+0.7
	baz=257						
COLD	Coldfoot	60.76	24	P	P	09 11 00.3	+1.6
COLD				IAmb	IAmb	09 11 01.0	
	comp=Z,7.5nm,1.0s						
ARSB	Arslanbob	60.92	306	P	P	09 11 01.6	+1.1
MDM	Murphy Dome	61.12	27	P	P	09 11 01.3	+0.1
CCB	Clear Creek Bu	61.25	27	P	P	09 11 01.7	-0.3
CCB				IAmb	IAmb	09 11 02.3	
	comp=Z,13nm,1.4s						
POKR	Poker Plat Res	61.48	27	P	P	09 11 03.2	-0.4
	baz=261						
HDA	Harding Lake	61.58	28	P	P	09 11 03.9	-0.4
	baz=262						
HDA	Harding Lake	61.58	28	P	P	09 11 03.8	-0.4
HDA				IAmb	IAmb	09 11 05.3	
	comp=Z,5.6nm,0.7s						
IL31		61.66	27	P	P	09 11 04.0	-0.7
IL31				IAmb	IAmb	09 11 04.8	
	comp=Z,7.9nm,0.6s						
ILAR	Eielson Array	61.66	27	P	P	09 11 04.0	-0.8
	comp=Z,5.6nm,0.6s,baz=260,slow=5.4,SNR=104						
BRVK	Borovoye	62.22	319	P	P	09 11 09.1	+0.3
BRVK				IAmb	IAmb	09 11 09.8	
	comp=Z,8.4nm,0.9s						
N25K	Chitina, Valde	62.35	31	P	P	09 11 10.1	+0.6
	baz=266						
KK31	Karatay Array	62.59	308	P	P	09 11 12.2	+0.8
KK31				IAmb	IAmb	09 11 12.8	
	comp=Z,7.7nm,0.8s						
KKAR	Karatay Array	62.59	308	P	P	09 11 12.5	+1.1
KKAR				IAmb	IAmb	09 11 12.8	
	comp=Z,7.7nm,0.8s						
GLB	Gilahina Butte	62.71	31	P	P	09 11 12.6	+0.7
GLB				IAmb	IAmb	09 11 12.9	
	comp=Z,6.2nm,0.7s						
SCRK	Sand Creek	62.82	28	P	P	09 11 13.0	+0.3
	baz=265						
VRDI	Verde Repeater	62.87	31	P	P	09 11 13.6	+0.4
VRDI				IAmb	IAmb	09 11 14.3	
	comp=Z,12nm,1.0s						
CRQM	Cirque	63.00	32	P	P	09 11 14.6	+0.5
L26K	Log Cabin Wild	63.03	29	P	P	09 11 14.7	+0.8
	baz=266						
MCARA	McCarthy VSAT	63.09	31	P	P	09 11 14.8	+0.5
MCARA				IAmb	IAmb	09 11 15.8	
	comp=Z,11nm,0.8s						
ISLE	Juniper Island	63.39	32	P	P	09 11 16.9	+0.4
BALM	Baldy	63.40	32	P	P	09 11 16.8	+0.3
BALM				IAmb	IAmb	09 11 17.4	
	comp=Z,10.0nm,0.7s						
OUZ	Omahuta	64.09	152	P	P	09 11 23.0	+1.9
EGAK	Eagle	64.10	28	P	P	09 11 21.2	+0.3
EGAK				IAmb	IAmb	09 11 22.9	
	comp=Z,4.5nm,0.6s						
KBL	Kabul	64.92	299	P	P	09 11 27.0	0.0
KBL				IAmb	IAmb	09 11 28.0	
	comp=Z,8.4nm,0.8s						
WHY	Whitehorse	67.06	32	P	P	09 11 41.2	+1.2
WHY				IAmb	IAmb	09 11 41.9	
	comp=Z,6.5nm,0.8s						
INK	Inuvik	67.16	24	P	P	09 11 40.3	0.0
INK				IAmb	IAmb	09 11 41.2	
	comp=Z,7.5nm,0.7s						
BKZ	Black Stump Fm	68.65	153	P	P	09 11 49.9	-0.2
BKZ				IAmb	IAmb	09 12 00.6	
	comp=Z,21nm,1.4s						
ARU	Arti	68.73	324	P	P	09 11 50.5	+0.1
ARU				IAmb	IAmb	09 11 50.7	
	comp=Z,6.0nm,0.6s						
ABKAR	Akbulak array	69.04	316	P	P	09 11 52.3	-0.1
ABKAR				IAmb	IAmb	09 11 53.0	
	comp=Z,5.4nm,0.7s						
NNZ	Nelson	69.14	156	P	P	09 11 52.5	-0.4
C36M	Paulatuk	70.44	22	P	P	09 12 00.4	-0.2
	baz=281						
C36M	Paulatuk	70.44	22	P	P	09 12 00.4	-0.2
C36M				IAmb	IAmb	09 12 01.1	
	comp=Z,5.8nm,0.8s						
YKA	Yellowknife Ar	76.08	28	P	P	09 12 33.6	-0.1
	comp=Z,4.5nm,0.4s,baz=296,slow=4.8,SNR=179						
E03A	Lebam	76.49	45	P	P	09 12 37.3	+1.0
D03D	Eldon	76.49	44	P	P	09 12 37.2	+0.9
	baz=288,SNR=6.2						
B05A	Bryant	76.90	43	P	P	09 12 38.9	+0.3
	baz=289,SNR=5.4						
I02D	Swisshome	77.06	48	P	P	09 12 40.4	+0.9
	baz=288						
G03D	McMinnville, O	77.10	46	P	P	09 12 40.8	+1.1
	baz=288						
E04D	Cinebar	77.14	45	P	P	09 12 41.2	+1.3
	baz=289						
J01E	Myrtle Point	77.30	49	P	P	09 12 41.6	+0.7
	baz=288						
I03D	Drain, OR	77.53	48	P	P	09 12 43.0	+0.8
	baz=289						
K02D	Willamette Mer	77.63	49	P	P	09 12 43.5	+0.6
	baz=289						
H04D	Lebanon	77.68	47	P	P	09 12 43.7	+0.7
	baz=289						
L02E	Cave Junction	77.85	49	P	P	09 12 44.7	+0.7
	baz=289						
H04A	Detroit Lake	78.00	47	P	P	09 12 45.8	+1.0
H04A				IAmb	IAmb	09 12 46.4	
	comp=Z,7.0nm,0.8s						
LTY	Liberty	78.14	44	P	P	09 12 46.0	+0.4
I04A	Tendick Farm,	78.14	48	P	P	09 12 45.8	+0.2
	baz=289,SNR=7.5						
HUMO	Hull Mountain	78.16	49	P	P	09 12 47.1	+1.4
HUMO				IAmb	IAmb	09 12 49.1	
	comp=Z,4.5nm,0.6s						
ARCES	ARCESS Array B	78.36	341	P	P	09 12 46.0	-0.3
	comp=Z,1.2nm,0.3s,baz=69,slow=6.6,SNR=54						
J04D	Umpqua Nationa	78.53	48	P	P	09 12 48.3	+0.3
	baz=290,SNR=6.7						
B08A	Colville Reser	78.60	42	P	P	09 12 48.6	+0.5
B08A				IAmb	IAmb	09 12 49.3	
	comp=Z,10nm,0.8s						
M02C	Callahan	78.63	50	P	P	09 12 49.1	+0.7
	baz=290						
KCPM	Cahto Peak	78.67	52	P	P	09 12 50.0	+1.3
L04D	Klamath Falls	78.74	49	P	P	09 12 49.8	+0.7
	baz=290						
N02D	Trinity Center	78.88	50	P	P	09 12 50.6	+0.9
	baz=290						
E07A	Sunnyside	78.90	44	P	P	09 12 50.9	+1.2
E07A				IAmb	IAmb	09 12 51.0	
	comp=Z,5.1nm,0.6s						
K04D	Chiloquin, OR	78.99	48	P	P	09 12 50.9	+0.5
	baz=290						
O02D	Mt. Diablo Mer	79.08	51	P	P	09 12 51.9	+1.0
	baz=290						
J05D	Fort Rock, OR	79.12	48	P	P	09 12 51.9	+0.8
	baz=290						
WDC	Whiskeytown Da	79.13	51	P	P	09 12 51.8	+0.8
O03E	Paynes Creek	79.75	51	P	P	09 12 54.6	+0.1
	baz=290						
NEW	Newport	80.01	42	P	P	09 12 56.0	+0.3
	baz=292						
NEW	Newport	80.01	42	P	P	09 12 55.9	+0.3
NEW				IAmb	IAmb	09 12 56.9	
	comp=Z,6.7nm,0.9s						
E09A	Wood Farm, Sta	80.02	44	P	P	09 12 56.7	+1.1
E09A				IAmb	IAmb	09 12 57.7	
	comp=Z,7.3nm,1.0s						
AFDM	Forest Hills D	80.83	52	P	P	09 13 00.9	+0.8
BEKR	Beckworth	80.94	51	P	P	09 13 01.6	+0.6
BEKR				IAmb	IAmb	09 13 02.1	
	comp=Z,5.3nm,0.7s						
BMO	Blue Mountains	81.19	45	P	P	09 13 02.6	+0.5
CMB	Columbia Colle	81.59	52	P	P	09 13 05.0	+0.8
CMB				IAmb	IAmb	09 13 05.5	
	comp=Z,7.0nm,0.6s						
WALA	Waterton Lakes	81.66	40	P	P	09 13 05.7	+1.2
WALA				IAmb	IAmb	09 13 06.4	
	comp=Z,6.7nm,0.6s						
KBZ	Khabaz	81.87	314	P	P	09 13 06.2	+0.8
	comp=Z,9.7nm,0.8s,baz=148,slow=7.4,SNR=12						
FINES	FINESS Array B	82.63	334	P	P	09 13 07.7	-1.4
	comp=Z,1.3nm,0.3s,baz=61,slow=4.8,SNR=23						
RYN	Ryan	82.72	51	P	P	09 13 10.6	+0.3
NVAR	Mina Array Bea	82.96	51	P	P	09 13 12.3	+0.7
	comp=Z,3.7nm,0.6s,baz=274,slow=5.6,SNR=46						
PKM	Mcpherson Peak	83.19	55	P	P	09 13 12.9	+0.2
	baz=292						
VES	Vestal, Richgr	83.38	54	P	P	09 13 13.4	0.0
	baz=293						
TIN	Tinemaha, Big	83.54	53	P	P	09 13 15.2	+0.8
	baz=293						
HLID	Hailey	83.61	46	P	P	09 13 15.0	+0.2
	baz=295						
HLID	Hailey	83.61	46	P	P	09 13 15.4	+0.7
CWC	Cottonwood Cre	83.89	53	P	P	09 13 16.3	0.0
	baz=293						
ISA	Isabella, Lake	83.90	54	P	P	09 13 15.8	-0.5
	baz=293						
HRY	Holter Researc	83.92	42	P	P	09 13 17.0	+0.9
LRM	Limekiln Ridge	83.92	43	P	P	09 13 16.9	+0.5
DLMT	Dillon	84.03	43	P	P	09 13 17.3	+0.5
ELK	Elko	84.21	48	P	P	09 13 18.8	+0.9
MPMC	Manual Prospec	84.48	53	P	P	09 13 19.7	+0.4
	baz=293						
BOZ	Bozeman (W)	84.54	43	P	P	09 13 19.7	+0.4
	baz=296						
LRMC	Laurel Mtn Rad	84.57	54	P	P	09 13 19.7	0.0
	baz=293						
EDW2	Edwards Air Fo	84.57	55	P	P	09 13 19.9	+0.3
	baz=293						
EGMT	Eagleton	84.59	40	P	P	09 13 19.6	+0.2
	baz=297						
FURC	Furnace Creek,	84.78	53	P	P	09 13 21.1	+0.6
	baz=294						
R11A	Troy Canyon, C	84.95	51	P	P	09 13 22.1	+0.5
	baz=294						
TPNV	Topopah Spring	85.04	52	P	P	09 13 22.6	+0.5
	baz=294						
TPNV	Topopah Spring	85.04	52	P	P	09 13 22.5	+0.5
TPNV				IAmb	IAmb	09 13 23.3	
	comp=Z,5.9nm,0.8s						
GSC	Goldstone, Bar	85.30	54	P	P	09 13 23.5	+0.3
	baz=294						
SUMG	Summit	85.44	0	P	P	09 13 23.7	+0.2
SHOC	Shoshone, Teco	85.45	53	P	P	09 13 23.9	+0.1
	baz=294						
FFC	Flin Flon	85.48	32	P	P	09 13 23.8	+0.2
FFC				IAmb	IAmb	09 13 24.2	
	comp=Z,6.3nm,0.6s						
BBRC	Big Bear Solar	85.63	55	P	P	09 13 24.2	-0.9
	baz=294						
BGU	Big Grassy Mou	85.66	48	P	P	09 13 25.4	+0.4
GCMT	Greycliff	85.68	42	P	P	09 13 25.6	+0.7
PRN	Pahroc Range	85.72	51	P	P	09 13 26.6	+1.2
H17A	Grant Village	85.74	44	P	P	09 13 27.1	+1.6
	baz=297						
REDW	Red Top Meadow	86.03	45	P	P	09 13 27.8	+0.9
DUG	Dugway, Tooele	86.12	48	P	P	09 13 27.8	+0.6
	baz=296						
RLMT	Red Lodge	86.24	43	P	P	09 13 28.8	+1.0
	baz=298						
PFO	Pinyon Flats O	86.24	55	P	P	09 13 28.0	0.0
	baz=294						

PFO	**Pinyon Flats O**	**86.24**	**55**	P	**P**	**09 13 28.2**	**+0.2**
PFO				IAmb	IAmb	09 13 28.9	
	comp=Z,6.7nm,1.0s						
TPFO	**Pinon Flats**	**86.25**	**55**	P	**P**	**09 13 28.0**	**0.0**
	baz=294						
GMRC	**Granite Mounta**	**86.36**	**54**	P	**P**	**09 13 28.9**	**+0.3**
	baz=294						
BELC	**Belle Mtn. Jos**	**86.43**	**55**	P	**P**	**09 13 28.8**	**-0.1**
	baz=294						
MONP2	**Monument Peak**	**86.56**	**56**	P	**P**	**09 13 29.7**	**0.0**
	baz=294						
FCC	**Fort Churchill**	**86.65**	**26**	P	**P**	**09 13 28.7**	**-0.5**
FCC				IAmb	IAmb	09 13 47.9	
	comp=Z,6.8nm,1.4s						
IKP	**In-Ko-Pah, Jac**	**86.90**	**56**	P	**P**	**09 13 31.1**	**-0.1**
	baz=294						
AKASG	**Malin Array Be**	**86.97**	**324**	P	**P**	**09 13 29.1**	**-1.8**
	comp=Z,1.4nm,0.4s,baz=53,slow=5.3,SNR=10						
AKBB	**Malin Array Si**	**86.97**	**324**	P	**P**	**09 13 29.6**	**-1.3**
BC3	**Big Chuckawall**	**86.99**	**55**	P	**P**	**09 13 31.8**	**+0.2**
	baz=295						
IRM	**Iron Mountain**	**87.01**	**54**	P	**P**	**09 13 31.9**	**+0.3**
	baz=295						
SWSC	**Sam W. Stewart**	**87.02**	**56**	P	**P**	**09 13 31.4**	**-0.2**
	baz=295						
PDAR	**Pinedale Array**	**87.15**	**45**	P	**P**	**09 13 31.6**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=50,slow=1.5,SNR=6.8						
LAO	**LASA Array**	**87.34**	**40**	P	**P**	**09 13 34.0**	**+1.0**
	baz=300						
NB201	**NORSAR Array S**	**88.35**	**339**	P	**P**	**09 13 36.2**	**-1.1**
214A	**Organ Pipe Nat**	**89.72**	**55**	P	**P**	**09 13 44.3**	**0.0**
	baz=296						
RSSD	**Black Hills**	**89.98**	**42**	P	**P**	**09 13 45.3**	**-0.3**
	baz=302						
N23A	**Red Feather La**	**90.42**	**45**	P	**P**	**09 13 48.2**	**+0.4**
	baz=300						
MVCO	**Mesa Verde**	**90.48**	**49**	P	**P**	**09 13 47.9**	**-0.2**
	baz=299						
ISCO	**Idaho Springs**	**91.19**	**46**	P	**P**	**09 13 51.3**	**-0.1**
	baz=300						
S22A	**4UR Ranch, Cre**	**91.39**	**48**	P	**P**	**09 13 52.1**	**-0.2**
	baz=300						
SDCO	**Great Sand Dun**	**92.30**	**48**	P	**P**	**09 13 56.1**	**-0.4**
	baz=300						
TORD	**Torodi Ar. Bea**	**128.27**	**309**	PKP	**PKPdf**	**09 19 51.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=17,slow=1.1,SNR=1.8						
PLCA	**Paso Flores**	**146.24**	**131**	PKPbc	**PKPbc**	**09 20 25.8**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=216,slow=1.3,SNR=15						

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*NIED **07** 09:58:56.3, 38.°47N×142.°04E, h43^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.12; $M_{\theta\theta}$-1.12; $M_{\phi\phi}$-0.00; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.46; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.34000×10^{15} NP1:ϕ_s81.00000°, δ58.00000°, λ103.00000°. NP2:ϕ_s238.00000°, δ34.00000°, λ70.00000°.*

*JMA **07** 09:58:56.2±0.1, 38.°47N×142.°04E, h43^{km}±1^{km}, M4.2*

JMA Felt III J1.

*IDC **07** 09:58:57.6±2.2, 38.°41N×142.°01E, h52^{km}±20^{km}, mb3.6/16, mb1 3.8/20, mb1mx3.7/48, mbtmp3.9/20, ML3.7/3, MS2.8/6, Ms1 2.8/6, ms1mx2.7/33, Error ellipse: s-maj=18.6km s-min=13.8km az=105.0*

*NEIC **07** 09:58:57.1±1.2, 38.°41N±0.°07×141.°96E±0.°06, h48^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=11.4km s-min=3.0km az=146.0*

ISC 07 09:58:56.9±1.2**, 38.°45N**±0.°04×**142.°03E**±0.°08**, h43**^{km}±10^{km}**, n65, σ1§21**/71**, mb4.0**/19**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.46**	**253**	P	**Pn**	**09 59 06.7**	**-0.6**
JIKH				*i* S	**Sn**	**09 59 13.9**	**-0.7**
JIO	**Ouri**	**0.53**	**271**	P	**Pn**	**09 59 07.7**	**-0.4**
JIO				S	**Sn**	**09 59 15.5**	**-0.7**
JKMT	**Kesennumamotoy**	**0.56**	**310**	P	**Pn**	**09 59 08.0**	**-0.6**
JKMT				S	**Sn**	**09 59 16.1**	**-0.8**
OFUJ	**Ofunato**	**0.69**	**336**	P	**Pn**	**09 59 09.5**	**-0.7**
OFUJ				S	**Sn**	**09 59 18.4**	**-1.4**
JMK	**Ichinoseki**	**0.81**	**309**	P	**Pn**	**09 59 11.4**	**-0.4**
JMK				S	**Sn**	**09 59 22.0**	**-0.6**
JOU	**Okura**	**1.07**	**266**	P	**Pn**	**09 59 15.4**	**-0.1**
JOU				S	**Sn**	**09 59 29.7**	**+0.4**
JMM	**Marumori**	**1.14**	**239**	P	**Pn**	**09 59 15.5**	**-0.8**
JMM				*e*S	**Sn**	**09 59 30.1**	**-0.6**
JMM	**Marumori**	**1.14**	**239**	Pn	**Pn**	**09 59 15.6**	**-0.8**
JMM				Sn	**Sn**	**09 59 29.4**	**-1.3**
JOM	**Ohasama**	**1.17**	**331**	P	**Pn**	**09 59 16.5**	**-0.3**
JOM				*e*S	**Sn**	**09 59 31.6**	**0.0**
JYK	**Kaneyama**	**1.39**	**290**	P	**Pn**	**09 59 19.8**	**0.0**
JYK				*e*S	**Sn**	**09 59 37.4**	**+0.5**
JFK	**Kawauchi**	**1.42**	**220**	P	**Pn**	**09 59 19.3**	**-0.9**
JFK				*e*S	**Sn**	**09 59 37.0**	**-0.7**
JRG	**Rokugo**	**1.44**	**311**	P	**Pn**	**09 59 20.3**	**-0.2**
JRG				*e*S	**Sn**	**09 59 38.1**	**-0.1**
JYS	**Shirataka**	**1.56**	**262**	P	**Pn**	**09 59 22.2**	**+0.1**
JYS				*e*S	**Sn**	**09 59 41.4**	**+0.2**
JTM	**Tenmabayashi**	**2.45**	**343**	Pn	**Pn**	**09 59 35.1**	**+0.8**
JYT	**Yasato**	**2.66**	**214**	Pn	**Pn**	**09 59 36.9**	**-0.3**
MJAR	**Matsushiro Arr**	**3.59**	**239**	P	**Pn**	**09 59 51.7**	**+1.7**
	1.3nm,0.3s,baz=57,slow=10,SNR=42						
MJAR				S	Sn	10 00 42.6	+11
	0.8nm,0.3s,baz=83,slow=15,SNR=4.7						
MJAR				LR	LR	10 01 04.5	
	comp=Z,86nm,21.6s,baz=60,slow=36						
MAJO	**Matsushiro**	**3.59**	**239**	Pn	**Pn**	**09 59 51.7**	**+1.7**
MAT	**Matsushiro**	**3.59**	**239**	P	**Pn**	**09 59 50.9**	**+0.9**
MAT				*e*S	**Sn**	**10 00 33.9**	**+2.8**
MJB9	**Matsu-Tunnel**	**3.59**	**239**	Pn	**Pn**	**09 59 50.5**	**+0.5**
JEM	**Erimo**	**3.66**	**13**	Pn	Sn	10 00 19.3	-14
JEW	**Eniwo**	**4.41**	**354**	Pn	**Pn**	**10 00 02.5**	**+1.3**
JGF	**Kuroka**	**4.70**	**234**		**Pn**	**10 00 07.7**	**+2.4**
INU	**Inuyama**	**5.07**	**234**	Pn	**Pn**	**10 00 08.7**	**-1.6**
JHJ2	**Mitsune**	**5.62**	**199**	Pn	**Pn**	**10 00 16.9**	**-1.0**
JHJ	**Hachijo jima 2**	**5.62**	**200**	P	**Pn**	**10 00 16.9**	**-1.1**
	18nm,0.3s,baz=66,slow=20,SNR=4.6						
JHJ				S	**Sn**	**10 01 17.6**	**-3.7**
	20nm,0.3s,baz=73,slow=19,SNR=4.0						
ASAJ	**Asahikawa**	**5.68**	**4**	P	**Pn**	**10 00 18.5**	**-0.1**
	2.7nm,0.3s,baz=238,slow=19,SNR=9.7						
ASAJ				S	**Sn**	**10 01 18.8**	**-3.6**
	1.9nm,0.3s,baz=170,slow=18,SNR=2.3						
ASAJ				LR	LR	10 02 55.1	
	comp=Z,133nm,22.0s,baz=116,slow=42						
JKA	**Kamikawa-asahi**	**5.68**	**4**	Pn	**Pn**	**10 00 18.9**	**+0.3**
JWT	**Wachi**	**6.18**	**241**		**Pn**	**10 00 24.6**	**-1.0**
JHS	**Saijyo**	**7.94**	**247**	Pn	**Pn**	**10 00 47.5**	**-2.3**
USA0B	**Ussuriysk Arra**	**9.48**	**310**	Pn	**Pn**	**10 01 11.2**	**+0.4**
USRK	**Ussuriysk Ar.**	**9.48**	**310**	P	**Pn**	**10 01 11.4**	**+0.7**
	baz=116,slow=14,SNR=8.5						
USRK				LR	LR	10 04 29.4	
	comp=Z,51nm,20.9s,baz=133,slow=35						
KSRS	**Korea Array**	**11.18**	**269**	LR	LR	10 05 41.2	
	comp=Z,8.9nm,18.5s,baz=110,slow=36						
KLR	**Kul'dur**	**13.07**	**329**	P	**Pn**	**10 02 03.8**	**+4.1**
	0.1nm,0.3s,baz=160,slow=15,SNR=2.1						
KLR				LR	LR	10 07 03.0	
	comp=Z,80nm,18.3s,baz=166,slow=37						
SEY	**Seymchan**	**25.31**	**11**	P	**P**	**10 04 20.1**	**+1.0**
	5.2nm,0.9s,baz=200,slow=7.2,SNR=12						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**10 04 38.4**	**-0.2**
	0.2nm,0.3s,baz=101,slow=10,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	10 35 00.5	
	baz=316,slow=75,SNR=406						
H11N1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	10 35 08.4	
	baz=316,slow=75,SNR=434						
H11N3	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	10 35 01.8	
	baz=316,slow=75,SNR=389						
H11S1	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	10 36 09.0	
	baz=318,slow=76,SNR=51						
H11S3	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	10 36 06.8	
	baz=318,slow=76,SNR=277						
H11S2	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	10 36 08.3	
	baz=318,slow=76,SNR=150						
ZALV	**Zalesovo Beam**	**41.34**	**311**	P	**P**	**10 06 37.6**	**-0.6**
	1.5nm,0.4s,baz=92,slow=8.0,SNR=6.8						
ZALV				PcP	**PcP**	**10 08 35.3**	**-0.6**
	0.7nm,0.3s,baz=108,slow=4.8,SNR=3.6						
MK31	**Makanchi Array**	**43.79**	**301**	P	**P**	**10 06 56.4**	**-1.9**
MK31				IAmb	IAmb	10 07 01.0	
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**10 06 58.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=87,slow=9.0,SNR=14						
KURK	**Kurchatov**	**45.45**	**307**	P	**P**	**10 07 10.9**	**-0.5**
KURK				IAmb	IAmb	10 07 11.5	
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**48.04**	**33**	P	**P**	**10 07 31.6**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=267,slow=5.8,SNR=9.9						
INK	**Inuvik**	**52.90**	**28**	P	**P**	**10 08 08.2**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=301,slow=5.1,SNR=3.7						
INK	**Inuvik**	**52.90**	**28**	P	**P**	**10 08 08.3**	**+0.2**
INK				IAmb	IAmb	10 08 14.0	
	comp=Z,4.8nm,1.4s						
WRA	**Warramunga Arr**	**58.53**	**188**	P	**P**	**10 08 48.0**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=6.1,slow=7.2,SNR=9.7						
ASAR	**Alice Springs**	**62.26**	**188**	P	**P**	**10 09 13.9**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=1.3,slow=4.6,SNR=8.8						
ASAR				LR	LR	10 37 49.8	
	comp=Z,40nm,18.2s,baz=254,slow=38						
YKA	**Yellowknife Ar**	**62.34**	**31**	P	**P**	**10 09 14.0**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=307,slow=4.6,SNR=13						
ARCES	**ARCESS Array B**	**62.84**	**339**	P	**P**	**10 09 18.2**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=55,slow=6.7,SNR=3.3						
FINES	**FINESS Array B**	**67.79**	**332**	P	**P**	**10 09 49.3**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=38,slow=9.6,SNR=4.4						
SUMG	**Summit**	**69.27**	**0**	P	**P**	**10 09 59.8**	**+0.4**
NB2	**NORSAR Subarra**	**73.07**	**337**	P	**P**	**10 10 21.4**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.07**	**337**	P	**P**	**10 10 21.4**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=38,slow=5.9,SNR=5.1						
BOZ	**Bozeman (W)**	**73.39**	**45**	P	**P**	**10 10 24.8**	**+0.4**
BOZ				IAmb	IAmb	10 10 25.7	
	comp=Z,6.1nm,1.5s						
AKASG	**Malin Array Be**	**73.47**	**322**	P	**P**	**10 10 23.8**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=46,slow=5.9,SNR=4.5						
NVAR	**Mina Array Bea**	**73.75**	**54**	P	**P**	**10 10 27.2**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=301,slow=5.3,SNR=3.6						
PD31	**Pinedale Array**	**76.33**	**46**	P	**P**	**10 10 41.7**	**0.0**
PDAR	**Pinedale Array**	**76.33**	**46**	P	**P**	**10 10 41.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=289,slow=1.1,SNR=12						
GERES	**GERESS Array B**	**81.76**	**328**	P	**P**	**10 11 11.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=33,slow=5.8,SNR=2.7						
H03N2	**Juan Fernandez**	**146.66**	**94**	T	T	13 03 07.6	
	baz=289,slow=76,SNR=4.7						
H03N3	**Juan Fernandez**	**146.68**	**94**	T	T	13 03 04.9	
	baz=289,slow=76,SNR=5.7						
H03N1	**Juan Fernandez**	**146.68**	**94**	T	T	13 03 15.5	
	baz=289,slow=76,SNR=6.8						

WEL 07 10:15:41.8, 39°S±5°×**17°6E**±°**, h165**^{km}±9^{km}**, M2.2**/26**, mB5.0**/1**, MLv2.2**/26**, Mw(mB)4.4**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=117.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATZ	**Hinemaiaia**	**0.32**	**140**	P	Pn	10 16 03.2	-1.0
TMVZ	**Te Maari**	**0.48**	**192**	P	Pn	10 16 04.9	0.0
WTVZ	**West Tongariro**	**0.51**	**202**	P	Pn	10 16 05.0	0.0
OTVZ	**Oturere**	**0.53**	**194**	P	Pn	10 16 05.3	+0.1
NGZ	**Ngauruhoe**	**0.56**	**199**	P	Pn	10 16 05.4	+0.1
TUVZ	**Tukino**	**0.64**	**192**	P	Pn	10 16 05.9	+0.2
WNVZ	**Wahianoa**	**0.70**	**195**	P	Pn	10 16 06.3	+0.2
BKZ	**Black Stump Fm**	**0.73**	**135**	P	Pn	10 16 05.6	-0.6
MOVZ	**Moawhango**	**0.76**	**184**	P	Pn	10 16 06.1	-0.2
MTVZ	**Mangateitei**	**0.79**	**201**	P	Pn	10 16 07.0	+0.5
MTHZ	**Maungataniwha**	**0.82**	**105**	P	Pn	10 16 06.0	-0.7
BHHZ	**Black Hill Sta**	**0.86**	**168**	P	Pn	10 16 06.9	-0.2
NMHZ	**Naumai**	**0.89**	**121**	P	Pn	10 16 07.7	+0.5
RTZ	**Ruatahuna**	**0.90**	**89**	P	Pn	10 16 06.4	-0.9
KWHZ	**Kaweka Forest**	**0.91**	**150**	P	Pn	10 16 07.4	0.0
TOZ	**Tahuroa Road**	**0.95**	**344**	P	Pn	10 16 07.9	+0.3
MCHZ	**McNeill Hill**	**1.05**	**140**	P	Pn	10 16 09.1	+0.8
KRHZ	**Kereru**	**1.08**	**157**	P	Pn	10 16 08.8	+0.2
WAZ	**Wanganui**	**1.29**	**210**	P	Pn	10 16 11.7	+1.3
PNHZ	**Pukenui**	**1.30**	**167**	P	Pn	10 16 11.0	+0.4
KAHZ	**Kahuranaki**	**1.41**	**145**	P	Pn	10 16 12.4	+0.8
TSZ	**Takapari Road**	**1.42**	**176**	P	Pn	10 16 12.2	+0.5
RIGZ	**Rimuhau**	**1.51**	**93**	P	Pn	10 16 13.0	+0.3
PRHZ	**Porangahau**	**1.74**	**159**	P	Pn	10 16 15.4	+0.5
TWGZ	**Tauwhareparae**	**1.75**	**75**	P	Pn	10 16 20.7	+5.5
ANWZ	**Angora Road**	**1.88**	**165**	P	Pn	10 16 17.1	+0.6
PRWZ	**Pori Road**	**1.91**	**177**	P	Pn	10 16 17.4	+0.6
MRZ	**Mangatainoka R**	**2.02**	**185**	P	Pn	10 16 18.4	+0.3
TIWZ	**Tintock**	**2.13**	**179**	P	Pn	10 16 19.6	+0.3
OGWZ	**Otaki Gorge**	**2.23**	**193**	P	Pn	10 16 21.0	+0.6
HOWZ	**Holdsworth Sta**	**2.26**	**186**	P	Pn	10 16 21.0	+0.2
MTW	**Mount Morrison**	**2.52**	**186**	P	Pn	10 16 23.8	-0.1
CAW	**Cannon Point**	**2.53**	**193**	P	Pn	10 16 24.3	+0.4
PLWZ	**Palliser**	**2.95**	**188**	P	Pn	10 16 28.8	-0.3
OXZ	**Oxford**	**5.49**	**210**	P	Pn	10 17 00.9	-0.8
RACZ	**Rakaia**	**5.79**	**208**	P	Pn	10 17 06.9	+1.2
WACZ	**Wakanui South**	**6.09**	**208**	P	Pn	10 17 07.9	-1.7

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*WEL **07** 10:25:00, 43.°09S×171.°24E, h9^{km}, ML3.7, Mw3.7, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M_{rr}1.09; $M_{\theta\theta}$1.45; $M_{\phi\phi}$-2.54; $M_{r\theta}$-1.95; $M_{\theta\phi}$-2.13; $M_{\phi r}$-0.24; Fault plane solution: $M_0$3.64000×10^{14} NP1: ϕ_s343.00000°, δ55.00000°, λ18.00000°. NP2: ϕ_s243.00000°, δ75.00000°, λ144.00000°. Principal axes: T -36.9100, Plg36.0000°, Azm198.0000°; N 35.9000, Plg51.0000°, Azm43.0000°; P 1.0100, Plg13.0000°, Azm297.0000°;*

WEL 07 10:25:05.5±0.6**, 43°S**±2°×**17°1E**±°**, h5**^{km}**, M3.7**/10**, ML3.8**/10**, MLv3.7**/10 **Error ellipse: s-maj=0.0km s-min=0.0km az=99.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INZ	**Inchbonnie**	**0.36**	**30**	P	Pg	10 25 12.5	+0.2
INZ				S	Sg	10 25 16.9	-0.1
MHCZ	**Mount Hutt**	**0.57**	**152**	P	Pg	10 25 16.4	0.0
MHCZ				S	Sg	10 25 23.6	-0.2
OXZ	**Oxford**	**0.68**	**116**	P	Pg	10 25 18.1	-0.4
RPZ	**Rata Peaks**	**0.69**	**189**	P	Pg	10 25 19.2	+0.5
GCSZ	**Gaunt Creek Bo**	**0.70**	**246**	P	Pb	10 25 20.0	-0.2
ARCZ	**Arundel**	**0.92**	**181**	P	Pg	10 25 23.2	+0.1
WACZ	**Wakanui South**	**1.02**	**153**	P	Pg	10 25 25.1	0.0
WACZ				S	Sb	10 25 39.5	+0.1
AMCZ	**Amberley**	**1.07**	**98**	P	Pg	10 25 26.2	+0.2
AMCZ				S	Sb	10 25 41.2	+0.4
DSZ	**Denniston Nort**	**1.36**	**19**	P	Pn	10 25 30.7	-0.5
DSZ				S	Sg	10 25 49.4	+0.2
THZ	**Tophouse**	**1.79**	**45**	P	Pn	10 25 37.1	0.0
THZ				S	Sb	10 26 02.0	+0.5
KHZ	**Kahutara**	**1.83**	**71**	P	Pn	10 25 36.9	-0.6
BSWZ	**Blackbirch Sta**	**2.38**	**57**	P	Pn	10 25 45.2	0.0
QRZ	**Quartz Range**	**2.42**	**25**	P	Pn	10 25 45.7	0.0
QRZ				S	Sn	10 26 13.8	-1.8
NNZ	**Nelson**	**2.43**	**43**	P	Pn	10 25 47.1	+1.2
TUWZ	**Tuamarina**	**2.59**	**53**	P	Pn	10 25 49.2	+1.1
TUWZ				S	Sb	10 26 23.1	-1.4
TCW	**Tory Channel**	**2.92**	**53**	P	Pn	10 25 54.1	+1.5
DUWZ	**D'Urville Isla**	**3.02**	**43**	P	Pn	10 25 55.3	+1.4
MSWZ	**Moikau Station**	**3.41**	**63**	P	Pn	10 25 58.5	-0.8
CAW	**Cannon Point**	**3.46**	**58**	P	Pn	10 25 58.8	-1.3
KIW	**Kapiti Island**	**3.52**	**53**	P	Pn	10 26 00.4	-0.4
OGWZ	**Otaki Gorge**	**3.70**	**55**	P	Pb	10 26 07.5	-3.8
MTW	**Mount Morrison**	**3.71**	**61**	P	Pn	10 26 02.5	-0.9
HOWZ	**Holdsworth Sta**	**3.86**	**58**	P	Pb	10 26 12.2	-1.9
MRZ	**Mangatainoka R**	**4.04**	**56**	P	Pn	10 26 07.6	-0.3
NMEZ	**Namu Road**	**4.14**	**30**	P	Pn	10 26 11.0	+1.6
NBEZ	**Newall Road No**	**4.26**	**29**	P	Pn	10 26 12.3	+1.2
KHEZ	**Kahui Hut**	**4.30**	**31**	P	Pn	10 26 13.2	+1.6
LREZ	**Lake Rotokare**	**4.31**	**35**	P	Pn	10 26 14.2	+2.5
PREZ	**Palmer Road**	**4.31**	**32**	P	Pn	10 26 13.2	+1.5
WAZ	**Wanganui**	**4.34**	**42**	P	Pn	10 26 14.9	+2.8
NEZ	**North Egmont**	**4.35**	**31**	P	Pn	10 26 14.1	+1.8
PKE	**Pukeiti**	**4.37**	**30**	P	Pn	10 26 14.0	+1.4
APZ	**The Paps**	**4.43**	**210**	P	Pn	10 26 11.7	-1.7
VRZ	**Vera Road**	**4.74**	**36**	P	Pn	10 26 19.2	+1.6
WNVZ	**Wahianoa**	**4.97**	**43**	P	Pn	10 26 24.8	+3.9
NGZ	**Ngauruhoe**	**5.09**	**42**	P	Pn	10 26 27.6	+5.1
BHHZ	**Black Hill Sta**	**5.09**	**48**	P	Pn	10 26 23.5	+0.9
OTVZ	**Oturere**	**5.13**	**43**	P	Pn	10 26 24.9	+1.8
WTVZ	**West Tongariro**	**5.13**	**42**	P	Pn	10 26 26.5	+3.4
TMVZ	**Te Maari**	**5.18**	**43**	P	Pn	10 26 29.2	+5.4
KATZ	**Kakaramea**	**5.29**	**41**	P	Pn	10 26 29.9	+4.6
HIZ	**Hauiti**	**5.30**	**33**	P	Pn	10 26 25.8	+0.5
TLZ	**Tolley Road**	**5.74**	**36**	P	Pn	10 26 32.2	+0.8
TOZ	**Tahuroa Road**	**6.23**	**33**	P	Pn	10 26 38.4	+0.4
AWAZ	**Awhitu Peninsu**	**6.52**	**25**	P	Pn	10 26 43.0	+1.0
RVAZ	**Riverhead Bore**	**6.77**	**24**	P	Pn	10 26 45.3	-0.2
MBAZ	**Motutapu North**	**6.87**	**26**	P	Pn	10 26 48.2	+1.3
WIAZ	**Waiheke Island**	**6.92**	**27**	P	Pn	10 26 48.9	+1.3
WCZ	**Waipu Caves**	**7.49**	**20**	P	Pn	10 26 55.9	+0.6
OUZ	**Omahuta**	**8.02**	**14**	P	Pn	10 27 03.7	+1.0

REY 07 10:49:23.2, 64.°67N×17.°44W, h9^{km}**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**15**	P	Pg	10 49 26.1	-0.1
	baz=15						
IDYN				S	Sg	10 49 28.6	+0.3
	baz=15						
IHAM	**Hamarinn**	**0.25**	**221**	P	Pg	10 49 28.1	-0.2
	baz=221						
IHAM				S	Sg	10 49 32.4	+0.6
	baz=221						
IKVE	**Kverkfjoll**	**0.33**	**88**	P	Pg	10 49 29.8	0.0
	baz=88						
IKVE				S	Sg	10 49 34.4	+0.2
	baz=88						
ISKR	**Skrokkalda**	**0.42**	**255**	P	Pg	10 49 31.0	-0.4
	baz=255						
ISKR				S	Sg	10 49 37.3	+0.3
	baz=255						
IJOK	**Jokulheimar**	**0.49**	**224**	P	Pg	10 49 32.4	-0.3
	baz=224						
IJOK				S	Sg	10 49 39.2	0.0
	baz=224						
IIEY	**Innrieyrar**	**0.65**	**208**	P	Pg	10 49 34.9	-0.8
	baz=208						
IKSK	**Karasker**	**0.66**	**140**	P	Pg	10 49 34.6	-1.3
	baz=140						
IKSK				S	Sg	10 49 44.3	-0.3
	baz=140						
ISVA	**Svartarkot**	**0.68**	**7**	P	Pg	10 49 35.3	-1.0
	baz=6.7						
ISVA				S	Sg	10 49 45.1	0.0
	baz=6.7						
IKAL	**Kalfafell**	**0.73**	**189**	P	Pg	10 49 36.3	-1.0
	baz=188						
IKAL				S	Sg	10 49 46.7	-0.1
	baz=188						
IVSH	**V-Sauoahnukur**	**0.75**	**79**	P	Pg	10 49 36.4	-1.2
	baz=79						
IVSH				S	Sg	10 49 46.9	-0.4
	baz=79						
IADA	**Aoalbol**	**0.87**	**65**	P	Pg	10 49 38.4	-1.6
	baz=65						
IADA				S	Sg	10 49 50.4	-0.8
	baz=65						
IMEL	**Melhnausar**	**0.96**	**20**	P	Pg	10 49 40.0	-1.7
	baz=20						
IREN	**Reynihlio**	**1.01**	**13**	P	Pg	10 49 40.8	-1.8
	baz=13						
IKVO	**Krokottuvotn**	**1.07**	**12**	P	Pg	10 49 41.9	-1.9
	baz=12						
IGRS	**Grimsstaoir**	**1.12**	**29**	P	Pg	10 49 42.7	-2.0
	baz=29						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	Pb	10 49 44.2	-2.2
	baz=8.0						
IGHA	**Grjothals**	**1.22**	**15**	P	Pn	10 49 44.5	-2.0
	baz=15						
IGRA	**Granastaoir**	**1.25**	**357**	P	Pn	10 49 44.7	-2.1
	baz=357						
IDIM	**Dimmadalss**	**1.31**	**9**	P	Pn	10 49 45.8	-1.9
	baz=9.1						
IHED	**Heoinshofoi**	**1.42**	**2**	P	Pn	10 49 47.3	-1.8
	baz=2.2						

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*DNK **07** 10:50:09.7±2.5, 72.°41N×4.°75W, h0^{km}±113^{km}, ML2.3*

BER 07 10:50:01.7±2.2**, 71.°52N×4.°08W, h10**^{km}**, ML1.7, ML2.3**(DNK)**, Confirmed Earthquake, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBG	**Daneborg**	**5.51**	**308**	*i* P	Pn	10 51 22.3	-1.4
DBG				*i*		10 51 27.5	
DBG				*e*S	Sn	10 52 19.2	-7.7
DBG				IAML		10 52 36.2	
	comp=Z,1.4nm,0.4s						
DBG	**Daneborg**	**5.51**	**308**	*i* P	Pn	10 51 22.3	-1.4
DBG				*i*		10 51 27.5	
DBG				*e*S	Sn	10 52 19.2	-7.7
DBG				IAML		10 52 36.2	
	comp=Z,1.4nm,0.4s						
DAG	**Danmarks Havn**	**6.59**	**330**	*e*	Pn	10 51 35.2	-3.2
	baz=134,slow=16						
DAG				*i* P	Pb	10 51 37.2	-19
DAG				*e*S	Sn	10 52 37.7	-16
DAG				IAML		10 52 50.0	
	comp=Z,1.8nm,0.4s						
DAG	**Danmarks Havn**	**6.59**	**330**	*i* P	Pn	10 51 37.2	-1.3
DAG				*e*S	Sn	10 52 37.7	-16
DAG	**Danmarks Havn**	**6.59**	**330**	*e*	Pn	10 51 35.2	-3.2
	baz=134,slow=16						
DAG				*i* P	Pb	10 51 37.2	-19
DAG				*e*S	Sn	10 52 37.7	-16
DAG				IAML		10 52 50.0	
	comp=Z,1.8nm,0.4s						
LOF	**Lofoten**	**6.96**	**111**	*e*P	Pn	10 51 40.3	-3.2
N2VA	**Vr¸y**	**7.01**	**115**	*e*P	Pn	10 51 41.2	-3.0
N2VI	**Vinje**	**7.04**	**108**	*e*P	Pn	10 51 41.2	-3.5
STEI	**Steigen**	**7.59**	**109**	*e*P	Pn	10 51 48.6	-3.6
NBB30	**Finnes**	**7.77**	**117**	*e*P	Pn	10 51 52.2	-2.4
N2IH	**Innhavet**	**7.78**	**107**	*e*P	Pn	10 51 52.8	-2.0
N2TV	**T¥rnvik**	**7.78**	**111**	*e*P	Pn	10 51 51.4	-3.4
NBB28	**Valnes**	**7.83**	**115**	*e*P	Pn	10 51 53.0	-2.5
TRO	**Tromso**	**7.87**	**93**	*e*P	Pn	10 51 50.6	-5.4
KONS	**Konsvik**	**7.94**	**121**	*e*P	Pn	10 51 53.8	-3.2
FAUS	**Fauske**	**7.95**	**112**	*e*P	Pn	10 51 52.5	-4.6
KBS	**Kingsbay**	**8.44**	**21**	*e*P	Pn	10 52 01.7	-2.1
KBS	**Kingsbay**	**8.44**	**21**	*i* P	Pn	10 52 01.7	-2.1
SPA0	**Spitsbergen Ar**	**8.49**	**29**	*e*P	Pn	10 52 03.5	-1.0
KIF	**Kilpisjarvi**	**8.75**	**95**	*e*P	Pn	10 52 03.5	-4.5
KTK1	**Kautokeino**	**9.52**	**92**	*e*P	Pn	10 52 14.6	-4.1
ARA0	**ARCESS Array S**	**10.01**	**87**	*e*P	Pn	10 52 22.1	-3.2

TAP 07 11:06:55.1, 21.°32N×122.°31E, h141^{km}±1^{km}**, ML3.1, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWKBT	**Hengchun**	**1.53**	**294**	*e*P	Pn	11 07 24.8	+0.6
	baz=289						
TWKBT				*e*S	Sn	11 07 46.7	+0.1
	baz=289						
TWK1	**Hengchun**	**1.53**	**294**	*e*P	Pn	11 07 25.3	+0.9
	baz=289						
TWK1				S	Sn	11 07 46.5	-0.1
	baz=289						
HEN	**Hengchun**	**1.62**	**295**	*e*S	Sn	11 07 47.6	-0.6
	baz=297						
SLIU	**Shizi**	**1.67**	**303**	*e*P	Pn	11 07 26.0	+0.2
	baz=304						
SLIU				*e*S	Sn	11 07 48.7	-0.6
	baz=304						
TAW	**Tawu**	**1.67**	**308**	*e*P	Pn	11 07 25.5	-0.4
	baz=308						
TAW				*e*S	Sn	11 07 48.3	-1.2
	baz=308						
EAST	**Anshuo**	**1.72**	**308**	*e*P	Pn	11 07 26.6	+0.1
	baz=308						
EAST				S	Sn	11 07 49.5	-1.0
	baz=308						
ECL	**Taimali**	**1.79**	**316**	*e*P	Pn	11 07 26.9	-0.3
	baz=311						
ECL				*e*S	Sn	11 07 50.8	-1.1
	baz=311						
TWGBT	**Beinan**	**1.88**	**323**	*e*S	Sn	11 07 53.9	+0.1
	baz=315						
SCZT	**Fangliau**	**1.89**	**304**	S	Sn	11 07 53.2	-0.7
	baz=304						
EDH	**Donghe**	**1.89**	**331**	*e*S	Sn	11 07 55.2	+1.2
	baz=334						
SSPT	**Xinbi**	**1.99**	**306**	S	Sn	11 07 55.2	-0.8
	baz=306						
MASBT	**Mashibuluo**	**2.02**	**310**	*e*P	Pn	11 07 30.0	+0.1
	baz=310						
MASBT				*e*S	Sn	11 07 55.8	-0.9
	baz=310						
TSMG	**Majia**	**2.07**	**312**	P	Pn	11 07 31.0	+0.4
	baz=312						

TSMG				*e*S	Sn	11 07 57.4	-0.4
	baz=312						
FULB	Fuli	2.10	333	*e*S	Sn	11 07 58.1	-0.3
	baz=336						
SSD	Sandimen	2.11	313	*e*P	Pn	11 07 31.1	+0.1
	baz=308						
SSD				*e*S	Sn	11 07 58.3	-0.3
	baz=308						
ELDTW	Lidau	2.21	327	*e*P	Pn	11 07 32.5	+0.1
	baz=325						
ELDTW				*e*S	Sn	11 08 00.8	-0.2
	baz=325						
YULB	Yu-li	2.27	336	*e*S	Sn	11 08 04.1	+2.0
	baz=338						
SLGT	Liugui	2.27	318	*e*S	Sn	11 08 02.8	+0.7
	baz=317						
HGSD	Ruisui	2.31	339	*e*S	Sn	11 08 03.4	+0.4
	baz=341						
CHN1	Nanshi	2.49	319	*e*S	Sn	11 08 07.6	+0.8
	baz=311						
CHN1	Nanshi	2.49	319	S	Sn	11 08 07.6	+0.8
	baz=274						
TPUB	Ta-pu	2.51	322	*e*S	Sn	11 08 07.1	-0.4
	baz=313						
TPUB	Ta-pu	2.51	322	*e*S	Sn	11 08 07.5	0.0
	baz=340						
TWK	Hsinying	2.57	319	*e*P	Pn	11 07 36.9	+0.2
	baz=311						
TWK				*e*S	Sn	11 08 08.2	-0.7
	baz=311						

TAP 07 11:07:56.1, 23°.20N×120°.67E, h36^{km}, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTP	Ta-pu	0.07	314	*e*S	Sn	11 08 07.5	+1.0
	baz=312						
WTP	Ta-pu	0.07	314	P	Pn	11 08 02.7	+0.4
	baz=317						
WTP				*e*S	Sn	11 08 07.3	+0.8
	baz=317						
TPUB	Ta-pu	0.11	340	*e*P	Pn	11 08 02.9	-5.8
	baz=340						
CHN1	Nanshi	0.13	266	*e*P	Pn	11 08 02.9	-4.7
	baz=274						
SNST	Tainan City	0.16	279	*e*P	Pn	11 08 02.6	-3.8
	baz=279						
SNST				*e*S	Sn	11 08 08.2	-8.3
	baz=279						
CHN4	Tsaushan	0.17	335	*e*P	Pn	11 08 03.5	-2.6
	baz=342						
CHN4				S	Sn	11 08 08.8	-7.1
	baz=342						
TWK	Hsinying	0.18	293	*e*P	Pn	11 08 03.3	-2.4
	baz=294						
TWK				S	Sn	11 08 08.8	-6.4
	baz=294						
ALS	Alishan	0.34	21	*e*P	Pn	11 08 05.3	+0.5
	baz=23						
ALS				S	Sn	11 08 11.6	-0.2
	baz=23						
CHN5	Tsauling	0.40	1	P	Pn	11 08 05.8	+0.6
	baz=7.0						
CHN5				S	Sn	11 08 12.7	+0.7
	baz=7.0						

REY ***07*** *11:10:27.9, 64°.67N×17°.48W, h17^{km}*

IDC ***07*** *11:10:28.4±0.8, 64°.59N×17°.78W, h0^{km}, mb3.6/8, mb1 3.9/9, mb1mx3.7/37, mbtmp3.7/9, ML4.2/1, MS3.3/8, Ms1 3.3/8, ms1mx3.0/37, Error ellipse: s-maj=26.6km s-min=14.8km az=27.0*

NEIC ***07*** *11:10:30.1±1.3, 64°.71N±0°.07×17°.6W±0°.2, h9^{km}±5^{km}, mb4.6/14, Error ellipse: s-maj=12.9km s-min=5.0km az=224.0*

ISC 07 11:10:29.1±0.5**, 64°.68N**±0°.02×**17°.49W**±0°.02**, h10^{km}, n63, σ2^{s}.03**/71**, mb4.1**/14**, MS3.2**/6**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHAM	Hamarinn	0.25	215	S	Sg	11 10 37.1	-0.6
	baz=217						
IKVE	Kverkfjoll	0.35	90	P	Pg	11 10 34.8	-1.4
	baz=89						
IKVE				S	Sg	11 10 40.1	-0.7
	baz=89						
ISKR	Skrokkalda	0.40	253	P	Pg	11 10 35.1	-1.9
	baz=254						
ISKR				S	Sg	11 10 41.9	-0.5
	baz=254						
IJOK	Jokulheimar	0.48	221	P	Pg	11 10 36.8	-1.8
	baz=222						
IJOK				S	Sg	11 10 43.6	-1.3
	baz=222						
IASK	Askja	0.52	44	P	Pg	11 10 37.3	-1.9
	baz=43						
IASK				S	Sg	11 10 45.0	-1.1
	baz=43						
IIEY	Innrieyrar	0.65	205	P	Pg	11 10 39.6	-2.1
	baz=206						
IIEY				S	Sg	11 10 48.6	-1.5
	baz=206						
ISVA	Svartarkot	0.67	9	P	Pg	11 10 40.0	-2.0
	baz=8.2						
ISVA				S	Sg	11 10 49.6	-1.1
	baz=8.2						
IKSK	Karasker	0.68	139	P	Pg	11 10 39.5	-2.8
	baz=139						
IKAL	Kalfafell	0.74	187	P	Pg	11 10 40.9	-2.5
	baz=187						
IKAL				S	Sg	11 10 51.3	-1.7
	baz=187						
IVSH	V-Sauoahnukur	0.77	80	P	Pg	11 10 41.1	-2.8
	baz=79						
IVSH				S	Sg	11 10 51.8	-2.2
	baz=79						
IADA	Aoalbol	0.89	67	P	Pg	11 10 43.4	-2.8
	baz=66						
IADA				S	Sg	11 10 55.7	-2.0
	baz=66						
IFAG	Fagurholsmyri	0.89	155	P	Pg	11 10 43.5	-2.7
	baz=155						
IHVE	Hveravellir	0.91	283	P	Pg	11 10 43.6	-3.0
	baz=284						
IMEL	Melhnausar	0.96	21	P	Pg	11 10 44.8	-2.8
	baz=21						
IREN	Reynihlio	1.00	14	P	Pg	11 10 45.6	-2.8
	baz=14						
IKVO	Krokottuvotn	1.07	14	P	Pg	11 10 46.6	-3.1
	baz=13						
ISNB	Snabyli	1.07	208	P	Pg	11 10 46.7	-3.0
	baz=209						
IGRS	Grimsstaoir	1.12	30	P	Pb	11 10 47.5	-3.1
	baz=30						
IRJU	Rjupnafell	1.19	206	P	Pb	11 10 48.8	-2.9
	baz=207						
IMJO	Mjoaskard	1.21	233	P	Pb	11 10 49.3	-2.8
	baz=233						
ISKI	Skildingahlsh	1.21	9	P	Pn	11 10 48.9	-3.2
	baz=8.9						
IGHA	Grjothals	1.22	16	P	Pn	11 10 49.1	-3.1
	baz=16						
IGRA	Granastaoir	1.24	358	P	Pn	11 10 49.5	-3.1
	baz=358						
IGRA				S	Sb	11 11 06.4	-2.3
	baz=358						
IGYG	Gygjarholskot	1.25	252	P	Pn	11 10 49.1	-3.4
	baz=253						
IDIM	Dimmadalss	1.31	10	P	Pn	11 10 50.5	-2.9
	baz=9.9						
BORG	Borgarnes	1.65	274	Pn	Pn	11 10 55.8	-2.2
	30nm,0.3s,baz=105,slow=8.2,SNR=48						
BORG				Sn	Sb	11 11 18.7	-1.6
	13nm,0.3s,baz=67,slow=22,SNR=16						
BORG	Borgarnes	1.65	274	Pn	Pn	11 10 55.3	-2.7
SCO	Scoresbysund	6.07	346		Pn	11 11 59.5	+0.7
SCO	Scoresbysund	6.07	346	*e*	Pn	11 11 56.1	-2.6
	baz=164,slow=6.9						
SCO				*i* P	Pn	11 11 59.0	+0.2
SCO				*i* S	Sn	11 13 11.8	+3.6
SCO				IAML		11 13 20.7	
	comp=Z,1.1nm,0.5s						
EKA	Eskdalemuir Ar	11.77	136	Pn	Pn	11 13 17.6	+0.8
	baz=319,slow=13,SNR=3.4						
NOA	NORSAR Array B	13.53	92	LR	LR	11 18 41.8	
	comp=Z,27nm,20.6s,baz=295,slow=36						
FINES	FINESS Array B	19.70	79	LR	LR	11 22 58.9	
	comp=Z,53nm,19.1s,baz=228,slow=38						
GERES	GERESS Array B	22.96	119	P	P	11 15 35.0	+1.6
	comp=Z,1.0nm,0.8s,baz=322,slow=8.5,SNR=4.0						
GERES				LR	LR	11 25 49.0	
	comp=Z,79nm,19.9s,baz=316,slow=40						
DAVOX	Davos/Dischmat	23.32	127	LR	LR	11 23 56.4	
	comp=Z,42nm,20.8s,baz=259,slow=35						
VRAC	Vranov	23.70	114	LR	LR	11 25 27.0	
	comp=Z,95nm,19.4s,baz=307,slow=38						
ESDC	Sonseca Array	26.27	156	P	P	11 16 05.5	+1.1
	comp=Z,0.6nm,0.6s,baz=347,slow=9.9,SNR=4.8						
ESDC				LR	LR	11 25 55.1	
	comp=Z,100nm,18.3s,baz=345,slow=35						
RES	Resolute Bay	26.46	324	LR	LR	11 26 27.6	
	comp=Z,66nm,20.1s,baz=277,slow=36						
YKA	Yellowknife Ar	39.20	313	P	P	11 17 56.8	0.0
	comp=Z,1.1nm,1.1s,baz=38,slow=8.9,SNR=6.9						
YKA				PcP	PcP	11 20 06.7	+1.1
	comp=Z,0.8nm,1.1s,baz=61,slow=4.9,SNR=4.4						
AB05	Akbulak array	41.97	73	P	P	11 18 20.8	+1.1
AB08	Akbulak array	41.99	73	P	P	11 18 20.9	+0.9
TIXI	Tiksi	42.02	15	P	P	11 18 17.8	-2.1
GNI	Garni	42.83	94	P	P	11 18 28.0	+0.9
AGMN	Agassiz Nation	43.12	287	P	P	11 18 29.9	+0.8
AGMN				IAmb	IAmb	11 18 31.4	
	comp=Z,11nm,1.4s						
BRVK	Borovoye	43.12	62	P	P	11 18 30.4	+1.3
IL18	Eielson Array	45.66	332	P	P	11 18 50.8	+1.5
ILAR	Eielson Array	45.67	332	P	P	11 18 51.4	+2.0
	comp=Z,1.9nm,1.1s,baz=24,slow=5.3,SNR=9.0						
ZALV	Zalesovo Beam	47.62	51	P	P	11 19 06.2	+1.5
	comp=Z,0.4nm,0.4s,baz=316,slow=6.0,SNR=2.0						
EGMT	Eagleton	48.87	297	P	P	11 19 15.8	+1.3
EGMT				IAmb	IAmb	11 19 17.4	
	comp=Z,9.6nm,1.2s						
GCMT	Greycliff	50.68	295	P	P	11 19 29.4	+0.9
HRY	Holter Researc	50.75	298	P	P	11 19 30.0	+1.1
KK09	Karatay Array	51.25	70	P	P	11 19 34.1	+1.5
KK04	Karatay Array	51.26	70	P	P	11 19 33.5	+0.8
KKAR	Karatay Array	51.27	70	P	P	11 19 33.5	+0.8
MKAR	Makanchi Array	52.72	58	P	P	11 19 44.5	+1.0
	comp=Z,0.6nm,0.9s,baz=313,slow=7.5,SNR=4.2						
TORD	Torodi Ar. Bea	53.15	156	P	P	11 19 46.9	0.0
	comp=Z,0.7nm,0.8s,baz=340,slow=8.1,SNR=2.3						
PD31	Pinedale Array	53.17	293	P	P	11 19 48.1	+0.9
PD31				IAmb	IAmb	11 19 49.2	
	comp=Z,8.9nm,1.4s						
PDAR	Pinedale Array	53.17	293	P	P	11 19 47.5	+0.4
	comp=Z,1.6nm,0.9s,baz=54,slow=7.7,SNR=9.9						
BW06	Boulder Array	53.17	293	P	P	11 19 47.8	+0.6
BW06				IAmb	IAmb	11 19 49.2	
	comp=Z,8.9nm,1.4s						
DRK	Karamyk	54.84	71	P	P	11 20 01.7	+2.2
PV13	Radium Mtn., P	56.80	290	P	P	11 20 14.9	+1.5
PV13				IAmb	IAmb	11 20 15.6	
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	60.10	290	P	P	11 20 37.3	+0.8
WUAZ				IAmb	IAmb	11 20 38.7	
	comp=Z,5.8nm,1.1s						
NVAR	Mina Array Bea	60.30	297	LR	LR	11 49 13.3	
	comp=Z,71nm,19.4s,baz=20,slow=39						
PB16	IPOC Station P	91.77	229	P	P	11 23 39.2	+1.8
PB16				IAmb	IAmb	11 23 42.8	
	comp=Z,3.5nm,0.6s						

IDC 07 11:31:13.3±4.5**, 23°.40S×68°.85E, h0^{km}, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.6**/38**, mbtmp3.7**/6**, MS3.8**/4**, Ms1 3.7**/4**, ms1mx3.1**/42**, Error ellipse: s-maj=133.2km s-min=31.2km az=54.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	16.05	13	T	T	11 51 02.7	
	baz=192,slow=76,SNR=160						
H08S2	Diego Garcia H	16.05	13	T	T	11 51 02.7	
	baz=192,slow=76,SNR=186						
H08S3	Diego Garcia H	16.07	13	T	T	11 51 05.5	
	baz=192,slow=76,SNR=220						
BOSA	Boshof	39.36	253	LR	LR	11 52 15.3	
	comp=Z,71nm,18.4s,baz=136,slow=32						
H01W2	Cape Leeuwin H	40.86	117	T	T	12 22 22.1	
	baz=274,slow=74,SNR=10.0						
H01W3	Cape Leeuwin H	40.87	117	T	T	12 22 22.1	
	baz=274,slow=74,SNR=9.2						
H01W1	Cape Leeuwin H	40.88	117	T	T	12 22 23.2	
	baz=274,slow=74,SNR=9.6						
CMAR	Chiang Mai Arr	50.93	38	P	P	11 40 16.6	-0.1
	0.5nm,0.7s,baz=235,slow=6.1,SNR=4.5						
ASAR	Alice Springs	59.14	104	P	P	11 41 16.2	0.0
	1.0nm,0.8s,baz=246,slow=5.7,SNR=10						
ASAR				LR	LR	12 02 52.9	
	comp=Z,75nm,21.8s,baz=262,slow=32						
WRA	Warramunga Arr	60.50	100	P	P	11 41 25.2	-0.3
	0.6nm,1.0s,baz=253,slow=7.6,SNR=5.8						
MKAR	Makanchi Array	70.92	10	P	P	11 42 30.8	-1.4
	0.2nm,0.5s,baz=200,slow=6.8,SNR=6.3						
TORD	Torodi Ar. Bea	75.04	292	LR	LR	12 15 43.2	
	comp=Z,52nm,18.1s,baz=330,slow=36						
DBIC	Dimbokro	77.85	283	LR	LR	12 15 46.5	
	comp=Z,72nm,18.2s,baz=92,slow=34						
ZALV	Zalesovo Beam	78.26	10	P	P	11 43 15.3	+0.7
	0.6nm,0.5s,baz=172,slow=2.9,SNR=2.7						
SONM	Songino Array	78.53	25	P	P	11 43 17.3	+0.8
	0.3nm,0.6s,baz=197,slow=4.5,SNR=2.5						
YKA	Yellowknife Ar	140.86	3	PKP	PKiKP	11 50 49.9	+2.7
	0.3nm,1.0s,baz=338,slow=1.5,SNR=3.0						

IDC 07 11:32:50.6±58.0**, 29°.29S×179°.94W, h0^{km}, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/17**, mbtmp3.6**/3**, Error ellipse: s-maj=1044.0km s-min=183.1km az=96.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.10	256	P	P	11 39 28.3	-0.1
	0.9nm,0.5s,baz=99,slow=13,SNR=3.7						
ASAR	Alice Springs	41.49	267	P	P	11 40 39.1	-0.6
	0.4nm,0.9s,baz=108,slow=8.0,SNR=2.9						
WRA	Warramunga Arr	42.38	272	P	P	11 40 47.4	+0.4
	0.3nm,0.3s,baz=111,slow=7.8,SNR=4.6						

SJA 07 11:44:12.9±0.5**, 22°.62S×64°.37W, h534^{km}**±3^{km}**, ML4.0, MW3.8, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.12	238	*e*P	P	11 45 20.2	+1.8
HJA				*e*S	S	11 46 09.5	-2.2
YJA	Yavi	1.15	292	*e*P	P	11 45 20.3	+1.7
YJA				*e*S	S	11 46 09.9	-1.9
ASTB	Santa Barbara	1.33	183	*e*P	P	11 45 19.6	+0.9
AZAP	Zapla	1.72	202	*e*P	P	11 45 21.9	+1.7
AZAP				*e*S	S	11 46 12.8	-2.2
SLA	San Lorenzo	2.34	206	*e*P	P	11 45 26.0	+3.0
FSA	Cafayete	3.77	203	*e*P	P	11 45 34.8	+2.7
LVC	Limon Verde	4.19	269	*e*P	P	11 45 38.1	+2.5
AHML	Horco Molle	4.24	192	*e*P	P	11 45 38.4	+2.9
PB09	IPOC Station P	4.59	279	*e*P	P	11 45 41.4	+2.9
PB09				*e*S	S	11 46 51.9	+3.5
PB09				IAML		11 46 55.4	
	comp=Z,27nm,0.3s						
PB04	IPOC Station P	5.35	272	*e*P	P	11 45 49.1	+4.0
PB04				*e*S	S	11 47 04.5	+4.1
PB05	IPOC Station P	5.39	266	*e*P	P	11 45 48.4	+3.1
PB05				*e*S	S	11 47 04.7	+3.8
PB05				IAML		11 47 14.9	
	comp=Z,32nm,0.4s						
PB14	IPOC Station P	5.88	249	*e*P	P	11 45 54.4	+4.4
PB14				*e*S	S	11 47 17.9	+8.5
PB14				IAML		11 47 25.3	
	comp=Z,30nm,0.2s						
CYA	Choya	5.94	192	*e*P	P	11 45 54.2	+4.0
VCA	Vinchina	7.00	209	*e*P	P	11 46 06.1	+5.7
VCA				*e*S	S	11 47 35.3	+6.8
ACDV	Cuesta del Vie	8.64	208	*e*P	P	11 46 22.6	+5.9
AROD	Rodeo	8.80	210	*e*P	P	11 46 25.1	+6.6

IDC ***07*** *12:27:13.9±2.5, 6°.13S×146°.60E, h28^{km}±17^{km}, mb4.4/24, mb1 4.5/30, mb1mx4.4/42, mbtmp4.6/30, ML4.2/5, MS4.1/25, Ms1 4.1/25, ms1mx4.0/33, Error ellipse: s-maj=14.0km s-min=8.2km az=102.0*

BJI ***07*** *12:27:15.0±0.0, 5°.93S×146°.63E, h49^{km}, mB5.3/30, mb4.7/49, Ms5.1/5, Ms7 4.8/6*

NEIC ***07*** *12:27:16±1.1, 6°.12S±0°.06×146°.63E±0°.07, h55^{km}±7^{km}, mb4.9/72, Error ellipse: s-maj=9.6km s-min=8.2km az=90.0*

DJA ***07*** *12:27:17.2±0.3, 6°S±3°×14°7E±°, h71^{km}±4^{km}, M4.8/41, mB5.3/12, mb4.8/41, MLv5.1/4, Mw(mB)4.7/12*

NOU ***07*** *12:27:18.4, 6°.21S×146°.63E, h60^{km}, mb5.0, Eastern New Guinea Reg., P.N.G.*

GCMT ***07*** *12:27:18.0±0.3, 5°.99S±0°.02×146°.65E±0°.02, h40^{km}, MW5.0/58, Moment Tensor Solution. s54,c70; s58,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.58±.17; M$_{\theta\theta}$-3.62±.10; M$_{\phi\phi}$0.04±.12; M$_{r\theta}$-1.47±.10; M$_{\theta\phi}$0.14±.10; M$_{\phi r}$0.10±.12; Best double couple: M$_0$3.89200×10^{16} NP1:φ$_s$91.00000°, δ34.00000°, λ89.00000°. NP2: φ$_s$273.00000°, δ56.00000°, λ91.00000°. Principal axes: T 3.8700, Plg79.0000°, Azm186.0000°; N 0.0510, Plg1.0000°, Azm92.0000°; P -3.9150, Plg11.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 12:27:16.2±0.3**, 6°.13S**±0°.04×**146°.64E**±0°.05**, h52^{km}, n235, σ1^{s}.42**/227**, mb5.0**/103**, MS4.2**/23**, 1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.29	171	Pn	Pn	12 28 05.4	0.0
	14nm,0.3s,baz=352,slow=4.5,SNR=32						
PMG				Sn	Sn	12 28 43.6	+0.3
	54nm,0.3s,baz=335,slow=14,SNR=1.7						
PMG				LR	LR	12 29 49.0	
	comp=Z,11µm,19.3s,baz=344,slow=47						
PMG	Port Moresby	3.29	171	Pn	Pn	12 28 05.3	0.0
PMG				Sn	Sn	12 28 44.8	+1.5
PMG	Port Moresby	3.29	171	P	Pn	12 28 06.2	+0.8
MANU	Manus Island	4.12	10		Pn	12 28 14.1	-2.7
KRVT	Keravat (AS076	5.66	72	Pn	Pn	12 28 37.9	0.0
	19nm,0.3s,baz=52,slow=4.0,SNR=4.6						
KRVT				LR	LR	12 30 40.3	
	comp=Z,2µm,21.2s,baz=237,slow=36						
RABL	Rabaul	5.83	71		Pn	12 28 40.0	-0.1
RABL	Rabaul	5.83	71	P	Pn	12 28 41.4	+1.2
JAY	Jayapura	6.92	301	Pn	Pn	12 28 59.1	+3.9
	2.8nm,0.3s,baz=127,slow=8.7,SNR=6.8						
JAY				LR	LR	12 32 03.5	
	comp=Z,4µm,20.1s,baz=126,slow=42						
JAY	Jayapura	6.92	301	P	Pn	12 28 58.5	+3.3
	0.2nm58nm,0.9s						
COEN	Coen	8.49	203	Pn	Pn	12 29 16.7	0.0
COEN				Sn	Sn	12 30 48.9	-2.3
SMPI	Sarmi	8.92	297	P	Pn	12 29 25.7	+3.2
	37nm,1.7s						
MTSU	Mount Surprise	12.14	191	P	Pn	12 30 09.6	+2.9
	baz=12,SNR=8.2						
HNR	Honiara	13.58	105	Pn	Pn	12 30 28.4	+2.1
	2.0nm,0.3s,baz=194,slow=1.5,SNR=6.4						
HNR				LR	LR	12 33 58.4	
	comp=Z,139nm,20.6s,baz=276,slow=30						
HNR	Honiara	13.58	105		Pn	12 30 26.2	-0.2
HNR	Honiara	13.58	105	P	Pn	12 30 28.3	+2.0
CTA	Charters Tower	13.88	182	Pn	Pn	12 30 30.2	-0.1
	0.3nm,0.3s,baz=349,slow=5.2,SNR=3.8						
CTAO	Charters Tower	13.88	182	Pn	Pn	12 30 30.6	+0.3
FAKI	Fak Fak	14.70	282		Pn	12 30 40.0	-1.2
FAKI	Fak Fak	14.70	282	P	Pn	12 30 43.0	+1.8
	67nm,0.8s						
KDU	Kakadu	15.41	244	P	Pn	12 30 51.0	+0.5
	baz=15,SNR=29						
QIS	Mount Isa	15.88	205	P	Pn	12 30 57.1	+0.6
	baz=16,SNR=6.8						
SIJI	Sorong	16.21	288	Pn	Pn	12 31 00.2	-0.4
	1.0nm,0.3s,baz=100,slow=9.6,SNR=6.5						
SIJI				LR	LR	12 37 36.4	
	comp=Z,566nm,19.9s,baz=103,slow=38						
SWI	Sorong	16.22	288	P	P	12 31 02.7	-0.4
	1µm215nm,1.2s						
MTN	Manton Dam	16.68	245	P	P	12 31 08.9	+0.7
	baz=17,SNR=4.5						
MTN	Manton Dam	16.68	245	P	P	12 31 07.5	-0.7
MTN				IAmb	IAmb	12 31 52.2	
	comp=Z,78nm,1.1s						
MSAI	Masohi	17.87	278	P	P	12 31 23.4	+2.0
	comp=Z,22nm,0.8s						
WB0	Warramunga Arr	18.04	220		P	12 31 22.5	-0.8
WR0	Warramunga Arr	18.09	219	P	P	12 31 22.9	-0.9
WRAB	Tennant Creek	18.19	220	P	P	12 31 24.6	-0.2
WB2	Warramunga Arr	18.20	220	P	Pn	12 31 25.2	0.0
WRA	Warramunga Arr	18.20	220	P	P	12 31 24.3	-0.8
	comp=Z,0.7nm,0.3s,baz=43,slow=11,SNR=58						
WRA				S	Sn	12 34 47.7	-0.1
	comp=Z,0.1nm,0.3s,baz=36,slow=24,SNR=2.7						
WRA				PcP	PcP	12 35 57.5	+1.2
	baz=12,slow=1.7,SNR=5.3						
WRA				LR	LR	12 39 22.2	
	comp=Z,1µm,18.8s,baz=40,slow=40						
WRA				ScP	ScP	12 39 31.6	+4.0
	comp=Z,0.0nm,0.3s,baz=40,slow=2.5,SNR=6.1						
EIDS	Eidsvold	19.60	168	P	Pn	12 31 41.4	-0.6
	baz=20,SNR=5.2						
EIDS	Eidsvold	19.60	168	P	P	12 31 39.1	-1.1
GUMO	Guam	19.67	355	P	Pn	12 31 42.3	-0.6
	comp=Z,1.9nm,0.3s,baz=206,slow=12,SNR=4.1						
GUMO				LR	LR	12 38 57.1	
	comp=Z,418nm,18.3s,baz=180,slow=36						
GUMO	Guam	19.67	355	P	P	12 31 40.3	-0.8
NLAI	Namlea	19.68	278	P	Pn	12 31 43.4	+0.3
	comp=Z,2µmcomp=Z,61nm,1.1s						
RMQ	Roma	20.34	175	P	Pn	12 31 50.5	-0.2
	baz=20,SNR=6.3						
QLP	Quilpie	20.47	186	P	P	12 31 50.0	+0.4
	baz=20,SNR=14						
SANI	Sanana	20.99	280	P	P	12 31 56.9	+1.4
	comp=Z,1µmcomp=Z,59nm,0.9s						
AS31	Alice Springs	21.31	214	P	P	12 31 58.9	0.0
ASAR	Alice Springs	21.31	214	P	P	12 31 58.5	-0.4
	comp=Z,4.4nm,0.8s,baz=47,slow=8.7,SNR=36						
ASAR				S	S	12 35 53.5	+0.6
	comp=Z,1.2nm,0.7s,baz=30,slow=27,SNR=3.0						
ASAR				ScP	ScP	12 39 39.2	+4.5
	comp=Z,0.8nm,0.9s,baz=45,slow=1.9,SNR=4.5						
ASAR				LR	LR	12 41 29.5	
	comp=Z,2µm,18.1s,baz=38,slow=40						
SANVU	Saraoutou	22.20	116	P	P	12 32 08.4	0.0
SANVU				IAmb	IAmb	12 32 15.3	
	comp=Z,52nm,0.8s						
SANVU	Saraoutou	22.20	116	P	P	12 32 08.8	+0.4
SOEI	Soe	22.45	259	P	P	12 32 10.6	-0.6
KMSI	Cibinong	23.58	286	P	P	12 32 23.5	+1.0
	comp=Z,216nm,1.1s						
FITZ	Fitzroy Crossi	23.69	238	P	P	12 32 23.1	-0.4
	baz=24,SNR=35						
FITZ	Fitzroy Crossi	23.69	238	P	P	12 32 23.4	-0.1
	comp=Z,54nm,0.8s,baz=70,slow=6.7,SNR=47						
FITZ				LR	LR	12 43 15.2	
	comp=Z,804nm,18.8s,baz=62,slow=41						
FITZ	Fitzroy Crossi	23.69	238	P	P	12 32 22.6	-0.9
FITZ				IAmb	IAmb	12 32 25.0	
	comp=Z,51nm,0.8s						
LUWI	Luwuk	24.35	281	P	P	12 32 28.9	-0.6
LUWI	Luwuk	24.35	281	P	P	12 32 29.8	+0.3
	comp=Z,3µmcomp=Z,202nm,0.9s						
GTOI	Gorontalo	24.53	285	P	P	12 32 33.3	+2.1
	comp=Z,914nmcomp=Z,94nm,0.7s						
ARMA	Armidale	24.61	170	P	P	12 32 32.1	+0.2
DAV	Davao City (W)	24.77	302	LR	LR	12 42 02.6	
	comp=Z,284nm,21.0s,baz=142,slow=36						
DZM	Mont Dzumac	24.84	132	P	P	12 32 33.5	-0.6
	comp=Z,25nm,0.9s,baz=25,slow=9.1,SNR=8.9						
DZM	Mont Dzumac	24.84	132	*e*P	P	12 32 33.7	-0.4
	comp=Z,65nm,1.0s						
DZM				*e*S	S	12 36 48.3	-5.3
	comp=Z,304nm,26.9s						
DZM				*e*LR	LR	12 38 36.4	
	comp=Z,1µm,28.7s						
DZM	Mont Dzumac	24.84	132	P	P	12 32 33.4	-0.7
DZM				IAmb	IAmb	12 32 36.1	
	comp=Z,36nm,1.0s						
DZM	Mont Dzumac	24.84	132	P	P	12 32 33.9	-0.2
EDFI	Ende, Flores	24.88	262	P	P	12 32 33.7	-0.8
	comp=Z,24nm,0.8s						
APSI	Ampana	25.47	281	P	P	12 32 40.2	+0.5

	comp=Z,1µmcomp=Z,112nm,1.0s						
MRSI	Marisa	25.52	284	P	P	12 32 39.1	-1.1
	comp=Z,31nm,0.7s						
KWAJ	Kwajalein Atol	25.64	55	P	P	12 32 40.6	-0.6
WRKA	Warakurna	25.73	221	P	P	12 32 41.0	-1.0
	baz=26,SNR=21						
STKA	Stephens Creek	26.05	190	P	P	12 32 45.2	+0.4
	baz=26,SNR=13						
STKA	Stephens Creek	26.05	190	P	P	12 32 44.1	-0.6
	comp=Z,7.1nm,0.7s,baz=358,slow=9.8,SNR=22						
STKA				LR	LR	12 43 48.4	
	comp=Z,1µm,19.2s,baz=9.7,slow=38						
STKA	Stephens Creek	26.05	190	P	P	12 32 44.4	-0.3
WSI	Waingapu	26.32	261	P	P	12 32 38.1	-9.4
BNSI	Bone	26.48	272	P	P	12 32 49.1	+0.2
	comp=Z,32nm,1.0s						
KAPI	Kappang	26.79	271	LR	LR	12 46 42.3	
	comp=Z,228nm,19.3s,baz=84,slow=44						
TOLI2	Tolitoli	26.80	285	P	P	12 32 51.1	-0.7
TOLI2				IAmb	IAmb	12 33 00.6	
	comp=Z,71nm,1.5s						
SPSI	Sidrap Palu	26.85	273	P	P	12 32 53.2	+1.0
	comp=Z,32nm,1.2s						
TTSI	Tana Toraja	26.91	275	P	P	12 32 53.1	+0.4
	comp=Z,31nm,0.9s						
YNG	Young	28.07	177	P	P	12 33 03.0	0.0
	baz=28,SNR=4.8						
HTT	Hallett	28.09	194	P	P	12 33 03.6	+0.4
	baz=28,SNR=6.6						
BBOO	Buckleboo	28.32	199	P	P	12 33 04.2	-1.0
FORT	Forrest	30.09	213	P	P	12 33 21.3	+0.4
FORT				IAmb	IAmb	12 34 24.8	
	comp=Z,24nm,0.8s						
PSA00	Pilbara Seismi	30.12	237	P	P	12 33 21.1	-0.2
PSA00				IAmb	IAmb	12 33 22.3	
	comp=Z,18nm,0.8s						
H11S3	WAKE ISLAND Hy	31.46	39	T	T	13 06 20.9	
	baz=220,slow=74,SNR=35						
H11S2	WAKE ISLAND Hy	31.47	39	T	T	13 06 20.1	
	baz=220,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	31.48	39	T	T	13 06 19.1	
	baz=220,slow=74,SNR=20						
H11N1	WAKE ISLAND Hy	32.51	37	T	T	13 07 32.7	
	baz=218,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	32.52	37	T	T	13 07 33.7	
	baz=218,slow=76,SNR=50						
H11N2	WAKE ISLAND Hy	32.53	37	T	T	13 07 34.5	
	baz=218,slow=76,SNR=83						
MSVF	Nonsavu	32.76	113	P	P	12 33 46.3	+1.6
	comp=Z,9.6nm,0.9s,baz=268,slow=7.4,SNR=12						
MSVF	Nonsavu	32.76	113	P	P	12 33 45.8	+1.1
MSVF				IAmb	IAmb	12 34 08.1	
	comp=Z,48nm,1.4s						
MEEK	Meekatharra	33.60	229	P	P	12 33 51.9	+0.1
	baz=34,SNR=23						
SBUM	Sibu	35.41	283	P	P	12 34 07.4	-0.2
SBUM				IAmb	IAmb	12 34 11.4	
	comp=Z,12nm,0.9s						
MORW	Morawa	36.82	228	P	P	12 34 19.4	0.0
	baz=37,SNR=3.6						
MORW	Morawa	36.82	228	P	P	12 34 16.9	-2.6
KLBR	Kellerberrin	37.03	223	P	P	12 34 21.2	-0.1
	baz=37,SNR=7.4						
KSM	Kuching	37.05	281	P	P	12 34 19.6	-2.1
KSM				IAmb	IAmb	12 34 37.6	
	comp=Z,20nm,1.1s						
YULB	Yu-li	38.39	321	P	P	12 34 32.6	-0.2
CISI	Cisompet, Garu	38.57	266	P	P	12 34 33.7	-0.7
TPUB	Ta-pu	38.75	320	P	P	12 34 35.2	-0.7
SSLB	Suanglung	38.90	321	P	P	12 34 36.2	-0.8
TPI	Tanjungpandan	39.01	273	P	P	12 34 37.6	-0.5
	comp=Z,34nm,0.7s						
YHNB	Yeheng	39.28	322	P	P	12 34 40.4	+0.1
XMIS	Christmas Isla	40.77	261	P	P	12 34 51.8	-0.9
JNU	Nakatsue	41.81	340	P	P	12 35 01.6	+0.6
	comp=Z,20nm,0.9s,baz=134,slow=6.0,SNR=6.6						
JNU	Nakatsue	41.81	340	P	P	12 35 01.6	+0.6
JNU				IAmb	IAmb	12 35 08.4	
	comp=Z,48nm,1.2s						
BKZ	Black Stump Fm	42.51	145	P	P	12 35 05.9	-0.8
BKZ				IAmb	IAmb	12 35 22.3	
	comp=Z,37nm,1.3s						
LTZ	Lake Taylor	42.96	152	P	P	12 35 10.9	+0.6
LTZ				IAmb	IAmb	12 35 27.9	
	comp=Z,58nm,1.6s						
MJAR	Matsushiro Arr	43.18	350	P	P	12 35 11.5	-0.6
	comp=Z,5.6nm,1.0s,baz=164,slow=5.1,SNR=6.0						
MJAR				LR	LR	12 53 07.9	
	comp=Z,105nm,18.3s,baz=180,slow=36						
BKNI	Bangkinang	45.97	276	P	P	12 35 34.0	-0.6
NJ2	Nanjing	46.29	327	*e*P	P	12 35 37.4	+0.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
KSRS	Korea Array	46.75	339	P	P	12 35 41.6	+1.3
	comp=Z,8.1nm,0.8s,baz=158,slow=9.5,SNR=17						
KSRS				LR	LR	12 53 25.2	
	comp=Z,258nm,20.6s,baz=148,slow=34						
IPM	Ipoh	46.75	282	P	P	12 35 39.8	-1.0
IPM				IAmb	IAmb	12 35 44.2	
	comp=Z,18nm,0.9s						
KULM	Kulim	47.30	283	P	P	12 35 43.8	-1.3
KULM				IAmb	IAmb	12 35 55.4	
	comp=Z,20nm,0.9s						
MNSI	Mandailing Nat	47.48	277	P	P	12 35 56.4	+10
SRAK	Srakaew	48.57	295	P	P	12 35 58.4	+3.5
	comp=Z,139nm,1.3s						
TRTT	Trang	48.84	286	P	P	12 35 60.0	+3.0
	comp=Z,18nm,1.1s						
NONG	Nongkai	49.19	300	P	P	12 36 01.2	+1.6
	comp=Z,17nm,0.8s						
CHAI	Chaiyaphum	49.33	297	P	P	12 36 01.5	+0.8
	comp=Z,28nm,0.7s						
GSI	Gunungsitoli	49.54	277	P	P	12 35 59.9	-2.5
GSI	Gunungsitoli	49.54	277	P	P	12 36 01.7	-0.7
	comp=Z,2µmcomp=Z,25nm,0.8s						
KCSI	Kotacane, Aceh	49.73	280	P	P	12 36 02.2	-1.6
	comp=Z,24nm,0.8s						
SLVN	Son La	50.02	304	P	P	12 36 05.1	-0.8
SLVN				IAmb	IAmb	12 36 10.7	
	comp=Z,8.5nm,1.1s						
ASAJ	Asahikawa	50.15	356	P	P	12 36 07.9	+1.5
	comp=Z,14nm,0.9s,baz=107,slow=14,SNR=4.2						
PKDT	Phuket	50.15	286	P	P	12 36 10.6	+3.5
	comp=Z,37nm,0.9s						
TPTI		50.26	279	P	P	12 36 07.6	-0.2
	comp=Z,14nm,0.9s						
ENH	Enshi	50.77	318	P	P	12 36 10.8	-0.7
ENH				IAmb	IAmb	12 36 15.0	
	comp=Z,16nm,1.1s						
MLSI	Meulaboh, Aceh	51.21	280	P	P	12 36 13.5	-1.5
	comp=Z,82nm,0.8s						
PHIT	Phitsanulok	51.21	298	P	P	12 36 18.0	+3.1
	comp=Z,82nm,0.8s						
UTTA	Uttaradit	51.31	298	P	P	12 36 17.4	+1.7
	comp=Z,28nm,0.7s						
UTHA	Uthaitani	51.47	295	P	P	12 36 18.3	+1.5
	comp=Z,333nmcomp=Z,32nm,0.9s						
NANT	Nan	51.61	300	P	P	12 36 22.0	+4.1
	comp=Z,13µmcomp=Z,376nm,0.9s						
USRK	Ussuriysk Ar.	51.81	347	P	P	12 36 20.2	+1.3
	comp=Z,5.2nm,0.7s,baz=161,slow=8.1,SNR=13						
USRK				LR	LR	12 57 00.9	
	comp=Z,72nm,18.7s,baz=144,slow=34						
SUKH	Sukhothai	52.02	298	P	P	12 36 23.3	+2.4
	comp=Z,22nm,1.0s						
LAMP	Lampang	52.42	299	P	P	12 36 26.2	+2.3
	comp=Z,28nm,0.8s						
PAYA	Payao	52.55	300	P	P	12 36 26.6	+1.6
	comp=Z,3µmcomp=Z,332nm,0.8s						
CM36	Chiang Mai Arr	52.89	299	P	P	12 36 28.0	+0.6
CM35	Chiang Mai Arr	52.90	299	P	P	12 36 28.0	+0.5
CM04	Chiang Mai Arr	52.94	298	P	P	12 36 29.8	+2.0
	comp=Z,143nmcomp=Z,16nm,0.9s						
CM09	Chiang Mai Arr	52.95	298	P	P	12 36 29.9	+2.0
	comp=Z,128nmcomp=Z,17nm,1.1s						
CM01	Chiang Mai Arr	52.97	298	P	P	12 36 30.0	+2.0
	comp=Z,159nmcomp=Z,21nm,1.0s						
CM34	Chiang Mai Arr	52.97	299	P	P	12 36 29.0	+1.0
CM05	Chiang Mai Arr	52.98	298	P	P	12 36 29.9	+1.9
	comp=Z,111nmcomp=Z,15nm,0.9s						
CM02	Chiang Mai Arr	52.99	298	P	P	12 36 30.0	+1.9
	comp=Z,135nmcomp=Z,20nm,1.0s						
CM31	Chiang Mai Arr	53.00	298	P	P	12 36 30.2	+2.0
	comp=Z,3µmcomp=Z,436nm,1.0s						
CM31	Chiang Mai Arr	53.00	298	P	P	12 36 28.6	+0.4
CM31				IAmb	IAmb	12 36 30.6	
	comp=Z,16nm,0.9s						
CMAR	Chiang Mai Arr	53.00	298	P	P	12 36 29.8	+1.6
	comp=Z,11nm,0.8s,baz=120,slow=5.9,SNR=56						
CMAR				LR	LR	12 56 49.6	
	comp=Z,60nm,21.8s,baz=183,slow=34						
CM15	Chiang Mai Arr	53.01	298	P	P	12 36 30.0	+1.7
	comp=Z,20nm,0.9s						
CM13	Chiang Mai Arr	53.02	298	P	P	12 36 30.0	+1.7
	comp=Z,110nmcomp=Z,15nm,1.0s						
CMMT	Chiang Mai	53.13	299	P	P	12 36 30.0	+0.8
	comp=Z,6.3nm,1.1s						
CM33	Chiang Mai Arr	53.13	299	P	P	12 36 30.0	+0.8
CHTO	Chiang Mai	53.14	299	P	P	12 36 28.4	-0.8
CHTO				IAmb	IAmb	12 36 31.2	
	comp=Z,11nm,1.0s						
CM32	Chiang Mai Arr	53.16	299	P	P	12 36 31.0	+1.6
CN2	Changchun	53.27	341	*e*P	P	12 36 33.1	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
XAN	Xi'an	53.56	321	P	P	12 36 31.2	-0.9
XAN				pP	pP	12 36 45.3	-1.9
XAN				pmax	pmax		
	comp=Z,29nm,1.0s						
XAN				pmax	pmax		
	comp=Z,170nm,4.9s						
XAN	Xi'an	53.56	321	P	P	12 36 31.0	-1.1
MHMT	Maesarieng	53.78	298	P	P	12 36 37.0	+3.1
BJT	Baijiatuau	53.83	331	P	P	12 36 32.5	-1.4
BJT				IAmb	IAmb	12 37 02.5	
	comp=Z,22nm,1.4s						
BJI	Beijing	53.84	331	P	P	12 36 33.6	-0.4
BJI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
CD2	Chengdu	55.11	315	*e*P	P	12 36 43.5	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	56.65	348	P	P	12 36 54.9	+0.8
	comp=Z,3.6nm,1.0s,baz=167,slow=8.3,SNR=3.3						
KLR				LR	LR	12 57 00.4	
	comp=Z,134nm,21.9s,baz=132,slow=32						
HHC	Hu-ho-hao-te	56.76	329	*e*P	P	12 36 54.8	-0.3
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,7.0s						
LZH	Lanzhou	58.08	320	*e*P	P	12 37 05.0	+0.4
LZH				pP	pP	12 37 21.3	+1.5
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
PETK	Petropavlovsk-	59.76	8	P	P	12 37 16.5	+0.8
	comp=Z,8.5nm,0.9s,baz=167,slow=5.7,SNR=9.3						
PETK				LR	LR	12 58 38.2	
	comp=Z,254nm,21.8s,baz=200,slow=32						
HIA	Hailar	59.95	340	P	P	12 37 14.8	-2.3
HIA				IAmb	IAmb	12 37 26.2	
	comp=Z,17nm,1.1s						
SHL	Shillong	61.79	303	P	P	12 37 30.0	-0.3
SHL				IAmb	IAmb	12 37 40.7	
	comp=Z,10nm,0.9s						
GTA	Gaotai	62.62	320	*e*P	P	12 37 35.8	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PPT	Papeete	63.20	107	LR	LR	13 01 51.3	
	comp=Z,56nm,19.0s,baz=288,slow=33						
PPT2	Papeete2	63.20	107	*e*LR	LR	12 56 31.9	
	comp=Z,215nm,23.0s						
TBI	Tubuai	63.65	113	*e*LR	LR	12 56 44.4	
	comp=Z,269nm,27.2s						
ULN	Ulaanbaatar	64.05	331	P	P	12 37 44.3	-0.5
ULN				IAmb	IAmb	12 37 47.9	
	comp=Z,6.0nm,0.8s						
SONM	Songino Array	64.35	331	P	P	12 37 47.1	+0.4
	comp=Z,4.3nm,0.8s,baz=129,slow=5.5,SNR=14						
SONM				LR	LR	13 07 11.5	
	comp=Z,140nm,18.9s,baz=230,slow=37						
TAPN	Taplejung	65.92	303	*e*P	P	12 37 59.1	+1.5
	comp=Z,19nm,1.0s						
ODAN	Odare	66.02	303	*e*P	P	12 37 59.6	+1.5
	comp=Z,23nm,0.8s						
GUN	Gumba	67.64	303	*e*P	P	12 38 08.8	+0.2
PKI	Pulchoki	67.92	303	*e*P	P	12 38 10.4	+0.1
	comp=Z,19nm,0.9s						
DMN	Daman	68.18	303	*e*P	P	12 38 12.5	+0.6
	comp=Z,22nm,0.9s						
SEY	Seymchan	69.01	3	P	P	12 38 15.4	-0.6
	comp=Z,2.7nm,0.7s,baz=174,slow=5.8,SNR=12						
SEY				LR	LR	13 08 25.2	
	comp=Z,89nm,19.5s,baz=200,slow=36						
YAK	Yakutsk	69.22	352	P	P	12 38 17.6	+0.4
	comp=Z,4.6nm,0.6s,baz=36,slow=2.5,SNR=4.1						
YAK	Yakutsk	69.22	352	P	P	12 38 16.9	-0.3
YAK				IAmb	IAmb	12 38 21.1	
	comp=Z,12nm,0.9s						
KOLN	Koldanda	69.50	303	*e*P	P	12 38 19.7	-0.3
	comp=Z,20nm,0.9s						
DANN	Dangsing	69.55	303	*e*P	P	12 38 20.1	-0.3
	comp=Z,13nm,0.7s						
HYB	Hyderabad	71.17	291	*i* P	P	12 38 29.5	-0.7
VNDA	Vanda	71.80	177	P	P	12 38 32.4	-0.5
	comp=Z,2.3nm,0.8s,baz=323,slow=6.0,SNR=10						
WMQ	Urumqi	72.66	319	*e*P	P	12 38 39.4	+0.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
WMQ				LR	LR		
	comp=Z,910nm,29.2s						
RKT	Rikitea	76.95	112	*e*LR	LR	13 02 56.0	
	comp=Z,282nm,32.8s						
MK31	Makanchi Array	77.37	321	P	P	12 39 04.4	-1.3
MKAR	Makanchi Array	77.37	321	P	P	12 39 05.0	-0.8
	comp=Z,2.5nm,0.8s,baz=97,slow=9.2,SNR=20						
MAKZ	Makanchi	77.58	321	P	P	12 39 06.2	-0.6
SHLS	Shalkode	77.88	316	*e*P	P	12 39 05.5	-3.3
	baz=316						
TIXI	Tiksi	78.50	354	P	P	12 39 10.5	-0.9
KPKS	Kokpek	78.52	316	*e*P	P	12 39 11.2	-1.1
	baz=316						
SATY	Saty	78.58	316	*e*P	P	12 39 11.3	-1.4
	baz=316						
ZAA0	Zalesovo Array	78.93	328	P	P	12 39 12.5	-1.6
ZALV	Zalesovo Beam	78.93	328	P	P	12 39 12.6	-1.5
	comp=Z,2.1nm,0.5s,baz=114,slow=6.5,SNR=8.0						
ZALV				LR	LR	13 13 26.5	
	comp=Z,113nm,20.1s,baz=128,slow=35						
KSH	Kashi	79.20	312	P	P	12 39 17.6	+1.5
KSH				S	S	12 49 12.2	-0.2
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,450nm,6.2s						
TDK	Taldyqorghan	79.23	318	*e*P	P	12 39 14.2	-1.9
	baz=318						
MDOK	Medeo	79.55	316	*e*P	P	12 39 16.4	-1.5
	baz=316						
TNSS	Tian-Shan	79.58	316	*e*P	P	12 39 17.0	-1.5
	baz=316						
AAA	Alma-Ata	79.66	316	*e*P	P	12 39 16.5	-1.9
	baz=316						
NIL	Nilore	79.71	306	P	P	12 39 19.0	+0.1
SEM	Semipalatinsk	80.02	323	*e*P	P	12 39 18.0	-2.5
	baz=324						
BOOM	Boomskoye usch	80.12	315	P	P	12 39 20.2	-0.9
KUU	Kurty	80.27	316	*e*P	P	12 39 20.6	-1.1
	baz=316						
KURK	Kurchatov	81.10	323	P	P	12 39 25.0	-0.9
KURBB	Kurchatov Arra	81.12	323	P	P	12 39 24.8	-1.2
	comp=Z,1.5nm,0.8s,baz=109,slow=4.6,SNR=10						
AAK	Ala-Archa	81.18	315	P	P	12 39 26.7	-0.1
BTLS	Baital	82.18	317	*e*P	P	12 39 30.0	-1.8
	baz=317						
DZA	Taraz	83.49	314	*e*P	P	12 39 37.0	-1.7
	baz=314						
KTH	Kantishna Hill	83.62	24	P	P	12 39 38.3	-0.6
KTH				IAmb	IAmb	12 40 02.9	
	comp=Z,34nm,1.7s						
QSPA	South Pole Qui	83.84	180	P	P	12 39 39.9	-0.2
QSPA				IAmb	IAmb	12 39 57.7	
	comp=Z,14nm,1.2s						
KK31	Karatay Array	84.13	314	P	P	12 39 41.5	-0.3
KK31				IAmb	IAmb	12 39 42.3	
	comp=Z,11nm,1.6s						
KKAR	Karatay Array	84.13	314	P	P	12 39 41.4	-0.5
KKAR				IAmb	IAmb	12 39 42.3	
	comp=Z,11nm,1.6s						
IUG	Iuzhnay	84.24	313	*e*P	P	12 39 40.8	-1.8
	baz=313						
RND	Reindeer	84.38	24	P	P	12 39 42.0	-0.8
BRZS	Berezniki	84.47	321	*e*P	P	12 39 41.6	-1.9
	baz=322						
DHY	Denali Highway	84.85	25	P	P	12 39 45.3	0.0
DHY				IAmb	IAmb	12 39 49.8	
	comp=Z,34nm,1.9s						
I23K	Minto, Yukon-K	84.95	22	P	P	12 39 45.2	-0.3
I23K				IAmb	IAmb	12 39 47.1	
	comp=Z,36nm,2.0s						
NRIK	Noril'sk	85.29	342	P	P	12 39 46.3	-0.8
	comp=Z,3.2nm,0.5s,baz=132,slow=5.9,SNR=5.3						
NRIK				LR	LR	13 18 16.1	
	comp=Z,105nm,19.4s,baz=138,slow=36						
CCB	Clear Creek Bu	85.33	23	P	P	12 39 46.4	-1.0
CCB				IAmb	IAmb	12 39 49.0	
	comp=Z,5.6nm,0.8s						
TCOL	CIGO, UAF Yank	85.40	23	P	P	12 39 47.0	-0.8
TCOL				IAmb	IAmb	12 39 49.5	
	comp=Z,7.3nm,0.7s						
COLD	Coldfoot	85.58	20	P	P	12 39 49.0	+0.4
COLD				IAmb	IAmb	12 40 58.6	
	comp=Z,12nm,1.5s						
A21K	Barrow	85.69	16	P	P	12 39 49.6	+0.5
A21K				IAmb	IAmb	12 39 51.2	
	comp=Z,5.6nm,0.8s						
IL31		85.74	23	P	P	12 39 48.2	-1.2
IL31				IAmb	IAmb	12 39 50.6	
	comp=Z,6.4nm,0.8s						
ILAR	Eielson Array	85.74	23	P	P	12 39 47.8	-1.7
	comp=Z,4.3nm,0.6s,baz=253,slow=4.8,SNR=60						
ILAR				LR	LR	13 14 17.1	
	comp=Z,109nm,19.3s,baz=274,slow=33						
BARN	Barnard Glacie	86.61	28	P	P	12 39 54.8	+0.7
BARN				IAmb	IAmb	12 40 24.1	
	comp=Z,15nm,1.2s						
K27K	Chicken	87.41	25	P	P	12 39 57.8	+0.2
SYO	Syowa Base	90.35	200⇓	*e*P	P	12 40 11.2	-0.2
INK	Inuvik	91.91	21	P	P	12 40 17.4	-1.2
	comp=Z,1.6nm,0.9s,baz=238,slow=3.3,SNR=4.1						
INK	Inuvik	91.91	21	IAmb	IAmb	12 40 18.1	
	comp=Z,7.0nm,1.4s						
BELA	Belgrano 2	96.11	180	P	P	12 40 37.3	-0.6
NVAR	Mina Array Bea	97.73	52	P	Pdif	12 40 47.3	+1.0
	comp=Z,0.7nm,0.8s,baz=259,slow=6.6,SNR=3.9						
NVAR				LR	LR	13 19 21.0	
	comp=Z,91nm,20.4s,baz=296,slow=32						
YKA	Yellowknife Ar	99.45	28	P	Pdif	12 40 52.6	-0.5
	comp=Z,0.9nm,0.9s,baz=280,slow=4.7,SNR=9.7						
PDAR	Pinedale Array	104.27	48	Pdiff	Pdif	12 41 13.7	-1.7
	comp=Z,0.3nm,0.8s,baz=88,slow=4.8,SNR=3.0						
PLCA	Paso Flores	122.21	147	PKP	PKiKP	12 46 06.2	+0.2
	comp=Z,1.0nm,0.6s,baz=252,slow=3.6,SNR=4.1						
CPUP	Villa Florida	140.23	145	PKP	PKPdf	12 46 40.5	+0.4
	comp=Z,1.9nm,0.7s,baz=64,slow=0.5,SNR=4.1						
TORD	Torodi Ar. Bea	144.78	284	PKP	PKPbc	12 46 48.0	+0.5
	comp=Z,21nm,0.7s,baz=72,slow=3.5,SNR=99						
KIC	Kosan Boka	151.55	272	*e*PKP1	PKPbc	12 47 05.9	+0.1
	comp=Z,48nm,0.9s						
DBIC	Dimbokro	151.67	273	PKPbc	PKiKP	12 47 06.8	+0.4
	comp=Z,20nm,0.8s,baz=87,slow=2.6,SNR=33						
TIC	Toumodi	151.83	273	*e*PKP1	PKiKP	12 47 06.7	-0.1
LIC	Lamto	151.84	272	*e*PKP1	PKPbc	12 47 06.4	0.0
	comp=Z,92nm,0.8s						
BDFB	Brasilia	153.95	146	PKPbc	PKiKP	12 47 12.9	+1.7
	comp=Z,3.2nm,0.5s,baz=180,slow=2.0,SNR=2.8						

IDC ***07*** *12:32:49.1±1.3, 6°.27S×147°.20E, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.8/28, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=39.5km s-min=20.0km az=105.0*

ISC 07 12:32:55.6±1.1,**6°.4S**±0°.1×**147°.1E**±0°.2,**h49**^{km},**n11**, σ**0^{s}98**/11,**mb3.9**/6,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.03	179	Pn	Pn	12 33 40.6	-0.5
	3.7nm,0.3s,baz=117,slow=23,SNR=6.1						
PMG				Sn	Sn	12 34 25.7	+10
	6.6nm,0.3s,baz=336,slow=20,SNR=1.7						
SIJI	Sorong	16.74	288	Pn	Pn	12 36 45.7	-1.1
	0.7nm,0.3s,baz=92,slow=11,SNR=6.3						
WRA	Warramunga Arr	18.35	221	P	P	12 37 06.0	-0.2
	0.2nm,0.3s,baz=42,slow=12,SNR=3.4						
ASAR	Alice Springs	21.40	215	P	P	12 37 40.7	+1.3
	0.7nm,0.4s,baz=56,slow=8.9,SNR=5.9						
FITZ	Fitzroy Crossi	23.99	239	P	P	12 38 04.9	-0.9
	8.5nm,0.8s,baz=58,slow=11,SNR=6.1						
USRK	Ussuriysk Ar.	52.15	346	P	P	12 42 00.8	-0.2
	0.8nm,0.6s,baz=137,slow=8.7,SNR=3.6						
CMAR	Chiang Mai Arr	53.53	298	P	P	12 42 12.1	+0.3
	0.7nm,0.5s,baz=134,slow=5.9,SNR=4.4						
SONM	Songino Array	64.78	331	P	P	12 43 30.2	+0.9
	0.4nm,0.7s,baz=116,slow=6.6,SNR=3.0						
ILAR	Eielson Array	85.76	23	P	P	12 45 28.2	-1.0
	0.6nm,0.6s,baz=250,slow=5.1,SNR=8.1						
TORD	Torodi Ar. Bea	145.30	284	PKPbc	PKPab	12 52 29.5	+0.4
	3.4nm,0.7s,baz=69,slow=3.5,SNR=12						
DBIC	Dimbokro	152.16	272	PKPbc	PKiKP	12 52 48.4	+1.2
	1.7nm,0.7s,baz=120,slow=4.2,SNR=3.4						

IDC ***07*** *12:46:32.2±0.7, 55°.34S×29°.64W, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.3/19, mbtmp4.4/10, ML4.0/1, MS4.1/11, Ms1 4.0/11, ms1mx3.9/18, Error ellipse: s-maj=25.1km s-min=17.4km az=55.0*

NEIC ***07*** *12:46:33.6±1.7, 55°.3S±0°.1×29°.6W±0°.2, h10^{km}±1^{km}, mb4.8/37, Error ellipse: s-maj=19.1km s-min=14.7km az=191.0*

ISC 07 12:46:36.3±0.4,**55°.32S**±0°.08×**29°.68W**±0°.08,**h28**^{km},**n91**, σ**0^{s}72**/78,**mb4.8**/22,**MS4.1**/10,**1C,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.08	282		Pn	12 47 36.5	-0.2
VNA1	Neumayer--Stat	18.01	157	P	P	12 50 45.0	+0.5
VNA3	Neumayer Olymp	18.16	159	P	P	12 50 46.7	+0.5
VNA2	Neumayer--Watz	18.41	157	P	P	12 50 48.7	-0.2
	baz=308,slow=11						
PMSA	Palmer Station	19.34	227	LR	LR	12 57 11.0	
	comp=Z,204nm,19.3s,baz=132,slow=33						
SNAA	Sanae	19.99	155	P	P	12 51 05.5	-0.6
SNAA	Sanae	19.99	155	P	P	12 51 05.8	-0.3
	0.4nm,0.3s,baz=309,slow=9.0,SNR=31						
SNAA	Sanae	19.99	155	P	P	12 51 05.0	-1.1
SNAA				IAmb	IAmb	12 51 21.2	
	comp=Z,39nm,0.8s						
BELA	Belgrano 2	22.72	183	P	P	12 51 35.9	+0.4
GO09	Cerro Castillo	25.52	261	P	P	12 52 01.6	-0.5
PLCA	Paso Flores	30.48	281	LR	LR	13 06 20.7	
	comp=Z,123nm,18.6s,baz=132,slow=39						
SYO	Syowa Base	33.03	142⇑	*e*pP	P	12 53 07.4	-1.2
QSPA	South Pole Qui	34.93	180	P	P	12 53 26.1	+0.8
QSPA				IAmb	IAmb	12 53 40.6	
	comp=Z,23nm,1.2s						
CPUP	Villa Florida	35.28	314	P	P	12 53 27.9	-0.6
	comp=Z,4.9nm,0.9s,baz=125,slow=7.9,SNR=5.6						
CPUP				LR	LR	13 06 52.4	
	comp=Z,267nm,20.9s,baz=158,slow=35						
CPUP	Villa Florida	35.28	314	P	P	12 53 27.9	-0.6
CPUP	Villa Florida	35.28	314	*e*P	P	12 53 28.6	+0.1
MT05	Renca	35.90	290	P	P	12 53 33.2	-0.7
PEL	Peldehue	36.06	291	P	P	12 53 34.1	-1.2
MT02	Curacav	36.22	290	P	P	12 53 37.0	+0.5
ZON	Zonda	36.25	295	P	P	12 53 36.5	-0.4
VA03	San Esteban	36.28	291	P	P	12 53 36.9	-0.3
CO03	El Pedregal	37.86	293	P	P	12 53 52.0	+1.3
CO03				IAmb	IAmb	12 54 14.9	
	comp=Z,22nm,1.4s						
CO01	Juntas del Tor	38.23	295	P	P	12 53 54.6	+0.7
CO01				IAmb	IAmb	12 54 04.1	
	comp=Z,15nm,0.8s						
GO04	Tololo Observa	38.45	294	P	P	12 53 56.0	+0.3
GO04				IAmb	IAmb	12 54 02.2	
	comp=Z,16nm,0.9s						
AC05	El Transito	39.24	296	P	P	12 54 02.2	-0.1
AC05				IAmb	IAmb	12 54 11.2	
	comp=Z,41nm,1.5s						
LCO	Las Campanas	39.32	295	P	P	12 54 02.4	-0.7
AQDB	Aquidauana	39.92	320	*e*P	P	12 54 07.6	-0.2
AC04	Llanos de Chal	40.16	295	P	P	12 54 10.0	+0.2

GO03	**Copiap**	**40.23**	**297**	P	**P**	**12 54 09.9**	**-0.5**
AC02	**Maricunga**	**40.29**	**299**	P	**P**	**12 54 10.2**	**-1.2**
MAW	**Mawson**	**41.56**	**145**	P	**P**	**12 54 19.5**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=248,slow=8.4,SNR=3.4						
MAW				LR	LR	13 09 07.6	
	comp=Z,324nm,21.4s,baz=250,slow=33						
MAW	**Mawson**	**41.56**	**145**	P	**P**	**12 54 20.1**	**-0.8**
AC01	**Pan de Azucar**	**41.60**	**298**	P	**P**	**12 54 21.4**	**-0.2**
AC01				IAmb	IAmb	12 54 30.1	
	comp=Z,19nm,1.1s						
GO02	**Mina Guanaco**	**41.91**	**299**	P	**P**	**12 54 25.2**	**+0.7**
GO02				IAmb	IAmb	12 54 31.9	
	comp=Z,22nm,0.8s						
BDFB	**Brasilia**	**42.05**	**333**	P	**P**	**12 54 26.0**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=75,slow=2.4,SNR=4.2						
BDFB				LR	LR	13 09 37.4	
	comp=Z,212nm,20.3s,baz=126,slow=33						
BDFB	**Brasilia**	**42.05**	**333**	P	**P**	**12 54 25.9**	**+0.5**
ARAG	**Araguaiana, MT**	**43.06**	**328**	*e*P	**P**	**12 54 33.9**	**+0.3**
LVC	**Limon Verde**	**43.72**	**302**	P	**P**	**12 54 40.0**	**+0.8**
	comp=Z,5.7nm,0.7s,baz=91,slow=3.4,SNR=6.6						
LVC	**Limon Verde**	**43.72**	**302**	P	**P**	**12 54 40.7**	**+1.4**
LVC				IAmb	IAmb	12 54 48.9	
	comp=Z,13nm,0.8s						
SDBA	**SAO DESIDERIO**	**44.44**	**339**	*e*P	**P**	**12 54 45.4**	**+0.7**
PB01	**IPOC Station P**	**45.33**	**303**	P	**P**	**12 54 52.7**	**+0.9**
PB01				IAmb	IAmb	12 55 09.6	
	comp=Z,14nm,1.0s						
PTLB	**Pontes e Lacer**	**45.80**	**319**	*e*P	**P**	**12 54 55.6**	**+0.2**
PB08	**IPOC Station P**	**45.94**	**304**	P	**P**	**12 54 58.2**	**+1.2**
PB08				IAmb	IAmb	12 55 04.2	
	comp=Z,11nm,1.0s						
GO01	**Chusmiza**	**46.37**	**304**	P	**P**	**12 55 01.5**	**+1.0**
SNDB	**Serra Nova Dou**	**46.44**	**330**	*e*P	**P**	**12 55 00.5**	**0.0**
PSGCX	**Pisagua**	**46.87**	**303**	P	**P**	**12 55 04.6**	**+0.6**
PSGCX				IAmb	IAmb	12 55 09.5	
	comp=Z,8.6nm,0.9s						
MNMC	**Minye Minye**	**47.02**	**304**	P	**P**	**12 55 06.4**	**+1.1**
BOSA	**Boshof**	**47.18**	**79**	P	**P**	**12 55 06.6**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=229,slow=6.4,SNR=5.9						
BOSA	**Boshof**	**47.18**	**79**	P	**P**	**12 55 06.8**	**+0.4**
BOSA				IAmb	IAmb	12 55 22.9	
	comp=Z,17nm,1.3s						
VNDA	**Vanda**	**47.23**	**183**	P	**P**	**12 55 07.2**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=175,slow=6.7,SNR=8.4						
VNDA	**Vanda**	**47.23**	**183**	P	**P**	**12 55 06.9**	**+0.9**
H10S2	**ASCENSION HYDR**	**47.76**	**20**	T	T	13 46 47.5	
	baz=29,slow=74,SNR=11						
H10S3	**ASCENSION HYDR**	**47.76**	**20**	T	T	13 46 47.7	
	baz=191,slow=74,SNR=18						
SMTB	**Santa Maria do**	**48.47**	**336**	*e*P	**P**	**12 55 17.4**	**+1.1**
VILB	**Vilhena**	**48.49**	**319**	*e*P	**P**	**12 55 16.7**	**+0.2**
H10N1	**ASCENSION HYDR**	**48.87**	**20**	T	T	13 48 09.0	
	baz=191,slow=76,SNR=14						
H10N3	**ASCENSION HYDR**	**48.87**	**20**	T	T	13 48 09.6	
	baz=191,slow=76,SNR=32						
H10N2	**ASCENSION HYDR**	**48.89**	**20**	T	T	13 48 09.6	
	baz=191,slow=76,SNR=26						
LBTB	**Lobatse**	**50.17**	**76**	P	**P**	**12 55 31.1**	**+1.7**
	comp=Z,3.4nm,0.7s,baz=215,slow=8.9,SNR=5.1						
LBTB	**Lobatse**	**50.17**	**76**	P	**P**	**12 55 29.9**	**+0.5**
LBTB				IAmb	IAmb	12 55 38.7	
	comp=Z,22nm,1.4s						
TSUM	**Tsumeb**	**50.59**	**64**	P	**P**	**12 55 32.3**	**-0.3**
PRPB	**Parauapebas**	**51.60**	**334**	*e*P	**P**	**12 55 40.4**	**+0.3**
SAML	**Samuel**	**53.30**	**317**	P	**P**	**12 55 52.4**	**-0.2**
SAML				IAmb	IAmb	12 55 59.7	
	comp=Z,16nm,1.0s						
DBIC	**Dimbokro**	**65.13**	**27**	P	**P**	**12 57 14.7**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=234,slow=6.8,SNR=3.3						
DBIC				LR	LR	13 18 38.1	
	comp=Z,92nm,20.6s,baz=156,slow=30						
DBIC	**Dimbokro**	**65.13**	**27**	P	**P**	**12 57 13.8**	**-0.5**
DBIC				IAmb	IAmb	12 57 17.9	
	comp=Z,8.6nm,1.2s						
OTAV	**Otavalo**	**68.08**	**306**	P	**P**	**12 57 33.1**	**-0.8**
OTAV				IAmb	IAmb	12 57 42.8	
	comp=Z,9.2nm,1.1s						
OTAV	**Otavalo**	**68.08**	**306**	*e*P	P	12 57 42.0	+8.1
ROSC	**El Rosal**	**70.34**	**312**	LR	LR	13 30 20.7	
	comp=Z,165nm,19.8s,baz=216,slow=37						
SDV	**Santo Domingo**	**72.51**	**317**	P	**P**	**12 58 00.6**	**0.0**
SDV				IAmb	IAmb	12 58 07.4	
	comp=Z,14nm,1.1s						
KOWA	**Kowa**	**72.85**	**26**	LR	LR	13 26 46.0	
	comp=Z,71nm,18.1s,baz=205,slow=33						
MBAR	**Mbarara**	**73.10**	**65**	P	**P**	**12 58 04.2**	**+0.1**
TOA0	**Torodi Ar. Sit**	**73.15**	**32**	P	**P**	**12 58 04.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**73.15**	**32**	P	**P**	**12 58 04.3**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=199,slow=6.4,SNR=11						
TORD				LR	LR	13 24 04.6	
	comp=Z,153nm,20.2s,baz=205,slow=31						
MDT	**Midelt**	**90.38**	**21**	LR	LR	13 36 15.6	
	comp=Z,118nm,19.3s,baz=222,slow=33						
STKA	**Stephens Creek**	**92.83**	**173**	LR	LR	13 38 42.5	
	comp=Z,240nm,21.8s,baz=206,slow=34						
FINES	**FINESS Array B**	**124.41**	**29**	PKP	**PKiKP**	**13 05 31.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=153,slow=2.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**126.64**	**112**	PKP	**PKPdf**	**13 05 36.5**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=242,slow=3.2,SNR=5.1						
KSH	**Kashi**	**129.74**	**76**	PKP	**PKPdf**	**13 05 40.1**	**-2.1**
ARCES	**ARCESS Array B**	**130.80**	**22**	PKP	**PKPdf**	**13 05 42.8**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=190,slow=4.6,SNR=3.9						
YKA	**Yellowknife Ar**	**134.69**	**319**	PKhKP	PKPpre	13 05 46.8	
	comp=Z,0.2nm,0.7s,baz=126,slow=3.2,SNR=4.0						
YKA				PKP	**PKPdf**	**13 05 51.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=116,slow=3.2,SNR=12						
BVAR	**Borovoye Array**	**135.58**	**58**	PKP	**PKPdf**	**13 05 52.7**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=95,slow=1.7,SNR=2.8						
MKAR	**Makanchi Array**	**138.00**	**72**	PKP	**PKPdf**	**13 05 56.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=17,slow=1.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**138.27**	**65**	PKP	**PKPdf**	**13 05 57.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=232,slow=3.7,SNR=4.2						
WMQ	**Urumqi**	**139.15**	**79**	*e*PKP	**PKiKP**	**13 06 01.5**	**-0.3**
CD2	**Chengdu**	**139.22**	**107**	PKP	**PKPdf**	**13 06 00.0**	**-0.1**
LZH	**Lanzhou**	**143.13**	**102**	*e*PKP	**PKPdf**	**13 06 07.9**	**+0.8**
ZALV	**Zalesovo Beam**	**143.31**	**64**	PKP	PKPbc	13 06 04.5	+0.7
	comp=Z,1.0nm,0.5s,baz=250,slow=4.3,SNR=3.5						
NJ2	**Nanjing**	**147.92**	**123**	*e*PKPbc	**PKPdf**	**13 06 14.9**	**-0.3**
ILAR	**Eielson Array**	**148.58**	**313**	PKPbc	**PKPbc**	**13 06 19.2**	**+0.2**
	comp=Z,4.9nm,0.6s,baz=124,slow=1.7,SNR=66						
HHC	**Hu-ho-hao-te**	**150.78**	**103**	*e*PKPbc	**PKPdf**	**13 06 20.0**	**+0.4**
HHC				AMB	AMB		
	comp=Z,180nm,6.9s						
SONM	**Songino Array**	**152.09**	**87**	PKPbc	**PKPbc**	**13 06 27.3**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=226,slow=4.8,SNR=4.4						

BYKL 07 12:54:52.6±0.2,56°.12N×113°.74E,h4^{km}±4^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**268**	*e*Pg	Pg	12 54 54.9	+0.2
SVKR				*e*Sg	Sg	12 54 56.9	+0.8
UKT	**Uakit**	**0.64**	**186**	*e*Pg	Pg	12 55 04.0	-0.8
UKT				*e*Sg	Sg	12 55 11.8	-1.2
UKT				Pmax			
	30nm,0.5s						
UKT				Smax			
	460nm,0.5s						
NLYR	**Nelyaty**	**1.16**	**70**	*e*Pg	Pg	12 55 13.7	-1.0
NLYR				*e*Pb	Pn	12 55 16.1	+0.5
NLYR				*e*Sg	Sg	12 55 28.5	-1.2
NLYR				max			
	148nm,0.3s						
NLYR				Smax			
	882nm,0.8s						
KMO	**Kumora**	**1.45**	**262**	*e*Pg	Pn	12 55 19.2	-0.3
KMO				*e*Pb	Pg	12 55 20.8	+0.5
KMO				*e*Sg	Sb	12 55 37.6	-1.2
KMO				max			
	78nm,0.4s						
KMO				Smax			
	1µm,1.0s						
BOD	**Bodaibo**	**1.71**	**5**	*e*Pg	Pn	12 55 23.4	+0.3
BOD				*e*Sg	Sn	12 55 44.8	-0.6
BOD				Pmax			
	20nm,0.2s						
BOD				Smax			
	141nm,0.5s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*Pg	Pb	12 55 27.4	-0.8
YLYR				Sg	Sb	12 55 51.9	-0.7
YLYR				Pmax			
	24nm,0.4s						
YLYR				Smax			
	234nm,1.2s						
TUP	**Tupik**	**3.94**	**113**	*e*Pn	Pn	12 55 54.3	+0.5

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*BJI **07** 12:54:56.0±0.0,56°.10N×113°.80E,h10^{km},mb3.8/3*
*MOS **07** 12:54:57.6±1.5,56°.10N×113°.83E,h7^{km},mb4.1/5,Error ellipse: s-maj=9.8km s-min=6.0km az=73.6*
MOS Felt (II-III) at Severomuysk.
*BYKL **07** 12:54:59.3±0.1,56°.13N×113°.74E,h4^{km}±2^{km},FELT I=II-III MSK at Severomuisk*
*IDC **07** 12:54:59.3±0.8,56°.19N×113°.77E,h0^{km},mb3.6/10, mb1 3.9/14,mb1mx3.6/64,mbtmp3.7/14,ML3.5/3,MS3.5/5, Ms1 3.5/5,ms1mx3.0/44,Error ellipse: s-maj=23.1km s-min=16.4km az=163.0*

ISC 07 12:54:59.9±0.5,56°.16N±0°.02×113°.78E±0°.02,h10^{km},n87, σ2^{s}.77/151,mb3.8/11,MS3.3/5,10C-11D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.13**	**252**	*e*Pg	**Pg**	**12 55 01.3**	**-1.8**
SVKR				Pmax		12 55 01.9	
	9µm,0.2s						
SVKR				*e*Sg	**Sg**	**12 55 03.2**	**-2.0**
SVKR				Smax		12 55 03.6	
	157µm,0.4s						
SVKR	**Severomuysk**	**0.13**	**252**	*e*PG	**Pg**	**12 55 01.2**	**-1.8**
SVKR				*e*S	**Sg**	**12 55 02.9**	**-2.3**
UKT	**Uakit**	**0.68**	**187**	⇓*i*Pg	**Pg**	**12 55 10.7**	**-2.3**
UKT				Pmax		12 55 11.2	
	325nm,0.3s						
UKT				*e*Sg	**Sg**	**12 55 19.0**	**-2.9**
UKT				Smax		12 55 27.3	
	3µm,0.8s						
UKT	**Uakit**	**0.68**	**187**	*e*PG	**Pg**	**12 55 10.8**	**-2.3**
UKT				*e*S	**Sg**	**12 55 19.5**	**-2.4**
NLYR	**Nelyaty**	**1.12**	**72**	*e*Pg	**Pb**	**12 55 20.0**	**-1.4**
NLYR				*e*Pb	**Pn**	**12 55 22.4**	**+0.7**
NLYR				max		12 55 23.9	
	2µm,0.4s						
NLYR				*e*Sg	**Sb**	**12 55 35.0**	**-1.1**
NLYR				*e*		12 55 40.2	
NLYR				max		12 55 41.1	
	6µm,1.1s						
YOA	**Uoyan**	**1.15**	**270**	*e*Pg	**Pb**	**12 55 20.0**	**-1.9**
YOA				Pmax		12 55 26.4	
	2µm,0.5s						
YOA				*e*Sg	**Sg**	**12 55 34.8**	**-2.1**
YOA				Smax		12 55 43.7	
	9µm,0.6s						
YOA	**Uoyan**	**1.15**	**270**	*e*PG	**Pb**	**12 55 20.0**	**-1.9**
YOA				*e*		12 55 35.9	
YOA				pmax	pmax		
	comp=Z,828nm,0.3s						
YOA				smax	smax		
	comp=E,9µm,0.5s						
KMO	**Kumora**	**1.47**	**260**	⇓*i*Pg	**Pn**	**12 55 25.4**	**-1.1**
KMO				*e*Pb	**Pb**	**12 55 26.7**	**-0.7**
KMO				max		12 55 27.9	
	comp=E,1µm,0.5s						
KMO				*e*		12 55 30.4	
KMO				*e*Sg	**Sn**	**12 55 45.0**	**-0.8**
KMO				*e*		12 55 48.0	
KMO				max		12 55 49.2	
	comp=E,7µm,0.9s						
KMO	**Kumora**	**1.47**	**260**	⇓*i*PG	**Pn**	**12 55 25.4**	**-1.1**
KMO				*e*		12 55 44.9	
KMO				pmax	pmax		
	comp=Z,796nm,0.4s						
KMO				smax	smax		
	comp=N,7µm,0.9s						
BOD	**Bodaibo**	**1.67**	**4**	*e*Pg	**Pn**	**12 55 29.9**	**+0.7**
BOD				Pmax		12 55 31.7	
	comp=N,906nm,0.5s						
BOD				*e*Sg	**Sb**	**12 55 52.2**	**+0.4**
BOD				*e*		12 55 55.2	
BOD				max		12 55 56.0	
	comp=N,2µm,0.6s						
BOD	**Bodaibo**	**1.67**	**4**	⇑*e*PN	**Pn**	**12 55 29.9**	**+0.7**
BOD				*i*		12 55 30.1	
BOD				*e*		12 55 52.0	
BOD				pmax	pmax		
	comp=Z,876nm,0.6s						
BOD				smax	smax		
	comp=E,2µm,0.4s						
YLYR	**Ulyunkhan**	**1.97**	**230**	⇓*i*Pn	**Pn**	**12 55 33.8**	**+0.5**
YLYR				*e*Pg	**Pb**	**12 55 34.3**	**-1.5**
YLYR				Pmax		12 55 35.9	
	comp=E,615nm,0.5s						
YLYR				*e*Sg	**Sb**	**12 55 59.8**	**-0.5**
YLYR				Smax		12 56 03.8	
	comp=E,4µm,0.9s						
YLYR	**Ulyunkhan**	**1.97**	**230**	⇓*i*PN	**Pn**	**12 55 33.8**	**+0.5**
YLYR				*e*		12 55 59.7	
YLYR				pmax	pmax		
	comp=Z,504nm,0.4s						
YLYR				smax	smax		
	comp=N,4µm,0.9s						
NIZ	**Nizh Angarsk**	**2.41**	**263**	*e*Pn	**Pn**	**12 55 40.0**	**+0.6**
NIZ				*e*Pg	**Pb**	**12 55 42.5**	**-0.9**
NIZ				Pmax		12 55 42.8	
	comp=N,284nm,0.9s						
NIZ				*e*Sn	**Sn**	**12 56 09.5**	**+0.5**
NIZ				*e*Sg	**Sb**	**12 56 14.1**	**+0.9**
NIZ				Smax		12 56 16.6	
	comp=N,2µm,0.8s						
CRS	**Chara**	**2.60**	**71**	*e*Pn	**Pn**	**12 55 42.9**	**+0.9**
CRS				⇑*i*Pg	**Pb**	**12 55 47.2**	**+0.6**
CRS				Pmax		12 55 48.2	
	comp=N,1µm,1.0s						
CRS				*e*		12 55 58.0	
CRS				*e*Sg	**Sb**	**12 56 21.3**	**+2.8**
CRS				Smax		12 56 24.0	
	comp=N,2µm,1.6s						
CRS	**Chara**	**2.60**	**71**	⇑*e*PN	**Pn**	**12 55 40.9**	**-1.1**
CRS				*i*		12 55 47.2	
CRS				*e*		12 56 20.7	
CRS				pmax	pmax		
	comp=Z,1µm,0.9s						
CRS				smax	smax		
	comp=E,2µm,1.3s						
SYVR	**Suvo**	**3.32**	**223**	*e*Pn	**Pn**	**12 55 51.9**	**0.0**
SYVR				*e*Pg	**Pb**	**12 55 58.8**	**-0.1**
SYVR				Pmax		12 56 03.0	
	comp=E,247nm,1.2s						
SYVR				*e*Sg	**Sb**	**12 56 41.4**	**+2.1**
SYVR				*e*		12 56 50.7	
SYVR				max		12 56 50.8	
	comp=E,2µm,1.1s						
SYVR	**Suvo**	**3.32**	**223**	*e*PN	**Pn**	**12 55 51.9**	**0.0**
SYVR				*e*		12 55 59.7	
SYVR				*e*		12 56 41.3	
SYVR				pmax	pmax		
	comp=Z,251nm,1.2s						
SYVR				smax	smax		
	comp=N,2µm,0.9s						
VTMR	**Vitim**	**3.36**	**349**	*e*Pn	**Pn**	**12 55 52.7**	**+0.3**
VTMR				*e*Pg	**Pb**	**12 56 00.3**	**+0.8**
VTMR				*e*PgPg	**Pg**	**12 56 03.8**	**-0.4**
VTMR				*e*Sn	**Sn**	**12 56 32.5**	**+0.3**
VTMR				*e*Sg	**Sb**	**12 56 44.2**	**+3.9**
VTMR				*e*		12 56 46.2	
TUP	**Tupik**	**3.93**	**114**	⇓*i*Pn	**Pn**	**12 56 00.4**	**0.0**
TUP				*e*Pg	**Pb**	**12 56 10.2**	**+0.9**
TUP				Pmax		12 56 11.6	
	comp=N,65nm,0.8s						
TUP				*e*Sn	**Sn**	**12 56 45.8**	**-0.8**
TUP				*e*Sg	**Sb**	**12 57 01.6**	**+4.6**
TUP				*e*		12 57 05.8	
TUP				max		12 57 09.8	
	comp=N,1µm,1.0s						
TUP				*e*		12 57 16.2	
TUP	**Tupik**	**3.93**	**114**	⇓*i*PN	**Pn**	**12 56 00.3**	**-0.1**
TUP				*e*		12 56 10.3	
TUP				*e*S	**Sn**	**12 56 46.6**	**0.0**
TUP				*e*		12 57 01.7	
TUP				pmax	pmax		
	comp=Z,64nm,0.4s						
TUP				smax	smax		
	comp=E,1µm,1.2s						
MXMB	**Maximikha**	**4.12**	**227**	*e*Pn	**Pn**	**12 56 04.0**	**+1.2**
MXMB				*e*		12 56 11.1	
MXMB				*e*Pg	**Pb**	**12 56 12.5**	**+0.1**
MXMB				*e*Sn	**Sn**	**12 56 49.6**	**-1.4**
MXMB				*e*Sg	**Sb**	**12 57 05.2**	**+3.0**
MXMB				*e*		12 57 12.3	
CIT	**Chita**	**4.15**	**182**	*e*Pg	**Pb**	**12 56 13.7**	**+0.7**
CIT				Pmax		12 56 14.3	
	comp=E,190nm,1.0s						
CIT				*e*Sn	**Sn**	**12 56 51.7**	**-0.1**
CIT				*e*Sg	**Sb**	**12 57 07.2**	**+4.1**
CIT				Smax		12 57 22.7	
	comp=E,1µm,1.5s						
CIT	**Chita**	**4.15**	**182**	*e*PN	**Pn**	**12 56 02.3**	**-1.0**
CIT				*e*		12 56 13.8	
CIT				*e*S	**Sn**	**12 56 49.1**	**-2.7**
CIT				*e*		12 57 06.1	
CIT				pmax	pmax		
	comp=Z,164nm,1.2s						
CIT				smax	smax		
	comp=E,1µm,1.9s						
OGRR	**Ongureny**	**4.37**	**237**	*e*Pn	**Pn**	**12 56 07.4**	**+1.1**
OGRR				*e*Pg	**Pb**	**12 56 17.2**	**+0.5**
OGRR				*e*PgPg	**PbPb**	**12 56 19.1**	**-0.8**
OGRR				max		12 56 21.4	
	comp=E,134nm,1.6s						
OGRR				*e*Sn	**Sn**	**12 56 55.0**	**-2.2**
OGRR				*e*Sg	**Sb**	**12 57 13.0**	**+3.6**
OGRR				Smax		12 57 23.7	
	comp=E,511nm,1.2s						
OGRR	**Ongureny**	**4.37**	**237**	*e*PN	**Pn**	**12 56 07.4**	**+1.1**
OGRR				*e*		12 56 18.4	
OGRR				*e*		12 57 13.1	
OGRR				pmax	pmax		
	comp=Z,135nm,1.9s						
OGRR				smax	smax		
	comp=N,518nm,1.8s						
YKLR	**Yuktali**	**4.40**	**81**	*e*Pn	**Pn**	**12 56 07.4**	**+0.7**
YKLR				*e*Pg	**Pb**	**12 56 18.2**	**+0.9**
YKLR				*e*		12 56 22.3	
YKLR				*e*Sn	**Sn**	**12 56 57.4**	**-0.6**
YKLR				*e*Sg	**Sb**	**12 57 15.5**	**+5.2**
ZRHB	**Zarechye**	**5.30**	**230**	*e*Pg	**Pb**	**12 56 34.2**	**+1.7**
ZRHB				*e*		12 56 38.7	
ZRHB				max		12 56 39.3	
	comp=N,183nm,0.9s						
ZRHB				*e*Sn	**Sn**	**12 57 18.8**	**-1.3**
ZRHB				*e*Sg	**Sg**	**12 57 43.2**	**-6.6**
ZRHB				Smax		12 58 05.2	
	comp=N,2µm,1.3s						
TRG	**Tyrgan**	**5.51**	**235**	*e*Pn	**Pn**	**12 56 22.4**	**+0.4**
TRG				*e*Pg	**Pb**	**12 56 37.2**	**+1.0**
TRG				*e*		12 56 41.5	
TRG				max		12 56 43.4	
	comp=N,64nm,1.3s						
TRG				*e*Sn	**Sn**	**12 57 23.3**	**-2.1**
TRG				*e*Sg	**Sb**	**12 57 47.8**	**+5.5**
TRG				Smax		12 57 51.7	
	comp=N,265nm,1.2s						
TRG	**Tyrgan**	**5.51**	**235**	*e*PN	**Pn**	**12 56 19.1**	**-2.9**
TRG				*e*		12 56 35.0	
TRG				*e*S	**Sn**	**12 57 21.8**	**-3.6**
FFNB	**Fofonovo**	**5.83**	**228**	*e*Pg	**Pb**	**12 56 44.2**	**+2.6**
FFNB				*e*Sn	**Sn**	**12 57 30.9**	**-2.3**
FFNB				*e*Sg	**Sg**	**12 57 59.2**	**-7.7**
KAB	**Kabansk**	**5.87**	**228**	*e*Pg	**Pb**	**12 56 44.4**	**+2.1**
KAB				Pmax		12 57 08.7	
	comp=N,167nm,0.7s						
KAB				*e*Sn	**Sn**	**12 57 32.1**	**-2.2**
KAB				*e*Sg	**Sg**	**12 58 00.6**	**-7.7**
KAB				Smax		12 58 31.7	
	comp=N,2µm,1.3s						
STDB	**Stepnoy Dvoret**	**5.91**	**231**	*e*Pg	**Pb**	**12 56 44.9**	**+2.0**
STDB				*e*Sn	**Sn**	**12 57 33.4**	**-1.8**
STDB				*e*Sg	**Sb**	**12 58 00.7**	**+7.0**
HRMR	**Khuramsha**	**6.07**	**224**	*e*Pn	**Pn**	**12 56 29.7**	**0.0**
HRMR				*e*Pg	**Pb**	**12 56 47.9**	**+2.2**
HRMR				Pmax		12 57 27.6	
	comp=N,105nm,0.5s						
HRMR				*e*Sn	**Sn**	**12 57 36.3**	**-2.9**
HRMR				*e*Sg	**Sb**	**12 58 05.9**	**+7.5**
HRMR				Smax		12 58 17.8	
	comp=N,1µm,1.0s						
IENR	**Iengra**	**6.19**	**85**	*e*Sg	**Sg**	**12 58 11.8**	**-6.5**
BGT	**Bolshoye Golou**	**6.42**	**234**	*e*Pn	**Pn**	**12 56 34.5**	**+0.1**
BGT				*e*Pg	**Pb**	**12 56 54.6**	**+3.0**
BGT				Pmax		12 56 56.4	
	comp=N,26nm,1.0s						
BGT				*e*Sn	**Sn**	**12 57 46.4**	**-1.3**
BGT				*e*Sg	**Sg**	**12 58 17.2**	**-8.6**
BGT				Smax		12 58 25.3	
	comp=N,220nm,1.3s						
KPC	**Khapcheranga**	**6.52**	**188**	*e*Pn	**Pn**	**12 56 35.8**	**-0.1**
KPC				*e*Pg	**Pb**	**12 56 56.2**	**+2.8**
KPC				Pmax		12 57 06.2	
	comp=N,22nm,0.8s						
KPC				*e*Sn	**Sn**	**12 57 47.7**	**-2.6**
KPC				*e*Sg	**Sb**	**12 58 19.7**	**+8.3**
KPC				Smax		12 58 36.7	
	comp=N,698nm,1.5s						
KPC	**Khapcheranga**	**6.52**	**188**	*e*PN	**Pn**	**12 56 34.7**	**-1.2**
KPC				*e*		12 56 55.8	
KPC				*e*		12 58 18.7	
KPC				pmax	pmax		
	comp=Z,11nm,0.4s						
KPC				smax	smax		
	comp=E,698nm,1.6s						
LSTR	**Listvyanka**	**6.80**	**235**	*e*Pn	**Pn**	**12 56 39.9**	**+0.2**
LSTR				*e*Pg	**Pb**	**12 57 01.1**	**+3.0**
LSTR				Pmax		12 57 03.1	
	comp=E,28nm,1.5s						
LSTR				*e*Sn	**Sn**	**12 57 54.0**	**-3.1**
LSTR				*e*Sg	Sg	12 58 28.6	-9.4
LSTR				*e*		12 58 35.2	
LSTR				max		12 58 36.6	
	comp=E,413nm,1.6s						
IRK	**Irkutsk**	**6.82**	**239**	*e*Sg	**Sb**	**12 58 28.4**	**+8.6**
IRK				Smax		12 58 37.9	
	comp=E,511nm,1.3s						
IRK	**Irkutsk**	**6.82**	**239**	*e*PG	**Pb**	**12 57 00.6**	**+2.2**
IRK				*e*		12 58 27.9	
IRK				pmax	pmax		
	comp=Z,292nm,0.1s						
IRK				smax	smax		
	comp=N,496nm,1.0s						
IVK	**Ivanovka**	**7.04**	**236**	*e*Pn	**Pn**	**12 56 43.3**	**+0.4**
IVK				*e*Pg	**Pb**	**12 57 04.9**	**+2.8**
IVK				Pmax		12 57 15.5	
	comp=N,17nm,1.2s						
IVK				*e*Sn	**Sn**	**12 57 59.6**	**-3.3**
IVK				*e*Sg	Sb	12 58 35.2	+9.1
IVK				*e*		12 58 41.2	
IVK				max		12 58 44.7	
	comp=N,223nm,1.1s						
TLY	**Talaya**	**7.47**	**237**	*e*Pn	**Pn**	**12 56 49.6**	**+0.6**
TLY				*e*Pg	**Pb**	**12 57 13.3**	**+3.7**
TLY				*e*		12 57 14.3	
TLY				max		12 57 18.6	
	comp=N,16nm,1.0s						
TLY				*e*Sn	**Sn**	**12 58 09.1**	**-4.6**
TLY				*e*		12 58 46.0	
TLY				*e*Sg	Sg	12 58 49.8	-10
TLY				Smax		12 59 04.9	
	comp=N,123nm,1.7s						
TLY	**Talaya**	**7.47**	**237**	*e*PG	**Pb**	**12 57 13.4**	**+3.8**
TLY				*e*		12 58 47.5	
TLY				pmax	pmax		
	comp=Z,24nm,0.4s						
TLY				smax	smax		
	comp=E,76nm,0.8s						
HIA	**Hailar**	**7.79**	**150**	⇑*e*PN	**Pn**	**12 56 51.6**	**-1.7**
ARS	**Arshan**	**7.92**	**242**	*e*Pn	**Pn**	**12 56 55.7**	**+0.7**
ARS				*e*Pg	**Pb**	**12 57 21.3**	**+4.2**
ARS				Pmax		12 57 31.1	
	comp=E,33nm,0.9s						
ARS				*e*Sn	**Sn**	**12 58 20.7**	**-3.9**
ARS				*e*Sg	Sg	12 59 02.7	-11
ARS				Smax		12 59 05.5	
	comp=E,413nm,0.9s						
ARS	**Arshan**	**7.92**	**242**	*e*PG	**Pb**	**12 57 19.2**	**+2.1**
ARS				pmax	pmax		
	comp=Z,22nm,0.5s						
ZEA	**Zeya**	**8.13**	**102**	*e*PG	Pb	12 57 25.9	+5.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAK	**Zakamensk**	**8.54**	**232**	*e*Pn	**Pn**	**12 57 05.4**	**+1.7**

ZAK				*e*		12 57 35.6	
	comp=Z,14nm,1.3s						
ZAK				*e*Sg	Sg	12 59 22.9	-11
ZAK				Smax		12 59 56.5	
	comp=Z,192nm,1.8s						
ZAK	**Zakamensk**	**8.54**	**232**	*e*PN	**Pn**	**12 57 07.1**	**+3.4**
ZAK				*e*		12 57 35.6	
ZAK				*e*		12 59 23.5	
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
ZAK				smax	smax		
	comp=N,193nm,1.5s						
MOY	**Mondy**	**8.78**	**245**	*e*Pn	**Pn**	**12 57 07.1**	**+0.2**
MOY				*e*		12 57 20.4	
MOY				*e*Pg	Pg	12 57 36.3	-12
MOY				Pmax		12 57 49.7	
	comp=N,36nm,1.4s						
MOY				*e*Sn	**Sn**	**12 58 41.3**	**-4.7**
MOY				*e*Sg	Sg	12 59 29.3	-12
MOY				*e*		12 59 46.7	
MOY				max		12 59 55.4	
	comp=N,312nm,1.5s						
MOY	**Mondy**	**8.78**	**245**	*e*PN	**Pn**	**12 57 07.2**	**+0.3**
MOY				*e*		12 57 37.6	
MOY				*e*		12 59 30.0	
MOY				pmax	pmax		
	comp=Z,40nm,1.1s						
MOY				smax	smax		
	comp=E,313nm,1.6s						
ORL	**Orlik**	**8.93**	**252**	*e*Pn	**Pn**	**12 57 08.5**	**-0.4**
ORL				*e*		12 57 18.5	
ORL				*e*		12 57 27.4	
ORL				max		12 57 48.5	
	comp=E,30nm,1.2s						
ORL				*e*Sn	**Sn**	**12 58 45.6**	**-3.9**
ORL				*e*Sg	Sg	12 59 33.5	-13
ORL				Smax		12 59 51.7	
	comp=E,136nm,1.8s						
ORL	**Orlik**	**8.93**	**252**	*e*PN	**Pn**	**12 57 08.9**	**0.0**
ORL				*e*		12 57 38.8	
ORL				*e*S	**Sn**	**12 58 42.7**	**-6.8**
ORL				*e*		12 59 33.3	
ORL				pmax	pmax		
	comp=Z,31nm,0.8s						
ORL				smax	smax		
	comp=N,130nm,1.4s						
ULN	**Ulaanbaatar**	**9.28**	**209**	⇓*e*P	**Pn**	**12 57 12.0**	**-1.8**
ULN				pmax	pmax		
	comp=Z,11nm,3.3s						
SONM	**Songino Array**	**9.49**	**212**	Pn	**Pn**	**12 57 17.7**	**+1.0**
	baz=21,slow=12,SNR=1.5						
SONM				Lg	Lg	12 59 54.1	
	comp=Z,3.8nm,0.3s,baz=20,slow=27,SNR=14						
YAK	**Yakutsk**	**10.06**	**48**	Sn	Sn	12 59 07.3	-10
	comp=Z,0.1nm,0.3s,baz=41,slow=20,SNR=2.3						
YAK				Lg	Lg	13 00 08.3	
	comp=Z,0.1nm,0.3s,baz=158,slow=23,SNR=9.4						
YAK	**Yakutsk**	**10.06**	**48**	⇑*e*P	**Pn**	**12 57 23.3**	**-1.0**
KLR	**Kul'dur**	**12.89**	**115**	Pn	**Pn**	**12 58 04.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=308,slow=11,SNR=8.4						
KLR				Sn	Sn	13 00 15.8	-11
	comp=Z,0.2nm,0.3s,baz=206,slow=6.6,SNR=4.5						
KLR				Lg	Lg	13 01 42.2	
	comp=Z,0.3nm,0.3s,baz=0.0,slow=7.1,SNR=5.8						
KLR	**Kul'dur**	**12.89**	**115**	⇓*e*P	**Pn**	**12 58 04.2**	**+1.1**
KLR				MLR	MLR		
	comp=Z,77nm,7.0s						
USRK	**Ussuriysk Ar.**	**16.65**	**128**	Lg	Lg	13 03 43.1	
	baz=330,slow=26,SNR=5.0						
ZALV	**Zalesovo Beam**	**16.68**	**275**	Pn	**Pn**	**12 58 53.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=64,slow=13,SNR=2.1						
ZALV				Lg	Lg	13 03 44.3	
	comp=Z,0.1nm,0.3s,baz=72,slow=25,SNR=5.1						
TIXI	**Tiksi**	**16.81**	**17**	⇑*e*P	**Pn**	**12 58 52.8**	**-2.2**
DGZ	**Jazzator, Alta**	**17.08**	**259**	⇑*e*P	**Pn**	**12 58 58.1**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MSHR	**Mys Shultsa**	**17.61**	**133**	⇓*e*P	**Pn**	**12 59 02.9**	**-2.3**
NRIK	**Noril'sk**	**17.63**	**329**	P	**Pn**	**12 59 03.8**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=120,slow=9.9,SNR=4.6						
NRIK				S	Sn	13 02 04.3	-17
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=4.7						
NRIK				Lg	Lg	13 04 06.4	
	baz=49,slow=19,SNR=4.2						
SEY	**Seymchan**	**20.44**	**55**	P	**P**	**12 59 37.6**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=257,slow=23,SNR=7.8						
SEY				Lg	Lg	13 05 40.2	
	comp=Z,0.8nm,0.7s,baz=0.1,slow=8.6,SNR=2.8						
SEY	**Seymchan**	**20.44**	**55**	⇑*e*P	Pn	12 59 39.3	+0.1
KSRS	**Korea Array**	**20.99**	**147**	LR	LR	13 08 26.7	
	comp=Z,117nm,18.4s,baz=332,slow=38						
KURK	**Kurchatov**	**21.47**	**270**	⇑*e*P	**P**	**12 59 47.2**	**-1.1**
KURK				pmax	pmax		
	comp=Z,12nm,1.6s						
MK31	**Makanchi Array**	**21.56**	**258**	⇓*e*P	**P**	**12 59 50.4**	**+1.1**
MKAR	**Makanchi Array**	**21.56**	**258**	P	**P**	**12 59 50.0**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=61,slow=10,SNR=13						
MKAR				LR	LR	13 08 28.4	
	comp=Z,210nm,19.3s,baz=64,slow=38						
MKAR	**Makanchi Array**	**21.56**	**258**	*i* P	**P**	**12 59 50.7**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**21.57**	**270**	P	**P**	**12 59 49.2**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=55,slow=11,SNR=25						
BVAR	**Borovoye Array**	**25.02**	**281**	P	**P**	**13 00 25.8**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=168,slow=21,SNR=4.8						
BRVK	**Borovoye**	**25.07**	**281**	⇑*e*P	**P**	**13 00 24.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JNU	**Nakatsue**	**25.91**	**146**	LR	LR	13 11 56.0	
	comp=Z,68nm,20.2s,baz=1.0,slow=39						
AAK	**Ala-Archa**	**28.49**	**258**	LR	LR	13 13 28.2	
	comp=Z,28nm,18.2s,baz=106,slow=39						
FINES	**FINESS Array B**	**42.47**	**315**	P	**P**	**13 02 55.0**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=54,slow=10.0,SNR=5.1						
FINES	**FINESS Array B**	**42.47**	**315**	*i* P	**P**	**13 02 56.5**	**+2.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ILAR	**Eielson Array**	**44.77**	**37**	P	**P**	**13 03 14.9**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=290,slow=3.0,SNR=6.8						
YKA	**Yellowknife Ar**	**55.84**	**25**	P	**P**	**13 04 37.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=337,slow=6.4,SNR=9.9						
YKA	**Yellowknife Ar**	**55.84**	**25**	*i* P	**P**	**13 04 37.9**	**+1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**70.97**	**314**	P	**P**	**13 06 19.1**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=18,slow=6.5,SNR=4.1						
NVAR	**Mina Array Bea**	**75.94**	**40**	P	**P**	**13 06 46.8**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=341,slow=5.0,SNR=1.4						
WRA	**Warramunga Arr**	**77.77**	**160**	P	**P**	**13 06 58.0**	**+1.1**
	comp=Z,1.0nm,1.1s,baz=350,slow=6.8,SNR=3.1						
ASAR	**Alice Springs**	**81.33**	**161**	LR	LR	13 42 08.0	
	comp=Z,109nm,21.7s,baz=190,slow=35						

BYKL 07 12:55:45.1±0.3, 56°.13N×113°.73E, h2^{km}±8^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**262**	Smax			
	36μm,0.4s						
SVKR				Pmax			
	4μm,0.2s						
SVKR	**Severomuysk**	**0.10**	**262**	⇑*i*Pg	Pg	12 55 46.3	-0.7
SVKR	**Severomuysk**	**0.10**	**262**	*e*Sg	Sg	12 55 48.3	0.0
UKT	**Uakit**	**0.65**	**185**	Smax			
	456nm,1.0s						
UKT				Pmax			
	241nm,0.8s						
UKT	**Uakit**	**0.65**	**185**	*e*Pg	Pg	12 55 56.6	-0.8
UKT	**Uakit**	**0.65**	**185**	*e*Sg	Sg	12 56 04.7	-1.1
YOA	**Uoyan**	**1.12**	**271**	Smax			
	4μm,0.4s						
YOA				Pmax			
	2μm,0.6s						
YOA	**Uoyan**	**1.12**	**271**	*e*Pg	Pg	12 56 05.3	-1.3
YOA	**Uoyan**	**1.12**	**271**	*e*Sg	Sg	12 56 20.5	-0.6
NLYR	**Nelyaty**	**1.16**	**71**	max			
	1μm,0.7s						
NLYR				max			
	589nm,0.6s						
NLYR	**Nelyaty**	**1.16**	**71**	*e*Pg	Pg	12 56 05.0	-2.3
NLYR	**Nelyaty**	**1.16**	**71**	*e*	Pb	12 56 07.6	-0.2
KMO	**Kumora**	**1.44**	**261**	Smax			
	549nm,0.5s						
KMO				Pmax			
	444nm,1.5s						
KMO	**Kumora**	**1.44**	**261**	*e*Pg	Pn	12 56 10.5	-1.7
KMO	**Kumora**	**1.44**	**261**	*e*Sg	Sg	12 56 30.3	-1.0
BOD	**Bodaibo**	**1.70**	**5**	Smax			
	555nm,0.9s						
BOD				Pmax			
	739nm,1.5s						
BOD	**Bodaibo**	**1.70**	**5**	*e*Pg	Pn	12 56 16.1	+0.3
BOD	**Bodaibo**	**1.70**	**5**	*e*Sg	Sn	12 56 38.2	+0.1
YLYR	**Ulyunkhan**	**1.93**	**230**	Smax			
	703nm,0.8s						
YLYR				Pmax			
	332nm,0.6s						
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Pn	Pn	12 56 18.3	-0.6
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Pg	Pn	12 56 19.7	+0.8
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Sn	Sn	12 56 42.6	-1.1
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Sg	Sb	12 56 45.4	0.0
NIZ	**Nizh Angarsk**	**2.38**	**263**	Smax			
	340nm,0.8s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	*e*Sg	Sb	12 56 58.9	+0.4
CRS	**Chara**	**2.63**	**71**	Smax			
	429nm,0.8s						
CRS	**Chara**	**2.63**	**71**	*e*Sg	Sb	12 57 07.1	+1.4
SYVR	**Suvo**	**3.28**	**223**	Smax			
	228nm,0.6s						
SYVR	**Suvo**	**3.28**	**223**	*e*Sg	Sg	12 57 27.5	-3.0
TUP	**Tupik**	**3.95**	**113**	Smax			
	311nm,0.9s						
TUP	**Tupik**	**3.95**	**113**	*e*Sg	Sb	12 57 46.8	+3.2
OGRR	**Ongureny**	**4.33**	**237**	*e*Pg	Pb	12 57 02.7	+0.8
OGRR				Pmax			
	78nm,0.8s						
OGRR				Smax			
	127nm,1.3s						
KPC	**Khapcheranga**	**6.49**	**188**	*e*Pg	Pb	12 57 41.2	+2.5
KPC				Smax			
	87nm,1.1s						

IDC 07 12:55:47.1±7.6, 6°.93S×146°.69E, h121^{km}±77^{km}, mb3.0/2, mb1 3.1/4, mb1mx2.9/37, mbtmp3.4/4, Error ellipse: s-maj=116.8km s-min=50.5km az=140.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.50**	**169**	P	Pn	12 56 26.9	-0.1
	1.0nm,0.3s,baz=328,slow=19,SNR=5.8						
PMG				S	Sn	12 57 05.6	+7.9
	4.2nm,0.3s,baz=294,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**17.63**	**222**	P	Pn	12 59 45.3	+0.1
	0.1nm,0.3s,baz=45,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**20.68**	**215**	P	P	13 00 17.6	0.0
	0.2nm,0.6s,baz=53,slow=8.8,SNR=13						
FITZ	**Fitzroy Crossi**	**23.32**	**240**	P	P	13 00 44.4	-0.2
	3.6nm,0.7s,baz=45,slow=13,SNR=3.4						
TORD	**Torodi Ar. Bea**	**145.01**	**283**	PKPbc	PKPbc	13 15 09.7	-1.0
	1.0nm,0.7s,baz=56,slow=4.0,SNR=4.6						

BYKL 07 12:56:52.0±0.5, 56°.11N×113°.84E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.16**	**273**	*e*Pg	Pg	12 56 54.7	-0.3
SVKR				*e*Sg	Sg	12 56 57.0	0.0
SVKR				Pmax			
	528nm,0.2s						
SVKR				Smax			
	4μm,0.6s						
UKT	**Uakit**	**0.63**	**191**	*e*Sg	Sg	12 57 11.2	-1.1
UKT				Smax			
	172nm,0.8s						
NLYR	**Nelyaty**	**1.11**	**69**	*e*Pg	Pg	12 57 13.1	-0.1
NLYR				*e*Pb	Pn	12 57 15.6	+0.8
NLYR				*e*Sg	Sg	12 57 27.7	+0.2
NLYR				*e*Sb	Sn	12 57 32.2	+1.4
NLYR				max			
	178nm,0.8s						
NLYR				max			
	288nm,0.9s						
YOA	**Uoyan**	**1.19**	**272**	*e*Pg	Pg	12 57 12.6	-2.1
YOA				*e*Sg	Sg	12 57 29.2	-0.8
YOA				Smax			
	1μm,0.7s						
KMO	**Kumora**	**1.50**	**263**	*e*Pg	Pn	12 57 18.8	-1.4
KMO				*e*Sg	Sg	12 57 38.5	-1.6
KMO				Pmax			
	72nm,0.3s						
KMO				Smax			
	143nm,1.0s						
BOD	**Bodaibo**	**1.72**	**3**	*e*Sg	Sn	12 57 44.1	-1.6
BOD				Smax			
	90nm,0.8s						
YLYR	**Ulyunkhan**	**1.96**	**232**	*e*Pn	Pn	12 57 26.4	-0.1
YLYR				*e*Pg	Pb	12 57 27.3	-1.3
YLYR				*e*Sg	Sb	12 57 53.9	+0.3
YLYR				Pmax			
	23nm,0.3s						
YLYR				Smax			
	95nm,0.4s						
NIZ	**Nizh Angarsk**	**2.44**	**264**	*e*Sg	Sb	12 58 08.0	+0.6
NIZ				Smax			
	102nm,0.6s						
TUP	**Tupik**	**3.88**	**113**	Sg	Sb	12 58 50.9	+2.0

NNC 07 13:30:43.5±9.3, 37°.41N×69°.05E, h0^{km}, mb3.9, mpv3.3, 3C-2D, Error ellipse: s-maj=99.1km s-min=48.4km az=159.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.79**	**11**	⇑Pn	Pn	13 32 11.3	+0.6
	0.5nm,0.3s,baz=202,slow=15,SNR=34						
KK31				⇓Sn	Sn	13 33 19.1	+1.2
	1.9nm,0.5s,baz=207,slow=25,SNR=3.9						
AAK	**Ala-Archa**	**6.68**	**37**	⇑Pn	Pn	13 32 22.0	-1.0
	2.3nm,0.5s						
AAK				⇓Sn	Sn	13 33 41.1	+1.2
	5.3nm,0.6s						
AB31	**Akbulak array**	**13.55**	**334**	P	Pn	13 33 54.8	-2.1
	1.3nm,0.6s,baz=159,slow=13,SNR=26						
AKTO	**Aktyubinsk**	**15.23**	**332**	⇑P	P	13 34 23.1	-1.8
	3.9nm,0.8s						

SJA ***07*** *13:34:55.1±0.6, 32°.91S×72°.13W, h13^{km}±3^{km}, ML4.1, MW4.0*

IDC ***07*** *13:34:56.8±1.1, 32°.69S×71°.61W, h0^{km}, mb4.0/6, mb1 4.1/9, mb1mx4.0/28, mbtmp3.9/9, ML4.2/3, MS3.1/2, Ms1 3.0/2, ms1mx2.8/17, Error ellipse: s-maj=31.6km s-min=24.0km az=93.0*

NEIC ***07*** *13:34:59.7, 32°.80S×71°.81W, h37^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.78; $M_{\theta\theta}$0.22; $M_{\phi\phi}$-1.00; $M_{r\theta}$-0.30; $M_{\theta\phi}$-0.26; $M_{\phi r}$-0.40; Fault plane solution: $M_0$1.07000×10^{15} NP1:ϕ_s352.10000°, δ34.81000°, λ59.96000°. NP2:ϕ_s207.26000°, δ60.38000°, λ109.19000°. Principal axes: T 0.9531, Plg68.0000°, Azm156.0000°; N 0.2083, Plg17.0000°, Azm17.0000°; P -1.1614, Plg13.0000°, Azm283.0000°;*

NEIC ***07*** *13:35:00.5±2.0, 32°.78S±0°.05×71°.77W±0°.08, h28^{km}±5^{km}, mb4.6/10, Mwr4.0/19, ML4.2(GUC) Error ellipse: s-maj=9.9km s-min=6.7km az=80.0*

GUC ***07*** *13:35:01.6±0.6, 32°.79S×71°.69W, h20^{km}±13^{km}, ML4.2*

ISC 07 13:34:57.5±1.4, 32°.72S±0°.03×71°.91W±0°.04, h7^{km}±8^{km}, n94, σ1§75/106, mb4.3/10, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.79**	**109**		**Pg**	**13 35 13.3**	**+0.5**
ROC1	**El Roble**	**0.79**	**109**	*e*P	**Pg**	**13 35 13.3**	**+0.5**
ROC1				*e*S	**Sg**	**13 35 21.9**	**-1.2**
ROCH	**El Roble**	**0.79**	**109**	⇓*i*P	**Pg**	**13 35 13.4**	**+0.6**
ROCH				*i* S	**Sg**	**13 35 21.8**	**-1.4**
MT02	**Curacav**	**0.84**	**130**	*e*P	**Pg**	**13 35 14.0**	**+0.3**
MT02				*i* S	**Sg**	**13 35 23.2**	**-1.4**
MT02	**Curacav**	**0.84**	**130**		**Pg**	**13 35 14.1**	**+0.3**
VA05	**Santo Domingo**	**0.97**	**165**	*i* P	**Pg**	**13 35 17.3**	**+1.2**
VA05				*i* S	**Sg**	**13 35 29.1**	**+0.5**
VA05				IAML		13 35 31.6	
	comp=E,15μm,0.2s						
PEL	**Peldehue**	**1.11**	**113**	*e*P	**Pb**	**13 35 18.2**	**-0.8**
PEL				*i* S	**Sb**	**13 35 31.1**	**-2.6**
PEL				IAML		13 35 33.4	
	comp=N,15μm,0.2s						
PEL	**Peldehue**	**1.11**	**113**		**Pb**	**13 35 18.5**	**-0.6**
PEL	**Peldehue**	**1.11**	**113**	*e*P	**Pb**	**13 35 18.6**	**-0.4**
PEL				*e*S	**Sb**	**13 35 32.1**	**-1.6**
VA03	**San Esteban**	**1.14**	**93**	*i* P	**Pb**	**13 35 18.8**	**-0.9**
VA03				*i* S	**Sb**	**13 35 32.2**	**-2.5**
VA03				IAML		13 35 32.9	
	comp=E,15μm,0.1s						
VA03	**San Esteban**	**1.14**	**93**		**Pb**	**13 35 18.7**	**-0.9**
MT05	**Renca**	**1.19**	**125**	⇓*i*P	**Pn**	**13 35 19.8**	**-0.8**
MT05				IAML		13 35 37.3	
	comp=E,18μm,0.4s						
MT05	**Renca**	**1.19**	**125**		**Pn**	**13 35 19.8**	**-0.8**
MT09	**Talagante**	**1.30**	**144**	⇓*i*P	**Pn**	**13 35 22.0**	**-0.3**
MT09				*i* S	**Sb**	**13 35 37.2**	**-2.2**
MT09				IAML		13 35 42.4	
	comp=N,8μm,0.2s						
MT03	**Universidad Ad**	**1.40**	**124**	⇓*i*P	**Pn**	**13 35 23.1**	**-0.4**
MT03				*e*S	**Sn**	**13 35 40.4**	**-1.9**
MT03				IAML		13 35 41.6	
	comp=N,15μm,0.4s						
BO03	**Pichilemu**	**1.77**	**181**	⇑*i*P	**Pn**	**13 35 28.7**	**+0.1**
LMEL	**Las Melosas**	**1.82**	**129**	*e*P	**Pn**	**13 35 29.8**	**+0.5**
LMEL				*e*S	**Sn**	**13 35 52.8**	**+0.1**
LMEL				IAML		13 35 57.1	
	comp=N,7μm,0.2s						
CO03	**El Pedregal**	**2.14**	**29**	*i* P	**Pn**	**13 35 35.6**	**+1.9**
CO03				IAML		13 36 13.6	
	comp=E,1μm,0.6s						
CO03	**El Pedregal**	**2.14**	**29**	Pn	**Pn**	**13 35 35.2**	**+1.5**
AUSP	**Uspallata**	**2.19**	**78**	*e*P	**Pb**	**13 35 37.1**	**-0.4**
AUSP				*e*S	**Sn**	**13 36 03.6**	**+1.6**
BO02	**Sierra Bellavi**	**2.27**	**156**	*e*P	**Pn**	**13 35 36.0**	**+0.5**
BO02				*i* S	**Sn**	**13 36 04.3**	**+0.5**
BO02	**Sierra Bellavi**	**2.27**	**156**	Pn	**Pn**	**13 35 36.0**	**+0.5**
RTLS	**Leoncito**	**2.39**	**68**	*e*P	**Pb**	**13 35 40.7**	**-0.4**
RTLS				IAML		13 36 19.1	
	comp=Z,670nm,0.4s						
ARCO	**CERRO ARCO**	**2.51**	**94**	*e*P	**Pb**	**13 35 42.5**	**-0.5**
ARCO				*e*S	**Sb**	**13 36 14.8**	**+0.7**
ARCO				IAML		13 36 19.5	
	comp=Z,824nm,0.8s						
ASAL	**Salagasta**	**2.59**	**88**	*e*P	**Pb**	**13 35 44.0**	**-0.4**
ASAL				*e*S	**Sb**	**13 36 17.1**	**+0.6**
ASAL				IAML		13 36 27.2	
	comp=Z,870nm,1.2s						
AAGR	**Agrelo**	**2.61**	**99**	*e*P	**Pb**	**13 35 43.8**	**-0.9**
AAGR				IAML		13 36 29.1	
	comp=Z,336nm,0.4s						
GO04	**Tololo Observa**	**2.71**	**21**		**Pn**	**13 35 43.2**	**+1.5**
AVIZ	**Vizcacheras**	**2.94**	**106**	*e*P	**Pb**	**13 35 52.9**	**+2.6**
AVIZ				*e*S	**Sg**	**13 36 32.0**	**-0.1**
RTCV	**Cerro Valdivia**	**2.98**	**74**	*e*P	**Pn**	**13 35 48.7**	**+3.5**
RTCV				*e*S	**Sb**	**13 36 29.1**	**+1.6**
RTCV				IAML		13 36 36.5	
	comp=Z,585nm,0.8s						
ZON	**Zonda**	**2.98**	**68**	Pn	**Pn**	**13 35 47.5**	**+2.3**
ZON	**Zonda**	**2.98**	**68**	*e*P	**Pn**	**13 35 48.7**	**+3.5**
ZON				*e*P	**Pb**	**13 35 49.1**	**-1.8**
ZON				*e*S	**Sb**	**13 36 27.5**	**0.0**
ZON				IAML		13 36 41.3	
	comp=Z,366nm,0.4s						
COIS	**El Sosneado**	**3.06**	**142**	*e*P	**Pn**	**13 35 45.4**	**-0.9**
CO01	**Juntas del Tor**	**3.14**	**30**	*e*P	**Pn**	**13 35 50.0**	**+2.3**
CO01				IAML		13 36 41.8	
	comp=N,312nm,0.4s						
CO01	**Juntas del Tor**	**3.14**	**30**		**Pn**	**13 35 49.6**	**+2.0**
LAMA	**Las Malvinas**	**3.15**	**135**	*e*P	**Pn**	**13 35 50.5**	**+2.9**
ACCO	**Cerro Coronel**	**3.22**	**49**	*e*P	**Pb**	**13 35 53.0**	**-2.2**
ACCO				*e*S	**Sb**	**13 36 35.2**	**+0.4**
ACCO				IAML		13 36 46.9	
	comp=Z,460nm,0.8s						
RTLL	**Cerro Villicun**	**3.23**	**65**	*e*P	**Pn**	**13 35 51.4**	**+2.8**
RTLL				*e*S	**Sb**	**13 36 32.9**	**-1.8**
RTLL				IAML		13 36 43.3	
	comp=Z,543nm,0.5s						
AROD	**Rodeo**	**3.29**	**40**	*e*P	**Pn**	**13 35 53.5**	**+3.8**
AROD				*e*S	**Sb**	**13 36 36.5**	**-0.2**
PUMA	**Malargue**	**3.44**	**144**	*e*P	**Pn**	**13 35 54.0**	**+2.5**
ACDV	**Cuesta del Vie**	**3.48**	**44**	*e*P	**Pn**	**13 35 56.4**	**+4.1**
ACDV				IAML		13 36 57.8	
	comp=Z,232nm,0.6s						
RFA	**San Rafael**	**3.52**	**126**	*e*P	**Pn**	**13 35 55.4**	**+2.7**
RFA				*e*S	**Sb**	**13 36 47.5**	**+4.4**
RFA				IAML		13 36 55.1	
	comp=Z,164nm,1.1s						
EDS3	**Malargue**	**3.68**	**146**	*e*P	**Pn**	**13 35 58.1**	**+3.1**
LCO	**Las Campanas**	**3.84**	**16**	Pn	**Pn**	**13 35 58.5**	**+1.2**
AC05	**El Transito**	**4.12**	**20**		**Pn**	**13 36 02.7**	**+1.8**
BI03	**Tigo**	**4.22**	**192**	Pn	**Pn**	**13 36 01.9**	**-0.3**
AC04	**Llanos de Chal**	**4.56**	**9**	Pn	**Pn**	**13 36 07.3**	**+0.5**
GO03	**Copiap**	**5.31**	**16**	Pn	**Pn**	**13 36 18.1**	**+0.9**
H03N1	**Juan Fernandez**	**5.92**	**261**	T	T	13 42 58.9	
	baz=89,slow=74,SNR=619						
H03N3	**Juan Fernandez**	**5.94**	**261**	T	T	13 42 58.5	
	baz=89,slow=74,SNR=860						
H03N2	**Juan Fernandez**	**5.94**	**261**	T	T	13 42 59.8	
	baz=89,slow=74,SNR=910						
H03S1	**Juan Fernandez**	**5.97**	**257**	T	T	13 42 47.1	
	baz=83,slow=75,SNR=150						
H03S3	**Juan Fernandez**	**5.97**	**257**	T	T	13 42 46.5	
	baz=83,slow=75,SNR=173						
H03S2	**Juan Fernandez**	**5.99**	**257**	T	T	13 42 46.4	
	baz=83,slow=75,SNR=364						
LC01	**Cunco**	**6.17**	**180**	Pn	**Pn**	**13 36 28.3**	**-0.6**
AC02	**Maricunga**	**6.34**	**23**	Pn	**Pn**	**13 36 32.7**	**+0.9**
TCA	**Tanti**	**6.36**	**79**	*e*P	**Pn**	**13 36 32.1**	**+0.4**
TCA				*e*S	**Sn**	**13 37 44.0**	**-0.6**
TCA				*e*S	**Sn**	**13 37 49.1**	**+4.5**
TCA				IAML		13 37 49.5	
	comp=Z,110nm,1.2s						
AC01	**Pan de Azucar**	**6.65**	**10**	Pn	**Pn**	**13 36 34.1**	**-1.5**
CYA	**Choya**	**6.77**	**53**	*e*P	**Pn**	**13 36 41.1**	**+3.8**
CYA				*e*S	**Sn**	**13 37 58.1**	**+3.4**
CYA				IAML		13 38 03.0	
	comp=Z,53nm,1.0s						
GO02	**Mina Guanaco**	**7.80**	**16**	Pn	**Pn**	**13 36 50.1**	**-1.6**
PLCA	**Paso Flores**	**8.07**	**173**	Pn	**Pn**	**13 36 56.4**	**+1.2**
	comp=Z,1.8nm,0.3s,baz=333,slow=11,SNR=69						
PLCA				LR	LR	13 39 59.2	
	comp=Z,100nm,19.7s,baz=303,slow=38						
PLCA	**Paso Flores**	**8.07**	**173**		**Pn**	**13 36 55.9**	**+0.7**
PB14	**IPOC Station P**	**8.17**	**10**	Pn	**Pn**	**13 36 54.9**	**-1.9**
LVC	**Limon Verde**	**10.41**	**15**	LR	LR	13 41 18.4	
	comp=Z,98nm,18.1s,baz=216,slow=37						
LVC	**Limon Verde**	**10.41**	**15**	Pn	**Pn**	**13 37 25.8**	**-1.8**
PB07	**IPOC Station P**	**11.10**	**10**	Pn	**Pn**	**13 37 36.5**	**-0.3**
PB01	**IPOC Station P**	**11.83**	**11**	Pn	**Pn**	**13 37 48.9**	**+2.2**
PSGCX	**Pisagua**	**13.17**	**7**	Pn	**Pn**	**13 38 05.7**	**+0.7**
CPUP	**Villa Florida**	**14.19**	**67**	Pn	**Pn**	**13 38 16.2**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=222,slow=16,SNR=1.7						
CPUP				Sn	**Sn**	**13 40 52.4**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=238,slow=16,SNR=3.1						
CPUP	**Villa Florida**	**14.19**	**67**	Pn	**Pn**	**13 38 19.7**	**+0.8**
PB16	**IPOC Station P**	**14.49**	**9**	Pn	**Pn**	**13 38 23.7**	**+0.2**
SIV	**San Ignacio**	**19.34**	**33**	P	**P**	**13 39 22.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=208,slow=8.8,SNR=5.7						
BDFB	**Brasilia**	**27.54**	**58**	P	**P**	**13 40 44.0**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=262,slow=3.4,SNR=3.2						
BDFB	**Brasilia**	**27.54**	**58**	P	**P**	**13 40 43.5**	**-1.6**
SNAA	**Sanae**	**52.73**	**158**	P	**P**	**13 44 12.6**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=259,slow=9.2,SNR=6.3						
SNAA	**Sanae**	**52.73**	**158**	P	**P**	**13 44 12.2**	**-0.3**
TEIG	**Tepich**	**54.93**	**341**	P	**P**	**13 44 30.2**	**+1.2**
QSPA	**South Pole Qui**	**57.51**	**180**	P	**P**	**13 44 48.0**	**+0.8**
QSPA				IAmb	IAmb	13 44 57.3	
	comp=Z,5.8nm,1.3s						
CPCT	**Cooper Cave**	**68.84**	**349**	P	**P**	**13 46 02.7**	**+0.3**
CPCT				IAmb	IAmb	13 46 22.0	
	comp=Z,7.1nm,1.2s						
SWET	**Sewanee**	**68.85**	**348**	P	**P**	**13 46 02.6**	**+0.1**
SWET				IAmb	IAmb	13 46 03.8	
	comp=Z,4.3nm,0.8s						
TZTN	**Tazewell**	**69.76**	**350**	P	**P**	**13 46 08.6**	**+0.5**
WVT	**Waverly**	**70.10**	**346**	P	**P**	**13 46 10.8**	**+0.6**
MAW	**Mawson**	**74.37**	**164**	P	**P**	**13 46 35.4**	**0.0**
MAW				IAmb	IAmb	13 46 36.4	
	comp=Z,6.4nm,1.5s						
BOSA	**Boshof**	**80.57**	**118**	P	**P**	**13 47 09.8**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=276,slow=2.3,SNR=3.6						

```
BOSA  Boshof             80.57 118  IAmb   IAmb    13 47 11.0
      comp=Z,8.2nm,1.1s
PDAR  Pinedale Array     82.67 333  P      P       13 47 22.5 +0.7
      comp=Z,0.3nm,0.8s,baz=160,slow=2.9,SNR=2.6
NVAR  Mina Array Bea     82.90 325  P      P       13 47 24.7 +1.7
      comp=Z,0.5nm,0.6s,baz=154,slow=6.7,SNR=4.9
TORD  Torodi Ar. Bea     83.67  70  P      P       13 47 26.4 -0.8
      comp=Z,1.4nm,0.7s,baz=268,slow=4.2,SNR=5.6
H11S2 WAKE ISLAND Hy125.89 270      T      T       16 12 58.4
      baz=118,slow=75,SNR=70
H11S1 WAKE ISLAND Hy125.90 270      T      T       16 12 58.2
      baz=118,slow=75,SNR=53
H11S3 WAKE ISLAND Hy125.91 270      T      T       16 12 58.1
      baz=118,slow=75,SNR=43
H11N3 WAKE ISLAND Hy126.27 271      T      T       16 13 26.8
      baz=117,slow=76,SNR=12
H11N1 WAKE ISLAND Hy126.29 271      T      T       16 13 27.8
      baz=117,slow=76,SNR=5.1
H11N2 WAKE ISLAND Hy126.29 271      T      T       16 13 28.0
      baz=117,slow=76,SNR=30
ZALV  Zalesovo Beam     153.08  31  PKPbc  PKPbc   13 54 54.9 -0.4
      comp=Z,2.5nm,0.6s,baz=318,slow=3.8,SNR=8.5
```

IDC ***07*** *13:35:37.7±2.1, 6.°07S×146.°65E, h0km, mb3.8/4, mb1 4.0/7, mb1mx3.7/41, mbtmp3.9/7, ML3.7/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/35, Error ellipse: s-maj=47.2km s-min=23.6km az=74.0*

NEIC ***07*** *13:35:46.4±1.3, 6.°3S±0.°1×146.°5E±0.°2, h61km±15km, mb4.3/4, Error ellipse: s-maj=30.9km s-min=17.1km az=83.0*

ISC 07 13:35:45.1±1.6**, 6.°2S**±0.°1×**146.°5E**±0.°2**, h52**km**, n17, σ0.s87**/16**, mb3.5**/5**, Eastern New Guinea region**

```
Code  Station Name        Δ°   AZ°  Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
PMG   Port Moresby        3.28 169  Pn     Pn      13 36 33.2 -0.7
      6.6nm,0.3s,baz=319,slow=7.6,SNR=21
PMG                                 Sn     Sn      13 37 12.1 +0.4
      11nm,0.3s,baz=117,slow=22,SNR=6.9
PMG                                 LR     LR      13 38 17.1
      comp=Z,231nm,20.1s,baz=342,slow=48
PMG   Port Moresby        3.28 169         Pn      13 36 33.1 -0.8
JAY   Jayapura            6.83 302  LR     LR      13 40 42.9
      comp=Z,73nm,18.1s,baz=191,slow=44
COEN  Coen                8.40 203  Pn     Pn      13 37 44.4 +0.2
SIJI  Sorong             16.09 289  Pn     Pn      13 39 25.8 -2.2
      0.5nm,0.3s,baz=156,slow=20,SNR=1.9
MTN   Manton Dam         16.53 245  Pn     Pn      13 39 33.4 -0.2
MTN                                 IAmb   IAmb    13 39 36.9
      comp=Z,69nm,1.4s
WRA   Warramunga Arr     18.08 220  P      P       13 39 52.2 -0.3
      comp=Z,0.2nm,0.3s,baz=42,slow=11,SNR=8.0
AS31  Alice Springs      21.19 214  P      P       13 40 26.1 -0.3
AS31                                IAmb   IAmb    13 40 33.5
      comp=Z,3.8nm,1.5s
ASAR  Alice Springs      21.20 214  P      P       13 40 27.1 +0.7
      comp=Z,0.5nm,0.6s,baz=52,slow=9.1,SNR=11
FITZ  Fitzroy Crossi     23.55 238  P      P       13 40 51.1 +0.2
      comp=Z,5.0nm,0.4s,baz=59,slow=11,SNR=15
FITZ  Fitzroy Crossi     23.55 238  P      P       13 40 50.9 -0.1
FITZ                                IAmb   IAmb    13 41 00.8
      comp=Z,21nm,1.3s
STKA  Stephens Creek     25.98 190  P      P       13 41 13.3 +0.3
      comp=Z,0.7nm,0.4s,baz=95,slow=11,SNR=1.2
PSA00 Pilbara Seismi     29.98 237  P      P       13 41 49.1 +0.2
CMAR  Chiang Mai Arr     52.89 299  P      P       13 44 58.0 +1.7
      comp=Z,0.9nm,0.4s,baz=123,slow=5.8,SNR=5.6
GEYT  Alibeck            92.48 308  LR     LR      14 34 38.5
      comp=Z,31nm,18.4s,baz=285,slow=38
TORD  Torodi Ar. Bea    144.65 284  PKP    PKPab   13 55 15.6 -0.2
      comp=Z,1.8nm,0.5s,baz=76,slow=3.3,SNR=11
DBIC  Dimbokro          151.53 273  PKPbc  PKPbc   13 55 34.4 -0.2
      comp=Z,2.0nm,0.6s,baz=104,slow=16,SNR=4.6
```

AEIC ***07*** *13:43:44.1±1.7, 51.°07N±0.°04×179.°13E±0.°07, h18km±3km, Error ellipse: s-maj=6.9km s-min=6.0km az=116.0*

IDC ***07*** *13:43:45.1±4.1, 51.°22N×179.°16E, h30km±27km, mb4.0/22, mb1 4.2/22, mb1mx4.0/47, mbtmp4.2/22, MS3.3/4, Ms1 3.3/4, ms1mx2.9/51, Error ellipse: s-maj=21.3km s-min=12.3km az=166.0*

MOS ***07*** *13:43:45.4±0.8, 51.°24N×179.°14E, h46km, mb4.6/26, Error ellipse: s-maj=10.7km s-min=9.0km az=114.1*

NEIC ***07*** *13:43:46.2±1.3, 51.°21N±0.°06×179.°14E±0.°08, h37km±5km, mb4.5/81, ML4.0/27(AEIC), Error ellipse: s-maj=8.9km s-min=6.9km az=189.0*

ISC 07 13:43:46.6±0.4**, 51.°16N**±0.°07×**179.°11E**±0.°04**, h41**km**, n211, σ1.s00**/210**, mb4.5**/82**, 6C-3D, Rat Islands**

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Code  Station Name        Δ°   AZ°  Phase ID        Time      Res
                                    Op     ISC      h  m  s   ISC
AMKA  Amchitka            0.25  29  Pn     Pn      13 43 51.7 -2.7
AMKA                                Sn     Sn      13 43 57.0 -2.9
CESW  Semis’ Southwe      0.80  21         Pn      13 44 00.6 -0.7
CERAA Semis’ Rag’d T      0.83  26         Pn      13 44 01.0 -0.8
CETU  Semis' Tuman        0.84  17         Pn      13 44 01.7 -0.3
LSPA  Little Sitkin       0.86 338         Pn      13 44 01.9 -0.4
LSPA                                       Sn      13 44 16.2 +2.4
LSSA  Little Sitkin       0.87 335         Pn      13 44 01.8 -0.6
LSNW  Little Sitkin       0.89 336         Pn      13 44 01.9 -0.7
CEAP  Semis’ Anvil P      0.89  19         Pn      13 44 02.2 -0.5
GALAA Gareloi Lava P      1.46  65         Pn      13 44 09.8 -0.6
TASE  Tanaga Southea      1.91  68         Pn      13 44 15.6 -1.0
TAFP  Tanaga Falls P      1.96  67         Pn      13 44 16.9 -0.5
TAFP                                       Sn      13 44 42.5 +1.8
KIMD  Kanaga Island       2.37  74         Pn      13 44 22.0 -0.8
KICM  Kanaga Island       2.43  70         Pn      13 44 23.7 -0.1
KIKV  Kanaga Island       2.44  71         Pn      13 44 23.4 -0.5
KIKV                                       Sn      13 44 55.0 +2.6
ADK   Adak                2.73  73  P      Pn      13 44 27.2 -0.6
ADK   Adak                2.73  73  Pn     Pn      13 44 27.2 -0.6
ADAG  Mount Adagdak       2.80  71         Pn      13 44 29.1 +0.3
GSTD  Great Sitkin T      3.09  71         Pn      13 44 32.5 -0.4
GSTD                                       Sn      13 45 11.6 +2.9
GSMY  Great Sitkin M      3.14  72         Pn      13 44 33.2 -0.3
GSTR  Great Sitkin T      3.15  71  Pn     Pn      13 44 33.1 -0.6
SMY   Shemya              3.47 299  P      Pn      13 44 38.3 +0.3
SMY   Shemya              3.47 299  Pn     Pn      13 44 38.3 +0.3
ATKA  Atka Island         4.30  73  Pn     Pn      13 44 48.7 -0.7
ATKA  Atka Island         4.30  73         Sn      13 45 38.5 +0.3
KOWE  Korovin West        4.30  71         Pn      13 44 49.3 -0.1
NIKH  Nikolski High       7.64  72  Pn     Pn      13 45 36.1 +0.9
SPIA  Saint Paul Isl      8.67  42  Pn     Pn      13 45 48.9 -0.4
UNV   Unalaska Valle      9.18  67  Pn     Pn      13 45 56.4 +0.2
AKUT  Akutan              9.66  66  Pn     Pn      13 46 03.8 +1.0
SDPT  Sand Point         12.91  63  Pn     Pn      13 46 45.9 -1.3
PETK  Petropavlovsk-     13.29 287  Pn     Pn      13 46 54.4 +2.0
      0.2nm,0.3s,baz=97,slow=19,SNR=1.6
PETK                                LR     LR      13 51 55.5
      comp=Z,81nm,21.7s,baz=70,slow=37
ANM   Nome               15.70  25  P      P       13 47 29.3 +1.3
ANM                                 pmax   pmax
      comp=Z,8.0nm,1.0s
ANM   Nome               15.70  25  P      P       13 47 29.3 +1.3
SEY   Seymchan           18.54 320  Pn     Pn      13 48 00.7 +0.8
      comp=Z,0.2nm,0.3s,baz=105,slow=16,SNR=6.8
SEY   Seymchan           18.54 320⇑eP      Pn      13 48 04.2 +4.3
RDOG  Red Dog Mine       19.09  21         Pn      13 48 06.4 -0.1
I23K  Minto, Yukon-K     21.43  37  P      P       13 48 30.6 -0.1
I23K                                IAmb   IAmb    13 48 31.4
      comp=Z,10nm,0.6s
COLD  Coldfoot           22.13  32  P      P       13 48 39.3 +1.1
A21K  Barrow             23.02  20  P      P       13 48 46.3 -1.2
EGAK  Eagle              24.58  41  P      P       13 49 02.1 -0.2
EGAK                                IAmb   IAmb    13 49 04.5
      comp=Z,11nm,0.9s
INK   Inuvik             28.39  35  P      P       13 49 37.3 +0.8
      comp=Z,5.0nm,1.0s,baz=243,slow=12,SNR=8.9
INK                                 PcP    PcP     13 52 47.5 -0.3
      comp=Z,0.6nm,0.6s,baz=319,slow=3.0,SNR=3.4
INK   Inuvik             28.39  35         P       13 49 36.8 +0.3
INK                                 IAmb   IAmb    13 49 41.9
      comp=Z,7.2nm,1.1s
YAK   Yakutsk            28.58 312⇑eP      P       13 49 38.1 -0.1
YAK                                 pmax   pmax
      comp=Z,5.0nm,0.8s
KLR   Kul'dur            29.97 285  P      P       13 49 51.2 +0.4
      comp=Z,8.3nm,0.6s,baz=76,slow=7.3,SNR=30
KLR   Kul'dur            29.97 285ceP      P       13 49 51.0 +0.2
ZEA   Zeya               31.14 295 eP      P       13 50 00.7 -0.3
ZEA                                 pmax   pmax
      comp=E,10.0nm,0.4s
ZEA                                 pmax   pmax
      comp=Z,10.0nm,1.0s
USRK  Ussuriysk Ar.      32.01 276  P      P       13 50 09.2 +0.4
      comp=Z,1.8nm,0.7s,baz=65,slow=13,SNR=4.5
H11N2 WAKE ISLAND Hy 32.81 202      T      T       14 25 17.7
      baz=20,slow=75,SNR=13
H11N3 WAKE ISLAND Hy 32.82 202      T      T       14 25 18.5
      baz=20,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 32.83 202      T      T       14 25 17.5
      baz=20,slow=75,SNR=14
H11S1 WAKE ISLAND Hy 34.03 201      T      T       14 26 50.6
      baz=19,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 34.05 201      T      T       14 26 49.5
      baz=19,slow=76,SNR=14
H11S3 WAKE ISLAND Hy 34.05 201      T      T       14 26 49.3
      baz=19,slow=76,SNR=8.1
JWT   Wachi              35.00 260  P      P       13 50 36.2 +1.3
PGC   Sidney             36.28  71  P      P       13 50 46.0 +0.4
YKA   Yellowknife Ar     36.33  46  P      P       13 50 44.7 -1.2
      comp=Z,1.1nm,0.5s,baz=281,slow=6.8,SNR=30
YKA                                 PcP    PcP     13 53 10.1 +0.4
      comp=Z,0.8nm,0.9s,baz=292,slow=2.4,SNR=5.7
YKA                                 ScP    ScP     13 56 53.9 +1.3
      comp=Z,0.5nm,0.7s,baz=292,slow=2.7,SNR=9.7
JHS   Saijyo             36.61 262  P      P       13 50 48.5 -0.1
KKH   Kailua Kona        37.05 139  P      P       13 50 52.3 -0.1
KKH   Kailua Kona        37.05 139  P      P       13 50 52.3 -0.1
LON   Longmire           38.14  73  P      P       13 51 01.6  0.0
LON                                 pmax   pmax
      comp=Z,5.0nm,1.2s
LON   Longmire           38.14  73  P      P       13 51 01.6  0.0
LON                                 IAmb   IAmb    13 51 16.4
      comp=Z,5.1nm,1.1s
KSRS  Korea Array        38.32 269  P      P       13 51 04.2 +1.1
      comp=Z,2.0nm,0.8s,baz=59,slow=7.4,SNR=4.9
KSRS                                LR     LR      14 07 32.0
      comp=Z,30nm,20.0s,baz=163,slow=37
LTY   Liberty            38.58  71  P      P       13 51 04.9 -0.4
LTY                                 IAmb   IAmb    13 51 25.7
      comp=Z,9.6nm,1.4s
H04A  Detroit Lake       38.95  76  P      P       13 51 08.4 +0.1
H04A                                IAmb   IAmb    13 51 22.5
      comp=Z,6.7nm,1.0s
KBO   Bosley Butte       39.01  80  P      P       13 51 07.2 -1.8
HAWA  Hanford            39.68  72  P      P       13 51 14.2 -0.2
HAWA                                IAmb   IAmb    13 51 15.1
      comp=Z,3.9nm,0.7s
NEW   Newport            40.19  68  P      P       13 51 17.3 -1.4
      comp=Z,2.1nm,0.6s,baz=310,slow=8.9,SNR=5.4
NEW   Newport            40.19  68  P      P       13 51 17.6 -1.0
NEW                                 pmax   pmax
      comp=Z,3.0nm,0.9s
NEW   Newport            40.19  68  P      P       13 51 17.6 -1.0
YBH   Yreka Blue Hor     40.21  80  LR     LR      14 03 43.4
      comp=Z,42nm,22.0s,baz=336,slow=30
RES   Resolute Bay       40.48  24  P      P       13 51 20.7 +0.1
      comp=Z,1.2nm,0.4s,baz=264,slow=8.8,SNR=4.4
K05A  Summer Lake        40.78  78  P      P       13 51 24.6 +0.7
K05A                                IAmb   IAmb    13 51 47.1
      comp=Z,13nm,1.4s
EUNU  Eureka             40.85  15  P      P       13 51 23.1 -0.6
I07A  Izee               40.90  75  P      P       13 51 24.7  0.0
MOD   Modoc Plateau      41.61  78  P      P       13 51 31.1 +0.6
BMO   Blue Mountains     41.82  73  P      P       13 51 31.8 -0.4
BMO                                 pmax   pmax
      comp=Z,2.0nm,0.8s
BMO   Blue Mountains     41.82  73  P      P       13 51 31.8 -0.4
WVOR  Wild Horse Val     42.33  77  P      P       13 51 36.2 -0.2
WVOR                                pmax   pmax
      comp=Z,6.0nm,1.2s
WVOR  Wild Horse Val     42.33  77  P      P       13 51 36.2 -0.2
PNTR  Pine Nut           43.68  81  P      P       13 51 47.9 +0.4
PNTR                                IAmb   IAmb    13 52 06.2
      comp=Z,4.4nm,0.7s
NRIK  Noril'sk           43.93 329  P      P       13 51 48.8  0.0
      comp=Z,2.4nm,0.6s,baz=79,slow=8.8,SNR=6.0
NRIK  Noril'sk           43.93 329 eP      P       13 51 49.1 +0.3
NRIK                                pmax   pmax
      comp=Z,2.0nm,0.6s
HRY   Holter Researc     44.07  68  P      P       13 51 49.9 -0.5
HLID  Hailey             44.26  73  P      P       13 51 51.1 -1.0
BCYI  Bear Canyon        44.45  71  P      P       13 51 52.7 -0.9
MCMT  McKenzie Canyo     44.49  70  P      P       13 51 53.3 -0.6
BOZ   Bozeman (W)        44.79  69  P      P       13 51 55.5 -0.7
BOZ                                 pmax   pmax
      comp=Z,3.0nm,0.9s
BOZ   Bozeman (W)        44.79  69  P      P       13 51 55.5 -0.7
NVAR  Mina Array Bea     44.88  81  P      P       13 51 56.9 -0.2
      comp=Z,1.2nm,0.7s,baz=301,slow=7.9,SNR=7.4
TLY   Talaya             45.06 302  P      P       13 51 57.9 -0.2
ULN   Ulaanbaatar        45.17 295⇓iP      P       13 52 00.1 +0.9
ULN                                 pmax   pmax
      comp=Z,2.0nm,1.0s
PAGB  Antelope Grade     45.35  85  P      P       13 52 00.1 -0.5
PAGB                                IAmb   IAmb    13 52 10.9
      comp=Z,4.9nm,0.9s
ELK   Elko               45.39  77  P      P       13 52 00.7 -0.4
ELK                                 pmax   pmax
      comp=Z,2.0nm,0.7s
ELK   Elko               45.39  77  P      P       13 52 00.7 -0.4
YHL   Hebgen Lake        45.47  69  P      P       13 52 00.8 -0.9
YHB   Horse Butte        45.52  70  P      P       13 52 01.3 -0.7
SONM  Songino Array      45.56 296  P      P       13 52 03.2 +0.9
      comp=Z,1.9nm,0.5s,baz=65,slow=7.5,SNR=13
SONM                                PcP    PcP     13 53 40.1 -0.1
      comp=Z,0.5nm,0.6s,baz=53,slow=2.7,SNR=2.6
YHH   Holmes Hill        45.70  69  P      P       13 52 02.6 -0.9
YNE   Yellowstone No     46.07  69  P      P       13 52 06.0 -0.4
H17A  Grant Village      46.08  70  P      P       13 52 07.7 +1.1
H17A                                IAmb   IAmb    13 52 26.7
      comp=Z,3.0nm,0.7s
HVU   Hansel Valley      46.28  74  P      P       13 52 08.0  0.0
HVU                                 pmax   pmax
      comp=Z,3.0nm,0.7s
HVU   Hansel Valley      46.28  74  P      P       13 52 08.0  0.0
MOOW  Moose Ponds        46.35  70  P      P       13 52 08.6  0.0
RLMT  Red Lodge          46.44  68  P      P       13 52 08.3 -1.0
RLMT                                IAmb   IAmb    13 52 36.5
      comp=Z,5.8nm,1.2s
HHC   Hu-ho-hao-te       46.48 285 eP      P       13 52 11.0 +1.5
HHC                                 pmax   pmax
      comp=Z,15nm,0.6s
HHC                                 pmax   pmax
      comp=Z,140nm,6.0s
REDW  Red Top Meadow     46.51  71  P      P       13 52 09.7 -0.1
REDW                                IAmb   IAmb    13 52 16.8
      comp=Z,5.9nm,1.5s
R11A  Troy Canyon, C     46.62  79  P      P       13 52 10.6 -0.2
SPUT  South Promonto     46.75  74  P      P       13 52 11.8 +0.1
FCC   Fort Churchill     47.06  45  P      P       13 52 14.8 +1.2
FCC                                 pmax   pmax
      comp=Z,8.0nm,1.5s
FCC   Fort Churchill     47.06  45  P      P       13 52 14.8 +1.2
FCC                                 IAmb   IAmb    13 52 27.5
      comp=Z,7.7nm,1.4s
TPNV  Topopah Spring     47.08  81  P      P       13 52 13.2 -1.1
TPNV                                pmax   pmax
      comp=Z,4.0nm,0.9s
TPNV  Topopah Spring     47.08  81  P      P       13 52 13.2 -1.1
TPNV                                IAmb   IAmb    13 52 24.5
      comp=Z,3.9nm,0.8s
HWUT  Hardware Ranch     47.11  73  P      P       13 52 14.8 +0.2
HWUT                                IAmb   IAmb    13 52 28.4
      comp=Z,4.6nm,1.4s
DUG   Dugway, Tooele     47.20  76  P      P       13 52 14.9 -0.3
DUG                                 pmax   pmax
      comp=Z,7.0nm,1.3s
DUG   Dugway, Tooele     47.20  76  P      P       13 52 14.9 -0.3
DUG                                 IAmb   IAmb    13 52 17.9
      comp=Z,7.5nm,1.2s
NJ2   Nanjing            47.50 270 eP      P       13 52 17.2 -0.2
NJ2                                 pmax   pmax
      comp=Z,12nm,0.5s
PRN   Pahroc Range       47.54  80  P      P       13 52 17.4 -0.5
PRN                                 IAmb   IAmb    13 52 34.3
      comp=Z,5.3nm,0.8s
PSUT  Pine Spring        47.58  78  P      P       13 52 17.7 -0.5
BW06  Boulder Array      47.63  71  P      P       13 52 17.6 -1.0
BW06                                IAmb   IAmb    13 52 18.7
      comp=Z,4.7nm,0.7s
PD31  Pinedale Array     47.63  71  P      P       13 52 17.6 -0.9
PD31                                IAmb   IAmb    13 52 18.7
      comp=Z,4.2nm,0.7s
PDAR  Pinedale Array     47.63  71  P      P       13 52 18.1 -0.5
      comp=Z,3.5nm,0.6s,baz=319,slow=3.2,SNR=45
CCUT  Cedar City         48.49  79  P      P       13 52 24.9 -0.4
MSU   Marysvale          48.62  77  P      P       13 52 26.7 +0.4
MSU   Marysvale          48.62  77  P      P       13 52 26.7 +0.4
TMUT  Trail Mountain     48.73  76  P      P       13 52 28.2 +0.9
MTPU  Mount Pierson      48.91  77  P      P       13 52 29.2 +0.5
SRU   San Rafael Swe     49.26  75  P      P       13 52 31.2  0.0
SRU                                 pmax   pmax
      comp=Z,8.0nm,1.4s
SRU   San Rafael Swe     49.26  75  P      P       13 52 31.2  0.0
U15A  North Rim          49.87  79  P      P       13 52 35.4 -0.6
U15A                                IAmb   IAmb    13 52 41.2
      comp=Z,4.7nm,1.1s
O20A  White River Ci     50.01  73  P      P       13 52 36.1 -0.7
O20A                                IAmb   IAmb    13 52 36.9
      comp=Z,4.8nm,0.7s
ESJX  Sierra Juarez      50.48  86  P      P       13 52 40.1 -0.5
SPA0  Spitsbergen Ar     50.49 355  P      P       13 52 38.8 -1.0
SPITS Spitsbergen Ar     50.49 355  P      P       13 52 38.8 -1.0
      comp=Z,2.5nm,0.5s,baz=35,slow=7.5,SNR=15
PV23  Carpenter Ridg     50.59  75  P      P       13 52 41.4  0.0
PV23                                IAmb   IAmb    13 53 04.0
      comp=Z,7.3nm,1.1s
PV04  Paradox Valley     50.69  75  P      P       13 52 41.6 -0.4
PV04                                IAmb   IAmb    13 53 04.7
      comp=Z,4.0nm,0.7s
PV17  East Wray Mesa     50.73  75  P      P       13 52 42.0 -0.4
PV11  David Mesa, Pa     50.77  75  P      P       13 52 42.2 -0.4
N23A  Red Feather La     50.91  71  P      P       13 52 43.8 +0.1
N23A                                IAmb   IAmb    13 53 06.5
      comp=Z,4.8nm,1.2s
SMCO  Snowmass           51.37  73  P      P       13 52 46.0 -1.3
XAN   Xi'an              52.40 280  P      P       13 52 55.0 +0.3
XAN                                 pP     pP      13 53 03.9 -1.9
XAN                                 pmax   pmax
      comp=Z,8.0nm,0.9s
SDCO  Great Sand Dun     53.17  73  P      P       13 53 00.3 -0.3
SDCO                                IAmb   IAmb    13 53 01.0
      comp=Z,4.8nm,1.3s
ZALV  Zalesovo Beam      53.22 313  P      P       13 52 59.9 -0.5
      comp=Z,1.2nm,0.4s,baz=38,slow=8.6,SNR=5.8
ZALV                                PcP    PcP     13 54 07.9 +0.2
      comp=Z,1.2nm,0.7s,baz=345,slow=4.6,SNR=4.4
SUMG  Summit             53.82  13  P      P       13 53 04.1 -0.9
SUMG  Summit             53.82  13  P      P       13 53 04.1 -0.9
GTA   Gaotai             54.42 291 eP      P       13 53 05.7 -3.8
GTA                                 pP     pP      13 53 10.2  -11
GTA                                 sP     pwP     13 53 13.6 -9.3
GTA                                 pmax   pmax
      comp=Z,2.0nm,0.8s
CBKS  Cedar Bluff        55.91  69  P      P       13 53 20.1  0.0
CBKS                                pmax   pmax
      comp=Z,6.0nm,0.9s
CBKS  Cedar Bluff        55.91  69  P      P       13 53 20.1  0.0
CBKS                                IAmb   IAmb    13 53 40.9
      comp=Z,5.5nm,0.8s
ARCES ARCESS Array B     58.07 349  P      P       13 53 33.2 -1.8
      comp=Z,6.3nm,1.1s,baz=23,slow=9.5,SNR=3.7
ARCES ARCESS Array B     58.07 349 eP      P       13 53 35.0  0.0
ARCES                               pmax   pmax
      comp=Z,2.0nm,0.7s
KURK  Kurchatov          58.21 313ceP      P       13 53 36.1 -0.1
KURK                                pmax   pmax
      comp=Z,10.0nm,1.3s
KURK  Kurchatov          58.21 313  P      P       13 53 36.0 -0.1
WMQ   Urumqi             58.35 302 eP      P       13 53 39.5 +2.2
MK31  Makanchi Array     59.13 307c iP     P       13 53 42.1 -0.6
MK31                                pmax   pmax
      comp=Z,2.0nm,0.5s
MK31  Makanchi Array     59.13 307  P      P       13 53 42.0 -0.7
MK31                                IAmb   IAmb    13 53 42.9
      comp=Z,2.5nm,0.6s
MKAR  Makanchi Array     59.13 307  P      P       13 53 42.2 -0.5
      comp=Z,2.5nm,0.4s,baz=51,slow=5.8,SNR=69
MAKZ  Makanchi           59.28 308  P      P       13 53 43.0 -0.7
MAKZ                                pmax   pmax
      comp=Z,4.0nm,0.6s
MAKZ  Makanchi           59.28 308  P      P       13 53 43.0 -0.7
BRVK  Borovoye           60.22 319ceP      P       13 53 50.2 +0.2
BRVK                                pmax   pmax
      comp=Z,9.0nm,1.3s
BRVK  Borovoye           60.22 319  P      P       13 53 50.1 +0.1
ARU   Arti               62.09 327d iP     P       13 54 00.5 -2.1
ARU                                 S      S       14 02 13.5  -11
ARU                                 pmax   pmax
      comp=Z,10.0nm,1.4s
ARU   Arti               62.09 327  P      P       13 54 02.9 +0.3
OXF   Oxford             64.87  66  P      P       13 54 21.2 -0.1
OXF                                 pmax   pmax
      comp=Z,39nm,1.5s
OXF   Oxford             64.87  66  P      P       13 54 21.2 -0.1
FINES FINESS Array B     65.69 346  P      P       13 54 24.2 -2.0
      comp=Z,5.0nm,1.0s,baz=7.6,slow=5.8,SNR=4.2
FINES FINESS Array B     65.69 346 eP      P       13 54 24.8 -1.4
FINES                               pmax   pmax
      comp=Z,5.0nm,1.0s
AAK   Ala-Archa          65.98 309⇓iP      P       13 54 28.5 -0.1
AAK                                 pmax   pmax
      comp=Z,16nm,1.3s
AAK   Ala-Archa          65.98 309  P      P       13 54 28.6  0.0
AAK                                 IAmb   IAmb    13 54 31.9
      comp=Z,6.2nm,1.2s
ABKAR Akbulak array      67.31 322  P      P       13 54 37.1 +0.4
ABKAR                               IAmb   IAmb    13 54 38.3
      comp=Z,5.4nm,1.1s
NC204 NORSAR Array S     67.53 354  P      P       13 54 36.9 -1.1
KK31  Karatay Array      67.55 311  P      P       13 54 38.5 +0.1
KK31                                pmax   pmax
      comp=Z,5.0nm,0.8s
KK31  Karatay Array      67.55 311  P      P       13 54 38.5 +0.1
KK31                                IAmb   IAmb    13 54 39.6
      comp=Z,5.1nm,0.8s
KKAR  Karatay Array      67.55 311  P      P       13 54 38.6 +0.2
KKAR                                pmax   pmax
      comp=Z,5.0nm,0.8s
KKAR  Karatay Array      67.55 311  P      P       13 54 38.6 +0.2
KKAR                                IAmb   IAmb    13 54 39.6
      comp=Z,5.1nm,0.8s
KSH   Kashi              67.56 305  PKPbc  P       13 54 42.7 +4.0
NC405 NORSAR Array S     67.62 353  P      P       13 54 37.2 -1.3
NB201 NORSAR Array S     67.72 354  P      P       13 54 38.1 -1.0
NB2   NORSAR Subarra     67.73 354  P      P       13 54 38.3 -0.9
      comp=Z,0.7nm,0.6s,baz=7.9,slow=6.5
NOA   NORSAR Array B     67.73 354  P      P       13 54 38.4 -0.9
      comp=Z,1.2nm,0.6s,baz=3.2,slow=5.0,SNR=5.0
CMAR  Chiang Mai Arr     69.72 274  P      P       13 54 52.4 +0.1
      comp=Z,1.4nm,0.6s,baz=29,slow=6.8,SNR=13
CMAR  Chiang Mai Arr     69.72 274 eP      P       13 54 52.6 +0.3
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.6s
TAPN  Taplejung          70.04 289 eP      P       13 54 55.1 +0.6
      comp=Z,28nm,1.0s
ODAN  Odare              70.59 289 eP      P       13 54 58.5 +0.7
      comp=Z,9.9nm,0.8s
GUN   Gumba              70.71 291 eP      P       13 54 59.5 +0.9
      comp=Z,30nm,0.7s
RAMN  Ramite             71.00 289 eP      P       13 55 01.0 +0.7
      comp=Z,28nm,0.6s
KKN   Kakani             71.15 291 eP      P       13 55 02.0 +0.8
      comp=Z,19nm,0.5s
PKI   Pulchoki           71.24 291 eP      P       13 55 02.2 +0.4
      comp=Z,9.7nm,0.6s
PKIN  Phulchoki          71.24 291 eP      P       13 55 02.4 +0.6
      comp=Z,11nm,0.5s
GKN   Gorkha             71.37 292 eP      P       13 55 03.0 +0.6
      comp=Z,15nm,0.6s
DANN  Dangsing           71.62 292 eP      P       13 55 04.9 +0.8
      comp=Z,18nm,0.7s
KOLN  Koldanda           72.15 292 eP      P       13 55 07.7 +0.5
PYUN  Piuthan            72.26 293 eP      P       13 55 08.4 +0.6
      comp=Z,20nm,0.9s
PPT   Papeete            73.73 149  LR     LR      14 21 39.4
      comp=Z,34nm,21.3s,baz=338,slow=31
KBL   Kabul              74.92 307  P      P       13 55 23.1 -0.2
KBL                                 pmax   pmax
      comp=Z,5.0nm,0.7s
KBL   Kabul              74.92 307  P      P       13 55 23.1 -0.2
KBL                                 IAmb   IAmb    13 55 23.7
      comp=Z,5.3nm,0.7s
AKASG Malin Array Be     75.34 341  P      P       13 55 24.2 -0.9
      comp=Z,1.2nm,0.4s,baz=21,slow=6.4,SNR=12
AKBB  Malin Array Si     75.34 341  P      P       13 55 24.0 -1.2
AKBB                                pmax   pmax
      comp=Z,6.0nm,1.2s
AKBB  Malin Array Si     75.34 341  P      P       13 55 24.0 -1.2
AKBB                                IAmb   IAmb    13 55 26.3
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	comp=Z,6.2nm,1.1s						
KOLS	Kolonicke sedl	78.33	345	eP	P	13 55 42.2	+0.1
KOLS	Kolonicke sedl	78.33	345	eP	P	13 55 42.2	+0.1
CRVS	Cervenica-Dubn	78.50	345	eP	P	13 55 45.4	+2.4
CRVS	Cervenica-Dubn	78.50	345	eP	P	13 55 45.4	+2.4
BUR08	Bucovina Ar. S	79.05	342	P	P	13 55 46.2	-0.1
BUR08				IAmb	IAmb	13 55 46.7	
	comp=Z,3.6nm,0.9s						
MTO3	Montecristo	79.89	80	P	P	13 55 50.6	-0.7
WRA	Warramunga Arr	80.95	222	P	P	13 55 55.8	-0.8
	comp=Z,0.8nm,0.8s,baz=32,slow=6.0,SNR=5.6						
WRA	Warramunga Arr	80.95	222	eP	P	13 55 56.9	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	84.45	221	P	P	13 56 14.7	0.0
	comp=Z,0.6nm,0.7s,baz=24,slow=5.5,SNR=8.5						
BRTR	Keskin Array B	84.58	334	P	P	13 56 15.5	0.0
	comp=Z,0.9nm,0.7s,baz=61,slow=2.6,SNR=2.8						
H03N2	Juan Fernandez	122.36	104	T	T	16 16 52.3	
	baz=317,slow=78,SNR=12						
H03N1	Juan Fernandez	122.37	104	T	T	16 16 53.6	
	baz=317,slow=78,SNR=13						
H03N3	Juan Fernandez	122.37	104	T	T	16 16 53.8	
	baz=317,slow=78,SNR=14						
BOSA	Boshof	150.12	309	PKPbc	PKPbc	14 03 32.4	-0.3
	comp=Z,2.4nm,0.5s,baz=22,slow=3.8,SNR=7.1						

IDC 07 13:59:10.2±8.1, **6°.10S**×**146°.78E**, **h66**^{km}±73^{km}, **mb2.5**/1, **mb1 3.1**/3, **mb1mx2.9**/34, **mbtmp3.1**/3, **ML2.9**/1, **Error ellipse: s-maj=66.3km s-min=54.1km az=115.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.31	173	P	Pn	14 00 01.3	+1.8
	1.7nm,0.3s,baz=291,slow=13,SNR=6.8						
PMG				S	Sn	14 00 37.7	+0.1
	1.4nm,0.3s,baz=188,slow=19,SNR=3.1						
WRA	Warramunga Arr	18.31	220	P	P	14 03 17.9	-1.2
	0.0nm,0.3s,baz=36,slow=10,SNR=2.9						
ASAR	Alice Springs	21.41	214	P	P	14 03 53.1	+0.4
	0.4nm,1.0s,baz=55,slow=8.8,SNR=8.5						
TORD	Torodi Ar. Bea	144.90	284	PKP	PKPbc	14 18 40.4	+0.3
	0.7nm,0.8s,baz=61,slow=3.7,SNR=3.3						

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*IDC **07** 14:02:04.6±1.5, 5°.75S×146°.86E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.5/32, mbtmp3.5/5, ML2.7/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/23, Error ellipse: s-maj=57.6km s-min=25.5km az=118.0*

*NEIC **07** 14:02:09.0±1.8, 5°.87S±0°.09×146°.85E±0°.07, h35^{km}±2^{km}, mb4.5/10, Error ellipse: s-maj=17.5km s-min=8.5km az=30.0*

ISC 07 14:02:13.3±1.0, **6°.05S**±0°.10×**146°.8E**±0°.1, **h78**^{km}, **n17**, σ**0^{s}.79**/18, **mb4.4**/6, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.35	174	Pn	Pn	14 03 03.6	+0.2
	5.2nm,0.3s,baz=348,slow=6.7,SNR=10						
PMG				Sn	Sn	14 03 42.1	-0.1
	3.6nm,0.3s,baz=256,slow=12,SNR=2.5						
PMG				LR	LR	14 04 40.7	
	comp=Z,102nm,21.5s,baz=266,slow=43						
COEN	Coen	8.65	204	Pn	Pn	14 04 15.0	-0.7
WR0	Warramunga Arr	18.28	220	P	Pn	14 06 22.0	+0.3
WR0				IAmb	IAmb	14 06 37.4	
	comp=Z,12nm,1.3s						
WRAB	Tennant Creek	18.38	220	P	P	14 06 22.3	+0.3
WRAB				IAmb	IAmb	14 06 38.7	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	18.39	220	P	P	14 06 22.3	+0.1
WRA	Warramunga Arr	18.39	220	P	P	14 06 22.3	+0.1
	comp=Z,0.1nm,0.3s,baz=38,slow=11,SNR=3.6						
AS31	Alice Springs	21.49	214	P	P	14 06 55.5	-0.3
ASAR	Alice Springs	21.49	214	P	P	14 06 57.4	+1.6
	comp=Z,0.2nm,0.5s,baz=55,slow=9.1,SNR=9.8						
SANVU	Saraoutou	22.07	117	P	P	14 07 02.4	+0.4
SANVU				IAmb	IAmb	14 07 14.2	
	comp=Z,23nm,0.7s						
FITZ	Fitzroy Crossi	23.90	238	P	P	14 07 21.9	+1.9
	comp=Z,4.0nm,0.8s,baz=61,slow=12,SNR=4.7						
FITZ	Fitzroy Crossi	23.90	238	P	P	14 07 21.1	+1.0
FITZ				IAmb	IAmb	14 07 43.0	
	comp=Z,16nm,1.4s						
LHI	Lord Howe Isla	27.81	157	P	P	14 07 55.1	-0.1
MYLDM	Lahad Datu	30.41	291	P	P	14 08 17.8	-0.6
MYLDM				IAmb	IAmb	14 08 43.5	
	comp=Z,37nm,1.3s						
NWAO	Narrogin (SRO)	38.38	222	P	P	14 09 26.5	-0.6
LBZ	Lake Benmore	43.32	156	P	P	14 10 06.9	-0.6
LBZ				IAmb	IAmb	14 10 35.2	
	comp=Z,21nm,1.0s						
ILAR	Eielson Array	85.59	23	P	P	14 14 42.7	0.0
	comp=Z,0.6nm,1.1s,baz=240,slow=8.2,SNR=2.8						
TORD	Torodi Ar. Bea	144.94	284	PKP	PKiKP	14 21 46.3	0.0
	comp=Z,0.4nm,0.4s,baz=72,slow=3.0,SNR=4.9						

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*SOF **07** 14:12:27.8, 42°.46N×21°.70E, h5^{km}, MD2.7*

*SKO **07** 14:12:29.6, 42°.34N×21°.79E, h14^{km}*

*BEO **07** 14:12:29.8±0.4, 42°.43N×21°.72E, h0^{km}, ML2.3/11*

ISC 07 14:12:29.2±1.1, **42°.43N**±0°.02×**21°.79E**±0°.02, **h3**^{km}±10^{km}, **n34**, σ**0^{s}.84**/59, **13C-10D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GJIK	Gjilan	0.27	276	⇑iPg	Pg	14 12 34.1	-0.2
GJIK				i Sg	Sg	14 12 37.8	0.0
BOSS	Bosilegrad	0.51	83	ePg	Pb	14 12 40.1	-0.8
BOSS				eSg	Sg	14 12 46.3	+0.6
SKO	Skopje	0.53	210	⇓iPg	Pg	14 12 38.8	-0.5
SKO				i Sg	Sg	14 12 45.0	-1.2
SKO				eLg	Lg	14 12 47.5	
	comp=N,14nm,0.4s						
STIP	Stip	0.80	158	⇓iPg	Pg	14 12 44.2	-0.3
STIP				i Sg	Sg	14 12 55.1	+0.3
STIP				eLg	Lg	14 12 56.0	
	comp=E,23nm,0.2s						
ZAPS	Zavoj	1.04	36	ePg	Pb	14 12 50.0	+0.1
ZAPS				eSg	Sb	14 13 04.6	+0.6
VTS	Vitosha	1.08	80	⇓P	Pb	14 12 50.9	+0.2
VTS				⇓S	Sb	14 13 05.8	+0.6
VTS	Vitosha	1.08	80	P	Pb	14 12 50.8	+0.2
VTS	Vitosha	1.08	80	⇑iPg	Pb	14 12 50.8	+0.2
VTS				i Sg	Sb	14 13 05.7	+0.4
KKB	Krupnik	1.11	120	P	Pn	14 12 51.8	+0.1
BOVS	Bovan	1.20	357	ePg	Pg	14 12 52.2	-0.1
BOVS				eSg	Sg	14 13 07.0	-0.9
ZAGS	Zajecar	1.42	13	ePg	Pn	14 12 55.8	0.0
ZAGS				eSg	Sg	14 13 14.5	-0.2
KNT	Kendrikon	1.52	147	i Pn	Pb	14 12 57.6	-0.3
OHR	Ohrid	1.52	210	⇓iPg	Pn	14 12 56.5	-0.7
OHR				i Sg	Sg	14 13 16.9	-1.0
OHR				eLg	Lg	14 13 20.1	
	comp=E,48nm,0.8s						
GRG	Griva	1.54	163	i Pn	Pn	14 12 57.5	-0.1
GRUS	Gruza	1.65	332	ePn	Pn	14 12 59.1	0.0
GRUS				eSn	Sb	14 13 22.1	+0.6
IVAS	Ivanjica	1.66	314	ePn	Pn	14 12 58.2	-1.0
IVAS				eSn	Sn	14 13 21.6	+0.5
MMB	Musomiste	1.67	120	P	Pg	14 13 01.9	+0.7
TIR	Tirane	1.80	234	⇓P	Pg	14 13 04.7	+0.9
TIR				⇓S	Sg	14 13 30.1	+3.0
PDG	Podgorica	1.88	271	⇑P	Pb	14 13 03.9	-0.2
PDG				⇑S	Sb	14 13 28.5	+0.5
SVIS	Svilajnac	1.88	347	eSn	Sn	14 13 27.8	+1.4
SRS	Serrai	1.88	134	i Pn	Pb	14 13 04.4	+0.2
KUBS	Kucevo	1.98	358	ePn	Pn	14 13 04.4	+0.8
KUBS				eSg	Sg	14 13 32.8	0.0
SOH	Sokhos	1.99	143	i Pn	Pg	14 13 06.9	-0.4
PUNG	Punghina	2.02	24	⇑P	Pn	14 13 04.5	+0.4
PUNG				⇓S	Sn	14 13 29.8	-0.2
TRUS	Trudelj	2.06	331	ePn	Pn	14 13 04.5	-0.1
TRUS				eSg	Sb	14 13 34.1	+1.0
DIVS	Divibare	2.12	322	ePn	Pn	14 13 06.8	+1.2
DIVS				eSn	Sn	14 13 33.3	+0.8
BBLS	Lazići	2.26	310	ePn	Pn	14 13 07.4	-0.1
BBLS				eSg	Sg	14 13 41.7	-0.1
MDVR	Moldovita	2.35	359	⇑P	Pn	14 13 08.6	-0.1
MDVR				⇑S	Sn	14 13 37.3	-0.7
HERR	Herculane	2.49	10	⇑P	Pn	14 13 10.9	+0.3
HERR				⇓S	Sn	14 13 39.3	-2.1
TREB	Trebinje	2.56	278	ePn	Pn	14 13 10.9	-0.6
TEKS	Tekeris	2.68	323	ePn	Pn	14 13 13.9	+0.7
TEKS				eSg	Sg	14 13 53.9	-1.4
GZR	Gura Zlata	3.04	13	⇑P	Pn	14 13 18.2	-0.1
GZR				⇑S	Sn	14 13 54.3	-0.9
BZS	Buzias	3.19	358	⇑P	Pn	14 13 19.7	-0.5
BZS				⇑S	Sn	14 13 56.6	-2.0
LOT	Lotru	3.33	25	⇑P	Pn	14 13 22.8	+0.4
LOT				⇓S	Sn	14 14 01.9	-0.5

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*NEIC **07** 14:26:20.6±1.9, 6°.02S±0°.08×146°.73E±0°.09, h40^{km}±7^{km}, mb4.6/14, Error ellipse: s-maj=12.7km s-min=10.8km az=123.0*

*IDC **07** 14:26:22.4±3.8, 6°.09S×146°.74E, h53^{km}±35^{km}, mb3.5/7, mb1 3.8/11, mb1mx3.7/29, mbtmp3.9/11, ML3.7/3, MS2.8/5, Ms1 2.8/5, ms1mx2.6/29, Error ellipse: s-maj=30.2km s-min=22.7km az=71.0*

ISC 07 14:26:21.8±0.5, **6°.06S**±0°.07×**146°.73E**±0°.09, **h52**^{km}, **n37**, σ**0^{s}.76**/36, **mb4.0**/12, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.36	173	P	Pn	14 27 12.2	+0.4
	4.2nm,0.3s,baz=14,slow=8.6,SNR=15						
PMG				S	Sn	14 27 51.1	+0.7
	16nm,0.3s,baz=176,slow=19,SNR=1.7						
PMG				LR	LR	14 28 56.8	
	comp=Z,376nm,19.4s,baz=18,slow=46						
PMG	Port Moresby	3.36	173		Pn	14 27 12.0	+0.1
KRVT	Keravat (AS076	5.55	72	LR	LR	14 30 04.7	
	comp=Z,25nm,20.9s,baz=200,slow=40						
RABL	Rabaul	5.72	71	Pn	Pn	14 27 43.1	-1.2
JAY	Jayapura	6.96	300	LR	LR	14 31 07.7	
	comp=Z,149nm,19.9s,baz=181,slow=41						
COEN	Coen	8.60	204	Pn	Pn	14 28 23.4	-0.4
CTA	Charters Tower	13.96	182	P	Pn	14 29 37.2	+0.3
	0.1nm,0.3s,baz=350,slow=17,SNR=2.0						
CTAO	Charters Tower	13.96	182	Pn	Pn	14 29 37.3	+0.3
SIJI	Sorong	16.27	288	P	P	14 30 09.1	-0.2
	0.6nm,0.3s,baz=107,slow=11,SNR=7.3						
SIJI				LR	LR	14 36 53.2	
	comp=Z,43nm,18.6s,baz=80,slow=39						
MTN	Manton Dam	16.79	245	P	P	14 30 14.6	-0.4
MTN				IAmb	IAmb	14 30 23.9	
	comp=Z,84nm,1.4s						
WB0	Warramunga Arr	18.16	220	P	P	14 30 29.4	-0.7
WB0				IAmb	IAmb	14 30 57.5	
	comp=Z,15nm,1.3s						
WR0	Warramunga Arr	18.20	219	P	P	14 30 29.8	-0.8
WB2	Warramunga Arr	18.31	220	P	P	14 30 30.6	-1.2
WB2				IAmb	IAmb	14 30 38.1	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	18.32	220	P	P	14 30 31.1	-0.8
	comp=Z,0.3nm,0.3s,baz=45,slow=11,SNR=15						
GUMO	Guam	19.60	355	LR	LR	14 37 37.3	
	comp=Z,21nm,19.2s,baz=84,slow=34						
AS31	Alice Springs	21.42	214	P	P	14 31 05.1	-0.6
ASAR	Alice Springs	21.42	214	P	P	14 31 05.6	-0.1
	comp=Z,0.9nm,0.4s,baz=54,slow=8.7,SNR=25						
FITZ	Fitzroy Crossi	23.81	238	P	P	14 31 29.7	-0.5
	comp=Z,4.6nm,0.6s,baz=64,slow=12,SNR=11						
STKA	Stephens Creek	26.13	190	P	P	14 31 50.9	-0.3
	comp=Z,1.0nm,0.4s,baz=11,slow=7.0,SNR=5.2						
PSA00	Pilbara Seismi	30.24	237	P	P	14 32 28.1	+0.1
PSA00				IAmb	IAmb	14 32 42.4	
	comp=Z,51nm,1.4s						
YOJ	Yonaguni jima	38.13	324	P	P	14 33 36.4	+0.2
NWAO	Narrogin (SRO)	38.31	222	P	P	14 33 36.7	-0.9
NWAO				IAmb	IAmb	14 33 44.6	
	comp=Z,33nm,1.2s						
KNTN	Kanton	41.55	87	P	P	14 34 05.5	+0.8
ODZ	Otahua Downs	44.08	156	P	P	14 34 24.5	-0.3
ODZ				IAmb	IAmb	14 34 39.2	
	comp=Z,20nm,1.2s						
CMAR	Chiang Mai Arr	53.04	298	P	P	14 35 34.2	+0.1
	comp=Z,0.6nm,0.6s,baz=131,slow=5.9,SNR=5.6						
CHTO	Chiang Mai	53.18	299	P	P	14 35 33.8	-1.3
CHTO				IAmb	IAmb	14 35 47.4	
	comp=Z,3.8nm,1.4s						
HIA	Hailar	59.91	340	P	P	14 36 21.6	-0.9
HIA				IAmb	IAmb	14 36 43.4	
	comp=Z,12nm,1.5s						
KHU	Kahuku	62.07	65	P	P	14 36 38.0	+0.1
SONM	Songino Array	64.32	331	P	P	14 36 54.2	+2.0
	comp=Z,0.3nm,0.4s,baz=137,slow=8.3,SNR=2.8						
MKAR	Makanchi Array	77.37	321	P	P	14 38 11.9	+0.6
	comp=Z,0.4nm,0.8s,baz=95,slow=6.6,SNR=2.5						
ILAR	Eielson Array	85.64	23	P	P	14 38 53.6	-0.9
	comp=Z,0.6nm,0.7s,baz=239,slow=4.6,SNR=10						
TORD	Torodi Ar. Bea	144.84	284	PKP	PKPdf	14 45 54.9	+0.7
	comp=Z,3.0nm,0.7s,baz=68,slow=3.4,SNR=13						
KIC	Kosan Boka	151.64	272	ePKIKP	PKiKP	14 46 12.6	+0.6
	comp=Z,4.6nm,0.7s						
DBIC	Dimbokro	151.76	273	PKP	PKPdf	14 46 06.4	+0.9
	comp=Z,1.3nm,0.6s,baz=63,slow=2.3,SNR=2.7						
DBIC				PKPbc	PKiKP	14 46 13.4	+1.2
	comp=Z,2.5nm,0.7s,baz=41,slow=4.7,SNR=3.9						
DBIC	Dimbokro	151.76	273		PKPdf	14 46 05.0	-0.4
TIC	Toumodi	151.92	273	ePKIKP	PKiKP	14 46 12.9	+0.3
LIC	Lamto	151.92	272	ePKIKP	PKPbc	14 46 12.6	+0.4
	comp=Z,9.5nm,0.6s						

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*NEIC **07** 14:42:24.3±1.2, 6°.04S±0°.09×146°.7E±0°.1, h46^{km}±4^{km}, mb4.2/15, Error ellipse: s-maj=16.9km s-min=13.5km az=86.0*

*IDC **07** 14:42:25.1±3.3, 6°.08S×146°.69E, h51^{km}±32^{km}, mb3.6/11, mb1 3.8/15, mb1mx3.6/45, mbtmp3.9/15, ML3.5/3, Error ellipse: s-maj=21.6km s-min=19.3km az=58.0*

ISC 07 14:42:24.9±0.5, **6°.05S**±0°.06×**146°.68E**±0°.10, **h52**^{km}, **n36**, σ**0^{s}.85**/38, **mb3.9**/12, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.37	172	P	Pn	14 43 14.7	-0.3
	4.8nm,0.3s,baz=322,slow=7.2,SNR=18						
PMG				S	Sn	14 43 53.4	-0.4
	11nm,0.3s,baz=107,slow=22,SNR=9.3						
PMG	Port Moresby	3.37	172		Pn	14 43 14.5	-0.5
COEN	Coen	8.58	203	Pn	Pn	14 44 25.1	-1.4
CTA	Charters Tower	13.96	182	P	Pn	14 45 41.6	+1.6
	0.1nm,0.3s,baz=29,slow=13,SNR=2.1						
SIJI	Sorong	16.22	288	P	Pn	14 46 10.6	+1.1
	0.6nm,0.3s,baz=122,slow=10,SNR=4.8						
MTN	Manton Dam	16.74	245	Pn	Pn	14 46 15.8	-0.2
MTN				IAmb	IAmb	14 46 19.8	
	comp=Z,39nm,1.1s						
PATS	Pohnpei	17.29	42	P	P	14 46 23.6	+0.1
WB0	Warramunga Arr	18.12	220		Pn	14 46 33.0	0.0
WR0	Warramunga Arr	18.17	219		Pn	14 46 33.5	-0.1
WR0				IAmb	IAmb	14 46 40.9	
	comp=Z,16nm,1.2s						
WRAB	Tennant Creek	18.27	220		P	14 46 34.2	-0.2
WRAB				IAmb	IAmb	14 46 43.2	
	comp=Z,7.7nm,0.7s						
WB2	Warramunga Arr	18.28	220		P	14 46 34.6	0.0
WB2				IAmb	IAmb	14 46 54.1	
	comp=Z,15nm,1.2s						
WRA	Warramunga Arr	18.29	220	P	P	14 46 33.3	-1.3
	comp=Z,0.1nm,0.3s,baz=44,slow=12,SNR=6.2						
EIDS	Eidsvold	19.66	168	P	P	14 46 48.6	-1.0
EIDS				IAmb	IAmb	14 47 13.0	
	comp=Z,11nm,1.0s						
AS31	Alice Springs	21.39	214	P	P	14 47 09.1	+0.7
ASAR	Alice Springs	21.39	214	P	P	14 47 08.2	-0.2
	comp=Z,0.6nm,0.7s,baz=53,slow=8.3,SNR=8.6						
FITZ	Fitzroy Crossi	23.76	238	P	P	14 47 32.9	0.0
	comp=Z,15nm,0.8s,baz=77,slow=5.4,SNR=10						
LUWI	Luwuk	24.36	281	P	P	14 47 38.3	-0.1
LUWI				IAmb	IAmb	14 47 41.1	
	comp=Z,26nm,0.7s						
STKA	Stephens Creek	26.13	190	P	P	14 47 54.5	+0.3
	comp=Z,1.3nm,0.7s,baz=314,slow=3.1,SNR=2.9						
PSA00	Pilbara Seismi	30.20	237	P	P	14 48 29.9	-0.7
MSVF	Nonsavu	32.76	114	P	P	14 48 55.0	+1.7
	comp=Z,2.9nm,0.8s,baz=285,slow=4.1,SNR=5.0						
JNU	Nakatsue	41.75	340	P	P	14 50 07.7	-1.5
MXZ	Matakaoa Point	42.57	142	P	P	14 50 16.2	+0.5
JEW	Eniwo	48.89	355	P	P	14 51 04.4	-1.2
CMAR	Chiang Mai Arr	52.99	298	P	P	14 51 38.6	+1.8
	comp=Z,2.8nm,0.9s,baz=119,slow=5.8,SNR=18						
PETK	Petropavlovsk-	59.67	8	P	P	14 52 24.7	+0.9
	comp=Z,3.5nm,0.9s,baz=214,slow=12,SNR=2.9						
SONM	Songino Array	64.30	331	P	P	14 52 55.9	+0.8
	comp=Z,0.6nm,1.0s,baz=139,slow=5.3,SNR=4.5						
MKAR	Makanchi Array	77.33	321	P	P	14 54 14.0	-0.2
	comp=Z,0.6nm,0.7s,baz=104,slow=5.1,SNR=6.7						
ZALV	Zalesovo Beam	78.89	328	P	P	14 54 21.5	-1.1
	comp=Z,0.3nm,0.3s,baz=127,slow=9.3,SNR=1.5						
KURBB	Kurchatov Arra	81.08	323	P	P	14 54 33.7	-0.8
	comp=Z,0.4nm,0.9s,baz=117,slow=4.4,SNR=3.4						
ILAR	Eielson Array	85.66	23	P	P	14 54 56.8	-1.0
	comp=Z,0.9nm,0.6s,baz=254,slow=4.9,SNR=16						
TORD	Torodi Ar. Bea	144.79	284	PKP	PKPdf	15 01 56.9	-0.2
	comp=Z,7.2nm,0.9s,baz=69,slow=3.5,SNR=25						
KOWA	Kowa	150.00	289	PKPbc	PKPbc	15 02 11.3	+0.5
	comp=Z,3.5nm,0.7s,baz=39,slow=5.0,SNR=12						
KIC	Kosan Boka	151.59	272	ePKIKP	PKPbc	15 02 14.7	+0.1
	comp=Z,11nm,0.9s						
DBIC	Dimbokro	151.70	273	PKPbc	PKPbc	15 02 14.4	-0.4
	comp=Z,3.5nm,0.8s,baz=68,slow=2.3,SNR=5.5						
DBIC				PKPab	pPKPdf	15 02 25.0	+0.1
	comp=Z,2.3nm,0.7s,baz=63,slow=2.3,SNR=3.4						
TIC	Toumodi	151.87	273	ePKIKP	PKPbc	15 02 14.8	-0.4
LIC	Lamto	151.87	272	ePKIKP	PKPbc	15 02 14.6	-0.6
	comp=Z,14nm,0.9s						

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*IDC **07** 14:43:01.5±1.5, 71°.23N×3°.49W, h0^{km}, mb3.4/5, mb1 3.7/9, mb1mx3.4/62, mbtmp3.6/9, ML2.9/3, MS3.4/14, Ms1 3.4/14, ms1mx3.2/43, Error ellipse: s-maj=36.0km s-min=18.1km az=38.0*

*BER **07** 14:43:03.7±2.4, 71°.47N×4°.16W, h10^{km}, ML1.8, ML2.4(DNK), Confirmed Earthquake*

*DNK **07** 14:43:11.2±3.5, 72°.27N×4°.55W, h0^{km}±86^{km}, ML2.4*

ISC 07 14:43:00.8±1.0, **71°.5N**±0°.1×**4°.28W**±0°.08, **h10**^{km}, **n38**, σ**2^{s}.06**/29, **mb3.4**/5, **MS3.3**/11, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBG	Daneborg	5.50	309	e	Pn	14 44 23.7	+1.2
	baz=106,slow=14						
DBG				i P	Pn	14 44 24.5	+1.9
DBG				i		14 44 30.0	
DBG				i S	Sn	14 45 21.2	-4.6
DBG				IAML		14 45 38.0	
	comp=Z,1.6nm,0.4s						
DBG	Daneborg	5.50	309	e	Pn	14 44 23.7	+1.2
	baz=106,slow=14						
DBG				i P	Pn	14 44 24.7	+2.1
DBG				i		14 44 30.0	
DBG				i S	Sn	14 45 21.2	-4.6
DBG				IAML		14 45 38.0	
	comp=Z,1.6nm,0.4s						
DAG	Danmarks Havn	6.62	330	e	Pn	14 44 38.4	+0.5
	baz=131,slow=16						
DAG				i P	Pn	14 44 39.3	+1.4
DAG				i S	Sn	14 45 44.9	-8.4
DAG				IAML		14 45 56.1	
	comp=Z,2.8nm,0.4s						
DAG	Danmarks Havn	6.62	330	e	Pn	14 44 38.4	+0.5
	baz=131,slow=16						
DAG				i P	Pn	14 44 39.3	+1.4
DAG				i S	Sn	14 45 44.9	-8.4
DAG				IAML		14 45 56.1	
	comp=Z,2.8nm,0.4s						
LOF	Lofoten	7.00	110	eP	Pn	14 44 43.6	+0.5
STEI	Steigen	7.63	108	eP	Pn	14 44 50.4	-1.4
HSPB	Hornsund (broa	7.71	35	eP	Pn	14 44 52.5	-0.3
KONS	Konsvik	7.96	120	eP	Pn	14 44 55.0	-1.3
FAUS	Fauske	7.99	111	eP	Pn	14 44 55.1	-1.5
KBS	Kingsbay	8.53	21	eP	Pn	14 45 05.5	+1.4
KBS				i S	Sn	14 46 27.0	-13
KBS	Kingsbay	8.53	21	i P	Pn	14 45 04.1	0.0
KBS				i S	Sn	14 46 27.0	-13
SPA0	Spitsbergen Ar	8.59	29	eP	Pn	14 45 05.8	+0.9
SPITS	Spitsbergen Ar	8.59	29	Pn	Pn	14 45 05.8	+0.9
	baz=213,slow=15,SNR=85						
KIF	Kilpisjarvi	8.81	94	eP	Pn	14 45 05.7	-2.3
KTK1	Kautokeino	9.59	91	eP	Pn	14 45 16.8	-1.8
ARA0	ARCESS Array S	10.08	87	eP	Pn	14 45 23.3	-2.0
ARCES	ARCESS Array B	10.08	87	Pn	Pn	14 45 22.8	-2.5
	baz=295,slow=12,SNR=30						
SUMG	Summit	10.53	292	i P	Pn	14 45 38.9	+7.1
SUMG	Summit	10.53	292	i P	Pn	14 45 38.9	+7.1
SUMG	Summit	10.53	292	i P	Pn	14 45 38.9	+7.1
NOA	NORSAR Array B	12.11	142	LR	LR	14 50 30.2	
	comp=Z,190nm,19.4s,baz=335,slow=38						
HFS	Hagfors	13.45	138	Pn	Pn	14 46 09.7	-1.6
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=4.0						
HFS				LR	LR	14 51 10.8	
	comp=Z,273nm,18.0s,baz=339,slow=37						
FINES	FINESS Array B	15.51	115	Pn	Pn	14 46 37.6	-1.7
	comp=Z,0.1nm,0.3s,baz=321,slow=11,SNR=3.2						
FINES				LR	LR	14 51 55.4	
	comp=Z,161nm,19.5s,baz=262,slow=35						
GERES	GERESS Array B	24.17	150	LR	LR	14 57 14.4	
	comp=Z,74nm,20.3s,baz=334,slow=36						
VRAC	Vranov	24.21	145	LR	LR	14 56 30.4	
	comp=Z,78nm,21.1s,baz=332,slow=34						
FRB	Frobisher Bay	24.45	285	LR	LR	14 56 16.4	
	comp=Z,125nm,21.4s,baz=344,slow=32						
DAVOX	Davos/Dischmat	25.64	157	LR	LR	14 57 17.5	
	comp=Z,47nm,19.7s,baz=3.5,slow=34						
AKASG	Malin Array Be	25.73	126	P	P	14 48 29.3	-1.6
	comp=Z,0.8nm,0.5s,baz=334,slow=10.0,SNR=5.0						
BELG	Belogornoye	29.58	102	LR	LR	15 00 08.5	
	comp=Z,81nm,20.3s,baz=167,slow=35						
MLR	Muntele Rosu	29.78	135	LR	LR	15 00 58.4	
	comp=Z,149nm,19.5s,baz=325,slow=37						
ESDC	Sonseca Array	31.85	180	LR	LR	15 01 28.7	
	comp=Z,30nm,19.1s,baz=255,slow=35						
BRTR	Keskin Array B	37.08	128	LR	LR	15 05 43.2	
	comp=Z,23nm,18.1s,baz=311,slow=37						
YKA	Yellowknife Ar	38.05	315	P	P	14 50 22.4	+3.7
	comp=Z,0.7nm,1.0s,baz=26,slow=9.3,SNR=6.0						
YKA				LR	LR	15 05 31.5	
	comp=Z,107nm,18.7s,baz=0.0,slow=35						
MDT	Midelt	38.69	180	LR	LR	15 04 56.2	
	comp=Z,96nm,18.0s,baz=248,slow=34						
GNI	Garni	39.70	115	LR	LR	15 05 10.1	
	comp=Z,55nm,18.2s,baz=305,slow=34						
KURBB	Kurchatov Arra	40.90	75	P	P	14 50 43.6	+1.1
	comp=Z,0.4nm,0.7s,baz=333,slow=7.3,SNR=4.7						
ILAR	Eielson Array	41.67	337	P	P	14 50 54.5	+5.7
	comp=Z,0.5nm,0.9s,baz=6.1,slow=6.9,SNR=5.7						
MKAR	Makanchi Array	45.45	74	P	P	14 51 20.9	+1.5
	comp=Z,0.4nm,0.8s,baz=349,slow=6.6,SNR=3.7						

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*MOS **07** 14:45:32.5±0.9, 6°.05S×146°.60E, h30^{km}, mb5.2/41, Error ellipse: s-maj=9.9km s-min=6.0km az=108.2*

*BJI **07** 14:45:33.1±0.0, 6°.16S×147°.04E, h54^{km}, mB5.2/32, mb4.9/58, Ms5.0/24, Ms7 4.7/26*

*NEIC **07** 14:45:36.4±2.0, 6°.12S±0°.06×146°.69E±0°.07, h53^{km}±5^{km}, mb5.1/107, Error ellipse: s-maj=9.4km s-min=8.5km az=94.0*

*IDC **07** 14:45:38.3±1.3, 6°.13S×146°.71E, h64^{km}±11^{km}, mb4.4/24, mb1 4.6/31, mb1mx4.4/49, mbtmp4.7/31, MS4.2/22, Ms1 4.2/22, ms1mx4.1/38, Error ellipse: s-maj=13.3km s-min=7.9km az=93.0*

*NOU **07** 14:45:38.9, 6°.03S×146°.54E, h66^{km}, mb5.0, Eastern New Guinea Reg., P.N.G.*

*GCMT **07** 14:45:38.4±0.2, 6°.03S±0°.01×146°.67E±0°.02, h38^{km}, MW5.0/73, Moment Tensor Solution. s69,c93; s73,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.05±.16; $M_{\theta\theta}$-4.32±.10; $M_{\phi\phi}$0.26±.11; $M_{r\theta}$-1.39±.10; $M_{\theta\phi}$-0.18±.09; $M_{\phi r}$-0.28±.12; Best double couple: $M_0$4.42300×10^{16} NP1:ϕ_s91.00000°, δ36.00000°, λ95.00000°. NP2: ϕ_s265.00000°, δ54.00000°, λ86.00000°. Principal axes: T 4.2910, Plg80.0000°, Azm158.0000°; N 0.2630, Plg3.0000°, Azm267.0000°; P -4.5550, Plg9.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **07** 14:45:43.3±0.4, 6°S±4°×14°7E±°, h93^{km}±39^{km}, M5.1/6, mb5.0/5, mB5.3/4, MLv5.2/6, Mw(mB)4.7/4, MwMwp5.0/2, Mwp5.3/2*

ISC 07 14:45:36.6±0.3, **6°.12S**±0°.04×**146°.62E**±0°.05, **h52**^{km}, **n381**, σ**1^{s}.38**/376, **mb5.0**/133, **MS4.4**/27, **8C-9D**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.31	171	P	Pn	14 46 26.3	+0.4
	41nm,0.3s,baz=307,slow=9.9,SNR=21						
PMG				S	Sn	14 47 05.6	+1.5
	80nm,0.3s,baz=276,slow=14,SNR=9.1						
PMG				LR	LR	14 48 09.0	
	comp=Z,15µm,18.5s,baz=336,slow=46						
PMG	Port Moresby	3.31	171	deP	Pn	14 46 25.8	-0.2
PMG				pmax	pmax		
	comp=Z,368nm,0.6s						
PMG	Port Moresby	3.31	171	Pn	Pn	14 46 26.0	0.0
PMG	Port Moresby	3.31	171	P	Pn	14 46 29.2	+3.2
MANU	Manus Island	4.12	10		Pn	14 46 35.8	-1.3
KRVT	Keravat (AS076	5.68	72	P	Pn	14 46 58.0	-0.4
	comp=Z,21nm,0.3s,baz=193,slow=6.3,SNR=5.5						
KRVT				LR	LR	14 49 01.7	
	comp=Z,2µm,20.4s,baz=235,slow=36						
RABL	Rabaul	5.84	71		Pn	14 47 00.7	-0.1
RABL	Rabaul	5.84	71	P	Pn	14 47 02.9	+2.1
JAY	Jayapura	6.90	301	P	Pn	14 47 19.1	+3.8
	comp=Z,2.5nm,0.3s,baz=153,slow=8.7,SNR=8.8						
JAY				S	Sn	14 48 50.1	+18
	baz=338,slow=19,SNR=2.3						
JAY				LR	LR	14 50 25.7	
	comp=Z,4µm,20.6s,baz=132,slow=41						
JAY	Jayapura	6.90	301	P	Pn	14 47 23.6	+8.3
	comp=Z,0.3nmcomp=Z,859nmcomp=Z,45nm,1.1s						
GENI	Genyem	7.33	298	P	Pn	14 47 31.6	+11
	comp=Z,2.0nmcomp=Z,3µmcomp=Z,5µmcomp=Z,287nm,1.0s						
COEN	Coen	8.49	203	Pn	Pn	14 47 37.8	+0.6
MTSU	Mount Surprise	12.15	190	P	Pn	14 48 29.7	+2.5
	baz=12,SNR=8.9						
HNR	Honiara	13.61	105	P	Pn	14 48 48.6	+1.6
	comp=Z,6.0nm,0.3s,baz=140,slow=11,SNR=6.4						
HNR				LR	LR	14 52 20.1	
	comp=Z,247nm,19.5s,baz=332,slow=30						
HNR	Honiara	13.61	105	P	Pn	14 48 44.1	-3.0
HNR	Honiara	13.61	105		Pn	14 48 44.1	-3.0
HNR	Honiara	13.61	105	P	Pn	14 48 50.5	+3.5
CTA	Charters Tower	13.89	181	P	Pn	14 48 53.5	+2.6
	comp=Z,1.3nm,0.3s,baz=360,slow=14,SNR=9.9						
CTAO	Charters Tower	13.89	181	P	Pn	14 48 52.1	+1.2
CTAO	Charters Tower	13.89	181	Pn	Pn	14 48 52.1	+1.2
FAKI	Fak Fak	14.68	282	Pn	Pn	14 49 03.5	+2.1
KDU	Kakadu	15.40	244	P	Pn	14 49 11.7	+1.0
	baz=15,SNR=38						
QIS	Mount Isa	15.88	205	P	P	14 49 18.5	-1.3
	baz=16,SNR=8.4						
SIJI	Sorong	16.18	288	P	P	14 49 22.3	-0.8
	comp=Z,1.7nm,0.3s,baz=79,slow=9.7,SNR=17						
MTN	Manton Dam	16.67	245	P	P	14 49 27.9	-0.6
	baz=17,SNR=11						
MTN	Manton Dam	16.67	245		Pn	14 49 27.4	+0.5
MTN				IAmb	IAmb	14 49 30.3	
	comp=Z,140nm,1.4s						
WB0	Warramunga Arr	18.04	220		Pn	14 49 43.7	0.0
WR0	Warramunga Arr	18.09	219	P	P	14 49 44.2	+0.1
WRAB	Tennant Creek	18.19	220	⇓eP	P	14 49 44.9	-0.4
WRAB				pmax	pmax		
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	18.19	220		P	14 49 45.3	0.0
WRA	Warramunga Arr	18.20	220	P	Pn	14 49 45.9	+0.2
	comp=Z,1.4nm,0.3s,baz=44,slow=12,SNR=44						
WRA				S	Sn	14 53 01.8	-6.4
	comp=Z,0.3nm,0.3s,baz=30,slow=22,SNR=3.4						
WRA				LR	LR	14 57 42.7	
	comp=Z,1µm,18.6s,baz=40,slow=40						
WRA	Warramunga Arr	18.20	220	i P	Pn	14 49 45.9	+0.2
WRA				pmax	pmax		
	comp=Z,21nm,1.0s						
EIDS	Eidsvold	19.61	168	P	Pn	14 50 02.0	-0.5
	baz=20,SNR=6.3						
EIDS	Eidsvold	19.61	168	P	P	14 50 01.6	+0.8
GUMO	Guam	19.66	355	LR	LR	14 57 19.0	
	comp=Z,592nm,18.0s,baz=186,slow=36						
RMQ	Roma	20.36	174	P	P	14 50 10.1	+1.2
	baz=20,SNR=19						
QLP	Quilpie	20.48	186	P	P	14 50 11.2	+1.0
	baz=20,SNR=7.4						
AS31	Alice Springs	21.31	214	P	P	14 50 20.1	+0.8
ASAR	Alice Springs	21.31	214	P	P	14 50 19.4	+0.2
	comp=Z,2.9nm,0.5s,baz=52,slow=8.8,SNR=38						
ASAR				S	S	14 54 16.5	+3.2
	comp=Z,7.6nm,0.8s,baz=38,slow=16,SNR=5.4						
ASAR				LR	LR	14 59 40.9	
	comp=Z,1µm,19.2s,baz=38,slow=40						
SANVU	Saraoutou	22.22	116	P	P	14 50 28.8	-0.2
SANVU				IAmb	IAmb	14 50 30.4	
	comp=Z,100nm,1.2s						
SANVU	Saraoutou	22.22	116	P	P	14 50 33.0	+4.0
SOEI	Soe	22.43	259	P	P	14 50 30.9	-0.6
SOEI				IAmb	IAmb	14 50 55.1	
	comp=Z,111nm,1.1s						
FITZ	Fitzroy Crossi	23.68	238	P	P	14 50 44.1	+0.3
	baz=24,SNR=38						
FITZ	Fitzroy Crossi	23.68	238	P	P	14 50 43.7	-0.1
	comp=Z,82nm,0.7s,baz=70,slow=7.9,SNR=71						
FITZ				LR	LR	15 01 35.6	
	comp=Z,916nm,18.5s,baz=61,slow=40						
FITZ	Fitzroy Crossi	23.68	238	P	P	14 50 43.5	-0.3
LUWI	Luwuk	24.32	281	P	P	14 50 49.1	-0.6
ARMA	Armidale	24.63	170	P	P	14 50 52.5	0.0
	baz=25,SNR=6.1						
ARMA	Armidale	24.63	170	P	P	14 50 52.4	0.0
DAV	Davao City (W)	24.75	302	LR	LR	15 00 24.5	
	comp=Z,350nm,21.1s,baz=131,slow=36						
DZM	Mont Dzumac	24.87	132	P	P	14 50 54.6	-0.1
	comp=Z,27nm,1.0s,baz=356,slow=14,SNR=8.1						
DZM	Mont Dzumac	24.87	132	eP	P	14 50 55.2	+0.5
	comp=Z,86nm,1.2s						
DZM				eS	S	14 55 13.1	-1.3
	comp=Z,510nm,27.1s						
DZM				eLR	LR	14 57 07.9	
	comp=Z,2µm,28.6s						
DZM	Mont Dzumac	24.87	132	P	P	14 50 54.7	0.0
DZM				IAmb	IAmb	14 50 57.4	
	comp=Z,93nm,1.5s						
DZM	Mont Dzumac	24.87	132	P	P	14 50 56.1	+1.4
WRKA	Warakurna	25.73	221	P	P	14 51 01.8	-0.7
	baz=26,SNR=30						
STKA	Stephens Creek	26.05	190	P	P	14 51 05.2	0.0
	baz=26,SNR=10						
STKA	Stephens Creek	26.05	190	P	P	14 51 05.2	0.0
	comp=Z,10.0nm,0.7s,baz=356,slow=8.2,SNR=15						
STKA				LR	LR	15 02 08.8	
	comp=Z,2µm,19.2s,baz=9.7,slow=38						
STKA	Stephens Creek	26.05	190	⇓eP	P	14 51 05.3	0.0
STKA	Stephens Creek	26.05	190	P	P	14 51 04.8	-0.5
TOLI2	Tolitoli	26.78	285	P	P	14 51 11.1	-0.9
TOLI2				IAmb	IAmb	14 51 17.8	
	comp=Z,52nm,0.9s						
HTT	Hallett	28.10	194	P	P	14 51 24.3	+0.7
	baz=28,SNR=20						
BBOO	Buckleboo	28.32	199	P	P	14 51 25.2	-0.3
FORT	Forrest	30.09	213	P	P	14 51 41.0	-0.3
FORT				IAmb	IAmb	14 52 10.3	
	comp=Z,51nm,1.2s						
PSA00	Pilbara Seismi	30.11	237	P	P	14 51 41.9	+0.3
PSA00				IAmb	IAmb	14 51 43.8	
	comp=Z,28nm,0.8s						
TOO	Toolangi	31.32	182	P	P	14 51 51.4	-0.7
TOO				pmax	pmax		
	comp=Z,27nm,1.4s						
TOO	Toolangi	31.32	182	P	P	14 51 51.4	-0.7
H11S3	WAKE ISLAND Hy	31.46	39	T	T	15 24 42.0	
	baz=220,slow=75,SNR=35						
H11S2	WAKE ISLAND Hy	31.47	39	T	T	15 24 42.5	
	baz=220,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	31.48	39	T	T	15 24 43.4	
	baz=220,slow=75,SNR=17						
H11N1	WAKE ISLAND Hy	32.51	37	T	T	15 26 00.0	
	baz=219,slow=75,SNR=79						
H11N3	WAKE ISLAND Hy	32.53	37	T	T	15 26 01.1	
	baz=219,slow=75,SNR=74						
H11N2	WAKE ISLAND Hy	32.53	37	T	T	15 26 01.3	
	baz=219,slow=75,SNR=101						
KKM	Kota Kinabalu	32.67	291	P	P	14 52 02.8	-1.5
KKM				IAmb	IAmb	14 52 20.6	
	comp=Z,54nm,1.4s						
MSVF	Nonsavu	32.78	113	LR	LR	15 04 35.7	
	comp=Z,424nm,19.8s,baz=290,slow=35						
MSVF	Nonsavu	32.78	113	⇓iP	P	14 52 07.4	+2.2
MSVF				pmax	pmax		
	comp=Z,110nm,3.8s						
MSVF	Nonsavu	32.78	113	P	P	14 52 03.6	-1.6
MSVF				IAmb	IAmb	14 52 07.7	
	comp=Z,25nm,1.1s						
JCJ	Chichijima	33.30	353	LR	LR	15 03 28.2	
	comp=Z,266nm,21.9s,baz=140,slow=32						
MEEK	Meekatharra	33.59	229	P	P	14 52 13.0	+0.8
	baz=34,SNR=30						
KMBL	Kambalda	34.17	220	P	P	14 52 17.7	+0.7
	baz=34,SNR=9.0						
SBUM	Sibu	35.39	283	P	P	14 52 27.9	+0.1
SBUM				IAmb	IAmb	14 52 30.8	
	comp=Z,29nm,0.9s						
SBUM	Sibu	35.39	283	P	P	14 52 30.0	+2.2
KLBR	Kellerberrin	37.03	223	P	P	14 52 42.4	+0.8
	baz=37,SNR=6.4						
KSM	Kuching	37.03	281	P	P	14 52 40.5	-1.4
KSM				IAmb	IAmb	14 52 49.4	
	comp=Z,28nm,1.2s						
KSM	Kuching	37.03	281	P	P	14 52 43.0	+1.1
BLDU	Ballidu	37.18	225	P	P	14 52 43.2	+0.3
	baz=37,SNR=7.0						
OUZ	Omahuta	38.15	143	P	P	14 52 51.1	+0.1
OUZ				IAmb	IAmb	14 53 12.1	
	comp=Z,35nm,1.4s						
NWAO	Narrogin (SRO)	38.19	222	LR	LR	15 09 44.6	
	comp=Z,846nm,18.2s,baz=72,slow=38						
NWAO	Narrogin (SRO)	38.19	222	P	P	14 52 51.0	-0.4
NWAO				pmax	pmax		
	comp=Z,35nm,1.5s						
NWAO	Narrogin (SRO)	38.19	222	P	P	14 52 51.0	-0.4
NWAO				IAmb	IAmb	14 53 07.7	
	comp=Z,35nm,1.5s						
YULB	Yu-li	38.37	321	P	P	14 52 53.1	+0.1
YULB				IAmb	IAmb	14 53 21.8	
	comp=Z,55nm,1.5s						
CISI	Cisompet, Garu	38.55	266	P	P	14 52 53.8	-0.9
TPUB	Ta-pu	38.73	320	P	P	14 52 55.3	-0.7
LEM	Lembang	38.76	267	LR	LR	15 13 09.6	
	comp=Z,171nm,18.6s,baz=91,slow=42						
SSLB	Suanglung	38.87	321	P	P	14 52 55.6	-1.6
SSLB				IAmb	IAmb	14 53 03.5	
	comp=Z,51nm,1.3s						
XMIS	Christmas Isla	40.75	261	P	P	14 53 13.0	0.0
JNU	Nakatsue	41.79	340	P	P	14 53 21.3	0.0
	comp=Z,14nm,0.8s,baz=201,slow=6.0,SNR=6.2						
JNU	Nakatsue	41.79	340	IAmb	IAmb	14 53 32.0	
	comp=Z,63nm,1.2s						
URZ	Urewera	42.28	144	LR	LR	15 10 31.7	
	comp=Z,691nm,18.7s,baz=26,slow=35						
URZ	Urewera	42.28	144	P	P	14 53 24.7	-0.5
URZ				IAmb	IAmb	14 53 37.8	
	comp=Z,31nm,1.2s						
BKZ	Black Stump Fm	42.53	145	P	P	14 53 27.5	+0.2
BKZ				IAmb	IAmb	14 53 38.5	
	comp=Z,48nm,1.4s						
KWHZ	Kaweka Forest	42.66	145	P	P	14 53 30.4	+2.0
TUWZ	Tuamarina	42.77	149	P	P	14 53 29.5	+0.5
KRHZ	Kereru	42.79	146	P	P	14 53 30.8	+1.5
MCHZ	McNeill Hill	42.83	145	P	P	14 53 31.1	+1.4
JHS	Saijyo	42.84	344	P	P	14 53 29.5	-0.2
JHS				IAmb	IAmb	14 53 41.6	
	comp=Z,63nm,1.3s						
TSZ	Takapari Road	42.85	146	P	P	14 53 31.2	+1.4
PNHZ	Pukenui	42.88	146	P	P	14 53 31.7	+1.7
BSWZ	Blackbirch Sta	42.94	150	P	P	14 53 30.3	-0.2
MRZ	Mangatainoka R	43.06	147	P	P	14 53 34.5	+3.0
MJAR	Matsushiro Arr	43.16	350	P	P	14 53 33.7	+1.4
	comp=Z,4.0nm,0.8s,baz=180,slow=8.3,SNR=6.2						
MAJO	Matsushiro	43.16	350	P	P	14 53 31.7	-0.7
MAJO				pmax	pmax		
	comp=Z,31nm,1.5s						
MAJO	Matsushiro	43.16	350	P	P	14 53 31.6	-0.7
RPZ	Rata Peaks	43.16	154	P	P	14 53 32.6	+0.4
HOWZ	Holdsworth Sta	43.20	148	P	P	14 53 34.1	+1.5
LBZ	Lake Benmore	43.34	155	P	P	14 53 34.1	+0.4
LBZ				IAmb	IAmb	14 53 59.0	
	comp=Z,42nm,1.3s						
MTW	Mount Morrison	43.37	148	P	P	14 53 35.4	+1.4
MYKOM	Kota Tinggi	43.42	279	P	P	14 53 35.2	+0.5
MYKOM				IAmb	IAmb	14 53 37.0	
	comp=Z,25nm,0.8s						
MYKOM	Kota Tinggi	43.42	279	P	P	14 53 37.0	+2.2
BFZ	Birch Farm	43.44	147	P	P	14 53 34.6	+0.1
WHZ	Wether Hill Ro	43.72	158	P	P	14 53 35.2	-1.5
WHZ				IAmb	IAmb	14 53 38.5	
	comp=Z,65nm,1.5s						
NJ2	Nanjing	46.27	327	eP	P	14 53 58.4	+1.3
NJ2				pP	pP	14 54 10.7	-0.9
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,920nm,12.3s						
NJ2				LR	LR		
	comp=Z,560nm,14.7s						
NJ2				LR	LR		
	comp=Z,800nm,15.2s						
IPM	Ipoh	46.73	282	P	P	14 54 00.5	-0.5
IPM				IAmb	IAmb	14 54 03.6	
	comp=Z,35nm,1.0s						
IPM					PcP	14 55 35.3	+1.3
IPM	Ipoh	46.73	282	P	P	14 54 03.0	+1.9
KSRS	Korea Array	46.73	339	P	P	14 54 00.9	+0.4
	comp=Z,10nm,0.9s,baz=157,slow=9.3,SNR=19						
KSRS				LR	LR	15 11 27.1	
	comp=Z,332nm,18.7s,baz=176,slow=33						
KSRS	Korea Array	46.73	339	P	P	14 54 01.0	+0.4
KS19	Wonju Array Si	46.79	339	P	P	14 54 00.5	-0.6
KS19				IAmb	IAmb	14 54 07.7	
	comp=Z,46nm,1.4s						
JTM	Tenmabayashi	46.95	354	P	P	14 54 01.1	-1.2
KULM	Kulim	47.27	283	P	P	14 54 05.9	+0.6
KULM				IAmb	IAmb	14 54 13.5	
	comp=Z,34nm,1.2s						
KULM	Kulim	47.27	283	P	P	14 54 07.0	+1.7
RPSI	Rantau Prapat	48.43	279	P	P	14 54 15.7	+1.4
PSI	Prapat	48.45	279	P	P	14 54 15.7	+1.1
	comp=Z,5.6nm,0.2s,baz=180,slow=4.0,SNR=7.4						
SRAK	Srakaew	48.55	295	P	P	14 54 12.8	-2.3
	comp=Z,2µmcomp=Z,178nm,0.9s						
TRTT	Trang	48.82	286	P	P	14 54 19.1	+1.9
	comp=Z,29nm,1.5s						
PATY	Pattaya	49.24	293	P	P	14 54 22.4	+2.0
	comp=Z,3µmcomp=Z,37nm,1.0s						
CHAI	Chaiyaphum	49.31	297	P	P	14 54 22.0	+1.1
	comp=Z,520nmcomp=Z,38nm,0.7s						
GSI	Gunungsitoli	49.52	277	P	P	14 54 22.2	-0.4
SLVN	Son La	50.00	304	P	P	14 54 26.1	0.0
SLVN				IAmb	IAmb	14 54 29.1	
	comp=Z,26nm,1.2s						
PKDT	Phuket	50.13	286	P	P	14 54 29.3	+2.1
	comp=Z,54nm,1.1s						
GYA	Guiyang	50.48	312	⇓P	P	14 54 31.6	+1.8
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
GYA				LR	LR		
	comp=Z,380nm,13.1s						
PHIT	Phitsanulok	51.19	298	P	P	14 54 37.7	+2.5
	comp=Z,150nm,1.0s						
UTTA	Uttaradit	51.29	298	P	P	14 54 37.8	+1.9
	comp=Z,520nmcomp=Z,59nm,0.9s						
UTHA	Uthaitani	51.45	295	P	P	14 54 38.9	+1.9
	comp=Z,645nmcomp=Z,78nm,0.9s						
NANT	Nan	51.58	300	P	P	14 54 40.5	+2.4
	comp=Z,12µmcomp=Z,686nm,1.1s						
USRK	Ussuriysk Ar.	51.80	347	P	P	14 54 40.8	+1.5
	comp=Z,4.6nm,0.6s,baz=166,slow=7.7,SNR=18						
USRK				LR	LR	15 15 23.6	
	comp=Z,127nm,18.9s,baz=157,slow=34						
USA0B	Ussuriysk Arra	51.80	347	P	P	14 54 38.6	-0.6
USA0B				pmax	pmax		
	comp=Z,50nm,1.5s						
USA0B	Ussuriysk Arra	51.80	347	P	P	14 54 38.6	-0.6
SUKH	Sukhothai	51.99	298	P	P	14 54 43.5	+2.4
	comp=Z,50nm,1.0s						
LAMP	Lampang	52.40	299	P	P	14 54 46.0	+1.8
	comp=Z,47nm,1.0s						
PAYA	Payao	52.53	300	P	P	14 54 47.0	+1.8
	comp=Z,4µmcomp=Z,598nm,1.0s						
MDJ	Mudanjiang	52.78	345	P	P	14 54 47.7	+1.2
MDJ				pP	pP	14 55 00.4	-0.8
MDJ				sP	sP	14 55 04.9	-2.5
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,570nm,4.5s						
MDJ	Mudanjiang	52.78	345	P	P	14 54 45.6	-0.8
MDJ				IAmb	IAmb	14 54 50.5	
	comp=Z,18nm,1.3s						
CM36	Chiang Mai Arr	52.87	299	P	P	14 54 49.0	+1.4
CM35	Chiang Mai Arr	52.88	299	P	P	14 54 49.0	+1.3
CM04	Chiang Mai Arr	52.92	298	P	P	14 54 50.0	+2.0
	comp=Z,324nmcomp=Z,40nm,1.0s						
CM09	Chiang Mai Arr	52.93	298	P	P	14 54 50.0	+1.9
	comp=Z,297nmcomp=Z,42nm,1.0s						
CM01	Chiang Mai Arr	52.95	298	P	P	14 54 50.5	+2.3
	comp=Z,486nmcomp=Z,28nm,0.6s						
CM34	Chiang Mai Arr	52.95	299	P	P	14 54 50.0	+1.8
CM05	Chiang Mai Arr	52.95	298	P	P	14 54 50.3	+2.0
	comp=Z,890nmcomp=Z,34nm,0.6s						
CM02	Chiang Mai Arr	52.96	298	P	P	14 54 50.6	+2.3
	comp=Z,334nmcomp=Z,38nm,1.0s						
CM02	Chiang Mai Arr	52.96	298	P	P	14 54 54.3	+6.0
CM31	Chiang Mai Arr	52.98	298	P	P	14 54 50.0	+1.6
	comp=Z,14µmcomp=Z,941nm,1.0s						
CM31	Chiang Mai Arr	52.98	298	P	P	14 54 50.3	+1.8
CMAR	Chiang Mai Arr	52.98	298	P	P	14 54 50.5	+2.0
	comp=Z,26nm,0.9s,baz=120,slow=5.8,SNR=118						
CMAR				PKP2bc		15 25 31.5	
	comp=Z,0.2nm,0.3s,baz=245,slow=1.9,SNR=5.0						
CM15	Chiang Mai Arr	52.99	298	P	P	14 54 50.0	+1.5
	comp=Z,483nmcomp=Z,40nm,1.0s						
CM13	Chiang Mai Arr	52.99	298	P	P	14 54 50.6	+2.0
	comp=Z,373nmcomp=Z,34nm,1.0s						
CM13	Chiang Mai Arr	52.99	298	P	P	14 54 53.9	+5.4
CMMT	Chiang Mai	53.11	299	P	P	14 54 51.0	+1.6
	comp=Z,557nmcomp=Z,12nm,0.7s						
CM33	Chiang Mai Arr	53.11	299	P	P	14 54 50.0	+0.6
CHTO	Chiang Mai	53.11	299	P	P	14 54 50.6	+1.2
CHTO				pmax	pmax		
	comp=Z,32nm,1.1s						
CHTO	Chiang Mai	53.11	299	P	P	14 54 50.6	+1.2
CM32	Chiang Mai Arr	53.13	299	P	P	14 54 51.0	+1.4
CN2	Changchun	53.25	341	eP	P	14 54 50.9	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN	Xi'an	53.54	321	P	P	14 54 52.5	+0.2
XAN				pP	pP	14 55 07.2	-0.2
XAN				S	S	15 02 17.9	-3.9
XAN				SS	SS	15 05 58.2	-4.8
XAN				pmax	pmax		
	comp=Z,34nm,1.2s						
XAN				pmax	pmax		
	comp=Z,210nm,4.7s						
XAN				LR	LR		
	comp=Z,320nm,16.5s						
XAN				LR	LR		
	comp=Z,470nm,13.5s						
XAN				LR	LR		
	comp=Z,700nm,15.2s						
XAN	Xi'an	53.54	321	P	P	14 54 51.1	-1.2
XAN				pmax	pmax		
	comp=Z,37nm,1.2s						
XAN	Xi'an	53.54	321	P	P	14 54 51.1	-1.2
BJT	Baijiatuau	53.81	331	P	P	14 54 53.1	-1.0
BJT				pmax	pmax		
	comp=Z,27nm,1.2s						
BJT	Baijiatuau	53.81	331	P	P	14 54 53.1	-1.0
BJT				IAmb	IAmb	14 54 55.5	
	comp=Z,27nm,1.2s						
BJI	Beijing	53.82	331	P	P	14 54 54.7	+0.5
BJI				pmax	pmax		
	comp=Z,18nm,1.2s						
BJI				LR	LR		
	comp=Z,340nm,19.6s						
BJI				LR	LR		
	comp=Z,310nm,21.0s						
BJI				LR	LR		
	comp=Z,230nm,21.6s						
CD2	Chengdu	55.09	315	eP	P	14 55 03.5	-0.2
CD2				S	S	15 02 43.5	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,500nm,15.2s						
CD2				LR	LR		
	comp=Z,570nm,10.3s						
CD2				LR	LR		
	comp=Z,780nm,12.3s						
KLR	Kul'dur	56.63	348	P	P	14 55 15.8	+1.5
	comp=Z,1.4nm,0.4s,baz=163,slow=6.3,SNR=6.3						
HHC	Hu-ho-hao-te	56.74	329	eP	P	14 55 16.2	+0.8
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,5.8s						
HHC				LR	LR		
	comp=Z,610nm,15.3s						
HHC				LR	LR		
	comp=Z,250nm,14.5s						
HHC				LR	LR		
	comp=Z,640nm,15.3s						
LZH	Lanzhou	58.06	320	eP	P	14 55 26.1	+1.3
LZH				pP	pP	14 55 41.5	+1.4
LZH				sP	sP	14 55 47.4	+1.0
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				LR	LR		
	comp=Z,340nm,13.0s						
LZH				LR	LR		
	comp=Z,400nm,12.2s						
LZH				LR	LR		
	comp=Z,310nm,14.1s						
PETK	Petropavlovsk-	59.75	8	P	P	14 55 36.8	+0.8
	comp=Z,3.9nm,0.7s,baz=163,slow=6.4,SNR=9.6						
HIA	Hailar	59.94	340	P	P	14 55 37.5	+0.1
HIA				pmax	pmax		
	comp=Z,35nm,1.1s						
HIA	Hailar	59.94	340	P	P	14 55 37.5	+0.1
ZEA	Zeya	61.83	347	eP	P	14 55 51.4	+1.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA	Gaotai	62.59	320	P	P	14 55 56.6	+0.9
GTA				pP	pP	14 56 08.9	-2.2
GTA				sP	sP	14 56 14.9	-2.5
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PPT	Papeete	63.22	107	LR	LR	15 21 29.4	
	comp=Z,45nm,18.1s,baz=278,slow=34						
PPT2	Papeete2	63.22	107	eS	S	15 04 25.0	-3.6
	comp=Z,63nm,25.8s						
PPT2	Papeete2	63.22	107	eLR	LR	15 14 57.9	
	comp=Z,290nm,23.5s						
TBI	Tubuai	63.67	113	eLR	LR	15 15 10.7	
	comp=Z,409nm,35.2s						
LSA	Lhasa	64.01	307	P	P	14 56 07.2	+1.5
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	64.01	307	P	P	14 56 05.1	-0.6
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LSA	Lhasa	64.01	307	P	P	14 56 05.1	-0.6
ULN	Ulaanbaatar	64.03	332	ceP	P	14 56 06.1	+1.0
ULN				pmax	pmax		
	comp=Z,25nm,1.7s						
ULN	Ulaanbaatar	64.03	332	P	P	14 56 05.7	+0.5
ULN				IAmb	IAmb	14 56 07.1	
	comp=Z,15nm,0.9s						
SONM	Songino Array	64.33	331	P	P	14 56 07.5	+0.5
	comp=Z,8.2nm,1.0s,baz=150,slow=7.5,SNR=6.4						
SONM				PKP2ab		15 25 05.9	
	comp=Z,1.4nm,1.0s,baz=337,slow=4.2,SNR=6.3						
SONM				LR	LR	15 25 43.4	
	comp=Z,159nm,18.4s,baz=122,slow=37						
CASY	Casey	65.04	195	P	P	14 56 11.4	+0.2
CASY				IAmb	IAmb	14 56 40.3	
	comp=Z,27nm,1.5s						
MA2	Magadan	65.57	2	⇑eP	P	14 56 16.3	+1.6
MA2				pmax	pmax		
	comp=Z,35nm,1.9s						
MA2	Magadan	65.57	2	P	P	14 56 15.7	+1.0
MA2				IAmb	IAmb	14 56 43.2	
	comp=Z,30nm,1.4s						
TAPN	Taplejung	65.90	303	eP	P	14 56 18.6	+0.7
	comp=Z,27nm,1.0s						
ODAN	Odare	65.99	303	eP	P	14 56 19.3	+0.9
RAMN	Ramite	66.69	303	eP	P	14 56 23.3	+0.5
	comp=Z,9.5nm,0.4s						
ZAK	Zakamensk	67.56	332	eP	P	14 56 28.0	+0.3
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s						

GUN	Gumba	67.62	303	eP	P	14 56 29.7	+0.8
	comp=Z,18nm,0.7s						
PKI	Pulchoki	67.89	303	eP	P	14 56 31.0	+0.4
PKIN	Phulchoki	67.91	303	eP	P	14 56 30.9	+0.3
KKN	Kakani	68.08	303	eP	P	14 56 32.2	+0.6
	comp=Z,15nm,0.8s						
DMN	Daman	68.16	303	eP	P	14 56 32.9	+0.7
	comp=Z,36nm,1.0s						
TLY	Talaya	68.28	333	c eP	P	14 56 32.7	+0.6
TLY				pmax	pmax		
	comp=Z,16nm,1.4s						
TLY	Talaya	68.28	333	P	P	14 56 31.8	-0.4
TLY				IAmb	IAmb	14 56 33.8	
	comp=Z,22nm,1.5s						
GKN	Gorkha	68.68	303	eP	P	14 56 35.9	+0.6
	comp=Z,31nm,0.8s						
SEY	Seymchan	69.00	3	P	P	14 56 36.8	+0.5
	comp=Z,13nm,1.1s,baz=188,slow=5.0,SNR=12						
YAK	Yakutsk	69.20	352	P	P	14 56 37.8	+0.2
	comp=Z,7.0nm,0.7s,baz=274,slow=0.5,SNR=11						
YAK	Yakutsk	69.20	352	eP	P	14 56 37.7	+0.2
YAK				e		14 57 03.9	
YAK				e		14 59 09.6	
YAK				ePPP	PPP	15 00 49.6	
YAK				eS	S	15 05 37.9	-1.5
YAK				e*SS	sS	15 06 08.8	+5.0
YAK				e		15 06 32.0	
YAK				eSS	SS	15 10 15.6	+8.7
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,140nm,3.7s						
YAK				pmax	pmax		
	comp=N,148nm,3.5s						
YAK				pmax	pmax		
	comp=E,91nm,3.8s						
YAK				smax	smax		
	comp=N,46nm,2.7s						
YAK				smax	smax		
	comp=E,48nm,2.8s						
YAK	Yakutsk	69.20	352	P	P	14 56 37.3	-0.3
YAK				IAmb	IAmb	14 56 39.0	
	comp=Z,29nm,1.1s						
KOLN	Koldanda	69.47	303	eP	P	14 56 41.0	+0.7
	comp=Z,32nm,0.8s						
MOY	Mondy	69.50	332	eP	P	14 56 40.6	+0.8
MOY				pmax	pmax		
	comp=Z,30nm,2.5s						
DANN	Dangsing	69.53	303	eP	P	14 56 40.9	+0.2
	comp=Z,23nm,0.8s						
HYB	Hyderabad	71.15	291	i P	P	14 56 50.0	-0.5
UNV	Unalaska Valle	71.49	27	P	P	14 56 51.9	+0.2
VNDA	Vanda	71.81	177	P	P	14 56 53.9	+0.6
	comp=Z,2.7nm,0.7s,baz=345,slow=7.9,SNR=11						
VNDA	Vanda	71.81	177	P	P	14 56 54.0	+0.6
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VNDA	Vanda	71.81	177	P	P	14 56 54.0	+0.6
WMQ	Urumqi	72.64	319	eP	P	14 56 59.4	+0.4
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,350nm,5.5s						
WMQ	Urumqi	72.64	319	P	P	14 56 59.3	+0.4
WMQ				pmax	pmax		
	comp=Z,16nm,1.0s						
WMQ	Urumqi	72.64	319	P	P	14 56 59.3	+0.4
WMQ				IAmb	IAmb	14 57 01.1	
	comp=Z,16nm,1.0s						
DGZ	Jazzator, Alta	75.51	325	⇑ iP	P	14 57 15.6	-0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
POO	Poona	75.76	291	eP	P	14 57 18.0	+0.4
ZSN	Zaisan	76.02	322	eP	P	14 57 18.2	-0.3
	baz=322						
ZSN	Zaisan	76.02	322	eP	P	14 57 18.1	-0.3
MK31	Makanchi Array	77.35	321	c iP	P	14 57 26.0	0.0
MK31	Makanchi Array	77.35	321	P	P	14 57 25.4	-0.6
MKAR	Makanchi Array	77.35	321	P	P	14 57 26.1	+0.1
	comp=Z,6.1nm,0.7s,baz=93,slow=7.7,SNR=47						
MKAR				LR	LR	15 34 46.9	
	comp=Z,57nm,18.0s,baz=91,slow=38						
MAKZ	Makanchi	77.55	321	P	P	14 57 26.8	-0.4
MAKZ				pmax	pmax		
	comp=Z,16nm,1.2s						
MAKZ	Makanchi	77.55	321	P	P	14 57 26.8	-0.4
MAKZ				IAmb	IAmb	14 57 28.2	
	comp=Z,16nm,1.1s						
SHLS	Shalkode	77.86	316	eP	P	14 57 27.4	-1.7
	comp=Z,5.7nm,1.2s,baz=316						
SHLS	Shalkode	77.86	316	eP	P	14 57 27.3	-1.7
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TIXI	Tiksi	78.49	354	⇑ iP	P	14 57 30.4	-1.3
TIXI				pmax	pmax		
	comp=Z,35nm,1.0s						
TIXI	Tiksi	78.49	354	P	P	14 57 30.5	-1.3
KPKS	Kokpek	78.50	316	eP	P	14 57 32.1	-0.5
	baz=316						
KPKS	Kokpek	78.50	316	eP	P	14 57 32.1	-0.5
SATY	Saty	78.56	316	eP	P	14 57 32.7	-0.3
	baz=316						
SATY	Saty	78.56	316	eP	P	14 57 32.6	-0.3
ZAA0	Zalesovo Array	78.91	328	P	P	14 57 33.0	-1.4
ZALV	Zalesovo Beam	78.91	328	P	P	14 57 33.6	-0.8
	comp=Z,5.5nm,0.5s,baz=108,slow=5.6,SNR=21						
ANM	Nome	78.94	19	P	P	14 57 34.7	+0.3
ANM				pmax	pmax		
	comp=Z,17nm,1.4s						
ANM	Nome	78.94	19	P	P	14 57 34.7	+0.3
KSH	Kashi	79.18	312	P	P	14 57 38.4	+2.0
KSH				pmax	pmax		
	comp=Z,24nm,1.2s						
KSH				pmax	pmax		
	comp=Z,290nm,4.2s						
TDK	Taldyqorghan	79.21	318	eP	P	14 57 36.2	-0.2
	comp=Z,4.0nm,0.6s,baz=318						
TDK	Taldyqorghan	79.21	318	eP	P	14 57 36.1	-0.2
TDK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MDOK	Medeo	79.53	316	eP	P	14 57 38.3	0.0
	baz=316						
MDOK	Medeo	79.53	316	eP	P	14 57 38.2	0.0
TNSS	Tian-Shan	79.56	316	eP	P	14 57 39.0	+0.2
	baz=316						
TNSS	Tian-Shan	79.56	316	eP	P	14 57 38.9	+0.2
OHAK	Old Harbor	79.58	29	P	P	14 57 38.1	+0.1
AAA	Alma-Ata	79.64	316	eP	P	14 57 38.7	0.0
	baz=316						
AAA	Alma-Ata	79.64	316	eP	P	14 57 38.6	-0.1
NIL	Nilore	79.69	306	P	P	14 57 39.2	0.0
NIL				pmax	pmax		
	comp=Z,29nm,1.0s						
NIL	Nilore	79.69	306	P	P	14 57 39.2	0.0
NIL				IAmb	IAmb	14 57 40.7	
	comp=Z,29nm,0.9s						
SEM	Semipalatinsk	80.00	323	eP	P	14 57 39.1	-1.7
	baz=324						
SEM	Semipalatinsk	80.00	323	eP	P	14 57 39.0	-1.7
KUU	Kurty	80.25	316	eP	P	14 57 41.5	-0.5
	comp=Z,15nm,1.4s,baz=316						
KUU	Kurty	80.25	316	eP	P	14 57 41.4	-0.5
KUU				pmax	pmax		
	comp=Z,15nm,1.4s						
TKM2	Tokmak 2	80.47	315	P	P	14 57 55.8	+12
	SNR=6.7						
UCH	Uchtor	81.03	314	P	P	14 57 47.6	+0.9
	SNR=10						
KURK	Kurchatov	81.08	323	P	P	14 57 45.6	-0.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	Kurchatov	81.08	323	P	P	14 57 45.6	-0.6
KURBB	Kurchatov Arra	81.10	323	P	P	14 57 46.1	-0.2
	comp=Z,3.4nm,0.8s,baz=114,slow=4.2,SNR=22						
AAK	Ala-Archa	81.16	315	P	P	14 57 47.8	+0.7
	comp=Z,3.0nm,0.7s,baz=132,slow=6.2,SNR=16						
AAK	Ala-Archa	81.16	315	P	P	14 57 47.4	+0.4
	SNR=5.6						
AAK	Ala-Archa	81.16	315	⇑ eP	P	14 57 47.3	+0.2
AAK				pmax	pmax		
	comp=Z,26nm,1.3s						
AAK	Ala-Archa	81.16	315	P	P	14 57 45.9	-1.1
SGDS	Sogindy	81.30	316	eP	P	14 57 47.1	-0.6
	baz=316						
SGDS	Sogindy	81.30	316	eP	P	14 57 47.1	-0.6
USP	Ospenovka	81.33	315	P	P	14 57 48.1	+0.3
	SNR=13						
AML	Almayashu	81.58	314	P	P	14 57 50.5	+0.9
	SNR=21						
EKS2	Erkin-Say	81.67	315	P	P	14 57 50.4	+0.7
	SNR=12						
RDOG	Red Dog Mine	81.97	17	P	P	14 57 50.0	-0.5
RDOG				IAmb	IAmb	14 57 52.7	
	comp=Z,32nm,1.3s						
MAW	Mawson	81.99	203	LR	LR	15 33 14.4	
	comp=Z,170nm,20.3s,baz=58,slow=35						
BTLS	Baital	82.16	317	eP	P	14 57 51.7	-0.4
	baz=317						
BTLS	Baital	82.16	317	eP	P	14 57 51.7	-0.4
RC01	Rabbit Creek A	82.99	26	P	P	14 57 56.2	+0.2
	baz=244						
KBL	Kabul	83.29	306	P	P	14 57 57.3	-1.2
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBL	Kabul	83.29	306	P	P	14 57 57.3	-1.2
CUT	Chulitna	83.36	25	P	P	14 57 58.0	+0.2
	baz=243						
DZA	Taraz	83.47	314	eP	P	14 57 58.8	-0.1
	baz=314						
DZA	Taraz	83.47	314	eP	P	14 57 58.8	-0.1
KTH	Kantishna Hill	83.62	24	P	P	14 57 58.4	-0.9
KTH				IAmb	IAmb	14 58 00.5	
	comp=Z,26nm,1.3s						
TRF	Thorofare Moun	83.82	24	P	P	14 57 59.7	-0.8
TRF				IAmb	IAmb	14 58 12.0	
	comp=Z,18nm,1.5s						
QSPA	South Pole Qui	83.85	180	P	P	14 58 00.5	-0.1
QSPA				IAmb	IAmb	14 58 01.4	
	comp=Z,11nm,0.9s						
SML	Sawmill	83.91	26	P	P	14 58 00.1	-0.8
SML				IAmb	IAmb	14 58 01.4	
	comp=Z,24nm,0.9s						
KK31	Karatay Array	84.10	314	P	P	14 58 02.2	0.0
KK31				pmax	pmax		
	comp=Z,16nm,1.5s						
KK31	Karatay Array	84.10	314	P	P	14 58 02.2	0.0
KKAR	Karatay Array	84.10	314	P	P	14 58 02.0	-0.2
KKAR				pmax	pmax		
	comp=Z,16nm,1.5s						
KKAR	Karatay Array	84.10	314	P	P	14 58 02.0	-0.2
IUG	Iuzhnay	84.22	313	eP	P	14 58 02.7	-0.3
	baz=313						
IUG	Iuzhnay	84.22	313	eP	P	14 58 02.6	-0.3
MLY	Manley	84.37	22	P	P	14 58 03.7	+0.7
	baz=242						
RND	Reindeer	84.38	24	P	P	14 58 02.5	-0.7
RND				pmax	pmax		
	comp=Z,13nm,0.8s						
RND	Reindeer	84.38	24	P	P	14 58 02.5	-0.7
RND				IAmb	IAmb	14 58 04.4	
	comp=Z,13nm,0.8s						
BRZS	Berezniki	84.45	321	eP	P	14 58 03.2	-0.6
	comp=Z,9.7nm,1.1s,baz=322						
BRZS	Berezniki	84.45	321	eP	P	14 58 03.1	-0.6
BRZS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BWN	Browne	84.47	23	P	P	14 58 03.5	0.0
MCK	McKinley	84.49	24	P	P	14 58 03.4	-0.3
	baz=244						
BRLS	Borolday	84.57	314	eP	P	14 58 03.2	-1.4
	comp=Z,10.0nm,0.8s,baz=314						
BRLS	Borolday	84.57	314	eP	P	14 58 03.1	-1.4
BRLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLU	Klutina	84.84	26	P	P	14 58 05.5	-0.1
DHY	Denali Highway	84.85	25	P	P	14 58 05.2	-0.5
DHY				IAmb	IAmb	14 58 06.3	
	comp=Z,11nm,1.0s						
I23K	Minto, Yukon-K	84.94	22	P	P	14 58 05.7	-0.1
	baz=244						
M24K	Tolsona, Glenn	84.97	26	P	P	14 58 07.0	+0.9
	baz=247						
M24K	Tolsona, Glenn	84.97	26	P	P	14 58 06.6	+0.5
WRH	Wood River Hil	85.14	23	P	P	14 58 05.8	-1.1
WRH				IAmb	IAmb	14 58 08.0	
	comp=Z,25nm,1.2s						
NRIK	Noril'sk	85.27	342	P	P	14 58 07.5	+0.1
	comp=Z,11nm,0.7s,baz=116,slow=4.7,SNR=21						
NRIK	Noril'sk	85.27	342	d eP	P	14 58 07.2	-0.2
NRIK				pmax	pmax		
	comp=Z,13nm,0.8s						
NRIK	Noril'sk	85.27	342	P	P	14 58 06.3	-1.2
NRIK				IAmb	IAmb	14 58 08.2	
	comp=Z,12nm,0.7s						
MDM	Murphy Dome	85.30	23	P	P	14 58 06.4	-1.3
CCB	Clear Creek Bu	85.33	23	P	P	14 58 06.5	-1.3
TCOL	CIGO, UAF Yank	85.40	23	P	P	14 58 07.6	-0.6
	baz=245						
TCOL	CIGO, UAF Yank	85.40	23	P	P	14 58 06.5	-1.6
TCOL				IAmb	IAmb	14 58 08.3	
	comp=Z,13nm,0.8s						
COLA	College	85.41	23	⇑ eP	P	14 58 07.1	-1.1
COLA				pmax	pmax		
	comp=Z,27nm,1.4s						
COLA	College	85.41	23	P	P	14 58 06.5	-1.6
COLA				IAmb	IAmb	14 58 08.3	
	comp=Z,13nm,0.8s						
N25K	Chitina, Valde	85.47	27	P	P	14 58 09.5	+0.8
	baz=248						
HDA	Harding Lake	85.57	24	P	P	14 58 08.4	-0.6
	baz=246						
COLD	Coldfoot	85.58	20	P	P	14 58 10.4	+1.3
	baz=243						
COLD	Coldfoot	85.58	20	P	P	14 58 09.1	+0.1
COLD				IAmb	IAmb	14 58 11.1	
	comp=Z,18nm,1.3s						
POKR	Poker Plat Res	85.67	23	P	P	14 58 09.3	-0.2
	baz=246						
IL31		85.74	23	P	P	14 58 08.3	-1.5
IL31				IAmb	IAmb	14 58 09.1	
	comp=Z,9.5nm,0.8s						
ILAR	Eielson Array	85.74	23	P	P	14 58 08.8	-1.1
	comp=Z,7.5nm,0.7s,baz=252,slow=4.8,SNR=86						
ILAR				LR	LR	15 33 00.2	
	comp=Z,134nm,21.7s,baz=273,slow=33						
GLB	Gilahina Butte	85.76	27	P	P	14 58 10.0	-0.1
GLB				IAmb	IAmb	14 58 10.9	
	comp=Z,11nm,0.9s						
TOLK	Toolik Lake Re	86.43	19	P	P	14 58 14.5	+1.2
	baz=243						
TOLK	Toolik Lake Re	86.43	19	P	P	14 58 13.7	+0.4
TOLK				IAmb	IAmb	14 58 15.4	
	comp=Z,13nm,1.3s						
L26K	Log Cabin Wild	86.53	25	P	P	14 58 14.6	+0.8
	baz=249						
SCRK	Sand Creek	86.60	24	P	P	14 58 14.7	+0.4
	baz=249						
BARN	Barnard Glacie	86.61	28	P	P	14 58 15.0	+0.5
BARN				IAmb	IAmb	14 58 15.7	
	comp=Z,12nm,0.8s						
BRVK	Borovoye	86.71	324	⇓ iP	P	14 58 14.2	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BRVK	Borovoye	86.71	324	P	P	14 58 13.7	-1.2
CTGM	Chitina Glacie	86.73	28	P	P	14 58 15.6	+0.6
K27K	Chicken	87.41	25	P	P	14 58 19.3	+1.3
	baz=250						
EGAK	Eagle	88.03	24	P	P	14 58 20.7	-0.3
HYT	Haines Junctio	88.48	28	P	P	14 58 23.8	+0.4
HRA	Herat	88.80	305	P	P	14 58 24.8	-0.8
HRA				IAmb	IAmb	14 58 27.0	
	comp=Z,14nm,1.2s						
EPYK	Eagle Plains	90.25	23	P	P	14 58 32.1	+0.6
	baz=255						
EPYK	Eagle Plains	90.25	23	P	P	14 58 31.1	-0.3
SYO	Syowa Base	90.35	200	⇓ eX	P	14 58 42.5	+11
INK	Inuvik	91.90	21	P	P	14 58 38.5	-0.5
INK				pmax	pmax		
	comp=Z,14nm,1.2s						
INK	Inuvik	91.90	21	P	P	14 58 38.5	-0.5
ABKAR	Akbulak array	92.42	319	P	P	14 58 39.8	-2.0
ARU	Arti	93.98	326	d iP	P	14 58 46.6	-2.2
ARU				*PP	pP	14 59 01.4	-3.3
ARU						15 02 32.7	
ARU				S	SKSac	15 09 16.7	-2.5
ARU				SP	SP	15 11 09.7	+0.7
ARU				pmax	pmax		
	comp=Z,10.0nm,1.6s						
O02D	Mt. Diablo Mer	94.35	50	P	P	14 58 52.7	+1.6
	baz=266						
M02C	Callahan	94.39	49	P	P	14 58 52.6	+1.4
	baz=266						
N02D	Trinity Center	94.47	49	P	P	14 58 53.2	+1.5
	baz=266						
WDC	Whiskeytown Da	94.57	50	P	P	14 58 51.6	-0.3
WDC				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WDC	Whiskeytown Da	94.57	50	P	P	14 58 51.6	-0.3
WDC				IAmb	IAmb	14 58 54.7	
	comp=Z,9.7nm,1.4s						
ORV	Oroville	95.30	51	P	P	14 58 55.3	0.0
ORV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ORV	Oroville	95.30	51	P	P	14 58 55.3	0.0
ORV				IAmb	IAmb	14 58 57.1	
	comp=Z,6.6nm,1.1s						
C36M	Paulatuk	95.44	21	P	P	14 58 54.7	-0.5
	baz=267						
NVAR	Mina Array Bea	97.74	52	P	Pdif	14 59 07.6	+0.8
	comp=Z,1.2nm,0.9s,baz=256,slow=6.2,SNR=7.5						
E09A	Wood Farm, Sta	98.00	44	P	P	14 59 07.3	-0.1
YKA	Yellowknife Ar	99.45	28	P	Pdif	14 59 13.7	+0.2
	comp=Z,3.0nm,1.1s,baz=281,slow=4.4,SNR=16						
ARCES	ARCESS Array B	106.25	342	Pdiff	Pdif	14 59 41.7	-1.9
	comp=Z,4.7nm,1.0s,baz=57,slow=6.6,SNR=5.2						
MNK	Minsk	111.40	327	PP	PP	15 04 44.3	-1.4
	comp=E,2.0nm,1.0s						
MNK				PP	PP	15 04 44.3	-1.4
	comp=N,7.0nm,0.7s						
MNK				PP	PP	15 04 44.3	-1.4
	comp=Z,5.0nm,1.2s						
MNK				i PPP	PPP	15 07 05.2	
MNK				i SKS	SKSdf	15 11 12.1	-0.5
MNK				i SS	SS	15 20 15.5	-0.2
MNK				i SKKS	SKKSdf	15 22 23.9	-4.8
MNK				i SSS	SSS	15 24 24.8	
MNK				i LQ	LQ	15 44 32.3	
MNK				i LR	LR	15 49 07.7	
MNK				i LRM	MLR	15 51 27.0	
	comp=E,15nm,14.0s						
MNK				i LRM	MLR	15 51 29.9	
	comp=N,92nm,12.4s						
MNK				i LRM	MLR	15 51 31.5	
	comp=Z,99nm,13.3s						
GERES	GERESS Array B	121.79	325	PKP	PKPdf	15 04 24.9	-0.3
	comp=Z,0.4nm,0.4s,baz=20,slow=1.6,SNR=4.7						
PLCA	Paso Flores	122.23	147	PKP	PKiKP	15 04 27.2	+0.8
	comp=Z,2.3nm,0.6s,baz=180,slow=24,SNR=11						
GO02	Mina Guanaco	133.02	133		PKPdf	15 04 47.2	-0.3
SDV	Santo Domingo	142.97	83	PKP	PKPdf	15 05 03.5	-2.4
	comp=Z,2.1nm,0.4s,baz=234,slow=4.5,SNR=6.2						
SDV	Santo Domingo	142.97	83	PKPdf	PKPdf	15 05 03.0	-3.0
TOA0	Torodi Ar. Sit	144.75	284		PKPbc	15 05 08.3	+0.5
TORD	Torodi Ar. Bea	144.75	284	PKP	PKPdf	15 05 08.7	-0.1
	comp=Z,79nm,1.0s,baz=69,slow=3.4,SNR=160						
TORD				SKPbc	SKPbc	15 08 40.7	-3.2
	comp=Z,0.9nm,0.8s,baz=118,slow=5.2,SNR=2.6						
SJG	San Juan	145.89	67	PKPbc	PKPab	15 05 11.6	-0.1
	comp=Z,8.6nm,0.2s,baz=280,slow=6.1,SNR=4.5						
HUMP	Col San Antoni	146.15	66		PKPdf	15 05 10.8	-0.2
SAML	Samuel	146.73	116	PKIKP	PKPdf	15 05 12.3	+0.1
SAML	Samuel	146.73	116	PKPbc	PKPdf	15 05 12.3	+0.1
KOWA	Kowa	149.97	288	PKPbc	PKiKP	15 05 23.3	+0.1
	comp=Z,25nm,0.6s,baz=68,slow=2.3,SNR=71						
KOWA	Kowa	149.97	288		PKPbc	15 05 22.2	-0.2
KIC	Kosan Boka	151.53	272	ePKIKP	PKiKP	15 05 26.9	+0.3
	comp=Z,80nm,0.8s						
DBIC	Dimbokro	151.65	273	PKPbc	PKiKP	15 05 27.7	+0.9
	comp=Z,29nm,0.7s,baz=82,slow=1.9,SNR=46						
DBIC	Dimbokro	151.65	273	PKIKP	PKiKP	15 05 26.8	0.0
DBIC	Dimbokro	151.65	273	PKPbc	PKiKP	15 05 26.8	0.0
LIC	Lamto	151.81	272	ePKIKP	PKiKP	15 05 27.5	+0.3
	comp=Z,159nm,0.9s						
TIC	Toumodi	151.81	273	ePKIKP	PKiKP	15 05 27.4	+0.2
BDFB	Brasilia	153.97	146	PKPbc	PKiKP	15 05 31.9	+0.2
	comp=Z,4.5nm,0.5s,baz=170,slow=5.4,SNR=4.7						

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*TIF **07** 14:46:46.5, 42°.06N×46°.02E, h42^{km}±1^{km}*
*MOS **07** 14:46:46.9±0.0, 42°.26N×45°.90E, h42^{km}, MPVA3.2*
*NORS **07** 14:46:47.7±0.0, 42°.26N×45°.87E, h42^{km}, MPVA3.2*
ISC 07 14:46:46.9±1.2**, 42°.22N**±0°.03×**45°.94E**±0°.03**, h9**^{km}±10^{km}**,**
n17, σ1^{s}.18/33**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.44	149	P	Pg	14 46 55.6	0.0
LGD				S	Sg	14 47 01.3	0.0
BTLR	Botlikh	0.50	25	i Pg	Pn	14 46 58.6	-1.6
BTLR				i Sg	Sb	14 47 06.7	+1.5
DVE	Vedeno	0.75	11	ePg	Pn	14 47 03.3	-0.4
DVE				eSg	Sn	14 47 14.9	-0.5
DDFL	Dedoflistskaro	0.78	170	P	Pn	14 47 03.5	-0.6
DDFL				S	Sn	14 47 18.2	+2.2
ARKR	Arakani	0.87	63	i Pg	Pn	14 47 05.0	-0.4
ARKR				i Sg	Sn	14 47 18.1	-0.1
KRNR	Karanay	0.94	49	ePg	Pn	14 47 06.5	+0.1
KRNR				eSg	Sn	14 47 19.9	-0.1
BTNK	Botanikuri	1.00	238	P	Pg	14 47 05.4	-0.8
BTNK				S	Sg	14 47 19.0	-0.1
DBC	Dubki	1.04	39	ePg	Pn	14 47 07.0	-0.7
DBC				i Sg	Sn	14 47 21.8	-0.6
GUDG	Gudauri	1.11	283	P	Pb	14 47 08.9	+0.5
GUDG				S	Sg	14 47 23.6	+1.0
GUDG	Gudauri	1.11	283	ePg	Pb	14 47 08.8	+0.5
GUDG				eSg	Sg	14 47 23.6	+1.0
LACR	Lac	1.36	297	ePg	Pn	14 47 12.2	+0.1
LACR				eSg	Sb	14 47 28.4	-1.6
KZRT	Kazreti	1.42	235	P	Pn	14 47 11.3	-1.6
KZRT				S	Sn	14 47 29.3	-2.3
DMNI	Dmanisi	1.58	236	P	Pn	14 47 13.6	-1.5
KORR	Kora	1.63	303	ePg	Pn	14 47 14.3	-1.4
KORR				eSg	Sn	14 47 36.5	-0.4
BRNG	Burnasheti	1.68	250	P	Pn	14 47 16.1	-0.5
BRNG				S	Sn	14 47 38.5	+0.1
TKB	Tkibuli	2.19	275	P	Pn	14 47 24.1	+0.7
TKB				S	Sn	14 47 53.1	+2.5
ABS	Abastumani	2.37	260	P	Pn	14 47 26.1	0.0
ABS				S	Sn	14 47 57.5	+2.1

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*NEIC **07** 14:51:33.7±2.3, 6°.19S±0°.05×146°.6E±0°.1, h35^{km}±2^{km}, mb4.6/11, Error ellipse: s-maj=18.0km s-min=7.6km az=99.0*
*IDC **07** 14:51:35.8±2.9, 6°.16S×146°.79E, h66^{km}±29^{km}, mb3.9/9, mb1 4.1/12, mb1mx3.8/45, mbtmp4.2/12, ML3.6/1, Error ellipse: s-maj=25.3km s-min=18.7km az=88.0*
ISC 07 14:51:35.0±0.5**, 6°.18S**±0°.06×**146°.66E**±0°.08**, h52**^{km}**, n33,**
σ1^{s}.07/34**, mb4.2**/11**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.24	171	P	Pn	14 52 23.5	0.0
	10.0nm,0.3s,baz=18,slow=9.9,SNR=12						
PMG				S	Sn	14 53 03.1	+2.2
	7.6nm,0.3s,baz=0.0,slow=16,SNR=4.1						
PMG	Port Moresby	3.24	171		Pn	14 52 23.9	+0.4
RABL	Rabaul	5.83	70	Pn	Pn	14 53 00.8	+1.8
COEN	Coen	8.45	204	Pn	Pn	14 53 35.0	0.0
FAKI	Fak Fak	14.72	282	Pn	Pn	14 55 01.6	+1.3
SIJI	Sorong	16.24	288	P	P	14 55 23.0	+0.9
	1.3nm,0.3s,baz=79,slow=9.5,SNR=18						
MTN	Manton Dam	16.67	245	Pn	Pn	14 55 24.9	-0.4
MTN				IAmb	IAmb	14 55 28.4	
	comp=Z,109nm,1.4s						
WB0	Warramunga Arr	18.01	220	P	P	14 55 41.4	-0.3
WB0				IAmb	IAmb	14 55 53.8	
	comp=Z,52nm,1.2s						
WRA	Warramunga Arr	18.18	220	P	P	14 55 42.6	-1.0
	comp=Z,0.2nm,0.3s,baz=43,slow=11,SNR=4.0						
WRA				PcP	PcP	15 00 15.9	+0.8
	baz=19,slow=1.8,SNR=4.6						
EIDS	Eidsvold	19.55	168	P	P	14 55 58.4	0.0
ASAR	Alice Springs	21.28	214	P	P	14 56 16.8	-0.6
	comp=Z,1.8nm,0.9s,baz=51,slow=8.8,SNR=3.9						
SANVU	Saraoutou	22.16	116	P	P	14 56 26.2	-0.6
SANVU				IAmb	IAmb	14 56 33.3	
	comp=Z,41nm,1.3s						
FITZ	Fitzroy Crossi	23.68	238	P	P	14 56 41.6	-0.5
	comp=Z,13nm,0.7s,baz=64,slow=9.7,SNR=5.7						
FITZ	Fitzroy Crossi	23.68	238	P	P	14 56 41.5	-0.7

LUWI	**Luwuk**	**24.37**	**281**	P	**P**	**14 56 48.5**	**0.0**
STKA	**Stephens Creek**	**26.00**	**190**	P	**P**	**14 57 02.9**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=350,slow=8.5,SNR=3.1						
PSA00	**Pilbara Seismi**	**30.11**	**237**	P	**P**	**14 57 39.9**	**-0.1**
SSLB	**Suanglung**	**38.94**	**321**	P	**P**	**14 58 57.6**	**+1.4**
YHNB	**Yeheng**	**39.33**	**322**	P	**P**	**14 59 00.1**	**+0.7**
KSRS	**Korea Array**	**46.80**	**339**	P	**P**	**14 59 59.6**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=158,slow=8.4,SNR=5.2						
JTM	**Tenmabayashi**	**47.02**	**354**	P	**P**	**15 00 01.2**	**0.0**
CMAR	**Chiang Mai Arr**	**53.03**	**298**	P	**P**	**15 00 48.6**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=120,slow=5.9,SNR=18						
PETK	**Petropavlovsk-**	**59.80**	**8**	P	**P**	**15 01 34.4**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=183,slow=7.2,SNR=3.0						
MKAR	**Makanchi Array**	**77.42**	**321**	P	**P**	**15 03 23.8**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=101,slow=7.8,SNR=4.8						
TIXI	**Tiksi**	**78.55**	**354**	P	**P**	**15 03 30.0**	**-0.5**
TIXI				IAmb	IAmb	15 03 31.4	
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**78.98**	**328**	P	**P**	**15 03 30.9**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=134,slow=6.2,SNR=2.4						
ILAR	**Eielson Array**	**85.78**	**23**	P	**P**	**15 04 06.2**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=252,slow=4.9,SNR=14						
YKA	**Yellowknife Ar**	**99.49**	**28**	P	**Pdif**	**15 05 09.9**	**-2.1**
	comp=Z,0.5nm,1.0s,baz=281,slow=3.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**144.80**	**284**	PKP	PKPbc	15 11 06.5	+0.1
	comp=Z,4.5nm,0.7s,baz=74,slow=3.6,SNR=16						
KIC	**Kosan Boka**	**151.57**	**272**	*e*PKIKP	**PKPbc**	**15 11 24.5**	**-0.1**
	comp=Z,8.6nm,0.7s						
DBIC	**Dimbokro**	**151.69**	**273**	PKPbc	**PKPbc**	**15 11 24.9**	**0.0**
	comp=Z,3.6nm,0.6s,baz=74,slow=1.7,SNR=7.1						
LIC	**Lamto**	**151.85**	**272**	*e*PKIKP	**PKPbc**	**15 11 24.7**	**-0.6**
	comp=Z,13nm,0.5s						
TIC	**Toumodi**	**151.85**	**273**	*e*PKIKP	**PKPbc**	**15 11 24.7**	**-0.6**

TAP 07 14:52:48.1, 24°.27N×121°.67E, h28^{km}, ML2.0, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.12**	**217**	P	Pb	14 52 53.5	+0.3
	baz=217						
NACB				S	Sb	14 52 57.4	+0.6
	baz=217						
ENA	**Nanau**	**0.17**	**22**	⇑*i*P	Pb	14 52 54.1	+0.4
	baz=23						
ENA				*i* S	Sb	14 52 58.9	+1.2
	baz=23						
ETLH	**Xiulin Townshi**	**0.18**	**251**	P	Pb	14 52 54.4	+0.4
	baz=250						
ETLH				S	Sb	14 52 58.6	+0.6
	baz=250						
TWD	**Chiawan**	**0.20**	**200**	*i* P	Pb	14 52 54.5	+0.4
	baz=198						
TWD				*i* S	Sb	14 52 58.7	+0.6
	baz=198						
ENAH	**Nanao**	**0.22**	**35**	S	Sb	14 52 59.6	+1.0
	baz=34						
HWA	**Hwalien**	**0.30**	**192**	*e*S	Sn	14 53 01.6	-0.4
	baz=190						
NNSB	**Datong**	**0.31**	**301**	P	Pb	14 52 56.2	+0.6
	baz=301						
NNSB				S	Sb	14 53 01.6	+0.9
	baz=301						
NNSH	**Datong**	**0.31**	**301**	P	Pn	14 52 56.3	-0.6
	baz=301						
NNSH				S	Sb	14 53 01.6	+0.9
	baz=301						
NNS	**Nan Shan**	**0.32**	**302**	*i* P	Pb	14 52 56.2	+0.4
	baz=302						
NNS				S	Sn	14 53 02.4	-0.5
	baz=302						
NDT	**Datong Townshi**	**0.36**	**336**	*e*P	Pn	14 52 57.1	-0.5
	baz=336						
NDT				S	Sn	14 53 03.1	-0.7
	baz=336						
TWC	**Suao**	**0.38**	**25**	*i* P	Pn	14 52 57.2	-0.6
	baz=26						
TWC				*i* S	Sn	14 53 03.6	-0.5
	baz=26						
ENTT	**Nioudou**	**0.38**	**345**	⇑*i*P	Pb	14 52 57.1	+0.4
	baz=346						
ENTT				*i* S	Sn	14 53 03.5	-0.7
	baz=346						
FUSS	**Fushou**	**0.39**	**267**	P	Pn	14 52 57.6	-0.5
	baz=267						
FUSS				S	Sn	14 53 04.7	-0.1
	baz=267						
WHF	**Hehuan Shan**	**0.39**	**252**	P	Pb	14 52 57.2	+0.2
	baz=251						
WHF				S	Sb	14 53 03.5	+0.4
	baz=251						
TWE	**Neicheng**	**0.45**	**359**	S	Sn	14 53 05.2	-0.7
	baz=1.0						
TDCB	**Techi**	**0.47**	**268**	P	Pn	14 52 59.2	0.0
	baz=268						
TDCB				S	Sb	14 53 05.5	+0.7
	baz=268						
YHNB	**Yeheng**	**0.48**	**326**	P	Pn	14 52 58.8	-0.5
	baz=325						
YHNB				S	Sn	14 53 06.2	-0.6
	baz=325						
YHNB	**Yeheng**	**0.48**	**326**	P	Pb	14 52 58.5	+0.3
NSK	**Sanguang**	**0.50**	**325**	*i* P	Pb	14 52 58.9	+0.4
	baz=325						
NSK				S	Sb	14 53 05.7	+0.2
	baz=325						
CHGB	**Renai**	**0.50**	**246**	P	Pb	14 52 58.9	+0.3
	baz=245						
CHGB				S	Sn	14 53 06.9	-0.5
	baz=245						
ESL	**Shilin**	**0.50**	**206**	P	Pn	14 52 59.0	-0.5
	baz=204						
ESL				S	Sn	14 53 06.8	-0.3
	baz=204						
NWLT	**Wulai**	**0.53**	**343**	*e*P	Pb	14 52 59.3	+0.3
	baz=343						
NWLT				*e*S	Sb	14 53 06.7	+0.3
	baz=343						
NTC	**Toucheng**	**0.60**	**14**	*e*P	Pn	14 53 00.6	-0.2
	baz=13						
NTC				*e*S	Sn	14 53 09.2	-0.4
	baz=13						
EGFH	**Guangfu**	**0.64**	**201**	*e*P	Pn	14 53 01.3	0.0
	baz=200						
WHP	**Taichung City**	**0.66**	**271**	P	Pn	14 53 01.7	0.0
	baz=270						
WHP				S	Sn	14 53 11.3	0.0
	baz=270						
LIOB	**Emei**	**0.71**	**302**	P	Pn	14 53 03.2	+0.9
	baz=302						
LIOB				*e*S	Sn	14 53 12.5	+0.2
	baz=302						
TWA	**Mucha**	**0.71**	**354**	*e*S	Sn	14 53 12.5	+0.1
	baz=354						
TIPB	**Shuangxi**	**0.71**	**11**	*e*P	Pb	14 53 02.1	+0.1
	baz=11						
DPDB	**Guoxing**	**0.72**	**251**	*e*P	Pb	14 53 01.1	-1.0
	baz=251						
NTY	**Taoyuan**	**0.80**	**335**	*e*P	Pb	14 53 03.4	-0.2
	baz=335						
NWF	**Wu-fen Shan**	**0.81**	**7**	*e*P	Pb	14 53 03.6	-0.1
	baz=7.0						
WFSB	**Wu-fen Shan**	**0.81**	**7**	*e*P	Pn	14 53 03.8	+0.1
	baz=7.0						

IDC ***07*** *14:56:53.3±4.9, 11°.10S×164°.78E, h37^{km}±39^{km}, mb4.0/7, mb1 4.2/10, mb1mx3.8/41, mbtmp4.2/10, ML4.2/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/35, Error ellipse: s-maj=31.4km s-min=24.1km az=110.0*

NEIC ***07*** *14:56:53.2±1.1, 11°.14S±0°.10×164°.74E±0°.04, h35^{km}±8^{km}, mb4.5/12, Error ellipse: s-maj=14.7km s-min=5.0km az=192.0*

ISC 07 14:56:52.4±0.6, 11°.16S±0°.08×164°.78E±0°.09, h31^{km}, n32, σ0^{s}.98/30, mb4.4/13, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.87**	**151**		**Pn**	**14 58 03.1**	**-0.4**
HNR	**Honiara**	**5.06**	**289**	Pn	**Pn**	**14 58 06.5**	**+0.4**
	29nm,0.3s,baz=137,slow=6.3,SNR=13						
HNR				Sn	**Sn**	**14 59 03.7**	**+0.1**
	19nm,0.3s,baz=216,slow=23,SNR=4.4						
HNR	**Honiara**	**5.06**	**289**		**Pn**	**14 58 06.2**	**0.0**
DZM	**Mont Dzumac**	**10.96**	**172**	Pn	**Pn**	**14 59 28.5**	**+1.2**
	1.0nm,0.3s,baz=137,slow=18,SNR=20						
DZM				Sn	**Sn**	**15 01 25.6**	**-3.4**
	0.1nm,0.3s,baz=135,slow=20,SNR=1.9						
KRVT	**Keravat (AS076**	**14.35**	**297**	LR	LR	15 05 43.7	
	comp=Z,200nm,20.2s,baz=131,slow=37						
MSVF	**Nonsavu**	**14.41**	**118**	P	**P**	**15 00 21.1**	**+0.1**
PMG	**Port Moresby**	**17.43**	**274**	LR	LR	15 06 28.2	
	comp=Z,259nm,20.5s,baz=65,slow=33						
CTA	**Charters Tower**	**19.91**	**241**	P	**Pn**	**15 01 23.7**	**+0.3**
	0.3nm,0.3s,baz=60,slow=14,SNR=2.8						
COEN	**Coen**	**21.27**	**260**	P	**P**	**15 01 36.7**	**+0.3**
H11S2	**WAKE ISLAND Hy**	**29.53**	**4**	T	T	15 33 51.6	
	baz=184,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**29.53**	**4**	T	T	15 33 55.7	
	baz=184,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**29.54**	**4**	T	T	15 33 54.7	
	baz=184,slow=76,SNR=4.8						
BKZ	**Black Stump Fm**	**29.77**	**161**	P	**P**	**15 02 59.1**	**+2.7**
WR0	**Warramunga Arr**	**30.37**	**250**	P	**P**	**15 03 01.2**	**-0.6**
WR0				IAmb	IAmb	15 03 21.2	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**30.47**	**250**	P	**P**	**15 03 02.2**	**-0.5**
WB0				IAmb	IAmb	15 03 05.5	
	comp=Z,7.2nm,0.8s						
WB2	**Warramunga Arr**	**30.54**	**250**	P	**P**	**15 03 02.9**	**-0.4**
WRA	**Warramunga Arr**	**30.55**	**250**	P	**P**	**15 03 03.1**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=82,slow=8.9,SNR=13						
TOO	**Toolangi**	**31.49**	**210**	P	**P**	**15 03 11.2**	**-0.4**
TOO				IAmb	IAmb	15 03 23.1	
	comp=Z,16nm,1.4s						
ASAR	**Alice Springs**	**31.89**	**243**	P	**P**	**15 03 15.3**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=64,slow=9.6,SNR=8.2						
ASAR				PcP	**PcP**	**15 06 05.8**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=62,slow=2.6,SNR=7.9						
FAKI	**Fak Fak**	**33.28**	**282**	P	**P**	**15 03 27.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**38.43**	**255**	P	**P**	**15 04 11.7**	**0.0**
	comp=Z,7.6nm,1.0s,baz=45,slow=8.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**38.43**	**255**	P	**P**	**15 04 11.3**	**-0.3**
JCJ	**Chichijima**	**43.90**	**330**	P	**P**	**15 04 55.6**	**-0.8**
MJAR	**Matsushiro Arr**	**53.64**	**333**	P	**P**	**15 06 09.8**	**-1.3**
	comp=Z,3.7nm,0.9s,baz=128,slow=8.2,SNR=4.3						
JNU	**Nakatsue**	**54.63**	**325**	P	**P**	**15 06 18.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**62.63**	**334**	P	**P**	**15 07 13.9**	**+0.1**
USA0B				IAmb	IAmb	15 07 37.7	
	comp=Z,3.8nm,1.1s						
USRK	**Ussuriysk Ar.**	**62.63**	**334**	P	**P**	**15 07 14.1**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=129,slow=7.0,SNR=2.4						
ULN	**Ulaanbaatar**	**77.84**	**324**	P	**P**	**15 08 47.4**	**+0.3**
ULN				IAmb	IAmb	15 08 48.5	
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**78.20**	**324**	P	**P**	**15 08 49.5**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=150,slow=5.8,SNR=5.1						
QSPA	**South Pole Qui**	**78.84**	**180**	P	**P**	**15 08 53.1**	**+0.7**
ILAR	**Eielson Array**	**83.93**	**19**	P	**P**	**15 09 18.4**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=229,slow=4.3,SNR=6.8						
MKAR	**Makanchi Array**	**92.96**	**317**	P	**P**	**15 10 02.6**	**-0.1**
	comp=Z,25nm,0.5s,baz=90,slow=4.7,SNR=2.6						

NOU ***07*** *14:57:17.8, 43°.06S×171°.34E, h0^{km}, MLv3.9, South Island, New Zealand*

WEL 07 14:57:17.5±0.3, 43°S±3°×17°1E±°, h5^{km}, M3.4/19, ML3.6/19, MLv3.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=156.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INZ	**Inchbonnie**	**0.34**	**26**	P	Pg	14 57 24.5	+0.4
INZ				S	Sg	14 57 29.1	+0.5
WVZ	**Waitaha Valley**	**0.37**	**264**	P	Pg	14 57 25.3	+0.6
WVZ				S	Sg	14 57 30.0	+0.5
MHCZ	**Mount Hutt**	**0.55**	**154**	P	Pg	14 57 28.4	+0.3
MHCZ				S	Sg	14 57 35.6	+0.3
OXZ	**Oxford**	**0.65**	**117**	P	Pg	14 57 30.4	+0.3
RPZ	**Rata Peaks**	**0.69**	**191**	P	Pg	14 57 31.0	+0.1
GCSZ	**Gaunt Creek Bo**	**0.73**	**247**	P	Pg	14 57 31.5	0.0
LTZ	**Lake Taylor**	**0.80**	**72**	P	Pb	14 57 33.4	-0.5
ARCZ	**Arundel**	**0.91**	**183**	P	Pg	14 57 35.0	0.0
RACZ	**Rakaia**	**0.95**	**137**	P	Pg	14 57 36.1	+0.3
RACZ				S	Sb	14 57 49.5	+0.1
WACZ	**Wakanui South**	**1.01**	**155**	P	Pg	14 57 37.1	+0.2
AMCZ	**Amberley**	**1.04**	**98**	P	Pb	14 57 38.2	+0.1
FOZ	**Fox Glacier**	**1.15**	**244**	P	Pg	14 57 39.3	-0.3
FOZ				S	Sn	14 57 56.1	-0.4
MQZ	**McQueen’s Vall**	**1.23**	**124**	P	Pg	14 57 40.0	-1.1
GVZ	**Greta Valley S**	**1.32**	**88**	P	Pn	14 57 41.9	-0.7
DSZ	**Denniston Nort**	**1.35**	**18**	P	Pn	14 57 42.7	-0.4
TMZ	**Timaru**	**1.36**	**187**	P	Pn	14 57 42.6	-0.6
AKCZ	**Akaroa Harbour**	**1.48**	**125**	P	Pn	14 57 43.6	-1.2
OKCZ	**Okains Bay**	**1.49**	**118**	P	Pn	14 57 44.2	-0.8
LBZ	**Lake Benmore**	**1.55**	**209**	P	Pn	14 57 45.6	-0.3
THZ	**Tophouse**	**1.77**	**45**	P	Pn	14 57 48.9	+0.1
KHZ	**Kahutara**	**1.80**	**71**	P	Pn	14 57 48.8	-0.4
ODZ	**Otahua Downs**	**2.06**	**192**	P	Pn	14 57 51.8	-0.9
JCZ	**Jackson Bay**	**2.06**	**239**	P	Pn	14 57 52.8	-0.2
BSWZ	**Blackbirch Sta**	**2.36**	**57**	P	Pn	14 57 58.1	+1.3
QRZ	**Quartz Range**	**2.41**	**24**	P	Pn	14 57 57.8	+0.2
WKZ	**Wanaka**	**2.41**	**221**	P	Pn	14 57 56.5	-1.0
NNZ	**Nelson**	**2.41**	**42**	P	Pn	14 57 58.0	+0.4
CMWZ	**Cape Campbell**	**2.55**	**61**	P	Pb	14 58 04.1	+0.3
TUWZ	**Tuamarina**	**2.57**	**52**	P	Pn	14 58 00.1	+0.3
EAZ	**Earnscleugh**	**2.60**	**212**	P	Pn	14 57 59.0	-1.3
TCW	**Tory Channel**	**2.90**	**52**	P	Pn	14 58 04.6	+0.2
MSZ	**Milford Sound**	**2.90**	**235**	P	Pn	14 58 04.5	+0.2
DUWZ	**D’Urville Isla**	**3.00**	**43**	P	Pn	14 58 06.9	+1.2
TUZ	**Tuapeka**	**3.14**	**201**	P	Pn	14 58 07.1	-0.4
BHW	**Baring Head**	**3.15**	**60**	P	Pn	14 58 07.2	-0.5
MLZ	**Mavora Lakes**	**3.24**	**223**	P	Pn	14 58 08.2	-0.8
PLWZ	**Palliser**	**3.32**	**65**	P	Pn	14 58 08.6	-1.5
MSWZ	**Moikau Station**	**3.39**	**63**	P	Pn	14 58 10.0	-1.1
CAW	**Cannon Point**	**3.44**	**57**	P	Pn	14 58 10.6	-1.1
KIW	**Kapiti Island**	**3.49**	**53**	P	Pn	14 58 12.0	-0.5
PAWZ	**Paruwai Farm**	**3.52**	**63**	P	Pn	14 58 12.3	-0.6
OGWZ	**Otaki Gorge**	**3.67**	**54**	P	Pn	14 58 13.9	-1.1
MTW	**Mount Morrison**	**3.68**	**61**	P	Pn	14 58 13.2	-1.9
WHZ	**Wether Hill Ro**	**3.71**	**218**	P	Pn	14 58 15.5	+0.1
SYZ	**Scrubby Hill**	**3.81**	**202**	P	Pn	14 58 16.0	-0.7
HOWZ	**Holdsworth Sta**	**3.84**	**58**	P	Pn	14 58 15.6	-1.6
TMWZ	**Te Maipa**	**3.96**	**62**	P	Pn	14 58 17.5	-1.4
MRZ	**Mangatainoka R**	**4.01**	**55**	P	Pn	14 58 17.8	-1.8
NMEZ	**Namu Road**	**4.13**	**30**	P	Pn	14 58 22.8	+1.6
TIWZ	**Tintock**	**4.14**	**59**	P	Pn	14 58 20.1	-1.3
NBEZ	**Newall Road No**	**4.25**	**29**	P	Pn	14 58 24.4	+1.5
KHEZ	**Kahui Hut**	**4.28**	**30**	P	Pn	14 58 25.1	+1.7
LREZ	**Lake Rotokare**	**4.29**	**35**	P	Pn	14 58 25.6	+2.2
PREZ	**Palmer Road**	**4.29**	**32**	P	Pn	14 58 25.0	+1.4
PRWZ	**Pori Road**	**4.32**	**57**	P	Pn	14 58 22.1	-1.8
WAZ	**Wanganui**	**4.32**	**42**	P	Pn	14 58 24.8	+0.9
NEZ	**North Egmont**	**4.33**	**31**	P	Pn	14 58 25.6	+1.5
PKE	**Pukeiti**	**4.36**	**29**	P	Pn	14 58 25.6	+1.2
BFZ	**Birch Farm**	**4.42**	**60**	P	Pn	14 58 23.6	-1.6
APZ	**The Paps**	**4.44**	**210**	P	Pn	14 58 24.7	-0.9
DREZ	**Durham Road**	**4.45**	**31**	P	Pn	14 58 27.1	+1.5
VRZ	**Vera Road**	**4.72**	**35**	P	Pn	14 58 30.8	+1.4
PKVZ	**Pokaka**	**4.86**	**41**	P	Pn	14 58 33.6	+2.3
PNHZ	**Pukenui**	**4.86**	**52**	P	Pn	14 58 30.9	-0.4
WNVZ	**Wahianoa**	**4.95**	**43**	P	Pn	14 58 32.3	-0.4
TUVZ	**Tukino**	**5.03**	**43**	P	Pn	14 58 36.0	+2.3
NGZ	**Ngauruhoe**	**5.07**	**42**	P	Pn	14 58 37.0	+2.7
BHHZ	**Black Hill Sta**	**5.07**	**47**	P	Pn	14 58 33.1	-1.2
OTVZ	**Oturere**	**5.11**	**42**	P	Pn	14 58 34.6	-0.3
WTVZ	**West Tongariro**	**5.11**	**41**	P	Pn	14 58 38.2	+3.3
KRVZ	**Karewarewa**	**5.15**	**42**	P	Pn	14 58 38.6	+3.2
TMVZ	**Te Maari**	**5.17**	**42**	P	Pn	14 58 38.0	+2.4
HIZ	**Hauiti**	**5.28**	**32**	P	Pn	14 58 37.4	+0.3
BKZ	**Black Stump Fm**	**5.54**	**48**	P	Pn	14 58 40.0	-0.6
TLZ	**Tolley Road**	**5.72**	**36**	P	Pn	14 58 43.7	+0.6
TOZ	**Tahuroa Road**	**6.21**	**33**	P	Pn	14 58 50.4	+0.5
WTAZ	**Waiatarua**	**6.61**	**24**	P	Pn	14 58 56.9	+1.6
MWZ	**Matawai**	**6.70**	**48**	P	Pn	14 58 55.4	-1.2
ETAZ	**East Tamaki Re**	**6.70**	**26**	P	Pn	14 58 57.9	+1.3

IDC 07 15:12:36.4±3.3, 6°.02S×146°.98E, h0^{km}, mb2.8/1, mb1 3.2/3, mb1mx3.2/32, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=87.5km s-min=35.0km az=85.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.37**	**177**	Pn	Pn	15 13 32.0	+1.7
	0.8nm,0.3s,baz=30,slow=8.1,SNR=1.4						
PMG				Sn	Sn	15 14 10.8	-0.3
	1.7nm,0.3s,baz=210,slow=20,SNR=2.8						
WRA	**Warramunga Arr**	**18.51**	**220**	P	Pn	15 16 54.8	+0.3
	0.1nm,0.3s,baz=49,slow=13,SNR=1.0						
ASAR	**Alice Springs**	**21.59**	**214**	P	P	15 17 27.3	-0.7
	0.4nm,0.9s,baz=55,slow=9.0,SNR=1.8						
TORD	**Torodi Ar. Bea**	**145.08**	**284**	PKPbc	PKPbc	15 32 15.3	-1.1
	0.8nm,0.9s,baz=93,slow=3.1,SNR=2.3						

BYKL 07 15:57:17.4±0.1, 56°.13N×113°.73E, h1^{km}±3^{km}, 2C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**262**	⇓*i*Pg	Pg	15 57 19.3	0.0
SVKR				*e*Sg	Sg	15 57 21.1	+0.6
SVKR				Pmax			
	3µm,0.2s						
SVKR				Smax			
	51µm,0.4s						
UKT	**Uakit**	**0.65**	**185**	⇑*i*Pg	Pg	15 57 28.4	-1.3
UKT				*e*Sg	Sg	15 57 37.0	-1.1
UKT				Pmax			
	156nm,0.6s						
UKT				Smax			
	491nm,0.6s						
YOA	**Uoyan**	**1.12**	**271**	*e*Pg	Pg	15 57 38.0	-0.9
YOA				*e*Sg	Sg	15 57 53.1	-0.3
YOA				*e*		15 57 58.4	
YOA				Pmax			
	370nm,0.3s						
YOA				max			
	3µm,0.4s						
NLYR	**Nelyaty**	**1.16**	**71**	⇓*i*Pg	Pg	15 57 38.2	-1.4
NLYR				*e*Pb	Pn	15 57 40.5	-0.3
NLYR				*e*Sg	Sg	15 57 53.8	-0.7
NLYR				*e*Sb	Sn	15 57 57.1	-0.1
NLYR				max			
	743nm,0.3s						
NLYR				max			
	1µm,0.8s						
KMO	**Kumora**	**1.44**	**261**	⇓*i*Pg	Pn	15 57 43.2	-1.4
KMO				*e*Pb	Pg	15 57 44.7	-0.3
KMO				*e*Sg	Sg	15 58 02.5	-1.1
KMO				*e*		15 58 05.6	
KMO				max			
	225nm,0.5s						
KMO				max			
	1µm,0.8s						
BOD	**Bodaibo**	**1.70**	**5**	⇑*i*Pg	Pn	15 57 47.9	-0.3
BOD				*e*		15 57 49.3	
BOD				*e*Sg	Sn	15 58 10.1	-0.5
BOD				Pmax			
	178nm,0.3s						
BOD				Smax			
	617nm,0.2s						
YLYR	**Ulyunkhan**	**1.93**	**230**	⇓*i*Pn	Pn	15 57 51.6	+0.3
YLYR				*e*Pg	Pb	15 57 52.3	-1.0
YLYR				*e*Sg	Sb	15 58 17.2	-0.6
YLYR				Pmax			
	111nm,0.7s						
YLYR				Smax			
	589nm,0.4s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	*e*Pn	Pn	15 57 57.7	+0.1
NIZ				*e*Pg	Pb	15 58 00.1	-1.0
NIZ				*e*Sn	Sn	15 58 27.6	+0.2
NIZ				*e*Sg	Sb	15 58 31.0	+0.1
NIZ				Pmax			
	82nm,0.8s						
NIZ				Smax			
	276nm,0.5s						
CRS	**Chara**	**2.63**	**71**	*e*Pn	Pn	15 58 01.0	0.0
CRS				*e*Pg	Pb	15 58 05.3	0.0
CRS				*e*Sn	Sn	15 58 33.6	0.0
CRS				*e*Sg	Sb	15 58 39.7	+1.6
CRS				Pmax			
	395nm,1.1s						
CRS				Smax			
	305nm,1.0s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pn	Pn	15 58 09.6	-0.3
SYVR				*e*Pg	Pb	15 58 16.7	+0.3
SYVR				*e*Sn	Sn	15 58 47.3	-2.3
SYVR				*e*Sg	Sb	15 58 58.7	+1.9
SYVR				Pmax			
	49nm,0.8s						
SYVR				Smax			
	262nm,1.5s						
VTMR	**Vitim**	**3.38**	**350**	*e*Pn	Pn	15 58 11.8	+0.6
VTMR				*e*Pg	Pb	15 58 18.7	+0.7
VTMR				*e*Sg	Sb	15 59 01.5	+1.9
TUP	**Tupik**	**3.95**	**113**	*e*Pn	Pn	15 58 18.2	-0.9
TUP				*e*Pg	Pb	15 58 28.8	+1.1
TUP				*e*Sn	Sn	15 59 03.4	-2.6
TUP				*e*Sg	Sb	15 59 18.9	+2.9
TUP				Pmax			
	28nm,0.6s						
TUP				Smax			
	280nm,1.4s						
MXMB	**Maximikha**	**4.08**	**227**	*e*Pn	Pn	15 58 22.2	+1.4
MXMB				*e*Pg	Pb	15 58 30.9	+1.0
MXMB				*e*		15 58 33.7	
MXMB				*e*Sn	Sn	15 59 07.1	-2.1
MXMB				*e*Sg	Sb	15 59 23.3	+3.7
MXMB				*e*		15 59 31.8	
CIT	**Chita**	**4.12**	**182**	*e*Sg	Sg	15 59 25.4	-4.2
CIT				Smax			
	179nm,0.6s						
OGRR	**Ongureny**	**4.33**	**237**	*e*Pn	Pn	15 58 24.8	+0.5
OGRR				*e*Pg	Pb	15 58 35.3	+1.0
OGRR				*e*Sn	Sn	15 59 14.3	-1.1
OGRR				*e*Sg	Sb	15 59 31.1	+4.1
OGRR				*e*		15 59 38.5	
OGRR				Pmax			
	31nm,1.0s						
OGRR				max			
	101nm,1.3s						
YKLR	**Yuktali**	**4.43**	**81**	*e*Pn	Pn	15 58 25.5	-0.2
YKLR				*e*Pg	Pb	15 58 36.2	+0.2
YKLR				*e*Sn	Sn	15 59 15.6	-2.3
YKLR				*e*Sg	Sb	15 59 34.2	+4.3
ZRHB	**Zarechye**	**5.26**	**230**	*e*Pg	Pb	15 58 52.3	+2.3
ZRHB				*e*Sn	Sn	15 59 37.1	-1.1
ZRHB				*e*Sg	Sg	16 00 00.4	-5.7
ZRHB				Pmax			
	38nm,0.8s						
ZRHB				Smax			
	269nm,1.1s						
TRG	**Tyrgan**	**5.47**	**235**	*e*Pn	Pn	15 58 41.7	+1.7
TRG				*e*Pg	Pb	15 58 55.6	+1.9
TRG				*e*Sn	Sn	15 59 41.4	-2.2
TRG				*e*Sg	Sb	16 00 05.1	+5.3
TRG				Pmax			
	16nm,1.2s						
TRG				Smax			
	50nm,0.9s						
KPC	**Khapcheranga**	**6.49**	**188**	*e*	Pn	15 58 51.9	-2.1
KPC				*e*Pg	Pb	15 59 14.7	+3.6
KPC				*e*Sn	Sn	16 00 06.4	-2.3
KPC				*e*Sg	Sg	16 00 39.2	-6.5
KPC				Pmax			
	7.0nm,0.9s						
KPC				Smax			
	72nm,1.8s						

BYKL 07 15:58:00.3±0.5, 56°.14N×113°.73E, 1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**257**	⇓*i*Pg	Pg	15 58 01.5	-0.7
SVKR				*e*Sg	Sg	15 58 03.4	0.0
UKT	**Uakit**	**0.66**	**185**	*e*Pg	Pg	15 58 12.3	-0.5
UKT				*e*Sg	Sg	15 58 20.5	-0.8
UKT				Pmax			
	72nm,0.5s						
UKT				Smax			
	95nm,0.3s						
NLYR	**Nelyaty**	**1.15**	**71**	*e*Pg	Pg	15 58 20.7	-1.7
NLYR				*e*Pb	Pb	15 58 22.6	-0.5
NLYR				*e*Sg	Sg	15 58 36.5	-0.8
NLYR				*e*Sb	Sn	15 58 39.9	-0.3
NLYR				max			
	191nm,0.6s						

NLYR				max			
	206nm,0.8s						
KMO	**Kumora**	**1.44**	**261**	*e*Pg	Pn	15 58 26.2	-1.5
KMO				*e*		15 58 28.6	
KMO				*e*Sg	Sg	15 58 46.1	-0.5
KMO				*e*Sb	Sn	15 58 48.5	+1.2
KMO				max			
	195nm,0.5s						
KMO				max			
	277nm,0.6s						
BOD	**Bodaibo**	**1.69**	**5**	*e*Sg	Sn	15 58 53.2	-0.2
BOD				Smax			
	110nm,1.0s						
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Pg	Pb	15 58 35.5	-0.9
YLYR				*e*Sn	Sn	15 59 00.1	+0.7
YLYR				*e*Sg	Sb	15 59 00.9	-0.2
YLYR				Pmax			
	119nm,1.0s						
YLYR				Smax			
	182nm,0.2s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	Sg	Sb	15 59 13.8	-0.2
NIZ				Smax			
	75nm,0.5s						
TUP	**Tupik**	**3.95**	**113**	*e*Sg	Sb	16 00 01.9	+2.8

BYKL 07 15:59:22.5±0.1, 56°.14N×113°.73E, h6^{km}±3^{km}, 2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**257**	⇓*i*Pg	Pg	15 59 24.6	-0.1
SVKR				*e*Sg	Sg	15 59 26.4	+0.2
SVKR				Pmax			
	3µm,0.1s						
SVKR				Smax			
	50µm,0.4s						
UKT	**Uakit**	**0.66**	**185**	*e*Pg	Pg	15 59 34.0	-1.1
UKT				*e*Sg	Sg	15 59 42.1	-1.5
UKT				Pmax			
	98nm,0.4s						
UKT				Smax			
	356nm,0.9s						
YOA	**Uoyan**	**1.12**	**270**	*e*Pg	Pg	15 59 42.8	-1.2
YOA				*e*Sg	Sg	15 59 58.4	-0.2
YOA				*e*Sb	Sn	16 00 02.8	+2.3
YOA				Pmax			
	245nm,0.3s						
YOA				max			
	1µm,0.5s						
NLYR	**Nelyaty**	**1.15**	**71**	⇓*i*Pg	Pg	15 59 43.4	-1.2
NLYR				*e*Pb	Pn	15 59 45.7	+0.5
NLYR				*e*Sg	Sg	15 59 59.3	-0.3
NLYR				*e*Sb	Sn	16 00 03.3	+2.0
NLYR				max			
	369nm,0.3s						
NLYR				max			
	839nm,0.9s						
KMO	**Kumora**	**1.44**	**261**	*e*Pg	Pn	15 59 48.5	-0.7
KMO				*e*Pb	Pb	15 59 49.9	+0.1
KMO				*e*Sg	Sb	16 00 06.8	-1.6
KMO				*e*		16 00 10.5	
KMO				max			
	145nm,0.3s						
KMO				max			
	824nm,0.8s						
BOD	**Bodaibo**	**1.69**	**5**	*e*Pg	Pn	15 59 53.0	+0.5
BOD				*e*Sg	Sb	16 00 15.2	-0.3
BOD				Pmax			
	99nm,0.6s						
BOD				Smax			
	246nm,0.3s						
YLYR	**Ulyunkhan**	**1.93**	**230**	*e*Pn	Pn	15 59 56.6	+0.7
YLYR				*e*Pg	Pb	15 59 57.2	-0.9
YLYR				*e*Sg	Sb	16 00 21.9	-0.6
YLYR				Pmax			
	93nm,0.4s						
YLYR				Smax			
	475nm,0.8s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	*e*Pn	Pn	16 00 02.5	+0.4
NIZ				*e*Pg	Pb	16 00 05.2	-0.6
NIZ				*e*Sn	Sn	16 00 30.7	-0.9
NIZ				*e*Sg	Sb	16 00 36.5	+1.1
NIZ				Pmax			
	33nm,0.5s						
NIZ				Smax			
	170nm,0.5s						
CRS	**Chara**	**2.63**	**71**	*e*Pn	Pn	16 00 06.2	+0.7
CRS				*e*Pg	Pb	16 00 10.3	+0.3
CRS				*e*Sn	Sn	16 00 37.6	-0.1
CRS				*e*Sg	Sb	16 00 43.9	+1.4
CRS				Pmax			
	194nm,0.7s						
CRS				Smax			
	138nm,0.6s						
SYVR	**Suvo**	**3.29**	**222**	*e*Pg	Pb	16 00 22.0	+0.8
SYVR				*e*PgPg	Pg	16 00 25.0	-0.5
SYVR				*e*Sn	Sn	16 00 53.4	-0.6
SYVR				*e*Sg	Sb	16 01 04.1	+2.6
SYVR				*e*		16 01 15.2	
SYVR				max			
	44nm,1.2s						
SYVR				max			
	152nm,1.7s						
VTMR	**Vitim**	**3.37**	**350**	*e*Pn	Pn	16 00 15.4	-0.2
VTMR				*e*Pg	Pb	16 00 22.8	+0.2
VTMR				*e*Sn	Sn	16 00 55.9	+0.1
VTMR				*e*Sg	Sb	16 01 06.4	+2.7
TUP	**Tupik**	**3.95**	**113**	*e*Pn	Pn	16 00 23.5	-0.2
TUP				*e*Pg	Pb	16 00 33.6	+1.1
TUP				*e*Sn	Sn	16 01 08.7	-1.6
TUP				*e*Sg	Sg	16 01 25.0	-4.3
TUP				*e*SgSg	SbSb	16 01 28.4	+2.7
TUP				Pmax			
	28nm,0.9s						
TUP				max			
	171nm,1.0s						
MXMB	**Maximikha**	**4.08**	**227**	*e*Pg	Pb	16 00 36.5	+1.8
MXMB				*e*Sn	Sn	16 01 11.7	-1.8
MXMB				*e*Sg	Sg	16 01 29.1	-4.4
OGRR	**Ongureny**	**4.34**	**237**	*e*Pg	Pb	16 00 40.5	+1.4
OGRR				*e*Sn	Sn	16 01 18.3	-1.4
OGRR				*e*Sg	Sb	16 01 35.9	+4.3
OGRR				Pmax			
	26nm,1.2s						
OGRR				Smax			
	69nm,1.5s						
YKLR	**Yuktali**	**4.43**	**81**	*e*Pg	Pb	16 00 41.7	+1.1
YKLR				*e*Sn	Sn	16 01 20.8	-1.2
YKLR				*e*Sg	Sg	16 01 39.6	-5.0
ZRHB	**Zarechye**	**5.26**	**230**	*e*Sg	Sg	16 02 06.0	-5.4
ZRHB				Smax			
	152nm,1.5s						
TRG	**Tyrgan**	**5.48**	**235**	*e*Pg	Pb	16 01 01.2	+2.7
TRG				*e*Sn	Sn	16 01 47.0	-0.9
TRG				*e*Sg	Sb	16 02 11.2	+6.8
TRG				Pmax			
	28nm,1.6s						
TRG				Smax			
	35nm,1.3s						
KPC	**Khapcheranga**	**6.50**	**188**	*e*Pg	Pb	16 01 20.0	+4.1
KPC				*e*Sn	Sn	16 02 11.7	-1.4
KPC				*e*Sg	Sg	16 02 43.2	-7.8
KPC				Pmax			
	22nm,1.4s						
KPC				Smax			
	57nm,1.5s						

BYKL 07 16:00:15.7±0.3, 56°.12N×113°.73E, h8^{km}±5^{km}, 2C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**268**	⇑*i*Pg	Pg	16 00 17.6	-0.5
SVKR				*e*Sg	Sg	16 00 19.6	-0.1
UKT	**Uakit**	**0.64**	**185**	*e*Pg	Pg	16 00 26.5	-1.5
UKT				*e*Sg	Sg	16 00 35.1	-1.1
UKT				Pmax			
	66nm,0.6s						
UKT				Smax			
	114nm,0.8s						
YOA	**Uoyan**	**1.12**	**271**	*e*Pg	Pg	16 00 36.5	-0.7
YOA				*e*Sg	Sg	16 00 50.8	-1.0
YOA				Smax			
	566nm,0.5s						
NLYR	**Nelyaty**	**1.16**	**70**	*e*Pg	Pg	16 00 36.3	-1.7
NLYR				*e*Pb	Pn	16 00 38.8	+0.5
NLYR				*e*Sg	Sg	16 00 52.4	-0.6
NLYR				*e*Sb	Sn	16 00 56.4	+2.1
NLYR				max			
	140nm,0.3s						
NLYR				max			
	178nm,0.6s						
KMO	**Kumora**	**1.44**	**262**	⇑*i*Pg	Pn	16 00 41.5	-0.6
KMO				*e*Pb	Pb	16 00 42.7	-0.1
KMO				*e*Sg	Sb	16 01 01.5	+0.3
KMO				*e*Sb	Sg	16 01 03.8	+1.9
KMO				max			
	65nm,0.2s						
KMO				max			
	233nm,0.7s						
BOD	**Bodaibo**	**1.71**	**5**	*e*Pn	Pn	16 00 45.2	-0.6
BOD				*e*Pg	Pb	16 00 46.4	-0.9
BOD				*e*Sn	Sb	16 01 08.9	-0.1
BOD				*e*Sg	Sn	16 01 09.2	+1.4
BOD				Pmax			
	902nm,0.2s						
BOD				Smax			
	87nm,0.6s						
YLYR	**Ulyunkhan**	**1.92**	**231**	*e*Pn	Pn	16 00 49.0	+0.3
YLYR				*e*Pg	Pb	16 00 49.9	-1.1
YLYR				*e*Sg	Sg	16 01 16.5	-0.9
YLYR				Pmax			
	55nm,1.0s						
YLYR				Smax			
	146nm,0.2s						
NIZ	**Nizh Angarsk**	**2.38**	**263**	*e*Pn	Pn	16 00 54.4	-0.6
NIZ				*e*Pg	Pb	16 00 58.7	-0.1
NIZ				*e*Sg	Sb	16 01 30.1	+1.8
NIZ				Pmax			
	26nm,0.4s						
NIZ				Smax			
	60nm,0.4s						
TUP	**Tupik**	**3.94**	**113**	*e*Sg	Sg	16 02 18.3	-4.0
TUP				Smax			
	45nm,1.0s						

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*IDC **07** 16:14:41.1±2.4, 5°.33S×146°.81E, h149^{km}±23^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.0/33, mbtmp3.7/6, Error ellipse: s-maj=29.1km s-min=21.0km az=79.0*

ISC 07 16:14:41.3±1.5**, 5°.3S**±0°.1×**146°.8E**±0°.2**, h150**^{km}**, n6, σ0ˢ.88**/7**, mb3.5**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.10**	**175**	P	**Pn**	**16 15 43.9**	**+1.1**
	3.6nm,0.3s,baz=312,slow=9.7,SNR=11						
PMG				S	**Sn**	**16 16 29.5**	**-1.3**
	2.2nm,0.3s,baz=327,slow=22,SNR=3.5						
JAY	**Jayapura**	**6.66**	**294**	P	**Pn**	**16 16 16.8**	**-0.1**
	2.2nm,0.3s,baz=129,slow=13,SNR=9.4						
WRA	**Warramunga Arr**	**18.93**	**219**	P	**P**	**16 18 50.7**	**-0.1**
	0.2nm,0.3s,baz=44,slow=9.6,SNR=2.3						
ASAR	**Alice Springs**	**22.07**	**213**	P	**P**	**16 19 24.1**	**-0.3**
	0.3nm,0.5s,baz=46,slow=7.7,SNR=15						
FITZ	**Fitzroy Crossi**	**24.25**	**237**	P	**P**	**16 19 45.0**	**+0.4**
	1.5nm,0.4s,baz=39,slow=14,SNR=1.6						
ILAR	**Eielson Array**	**84.93**	**23**	P	**P**	**16 26 58.9**	**-0.3**
	0.4nm,0.6s,baz=248,slow=5.0,SNR=8.4						

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*IDC **07** 16:26:02.2±0.6, 28°.64N×51°.89E, h0^{km}, mb4.4/27, mb1 4.5/32, mb1mx4.4/49, mbtmp4.4/32, ML4.0/5, MS3.6/21, Ms1 3.6/21, ms1mx3.4/54, Error ellipse: s-maj=13.7km s-min=11.5km az=6.0*

*TEH **07** 16:26:03.6, 28°.71N×51°.87E, h8^{km}, ML4.7*

*NEIC **07** 16:26:04.2±2.1, 28°.73N±0°.04×51°.86E±0°.06, h10^{km}±1^{km}, mb4.7/65, mb_Lg4.7(TEH), ML4.6(THR), Error ellipse: s-maj=9.8km s-min=6.9km az=245.0*

*MOS **07** 16:26:05.4±1.1, 28°.65N×51°.84E, h30^{km}, mb4.7/29, Error ellipse: s-maj=5.5km s-min=4.0km az=85.5*

*DSN **07** 16:26:06.4±1.5, 28°.58N×51°.99E, h10^{km}, ML4.9/12, Error ellipse: s-maj=21.1km s-min=6.1km az=4.0*

*OMAN **07** 16:26:08.6±1.0, 28°.20N×51°.86E, h10^{km}±6^{km}, mb6.0/17, ml4.7/3, Error ellipse: s-maj=9.5km s-min=3.3km az=136.0*

ISC 07 16:26:03.4±1.2**, 28°.67N**±0°.03×**51°.82E**±0°.03**, h6**^{km}±7^{km}**, n441, σ1ˢ.37**/460**, mb4.7**/133**, MS3.6**/19**, 37C-16D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.50**	**293**	*e*Pg	**Pb**	**16 26 14.2**	**-0.3**
KAZ1	**Kazerun**	**0.96**	**351**	Pg	**Pg**	**16 26 20.5**	**-1.3**
KAZ1	**Kazerun**	**0.96**	**351**	*e*Pg	**Pg**	**16 26 21.0**	**-0.8**
KAZ1				*e*		16 26 55.8	
	comp=Z,99nm,0.9s						
QIR1	**Qir**	**1.10**	**100**	*e*Pg	**Pg**	**16 26 24.7**	**+0.3**
QIR1				*e*		16 26 48.8	
	comp=Z,99nm,0.5s						
SHI	**Shiraz**	**1.14**	**32**	*e*Pg	**Pg**	**16 26 23.9**	**-1.4**
JHRM	**Jahrom**	**1.56**	**96**		**Pg**	**16 26 33.8**	**+0.6**
JHRM	**Jahrom**	**1.56**	**96**	*e*Pg	**Pb**	**16 26 33.4**	**+0.8**
JHRM				*e*		16 27 00.2	
	comp=Z,99nm,0.6s						
LMD1	**Lamerd**	**1.78**	**138**	Pn	**Pb**	**16 26 36.9**	**+0.5**
LMD1	**Lamerd**	**1.78**	**138**	*e*Pn	**Pb**	**16 26 37.0**	**+0.5**
LMD1				*e*		16 27 27.4	
	comp=Z,99nm,0.6s						
KLNJ	**Kolanjah**	**2.33**	**355**	Pn	**Pn**	**16 26 42.0**	**-0.6**
KLNJ	**Kolanjah**	**2.33**	**355**	*e*Pn	**Pn**	**16 26 43.5**	**+0.9**
ABEH	**Behbahan**	**2.35**	**325**	*e*Pn	**Pb**	**16 26 45.4**	**-0.8**
LAR1	**LAR**	**2.47**	**113**	Pn	**Pn**	**16 26 44.5**	**+0.3**
LAR1	**LAR**	**2.47**	**113**	*e*Pn	**Pn**	**16 26 45.3**	**+1.1**
IRAM	**Ramesheh**	**3.16**	**9**	*e*Pn	**Pn**	**16 26 54.5**	**+0.6**
QRN	**Al-Qurain**	**3.43**	**272**	*e*P		16 26 58.9	
ISAD	**Sadrabad**	**3.61**	**26**	*e*Pn	**Pn**	**16 27 02.3**	**+2.2**
IMEH	**Mehriz**	**3.63**	**41**	*e*Pn	**Pn**	**16 27 02.1**	**+1.7**
KBD	**Kabd**	**3.65**	**279**	*e*P		16 27 02.4	
UMR	**Umm Al-Rimmam**	**3.69**	**285**	*e*P		16 27 03.2	
AMIS	**Naft Sefid**	**3.70**	**324**	*e*Pn	**Pn**	**16 27 02.8**	**+1.7**
IGAR	**Gharneh**	**3.72**	**3**	Pn	**Pn**	**16 27 01.9**	**+0.3**
IGAR	**Gharneh**	**3.72**	**3**	*e*Pn	**Pn**	**16 27 02.5**	**+0.9**
SHK1	**Shahrekord**	**3.73**	**348**	*e*Pn	**Pn**	**16 27 02.2**	**+0.5**
RDF	**Al-Radifah**	**3.75**	**275**	*e*P		16 27 04.0	
JRN	**Qarnain Island**	**3.83**	**166**	*e*Pn	**Pn**	**16 27 05.2**	**+2.4**
BNDS	**Bandar-Abbas**	**4.05**	**107**	Pn	**Pn**	**16 27 07.0**	**+1.0**
BNDS	**Bandar-Abbas**	**4.05**	**107**	*e*Pn	**Pn**	**16 27 07.2**	**+1.2**
GENO	**Geno**	**4.05**	**107**	*e*Pn	**Pn**	**16 27 06.6**	**+0.5**
MIB	**Mutribah**	**4.07**	**287**	*e*P		16 27 08.5	
IPIR	**Pirpir**	**4.08**	**349**	Pn	**Pn**	**16 27 06.2**	**-0.3**
IPIR	**Pirpir**	**4.08**	**349**	*e*Pn	**Pn**	**16 27 06.4**	**-0.1**
ICHK	**Chekchek**	**4.20**	**31**	*e*Pn	**Pn**	**16 27 09.2**	**+1.0**
IZEF	**Zefreh**	**4.23**	**6**	*e*Pn	**Pn**	**16 27 09.5**	**+0.9**
RST	**Umm Al-Ruwaisa**	**4.30**	**282**	*e*P		16 27 11.9	
SHGR	**Shooshtar-Gavs**	**4.30**	**323**	Pn	**Pn**	**16 27 11.0**	**+1.7**
SHGR	**Shooshtar-Gavs**	**4.30**	**323**	*e*Pn	**Pn**	**16 27 11.5**	**+2.2**
IBAF	**Bafgh**	**4.36**	**47**	*e*Pn	**Pn**	**16 27 11.8**	**+1.6**
KHGB	**Koh Gabri**	**4.40**	**66**	*e*Pn	**Pn**	**16 27 12.2**	**+1.3**
NGRK	**Negar Kerman**	**4.40**	**76**	*e*Pn	**Pn**	**16 27 12.2**	**+1.1**
NGRK				*e*		16 28 42.3	
	comp=Z,99nm,0.6s						
YZKH	**Yazd**	**4.41**	**32**	Pn	**Pn**	**16 27 11.0**	**+0.1**
YZKH	**Yazd**	**4.41**	**32**	*e*Pn	**Pn**	**16 27 12.0**	**+1.1**
KRBR	**Kerman**	**4.51**	**72**	Pn	**Pn**	**16 27 13.0**	**+0.6**
KRBR	**Kerman**	**4.51**	**72**	*e*Pn	**Pn**	**16 27 13.5**	**+1.1**
TVBK	**TV Kerman**	**4.51**	**72**	*e*Pn	**Pn**	**16 27 14.3**	**+1.8**
TVBK				*e*		16 27 29.4	
	comp=Z,99nm,0.5s						
SLWR	**Sila**	**4.59**	**181**	*e*Pn	**Pn**	**16 27 15.9**	**+2.7**
IKLH	**Kolahrood**	**4.63**	**358**	*e*Pn	**Pn**	**16 27 14.8**	**+0.6**
SHME	**Shamm**	**4.65**	**123**	P	**Pn**	**16 27 14.6**	**+0.5**
SHME				S	**Sn**	**16 28 07.0**	**-1.4**
SHME	**Shamm**	**4.65**	**123**	*e*Pn	**Pn**	**16 27 13.7**	**-0.4**
ANAR	**Anarak**	**4.79**	**20**	*e*Pn	**Pn**	**16 27 16.8**	**+0.6**
BANOM	**Banah**	**4.84**	**123**	*i* P	**Pn**	**16 27 17.0**	**+0.2**
	SNR=90						
BANOM				S	**Sn**	**16 28 11.3**	**-1.8**
BANOM	**Banah**	**4.84**	**123**	*e*Pn	**Pn**	**16 27 17.6**	**+0.9**
BANOM	**Banah**	**4.84**	**123**	P	**Pn**	**16 27 17.2**	**+0.5**
	SNR=90						
BANOM				S	**Sn**	**16 28 11.4**	**-1.7**
AJN	**Ajban**	**4.98**	**145**	*i* P	**Pn**	**16 27 20.0**	**+1.3**
	SNR=23						
AJN	**Ajban**	**4.98**	**145**	*e*Pn	**Pn**	**16 27 20.2**	**+1.5**
NAZ	**Nazwa, Dubai**	**5.03**	**136**	*i* P	**Pn**	**16 27 20.7**	**+1.4**
	SNR=14						
NAZ	**Nazwa, Dubai**	**5.03**	**136**	*e*Pn	**Pn**	**16 27 21.2**	**+1.9**
QAM	**Ghamsar**	**5.08**	**356**	*e*Pn	**Pn**	**16 27 21.8**	**+1.6**
MSFE	**Esma-Masafi**	**5.09**	**129**	*i* P	**Pn**	**16 27 20.6**	**+0.4**
	SNR=22						
MSFE	**Esma-Masafi**	**5.09**	**129**	*e*Pn	**Pn**	**16 27 21.2**	**+1.0**
ASUD	**Al Ashush, Dub**	**5.11**	**141**	*i* P	**Pn**	**16 27 22.3**	**+1.9**
	SNR=84						
ASUD	**Al Ashush, Dub**	**5.11**	**141**	*e*Pn	**Pn**	**16 27 22.6**	**+2.1**
CHMN	**Cheshme madani**	**5.14**	**75**	*e*Pn	**Pn**	**16 27 22.2**	**+1.1**
CHMN				*e*		16 27 51.7	
	comp=Z,99nm,1.2s						
FAQ	**Al Faqa, Dubai**	**5.17**	**138**	*i* P	**Pn**	**16 27 22.3**	**+1.1**
	SNR=21						
FAQ	**Al Faqa, Dubai**	**5.17**	**138**	*e*Pn	**Pn**	**16 27 22.6**	**+1.4**
MDH	**Madha**	**5.22**	**129**	*i* P	**Pn**	**16 27 21.6**	**-0.4**
	SNR=15						
MDH	**Madha**	**5.22**	**129**	*e*Pn	**Pn**	**16 27 22.7**	**+0.7**
MDH	**Madha**	**5.22**	**129**	P	**Pn**	**16 27 22.4**	**+0.4**
	SNR=15						
MDH				S	**Sn**	**16 28 20.3**	**-2.2**
MZWR	**Madinat Zayed**	**5.23**	**159**	*e*Pn	**Pn**	**16 27 24.0**	**+1.9**
KRSH	**Karshahi**	**5.29**	**3**	*e*Pn	**Pn**	**16 27 23.5**	**+0.5**
UOSS	**Minazif**	**5.40**	**132**	*i* P	**Pn**	**16 27 24.3**	**-0.2**
	SNR=20						
UOSS	**Minazif**	**5.40**	**132**	Pn	**Pn**	**16 27 24.4**	**0.0**
UOSS				Sn	**Sn**	**16 28 22.9**	**-4.0**
HATD	**Hatta, Dubai**	**5.44**	**134**	*i* P	**Pn**	**16 27 25.4**	**+0.4**
	SNR=26						
HATD	**Hatta, Dubai**	**5.44**	**134**	*e*Pn	**Pn**	**16 27 25.8**	**+0.8**
ASHO	**Ashiyiah**	**5.49**	**135**	*i* P	**Pn**	**16 27 26.2**	**+0.4**
	SNR=61						
ASHO	**Ashiyiah**	**5.49**	**135**	*e*Pn	**Pn**	**16 27 26.4**	**+0.7**
ASHO	**Ashiyiah**	**5.49**	**135**	P	**Pn**	**16 27 26.5**	**+0.7**
	SNR=41						
ASHO				S	**Sn**	**16 28 27.7**	**-1.6**
IKMR	**Kamar-syah**	**5.66**	**329**	*e*Pn	**Pn**	**16 27 29.2**	**+1.3**
ALNE	**Al Ain**	**5.79**	**142**	*i* P	**Pn**	**16 27 31.2**	**+1.3**
	SNR=43						
ALNE	**Al Ain**	**5.79**	**142**	*e*Pn	**Pn**	**16 27 31.7**	**+1.8**
KBAM	**BAM**	**5.83**	**84**	*e*Pn	**Pn**	**16 27 32.1**	**+1.6**
KBAM				*e*		16 27 40.0	
	comp=Z,99nm,0.3s						
TPRV	**Parvadeh(Tabas**	**6.03**	**43**	*e*Pn	**Pn**	**16 27 34.1**	**+0.9**
IQOM	**Qom**	**6.18**	**354**	*e*Pn	**Pn**	**16 27 35.3**	**-0.1**
SOHO	**SOHO**	**6.19**	**136**	*i* P	**Pn**	**16 27 35.3**	**+0.1**
	SNR=41						
SOHO	**SOHO**	**6.19**	**136**	*e*Pn	**Pn**	**16 27 35.8**	**+0.5**
SOHO	**SOHO**	**6.19**	**136**	P	**Pn**	**16 27 35.7**	**+0.5**
IVRN	**Varamin**	**6.30**	**359**	*e*Pn	**Pn**	**16 27 37.2**	**+0.3**
UMZA	**Um Al Zommool**	**6.66**	**152**	*e*Pn	**Pn**	**16 27 42.8**	**+1.1**
TNSJ	**Nastanj**	**6.68**	**37**	*e*Pn	**Pn**	**16 27 42.8**	**+0.7**
TKDS	**Koohdasht(Taba**	**6.70**	**41**	*e*Pn	**Pn**	**16 27 42.8**	**+0.4**
TABS	**Tabas**	**6.72**	**41**	Pn	**Pn**	**16 27 43.0**	**+0.3**
TABS	**Tabas**	**6.72**	**41**	*e*Pn	**Pn**	**16 27 43.8**	**+1.1**
ILAS	**Lasjerd**	**6.76**	**8**	*e*Pn	**Pn**	**16 27 44.0**	**+0.7**
ARQ	**Araqi**	**6.79**	**140**	P	**Pn**	**16 27 44.2**	**+0.6**
	SNR=9.7						
IDMV	**Damavand**	**6.88**	**1**	*e*Pn	**Pn**	**16 27 45.2**	**+0.1**
IRAZ	**Razeghan**	**6.90**	**347**	*e*Pn	**Pn**	**16 27 46.6**	**+1.4**
IANJ	**Anjilo**	**7.00**	**14**	*e*Pn	**Pn**	**16 27 47.0**	**+0.3**
HOQ	**Hoqain**	**7.08**	**135**	P	**Pn**	**16 27 48.1**	**+0.6**
	SNR=24						
HOQ				S	**Sn**	**16 29 05.0**	**-3.2**
HSRG	**Sareghieh**	**7.21**	**336**	*e*Pn	**Pn**	**16 27 50.6**	**+1.1**
IVIS	**Veis**	**7.21**	**325**	*e*Pn	**Pn**	**16 27 51.2**	**+1.8**
QABG	**Abgarm-Qazvin**	**7.26**	**345**	*e*Pn	**Pn**	**16 27 50.0**	**-0.3**
ITEG	**Tejag**	**7.30**	**53**	*e*Pn	**Pn**	**16 27 51.3**	**+0.6**
IDHR	**Dehrash**	**7.58**	**324**	*e*Pn	**Pn**	**16 27 55.7**	**+1.1**
NHDN	**Nehbandan**	**7.63**	**67**	*e*Pn	**Pn**	**16 27 56.2**	**+1.0**
BSY	**Bisya**	**7.64**	**139**	P	**Pn**	**16 27 55.7**	**+0.5**
	SNR=59						
BIDO	**Bidbid**	**7.65**	**131**	*e*Pn	**Pn**	**16 27 56.2**	**+0.9**
BIDO	**Bidbid**	**7.65**	**131**	P	**Pn**	**16 27 54.4**	**-0.9**
BIDO				S	**Sn**	**16 29 19.4**	**-2.9**
RAYN	**Ar Rayn**	**7.65**	**229**	*i* P	**Pn**	**16 27 56.4**	**+1.0**
	SNR=51						
RAYN	**Ar Rayn**	**7.65**	**229**	P	**Pn**	**16 27 56.3**	**+0.9**
RAYN	**Ar Rayn**	**7.65**	**229**	Pn	**Pn**	**16 27 56.3**	**+0.9**
AFRZ	**Afriz**	**7.78**	**51**	*e*Pn	**Pn**	**16 27 57.4**	**+0.1**
SMDO	**Samad**	**7.92**	**133**	P	**Pn**	**16 27 59.0**	**-0.1**
	SNR=30						
SMDO				S	**Sn**	**16 29 26.5**	**-2.6**
IMON	**Monand**	**8.11**	**54**	*e*Pn	**Pn**	**16 28 05.4**	**+3.6**
WSAR	**Wadi Sarin**	**8.18**	**130**	Pn	**Pn**	**16 28 02.2**	**-0.3**
	comp=Z,3.9nm,0.3s,baz=327,slow=5.9,SNR=54						
WSAR				Sn	**Sn**	**16 29 30.5**	**-4.8**
	comp=Z,9.2nm,0.3s,baz=153,slow=22,SNR=13						
JMDO	**Jabal Madar**	**8.46**	**136**	P	**Pn**	**16 28 05.9**	**-0.6**
	SNR=13						
WBK	**Wadi Bani Khal**	**8.84**	**131**	P	**Pn**	**16 28 11.0**	**-0.7**
	SNR=30						
SBZV	**Sabzevar**	**9.11**	**31**	*e*Pn	**Pn**	**16 28 16.2**	**+0.6**
JLN	**Jalan Bani Buh**	**9.45**	**132**	P	**Pn**	**16 28 18.7**	**-1.3**
	SNR=18						
MHTO	**MHTO**	**9.47**	**143**	P	**Pn**	**16 28 20.5**	**+0.1**
	SNR=95						
DQM	**DQM**	**10.15**	**148**	P	**Pn**	**16 28 29.0**	**-0.6**
	SNR=11						
DOK	**Doka**	**10.23**	**168**	P	**Pn**	**16 28 30.2**	**-0.6**
	SNR=19						
IMYA	**Miami**	**10.36**	**40**	*e*Pn	**Pn**	**16 28 32.4**	**-0.2**
HRA	**Herat**	**10.56**	**55**		**Pn**	**16 28 37.2**	**+1.8**
GEYT	**Alibeck**	**10.62**	**28**	Pn	**Pn**	**16 28 35.6**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=209,slow=15,SNR=9.4						
GEYT				LR	LR	16 33 46.5	
	comp=Z,138nm,19.3s,baz=15,slow=44						
GYA0B	**ALIBECK ARRAY**	**10.62**	**28**	Pn	**Pn**	**16 28 38.6**	**+2.5**
WHFO	**Wadi Hawf**	**10.85**	**170**	P	**Pn**	**16 28 38.0**	**-1.4**
	SNR=73						
WHFO				S	**Sn**	**16 30 35.8**	**-5.4**
SHAO	**Shalim**	**11.16**	**161**	P	**Pn**	**16 28 42.2**	**-1.4**
	SNR=14						
DMTO	**DMTO**	**11.28**	**165**	P	**Pn**	**16 28 43.7**	**-1.4**
	SNR=34						
DMTO				⇓S	**Sn**	**16 30 46.6**	**-4.9**
RBK	**Rabkut**	**11.33**	**168**	P	**Pn**	**16 28 45.0**	**-0.9**
	SNR=11						
ABTO	**Aybut**	**11.35**	**173**	P	**Pn**	**16 28 45.0**	**-1.2**
	SNR=24						
MARD	**Mardin**	**12.64**	**316**	Pn	**Pn**	**16 29 02.9**	**-0.9**
MMAI	**Mount Meron Ar**	**14.75**	**291**	Pn	**Pn**	**16 29 31.9**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=109,slow=16,SNR=2.3						
MMAI				LR	LR	16 36 51.4	
	comp=Z,90nm,20.2s,baz=220,slow=44						
EIL	**Elat**	**14.77**	**278**	LR	LR	16 36 20.2	
	comp=Z,348nm,18.2s,baz=94,slow=42						
ZEI	**Tsey**	**15.47**	**338**	*e*P	**P**	**16 29 44.6**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s						
KBL	**Kabul**	**15.79**	**64**	P	**Pn**	**16 29 48.1**	**+1.6**
KBL				pmax	pmax		
	comp=Z,40nm,1.4s						
KBL	**Kabul**	**15.79**	**64**		**Pn**	**16 29 48.1**	**+1.6**
KBZ	**Khabaz**	**16.64**	**337**	Pn	**P**	**16 29 58.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=7.4						
KBZ	**Khabaz**	**16.64**	**337**	⇑*e*P	**P**	**16 29 59.7**	**+0.1**
KIV	**Kislovodsk**	**16.91**	**337**	*e*P	**P**	**16 30 01.8**	**-1.0**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,63nm,14.0s						
KIV	**Kislovodsk**	**16.91**	**337**	P	**P**	**16 30 04.3**	**+1.6**
THW	**Thamme Wali**	**17.61**	**72**	P	**Pn**	**16 30 08.6**	**-0.8**
SOC	**Sochi**	**17.77**	**330**	*e*P	**Pn**	**16 30 10.9**	**-0.4**
SOC				*e*		16 33 31.1	
SOC				MLR	MLR		
	comp=Z,77nm,14.0s						
CEP	**Cherat**	**17.92**	**68**	P	**Pn**	**16 30 13.5**	**+0.1**
BR131	**Keskin Array S**	**18.61**	**311**	P	**Pn**	**16 30 22.8**	**+1.1**
BR131				pmax	pmax		
	comp=Z,14nm,0.9s						
BR131	**Keskin Array S**	**18.61**	**311**	P	**Pn**	**16 30 22.8**	**+1.1**
BRTR	**Keskin Array B**	**18.61**	**311**	P	**Pn**	**16 30 21.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=131,slow=12,SNR=13						
NIL	**Nilore**	**18.99**	**69**	P	**P**	**16 30 24.2**	**-1.5**
NIL				pmax	pmax		
	comp=Z,17nm,0.7s						
NIL	**Nilore**	**18.99**	**69**	P	**P**	**16 30 24.2**	**-1.5**
ATD	**Arta Tunnel**	**19.01**	**208**	LR	LR	16 38 45.6	
	comp=Z,392nm,18.1s,baz=44,slow=40						
ANN	**Anapa**	**19.75**	**328**	*e*P	**P**	**16 30 33.3**	**-0.5**

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ANN                               eS      S       16 34 16.2 -0.4
ANN                               pmax    pmax
      comp=Z,58nm,1.0s
IUG   Iuzhnay           19.97  43 eP      P       16 30 36.9 +0.4
      baz=43
IUG   Iuzhnay           19.97  43 eP      P       16 30 36.8 +0.4
ELL   Elmali            20.09 299 P       Pn      16 30 40.0 +0.5
ELL                               pmax    pmax
      comp=Z,169nm,1.4s
ELL   Elmali            20.09 299 P       Pn      16 30 40.0 +0.5
KK31  Karatay Array     20.83  41 P       P       16 30 45.4 -0.2
KK31                              pmax    pmax
      comp=Z,17nm,0.9s
KK31  Karatay Array     20.83  41 P       P       16 30 45.4 -0.2
KKAR  Karatay Array     20.83  41 P       P       16 30 45.3 -0.3
KKAR                              pmax    pmax
      comp=Z,17nm,0.9s
KKAR  Karatay Array     20.83  41 P       P       16 30 45.3 -0.3
DZA   Taraz             21.19  43 eP      P       16 30 49.5 -0.1
      baz=43
DZA   Taraz             21.19  43 eP      P       16 30 49.4 -0.1
ARSB  Arslanbob         21.38  48 P       P       16 30 51.3 -0.4
ARSB                              pmax    pmax
      comp=Z,39nm,1.1s
ARSB  Arslanbob         21.38  48 P       P       16 30 51.3 -0.4
ARSB                              IAmb    IAmb    16 30 57.8
      comp=Z,39nm,1.1s
AB31  Akbulak array     21.48  15 i P     P       16 30 52.6 +0.1
AB31                              pmax    pmax
      comp=Z,6.0nm,0.6s
ABKAR Akbulak array     21.48  15 P       P       16 30 51.7 -0.8
AKTO  Aktyubinsk        22.24  11 P       P       16 31 01.2 +0.5
      comp=Z,4.6nm,0.4s,baz=201,slow=9.7,SNR=17
AKTO                              LR      LR      16 41 12.7
      comp=Z,84nm,20.3s,baz=167,slow=41
AML   Almayashu         22.24  47 P       P       16 31 00.5 -0.7
      SNR=18
EKS2  Erkin-Say         22.56  46 P       P       16 31 09.1 +4.7
      SNR=8.8
KSH   Kashi             22.67  55 P       P       16 31 02.3 -3.3
KSH                               sP      sP      16 31 08.2 -0.3
KSH                               S       S       16 35 00.3  -14
KSH                               sS      pS      16 35 07.6 -9.1
KSH                               SS      SnSn    16 35 39.5 -4.1
KSH                               pmax    pmax
      comp=Z,16nm,0.6s
KSH                               pmax    pmax
      comp=Z,410nm,6.1s
KSH                               LR      LR
      comp=N,640nm,7.4s
KSH                               LR      LR
      comp=E,510nm,6.4s
KSH                               LR      LR
      comp=Z,340nm,8.0s
UCH   Uchtor            22.82  48 P       P       16 31 09.1 +1.7
      SNR=12
AAK   Ala-Archa         23.01  47 P       P       16 31 09.6 +0.5
      comp=Z,2.9nm,0.4s,baz=222,slow=8.3,SNR=18
AAK                               LR      LR      16 41 43.7
      comp=Z,268nm,21.7s,baz=256,slow=41
AAK   Ala-Archa         23.01  47 P       P       16 31 11.0 +1.9
      SNR=9.4
AAK   Ala-Archa         23.01  47⇓eP      P       16 31 11.3 +2.2
AAK   Ala-Archa         23.01  47 P       P       16 31 10.1 +1.0
AAK                               IAmb    IAmb    16 31 17.9
      comp=Z,15nm,0.9s
KBK   Karagaybulak      23.31  47 P       P       16 31 14.0 +1.8
      SNR=6.9
SGDS  Sogindy           23.51  45 eP      P       16 31 15.0 +0.9
      baz=45
SGDS  Sogindy           23.51  45 eP      P       16 31 14.9 +0.9
VRH   Novokhopyorsk     23.75 344 eP      P       16 31 16.6 +0.4
VRH                               pmax    pmax
      comp=Z,20nm,0.9s
BOOM  Boomskoye usch    23.87  48 P       P       16 31 19.5 +1.7
BOOM                              pmax    pmax
      comp=Z,10.0nm,0.9s
BOOM  Boomskoye usch    23.87  48 P       P       16 31 19.4 +1.7
BELG  Belogornoye       23.90 354ceP      P       16 31 19.3 +1.7
BELG                              pmax    pmax
      comp=Z,7.0nm,1.3s
BTLS  Baital            24.03  41 eP      P       16 31 18.9 -0.1
      baz=42
BTLS  Baital            24.03  41 eP      P       16 31 18.9 -0.1
VSR   Storozhevoye      24.45 341 eP      P       16 31 22.1 -0.7
VSR                               pmax    pmax
      comp=Z,30nm,1.8s
MTBS  Maitube           24.49  47 eP      P       16 31 24.0 +0.6
      baz=48
MTBS  Maitube           24.49  47 eP      P       16 31 24.0 +0.6
KDJ   Kajisay           24.54  50 P       P       16 31 26.8 +2.8
KDJ                               pmax    pmax
      comp=Z,11nm,0.9s
KDJ   Kajisay           24.54  50 P       P       16 31 26.8 +2.8
KDJ                               IAmb    IAmb    16 31 33.3
      comp=Z,11nm,0.8s
TNSS  Tian-Shan         24.78  48 eP      P       16 31 27.6 +1.1
      baz=48
TNSS  Tian-Shan         24.78  48 eP      P       16 31 27.5 +1.1
KUU   Kurty             24.80  46 eP      P       16 31 26.6 +0.4
      comp=Z,35nm,1.8s,baz=46
KUU   Kurty             24.80  46 eP      P       16 31 26.5 +0.4
KUU                               pmax    pmax
      comp=Z,35nm,1.8s
AAA   Alma-Ata          24.84  48 eP      P       16 31 27.1 +0.6
      baz=48
AAA   Alma-Ata          24.84  48 eP      P       16 31 27.1 +0.6
MDOK  Medeo             24.91  48 eP      P       16 31 27.1 -0.1
      baz=48
MDOK  Medeo             24.91  48 eP      P       16 31 27.1 -0.1
CFR   Carcaliu          24.96 318 ⇑P      P       16 31 28.2 +0.7
CFR   Carcaliu          24.96 318 ⇑P      P       16 31 28.2 +0.7
CHKK  Chushkaly         25.19  46 eP      P       16 31 30.1 +0.4
      baz=47
CHKK  Chushkaly         25.19  46 eP      P       16 31 30.0 +0.4
PRZ   Przheval'sk       25.51  50 P       P       16 31 34.5 +1.7
PRZ                               pmax    pmax
      comp=Z,15nm,0.8s
PRZ   Przheval'sk       25.51  50 P       P       16 31 34.5 +1.7
PRZ                               IAmb    IAmb    16 31 38.2
      comp=Z,15nm,0.8s
MILM  Milestii Mici     25.58 322 ⇑P      P       16 31 33.4 +0.3
LPSR  Galich'ya Gora    25.75 342 eP      P       16 31 34.7 +0.2
LPSR                              pmax    pmax
      comp=Z,20nm,1.1s
SATY  Saty              25.75  49 eP      P       16 31 36.0 +1.1
      comp=Z,14nm,1.6s,baz=49
SATY  Saty              25.75  49 eP      P       16 31 35.9 +1.1
SATY                              pmax    pmax
      comp=Z,14nm,1.6s
KPKS  Kokpek            26.11  48 eP      P       16 31 38.5 +0.4
      baz=49
KPKS  Kokpek            26.11  48 eP      P       16 31 38.4 +0.4
VRI   Vrincioaia        26.16 318 ⇑P      P       16 31 40.0 +1.6
VRI   Vrincioaia        26.16 318 ⇑P      P       16 31 40.0 +1.6
PLOR  Plostina          26.20 318 ⇑P      P       16 31 41.4 +2.6
PLOR  Plostina          26.20 318 ⇑P      P       16 31 41.4 +2.6
MLR   Muntele Rosu      26.44 316 P       P       16 31 42.7 +1.7
      comp=Z,14nm,1.0s,baz=37,slow=16,SNR=8.5
MLR                               LR      LR      16 43 40.8
      comp=Z,124nm,20.5s,baz=116,slow=40
MLR   Muntele Rosu      26.44 316 ⇑P      P       16 31 43.2 +2.2
MLR   Muntele Rosu      26.44 316 ⇑P      P       16 31 43.2 +2.2
MLR   Muntele Rosu      26.44 316 P       P       16 31 43.6 +2.6
MLR                               IAmb    IAmb    16 31 47.7
      comp=Z,24nm,1.2s
SHLS  Shalkode          26.50  50 eP      P       16 31 45.0 +3.3
      baz=50
SHLS  Shalkode          26.50  50 eP      P       16 31 44.9 +3.3
BRZS  Berezniki         26.54  31 eP      P       16 31 42.6 +0.9
      baz=31
BRZS  Berezniki         26.54  31 eP      P       16 31 42.6 +0.9
TESR  Tescani           26.56 319 ⇑P      P       16 31 43.2 +1.2
SORM  Soroca            26.57 323 ⇑P      P       16 31 41.8 -0.3
SORM  Soroca            26.57 323 ⇑P      P       16 31 41.8 -0.3
TDK   Taldyqorghan      26.63  45 eP      P       16 31 42.6 -0.1
      comp=Z,19nm,1.0s,baz=45
TDK   Taldyqorghan      26.63  45 eP      P       16 31 42.6 -0.1
TDK                               pmax    pmax
      comp=Z,19nm,1.0s
OZUR                    26.84 317 ⇑P      P       16 31 46.1 +1.5
VTS   Vitosha           26.92 309 ⇑P      P       16 31 47.3 +1.8
VTS   Vitosha           26.92 309 ⇑P      P       16 31 47.3 +1.8
VOIR                    26.96 316 ⇑P      P       16 31 46.2 +0.5
VOIR                    26.96 316 ⇑P      P       16 31 46.2 +0.5
BIZ   Bicaz             27.11 319 ⇑P      P       16 31 48.4 +1.5
PYUN  Piuthan           27.39  84 eP      P       16 31 49.2 -0.7
      comp=Z,74nm,0.9s
AKASG Malin Array Be    27.84 328 P       P       16 31 53.1 -0.3
      comp=Z,1.3nm,0.4s,baz=117,slow=7.2,SNR=16
AKASG Malin Array Be    27.84 328ceP      P       16 31 53.0 -0.3
AKASG                             pmax    pmax
      comp=Z,2.0nm,0.5s
AKBB  Malin Array Si    27.84 328⇓eP      P       16 31 52.6 -0.8
AKBB                              pmax    pmax
      comp=Z,15nm,1.1s
AKBB  Malin Array Si    27.84 328 P       P       16 31 53.3 -0.1
AKBB                              IAmb    IAmb    16 31 55.5
      comp=Z,19nm,1.3s
BRVK  Borovoye          27.91  24⇑eP      P       16 31 54.5 +0.5
BRVK                              pmax    pmax
      comp=Z,4.0nm,1.3s
BRVK  Borovoye          27.91  24 P       P       16 31 54.0  0.0
BVAR  Borovoye Array    27.92  24 P       P       16 31 53.2 -1.0
      comp=Z,1.3nm,0.6s,baz=210,slow=12,SNR=14
KOLN  Koldanda          27.98  84 eP      P       16 31 54.2 -1.0
BURAR Bucovina Array    27.98 320 ⇑P      P       16 31 55.8 +0.9
BURAR Bucovina Array    27.98 320 ⇑P      P       16 31 55.8 +0.9
BUR08 Bucovina Ar. S    28.01 320 P       P       16 31 56.5 +1.4
DANN  Dangsing          28.03  83 eP      P       16 31 55.9 +0.2
      comp=Z,87nm,0.9s
ARU   Arti              28.15   8 P       P       16 31 57.2 +1.1
      comp=Z,0.4nm,0.4s,baz=193,slow=18,SNR=1.7
ARU   Arti              28.15   8c iP     P       16 31 57.2 +1.1
ARU                                               16 32 41.2
ARU                               S       S       16 36 44.8 +3.2
ARU                               SS      SnSn    16 38 01.0 +4.0
ARU                               pmax    pmax
      comp=Z,6.0nm,1.2s
GZR   Gura Zlata        28.35 314 ⇑P      P       16 31 58.8 +0.6
GZR   Gura Zlata        28.35 314 ⇑P      P       16 31 58.8 +0.6
OBN   Obninsk           28.62 342 LR      LR      16 44 39.8
      comp=Z,28nm,19.9s,baz=120,slow=39
OBN   Obninsk           28.62 342⇓eP      P       16 32 02.5 +2.2
OBN                               e               16 32 50.6
OBN                               pmax    pmax
      comp=Z,35nm,1.9s
MDVR  Moldovita         28.78 312 ⇓P      P       16 32 02.0  0.0
GKN   Gorkha            28.85  83 eP      P       16 32 02.1 -0.7
      comp=Z,8.5nm,0.3s
BZS   Buzias            29.19 314 ⇓P      P       16 32 06.9 +1.4
BZS   Buzias            29.19 314 ⇓P      P       16 32 06.9 +1.4
DMN   Daman             29.32  84 eP      P       16 32 06.2 -1.0
      comp=Z,18nm,0.7s
KKN   Kakani            29.44  84 eP      P       16 32 07.5 -0.7
      comp=Z,30nm,0.9s
PKIN  Phulchoki         29.58  84 eP      P       16 32 08.6 -0.9
      comp=Z,31nm,0.9s
PKI   Pulchoki          29.59  84 eP      P       16 32 08.9 -0.8
      comp=Z,54nm,1.1s
MAKZ  Makanchi          29.68  44 P       P       16 32 10.4 +0.5
MAKZ                              pmax    pmax
      comp=Z,8.0nm,1.0s
MAKZ  Makanchi          29.68  44 P       P       16 32 10.4 +0.5
MAKZ                              IAmb    IAmb    16 32 13.5
      comp=Z,7.9nm,0.9s
KURBB Kurchatov Arra    29.78  35 P       P       16 32 11.3 +0.7
      comp=Z,3.3nm,1.0s,baz=236,slow=8.9,SNR=19
KURBB                             PcP     PcP     16 35 13.8 -0.3
      comp=Z,1.0nm,0.8s,baz=235,slow=3.2,SNR=5.2
MK31  Makanchi Array    29.87  44 i P     P       16 32 11.3 -0.2
MK31                              pmax    pmax
      comp=Z,9.0nm,1.0s
MK31  Makanchi Array    29.87  44 P       P       16 32 11.9 +0.4
MKAR  Makanchi Array    29.87  44 P       P       16 32 12.0 +0.4
      comp=Z,4.3nm,0.8s,baz=232,slow=7.3,SNR=25
MKAR                              PcP     PcP     16 35 13.8 -0.7
      comp=Z,1.0nm,0.8s,baz=253,slow=3.8,SNR=3.6
MKAR                              LR      LR      16 46 07.8
      comp=Z,206nm,18.8s,baz=240,slow=40
MKAR  Makanchi Array    29.87  44ceP      P       16 32 12.0 +0.4
MKAR                              pmax    pmax
      comp=Z,4.0nm,0.8s
KURK  Kurchatov         29.88  35⇑eP      P       16 32 12.2 +0.7
KURK                              pmax    pmax
      comp=Z,4.0nm,1.0s
KURK  Kurchatov         29.88  35 P       P       16 32 12.3 +0.8
KURK                              IAmb    IAmb    16 32 18.5
      comp=Z,6.8nm,0.9s
GUN   Gumba             29.95  83 eP      P       16 32 12.3 -0.5
      comp=Z,55nm,1.0s
KIRV  Kirov             29.95 357 P       P       16 32 12.2 +0.1
      comp=Z,5.0nm,0.5s,baz=206,slow=6.4,SNR=4.8
KIRV  Kirov             29.95 357⇓eP      P       16 32 14.7 +2.7
KOLS  Kolonicke sedl    30.35 320 eP      P       16 32 17.0 +1.2
KOLS  Kolonicke sedl    30.35 320 eP      P       16 32 17.0 +1.2
KWP   Kalwaria Pacla    30.48 321 P       P       16 32 17.9 +1.1
KWP                               pmax    pmax
      comp=Z,11nm,1.0s
KWP   Kalwaria Pacla    30.48 321 P       P       16 32 17.9 +1.1
KWP                               IAmb    IAmb    16 32 20.8
      comp=Z,11nm,1.0s
SEM   Semipalatinsk     30.54  37 eP      P       16 32 17.9 +0.2
      baz=37
SEM   Semipalatinsk     30.54  37 eP      P       16 32 17.8 +0.2
RAMN  Ramite            30.75  85 eP      P       16 32 18.3 -1.5
      comp=Z,13nm,0.6s
CRVS  Cervenica-Dubn    30.80 319 eP      P       16 32 22.6 +2.9
CRVS  Cervenica-Dubn    30.80 319 e       P       16 32 22.6 +2.9
MNK   Minsk             31.11 333 i P     P       16 32 20.8 -1.6
      comp=E,4.0nm,1.0s
MNK                               i P     P       16 32 20.8 -1.6
      comp=N,11nm,1.3s
MNK                               i P     P       16 32 20.8 -1.6
      comp=Z,11nm,1.3s
MNK                               i PP    PnPn    16 33 22.0 -1.6
MNK                               i PPP   PPP     16 33 30.8
MNK                               i PcP   PcP     16 35 16.0 -1.6
MNK                               i S     S       16 37 25.8 -2.3
MNK                               i PcS   PcS     16 39 00.1 -1.2
MNK                               i ScP   ScP     16 39 03.9 +2.9
MNK                               i SS    SnSn    16 39 09.1 +0.1
MNK                               i SSS   SSS     16 39 24.2
MNK                               i LQ    LQ      16 42 29.5
MNK                               i ScS   ScS     16 42 56.0 -1.8
MNK                               i LR    LR      16 44 51.4
MNK                               i LRM   MLR     16 46 08.4
      comp=N,108nm,13.3s
MNK                               i LRM   MLR     16 46 25.6
      comp=Z,77nm,14.0s
MNK                               i LRM   MLR     16 46 33.9
      comp=E,11nm,13.4s
KECS  Kecovo            31.16 318 eP      P       16 32 24.0 +1.1
KECS  Kecovo            31.16 318 eP      P       16 32 24.0 +1.1
ODAN  Odare             31.46  85 eP      P       16 32 25.1 -1.0
      comp=E,8.8nm,0.7s
TAPN  Taplejung         31.64  84 eP      P       16 32 27.4 -0.3
      comp=E,10nm,0.8s
ZSN   Zaisan            31.74  45 eP      P       16 32 27.5 -0.6
      baz=45
ZSN   Zaisan            31.74  45 eP      P       16 32 27.4 -0.6
LANS  Liptovska Anna    32.06 319 eP      P       16 32 32.3 +1.4
LANS  Liptovska Anna    32.06 319 eP      P       16 32 32.3 +1.4
VYHS  Vyhne             32.14 317 eP      P       16 32 32.4 +0.8
VYHS  Vyhne             32.14 317 eP      P       16 32 32.4 +0.8
VYHS                              e               16 32 34.5
WMQ   Urumqi            32.36  52 eP      P       16 32 35.7 +2.1
WMQ                               pmax    pmax
      comp=Z,24nm,0.9s
WMQ                               pmax    pmax
      comp=Z,410nm,4.3s
WMQ                               LR      LR
      comp=N,950nm,24.1s
WMQ                               LR      LR
      comp=E,840nm,29.1s
WMQ                               LR      LR
      comp=Z,450nm,29.3s
OJC   Ojcow             32.39 321 eP      P       16 32 34.3 +0.6
OJC   Ojcow             32.39 321 P       P       16 32 34.9 +1.2
OJC                               pmax    pmax
      comp=Z,10.0nm,0.9s
OJC   Ojcow             32.39 321 P       P       16 32 34.9 +1.2
OJC                               IAmb    IAmb    16 32 39.8
      comp=Z,9.6nm,0.9s
PAOL  Paolisi           32.72 302 P       P       16 32 37.7 +1.0
PAOL                              IAmb    IAmb    16 32 39.8
      comp=Z,18nm,1.3s
SUW   Suwalki           32.81 329 eP      P       16 32 38.6 +1.3
SUW   Suwalki           32.81 329 P       P       16 32 38.5 +1.3
SUW                               pmax    pmax
      comp=Z,30nm,0.9s
SUW   Suwalki           32.81 329 P       P       16 32 38.5 +1.3
KLMR  Klimovskoe        33.23 349 eP      P       16 32 39.8 -1.0
KLMR                              pmax    pmax
      comp=Z,20nm,1.0s
KLMR  Klimovskoe        33.23 349 eP      P       16 32 39.9 -0.9
KLMR                              AMP             16 32 44.2
      comp=Z,20nm,1.0s
MORC  Moravsky Berou    33.47 319 ⇓P      P       16 32 43.4 +0.2
MORC  Moravsky Berou    33.47 319 ⇓P      P       16 32 43.4 +0.2
MORC  Moravsky Berou    33.47 319 P       P       16 32 42.4 -0.8
MORC                              IAmb    IAmb    16 32 46.3
      comp=Z,5.1nm,0.8s
ARSA  Arzberg           33.70 313 eP      P       16 32 46.8 +1.6
      comp=Z,1.9nm,0.5s
CONA  Conrad Observa    33.73 315 eP      P       16 32 45.8 +0.3
      comp=Z,6.4nm,1.4s
SOKA  Soboth            33.83 312 eP      P       16 32 48.0 +1.6
      comp=Z,4.4nm,1.2s
VRAC  Vranov            33.83 317 ⇓P      P       16 32 46.9 +0.6
VRAC  Vranov            33.83 317 ⇓P      P       16 32 46.9 +0.6
KRLC  Kraliky           34.04 319 eP      P       16 32 48.0 -0.2
KRLC  Kraliky           34.04 319 eP      P       16 32 48.0 -0.2
OBKA  Obir              34.09 312 eP      P       16 32 50.0 +1.3
      comp=Z,7.4nm,1.4s
DGZ   Jazzator, Alta    34.22  42⇑eP      P       16 32 50.7 +0.8
LSA   Lhasa             34.24  79 P       P       16 32 49.7 -0.9
LSA                               pmax    pmax
      comp=Z,4.0nm,0.9s
LSA   Lhasa             34.24  79 P       P       16 32 49.7 -0.9
DPC   Dobruska-Polom    34.43 319 eP      P       16 32 51.7 +0.2
DPC   Dobruska-Polom    34.43 319 eP      P       16 32 51.7 +0.2
KSP   Ksiaz             34.66 320 eP      P       16 32 53.5  0.0
CHVC  Chvalec           34.68 319 eP      P       16 32 53.6 -0.1
MOA   Molln             34.71 314 eP      P       16 32 55.9 +2.0
      comp=Z,5.5nm,0.8s
ZAA0  Zalesovo Array    34.85  34 P       P       16 32 54.1 -1.0
ZAA0                              IAmb    IAmb    16 33 00.8
      comp=Z,15nm,1.1s
ZALV  Zalesovo Beam     34.85  34 P       P       16 32 55.0  0.0
      comp=Z,3.3nm,0.3s,baz=242,slow=9.5,SNR=19
ZALV                              LR      LR      16 48 33.9
      comp=Z,98nm,18.5s,baz=234,slow=39
KBA   Koelnbreinsper    35.05 312 eP      P       16 32 58.9 +1.8
      comp=Z,8.1nm,0.8s
GERES GERESS Array B    35.41 315 P       P       16 32 59.8 -0.3
      comp=Z,1.1nm,0.7s,baz=109,slow=7.6,SNR=7.5
MBAR  Mbarara           35.42 218ceP      P       16 33 02.9 +2.3
MBAR                              pmax    pmax
      comp=Z,4.0nm,1.0s
MBAR  Mbarara           35.42 218 P       P       16 33 02.1 +1.5
ABTA  Abfaltersbach     35.50 311 eP      P       16 33 02.6 +1.7
      comp=Z,4.0nm,0.7s
KHC   Kasperske Hory    35.58 316⇑eP      P       16 33 02.2 +0.7
KHC                               pmax    pmax
      comp=Z,15nm,1.0s
KHC   Kasperske Hory    35.58 316 eP      P       16 33 01.6 +0.1
KHC   Kasperske Hory    35.58 316 P       P       16 33 02.2 +0.7
KHC                               IAmb    IAmb    16 33 04.9
      comp=Z,12nm,1.4s
WTTA  Wattenberg        36.22 312 eP      P       16 33 07.0 -0.2
      comp=Z,8.0nm,0.7s
WATA  Walderalm         36.28 312 eP      P       16 33 07.7 +0.1
      comp=Z,26nm,1.3s
KEST  Kesra             36.40 292 P       P       16 33 10.6 +1.9
      comp=Z,6.3nm,0.9s,baz=333,slow=2.1,SNR=5.4
KEST                              LR      LR      16 53 39.8
      comp=Z,84nm,18.0s,baz=268,slow=45
KEST  Kesra             36.40 292 P       P       16 33 10.7 +1.9
KEST                              IAmb    IAmb    16 33 22.2
      comp=Z,7.8nm,0.9s
SQTA  Sankt Quirin      36.49 312 eP      P       16 33 09.0 -0.3
      comp=Z,11nm,0.5s
MOTA  Moosalm           36.59 312 eP      P       16 33 09.8 -0.5
      comp=Z,8.7nm,0.8s
CLL   Collm             36.74 319 i P     P       16 33 11.4 +0.1
      comp=Z,10.0nm,1.1s
CLL   Collm             36.74 319 i P     P       16 33 11.4 +0.1
CLL                               pmax    pmax
      comp=Z,10.0nm,1.1s
CLL   Collm             36.74 319 P       P       16 33 11.5 +0.1
CLL                               IAmb    IAmb    16 33 14.7
      comp=Z,8.3nm,1.0s
FETA  Feichten          36.75 311 eP      P       16 33 11.9 +0.2
      comp=Z,20nm,1.2s
RETA  Reutte            36.85 312 eP      P       16 33 11.7 -0.7
      comp=Z,2.8nm,0.5s
FINES FINESS Array B    36.97 340 P       P       16 33 12.8 -0.3
      comp=Z,4.3nm,0.4s,baz=144,slow=9.4,SNR=40
FIA1  FINESS Array S    36.97 340 P       P       16 33 12.3 -0.8
DAVA  Damuels           37.38 311 eP      P       16 33 16.6 -0.4
      comp=Z,20nm,0.7s
SENIN Lac Senin/Sane    38.90 309 P       P       16 33 29.9  0.0
BNI   Bardonecchia      39.10 307 P       P       16 33 31.8 +0.3
BNI                               pmax    pmax
      comp=Z,7.0nm,0.9s
BNI   Bardonecchia      39.10 307 P       P       16 33 31.8 +0.3
GTA   Gaotai            40.77  62 P       P       16 33 46.1 +0.7
GTA                               pP      sP      16 33 50.2 +1.7
GTA                               sP      pP      16 33 53.2 +5.6
GTA                               pmax    pmax
      comp=Z,30nm,0.7s
NC602 NORSAR Array S    41.83 332 P       P       16 33 53.5 -0.2
NC602                             IAmb    IAmb    16 33 56.4
      comp=Z,25nm,1.1s
NC405 NORSAR Array S    41.96 332 P       P       16 33 54.0 -0.8
NB201 NORSAR Array S    42.10 332 P       P       16 33 55.1 -0.8
NB2   NORSAR Subarra    42.12 332 P       P       16 33 55.1 -1.1
      comp=Z,1.7nm,0.4s,baz=120,slow=8.6
NOA   NORSAR Array B    42.12 332 P       P       16 33 55.2 -0.9
      comp=Z,1.7nm,0.5s,baz=129,slow=8.8,SNR=16
NOA                               LR      LR      16 53 13.2
      comp=Z,64nm,18.7s,baz=355,slow=39
KONO  Kongsberg         42.12 329 P       P       16 33 55.7 -0.4
KONO                              pmax    pmax
      comp=Z,49nm,1.5s
KONO  Kongsberg         42.12 329 P       P       16 33 55.7 -0.4
NC303 NORSAR Array S    42.16 332 P       P       16 33 56.2 -0.2
NC303                             IAmb    IAmb    16 34 10.8
      comp=Z,10nm,0.8s
MOY   Mondy             43.01  44 eP      P       16 34 04.7 +1.1
MOY                               pmax    pmax
      comp=Z,26nm,1.5s
MHMT  Maesarieng        43.35  94 P       P       16 34 08.9 +2.3
      comp=Z,13nm,1.2s
ARCES ARCESS Array B    43.62 347 P       P       16 34 07.8 -0.4
      comp=Z,1.8nm,0.5s,baz=150,slow=8.0,SNR=16
CM32  Chiang Mai Arr    43.98  92 P       P       16 34 13.0 +1.4
CHTO  Chiang Mai        44.00  92 P       P       16 34 11.7 -0.2
CHTO                              pmax    pmax
      comp=Z,13nm,0.9s
CHTO  Chiang Mai        44.00  92 P       P       16 34 11.7 -0.2
CHTO                              IAmb    IAmb    16 34 15.0
      comp=Z,12nm,0.9s
CM33  Chiang Mai Arr    44.00  92 P       P       16 34 12.0 +0.1
CMMT  Chiang Mai        44.00  92 P       P       16 34 12.6 +0.7
      comp=Z,9.4nm,1.0s
CM13  Chiang Mai Arr    44.12  93 P       P       16 34 14.0 +1.2
      comp=Z,3.6nm,0.8s
CM15  Chiang Mai Arr    44.12  93 P       P       16 34 17.0 +4.2
LZH   Lanzhou           44.12  67 eP      P       16 34 12.9 +0.1
LZH                               pP      sP      16 34 16.8 +0.9
LZH                               sP      pP      16 34 19.1 +4.1
LZH                               pmax    pmax
      comp=Z,24nm,1.0s
CMAR  Chiang Mai Arr    44.13  93 P       P       16 34 12.7 -0.2
      comp=Z,3.0nm,0.8s,baz=292,slow=8.0,SNR=13
CMAR                              PcP     PcP     16 35 58.2 +0.2
      comp=Z,1.0nm,0.8s,baz=287,slow=4.8,SNR=3.6
CMAR                              LR      LR      16 57 09.1
      comp=Z,25nm,19.9s,baz=348,slow=42
CM02  Chiang Mai Arr    44.15  93 P       P       16 34 16.0 +3.0
      comp=Z,42nmcomp=Z,5.5nm,0.8s
CM05  Chiang Mai Arr    44.16  93 P       P       16 34 16.0 +2.9
      comp=Z,3.8nm,0.8s
CM01  Chiang Mai Arr    44.16  93 P       P       16 34 16.0 +2.9
      comp=Z,5.3nm,0.8s
CM34  Chiang Mai Arr    44.17  92 P       P       16 34 14.0 +0.8
ZAK   Zakamensk         44.18  46 eP      P       16 34 07.0 -6.0
ZAK                               pmax    pmax
      comp=Z,3.0nm,1.0s
CM09  Chiang Mai Arr    44.18  93 P       P       16 34 16.1 +2.7
      comp=Z,54nmcomp=Z,5.2nm,0.8s
CM04  Chiang Mai Arr    44.19  93 P       P       16 34 16.1 +2.7
      comp=Z,46nmcomp=Z,6.1nm,0.8s
CM35  Chiang Mai Arr    44.23  92 P       P       16 34 14.0 +0.3
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CM36	Chiang Mai Arr	44.24	92	P	P	16 34 14.0	+0.2
PAYA	Payao	44.61	91	P	P	16 34 17.5	+0.8
	comp=Z,222nm,0.9s						
TLY	Talaya	44.63	44	⇑eP	P	16 34 19.2	+2.7
TLY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SUKH	Sukhothai	45.11	94	P	P	16 34 23.4	+2.7
	comp=Z,14nm,0.9s						
KMI	Kunming	45.28	82	P	P	16 34 21.8	-0.4
KMI				pmax	pmax		
	comp=Z,37nm,1.4s						
KMI	Kunming	45.28	82	P	P	16 34 21.8	-0.4
NRIK	Noril'sk	45.62	17	P	P	16 34 24.2	+0.2
	comp=Z,4.2nm,0.9s,baz=228,slow=7.1,SNR=7.6						
NRIK				LR	LR	16 57 11.7	
	comp=Z,76nm,18.4s,baz=249,slow=41						
NRIK	Noril'sk	45.62	17	⇑eP	P	16 34 24.3	+0.2
NRIK				pmax	pmax		
	comp=Z,12nm,1.1s						
NRIK	Noril'sk	45.62	17	P	P	16 34 24.8	+0.7
NRIK				IAmb	IAmb	16 34 27.5	
	comp=Z,10nm,1.1s						
UTHA	Uthaitani	45.73	96	P	P	16 34 28.1	+2.4
	comp=Z,15nm,1.0s						
UTTA	Uttaradit	45.82	93	P	P	16 34 28.1	+1.8
	comp=Z,166nmcomp=Z,17nm,0.9s						
SONM	Songino Array	45.90	50	P	P	16 34 26.4	-0.4
	comp=Z,3.2nm,0.8s,baz=261,slow=7.5,SNR=15						
SONM				LR	LR	16 56 16.0	
	comp=Z,110nm,18.8s,baz=224,slow=40						
PHIT	Phitsanulok	45.92	93	P	P	16 34 32.7	+5.6
	comp=Z,26nm,0.8s						
ULN	Ulaanbaatar	46.35	50	⇓iP	P	16 34 30.3	0.0
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	Ulaanbaatar	46.35	50	P	P	16 34 29.6	-0.8
ULN				IAmb	IAmb	16 34 33.1	
	comp=Z,10.0nm,1.2s						
ESDC	Sonseca Array	46.77	299	P	P	16 34 34.7	+1.0
	comp=Z,0.5nm,0.4s,baz=86,slow=7.7,SNR=7.8						
ESDC				LR	LR	16 56 00.7	
	comp=Z,79nm,18.1s,baz=355,slow=38						
NONG	Nongkai	47.97	91	P	P	16 34 44.5	+1.3
	comp=Z,40nm,1.5s						
XAN	Xi'an	48.53	69	P	P	16 34 46.5	-0.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN	Xi'an	48.53	69	P	P	16 34 46.5	-0.9
XAN				IAmb	IAmb	16 34 48.4	
	comp=Z,7.8nm,1.0s						
BTO	Baotou	48.55	60	eP	P	16 34 46.5	-1.0
SRAK	Srakaew	48.66	97	P	P	16 34 53.0	+4.5
	comp=Z,237nm,1.1s						
TOA0	Torodi Ar. Sit	48.95	262	P	P	16 34 51.3	+0.6
TORD	Torodi Ar. Bea	48.95	262	P	P	16 34 51.1	+0.3
	comp=Z,5.9nm,0.7s,baz=57,slow=9.1,SNR=28						
TORD				LR	LR	16 56 27.0	
	comp=Z,110nm,20.2s,baz=145,slow=37						
LSZ	Lusaka	49.31	211	P	P	16 34 54.6	+1.1
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LSZ	Lusaka	49.31	211	P	P	16 34 54.6	+1.1
LSZ				IAmb	IAmb	16 34 56.2	
	comp=Z,7.7nm,1.2s						
HHC	Hu-ho-hao-te	49.69	59	eP	P	16 34 55.8	-0.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,5.8s						
SPA0	Spitsbergen Ar	52.07	351	P	P	16 35 13.1	-0.4
IPM	Ipoh	52.45	108	P	P	16 35 14.9	-2.3
IPM				IAmb	IAmb	16 35 18.7	
	comp=Z,17nm,1.2s						
KOWA	Kowa	53.37	267	P	P	16 35 24.6	+0.6
KOWA				IAmb	IAmb	16 35 26.1	
	comp=Z,7.7nm,0.7s						
NJ2	Nanjing	57.10	69	eP	P	16 35 48.4	-2.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
DBIC	Dimbokro	57.68	259	P	P	16 35 55.5	+0.4
	comp=Z,11nm,0.8s,baz=40,slow=7.4,SNR=21						
DBIC				LR	LR	17 02 34.3	
	comp=Z,118nm,18.5s,baz=38,slow=38						
DBIC	Dimbokro	57.68	259	P	P	16 35 55.4	+0.4
DBIC				pmax	pmax		
	comp=Z,18nm,1.1s						
DBIC	Dimbokro	57.68	259	P	P	16 35 55.4	+0.4
KIC	Kosan Boka	57.74	259	eP	P	16 35 55.8	+0.4
	comp=Z,11nm,0.6s						
TIC	Toumodi	57.84	259	eP	P	16 35 56.4	+0.2
LIC	Lamto	58.05	259	eP	P	16 35 57.9	+0.3
	comp=Z,27nm,0.6s						
TIXI	Tiksi	58.99	21	⇓eP	P	16 36 05.2	+1.9
TIXI	Tiksi	58.99	21	P	P	16 36 03.9	+0.6
TIXI				IAmb	IAmb	16 36 14.8	
	comp=Z,6.4nm,0.9s						
LBTB	Lobatse	59.04	208	P	P	16 36 05.7	+1.3
LBTB				pmax	pmax		
	comp=Z,20nm,1.1s						
LBTB	Lobatse	59.04	208	P	P	16 36 05.7	+1.3
CN2	Changchun	59.43	54	eP	P	16 36 08.2	+1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	59.46	32	⇑iP	P	16 36 05.9	-0.8
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	59.46	32	P	P	16 36 05.6	-1.1
KSM	Kuching	61.88	105	P	P	16 36 22.8	-1.2
BOSA	Boshof	62.38	206	P	P	16 36 26.9	-0.2
	comp=Z,5.2nm,0.9s,baz=70,slow=6.9,SNR=6.1						
BOSA	Boshof	62.38	206	P	P	16 36 28.3	+1.2
BOSA				IAmb	IAmb	16 36 56.4	
	comp=Z,12nm,1.4s						
KLR	Kul'dur	62.54	47	⇑eP	P	16 36 28.4	+0.5
KLR				pmax	pmax		
	comp=Z,24nm,3.7s						
KSRS	Korea Array	62.81	60	P	P	16 36 28.6	-1.3
	comp=Z,2.8nm,0.6s,baz=274,slow=7.1,SNR=8.6						
KSRS				LR	LR	17 08 12.5	
	comp=Z,45nm,19.7s,baz=281,slow=40						
SUMG	Summit	63.01	340	i P	P	16 36 32.0	+0.9
SUMG	Summit	63.01	340	i P	P	16 36 32.0	+0.9
SUMG	Summit	63.01	340	i P	P	16 36 32.0	+0.9
USRK	Ussuriysk Ar.	63.93	52	LR	LR	17 07 52.1	
	comp=Z,98nm,19.1s,baz=274,slow=39						
EUNU	Eureka	69.14	353	P	P	16 37 10.7	+0.7
EUNU				IAmb	IAmb	16 37 23.3	
	comp=Z,11nm,1.4s						
MJAR	Matsushiro Arr	70.88	58	LR	LR	17 09 39.5	
	comp=Z,24nm,20.9s,baz=355,slow=37						
SIJI	Sorong	81.16	96	P	P	16 38 19.6	-0.7
	comp=Z,2.6nm,0.7s,baz=357,slow=2.8,SNR=3.9						
TOLK	Toolik Lake Re	81.70	8	P	P	16 38 22.8	+0.5
TOLK				IAmb	IAmb	16 38 25.2	
	comp=Z,12nm,1.1s						
C36M	Paulatuk	82.22	359	P	P	16 38 24.6	-0.4
C36M				IAmb	IAmb	16 38 26.6	
	comp=Z,6.0nm,1.0s						
FITZ	Fitzroy Crossi	85.10	114	P	P	16 38 39.3	-1.2
	comp=Z,8.6nm,1.0s,baz=338,slow=11,SNR=3.2						
POKR	Poker Plat Res	85.32	8	P	P	16 38 41.6	+0.6
POKR				IAmb	IAmb	16 38 44.3	
	comp=Z,7.0nm,0.9s						
MDM	Murphy Dome	85.38	8	P	P	16 38 41.2	-0.1
COLA	College	85.50	8	⇓eP	P	16 38 43.2	+1.4
COLA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
IL31		85.72	8	P	P	16 38 41.6	-1.3
IL31				IAmb	IAmb	16 38 44.9	
	comp=Z,9.4nm,1.4s						
ILAR	Eielson Array	85.72	8	P	P	16 38 42.1	-0.8
	comp=Z,1.5nm,0.9s,baz=327,slow=4.3,SNR=14						
EGAK	Eagle	86.31	6	P	P	16 38 45.1	-0.7
EGAK				IAmb	IAmb	16 38 48.8	
	comp=Z,8.9nm,1.1s						
RND	Reindeer	86.78	9	P	P	16 38 47.6	-0.7
RND	Reindeer	86.78	9	P	P	16 38 47.6	-0.7
K27K	Chicken	86.96	6	P	P	16 38 49.4	+0.3
YKA	Yellowknife Ar	88.50	354	P	P	16 38 56.2	-0.1
	comp=Z,3.7nm,0.9s,baz=8.9,slow=4.9,SNR=30						
YKA	Yellowknife Ar	88.50	354	ceP	P	16 38 55.7	-0.7
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	93.11	111	P	P	16 39 17.5	-1.1
	comp=Z,0.3nm,0.3s,baz=303,slow=4.3,SNR=6.2						
WRAB	Tennant Creek	93.11	111	⇓eP	P	16 39 21.9	+3.3
WRAB				pmax	pmax		
	comp=Z,31nm,2.0s						
ASAR	Alice Springs	94.56	114	P	P	16 39 23.9	-1.3
	comp=Z,1.2nm,0.7s,baz=307,slow=5.2,SNR=17						
ASAR	Alice Springs	94.56	114	P	P	16 39 24.0	-1.3

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*MAN **07** 16:27:44.1, 8°.58N × 121°.43E, h34^{km}, MS3.1*

*IDC **07** 16:27:47.3 ± 1.3, 8°.93N × 121°.29E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.4/56, mbtmp3.6/5, MS2.8/2, Ms1 2.9/2, ms1mx2.6/34, Error ellipse: s-maj=83.3km s-min=20.2km az=58.0*

*NEIC **07** 16:27:53 ± 1.1, 8°.67N ± 0°.05 × 121°.0E ± 0°.1, h37^{km} ± 9^{km}, mb4.3/5, Error ellipse: s-maj=17.7km s-min=6.1km az=101.0*

ISC 07 16:27:47.8 ± 0.9, **8°.60N** ± 0°.04 × **121°.53E** ± 0°.04, **h35^{km}, n25,** σ**2^s.01**/25, **2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	Candoni, Negro	1.64	42	eP	Pn	16 28 11.6	-2.5
CNOP				eS	Sn	16 28 32.9	-1.0
ZCP	Zamboanga City	1.75	162	⇓iP	Pn	16 28 13.2	-2.4
ZCP				i S	Sn	16 28 33.5	-3.1
PAGZ	Pagadian	1.98	112	eP	Pn	16 28 17.0	-1.8
PAGZ				eS	Sn	16 28 40.4	-2.0
JAP	San Jose, Anti	2.17	11	⇓eP	Pn	16 28 15.1	-6.3
JAP				eS	Sn	16 28 46.8	-0.3
GUIM	Jordan	2.26	27	eP	Pn	16 28 21.3	-1.4
GUIM				eS	Sn	16 28 48.5	-1.0
CUYO	Cuyo Island	2.29	347	eP	Pn	16 28 20.9	-2.2
LLP	Lapu-Lapu	2.94	54	⇑iP	Pn	16 28 32.2	+0.1
LLP				i S	Sn	16 29 07.4	+1.1
CGP	Cagayan de Oro	3.13	92	⇑eP	Pn	16 28 33.4	-1.3
CGP				eS	Sn	16 29 11.6	+0.7
ENPP	El Nido	3.31	321	eP	Pn	16 28 34.2	-2.9
ENPP				eS	Sn	16 29 12.1	-3.3
SKMP	Bagumbayan, Su	3.63	125	eP	Pn	16 28 40.1	-1.4
MYLDM	Lahad Datu	4.54	222	Pn	Pn	16 28 54.7	+0.7
KKM	Kota Kinabalu	5.86	245	Pn	Pn	16 29 12.1	-0.1
TOLI2	Tolitoli	7.48	186	Pn	Pn	16 29 39.9	+5.5
KAPI	Kappang	13.64	188	LR	LR	16 36 38.0	
	comp=Z,37nm,20.1s,baz=80,slow=38						
FAKI	Fak Fak	15.66	137	P	P	16 31 38.8	+9.1
FAKI				IAmb	IAmb	16 31 51.9	
	comp=Z,26nm,1.1s						
CMAR	Chiang Mai Arr	24.02	296	LR	LR	16 42 54.1	
	comp=Z,25nm,18.2s,baz=275,slow=38						
CMAR				P	P	16 32 59.7	+0.1
	comp=Z,0.5nm,0.4s,baz=126,slow=8.2,SNR=5.9						
WB0	Warramunga Arr	30.91	156	P	P	16 34 09.1	+7.7
WRA	Warramunga Arr	31.04	156	P	P	16 34 10.1	+7.6
	comp=Z,0.9nm,0.5s,baz=338,slow=9.5,SNR=3.6						
WB2	Warramunga Arr	31.05	156	P	P	16 34 09.8	+7.2
WB2				IAmb	IAmb	16 34 26.3	
	comp=Z,7.2nm,1.1s						
ASAR	Alice Springs	34.28	160	P	P	16 34 39.3	+8.4
	comp=Z,0.5nm,0.7s,baz=342,slow=7.6,SNR=7.3						
MK31	Makanchi Array	50.64	326	P	P	16 36 46.3	+2.8
MKAR	Makanchi Array	50.64	326	P	P	16 36 46.1	+2.6
	comp=Z,0.6nm,0.6s,baz=137,slow=8.4,SNR=5.0						
KURBB	Kurchatov Arra	54.88	328	P	P	16 37 16.9	+2.1
	comp=Z,0.3nm,0.6s,baz=121,slow=8.2,SNR=4.6						
KURK	Kurchatov	54.89	328	P	P	16 37 17.1	+2.3
KURK				IAmb	IAmb	16 37 32.5	
	comp=Z,3.3nm,1.1s						
BVAR	Borovoye Array	60.45	327	P	P	16 37 55.4	+1.5
	comp=Z,0.2nm,0.6s,baz=111,slow=8.2,SNR=2.6						

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*IDC **07** 16:45:57.2 ± 2.0, 51°.47N × 178°.56W, h0^{km}, mb3.6/5, mb1 4.0/7, mb1mx3.6/54, mbtmp3.8/7, ML3.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/44, Error ellipse: s-maj=65.2km s-min=21.4km az=174.0*

*AEIC **07** 16:46:02.7 ± 1.3, 51°.4N ± 0°.1 × 178°.48W ± 0°.07, h48^{km} ± 7^{km}, ML3.6/25, mb4.0/23(NEIC), Error ellipse: s-maj=18.7km s-min=5.0km az=168.0*

*NEIC **07** 16:46:03.5 ± 1.6, 51°.45N ± 0°.10 × 178°.53W ± 0°.06, h45^{km} ± 7^{km}, Error ellipse: s-maj=15.0km s-min=4.6km az=165.0*

ISC 07 16:46:03.1 ± 0.9, **51°.4N** ± 0°.1 × **178°.50W** ± 0°.04, **h45^{km}, n58,** σ**1^s.15**/62, **mb4.0**/10, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALAA	Gareloi Lava P	0.40	335		Pn	16 46 13.3	+0.4
TASE	Tanaga Southea	0.53	33		Pn	16 46 14.5	0.0
TAFP	Tanaga Falls P	0.60	32		Pn	16 46 15.1	-0.2
KIMD	Kanaga Island	0.87	65		Pn	16 46 18.7	-0.2
KIKV	Kanaga Island	0.96	59		Pn	16 46 20.1	-0.1
KICM	Kanaga Island	0.97	57		Pn	16 46 20.4	+0.1
KICM					Sn	16 46 32.6	-0.3
ADK	Adak	1.23	66		Pn	16 46 23.4	-0.4
ADK				Sn	Sn	16 46 39.0	-0.4
CERAA	Semis' Rag'd T	1.24	295		Pn	16 46 24.4	+0.4
CESW	Semis' Southwe	1.31	293		Pn	16 46 25.2	+0.3
ADAG	Mount Adagdak	1.32	63		Pn	16 46 25.3	+0.3
CEAP	Semis' Anvil P	1.34	298		Pn	16 46 25.8	+0.5
AMKA	Amchitka	1.38	270		Pn	16 46 26.0	+0.2
AMKA					Sn	16 46 42.8	0.0
GSTD	Great Sitkin T	1.61	65		Pn	16 46 29.2	+0.1
GSTD					Sn	16 46 48.6	-0.1
GSMY	Great Sitkin M	1.65	66		Pn	16 46 29.8	+0.1
GSTR	Great Sitkin T	1.67	64		Pn	16 46 30.4	+0.4
LSPA	Little Sitkin	1.91	288		Pn	16 46 33.6	+0.5
LSSA	Little Sitkin	1.94	288		Pn	16 46 34.1	+0.5
LSNW	Little Sitkin	1.94	288		Pn	16 46 34.0	+0.4
ATKA	Atka Island	2.79	72	Pn	Pn	16 46 45.4	+0.2
KOWE	Korovin West	2.81	68		Pn	16 46 45.8	+0.3
KOFP	Korovin Flat P	2.87	70		Pn	16 46 47.3	+0.9
NIKH	Nikolski High	6.14	71	Pn	Pn	16 47 33.8	+2.6
SPIA	Saint Paul Isl	7.54	37	Pn	Pn	16 47 52.4	+2.1
UNV	Unalaska Valle	7.70	67	Pn	Pn	16 47 55.4	+2.9
CNBA	Chernabura Isl	11.87	66	Pn	Pn	16 48 50.0	+0.5
CHGN	Chignik	12.82	60	Pn	Pn	16 49 02.8	+0.3
PEA0B	Petropavlovsk-	14.66	286	Pn	Pn	16 49 28.5	+1.0
PETK	Petropavlovsk-	14.66	286	Pn	Pn	16 49 26.9	-0.6
	0.2nm,0.3s,baz=83,slow=12,SNR=1.9						
ANM	Nome	14.88	22	P	Pn	16 49 32.5	+2.3
OHAK	Old Harbor	15.77	58		Pn	16 49 37.9	-3.9
KDAK	Kodiak Island	16.26	57	Pn	Pn	16 49 45.4	-2.6
	0.9nm,0.3s,baz=194,slow=4.0,SNR=26						
KDAK				LR	LR	16 55 05.0	
	comp=Z,38nm,20.7s,baz=214,slow=34						
KDAK	Kodiak Island	16.26	57	Pn	Pn	16 49 45.4	-2.6
CNPM	China Poot	17.36	51	P	P	16 50 03.7	+0.9
BRLK	Bradley Lake	17.60	51		Pn	16 50 04.7	-0.1
BRLK				IAmb	IAmb	16 50 09.9	
	comp=Z,21nm,1.3s						
SKT	Skwentna	18.06	44	P	P	16 50 11.3	+0.9
SUA	Susitna One	18.21	46	P	P	16 50 12.2	+0.1
SUA				IAmb	IAmb	16 50 19.4	
	comp=Z,32nm,1.4s						
SEW	Seward	18.39	50	P	P	16 50 12.9	-1.0
KTH	Kantishna Hill	18.99	40	P	P	16 50 21.0	+0.4
KTH				IAmb	IAmb	16 50 23.4	
	comp=Z,4.3nm,0.7s						
TRF	Thorofare Moun	19.20	40	P	Pn	16 50 24.0	-0.3
KNK	Knik Glacier	19.23	47	P	Pn	16 50 25.0	+0.5
KNK				IAmb	IAmb	16 50 42.8	
	comp=Z,7.6nm,1.1s						
RND	Reindeer	19.77	41	P	P	16 50 28.5	-0.6
RND				IAmb	IAmb	16 50 41.9	
	comp=Z,10nm,1.5s						
SCM	Sheep Creek Mo	19.87	46	P	P	16 50 28.5	-1.8
SCM				IAmb	IAmb	16 50 34.3	
	comp=Z,18nm,1.3s						
FID	Port Fidalgo	19.98	50	P	P	16 50 31.8	+0.4
FID				IAmb	IAmb	16 50 41.2	
	comp=Z,15nm,1.0s						
DHY	Denali Highway	20.26	43	P	P	16 50 34.3	-0.3
DHY				IAmb	IAmb	16 50 38.2	
	comp=Z,7.5nm,1.0s						
KLU	Klutina	20.42	48	P	P	16 50 37.7	+1.4
M24K	Tolsona, Glenn	20.48	46	P	P	16 50 36.3	-0.5
N25K	Chitina, Valde	21.07	48	P	P	16 50 44.8	+1.6
N25K				IAmb	IAmb	16 50 57.1	
	comp=Z,5.1nm,1.2s						
IL31		21.11	39	P	P	16 50 44.1	+0.6
ILAR	Eielson Array	21.11	39	P	P	16 50 42.5	-1.1
	comp=Z,0.4nm,0.6s,baz=249,slow=11,SNR=6.1						
GLB	Gilahina Butte	21.40	49	P	P	16 50 45.5	-1.3
GLB				IAmb	IAmb	16 51 01.2	
	comp=Z,11nm,1.3s						
VRDI	Verde Repeater	21.52	49	P	P	16 50 49.5	+1.3
VRDI				IAmb	IAmb	16 50 50.0	
	comp=Z,11nm,1.5s						
TOLK	Toolik Lake Re	22.16	28	P	P	16 50 54.8	-0.1
BARN	Barnard Glacie	22.35	50		P	16 50 56.9	-0.2
BARN				IAmb	IAmb	16 51 15.3	
	comp=Z,13nm,1.5s						
CTGM	Chitina Glacie	22.49	50	P	P	16 50 59.2	+0.7
CTGM				IAmb	IAmb	16 51 02.8	
	comp=Z,7.8nm,1.2s						
KLR	Kul'dur	31.35	286	P	P	16 52 18.4	-0.7
	comp=Z,1.7nm,0.4s,baz=71,slow=6.7,SNR=12						
YKA	Yellowknife Ar	35.08	47	P	P	16 52 51.3	-0.2
	comp=Z,0.2nm,0.4s,baz=282,slow=5.8,SNR=4.2						
NVAR	Mina Array Bea	43.36	83	P	P	16 54 02.1	+1.1
	comp=Z,0.4nm,0.6s,baz=297,slow=7.0,SNR=2.7						
PDAR	Pinedale Array	46.13	72	P	P	16 54 23.0	0.0
	comp=Z,1.5nm,0.6s,baz=314,slow=3.5,SNR=18						

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*IDC **07** 17:29:40.3 ± 1.6, 17°.63S × 178°.72W, h583^{km} ± 11^{km}, mb3.3/5, mb1 3.4/7, mb1mx3.1/32, mbtmp4.2/7, Error ellipse: s-maj=33.0km s-min=27.9km az=167.0*

ISC 07 17:29:41.7 ± 1.4, **17°.5S** ± 0°.3 × **179°.0W** ± 0°.2, **h600^{km}, n7,** σ**1^s.50**/9, **mb3.9**/5, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.83	265	P	P	17 30 57.5	-2.5
	1.3nm,0.3s,baz=119,slow=6.1,SNR=26						
MSVF				S	S	17 32 03.3	-0.5
	baz=273,slow=22,SNR=9.0						
DZM	Mont Dzumac	14.44	249	P	P	17 32 44.2	-0.6
	0.6nm,0.3s,baz=309,slow=21,SNR=6.1						
STKA	Stephens Creek	38.34	241	P	P	17 36 14.4	+1.6
	3.5nm,0.6s,baz=88,slow=9.9,SNR=14						
WRA	Warramunga Arr	44.16	259	P	P	17 36 59.5	+0.6
	1.8nm,0.6s,baz=95,slow=7.2,SNR=6.9						
ASAR	Alice Springs	44.37	254	P	P	17 37 01.6	+1.0
	19nm,0.6s,baz=88,slow=8.2,SNR=312						
ASAR				PcP	PcP	17 38 32.5	+1.5
	0.5nm,0.4s,baz=107,slow=3.9,SNR=4.9						
QSPA	South Pole Qui	72.53	180	P	P	17 40 08.0	-0.7
	3.6nm,1.0s,baz=213,slow=0.9,SNR=10						
ILAR	Eielson Array	85.64	13	P	P	17 41 17.9	+0.5
	0.2nm,0.4s,baz=227,slow=5.4,SNR=4.0						

IDC 07 17:32:01.8 ± 27.0, **21°.76S** × **174°.00W, h0^{km}, mb4.2**/4, **mb1 4.4**/4, **mb1mx3.8**/29, **mbtmp4.2**/4, **Error ellipse: s-maj=508.7km s-min=159.1km az=76.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	37.09	265	P	P	17 39 15.1	+0.9
	4.4nm,0.3s,baz=94,slow=11,SNR=6.9						
STKA	Stephens Creek	40.65	246	P	P	17 39 42.8	-1.1
	1.1nm,0.8s,baz=106,slow=15,SNR=3.1						
ASAR	Alice Springs	47.87	257	P	P	17 40 41.5	-0.5
	1.0nm,0.4s,baz=97,slow=7.6,SNR=28						
WRA	Warramunga Arr	48.13	262	P	P	17 40 44.0	0.0
	1.9nm,0.3s,baz=96,slow=8.4,SNR=31						

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*DJA **07** 17:56:17.4 ± 0.7, 3°S ± 4° × 14°0E ± °, h22^{km} ± 7^{km}, M4.7/10, mB5.1/2, mb4.7/10, MLv4.7/6, Mw(mB)4.4/2*

*IDC **07** 17:56:18.7 ± 1.6, 2°.90S × 139°.73E, h44^{km} ± 18^{km}, mb3.7/9, mb1 4.1/11, mb1mx3.9/30, mbtmp4.1/11, ML4.5/2, MS3.4/14, Ms1 3.4/14, ms1mx3.3/23, Error ellipse: s-maj=16.2km s-min=11.5km az=113.0*

*NEIC **07** 17:56:18.5 ± 2.6, 2°.92S ± 0°.10 × 139°.73E ± 0°.04, h43^{km} ± 8^{km}, mb4.4/11, Error ellipse: s-maj=15.3km s-min=3.6km az=161.0*

*NOU **07** 17:56:29.4, 3°.56S × 139°.23E, h72^{km}, mb4.6, Irian Jaya, Indonesia*

ISC 07 17:56:18.8 ± 0.6, **2°.94S** ± 0°.06 × **139°.69E** ± 0°.06, **h46^{km}, n44,** σ**1^s.58**/43, **mb3.9**/8, **MS3.5**/10, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.59	55	P	Pn	17 56 30.6	-0.3
GENI				S	Sn	17 56 37.6	-2.0
JAY	Jayapura	1.10	68	P	Pn	17 56 36.9	-1.0
	245nm,0.3s,baz=237,slow=11,SNR=1190						
JAY				S	Sn	17 56 50.8	-1.0
	519nm,0.3s,baz=64,slow=20,SNR=13						
JAY				LR	LR	17 57 23.0	
	comp=Z,1µm,21.4s,baz=180,slow=61						
JAY	Jayapura	1.10	68	P	Pn	17 56 37.0	-0.8
JAY				S	Sn	17 56 50.5	-1.4
BAKI	Biak	3.98	296	P	Pn	17 57 17.3	0.0
MMPI	Merauke	5.54	173	P	Pn	17 57 38.2	-0.6
	3.8nm785nm,1.0s						
FAKI	Fak Fak	7.43	270	Pn	Pn	17 58 05.1	+0.3
FAKI	Fak Fak	7.43	270	P	Pn	17 58 05.0	+0.3
	0.2nm40nm,0.7s						
SIJI	Sorong	8.66	284	P	Pn	17 58 23.4	+1.6
	9.3nm,0.3s,baz=247,slow=24,SNR=37						
SIJI				S	Sn	17 59 55.6	-2.5
	0.8nm,0.3s,baz=297,slow=23,SNR=2.1						
SIJI				LR	LR	18 02 41.6	
	comp=Z,225nm,21.1s,baz=110,slow=44						
SWI	Sorong	8.67	284	P	Pn	17 58 23.8	+2.0
	33nm,0.7s						
PMG	Port Moresby	9.82	131	P	Pn	17 58 40.7	+3.2
	0.4nm,0.3s,baz=147,slow=18,SNR=1.9						
PMG				LR	LR	18 02 12.8	
	comp=Z,71nm,21.1s,baz=298,slow=36						
KRVT	Keravat (AS076	12.39	97	LR	LR	18 03 48.5	
	comp=Z,79nm,19.7s,baz=289,slow=36						
MTN	Manton Dam	12.98	220	Pn	Pn	17 59 20.0	-0.8
SANI	Sanana	13.72	273	P	Pn	17 59 30.9	+0.1
	71nm,0.9s						
SOEI	Soe	16.75	245	P	P	18 00 11.8	-0.4
SOEI	Soe	16.75	245	P	P	18 00 11.8	-0.4
	111nm,0.9s						
WB0	Warramunga Arr	17.51	197	P	Pn	18 00 18.8	-1.0
WB0				IAmb	IAmb	18 00 40.4	
	comp=Z,31nm,1.1s						
WR0	Warramunga Arr	17.65	196	P	Pn	18 00 20.8	-0.7
WR0				IAmb	IAmb	18 00 25.3	
	comp=Z,19nm,0.6s						
WRAB	Tennant Creek	17.68	197	P	Pn	18 00 21.1	-0.8
WRAB				IAmb	IAmb	18 00 38.3	
	comp=Z,19nm,0.8s						
WB2	Warramunga Arr	17.69	197	P	Pn	18 00 21.5	-0.5
WB2				IAmb	IAmb	18 00 26.2	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	17.69	197	P	Pn	18 00 21.2	-0.8
	comp=Z,1.4nm,0.3s,baz=16,slow=13,SNR=40						
WRA				S	Sn	18 03 31.4	-7.0
	comp=Z,0.5nm,0.3s,baz=14,slow=20,SNR=5.1						
WRA				LR	LR	18 07 39.9	
	comp=Z,312nm,20.9s,baz=20,slow=38						
BNSI	Bone	19.60	265	P	Pn	18 00 46.3	+1.2
	comp=Z,39nm,1.1s						
TTSI	Tana Toraja	19.84	269	P	Pn	18 00 48.4	+0.4
FITZ	Fitzroy Crossi	20.41	221	P	P	18 00 52.2	0.0
	comp=Z,3.4nm,0.3s,baz=58,slow=8.8,SNR=12						
FITZ	Fitzroy Crossi	20.41	221	P	P	18 00 52.1	-0.1
FITZ				IAmb	IAmb	18 01 18.6	
	comp=Z,28nm,1.1s						
AS31	Alice Springs	21.36	195		P	18 01 02.5	+0.1
ASAR	Alice Springs	21.36	195	P	P	18 01 03.0	+0.6
	comp=Z,9.6nm,0.7s,baz=16,slow=8.3,SNR=38						
ASAR				S	S	18 04 58.0	+0.8
	comp=Z,2.1nm,0.8s,baz=12,slow=26,SNR=4.5						
ASAR				LR	LR	18 09 04.9	
	comp=Z,127nm,19.0s,baz=12,slow=36						
STKA	Stephens Creek	28.84	177	P	P	18 02 14.5	+1.5
	comp=Z,1.3nm,0.5s,baz=346,slow=8.7,SNR=8.5						
STKA				LR	LR	18 14 45.0	
	comp=Z,231nm,18.7s,baz=12,slow=38						
STKA	Stephens Creek	28.84	177	P	P	18 02 14.1	+1.1
MJAR	Matsushiro Arr	39.30	358	LR	LR	18 17 46.1	
	comp=Z,23nm,21.8s,baz=240,slow=33						
KSRS	Korea Array	41.65	346	LR	LR	18 18 33.9	
	comp=Z,19nm,19.6s,baz=158,slow=32						
CMAR	Chiang Mai Arr	45.40	300	P	P	18 04 32.4	-1.0
	comp=Z,1.3nm,1.0s,baz=120,slow=6.0,SNR=9.9						
PETK	Petropavlovsk-	57.86	13	LR	LR	18 27 37.8	
	comp=Z,27nm,21.9s,baz=237,slow=32						

SONM	Songino Array	58.34	334	P	P	18 06 09.7	+0.3
	comp=Z,0.5nm,0.5s,baz=151,slow=8.9,SNR=7.0						
SONM				LR	LR	18 30 42.2	
	comp=Z,42nm,20.1s,baz=95,slow=35						
YAK	Yakutsk	65.24	355	P	P	18 06 55.8	+0.4
MKAR	Makanchi Array	70.56	322	P	P	18 07 30.4	+1.1
	comp=Z,0.4nm,0.5s,baz=93,slow=8.5,SNR=9.2						
ZALV	Zalesovo Beam	72.62	330	P	P	18 07 40.9	-0.5
	comp=Z,0.4nm,0.5s,baz=62,slow=29,SNR=2.5						
ZALV				LR	LR	18 39 45.7	
	comp=Z,21nm,20.8s,baz=121,slow=36						
VNDA	Vanda	75.47	175	P	P	18 07 59.2	+1.6
	comp=Z,1.3nm,0.8s,baz=30,slow=3.0,SNR=4.8						
VNDA	Vanda	75.47	175	P	P	18 07 59.1	+1.4
VNDA				IAmb	IAmb	18 08 18.4	
	comp=Z,6.8nm,1.4s						
MAW	Mawson	82.29	202	LR	LR	18 43 08.8	
	comp=Z,31nm,19.2s,baz=236,slow=34						
ILAR	Eielson Array	85.63	24	P	P	18 08 51.5	-0.8
	comp=Z,1.4nm,1.0s,baz=265,slow=5.1,SNR=8.4						
ILAR				LR	LR	18 45 54.5	
	comp=Z,43nm,21.2s,baz=130,slow=35						
BELA	Belgrano 2	99.23	181		Pdif	18 09 55.8	+0.6
YKA	Yellowknife Ar	99.82	27	LR	LR	18 56 06.8	
	comp=Z,30nm,18.4s,baz=0.0,slow=36						
DBIC	Dimbokro	144.49	277	PKP	PKPbc	18 15 50.0	+0.1
	comp=Z,1.2nm,0.4s,baz=85,slow=5.9,SNR=7.0						
DBIC	Dimbokro	144.49	277		PKPab	18 15 49.6	-0.1

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*SOME **07** 18:46:31.7, 40°.02N×75°.43E, h10^{km}*

*KRNET **07** 18:46:33.6±0.1, 39°.71N×75°.66E, mb3.6*

ISC 07 18:46:32.7±1.6**, 40°.09N**±0°.06×**75°.45E**±0°.03**, h2**^{km}±16^{km}**, n46, σ1.^{s}64**/82**, 27C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.50	268	⇑iP	Pg	18 47 02.4	+1.0
	baz=81						
SFK				⇑iS	Sg	18 47 22.8	+2.0
	baz=81						
ARLS	Aral	1.97	335	⇑eP	Pg	18 47 11.6	+1.2
	baz=35						
ARLS				⇑iS	Sg	18 47 39.9	+4.0
	baz=35						
OHH	Osh	2.08	283	⇑iP	Pg	18 47 11.0	-1.7
	baz=91						
OHH				⇑iS	Sg	18 47 38.7	-1.0
	baz=91						
ULHL	Ulahol	2.24	15	⇑iP	Pb	18 47 13.6	-0.4
	baz=10.0						
ULHL				⇑iS	Sb	18 47 42.9	+0.7
	baz=10.0						
ULHL	Ulahol	2.24	15	P	Pg	18 47 15.3	-0.3
	SNR=30						
ARSB	Arslanbob	2.25	304	⇑iP	Pg	18 47 14.6	-1.2
	baz=9.0						
ARSB				⇑iS	Sg	18 47 44.4	-0.5
	baz=9.0						
UCH	Uchtor	2.25	342	⇑iP	Pg	18 47 15.4	-0.5
	baz=41						
UCH				⇑iS	Sg	18 47 46.4	+1.3
	baz=41						
UCH	Uchtor	2.25	342	P	Pg	18 47 16.4	+0.5
	SNR=67						
KDJ	Kajisay	2.42	32	⇓iP	Pb	18 47 15.9	-1.2
	baz=25						
KDJ				⇓iS	Sb	18 47 46.8	-0.7
	baz=25						
BOOM	Boomskoye usch	2.43	9	⇑eP	Pb	18 47 16.4	-0.8
	baz=4.0						
BOOM				⇑iS	Sb	18 47 49.0	+1.3
	baz=4.0						
AML	Almayashu	2.44	328	⇑iP	Pb	18 47 17.7	+0.2
	baz=29						
AML				⇑iS	Sg	18 47 50.7	-0.3
	baz=29						
AML	Almayashu	2.44	328	P	Pg	18 47 20.7	+1.3
	SNR=160						
KBK	Karagaybulak	2.59	352	⇑iP	Pb	18 47 19.4	-0.6
	baz=50						
KBK				⇑iS	Sb	18 47 53.7	+1.3
	baz=50						
KBK	Karagaybulak	2.59	352	P	Pg	18 47 23.1	+0.6
	SNR=40						
AAK	Ala-Archa	2.65	345	⇑eP	Pb	18 47 20.7	-0.2
	baz=44						
AAK				⇑iS	Sb	18 47 55.1	+1.1
	baz=44						
AAK	Ala-Archa	2.65	345	P	Pb	18 47 21.2	+0.2
	SNR=12						
FRU1	Bishkek	2.79	347	⇑iP	Pb	18 47 22.5	-0.8
	baz=46						
FRU1				⇑iS	Sb	18 47 58.5	+0.6
	baz=46						
TKM2	Tokmak 2	2.83	2	⇓iP	Pb	18 47 23.0	-1.1
	baz=59						
TKM2				⇓iS	Sb	18 47 59.5	+0.2
	baz=59						
TKM2	Tokmak 2	2.83	2	P	Pg	18 47 26.9	-0.1
	SNR=14						
EKS2	Erkin-Say	2.86	334	⇓eP	Pb	18 47 24.1	-0.5
	baz=35						
EKS2				⇓iS	Sb	18 48 01.3	+1.2
	baz=35						
EKS2	Erkin-Say	2.86	334	P	Pg	18 47 28.3	+0.7
	SNR=13						
CHMS	Chumysh	2.96	350	⇑iP	Pb	18 47 24.5	-1.6
	baz=49						
CHMS				⇑iS	Sb	18 48 01.9	-0.8
	baz=49						
CHMS	Chumysh	2.96	350	P	Pg	18 47 29.6	+0.2
	SNR=8.0						
KST	Kastek	2.98	7	eP	Pg	18 47 28.9	-0.8
	16nm,0.4s						
KST				eS	Sg	18 48 10.5	+2.1
	115nm,0.5s						
IZV	Izvestkoviy	3.07	16	eP	Pg	18 47 30.4	-1.2
	11nm,0.6s						
IZV				eS	Sg	18 48 12.8	+1.4
	96nm,0.5s						
MTBS	Maitube	3.13	13	eP	Pg	18 47 31.2	-1.4
	5.5nm,0.3s						
MTBS				eS	Sg	18 48 14.3	+1.1
	27nm,0.5s						
MRKS	Merke	3.14	329	eP	Pg	18 47 32.4	-0.4
	19nm,0.5s						
MRKS				eS	Sg	18 48 16.2	+2.7
	19nm,0.4s						
TNSS	Tian-Shan	3.15	20	eP	Pb	18 47 31.2	+1.5
	13nm,0.3s						
TNSS				eS	Sg	18 48 14.3	+0.3
	25nm,0.6s						
DGS	Degeres	3.16	4	eP	Pg	18 47 32.1	-1.2
	11nm,0.5s						
DGS				eS	Sg	18 48 15.5	+1.2
	50nm,0.6s						
MNAS	Manas	3.27	318	⇑eP	Pb	18 47 28.8	-2.7
	baz=20						
MNAS				⇑iS	Sb	18 48 10.2	-1.6
	baz=20						
MDOK	Medeo	3.30	21	eP	Pb	18 47 33.5	+1.5
	9.0nm,0.6s						
MDOK				eS	Sg	18 48 18.2	-0.4
	68nm,0.8s						
AAA	Alma-Ata	3.31	19	eP	Pg	18 47 34.9	-1.2
	11nm,0.2s						
AAA				eS	Sg	18 48 20.3	+1.4
	77nm,0.7s						
KNDC	Almaty	3.33	19	⇓Pg	Pb	18 47 29.5	-3.0
	19nm,0.3s						
KNDC				⇑Lg	Lg	18 48 20.5	
	240nm,0.7s						
KOTS	Kotyrbulak	3.38	21	eP	Pg	18 47 35.6	-1.9
	14nm,0.5s						
KOTS				eS	Sg	18 48 21.7	+0.3
	249nm,0.7s						
KRBS	Karabastau	3.61	3	eP	Pg	18 47 40.4	-1.5
	6.7nm,0.4s						
KRBS				eS	Sg	18 48 29.9	+1.2
	19nm,0.3s						
SATY	Saty	3.71	36	eP	Pb	18 47 40.8	+1.8
	4.1nm,0.3s						
SATY				eS	Sg	18 48 30.6	-1.1
	18nm,0.7s						
KTBS	Karatobe	3.74	14	eP	Pg	18 47 42.4	-1.9
	9.0nm,0.5s						
KTBS				eS	Sg	18 48 33.2	+0.5
	100nm,0.6s						
ZHN	Zhinishke	3.81	35	eP	Pb	18 47 42.1	+1.5
	1.2nm,0.3s						
ZHN				eS	Sg	18 48 33.0	-1.9
	2.4nm,0.3s						
KUU	Kurty	3.86	10	eP	Pg	18 47 44.3	-2.4
	3.2nm,0.5s						
KUU				eS	Sg	18 48 36.6	-0.1
	15nm,0.8s						
CHKK	Chushkaly	3.94	16	eP	Pg	18 47 45.5	-2.6
	3.5nm,0.4s						
CHKK				eS	Sg	18 48 38.6	-0.5
	72nm,0.6s						
KURS	Kuram	3.96	30	eP	Pb	18 47 45.0	+1.7
	3.8nm,0.5s						
KURS				eS	Sg	18 48 37.6	-2.2
	8.2nm,0.5s						
UZB	Uzynbulak	4.06	40	eP	Pb	18 47 46.6	+1.5
	5.3nm,0.5s						
UZB				eS	Sg	18 48 40.8	-2.4
	9.4nm,1.3s						
KPKS	Kokpek	4.15	35	eP	Pb	18 47 48.0	+1.5
	11nm,0.4s						
KPKS				eS	Sg	18 48 43.1	-3.0
	36nm,0.6s						
SHLS	Shalkode	4.29	43	eP	Pg	18 47 55.9	+0.9
	7.9nm,0.7s						
SHLS				eS	Sg	18 48 56.6	+6.0
	24nm,0.9s						
ARXS	Arharly	4.49	22	eP	Pb	18 47 54.3	+2.1
	4.6nm,0.5s						
ARXS				eS	Sg	18 48 53.9	-2.9
	13nm,0.6s						
KK31	Karatay Array	4.77	311	⇓Pg	Pg	18 48 02.6	-1.6
	1.7nm,0.5s,baz=129,slow=15,SNR=22						
KK31				Lg	Lg	18 49 08.1	
	2.0nm,0.5s,baz=128,slow=24,SNR=3.8						

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*INET **07** 18:47:13.8, 12°.97N×88°.76W, h30^{km}, ML3.1, MW3.0*

SNET 07 18:47:14.3±0.9**, 13°.02N×88°.73W, h52**^{km}±8^{km}**, ML3.8, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	0.51	22	eP	Pn	18 47 26.0	0.0
COEB				eS	Sn	18 47 35.8	+1.5
TECA	Tecapa	0.52	25	eP	Pn	18 47 26.3	+0.2
JUCU	Jucuar¡n	0.52	64	eP	Pn	18 47 25.8	-0.2
JUCU				eS	Sn	18 47 35.1	+0.7
JUCU				IAML		18 47 37.0	
	comp=Z,4μm,0.2s						
LCY	Lacayo	0.58	47	eP	Pn	18 47 27.1	+0.3
PACA	Pacayal	0.59	41	eP	Pn	18 47 27.6	+0.6
VSM	San Miguel	0.60	47	eP	Pn	18 47 27.4	+0.3
COEG	Centro de Oper	0.61	346	eP	Pn	18 47 27.3	+0.2
COEG				eS	Sn	18 47 37.5	+1.2
COEG				IAML		18 47 42.2	
	comp=Z,5μm,0.3s						
LFRS	El Faro	0.68	331	eP	Pn	18 47 28.0	0.0
PAVA	Las Pavas	0.72	343	eP	Pn	18 47 28.8	+0.3
PAVA				eS	Sn	18 47 40.2	+1.4
PAVA				IAML		18 47 42.5	
	comp=Z,3μm,0.4s						
LBRS	Las Brisas	0.78	337	eP	Pn	18 47 29.9	+0.7
LFU	La Fuente	0.81	332	eP	Pn	18 47 30.4	+0.7
SNET	Serv Nac Est T	0.82	323	eP	Pn	18 47 30.0	+0.1
SNET				eS	Sn	18 47 41.8	+0.6
LCND	La Caada	0.86	71	eP	Pn	18 47 30.4	+0.1
LCND				eS	Sn	18 47 42.9	+0.9
LCND				IAML		18 47 44.4	
	comp=Z,3μm,0.3s						
BOQS	Boqueron	0.89	323	eP	Pn	18 47 30.8	0.0
FAGO	Alcalda de S	0.90	42	eP	Pn	18 47 30.8	0.0
FAGO				eS	Sn	18 47 43.3	+0.4
JAYA	Jayaque - finc	0.94	312	eP	Pn	18 47 31.3	-0.2
JAYA				eS	Sn	18 47 44.4	+0.3
JAYA				IAML		18 47 46.8	
	comp=Z,2μm,0.2s						
CEDA	San Andres	1.01	320	eP	Pn	18 47 33.3	+1.0
TACO	Tacachico	1.12	327	eP	Pn	18 47 33.6	-0.2
TACO				eS	Sn	18 47 48.7	+0.5
SBLS	San Blas	1.19	313	eP	Pn	18 47 35.3	+0.4
SNJE	San Jose	1.20	315	eP	Pn	18 47 35.5	+0.5
TGUH	Tegucigalpa,Un	1.75	54	eP	Pn	18 47 42.2	-0.2

IDC 07 18:51:43.8±7.6**, 56°.26S×150°.83W, h0**^{km}**, mb3.6**/1**, mb1 3.7**/1**, mb1mx3.5**/25**, mbtmp3.6**/1**, Error ellipse: s-maj=842.1km s-min=104.3km az=168.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	52.83	97	T	T	19 57 57.3	
	baz=219,slow=74,SNR=8.7						
H03S1	Juan Fernandez	52.84	97	T	T	19 57 57.6	
	baz=219,slow=74,SNR=8.0						
H03S3	Juan Fernandez	52.85	97	T	T	19 57 57.3	
	baz=219,slow=74,SNR=9.5						
ASAR	Alice Springs	62.52	268	P	P	19 02 09.2	0.0
	0.6nm,1.0s,baz=136,slow=6.7,SNR=5.3						
MKAR	Makanchi Array	146.41	277	PKPbc	PKPdf	19 11 24.5	+0.1
	0.6nm,0.7s,baz=111,slow=2.6,SNR=7.9						
ZALV	Zalesovo Beam	148.81	290	PKPbc	PKPbc	19 11 31.9	-0.1
	0.3nm,0.4s,baz=94,slow=4.5,SNR=2.1						

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*NEIC **07** 19:07:54.1±1.1, 19°.8S±0°.2×175°.1W±0°.1, h137^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=30.3km s-min=13.7km az=173.0*

*IDC **07** 19:08:02.1±4.2, 19°.93S×175°.31W, h200^{km}±31^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.6/31, mbtmp4.4/9, Error ellipse: s-maj=39.7km s-min=21.3km az=61.0*

ISC 07 19:07:55.0±1.0**, 19°.7S**±0°.2×**175°.1W**±0°.1**, h150**^{km}**, n31, σ0.^{s}97**/27**, mb3.9**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.89	84		Pn	19 09 06.9	-0.2
MSVF	Nonsavu	6.81	286	P	Pn	19 09 38.7	+6.1
	baz=122,slow=15,SNR=12						
DZM	Mont Dzumac	17.43	259	P	Pn	19 11 50.6	+1.2
	1.0nm,0.3s,baz=194,slow=13,SNR=7.2						
DZM	Mont Dzumac	17.43	259	P	Pn	19 11 48.6	-0.7
DZM				IAmb	IAmb	19 11 54.0	
	comp=Z,17nm,0.9s						
URZ	Urewera	19.70	199	P	P	19 12 12.4	-0.3
	comp=Z,4.8nm,0.3s,baz=307,slow=3.1,SNR=22						
URZ	Urewera	19.70	199	P	P	19 12 11.9	-0.8
URZ				IAmb	IAmb	19 12 14.4	
	comp=Z,27nm,1.0s						
HIZ	Hauiti	20.68	203	P	Pn	19 12 25.9	-1.5
KWHZ	Kaweka Forest	20.98	199	P	P	19 12 27.1	+0.6
OTVZ	Oturere	20.98	200	P	P	19 12 26.3	-0.3
BHHZ	Black Hill Sta	21.15	199	P	P	19 12 27.9	-0.4
KAHZ	Kahuranaki	21.19	197	P	P	19 12 31.5	+2.8
KRHZ	Kereru	21.20	199	P	P	19 12 28.5	-0.3
BFZ	Birch Farm	22.19	198	P	P	19 12 40.4	+1.3
MRZ	Mangatainoka R	22.37	199	P	P	19 12 39.8	-1.0
HOWZ	Holdsworth Sta	22.61	199	P	P	19 12 43.1	0.0
QRZ	Quartz Range	23.57	204	P	P	19 12 54.0	+2.1
TUWZ	Tuamarina	23.59	201	P	P	19 12 52.5	+0.4
RPZ	Rata Peaks	26.62	203	P	P	19 13 20.6	+1.2
	comp=Z,6.8nm,0.4s,baz=350,slow=3.6,SNR=6.5						
RPZ	Rata Peaks	26.62	203	P	P	19 13 20.3	+0.8
CTA	Charters Tower	36.31	263	P	P	19 14 44.2	-0.4
	comp=Z,5.1nm,0.5s,baz=95,slow=10,SNR=16						
STKA	Stephens Creek	40.61	244	P	P	19 15 20.3	0.0
	comp=Z,1.1nm,0.5s,baz=106,slow=9.7,SNR=4.7						
STKA	Stephens Creek	40.61	244	P	P	19 15 19.8	-0.6
AS31	Alice Springs	47.38	256	P	P	19 16 14.4	0.0
AS31				IAmb	IAmb	19 16 15.1	
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	47.38	256	P	P	19 16 14.4	0.0
	comp=Z,4.4nm,0.6s,baz=92,slow=8.2,SNR=87						
ASAR				PcP	PcP	19 17 43.6	+0.8
	comp=Z,0.5nm,0.4s,baz=105,slow=4.1,SNR=5.9						
WRA	Warramunga Arr	47.44	261	P	P	19 16 14.2	-0.8
	comp=Z,0.7nm,0.3s,baz=97,slow=7.4,SNR=19						
VNDA	Vanda	58.96	186	P	P	19 17 37.8	-0.4
	comp=Z,0.9nm,0.8s,baz=0.0,slow=5.1,SNR=1.9						
VNDA	Vanda	58.96	186	P	P	19 17 37.6	-0.5
VNDA				IAmb	IAmb	19 17 39.5	
	comp=Z,2.3nm,1.1s						
H03S2	Juan Fernandez	84.16	124	T	T	20 52 50.3	
	baz=249,slow=75,SNR=7.8						
H03S1	Juan Fernandez	84.17	124	T	T	20 52 51.4	
	baz=249,slow=75,SNR=8.3						
H03S3	Juan Fernandez	84.17	124	T	T	20 52 50.0	
	baz=249,slow=75,SNR=7.4						
GERES	GERESS Array B	150.08	348	PKPbc	PKiKP	19 27 29.2	+0.4
	comp=Z,0.2nm,0.2s,baz=35,slow=3.3,SNR=3.6						

IDC 07 19:23:14.2±6.2**, 6°.54S×128°.74E, h133**^{km}±69^{km}**, mb3.0**/1**, mb1 3.0**/4**, mb1mx2.9**/35**, mbtmp3.4**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/14**, Error ellipse: s-maj=116.7km s-min=24.6km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.17	24	P	Pn	19 24 43.5	+0.3
	0.2nm,0.3s,baz=219,slow=24,SNR=7.0						
SIJI				S	Sn	19 25 45.0	-7.6
	0.2nm,0.3s,baz=277,slow=23,SNR=1.2						
DAV	Davao City (W)	13.89	347	LR	LR	19 32 09.1	
	comp=Z,54nm,20.8s,baz=297,slow=38						
WRA	Warramunga Arr	14.39	158	P	Pn	19 26 31.9	0.0
	0.1nm,0.3s,baz=338,slow=13,SNR=2.3						
ASAR	Alice Springs	17.73	164	P	P	19 27 11.9	0.0
	0.1nm,0.3s,baz=346,slow=10,SNR=11						
SONM	Songino Array	57.62	342	P	P	19 32 50.3	-0.1
	0.5nm,0.9s,baz=152,slow=6.4,SNR=3.8						

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*DJA **07** 19:30:45.4±0.4, 7°S±4°×10°4E±°, h10^{km}, M4.0/13, MLv4.0/13*

*IDC **07** 19:30:54.1±6.2, 6°.35S×103°.89E, h84^{km}±48^{km}, mb3.7/9, mb1 3.7/10, mb1mx3.5/40, mbtmp4.0/10, ML3.5/1, MS4.2/1, Ms1 4.2/1, ms1mx2.7/44, Error ellipse: s-maj=67.2km s-min=19.7km az=62.0*

ISC 07 19:30:50.1±1.0**, 6°.4S**±0°.1×**103°.8E**±0°.1**, h48**^{km}**, n24, σ1.^{s}16**/23**, mb4.1**/9**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.10	37	P	Pn	19 31 07.8	-1.4
LWLI	Liwa	1.40	9	P	Pn	19 31 12.8	-0.6
BLSI	Bandar Lampung	1.75	54	P	Pn	19 31 18.3	+0.3
CGJI	Cibinong	1.86	96	P	Pn	19 31 19.5	0.0
KLSI		1.93	28	P	Pn	19 31 21.3	+0.8
MNAI	Manna	2.22	337	P	Pn	19 31 24.2	-0.2
LHSI	Lahat	2.59	353	P	Pn	19 31 30.6	+1.1
DBJI	Dramaga	2.91	93	P	Pn	19 31 34.4	+0.5
CBJI	Citeko	3.00	90	P	Pn	19 31 35.9	+0.7
KSI	Kapahiang	3.01	336	P	Pn	19 31 35.7	+0.4
LEM	Lembang	3.79	96	P	Pn	19 31 49.7	+3.6
	4.1nm,0.3s,baz=170,slow=22,SNR=3.7						
LEM				LR	LR	19 33 38.3	
	comp=Z,57nm,21.3s,baz=218,slow=44						
LEM	Lembang	3.79	96	P	Pn	19 31 45.3	-0.8
CISI	Cisompet, Garu	4.12	106	P	Pn	19 31 49.8	-0.8
CMJI	Cimerak	4.78	107	P	Pn	19 31 57.7	-1.9
WRA	Warramunga Arr	32.53	117	P	P	19 37 16.8	0.0
	0.6nm,0.7s,baz=286,slow=11,SNR=3.6						
ASAR	Alice Springs	33.61	124	P	P	19 37 26.1	-0.1
	0.5nm,0.7s,baz=304,slow=8.3,SNR=5.0						
STKA	Stephens Creek	43.39	131	P	P	19 38 49.3	+1.2
	3.1nm,1.1s,baz=335,slow=4.6,SNR=3.1						
KSRS	Korea Array	49.09	25	P	P	19 39 32.0	-0.7
	0.7nm,0.7s,baz=218,slow=7.0,SNR=4.4						
SONM	Songino Array	54.06	2	P	P	19 40 10.5	+0.6
	2.3nm,0.6s,baz=178,slow=8.9,SNR=11						
MKAR	Makanchi Array	56.32	342	P	P	19 40 25.4	-0.7
	3.0nm,0.8s,baz=154,slow=7.7,SNR=3.7						
USRK	Ussuriysk Ar.	56.42	24	P	P	19 40 26.6	-0.2
	2.2nm,0.7s,baz=201,slow=4.4,SNR=7.2						
KLR	Kul'dur	60.54	21	P	P	19 40 54.4	-1.0
	1.0nm,0.6s,baz=230,slow=4.6,SNR=7.0						
ZALV	Zalesovo Beam	62.23	347	P	P	19 41 06.3	-0.4
	0.8nm,0.2s,baz=157,slow=5.0,SNR=5.6						
DZM	Mont Dzumac	62.26	111	LR	LR	20 10 55.3	
	comp=Z,174nm,18.5s,baz=28,slow=39						

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*JMA **07** 19:30:48.5±0.6, 46°.39N×153°.25E, h30^{km}, M5.0*

*SKHL **07** 19:30:50.6±0.5, 46°.18N×153°.32E, h42^{km}±7^{km}, mb5.5/1, Ms4.5/6, msh5.3/1, msh5.5/2*

*MOS **07** 19:30:50.8±1.1, 46°.37N×152°.99E, h35^{km}, mb5.0/40, MS4.2/10, Error ellipse: s-maj=5.6km s-min=4.4km az=97.4*

*GCMT **07** 19:30:51.7±0.4, 46°.29N±0°.03×153°.31E±0°.03, h21^{km}±1^{km}, MW4.8/83, Moment Tensor Solution. s24,c27; s83,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.10±.16; $M_{\theta\theta}$-0.43±.10; $M_{\phi\phi}$-1.67±.10; $M_{r\theta}$-0.54±.18; $M_{\theta\phi}$-0.95±.05; $M_{\phi r}$0.67±.13; Best double couple: $M_0$2.30700×10^{16} NP1:ϕ_s226.00000°, δ44.00000°, λ118.00000°. NP2: ϕ_s10.00000°, δ52.00000°, λ66.00000°. Principal axes: T 2.3990, Plg71.0000°, Azm220.0000°; N -0.1840, Plg19.0000°, Azm25.0000°; P -2.2150, Plg5.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **07** 19:30:51.4±0.0, 46°.18N×154°.26E, h33^{km}, mb5.1*

*BJI **07** 19:30:53.8±0.0, 46°.36N×152°.70E, h48^{km}, mB5.2/41, mb4.9/65, Ms4.7/42, Ms7 4.4/43*

*IDC **07** 19:30:53.0±0.5, 46°.31N×152°.99E, h41^{km}±4^{km}, mb4.3/28, mb1 4.5/34, mb1mx4.3/54, mbtmp4.5/34, ML3.8/5, MS4.0/33, Ms1 4.0/33, ms1mx3.8/60, Error ellipse: s-maj=13.4km s-min=9.8km az=155.0*

*NEIC **07** 19:30:54.7±1.3, 46°.44N±0°.09×153°.0E±0°.1, h51^{km}±5^{km}, mb4.9/235, Error ellipse: s-maj=14.9km s-min=9.6km az=145.0*

ISC 07 19:30:53.4±0.5**, 46°.23N**±0°.05×**153°.11E**±0°.04**, h51**^{km}±3^{km}**, h51**^{km}**:pP-P, n742, σ1.^{s}49**/774**, mb4.9**/232**, MS4.3**/45**, 51C-27D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.80	257	i P	Pn	19 31 48.5	-0.8
KUR				AMB	AMB	19 31 50.0	
	1μm,0.4s						
KUR				eS	Sn	19 32 32.3	-0.5
KUR				A	A	19 32 36.2	
	1μm,0.4s						
KUR				A	A	19 32 36.2	
	1μm,0.4s						
KUR				A	A	19 32 51.1	
	7μm,3.0s						
KUR				A	A	19 32 51.1	
	2μm,3.0s						
KUR				AMS	AMS	19 38 15.0	
	6μm,17.0s						
KUR				AMS	AMS	19 38 15.0	
	7μm,17.0s						
KUR				AMS	AMS	19 38 15.0	
	4μm,17.0s						
KUR	Kuril'sk	3.80	257	c iPN	Pn	19 31 49.8	+0.5
KUR				eS	Sn	19 32 33.8	+1.0
KUR				pmax	pmax		
	comp=Z,1μm,0.4s						
KUR				pmax	pmax		
	comp=E,59nm,0.2s						
KUR				pmax	pmax		
	comp=N,371nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,1.1s						
KUR				smax	smax		
	comp=E,2μm,1.2s						
KUR				smax	smax		
	comp=N,1μm,0.6s						
KUR				smax	smax		
	comp=E,280nm,0.2s						
SKR	Severo-Kuril's	4.89	23	eP	Pn	19 32 01.9	-2.3
SKR				AMB	AMB	19 32 05.8	
	comp=E,130nm,0.3s						
SKR				eS	Sn	19 32 55.0	-4.4
SKR				A	A	19 33 08.0	
	comp=E,560nm,0.6s						
SKR				A	A	19 33 08.0	
	comp=E,360nm,0.6s						
SKR				AMS	AMS	19 34 07.0	
	comp=E,2μm,15.0s						
SKR				AMS	AMS	19 34 07.0	

	comp=E,2µm,15.0s						
SKR				AMS	AMS	19 34 07.0	
	comp=E,2µm,15.0s						
SKR	**Severo-Kuril's**	**4.89**	**23**	*e*PN	**Pn**	**19 32 03.3**	**-0.9**
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1µm,13.0s						
YUK	**Yuzh-Kuril'sk**	**5.57**	**249**	*i* P	**Pn**	**19 32 13.7**	**0.0**
YUK				AMB	AMB	19 32 24.0	
	comp=Z,672nm,0.3s						
YUK				*e*S	**Sn**	**19 33 15.5**	**-0.9**
YUK				A	A	19 33 20.4	
	comp=Z,1µm,2.0s						
YUK				A	A	19 33 20.4	
	comp=Z,2µm,2.0s						
YUK				A	A	19 33 23.0	
	comp=Z,590nm,0.5s						
YUK				A	A	19 33 23.0	
	comp=Z,420nm,0.5s						
YUK				AMS	AMS	19 34 22.9	
	comp=Z,3µm,13.0s						
YUK				AMS	AMS	19 34 22.9	
	comp=Z,2µm,13.0s						
YUK	**Yuzh-Kuril'sk**	**5.57**	**249**	*d i*PN	**Pn**	**19 32 14.1**	**+0.4**
YUK				pmax	pmax		
	comp=Z,672nm,0.3s						
YUK				pmax	pmax		
	comp=E,151nm,0.5s						
YUK				pmax	pmax		
	comp=N,296nm,0.4s						
GRPR	**Tuman**	**5.65**	**249**	*e*P	**Pn**	**19 32 15.0**	**+0.3**
GRPR				AMB	AMB	19 32 25.0	
	comp=N,433nm,0.4s						
GRPR				*e*S	**Sn**	**19 33 17.0**	**-1.3**
GRPR				A	A	19 33 20.0	
	comp=N,541nm,0.4s						
GRPR				A	A	19 33 20.0	
	comp=N,432nm,0.4s						
GRPR	**Tuman**	**5.65**	**249**	*e*PN	**Pn**	**19 32 14.7**	**0.0**
GRPR				pmax	pmax		
	comp=N,85nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,433nm,0.4s						
PAU	**Pauzhetka**	**5.79**	**24**	*e*P	**Pn**	**19 32 14.8**	**-1.7**
PAU				AMB	AMB	19 32 17.6	
	comp=Z,130nm,0.8s						
PAU				*e*S	**Sn**	**19 33 18.1**	**-3.4**
PAU				A	A	19 33 27.5	
	comp=Z,642nm,0.7s						
PAU				A	A	19 33 27.5	
	comp=Z,606nm,0.7s						
PAU				AMS	AMS	19 34 53.3	
	comp=Z,4µm,16.0s						
PAU				AMS	AMS	19 34 53.3	
	comp=Z,4µm,16.0s						
RUSJ	**Misakicho**	**5.95**	**252**	PN	**Pn**	**19 32 19.2**	**+0.4**
NEM2	**Nemuro 2**	**5.97**	**244**	P	**Pn**	**19 32 16.0**	**-3.1**
NEM2				*e*S	**Sn**	**19 33 21.6**	**-4.5**
NMR	**Nemuro--Hokkai**	**5.98**	**244**	*i* P	**Pn**	**19 32 16.0**	**-3.2**
NMR	**Nemuro--Hokkai**	**5.98**	**244**	⇓*i*PN	**Pn**	**19 32 16.2**	**-3.0**
JRA	**Rausu**	**6.10**	**251**	P	**Pn**	**19 32 20.6**	**-0.2**
JNK	**Nakash**	**6.51**	**249**	P	**Pn**	**19 32 25.7**	**-0.9**
JNK				*e*S	**Sn**	**19 33 38.1**	**-1.4**
JAK	**Akkeshi**	**6.81**	**245**	P	**Pn**	**19 32 27.8**	**-2.9**
JAK				*e*S	**Sn**	**19 33 41.5**	**-5.3**
JTKR	**Abashiri--Toko**	**6.89**	**254**	P	**Pn**	**19 32 31.6**	**-0.1**
YSS	**Yuzh-Sakhalins**	**7.17**	**280**	*i* P	**Pn**	**19 32 36.9**	**+1.4**
YSS				AMB	AMB	19 32 43.4	
	comp=Z,60nm,0.7s						
YSS				*e*S	**Sn**	**19 33 56.7**	**+1.2**
YSS				AMS	AMS	19 35 16.0	
	comp=Z,3µm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.17**	**280**	⇑*i*PN	**Pn**	**19 32 39.4**	**+3.9**
YSS				*e*S	**Sn**	**19 33 59.6**	**+4.1**
YSS				pmax	pmax		
	comp=Z,60nm,0.7s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.17**	**280**	Pn	**Pn**	**19 32 36.2**	**+0.7**
JMP	**Maruseppu**	**7.24**	**256**	P	**Pn**	**19 32 36.8**	**+0.2**
JAR	**Ashorobuto**	**7.26**	**250**	P	**Pn**	**19 32 35.8**	**-1.0**
JAR				*e*S	**Sn**	**19 33 56.3**	**-1.6**
JOB	**Onbets**	**7.41**	**247**	P	**Pn**	**19 32 36.7**	**-2.1**
PEA0B	**Petropavlovsk-**	**7.50**	**22**	⇓*e*PN	**Pn**	**19 32 38.1**	**-2.0**
PEA0B	**Petropavlovsk-**	**7.50**	**22**	Pn	**Pn**	**19 32 38.1**	**-2.0**
PETK	**Petropavlovsk-**	**7.50**	**22**	P	**Pn**	**19 32 38.1**	**-2.0**
	comp=Z,2.6nm,0.3s,baz=174,slow=12,SNR=35						
PET	**Petropavlovsk**	**7.70**	**26**	*e*P	**Pn**	**19 32 40.5**	**-2.2**
PET				AMB	AMB	19 32 40.8	
	comp=Z,47nm,1.0s						
PET				*e*S	**Sn**	**19 34 03.1**	**-5.3**
PET				AMS	AMS	19 36 59.4	
	comp=Z,1µm,17.0s						
PET	**Petropavlovsk**	**7.70**	**26**	*e*PN	**Pn**	**19 32 38.5**	**-4.2**
PET				pmax	pmax		
	comp=Z,48nm,1.5s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET	**Petropavlovsk**	**7.70**	**26**	Pn	**Pn**	**19 32 41.3**	**-1.3**
JKK2	**Kamakawa 2**	**7.70**	**256**	P	**Pn**	**19 32 43.2**	**+0.3**
JKA	**Kamikawa-asahi**	**7.72**	**258**	Pn	**Pn**	**19 32 43.6**	**+0.6**
ASAJ	**Asahikawa**	**7.72**	**258**	P	**Pn**	**19 32 43.4**	**+0.3**
	comp=Z,3.3nm,0.3s,baz=100,slow=16,SNR=12						
ASAJ				LR	LR	19 35 37.3	
	comp=Z,1µm,18.4s,baz=148,slow=37						
ASAJ	**Asahikawa**	**7.72**	**258**	P	**Pn**	**19 32 44.2**	**+1.1**
ASAJ	**Asahikawa**	**7.72**	**258**	PN	**Pn**	**19 32 43.6**	**+0.5**
JCH	**Churui**	**7.85**	**246**	P	**Pn**	**19 32 42.7**	**-2.2**
JCH				*e*S	**Sn**	**19 34 06.8**	**-5.5**
JWK2	**Keihoku**	**7.89**	**267**	P	**Pn**	**19 32 46.4**	**+1.0**
UGL	**Uglegorsk**	**7.98**	**295**	*e*P	**Pn**	**19 32 48.4**	**+1.8**
UGL				AMB	AMB	19 32 51.4	
	comp=Z,190nm,0.7s						
JFR	**Furan**	**8.09**	**252**	P	**Pn**	**19 32 48.3**	**+0.1**
JEM	**Erimo**	**8.30**	**243**	Pn	Pn	19 32 44.4	-6.6
ERM	**Erimo**	**8.30**	**243**	⇓*e*PN	**Pn**	**19 32 53.0**	**+2.0**
ERM	**Erimo**	**8.30**	**243**		**Pn**	**19 32 50.3**	**-0.7**
TYV	**Tymovskoe**	**8.34**	**308**	*e*P	**Pn**	**19 32 53.3**	**+1.8**
TYV				AMB	AMB	19 32 55.6	
	comp=Z,7.0nm,1.0s						
JBT2	**Biratori 2**	**8.42**	**250**	P	**Pn**	**19 32 51.0**	**-1.6**
JEW	**Eniwo**	**8.99**	**252**	Pn	**Pn**	**19 33 00.8**	**+0.4**
JNB	**Noboribetsu**	**9.43**	**251**	P	**Pn**	**19 33 04.7**	**-1.7**
JNB				*e*S	**Sn**	**19 34 46.1**	**-4.8**
JKB	**Kayabe**	**9.71**	**248**	P	**Pn**	**19 33 07.3**	**-3.0**
JKB				*e*S	**Sn**	**19 34 50.1**	**-7.8**
OKH	**Okha**	**9.83**	**322**	*e*P	**Pn**	**19 33 14.9**	**+3.0**
OKH				AMB	AMB	19 33 17.0	
	comp=Z,50nm,0.8s						
OKH				AMS	AMS	19 38 05.3	
	comp=Z,2µm,15.0s						
OKH				AMS	AMS	19 38 05.3	
	comp=Z,1µm,15.0s						
OKH				AMS	AMS	19 38 05.3	
	comp=Z,2µm,15.0s						
OKH	**Okha**	**9.83**	**322**	*de*PN	**Pn**	**19 33 09.2**	**-2.7**
OKH				MLR	MLR		
	comp=E,1µm,15.0s						
OKH				MLR	MLR		
	comp=N,2µm,13.0s						
OKH				MLR	MLR		
	comp=Z,2µm,12.0s						
JYM2	**Yakumo 2**	**10.03**	**250**	P	**Pn**	**19 33 12.9**	**-1.8**
JANG	**Nango**	**10.27**	**239**	P	Pn	19 33 12.7	-5.3
JANG				*e*S	Sn	19 35 00.2	-11
JTM	**Tenmabayashi**	**10.29**	**242**	P	**Pn**	**19 33 14.1**	**-4.2**
JTM				*e*S	Sn	19 35 01.9	-10
JTH	**Tanohata**	**10.34**	**237**	*e*S	Sn	19 35 02.3	-11
NKL	**Nikolayevsk**	**10.61**	**315**	*e*P	**Pn**	**19 33 23.6**	**+1.0**
NKL				AMB	AMB	19 33 26.3	
	comp=Z,34nm,0.6s						
JRG	**Rokugo**	**11.42**	**238**	*e*S	Sn	19 35 29.5	-10
TEY	**Ternei**	**11.62**	**270**	*e*P	**Pn**	**19 33 36.0**	**-0.4**
TEY				AMB	AMB	19 33 56.7	
	comp=Z,18nm,0.6s						
JIO	**Ouri**	**11.65**	**232**	*e*S	Sn	19 35 33.7	-12
GRNR	**Gornyy**	**11.96**	**298**	*e*P	**Pn**	**19 33 44.0**	**+3.0**
GRNR				AMB	AMB	19 33 45.5	
	comp=Z,3.0nm,0.9s						
GRNR				AMB	AMB	19 33 45.5	
	comp=Z,10.0nm,0.9s						
GRNR				AMB	AMB	19 33 45.5	
	comp=Z,10.0nm,0.9s						
GRNR				AMS	AMS	19 38 39.0	
	comp=Z,400nm,16.0s						
GRNR				AMS	AMS	19 38 39.0	
	comp=Z,800nm,16.0s						
GRNR				AMS	AMS	19 38 39.0	
	comp=Z,1µm,16.0s						
GRNR	**Gornyy**	**11.96**	**298**	⇑*i*PN	**Pn**	**19 33 44.0**	**+3.0**
GRNR				*e*S	**Sn**	**19 35 59.8**	**+7.0**
GRNR				pmax	pmax		
	comp=E,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=N,3.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,790nm,15.0s						
GRNR				MLR	MLR		
	comp=N,400nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
MA2	**Magadan**	**13.45**	**355**	P	**Pn**	**19 34 00.1**	**-1.1**
	comp=Z,2.3nm,0.3s,baz=166,slow=7.9,SNR=13						
MA2				LR	LR	19 39 36.2	
	comp=Z,539nm,18.5s,baz=177,slow=39						
MA2	**Magadan**	**13.45**	**355**	*e*P	**Pn**	**19 34 01.2**	**0.0**
MA2	**Magadan**	**13.45**	**355**	*ce*PN	**Pn**	**19 34 01.2**	**0.0**
MA2				pmax	pmax		
	comp=Z,31nm,1.7s						
MA2	**Magadan**	**13.45**	**355**	Pn	**Pn**	**19 33 59.9**	**-1.4**
JYT	**Yasato**	**13.92**	**229**		**P**	**19 34 13.1**	**-1.4**
KLR	**Kul'dur**	**14.68**	**290**	P	**Pn**	**19 34 18.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=97,slow=15,SNR=13						
KLR				LR	LR	19 40 17.1	
	comp=Z,1µm,18.2s,baz=102,slow=39						
KLR	**Kul'dur**	**14.68**	**290**	⇑*i*P	**Pn**	**19 34 19.0**	**+1.3**
KLR				pmax	pmax		
	comp=Z,33nm,1.2s						
KLR				MLR	MLR		
	comp=Z,1µm,16.0s						
EKMR	**Ekimchan**	**14.71**	**305**	*e*P	**Pn**	**19 34 16.0**	**-2.3**
EKMR				AMB	AMB	19 34 32.0	
	comp=Z,15nm,0.6s						
MJAR	**Matsushiro Arr**	**14.76**	**234**	P	**Pn**	**19 34 15.5**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=7.3						
MJAR				LR	LR	19 40 32.0	
	comp=Z,289nm,20.8s,baz=80,slow=39						
MAJO	**Matsushiro**	**14.77**	**234**	⇓*e*P	**Pn**	**19 34 18.2**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,92nm,3.0s						
MAJO	**Matsushiro**	**14.77**	**234**		**Pn**	**19 34 15.2**	**-3.8**
MAT	**Matsushiro**	**14.77**	**234**	P	**Pn**	**19 34 15.0**	**-4.0**
MAT				*e*S	**Sn**	**19 37 05.0**	**+3.7**
USA0B	**Ussuriysk Arra**	**15.02**	**270**	⇓*e*P	**Pn**	**19 34 22.1**	**-0.1**
USA0B	**Ussuriysk Arra**	**15.02**	**270**		**Pn**	**19 34 21.2**	**-1.0**
USRK	**Ussuriysk Ar.**	**15.02**	**270**	P	**Pn**	**19 34 21.1**	**-1.2**
	baz=73,slow=12,SNR=43						
JGF	**Kuroka**	**15.92**	**234**	Pn	**Pn**	**19 34 33.4**	**-0.5**
JSG	**Sagara**	**16.16**	**230**	Pn	**P**	**19 34 39.5**	**+0.1**
JSG				IAmb	IAmb	19 34 42.9	
	comp=Z,128nm,0.9s						
INU	**Inuyama**	**16.29**	**234**	Pn	**Pn**	**19 34 39.8**	**+1.2**
MDJ	**Mudanjiang**	**16.58**	**273**	Pn	**Pn**	**19 34 40.2**	**-1.9**
SEY	**Seymchan**	**16.75**	**359**	P	**Pn**	**19 34 42.4**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=162,slow=10,SNR=8.8						
JWT	**Wachi**	**17.26**	**237**	Pn	**Pn**	**19 34 51.0**	**+0.3**
BMKR	**Bomnak**	**17.55**	**308**	*e*P	**Pn**	**19 34 51.0**	**-3.2**
BMKR				AMB	AMB	19 34 59.2	
	comp=Z,10.0nm,0.5s						
AMKA	**Amchitka**	**17.96**	**64**	P	**P**	**19 34 59.8**	**+0.6**
ZEA	**Zeya**	**18.17**	**304**	*e*P	**Pn**	**19 35 02.0**	**+0.3**
ZEA				AMB	AMB	19 35 05.9	
	comp=Z,300nm,5.0s						
ZEA				AMB	AMB	19 35 05.9	
	comp=Z,200nm,5.0s						
ZEA				AMB	AMB	19 35 05.9	
	comp=Z,500nm,5.0s						
ZEA				AMB	AMB	19 35 13.2	
	comp=Z,10.0nm,0.9s						
ZEA				AMB	AMB	19 35 13.2	
	comp=Z,10.0nm,0.9s						
ZEA				AMB	AMB	19 35 13.2	
	comp=Z,10.0nm,0.9s						
ZEA				AMS	AMS	19 42 31.0	
	comp=Z,500nm,15.0s						
ZEA				AMS	AMS	19 42 31.0	
	comp=Z,500nm,15.0s						
ZEA	**Zeya**	**18.17**	**304**	*e*P	**Pn**	**19 35 02.0**	**+0.3**
ZEA				pmax	pmax		
	comp=E,200nm,4.9s						
ZEA				pmax	pmax		
	comp=N,300nm,5.5s						
ZEA				pmax	pmax		
	comp=Z,500nm,5.1s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,500nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
KROS	**Kirovskiy**	**18.51**	**306**	*e*P	**P**	**19 35 04.8**	**-0.4**
KROS				AMB	AMB	19 35 12.0	
	comp=Z,7.0nm,0.5s						
KROS				AMB	AMB	19 35 12.0	
	comp=Z,7.0nm,0.5s						
KROS				AMB	AMB	19 35 12.0	
	comp=Z,10.0nm,0.5s						
CN2	**Changchun**	**19.67**	**273**	*e*P	**P**	**19 35 18.1**	**+0.2**
CN2				*e*S	**S**	**19 38 48.2**	**-8.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,480nm,5.1s						
CN2				LR	LR		
	comp=Z,700nm,20.0s						
CN2				LR	LR		
	comp=Z,620nm,20.0s						
CN2				LR	LR		
	comp=Z,710nm,18.0s						
KSRS	**Korea Array**	**20.64**	**254**	P	**P**	**19 35 29.5**	**+1.0**
	comp=Z,11nm,0.8s,baz=60,slow=10,SNR=30						
KSRS				LR	LR	19 42 27.3	
	comp=Z,349nm,21.0s,baz=69,slow=34						
KS19	**Wonju Array Si**	**20.65**	**254**	P	**P**	**19 35 29.6**	**+0.9**
YAK	**Yakutsk**	**20.76**	**328**	P	**P**	**19 35 28.1**	**-1.4**
	comp=Z,20nm,0.6s,baz=3.2,slow=0.3,SNR=23						
YAK				LR	LR	19 43 46.6	
	comp=Z,440nm,18.8s,baz=101,slow=38						
YAK	**Yakutsk**	**20.76**	**328**	*e*P	**P**	**19 35 28.9**	**-0.7**
YAK	**Yakutsk**	**20.76**	**328**	*e*P	**P**	**19 35 28.9**	**-0.7**
YAK				*e**PP	**pP**	**19 35 37.7**	**-2.8**
YAK				*e*		19 35 47.0	
YAK				*e*S	**S**	**19 39 16.3**	**-1.9**
YAK				*e**SS	**sS**	**19 39 40.1**	**+5.1**
YAK				*e*SS	**SnSn**	**19 39 48.1**	**+7.2**
YAK				*e*		19 46 56.7	
YAK				pmax	pmax		
	comp=Z,23nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,48nm,1.7s						
YAK				pmax	pmax		
	comp=E,40nm,1.5s						
YAK				pmax	pmax		
	comp=N,101nm,2.0s						
YAK				smax	smax		
	comp=N,87nm,3.1s						
YAK				smax	smax		
	comp=E,134nm,3.3s						
YAK	**Yakutsk**	**20.76**	**328**	P	**P**	**19 35 27.6**	**-2.0**
YAK				IAmb	IAmb	19 35 39.0	
	comp=Z,56nm,0.7s						
JNU	**Nakatsue**	**21.45**	**240**	P	**P**	**19 35 37.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=94,slow=7.8,SNR=5.0						
JNU				LR	LR	19 43 59.6	
	comp=Z,173nm,20.5s,baz=38,slow=37						
JNU	**Nakatsue**	**21.45**	**240**	P	**P**	**19 35 37.8**	**+0.5**
TJN	**Taejon**	**21.61**	**252**	⇑*e*P	**P**	**19 35 40.1**	**+1.1**
JSU	**Suzuyama**	**22.85**	**238**	P	**P**	**19 35 53.7**	**+1.5**
JSU				IAmb	IAmb	19 35 59.1	
	comp=Z,57nm,1.2s						
BOD	**Bodaibo**	**26.32**	**310**	*e*P	**P**	**19 36 21.7**	**-2.3**
BOD				pmax	pmax		
	comp=Z,12nm,1.4s						
BJI	**Beijing**	**27.47**	**270**	P	**P**	**19 36 35.8**	**+1.3**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				LR	LR		
	comp=Z,230nm,7.9s						
BJI				LR	LR		
	comp=Z,520nm,19.5s						
BJI				LR	LR		
	comp=Z,440nm,18.1s						
BJT	**Baijiatuau**	**27.48**	**270**	P	**P**	**19 36 33.5**	**-1.2**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuau**	**27.48**	**270**	P	**P**	**19 36 33.5**	**-1.2**
TIXI	**Tiksi**	**27.97**	**344**	⇑*e*P	**P**	**19 36 34.5**	**-4.1**
TIXI	**Tiksi**	**27.97**	**344**	P	**P**	**19 36 34.5**	**-4.1**
ANM	**Nome**	**29.11**	**36**	P	**P**	**19 36 50.1**	**+1.2**
ANM				pmax	pmax		
	comp=Z,15nm,1.2s						
ANM	**Nome**	**29.11**	**36**	P	**P**	**19 36 50.1**	**+1.2**
H11S1	**WAKE ISLAND Hy**	**29.84**	**153**	T	T	20 09 42.0	
	baz=340,slow=76,SNR=262						
NJ2	**Nanjing**	**29.84**	**254**	*e*P	**P**	**19 36 56.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,730nm,14.9s						
NJ2				LR	LR		
	comp=Z,470nm,13.3s						
NJ2				LR	LR		
	comp=Z,380nm,13.7s						
H11S3	**WAKE ISLAND Hy**	**29.85**	**153**	T	T	20 09 47.6	
	baz=340,slow=76,SNR=167						
H11S2	**WAKE ISLAND Hy**	**29.86**	**153**	T	T	20 09 44.5	
	baz=340,slow=76,SNR=242						
HHC	**Hu-ho-hao-te**	**30.33**	**275**	*e*P	**P**	**19 37 01.5**	**+1.5**
HHC				S	**S**	**19 41 58.9**	**+2.2**
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,420nm,6.2s						
HHC				LR	LR		
	comp=Z,420nm,13.7s						
HHC				LR	LR		
	comp=Z,710nm,14.0s						
HHC				LR	LR		
	comp=Z,770nm,14.5s						
ULN	**Ulaanbaatar**	**31.07**	**290**	*e*P	**P**	**19 37 06.0**	**-0.6**
ULN	**Ulaanbaatar**	**31.07**	**290**	⇓*e*P	**P**	**19 37 06.0**	**-0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**31.07**	**290**	P	**P**	**19 37 05.6**	**-1.0**
SONM	**Songino Array**	**31.51**	**290**	P	**P**	**19 37 09.5**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=72,slow=8.4,SNR=16						
SONM				PcP	**PcP**	**19 40 01.9**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=113,slow=2.3,SNR=4.7						
TLY	**Talaya**	**32.42**	**298**	*e*P	**P**	**19 37 17.6**	**-0.6**
TLY	**Talaya**	**32.42**	**298**	*e*P	**P**	**19 37 17.6**	**-0.6**
TLY				pmax	pmax		
	comp=Z,16nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	**Talaya**	**32.42**	**298**	P	**P**	**19 37 17.2**	**-1.0**
TTA	**Tatalina**	**32.82**	**41**	P	**P**	**19 37 22.2**	**+0.6**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TTA	**Tatalina**	**32.82**	**41**	P	**P**	**19 37 22.2**	**+0.6**
ZAK	**Zakamensk**	**32.90**	**296**	*e*P	**P**	**19 37 21.7**	**-0.8**
ZAK	**Zakamensk**	**32.90**	**296**	*e*P	**P**	**19 37 21.7**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WHN	**Wuhan**	**33.80**	**256**	⇓P	**P**	**19 37 31.0**	**+0.6**
MOY	**Mondy**	**34.04**	**299**	*e*P	**P**	**19 37 31.8**	**-0.6**
A21K	**Barrow**	**34.48**	**26**	P	**P**	**19 37 36.4**	**+0.6**
A21K				IAmb	IAmb	19 37 42.9	
	comp=Z,15nm,0.7s						
PPLA	**Purkeypile**	**34.56**	**41**	P	**P**	**19 37 38.1**	**+1.3**
PPLA				IAmb	IAmb	19 37 53.9	
	comp=Z,29nm,1.2s						
TPUB	**Ta-pu**	**34.76**	**240**	P	**P**	**19 37 39.7**	**+0.9**
SKT	**Skwentna**	**34.84**	**43**	P	**P**	**19 37 39.4**	**+0.4**
SKT				IAmb	IAmb	19 37 59.1	
	comp=Z,14nm,1.0s						
CNPM	**China Poot**	**35.03**	**47**	P	**P**	**19 37 41.5**	**+0.8**
KTH	**Kantishna Hill**	**35.16**	**40**	P	**P**	**19 37 43.0**	**+1.0**
KTH				IAmb	IAmb	19 37 58.5	
	comp=Z,21nm,1.0s						
BRLK	**Bradley Lake**	**35.19**	**47**	P	**P**	**19 37 42.0**	**-0.1**
BRLK				IAmb	IAmb	19 38 05.2	
	comp=Z,27nm,1.2s						
SUA	**Susitna One**	**35.21**	**44**	P	**P**	**19 37 42.5**	**+0.1**
SUA				IAmb	IAmb	19 37 56.1	
	comp=Z,19nm,1.4s						
TRF	**Thorofare Moun**	**35.44**	**40**	P	**P**	**19 37 45.1**	**+0.7**
XAN	**Xi'an**	**35.47**	**266**	P	**P**	**19 37 45.4**	**+0.5**
XAN				pP	pwP	19 37 59.4	-1.3
XAN				S	**S**	**19 43 16.5**	**+0.1**
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				pmax	pmax		
	comp=Z,200nm,6.2s						
XAN				LR	LR		
	comp=Z,370nm,21.1s						
XAN				LR	LR		
	comp=Z,250nm,19.6s						
XAN				LR	LR		
	comp=Z,500nm,16.2s						
XAN	**Xi'an**	**35.47**	**266**	P	**P**	**19 37 45.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN	**Xi'an**	**35.47**	**266**	P	**P**	**19 37 45.0**	**+0.1**
XAN				IAmb	IAmb	19 37 47.2	
	comp=Z,14nm,1.1s						
COLD	**Coldfoot**	**35.77**	**34**	P	**P**	**19 37 47.3**	**+0.3**
RND	**Reindeer**	**36.09**	**40**	P	**P**	**19 37 49.7**	**-0.2**
RND				pmax	pmax		
	comp=Z,21nm,0.5s						
RND	**Reindeer**	**36.09**	**40**	P	**P**	**19 37 49.7**	**-0.2**
TOLK	**Toolik Lake Re**	**36.19**	**31**	P	**P**	**19 37 51.0**	**+0.3**
KNK	**Knik Glacier**	**36.31**	**44**	P	**P**	**19 37 51.5**	**-0.2**
KNK				IAmb	IAmb	19 38 11.2	
	comp=Z,24nm,1.1s						
SML	**Sawmill**	**36.35**	**43**	P	**P**	**19 37 52.1**	**0.0**
MDM	**Murphy Dome**	**36.39**	**38**	P	**P**	**19 37 52.9**	**+0.5**
WRH	**Wood River Hil**	**36.44**	**39**	P	**P**	**19 37 52.0**	**-0.8**
TCOL	**CIGO, UAF Yank**	**36.55**	**38**	P	**P**	**19 37 54.2**	**+0.6**
TCOL				IAmb	IAmb	19 38 18.9	
	comp=Z,16nm,0.9s						
COLA	**College**	**36.55**	**38**	⇓*i*P	**P**	**19 37 54.6**	**+0.9**
COLA				pmax	pmax		
	comp=Z,21nm,1.3s						
COLA	**College**	**36.55**	**38**	P	**P**	**19 37 54.1**	**+0.4**
CCB	**Clear Creek Bu**	**36.57**	**38**	P	**P**	**19 37 54.6**	**+0.8**
POKR	**Poker Plat Res**	**36.73**	**38**	P	**P**	**19 37 55.9**	**+0.6**
POKR				IAmb	IAmb	19 38 15.8	
	comp=Z,14nm,0.8s						
DHY	**Denali Highway**	**36.76**	**41**	P	**P**	**19 37 55.3**	**-0.4**
HDA	**Harding Lake**	**36.93**	**39**	P	**P**	**19 37 56.6**	**-0.4**
HDA				IAmb	IAmb	19 38 20.9	
	comp=Z,15nm,0.9s						
IL31		**36.96**	**38**	P	**P**	**19 37 57.1**	**-0.1**
ILAR	**Eielson Array**	**36.96**	**38**	P	**P**	**19 37 56.9**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=258,slow=7.4,SNR=18						
ILAR				LR	LR	19 53 31.1	
	comp=Z,111nm,21.0s,baz=310,slow=37						
IL18	**Eielson Array**	**37.01**	**38**	P	**P**	**19 37 56.4**	**-1.2**
ENH	**Enshi**	**37.27**	**260**	P	**P**	**19 38 00.1**	**-0.2**
ENH				IAmb	IAmb	19 38 01.0	
	comp=Z,13nm,1.0s						
KLU	**Klutina**	**37.52**	**44**	P	**P**	**19 38 02.1**	**0.0**
KLU				IAmb	IAmb	19 38 22.5	
	comp=Z,18nm,1.0s						
PAX	**Paxson**	**37.63**	**41**	P	**P**	**19 38 03.8**	**+0.8**
PAX				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PAX	**Paxson**	**37.63**	**41**	P	**P**	**19 38 03.8**	**+0.8**
LZH	**Lanzhou**	**37.90**	**272**	*e*P	**P**	**19 38 07.5**	**+1.8**
LZH				pP	sP	19 38 23.2	-0.7
LZH				pmax	pmax		

	comp=Z,16nm,1.1s						
LZH				LR	LR		
	comp=Z,420nm,13.3s						
LZH				LR	LR		
	comp=Z,410nm,13.6s						
LZH				LR	LR		
	comp=Z,420nm,14.4s						
MENT	**Mentasta**	**38.43**	**41**	P	**P**	**19 38 09.9**	**+0.2**
CRQM	**Cirque**	**38.95**	**44**	P	**P**	**19 38 15.0**	**+0.8**
CRQM				IAmb	IAmb	19 38 34.7	
	comp=Z,28nm,1.0s						
GTA	**Gaotai**	**39.05**	**280**	P	**P**	**19 38 16.1**	**+0.8**
GTA				pP	pwP	19 38 31.3	+0.2
GTA				sP	sP	19 38 38.7	+5.2
GTA				pmax	pmax		
	comp=Z,25nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,6.4s						
GTA				LR	LR		
	comp=Z,370nm,14.7s						
GTA				LR	LR		
	comp=Z,220nm,15.9s						
GTA				LR	LR		
	comp=Z,350nm,16.3s						
NRIK	**Noril'sk**	**39.21**	**329**	P	**P**	**19 38 14.9**	**-1.1**
	comp=Z,3.8nm,0.8s,baz=102,slow=11,SNR=9.4						
NRIK				LR	LR	19 55 25.8	
	comp=Z,115nm,18.3s,baz=84,slow=38						
NRIK	**Noril'sk**	**39.21**	**329**⇓	*e*P	**P**	**19 38 14.0**	**-2.0**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	**Noril'sk**	**39.21**	**329**	P	**P**	**19 38 14.2**	**-1.8**
EGAK	**Eagle**	**39.41**	**38**	P	**P**	**19 38 17.7**	**-0.1**
MESA	**MESA**	**39.61**	**45**	P	**P**	**19 38 20.6**	**+0.8**
BARN	**Barnard Glacie**	**39.62**	**44**	P	**P**	**19 38 21.0**	**+1.3**
BARN				IAmb	IAmb	19 38 36.5	
	comp=Z,14nm,0.9s						
YAH	**Yahtse**	**39.69**	**45**	P	**P**	**19 38 21.3**	**+0.9**
YAH				IAmb	IAmb	19 38 36.8	
	comp=Z,22nm,1.0s						
CTGM	**Chitina Glacie**	**39.79**	**44**	P	**P**	**19 38 21.4**	**+0.2**
CTGM				IAmb	IAmb	19 38 37.8	
	comp=Z,13nm,0.8s						
CD2	**Chengdu**	**40.83**	**266**	*e*P	**P**	**19 38 30.0**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
EPYK	**Eagle Plains**	**41.10**	**35**	P	**P**	**19 38 32.8**	**+1.1**
GYA	**Guiyang**	**41.60**	**258**	P	**P**	**19 38 37.6**	**+1.2**
GYA				pmax	pmax		
	comp=Z,38nm,0.9s						
GYA				LR	LR		
	comp=Z,340nm,16.5s						
INK	**Inuvik**	**42.09**	**32**	P	**P**	**19 38 40.8**	**+1.0**
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	**Inuvik**	**42.09**	**32**	P	**P**	**19 38 40.8**	**+1.0**
DGZ	**Jazzator, Alta**	**42.86**	**300**⇑	*i*P	**P**	**19 38 46.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAA0	**Zalesovo Array**	**42.91**	**306**	P	**P**	**19 38 44.5**	**-2.2**
ZALV	**Zalesovo Beam**	**42.91**	**306**	P	**P**	**19 38 45.1**	**-1.5**
	comp=Z,5.1nm,0.7s,baz=63,slow=7.5,SNR=26						
ZALV				PcP	**PcP**	**19 40 37.6**	**+1.1**
	comp=Z,3.4nm,0.9s,baz=106,slow=3.1,SNR=6.9						
WMQ	**Urumqi**	**45.11**	**292**	*e*P	**P**	**19 39 07.2**	**+2.7**
WMQ				pP	pP	19 39 18.4	+1.2
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.9s						
WMQ				LR	LR		
	comp=Z,700nm,18.1s						
WMQ				LR	LR		
	comp=Z,610nm,19.1s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
WMQ	**Urumqi**	**45.11**	**292**	P	**P**	**19 39 03.3**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,11nm,0.6s						
WMQ	**Urumqi**	**45.11**	**292**	P	**P**	**19 39 03.3**	**-1.2**
WMQ				IAmb	IAmb	19 39 09.6	
	comp=Z,11nm,0.6s						
KMI	**Kunming**	**45.14**	**260**	P	**P**	**19 39 04.7**	**-0.4**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI	**Kunming**	**45.14**	**260**	P	**P**	**19 39 04.7**	**-0.4**
KMI				IAmb	IAmb	19 39 30.1	
	comp=Z,14nm,0.5s						
C36M	**Paulatuk**	**45.27**	**30**	P	**P**	**19 39 05.6**	**+0.3**
ZSN	**Zaisan**	**45.31**	**298**	*e*P	**P**	**19 39 05.0**	**-1.0**
	baz=297						
ZSN				*i* S	**S**	**19 45 41.2**	**-1.6**
	baz=297						
ZSN	**Zaisan**	**45.31**	**298**	*e*P	**P**	**19 39 04.9**	**-1.0**
ZSN				*i* S	**S**	**19 45 41.1**	**-1.6**
SEM	**Semipalatinsk**	**46.84**	**303**	*e*P	**P**	**19 39 15.8**	**-2.4**
	baz=303						
SEM				LR	LR	19 59 13.4	
	comp=Z,158nm,17.3s,baz=303						
SEM	**Semipalatinsk**	**46.84**	**303**	*e*P	**P**	**19 39 15.7**	**-2.4**
SEM				MLR	MLR		
	comp=Z,158nm,17.0s						
MK31	**Makanchi Array**	**47.18**	**298***c*	*i*P	**P**	**19 39 20.0**	**-0.7**
MK31	**Makanchi Array**	**47.18**	**298**	P	**P**	**19 39 19.6**	**-1.0**
MK31				IAmb	IAmb	19 39 21.0	
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**47.18**	**298**	P	**P**	**19 39 20.1**	**-0.6**
	comp=Z,11nm,0.8s,baz=67,slow=8.0,SNR=113						
MKAR				LR	LR	20 00 19.3	
	comp=Z,872nm,18.1s,baz=72,slow=38						
KURK	**Kurchatov**	**47.65**	**304**	*e*P	**P**	**19 39 22.6**	**-1.6**
KURK	**Kurchatov**	**47.65**	**304***c*	*i*P	**P**	**19 39 22.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,19nm,0.7s						
KURK	**Kurchatov**	**47.65**	**304**	P	**P**	**19 39 22.9**	**-1.3**
EUNU	**Eureka**	**49.64**	**11**	P	**P**	**19 39 39.5**	**+0.3**
EUNU				IAmb	IAmb	19 39 54.5	
	comp=Z,7.5nm,0.8s						
LSA	**Lhasa**	**50.30**	**274**	P	**P**	**19 39 47.6**	**+2.3**
LSA				pmax	pmax		
	comp=Z,46nm,0.7s						
LSA	**Lhasa**	**50.30**	**274**	P	**P**	**19 39 47.3**	**+2.0**
LSA				pmax	pmax		
	comp=Z,13nm,0.7s						
LSA	**Lhasa**	**50.30**	**274**	P	**P**	**19 39 47.3**	**+2.0**
LSA				IAmb	IAmb	19 39 49.2	
	comp=Z,13nm,0.7s						
KRVT	**Keravat (AS076**	**50.32**	**181**	LR	LR	20 00 57.2	
	comp=Z,135nm,18.5s,baz=8.6,slow=36						
TDK	**Taldyqorghan**	**50.42**	**297**	*e*P	**P**	**19 39 45.0**	**-0.5**
	comp=Z,38nm,0.8s,baz=297						
TDK	**Taldyqorghan**	**50.42**	**297**	*e*P	**P**	**19 39 44.9**	**-0.5**
TDK				pmax	pmax		
	comp=Z,37nm,0.8s						
SHLS	**Shalkode**	**50.68**	**295**	*e*P	**P**	**19 39 45.0**	**-2.6**
	comp=Z,4.1nm,0.7s,baz=294						
SHLS	**Shalkode**	**50.68**	**295**	*e*P	**P**	**19 39 45.0**	**-2.6**
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PAYA	**Payao**	**50.99**	**257**	P	**P**	**19 39 52.5**	**+2.4**
	comp=Z,189nm,0.8s						
KPKS	**Kokpek**	**51.02**	**296**	*e*P	**P**	**19 39 49.7**	**-0.4**
	comp=Z,9.5nm,0.9s,baz=295						
KPKS	**Kokpek**	**51.02**	**296**	*e*P	**P**	**19 39 49.7**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRVK	**Borovoye**	**51.23**	**310**	*e*P	**P**	**19 39 50.6**	**-0.8**
BRVK	**Borovoye**	**51.23**	**310***c*	*i*P	**P**	**19 39 50.6**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,18nm,1.2s						
BRVK	**Borovoye**	**51.23**	**310**	P	**P**	**19 39 50.1**	**-1.3**
BRVK				IAmb	IAmb	19 39 51.7	
	comp=Z,20nm,1.2s						
RES	**Resolute Bay**	**51.33**	**18**	P	**P**	**19 39 52.4**	**+0.5**
RES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	**Resolute Bay**	**51.33**	**18**	P	**P**	**19 39 52.4**	**+0.5**
RES				IAmb	IAmb	19 39 56.7	
	comp=Z,7.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.35**	**36**	P	**P**	**19 39 52.3**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=297,slow=6.8,SNR=34						
YKA				LR	LR	20 06 00.4	
	comp=Z,60nm,18.1s,baz=0.0,slow=41						
BRZS	**Berezniki**	**51.38**	**305**	*e*P	**P**	**19 39 51.2**	**-1.5**
	comp=Z,5.0nm,1.0s,baz=305						
BRZS	**Berezniki**	**51.38**	**305**	*e*P	**P**	**19 39 51.1**	**-1.5**
BRZS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SATY	**Saty**	**51.40**	**295**	*e*P	**P**	**19 39 53.2**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=295						
SATY	**Saty**	**51.40**	**295**	*e*P	**P**	**19 39 53.1**	**+0.1**
SATY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LAMP	**Lampang**	**51.73**	**256**	P	**P**	**19 39 58.5**	**+2.9**
	comp=Z,21nm,1.0s						
CHKK	**Chushkaly**	**51.87**	**297**	*e*P	**P**	**19 39 55.8**	**-0.6**
	baz=297						
CHKK	**Chushkaly**	**51.87**	**297**	*e*P	**P**	**19 39 55.8**	**-0.6**
CMMT	**Chiang Mai**	**51.99**	**257**	P	**P**	**19 39 59.1**	**+1.6**
	comp=Z,8.7nm,1.2s						
CHTO	**Chiang Mai**	**51.99**	**257**	P	**P**	**19 39 58.7**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	**Chiang Mai**	**51.99**	**257**	P	**P**	**19 39 58.7**	**+1.1**
CHTO				IAmb	IAmb	19 40 00.3	
	comp=Z,12nm,0.8s						
MDOK	**Medeo**	**52.19**	**296**	*e*P	**P**	**19 39 58.4**	**-0.7**
	baz=296						
MDOK				LR	LR	20 02 36.3	
	comp=Z,166nm,14.3s,baz=296						
MDOK	**Medeo**	**52.19**	**296**	*e*P	**P**	**19 39 58.3**	**-0.7**
MDOK				MLR	MLR		
	comp=Z,166nm,14.0s						
CM09	**Chiang Mai Arr**	**52.22**	**257**	P	**P**	**19 40 01.7**	**+2.4**
	comp=Z,76nmcomp=Z,8.0nm,0.8s						
CM31	**Chiang Mai Arr**	**52.24**	**257**	P	**P**	**19 40 01.6**	**+2.1**
	comp=Z,194nm,0.8s						
CM31	**Chiang Mai Arr**	**52.24**	**257**	P	**P**	**19 40 00.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**52.24**	**257**	P	**P**	**19 40 00.5**	**+1.0**
	comp=Z,4.1nm,0.8s,baz=35,slow=7.6,SNR=42						
CMAR				LR	LR	20 05 55.0	
	comp=Z,107nm,18.5s,baz=91,slow=40						
AAA	**Alma-Ata**	**52.25**	**296**	*e*P	**P**	**19 39 59.0**	**-0.3**
AAA	**Alma-Ata**	**52.25**	**296**	*e*P	**P**	**19 39 59.1**	**-0.3**
	comp=Z,12nm,0.9s,baz=296						
AAA	**Alma-Ata**	**52.25**	**296**	*e*P	**P**	**19 39 59.0**	**-0.3**
AAA				pmax	pmax		
	comp=Z,12nm,0.9s						
KUU	**Kurty**	**52.25**	**297**	*e*P	**P**	**19 39 57.6**	**-1.6**
	comp=Z,18nm,1.1s,baz=297						
KUU	**Kurty**	**52.25**	**297**	*e*P	**P**	**19 39 57.6**	**-1.6**
KUU				pmax	pmax		
	comp=Z,18nm,1.1s						
CM02	**Chiang Mai Arr**	**52.26**	**257**	P	**P**	**19 40 01.9**	**+2.3**
	comp=Z,76nmcomp=Z,9.4nm,0.9s						
CM01	**Chiang Mai Arr**	**52.26**	**257**	P	**P**	**19 40 02.0**	**+2.5**
	comp=Z,82nmcomp=Z,7.1nm,0.8s						
CM04	**Chiang Mai Arr**	**52.26**	**257**	P	**P**	**19 40 02.0**	**+2.4**
	comp=Z,51nmcomp=Z,5.8nm,0.8s						
CM15	**Chiang Mai Arr**	**52.26**	**257**	P	**P**	**19 40 01.0**	**+1.4**
	comp=Z,58nmcomp=Z,8.2nm,0.8s						
CM05	**Chiang Mai Arr**	**52.28**	**257**	P	**P**	**19 40 02.1**	**+2.4**
	comp=Z,48nmcomp=Z,5.4nm,0.9s						
CM13	**Chiang Mai Arr**	**52.29**	**257**	P	**P**	**19 40 02.0**	**+2.3**
	comp=Z,56nmcomp=Z,6.9nm,0.8s						
TNSS	**Tian-Shan**	**52.32**	**296**	*e*P	**P**	**19 40 00.0**	**-0.2**
	baz=296						
TNSS	**Tian-Shan**	**52.32**	**296**	*e*P	**P**	**19 40 00.0**	**-0.2**
KBS	**Kingsbay**	**53.01**	**351**	*e*P	**P**	**19 40 04.0**	**-0.4**
BTLS	**Baital**	**53.06**	**299**	*e*P	**P**	**19 40 04.0**	**-1.1**
	baz=299						
BTLS	**Baital**	**53.06**	**299**	*e*P	**P**	**19 40 04.0**	**-1.1**
SPB1	**Spitsbergen Ar**	**53.12**	**350**	P	**P**	**19 40 04.3**	**-0.9**
MHMT	**Maesarieng**	**53.12**	**257**	P	**P**	**19 40 10.7**	**+4.8**
SPA1	**Spitsbergen Ar**	**53.12**	**350**	P	**P**	**19 40 04.4**	**-0.8**
SPA0	**Spitsbergen Ar**	**53.13**	**350**	P	**P**	**19 40 04.0**	**-1.2**
SPA0	**Spitsbergen Ar**	**53.13**	**350**	*e*P	**P**	**19 40 04.2**	**-1.0**
SPA2	**Spitsbergen Ar**	**53.13**	**350**	P	**P**	**19 40 03.3**	**-1.9**
SPB2	**Spitsbergen Ar**	**53.13**	**350**	P	**P**	**19 40 04.3**	**-0.9**
SPA3	**Spitsbergen Ar**	**53.13**	**350**	P	**P**	**19 40 04.6**	**-0.6**
SPB4	**Spitsbergen Ar**	**53.13**	**350**	P	**P**	**19 40 04.4**	**-0.8**
SGDS	**Sogindy**	**53.54**	**297**	*e*P	**P**	**19 40 08.2**	**-0.6**
	comp=Z,9.4nm,1.0s,baz=297						
SGDS	**Sogindy**	**53.54**	**297**	*e*P	**P**	**19 40 08.2**	**-0.6**
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHMS	**Chumysh**	**53.71**	**297**	P	**P**	**19 40 09.9**	**-0.1**
	SNR=6.2						
KBK	**Karagaybulak**	**53.77**	**296**	P	**P**	**19 40 11.0**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**54.06**	**297**	P	**P**	**19 40 13.2**	**+0.5**
	SNR=21						
AAK	**Ala-Archa**	**54.06**	**297**	*e*P	**P**	**19 40 13.0**	**+0.3**
AAK	**Ala-Archa**	**54.06**	**297***c*	*i*P	**P**	**19 40 13.0**	**+0.3**
AAK				pmax	pmax		
	comp=Z,42nm,0.8s						
AAK	**Ala-Archa**	**54.06**	**297**	P	**P**	**19 40 12.8**	**+0.1**
AAK				IAmb	IAmb	19 40 14.5	
	comp=Z,14nm,0.8s						
TAPN	**Taplejung**	**54.12**	**274**	*e*P	**P**	**19 40 14.8**	**+1.3**
	comp=Z,23nm,0.6s						
HSPB	**Hornsund (broa**	**54.19**	**349**	*e*P	**P**	**19 40 12.5**	**-0.4**
SVE	**Sverdlovsk**	**54.21**	**317**⇓	*e*P	**P**	**19 40 12.8**	**-0.6**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SVE				MLR	MLR		
	comp=Z,463nm,16.0s						
EKS2	**Erkin-Say**	**54.49**	**297**	P	**P**	**19 40 16.4**	**+0.6**
	SNR=22						
TULEG	**Thule**	**54.64**	**11**	P	**P**	**19 40 16.3**	**+0.1**
TULEG				IAmb	IAmb	19 40 18.0	
	comp=Z,11nm,0.8s						
ODAN	**Odare**	**54.65**	**273**	*e*P	**P**	**19 40 18.9**	**+1.6**
AML	**Almayashu**	**54.84**	**297**	P	**P**	**19 40 19.5**	**+0.9**
	SNR=11						
KSH	**Kashi**	**54.85**	**293**	P	**P**	**19 40 23.2**	**+4.8**
KSH				S	**S**	**19 47 57.0**	**+1.1**
KSH				pmax	pmax		
	comp=Z,27nm,0.7s						
KSH				pmax	pmax		
	comp=Z,560nm,5.4s						
KSH				LR	LR		
	comp=Z,1µm,15.5s						
KSH				LR	LR		
	comp=Z,2µm,17.7s						
KSH				LR	LR		
	comp=Z,2µm,18.0s						
GUN	**Gumba**	**55.04**	**275**	*e*P	**P**	**19 40 21.2**	**+0.9**
	comp=Z,69nm,1.0s						
RAMN	**Ramite**	**55.15**	**274**	*e*P	**P**	**19 40 22.0**	**+1.1**
	comp=Z,42nm,0.6s						
ARU	**Arti**	**55.40**	**318**	*e*P	**P**	**19 40 20.9**	**-1.0**
ARU	**Arti**	**55.40**	**318***c*	*i*P	**P**	**19 40 20.9**	**-1.0**
ARU				*PP	**pP**	**19 40 34.5**	**-0.5**
ARU						19 41 19.6	
ARU				S	**S**	**19 48 02.0**	**-0.4**
ARU				SS	**SS**	**19 51 44.1**	**-2.7**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU				MLR	MLR		
	comp=Z,456nm,18.0s						
ARU	**Arti**	**55.40**	**318**	P	**P**	**19 40 21.1**	**-0.9**
ARU				IAmb	IAmb	19 40 21.8	
	comp=Z,12nm,0.8s						
KKN	**Kakani**	**55.53**	**276**	*e*P	**P**	**19 40 25.0**	**+1.4**
	comp=Z,40nm,0.7s						
PKI	**Pulchoki**	**55.58**	**275**	*e*P	**P**	**19 40 25.3**	**+1.2**
	comp=Z,39nm,1.1s						
PKIN	**Phulchoki**	**55.59**	**275**	*e*P	**P**	**19 40 25.2**	**+1.1**
	comp=Z,26nm,0.6s						
HNR	**Honiara**	**55.74**	**172**	LR	LR	20 05 12.0	
	comp=Z,48nm,18.6s,baz=349,slow=37						
DMN	**Daman**	**55.77**	**276**	*e*P	**P**	**19 40 27.0**	**+1.7**
	comp=Z,48nm,0.7s						
DZA	**Taraz**	**55.87**	**299**	*e*P	**P**	**19 40 25.5**	**-0.1**
	comp=Z,6.1nm,1.0s,baz=298						
DZA	**Taraz**	**55.87**	**299**	*e*P	**P**	**19 40 25.5**	**-0.1**
DZA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
B08A	**Colville Reser**	**56.22**	**53**	P	**P**	**19 40 29.5**	**+1.5**
B08A				IAmb	IAmb	19 40 42.1	
	comp=Z,10nm,0.9s						
DANN	**Dangsing**	**56.23**	**277**	*e*P	**P**	**19 40 30.6**	**+1.9**
	comp=Z,84nm,0.6s						
KK05	**Karatay Array**	**56.23**	**299**	P	**P**	**19 40 27.1**	**-1.1**
KK06	**Karatay Array**	**56.24**	**299**	P	**P**	**19 40 27.7**	**-0.5**
KK09	**Karatay Array**	**56.24**	**299**	P	**P**	**19 40 27.6**	**-0.7**
KK04	**Karatay Array**	**56.25**	**299**	P	**P**	**19 40 27.9**	**-0.4**
KK02	**Karatay Array**	**56.25**	**299**	P	**P**	**19 40 28.1**	**-0.2**
KK31	**Karatay Array**	**56.25**	**299**	P	**P**	**19 40 28.1**	**-0.2**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KK31	**Karatay Array**	**56.25**	**299**	P	**P**	**19 40 28.1**	**-0.2**
KK31				IAmb	IAmb	19 40 29.2	
	comp=Z,9.2nm,0.8s						
KK01	**Karatay Array**	**56.25**	**299**	P	**P**	**19 40 28.2**	**-0.1**
KK03	**Karatay Array**	**56.26**	**299**	P	**P**	**19 40 28.4**	**+0.1**
KK07	**Karatay Array**	**56.26**	**299**	P	**P**	**19 40 28.6**	**+0.1**
KK08	**Karatay Array**	**56.26**	**299**	P	**P**	**19 40 28.7**	**+0.3**
H04A	**Detroit Lake**	**56.63**	**58**	P	**P**	**19 40 32.1**	**+1.1**
IUG	**Iuzhnay**	**57.08**	**298**	*e*P	**P**	**19 40 34.4**	**+0.1**
	comp=Z,20nm,0.8s,baz=298						
IUG	**Iuzhnay**	**57.08**	**298**	*e*P	**P**	**19 40 34.4**	**+0.1**
IUG				pmax	pmax		
	comp=Z,20nm,0.8s						
DAG	**Danmarks Havn**	**57.17**	**358**	*i* P	**P**	**19 40 34.0**	**-0.3**
DAG	**Danmarks Havn**	**57.17**	**358**	*i* P	**P**	**19 40 34.0**	**-0.3**
DAG	**Danmarks Havn**	**57.17**	**358**	*i* P	**P**	**19 40 34.0**	**-0.3**
KEV	**Kevo**	**57.84**	**341**	P	**P**	**19 40 38.7**	**-0.3**
KEV				pmax	pmax		
	comp=Z,44nm,1.3s						
KEV	**Kevo**	**57.84**	**341**	P	**P**	**19 40 38.7**	**-0.3**
KHMM	**Horse Mountain**	**57.87**	**63**	P	**P**	**19 40 42.4**	**+2.5**
KHMM				IAmb	IAmb	19 41 01.2	
	comp=Z,18nm,1.4s						
PINE	**Pine Mountain**	**57.87**	**59**	P	**P**	**19 40 41.3**	**+1.3**
E09A	**Wood Farm, Sta**	**57.93**	**55**	P	**P**	**19 40 41.1**	**+1.0**
E09A				IAmb	IAmb	19 40 54.3	
	comp=Z,13nm,1.0s						
YBH	**Yreka Blue Hor**	**58.00**	**61**	P	**P**	**19 40 42.0**	**+1.2**
YBH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YBH	**Yreka Blue Hor**	**58.00**	**61**	P	**P**	**19 40 42.0**	**+1.2**
KIRV	**Kirov**	**58.19**	**323**⇑	*i*P	**P**	**19 40 41.0**	**-0.7**
ARCES	**ARCESS Array B**	**58.35**	**341**	P	**P**	**19 40 42.4**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=27,slow=7.4,SNR=14						
ARCES				LR	LR	20 08 57.0	
	comp=Z,217nm,19.8s,baz=310,slow=39						
K05A	**Summer Lake**	**58.52**	**60**	P	**P**	**19 40 45.7**	**+1.2**
I07A	**Izee**	**58.55**	**58**	P	**P**	**19 40 46.7**	**+2.1**
AB06	**Akbulak array**	**58.74**	**310**	P	**P**	**19 40 45.7**	**0.0**
AB05	**Akbulak array**	**58.75**	**310**	P	**P**	**19 40 45.7**	**0.0**
AB02	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.7**	**-0.1**
F10A	**Beach Ranch, E**	**58.76**	**55**	P	**P**	**19 40 47.1**	**+1.1**
F10A				IAmb	IAmb	19 41 02.1	
	comp=Z,9.1nm,0.9s						
AB01	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.6**	**-0.3**
AB07	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.6**	**-0.2**
AB31	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.6**	**-0.2**
AB31				IAmb	IAmb	19 40 46.3	
	comp=Z,9.6nm,0.8s						
AB03	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.6**	**-0.3**
AB04	**Akbulak array**	**58.76**	**310**	P	**P**	**19 40 45.7**	**-0.2**
AB09	**Akbulak array**	**58.77**	**310**	P	**P**	**19 40 45.7**	**-0.2**
WDC	**Whiskeytown Da**	**58.77**	**62**	P	**P**	**19 40 47.5**	**+1.4**
WDC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WDC	**Whiskeytown Da**	**58.77**	**62**	P	**P**	**19 40 47.5**	**+1.4**
WDC				IAmb	IAmb	19 41 00.9	
	comp=Z,7.2nm,0.9s						
AB08	**Akbulak array**	**58.78**	**310**	P	**P**	**19 40 45.6**	**-0.3**
WALA	**Waterton Lakes**	**58.78**	**50**	P	**P**	**19 40 47.3**	**+1.1**
WALA				IAmb	IAmb	19 41 00.4	
	comp=Z,11nm,0.9s						
TMCR	**Tamitsa**	**58.80**	**332**	*e*P	**P**	**19 40 45.4**	**-0.4**
TMCR				pmax	pmax		
	comp=Z,22nm,1.4s						
KTK1	**Kautokeino**	**59.26**	**341**	*e*P	**P**	**19 40 48.9**	**-0.1**
MOD	**Modoc Plateau**	**59.35**	**60**	P	**P**	**19 40 51.5**	**+1.2**
MOD				IAmb	IAmb	19 41 05.0	
	comp=Z,11nm,0.9s						
BMO	**Blue Mountains**	**59.37**	**56**	P	**P**	**19 40 51.6**	**+1.3**
BMO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BMO	**Blue Mountains**	**59.37**	**56**	P	**P**	**19 40 51.6**	**+1.3**
BMO				IAmb	IAmb	19 41 04.9	
	comp=Z,7.0nm,0.9s						
DBG	**Daneborg**	**59.67**	**358**	*i* P	**P**	**19 40 51.2**	**-0.6**
TRO	**Tromso**	**59.68**	**343**	*e*P	**P**	**19 40 51.8**	**-0.1**
ORV	**Oroville**	**60.02**	**63**	P	**P**	**19 40 56.1**	**+1.4**
ORV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORV	**Oroville**	**60.02**	**63**	P	**P**	**19 40 56.1**	**+1.4**
WVOR	**Wild Horse Val**	**60.03**	**59**	P	**P**	**19 40 55.8**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,14nm,1.0s						
WVOR	**Wild Horse Val**	**60.03**	**59**	P	**P**	**19 40 55.8**	**+0.9**
WVOR				IAmb	IAmb	19 41 09.6	
	comp=Z,14nm,0.9s						
NIL	**Nilore**	**60.07**	**289**	P	**P**	**19 40 56.8**	**+1.7**
NIL				pmax	pmax		
	comp=Z,68nm,0.9s						
NIL	**Nilore**	**60.07**	**289**	P	**P**	**19 40 56.8**	**+1.7**
MSO	**Missoula**	**60.09**	**52**	P	**P**	**19 40 56.1**	**+0.9**
MSO				IAmb	IAmb	19 41 09.6	
	comp=Z,15nm,0.9s						
KLMR	**Klimovskoe**	**60.55**	**329**	*e*P	**P**	**19 40 56.8**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**60.55**	**329**	*e*P	**P**	**19 40 56.9**	**-1.0**
KLMR				AMP		19 40 59.1	
	comp=Z,12nm,0.8s						
AFDM	**Forest Hills D**	**60.72**	**63**	P	**P**	**19 40 58.9**	**-0.6**
AFDM				IAmb	IAmb	19 41 13.8	
	comp=Z,10nm,1.2s						
MFID	**Camas Ranch**	**61.09**	**56**	P	**P**	**19 41 02.8**	**+0.8**
MFID				IAmb	IAmb	19 41 16.5	
	comp=Z,11nm,1.0s						
FFC	**Flin Flon**	**61.14**	**40**	P	**P**	**19 41 03.1**	**+1.0**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FFC	**Flin Flon**	**61.14**	**40**	P	**P**	**19 41 03.1**	**+1.0**
FFC				IAmb	IAmb	19 41 16.4	
	comp=Z,7.4nm,0.8s						
SUMG	**Summit**	**61.22**	**4**	P	**P**	**19 41 03.1**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,29nm,0.9s						
SUMG	**Summit**	**61.22**	**4**	P	**P**	**19 41 03.1**	**+0.3**
SUMG	**Summit**	**61.22**	**4**	*i* P	**P**	**19 41 03.2**	**+0.4**
	comp=Z,68nm,0.8s						
SUMG	**Summit**	**61.22**	**4**	*i* P	**P**	**19 41 03.2**	**+0.4**
SUMG				IAmb	IAmb	19 41 06.3	
	comp=Z,68nm,0.8s						
PAHR	**Pah Rah Range**	**61.23**	**62**		**P**	**19 41 02.7**	**-0.4**
PAHR				IAmb	IAmb	19 41 17.6	
	comp=Z,10nm,0.9s						
HRY	**Holter Researc**	**61.31**	**51**	P	**P**	**19 41 04.2**	**+0.7**
LRM	**Limekiln Ridge**	**61.52**	**52**	P	**P**	**19 41 06.2**	**+1.1**
EGMT	**Eagleton**	**61.60**	**49**	P	**P**	**19 41 04.9**	**-0.5**
N2IH	**Innhavet**	**61.68**	**343**	*e*P	**P**	**19 41 05.6**	**+0.1**
FCC	**Fort Churchill**	**61.70**	**33**	P	**P**	**19 41 05.3**	**-0.5**
FCC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FCC	**Fort Churchill**	**61.70**	**33**	P	**P**	**19 41 05.3**	**-0.5**
HLID	**Hailey**	**61.81**	**55**	P	**P**	**19 41 08.0**	**+1.0**
HLID				IAmb	IAmb	19 41 21.8	
	comp=Z,8.1nm,1.0s						
STEI	**Steigen**	**61.85**	**343**	*e*P	**P**	**19 41 06.3**	**-0.2**
MCMT	**McKenzie Canyo**	**61.91**	**54**	P	**P**	**19 41 08.2**	**+0.4**
BCYI	**Bear Canyon**	**61.92**	**54**	P	**P**	**19 41 08.5**	**+0.7**
WAKR	**Walker**	**61.94**	**63**	P	**P**	**19 41 09.0**	**+1.1**
WAKR				IAmb	IAmb	19 41 22.9	
	comp=Z,9.8nm,0.9s						
LOF	**Lofoten**	**62.01**	**344**	*e*P	**P**	**19 41 07.5**	**-0.2**
BOZ	**Bozeman (W)**	**62.11**	**52**	P	**P**	**19 41 09.6**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BOZ	**Bozeman (W)**	**62.11**	**52**	P	**P**	**19 41 09.6**	**+0.7**
BOZ				IAmb	IAmb	19 41 23.7	
	comp=Z,9.1nm,0.9s						
N2TV	**T¥rnvik**	**62.18**	**343**	*e*P	**P**	**19 41 09.1**	**+0.3**
KBL	**Kabul**	**62.26**	**292**	P	**P**	**19 41 09.9**	**-0.3**
KBL				pmax	pmax		
	comp=Z,28nm,0.8s						
KBL	**Kabul**	**62.26**	**292**	P	**P**	**19 41 09.9**	**-0.3**
FAUS	**Fauske**	**62.31**	**343**	*e*P	**P**	**19 41 09.7**	**0.0**
RYN	**Ryan**	**62.42**	**62**	P	**P**	**19 41 12.4**	**+1.2**
RYN				IAmb	IAmb	19 41 26.2	
	comp=Z,9.4nm,0.8s						
NBB28	**Valnes**	**62.64**	**343**	*e*P	**P**	**19 41 11.9**	**+0.1**
LHV	**Little Huntoon**	**62.67**	**62**	P	**P**	**19 41 14.6**	**+2.0**
NVAR	**Mina Array Bea**	**62.68**	**62**	P	**P**	**19 41 14.3**	**+1.4**
	comp=Z,3.9nm,0.7s,baz=288,slow=6.7,SNR=20						
NVAR				pP	**pP**	**19 41 26.9**	**+1.6**
	comp=Z,11nm,0.8s,baz=288,slow=7.2,SNR=18						
NVAR				LR	LR	20 06 27.6	

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       comp=Z,26nm,18.8s,baz=333,slow=34
QLMT   Earthquake Lak   62.70  53   P      P      19 41 14.2 +1.3
MDPB   Devils Postpil   62.70  63   P      P      19 41 13.6 +0.4
MDPB                                IAmb   IAmb   19 41 27.7
       comp=Z,10nm,0.9s
OMMB   Old Mammoth Mi   62.76  63   P      P      19 41 15.2 +1.6
NV11   Mina Array Sit   62.77  62   P      P      19 41 13.9 +0.4
N2RO   R¸st             62.81 344  eP      P      19 41 12.5 -0.5
YHL    Hebgen Lake      62.82  53   P      P      19 41 15.5 +1.6
NBB05  Inndyr           62.86 343  eP      P      19 41 13.3  0.0
YHB    Horse Butte      62.88  53   P      P      19 41 15.7 +1.5
BELG   Belogornoye      62.92 318c iP      P      19 41 13.6 -0.4
BELG                                pmax   pmax
       comp=Z,6.0nm,0.8s
NBB30  Finnes           62.97 343  eP      P      19 41 14.1  0.0
YHH    Holmes Hill      63.05  53   P      P      19 41 16.6 +1.2
GCMT   Greycliff        63.05  51   P      P      19 41 16.0 +0.8
YMR    Madison River    63.06  53   P      P      19 41 17.2 +1.8
ELK    Elko             63.08  58   P      P      19 41 16.7 +1.1
       comp=Z,1.4nm,0.7s,baz=310,slow=8.9,SNR=7.3
ELK                                 pP     pP     19 41 29.2 +0.8
       comp=Z,4.8nm,0.8s,baz=292,slow=5.9,SNR=11
ELK    Elko             63.08  58   P      P      19 41 17.2 +1.6
YNE    Yellowstone No   63.37  52   P      P      19 41 18.8 +1.4
LKWY   Lake             63.44  53   P      P      19 41 20.0 +2.1
LKWY                                pmax   pmax
       comp=Z,8.0nm,1.0s
LKWY   Lake             63.44  53   P      P      19 41 19.9 +2.1
LKWY                                IAmb   IAmb   19 41 34.0
       comp=Z,8.0nm,0.9s
H17A   Grant Village    63.45  53   P      P      19 41 19.8 +1.8
H17A                                IAmb   IAmb   19 41 34.4
       comp=Z,8.5nm,0.9s
MOR8   Moi Rana         63.52 343  eP      P      19 41 16.7 -1.1
TPH    Tonopah          63.57  62   P      P      19 41 20.1 +1.3
TPH                                 pmax   pmax
       comp=Z,67nm,1.0s
TPH    Tonopah          63.57  62   P      P      19 41 20.1 +1.3
RLMT   Red Lodge        63.70  52   P      P      19 41 20.6 +1.0
RLMT                                IAmb   IAmb   19 41 34.8
       comp=Z,21nm,1.3s
MOOW   Moose Ponds      63.76  53   P      P      19 41 21.2 +1.1
PSI    Prapat           63.85 244   LR     LR     20 10 29.6
       comp=Z,57nm,20.8s,baz=271,slow=37
HVU    Hansel Valley    63.87  56   P      P      19 41 22.4 +1.7
HVU                                 pmax   pmax
       comp=Z,11nm,1.0s
HVU    Hansel Valley    63.87  56   P      P      19 41 22.4 +1.7
LOHW   Long Hollow      63.93  53   P      P      19 41 22.7 +1.6
REDW   Red Top Meadow   63.95  54   P      P      19 41 22.8 +1.5
REDW                                IAmb   IAmb   19 41 36.5
       comp=Z,17nm,0.9s
AHID   Auburn Hatcher   64.19  54   P      P      19 41 23.4 +0.5
AHID                                IAmb   IAmb   19 41 37.5
       comp=Z,8.5nm,0.9s
LAO    LASA Array       64.31  49   P      P      19 41 24.4 +1.0
LAO                                 IAmb   IAmb   19 41 38.1
       comp=Z,20nm,1.2s
ISA    Isabella, Lake   64.32  65   P      P      19 41 23.0 -0.6
ISA                                 pmax   pmax
       comp=Z,8.0nm,1.1s
ISA    Isabella, Lake   64.32  65   P      P      19 41 23.0 -0.6
SPUT   South Promonto   64.36  56   P      P      19 41 25.7 +1.8
R11A   Troy Canyon, C   64.39  61   P      P      19 41 24.9 +0.8
FINES  FINESS Array B   64.51 335   P      P      19 41 24.3  0.0
       comp=Z,12nm,0.6s,baz=36,slow=7.3,SNR=86
FINES                               LR     LR     20 12 41.8
       comp=Z,198nm,18.2s,baz=53,slow=39
ICESG  Greenland Ices   64.61   5  iP      P      19 41 25.4  0.0
ICESG                               IAmb   IAmb   19 41 28.9
       comp=Z,32nm,0.9s
HWUT   Hardware Ranch   64.67  56   P      P      19 41 26.9 +0.9
HWUT                                IAmb   IAmb   19 41 40.7
       comp=Z,9.7nm,0.8s
DUG    Dugway, Tooele   64.86  58   P      P      19 41 28.5 +1.3
DUG                                 pmax   pmax
       comp=Z,17nm,1.0s
DUG    Dugway, Tooele   64.86  58   P      P      19 41 28.5 +1.3
DUG                                 IAmb   IAmb   19 41 41.9
       comp=Z,17nm,1.0s
MOS    Moscow           64.87 326  eP      P      19 41 24.5 -2.2
TPNV   Topopah Spring   64.88  62   P      P      19 41 28.6 +1.2
TPNV                                pmax   pmax
       comp=Z,16nm,1.1s
TPNV   Topopah Spring   64.88  62   P      P      19 41 28.6 +1.2
TPNV                                IAmb   IAmb   19 41 41.9
       comp=Z,16nm,1.1s
BW06   Boulder Array    65.06  54   P      P      19 41 29.0 +0.4
BW06                                IAmb   IAmb   19 41 42.8
       comp=Z,9.6nm,0.9s
PD31   Pinedale Array   65.06  54   P      P      19 41 29.1 +0.6
PD31                                IAmb   IAmb   19 41 42.8
       comp=Z,8.8nm,0.9s
PDAR   Pinedale Array   65.06  54   P      P      19 41 29.3 +0.8
       comp=Z,2.1nm,0.7s,baz=256,slow=1.8,SNR=17
PDAR                                pP     pP     19 41 41.5 +0.1
       comp=Z,7.7nm,0.8s,baz=322,slow=1.6,SNR=19
PDAR                                LR     LR     20 07 37.0
       comp=Z,43nm,21.4s,baz=360,slow=34
TCUT   Toone Canyon     65.08  56   P      P      19 41 29.6 +0.9
PSUT   Pine Spring      65.31  60   P      P      19 41 28.9 -1.4
PRN    Pahroc Range     65.32  61   P      P      19 41 30.7 +0.6
NSS    Namsos           65.47 343  eP      P      19 41 30.2 -0.2
FRB    Frobisher Bay    65.55  19   P      P      19 41 30.7 -0.2
       comp=Z,3.9nm,0.5s,baz=308,slow=8.5,SNR=3.2
GSC    Goldstone, Bar   65.59  64   P      P      19 41 33.8 +1.9
GSC                                 pmax   pmax
       comp=Z,10.0nm,1.1s
GSC    Goldstone, Bar   65.59  64   P      P      19 41 33.8 +1.9
GSC                                 IAmb   IAmb   19 41 46.1
       comp=Z,10nm,1.1s
MPU    Maple Canyon     65.66  57   P      P      19 41 32.9 +0.4
OBN    Obninsk          65.74 326  eP      P      19 41 31.5 -0.9
OBN    Obninsk          65.74 326⇑iP      P      19 41 31.5 -0.9
OBN                                i             19 41 57.6
OBN                                e             19 43 57.2
OBN                                 pmax   pmax
       comp=Z,43nm,1.8s
OBN                                 MLR    MLR
       comp=Z,243nm,17.0s
SHPR   Sheep Range      65.83  62   P      P      19 41 35.2 +1.7
SHPR                                IAmb   IAmb   19 41 48.3
       comp=Z,10nm,1.0s
CCUT   Cedar City       66.25  60   P      P      19 41 38.6 +2.3
MVU    Marysvale        66.31  59   P      P      19 41 37.6 +0.9
MSU    Marysvale        66.33  59   P      P      19 41 37.3 +0.5
MSU    Marysvale        66.33  59   P      P      19 41 37.3 +0.5
TMUT   Trail Mountain   66.38  57   P      P      19 41 38.0 +0.8
RDMU   Red Mountain     66.49  55   P      P      19 41 39.0 +1.2
P17A   Butcher Ranch,   66.54  57   P      P      19 41 40.4 +2.4
MTPU   Mount Pierson    66.63  59   P      P      19 41 40.5 +1.6
Q16A   Castle Valley    66.65  58   P      P      19 41 40.0 +1.2
LCMT   Little Creek M   66.67  60   P      P      19 41 40.2 +1.4
HRA    Herat            66.67 296   P      P      19 41 39.8 +0.8
VSU    Vasula           66.68 333  eP      P      19 41 38.5 +0.2
VSU    Vasula           66.68 333⇑iP      P      19 41 38.3  0.0
VSU                                 pmax   pmax
       comp=Z,60nm,0.7s
K22A   Casper           66.82  52   P      P      19 41 41.1 +1.3
K22A                                IAmb   IAmb   19 41 54.6
       comp=Z,10nm,0.9s
GYA2   ALIBECK ARRAY    66.86 301   P      P      19 41 40.1 +0.2
GYA2                                IAmb   IAmb   19 41 57.8
       comp=Z,9.0nm,0.8s
GEYT   Alibeck          66.87 301   P      P      19 41 39.5 -0.5
       comp=Z,3.4nm,0.6s,baz=357,slow=3.0,SNR=9.8
GYA0   ALIBECK ARRAY    66.87 301   P      P      19 41 40.7 +0.7
GYA0                                pmax   pmax
       comp=Z,7.0nm,0.8s
GYA0   ALIBECK ARRAY    66.87 301   P      P      19 41 40.7 +0.7
GYA0                                IAmb   IAmb   19 41 42.4
       comp=Z,7.2nm,0.8s
GYA0B  ALIBECK ARRAY    66.87 301   P      P      19 41 40.9 +0.9
GYA0B                               IAmb   IAmb   19 41 42.4
       comp=Z,7.8nm,0.8s
GYA3   ALIBECK ARRAY    66.87 301   P      P      19 41 39.8 -0.2
GYA3                                IAmb   IAmb   19 41 42.4
       comp=Z,7.9nm,0.8s
GYB1   ALIBECK ARRAY    66.87 301   P      P      19 41 40.5 +0.5
GYB1                                IAmb   IAmb   19 41 54.6
       comp=Z,7.2nm,0.8s
GYA1   ALIBECK ARRAY    66.87 301   P      P      19 41 40.2 +0.2
GYB4   ALIBECK ARRAY    66.88 301   P      P      19 41 39.4 -0.6
SRU    San Rafael Swe   66.90  57   P      P      19 41 41.4 +1.0
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SRU                                 pmax   pmax
       comp=Z,19nm,0.8s
SRU    San Rafael Swe   66.90  57   P      P      19 41 41.4 +1.0
PFO    Pinyon Flats O   66.91  65   P      P      19 41 41.4 +0.9
PFO                                 pmax   pmax
       comp=Z,12nm,1.5s
PFO    Pinyon Flats O   66.91  65   P      P      19 41 41.4 +0.9
KNB    Kanab            66.92  60   P      P      19 41 43.1 +2.6
KNB                                 pmax   pmax
       comp=Z,15nm,0.9s
KNB    Kanab            66.92  60   P      P      19 41 43.0 +2.6
ULM    Lac du Bonnet    66.92  41   P      P      19 41 40.0 -0.1
       comp=Z,1.3nm,0.6s,baz=319,slow=11,SNR=3.0
HYB    Hyderabad        67.00 271  iP      P      19 41 42.0 +0.9
RSSD   Black Hills      67.17  50   P      P      19 41 42.1 +0.1
RSSD                                pmax   pmax
       comp=Z,9.0nm,0.9s
RSSD   Black Hills      67.17  50   P      P      19 41 42.1 +0.1
RSSD                                IAmb   IAmb   19 41 56.5
       comp=Z,8.9nm,0.8s
W13A   Hualapai Mount   67.53  62   P      P      19 41 45.4 +0.9
O20A   White River Ci   67.54  55   P      P      19 41 44.5 +0.1
MSVF   Nonsavu          67.54 154   LR     LR     20 09 23.4
       comp=Z,148nm,19.1s,baz=358,slow=34
U15A   North Rim        67.63  60   P      P      19 41 44.7 -0.5
U15A                                IAmb   IAmb   19 42 00.1
       comp=Z,9.5nm,1.0s
WB0    Warramunga Arr   67.83 199   P      P      19 41 47.0 +1.0
WB0                                 IAmb   IAmb   19 42 12.9
       comp=Z,28nm,1.4s
WRAB   Tennant Creek    68.00 199⇑iP      P      19 41 48.4 +1.3
WRAB                                pmax   pmax
       comp=Z,18nm,1.3s
WRA    Warramunga Arr   68.02 199   P      P      19 41 47.1 -0.1
       comp=Z,2.7nm,0.9s,baz=16,slow=6.4,SNR=8.4
WRA                                 pP     pP     19 41 58.9 -0.6
       comp=Z,5.7nm,1.0s,baz=16,slow=6.6,SNR=8.6
MOL    Molde            68.11 344  eP      P      19 41 47.9 +0.6
PV23   Carpenter Ridg   68.22  57   P      P      19 41 50.5 +1.7
PV14   Lion Creek, Pa   68.27  57   P      P      19 41 49.4 +0.3
PV14                                IAmb   IAmb   19 42 03.4
       comp=Z,9.5nm,0.8s
DOMB   Dombas           68.29 343  eP      P      19 41 48.8 +0.3
ESJX   Sierra Juarez    68.29  66   P      P      19 41 49.7 +0.4
PV22   Blue Mesa, Par   68.30  57   P      P      19 41 51.5 +2.3
N23A   Red Feather La   68.32  53   P      P      19 41 50.2 +0.8
PV20   West Nyswonger   68.32  57   P      P      19 41 50.3 +1.0
PV20                                IAmb   IAmb   19 42 11.9
       comp=Z,11nm,0.7s
PV04   Paradox Valley   68.33  57   P      P      19 41 50.3 +1.0
PV04                                IAmb   IAmb   19 42 03.8
       comp=Z,11nm,0.9s
PV19   Morning Glory    68.33  57   P      P      19 41 49.4  0.0
PV19                                IAmb   IAmb   19 42 03.8
       comp=Z,14nm,0.8s
PV17   East Wray Mesa   68.37  57   P      P      19 41 50.6 +0.9
PV16   Nyswonger Mesa   68.37  57   P      P      19 41 50.6 +0.9
PV16                                IAmb   IAmb   19 42 04.1
       comp=Z,16nm,1.0s
PV11   David Mesa, Pa   68.41  57   P      P      19 41 50.8 +0.9
PV18   Skein Mesa, Pa   68.42  57   P      P      19 41 51.1 +1.1
PV05   Paradox Valley   68.42  57   P      P      19 41 51.1 +1.1
PV05                                IAmb   IAmb   19 42 04.6
       comp=Z,18nm,0.9s
PV12   Saucer Basin,    68.44  57   P      P      19 41 51.7 +1.6
PV12                                IAmb   IAmb   19 42 10.4
       comp=Z,22nm,1.0s
PV07   Paradox Valley   68.44  57   P      P      19 41 51.5 +1.3
PV07                                IAmb   IAmb   19 42 01.4
       comp=Z,7.8nm,0.8s
PV03   Paradox Valley   68.45  57   P      P      19 41 51.1 +0.9
PV03                                IAmb   IAmb   19 42 04.5
       comp=Z,13nm,1.0s
PV13   Radium Mtn., P   68.53  57   P      P      19 41 51.9 +1.2
PV13                                IAmb   IAmb   19 42 05.1
       comp=Z,14nm,0.8s
NC405  NORSAR Array S   68.54 341   P      P      19 41 49.9 -0.2
PV02   Paradox Valley   68.55  57   P      P      19 41 51.3 +0.5
PV02                                IAmb   IAmb   19 42 14.9
       comp=Z,18nm,1.3s
NC204  NORSAR Array S   68.61 342   P      P      19 41 50.9 +0.3
PV01   Paradox Valley   68.69  57   P      P      19 41 53.0 +1.3
PV01                                IAmb   IAmb   19 42 07.5
       comp=Z,7.5nm,0.7s
NB201  NORSAR Array S   68.69 341   P      P      19 41 50.7 -0.4
NB201  NORSAR Array S   68.69 341  eP      P      19 41 51.5 +0.5
NB2    NORSAR Subarra   68.72 341   P      P      19 41 51.3  0.0
       comp=Z,21nm,1.0s,baz=26,slow=6.5
NB2    NORSAR Subarra   68.72 341   P      P      19 41 51.3  0.0
       baz=26,slow=6.5
NOA    NORSAR Array B   68.72 341   P      P      19 41 51.5 +0.3
       comp=Z,6.0nm,0.7s,baz=29,slow=6.5,SNR=25
NOA                                 LR     LR     20 16 23.2
       comp=Z,175nm,19.0s,baz=30,slow=40
WUAZ   Wupatki          68.79  61   P      P      19 41 54.8 +2.6
HFS    Hagfors          68.95 340   LR     LR     20 15 57.6
       comp=Z,146nm,18.0s,baz=20,slow=39
IDID   Didziasalis      69.19 330  eP      P      19 41 54.8 +0.6
ISAL   Salakas          69.19 331  eP      P      19 41 55.0 +0.8
IIGN   Ignalina         69.34 331  eP      P      19 41 55.8 +0.7
MVCO   Mesa Verde       69.36  58   P      P      19 41 57.2 +1.3
MNK    Minsk            69.44 329  iP      P      19 41 53.9 -1.8
       comp=E,2.0nm,1.1s
MNK                                iP      P      19 41 53.9 -1.8
       comp=N,31nm,0.9s
MNK                                iP      P      19 41 53.9 -1.8
       comp=Z,65nm,1.2s
MNK                                iPcP    PcP    19 42 17.0 -1.8
MNK                                iPP     PP     19 44 27.4 -1.7
MNK                                iPPP    PPP    19 46 08.4
MNK                                iS      S      19 50 56.0 -2.9
MNK                                iSS     SS     19 55 25.8  0.0
MNK                                iSSS    SSS    19 58 43.4
MNK                                iLQ     LQ     20 07 33.9
MNK                                iLR     LR     20 12 50.5
MNK                                iLRM    MLR    20 15 22.9
       comp=E,10.0nm,12.2s
MNK                                iLRM    MLR    20 15 28.7
       comp=Z,296nm,22.6s
MNK                                iLRM    MLR    20 15 35.8
       comp=N,345nm,24.5s
X16A   Lo Mia Camp, P   69.49  61   P      P      19 41 57.7 +1.0
POO    Poona            69.50 276  eP      P      19 41 55.0 -1.7
NACGM  Naroch           69.51 330  iP      P      19 41 56.5 +0.4
NACGM                              iP      P      19 41 56.5 +0.4
NACGM                              iP      P      19 41 56.5 +0.4
NACGM                              iPP     PP     19 44 31.9 +2.3
NACGM                              iPPP    PPP    19 46 14.4
NACGM                              iS      S      19 51 06.4 +6.8
NACGM                              iSS     SS     19 55 08.0  -19
NACGM                              iSSS    SSS    19 58 37.6
NACGM                              iLQ     LQ     20 07 19.9
NACGM                              iLR     LR     20 13 37.1
SKAR   Skarslia         69.68 342  eP      P      19 41 56.5 -0.7
PABE   Paberze          69.96 332  eP      P      19 41 58.5 -0.4
GOF    Gofitskoye       70.19 315⇑iP      P      19 42 01.5 +1.0
GOF                                 pmax   pmax
       comp=Z,39nm,0.6s
ASK    Askoy            70.48 344  eP      P      19 42 01.2 -0.8
BER    Bergen           70.55 344  eP      P      19 42 02.7 +0.3
ODD1   Odda             70.72 343  eP      P      19 42 05.1 +1.5
NCK    Nalchik          71.04 314⇓iP      P      19 42 07.6 +1.8
NCK                                 pmax   pmax
       comp=Z,27nm,0.8s
KIV    Kislovodsk       71.16 314 ⇑P      P      19 42 09.0 +2.4
KIV    Kislovodsk       71.16 314  eP      P      19 42 05.9 -0.7
KIV    Kislovodsk       71.16 314⇑eP      P      19 42 09.0 +2.4
KIV                                i             19 42 19.6
KIV                                e             19 44 40.8
KIV                                 pmax   pmax
       comp=Z,20nm,0.8s
KIV    Kislovodsk       71.16 314   P      P      19 42 07.9 +1.3
KIV                                 IAmb   IAmb   19 42 10.1
       comp=Z,17nm,0.8s
BLS5   Blasjo           71.21 343  eP      P      19 42 05.8 -0.7
KBZ    Khabaz           71.22 314   P      P      19 42 07.3 +0.6
       comp=Z,22nm,0.8s,baz=103,slow=3.5,SNR=32
KBZ    Khabaz           71.22 314  eP      P      19 42 08.5 +1.7
KBZ    Khabaz           71.22 314⇓iP      P      19 42 08.5 +1.7
KBZ                                 pmax   pmax
       comp=Z,30nm,0.9s
TUC    Tucson           71.32  63   P      P      19 42 07.8 +0.1
TUC                                 pmax   pmax
       comp=Z,4.0nm,1.0s
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TUC    Tucson           71.32  63   P      P      19 42 07.8 +0.1
ZEI    Tsey             71.39 313  eP      P      19 42 09.1 +0.9
ZEI                                 pmax   pmax
       comp=Z,9.0nm,0.8s
SUW    Suwalki          71.45 331  eP      P      19 42 07.9 -0.1
SUW    Suwalki          71.45 331  eP      P      19 42 07.8 -0.3
SUW    Suwalki          71.45 331   P      P      19 42 07.7 -0.3
SUW                                 pmax   pmax
       comp=Z,35nm,1.0s
SUW    Suwalki          71.45 331   P      P      19 42 07.7 -0.3
ASAR   Alice Springs    71.71 199   P      P      19 42 10.8 +1.0
       comp=Z,2.0nm,0.7s,baz=12,slow=5.4,SNR=23
ASAR                                LR     LR     20 12 03.6
       comp=Z,47nm,20.5s,baz=352,slow=34
T25A   Trinidad         71.77  55   P      P      19 42 09.5 -1.0
T25A                                IAmb   IAmb   19 42 31.6
       comp=Z,16nm,1.3s
HOMB   Homborsund       71.82 341  eP      P      19 42 10.5 +0.4
AKASG  Malin Array Be   71.98 326   P      P      19 42 11.2  0.0
       comp=Z,24nm,0.5s,baz=34,slow=6.2,SNR=127
AKASG                               LR     LR     20 15 38.0
       comp=Z,213nm,20.6s,baz=35,slow=37
AKASG  Malin Array Be   71.98 326  iP      P      19 42 11.1 -0.1
AKASG                               pmax   pmax
       comp=Z,24nm,0.5s
AKBB   Malin Array Si   71.98 326   P      P      19 42 10.8 -0.4
AKBB                                pmax   pmax
       comp=Z,35nm,0.7s
AKBB   Malin Array Si   71.98 326   P      P      19 42 10.8 -0.4
SNART  Snartemo         72.04 342  iP      P      19 42 11.0 -0.5
SNART                              iP      pP     19 42 13.1  -12
ANMO   Albuquerque      72.11  58   LR     LR     20 12 23.5
       comp=Z,28nm,19.2s,baz=98,slow=34
ANMO   Albuquerque      72.11  58   P      P      19 42 13.0 +0.4
ANMO                                pmax   pmax
       comp=Z,4.0nm,0.9s
ANMO   Albuquerque      72.11  58          P      19 42 13.0 +0.4
LENM   Lemitar          72.35  59   P      P      19 42 15.0 +1.0
I37A   Lemond, Waseca   72.62  44   P      P      19 42 15.3  0.0
I37A                                IAmb   IAmb   19 42 32.3
       comp=Z,17nm,0.8s
GNI    Garni            72.87 310⇓eP      P      19 42 19.0 +2.1
GNI                                 pmax   pmax
       comp=Z,24nm,0.9s
319A   Douglas          72.89  63   P      P      19 42 18.3 +1.1
BSD    Bornholm Skovb   73.03 336  eP      P      19 42 18.0 +0.6
BSD    Bornholm Skovb   73.03 336  iP      P      19 42 18.0 +0.6
BSD    Bornholm Skovb   73.03 336  eP      P      19 42 18.0 +0.6
ANN    Anapa            73.06 318  eP      P      19 42 14.8 -3.0
ANN                                e*PP    pP     19 42 29.6 -1.6
ANN                                ePPP    PPP    19 46 39.5
ANN                                eS      S      19 51 36.8 -4.2
ANN                                eSSS    SSS    19 59 37.4
ANN                                 pmax   pmax
       comp=Z,81nm,1.1s
SORM   Soroca           74.38 325 ⇑P      P      19 42 25.7 +0.3
LVV    L'vov            74.64 329  eP      P      19 42 27.8 +0.9
MSTX   Muleshoe         74.96  57   P      P      19 42 27.8 -1.4
MILM   Milestii Mici    75.17 324 ⇑P      P      19 42 30.4 +0.4
KWP    Kalwaria Pacla   75.27 329  eP      P      19 42 31.6 +1.1
KWP    Kalwaria Pacla   75.27 329   P      P      19 42 31.4 +0.8
KWP                                 pmax   pmax
       comp=Z,40nm,1.0s
KWP    Kalwaria Pacla   75.27 329   P      P      19 42 31.4 +0.8
OJC    Ojcow            75.78 331  eP      P      19 42 34.2 +0.7
OJC    Ojcow            75.78 331   P      P      19 42 33.1 -0.4
OJC                                 pmax   pmax
       comp=Z,13nm,1.1s
OJC    Ojcow            75.78 331   P      P      19 42 33.1 -0.4
OJC                                 IAmb   IAmb   19 42 48.3
       comp=Z,13nm,1.1s
VASR   Vaslui           75.81 325 ⇑P      P      19 42 34.0 +0.2
BUR08  Bucovina Ar. S   76.00 327   P      P      19 42 35.0  0.0
BUR08                               IAmb   IAmb   19 42 37.3
       comp=Z,14nm,1.0s
KOLS   Kolonicke sedl   76.01 329  eP      P      19 42 35.6 +0.8
KOLS                                pmax   pmax
       comp=Z,12nm,1.3s
KOLS   Kolonicke sedl   76.01 329  eP      P      19 42 35.6 +0.8
BURAR  Bucovina Array   76.02 327 ⇑P      P      19 42 35.9 +0.9
BIR    Birlad           76.18 324 ⇑P      P      19 42 37.5 +1.6
BIZ    Bicaz            76.24 326 ⇑P      P      19 42 37.1 +1.0
UZH    Uzhgorod         76.26 329  eP      P      19 42 34.0 -2.2
UZH                                e             19 42 49.8
NIE    Niedzica         76.29 330  eP      P      19 42 37.6 +1.1
CRVS   Cervenica-Dubn   76.33 330  eP      P      19 42 37.4 +0.8
CRVS                                pmax   pmax
       comp=Z,13nm,1.0s
CRVS   Cervenica-Dubn   76.33 330  eP      P      19 42 37.4 +0.8
KSP    Ksiaz            76.37 333  eP      P      19 42 36.4 -0.4
TESR   Tescani          76.37 325 ⇑P      P      19 42 37.6 +0.7
TLCR                    76.57 323 ⇓P      P      19 42 39.2 +1.2
CHVC   Chvalec          76.66 333  eP      P      19 42 39.2 +0.7
UPC    Upice            76.75 333  eP      P      19 42 39.9 +0.9
UPC    Upice            76.75 333  eP      P      19 42 39.9 +0.9
DPC    Dobruska-Polom   76.79 333  eP      P      19 42 40.4 +1.1
DPC    Dobruska-Polom   76.79 333  eP      P      19 42 40.4 +1.1
ARCR   ARCALIA          76.79 327 ⇑P      P      19 42 41.1 +1.8
LANS   Liptovska Anna   76.80 331  eP      P      19 42 41.2 +1.8
LANS                                pmax   pmax
       comp=Z,8.0nm,0.8s
LANS   Liptovska Anna   76.80 331  eP      P      19 42 41.2 +1.8
ODBI   Odobesti         76.82 324 ⇓P      P      19 42 41.8 +2.4
CFR    Carcaliu         76.86 323 ⇑P      P      19 42 40.1 +0.4
VRI    Vrincioaia       76.87 325 ⇑P      P      19 42 40.7 +1.0
KRLC   Kraliky          76.88 333  eP      P      19 42 40.6 +0.8
KRLC   Kraliky          76.88 333  eP      P      19 42 40.6 +0.8
MORC   Moravsky Berou   76.90 332 ⇓P      P      19 42 41.0 +1.1
MORC   Moravsky Berou   76.90 332  eP      P      19 42 40.6 +0.7
MORC   Moravsky Berou   76.90 332   P      P      19 42 39.2 -0.7
MORC                                pmax   pmax
       comp=Z,12nm,0.9s
MORC   Moravsky Berou   76.90 332   P      P      19 42 39.2 -0.7
MORC                                IAmb   IAmb   19 42 42.9
       comp=Z,12nm,0.9s
UOSS   Minazif          76.93 292   P      P      19 42 41.2 +0.8
UOSS                                IAmb   IAmb   19 42 43.9
       comp=Z,14nm,0.9s
CLL    Collm            76.94 336  iP      P      19 42 40.3 +0.3
       comp=Z,18nm,0.7s
CLL                                iPcP    PcP    19 42 51.7 +0.8
CLL                                ipP     pP     19 42 54.2 +0.8
CLL    Collm            76.94 336  iP      P      19 42 40.3 +0.3
CLL                                i             19 42 51.7
CLL                                 pmax   pmax
       comp=Z,18nm,0.7s
CLL    Collm            76.94 336   P      P      19 42 40.0  0.0
TPGR   Topolog          77.00 323 ⇑P      P      19 42 41.7 +1.2
BRG    Berggiesshubel   77.05 335  eP      P      19 42 42.0 +1.3
BRG                                 Amp           19 42 43.9
       comp=Z,6.1nm,1.0s
BRG                                ex      x      19 42 52.6
BRG                                 Amp           19 42 55.4
       comp=Z,8.8nm,1.1s
BRG    Berggiesshubel   77.05 335  eP      P      19 42 41.9 +1.3
BRG                                e             19 42 52.5
BRG                                 pmax   pmax
       comp=Z,6.0nm,1.0s
BRG    Berggiesshubel   77.05 335  eP      P      19 42 42.0 +1.3
BRG                                 Amp           19 42 43.9
       comp=Z,6.1nm,1.0s
BRG                                ex      x      19 42 52.6
BRG                                 Amp           19 42 55.4
       comp=Z,8.8nm,1.1s
OZUR                    77.06 325 ⇑P      P      19 42 42.5 +1.6
PVCC   Panska Ves       77.17 334  eP      P      19 42 42.0 +0.7
PVCC   Panska Ves       77.17 334  eP      P      19 42 42.0 +0.7
DOPR   Dopca            77.32 326 ⇑P      P      19 42 43.9 +1.6
CJR    Cluj-Napoca      77.39 327 ⇑P      P      19 42 44.1 +1.4
NEHR   Nehoiu           77.40 325 ⇑P      P      19 42 44.4 +1.7
LTVH   Ltavrtes, Hu     77.45 328  eP      P      19 42 50.5 +7.5
MLR    Muntele Rosu     77.49 325   LR     LR     20 19 51.9
       comp=Z,137nm,18.3s,baz=36,slow=38
MLR    Muntele Rosu     77.49 325 ⇑P      P      19 42 44.9 +1.5
MLR    Muntele Rosu     77.49 325   P      P      19 42 44.9 +1.5
MLR                                 pmax   pmax
       comp=Z,38nm,1.5s
MLR    Muntele Rosu     77.49 325   P      P      19 42 44.9 +1.5
ISR    Istrita          77.56 324 ⇑P      P      19 42 45.2 +1.5
VYHS   Vyhne            77.58 331  eP      P      19 42 44.7 +1.0
VYHS                                pmax   pmax
       comp=Z,10.0nm,1.0s
VYHS   Vyhne            77.58 331  eP      P      19 42 44.7 +1.0
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VRAC	Vranov	77.61	333	LR	LR	20 20 54.2	
	comp=Z,175nm,19.0s,baz=25,slow=39						
VRAC	Vranov	77.61	333	⇑P	P	19 42 45.2	+1.3
VRAC	Vranov	77.61	333	eP	P	19 42 44.9	+1.0
DRGR		77.65	328	⇑P	P	19 42 45.1	+0.9
JAVC	Velka Javorina	77.65	332	eP	P	19 42 45.8	+1.6
PRU	Pruhonice	77.66	334	eP	P	19 42 45.0	+0.9
PRU				e		19 42 49.6	
PRU	Pruhonice	77.66	334	eP	P	19 42 45.0	+0.9
PRU				ex	x	19 42 49.6	
PSZ	Piszkesteto	77.71	330	⇓P	P	19 42 46.2	+1.7
PSZ	Piszkesteto	77.71	330	eP	P	19 42 52.9	+8.3
PSZ	Piszkesteto	77.71	330	P	P	19 42 45.6	+1.1
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PSZ	Piszkesteto	77.71	330	P	P	19 42 45.6	+1.1
PSZ				IAmb	IAmb	19 42 54.1	
	comp=Z,8.2nm,0.9s						
TX31	Lajitas Ar. Si	77.75	60	P	P	19 42 45.6	+0.5
TX32	Lajitas Array	77.75	60	P	P	19 42 45.6	+0.5
TX32				IAmb	IAmb	19 42 59.4	
	comp=Z,10nm,0.8s						
TXAR	Lajitas Array	77.75	60	P	P	19 42 46.0	+0.9
	comp=Z,5.2nm,0.7s,baz=302,slow=4.1,SNR=15						
TXAR				pP	pP	19 42 58.5	+0.4
	comp=Z,9.7nm,0.7s,baz=292,slow=3.9,SNR=14						
TXAR				LR	LR	20 14 37.9	
	comp=Z,31nm,20.7s,baz=0.0,slow=34						
ICOR	Ion Corvin	77.86	323	⇓P	P	19 42 46.3	+1.0
VOIR		77.89	325	⇑P	P	19 42 47.0	+1.4
KRUC	Moravsky	77.89	333	eP	P	19 42 46.3	+0.9
TREC	Trest	77.97	333	eP	P	19 42 46.8	+0.9
TREC	Trest	77.97	333	eP	P	19 42 46.8	+0.9
SMOL	Smolenice	78.03	332	eP	P	19 42 47.7	+1.5
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SMOL	Smolenice	78.03	332	eP	P	19 42 47.7	+1.5
NKC	Novy Kostel	78.06	335	eP	P	19 42 47.1	+0.8
NKC	Novy Kostel	78.06	335	eP	P	19 42 47.1	+0.8
ARR	Arges	78.11	326	⇓P	P	19 42 48.6	+1.9
MODS	Modra-Piesok	78.21	332	eP	P	19 42 47.9	+0.7
MODS				pmax	pmax		
	comp=Z,14nm,1.0s						
MODS	Modra-Piesok	78.21	332	eP	P	19 42 47.9	+0.7
SRO	Srobarova	78.34	331	eP	P	19 42 49.7	+1.8
SRO	Srobarova	78.34	331	eP	P	19 42 49.7	+1.8
BUD	Budapest	78.39	330	eP	P	19 42 49.7	+1.5
ZST	Bratislava	78.42	332	eP	P	19 42 49.9	+1.6
ZST				pmax	pmax		
	comp=Z,25nm,1.0s						
ZST	Bratislava	78.42	332	eP	P	19 42 49.9	+1.6
STKA	Stephens Creek	78.43	190	LR	LR	20 17 48.1	
	comp=Z,58nm,19.8s,baz=24,slow=36						
HUMR	Humele	78.67	325	⇑P	P	19 42 49.5	-0.3
KHC	Kasperske Hory	78.71	334	ceP	P	19 42 50.9	+1.0
KHC				pmax	pmax		
	comp=Z,36nm,0.9s						
KHC	Kasperske Hory	78.71	334	eP	P	19 42 51.0	+1.0
KHC				ex	x	19 42 55.0	
KHC	Kasperske Hory	78.71	334	P	P	19 42 50.4	+0.5
KHC				IAmb	IAmb	19 42 52.9	
	comp=Z,14nm,0.8s						
CSKK	Cskako	78.75	331	eP	P	19 42 51.9	+1.7
BR131	Keskin Array S	78.77	317	P	P	19 42 51.9	+1.3
BR131				pmax	pmax		
	comp=Z,21nm,1.1s						
BR131	Keskin Array S	78.77	317	P	P	19 42 51.9	+1.3
BR131				IAmb	IAmb	19 43 05.4	
	comp=Z,21nm,1.1s						
BRTR	Keskin Array B	78.77	317	P	P	19 42 51.2	+0.7
	comp=Z,6.1nm,0.9s,baz=62,slow=2.5,SNR=15						
GZR	Gura Zlata	78.81	327	⇑P	P	19 42 51.2	+0.6
UMR	Umm Al-Rimmam	78.89	301	eP		19 42 52.0	
GRA1	Grafenberg Arr	78.89	336	P	P	19 42 52.0	+1.0
GRF	Grafenberg Arr	78.89	336	P	P	19 42 52.0	+1.0
GRF				pmax	pmax		
	comp=Z,24nm,0.8s						
GRF	Grafenberg Arr	78.89	336	eP	P	19 42 52.0	+1.0
	comp=Z,16nm,0.8s,baz=25,slow=4.8						
COPA	Copaceanca	78.90	325	⇑P	P	19 42 51.7	+0.6
GEC2	GERESS Array S	78.92	334	P	P	19 42 51.8	+0.6
GEC2B	GERESS ARRAY S	78.92	334	P	P	19 42 51.3	+0.1
GERES	GERESS Array B	78.92	334	P	P	19 42 51.8	+0.6
	comp=Z,3.7nm,0.6s,baz=40,slow=5.0,SNR=32						
GERES				LR	LR	20 21 47.7	
	comp=Z,260nm,18.1s,baz=26,slow=39						
MIB	Mutribah	78.93	302	eP		19 42 52.5	
EGYH	Egyhazaskeszo	79.02	331	eP	P	19 42 48.7	-2.9
BZS	Buzias	79.05	328	⇑P	P	19 42 53.0	+1.1
CONA	Conrad Observa	79.06	332	iP	P	19 42 53.2	+1.3
	comp=Z,10nm,0.8s,SNR=7.0						
MPLH	Magyarpolny	79.17	331	eP	P	19 42 54.0	+1.6
TIH	Tihany	79.28	331	eP	P	19 42 53.8	+0.8
VLAD	Vladila	79.34	325	⇑P	P	19 42 54.5	+1.1
RST	Umm Al-Ruwaisa	79.36	302	eP		19 42 54.2	
QRN	Al-Qurain	79.36	300	eP		19 42 54.5	
HERR	Herculane	79.38	327	⇑P	P	19 42 53.7	0.0
BTNL	Ternell	79.43	339	dP	P	19 42 54.3	+0.5
MEM	Membach	79.44	339	dP	P	19 42 54.8	+1.0
	comp=Z,19nm,1.1s						
BSTI	Sart Tilman	79.56	340	dP	P	19 42 54.3	-0.2
MOA	Molln	79.63	333	eP	P	19 42 56.2	+1.2
	comp=Z,6.1nm,0.7s						
ARSA	Arzberg	79.76	332	eP	P	19 42 56.3	+0.5
	comp=Z,9.6nm,1.2s						
BCLA	Clavier	79.78	340	bP	P	19 42 54.2	-1.5
BMRD	Maredsous	80.02	340	dP	P	19 42 58.6	+1.6
RCHB	Rochefort	80.04	340	dP	P	19 42 58.5	+1.4
FRGS	Fruska Gora	80.11	328	eP	P	19 42 57.8	+0.2
SOKA	Soboth	80.42	332	iP	P	19 43 00.4	+1.0
	comp=Z,15nm,0.8s,SNR=7.8						
PERS	Pernice	80.44	332	iP	P	19 43 00.1	+0.6
PERS				ipP	pP	19 43 14.3	+1.3
KBA	Koelnbreinsper	80.61	333	iP	P	19 43 02.1	+1.6
	comp=Z,31nm,0.7s,SNR=15						
OBKA	Obir	80.73	332	eP	P	19 43 01.5	+0.4
	comp=Z,6.3nm,0.7s						
MYKA	Terra Mystica	80.91	333	eP	P	19 43 01.9	-0.1
	comp=Z,6.4nm,0.8s						
WATA	Walderalm	80.91	335	iP	P	19 43 03.1	+1.1
	comp=Z,17nm,0.7s,SNR=11						
BFO	Black Forest	80.93	337	P	P	19 43 02.4	+0.4
BFO				pmax	pmax		
	comp=Z,13nm,0.9s						
BFO	Black Forest	80.93	337	P	P	19 43 02.4	+0.4
BFO				IAmb	IAmb	19 43 04.7	
	comp=Z,13nm,0.9s						
DIVS	Divibare	80.95	328	eP	P	19 43 02.1	-0.1
DIVS	Divibare	80.95	328	P	P	19 43 02.3	+0.1
DIVS				IAmb	IAmb	19 43 04.4	
	comp=Z,8.1nm,0.7s						
WTTA	Wattenberg	80.96	335	iP	P	19 43 03.0	+0.6
	comp=Z,36nm,0.7s,SNR=11						
VTS	Vitosha	80.96	325	⇑P	P	19 43 04.2	+1.8
RETA	Reutte	81.02	335	eP	P	19 43 03.6	+1.1
	comp=Z,8.9nm,0.7s						
CRES	Cresnjev	81.04	332	iP	P	19 43 02.6	0.0
CRES				ipP	pP	19 43 16.9	+0.7
CRES	Cresnjev	81.04	332	eP	P	19 43 02.6	0.0
MOTA	Moosalm	81.05	335	iP	P	19 43 03.7	+1.0
	comp=Z,30nm,1.0s,SNR=8.8						
SQTA	Sankt Quirin	81.13	335	iP	P	19 43 04.7	+1.5
	comp=Z,22nm,1.0s,SNR=8.0						
ABTA	Abfaltersbach	81.16	334	eP	P	19 43 04.1	+0.8
	comp=Z,6.0nm,0.9s						
HAPS	Han Pijesak,Bl	81.34	328	eP	P	19 43 04.8	+0.4
ECH	Echery	81.35	338	P	P	19 43 04.6	+0.4
ECH				pmax	pmax		
	comp=Z,12nm,0.8s						
ECH	Echery	81.35	338	P	P	19 43 04.6	+0.4
ECH				IAmb	IAmb	19 43 07.1	
	comp=Z,12nm,0.8s						
BBLS	Lazići	81.37	328	eP	P	19 43 05.0	+0.6
BLY	Banja Luka	81.40	330	eP	P	19 43 02.8	-1.7
FETA	Feichten	81.45	335	eP	P	19 43 06.1	+1.1
	comp=Z,11nm,1.1s						
DAVA	Damuels	81.45	336	eP	P	19 43 05.9	+1.0
	comp=Z,12nm,0.8s						
CEY	Cerknica	81.45	332	eP	P	19 43 05.3	+0.5
STAL	STALIGIAL	81.53	333	P	P	19 43 05.4	+0.2
PPT	Papeete	81.86	126	LR	LR	20 15 18.9	
	comp=Z,130nm,18.9s,baz=323,slow=32						
DAVOX	Davos/Dischmat	81.91	335	LR	LR	20 22 12.9	
	comp=Z,130nm,19.4s,baz=18,slow=38						
CTI	Castel Tesino	82.05	334	P	P	19 43 07.9	-0.1
CTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTI	Castel Tesino	82.05	334	P	P	19 43 07.9	-0.1
CTI				IAmb	IAmb	19 43 09.9	
	comp=Z,7.4nm,0.8s						
MANT	Manisa	82.12	319	P	P	19 43 09.9	+1.2
UPM	Unac-Piva	82.12	328	eP	P	19 43 08.9	+0.3
STIP	Stip	82.16	325	iP	P	19 43 08.4	-0.1
SKO	Skopje	82.22	326	iP	P	19 43 10.3	+1.5
TUE	Stuetta	82.34	336	P	P	19 43 10.0	+0.3
BRY	Bratogost	82.52	328	eP	P	19 43 10.6	0.0
PDG	Podgorica	82.66	327	⇑P	P	19 43 11.3	+0.1
PDG	Podgorica	82.66	327	eP	P	19 43 11.8	+0.7
PDG	Podgorica	82.66	327	P	P	19 43 10.8	-0.3
TEOL	Teolo	82.66	334	P	P	19 43 11.1	0.0
TREB	Trebinje	82.75	328	eP	P	19 43 11.6	0.0
STON	Ston	82.85	329	eP	P	19 43 12.0	-0.1
DRME	Dracevica, Mon	82.90	327	eP	P	19 43 12.6	+0.2
HCY	Herceg Novi	82.93	328	eP	P	19 43 12.5	0.0
SENIN	Lac Senin/Sane	83.02	337	P	P	19 43 14.2	+1.0
OHR	Ohrid	83.20	326	iP	P	19 43 16.4	+2.4
MURB	Monte Urbino	84.28	332	P	P	19 43 21.1	+1.5
OSSC	Osservatorio P	84.45	333	P	P	19 43 20.6	+0.3
OSSC				IAmb	IAmb	19 43 23.2	
	comp=Z,8.4nm,0.6s						
NRCA	Norcia	84.47	332	P	P	19 43 21.6	+1.1
SGRT	San Giovanni R	84.53	329	P	P	19 43 22.3	+1.5
SGRT				IAmb	IAmb	19 43 23.4	
	comp=Z,8.2nm,0.7s						
RAYN	Ar Rayn	84.67	299	P	P	19 43 22.7	+0.9
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAYN	Ar Rayn	84.67	299	P	P	19 43 22.7	+0.9
SSB	Saint Sauveur	84.75	338	P	P	19 43 23.6	+1.8
SSB				pmax	pmax		
	comp=Z,11nm,0.8s						
SSB	Saint Sauveur	84.75	338	P	P	19 43 23.6	+1.8
SSB				IAmb	IAmb	19 43 26.1	
	comp=Z,11nm,0.8s						
INTR	Introdacqua	84.94	331	P	P	19 43 23.5	+0.6
INTR				IAmb	IAmb	19 43 26.6	
	comp=Z,14nm,0.9s						
TIP	Timpagrande	86.42	327	P	P	19 43 31.4	+1.1
TIP				IAmb	IAmb	19 43 33.3	
	comp=Z,8.4nm,0.9s						
ESDC	Sonseca Array	92.05	342	P	P	19 43 56.5	-0.3
	comp=Z,0.9nm,1.0s,baz=14,slow=4.6,SNR=4.7						
ESDC				LR	LR	20 32 38.6	
	comp=Z,52nm,18.3s,baz=5.0,slow=40						
KEST	Kesra	92.13	331	P	P	19 43 57.9	+0.6
	comp=Z,4.8nm,0.8s,baz=11,slow=3.3,SNR=6.4						
KEST	Kesra	92.13	331	IAmb	IAmb	19 44 02.0	
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	115.54	329	PKP	PKiKP	19 49 29.3	-0.6
	comp=Z,0.2nm,0.3s,baz=47,slow=0.9,SNR=3.7						
DBIC	Dimbokro	123.79	333	PKP	PKiKP	19 49 46.3	+0.2
	comp=Z,4.4nm,1.0s,baz=54,slow=2.6,SNR=4.3						
LC01	Cunco	146.44	94	PKPdf	PKPab	19 50 30.0	+0.7
BELA	Belgrano 2	148.09	177	PKPdf	PKPbc	19 50 30.4	-1.4
PLCA	Paso Flores	148.16	96	PKPbc	PKiKP	19 50 34.1	-0.7
	comp=Z,7.9nm,1.0s,baz=256,slow=4.1,SNR=9.3						
PLCA	Paso Flores	148.16	96	PKP2	PKPbc	19 50 33.9	+0.8
PLCA	Paso Flores	148.16	96		PKPbc	19 50 33.9	+0.8
CPUP	Villa Florida	148.73	61	PKPbc	PKiKP	19 50 35.9	-0.4
	comp=Z,3.5nm,0.9s,baz=306,slow=2.8,SNR=5.6						
SNAA	Sanae	152.05	196	PKPdf	PKPbc	19 50 41.4	-0.2
VNA2	Neumayer--Watz	153.49	194	PKPdf	PKPdf	19 50 40.5	+3.6
	baz=121,slow=2.2						

IDC **07** *19:41:37.8±0.9, 35.°86N×97.°57W,* $h0^{km}$*, mb3.8/5, mb1 4.1/12, mb1mx3.8/44, mbtmp3.8/12, ML3.7/7, MS3.2/2, Ms1 3.2/2, ms1mx2.6/52, Error ellipse: s-maj=14.3km s-min=10.7km az=162.0*

ANF **07** *19:41:37.6±0.1, 35.°83N×97.°43W,* $h5^{km}$*, ML4.9/17, Error ellipse: s-maj=2.2km s-min=1.7km az=15.0*

NEIC **07** *19:41:37.7±1.2, 35.°84N±0.°01×97.°44W±0.°02,* $h5^{km}\pm2^{km}$*, Error ellipse: s-maj=3.3km s-min=3.0km az=82.0*

TUL **07** *19:41:37.9±1.6, 35.°82N±0.°02×97.°43W±0.°02,* $h7^{km}\pm5^{km}$*, ML3.8, mb_Lg4.0/170(NEIC), Mwr3.8/43(NEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=106.0*

NEIC **07** *19:41:37.9, 35.°82N×97.°43W,* $h6^{km}$*, Moment Tensor Solution. Moment tensor: Scale* 10^{14}*Nm;* M_{rr}*-0.08;* $M_{\theta\theta}$*5.18;* $M_{\phi\phi}$*-5.09;* $M_{r\theta}$*-2.64;* $M_{\theta\phi}$*1.49;* $M_{\phi r}$*-1.60; Fault plane solution:* M_0*6.17000×*10^{14} *NP1:*ϕ_s*309.25000°, δ63.07000°, λ6.91000°. NP2:*ϕ_s*216.11000°, δ83.84000°, λ152.90000°. Principal axes: T 6.6135, Plg23.0000°, Azm169.0000°; N -1.0045, Plg62.0000°, Azm24.0000°; P -5.6091, Plg14.0000°, Azm266.0000°;*

ISC 07 19:41:37.9±1.0**, 35.°85N**±0.°02×**97.°43W**±0.°03**,** $\mathbf{h5}^{km}\pm8^{km}$**, n214, σ1.°05**/211**, mb3.6**/4**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.27	179		Pg	19 41 42.9	-0.2
OK025	Westminster Rd	0.28	165		Pg	19 41 43.2	-0.1
OK025				Sg	Sg	19 41 46.8	-0.1
OK001	Jones High Sch	0.31	158	Pg	Pg	19 41 43.8	-0.1
OKCFA	Oklahoma City	0.43	183		Pg	19 41 45.9	-0.4
OKCFA				Sg	Sg	19 41 51.3	-0.5
OKCSW	OKLAHOMA CITY	0.44	181		Pg	19 41 46.0	-0.4
OKCSW				Sg	Sg	19 41 52.0	-0.1
OK031	S. Brethren Rd	0.49	77		Pg	19 41 47.7	+0.4
OK031				Sg	Sg	19 41 54.5	+0.8
OK030	Cody Creek RV	0.53	81		Pg	19 41 48.4	+0.3
OK030				Sg	Sg	19 41 55.4	+0.4
FNO	Franklin	0.59	178		Pg	19 41 48.8	-0.5
FNO				Sg	Sg	19 41 56.8	-0.1
QUOK	Quay	0.67	61		Pg	19 41 51.0	+0.3
QUOK				Sg	Sg	19 41 59.6	+0.2
OK011	Prague	0.70	121		Pg	19 41 51.3	-0.1
CROK	Carrier	0.80	326		Pg	19 41 53.3	+0.1
CROK				IAmb_Lg		19 42 04.5	
	comp=Z,2µm,0.9s						
W35A	Tecumseh	0.83	147		Pg	19 41 52.9	-0.9
W35A				Sg	Sg	19 42 03.9	-0.6
GC02	Grant County #	1.06	341		Pg	19 41 58.1	-0.1
KAN13	South Haven SW	1.16	358		Pg	19 42 00.2	-0.1
KAN13				Sg	Sg	19 42 15.5	+0.1
KAN14	Manchester OK	1.19	339		Pg	19 42 00.4	-0.3
T35A	Sooner Cattle	1.30	34		Pn	19 42 02.2	-0.6
T35B	Sooner Cattle	1.30	34	P		19 42 02.2	
	baz=214,SNR=78						
T35B				S		19 42 20.2	
	baz=214						
TUL1	Leonard	1.33	87	P	Pn	19 42 01.9	-1.4
	baz=266,SNR=255						
TUL1				S	Sg	19 42 20.2	-0.4
	baz=266						
TUL1	Leonard	1.33	87	Pn	Pn	19 42 01.8	-1.4
TUL1				IAmb_Lg		19 42 22.4	
	comp=Z,1µm,1.0s						
TUL1	Leonard	1.33	87	P		19 42 02.0	
	baz=266						
TUL1				S		19 42 20.1	
	baz=266						
U32A	Winter Ranch,	1.38	293		Pn	19 42 03.2	-0.8
U32A	Winter Ranch,	1.38	293	P		19 42 03.2	
	baz=113						
U32A				S		19 42 23.0	
	baz=113						
KAN10	Anthony SW Sta	1.38	337		Pn	19 42 03.9	-0.1
KAN08	Anthony NE Sta	1.44	343		Pn	19 42 05.0	+0.1
KS21	Milan North St	1.45	353		Pn	19 42 05.0	+0.1
KS21	Milan North St	1.45	353	IAmb_Lg		19 42 28.2	
	comp=Z,2µm,1.1s						
KAN12	Harper NE Stat	1.52	343		Pn	19 42 06.0	+0.2
WMOK	Wichita Mounta	1.56	225	S	Sn	19 42 26.3	-0.8
	baz=45						
WMOK	Wichita Mounta	1.56	225		Pn	19 42 05.9	-0.6
WMOK	Wichita Mounta	1.56	225	P		19 42 06.2	
	baz=45						
WMOK				S		19 42 26.4	
	baz=45						
X37A	Clayton	2.10	126		Pn	19 42 13.7	-0.1
X37A				IAmb_Lg		19 42 46.7	
	comp=Z,722nm,0.8s						
X37A	Clayton	2.10	126	P		19 42 13.6	
	baz=307						
Z35A	Perchaven, San	2.52	177		Pn	19 42 19.2	-0.3
Z35A				IAmb_Lg		19 42 56.8	
	comp=Z,610nm,1.1s						
U38A	Gravette	2.53	76		Pn	19 42 19.9	+0.2
U38A				IAmb_Lg		19 43 01.1	
	comp=Z,353nm,0.7s						
U38A	Gravette	2.53	76	P		19 42 20.8	
	baz=257,SNR=182						
R32A	Long Quarter,	2.77	339		Pb	19 42 26.7	-1.2
R32A				IAmb_Lg		19 43 12.8	
	comp=Z,396nm,0.8s						
HHAR	Hobbs	2.86	80		Pn	19 42 24.8	+0.5
HHAR				IAmb_Lg		19 43 16.2	
	comp=Z,641nm,1.3s						
W39A	Magazine	3.04	101	P	Pn	19 42 26.8	0.0
	baz=283,SNR=51						
W39A				S	Sn	19 43 03.9	+0.3
	baz=283						
W39A	Magazine	3.04	101		Pn	19 42 27.1	+0.3
W39A				IAmb_Lg		19 43 18.4	
	comp=Z,320nm,0.7s						
W39A	Magazine	3.04	101	P		19 42 27.0	
	baz=283,SNR=50						
Z38A	Mt. Pleasant	3.27	141	Pn	Pn	19 42 29.4	-0.5
Z38A				IAmb_Lg		19 43 29.5	
	comp=Z,393nm,0.8s						
Z38A	Mt. Pleasant	3.27	141	P		19 42 29.8	
	baz=322						
Z38A				S		19 43 10.2	
	baz=322						
KSU1	Kansas State U	3.31	11	P	Pn	19 42 30.9	+0.3
	baz=192,SNR=21						
KSU1	Kansas State U	3.31	11	Pn	Pn	19 42 30.8	+0.3
KSU1				IAmb_Lg		19 43 31.2	
	comp=Z,611nm,0.9s						
KSU1	Kansas State U	3.31	11	P		19 42 31.3	
	baz=192						
MIAR	Mount Ida	3.41	111	P	Pn	19 42 31.6	-0.2
	baz=293						
MIAR				S	Sn	19 43 11.7	-1.0
	baz=293						
MIAR	Mount Ida	3.41	111		Pn	19 42 31.8	-0.1
MIAR				IAmb_Lg		19 43 34.8	
	comp=Z,238nm,0.9s						
MIAR	Mount Ida	3.41	111	P		19 42 32.5	
	baz=293,SNR=128						
MIAR				S		19 43 13.3	
	baz=293						
CBKS	Cedar Bluff	3.49	329	P		19 42 33.9	
	baz=148,SNR=36						
CBKS	Cedar Bluff	3.49	329	P	Pn	19 42 33.6	+0.7
	baz=148,SNR=38						
CBKS	Cedar Bluff	3.49	329	Pn	Pn	19 42 33.3	+0.4
AMTX	Amarillo	3.61	256	P	Pn	19 42 34.5	-0.1
	baz=74						
AMTX	Amarillo	3.61	256	Pn	Pn	19 42 35.3	+0.7
AMTX				IAmb_Lg		19 43 32.7	
	comp=Z,396nm,0.8s						
ABTX	Abilene, Hawle	3.70	210	P	Pn	19 42 35.6	-0.3
	baz=29						
ABTX				S	Sn	19 43 19.4	-0.5
	baz=29						
ABTX	Abilene, Hawle	3.70	210	Pn	Pn	19 42 35.2	-0.7
ABTX				IAmb_Lg		19 43 39.0	
	comp=Z,329nm,0.7s						
ABTX	Abilene, Hawle	3.70	210	P		19 42 35.5	
	baz=29,SNR=5.6						
ABTX				S		19 43 19.5	
	baz=29						
U40A	Yellville	3.74	81	P	Pn	19 42 36.0	-0.4
	baz=263,SNR=14						
U40A				Sb	Sb	19 43 33.1	+3.0
	baz=263						
U40A	Yellville	3.74	81	Pn	Pn	19 42 36.0	-0.4
U40A				IAmb_Lg		19 43 43.5	
	comp=Z,328nm,0.7s						
U40A	Yellville	3.74	81	P		19 42 37.0	
	baz=263,SNR=22						
U40A				P		19 42 37.0	
	baz=263,SNR=22						
S39A	Bolivar	3.77	60	Pn	Pn	19 42 37.1	+0.3
S39A				IAmb_Lg		19 43 43.8	
	comp=Z,426nm,0.8s						
S39A	Bolivar	3.77	60	P		19 42 37.1	
	baz=242,SNR=31						
S39A				S		19 43 22.5	
	baz=242						
WHTX	Lake Whitney,	3.85	180	P	Pn	19 42 37.3	-0.5
	baz=0.3						
WHTX				Sb	Sb	19 43 34.6	+1.4
	baz=0.3						
WHTX	Lake Whitney,	3.85	180	Pn	Pn	19 42 37.5	-0.3
WHTX				IAmb_Lg		19 43 44.3	
	comp=Z,263nm,0.9s						
WHTX	Lake Whitney,	3.85	180	P		19 42 37.5	
	baz=0.3,SNR=7.6						
WHTX				S		19 43 25.0	
	baz=0.3						
X40A	Basin Creek Fa	4.00	108	P	Pn	19 42 39.8	-0.1
	baz=291,SNR=15						
X40A	Basin Creek Fa	4.00	108		Pn	19 42 40.4	+0.5
X40A				IAmb_Lg		19 43 53.1	
	comp=Z,375nm,0.8s						
X40A	Basin Creek Fa	4.00	108	P		19 42 40.2	
	baz=291,SNR=19						
X40A				P		19 42 40.2	
	baz=291,SNR=19						
237A	Washetta, Mont	4.07	160	Pn	Pn	19 42 40.7	-0.1
237A				IAmb_Lg		19 43 49.2	
	comp=Z,261nm,0.9s						
WLAR	White Oak Lake	4.16	120		Pn	19 42 42.1	+0.1
WLAR				IAmb_Lg		19 43 59.3	
	comp=Z,383nm,0.8s						
WHAR	Wooly Hollow	4.23	96	Pn	Pn	19 42 43.2	+0.1
WHAR				IAmb_Lg		19 43 55.5	
	comp=Z,582nm,1.2s						
W41B	Gary Mavity, V	4.28	98	P	Pn	19 42 43.7	-0.1
	baz=280						
W41B				S	Sn	19 43 33.5	-0.5
	baz=280						
W41B	Gary Mavity, V	4.28	98		Pn	19 42 44.1	+0.4
W41B				IAmb_Lg		19 43 52.9	
	comp=Z,353nm,0.7s						
W41B	Gary Mavity, V	4.28	98	P		19 42 43.8	
	baz=280,SNR=53						
UALR	University of	4.29	103	Pn	Pn	19 42 44.7	+0.7
UALR				IAmb_Lg		19 44 06.0	
	comp=Z,265nm,0.9s						
FCAR	Ozark Folk Cen	4.31	88		Pn	19 42 44.0	-0.1
FCAR				IAmb_Lg		19 43 59.0	
	comp=Z,221nm,0.7s						
MGMO	Mountain Grove	4.36	71		Pn	19 42 46.0	+1.1
MGMO				IAmb_Lg		19 43 55.3	
	comp=Z,344nm,0.9s						
Z41A	Richland Creek	4.61	123	S	Sn	19 43 40.1	-2.1
	baz=305						
Z41A	Richland Creek	4.61	123		Pn	19 42 47.7	-0.6
Z41A				IAmb_Lg		19 44 14.8	
	comp=Z,359nm,0.8s						
NATX	Nacogdoches	4.68	150	S	Sn	19 43 42.1	-1.9
	baz=331						
NATX	Nacogdoches	4.68	150	Pn	Pn	19 42 48.7	-0.6
MSTX	Muleshoe	4.77	248	P	Pn	19 42 50.4	-0.3
	baz=66						
MSTX	Muleshoe	4.77	248		Pn	19 42 50.4	-0.3
R40A	Maddies Statio	4.79	58		Pn	19 42 51.0	+0.2
R40A				IAmb_Lg		19 44 11.6	
	comp=Z,297nm,0.8s						
R40A	Maddies Statio	4.79	58	P		19 42 51.0	
	baz=241,SNR=20						
P38A	Dawn	4.87	38	Pn	Pn	19 42 51.7	-0.2
P38A				IAmb_Lg		19 44 16.1	
	comp=Z,303nm,0.9s						
N33A	J Bar K, Exete	4.88	360		Pb	19 43 03.0	-1.0
CCAR	Cane Creek	5.03	111	IAmb_Lg		19 44 25.1	
	comp=Z,356nm,0.9s						
435B	Jarrell	5.05	182	P	Pn	19 42 53.5	-0.9
	baz=1.4						
435B				Sb	Sb	19 44 12.4	+4.5
	baz=1.4						
435B	Jarrell	5.05	182	Pn	Pn	19 42 53.4	-1.0
435B				IAmb_Lg		19 44 31.4	
	comp=Z,466nm,0.8s						
LCAR	Lake Charles	5.09	86		Pn	19 42 54.6	-0.3
LCAR				IAmb_Lg		19 44 19.3	
	comp=Z,184nm,1.0s						
N35A	Tabor	5.20	15		Pn	19 42 56.4	0.0
KSCO	Kaye Shedlock'	5.21	309	P	Pn	19 42 56.8	+0.2

	baz=126						
KSCO	**Kaye Shedlock'**	**5.21**	**309**	Pn	**Pn**	**19 42 56.3**	**-0.3**
KSCO				IAmb_Lg		19 44 37.8	
	comp=Z,220nm,0.8s						
CCM	**Cathedral Cave**	**5.42**	**64**	P	**Pn**	**19 42 59.3**	**-0.2**
	baz=248						
CCM				S	**Sn**	**19 44 02.6**	**+0.4**
	baz=248						
CCM	**Cathedral Cave**	**5.42**	**64**	Pn	**Pn**	**19 42 59.8**	**+0.4**
CCM				IAmb_Lg		19 44 35.7	
	comp=Z,286nm,0.9s						
X43A	**Marvell**	**5.52**	**102**	IAmb_Lg		19 44 38.4	
	comp=Z,284nm,1.1s						
BGNE	**Belgrade**	**5.58**	**354**	P	**Pn**	**19 43 01.9**	**+0.2**
	baz=174						
BGNE				S	**Sn**	**19 44 06.6**	**+0.4**
	baz=174						
BGNE	**Belgrade**	**5.58**	**354**	Pn	**Pn**	**19 42 59.9**	**-1.8**
P40A	**Paris**	**5.63**	**48**		**Pn**	**19 43 02.9**	**+0.6**
JCT	**Junction City**	**5.71**	**201**	P	**Pn**	**19 43 02.4**	**-1.1**
	baz=20						
JCT	**Junction City**	**5.71**	**201**	Pn	**Pn**	**19 43 02.7**	**-0.8**
PBMO	**Poplar Bluff**	**5.73**	**79**	Pn	**Pn**	**19 43 03.1**	**-0.5**
PBMO				IAmb_Lg		19 44 53.7	
	comp=Z,272nm,0.8s						
T25A	**Trinidad**	**5.77**	**285**	P	**Pn**	**19 43 04.0**	**-0.4**
	baz=101,SNR=7.8						
T25A	**Trinidad**	**5.77**	**285**	Pn	**Pn**	**19 43 04.4**	**-0.1**
T25A				IAmb_Lg		19 44 46.7	
	comp=Z,358nm,0.8s						
143A	**Socs Landing,**	**5.89**	**120**	IAmb_Lg		19 44 57.1	
	comp=Z,166nm,0.9s						
N38A	**Joes South For**	**5.94**	**32**	Pn	**Pn**	**19 43 05.6**	**-1.0**
FVM	**French Village**	**6.00**	**67**		**Pn**	**19 43 08.5**	**+1.0**
FVM				IAmb_Lg		19 44 48.9	
	comp=Z,307nm,1.0s						
CPRX	**Cap Rock**	**6.02**	**244**	Pn	**Pn**	**19 43 06.7**	**-1.1**
HKT	**Hockley**	**6.03**	**167**	IAmb_Lg		19 45 01.6	
	comp=Z,29nm,1.0s						
PEBM	**Pemiscott Bayo**	**6.14**	**85**	IAmb_Lg		19 45 10.3	
	comp=Z,349nm,0.7s						
MET	**Memphis--Engin**	**6.16**	**95**	IAmb_Lg		19 45 08.9	
	comp=Z,334nm,0.9s						
OGNE	**Ogallala**	**6.24**	**326**	P	**Pn**	**19 43 11.7**	**+0.9**
	baz=143,SNR=23						
OGNE	**Ogallala**	**6.24**	**326**	Pn	**Pn**	**19 43 11.7**	**+0.9**
OGNE				IAmb_Lg		19 45 05.4	
	comp=Z,379nm,0.7s						
SLM	**Saint Louis**	**6.38**	**62**	IAmb_Lg		19 44 59.1	
	comp=Z,292nm,0.8s						
HALT	**Halls**	**6.57**	**87**	IAmb_Lg		19 45 12.0	
	comp=Z,260nm,0.8s						
GLAT	**Glass**	**6.61**	**84**	IAmb_Lg		19 45 11.0	
	comp=Z,344nm,0.8s						
OXF	**Oxford**	**6.70**	**99**	P	**Pn**	**19 43 16.4**	**-0.7**
	baz=284,SNR=5.9						
OXF	**Oxford**	**6.70**	**99**	Pn	**Pn**	**19 43 17.1**	**+0.1**
OXF				IAmb_Lg		19 45 25.9	
	comp=Z,164nm,0.8s						
SDCO	**Great Sand Dun**	**6.75**	**289**	P	**Pn**	**19 43 18.4**	**+0.4**
	baz=104,SNR=47						
SDCO	**Great Sand Dun**	**6.75**	**289**	Pn	**Pn**	**19 43 18.6**	**+0.7**
SDCO				IAmb_Lg		19 45 12.8	
	comp=Z,122nm,1.1s						
W45A	**Hickory Valley**	**6.76**	**93**	Pn	**Pn**	**19 43 18.1**	**+0.3**
W45A				IAmb_Lg		19 45 24.7	
	comp=Z,188nm,0.8s						
Y45A	**Yeager Farm, C**	**6.78**	**105**	Pn	**Pn**	**19 43 18.9**	**+0.8**
Y45A				IAmb_Lg		19 45 32.5	
	comp=Z,144nm,1.1s						
VBMS	**Vicksburg**	**6.78**	**120**	IAmb_Lg		19 45 30.2	
	comp=Z,147nm,1.2s						
GDL2	**Guadalupe Moun**	**6.81**	**240**		**Pn**	**19 43 17.4**	**-1.3**
S44A	**Carbondale**	**6.81**	**72**		**Pn**	**19 43 19.6**	**+1.0**
S44A				IAmb_Lg		19 45 26.3	
	comp=Z,242nm,0.7s						
K31A	**O'Neill**	**6.84**	**352**	Pn	**Pn**	**19 43 18.7**	**-0.4**
SIUC	**Southern Illin**	**6.85**	**72**	Pn	**Pn**	**19 43 19.8**	**+0.7**
Q24A	**Divide**	**6.89**	**299**	P	**Pn**	**19 43 19.6**	**-0.3**
	baz=115,SNR=6.3						
Q24A	**Divide**	**6.89**	**299**		**Pn**	**19 43 19.4**	**-0.5**
Q24A				IAmb_Lg		19 45 20.4	
	comp=Z,180nm,0.8s						
735A	**Kenedy**	**6.98**	**183**	IAmb_Lg		19 45 28.9	
	comp=Z,189nm,0.8s						
N41A	**Harden Midland**	**7.09**	**45**	Pn	**Pn**	**19 43 23.0**	**+0.6**
N41A				IAmb_Lg		19 45 34.9	
	comp=Z,314nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.32**	**56**	Pn	**Pn**	**19 43 26.8**	**+1.3**
Q44A	**Meyer Farm, Va**	**7.36**	**63**	Pn	**Pn**	**19 43 25.9**	**-0.2**
ANMO	**Albuquerque**	**7.43**	**266**	Pn	**Pn**	**19 43 25.5**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=87,slow=14,SNR=1.9						
ANMO				Pg	**Pb**	**19 43 50.3**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=91,slow=16,SNR=9.1						
ANMO				Lg	Lg	19 45 31.7	
	comp=Z,8.7nm,0.3s,baz=26,slow=12,SNR=6.4						
ANMO				LR	LR	19 46 30.9	
	comp=Z,164nm,20.8s,baz=103,slow=40						
ANMO	**Albuquerque**	**7.43**	**266**	Pn	**Pn**	**19 43 27.0**	**-0.3**
ISCO	**Idaho Springs**	**7.58**	**304**	P	**Pn**	**19 43 28.9**	**-0.5**
	baz=119,SNR=11						
ISCO	**Idaho Springs**	**7.58**	**304**	Pn	**Pn**	**19 43 28.8**	**-0.6**
ISCO				IAmb_Lg		19 45 42.7	
	comp=Z,109nm,0.8s						
ISCO	**Idaho Springs**	**7.58**	**304**	P		19 43 29.2	
	baz=119,SNR=10						
833A	**Chaparral WMA,**	**7.68**	**193**	P	**Pn**	**19 43 30.2**	**-0.3**
	baz=12						
833A	**Chaparral WMA,**	**7.68**	**193**	Pn	**Pn**	**19 43 29.2**	**-1.3**
833A				IAmb_Lg		19 45 48.1	
	comp=Z,163nm,0.7s						
PLAL	**Pickwick Lake**	**7.69**	**94**	Pn	**Pn**	**19 43 29.0**	**-1.5**
K38A	**Parkersburg**	**7.69**	**27**	Pn	**Pn**	**19 43 29.3**	**-1.3**
K38A				IAmb_Lg		19 45 45.6	
	comp=Z,281nm,0.9s						
BNM	**Barren Site**	**7.74**	**260**		**Pn**	**19 43 30.2**	**-1.3**
S22A	**4UR Ranch, Cre**	**7.78**	**287**	P	**Pn**	**19 43 32.2**	**+0.1**
	baz=102						
S22A	**4UR Ranch, Cre**	**7.78**	**287**	Pn	**Pn**	**19 43 32.9**	**+0.8**
WVT	**Waverly**	**7.79**	**85**	P	**Pn**	**19 43 31.4**	**-0.6**
	baz=270						
WVT	**Waverly**	**7.79**	**85**	Pn	**Pn**	**19 43 30.4**	**-1.5**
MNTX	**Cornudas Mount**	**7.81**	**240**	P	**Pn**	**19 43 31.7**	**-0.5**
	baz=56						
MNTX	**Cornudas Mount**	**7.81**	**240**	Pn	**Pn**	**19 43 31.2**	**-1.1**
MNTX				IAmb_Lg		19 46 00.3	
	comp=Z,107nm,0.9s						
L40A	**Anamosa**	**7.87**	**36**		**Pn**	**19 43 33.8**	**+0.8**
L40A				IAmb_Lg		19 45 51.2	
	comp=Z,176nm,0.8s						
ECSD	**EROS Data Cent**	**7.90**	**4**	P	**Pn**	**19 43 32.8**	**-0.7**
	baz=185,SNR=10						
ECSD	**EROS Data Cent**	**7.90**	**4**	Pn	**Pn**	**19 43 32.9**	**-0.7**
ECSD	**EROS Data Cent**	**7.90**	**4**	P		19 43 32.2	
	baz=185,SNR=20						
HDIL	**Hopedale**	**7.94**	**51**	P	**Pn**	**19 43 33.2**	**-0.9**
	baz=236,SNR=7.2						
HDIL	**Hopedale**	**7.94**	**51**	Pn	**Pn**	**19 43 33.9**	**-0.1**
OLIL	**Olney**	**7.97**	**66**	Pn	**Pn**	**19 43 31.9**	**-2.6**
Y22D	**IRIS PASSCAL I**	**7.99**	**260**	IAmb_Lg		19 46 09.3	
	comp=Z,274nm,0.9s						
USIN	**University of**	**8.10**	**72**	IAmb_Lg		19 46 05.3	
	comp=Z,239nm,1.0s						
O44A	**Mansfield**	**8.28**	**56**	Pn	**Pn**	**19 43 37.2**	**-1.4**
SMCO	**Snowmass**	**8.28**	**296**		**Pn**	**19 43 37.4**	**-1.7**
PHWY	**Pilot Hill**	**8.32**	**313**		**Pn**	**19 43 38.8**	**-0.6**
PHWY				IAmb_Lg		19 46 07.3	
	comp=Z,154nm,0.9s						
TX31	**Lajitas Ar. Si**	**8.36**	**221**		**Pn**	**19 43 38.4**	**-1.5**
TX32	**Lajitas Array**	**8.36**	**221**	Pn	**Pn**	**19 43 38.7**	**-1.2**
TXAR	**Lajitas Array**	**8.36**	**221**	Pn	**Pn**	**19 43 38.5**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=44,slow=11,SNR=6.0						
TXAR				Pg	**Pb**	**19 44 07.4**	**+4.2**
	comp=Z,4.4nm,0.3s,baz=54,slow=15,SNR=15						
N23A	**Red Feather La**	**8.37**	**310**	P	**Pn**	**19 43 40.8**	**+0.6**
	baz=124,SNR=20						
N23A	**Red Feather La**	**8.37**	**310**	Pn	**Pn**	**19 43 41.0**	**+0.8**
L42A	**Oliver, Polo**	**8.62**	**42**	Pn	**Pn**	**19 43 43.2**	**-0.2**
SUSD	**Miller**	**8.66**	**353**	Pn	**Pn**	**19 43 42.7**	**-1.3**
SUSD				IAmb_Lg		19 46 20.8	
	comp=Z,191nm,0.8s						
I37A	**Lemond, Waseca**	**8.72**	**20**	Pn	**Pn**	**19 43 42.6**	**-2.1**
JFWS	**Jewell Farm**	**8.98**	**36**	P	**Pn**	**19 43 48.2**	**-0.1**
	baz=220						
JFWS	**Jewell Farm**	**8.98**	**36**	Pn	**Pn**	**19 43 48.0**	**-0.3**
LRAL	**Lakeview Retre**	**9.06**	**105**	P	**Pn**	**19 43 49.1**	**-0.3**
	baz=291						
LRAL	**Lakeview Retre**	**9.06**	**105**		**Pn**	**19 43 48.0**	**-1.4**
121A	**Cookes Peak, D**	**9.19**	**252**	Pn	**Pn**	**19 43 51.4**	**0.0**
PV01	**Paradox Valley**	**9.20**	**288**	Pn	**Pn**	**19 43 53.4**	**+1.8**
PV01				IAmb_Lg		19 46 46.5	
	comp=Z,89nm,1.3s						
WCI	**Wyandotte Cave**	**9.21**	**72**	Pn	**Pn**	**19 43 51.9**	**+0.3**
WCI				IAmb_Lg		19 46 29.9	
	comp=Z,138nm,0.8s						
Y49A	**Blount Mountai**	**9.27**	**99**	IAmb_Lg		19 46 44.4	
	comp=Z,72nm,0.9s						
BLO	**Bloomington**	**9.28**	**66**	Pn	**Pn**	**19 43 53.0**	**+0.6**
PV02	**Paradox Valley**	**9.35**	**288**	IAmb_Lg		19 46 50.4	
	comp=Z,84nm,1.2s						
PV13	**Radium Mtn., P**	**9.40**	**288**	Pn	**Pn**	**19 43 52.6**	**-1.7**
PV13				IAmb_Lg		19 46 55.1	
	comp=Z,106nm,1.3s						
PV12	**Saucer Basin,**	**9.42**	**289**	IAmb_Lg		19 46 47.9	
	comp=Z,71nm,0.9s						
PV03	**Paradox Valley**	**9.44**	**288**	Pn	**Pn**	**19 43 54.5**	**-0.3**
U49A	**Red Boiling Sp**	**9.44**	**83**	IAmb_Lg		19 46 46.2	
	comp=Z,67nm,0.8s						
PV22	**Blue Mesa, Par**	**9.45**	**290**	Pn	**Pn**	**19 43 53.7**	**-1.3**
PV11	**David Mesa, Pa**	**9.47**	**288**	Pn	**Pn**	**19 43 54.9**	**-0.3**
PV11				IAmb_Lg		19 46 45.8	
	comp=Z,131nm,1.3s						
PV16	**Nyswonger Mesa**	**9.50**	**288**	Pn	**Pn**	**19 43 56.4**	**+0.7**
PV04	**Paradox Valley**	**9.51**	**289**	Pn	**Pn**	**19 43 56.1**	**+0.3**
PV17	**East Wray Mesa**	**9.53**	**288**	Pn	**Pn**	**19 43 56.3**	**+0.2**
PV20	**West Nyswonger**	**9.55**	**289**	Pn	**Pn**	**19 43 57.2**	**+0.9**
PV19	**Morning Glory**	**9.55**	**288**	IAmb_Lg		19 46 52.3	
	comp=Z,77nm,1.3s						
I40A	**Norwalk**	**9.59**	**31**	IAmb_Lg		19 46 48.1	
	comp=Z,150nm,1.0s						
PV05	**Paradox Valley**	**9.60**	**287**	Pn	**Pn**	**19 43 58.4**	**+1.3**
PV23	**Carpenter Ridg**	**9.61**	**289**	Pn	**Pn**	**19 43 57.7**	**+0.6**
RWWY	**Rawlins**	**9.61**	**310**	Pn	**Pn**	**19 43 58.2**	**+1.1**
RWWY				IAmb_Lg		19 46 51.8	
	comp=Z,143nm,1.1s						
PV10	**Paradox Valley**	**9.61**	**289**	IAmb_Lg		19 47 05.2	
	comp=Z,68nm,1.2s						
RSSD	**Black Hills**	**9.69**	**331**	P	**Pn**	**19 43 58.6**	**+0.4**
	baz=146						
RSSD	**Black Hills**	**9.69**	**331**	Pn	**Pn**	**19 43 58.5**	**+0.2**
RSSD				IAmb_Lg		19 46 47.8	
	comp=Z,105nm,0.9s						
K22A	**Casper**	**9.79**	**317**	P	**Pn**	**19 43 59.7**	**+0.1**
	baz=131,SNR=7.7						
K22A	**Casper**	**9.79**	**317**		**Pn**	**19 43 59.6**	**+0.1**
BRAL	**Brewton**	**9.84**	**115**	IAmb_Lg		19 47 14.3	
	comp=Z,123nm,1.1s						
W50A	**Signal Mountai**	**9.90**	**90**	IAmb_Lg		19 46 57.0	
	comp=Z,105nm,0.9s						
SPMN	**Marine on St.**	**10.00**	**19**	Pn	**Pn**	**19 44 01.7**	**-0.6**
F33A	**5 Mile Ranch,**	**10.02**	**5**	Pn	**Pn**	**19 44 00.4**	**-2.2**
F36A	**Milaca**	**10.43**	**15**	Pn	**Pn**	**19 44 05.6**	**-2.5**
V51A	**Loudon**	**10.62**	**86**		**Pn**	**19 44 10.7**	**-0.1**
RDMU	**Red Mountain**	**10.65**	**300**	Pn	**Pn**	**19 44 10.4**	**-1.0**
TKL	**Tuckaleechee C**	**11.10**	**87**	Pn	**Pn**	**19 44 18.0**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=227,slow=9.6,SNR=6.1						
TKL				Lg	Lg	19 47 23.4	
	comp=Z,1.1nm,0.3s,baz=151,slow=16,SNR=6.0						
TKL				LR	LR	19 48 32.0	
	comp=Z,126nm,18.5s,baz=338,slow=37						
BW06	**Boulder Array**	**11.66**	**310**	P	**Pn**	**19 44 24.2**	**-1.0**
	baz=122						
BW06	**Boulder Array**	**11.66**	**310**	Pn	**Pn**	**19 44 23.8**	**-1.4**
PD31	**Pinedale Array**	**11.66**	**310**		**Pn**	**19 44 24.1**	**-1.1**
PDAR	**Pinedale Array**	**11.66**	**310**	Pn	**Pn**	**19 44 24.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=121,slow=15,SNR=13						
PDAR				Lg	Lg	19 47 47.3	
	comp=Z,1.6nm,0.3s,baz=98,slow=40,SNR=2.2						
ACSO	**Alum Creek Sta**	**12.20**	**65**	P	**Pn**	**19 44 31.4**	**-1.0**
	baz=253						
HWUT	**Hardware Ranch**	**12.44**	**302**		**Pn**	**19 44 36.9**	**+1.0**
AGMN	**Agassiz Nation**	**12.49**	**5**	Pn	**Pn**	**19 44 33.1**	**-3.2**
AHID	**Auburn Hatcher**	**12.63**	**307**	Pn	**Pn**	**19 44 38.1**	**-0.4**
LAO	**LASA Array**	**12.68**	**331**	P	**Pn**	**19 44 38.4**	**-0.6**
	baz=146						
LAO	**LASA Array**	**12.68**	**331**	Pn	**Pn**	**19 44 38.7**	**-0.3**
LOHW	**Long Hollow**	**12.76**	**311**		**Pn**	**19 44 41.0**	**+0.9**
RLMT	**Red Lodge**	**12.91**	**319**	P	**Pn**	**19 44 41.2**	**-1.1**
	baz=132						
RLMT	**Red Lodge**	**12.91**	**319**		**Pn**	**19 44 40.9**	**-1.4**
MOOW	**Moose Ponds**	**12.92**	**312**	Pn	**Pn**	**19 44 41.7**	**-0.6**
Q53A	**Leroy**	**13.01**	**72**	P	**Pn**	**19 44 42.2**	**-1.2**
	baz=261,SNR=5.1						
E43A	**Lone Tree Farm**	**13.12**	**34**	Pn	**Pn**	**19 44 44.5**	**-0.5**
YNE	**Yellowstone No**	**13.23**	**318**		**Pn**	**19 44 46.3**	**-0.5**
R55A	**Marlinton**	**14.04**	**75**	P	**Pn**	**19 44 56.6**	**-1.0**
	baz=265						
ULM	**Lac du Bonnet**	**14.44**	**4**	Pn	**Pn**	**19 44 58.3**	**-4.6**
	comp=Z,0.6nm,0.3s,baz=182,slow=11,SNR=7.0						
ULM				Sn	Sn	19 47 31.9	-11
	comp=Z,0.4nm,0.3s,baz=123,slow=13,SNR=3.3						
ULM				Lg	Lg	19 49 07.0	
	comp=Z,0.6nm,0.3s,baz=258,slow=12,SNR=3.5						
PFO	**Pinyon Flats O**	**15.81**	**267**	Pn	**Pn**	**19 45 21.6**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=71,slow=2.7,SNR=6.4						
SADO	**Sadowa**	**16.52**	**52**	Lg	Lg	19 50 14.1	
	comp=Z,0.9nm,0.3s,baz=341,slow=19,SNR=5.4						
NVAR	**Mina Array Bea**	**16.84**	**285**	Pn	**Pn**	**19 45 34.2**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=265,slow=39,SNR=3.4						
YBH	**Yreka Blue Hor**	**20.53**	**294**	P	**P**	**19 46 17.1**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=81,slow=6.1,SNR=10						
YKA	**Yellowknife Ar**	**28.74**	**343**	P	**P**	**19 47 36.0**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=141,slow=10.0,SNR=5.6						
ILAR	**Eielson Array**	**41.14**	**330**	P	**P**	**19 49 23.4**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=109,slow=6.9,SNR=11						
FINES	**FINESS Array B**	**72.79**	**25**	P	**P**	**19 53 08.2**	**+1.2**
	comp=Z,3.8nm,1.1s,baz=306,slow=6.6,SNR=3.8						
AKASG	**Malin Array Be**	**81.86**	**31**	P	**P**	**19 53 59.3**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=324,slow=4.6,SNR=2.7						

IDC ***07*** *19:46:03.6±4.8, 31°.36S×138°.96E, h0^{km}, mb1 3.0/3, mb1mx2.9/22, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=93.6km s-min=16.6km az=31.0*

AUST ***07*** *19:46:04.3±1.0, 31°.90S×138°.75E, h10^{km}, Error ellipse: s-maj=12.2km s-min=8.4km az=77.0*

ISC 07 19:46:02.6±0.9**, 31°.85S**±0°.05×**138°.84E**±0°.05**, h10^{km}, n10, σ2^{s}.66**/17**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	**Leigh Creek**	**1.49**	**339**	P	**Pg**	**19 46 31.9**	**+0.7**
	baz=1.5						
LCRK				S	**Sg**	**19 46 53.2**	**+2.6**
	baz=1.5						
HTT	**Hallett**	**1.58**	**178**	P	**Pn**	**19 46 30.7**	**0.0**
	baz=1.5						
HTT				S	**Sb**	**19 46 51.9**	**-0.2**
	baz=1.5						
STKA	**Stephens Creek**	**2.34**	**91**	P	**Pb**	**19 46 44.5**	**-0.4**
	baz=2.4						
STKA	**Stephens Creek**	**2.34**	**91**	Pn	**Pn**	**19 46 42.4**	**+1.2**
	0.5nm,0.3s,baz=275,slow=14,SNR=4.1						
STKA				Pg	**Pg**	**19 46 46.9**	**-0.6**
	1.4nm,0.3s,baz=272,slow=16,SNR=30						
STKA				Lg	Lg	19 47 16.2	
	2.5nm,0.3s,baz=184,slow=22,SNR=11						
BBOO	**Buckleboo**	**2.54**	**247**	P	**Pn**	**19 46 44.8**	**+0.9**
	baz=2.5						
BBOO				S	**Sn**	**19 47 16.5**	**+1.5**
	baz=2.5						
MULG	**Mulgathing**	**4.39**	**290**	P	**Pn**	**19 47 10.6**	**+1.3**
	baz=4.3						
MULG				S	**Sn**	**19 48 01.3**	**+0.8**
	baz=4.3						
INKA	**Innaminka**	**4.41**	**23**	P	**Pn**	**19 47 13.0**	**+3.4**
	baz=4.5						
OOD	**Oodnadatta**	**4.88**	**325**	P	**Pn**	**19 47 18.5**	**+2.5**
	baz=4.9						
OOD				S	**Sn**	**19 48 13.2**	**+0.7**
	baz=4.9						
ASAR	**Alice Springs**	**9.24**	**331**	Pn	**Pn**	**19 48 12.1**	**-3.9**
	0.0nm,0.3s,baz=149,slow=13,SNR=1.6						
ASAR				Sn	**Sn**	**19 49 53.3**	**-6.9**
	0.1nm,0.3s,baz=154,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**12.52**	**340**	Pn	**Pn**	**19 48 59.1**	**-1.8**
	0.1nm,0.3s,baz=156,slow=14,SNR=1.3						

IDC ***07*** *19:50:33.4±31.0, 28°.71N×72°.17E, h0^{km}, mb4.1/2, mb1 3.9/3, mb1mx3.3/34, mbtmp3.8/3, ML3.0/1, MS4.1/1, Ms1 4.1/1, ms1mx2.9/49, Error ellipse: s-maj=605.3km s-min=82.2km az=159.0*

DMN ***07*** *19:51:00.8±2.9, 34°.99N×64°.89E, h10^{km}, Mb3.9/2, Error ellipse: s-maj=294.7km s-min=52.2km az=31.0*

ISC 07 19:51:17.4±10.0**, 35°.5N**±0°.4×**6°7E**±°**, h10^{km}, n10, σ1^{s}.31**/7**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**16.06**	**112**	*e*P	**P**	**19 55 05.4**	**-1.7**
MKAR	**Makanchi Array**	**16.19**	**41**	P	**Pn**	**19 55 04.3**	**-0.6**
	0.1nm,0.3s,baz=201,slow=12,SNR=6.2						
KKN	**Kakani**	**17.50**	**111**	*e*P	**Pn**	**19 55 22.5**	**+0.7**
PKIN	**Phulchoki**	**17.70**	**111**	*e*P	**Pn**	**19 55 25.3**	**+1.0**
	4.5nm,0.3s						
PKI	**Pulchoki**	**17.71**	**111**	*e*P	**Pn**	**19 55 25.3**	**+0.8**
	8.7nm,0.5s						
GUN	**Gumba**	**17.90**	**110**	*e*P	**Pn**	**19 55 27.9**	**+1.1**
TAPN	**Taplejung**	**19.59**	**109**	*e*P	Pn	19 55 46.6	-0.7
BELG	**Belogornoye**	**21.69**	**327**	LR	LR	20 11 03.7	
	comp=Z,359nm,19.5s,baz=69,slow=41						
ZALV	**Zalesovo Beam**	**22.33**	**29**	P	**P**	**19 56 15.6**	**+0.6**
	0.6nm,0.4s,baz=210,slow=9.5,SNR=4.2						
ARCES	**ARCESS Array B**	**40.80**	**339**	P	P	19 59 19.3	+21
	5.0nm,1.1s,baz=108,slow=8.6,SNR=1.9						

IDC 07 20:32:31.1±1.1**, 49°.83S**×**122°.38E, h0^{km}, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/29**, mbtmp3.9**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/14**, Error ellipse: s-maj=74.5km s-min=24.4km az=100.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**27.63**	**23**	P	P	20 38 20.1	-0.2
	1.1nm,0.9s,baz=191,slow=9.6,SNR=4.6						
ASAR				LR	LR	20 48 55.7	
	comp=Z,73nm,19.2s,baz=190,slow=36						
VNDA	**Vanda**	**31.52**	**165**	LR	LR	20 50 28.5	
	comp=Z,43nm,18.1s,baz=323,slow=34						
QSPA	**South Pole Qui**	**40.30**	**180**	P	P	20 40 09.1	-0.6
	0.6nm,0.4s,baz=282,slow=2.5,SNR=3.7						
SNAA	**Sanae**	**52.80**	**199**	P	P	20 41 47.7	+0.2
	3.7nm,1.1s,baz=131,slow=6.3,SNR=5.7						
CMAR	**Chiang Mai Arr**	**71.08**	**336**	P	P	20 43 50.9	0.0
	0.7nm,0.9s,baz=186,slow=3.6,SNR=4.5						
YKA	**Yellowknife Ar**	**147.00**	**46**	PKPbc	PKPbc	20 52 13.9	-0.5
	0.5nm,1.0s,baz=291,slow=3.0,SNR=7.1						

BJI ***07*** *20:33:30.9±0.0, 56°.07N×114°.03E, h7^{km}, mB4.5/2, mb4.0/12, Ms4.4/1*

IDC ***07*** *20:33:30.8±1.1, 56°.06N×113°.91E, h0^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.6/44, mbtmp3.8/11, ML3.3/4, MS3.3/9, Ms1 3.3/9, ms1mx3.1/40, Error ellipse: s-maj=24.8km s-min=16.9km az=157.0*

MOS ***07*** *20:33:30.1±1.1, 56°.06N×113°.75E, h5^{km}, mb4.1/5, Error ellipse: s-maj=10.0km s-min=6.4km az=70.1*

MOS Felt (III-IV) at Severomuysk.

BYKL ***07*** *20:33:31.8±0.1, 56°.11N×113°.75E, h4^{km}±2^{km}, Mw4.2/8(IEC), #STATIONS MA2 PET MAJO INCN XAN KMI WMQ ARU FELT I=III-IV MSK at Severomuisk*

ISC 07 20:33:32.5±0.5**, 56°.18N**±0°.02×**113°.82E**±0°.02**, h10^{km}, n83, σ2^{s}.68**/137**, mb4.2**/11**, MS3.2**/5**, 12C-14D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.15**	**248**	⇑*i*Pg	**Pg**	**20 33 33.6**	**-2.4**
SVKR				*e*Sg	**Sg**	**20 33 35.7**	**-2.7**
SVKR	**Severomuysk**	**0.15**	**248**	⇑*i*PG	**Pg**	**20 33 33.6**	**-2.4**
SVKR				*e*S	**Sg**	**20 33 35.4**	**-3.0**
UKT	**Uakit**	**0.70**	**189**	⇑*i*Pg	**Pg**	**20 33 42.7**	**-3.3**
UKT				Pmax		20 33 43.1	
	428nm,0.6s						
UKT				*e*Sg	**Sg**	**20 33 51.4**	**-3.7**
UKT				Smax		20 33 56.4	
	4µm,0.6s						
UKT	**Uakit**	**0.70**	**189**	⇑*i*PG	**Pg**	**20 33 42.9**	**-3.1**
UKT				*e*S	**Sg**	**20 33 51.7**	**-3.4**
NLYR	**Nelyaty**	**1.10**	**72**	⇓*i*Pg	**Pb**	**20 33 52.5**	**-1.1**
NLYR				*e*Pb	**Pn**	**20 33 54.8**	**+0.8**
NLYR				max		20 33 55.2	
	1µm,0.2s						
NLYR				*e*Sg	**Sg**	**20 34 07.9**	**0.0**
NLYR				*e*		20 34 12.8	
NLYR				max		20 34 16.4	
	3µm,0.9s						
NLYR	**Nelyaty**	**1.10**	**72**	*e*PG	**Pb**	**20 33 52.5**	**-1.1**
NLYR				*e*		20 34 08.7	
NLYR				pmax	pmax		
	comp=Z,1µm,0.8s						
NLYR				smax	smax		
	comp=E,3µm,1.1s						
YOA	**Uoyan**	**1.17**	**269**	*e*Pg	**Pb**	**20 33 52.3**	**-2.5**
YOA				Pmax		20 33 54.7	
	comp=E,1µm,0.3s						
YOA				*e*Sg	**Sb**	**20 34 07.8**	**-2.2**
YOA				*e*		20 34 13.6	
YOA				max		20 34 16.0	
	comp=E,9µm,0.6s						
YOA	**Uoyan**	**1.17**	**269**	⇑*i*PG	**Pb**	**20 33 52.6**	**-2.2**
YOA				*e*		20 34 07.7	
YOA				pmax	pmax		
	comp=Z,1µm,0.3s						
YOA				smax	smax		
	comp=N,9µm,0.6s						
KMO	**Kumora**	**1.50**	**260**	⇓*i*Pg	**Pn**	**20 33 57.7**	**-1.7**
KMO				*e*		20 34 00.0	
KMO				max		20 34 01.0	
	comp=N,1µm,0.4s						
KMO				*e*Sg	**Sn**	**20 34 17.2**	**-1.8**
KMO				Smax		20 34 21.5	
	comp=N,7µm,0.8s						
KMO	**Kumora**	**1.50**	**260**	⇓*i*PG	**Pn**	**20 33 57.7**	**-1.7**
KMO				*e*		20 34 16.6	
KMO				pmax	pmax		
	comp=Z,214nm,0.3s						
KMO				smax	smax		
	comp=N,7µm,0.8s						
BOD	**Bodaibo**	**1.65**	**4**	*e*Pg	**Pn**	**20 34 02.5**	**+1.0**
BOD				Pmax		20 34 05.7	
	comp=N,696nm,0.7s						
BOD				*e*Sg	**Sb**	**20 34 24.8**	**+0.9**
BOD				Smax		20 34 27.4	
	comp=N,3µm,1.6s						
BOD	**Bodaibo**	**1.65**	**4**	⇑*i*PN	**Pn**	**20 34 02.5**	**+1.0**
BOD				*e*		20 34 24.3	
BOD				pmax	pmax		
	comp=Z,691nm,0.8s						
BOD				smax	smax		
	comp=E,2µm,0.7s						
YLYR	**Ulyunkhan**	**1.99**	**230**	⇓*i*Pn	**Pn**	**20 34 06.1**	**-0.2**
YLYR				*e*Pg	**Pb**	**20 34 06.8**	**-2.0**
YLYR				Pmax		20 34 09.9	
	comp=E,364nm,0.4s						
YLYR				*e*Sg	**Sb**	**20 34 31.9**	**-1.8**
YLYR				Smax		20 34 34.2	
	comp=E,6µm,0.3s						
NIZ	**Nizh Angarsk**	**2.44**	**262**	*e*Pn	**Pn**	**20 34 12.6**	**+0.3**
NIZ				*e*Pg	**Pb**	**20 34 15.7**	**-0.7**
NIZ				Pmax		20 34 29.2	
	comp=E,211nm,0.7s						
NIZ				*e*Sn	**Sn**	**20 34 41.3**	**-0.8**
NIZ				*e*Sg	**Sb**	**20 34 46.6**	**+0.2**
NIZ				Smax		20 34 48.8	
	comp=E,3µm,0.8s						
CRS	**Chara**	**2.57**	**72**	⇓*i*Pn	**Pn**	**20 34 15.5**	**+1.2**
CRS				*e*Pg	**Pb**	**20 34 19.8**	**+1.1**
CRS				Pmax		20 34 21.3	
	comp=E,992nm,0.7s						
CRS				*e*Sn	**Sn**	**20 34 47.7**	**+2.1**
CRS				*e*Sg	**Sg**	**20 34 54.0**	**-1.1**
CRS				Smax		20 34 56.7	
	comp=E,589nm,0.9s						
CRS	**Chara**	**2.57**	**72**	⇓*i*PN	**Pn**	**20 34 15.4**	**+1.2**
CRS				*i*		20 34 19.4	
CRS				*e*		20 34 53.6	
CRS				pmax	pmax		
	comp=Z,739nm,0.8s						
CRS				smax	smax		
	comp=E,945nm,1.3s						

VTMR	Vitim	3.34	349	ePn	Pn	20 34 25.6	+0.8
VTMR				ePg	Pb	20 34 33.1	+1.3
VTMR				eSn	Sn	20 35 05.0	+0.5
VTMR				eSg	Sb	20 35 16.8	+4.3
SYVR	Suvo	3.35	223	⇑iPn	Pn	20 34 24.2	-0.7
SYVR				ePg	Pb	20 34 30.6	-1.3
SYVR				ePgPg	Pg	20 34 34.8	-1.8
SYVR				max		20 34 35.2	
	comp=E,352nm,1.0s						
SYVR				e		20 34 37.1	
SYVR				eSn	Sn	20 35 03.0	-1.7
SYVR				eSg	Sb	20 35 13.3	+0.6
SYVR				eSgSg	Sg	20 35 19.9	-0.1
SYVR				max		20 35 25.0	
	comp=E,2µm,1.3s						
SYVR	Suvo	3.35	223	ePN	Pn	20 34 24.1	-0.8
SYVR				e		20 34 30.3	
SYVR				e		20 35 12.8	
SYVR				pmax	pmax		
	comp=Z,356nm,1.0s						
SYVR				smax	smax		
	comp=N,2µm,0.8s						
TUP	Tupik	3.92	114	⇓iPn	Pn	20 34 32.7	-0.1
TUP				ePg	Pb	20 34 43.1	+1.4
TUP				Pmax		20 34 49.4	
	comp=N,117nm,0.7s						
TUP				eSn	Sn	20 35 18.3	-0.6
TUP				eSg	Sg	20 35 34.3	-4.1
TUP				Smax		20 35 39.0	
	comp=N,1µm,1.1s						
TUP	Tupik	3.92	114	ePN	Pn	20 34 32.9	+0.1
TUP				e		20 34 42.8	
TUP				eS	Sn	20 35 18.7	-0.2
TUP				e		20 35 34.4	
TUP				pmax	pmax		
	comp=Z,117nm,0.7s						
TUP				smax	smax		
	comp=N,1µm,1.1s						
MXMB	Maximikha	4.14	227	ePn	Pn	20 34 35.8	0.0
MXMB				ePg	Pb	20 34 45.6	+0.2
MXMB				eSn	Sn	20 35 21.6	-2.6
MXMB				eSg	Sb	20 35 38.0	+2.5
CIT	Chita	4.17	182	ePg	Pb	20 34 45.8	-0.1
CIT				Pmax		20 34 46.9	
	comp=N,166nm,0.3s						
CIT				eSg	Sb	20 35 38.2	+2.0
CIT				Smax		20 35 54.8	
	comp=N,1µm,1.1s						
CIT	Chita	4.17	182	ePN	Pn	20 34 32.5	-3.6
CIT				e		20 34 44.6	
CIT				eS	Sn	20 35 20.7	-4.2
CIT				e		20 35 36.9	
CIT				pmax	pmax		
	comp=Z,196nm,1.0s						
CIT				smax	smax		
	comp=E,2µm,1.7s						
YKLR	Yuktali	4.38	81	ePn	Pn	20 34 39.5	+0.5
YKLR				ePg	Pb	20 34 50.8	+1.3
YKLR				eSn	Sn	20 35 30.0	0.0
YKLR				eSg	Sg	20 35 48.8	-4.2
OGRR	Ongureny	4.39	237	ePn	Pn	20 34 39.6	+0.3
OGRR				ePg	Pb	20 34 49.8	0.0
OGRR				e		20 34 51.8	
OGRR				max		20 34 52.9	
	comp=E,171nm,1.3s						
OGRR				eSn	Sn	20 35 27.4	-3.1
OGRR				eSg	Sb	20 35 45.5	+2.7
OGRR				Smax		20 35 50.0	
	comp=E,439nm,0.4s						
OGRR	Ongureny	4.39	237	ePN	Pn	20 34 39.6	+0.3
OGRR				e		20 34 50.6	
OGRR				e		20 35 45.1	
OGRR				pmax	pmax		
	comp=Z,171nm,1.2s						
OGRR				smax	smax		
	comp=N,618nm,1.5s						
ZRHB	Zarechye	5.32	230	ePg	Pb	20 35 06.9	+1.4
ZRHB				Pmax		20 35 11.6	
	comp=N,184nm,1.3s						
ZRHB				eSg	Sb	20 36 14.3	+4.9
ZRHB				Smax		20 36 36.6	
	comp=N,3µm,1.3s						
TRG	Tyrgan	5.54	235	ePn	Pn	20 34 54.7	-0.3
TRG				e		20 35 05.1	
TRG				ePg	Pb	20 35 10.0	+0.8
TRG				Pmax		20 35 17.0	
	comp=N,77nm,1.5s						
TRG				eSn	Sn	20 35 54.7	-3.9
TRG				eSg	Sb	20 36 19.9	+4.3
TRG				Smax		20 36 35.2	
	comp=N,354nm,1.2s						
TRG	Tyrgan	5.54	235	ePN	Pn	20 34 51.3	-3.7
TRG				e		20 35 07.5	
TRG				eS	Sn	20 35 52.2	-6.4
TRG				e		20 36 18.7	
TRG				pmax	pmax		
	comp=Z,77nm,1.6s						
TRG				smax	smax		
	comp=E,351nm,1.0s						
FFNB	Fofonovo	5.86	228	ePn	Pn	20 34 58.5	-0.8
FFNB				ePg	Pb	20 35 15.4	+0.8
FFNB				eSg	Sb	20 36 29.8	+5.0
KAB	Kabansk	5.90	229	e	Pb	20 35 18.8	+3.4
KAB				max		20 35 32.8	
	comp=E,201nm,1.1s						
KAB				eSg	Sb	20 36 31.8	+5.8
KAB				Smax		20 37 05.1	
	comp=E,2µm,1.1s						
HRMR	Khuramsha	6.10	225	ePn	Pn	20 35 01.9	-0.7
HRMR				ePg	Pb	20 35 20.4	+1.7
HRMR				Pmax		20 35 23.7	
	comp=E,123nm,0.6s						
HRMR				eSn	Sn	20 36 08.2	-4.2
HRMR				eSg	Sb	20 36 38.8	+7.1
HRMR				Smax		20 36 52.4	
	comp=E,2µm,0.7s						
IENR	Iengra	6.17	85	eSg	Sg	20 36 43.6	-6.6
BGT	Bolshoye Golou	6.45	234	ePn	Pn	20 35 07.5	+0.1
BGT				ePg	Pb	20 35 26.6	+1.9
BGT				Pmax		20 35 28.7	
	comp=E,28nm,0.9s						
BGT				eSg	Sb	20 36 49.0	+7.3
BGT				Smax		20 37 02.5	
	comp=E,345nm,0.9s						
KPC	Khapcheranga	6.54	188	ePn	Pn	20 35 07.3	-1.5
KPC				ePg	Pb	20 35 28.6	+2.3
KPC				Pmax		20 35 36.0	
	comp=E,24nm,0.8s						
KPC				eSn	Sn	20 36 18.9	-4.5
KPC				eSg	Sb	20 36 51.9	+7.4
KPC				e		20 37 07.1	
KPC				max		20 37 09.5	
	comp=E,855nm,1.3s						
KPC	Khapcheranga	6.54	188	ePN	Pn	20 35 06.6	-2.2
KPC				e		20 35 27.9	
KPC				e		20 36 51.8	
KPC				pmax	pmax		
	comp=Z,33nm,0.5s						
KPC				smax	smax		
	comp=E,856nm,1.6s						
LSTR	Listvyanka	6.83	235	e	Pb	20 35 26.3	-4.8
LSTR				max		20 35 34.7	
	comp=E,29nm,1.4s						
LSTR				eSg	Sb	20 37 00.3	+7.7
LSTR				Smax		20 37 08.7	
	comp=E,355nm,1.4s						
IRK	Irkutsk	6.84	239	ePG	Pb	20 35 32.7	+1.3
IRK				e		20 36 58.6	
IRK				pmax	pmax		
	comp=Z,47nm,0.1s						
IRK				smax	smax		
	comp=E,513nm,0.7s						
TLY	Talaya	7.50	237	ePn	Pn	20 35 21.1	-0.8
TLY				ePg	Pb	20 35 46.5	+3.9
TLY				Pmax		20 35 50.9	
	comp=E,19nm,1.0s						
TLY				e		20 36 51.7	
TLY				e		20 37 16.2	
TLY				eSg	Sb	20 37 21.6	+10
TLY				Smax		20 37 39.8	
	comp=E,181nm,1.1s						
TLY	Talaya	7.50	237	ePG	Pb	20 35 46.5	+3.9
TLY				e		20 37 19.2	
TLY				pmax	pmax		
	comp=Z,22nm,0.5s						
ARS	Arshan	7.94	242	ePn	Pn	20 35 27.8	-0.2
ARS				ePg	Pb	20 35 53.5	+3.3
ARS				Pmax		20 35 55.1	
	comp=Z,29nm,0.9s						
ARS				e		20 37 29.9	
ARS				eSg	Sb	20 37 34.2	+9.5
ARS				Smax		20 37 38.6	
	comp=Z,620nm,0.8s						
ARS	Arshan	7.94	242	ePN	Pn	20 35 28.5	+0.5
ARS				e		20 35 51.6	
ARS				e		20 37 32.6	
ARS				pmax	pmax		
	comp=Z,29nm,0.8s						
ARS				smax	smax		
	comp=E,618nm,0.8s						
ZEA	Zeya	8.11	102	ePN	Pn	20 35 35.0	+4.8
ZEA				e		20 35 58.5	
ZEA				eS	Sn	20 37 06.9	+5.1
ZEA				e		20 37 46.9	
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				smax	smax		
	comp=E,70nm,0.9s						
ZEA				smax	smax		
	comp=N,170nm,1.0s						
ZEA				smax	smax		
	comp=Z,60nm,1.0s						
ZAK	Zakamensk	8.57	232	ePn	Pn	20 35 37.6	+1.0
ZAK				ePg	Pg	20 36 06.3	-10
ZAK				Pmax		20 36 17.3	
	comp=Z,15nm,1.0s						
ZAK				eSg	Sg	20 37 55.2	-12
ZAK				Smax		20 38 14.1	
	comp=Z,280nm,1.4s						
ZAK	Zakamensk	8.57	232	ePN	Pn	20 35 39.3	+2.7
ZAK				e		20 37 57.1	
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
ZAK				smax	smax		
	comp=N,281nm,1.3s						
MOY	Mondy	8.81	245	ePn	Pn	20 35 40.6	+0.7
MOY				e		20 35 52.9	
MOY				max		20 35 53.6	
	comp=N,51nm,1.0s						
MOY				eSn	Sn	20 37 13.8	-5.4
MOY				eSg	Sg	20 38 02.1	-13
MOY				Smax		20 38 25.9	
	comp=N,373nm,1.9s						
MOY	Mondy	8.81	245	ePN	Pn	20 35 40.0	+0.1
MOY				e		20 36 10.0	
MOY				e		20 38 01.9	
MOY				pmax	pmax		
	comp=Z,42nm,1.4s						
MOY				smax	smax		
	comp=N,372nm,1.6s						
ORL	Orlik	8.95	252	ePn	Pn	20 35 42.1	+0.3
ORL				e		20 35 50.2	
ORL				ePg	Pg	20 36 12.4	-11
ORL				Pmax		20 36 31.4	
	comp=N,31nm,1.3s						
ORL				eSn	Sn	20 37 16.9	-5.8
ORL				eSg	Sg	20 38 05.8	-14
ORL				Smax		20 38 33.4	
	comp=N,158nm,2.0s						
ORL	Orlik	8.95	252	ePN	Pn	20 35 41.7	-0.1
ORL				e		20 36 12.4	
ORL				eS	Sn	20 37 18.3	-4.4
ORL				e		20 38 05.5	
ORL				pmax	pmax		
	comp=Z,35nm,1.0s						
ORL				smax	smax		
	comp=E,135nm,1.7s						
ULN	Ulaanbaatar	9.30	209	⇓eP	Pn	20 35 46.1	-0.6
SONM	Songino Array	9.52	212	Pn	Pn	20 35 48.9	-0.8
	comp=E,0.2nm,0.3s,baz=25,slow=13,SNR=7.6						
SONM				Lg	Lg	20 38 27.8	
	comp=E,7.2nm,0.3s,baz=24,slow=30,SNR=14						
YAK	Yakutsk	10.03	48	Lg	Lg	20 38 44.8	
	comp=E,0.1nm,0.3s,baz=150,slow=23,SNR=7.8						
YAK				LR	LR	20 39 49.9	
	comp=E,171nm,18.4s,baz=270,slow=38						
YAK	Yakutsk	10.03	48	⇓eP	Pn	20 35 59.4	+2.9
YAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KLR	Kul'dur	12.88	115	Pn	Pn	20 36 35.1	-0.4
	comp=Z,0.2nm,0.3s,baz=303,slow=12,SNR=8.5						
KLR				Lg	Lg	20 40 15.7	
	comp=Z,0.2nm,0.3s,baz=36,slow=22,SNR=6.6						
KLR				LR	LR	20 41 22.7	
	comp=Z,32nm,19.8s,baz=320,slow=37						
KLR	Kul'dur	12.88	115	⇑eP	Pn	20 36 38.3	+2.8
KLR				pmax	pmax		
	comp=Z,22nm,2.8s						
KLR				MLR	MLR		
	comp=Z,81nm,9.0s						
USRK	Ussuriysk Ar.	16.64	128	Lg	Lg	20 42 14.6	
	baz=346,slow=32,SNR=4.9						
ZALV	Zalesovo Beam	16.70	274	Pn	Pn	20 37 26.0	-0.4
	comp=Z,0.1nm,0.3s,baz=70,slow=13,SNR=5.1						
ZALV				Lg	Lg	20 42 17.6	
	comp=Z,0.1nm,0.3s,baz=86,slow=26,SNR=6.7						
TIXI	Tiksi	16.79	17	⇓eP	Pn	20 37 24.3	-3.0
DGZ	Jazzator, Alta	17.10	259	⇑eP	Pn	20 37 30.5	-1.1
NRIK	Noril'sk	17.63	329	P	Pn	20 37 37.7	-0.2
	comp=Z,1.0nm,0.3s,baz=57,slow=5.6,SNR=5.9						
NRIK				LR	LR	20 44 53.7	
	comp=Z,244nm,18.1s,baz=149,slow=38						
GTA	Gaotai	19.16	215	eP	P	20 37 55.9	-0.2
GTA				pP	sP	20 38 00.3	-0.4
GTA				sP	pP	20 38 03.6	+4.4
MA2	Magadan	19.77	65	LR	LR	20 45 57.2	
	comp=Z,88nm,19.4s,baz=281,slow=38						
SEY	Seymchan	20.41	55	P	P	20 38 08.6	-0.7
	comp=Z,1.2nm,0.9s,baz=228,slow=12,SNR=2.7						
SEY	Seymchan	20.41	55	⇓eP	P	20 38 10.4	+1.1
KSRS	Korea Array	20.99	147	LR	LR	20 47 09.0	
	comp=Z,104nm,18.4s,baz=345,slow=39						
LZH	Lanzhou	21.20	203	eP	P	20 38 20.4	+2.1
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	Kurchatov	21.49	270	c iP	P	20 38 22.3	+1.2
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK31	Makanchi Array	21.58	258	⇓eP	P	20 38 22.9	+0.7
MKAR	Makanchi Array	21.58	258	P	P	20 38 21.9	-0.2
	comp=Z,2.6nm,0.8s,baz=59,slow=10.0,SNR=13						
MKAR				LR	LR	20 47 01.3	
	comp=Z,137nm,20.4s,baz=33,slow=38						
MKAR	Makanchi Array	21.58	258	c eP	P	20 38 23.3	+1.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	21.59	270	P	P	20 38 22.7	+0.6
	comp=Z,11nm,1.0s,baz=64,slow=11,SNR=14						
BRVK	Borovoye	25.08	281	⇓eP	P	20 38 57.4	+0.5
BRVK				pmax	pmax		
	comp=Z,15nm,2.9s						
MJAR	Matsushiro Arr	25.63	130	LR	LR	20 49 00.6	
	comp=Z,44nm,18.8s,baz=125,slow=36						
AAK	Ala-Archa	28.51	258	⇓eP	P	20 39 26.2	-1.8
AAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BELG	Belogornoye	37.49	293	⇑eP	P	20 40 44.7	-1.2
BELG				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ARCES	ARCESS Array B	38.57	326	LR	LR	21 00 14.9	
	comp=Z,29nm,18.1s,baz=285,slow=42						
CMAR	Chiang Mai Arr	39.29	203	LR	LR	20 56 20.9	
	comp=Z,40nm,18.2s,baz=145,slow=35						
FINES	FINESS Array B	42.47	315	P	P	20 41 28.9	+1.8
	comp=Z,4.5nm,0.8s,baz=175,slow=11,SNR=5.6						
ILAR	Eielson Array	44.74	37	P	P	20 41 46.0	+0.6
	comp=Z,1.2nm,1.1s,baz=288,slow=7.1,SNR=5.4						
YKA	Yellowknife Ar	55.81	25	P	P	20 43 08.8	-0.5
	comp=Z,0.5nm,0.7s,baz=333,slow=6.9,SNR=6.5						
YKA	Yellowknife Ar	55.81	25	i P	P	20 43 10.1	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	Sonseca Array	70.97	314	P	P	20 44 50.5	+0.4
	comp=Z,0.5nm,0.8s,baz=29,slow=7.3,SNR=3.3						

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*JMA **07** 20:51:26.1±0.5, 44°.78N×149°.76E, h30^{km}, M4.3*
*MOS **07** 20:51:28.8±0.8, 44°.71N×149°.40E, h55^{km}, mb3.9/7, Error*
ellipse: s-maj=14.2km s-min=11.6km az=166.7
*SKHL **07** 20:51:28.7±0.7, 44°.71N×149°.53E, h65^{km}±5^{km}, mb4.8/3*
*NEIC **07** 20:51:30.5±1.8, 44°.7N±0°.1×149°.5E±0°.2, h62^{km}±9^{km}, mb4.2/1, Error ellipse: s-maj=21.3km s-min=17.4km az=157.0*
*IDC **07** 20:51:35.9±2.8, 44°.81N×149°.40E, h105^{km}±25^{km}, mb3.4/12, mb1 3.6/15, mb1mx3.4/36, mbtmp3.8/15, Error ellipse: s-maj=23.1km s-min=17.2km az=140.0*
ISC 07 20:51:28.2±2.3**, 44°.57N**±0°.07**×149°.6E**±0°.1**, h43^{km}**±20^{km}**, n69, σ1^s.63**/75**, mb3.9**/14**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.41	299	i P	Pn	20 51 49.7	-1.6
KUR				AMB	AMB	20 51 50.0	
	350nm,0.4s						
KUR				eS	Sn	20 52 04.9	-3.7
KUR				A	A	20 52 10.0	
	510nm,0.4s						
KUR				A	A	20 52 10.0	
	440nm,0.4s						
KUR	Kuril'sk	1.41	299	d iPN	Pn	20 51 49.7	-1.6
YUK	Yuzh-Kuril'sk	2.75	260	eP	Pn	20 52 09.7	+0.1
YUK				AMB	AMB	20 52 13.0	
	110nm,0.3s						
YUK				eS	Sn	20 52 41.0	-0.6
YUK				A	A	20 52 51.0	
	330nm,0.6s						
YUK				A	A	20 52 51.0	
	550nm,0.6s						
YUK	Yuzh-Kuril'sk	2.75	260	ePN	Pn	20 52 09.7	+0.1
YUK				eS	Sn	20 52 42.3	+0.7
YUK				pmax	pmax		
	comp=Z,223nm,0.2s						
YUK				pmax	pmax		
	comp=N,57nm,0.1s						
YUK				pmax	pmax		
	comp=E,61nm,0.2s						
YUK				smax	smax		
	comp=N,244nm,0.3s						
YUK				smax	smax		
	comp=E,504nm,0.5s						
GRPR	Tuman	2.82	260	eP	Pn	20 52 10.0	-0.6
GRPR				AMB	AMB	20 52 19.0	
	comp=E,178nm,0.4s						
GRPR				eS	Sn	20 52 44.0	+0.6
GRPR				A	A	20 52 49.0	
	comp=E,294nm,0.4s						
GRPR				A	A	20 52 49.0	
	comp=E,363nm,0.4s						
GRPR	Tuman	2.82	260	ePN	Pn	20 52 10.8	+0.2
GRPR				eS	Sn	20 52 44.5	+1.1
GRPR				pmax	pmax		
	comp=Z,178nm,0.4s						
GRPR				pmax	pmax		
	comp=N,102nm,0.2s						
GRPR				pmax	pmax		
	comp=E,163nm,0.2s						
GRPR				smax	smax		
	comp=N,294nm,0.4s						
GRPR				smax	smax		
	comp=E,363nm,0.4s						
NEM2	Nemuro 2	3.04	248	P	Pn	20 52 13.5	-0.2
NEM2				eS	Sn	20 52 48.9	0.0
NMR	Nemuro--Hokkai	3.05	248	i P	Pn	20 52 13.0	-0.8
NMR				eS	Sn	20 52 50.0	+0.9
NMR	Nemuro--Hokkai	3.05	248	⇑iPN	Pn	20 52 13.4	-0.4
NMR				eS	Sn	20 52 50.0	+0.9
RUSJ	Misakicho	3.17	263	ePN	Pn	20 52 16.7	+1.3
RUSJ				eS	Sn	20 52 53.6	+1.7
JNK	Nakash	3.66	256	P	Pn	20 52 23.1	+0.9
JAK	Akkeshi	3.89	248	P	Pn	20 52 25.3	-0.1
JAK				eS	Sn	20 53 08.7	-1.1
JTKR	Abashiri--Toko	4.14	264	P	Pn	20 52 30.6	+1.8
JAR	Ashorobuto	4.41	255	P	Pn	20 52 33.9	+1.4
JAR				eS	Sn	20 53 24.6	+2.1
JOB	Onbets	4.51	250	P	Pn	20 52 34.5	+0.7
JCH	Churui	4.94	249	P	Pn	20 52 40.3	+0.5
JKK2	Kamakawa 2	4.98	264	P	Pn	20 52 43.1	+2.7
JKA	Kamikawa-asahi	5.05	267		Pn	20 52 44.6	+3.3
ASAJ	Asahikawa	5.05	267	P	Pn	20 52 49.0	+7.7
	comp=E,2.3nm,0.3s,baz=231,slow=24,SNR=1.9						
ASAJ	Asahikawa	5.05	267	P	Pn	20 52 44.6	+3.3
JFR	Furan	5.27	257	P	Pn	20 52 47.4	+3.1
ERM	Erimo	5.36	244	⇓ePN	Pn	20 52 47.9	+2.4
ERM	Erimo	5.36	244	Pn	Pn	20 52 47.2	+1.7
JEM	Erimo	5.36	244	Pn	Pn	20 52 43.2	-2.3
JNBK	Urakawa-nobuka	5.50	248	P	Pn	20 52 47.6	+0.2
JNBK				eS	Sn	20 53 48.3	-1.0
JBT2	Biratori 2	5.55	254	P	Pn	20 52 49.5	+1.3
JEW	Eniwo	6.16	257	Pn	Pn	20 52 59.5	+2.9
JNB	Noboribetsu	6.58	254	P	Pn	20 53 03.3	+1.0
JNB				eS	Sn	20 54 16.6	+0.7
JKB	Kayabe	6.82	250	P	Pn	20 53 05.6	+0.1
JYM2	Yakumo 2	7.17	253	P	Pn	20 53 11.4	+1.0
JTM	Tenmabayashi	7.34	242	P	Pn	20 53 12.4	-0.3
JTM				eS	Sn	20 54 29.8	-4.9
JTM	Tenmabayashi	7.34	242	Pn	Pn	20 53 11.6	-1.1
OFUJ	Ofunato	8.07	230	P	Pn	20 53 22.5	-0.3
JRG	Rokugo	8.45	235	eS	Sn	20 54 57.6	-4.3
JIO	Ouri	8.70	228	P	Pn	20 53 30.5	-0.9
JIO				eS	Sn	20 55 00.8	-7.3
JMM	Marumori	9.43	228	Pn	Pn	20 53 38.0	-3.3
PETK	Petropavlovsk-	10.06	29	P	Pn	20 53 55.5	+5.5
	comp=E,0.8nm,0.3s,baz=220,slow=8.7,SNR=2.3						
MJB9	Matsu-Tunnel	11.80	231		Pn	20 54 15.2	+1.3
USRK	Ussuriysk Ar.	12.62	275	P	Pn	20 54 27.4	+2.5
	baz=79,slow=13,SNR=5.1						
YAK	Yakutsk	21.00	333	P	P	20 56 07.0	-0.7
	comp=E,1.7nm,0.3s,baz=131,slow=1.0,SNR=2.8						
YAK	Yakutsk	21.00	333	eP	P	20 56 07.0	-0.7
YAK	Yakutsk	21.00	333	P	P	20 56 07.0	-0.7
H11N2	WAKE ISLAND Hy	28.64	144	T	T	21 28 03.6	
	baz=334,slow=76,SNR=71						
H11N1	WAKE ISLAND Hy	28.66	144	T	T	21 28 18.3	
	baz=334,slow=76,SNR=57						
H11N3	WAKE ISLAND Hy	28.66	144	T	T	21 28 18.6	
	baz=334,slow=76,SNR=63						
H11S1	WAKE ISLAND Hy	29.66	146	T	T	21 29 30.3	
	baz=335,slow=76,SNR=90						
H11S3	WAKE ISLAND Hy	29.67	146	T	T	21 29 40.5	
	baz=335,slow=76,SNR=75						
H11S2	WAKE ISLAND Hy	29.68	146	T	T	21 29 28.3	
	baz=335,slow=76,SNR=81						
SONM	Songino Array	29.80	292	P	P	20 57 31.0	+0.1
	comp=E,0.2nm,0.4s,baz=89,slow=7.8,SNR=2.3						
ILAR	Eielson Array	39.77	37	P	P	20 58 56.2	-0.2
	comp=E,0.6nm,0.9s,baz=268,slow=6.8,SNR=4.5						
ILAR	Eielson Array	39.77	37	eP	P	20 58 57.6	+1.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	45.77	298	P	P	20 59 45.1	-0.2
	comp=Z,0.9nm,0.6s,baz=71,slow=7.4,SNR=11						
MKAR				PcP	PcP	21 01 21.4	-0.9
	comp=Z,0.2nm,0.6s,baz=58,slow=3.7,SNR=2.4						
KURK	Kurchatov	46.54	304	eP	P	20 59 51.1	-0.1
KURK	Kurchatov	46.54	304	⇑eP	P	20 59 51.1	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
YKA	Yellowknife Ar	54.13	35	P	P	21 00 49.4	+1.1
	comp=Z,0.3nm,0.7s,baz=301,slow=6.4,SNR=4.9						
YKA	Yellowknife Ar	54.13	35	eP	P	21 00 50.9	+2.5
ABKAR	Akbulak array	57.92	309	P	P	21 01 14.6	-1.1
ABKAR				IAmb	IAmb	21 01 15.9	
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	65.70	196	P	P	21 02 09.8	+1.7
	comp=Z,0.4nm,0.7s,baz=13,slow=6.3,SNR=1.3						
PDAR	Pinedale Array	68.02	51	P	P	21 02 24.3	+1.1
	comp=Z,0.4nm,0.3s,baz=268,slow=4.5,SNR=2.0						
ASAR	Alice Springs	69.41	195	P	P	21 02 33.8	+2.2
	comp=Z,0.4nm,0.6s,baz=15,slow=6.7,SNR=4.3						
NB2	NORSAR Subarra	69.46	340	P	P	21 02 30.6	-1.0
	comp=Z,0.0nm,0.2s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.46	340	P	P	21 02 30.4	-1.2
	comp=Z,1.1nm,0.9s,baz=30,slow=6.6,SNR=4.7						
KBZ	Khabaz	70.57	313	P	P	21 02 37.7	-0.8
	comp=Z,2.4nm,0.9s,baz=166,slow=14,SNR=1.5						
AKASG	Malin Array Be	71.95	325	P	P	21 02 46.0	-0.9
	comp=Z,0.7nm,0.3s,baz=39,slow=6.2,SNR=7.4						
AKASG	Malin Array Be	71.95	325	eP	P	21 02 46.4	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CLL	Collm	77.39	334	eP	P	21 03 17.0	-1.3
CLL	Collm	77.39	334	eP	P	21 03 17.0	-1.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	Keskin Array B	78.24	315	*i* P	P	21 03 23.5	0.0
GERES	GERESS Array B	79.29	332	P	P	21 03 28.4	-0.6
	comp=Z,0.3nm,0.5s,baz=50,slow=7.9,SNR=2.4						

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*IDC **07** 21:19:51.7±1.4, 13°.21N×86°.65W, h0^{km}, mb3.4/4, mb1 3.9/5, mb1mx3.6/39, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=117.2km s-min=17.1km az=59.0*
*INET **07** 21:19:52.7, 12°.08N×87°.72W, h12^{km}, MW3.5*
*SNET **07** 21:19:53.2±1.0, 12°.19N×87°.90W, h6^{km}±9^{km}, ML3.5*
ISC 07 21:19:51.2±1.2, **12°.13N**±0°.07×**87°.96W**±0°.09, **h10^{km}, n20, σ1^{s}.10**/24, **mb3.4**/4, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	1.15	346	*e*P	Pn	21 20 13.7	+0.2
JUCU				IAML		21 20 34.8	
	comp=Z,835nm,0.5s						
LCND	La Caada	1.17	3	*e*P	Pb	21 20 13.7	+0.1
LCND				*e*S	Sn	21 20 30.1	+0.4
LCND				IAML		21 20 34.8	
	comp=Z,2μm,0.4s						
LCY	Lacayo	1.32	346	*e*P	Pg	21 20 17.3	+0.6
VSM	San Miguel	1.32	346	*e*P	Pg	21 20 17.1	+0.4
RANC	El Ranchito	1.33	346	*e*P	Pb	21 20 16.7	+0.3
PACA	Pacayal	1.38	345	*e*P	Pg	21 20 18.1	+0.4
PACA				*e*S	Sg	21 20 36.3	+0.7
TECA	Tecapa	1.45	339	*e*P	Pb	21 20 19.1	+0.5
COEB	Comit de Eme	1.47	338	*e*P	Pb	21 20 18.9	+0.2
COEB				IAML		21 20 41.8	
	comp=Z,492nm,0.4s						
FAGO	Alcalda de S	1.56	355	*e*P	Pb	21 20 20.0	-0.3
FAGO				*e*S	Sg	21 20 40.9	-0.5
COEG	Centro de Oper	1.73	329	*e*P	Pb	21 20 23.2	0.0
COEG				IAML		21 20 50.3	
	comp=Z,614nm,0.3s						
LFRS	El Faro	1.83	324	*e*P	Pb	21 20 25.1	+0.1
PAVA	Las Pavas	1.84	329	*e*S	Sg	21 20 50.1	-0.3
LBRS	Las Brisas	1.92	327	*e*P	Pb	21 20 26.7	+0.3
TGUH	Tegucigalpa,Un	2.02	19	*e*P	Pn	21 20 25.9	+0.3
TACO	Tacachico	2.28	323	*e*P	Pb	21 20 31.5	-1.0
TACO				*e*S	Sb	21 21 00.1	-0.6
JTS	Las Juntas de	3.47	122	Pn	Pn	21 20 45.7	+0.4
	comp=Z,4.6nm,0.3s,baz=16,slow=17,SNR=8.1						
JTS				Lg	Lg	21 21 37.2	
	comp=Z,5.7nm,0.3s,baz=4.4,slow=23,SNR=4.0						
TXAR	Lajitas Array	22.51	322	P	P	21 24 52.8	+1.5
	comp=Z,1.4nm,0.6s,baz=144,slow=11,SNR=4.5						
PDAR	Pinedale Array	35.82	332	P	P	21 26 49.8	-1.4
	comp=Z,0.4nm,0.8s,baz=129,slow=12,SNR=4.2						
NVAR	Mina Array Bea	37.62	319	P	P	21 27 09.6	+3.0
	comp=Z,0.4nm,0.6s,baz=101,slow=9.3,SNR=2.4						
YKA	Yellowknife Ar	53.79	345	P	P	21 29 10.8	-2.9
	comp=Z,0.3nm,0.6s,baz=137,slow=8.6,SNR=6.2						

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*IDC **07** 21:28:39.5±1.3, 34°.95N×24°.58E, h0^{km}, mb3.5/4, mb1 3.6/8, mb1mx3.4/50, mbtmp3.5/8, ML3.6/4, Error ellipse: s-maj=27.7km s-min=9.1km az=134.0*
*THE **07** 21:28:40.4, 35°.01N×24°.61E, h15^{km}±1^{km}, ML3.2/7, Error ellipse: s-maj=1.0km s-min=0.4km az=159.0*
*ATH **07** 21:28:41.0, 35°.00N×24°.61E, h8^{km}±1^{km}, ML3.3/6, Error ellipse: s-maj=1.8km s-min=0.8km az=158.0*
ISC 07 21:28:40.9±0.9, **35°.01N**±0°.04×**24°.60E**±0°.02, **h12^{km}**±6^{km}, **n30, σ0^{s}.67**/43, **mb3.5**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMBK	Timbaki Herakl	0.15	67	P	Pg	21 28 44.7	+0.2
SIVA	Sivas	0.18	88	P	Pg	21 28 44.7	-0.2
SIVA				S	Sg	21 28 46.9	-0.7
SIVA				AML	AML	21 28 48.5	
	comp=E,81220μm,0.3s						
SIVA				AML	AML	21 28 49.9	
	comp=N,34934μm,0.4s						
SIVA	Sivas	0.18	88	P	Pg	21 28 44.6	-0.2
SIVA				S	Sg	21 28 48.0	+0.4
	comp=N,28μm,0.3s						
IDI	Anoyia	0.37	41	Pg	Pg	21 28 47.6	-0.7
	comp=N,110nm,0.3s,baz=247,slow=9.5,SNR=200						
IDI				Lg	Lg	21 28 53.1	
	comp=N,1μm,0.3s,baz=76,slow=2.5,SNR=139						
IDI				LR	LR	21 29 11.9	
	comp=N,254nm,18.2s,baz=268,slow=77						
IDI	Anoyia	0.37	41	P	Pg	21 28 47.9	-0.4
IDI				S	Sg	21 28 53.0	-0.3
IDI				AML	AML	21 28 54.5	
	comp=N,10229μm,0.2s						
IDI				AML	AML	21 28 54.6	
	comp=E,6779μm,0.2s						
IDI	Anoyia	0.37	41	P	Pg	21 28 47.6	-0.7
IDI				S	Sg	21 28 53.5	+0.3
	comp=E,4μm,0.2s						
GVDS	Gavdos	0.45	248	P	Pg	21 28 49.8	+0.1
GVD	Gavdhos	0.45	248	P	Pg	21 28 49.5	-0.3
GVD				S	Sg	21 28 55.8	0.0
GVD				AML	AML	21 28 58.2	
	comp=E,29642μm,0.3s						
GVD				AML	AML	21 28 59.4	
	comp=N,25807μm,0.3s						
GVD	Gavdhos	0.45	248	P	Pg	21 28 49.5	-0.3
GVD				S	Sb	21 28 56.7	-0.9
	comp=N,13μm,0.2s						
VAM	Vamos	0.51	321	P	Pg	21 28 50.9	0.0
VAM				S	Sg	21 28 58.0	+0.3
VAM				AML	AML	21 28 59.8	
	comp=N,8482μm,0.2s						
VAM				AML	AML	21 29 02.0	
	comp=E,7540μm,0.3s						
VAM	Vamos	0.51	321	P	Pg	21 28 50.3	-0.6
VAM				S	Sb	21 28 58.8	-0.5
	comp=E,3μm,0.2s						
HRKL	Herakleio	0.51	54	P	Pg	21 28 50.2	-0.8
HRKL				S	Sg	21 28 58.1	+0.4
	comp=E,4μm,0.5s						
IMMV	Iera Moni Meta	0.67	312	P	Pg	21 28 54.1	+0.1
IMMV				S	Sb	21 29 03.6	-0.4
IMMV				AML	AML	21 29 06.8	
	comp=E,3242μm,0.5s						
IMMV				AML	AML	21 29 07.3	
	comp=N,2789μm,0.4s						
IMMV	Iera Moni Meta	0.67	312	P	Pg	21 28 53.2	-0.8
IMMV				S	Sb	21 29 03.7	-0.3
	comp=N,1μm,0.5s						
NPS	Neapolis	0.87	73	P	Pg	21 28 56.9	-0.9
NPS				S	Sg	21 29 08.9	-0.3
NPS				AML	AML	21 29 09.4	
	comp=N,1890μm,0.5s						
NPS				AML	AML	21 29 10.4	
	comp=E,2372μm,0.5s						
NPS	Neapolis	0.87	73	P	Pg	21 28 56.8	-0.9
NPS				S	Sg	21 29 08.8	-0.3
	comp=E,1μm,0.5s						
ZKR	Zakros	1.33	85	P	Pn	21 29 04.9	-0.6
ANKY	Antikythira Is	1.36	309	P	Pn	21 29 05.8	+0.1
MHLO	Agia Marina, M	1.68	355	P	Pn	21 29 09.8	-0.4
MHLA	Plaka, Milos I	1.73	355	P	Pn	21 29 11.0	0.0
KTHA	Kythira Island	1.76	315	P	Pn	21 29 11.4	0.0
VLI	Veliai	2.17	322	P	Pn	21 29 17.0	0.0
BRTR	Keskin Array B	8.60	54	Pn	Pn	21 30 46.9	+1.5
	comp=E,0.1nm,0.3s,baz=226,slow=14,SNR=1.4						
MMAI	Mount Meron Ar	9.19	99	Pn	Pn	21 30 54.7	+1.2
	comp=E,0.7nm,0.3s,baz=285,slow=12,SNR=1.9						
GERES	GERESS Array B	16.00	333	Pn	P	21 32 28.4	-0.9
	comp=E,0.1nm,0.3s,baz=148,slow=11,SNR=10						
AKASG	Malin Array Be	16.04	11	Pn	Pn	21 32 27.8	+1.5
	comp=E,0.5nm,0.3s,baz=202,slow=10,SNR=4.1						
ESDC	Sonseca Array	23.13	290	P	P	21 33 47.0	-0.1
	comp=E,1.0nm,0.7s,baz=81,slow=9.9,SNR=9.6						
TORD	Torodi Ar. Bea	30.04	229	P	P	21 34 49.0	-1.0
	comp=E,0.3nm,0.3s,baz=30,slow=9.4,SNR=2.2						
MKAR	Makanchi Array	44.24	56	P	P	21 36 51.4	+1.2
	comp=E,0.3nm,0.5s,baz=265,slow=7.7,SNR=4.4						
ZALV	Zalesovo Beam	45.44	46	P	P	21 37 00.1	+0.6
	comp=E,0.4nm,0.4s,baz=271,slow=8.3,SNR=3.2						

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*IDC **07** 21:34:20.9±0.8, 4°.73N×81°.32W, h0^{km}, mb3.8/9, mb1 4.1/11, mb1mx3.9/34, mbtmp3.9/11, ML3.3/2, MS3.2/5, Ms1 3.2/5, ms1mx2.8/39, Error ellipse: s-maj=32.8km s-min=19.6km az=55.0*
*RSNC **07** 21:34:23.5±0.6, 4°.63N×81°.33W, h32^{km}±13^{km}, ML3.7, Mw3.8*
ISC 07 21:34:21.8±0.6, **4°.69N**±0°.05×**81°.27W**±0°.06, **h10^{km}, n44, σ1^{s}.41**/45, **mb3.9**/9, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAPC	Malpelo	0.76	206	*e*P	Pg	21 34 35.8	-0.7
MAPC				*e*S	Sg	21 34 45.6	-0.8
MAPC				*i*		21 34 48.8	
	comp=Z,2μm,0.5s						
AZU	Azuero	3.24	18	*e*P	Pn	21 35 11.9	-0.9
AZU				*i*		21 35 50.2	
	comp=Z,188nm,0.3s						
PIZC	Pizarro, Choco	3.90	86	*e*P	Pn	21 35 21.7	-0.2
PIZC				*i*		21 35 32.6	
	comp=Z,70nm,0.3s						
PIZC				*e*S	Sn	21 36 06.0	-1.9
MALC	Bahia Malaga	3.98	100	*e*P	Pn	21 35 23.5	+0.5
MALC				*e*S	Sn	21 36 08.3	-1.4
MALC				*i*		21 36 14.4	
	comp=Z,99nm,0.2s						
PTAC	Punta Ardita,	4.22	54	*e*P	Pn	21 35 25.3	-1.0
PTAC				*i*		21 35 35.9	
	comp=Z,165nm,0.2s						
UPA	Univ. de Panam	4.60	22	*e*P	Pn	21 35 31.2	-0.3
UPA				*i*		21 35 32.7	
	comp=Z,62nm,0.3s						
BCIP	Isla Barro Col	4.67	18	*e*P	Pn	21 35 32.4	-0.1
BCIP				*i*		21 35 32.9	
	comp=Z,63nm,0.2s						
BBAC	Balboa, Cauca	4.81	123	*e*P	Pn	21 35 34.2	-0.3
BBAC				*i*		21 36 43.4	
	comp=Z,67nm,0.3s						
YOTC	Yotoco, Valle	4.96	98	*e*P	Pn	21 35 37.0	+0.4
YOTC				*e*S	Sn	21 36 31.4	-2.7
YOTC				*i*		21 36 36.1	
	comp=Z,44nm,0.4s						
PLMC	San Jos del P	4.97	87	*e*P	Pn	21 35 36.6	-0.1
OTAV	Otavalo	5.24	147	*e*P	Pn	21 35 40.0	-0.6
OTAV				*e*S	Sn	21 36 37.9	-3.6
CBOC	Ciudad Bolivar	5.36	77	*e*P	Pn	21 35 41.6	-0.6
CBOC				*i*		21 35 59.1	
	comp=Z,14nm,0.2s						
PCON	Cinco Dias	5.40	116	*e*P	Pn	21 35 44.5	+1.6
PCON				*i*		21 36 01.1	
	comp=Z,52nm,0.5s						
PCON				*e*S	Sn	21 36 43.2	-2.3
CAPC	Capurgana	5.53	45	*e*P	Pn	21 35 44.9	+0.7
CAPC				*i*		21 35 46.0	
	comp=Z,109nm,0.2s						
DBBC	Dabeiba	5.54	65	*e*P	Pn	21 35 44.0	-0.5
DBBC				*i*		21 36 01.4	
	comp=Z,52nm,0.6s						
MARP	Paez Belalcaza	5.61	109	*e*P	Pn	21 35 47.5	+1.9
ANIL	Santa Ana	5.85	92	*e*P	Pn	21 35 50.3	+1.3
ANIL				*i*		21 36 00.5	
	comp=Z,17nm,0.3s						
ANIL				*e*S	Sn	21 36 55.1	-1.2
HELC	Santa Helena	5.91	75	*e*P	Pn	21 35 50.1	+0.3
ORTC	Ortega, Tolima	6.05	97	*e*P	Pn	21 35 53.9	+2.4
BETC	Betania	6.15	109	*e*P	Pn	21 35 56.0	+3.2
GARC	Garzon, Huila	6.28	113	*e*P	Pn	21 35 57.1	+2.4
JTS	Las Juntas de	6.66	327	Pn	Pn	21 36 00.5	+0.7
	comp=Z,2.6nm,0.3s,baz=191,slow=5.7,SNR=4.8						
JTS				Sn	Sn	21 37 14.4	-1.5
	comp=Z,1.1nm,0.3s,baz=356,slow=19,SNR=1.4						
ROSC	El Rosal	6.93	88	Pn	Pn	21 36 08.9	+5.1
	comp=Z,10nm,0.3s,baz=121,slow=17,SNR=6.8						
ROSC				LR	LR	21 38 52.8	
	comp=Z,116nm,20.2s,baz=268,slow=39						
CHIC	Chingaza	7.51	90	*e*P	Pn	21 36 17.5	+5.6
CHIC				*i*		21 36 28.4	
	comp=Z,24nm,0.5s						
SDV	Santo Domingo	11.35	68	Pn	Pn	21 37 06.2	+1.8
	comp=Z,0.6nm,0.3s,baz=276,slow=11,SNR=4.0						
SDV				LR	LR	21 41 23.8	
	comp=Z,103nm,21.6s,baz=254,slow=37						
ATAH	Atahualpa	12.09	166	LR	LR	21 41 33.0	
	comp=Z,87nm,21.1s,baz=329,slow=36						
TKL	Tuckaleechee C	30.91	356	LR	LR	21 52 47.4	
	comp=Z,64nm,19.8s,baz=110,slow=36						
H06E1	SOCORRO T-PHAS	32.16	298	T	T	22 14 40.6	
	SNR=7.2						
SADO	Sadowa	39.97	2	LR	LR	21 58 57.5	
	comp=Z,44nm,18.1s,baz=81,slow=37						
PDAR	Pinedale Array	45.48	331	P	P	21 42 41.5	-0.1
	comp=Z,0.5nm,0.6s,baz=120,slow=9.6,SNR=4.2						
PLCA	Paso Flores	46.25	169	P	P	21 42 48.3	+0.8
	comp=Z,1.0nm,0.7s,baz=344,slow=7.2,SNR=5.3						
ULM	Lac du Bonnet	47.05	347	P	P	21 42 52.0	-1.5
	comp=Z,0.8nm,0.4s,baz=158,slow=6.9,SNR=4.1						
ELK	Elko	47.09	325	P	P	21 42 54.4	0.0
	comp=Z,0.3nm,0.3s,baz=108,slow=2.8,SNR=3.7						
YBH	Yreka Blue Hor	52.19	321	P	P	21 43 34.2	+1.2
	comp=Z,0.8nm,0.6s,baz=176,slow=13,SNR=3.7						
YKA	Yellowknife Ar	62.71	343	P	P	21 44 47.3	+0.6
	comp=Z,1.3nm,0.7s,baz=135,slow=6.8,SNR=23						
ILAR	Eielson Array	75.54	336	P	P	21 46 07.2	+0.9
	comp=Z,0.6nm,0.8s,baz=119,slow=4.9,SNR=7.5						
ESDC	Sonseca Array	77.25	51	P	P	21 46 17.9	+1.2
	comp=Z,0.6nm,0.6s,baz=262,slow=5.4,SNR=7.5						
TORD	Torodi Ar. Bea	82.11	77	P	P	21 46 44.9	+1.4
	comp=Z,0.5nm,0.7s,baz=287,slow=5.4,SNR=1.6						
MKAR	Makanchi Array	126.72	14	PKP	PKPdf	21 53 25.4	-0.5
	comp=Z,0.6nm,0.7s,baz=344,slow=2.5,SNR=7.0						
SONM	Songino Array	127.27	354	PKP	PKPdf	21 53 27.0	-0.1
	comp=Z,0.8nm,0.8s,baz=17,slow=1.7,SNR=5.9						
ASAR	Alice Springs	141.21	237	PKP	PKiKP	21 53 56.1	-0.3
	comp=Z,0.7nm,0.8s,baz=70,slow=1.5,SNR=5.2						
WRA	Warramunga Arr	142.17	243	PKhKP	PKPpre	21 53 50.9	
	comp=Z,0.9nm,0.8s,baz=107,slow=2.5,SNR=3.2						
WRA				PKP	pPKPdf	21 53 57.3	-0.4
	comp=Z,0.7nm,0.3s,baz=102,slow=4.0,SNR=4.6						
FITZ	Fitzroy Crossi	150.51	241	PKPbc	PKPbc	21 54 15.3	+0.5
	comp=Z,9.4nm,0.9s,baz=43,slow=5.0,SNR=3.9						
CMAR	Chiang Mai Arr	157.00	359	PKPab	PKPab	21 54 47.2	-1.4
	comp=Z,0.2nm,0.4s,baz=335,slow=3.3,SNR=4.2						

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*JMA **07** 21:51:06.4±0.1, 24°.48N×122°.39E, h71^{km}±1^{km}, M2.1*
*TAP **07** 21:51:06.1, 24°.62N×122°.39E, h71^{km}, ML3.1, C*
ISC 07 21:51:07.3±1.3, **24°.58N**±0°.03×**122°.40E**±0°.02, **h57^{km}**±9^{km}, **n85, σ1^{s}.00**/163, **3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.50	274	⇓*i*P	Pn	21 51 18.9	-0.2
	baz=272						
TWC				*i* S	Sn	21 51 28.3	+0.7
	baz=272						
ENAH	Nanao	0.55	257	P	Pn	21 51 19.4	-0.2
	baz=256						
ENAH				*e*S	Sn	21 51 29.5	+1.0
	baz=256						
YOJ	Yonaguni jima	0.57	101	P	Pn	21 51 20.0	+0.2
YOJ				*e*S	Sn	21 51 30.1	+1.2
YOJ	Yonaguni jima	0.57	101	*e*P	Pn	21 51 19.7	-0.1
	baz=110						
YOJ				*e*S	Sn	21 51 30.1	+1.2
	baz=110						
TWB1	Santiao Chiao	0.57	319	*e*P	Pn	21 51 19.0	-0.8
	baz=317						
TWB1				*e*S	Sn	21 51 28.1	-0.8
	baz=317						
NTC	Toucheng	0.59	298	P	Pn	21 51 19.9	-0.1
	baz=295						
NTC				S	Sn	21 51 29.3	0.0
	baz=295						
ENA	Nanau	0.62	256	P	Pn	21 51 20.5	+0.1
	baz=250						
ENA				*e*S	Sn	21 51 30.8	+0.8
	baz=250						
ILA	Ilan	0.62	288	P	Pn	21 51 20.7	+0.2
	baz=284						
ILA				S	Sn	21 51 30.7	+0.7
	baz=284						
TIPB	Shuangxi	0.66	307	*i* P	Pn	21 51 20.3	-0.6
	baz=307						
TIPB				*e*S	Sn	21 51 30.4	-0.4
	baz=307						
TWE	Neicheng	0.68	282	⇓*i*P	Pn	21 51 21.1	0.0
	baz=281						
TWE				S	Sn	21 51 31.6	+0.3
	baz=281						
NWF	Wu-fen Shan	0.75	311	*i* P	Pn	21 51 21.8	-0.4
	baz=309						
NWF				*i* S	Sn	21 51 32.8	-0.1
	baz=309						
WFSB	Wu-fen Shan	0.75	311	P	Pn	21 51 21.7	-0.4
	baz=309						
WFSB				S	Sn	21 51 33.0	+0.2
	baz=309						
ENTT	Nioudou	0.76	275	*i* P	Pn	21 51 22.2	0.0
	baz=275						
ENTT				S	Sn	21 51 33.5	+0.4
	baz=275						
NDT	Datong Townshi	0.81	272	P	Pn	21 51 23.1	+0.3
	baz=271						
NDT				*e*S	Sn	21 51 34.9	+0.8
	baz=271						
TNOU	National Taiwa	0.81	315	*e*P	Pn	21 51 20.5	-2.3
	baz=308						
TNOU				*e*S	Sn	21 51 32.0	-2.1
	baz=308						
NACB	Ninganchiao	0.84	242	*i* P	Pn	21 51 22.6	-0.6
	baz=231						
NACB				*e*S	Sn	21 51 34.8	0.0
	baz=231						
NWLT	Wulai	0.84	284	P	Pn	21 51 23.0	-0.2
	baz=288						
NWLT				S	Sn	21 51 35.0	0.0
	baz=288						
TWA	Mucha	0.84	299	P	Pn	21 51 22.9	-0.4
	baz=296						
TWA				S	Sn	21 51 34.4	-0.6
	baz=296						
NHDH	Xindian Distri	0.88	296	P	Pn	21 51 23.5	-0.2
	baz=287						
NHDH				S	Sn	21 51 35.7	-0.1
	baz=287						
TWD	Chiawan	0.88	236	P	Pn	21 51 23.2	-0.5
	baz=226						
TWD				*e*S	Sn	21 51 35.5	-0.3
	baz=226						
ETLH	Xiulin Townshi	0.91	247	P	Pn	21 51 23.9	-0.3
	baz=244						
ETLH				*e*S	Sn	21 51 37.0	+0.3
	baz=244						
TAP	Taipei	0.94	300	*e*P	Pn	21 51 24.0	-0.4
	baz=288						
TAP				*e*S	Sn	21 51 37.3	+0.3
	baz=288						
YHNB	Yeheng	0.94	276	⇓*i*P	Pn	21 51 24.7	+0.2
	baz=280						
YHNB				S	Sn	21 51 37.3	+0.1
	baz=280						
NNSB	Datong	0.94	261	*i* P	Pn	21 51 24.5	-0.1
	baz=250						
NNSB				*e*S	Sn	21 51 38.1	+0.8
	baz=250						
NNSH	Datong	0.94	261	*e*P	Pn	21 51 24.1	-0.5
	baz=250						
NNSH				*e*S	Sn	21 51 37.3	0.0
	baz=250						
HWA	Hwalien	0.94	231	*e*P	Pn	21 51 24.2	-0.3
	baz=220						
HWA				*e*S	Sn	21 51 37.4	+0.3
	baz=220						
NNS	Nan Shan	0.94	262	P	Pn	21 51 24.4	-0.2
	baz=251						
NNS				S	Sn	21 51 37.9	+0.4
	baz=251						
YM01	YM01	0.94	307	*i* P	Pn	21 51 24.1	-0.5
	baz=298						
YM01				S	Sn	21 51 36.6	-0.7
	baz=298						
YM11	YM11	0.95	308	P	Pn	21 51 24.3	-0.4
	baz=299						
YM11				*e*S	Sn	21 51 37.0	-0.5
	baz=299						
NSK	Sanguang	0.95	276	P	Pn	21 51 24.9	+0.2
	baz=279						
NSK				*e*S	Sn	21 51 38.0	+0.5
	baz=279						
YM08	YM08	0.96	310	P	Pn	21 51 23.9	-0.8
	baz=300						
YM08				*e*S	Sn	21 51 36.6	-0.9
	baz=300						
YM10	YM10	0.96	307	P	Pn	21 51 24.2	-0.6
	baz=298						
YM10				*e*S	Sn	21 51 37.6	0.0
	baz=298						
YM05	YM05	0.96	308	*i* P	Pn	21 51 24.1	-0.7
	baz=299						
YM05				S	Sn	21 51 37.2	-0.5
	baz=299						
YM03	YM03	0.99	308	*e*P	Pn	21 51 24.7	-0.5
	baz=296						
YM03				*e*S	Sn	21 51 38.2	-0.2
	baz=296						
ANP	Anpu	1.00	307	P	Pn	21 51 23.9	-1.5
	baz=296						
ANP				*e*S	Sn	21 51 38.9	+0.1
	baz=296						
TWS1	Kuangyinshan	1.03	301	P	Pn	21 51 25.4	-0.3
	baz=299						
TWS1				*e*S	Sn	21 51 39.6	+0.2
	baz=299						
NTST	Danshui	1.04	304	P	Pn	21 51 25.3	-0.6
	baz=302						
NTST				*e*S	Sn	21 51 39.2	-0.4
	baz=302						
NTY	Taoyuan	1.09	293	P	Pn	21 51 26.2	-0.3
	baz=291						
NTY				*e*S	Sn	21 51 40.3	-0.3
	baz=291						
FUSS	Fushou	1.10	253	P	Pn	21 51 26.4	-0.4
	baz=243						
FUSS				*e*S	Sn	21 51 41.5	+0.2
	baz=243						
WHF	Hehuan Shan	1.12	248	*e*P	Pn	21 51 26.6	-0.7
	baz=245						
WHF				*e*S	Sn	21 51 41.8	-0.2
	baz=245						
TWT	Tachien	1.16	254	P	Pn	21 51 27.9	+0.3
	baz=246						
TWT				*e*S	Sn	21 51 42.8	+0.1
	baz=246						
ESL	Shilin	1.16	230	*e*P	Pn	21 51 26.7	-0.8
	baz=221						
TDCB	Techi	1.18	254	P	Pn	21 51 27.7	0.0
	baz=246						
TDCB				*e*S	Sn	21 51 42.6	-0.3
	baz=246						
CHGB	Renai	1.23	246	P	Pn	21 51 28.4	-0.1
	baz=235						
CHGB				*e*S	Sn	21 51 44.0	-0.4
	baz=235						
IRIF	Iriomote-Funau	1.23	101	P	Pn	21 51 27.8	-0.6
IRIF				S	Sn	21 51 43.9	-0.2
LIOB	Emei	1.26	273	P	Pn	21 51 28.8	0.0
	baz=271						
LIOB				*e*S	Sn	21 51 46.5	+1.7
	baz=271						
EGFH	Guangfu	1.27	225	*e*P	Pn	21 51 28.2	-0.7
	baz=216						
EGFH				*e*S	Sn	21 51 43.9	-1.0
	baz=216						
NSTT	Nanjuang	1.27	273	*e*P	Pn	21 51 30.3	+1.3
	baz=270						
NSTT				*e*S	Sn	21 51 45.3	+0.2
	baz=270						
WHP	Taichung City	1.36	258	*e*P	Pn	21 51 30.6	+0.5
	baz=251						
WHP				*e*S	Sn	21 51 47.7	+0.5
	baz=251						
HGSD	Ruisui	1.40	220	*e*P	Pn	21 51 29.7	-0.9
	baz=214						
HGSD				*e*S	Sn	21 51 47.7	-0.4
	baz=214						
WPL	Puli Township	1.43	247	*e*P	Pn	21 51 29.7	-1.3
	baz=240						
EHY	Hungye	1.45	223	P	Pn	21 51 30.0	-1.3
	baz=221						
EHY				*e*S	Sn	21 51 47.7	-1.6
	baz=221						
TWQ1	Liyutan	1.50	262	*e*P	Pn	21 51 31.5	-0.5
	baz=259						
TWQ1				*e*S	Sn	21 51 49.7	-0.8
	baz=259						
JKRS	Kuro-shima	1.50	103	P	Pn	21 51 32.2	+0.2
JKRS				*e*S	Sn	21 51 51.2	+0.6
SMLT	Sun Moon Lake	1.53	244	P	Pn	21 51 32.5	-0.1
	baz=235						
SMLT				*e*S	Sn	21 51 52.4	+0.9
	baz=235						

SSLB	Suanglung	1.54	240	P	Pn	21 51 32.5	0.0
	baz=233						
SSLB				eS	Sn	21 51 51.5	+0.1
	baz=233						
YULB	Yu-li	1.55	221	P	Pn	21 51 31.2	-1.5
	baz=219						
YULB				eS	Sn	21 51 49.5	-2.2
	baz=219						
TYC	Yuchr	1.56	245	P	Pn	21 51 32.9	+0.2
	baz=237						
TYC				eS	Sn	21 51 52.4	+0.5
	baz=237						
EYUL	Yuli	1.57	219	eP	Pn	21 51 32.0	-0.9
	baz=226						
EYUL				eS	Sn	21 51 52.0	-0.2
	baz=226						
TWF1	Yuli	1.58	220	eP	Pn	21 51 31.9	-1.2
	baz=226						
TWF1				eS	Sn	21 51 50.9	-1.6
	baz=226						
JIJ	Ishigaki jima	1.60	97	P	Pn	21 51 33.3	0.0
JIJ				eS	Sn	21 51 54.0	+1.0
WHYT	Xinyi Township	1.66	239	eP	Pn	21 51 35.6	+1.4
	baz=233						
WHYT				eS	Sn	21 51 57.3	+2.8
	baz=233						
WJS	Zhushan	1.70	244	eP	Pn	21 51 36.0	+1.3
	baz=253						
WJS				eS	Sn	21 51 57.3	+1.9
	baz=253						
FULB	Fuli	1.70	217	eP	Pn	21 51 35.3	+0.5
	baz=207						
FULB				eS	Sn	21 51 54.6	-0.9
	baz=207						
YUS	Yu-Shan	1.71	231	eP	Pn	21 51 35.2	-0.1
	baz=222						
YUS				eS	Sn	21 51 56.0	-0.3
	baz=222						
WNT	Mingjian	1.71	246	eP	Pn	21 51 36.1	+1.2
	baz=255						
WNT				eS	Sn	21 51 58.2	+2.5
	baz=255						
JISG	Ishigakijimahi	1.74	89	P	Pn	21 51 35.1	-0.1
JISG				eS	Sn	21 51 56.8	+0.5
CHKT	Chengkung	1.75	213	eP	Pn	21 51 34.8	-0.5
	baz=204						
ALS	Alishan	1.80	234	P	Pn	21 51 37.0	+0.7
	baz=224						
ALS				eS	Sn	21 52 00.7	+2.4
	baz=224						
CHN5	Tsauling	1.85	239	P	Pn	21 51 37.5	+0.7
	baz=248						
CHN5				eS	Sn	21 52 01.2	+2.1
	baz=248						
ELDTW	Lidau	1.87	223	P	Pn	21 51 36.0	-1.2
	baz=217						
ELDTW				eS	Sn	21 51 58.3	-1.5
	baz=217						
EDH	Donghe	1.89	212	eP	Pn	21 51 36.9	-0.3
	baz=204						
EDH				eS	Sn	21 51 56.7	-3.1
	baz=204						
WDLH	Douliu	1.92	243	eP	Pn	21 51 37.9	+0.3
	baz=252						
WDLH				eS	Sn	21 52 03.3	+2.6
	baz=252						
CHN4	Tsaushan	2.05	234	i P	Pn	21 51 41.0	+1.4
	baz=232						
CHN4				eS	Sn	21 52 06.2	+2.1
	baz=232						
TPUB	Ta-pu	2.06	232	P	Pn	21 51 40.2	+0.6
	baz=223						
TPUB				eS	Sn	21 52 05.8	+1.7
	baz=223						
STYT	Tauyuan	2.06	227	eP	Pn	21 51 40.2	+0.6
	baz=219						
STYT				eS	Sn	21 52 04.2	0.0
	baz=219						
JTJ	Tarama	2.10	88	P	Pn	21 51 40.1	0.0
WTP	Ta-pu	2.10	231	eP	Pn	21 51 41.0	+0.7
	baz=229						
WTP				eS	Sn	21 52 06.8	+1.5
	baz=229						
TWG	Pinlang	2.13	215	eP	Pn	21 51 38.3	-2.2
	baz=213						
TWG				eS	Sn	21 52 03.2	-2.7
	baz=213						
TWK	Hsinying	2.18	234	eP	Pn	21 51 42.1	+0.8
	baz=231						
CHN1	Nanshi	2.20	231	eP	Pn	21 51 42.0	+0.5
	baz=229						
ECL	Taimali	2.37	214	eP	Pn	21 51 43.8	-0.1
	baz=212						
ECL				eS	Sn	21 52 10.3	-1.5
	baz=212						
MASBT	Mashibuluo	2.54	220	eP	Pn	21 51 47.1	+1.0
	baz=218						
MASBT				eS	Sn	21 52 16.8	+0.9
	baz=218						
SGLT	Jiouru	2.54	224	eP	Pn	21 51 48.0	+1.9
	baz=222						
EAST	Anshuo	2.61	213	eP	Pn	21 51 46.1	-1.0
	baz=206						
EAST				eS	Sn	21 52 15.2	-2.4
	baz=206						

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*BJI **07** 21:51:06.4±0.0, 6°.20S×153°.08E, h7^{km}, mB5.2/27, mb4.9/45, Ms5.0/4, Ms7 4.8/2*

*NEIC **07** 21:51:10.2±1.3, 6°.23S±0°.06×152°.68E±0°.09, h10^{km}±1^{km}, mb4.9/72, Error ellipse: s-maj=15.5km s-min=10.0km az=86.0*

*IDC **07** 21:51:12.9±4.9, 6°.29S×152°.71E, h30^{km}±35^{km}, mb4.4/25, mb1 4.6/29, mb1mx4.4/45, mbtmp4.6/29, ML3.5/2, MS3.7/18, Ms1 3.7/18, ms1mx3.5/34, Error ellipse: s-maj=16.0km s-min=11.8km az=86.0*

*GCMT **07** 21:51:12.2±0.3, 6°.37S±0°.03×152°.82E±0°.04, h20^{km}±1^{km}, MW4.9/78, Moment Tensor Solution. s23,c24; s78,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.86±.19; M$_{\theta\theta}$1.89±.12; M$_{\phi\phi}$0.97±.11; M$_{r\theta}$0.16±.19; M$_{\theta\phi}$-0.51±.06; M$_{\phi r}$-0.22±.26; Best double couple: M$_0$2.50300×10^{16} NP1:ϕ_s112.00000°, δ42.00000°, λ-93.00000°. NP2: ϕ_s296.00000°, δ48.00000°, λ-87.00000°. Principal axes: T 2.1300, Plg3.0000°, Azm24.0000°; N 0.7500, Plg2.0000°, Azm114.0000°; P -2.8760, Plg87.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **07** 21:51:14.5±1.4, 6°S±38°×15°3E±3°6, h82^{km}±66^{km}, M4.9/4, mB4.9/1, mb4.8/4, MLv4.9/1, Mw(mB)4.2/1*

ISC 07 21:51:13.8±0.3, **6°.23S**±0°.05×**152°.71E**±0°.06, **h35^{km}, n189, σ0^s.81**/184, **mb4.9**/73, **MS3.8**/18, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.03	340	Pn	Pn	21 51 45.0	-0.4
	411nm,0.3s,baz=151,slow=1.0,SNR=177						
KRVT				Sn	Sn	21 52 08.7	-1.0
	1μm,0.3s,baz=349,slow=21,SNR=28						
RABL	Rabaul	2.10	345		Pn	21 51 45.4	-1.1
PMG	Port Moresby	6.34	240	Pn	Pn	21 52 44.5	-0.3
	51nm,0.3s,baz=56,slow=4.7,SNR=49						
PMG				Sn	Sn	21 53 59.8	+3.7
	15nm,0.3s,baz=18,slow=23,SNR=8.9						
PMG				LR	LR	21 55 19.2	
	comp=Z,509nm,21.9s,baz=25,slow=39						
PMG	Port Moresby	6.34	240	Pn	Pn	21 52 45.1	+0.3
COEN	Coen	12.12	230	Pn	Pn	21 54 03.2	-1.0
JAY	Jayapura	12.53	287	Pn	Pn	21 54 09.3	-0.4
	baz=136,slow=15,SNR=2.0						
MTSU	Mount Surprise	14.39	214	P	Pn	21 54 35.0	-0.1
	baz=14,SNR=4.3						
CTA	Charters Tower	15.14	204	Pn	Pn	21 54 45.2	+0.1
	0.1nm,0.3s,baz=85,slow=14,SNR=2.5						
CTAO	Charters Tower	15.14	204	Pn	Pn	21 54 46.8	+1.7
QIS	Mount Isa	19.09	221	P	P	21 55 34.0	+0.3
	baz=19,SNR=12						
EIDS	Eidsvold	19.10	185	P	P	21 55 33.4	-0.2
RMQ	Roma	20.50	190	P	Pn	21 55 50.2	-0.9
	baz=21,SNR=23						
DZM	Mont Dzumac	20.59	141	P	P	21 55 49.5	-0.5
	20nm,0.9s,baz=313,slow=8.2,SNR=9.8						
DZM				LR	LR	22 02 43.1	
	comp=Z,142nm,19.2s,baz=270,slow=34						
DZM	Mont Dzumac	20.59	141	eP	P	21 55 49.7	-0.4
	66nm,1.1s						
DZM				eLR	LR	22 00 47.8	
	comp=Z,306nm,28.3s						
DZM	Mont Dzumac	20.59	141	P	P	21 55 50.0	0.0
KDU	Kakadu	20.96	251	P	P	21 55 54.0	0.0
	baz=21,SNR=29						
GUMO	Guam	21.17	338	LR	LR	22 03 23.9	
	comp=Z,46nm,21.0s,baz=110,slow=34						
QLP	Quilpie	21.80	201	P	P	21 56 03.5	+0.7
	baz=22,SNR=3.9						
SIJI	Sorong	22.05	283	P	P	21 56 05.8	+0.1
	4.7nm,0.7s,baz=131,slow=20,SNR=2.1						
SIJI				LR	LR	22 06 31.4	
	comp=Z,107nm,19.0s,baz=354,slow=42						
WR0	Warramunga Arr	22.31	231	P	P	21 56 07.9	-0.6
WR0				IAmb	IAmb	21 56 13.3	
	comp=Z,58nm,1.1s						
WB0	Warramunga Arr	22.32	231	P	P	21 56 07.9	-0.6
WB0				IAmb	IAmb	21 56 13.4	
	comp=Z,57nm,1.4s						
WB2	Warramunga Arr	22.45	231	P	P	21 56 09.4	-0.6
WB2				IAmb	IAmb	21 56 14.8	
	comp=Z,42nm,1.2s						
WRA	Warramunga Arr	22.46	231	P	P	21 56 09.8	-0.3
	comp=Z,35nm,1.2s,baz=58,slow=11,SNR=16						
WRA				LR	LR	22 04 39.3	
	comp=Z,252nm,20.4s,baz=80,slow=36						
ARMA	Armidale	24.09	182	P	P	21 56 26.1	-0.1
AS31	Alice Springs	25.05	224	P	P	21 56 34.6	-0.5
ASAR	Alice Springs	25.06	224	P	P	21 56 35.0	-0.1
	comp=Z,11nm,0.8s,baz=62,slow=8.9,SNR=58						
ASAR				LR	LR	22 06 00.1	
	comp=Z,324nm,20.5s,baz=58,slow=36						
MSVF	Nonsavu	27.25	117	P	P	21 56 54.8	-0.2
	comp=Z,3.2nm,0.6s,baz=271,slow=11,SNR=6.2						
MSVF	Nonsavu	27.25	117	P	P	21 56 55.5	+0.5
MSVF				IAmb	IAmb	21 57 09.6	
	comp=Z,24nm,1.4s						
STKA	Stephens Creek	27.55	201	P	P	21 56 56.7	-0.7
	baz=28,SNR=6.1						
STKA	Stephens Creek	27.55	201	P	P	21 56 55.9	-1.6
	comp=Z,8.3nm,0.8s,baz=9.4,slow=9.4,SNR=13						
STKA				LR	LR	22 07 55.5	
	comp=Z,279nm,18.9s,baz=15,slow=36						
STKA	Stephens Creek	27.55	201	P	P	21 56 56.3	-1.2
FITZ	Fitzroy Crossi	28.92	244	P	P	21 57 09.7	-0.1
	baz=29,SNR=8.6						
FITZ	Fitzroy Crossi	28.92	244	P	P	21 57 08.5	-1.4
	comp=Z,7.9nm,0.6s,baz=71,slow=9.3,SNR=15						
FITZ				LR	LR	22 08 57.9	
	comp=Z,160nm,20.7s,baz=56,slow=37						
FITZ	Fitzroy Crossi	28.92	244	P	P	21 57 09.5	-0.3
FITZ				IAmb	IAmb	21 57 12.5	
	comp=Z,29nm,1.4s						
WRKA	Warakurna	29.94	229	P	P	21 57 17.9	-1.0
	baz=30,SNR=4.7						
HTT	Hallett	29.94	204	P	P	21 57 18.1	-0.6
	baz=30,SNR=4.7						
LUWI	Luwuk	30.31	279	P	P	21 57 21.6	-0.6
LUWI				IAmb	IAmb	21 57 24.5	
	comp=Z,28nm,1.1s						
BBOO	Buckleboo	30.66	208	P	P	21 57 24.1	-1.0
BBOO				IAmb	IAmb	21 57 41.5	
	comp=Z,23nm,1.4s						
FORT	Forrest	33.64	220	P	P	21 57 50.3	-0.9
PSA00	Pilbara Seismi	35.25	241	P	P	21 58 04.7	-0.6
PSA00				IAmb	IAmb	21 58 19.0	
	comp=Z,33nm,1.3s						
URZ	Urewera	38.81	149	P	P	21 58 34.9	-0.4
URZ				IAmb	IAmb	21 58 43.3	
	comp=Z,29nm,1.3s						
KPJI	Karang Pucung	43.48	266	P	P	21 59 27.7	+14
CISI	Cisompet, Garu	44.58	266	P	P	21 59 22.1	-0.8
MJAR	Matsushiro Arr	44.66	343	LR	LR	22 17 00.2	
	comp=Z,28nm,20.5s,baz=40,slow=35						
XMIS	Christmas Isla	46.72	262	P	P	21 59 39.6	-0.3
KSRS	Korea Array	49.23	334	P	P	21 59 58.7	-0.1
	comp=Z,1.6nm,0.7s,baz=140,slow=8.5,SNR=5.9						
KSRS				LR	LR	22 19 22.2	
	comp=Z,28nm,21.2s,baz=156,slow=34						
NJ2	Nanjing	49.90	322	eP	P	22 00 04.8	+0.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KULM	Kulim	53.22	281	P	P	22 00 29.1	-0.1
USRK	Ussuriysk Ar.	53.56	342	P	P	22 00 30.8	-0.4
	comp=Z,2.7nm,0.7s,baz=124,slow=7.8,SNR=3.6						
ENH	Enshi	55.06	314	P	P	22 00 43.0	+0.6
ENH				IAmb	IAmb	22 00 52.5	
	comp=Z,11nm,1.0s						
MLSI	Meulaboh, Aceh	57.18	279	P	P	22 00 57.5	-0.3
XAN	Xi'an	57.59	317	P	P	22 01 01.1	+0.7
XAN				pP	pP	22 01 08.0	-1.3
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CM31	Chiang Mai Arr	58.41	296	P	P	22 01 07.3	+1.0
CMAR	Chiang Mai Arr	58.41	296	P	P	22 01 07.2	+0.9
	comp=Z,1.8nm,0.7s,baz=117,slow=5.4,SNR=14						
PEA0B	Petropavlovsk-	59.26	3	P	P	22 01 11.9	+0.3
PETK	Petropavlovsk-	59.26	3	P	P	22 01 12.2	+0.6
	comp=Z,6.8nm,0.5s,baz=162,slow=6.3,SNR=20						
CD2	Chengdu	59.60	311	eP	P	22 01 15.0	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	60.15	325	eP	P	22 01 18.3	+0.1
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,330nm,5.6s						
LZH	Lanzhou	62.19	316	eP	P	22 01 33.7	+1.5
LZH				pP	pP	22 01 37.8	-3.3
LZH				sP	sP	22 01 39.8	-4.7
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
HIA	Hailar	62.30	336	P	P	22 01 32.4	0.0
HIA				IAmb	IAmb	22 01 34.0	
	comp=Z,12nm,1.2s						
ADK	Adak	63.53	21	P	P	22 01 41.2	+0.8
MA2	Magadan	65.61	359	P	P	22 01 53.9	0.0
GTA	Gaotai	66.64	318	eP	P	22 02 02.2	+1.0
GTA				pP	pP	22 02 06.5	-3.7
GTA				sP	sP	22 02 09.8	-3.8
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	67.16	328	P	P	22 02 03.9	-0.4
SONM	Songino Array	67.48	328	P	P	22 02 07.5	+1.2
	comp=Z,9.6nm,0.8s,baz=138,slow=4.3,SNR=51						
LSA	Lhasa	68.97	305	P	P	22 02 17.8	+1.3
LSA				pmax	pmax		
	comp=Z,5.0nm,0.1s						
LSA	Lhasa	68.97	305	P	P	22 02 17.3	+0.8
LSA				IAmb	IAmb	22 02 18.5	
	comp=Z,9.1nm,0.7s						
YAK	Yakutsk	70.35	349	P	P	22 02 23.9	+0.2
TAPN	Taplejung	71.07	302	eP	P	22 02 29.4	+0.2
	comp=Z,50nm,1.1s						
ODAN	Odare	71.19	301	eP	P	22 02 30.2	+0.3
	comp=Z,46nm,0.8s						
TLY	Talaya	71.27	330	P	P	22 02 30.0	+0.5
TLY				IAmb	IAmb	22 02 34.7	
	comp=Z,7.2nm,0.9s						
VNDA	Vanda	71.41	178	P	P	22 02 30.1	+0.1
	comp=Z,2.3nm,0.9s,baz=346,slow=6.5,SNR=9.5						
VNDA				LR	LR	22 31 23.7	
	comp=Z,43nm,18.4s,baz=327,slow=34						
VNDA	Vanda	71.41	178	P	P	22 02 30.1	+0.1
RAMN	Ramite	71.89	301	eP	P	22 02 34.3	+0.2
GUN	Gumba	72.78	302	eP	P	22 02 40.1	+0.6
	comp=Z,71nm,0.7s						
PALK	Pallekele	73.08	280	P	P	22 02 40.5	-0.7
PKI	Pulchoki	73.09	301	eP	P	22 02 41.3	0.0
	comp=Z,23nm,0.8s						
PKIN	Phulchoki	73.10	301	eP	P	22 02 41.3	0.0
	comp=Z,22nm,0.7s						
KKN	Kakani	73.26	301	eP	P	22 02 42.6	+0.4
	comp=Z,37nm,0.7s						
DMN	Daman	73.36	301	eP	P	22 02 43.4	+0.6
	comp=Z,90nm,0.9s						
DANN	Dangsing	74.70	301	eP	P	22 02 50.6	-0.1
	comp=Z,31nm,0.7s						
WMQ	Urumqi	76.73	318	eP	P	22 02 55.4	-6.3
WMQ	Urumqi	76.73	318	eP	P	22 03 03.1	+1.4
WMQ				sP	pP	22 03 10.9	+0.1
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,460nm,4.9s						
WMQ				LR	LR		
	comp=Z,620nm,26.1s						
WMQ				LR	LR		
	comp=Z,1μm,23.9s						
WMQ				LR	LR		
	comp=Z,800nm,29.9s						
WMQ	Urumqi	76.73	318	P	P	22 03 02.1	+0.4
WMQ				IAmb	IAmb	22 03 13.3	
	comp=Z,7.2nm,0.7s						
HYB	Hyderabad	76.88	289	i P	P	22 03 02.0	-1.0
ANM	Nome	77.16	17	P	P	22 03 04.1	+0.6
ANM				IAmb	IAmb	22 03 09.8	
	comp=Z,16nm,1.1s						
CNPM	China Poot	79.03	26	P	P	22 03 14.8	+0.7
TTA	Tatalina	79.12	21	P	P	22 03 15.4	+0.8
TTA				IAmb	IAmb	22 03 17.4	
	comp=Z,16nm,1.3s						
TIXI	Tiksi	79.29	353	P	P	22 03 15.3	+0.1
BRLK	Bradley Lake	79.31	25	P	P	22 03 16.5	+0.8
BRLK				IAmb	IAmb	22 03 17.4	
	comp=Z,19nm,1.0s						
ZSN	Zaisan	79.90	320	eP	P	22 03 19.0	-0.1
	baz=320						
O22K	Cooper Landing	80.19	25	P	P	22 03 21.3	+1.0
	baz=238						
SUA	Susitna One	80.29	24	P	P	22 03 21.1	+0.1
SUA				IAmb	IAmb	22 03 22.1	
	comp=Z,10nm,0.8s						
RC01	Rabbit Creek A	80.50	25	P	P	22 03 22.5	+0.5
	baz=238						
MK31	Makanchi Array	81.34	319	P	P	22 03 26.9	+0.1
MKAR	Makanchi Array	81.34	319	P	P	22 03 27.4	+0.6
	comp=Z,2.4nm,0.8s,baz=110,slow=5.1,SNR=23						
KTH	Kantishna Hill	81.36	22	P	P	22 03 26.6	0.0
KTH				IAmb	IAmb	22 03 27.2	
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	81.54	22	P	P	22 03 27.3	-0.4
TRF				IAmb	IAmb	22 03 28.2	
	comp=Z,16nm,1.2s						
MAKZ	Makanchi	81.55	319	P	P	22 03 28.1	+0.2
MCK	McKinley	82.21	22	P	P	22 03 31.2	+0.2
	baz=239						
MLY	Manley	82.24	21	P	P	22 03 32.3	+1.1
	baz=237						
ZAA0	Zalesovo Array	82.29	326	P	P	22 03 31.0	-0.6
ZALV	Zalesovo Beam	82.29	326	P	P	22 03 30.9	-0.7
	comp=Z,3.5nm,0.6s,baz=118,slow=5.6,SNR=16						
M24K	Tolsona, Glenn	82.49	25	P	P	22 03 34.1	+1.6
	baz=241						
PRZ	Przheval'sk	82.74	314	P	P	22 03 34.1	-0.4
I23K	Minto, Yukon-K	82.80	21	P	P	22 03 34.5	+0.5
	baz=238						
KPKS	Kokpek	82.80	315	eP	P	22 03 34.5	-0.1
	baz=315						
SATY	Saty	82.89	315	eP	P	22 03 35.1	-0.1
	baz=315						
CCB	Clear Creek Bu	83.10	22	P	P	22 03 35.4	-0.2
CCB				IAmb	IAmb	22 03 39.2	
	comp=Z,11nm,1.1s						
GLB	Gilahina Butte	83.18	26	P	P	22 03 36.9	+0.7
TCOL	CIGO, UAF Yank	83.20	22	P	P	22 03 36.2	+0.1
	baz=240						
COLA	College	83.20	22	P	P	22 03 35.9	-0.2
HDA	Harding Lake	83.31	22	P	P	22 03 36.8	+0.1
	baz=240						
HDA	Harding Lake	83.31	22	P	P	22 03 36.6	-0.1
TDK	Taldyqorghan	83.41	317	eP	P	22 03 37.8	+0.1
	comp=Z,3.1nm,0.8s,baz=316						
IL31		83.51	22	P	P	22 03 37.3	-0.3
IL31				IAmb	IAmb	22 03 38.0	
	comp=Z,7.8nm,0.8s						
ILAR	Eielson Array	83.51	22	P	P	22 03 36.9	-0.8
	comp=Z,5.3nm,0.6s,baz=244,slow=5.1,SNR=74						
ILAR				LR	LR	22 34 25.3	
	comp=Z,83nm,21.2s,baz=242,slow=31						
KDJ	Kajisay	83.53	314	P	P	22 03 39.2	+0.6
KDJ				IAmb	IAmb	22 03 41.8	
	comp=Z,8.8nm,0.9s						
COLD	Coldfoot	83.63	19	P	P	22 03 39.8	+1.5
	baz=237						
COLD	Coldfoot	83.63	19	P	P	22 03 39.2	+0.9
COLD				IAmb	IAmb	22 03 43.8	
	comp=Z,9.0nm,0.9s						
BALM	Baldy	83.64	26	P	P	22 03 39.4	+0.8
BALM				IAmb	IAmb	22 03 40.1	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	83.74	180	P	P	22 03 38.0	-1.1
	comp=Z,13nm,0.9s,baz=344,slow=1.6,SNR=23						
QSPA	South Pole Qui	83.74	180	P	P	22 03 38.7	-0.4
SEM	Semipalatinsk	83.75	322	eP	P	22 03 38.3	-1.3
	baz=322						
KSH	Kashi	83.79	311	P	P	22 03 42.3	+2.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,230nm,6.0s						
MDOK	Medeo	83.88	315	eP	P	22 03 40.7	+0.4
	baz=314						
TNSS	Tian-Shan	83.92	314	eP	P	22 03 41.8	+1.0
	baz=314						
BARN	Barnard Glacie	83.95	26	P	P	22 03 41.8	+1.5
AAA	Alma-Ata	83.98	315	eP	P	22 03 40.3	-0.4
	baz=314						
L26K	Log Cabin Wild	84.07	24	P	P	22 03 41.5	+0.8
	baz=244						
A21K	Barrow	84.20	15	P	P	22 03 42.1	+1.0
	baz=231						
MAW	Mawson	84.23	203	P	P	22 03 40.1	-1.2
	comp=Z,8.8nm,0.9s,baz=94,slow=1.8,SNR=4.4						
MAW				LR	LR	22 37 22.4	
	comp=Z,61nm,20.6s,baz=62,slow=33						
MAW	Mawson	84.23	203	P	P	22 03 41.2	-0.2
SCRK	Sand Creek	84.24	23	P	P	22 03 42.4	+0.8
	baz=243						
BOOM	Boomskoye usch	84.51	314	P	P	22 03 44.1	+0.6
BOOM				IAmb	IAmb	22 03 45.5	
	comp=Z,6.9nm,0.9s						
KUU	Kurty	84.56	315	eP	P	22 03 43.3	-0.2
	comp=Z,8.7nm,0.8s,baz=315						
TOLK	Toolik Lake Re	84.59	18	P	P	22 03 44.5	+1.2
	baz=238						
TOLK	Toolik Lake Re	84.59	18	P	P	22 03 44.3	+1.1
NIL	Nilore	84.71	305	P	P	22 03 44.6	+0.1
NIL				IAmb	IAmb	22 03 55.6	
	comp=Z,8.6nm,0.8s						
KURK	Kurchatov	84.83	322	P	P	22 03 44.4	-0.3
KURK				IAmb	IAmb	22 03 57.3	
	comp=Z,5.0nm,0.8s						
TKM2	Tokmak 2	84.85	314	P	P	22 03 46.0	+0.6
	SNR=5.6						
K27K	Chicken	85.02	24	P	P	22 03 47.0	+1.6
	baz=245						
K27K	Chicken	85.02	24	P	P	22 03 46.7	+1.3
K27K				IAmb	IAmb	22 03 48.1	
	comp=Z,9.7nm,1.0s						
CHMS	Chumysh	85.47	314	P	P	22 03 48.8	+0.6
	SNR=6.0						
UCH	Uchtor	85.48	313	P	P	22 03 50.1	+1.4
	SNR=6.5						
AAK	Ala-Archa	85.58	314	P	P	22 03 48.6	-0.3
SGDS	Sogindy	85.66	314	eP	P	22 03 49.1	-0.1
	baz=314						
EGAK	Eagle	85.70	23	P	P	22 03 49.5	+0.8
EGAK				IAmb	IAmb	22 03 50.8	
	comp=Z,12nm,0.9s						
USP	Ospenovka	85.71	314	P	P	22 03 50.4	+1.0
	SNR=7.7						
HYT	Haines Junctio	85.73	27	P	P	22 03 51.0	+1.8
AML	Almayashu	86.05	313	P	P	22 03 52.8	+1.2
	SNR=12						
EKS2	Erkin-Say	86.10	313	P	P	22 03 52.8	+1.4
	SNR=6.2						
ARSB	Arslanbob	86.41	312	P	P	22 03 53.5	+0.5
ARSB				IAmb	IAmb	22 04 12.5	
	comp=Z,12nm,1.0s						
BTLS	Baital	86.42	316	eP	P	22 03 52.4	-0.4
	baz=316						
WHY	Whitehorse	86.89	28	P	P	22 03 56.0	+1.1
WHY				IAmb	IAmb	22 03 57.2	
	comp=Z,6.6nm,0.8s						
NRIK	Noril'sk	87.28	341	P	P	22 03 55.5	-0.9
	comp=Z,5.5nm,0.8s,baz=116,slow=3.8,SNR=8.5						
NRIK				LR	LR	22 42 47.5	
	comp=Z,37nm,19.3s,baz=47,slow=35						
NRIK	Noril'sk	87.28	341	P	P	22 03 56.2	-0.2

NRIK				IAmb	IAmb	22 04 05.9	
	comp=Z,5.6nm,0.8s						
DZA	**Taraz**	87.91	313	*e*P	**P**	22 04 00.2	0.0
	baz=313						
EPYK	**Eagle Plains**	88.01	22	P	**P**	22 04 01.4	+1.3
	baz=250						
EPYK	**Eagle Plains**	88.01	22	P	**P**	22 04 00.8	+0.8
KK31	**Karatay Array**	88.54	313	P	**P**	22 04 02.3	-0.8
DLBC	**Dease Lake**	88.64	31	P	**P**	22 04 03.0	-0.3
	comp=Z,5.5nm,0.8s,baz=244,slow=6.1,SNR=3.7						
IUG	**Iuzhnay**	88.73	312	*e*P	**P**	22 04 04.2	+0.1
	baz=312						
O02D	**Mt. Diablo Mer**	89.78	50	P	**P**	22 04 10.7	+1.6
	baz=262						
INK	**Inuvik**	89.81	21	P	**P**	22 04 08.1	-0.3
	comp=Z,1.7nm,0.5s,baz=277,slow=5.0,SNR=10.0						
INK				LR	LR	22 41 48.6	
	comp=Z,224nm,19.2s,baz=126,slow=34						
INK	**Inuvik**	89.81	21	P	**P**	22 04 08.8	+0.4
INK				IAmb	IAmb	22 04 18.8	
	comp=Z,9.0nm,1.2s						
YBH	**Yreka Blue Hor**	90.07	48	P	**P**	22 04 10.3	0.0
	comp=Z,0.5nm,0.3s,baz=317,slow=2.3,SNR=3.8						
BRVK	**Borovoye**	90.39	323	P	**P**	22 04 10.8	-0.7
LHV	**Little Huntoon**	92.86	52	P	**P**	22 04 24.2	+1.0
LHV				IAmb	IAmb	22 04 28.6	
	comp=Z,6.8nm,1.0s						
NVAR	**Mina Array Bea**	93.03	52	P	**P**	22 04 24.9	+0.5
	comp=Z,3.3nm,0.8s,baz=254,slow=6.5,SNR=18						
NVAR				LR	LR	22 39 33.6	
	comp=Z,44nm,20.2s,baz=314,slow=31						
NV11	**Mina Array Sit**	93.15	52	P	**P**	22 04 24.9	+0.1
NV11				IAmb	IAmb	22 04 39.6	
	comp=Z,7.5nm,1.3s						
HRA	**Herat**	93.86	304	P	**P**	22 04 27.2	-1.0
PFO	**Pinyon Flats O**	94.09	57	P	**P**	22 04 30.3	+1.0
	comp=Z,2.1nm,0.7s,baz=251,slow=8.9,SNR=4.4						
NEW	**Newport**	94.71	42	P	**P**	22 04 32.4	+0.8
	baz=266						
R11A	**Troy Canyon, C**	95.15	52	P	**P**	22 04 36.0	+1.9
	baz=266						
YKA	**Yellowknife Ar**	96.72	28	P	**P**	22 04 40.9	+0.5
	comp=Z,0.7nm,0.7s,baz=270,slow=4.0,SNR=9.0						
YKA				LR	LR	22 43 51.3	
	comp=Z,78nm,21.2s,baz=0.0,slow=33						
BOZ	**Bozeman (W)**	98.37	45	P	Pdif	22 04 49.7	+1.3
	baz=270						
PDAR	**Pinedale Array**	99.87	48	LR	LR	22 43 29.3	
	comp=Z,75nm,20.9s,baz=310,slow=31						
CLL	**Collm**	124.05	331	*e*PKPdf	**PKiKP**	22 10 09.0	+0.2
GERES	**GERESS Array B**	125.22	328	PKP	**PKiKP**	22 10 12.1	+0.8
	comp=Z,0.9nm,0.8s,baz=45,slow=2.1,SNR=5.5						
CPUP	**Villa Florida**	136.45	139	PKP	**PKPdf**	22 10 32.6	-0.1
	comp=Z,1.9nm,0.8s,baz=317,slow=1.1,SNR=3.3						
SDV	**Santo Domingo**	136.97	84	PKPdf	**PKPdf**	22 10 34.5	+0.2
SIV	**San Ignacio**	139.93	124	PKP	**PKPdf**	22 10 39.2	-0.3
	comp=Z,1.7nm,0.6s,baz=274,slow=0.6,SNR=8.3						
BDFB	**Brasilia**	150.11	137	PKPbc	**PKPbc**	22 11 02.1	0.0
	comp=Z,7.3nm,0.7s,baz=219,slow=4.6,SNR=12						
BDFB	**Brasilia**	150.11	137		**PKPbc**	22 11 02.2	+0.2
TOA0	**Torodi Ar. Sit**	150.64	286		**PKPbc**	22 11 02.5	-0.8
TORD	**Torodi Ar. Bea**	150.64	286	PKPbc	**PKPbc**	22 11 02.4	-0.8
	comp=Z,10.0nm,0.7s,baz=65,slow=2.6,SNR=34						
KOWA	**Kowa**	155.70	292	PKPab	**PKPab**	22 11 30.7	-0.7
	comp=Z,3.6nm,0.5s,baz=59,slow=3.8,SNR=13						
KOWA	**Kowa**	155.70	292	PKPab	**PKPab**	22 11 31.2	-0.3

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*JMA **07** 21:56:14.6±0.2, 24°.80N×121°.91E, h93^{km}±2^{km}, M3.1*

*TAP **07** 21:56:16.1, 24°.79N×121°.96E, h79^{km}, ML4.2, B*

ISC 07 21:56:16.5±1.2**, 24°.80N**±0°.03×**121°.98E**±0°.02**, h78**^{km}±5^{km}**,**
n142, σ0ˢ.92/251**, 19C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng**	0.14	292	*i* P	**Pn**	21 56 27.8	0.0
	baz=305						
NTC				S	**Sn**	21 56 36.3	+0.2
	baz=305						
TWB1	**Santiao Chiao**	0.21	3	⇓*i*P	**Pn**	21 56 28.0	-0.1
	baz=15						
TWB1				*i* S	**Sn**	21 56 36.2	-0.3
	baz=15						
ILA	**Ilan**	0.21	261	⇑*i*P	**Pn**	21 56 28.2	+0.2
	baz=267						
ILA				*i* S	**Sn**	21 56 37.0	+0.5
	baz=267						
TIPB	**Shuangxi**	0.22	321	⇑*i*P	**Pn**	21 56 28.0	-0.2
	baz=316						
TIPB				*i* S	**Sn**	21 56 36.0	-0.8
	baz=316						
TWC	**Suao**	0.22	211	⇑*i*P	**Pn**	21 56 28.1	0.0
	baz=206						
TWC				S	**Sn**	21 56 36.9	+0.3
	baz=206						
TWE	**Neicheng**	0.29	254	*i* P	**Pn**	21 56 28.5	+0.1
	baz=253						
TWE				*e*S	**Sn**	21 56 38.8	+1.5
	baz=253						
NWF	**Wu-fen Shan**	0.32	327	*i* P	**Pn**	21 56 28.6	-0.2
	baz=329						
NWF				*i* S	**Sn**	21 56 37.3	-0.5
	baz=329						
WFSB	**Wu-fen Shan**	0.32	327	⇑*i*P	**Pn**	21 56 28.6	-0.1
	baz=329						
WFSB				*i* S	**Sn**	21 56 37.4	-0.2
	baz=329						
ENAH	**Nanao**	0.38	203	⇑*i*P	**Pn**	21 56 29.4	+0.4
	baz=203						
ENAH				*e*S	**Sn**	21 56 38.0	-0.2
	baz=203						
TWA	**Mucha**	0.40	297	⇑*i*P	**Pn**	21 56 29.0	-0.2
	baz=302						
TWA				*i* S	**Sn**	21 56 38.0	-0.6
	baz=302						
ENTT	**Nioudou**	0.41	247	⇑*i*P	**Pn**	21 56 29.6	+0.3
	baz=246						
ENTT				S	**Sn**	21 56 40.0	+1.3
	baz=246						
ENA	**Nanau**	0.43	210	P	**Pn**	21 56 29.8	+0.4
	baz=208						
ENA				S	**Sn**	21 56 40.8	+1.9
	baz=208						
NWLT	**Wulai**	0.43	267	⇑*i*P	**Pn**	21 56 29.4	-0.1
	baz=274						
NWLT				*e*S	**Sn**	21 56 39.1	+0.1
	baz=274						
NHDH	**Xindian Distri**	0.44	292	⇑*i*P	**Pn**	21 56 29.3	-0.2
	baz=299						
NHDH				*e*S	**Sn**	21 56 38.4	-0.7
	baz=299						
NDT	**Datong Townshi**	0.47	245	⇑*i*P	**Pn**	21 56 30.2	+0.5
	baz=253						
NDT				*e*S	**Sn**	21 56 40.1	+0.6
	baz=253						
TAP1	**Taipei**	0.47	300	*e*P	**Pn**	21 56 29.5	-0.3
	baz=308						
TAP1				*e*S	**Sn**	21 56 39.1	-0.5
	baz=308						
TAP	**Taipei**	0.49	299	*i* P	**Pn**	21 56 29.8	-0.2
	baz=308						
TAP				*e*S	**Sn**	21 56 39.4	-0.4
	baz=308						
YM01	**YM01**	0.51	313	*i* P	**Pn**	21 56 29.9	-0.3
	baz=315						
YM01				*e*S	**Sn**	21 56 39.3	-0.9
	baz=315						
YM11	**YM11**	0.52	315	*i* P	**Pn**	21 56 30.1	-0.1
	baz=316						
YM11				*e*S	**Sn**	21 56 39.8	-0.6
	baz=316						
YM10	**YM10**	0.52	313	*i* P	**Pn**	21 56 29.9	-0.3
	baz=315						
YM10				*e*S	**Sn**	21 56 39.5	-0.9
	baz=315						
YM05	**YM05**	0.52	314	⇑*i*P	**Pn**	21 56 29.9	-0.4
	baz=316						
YM05				*e*S	**Sn**	21 56 39.6	-0.9
	baz=316						
YM08	**YM08**	0.52	318	⇑*i*P	**Pn**	21 56 29.8	-0.5
	baz=319						
YM08				*e*S	**Sn**	21 56 39.1	-1.3
	baz=319						
YM03	**YM03**	0.55	314	*e*P	**Pn**	21 56 30.1	-0.4
	baz=315						
YM03				*e*S	**Sn**	21 56 40.5	-0.4
	baz=315						
YHNB	**Yeheng**	0.56	257	⇑*i*P	**Pn**	21 56 30.7	0.0
	baz=257						
YHNB				*e*S	**Sn**	21 56 41.0	-0.2
	baz=257						
ANP	**Anpu**	0.56	313	*e*P	**Pn**	21 56 30.3	-0.4
	baz=314						
ANP				*e*S	**Sn**	21 56 41.6	+0.4
	baz=314						
NSK	**Sanguang**	0.57	258	⇑*i*P	**Pn**	21 56 30.7	-0.1
	baz=258						
NSK				*e*S	**Sn**	21 56 41.3	-0.1
	baz=258						
TWY	**Chenhua**	0.58	324	*e*P	**Pn**	21 56 30.7	-0.1
	baz=326						
TWY				*e*S	**Sn**	21 56 41.4	0.0
	baz=326						
TWS1	**Kuangyinshan**	0.59	301	⇑*i*P	**Pn**	21 56 30.9	0.0
	baz=309						
TWS1				*e*S	**Sn**	21 56 41.5	0.0
	baz=309						
NSM	**Shimen**	0.60	324	*e*P	**Pn**	21 56 30.8	-0.2
	baz=325						
NSM				*e*S	**Sn**	21 56 42.0	+0.4
	baz=325						
NTST	**Danshui**	0.60	307	*e*P	**Pn**	21 56 31.0	0.0
	baz=313						
NTST				*e*S	**Sn**	21 56 41.9	+0.3
	baz=313						
NTY	**Taoyuan**	0.65	288	*e*P	**Pn**	21 56 31.6	+0.2
	baz=289						
NTY				*e*S	**Sn**	21 56 43.2	+0.7
	baz=289						
NNSB	**Datong**	0.65	236	*i* P	**Pn**	21 56 32.0	+0.4
	baz=242						
NNSB				*e*S	**Sn**	21 56 43.1	+0.3
	baz=242						
NNSH	**Datong**	0.65	236	*i* P	**Pn**	21 56 32.2	+0.5
	baz=242						
NNSH				*e*S	**Sn**	21 56 43.6	+0.8
	baz=242						
NNS	**Nan Shan**	0.66	237	*i* P	**Pn**	21 56 32.1	+0.4
	baz=242						
NNS				*e*S	**Sn**	21 56 43.4	+0.5
	baz=242						
NACB	**Ninganchiao**	0.71	209	⇑*i*P	**Pn**	21 56 31.5	-0.7
	baz=208						
NACB				*e*S	**Sn**	21 56 43.1	-0.6
	baz=208						
NCU	**National Centr**	0.74	283	⇑*i*P	**Pn**	21 56 32.6	+0.2
	baz=292						
NCU				*i* S	**Sn**	21 56 45.0	+0.8
	baz=292						
NCUH	**Zhongli**	0.74	283	P	**Pn**	21 56 32.6	+0.2
	baz=292						
NCUH				*e*S	**Sn**	21 56 45.0	+0.8
	baz=292						
ETLH	**Xiulin Townshi**	0.74	217	⇑P	**Pn**	21 56 32.4	-0.2
	baz=225						
ETLH				*e*S	**Sn**	21 56 44.3	-0.1
	baz=225						
TWD	**Chiawan**	0.80	206	*i* P	**Pn**	21 56 32.4	-0.7
	baz=215						
TWD				S	**Sn**	21 56 44.7	-0.6
	baz=215						
PCYT	**Pengchaiyu**	0.83	6	⇓*i*P	**Pn**	21 56 33.5	0.0
	baz=13						
PCYT				S	**Sn**	21 56 47.0	+1.0
	baz=13						
FUSS	**Fushou**	0.86	231	⇑*i*P	**Pn**	21 56 34.6	+0.6
	baz=222						
FUSS				S	**Sn**	21 56 47.5	+0.4
	baz=222						
HSN1	**Hsinchu**	0.87	269	P	**Pn**	21 56 34.0	+0.1
	baz=269						
HSN1				S	**Sn**	21 56 47.2	+0.4
	baz=269						
HWA	**Hwalien**	0.89	203	*e*P	**Pn**	21 56 33.9	-0.2
	baz=189						
HWA				*e*S	**Sn**	21 56 48.9	+1.8
	baz=189						
LIOB	**Emei**	0.89	260	⇓*i*P	**Pn**	21 56 34.1	0.0
	baz=260						
LIOB				S	**Sn**	21 56 47.4	+0.2
	baz=260						
SBCB	**Hsinchu**	0.90	270	*i* P	**Pn**	21 56 34.4	+0.1
	baz=270						
SBCB				S	**Sn**	21 56 47.7	+0.3
	baz=270						
NSTT	**Nanjuang**	0.90	259	⇓*i*P	**Pn**	21 56 34.1	-0.1
	baz=259						
NSTT				*i* S	**Sn**	21 56 47.4	0.0
	baz=259						
TWT	**Tachien**	0.91	233	⇓*i*P	**Pn**	21 56 35.2	+0.7
	baz=226						
TWT				*i* S	**Sn**	21 56 49.4	+1.4
	baz=226						
HSN	**Hsinchu**	0.92	270	*i* P	**Pn**	21 56 34.0	-0.3
	baz=272						
HSN				S	**Sn**	21 56 47.1	-0.6
	baz=272						
WHF	**Hehuan Shan**	0.92	225	*i* P	**Pn**	21 56 34.9	0.0
	baz=218						
WHF				*e*S	**Sn**	21 56 48.6	+0.1
	baz=218						
TDCB	**Techi**	0.92	234	⇓*i*P	**Pn**	21 56 35.2	+0.6
	baz=226						
TDCB				S	**Sn**	21 56 48.9	+0.7
	baz=226						
JYNG	**Yonagunijimaku**	0.95	111	P	**Pn**	21 56 34.7	-0.1
JYNG				*e*S	**Sn**	21 56 48.5	+0.1
YOJ	**Yonaguni jima**	1.00	109	P	**Pn**	21 56 35.3	-0.1
YOJ				*e*S	**Sn**	21 56 50.3	+0.8
YOJ	**Yonaguni jima**	1.00	109	*e*P	**Pn**	21 56 34.9	-0.5
	baz=105						
YOJ				*e*S	**Sn**	21 56 48.9	-0.6
	baz=105						
CHGB	**Renai**	1.04	225	*i* P	**Pn**	21 56 36.5	+0.4
	baz=216						
CHGB				S	**Sn**	21 56 50.8	+0.1
	baz=216						
WHP	**Taichung City**	1.07	241	⇓*i*P	**Pn**	21 56 37.0	+0.6
	baz=249						
WHP				S	**Sn**	21 56 51.7	+0.5
	baz=249						
ESL	**Shilin**	1.10	207	*e*P	**Pn**	21 56 35.0	-1.7
	baz=205						
ESL				*e*S	**Sn**	21 56 50.3	-1.4
	baz=205						
NMLH	**Miaoli**	1.11	257	⇓*i*P	**Pn**	21 56 36.9	+0.2
	baz=256						
NMLH				S	**Sn**	21 56 52.3	+0.4
	baz=256						
NSY	**Sanyi**	1.17	251	⇓*i*P	**Pn**	21 56 37.8	+0.3
	baz=250						
NSY				*i* S	**Sn**	21 56 53.8	+0.5
	baz=250						
WPL	**Puli Township**	1.22	230	*e*P	**Pn**	21 56 38.9	+0.8
	baz=239						
WPL				*e*S	**Sn**	21 56 55.3	+1.0
	baz=239						
DPDB	**Guoxing**	1.22	232	P	**Pn**	21 56 38.7	+0.4
	baz=241						
DPDB				*e*S	**Sn**	21 56 55.1	+0.6
	baz=241						
EGFH	**Guangfu**	1.23	204	*e*P	**Pn**	21 56 37.8	-0.5
	baz=209						
EGFH				*e*S	**Sn**	21 56 55.1	+0.5
	baz=209						
WDJ	**Dajia District**	1.30	250	⇓*i*P	**Pn**	21 56 39.3	+0.2
	baz=249						
WDJ				*i* S	**Sn**	21 56 56.1	0.0
	baz=249						
SMLT	**Sun Moon Lake**	1.34	227	⇓*i*P	**Pn**	21 56 40.2	+0.4
	baz=235						
SMLT				*e*S	**Sn**	21 56 59.2	+1.9
	baz=235						
TCU	**Taichung**	1.35	242	P	**Pn**	21 56 40.1	+0.3
	baz=241						
TCU				*e*S	**Sn**	21 56 57.8	+0.4
	baz=241						
TYC	**Yuchr**	1.35	229	P	**Pn**	21 56 40.1	+0.3
	baz=236						
TYC				*e*S	**Sn**	21 56 58.8	+1.4
	baz=236						
SSLB	**Suanglung**	1.37	223	⇓*i*P	**Pn**	21 56 40.6	+0.5
	baz=233						
SSLB				*e*S	**Sn**	21 56 59.0	+1.1
	baz=233						
WWF	**Wufeng**	1.39	237	*e*P	**Pn**	21 56 39.8	-0.4
	baz=245						
WWF				*e*S	**Sn**	21 56 58.2	0.0
	baz=245						
HGSD	**Ruisui**	1.40	201	P	**Pn**	21 56 40.0	-0.4
	baz=209						
HGSD				*e*S	**Sn**	21 56 59.5	+1.1
	baz=209						
EHY	**Hungye**	1.42	205	*e*P	**Pn**	21 56 39.7	-1.1
	baz=195						
WCHH	**Zhanghua**	1.48	241	*e*P	**Pn**	21 56 41.3	-0.1
	baz=240						
WCHH				*e*S	**Sn**	21 57 00.8	+0.6
	baz=240						
WNT1	**Nantou City**	1.48	233	*e*P	**Pn**	21 56 41.6	+0.2
	baz=242						
WNT1				*e*S	**Sn**	21 56 59.7	-0.5
	baz=242						
WNT	**Mingjian**	1.49	232	*e*P	**Pn**	21 56 41.9	+0.2
	baz=242						
WNT				*e*S	**Sn**	21 57 01.5	+0.9
	baz=242						
WJS	**Zhushan**	1.50	230	*e*P	**Pn**	21 56 42.2	+0.5
	baz=239						
WJS				S	**Sn**	21 57 02.1	+1.3
	baz=239						
WHYT	**Xinyi Township**	1.50	223	*e*P	**Pn**	21 56 42.4	+0.6
	baz=232						
WHYT				*e*S	**Sn**	21 57 03.0	+2.1
	baz=232						
YULB	**Yu-li**	1.53	204	*e*P	**Pn**	21 56 40.7	-1.5
	baz=195						
YULB				*e*S	**Sn**	21 57 00.5	-1.1
	baz=195						
EYUL	**Yuli**	1.57	203	*e*P	**Pn**	21 56 42.6	0.0
	baz=208						
EYUL				*e*S	**Sn**	21 57 01.1	-1.2
	baz=208						
TWF1	**Yuli**	1.57	203	*e*P	**Pn**	21 56 41.2	-1.5
	baz=208						
TWF1				*e*S	**Sn**	21 56 60.0	-2.5
	baz=208						
IRIF	**Iriomote-Funau**	1.66	106	P	**Pn**	21 56 43.7	-0.1
IRIF				S	**Sn**	21 57 04.5	-0.1
ALS	**Alishan**	1.67	220	P	**Pn**	21 56 44.7	+0.5
	baz=228						
ALS				*e*S	**Sn**	21 57 07.2	+1.9
	baz=228						
CHN5	**Tsauling**	1.69	225	P	**Pn**	21 56 44.4	+0.1
	baz=233						
CHN5				*e*S	**Sn**	21 57 06.3	+1.0
	baz=233						
WGK	**Gukeng**	1.70	230	*e*P	**Pn**	21 56 44.7	+0.3
	baz=238						
WGK				*e*S	**Sn**	21 57 07.2	+1.7
	baz=238						
FULB	**Fuli**	1.71	202	*e*P	**Pn**	21 56 44.3	-0.2
	baz=208						
FULB				*e*S	**Sn**	21 57 05.7	-0.1
	baz=208						
WDLH	**Douliu**	1.72	230	*e*P	**Pn**	21 56 44.8	+0.2
	baz=239						
WDLH				*e*S	**Sn**	21 57 06.9	+1.0
	baz=239						
RLNB	**Erlin**	1.73	239	P	**Pn**	21 56 44.6	-0.1
	baz=238						
RLNB				S	**Sn**	21 57 06.3	+0.1
	baz=238						
CHKT	**Chengkung**	1.78	198	*e*P	**Pn**	21 56 44.6	-0.9
	baz=197						
CHKT				*e*S	**Sn**	21 57 05.3	-2.1
	baz=197						
HATJ	**Hateruma jima**	1.82	114	*e*S	**Sn**	21 57 09.0	+0.6
WTK	**Tuku**	1.82	233	*e*P	**Pn**	21 56 45.8	-0.2
	baz=232						
WTK				*e*S	**Sn**	21 57 09.6	+1.2
	baz=232						
ELDTW	**Lidau**	1.83	209	P	**Pn**	21 56 46.0	-0.2
	baz=199						
ELDTW				*e*S	**Sn**	21 57 07.1	-1.6
	baz=199						
CHN2	**Minshiung**	1.86	228	*e*P	**Pn**	21 56 47.1	+0.6
	baz=236						
CHN2				*e*S	**Sn**	21 57 10.7	+1.3
	baz=236						
CHN4	**Tsaushan**	1.92	222	*e*P	**Pn**	21 56 47.7	+0.4
	baz=220						
CHN4				*e*S	**Sn**	21 57 12.4	+1.8
	baz=220						
EDH	**Donghe**	1.92	199	*e*P	**Pn**	21 56 46.5	-0.8
	baz=198						
EDH				*e*S	**Sn**	21 57 09.4	-1.3
	baz=198						
CHY	**Chiayi**	1.92	228	*e*P	**Pn**	21 56 47.2	0.0
	baz=236						
CHY				*e*S	**Sn**	21 57 12.2	+1.5
	baz=236						
JKRS	**Kuro-shima**	1.94	106	P	**Pn**	21 56 47.4	0.0
JKRS				*e*S	**Sn**	21 57 11.7	+0.7
TPUB	**Ta-pu**	1.94	220	P	**Pn**	21 56 47.4	-0.1
	baz=218						
TPUB				*e*S	**Sn**	21 57 11.6	+0.5
	baz=218						
STYT	**Tauyuan**	1.97	215	P	**Pn**	21 56 48.8	+0.7
	baz=204						
STYT				*e*S	**Sn**	21 57 15.6	+3.5
	baz=204						
WSF	**Szhu**	1.98	235	*e*P	**Pn**	21 56 47.7	-0.3
	baz=233						
WSF				*e*S	**Sn**	21 57 11.7	-0.3
	baz=233						
WTP	**Ta-pu**	1.99	219	P	**Pn**	21 56 48.4	+0.2
	baz=228						
WTP				*e*S	**Sn**	21 57 14.8	+2.4
	baz=228						
WLGB	**Puzi**	2.02	230	*e*P	**Pn**	21 56 47.3	-1.3
	baz=237						
WLGB				*e*S	**Sn**	21 57 13.2	+0.1
	baz=237						
JIJ	**Ishigaki jima**	2.02	102	P	**Pn**	21 56 48.5	-0.1
JIJ				S	**Sn**	21 57 12.2	-0.9
LONT	**Longtian**	2.04	203	*e*P	**Pn**	21 56 47.8	-1.1
	baz=192						
LONT				*e*S	**Sn**	21 57 12.0	-1.5
	baz=192						
TWK	**Hsinying**	2.04	222	P	**Pn**	21 56 49.3	+0.3
	baz=220						
TWK				*e*S	**Sn**	21 57 16.1	+2.3
	baz=220						
SNST	**Tainan City**	2.07	221	*e*P	**Pn**	21 56 49.8	+0.5
	baz=219						
CHN1	**Nanshi**	2.08	220	P	**Pn**	21 56 49.6	+0.2
	baz=218						
CHN1				*e*S	**Sn**	21 57 15.2	+0.6
	baz=218						
ICHU	**Yijhu**	2.11	228	P	**Pn**	21 56 49.9	+0.1
	baz=226						
ICHU				*e*S	**Sn**	21 57 16.7	+1.4
	baz=226						
PTTC	**Pingtan**	2.12	290	⇓*e*P	**Pn**	21 56 48.8	-1.1
	baz=290						
SGST	**Jiashian**	2.13	217	*e*P	**Pn**	21 56 50.0	-0.1
	baz=225						
SGST				*e*S	**Sn**	21 57 15.9	+0.1
	baz=225						
JISG	**Ishigakijimahi**	2.13	95	P	**Pn**	21 56 50.6	+0.5
JISG				*e*S	**Sn**	21 57 16.0	+0.2
TWG	**Pinlang**	2.14	203	*e*P	**Pn**	21 56 48.7	-1.5
	baz=192						
TWG				*e*S	**Sn**	21 57 14.3	-1.6
	baz=192						
TWGBT	**Beinan**	2.14	203	*e*P	**Pn**	21 56 49.7	-0.5
	baz=192						
TWGBT				*e*S	**Sn**	21 57 12.5	-3.4
	baz=192						
CHN8	**Yiju**	2.17	228	*e*P	**Pn**	21 56 50.8	+0.3
	baz=237						
CHN8				*e*S	**Sn**	21 57 18.3	+1.7
	baz=237						
LDUT	**Ludao**	2.17	192	*e*P	**Pn**	21 56 48.4	-2.2
	baz=186						
LDUT				*e*S	**Sn**	21 57 13.3	-3.2
	baz=186						
SLGT	**Liugui**	2.17	214	*e*P	**Pn**	21 56 51.6	+0.9
	baz=213						
MATB	**Ma-tsu**	2.28	307	*e*P	**Pn**	21 56 51.0	-1.0
	baz=307						
MSUT	**Lienchiang**	2.30	307	*e*P	**Pn**	21 56 51.4	-1.0
	baz=308						

VWUC	VWUC	2.30	275⇓	eP	Pn	21 56 51.4	-0.9
	baz=275						
SCST	Cishan	2.34	216	eP	Pn	21 56 54.0	+1.1
	baz=224						
ECL	Taimali	2.38	203	eP	Pn	21 56 52.2	-1.3
	baz=195						
SSD	Sandimen	2.39	211	eP	Pn	21 56 54.6	+1.1
	baz=209						
TSMG	Majia	2.42	211	eP	Pn	21 56 55.0	+1.1
	baz=221						
TWM1	Shoushan	2.43	216	eP	Pn	21 56 55.8	+1.7
	baz=214						
JTJ	Tarama	2.48	93	P	Pn	21 56 56.2	+1.4
JTJ				eS	Sn	21 57 26.0	+1.8
MASBT	Mashibuluo	2.50	210	eP	Pn	21 56 55.8	+0.7
	baz=208						
MASBT				eS	Sn	21 57 25.9	+1.3
	baz=208						
PNG	Penghu	2.53	241	eP	Pn	21 56 54.0	-1.4
	baz=239						
PHUB	P'eng-hu	2.54	240	eP	Pn	21 56 54.3	-1.3
	baz=238						
PTMZ	Houxiangcun	2.60	276	eP	Pn	21 56 55.5	-0.9
	baz=275						
EAST	Anshuo	2.62	203	eP	Pn	21 56 55.7	-1.0
	baz=194						
SSPT	Xinbi	2.64	210	eP	Pn	21 56 59.0	+2.0
	baz=208						
LYJJ	Jianjiangzhen	2.65	312	eP	Pn	21 56 56.3	-0.8
	baz=313						
XPSS	Dashiqiu	2.66	323	eP	Pn	21 56 57.1	-0.1
	baz=325						
SCZT	Fangliau	2.72	208	eP	Pn	21 56 59.0	+1.0
	baz=206						
LAY	Lan-yu	2.78	188	eP	Pn	21 56 57.3	-1.6
	baz=186						
SLIU	Shizi	2.79	203	eP	Pn	21 56 58.9	-0.1
	baz=201						
VCHM	Qimei	2.82	236	eP	Pn	21 56 58.2	-1.1
	baz=234						
WLCH	Liuqiu	2.84	211	eP	Pn	21 56 59.6	-0.1
	baz=221						
JIRB	Irabujima	2.91	89	eS	Sn	21 57 35.0	+0.6
JMJ	Miyako jima 2	3.02	89	eP	Pn	21 57 02.8	+0.8
	baz=91						
TWK1	Hengchun	3.04	201	eP	Pn	21 57 02.2	-0.1
	baz=199						
TWKBT	Hengchun	3.04	201	eP	Pn	21 57 02.2	-0.2
	baz=199						
JMJ2	Miyako jima3	3.05	90	eS	Sn	21 57 38.9	+1.0
KNM	Kinmen	3.25	264	eP	Pn	21 57 05.7	+0.6
	baz=261						
KNMB	Chin-men Tao	3.28	265	eP	Pn	21 57 04.3	-1.3
	baz=262						
AXDP	Jialang	3.64	272⇓	eP	Pn	21 57 09.5	-1.0
	baz=270						

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*MOS **07** 22:21:38.8±0.8, 60°.93N×166°.92E, h8^{km}, mb4.3/6, Error ellipse: s-maj=17.1km s-min=6.6km az=72.3*
*KRSC **07** 22:21:38.7±1.1, 60°.77N×167°.25E, h22^{km}±9^{km}, ML4.7*
*IDC **07** 22:21:39.1±0.7, 60°.93N×167°.00E, h0^{km}, mb4.0/15, mb1 4.2/18, mb1mx4.0/41, mbtmp4.0/18, ML2.8/2, MS3.4/7, Ms1 3.5/7, ms1mx3.1/56, Error ellipse: s-maj=23.1km s-min=10.1km az=163.0*
*NEIC **07** 22:21:41.7±0.9, 61°.00N±0°.06×166°.8E±0°.2, h10^{km}±1^{km}, mb4.4/40, Error ellipse: s-maj=14.9km s-min=9.1km az=109.0*
ISC 07 22:21:42.8±0.5, **60°.89N**±0°.04×**166°.91E**±0°.05, **h22**^{km}, **n96**, σ**0^{s}98**/100, **mb4.2**/26, **MS3.5**/7, **Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TILK	Tilichiki	0.58	221	PN	Pb	22 21 51.4	-2.9
TILK				S	Sb	22 22 00.4	-1.7
TILK	Tilichiki	0.58	221	eP	Pb	22 21 51.4	-2.9
TILK				eS	Sb	22 22 00.4	-1.7
KMSK	Kamenskaya	1.62	348	PN	Pn	22 22 09.7	-0.3
KMSK				S	Sb	22 22 31.8	-0.2
KMSK	Kamenskaya	1.62	348	eP	Pn	22 22 09.7	-0.3
KMSK				eS	Sb	22 22 31.8	-0.2
OSSR	Ossora	2.53	231	PN	Pn	22 22 21.8	-0.7
OSSR				S	Sn	22 22 52.8	+0.2
OSSR	Ossora	2.53	231	eP	Pn	22 22 21.8	-0.7
OSSR				eS	Sn	22 22 52.8	+0.2
PALN	Palana	3.93	246	PN	Pn	22 22 42.1	+0.4
PALN	Palana	3.93	246	eP	Pn	22 22 42.1	+0.4
KBG	Krutoberegovo	5.14	207	PN	Pn	22 22 58.4	+0.1
KBG	Krutoberegovo	5.14	207	eP	Pn	22 22 58.4	+0.1
KBTR	Krutoberegovo	5.16	206	PN	Pn	22 22 58.4	-0.2
KBTR	Krutoberegovo	5.16	206	eP	Pn	22 22 58.4	-0.2
SRKR	Sorokina	5.19	218	PN	Pn	22 23 00.4	+1.3
SRKR	Sorokina	5.19	218	eP	Pn	22 23 00.4	+1.3
BKI	Bering	5.72	185	PN	Pn	22 23 05.1	-1.2
BKI	Bering	5.72	185	eP	Pn	22 23 05.1	-1.2
TUMR	Tumrok	6.66	216	PN	Pn	22 23 21.9	+2.5
TUMR	Tumrok	6.66	216	eP	Pn	22 23 21.9	+2.5
KZV	Kizimen	6.77	214	PN	Pn	22 23 21.9	+1.0
KZV	Kizimen	6.77	214	eP	Pn	22 23 21.9	+1.0
SEY	Seymchan	7.16	293	Pn	Pn	22 23 25.2	-0.8
	0.6nm,0.3s,baz=103,slow=12,SNR=20						
SEY				Lg	Lg	22 25 27.4	
	0.6nm,0.3s,baz=14,slow=21,SNR=7.1						
MA2	Magadan	8.14	268	Pn	Pn	22 23 38.9	-0.5
	1.5nm,0.3s,baz=59,slow=15,SNR=6.1						
MA2				Sn	Sn	22 25 11.3	+0.6
	1.7nm,0.3s,baz=330,slow=6.2,SNR=7.5						
MA2	Magadan	8.14	268		Pn	22 23 39.0	-0.5
PETK	Petropavlovsk-	9.27	217	Pn	Pn	22 23 56.3	+1.3
	0.1nm,0.3s,baz=33,slow=11,SNR=1.8						
RDOG	Red Dog Mine	14.71	48	Pn	Pn	22 25 09.7	+0.4
YAK	Yakutsk	17.67	290	P	P	22 25 49.3	+1.4
	0.0nm,0.3s,baz=54,slow=1.1,SNR=4.2						
YAK	Yakutsk	17.67	290	eP	P	22 25 52.3	+4.4
YAK				pmax	pmax		
	comp=Z,23nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK	Yakutsk	17.67	290		Pn	22 25 46.6	-0.5
A21K	Barrow	17.74	39	Pn	Pn	22 25 47.2	-0.7
A21K				IAmb	IAmb	22 25 51.5	
	comp=Z,26nm,1.1s						
PPLA	Purkeypile	19.14	66		Pn	22 26 05.8	+0.6
PPLA				IAmb	IAmb	22 26 15.9	
	comp=Z,24nm,1.3s						
SKT	Skwentna	19.66	69		Pn	22 26 11.2	-0.1
SKT				IAmb	IAmb	22 26 13.2	
	comp=Z,20nm,1.0s						
TOLK	Toolik Lake Re	19.69	48		P	22 26 10.9	+0.8
TOLK				IAmb	IAmb	22 26 13.8	
	comp=Z,34nm,1.0s						
TRF	Thorofare Moun	19.87	64	P	Pn	22 26 13.7	-0.2
TRF				IAmb	IAmb	22 26 27.5	
	comp=Z,25nm,1.2s						
I23K	Minto, Yukon-K	19.97	59		P	22 26 14.3	+1.2
SUA	Susitna One	20.17	70		P	22 26 16.8	+1.3
SUA				IAmb	IAmb	22 26 18.3	
	comp=Z,24nm,0.9s						
MDM	Murphy Dome	20.47	59		P	22 26 19.2	+0.6
RND	Reindeer	20.51	64	P	P	22 26 19.8	+0.7
RND				pmax	pmax		
	comp=Z,11nm,0.8s						
RND	Reindeer	20.51	64		P	22 26 19.8	+0.7
RND				IAmb	IAmb	22 26 21.5	
	comp=Z,11nm,0.8s						
WRH	Wood River Hil	20.61	60		P	22 26 20.3	+0.2
WRH				IAmb	IAmb	22 26 25.5	
	comp=Z,14nm,0.8s						
TCOL	CIGO, UAF Yank	20.64	59		P	22 26 20.8	+0.4
TCOL				IAmb	IAmb	22 26 22.2	
	comp=Z,11nm,0.8s						
COLA	College	20.64	59	P	P	22 26 21.0	+0.6
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
COLA	College	20.64	59		P	22 26 21.0	+0.6
COLA				IAmb	IAmb	22 26 28.0	
	comp=Z,12nm,0.8s						
CCB	Clear Creek Bu	20.70	60	P	P	22 26 21.8	+0.7
POKR	Poker Plat Res	20.78	59	P	P	22 26 22.1	+0.2
IL31		21.07	59		P	22 26 25.9	+0.9
ILAR	Eielson Array	21.07	59	P	P	22 26 25.4	+0.4
	comp=Z,4.2nm,0.7s,baz=273,slow=11,SNR=39						
HDA	Harding Lake	21.11	60		P	22 26 26.1	+0.6
HDA				IAmb	IAmb	22 26 27.9	
	comp=Z,27nm,1.1s						
SML	Sawmill	21.16	68	P	P	22 26 25.6	-0.6
SML				IAmb	IAmb	22 26 30.8	
	comp=Z,24nm,1.0s						
DHY	Denali Highway	21.24	64		P	22 26 26.8	-0.3
SCM	Sheep Creek Mo	21.61	67	P	P	22 26 30.6	-0.4
SCM	Sheep Creek Mo	21.61	67		P	22 26 30.6	-0.4
M24K	Tolsona, Glenn	22.05	66		P	22 26 36.0	+0.4
PAX	Paxson	22.10	64	P	P	22 26 35.5	-0.7
PAX				pmax	pmax		
	comp=Z,16nm,1.4s						
PAX	Paxson	22.10	64	P	P	22 26 35.5	-0.7
PAX				IAmb	IAmb	22 26 41.6	
	comp=Z,16nm,1.4s						
KLU	Klutina	22.36	68		P	22 26 39.7	+0.7
KLU				IAmb	IAmb	22 26 41.2	
	comp=Z,13nm,0.7s						
EYAK	Cordova Ski Ar	22.77	70		P	22 26 44.6	+1.4
EYAK				IAmb	IAmb	22 27 03.3	
	comp=Z,26nm,1.2s						
KLR	Kul'dur	22.96	255	P	P	22 26 45.8	+0.5
	comp=Z,5.0nm,0.9s,baz=35,slow=13,SNR=11						
GLB	Gilahina Butte	23.33	67		P	22 26 51.6	+2.6
EGAK	Eagle	23.46	58		P	22 26 49.3	-0.9
EGAK				IAmb	IAmb	22 26 51.2	
	comp=Z,21nm,1.1s						
CRQM	Cirque	23.88	68		P	22 26 55.5	+1.0
BARN	Barnard Glacie	24.43	67		P	22 27 00.1	+0.4
CTGM	Chitina Glacie	24.62	67		P	22 27 02.1	+0.9
YAH	Yahtse	24.67	68		P	22 27 03.6	+1.7
YAH				IAmb	IAmb	22 27 05.3	
	comp=Z,13nm,1.0s						
TABL	Table Mountain	24.91	68		P	22 27 04.9	+0.9
INK	Inuvik	25.60	48	P	P	22 27 08.7	-1.1
	comp=Z,4.7nm,0.8s,baz=263,slow=8.9,SNR=11						
INK	Inuvik	25.60	48	P	P	22 27 09.8	0.0
INK				IAmb	IAmb	22 27 14.7	
	comp=Z,7.7nm,1.0s						
MJAR	Matsushiro Arr	30.40	230	P	P	22 27 53.3	+0.3
	comp=Z,3.0nm,0.8s,baz=16,slow=7.4,SNR=5.8						
MJAR				LR	LR	22 40 20.7	
	comp=Z,56nm,18.7s,baz=345,slow=37						
KSRS	Korea Array	33.83	244	LR	LR	22 43 28.5	
	comp=Z,33nm,18.4s,baz=25,slow=39						
YKA	Yellowknife Ar	35.13	52	P	P	22 28 33.7	-0.4
	comp=Z,2.2nm,0.8s,baz=306,slow=8.3,SNR=23						
SONM	Songino Array	36.22	277	PcP	PcP	22 31 08.7	+0.1
	comp=Z,0.8nm,0.7s,baz=51,slow=0.9,SNR=5.4						
SONM				LR	LR	22 44 30.4	
	comp=Z,94nm,18.5s,baz=228,slow=38						
BJT	Baijiatuau	37.22	259	P	P	22 28 52.5	+0.3
BJT	Baijiatuau	37.22	259	P	P	22 28 52.5	+0.3
BJT				IAmb	IAmb	22 29 04.0	
	comp=Z,7.0nm,0.6s						
ZALV	Zalesovo Beam	41.98	299	LR	LR	22 47 16.6	
	comp=Z,55nm,18.2s,baz=39,slow=37						
FCC	Fort Churchill	45.21	46	P	P	22 29 57.7	+0.2
FCC	Fort Churchill	45.21	46	P	P	22 29 57.7	+0.2
KURK	Kurchatov	46.95	300	P	P	22 30 11.3	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	46.95	300	P	P	22 30 11.3	-0.1
KURK				IAmb	IAmb	22 30 23.7	
	comp=Z,3.7nm,1.1s						
KURBB	Kurchatov Arra	47.06	300	P	P	22 30 11.3	-0.9
	comp=Z,0.7nm,0.6s,baz=42,slow=7.4,SNR=5.2						
MK31	Makanchi Array	48.30	294	P	P	22 30 22.4	+0.5
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	48.30	294	P	P	22 30 22.4	+0.5
MKAR	Makanchi Array	48.30	294	P	P	22 30 19.9	-2.1
	comp=Z,0.3nm,0.7s,baz=40,slow=5.4,SNR=2.6						
MKAR				LR	LR	22 52 04.7	
	comp=Z,76nm,19.7s,baz=350,slow=38						
NVAR	Mina Array Bea	50.15	81	PcP	PcP	22 31 56.4	+0.7
	comp=Z,0.5nm,0.6s,baz=318,slow=2.0,SNR=5.3						
PDAR	Pinedale Array	50.90	71	P	P	22 30 41.5	-0.6
	comp=Z,1.6nm,0.7s,baz=332,slow=3.2,SNR=12						
PDAR				PcP	PcP	22 31 57.6	-0.7
	comp=Z,0.5nm,0.8s,baz=90,slow=0.1,SNR=2.4						
ULM	Lac du Bonnet	51.00	55	P	P	22 30 42.1	-0.3
	comp=Z,4.6nm,0.9s,baz=319,slow=9.7,SNR=6.1						
ULM	Lac du Bonnet	51.00	55	P	P	22 30 43.0	+0.6
ULM	Lac du Bonnet	51.00	55	P	P	22 30 43.0	+0.6
F33A	5 Mile Ranch,	54.32	59	P	P	22 31 07.7	+0.7
KK31	Karatay Array	56.36	299	P	P	22 31 21.1	-0.8
KK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KK31	Karatay Array	56.36	299	P	P	22 31 21.1	-0.8
NOA	NORSAR Array B	56.97	346	P	P	22 31 25.7	-0.2
	comp=Z,1.5nm,0.8s,baz=13,slow=7.3,SNR=3.5						
NOA				LR	LR	22 56 10.9	
	comp=Z,21nm,21.6s,baz=285,slow=36						
N35A	Tabor	58.64	62	P	P	22 31 38.7	+0.8
CMAR	Chiang Mai Arr	63.34	260	P	P	22 32 09.8	-0.2
	comp=Z,0.2nm,0.3s,baz=358,slow=6.3,SNR=4.6						
CMAR				LR	LR	23 03 52.1	
	comp=Z,28nm,18.4s,baz=180,slow=40						
AKASG	Malin Array Be	63.69	331	P	P	22 32 11.3	-0.6
	comp=Z,0.3nm,0.5s,baz=18,slow=7.5,SNR=2.7						
ESDC	Sonseca Array	79.52	353	P	P	22 33 46.5	-0.9
	comp=Z,1.8nm,0.9s,baz=4.0,slow=6.7,SNR=9.6						
WRA	Warramunga Arr	84.72	211	P	P	22 34 14.4	-0.3
	comp=Z,2.2nm,1.0s,baz=19,slow=5.8,SNR=5.1						
ASAR	Alice Springs	88.40	210	P	P	22 34 32.1	-0.5
	comp=Z,0.7nm,0.8s,baz=15,slow=6.8,SNR=4.7						

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*SEA **07** 22:27:56.7±1.3, 48°.09N±0°.01×121°.94W±0°.02, h0^{km}±2^{km}, Md1.6/15, ML1.8/10(NEIC), Error ellipse: s-maj=3.0km s-min=2.7km az=55.0*
NEIC 07 22:27:56.5±1.1, **48°.09N**±0°.02×**121°.97W**±0°.01, **h1**^{km}±9^{km}, **Error ellipse: s-maj=2.2km s-min=1.4km az=183.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCW	Jim Creek	0.11	14		Pg	22 27 58.7	+0.1
B05A	Bryant	0.20	335		Pg	22 28 00.5	+0.2
BLH	Bald Hill	0.26	189		Pg	22 28 02.1	+0.8
HTW	Haystack Looko	0.32	154		Pg	22 28 02.6	+0.1
HTW					Sg	22 28 07.6	+1.0
CMW	Cultus Mountai	0.35	344		Pg	22 28 03.8	+0.5
C05A	Tolt Reservoir	0.44	154		Pg	22 28 04.8	0.0
RPW	Rockport	0.47	40		Pg	22 28 05.6	0.0
B06A	Marblemount	0.54	37		Pg	22 28 06.7	-0.2
B06A				IAML		22 28 15.4	
	comp=E,61nm,0.3s						
B06A				IAML		22 28 15.8	
	comp=N,78nm,0.2s						
GPW	Glacier Peak	0.56	87		Pg	22 28 07.0	-0.3
RATT	Rattlesnake La	0.67	170		Pg	22 28 09.4	0.0
BLN	Blyn Mountain	0.68	264		Pg	22 28 10.3	+0.8
MBW	Mount Baker	0.70	4		Pg	22 28 10.2	+0.3
C06D	Leavenworth	0.74	102		Pg	22 28 10.1	-0.6
WRW	Wenatchee Ridg	0.77	107		Pg	22 28 10.6	-0.6
C04A	Brinnon	0.77	242		Pg	22 28 11.2	0.0
GMW	Gold Mountain	0.77	226		Pg	22 28 11.4	+0.1
GNW	Green Mountain	0.78	228		Pg	22 28 11.5	+0.1
SHUK	Shuksan-Mt. Ba	0.79	14		Pg	22 28 11.7	0.0
HDW	Hoodsport	0.85	239		Pg	22 28 12.6	-0.3
D03D	Eldon	0.94	234		Pg	22 28 14.0	-0.4
VDB	Vedder Mountai	0.94	355		Pg	22 28 14.6	0.0
B04A	Port Angeles	1.03	269		Pg	22 28 16.0	-0.2
NLW	Nelson Butte	1.09	90		Pg	22 28 16.7	-0.8
B011	North Saanich	1.13	300		Pg	22 28 18.0	-0.2
PGC	Sidney	1.14	300	Pg	Pg	22 28 17.9	-0.4
PGC				Sg	Sg	22 28 33.5	+0.5
PGC				IAML		22 28 35.5	
	comp=N,16nm,1.9s						
PGC				IAML		22 28 35.6	
	comp=E,29nm,2.6s						
RVC	Mount Rainier-	1.15	180		Pg	22 28 17.6	-0.9
FMW	Mount Fremont	1.17	170		Pg	22 28 18.0	-1.0
OBSR	Observation Ro	1.19	175		Pg	22 28 18.6	-0.8
LTY	Liberty	1.21	133	Pg	Pb	22 28 20.4	+0.2
PANH	Panhandle Gap,	1.25	170		Pg	22 28 19.7	-0.8
RCM	Mount Rainier-	1.26	173		Pg	22 28 17.3	-3.4
CBSW	Chelan Butte S	1.33	102		Pg	22 28 20.7	-1.2
NLWA	Neilton Lookou	1.46	242	Pn	Pn	22 28 22.8	-1.2
LCW	Lucas Creek	1.50	200		Pn	22 28 23.6	-1.0
EBG	Ellensburg	1.51	141		Pb	22 28 25.3	-0.1
NAC	Naches	1.56	150		Pb	22 28 26.1	-0.1
TDL	Tradedollar La	1.75	186		Pn	22 28 28.1	0.0
B08A	Colville Reser	1.78	80	Pn	Pn	22 28 28.5	0.0
B08A				IAML		22 28 55.4	
	comp=N,7.8nm,4.6s						
B08A				IAML		22 29 23.6	
	comp=E,7.4nm,4.7s						
B201	Coldwater, Mou	1.80	187		Pn	22 28 28.8	+0.1
ERK	Elk Rock	1.80	188		Pn	22 28 28.7	-0.1
B202	Windy Ridge, M	1.85	184		Pn	22 28 29.4	0.0
SOSW	Source of Smit	1.85	184		Pn	22 28 30.1	+0.6
STD	Studebaker Rid	1.86	185		Pn	22 28 29.9	+0.3
FL2	Flat Top 2	1.91	188		Pn	22 28 30.4	+0.1
B203	Quarry, Mount	1.94	187		Pn	22 28 30.9	+0.4
JLK	June Lake	1.95	184		Pn	22 28 31.5	+0.7
CDFW	Cedar Flats	1.97	182		Pn	22 28 32.0	+0.9
PNT	Penticton	1.99	51		Pb	22 28 33.8	+0.3
LVP	Lakeview Peak	2.04	189		Pn	22 28 33.1	+1.0
BUCK	Buck Mountain	3.96	191		Pb	22 29 04.7	-2.3

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*TEH **07** 22:45:28.8, 27°.75N×52°.39E, h21^{km}, ML3.1*
*DSN **07** 22:45:29.2±1.4, 27°.52N×52°.46E, h10^{km}, ML3.4/9, Error ellipse: s-maj=23.7km s-min=7.3km az=6.0*
*OMAN **07** 22:45:30.8±0.3, 27°.48N×52°.54E, h10^{km}, ml3.2/4, Error ellipse: s-maj=14.5km s-min=13.0km az=147.0*
ISC 07 22:45:28.3±1.7, **27°.68N**±0°.05×**52°.4E**±0°.1, **h14**^{km}, **n25**, σ**0^{s}73**/33, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.72	118	ePg	Pn	22 45 43.8	-0.4
LMD1				eSg	Sn	22 45 56.5	+1.4
LMD1				e		22 46 07.3	
	comp=Z,99nm,0.4s						
QIR1	Qir	0.95	34	ePg	Pg	22 45 45.8	-1.0
QIR1				eSg	Sn	22 46 00.0	-0.8
QIR1				e		22 46 09.0	
	comp=Z,99nm,0.4s						
JHRM	Jahrom	1.29	50	ePg	Pg	22 45 53.2	-0.1
JHRM				e		22 46 17.3	
	comp=Z,99nm,0.3s						
LAR1	LAR	1.71	90	ePn	Pb	22 45 59.6	0.0
LAR1				e		22 46 04.3	
	comp=Z,99nm,0.2s						
SHI	Shiraz	1.96	2	ePn	Pn	22 46 01.5	+0.2
SHI				e		22 46 40.8	
	comp=Z,99nm,0.6s						
KAZ1	Kazerun	2.06	340	ePn	Pn	22 46 03.4	+0.8
KAZ1				e		22 46 46.2	
	comp=Z,99nm,0.4s						
SHME	Shamm	3.68	115	P	Pn	22 46 24.8	0.0
BANOM	Banah	3.86	116	i P	Pn	22 46 27.8	+0.4
	SNR=18						
BANOM				S	Sn	22 47 12.3	-0.3
BANOM	Banah	3.86	116	P	Pn	22 46 28.0	+0.6
	SNR=18						
BANOM				S	Sn	22 47 12.7	+0.1
NAZ	Nazwa, Dubai	3.94	132	i P	Pn	22 46 29.8	+1.4
	SNR=12						
ASUD	Al Ashush, Dub	4.00	139	i P	Pn	22 46 30.3	+1.1
	SNR=46						
MSFE	Esma-Masafi	4.05	124	i P	Pn	22 46 30.5	+0.5
	SNR=12						
MSFE				S	Sn	22 47 16.6	-0.7
MDH	Madha	4.19	124	P	Pn	22 46 32.1	+0.3
MDH	Madha	4.19	124	P	Pn	22 46 32.3	+0.5
MDH				S	Sn	22 47 20.0	-0.5
UOSS	Minazif	4.34	128	i P	Pn	22 46 33.8	0.0
	SNR=5.3						
HATD	Hatta, Dubai	4.36	130	P	Pn	22 46 34.6	+0.4
ASHO	Ashiyiah	4.41	132	i P	Pn	22 46 35.4	+0.5
	SNR=35						
ASHO	Ashiyiah	4.41	132	P	Pn	22 46 35.6	+0.7
	SNR=35						
ASHO				S	Sn	22 47 25.6	-0.4
KHGB	Koh Gabri	4.44	52	ePn	Pn	22 46 36.2	+0.8
KHGB				e		22 46 37.5	
	comp=Z,99nm,0.3s						
ICHK	Chekchek	4.86	20	ePn	Pn	22 46 41.5	+0.3
CHMN	Cheshme madani	4.97	63	ePn	Pn	22 46 44.6	+1.7
SOHO	SOHO	5.10	133	i P	Pn	22 46 44.5	+0.2
	SNR=12						
SOHO	SOHO	5.10	133	P	Pn	22 46 44.7	+0.3
SOHO				S	Sn	22 47 43.3	+0.2
ARQ	Araqi	5.68	139	P	Pn	22 46 52.6	+0.2
	SNR=23						
ARQ				S	Sn	22 47 56.2	-1.2
RAYN	Ar Rayn	7.51	238	i P	Pn	22 47 15.6	-1.9
	SNR=12						

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*IDC **07** 22:51:03.5±1.2, 55°.38N×163°.28E, h0^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.4/73, mbtmp3.6/9, ML2.8/2, Error ellipse: s-maj=30.2km s-min=20.5km az=130.0*
*KRSC **07** 22:51:03.5±0.8, 55°.07N×163°.58E, h19^{km}±35^{km}, ML3.7*
*NEIC **07** 22:51:04.7±0.9, 55°.38N±0°.08×163°.3E±0°.2, h10^{km}±1^{km}, mb4.2/6, Error ellipse: s-maj=23.9km s-min=6.5km az=121.0*
ISC 07 22:51:04.4±0.7, **55°.29N**±0°.06×**163°.58E**±0°.05, **h10**^{km}, **n50**, σ**1^{s}14**/50, **mb4.1**/11, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.02	335	eP	Pn	22 51 24.7	-0.1
KBG	Krutoberegovo	1.09	333	eP	Pn	22 51 25.8	+0.1
BKI	Bering	1.37	92	eP	Pn	22 51 28.8	-0.8
BKI				eS	Sb	22 51 46.3	-1.4
SMKR	Semkarok	1.76	318	eP	Pb	22 51 36.7	-0.1
BDR	Baidarnaya	1.85	315	eP	Pb	22 51 37.6	-0.8
KZV	Kizimen	1.89	266	eP	Pn	22 51 36.6	-0.3
SRKR	Sorokina	1.93	316	eP	Pb	22 51 38.8	-0.9
KMNR	Kamenistaya	1.96	285	eP	Pb	22 51 39.2	-1.0
TUMR	Tumrok	1.96	271	eP	Pn	22 51 38.4	+0.6
TUMR				eS	Sn	22 52 02.7	+0.1
KOZ	Kozyrevsk	2.24	292	eP	Pb	22 51 43.9	-1.0
SRDR	Sredinnyy	2.41	297	eP	Pb	22 51 46.4	-1.5
KII	Karymskiy	2.71	244	eP	Pn	22 51 47.9	-0.1
ESO	Esso	2.84	285	eP	Pn	22 51 51.5	+1.7
SPN	Mys Shipunski	3.03	225	eP	Pn	22 51 50.2	-2.1
NLC	Nalytchevo	3.27	231	eS	Sn	22 52 33.0	-1.4
KRER	Koryakskii	3.46	237	eP	Pn	22 51 58.4	0.0
SMAR	Somma	3.46	236	eP	Pn	22 51 57.9	-0.5
KRX	Arik	3.47	238	eP	Pn	22 51 58.5	-0.1
UGLR	Uglovaya	3.48	235	eP	Pn	22 51 58.4	-0.3
AVH	Avacha	3.49	236	eP	Pn	22 51 59.1	+0.4
KOK	Koryaka	3.52	237	eP	Pn	22 51 58.9	-0.3
DALK	Dalny	3.63	233	eP	Pn	22 51 59.8	-0.7
GNL	Ganaly	3.65	246	eP	Pn	22 52 01.8	+0.8
PET	Petropavlovsk	3.68	234	eP	Pn	22 52 01.7	+0.5
PET	Petropavlovsk	3.68	234	Pn	Pn	22 52 00.3	-1.0
KRMR	Karymshinskiy	4.04	235	eP	Pn	22 52 06.4	+0.1
PEA0B	Petropavlovsk-	4.08	240	Pn	Pn	22 52 06.5	-0.4
PETK	Petropavlovsk-	4.08	240	Pn	Pn	22 52 05.5	-1.3
	2.1nm,0.3s,baz=66,slow=17,SNR=24						
PETK				Sn	Sn	22 52 57.9	+3.2
	0.8nm,0.3s,baz=327,slow=13,SNR=4.1						
RUS	Russkaya	4.14	228	eP	Pn	22 52 06.8	-0.8
MTVR	Mutnovka	4.25	231	eP	Pn	22 52 08.8	-0.5
GRL	Gorelyy	4.25	232	eP	Pn	22 52 09.0	-0.3
ASAK	Asacha	4.45	231	eP	Pn	22 52 12.8	+0.9
APC	Apacha	4.46	241	eP	Pn	22 52 13.3	+1.3
SEY	Seymchan	9.58	328	Pn	Pn	22 53 20.2	-1.9
	0.1nm,0.3s,baz=84,slow=19,SNR=1.6						
PPLA	Purkeypile	23.53	53	P	P	22 56 15.8	+1.3
TRF	Thorofare Moun	24.37	52	P	P	22 56 24.0	+1.5
TRF				IAmb	IAmb	22 56 33.6	
	comp=Z,6.2nm,0.9s						
RND	Reindeer	25.02	52	P	P	22 56 29.2	+1.0
RND				IAmb	IAmb	22 56 44.2	
	comp=Z,10nm,1.5s						
MDM	Murphy Dome	25.24	48		P	22 56 31.5	+1.3
MDM				IAmb	IAmb	22 56 45.5	
	comp=Z,7.1nm,1.4s						
MJAR	Matsushiro Arr	25.51	233	P	P	22 56 32.6	-0.2
	comp=Z,2.1nm,0.5s,baz=30,slow=9.7,SNR=4.9						
ILAR	Eielson Array	25.82	48	P	P	22 56 35.9	+0.5
	comp=Z,0.6nm,0.8s,baz=267,slow=7.7,SNR=4.5						
H11N2	WAKE ISLAND Hy	35.58	175	T	T	23 37 05.8	
	baz=359,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	35.60	175	T	T	23 37 05.0	
	baz=359,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	35.60	175	T	T	23 37 09.6	

	baz=359,slow=76,SNR=32						
YKA	**Yellowknife Ar**	40.16	45	P	P	22 58 40.9	+0.8
	comp=Z,0.2nm,0.3s,baz=300,slow=7.1,SNR=2.7						
KURK	**Kurchatov**	48.31	302	P	P	22 59 43.6	-1.9
KURK				IAmb	IAmb	22 59 49.5	
	comp=Z,3.5nm,1.4s						
MK31	**Makanchi Array**	49.04	296	P	P	22 59 49.6	-1.6
MKAR	**Makanchi Array**	49.04	296	P	P	22 59 49.3	-2.0
	comp=Z,0.2nm,0.4s,baz=45,slow=6.1,SNR=4.8						
FINES	**FINESS Array B**	58.89	338	P	P	23 01 02.9	0.0
	comp=Z,3.2nm,1.1s,baz=14,slow=7.7,SNR=3.7						
GERES	**GERESS Array B**	73.21	340	P	P	23 02 36.1	+0.9
	comp=Z,0.4nm,0.6s,baz=37,slow=6.9,SNR=4.1						
ASAR	**Alice Springs**	82.62	207	P	P	23 03 28.9	+1.3
	comp=Z,0.4nm,0.9s,baz=16,slow=5.5,SNR=4.1						

*NIED **07** 22:57:54.0, 35°.93N×141°.14E, h20^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.80; $M_{\theta\theta}$0.78; $M_{\phi\phi}$2.02; $M_{r\theta}$-2.43; $M_{\theta\phi}$1.28; $M_{\phi r}$-1.08; Fault plane solution: $M_0$3.86000×10^{14} NP1:ϕ_s53.00000°, δ67.00000°, λ-73.00000°. NP2:ϕ_s195.00000°, δ28.00000°, λ-124.00000°.*

JMA 07 22:57:54.0±0.2**, 35°.93N×141°.14E, h20^{km}±2^{km}, M4.3, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	0.32	225	P	Pb	22 58 00.9	-0.1
CHOJ				eS	Sb	22 58 05.7	-0.1
JIHU	**Itakohorinouch**	0.50	274	P	Pb	22 58 04.5	+0.4
JIHU				eS	Sb	22 58 11.8	+0.9
JHYU	**Hitachinakayam**	0.61	313	P	Pb	22 58 06.1	+0.2
JHYU				eS	Sb	22 58 14.5	+0.4
JSMT	**Sammumatsuo**	0.63	243	P	Pb	22 58 06.9	+0.6
JSMT				eS	Sb	22 58 15.6	+0.8
JHO	**Hitachi**	0.82	326	P	Pb	22 58 09.1	-0.5
JHO				eS	Sb	22 58 20.7	+0.5
JYT	**Yasato**	0.82	291	P	Pb	22 58 08.8	-0.8
JYT				eS	Sb	22 58 20.0	-0.2
MAT	**Matsushiro**	2.45	285	P	Pn	22 58 33.4	+0.6
MAT				eS	Sn	22 59 01.8	-0.4

*AZER **07** 23:00:55.4±0.1, 39°.29N×45°.96E, h7^{km}, ml4.2/32, Error ellipse: s-maj=1.9km s-min=1.0km az=344.0*
*TIF **07** 23:00:55.9, 39°.33N×46°.04E, h1^{km}±1^{km}*
*NSSP **07** 23:00:56.6, 39°.32N×46°.00E, h10^{km}, Ms3.9*
*MOS **07** 23:00:57.8±1.2, 39°.24N×45°.99E, h11^{km}, mb4.3/12, Error ellipse: s-maj=5.5km s-min=4.2km az=95.3*
*TEH **07** 23:00:57.4, 39°.33N×46°.02E, h11^{km}, ML4.1*
*IDC **07** 23:00:58.1±0.8, 39°.40N×45°.96E, h0^{km}, mb4.0/21, mb1 4.0/28, mb1mx3.9/50, mbtmp3.9/28, ML3.0/6, MS3.4/12, Ms1 3.4/12, ms1mx3.0/49, Error ellipse: s-maj=14.9km s-min=8.2km az=17.0*
*NEIC **07** 23:00:59.0±1.9, 39°.31N±0°.07×46°.02E±0°.08, h10^{km}±1^{km}, mb4.1/33, Error ellipse: s-maj=13.3km s-min=8.8km az=209.0*
*DDA **07** 23:00:58.4, 39°.33N×45°.84E, h2^{km}±1^{km}, ML3.8*
*ISK **07** 23:01:03.8, 39°.32N×45°.44E, h5^{km}, ML3.9/12*

ISC 07 23:00:57.9±1.1**, 39°.32N**±0°.02×**46°.03E**±0°.01**, h1**^{km}±7^{km}**, n321, σ$1^{s}.$58**/398**, mb4.2**/50**, MS3.3**/8**, 20C-20D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBZ	**Shahbuz**	0.38	283	P	Pg	23 01 04.5	-0.6
SBZ				S	Sg	23 01 10.3	+0.3
SBZ	**Shahbuz**	0.38	283	ePg	Pg	23 01 04.5	-0.6
ORD	**Ordubad**	0.39	184	P	Pg	23 01 05.1	-0.2
	SNR=712						
ORD				S	Sg	23 01 10.7	+0.4
ORD	**Ordubad**	0.39	184	ePg	Pg	23 01 05.1	-0.2
NAX	**Nakhchivan**	0.44	251	PG	Pg	23 01 06.4	+0.2
NAX	**Nakhchivan**	0.44	251	P	Pg	23 01 06.5	+0.2
	SNR=2982						
NAX				S	Sg	23 01 13.5	+1.6
NAX	**Nakhchivan**	0.44	251	ePg	Pg	23 01 06.4	+0.2
IMRD	**Marand**	0.65	203	ePg	Pg	23 01 10.1	-0.3
IMRD				e		23 01 23.5	
	comp=Z,99nm,0.5s						
HYR	**Heyderabad**	0.99	294	P	Pg	23 01 16.2	-0.7
	SNR=800						
HYR				S	Sg	23 01 29.6	-0.2
HYR	**Heyderabad**	0.99	294	ePg	Pg	23 01 16.2	-0.7
QRD	**Qoradiz**	1.01	81	P	Pg	23 01 16.3	-1.0
	SNR=625						
QRD				S	Sg	23 01 31.0	+0.6
QRD	**Qoradiz**	1.01	81	ePn	Pg	23 01 16.2	-1.0
ITBZ	**Tabriz**	1.08	175	ePg	Pg	23 01 17.1	-1.5
AGDM	**Agdam**	1.15	46	P	Pb	23 01 18.8	-1.7
	SNR=634						
AGDM				S	Sb	23 01 35.6	-0.4
BLQ	**Beylaqan**	1.25	71	P	Pn	23 01 20.4	-2.1
	SNR=253						
BLQ				Sg	Sb	23 01 38.6	-0.3
NRKZ	**NAREK**	1.26	303	⇓iP	Pn	23 01 20.6	-2.0
NRKZ				⇓iS	Sb	23 01 37.8	-1.4
IHRS	**Heris**	1.27	141	e	Sg	23 01 38.6	-0.1
	comp=Z,99nm,0.4s						
TABZ	**Tabriz**	1.28	169	ePg	Pn	23 01 22.1	-0.9
TABZ				e		23 01 45.7	
	comp=Z,99nm,0.4s						
GNI	**Garni**	1.29	310	Pg	Pn	23 01 22.1	-1.2
	comp=Z,346nm,0.3s,baz=126,slow=2.1,SNR=335						
GNI				Lg	Lg	23 01 40.2	
	comp=Z,699nm,0.3s,baz=175,slow=23,SNR=25						
GNI				LR	LR	23 01 45.6	
	comp=Z,107nm,19.7s,baz=132,slow=40						
GNI	**Garni**	1.29	310	⇓iP	Pn	23 01 21.4	-1.8
GNI				⇑iS	Sb	23 01 40.1	-0.3
GNI	**Garni**	1.29	310	d iPG	Pn	23 01 21.2	-2.1
GNI				pmax	pmax		
	comp=Z,833nm,0.6s						
GNI	**Garni**	1.29	310		Pn	23 01 21.6	-1.7
GNI				Sg	Sb	23 01 39.7	-0.6
GNI	**Garni**	1.29	310	ePg	Pn	23 01 21.5	-1.7
BRDA	**Brd**	1.30	43	Pn	Pn	23 01 22.2	-1.0
	SNR=143						
BRDA				Sn	Sg	23 01 42.2	+2.6
BRDA	**Brd**	1.30	43	ePg	Pn	23 01 22.1	-1.0
GANJ	**Ganja**	1.35	10	PG	Pn	23 01 21.7	-2.1
GANJ	**Ganja**	1.35	10	Pn	Pn	23 01 21.8	-2.1
	SNR=300						
GANJ				Sg	Sb	23 01 39.5	-2.3
GANJ	**Ganja**	1.35	10	ePg	Pn	23 01 21.7	-2.1
GDB	**GEDABAY**	1.42	352	Pn	Pn	23 01 22.9	-2.1
	SNR=329						
GDB				Sg	Sn	23 01 41.8	-2.6
GDB	**GEDABAY**	1.42	352	ePg	Pn	23 01 22.9	-2.1
KAPZ	**Kaputan**	1.44	315	⇓iP	Pn	23 01 23.9	-1.2
KAPZ				⇓iS	Sn	23 01 43.3	-1.5
TASB	**TASBURUN-IGDIR**	1.53	296	PN	Pn	23 01 25.8	-0.7
TASB				SN	Sn	23 01 43.8	-3.3
TASB	**TASBURUN-IGDIR**	1.53	296	ePn	Pn	23 01 25.7	-0.7
ZRD	**Zardab**	1.60	52	Pn	Pn	23 01 27.2	0.0
	SNR=104						
ZRD				Sn	Sg	23 01 51.0	+1.8
ZRD	**Zardab**	1.60	52	ePg	Pn	23 01 27.2	0.0
IGDI	**IGDIR**	1.60	291	i P	Pn	23 01 26.2	-1.2
IGDI				i S	Sn	23 01 46.5	-2.3
IGDI				IAML		23 01 48.0	
	comp=N,2µm,0.7s						
IGDI				IAML		23 01 54.0	
	comp=E,3µm,0.5s						
IGDI	**IGDIR**	1.60	291	ePn	Pn	23 01 26.2	-1.2
CLDR	**Caldiran**	1.65	265	PN	Pn	23 01 27.7	-0.5
CLDR	**Caldiran**	1.65	265	i P	Pn	23 01 27.4	-0.7
CLDR				i S	Sn	23 01 47.5	-2.6
CLDR				IAML		23 01 55.0	
	comp=N,994nm,1.4s						
CLDR				IAML		23 02 01.0	
	comp=E,1µm,0.9s						
CLDR	**Caldiran**	1.65	265	ePn	Pn	23 01 27.4	-0.7
MNGR	**Mingechevir, A**	1.67	29	PN	Pn	23 01 28.5	+0.3
MNGR	**Mingechevir, A**	1.67	29	Pn	Pn	23 01 28.6	+0.3
	SNR=54						
MNGR				Sn	Sb	23 01 51.4	+0.5
MNGR	**Mingechevir, A**	1.67	29	ePn	Pn	23 01 28.5	+0.3
OZAP	**Van, Ozalp-Mer**	1.71	248	i P	Pn	23 01 29.5	+0.5
OZAP				i S	Sg	23 01 55.3	+2.4
OZAP				IAML		23 02 01.0	
	comp=E,672nm,1.2s						
OZAP				IAML		23 02 06.0	
	comp=N,859nm,0.9s						
METS	**Metsamor**	1.72	300	⇓iP	Pn	23 01 28.1	-0.9
METS				⇑iS	Sn	23 01 50.4	-1.2
YRD	**Yardimli**	1.77	102	Pn	Pn	23 01 29.5	-0.3
	SNR=617						
YRD				Sn	Sb	23 01 53.5	-0.5
YRD	**Yardimli**	1.77	102	ePn	Pn	23 01 29.4	-0.3
QZX	**Qazax, Azerbai**	1.81	344	Pn	Pn	23 01 29.9	-0.3
	SNR=150						
QZX				Sn	Sn	23 01 54.1	+0.2
DYDN	**Diyadin**	1.82	278	i P	Pn	23 01 30.5	-0.1
DYDN				i S	Sb	23 01 55.1	-0.5
DYDN				IAML		23 02 08.0	
	comp=E,1µm,0.7s						
DYDN				IAML		23 02 16.0	
	comp=N,1µm,1.0s						
GLBA	**Clilabad**	1.84	92	Pn	Pn	23 01 30.7	+0.2
	SNR=124						
GLBA				Sn	Sb	23 01 55.8	+0.1
VNNZ	**Vanand**	1.87	296	⇓iP	Pn	23 01 31.8	+0.7
VNNZ				⇓iS	Sb	23 01 57.3	+0.4
LRK	**Lerik**	1.92	110	Pn	Pn	23 01 31.8	-0.1
	SNR=175						
LRK				Sn	Sb	23 01 58.3	-0.1
SAAT	**Saatly**	1.93	73	Pn	Pn	23 01 30.1	-1.7
	SNR=33						
SAAT				Sg	Sn	23 01 55.0	-1.6
VMUR	**Van-Muradiye**	1.94	261	i P	Pb	23 01 33.4	-0.7
VMUR				i S	Sb	23 01 59.2	+0.4
VMUR				IAML		23 02 11.0	
	comp=N,818nm,0.9s						
VMUR				IAML		23 02 17.0	
	comp=E,705nm,1.6s						
ISRB	**Sarab**	1.97	139	ePn	Pn	23 01 33.1	+0.6
ISRB				e		23 02 06.7	
	comp=Z,99nm,0.5s						
KDMR	**Kurdemir**	1.97	57	Pn	Pn	23 01 32.5	+0.2
	SNR=28						
KDMR				Sn	Sb	23 02 00.6	+1.0
SEKA	**Sheki**	2.09	25	PN	Pn	23 01 34.6	+0.5
SEKA	**Sheki**	2.09	25	Pn	Pn	23 01 34.6	+0.5
	SNR=410						
SEKA				Sn	Sb	23 02 02.5	-0.7
STE	**Stepanavan**	2.11	323	⇓iP	Pn	23 01 35.6	+1.2
STE				⇓iS	Sg	23 02 05.6	0.0
ERCV	**ERCIS-VAN**	2.11	263	PN	Pn	23 01 34.9	+0.4
DDFL	**Dedoflistskaro**	2.13	2	P	Pb	23 01 37.0	-0.3
DDFL	**Dedoflistskaro**	2.13	2	P	Pb	23 01 38.6	+1.3
DDFL	**Dedoflistskaro**	2.13	2	i P	Pb	23 01 36.8	-0.5
DDFL				i S	Sg	23 02 08.9	+2.6
DDFL	**Dedoflistskaro**	2.13	2	PN	Pb	23 01 37.0	-0.3
QBL	**Gabala**	2.14	40	Pn	Pn	23 01 35.2	+0.5
	SNR=199						
QBL				Sn	Sb	23 02 04.7	+0.2
VANB	**Van**	2.18	252	PN	Pb	23 01 36.9	-1.3
TVAN	**Van**	2.19	250	i P	Pn	23 01 36.9	+1.3
TVAN				IAML		23 02 32.0	
	comp=E,452nm,0.8s						
YOVA	**Hakkari_Yksek**	2.20	219	i P	Pb	23 01 37.4	-1.2
YOVA				i S	Sb	23 02 07.3	+0.9
IML	**Ismayilli**	2.22	48	Pn	Pn	23 01 35.8	0.0
	SNR=294						
IML				Sn	Sb	23 02 06.7	0.0
LKRN	**Lenkeran, Azer**	2.23	105	PN	Pn	23 01 36.4	+0.5
LKRN	**Lenkeran, Azer**	2.23	105	Pn	Pn	23 01 36.4	+0.5
	SNR=46						
LKRN				Sn	Sb	23 02 06.4	-0.5
IHSH	**Hashtrud**	2.23	154	ePn	Sg	23 01 38.1	-4.6
IHSH				e		23 02 11.2	
	comp=E,99nm,0.3s						
KOTA	**Agri, Merkez-K**	2.23	283	i P	Pb	23 01 38.4	-0.8
KOTA				i S	Sb	23 02 06.8	-0.6
ASTR	**Astara**	2.28	108	Pg	Pn	23 01 37.8	+1.1
	SNR=40						
ASTR				Sg	Sb	23 02 09.5	+0.9
EAK	**Akyaka**	2.31	307	i P	Pb	23 01 39.1	-1.3
EAK				i S	Sb	23 02 11.0	+1.5
EAK				IAML		23 02 13.0	
	comp=N,2µm,0.8s						
EAK				IAML		23 02 16.0	
	comp=E,2µm,1.0s						
AGRB	**Hanur-Agry**	2.36	277	PN	Pn	23 01 39.1	+1.1
ZKTA	**Zakatala**	2.37	11	Pg	Pn	23 01 38.8	+0.9
	SNR=74						
ZKTA				Sg	Sb	23 02 11.6	+0.6
ALIB	**Äli-Bayra**	2.39	73	Pg	Pn	23 01 39.7	+1.6
ALIB				Sg	Sb	23 02 12.7	+1.1
KZRT	**Kazreti**	2.42	330	P	Pn	23 01 40.5	+1.9
KZRT				S	Sb	23 02 10.9	-1.6
KZRT	**Kazreti**	2.42	330	P	Pb	23 01 40.8	-1.4
KZRT				S	Sb	23 02 11.5	-1.0
KZRT	**Kazreti**	2.42	330	i P	Pb	23 01 40.7	-1.4
KZRT				i S	Sb	23 02 11.0	-1.4
KZRT	**Kazreti**	2.42	330	PN	Pn	23 01 40.5	+1.9
KZRT				S	Sb	23 02 10.9	-1.6
DMNI	**Dmanisi**	2.45	326	P	Pn	23 01 40.0	+0.9
DMNI				S	Sb	23 02 12.8	-0.8
DMNI	**Dmanisi**	2.45	326	P	Pb	23 01 41.7	-1.2
DMNI				S	Sb	23 02 13.5	-0.1
DMNI	**Dmanisi**	2.45	326	PN	Pn	23 01 40.0	+0.9
DMNI				S	Sb	23 02 12.8	-0.8
PQL	**Pirkuli**	2.46	52	Pn	Pn	23 01 39.7	+0.4
	SNR=40						
PQL				Sn	Sb	23 02 13.9	+0.1
XNQ	**Khinaliq**	2.46	40	Pn	Pn	23 01 39.3	-0.1
	SNR=81						
XNQ				Sn	Sn	23 02 11.9	+1.8
LGD	**Lagodekhi**	2.52	4	P	Pn	23 01 40.8	+0.8
LGD				S	Sb	23 02 15.6	+0.1
LGD	**Lagodekhi**	2.52	4	P	Pb	23 01 43.4	-0.6
LGD				S	Sb	23 02 16.5	+1.0
LGD	**Lagodekhi**	2.52	4	PN	Pn	23 01 40.8	+0.8
LGD				S	Sb	23 02 15.6	+0.1
AKT	**Akhty**	2.52	30	ePN	Pn	23 01 41.1	+1.0
AKT				e		23 01 47.5	
AKT				eS	Sb	23 02 15.3	-0.3
AKT				e		23 02 21.5	
AKT				e		23 02 28.6	
AKT				pmax	pmax		
	comp=Z,274nm,0.5s						
AKT				smax	smax		
	comp=E,1µm,0.4s						
AKT				smax	smax		
	comp=E,1µm,0.5s						
AKT				smax	smax		
	comp=N,446nm,0.4s						
AKT				MLR	MLR		
	comp=Z,206nm,2.0s						
HAKT	**HAKKARI**	2.53	227	i P	Pn	23 01 41.7	+1.4
BTNK	**Botanikuri**	2.54	339	P	Pn	23 01 41.9	+1.6
BTNK				S	Sb	23 02 16.4	+0.3
BTNK	**Botanikuri**	2.54	339	P	Pb	23 01 43.5	-0.9
BTNK				S	Sb	23 02 16.7	+0.5
BTNK	**Botanikuri**	2.54	339	i P	Pn	23 01 42.0	+1.6
BTNK				i S	Sb	23 02 15.9	-0.2
BTNK				IAML		23 02 24.0	
	comp=E,573nm,2.0s						
BTNK	**Botanikuri**	2.54	339	PN	Pn	23 01 41.9	+1.6
BTNK				S	Sb	23 02 16.4	+0.3
GBS	**Qobustan**	2.55	61	Pg	Pn	23 01 42.7	+2.3
GBS				Sg	Sb	23 02 17.9	+1.5
MAHB	**Mahabad**	2.56	186	ePn	Pb	23 01 42.9	-1.7
MAHB				e		23 02 18.9	
	comp=Z,99nm,0.6s						
AKDM	**Akdamar-Van**	2.58	248	PN	Pn	23 01 42.4	+1.5
KARS	**Kars**	2.62	301	PN	Pn	23 01 43.4	+2.0
SEAG	**Tbilisi Sea**	2.62	340	P	Pb	23 01 44.0	-1.6
SEAG	**Tbilisi Sea**	2.62	340	P	Pb	23 01 44.8	-0.8
SEAG				S	Sb	23 02 18.3	0.0
SEAG	**Tbilisi Sea**	2.62	340	PN	Pb	23 01 44.0	-1.6
ADCV	**BITLIS_Adilcev**	2.62	260	i P	Pb	23 01 44.8	-0.9
MLAZ	**Malazgirt-MUS**	2.71	267	PN	Pn	23 01 43.8	+1.1
ATGJ	**Altiaghaj**	2.71	54	Pg	Pn	23 01 44.7	+2.0
ATGJ				Sg	Sb	23 02 22.8	+1.7
QUBA	**Quba, Azerbaij**	2.78	42	Pg	Pn	23 01 45.2	+1.7
	SNR=16						
QUBA				Sg	Sb	23 02 23.9	+1.1
QSAR	**Qusar**	2.78	37	Pg	Pn	23 01 45.9	+2.3
	SNR=35						
QSAR				Sg	Sb	23 02 24.3	+1.3
EATA	**Eleskirt**	2.79	282	i P	Pb	23 01 48.8	+0.2
EATA				i S	Sb	23 02 25.3	+2.0
CUKT	**Cukurca**	2.81	223	PN	Pb	23 01 47.1	-1.8
CUKT	**Cukurca**	2.81	223	i P	Pn	23 01 45.5	+1.5
CUKT				IAML		23 02 47.0	
	comp=E,418nm,0.8s						
SIZA	**Siyzn**	2.82	50	Pg	Pn	23 01 46.3	+2.2
	SNR=11						
SIZA				Sg	Sb	23 02 26.5	+2.5
AKH	**Akhalkalaki**	2.85	318	P	Pb	23 01 49.1	-0.6
AKH	**Akhalkalaki**	2.85	318	P	Pb	23 01 49.0	-0.6
AKH	**Akhalkalaki**	2.85	318	PN	Pb	23 01 48.1	-1.6
AKH	**Akhalkalaki**	2.85	318	PN	Pn	23 01 46.5	+1.8
AKH	**Akhalkalaki**	2.85	318	Pn	Pn	23 01 46.5	+1.8
BRNG	**Burnasheti**	2.85	325	P	Pb	23 01 49.0	-0.7
BRNG	**Burnasheti**	2.85	325	P	Pb	23 01 49.1	-0.5
BRNG				S	Sb	23 02 27.1	+2.0
PERV	**Siirt/Pervari-**	3.05	244	i P	Pn	23 01 49.6	+2.2
SENK	**Senkaya-Erzuru**	3.09	295	PN	Pn	23 01 50.1	+2.1
BLIS	**Bitlis-Merkez**	3.18	255	i P	Pn	23 01 50.2	+1.0
BLIS				i S	Sb	23 02 37.3	+2.7
KOPR	**Koprukoy-ERZUR**	3.29	283	PN	Pn	23 01 52.5	+1.8
EPOS	**Posof**	3.33	312	i P	Pb	23 01 56.2	-1.7
EPOS				i S	Sb	23 02 37.9	-1.1
GUDG	**Gudauri**	3.36	340	P	Pn	23 01 54.4	+2.7
GUDG	**Gudauri**	3.36	340	P	Pb	23 01 58.7	+0.4
GUDG				S	Sb	23 02 40.9	+1.1
GUDG	**Gudauri**	3.36	340	PN	Pn	23 01 54.4	+2.7
ABS	**Abastumani**	3.46	316	P	Pb	23 01 59.9	0.0
ABS	**Abastumani**	3.46	316	P	Pb	23 01 59.9	0.0
ABS				S	Sg	23 02 47.7	-1.2
ABS	**Abastumani**	3.46	316	PN	Pb	23 01 59.9	0.0
ABS				S	Sg	23 02 47.7	-1.2
SRTM	**Siirt_Merkez**	3.48	249	i P	Pn	23 01 54.8	+1.7
MUSM	**Mu-Merkez**	3.57	262	i P	Pn	23 01 56.8	+2.3
DAGI	**Agillar**	3.61	301	i P	Pb	23 02 01.8	-0.8
DAGI				i S	Sb	23 02 46.6	-0.2
AKDA	**Akdag**	3.68	284	i P	Pb	23 02 04.3	+0.5
DBAD	**Bademkaya**	3.73	299	i P	Pb	23 02 04.5	-0.1
QSDN	**Sirdan**	3.75	137	ePn	Pn	23 02 00.1	+3.0
TKB	**Tkibuli**	3.81	324	P	Pb	23 02 04.5	-1.3
TKB	**Tkibuli**	3.81	324	P	Pb	23 02 04.7	-1.2
TKB				S	Sb	23 02 53.6	+1.2
TKB	**Tkibuli**	3.81	324	PN	Pb	23 02 04.5	-1.3
MAK	**Makhachkala**	3.81	17	ePN	Pn	23 01 57.7	+0.1
MAK				eS	Sn	23 02 42.6	-0.4
MAK				pmax	pmax		
	comp=Z,488nm,1.4s						
MAK				MLR	MLR		
	comp=Z,662nm,13.0s						
ZEI	**Tsey**	3.82	336	ePN	Pn	23 02 02.2	+4.1
ZEI				pmax	pmax		
	comp=Z,69nm,0.6s						
DBOC	**Borcka**	3.90	303	i P	Pb	23 02 06.3	-1.2
SLHN	**Bingol, Solhan**	3.91	266	i P	Pb	23 02 04.8	-2.8
SVAN	**Silvan-Diyarba**	3.95	254	PN	Pn	23 02 01.8	+2.1
EMRE	**Erzurum,Aziziy**	3.96	282	i P	Pb	23 02 10.5	+1.9
MIDY	**Mardin/Midyat-**	4.11	244	i P	Pn	23 02 02.5	+0.6
KOPT	**Kop Dagi**	4.33	281	Pn	Pn	23 02 06.1	+1.1
HSRG	**Sareghieh**	4.44	155	ePn	Pn	23 02 08.3	+1.6
QABG	**Abgarm-Qazvin**	4.58	141	ePn	Pn	23 02 09.6	+1.2
QALM	**Alamut, Qazvin**	4.65	127	ePn	Pn	23 02 12.1	+2.6
DIYA	**Diyarbakir**	4.83	255	i P	Pn	23 02 12.3	+0.6
KOVA	**Elazig, Kovanc**	4.88	265	i P	Pn	23 02 15.7	+3.2
IRAZ	**Razeghan**	4.99	140	ePn	Pn	23 02 16.4	+2.3
KBZ	**Khabaz**	5.00	333	Pn	Pn	23 02 17.9	+4.0
	comp=Z,0.1nm,0.3s,baz=190,slow=20,SNR=3.0						
KBZ				Sn	Sn	23 03 11.4	-0.9
	comp=Z,0.5nm,0.3s,baz=129,slow=13,SNR=1.6						
KBZ				Lg	Lg	23 03 32.7	
	baz=154,slow=20,SNR=1.5						
KBZ				LR	LR	23 04 05.5	
	comp=Z,29nm,20.5s,baz=138,slow=38						
KBZ	**Khabaz**	5.00	333	⇓ePN	Pn	23 02 14.8	+0.9
KIV	**Kislovodsk**	5.27	333	⇓ePN	Pn	23 02 21.2	+3.4
KIV				i		23 02 32.1	
KIV				eS	Sn	23 03 18.1	-1.1
KIV				pmax	pmax		
	comp=Z,18nm,1.2s						
KIV				MLR	MLR		
	comp=Z,56nm,15.0s						
KIV	**Kislovodsk**	5.27	333	Pn	Pn	23 02 20.0	+2.2
IPRN	**Peran**	5.86	120	ePn	Pn	23 02 28.8	+2.8
KRSH	**Karshahi**	7.25	136	ePn	Pn	23 02 46.3	+1.2
GAZ	**Gaziantep**	7.26	256	Pn	Pn	23 02 45.4	+0.3
IANJ	**Anjilo**	7.36	119	ePn	Pn	23 02 49.8	+3.1
GEYT	**Alibeck**	9.56	95	Pn	Pn	23 03 14.8	-1.9
	comp=Z,1.3nm,0.3s,baz=272,slow=18,SNR=10						
GEYT				Sn	Sn	23 05 00.8	-4.0
	comp=Z,0.6nm,0.3s,baz=273,slow=13,SNR=2.8						
GYA0B	**ALIBECK ARRAY**	9.56	95	Pn	Pn	23 03 15.8	-0.9
BRTR	**Keskin Array B**	9.58	276	Pn	Pn	23 03 18.0	+0.9
	comp=Z,0.0nm,0.3s,baz=31,slow=39,SNR=1.8						
BRTR				LR	LR	23 07 25.3	
	comp=Z,114nm,19.3s,baz=88,slow=41						
BRTR	**Keskin Array B**	9.58	276	P	Pn	23 03 18.0	+0.9
BELG	**Belogornoye**	13.13	4	Pn	Pn	23 04 04.7	-0.6
	comp=Z,0.5nm,0.3s,baz=252,slow=2.8,SNR=2.7						
BELG	**Belogornoye**	13.13	4	⇓eP	Pn	23 04 08.9	+3.6
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
EIL	**Elat**	13.26	227	LR	LR	23 09 19.4	
	comp=Z,106nm,19.2s,baz=30,slow=38						
AKTO	**Aktyubinsk**	13.97	33	Pn	Pn	23 04 13.3	-3.6
	comp=Z,0.3nm,0.3s,baz=197,slow=20,SNR=2.9						
AKTO				LR	LR	23 10 35.0	
	comp=Z,85nm,18.2s,baz=253,slow=41						
ABKAR	**Akbulak array**	14.05	40		Pn	23 04 16.8	-1.1
RAYN	**Ar Rayn**	15.75	182	P	Pn	23 04 40.3	-0.7
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RAYN	**Ar Rayn**	15.75	182	Pn	Pn	23 04 40.3	-0.7
MLR	**Muntele Rosu**	16.05	299	⇑P	P	23 04 51.6	+3.2
MLR	**Muntele Rosu**	16.05	299	⇑P	P	23 04 51.6	+3.2
BIZ	**Bicaz**	16.39	304	⇑P	P	23 04 52.8	+0.7
AKASG	**Malin Array Be**	16.41	319	Pn	Pn	23 04 48.9	-0.4
	comp=Z,0.3nm,0.3s,baz=126,slow=11,SNR=4.7						
AKBB	**Malin Array Si**	16.41	319	P	Pn	23 04 49.7	+0.4
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AKBB	**Malin Array Si**	16.41	319	Pn	Pn	23 04 49.7	+0.4
DOPR	**Dopca**	16.55	300	⇑P	P	23 04 56.1	+2.2
VOIR		16.64	298	⇑P	P	23 04 57.8	+2.9
VOIR		16.64	298	⇑P	P	23 04 57.8	+2.9
OBN	**Obninsk**	17.04	341	⇑eP	P	23 04 59.0	0.0
OBN				pmax	pmax		
	comp=Z,16nm,0.8s						
BURAR	**Bucovina Array**	17.20	306	⇑P	P	23 05 01.1	+0.1
BURAR	**Bucovina Array**	17.20	306	⇑P	P	23 05 01.1	+0.1
BUR08	**Bucovina Ar. S**	17.22	306		P	23 05 00.8	-0.5
AGG	**Agios Georgios**	18.37	277	P	P	23 05 14.2	+0.2
AGG				pmax	pmax		
	comp=Z,20nm,1.2s						
AGG	**Agios Georgios**	18.37	277		P	23 05 14.2	+0.2
AGG				IAmb	IAmb	23 05 28.2	
	comp=Z,20nm,1.2s						
IUG	**Iuzhnay**	18.40	73	eP	Pn	23 05 14.3	0.0
	baz=74						
IUG	**Iuzhnay**	18.40	73	eP	Pn	23 05 14.2	0.0
DRGR		18.56	301	⇑P	Pn	23 05 17.4	+1.2
DRGR		18.56	301	⇑P	Pn	23 05 17.4	+1.2
KK31	**Karatay Array**	18.79	70	P	P	23 05 16.3	-2.2
KK31				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KK31	**Karatay Array**	18.79	70	P	P	23 05 16.3	-2.2
KKAR	**Karatay Array**	18.79	70	P	P	23 05 16.4	-2.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KKAR	**Karatay Array**	18.79	70	P	P	23 05 16.4	-2.1
KBL	**Kabul**	18.99	97	P	P	23 05 20.2	-0.8
KBL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KBL	**Kabul**	18.99	97	P	P	23 05 20.2	-0.8
ARU	**Arti**	19.02	22	P	P	23 05 20.0	-1.0
	comp=Z,0.0nm,0.3s,baz=190,slow=12,SNR=7.0						
ARU				LR	LR	23 14 52.9	
	comp=Z,142nm,20.1s,baz=224,slow=44						
ARU	**Arti**	19.02	22	c iP	P	23 05 21.2	+0.2
ARU				S	S	23 08 56.3	-1.2
ARU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ARU	**Arti**	19.02	22	P	P	23 05 19.5	-1.4
ARU				IAmb	IAmb	23 05 32.4	

	comp=Z,18nm,1.4s						
ITM	Ithomi	19.04	271	P	P	23 05 20.5	-0.8
DZA	Taraz	19.38	71	eP	Pn	23 05 25.5	-0.5
	baz=72						
DZA	Taraz	19.38	71	eP	Pn	23 05 25.5	-0.5
KIRV	Kirov	19.41	5	P	P	23 05 23.9	-1.2
	comp=Z,0.9nm,0.3s,baz=351,slow=2.5,SNR=4.4						
KIRV	Kirov	19.41	5	⇓iP	P	23 05 24.9	-0.2
KOLS	Kolonicke sedl	19.50	307	eP	Pn	23 05 33.3	+5.8
KOLS	Kolonicke sedl	19.50	307	eP	Pn	23 05 33.3	+5.8
DIVS	Divibare	19.98	292	P	Pn	23 05 32.4	-1.0
CRVS	Cervenica-Dubn	20.00	307	eP	Pn	23 05 36.9	+3.5
CRVS	Cervenica-Dubn	20.00	307	eP	Pn	23 05 36.9	+3.5
IDID	Didziasalis	20.56	327	eP	P	23 05 38.0	+0.3
ARSB	Arslanbob	20.62	76	P	P	23 05 39.1	+0.3
ARSB				pmax	pmax		
	comp=Z,19nm,1.4s						
ARSB	Arslanbob	20.62	76	P	P	23 05 39.1	+0.3
ARSB				IAmb	IAmb	23 05 47.3	
	comp=Z,20nm,1.4s						
PSZ	Piszkesteto	20.70	303	P	P	23 05 39.0	-0.5
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PSZ	Piszkesteto	20.70	303	P	P	23 05 39.0	-0.5
PSZ				IAmb	IAmb	23 05 56.4	
	comp=Z,10nm,1.4s						
IIGN	Ignalina	20.80	327	eP	P	23 05 41.0	+0.7
ISAL	Salakas	20.99	327	eP	P	23 05 42.8	+0.4
BTLS	Baital	21.48	65	eP	P	23 05 47.4	-0.4
	baz=66						
BTLS	Baital	21.48	65	eP	P	23 05 47.3	-0.4
VYHS	Vyhne	21.54	304	eP	P	23 05 49.5	+1.1
VYHS	Vyhne	21.54	304	eP	P	23 05 49.5	+1.1
BRVK	Borovoye	21.56	42	⇑eP	P	23 05 53.4	+4.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BRVK	Borovoye	21.56	42	P	P	23 05 48.5	-0.1
BRVK				IAmb	IAmb	23 05 53.7	
	comp=Z,7.0nm,1.0s						
BVAR	Borovoye Array	21.60	43	P	P	23 05 48.5	-0.5
	comp=Z,0.5nm,0.4s,baz=258,slow=7.2,SNR=3.5						
BRZS	Berezniki	21.64	52	eP	P	23 05 50.6	+1.1
	baz=52						
BRZS	Berezniki	21.64	52	eP	P	23 05 50.6	+1.1
AAK	Ala-Archa	21.70	72	P	P	23 05 51.3	+0.9
	comp=Z,3.2nm,0.8s,baz=262,slow=12,SNR=8.5						
AAK				LR	LR	23 15 28.9	
	comp=Z,82nm,18.7s,baz=294,slow=40						
AAK	Ala-Archa	21.70	72	⇓eP	P	23 05 51.9	+1.5
AAK				pmax	pmax		
	comp=Z,25nm,0.9s						
AAK	Ala-Archa	21.70	72	P	P	23 05 51.0	+0.7
AAK				IAmb	IAmb	23 05 58.3	
	comp=Z,12nm,1.1s						
FRU1	Bishkek	21.80	72	P	P	23 05 51.4	+0.1
FRU1				pmax	pmax		
	comp=Z,16nm,1.1s						
FRU1	Bishkek	21.80	72	P	P	23 05 51.4	+0.1
SGDS	Sogindy	21.80	70	eP	P	23 05 53.7	+2.3
	baz=70						
SGDS	Sogindy	21.80	70	eP	P	23 05 53.6	+2.3
PABE	Paberze	21.88	325	eP	P	23 05 45.2	-6.7
KLMR	Klimovskoe	21.94	351	eP	P	23 05 49.9	-2.7
KLMR				pmax	pmax		
	comp=Z,14nm,1.2s						
KLMR	Klimovskoe	21.94	351	eP	P	23 05 49.9	-2.7
KLMR				AMP		23 05 54.3	
	comp=Z,14nm,1.2s						
NIL	Nilore	22.56	96	P	P	23 06 00.2	+0.6
NIL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NIL	Nilore	22.56	96	P	P	23 06 00.2	+0.6
NIL				IAmb	IAmb	23 06 02.3	
	comp=Z,6.4nm,1.1s						
TIP	Timpagrande	22.63	279	P	P	23 06 00.1	-0.1
TIP				IAmb	IAmb	23 06 04.9	
	comp=Z,14nm,1.3s						
BOOM	Boomskoye usch	22.77	72	P	P	23 06 02.3	+0.4
BOOM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BOOM	Boomskoye usch	22.77	72	P	P	23 06 02.3	+0.4
BOOM				IAmb	IAmb	23 06 08.5	
	comp=Z,8.5nm,1.1s						
VSU	Vasula	22.83	333	eP	P	23 06 02.7	+0.7
KUU	Kurty	23.05	69	eP	P	23 06 06.6	+2.0
	comp=Z,7.0nm,1.2s,baz=69						
KUU	Kurty	23.05	69	eP	P	23 06 06.6	+2.0
KUU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AAA	Alma-Ata	23.47	70	eP	P	23 06 10.9	+1.9
	baz=71						
AAA	Alma-Ata	23.47	70	eP	P	23 06 10.8	+1.9
TNSS	Tian-Shan	23.50	71	eP	P	23 06 10.4	+0.8
	baz=71						
TNSS	Tian-Shan	23.50	71	eP	P	23 06 10.4	+0.8
CHKK	Chushkaly	23.52	69	eP	P	23 06 10.3	+1.0
	baz=69						
CHKK	Chushkaly	23.52	69	eP	P	23 06 10.3	+1.0
MDOK	Medeo	23.57	71	eP	P	23 06 10.7	+0.6
	baz=71						
MDOK	Medeo	23.57	71	eP	P	23 06 10.6	+0.6
SOKA	Soboth	23.72	298	eP	P	23 06 07.5	-3.9
	comp=Z,4.0nm,0.9s						
CHVC	Chvalec	23.85	308	eP	P	23 06 13.5	+1.0
TDK	Taldyqorghan	24.56	66	eP	P	23 06 20.1	+1.0
	comp=Z,4.0nm,0.8s,baz=66						
TDK	Taldyqorghan	24.56	66	eP	P	23 06 20.1	+1.0
TDK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KPKS	Kokpek	24.76	70	eP	P	23 06 22.5	+1.4
	comp=Z,3.7nm,1.5s,baz=70						
KPKS	Kokpek	24.76	70	eP	P	23 06 22.4	+1.4
KPKS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KBA	Koelnbreinsper	24.92	299	eP	P	23 06 18.7	-3.8
	comp=Z,6.9nm,1.4s						
GEC2	GERESS Array S	24.93	303	P	P	23 06 22.3	-0.3
GEC2				IAmb	IAmb	23 06 24.1	
	comp=Z,4.4nm,0.9s						
GERES	GERESS Array B	24.93	303	P	P	23 06 22.6	0.0
	comp=Z,2.1nm,0.6s,baz=102,slow=9.1,SNR=21						
KHC	Kasperske Hory	25.07	304	⇑iP	P	23 06 25.4	+1.7
KHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KHC	Kasperske Hory	25.07	304	eP	P	23 06 25.3	+1.6
KHC	Kasperske Hory	25.07	304	P	P	23 06 24.3	+0.6
KHC				IAmb	IAmb	23 06 29.0	
	comp=Z,4.1nm,0.8s						
ZOU	Zoufplan	25.12	298	P	P	23 06 24.7	+0.3
ZOU				IAmb	IAmb	23 06 30.3	
	comp=Z,3.6nm,0.8s						
SHLS	Shalkode	25.34	70	eP	P	23 06 30.8	+4.5
	baz=71						
SHLS	Shalkode	25.34	70	eP	P	23 06 30.7	+4.5
FINES	FINESS Array B	25.34	337	P	P	23 06 25.0	-0.9
	comp=Z,4.3nm,0.8s,baz=153,slow=12,SNR=6.8						
KURBB	Kurchatov Arra	25.42	53	P	P	23 06 26.1	-0.7
	comp=Z,3.3nm,1.0s,baz=257,slow=11,SNR=12						
ABTA	Abfaltersbach	25.46	298	eP	P	23 06 25.8	-1.5
	comp=Z,6.0nm,1.1s						
KURK	Kurchatov	25.50	53	⇓iP	P	23 06 29.9	+2.4
KURK				pmax	pmax		
	comp=Z,14nm,1.5s						
KURK	Kurchatov	25.50	53	P	P	23 06 27.1	-0.4
CLL	Collm	25.91	308	eP	P	23 06 33.0	+1.8
CLL				e		23 06 39.0	
	comp=Z,5.0nm,0.9s						
CLL	Collm	25.91	308	eP	P	23 06 33.0	+1.8
CLL				e		23 06 39.0	
WTTA	Wattenberg	26.10	299	eP	P	23 06 32.3	-0.9
	comp=Z,5.8nm,1.1s						
WATA	Walderalm	26.14	299	eP	P	23 06 33.8	+0.2
	comp=Z,3.1nm,0.7s						
SQTA	Sankt Quirin	26.38	299	eP	P	23 06 35.4	-0.3
	comp=Z,3.4nm,0.5s						
MOTA	Moosalm	26.47	299	eP	P	23 06 36.0	-0.5
	comp=Z,7.1nm,1.5s						
FETA	Feichten	26.70	298	eP	P	23 06 38.2	-0.4
	comp=Z,3.0nm,0.7s						
RETA	Reutte	26.71	299	eP	P	23 06 38.1	-0.5
	comp=Z,4.6nm,1.0s						
MAKZ	Makanchi	27.13	62	P	P	23 06 43.9	+1.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	27.13	62	P	P	23 06 43.9	+1.5
MAKZ				IAmb	IAmb	23 07 02.4	
	comp=Z,2.6nm,0.8s						
DAVOX	Davos/Dischmat	27.26	298	P	P	23 06 43.9	+0.2
	comp=Z,3.4nm,0.8s,baz=75,slow=6.3,SNR=4.5						
DAVA	Damuels	27.29	299	eP	P	23 06 43.0	-1.0
	comp=Z,1.7nm,0.5s						
MK31	Makanchi Array	27.34	62	⇑iP	P	23 06 46.9	+2.6
MK31	Makanchi Array	27.34	62	P	P	23 06 45.2	+0.9
MK31				IAmb	IAmb	23 07 04.0	
	comp=Z,2.3nm,0.9s						
MKAR	Makanchi Array	27.34	62	P	P	23 06 45.5	+1.2
	comp=Z,1.1nm,0.7s,baz=268,slow=6.9,SNR=11						
MKAR				LR	LR	23 19 13.2	
	comp=Z,68nm,18.4s,baz=259,slow=40						
MKAR	Makanchi Array	27.34	62	ceP	P	23 06 47.0	+2.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	Hagfors	29.03	327	P	P	23 06 58.3	-0.8
	comp=Z,4.3nm,0.8s,baz=134,slow=11,SNR=3.1						
SENIN	Lac Senin/Sane	29.03	297	P	P	23 06 59.3	-0.3
KEST	Kesra	29.18	275	P	P	23 07 02.2	+1.4
	comp=Z,2.0nm,0.8s,baz=18,slow=6.4,SNR=3.7						
ZALV	Zalesovo Beam	29.96	48	P	P	23 07 08.5	+1.0
	comp=Z,0.4nm,0.4s,baz=268,slow=9.8,SNR=3.4						
ZALV				LR	LR	23 21 16.6	
	comp=Z,66nm,18.9s,baz=354,slow=41						
NOA	NORSAR Array B	30.54	327	P	P	23 07 11.5	-1.1
	comp=Z,1.3nm,1.0s,baz=119,slow=8.3,SNR=2.1						
NOA				LR	LR	23 19 21.9	
	comp=Z,25nm,18.3s,baz=300,slow=36						
DGZ	Jazzator, Alta	30.94	57	⇑iP	P	23 07 17.5	+1.2
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.8s						
WMQ	Urumqi	31.26	68	P	P	23 07 19.5	+0.4
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ	Urumqi	31.26	68	P	P	23 07 19.5	+0.4
ARCES	ARCESS Array B	32.20	347	P	P	23 07 26.2	-0.8
	comp=Z,3.9nm,1.0s,baz=148,slow=9.1,SNR=5.2						
EKA	Eskdalemuir Ar	36.14	313	P	P	23 08 01.0	-0.3
	comp=Z,4.9nm,0.7s,baz=98,slow=9.6,SNR=10						
NRIK	Noril'sk	37.24	23	P	P	23 08 10.6	+0.1
	comp=Z,2.8nm,0.8s,baz=246,slow=6.5,SNR=5.1						
NRIK	Noril'sk	37.24	23	⇓iP	P	23 08 10.8	+0.2
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NRIK	Noril'sk	37.24	23	P	P	23 08 10.3	-0.2
NRIK				IAmb	IAmb	23 08 13.1	
	comp=Z,4.3nm,0.9s						
TAM	Tamanrasset	38.06	256	P	P	23 08 17.7	-0.5
TAM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TAM	Tamanrasset	38.06	256	P	P	23 08 17.7	-0.5
TAM				IAmb	IAmb	23 08 21.2	
	comp=Z,2.0nm,0.9s						
ESBB	Sonseca Array	38.17	287	P	P	23 08 18.4	-0.5
ESBB				IAmb	IAmb	23 08 22.3	
	comp=Z,2.3nm,1.1s						
ESDC	Sonseca Array	38.17	287	P	P	23 08 18.2	-0.6
	comp=Z,0.8nm,0.8s,baz=62,slow=8.8,SNR=9.1						
SPA0	Spitsbergen Ar	40.84	351	P	P	23 08 41.3	+0.7
SONM	Songino Array	43.55	58	P	P	23 09 03.6	+0.3
	comp=Z,0.5nm,0.8s,baz=270,slow=6.3,SNR=3.5						
SONM				PcP	PcP	23 10 52.2	+1.2
	comp=Z,0.4nm,0.7s,baz=292,slow=2.3,SNR=2.8						
SONM				LR	LR	23 29 46.3	
	comp=Z,45nm,18.8s,baz=248,slow=40						
ULN	Ulaanbaatar	43.98	58	⇓iP	P	23 09 09.3	+2.6
ULN				pmax	pmax		
	comp=Z,12nm,2.5s						
ULN	Ulaanbaatar	43.98	58	P	P	23 09 07.4	+0.7
TOA0	Torodi Ar. Sit	46.91	249	P	P	23 09 28.3	-1.8
TORD	Torodi Ar. Bea	46.91	249	P	P	23 09 29.5	-0.6
	comp=Z,1.6nm,1.1s,baz=59,slow=5.9,SNR=3.0						
CMAR	Chiang Mai Arr	50.02	99	P	P	23 09 54.6	+0.6
	comp=Z,0.7nm,0.3s,baz=302,slow=5.2,SNR=1.8						
SUMG	Summit	51.38	337	P	P	23 10 04.1	0.0
SUMG	Summit	51.38	337	P	P	23 10 04.1	0.0
USRK	Ussuriysk Ar.	61.46	55	LR	LR	23 40 43.3	
	comp=Z,77nm,18.3s,baz=185,slow=39						
KSRS	Korea Array	62.02	63	P	P	23 11 20.7	+0.9
	comp=Z,2.4nm,0.7s,baz=290,slow=6.8,SNR=6.7						
KSRS				LR	LR	23 41 06.8	
	comp=Z,22nm,21.2s,baz=25,slow=39						
SEY	Seymchan	62.53	30	⇓iP	P	23 11 23.7	+0.9
FRB	Frobisher Bay	65.06	334	P	P	23 11 39.1	-0.3
	comp=Z,2.4nm,0.6s,baz=46,slow=6.4,SNR=9.8						
MJAR	Matsushiro Arr	69.49	59	LR	LR	23 44 28.2	
	comp=Z,43nm,18.0s,baz=340,slow=38						
YKA	Yellowknife Ar	77.34	351	P	P	23 12 52.6	-1.2
	comp=Z,0.2nm,0.4s,baz=27,slow=5.5,SNR=4.5						
YKA	Yellowknife Ar	77.34	351	ceP	P	23 12 53.0	-0.8

PRU 07 23:03:57.3±0.0, 50°.16N×19°.02E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	1.03	249	ePG	Pg	23 04 17.0	0.0
MORC				eSG	Sg	23 04 30.9	+0.6
KRLC	Kraliky	1.44	267	eSG	Sg	23 04 42.8	-0.8
DPC	Dobruska-Polom	1.74	277	ePG	Pn	23 04 29.2	+0.4
DPC				eSG	Sb	23 04 52.6	0.0
CHVC	Chvalec	1.95	284	eSG	Sg	23 04 59.4	-0.4

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*NSSP **07** 23:16:08.9, 39°.33N×46°.00E, h10km, Ms3.4*
*AZER **07** 23:16:08.2±0.3, 39°.32N×46°.06E, h10km±1km, ml3.6/32,*
Error ellipse: s-maj=1.5km s-min=0.9km az=347.0
*TEH **07** 23:16:10.1, 39°.31N×46°.03E, h14km, ML3.5*
*IDC **07** 23:16:11.0±1.4, 39°.25N×45°.80E, h0km, mb3.3/7,*
mb1 3.5/8, mb1mx3.3/55, mbtmp3.4/8, ML2.0/1, MS3.4/1,
Ms1 3.4/1, ms1mx2.4/33, Error ellipse: s-maj=26.2km
s-min=12.5km az=20.0
*ISK **07** 23:16:11.5, 39°.41N×45°.95E, h5km, ML3.3/11*
*DDA **07** 23:16:11.3, 39°.37N×45°.86E, h7km±3km, ML3.0*
ISC 07 23:16:11.2±0.6, **39°.27N**±0°.02×**45°.99E**±0°.02, **h10km, n125,**
σ1ˢ.**40**/181, **mb3.2**/7, **6C-6D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORD	Ordubad	0.34	179	P	Pb	23 16 17.9	-1.5
	SNR=36						
ORD				S	Sb	23 16 23.4	-1.4
ORD	Ordubad	0.34	179	ePg	Pb	23 16 17.9	-1.5
SBZ	Shahbuz	0.36	291	P	Pg	23 16 17.5	-1.0
	SNR=45						
SBZ				S	Sg	23 16 23.2	-0.1
SBZ	Shahbuz	0.36	291	ePg	Pg	23 16 17.5	-1.0
NAX	Nakhchivan	0.40	257	P	Pb	23 16 19.2	-1.2
	SNR=178						
NAX				S	Sb	23 16 26.2	-0.3
NAX	Nakhchivan	0.40	257	ePg	Pb	23 16 19.1	-1.2
IMRD	Marand	0.59	202	ePg	Pb	23 16 22.9	-0.9
HYR	Heyderabad	0.99	298	P	Pg	23 16 29.2	-1.1
	SNR=8.4						
HYR				S	Sb	23 16 43.1	-0.6
HYR	Heyderabad	0.99	298	ePg	Pg	23 16 29.2	-1.1
ITBZ	Tabriz	1.04	173	ePg	Pg	23 16 29.6	-1.6
ITBZ				e		23 16 48.8	
	comp=Z,99nm,0.3s						
QRD	Qoradiz	1.05	79	P	Pg	23 16 29.0	-2.4
	SNR=68						
QRD				S	Sg	23 16 43.7	-1.4
QRD	Qoradiz	1.05	79	ePg	Pg	23 16 29.0	-2.4
AGDM	Agdam	1.21	45	P	Pn	23 16 31.6	-2.6
	SNR=81						
AGDM				S	Sb	23 16 48.4	-1.4
TABZ	Tabriz	1.23	168	ePg	Pg	23 16 34.9	0.0
TABZ				e		23 16 56.9	
	comp=Z,99nm,0.2s						
IHRS	Heris	1.25	139	ePg	Pn	23 16 33.4	-1.6
IHRS				e		23 16 53.6	
	comp=Z,99nm,0.1s						
NRKZ	NAREK	1.26	306	⇓iP	Pn	23 16 33.3	-1.7
NRKZ				⇑iS	Sb	23 16 50.1	-1.4
BLQ	Beylaqan	1.30	69	P	Pn	23 16 33.2	-2.2
	SNR=28						
BLQ				S	Sb	23 16 51.8	-0.6
BLQ	Beylaqan	1.30	69	ePg	Pn	23 16 33.2	-2.2
GNI	Garni	1.31	313	Pg	Pn	23 16 34.7	-1.0
	comp=Z,38nm,0.3s,baz=111,slow=4.4,SNR=137						
GNI				Lg	Lg	23 16 52.8	
	comp=Z,106nm,0.3s,baz=0.4,slow=21,SNR=8.4						
GNI	Garni	1.31	313	⇓iP	Pn	23 16 34.3	-1.4
GNI				⇑iS	Sn	23 16 52.6	-0.7
GNI	Garni	1.31	313	PN	Pn	23 16 34.8	-0.9
GNI				SN	Sb	23 16 51.8	-1.1
GNI	Garni	1.31	313	ePn	Pn	23 16 34.1	-1.6
BRDA	Brd	1.35	42	P	Pn	23 16 34.9	-1.3
	SNR=40						
BRDA				S	Sb	23 16 54.0	-0.1
BRDA	Brd	1.35	42	ePg	Pn	23 16 34.9	-1.3
GANJ	Ganja	1.40	10	P	Pn	23 16 34.8	-2.0
	SNR=38						
GANJ				S	Sn	23 16 52.2	-3.3
GANJ	Ganja	1.40	10	ePn	Pn	23 16 34.9	-2.0
KAPZ	Kaputan	1.45	317	⇓iP	Pn	23 16 36.8	-0.9
KAPZ				⇑iS	Sn	23 16 56.0	-0.9
GDB	GEDABAY	1.47	353	P	Pn	23 16 35.9	-2.0
	SNR=52						
GDB				S	Sn	23 16 55.1	-2.1
GDB	GEDABAY	1.47	353	ePn	Pn	23 16 35.9	-2.0
TASB	TASBURUN-IGDIR	1.53	299	PN	Pb	23 16 38.5	-1.2
TASB				SN	Sg	23 16 58.9	-1.6
TASB	TASBURUN-IGDIR	1.53	299	ePn	Pb	23 16 38.5	-1.2
IGDI	IGDIR	1.60	293	i P	Pn	23 16 38.7	-0.9
IGDI				i S	Sn	23 16 59.2	-1.0
IGDI				IAML		23 17 00.0	
	comp=N,327nm,0.8s						
IGDI				IAML		23 17 07.0	
	comp=E,411nm,0.5s						
IGDI	IGDIR	1.60	293	ePn	Pn	23 16 38.7	-0.9
CLDR	Caldiran	1.61	266	PN	Pg	23 16 40.9	-1.3
CLDR				SN	Sg	23 17 02.5	-0.7
CLDR	Caldiran	1.61	266	i P	Pb	23 16 40.0	-1.3
CLDR				i S	Sb	23 17 00.3	-1.4
CLDR				IAML		23 17 13.0	
	comp=N,192nm,1.0s						
CLDR				IAML		23 17 14.0	
	comp=E,211nm,0.8s						
CLDR	Caldiran	1.61	266	ePn	Pb	23 16 39.9	-1.3
ZRD	Zardab	1.65	52	P	Pn	23 16 39.9	-0.3
	SNR=25						
ZRD				S	Sg	23 17 03.6	-0.7
ZRD	Zardab	1.65	52	ePn	Pn	23 16 39.9	-0.3
OZAP	Van, Ozalp-Mer	1.67	249	i P	Pg	23 16 42.3	-0.9
OZAP				IAML		23 17 19.0	
	comp=N,129nm,0.9s						
METS	Metsamor	1.72	302	⇓iP	Pn	23 16 40.8	-0.5
METS				⇑iS	Sb	23 17 03.1	-1.5
MNGR	Mingechevir, A	1.73	29	P	Pn	23 16 41.2	0.0
	SNR=12						
MNGR				S	Sb	23 17 04.8	+0.1
YRD	Yardimli	1.79	101	P	Pn	23 16 42.2	-0.1
	SNR=5.6						
YRD				S	Sb	23 17 06.8	+0.1
YRD	Yardimli	1.79	101	ePn	Pn	23 16 42.2	-0.1
DYDN	Diyadin	1.80	280	i P	Pb	23 16 43.9	-0.6
DYDN				IAML		23 17 20.0	
	comp=E,232nm,0.7s						
DYDN				IAML		23 17 28.0	
	comp=N,211nm,1.1s						
QZX	Qazax, Azerbai	1.85	345	P	Pn	23 16 42.8	-0.3
	SNR=26						
QZX				S	Sn	23 17 06.7	+0.2
QZX	Qazax, Azerbai	1.85	345	ePn	Pn	23 16 42.8	-0.3
GLBA	Clilabad	1.87	90	P	Pn	23 16 43.2	-0.1
	SNR=23						
GLBA				S	Sb	23 17 08.6	-0.2
GLBA	Clilabad	1.87	90	ePn	Pn	23 16 43.1	-0.1
VNNZ	Vanand	1.87	297	⇑iP	Pb	23 16 44.4	-1.1
VNNZ				⇓iS	Sg	23 17 09.9	-1.5
VMUR	Van-Muradiye	1.90	262	i P	Pg	23 16 45.7	-2.0
VMUR				i S	Sg	23 17 12.4	+0.1
VMUR				IAML		23 17 23.0	
	comp=N,146nm,0.9s						
VMUR				IAML		23 17 30.0	
	comp=E,115nm,0.8s						
LRK	Lerik	1.94	108	P	Pn	23 16 44.5	+0.2
	SNR=44						
LRK				S	Sb	23 17 11.7	+0.7
LRK	Lerik	1.94	108	ePn	Pn	23 16 44.5	+0.2
ISRB	Sarab	1.95	137	ePn	Pb	23 16 45.8	-1.1
ISRB				e		23 17 14.7	
	comp=Z,99nm,0.3s						
SAAT	Saatly	1.97	72	P	Pn	23 16 42.5	-2.1
	SNR=8.6						
SAAT				S	Sn	23 17 09.1	-0.3
KDMR	Kurdemir	2.02	56	P	Pn	23 16 44.9	-0.4
	SNR=23						
KDMR				S	Sb	23 17 12.8	-0.4
ERCV	ERCIS-VAN	2.08	264	PN	Pb	23 16 47.9	-1.2
STE	Stepanavan	2.13	325	⇑iP	Pb	23 16 49.0	-1.0
STE				⇓iS	Sg	23 17 18.0	-1.7
VANB	Van	2.14	253	PN	Pb	23 16 49.6	-0.5
VANB	Van	2.14	253	ePn	Pg	23 16 50.7	-1.5
YOVA	Hakkari_Yksek	2.14	219	i P	Pg	23 16 50.1	-2.2
TVAN	Van	2.15	251	i P	Pg	23 16 50.4	-1.9
TVAN				IAML		23 17 44.0	
	comp=E,99nm,0.8s						
SEKA	Sheki	2.15	25	P	Pn	23 16 47.4	+0.1
	SNR=48						
SEKA				S	Sn	23 17 14.2	+0.2
SEKA	Sheki	2.15	25	ePn	Pn	23 16 47.3	+0.1
DDFL	Dedoflistskaro	2.18	3	P	Pb	23 16 49.8	-1.0
DDFL	Dedoflistskaro	2.18	3	i P	Pb	23 16 49.0	-1.8
DDFL				i S	Sb	23 17 18.4	+0.5
QBL	Gabala	2.20	40	P	Pn	23 16 48.1	+0.2
	SNR=33						
QBL				S	Sn	23 17 15.8	+0.8
QBL	Gabala	2.20	40	ePn	Pn	23 16 48.0	+0.2
IHSH	Hashtrud	2.20	152	ePn	Sb	23 16 51.6	-3.5
IHSH				e		23 17 24.0	
	comp=E,99nm,0.4s						
KOTA	Agri, Merkez-K	2.22	285	i P	Pb	23 16 51.0	-0.6
LKRN	Lenkeran, Azer	2.24	103	P	Pn	23 16 48.9	+0.6
	SNR=22						
LKRN				S	Sb	23 17 19.2	-0.4
IML	Ismayilli	2.27	47	P	Pn	23 16 47.6	-1.3
	SNR=16						
IML				S	Sn	23 17 17.7	+0.8
IML	Ismayilli	2.27	47	ePn	Pn	23 16 47.8	-1.1
ASTR	Astara	2.30	107	P	Pn	23 16 49.2	+0.1
	SNR=18						
ASTR				S	Sn	23 17 19.0	+1.5
EAK	Akyaka	2.32	309	i P	Pb	23 16 52.5	-0.7
EAK				i S	Sg	23 17 23.6	-2.1
EAK				IAML		23 17 26.0	
	comp=N,239nm,0.9s						
EAK				IAML		23 17 29.0	
	comp=E,264nm,1.1s						
AGRB	Hanur-Agry	2.34	279	PN	Pb	23 16 51.3	-2.3
ZKTA	Zakatala	2.42	11	P	Pn	23 16 51.5	+0.6
	SNR=7.4						
ZKTA				S	Sb	23 17 22.4	-2.3
ALIB	Äli-Bayra	2.43	72	P	Pn	23 16 50.4	-0.5
ALIB				S	Sn	23 17 22.8	+2.0
KZRT	Kazreti	2.44	331	P	Pb	23 16 53.5	-1.8
KZRT				S	Sb	23 17 25.2	-0.3
KZRT	Kazreti	2.44	331	i P	Pn	23 16 52.0	+0.8
KZRT				i S	Sb	23 17 23.0	-2.4
HAKT	HAKKARI	2.47	227	i P	Pb	23 16 54.6	-1.3
DMNI	Dmanisi	2.48	327	P	Pb	23 16 54.4	-1.5
DMNI				S	Sb	23 17 26.1	-0.5
MAHB	Mahabad	2.50	185	ePn	Pb	23 16 55.2	-1.2
MAHB				e		23 17 32.0	
	comp=Z,99nm,0.6s						
PQL	Pirkuli	2.51	52	P	Pn	23 16 52.2	0.0
	SNR=13						
PQL				S	Sn	23 17 23.6	+0.6
XNQ	Khinaliq	2.52	40	P	Pn	23 16 51.6	-0.8
	SNR=10						
XNQ				S	Sn	23 17 24.3	+1.0
AKDM	Akdamar-Van	2.53	249	PN	Pb	23 16 54.9	-1.9
LGD	Lagodekhi	2.57	4	P	Pn	23 16 53.7	+0.8
LGD				S	Sb	23 17 30.4	+1.2
BTNK	Botanikuri	2.58	340	P	Pb	23 16 56.3	-1.4
BTNK				S	Sb	23 17 29.6	+0.2
BTNK	Botanikuri	2.58	340	i P	Pb	23 16 56.2	-1.4
BTNK				i S	Sb	23 17 27.3	-2.1
ADCV	BITLIS_Adilcev	2.58	261	i P	Pb	23 16 56.2	-1.6
ADCV				i S	Sg	23 17 32.9	-1.4
GBS	Qobustan	2.60	60	P	Pn	23 16 52.9	-0.5
	SNR=6.4						
GBS				S	Sn	23 17 26.2	+1.1

KARS	Kars	2.62	302	PN	Pn	23 16 54.1	+0.4
MLAZ	Malazgirt-MUS	2.68	268	PN	Pb	23 16 56.3	-3.0
CUKT	Cukurca	2.75	224	PN	Pb	23 16 58.9	-1.7
CUKT	Cukurca	2.75	224	*i*P	Pb	23 16 58.9	-1.7
CUKT				IAML		23 18 00.0	
	comp=E,66nm,0.8s						
ATGJ	Altiaghaj	2.77	54	P	Pn	23 16 55.4	-0.3
ATGJ				S	Sn	23 17 30.3	+1.0
EATA	Eleskirt	2.77	284	*i*P	Pg	23 17 02.5	-1.8
QUBA	Quba, Azerbaij	2.83	42	P	Pn	23 16 56.6	0.0
QUBA				S	Sn	23 17 31.4	+0.6
QSAR	Qusar	2.84	37	P	Pn	23 16 56.7	+0.1
QSAR				S	Sn	23 17 32.9	+2.0
AKH	Akhalkalaki	2.87	319	P	Pb	23 17 02.4	-0.2
AKH	Akhalkalaki	2.87	319	PN	Pn	23 16 57.3	+0.1
SIZA	Siyzn	2.87	50	P	Pn	23 16 57.0	-0.1
SIZA				S	Sn	23 17 33.5	+1.8
BRNG	Burnasheti	2.88	326	P	Pb	23 17 01.8	-0.9
BRNG				S	Sb	23 17 39.5	+1.4
PERV	Siirt/Pervari-	3.00	245	*i*P	Pn	23 17 00.5	+1.5
PERV				IAML		23 17 58.0	
	comp=E,39nm,0.8s						
PERV				IAML		23 18 03.0	
	comp=N,46nm,1.1s						
SENK	Senkaya-Erzuru	3.08	296	PN	Pn	23 17 01.1	+0.9
EPOS	Posof	3.35	313	*i*P	Pb	23 17 10.3	-0.4
GUDG	Gudauri	3.40	341	P	Pb	23 17 10.5	-1.1
GUDG				S	Sb	23 17 53.7	+0.7
SRTM	Siirt_Merkez	3.43	250	*i*P	Pn	23 17 05.8	+0.9
SRTM				IAML		23 18 28.0	
	comp=N,23nm,0.9s						
SRTM				IAML		23 18 28.0	
	comp=E,26nm,1.3s						
ABS	Abastumani	3.47	317	P	Pb	23 17 13.9	+1.0
ABS				S	Sg	23 18 00.8	-1.9
PNSH	Pansheti	3.52	343	P	Pb	23 17 12.5	-1.3
PNSH				S	Sb	23 17 57.9	+1.3
MUSM	Mu-Merkez	3.53	263	*i*P	Pb	23 17 14.6	+0.8
DAGI	Agillar	3.61	301	*i*P	Pb	23 17 14.1	-1.1
QSDN	Sirdan	3.73	137	*e*Pn	Pb	23 17 12.8	-4.6
QSDN				*e*		23 18 11.5	
	comp=Z,99nm,0.5s						
TKB	Tkibuli	3.83	325	P	Pb	23 17 18.3	-0.6
TKB				S	Sb	23 18 08.1	+2.8
SVAN	Silvan-Diyarba	3.91	255	PN	Pn	23 17 14.3	+2.9
KBZ	Khabaz	5.03	333	Pn	Pb	23 17 33.0	-6.3
	comp=Z,0.1nm,0.3s,baz=273,slow=16,SNR=1.6						
BRTR	Keskin Array B	9.56	277	Pn	Pn	23 18 30.8	+1.7
	comp=Z,0.0nm,0.3s,baz=102,slow=12,SNR=1.9						
GEYT	Alibeck	9.59	94	Pn	Pn	23 18 28.8	-0.6
	comp=Z,0.3nm,0.3s,baz=205,slow=31,SNR=2.3						
KIRV	Kirov	19.46	5	LR	LR	23 29 18.5	
	comp=Z,108nm,19.5s,baz=293,slow=40						
BVAR	Borovoye Array	21.66	43	P	P	23 21 04.3	+2.6
	comp=Z,0.3nm,0.5s,baz=239,slow=9.9,SNR=2.5						
AAK	Ala-Archa	21.75	72	P	P	23 21 06.4	+3.5
	comp=Z,0.9nm,0.8s,baz=246,slow=18,SNR=2.2						
GERES	GERESS Array B	24.94	303	P	P	23 21 35.6	+1.0
	comp=Z,0.3nm,0.4s,baz=106,slow=9.8,SNR=4.6						
KURBB	Kurchatov Arra	25.47	53	P	P	23 21 41.9	+2.6
	comp=Z,0.7nm,0.7s,baz=260,slow=8.6,SNR=3.3						
MKAR	Makanchi Array	27.39	62	P	P	23 21 58.4	+1.7
	comp=Z,0.2nm,0.6s,baz=257,slow=9.5,SNR=2.3						
EKA	Eskdalemuir Ar	36.15	313	P	P	23 23 14.4	+1.0
	comp=Z,4.0nm,1.0s,baz=96,slow=8.5,SNR=1.7						
ESDC	Sonseca Array	38.16	287	P	P	23 23 31.4	+0.7
	comp=Z,0.2nm,0.9s,baz=58,slow=9.5,SNR=1.8						

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*IDC **07** 23:17:41.9±1.6, 6°.46S×147°.29E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/50, mbtmp3.6/5, ML3.4/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/25, Error ellipse: s-maj=53.0km s-min=26.4km az=105.0*

*NEIC **07** 23:17:47.1±1.5, 6°.5S±0°.1×147°.2E±0°.2, h36^{km}±4^{km}, mb4.2/5, Error ellipse: s-maj=25.2km s-min=16.1km az=103.0*

ISC 07 23:17:47.5±1.1, **6°.54S**±0°.10×**147°.2E**±0°.2, **h35**^{km}, **n17**, σ**0^s.78**/14, **mb3.9**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.85	181	Pn	Pn	23 18 31.0	+0.6
	8.8nm,0.3s,baz=323,slow=10,SNR=7.3						
PMG				Sn	Sn	23 19 03.2	-0.3
	7.8nm,0.3s,baz=128,slow=15,SNR=1.7						
PMG				LR	LR	23 19 58.6	
	comp=Z,297nm,19.5s,baz=340,slow=46						
PMG	Port Moresby	2.85	181		Pn	23 18 30.1	-0.3
KRVT	Keravat (AS076	5.29	65	LR	LR	23 21 04.8	
	comp=Z,132nm,19.2s,baz=220,slow=39						
JAY	Jayapura	7.61	301	LR	LR	23 23 07.8	
	comp=Z,63nm,20.4s,baz=207,slow=43						
COEN	Coen	8.36	208	Pn	Pn	23 19 45.6	-0.7
WR0	Warramunga Arr	18.14	221	P	Pn	23 21 56.5	-0.2
WR0				IAmb	IAmb	23 22 07.3	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	18.26	222	P	Pn	23 21 57.0	-1.2
	comp=Z,0.1nm,0.3s,baz=42,slow=11,SNR=2.2						
EIDS	Eidsvold	19.09	169		P	23 22 07.8	+0.6
EIDS				IAmb	IAmb	23 22 19.8	
	comp=Z,13nm,1.2s						
AS31	Alice Springs	21.29	215	P	P	23 22 32.1	+0.9
ASAR	Alice Springs	21.29	215	P	P	23 22 30.8	-0.4
	comp=Z,0.5nm,0.3s,baz=48,slow=8.8,SNR=11						
FITZ	Fitzroy Crossi	23.95	239	P	P	23 23 00.1	+1.4
FITZ				IAmb	IAmb	23 23 08.7	
	comp=Z,28nm,1.4s						
CMAR	Chiang Mai Arr	53.68	298	P	P	23 27 06.7	+0.5
	comp=Z,0.5nm,0.3s,baz=140,slow=7.1,SNR=1.6						
VNDA	Vanda	71.36	177	LR	LR	23 59 12.3	
	comp=Z,43nm,18.3s,baz=280,slow=35						
KDAK	Kodiak Island	80.28	28	LR	LR	23 59 21.5	
	comp=Z,58nm,20.8s,baz=243,slow=31						
QSPA	South Pole Qui	83.43	180	P	P	23 30 11.2	0.0
ILAR	Eielson Array	85.90	23	P	P	23 30 22.8	-0.7
	comp=Z,0.4nm,0.7s,baz=252,slow=5.0,SNR=5.2						
TORD	Torodi Ar. Bea	145.41	284	PKPbc	PKPdf	23 37 22.5	-0.4
	comp=Z,3.0nm,0.9s,baz=80,slow=3.3,SNR=8.7						

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*NNC **07** 23:43:59.8±0.5, 44°.48N×79°.41E, h0^{km}, mb4.1, mpv2.8, Error ellipse: s-maj=3.7km s-min=3.6km az=17.0*

*SOME **07** 23:44:00.5, 44°.47N×79°.42E, h10^{km}*

ISC 07 23:43:59.5±1.1, **44°.55N**±0°.03×**79°.48E**±0°.04, **h17**^{km}±8^{km}, **n23**, σ**0^s.77**/45, **1C-1D**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.31	134	⇑*e*P	Pg	23 44 06.5	+0.4
	6.7nm,0.1s						
DJR				*e*S	Sg	23 44 10.4	-0.2
	20nm,0.1s						
DJR	Jarkent	0.31	134	P	Pg	23 44 06.5	+0.4
	6.7nm,0.1s						
DJR				S	Sg	23 44 10.4	-0.2
	20nm,0.1s						
KAPS	Kapalarasan	0.74	353	⇓*e*P	Pn	23 44 15.4	+0.1
	1.0nm,0.1s						
KAPS				*e*S	Sn	23 44 26.3	0.0
	3.1nm,0.1s						
KAPS	Kapalarasan	0.74	353	P	Pn	23 44 15.4	+0.1
	1.0nm,0.1s						
KAPS				S	Sn	23 44 26.4	0.0
	3.1nm,0.1s						
MNBS	Baschi	0.91	239	*e*P	Pb	23 44 15.5	-1.3
	1.2nm,0.1s						
MNBS				*e*S	Sb	23 44 26.7	-1.9
	7.6nm,0.2s						
MNBS	Baschi	0.91	239	P	Pb	23 44 15.6	-1.2
	1.2nm,0.1s						
MNBS				S	Sb	23 44 26.8	-1.9
	7.6nm,0.2s						
KPKS	Kokpek	1.22	208	*e*P	Pn	23 44 21.3	-0.6
	2.9nm,0.1s						
KPKS				*e*S	Sb	23 44 36.3	-1.5
	13nm,0.2s						
ARXS	Arharly	1.23	255	*e*P	Pn	23 44 22.4	+0.4
	0.7nm,0.1s						
ARXS				*e*S	Sb	23 44 38.0	-0.1
	2.4nm,0.2s						
ARXS	Arharly	1.23	255	P	Pn	23 44 22.5	+0.4
	0.7nm,0.1s						
ARXS				S	Sn	23 44 38.5	+0.1
	2.4nm,0.2s						
KTMS	Ketmen	1.27	150	*e*P	Pn	23 44 22.3	-0.3
	0.6nm,0.2s						
KTMS				*e*S	Sb	23 44 38.2	-0.8
	1.9nm,0.1s						
KTMS	Ketmen	1.27	150	P	Pn	23 44 22.5	-0.1
	0.6nm,0.2s						
KTMS				S	Sb	23 44 38.4	-0.7
	1.9nm,0.1s						
SHLS	Shalkode	1.39	181	*e*P	Pg	23 44 26.0	-0.3
	1.1nm,0.2s						
SHLS				*e*S	Sg	23 44 44.2	-0.1
	2.7nm,0.2s						
SHLS	Shalkode	1.39	181	P	Pg	23 44 26.0	-0.3
	1.1nm,0.2s						
SHLS				S	Sg	23 44 44.2	-0.1
	2.7nm,0.2s						
UZB	Uzynbulak	1.44	194	*e*P	Pb	23 44 26.5	+0.5
	0.3nm,0.1s						
UZB				*e*S	Sb	23 44 45.1	+1.1
	11nm,0.2s						
UZB	Uzynbulak	1.44	194	P	Pb	23 44 26.5	+0.5
	0.3nm,0.1s						
UZB				S	Sb	23 44 45.1	+1.1
	11nm,0.2s						
ZHN	Zhinishke	1.57	209	*e*P	Pb	23 44 27.8	-0.4
	88nm,0.4s						
ZHN				*e*S	Sn	23 44 47.3	+0.5
	2.9nm,0.2s						
ZHN	Zhinishke	1.57	209	P	Pb	23 44 27.8	-0.4
	88nm,0.4s						
ZHN				S	Sn	23 44 47.3	+0.5
	2.9nm,0.2s						
SATY	Saty	1.68	208	*e*P	Pb	23 44 30.2	+0.2
	0.8nm,0.1s						
SATY				*e*S	Sb	23 44 51.6	+0.7
	9.4nm,0.3s						
SATY	Saty	1.68	208	P	Pb	23 44 30.2	+0.2
	0.8nm,0.1s						
SATY				S	Sb	23 44 51.6	+0.7
	9.4nm,0.3s						
CHKK	Chushkaly	1.92	250	*e*P	Pb	23 44 34.3	+0.2
	0.7nm,0.1s						
CHKK				*e*S	Sb	23 44 58.9	+1.0
	3.8nm,0.2s						
CHKK	Chushkaly	1.92	250	P	Pb	23 44 34.3	+0.2
	0.7nm,0.1s						
CHKK				S	Sb	23 44 58.9	+1.0
	3.8nm,0.2s						
MDOK	Medeo	2.24	233	*e*P	Pb	23 44 40.0	+0.4
	0.2nm,0.1s						
MDOK				*e*S	Sb	23 45 08.4	+1.3
	1.9nm,0.5s						
MDOK	Medeo	2.24	233	Pg	Pb	23 44 40.0	+0.4
	0.2nm,0.1s						
MDOK				Lg	Lg	23 45 08.4	
	1.9nm,0.5s						

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*SOME **08** 00:25:22.9, 40°.33N×77°.38E, h15^{km}*

*KRNET **08** 00:25:25.6±0.1, 40°.44N×77°.43E, mb3.3*

*NNC **08** 00:25:26.9±1.8, 40°.49N×77°.53E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=12.9km s-min=9.1km az=156.0*

ISC 08 00:25:27.4±1.6, **40°.50N**±0°.07×**77°.41E**±0°.04, **h10**^{km}, **n66**, σ**1^s.26**/107, **19C-17D**, **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.64	354	⇑*i*P	Pn	00 25 56.7	+0.2
	baz=54						
KDJ				⇑*i*S	Sb	00 26 19.4	+0.7
	baz=54						
ULHL	Ulahol	1.95	334	⇓*i*P	Pn	00 26 01.4	+0.5
	baz=34						
ULHL				⇓*i*S	Sb	00 26 27.7	-0.1
	baz=34						
ULHL	Ulahol	1.95	334	P	Pb	00 26 02.8	-0.5
	SNR=8.8						
PRZ	Przheval'sk	2.12	20	⇑*i*P	Pn	00 26 04.2	+1.1
	baz=19						
PRZ				⇑*i*S	Sb	00 26 32.1	-0.4
	baz=19						
BOOM	Boomskoye usch	2.27	332	⇓*e*P	Pn	00 26 06.6	+1.4
	baz=32						
BOOM				⇓*i*S	Sb	00 26 35.7	-1.3
	baz=32						
ANVS	Anan'yevo	2.29	5	⇑*e*P	Pn	00 26 07.0	+1.5
	baz=4.0						
ANVS				⇑*i*S	Sb	00 26 36.9	-0.6
	baz=4.0						
TNSS	Tian-Shan	2.56	352	*e*P	Pb	00 26 13.2	-0.5
	26nm,0.4s						
TNSS				*e*S	Sg	00 26 50.6	+0.8
	44nm,0.9s						
TNSS	Tian-Shan	2.56	352	Pg	Pb	00 26 12.8	-0.9
	26nm,0.4s						
TNSS				Lg	Lg	00 26 50.6	
	44nm,0.9s						
IZV	Izvestkoviy	2.60	347	*e*P	Pb	00 26 14.7	+0.4
	12nm,0.5s						
IZV				*e*S	Sg	00 26 52.6	+1.5
	49nm,0.5s						
IZV	Izvestkoviy	2.60	347	Pg	Pb	00 26 14.7	+0.4
	12nm,0.5s						
IZV				Lg	Lg	00 26 52.6	
	49nm,0.5s						
SATY	Saty	2.67	16	*e*P	Pb	00 26 15.1	-0.3
	22nm,0.4s						
SATY				*e*S	Sg	00 26 53.5	+0.4
	57nm,0.7s						
SATY	Saty	2.67	16	Pg	Pb	00 26 15.4	+0.1
	22nm,0.4s						
SATY				Lg	Lg	00 26 54.1	
	57nm,0.7s						
MDOK	Medeo	2.68	354	*e*P	Pb	00 26 15.0	-0.5
	16nm,0.5s						
MDOK				*e*S	Sg	00 26 53.5	+0.1
	56nm,0.7s						
MDOK	Medeo	2.68	354	Pg	Pb	00 26 15.2	-0.4
	16nm,0.5s						
MDOK				Lg	Lg	00 26 54.3	
	56nm,0.7s						
ARLS	Aral	2.70	301	⇑*i*P	Pn	00 26 11.8	+0.8
	baz=2.0						
ARLS				⇑*i*S	Sn	00 26 44.8	+1.0
	baz=2.0						
MTBS	Maitube	2.73	345	*e*P	Pb	00 26 16.3	-0.1
	11nm,0.3s						
MTBS				*e*S	Sg	00 26 55.6	+0.5
	46nm,0.3s						
AAA	Alma-Ata	2.73	352	*e*P	Pb	00 26 16.9	+0.5
	34nm,0.2s						
AAA				*e*S	Sg	00 26 56.7	+1.4
	68nm,0.4s						
KOTS	Kotyrbulak	2.74	356	*e*P	Pb	00 26 16.9	+0.2
	48nm,0.5s						
KOTS				*e*S	Sg	00 26 56.2	+0.7
	185nm,0.5s						
KOTS	Kotyrbulak	2.74	356	Pg	Pb	00 26 16.9	+0.2
	48nm,0.5s						
KOTS				Lg	Lg	00 26 56.2	
	185nm,0.5s						
KST	Kastek	2.76	337	*e*P	Pb	00 26 17.1	+0.1
	4.2nm,0.4s						
KST				*e*S	Sg	00 26 56.8	+0.6
	36nm,1.0s						
KST	Kastek	2.76	337	Pg	Pb	00 26 17.1	+0.1
	4.2nm,0.4s						
KST				Lg	Lg	00 26 56.8	
	36nm,1.0s						
TKM2	Tokmak 2	2.77	331	⇓*e*P	Pn	00 26 12.7	+0.6
	baz=32						
TKM2				⇓*i*S	Sn	00 26 47.0	+1.2
	baz=32						
TKM2	Tokmak 2	2.77	331	P	Pn	00 26 14.2	+2.1
	SNR=14						
TKM2	Tokmak 2	2.77	331	⇓Pg	Pg	00 26 19.2	-1.4
	4.3nm,0.5s,baz=112,slow=26						
TKM2				⇑Lg	Lg	00 26 54.7	
	56nm,0.8s,baz=112,slow=26						
ZHN	Zhinishke	2.78	16	*e*P	Pb	00 26 16.6	-0.7
	6.0nm,0.3s						
ZHN				*e*S	Sg	00 26 56.2	-0.4
	13nm,0.3s						
UCH	Uchtor	2.78	309	⇑*e*P	Pn	00 26 13.3	+0.9
	baz=10.0						
UCH				⇑*e*S	Sn	00 26 48.3	+2.0
	baz=10.0						
UCH	Uchtor	2.78	309	P	Pb	00 26 15.9	-1.6
	SNR=5.8						
KBK	Karagaybulak	2.84	320	⇑*i*P	Pn	00 26 13.8	+0.8
	baz=21						
KBK				⇑*e*S	Sn	00 26 49.0	+1.7
	baz=21						
KBK	Karagaybulak	2.84	320	P	Pb	00 26 17.9	-0.4
	SNR=6.4						
UZB	Uzynbulak	2.91	24	*e*P	Pb	00 26 18.9	-0.6
	7µm,0.1s						
UZB				*e*S	Sg	00 26 59.9	-1.0
	21nm,0.7s						
UZB	Uzynbulak	2.91	24	Pg	Pb	00 26 18.9	-0.6
	7µm,0.1s						
UZB				Lg	Lg	00 26 59.9	
	21nm,0.7s						
DGS	Degeres	3.00	337	*e*P	Pb	00 26 21.0	-0.1
	9.2nm,0.7s						
DGS				*e*S	Sg	00 27 03.9	+0.1
	31nm,0.5s						
KURS	Kuram	3.04	11	*e*P	Pb	00 26 22.0	+0.3
	10.0nm,0.5s						
KURS				*e*S	Sg	00 27 05.7	+0.6
	26nm,0.5s						
KURS	Kuram	3.04	11	Pg	Pb	00 26 22.0	+0.3
	10.0nm,0.5s						
KURS				Lg	Lg	00 27 05.7	
	26nm,0.5s						
AAK	Ala-Archa	3.06	315	⇑*e*P	Pn	00 26 17.2	+1.2
	baz=16						
AAK				⇑*i*S	Sn	00 26 54.5	+1.8
	baz=16						
AAK	Ala-Archa	3.06	315	P	Pb	00 26 21.1	-0.9
	SNR=19						
AAK	Ala-Archa	3.06	315	⇓Pn	Pb	00 26 21.0	-0.9
	6.0nm,0.5s,baz=112,slow=26						
AAK				⇓Lg	Lg	00 27 04.6	
	17nm,0.5s,baz=112,slow=26						
SHLS	Shalkode	3.07	29	*e*P	Pg	00 26 24.4	-1.8
	21nm,0.8s						
SHLS				*e*S	Sg	00 27 09.2	+3.2
	23nm,0.9s						
SHLS	Shalkode	3.07	29	Pg	Pg	00 26 24.4	-1.8
	21nm,0.8s						
SHLS				Lg	Lg	00 27 09.2	
	23nm,0.9s						
FRU1	Bishkek	3.11	319	⇓*i*P	Pn	00 26 17.8	+1.2
	baz=19						
FRU1				⇓*i*S	Sn	00 26 55.2	+1.4
	baz=19						
KPKS	Kokpek	3.12	17	*e*P	Pb	00 26 22.6	-0.4
	22nm,0.4s						
KPKS				*e*S	Sg	00 27 06.3	-1.2
	67nm,0.6s						
AML	Almayashu	3.24	301	⇑*i*P	Pn	00 26 19.4	+0.7
	baz=2.0						
AML				⇑*e*S	Sn	00 26 59.2	+1.7
	baz=2.0						
AML	Almayashu	3.24	301	P	Pn	00 26 19.6	+1.0
	SNR=12						
KTBS	Karatobe	3.26	351	*e*P	Pb	00 26 25.7	+0.3
	4.8nm,0.3s						
KTBS				*e*S	Sg	00 27 11.6	-0.5
	18nm,0.4s						
CHKK	Chushkaly	3.37	355	*e*P	Pb	00 26 27.8	+0.6
	8.2nm,0.4s						
CHKK				*e*S	Sg	00 27 15.1	-0.5
	36nm,0.8s						
CHKK	Chushkaly	3.37	355	Pg	Pb	00 26 27.8	+0.6
	8.2nm,0.4s						
CHKK				Lg	Lg	00 27 15.1	
	36nm,0.8s						
KRBS	Karabastau	3.45	339	*e*P	Pb	00 26 28.5	-0.1
	2.2nm,0.6s						
KRBS				*e*S	Sg	00 27 16.9	-1.2
	15nm,0.5s						
ARSB	Arslanbob	3.45	285	⇓*i*P	Pn	00 26 22.1	+0.7
	baz=86						
ARSB				⇓*i*S	Sn	00 27 03.5	+1.1
	baz=86						
EKS2	Erkin-Say	3.48	310	⇓*e*P	Pn	00 26 22.9	+1.2
	baz=10.0						
EKS2				⇓*e*S	Sn	00 27 04.5	+1.5
	baz=10.0						
KUU	Kurty	3.48	347	*e*P	Pb	00 26 29.8	+0.6
	1.8nm,0.6s						
KUU				*e*S	Sg	00 27 18.8	-0.5
	47nm,0.8s						
KUU	Kurty	3.48	347	Pg	Pb	00 26 29.8	+0.6
	1.8nm,0.6s						
KUU				Lg	Lg	00 27 18.8	
	47nm,0.8s						
MNBS	Baschi	3.66	11	*e*P	Pb	00 26 32.6	+0.5
	4.6nm,0.4s						
MNBS				*e*S	Sg	00 27 23.4	-1.4
	37nm,0.5s						
MNBS	Baschi	3.66	11	Pg	Pb	00 26 32.6	+0.5
	4.6nm,0.4s						
MNBS				Lg	Lg	00 27 23.4	
	37nm,0.5s						
ARXS	Arharly	3.73	5	*e*P	Pb	00 26 34.0	+0.6
	11nm,0.5s						
ARXS				*e*S	Sg	00 27 26.1	-1.0
	18nm,0.5s						
MRKS	Merke	3.85	307	*e*P	Pb	00 26 36.0	+0.5
	4.6nm,0.7s						
MRKS				*e*S	Sg	00 27 29.6	-1.7
	7.2nm,0.7s						
MRKS	Merke	3.85	307	Pg	Pb	00 26 36.0	+0.5
	4.6nm,0.7s						
MRKS				Lg	Lg	00 27 29.6	
	7.2nm,0.7s						
MNAS	Manas	4.18	300	⇓*i*P	Pn	00 26 32.5	+1.1
	baz=1.0						
MNAS				⇓*i*S	Sn	00 27 21.4	+0.9
	baz=1.0						
DJR	Jarkent	4.22	24	*e*P	Pb	00 26 42.4	+0.7
	3.2nm,0.7s						
DJR				*e*S	Sg	00 27 40.1	-2.7
	7.6nm,0.4s						
DJR	Jarkent	4.22	24	Pg	Pb	00 26 42.4	+0.7
	3.2nm,0.7s						
DJR				Lg	Lg	00 27 40.1	
	7.6nm,0.4s						
TDK	Taldyqorghan	4.56	9	*e*P	Pb	00 26 48.5	+0.9
	7.0nm,0.3s						
TDK				*e*S	Sg	00 27 51.2	-2.6
	38nm,0.5s						
TDK	Taldyqorghan	4.56	9	Pg	Pb	00 26 48.5	+0.9
	7.0nm,0.3s						
TDK				Lg	Lg	00 27 51.2	
	38nm,0.5s						
KAPS	Kapalarasan	5.00	16	*e*P	Pg	00 26 59.7	-3.4
	1.3nm,0.8s						
KAPS				*e*S	Sg	00 28 10.1	+2.4
	7.9nm,0.8s						
BTLS	Baital	5.17	333	*e*P	Pb	00 27 00.4	+2.5
	1.5nm,0.7s						
BTLS				*e*S	Sg	00 28 10.9	-2.4
	7.5nm,0.6s						
BTLS	Baital	5.17	333	Pg	Pb	00 27 00.4	+2.5
	1.5nm,0.7s						
BTLS				Lg	Lg	00 28 10.9	
	7.5nm,0.6s						
KK31	Karatay Array	5.77	299	⇑Pg	Pg	00 27 15.3	-2.7
	1.7nm,0.8s,baz=106,slow=16,SNR=7.5						
KK31				⇑Lg	Lg	00 28 35.5	
	1.1nm,0.5s,baz=112,slow=26,SNR=4.1						
IUG	Iuzhnay	5.79	289	*e*P	Pb	00 27 11.7	+3.1
	2.5nm,0.0s						
IUG				*e*S	Sg	00 28 31.1	-2.2
	8.0nm,1.2s						

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*BJI **08** 01:29:25.0±0.0, 2°.98S×140°.37E, h15^{km}, mB5.1/8, mb4.8/18, Ms5.0/1*

*IDC **08** 01:29:29.1±0.5, 2°.41S×139°.91E, h0^{km}, mb4.4/18, mb1 4.5/21, mb1mx4.3/45, mbtmp4.4/21, ML4.5/2, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=11.3km s-min=8.2km az=20.0*

*DJA **08** 01:29:33.1±0.6, 2°S±6°×14°0E±°, h10^{km}±4^{km}, M4.7/8, mb5.0/8, mB4.9/1, MLv4.6/5, Mw(mB)4.2/1*

*NEIC **08** 01:29:33.5±1.1, 2°.62S±0°.09×140°.08E±0°.04, h37^{km}±7^{km}, mb4.7/32, Error ellipse: s-maj=14.1km s-min=4.0km az=201.0*

*NOU **08** 01:29:41.9, 2°.89S×139°.58E, h53^{km}, mb4.9, Near North Coast of Irian Jaya*

ISC 08 01:29:34.0±0.7, **2°.54S**±0°.06×**140°.10E**±0°.05, **h37**^{km}±2^{km},

n96,σ1ˢ66/86,mb4.6/37,MS3.7/9,1D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.09	126	P	Pn	01 29 39.7	-0.5
JAY	Jayapura	0.61	87	Pg	Pn	01 29 45.0	-1.2
	688nm,0.3s,baz=252,slow=12,SNR=866						
JAY				Lg	Lg	01 29 56.3	
	2µm,0.3s,baz=83,slow=18,SNR=22						
JAY	Jayapura	0.61	87	P	Pn	01 29 45.2	-1.1
SMPI	Sarmi	1.49	292	P	Pn	01 29 56.7	-1.5
WAMI	Wamena	1.92	226	P	Pn	01 30 06.7	+2.5
SRPI	Serui, Papua	3.91	280	P	Pn	01 30 33.4	+1.8
FAKI	Fak Fak	7.85	267	Pn	Pn	01 31 25.2	-0.5
FAKI				Sn	Sn	01 32 51.6	-1.7
SIJI	Sorong	8.98	281	LR	LR	01 35 37.6	
	comp=Z,412nm,19.3s,baz=84,slow=42						
PMG	Port Moresby	9.79	134	Pn	Pn	01 31 55.8	+3.6
	1.9nm,0.3s,baz=297,slow=10,SNR=3.6						
PMG				LR	LR	01 36 57.6	
	comp=Z,159nm,20.9s,baz=334,slow=45						
KRVT	Keravat (AS076	12.04	99	LR	LR	01 36 25.9	
	comp=Z,194nm,19.0s,baz=280,slow=34						
MTN	Manton Dam	13.55	220	Pn	Pn	01 32 42.4	-1.3
MTN					Sn	01 35 12.8	-0.3
SOEI	Soe	17.29	245		Pn	01 33 32.0	-0.8
SOEI	Soe	17.29	245	P	P	01 33 38.1	+4.2
	181nm,0.8s						
GTOI	Gorontalo	17.37	280	P	P	01 33 37.2	+2.4
	21nm,0.7s						
WB0	Warramunga Arr	18.00	198		Pn	01 33 39.7	-1.8
WR0	Warramunga Arr	18.14	197		Pn	01 33 41.7	-1.5
WR0				IAmb	IAmb	01 33 50.8	
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	18.17	198		Pn	01 33 41.7	-1.8
WB2	Warramunga Arr	18.18	198		Pn	01 33 42.1	-1.6
WB2				IAmb	IAmb	01 33 50.0	
	comp=Z,27nm,0.6s						
WRA	Warramunga Arr	18.19	198	P	P	01 33 43.0	-0.7
	comp=Z,2.9nm,0.3s,baz=21,slow=11,SNR=44						
WRA				S	Sn	01 36 58.8	-7.0
	comp=Z,0.4nm,0.3s,baz=15,slow=22,SNR=5.2						
WRA				LR	LR	01 41 24.5	
	comp=Z,346nm,19.8s,baz=5.0,slow=39						
CTA	Charters Tower	18.45	161	P	Pn	01 33 49.8	+2.9
	comp=Z,0.5nm,0.3s,baz=335,slow=12,SNR=9.1						
TTSI	Tana Toraja	20.26	268	P	Pn	01 34 23.8	+15
FITZ	Fitzroy Crossi	20.98	222	P	Pn	01 34 14.8	-2.1
	comp=Z,41nm,0.9s,baz=42,slow=11,SNR=22						
FITZ				S	S	01 38 01.3	-4.7
	comp=Z,12nm,0.8s,baz=194,slow=14,SNR=4.5						
FITZ				LR	LR	01 43 10.5	
	comp=Z,313nm,18.3s,baz=42,slow=39						
FITZ	Fitzroy Crossi	20.98	222	P	P	01 34 12.9	-1.3
FITZ				IAmb	IAmb	01 34 20.1	
	comp=Z,42nm,0.9s						
AS31	Alice Springs	21.84	195	P	P	01 34 20.6	-2.8
ASAR	Alice Springs	21.84	195	P	P	01 34 23.8	+0.3
	comp=Z,6.8nm,0.5s,baz=27,slow=10,SNR=74						
ASAR				S	Sn	01 38 27.9	-5.9
	comp=Z,1.7nm,0.8s,baz=14,slow=31,SNR=4.2						
ASAR				LR	LR	01 43 39.6	
	comp=Z,297nm,18.7s,baz=14,slow=39						
MYLDM	Lahad Datu	22.90	290	P	P	01 34 33.5	-1.3
MYLDM				IAmb	IAmb	01 34 46.4	
	comp=Z,19nm,0.9s						
EIDS	Eidsvold	25.04	156	P	P	01 34 59.6	+4.7
MTKI	Muara Teweh, K	25.24	273	P	P	01 34 57.5	+0.7
STKA	Stephens Creek	29.21	177	P	P	01 35 34.2	+2.0
	comp=Z,5.4nm,0.9s,baz=346,slow=8.6,SNR=7.9						
STKA				LR	LR	01 48 27.9	
	comp=Z,288nm,20.6s,baz=1.2,slow=39						
STKA	Stephens Creek	29.21	177	P	P	01 35 35.0	+2.7
JCJ	Chichijima	29.53	4	LR	LR	01 46 03.3	
	comp=Z,110nm,20.5s,baz=86,slow=34						
H11N1	WAKE ISLAND Hy	34.37	49	T	T	02 12 30.0	
	baz=233,slow=75,SNR=9.1						
H11N2	WAKE ISLAND Hy	34.39	49	T	T	02 12 36.0	
	baz=233,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	34.39	49	T	T	02 12 32.3	
	baz=233,slow=75,SNR=8.7						
KRJI	Kerinci	38.61	270	P	P	01 36 52.0	-2.1
PHET	Kaeng Krachan	43.01	292	P	P	01 37 30.1	-0.2
	comp=Z,770nmcomp=Z,30nm,0.7s						
UTHA	Uthaitani	44.05	295	P	P	01 37 38.4	-0.3
	comp=Z,229nmcomp=Z,16nm,0.8s						
PAYA	Payao	45.12	301	P	P	01 37 47.0	-0.2
	comp=Z,7µmcomp=Z,201nm,1.0s						
CM04	Chiang Mai Arr	45.51	299	P	P	01 37 50.7	+0.4
	comp=Z,7.0nm,1.0s						
CM09	Chiang Mai Arr	45.52	299	P	P	01 37 51.9	+1.5
	comp=Z,7.2nm,1.0s						
CM01	Chiang Mai Arr	45.53	299	P	P	01 37 52.1	+1.6
	comp=Z,8.2nm,1.2s						
CM05	Chiang Mai Arr	45.54	299	P	P	01 37 50.9	+0.4
	comp=Z,6.5nm,1.0s						
CM02	Chiang Mai Arr	45.55	299	P	P	01 37 51.7	+1.1
	comp=Z,8.0nm,1.0s						
CMAR	Chiang Mai Arr	45.56	299	P	P	01 37 50.7	0.0
	comp=Z,2.3nm,0.4s,baz=119,slow=6.5,SNR=18						
CM13	Chiang Mai Arr	45.58	299	P	P	01 37 51.8	+0.9
	comp=Z,7.8nm,0.9s						
CMMT	Chiang Mai	45.70	299	P	P	01 37 53.0	+1.2
USRK	Ussuriysk Ar.	47.10	352	LR	LR	01 54 44.1	
	comp=Z,103nm,21.4s,baz=172,slow=32						
URZ	Urewera	49.07	141	LR	LR	01 59 30.1	
	comp=Z,39nm,18.4s,baz=226,slow=36						
RPZ	Rata Peaks	49.34	151	P	P	01 38 19.5	-0.2
GTA	Gaotai	55.77	323	eP	P	01 39 08.1	+0.6
GTA				pP	pP	01 39 12.5	-6.0
GTA				sP	sP	01 39 16.0	-6.4
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PETK	Petropavlovsk-	57.39	12	P	P	01 39 19.3	+0.7
	comp=Z,2.6nm,0.8s,baz=188,slow=6.4,SNR=4.3						
PETK				LR	LR	02 06 10.4	
	comp=Z,26nm,18.5s,baz=219,slow=38						
SONM	Songino Array	58.17	334	P	P	01 39 25.1	+0.7
	comp=Z,0.5nm,0.7s,baz=129,slow=16,SNR=3.9						
SONM				LR	LR	02 02 40.8	
	comp=Z,90nm,21.5s,baz=106,slow=34						
KHU	Kahuku	66.73	68	P	P	01 40 20.9	-1.4
MK31	Makanchi Array	70.51	322	P	P	01 40 45.3	+0.2
MK31				IAmb	IAmb	01 40 46.5	
	comp=Z,11nm,1.0s						
MKAR	Makanchi Array	70.51	322	P	P	01 40 45.5	+0.4
	comp=Z,8.5nm,0.8s,baz=114,slow=7.9,SNR=71						
MAKZ	Makanchi	70.71	322	P	P	01 40 45.8	-0.5
NIL	Nilore	72.34	306	P	P	01 40 56.1	-0.3
ZAA0	Zalesovo Array	72.49	329	P	P	01 40 56.3	-0.6
ZAA0				IAmb	IAmb	01 40 57.0	
	comp=Z,6.8nm,1.0s						
ZALV	Zalesovo Beam	72.49	329	P	P	01 40 56.1	-0.8
	comp=Z,5.1nm,0.6s,baz=111,slow=6.0,SNR=25						
AAK	Ala-Archa	74.05	316	P	P	01 41 06.3	-0.3
	comp=Z,1.9nm,0.7s,baz=150,slow=6.7,SNR=5.9						
AAK	Ala-Archa	74.05	316	P	P	01 41 06.2	-0.3
KURK	Kurchatov	74.38	325	P	P	01 41 08.1	+0.1
KURK				IAmb	IAmb	01 41 09.0	
	comp=Z,11nm,0.9s						
KURBB	Kurchatov Arra	74.39	324	P	P	01 41 07.8	-0.3
	comp=Z,6.0nm,0.9s,baz=110,slow=5.6,SNR=28						
ARSB	Arslanbob	74.72	314	P	P	01 41 10.1	-0.3
ARSB				IAmb	IAmb	01 41 11.3	
	comp=Z,5.5nm,0.7s						
KBL	Kabul	75.94	306	P	P	01 41 16.7	-0.9
KK31	Karatay Array	76.98	315	P	P	01 41 22.9	-0.3
KK31				IAmb	IAmb	01 41 25.1	
	comp=Z,4.1nm,1.1s						
KKAR	Karatay Array	76.98	315	P	P	01 41 22.7	-0.4
KKAR				IAmb	IAmb	01 41 25.1	
	comp=Z,4.1nm,1.1s						
NRIK	Noril'sk	79.95	343	P	P	01 41 39.0	0.0
	comp=Z,9.5nm,1.0s,baz=127,slow=5.6,SNR=15						
NRIK	Noril'sk	79.95	343	P	P	01 41 39.0	0.0
NRIK				IAmb	IAmb	01 41 40.1	
	comp=Z,13nm,1.1s						
BVAR	Borovoye Array	79.97	325	P	P	01 41 39.4	0.0
	comp=Z,1.7nm,0.5s,baz=131,slow=6.5,SNR=12						
BRVK	Borovoye	80.04	325	P	P	01 41 39.6	-0.1
BRVK				IAmb	IAmb	01 41 41.0	
	comp=Z,11nm,1.1s						
MAW	Mawson	82.80	202	LR	LR	02 16 48.5	
	comp=Z,51nm,18.6s,baz=55,slow=34						
RND	Reindeer	83.88	25	P	P	01 41 59.9	+0.2
DHY	Denali Highway	84.41	26	P	P	01 42 02.9	+0.3
DHY				IAmb	IAmb	01 42 04.0	
	comp=Z,8.9nm,1.0s						
CCB	Clear Creek Bu	84.69	24	P	P	01 42 03.4	-0.3
CCB				IAmb	IAmb	01 42 05.6	
	comp=Z,7.1nm,0.8s						
IL31		85.11	24	P	P	01 42 05.3	-0.6
IL31				IAmb	IAmb	01 42 06.0	
	comp=Z,4.4nm,0.9s						
ILAR	Eielson Array	85.11	24	P	P	01 42 05.0	-0.9
	comp=Z,2.5nm,0.7s,baz=262,slow=4.2,SNR=24						
GEYT	Alibeck	85.22	308	P	P	01 42 06.8	-0.3
	comp=Z,3.4nm,0.8s,baz=214,slow=10,SNR=7.5						
ABKAR	Akbulak array	85.49	320	P	P	01 42 07.5	-0.6
ABKAR				IAmb	IAmb	01 42 08.8	
	comp=Z,5.1nm,0.7s						
CTGM	Chitina Glacie	86.67	29	P	P	01 42 13.7	-0.2
AKTO	Aktyubinsk	86.90	321	P	P	01 42 13.7	-1.4
	comp=Z,1.0nm,0.5s,baz=122,slow=6.2,SNR=4.4						
K27K	Chicken	86.95	26	P	P	01 42 15.1	+0.1
ARU	Arti	87.42	327	P	P	01 42 15.9	-1.5
	comp=Z,0.6nm,0.5s,baz=91,slow=11,SNR=5.1						
INK	Inuvik	91.00	22	P	P	01 42 34.0	0.0
	comp=Z,1.2nm,0.8s,baz=293,slow=6.3,SNR=3.6						
SYO	Syowa Base	91.41	201	⇓ePcP	PcP	01 42 38.0	+1.2
YKA	Yellowknife Ar	99.29	27	P	Pdif	01 43 11.0	-0.9
	comp=Z,0.1nm,0.3s,baz=286,slow=4.4,SNR=4.3						
NVAR	Mina Array Bea	100.66	52	P	Pdif	01 43 18.4	-0.6
	comp=Z,0.6nm,0.8s,baz=246,slow=8.3,SNR=4.5						
ARCES	ARCESS Array B	100.81	341	P	Pdif	01 43 17.4	-1.2
	comp=Z,1.8nm,0.7s,baz=74,slow=5.4,SNR=6.9						
KEST	Kesra	123.79	312	PKP	PKiKP	01 48 29.3	+0.4
	comp=Z,1.8nm,0.8s,baz=92,slow=2.0,SNR=4.5						
TORD	Torodi Ar. Bea	137.54	287	PKP	PKPdf	01 48 54.4	-0.7
	comp=Z,0.3nm,0.3s,baz=82,slow=1.6,SNR=3.6						
KIC	Kosan Boka	144.75	277	ePKP1	PKPbc	01 49 06.7	-0.4
	comp=Z,34nm,0.7s						
DBIC	Dimbokro	144.84	278	PKP	PKPbc	01 49 07.1	-0.2
	comp=Z,17nm,0.6s,baz=65,slow=3.8,SNR=55						
TIC	Toumodi	145.00	278	ePKP1	PKPab	01 49 07.4	-0.5
LIC	Lamto	145.04	277	ePKP1	PKPab	01 49 07.5	-0.5
	comp=Z,28nm,0.6s						
CPUP	Villa Florida	146.72	151	PKPbc	PKiKP	01 49 14.3	-1.2
	comp=Z,8.0nm,0.8s,baz=222,slow=3.9,SNR=16						
SIV	San Ignacio	152.12	132	PKPbc	PKiKP	01 49 27.4	+0.4
	comp=Z,2.5nm,0.7s,baz=258,slow=3.5,SNR=7.5						

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*IDC **08** 01:36:29.0±0.9, 15°74N×144°71E, h0km, mb3.8/12, mb1 4.1/13, mb1mx3.8/58, mbtmp3.9/13, ML3.6/1, MS3.4/1, Ms1 3.6/1, ms1mx2.8/34, Error ellipse: s-maj=28.6km s-min=16.7km az=85.0*

*NEIC **08** 01:36:32.2±0.9, 15°67N±0°07×144°69E±0°06, h24km±2km, mb4.4/9, Error ellipse: s-maj=10.3km s-min=8.5km az=176.0*

ISC 08 01:36:33.9±0.7, 15°66N±0°07×144°6E±0°2, h35km, n30, σ0ˢ57/25, mb4.0/16, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.07	174	Pn	Pn	01 37 06.2	-0.1
	20nm,0.3s,baz=34,slow=21,SNR=6.8						
GUMO				Sn	Sn	01 37 31.3	+0.4
	10nm,0.3s,baz=328,slow=20,SNR=1.8						
GUMO	Guam	2.07	174		Pn	01 37 06.1	-0.1
GUMO				Sn	Sn	01 37 30.7	-0.1
H11S3	WAKE ISLAND Hy	21.26	79	T	T	02 03 40.2	
	baz=266,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	21.27	79	T	T	02 03 34.5	
	baz=266,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	21.27	79	T	T	02 03 37.7	
	baz=266,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	21.57	76	T	T	02 03 54.6	
	baz=264,slow=75,SNR=62						
MJAR	Matsushiro Arr	21.57	346	P	P	01 41 20.9	+0.4
	1.9nm,0.7s,baz=172,slow=9.6,SNR=2.7						
H11N2	WAKE ISLAND Hy	21.58	76	T	T	02 03 57.8	
	baz=264,slow=75,SNR=108						
H11N3	WAKE ISLAND Hy	21.59	76	T	T	02 03 51.0	
	baz=264,slow=75,SNR=77						
YULB	Yu-li	23.29	293	P	P	01 41 38.9	+0.1
YULB				IAmb	IAmb	01 41 44.4	
	comp=Z,9.8nm,0.9s						
KSRS	Korea Array	26.28	329	P	P	01 42 05.5	-0.6
	comp=Z,1.3nm,0.7s,baz=186,slow=11,SNR=5.4						
KNRA	Kununurra	34.87	207	P	P	01 43 20.6	-1.4
WB0	Warramunga Arr	36.62	196	P	P	01 43 36.0	-1.1
WB2	Warramunga Arr	36.80	196	P	P	01 43 38.8	+0.2
WRA	Warramunga Arr	36.80	196	P	P	01 43 39.7	+1.0
	comp=Z,5.7nm,0.9s,baz=16,slow=9.3,SNR=9.6						
ASAR	Alice Springs	40.47	195	P	P	01 44 10.1	+0.7
	comp=Z,0.7nm,0.8s,baz=21,slow=11,SNR=3.3						
DZM	Mont Dzumac	43.16	150	eLR	LR	01 44 33.6	
	comp=Z,108nm,32.9s						
CMAR	Chiang Mai Arr	43.70	280	P	P	01 44 36.5	+0.6
	comp=Z,1.1nm,0.4s,baz=73,slow=7.7,SNR=7.1						
CMAR				LR	LR	02 02 25.2	
	comp=Z,39nm,18.3s,baz=287,slow=36						
SONM	Songino Array	44.93	324	P	P	01 44 45.7	+0.2
	comp=Z,2.0nm,1.1s,baz=123,slow=5.6,SNR=4.8						
ZALV	Zalesovo Beam	59.83	324	P	P	01 46 35.6	-0.2
	comp=Z,1.0nm,0.6s,baz=101,slow=7.7,SNR=6.2						
MK31	Makanchi Array	59.87	315	P	P	01 46 35.9	-0.3
MKAR	Makanchi Array	59.87	315	P	P	01 46 36.8	+0.6
	comp=Z,1.6nm,0.7s,baz=91,slow=8.5,SNR=15						
KURK	Kurchatov	62.88	319	P	P	01 46 56.4	-0.1
KURK				IAmb	IAmb	01 46 58.5	
	comp=Z,4.6nm,0.9s						
AAK	Ala-Archa	65.01	310	P	P	01 47 10.7	-0.1
	comp=Z,0.5nm,0.4s,baz=100,slow=6.1,SNR=3.5						
AAK	Ala-Archa	65.01	310	P	P	01 47 10.6	-0.3
ILAR	Eielson Array	66.80	26	P	P	01 47 21.4	-0.4
	comp=Z,0.3nm,0.8s,baz=250,slow=5.4,SNR=2.4						
KK31	Karatay Array	67.94	311	P	P	01 47 29.4	0.0
KK31				IAmb	IAmb	01 47 32.2	
	comp=Z,3.4nm,1.1s						
KKAR	Karatay Array	67.94	311	P	P	01 47 29.2	-0.2
KKAR				IAmb	IAmb	01 47 32.2	
	comp=Z,3.4nm,1.1s						
YKA	Yellowknife Ar	81.13	27	P	P	01 48 45.1	-0.4
	comp=Z,0.4nm,0.8s,baz=280,slow=4.1,SNR=7.2						
NVAR	Mina Array Bea	85.80	51	P	P	01 49 11.0	+0.6
	comp=Z,0.4nm,0.7s,baz=263,slow=4.3,SNR=2.9						

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*JMA **08** 01:38:34.7±0.1, 23°26N×122°14E, h39km, M3.3*

*TAP **08** 01:38:35.3, 23°24N×122°16E, h37km, ML3.7, C*

ISC 08 01:38:32.8±1.1, 23°24N±0°02×122°15E±0°02, h15km±9km, n117, σ0ˢ72/172, 8D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui	0.72	291	⇓P	Pn	01 38 47.9	-0.5
	baz=290						
HGSD				eS	Sb	01 38 57.0	+0.3
	baz=290						
CHKT	Chengkung	0.74	259	P	Pn	01 38 48.2	-0.5
	baz=251						
EYUL	Yuli	0.78	278	⇓P	Pn	01 38 49.1	-0.1
	baz=278						
EYUL				S	Sn	01 38 59.6	-1.0
	baz=278						
FULB	Fuli	0.79	267	eP	Pn	01 38 49.2	-0.2
	baz=267						
EGFH	Guangfu	0.79	303	P	Pn	01 38 49.4	-0.1
	baz=311						
TWF1	Yuli	0.80	278	⇓iP	Pn	01 38 49.3	-0.2
	baz=271						
TWF1				S	Sn	01 38 59.9	-1.3
	baz=271						
YULB	Yu-li	0.80	281	P	Pn	01 38 49.5	-0.2
	baz=275						
YULB				S	Sn	01 39 00.3	-1.0
	baz=275						
EHY	Hungye	0.81	289	P	Pn	01 38 49.5	-0.2
	baz=289						
EHY				S	Sn	01 39 00.5	-1.0
	baz=289						
EDH	Donghe	0.83	252	P	Pn	01 38 49.5	-0.4
	baz=251						
EDH				S	Sg	01 38 59.7	+0.1
	baz=251						
LDUT	Ludao	0.84	228	i P	Pn	01 38 49.9	-0.2
	baz=228						
LDUT				eS	Sb	01 38 59.8	-0.6
	baz=228						
ESL	Shilin	0.88	311	⇓P	Pg	01 38 50.0	+0.3
	baz=311						
ESL				eS	Sb	01 39 00.7	-0.6
	baz=311						
HWA	Hwalien	0.89	326	P	Pn	01 38 50.8	-0.1
	baz=326						
HWA				eS	Sg	01 39 01.8	0.0
	baz=326						
TWD	Chiawan	0.98	329	P	Pg	01 38 51.7	0.0
	baz=328						
TWD				eS	Sb	01 39 03.8	-0.5
	baz=328						
LONT	Longtian	1.00	251	eP	Pn	01 38 53.4	+1.1
	baz=251						
LONT				eS	Sn	01 39 06.2	0.0
	baz=251						
TTN	Taitung	1.04	243	eP	Pg	01 38 54.6	+1.7
	baz=242						
ELDTW	Lidau	1.05	268	P	Pn	01 38 53.0	-0.1
	baz=267						
ELDTW				S	Sb	01 39 05.3	-1.0
	baz=267						
NACB	Ninganchiao	1.06	331	⇓P	Pb	01 38 52.9	0.0
	baz=331						
NACB				S	Sb	01 39 05.8	-0.9
	baz=331						
TWGBT	Beinan	1.07	247	eP	Pg	01 38 53.8	+0.2
	baz=247						
TWGBT				eS	Sg	01 39 07.3	-0.3
	baz=247						
YUS	Yu-Shan	1.13	283	P	Pg	01 38 55.1	+0.4
	baz=282						
YUS				eS	Sg	01 39 09.3	-0.2
	baz=282						
ETLH	Xiulin Townshi	1.14	328	P	Pb	01 38 54.3	-0.1
	baz=327						
ETLH				eS	Sb	01 39 08.2	-0.9
	baz=327						
CHGB	Renai	1.22	313	P	Pg	01 38 56.0	-0.2
	baz=312						
CHGB				eS	Sb	01 39 10.7	-0.6
	baz=312						
WHF	Hehuan Shan	1.22	318	eP	Pb	01 38 55.8	0.0
	baz=318						
WHF				eS	Sb	01 39 10.4	-1.0
	baz=318						
SSLB	Suanglung	1.23	297	⇓P	Pb	01 38 56.0	+0.2
	baz=304						
ENA	Nanau	1.24	342	P	Pb	01 38 56.2	+0.2
	baz=334						
ENA				eS	Sb	01 39 11.0	-0.9
	baz=334						
ENAH	Nanao	1.25	345	P	Pb	01 38 56.3	+0.3
	baz=335						
ENAH				S	Sb	01 39 11.8	-0.1
	baz=335						
ALS	Alishan	1.27	283	eP	Pg	01 38 57.5	+0.3
	baz=282						
ALS				S	Sg	01 39 13.3	-0.5
	baz=282						
ECL	Taimali	1.28	240	eP	Pn	01 38 56.1	0.0
	baz=251						
ECL				eS	Sb	01 39 11.2	-1.6
	baz=251						
WHYT	Xinyi Township	1.28	291	eP	Pg	01 38 57.6	+0.2
	baz=291						
STYT	Tauyuan	1.29	267	eP	Pg	01 38 57.3	-0.2
	baz=266						
STYT				eS	Sb	01 39 12.8	-0.3
	baz=266						
FUSS	Fushou	1.31	321	⇓P	Pb	01 38 57.3	+0.1
	baz=320						
FUSS				eS	Sb	01 39 12.7	-1.2
	baz=320						
LAY	Lan-yu	1.32	205	P	Pn	01 38 56.2	-0.5
	baz=205						
SMLT	Sun Moon Lake	1.32	299	⇓P	Pb	01 38 57.6	+0.3
	baz=299						
WPL	Puli Township	1.34	305	eP	Pg	01 38 58.2	-0.4
	baz=313						
WPL				eS	Sb	01 39 15.1	+0.4
	baz=313						
TDCB	Techi	1.36	318	P	Pb	01 38 58.4	+0.3
	baz=317						
TDCB				eS	Sn	01 39 14.2	-1.1
	baz=317						
TYC	Yuchr	1.36	299	P	Pb	01 38 58.4	+0.4
	baz=299						
DPDB	Guoxing	1.38	305	eP	Pb	01 38 58.8	+0.5
	baz=305						
TWC	Suao	1.39	349	P	Pb	01 38 59.0	+0.4
	baz=359						
TWC				eS	Sn	01 39 15.7	-0.2
	baz=359						
NNS	Nan Shan	1.39	329	P	Pb	01 38 58.6	-0.1
	baz=318						
NNS				S	Sn	01 39 15.3	-0.8
	baz=318						
CHN5	Tsauling	1.40	285	eP	Pg	01 39 00.0	+0.2
	baz=284						
TPUB	Ta-pu	1.40	273	eP	Pg	01 38 59.6	-0.1
	baz=268						
TPUB				eS	Sg	01 39 17.4	-0.6
	baz=268						
SLGT	Liugui	1.41	260	eP	Pg	01 39 00.1	+0.3
	baz=264						
SLGT				eS	Sn	01 39 16.2	-0.1
	baz=264						
WTP	Ta-pu	1.42	271	eP	Pg	01 38 60.0	0.0
	baz=263						
WJS	Zhushan	1.43	294	eP	Pg	01 39 00.3	0.0
	baz=293						
CHN4	Tsaushan	1.44	275	eP	Pg	01 39 00.4	0.0
	baz=270						
CHN4				eS	Sg	01 39 18.9	-0.3
	baz=270						
YOJ	Yonaguni jima	1.45	33	P	Pb	01 38 59.4	-0.1
YOJ				eS	Sn	01 39 17.5	+0.2
YOJ	Yonaguni jima	1.45	33	eP	Pb	01 38 59.5	0.0
	baz=32						
SGST	Jiashian	1.45	264	eP	Pb	01 39 00.2	+0.6
	baz=263						
TAW	Tawu	1.45	233	eP	Pn	01 38 59.1	+0.5
	baz=232						
EAST	Anshuo	1.48	235	P	Pn	01 38 59.2	+0.3
	baz=234						
NDT	Datong Townshi	1.48	337	eP	Pb	01 39 00.2	+0.2
	baz=336						
SSD	Sandimen	1.48	251	eP	Pb	01 39 00.1	0.0
	baz=250						
TSMG	Majia	1.49	249	eP	Pb	01 38 60.0	-0.2
	baz=249						
WNT	Mingjian	1.49	296	P	Pg	01 39 01.3	-0.1
	baz=295						
CHN1	Nanshi	1.50	268	eP	Pg	01 39 01.5	0.0
	baz=268						
ENTT	Nioudou	1.50	339	P	Pb	01 39 00.2	-0.1
	baz=339						
ENTT				eS	Sn	01 39 18.3	-0.2
	baz=339						
WNT1	Nantou City	1.51	297	eP	Pg	01 39 01.7	-0.1
	baz=296						
WHP	Taichung City	1.52	313	eP	Pb	01 39 01.2	+0.5
	baz=312						
WHP				eS	Sb	01 39 19.3	-0.5
	baz=312						
SNST	Tainan City	1.52	270	eP	Pg	01 39 01.8	-0.3
	baz=269						
TWK	Hsinying	1.53	271	eP	Pg	01 39 01.9	-0.4
	baz=271						
TWK				eS	Sg	01 39 21.2	-1.0
	baz=271						
MASBT	Mashibuluo	1.53	246	P	Pb	01 39 00.7	-0.3
	baz=240						
TWE	Neicheng	1.54	343	eP	Pb	01 39 01.8	+0.7
	baz=343						
TWE				eS	Sb	01 39 20.0	-0.5
	baz=343						
WDLH	Douliu	1.55	287	eP	Pg	01 39 02.2	-0.4
	baz=286						
YHNB	Yeheng	1.59	334	P	Pb	01 39 01.6	-0.4
	baz=333						
NSK	Sanguang	1.61	333	eP	Pb	01 39 01.8	-0.4
	baz=333						
NSK				eS	Sn	01 39 20.8	-0.5
	baz=333						
CHY	Chiayi	1.61	280	eP	Pg	01 39 03.3	-0.5
	baz=279						
SLIU	Shizi	1.61	231	eP	Pn	01 39 01.2	+0.4

	baz=231						
EGS		1.61	353	eS	Sn	01 39 21.6	+0.2
	baz=1.0						
TCU	Taichung	1.63	304	eP	Pg	01 39 03.8	-0.3
	baz=303						
NTC	Toucheng	1.64	350	eS	Sb	01 39 22.5	-0.7
	baz=360						
NWLT	Wulai	1.64	339	eP	Pb	01 39 02.6	-0.2
	baz=327						
NWLT				eS	Sn	01 39 22.0	-0.1
	baz=327						
SSPT	Xinbi	1.64	243	eP	Pb	01 39 03.2	+0.4
	baz=243						
TWM1	Shoushan	1.65	256	eP	Pg	01 39 05.4	+0.9
	baz=255						
CHN3	Shinhua	1.65	265	eP	Pg	01 39 03.9	-0.7
	baz=264						
SCZT	Fangliau	1.66	239	eP	Pb	01 39 03.7	+0.7
	baz=243						
WTK	Tuku	1.68	286	eP	Pg	01 39 04.4	-0.7
	baz=285						
WCHH	Zhanghua	1.69	300	eP	Pg	01 39 04.4	-0.7
	baz=299						
HATJ	Hateruma jima	1.72	61	P	Pn	01 39 03.1	+0.9
HATJ				S	Sn	01 39 23.4	-0.6
ICHU	Yijhu	1.73	274	eP	Pb	01 39 04.4	+0.1
	baz=274						
NSY	Sanyi	1.73	313	eP	Pg	01 39 05.3	-0.8
	baz=312						
NSTT	Nanjuang	1.74	323	eP	Pb	01 39 05.0	+0.5
	baz=307						
LIOB	Emei	1.75	324	eP	Pb	01 39 05.2	+0.6
	baz=308						
TIPB	Shuangxi	1.75	350	eP	Pb	01 39 04.5	-0.2
	baz=358						
TIPB				eS	Sn	01 39 25.2	+0.4
	baz=358						
TWB1	Santiao Chiao	1.77	355	eP	Pb	01 39 04.0	-0.9
	baz=355						
WDJ	Dajia District	1.77	309	eP	Pb	01 39 05.1	+0.1
	baz=308						
CHN8	Yiju	1.79	274	eP	Pb	01 39 05.8	+0.5
	baz=273						
TWKBT	Hengchun	1.79	224	eP	Pb	01 39 04.5	-0.8
	baz=224						
TWKBT				eS	Sn	01 39 26.6	+0.9
	baz=224						
TWK1	Hengchun	1.79	224	eP	Pb	01 39 04.6	-0.8
	baz=224						
TWK1				eS	Sn	01 39 26.5	+0.8
	baz=224						
HEN	Hengchun	1.79	227	eP	Pb	01 39 04.9	-0.4
	baz=220						
HEN				eS	Sn	01 39 26.5	+0.8
	baz=220						
NMLH	Miaoli	1.80	316	eP	Pb	01 39 05.8	+0.4
	baz=315						
IRIF	Iriomote-Funau	1.81	53	P	Pn	01 39 04.6	+1.1
IRIF				S	Sn	01 39 26.2	0.0
NHDH	Xindian Distri	1.81	342	eP	Pb	01 39 05.5	-0.2
	baz=330						
NHDH				eS	Sn	01 39 26.9	+0.7
	baz=330						
TATO	Taipei	1.83	341	eP	Pb	01 39 05.6	-0.5
	baz=330						
TATO				eS	Sn	01 39 27.3	+0.6
	baz=330						
NWF	Wu-fen Shan	1.86	350	eP	Pb	01 39 06.9	+0.4
	baz=349						
NWF				eS	Sn	01 39 27.9	+0.4
	baz=349						
WFSB	Wu-fen Shan	1.86	350	eP	Pb	01 39 06.8	+0.4
	baz=349						
WFSB				eS	Sn	01 39 28.1	+0.8
	baz=349						
JKRS	Kuro-shima	1.97	59	P	Pn	01 39 06.9	+1.2
JKRS				S	Sn	01 39 29.6	-0.5
TWS1	Kuangyinshan	1.97	340	eS	Sn	01 39 31.2	+1.0
	baz=340						
YM10	YM10	1.98	344	eP	Pb	01 39 07.8	-0.8
	baz=329						
YM08	YM08	2.01	345	eP	Pb	01 39 07.9	-1.1
	baz=330						
ANP	Anpu	2.02	344	eP	Pb	01 39 08.2	-1.1
	baz=330						
JIJ	Ishigaki jima	2.14	58	P	Pn	01 39 08.8	+0.8
JIJ				S	Sn	01 39 33.5	-0.8
WDGT	Dungji	2.29	271	eS	Sn	01 39 38.5	+0.4
	baz=270						
JISG	Ishigakijimahi	2.39	55	P	Pn	01 39 11.9	+0.5
JISG				S	Sn	01 39 38.7	-1.7
PHUB	P'eng-hu	2.39	277	eP	Pn	01 39 13.2	+1.8
	baz=264						
PHUB				eS	Sn	01 39 40.4	-0.1
	baz=264						
PNG	Penghu	2.41	278	eP	Pn	01 39 13.5	+1.8
	baz=265						
PNG				eS	Sn	01 39 41.3	+0.3
	baz=265						
VCHM	Qimei	2.51	270	eP	Pn	01 39 15.1	+2.1
	baz=269						
VCHM				eS	Sn	01 39 43.8	+0.4
	baz=269						
JTJ	Tarama	2.72	59	P	Pn	01 39 17.0	+1.1
JTJ				S	Sn	01 39 48.2	-0.4
VWUC	VWUC	3.02	306	eP	Pn	01 39 21.4	+1.3
	baz=305						
PTTC	Pingtan	3.13	316	eP	Pn	01 39 22.9	+1.3
	baz=316						
JMJ	Miyako jima 2	3.27	61	eS	Sn	01 40 02.1	-0.1
	baz=59						
PTMZ	Houxiangcun	3.30	304	eP	Pn	01 39 25.4	+1.4
	baz=302						
MATB	Ma-tsu	3.53	326	eP	Pn	01 39 28.2	+1.1
	baz=314						
MSUT	Lienchiang	3.55	326	eP	Pn	01 39 29.0	+1.5
	baz=314						
KNMB	Chin-men Tao	3.66	290	eP	Pn	01 39 30.1	+1.2
	baz=288						
LYJJ	Jianjiangzhen	3.95	327	eP	Pn	01 39 34.7	+1.8
	baz=337						
MHZQ	Yeshan	4.02	316	eP	Pn	01 39 35.3	+1.4
	baz=315						
XPSS	Dashiqiu	4.08	335	eP	Pn	01 39 35.6	+0.9
	baz=334						
AXDP	Jialang	4.17	294	eP	Pn	01 39 37.7	+1.8
	baz=303						

IDC 08 01:59:02.4±1.9**, 7°.33S×127°.40E, h0^{km}, mb3.8**/1**, mb1 3.9**/4**, mb1mx3.5**/35**, mbtmp3.7**/4**, ML3.7**/3**, Error ellipse: s-maj=102.7km s-min=26.9km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.84	189	Pn	Pn	02 01 40.0	+1.1
	0.5nm,0.3s,baz=0.6,slow=12,SNR=7.8						
FITZ				Sn	Sn	02 03 36.4	-4.6
	0.3nm,0.3s,baz=7.8,slow=23,SNR=1.8						
WRA	Warramunga Arr	14.23	152	Pn	Pn	02 02 23.5	-1.9
	0.3nm,0.3s,baz=321,slow=13,SNR=7.3						
WRA				Sn	Sn	02 04 55.7	-8.5
	0.4nm,0.3s,baz=327,slow=23,SNR=2.0						
ASAR	Alice Springs	17.40	160	P	Pn	02 03 07.1	+0.3
	0.2nm,0.3s,baz=344,slow=12,SNR=12						
ASAR				S	Sn	02 06 12.4	-8.9
	0.2nm,0.3s,baz=314,slow=18,SNR=4.8						
MKAR	Makanchi Array	67.11	328	P	P	02 09 57.9	0.0
	0.6nm,0.5s,baz=130,slow=7.6,SNR=8.9						

*IDC **08** 02:02:51.0±0.5, 49°.22N×125°.71W, h0^{km}, mb4.2/17, mb1 4.6/27, mb1mx4.5/40, mbtmp4.4/27, ML4.1/10, MS3.8/23, Ms1 3.9/23, ms1mx3.7/43, Error ellipse: s-maj=12.8km s-min=5.4km az=55.0*

*BJI **08** 02:02:51.0±0.0, 49°.20N×125°.70W, h25^{km}, mB5.3/8, mb4.8/22, Ms5.1/3, Ms7 4.9/2*

*PGC **08** 02:02:53.6±0.3, 49°.18N×125°.72W, h40^{km}, ML4.4/42, 14km east of Tofino, Bc Vancouver Island, Canada Region*

*NEIC **08** 02:02:54.1, 49°.18N×125°.72W, h35^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.21; M$_{\theta\theta}$-1.25; M$_{\phi\phi}$1.10; M$_{r\theta}$0.07; M$_{\theta\phi}$-0.01; M$_{\phi r}$0.32; Fault plane solution: M$_0$1.20000×10^{16} NP1:ϕ_s46.00000°, δ79.00000°, λ15.00000°. NP2:ϕ_s313.00000°, δ75.00000°, λ169.00000°. Principal axes: T 1.1850, Plg18.0000°, Azm270.0000°; N 0.0893, Plg72.0000°, Azm81.0000°; P -1.2742, Plg3.0000°, Azm179.0000°;*

*NEIC **08** 02:02:54±1.0, 49°.18N±0°.02×125°.70W±0°.05, h35^{km}±5^{km} Error ellipse: s-maj=5.3km s-min=1.3km az=115.0*

*NEIC **08** 02:02:54, 49°.19N×125°.68W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.37; M$_{\theta\theta}$-1.06; M$_{\phi\phi}$0.70; M$_{r\theta}$-0.92; M$_{\theta\phi}$0.61; M$_{\phi r}$1.04; Fault plane solution: M$_0$1.78000×10^{16} NP1:ϕ_s63.58000°, δ34.85000°, λ13.29000°. NP2:ϕ_s322.62000°, δ82.45000°, λ124.12000°. Principal axes: T 1.5954, Plg42.0000°, Azm265.0000°; N 0.3299, Plg34.0000°, Azm138.0000°; P -1.9254, Plg29.0000°, Azm26.0000°;*

*ANF **08** 02:02:56.1±0.2, 49°.14N×125°.52W, h38^{km}±2^{km}, ML4.9/12 Error ellipse: s-maj=2.7km s-min=2.1km az=59.0*

*GCMT **08** 02:02:56.8±0.4, 49°.08N±0°.02×125°.70W±0°.04, h30^{km}±3^{km}, MW4.9/71, Moment Tensor Solution. s22,c24; s71,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.04±.24; M$_{\theta\theta}$-3.21±.16; M$_{\phi\phi}$2.17±.16; M$_{r\theta}$-0.95±.39; M$_{\theta\phi}$-0.56±.13; M$_{\phi r}$0.39±.23; Best double couple: M$_0$2.93600×10^{16} NP1:ϕ_s39.00000°, δ66.00000°, λ7.00000°. NP2: ϕ_s306.00000°, δ83.00000°, λ156.00000°. Principal axes: T 2.4200, Plg21.0000°, Azm261.0000°; N 1.0330, Plg65.0000°, Azm111.0000°; P -3.4520, Plg12.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 02:02:58, 49°.47N×125°.65W, h36^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.51; M$_{\theta\theta}$-1.40; M$_{\phi\phi}$1.91; M$_{r\theta}$0.25; M$_{\theta\phi}$0.37; M$_{\phi r}$0.45; Fault plane solution: M$_0$1.82000×10^{16} NP1:ϕ_s321.00000°, δ74.00000°, λ-178.00000°. NP2:ϕ_s230.00000°, δ89.00000°, λ-16.00000°. Principal axes: T 2.0358, Plg11.0000°, Azm277.0000°; N -0.5565, Plg74.0000°, Azm47.0000°; P -1.4794, Plg12.0000°, Azm185.0000°;*

ISC 08 02:02:54.3±0.6**, 49°.16N**±0°.02×**125°.74W**±0°.02**, h34**^{km}±3km**, n590, $\sigma 1^{s}36$**/584**, mb4.8**/97**, MS3.8**/12**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOFB	Tofino	0.11	268	P	Pb	02 03 00.0	-0.3
TOFB				S	Sb	02 03 04.6	+0.2
OZB	Mount Ozzard	0.26	141	P	Pn	02 03 01.3	0.0
OZB				S	Sb	02 03 06.8	+0.1
OZB	Mount Ozzard	0.26	141		Pn	02 03 01.3	0.0
OZB					Sb	02 03 06.8	+0.1
B012	Ucluelet	0.27	151	P	Pn	02 03 01.4	-0.1
B012				S	Sb	02 03 06.8	-0.1
B012	Ucluelet	0.27	151		Pn	02 03 01.4	-0.1
B012					Sb	02 03 06.7	-0.1
BTB	Buttle Lake	0.34	24	P	Pb	02 03 01.9	-1.0
BTB				S	Sn	02 03 08.2	-0.1
BTB	Buttle Lake	0.34	24		Pb	02 03 01.9	-1.0
BFSB	Bamfield	0.51	129	P	Pn	02 03 04.3	-0.9
BFSB				S	Sb	02 03 11.7	-0.9
ETB	Estevan Point	0.57	293	P	Pn	02 03 04.9	-1.0
B927	Port Alberni	0.61	84	P	Pn	02 03 05.3	-1.2
B927				S	Sn	02 03 13.6	-1.5
B927	Port Alberni	0.61	84		Pn	02 03 05.2	-1.2
B927					Sn	02 03 14.2	-0.8
GDR	Gold River	0.65	343	P	Pn	02 03 05.9	-1.1
GDR	Gold River	0.65	343		Pn	02 03 05.9	-1.1
MGB	Mount Grey	0.70	103	P	Pn	02 03 06.7	-1.3
MGB				S	Sn	02 03 16.5	-1.2
MGB	Mount Grey	0.70	103		Pn	02 03 06.7	-1.3
NCBC	Barkley Canyon	0.79	202	P	Pn	02 03 08.2	-0.7
NCBC				S	Sn	02 03 18.9	-0.5
NCBC	Barkley Canyon	0.79	202		Pn	02 03 08.2	-0.7
NCBC					Sn	02 03 19.8	+0.5
CBB	Campbell River	0.91	15	P	Pn	02 03 09.6	-1.0
CBB				S	Sn	02 03 21.7	-0.8
CBB	Campbell River	0.91	15		Pn	02 03 09.6	-1.0
GHNB	Nanoose	0.99	81	P	Pn	02 03 11.0	-0.7
GHNB				S	Sn	02 03 23.6	-1.0
TXB	Texada	1.01	57	P	Pn	02 03 11.1	-0.9
PFB	Port Renfrew	1.04	124	P	Pn	02 03 11.2	-1.2
PFB				S	Sn	02 03 24.5	-1.3
PFB	Port Renfrew	1.04	124		Pn	02 03 11.2	-1.2
B926	Mesachie Lake	1.11	107	P	Pn	02 03 12.2	-1.2
B926				S	Sn	02 03 26.4	-1.1
B926	Mesachie Lake	1.11	107		Pn	02 03 12.2	-1.2
OCP	Olym-Cheeka Pk	1.13	139	P	Pn	02 03 13.0	-0.7
OCP	Olym-Cheeka Pk	1.13	139		Pn	02 03 13.0	-0.7
WOSB	Woss	1.14	332	P	Pn	02 03 13.0	-0.9
NLLB	Nanaimo Lost L	1.15	86	P	Pn	02 03 13.1	-0.8
NLLB				S	Sn	02 03 26.2	-2.2
NLLB	Nanaimo Lost L	1.15	86		Pn	02 03 13.1	-0.8
EDB	Eliza Dome	1.15	309	P	Pn	02 03 12.2	-1.7
EDB				S	Sn	02 03 27.4	-1.1
EDB	Eliza Dome	1.15	309		Pn	02 03 12.2	-1.7
NCRB	Newcastle Ridg	1.26	351	P	Pn	02 03 15.0	-0.7
FHRB	Fair Harbour	1.27	315	P	Pn	02 03 14.4	-1.1
SHB	Sechelt	1.29	69	P	Pn	02 03 15.2	-0.8
SHB				S	Sn	02 03 31.3	-0.9
SHB	Sechelt	1.29	69		Pn	02 03 14.8	-1.2
OTR	Olympics--Tyee	1.42	139		Pn	02 03 17.3	-0.4
C03A	Quillayute Air	1.44	147		Pn	02 03 17.8	-0.2
GOBB	Galiano Island	1.48	97	P	Pn	02 03 18.0	-0.4
MAYB	Maynard	1.55	324	P	Pn	02 03 18.8	-0.8
TLCB	Telegraph Cove	1.56	333	P	Pn	02 03 18.8	-0.8
TLCB				S	Sn	02 03 36.7	-1.8
SOKB	Sooke	1.56	118	P	Pn	02 03 18.1	-1.5
SOKB				S	Sn	02 03 36.5	-2.2
OBC	Olympics--Boni	1.57	135	P	Pn	02 03 19.2	-0.7
B009	North Saanich	1.59	108	P	Pn	02 03 18.9	-1.1
B010	North Saanich	1.59	108	P	Pn	02 03 18.8	-1.2
B010				S	Sn	02 03 37.9	-1.4
PGC	Sidney	1.59	108	S	Sn	02 03 37.9	-1.4
PGC	Sidney	1.59	108		Pn	02 03 19.1	-0.9
B011	North Saanich	1.59	108	P	Pn	02 03 18.8	-1.2
B011				S	Sn	02 03 37.9	-1.5
PA01	PA01 North	1.59	108	P	Pn	02 03 18.8	-1.2
PA01				S	Sn	02 03 38.2	-1.2
PA12	PA12 Sannich	1.59	108	P	Pn	02 03 18.9	-1.1
PA12				S	Sn	02 03 38.1	-1.3
BIB	Bowen Island	1.61	80	P	Pn	02 03 19.4	-0.8
STW	Striped Peak	1.70	126	P	Pn	02 03 20.5	-1.0
WPB	Watts Point	1.72	72	P	Pn	02 03 21.1	-0.7
VGZ	Gonzales	1.76	114	P	Pn	02 03 20.9	-1.5
VGZ				S	Sn	02 03 41.6	-1.9
PHC	Port Hardy	1.90	325	P	Pn	02 03 23.5	-0.7
PHC				S	Sn	02 03 45.2	-1.7
PHC	Port Hardy	1.90	325		Pn	02 03 23.7	-0.5
OSD	Olympics--Snow	1.90	134	P	Pn	02 03 23.9	-0.6
NC27	ODP1027	1.94	225	P	Pn	02 03 21.8	-2.6
NC27				S	Sn	02 03 42.9	-4.6
MCW	Mount Constitu	1.98	103	P	Pn	02 03 24.6	-0.7
A04D	Lummi Island	2.05	101	P	Pn	02 03 25.8	-0.4
	baz=284,SNR=196						
A04D				S	Sn	02 03 50.8	+0.3
	baz=284						
WSLR	Whistler	2.07	61	P	Pn	02 03 26.4	-0.3
WSLR				S	Sn	02 03 51.4	+0.1
WSLR	Whistler	2.07	61		Pn	02 03 26.5	-0.2
HOLB	Holberg	2.14	315	P	Pn	02 03 26.7	-0.9
HOLB				S	Sn	02 03 50.9	-2.2
NLWA	Neilton Lookou	2.17	144		Pn	02 03 27.5	-0.4
BLN	Blyn Mountain	2.17	121	P	Pn	02 03 27.2	-0.8
HDW	Hoodsport	2.34	129	P	Pn	02 03 30.1	-0.3
VDB	Vedder Mountai	2.39	92	P	Pn	02 03 30.4	-0.6
D03D	Eldon	2.40	132	P	Pn	02 03 30.5	-0.7
	baz=314,SNR=135						
D03D				S	Sn	02 04 00.3	+1.0
	baz=314						
A05A	Maple Falls	2.41	92	P	Pn	02 03 30.6	-0.6
WISH	Wishkah	2.43	146	P	Pn	02 03 31.4	-0.1
WISH				S	Sn	02 03 58.4	-1.6
CMW	Cultus Mountai	2.50	106	P	Pn	02 03 32.7	+0.1
GNW	Green Mountain	2.51	128	P	Pn	02 03 32.2	-0.5
KEMF	NEPTUNE Canada	2.54	243	P	Sn	02 03 59.3	-3.1
KEMF				S		02 04 26.1	
MBW	Mount Baker	2.56	97	P	Pn	02 03 33.2	-0.3
B05A	Bryant	2.57	109	P	Pn	02 03 33.1	-0.4
	baz=292,SNR=266						
B05A				S	Sn	02 04 03.0	-0.5
	baz=292						
JCW	Jim Creek	2.70	110	P	Pn	02 03 35.1	-0.2
CPW	Capitol Peak	2.80	140	P	Pn	02 03 36.0	-0.6
D04E	Lakebay	2.81	134	P	Pn	02 03 36.6	-0.1
	baz=317,SNR=19						
HOPB	Hope	2.84	84	P	Pn	02 03 36.9	-0.2
RPW	Rockport	2.88	103	P	Pn	02 03 37.7	-0.1
B06A	Marblemount	2.88	101	P	Pn	02 03 37.5	-0.3
B06A	Marblemount	2.88	101	Pn	Pn	02 03 37.6	-0.1
LLLB	Lillooet	2.88	58	P	Pn	02 03 37.8	-0.1
E03A	Lebam	3.00	150	P	Pn	02 03 38.7	-0.6
E03A				S	Sn	02 04 11.1	-2.9
E03A	Lebam	3.00	150	Pn	Pn	02 03 38.9	-0.4
E03A				IAML		02 04 12.8	
	comp=N,1µm,0.4s						
E03A				IAML		02 04 15.9	
	comp=E,1µm,0.8s						
C05A	Tolt Reservoir	3.07	117	P	Pn	02 03 40.4	+0.1
D05A	Enumclaw	3.19	127	P	Pn	02 03 42.3	+0.3
D05A	Enumclaw	3.19	127		Pn	02 03 41.9	-0.1
D05A				IAML		02 04 38.0	
	comp=E,1µm,1.2s						
GPW	Glacier Peak	3.22	107	P	Pn	02 03 42.8	+0.1
E04D	Cinebar	3.37	139	P	Pn	02 03 44.5	+0.1
	baz=322,SNR=36						
E04D				S	Sn	02 04 21.3	-1.9
	baz=322						
BBB	Bella Bella	3.38	334	Pn	Pn	02 03 43.6	-1.0
	comp=E,5.8nm,0.3s,baz=151,slow=7.3,SNR=4.8						
BBB				Pg	Pb	02 03 51.0	-2.6
	comp=E,84nm,0.3s,baz=150,slow=14,SNR=34						
BBB				Sn	Sn	02 04 19.7	-3.8
	comp=E,68nm,0.3s,baz=154,slow=11,SNR=5.6						
BBB				Lg	Lg	02 04 34.5	
	comp=E,135nm,0.3s,baz=246,slow=12,SNR=10.0						
BBB				LR	LR	02 05 04.2	
	comp=E,2µm,18.1s,baz=159,slow=40						
BBB	Bella Bella	3.38	334	P	Pn	02 03 43.6	-1.0
BBB	Bella Bella	3.38	334		Pn	02 03 43.7	-1.0
C06D	Leavenworth	3.45	109	P	Pn	02 03 45.4	-0.2
	baz=293,SNR=52						
FMW	Mount Fremont	3.52	128	P	Pn	02 03 46.6	-0.1
LON	Longmire	3.57	131	P	Pn	02 03 47.4	0.0
LON				S	Sn	02 04 26.5	-1.9
LON	Longmire	3.57	131		Pn	02 03 47.6	+0.2
LON				Sn	Sn	02 04 26.9	-1.4
F04D	Rainier, OR	3.59	148	P	Pn	02 03 47.2	-0.3
	baz=331,SNR=6.3						
F04D				S	Sn	02 04 27.7	-0.9
	baz=331						
UBRB	Upper Baezaeko	3.88	15	P	Pn	02 03 51.2	-0.4
LTY	Liberty	3.89	117	P	Pn	02 03 51.8	+0.2
LTY				S	Sn	02 04 35.7	-0.3
LTY	Liberty	3.89	117		Pn	02 03 52.0	+0.4
LTY				IAML		02 04 36.4	
	comp=N,918nm,0.8s						
LTY				IAML		02 04 36.8	
	comp=E,1µm,0.8s						
PNT	Penticton	4.01	85	P	Pn	02 03 52.8	-0.5
G03D	McMinnville, O	4.29	156	P	Pn	02 03 57.6	+0.4
	baz=338						
G03D				S	Sn	02 04 44.1	-2.0
	baz=338						
B08A	Colville Reser	4.31	98	P	Pn	02 03 57.0	-0.5
B08A	Colville Reser	4.31	98	Pn	Pn	02 03 57.3	-0.2
B08A				IAML		02 05 12.2	
	comp=N,562nm,1.4s						
F05D	White Salmon	4.37	137	P	Pn	02 03 59.1	+0.8
	baz=320						
F05D				S	Sn	02 04 48.2	+0.2
	baz=320						
HG4B	Hotspring	4.68	314	P	Pn	02 04 01.2	-1.2
HG4B				S	Sn	02 04 51.5	-4.0
E07A	Sunnyside	4.74	121		Pn	02 04 03.3	0.0
E07A				IAML		02 04 57.5	
	comp=N,526nm,0.7s						
E07A				IAML		02 05 35.3	
	comp=E,548nm,0.9s						
COR	Corvallis	4.87	159	Pn	Pn	02 04 06.2	+1.1
COR	Corvallis	4.87	159	IAML		02 05 05.8	
	comp=E,380nm,0.6s						
HWKB	Hawksbury Isla	4.93	336	P	Pn	02 04 04.8	-1.1
G05D	Wamic, OR	4.94	141	P	Pn	02 04 07.3	+1.1
	baz=324						
HAWA	Hanford	5.01	121		Pn	02 04 06.6	-0.5
HAWA				IAML		02 05 17.4	
	comp=E,308nm,1.0s						
HAWA				IAML		02 05 39.1	
	comp=E,286nm,1.2s						
D08A	Wollman Farm,	5.03	112		Pn	02 04 06.7	-0.5
D08A				IAML		02 05 00.7	
	comp=N,277nm,0.8s						
BLBC	Blue River	5.04	53	P	Pn	02 04 07.6	-0.1
H04D	Lebanon	5.07	155	P	Pn	02 04 08.5	+0.6
	baz=338						
H04A	Detroit Lake	5.09	150	Pn	Pn	02 04 08.2	0.0
H04A				IAML		02 05 09.7	
	comp=N,511nm,0.5s						
F07A	Phinny Hill Vi	5.11	128		Pn	02 04 08.5	+0.1
F07A				IAML		02 05 28.9	
	comp=N,406nm,0.7s						
F07A				IAML		02 05 50.6	
	comp=E,360nm,0.8s						
I02D	Swisshome	5.22	165	P	Pn	02 04 10.3	+0.4
	baz=347,SNR=34						
E08A	Dider Farm, El	5.23	118		Pn	02 04 09.4	-0.6
E08A				IAML		02 05 48.2	
	comp=N,247nm,1.4s						
E08A				IAML		02 05 52.1	
	comp=E,249nm,0.8s						
SLEB	Sale Mountain	5.28	65	P	Pn	02 04 10.7	-0.2
BNAB	Bonilla	5.32	327	S	Sn	02 05 07.5	-3.6
GRNB	Grenville Isla	5.38	332	P	Pn	02 04 11.4	-0.7
GRNB				S	Sn	02 05 10.5	-2.3
FSB	Fort Saint Jam	5.40	9	P	Pn	02 04 12.4	+0.1
MNB	Mounoet Dainar	5.58	54	P	Pn	02 04 15.3	+0.3
MOBC	Moresby Island	5.59	318	P	Pn	02 04 13.7	-1.3
MOBC				S	Sn	02 05 13.1	-5.0
I05D	Terrebonne, OR	5.69	146	P	Pn	02 04 17.2	+0.8
	baz=330						
I03D	Drain, OR	5.71	162	P	Pn	02 04 17.1	+0.5
	baz=344,SNR=39						
E09A	Wood Farm, Sta	5.75	115		Pn	02 04 16.5	-0.8
NEW	Newport	5.77	96	Pn	Pn	02 04 17.0	-0.6
	comp=E,39nm,0.3s,baz=296,slow=11,SNR=397						
NEW				Lg	Lg	02 05 51.4	
	comp=E,7.2nm,0.3s,baz=132,slow=2.7,SNR=12						
NEW				LR	LR	02 06 47.4	
	comp=E,1µm,18.8s,baz=233,slow=41						
NEW	Newport	5.77	96	P	Pn	02 04 17.1	-0.4
	baz=282						
NEW	Newport	5.77	96	Pn	Pn	02 04 16.7	-0.8
I04A	Tendick Farm,	5.84	156	P	Pn	02 04 18.7	+0.3
	baz=338,SNR=53						
I04A				S	Sn	02 05 22.3	-1.8
	baz=338						
DIB	Dawson Inlet,	5.86	316	P	Pn	02 04 17.2	-1.4
DIB				S	Sn	02 05 18.9	-5.6
DIB	Dawson Inlet,	5.86	316	Pn	Pn	02 04 18.8	+0.2
RUBB	Prince Rupert	5.88	333	P	Pn	02 04 18.7	-0.2
G08A	Pilot Rock	6.02	127		Pn	02 04 20.5	-0.5
J01E	Myrtle Point	6.13	168	P	Pn	02 04 22.9	+0.6
	baz=349,SNR=47						
J01E				S	Sn	02 05 29.8	-1.4
	baz=349						
PINE	Pine Mountain	6.31	147	Pn	Pn	02 04 24.7	-0.3
J04D	Umpqua Nationa	6.43	156	P	Pn	02 04 27.8	+1.1
	baz=339						
NDB	Naden	6.57	320	P	Pn	02 04 27.2	-1.3
F10A	Beach Ranch, E	6.58	116	Pn	Pn	02 04 28.0	-0.7
K02D	Willamette Mer	6.62	167	P	Pn	02 04 30.2	+0.9
	baz=348,SNR=211						
K02D				S	Sn	02 05 42.7	-0.9
	baz=348						
I07A	Izee	6.65	137	Pn	Pn	02 04 29.3	-0.3
J05D	Fort Rock, OR	6.65	150	P	Pn	02 04 31.9	+2.2
	baz=334						
HUMO	Hull Mountain	6.83	162	Pn	Pn	02 04 32.2	+0.1
LIB	Langara Island	6.83	321	P	Pn	02 04 31.0	-1.0
K04D	Chiloquin, OR	7.10	155	P	Pn	02 04 39.0	+3.1
	baz=339						
L02E	Cave Junction	7.16	167	P	Pn	02 04 37.9	+1.4
	baz=349						
BMO	Blue Mountains	7.19	124	Pn	Pn	02 04 36.3	-0.8
NBC4	NorthernBC 4	7.24	23	P	Pn	02 04 38.0	+0.4
BMBC	Bull Mountain	7.24	16	P	Pn	02 04 38.2	+0.6

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L04D  Klamath Falls       7.34 160  P     Pn    02 04 40.1 +0.9
      baz=342
PRDA  Priddis             7.57  73  P     Pn    02 04 43.1 +0.9
YBH   Yreka Blue Hor      7.73 163  Pn    Pn    02 04 48.6 +4.2
      comp=E,36nm,0.3s,baz=353,slow=10,SNR=1046
YBH                                 LR    LR    02 08 12.1
      comp=E,449nm,20.1s,baz=351,slow=41
JTMT  Jette               7.75  96        Pn    02 04 43.8 -0.9
WALA  Waterton Lakes      7.76  86  Pn    Pn    02 04 44.5 -0.4
M04C  Macdoel             7.87 158  P     Pn    02 04 48.5 +2.1
      baz=341
M02C  Callahan            8.03 164  P     Pn    02 04 52.3 +3.7
      baz=347
MSO   Missoula            8.25 102  P     Pn    02 04 50.5 -1.1
      baz=291
MSO   Missoula            8.25 102  Pn    Pn    02 04 50.4 -1.1
N02D  Trinity Center      8.46 164  P     Pn    02 04 57.7 +3.2
      baz=347
NBC5  NorthernBC 5        8.58  11  P     Pn    02 04 56.4 +0.4
EDM   Edmonton            8.78  58  P     Pn    02 04 58.3 -0.4
MFID  Camas Ranch         8.95 126  Pn    Pn    02 05 00.8 -0.3
O02D  Mt. Diablo Mer      9.22 166  P     Pn    02 05 08.3 +3.4
      baz=348
O03E  Paynes Creek        9.29 161  P     Pn    02 05 06.3 +0.4
      baz=344
LRM   Limekiln Ridge      9.59 105  Pn    Pn    02 05 09.4 -0.7
HLID  Hailey              9.62 121  P     Pn    02 05 10.2 -0.2
      baz=310
HLID  Hailey              9.62 121  Pn    Pn    02 05 09.7 -0.7
DLBC  Dease Lake          9.63 346  Pn    Pn    02 05 12.3 +1.9
      comp=E,0.7nm,0.3s,baz=185,slow=10,SNR=13
DLBC                                Lg    Lg    02 07 50.5
      comp=E,1.4nm,0.3s,baz=273,slow=22,SNR=5.7
DLBC                                LR    LR    02 09 15.3
      comp=E,814nm,22.0s,baz=157,slow=40
DLBC  Dease Lake          9.63 346  Pn    Pn    02 05 10.5 +0.1
HRY   Holter Researc      9.65  99        Pn    02 05 10.0 -0.7
DLMT  Dillon              9.71 108        Pn    02 05 10.9 -0.6
BCYI  Bear Canyon         9.75 115        Pn    02 05 11.4 -0.9
MCMT  McKenzie Canyo      9.81 111  Pn    Pn    02 05 12.2 -0.9
FNBB  Fort Nelson         9.88   8  P     Pn    02 05 13.4 -0.4
BOZ   Bozeman (W)        10.21 105  P     Pn    02 05 18.3 -0.1
      baz=296
BOZ   Bozeman (W)        10.21 105        Pn    02 05 17.8 -0.6
EGMT  Eagleton           10.65  90  P     Pn    02 05 23.9 -0.5
      baz=282
EGMT  Eagleton           10.65  90  Pn    Pn    02 05 23.5 -0.9
QLMT  Earthquake Lak     10.69 109        Pn    02 05 24.2 -0.8
AFDM  Forest Hills D     10.77 160  Pn    Pn    02 05 26.1 +0.1
YHL   Hebgen Lake        10.83 108        Pn    02 05 26.1 -0.9
YHB   Horse Butte        10.87 108        Pn    02 05 27.0 -0.6
NBC3  NorthernBC 3       10.90  14  P     Pn    02 05 28.6 +0.9
YMR   Madison River      11.05 108        Pn    02 05 29.3 -0.8
YHH   Holmes Hill        11.07 108  Pn    Pn    02 05 29.4 -1.0
ELK   Elko               11.22 135  Pn    Pn    02 05 36.8 +4.4
      comp=E,2.3nm,0.3s,baz=320,slow=13,SNR=239
ELK                                 LR    LR    02 10 11.7
      comp=E,581nm,18.3s,baz=324,slow=39
YPP   Pitchstone Pla     11.35 110        Pn    02 05 33.5 -0.7
GCMT  Greycliff          11.38 101        Pn    02 05 33.7 -0.8
H17A  Grant Village      11.43 109  P     Pn    02 05 35.5 +0.2
      baz=300
LKWY  Lake               11.46 108        Pn    02 05 34.7 -0.9
YNE   Yellowstone No     11.50 105        Pn    02 05 35.2 -0.9
YMP   Mirror Lake Pl     11.53 107        Pn    02 05 36.2 -0.4
MOOW  Moose Ponds        11.66 112  Pn    Pn    02 05 37.5 -0.9
REDW  Red Top Meadow     11.81 114        Pn    02 05 39.7 -0.7
LOHW  Long Hollow        11.82 112        Pn    02 05 39.6 -1.1
RLMT  Red Lodge          11.92 104  P     Pn    02 05 41.1 -0.8
      baz=296
RLMT  Red Lodge          11.92 104        Pn    02 05 41.2 -0.7
NVAR  Mina Array Bea     11.99 151  Pn    Pn    02 05 47.6 +4.7
      comp=E,1.0nm,0.3s,baz=326,slow=12,SNR=175
NVAR                                LR    LR    02 10 49.4
      comp=E,272nm,21.7s,baz=336,slow=40
WHY   Whitehorse         12.65 339  P     Pn    02 05 54.9 +3.2
SAO   San Andreas Ge     12.78 164  Pn    Pn    02 05 54.0 +0.6
DUG   Dugway, Tooele     12.83 129  P     Pn    02 05 54.6 +0.4
      baz=319
DUG   Dugway, Tooele     12.83 129  Pn    Pn    02 05 53.7 -0.5
BW06  Boulder Array      12.93 114  P     Pn    02 05 57.9 +2.1
      baz=305
BW06  Boulder Array      12.93 114  Pn    Pn    02 05 54.9 -0.8
PDAR  Pinedale Array     12.93 114  Pn    Pn    02 05 58.1 +2.3
      comp=E,1.1nm,0.3s,baz=312,slow=12,SNR=195
PDAR                                LR    LR    02 11 03.5
      comp=E,423nm,19.4s,baz=315,slow=38
CTU   Camp Tracy         13.02 125  Pn    Pn    02 05 56.3 -0.6
R11A  Troy Canyon, C     13.05 142  P     Pn    02 05 59.7 +2.4
      baz=329
JLU   Jordanelle         13.24 125        Pn    02 05 59.4 -0.6
LAO   LASA Array         13.32  93  P     Pn    02 06 00.7 -0.2
      baz=288
LAO   LASA Array         13.32  93        Pn    02 05 59.9 -0.9
HYT   Haines Junctio     13.47 335  P     Pn    02 06 06.0 +3.1
MPU   Maple Canyon       13.57 127        Pn    02 06 03.8 -0.6
CWC   Cottonwood Cre     13.89 153  P     Pn    02 06 12.1 +3.4
      baz=339
PAGB  Antelope Grade     14.01 161        Pn    02 06 10.4 +0.1
TPNV  Topopah Spring     14.02 147  P     Pn    02 06 10.7 +0.1
      baz=334
PRN   Pahroc Range       14.07 143  Pn    Pn    02 06 10.8 -0.4
VES   Vestal, Richgr     14.18 157  P     Pn    02 06 12.9 +0.4
      baz=342
DGMT  Dagmar             14.21  85  P     Pn    02 06 11.8 -1.1
      baz=281
FURC  Furnace Creek,     14.24 150  P     Pn    02 06 16.6 +3.2
      baz=336
MPMC  Manual Prospec     14.42 152  P     Pn    02 06 18.9 +2.9
      baz=338
SMMC  Simmler            14.47 161  P     Pn    02 06 20.0 +3.5
      baz=345
ISA   Isabella, Lake     14.50 156  P     Pn    02 06 17.3 +0.2
      baz=341
YKA   Yellowknife Ar     14.72  21  Pn    Pn    02 06 16.4 -3.3
      comp=E,1.3nm,0.3s,baz=208,slow=12,SNR=109
YKA                                 Lg    Lg    02 10 27.0
      comp=E,0.1nm,0.3s,baz=224,slow=30,SNR=1.5
YKA                                 LR    LR    02 12 15.7
      comp=E,623nm,18.0s,baz=0.0,slow=38
SHPR  Sheep Range        14.82 145        Pn    02 06 20.5 -0.8
K22A  Casper             14.86 109  P     Pn    02 06 21.0 -0.8
      baz=303
LRMC  Laurel Mtn Rad     14.90 154  P     P     02 06 26.0 -1.7
      baz=339
PKM   Mcpherson Peak     14.92 161  P     Pn    02 06 23.0 +0.2
      baz=345
ARVC  Arvin              14.92 157  P     P     02 06 26.1 -1.7
      baz=342
SHOC  Shoshone, Teco     14.96 149  P     P     02 06 26.3 -1.9
      baz=336
LCMT  Little Creek M     15.16 139  Pn    Pn    02 06 25.8 -0.1
PKCU  Pink Cliffs        15.22 135  Pn    Pn    02 06 26.5 -0.4
PKCU                                IAmb  IAmb  02 06 36.3
      comp=Z,66nm,1.1s
GSC   Goldstone, Bar     15.33 151  P     Pn    02 06 28.3 +0.2
      baz=338
GSC   Goldstone, Bar     15.33 151  Pn    Pn    02 06 27.8 -0.3
KNB   Kanab              15.34 137  Pn    Pn    02 06 28.0 -0.3
O20A  White River Ci     15.35 119  P     Pn    02 06 28.2 -0.2
      baz=312
O20A  White River Ci     15.35 119  Pn    Pn    02 06 27.5 -0.9
O20A                                IAmb  IAmb  02 06 41.3
      comp=Z,65nm,0.8s
EDW2  Edwards Air Fo     15.37 155  P     Pn    02 06 29.1 +0.5
      baz=341
RSSD  Black Hills        15.71 100  P     Pn    02 06 30.4 -2.8
      baz=296
RSSD  Black Hills        15.71 100  Pn    Pn    02 06 30.6 -2.5
HEC   Hector,Ludlow      15.91 151  P     Pn    02 06 36.7 +1.1
      baz=337
GLB   Gilahina Butte     15.96 327  Pn    Pn    02 06 36.3 +0.3
MWC   Mount Wilson       15.97 156  Pn    Pn    02 06 36.3 -0.2
BFSC  Mount Baldy Ra     16.07 155  P     Pn    02 06 39.0 +1.3
      baz=341
U15A  North Rim          16.07 137  Pn    Pn    02 06 37.2 -0.6
U15A                                IAmb  IAmb  02 06 45.6
      comp=Z,36nm,0.8s
PV23  Carpenter Ridg     16.10 125  Pn    Pn    02 06 37.7 -0.4
PV23                                IAmb  IAmb  02 06 44.3
      comp=Z,36nm,0.9s
PV10  Paradox Valley     16.14 126  IAmb  IAmb  02 06 41.5
      comp=Z,45nm,1.1s
PV14  Lion Creek, Pa     16.15 126  Pn    Pn    02 06 38.4 -0.4
PV14                                IAmb  IAmb  02 06 44.3
      comp=Z,49nm,1.0s
PV22  Blue Mesa, Par     16.16 125  Pn    Pn    02 06 38.2 -0.7
PV22                                IAmb  IAmb  02 06 54.2
      comp=Z,60nm,1.1s
GMRC  Granite Mounta     16.18 149  P     P     02 06 41.7 -0.2
      baz=336
PV04  Paradox Valley     16.20 125  Pn    Pn    02 06 38.8 -0.6
PV04                                IAmb  IAmb  02 06 44.9
      comp=Z,39nm,1.0s
PV20  West Nyswonger     16.20 126  Pn    Pn    02 06 38.9 -0.5
N23A  Red Feather La     16.22 113  P     Pn    02 06 38.8 -0.9
      baz=307
PV11  David Mesa, Pa     16.28 126  IAmb  IAmb  02 06 55.3
      comp=Z,34nm,0.8s
PV07  Paradox Valley     16.30 125  IAmb  IAmb  02 06 49.7
      comp=Z,44nm,0.9s
PV18  Skein Mesa, Pa     16.30 126  Pn    Pn    02 06 39.5 -1.2
PV12  Saucer Basin,      16.31 125  IAmb  IAmb  02 07 00.3
      comp=Z,39nm,1.0s
PV05  Paradox Valley     16.33 127  IAmb  IAmb  02 06 43.4
      comp=Z,70nm,1.2s
PV15  Paradox Valley     16.46 125  IAmb  IAmb  02 06 44.2
      comp=Z,38nm,1.0s
KLU   Klutina            16.77 325  Pn    Pn    02 06 46.5 +0.2
BELC  Belle Mtn. Jos     16.78 151  P     Pn    02 06 47.4 +0.6
      baz=338
MURC  Murrieta           16.80 155  P     P     02 06 48.5 -0.2
      baz=340
IRM   Iron Mountain      16.92 148  P     P     02 06 50.0 -0.1
      baz=336
L26K  Log Cabin Wild     16.93 332  P     P     02 06 51.2 +1.3
      baz=137
E28A  Huff               16.98  89  IAmb  IAmb  02 07 02.7
      comp=Z,77nm,0.9s
PFO   Pinyon Flats O     17.00 153  Pn    P     02 06 52.8 +1.7
      comp=Z,0.2nm,0.3s,baz=336,slow=7.5,SNR=23
PFO   Pinyon Flats O     17.00 153  P     P     02 06 51.2 +0.2
      baz=339
TPFO  Pinon Flats        17.01 153  P     P     02 06 51.3 +0.2
      baz=339
ISCO  Idaho Springs      17.09 116  P     Pn    02 06 50.2 -0.6
      baz=310
PDMCI Parker Dam,Lak     17.15 146  P     P     02 06 53.4 +0.9
      baz=334
WUAZ  Wupatki            17.24 137  P     P     02 06 54.2 +0.5
      baz=327
BC3   Big Chuckawall     17.28 150  P     Pn    02 06 53.1 +0.3
      baz=337
MVCO  Mesa Verde         17.29 127  P     Pn    02 06 53.8 +0.6
      baz=319
MVCO  Mesa Verde         17.29 127  IAmb  IAmb  02 07 08.0
      comp=Z,42nm,0.9s
K27K  Chicken            17.32 335  P     P     02 06 55.5 +1.3
      baz=142
MDND  Maddock            17.34  84  P     Pn    02 06 51.5 -2.0
      baz=284
MDND  Maddock            17.34  84  IAmb  IAmb  02 06 52.8
      comp=Z,158nm,1.1s
DOT   Dot Lake           17.60 332        Pn    02 06 57.3 +0.7
DOT                                       PcP   02 11 34.3  0.0
MONP2 Monument Peak      17.68 153  P     P     02 06 59.1 +0.5
      baz=340
O22K  Cooper Landing     17.75 319  P     P     02 07 00.8 +1.8
      baz=119
S22A  4UR Ranch, Cre     17.79 123  P     Pn    02 06 59.0 -0.4
      baz=316
SCRK  Sand Creek         17.82 333  P     P     02 07 01.6 +1.7
      baz=138
Q24A  Divide             17.91 117  P     Pn    02 07 00.1 -0.8
      baz=312
IKP   In-Ko-Pah, Jac     18.00 153  P     Pn    02 07 01.4 -0.3
      baz=339
GLA   Glamis             18.04 149  P     P     02 07 04.8 +2.4
      baz=336
KDAK  Kodiak Island      18.06 309  LR    LR    02 12 28.8
      comp=Z,341nm,21.0s,baz=152,slow=32
W18A  Petrified Fore     18.32 134  P     Pn    02 07 08.5 +2.7
      baz=325
SDCO  Great Sand Dun     18.54 120  P     P     02 07 07.8 -0.3
      baz=315
SDCO  Great Sand Dun     18.54 120  IAmb  IAmb  02 07 10.8
      comp=Z,54nm,1.1s
OGNE  Ogallala           18.60 107  P     P     02 07 08.2 -0.4
      baz=304
OGNE  Ogallala           18.60 107  P     P     02 07 07.5 -1.0
OGNE                                IAmb  IAmb  02 07 11.7
      comp=Z,39nm,0.7s
SUSD  Miller             18.89  94  P     P     02 07 10.2 -1.4
      baz=294
SUSD  Miller             18.89  94  IAmb  IAmb  02 07 10.5
      comp=Z,68nm,0.8s
HDA   Harding Lake       19.04 331  P     Pn    02 07 15.1 +1.0
      baz=133
HDA   Harding Lake       19.04 331  P     P     02 07 13.4 +0.3
D32A  Dogwood Acres,     19.22  85  IAmb  IAmb  02 07 24.2
      comp=Z,45nm,0.4s
MCK   McKinley           19.26 328  P     Pn    02 07 19.0 +2.3
      baz=128
IL31                     19.27 332  P     P     02 07 15.9 +0.3
ILAR  Eielson Array      19.27 332  P     Pn    02 07 17.6 +0.7
      comp=Z,0.1nm,0.3s,baz=140,slow=10,SNR=23
ILAR                                Lg    Lg    02 12 56.1
      comp=Z,0.0nm,0.3s,baz=123,slow=26,SNR=4.2
ULM   Lac du Bonnet      19.29  75  Pn    P     02 07 12.7 -3.3
      comp=Z,4.1nm,0.3s,baz=284,slow=12,SNR=68
ULM                                 Lg    Lg    02 12 46.7
      comp=Z,0.1nm,0.3s,baz=101,slow=16,SNR=2.4
ULM                                 LR    LR    02 14 42.9
      comp=Z,373nm,19.1s,baz=280,slow=37
ULM   Lac du Bonnet      19.29  75  P     P     02 07 12.1 -3.9
ULM   Lac du Bonnet      19.29  75  P     P     02 07 12.6 -3.3
ULM                                 IAmb  IAmb  02 07 24.2
      comp=Z,31nm,0.7s
KSCO  Kaye Shedlock’     19.38 113  P     P     02 07 17.1 -0.1
      baz=309
KSCO  Kaye Shedlock’     19.38 113  IAmb  IAmb  02 07 20.3
      comp=Z,102nm,1.1s
KUKN  Kugluktuk,NWT      19.47  12  P     P     02 07 16.9 -0.9
CCB   Clear Creek Bu     19.47 331        P     02 07 18.1 +0.3
T25A  Trinidad           19.58 120  P     P     02 07 20.0 +0.6
      baz=315
INK   Inuvik             19.59 351  P     P     02 07 20.1 +1.0
      comp=Z,0.3nm,0.3s,baz=146,slow=12,SNR=45
INK                                 Lg    Lg    02 13 06.8
      comp=Z,0.0nm,0.3s,baz=242,slow=17,SNR=2.2
INK                                 LR    LR    02 15 29.6
      comp=Z,588nm,18.3s,baz=165,slow=39
INK   Inuvik             19.59 351  P     P     02 07 19.6 +0.5
INK   Inuvik             19.59 351  IAmb  IAmb  02 07 22.6
      comp=Z,37nm,1.1s
POKR  Poker Plat Res     19.68 332  P     Pn    02 07 22.1 +0.3
      baz=134
214A  Organ Pipe Nat     19.74 146  P     Pn    02 07 22.8 +0.1
      baz=334
K31A  O'Neill            19.82  99  IAmb  IAmb  02 07 32.7
      comp=Z,67nm,0.9s
PPLA  Purkeypile         19.99 323  P     P     02 07 24.4 +0.8
PPLA                                IAmb  IAmb  02 07 39.9
      comp=Z,30nm,1.1s
ANMO  Albuquerque        20.09 128  P     Pn    02 07 26.4 -0.5
      comp=Z,5.9nm,0.9s,baz=320,slow=13,SNR=9.3
ANMO                                LR    LR    02 14 49.3
      comp=Z,163nm,19.7s,baz=320,slow=36
ANMO  Albuquerque        20.09 128  P     Pn    02 07 26.4 -0.5
      baz=321
ANMO  Albuquerque        20.09 128  P     P     02 07 24.8 -0.2
F33A  5 Mile Ranch,      20.11  88  IAmb  IAmb  02 07 33.4
      comp=Z,41nm,0.9s
FYU   Fort Yukon         20.13 337  P     P     02 07 25.8 +0.8
FYU                                 IAmb  IAmb  02 07 33.9
      comp=Z,38nm,1.1s
BPAW  Bear Paw Mtn.      20.20 327  P     P     02 07 26.1 +0.2
BPAW                                IAmb  IAmb  02 07 45.4
      comp=Z,31nm,1.0s
TUC   Tucson             20.23 141  P     P     02 07 26.2 -0.2
      baz=331
C36M  Paulatuk           20.27   2  P     P     02 07 25.6 -0.8
C36M  Paulatuk           20.27   2  P     P     02 07 26.2 -0.2
      baz=183
C36M  Paulatuk           20.27   2  P     P     02 07 26.2 -0.2
I23K  Minto, Yukon-K     20.30 331  P     Pn    02 07 29.4 +0.3
      baz=131
LENM  Lemitar            20.43 130  P     P     02 07 28.5 -0.2
BNM   Barren Site        20.62 130  P     P     02 07 29.7 -1.1
ECSD  EROS Data Cent     20.71  94  P     P     02 07 28.6 -3.0
      baz=296
ECSD  EROS Data Cent     20.71  94  P     P     02 07 28.4 -3.2
ECSD                                IAmb  IAmb  02 07 34.3
      comp=Z,29nm,1.0s
EPLO  Experimental L     20.75  76  P     P     02 07 27.9 -4.0
FCC   Fort Churchill     20.76  50  P     P     02 07 28.4 -3.5
FCC   Fort Churchill     20.76  50  P     P     02 07 28.9 -3.0
FCC                                 IAmb  IAmb  02 07 47.7
      comp=Z,23nm,0.8s
CHGN  Chignik            20.89 302  P     P     02 07 32.5 -0.7
CHGN                                IAmb  IAmb  02 07 37.6
      comp=Z,60nm,0.9s
CBKS  Cedar Bluff        21.27 109  P     P     02 07 37.2 -0.4
      baz=308
CBKS  Cedar Bluff        21.27 109  P     P     02 07 37.4 -0.2
CBKS                                IAmb  IAmb  02 07 41.3
      comp=Z,57nm,1.0s
121A  Cookes Peak, D     21.37 134  P     P     02 07 41.6 +2.8
      baz=326
TTA   Tatalina           21.54 321  P     P     02 07 41.1 +0.8
N33A  J Bar K, Exete     21.62 102  P     P     02 07 40.9 -0.4
L34A  Svendsen Farm,     21.68  98  P     P     02 07 41.2 -0.7
L34A                                IAmb  IAmb  02 07 42.1
      comp=Z,56nm,0.8s
SOLO  Sioux Lookout      21.73  75  P     P     02 07 38.3 -4.1
COLD  Coldfoot           21.96 334  P     P     02 07 46.9 +2.2
      baz=133
SDPT  Sand Point         21.98 300  P     P     02 07 43.6 -1.3
R32A  Long Quarter,      22.15 109  P     P     02 07 46.5 -0.5
R32A                                IAmb  IAmb  02 07 52.8
      comp=Z,41nm,0.9s
ATKO  Atikokan Iron      22.30  78  P     P     02 07 44.1 -4.4
PKLO  Pickle Lake        22.58  71  P     P     02 07 46.8 -4.7
EYMN  Ely                22.59  80  P     P     02 07 47.9 -3.8
      baz=286
SPMN  Marine on St.      22.62  87  P     P     02 07 48.7 -3.3
      baz=292
N35A  Tabor              22.72 100  P     P     02 07 51.9 -1.2
AMTX  Amarillo           22.74 120  P     P     02 07 53.6 +0.2
      baz=316
AMTX  Amarillo           22.74 120  P     P     02 07 53.2 -0.2
AMTX                                IAmb  IAmb  02 08 08.3
      comp=Z,64nm,1.1s
TOLK  Toolik Lake Re     22.80 338  P     P     02 07 56.0 +2.4
      baz=137
TOLK  Toolik Lake Re     22.80 338  P     P     02 07 53.8 +0.2
TOLK                                IAmb  IAmb  02 08 03.2
      comp=Z,21nm,1.0s
MSTX  Muleshoe           22.80 123  P     P     02 07 54.2 +0.1
      baz=319
MSTX  Muleshoe           22.80 123  P     P     02 07 53.5 -0.6
MSTX                                IAmb  IAmb  02 07 56.6
      comp=Z,16nm,0.9s
KSU1  Kansas State U     23.07 105  P     P     02 07 56.5 -0.1
      baz=306
MNTX  Cornudas Mount     23.21 131  P     P     02 07 57.7 -0.4
U32A  Winter Ranch,      23.27 113  IAmb  IAmb  02 07 59.9
      comp=Z,40nm,0.8s
KAN12 Harper NE Stat     23.29 110  IAmb  IAmb  02 08 08.8
      comp=Z,57nm,1.1s
KAN10 Anthony SW Sta     23.34 111  IAmb  IAmb  02 08 01.7
      comp=Z,36nm,0.9s
KAN08 Anthony NE Sta     23.35 110  IAmb  IAmb  02 08 09.6
      comp=Z,42nm,1.0s
KAN14 Manchester OK      23.53 111  IAmb  IAmb  02 08 02.3
      comp=Z,21nm,0.8s
K38A  Parkersburg        23.71  93  IAmb  IAmb  02 08 04.2
      comp=Z,43nm,0.8s
TBO   Thunder Bay        23.75  77  P     P     02 08 00.4 -2.8
KAN13 South Haven SW     23.79 110  IAmb  IAmb  02 08 04.7
      comp=Z,33nm,0.8s
WMOK  Wichita Mounta     24.52 116  P     P     02 08 10.7 +0.2
      baz=314,SNR=15
WMOK  Wichita Mounta     24.52 116  IAmb  IAmb  02 08 23.7
      comp=Z,18nm,0.8s
P38A  Dawn               24.74 100  IAmb  IAmb  02 08 14.0
      comp=Z,46nm,1.0s
QUOK  Quay               24.81 111  IAmb  IAmb  02 08 14.8
      comp=Z,34nm,0.9s
OK025 Westminster Rd     24.81 113  IAmb  IAmb  02 08 15.2
      comp=Z,37nm,1.0s
OK031 S. Brethren Rd     24.87 111  IAmb  IAmb  02 08 15.3
      comp=Z,35nm,0.8s
GTO   Geraldton          25.03  74  P     P     02 08 13.0 -1.9
JFWS  Jewell Farm        25.25  91  P     P     02 08 16.1 -0.8
      baz=297
JFWS  Jewell Farm        25.25  91  P     P     02 08 15.1 -1.9
W35A  Tecumseh           25.38 113  P     P     02 08 17.2 -1.0
TUL1  Leonard            25.54 110  P     P     02 08 19.6 -0.1
      baz=311,SNR=8.4
TUL1  Leonard            25.54 110  P     P     02 08 19.1 -0.6
TUL1                                IAmb  IAmb  02 08 23.6
      comp=Z,25nm,0.7s
ABTX  Abilene, Hawle     25.54 121  P     P     02 08 20.0 +0.2
      baz=318
ABTX  Abilene, Hawle     25.54 121  P     P     02 08 19.8  0.0
ABTX                                IAmb  IAmb  02 08 22.7
      comp=Z,22nm,1.1s
I42A  Draeger Farm,      25.70  88  P     P     02 08 20.5 -0.6
P40A  Paris              25.76  99  P     P     02 08 21.4 -0.2
P40A                                IAmb  IAmb  02 08 21.7
      comp=Z,16nm,0.7s
N41A  Harden Midland     25.91  96  P     P     02 08 22.7 -0.3
S39A  Bolivar            25.98 104  P     P     02 08 23.6 -0.1
TX31  Lajitas Ar. Si     25.99 132  P     P     02 08 23.3 -0.6
TX31                                IAmb  IAmb  02 08 37.5
      comp=Z,43nm,1.1s
TXAR  Lajitas Array      25.99 132  P     P     02 08 25.2 +1.3
      comp=Z,5.4nm,0.8s,baz=331,slow=7.4,SNR=11
TXAR                                LR    LR    02 19 27.1
      comp=Z,219nm,19.4s,baz=0.0,slow=38
L42A  Oliver, Polo       26.05  92  P     P     02 08 23.6 -0.6
U38A  Gravette           26.08 107  P     P     02 08 24.6  0.0
R40A  Maddies Statio     26.31 102  P     P     02 08 26.0 -0.6
R40A                                IAmb  IAmb  02 08 28.5
      comp=Z,27nm,0.9s
A21K  Barrow             26.41 338  P     P     02 08 28.7 +1.6
      baz=131
HHAR  Hobbs              26.46 107  P     P     02 08 27.9 -0.1
HHAR                                IAmb  IAmb  02 08 31.3
      comp=Z,25nm,0.8s
MGMO  Mountain Grove     26.98 104  P     P     02 08 32.0 -0.7
MGMO                                IAmb  IAmb  02 08 35.2
      comp=Z,20nm,0.8s
NIKH  Nikolski High      27.06 295  P     P     02 08 32.4 -0.7
JCT   Junction City      27.08 124  P     P     02 08 33.8 +0.2
      baz=321
JCT   Junction City      27.08 124  P     P     02 08 33.7  0.0
JCT                                 IAmb  IAmb  02 08 46.3
      comp=Z,22nm,1.0s
U40A  Yellville          27.09 106  P     P     02 08 33.5 -0.2
      baz=309,SNR=20
U40A  Yellville          27.09 106  P     P     02 08 32.8 -0.9
U40A                                IAmb  IAmb  02 08 37.6
      comp=Z,45nm,0.9s
CCM   Cathedral Cave     27.10 101  P     P     02 08 34.0 +0.2
      baz=306
CCM   Cathedral Cave     27.10 101  P     P     02 08 32.8 -0.9
CCM                                 IAmb  IAmb  02 08 37.8
      comp=Z,20nm,0.9s
W39A  Magazine           27.25 109  P     P     02 08 35.4 +0.3
      baz=311,SNR=7.3
W39A  Magazine           27.25 109  P     P     02 08 34.8 -0.3
W39A                                IAmb  IAmb  02 08 43.4
      comp=Z,18nm,0.8s
P43A  Skaggs, Pawnee     27.34  97  P     P     02 08 35.9  0.0
M44A  Midewin, Midew     27.41  92  P     P     02 08 35.4 -1.1
FVM   French Village     27.67 100  P     P     02 08 38.0 -0.8
FVM                                 IAmb  IAmb  02 08 53.1
      comp=Z,23nm,0.8s
O44A  Mansfield          27.76  95  P     P     02 08 38.5 -1.1
O44A                                IAmb  IAmb  02 08 40.3
      comp=Z,29nm,0.8s
LPIG  La Paz             27.80 149  LR    LR    02 20 07.3
      comp=Z,84nm,18.1s,baz=8.5,slow=37
MIAR  Mount Ida          27.80 110  P     P     02 08 40.2 +0.2
      baz=312,SNR=13
MIAR  Mount Ida          27.80 110  P     P     02 08 40.0 -0.1
MIAR                                IAmb  IAmb  02 08 45.9
      comp=Z,23nm,0.9s
T42A  Van Buren          27.80 103  P     P     02 08 39.1 -1.0
FCAR  Ozark Folk Cen     27.85 106  P     P     02 08 39.3 -1.1
FCAR                                IAmb  IAmb  02 08 42.9
      comp=Z,24nm,0.7s
Q44A  Meyer Farm, Va     28.07  97  P     P     02 08 42.4  0.0
Q44A                                IAmb  IAmb  02 08 46.1
      comp=Z,15nm,0.8s
W41B  Gary Mavity, V     28.22 107  P     P     02 08 43.9 +0.1
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	baz=310						
X40A	**Basin Creek Fa**	**28.30**	**109**	P	**P**	**02 08 43.8**	**-0.7**
	baz=311						
LCAR	**Lake Charles**	**28.35**	**104**	P	**P**	**02 08 44.3**	**-0.6**
LCAR				IAmb	IAmb	02 08 46.2	
	comp=Z,15nm,0.9s						
PBMO	**Poplar Bluff**	**28.38**	**103**	P	**P**	**02 08 44.5**	**-0.6**
PBMO				IAmb	IAmb	02 08 45.2	
	comp=Z,14nm,1.1s						
SFIN	**Lafayette**	**28.54**	**93**	P	**P**	**02 08 45.2**	**-1.4**
	baz=301						
S44A	**Carbondale**	**28.60**	**100**	P	**P**	**02 08 46.1**	**-1.0**
SIUC	**Southern Illin**	**28.61**	**100**	P	**P**	**02 08 46.3**	**-0.9**
WLAR	**White Oak Lake**	**28.66**	**110**	P	**P**	**02 08 47.8**	**+0.1**
WLAR				IAmb	IAmb	02 09 04.8	
	comp=Z,34nm,1.2s						
RES	**Resolute Bay**	**28.71**	**16**	P	**P**	**02 08 48.1**	**+0.4**
	comp=Z,4.7nm,0.9s,baz=227,slow=10,SNR=5.0						
RES	**Resolute Bay**	**28.71**	**16**	P	**P**	**02 08 47.8**	**+0.1**
OLIL	**Olney**	**28.76**	**97**	P	**P**	**02 08 47.7**	**-0.8**
T45A	**Paducah**	**29.38**	**100**	P	**P**	**02 08 53.1**	**-1.0**
BLO	**Bloomington**	**29.55**	**95**	P	**P**	**02 08 54.2**	**-1.3**
P48A	**Milroy**	**30.11**	**93**	P	**P**	**02 08 59.5**	**-1.0**
W45A	**Hickory Valley**	**30.17**	**104**	P	**P**	**02 09 01.1**	**0.0**
WCI	**Wyandotte Cave**	**30.22**	**96**	P	**P**	**02 09 00.5**	**-1.0**
	baz=304						
WCI	**Wyandotte Cave**	**30.22**	**96**	P	**P**	**02 09 01.4**	**-0.1**
WCI				IAmb	IAmb	02 09 02.4	
	comp=Z,17nm,0.9s						
OXF	**Oxford**	**30.44**	**105**	P	**P**	**02 09 03.1**	**-0.3**
	baz=310,SNR=10						
OXF	**Oxford**	**30.44**	**105**	P	**P**	**02 09 03.5**	**+0.1**
WVT	**Waverly**	**30.44**	**101**	P	**P**	**02 09 03.3**	**-0.1**
	baz=307						
WVT	**Waverly**	**30.44**	**101**	P	**P**	**02 09 03.0**	**-0.4**
WVT				IAmb	IAmb	02 09 14.1	
	comp=Z,15nm,0.9s						
O49A	**Covington**	**30.45**	**91**	P	**P**	**02 09 03.0**	**-0.5**
O49A				IAmb	IAmb	02 09 04.0	
	comp=Z,28nm,1.0s						
P49A	**Miami Univ. Ec**	**30.54**	**93**	P	**P**	**02 09 03.4**	**-0.9**
	baz=302						
P49A	**Miami Univ. Ec**	**30.54**	**93**	P	**P**	**02 09 03.7**	**-0.6**
P49A				IAmb	IAmb	02 09 04.4	
	comp=Z,36nm,1.1s						
PLAL	**Pickwick Lake**	**30.99**	**103**	P	**P**	**02 09 08.0**	**-0.3**
PLAL				IAmb	IAmb	02 09 25.4	
	comp=Z,12nm,0.8s						
ACSO	**Alum Creek Sta**	**31.31**	**90**	P	**P**	**02 09 10.7**	**-0.4**
	baz=301,SNR=5.4						
ACSO	**Alum Creek Sta**	**31.31**	**90**	P	**P**	**02 09 11.0**	**-0.1**
N51A	**Ashland**	**31.36**	**89**	P	**P**	**02 09 10.8**	**-0.8**
N51A				IAmb	IAmb	02 09 11.6	
	comp=Z,20nm,0.7s						
R50A	**Paris**	**31.47**	**94**	P	**P**	**02 09 11.5**	**-1.0**
P51A	**Williamsport**	**31.65**	**91**	P	**P**	**02 09 13.6**	**-0.5**
Q51A	**Peebles**	**31.71**	**92**	P	**P**	**02 09 14.3**	**-0.3**
Q51A				IAmb	IAmb	02 09 15.8	
	comp=Z,19nm,0.8s						
ALGO	**Algonquin Park**	**31.92**	**77**	P	**P**	**02 09 15.6**	**-0.8**
	baz=293						
ADK	**Adak**	**31.97**	**295**	P	**P**	**02 09 17.0**	**+0.3**
X48A	**Hartselle**	**31.98**	**103**	P	**P**	**02 09 16.4**	**-0.6**
X48A				IAmb	IAmb	02 09 17.1	
	comp=Z,10nm,0.8s						
P52A	**Corning**	**32.18**	**91**	P	**P**	**02 09 18.4**	**-0.4**
	baz=302						
M53A	**WI Miller and**	**32.22**	**87**	P	**P**	**02 09 18.7**	**-0.4**
	baz=300						
S51A	**Beattyville**	**32.31**	**95**	P	**P**	**02 09 18.9**	**-1.0**
S51A				IAmb	IAmb	02 09 20.7	
	comp=Z,22nm,0.8s						
O53A	**New Philadelph**	**32.47**	**89**	P	**P**	**02 09 20.5**	**-0.7**
	baz=301						
O53A	**New Philadelph**	**32.47**	**89**	P	**P**	**02 09 21.0**	**-0.3**
O53A				IAmb	IAmb	02 09 21.2	
	comp=Z,24nm,1.0s						
W50A	**Signal Mountai**	**32.63**	**100**	P	**P**	**02 09 21.5**	**-1.3**
W50A				IAmb	IAmb	02 09 33.6	
	comp=Z,13nm,0.8s						
LRAL	**Lakeview Retre**	**32.92**	**105**	P	**P**	**02 09 24.7**	**-0.6**
	baz=311						
TZTN	**Tazewell**	**32.97**	**96**	P	**P**	**02 09 24.1**	**-1.6**
	baz=306						
TZTN	**Tazewell**	**32.97**	**96**	P	**P**	**02 09 25.1**	**-0.6**
TZTN				IAmb	IAmb	02 09 26.9	
	comp=Z,22nm,1.0s						
X51A	**Calhoun**	**33.32**	**100**	P	**P**	**02 09 28.7**	**0.0**
X51A				IAmb	IAmb	02 09 40.0	
	comp=Z,24nm,1.0s						
V52A	**Sevierville**	**33.36**	**98**	P	**P**	**02 09 28.2**	**-0.8**
V52A				IAmb	IAmb	02 09 39.6	
	comp=Z,21nm,0.9s						
Q54A	**Coxs Mills**	**33.38**	**91**	P	**P**	**02 09 29.3**	**+0.1**
D56A	**ZEC Mazanza, M**	**33.59**	**74**	P	**P**	**02 09 29.8**	**-1.2**
	baz=293						
GAC	**Glen Almond**	**33.67**	**76**	P	**P**	**02 09 30.2**	**-1.4**
MCWV	**Mont Chateau**	**33.67**	**89**	P	**P**	**02 09 30.8**	**-0.9**
	baz=302						
R54A	**Victor**	**33.72**	**92**	P	**P**	**02 09 31.2**	**-1.0**
	baz=304						
S54A	**Dingess, Beckl**	**33.72**	**93**	P	**P**	**02 09 31.8**	**-0.5**
	baz=304						
K56A	**Middlesex**	**33.81**	**82**	P	**P**	**02 09 32.0**	**-1.0**
	baz=298						
V53A	**Saluda**	**33.97**	**97**	P	**P**	**02 09 33.3**	**-1.2**
250A	**Grady**	**34.08**	**105**	P	**P**	**02 09 34.6**	**-0.7**
U54A	**Nelsons Funny**	**34.12**	**95**	P	**P**	**02 09 35.7**	**0.0**
	baz=306						
R55A	**Marlinton**	**34.23**	**91**	P	**P**	**02 09 35.7**	**-1.0**
	baz=304,SNR=6.4						
R55A	**Marlinton**	**34.23**	**91**	P	**P**	**02 09 36.6**	**-0.1**
R55A				IAmb	IAmb	02 09 38.2	
	comp=Z,21nm,0.8s						
J57A	**Williamstown**	**34.34**	**80**	P	**P**	**02 09 36.3**	**-1.2**
	baz=297						
P56A	**Dayton Farm, R**	**34.41**	**88**	P	**P**	**02 09 37.4**	**-0.8**
	baz=302						
Q56A	**Snyder Ridge,**	**34.43**	**89**	P	**P**	**02 09 37.6**	**-0.7**
	baz=303						
Q56A	**Snyder Ridge,**	**34.43**	**89**	P	**P**	**02 09 37.5**	**-0.9**
N57A	**Milroy**	**34.61**	**85**	P	**P**	**02 09 38.5**	**-1.4**
	baz=301						
152A	**Waverly Hall**	**34.61**	**103**	P	**P**	**02 09 40.1**	**+0.1**
R56A	**Bull Pasture M**	**34.63**	**90**	P	**P**	**02 09 39.4**	**-0.8**
	baz=303						
BLA	**Blacksburg**	**34.63**	**93**	P	**P**	**02 09 39.6**	**-0.6**
	baz=305						
D58A	**Chemin du LacG**	**34.75**	**73**	P	**P**	**02 09 39.7**	**-1.3**
	baz=293						
E58A	**La Victoria**	**34.79**	**74**	P	**P**	**02 09 40.3**	**-1.1**
	baz=294						
G58A	**Ormstown**	**34.81**	**77**	P	**P**	**02 09 40.6**	**-0.9**
	baz=296						
O57A	**Amberson**	**34.83**	**86**	P	**P**	**02 09 40.7**	**-1.1**
	baz=301						
S56A	**Natural Bridge**	**34.93**	**91**	P	**P**	**02 09 42.0**	**-0.7**
	baz=304						
GOGA	**Godfrey**	**34.94**	**101**	P	**P**	**02 09 42.1**	**-0.7**
	baz=310						
GOGA	**Godfrey**	**34.94**	**101**	P	**P**	**02 09 42.1**	**-0.7**
GOGA				IAmb	IAmb	02 09 56.5	
	comp=Z,19nm,1.1s						
Q57A	**Strasburg**	**34.94**	**89**	P	**P**	**02 09 40.4**	**-2.4**
	baz=303						
P57A	**Homestead Farm**	**34.97**	**88**	P	**P**	**02 09 42.2**	**-0.7**
	baz=302						
P57A	**Homestead Farm**	**34.97**	**88**	P	**P**	**02 09 41.7**	**-1.2**
P57A				IAmb	IAmb	02 09 43.3	
	comp=Z,20nm,0.8s						
T56A	**Rocky Mt**	**34.99**	**93**	P	**P**	**02 09 42.7**	**-0.5**
	baz=305						
KMSC	**Kings Mountain**	**35.25**	**97**	P	**P**	**02 09 45.2**	**-0.3**
	baz=307						
R57A	**Stanardsville**	**35.27**	**90**	P	**P**	**02 09 44.9**	**-0.7**
	baz=304						
S57A	**Dark Hollow, R**	**35.29**	**91**	P	**P**	**02 09 44.9**	**-0.9**
	baz=304						
S57A	**Dark Hollow, R**	**35.29**	**91**	P	**P**	**02 09 45.1**	**-0.6**
V56A	**Mocksville**	**35.40**	**95**	P	**P**	**02 09 46.8**	**+0.1**
	baz=307						
P58A	**Pank, Wackersv**	**35.43**	**87**	P	**P**	**02 09 45.8**	**-1.1**
	baz=302						
Q58A	**Fox Den Farm,**	**35.47**	**88**	P	**P**	**02 09 46.8**	**-0.5**
	baz=303						
M59A	**Waymart**	**35.60**	**83**	P	**P**	**02 09 47.5**	**-0.9**
	baz=300						
R58A	**Rapidan**	**35.61**	**89**	P	**P**	**02 09 48.1**	**-0.5**
	baz=304						
W56A	**Indian Trail**	**35.75**	**96**	P	**P**	**02 09 48.4**	**-1.3**
	baz=307						
U57A	**Blanch**	**35.79**	**93**	P	**P**	**02 09 49.3**	**-0.8**
	baz=306						
V57A	**Coltrane Farms**	**35.83**	**94**	P	**P**	**02 09 49.4**	**-1.0**
	baz=306						
X56A	**White Oak**	**35.84**	**97**	P	**P**	**02 09 49.5**	**-1.0**
	baz=308						
R58B	**Mineral**	**35.88**	**90**	P	**P**	**02 09 50.0**	**-0.8**
	baz=304,SNR=6.0						
R58B	**Mineral**	**35.88**	**90**	P	**P**	**02 09 49.2**	**-1.6**
R58B				IAmb	IAmb	02 09 52.7	
	comp=Z,27nm,1.0s						
E60A	**Ste Agathe de**	**35.95**	**73**	P	**P**	**02 09 50.3**	**-1.0**
	baz=295						
V58A	**Windy Hill, Pi**	**36.31**	**94**	P	**P**	**02 09 54.4**	**-0.1**
	baz=306						
U58A	**Oxford**	**36.33**	**92**	P	**P**	**02 09 54.4**	**-0.3**
	baz=306						
G61A	**St-Isidore-de-**	**36.36**	**75**	P	**P**	**02 09 54.2**	**-0.7**
	baz=296						
S59A	**Mechanicsville**	**36.38**	**90**	P	**P**	**02 09 54.5**	**-0.6**
	baz=304						
LBNH	**Lisbon**	**36.58**	**77**	P	**P**	**02 09 55.8**	**-0.9**
LBNH				IAmb	IAmb	02 10 05.9	
	comp=Z,15nm,1.1s						
HNH	**Hanover**	**36.59**	**78**	P	**P**	**02 09 56.5**	**-0.3**
T59A	**Double "B" Far**	**36.65**	**91**	P	**P**	**02 09 57.2**	**-0.2**
	baz=305						
T59A	**Double "B" Far**	**36.65**	**91**	P	**P**	**02 09 56.6**	**-0.8**
W58A	**Raeford**	**36.70**	**95**	P	**P**	**02 09 57.9**	**+0.1**
	baz=307						
H62A	**Milan**	**36.91**	**76**	P	**P**	**02 09 59.4**	**-0.2**
H62A				IAmb	IAmb	02 10 13.9	
	comp=Z,10nm,1.1s						
Y58A	**Scranton**	**37.09**	**97**	P	**P**	**02 10 01.6**	**+0.4**
	baz=308						
K62A	**Royalston**	**37.12**	**79**	P	**P**	**02 10 01.8**	**+0.5**
K62A				IAmb	IAmb	02 10 14.0	
	comp=Z,21nm,1.1s						
U60A	**Pendleton**	**37.20**	**91**	P	**P**	**02 10 02.0**	**-0.1**
	baz=306						
V60A	**Jim Taylor Roa**	**37.54**	**92**	P	**P**	**02 10 05.2**	**+0.2**
	baz=306						
U61A	**Possum Corner**	**37.75**	**91**	P	**P**	**02 10 05.0**	**-1.7**
X60A	**Albert Glenn T**	**37.79**	**94**	P	**P**	**02 10 06.8**	**-0.3**
	baz=308						
HMH	**Humu‘ula Sheep**	**37.92**	**230**	P	**P**	**02 10 08.5**	**-0.1**
656A	**Willston**	**38.21**	**105**	P	**P**	**02 10 10.9**	**+0.3**
M65A	**Busby, Falmout**	**38.69**	**80**	P	**P**	**02 10 14.2**	**-0.4**
LMN	**Caledonia Moun**	**40.32**	**71**	P	**P**	**02 10 26.6**	**-1.6**
LMN				IAmb	IAmb	02 10 27.2	
	comp=Z,16nm,1.1s						
CCIG	**Comitan**	**42.67**	**128**	P	**P**	**02 10 45.9**	**-1.9**
SUMG	**Summit**	**43.22**	**26**	P	**P**	**02 10 51.7**	**-0.3**
SUMG	**Summit**	**43.22**	**26**	*i* P	**P**	**02 10 52.0**	**0.0**
SUMG	**Summit**	**43.22**	**26**	*i* P	**P**	**02 10 52.0**	**0.0**
NRS	**Narsarsuaq**	**44.50**	**43**	P	**P**	**02 11 02.5**	**+0.7**
SEY	**Seymchan**	**44.50**	**320**	P	**P**	**02 11 02.9**	**+1.0**
	comp=Z,2.4nm,0.5s,baz=98,slow=9.4,SNR=6.8						
PETK	**Petropavlovsk-**	**46.07**	**305**	P	**P**	**02 11 15.0**	**+0.6**
	comp=Z,5.8nm,0.8s,baz=72,slow=12,SNR=9.3						
PETK				LR	LR	02 27 23.6	
	comp=Z,93nm,19.3s,baz=50,slow=32						
SNET	**Serv Nac Est T**	**46.35**	**127**	P	**P**	**02 11 16.1**	**-1.0**
FSCY	**Frank Sound, G**	**46.39**	**114**	P	**P**	**02 11 17.4**	**+0.1**
MA2	**Magadan**	**46.59**	**316**	P	**P**	**02 11 18.6**	**+0.2**
	comp=Z,5.4nm,0.7s,baz=90,slow=7.3,SNR=3.6						
MA2	**Magadan**	**46.59**	**316**	P	**P**	**02 11 18.3**	**-0.1**
MA2				IAmb	IAmb	02 11 21.6	
	comp=Z,13nm,1.1s						
SDDR	**Presa de Saban**	**52.77**	**105**	P	**P**	**02 12 05.2**	**-0.8**
SDDR				IAmb	IAmb	02 12 06.8	
	comp=Z,14nm,0.8s						
NRIK	**Noril'sk**	**59.30**	**347**	P	**P**	**02 12 54.6**	**+2.7**
	comp=Z,4.5nm,1.0s,baz=31,slow=5.7,SNR=5.5						
NRIK				LR	LR	02 42 07.9	
	comp=Z,82nm,18.4s,baz=58,slow=40						
NRIK	**Noril'sk**	**59.30**	**347**	P	**P**	**02 12 51.9**	**0.0**
NRIK				IAmb	IAmb	02 13 07.2	
	comp=Z,8.0nm,1.1s						
ARCES	**ARCESS Array B**	**59.75**	**11**	P	**P**	**02 12 56.9**	**+1.8**
	comp=Z,3.7nm,0.9s,baz=331,slow=6.6,SNR=2.3						
ARD7	**ARCESS Array S**	**59.75**	**11**	P	**P**	**02 12 55.3**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**60.58**	**267**	T	T	03 18 37.1	
	baz=44,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**60.59**	**266**	T	T	03 18 38.4	
	baz=44,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**60.60**	**266**	T	T	03 18 38.7	
	baz=44,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**61.59**	**266**	T	T	03 19 54.6	
	baz=44,slow=74,SNR=20						
H11S2	**WAKE ISLAND Hy**	**61.60**	**266**	T	T	03 19 51.6	
	baz=44,slow=74,SNR=27						
H11S3	**WAKE ISLAND Hy**	**61.61**	**266**	T	T	03 19 55.4	
	baz=44,slow=74,SNR=11						
ROSC	**El Rosal**	**61.89**	**118**	LR	LR	02 44 21.1	
	comp=Z,47nm,19.0s,baz=278,slow=40						
NOA	**NORSAR Array B**	**64.82**	**22**	P	**P**	**02 13 30.0**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=328,slow=7.0,SNR=1.9						
NOA				LR	LR	02 40 03.4	
	comp=Z,43nm,19.5s,baz=280,slow=34						
USRK	**Ussuriysk Ar.**	**64.93**	**309**	P	**P**	**02 13 30.1**	**0.0**
	comp=Z,2.6nm,0.6s,baz=33,slow=4.9,SNR=8.0						
FINES	**FINESS Array B**	**67.45**	**14**	P	**P**	**02 13 45.8**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=337,slow=4.4,SNR=7.1						
KLMR	**Klimovskoe**	**69.70**	**8**	*e*P	**P**	**02 13 56.5**	**-3.5**
KLMR				AMP		02 14 03.8	
	comp=Z,19nm,1.4s						
SONM	**Songino Array**	**73.39**	**326**	P	**P**	**02 14 23.3**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=51,slow=4.1,SNR=3.6						
SONM				LR	LR	02 48 46.9	
	comp=Z,98nm,19.0s,baz=34,slow=38						
CLL	**Collm**	**73.89**	**26**	*e*P	**P**	**02 14 28.0**	**+2.7**
ZALV	**Zalesovo Beam**	**74.08**	**342**	P	**P**	**02 14 29.6**	**+3.2**
	comp=Z,1.2nm,0.9s,baz=47,slow=6.7,SNR=5.6						
ZALV				LR	LR	02 48 57.0	
	comp=Z,62nm,22.0s,baz=13,slow=37						
BRG	**Berggiesshubel**	**74.54**	**25**	*e*P	P	02 14 35.9	+6.8
BRG				Amp		02 14 48.8	
	comp=Z,11nm,1.6s						
BRG	**Berggiesshubel**	**74.54**	**25**	*e*P	P	02 14 35.9	+6.8
BRG				Amp		02 14 48.8	
	comp=Z,11nm,1.6s						
CHVC	**Chvalec**	**75.38**	**24**	*e*P	P	02 14 49.9	+16
CHVC				*e*x	x	02 15 01.0	
DPC	**Dobruska-Polom**	**75.67**	**24**	*e*P	P	02 14 42.6	+6.9
DPC				*e*sP	sP	02 14 52.8	+2.4
KHC	**Kasperske Hory**	**76.01**	**26**	*e*P	**P**	**02 14 39.0**	**+1.4**
KHC				*e*sP	**sP**	**02 14 55.0**	**+2.7**
KRLC	**Kraliky**	**76.04**	**24**	*e*P	P	02 14 44.7	+6.9
KRLC				*e*sP	sP	02 14 54.8	+2.3
GEC2	**GERESS Array S**	**76.30**	**26**	P	**P**	**02 14 37.5**	**-1.8**
GERES	**GERESS Array B**	**76.30**	**26**	P	**P**	**02 14 41.0**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=308,slow=4.8,SNR=2.5						
RETA	**Reutte**	**76.62**	**29**	*e*P	P	02 14 46.4	+5.2
	comp=Z,1.3nm,0.5s						
MOTA	**Moosalm**	**76.86**	**29**	*e*P	P	02 14 48.8	+6.2
	comp=Z,6.2nm,1.1s						
SQTA	**Sankt Quirin**	**77.00**	**29**	*e*P	P	02 14 49.3	+5.9
	comp=Z,2.8nm,0.5s						
WATA	**Walderalm**	**77.01**	**28**	*e*P	P	02 14 48.7	+5.2
	comp=Z,4.1nm,1.0s						
FETA	**Feichten**	**77.02**	**29**	*e*P	P	02 14 49.5	+5.9
	comp=Z,6.7nm,1.5s						
WTTA	**Wattenberg**	**77.09**	**28**	*e*P	P	02 14 50.0	+6.0
	comp=Z,2.9nm,0.7s						
HHC	**Hu-ho-hao-te**	**77.15**	**319**	*e*P	**P**	**02 14 46.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,280nm,7.5s						
BRVK	**Borovoye**	**77.26**	**350**	P	**P**	**02 14 44.6**	**+0.1**
BRVK				IAmb	IAmb	02 15 00.4	
	comp=Z,7.8nm,1.1s						
MOA	**Molln**	**77.36**	**26**	*e*P	P	02 14 51.0	+5.7
	comp=Z,6.1nm,1.5s						
ESDC	**Sonseca Array**	**77.71**	**42**	P	**P**	**02 14 50.9**	**+3.5**
	comp=Z,2.4nm,0.9s,baz=316,slow=5.2,SNR=17						
ESDC				LR	LR	02 45 00.6	
	comp=Z,94nm,18.9s,baz=350,slow=33						
CONA	**Conrad Observa**	**77.74**	**25**	*e*P	P	02 14 53.2	+5.7
	comp=Z,3.5nm,1.1s						
KBA	**Koelnbreinsper**	**77.78**	**27**	*e*P	P	02 14 55.5	+7.7
	comp=Z,8.9nm,1.4s						
ABTA	**Abfaltersbach**	**77.83**	**28**	*e*P	P	02 15 02.5	+14
	comp=Z,2.2nm,0.9s						
AKASG	**Malin Array Be**	**78.23**	**16**	P	**P**	**02 14 49.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=348,slow=4.6,SNR=3.7						
AKASG				LR	LR	02 48 20.3	
	comp=Z,144nm,18.2s,baz=305,slow=35						
ARSA	**Arzberg**	**78.26**	**26**	*e*P	**P**	**02 14 54.7**	**+4.4**
	comp=Z,2.2nm,0.8s						
KURK	**Kurchatov**	**78.34**	**344**	P	**P**	**02 14 50.8**	**+0.2**
SOKA	**Soboth**	**78.64**	**26**	*e*P	P	02 14 57.4	+4.9
	comp=Z,4.2nm,0.8s						
OBKA	**Obir**	**78.65**	**27**	*e*P	P	02 14 57.3	+4.7
	comp=Z,9.0nm,1.6s						
NJ2	**Nanjing**	**80.84**	**309**	*e*P	**P**	**02 15 04.6**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MKAR	**Makanchi Array**	**81.38**	**341**	P	**P**	**02 15 07.3**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=343,slow=4.1,SNR=12						
ABKAR	**Akbulak array**	**81.84**	**356**	P	**P**	**02 15 09.4**	**-0.2**
WMQ	**Urumqi**	**82.88**	**336**	*e*P	**P**	**02 15 18.0**	**+2.8**
WMQ				pP	pP	02 15 26.1	-0.1
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,270nm,5.3s						
XAN	**Xi'an**	**83.97**	**317**	P	**P**	**02 15 21.2**	**+0.2**
XAN				pP	PcP	02 15 27.1	+2.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	**Lanzhou**	**84.40**	**322**	*e*P	**P**	**02 15 25.9**	**+2.7**
LZH				pP	pP	02 15 32.5	-1.6
LZH				sP	sP	02 15 35.9	-2.2
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
KBZ	**Khabaz**	**86.96**	**8**	P	**P**	**02 15 36.5**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=0.0,slow=8.1,SNR=2.6						
KSH	**Kashi**	**89.64**	**343**	P	**P**	**02 15 51.4**	**+2.8**
KSH				S	**S**	**02 26 40.8**	**+3.5**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GEYT	**Alibeck**	**93.22**	**357**	LR	LR	03 04 06.9	
	comp=Z,73nm,18.2s,baz=270,slow=40						
VNA2	**Neumayer--Watz**	**144.58**	**150**	PKPdf	**PKPab**	**02 22 24.1**	**-0.2**
SNAA	**Sanae**	**145.94**	**152**	PKPdf	**PKPdf**	**02 22 28.2**	**+0.2**

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*NIED **08** 02:05:30.8, 35°.58N×140°.90E, h19^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.16; $M_{\theta\theta}$0.37; $M_{\phi\phi}$0.79; $M_{r\theta}$1.95; $M_{\theta\phi}$-1.22; $M_{\phi r}$-0.72; Fault plane solution: $M_0$2.62000×10^{14} NP1: ϕ_s294.00000°, δ75.00000°, λ-112.00000°. NP2: ϕ_s171.00000°, δ27.00000°, λ-36.00000°.*

JMA 08 02:05:30.8±0.1**, 35°.58N×140°.90E, h19**^{km}±1^{km}**, M3.5, 2C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**345**	⇓P	Pg	02 05 34.8	-0.1
CHOJ				S	Sg	02 05 37.6	-0.1
JSMT	**Sammumatsuo**	**0.37**	**280**	⇑P	Pg	02 05 38.7	0.0
JSMT				S	Sb	02 05 44.7	+0.3
JIHU	**Itakohorinouch**	**0.49**	**322**	⇓P	Pb	02 05 41.2	+0.4
JIHU				S	Sb	02 05 48.6	+1.0
JCN	**Nagara**	**0.59**	**254**	⇑P	Pg	02 05 42.9	+0.3
JCN				S	Sn	02 05 52.6	-0.7
KTR	**Katsuura**	**0.64**	**228**	P	Pb	02 05 42.8	-0.5
KTR				S	Sg	02 05 52.9	+0.7
BSO4	**Boso 4**	**0.75**	**218**	P	Pg	02 05 45.3	-0.1
BSO4				X		02 05 54.7	
BSO3	**Boso 3**	**0.84**	**202**	⇓P	Pb	02 05 46.8	+0.2
JYT	**Yasato**	**0.86**	**319**	P	Pb	02 05 46.5	-0.7
JYT				S	Sb	02 05 57.8	-0.6
BSO1	**Boso 1**	**0.93**	**176**	P	Pb	02 05 47.2	-0.7
JHO	**Hitachi**	**1.06**	**345**	P	Pb	02 05 49.3	-1.3
JHO				S	Sb	02 06 04.0	-0.1
MAT	**Matsushiro**	**2.38**	**295**	P	Pb	02 06 11.8	-1.3
MAT				*e*S	Sn	02 06 39.1	+1.5

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*NEIC **08** 02:32:54.7±0.6, 19°.4N±0°.1×145°.5E±0°.2, h190^{km}±8^{km}, mb4.1/13, Error ellipse: s-maj=23.8km s-min=16.7km az=72.0*

*IDC **08** 02:32:58.0±6.2, 19°.41N×145°.43E, h218^{km}±60^{km}, mb3.5/14, mb1 3.6/15, mb1mx3.5/39, mbtmp4.0/15, MS3.6/1, Ms1 3.6/1, ms1mx2.7/21, Error ellipse: s-maj=23.4km s-min=12.9km az=87.0*

ISC 08 02:32:55.7±0.7**, 19°.4N**±0°.1×**145°.5E**±0°.1**, h200**^{km}**, n29,** σ**0^{s}69**/29**, mb4.0**/21**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**14.63**	**341**	LR	LR	02 40 53.2	
	comp=Z,239nm,19.6s,baz=96,slow=33						
JYT	**Yasato**	**17.44**	**346**	P	**P**	**02 36 44.2**	**-1.1**
PATS	**Pohnpei**	**17.62**	**133**	P	**P**	**02 36 46.5**	**-1.0**
PATS				S	**S**	**02 39 59.5**	**-0.6**
MJAR	**Matsushiro Arr**	**18.28**	**341**	P	**P**	**02 36 54.3**	**-0.2**
	0.1nm,0.3s,baz=176,slow=11,SNR=1.8						
KSRS	**Korea Array**	**23.67**	**323**	P	**P**	**02 37 48.8**	**-0.3**
	5.0nm,1.0s,baz=144,slow=8.9,SNR=6.7						
WB0	**Warramunga Arr**	**40.37**	**196**	P	**P**	**02 40 14.4**	**+0.2**
WB0				IAmb	IAmb	02 40 21.7	
	comp=Z,4.9nm,1.0s						
WR0	**Warramunga Arr**	**40.52**	**196**	P	**P**	**02 40 15.6**	**+0.2**
WR0				IAmb	IAmb	02 40 35.3	
	comp=Z,6.0nm,1.1s						
WB2	**Warramunga Arr**	**40.55**	**196**	P	**P**	**02 40 16.2**	**+0.5**
WB2				IAmb	IAmb	02 40 34.7	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**40.55**	**196**	P	**P**	**02 40 16.6**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=20,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**42.01**	**209**	P	**P**	**02 40 28.0**	**+0.4**
FITZ				IAmb	IAmb	02 40 28.8	
	comp=Z,9.1nm,1.1s						
SONM	**Songino Array**	**42.51**	**321**	P	**P**	**02 40 32.2**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=128,slow=6.3,SNR=14						
ASAR	**Alice Springs**	**44.23**	**195**	P	**P**	**02 40 45.9**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=15,slow=8.6,SNR=10						
ZAA0	**Zalesovo Array**	**57.37**	**322**	P	**P**	**02 42 22.8**	**-0.2**
ZAA0				IAmb	IAmb	02 42 23.1	
	comp=Z,3.5nm,1.1s						
ZALV	**Zalesovo Beam**	**57.37**	**322**	P	**P**	**02 42 22.9**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=102,slow=7.4,SNR=12						
MK31	**Makanchi Array**	**57.86**	**314**	P	**P**	**02 42 26.7**	**+0.1**
MKAR	**Makanchi Array**	**57.86**	**314**	P	**P**	**02 42 27.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=93,slow=8.6,SNR=6.8						
NRIK	**Noril'sk**	**60.93**	**340**	P	**P**	**02 42 47.2**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=98,slow=7.1,SNR=2.0						
NRIK	**Noril'sk**	**60.93**	**340**	P	**P**	**02 42 47.1**	**0.0**
IL31		**63.15**	**26**	P	**P**	**02 43 01.9**	**0.0**
ILAR	**Eielson Array**	**63.15**	**26**	P	**P**	**02 43 01.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=254,slow=5.2,SNR=11						
PAX	**Paxson**	**63.43**	**28**	P	**P**	**02 43 03.8**	**-0.2**
PAX				IAmb	IAmb	02 43 12.6	
	comp=Z,2.6nm,1.0s						
N25K	**Chitina, Valde**	**63.62**	**30**	P	**P**	**02 43 06.5**	**+1.3**
N25K				IAmb	IAmb	02 43 12.7	
	comp=Z,4.8nm,1.1s						
BRVK	**Borovoye**	**65.91**	**320**	P	**P**	**02 43 19.2**	**-0.8**
INK	**Inuvik**	**68.85**	**23**	P	**P**	**02 43 38.1**	**0.0**
	comp=Z,1.7nm,0.9s,baz=267,slow=5.1,SNR=4.7						
YKA	**Yellowknife Ar**	**77.51**	**28**	P	**P**	**02 44 29.7**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=286,slow=4.9,SNR=11						
ARCES	**ARCESS Array B**	**81.81**	**342**	P	**P**	**02 44 51.4**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=47,slow=8.8,SNR=7.6						
NVAR	**Mina Array Bea**	**82.90**	**52**	P	**P**	**02 45 00.1**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=267,slow=5.6,SNR=10.0						
FINES	**FINESS Array B**	**86.21**	**335**	P	**P**	**02 45 13.1**	**-1.2**
	comp=Z,1.7nm,0.4s,baz=73,slow=4.5,SNR=34						
PDAR	**Pinedale Array**	**87.52**	**45**	P	**P**	**02 45 21.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=256,slow=3.6,SNR=2.1						

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*NIED **08** 03:01:57.7, 34°.79N×137°.69E, h34^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.30; $M_{\theta\theta}$-8.40; $M_{\phi\phi}$6.10; $M_{r\theta}$1.97; $M_{\theta\phi}$-0.11; $M_{\phi r}$4.41; Fault plane solution: $M_0$8.93000×10^{14} NP1: ϕ_s49.00000°, δ75.00000°, λ34.00000°. NP2: ϕ_s310.00000°, δ58.00000°, λ163.00000°.*

*JMA **08** 03:01:57.7, 34°.79N×137°.69E, h34^{km}±1^{km}, M4.1*

Broadband fault plane solution: P waves. NP1: φs318.00000°, δ71.00000°, λ165.00000°. NP2: φs53.00000°, δ75.00000°, λ20.00000°. Principal axes: T Plg24.0000°, Azm276.0000°; N Plg66.0000°, Azm88.0000°; P Plg3.0000°, Azm185.0000°;

JMA Felt III J1.

*IDC **08** 03:01:59.5±1.6, 34°.79N×137°.62E, h48^{km}±15^{km}, mb3.3/9, mb1 3.6/12, mb1mx3.4/45, mbtmp3.6/12, ML3.6/3, MS3.1/6, Ms1 3.2/6, ms1mx2.8/36 Error ellipse: s-maj=19.8km s-min=13.1km az=108.0*

ISC 08 03:01:57.5±0.8**, 34°.75N**±0°.04×**137°.67E**±0°.03**, h32**^{km}±5^{km}**, n31, σ1^{s}10**/38**, mb3.5**/9**, MS3.4**/3**, 5C-3D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHMK	**Hamakita**	0.10	47	P	Pb	03 02 02.9	-0.1
JHMK				S	Sb	03 02 06.7	-0.2
HMMJ	**Hamamatsu 2**	0.12	22	⇑P	Pn	03 02 03.2	0.0
HMMJ				S	Sb	03 02 07.2	-0.1
JSSY	**Shinshiroyabe**	0.21	322	⇓P	Pb	03 02 04.2	+0.1
JSSY				S	Sb	03 02 09.0	+0.4
JYZW	**Yoshizawa**	0.26	12	P	Pb	03 02 04.1	-0.5
TK04	**Tokai 4**	0.40	154	⇓P	Pn	03 02 07.3	+0.4
TK04				X		03 02 15.3	
JAA	**Atsumi**	0.45	255	⇑P	Pb	03 02 07.6	+0.4
JAA				S	Sn	03 02 14.8	+0.3
SHZ3	**Shizuoka 3**	0.55	54	P	Pb	03 02 08.0	-0.9
SHZ3				S	Sb	03 02 15.5	-1.2
TK02	**Tokai 2**	0.80	175	⇓P	Pn	03 02 12.0	-0.3
TK02				X		03 02 23.8	
JIE	**Ise**	0.87	246	⇑P	Pn	03 02 13.1	-0.3
JIE				S	Sn	03 02 24.4	-0.5
TSUJ	**Tsu 2**	1.03	268	⇑P	Pn	03 02 15.4	-0.2
TTO2	**TONANKAI O.B.S**	1.14	208	P	Pn	03 02 17.0	+0.1
JYTA	**Yamagatataniai**	1.14	318	⇑P	Pn	03 02 17.2	0.0
JYTA				S	Sn	03 02 31.3	-0.4
JOD2	**Odawara 2**	1.28	66	P	Pn	03 02 18.6	-0.5
MJAR	**Matsushiro Arr**	1.85	14	P	Pn	03 02 27.5	+0.6
	30nm,0.3s,baz=196,slow=16,SNR=198						
MJAR				S	Sn	03 02 50.6	+1.4
	7.8nm,0.3s,baz=198,slow=25,SNR=6.8						
MJAR				LR	LR	03 03 10.2	
	comp=Z,192nm,20.0s,baz=240,slow=39						
MAT	**Matsushiro**	1.85	14	P	Pn	03 02 27.2	+0.3
MAT				S	Sn	03 02 50.4	+1.2
JHJ	**Hachijo jima 2**	2.39	132	P	Pn	03 02 35.7	+1.3
	27nm,0.3s,baz=74,slow=22,SNR=5.2						
JHJ				S	Sn	03 03 01.9	-0.7
	28nm,0.3s,baz=61,slow=18,SNR=2.2						
JNU	**Nakatsue**	5.87	256	P	Pn	03 03 23.7	+1.4
	1.4nm,0.3s,baz=85,slow=4.1,SNR=6.2						
JNU				S	Sn	03 04 24.2	-4.2
	0.5nm,0.3s,baz=88,slow=23,SNR=0.8						
JNU				LR	LR	03 05 19.9	
	comp=Z,41nm,20.0s,baz=52,slow=34						
KSRS	**Korea Array**	8.34	292	P	Pn	03 03 57.3	+1.3
	0.9nm,0.3s,baz=104,slow=14,SNR=5.7						
KSRS				LR	LR	03 07 12.7	
	comp=Z,88nm,18.2s,baz=98,slow=38						
KLR	**Kul'dur**	15.12	345	LR	LR	03 11 27.2	
	comp=Z,86nm,19.0s,baz=173,slow=38						
SONM	**Songino Array**	26.69	309	P	P	03 07 33.8	+0.1
	0.7nm,0.8s,baz=112,slow=9.4,SNR=4.3						
YAK	**Yakutsk**	27.77	352	LR	LR	03 19 03.9	
	comp=Z,84nm,18.2s,baz=94,slow=37						
JAY	**Jayapura**	37.17	175	LR	LR	03 21 45.8	
	comp=Z,22nm,21.1s,baz=186,slow=32						
MKAR	**Makanchi Array**	42.80	304	P	P	03 09 52.2	+0.1
	0.7nm,0.7s,baz=91,slow=9.4,SNR=8.6						
ILAR	**Eielson Array**	53.04	31	P	P	03 11 10.8	-0.2
	0.3nm,0.7s,baz=266,slow=7.1,SNR=2.1						
WRA	**Warramunga Arr**	54.48	184	P	P	03 11 24.2	+2.2
	0.6nm,0.9s,baz=360,slow=7.8,SNR=2.3						
ARCES	**ARCESS Array B**	65.05	339	LR	LR	03 44 15.1	
	comp=Z,63nm,19.5s,baz=270,slow=39						
FINES	**FINESS Array B**	69.39	331	P	P	03 13 01.3	-0.5
	3.4nm,0.8s,baz=93,slow=6.1,SNR=6.1						
AKASG	**Malin Array Be**	74.20	321	P	P	03 13 29.3	-1.6
	0.2nm,0.3s,baz=42,slow=5.9,SNR=4.1						
BRTR	**Keskin Array B**	78.04	310	P	P	03 13 53.6	+0.4
	0.5nm,0.7s,baz=144,slow=4.4,SNR=1.3						
NVAR	**Mina Array Bea**	78.79	51	P	P	03 13 58.2	+0.8
	0.1nm,0.5s,baz=302,slow=5.2,SNR=2.1						
GERES	**GERESS Array B**	82.99	326	P	P	03 14 18.6	-0.8
	0.1nm,0.3s,baz=39,slow=6.3,SNR=1.3						

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*IDC **08** 03:04:14.7±11.0, 71°.64N×3°.33W, h0^{km}, mb3.3/1, mb1 3.8/4, mb1mx3.2/45, mbtmp3.7/4, ML2.8/3, MS2.9/1, Ms1 3.0/1, ms1mx2.6/33, Error ellipse: s-maj=147.3km s-min=57.8km az=124.0*

*BER **08** 03:04:16.4±2.5, 71°.28N×4°.13W, h0^{km}±999^{km}, Confirmed Earthquake*

ISC 08 03:04:18.9±2.7**, 71°.5N**±0°.1×**2°.8W**±0°.3**, h10**^{km}**, n18, σ0^{s}76**/15**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBG	**Daneborg**	5.85	307	*e*P	Pn	03 05 38.9	-6.7
LOF	**Lofoten**	6.57	113	*e*P	Pn	03 05 55.5	+0.2
N2VI	**Vinje**	6.64	110	*e*P	Pn	03 05 57.2	+0.8
STEI	**Steigen**	7.19	111	*e*P	Pn	03 06 04.5	+0.5
N2IH	**Innhavet**	7.38	110	*e*P	Pn	03 06 07.2	+0.7
NBB05	**Inndyr**	7.44	119	*e*P	Pn	03 06 02.2	-5.0
TRO	**Tromso**	7.46	94	*e*P	Pn	03 06 05.7	-1.9
FAUS	**Fauske**	7.56	114	*e*P	Pn	03 06 08.9	-0.1
SPA0	**Spitsbergen Ar**	8.31	28	*e*P	Pn	03 06 20.1	+0.8
KBS	**Kingsbay**	8.32	20	*e*P	Pn	03 06 18.8	-0.5
KIF	**Kilpisjarvi**	8.33	96	*e*P	Pn	03 06 19.8	+0.3
NSS	**Namsos**	8.88	135	*e*P	Pn	03 06 27.6	+0.5
KTK1	**Kautokeino**	9.11	93	*e*P	Pn	03 06 30.9	+0.8
ARCES	**ARCESS Array B**	9.60	88	Pn	Pn	03 06 36.8	-0.1
	baz=290,slow=12,SNR=16						
NOA	**NORSAR Array B**	11.87	145	LR	LR	03 11 15.7	
	comp=Z,53nm,18.5s,baz=275,slow=35						
HFS	**Hagfors**	13.18	142	Pn	Pn	03 07 25.5	-0.3
	0.2nm,0.3s,baz=334,slow=13,SNR=5.7						
FINES	**FINESS Array B**	15.10	117	Pn	Pn	03 07 51.9	-0.1
	0.1nm,0.3s,baz=329,slow=10,SNR=3.6						
AKASG	**Malin Array Be**	25.37	128	P	P	03 09 45.3	-0.5
	0.2nm,0.3s,baz=338,slow=9.6,SNR=3.1						

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*ECX **08** 03:11:05.5±0.6, 30°.60N×114°.23W, h14^{km}±5^{km}, MD2.9, ML3.0*

*MEX **08** 03:11:05.0±0.7, 30°.22N×114°.20W, h16^{km}±15^{km}, MD4.0*

ISC 08 03:11:01.9±2.7**, 30°.5N**±0°.1×**114°.16W**±0°.06**, h3**^{km}±15^{km}**, n10, σ1^{s}41**/17**, 3C-5D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	**San Felipe**	0.80	312	⇓*e*P	Pg	03 11 17.4	0.0
PIX	**Pinacate**	1.22	29	*e*P	Pn	03 11 24.5	-1.5
PIX				*e*S	Sb	03 11 39.7	-2.2
ECBX	**El Chinero**	1.24	322	⇓*e*P	Pb	03 11 24.9	-1.1
ECBX				*e*S	Sb	03 11 40.5	-1.9
SPX	**San Pedro Mart**	1.24	296	⇓*e*P	Pb	03 11 26.0	-0.3
SPX				IAML		03 11 43.5	
	comp=E,181nm,0.3s						
SPIG	**San Pedro Mart**	1.25	296	*e*P	Pb	03 11 25.9	-0.5
	baz=128,slow=10						
SPIG				*i* S	Sb	03 11 42.4	-0.7
SPIG	**San Pedro Mart**	1.25	296	⇓*e*P	Pb	03 11 26.0	-0.4
SQX	**San Quintin**	1.48	273	⇓*e*P	Pn	03 11 29.5	0.0
SQX				*e*S	Sn	03 11 48.2	-1.2
SQX				⇑*e*		03 12 00.6	
SQX				IAML		03 12 00.6	
	comp=N,342nm,0.4s						
214A	**Organ Pipe Nat**	1.86	38	*e*P	Pn	03 11 36.8	+2.0
214A				*i* S	Sn	03 12 00.1	+1.2
CBX	**Cerro Bola**	2.80	311	*e*P	Pb	03 11 54.6	+1.8
CBX				*e*S	Sb	03 12 28.3	+0.7
CBX				⇑*e*		03 12 32.6	
CBX				IAML		03 12 32.6	
	comp=N,113nm,0.5s						
CBX				⇑*e*		03 12 32.7	
CBX				IAML		03 12 32.7	
	comp=E,62nm,0.4s						
TJIG	**Tijuana**	2.89	313	*i* P	Pn	03 11 50.3	+1.4
TJIG				*i* S	Sn	03 12 24.9	+0.7

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*AEIC **08** 03:21:24.5±0.8, 51°.9N±0°.1×178°.32E±0°.08, h128^{km}±4^{km}, ML3.9/28, mb4.5/151(NEIC), Error ellipse: s-maj=17.7km s-min=7.2km az=184.0*

*NEIC **08** 03:21:24.6±0.8, 51°.98N±0°.09×178°.23E±0°.08, h131^{km}±4^{km}, Error ellipse: s-maj=13.2km s-min=7.3km az=183.0*

*IDC **08** 03:21:25.1±1.4, 52°.04N×178°.25E, h131^{km}±12^{km}, mb4.0/25, mb1 4.2/28, mb1mx3.9/56, mbtmp4.4/28, MS3.2/1, Ms1 3.2/1, ms1mx2.5/53, Error ellipse: s-maj=14.8km s-min=7.9km az=166.0*

ISC 08 03:21:24.6±0.6**, 52°.01N**±0°.08×**178°.23E**±0°.04**, h130**^{km}±4^{km}**, n337, σ0^{s}66**/350**, mb4.4**/90**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	0.18	102		Pn	03 21 42.5	+0.1
LSNW					Sn	03 21 55.0	-0.8
LSSA	**Little Sitkin**	0.19	109		Pn	03 21 42.6	+0.2
LSPA	**Little Sitkin**	0.22	104		Pn	03 21 42.6	+0.1
LSPA					Sn	03 21 57.4	+1.4
CETU	**Semis' Tuman**	0.79	93		Pn	03 21 46.2	+0.6
CESW	**Semis' Southwe**	0.83	97		Pn	03 21 46.0	0.0
CEAP	**Semis' Anvil P**	0.83	90		Pn	03 21 46.6	+0.6
CEAP					Sn	03 22 02.0	-0.2
CERAA	**Semis' Rag'd T**	0.91	96		Pn	03 21 46.8	+0.2
AMKA	**Amchitka**	0.92	133	Pn	Pn	03 21 46.4	-0.4
AMKA				Sn	Sn	03 22 02.3	-1.2
GALAA	**Gareloi Lava P**	1.88	96		Pn	03 21 57.2	+0.1
GALAA					Sn	03 22 21.6	-0.2
TASE	**Tanaga Southea**	2.32	93		Pn	03 22 02.4	-0.2
TAFP	**Tanaga Falls P**	2.35	91		Pn	03 22 02.6	-0.3
TAFP					Sn	03 22 32.3	+0.1
SMY	**Shemya**	2.63	288	Pn	Pn	03 22 05.6	-0.7
SMY				Sn	Sn	03 22 37.5	-1.0
KIMD	**Kanaga Island**	2.82	93		Pn	03 22 08.5	-0.3
KICM	**Kanaga Island**	2.83	90		Pn	03 22 09.0	0.0
KIKV	**Kanaga Island**	2.85	91		Pn	03 22 08.9	-0.3
ADK	**Adak**	3.15	90	Pn	Pn	03 22 12.5	-0.6
ADK				Sn	Sn	03 22 49.8	-0.7
ADAG	**Mount Adagdak**	3.20	88		Pn	03 22 13.3	-0.4
GSTD	**Great Sitkin T**	3.48	87		Pn	03 22 16.6	-0.8
GSTR	**Great Sitkin T**	3.53	86		Pn	03 22 17.9	-0.2
GSMY	**Great Sitkin M**	3.53	87		Pn	03 22 17.6	-0.5
KOWE	**Korovin West**	4.64	83		Pn	03 22 33.2	+0.4
ATKA	**Atka Island**	4.68	85	Pn	Pn	03 22 33.3	+0.1
KOFP	**Korovin Flat P**	4.74	84		Pn	03 22 34.8	+0.7
NIKH	**Nikolski High**	7.95	78		Pn	03 23 17.4	+0.3
SPIA	**Saint Paul Isl**	8.46	48	Pn	Pn	03 23 24.4	+0.5
UNV	**Unalaska Valle**	9.41	73	Pn	Pn	03 23 37.1	+0.4
AKUT	**Akutan**	9.86	71	Pn	Pn	03 23 44.1	+1.2
PETK	**Petropavlovsk-**	12.54	283	P	Pn	03 24 19.6	+1.3
	1.8nm,0.3s,baz=98,slow=20,SNR=22						
PETK				S	Sn	03 26 32.2	-4.2
	0.9nm,0.3s,baz=88,slow=22,SNR=2.8						
ANM	**Nome**	15.19	28	Pn	Pn	03 24 52.0	+0.1
OHAK	**Old Harbor**	17.23	61		P	03 25 14.9	-1.5
OHAK				IAmb	IAmb	03 25 16.5	
	comp=Z,46nm,1.1s						
TTA	**Tatalina**	17.51	41		Pn	03 25 21.1	+0.8
SEY	**Seymchan**	17.54	319	P	Pn	03 25 21.1	+0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=23,SNR=1.5						
SEY				ScP	ScP	03 33 15.1	-0.1
	comp=Z,0.2nm,0.3s,baz=239,slow=5.9,SNR=6.1						
KDAK	**Kodiak Island**	17.66	59	P	P	03 25 20.1	-1.1
	comp=Z,7.1nm,0.3s,baz=274,slow=5.5,SNR=43						
KDAK				LR	LR	03 31 23.3	
	comp=Z,74nm,19.4s,baz=76,slow=34						
KDAK	**Kodiak Island**	17.66	59	P	P	03 25 20.0	-1.1
RSO	**Redoubt South**	18.08	51	P	P	03 25 25.8	-0.2
RDOG	**Red Dog Mine**	18.50	23	P	P	03 25 31.2	+0.8
RDOG				IAmb	IAmb	03 25 37.5	
	comp=Z,20nm,0.6s						
CNPM	**China Poot**	18.62	54	P	P	03 25 31.8	+0.1
BRLK	**Bradley Lake**	18.84	54		P	03 25 33.9	-0.1
SKT	**Skwentna**	19.07	47	P	P	03 25 37.2	+0.6
PPLA	**Purkeypile**	19.09	44		P	03 25 37.3	+0.4
PPLA					S	03 29 07.1	+0.7
SUA	**Susitna One**	19.29	49	P	P	03 25 39.5	+0.4
O22K	**Cooper Landing**	19.54	52	P	P	03 25 41.6	-0.1
	baz=258,SNR=7.3						
O22K	**Cooper Landing**	19.54	52	P	P	03 25 41.4	-0.3
SEW	**Seward**	19.61	53	P	P	03 25 42.1	-0.2
RC01	**Rabbit Creek A**	19.67	50	P	P	03 25 43.2	+0.1
	baz=257,SNR=5.8						
KTH	**Kantishna Hill**	19.86	43	P	P	03 25 45.8	+0.5
PMR	**Palmer**	20.07	49	P	P	03 25 47.9	+0.6
TRF	**Thorofare Moun**	20.09	43	P	P	03 25 48.2	+0.4
GHO	**Glory Hole Cre**	20.21	48	P	P	03 25 48.6	-0.3
GHO				IAmb	IAmb	03 25 54.2	
	comp=Z,15nm,0.6s						
KNK	**Knik Glacier**	20.34	49	P	P	03 25 50.7	+0.4
KNK				IAmb	IAmb	03 25 53.8	
	comp=Z,18nm,0.7s						
SML	**Sawmill**	20.49	48	P	P	03 25 52.1	+0.2
MLY	**Manley**	20.52	39	P	P	03 25 53.5	+1.3
	baz=245						
RND	**Reindeer**	20.69	44	P	P	03 25 54.5	+0.4
RND				IAmb	IAmb	03 25 56.8	
	comp=Z,11nm,0.6s						
MCK	**McKinley**	20.76	43	P	P	03 25 55.6	+0.8
	baz=251,SNR=10						
GLI	**Glacier Island**	20.89	51	P	P	03 25 56.4	+0.3
SCM	**Sheep Creek Mo**	20.96	49	P	P	03 25 57.3	+0.3
SCM				IAmb	IAmb	03 25 59.5	
	comp=Z,26nm,0.9s						
NEA2	**Nenana**	21.00	41	P	P	03 25 57.5	+0.1
	baz=248,SNR=6.9						
I23K	**Minto, Yukon-K**	21.10	39	P	P	03 25 58.6	+0.3
	baz=247,SNR=5.5						
I23K	**Minto, Yukon-K**	21.10	39	P	P	03 25 58.8	+0.5
I23K				IAmb	IAmb	03 26 03.2	
	comp=Z,10nm,0.4s						
FID	**Port Fidalgo**	21.17	52	P	P	03 25 58.7	-0.5
FID				IAmb	IAmb	03 26 01.2	
	comp=Z,25nm,0.8s						
DHY	**Denali Highway**	21.23	45	P	P	03 26 00.2	+0.2
WRH	**Wood River Hil**	21.36	41	P	P	03 26 01.6	+0.4
MDM	**Murphy Dome**	21.47	40	P	P	03 26 02.8	+0.4
CCB	**Clear Creek Bu**	21.53	41	P	P	03 26 02.5	-0.4
M24K	**Tolsona, Glenn**	21.55	48	P	P	03 26 03.9	+0.7
	baz=258,SNR=9.4						
M24K	**Tolsona, Glenn**	21.55	48	P	P	03 26 03.6	+0.3
KLU	**Klutina**	21.55	50	P	P	03 26 03.7	+0.4
KLU				IAmb	IAmb	03 26 10.4	
	comp=Z,13nm,0.7s						
TCOL	**CIGO, UAF Yank**	21.59	40	P	P	03 26 03.8	+0.2
	baz=249						
TCOL	**CIGO, UAF Yank**	21.59	40	P	P	03 26 04.0	+0.5
TCOL				IAmb	IAmb	03 26 06.6	
	comp=Z,18nm,0.6s						
COLA	**College**	21.59	40	P	P	03 26 04.1	+0.6
COLA				IAmb	IAmb	03 26 06.6	
	comp=Z,18nm,0.6s						
COLD	**Coldfoot**	21.71	33	P	P	03 26 05.0	+0.2
	baz=241						
COLD	**Coldfoot**	21.71	33	P	P	03 26 05.3	+0.5
HDA	**Harding Lake**	21.80	42	P	P	03 26 05.8	0.0
	baz=252,SNR=11						
HDA	**Harding Lake**	21.80	42	P	P	03 26 06.3	+0.4
HDA				IAmb	IAmb	03 26 07.7	
	comp=Z,16nm,0.8s						
POKR	**Poker Plat Res**	21.84	40	P	P	03 26 06.4	+0.1
	baz=249,SNR=15						
POKR	**Poker Plat Res**	21.84	40	P	P	03 26 06.8	+0.5
POKR				IAmb	IAmb	03 26 08.3	
	comp=Z,20nm,0.7s						
IL31		21.95	41	P	P	03 26 06.1	-1.1
ILAR	**Eielson Array**	21.95	41	P	P	03 26 06.0	-1.4
	comp=Z,4.9nm,0.6s,baz=244,slow=8.8,SNR=66						
ILAR				ScP	ScP	03 33 24.2	-1.2
	comp=Z,1.0nm,0.7s,baz=281,slow=3.1,SNR=8.8						
PAX	**Paxson**	22.05	46	P	P	03 26 09.1	+0.6
PAX				IAmb	IAmb	03 26 10.6	
	comp=Z,28nm,0.8s						
N25K	**Chitina, Valde**	22.20	50	P	P	03 26 09.7	-0.3
	baz=261,SNR=7.6						
N25K	**Chitina, Valde**	22.20	50	P	P	03 26 10.5	+0.5
N25K				IAmb	IAmb	03 26 11.8	
	comp=Z,11nm,0.7s						
A21K	**Barrow**	22.42	21	P	P	03 26 11.8	-0.1
	baz=223,SNR=12						
A21K	**Barrow**	22.42	21	P	P	03 26 11.8	-0.1
A21K				IAmb	IAmb	03 26 12.6	
	comp=Z,16nm,0.7s						
GLB	**Gilahina Butte**	22.55	50	P	P	03 26 14.1	+0.6
GLB				IAmb	IAmb	03 26 15.8	
	comp=Z,13nm,0.7s						
TOLK	**Toolik Lake Re**	22.62	30	P	P	03 26 14.4	+0.3
	baz=239,SNR=23						
TOLK	**Toolik Lake Re**	22.62	30	P	P	03 26 14.9	+0.7
TOLK				IAmb	IAmb	03 26 17.8	
	comp=Z,16nm,0.6s						
VRDI	**Verde Repeater**	22.69	51	P	P	03 26 15.2	+0.2
VRDI				IAmb	IAmb	03 26 17.2	
	comp=Z,16nm,1.0s						
CRQM	**Cirque**	22.80	52	P	P	03 26 16.5	+0.5
DOT	**Dot Lake**	22.82	45	P	P	03 26 15.8	-0.3
DOT				IAmb	IAmb	03 26 18.0	
	comp=Z,27nm,0.8s						
MCARA	**McCarthy VSAT**	22.92	51	P	P	03 26 17.5	+0.6
SCRK	**Sand Creek**	22.93	44	P	P	03 26 16.5	-0.7
	baz=256,SNR=8.1						
TGL	**Tana Glacier**	22.95	52	P	P	03 26 17.7	+0.3
L26K	**Log Cabin Wild**	23.01	46	P	P	03 26 18.3	+0.4
	baz=259,SNR=16						
ISLE	**Juniper Island**	23.18	53	P	P	03 26 19.9	+0.3
ISLE				IAmb	IAmb	03 26 21.8	
	comp=Z,27nm,1.1s						
FYU	**Fort Yukon**	23.20	37	P	P	03 26 20.1	+0.6
FYU				IAmb	IAmb	03 26 22.8	
	comp=Z,16nm,0.6s						
BALM	**Baldy**	23.21	52	P	P	03 26 20.0	+0.2
BALM				IAmb	IAmb	03 26 22.0	
	comp=Z,25nm,1.2s						
YAH	**Yahtse**	23.46	53	P	P	03 26 22.4	+0.2
BARN	**Barnard Glacie**	23.54	52	P	P	03 26 23.3	+0.4
CTGM	**Chitina Glacie**	23.69	52	P	P	03 26 24.5	+0.3
TABL	**Table Mountain**	23.76	53	P	P	03 26 25.2	+0.3
K27K	**Chicken**	23.77	44	P	P	03 26 25.3	+0.6
	baz=258						
K27K	**Chicken**	23.77	44	P	P	03 26 25.2	+0.6
K27K				IAmb	IAmb	03 26 26.7	
	comp=Z,19nm,0.8s						
EGAK	**Eagle**	24.31	43	P	P	03 26 29.8	+0.2
HYT	**Haines Junctio**	25.56	52	P	P	03 26 41.3	+0.2
INK	**Inuvik**	28.02	36	P	P	03 27 03.7	+0.9
	comp=Z,5.3nm,0.5s,baz=245,slow=8.9,SNR=50						
INK				ScP	ScP	03 33 42.4	-0.1
	comp=Z,0.5nm,0.7s,baz=272,slow=7.4,SNR=3.9						
INK	**Inuvik**	28.02	36	P	P	03 27 03.7	+0.9
INK				IAmb	IAmb	03 27 04.6	
	comp=Z,6.3nm,0.6s						
KLR	**Kul'dur**	29.23	283	P	P	03 27 14.3	+0.5
	comp=Z,3.3nm,0.7s,baz=71,slow=8.7,SNR=12						
DLBC	**Dease Lake**	29.56	57	P	P	03 27 18.2	+1.5
	comp=Z,3.4nm,0.6s,baz=257,slow=6.0,SNR=8.0						
USRK	**Ussuriysk Ar.**	31.39	274	P	P	03 27 33.0	+0.1
	comp=Z,1.8nm,0.6s,baz=60,slow=10,SNR=6.1						
USRK				PcP	PcP	03 30 24.0	+0.8
	comp=Z,1.3nm,0.6s,baz=154,slow=2.8,SNR=4.5						
C36M	**Paulatuk**	31.56	35	P	P	03 27 34.4	+0.4
	baz=266,SNR=10.0						
C36M	**Paulatuk**	31.56	35	P	P	03 27 34.8	+0.8
H11N2	**WAKE ISLAND Hy**	33.41	200	T	T	04 03 34.2	
	baz=11,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	33.42	200	T	T	04 03 31.5	
	baz=11,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	33.43	200	T	T	04 03 30.3	
	baz=11,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	34.64	199	T	T	04 05 08.1	
	baz=11,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	34.66	199	T	T	04 04 54.7	
	baz=11,slow=76,SNR=8.3						
H11S3	**WAKE ISLAND Hy**	34.66	200	T	T	04 05 03.3	
	baz=11,slow=76,SNR=13						
YKA	**Yellowknife Ar**	36.14	47	P	P	03 28 14.4	+0.7
	comp=Z,5.1nm,0.5s,baz=286,slow=6.6,SNR=120						
YKA				ScP	ScP	03 34 08.5	-1.8
	comp=Z,0.6nm,0.9s,baz=292,slow=3.3,SNR=5.4						
D03D	**Eldon**	37.27	73	P	P	03 28 24.0	+0.5
	baz=299						
B05A	**Bryant**	37.50	71	P	P	03 28 25.4	+0.1
	baz=299						
KSRS	**Korea Array**	37.80	268	P	P	03 28 28.7	+0.7
	comp=Z,0.9nm,0.7s,baz=64,slow=8.3,SNR=2.2						
E04D	**Cinebar**	38.07	74	P	P	03 28 30.5	+0.3
	baz=300						
LON	**Longmire**	38.42	73	P	P	03 28 33.0	-0.2
I02D	**Swisshome**	38.59	78	P	P	03 28 34.5	0.0
	baz=303						
H04D	**Lebanon**	39.03	77	P	P	03 28 38.1	-0.1
	baz=303						
B08A	**Colville Reser**	39.06	70	P	P	03 28 38.4	-0.1
B08A				IAmb	IAmb	03 28 38.7	
	comp=Z,4.5nm,0.6s						
I03D	**Drain, OR**	39.11	78	P	P	03 28 39.3	+0.4
	baz=303						
H04A	**Detroit Lake**	39.28	76	P	P	03 28 40.7	+0.3
H04A				IAmb	IAmb	03 28 41.5	
	comp=Z,6.8nm,0.8s						
K02D	**Willamette Mer**	39.48	80	P	P	03 28 42.2	+0.1
	baz=304						
G05D	**Wamic, OR**	39.50	75	P	P	03 28 42.6	+0.4
	baz=302						
I04A	**Tendick Farm,**	39.63	78	P	P	03 28 43.0	-0.2
	baz=303,SNR=5.4						
L02E	**Cave Junction**	39.82	81	P	P	03 28 45.7	+0.9
	baz=305						
RES	**Resolute Bay**	39.93	24	P	P	03 28 45.6	+0.3
	comp=Z,1.5nm,0.4s,baz=232,slow=6.9,SNR=5.7						
HAWA	**Hanford**	39.95	73	P	P	03 28 45.8	-0.1
HAWA				IAmb	IAmb	03 28 46.6	
	comp=Z,8.9nm,1.0s						
HUMO	**Hull Mountain**	39.96	80	P	P	03 28 46.3	+0.3
I05D	**Terrebonne, OR**	39.97	76	P	P	03 28 46.3	+0.2
	baz=303						
F07A	**Phinny Hill Vi**	39.98	73	P	P	03 28 46.1	+0.1
F07A				IAmb	IAmb	03 28 47.0	
	comp=Z,6.7nm,0.6s						
J04D	**Umpqua Nationa**	40.12	78	P	P	03 28 46.6	-0.9
	baz=304						
NEW	**Newport**	40.39	69	P	P	03 28 49.0	-0.4
	comp=Z,5.7nm,0.5s,baz=301,slow=7.3,SNR=8.8						
NEW	**Newport**	40.39	69	P	P	03 28 48.8	-0.7
	baz=300,SNR=8.5						
NEW	**Newport**	40.39	69	P	P	03 28 49.1	-0.4
NEW				IAmb	IAmb	03 28 49.7	
	comp=Z,6.7nm,0.6s						
KHMM	**Horse Mountain**	40.49	82	P	P	03 28 50.1	-0.4
KHMM				IAmb	IAmb	03 28 54.8	
	comp=Z,9.9nm,0.9s						
L04D	**Klamath Falls**	40.58	80	P	P	03 28 51.6	+0.3
	baz=305						
YBH	**Yreka Blue Hor**	40.61	81	P	P	03 28 52.9	+1.5
	comp=Z,3.7nm,0.5s,baz=327,slow=7.4,SNR=22						
YBH	**Yreka Blue Hor**	40.61	81	P	P	03 28 51.8	+0.3
YBH				IAmb	IAmb	03 28 53.4	
	comp=Z,3.8nm,0.6s						
J05D	**Fort Rock, OR**	40.62	78	P	P	03 28 52.3	+0.8
	baz=304,SNR=9.8						
K04D	**Chiloquin, OR**	40.68	79	P	P	03 28 52.5	+0.5
	baz=305						
KMRM	**Mail Ridge**	40.89	83	P	P	03 28 54.0	+0.3
KMRM				IAmb	IAmb	03 28 56.3	
	comp=Z,8.1nm,0.7s						
N02D	**Trinity Center**	41.06	81	P	P	03 28 56.0	+0.9
	baz=306,SNR=5.7						
M04C	**Macdoel**	41.11	80	P	P	03 28 56.1	+0.5
	baz=306,SNR=6.9						
K05A	**Summer Lake**	41.14	78	P	P	03 28 56.1	+0.1
I07A	**Izee**	41.21	76	P	P	03 28 56.6	+0.3
I07A				IAmb	IAmb	03 28 57.9	
	comp=Z,5.9nm,0.9s						
WDC	**Whiskeytown Da**	41.39	82	P	P	03 28 58.0	+0.2
WDC				IAmb	IAmb	03 28 59.8	
	comp=Z,7.7nm,1.1s						
O02D	**Mt. Diablo Mer**	41.48	82	P	P	03 28 59.1	+0.6
	baz=307,SNR=6.2						
WALA	**Waterton Lakes**	41.81	66	P	P	03 29 01.2	0.0
WALA				IAmb	IAmb	03 29 01.8	
	comp=Z,9.1nm,0.8s						
MOD	**Modoc Plateau**	41.98	79	P	P	03 29 02.8	+0.1
MOD				IAmb	IAmb	03 29 04.3	
	comp=Z,7.7nm,0.5s						
O03E	**Paynes Creek**	42.01	82	P	P	03 29 03.1	+0.2
	baz=307,SNR=8.9						
HOPS	**Hopland Field**	42.02	84	P	P	03 29 03.2	+0.3
HOPS				IAmb	IAmb	03 29 05.0	

	comp=Z,19nm,1.1s						
BMO	Blue Mountains	42.09	73	P	P	03 29 03.4	-0.1
JTMT	Jette	42.29	68	P	P	03 29 05.0	-0.1
ORV	Oroville	42.65	82	P	P	03 29 08.2	+0.2
WVOR	Wild Horse Val	42.67	77	P	P	03 29 08.6	+0.3
MSO	Missoula	42.98	69	P	P	03 29 09.5	-1.1
	baz=303,SNR=5.3						
MSO	Missoula	42.98	69	P	P	03 29 10.2	-0.4
MSO				IAmb	IAmb	03 29 10.3	
	comp=Z,4.4nm,0.5s						
BEKR	Beckworth	43.15	81	P	P	03 29 12.4	+0.1
AFDM	Forest Hills D	43.34	83	P	P	03 29 13.9	+0.3
RUBR	Rubicon Trail	43.78	82	P	P	03 29 16.8	-0.5
RUBR				IAmb	IAmb	03 29 25.7	
	comp=Z,5.6nm,0.7s						
PAHR	Pah Rah Range	43.85	81	P	P	03 29 17.8	+0.1
VCNR	Virginia City	43.94	81	P	P	03 29 18.6	0.0
VCNR				IAmb	IAmb	03 29 19.9	
	comp=Z,4.4nm,0.7s						
PNTR	Pine Nut	44.09	82	P	P	03 29 19.9	+0.1
HRY	Holter Researc	44.25	68	P	P	03 29 20.0	-0.8
CMB	Columbia Colle	44.27	83	P	P	03 29 20.7	-0.3
HLID	Hailey	44.54	73	P	P	03 29 22.5	-0.7
	baz=306						
HLID	Hailey	44.54	73	P	P	03 29 23.0	-0.2
WAKR	Walker	44.56	82	P	P	03 29 23.6	+0.2
WAKR				IAmb	IAmb	03 29 25.2	
	comp=Z,5.7nm,0.7s						
BCYI	Bear Canyon	44.70	72	P	P	03 29 24.2	-0.3
SONM	Songino Array	44.70	294	P	P	03 29 25.6	+1.2
	comp=Z,1.1nm,0.6s,baz=60,slow=7.9,SNR=9.2						
SONM				PcP	PcP	03 31 04.8	+0.3
	comp=Z,0.6nm,0.5s,baz=72,slow=2.5,SNR=5.3						
SONM				ScP	ScP	03 34 45.1	+0.7
	comp=Z,0.3nm,0.7s,baz=24,slow=4.4,SNR=4.4						
MCMT	McKenzie Canyo	44.73	71	P	P	03 29 24.0	-0.8
BOZ	Bozeman (W)	44.99	69	P	P	03 29 26.0	-0.8
	baz=305,SNR=11						
BOZ	Bozeman (W)	44.99	69	P	P	03 29 26.2	-0.6
BOZ				IAmb	IAmb	03 29 26.5	
	comp=Z,5.5nm,0.6s						
RYN	Ryan	45.04	81	P	P	03 29 27.4	+0.2
RYN				IAmb	IAmb	03 29 28.6	
	comp=Z,5.2nm,0.6s						
PMPB	Monarch Peak	45.17	86	P	P	03 29 27.9	-0.3
PMPB				IAmb	IAmb	03 29 31.4	
	comp=Z,6.8nm,0.8s						
LHV	Little Huntoon	45.29	82	P	P	03 29 29.4	+0.4
NVAR	Mina Array Bea	45.30	81	P	P	03 29 30.0	+0.6
	comp=Z,4.3nm,0.6s,baz=300,slow=7.3,SNR=66						
NVAR				ScP	ScP	03 34 47.2	+0.1
	comp=Z,0.5nm,0.8s,baz=290,slow=5.7,SNR=3.7						
MDPB	Devils Postpil	45.33	83	P	P	03 29 29.3	-0.3
MDPB				IAmb	IAmb	03 29 31.6	
	comp=Z,7.3nm,0.7s						
OMMB	Old Mammoth Mi	45.39	83	P	P	03 29 29.6	-0.6
NV11	Mina Array Sit	45.39	81	P	P	03 29 29.4	-0.6
YHL	Hebgen Lake	45.68	70	P	P	03 29 31.8	-0.6
ELK	Elko	45.73	77	P	P	03 29 32.5	-0.3
	comp=Z,3.9nm,0.7s,baz=296,slow=11,SNR=8.9						
ELK	Elko	45.73	77	P	P	03 29 32.8	+0.1
YHB	Horse Butte	45.73	70	P	P	03 29 31.3	-1.4
HHC	Hu-ho-hao-te	45.74	283	*e*P	P	03 29 33.4	+0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,8.0s						
PAGB	Antelope Grade	45.83	86	P	P	03 29 33.5	+0.2
PAGB				IAmb	IAmb	03 29 35.1	
	comp=Z,10nm,0.6s						
YHH	Holmes Hill	45.91	70	P	P	03 29 33.9	-0.3
TPH	Tonopah	46.18	81	P	P	03 29 35.8	-0.5
H17A	Grant Village	46.30	70	P	P	03 29 37.2	0.0
	baz=306,SNR=5.6						
H17A	Grant Village	46.30	70	P	P	03 29 37.4	+0.2
H17A				IAmb	IAmb	03 29 38.5	
	comp=Z,3.8nm,0.5s						
VES	Vestal, Richgr	46.47	85	P	P	03 29 38.2	-0.1
	baz=311,SNR=5.9						
HVU	Hansel Valley	46.57	74	P	P	03 29 39.2	-0.1
RLMT	Red Lodge	46.63	68	P	P	03 29 38.9	-0.8
	baz=306						
PKM	Mcpherson Peak	46.65	86	P	P	03 29 40.3	+0.4
	baz=311,SNR=7.9						
CWC	Cottonwood Cre	46.70	83	P	P	03 29 40.7	+0.3
	baz=310						
GRAC	Grapevine Rang	46.78	82	P	P	03 29 40.7	-0.1
	baz=310						
FCC	Fort Churchill	46.85	46	P	P	03 29 41.2	+0.3
NJ2	Nanjing	46.96	269	*e*P	P	03 29 42.2	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ISA	Isabella, Lake	46.97	84	P	P	03 29 42.3	0.0
	baz=311						
ISA	Isabella, Lake	46.97	84	P	P	03 29 41.9	-0.3
R11A	Troy Canyon, C	47.01	80	P	P	03 29 42.3	-0.4
	baz=309						
R11A	Troy Canyon, C	47.01	80	P	P	03 29 42.3	-0.4
MPMC	Manual Prospec	47.31	83	P	P	03 29 45.1	0.0
	baz=311,SNR=7.3						
FURC	Furnace Creek,	47.43	82	P	P	03 29 46.2	+0.5
	baz=310,SNR=9.0						
LAO	LASA Array	47.44	65	P	P	03 29 45.2	-0.6
	baz=306						
TPNV	Topopah Spring	47.49	81	P	P	03 29 46.3	-0.1
	baz=310,SNR=16						
TPNV	Topopah Spring	47.49	81	P	P	03 29 46.6	+0.1
TPNV				IAmb	IAmb	03 29 48.2	
	comp=Z,9.2nm,0.8s						
DUG	Dugway, Tooele	47.52	76	P	P	03 29 46.3	-0.3
	baz=308,SNR=6.2						
DUG	Dugway, Tooele	47.52	76	P	P	03 29 46.9	+0.3
DUG				IAmb	IAmb	03 29 47.1	
	comp=Z,3.5nm,0.6s						
LRMC	Laurel Mtn Rad	47.57	84	P	P	03 29 46.7	-0.4
	baz=311						
EDW2	Edwards Air Fo	47.77	85	P	P	03 29 48.0	-0.5
	baz=312						
BW06	Boulder Array	47.87	71	P	P	03 29 48.7	-0.6
	baz=307,SNR=7.0						
BW06	Boulder Array	47.87	71	P	P	03 29 48.8	-0.6
PD31	Pinedale Array	47.87	71	P	P	03 29 48.9	-0.5
PDAR	Pinedale Array	47.87	71	P	P	03 29 48.6	-0.7
	comp=Z,3.2nm,0.5s,baz=314,slow=3.6,SNR=42						
SNCC	San Nicolas Is	47.92	88	P	P	03 29 49.7	+0.1
	baz=312						
PRN	Pahroc Range	47.93	80	P	P	03 29 49.9	+0.1
PRN				IAmb	IAmb	03 29 51.6	
	comp=Z,5.4nm,0.8s						
PSUT	Pine Spring	47.94	78	P	P	03 29 50.1	+0.2
SHOC	Shoshone, Teco	48.16	83	P	P	03 29 51.7	+0.3
	baz=311,SNR=8.7						
MWC	Mount Wilson	48.17	86	P	P	03 29 51.2	-0.5
MWC				IAmb	IAmb	03 29 52.7	
	comp=Z,6.0nm,0.8s						
GSC	Goldstone, Bar	48.23	84	P	P	03 29 52.3	+0.2
	baz=311,SNR=14						
GSC	Goldstone, Bar	48.23	84	P	P	03 29 52.0	-0.1
GSC				IAmb	IAmb	03 29 53.3	
	comp=Z,11nm,0.8s						
BFSC	Mount Baldy Ra	48.41	85	P	P	03 29 53.5	0.0
	baz=312						
HEC	Hector,Ludlow	48.83	84	P	P	03 29 56.8	+0.2
	baz=312						
CCUT	Cedar City	48.87	79	P	P	03 29 56.8	-0.3
MVU	Marysvale	48.95	77	P	P	03 29 57.7	0.0
MSU	Marysvale	48.96	77	P	P	03 29 57.8	0.0
TMUT	Trail Mountain	49.05	76	P	P	03 29 58.6	+0.1
MURC	Murrieta	49.12	86	P	P	03 29 59.3	+0.4
	baz=312						
RDMU	Red Mountain	49.22	73	P	P	03 29 59.8	+0.2
MTPU	Mount Pierson	49.26	78	P	P	03 29 59.5	-0.8
GMRC	Granite Mounta	49.27	83	P	P	03 29 59.9	-0.2
	baz=312,SNR=6.8						
LCMT	Little Creek M	49.29	79	P	P	03 29 59.8	-0.4
PFO	Pinyon Flats O	49.57	85	P	P	03 30 02.1	-0.2
	comp=Z,2.0nm,0.6s,baz=322,slow=7.8,SNR=6.5						
PFO	Pinyon Flats O	49.57	85	P	P	03 30 02.3	0.0
	baz=312						
PFO	Pinyon Flats O	49.57	85	P	P	03 30 02.5	+0.2
SRU	San Rafael Swe	49.57	75	P	P	03 30 02.4	+0.1
TPFO	Pinon Flats	49.57	85	P	P	03 30 02.0	-0.4
	baz=312						
BELC	Belle Mtn. Jos	49.59	84	P	P	03 30 01.9	-0.6
	baz=312,SNR=8.7						
SPITS	Spitsbergen Ar	49.60	355	P	P	03 30 01.3	-0.5
	comp=Z,9.3nm,1.0s,baz=36,slow=7.2,SNR=11						
BAR	Barrett	50.07	86	P	P	03 30 05.7	-0.3
BAR				IAmb	IAmb	03 30 07.3	
	comp=Z,5.1nm,0.7s						
MONP2	Monument Peak	50.08	86	P	P	03 30 06.4	+0.1
	baz=313						
W13A	Hualapai Mount	50.15	82	P	P	03 30 06.2	-0.6
BC3	Big Chuckawall	50.16	84	P	P	03 30 06.4	-0.3
	baz=312						
RSSD	Black Hills	50.21	66	P	P	03 30 05.9	-1.3
	baz=308						
U15A	North Rim	50.25	79	P	P	03 30 07.5	-0.1
U15A				IAmb	IAmb	03 30 09.7	
	comp=Z,4.8nm,0.7s						
O20A	White River Ci	50.28	73	P	P	03 30 07.2	-0.5
	baz=310,SNR=5.6						
O20A	White River Ci	50.28	73	P	P	03 30 07.0	-0.7
O20A				IAmb	IAmb	03 30 07.5	
	comp=Z,5.2nm,0.5s						
CBX	Cerro Bola	50.32	86	P	P	03 30 08.1	+0.1
CBX				IAmb	IAmb	03 30 09.8	
	comp=Z,5.7nm,0.7s						
MDND	Maddock	50.38	60	P	P	03 30 07.8	-0.3
	baz=307						
IKP	In-Ko-Pah, Jac	50.43	86	P	P	03 30 08.9	+0.1
	baz=313						
PDMCI	Parker Dam,Lak	50.53	83	P	P	03 30 09.4	0.0
	baz=312						
ULM	Lac du Bonnet	50.87	56	P	P	03 30 11.1	-0.6
	comp=Z,2.6nm,0.4s,baz=302,slow=7.2,SNR=8.0						
PV14	Lion Creek, Pa	50.95	75	P	P	03 30 12.0	-0.7
PV14				IAmb	IAmb	03 30 12.9	
	comp=Z,3.5nm,0.6s						
GLA	Glamis	50.95	84	P	P	03 30 12.7	+0.1
	baz=313						
GLA	Glamis	50.95	84	P	P	03 30 12.2	-0.4
GLA				IAmb	IAmb	03 30 13.8	
	comp=Z,8.0nm,0.7s						
ESJX	Sierra Juarez	50.97	86	P	P	03 30 12.8	-0.2
PV20	West Nyswonger	51.00	75	P	P	03 30 12.7	-0.4
PV20				IAmb	IAmb	03 30 15.2	
	comp=Z,5.8nm,0.5s						
PV04	Paradox Valley	51.00	75	P	P	03 30 12.8	-0.3
PV04				IAmb	IAmb	03 30 14.7	
	comp=Z,4.1nm,0.6s						
PV17	East Wray Mesa	51.05	75	P	P	03 30 13.4	0.0
PV16	Nyswonger Mesa	51.05	75	P	P	03 30 13.1	-0.5
PV16				IAmb	IAmb	03 30 13.8	
	comp=Z,4.1nm,0.5s						
PV11	David Mesa, Pa	51.08	75	P	P	03 30 13.3	-0.4
PV03	Paradox Valley	51.13	75	P	P	03 30 13.9	-0.2
PV03				IAmb	IAmb	03 30 14.1	
	comp=Z,5.5nm,0.5s						
N23A	Red Feather La	51.14	71	P	P	03 30 13.8	-0.5
	baz=310						
PV13	Radium Mtn., P	51.21	75	P	P	03 30 14.4	-0.3
PV02	Paradox Valley	51.23	75	P	P	03 30 14.4	-0.4
PV02				IAmb	IAmb	03 30 15.2	
	comp=Z,6.5nm,0.7s						
PV01	Paradox Valley	51.37	75	P	P	03 30 15.5	-0.4
WUAZ	Wupatki	51.41	80	P	P	03 30 16.2	+0.1
	baz=312						
WUAZ	Wupatki	51.41	80	P	P	03 30 15.8	-0.4
WUAZ				IAmb	IAmb	03 30 17.1	
	comp=Z,3.0nm,0.6s						
SPX	San Pedro Mart	51.94	87	P	P	03 30 20.1	-0.2
SPX				IAmb	IAmb	03 30 21.7	
	comp=Z,3.5nm,0.8s						
ISCO	Idaho Springs	52.04	72	P	P	03 30 20.8	-0.2
	baz=310						
X16A	Lo Mia Camp, P	52.10	81	P	P	03 30 21.1	-0.2
X16A				IAmb	IAmb	03 30 22.9	
	comp=Z,3.8nm,0.8s						
ZALV	Zalesovo Beam	52.24	312	P	P	03 30 21.2	-0.6
	comp=Z,0.2nm,0.3s,baz=31,slow=8.6,SNR=1.4						
ZALV				ScP	ScP	03 35 16.2	+0.2
	comp=Z,0.2nm,0.3s,baz=45,slow=2.9,SNR=1.7						
S22A	4UR Ranch, Cre	52.66	74	P	P	03 30 25.7	+0.1
	baz=311						
214A	Organ Pipe Nat	52.94	84	P	P	03 30 27.7	+0.3
	baz=314						
214A	Organ Pipe Nat	52.94	84	P	P	03 30 27.1	-0.3
SDCO	Great Sand Dun	53.45	73	P	P	03 30 30.9	-0.5
	baz=312						
GTA	Gaotai	53.61	289	*e*P	P	03 30 33.4	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TUC	Tucson	53.94	82	P	P	03 30 34.7	0.0
	baz=314						
TUC	Tucson	53.94	82	P	P	03 30 34.7	0.0
T25A	Trinidad	54.50	73	P	P	03 30 38.5	-0.4
	baz=312						
T25A	Trinidad	54.50	73	P	P	03 30 38.5	-0.4
121A	Cookes Peak, D	55.62	80	P	P	03 30 46.7	-0.2
	baz=314						
SPMN	Marine on St.	55.66	59	P	P	03 30 46.1	-0.8
	baz=312						
N35A	Tabor	57.05	64	P	P	03 30 56.8	+0.1
WMQ	Urumqi	57.44	301	*e*P	P	03 31 02.6	+3.1
MSTX	Muleshoe	57.64	75	P	P	03 31 00.6	-0.6
	baz=314						
MNTX	Cornudas Mount	57.66	79	P	P	03 31 01.2	+0.1
	baz=315,SNR=5.3						
MNTX	Cornudas Mount	57.66	79	P	P	03 31 01.2	+0.1
MNTX				IAmb	IAmb	03 31 02.4	
	comp=Z,3.3nm,0.8s						
AMTX	Amarillo	57.66	73	P	P	03 31 00.5	-0.7
	baz=314						
MKAR	Makanchi Array	58.18	306	P	P	03 31 04.3	-0.2
	comp=Z,0.7nm,0.6s,baz=50,slow=5.7,SNR=14						
GC02	Grant County #	58.53	69	P	P	03 31 07.2	+0.1
JFWS	Jewell Farm	58.58	59	P	P	03 31 06.5	-0.9
	baz=314						
WMOK	Wichita Mounta	59.47	72	P	P	03 31 12.6	-1.0
	baz=315						
KRVT	Keravat (AS076	60.37	210	P	P	03 31 19.2	-0.7
	comp=Z,432nm,0.6s,baz=331,slow=5.6,SNR=4.4						
TX31	Lajitas Ar. Si	60.37	79	P	P	03 31 20.1	+0.2
TX32	Lajitas Array	60.37	79	P	P	03 31 20.0	0.0
TX32				IAmb	IAmb	03 31 20.5	
	comp=Z,3.5nm,0.8s						
TXAR	Lajitas Array	60.37	79	P	P	03 31 20.3	+0.4
	comp=Z,2.2nm,0.6s,baz=313,slow=5.6,SNR=7.9						
LSQQ	Lebel-sur-Quev	60.77	47	P	P	03 31 21.0	-1.3
	baz=317						
U40A	Yellville	61.75	66	P	P	03 31 28.1	-1.0
	baz=316						
W39A	Magazine	62.04	68	P	P	03 31 30.0	-1.0
	baz=316						
SFIN	Lafayette	62.05	60	P	P	03 31 30.1	-0.8
	baz=316						
FCAR	Ozark Folk Cen	62.49	66	P	P	03 31 32.6	-1.4
MIAR	Mount Ida	62.63	68	P	P	03 31 33.9	-1.0
	baz=316						
W41B	Gary Mavity, V	62.94	67	P	P	03 31 36.0	-0.9
	baz=316						
D55A	Sainte-Anne-du	62.96	48	P	P	03 31 35.9	-1.1
	baz=318						
E56A	St. Veronique	63.52	48	P	P	03 31 39.9	-0.7
	baz=319						
LATQ	La Tuque	63.90	46	P	P	03 31 42.0	-1.0
	baz=319						
P49A	Miami Univ. Ec	63.92	59	P	P	03 31 42.1	-1.3
	baz=317						
D58A	Chemin du LacG	64.07	46	P	P	03 31 43.2	-1.1
	baz=319						
E58A	La Victoria	64.44	47	P	P	03 31 45.6	-1.0
	baz=320						
OXF	Oxford	65.02	66	P	P	03 31 49.9	-0.7
	baz=317						
F59A	Saint Guilaume	65.06	47	P	P	03 31 49.4	-1.2
	baz=320						
D60A	Saint Jean D’O	65.07	45	P	P	03 31 49.5	-1.1
	baz=320						
E60A	Ste Agathe de	65.26	46	P	P	03 31 51.2	-0.7
	baz=320						
K56A	Middlesex	65.33	52	P	P	03 31 52.0	-0.5
	baz=319						
L56A	Greenwood	65.63	52	P	P	03 31 54.1	-0.4
	baz=319						
N57A	Milroy	66.68	53	P	P	03 32 00.7	-0.4
	baz=319						
N59A	State Game Lan	67.43	52	P	P	03 32 05.3	-0.7
	baz=320						
CMAR	Chiang Mai Arr	69.12	273	P	P	03 32 16.9	+0.3
	comp=Z,1.4nm,0.3s,baz=29,slow=7.2,SNR=5.0						
AKASG	Malin Array Be	74.35	340	P	P	03 32 48.1	+0.7
	comp=Z,0.4nm,0.4s,baz=21,slow=5.9,SNR=4.0						
FETA	Feichten	80.77	351	*e*P	P	03 33 20.2	-3.2
	comp=Z,9.8nm,2.2s						
WRA	Warramunga Arr	81.23	221	P	P	03 33 25.9	+0.1
	comp=Z,3.0nm,0.6s,baz=32,slow=6.2,SNR=19						
FITZ	Fitzroy Crossi	83.43	230	P	P	03 33 38.1	+0.9
	comp=Z,5.3nm,0.7s,baz=44,slow=2.0,SNR=5.5						
FITZ	Fitzroy Crossi	83.43	230	P	P	03 33 37.6	+0.3
FITZ				IAmb	IAmb	03 33 38.9	
	comp=Z,8.8nm,0.9s						
ASAR	Alice Springs	84.74	220	P	P	03 33 44.7	+0.8
	comp=Z,2.1nm,0.7s,baz=21,slow=5.3,SNR=18						
STKA	Stephens Creek	89.49	211	P	P	03 34 08.0	+1.5
	comp=Z,3.4nm,0.7s,baz=338,slow=6.6,SNR=8.1						
TORD	Torodi Ar. Bea	115.05	356	PKP	PKiKP	03 39 49.1	-1.3
	comp=Z,0.4nm,0.7s,baz=348,slow=1.9,SNR=1.7						
MAW	Mawson	145.84	218	PKPbc	PKPbc	03 40 47.1	+0.1
	comp=Z,3.0nm,0.8s,baz=262,slow=2.5,SNR=3.8						
BOSA	Boshof	149.16	309	PKPbc	PKPbc	03 40 57.8	+0.3
	comp=Z,1.1nm,0.6s,baz=13,slow=2.6,SNR=3.1						

IDC 08 03:40:36.1±2.6**, 3°.22S**×**128°.88E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.4**/30**, mbtmp3.6**/3**, ML3.7**/1**, Error ellipse: s-maj=189.7km s-min=29.5km az=68.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.46	163	P	Pn	03 44 41.5	+0.2
	0.3nm,0.3s,baz=345,slow=12,SNR=9.6						
ASAR	Alice Springs	20.90	167	P	P	03 45 20.1	-0.2
	2.6nm,0.6s,baz=348,slow=9.5,SNR=33						
MKAR	Makanchi Array	64.47	326	P	P	03 51 14.7	+0.1
	0.2nm,0.4s,baz=122,slow=7.7,SNR=2.1						

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*IDC **08** 03:54:50.8±3.7, 10°.88S×165°.86E, h70^{km}±33^{km}, mb3.4/7, mb1 3.8/9, mb1mx3.6/40, mbtmp3.9/9, ML4.5/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/19, Error ellipse: s-maj=34.0km s-min=28.3km az=146.0*

ISC 08 03:54:49.5±0.8**, 10°.98S**±0°.09×**165°.9E**±0°.1**, h61**^{km}**, n21,** σ**1^{s}.26**/13**, mb3.6**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.08	284	P	Pn	03 56 17.0	+0.1
	29nm,0.3s,baz=202,slow=5.5,SNR=4.4						
DZM	Mont Dzumac	11.04	178	P	Pn	03 57 26.9	+2.1
	1.3nm,0.3s,baz=337,slow=22,SNR=12						
DZM				S	Sn	03 59 24.2	-2.6
	0.3nm,0.3s,baz=346,slow=19,SNR=1.8						
PMG	Port Moresby	18.54	273	LR	LR	04 06 05.9	
	comp=Z,110nm,19.8s,baz=83,slow=37						
H11S2	WAKE ISLAND Hy	29.29	2	T	T	04 31 17.9	
	baz=181,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	29.29	1	T	T	04 31 18.2	
	baz=181,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	29.31	1	T	T	04 31 18.3	
	baz=181,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	30.51	2	T	T	04 32 50.1	
	baz=182,slow=76,SNR=6.8						
H11N3	WAKE ISLAND Hy	30.52	2	T	T	04 32 42.0	
	baz=182,slow=76,SNR=5.9						
H11N2	WAKE ISLAND Hy	30.53	2	T	T	04 32 52.4	
	baz=182,slow=76,SNR=7.2						
WRA	Warramunga Arr	31.68	250	P	P	04 01 08.4	+0.9
	1.4nm,0.9s,baz=76,slow=7.3,SNR=3.6						
ASAR	Alice Springs	32.98	243	P	P	04 01 19.0	+0.1
	0.4nm,0.8s,baz=66,slow=9.7,SNR=2.3						
ASAR				PcP	PcP	04 04 00.9	-1.0
	0.4nm,0.9s,baz=61,slow=1.9,SNR=4.4						
ASAR				LR	LR	04 15 14.7	
	comp=Z,42nm,19.1s,baz=284,slow=37						
FITZ	Fitzroy Crossi	39.57	255	LR	LR	04 16 50.6	
	comp=Z,43nm,21.5s,baz=270,slow=33						
PPT	Papeete	43.54	104	LR	LR	04 16 34.6	
	comp=Z,30nm,20.9s,baz=266,slow=30						
NWAO	Narrogin (SRO)	49.65	236	LR	LR	04 25 15.8	
	comp=Z,31nm,21.5s,baz=131,slow=37						
SONM	Songino Array	78.72	324	P	P	04 06 44.0	-1.5
	0.2nm,0.5s,baz=134,slow=8.3,SNR=3.6						
ILAR	Eielson Array	83.39	18	P	P	04 07 09.9	+0.1
	0.6nm,0.5s,baz=237,slow=5.0,SNR=24						
NVAR	Mina Array Bea	85.84	50	P	P	04 07 23.5	+0.5
	0.5nm,0.9s,baz=254,slow=5.5,SNR=3.2						
MKAR	Makanchi Array	93.59	317	P	P	04 07 59.3	+0.2
	0.3nm,0.6s,baz=88,slow=4.5,SNR=2.6						
YKA	Yellowknife Ar	94.83	27	P	P	04 08 04.2	-0.1
	0.2nm,0.7s,baz=253,slow=6.3,SNR=2.4						
ARCES	ARCESS Array B	116.31	346	PKP	PKiKP	04 13 25.3	-0.3
	2.9nm,1.0s,baz=60,slow=1.9,SNR=6.5						
ESDC	Sonseca Array	150.04	344	PKPbc	PKPbc	04 14 34.0	+0.3
	0.4nm,0.6s,baz=4.5,slow=3.1,SNR=2.3						

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*IDC **08** 04:11:28.8±4.0, 35°.66N×70°.78E, h70^{km}±33^{km}, mb3.4/5, mb1 3.6/9, mb1mx3.2/45, mbtmp3.8/9, ML3.7/4, Error ellipse: s-maj=38.3km s-min=24.2km az=177.0*

*NNC **08** 04:11:36.3±4.3, 36°.71N×70°.50E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=34.2km s-min=24.3km az=169.0*

ISC 08 04:11:35.1±1.2**, 36°.24N**±0°.10×**70°.64E**±0°.08**, h110**^{km}**, n21,** σ**1^{s}.97**/28**, mb3.6**/4**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.35	21	P	Pn	04 13 06.5	0.0
	SNR=27						
UCH	Uchtor	6.70	26	P	Pn	04 13 11.1	-0.2
	SNR=9.6						
KK31	Karatay Array	6.86	359	⇓P	Pn	04 13 13.7	+0.6
	2.2nm,0.3s,baz=178,slow=12,SNR=42						
KK31				⇓S	Sn	04 14 27.6	-2.0
	1.8nm,0.3s,baz=181,slow=24,SNR=4.3						
EKS2	Erkin-Say	6.86	20	P	Pn	04 13 13.5	+0.3
	SNR=6.7						
AAK	Ala-Archa	7.05	24	P	Pn	04 13 16.2	+0.4
	3.6nm,0.3s,baz=190,slow=6.1,SNR=47						
AAK				S	Sn	04 14 32.8	-1.7
	0.6nm,0.3s,baz=114,slow=22,SNR=1.6						
AAK	Ala-Archa	7.05	24	P	Pn	04 13 16.1	+0.3
	SNR=16						
AAK	Ala-Archa	7.05	24	⇓P	Pn	04 13 15.9	0.0
	6.1nm,0.4s						
AAK				⇓S	Sn	04 14 35.0	+0.5
	9.2nm,1.0s						
CHMS	Chumysh	7.46	24	P	Pn	04 13 21.5	+0.3
	SNR=5.4						
USP	Ospenovka	7.62	22	P	Pn	04 13 23.8	+0.3
	SNR=5.3						
TKM2	Tokmak 2	7.69	28	P	Pn	04 13 24.0	-0.6
	SNR=5.8						
TKM2	Tokmak 2	7.69	28	⇓P	Pn	04 13 24.0	-0.6
	2.0nm,0.4s						
TKM2				⇑S	Sn	04 14 47.8	-2.4
	1.6nm,0.7s						
GEYT	Alibeck	10.15	283	P	Pn	04 13 55.6	-2.1
	1.4nm,0.3s,baz=108,slow=12,SNR=7.2						
GEYT				S	Sn	04 15 49.0	-0.5
	1.1nm,0.3s,baz=274,slow=40,SNR=2.2						
MKAR	Makanchi Array	13.68	36	P	Pn	04 14 45.1	+0.8
	0.0nm,0.3s,baz=218,slow=13,SNR=1.9						
AB31	Akbulak array	15.18	332	P	Pn	04 15 04.1	+0.7
	1.3nm,0.3s,baz=142,slow=12,SNR=116						
AB31				⇑S	Sn	04 17 47.5	-3.5
	0.9nm,0.5s,baz=152,slow=25,SNR=6.3						
AKTO	Aktyubinsk	16.87	331	P	P	04 15 28.0	+3.4
	0.3nm,0.3s,baz=146,slow=15,SNR=13						
AKTO	Aktyubinsk	16.87	331	⇑P	P	04 15 28.0	+3.4
	3.9nm,0.7s						
AKTO				⇑S	Sn	04 18 28.6	-3.1
	2.8nm,1.0s						
ZALV	Zalesovo Beam	20.28	25	P	P	04 16 02.3	+0.6
	0.6nm,0.3s,baz=212,slow=10,SNR=4.1						
ARCES	ARCESS Array B	41.28	338	P	P	04 19 13.1	+4.0
	5.9nm,1.1s,baz=118,slow=9.5,SNR=1.4						
NOA	NORSAR Array B	44.41	323	P	P	04 19 35.4	+0.8
	1.5nm,0.9s,baz=89,slow=8.3,SNR=1.4						
YKA	Yellowknife Ar	81.52	2	P	P	04 23 40.9	+0.9
	0.1nm,0.4s,baz=2.1,slow=4.9,SNR=4.5						
WRA	Warramunga Arr	82.10	122	P	P	04 23 40.0	-3.7
	0.4nm,0.6s,baz=328,slow=4.8,SNR=1.5						

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*NOU **08** 04:15:41.3, 22°.46S×148°.31E, h0^{km}, MLv3.8, Queensland, Australia*

*IDC **08** 04:15:41.4±2.7, 22°.50S×148°.15E, h0km, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=35.8km s-min=20.8km az=69.0*

ISC 08 04:15:42.7±2.8**, 22°.5S**±0°.1×**148°.1E**±0°.3**, h10km, n6, σ1s.24**/6**, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	2.92	325	Pn	Pn	04 16 30.7	+1.5
	2.5nm,0.3s,baz=137,slow=16,SNR=21						
CTA				Pg	Pg	04 16 37.3	-1.4
	4.7nm,0.3s,baz=144,slow=18,SNR=8.0						
CTA				Lg	Lg	04 17 14.5	
	8.6nm,0.3s,baz=140,slow=8.1,SNR=11						
STKA	Stephens Creek	10.98	210	Pn	Pn	04 18 19.4	-0.5
	0.2nm,0.3s,baz=33,slow=12,SNR=3.8						
WRA	Warramunga Arr	13.04	279	Pn	Pn	04 18 48.4	+0.3
	0.1nm,0.3s,baz=103,slow=12,SNR=1.6						
WRA				Lg	Lg	04 22 37.6	
	baz=104,slow=29,SNR=6.2						
I07AU	WARRAMUNGA INF	13.05	279	*i*		05 36 45.0	
	baz=103,slow=301,SNR=12						
ASAR	Alice Springs	13.08	262	Pn	Pn	04 18 49.2	+0.5
	0.2nm,0.3s,baz=91,slow=14,SNR=8.5						
ASAR				Lg	Lg	04 22 43.8	
	0.0nm,0.3s,baz=71,slow=30,SNR=4.2						
TORD	Torodi Ar. Bea	146.72	260	PKPbc	PKPbc	04 35 25.5	-0.3
	0.8nm,0.7s,baz=121,slow=2.9,SNR=2.9						

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*IDC **08** 04:48:18.8±0.8, 15°.88N×92°.91W, h88km±5km, mb3.9/17, mb1 4.1/18, mb1mx3.8/52, mbtmp4.2/18, MS3.5/1, Ms1 3.5/1, ms1mx2.7/27, Error ellipse: s-maj=28.4km s-min=11.0km az=57.0*

*NEIC **08** 04:48:19.7±1.2, 15°.67N±0°.06×93°.43W±0°.06, h104km±4km, Error ellipse: s-maj=10.5km s-min=5.7km az=225.0*

*MEX **08** 04:48:20.2±0.9, 15°.67N×93°.55W, h92km±8km, MD4.1*

ISC 08 04:48:18.4±0.6**, 15°.64N**±0°.05×**93°.50W**±0°.04**, h95**km±4km**, n124, σ1s.19**/141**, mb4.2**/40**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.28	76	*i* P	Pn	04 48 32.1	-0.1
PCIG				*e*S	Sn	04 48 42.6	0.0
TGIG		1.19	18	*i* P	Pn	04 48 41.0	+0.3
TGIG				*e*S	Sn	04 48 56.8	-0.7
THIG		1.39	121	*e*P	Pn	04 48 43.6	+0.6
THIG				*e*S	Sn	04 49 03.4	+1.7
CCIG	Comitan	1.46	64	*e*P	Pn	04 48 44.9	+0.8
CCIG				*e*S	Sn	04 49 03.7	+0.3
CCIG	Comitan	1.46	64		Pn	04 48 44.8	+0.8
CCIG				Sn	Sn	04 49 05.2	+1.8
HUEH	Huehuetenango	1.95	99		Pn	04 48 50.8	+0.5
HUEH				Sn	Sn	04 49 14.3	-0.4
CMIG	Matias Romero	1.97	318	P	Pn	04 48 50.5	+0.2
	87nm,0.3s,baz=153,slow=12,SNR=629						
CMIG				S	Sn	04 49 12.3	-2.4
	328nm,0.3s,baz=136,slow=12,SNR=13						
CMIG	Matias Romero	1.97	318	*e*P	Pn	04 48 50.4	0.0
CMIG				*i* S	Sn	04 49 13.2	-1.5
CMIG	Matias Romero	1.97	318		Pn	04 48 50.4	0.0
CMIG					Sn	04 49 13.2	-1.5
RTAL	Retalhuleu	2.06	122		Pn	04 48 52.8	+1.2
HUIG	Huatulco	2.52	273	*i* P	Pn	04 48 55.5	-2.0
PETF	Flores	3.71	69	Sn	Sn	04 49 54.6	-1.7
ESQI	Esquipulas	4.15	104		Pn	04 49 20.0	+0.3
MTO3	Montecristo	4.18	107		Pn	04 49 20.5	+0.4
TLIG	Tlapa	5.22	292	Pn	Pn	04 49 35.6	+1.4
TGUH	Tegucigalpa,Un	6.22	104	Pn	Pn	04 49 47.6	-0.2
TEIG	Tepich	6.75	47	Pn	Pn	04 49 53.6	-1.2
TEIG					Sn	04 51 09.4	-0.7
MOIG	Morelia	8.36	300	Pn	Pn	04 50 20.6	+3.6
JTS	Las Juntas de	9.88	122	P	Pn	04 50 38.3	+0.8
	2.8nm,0.3s,baz=170,slow=22,SNR=11						
JTS	Las Juntas de	9.88	122		Pn	04 50 37.1	-0.4
833A	Chaparral WMA,	13.76	338	Pn	Pn	04 51 30.4	+1.0
JCT	Junction City	15.87	340	Pn	Pn	04 51 57.4	+1.1
JCT				IAmb	IAmb	04 52 12.9	
	comp=Z,11nm,0.7s						
TX31	Lajitas Ar. Si	16.54	327	P	Pn	04 52 06.4	+1.6
TX32	Lajitas Array	16.54	327		Pn	04 52 06.1	+1.4
TXAR	Lajitas Array	16.54	327	P	P	04 52 07.5	+1.8
	comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=8.0						
Z41A	Richland Creek	17.56	2	P	P	04 52 16.9	+0.2
ABTX	Abilene, Hawle	17.81	343		P	04 52 20.3	+0.7
ABTX				IAmb	IAmb	04 52 30.5	
	comp=Z,9.0nm,0.5s						
Z47A	Carrollton	18.16	15	P	P	04 52 23.5	+0.1
Z47A				IAmb	IAmb	04 52 41.4	
	comp=Z,13nm,0.7s						
LRAL	Lakeview Retre	18.30	18		P	04 52 24.8	0.0
LRAL				IAmb	IAmb	04 52 27.4	
	comp=Z,22nm,1.1s						
152A	Waverly Hall	18.74	24	P	P	04 52 29.0	-0.7
152A				IAmb	IAmb	04 52 33.5	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	18.83	360		P	04 52 30.8	+0.1
MIAR				IAmb	IAmb	04 52 36.8	
	comp=Z,18nm,0.8s						
X43A	Marvell	18.95	7	P	P	04 52 32.2	+0.3
OXF	Oxford	19.15	10		P	04 52 34.7	+0.5
GDL2	Guadalupe Moun	19.23	331	P	P	04 52 36.5	+1.3
Y49A	Blount Mountai	19.24	18	P	P	04 52 35.3	+0.2
Y49A				IAmb	IAmb	04 52 45.9	
	comp=Z,11nm,0.9s						
W39A	Magazine	19.48	359	P	P	04 52 38.4	+0.6
W39A				IAmb	IAmb	04 52 45.9	
	comp=Z,11nm,1.1s						
WHAR	Wooly Hollow	19.60	3		Pn	04 52 41.7	+0.3
WHAR				IAmb	IAmb	04 52 46.9	
	comp=Z,9.0nm,0.8s						
WMOK	Wichita Mounta	19.61	347	P	P	04 52 40.0	+0.8
X48A	Hartselle	19.61	16		P	04 52 39.4	+0.2
W35A	Tecumseh	19.67	352	P	P	04 52 40.4	+0.6
CPRX	Cap Rock	19.70	333	P	P	04 52 41.5	+1.1
FNO	Franklin	19.85	351	P	P	04 52 42.7	+0.9
Y52A	Lilburn	20.05	23	P	P	04 52 43.6	-0.4
MSTX	Muleshoe	20.08	337	P	P	04 52 45.4	+1.0
MSTX				IAmb	IAmb	04 52 49.7	
	comp=Z,10.0nm,0.8s						
FPAL	Fort Paine	20.12	19	P	P	04 52 44.7	0.0
FPAL				IAmb	IAmb	04 52 53.3	
	comp=Z,12nm,0.9s						
OK025	Westminster Rd	20.16	351	P	P	04 52 46.0	+0.9
TUL1	Leonard	20.30	355	P	P	04 52 48.3	+1.7
LCAR	Lake Charles	20.46	5	P	P	04 52 48.8	+0.5
AMTX	Amarillo	20.53	341	P	P	04 52 50.2	+1.0
HHAR	Hobbs	20.57	359	P	P	04 52 50.0	+0.4
HHAR				IAmb	IAmb	04 52 57.8	
	comp=Z,14nm,0.9s						
U40A	Yellville	20.64	1	P	P	04 52 50.9	+0.5
SWET	Sewanee	20.64	18	P	P	04 52 50.5	+0.1
SWET				IAmb	IAmb	04 53 08.3	
	comp=Z,15nm,1.1s						
U38A	Gravette	20.73	358	P	P	04 52 51.5	+0.2
WVT	Waverly	21.03	13	P	P	04 52 54.7	+0.2
WVT				IAmb	IAmb	04 52 59.6	
	comp=Z,9.7nm,0.7s						
PBMO	Poplar Bluff	21.23	7	P	P	04 52 56.9	+0.3
PBMO				IAmb	IAmb	04 53 04.2	
	comp=Z,12nm,1.1s						
121A	Cookes Peak, D	21.25	325	P	P	04 52 58.3	+1.3
121A				IAmb	IAmb	04 53 05.2	
	comp=Z,11nm,0.9s						
CLTN	Cedars of Leba	21.35	16	P	P	04 52 58.1	+0.1
CLTN				IAmb	IAmb	04 53 07.2	
	comp=Z,12nm,1.2s						
T35A	Sooner Cattle	21.36	353	P	P	04 52 58.9	+0.9
T35A				IAmb	IAmb	04 53 18.4	
	comp=Z,8.5nm,0.7s						
KAN13	South Haven SW	21.58	351	P	P	04 53 01.1	+0.8
ROSC	El Rosal	21.68	118	P	P	04 53 00.8	-1.3
T45A	Paducah	21.73	11	P	P	04 53 02.1	+0.2
TKL	Tuckaleechee C	21.75	22	P	P	04 52 58.9	-3.3
	comp=Z,3.0nm,0.9s,baz=242,slow=6.6,SNR=1.6						
U49A	Red Boiling Sp	21.90	17	P	P	04 53 03.6	-0.1
U49A				IAmb	IAmb	04 53 20.3	
	comp=Z,9.7nm,1.1s						
KAN12	Harper NE Stat	21.94	350	P	P	04 53 04.6	+0.4
S39A	Bolivar	21.97	0	P	P	04 53 03.5	-1.0
LENM	Lemitar	22.09	329	P	P	04 53 07.1	+1.1
ANMO	Albuquerque	22.47	331	P	P	04 53 12.0	+1.9
	comp=Z,2.6nm,0.6s,baz=132,slow=12,SNR=14						
ANMO	Albuquerque	22.47	331	P	P	04 53 11.1	+1.0
SDV	Santo Domingo	23.31	104	P	P	04 53 14.5	-4.0
	comp=Z,1.7nm,0.6s,baz=354,slow=10,SNR=1.9						
SDV	Santo Domingo	23.31	104	P	P	04 53 17.0	-1.5
WCI	Wyandotte Cave	23.39	14	P	P	04 53 17.5	-1.2
T25A	Trinidad	23.50	338	P	P	04 53 20.7	+0.6
T25A				IAmb	IAmb	04 53 23.8	
	comp=Z,9.4nm,0.7s						
KSU1	Kansas State U	23.54	354	P	P	04 53 20.1	+0.1
KSU1				IAmb	IAmb	04 53 22.6	
	comp=Z,8.0nm,0.6s						
CBKS	Cedar Bluff	23.73	348	P	P	04 53 22.6	+0.7
CBKS				IAmb	IAmb	04 53 23.6	
	comp=Z,10nm,0.7s						
SDCO	Great Sand Dun	24.45	337	P	P	04 53 28.9	+0.2
P46A	Rosedale	24.52	12	P	P	04 53 27.8	-1.1
P46A				IAmb	IAmb	04 53 32.1	
	comp=Z,13nm,0.9s						
P48A	Milroy	24.77	15	P	P	04 53 29.4	-1.8
P48A				IAmb	IAmb	04 53 34.1	
	comp=Z,7.7nm,1.0s						
SFX	San Felipe	24.82	312	P	P	04 53 33.4	+1.7
SFX				IAmb	IAmb	04 53 35.3	
	comp=Z,11nm,0.8s						
N38A	Joes South For	25.07	0	P	P	04 53 34.2	+0.3
MVCO	Mesa Verde	25.27	331	P	P	04 53 37.6	+1.5
Q24A	Divide	25.39	338	P	P	04 53 37.0	-0.3
Q24A				IAmb	IAmb	04 53 48.4	
	comp=Z,7.6nm,0.9s						
O49A	Covington	25.73	16	P	P	04 53 39.3	-0.7
O49A				IAmb	IAmb	04 53 53.1	
	comp=Z,7.5nm,0.9s						
GLA	Glamis	25.96	316	P	P	04 53 43.5	+1.4
GLA				IAmb	IAmb	04 53 45.0	
	comp=Z,9.1nm,0.8s						
PV13	Radium Mtn., P	26.19	332	P	P	04 53 44.6	+0.2
PV13				IAmb	IAmb	04 53 51.8	
	comp=Z,4.8nm,0.7s						
PV03	Paradox Valley	26.28	332	P	P	04 53 46.1	+0.9
PV12	Saucer Basin,	26.32	332	P	P	04 53 46.2	+0.7
PV12				IAmb	IAmb	04 53 51.1	
	comp=Z,4.7nm,0.7s						
PV17	East Wray Mesa	26.36	332	P	P	04 53 45.1	-0.8
PV04	Paradox Valley	26.42	332	P	P	04 53 47.4	+1.0
PV04				IAmb	IAmb	04 53 57.4	
	comp=Z,8.6nm,1.2s						
PV22	Blue Mesa, Par	26.49	332	P	P	04 53 46.5	-0.5
PV23	Carpenter Ridg	26.52	332	P	P	04 53 45.9	-1.5
PV23				IAmb	IAmb	04 53 58.4	
	comp=Z,6.9nm,1.0s						
ECSD	EROS Data Cent	28.13	355	P	P	04 54 01.2	-0.2
ECSD				IAmb	IAmb	04 54 01.5	
	comp=Z,4.8nm,0.7s						
SPMN	Marine on St.	29.50	1	P	P	04 54 13.0	-0.5
PDAR	Pinedale Array	30.34	336	P	P	04 54 22.6	+1.3
	comp=Z,0.3nm,0.5s,baz=137,slow=12,SNR=4.8						
PDAR				PcP	PcP	04 57 21.1	+1.8
	comp=Z,0.3nm,0.6s,baz=144,slow=6.3,SNR=2.4						
HVU	Hansel Valley	30.91	331	P	P	04 54 25.4	-0.8
AHID	Auburn Hatcher	30.96	334	P	P	04 54 26.3	-0.4
REDW	Red Top Meadow	31.36	335	P	P	04 54 31.3	+1.0
LOHW	Long Hollow	31.47	336	P	P	04 54 31.9	+0.7
NVAR	Mina Array Bea	31.50	321	P	P	04 54 34.4	+2.9
	comp=Z,2.5nm,0.6s,baz=136,slow=9.5,SNR=27						
NVAR				pP	pP	04 54 54.6	+1.6
	comp=Z,2.1nm,0.7s,baz=136,slow=8.9,SNR=6.9						
NVAR				PcP	PcP	04 57 23.1	+0.6
	comp=Z,0.4nm,0.7s,baz=186,slow=4.4,SNR=1.9						
LHV	Little Huntoon	31.51	320	P	P	04 54 32.5	+1.2
LHV				IAmb	IAmb	04 54 38.1	
	comp=Z,2.9nm,0.6s						
YNE	Yellowstone No	32.43	338	P	P	04 54 40.2	+0.5
MCMT	McKenzie Canyo	33.38	335	P	P	04 54 48.8	+0.9
DLMT	Dillon	33.71	335	P	P	04 54 50.4	-0.3
DLMT				IAmb	IAmb	04 54 55.4	
	comp=Z,5.9nm,1.1s						
ULM	Lac du Bonnet	34.58	357	P	P	04 54 55.9	-2.0
	comp=Z,1.2nm,0.3s,baz=182,slow=8.4,SNR=9.3						
F10A	Beach Ranch, E	36.19	332	P	P	04 55 13.2	+1.3
H04A	Detroit Lake	37.76	326	P	P	04 55 26.4	+1.3
NEW	Newport	37.90	334	LR	LR	05 12 56.5	
	comp=Z,68nm,19.4s,baz=68,slow=39						
FFC	Flin Flon	39.56	352	P	P	04 55 40.6	+0.6
FFC				IAmb	IAmb	04 55 42.1	
	comp=Z,2.2nm,0.6s						
SIV	San Ignacio	44.86	133	P	P	04 56 23.5	0.0
	comp=Z,2.1nm,0.5s,baz=298,slow=8.0,SNR=19						
SIV				pP	pP	04 56 44.0	-2.1
	comp=Z,1.8nm,0.6s,baz=330,slow=8.5,SNR=4.5						
YKA	Yellowknife Ar	49.11	347	P	P	04 56 56.1	+0.1
	comp=Z,2.4nm,0.4s,baz=146,slow=8.1,SNR=64						
YKA				pP	pP	04 57 16.4	-2.7
	comp=Z,0.6nm,0.5s,baz=144,slow=8.4,SNR=2.8						
DLBC	Dease Lake	50.58	336	P	P	04 57 09.9	+2.7
	comp=Z,3.3nm,0.7s,baz=147,slow=6.4,SNR=6.4						
DLBC				pP	pP	04 57 30.7	+0.3
	comp=Z,2.2nm,0.7s,baz=210,slow=6.3,SNR=2.4						
DLBC	Dease Lake	50.58	336	P	P	04 57 07.5	+0.2
FRB	Frobisher Bay	51.07	14	P	P	04 57 08.8	-1.9
	comp=Z,5.4nm,0.7s,baz=224,slow=9.8,SNR=19						
BDFB	Brasilia	54.62	123	P	P	04 57 36.4	-1.3
	comp=Z,2.5nm,0.6s,baz=236,slow=5.7,SNR=4.3						
BDFB	Brasilia	54.62	123	P	P	04 57 36.9	-0.8
INK	Inuvik	58.47	344	P	P	04 58 05.0	+0.9
	comp=Z,6.5nm,0.6s,baz=131,slow=6.0,SNR=33						
INK				pP	pP	04 58 26.4	-1.4
	comp=Z,2.6nm,0.7s,baz=127,slow=6.0,SNR=3.7						
INK	Inuvik	58.47	344	P	P	04 58 04.9	+0.8
RES	Resolute Bay	59.06	360	P	P	04 58 07.2	-0.8
	comp=Z,2.0nm,0.7s,baz=181,slow=6.7,SNR=4.4						
RES	Resolute Bay	59.06	360	P	P	04 58 07.4	-0.6
PLCA	Paso Flores	59.99	160	P	P	04 58 15.4	+0.4
	comp=Z,4.9nm,1.1s,baz=330,slow=8.4,SNR=6.0						
ILAR	Eielson Array	60.77	337	P	P	04 58 20.6	+0.6
	comp=Z,0.7nm,0.5s,baz=135,slow=5.4,SNR=9.8						
ILAR				pP	pP	04 58 43.5	-0.1
	comp=Z,0.6nm,0.4s,baz=126,slow=5.2,SNR=4.1						
SPITS	Spitsbergen Ar	78.78	11	P	P	05 00 08.9	-1.3
	comp=Z,2.6nm,0.7s,baz=272,slow=8.1,SNR=4.0						
ARCES	ARCESS Array B	85.04	18	P	P	05 00 43.2	0.0
	comp=Z,1.9nm,0.7s,baz=306,slow=4.1,SNR=8.8						
WRA	Warramunga Arr	134.37	257	PKP	PKPdf	05 07 26.8	+0.7
	comp=Z,0.5nm,0.7s,baz=85,slow=1.8,SNR=2.0						
ASAR	Alice Springs	134.82	252	PKP	PKPdf	05 07 28.1	+1.2
	comp=Z,0.4nm,0.6s,baz=103,slow=1.4,SNR=4.7						

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*REY **08** 04:51:33.1, 64°.61N×17°.40W, h2km*

*IDC **08** 04:51:34.4±0.8, 64°.48N×17°.70W, h0km, mb3.5/8, mb1 3.9/9, mb1mx3.6/47, mbtmp3.6/9, ML4.0/1, Error ellipse: s-maj=28.1km s-min=11.1km az=21.0*

ISC 08 04:51:34.3±0.6**, 64°.61N**±0°.02×**17°.37W**±0°.03**, h10km, n55, σ2s.25**/61**, mb3.8**/14**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.18	360	P	Pg	04 51 37.1	-1.1
	baz=4.0						
IDYN				S	Sg	04 51 40.4	-0.5
	baz=4.0						
IHAM	Hamarinn	0.24	236	P	Pg	04 51 37.8	-1.5
	baz=236						
IKVE	Kverkfjoll	0.30	77	P	Pb	04 51 39.7	-2.3
	baz=77						
ISKR	Skrokkalda	0.44	264	P	Pg	04 51 41.3	-1.7
	baz=264						
ISKR				S	Sb	04 51 48.3	-2.7
	baz=264						
IJOK	Jokulheimar	0.48	232	P	Pg	04 51 42.0	-1.6
	baz=231						
IJOK				S	Sg	04 51 49.0	-1.0
	baz=231						
IASK	Askja	0.54	34	P	Pb	04 51 43.3	-2.6
	baz=35						
IASK				S	Sb	04 51 51.4	-2.4
	baz=35						
IMKO	Mokollar	0.57	50	P	Pb	04 51 44.0	-2.5
	baz=50						
IMKO				S	Sb	04 51 52.5	-2.2
	baz=50						
IKSK	Karasker	0.60	139	P	Pg	04 51 44.0	-1.9
	baz=138						
IKSK				S	Sb	04 51 52.9	-2.5
	baz=138						
IIEY	Innrieyrar	0.61	213	P	Pg	04 51 44.5	-1.8
	baz=212						
IIEY				S	Sg	04 51 53.2	-1.1
	baz=212						
IKAL	Kalfafell	0.68	192	P	Pg	04 51 45.7	-1.8
	baz=191						
IKAL				S	Sg	04 51 55.2	-1.2
	baz=191						
ISVA	Svartarkot	0.73	4	P	Pb	04 51 46.7	-2.4
	baz=4.6						
ISVA				S	Sb	04 51 57.1	-2.1
	baz=4.6						
IVSH	V-Sauoahnukur	0.73	74	P	Pb	04 51 46.6	-2.6
	baz=74						
IVSH				S	Sb	04 51 56.9	-2.3
	baz=74						
IFAG	Fagurholsmyri	0.80	157	P	Pg	04 51 47.8	-2.0
	baz=156						
IADA	Aoalbol	0.87	61	P	Pg	04 51 48.9	-2.1
	baz=61						
IADA				S	Sb	04 52 01.2	-1.9
	baz=61						
IHVE	Hveravellir	0.98	286	P	Pg	04 51 50.5	-2.7
	baz=287						
IMEL	Melhnausar	1.01	17	P	Pg	04 51 51.1	-2.5
	baz=18						
ISNB	Snabyli	1.04	213	P	Pg	04 51 51.9	-2.4
	baz=212						
ISNB				S	Sb	04 52 06.6	-1.4
	baz=212						
IREN	Reynihlio	1.06	10	P	Pg	04 51 52.4	-2.2
	baz=11						
IKVO	Krokottuvotn	1.12	10	P	Pb	04 51 53.4	-2.5
	baz=11						
IRJU	Rjupnafell	1.15	210	P	Pb	04 51 53.8	-2.5
	baz=210						
IGRS	Grimsstaoir	1.16	26	P	Pb	04 51 53.8	-2.6
	baz=27						
ISKI	Skildingahlsh	1.27	6	P	Pn	04 51 55.4	-2.7
	baz=6.8						
IGRA	Granastaoir	1.31	356	P	Pn	04 51 56.6	-2.1
	baz=357						
IDIM	Dimmadalss	1.37	7	P	Pn	04 51 57.4	-2.0
	baz=8.0						
IALF	Alftagrof	1.38	216	P	Pn	04 51 57.8	-1.9
	baz=216						
IHLA	Hella	1.41	343	P	Pn	04 51 57.9	-2.1
	baz=343						
IESK	Eystri-Skogar	1.43	221	P	Pn	04 51 58.1	-2.1
	baz=221						
IMID	Miomork	1.46	230	P	Pn	04 51 59.3	-1.5
	baz=230						
ISAU	Saurbar	1.47	246	P	Pn	04 51 58.9	-1.9
	baz=246						
IHED	Heoinshofoi	1.48	1	P	Pn	04 51 58.6	-2.3
	baz=1.4						
IGIL	Gilhagi	1.53	16	P	Pn	04 51 59.8	-1.9
	baz=16						
IBRE	Brettingsstaoi	1.53	352	P	Pn	04 51 59.8	-1.9
	baz=352						
ISIG	Siglufjorour	1.66	338	P	Pn	04 52 01.5	-1.9
	baz=338						
BORG	Borgarnes	1.71	276	Pg	Pn	04 52 02.4	-1.7
	23nm,0.3s,baz=97,slow=11,SNR=41						
BORG				Lg	Lg	04 52 24.4	
	11nm,0.3s,baz=220,slow=22,SNR=10						
SCO	Scoresbysund	6.15	345	*e*	Pn	04 53 01.9	-3.2
	baz=159,slow=8.6						
SCO				*i* P	Pn	04 53 06.0	+0.9
SCO				*i* S	Sn	04 54 21.6	+6.2
SCO				IAML		04 54 26.0	
	comp=Z,0.8nm,0.5s						
EKA	Eskdalemuir Ar	11.68	136	Pn	Pn	04 54 21.4	+0.6
	baz=325,slow=13,SNR=4.5						
GRF	Grafenberg Arr	21.25	121	*e*P	P	04 56 21.3	+1.0
	comp=Z,7.5nm,1.1s,baz=328,slow=9.1						
BRG	Berggiesshubel	21.34	115	*e*(P)	P	04 56 28.7	+7.5
BRG				Amp		04 56 30.2	
	comp=Z,3.7nm,0.8s						
BRG	Berggiesshubel	21.34	115	*e*(P)	P	04 56 28.7	+7.5
BRG				Amp		04 56 30.2	
	comp=Z,3.7nm,0.8s						
CHVC	Chvalec	22.39	113	*e*P	P	04 56 36.1	+3.5
KHC	Kasperske Hory	22.60	118	*e*P	P	04 56 37.0	+2.2
DPC	Dobruska-Polom	22.69	113	*e*P	P	04 56 37.9	+2.2
GERES	GERESS Array B	22.88	119	P	P	04 56 40.1	+2.3
	comp=Z,1.1nm,0.9s,baz=328,slow=9.2,SNR=3.8						
WTTA	Wattenberg	23.44	124	*e*P	P	04 56 54.8	+11
	comp=Z,11nm,1.4s						
KBA	Koelnbreinsper	24.22	122	*e*P	P	04 57 03.0	+12
	comp=Z,8.2nm,1.6s						
ARSA	Arzberg	24.89	118	*e*P	P	04 57 04.2	+7.2
	comp=Z,4.2nm,1.1s						
OBKA	Obir	25.14	121	*e*P	P	04 57 06.4	+7.1
	comp=Z,5.8nm,1.1s						
SOKA	Soboth	25.18	120	*e*P	P	04 57 05.1	+5.4
	comp=Z,1.7nm,0.7s						
ESDC	Sonseca Array	26.18	156	P	P	04 57 10.1	+1.4
	comp=Z,1.0nm,0.8s,baz=351,slow=8.5,SNR=7.8						
AKASG	Malin Array Be	27.78	98	P	P	04 57 24.8	+1.9
	comp=Z,0.1nm,0.3s,baz=312,slow=9.9,SNR=4.0						
YKA	Yellowknife Ar	39.29	313	P	P	04 59 03.7	+1.0
	comp=Z,0.6nm,0.9s,baz=30,slow=9.0,SNR=4.8						
ILAR	Eielson Array	45.76	333	P	P	04 59 58.3	+3.1
	comp=Z,1.1nm,1.1s,baz=15,slow=7.5,SNR=6.0						
MKAR	Makanchi Array	52.70	58	P	P	05 00 51.0	+2.4
	comp=Z,0.4nm,0.8s,baz=345,slow=9.0,SNR=3.6						
TORD	Torodi Ar. Bea	53.07	157	P	P	05 00 53.0	+1.5
	comp=Z,1.2nm,1.1s,baz=340,slow=6.6,SNR=2.9						
PDAR	Pinedale Array	53.25	293	P	P	05 00 54.4	+1.5
	comp=Z,1.2nm,0.8s,baz=56,slow=6.1,SNR=10						

IDC 08 04:53:46.3±1.9**, 6°.94S**×**123°.80E, h0km, mb3.4**/1**, mb1 4.0**/4**, mb1mx3.5**/37**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=124.3km s-min=27.7km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.23	171	Pn	Pn	04 56 28.6	+0.3
	0.5nm,0.3s,baz=351,slow=12,SNR=14						
FITZ				Sn	Sn	04 58 18.9	-16
	1.7nm,0.3s,baz=160,slow=10,SNR=12						
WRA	Warramunga Arr	16.48	143	Pn	P	04 57 41.0	-1.0
	0.2nm,0.3s,baz=316,slow=12,SNR=7.4						
WRA				Sn	Sn	05 00 32.1	-11
	0.4nm,0.3s,baz=309,slow=25,SNR=3.2						
ASAR	Alice Springs	19.25	151	P	P	04 58 11.7	-0.9
	0.4nm,0.3s,baz=331,slow=13,SNR=20						
ASAR				S	Sn	05 01 37.8	-12
	0.1nm,0.3s,baz=327,slow=22,SNR=3.6						
MKAR	Makanchi Array	64.94	330	P	P	05 04 27.9	0.0
	0.3nm,0.7s,baz=141,slow=4.8,SNR=2.7						

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*TUL **08** 05:06:59.8±0.9, 36°.87N±0°.01×98°.14W±0°.02, h7km±7km, ML3.0, mb_Lg2.9/51(NEIC), Error ellipse: s-maj=2.8km s-min=1.7km az=108.0*

*NEIC **08** 05:07:00.1±0.5, 36°.86N±0°.02×98°.14W±0°.02, h9km±7km, Error ellipse: s-maj=2.7km s-min=2.4km az=106.0*

*ANF **08** 05:07:00.4±0.3, 36°.81N×98°.11W, h0km, ML3.7/10, Error ellipse: s-maj=4.5km s-min=3.3km az=68.0*

ISC 08 05:06:60.0±1.0**, 36°.86N**±0°.02×**98°.13W**±0°.03**, h9**km±8km**, n61, σ0s.54**/55**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.17	56		Pg	05 07 03.5	0.0
KAN14				Sg	Sg	05 07 06.2	+0.1
GC02	Grant County #	0.22	93		Pg	05 07 04.5	0.0
GC02				Sg	Sg	05 07 07.9	+0.3
KAN10	Anthony SW Sta	0.26	7		Pg	05 07 05.2	0.0
KAN10				Sg	Sg	05 07 09.1	+0.3
CROK	Carrier	0.38	161	Pg	Pg	05 07 07.5	0.0
CROK				Sg	Sg	05 07 13.1	+0.6
KAN08	Anthony NE Sta	0.38	20		Pg	05 07 07.6	0.0
KAN08					Sg	05 07 12.9	+0.3
KAN12	Harper NE Stat	0.45	14		Pg	05 07 08.7	0.0
KAN12				Sg	Sg	05 07 15.0	+0.4
KAN13	South Haven SW	0.55	74		Pg	05 07 10.5	-0.1
KAN13				Sg	Sg	05 07 18.0	+0.2
U32A	Winter Ranch,	0.85	236		Pg	05 07 16.0	-0.3
U32A				Sg	Sg	05 07 27.6	+0.2
U32A	Winter Ranch,	0.85	236	P		05 07 16.2	
	baz=54						
U32A				S		05 07 27.6	
	baz=54						

T35A	Sooner Cattle	1.30	87		Pn	05 07 24.2	-0.2
T35B	Sooner Cattle	1.30	87	P		05 07 24.2	
	baz=269						
QUOK	Quay	1.34	121	Pn	Pn	05 07 24.9	0.0
OK031	S. Brethren Rd	1.39	131		Pn	05 07 25.5	0.0
OK025	Westminster Rd	1.43	153		Pn	05 07 26.2	0.0
OK030	Cody Creek RV	1.44	130		Pn	05 07 26.2	+0.1
OKCFA	Oklahoma City	1.55	159		Pn	05 07 28.0	+0.3
OKCSW	OKLAHOMA CITY	1.56	159		Pn	05 07 28.4	+0.5
R32A	Long Quarter,	1.62	344		Pn	05 07 29.5	+0.8
R32A	Long Quarter,	1.62	344	P		05 07 29.5	
	baz=163,SNR=136						
R32A				S		05 07 50.9	
	baz=163						
FNO	Franklin	1.71	159		Pn	05 07 30.0	+0.1
W35A	Tecumseh	1.99	149		Pn	05 07 34.3	+0.5
TUL1	Leonard	2.12	116	P	Pn	05 07 36.1	+0.6
	baz=298						
TUL1				S	Sb	05 08 05.5	+0.7
	baz=298						
TUL1	Leonard	2.12	116	Pn	Pn	05 07 36.0	+0.5
TUL1	Leonard	2.12	116	P		05 07 37.1	
	baz=298,SNR=24						
WMOK	Wichita Mounta	2.19	194	P	Pn	05 07 37.5	+1.0
	baz=14						
WMOK				S	Sb	05 08 06.4	-0.5
	baz=14						
WMOK	Wichita Mounta	2.19	194		Pn	05 07 36.4	-0.1
WMOK				IAmb_Lg		05 08 12.9	
	comp=Z,44nm,0.8s						
WMOK	Wichita Mounta	2.19	194	P		05 07 37.5	
	baz=14,SNR=65						
WMOK				S		05 08 06.2	
	baz=14						
CBKS	Cedar Bluff	2.32	327	P	Pn	05 07 39.6	+1.2
	baz=146						
CBKS				S	Sb	05 08 11.7	+0.8
	baz=146						
CBKS	Cedar Bluff	2.32	327	Pn	Pn	05 07 38.4	-0.1
CBKS	Cedar Bluff	2.32	327	P		05 07 39.3	
	baz=146						
KSU1	Kansas State U	2.54	28	P	Pb	05 07 44.2	-1.5
	baz=209						
KSU1				S	Sb	05 08 17.1	+0.1
	baz=209						
KSU1	Kansas State U	2.54	28	Pn	Pn	05 07 41.4	+0.1
KSU1				IAmb_Lg		05 08 24.7	
	comp=Z,69nm,0.8s						
KSU1	Kansas State U	2.54	28	P		05 07 42.4	
	baz=209						
KSU1				S		05 08 14.2	
	baz=209						
U38A	Gravette	3.04	97	Pn	Pn	05 07 48.4	+0.1
U38A				IAmb_Lg		05 08 42.2	
	comp=Z,33nm,0.8s						
U38A	Gravette	3.04	97	P		05 07 49.4	
	baz=279,SNR=16						
U38A				S		05 08 26.5	
	baz=279						
X37A	Clayton	3.19	134	Pn	Pn	05 07 50.6	+0.2
X37A				IAmb_Lg		05 08 45.4	
	comp=Z,41nm,0.9s						
X37A	Clayton	3.19	134	P		05 07 51.5	
	baz=316						
HHAR	Hobbs	3.43	99		Pn	05 07 54.3	+0.7
AMTX	Amarillo	3.49	237	Pn	Pn	05 07 54.9	+0.4
AMTX				IAmb_Lg		05 08 57.7	
	comp=Z,41nm,0.7s						
Z35A	Perchaven, San	3.60	168	IAmb_Lg		05 09 03.1	
	comp=Z,25nm,0.8s						
W39A	Magazine	3.90	114	P	Pn	05 08 01.2	+1.2
	baz=297						
W39A	Magazine	3.90	114	IAmb_Lg		05 09 12.3	
	comp=Z,28nm,0.8s						
W39A	Magazine	3.90	114	P		05 08 01.2	
	baz=297,SNR=5.9						
S39A	Bolivar	3.92	76	Pn	Pn	05 08 00.8	+0.4
S39A	Bolivar	3.92	76	P		05 08 01.1	
	baz=259,SNR=21						
U40A	Yellville	4.28	95	P	Pn	05 08 05.7	+0.5
	baz=278						
U40A				S	Sn	05 08 55.4	+0.1
	baz=278						
U40A	Yellville	4.28	95		Pn	05 08 05.1	-0.1
U40A				IAmb_Lg		05 09 17.9	
	comp=Z,39nm,1.1s						
U40A	Yellville	4.28	95	P		05 08 05.9	
	baz=278,SNR=7.8						
U40A				P		05 08 05.9	
	baz=278,SNR=7.8						
MIAR	Mount Ida	4.37	121	P	Pn	05 08 07.6	+1.1
	baz=304						
MIAR	Mount Ida	4.37	121	IAmb_Lg		05 09 29.4	
	comp=Z,26nm,0.7s						
MIAR	Mount Ida	4.37	121	P		05 08 07.5	
	baz=304,SNR=11						
Z38A	Mt. Pleasant	4.43	143	IAmb_Lg		05 09 30.5	
	comp=Z,26nm,0.8s						
BGNE	Belgrade	4.54	360	IAmb_Lg		05 09 27.1	
	comp=Z,34nm,0.8s						
P38A	Dawn	4.55	51	IAmb_Lg		05 09 35.6	
	comp=Z,26nm,0.8s						
MGMO	Mountain Grove	4.70	85	Pn	Pn	05 08 11.2	+0.1
MSTX	Muleshoe	4.76	234	Pn	Pn	05 08 12.2	+0.2
R40A	Maddies Statio	4.87	71	Pn	Pn	05 08 13.1	-0.3
R40A	Maddies Statio	4.87	71	P		05 08 14.6	
	baz=255,SNR=10						
WHTX	Lake Whitney,	4.89	173	P	Pn	05 08 14.3	+0.6
	baz=354						
WHTX	Lake Whitney,	4.89	173	Pn	Pn	05 08 13.6	-0.1
WHTX	Lake Whitney,	4.89	173	P		05 08 14.2	
	baz=354,SNR=11						
X40A	Basin Creek Fa	4.92	117	P	Pn	05 08 15.2	+1.1
	baz=300						
X40A	Basin Creek Fa	4.92	117	IAmb_Lg		05 09 44.8	
	comp=Z,22nm,0.9s						
X40A	Basin Creek Fa	4.92	117	P		05 08 15.5	
	baz=300,SNR=5.9						
X40A				P		05 08 15.5	
	baz=300,SNR=5.9						
FCAR	Ozark Folk Cen	4.95	100	IAmb_Lg		05 09 44.0	
	comp=Z,24nm,1.0s						
WHAR	Wooly Hollow	4.99	107	IAmb_Lg		05 09 52.2	
	comp=Z,22nm,1.1s						
W41B	Gary Mavity, V	5.06	108	P	Pn	05 08 16.8	+0.8
	baz=291						
UALR	University of	5.15	112	IAmb_Lg		05 09 49.2	
	comp=Z,18nm,0.9s						
P40A	Paris	5.48	59	IAmb_Lg		05 09 56.3	
	comp=Z,26nm,0.8s						
CCM	Cathedral Cave	5.61	76	IAmb_Lg		05 10 01.5	
	comp=Z,17nm,0.8s						
PBMO	Poplar Bluff	6.18	88	IAmb_Lg		05 10 20.3	
	comp=Z,14nm,0.9s						
SLM	Saint Louis	6.50	72	IAmb_Lg		05 10 26.2	
	comp=Z,20nm,0.8s						
JCT	Junction City	6.52	193	IAmb_Lg		05 10 30.7	
	comp=Z,23nm,0.8s						
PHWY	Pilot Hill	7.21	310	IAmb_Lg		05 11 02.0	
	comp=Z,18nm,1.0s						
N23A	Red Feather La	7.30	306	IAmb_Lg		05 10 59.2	
	comp=Z,20nm,0.9s						
OXF	Oxford	7.48	106	IAmb_Lg		05 10 59.0	
	comp=Z,14nm,1.0s						
K22A	Casper	8.66	314	IAmb_Lg		05 11 40.1	
	comp=Z,9.6nm,0.9s						

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*JMA **08** 05:32:23.5±0.3, 42°.60N×137°.30E, h311^{km}, M3.8*
*IDC **08** 05:32:24.9±1.3, 42°.71N×137°.13E, h299^{km}±12^{km}, mb3.3/12, mb1 3.5/17, mb1mx3.4/46, mbtmp4.0/17, Error ellipse: s-maj=21.9km s-min=12.8km az=178.0*
ISC 08 05:32:24.4±0.7, **42°.63N**±0°.06×**137°.42E**±0°.07, **h300**^{km}, **n36,** σ1^{s}**53**/44, **mb3.6**/12, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	1.62	109	P	Pn	05 33 09.0	+0.7
JHST	Hiyamasetana	1.83	96	P	Pn	05 33 10.9	+1.1
JSH	Shimam	1.94	89	P	Pn	05 33 11.5	+0.9
JOMM	Oshimamatsumae	2.22	119	P	Pn	05 33 13.8	+0.9
JSK	Shakotan	2.36	71	P	Pn	05 33 14.9	+0.9
JKB	Kayabe	2.78	104	P	Pn	05 33 18.7	+0.7
JEW	Eniwo	2.98	85	P	Pn	05 33 21.1	+1.3
JOT	Ohata	2.98	114	P	Pn	05 33 20.3	+0.4
JHR	Hokuryu	3.34	69	P	Pn	05 33 24.9	+1.4
JANG	Nango	3.81	125	P	Pn	05 33 27.9	-0.7
JANG				eS	S	05 34 18.9	-1.1
JNBK	Urakawa-nobuka	3.96	93	P	Pn	05 33 30.0	-0.1
JNBK				eS	S	05 34 23.0	+0.2
ASAJ	Asahikawa	4.06	67	P	Pn	05 33 32.0	+0.9
	8.3nm,0.3s,baz=259,slow=13,SNR=28						
JKK2	Kamakawa 2	4.09	70	P	Pn	05 33 32.4	+0.9
JKK2				eS	S	05 34 24.8	-0.4
JWK2	Keihoku	4.20	49	P	Pn	05 33 34.7	+2.0
USRK	Ussuriysk Ar.	4.25	293	P	Pn	05 33 32.2	-1.1
	baz=100,slow=12,SNR=74						
JOM	Ohasama	4.30	136	P	Pn	05 33 34.5	+0.5
JOM				eS	S	05 34 29.0	-0.8
JYK	Kaneyama	4.33	148	P	Pn	05 33 34.5	+0.2
JYK				eS	S	05 34 30.1	-0.2
JCH	Churui	4.39	88	P	Pn	05 33 34.2	-0.6
JCH				eS	S	05 34 28.0	-3.3
JMK	Ichinoseki	4.67	141	P	Pn	05 33 37.7	-0.4
JMK				eS	S	05 34 35.8	-1.5
JTKR	Abashiri--Toko	4.92	72	P	Pn	05 33 41.4	+0.5
MJAR	Matsushiro Arr	6.11	174	P	Pn	05 33 57.1	+2.1
	0.1nm,0.3s,baz=357,slow=12,SNR=4.8						
NEM2	Nemuro 2	6.15	80	P	Pn	05 33 54.2	-1.1
NEM2				eS	S	05 35 02.7	-6.0
KLR	Kul'dur	7.69	331	P	Pn	05 34 13.4	-0.6
	0.7nm,0.3s,baz=154,slow=13,SNR=16						
MA2	Magadan	18.86	21	P	P	05 36 23.0	+0.1
	1.1nm,0.3s,baz=212,slow=11,SNR=8.6						
SEY	Seymchan	22.15	18	P	P	05 36 56.1	+0.8
	2.7nm,0.5s,baz=358,slow=23,SNR=12						
SONM	Songino Array	22.37	294	P	P	05 36 56.3	-1.3
	0.7nm,0.5s,baz=93,slow=8.6,SNR=6.2						
ZALV	Zalesovo Beam	35.98	307	P	P	05 38 55.0	-1.9
	1.0nm,0.5s,baz=90,slow=9.6,SNR=5.1						
MKAR	Makanchi Array	38.72	296	P	P	05 39 18.8	-1.1
	0.8nm,0.5s,baz=85,slow=12,SNR=11						
ILAR	Eielson Array	46.54	35	P	P	05 40 23.4	+1.3
	2.1nm,0.7s,baz=273,slow=7.4,SNR=31						
YKA	Yellowknife Ar	60.53	30	P	P	05 42 04.1	+1.2
	0.3nm,0.4s,baz=317,slow=5.4,SNR=14						
FINES	FINESS Array B	62.44	330	P	P	05 42 15.1	-0.5
	2.2nm,0.9s,baz=52,slow=9.0,SNR=1.2						
NOA	NORSAR Array B	67.83	335	P	P	05 42 48.2	-1.9
	0.4nm,0.4s,baz=40,slow=6.1,SNR=1.5						
NVAR	Mina Array Bea	74.05	52	P	P	05 43 30.2	+2.2
	0.7nm,0.5s,baz=296,slow=6.2,SNR=9.1						
PDAR	Pinedale Array	75.88	44	P	P	05 43 39.6	+1.4
	1.2nm,0.5s,baz=42,slow=1.5,SNR=14						
ULM	Lac du Bonnet	76.46	32	P	P	05 43 41.0	-0.1
	1.6nm,0.4s,baz=327,slow=5.5,SNR=6.5						
TXAR	Lajitas Array	89.01	50	P	P	05 44 46.6	+0.9
	0.3nm,0.5s,baz=291,slow=2.8,SNR=1.6						

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*DJA **08** 05:37:25.8±0.8, 11°S±5°×12°0E±°, h14^{km}±3^{km}, M4.4/8, mb4.7/2, MLv4.2/8*
*NEIC **08** 05:37:28.1±2.3, 10°.63S±0°.03×120°.48E±0°.09, h41^{km}±8^{km}, mb4.1/11, Error ellipse: s-maj=12.3km s-min=4.1km az=79.0*
*IDC **08** 05:37:30.1±3.0, 10°.40S×120°.83E, h55^{km}±29^{km}, mb3.9/7, mb1 4.1/11, mb1mx3.9/29, mbtmp4.2/11, ML4.0/4, MS3.4/3, Ms1 3.5/3, ms1mx3.0/25, Error ellipse: s-maj=50.4km s-min=17.2km az=62.0*
ISC 08 05:37:26.6±0.5, **10°.66S**±0°.05×**120°.62E**±0°.06, **h31**^{km}**, n44,** σ**2**^{s}**33**/46, **mb4.3**/11, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BASI	Baing, Sumba	0.44	355	P	Pb	05 37 36.5	+0.3
BASI				S	Sn	05 37 43.4	-0.4
WSI	Waingapu	1.04	342	P	Pb	05 37 46.4	+0.4
EDFI	Ende, Flores	2.18	29	P	Pn	05 38 03.3	+2.5
EDFI				S	Sb	05 38 31.4	-0.6
MMRI	Maumere	2.57	39	Pn	Pn	05 38 06.9	+0.8
PLAI	Plampang	3.34	303	P	Pn	05 38 16.4	-0.4
PLAI				S	Sn	05 38 55.5	0.0
SOEI	Soe	3.70	76	P	Pn	05 38 24.1	+2.3
TWSI	Taliwang, Sumb	4.15	297	P	Pn	05 38 27.1	-0.8
BSSI	Bau Bau, Buton	4.49	358	P	Pn	05 38 33.6	+1.0
BKSI	Bulukumba	5.33	355	P	Pn	05 38 45.3	+1.2
	0.2nm41nm,0.5s						
KAPI	Kappang	5.68	351	P	Pn	05 38 50.2	+1.3
	4.2nm,0.3s,baz=150,slow=5.0,SNR=6.0						
KAPI				LR	LR	05 41 21.0	
	comp=Z,324nm,18.2s,baz=208,slow=42						
KAPI	Kappang	5.68	351		Pn	05 38 50.1	+1.2
SRBI	Singaraja	5.92	295	P	Pn	05 38 51.2	-1.0
JAGI	Jajag, Banyuwa	6.74	288	Pn	Pn	05 39 00.7	-2.8
FITZ	Fitzroy Crossi	8.85	147	P	Pn	05 39 35.1	+2.7
	2.3nm,0.3s,baz=352,slow=10,SNR=31						
FITZ				S	Sn	05 41 06.5	-4.6
	1.5nm,0.3s,baz=324,slow=18,SNR=2.0						
FITZ	Fitzroy Crossi	8.85	147		Pn	05 39 34.9	+2.5
UGM	Wanagama	10.33	284	Pn	Pn	05 39 52.0	-0.8
PSA00	Pilbara Seismi	10.87	184	Pn	Pn	05 40 01.1	+1.0
GIRL	Giralia	13.39	206	Pn	Pn	05 40 34.3	-0.2
WB0	Warramunga Arr	16.07	126	Pn	Pn	05 41 11.8	+1.3
WB0				IAmb	IAmb	05 41 24.9	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	16.12	127	P	Pn	05 41 12.5	+1.4
	comp=Z,0.4nm,0.3s,baz=295,slow=13,SNR=11						
WRA				S	Sn	05 44 02.6	-6.5
	comp=Z,0.2nm,0.3s,baz=294,slow=22,SNR=6.2						
WB2	Warramunga Arr	16.13	126	Pn	Pn	05 41 11.8	+0.5
WB2				IAmb	IAmb	05 41 15.4	
	comp=Z,6.7nm,0.9s						
WR0	Warramunga Arr	16.29	126	Pn	Pn	05 41 15.0	+1.8
WR0				IAmb	IAmb	05 41 28.1	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	18.10	137	P	P	05 41 40.6	+4.5
ASAR	Alice Springs	18.10	137	P	P	05 41 39.8	+3.8
	comp=Z,0.8nm,0.3s,baz=316,slow=13,SNR=68						
ASAR				S	Sn	05 44 49.6	-7.4
	comp=Z,0.1nm,0.3s,baz=312,slow=22,SNR=3.8						
STKA	Stephens Creek	28.66	141	P	P	05 43 23.2	+2.5
	comp=Z,1.4nm,0.8s,baz=319,slow=12,SNR=3.3						
CMAR	Chiang Mai Arr	35.98	323	P	P	05 44 24.6	-0.3
	comp=Z,0.9nm,0.4s,baz=133,slow=7.5,SNR=4.2						
CMAR				LR	LR	06 00 55.5	
	comp=Z,71nm,18.0s,baz=230,slow=39						
H08S2	Diego Garcia H	47.57	269	T	T	06 36 38.0	
	baz=97,slow=76,SNR=8.9						
H08S3	Diego Garcia H	47.58	269	T	T	06 36 39.5	
	baz=97,slow=76,SNR=9.6						
H08S1	Diego Carcia H	47.59	269	T	T	06 36 40.3	
	baz=97,slow=76,SNR=6.0						
KSRS	Korea Array	48.35	8	LR	LR	06 07 02.7	
	comp=Z,25nm,19.2s,baz=287,slow=37						
MJAR	Matsushiro Arr	49.79	19	P	P	05 46 14.0	-2.5
	comp=Z,1.3nm,0.5s,baz=191,slow=7.8,SNR=2.2						
USRK	Ussuriysk Ar.	55.57	10	P	P	05 46 57.1	-2.0
	comp=Z,1.7nm,0.7s,baz=191,slow=5.9,SNR=2.4						
SONM	Songino Array	59.59	349	P	P	05 47 27.8	+0.2
	comp=Z,1.2nm,0.4s,baz=164,slow=8.5,SNR=15						
MK31	Makanchi Array	66.66	332	P	P	05 48 14.5	+0.1
MK31				IAmb	IAmb	05 48 14.9	
	comp=Z,1.9nm,0.6s						
MKAR	Makanchi Array	66.66	332	P	P	05 48 14.3	0.0
	comp=Z,2.7nm,0.5s,baz=156,slow=7.2,SNR=42						
AAK	Ala-Archa	67.75	325	P	P	05 48 22.3	+0.8
AAK				IAmb	IAmb	05 48 22.5	
	comp=Z,2.1nm,0.7s						
ARSB	Arslanbob	67.79	323	P	P	05 48 22.6	+0.8
ZAA0	Zalesovo Array	71.16	339	P	P	05 48 41.6	-0.5
ZAA0				IAmb	IAmb	05 48 42.1	
	comp=Z,4.4nm,0.7s						
ZALV	Zalesovo Beam	71.16	339	P	P	05 48 41.3	-0.8
	comp=Z,4.1nm,0.5s,baz=139,slow=4.5,SNR=24						
KURK	Kurchatov	71.19	333	P	P	05 48 41.8	-0.5
KURK				IAmb	IAmb	05 48 43.1	
	comp=Z,2.5nm,0.9s						
MIDW	Midway	71.30	55	P	P	05 48 42.8	-0.8
QSPA	South Pole Qui	79.34	180	P	P	05 49 32.3	+3.0
ILAR	Eielson Array	100.63	26	P	Pdif	05 51 10.1	-1.1
	comp=Z,0.1nm,0.4s,baz=270,slow=4.2,SNR=0.9						
TORD	Torodi Ar. Bea	120.31	279	PKP	PKiKP	05 56 16.4	+0.5
	comp=Z,0.4nm,0.6s,baz=68,slow=1.7,SNR=1.8						

WEL 08 05:46:30.2±0.7, **32°S**±12°×**18°0E**±2°8, **h260**^{km}±19^{km}, **M4.0**/21, **mB4.4**/9, **MLv4.6**/21, **Mw(mB)3.5**/9, **Error ellipse: s-maj=0.0km s-min=0.0km az=111.9, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.78	35	S	S	05 48 18.3	-2.8
MXZ	Matakaoa Point	5.26	191	P	Pn	05 47 52.2	+2.9
MXZ				S	S	05 48 55.9	+3.3
HAZ	Te Kaha	5.55	195	P	Pn	05 47 54.0	+1.2
HAZ				S	S	05 49 01.6	+2.6
PUZ	Puketiti	5.76	191	P	Pn	05 47 59.0	+3.5
PUZ				S	S	05 49 05.1	+1.2
RUGZ	Raukumara Rang	5.77	195	P	Pn	05 47 56.7	+1.0
RUGZ				S	S	05 49 03.8	-0.4
OPRZ	Ohinepanea	5.98	204	P	Pn	05 48 01.0	+2.8
MWZ	Matawai	6.16	196	P	Pn	05 48 01.4	+1.0
MWZ				S	S	05 49 14.3	+1.5
CNGZ	Carnagh Statio	6.17	190	P	Pn	05 48 01.7	+1.2
URZ	Urewera	6.19	199	P	Pn	05 48 02.1	+1.3
RIGZ	Rimuhau	6.47	193	P	Pn	05 48 04.2	-0.1
RIGZ				S	S	05 49 18.6	-1.2
MUGZ	Murupara	6.49	200	P	Pn	05 48 05.2	+0.7
KNZ	Kokohu	6.79	193	P	Pn	05 48 09.1	+0.9
KNZ				S	S	05 49 28.0	+1.0
RAHZ	Arahi	6.82	197	P	Pn	05 48 09.3	+0.7
RAHZ				S	S	05 49 26.9	-0.8
MTHZ	Maungataniwha	6.82	199	P	Pn	05 48 10.0	+1.3
MTHZ				S	S	05 49 27.6	-0.2
NMHZ	Naumai	7.06	198	P	Pn	05 48 09.9	-1.8
NMHZ				S	S	05 49 34.4	+1.1
ARHZ	Aropaoanui	7.17	197	P	Pn	05 48 13.5	+0.5
BKZ	Black Stump Fm	7.21	200	P	Pn	05 48 13.4	-0.2
BKZ				S	S	05 49 34.9	-1.9
MCHZ	McNeill Hill	7.41	198	P	Pn	05 48 15.8	-0.3
MCHZ				S	S	05 49 41.3	0.0
TMVZ	Te Maari	7.41	204	P	Pn	05 48 16.7	+0.5
ETVZ	East Tongariro	7.43	204	P	Pn	05 48 16.9	+0.5
KWHZ	Kaweka Forest	7.47	199	P	Pn	05 48 16.1	-0.7
KWHZ				S	S	05 49 41.6	-1.0
OTVZ	Oturere	7.47	204	P	Pn	05 48 17.3	+0.3
BHHZ	Black Hill Sta	7.63	201	P	Pn	05 48 17.6	-1.2
BHHZ				S	S	05 49 43.6	-2.9
WNVZ	Wahianoa	7.64	204	P	Pn	05 48 18.3	-0.8
WNVZ				S	S	05 49 48.5	+1.8
KRHZ	Kereru	7.69	199	P	Pn	05 48 18.3	-1.2
KRHZ				S	S	05 49 44.3	-3.4
KAHZ	Kahuranaki	7.70	196	P	Pn	05 48 19.4	-0.3
KAHZ				S	S	05 49 47.3	-0.7
PXZ	Pawanui	7.93	196	P	Pn	05 48 21.5	-1.0
PXZ				S	S	05 49 48.9	-4.2
PNHZ	Pukenui	7.99	199	P	Pn	05 48 21.3	-2.0

IDC 08 05:49:23.6±1.2, **13°.84N**×**144°.71E, h0**^{km}**, mb3.5**/6, **mb1 3.8**/6, **mb1mx3.5**/41, **mbtmp3.5**/6, **Error ellipse: s-maj=40.1km s-min=32.0km az=113.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.09	197	P	P	05 56 18.5	-0.2
	0.4nm,0.7s,baz=4.7,slow=9.4,SNR=1.0						
MKAR	Makanchi Array	61.20	316	P	P	05 59 41.7	+1.4
	0.2nm,0.3s,baz=97,slow=8.1,SNR=8.7						
KURBB	Kurchatov Arra	64.33	320	P	P	05 59 59.7	-1.4
	0.2nm,0.3s,baz=106,slow=6.8,SNR=2.5						
ILAR	Eielson Array	68.41	25	P	P	06 00 26.4	-0.6
	0.3nm,0.5s,baz=241,slow=6.4,SNR=7.1						
YKA	Yellowknife Ar	82.71	27	P	P	06 01 49.0	-0.1
	0.1nm,0.4s,baz=290,slow=4.3,SNR=6.6						
NVAR	Mina Array Bea	86.89	51	P	P	06 02 11.3	+0.3
	0.3nm,0.5s,baz=266,slow=6.1,SNR=5.4						

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*NOU **08** 06:00:24.2, 38°.36S×176°.69E, h172^{km}, MLv3.7, North Island, New Zealand*
WEL 08 06:00:32.9, 38°.5S±0°.9×**17°6E**±°, **h104**^{km}±2^{km}, **M2.8**/67, **MLv2.8**/67, **Error ellipse: s-maj=0.0km s-min=0.0km az=82.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPRZ	Whakapapatarin	0.07	277	P	Pn	06 00 47.3	0.0
ALRZ	Allen Road	0.08	114	P	Pn	06 00 47.0	-0.3
HRRZ	Handcock Road	0.14	13	P	Pn	06 00 47.4	0.0
GRRZ	Galatos Road	0.21	329	P	Pn	06 00 47.8	+0.2
HSRZ	Hossack Road	0.22	0	P	Pn	06 00 47.8	+0.2
RRRZ	Republican Roa	0.28	48	P	Pn	06 00 47.9	0.0
HLRZ	Highlands Stat	0.29	17	P	Pn	06 00 48.5	+0.6
KUTZ	Kaahu Road	0.33	276	P	Pn	06 00 49.6	+1.5
MRHZ	Matea Rd	0.33	156	P	Pn	06 00 48.1	-0.1
UTU	Utuhina	0.35	353	P	Pn	06 00 48.6	+0.3
TARZ	Mount Tarawera	0.36	35	P	Pn	06 00 48.3	0.0
MUGZ	Murupara	0.41	83	P	Pn	06 00 48.2	-0.3
MKRZ	Makatiti	0.43	24	P	Pn	06 00 49.4	+0.7
NGRZ	Ngongotaha	0.43	354	P	Pn	06 00 49.0	+0.3
OMRZ	Omania	0.43	13	P	Pn	06 00 48.8	+0.1
WATZ	Wairara	0.44	246	P	Pn	06 00 48.9	+0.1
KARZ	Kaharoa	0.51	360	P	Pn	06 00 49.5	+0.3
LIRZ	Lichensteins R	0.54	12	P	Pn	06 00 49.6	+0.3
RITZ	Rihia Road	0.54	214	P	Pn	06 00 49.8	+0.4
MTHZ	Maungataniwha	0.57	125	P	Pn	06 00 49.8	+0.2
EDRZ	Edgecumbe	0.57	43	P	Pn	06 00 49.6	-0.1
RTZ	Ruatahuna	0.58	99	P	Pn	06 00 49.8	+0.1
KATZ	Kakaramea	0.62	224	P	Pn	06 00 50.2	0.0
MARZ	Manawahe	0.64	32	P	Pn	06 00 50.3	+0.1
BKZ	Black Stump Fm	0.67	163	P	Pn	06 00 50.4	0.0
NMHZ	Naumai	0.72	143	P	Pn	06 00 51.9	+0.9
KMRZ	Kaimai	0.72	341	P	Pn	06 00 51.2	+0.3
TMVZ	Te Maari	0.72	216	P	Pn	06 00 51.1	+0.1
OPRZ	Ohinepanea	0.72	20	P	Pn	06 00 50.9	+0.1
URZ	Urewera	0.73	69	P	Pn	06 00 50.7	-0.2
ETVZ	East Tongariro	0.74	214	P	Pn	06 00 51.3	+0.2
KRVZ	Karewarewa	0.74	220	P	Pn	06 00 51.3	+0.1
RAHZ	Arahi	0.76	121	P	Pn	06 00 51.9	+0.7
WTVZ	West Tongariro	0.78	221	P	Pn	06 00 51.7	+0.2
OTVZ	Oturere	0.78	215	P	Pn	06 00 52.0	+0.5
TGRZ	Tauranga	0.80	1	P	Pn	06 00 51.9	+0.3
NGZ	Ngauruhoe	0.82	218	P	Pn	06 00 52.3	+0.4
TWVZ	Taurewa	0.83	229	P	Pn	06 00 52.3	+0.3
TUVZ	Tukino	0.87	212	P	Pn	06 00 52.8	+0.4
WHRZ	Whale Island	0.88	41	P	Pn	06 00 51.0	-1.4
SNGZ	Shannon Statio	0.89	107	P	Pn	06 00 53.6	+1.1
FWVZ	Far West T-bar	0.91	216	P	Pn	06 00 53.2	+0.3
KWHZ	Kaweka Forest	0.91	171	P	Pn	06 00 53.0	+0.3
WHVZ	Whangaehu Hut	0.91	214	P	Pn	06 00 53.3	+0.3
RAGZ	Rawiri	0.92	88	P	Pn	06 00 53.5	+0.7
ARHZ	Aropaoanui	0.94	142	P	Pn	06 00 53.6	+0.7
TRVZ	Turoa	0.94	215	P	Pn	06 00 53.6	+0.4
WNVZ	Wahianoa	0.94	212	P	Pn	06 00 53.5	+0.3
WHHZ	Waihua	0.95	126	P	Pn	06 00 53.9	+0.9
MOVZ	Moawhango	0.96	203	P	Pn	06 00 53.2	0.0
BHHZ	Black Hill Sta	0.97	188	P	Pn	06 00 53.4	+0.1
MCHZ	McNeill Hill	0.98	159	P	Pn	06 00 54.4	+1.0
TOZ	Tahuroa Road	0.99	323	P	Pn	06 00 53.9	+0.4
MWZ	Matawai	1.03	80	P	Pn	06 00 53.9	0.0
PKVZ	Pokaka	1.03	222	P	Pn	06 00 54.5	+0.5
MTVZ	Mangateitei	1.05	215	P	Pn	06 00 54.7	+0.5
HIZ	Hauiti	1.09	270	P	Pn	06 00 55.0	+0.4
KRHZ	Kereru	1.12	175	P	Pn	06 00 55.1	+0.2
RIGZ	Rimuhau	1.20	99	P	Pn	06 00 56.4	+0.6
KNZ	Kokohu	1.22	114	P	Pn	06 00 56.5	+0.5
RUGZ	Raukumara Rang	1.26	64	P	Pn	06 00 56.0	-0.6
TKGZ	Te Karaka	1.26	86	P	Pn	06 00 57.4	+0.9
CKHZ	Cape Kidnapper	1.30	150	P	Pn	06 00 57.4	+0.5
VRZ	Vera Road	1.30	242	P	Pn	06 00 57.5	+0.5
PRGZ	Paritu Road	1.34	108	P	Pn	06 00 57.8	+0.3
KAHZ	Kahuranaki	1.36	159	P	Pn	06 00 57.9	+0.3
PNHZ	Pukenui	1.38	181	P	Pn	06 00 57.7	-0.3
TWGZ	Tauwhareparae	1.41	76	P	Pn	06 00 59.2	+1.0
HAZ	Te Kaha	1.44	58	P	Pn	06 00 58.1	-0.5
MHGZ	Mahia Peninsul	1.44	116	P	Pn	06 00 59.3	+0.7
CNGZ	Carnagh Statio	1.54	89	P	Pn	06 01 00.6	+0.8
WPHZ	Waipukurau	1.54	174	P	Pn	06 00 59.5	-0.4
TSZ	Takapari Road	1.54	188	P	Pn	06 00 59.7	-0.2
WAZ	Wanganui	1.57	218	P	Pn	06 01 00.8	+0.7
PXZ	Pawanui	1.58	162	P	Pn	06 01 00.1	-0.2
PKGZ	Pakihiroa	1.58	67	P	Pn	06 01 01.0	+0.6
PUZ	Puketiti	1.65	75	P	Pn	06 01 01.4	+0.2
LREZ	Lake Rotokare	1.71	236	P	Pn	06 01 02.9	+1.0
PRHZ	Porangahau	1.76	170	P	Pn	06 01 02.3	-0.3
DVHZ	Dannevirke	1.77	182	P	Pn	06 01 01.7	-1.0
KUZ	Kuaotunu	1.83	347	P	Pn	06 01 03.9	+0.5
NEZ	North Egmont	1.83	245	P	Pn	06 01 04.6	+1.0

WMGZ	Waiomatatini S	1.85	68	P	Pn	06 01 04.0	+0.3
PKE	Pukeiti	1.88	249	P	Pn	06 01 04.9	+0.7
ETAZ	East Tamaki Re	1.89	326	P	Pn	06 01 04.7	+0.6
MXZ	Matakaoa Point	1.89	60	P	Pn	06 01 05.2	+1.0
POWZ	Post Office Ro	1.90	191	P	Pn	06 01 03.9	-0.4
KHEZ	Kahui Hut	1.90	246	P	Pn	06 01 05.3	+0.9
AWAZ	Awhitu Peninsu	1.94	319	P	Pn	06 01 05.2	+0.5
ANWZ	Angora Road	1.94	175	P	Pn	06 01 04.1	-0.7
PRWZ	Pori Road	2.04	186	P	Pn	06 01 05.3	-0.8
MBAZ	Motutapu North	2.06	328	P	Pn	06 01 06.9	+0.6
WTAZ	Waiatarua	2.07	320	P	Pn	06 01 07.3	+0.8
BFZ	Birch Farm	2.15	180	P	Pn	06 01 06.2	-1.3
MRZ	Mangatainoka R	2.19	193	P	Pn	06 01 06.6	-1.5
TIWZ	Tintock	2.26	187	P	Pn	06 01 07.7	-1.3
CPWZ	Castlepoint	2.38	181	P	Pn	06 01 09.6	-0.8
OGWZ	Otaki Gorge	2.43	200	P	Pn	06 01 09.9	-1.3
HOWZ	Holdsworth Sta	2.43	193	P	Pn	06 01 09.4	-1.9
KIW	Kapiti Island	2.55	203	P	Pn	06 01 11.0	-1.7
TMWZ	Te Maipa	2.59	186	P	Pn	06 01 11.5	-1.8
MTW	Mount Morrison	2.69	192	P	Pn	06 01 12.3	-2.3
CAW	Cannon Point	2.73	199	P	Pn	06 01 13.0	-2.1
DUWZ	D'Urville Isla	2.89	218	P	Pn	06 01 15.5	-1.8
TRWZ	Traveller	2.90	188	P	Pn	06 01 15.3	-2.0
PAWZ	Paruwai Farm	2.92	192	P	Pn	06 01 15.1	-2.5
MSWZ	Moikau Station	2.98	195	P	Pn	06 01 15.8	-2.7
TCW	Tory Channel	3.08	209	P	Pn	06 01 17.3	-2.4
PLWZ	Palliser	3.13	194	P	Pn	06 01 17.6	-2.9
NNZ	Nelson	3.48	218	P	Pn	06 01 22.9	-2.1
BSWZ	Blackbirch Sta	3.67	209	P	Pn	06 01 25.0	-2.5
QRZ	Quartz Range	3.67	230	P	Pn	06 01 25.7	-1.9
THZ	Tophouse	4.12	217	P	Pn	06 01 31.4	-2.4
RPZ	Rata Peaks	6.50	215	P	Pn	06 02 03.1	-2.8

GUC 08 06:12:43.8±0.6**, 35°.66S**×**73°.75W, h37**^{km}±8^{km}**, ML4.0, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI03	Tigo	1.32	154	⇑*i*P	Pn	06 13 05.7	0.0
BI03				*i* S	Sn	06 13 23.4	+1.3
BI03				IAML		06 13 28.6	
	comp=E,10μm,0.4s						
BO03	Pichilemu	1.87	52	⇑*i*P	Pn	06 13 14.0	+0.8
BO03				*e*S	Sn	06 13 36.8	+1.3
BO02	Sierra Bellavi	2.58	71	*e*P	Pn	06 13 24.1	+1.0
BO02				*e*S	Sn	06 13 54.5	+1.3
MT09	Talagante	2.95	51	*e*P	Pn	06 13 29.5	+1.3
MT09				IAML		06 14 30.2	
	comp=E,291nm,0.6s						
LC01	Cunco	3.56	156	*e*P	Pn	06 13 37.5	+1.0
LC01				IAML		06 14 44.3	
	comp=E,132nm,0.7s						

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*DDA **08** 06:17:14.3, 40°.13N×27°.10E, h7^{km}±3^{km}, ML1.9*
*ISK **08** 06:17:14.1, 40°.15N×27°.08E, h12^{km}, ML3.0/8*
ISC 08 06:17:14.4±1.0**, 40°.14N**±0°.02×**27°.09E**±0°.02**, h14**^{km}±11^{km}**, n26,** σ**0**^{s}**.49**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPK	Lapseki	0.34	312	PG	Pg	06 17 21.7	+0.3
LPK				SG	Sg	06 17 26.6	+0.5
GONE	Gonen-Balikesi	0.47	102	PG	Pb	06 17 23.9	-0.5
GONE				SG	Sb	06 17 31.0	-0.1
GELI	Tayfur-Gelibol	0.54	299	PG	Pg	06 17 25.0	0.0
RKY	Sarkoy-Tekirda	0.55	7	PG	Pg	06 17 25.2	0.0
RKY				SG	Sb	06 17 33.3	-0.3
SART	Tekirdag	0.55	7	*i* P	Pg	06 17 25.6	+0.3
SART				IAML		06 17 33.0	
	comp=E,80nm,0.4s						
SART				*i* S	Sg	06 17 33.1	+0.6
BALY	Balya	0.57	135	*i* P	Pb	06 17 26.0	-0.2
BALY				*i* S	Sg	06 17 33.2	+0.1
BAYC	CANAKKALE_Bayr	0.58	226	*i* P	Pb	06 17 26.6	+0.3
BAYC				*i* S	Sb	06 17 34.6	+0.1
MRMT	Marmara Adasi	0.60	40	PG	Pg	06 17 26.4	+0.2
EDC	Edincik	0.62	71	PG	Pg	06 17 26.6	0.0
BUHA	Balikesir, Bur	0.64	181	*i* P	Pg	06 17 26.7	-0.2
BUHA				*i* S	Sg	06 17 35.4	0.0
BUHA				IAML		06 17 36.0	
	comp=N,45nm,0.3s						
BUHA				IAML		06 17 38.0	
	comp=E,76nm,0.4s						
MAR4	Marsite Statio	0.66	14	PG	Pg	06 17 27.3	-0.1
EZN	Ezine	0.67	242	PG	Pg	06 17 27.2	-0.2
ERIK	Erikli-Kesan	0.69	320	PG	Pb	06 17 28.0	-0.2
KESN	Edirne-Kesan	0.75	335	*i* P	Pb	06 17 29.3	-0.2
KESN				*i* S	Sg	06 17 37.1	-1.9
KESN				IAML		06 17 40.0	
	comp=N,41nm,0.1s						
BALB	Balikesir	0.79	129	PG	Pb	06 17 29.7	-0.2
BOZC	Bozcaada	0.85	250	PG	Pb	06 17 30.9	-0.1
AYVA	Ayvalik	0.89	201	*i* P	Pg	06 17 31.2	-0.4
AYVA				*i* S	Sb	06 17 44.0	+0.7
AYVA				IAML		06 17 46.0	
	comp=E,50nm,0.6s						
AYVA				IAML		06 17 46.0	
	comp=N,53nm,0.2s						
CAVK	Edirne/Enez-Ca	0.89	308	*i* P	Pb	06 17 31.8	+0.1
CAVK				IAML		06 17 44.0	
	comp=E,22nm,0.3s						
STEP	BALIKESIR_Sava	0.91	148	*i* P	Pb	06 17 32.1	+0.2
STEP				*i* S	Sb	06 17 44.9	+1.1
STEP				IAML		06 17 46.0	
	comp=E,37nm,0.3s						
GADA	Gvkgeada	0.92	273	PG	Pg	06 17 31.8	-0.3
ENEZ	Enez	0.93	310	PG	Pb	06 17 32.4	+0.1
KOCA	Canakkale, Ayv	0.97	229	*i* P	Pg	06 17 32.7	-0.5
KOCA				*i* S	Sg	06 17 45.5	-0.5
KOCA				IAML		06 17 48.0	
	comp=N,58nm,0.4s						
KOCA				IAML		06 17 48.0	
	comp=E,50nm,0.4s						
ALN	Alexandroupoli	1.10	314	PN	Pg	06 17 35.5	0.0
ZEDA	zmir-Bergama	1.18	181	*i* P	Pb	06 17 36.5	+0.1
DURS	Dursunbey	1.19	117	*i* P	Pb	06 17 36.2	-0.6
RDO	Rodhopi	1.55	311	PN	Pn	06 17 41.8	+0.2

IDC 08 06:29:39.5±2.7**, 54°.18N**×**86°.47E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.9**/36**, mbtmp3.0**/2**, ML2.8**/2**, Error ellipse: s-maj=21.8km s-min=13.8km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.00	257	*i*		06 37 20.0	
	baz=76,slow=324,SNR=5.4						
ZALV	Zalesovo Beam	1.00	257	Pg	Pg	06 29 57.8	-0.9
	0.9nm,0.3s,baz=77,slow=16,SNR=3.9						
ZALV				Lg	Lg	06 30 12.8	
	1.1nm,0.3s,baz=73,slow=30,SNR=6.4						
ZALV				Rg	Rg	06 30 20.8	
	115nm,1.3s,baz=75,slow=31,SNR=18						
KURBB	Kurchatov Arra	6.03	237	Pn	Pn	06 31 10.9	+1.1
	0.1nm,0.3s,baz=53,slow=13,SNR=3.5						
KURBB				Lg	Lg	06 32 49.2	
	0.0nm,0.3s,baz=75,slow=22,SNR=2.2						
MKAR	Makanchi Array	7.86	201	Pn	Pn	06 31 36.2	+1.1
	0.3nm,0.3s,baz=13,slow=11,SNR=12						
MKAR				Lg	Lg	06 33 46.5	
	0.0nm,0.3s,baz=27,slow=29,SNR=2.4						

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*IDC **08** 07:25:26.1±7.4, 36°.55N×71°.16E, h176^{km}±39^{km}, mb2.9/1, mb1 3.1/7, mb1mx2.8/48, mbtmp3.6/7, Error ellipse: s-maj=104.0km s-min=28.0km az=157.0*
ISC 08 07:25:26.2±2.0**, 36°.7N**±0°.2×**71°.1E**±0°.1**, h150**^{km}**, n9,** σ**1**^{s}**.76**/13**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.38	356	Pn	Pn	07 26 59.8	+1.9
	2.0nm,0.3s,baz=180,slow=13,SNR=24						
KK31				⇓Sn	Sn	07 28 08.4	-1.3
	7.4nm,0.5s,baz=186,slow=24,SNR=15						
AAK	Ala-Archa	6.45	23	P	Pn	07 27 00.3	+1.2
	0.8nm,0.3s,baz=198,slow=11,SNR=4.5						
AAK				S	Sn	07 28 09.7	-2.1
	0.8nm,0.3s,baz=306,slow=22,SNR=7.8						
AAK	Ala-Archa	6.45	23	⇓Pn	Pn	07 27 01.5	+2.4
	1.1nm,0.5s						
AAK				⇑Sn	Sn	07 28 11.4	-0.3
	14nm,1.1s						
GEYT	Alibeck	10.39	280	P	Pn	07 27 51.9	+0.4
	0.4nm,0.3s,baz=90,slow=12,SNR=3.1						
GEYT				S	Sn	07 29 45.8	-0.6
	0.5nm,0.3s,baz=110,slow=8.5,SNR=1.9						
MKAR	Makanchi Array	13.06	36	P	Pn	07 28 27.8	+1.7
	0.0nm,0.3s,baz=231,slow=9.1,SNR=1.9						
KURBB	Kurchatov Arra	14.88	19	P	Pn	07 28 50.8	+1.8
	0.0nm,0.3s,baz=215,slow=14,SNR=0.9						
AKTO	Aktyubinsk	16.61	330	P	P	07 29 11.2	+1.2
	0.9nm,0.3s,baz=133,slow=11,SNR=9.0						
ZALV	Zalesovo Beam	19.67	25	P	P	07 29 42.2	-1.2
	0.4nm,0.3s,baz=211,slow=9.1,SNR=6.0						
YKA	Yellowknife Ar	81.01	3	P	P	07 37 21.6	-2.2
	0.2nm,0.7s,baz=360,slow=4.9,SNR=5.2						

IDC 08 07:30:42.7±4.0**, 55°.95N**×**86°.38E, h0**^{km}**, mb1 2.9**/2**, mb1mx2.8**/50**, mbtmp2.9**/2**, ML2.6**/2**, Error ellipse: s-maj=34.8km s-min=30.5km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.20	205	*i*		07 45 40.0	
	baz=24,slow=343,SNR=1.3						
ZALV	Zalesovo Beam	2.20	205	Pg	Pn	07 31 21.6	+1.1
	2.6nm,0.3s,baz=20,slow=14,SNR=32						
ZALV				Lg	Lg	07 31 52.8	
	4.2nm,0.3s,baz=26,slow=26,SNR=17						
KURBB	Kurchatov Arra	7.11	225	Pn	Pn	07 32 27.7	-0.3
	0.1nm,0.3s,baz=41,slow=14,SNR=4.2						
MKAR	Makanchi Array	9.51	197	Pn	Pn	07 33 01.4	+0.5
	0.1nm,0.3s,baz=16,slow=14,SNR=2.6						

IDC 08 07:39:11.7±4.7**, 16°.80S**×**179°.80W, h536**^{km}±14^{km}**, mb2.8**/3**, mb1 3.1**/4**, mb1mx2.8**/34**, mbtmp3.6**/4**, Error ellipse: s-maj=237.5km s-min=34.3km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.26	245	P	P	07 40 23.5	+2.0
	1.9nm,0.3s,baz=126,slow=14,SNR=8.8						
MSVF				S	S	07 41 17.9	-0.4
	1.1nm,0.3s,baz=270,slow=24,SNR=1.8						
WRA	Warramunga Arr	43.54	259	P	P	07 46 27.9	-0.5
	0.2nm,0.2s,baz=96,slow=8.1,SNR=1.5						
ASAR	Alice Springs	43.83	253	P	P	07 46 30.7	+0.1
	0.9nm,0.4s,baz=88,slow=7.9,SNR=17						
ILAR	Eielson Array	85.12	14	P	P	07 50 50.1	-0.6
	0.5nm,0.8s,baz=209,slow=7.0,SNR=3.1						

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*JMA **08** 07:39:57.9±0.1, 40°.19N×142°.58E, h29^{km}±2^{km}, M3.7*
*NIED **08** 07:39:58.0, 40°.19N×142°.58E, h29^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.50; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$0.70; $M_{r\theta}$-0.03; $M_{\theta\phi}$-1.36; $M_{\phi r}$1.61; Fault plane solution: $M_0$2.18000×10^{14} NP1: ϕ_s181.00000°, δ82.00000°, λ-52.00000°. NP2: ϕ_s281.00000°, δ39.00000°, λ-167.00000°.*
*IDC **08** 07:40:01.7±3.1, 40°.25N×142°.85E, h60^{km}±25^{km}, mb3.4/4, mb1 3.7/7, mb1mx3.3/41, mbtmp3.7/7, ML2.9/3 Error ellipse: s-maj=43.7km s-min=18.1km az=98.0*
ISC 08 07:39:60.0±1.7**, 40°.20N**±0°.03×**142°.42E**±0°.08**, h29**^{km}±10^{km}**, n26,** σ**1**^{s}**.89**/31**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.50	239	P	Pb	07 40 10.0	-0.3
JTH				*e*S	Sb	07 40 18.5	+1.1
JKEN	Kujiedanarisaw	0.54	271	P	Pb	07 40 10.4	-0.6
JKEN				S	Sb	07 40 19.5	+0.9
JANG	Nango	0.71	284	P	Pn	07 40 13.2	-0.9
JANG				S	Sb	07 40 24.0	+0.7
MIYJ	Miyakonagasawa	0.78	217	P	Pn	07 40 13.3	-1.7
MIYJ				S	Sb	07 40 24.1	-1.0
JKZ	Kuzumaki	0.86	256	P	Pn	07 40 15.7	-0.5
JOM	Ohasama	1.13	230	P	Pn	07 40 19.7	-0.2
JOM				*e*S	Sb	07 40 35.4	+0.1
JARK	Aomorirokkasho	1.14	315	P	Pn	07 40 19.3	-0.6
JARK				S	Sn	07 40 34.3	-0.2
JTM	Tenmabayashi	1.18	300	P	Pn	07 40 20.7	+0.1
JTM				S	Sb	07 40 37.3	+0.6
OFUJ	Ofunato	1.26	208	P	Pn	07 40 20.7	-0.9
OFUJ				*e*S	Sn	07 40 37.4	-0.2
JAH	Hinai	1.37	270	P	Pb	07 40 23.8	-1.1
JAH				S	Sb	07 40 43.1	+1.2
JMK	Ichinoseki	1.56	217	P	Pn	07 40 25.8	+0.1
JMK				S	Sb	07 40 46.8	-0.5
JOT	Ohata	1.57	319	P	Pn	07 40 25.8	-0.1
JOT				S	Sn	07 40 45.7	+0.4
ASAJ	Asahikawa	3.91	2	P	Pn	07 40 59.3	+1.2
	1.1nm,0.3s,baz=19,slow=14,SNR=2.8						
ASAJ				S	Sn	07 41 43.2	+0.2
	0.9nm,0.3s,baz=289,slow=22,SNR=1.5						
MAT	Matsushiro	4.93	224	P	Pn	07 41 16.1	+4.0
MAT				*e*S	Sn	07 42 15.7	+7.6
MJAR	Matsushiro Arr	4.93	223	P	Pn	07 41 16.1	+4.1
	0.3nm,0.3s,baz=32,slow=13,SNR=19						
USRK	Ussuriysk Ar.	8.71	301	P	Pn	07 42 09.3	+5.4
	baz=103,slow=15,SNR=14						
USRK				S	Sn	07 43 36.2	-4.8
	baz=142,slow=33,SNR=1.6						
SONM	Songino Array	26.82	299	P	P	07 45 38.6	+0.9
	0.4nm,0.5s,baz=85,slow=8.0,SNR=5.2						
H11N2	WAKE ISLAND Hy	29.26	127	T	T	08 16 44.7	
	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	29.27	127	T	T	08 16 45.7	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	29.28	127	T	T	08 16 46.1	
	baz=320,slow=75						
H11S1	WAKE ISLAND Hy	30.08	129	T	T	08 17 59.3	
	baz=321,slow=76,SNR=8.9						
H11S3	WAKE ISLAND Hy	30.08	129	T	T	08 18 01.5	
	baz=321,slow=76,SNR=7.1						
H11S2	WAKE ISLAND Hy	30.09	129	T	T	08 18 02.1	
	baz=321,slow=76,SNR=9.9						
ZALV	Zalesovo Beam	40.43	310	P	P	07 47 35.5	+0.1
	0.5nm,0.4s,baz=110,slow=9.0,SNR=4.2						
MKAR	Makanchi Array	43.18	299	P	P	07 47 58.5	+0.5
	0.7nm,0.7s,baz=76,slow=10,SNR=4.9						
WRA	Warramunga Arr	60.30	189	P	P	07 50 04.8	-1.1
	2.0nm,1.2s,baz=9.1,slow=6.8,SNR=2.8						

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*ANF **08** 07:59:28.8±0.7, 41°.87N×119°.62W, h9^{km}±8^{km}, ML3.3/15, Error ellipse: s-maj=5.4km s-min=2.0km az=99.0*
*REN **08** 07:59:29.3±2.9, 41°.88N±0°.03×119°.64W±0°.03, h9^{km}±6^{km}, ML3.3/8, ML3.1/68(NEIC), ML3.3/40(SEA), Error ellipse: s-maj=4.3km s-min=2.6km az=185.0*
*NEIC **08** 07:59:30.0±3.0, 41°.88N±0°.03×119°.64W±0°.03, h6^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=2.8km az=165.0*
*SEA **08** 07:59:30.4±3.0, 41°.85N±0°.04×119°.68W±0°.03, h0^{km}±7^{km}, Error ellipse: s-maj=5.5km s-min=3.2km az=189.0*
ISC 08 07:59:29.6±1.3**, 41°.89N**±0°.03×**119°.65W**±0°.03**, h1**^{km}±13^{km}**, n72,** σ**1**^{s}**.13**/85**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.48	272		Pg	07 59 39.2	+0.3
MOD					Sg	07 59 46.1	+1.0
LKVW	Lakeview	0.63	303		Pg	07 59 41.6	+0.1
LKVW					Sg	07 59 51.0	+1.3
WVOR	Wild Horse Val	0.93	54		Pg	07 59 46.9	-0.5
WVOR					Sg	07 59 59.4	-0.2
WVOR				IAML		08 00 03.0	
	759nm,0.6s						
WVOR				IAML		08 00 07.3	
	429nm,0.7s						
K05A	Summer Lake	1.25	313		Pg	07 59 53.0	-0.4
K05A					Sg	08 00 10.1	+0.5
K05A				IAML		08 00 14.1	
	comp=N,311nm,1.0s						
K05A				IAML		08 00 15.5	
	comp=E,281nm,0.8s						
LASM	Arnica Sink	1.47	259		Pn	07 59 56.1	-1.3
LTIM	Timbered Crate	1.55	243		Pn	07 59 57.4	-1.0
HOG	Hogback Mounta	1.57	284		Pn	07 59 57.8	-1.0
M04C	Macdoel	1.64	267	P	Pn	07 59 58.3	-1.3
	baz=86,SNR=186						
M04C				Sb	Sg	08 00 22.5	+0.4
	baz=86						
M04C	Macdoel	1.64	267		Pn	07 59 58.4	-1.3
LBCM	Butte Creek Ri	1.65	231		Pn	07 59 58.8	-1.1
K04D	Chiloquin, OR	1.73	296	P	Pn	07 59 59.5	-1.3
	baz=115,SNR=142						
K04D	Chiloquin, OR	1.73	296		Pn	07 59 59.6	-1.3
J05D	Fort Rock, OR	1.82	321	Pb	Pn	08 00 02.9	+0.7
	baz=140,SNR=418						
J05D				Sb	Sb	08 00 27.8	+0.6
	baz=140						
J05D	Fort Rock, OR	1.82	321		Pn	08 00 03.0	+0.8
LHEM	Herd Peak	1.94	263		Pn	08 00 04.9	+1.1
M03C	McCloud	1.95	253		Pn	08 00 04.9	+1.0
L04D	Klamath Falls	2.00	280	P	Pn	08 00 03.2	-1.5
	baz=99,SNR=150						
L04D				Sb	Sb	08 00 32.9	+0.5
	baz=99						
L04D	Klamath Falls	2.00	280		Pn	08 00 03.1	-1.5
TMBU	Tom Butte, New	2.04	328		Pn	08 00 06.0	+0.8
BEKR	Beckworth	2.09	195		Pn	08 00 05.1	-0.8
BEKR				IAML		08 00 37.8	
	comp=E,140nm,0.5s						
SVIC	Surveyors Ice	2.12	327		Pb	08 00 08.0	-0.8
NCOR	Newberry Crate	2.12	329		Pb	08 00 08.4	-0.6
PAHR	Pah Rah Range	2.19	175		Pn	08 00 06.9	-0.3
PAHR				IAML		08 00 39.6	
	comp=E,78nm,0.6s						
PAHR				IAML		08 00 40.0	
	comp=N,74nm,0.5s						
I07A	Izee	2.20	3		Pn	08 00 05.7	-1.7
I07A				IAML		08 00 40.3	
	comp=N,121nm,0.8s						
I07A				IAML		08 00 48.4	
	comp=E,112nm,0.7s						
KWBU	Kawak Butte, N	2.23	327		Pb	08 00 10.1	-0.6
J04D	Umpqua Nationa	2.26	308	Pb	Pb	08 00 10.3	-1.0
	baz=126,SNR=45						
O03E	Paynes Creek	2.27	226	Pb	Pb	08 00 10.0	-1.4
	baz=45,SNR=89						
O03E				Sb	Sb	08 00 40.7	+0.6
	baz=45						
YBH	Yreka Blue Hor	2.29	267		Pn	08 00 07.1	-1.4
YBH				IAML		08 00 43.4	
	comp=N,95nm,0.6s						
ASBU	Astronaut Butt	2.31	327		Pn	08 00 10.7	+1.8
M02C	Callahan	2.45	259	P	Pn	08 00 08.8	-1.9
	baz=78,SNR=19						
M02C				Sb	Sb	08 00 45.9	+0.7
	baz=78						
N02D	Trinity Center	2.47	249	P	Pn	08 00 09.2	-1.8
	baz=68,SNR=6.6						
N02D				Sb	Sb	08 00 46.4	+0.7
	baz=68						
N02D	Trinity Center	2.47	249		Pn	08 00 09.8	-1.2
WDC	Whiskeytown Da	2.54	240		Pn	08 00 10.7	-1.2
WDC				IAML		08 00 51.3	
	comp=N,74nm,0.5s						
HUMO	Hull Mountain	2.56	287		Pn	08 00 10.4	-1.8
ORV	Oroville	2.72	212		Pn	08 00 13.7	-0.7
I05D	Terrebonne, OR	2.75	334	Pb	Pb	08 00 18.6	-0.9
	baz=153,SNR=12						
I05D				Sb	Sb	08 00 55.0	+1.4
	baz=153						
I04A	Tendick Farm,	2.78	314	Pb	Pb	08 00 19.5	-0.6
	baz=132,SNR=37						
PNTR	Pine Nut	2.79	179		Pn	08 00 15.7	+0.1
PNTR				IAML		08 01 02.5	
	comp=E,93nm,0.9s						
RUBR	Rubicon Trail	2.86	188		Pn	08 00 18.5	+2.0
RUBR				IAML		08 01 02.1	
	comp=N,68nm,1.1s						
RUBR				IAML		08 01 06.6	
	comp=E,64nm,0.8s						
O02D	Mt. Diablo Mer	2.92	235	Pb	Pb	08 00 21.2	-1.3
	baz=53,SNR=9.9						
O02D				Sb	Sb	08 00 59.9	+1.2
	baz=53						
L02E	Cave Junction	2.96	277	P	Pn	08 00 16.5	-1.1
	baz=94,SNR=46						
L02E				Sb	Sb	08 01 00.6	+0.9
	baz=94						
K02D	Willamette Mer	3.08	287	Sb	Sb	08 01 05.0	+1.6
	baz=104						
AFDM	Forest Hills D	3.10	199		Pn	08 00 21.4	+1.7
KRMB	Red Mountain	3.21	265		Pn	08 00 20.9	-0.3
KRMB				IAML		08 01 02.3	
	comp=N,34nm,4.9s						
KRMB				IAML		08 01 28.7	
	comp=E,28nm,4.0s						
MFID	Camas Ranch	3.21	60	Pn	Pn	08 00 20.2	-1.1
RYN	Ryan	3.37	165		Pn	08 00 24.6	+1.2
RYN				IAML		08 01 19.1	
	comp=N,38nm,0.6s						
RYN				IAML		08 01 20.3	
	comp=E,54nm,1.0s						
WAKR	Walker	3.38	177		Pn	08 00 24.3	+0.6
WAKR				IAML		08 01 23.7	
	comp=E,23nm,0.8s						
KBO	Bosley Butte	3.42	277		Pn	08 00 23.7	-0.4
KBO				IAML		08 01 25.6	
	comp=E,54nm,1.0s						
BMO	Blue Mountains	3.42	29		Pn	08 00 25.5	+1.3
BMO				IAML		08 01 20.3	
	comp=E,24nm,0.3s						
JCC	Jacoby Creek,	3.46	254		Pn	08 00 23.5	-1.0
JCC				IAML		08 01 34.6	
	comp=N,44nm,3.5s						
H04D	Lebanon	3.47	321	Pb	Pb	08 00 31.2	-0.5
	baz=138						
KMRM	Mail Ridge	3.49	243		Pn	08 00 25.8	+0.8
KMRM				IAML		08 01 29.0	
	comp=E,32nm,1.8s						
KMRM				IAML		08 01 32.3	
	comp=N,45nm,1.6s						
ELK	Elko	3.52	107		Pn	08 00 26.4	+0.9
KEBM	Edson Butte	3.60	287		Pn	08 00 26.4	-0.2
NV11	Mina Array Sit	3.63	161		Pn	08 00 25.6	-1.5
NV11				IAML		08 01 28.6	
	comp=E,23nm,2.0s						
KCPM	Cahto Peak	3.70	235		Pn	08 00 29.0	+0.9
LHV	Little Huntoon	3.73	166		Pn	08 00 29.0	+0.7
COR	Corvallis	3.79	317		Pn	08 00 29.2	+0.1
COR				IAML		08 00 55.2	
	comp=E,28nm,4.9s						
COR				IAML		08 02 28.2	
	comp=E,33nm,4.8s						
HLID	Hailey	4.21	65	P	Pn	08 00 34.8	-0.3
	baz=248						
HLID	Hailey	4.21	65	Pn	Pn	08 00 34.5	-0.6
HLID				IAML		08 01 43.9	
	comp=E,29nm,0.6s						
HLID				IAML		08 01 46.4	
	comp=E,24nm,0.8s						
R11A	Troy Canyon, C	4.71	137		Pn	08 00 43.1	+1.2
R11A				IAML		08 02 01.3	
	comp=E,8.6nm,0.9s						
BGU	Big Grassy Mou	5.07	99		Pn	08 00 44.5	-2.4
HVU	Hansel Valley	5.14	89		Pn	08 00 48.7	+0.9
BCYI	Bear Canyon	5.18	60		Pn	08 00 48.0	-0.3
SPUT	South Promonto	5.43	94		Pn	08 00 49.1	-2.7
DUG	Dugway, Tooele	5.44	106	Pn	Pn	08 00 52.4	+0.5
PSUT	Pine Spring	5.56	125		Pn	08 00 53.0	-0.7
TPNV	Topopah Spring	5.59	151		Pn	08 00 54.1	+0.1
PRN	Pahroc Range	5.71	140		Pn	08 00 57.3	+1.6
MCMT	McKenzie Canyo	5.77	57	Pn	Pn	08 00 54.9	-1.6
DLMT	Dillon	6.19	53		Pn	08 01 03.1	+0.9
LRM	Limekiln Ridge	6.53	50	Pn	Pn	08 01 06.7	-0.2

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*KRSC **08** 08:17:08.9±1.1, 52°.59N×159°.76E, h51^{km}±13^{km}, ML4.8*
*MOS **08** 08:17:10.2±0.9, 52°.59N×159°.64E, h57^{km}, mb4.4/10, Error ellipse: s-maj=8.2km s-min=4.0km az=84.9*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
*NEIC **08** 08:17:13.2±1.6, 52°.8N±0°.1×159°.3E±0°.1, h69^{km}±5^{km}, mb4.3/22, Error ellipse: s-maj=15.9km s-min=10.4km az=185.0*
*IDC **08** 08:17:14.3±1.2, 52°.82N×159°.30E, h82^{km}±10^{km}, mb3.6/18, mb1 3.8/21, mb1mx3.7/36, mbtmp3.9/21, MS3.3/5, Ms1 3.3/5, ms1mx3.0/39, Error ellipse: s-maj=18.8km s-min=13.5km az=158.0*

ISC 08 08:17:11.6±0.5,52°.63N±0°.03×159°.59E±0°.03,h54^{km}±4^{km}, n175,σ1^{s}50/203,mb4.2/42,MS3.3/4,2D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.53	29	PN	Pn	08 17 21.9	-1.6
SPN				S	Sn	08 17 29.7	-2.4
SPN	Mys Shipunski	0.53	29	i P	Pn	08 17 21.9	-1.6
SPN				eS	Sn	08 17 29.7	-2.4
NLC	Nalytchevo	0.56	345	PN	Pn	08 17 22.8	-0.9
NLC				S	Sn	08 17 32.0	-0.6
NLC	Nalytchevo	0.56	345	i P	Pn	08 17 22.8	-0.9
NLC				eS	Sn	08 17 32.0	-0.6
DALK	Dalny	0.65	308	PN	Pn	08 17 24.0	-0.8
DALK				S	Sn	08 17 33.6	-0.8
DALK	Dalny	0.65	308	eP	Pn	08 17 24.0	-0.8
DALK				eS	Sn	08 17 33.6	-0.8
RUS	Russkaya	0.69	253	PN	Pn	08 17 24.8	-0.5
RUS				S	Sn	08 17 35.0	-0.3
RUS	Russkaya	0.69	253	i P	Pn	08 17 24.8	-0.5
RUS				eS	Sn	08 17 35.0	-0.3
PET	Petropavlovsk	0.69	305	⇓iPN	Pn	08 17 24.5	-0.8
PET				eS	Sn	08 17 35.0	-0.4
PET				pmax	pmax		
	comp=Z,4μm,0.4s						
PET				smax	smax		
	comp=E,9μm,0.4s						
PET				smax	smax		
	comp=N,10μm,0.7s						
PET	Petropavlovsk	0.69	305	i P	Pn	08 17 24.8	-0.6
PET				eS	Sn	08 17 34.9	-0.4
PET	Petropavlovsk	0.69	305		Pn	08 17 24.7	-0.6
PET				Sn	Sn	08 17 34.9	-0.4
UGLR	Uglovaya	0.74	321	PN	Pn	08 17 26.0	-0.1
UGLR	Uglovaya	0.74	321	i P	Pn	08 17 26.0	-0.1
SDLR	Sedlovina	0.78	327	PN	Pn	08 17 26.0	-0.6
SDLR	Sedlovina	0.78	327	eP	Pn	08 17 26.0	-0.6
SMAR	Somma	0.79	323	PN	Pn	08 17 26.2	-0.7
SMAR	Somma	0.79	323	eP	Pn	08 17 26.2	-0.7
AVH	Avacha	0.82	321	PN	Pn	08 17 27.1	0.0
AVH				S	Sn	08 17 39.2	+0.8
AVH	Avacha	0.82	321	i P	Pn	08 17 27.1	0.0
AVH				eS	Sn	08 17 39.2	+0.8
KRER	Koryakskii	0.84	323	PN	Pn	08 17 27.5	0.0
KRER				S	Sn	08 17 39.8	+0.6
KRER	Koryakskii	0.84	323	i P	Pn	08 17 27.5	0.0
KRER				eS	Sn	08 17 39.8	+0.6
MTVR	Mutnovka	0.87	261	PN	Pn	08 17 27.7	-0.1
MTVR	Mutnovka	0.87	261	i P	Pn	08 17 27.7	-0.1
KOK	Koryaka	0.88	319	PN	Pn	08 17 27.9	0.0
KOK	Koryaka	0.88	319	i P	Pn	08 17 27.9	0.0
KRMR	Karymshinskiy	0.91	283	PN	Pn	08 17 28.4	+0.2
KRMR				S	Sn	08 17 40.9	+0.5
KRMR	Karymshinskiy	0.91	283	i P	Pn	08 17 28.4	+0.2
KRMR				eS	Sn	08 17 40.9	+0.5
KRX	Arik	0.92	322	PN	Pn	08 17 28.3	-0.2
KRX	Arik	0.92	322	eP	Pn	08 17 28.3	-0.2
GRL	Gorelyy	0.93	266	PN	Pn	08 17 29.0	+0.4
GRL				S	Sn	08 17 42.2	+1.1
GRL	Gorelyy	0.93	266	eP	Pn	08 17 29.0	+0.4
GRL				eS	Sn	08 17 42.2	+1.1
ASAK	Asacha	1.06	257	PN	Pn	08 17 30.7	+0.4
ASAK				S	Sn	08 17 44.9	+0.7
ASAK	Asacha	1.06	257	i P	Pn	08 17 30.7	+0.4
ASAK				eS	Sn	08 17 44.9	+0.7
PEA0B	Petropavlovsk-	1.24	293	PN	Pn	08 17 32.9	+0.3
PEA0B						08 17 46.1	
PEA0B	Petropavlovsk-	1.24	293		Pn	08 17 32.9	+0.3
PEA0B				Sn	Sn	08 17 46.1	-2.2
PETK	Petropavlovsk-	1.24	293	P	Pn	08 17 32.9	+0.2
	comp=N,294nm,0.3s,baz=111,slow=19,SNR=3218						
PETK				S	Sn	08 17 48.8	+0.4
	comp=N,301nm,0.3s,baz=88,slow=40,SNR=6.4						
PETK				LR	LR	08 18 08.6	
	comp=N,454nm,20.2s,baz=31,slow=54						
KDTR	Khodutka, Kamc	1.25	229	PN	Pn	08 17 32.6	0.0
KDTR				S	Sn	08 17 49.6	+1.3
KDTR	Khodutka, Kamc	1.25	229	i P	Pn	08 17 32.6	0.0
KDTR				eS	Sn	08 17 49.6	+1.3
KII	Karymskiy	1.41	357	PN	Pn	08 17 34.2	-0.7
KII	Karymskiy	1.41	357	P	Pn	08 17 34.2	-0.7
GNL	Ganaly	1.46	318	PN	Pn	08 17 36.5	+0.9
GNL	Ganaly	1.46	318	eP	Pn	08 17 36.5	+0.9
APC	Apacha	1.51	282	PN	Pn	08 17 37.3	+1.1
APC				S	Sn	08 17 57.8	+3.1
APC	Apacha	1.51	282	eP	Pn	08 17 37.3	+1.1
APC				eS	Sn	08 17 57.8	+3.1
MIPR	Malaya Ipel'ka	1.77	259	PN	Pn	08 17 41.1	+1.3
MIPR	Malaya Ipel'ka	1.77	259	eP	Pn	08 17 41.1	+1.3
PAU	Pauzhetka	2.08	237	PN	Pn	08 17 45.2	+1.3
PAU				S	Sn	08 18 11.2	+2.6
PAU	Pauzhetka	2.08	237	eP	Pn	08 17 45.2	+1.3
PAU				eS	Sn	08 18 11.2	+2.6
MKZ	Mys Kozlova	2.31	33	PN	Pn	08 17 47.1	0.0
MKZ	Mys Kozlova	2.31	33	eP	Pn	08 17 47.1	0.0
KZV	Kizimen	2.52	9	PN	Pn	08 17 50.6	+0.5
KZV				S	Sn	08 18 20.4	+0.7
KZV	Kizimen	2.52	9	eP	Pn	08 17 50.6	+0.5
KZV				eS	Sn	08 18 20.4	+0.7
TUMR	Tumrok	2.67	7	PN	Pn	08 17 53.2	+1.0
TUMR				S	Sn	08 18 25.0	+1.5
TUMR	Tumrok	2.67	7	eP	Pn	08 17 53.2	+1.0
TUMR				eS	Sn	08 18 25.0	+1.5
SKR	Severo-Kuril's	2.92	229	ePN	Pn	08 17 56.7	+1.3
SKR				eS	Sn	08 18 30.5	+1.4
SKR				pmax	pmax		
	comp=Z,69nm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
SKR				smax	smax		
	comp=N,606nm,0.4s						
SKR	Severo-Kuril's	2.92	229	eP	Pn	08 17 56.9	+1.5
SKR				eS	Sn	08 18 30.6	+1.4
ALID	Alaid	3.07	236	PN	Pn	08 17 58.7	+1.0
ALID	Alaid	3.07	236	eP	Pn	08 17 58.7	+1.0
KMNR	Kamenistaya	3.15	7	PN	Pn	08 18 00.7	+2.0
KMNR	Kamenistaya	3.15	7	eP	Pn	08 18 00.7	+2.0
ESO	Esso	3.34	351	PN	Pn	08 18 03.0	+1.8
ESO	Esso	3.34	351	eP	Pn	08 18 03.0	+1.8
KOZ	Kozyrevsk	3.44	3	PN	Pn	08 18 04.1	+1.6
KOZ	Kozyrevsk	3.44	3	eP	Pn	08 18 04.1	+1.6
SRDR	Sredinnyy	3.69	1	PN	Pn	08 18 07.6	+1.5
SRDR				S	Sn	08 18 49.4	+1.1
SRDR	Sredinnyy	3.69	1	eP	Pn	08 18 07.6	+1.5
SRDR				eS	Sn	08 18 49.4	+1.1
KLY	Klyuchi	3.74	9	PN	Pn	08 18 08.8	+2.1
KLY	Klyuchi	3.74	9	eP	Pn	08 18 08.8	+2.1
KBTR	Krutoberegovo	4.05	26	PN	Pn	08 18 11.9	+1.0
KBTR				S	Sn	08 18 57.4	+0.5
KBTR	Krutoberegovo	4.05	26	eP	Pn	08 18 11.9	+1.0
KBTR				eS	Sn	08 18 57.4	+0.5
BDR	Baidarnaya	4.05	13	PN	Pn	08 18 13.8	+2.7
BDR	Baidarnaya	4.05	13	eP	Pn	08 18 13.8	+2.7
KBG	Krutoberegovo	4.06	25	PN	Pn	08 18 12.6	+1.6
KBG				S	Sn	08 18 58.9	+1.7
KBG	Krutoberegovo	4.06	25	eP	Pn	08 18 12.6	+1.6
KBG				eS	Sn	08 18 58.9	+1.7
SMKR	Semkarok	4.10	15	PN	Pn	08 18 14.1	+2.3
SMKR				S	Sn	08 19 00.8	+2.3
SMKR	Semkarok	4.10	15	eP	Pn	08 18 14.1	+2.3
SMKR				eS	Sn	08 19 00.8	+2.3
SRKR	Sorokina	4.13	12	PN	Pn	08 18 14.6	+2.5
SRKR				S	Sn	08 19 02.0	+2.9
SRKR	Sorokina	4.13	12	eP	Pn	08 18 14.6	+2.5
SRKR				eS	Sn	08 19 02.0	+2.9
BKI	Bering	4.57	53	PN	Pn	08 18 16.8	-1.2
BKI	Bering	4.57	53	eP	Pn	08 18 16.8	-1.2
BKI				eS	Sn	08 19 04.1	-5.6
PALN	Palana	6.47	2	PN	Pn	08 18 47.5	+3.4
PALN	Palana	6.47	2	eP	Pn	08 18 47.5	+3.4
OSSR	Ossora	6.91	15	PN	Pn	08 18 54.4	+4.3
OSSR	Ossora	6.91	15	eP	Pn	08 18 54.4	+4.3
MA2	Magadan	8.52	328	LR	LR	08 23 01.1	
	comp=N,114nm,19.1s,baz=190,slow=42						
KMSK	Kamenskaya	10.47	17	PN	Pn	08 19 41.7	+3.0
KMSK	Kamenskaya	10.47	17	P	Pn	08 19 41.7	+3.0
SEY	Seymchan	11.01	343	P	Pn	08 19 44.9	-1.2
	comp=N,0.1nm,0.3s,baz=101,slow=14,SNR=1.9						
SEY	Seymchan	11.01	343	i PN	Pn	08 19 46.0	-0.1
AMKA	Amchitka	12.21	88	Pn	Pn	08 20 05.0	+2.5
JKA	Kamikawa-asahi	14.12	240		Pn	08 20 28.8	+0.2
ASAJ	Asahikawa	14.12	240	P	P	08 20 32.7	-1.9
	comp=N,0.8nm,0.3s,baz=78,slow=15,SNR=5.1						
ASAJ	Asahikawa	14.12	240	P	Pn	08 20 28.8	+0.3
ERM	Erimo	15.36	233	i P	Pn	08 20 42.9	-1.7
ERM	Erimo	15.36	233	Pn	Pn	08 20 45.8	+1.2
JTM	Tenmabayashi	17.31	234	P	Pn	08 21 08.8	-0.5
KLR	Kul'dur	17.83	270	P	P	08 21 15.0	-0.7
	comp=N,0.1nm,0.3s,baz=349,slow=18,SNR=1.4						
KLR	Kul'dur	17.83	270	i P	P	08 21 16.8	+1.1
YAK	Yakutsk	18.52	312	P	P	08 21 20.5	-2.6
	comp=N,0.3nm,0.3s,baz=114,slow=12,SNR=5.6						
YAK	Yakutsk	18.52	312	eP	Pn	08 21 24.0	+0.2
YAK				eS	S	08 24 55.1	+4.0
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,224nm,4.1s						
YAK				smax	smax		
	comp=E,187nm,4.2s						
ANM	Nome	21.48	43	P	P	08 21 54.4	-0.8
ANM				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANM	Nome	21.48	43	P	P	08 21 54.4	-0.8
MAJO	Matsushiro	22.02	232	i P	P	08 22 01.5	+0.2
MAJO				pmax	pmax		
	comp=Z,13nm,1.3s						
MAJO	Matsushiro	22.02	232	P	P	08 22 02.2	+1.0
MAJO				IAmb	IAmb	08 22 23.2	
	comp=Z,23nm,1.3s						
MJAR	Matsushiro Arr	22.02	232	P	P	08 22 01.2	-0.1
	comp=Z,4.8nm,0.7s,baz=18,slow=10.0,SNR=6.9						
TIXI	Tiksi	23.38	336	P	P	08 22 12.5	-2.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIXI	Tiksi	23.38	336	P	P	08 22 12.5	-2.4
TIXI				IAmb	IAmb	08 22 18.4	
	comp=Z,4.2nm,0.6s						
TTA	Tatalina	25.28	49	P	P	08 22 33.4	+0.9
TTA				pmax	pmax		
	comp=Z,14nm,1.5s						
TTA	Tatalina	25.28	49	P	P	08 22 33.4	+0.9
TTA				IAmb	IAmb	08 22 48.3	
	comp=Z,14nm,1.5s						
KSRS	Korea Array	26.76	248	LR	LR	08 32 40.1	
	comp=Z,28nm,20.7s,baz=95,slow=35						
A21K	Barrow	26.84	30	P	P	08 22 46.9	+0.6
A21K				IAmb	IAmb	08 23 08.7	
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	28.52	37	P	P	08 23 00.7	-0.7
TOLK				IAmb	IAmb	08 23 25.9	
	comp=Z,6.6nm,1.4s						
IL31		29.36	45	P	P	08 23 09.2	+0.3
ILAR	Eielson Array	29.36	45	P	P	08 23 08.2	-0.7
	comp=Z,0.6nm,0.7s,baz=258,slow=7.9,SNR=7.9						
SCM	Sheep Creek Mo	29.36	51	P	P	08 23 09.0	0.0
SCM				pmax	pmax		
	comp=Z,16nm,1.3s						
SCM	Sheep Creek Mo	29.36	51	P	P	08 23 09.0	0.0
SCM				IAmb	IAmb	08 23 25.4	
	comp=Z,16nm,1.3s						
K27K	Chicken	31.49	46	P	P	08 23 26.7	-1.0
H11N2	WAKE ISLAND Hy	33.33	167	T	T	08 59 30.2	
	baz=352,slow=76,SNR=730						
H11N3	WAKE ISLAND Hy	33.34	167	T	T	08 59 31.8	
	baz=352,slow=76,SNR=379						
H11N1	WAKE ISLAND Hy	33.34	167	T	T	08 59 33.2	
	baz=352,slow=76,SNR=399						
SONM	Songino Array	33.71	284	LR	LR	08 38 02.8	
	comp=Z,84nm,18.6s,baz=280,slow=37						
INK	Inuvik	34.42	37	P	P	08 23 53.0	-0.1
	comp=Z,1.1nm,0.6s,baz=303,slow=6.4,SNR=6.4						
INK	Inuvik	34.42	37	P	P	08 23 52.8	-0.3
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	Inuvik	34.42	37	P	P	08 23 52.8	-0.3
INK				IAmb	IAmb	08 24 13.6	
	comp=Z,4.7nm,1.4s						
H11S1	WAKE ISLAND Hy	34.51	168	T	T	09 00 58.5	
	baz=352,slow=76,SNR=57						
H11S3	WAKE ISLAND Hy	34.52	168	T	T	09 00 56.8	
	baz=352,slow=76,SNR=75						
H11S2	WAKE ISLAND Hy	34.52	168	T	T	09 00 57.0	
	baz=352,slow=76,SNR=25						
EUNU	Eureka	42.47	14	P	P	08 25 00.2	-0.5
EUNU				IAmb	IAmb	08 25 14.6	
	comp=Z,9.2nm,1.0s						
DGZ	Jazzator, Alta	43.60	296	i P	P	08 25 09.9	-0.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	43.71	42	P	P	08 25 10.5	-0.2
	comp=Z,0.4nm,0.6s,baz=305,slow=6.0,SNR=6.8						
SPA0	Spitsbergen Ar	47.54	350	P	P	08 25 39.1	-1.7
KURK	Kurchatov	47.72	302	P	P	08 25 40.0	-2.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	47.72	302	P	P	08 25 40.0	-2.5
KURK				IAmb	IAmb	08 25 40.9	
	comp=Z,4.6nm,1.3s						
MK31	Makanchi Array	48.08	296	i P	P	08 25 46.0	+0.6
MK31	Makanchi Array	48.08	296	P	P	08 25 43.2	-2.2
MKAR	Makanchi Array	48.08	296	P	P	08 25 42.5	-2.9
	comp=Z,0.4nm,0.5s,baz=60,slow=7.2,SNR=9.4						
MKAR	Makanchi Array	48.08	296	i P	P	08 25 43.0	-2.4
B08A	Colville Reser	49.17	61	P	P	08 25 54.8	+1.0
B08A				IAmb	IAmb	08 25 59.7	
	comp=Z,2.5nm,1.2s						
BRVK	Borovoye	50.47	309	i P	P	08 25 59.9	-3.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WALA	Waterton Lakes	51.56	57	P	P	08 26 12.2	+0.3
ARU	Arti	53.53	317	d iP	P	08 26 22.9	-3.3
ARU						08 27 26.2	
ARU				S	S	08 33 53.9	-0.9
ARU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ARCES	ARCESS Array B	53.63	342	P	P	08 26 24.0	-2.7
	comp=Z,5.2nm,1.0s,baz=53,slow=8.0,SNR=2.3						
ARCES	ARCESS Array B	53.63	342	P	P	08 26 24.0	-2.7
SUMG	Summit	54.45	7	i P	P	08 26 32.8	-0.4
SUMG				pmax	pmax		
	comp=Z,27nm,0.8s						
SUMG	Summit	54.45	7	i P	P	08 26 32.8	-0.4
	comp=Z,27nm,0.8s						
SUMG	Summit	54.45	7	i P	P	08 26 32.8	-0.4
SUMG				IAmb	IAmb	08 26 34.6	
	comp=Z,27nm,0.8s						
PNTR	Pine Nut	55.00	70	P	P	08 26 39.3	+1.9
PNTR				IAmb	IAmb	08 26 40.0	
	comp=Z,2.8nm,0.7s						
NVAR	Mina Array Bea	56.19	69	P	P	08 26 46.9	+1.0
	comp=Z,1.3nm,0.8s,baz=290,slow=7.6,SNR=16						
CMAR	Chiang Mai Arr	57.79	258	LR	LR	08 52 15.6	
	comp=Z,16nm,18.1s,baz=275,slow=36						
PDAR	Pinedale Array	58.01	60	P	P	08 26 58.0	-0.8
	comp=Z,1.0nm,0.6s,baz=315,slow=2.0,SNR=15						
ULM	Lac du Bonnet	59.36	46	P	P	08 27 07.6	-0.1
	comp=Z,0.9nm,0.5s,baz=344,slow=7.5,SNR=1.7						
FINES	FINESS Array B	60.42	336	P	P	08 27 13.1	-1.7
	comp=Z,1.4nm,0.5s,baz=34,slow=8.1,SNR=7.3						
FINES	FINESS Array B	60.42	336	i P	P	08 27 13.3	-1.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	NORSAR Array B	63.90	343	P	P	08 27 36.9	-1.3
	comp=Z,0.9nm,0.7s,baz=28,slow=6.0,SNR=4.2						
AKASG	Malin Array Be	68.85	329	P	P	08 28 07.8	-2.1
	comp=Z,0.5nm,0.4s,baz=34,slow=6.9,SNR=4.9						
TX31	Lajitas Ar. Si	71.10	66	P	P	08 28 24.9	+0.8
TX32	Lajitas Array	71.10	66	P	P	08 28 24.9	+0.8
TX32				IAmb	IAmb	08 28 25.3	
	comp=Z,6.6nm,1.3s						
TXAR	Lajitas Array	71.10	66	P	P	08 28 25.1	+0.9
	comp=Z,2.2nm,0.7s,baz=299,slow=4.4,SNR=14						
CLL	Collm	72.67	339	eP	P	08 28 33.0	-0.1
	comp=Z,8.0nm,1.1s						
CLL	Collm	72.67	339	eP	P	08 28 33.0	-0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GERES	GERESS Array B	74.82	337	P	P	08 28 44.4	-1.4
	comp=Z,0.8nm,0.5s,baz=65,slow=7.5,SNR=5.1						
CONA	Conrad Observa	75.15	336	eP	P	08 28 42.7	-5.1
	comp=Z,2.5nm,0.6s						
WRA	Warramunga Arr	75.54	204	P	P	08 28 50.1	+0.1
	comp=Z,0.8nm,0.7s,baz=22,slow=6.2,SNR=3.2						
MOA	Molln	75.62	337	eP	P	08 28 44.7	-5.7
	comp=Z,8.4nm,1.5s						
SWET	Sewanee	75.62	50	P	P	08 28 50.1	-0.5
SOKA	Soboth	76.52	336	eP	P	08 28 50.5	-5.1
	comp=Z,3.5nm,1.2s						
KBA	Koelnbreinsper	76.56	337	eP	P	08 28 50.8	-5.1
	comp=Z,5.2nm,0.7s						
BRTR	Keskin Array B	76.78	320	P	P	08 28 55.8	-1.5
	comp=Z,1.7nm,1.0s,baz=54,slow=7.3,SNR=2.7						
BRTR				LR	LR	09 09 03.7	
	comp=Z,47nm,18.2s,baz=316,slow=41						
OBKA	Obir	76.80	336	eP	P	08 28 52.1	-5.1
	comp=Z,5.0nm,1.1s						
ABTA	Abfaltersbach	77.07	337	eP	P	08 28 53.0	-5.7
	comp=Z,7.0nm,1.2s						
FETA	Feichten	77.22	339	eP	P	08 28 54.3	-5.3
	comp=Z,8.0nm,1.9s						
ASAR	Alice Springs	79.21	204	P	P	08 29 11.0	+0.4
	comp=Z,0.5nm,0.6s,baz=21,slow=4.7,SNR=5.2						
ESDC	Sonseca Array	86.96	347	P	P	08 29 50.0	-0.6
	comp=Z,0.8nm,0.9s,baz=359,slow=6.6,SNR=4.8						
PLCA	Paso Flores	144.31	91	PKP	PKPab	08 36 39.2	+0.2
	comp=Z,3.0nm,0.9s,baz=328,slow=3.5,SNR=6.3						
PLCA	Paso Flores	144.31	91	PKPdf	PKPbc	08 36 39.9	+0.6

*IDC **08** 08:51:50.9±0.5,24°.77S×179°.91E,h491^{km}±4^{km},mb4.1/25, mb1 4.2/28,mb1mx4.1/36,mbtmp4.9/28,Error ellipse: s-maj=9.4km s-min=8.5km az=179.0*

*BJI **08** 08:51:50.6±0.0,24°.40S×179°.89E,h486^{km},mB5.2/26, mb4.7/38*

*NEIC **08** 08:51:50.6±2.2,24°.77S±0°.10×180°.0E±0°.1,h493^{km}±4^{km}, mb4.9/54,Error ellipse: s-maj=15.2km s-min=13.7km az=137.0*

*NOU **08** 08:51:53.0,24°.55S×179°.96W,h531^{km},mb4.8,South of Fiji Islands*

*GCMT **08** 08:51:54.6±0.6,24°.69S±0°.06×179°.81E±0°.05,h505^{km}±3^{km}, MW5.2/49,Moment Tensor Solution. s49,c62; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.31±.04; M$_{\theta\theta}$-0.01±.07; M$_{\phi\phi}$0.32±.06; M$_{r\theta}$0.27±.07; M$_{\theta\phi}$-0.03±.06; M$_{\phi r}$-0.85±.06; Best double couple: M$_0$0.94900×10^{17} NP1:φ$_s$186.00000°,δ10.00000°,λ-67.00000°. NP2: φ$_s$343.00000°,δ80.00000°,λ-94.00000°. Principal axes: T 0.9500, Plg35.0000°, Azm76.0000°; N -0.0010, Plg4.0000°, Azm344.0000°; P -0.9490, Plg54.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 08 08:51:50.8±0.4,24°.78S±0°.06×179°.98E±0°.05,h496^{km}±4^{km}, h497^{km}:pP-P,n279,σ1^{s}40/327,mb4.8/68,19C-14D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.24	345	P	P	08 53 39.7	+0.2
	12nm,0.3s,baz=160,slow=6.5,SNR=24						
MSVF				S	S	08 55 08.4	0.0
	baz=6.8,slow=22,SNR=8.0						
MSVF	Nonsavu	7.24	345		P	08 53 39.6	+0.1
MSVF	Nonsavu	7.24	345	P	P	08 53 39.7	+0.2
NIUE	Niue	10.95	61	P	P	08 54 17.8	-0.5
	baz=11,SNR=8.4						
NIUE	Niue	10.95	61	P	P	08 54 17.8	-0.5
NIUE	Niue	10.95	61	P	P	08 54 18.4	0.0
MARNC	Mare, Loyalty	11.47	284	P	P	08 54 25.9	+2.1
OUENC	Ouen Island, N	12.27	278	P	P	08 54 34.6	+2.3
YATNC	Mamie plateau,	12.31	280	P	P	08 54 36.0	+3.2
DZM	Mont Dzumac	12.71	279	P	P	08 54 37.1	0.0
	2.3nm,0.3s,baz=92,slow=16,SNR=24						
DZM				S	S	08 56 55.1	+0.8
	baz=202,slow=19,SNR=5.7						
DZM	Mont Dzumac	12.71	279	eP	P	08 54 39.2	+2.1
	198nm,1.1s						
DZM	Mont Dzumac	12.71	279	P	P	08 54 38.6	+1.5
DZM	Mont Dzumac	12.71	279	P	P	08 54 39.4	+2.3
NOUC	Port Laguerre	12.83	279	P	P	08 54 41.0	+2.7
AFI	Afiamalu	13.31	37	P	P	08 54 40.4	-3.2
SANVU	Saraoutou	15.16	305	P	P	08 55 02.0	-0.9
SANVU				IAmb	IAmb	08 55 29.7	
	comp=Z,29nm,0.9s						
MSWZ	Moikau Station	17.05	192	P	P	08 55 21.8	-0.5
SNZO	South Karori	17.06	194	P	P	08 55 21.2	-1.1
BHW	Baring Head	17.12	193	P	P	08 55 21.9	-1.0
QRZ	Quartz Range	17.17	199	P	P	08 55 22.2	-1.2
TUWZ	Tuamarina	17.35	195	P	P	08 55 23.3	-1.9
RAR	Rarotonga	18.98	83	P	P	08 55 40.1	-0.3
	comp=Z,1.2nm,0.3s,baz=282,slow=15,SNR=2.7						
LTZ	Lake Taylor	19.05	198	P	P	08 55 38.8	-2.1
LTZ				IAmb	IAmb	08 55 41.6	
	comp=Z,24nm,0.8s						
LHI	Lord Howe Isla	19.61	245	P	P	08 55 48.6	+2.5
	baz=20,SNR=3.3						
RPZ	Rata Peaks	20.25	199	P	P	08 55 50.7	-1.1
	comp=Z,14nm,0.5s,baz=113,slow=2.5,SNR=3.2						
HNR	Honiara	24.43	305	P	P	08 56 27.9	-1.7
	comp=Z,157nm,0.7s,baz=212,slow=3.1,SNR=8.2						
HNR				ScP	ScP	09 02 44.6	+1.1
	comp=Z,66nm,0.7s,baz=192,slow=4.9,SNR=3.9						
HNR	Honiara	24.43	305	P	P	08 56 28.3	-1.3
HNR	Honiara	24.43	305	P	P	08 56 29.3	-0.3
	comp=Z,230nm,0.8s						
ARMA	Armidale	25.70	251	P	P	08 56 42.4	+1.5
	baz=26,SNR=4.2						
ARMA	Armidale	25.70	251	P	P	08 56 38.0	-3.0
ARMA				IAmb	IAmb	08 56 43.5	
	comp=Z,45nm,1.2s						
EIDS	Eidsvold	26.16	263	P	P	08 56 45.4	+0.6
	baz=26,SNR=9.2						
EIDS	Eidsvold	26.16	263	P	P	08 56 44.6	-0.2
EIDS				IAmb	IAmb	08 56 46.6	
	comp=Z,67nm,1.1s						
MGCD	Mangrove Creek	26.55	245	P	P	08 56 49.9	+1.7
	baz=27,SNR=13						
RMQ	Roma	28.16	260	P	P	08 57 04.0	+1.5
	baz=28,SNR=28						
CNB	Canberra Magne	28.40	241	P	P	08 57 06.5	+1.9
	baz=28,SNR=12						
CAN	Canberra	28.69	241	P	P	08 57 08.2	+1.1
YNG	Young	28.97	244	P	P	08 57 10.8	+1.3
	baz=29,SNR=7.6						
PAE	Paea	29.20	82	eP	P	08 57 11.9	+0.2
	comp=Z,12nm,1.3s						
PPT2	Papeete2	29.23	82	eP	P	08 57 12.7	+0.7
	comp=Z,61nm,1.3s						
PPT	Papeete	29.24	82	P	P	08 57 12.1	+0.1
	comp=Z,31nm,0.9s,baz=238,slow=5.9,SNR=4.3						
TIAR	Tiarei	29.45	82	eP	P	08 57 14.4	+0.6
	comp=Z,28nm,1.3s						
TVO	Taravao	29.46	82	eP	P	08 57 14.3	+0.3
	comp=Z,22nm,1.3s						
MEH	Mehetia	30.50	83	eP	P	08 57 23.4	+0.5
	comp=Z,24nm,1.0s						
CTA	Charters Tower	31.47	272	P	P	08 57 31.7	+0.5
	comp=Z,48nm,0.4s,baz=93,slow=11,SNR=176						
CTA				PcP	PcP	09 00 09.1	-0.5
	comp=Z,4.9nm,0.6s,baz=187,slow=0.7,SNR=2.3						
CTA				S	S	09 02 04.5	+0.6
	comp=Z,25nm,1.2s,baz=262,slow=17,SNR=4.9						
CTAO	Charters Tower	31.47	272	P	P	08 57 32.1	+0.8
VAH	Vaihoa	31.82	79	eP	P	08 57 34.6	+0.4
	comp=Z,65nm,1.2s						
TOO	Toolangi	31.96	238	P	P	08 57 35.8	+0.6
	baz=32,SNR=15						
TOO	Toolangi	31.96	238	P	P	08 57 35.4	+0.1
TOO				IAmb	IAmb	08 57 37.1	
	comp=Z,14nm,0.8s						
QLP	Quilpie	32.20	259	P	P	08 57 37.7	+0.3
	baz=32,SNR=6.1						
MTSU	Mount Surprise	33.77	274	P	P	08 57 51.7	+0.8
	baz=34,SNR=69						
STKA	Stephens Creek	34.38	249	P	P	08 57 56.2	+0.4
	baz=34,SNR=59						
STKA	Stephens Creek	34.38	249	P	P	08 57 56.1	+0.4
	comp=Z,11nm,0.5s,baz=97,slow=11,SNR=64						
STKA	Stephens Creek	34.38	249	P	P	08 57 56.3	+0.4
XMAS	Kiritimati	34.51	43	P	P	08 57 57.3	+0.2
ARPS	Mount Arapiles	34.66	241	P	P	08 57 58.5	+0.4
	baz=35,SNR=11						
PMG	Port Moresby	34.77	290	P	P	08 57 58.8	-0.4
	comp=Z,95nm,0.9s,baz=86,slow=4.5,SNR=12						
PMG	Port Moresby	34.77	290	P	P	08 57 59.6	+0.3
PMG	Port Moresby	34.77	290	P	P	08 57 59.7	+0.5

	comp=Z,137nm,1.0s						
COEN	Coen	36.24	280	P	P	08 58 12.3	+0.8
COEN				IAmb	IAmb	08 58 13.3	
	comp=Z,66nm,1.1s						
HTT	Hallett	36.70	247	P	P	08 58 15.1	-0.1
	baz=37,SNR=22						
QIS	Mount Isa	37.40	268	P	P	08 58 20.7	-0.3
	baz=37,SNR=6.8						
PATS	Pohnpei	37.85	323	P	P	08 58 22.2	-2.5
	baz=38,SNR=3.5						
BBOO	Buckleboo	39.09	248	P	P	08 58 33.9	-0.7
	baz=39,SNR=26						
BBOO	Buckleboo	39.09	248	P	P	08 58 34.0	-0.7
BBOO				IAmb	IAmb	08 58 35.7	
	comp=Z,39nm,1.1s						
AS31	Alice Springs	41.88	262	P	P	08 58 56.5	-0.6
ASAR	Alice Springs	41.88	262	P	P	08 58 57.0	-0.2
	comp=Z,71nm,1.1s,baz=95,slow=8.3,SNR=113						
ASAR				pP	pP	09 00 27.6	+1.1
	comp=Z,8.2nm,0.9s,baz=93,slow=8.7,SNR=4.8						
ASAR				ScP	ScP	09 03 46.3	+1.9
	comp=Z,1.2nm,0.9s,baz=84,slow=3.3,SNR=2.9						
ASAR				S	S	09 04 34.0	-5.0
	comp=Z,1.7nm,0.8s,baz=91,slow=17,SNR=7.3						
WR0	Warramunga Arr	42.15	267	P	P	08 58 58.6	-0.7
WR0				IAmb	IAmb	08 58 59.7	
	comp=Z,47nm,1.1s						
WB2	Warramunga Arr	42.32	267	P	P	08 59 00.1	-0.6
WB2				IAmb	IAmb	08 59 01.1	
	comp=Z,86nm,1.2s						
WRAB	Tennant Creek	42.33	267	P	P	08 58 59.2	-1.6
WRAB				IAmb	IAmb	08 59 00.5	
	comp=Z,49nm,1.0s						
WB0	Warramunga Arr	42.33	267	P	P	08 59 00.1	-0.7
WRA	Warramunga Arr	42.33	267	P	P	08 58 60.0	-0.8
	comp=Z,20nm,0.4s,baz=100,slow=6.9,SNR=148						
WRA				pP	pP	09 00 31.4	+1.0
	comp=Z,4.3nm,0.9s,baz=99,slow=7.0,SNR=2.6						
WRA				PcP	PcP	09 00 42.4	-0.7
	comp=Z,4.0nm,0.8s,baz=101,slow=3.1,SNR=3.7						
WRA				ScP	ScP	09 03 48.5	+2.1
	comp=Z,4.7nm,0.8s,baz=103,slow=3.7,SNR=7.8						
WRA				S	S	09 04 40.2	-5.3
	comp=Z,15nm,1.0s,baz=105,slow=14,SNR=14						
JAY	Jayapura	43.84	294	P	P	08 59 12.2	-0.6
	comp=Z,25nm,0.7s,baz=150,slow=3.2,SNR=6.1						
FORT	Forrest	45.99	250	P	P	08 59 27.9	-1.1
	baz=46,SNR=24						
FORT	Forrest	45.99	250	P	P	08 59 28.0	-1.1
KDU	Kakadu	46.35	276	P	P	08 59 31.0	-1.0
	baz=46,SNR=27						
WRKA	Warakurna	46.63	258	P	P	08 59 33.4	-0.6
	baz=47,SNR=34						
MTN	Manton Dam	47.51	275	P	P	08 59 39.7	-0.9
	baz=48,SNR=7.9						
MTN	Manton Dam	47.51	275	P	P	08 59 39.9	-0.8
MTN				IAmb	IAmb	08 59 55.4	
	comp=Z,53nm,1.2s						
FITZ	Fitzroy Crossi	50.74	266	P	P	09 00 04.6	0.0
	baz=51,SNR=18						
FITZ	Fitzroy Crossi	50.74	266	P	P	09 00 04.5	-0.2
	comp=Z,59nm,1.0s,baz=116,slow=6.0,SNR=35						
FITZ	Fitzroy Crossi	50.74	266	P	P	09 00 04.8	+0.1
FITZ				IAmb	IAmb	09 00 05.8	
	comp=Z,74nm,1.1s						
FAKI	Fak Fak	50.82	288	P	P	09 00 04.3	-1.0
FAKI				IAmb	IAmb	09 00 05.0	
	comp=Z,37nm,1.0s						
SIJI	Sorong	52.70	289	P	P	09 00 18.6	-0.3
	comp=Z,62nm,0.5s,baz=77,slow=6.9,SNR=40						
VNDA	Vanda	53.51	185	P	P	09 00 24.6	+1.0
	comp=Z,2.4nm,0.8s,baz=354,slow=6.9,SNR=13						
VNDA				PcP	PcP	09 01 23.2	+0.6
	comp=Z,2.0nm,0.8s,baz=42,slow=6.4,SNR=2.9						
VNDA				ScP	ScP	09 04 33.1	+0.5
	comp=Z,0.7nm,0.6s,baz=27,slow=2.3,SNR=2.8						
VNDA	Vanda	53.51	185	P	P	09 00 24.6	+1.0
KLBR	Kellerberrin	54.63	248	P	P	09 00 31.6	-0.8
	baz=55,SNR=17						
MEEK	Meekatharra	54.84	254	P	P	09 00 32.7	-1.3
	baz=55,SNR=12						
NWAO	Narrogin (SRO)	54.86	246	P	P	09 00 33.4	-0.5
NWAO				IAmb	IAmb	09 00 58.6	
	comp=Z,40nm,1.4s						
SOEI	Soe	54.90	276	P	P	09 00 35.9	+1.3
PSA00	Pilbara Seismi	54.99	260	P	P	09 00 33.8	-1.2
PSA00				IAmb	IAmb	09 00 34.5	
	comp=Z,55nm,1.4s						
BLDU	Ballidu	55.69	249	P	P	09 00 38.8	-1.0
	baz=56,SNR=22						
MUN	Mundaring	55.87	247	P	P	09 00 40.4	-0.6
	baz=56,SNR=5.7						
MORW	Morawa	56.56	250	P	P	09 00 45.3	-0.6
	baz=57,SNR=3.9						
MORW	Morawa	56.56	250	P	P	09 00 45.4	-0.5
MORW				IAmb	IAmb	09 00 45.5	
	comp=Z,20nm,0.6s						
CASY	Casey	59.32	206	P	P	09 01 03.7	-0.2
CASY				IAmb	IAmb	09 01 04.8	
	comp=Z,20nm,0.7s						
GIRL	Giralia	59.70	257	P	P	09 01 08.4	+1.2
TOLI2	Tolitoli	62.78	285	P	P	09 01 26.9	-0.7
TOLI2				IAmb	IAmb	09 01 28.6	
	comp=Z,39nm,0.8s						
JAGI	Jajag, Banyuwa	64.58	272	P	P	09 01 38.4	-0.8
QSPA	South Pole Qui	65.31	180	P	P	09 01 44.1	+1.0
	comp=Z,18nm,0.7s,baz=332,slow=0.5,SNR=83						
QSPA	South Pole Qui	65.31	180	P	P	09 01 44.1	+1.0
QSPA				IAmb	IAmb	09 01 45.5	
	comp=Z,28nm,0.8s						
UGM	Wanagama	68.10	271	P	P	09 02 00.6	-0.5
SBUM	Sibu	70.97	282	P	P	09 02 18.2	0.0
SBUM				IAmb	IAmb	09 02 19.6	
	comp=Z,24nm,1.1s						
KSM	Kuching	72.23	280	P	P	09 02 24.9	-0.7
KSM				IAmb	IAmb	09 02 26.7	
	comp=Z,55nm,1.1s						
MJAR	Matsushiro Arr	72.61	326	P	P	09 02 27.0	-0.3
	comp=Z,15nm,0.9s,baz=157,slow=5.9,SNR=22						
MAJO	Matsushiro	72.61	326	P	P	09 02 27.4	+0.1
MAJO				IAmb	IAmb	09 02 28.4	
	comp=Z,18nm,0.8s						
MAT	Matsushiro	72.61	326	P	P	09 02 27.0	-0.3
JHS	Saijyo	74.20	321	P	P	09 02 36.7	+0.3
JHS				IAmb	IAmb	09 02 38.1	
	comp=Z,88nm,1.2s						
BELA	Belgrano 2	75.57	173	P	P	09 02 43.2	-0.3
MAW	Mawson	76.92	200	P	P	09 02 51.9	+0.8
	baz=77,SNR=12						
MAW	Mawson	76.92	200	P	P	09 02 51.8	+0.8
	comp=Z,9.7nm,0.6s,baz=128,slow=9.1,SNR=16						
MAW	Mawson	76.92	200	P	P	09 02 51.3	+0.2
KSRS	Korea Array	78.90	320	P	P	09 03 03.1	+0.9
	comp=Z,6.3nm,0.9s,baz=140,slow=6.0,SNR=16						
PEA0B	Petropavlovsk-	79.94	347	P	P	09 03 08.1	+0.7
PEA0B				IAmb	IAmb	09 03 09.5	
	comp=Z,78nm,1.2s						
PETK	Petropavlovsk-	79.94	347	P	P	09 03 08.0	+0.6
	comp=Z,25nm,1.0s,baz=101,slow=7.7,SNR=7.5						
NJ2	Nanjing	81.22	311	eP	P	09 03 15.9	+1.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USA0B	Ussuriysk Arra	81.49	327	P	P	09 03 17.0	+1.4
USA0B				IAmb	IAmb	09 03 17.3	
	comp=Z,35nm,1.2s						
USRK	Ussuriysk Ar.	81.49	327	P	P	09 03 16.8	+1.2
	comp=Z,10nm,0.8s,baz=149,slow=4.5,SNR=18						
SYO	Syowa Base	82.16	193	⇓eP	P	09 03 18.2	-0.5
MDJ	Mudanjiang	82.98	326	P	P	09 03 24.6	+1.4
MDJ				pmax	pmax		
	comp=Z,19nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,400nm,4.3s						
ESJX	Sierra Juarez	83.23	50	P	P	09 03 26.0	+1.0
RMX	La Rumorosa	83.48	50	P	P	09 03 27.7	+1.5
WHN	Wuhan	83.52	308	⇑P	P	09 03 27.4	+1.2
GSI	Gunungsitoli	83.64	274	P	P	09 03 27.6	+0.3
GSI				IAmb	IAmb	09 03 29.0	
	comp=Z,31nm,0.7s						
GSI	Gunungsitoli	83.64	274	P	P	09 03 28.0	+0.7
	comp=Z,44nm,1.4s						
ISA	Isabella, Lake	83.64	46	P	P	09 03 28.1	+1.3
SNAA	Sanae	83.79	179	P	P	09 03 26.5	-0.5
SNAA	Sanae	83.79	179	P	P	09 03 26.6	-0.5
AFDM	Forest Hills D	84.05	42	P	P	09 03 29.8	+1.1
ORV	Oroville	84.11	42	P	P	09 03 30.0	+1.0
VNA2	Neumayer--Watz	84.42	178	P	P	09 03 30.1	+0.1
	baz=181,slow=4.6						
GSC	Goldstone, Bar	84.53	47	P	P	09 03 32.3	+1.0
CN2	Changchun	84.58	324	eP	P	09 03 31.4	+0.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
VNA1	Neumayer--Stat	84.66	177	P	P	09 03 31.9	+0.7
PIX	Pinacate	84.75	52	P	P	09 03 33.2	+1.0
TIA	Tai'an	84.82	314	P	P	09 03 32.9	+0.4
TIA				pmax	pmax		
	comp=Z,35nm,1.0s						
KLR	Kul'dur	85.28	331	P	P	09 03 35.5	+1.1
	comp=Z,3.0nm,0.9s,baz=140,slow=5.0,SNR=8.1						
NVAR	Mina Array Bea	85.40	44	P	P	09 03 36.5	+0.9
	comp=Z,0.7nm,0.7s,baz=222,slow=11,SNR=7.4						
NVAR				pP	pP	09 05 25.1	+0.6
	comp=Z,1.5nm,0.9s,baz=227,slow=8.3,SNR=6.8						
MLSI	Meulaboh, Aceh	85.95	277	P	P	09 03 39.5	+1.0
TUC	Tucson	87.07	52	P	P	09 03 45.3	+1.8
BJI	Beijing	87.65	316	P	P	09 03 47.1	+1.2
UTHA	Uthaitani	88.11	288	P	P	09 03 50.0	+1.4
SUKH	Sukhothai	88.79	290	P	P	09 03 53.0	+1.3
XAN	Xi'an	89.26	308	P	P	09 03 54.7	+1.0
XAN				pP	pP	09 05 42.3	-0.7
XAN				S	S	09 14 02.3	+1.3
XAN				SS	SS	09 20 14.9	+4.2
XAN				pmax	pmax		
	comp=Z,24nm,1.2s						
XAN				pmax	pmax		
	comp=Z,170nm,5.3s						
CM36	Chiang Mai Arr	89.71	290	P	P	09 03 57.0	+1.0
CM04	Chiang Mai Arr	89.75	290	P	P	09 03 58.4	+2.1
	comp=Z,158nmcomp=Z,20nm,1.1s						
CM09	Chiang Mai Arr	89.76	290	P	P	09 03 58.9	+2.6
	comp=Z,144nmcomp=Z,18nm,1.1s						
CM01	Chiang Mai Arr	89.78	290	P	P	09 03 58.0	+1.7
	comp=Z,156nmcomp=Z,18nm,1.1s						
CM05	Chiang Mai Arr	89.78	290	P	P	09 03 58.7	+2.3
	comp=Z,115nmcomp=Z,13nm,1.1s						
CM02	Chiang Mai Arr	89.80	290	P	P	09 03 58.0	+1.6
	comp=Z,150nmcomp=Z,19nm,1.1s						
CM34	Chiang Mai Arr	89.81	291	P	P	09 03 58.0	+1.5
CM31	Chiang Mai Arr	89.81	290	P	P	09 03 59.0	+2.5
	comp=Z,352nm,0.7s						
CMAR	Chiang Mai Arr	89.81	290	P	P	09 03 58.1	+1.6
	comp=Z,12nm,1.0s,baz=136,slow=3.4,SNR=52						
CMAR				pP	pP	09 05 47.3	+1.5
	comp=Z,0.8nm,0.3s,baz=148,slow=3.7,SNR=1.6						
CM15	Chiang Mai Arr	89.82	290	P	P	09 03 58.0	+1.4
CM13	Chiang Mai Arr	89.82	290	P	P	09 03 58.8	+2.2
	comp=Z,121nmcomp=Z,16nm,0.9s						
CMMT	Chiang Mai	89.96	291	P	P	09 03 58.0	+0.8
	comp=Z,13nm,1.1s						
CHTO	Chiang Mai	89.96	291	P	P	09 03 58.2	+1.0
CHTO				IAmb	IAmb	09 03 59.7	
	comp=Z,31nm,1.1s						
CM33	Chiang Mai Arr	89.96	291	P	P	09 03 58.0	+0.8
CM32	Chiang Mai Arr	89.98	290	P	P	09 04 00.0	+2.7
TXAR	Lajitas Array	90.91	58	P	P	09 04 03.2	+1.8
	comp=Z,1.3nm,0.9s,baz=235,slow=4.4,SNR=6.1						
TXAR				pP	pP	09 05 52.4	+0.8
	comp=Z,2.7nm,1.0s,baz=223,slow=5.1,SNR=9.3						
TXAR				PKKPbc	PKKPbc	09 21 24.4	+0.9
	comp=Z,0.4nm,0.6s,baz=92,slow=3.9,SNR=3.7						
HHC	Hu-ho-hao-te	91.02	315	eP	P	09 04 02.1	+0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,8.4s						
CD2	Chengdu	91.54	303	P	P	09 04 05.6	+1.3
CD2				pmax	pmax		
	comp=Z,50nm,1.1s						
ILAR	Eielson Array	92.89	14	P	P	09 04 09.7	+0.1
	comp=Z,0.6nm,0.9s,baz=238,slow=4.6,SNR=3.8						
ILAR				pP	pP	09 06 01.1	+1.2
	comp=Z,1.7nm,1.0s,baz=234,slow=4.6,SNR=5.9						
PDAR	Pinedale Array	93.33	44	P	P	09 04 12.6	+0.1
	comp=Z,0.5nm,0.8s,baz=201,slow=4.7,SNR=3.1						
PDAR				pP	pP	09 06 04.2	+1.1
	comp=Z,1.2nm,0.9s,baz=226,slow=3.9,SNR=5.0						
LZH	Lanzhou	93.89	308	eP	P	09 04 16.5	+1.4
LZH				pP	pP	09 06 06.2	+1.4
LZH				sP	sP	09 06 56.3	+1.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	Songino Array	97.75	319	P	Pdif	09 04 32.0	-0.1
	comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=1.9						
YKA	Yellowknife Ar	101.16	25	PKKPbc	PKKPbc	09 20 52.8	-4.2
	comp=Z,0.3nm,0.6s,baz=51,slow=2.7,SNR=8.1						
MKAR	Makanchi Array	112.73	312	PKiKP	PKiKP	09 09 29.6	-0.9
	comp=Z,0.7nm,0.5s,baz=163,slow=0.5,SNR=11						
MKAR				SKP	SKPdf	09 12 19.2	+0.6
	comp=Z,0.3nm,0.5s,baz=222,slow=1.7,SNR=4.5						
BANI	BANI	114.91	80		PKiKP	09 09 36.2	+0.6
KSH	Kashi	115.74	304	PKP	PKiKP	09 09 39.2	+2.5
KURK	Kurchatov	115.82	316	PKPdf	PKPdf	09 09 35.1	-1.2
CHKK	Chushkaly	115.82	308	ePKP	PKPdf	09 09 35.1	-1.4
	baz=308						
AAK	Ala-Archa	117.41	307	PKP	PKPdf	09 09 37.5	-2.4
	comp=Z,1.2nm,0.5s,baz=210,slow=4.5,SNR=4.0						
SGDS	Sogindy	117.44	308	ePKP	PKPdf	09 09 38.3	-1.4
	baz=308						
BTLS	Baital	118.09	309	ePKP	PKPdf	09 09 39.6	-1.2
	baz=309						
BRZS	Berezniki	119.52	315	ePKP	PKPdf	09 09 41.6	-1.8
	baz=315						
DZA	Taraz	119.75	307	ePKP	PKPdf	09 09 42.9	-1.2
	baz=307						
KBL	Kabul	120.22	297	PKPdf	PKiKP	09 09 45.8	+0.1
KKAR	Karatay Array	120.37	307	PKPdf	PKPdf	09 09 44.8	-0.5
IUG	Iuzhnay	120.61	306	ePKP	PKPdf	09 09 45.0	-0.9
	baz=306						
BOSA	Boshof	121.61	206	PKP	PKPdf	09 09 47.1	-1.3
	comp=Z,1.7nm,0.7s,baz=63,slow=2.3,SNR=4.8						
ARU	Arti	127.57	323	PKP	PKPdf	09 09 58.4	-0.3
	comp=Z,3.5nm,0.5s,baz=66,slow=2.6,SNR=17						
ARU	Arti	127.57	323	PKPdf	PKPdf	09 09 58.9	+0.3
AKTO	Aktyubinsk	128.91	316	PKP	PKPdf	09 10 01.5	+0.1
	comp=Z,2.1nm,0.6s,baz=98,slow=5.5,SNR=9.1						
GEYT	Alibeck	129.38	300	PKP	PKPdf	09 10 02.7	-0.1
	comp=Z,1.5nm,0.4s,baz=70,slow=12,SNR=2.0						
KIRV	Kirov	131.65	328	PKP	PKPdf	09 10 06.3	0.0
	comp=Z,10nm,0.5s,baz=10.0,slow=1.0,SNR=4.7						
KIRV				SKPbc	SKPab	09 12 46.1	-0.4
	comp=Z,15nm,0.5s,baz=104,slow=1.9,SNR=6.2						
ARCES	ARCESS Array B	132.74	348	PKhKP	PKPpre	09 10 00.9	
	comp=Z,5.5nm,1.0s,baz=22,slow=0.7,SNR=5.5						
ARCES				PKP	PKPdf	09 10 07.4	-0.7
	comp=Z,2.9nm,0.6s,baz=31,slow=1.1,SNR=15						
ARCES				SKPbc	SKPab	09 12 49.9	-1.0
	comp=Z,2.5nm,0.5s,baz=35,slow=4.4,SNR=13						
BELG	Belogornoye	134.80	320	PKP	PKPdf	09 10 11.8	-0.6
	comp=Z,11nm,0.7s,baz=228,slow=0.6,SNR=4.6						
BELG				SKPbc	SKPbc	09 12 56.6	+0.8
	comp=Z,6.4nm,0.6s,baz=90,slow=6.1,SNR=2.9						
KLMR	Klimovskoe	134.96	334	ePKPdf	PKPdf	09 10 05.8	-6.6
KLMR				AMP		09 10 12.9	
	comp=Z,23nm,1.5s						
FINES	FINESS Array B	139.27	341	PKhKP	PKPpre	09 10 11.2	
	comp=Z,2.3nm,0.4s,baz=48,slow=3.8,SNR=20						
FINES				PKP	PKPdf	09 10 21.5	+1.1
	comp=Z,2.4nm,0.5s,baz=116,slow=3.6,SNR=7.2						
FINES				SKPbc	SKPbc	09 13 09.2	+0.5
	comp=Z,2.9nm,0.6s,baz=29,slow=4.4,SNR=5.7						
NB2	NORSAR Subarra	142.94	351	PKP	PKPdf	09 10 23.9	-3.1
	comp=Z,33nm,1.4s,baz=14,slow=2.5						
NB2	NORSAR Subarra	142.94	351	PKP	PKPdf	09 10 23.9	-3.1
	baz=14,slow=2.5						
NOA	NORSAR Array B	142.94	351	PKhKP	PKPpre	09 10 23.6	
	comp=Z,5.9nm,0.9s,baz=17,slow=2.4,SNR=9.5						
IDID	Didziasalis	143.70	334	eP	PKPbc	09 10 27.4	+0.1
ISAL	Salakas	143.75	335	eP	PKPdf	09 10 28.4	-0.1
MNK	Minsk	143.81	332	i PKP	PKPab	09 10 25.9	-1.7
	comp=E,1.0nm,0.3s						
MNK				i PKP	PKPab	09 10 25.9	-1.7
	comp=N,38nm,1.1s						
MNK				i PKP	PKPab	09 10 25.9	-1.7
	comp=Z,115nm,1.1s						
MNK				i pPKP	pPKPdf	09 12 24.6	-1.3
MNK				i PP	PP	09 13 46.1	-1.8
MNK				i SKS	SKSdf	09 16 47.4	-3.1
MNK				i PPP	PPP	09 17 01.3	
MNK				i SKKS	SKKSdf	09 26 01.6	-4.7
MNK				i SS	SS	09 31 20.3	-30
MNK				i SSS	SSS	09 37 20.8	
MNK				i LRM	MLR	10 15 05.4	
	comp=N,2µm,20.3s						
MNK				i LRM	MLR	10 15 05.4	
	comp=Z,74nm,14.5s						
MNK				i LRM	MLR	10 15 05.5	
	comp=E,61nm,15.2s						
IIGN	Ignalina	143.88	335	eP	PKPdf	09 10 28.6	-0.2
NACGM	Naroch	143.98	334	i PKP	PKPbc	09 10 27.9	-0.2
NACGM				i PKP	PKPbc	09 10 27.9	-0.2
NACGM				i PKP	PKPbc	09 10 27.9	-0.2
NACGM				i PP	pPKPdf	09 12 41.1	+15
NACGM				i PPP	PPP	09 15 23.2	
NACGM				i SKS		09 17 59.7	
NACGM				i SKKS	SKKSac	09 20 29.4	+38
NACGM				i PS		09 23 06.3	
NACGM				i SS	SS	09 30 30.4	-82
NACGM				i SSS	SSS	09 35 41.7	
NACGM				i LR	LR	09 46 23.3	
PABE	Paberze	144.61	336	eP	PKPab	09 10 30.4	-0.2
AKASG	Malin Array Be	145.69	327	PKPbc	PKPbc	09 10 32.8	-0.7
	comp=E,7.0nm,0.4s,baz=45,slow=4.0,SNR=55						
AKASG				pPKPbc	pPKPab	09 12 27.1	-0.2
	comp=E,0.8nm,0.5s,baz=87,slow=4.7,SNR=1.8						
AKASG				SKPbc	SKiKP	09 13 26.4	+1.3
	comp=E,1.1nm,0.6s,baz=49,slow=3.6,SNR=1.9						
AKBB	Malin Array Si	145.69	327	PKPdf	PKPdf	09 10 32.7	+0.7
SNART	Snartemo	146.07	353	i P	PKPbc	09 10 34.8	+0.4
SNART				IAmb	IAmb	09 10 35.5	
	comp=Z,6.1nm,0.4s						
MUD	Monsted U'grnd	147.65	350	i P	PKPbc	09 10 37.9	-0.7
MUD	Monsted U'grnd	147.65	350	eP	PKPbc	09 10 38.0	-0.7
SORM	Soroca	147.69	323	⇓P	PKPbc	09 10 38.5	-0.5
BSD	Bornholm Skovb	147.75	344	i P	PKPbc	09 10 38.6	-0.3
	comp=Z,2.5nm,0.5s						
BSD	Bornholm Skovb	147.75	344	i P	PKPbc	09 10 38.6	-0.3
BSD				IAmb	IAmb	09 10 40.7	
	comp=Z,2.5nm,0.5s						
COP	Copenhagen	147.80	347	i P	PKPdf	09 10 36.8	+1.5
	comp=Z,13nm,0.4s						
COP	Copenhagen	147.80	347	i P	PKPdf	09 10 36.8	+1.5
COP				IAmb	IAmb	09 10 37.0	
	comp=Z,13nm,0.4s						
BRTR	Keskin Array B	148.08	306	PKPbc	PKPbc	09 10 40.0	-0.4
	comp=Z,7.2nm,0.7s,baz=143,slow=4.9,SNR=27						
MILM	Milestii Mici	148.13	321	⇓P	PKPbc	09 10 39.9	-0.3
BR231	Keskin MP Arra	148.68	307		PKPbc	09 10 42.3	+0.4
TLCR		149.07	318	⇓P	PKPbc	09 10 42.7	+0.2
CSS	Mathiatis	149.47	297		PKPbc	09 10 43.8	-0.1
CFR	Carcaliu	149.48	319	⇑P	PKiKP	09 10 44.0	-0.3
TPGR	Topolog	149.48	318	⇑P	PKiKP	09 10 44.1	-0.2
KWP	Kalwaria Pacla	149.52	330	ePKP	PKiKP	09 10 44.0	-0.3
TESR	Tescani	149.59	322	⇓P	PKPbc	09 10 43.7	-0.1
BIZ	Bicaz	149.63	323	⇑P	PKiKP	09 10 44.6	0.0
BURAR	Bucovina Array	149.68	325	⇓P	PKiKP	09 10 45.1	+0.3
HARR	Harsova	149.86	318	⇑P	PKiKP	09 10 45.2	+0.1
VRI	Vrincioaia	149.92	321	⇑P	PKPbc	09 10 44.7	+0.1
KOLS	Kolonicke sedl	150.22	330	ePKP	PKiKP	09 10 46.2	+0.4
KOLS				e		09 10 53.6	
OJC	Ojcow	150.31	334	ePKP	PKPbc	09 10 45.6	+0.2
OZUR		150.31	322	⇓P	PKPbc	09 10 45.7	+0.1
NEHR	Nehoiu	150.42	321	⇑P	PKPbc	09 10 46.0	+0.2
ARCR	ARCALIA	150.47	325	⇑P	PKiKP	09 10 46.6	+0.3
MLR	Muntele Rosu	150.59	321	⇑P	PKPbc	09 10 46.3	0.0
CRVS	Cervenica-Dubn	150.61	330	ePKP	PKiKP	09 10 46.7	+0.1
CRVS				e		09 10 55.6	
DOPR	Dopca	150.61	322	⇑P	PKiKP	09 10 47.0	+0.3
NIE	Niedzica	150.73	332	ePKP	PKiKP	09 10 47.3	+0.5
CJR	Cluj-Napoca	151.10	325	⇑P	PKiKP	09 10 48.1	+0.4
VOIR		151.12	322	⇓P	PKiKP	09 10 47.8	0.0
LANS	Liptovska Anna	151.28	333	ePKP	PKiKP	09 10 49.0	+1.0
OSTC	Ostas	151.36	338	⇑ePKP	PKiKP	09 10 48.3	+0.2
CHVC	Chvalec	151.39	338	⇑ePKP	PKiKP	09 10 48.1	-0.1
ARR	Arges	151.40	322	⇓P	PKiKP	09 10 49.7	+1.3
UPC	Upice	151.47	338	⇑ePKP	PKiKP	09 10 48.5	+0.2
UPC				ePKPAB	PKPab	09 10 59.0	+0.3
DPC	Dobruska-Polom	151.50	338	⇑ePKP	PKPbc	09 10 48.2	+0.1
DPC				ePKPAB	PKPab	09 10 58.0	-0.8
DRGR		151.50	326	⇓P	PKiKP	09 10 49.2	+0.6
MORC	Moravsky Berou	151.54	336	⇓P	PKiKP	09 10 49.6	+1.1
MORC	Moravsky Berou	151.54	336	ePKP	PKiKP	09 10 48.9	+0.4
KRLC	Kraliky	151.57	337	⇑ePKP	PKPbc	09 10 48.4	+0.1
KRLC				ePKPAB	PKPab	09 10 59.8	+0.7
HUMR	Humele	151.70	320	⇑P	PKiKP	09 10 49.5	+0.6
PSZ	Piszkesteto	152.04	331	eP	PKiKP	09 10 49.6	-0.1
VYHS	Vyhne	152.06	333	ePKP	PKPbc	09 10 49.3	-0.1
VYHS				e		09 11 01.7	
JAVC	Velka Javorina	152.24	334	ePKP	PKiKP	09 10 51.5	+1.5
VRAC	Vranov	152.28	336	ePKP	PKPbc	09 10 49.6	-0.2
GZR	Gura Zlata	152.40	324	⇓P	PKPbc	09 10 49.9	-0.4
KRUC	Moravsky	152.55	336	ePKP	PKiKP	09 10 51.0	+0.4
MODS	Modra-Piesok	152.78	334	ePKP	PKPbc	09 10 50.7	-0.3
NKC	Novy Kostel	152.81	342	ePKPAB	PKPab	09 11 04.3	0.0
BZS	Buzias	152.86	325	⇓P	PKPbc	09 10 51.1	-0.1
HERR	Herculane	152.93	323	⇓P	PKPbc	09 10 50.6	-0.7
KHC	Kasperske Hory	153.46	340	⇑ePKP	PKPbc	09 10 51.9	-0.5
KHC				ePKPAB	PKPab	09 11 07.8	+0.6
GRF	Grafenberg Arr	153.63	343	ePKP	PKPab	09 11 08.0	+0.2
	baz=24,slow=4.0						
MPLH	Magyarpolny	153.63	332	eP	PKiKP	09 10 52.9	0.0
GERES	GERESS Array B	153.67	339	PKPbc	PKPbc	09 10 52.7	-0.3
	comp=Z,0.7nm,0.5s,baz=48,slow=2.0,SNR=6.5						
CONA	Conrad Observa	153.69	335	eP	PKiKP	09 10 54.0	+1.0
	comp=Z,12nm,1.6s						
CONA				eP	PKPab	09 11 09.1	+0.8
	comp=Z,9.8nm,1.0s						
CONA				eP	pPKPbc	09 12 48.2	-1.4
	comp=Z,3.3nm,1.1s						
VTS	Vitosha	153.85	319	⇑P	PKPab	09 11 10.7	+1.5
MORH	Mrgy, Hungar	153.88	330	eP	PKPdf	09 10 45.2	+0.3
MOA	Molln	154.34	337	eP	PKPab	09 11 11.5	+0.5
	comp=Z,9.5nm,1.3s						
ARSA	Arzberg	154.38	335	eP	PKPab	09 11 12.0	+0.8
	comp=Z,5.5nm,1.1s						
ARSA				eP	pPKPbc	09 12 49.9	-1.1
	comp=Z,1.9nm,1.2s						
SOKA	Soboth	155.05	335	eP	PKPdf	09 10 45.8	-0.9
	comp=Z,6.9nm,1.3s						
SOKA				eP	PKPab	09 11 14.5	+0.4
	comp=Z,16nm,1.4s						
OBKA	Obir	155.37	335	eP	PKPdf	09 10 46.6	-0.5
	comp=Z,4.5nm,1.1s						
OBKA				eP	pPKPdf	09 12 40.6	-4.2
	comp=Z,4.3nm,1.0s						
MYKA	Terra Mystica	155.60	337	eP	PKPab	09 11 16.9	+0.5
	comp=Z,6.0nm,1.0s						
MYKA				eP	pPKPdf	09 12 41.0	-4.0
	comp=Z,4.0nm,1.0s						
WATA	Walderalm	155.67	341	eP	PKPab	09 11 16.9	+0.1
	comp=Z,5.5nm,0.9s						
WATA				eP	pPKPdf	09 12 40.2	-5.0
	comp=Z,7.7nm,1.1s						
WTTA	Wattenberg	155.71	340	eP	PKPab	09 11 17.3	+0.2
	comp=Z,7.2nm,0.7s						
WTTA				eP	pPKPdf	09 12 43.4	-1.9
	comp=Z,8.3nm,1.3s						
RETA	Reutte	155.77	342	eP	PKPdf	09 10 47.9	+0.3
RETA				eP	PKPab	09 11 17.9	+0.7
	comp=Z,16nm,1.2s						
RETA				eP	pPKPdf	09 12 42.3	-3.0
	comp=Z,11nm,1.3s						
MOTA	Moosalm	155.80	341	eP	PKPab	09 11 18.0	+0.6
	comp=Z,17nm,1.2s						
SQTA	Sankt Quirin	155.88	341	eP	PKPdf	09 10 48.3	+0.5
	comp=Z,3.2nm,0.9s						
SQTA				eP	PKPab	09 11 18.7	+1.0
	comp=Z,12nm,1.3s						
SQTA				eP	pPKPdf	09 12 43.8	-1.7
	comp=Z,8.1nm,1.0s						
ABTA	Abfaltersbach	155.89	339	eP	PKPdf	09 10 47.1	-0.6
	comp=Z,5.8nm,0.8s						
ABTA				eP	PKPab	09 11 17.9	+0.1
	comp=Z,5.1nm,0.7s						
ABTA				eP	pPKPdf	09 12 44.8	-0.7
	comp=Z,7.1nm,1.3s						
DAVA	Damuels	156.19	343	eP	PKPab	09 11 19.9	+0.8
	comp=Z,9.1nm,1.1s						
DAVA				eP	pPKPdf	09 12 42.7	-3.2
	comp=Z,13nm,1.6s						
FETA	Feichten	156.20	342	eP	PKPdf	09 10 48.4	+0.1
	comp=Z,2.9nm,0.9s						
FETA				eP	PKPab	09 11 19.6	+0.4
	comp=Z,7.6nm,1.3s						
FETA				eP	pPKPdf	09 12 38.6	-7.4
	comp=Z,6.2nm,1.3s						
ITM	Ithomi	157.54	309	PKPab	PKPab	09 11 25.3	+0.1

LIC	**Lamto**	**160.94**	**165**	*e*PKP2	**PKPab**	**09 11 40.8**	**+0.5**
	comp=Z,15nm,0.8s						
KIC	**Kosan Boka**	**161.14**	**165**	*e*PKP2	**PKPab**	**09 11 41.2**	**0.0**
	comp=Z,4.0nm,0.7s						
TIC	**Toumodi**	**161.34**	**164**	*e*PKP2	**PKPab**	**09 11 42.5**	**+0.4**
ESDC	**Sonseca Array**	**164.78**	**12**	PKPab	**PKPab**	**09 11 57.0**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=338,slow=5.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**168.32**	**188**	PKP	**PKPdf**	**09 10 59.9**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=138,slow=0.3,SNR=7.8						
TORD				PKPab	**PKPab**	**09 12 12.7**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=176,slow=3.4,SNR=12						
TORD				pPKP	**pPKPdf**	**09 13 00.7**	**+1.7**
	comp=Z,4.4nm,1.3s,baz=90,slow=1.5,SNR=2.7						

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*NOU **08** 08:52:24.2, 41°.86S×174°.59E, h34^{km}, MLv3.8, Cook Strait, New Zealand*

WEL 08 08:52:24.5, 42°S±1°×**17°4E**±°**, h39**^{km}±2^{km}**, M3.8**/22, **ML3.9**/22, **MLv3.8**/22, **Error ellipse: s-maj=0.0km s-min=0.0km az=113.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.17**	**291**	P	Pn	08 52 31.6	-1.8
CMWZ				S	Sn	08 52 36.2	-5.1
BSWZ	**Blackbirch Sta**	**0.42**	**283**	P	Pn	08 52 34.7	+0.8
BSWZ				S	Sn	08 52 41.5	+0.6
BHW	**Baring Head**	**0.52**	**40**	P	Pn	08 52 36.4	+0.9
BHW				S	Sn	08 52 44.2	+1.1
TUWZ	**Tuamarina**	**0.52**	**316**	P	Pn	08 52 35.7	+0.2
TUWZ				S	Sn	08 52 43.3	+0.1
WEL	**Wellington**	**0.58**	**26**	P	Pn	08 52 37.2	+0.8
WEL				S	Sn	08 52 46.1	+1.4
TCW	**Tory Channel**	**0.61**	**349**	P	Pn	08 52 37.0	+0.3
TCW				S	Sn	08 52 45.1	-0.2
PLWZ	**Palliser**	**0.67**	**69**	S	Sn	08 52 48.9	+2.1
MSWZ	**Moikau Station**	**0.73**	**58**	P	Pn	08 52 39.6	+1.2
MSWZ				S	Sn	08 52 49.9	+1.6
CAW	**Cannon Point**	**0.85**	**35**	P	Pn	08 52 41.2	+1.2
CAW				S	Sn	08 52 52.8	+1.6
PAWZ	**Paruwai Farm**	**0.86**	**61**	P	Pn	08 52 41.1	+0.9
PAWZ				S	Sn	08 52 53.0	+1.4
KHZ	**Kahutara**	**0.90**	**227**	P	Pn	08 52 42.0	+1.5
KHZ				S	Sn	08 52 53.3	+1.0
NNZ	**Nelson**	**0.98**	**307**	P	Pn	08 52 42.5	+0.7
NNZ				S	Sn	08 52 56.2	+1.8
KIW	**Kapiti Island**	**1.02**	**21**	P	Pn	08 52 43.4	+1.2
KIW				S	Sn	08 52 57.6	+2.4
TRWZ	**Traveller**	**1.03**	**67**	P	Pn	08 52 43.2	+0.7
MTW	**Mount Morrison**	**1.04**	**52**	P	Pn	08 52 43.3	+0.8
MTW				S	Sn	08 52 57.4	+1.6
DUWZ	**D’Urville Isla**	**1.08**	**339**	P	Pn	08 52 44.3	+1.3
DUWZ				S	Sn	08 52 57.4	+0.6
THZ	**Tophouse**	**1.14**	**272**	P	Pn	08 52 45.0	+1.1
THZ				S	Sn	08 52 59.8	+1.5
OGWZ	**Otaki Gorge**	**1.14**	**30**	P	Pn	08 52 45.1	+1.2
HOWZ	**Holdsworth Sta**	**1.23**	**42**	P	Pn	08 52 45.9	+0.8
TMWZ	**Te Maipa**	**1.31**	**58**	P	Pn	08 52 46.8	+0.6
MRZ	**Mangatainoka R**	**1.44**	**38**	P	Pn	08 52 48.9	+0.9
TIWZ	**Tintock**	**1.51**	**47**	P	Pn	08 52 49.4	+0.4
GVZ	**Greta Valley S**	**1.55**	**221**	P	Pn	08 52 50.8	+1.2
CPWZ	**Castlepoint**	**1.61**	**57**	P	Pn	08 52 51.0	+0.6
PRWZ	**Pori Road**	**1.71**	**43**	P	Pn	08 52 52.3	+0.6
QRZ	**Quartz Range**	**1.73**	**304**	P	Pn	08 52 53.9	+1.9
OHWZ	**Ohakea**	**1.74**	**23**	P	Pn	08 52 54.7	+2.6
POWZ	**Post Office Ro**	**1.74**	**36**	P	Pn	08 52 52.9	+0.7
BFZ	**Birch Farm**	**1.78**	**51**	P	Pn	08 52 52.6	-0.1
LTZ	**Lake Taylor**	**1.87**	**238**	P	Pn	08 52 55.2	+1.2
AMCZ	**Amberley**	**1.89**	**223**	P	Pn	08 52 55.1	+0.9
DSZ	**Denniston Nort**	**1.96**	**271**	P	Pn	08 52 56.9	+1.6
DVHZ	**Dannevirke**	**2.00**	**42**	P	Pn	08 52 55.8	0.0
ANWZ	**Angora Road**	**2.05**	**50**	P	Pn	08 52 56.2	-0.2
WAZ	**Wanganui**	**2.10**	**12**	P	Pn	08 53 00.1	+3.0
TSZ	**Takapari Road**	**2.10**	**34**	P	Pn	08 52 57.8	+0.6
OKCZ	**Okains Bay**	**2.16**	**207**	P	Pn	08 52 58.4	+0.5
PRHZ	**Porangahau**	**2.27**	**48**	P	Pn	08 52 59.0	-0.5
MQZ	**McQueen’s Vall**	**2.30**	**214**	P	Pn	08 52 59.6	-0.2
WPHZ	**Waipukurau**	**2.32**	**42**	P	Pn	08 53 00.2	+0.1
OXZ	**Oxford**	**2.32**	**229**	P	Pn	08 53 00.3	+0.2
PNHZ	**Pukenui**	**2.32**	**36**	P	Pn	08 53 00.4	+0.2
AKCZ	**Akaroa Harbour**	**2.34**	**208**	P	Pn	08 53 00.7	+0.3
LREZ	**Lake Rotokare**	**2.35**	**360**	P	Pn	08 53 05.9	+5.4
INZ	**Inchbonnie**	**2.39**	**247**	P	Pn	08 53 02.4	+1.3
NMEZ	**Namu Road**	**2.43**	**350**	P	Pn	08 53 07.0	+5.4
PREZ	**Palmer Road**	**2.47**	**355**	P	Pn	08 53 07.7	+5.4
KHEZ	**Kahui Hut**	**2.53**	**353**	P	Pn	08 53 07.5	+4.4
NEZ	**North Egmont**	**2.55**	**354**	P	Pn	08 53 07.3	+4.0
MTVZ	**Mangateitei**	**2.55**	**19**	P	Pn	08 53 05.3	+2.0
RACZ	**Rakaia**	**2.55**	**221**	P	Pn	08 53 03.2	-0.1
PXZ	**Pawanui**	**2.56**	**47**	P	Pn	08 53 02.6	-0.8
NBEZ	**Newall Road No**	**2.57**	**350**	P	Pn	08 53 08.0	+4.4
MOVZ	**Moawhango**	**2.60**	**23**	P	Pn	08 53 05.2	+1.1
PKVZ	**Pokaka**	**2.61**	**16**	P	Pn	08 53 06.6	+2.4
KRHZ	**Kereru**	**2.62**	**35**	P	Pn	08 53 04.3	0.0
DREZ	**Durham Road**	**2.62**	**356**	P	Pn	08 53 09.2	+4.9
BHHZ	**Black Hill Sta**	**2.63**	**29**	P	Pn	08 53 05.3	+0.8
PKE	**Pukeiti**	**2.63**	**353**	P	Pn	08 53 09.2	+4.7
WNVZ	**Wahianoa**	**2.64**	**20**	P	Pn	08 53 06.3	+1.7
TRVZ	**Turoa**	**2.65**	**19**	P	Pn	08 53 06.9	+2.1
DRZ	**Dome Shelter**	**2.68**	**19**	P	Pn	08 53 07.9	+2.6
WHVZ	**Whangaehu Hut**	**2.68**	**20**	P	Pn	08 53 07.3	+2.1
FWVZ	**Far West T-bar**	**2.69**	**19**	P	Pn	08 53 07.5	+2.0
VRZ	**Vera Road**	**2.69**	**6**	P	Pn	08 53 08.7	+3.4
TUVZ	**Tukino**	**2.71**	**21**	P	Pn	08 53 07.4	+1.8
KAHZ	**Kahuranaki**	**2.74**	**44**	P	Pn	08 53 05.3	-0.6
NGZ	**Ngauruhoe**	**2.78**	**19**	P	Pn	08 53 08.5	+1.9
OTVZ	**Oturere**	**2.81**	**20**	P	Pn	08 53 08.8	+1.8
KWHZ	**Kaweka Forest**	**2.83**	**33**	P	Pn	08 53 07.1	0.0
WTVZ	**West Tongariro**	**2.83**	**19**	P	Pn	08 53 09.2	+1.9
TWVZ	**Taurewa**	**2.84**	**16**	P	Pn	08 53 10.5	+3.1
ETVZ	**East Tongariro**	**2.84**	**21**	P	Pn	08 53 09.0	+1.5
WACZ	**Wakanui South**	**2.85**	**221**	P	Pn	08 53 07.6	+0.2
TMVZ	**Te Maari**	**2.86**	**20**	P	Pn	08 53 09.2	+1.5
KRVZ	**Karewarewa**	**2.87**	**19**	P	Pn	08 53 09.6	+1.8
MCHZ	**McNeill Hill**	**2.93**	**37**	P	Pn	08 53 08.3	-0.2
KATZ	**Kakaramea**	**2.99**	**19**	P	Pn	08 53 12.4	+2.9
WVZ	**Waitaha Valley**	**3.01**	**244**	P	Pn	08 53 10.8	+1.3
BKZ	**Black Stump Fm**	**3.08**	**32**	P	Pn	08 53 10.3	-0.3
RPZ	**Rata Peaks**	**3.13**	**231**	P	Pn	08 53 11.8	+0.5
ARCZ	**Arundel**	**3.20**	**227**	P	Pn	08 53 12.7	+0.4
ARHZ	**Aropaoanui**	**3.21**	**38**	P	Pn	08 53 11.9	-0.5
NMHZ	**Naumai**	**3.26**	**35**	P	Pn	08 53 12.8	-0.3
HIZ	**Hauiti**	**3.31**	**6**	P	Pn	08 53 16.8	+3.1
MRHZ	**Matea Rd**	**3.34**	**28**	P	Pn	08 53 14.3	+0.1
GCSZ	**Gaunt Creek Bo**	**3.38**	**242**	P	Pn	08 53 16.8	+2.2
MTHZ	**Maungataniwha**	**3.48**	**33**	P	Pn	08 53 15.7	-0.5
ALRZ	**Allen Road**	**3.56**	**25**	P	Pn	08 53 18.3	+1.1
TLZ	**Tolley Road**	**3.58**	**14**	P	Pn	08 53 20.2	+2.7
TMZ	**Timaru**	**3.59**	**223**	P	Pn	08 53 18.1	+0.5
MUGZ	**Murupara**	**3.78**	**29**	P	Pn	08 53 21.3	+1.1
FOZ	**Fox Glacier**	**3.81**	**242**	P	Pn	08 53 22.1	+1.5
TARZ	**Mount Tarawera**	**3.91**	**25**	P	Pn	08 53 22.4	+0.4
URZ	**Urewera**	**4.10**	**31**	P	Pn	08 53 23.8	-0.7
TOZ	**Tahuroa Road**	**4.16**	**12**	P	Pn	08 53 27.5	+2.1
ODZ	**Otahua Downs**	**4.25**	**219**	P	Pn	08 53 26.4	-0.2
TWGZ	**Tauwhareparae**	**4.54**	**38**	P	Pn	08 53 29.8	-0.9
RUGZ	**Raukumara Rang**	**4.58**	**34**	P	Pn	08 53 29.9	-1.4
JCZ	**Jackson Bay**	**4.72**	**239**	P	Pn	08 53 33.9	+0.7
AWAZ	**Awhitu Peninsu**	**4.74**	**2**	P	Pn	08 53 37.0	+3.6
HAZ	**Te Kaha**	**4.80**	**34**	P	Pn	08 53 32.8	-1.4
PKGZ	**Pakihiroa**	**4.82**	**37**	P	Pn	08 53 33.8	-0.8
WKZ	**Wanaka**	**4.96**	**231**	P	Pn	08 53 36.4	-0.1
EAZ	**Earnscleugh**	**5.05**	**226**	P	Pn	08 53 38.2	+0.6
WHZ	**Wether Hill Ro**	**6.21**	**227**	P	Pn	08 54 00.1	+6.5
CTZ	**Chatham Island**	**6.87**	**109**	P	Pn	08 54 03.4	+0.8

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*NNC **08** 08:56:34.4±8.8, 53°.74N×88°.25E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=70.4km s-min=41.4km az=52.0, Suspected Mining explosion.*

*IDC **08** 08:56:36.2±2.7, 53°.77N×88°.12E, h0^{km}, mb1 3.2/2, mb1mx3.1/48, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=23.2km s-min=16.5km az=58.0*

ISC 08 08:56:26.5±2.8**, 52°.27N**±0°.09×**88°.2E**±0°.2**, h0**^{km}**, n8, σ1**^{s}**16**/11**, 7C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.64**	**311**	*i*		09 10 10.0	
	baz=90,slow=333,SNR=2.5						
ZAA0	**Zalesovo Array**	**2.64**	**311**	⇑Pg	**Pn**	**08 57 10.9**	**+0.6**
	2.5nm,0.5s						
ZAA0				⇑Lg	Lg	08 57 38.9	
	13nm,0.9s						
ZALV	**Zalesovo Beam**	**2.64**	**311**	Pn	**Pn**	**08 57 11.1**	**+0.7**
	4.8nm,0.3s,baz=96,slow=12,SNR=98						
ZALV				Lg	Lg	08 57 38.1	
	6.9nm,0.3s,baz=93,slow=25,SNR=22						
KURK	**Kurchatov**	**6.17**	**259**	⇓Pn	**Pb**	**08 58 14.9**	**0.0**
	2.3nm,0.7s						
KURK				⇓Lg	Lg	09 00 07.1	
	5.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.26**	**259**	Pn	**Pb**	**08 58 16.4**	**+0.1**
	0.3nm,0.3s,baz=62,slow=14,SNR=19						
KURBB				Sn	**Sb**	**08 59 30.9**	**-0.7**
	0.0nm,0.3s,baz=72,slow=22,SNR=1.3						
KURBB				Lg	Lg	09 00 08.0	
	0.1nm,0.3s,baz=59,slow=29,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.26**	**259**	⇑Pn	**Pb**	**08 58 16.2**	**-0.1**
	2.9nm,0.4s						
KURBB				⇓Sn	**Sb**	**08 59 30.9**	**-0.7**
	4.4nm,0.6s						
KURBB				⇑Lg	Lg	09 00 08.1	
	6.9nm,0.7s						
MK31	**Makanchi Array**	**6.69**	**217**	⇑Pn	**Pg**	**08 58 33.2**	**-1.3**
	0.3nm,0.5s,baz=28,slow=13,SNR=7.8						
MK31				⇑Sn	**Sg**	**09 00 03.0**	**+1.9**
	0.3nm,0.4s,baz=257,slow=48,SNR=4.5						
MK31				⇑Lg	Lg	09 00 44.8	
	1.5nm,0.7s,baz=38,slow=28						
MKAR	**Makanchi Array**	**6.69**	**217**	Pn	**Pg**	**08 58 33.4**	**-1.2**
	0.2nm,0.3s,baz=28,slow=13,SNR=9.9						
MKAR				Sn	**Sg**	**09 00 02.6**	**+1.4**
	0.2nm,0.3s,baz=38,slow=28,SNR=6.2						
MKAR				Lg	Lg	09 00 47.0	
	0.1nm,0.3s,baz=32,slow=31,SNR=2.5						

IDC 08 08:58:37.4±1.2**, 3°.97S**×**150°.87E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.6**/35**, mbtmp3.8**/4**, ML1.3**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=28.7km s-min=19.8km az=169.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.20**	**106**	Pn	Pn	08 59 01.5	0.0
	180nm,0.3s,baz=206,slow=1.3,SNR=15						
KRVT				Sn	Sn	08 59 20.1	+1.6
	156nm,0.3s,baz=174,slow=20,SNR=8.3						
KRVT				LR	LR	08 59 30.0	
	comp=Z,255nm,21.1s,baz=5.6,slow=44						
PMG	**Port Moresby**	**6.54**	**214**	Pn	Pn	09 00 16.8	+1.8
	0.4nm,0.3s,baz=136,slow=9.4,SNR=2.2						
PMG				Sn	Sn	09 01 30.6	+0.2
	3.7nm,0.3s,baz=142,slow=14,SNR=6.8						
ASAR	**Alice Springs**	**25.54**	**218**	P	P	09 04 06.9	-1.2
	1.2nm,0.8s,baz=51,slow=9.2,SNR=5.4						
FITZ	**Fitzroy Crossi**	**28.41**	**238**	LR	LR	09 17 47.4	
	comp=Z,71nm,21.0s,baz=308,slow=40						
ILAR	**Eielson Array**	**82.12**	**23**	P	P	09 10 59.2	-0.5
	0.3nm,0.5s,baz=250,slow=4.9,SNR=4.1						
YKA	**Yellowknife Ar**	**95.59**	**28**	P	P	09 12 03.6	-0.8
	0.2nm,0.8s,baz=268,slow=4.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**148.22**	**289**	PKPbc	PKiKP	09 18 27.8	-0.5
	0.4nm,0.6s,baz=42,slow=4.5,SNR=1.6						

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*SOME **08** 09:20:11.6, 41°.12N×76°.05E, h5^{km}*

*KRNET **08** 09:20:12.5±0.1, 41°.15N×76°.12E, h20^{km}, mb2.8*

*NNC **08** 09:20:13.6±0.8, 41°.15N×76°.17E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=5.3km s-min=3.1km az=1.0*

*KNET **08** 09:20:13.8±0.8, 41°.18N×76°.13E, h23^{km}±6^{km}, ml2.2, Error ellipse: s-maj=7.0km s-min=5.0km az=57.0*

ISC 08 09:20:14.7±1.5**, 41°.23N**±0°.05×**76°.12E**±0°.03**, h9**^{km}±11^{km}**, n64, σ1**^{s}**29**/107**, 34C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.02**	**5**	⇓*i*P	**Pg**	**09 20 33.3**	**-1.0**
	baz=5.0						
ULHL				⇓*i*S	**Sn**	**09 20 48.3**	**-1.6**
	baz=5.0						
ULHL	**Ulahol**	**1.02**	**5**	⇓P	**Pg**	**09 20 33.4**	**-1.0**
	5.5nm,0.1s,SNR=9.6						
ULHL				⇓S	**Sn**	**09 20 49.0**	**-0.9**
	31nm,0.2s						
KDJ	**Kajisay**	**1.20**	**41**	⇑*i*P	**Pb**	**09 20 35.9**	**-1.8**
	baz=39						
KDJ				⇑*i*S	**Sn**	**09 20 53.6**	**-0.7**
	baz=39						
BOOM	**Boomskoye usch**	**1.27**	**354**	⇑*i*P	**Pb**	**09 20 37.7**	**-1.2**
	baz=54						
BOOM				⇑*i*S	**Sn**	**09 20 56.2**	**+0.2**
	baz=54						
ARLS	**Aral**	**1.49**	**296**	⇓*i*P	**Pn**	**09 20 40.5**	**-1.3**
	baz=98						
ARLS				⇓*i*S	**Sn**	**09 21 01.1**	**-0.3**
	baz=98						
UCH	**Uchtor**	**1.56**	**310**	⇑*i*P	**Pn**	**09 20 42.6**	**-0.4**
	baz=12						
UCH				⇑*i*S	**Sb**	**09 21 04.1**	**0.0**
	baz=12						
KBK	**Karagaybulak**	**1.67**	**329**	⇓*i*P	**Pn**	**09 20 44.6**	**+0.3**
	baz=30						
KBK				⇓*i*S	**Sg**	**09 21 07.9**	**-0.7**
	baz=30						
KBK	**Karagaybulak**	**1.67**	**329**	⇑P	**Pb**	**09 20 45.5**	**-0.3**
	9.6nm,0.1s,SNR=9.7						
KBK				⇓S	**Sg**	**09 21 09.2**	**+0.7**
	73nm,0.3s						
TKM2	**Tokmak 2**	**1.74**	**347**	⇑*i*P	**Pn**	**09 20 45.9**	**+0.7**
	baz=48						
TKM2				⇑*i*S	**Sg**	**09 21 10.6**	**0.0**
	baz=48						
TKM2	**Tokmak 2**	**1.74**	**347**	⇑P	**Pb**	**09 20 46.5**	**-0.3**
	5.5nm,0.1s,SNR=12						
TKM2				⇓S	**Sg**	**09 21 11.6**	**+1.1**
	14nm,0.1s						
TKM2	**Tokmak 2**	**1.74**	**347**	⇑P	**Pb**	**09 20 46.5**	**-0.3**
	4.0nm,0.3s						
TKM2				⇓S	**Sg**	**09 21 11.4**	**+0.8**
	3.7nm,0.2s						
KST	**Kastek**	**1.82**	**356**	*e*P	**Pb**	**09 20 48.2**	**0.0**
	10nm,0.2s						
KST				*e*S	**Sg**	**09 21 14.4**	**+1.3**
	10nm,0.5s						
KST	**Kastek**	**1.82**	**356**	Pg	**Pb**	**09 20 48.2**	**0.0**
	10nm,0.2s						
KST				Lg	Lg	09 21 14.4	
	10nm,0.5s						
AAK	**Ala-Archa**	**1.86**	**320**	⇑*i*P	**Pn**	**09 20 47.1**	**+0.3**
	baz=21						
AAK				⇑*i*S	**Sb**	**09 21 12.7**	**+0.4**
	baz=21						
AAK	**Ala-Archa**	**1.86**	**320**	⇓P	**Pb**	**09 20 48.4**	**-0.5**
	4.9nm,0.2s,SNR=11						
AAK				⇓S	**Sg**	**09 21 14.3**	**-0.2**
	11nm,0.2s						
AAK	**Ala-Archa**	**1.86**	**320**	⇑P	**Pb**	**09 20 49.2**	**+0.3**
	4.1nm,0.6s						
AAK				⇑S	**Sg**	**09 21 14.0**	**-0.5**
	14nm,0.6s						
TNSS	**Tian-Shan**	**1.91**	**19**	⇓*e*P	**Pb**	**09 20 49.4**	**-0.6**
	6.0nm,0.3s						
TNSS				*e*S	**Sg**	**09 21 16.0**	**-0.1**
	7.8nm,0.5s						
TNSS	**Tian-Shan**	**1.91**	**19**	Pg	**Pb**	**09 20 49.3**	**-0.7**
	6.0nm,0.3s						
TNSS				Lg	Lg	09 21 16.0	
	7.8nm,0.5s						
MTBS	**Maitube**	**1.92**	**7**	*e*P	**Pb**	**09 20 50.1**	**+0.3**
	7.3nm,0.2s						
MTBS				*e*S	**Sg**	**09 21 17.5**	**+1.2**
	8.9nm,0.2s						
MTBS	**Maitube**	**1.92**	**7**	Pg	**Pb**	**09 20 50.1**	**+0.3**
	7.3nm,0.2s						
MTBS				Lg	Lg	09 21 17.5	
	8.9nm,0.2s						
ANVS	**Anan'yevo**	**1.94**	**36**	⇑*i*P	**Pb**	**09 20 49.4**	**-0.8**
	baz=35						
ANVS				⇑*i*S	**Sg**	**09 21 15.5**	**-1.4**
	baz=35						
AML	**Almayashu**	**2.03**	**297**	⇓*i*P	**Pn**	**09 20 49.4**	**0.0**
	baz=99						
AML				⇓*i*S	**Sn**	**09 21 16.3**	**+1.3**
	baz=99						
AML	**Almayashu**	**2.03**	**297**	⇑P	**Pn**	**09 20 50.4**	**+1.0**
	5.9nm,0.2s,SNR=9.7						
AML				⇑S	**Sb**	**09 21 17.9**	**+0.4**
	12nm,0.3s						
DGS	**Degeres**	**2.03**	**353**	*e*P	**Pb**	**09 20 52.2**	**+0.4**
	6.3nm,0.4s						
DGS				*e*S	**Sg**	**09 21 20.9**	**+0.9**
	14nm,0.2s						
DGS	**Degeres**	**2.03**	**353**	Pg	**Pb**	**09 20 52.2**	**+0.4**
	6.3nm,0.4s						
DGS				Lg	Lg	09 21 20.9	
	14nm,0.2s						
CHMS	**Chumysh**	**2.04**	**331**	⇑*i*P	**Pn**	**09 20 49.7**	**+0.5**
	baz=32						
CHMS				⇑*i*S	**Sb**	**09 21 17.2**	**-0.2**
	baz=32						
MDOK	**Medeo**	**2.05**	**19**	*e*P	**Pb**	**09 20 51.6**	**-0.5**
	5.5nm,0.3s						
MDOK				*e*S	**Sg**	**09 21 20.1**	**-0.6**
	18nm,0.4s						
MDOK	**Medeo**	**2.05**	**19**	⇑Pg	**Pb**	**09 20 51.7**	**-0.5**
	3.7nm,0.5s						
MDOK				⇓Lg	Lg	09 21 21.7	
	6.6nm,0.5s						
MDOK	**Medeo**	**2.05**	**19**	Pg	**Pb**	**09 20 51.2**	**-1.0**
	5.5nm,0.3s						
MDOK				Lg	Lg	09 21 19.7	
	18nm,0.4s						
KOTS	**Kotyrbulak**	**2.14**	**20**	*e*P	**Pb**	**09 20 54.1**	**+0.4**
	10nm,0.3s						
KOTS				*e*S	**Sg**	**09 21 24.4**	**+1.0**
	26nm,0.4s						
KOTS	**Kotyrbulak**	**2.14**	**20**	Pg	**Pb**	**09 20 54.2**	**+0.6**
	10nm,0.3s						
KOTS				Lg	Lg	09 21 24.4	
	26nm,0.4s						
EKS2	**Erkin-Say**	**2.26**	**310**	⇑*i*P	**Pn**	**09 20 52.6**	**+0.3**
	baz=12						
EKS2				⇑*i*S	**Sb**	**09 21 22.3**	**-1.5**
	baz=12						
SFK	**Sufi-Kurgan**	**2.33**	**240**	⇑*i*P	**Pn**	**09 20 53.0**	**-0.4**
	baz=41						
SFK				⇑*i*S	**Sn**	**09 21 22.1**	**-0.2**
	baz=41						
USP	**Ospenovka**	**2.37**	**330**	⇑*e*P	**Pn**	**09 20 54.4**	**+0.7**
	baz=31						
USP				⇑*i*S	**Sb**	**09 21 25.0**	**-1.8**
	baz=31						
ARSB	**Arslanbob**	**2.37**	**273**	⇑*i*P	**Pn**	**09 20 53.7**	**-0.1**
	baz=75						
ARSB				⇑*i*S	**Sn**	**09 21 23.6**	**+0.6**
	baz=75						
SGDS	**Sogindy**	**2.48**	**334**	Pg	**Pb**	**09 20 59.7**	**+0.2**
	5.3nm,0.4s						
SGDS				Lg	Lg	09 21 34.0	
	12nm,0.3s						
KRBS	**Karabastau**	**2.49**	**353**	*e*P	**Pb**	**09 21 00.2**	**+0.6**
	15nm,0.4s						
KRBS				*e*S	**Sg**	**09 21 35.0**	**+0.4**
	12nm,0.3s						
KRBS	**Karabastau**	**2.49**	**353**	Pg	**Pb**	**09 21 00.2**	**+0.6**
	15nm,0.4s						
KRBS				Lg	Lg	09 21 35.0	
	12nm,0.3s						
SATY	**Saty**	**2.50**	**42**	*e*P	**Pb**	**09 20 59.7**	**-0.1**
	2.7nm,0.4s						
SATY				*e*S	**Sg**	**09 21 33.6**	**-1.4**
	25nm,0.3s						
SATY	**Saty**	**2.50**	**42**	Pg	**Pb**	**09 20 59.7**	**-0.1**
	2.7nm,0.4s						
SATY				Lg	Lg	09 21 33.6	
	25nm,0.3s						
KTBS	**Karatobe**	**2.52**	**9**	*e*P	**Pb**	**09 21 00.6**	**+0.5**
	11nm,0.3s						
KTBS				*e*S	**Sg**	**09 21 35.4**	**-0.2**
	26nm,0.4s						
KTBS	**Karatobe**	**2.52**	**9**	Pg	**Pb**	**09 21 00.6**	**+0.5**
	11nm,0.3s						
KTBS				Lg	Lg	09 21 35.4	
	26nm,0.4s						
MRKS	**Merke**	**2.64**	**306**	*e*P	**Pb**	**09 21 01.4**	**-0.7**
	4.9nm,0.2s						
MRKS				*e*S	**Sb**	**09 21 36.8**	**+2.1**
	10nm,0.4s						
MRKS	**Merke**	**2.64**	**306**	Pg	**Pb**	**09 21 01.4**	**-0.7**
	4.9nm,0.2s						
MRKS				Lg	Lg	09 21 36.8	
	10nm,0.4s						
CHKK	**Chushkaly**	**2.70**	**13**	*e*P	**Pb**	**09 21 04.2**	**+0.9**
	5.2nm,0.2s						
CHKK				*e*S	**Sg**	**09 21 41.5**	**0.0**
	13nm,0.3s						
CHKK	**Chushkaly**	**2.70**	**13**	Pg	**Pb**	**09 21 04.1**	**+0.9**
	5.2nm,0.2s						
CHKK				Lg	Lg	09 21 41.5	
	13nm,0.3s						
UZB	**Uzynbulak**	**2.89**	**47**	*e*P	**Pb**	**09 21 06.3**	**-0.1**
	5.9nm,0.3s						
UZB				*e*S	**Sg**	**09 21 45.0**	**-2.5**
	7.4nm,0.5s						
UZB	**Uzynbulak**	**2.89**	**47**	Pg	**Pb**	**09 21 06.3**	**-0.1**
	5.9nm,0.3s						
UZB				Lg	Lg	09 21 44.9	
	7.4nm,0.5s						
KPKS	**Kokpek**	**2.94**	**40**	*e*P	**Pb**	**09 21 07.5**	**+0.2**
	10nm,0.4s						
KPKS				*e*S	**Sg**	**09 21 46.9**	**-2.1**
	30nm,0.5s						
MNAS	**Manas**	**2.98**	**296**	⇑*i*P	**Pn**	**09 21 02.6**	**+0.4**
	baz=98						
MNAS				⇑*i*S	**Sn**	**09 21 39.3**	**+1.2**
	baz=98						
SHLS	**Shalkode**	**3.14**	**51**	*e*P	**Pg**	**09 21 15.9**	**+1.0**
	5.4nm,0.1s						
SHLS				*e*S	**Sg**	**09 22 01.9**	**+6.2**
	12nm,0.5s						
SHLS	**Shalkode**	**3.14**	**51**	Pg	**Pg**	**09 21 17.1**	**+2.2**
	5.4nm,0.1s						
SHLS				Lg	Lg	09 22 03.5	
	12nm,0.5s						
ARXS	**Arharly**	**3.24**	**22**	*e*P	**Pb**	**09 21 13.5**	**+1.1**
	6.5nm,0.6s						
ARXS				*e*S	**Sg**	**09 21 57.7**	**-1.0**
	4.5nm,0.3s						
ARXS	**Arharly**	**3.24**	**22**	Pg	**Pb**	**09 21 13.5**	**+1.1**
	6.5nm,0.6s						
ARXS				Lg	Lg	09 21 57.7	
	4.5nm,0.3s						
PDGK	**Podgornoye**	**3.27**	**49**	Pg	**Pb**	**09 21 12.8**	**0.0**
	0.8nm,0.4s						
PDGK				Lg	Lg	09 21 56.2	
	4.3nm,0.7s						
MNBS	**Baschi**	**3.31**	**30**	*e*P	**Pb**	**09 21 14.8**	**+1.2**
	2.2nm,0.3s						
MNBS				*e*S	**Sg**	**09 21 59.5**	**-1.4**
	9.4nm,0.3s						
MNBS	**Baschi**	**3.31**	**30**	Pg	**Pb**	**09 21 14.8**	**+1.2**
	2.2nm,0.3s						
MNBS				Lg	Lg	09 21 59.5	
	9.4nm,0.3s						
TRKS	**Terek-Say**	**3.76**	**276**	⇑*i*P	**Pn**	**09 21 12.5**	**-0.5**
	baz=76						
TRKS				⇑*i*S	**Sn**	**09 21 56.3**	**-1.1**
	baz=76						
BTLS	**Baital**	**4.10**	**339**	*e*P	**Pb**	**09 21 28.5**	**+1.5**
	1.0nm,0.5s						
BTLS				*e*S	**Sg**	**09 22 23.0**	**-3.4**
	2.2nm,0.4s						
BTLS	**Baital**	**4.10**	**339**	Pg	**Pb**	**09 21 28.5**	**+1.5**
	1.0nm,0.5s						
BTLS				Lg	Lg	09 22 23.0	
	2.2nm,0.4s						
DJR	**Jarkent**	**4.11**	**40**	*e*P	**Pb**	**09 21 28.8**	**+1.5**
	1.1nm,0.6s						
DJR				*e*S	**Sg**	**09 22 23.5**	**-3.3**
	3.1nm,0.4s						
DJR	**Jarkent**	**4.11**	**40**	Pg	**Pb**	**09 21 28.8**	**+1.5**
	1.5nm,0.3s						
DJR				Lg	Lg	09 22 23.5	
	2.8nm,0.3s						
KAPS	**Kapalarasan**	**4.69**	**29**	*e*P	**Pb**	**09 21 39.3**	**+2.1**
	1.4nm,0.7s						
KAPS				*e*S	**Sg**	**09 22 41.4**	**-4.0**
	1.6nm,0.5s						
KAPS	**Kapalarasan**	**4.69**	**29**	Pg	**Pb**	**09 21 39.3**	**+2.1**
	1.4nm,0.7s						
KAPS				Lg	Lg	09 22 41.4	
	1.6nm,0.5s						

*IDC **08** 09:27:07.5±1.4, 8°.31S×156°.12E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/28, mbtmp3.8/6, ML3.5/1, MS3.2/5, Ms1 3.1/5, ms1mx2.8/33, Error ellipse: s-maj=34.7km s-min=28.0km az=122.0*

ISC 08 09:27:12.4±1.0, **8°.4S**±0°.2×**156°.19E**±0°.10, **h35**km, **n8**, σ**0ˢ64**/7, **mb3.8**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.86**	**106**	Pn	**Pn**	**09 28 09.6**	**+0.2**
	3.3nm,0.3s,baz=150,slow=3.7,SNR=1.6						
HNR				Sn	**Sn**	**09 28 53.1**	**-0.3**
	13nm,0.3s,baz=278,slow=21,SNR=1.8						
HNR				LR	LR	09 29 18.1	
	comp=Z,132nm,20.5s,baz=246,slow=33						
PMG	**Port Moresby**	**8.98**	**263**	LR	LR	09 32 53.1	
	comp=Z,136nm,18.1s,baz=76,slow=39						
DZM	**Mont Dzumac**	**16.81**	**145**	LR	LR	09 35 53.6	
	comp=Z,80nm,19.0s,baz=324,slow=31						
WRA	**Warramunga Arr**	**24.06**	**239**	P	**P**	**09 32 25.0**	**+0.3**
	1.5nm,0.6s,baz=65,slow=9.4,SNR=9.2						
ASAR	**Alice Springs**	**26.20**	**232**	P	**P**	**09 32 43.1**	**-1.1**
	0.2nm,0.4s,baz=58,slow=12,SNR=2.1						
ASAR				LR	LR	09 41 16.0	
	comp=Z,57nm,20.1s,baz=308,slow=32						
STKA	**Stephens Creek**	**27.03**	**208**	P	**P**	**09 32 52.0**	**+0.5**
	2.3nm,1.0s,baz=58,slow=13,SNR=2.0						
STKA				LR	LR	09 42 05.5	
	comp=Z,61nm,18.7s,baz=200,slow=33						
SONM	**Songino Array**	**71.14**	**327**	P	**P**	**09 38 27.5**	**-0.1**
	1.1nm,1.0s,baz=142,slow=7.3,SNR=4.4						
MKAR	**Makanchi Array**	**85.22**	**319**	P	**P**	**09 39 45.6**	**+0.1**
	1.2nm,0.8s,baz=95,slow=5.8,SNR=9.0						

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*GCG **08** 09:43:58.4±0.4, 12°.25N×88°.85W, h0km±88km, MD4.2*
*SNET **08** 09:44:13.7±1.1, 13°.14N×89°.32W, h54km±5km, ML4.5, MW4.9*
*NEIC **08** 09:44:14.8±2.3, 13°.17N±0°.07×89°.20W±0°.06, h69km±7km, Error ellipse: s-maj=13.2km s-min=1.9km az=216.0*
*IDC **08** 09:44:14.3±0.7, 13°.46N×88°.92W, h64km±6km, mb3.7/9, mb1 4.0/11, mb1mx3.8/38, mbtmp4.0/11, MS3.7/7, Ms1 3.7/7, ms1mx3.3/33, Error ellipse: s-maj=35.6km s-min=13.7km az=48.0*
*INET **08** 09:44:17.8, 12°.88N×89°.03W, h15km, MW3.5*

ISC 08 09:44:12.4±0.6, **13°.10N**±0°.05×**89°.32W**±0°.04, **h51**km±4km, **n171**, σ**1ˢ66**/204, **mb4.4**/36, **10C-39D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.39**	**359**	⇓*i*P	**Pn**	**09 44 23.6**	**+1.2**
LALI				*e*S	**Sn**	**09 44 31.9**	**+2.2**
LALI	**Alcalda de L**	**0.39**	**359**	⇓*i*P	**Pn**	**09 44 23.6**	**+1.2**
LALI				*e*S	**Sn**	**09 44 31.9**	**+2.2**
JAYA	**Jayaque - finc**	**0.57**	**347**	⇓*i*P	**Pn**	**09 44 25.7**	**+1.0**
JAYA				*e*S	**Sn**	**09 44 34.5**	**+0.9**
JAYA				IAML		09 44 36.2	
	comp=Z,34μm,0.3s						
JAYA	**Jayaque - finc**	**0.57**	**347**	⇓*i*P	**Pn**	**09 44 25.7**	**+1.0**
JAYA				*e*S	**Sn**	**09 44 34.5**	**+0.9**
JAYA				IAML		09 44 36.2	
	comp=Z,34μm,0.3s						
LFRS	**El Faro**	**0.58**	**25**	⇓*i*P	**Pn**	**09 44 26.0**	**+1.2**
LFRS	**El Faro**	**0.58**	**25**	⇓*i*P	**Pn**	**09 44 26.0**	**+1.2**
SNET	**Serv Nac Est T**	**0.59**	**8**	⇓*e*P	**Pn**	**09 44 26.1**	**+1.1**
SNET				IAML		09 44 26.7	
	comp=Z,36μm,0.3s						
SNET				*e*S	**Sn**	**09 44 35.3**	**+1.4**
SNET	**Serv Nac Est T**	**0.59**	**8**	⇓*e*P	**Pn**	**09 44 26.1**	**+1.1**
SNET				IAML		09 44 26.7	
	comp=Z,36μm,0.3s						
SNET				*e*S	**Sn**	**09 44 35.3**	**+1.4**
SNET	**Serv Nac Est T**	**0.59**	**8**	Pn	**Pn**	**09 44 26.1**	**+1.1**
CLUB	**Club Campestre**	**0.61**	**6**	*e*P	**Pn**	**09 44 26.3**	**+1.2**
CLUB				*e*S	**Sn**	**09 44 36.0**	**+1.8**
CLUB	**Club Campestre**	**0.61**	**6**	*e*P	**Pn**	**09 44 26.3**	**+1.2**
CLUB				*e*S	**Sn**	**09 44 36.0**	**+1.8**
UTEC	**Universidad Te**	**0.61**	**10**	*e*P	**Pn**	**09 44 26.3**	**+1.1**
UTEC				*e*S	**Sn**	**09 44 35.7**	**+1.4**
UTEC	**Universidad Te**	**0.61**	**10**	*e*P	**Pn**	**09 44 26.3**	**+1.1**
UTEC				*e*S	**Sn**	**09 44 35.7**	**+1.4**
PMON	**Piamonte**	**0.61**	**0**	⇑*e*P	**Pn**	**09 44 26.3**	**+1.1**
PMON				*e*S	**Sn**	**09 44 36.0**	**+1.6**
PMON	**Piamonte**	**0.61**	**0**	⇑*e*P	**Pn**	**09 44 26.3**	**+1.1**
PMON				*e*S	**Sn**	**09 44 36.0**	**+1.6**
CRW	**Hotel Crowe Pl**	**0.61**	**7**	*e*P	**Pn**	**09 44 26.4**	**+1.2**
CRW				*e*S	**Sn**	**09 44 36.4**	**+1.9**
CIGS	**Centro de Inve**	**0.62**	**13**	*e*P	**Pn**	**09 44 26.5**	**+1.3**
CIGS				*e*S	**Sn**	**09 44 36.7**	**+2.3**
UEES	**Universidad Ev**	**0.62**	**7**	⇓*e*P	**Pn**	**09 44 26.5**	**+1.2**
UEES				*e*S	**Sn**	**09 44 36.4**	**+1.8**
UEES	**Universidad Ev**	**0.62**	**7**	⇓*e*P	**Pn**	**09 44 26.5**	**+1.2**
UEES				*e*S	**Sn**	**09 44 36.4**	**+1.8**
AEIL	**Aeropuerto Ilo**	**0.63**	**18**	⇓*e*P	**Pn**	**09 44 26.9**	**+1.5**
AEIL	**Aeropuerto Ilo**	**0.63**	**18**	⇓*e*P	**Pn**	**09 44 26.9**	**+1.5**
UESS	**Universidad de**	**0.63**	**10**	*e*P	**Pn**	**09 44 26.6**	**+1.2**
UESS				*e*S	**Sn**	**09 44 37.4**	**+2.6**
UESS				AML	AML	09 44 38.6	
	comp=Z,26μm,0.3s						
UESS	**Universidad de**	**0.63**	**10**	*e*P	**Pn**	**09 44 26.6**	**+1.2**
UESS				*e*S	**Sn**	**09 44 37.4**	**+2.6**
UESS				AML	AML	09 44 38.6	
	comp=Z,26μm,0.3s						
UDBS	**Universidad Do**	**0.64**	**14**	⇓*i*P	**Pn**	**09 44 26.7**	**+1.2**
UDBS				AML	AML	09 44 41.1	
	comp=Z,30μm,0.3s						
UDBS	**Universidad Do**	**0.64**	**14**	⇓*i*P	**Pn**	**09 44 26.7**	**+1.2**
UDBS				AML	AML	09 44 41.1	
	comp=Z,30μm,0.3s						
BOQS	**Boqueron**	**0.64**	**3**	⇓*i*P	**Pn**	**09 44 26.9**	**+1.3**
BOQS	**Boqueron**	**0.64**	**3**	⇓*i*P	**Pn**	**09 44 26.9**	**+1.3**
COEG	**Centro de Oper**	**0.67**	**39**	⇓*e*P	**Pn**	**09 44 26.9**	**+0.9**
COEG				*e*S	**Sn**	**09 44 36.5**	**+0.8**
COEG				IAML		09 44 41.6	
	comp=Z,16μm,0.5s						
COEG	**Centro de Oper**	**0.67**	**39**	⇓*e*P	**Pn**	**09 44 26.9**	**+0.9**
COEG				*e*S	**Sn**	**09 44 36.5**	**+0.8**
COEG				IAML		09 44 41.6	
	comp=Z,16μm,0.5s						
LFU	**La Fuente**	**0.68**	**17**	⇑*i*P	**Pn**	**09 44 27.5**	**+1.5**
LFU	**La Fuente**	**0.68**	**17**	⇑*i*P	**Pn**	**09 44 27.5**	**+1.5**
LBRS	**Las Brisas**	**0.69**	**23**	⇓*i*P	**Pn**	**09 44 27.6**	**+1.5**
LBRS	**Las Brisas**	**0.69**	**23**	⇓*i*P	**Pn**	**09 44 27.6**	**+1.5**
CEDA	**San Andres**	**0.71**	**354**	⇓*i*P	**Pn**	**09 44 27.6**	**+1.2**
CEDA				*e*S	**Sn**	**09 44 38.4**	**+2.0**
CEDA				IAML		09 44 46.1	
	comp=Z,42μm,0.4s						
CEDA	**San Andres**	**0.71**	**354**	⇓*i*P	**Pn**	**09 44 27.6**	**+1.2**
CEDA				*e*S	**Sn**	**09 44 38.4**	**+2.0**
CEDA				IAML		09 44 46.1	
	comp=Z,42μm,0.4s						
PAVA	**Las Pavas**	**0.72**	**31**	⇓*i*P	**Pn**	**09 44 27.8**	**+1.3**
PAVA				*e*S	**Sn**	**09 44 38.6**	**+1.8**
PAVA	**Las Pavas**	**0.72**	**31**	⇓*i*P	**Pn**	**09 44 27.8**	**+1.3**
PAVA				*e*S	**Sn**	**09 44 38.6**	**+1.8**
CEVE	**Cerro Verde**	**0.79**	**338**	⇑*i*P	**Pn**	**09 44 28.9**	**+1.4**
CEVE				*e*S	**Sn**	**09 44 40.9**	**+2.3**
CEVE	**Cerro Verde**	**0.79**	**338**	⇑*i*P	**Pn**	**09 44 28.9**	**+1.4**
CEVE				*e*S	**Sn**	**09 44 40.9**	**+2.3**
SBLS	**San Blas**	**0.80**	**338**	*e*P	**Pn**	**09 44 28.8**	**+1.1**
SBLS	**San Blas**	**0.80**	**338**	*e*P	**Pn**	**09 44 28.8**	**+1.1**
SNJE	**San Jose**	**0.82**	**340**	⇓*i*P	**Pn**	**09 44 29.0**	**+1.0**
SNJE	**San Jose**	**0.82**	**340**	⇓*i*P	**Pn**	**09 44 29.0**	**+1.0**
COEB	**Comit de Eme**	**0.86**	**62**	*e*P	**Pn**	**09 44 29.5**	**+1.1**
COEB				*e*S	**Sn**	**09 44 42.2**	**+2.0**
COEB				IAML		09 44 46.0	
	comp=Z,14μm,0.3s						
COEB	**Comit de Eme**	**0.86**	**62**	*e*P	**Pn**	**09 44 29.5**	**+1.1**
COEB				*e*S	**Sn**	**09 44 42.2**	**+2.0**
COEB				IAML		09 44 46.0	
	comp=Z,14μm,0.3s						
TACO	**Tacachico**	**0.87**	**358**	⇓*e*P	**Pn**	**09 44 29.7**	**+1.2**
TACO				*e*S	**Sn**	**09 44 41.8**	**+1.6**
TACO	**Tacachico**	**0.87**	**358**	⇓*e*P	**Pn**	**09 44 29.7**	**+1.2**
TACO				*e*S	**Sn**	**09 44 41.8**	**+1.6**
TECA	**Tecapa**	**0.89**	**63**	⇓*i*P	**Pn**	**09 44 29.8**	**+1.0**
TECA	**Tecapa**	**0.89**	**63**	⇓*i*P	**Pn**	**09 44 29.8**	**+1.0**
UNIC	**Universidad Ca**	**0.91**	**346**	*e*P	**Pn**	**09 44 30.3**	**+1.3**
UNIC				*e*S	**Sn**	**09 44 43.4**	**+2.2**
UNIC	**Universidad Ca**	**0.91**	**346**	*e*P	**Pn**	**09 44 30.3**	**+1.3**
UNIC				*e*S	**Sn**	**09 44 43.4**	**+2.2**
PACA	**Pacayal**	**1.04**	**69**	*e*P	**Pn**	**09 44 32.8**	**+2.0**
PACA				*e*S	**Sn**	**09 44 47.3**	**+3.0**
PACA				IAML		09 44 51.7	
	comp=Z,8μm,0.3s						
PACA	**Pacayal**	**1.04**	**69**	*e*P	**Pn**	**09 44 32.8**	**+2.0**
PACA				*e*S	**Sn**	**09 44 47.3**	**+3.0**
PACA				IAML		09 44 51.7	
	comp=Z,8μm,0.3s						
LCY	**Lacayo**	**1.05**	**72**	⇓*i*P	**Pn**	**09 44 32.4**	**+1.5**
LCY	**Lacayo**	**1.05**	**72**	⇓*i*P	**Pn**	**09 44 32.4**	**+1.5**
RANC	**El Ranchito**	**1.06**	**71**	⇑*e*P	**Pn**	**09 44 32.5**	**+1.5**
RANC				*e*S	**Sn**	**09 44 47.6**	**+2.9**
RANC	**El Ranchito**	**1.06**	**71**	⇑*e*P	**Pn**	**09 44 32.5**	**+1.5**
RANC				*e*S	**Sn**	**09 44 47.6**	**+2.9**
VSM	**San Miguel**	**1.07**	**72**	*e*P	**Pn**	**09 44 32.8**	**+1.6**
VSM	**San Miguel**	**1.07**	**72**	*e*P	**Pn**	**09 44 32.8**	**+1.6**
LLGN	**La Laguna**	**1.12**	**19**	*e*P	**Pn**	**09 44 33.0**	**+1.1**
LLGN				*e*S	**Sn**	**09 44 48.2**	**+1.9**
LLGN				AML	AML	09 44 49.8	
	comp=Z,6μm,0.4s						
LLGN	**La Laguna**	**1.12**	**19**	*e*P	**Pn**	**09 44 33.0**	**+1.1**
LLGN				*e*S	**Sn**	**09 44 48.2**	**+1.9**
LLGN				AML	AML	09 44 49.8	
	comp=Z,6μm,0.4s						
MTO3	**Montecristo**	**1.30**	**358**	⇓*i*P	**Pn**	**09 44 35.6**	**+1.3**
MTO3				*e*S	**Sn**	**09 44 52.5**	**+1.7**
MTO3	**Montecristo**	**1.30**	**358**	⇓*i*P	**Pn**	**09 44 35.6**	**+1.3**
MTO3				*e*S	**Sn**	**09 44 52.5**	**+1.7**
MTO3	**Montecristo**	**1.30**	**358**		**Pn**	**09 44 35.7**	**+1.3**
FAGO	**Alcalda de S**	**1.32**	**63**	⇓*i*P	**Pn**	**09 44 35.5**	**+1.0**
FAGO				⇑*e*S	**Sn**	**09 44 52.7**	**+1.7**
FAGO	**Alcalda de S**	**1.32**	**63**	⇓*i*P	**Pn**	**09 44 35.5**	**+1.0**
FAGO				⇑*e*S	**Sn**	**09 44 52.7**	**+1.7**
LCND	**La Caada**	**1.41**	**81**	*e*P	**Pn**	**09 44 37.4**	**+1.8**
LCND				IAML		09 44 58.2	
	comp=Z,14μm,0.3s						
LCND	**La Caada**	**1.41**	**81**	*e*P	**Pn**	**09 44 37.3**	**+1.7**
LCND				*e*P		09 44 37.4	
LCND				*e*S	**Sn**	**09 44 55.8**	**+2.8**
LCND				IAML		09 44 58.2	
	comp=Z,14μm,0.3s						
ESQI	**Esquipulas**	**1.46**	**359**	⇓*i*P	**Pn**	**09 44 38.1**	**+1.7**
ESQI				*e*S	**Sn**	**09 44 56.3**	**+1.8**
ESQI	**Esquipulas**	**1.46**	**359**	Pn	**Pn**	**09 44 38.5**	**+2.0**
CSGN	**Cosiguina Volc**	**1.72**	**94**		**Pn**	**09 44 41.4**	**+1.5**
NBG	**Las Nubes**	**1.79**	**326**	*e*P	**Pn**	**09 44 44.3**	**+3.2**
PCG	**Pacaya**	**1.80**	**316**	*e*P	**Pn**	**09 44 44.5**	**+3.2**
FUG	**Fuego 3**	**2.00**	**312**	*e*P	**Pn**	**09 44 46.7**	**+2.7**
MRL	**Marmol**	**2.01**	**350**	*e*P	**Pn**	**09 44 47.1**	**+3.0**
MRL				*e*S	Sn	09 45 25.0	+17
TGUH	**Tegucigalpa,Un**	**2.21**	**64**	⇓*i*P	**Pn**	**09 44 48.0**	**+1.4**
TGUH	**Tegucigalpa,Un**	**2.21**	**64**	⇓*i*P	**Pn**	**09 44 48.0**	**+1.4**
TGUH	**Tegucigalpa,Un**	**2.21**	**64**	Pn	**Pn**	**09 44 48.1**	**+1.4**
CRIN	**San Cristobal**	**2.24**	**100**		**Pn**	**09 44 48.6**	**+1.5**
RTAL	**Retalhuleu**	**2.71**	**302**		**Pn**	**09 44 56.3**	**+2.8**
HUEH	**Huehuetenango**	**3.06**	**316**	Pn	**Pn**	**09 45 00.7**	**+2.2**
PETF	**Flores**	**3.84**	**352**		**Pn**	**09 45 11.4**	**+2.4**
CCIG	**Comitan**	**4.18**	**320**		**Pn**	**09 45 17.0**	**+3.2**
ACON	**Acoyapa**	**4.20**	**105**		**Pn**	**09 45 14.0**	**+0.1**
ESPN	**Las Esperanzas**	**4.98**	**100**		**Pn**	**09 45 25.5**	**+0.9**
JTS	**Las Juntas de**	**5.10**	**123**	P	**Pn**	**09 45 29.8**	**+3.5**
	comp=Z,6.6nm,0.3s,baz=12,slow=21,SNR=11						
JTS				S	**Sn**	**09 46 25.2**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=214,slow=20,SNR=1.1						
JTS	**Las Juntas de**	**5.10**	**123**	Pn	**Pn**	**09 45 29.3**	**+3.0**
HDC	**Heredia**	**5.95**	**121**		**Pn**	**09 45 38.9**	**+0.7**
EDDO	**Dominical**	**6.57**	**125**	*e*P	**Pn**	**09 45 48.9**	**+2.3**
CMIG	**Matias Romero**	**6.69**	**307**	P	**Pn**	**09 45 50.6**	**+2.5**
	comp=Z,3.2nm,0.3s,baz=145,slow=14,SNR=38						
CMIG				S	**Sn**	**09 47 01.1**	**-1.8**
	comp=Z,3.7nm,0.3s,baz=249,slow=20,SNR=8.0						
EDPN	**Palmar Norte**	**7.07**	**125**	*e*P	Pn	09 45 57.8	+4.5
EDBA	**Buenos Aires**	**7.10**	**123**	*e*P	**Pn**	**09 45 57.1**	**+3.4**
TEIG	**Tepich**	**7.16**	**8**		**Pn**	**09 45 58.2**	**+3.7**
EDSV	**San Vito**	**7.54**	**124**	*e*P	Pn	09 46 04.0	+4.1
TLIG	**Tlapa**	**9.97**	**298**		**Pn**	**09 46 37.2**	**+4.0**
342A	**Flagon Creek P**	**18.40**	**352**		**Pn**	**09 48 27.1**	**+3.3**
342A				IAmb	IAmb	09 48 27.5	
	comp=Z,38nm,0.8s						
SDV	**Santo Domingo**	**18.81**	**101**	P	**P**	**09 48 27.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=280,slow=7.8,SNR=8.2						
SDV	**Santo Domingo**	**18.81**	**101**	P	**P**	**09 48 27.7**	**-0.5**
VBMS	**Vicksburg**	**19.07**	**357**	P	**Pn**	**09 48 32.1**	**+0.3**
435B	**Jarrell**	**19.19**	**338**	P	**Pn**	**09 48 33.3**	**0.0**
435B				IAmb	IAmb	09 48 34.9	
	comp=Z,14nm,0.6s						
JCT	**Junction City**	**19.83**	**332**	P	**P**	**09 48 39.6**	**+0.5**
WHTX	**Lake Whitney,**	**20.24**	**340**	P	**P**	**09 48 43.7**	**+0.3**
Z41A	**Richland Creek**	**20.32**	**352**	P	Pn	09 48 48.1	+1.4
Z41A				IAmb	IAmb	09 48 51.6	
	comp=Z,24nm,0.8s						
HPIG		**20.60**	**314**	P	Pn	09 48 49.7	-0.5
WLAR	**White Oak Lake**	**20.79**	**351**	P	Pn	09 48 52.5	+0.2
WLAR				IAmb	IAmb	09 48 55.8	
	comp=Z,20nm,0.8s						
TXAR	**Lajitas Array**	**20.94**	**323**	P	Pn	09 48 52.8	-1.5
	comp=Z,3.7nm,0.6s,baz=141,slow=10,SNR=24						
TXAR				PcP	**PcP**	**09 52 57.3**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=134,slow=3.6,SNR=4.0						
TX31	**Lajitas Ar. Si**	**20.94**	**323**	P	Pn	09 48 52.7	-1.6
TX31				IAmb	IAmb	09 48 55.7	
	comp=Z,11nm,0.6s						
TX32	**Lajitas Array**	**20.94**	**323**	P	**P**	**09 48 52.0**	**+0.8**
OXF	**Oxford**	**21.32**	**360**	P	**P**	**09 48 56.3**	**+1.2**
ABTX	**Abilene, Hawle**	**21.62**	**336**	P	**P**	**09 48 58.3**	**0.0**
ABTX				IAmb	IAmb	09 49 01.3	
	comp=Z,8.1nm,0.8s						
MIAR	**Mount Ida**	**21.70**	**350**	P	**P**	**09 48 59.9**	**+0.7**
MIAR				IAmb	IAmb	09 49 03.8	
	comp=Z,16nm,0.8s						
W45A	**Hickory Valley**	**21.97**	**0**	P	**P**	**09 49 03.8**	**+1.8**
WHAR	**Wooly Hollow**	**22.26**	**354**	P	**P**	**09 49 05.2**	**+0.1**
WHAR				IAmb	IAmb	09 49 09.9	
	comp=Z,14nm,0.9s						
HBAR	**Harrisburg**	**22.40**	**357**	P	**P**	**09 49 06.8**	**+0.3**
LPAR	**Lepanto**	**22.43**	**358**	P	**P**	**09 49 05.5**	**-1.4**
FCAR	**Ozark Folk Cen**	**22.84**	**354**	IAmb	IAmb	09 49 14.7	
	comp=Z,6.6nm,0.7s						
BIRD	**Birdtown, Kers**	**22.91**	**19**	P	**P**	**09 49 11.7**	**-0.3**
BIRD				IAmb	IAmb	09 49 30.8	
	comp=Z,26nm,1.3s						
WVT	**Waverly**	**22.98**	**3**	P	**P**	**09 49 12.3**	**-0.4**
TKL	**Tuckaleechee C**	**23.02**	**12**	P	**P**	**09 49 12.5**	**-0.6**
	comp=Z,5.9nm,0.9s,baz=156,slow=8.9,SNR=4.6						
TKL	**Tuckaleechee C**	**23.02**	**12**	P	**P**	**09 49 12.5**	**-0.6**
WMOK	**Wichita Mounta**	**23.19**	**340**	P	**P**	**09 49 13.4**	**-1.5**
V53A	**Saluda**	**23.23**	**14**	P	**P**	**09 49 16.6**	**+1.3**
V53A				IAmb	IAmb	09 49 42.6	
	comp=Z,14nm,1.1s						
U40A	**Yellville**	**23.38**	**353**	IAmb	IAmb	09 49 18.4	
	comp=Z,12nm,0.8s						
MNTX	**Cornudas Mount**	**23.68**	**324**	P	**P**	**09 49 20.8**	**+1.2**
T42A	**Van Buren**	**23.89**	**356**	P	**P**	**09 49 21.3**	**-0.1**
T42A				IAmb	IAmb	09 49 23.2	
	comp=Z,10nm,0.8s						
MGMO	**Mountain Grove**	**24.10**	**354**	P	**P**	**09 49 23.8**	**+0.4**
MGMO				IAmb	IAmb	09 49 26.3	
	comp=Z,9.9nm,0.8s						
MSTX	**Muleshoe**	**24.12**	**332**	IAmb	IAmb	09 49 25.1	
	comp=Z,8.1nm,0.7s						
U54A	**Nelsons Funny**	**24.28**	**15**	P	**P**	**09 49 25.5**	**+0.4**
S44A	**Carbondale**	**24.50**	**0**	P	**P**	**09 49 27.6**	**+0.7**
S44A				IAmb	IAmb	09 49 44.1	
	comp=Z,17nm,1.0s						
SIUC	**Southern Illin**	**24.52**	**0**	P	**P**	**09 49 27.4**	**+0.3**
SIUC				IAmb	IAmb	09 49 44.6	
	comp=Z,19nm,1.1s						
S39A	**Bolivar**	**24.75**	**352**	IAmb	IAmb	09 49 31.9	
	comp=Z,7.0nm,0.8s						
CCM	**Cathedral Cave**	**24.92**	**356**	P	**P**	**09 49 29.9**	**-0.8**
CCM				IAmb	IAmb	09 49 32.1	
	comp=Z,14nm,0.9s						
R40A	**Maddies Statio**	**25.23**	**355**	P	**P**	**09 49 32.7**	**-0.9**
R40A				IAmb	IAmb	09 49 36.7	
	comp=Z,5.4nm,0.7s						
ANMO	**Albuquerque**	**26.72**	**327**	P	**P**	**09 49 48.5**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=162,slow=15,SNR=4.0						
ANMO				PcP	**PcP**	**09 53 09.4**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=155,slow=6.3,SNR=3.7						
T25A	**Trinidad**	**27.49**	**333**	IAmb	IAmb	09 49 57.7	
	comp=Z,6.3nm,0.8s						
SPX	**San Pedro Mart**	**29.98**	**311**	P	**P**	**09 50 17.9**	**+1.3**
PV12	**Saucer Basin,**	**30.51**	**329**	P	**P**	**09 50 21.7**	**+0.6**
PV12				IAmb	IAmb	09 50 24.5	
	comp=Z,7.8nm,0.8s						
PV18	**Skein Mesa, Pa**	**30.51**	**329**	IAmb	IAmb	09 50 24.1	
	comp=Z,4.5nm,0.8s						
PV11	**David Mesa, Pa**	**30.53**	**329**	IAmb	IAmb	09 50 24.0	
	comp=Z,5.8nm,0.7s						
PV17	**East Wray Mesa**	**30.56**	**329**	IAmb	IAmb	09 50 24.6	
	comp=Z,6.6nm,0.7s						
PV16	**Nyswonger Mesa**	**30.57**	**329**	IAmb	IAmb	09 50 24.3	
	comp=Z,4.3nm,0.7s						
PV04	**Paradox Valley**	**30.62**	**329**	IAmb	IAmb	09 50 25.2	
	comp=Z,4.7nm,0.6s						
PV14	**Lion Creek, Pa**	**30.67**	**329**	IAmb	IAmb	09 50 23.6	
	comp=Z,4.8nm,0.9s						
I42A	**Draeger Farm,**	**30.69**	**1**	P	**P**	**09 50 21.3**	**-1.0**
ESJX	**Sierra Juarez**	**30.83**	**312**	P	**P**	**09 50 24.9**	**+1.0**
MTPU	**Mount Pierson**	**32.12**	**325**	P	**P**	**09 50 37.0**	**+1.6**
SPMN	**Marine on St.**	**32.16**	**355**	P	**P**	**09 50 33.5**	**-1.7**
RSSD	**Black Hills**	**33.40**	**341**	P	**P**	**09 50 47.8**	**+1.5**
RSSD				IAmb	IAmb	09 50 48.8	
	comp=Z,3.1nm,0.8s						
SAML	**Samuel**	**33.96**	**129**	P	**P**	**09 50 50.4**	**-0.9**
SAML				IAmb	IAmb	09 51 08.4	
	comp=Z,5.3nm,0.7s						
PDAR	**Pinedale Array**	**34.36**	**333**	P	**P**	**09 50 54.5**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=132,slow=11,SNR=12						
PDAR				PcP	**PcP**	**09 53 28.4**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=133,slow=4.4,SNR=5.5						
PDAR				ScP	**ScP**	**09 57 10.8**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=169,slow=1.8,SNR=3.1						
EYMN	**Ely**	**34.79**	**357**	P	**P**	**09 50 56.1**	**-2.0**
AHID	**Auburn Hatcher**	**35.06**	**332**	IAmb	IAmb	09 51 03.3	
	comp=Z,5.2nm,0.7s						
LOHW	**Long Hollow**	**35.50**	**333**	IAmb	IAmb	09 51 07.3	
	comp=Z,4.9nm,0.7s						
MOOW	**Moose Ponds**	**35.67**	**333**	P	**P**	**09 51 06.5**	**+0.6**
NVAR	**Mina Array Bea**	**36.03**	**320**	P	**P**	**09 51 10.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=132,slow=6.9,SNR=9.4						
NVAR				PcP	**PcP**	**09 53 35.2**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=139,slow=3.6,SNR=12						
NVAR				ScP	**ScP**	**09 57 15.6**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=113,slow=4.7,SNR=4.4						
ULM	**Lac du Bonnet**	**37.44**	**353**	P	**P**	**09 51 18.3**	**-2.4**
	comp=Z,2.6nm,0.5s,baz=172,slow=9.1,SNR=9.2						
ULM				LR	LR	10 08 10.1	
	comp=Z,84nm,21.7s,baz=102,slow=39						
SIV	**San Ignacio**	**40.19**	**135**	P	**P**	**09 51 44.1**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=312,slow=11,SNR=15						
SIV				pP	**sP**	**09 52 01.3**	**-2.1**
	comp=Z,7.2nm,0.8s,baz=320,slow=9.2,SNR=14						
SIV				LR	LR	10 08 14.0	
	comp=Z,34nm,20.6s,baz=318,slow=36						
FFC	**Flin Flon**	**42.71**	**349**	P	**P**	**09 52 03.3**	**-1.0**
RPN	**Rapa Nui**	**44.45**	**206**	LR	LR	10 06 06.4	
	comp=Z,38nm,20.8s,baz=28,slow=29						
YKA	**Yellowknife Ar**	**52.52**	**346**	P	**P**	**09 53 18.5**	**-1.8**
	comp=Z,5.8nm,0.9s,baz=141,slow=7.7,SNR=64						
YKA				LR	LR	10 16 42.8	
	comp=Z,65nm,18.2s,baz=0.0,slow=37						
INK	**Inuvik**	**62.05**	**343**	P	**P**	**09 54 26.0**	**-1.3**
KKH	**Kailua Kona**	**63.99**	**286**	P	**P**	**09 54 44.2**	**+3.1**
ILAR	**Eielson Array**	**64.70**	**336**	P	**P**	**09 54 42.9**	**-2.1**
	comp=Z,1.2nm,0.8s,baz=115,slow=4.7,SNR=10						
RAR	**Rarotonga**	**77.11**	**244**	LR	LR	10 21 44.1	
	comp=Z,340nm,21.2s,baz=306,slow=29						
ESDC	**Sonseca Array**	**78.22**	**52**	P	**P**	**09 56 04.2**	**-2.8**
	comp=Z,0.3nm,0.2s,baz=302,slow=1.4,SNR=2.1						
ESDC				LR	LR	10 27 32.4	
	comp=Z,62nm,18.2s,baz=340,slow=33						
KOWA	**Kowa**	**82.34**	**77**	LR	LR	10 31 14.3	
	comp=Z,69nm,18.1s,baz=20,slow=34						
SONM	**Songino Array**	**117.75**	**348**	PKP	**PKPdf**	**10 02 52.4**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=330,slow=2.8,SNR=2.9						
WRA	**Warramunga Arr**	**137.69**	**255**	PKP	**PKiKP**	**10 03 33.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=85,slow=2.2,SNR=5.1						
WRA				pPKP	**sPKPdf**	**10 03 50.3**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=81,slow=1.3,SNR=3.9						
ASAR	**Alice Springs**	**137.81**	**249**	PKP	**PKPdf**	**10 03 32.1**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=103,slow=2.5,SNR=2.3						
ASAR				pPKP	**sPKPdf**	**10 03 50.8**	**-2.0**
	comp=Z,1.2nm,0.9s,baz=106,slow=2.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**146.00**	**257**	PKPbc	**PKPab**	**10 03 48.4**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=124,slow=18,SNR=2.1						
CMAR	**Chiang Mai Arr**	**147.61**	**345**	PKPbc	**PKPdf**	**10 03 49.9**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=339,slow=3.4,SNR=16						
CMAR				pPKPbc	**sPKPdf**	**10 04 09.6**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=347,slow=3.7,SNR=1.6						

IDC 08 09:49:21.2±2.0, **1°.64N**×**126°.15E**, **h0**km, **mb3.6**/3, **mb1 3.8**/3, **mb1mx3.4**/40, **mbtmp3.6**/3, **MS2.7**/1, **Ms1 2.7**/1, **ms1mx2.3**/40, **Error ellipse: s-maj=162.7km s-min=25.6km az=65.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.19**	**224**	LR	LR	09 55 04.3	
	comp=Z,53nm,20.6s,baz=242,slow=37						
WRA	**Warramunga Arr**	**22.91**	**160**	P	P	09 54 26.8	-0.1
	1.2nm,0.4s,baz=338,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.26**	**164**	P	P	09 54 58.5	0.0
	0.5nm,0.4s,baz=344,slow=7.3,SNR=12						
MKAR	**Makanchi Array**	**58.94**	**326**	P	P	09 59 22.4	0.0
	0.2nm,0.3s,baz=128,slow=7.0,SNR=5.0						

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*IDC **08** 09:59:40.8±2.8, 24°.61S×179°.14W, h372km±27km, mb3.1/6, mb1 3.4/8, mb1mx3.2/39, mbtmp4.0/8, Error ellipse: s-maj=34.5km s-min=20.6km az=109.0*

ISC 08 09:59:38.8±1.0, **24°.58S**±0°.10×**178°.8W**±0°.2, **h350**km, **n18**, σ**2ˢ00**/17, **mb3.4**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.41**	**336**	P	**Pn**	**10 01 27.9**	**+1.7**
	2.7nm,0.3s,baz=147,slow=15,SNR=18						
KUZ	**Kuaotunu**	**12.99**	**200**	P	**Pn**	**10 02 35.1**	**+2.9**
WIAZ	**Waiheke Island**	**13.23**	**202**	P	**Pn**	**10 02 38.0**	**+3.1**
ETAZ	**East Tamaki Re**	**13.44**	**202**	P	**Pn**	**10 02 39.9**	**+2.5**
HAZ	**Te Kaha**	**13.45**	**192**	P	**Pn**	**10 02 38.3**	**+0.8**
PKGZ	**Pakihiroa**	**13.53**	**190**	P	**Pn**	**10 02 39.3**	**+0.8**
AWAZ	**Awhitu Peninsu**	**13.64**	**203**	P	**Pn**	**10 02 42.2**	**+2.5**
RUGZ	**Raukumara Rang**	**13.67**	**192**	P	**Pn**	**10 02 40.6**	**+0.3**
TWGZ	**Tauwhareparae**	**13.82**	**191**	P	**Pn**	**10 02 42.9**	**+1.0**
KMRZ	**Kaimai**	**13.95**	**197**	P	P	10 02 36.6	-5.3
URZ	**Urewera**	**14.07**	**193**	P	**P**	**10 02 42.5**	**-0.6**
	4.8nm,0.3s,baz=267,slow=3.3,SNR=28						
RAGZ	**Rawiri**	**14.23**	**192**	P	**Pn**	**10 02 46.5**	**-0.3**
RPZ	**Rata Peaks**	**20.81**	**201**	P	**P**	**10 03 53.9**	**-0.1**
	3.3nm,0.5s,baz=270,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**42.97**	**261**	P	**P**	**10 07 02.9**	**-2.1**
	0.3nm,0.5s,baz=96,slow=7.6,SNR=5.1						
WRA	**Warramunga Arr**	**43.42**	**266**	P	**P**	**10 07 05.1**	**-3.5**
	0.8nm,0.8s,baz=96,slow=6.3,SNR=3.1						
USRK	**Ussuriysk Ar.**	**81.91**	**327**	P	**P**	**10 11 20.6**	**+0.8**
	1.6nm,0.9s,baz=167,slow=4.6,SNR=5.3						
NVAR	**Mina Array Bea**	**84.51**	**43**	P	**P**	**10 11 34.1**	**+0.7**
	0.5nm,0.9s,baz=207,slow=5.7,SNR=2.5						
ILAR	**Eielson Array**	**92.45**	**13**	P	**P**	**10 12 08.5**	**-1.4**
	0.3nm,0.6s,baz=229,slow=5.4,SNR=5.1						

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*BGR **08** 10:22:56.1±0.0, 18°.67S×177°.43W, h33km*
*BJI **08** 10:24:00.0±0.0, 17°.90S×178°.50W, h600km, mB4.8/3, mb4.8/31*
*NOU **08** 10:24:01.2, 17°.93S×178°.49W, h606km, mb4.8, Fiji Islands Region*
*NEIC **08** 10:24:01.2±2.4, 17°.8S±0°.1×178°.6W±0°.1, h600km±7km, mb4.5/105, Error ellipse: s-maj=16.4km s-min=15.5km az=163.0*
*IDC **08** 10:24:03.0±0.8, 17°.86S×178°.60W, h618km±8km, mb3.8/22, mb1 4.0/23, mb1mx3.9/29, mbtmp4.8/23, Error ellipse: s-maj=11.3km s-min=9.1km az=151.0*

ISC 08 10:24:00.8±0.3, **17°.83S**±0°.05×**178°.47W**±0°.05, **h600**km, **n339**, σ**1ˢ61**/341, **mb4.5**/80, **19C-25D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.32**	**271**	P	**P**	**10 25 23.4**	**+1.5**
	33nm,0.3s,baz=131,slow=3.3,SNR=320						
MSVF				S	**S**	**10 26 32.3**	**+4.3**
	baz=31,slow=21,SNR=9.2						
MSVF	**Nonsavu**	**3.32**	**271**	P	**P**	**10 25 23.2**	**+1.3**
MSVF	**Nonsavu**	**3.32**	**271**	P	**P**	**10 25 23.4**	**+1.5**
AFI	**Afiamalu**	**7.53**	**60**	P	**P**	**10 25 56.0**	**+0.2**

	21nm,0.3s,baz=214,slow=1.0,SNR=35						
AFI				S	S	10 27 24.1	-5.8
	2.5nm,0.3s,baz=210,slow=20,SNR=1.5						
NIUE	Niue	8.20	100	P	P	10 26 02.9	+0.8
	baz=8.1,SNR=18						
NIUE	Niue	8.20	100	P	P	10 26 02.5	+0.5
NIUE	Niue	8.20	100	P	P	10 26 02.8	+0.8
GLKZ	Green Lake	11.39	178	P	P	10 26 24.6	-8.6
GLKZ				S	S	10 28 35.8	-2.7
SANVU	Saraoutou	13.94	278	P	P	10 26 58.2	-0.9
SANVU	Saraoutou	13.94	278	P	P	10 26 59.6	+0.5
KNTN	Kanton	16.36	25	P	P	10 27 20.2	-1.4
KNTN	Kanton	16.36	25	P	P	10 27 21.1	-0.5
NFK	Norfolk Island	16.72	226	P	P	10 27 25.2	+0.6
	baz=17,SNR=3.8						
OUZ	Omahuta	18.70	201	P	P	10 27 44.5	+1.9
OUZ	Omahuta	18.70	201	P	P	10 27 43.6	+1.0
GRZ	Great Barrier	19.12	195	P	P	10 27 47.1	+0.7
KUZ	Kuaotunu	19.53	194	P	P	10 27 51.5	+1.4
MXZ	Matakaoa Point	19.86	188	P	P	10 27 51.2	-1.8
MXZ	Matakaoa Point	19.86	188	P	P	10 27 51.2	-1.8
WMGZ	Waiomatatini S	20.10	187	P	P	10 27 54.6	-0.7
HAZ	Te Kaha	20.12	189	P	P	10 27 54.2	-1.3
HAZ				S	S	10 30 59.3	-5.7
PKGZ	Pakihiroa	20.21	188	P	P	10 27 55.9	-0.4
RUGZ	Raukumara Rang	20.34	189	P	P	10 27 57.0	-0.6
PUZ	Puketiti	20.37	187	P	P	10 27 57.9	+0.2
PUZ				S	S	10 31 14.4	+5.5
OPRZ	Ohinepanea	20.41	191	P	P	10 27 58.6	+0.5
TWGZ	Tauwhareparae	20.51	188	P	P	10 27 59.8	+0.8
TOZ	Tahuroa Road	20.52	194	P	P	10 28 01.5	+2.4
TOZ				S	S	10 31 20.6	+9.4
KMRZ	Kaimai	20.53	193	P	P	10 28 01.0	+1.8
URZ	Urewera	20.72	190	P	P	10 27 57.6	-3.2
	16nm,0.3s,baz=280,slow=2.6,SNR=21						
URZ	Urewera	20.72	190	P	P	10 27 59.1	-1.7
URZ	Urewera	20.72	190	P	P	10 27 57.8	-3.0
URZ				S	S	10 31 17.8	+3.5
MWZ	Matawai	20.73	189	P	P	10 27 59.4	-1.5
MWZ				S	S	10 31 08.9	-5.7
CNGZ	Carnagh Statio	20.78	187	P	P	10 28 01.9	+0.5
TKGZ	Te Karaka	20.78	188	P	P	10 28 01.4	0.0
MUGZ	Murupara	20.99	190	P	P	10 28 01.9	-1.3
RIGZ	Rimuhau	21.06	188	P	P	10 28 03.4	-0.5
RIGZ				S	S	10 31 17.3	-2.5
TLZ	Tolley Road	21.09	193	P	P	10 28 05.5	+1.3
WHTZ	Whakaora	21.32	192	P	P	10 28 00.9	-5.4
MTHZ	Maungataniwha	21.34	190	P	P	10 28 06.3	-0.1
RAHZ	Arahi	21.36	190	P	P	10 28 06.0	-0.6
HIZ	Hauiti	21.42	194	P	P	10 28 11.6	+4.5
HATZ	Hinemaiaia	21.51	192	P	P	10 28 07.0	-1.0
NMHZ	Naumai	21.59	190	P	P	10 28 07.7	-0.9
BKZ	Black Stump Fm	21.71	191	P	P	10 28 07.5	-2.2
BKZ				S	S	10 31 24.9	-5.2
TMVZ	Te Maari	21.81	192	P	P	10 28 09.9	-0.8
OTVZ	Oturere	21.86	192	P	P	10 28 09.4	-1.9
MCHZ	McNeill Hill	21.94	190	P	P	10 28 10.1	-1.7
KWHZ	Kaweka Forest	21.97	191	P	P	10 28 10.4	-1.6
KWHZ				S	S	10 31 32.3	-2.0
VRZ	Vera Road	22.02	194	P	P	10 28 13.9	+1.5
WNVZ	Wahianoa	22.03	192	P	P	10 28 11.9	-0.9
KRHZ	Kereru	22.19	191	P	P	10 28 12.8	-1.2
KAHZ	Kahuranaki	22.25	190	P	P	10 28 13.3	-1.3
NEZ	North Egmont	22.32	195	P	P	10 28 18.5	+3.3
PNHZ	Pukenui	22.48	191	P	P	10 28 15.3	-1.3
PXZ	Pawanui	22.49	189	P	P	10 28 15.1	-1.5
PRHZ	Porangahau	22.75	190	P	P	10 28 18.5	-0.4
DVHZ	Dannevirke	22.86	191	P	P	10 28 18.8	-1.2
ANWZ	Angora Road	22.97	190	P	P	10 28 19.9	-1.0
BFZ	Birch Farm	23.22	190	P	P	10 28 22.1	-1.0
BFZ				IAmb	IAmb	10 28 32.2	
	comp=Z,54nm,1.4s						
BFZ	Birch Farm	23.22	190	P	P	10 28 21.2	-2.0
MRZ	Mangatainoka R	23.32	192	P	P	10 28 21.4	-2.6
OGWZ	Otaki Gorge	23.55	192	P	P	10 28 25.1	-1.0
MSWZ	Moikau Station	24.12	192	P	P	10 28 30.0	-1.0
SNZO	South Karori	24.12	193	P	P	10 28 29.9	-1.1
QRZ	Quartz Range	24.19	197	P	P	10 28 31.3	-0.4
QRZ				IAmb	IAmb	10 28 40.1	
	comp=Z,22nm,1.1s						
PLWZ	Palliser	24.26	192	P	P	10 28 31.0	-1.3
NNZ	Nelson	24.34	195	P	P	10 28 31.7	-1.2
BSWZ	Blackbirch Sta	24.69	194	P	P	10 28 35.2	-0.8
THZ	Tophouse	24.97	195	P	P	10 28 38.7	+0.1
THZ				IAmb	IAmb	10 28 42.9	
	comp=Z,20nm,0.9s						
KHZ	Kahutara	25.43	194	P	P	10 28 41.0	-1.6
KHZ				IAmb	IAmb	10 28 57.0	
	comp=Z,26nm,1.2s						
LTZ	Lake Taylor	26.09	196	P	P	10 28 47.5	-0.9
LTZ				IAmb	IAmb	10 28 49.4	
	comp=Z,20nm,0.6s						
OXZ	Oxford	26.66	196	P	P	10 28 51.7	-1.7
MQZ	McQueen's Vall	26.86	194	P	P	10 28 53.6	-1.5
MQZ				IAmb	IAmb	10 28 57.0	
	comp=Z,28nm,1.0s						
RPZ	Rata Peaks	27.28	197	P	P	10 28 58.6	-0.3
	comp=Z,6.7nm,0.5s,baz=351,slow=1.3,SNR=12						
RPZ	Rata Peaks	27.28	197	P	P	10 28 58.5	-0.3
RPZ				IAmb	IAmb	10 29 03.8	
	comp=Z,17nm,1.2s						
FOZ	Fox Glacier	27.47	199	P	P	10 28 59.7	-0.7
PPT	Papeete	27.51	94	P	P	10 29 02.9	+1.7
	comp=Z,25nm,0.6s,baz=62,slow=2.3,SNR=6.9						
LBZ	Lake Benmore	28.14	197	P	P	10 29 03.9	-2.4
LBZ				IAmb	IAmb	10 29 19.5	
	comp=Z,31nm,1.1s						
ODZ	Otahua Downs	28.62	196	P	P	10 29 09.4	-1.0
ODZ				IAmb	IAmb	10 29 15.3	
	comp=Z,32nm,1.4s						
WKZ	Wanaka	28.89	199	P	P	10 29 12.3	-0.4
EIDS	Eidsvold	29.24	250	P	P	10 29 15.7	-0.4
	baz=29,SNR=4.1						
EIDS	Eidsvold	29.24	250	P	P	10 29 15.3	-0.8
EIDS				IAmb	IAmb	10 29 16.6	
	comp=Z,7.0nm,0.6s						
MLZ	Mavora Lakes	29.65	199	P	P	10 29 19.8	+0.5
DCZ	Deep Cove	30.05	200	P	P	10 29 22.7	+0.1
DCZ				IAmb	IAmb	10 29 41.1	
	comp=Z,51nm,1.5s						
WHZ	Wether Hill Ro	30.18	199	P	P	10 29 24.1	+0.3
WHZ				IAmb	IAmb	10 29 25.5	
	comp=Z,35nm,1.0s						
RMQ	Roma	31.48	248	P	P	10 29 36.0	+0.8
	baz=32,SNR=11						
CTA	Charters Tower	33.41	260	P	P	10 29 51.4	-0.2
	comp=Z,14nm,0.6s,baz=94,slow=10,SNR=19						
CTAO	Charters Tower	33.41	260	P	P	10 29 51.7	+0.1
CTAO				IAmb	IAmb	10 29 52.2	
	comp=Z,17nm,0.7s						
CNB	Canberra Magne	33.43	232	P	P	10 29 52.7	+1.0
	baz=33,SNR=9.8						
PMG	Port Moresby	34.39	279	P	P	10 30 00.8	+0.9
	comp=Z,115nm,0.8s,baz=77,slow=6.1,SNR=19						
PMG	Port Moresby	34.39	279	P	P	10 30 00.6	+0.7
PMG	Port Moresby	34.39	279	P	P	10 30 01.0	+1.1
MTSU	Mount Surprise	35.36	264	P	P	10 30 07.8	-0.1
	baz=35,SNR=11						
QLP	Quilpie	35.51	249	P	P	10 30 09.0	+0.1
	baz=36,SNR=7.7						
COEN	Coen	37.05	270	P	P	10 30 22.5	+0.7
TOO	Toolangi	37.17	231	P	P	10 30 22.4	-0.1
	baz=37,SNR=4.8						
TOO	Toolangi	37.17	231	P	P	10 30 23.6	+1.1
TOO				IAmb	IAmb	10 30 31.4	
	comp=Z,23nm,1.4s						
TAOE	Nuku Hiva Isla	38.27	82	P	P	10 30 33.4	+1.6
STKA	Stephens Creek	38.62	241	P	P	10 30 35.2	+1.0
	baz=39,SNR=12						
STKA	Stephens Creek	38.62	241	P	P	10 30 35.3	+1.1
	comp=Z,4.0nm,0.6s,baz=75,slow=9.2,SNR=13						
STKA				PcP	PcP	10 32 31.3	+0.6
	comp=Z,3.5nm,0.6s,baz=83,slow=6.4,SNR=3.5						
STKA	Stephens Creek	38.62	241	P	P	10 30 35.2	+1.0
QIS	Mount Isa	39.62	259	P	P	10 30 42.0	-0.5
	baz=40,SNR=7.0						
HTT	Hallett	41.14	239	P	P	10 30 53.7	-0.7
	baz=41,SNR=3.8						
JAY	Jayapura	42.83	286	P	P	10 31 08.4	+0.5
	comp=Z,79nm,0.6s,baz=173,slow=4.7,SNR=31						
BBOO	Buckleboo	43.40	241	P	P	10 31 12.3	+0.3
	baz=43,SNR=15						
BBOO	Buckleboo	43.40	241	P	P	10 31 11.6	-0.3
BBOO				IAmb	IAmb	10 31 12.6	
	comp=Z,14nm,0.7s						
WR0	Warramunga Arr	44.40	259	P	P	10 31 19.0	-0.9
WR0				IAmb	IAmb	10 31 21.0	
	comp=Z,24nm,1.2s						
WB0	Warramunga Arr	44.56	260	P	P	10 31 20.2	-0.9
WRAB	Tennant Creek	44.58	259	P	P	10 31 20.3	-0.9
WRAB				IAmb	IAmb	10 31 21.3	
	comp=Z,30nm,0.6s						
WRA	Warramunga Arr	44.59	259	P	P	10 31 20.4	-0.9
	comp=Z,18nm,0.5s,baz=92,slow=7.4,SNR=285						
WRA				PcP	PcP	10 32 51.3	+0.3
	comp=Z,3.1nm,0.4s,baz=93,slow=3.4,SNR=5.9						
WRA				S	S	10 37 09.4	-5.5
	comp=Z,2.7nm,0.7s,baz=97,slow=13,SNR=6.5						
AS31	Alice Springs	44.76	254	IAmb	IAmb	10 31 23.2	
	comp=Z,30nm,0.8s						
ASAR	Alice Springs	44.76	254	P	P	10 31 22.5	-0.1
	comp=Z,126nm,0.7s,baz=87,slow=8.4,SNR=1183						
ASAR				PcP	PcP	10 32 51.6	+0.1
	comp=Z,8.5nm,0.5s,baz=99,slow=4.1,SNR=9.2						
ASAR				S	S	10 37 14.4	-2.9
	comp=Z,14nm,1.1s,baz=85,slow=16,SNR=26						
KDU	Kakadu	47.50	269	P	P	10 31 42.9	-0.4
	baz=48,SNR=14						
GUMO	Guam	47.79	308	P	P	10 31 45.9	+0.5
	comp=Z,270nm,0.9s,baz=164,slow=11,SNR=8.1						
GUMO	Guam	47.79	308	P	P	10 31 44.7	-0.7
MTN	Manton Dam	48.75	268	P	P	10 31 51.7	-0.9
	baz=49,SNR=8.8						
FORT	Forrest	49.99	245	P	P	10 32 01.0	-0.5
	baz=50,SNR=22						
FORT	Forrest	49.99	245	P	P	10 32 01.1	-0.4
FAKI	Fak Fak	50.51	281	P	P	10 32 04.1	-1.4
FAKI				IAmb	IAmb	10 32 13.2	
	comp=Z,20nm,0.8s						
FITZ	Fitzroy Crossi	52.99	260	P	P	10 32 23.2	0.0
	baz=53,SNR=4.3						
FITZ	Fitzroy Crossi	52.99	260	P	P	10 32 23.4	+0.2
FITZ				IAmb	IAmb	10 32 25.4	
	comp=Z,30nm,1.4s						
KMBL	Kambalda	55.30	244	P	P	10 32 38.4	-0.8
	baz=55,SNR=14						
TNTI	Ternate	56.39	283	P	P	10 32 47.3	+0.3
TNTI				IAmb	IAmb	10 32 48.0	
	comp=Z,70nm,0.8s						
PSA00	Pilbara Seismi	57.88	255	P	P	10 32 56.7	-0.3
PSA00				IAmb	IAmb	10 32 57.3	
	comp=Z,34nm,0.7s						
MEEK	Meekatharra	58.41	249	P	P	10 32 59.8	-0.8
	baz=58,SNR=19						
KLBR	Kellerberrin	58.81	243	P	P	10 33 02.7	-0.4
	baz=59,SNR=9.0						
NWAO	Narrogin (SRO)	59.20	242	P	P	10 33 05.1	-0.5
	comp=Z,8.3nm,0.6s,baz=124,slow=2.2,SNR=6.3						
BLDU	Ballidu	59.76	245	P	P	10 33 09.2	-0.3
	baz=60,SNR=6.0						
MUN	Mundaring	60.11	243	P	P	10 33 11.8	+0.1
	baz=60,SNR=3.9						
VNDA	Vanda	60.52	185	P	P	10 33 15.3	+1.7
	comp=Z,0.5nm,0.5s,baz=357,slow=6.4,SNR=2.6						
KAPI	Kappang	61.63	274	P	P	10 33 21.3	-0.6
	comp=Z,15nm,0.7s,baz=105,slow=15,SNR=1.9						
GIRL	Giralia	62.86	253	P	P	10 33 30.8	+1.1
	baz=63,SNR=4.9						
GIRL	Giralia	62.86	253	P	P	10 33 30.2	+0.4
JYT	Yasato	66.47	324	P	P	10 33 52.4	+0.4
JGF	Kuroka	67.64	322	P	P	10 33 59.0	-0.3
JGF				IAmb	IAmb	10 34 05.7	
	comp=Z,28nm,1.2s						
MJAR	Matsushiro Arr	67.81	323	P	P	10 33 60.0	-0.3
	comp=Z,16nm,0.5s,baz=160,slow=5.8,SNR=40						
MAJO	Matsushiro	67.81	323	P	P	10 34 00.3	0.0
MAJO				IAmb	IAmb	10 34 00.7	
	comp=Z,20nm,0.5s						
MAT	Matsushiro	67.81	323	P	P	10 34 00.1	-0.2
JHS	Saijyo	69.80	319	P	P	10 34 13.1	+0.8
YULB	Yu-li	71.68	303	P	P	10 34 21.8	-1.7
YULB				IAmb	IAmb	10 34 26.3	
	comp=Z,21nm,0.9s						
SSLB	Suanglung	72.15	303	P	P	10 34 25.2	-1.0
SSLB				IAmb	IAmb	10 34 26.1	
	comp=Z,39nm,1.0s						
TPUB	Ta-pu	72.17	302	P	P	10 34 25.5	-0.9
QSPA	South Pole Qui	72.22	180	P	P	10 34 27.3	+1.2
	comp=Z,0.8nm,0.5s,baz=352,slow=0.7,SNR=12						
QSPA	South Pole Qui	72.22	180	P	P	10 34 27.3	+1.2
KSM	Kuching	72.62	277	P	P	10 34 29.0	-0.2
PEA0B	Petropavlovsk-	73.59	345	P	P	10 34 33.6	-0.2
PEA0B				IAmb	IAmb	10 34 34.9	
	comp=Z,32nm,0.9s						
PETK	Petropavlovsk-	73.59	345	P	P	10 34 34.1	+0.3
	comp=Z,15nm,0.8s,baz=132,slow=8.8,SNR=10						
KSRS	Korea Array	74.61	318	P	P	10 34 41.0	+1.1
	comp=Z,3.4nm,0.6s,baz=130,slow=6.4,SNR=17						
SAO	San Andreas Ge	76.41	44	P	P	10 34 51.6	+1.8
SAO				IAmb	IAmb	10 34 52.5	
	comp=Z,7.4nm,0.8s						
USRK	Ussuriysk Ar.	76.52	326	P	P	10 34 51.3	+1.1
	comp=Z,4.4nm,0.6s,baz=111,slow=4.5,SNR=25						
PMPB	Monarch Peak	76.53	45	IAmb	IAmb	10 34 53.4	
	comp=Z,7.1nm,0.8s						
KMRM	Mail Ridge	76.99	40	IAmb	IAmb	10 34 56.1	
	comp=Z,13nm,0.8s						
MWC	Mount Wilson	77.33	48	IAmb	IAmb	10 34 56.9	
	comp=Z,5.9nm,0.6s						
ISA	Isabella, Lake	77.80	46	IAmb	IAmb	10 35 00.1	
	comp=Z,6.7nm,0.8s						
CMB	Columbia Colle	77.82	43	P	P	10 34 58.9	+1.4
NJ2	Nanjing	77.85	309	*e*P	P	10 34 58.9	+1.2
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
RMX	La Rumorosa	77.91	50	IAmb	IAmb	10 35 01.0	
	comp=Z,7.3nm,0.8s						
AFDM	Forest Hills D	77.96	42		PcP	10 35 07.2	+1.9
MDPB	Devils Postpil	78.46	44	IAmb	IAmb	10 35 03.7	
	comp=Z,5.5nm,0.8s						
YBH	Yreka Blue Hor	78.50	39	P	P	10 35 02.9	+1.8
WAKR	Walker	78.70	43	IAmb	IAmb	10 35 05.2	
	comp=Z,7.2nm,0.9s						
BEKR	Beckworth	78.87	42	IAmb	IAmb	10 35 05.1	
	comp=Z,4.6nm,0.5s						
PNTR	Pine Nut	78.92	43	IAmb	IAmb	10 35 06.2	
	comp=Z,11nm,0.8s						
LHV	Little Huntoon	79.18	44	IAmb	IAmb	10 35 07.6	
	comp=Z,7.3nm,0.9s						
NVAR	Mina Array Bea	79.41	44	P	P	10 35 07.7	+1.5
	comp=Z,3.1nm,0.7s,baz=224,slow=8.8,SNR=37						
CN2	Changchun	79.93	322	*e*P	P	10 35 09.3	+0.8
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
MOD	Modoc Plateau	80.06	40	IAmb	IAmb	10 35 11.8	
	comp=Z,6.0nm,0.7s						
PINE	Pine Mountain	80.77	38	P	P	10 35 15.0	+1.9
PINE				IAmb	IAmb	10 35 15.7	
	comp=Z,5.4nm,0.8s						
PRN	Pahroc Range	81.06	46	IAmb	IAmb	10 35 17.6	
	comp=Z,7.7nm,0.9s						
WVOR	Wild Horse Val	81.39	40	IAmb	IAmb	10 35 19.2	
	comp=Z,5.7nm,0.9s						
TUC	Tucson	81.70	52	P	P	10 35 20.7	+2.7
I07A	Izee	81.78	39	P	P	10 35 19.8	+1.7
X16A	Lo Mia Camp, P	82.18	50	IAmb	IAmb	10 35 24.1	
	comp=Z,6.4nm,1.1s						
BELA	Belgrano 2	82.25	173	P	P	10 35 20.4	+0.5
U15A	North Rim	82.51	48	IAmb	IAmb	10 35 25.2	
	comp=Z,6.7nm,0.8s						
WUAZ	Wupatki	82.74	49	IAmb	IAmb	10 35 26.7	
	comp=Z,8.2nm,1.1s						
BJI	Beijing	83.69	315	P	P	10 35 28.7	+1.1
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GSI	Gunungsitoli	84.64	273	P	P	10 35 34.1	+1.2
GSI				IAmb	IAmb	10 35 34.9	
	comp=Z,30nm,0.7s						
GYA	Guiyang	84.95	300	⇓P	P	10 35 35.7	+1.4
GYA				pmax	pmax		
	comp=Z,12nm,1.3s						
ILAR	Eielson Array	85.83	13	P	P	10 35 36.9	-0.5
	comp=Z,1.2nm,0.4s,baz=220,slow=5.1,SNR=34						
TX31	Lajitas Ar. Si	86.00	58	IAmb	IAmb	10 35 42.7	
	comp=Z,15nm,1.0s						
TX32	Lajitas Array	86.00	58	IAmb	IAmb	10 35 42.7	
	comp=Z,5.0nm,1.0s						
TXAR	Lajitas Array	86.00	58	P	P	10 35 41.7	+2.5
	comp=Z,3.5nm,0.8s,baz=220,slow=6.1,SNR=29						
XAN	Xi'an	86.17	307	P	P	10 35 40.9	+1.1
XAN				pP	pP	10 37 54.2	+6.0
XAN				S	S	10 45 25.0	-0.6
XAN				pmax	pmax		
	comp=Z,39nm,1.0s						
HHC	Hu-ho-hao-te	87.18	314	*e*P	P	10 35 44.8	+0.3
HHC				pmax	pmax		
	comp=Z,13nm,1.7s						
HHC				pmax	pmax		
	comp=Z,120nm,8.3s						
PD31	Pinedale Array	87.33	43	IAmb	IAmb	10 35 47.0	
	comp=Z,1.9nm,0.7s						
PDAR	Pinedale Array	87.33	43	P	P	10 35 46.5	+1.1
	comp=Z,1.4nm,0.6s,baz=217,slow=3.3,SNR=16						
PDAR				PP	PP	10 39 19.9	-1.6
	comp=Z,0.5nm,1.0s,baz=256,slow=6.0,SNR=4.8						
PAYA	Payao	88.28	291	P	P	10 35 51.3	+1.3
CM04	Chiang Mai Arr	88.76	290	P	P	10 35 54.1	+1.9
CM09	Chiang Mai Arr	88.76	290	P	P	10 35 54.0	+1.8
CM01	Chiang Mai Arr	88.78	290	P	P	10 35 54.3	+2.0
CM05	Chiang Mai Arr	88.79	290	P	P	10 35 54.0	+1.7
CM02	Chiang Mai Arr	88.80	290	P	P	10 35 54.0	+1.6
CMAR	Chiang Mai Arr	88.81	290	P	P	10 35 54.1	+1.7
	comp=Z,6.8nm,0.8s,baz=110,slow=3.0,SNR=38						
CM15	Chiang Mai Arr	88.82	290	P	P	10 35 54.5	+2.0
CM13	Chiang Mai Arr	88.83	290	P	P	10 35 54.4	+1.9
CMMT	Chiang Mai	88.92	290	P	P	10 35 54.0	+1.0
CM33	Chiang Mai Arr	88.92	290	P	P	10 35 54.0	+1.0
CHTO	Chiang Mai	88.92	290	P	P	10 35 54.1	+1.1
CHTO				IAmb	IAmb	10 35 54.9	
	comp=Z,9.0nm,0.8s						
CM32	Chiang Mai Arr	88.96	290	P	P	10 35 56.0	+2.9
SNAA	Sanae	90.67	179	P	P	10 36 00.3	+0.1
LZH	Lanzhou	90.80	308	*e*P	P	10 36 01.5	0.0
LZH				pP	pP	10 38 11.3	0.0
LZH				sP	sP	10 39 14.5	+3.5
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
VNA2	Neumayer--Watz	91.26	177	P	P	10 36 03.2	+0.5
INK	Inuvik	91.83	15	P	P	10 36 05.3	+0.2
	comp=Z,1.7nm,0.8s,baz=194,slow=5.1,SNR=6.6						
ULN	Ulaanbaatar	93.06	319	P	P	10 36 12.2	+0.6
ULN				IAmb	IAmb	10 36 12.7	
	comp=Z,4.1nm,0.8s						
SONM	Songino Array	93.46	319	P	P	10 36 13.3	-0.1
	comp=Z,1.0nm,0.5s,baz=128,slow=4.9,SNR=10.0						
YKA	Yellowknife Ar	94.29	25	P	P	10 36 16.6	0.0
	comp=Z,0.2nm,0.5s,baz=221,slow=3.7,SNR=5.3						
YKA				PKKPbc	PKKPdf	10 53 13.1	-1.9
	comp=Z,0.1nm,0.5s,baz=65,slow=3.1,SNR=6.0						
AP01	Chacalluta	100.72	113		pwP	10 39 02.4	+2.9
ZALV	Zalesovo Beam	108.14	322	PKiKP	PKiKP	10 41 20.3	-1.0
	comp=Z,1.4nm,0.5s,baz=97,slow=1.1,SNR=9.7						
MKAR	Makanchi Array	109.04	314	Pdiff	Pdif	10 37 20.9	-1.9
	comp=Z,0.2nm,0.5s,baz=101,slow=7.5,SNR=1.7						
MKAR				PKiKP	PKiKP	10 41 22.5	-0.7
	comp=Z,2.1nm,0.5s,baz=164,slow=0.6,SNR=41						
KSH	Kashi	112.99	306	PKP	PKiKP	10 41 36.3	+5.2
BVAR	Borovoye Array	116.75	321	PKP	PKiKP	10 41 37.1	-0.7
	comp=Z,2.8nm,0.4s,baz=166,slow=3.1,SNR=22						
BRVK	Borovoye	116.81	321		PKiKP	10 41 37.6	-0.3
SPITS	Spitsbergen Ar	119.19	357	PKP	PKiKP	10 41 41.6	-0.3
	comp=Z,12nm,1.1s,baz=91,slow=4.4,SNR=9.0						
ARU	Arti	122.76	326	PKP	PKiKP	10 41 48.9	-0.5
	comp=Z,3.1nm,0.5s,baz=8.7,slow=0.5,SNR=15						
ARU	Arti	122.76	326		PKiKP	10 41 48.5	-0.9
ABKAR	Akbulak array	123.84	318		PKiKP	10 41 51.2	-0.5
ARCES	ARCESS Array B	126.23	350	PKP	PKiKP	10 41 55.4	-0.6
	comp=Z,5.5nm,0.8s,baz=98,slow=1.7,SNR=3.8						
GEYT	Alibeck	126.95	304	PKP	PKiKP	10 41 58.6	+0.2
	comp=Z,2.2nm,0.5s,baz=221,slow=5.7,SNR=4.6						
FINES	FINESS Array B	133.10	344	PKhKP	PKPpre	10 42 02.8	
	comp=Z,1.0nm,0.4s,baz=48,slow=2.8,SNR=6.0						
FINES				PP	PP	10 44 43.8	-0.1
	comp=Z,2.1nm,0.8s,baz=37,slow=1.0,SNR=5.2						
AKASG	Malin Array Be	140.47	332	PKhKP	PKPpre	10 42 15.9	
	comp=Z,1.3nm,0.3s,baz=45,slow=4.3,SNR=9.0						
AKASG				PKP	PKiKP	10 42 24.0	-1.4
	comp=Z,2.2nm,0.3s,baz=40,slow=3.2,SNR=10						
SORM	Soroca	142.70	330	⇑P	PKPdf	10 42 23.8	-2.8
BSEG	Bad Segeberg	143.33	351	*e*PKPbc	PKPdf	10 42 26.4	-1.2
	baz=16,slow=2.8						
KWP	Kalwaria Pacla	143.98	336	*e*PKP	PKPdf	10 42 28.9	+0.1
KWP	Kalwaria Pacla	143.98	336		PKPdf	10 42 29.0	+0.1
VASR	Vaslui	144.02	329	⇓P	PKPdf	10 42 29.4	+0.4
RUE	Ruedersdorf	144.11	347	*e*PKPbc	PKPab	10 42 28.9	-0.1
	baz=16,slow=2.8						
PRAR	RASCA	144.25	331	⇑P	PKPab	10 42 29.9	+0.1
TLCR		144.48	326	⇑P	PKPab	10 42 30.3	-0.4
BURAR	Bucovina Array	144.52	332	⇓P	PKPab	10 42 30.8	-0.1
OJC	Ojcow	144.52	340	*e*PKP	PKPab	10 42 30.4	-0.3
OJC	Ojcow	144.52	340		PKPab	10 42 30.5	-0.3
BIZ	Bicaz	144.62	331	⇑P	PKiKP	10 42 31.9	-2.1
TESR	Tescani	144.67	330	⇓P	PKPab	10 42 31.2	-0.2
BRTR	Keskin Array B	144.69	315	PKP	PKPab	10 42 31.1	-0.8
	comp=Z,8.7nm,0.5s,baz=100,slow=2.9,SNR=59						
KOLS	Kolonicke sedl	144.71	336	*e*PKP	PKiKP	10 42 31.5	-2.7
FLTG	Flechtingen	144.74	350	*e*PKPbc	PKPab	10 42 30.5	-0.9
	baz=16,slow=2.8						
CFR	Carcaliu	144.84	327	⇑P	PKPab	10 42 31.9	-0.2
TPGR	Topolog	144.91	326	⇑P	PKiKP	10 42 32.4	-2.3
PETR	Petresti	144.94	328	⇑P	PKPab	10 42 31.7	-0.7
ODBI	Odobesti	145.00	328	⇓P	PKiKP	10 42 33.6	-1.2
KSP	Ksiaz	145.02	344	*e*PKP	PKiKP	10 42 32.4	-2.3
NIE	Niedzica	145.03	338	*e*PKP	PKiKP	10 42 32.6	-2.2
CRVS	Cervenica-Dubn	145.05	337	*e*PKP	PKPab	10 42 32.4	-0.4
VRI	Vrincioaia	145.09	329	⇑P	PKPab	10 42 32.6	-0.5
PLOR	Plostina	145.13	329	⇓P	PKPab	10 42 32.3	-1.0
PLOR				⇓P	PKiKP	10 42 32.6	-2.5
TIRR	Tirgusor	145.17	325	⇓P	PKPab	10 42 32.0	-1.3
BMR	Baia Mare	145.22	334	⇑P	PKPab	10 42 33.0	-0.5
IBBN	Ibbenburen	145.25	353	*e*PKPbc	PKiKP	10 42 33.2	-1.9
	baz=16,slow=2.8						
HARR	Harsova	145.28	326	⇑P	PKiKP	10 42 33.4	-2.0
OSTC	Ostas	145.30	344	*e*PKP	PKiKP	10 42 33.3	-2.0
ARCR	ARCALIA	145.31	332	⇑P	PKiKP	10 42 33.8	-1.6
CLZ	Clausthal	145.35	350	*e*PKPbc	PKPab	10 42 33.0	-0.9
	baz=16,slow=2.8						
CLL	Collm	145.38	347	⇓*i*PKPbc	PKPab	10 42 33.0	-0.9
	comp=Z,30nm,1.0s						
CLL	Collm	145.38	347	*e*PKPbc	PKPab	10 42 32.8	-1.2
	baz=16,slow=2.8						
OZUR		145.38	330	⇓P	PKPab	10 42 33.6	-0.7
UPC	Upice	145.40	344	*e*PKP	PKPab	10 42 33.1	-1.0
DPC	Dobruska-Polom	145.46	343	*e*PKP	PKPab	10 42 33.2	-1.2
MANR	Mangalia	145.50	324	⇑P	PKPab	10 42 33.8	-0.9
BRG	Berggiesshubel	145.58	346	*i* PKP	PKPab	10 42 33.6	-1.1
BRG				Amp		10 42 35.8	
	comp=Z,15nm,0.8s						
BRG	Berggiesshubel	145.58	346	*i* PKP	PKPab	10 42 33.6	-1.1
BRG				Amp		10 42 35.8	
	comp=Z,15nm,0.8s						
BRG	Berggiesshubel	145.58	346	*e*PKPbc	PKPab	10 42 33.5	-1.2
	baz=16,slow=2.8						
KRLC	Kraliky	145.58	343	*e*PKP	PKPab	10 42 33.6	-1.3
NEHR	Nehoiu	145.61	329	⇑P	PKPab	10 42 33.7	-1.5
MORC	Moravsky Berou	145.62	342	⇑P	PKiKP	10 42 34.3	-1.8
MORC	Moravsky Berou	145.62	342	*e*PKP	PKPab	10 42 33.8	-1.2
MORC	Moravsky Berou	145.62	342		PKPab	10 42 34.0	-1.1
DOPR	Dopca	145.66	330	⇓P	PKiKP	10 42 34.7	-1.5
FBE	Freiberg	145.67	347	*e*PKPbc	PKiKP	10 42 34.3	-1.7
	baz=16,slow=2.8						
GTTG	Gottingen	145.70	351	*e*PKPbc	PKPab	10 42 34.1	-1.1
	baz=16,slow=2.8						
ISR	Istrita	145.70	328	⇓P	PKPdf	10 42 31.3	-0.7
NEUB	Neuenburg	145.72	349	*e*PKPbc	PKPab	10 42 34.3	-1.0
	baz=16,slow=2.8						
MLR	Muntele Rosu	145.74	329	⇓P	PKPab	10 42 33.7	-2.1
PVCC	Panska Ves	145.75	345	*e*PKP	PKiKP	10 42 34.6	-1.6
KECS	Kecovo	145.75	337	*e*PKP	PKiKP	10 42 34.6	-1.7
CJR	Cluj-Napoca	145.92	333	⇓P	PKPab	10 42 35.0	-1.3
MMAI	Mount Meron Ar	146.06	303	PKPbc	PKPab	10 42 35.9	-1.5
	comp=Z,16nm,0.5s,baz=56,slow=5.4,SNR=7.6						
VOIR		146.21	330	⇑P	PKiKP	10 42 35.8	-1.6
DRGR		146.25	333	⇑P	PKiKP	10 42 35.6	-1.9
PRU	Pruhonice	146.26	345	*e*PKP	PKiKP	10 42 35.4	-1.9
PRU				*e*x	x	10 42 38.2	
VRAC	Vranov	146.32	342	⇑P	PKiKP	10 42 36.0	-1.5
VRAC	Vranov	146.32	342	*e*PKP	PKiKP	10 42 35.9	-1.5
VYHS	Vyhne	146.33	339	*e*PKP	PKiKP	10 42 36.3	-1.2
VYHS				*e*		10 42 38.8	
PLN	Plauen	146.33	348	*e*PKPbc	PKiKP	10 42 35.8	-1.6
	baz=16,slow=2.8						
TANN	Tannenbergstha	146.33	347	*e*PKPbc	PKiKP	10 42 36.0	-1.5

	baz=16,slow=2.8						
WERD	Werda	146.34	348	*e*PKPbc	PKiKP	10 42 35.7	-1.7
	baz=16,slow=2.8						
JAVC	Velka Javorina	146.39	341	*e*PKP	PKPab	10 42 37.3	-0.9
GUNZ	Gunzen	146.41	347	*e*PKPbc	PKiKP	10 42 36.3	-1.4
	baz=16,slow=2.8						
PSZ	Piszkesteto	146.44	337	⇓P	PKPbc	10 42 35.4	-0.3
ARR	Arges	146.46	330	⇑P	PKPab	10 42 37.3	-1.3
WERN	Wernitzgruen	146.47	347	*e*PKPbc	PKiKP	10 42 36.5	-1.3
	baz=16,slow=2.8						
NKC	Novy Kostel	146.51	347	*e*PKP	PKiKP	10 42 35.8	-2.0
KRUC	Moravsky	146.60	342	*e*PKP	PKiKP	10 42 36.5	-1.5
PBCC	Pribram	146.67	345	*e*PKP	PKPab	10 42 39.6	+0.4
SMOL	Smolenice	146.77	341	*e*PKP	PKPab	10 42 37.8	-1.8
MODS	Modra-Piesok	146.94	341	*e*PKP	PKiKP	10 42 37.4	-1.4
ROTZ	Rotzenmuhle	147.00	347	*e*PKPbc	PKiKP	10 42 37.5	-1.3
	baz=16,slow=2.8						
MEM	Membach	147.10	355	*d*PKP	PKiKP	10 42 37.4	-1.6
MEM				*d*PKPab	PKPab	10 42 40.2	-0.6
BTNL	Ternell	147.12	355	*d*PKP	PKiKP	10 42 38.0	-1.0
BSTI	Sart Tilman	147.17	355	*d*PKP	PKiKP	10 42 37.9	-1.2
TNS	Taunus Mts	147.21	352	*e*PKPbc	PKiKP	10 42 38.0	-1.4
	baz=16,slow=2.8						
GRF	Grafenberg Arr	147.27	348	*e*PKPbc	PKiKP	10 42 38.3	-1.1
	baz=16,slow=2.8						
KHC	Kasperske Hory	147.29	345	*e*PKP	PKiKP	10 42 37.8	-1.7
KHC				*e*x	x	10 42 41.8	
GZR	Gura Zlata	147.31	332	⇓P	PKiKP	10 42 37.8	-1.9
BMRD	Maredsous	147.50	356	*d*PKP	PKiKP	10 42 39.4	-0.4
GEC2	GERESS Array S	147.53	345	*e*PKPbc	PKiKP	10 42 39.0	-1.1
	baz=16,slow=2.8						
GERES	GERESS Array B	147.53	345	PKPbc	PKiKP	10 42 39.0	-1.1
	comp=Z,11nm,0.6s,baz=26,slow=3.3,SNR=39						
BZS	Buzias	147.64	333	⇓P	PKiKP	10 42 39.1	-1.2
DOU	Dourbes	147.72	356	*d*PKP	PKiKP	10 42 39.5	-0.8
DOU				*d*PKPab	PKPab	10 42 42.7	-0.7
CONA	Conrad Observa	147.77	342	*i* P	PKiKP	10 42 40.1	-0.5
	comp=Z,12nm,0.6s,SNR=6.1						
HERR	Herculane	147.86	332	⇓P	PKiKP	10 42 39.7	-1.0
WLF	Walferdange	148.03	354	*e*PKPbc	PKiKP	10 42 40.7	-0.2
	baz=16,slow=2.8						
MDVR	Moldovita	148.26	332	⇑P	PKiKP	10 42 40.9	-0.7
MOA	Molln	148.30	344	*e*P	PKiKP	10 42 40.9	-0.7
	comp=Z,9.9nm,1.2s						
ARSA	Arzberg	148.48	342	*e*P	PKiKP	10 42 41.2	-0.8
	comp=Z,8.6nm,1.4s						
STU	Stuttgart	148.52	350	*e*PKPbc	PKiKP	10 42 41.3	-0.6
	baz=16,slow=2.8						
MANT	Manisa	148.71	317		PKiKP	10 42 42.5	-0.5
FUR	Furstenfeldbru	148.72	347	*e*PKPbc	PKiKP	10 42 42.0	-0.5
	baz=16,slow=2.8						
BFO	Black Forest	149.08	351	*e*PKPbc	PKiKP	10 42 42.5	-0.7
	baz=16,slow=2.8						
SOKA	Soboth	149.15	342	*e*P	PKiKP	10 42 42.5	-1.0
	comp=Z,10.0nm,1.1s						
PERS	Pernice	149.16	342	*i* PKPbc	PKiKP	10 42 42.4	-1.1
KBA	Koelnbreinsper	149.25	344	*e*P	PKPbc	10 42 42.0	-1.0
	comp=Z,6.5nm,0.5s						
UBR	Ueberruh	149.41	349	*e*PKPbc	PKiKP	10 42 43.3	-0.6
	baz=16,slow=2.8						
WATA	Walderalm	149.44	347	*e*P	PKiKP	10 42 43.7	-0.5
	comp=Z,8.2nm,0.6s						
OBKA	Obir	149.44	342	*e*P	PKPbc	10 42 42.4	-1.0
	comp=Z,6.6nm,1.2s						
RETA	Reutte	149.47	348	*e*P	PKiKP	10 42 43.8	-0.3
	comp=Z,4.8nm,0.5s						
DOBS	Dobrina	149.49	341	*i* PKPbc	PKiKP	10 42 43.4	-0.7
WTTA	Wattenberg	149.49	346	*i* P	PKiKP	10 42 43.9	-0.4
	comp=Z,28nm,0.7s,SNR=6.7						
MOTA	Moosalm	149.53	347	*e*P	PKiKP	10 42 43.9	-0.5
	comp=Z,14nm,0.9s						
MYKA	Terra Mystica	149.59	343	*e*P	PKiKP	10 42 43.1	-1.3
	comp=Z,11nm,0.6s						
SQTA	Sankt Quirin	149.63	347	*i* P	PKiKP	10 42 44.2	-0.3
	comp=Z,16nm,0.6s,SNR=5.0						
ABTA	Abfaltersbach	149.77	345	*i* P	PKiKP	10 42 43.9	-0.8
	comp=Z,20nm,0.7s,SNR=7.4						
DAVA	Damuels	149.83	349	*e*P	PKiKP	10 42 45.3	+0.4
	comp=Z,8.9nm,0.7s						
LJU	Ljubljana	149.87	342	*i* PKPbc	PKiKP	10 42 44.5	-0.3
FETA	Feichten	149.92	347	*e*P	PKiKP	10 42 45.0	-0.1
	comp=Z,17nm,1.0s						
VOJS	Vojsko	150.07	343	*i* PKPbc	PKiKP	10 42 44.4	-1.0
KEST	Kesra	160.87	340	PKPab	PKPab	10 43 39.5	-0.6
	comp=Z,3.6nm,0.6s,baz=321,slow=4.1,SNR=4.4						
DBIC	Dimbokro	167.27	150	PKP	PKPdf	10 42 58.7	-1.0
	comp=Z,3.0nm,0.9s,baz=226,slow=3.3,SNR=3.2						
TORD	Torodi Ar. Bea	175.34	182	PKP	PKPdf	10 43 02.6	-1.0
	comp=Z,0.8nm,0.8s,baz=321,slow=2.4,SNR=7.1						
TORD				PKPab	PKPab	10 44 44.7	+0.3
	comp=Z,0.7nm,0.9s,baz=152,slow=4.4,SNR=2.1						

*TRN **08** 10:25:18.4, 11.°01N×62.°24W, h15^{km}, MD3.1*
*FUNV **08** 10:25:19.3, 10.°91N×62.°27W, h26^{km}, MW3.0*
ISC 08 10:25:17.8±1.5**, 10.°91N**±0.°04×**62.°31W**±0.°04**, h82**^{km}±17^{km}**,**
n13, σ1.^{s}**10**/23**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.93	106	⇑*i*P	Pn	10 25 36.2	+0.1
TRN				*e*S	Sn	10 25 48.6	-1.2
TRN	Trinidad (W)	0.93	106	*e*P	Pn	10 25 36.0	-0.1
TRN				*e*S	Sn	10 25 48.6	-1.2
CRUV	Carupano	0.94	255	*e*P	Pn	10 25 37.0	+0.8
CRUV				*e*S	Sn	10 25 49.9	-0.2
TBH	Brigand Hill	1.29	109	*e*S	Sn	10 25 58.9	+1.2
GRGR	Grenville	1.37	28	*e*P	Pn	10 25 42.2	+0.6
GRGR				*e*S	Sn	10 25 59.1	-0.3
GRGR	Grenville	1.37	28	*e*P	Pn	10 25 42.2	+0.6
GRGR				*e*S	Sn	10 25 59.0	-0.5
TPR	Prospect	1.53	80	*e*S	Sn	10 26 03.5	+0.4
GCMP	Grenada, Carri	1.79	29	*e*P	Pn	10 25 46.5	-0.4
GCMP				*e*S	Sn	10 26 07.8	-1.2
PCRV	Puerto La Cruz	2.40	252	*e*P	Pn	10 25 56.7	+1.6
PCRV				*e*S	Sn	10 26 23.7	-0.1
SVB	Belmont	2.56	24	*e*S	Sn	10 26 28.1	+0.5
RIOV	Rio Grande	2.87	170	*e*P	Pn	10 26 02.5	+1.1
RIOV				*e*S	Sn	10 26 33.9	-1.2
MERV	Las Mercedes	4.26	248	*e*P	Pn	10 26 21.2	+0.9
MERV				*e*S	Sn	10 27 08.0	-0.8
BAUV	El Baul	5.98	251	*e*P	Pn	10 26 43.9	+0.2
BAUV				*e*S	Sn	10 27 48.0	-2.9

*ATH **08** 10:44:46.9, 39.°91N×19.°98E, h20^{km}±4^{km}, ML2.3/6, Error ellipse: s-maj=5.2km s-min=1.2km az=202.0*
*THE **08** 10:44:46.6, 39.°97N×20.°00E, h6^{km}±1^{km}, ML2.2/5, Error ellipse: s-maj=1.5km s-min=0.6km az=305.0*
*TIR **08** 10:44:46.9, 39.°89N×20.°12E, h2^{km}±1^{km}, Md2.7*
ISC 08 10:44:46.5±0.8**, 39.°92N**±0.°03×**20.°00E**±0.°03**, h14**^{km}±5^{km}**,**
n26, σ1.^{s}**08**/43**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	Sarande	0.04	184	P	Pg	10 44 49.0	0.0
SRN				S	Sg	10 44 50.5	-0.2
	5µm,0.3s						
SRN	Sarande	0.04	184	P	Pg	10 44 49.0	0.0
	baz=264						
SRN				S	Sg	10 44 50.9	+0.2
	baz=264						
KASA	Kassiopi	0.18	197	P	Pg	10 44 51.1	+0.5
KASA				S	Sg	10 44 54.0	+0.6
KASA				AML	AML	10 44 56.0	
	comp=E,4666µm,0.3s						
KASA				AML	AML	10 44 56.3	
	comp=N,2923µm,0.3s						
KEK	Kerkira	0.26	218	P	Pg	10 44 52.3	+0.3
KEK				S	Sb	10 44 57.1	-0.2
KEK				AML	AML	10 44 57.9	
	comp=E,1388µm,0.2s						
KEK				AML	AML	10 45 00.1	
	comp=N,1355µm,0.4s						
KEK	Kerkira	0.26	218	P	Pg	10 44 52.3	+0.3
KEK				S	Sb	10 44 57.1	-0.2
	comp=N,792nm,0.4s						
IGT	Igoumenitsa	0.46	146	P	Pg	10 44 55.6	0.0
IGT				S	Sb	10 45 02.8	-0.3
IGT				AML	AML	10 45 07.8	
	comp=N,338µm,0.4s						
IGT				AML	AML	10 45 08.3	
	comp=E,411µm,0.3s						
IGT	Igoumenitsa	0.46	146	P	Pg	10 44 55.7	0.0
IGT				S	Sb	10 45 03.3	+0.2
	comp=E,212nm,0.5s						
IGT	Igoumenitsa	0.46	146	P	Pg	10 44 55.7	0.0
	baz=156						
IGT				S	Sb	10 45 01.7	-1.4
	baz=156						
LSK	Leskovik	0.51	63	P	Pg	10 44 55.8	-0.9
LSK				S	Sg	10 45 03.5	-0.1
	comp=E,412nm,0.6s						
LSK	Leskovik	0.51	63	P	Pg	10 44 56.1	-0.6
	baz=54						
LSK				S	Sg	10 45 03.7	+0.1
	baz=54						
JAN	Janina	0.70	111	P	Pb	10 45 00.4	-0.2
JAN				S	Sb	10 45 10.7	+0.6
JAN				AML	AML	10 45 13.3	
	comp=N,520µm,0.3s						
JAN				AML	AML	10 45 13.7	
	comp=E,394µm,0.3s						
JAN	Janina	0.70	111	P	Pb	10 45 00.6	+0.1
PENT	Pentalofos	0.92	72	P	Pg	10 45 03.6	-0.6
NEST	Nestorio	0.94	58	P	Pb	10 45 04.7	0.0
KPRO	Kipourio	1.05	87	P	Pb	10 45 06.2	-0.3
KPRO				S	Sb	10 45 19.1	-0.9
KPRO				AML	AML	10 45 27.3	
	comp=N,267µm,0.6s						
KPRO				AML	AML	10 45 27.6	
	comp=E,289µm,0.4s						
KPRO	Kipourio	1.05	87	P	Pb	10 45 06.5	+0.1
KPRO				S	Sn	10 45 22.2	+0.9
	comp=E,140nm,0.5s						
LKD2	Lefkada island	1.23	156	P	Pg	10 45 10.8	+0.5
LKD2				S	Sg	10 45 28.9	+2.5
NYDR	Nydri-Lefkada	1.32	156	P	Pg	10 45 12.0	+0.2
OHR	Ohrid	1.34	27	*i* Pn	Pg	10 45 14.0	+1.7
OHR				*i* Sn	Sg	10 45 33.6	+3.9
FNA	Florina	1.36	50	P	Pn	10 45 10.3	-0.9
FNA				AML	AML	10 45 36.2	
	comp=E,243µm,0.5s						
FNA				AML	AML	10 45 36.4	
	comp=N,220µm,0.4s						
FNA	Florina	1.36	50	P	Pb	10 45 12.7	+0.9
	baz=46						
STON	Ston	3.42	330	Sn	Sn	10 46 19.3	-0.5
HVAR	Hvar	4.21	322	*e*Pn	Pn	10 45 49.6	-0.6
ZIRJ	Zirje	4.96	320	*e*Pn	Pn	10 46 01.1	+0.6
ZIRJ				Sn	Sn	10 46 55.0	-2.6
MORI	Morici	5.08	322	*e*Pn	Pn	10 46 02.4	+0.1
MORI				Sn	Sn	10 46 59.3	-1.5
DUGI	Dugi Otok	5.49	319	Sn	Sn	10 47 09.2	-1.6

*IDC **08** 10:52:49.1±5.4, 23.°14N×94.°64E, h116^{km}±41^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.1/55, mbtmp3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx2.8/31, Error ellipse: s-maj=212.6km s-min=20.2km az=59.0*
ISC 08 10:52:47.2±0.9**, 22.°9N**±0.°3×**94.°0E**±0.°3**, h100**^{km}**, n12,**
σ1.^{s}**59**/12**, mb4.0**/4**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.38	133	P	Pn	10 54 17.6	-1.0
	0.2nm,0.3s,baz=310,slow=13,SNR=2.2						
CMAR				S	Sn	10 55 33.4	+3.4
	0.5nm,0.3s,baz=298,slow=38,SNR=1.9						
ODAN	Odare	7.21	304	*e*P	Pn	10 54 31.2	+1.1
	9.1nm,0.3s						
TAPN	Taplejung	7.24	309	*e*P	Pn	10 54 31.1	+0.4
	12nm,0.3s						
RAMN	Ramite	7.86	302	*e*P	Pn	10 54 40.2	+1.2
	8.6nm,0.4s						
GUN	Gumba	8.90	306	*e*P	Pn	10 54 54.7	+1.4
	5.3nm,0.2s						
PKI	Pulchoki	9.09	302	*e*P	Pn	10 54 56.7	+0.9
	8.1nm,0.4s						
KOLN	Koldanda	10.61	299	*e*P	Pn	10 55 15.9	-0.5
	3.9nm,0.2s						
MKAR	Makanchi Array	25.65	341	P	P	10 58 07.6	+0.1
	0.8nm,0.7s,baz=147,slow=11,SNR=7.6						
JHJ	Hachijo jima 2	41.36	65	LR	LR	11 18 21.0	
	comp=Z,150nm,18.2s,baz=111,slow=38						
WRA	Warramunga Arr	57.97	134	P	P	11 02 27.6	-2.0
	0.7nm,0.5s,baz=325,slow=7.3,SNR=3.2						
ASAR	Alice Springs	60.37	137	P	P	11 02 45.1	-0.9
	0.9nm,0.8s,baz=318,slow=6.9,SNR=4.6						
ARCES	ARCESS Array B	61.25	338	P	P	11 02 51.4	0.0
	4.8nm,0.9s,baz=94,slow=11,SNR=2.5						

*NOU **08** 10:53:32.4, 24.°26S×179.°74W, h544^{km}, mb4.5, South of Fiji Islands*
*IDC **08** 10:53:32.6±1.2, 24.°32S×179.°88E, h514^{km}±10^{km}, mb3.4/11, mb1 3.7/12, mb1mx3.5/31, mbtmp4.3/12, Error ellipse: s-maj=18.0km s-min=11.5km az=157.0*
*NEIC **08** 10:53:34.2±1.8, 24.°3S±0.°1×179.°9E±0.°1, h534^{km}±7^{km}, mb4.5/65, Error ellipse: s-maj=16.9km s-min=14.8km az=160.0*
ISC 08 10:53:32.6±0.4**, 24.°37S**±0.°06×**179.°95E**±0.°07**, h517**^{km}**,**
n100, σ1.^{s}**14**/100**, mb4.4**/39**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.83	345	P	P	10 55 18.3	+0.4
	9.6nm,0.3s,baz=155,slow=3.7,SNR=58						
MSVF				S	S	10 56 42.6	-1.4
	baz=342,slow=19,SNR=1.6						
MSVF	Nonsavu	6.83	345	P	P	10 55 18.5	+0.6
NIUE	Niue	10.78	63	P	P	10 55 59.3	+1.0
MARNC	Mare, Loyalty	11.36	282	P	P	10 56 05.7	+1.3
PINNC	Pines Island,	11.61	276	P	P	10 56 09.7	+2.7
OUENC	Ouen Island, N	12.20	276	P	P	10 56 15.9	+2.7
YATNC	Mamie plateau,	12.23	278	P	P	10 56 16.5	+2.9
LIFNC	LIFOU	12.28	284	P	P	10 56 17.3	+3.2
	103nm,1.0s						
DZM	Mont Dzumac	12.63	278	P	P	10 56 20.6	+2.7
	2.0nm,0.3s,baz=89,slow=16,SNR=26						
DZM	Mont Dzumac	12.63	278	P	P	10 56 19.4	+1.5
DZM	Mont Dzumac	12.63	278	P	P	10 56 20.6	+2.7
DVP	Devils Point	12.81	299	P	P	10 56 21.6	+1.8
	79µm,0.7s						
AFI	Afiamalu	13.00	38	P	P	10 56 17.4	-4.4
	1.9nm,0.3s,baz=58,slow=17,SNR=4.2						
AFI				S	S	10 58 27.7	-14
	0.7nm,0.3s,baz=24,slow=20,SNR=1.2						
URZ	Urewera	14.06	189	P	P	10 56 30.3	-2.2
	0.5nm,0.3s,baz=27,slow=4.5,SNR=2.0						
URZ				S	S	10 58 59.1	-1.8
	1.3nm,0.3s,baz=167,slow=22,SNR=9.1						
SANVU	Saraoutou	14.91	304	P	P	10 56 39.6	-2.1
BKZ	Black Stump Fm	15.04	190	P	P	10 56 43.0	+0.1
QRZ	Quartz Range	17.55	199	P	P	10 57 07.5	-0.3
THZ	Tophouse	18.32	197	P	P	10 57 16.2	+1.4
LTZ	Lake Taylor	19.43	197	P	P	10 57 26.0	+1.0
ARMA	Armidale	25.82	250	P	P	10 58 23.8	+1.2
ARMA				IAmb	IAmb	10 58 25.9	
	comp=Z,17nm,1.4s						
EIDS	Eidsvold	26.20	262	P	P	10 58 26.6	+0.8
EIDS				IAmb	IAmb	10 58 49.7	
	comp=Z,35nm,1.5s						
CTAO	Charters Tower	31.44	271	P	P	10 59 12.2	+0.7
STKA	Stephens Creek	34.51	249	P	P	10 59 37.4	0.0
	comp=Z,3.4nm,0.7s,baz=105,slow=12,SNR=11						
STKA	Stephens Creek	34.51	249	P	P	10 59 37.0	-0.3
PMG	Port Moresby	34.61	290	P	P	10 59 38.4	0.0
BBOO	Buckleboo	39.23	247	P	P	11 00 16.2	+0.1
AS31	Alice Springs	41.92	261	P	P	11 00 37.7	-0.1
ASAR	Alice Springs	41.92	261	P	P	11 00 37.8	-0.1
	comp=Z,3.5nm,0.5s,baz=94,slow=7.0,SNR=77						
ASAR				ScP	ScP	11 05 23.2	+0.6
	comp=Z,1.7nm,0.9s,baz=110,slow=4.4,SNR=6.6						
ASAR				S	S	11 06 18.8	0.0
	comp=Z,0.5nm,0.7s,baz=104,slow=14,SNR=5.2						
WR0	Warramunga Arr	42.15	267	P	P	11 00 39.2	-0.4
WR0				IAmb	IAmb	11 01 37.5	
	comp=Z,36nm,1.6s						
WB2	Warramunga Arr	42.32	267	P	P	11 00 40.6	-0.4
WB2				IAmb	IAmb	11 00 41.2	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	42.33	267	P	P	11 00 40.3	-0.7
WRAB				IAmb	IAmb	11 00 41.1	
	comp=Z,15nm,1.0s						
WB0	Warramunga Arr	42.33	267	P	P	11 00 40.6	-0.5
WRA	Warramunga Arr	42.34	267	P	P	11 00 40.5	-0.6
	comp=Z,9.8nm,0.4s,baz=100,slow=8.2,SNR=98						
WRA				ScP	ScP	11 05 26.5	+2.3
	comp=Z,5.4nm,1.0s,baz=98,slow=3.9,SNR=13						
WRA				S	S	11 06 23.2	-1.6
	comp=Z,0.4nm,0.7s,baz=103,slow=14,SNR=1.6						
FORT	Forrest	46.11	250	P	P	11 01 09.4	-0.8
MTN	Manton Dam	47.45	275	P	P	11 01 20.2	-0.3
FAKI	Fak Fak	50.68	287	P	P	11 01 43.1	-1.3
FITZ	Fitzroy Crossi	50.75	266	P	P	11 01 45.4	+0.4
VNDA	Vanda	53.91	185	P	P	11 02 07.1	+0.4
	comp=Z,0.7nm,0.7s,baz=8.5,slow=4.3,SNR=2.7						
VNDA	Vanda	53.91	185	P	P	11 02 07.4	+0.7
PSA00	Pilbara Seismi	55.04	260	P	P	11 02 14.9	-0.7
PSA00				IAmb	IAmb	11 03 38.4	
	comp=Z,38nm,1.3s						
QSPA	South Pole Qui	65.72	180	P	P	11 03 26.7	+1.1
QSPA				IAmb	IAmb	11 03 28.2	
	comp=Z,31nm,1.6s						
BELA	Belgrano 2	75.98	173	P	P	11 04 25.0	-0.7
KSRS	Korea Array	78.58	320	P	P	11 04 40.2	-0.2
	comp=Z,1.0nm,0.8s,baz=136,slow=6.3,SNR=4.1						
SAO	San Andreas Ge	82.12	44	P	P	11 05 00.3	+1.3
HOPS	Hopland Field	82.52	41	P	P	11 05 01.6	+0.7
HOPS				IAmb	IAmb	11 05 45.6	
	comp=Z,42nm,1.8s						
CBX	Cerro Bola	82.66	50	P	P	11 05 02.8	+0.8
SPX	San Pedro Mart	82.79	51	P	P	11 05 03.9	+1.0
KMRM	Mail Ridge	82.92	40	P	P	11 05 03.7	+0.7
KMRM				IAmb	IAmb	11 06 51.7	
	comp=Z,27nm,1.6s						
ESJX	Sierra Juarez	82.99	50	P	P	11 05 03.2	-0.5
SLBS	Sierra La Lagu	83.07	60	P	P	11 05 05.4	+1.3
SLBS				IAmb	IAmb	11 05 05.6	
	comp=Z,8.8nm,0.7s						
CMB	Columbia Colle	83.57	43	P	P	11 05 05.5	-0.7
KRMB	Red Mountain	83.65	39	P	P	11 05 07.5	+0.9
ORV	Oroville	83.82	42	P	P	11 05 07.8	+0.4
SNAA	Sanae	84.20	179	P	P	11 05 08.0	-0.9
SNAA	Sanae	84.20	179	P	P	11 05 07.9	-1.1
SNAA				IAmb	IAmb	11 07 04.8	
	comp=Z,15nm,1.8s						
GSC	Goldstone, Bar	84.27	47	P	P	11 05 10.2	+0.4
WAKR	Walker	84.44	43	P	P	11 05 11.5	+0.7
PIX	Pinacate	84.51	52	P	P	11 05 11.7	+0.7
PNTR	Pine Nut	84.70	43	P	P	11 05 12.0	0.0
PNTR				IAmb	IAmb	11 05 13.6	
	comp=Z,6.9nm,1.0s						
BEKR	Beckworth	84.70	42	P	P	11 05 12.0	0.0
VNA2	Neumayer--Watz	84.83	178	P	P	11 05 11.8	-0.1
HUMO	Hull Mountain	84.89	38	P	P	11 05 13.7	+1.1
HUMO				IAmb	IAmb	11 05 15.0	
	comp=Z,9.9nm,1.3s						
HSIG		85.01	55	P	P	11 05 13.0	-0.5
HSIG				IAmb	IAmb	11 05 15.1	
	comp=Z,7.6nm,0.8s						
NVAR	Mina Array Bea	85.11	44	P	P	11 05 14.6	+0.5
	comp=Z,1.8nm,0.8s,baz=226,slow=8.0,SNR=17						
TPNV	Topopah Spring	85.58	46	P	P	11 05 16.3	0.0
PRN	Pahroc Range	86.63	46	IAmb	IAmb	11 05 23.1	
	comp=Z,4.9nm,1.0s						
PINE	Pine Mountain	86.78	38	P	P	11 05 23.0	+1.1
PINE				IAmb	IAmb	11 05 24.1	
	comp=Z,17nm,1.3s						
TUC	Tucson	86.83	52	P	P	11 05 23.4	+1.1
TUC				IAmb	IAmb	11 05 24.7	
	comp=Z,7.3nm,0.9s						
WVOR	Wild Horse Val	87.29	41	IAmb	IAmb	11 05 25.8	
	comp=Z,11nm,1.3s						
319A	Douglas	87.45	54	IAmb	IAmb	11 05 27.8	
	comp=Z,15nm,1.1s						
I07A	Izee	87.78	39	P	P	11 05 27.6	+1.2
I07A				IAmb	IAmb	11 05 28.2	
	comp=Z,6.7nm,1.0s						
U15A	North Rim	87.94	48	P	P	11 05 28.1	+0.5
U15A				IAmb	IAmb	11 05 29.6	
	comp=Z,8.4nm,1.2s						
PLCA	Paso Flores	87.97	134	P	P	11 05 28.4	+0.8
	comp=Z,1.6nm,0.8s,baz=258,slow=7.6,SNR=6.2						
HPIG		88.03	59	IAmb	IAmb	11 05 29.5	
	comp=Z,4.9nm,0.8s						
ELK	Elko	88.38	43	P	P	11 05 30.1	+0.6
ELK				IAmb	IAmb	11 05 30.6	
	comp=Z,6.8nm,1.4s						
G08A	Pilot Rock	88.82	38	IAmb	IAmb	11 05 33.9	
	comp=Z,4.1nm,0.9s						
CMAR	Chiang Mai Arr	89.65	290	P	P	11 05 36.8	+1.2
	comp=Z,0.3nm,0.2s,baz=128,slow=2.4,SNR=4.6						
TMUT	Trail Mountain	90.19	46	P	P	11 05 38.5	+0.5
F10A	Beach Ranch, E	90.20	38	IAmb	IAmb	11 05 37.7	
	comp=Z,2.0nm,0.7s						
HVU	Hansel Valley	90.50	44	P	P	11 05 39.7	+0.5
MNTX	Cornudas Mount	90.51	55	P	P	11 05 39.8	+0.5
MNTX				IAmb	IAmb	11 05 42.6	
	comp=Z,8.2nm,1.4s						
TX32	Lajitas Array	90.71	58	IAmb	IAmb	11 05 42.3	
	comp=Z,3.5nm,0.8s						
TXAR	Lajitas Array	90.71	58	P	P	11 05 41.4	+1.0
	comp=Z,3.2nm,0.7s,baz=212,slow=6.4,SNR=34						
HWUT	Hardware Ranch	91.18	44	IAmb	IAmb	11 05 43.1	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	92.49	14	P	P	11 05 46.6	-1.0
	comp=Z,0.3nm,0.6s,baz=218,slow=6.0,SNR=4.6						
PDAR	Pinedale Array	93.05	44	P	P	11 05 50.9	-0.1
	comp=Z,0.9nm,0.8s,baz=194,slow=4.0,SNR=7.7						
MKAR	Makanchi Array	112.44	313	PKiKP	PKiKP	11 11 08.0	-1.7
	comp=Z,0.2nm,0.5s,baz=46,slow=0.7,SNR=4.3						
ARU	Arti	127.23	323	PKP	PKPdf	11 11 37.4	-0.2
	comp=Z,0.9nm,0.4s,baz=145,slow=8.4,SNR=5.0						
KIRV	Kirov	131.29	328	SKPbc	SKPbc	11 14 20.5	-1.4
	comp=Z,10.0nm,0.7s,baz=40,slow=5.7,SNR=3.7						
ARCES	ARCESS Array B	132.33	348	PKP	PKPdf	11 11 45.9	-1.1
	comp=Z,2.9nm,0.8s,baz=355,slow=1.5,SNR=6.6						
ARCES				SKPbc	SKPbc	11 14 25.5	+0.2
	comp=Z,2.4nm,0.9s,baz=309,slow=3.9,SNR=4.8						
JMIC	Jan Mayen	133.10	4	PKP	PKiKP	11 11 50.5	+0.8
	comp=Z,217nm,0.7s,baz=24,slow=22,SNR=4.9						
BELG	Belogornoye	134.47	321	SKPbc	SKPbc	11 14 32.5	-0.3
	comp=Z,13nm,0.8s,baz=153,slow=2.3,SNR=3.9						
FINES	FINESS Array B	138.87	341	PKP	PKPdf	11 12 00.4	+1.1
	comp=Z,9.4nm,1.1s,baz=60,slow=3.7,SNR=3.6						
FINES				SKPbc	SKPbc	11 14 44.7	-0.8
	comp=Z,9.0nm,0.9s,baz=46,slow=3.4,SNR=12						
HFS	Hagfors	142.99	349	PKhKP	PKPpre	11 12 03.5	
	baz=52,slow=2.4						
AKASG	Malin Array Be	145.34	327	PKPbc	PKPdf	11 12 10.7	-0.4
	comp=Z,0.9nm,0.5s,baz=45,slow=4.1,SNR=4.6						
AKASG				SKPbc	SKPbc	11 15 01.6	-0.2
	comp=Z,1.3nm,0.6s,baz=51,slow=2.2,SNR=5.1						
BRTR	Keskin Array B	147.82	307	PKPbc	PKPbc	11 12 18.6	-0.9
	comp=Z,1.1nm,0.7s,baz=134,slow=7.1,SNR=3.6						
MMAI	Mount Meron Ar	147.85	294	PKPbc	PKPbc	11 12 20.0	+0.2
	comp=Z,16nm,1.1s,baz=80,slow=5.0,SNR=2.5						
EKA	Eskdalemuir Ar	148.98	3	PKPbc	PKPbc	11 12 21.0	-0.6
	comp=Z,1.0nm,0.4s,baz=352,slow=3.0,SNR=7.9						
CLL	Collm	151.28	343	*e*PKPbc	PKPbc	11 12 27.0	-0.2
TORD	Torodi Ar. Bea	168.72	189	PKP	PKPdf	11 12 39.2	-1.5
	comp=Z,1.4nm,0.9s,baz=338,slow=0.9,SNR=4.8						
TORD				PKPab	PKPab	11 13 53.7	-0.7
	comp=Z,1.3nm,0.7s,baz=180,slow=3.3,SNR=5.8						

*IDC **08** 11:04:55.7±0.6, 51.°55N×174.°27W, h0^{km}, mb4.2/28, mb1 4.4/30, mb1mx4.4/42, mbtmp4.3/30, ML4.6/2, MS3.8/13, Ms1 3.8/13, ms1mx3.4/55, Error ellipse: s-maj=19.0km s-min=11.4km az=172.0*
*MOS **08** 11:04:58.9±1.1, 51.°63N×174.°31W, h31^{km}, mb4.7/34, Error ellipse: s-maj=8.8km s-min=6.8km az=96.0*
*NEIC **08** 11:04:59.6±1.8, 51.°45N±0.°03×174.°30W±0.°05, h25^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=4.4km az=203.0*
*BJI **08** 11:04:59.0±0.0, 51.°60N×174.°30W, h36^{km}, mB5.1/13, mb4.8/45, Ms4.5/2, Ms7 4.4/2*
*AEIC **08** 11:05:00.9±2.0, 51.°44N±0.°06×174.°36W±0.°03, h35^{km}±5^{km}, ML4.2/23, mb4.6/166(NEIC), Error ellipse: s-maj=8.2km s-min=2.7km az=181.0*
*BGR **08** 11:05:00.8±0.0, 51.°14N×174.°57W, h33^{km}, mb4.9*
ISC 08 11:04:59.4±0.8**, 51.°52N**±0.°07×**174.°23W**±0.°04**, h24**^{km}±4^{km}**,**
n481, σ1.^{s}**15**/446**, mb4.6**/129**, MS3.9**/16**, 20C-12D,**
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.69	2		Pn	11 05 15.2	+1.7
ATKA	Atka Island	0.69	2		Sn	11 05 25.4	+1.9
KOFP	Korovin Flat P	0.76	6		Pn	11 05 16.8	+2.1
KOWE	Korovin West	0.85	359		Pn	11 05 18.1	+2.3

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GSMY  Great Sitkin M     1.25 296       Pn      11 05 21.6 +0.2
GSTR  Great Sitkin T     1.27 298       Pb      11 05 22.4  -0.3
GSTD  Great Sitkin T     1.30 295       Pn      11 05 22.5 +0.3
GSTD                                    Sb      11 05 40.2 +0.6
ADAG  Mount Adagdak      1.54 288       Pn      11 05 26.3 +0.9
ADK   Adak               1.57 284  P    Pn      11 05 25.7   0.0
ADK   Adak               1.57 284       Pn      11 05 25.7   0.0
KIKV  Kanaga Island      1.86 282       Pn      11 05 30.4 +0.6
KICM  Kanaga Island      1.89 283       Pn      11 05 31.1 +1.0
KIMD  Kanaga Island      1.89 279       Pn      11 05 30.2 +0.1
KIMD                                    Sb      11 05 55.0  -1.2
TAFP  Tanaga Falls P     2.37 281       Pn      11 05 37.8 +1.2
TASE  Tanaga Southea     2.39 279       Pn      11 05 38.0 +1.0
NIKH  Nikolski High      3.61  64  Pn   Pn      11 05 54.9 +1.2
OKSP  Okmok Steeple      4.03  62       Pn      11 06 01.8 +2.2
AMKA  Amchitka           4.05 271  Pn   Pn      11 05 59.2  -0.5
MREP  Makushin Rep't     5.10  60       Pn      11 06 17.2 +2.9
MNAT  Makushin Natee     5.17  60       Pn      11 06 17.6 +2.5
UNV   Unalaska Valle     5.25  61  Pn   Pn      11 06 17.7 +1.5
AKGG  Akutan Green G     5.67  58       Pn      11 06 24.2 +2.3
AKUT  Akutan             5.76  60  Pn   Pn      11 06 25.0 +1.8
FALS  False Pass         7.31  59  Pn   Pn      11 06 48.4 +4.0
SDPT  Sand Point         9.06  60  Pn   Pn      11 07 09.7 +1.2
CNBA  Chernabura Isl     9.39  64  Pn   Pn      11 07 13.4 +0.3
KDAK  Kodiak Island     13.98  55  Pn   Pn      11 08 16.4 +0.8
      1.5nm,0.3s,baz=318,slow=14,SNR=1.9
KDAK                               Sn   S       11 11 03.3  -7.7
      0.6nm,0.3s,baz=346,slow=19,SNR=2.0
KDAK  Kodiak Island     13.98  55  Pn   Pn      11 08 17.8 +2.2
TTA   Tatalina          15.03  33  P    P       11 08 35.3 +0.1
TTA                                pmax pmax
      comp=Z,24nm,0.9s
TTA   Tatalina          15.03  33       P       11 08 35.3 +0.1
TTA                                IAmb IAmb    11 08 38.7
      comp=Z,24nm,0.9s
CNPM  China Poot        15.23  49  P    P       11 08 35.3  -2.0
CNPM                               IAmb IAmb    11 08 50.7
      comp=Z,68nm,1.2s
BRLK  Bradley Lake      15.48  49  Pn   Pn      11 08 37.2 +1.3
BRLK                               IAmb IAmb    11 08 52.9
      comp=Z,84nm,1.2s
SUA   Susitna One       16.25  43       P       11 08 47.4  -1.4
SEW   Seward            16.28  49       Pn      11 08 44.6  -1.4
SEW                                IAmb IAmb    11 08 55.8
      comp=Z,38nm,1.0s
O22K  Cooper Landing    16.29  47  P    Pn      11 08 46.9 +0.7
      baz=248
O22K  Cooper Landing    16.29  47  P    P       11 08 48.5  -0.6
PPLA  Purkeypile        16.40  38  P    P       11 08 52.2 +1.8
PPLA                               IAmb IAmb    11 08 59.5
      comp=Z,35nm,0.9s
PET   Petropavlovsk     16.63 286 i P   Pn      11 08 48.9  -1.7
PMR   Palmer            17.00  44  P    Pn      11 08 55.5 +0.2
PMR                                pmax pmax
      comp=Z,21nm,1.3s
PMR   Palmer            17.00  44  P    Pn      11 08 55.5 +0.2
GHO   Glory Hole Cre    17.17  44  P    Pn      11 08 57.4   0.0
GHO                                IAmb IAmb    11 09 05.5
      comp=Z,55nm,1.3s
PETK  Petropavlovsk-    17.20 286  P    P       11 08 59.3 +0.2
      comp=Z,0.4nm,0.3s,baz=71,slow=15,SNR=5.7
KNK   Knik Glacier      17.22  45  IAmb IAmb    11 09 00.9
      comp=Z,29nm,0.6s
TRF   Thorofare Moun    17.42  38  P    P       11 09 03.0 +1.2
BPAW  Bear Paw Mtn.     17.53  35  P    P       11 09 03.8 +1.0
BPAW                               IAmb IAmb    11 09 10.5
      comp=Z,33nm,1.0s
GLI   Glacier Island    17.64  47  Pn   Pn      11 09 03.3 +0.1
GLI                                IAmb IAmb    11 09 17.1
      comp=Z,79nm,1.4s
FID   Port Fidalgo      17.88  48  P    Pn      11 09 04.0  -2.2
SCM   Sheep Creek Mo    17.89  44  IAmb IAmb    11 09 14.3
      comp=Z,34nm,0.6s
RND   Reindeer          17.96  39  P    P       11 09 07.5  -0.1
RND                                pmax pmax
      comp=Z,22nm,1.1s
RND   Reindeer          17.96  39       P       11 09 07.5  -0.1
MCK   McKinley          18.09  38  P    Pn      11 09 08.7   0.0
      baz=239,SNR=14
EYAK  Cordova Ski Ar    18.16  49  P    Pn      11 09 08.1  -1.5
MLY   Manley            18.16  33  P    P       11 09 11.3 +1.5
      baz=233,SNR=9.0
KLU   Klutina           18.39  46  P    P       11 09 11.6  -0.7
M24K  Tolsona, Glenn    18.50  44  P    Pn      11 09 13.8   0.0
      baz=248
M24K  Tolsona, Glenn    18.50  44  P    Pn      11 09 14.0 +0.3
M24K                               IAmb IAmb    11 09 22.6
      comp=Z,79nm,1.2s
SKR   Severo-Kuril's    18.59 279 i P   P       11 09 14.3  -0.2
I23K  Minto, Yukon-K    18.70  34  P    Pn      11 09 16.4 +0.2
      baz=235,SNR=37
I23K  Minto, Yukon-K    18.70  34  IAmb IAmb    11 09 20.8
      comp=Z,56nm,0.9s
CCB   Clear Creek Bu    18.99  36  IAmb IAmb    11 09 22.0
      comp=Z,20nm,0.6s
N25K  Chitina, Valde    19.02  46  P    P       11 09 19.3   0.0
      baz=251
TCOL  CIGO, UAF Yank    19.08  35  IAmb IAmb    11 09 31.8
      comp=Z,23nm,0.8s
COLA  College           19.09  35 i P   P       11 09 19.7  -0.2
COLA                               pmax pmax
      comp=Z,17nm,0.9s
HDA   Harding Lake      19.18  37  P    P       11 09 21.3 +0.3
      baz=241,SNR=11
HDA   Harding Lake      19.18  37  IAmb IAmb    11 09 28.8
      comp=Z,44nm,0.8s
POKR  Poker Plat Res    19.37  35  P    P       11 09 22.6  -0.3
      baz=238
IL31                    19.39  36  IAmb IAmb    11 09 31.4
      comp=Z,17nm,0.6s
ILAR  Eielson Array     19.39  36  P    P       11 09 21.6  -1.6
      comp=Z,3.0nm,0.3s,baz=240,slow=9.5,SNR=73
ILAR                               LR   LR      11 17 35.7
      comp=Z,228nm,18.1s,baz=222,slow=39
CRQM  Cirque            19.46  50  P    Pn      11 09 25.1  -0.4
CRQM                               IAmb IAmb    11 09 36.5
      comp=Z,20nm,0.8s
TGL   Tana Glacier      19.61  50  P    P       11 09 25.7   0.0
MCARA McCarthy VSAT     19.68  48  P    Pn      11 09 28.1 +0.3
COLD  Coldfoot          19.72  28  P    Pn      11 09 28.5 +0.1
      baz=229,SNR=17
COLD  Coldfoot          19.72  28  IAmb IAmb    11 09 39.1
      comp=Z,45nm,1.0s
ISLE  Juniper Island    19.80  50  P    Pn      11 09 29.3  -0.2
ISLE                               IAmb IAmb    11 09 46.7
      comp=Z,17nm,0.8s
MENT  Mentasta          19.86  43  P    P       11 09 29.3 +0.9
MENT                               IAmb IAmb    11 09 45.7
      comp=Z,18nm,0.6s
BALM  Baldy             19.90  49  P    P       11 09 28.4  -0.5
YAH   Yahtse            20.04  51  P    P       11 09 30.7 +0.1
YAH                                IAmb IAmb    11 09 40.8
      comp=Z,31nm,0.8s
L26K  Log Cabin Wild    20.05  43  P    P       11 09 31.0 +0.6
      baz=249,SNR=11
SCRK  Sand Creek        20.15  40  P    P       11 09 31.3  -0.3
      baz=246,SNR=34
BARN  Barnard Glacie    20.23  49  P    P       11 09 33.5 +0.9
PRP   Porcupine Dome    20.26  35  P    P       11 09 33.4 +0.6
PRP                                IAmb IAmb    11 09 42.5
      comp=Z,17nm,0.7s
CTGM  Chitina Glacie    20.37  50       Pn      11 09 36.7 +0.5
CTGM                               IAmb IAmb    11 09 43.6
      comp=Z,17nm,0.8s
TOLK  Toolik Lake Re    20.85  25  P    P       11 09 40.2 +1.1
      baz=227,SNR=34
TOLK  Toolik Lake Re    20.85  25       Pn      11 09 40.6  -1.0
K27K  Chicken           20.95  41  P    P       11 09 40.2 +0.1
      baz=248
K27K  Chicken           20.95  41  P    P       11 09 40.1 +0.1
K27K                               IAmb IAmb    11 09 51.2
      comp=Z,34nm,0.9s
SEY   Seymchan          21.10 316  P    P       11 09 39.7  -2.0
      comp=Z,1.8nm,0.8s,baz=170,slow=6.1,SNR=2.8
SEY   Seymchan          21.10 316 i P   P       11 09 39.4  -2.4
A21K  Barrow            21.41  15  P    P       11 09 45.1 +0.2
      baz=211,SNR=35
EGAK  Eagle             21.59  39       P       11 09 47.3 +0.3
EPYK  Eagle Plains      23.89  37  P    P       11 10 09.8  -1.0
EPYK                               IAmb IAmb    11 10 17.0
      comp=Z,16nm,0.8s
INK   Inuvik            25.72  34  P    P       11 10 27.8 +0.4
      comp=Z,5.4nm,0.6s,baz=243,slow=9.1,SNR=27
INK   Inuvik            25.72  34  IAmb IAmb    11 10 34.7
      comp=Z,13nm,0.8s
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DLBC  Dease Lake        25.89  57  P    P       11 10 32.6 +3.5
      comp=Z,8.9nm,1.0s,baz=273,slow=6.4,SNR=7.0
DLBC  Dease Lake        25.89  57  IAmb IAmb    11 10 34.5
      comp=Z,29nm,1.4s
YSS   Yuzh-Sakhalins    28.14 278 i P   P       11 10 50.7 +1.4
YSS                                pmax pmax
      comp=Z,22nm,1.1s
C36M  Paulatuk          29.31  34  P    P       11 10 59.7 +0.2
      baz=259
YAK   Yakutsk           31.47 311  LR   LR      11 24 28.9
      comp=Z,205nm,18.6s,baz=88,slow=37
YAK   Yakutsk           31.47 311ceP    P       11 11 18.7 +0.1
YAK                                pmax pmax
      comp=Z,11nm,0.8s
YKA   Yellowknife Ar    33.05  47  P    P       11 11 32.4  -0.1
      comp=Z,0.6nm,0.6s,baz=278,slow=7.9,SNR=12
YKA                                PcP  PcP     11 14 16.1 +0.7
      comp=Z,1.0nm,0.6s,baz=288,slow=1.9,SNR=10.0
YKA                                ScP  ScP     11 17 59.8 +2.0
      comp=Z,0.2nm,0.7s,baz=297,slow=2.7,SNR=2.8
YKA                                LR   LR      11 27 31.7
      comp=Z,290nm,18.1s,baz=0.0,slow=41
YKA   Yellowknife Ar    33.05  47 i P   P       11 11 31.7  -0.8
YKA                                pmax pmax
      comp=Z,1.0nm,0.6s
KLR   Kul'dur           33.88 288  LR   LR      11 24 40.6
      comp=Z,109nm,21.5s,baz=46,slow=35
KLR   Kul'dur           33.88 288ceP    P       11 11 39.0  -0.8
KLR                                pmax pmax
      comp=Z,5.0nm,0.9s
H04A  Detroit Lake      34.78  80  IAmb IAmb    11 12 07.0
      comp=Z,10nm,1.0s
K02D  Willamette Mer    34.90  84  P    P       11 11 49.2 +0.3
      baz=302
H11N2 WAKE ISLAND Hy    35.02 212  T    T       11 49 51.9
      baz=20,slow=76,SNR=49
H11N3 WAKE ISLAND Hy    35.03 212  T    T       11 49 52.6
      baz=20,slow=76,SNR=33
H11N1 WAKE ISLAND Hy    35.04 212  T    T       11 49 32.0
      baz=20,slow=76,SNR=35
I04A  Tendick Farm,     35.10  82  P    P       11 11 51.0 +0.5
      baz=301
L02E  Cave Junction     35.23  85  P    P       11 11 52.5 +0.9
      baz=303
I05D  Terrebonne, OR    35.48  80  P    P       11 11 54.7 +0.9
      baz=301
HAWA  Hanford           35.57  76  P    P       11 11 58.1 +3.7
HAWA                               IAmb IAmb    11 12 12.2
      comp=Z,8.0nm,1.0s
J04D  Umpqua Nationa    35.58  82  P    P       11 11 56.2 +1.4
      baz=302
L04D  Klamath Falls     36.01  84  P    P       11 11 58.9 +0.5
      baz=303
YBH   Yreka Blue Hor    36.02  85  P    P       11 12 00.8 +2.3
YBH                                pmax pmax
      comp=Z,5.0nm,1.0s
YBH   Yreka Blue Hor    36.02  85  P    P       11 12 00.8 +2.3
YBH                                IAmb IAmb    11 12 19.0
      comp=Z,5.4nm,1.0s
J05D  Fort Rock, OR     36.10  82  P    P       11 12 00.2 +1.0
      baz=302
USA0B Ussuriysk Arra    36.10 280 i P   P       11 11 57.2  -1.8
USRK  Ussuriysk Ar.     36.10 280  P    P       11 11 58.9  -0.2
      comp=Z,9.4nm,0.6s,baz=60,slow=8.9,SNR=28
USRK                               LR   LR      11 27 41.6
      comp=Z,91nm,19.9s,baz=25,slow=38
M02C  Callahan          36.12  86  P    P       11 12 00.9 +1.5
      baz=304
NEW   Newport           36.14  72  P    P       11 12 00.2 +0.8
      baz=297
NEW   Newport           36.14  72  IAmb IAmb    11 12 20.0
      comp=Z,7.0nm,0.8s
H11S1 WAKE ISLAND Hy    36.22 212  T    T       11 51 01.3
      baz=20,slow=76,SNR=142
H11S2 WAKE ISLAND Hy    36.24 212  T    T       11 50 55.9
      baz=20,slow=76,SNR=70
H11S3 WAKE ISLAND Hy    36.24 212  T    T       11 51 16.2
      baz=20,slow=76,SNR=46
N02D  Trinity Center    36.45  86  P    P       11 12 03.6 +1.4
      baz=305
M04C  Macdoel           36.54  84  P    P       11 12 03.9 +0.9
      baz=304
K05A  Summer Lake       36.61  82  IAmb IAmb    11 12 16.5
      comp=Z,6.6nm,0.9s
MJAR  Matsushiro Arr    36.64 265  P    P       11 12 04.4 +0.6
      comp=Z,1.7nm,0.8s,baz=49,slow=8.1,SNR=3.0
MJAR                               LR   LR      11 25 35.2
      comp=Z,71nm,21.7s,baz=65,slow=34
MAT   Matsushiro        36.64 265  P    P       11 12 03.5  -0.2
I07A  Izee              36.74  80  IAmb IAmb    11 12 23.8
      comp=Z,10.0nm,1.1s
O02D  Mt. Diablo Mer    36.86  87  P    P       11 12 06.8 +1.1
      baz=305
MDJ   Mudanjiang        37.35 282  P    P       11 12 09.1  -0.6
MDJ                                pmax pmax
      comp=Z,9.0nm,0.9s
O03E  Paynes Creek      37.41  86  P    P       11 12 11.1 +0.8
      baz=305
MOD   Modoc Plateau     37.43  83  IAmb IAmb    11 12 29.5
      comp=Z,8.6nm,1.4s
WALA  Waterton Lakes    37.67  69  IAmb IAmb    11 12 29.9
      comp=Z,7.7nm,0.8s
WVOR  Wild Horse Val    38.16  81  IAmb IAmb    11 12 37.2
      comp=Z,8.3nm,0.9s
RES   Resolute Bay      38.42  25  LR   LR      11 34 10.6
      comp=Z,115nm,18.0s,baz=322,slow=46
MSO   Missoula          38.72  72  P    P       11 12 21.8 +0.5
      baz=300
MSO   Missoula          38.72  72  P    P       11 12 23.2 +1.9
MSO                                IAmb IAmb    11 12 40.2
      comp=Z,20nm,1.4s
PNTR  Pine Nut          39.49  86  P    P       11 12 29.7 +1.7
PNTR                               IAmb IAmb    11 12 48.5
      comp=Z,7.6nm,0.9s
CMB   Columbia Colle    39.63  88  P    P       11 12 31.3 +2.3
CMB                                pmax pmax
      comp=Z,5.0nm,1.2s
CMB   Columbia Colle    39.63  88  P    P       11 12 31.3 +2.3
HRY   Holter Researc    40.03  71  P    P       11 12 32.6 +0.3
HLID  Hailey            40.14  77  P    P       11 12 33.8 +0.5
      baz=303
HLID  Hailey            40.14  77  P    P       11 12 33.5 +0.2
BCYI  Bear Canyon       40.34  76  P    P       11 12 35.0  -0.1
NVAR  Mina Array Bea    40.69  86  P    P       11 12 39.1 +1.1
      comp=Z,2.0nm,0.8s,baz=291,slow=7.6,SNR=13
NVAR                               PcP  PcP     11 14 39.4 +0.1
      comp=Z,0.9nm,0.7s,baz=306,slow=3.1,SNR=3.8
MDPB  Devils Postpil    40.70  88  P    P       11 12 39.1 +1.1
BOZ   Bozeman (W)       40.73  73  P    P       11 12 38.3 +0.2
BOZ                                pmax pmax
      comp=Z,18nm,1.5s
BOZ   Bozeman (W)       40.73  73  P    P       11 12 38.1   0.0
      baz=302,SNR=8.0
BOZ   Bozeman (W)       40.73  73  P    P       11 12 38.3 +0.2
BOZ                                IAmb IAmb    11 12 57.6
      comp=Z,18nm,1.5s
HIA   Hailar            40.87 294 i P   P       11 12 37.2  -1.9
HIA                                pmax pmax
      comp=Z,5.0nm,1.0s
ELK   Elko              41.22  81  P    P       11 12 42.1  -0.2
ELK                                pmax pmax
      comp=Z,3.0nm,0.8s
ELK   Elko              41.22  81  P    P       11 12 42.1  -0.2
YHL   Hebgen Lake       41.39  74  P    P       11 12 42.8  -1.0
SMMC  Simmler           41.59  91  P    P       11 12 46.1 +1.0
      baz=310
FFC   Flin Flon         41.72  56  P    P       11 12 46.8 +0.9
FFC                                pmax pmax
      comp=Z,9.0nm,0.9s
FFC   Flin Flon         41.72  56  P    P       11 12 46.8 +0.9
FFC                                IAmb IAmb    11 12 47.4
      comp=Z,8.6nm,0.8s
PKM   Mcpherson Peak    41.97  92  P    P       11 12 49.2 +0.7
      baz=311
YNE   Yellowstone No    42.01  73  P    P       11 12 52.6 +3.9
LKWY  Lake              42.01  73  P    P       11 12 50.9 +2.1
LKWY                               pmax pmax
      comp=Z,7.0nm,0.7s
LKWY  Lake              42.01  73  P    P       11 12 50.9 +2.1
LKWY                               IAmb IAmb    11 13 07.7
      comp=Z,6.8nm,0.7s
CWC   Cottonwood Cre    42.06  88  P    P       11 12 49.5 +0.3
      baz=309
ISA   Isabella, Lake    42.31  90  P    P       11 12 51.1   0.0
      baz=310
RLMT  Red Lodge         42.39  72  P    P       11 12 51.3  -0.5
      baz=303
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RLMT  Red Lodge         42.39  72  IAmb IAmb    11 13 09.4
      comp=Z,16nm,1.2s
R11A  Troy Canyon, C    42.43  84  P    P       11 12 51.9  -0.3
      baz=308
KSRS  Korea Array       42.49 274  P    P       11 12 52.9 +0.5
      comp=Z,2.3nm,0.7s,baz=52,slow=6.7,SNR=7.0
KSRS                               LR   LR      11 30 17.8
      comp=Z,53nm,21.9s,baz=34,slow=36
SPUT  South Promonto    42.61  79  P    P       11 12 54.3 +0.8
MPMC  Manual Prospec    42.68  88  P    P       11 12 54.2   0.0
      baz=310
FURC  Furnace Creek,    42.81  87  P    P       11 12 55.6 +0.6
      baz=309
TPNV  Topopah Spring    42.89  86  P    P       11 12 56.4 +0.5
      baz=309,SNR=7.7
DUG   Dugway, Tooele    43.04  80  P    P       11 12 58.2 +1.1
DUG                                pmax pmax
      comp=Z,8.0nm,1.1s
DUG   Dugway, Tooele    43.04  80  P    P       11 12 57.4 +0.4
      baz=306,SNR=6.3
DUG   Dugway, Tooele    43.04  80  P    P       11 12 58.2 +1.1
DUG                                IAmb IAmb    11 13 16.6
      comp=Z,8.3nm,1.1s
EDW2  Edwards Air Fo    43.12  90  P    P       11 12 58.3 +0.7
      baz=311
PRN   Pahroc Range      43.35  85  P    P       11 13 00.3 +0.7
PRN                                IAmb IAmb    11 13 18.3
      comp=Z,8.2nm,0.8s
PSUT  Pine Spring       43.40  83  P    P       11 13 00.3 +0.3
BW06  Boulder Array     43.53  75  P    P       11 13 00.8  -0.2
      baz=305
BW06  Boulder Array     43.53  75  P    P       11 13 01.7 +0.6
BW06                               IAmb IAmb    11 13 19.2
      comp=Z,7.8nm,0.8s
PD31  Pinedale Array    43.53  75  IAmb IAmb    11 13 19.2
      comp=Z,6.9nm,0.8s
PDAR  Pinedale Array    43.53  75  P    P       11 13 01.7 +0.6
      comp=Z,2.9nm,0.8s,baz=304,slow=3.8,SNR=19
SHOC  Shoshone, Teco    43.53  88  P    P       11 13 01.1 +0.2
      baz=310
GSC   Goldstone, Bar    43.59  89  P    P       11 13 01.8 +0.4
      baz=310
BFSC  Mount Baldy Ra    43.74  91  P    P       11 13 03.2 +0.5
      baz=311
FCC   Fort Churchill    43.77  48  P    P       11 13 03.0 +0.5
FCC                                pmax pmax
      comp=Z,11nm,1.3s
FCC   Fort Churchill    43.77  48  P    P       11 13 03.0 +0.5
FCC                                IAmb IAmb    11 13 03.7
      comp=Z,11nm,1.3s
BBRC  Big Bear Solar    44.19  90  P    P       11 13 07.1 +0.7
      baz=311
MURC  Murrieta          44.45  91  P    P       11 13 07.9  -0.4
      baz=312
GMRC  Granite Mounta    44.64  88  P    P       11 13 09.8  -0.2
      baz=311
PFO   Pinyon Flats O    44.91  90  P    P       11 13 12.0  -0.1
      baz=312
TPFO  Pinon Flats       44.91  90  P    P       11 13 11.8  -0.3
      baz=312
BELC  Belle Mtn. Jos    44.94  89  P    P       11 13 12.1  -0.3
      baz=311
SRU   San Rafael Swe    45.10  80  P    P       11 13 14.5 +0.9
SRU                                pmax pmax
      comp=Z,9.0nm,0.8s
SRU   San Rafael Swe    45.10  80  P    P       11 13 14.5 +0.9
IRM   Iron Mountain     45.37  89  P    P       11 13 15.8 +0.2
      baz=311
MONP2 Monument Peak     45.41  91  P    P       11 13 16.6 +0.5
      baz=312
K22A  Casper            45.42  73  P    P       11 13 15.9  -0.2
      baz=306
U15A  North Rim         45.68  84  P    P       11 13 19.3 +0.9
U15A                               IAmb IAmb    11 13 32.4
      comp=Z,4.5nm,0.8s
NRIK  Noril'sk          45.71 331  P    P       11 13 17.9   0.0
      comp=Z,1.6nm,0.6s,baz=88,slow=9.1,SNR=2.7
NRIK  Noril'sk          45.71 331ceP    P       11 13 17.4  -0.4
NRIK                               pmax pmax
      comp=Z,3.0nm,0.9s
IKP   In-Ko-Pah, Jac    45.77  91  P    P       11 13 19.0 +0.2
      baz=312
O20A  White River Ci    45.88  77  P    P       11 13 19.6  -0.2
      baz=307
O20A  White River Ci    45.88  77  P    P       11 13 19.3  -0.4
O20A                               IAmb IAmb    11 13 38.0
      comp=Z,13nm,0.9s
RSSD  Black Hills       46.04  70  P    P       11 13 21.0  -0.1
      baz=305
MDND  Maddock           46.48  64  P    P       11 13 24.7 +0.5
      baz=304
PV22  Blue Mesa, Par    46.52  79  IAmb IAmb    11 13 44.0
      comp=Z,13nm,1.1s
PV04  Paradox Valley    46.54  80  P    P       11 13 25.4 +0.5
PV04                               IAmb IAmb    11 13 36.1
      comp=Z,7.0nm,0.8s
PV17  East Wray Mesa    46.58  80  IAmb IAmb    11 13 39.7
      comp=Z,8.3nm,0.9s
PV16  Nyswonger Mesa    46.58  80  P    P       11 13 25.2  -0.1
PV16                               IAmb IAmb    11 13 36.4
      comp=Z,5.3nm,0.7s
PV11  David Mesa, Pa    46.62  80  P    P       11 13 25.8 +0.1
PV12  Saucer Basin,     46.65  80  IAmb IAmb    11 13 45.4
      comp=Z,8.4nm,0.9s
PV03  Paradox Valley    46.66  80  IAmb IAmb    11 13 43.6
      comp=Z,8.7nm,1.1s
PV02  Paradox Valley    46.76  80  IAmb IAmb    11 13 37.9
      comp=Z,8.8nm,0.8s
N23A  Red Feather La    46.81  75  P    P       11 13 26.7  -0.5
      baz=307
WUAZ  Wupatki           46.84  84  P    P       11 13 27.6 +0.3
      baz=310
WUAZ  Wupatki           46.84  84  IAmb IAmb    11 13 40.1
      comp=Z,3.8nm,0.7s
PV01  Paradox Valley    46.91  80  IAmb IAmb    11 13 39.0
      comp=Z,6.9nm,0.7s
ULM   Lac du Bonnet     47.19  59  P    P       11 13 29.9 +0.3
      comp=Z,5.9nm,0.5s,baz=303,slow=7.8,SNR=20
ULM                                LR   LR      11 33 11.1
      comp=Z,154nm,18.2s,baz=331,slow=36
ULM   Lac du Bonnet     47.19  59 i P   P       11 13 28.3  -1.4
ULM   Lac du Bonnet     47.19  59  IAmb IAmb    11 13 30.7
      comp=Z,16nm,1.2s
MVCO  Mesa Verde        47.53  81  P    P       11 13 33.4 +0.5
      baz=310
ISCO  Idaho Springs     47.68  76  P    P       11 13 34.4 +0.3
      baz=308
TLY   Talaya            48.37 304 i P   P       11 13 38.1  -0.8
TLY                                pmax pmax
      comp=Z,5.0nm,1.1s
ULN   Ulaanbaatar       48.73 299ceP    P       11 13 41.5  -0.4
ULN                                pmax pmax
      comp=Z,4.0nm,1.0s
ULN   Ulaanbaatar       48.73 299  P    P       11 13 42.0 +0.2
ULN                                IAmb IAmb    11 13 42.8
      comp=Z,5.4nm,1.1s
SDCO  Great Sand Dun    49.03  78  P    P       11 13 44.1  -0.4
      baz=310
SDCO  Great Sand Dun    49.03  78  IAmb IAmb    11 14 02.7
      comp=Z,4.4nm,1.1s
SONM  Songino Array     49.11 299  P    P       11 13 44.7   0.0
      comp=Z,2.8nm,0.9s,baz=56,slow=8.1,SNR=12
SONM                               PcP  PcP     11 15 08.2 +0.3
      comp=Z,1.9nm,1.0s,baz=54,slow=4.1,SNR=4.5
SONM                               ScP  ScP     11 19 02.5 +1.3
      comp=Z,0.8nm,1.0s,baz=56,slow=2.6,SNR=2.9
ZAK   Zakamensk         49.30 303 eP    P       11 13 45.2  -0.9
ZAK                               e             11 15 09.6
ZAK                                pmax pmax
      comp=Z,10.0nm,1.2s
ZAK                                pmax pmax
      comp=Z,4.0nm,1.1s
TUC   Tucson            49.32  87  P    P       11 13 46.4   0.0
      baz=313
T25A  Trinidad          50.09  78  P    P       11 13 52.2  -0.2
      baz=310
ANMO  Albuquerque       50.26  81ceP    P       11 13 52.7  -1.0
ANMO                               pmax pmax
      comp=Z,7.0nm,2.5s
ANMO  Albuquerque       50.26  81  P    P       11 13 54.0 +0.4
      baz=311
HHC   Hu-ho-hao-te      50.38 289 eP    P       11 13 56.6 +2.2
HHC                                pmax pmax
      comp=Z,10.0nm,0.9s
HHC                                pmax pmax
      comp=Z,210nm,7.7s
SPITS Spitsbergen Ar    50.41 357  P    P       11 13 54.1 +0.1
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	comp=Z,3.2nm,0.6s,baz=41,slow=7.7,SNR=13						
ECSD	**EROS Data Cent**	**50.58**	**66**	P	**P**	**11 13 55.3**	**-0.5**
	baz=308						
ECSD	**EROS Data Cent**	**50.58**	**66**	IAmb	IAmb	11 14 04.3	
	comp=Z,5.9nm,0.8s						
EYMN	**Ely**	**50.87**	**59**	P	**P**	**11 13 58.2**	**+0.3**
	baz=307						
121A	**Cookes Peak, D**	**51.04**	**85**	P	**P**	**11 14 00.1**	**+0.5**
	baz=313						
NJ2	**Nanjing**	**51.66**	**275**	*e*P	**P**	**11 14 04.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MNTX	**Cornudas Mount**	**53.10**	**84**	P	**P**	**11 14 15.3**	**+0.5**
	baz=313						
MNTX	**Cornudas Mount**	**53.10**	**84**	P	**P**	**11 14 15.3**	**+0.5**
MNTX				IAmb	IAmb	11 14 27.0	
	comp=Z,3.8nm,0.8s						
MSTX	**Muleshoe**	**53.18**	**80**	P	**P**	**11 14 15.2**	**-0.1**
	baz=312						
AMTX	**Amarillo**	**53.23**	**78**	P	**P**	**11 14 16.4**	**+0.6**
	baz=312						
JFWS	**Jewell Farm**	**54.70**	**64**	P	**P**	**11 14 26.4**	**+0.1**
	baz=310						
WMOK	**Wichita Mounta**	**55.10**	**76**	P	**P**	**11 14 28.8**	**-0.5**
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMOK	**Wichita Mounta**	**55.10**	**76**	P	**P**	**11 14 29.4**	**+0.1**
	baz=313						
WMOK	**Wichita Mounta**	**55.10**	**76**	P	**P**	**11 14 28.8**	**-0.5**
WMOK				IAmb	IAmb	11 14 47.3	
	comp=Z,6.2nm,0.9s						
TX32	**Lajitas Array**	**55.80**	**85**	IAmb	IAmb	11 14 46.4	
	comp=Z,4.7nm,0.8s						
TXAR	**Lajitas Array**	**55.80**	**85**	P	**P**	**11 14 34.4**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=306,slow=4.8,SNR=12						
P40A	**Paris**	**55.90**	**68**	P	**P**	**11 14 33.6**	**-1.3**
ZALV	**Zalesovo Beam**	**55.97**	**316**	P	**P**	**11 14 37.0**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=30,slow=12,SNR=2.6						
ZALV				PcP	**PcP**	**11 15 34.1**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=35,slow=5.4,SNR=5.3						
ZALV				LR	LR	11 41 17.6	
	comp=Z,92nm,18.4s,baz=351,slow=39						
ABTX	**Abilene, Hawle**	**56.01**	**79**	P	**P**	**11 14 36.2**	**+0.3**
	baz=314						
XAN	**Xi'an**	**56.42**	**284**	P	**P**	**11 14 39.0**	**+0.2**
XAN				pP	pwP	11 14 52.1	+1.3
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN				pmax	pmax		
	comp=Z,210nm,7.7s						
XAN	**Xi'an**	**56.42**	**284**	P	**P**	**11 14 39.2**	**+0.4**
XAN				pmax	pmax		
	comp=Z,19nm,1.2s						
XAN	**Xi'an**	**56.42**	**284**	P	**P**	**11 14 39.2**	**+0.4**
L44A	**Lake County Fo**	**56.49**	**63**	P	**P**	**11 14 39.6**	**+0.5**
	baz=312						
R40A	**Maddies Statio**	**56.59**	**69**	IAmb	IAmb	11 14 49.3	
	comp=Z,6.5nm,0.9s						
MATQ	**Matagami**	**56.78**	**50**	P	**P**	**11 14 40.6**	**-0.5**
	baz=312						
U40A	**Yellville**	**57.56**	**71**	P	**P**	**11 14 45.7**	**-1.1**
	baz=313						
LSQQ	**Lebel-sur-Quev**	**57.58**	**51**	P	**P**	**11 14 46.1**	**-0.6**
	baz=313						
DGZ	**Jazzator, Alta**	**57.66**	**311**	*i* P	**P**	**11 14 46.2**	**-1.3**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
W39A	**Magazine**	**57.80**	**73**	P	**P**	**11 14 48.2**	**-0.3**
	baz=313						
FVM	**French Village**	**57.87**	**68**	P	**P**	**11 14 48.0**	**-1.0**
FVM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FVM	**French Village**	**57.87**	**68**	P	**P**	**11 14 48.0**	**-1.0**
FVM				IAmb	IAmb	11 14 58.6	
	comp=Z,7.7nm,0.8s						
VLDQ	**Val d'Or**	**57.99**	**52**	P	**P**	**11 14 47.7**	**-1.9**
LZH	**Lanzhou**	**58.07**	**289**	*e*P	**P**	**11 14 51.5**	**+0.9**
LZH				pP	pwP	11 15 03.4	+0.8
LZH				sP	sP	11 15 08.4	+9.2
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA	**Gaotai**	**58.14**	**295**	*e*P	**P**	**11 14 51.1**	**+0.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SFIN	**Lafayette**	**58.15**	**64**	P	**P**	**11 14 50.3**	**-0.6**
	baz=313						
MIAR	**Mount Ida**	**58.37**	**73**	P	**P**	**11 14 52.0**	**-0.5**
	baz=314						
ARCES	**ARCESS Array B**	**58.40**	**352**	P	**P**	**11 14 51.5**	**-0.7**
	comp=Z,2.6nm,0.5s,baz=24,slow=8.1,SNR=18						
ARCES				PcP	**PcP**	**11 15 43.1**	**+0.4**
	comp=Z,6.3nm,0.7s,baz=21,slow=4.1,SNR=8.6						
W41B	**Gary Mavity, V**	**58.73**	**72**	P	**P**	**11 14 54.5**	**-0.4**
	baz=314						
ALGO	**Algonquin Park**	**59.17**	**54**	P	**P**	**11 14 58.0**	**+0.1**
	baz=314						
G54A	**Lake Saint Pet**	**59.54**	**54**	P	**P**	**11 15 00.5**	**0.0**
	baz=314						
D55A	**Sainte-Anne-du**	**59.71**	**52**	P	**P**	**11 15 01.1**	**-0.6**
	baz=314,SNR=8.3						
E55A	**Montcerf-Lytto**	**59.82**	**52**	P	**P**	**11 15 02.0**	**-0.3**
	baz=314						
H53A	**Bobcaygeon**	**59.86**	**55**	P	**P**	**11 15 02.5**	**-0.2**
	baz=314						
D56A	**ZEC Mazanza, M**	**60.04**	**51**	P	**P**	**11 15 03.6**	**-0.3**
	baz=315						
E56A	**St. Veronique**	**60.26**	**52**	P	**P**	**11 15 04.7**	**-0.7**
	baz=315						
LATQ	**La Tuque**	**60.76**	**50**	P	**P**	**11 15 08.1**	**-0.6**
	baz=316						
D58A	**Chemin du LacG**	**60.91**	**50**	P	**P**	**11 15 09.2**	**-0.6**
	baz=316						
KURK	**Kurchatov**	**60.95**	**316**	*ce*P	**P**	**11 15 09.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**60.95**	**316**	P	**P**	**11 15 10.1**	**+0.1**
KURK				IAmb	IAmb	11 15 10.9	
	comp=Z,4.0nm,0.6s						
E58A	**La Victoria**	**61.24**	**51**	P	**P**	**11 15 11.4**	**-0.6**
	baz=316						
G57A	**Newington**	**61.31**	**53**	P	**P**	**11 15 12.2**	**-0.3**
	baz=315						
WMQ	**Urumqi**	**61.63**	**305**	*e*P	**P**	**11 15 16.8**	**+2.0**
WMQ				pP	sP	11 15 25.6	+2.2
WMQ				sP	pwP	11 15 31.6	+4.6
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
N54A	**Moraine State**	**61.65**	**59**	P	**P**	**11 15 13.9**	**-1.0**
	baz=315						
J56A	**Wolcott**	**61.66**	**55**	P	**P**	**11 15 15.5**	**+0.6**
	baz=315						
J56A	**Wolcott**	**61.66**	**55**	P	**P**	**11 15 16.5**	**+1.6**
CD2	**Chengdu**	**61.72**	**285**	*e*P	**P**	**11 15 16.2**	**+0.6**
CD2				sP	pwP	11 15 30.2	+2.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
G58A	**Ormstown**	**61.73**	**52**	P	**P**	**11 15 14.1**	**-1.2**
	baz=316						
I57A	**Carthage**	**61.80**	**54**	P	**P**	**11 15 15.8**	**-0.1**
	baz=316						
K56A	**Middlesex**	**61.83**	**56**	P	**P**	**11 15 16.1**	**0.0**
	baz=315						
LONY	**Lake Ozonia**	**61.85**	**53**	P	**P**	**11 15 15.1**	**-1.1**
	baz=316,SNR=5.4						
LONY	**Lake Ozonia**	**61.85**	**53**	P	**P**	**11 15 16.3**	**+0.1**
F59A	**Saint Guilaume**	**61.85**	**51**	P	**P**	**11 15 15.5**	**-0.7**
	baz=316						
TMCR	**Tamitsa**	**61.95**	**345**	*e*P	**P**	**11 15 13.8**	**-2.7**
TMCR				pmax	pmax		
	comp=Z,12nm,1.1s						
D60A	**Saint Jean D'O**	**61.98**	**49**	P	**P**	**11 15 16.5**	**-0.5**
	baz=317						
L56A	**Greenwood**	**62.10**	**57**	P	**P**	**11 15 17.7**	**-0.3**
	baz=316						
L56A	**Greenwood**	**62.10**	**57**	P	**P**	**11 15 18.4**	**+0.5**
D61A	**St Aubert, Com**	**62.11**	**48**	P	**P**	**11 15 16.8**	**-1.1**
	baz=317						
E60A	**Ste Agathe de**	**62.12**	**50**	P	**P**	**11 15 17.6**	**-0.4**
	baz=316						
MK31	**Makanchi Array**	**62.15**	**311**	*ce*P	**P**	**11 15 17.2**	**-1.0**
MK31	**Makanchi Array**	**62.15**	**311**	P	**P**	**11 15 17.4**	**-0.7**
MKAR	**Makanchi Array**	**62.15**	**311**	P	**P**	**11 15 17.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=49,slow=5.8,SNR=13						
F60A	**Warwick**	**62.17**	**50**	P	**P**	**11 15 17.8**	**-0.5**
	baz=316						
H58A	**Gabriels**	**62.20**	**53**	P	**P**	**11 15 18.5**	**0.0**
	baz=316						
G59A	**Clarenceville**	**62.22**	**52**	P	**P**	**11 15 18.2**	**-0.4**
	baz=316						
K57A	**Scipio Center**	**62.22**	**56**	P	**P**	**11 15 18.3**	**-0.4**
	baz=316						
H59A	**Cadyville**	**62.28**	**52**	P	**P**	**11 15 18.9**	**-0.1**
	baz=316						
Q53A	**Leroy**	**62.30**	**62**	P	**P**	**11 15 19.0**	**-0.3**
	baz=315						
I58A	**Old Forge**	**62.32**	**54**	P	**P**	**11 15 18.7**	**-0.7**
	baz=316						
J58A	**Remsen**	**62.40**	**54**	P	**P**	**11 15 20.1**	**+0.2**
	baz=316,SNR=6.8						
J58A	**Remsen**	**62.40**	**54**	P	**P**	**11 15 21.0**	**+1.1**
L57A	**Andrews Acres**	**62.57**	**56**	P	**P**	**11 15 21.0**	**-0.1**
	baz=316						
BRVK	**Borovoye**	**62.60**	**322**	*ce*P	**P**	**11 15 20.0**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
F61A	**St Evariste**	**62.63**	**50**	P	**P**	**11 15 21.2**	**-0.2**
	baz=317						
K58A	**Earlville**	**62.64**	**55**	P	**P**	**11 15 21.7**	**+0.1**
	baz=316						
MCWV	**Mont Chateau**	**62.65**	**60**	P	**P**	**11 15 21.7**	**0.0**
	baz=316						
J59A	**Piesco**	**62.72**	**54**	P	**P**	**11 15 21.7**	**-0.4**
	baz=316						
J59A	**Piesco**	**62.72**	**54**	P	**P**	**11 15 22.5**	**+0.5**
BINY	**Binghamton**	**62.88**	**56**	P	**P**	**11 15 23.4**	**+0.2**
	baz=316						
K59A	**Cooperstown**	**63.04**	**55**	P	**P**	**11 15 23.9**	**-0.4**
	baz=316						
I60A	**Shoreham**	**63.05**	**53**	P	**P**	**11 15 23.6**	**-0.7**
	baz=317						
L58A	**Harry Jones Me**	**63.06**	**56**	P	**P**	**11 15 24.9**	**+0.5**
	baz=316,SNR=6.9						
S54A	**Dingess, Beckl**	**63.17**	**62**	P	**P**	**11 15 25.3**	**+0.1**
	baz=316						
ACCN	**Adirondack Com**	**63.20**	**53**	P	**P**	**11 15 25.1**	**-0.2**
D63A	**Stockholm**	**63.20**	**47**	P	**P**	**11 15 24.8**	**-0.3**
	baz=318						
M58A	**Price's Panora**	**63.22**	**57**	P	**P**	**11 15 25.9**	**+0.5**
	baz=316						
LRAL	**Lakeview Retre**	**63.32**	**70**	P	**P**	**11 15 25.7**	**-0.5**
	baz=316						
L59A	**Walton**	**63.37**	**55**	P	**P**	**11 15 26.7**	**+0.3**
	baz=316,SNR=10.0						
L59A	**Walton**	**63.37**	**55**	P	**P**	**11 15 27.7**	**+1.2**
G62A	**West of Eustis**	**63.40**	**50**	P	**P**	**11 15 26.3**	**-0.3**
	baz=317						
G62A	**West of Eustis**	**63.40**	**50**	P	**P**	**11 15 26.9**	**+0.3**
J60A	**Lant Hill Farm**	**63.42**	**53**	P	**P**	**11 15 26.8**	**+0.1**
	baz=317,SNR=5.6						
E63A	**Oxbow**	**63.51**	**48**	P	**P**	**11 15 25.9**	**-1.3**
	baz=318						
H62A	**Milan**	**63.57**	**51**	P	**P**	**11 15 27.0**	**-0.7**
	baz=317						
M59A	**Waymart**	**63.64**	**56**	P	**P**	**11 15 28.5**	**+0.4**
	baz=316						
K60A	**Five Rivers En**	**63.65**	**54**	P	**P**	**11 15 28.7**	**+0.5**
	baz=317						
J61A	**Chester**	**63.78**	**53**	P	**P**	**11 15 29.2**	**+0.1**
	baz=317						
E64A	**Bridgewater**	**63.79**	**48**	P	**P**	**11 15 29.2**	**+0.2**
	baz=318						
N59A	**State Game Lan**	**63.91**	**57**	P	**P**	**11 15 30.3**	**+0.3**
	baz=317						
G63A	**Kingsbury**	**63.91**	**50**	P	**P**	**11 15 29.7**	**-0.2**
	baz=318						
K61A	**Williamstown**	**63.92**	**54**	P	**P**	**11 15 30.5**	**+0.5**
	baz=317						
L60A	**Shokan**	**63.93**	**55**	P	**P**	**11 15 30.7**	**+0.6**
	baz=317						
ARU	**Arti**	**63.94**	**330**	P	**P**	**11 15 29.5**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=31,slow=5.6,SNR=6.0						
ARU	**Arti**	**63.94**	**330**	*c i*P	**P**	**11 15 29.6**	**-0.3**
ARU						11 17 48.0	
ARU				S	**S**	**11 24 04.7**	**+0.8**
ARU				SS	**SS**	**11 28 12.8**	**+1.3**
ARU				pmax	pmax		
	comp=Z,17nm,2.9s						
F64A	**Sherman**	**63.96**	**48**	P	**P**	**11 15 29.3**	**-0.8**
	baz=318						
L61A	**Hillsdale 1, H**	**64.12**	**54**	P	**P**	**11 15 31.6**	**+0.2**
	baz=317,SNR=5.1						
O59A	**Robesonia**	**64.13**	**57**	P	**P**	**11 15 32.1**	**+0.7**
	baz=317						
M60A	**Port Jervis**	**64.21**	**56**	P	**P**	**11 15 32.2**	**+0.3**
	baz=317,SNR=7.6						
I63A	**Otisfield**	**64.24**	**51**	P	**P**	**11 15 32.4**	**+0.3**
	baz=318						
J62A	**Henniker**	**64.24**	**52**	P	**P**	**11 15 32.5**	**+0.5**
	baz=317						
N60A	**Cedar Hill Far**	**64.30**	**56**	P	**P**	**11 15 33.0**	**+0.5**
	baz=317						
Q58A	**Fox Den Farm,**	**64.33**	**59**	P	**P**	**11 15 32.7**	**-0.1**
	baz=317						
R57A	**Stanardsville**	**64.34**	**60**	P	**P**	**11 15 33.7**	**+0.8**
	baz=316						
K62A	**Royalston**	**64.44**	**53**	P	**P**	**11 15 33.2**	**-0.2**
	baz=317						
BRAL	**Brewton**	**64.63**	**71**	P	**P**	**11 15 33.8**	**-1.0**
	baz=316						
KIRV	**Kirov**	**64.64**	**336**	*i* P	**P**	**11 15 33.6**	**-0.8**
K63A	**Dunstable**	**64.78**	**53**	P	**P**	**11 15 35.5**	**-0.1**
	baz=318						
N61A	**South Mountain**	**64.80**	**56**	P	**P**	**11 15 35.8**	**+0.1**
	baz=317						
PAL	**Palisades**	**64.81**	**55**	P	**P**	**11 15 36.1**	**+0.3**
	baz=317						
HRV	**Adam Dziewonsk**	**64.90**	**53**	P	**P**	**11 15 37.1**	**+0.7**
	baz=318						
V56A	**Mocksville**	**65.06**	**63**	P	**P**	**11 15 37.5**	**0.0**
	baz=317						
H66A	**Whiting**	**65.25**	**49**	P	**P**	**11 15 37.8**	**-0.8**
	baz=319						
M63A	**Gales Ferry**	**65.47**	**54**	P	**P**	**11 15 39.7**	**-0.4**
	baz=318						
W57A	**Gilead**	**65.81**	**64**	P	**P**	**11 15 42.2**	**-0.2**
	baz=317						
FINES	**FINESS Array B**	**66.22**	**350**	P	**P**	**11 15 43.8**	**-0.8**
	comp=Z,3.3nm,0.7s,baz=32,slow=11,SNR=8.8						
NB2	**NORSAR Subarra**	**67.71**	**357**	P	**P**	**11 15 53.8**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=2.7,slow=6.2						
NOA	**NORSAR Array B**	**67.71**	**357**	P	**P**	**11 15 53.6**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=3.7,slow=6.5,SNR=5.4						
BOOM	**Boomskoye usch**	**68.37**	**312**	IAmb	IAmb	11 16 00.4	
	comp=Z,3.3nm,0.6s						
AAK	**Ala-Archa**	**68.92**	**313**	*ce*P	**P**	**11 16 01.9**	**-0.3**
AAK				pmax	pmax		
	comp=Z,22nm,1.7s						
AAK	**Ala-Archa**	**68.92**	**313**	P	**P**	**11 16 03.1**	**+0.9**
AAK				IAmb	IAmb	11 16 03.8	
	comp=Z,3.4nm,0.7s						
KONO	**Kongsberg**	**69.14**	**358**	*ce*P	**P**	**11 16 03.0**	**-0.1**
KONO				pmax	pmax		
	comp=Z,82nm,2.5s						
AKTO	**Aktyubinsk**	**69.17**	**327**	P	**P**	**11 16 03.9**	**+0.5**
	comp=Z,4.8nm,0.6s,baz=55,slow=8.0,SNR=26						
PMG	**Port Moresby**	**69.21**	**221**	*e*P	**P**	**11 16 04.2**	**+0.2**
PMG				pmax	pmax		
	comp=Z,33nm,1.1s						
ABKAR	**Akbulak array**	**69.50**	**325**	P	**P**	**11 16 06.7**	**+1.3**
KK31	**Karatay Array**	**70.35**	**315**	IAmb	IAmb	11 16 11.8	
	comp=Z,3.9nm,0.6s						
KKAR	**Karatay Array**	**70.35**	**315**	IAmb	IAmb	11 16 11.8	
	comp=Z,3.9nm,0.6s						
BELG	**Belogornoye**	**70.62**	**334**	*i* P	**P**	**11 16 11.4**	**-0.8**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	**Kashi**	**70.66**	**310**	P	**P**	**11 16 17.1**	**+4.2**
KSH				sP	PcP	11 16 30.8	-3.0
KSH				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN	**Obninsk**	**70.69**	**342**	⇓*e*P	**P**	**11 16 12.2**	**-0.4**
OBN				*PP	**pP**	**11 16 20.0**	**+0.8**
OBN						11 16 30.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PPT2	**Papeete2**	**72.11**	**155**	*e*LR	LR	11 38 22.0	
	comp=Z,69nm,23.8s						
PAYA	**Payao**	**72.58**	**279**	P	**P**	**11 16 28.7**	**+4.1**
MNK	**Minsk**	**72.75**	**347**	*i* P	**P**	**11 16 23.9**	**-1.1**
	comp=E,6.0nm,0.9s						
MNK				*i* P	**P**	**11 16 23.9**	**-1.1**
	comp=N,8.0nm,0.6s						
MNK				*i* P	**P**	**11 16 23.9**	**-1.1**
	comp=Z,9.0nm,0.7s						
MNK				*i* PcP	**PcP**	**11 16 41.2**	**-1.0**
MNK				*i* PP	**PP**	**11 19 05.3**	**-0.9**
MNK				*i* PPP	PPP	11 20 49.8	
MNK				*i* S	**S**	**11 25 45.4**	**-3.3**
MNK				*i* ScS	**ScS**	**11 26 34.8**	**+4.3**
MNK				*i* SS	**SS**	**11 30 27.0**	**-0.2**
MNK				*i* SSS	SSS	11 33 50.1	
MNK				*i* LR	LR	11 48 56.7	
MNK				*i* LRM	MLR	11 50 57.7	
	comp=Z,67nm,9.4s						
MNK				*i* LRM	MLR	11 51 04.9	
	comp=N,126nm,12.3s						
MNK				*i* LRM	MLR	11 51 10.7	
	comp=E,19nm,14.5s						
TAPN	**Taplejung**	**73.81**	**293**	*e*P	**P**	**11 16 33.0**	**+0.9**
	comp=E,48nm,0.8s						
CM09	**Chiang Mai Arr**	**73.81**	**279**	P	P	11 16 38.0	+6.2
CMAR	**Chiang Mai Arr**	**73.83**	**279**	P	**P**	**11 16 32.4**	**+0.5**
	comp=E,3.8nm,0.7s,baz=25,slow=6.9,SNR=13						
CM02	**Chiang Mai Arr**	**73.84**	**279**	P	**P**	**11 16 36.0**	**+4.0**
CM01	**Chiang Mai Arr**	**73.85**	**279**	P	**P**	**11 16 35.5**	**+3.4**
CM04	**Chiang Mai Arr**	**73.85**	**279**	P	**P**	**11 16 35.6**	**+3.5**
CM05	**Chiang Mai Arr**	**73.87**	**279**	P	**P**	**11 16 35.0**	**+2.8**
CM13	**Chiang Mai Arr**	**73.88**	**279**	P	**P**	**11 16 35.5**	**+3.3**
GUN	**Gumba**	**74.42**	**295**	*e*P	**P**	**11 16 36.4**	**+0.7**
	comp=E,54nm,0.9s						
MHMT	**Maesarieng**	**74.66**	**280**	P	**P**	**11 16 41.0**	**+4.2**
RAMN	**Ramite**	**74.75**	**294**	*e*P	**P**	**11 16 38.1**	**+0.6**
	comp=E,73nm,0.8s						
PKI	**Pulchoki**	**74.95**	**295**	*e*P	**P**	**11 16 39.1**	**+0.3**
	comp=E,61nm,1.1s						
GKN	**Gorkha**	**75.05**	**296**	*e*P	**P**	**11 16 39.6**	**+0.5**
DMN	**Daman**	**75.09**	**296**	*e*P	**P**	**11 16 40.0**	**+0.5**
	comp=E,44nm,1.0s						
DZM	**Mont Dzumac**	**75.21**	**199**	LR	LR	11 44 21.6	
	comp=E,70nm,19.1s,baz=9.0,slow=31						
DANN	**Dangsing**	**75.27**	**297**	*e*P	**P**	**11 16 41.2**	**+0.6**
	comp=E,78nm,0.8s						
KOLN	**Koldanda**	**75.81**	**297**	*e*P	**P**	**11 16 44.1**	**+0.5**
	comp=E,45nm,1.1s						
PYUN	**Piuthan**	**75.89**	**297**	*e*P	**P**	**11 16 44.5**	**+0.4**
	comp=E,74nm,0.9s						
AKASG	**Malin Array Be**	**76.23**	**345**	P	**P**	**11 16 44.4**	**-0.9**
	comp=E,2.5nm,0.5s,baz=17,slow=6.0,SNR=12						
CLL	**Collm**	**77.37**	**355**	⇓*i*P	**P**	**11 16 52.0**	**+0.3**
	comp=Z,10.0nm,0.8s						
CLL	**Collm**	**77.37**	**355**	⇓*i*P	**P**	**11 16 52.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLL	**Collm**	**77.37**	**355**	P	**P**	**11 16 52.1**	**+0.4**
TBI	**Tubuai**	**77.66**	**157**	*e*LR	LR	11 40 58.3	
	comp=Z,78nm,25.5s						
TBI	**Tubuai**	**77.66**	**157**	*e*T	T	12 42 05.0	
	comp=Z,3.7nm,0.3s						
BRG	**Berggiesshubel**	**77.75**	**355**	*i* P	**P**	**11 16 54.2**	**+0.3**
BRG				Amp		11 16 55.7	
	comp=Z,16nm,1.2s						
BRG				*e*x	x	11 17 12.3	
BRG				Amp		11 17 13.1	
	comp=Z,6.5nm,0.9s						
BRG	**Berggiesshubel**	**77.75**	**355**	*i* P	**P**	**11 16 54.1**	**+0.3**
BRG				*e*		11 17 12.3	
BRG				pmax	pmax		
	comp=Z,16nm,1.2s						
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRG	**Berggiesshubel**	**77.75**	**355**	*i* P	**P**	**11 16 54.2**	**+0.3**
BRG				Amp		11 16 55.7	
	comp=Z,16nm,1.2s						
BRG				*e*x	x	11 17 12.3	
BRG				Amp		11 17 13.1	
	comp=Z,6.5nm,0.9s						
CSGN	**Cosiguina Volc**	**77.90**	**84**	P	**P**	**11 16 53.7**	**-1.6**
KBL	**Kabul**	**77.95**	**311**	P	**P**	**11 16 55.2**	**-0.4**
KBL				pmax	pmax		
	comp=Z,12nm,0.9s						
KBL	**Kabul**	**77.95**	**311**	P	**P**	**11 16 55.2**	**-0.4**
DPC	**Dobruska-Polom**	**78.11**	**353**	*e*P	**P**	**11 16 56.5**	**+0.5**
DPC	**Dobruska-Polom**	**78.11**	**353**	*e*P	**P**	**11 16 56.5**	**+0.5**
MEM	**Membach**	**78.25**	**360**	*d*P	**P**	**11 16 57.1**	**+0.5**
MEM				*d*PcP	**sP**	**11 17 05.2**	**-0.1**
BTNL	**Ternell**	**78.27**	**360**	*d*P	**P**	**11 16 57.9**	**+1.1**
KRLC	**Kraliky**	**78.35**	**353**	*e*P	**P**	**11 16 58.2**	**+0.9**
KRLC	**Kraliky**	**78.35**	**353**	*e*P	**P**	**11 16 58.2**	**+0.9**
BCLA	**Clavier**	**78.44**	**0**	*d*PcP	**PcP**	**11 17 05.9**	**-1.0**
BMRD	**Maredsous**	**78.55**	**1**	*d*P	**P**	**11 16 57.6**	**-0.7**
PRU	**Pruhonice**	**78.60**	**354**	*e*P	**P**	**11 16 58.5**	**-0.1**
PRU	**Pruhonice**	**78.60**	**354**	*e*P	**P**	**11 16 58.5**	**-0.1**
SORM	**Soroca**	**78.86**	**345**	⇑P	**P**	**11 16 59.2**	**-0.8**
KOLS	**Kolonicke sedl**	**78.94**	**349**	*e*P	**P**	**11 17 01.2**	**+0.7**
KOLS	**Kolonicke sedl**	**78.94**	**349**	*e*P	**P**	**11 17 01.2**	**+0.7**
GRF	**Grafenberg Arr**	**79.06**	**356**	*e*P	**P**	**11 17 02.1**	**+0.9**
	comp=Z,13nm,0.9s,baz=1.9,slow=4.7						
KHC	**Kasperske Hory**	**79.51**	**355**	*e*P	**P**	**11 17 04.0**	**+0.4**
KHC				*e*		11 17 18.0	
KHC	**Kasperske Hory**	**79.51**	**355**	*e*P	**P**	**11 17 04.0**	**+0.4**
KHC				*e*x	x	11 17 18.0	
KHC	**Kasperske Hory**	**79.51**	**355**	IAmb	IAmb	11 17 05.3	
	comp=Z,6.0nm,0.7s						
KIV	**Kislovodsk**	**79.67**	**334**	⇓*e*P	**P**	**11 17 04.1**	**-0.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,111nm,17.0s						
VYHS	**Vyhne**	**79.74**	**351**	*e*P	**P**	**11 17 05.7**	**+0.8**
VYHS	**Vyhne**	**79.74**	**351**	*e*P	**P**	**11 17 05.7**	**+0.8**
GERES	**GERESS Array B**	**79.79**	**355**	P	**P**	**11 17 05.6**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=15,slow=5.5,SNR=11						
BUR08	**Bucovina Ar. S**	**79.82**	**347**	IAmb	IAmb	11 17 06.4	
	comp=Z,4.1nm,0.8s						
BURAR	**Bucovina Array**	**79.85**	**347**	⇓P	**P**	**11 17 05.7**	**+0.1**
GEYT	**Alibeck**	**79.86**	**321**	P	**P**	**11 17 06.6**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=349,slow=1.5,SNR=5.6						
MODS	**Modra-Piesok**	**80.00**	**352**	*e*P	**P**	**11 17 06.7**	**+0.4**
MODS	**Modra-Piesok**	**80.00**	**352**	*e*P	**P**	**11 17 06.7**	**+0.4**
BIZ	**Bicaz**	**80.38**	**346**	⇑P	**P**	**11 17 08.8**	**+0.5**
CONA	**Conrad Observa**	**80.56**	**353**	*i* P	**P**	**11 17 10.1**	**+0.7**
	comp=Z,12nm,1.3s,SNR=4.4						
ECH	**Echery**	**80.64**	**359**	P	**P**	**11 17 10.6**	**+0.9**
ECH				pmax	pmax		
	comp=Z,13nm,0.9s						
ECH	**Echery**	**80.64**	**359**	P	**P**	**11 17 10.6**	**+0.9**
MOA	**Molln**	**80.74**	**354**	*e*P	**P**	**11 17 11.4**	**+1.1**
	comp=Z,5.0nm,1.4s						
ARSA	**Arzberg**	**81.25**	**353**	*e*P	**P**	**11 17 13.9**	**+0.8**
	comp=Z,5.7nm,1.2s						
RETA	**Reutte**	**81.28**	**357**	*e*P	**P**	**11 17 14.3**	**+1.1**
	comp=Z,6.7nm,1.1s						
VRI	**Vrincioaia**	**81.33**	**345**	⇓P	**P**	**11 17 13.5**	**+0.1**
WATA	**Walderalm**	**81.40**	**356**	*e*P	**P**	**11 17 14.6**	**+0.6**
	comp=Z,3.3nm,0.5s						
MOTA	**Moosalm**	**81.41**	**356**	*e*P	**P**	**11 17 14.9**	**+0.9**
	comp=Z,13nm,1.4s						
WTTA	**Wattenberg**	**81.47**	**356**	*e*P	**P**	**11 17 14.3**	**0.0**
	comp=Z,9.0nm,1.0s						
DAVA	**Damuels**	**81.51**	**357**	*e*P	**P**	**11 17 13.4**	**-1.2**
	comp=Z,7.0nm,1.1s						
SQTA	**Sankt Quirin**	**81.53**	**356**	*e*P	**P**	**11 17 15.5**	**+0.9**
	comp=Z,7.6nm,0.8s						
KBA	**Koelnbreinsper**	**81.57**	**355**	*e*P	**P**	**11 17 15.9**	**+1.0**
	comp=Z,9.2nm,0.7s						
TLCR		**81.64**	**344**	⇑P	**P**	**11 17 15.0**	**0.0**
FETA	**Feichten**	**81.75**	**357**	*i* P	**P**	**11 17 17.0**	**+1.1**
	comp=Z,9.8nm,0.9s,SNR=8.0						
CFR	**Carcaliu**	**81.76**	**344**	⇑P	**P**	**11 17 16.2**	**+0.5**
MLR	**Muntele Rosu**	**81.81**	**346**	⇓P	**P**	**11 17 16.9**	**+0.8**
SOKA	**Soboth**	**81.86**	**354**	*e*P	**P**	**11 17 16.8**	**+0.4**
	comp=Z,8.2nm,1.0s						
ABTA	**Abfaltersbach**	**81.94**	**355**	*e*P	**P**	**11 17 14.8**	**-2.0**
	comp=Z,5.5nm,1.3s						
MYKA	**Terra Mystica**	**82.00**	**355**	*e*P	**P**	**11 17 15.6**	**-1.4**
	comp=Z,5.1nm,1.0s						
VOIR		**82.00**	**346**	⇑P	**P**	**11 17 16.6**	**-0.5**
OBKA	**Obir**	**82.06**	**354**	*i* P	**P**	**11 17 18.3**	**+0.9**
	comp=Z,6.8nm,0.8s,SNR=5.0						
HARR	**Harsova**	**82.27**	**344**	⇑P	**P**	**11 17 19.6**	**+1.2**
BZS	**Buzias**	**82.28**	**349**	⇑P	**P**	**11 17 18.0**	**-0.4**
TUE	**Stuetta**	**82.34**	**358**	IAmb	IAmb	11 17 21.0	
	comp=Z,7.5nm,0.8s						
HERR	**Herculane**	**82.91**	**348**	⇑P	**P**	**11 17 22.2**	**+0.5**
MDVR	**Moldovita**	**83.09**	**349**	⇑P	**P**	**11 17 21.7**	**-1.1**
BNI	**Bardonecchia**	**83.81**	**359**	IAmb	IAmb	11 17 29.5	
	comp=Z,7.5nm,0.8s						
WRA	**Warramunga Arr**	**84.16**	**228**	P	**P**	**11 17 27.0**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=31,slow=5.6,SNR=6.8						

WRA	Warramunga Arr	84.16	228	P	P	11 17 27.0	-1.3
BRTR	Keskin Array B	85.93	339	P	P	11 17 37.5	+0.2
	comp=Z,1.6nm,0.9s,baz=20,slow=4.1,SNR=3.8						
ASAR	Alice Springs	87.59	226	P	P	11 17 44.7	-0.5
	comp=Z,2.0nm,0.8s,baz=25,slow=5.0,SNR=15						
POO	Poona	88.55	298	eP	P	11 17 50.0	-0.2
ESDC	Sonseca Array	88.79	7	P	P	11 17 50.4	-0.6
	comp=Z,3.3nm,0.9s,baz=346,slow=4.6,SNR=13						
STKA	Stephens Creek	91.67	216	LR	LR	11 56 46.3	
	comp=Z,57nm,19.8s,baz=21,slow=34						
MDT	Midelt	95.53	9	LR	LR	12 00 57.7	
	comp=Z,74nm,19.8s,baz=28,slow=35						
BOSA	Boshof	152.86	320	PKPbc	PKPbc	11 24 54.2	0.0
	comp=Z,3.3nm,0.6s,baz=30,slow=1.9,SNR=10.0						

IDC ***08*** *11:19:24.0±2.3, 34.°75N×143.°06E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.3/40, mbtmp3.6/5, ML2.9/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/60, Error ellipse: s-maj=57.2km s-min=32.2km az=62.0*

JMA ***08*** *11:19:28.7±0.7, 34.°95N×142.°82E, h56km, M3.2*

ISC 08 11:19:27.6±1.4**, 35.°01N**±0.°07×**143.°0E**±0.°1**, h35km, n14, σ1ˢ63**/16**, mb3.7**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.72	259	P	Pn	11 19 54.3	-0.2
CHOJ	Chosi	1.90	292	P	Pn	11 19 57.8	+0.4
BSO3	Boso 3	2.08	265	P	Pn	11 20 00.1	+0.5
BSO4	Boso 4	2.21	270	P	Pn	11 20 01.9	+0.3
JAG	Ashikaga	3.23	297	P	Pn	11 20 15.6	-0.1
JOD2	Odawara 2	3.23	276	P	Pn	11 20 15.9	+0.1
JOD2				S	Sn	11 20 52.1	-1.1
JHJ	Hachijo jima 2	3.29	236	Pn	Pn	11 20 15.3	-1.2
	11nm,0.3s,baz=255,slow=20,SNR=2.0						
JHJ				Sn	Sn	11 20 51.1	-3.3
	27nm,0.3s,baz=102,slow=22,SNR=6.8						
JFT	Otama	3.31	320	P	Pn	11 20 15.6	-1.3
JFT				S	Sn	11 20 53.1	-1.9
JMK	Ichinoseki	4.19	340	P	Pn	11 20 27.0	-1.9
MJAR	Matsushiro Arr	4.20	293	Pn	Pn	11 20 30.4	+1.2
	0.2nm,0.3s,baz=102,slow=8.1,SNR=7.9						
JAY	Jayapura	37.39	184	LR	LR	11 41 10.0	
	comp=Z,62nm,19.6s,baz=20,slow=35						
WRA	Warramunga Arr	55.27	190	P	P	11 28 57.2	-0.2
	0.5nm,0.6s,baz=10,slow=7.6,SNR=1.9						
ASAR	Alice Springs	58.99	190	P	P	11 29 23.6	-0.2
	0.4nm,0.8s,baz=3.4,slow=6.7,SNR=4.6						
BRTR	Keskin Array B	81.17	313	P	P	11 31 43.0	+3.1
	1.1nm,1.0s,baz=16,slow=11,SNR=3.9						

JMA ***08*** *11:25:52.5±0.1, 24.°66N×122.°72E, h23km±1km, M2.2*

TAP ***08*** *11:25:52.1, 24.°70N×122.°75E, h23km, ML3.0, C*

ISC 08 11:25:52.2±1.2**, 24.°70N**±0.°05×**122.°73E**±0.°02**, h21**km±3km**, n35, σ0ˢ35**/60**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.31	141	P	Pb	11 25 59.0	-0.1
JYNG				S	Sb	11 26 03.6	-0.2
YOJ	Yonaguni jima	0.35	132	P	Pb	11 25 59.6	0.0
	baz=130						
YOJ				S	Sb	11 26 04.9	+0.3
	baz=130						
TWB1	Santiao Chiao	0.74	295	i P	Pb	11 26 06.3	-0.1
	baz=295						
TWB1				eS	Sb	11 26 15.9	-0.2
	baz=295						
TWC	Suao	0.81	264	i P	Pb	11 26 07.2	-0.3
	baz=264						
TWC				i S	Sb	11 26 18.0	0.0
	baz=264						
NTC	Toucheng	0.83	281	eS	Sn	11 26 19.7	-0.6
	baz=296						
TIPB	Shuangxi	0.87	289	P	Pb	11 26 08.3	-0.3
	baz=303						
TIPB				S	Sb	11 26 19.4	-0.3
	baz=303						
ENAH	Nanao	0.87	254	eP	Pb	11 26 08.3	-0.3
	baz=255						
ENAH				S	Sb	11 26 20.0	+0.2
	baz=255						
ENA	Nanau	0.94	254	eP	Pb	11 26 09.7	-0.1
	baz=254						
ENA				S	Sb	11 26 21.6	-0.2
	baz=254						
TWE	Neicheng	0.97	272	P	Pb	11 26 10.2	0.0
	baz=272						
TWE				S	Sb	11 26 22.8	+0.2
	baz=272						
IRIF	Iriomote-Funau	0.98	111	P	Pb	11 26 10.4	-0.1
ENTT	Nioudou	1.06	267	P	Pn	11 26 11.9	0.0
	baz=257						
ENTT				eS	Sn	11 26 25.7	-0.3
	baz=257						
NDT	Datong Townshi	1.11	265	eP	Pb	11 26 13.5	+0.8
	baz=256						
NDT				eS	Sb	11 26 26.6	-0.1
	baz=256						
NWLT	Wulai	1.12	274	eP	Pb	11 26 13.1	+0.2
	baz=284						
NWLT				eS	Sb	11 26 26.8	-0.2
	baz=284						
NHDH	Xindian Distri	1.13	284	eS	Sn	11 26 27.8	+0.2
	baz=285						
YM01	YM01	1.14	293	eP	Pn	11 26 13.1	0.0
	baz=294						
YM08	YM08	1.15	296	eP	Pb	11 26 13.7	+0.4
	baz=296						
YM05	YM05	1.16	294	eP	Pb	11 26 13.9	+0.4
	baz=294						
YM10	YM10	1.16	294	eP	Pn	11 26 13.1	-0.1
	baz=294						
NACB	Ninganchiao	1.16	244	P	Pb	11 26 13.4	-0.1
	baz=251						
NACB				eS	Sn	11 26 28.2	-0.2
	baz=251						
HATJ	Hateruma jima	1.17	123	P	Pn	11 26 13.3	0.0
HATJ				eS	Sn	11 26 28.1	-0.5
YHNB	Yeheng	1.23	269	eP	Pn	11 26 14.2	0.0
	baz=270						
YHNB				S	Sn	11 26 29.5	-0.8
	baz=270						
ETLH	Xiulin Townshi	1.24	247	eP	Pb	11 26 15.2	+0.3
	baz=255						
ETLH				eS	Sb	11 26 31.2	+0.8
	baz=255						
NSK	Sanguang	1.25	269	P	Pb	11 26 15.5	+0.4
	baz=270						
NSK				eS	Sn	11 26 30.5	-0.2
	baz=270						
JKRS	Kuro-shima	1.25	111	P	Pn	11 26 14.6	+0.1
JKRS				S	Sb	11 26 31.4	+0.6
NNSB	Datong	1.25	258	eP	Pb	11 26 15.2	-0.1
	baz=259						
NNSB				eS	Sn	11 26 30.7	-0.2
	baz=259						
TWS1	Kuangyinshan	1.26	289	eS	Sb	11 26 31.5	+0.5
	baz=275						
NNS	Nan Shan	1.26	259	eP	Pb	11 26 15.3	0.0
	baz=259						
NNS				S	Sn	11 26 31.1	0.0
	baz=259						
JIJ	Ishigaki jima	1.33	104	P	Pn	11 26 15.5	0.0
JIJ				eS	Sn	11 26 32.2	-0.4
FUSS	Fushou	1.43	252	eP	Pb	11 26 17.7	-0.5
	baz=261						
FUSS				eS	Sb	11 26 36.3	+0.3
	baz=261						
WHF	Hehuan Shan	1.44	248	eP	Pn	11 26 17.6	+0.1
	baz=249						
WHF				eS	Sb	11 26 36.5	-0.2
	baz=249						
JISG	Ishigakijimahi	1.44	94	P	Pn	11 26 17.5	+0.4
ESL	Shilin	1.47	234	eP	Pn	11 26 17.9	+0.4
	baz=235						
ESL				eS	Sb	11 26 37.1	-0.1
	baz=235						
CHGB	Renai	1.55	246	eP	Pn	11 26 19.5	+0.7
	baz=248						
CHGB				eS	Sb	11 26 39.6	-0.1
	baz=248						
LIOB	Emei	1.56	269	eP	Pb	11 26 19.9	-0.5
	baz=270						
LIOB				eS	Sb	11 26 39.4	-0.3
	baz=270						
NSTT	Nanjuang	1.57	268	eS	Sn	11 26 39.4	+0.8
	baz=269						

IDC ***08*** *11:37:28.1±2.0, 4.°91S×150.°88E, h88km±28km, mb3.5/4, mb1 3.7/5, mb1mx3.3/24, mbtmp3.8/5, Error ellipse: s-maj=103.4km s-min=11.2km az=135.0*

ISC 08 11:37:28.4±1.0**, 5.°1S**±0.°4×**151.°1E**±0.°4**, h100km, n7, σ1ˢ30**/9**, mb3.4**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.21	49	P	Pn	11 37 50.4	-0.8
	29nm,0.3s,baz=202,slow=20,SNR=1.7						
KRVT				S	Sn	11 38 08.6	+0.2
	108nm,0.3s,baz=54,slow=23,SNR=8.2						
PMG	Port Moresby	5.80	222	P	Pn	11 38 51.7	-0.3
	3.6nm,0.3s,baz=46,slow=5.4,SNR=8.6						
PMG				S	Sn	11 39 55.5	-1.7
	5.1nm,0.3s,baz=308,slow=23,SNR=9.2						
WRA	Warramunga Arr	22.00	226	P	P	11 42 16.2	+1.5
	1.0nm,0.5s,baz=51,slow=9.9,SNR=6.7						
ASAR	Alice Springs	24.81	220	P	P	11 42 42.6	+1.2
	0.7nm,0.7s,baz=55,slow=8.7,SNR=8.8						
FITZ	Fitzroy Crossi	28.04	240	P	P	11 43 11.3	+0.9
	6.8nm,0.9s,baz=60,slow=8.1,SNR=2.5						
ILAR	Eielson Array	83.08	22	P	P	11 49 42.6	0.0
	0.3nm,0.7s,baz=269,slow=6.0,SNR=5.0						
TORD	Torodi Ar. Bea	148.80	287	PKPbc	PKPbc	11 57 04.1	-1.3
	1.9nm,1.3s,baz=88,slow=4.5,SNR=3.6						

IDC ***08*** *12:01:12.2±0.7, 11.°43N×125.°98E, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.9/54, mbtmp3.9/14, Error ellipse: s-maj=37.3km s-min=14.2km az=73.0*

NEIC ***08*** *12:01:18.9±0.8, 11.°40N±0.°10×126.°0E±0.°2, h51km±8km, mb4.4/9, Error ellipse: s-maj=24.0km s-min=11.9km az=70.0*

ISC 08 12:01:16.7±1.5**, 11.°50N**±0.°04×**126.°00E**±0.°07**, h29**km±11km**, n36, σ1ˢ90**/47**, mb4.0**/19**, 2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.56	281	eP	Pb	12 01 26.7	-1.3
BESP				eS	Sb	12 01 35.0	-0.8
OCLP	Ormoc	1.43	252	eP	Pb	12 01 41.4	-1.4
OCLP				eS	Sb	12 02 01.8	+1.2
CNP	Catarman	1.65	308	eP	Pn	12 01 44.3	+0.6
CNP				eS	Sb	12 02 07.6	+0.8
GLSP	General Luna,	1.71	176	eP	Pn	12 01 43.7	-0.8
GLSP				eS	Sb	12 02 10.4	+1.8
MSLP	Maasin	1.75	220	eP	Pb	12 01 47.3	-1.0
MSLP				eS	Sb	12 02 13.2	+3.3
LLP	Lapu-Lapu	2.31	240	eP	Pb	12 01 55.5	-2.2
LLP				eS	Sb	12 02 28.0	+2.0
PVCP	Virac	2.75	319	eP	Pn	12 01 56.6	-2.3
PVCP				eS	Sn	12 02 32.3	+1.0
CGP	Cagayan de Oro	3.28	203	⇓eP	Pb	12 02 16.7	+2.3
CGP				eS	Sb	12 02 46.8	-7.1
GUIM	Jordan	3.45	256	eP	Pn	12 02 09.2	+0.6
GUIM				eS	Sn	12 02 49.9	+1.3
KCP	Kidapawan	4.55	191	⇓eP	Pb	12 02 28.0	-7.9
KCP				i S	Sb	12 03 34.1	+3.7
YULB	Yu-li	12.65	340	Pn	Pn	12 04 17.9	+3.1
SMRI	Semarang	24.06	221	P	P	12 06 28.7	-1.1
MTN	Manton Dam	24.71	168	P	P	12 06 32.8	-2.9
KSRS	Korea Array	25.90	4	P	P	12 06 47.0	+0.8
	1.0nm,0.6s,baz=184,slow=10,SNR=4.2						
CMAR	Chiang Mai Arr	27.01	288	P	P	12 06 57.3	+0.8
	1.1nm,0.6s,baz=96,slow=8.3,SNR=3.1						
FITZ	Fitzroy Crossi	29.41	181	P	P	12 07 15.5	-2.3
	4.7nm,1.0s,baz=350,slow=6.1,SNR=1.5						
FITZ	Fitzroy Crossi	29.41	181	P	P	12 07 14.9	-2.9
WB0	Warramunga Arr	32.15	165	P	P	12 07 40.9	-1.1
WRA	Warramunga Arr	32.30	165	P	P	12 07 42.0	-1.4
	0.4nm,0.4s,baz=346,slow=9.1,SNR=2.0						
WB2	Warramunga Arr	32.31	165	P	P	12 07 42.5	-0.9
WB2				IAmb	IAmb	12 07 59.7	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	32.37	165	P	P	12 07 42.6	-1.4
WR0				IAmb	IAmb	12 07 52.6	
	comp=Z,10nm,1.4s						
USRK	Ussuriysk Ar.	32.99	8	P	P	12 07 50.2	+1.1
	comp=Z,1.3nm,0.7s,baz=210,slow=11,SNR=2.2						
AS31	Alice Springs	35.79	168	P	P	12 08 13.5	-0.2
AS31				IAmb	IAmb	12 08 37.0	
	comp=Z,2.4nm,1.3s						
ASAR	Alice Springs	35.79	168	P	P	12 08 13.4	-0.3
	comp=Z,0.5nm,0.4s,baz=351,slow=7.2,SNR=15						
ASAR				PcP	PcP	12 10 41.1	0.0
	comp=Z,0.4nm,0.5s,baz=347,slow=3.3,SNR=5.5						
SONM	Songino Array	39.78	339	P	P	12 08 47.6	+0.4
	comp=Z,0.6nm,0.7s,baz=162,slow=7.3,SNR=4.2						
STKA	Stephens Creek	45.64	161	P	P	12 09 35.2	+0.5
	comp=Z,3.9nm,0.7s,baz=342,slow=6.7,SNR=8.0						
STKA	Stephens Creek	45.64	161	P	P	12 09 34.0	-0.8
MK31	Makanchi Array	50.90	322	P	P	12 10 15.7	+0.4
MK31				IAmb	IAmb	12 10 16.9	
	comp=Z,4.0nm,1.5s						
MKAR	Makanchi Array	50.90	322	P	P	12 10 16.4	+1.1
	comp=Z,1.0nm,0.6s,baz=115,slow=8.4,SNR=15						
MKAR				PcP	PcP	12 11 31.3	-0.2
	comp=Z,0.3nm,0.5s,baz=132,slow=2.7,SNR=1.3						
KURK	Kurchatov	54.91	325	P	P	12 10 45.0	+0.3
KURK				IAmb	IAmb	12 10 46.2	
	comp=Z,7.8nm,1.4s						
AMKA	Amchitka	58.58	36	P	P	12 11 10.4	-0.4
BVAR	Borovoye Array	60.51	325	P	P	12 11 24.4	+0.3
	comp=Z,0.3nm,0.5s,baz=97,slow=7.4,SNR=4.0						
ARU	Arti	68.06	326	P	P	12 12 13.4	-0.1
	comp=Z,0.7nm,0.5s,baz=130,slow=11,SNR=3.6						
ILAR	Eielson Array	78.46	26	P	P	12 13 14.6	-0.1
	comp=Z,0.3nm,0.7s,baz=238,slow=5.0,SNR=2.8						
FINES	FINESS Array B	84.69	332	P	P	12 13 46.9	-0.8
	comp=Z,5.3nm,1.1s,baz=76,slow=8.0,SNR=5.1						
AKASG	Malin Array Be	85.45	321	P	P	12 13 50.6	-1.1
	comp=Z,0.3nm,0.4s,baz=87,slow=1.4,SNR=1.8						

SJA ***08*** *12:15:25.3±0.6, 23.°14S×66.°81W, h216km±4km, ML4.3, MW4.2*

NEIC ***08*** *12:15:25.4±2.0, 23.°17S±0.°07×66.°69W±0.°09, h192km±5km, Error ellipse: s-maj=12.7km s-min=9.6km az=94.0*

IDC ***08*** *12:15:25.5±0.8, 23.°12S×66.°66W, h191km±8km, mb3.7/10, mb1 3.9/16, mb1mx3.9/24, mbtmp4.3/16, Error ellipse: s-maj=15.4km s-min=11.8km az=16.0*

VAO ***08*** *12:15:26.9±0.3, 23.°00S×66.°73W, h210km, mb4.6*

GUC ***08*** *12:15:27.8±0.5, 23.°10S×67.°17W, h239km±6km, ML4.7*

ISC 08 12:15:25.9±0.5**, 23.°17S**±0.°03×**66.°85W**±0.°03**, h205**km±5km**, n141, σ1ˢ31**/174**, mb3.9**/11**, 11C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HJA	Humahuaca	1.32	92	eP	Pn	12 15 59.9	+0.9
HJA				eS	S	12 16 25.4	+1.1
YJA	Yavi	1.58	51	eP	Pn	12 16 02.2	+0.9
YJA				eS	S	12 16 29.5	+1.2
AZAP	Zapla	1.94	123	eP	Pn	12 16 05.0	+0.6
AZAP				eS	S	12 16 34.9	+0.9
SLA	San Lorenzo	1.97	142	⇓iP	Pn	12 16 06.6	+1.9
SLA				i S	S	12 16 36.5	+2.0
SLA	San Lorenzo	1.97	142	eP	Pn	12 16 06.6	+1.9
SLA				eS	S	12 16 36.2	+1.7
LVC	Limon Verde	1.98	286	P	Pn	12 16 06.3	+1.2
	127nm,0.3s,baz=99,slow=6.3,SNR=694						
LVC				S	S	12 16 35.7	+0.8
	45nm,0.3s,baz=34,slow=18,SNR=26						
LVC	Limon Verde	1.98	286	eP	Pn	12 16 06.2	+1.2
LVC				eS	S	12 16 35.9	+1.0
LVC	Limon Verde	1.98	286	eP	Pn	12 16 06.3	+1.2
LVC				eS	S	12 16 36.4	+1.5
LVC	Limon Verde	1.98	286	eP	Pn	12 16 06.6	+1.5
ASTB	Santa Barbara	2.33	110	eP	Pn	12 16 09.0	+0.6
PB15	IPOC Station P	2.42	269		Pn	12 16 10.0	+0.5
PB06	IPOC Station P	2.56	280		Pn	12 16 12.0	+1.0
PB09	IPOC Station P	2.60	301	⇑iP	Pn	12 16 12.9	+1.5
PB09				eS	S	12 16 47.2	+0.7
PB09				IAML		12 16 50.9	
	comp=E,854nm,0.6s						
PB09	IPOC Station P	2.60	301		Pn	12 16 12.7	+1.2
PB09	IPOC Station P	2.60	301	eP	Pn	12 16 13.0	+1.5
PB09				eS	S	12 16 48.2	+1.7
PB09				IAML		12 16 49.0	
	comp=Z,799nm,0.5s						
PB03	IPOC Station P	2.91	292	⇑iP	Pn	12 16 15.6	+0.6
PB03				i S	S	12 16 51.9	-0.7
PB03				IAML		12 16 53.6	
	comp=E,2µm,0.2s						
PB03	IPOC Station P	2.91	292	eP	Pn	12 16 15.7	+0.7
PB03				eS	S	12 16 51.9	-0.7
FSA	Cafayete	3.03	165	eP	Pn	12 16 17.7	+1.3
FSA				eS	S	12 16 55.9	+0.5
PB05	IPOC Station P	3.11	275	⇑iP	Pn	12 16 17.7	+0.5
PB05				i S	S	12 16 55.6	-1.1
PB05				IAML		12 16 58.9	
	comp=N,582nm,0.3s						
PB05	IPOC Station P	3.11	275	eP	Pn	12 16 17.9	+0.6
PB05				eS	S	12 16 55.9	-0.9
PB05				IAML		12 16 58.6	
	comp=Z,324nm,0.5s						
PB07	IPOC Station P	3.16	296	⇑iP	Pn	12 16 18.5	+0.6
PB07				eS	S	12 16 56.8	-1.2
PB07	IPOC Station P	3.16	296		Pn	12 16 18.5	+0.6
PB07	IPOC Station P	3.16	296	eP	Pn	12 16 18.6	+0.6
PB07				eS	S	12 16 56.8	-1.2
PB04	IPOC Station P	3.16	285	⇑iP	Pn	12 16 18.5	+0.6
PB04				i S	S	12 16 56.6	-1.4
PB04				IAML		12 17 00.1	
	comp=N,2µm,0.5s						
PB04	IPOC Station P	3.16	285		Pn	12 16 18.5	+0.6
PB04	IPOC Station P	3.16	285	eP	Pn	12 16 18.6	+0.6
PB04				eS	S	12 16 56.8	-1.2
PB04				IAML		12 17 01.1	
	comp=Z,1µm,0.1s						
GO02	Mina Guanaco	3.20	231	⇑iP	Pn	12 16 19.4	+1.0
GO02				eS	S	12 17 00.0	+1.0
GO02	Mina Guanaco	3.20	231	Pn	Pn	12 16 19.5	+1.0
PB01	IPOC Station P	3.24	310	⇑iP	Pn	12 16 19.3	+0.5
PB01				i S	S	12 16 58.6	-0.9
PB01	IPOC Station P	3.24	310		Pn	12 16 19.4	+0.6
PB01	IPOC Station P	3.24	310	eP	Pn	12 16 19.4	+0.6
PB01				eS	S	12 16 59.4	-0.1
PB01				IAML		12 17 00.7	
	comp=Z,774nm,0.2s						
PB02	IPOC Station P	3.37	302	⇑iP	Pn	12 16 20.6	+0.3
PB02				i S	S	12 17 00.9	-1.5
PB02	IPOC Station P	3.37	302	eP	Pn	12 16 20.7	+0.3
PB02				eS	S	12 17 01.5	-1.0
PB10	IPOC Station P	3.43	264	⇑iP	Pn	12 16 21.7	+0.8
PB10				i S	S	12 17 01.9	-1.5
PB10	IPOC Station P	3.43	264	Pn	Pn	12 16 21.7	+0.8
PB10	IPOC Station P	3.43	264	eP	Pn	12 16 21.7	+0.8
PB10				eS	S	12 17 01.7	-1.6
PB10				IAML		12 17 06.2	
	comp=Z,251nm,0.5s						
PB14	IPOC Station P	3.56	245	⇑iP	Pn	12 16 23.4	+0.5
PB14				i S	S	12 17 05.9	-1.0
PB14	IPOC Station P	3.56	245	Pn	Pn	12 16 23.4	+0.5
PB14	IPOC Station P	3.56	245	eP	Pn	12 16 23.4	+0.5
PB14				eS	S	12 17 05.7	-1.3
PB14				IAML		12 17 07.3	
	comp=Z,439nm,0.2s						
PB08	IPOC Station P	3.70	324	⇑iP	Pn	12 16 25.9	+1.2
PB08				i S	S	12 17 10.3	+0.2
PB08	IPOC Station P	3.70	324	Pn	Pn	12 16 25.6	+1.0
AHML	Horco Molle	3.85	159	eP	Pn	12 16 27.3	+1.2
AHML				eS	S	12 17 13.3	+0.3
PATCX	Punta Patache	3.86	307		Pn	12 16 25.9	-0.4
TA01	Diego Aracena	4.04	309	eP	Pn	12 16 27.9	-0.5
TA01				eS	S	12 17 14.0	-3.0
TA01	Diego Aracena	4.04	309	Pn	Pn	12 16 27.6	-0.8
GO01	Chusmiza	4.11	327	Pn	Pn	12 16 30.8	+0.9
AC02	Maricunga	4.20	209	Pn	Pn	12 16 31.8	+1.0
AC01	Pan de Azucar	4.52	228	Pn	Pn	12 16 33.9	-0.6
PSGCX	Pisagua	4.69	319	Pn	Pn	12 16 34.3	-2.3
MNMC	Minye Minye	4.77	327	Pn	Pn	12 16 38.5	+0.6
CYA	Choya	5.33	170	eP	Pn	12 16 46.3	+1.6
CYA				eS	S	12 17 39.9	-6.8
GO03	Copiap	5.37	214	Pn	Pn	12 16 44.0	-1.2
GO03	Copiap	5.37	214	eP	Pn	12 16 44.5	-0.6
GO03				eS	S	12 17 45.6	-1.9
PB16	IPOC Station P	5.42	332	Pn	Pn	12 16 46.9	+0.5
AC04	Llanos de Chal	6.30	216	Pn	Pn	12 16 55.7	-1.4
AC05	El Transito	6.43	208		Pn	12 16 57.8	-1.2
LCO	Las Campanas	6.77	210	Pn	Pn	12 17 01.4	-2.1
CO01	Juntas del Tor	7.38	203		Pn	12 17 11.2	-0.1
CO03	El Pedregal	8.37	203	Pn	Pn	12 17 22.2	-1.9
CO02	Combarbal	8.81	204	Pn	Pn	12 17 27.9	-1.9
SIV	San Ignacio	8.98	38	P	Pn	12 17 29.8	-2.2
	comp=Z,6.9nm,0.3s,baz=228,slow=10,SNR=96						
SIV				S	S	12 18 54.7	-18
	baz=226,slow=16,SNR=1.3						
CPUP	Villa Florida	9.20	112	P	Pn	12 17 33.6	-1.2
	comp=Z,0.1nm,0.3s,baz=292,slow=12,SNR=7.8						
CPUP	Villa Florida	9.20	112	Pn	Pn	12 17 33.3	-1.5
ROC1	El Roble	10.44	200	Pn	Pn	12 17 51.0	0.0
PTLB	Pontes e Lacer	10.58	45	eP	Pn	12 17 50.6	-2.0
AQDB	Aquidauana	10.69	78	eP	Pn	12 17 52.9	-1.2
VILB	Vilhena	11.96	33	eP	Pn	12 18 09.0	-1.4
BO02	Sierra Bellavi	12.08	196	P	Pn	12 18 12.8	+1.0
PP1B	Ponte de Pedra	12.51	66	eP	Pn	12 18 15.4	-1.9
TRCB	Terra Rica	13.10	91	eP	Pn	12 18 24.4	-0.2
ETMB	Extrema	13.29	3	eP	Pn	12 18 25.3	-1.7
PTGB	Pitanga	13.60	99	eP	P	12 18 32.0	-1.2
ITAB	Concordia	13.92	110	eP	P	12 18 36.6	0.0
CPSB	Cacapava Do Su	13.97	124	eP	Pn	12 18 35.1	-0.2
PCMB	Pacaembu	14.50	87	eP	Pn	12 18 41.6	-0.4
PLTB	Pedras Altas	14.53	129	eP	P	12 18 43.9	+0.6
SAML	Samuel	14.57	15	P	Pn	12 18 42.1	-0.8
SAML	Samuel	14.57	15	eP	Pn	12 18 42.4	-0.5
NNA	Nana	14.64	318	P	P	12 18 46.2	+1.5
	comp=Z,1.4nm,0.3s,baz=174,slow=12,SNR=4.8						
CNLB	Canela	15.59	116	eP	Pn	12 18 56.1	+0.9
ITRB	Iturama	15.73	80	eP	P	12 18 56.3	-0.4
FRTB	Fartura	15.88	94	eP	P	12 18 58.1	-0.4
ARAG	Araguaiana, MT	16.00	65	eP	P	12 18 59.4	-0.2
BB19B	Bebedouro	17.10	86	eP	P	12 19 11.4	-0.4
PLCA	Paso Flores	17.79	189	P	Pn	12 19 20.3	-0.9
	comp=Z,1.2nm,0.3s,baz=6.5,slow=12,SNR=52						
PLCA	Paso Flores	17.79	189	P	Pn	12 19 20.6	-0.7
PLCA				IAmb	IAmb	12 19 21.9	
	comp=Z,10nm,0.7s						
PLCA	Paso Flores	17.79	189	eP	Pn	12 19 21.1	-0.1
IPMB	Ipameri, GO	18.19	77	eP	P	12 19 23.4	-0.3
VAO	Valinhos	18.29	93	eP	P	12 19 24.4	-0.4
SNDB	Serra Nova Dou	18.52	56	eP	P	12 19 26.2	-1.0
BDFB	Brasilia	19.26	70	P	P	12 19 35.3	-0.1
	comp=Z,4.4nm,0.3s,baz=244,slow=11,SNR=93						
BDFB	Brasilia	19.26	70	P	P	12 19 35.1	-0.3
NPGB	Novo Progresso	19.47	36	eP	P	12 19 35.0	-2.5
PARB	Paraibuna	19.50	95	eP	P	12 19 37.0	-0.9
LL01	San Ignacio de	19.71	192	P	P	12 19 40.9	+1.1
BSCB	Bom Sucesso	20.57	88	eP	P	12 19 48.4	-0.8
ESAR	Angra dos Reis	20.61	94	eP	P	12 19 49.0	-0.6
MACA	Manacapuru-AM	20.77	18	eP	P	12 19 48.8	-2.5
PEXB	Peixe	20.79	61	eP	P	12 19 50.0	-1.6
MAN01	Angra dos Reis	21.06	94	eP	P	12 19 53.7	-0.8
ITTB	Itaituba	21.56	32	eP	P	12 19 57.2	-2.4
VAS01	Vassouras-RJ	21.60	92	eP	P	12 19 59.5	-0.5
DUB01	Friburgo-RJ	22.61	92	eP	P	12 20 09.0	-0.6
JANB	Januaria	22.75	73	eP	P	12 20 09.5	-1.4
SMTB	Santa Maria do	23.30	55	eP	P	12 20 15.2	-0.6
CAM01	Campos-RJ	23.30	92	eP	P	12 20 14.5	-1.2
SDBA	SAO DESIDERIO	23.44	67	eP	P	12 20 14.6	-2.5
PRPB	Parauapebas	23.55	47	eP	P	12 20 15.9	-2.1
ALF01	Guarapari-ES	24.36	89	eP	P	12 20 23.7	-1.7
SJMB	Sao Joao De Ma	24.36	84	eP	P	12 20 24.3	-1.1
MALB	Monte Alegre	24.45	32	eP	P	12 20 25.4	-0.8
BSFB	Barra de Sao F	24.64	85	eP	P	12 20 27.2	-0.7
RIB01	Linhares ES	24.94	86	eP	P	12 20 29.7	-0.9
NAN01	Guarapari, ES	25.56	83	eP	P	12 20 34.3	-1.9
OTAV	Otavalo	25.86	333	eP	P	12 20 38.8	-0.7
GDU01	Guandu, BA	27.48	75	eP	P	12 20 51.6	-1.8
EFI	East Falkland	29.25	169	P	P	12 21 08.8	+0.1
FDF	Fort de France	38.08	9	P	P	12 22 23.8	-1.3
PMSA	Palmer Station	41.63	178	P	P	12 22 54.5	+0.8
	comp=Z,20nm,1.0s,baz=262,slow=19,SNR=2.5						
PMSA	Palmer Station	41.63	178	P	P	12 22 53.9	+0.1
SNAA	Sanae	60.08	161	P	P	12 25 12.4	+1.2
SNAA				IAmb	IAmb	12 25 18.7	
	comp=Z,3.1nm,1.2s						
TXAR	Lajitas Array	63.09	324	P	P	12 25 33.2	+1.3
	comp=Z,0.2nm,0.5s,baz=146,slow=7.2,SNR=10.0						

J59A	Piesco	66.68	354	P	P	12 25 56.1	+1.5
DBIC	Dimbokro comp=Z,2.6nm,0.4s,baz=203,slow=8.1,SNR=6.6	67.41	72	P	P	12 25 58.9	-0.9
CCUT	Cedar City	74.58	323	P	P	12 26 44.0	+1.2
VNDA	Vanda comp=Z,1.1nm,0.9s,baz=166,slow=8.0,SNR=3.7	75.54	190	P	P	12 26 49.9	+2.5
VNDA	Vanda comp=Z,1.3nm,1.0s	75.54	190	IAmb	IAmb	12 26 57.0	
TORD	Torodi Ar. Bea comp=Z,3.6nm,0.4s,baz=257,slow=5.5,SNR=54	76.14	69	P	P	12 26 51.0	-0.8
TORD	comp=Z,1.2nm,0.7s,baz=254,slow=5.2,SNR=1.3			pP	pP	12 27 39.1	-2.8
PDAR	Pinedale Array comp=Z,0.4nm,0.6s,baz=128,slow=7.7,SNR=4.4	76.51	329	P	P	12 26 54.9	+1.3
NVAR	Mina Array Bea comp=Z,0.4nm,0.6s,baz=86,slow=9.5,SNR=6.2	77.98	321	P	P	12 27 03.9	+2.1
YHL	Hebgen Lake	78.86	330	P	P	12 27 09.2	+2.6
BOSA	Boshof comp=Z,2.5nm,0.7s,baz=185,slow=2.3,SNR=7.1	80.98	117	P	P	12 27 18.4	+0.1
ESDC	Sonseca Array comp=Z,2.2nm,0.9s,baz=242,slow=4.4,SNR=9.1	85.70	44	P	P	12 27 42.0	+0.2
YKA	Yellowknife Ar comp=Z,0.2nm,0.5s,baz=127,slow=5.6,SNR=8.9	93.40	340	P	P	12 28 18.4	+1.1
ASAR	Alice Springs comp=Z,0.8nm,0.7s,baz=149,slow=0.8,SNR=7.3	129.27	205	PKP	PKiKP	12 34 11.7	+0.3
WRA	Warramunga Arr comp=Z,0.5nm,0.4s,baz=162,slow=1.6,SNR=7.9	132.43	207	PKP	PKiKP	12 34 18.0	+0.2
FITZ	Fitzroy Crossi comp=Z,5.0nm,1.0s,baz=225,slow=7.1,SNR=1.5	137.21	198	PKP	PKiKP	12 34 26.7	-0.8
ZALV	Zalesovo Beam comp=Z,0.8nm,0.5s,baz=302,slow=4.0,SNR=4.9	142.60	28	PKhKP	PKPpre	12 34 31.0	
MKAR	Makanchi Array comp=Z,3.3nm,0.5s,baz=314,slow=3.3,SNR=52	145.79	39	PKPbc	PKPab	12 34 42.2	+0.5
MKAR	comp=Z,0.8nm,0.9s,baz=337,slow=1.8,SNR=4.4			SKPbc	SKiKP	12 38 02.0	+1.0
SONM	Songino Array comp=Z,0.1nm,0.4s,baz=331,slow=4.8,SNR=4.0	154.80	11	PKPab	PKPab	12 35 19.7	+0.9
CMAR	Chiang Mai Arr comp=Z,1.4nm,0.6s,baz=246,slow=5.5,SNR=7.0	165.91	107	PKPab	PKPab	12 36 08.2	+0.1

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*TAP **08** 12:15:40.6, 24°.84N×122°.02E, h9^{km}, ML3.5, C*
*JMA **08** 12:15:41.2, 24°.85N×121°.94E, h41^{km}, M2.7*
ISC 08 12:15:40.3±0.8**, 24°.88N**±0°.02×**122°.02E**±0°.02**, h15**^{km}±5^{km}**,**
n97, σ1^{s}.11/176**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS	baz=273	0.08	249	P	Pg	12 15 43.2	-0.2
EGS	baz=273			S	Sg	12 15 44.8	-0.6
TWB1	Santiao Chiao baz=352	0.14	349	P	Pb	12 15 44.6	0.0
TWB1	baz=352			S	Sg	12 15 47.3	+0.8
NTC	Toucheng baz=275	0.17	263	P	Pb	12 15 44.7	-0.5
NTC	baz=275			S	Sg	12 15 47.8	+0.5
TIPB	Shuangxi baz=306	0.20	299	*i* P	Pb	12 15 45.6	-0.1
TIPB	baz=306			S	Sg	12 15 48.9	+0.8
ILA	Ilan baz=254	0.27	246	*e*P	Pb	12 15 46.0	-0.9
ILA	baz=254			*e*S	Sg	12 15 50.8	+0.8
NWF	Wu-fen Shan baz=307	0.29	313	*e*P	Pb	12 15 47.7	+0.4
NWF	baz=307			*e*S	Sb	12 15 52.5	+0.5
WFSB	Wu-fen Shan baz=307	0.29	313	*i* P	Pb	12 15 47.7	+0.5
WFSB	baz=307			*e*S	Sb	12 15 52.9	+1.0
TWC	Suao baz=214	0.30	210	*i* P	Pg	12 15 46.4	-0.3
TNOU	National Taiwa baz=312	0.35	321	*e*P	Pb	12 15 47.2	-1.1
TWE	Neicheng baz=249	0.35	244	P	Pb	12 15 47.6	-0.7
TWE	baz=249			*e*S	Sb	12 15 53.2	-0.5
TWA	Mucha baz=279	0.41	285	P	Pb	12 15 49.5	+0.2
TWA	baz=279			*e*S	Sb	12 15 55.3	0.0
NHDH	Xindian Distri baz=276	0.45	281	*e*P	Pb	12 15 50.2	+0.2
NHDH	baz=276			*e*S	Sb	12 15 56.9	+0.2
ENAH	Nanao baz=215	0.46	204	P	Pb	12 15 49.5	-0.8
ENAH	baz=215			*e*S	Sb	12 15 57.1	+0.3
ENTT	Nioudou baz=245	0.47	240	P	Pb	12 15 50.0	-0.4
ENTT	baz=245			*e*S	Sb	12 15 56.3	-0.9
NWLT	Wulai baz=263	0.48	258	P	Pb	12 15 50.1	-0.4
NWLT	baz=263			*e*S	Sb	12 15 56.7	-0.6
YM01	YM01 baz=305	0.49	304	*i* P	Pn	12 15 51.7	-1.1
YM01	baz=305			*e*S	Sb	12 15 57.9	+0.3
TATO	Taipei baz=277	0.49	282	*i* P	Pn	12 15 51.2	-1.6
TATO	baz=277			*e*S	Sb	12 15 58.1	+0.4
TAP	Taipei baz=284	0.49	290	*e*P	Pn	12 15 51.5	-1.4
TAP	baz=284			*e*S	Sb	12 15 59.0	+1.3
YM11	YM11 baz=297	0.49	306	*i* P	Pn	12 15 52.1	-0.9
YM11	baz=297			*e*S	Sb	12 15 58.2	+0.3
YM08	YM08 baz=310	0.50	309	*i* P	Pn	12 15 51.5	-1.4
YM10	YM10 baz=305	0.50	304	*i* P	Pn	12 15 51.9	-1.2
YM10	baz=305			*e*S	Sb	12 15 59.6	+1.6
YM05	YM05 baz=307	0.50	305	P	Pn	12 15 51.9	-1.2
ENA	Nanau baz=218	0.51	209	*e*P	Pb	12 15 50.4	-0.6
ENA	baz=218			*e*S	Sb	12 15 57.6	-0.6
YM04	YM04 baz=304	0.52	303	*i* P	Pn	12 15 52.1	-1.1
YM04	baz=304			*e*S	Sb	12 15 59.7	+1.2
NDT	Datong Townshi baz=244	0.53	239	*e*P	Pb	12 15 51.4	0.0
NDT	baz=244			*e*S	Sb	12 15 58.9	0.0
ANP	Anpu baz=296	0.55	305	*e*P	Pn	12 15 52.4	-1.3
ANP	baz=296			*e*S	Sn	12 16 01.6	-1.0
TWY	Chenhua baz=310	0.55	317	P	Pn	12 15 53.0	-0.7
TWS1	Kuangyinshan baz=295	0.59	293	*e*P	Pn	12 15 53.0	-1.2
TWS1	baz=295			*e*S	Sn	12 16 02.8	-0.7
YHNB	Yeheng baz=255	0.62	251	*i* P	Pb	12 15 52.6	-0.2
YHNB	baz=255			*e*S	Sb	12 16 00.8	-0.7
NSK	Sanguang baz=255	0.63	252	P	Pb	12 15 52.8	-0.3
NSK	baz=255			*e*S	Sb	12 16 01.9	+0.2
NTY	Taoyuan baz=275	0.66	281	*e*P	Pn	12 15 54.1	-1.1
NTY	baz=275			*e*S	Sn	12 16 04.0	-1.3
NNSB	Datong baz=236	0.73	232	P	Pb	12 15 54.9	+0.1
NNSB	baz=236			S	Sn	12 16 05.7	-1.5
NNSH	Datong baz=236	0.73	232	P	Pn	12 15 55.2	-1.0
NNSH	baz=236			S	Sn	12 16 06.0	-1.1
NNS	Nan Shan baz=237	0.73	234	*e*P	Pb	12 15 54.6	-0.2
NNS	baz=237			*e*S	Sn	12 16 05.7	-1.4
PCYT	Pengchaiyu baz=356	0.75	4	P	Pn	12 15 56.3	-0.2
PCYT	baz=356			*e*S	Sn	12 16 07.3	-0.3
NCU	National Centr baz=279	0.76	277	*e*P	Pn	12 15 57.0	+0.4
NCU	baz=279			S	Sn	12 16 09.5	+1.8
NCUH	Zhongli baz=279	0.76	277	*e*P	Pn	12 15 57.6	+1.1
NCUH	baz=279			*e*S	Sn	12 16 08.5	+0.7
NACB	Ninganchiao baz=202	0.80	209	P	Pb	12 15 55.9	0.0
NACB	baz=202			S	Sb	12 16 06.4	0.0
ETLH	Xiulin Townshi baz=229	0.82	216	P	Pb	12 15 56.3	-0.1
ETLH	baz=229			*e*S	Sb	12 16 07.5	+0.2
TWD	Chiawan baz=201	0.88	206	P	Pb	12 15 57.3	0.0
TWD	baz=201			*e*S	Sb	12 16 08.5	-0.4
HSN1	Hsinchu baz=260	0.91	264	*e*P	Pn	12 15 59.4	+0.7
HSN1	baz=260			*e*S	Sn	12 16 14.0	+2.5
LIOB	Emei baz=259	0.94	256	*e*P	Pn	12 16 00.6	+1.6
LIOB	baz=259			*e*S	Sn	12 16 14.0	+1.8
FUSS	Fushou baz=232	0.94	229	P	Pn	12 15 58.6	-0.6
FUSS	baz=232			*e*S	Sn	12 16 11.8	-0.7
SBCB	Hsinchu baz=267	0.94	265	*e*P	Pn	12 16 01.1	+2.1
SBCB	baz=267			*e*S	Sn	12 16 14.9	+2.6
JYNG	Yonagunijimaku	0.94	116	P	Pb	12 15 59.0	+0.6
JYNG				*e*S	Sg	12 16 11.3	+0.3
HSN	Hsinchu baz=261	0.95	266	*e*P	Pn	12 16 00.1	+0.9
HSN	baz=261			S	Sn	12 16 13.8	+1.3
NSTT	Nanjuang baz=258	0.95	255	*e*P	Pn	12 16 00.6	+1.4
NSTT	baz=258			*e*S	Sn	12 16 12.6	+0.1
HWA	Hwalien baz=217	0.97	203	*e*P	Pn	12 15 59.0	-0.4
HWA	baz=217			*e*S	Sn	12 16 13.0	+0.1
TWT	Tachien baz=230	0.98	231	*e*P	Pn	12 16 01.6	+1.8
TWT	baz=230			*e*S	Sn	12 16 13.5	-0.1
YOJ	Yonaguni jima baz=113	0.99	114	*e*P	Pn	12 16 00.2	+0.5
TDCB	Techi baz=230	1.00	232	*e*P	Pn	12 16 00.2	+0.3
TDCB	baz=230			*e*S	Sn	12 16 13.8	0.0
WHF	Hehuan Shan baz=227	1.00	223	P	Pb	12 15 59.4	-0.2
WHF	baz=227			*e*S	Sb	12 16 13.0	+0.2
CHGB	Renai baz=227	1.12	224	P	Pn	12 16 01.6	-0.1
CHGB	baz=227			*e*S	Sn	12 16 16.9	0.0
WHP	Taichung City baz=242	1.14	239	*e*P	Pn	12 16 01.9	+0.1
WHP	baz=242			*e*S	Sn	12 16 17.6	+0.3
NMLH	Miaoli baz=256	1.16	253	*e*P	Pn	12 16 05.6	+3.4
NMLH	baz=256			*e*S	Sn	12 16 20.7	+3.0
ESL	Shilin baz=210	1.18	207	P	Pg	12 16 02.9	-0.3
ESL	baz=210			*e*S	Sn	12 16 18.1	-0.1
NSY	Sanyi baz=251	1.23	248	*e*P	Pg	12 16 03.4	-0.6
NSY	baz=251			*e*S	Sn	12 16 21.1	+1.6
TWQ1	Liyutan baz=248	1.25	245	*e*P	Pg	12 16 03.8	-0.6
TWQ1	baz=248			*e*S	Sn	12 16 21.6	+1.8
WPL	Puli Township baz=240	1.29	229	*e*P	Pg	12 16 05.7	+0.5
WPL	baz=240			*e*S	Sg	12 16 21.4	-0.7
DPDB	Guoxing baz=242	1.30	230	*e*P	Pg	12 16 05.6	+0.2
DPDB	baz=242			*e*S	Sg	12 16 23.6	+1.3
EGFH	Guangfu baz=215	1.31	204	*e*P	Pg	12 16 05.4	-0.3
EGFH	baz=215			*e*S	Sg	12 16 22.1	-0.7
WDJ	Dajia District baz=240	1.36	248	*e*P	Pg	12 16 08.5	+2.0
WDJ	baz=240			*e*S	Sg	12 16 26.4	+2.2
SMLT	Sun Moon Lake baz=221	1.42	226	*e*P	Pg	12 16 07.8	+0.1
SMLT	baz=221			*e*S	Sg	12 16 25.0	-1.1
TCU	Taichung baz=242	1.42	240	*e*P	Pg	12 16 07.8	+0.1
TCU	baz=242			*e*S	Sg	12 16 26.7	+0.6
TYC	Yuchr baz=223	1.43	228	*e*P	Pg	12 16 07.5	-0.4
TYC	baz=223			*e*S	Sg	12 16 25.9	-0.7
SSLB	Suanglung baz=226	1.45	222	*e*P	Pb	12 16 06.9	-0.2
SSLB	baz=226			*e*S	Sg	12 16 26.0	-1.2
HGSD	Ruisui baz=224	1.48	202	*e*P	Pg	12 16 08.3	-0.5
HGSD	baz=224			*e*S	Sg	12 16 29.3	+1.3
EHY	Hungye baz=220	1.50	205	*e*P	Pb	12 16 08.0	0.0
EHY	baz=220			*e*S	Sg	12 16 27.6	-1.2
WNT	Mingjian baz=223	1.57	231	*e*P	Pg	12 16 12.1	+1.6
WNT	baz=223			*e*S	Sg	12 16 33.3	+2.3
WJS	Zhushan baz=223	1.57	229	*e*P	Pg	12 16 12.4	+1.8
WJS	baz=223			*e*S	Sg	12 16 34.0	+2.8
WHYT	Xinyi Township baz=226	1.58	222	*e*P	Pg	12 16 09.7	-1.1
YULB	Yu-li baz=218	1.61	204	*e*P	Pg	12 16 10.6	-0.9
YULB	baz=218			*e*S	Sn	12 16 29.5	+0.6
IRIF	Iriomote-Funau	1.65	109	P	Pn	12 16 09.0	+0.2
TWF1	Yuli baz=218	1.65	204	*e*P	Pb	12 16 09.7	-0.8
TWF1	baz=218			*e*S	Sb	12 16 31.5	+0.4
YUS	Yu-Shan baz=228	1.69	215	*e*P	Pb	12 16 10.4	-1.0
ALS	Alishan baz=224	1.75	219	*e*P	Pg	12 16 13.7	-0.4
ALS	baz=224			*e*S	Sg	12 16 36.9	0.0
CHN5	Tsauling baz=229	1.76	224	*e*P	Pg	12 16 14.3	+0.1
CHN5	baz=229			*e*S	Sg	12 16 37.4	+0.2
FULB	Fuli baz=219	1.79	202	*e*P	Pn	12 16 11.6	+0.8
ELDTW	Lidau baz=215	1.91	209	*e*P	Pg	12 16 15.9	-1.2
ELDTW	baz=215			*e*S	Sn	12 16 37.4	+1.0
JKRS	Kuro-shima	1.92	109	P	Pn	12 16 13.0	+0.5
CHY	Chiayi baz=249	2.00	227	*e*P	Pg	12 16 16.9	-1.8
EDH	Donghe baz=221	2.00	199	P	Pn	12 16 15.0	+1.3
EDH	baz=221			*e*S	Sn	12 16 39.7	+1.2
JIJ	Ishigaki jima	2.00	104	P	Pn	12 16 14.3	+0.7
TPUB	Ta-pu baz=210	2.02	219	*e*P	Pg	12 16 17.8	-1.3
TPUB	baz=210			*e*S	Sg	12 16 43.9	-1.3
WTP	Ta-pu baz=212	2.07	219	*e*P	Pg	12 16 19.0	-1.0
WTP	baz=212			*e*S	Sg	12 16 45.5	-1.4
TWK	Hsinying baz=227	2.12	221	*e*P	Pg	12 16 19.5	-1.6
TWK	baz=227			*e*S	Sg	12 16 47.7	-1.0
CHN1	Nanshi baz=213	2.16	219	*e*P	Pg	12 16 21.2	-0.7
CHN1	baz=213			*e*S	Sg	12 16 48.9	-1.0
TWG	Pinlang baz=210	2.22	203	*e*P	Pn	12 16 17.6	+1.0
TWG	baz=210			*e*S	Sn	12 16 45.1	+1.3
TWGBT	Beinan baz=195	2.22	203	*e*P	Pn	12 16 18.0	+1.4
VWUC	VWUC baz=272	2.33	273	*e*P	Pb	12 16 20.0	-2.1
SSD	Sandimen baz=216	2.47	211	*e*P	Pb	12 16 25.4	+0.9
TSMG	Majia baz=220	2.50	210	*e*P	Pb	12 16 24.0	-1.0
TSMG	baz=220			*e*S	Sb	12 16 55.6	+0.1
MASBT	Mashibuluo baz=219	2.58	210	*e*P	Pb	12 16 25.5	-0.9
MASBT	baz=219			*e*S	Sb	12 16 58.5	+0.5
PHUB	P'eng-hu baz=254	2.61	239	*e*P	Pn	12 16 23.5	+1.5
PHUB	baz=254			*e*S	Sb	12 16 55.8	-3.0
XPSS	Dashiqiu baz=317	2.63	322	*e*P	Pb	12 16 24.3	-2.8
EAST	Anshuo baz=201	2.70	204	*e*P	Pn	12 16 24.5	+1.2
EAST	baz=201			*e*S	Sn	12 16 57.2	+1.4
SCZT	Fangliau baz=200	2.80	207	*e*P	Pb	12 16 28.1	-2.0

IDC 08 12:30:08.1±3.1**, 7°.22S**×**129°.48E, h117**^{km}±42^{km}**, mb3.0**/1**,**
mb1 3.3/5**, mb1mx3.0**/35**, mbtmp3.6**/5**, Error ellipse:**
s-maj=70.2km s-min=23.1km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong 0.5nm,0.3s,baz=311,slow=19,SNR=2.3	6.56	16	P	Pn	12 31 42.8	+0.6
SIJI	0.4nm,0.3s,baz=200,slow=22,SNR=1.7			S	Sn	12 32 46.8	-8.8
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=5.7,slow=10,SNR=2.1	11.44	199	P	Pn	12 32 46.1	-1.8
FITZ	0.4nm,0.3s,baz=276,slow=23,SNR=7.6			S	Sn	12 34 45.9	-8.1
WRA	Warramunga Arr 0.2nm,0.3s,baz=347,slow=14,SNR=5.9	13.49	160	P	Pn	12 33 15.2	+0.3
WRA	0.3nm,0.3s,baz=330,slow=23,SNR=6.3			S	Sn	12 35 36.8	-6.9
ASAR	Alice Springs 0.1nm,0.3s,baz=345,slow=10.0,SNR=4.9	16.89	166	P	P	12 33 59.0	+1.4
ASAR	0.1nm,0.3s,baz=2.1,slow=33,SNR=2.4			S	Sn	12 36 58.1	-7.6
MKAR	Makanchi Array 0.2nm,0.5s,baz=111,slow=7.9,SNR=4.2	68.13	327	P	P	12 40 55.4	-0.1

IDC 08 12:31:53.8±6.3**, 55°.74S**×**151°.33W, h0**^{km}**, mb3.7**/1**,**
mb1 3.9/1**, mb1mx3.7**/16**, mbtmp3.7**/1**, Error ellipse:**
s-maj=739.0km s-min=89.8km az=168.0,
Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	Juan Fernandez baz=219,slow=74,SNR=23	53.17	98	T	T	13 38 08.0	
H03S1	Juan Fernandez baz=219,slow=74,SNR=20	53.18	98	T	T	13 38 10.2	
H03S3	Juan Fernandez baz=219,slow=74,SNR=26	53.19	98	T	T	13 38 07.0	
ASAR	Alice Springs 0.4nm,0.5s,baz=138,slow=6.8,SNR=6.7	62.26	268	P	P	12 42 17.4	0.0
H01W1	Cape Leeuwin H baz=141,slow=76,SNR=4.1	64.34	245	T	T	13 52 29.5	
H01W2	Cape Leeuwin H baz=141,slow=76,SNR=3.7	64.34	245	T	T	13 52 34.9	
H01W3	Cape Leeuwin H baz=141,slow=76,SNR=3.6	64.36	245	T	T	13 52 29.7	
H10N3	ASCENSION HYDR baz=203,slow=76,SNR=5.0	107.27	135	T	T	14 45 44.8	
H10N1	ASCENSION HYDR baz=203,slow=76,SNR=6.9	107.27	135	T	T	14 45 39.6	
H10N2	ASCENSION HYDR baz=203,slow=76,SNR=3.7	107.29	135	T	T	14 45 37.6	
MKAR	Makanchi Array 1.3nm,0.8s,baz=127,slow=4.1,SNR=10	146.07	278	PKPbc	PKPdf	12 51 34.0	+0.3
ZALV	Zalesovo Beam 0.5nm,0.5s,baz=116,slow=3.4,SNR=3.6	148.37	291	PKPbc	PKPbc	12 51 40.2	-0.6
KURBB	Kurchatov Arra baz=126,slow=2.2	150.23	281	PKPbc	PKPbc	12 51 44.9	-0.6

IDC 08 12:56:32.4±1.6**, 3°.69S**×**151°.61E, h0**^{km}**, mb3.5**/3**,**
mb1 3.8/3**, mb1mx3.3**/40**, mbtmp3.5**/3**, MS3.1**/4**, Ms1 3.1**/4**,**
ms1mx2.8/24**, Error ellipse: s-maj=30.8km**
s-min=12.2km az=51.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 99nm,0.3s,baz=257,slow=2.0,SNR=19	0.74	146	Pg	Pg	12 56 46.8	+0.2
KRVT	138nm,0.3s,baz=34,slow=19,SNR=6.4			Lg	Lg	12 56 56.8	
KRVT	comp=Z,493nm,20.6s,baz=98,slow=52			LR	LR	12 57 10.7	
HNR	Honiara comp=Z,76nm,20.9s,baz=354,slow=38	10.05	125	LR	LR	13 02 58.6	
GUMO	Guam comp=Z,28nm,19.8s,baz=82,slow=38	18.43	339	LR	LR	13 08 06.5	
WRA	Warramunga Arr 1.0nm,1.0s,baz=51,slow=9.3,SNR=2.6	23.34	225	P	P	13 01 42.2	-0.3
WRA	comp=Z,63nm,19.1s,baz=10.0,slow=40			LR	LR	13 12 05.5	
ASAR	Alice Springs 0.7nm,0.7s,baz=46,slow=9.3,SNR=6.6	26.21	219	P	P	13 02 09.3	+0.2
ASAR	comp=Z,84nm,18.8s,baz=316,slow=37			LR	LR	13 12 42.4	
ILAR	Eielson Array 0.4nm,0.8s,baz=252,slow=5.4,SNR=5.0	81.59	22	P	P	13 08 51.8	-0.1

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*IDC **08** 13:00:44.9±1.2, 6°.90S×132°.58E, h0^{km}, mb4.1/7,*
mb1 4.3/12, mb1mx4.1/41, mbtmp4.2/12, ML4.3/5, MS3.1/3,
Ms1 3.1/3, ms1mx2.7/36, Error ellipse: s-maj=28.5km
s-min=22.8km az=98.0
*NOU **08** 13:00:46.0, 6°.69S×132°.49E, h0^{km}, mb4.5, Tanimbar*
Islands Reg., Indonesia
*DJA **08** 13:00:51.2±0.2, 7°S±2°×13°2E±°, h85^{km}±8^{km}, M4.8/14,*
mB5.3/8, mb4.6/14, MLv5.0/13, Mw(mB)4.7/8
*NEIC **08** 13:00:57.7±1.9, 7°.40S±0°.09×132°.3E±0°.1, h136^{km}±6^{km},*
mb4.1/4, Error ellipse: s-maj=20.5km s-min=12.4km
az=86.0
ISC 08 13:00:48.9±0.6**, 6°.95S**±0°.05×**132°.57E**±0°.06**, h35**^{km}**, n43,**
σ2^{s}.69/45**, mb4.1**/8**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.62	231		Pn	13 01 20.4	+5.3
SAUI	Saumlaki	1.62	231	P	Pn	13 01 18.3	+3.2
SAUI				S	Sn	13 01 38.1	+3.3
BNDI	Bandanaira	3.58	312	P	Pn	13 01 42.5	+0.5
FAKI	Fak Fak	4.01	355		Pn	13 01 47.4	-0.6
FAKI	Fak Fak	4.01	355	P	Pn	13 01 47.2	-0.7
MSAI	Masohi	5.09	314	P	Pn	13 02 01.5	-1.3
MTN	Manton Dam	6.03	193		Pn	13 02 19.9	+4.2
SIJI	Sorong	6.17	348	Pn	Pn	13 02 16.1	-1.6
	9.6nm,0.3s,baz=79,slow=2.0,SNR=122						
SIJI				Sn	Sn	13 03 18.1	-9.0
	25nm,0.3s,baz=214,slow=23,SNR=13						
SWI	Sorong	6.18	348	P	Pn	13 02 16.8	-1.0
	1.3nm2µm56nm,0.7s						
SRPI	Serui, Papua	6.23	36	P	Pn	13 02 20.2	+1.7
	2.9nm7µm407nm,0.4s						
NLAI	Namlea	6.57	304	P	Pn	13 02 23.4	+0.3
	0.3nm26nm,0.7s						
BAKI	Biak	6.72	32	P	Pn	13 02 28.0	+2.8
	1.5nm5µm428nm,0.6s						
SMPI	Sarmi	7.86	51	P	Pn	13 02 43.6	+2.8
	0.1nm15nm,0.6s						
MMPI	Merauke	7.89	102	P	Pn	13 02 45.5	+4.2
	275nm,1.3s						
SANI	Sanana	8.16	306	P	Pn	13 02 44.7	-0.3
	0.3nm1µm44nm,0.6s						
SOEI	Soe	8.67	251		Pn	13 02 54.8	+2.6
SOEI	Soe	8.67	251	P	Pn	13 02 53.9	+1.8
	105nm,0.8s						
JAY	Jayapura	9.23	62	Pn	Pn	13 03 00.5	+0.9
	2.1nm,0.3s,baz=227,slow=9.8,SNR=7.5						
JAY				Sn	Sn	13 04 35.9	-6.5
	0.7nm,0.3s,baz=159,slow=21,SNR=1.3						
JAY	Jayapura	9.23	62	P	Pn	13 03 03.8	+4.1
EDFI	Ende, Flores	10.92	260	P	Pn	13 03 23.8	+0.9
	14nm,0.9s						
GTOI	Gorontalo	12.15	308	P	Pn	13 03 40.2	+0.6
	12nm,0.9s						
WB0	Warramunga Arr	12.87	172		Pn	13 03 50.3	+0.9
KAPI	Kappang	12.89	278	LR	LR	13 08 54.0	
	comp=Z,98nm,20.4s,baz=101,slow=38						
FITZ	Fitzroy Crossi	12.98	211	Pn	Pn	13 03 51.2	+0.3
	2.0nm,0.3s,baz=33,slow=12,SNR=30						
FITZ				Sn	Sn	13 06 06.4	-7.8
	8.3nm,0.3s,baz=94,slow=16,SNR=14						
FITZ				LR	LR	13 08 50.4	
	comp=Z,72nm,21.9s,baz=350,slow=37						
FITZ	Fitzroy Crossi	12.98	211		Pn	13 03 51.7	+0.7
WRA	Warramunga Arr	13.04	173	Pn	Pn	13 03 52.5	+0.8
	1.6nm,0.3s,baz=355,slow=13,SNR=35						
WRA				Sn	Sn	13 06 11.5	-4.1
	2.6nm,0.3s,baz=353,slow=24,SNR=7.7						
WB2	Warramunga Arr	13.04	173		Pn	13 03 52.5	+0.7
WR0	Warramunga Arr	13.08	172		Pn	13 03 54.3	+1.9
PMG	Port Moresby	14.65	101	LR	LR	13 10 27.9	
	comp=Z,63nm,19.3s,baz=320,slow=40						
PLAI	Plampang	14.77	262	P	Pn	13 04 12.8	-2.6
	38nm,0.9s						
TWSI	Taliwang, Sumb	15.64	262	P	Pn	13 04 24.4	-2.4
	22nm,1.9s						
AS31	Alice Springs	16.68	176	P	Pn	13 04 40.0	0.0
AS31				IAmb	IAmb	13 05 07.0	
	comp=Z,4.2nm,0.6s						
ASAR	Alice Springs	16.68	176	Pn	Pn	13 04 40.6	+0.6
	comp=Z,0.7nm,0.3s,baz=356,slow=14,SNR=36						
ASAR				Sn	Sn	13 07 38.0	-6.3
	comp=Z,1.0nm,0.3s,baz=1.2,slow=27,SNR=7.6						
PSI	Prapat	34.95	285	P	P	13 07 39.9	+1.8
	comp=Z,2.4nm,0.3s,baz=180,slow=5.1,SNR=4.0						
CMAR	Chiang Mai Arr	41.68	308	P	P	13 08 35.5	+1.0
	comp=Z,1.6nm,0.7s,baz=138,slow=6.4,SNR=14						
CHTO	Chiang Mai	41.88	308	P	P	13 08 36.2	+0.1
CHTO				IAmb	IAmb	13 08 37.4	
	comp=Z,10nm,1.4s						
USRK	Ussuriysk Ar.	50.91	359	P	P	13 09 47.9	+1.3
	comp=Z,1.5nm,0.6s,baz=180,slow=8.3,SNR=5.1						
PALK	Pallekele	53.62	284	P	P	13 10 07.7	+0.3
	comp=Z,4.1nm,0.9s,baz=142,slow=5.5,SNR=3.6						
MK31	Makanchi Array	69.59	326	P	P	13 11 53.2	-1.4
MKAR	Makanchi Array	69.59	326	P	P	13 11 56.4	+1.8
	comp=Z,1.3nm,0.7s,baz=124,slow=7.5,SNR=16						
ZALV	Zalesovo Beam	72.68	333	P	P	13 12 13.7	+0.6
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=1.5						
ILAR	Eielson Array	92.22	25	P	P	13 13 54.6	-0.3
	comp=Z,0.2nm,0.6s,baz=278,slow=5.6,SNR=1.4						
SKAG	Skagway	97.00	31	P	P	13 14 15.0	-1.8

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*IDC **08** 13:12:15.8±0.7, 4°.32S×152°.05E, h141^{km}±4^{km}, mb3.4/11, mb1 3.6/12, mb1mx3.4/41, mbtmp3.8/12, MS3.4/2, Ms1 3.4/2, ms1mx2.7/28, Error ellipse: s-maj=23.3km s-min=14.4km az=116.0*

ISC 08 13:12:16.6±0.7**, 4°.4S**±0°.1×**152°.0E**±0°.2**, h153**^{km}**, n16, σ1^{s}.36**/16**, mb3.4**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.07	344	P	Pn	13 12 35.0	-2.0
	122nm,0.3s,baz=163,slow=6.4,SNR=14						
KRVT				S	Sn	13 12 49.5	-3.2
	31nm,0.3s,baz=48,slow=5.3,SNR=1.7						
PMG	Port Moresby	6.97	224	P	Pn	13 13 55.1	-1.1
	0.6nm,0.3s,baz=87,slow=4.5,SNR=1.8						
PMG				S	Sn	13 15 13.3	-1.1
	1.2nm,0.3s,baz=347,slow=17,SNR=2.7						
SIJI	Sorong	21.04	279	LR	LR	13 25 29.6	
	comp=Z,160nm,18.1s,baz=106,slow=38						
DZM	Mont Dzumac	22.46	143	P	P	13 17 03.6	+0.3
	8.5nm,0.8s,baz=266,slow=6.0,SNR=12						
WRA	Warramunga Arr	23.18	227	P	P	13 17 11.0	+1.2
	1.8nm,0.4s,baz=50,slow=10,SNR=17						
ASAR	Alice Springs	25.97	221	P	P	13 17 36.4	+1.2
	0.2nm,0.3s,baz=49,slow=8.9,SNR=8.1						
RPZ	Rata Peaks	42.63	160	LR	LR	13 36 53.3	
	comp=Z,31nm,21.3s,baz=93,slow=35						
SONM	Songino Array	65.56	328	P	P	13 22 44.6	+0.7
	0.2nm,0.5s,baz=142,slow=5.4,SNR=1.9						
MKAR	Makanchi Array	79.51	319	P	P	13 24 06.8	+0.4
	0.2nm,0.5s,baz=91,slow=8.5,SNR=3.8						
ZALV	Zalesovo Beam	80.38	326	P	P	13 24 10.5	-0.3
	0.5nm,0.4s,baz=122,slow=5.4,SNR=3.6						
ILAR	Eielson Array	82.05	22	P	P	13 24 18.9	-0.6
	0.5nm,0.9s,baz=242,slow=5.5,SNR=6.9						
KURBB	Kurchatov Arra	83.00	322	P	P	13 24 25.5	+0.8
	0.4nm,0.8s,baz=116,slow=4.2,SNR=1.5						
NVAR	Mina Array Bea	92.41	52	P	P	13 25 12.0	+1.5
	0.7nm,0.9s,baz=268,slow=4.4,SNR=3.9						
YKA	Yellowknife Ar	95.40	28	P	P	13 25 23.6	+0.2
	0.2nm,1.0s,baz=265,slow=3.5,SNR=1.5						
PDAR	Pinedale Array	99.12	48	P	Pdif	13 25 41.0	+0.1
	0.2nm,0.6s,baz=312,slow=3.1,SNR=2.2						
TORD	Torodi Ar. Bea	149.46	289	PKPbc	PKPbc	13 31 49.1	+0.3
	0.7nm,0.5s,baz=98,slow=2.7,SNR=5.1						

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*ANF **08** 13:18:08.4±1.1, 41°.85N×119°.62W, h6^{km}±10^{km}, ML3.1/11, Error ellipse: s-maj=4.2km s-min=2.2km az=88.0*

*NEIC **08** 13:18:08.8±2.5, 41°.81N±0°.03×119°.58W±0°.02, h4^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=1.6km az=161.0*

*REN **08** 13:18:09.1±1.8, 41°.86N±0°.04×119°.63W±0°.03, h9^{km}±7^{km}, ML3.0/7, ML2.8/82(NEIC), ML3.0/29(SEA), Error ellipse: s-maj=5.1km s-min=3.0km az=170.0*

*SEA **08** 13:18:09.7±2.8, 41°.79N±0°.04×119°.58W±0°.05, h0^{km}±7^{km}, Error ellipse: s-maj=6.0km s-min=4.8km az=223.0*

ISC 08 13:18:09.0±1.2**, 41°.88N**±0°.02×**119°.61W**±0°.02**, h7**^{km}±12^{km}**, n72, σ0^{s}.98**/89**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.52	273		Pg	13 18 19.3	+0.2
MOD					Sg	13 18 26.5	+0.6
MOD	Modoc Plateau	0.52	273	IAML		13 18 26.6	
	comp=N,2µm,0.4s						
MOD				IAML		13 18 26.7	
	comp=E,3µm,0.5s						
LKVW	Lakeview	0.66	302		Pg	13 18 21.6	-0.1
LKVW					Sg	13 18 30.9	+0.6
WVOR	Wild Horse Val	0.91	52		Pg	13 18 26.8	+0.3
WVOR					Sg	13 18 39.0	+0.7
WVOR				IAML		13 18 43.1	
	comp=E,344nm,0.7s						
K05A	Summer Lake	1.27	312		Pn	13 18 33.0	-0.4
K05A				IAML		13 18 55.5	
	comp=E,167nm,0.6s						
K05A				IAML		13 18 59.5	
	comp=N,174nm,0.6s						
LASM	Arnica Sink	1.50	260		Pn	13 18 36.1	-0.5
LTIM	Timbered Crate	1.58	244		Pn	13 18 37.3	-0.3
HOG	Hogback Mounta	1.60	284		Pn	13 18 37.6	-0.4
HOG					Sg	13 19 01.3	+0.8
M04C	Macdoel	1.67	267	P	Pn	13 18 38.1	-0.7
	baz=86,SNR=122						
M04C				Sb	Sg	13 19 02.4	-0.3
	baz=86						
M04C	Macdoel	1.67	267		Pn	13 18 38.3	-0.6
LBCM	Butte Creek Ri	1.68	232		Pn	13 18 38.6	-0.3
K04D	Chiloquin, OR	1.76	296	P	Pn	13 18 39.5	-0.5
	baz=115,SNR=121						
K04D				Sb	Sg	13 19 05.5	0.0
	baz=115						
K04D	Chiloquin, OR	1.76	296		Pn	13 18 39.6	-0.4
K04D					Sg	13 19 05.9	+0.4
J05D	Fort Rock, OR	1.85	320	Pb	Pb	13 18 42.8	-0.4
	baz=140,SNR=134						
J05D				Sb	Sg	13 19 08.2	-0.2
	baz=140						
J05D	Fort Rock, OR	1.85	320		Pb	13 18 43.0	-0.2
LHEM	Herd Peak	1.97	264		Pn	13 18 42.7	-0.3
LHEM					Sg	13 19 12.8	+0.4
L04D	Klamath Falls	2.04	280	P	Pn	13 18 43.1	-0.8
	baz=99,SNR=110						
L04D				Sb	Sg	13 19 12.9	-1.5
	baz=99						
L04D	Klamath Falls	2.04	280		Pn	13 18 43.1	-0.8
L04D					LR	13 19 13.6	
TMBU	Tom Butte, New	2.06	327		Pb	13 18 46.3	-0.6
BEKR	Beckworth	2.09	196	Pg	Pb	13 18 47.3	-0.1
BEKR				IAML		13 19 17.0	
	comp=N,46nm,0.3s						
BEKR				IAML		13 19 17.6	
	comp=E,94nm,0.5s						
B040	Montague	2.10	270		Pn	13 18 43.5	-1.1
B040					Lg	13 19 16.4	
SVIC	Surveyors Ice	2.14	326		Pb	13 18 48.1	-0.1
SVIC					LR	13 19 17.3	
NCOR	Newberry Crate	2.14	329		Pb	13 18 48.5	+0.2
PINE	Pine Mountain	2.15	333		Pb	13 18 48.7	+0.3
PINE				IAML		13 19 19.5	
	comp=E,65nm,0.6s						
PINE				IAML		13 19 26.8	
	comp=N,59nm,0.8s						
PAHR	Pah Rah Range	2.18	175		Pb	13 18 49.0	+0.1
I07A	Izee	2.20	2		Pb	13 18 49.4	+0.1
I07A				IAML		13 19 20.4	
	comp=N,41nm,0.6s						
I07A				IAML		13 19 29.4	
	comp=E,39nm,1.5s						
O03E	Paynes Creek	2.29	227	P	Pn	13 18 47.1	-0.3
	baz=46,SNR=49						
O03E				Sb	Sb	13 19 20.1	+0.8
	baz=46						
J04D	Umpqua Nationa	2.29	307	Pb	Pb	13 18 50.5	-0.4
	baz=126,SNR=24						
YBH	Yreka Blue Hor	2.33	267		Pn	13 18 46.7	-1.1
YBH				IAML		13 19 22.9	
	comp=N,38nm,0.6s						
ASBU	Astronaut Butt	2.33	327		Pb	13 18 50.8	-0.6
M02C	Callahan	2.48	260	P	Pn	13 18 48.7	-1.3
	baz=78,SNR=10.0						
M02C				Sb	Sb	13 19 25.8	+1.1
	baz=78						
N02D	Trinity Center	2.50	250	P	Pn	13 18 49.1	-1.1
	baz=68,SNR=27						
N02D				Sb	Sg	13 19 26.9	-2.3
	baz=68						
WDC	Whiskeytown Da	2.57	241		Pn	13 18 50.4	-0.6
WDC				IAML		13 19 28.3	
	comp=N,46nm,0.5s						
VCNR	Virginia City	2.58	181		Pn	13 18 50.2	-1.2
HUMO	Hull Mountain	2.59	287	Pn	Pn	13 18 50.3	-1.1
HUMO				IAML		13 19 30.4	
	comp=N,42nm,0.5s						
HUMO				IAML		13 19 30.8	
	comp=E,28nm,0.6s						
ORV	Oroville	2.73	212		Pn	13 18 52.3	-1.0
I05D	Terrebonne, OR	2.77	333	Pb	Pb	13 18 58.9	0.0
	baz=153,SNR=8.5						
I05D				Sb	Sg	13 19 35.9	-1.9
	baz=153						
PNTR	Pine Nut	2.79	180		Pb	13 19 00.5	+1.2
PNTR				IAML		13 19 43.3	
	comp=N,46nm,0.7s						
PNTR				IAML		13 19 46.5	
	comp=E,30nm,1.1s						
I04A	Tendick Farm,	2.81	314	Pb	Pb	13 18 59.6	0.0
	baz=132,SNR=20						
I04A				Sb	Sg	13 19 36.9	-2.5
	baz=132						
RUBR	Rubicon Trail	2.85	189		Pn	13 18 54.1	-1.1
RUBR				IAML		13 19 46.5	
	comp=E,26nm,0.7s						
RUBR				IAML		13 19 48.7	
	comp=N,28nm,2.0s						
O02D	Mt. Diablo Mer	2.95	236	P	Pn	13 18 55.9	-0.4
	baz=54,SNR=16						
O02D				Sb	Sb	13 19 40.0	+1.8
	baz=54						
L02E	Cave Junction	2.99	277	P	Pn	13 18 56.7	-0.1
	baz=94,SNR=23						
L02E				Sb	Sb	13 19 40.2	+0.8
	baz=94						
AFDM	Forest Hills D	3.11	200		Pn	13 18 58.4	-0.1
K02D	Willamette Mer	3.12	287	P	Pn	13 18 58.5	-0.2
	baz=104,SNR=90						
K02D				Sb	Sb	13 19 45.0	+1.9
	baz=104						
K02D	Willamette Mer	3.12	287		Pn	13 19 00.5	+1.8
MFID	Camas Ranch	3.18	60	Pn	Pn	13 19 00.1	+0.5
KRMB	Red Mountain	3.24	265	Pn	Pn	13 19 00.8	+0.4
KRMB				IAML		13 19 45.9	
	comp=N,27nm,5.0s						
KRMB				IAML		13 20 58.6	
	comp=E,28nm,4.7s						
KHMM	Horse Mountain	3.26	253		Pn	13 19 01.1	+0.4
KHMM				IAML		13 19 56.0	
	comp=E,32nm,4.9s						
KHMM				IAML		13 20 52.9	
	comp=N,33nm,4.5s						
RYN	Ryan	3.35	165		Pn	13 19 00.9	-1.1
RYN				IAML		13 19 59.9	
	comp=N,16nm,0.9s						
RYN				IAML		13 20 00.1	
	comp=E,17nm,0.5s						
WAKR	Walker	3.37	178		Pb	13 19 08.8	-0.5
WAKR				IAML		13 19 41.4	
	comp=E,14nm,5.0s						
H04A	Detroit Lake	3.38	327		Pn	13 19 01.6	-0.6
H04A				IAML		13 20 16.4	
	comp=E,20nm,4.8s						
BMO	Blue Mountains	3.41	29		Pb	13 19 09.7	-0.2
BMO				IAML		13 20 00.3	
	comp=E,20nm,0.4s						
G08A	Pilot Rock	3.44	8		Pn	13 19 02.1	-1.1
KBO	Bosley Butte	3.46	277	Pn	Pn	13 19 02.9	-0.4
ELK	Elko	3.48	108		Pn	13 19 03.0	-0.8
ELK				IAML		13 20 03.7	
	comp=E,22nm,0.3s						
JCC	Jacoby Creek,	3.49	254	Pn	Pn	13 19 02.8	-0.9
NV11	Mina Array Sit	3.62	162		Pn	13 19 03.4	-2.2
NV11				IAML		13 21 00.7	
	comp=E,16nm,4.8s						
KEBM	Edson Butte	3.64	287	Pn	Pn	13 19 06.2	+0.4
LHV	Little Huntoon	3.72	166		Pn	13 19 06.7	-0.2
LHV				IAML		13 20 13.8	
	comp=N,22nm,1.0s						
CMB	Columbia Colle	3.89	189		Pn	13 19 08.6	-0.6
CMB				IAML		13 20 15.0	
	comp=E,11nm,3.2s						
HLID	Hailey	4.18	65	Pn	Pn	13 19 14.7	+1.3
HLID				IAML		13 20 22.0	
	comp=E,14nm,1.4s						
HLID				IAML		13 20 26.4	
	comp=E,12nm,0.8s						
TPH	Tonopah	4.22	153		Pn	13 19 12.5	-1.5
MDPB	Devils Postpil	4.26	174	Pn	Pn	13 19 14.7	+0.2
MDPB				IAML		13 20 32.5	
	comp=E,12nm,5.0s						
F10A	Beach Ranch, E	4.44	22		Pn	13 19 16.3	-0.6
F10A				IAML		13 19 53.9	
	comp=N,12nm,4.6s						
R11A	Troy Canyon, C	4.68	138		Pn	13 19 18.8	-1.5
R11A				IAML		13 20 20.3	
	comp=N,6.6nm,5.0s						
R11A				IAML		13 20 44.0	
	comp=E,10.0nm,4.7s						
BGU	Big Grassy Mou	5.04	99	Pn	Pn	13 19 25.1	0.0
HVU	Hansel Valley	5.11	89		Pn	13 19 25.6	-0.5
BCYI	Bear Canyon	5.15	60		Pn	13 19 24.8	-1.9
SPUT	South Promonto	5.40	94		Pn	13 19 30.4	+0.3
DUG	Dugway, Tooele	5.41	106		Pn	13 19 29.1	-1.1
PSUT	Pine Spring	5.53	125		Pn	13 19 28.8	-3.1
CCUT	Cedar City	6.47	130	Pg	Pb	13 20 03.0	+1.0

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*DJA **08** 13:19:00.0±1.0, 2°S±7°×14°0E±°, h10^{km}, M3.8/3, MLv3.8/3*

*IDC **08** 13:19:01.1±1.1, 2°.12S×139°.71E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/35, mbtmp3.8/5, ML3.3/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/45, Error ellipse: s-maj=28.7km s-min=11.0km az=24.0*

ISC 08 13:19:02.6±0.9**, 2°.10S**±0°.09×**139°.79E**±0°.05**, h10**^{km}**, n19, σ1^{s}.16**/12**, mb3.7**/4**, MS3.3**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.62	142	S	Sn	13 19 30.0	+2.4
JAY	Jayapura	1.01	114	Pg	Pg	13 19 21.6	-0.4
	25nm,0.3s,baz=248,slow=11,SNR=92						
JAY				Lg	Lg	13 19 36.6	
	52nm,0.3s,baz=219,slow=18,SNR=8.5						
JAY	Jayapura	1.01	114	P	Pg	13 19 21.1	-0.9
JAY				S	Sb	13 19 35.4	-0.2
SMPI	Sarmi	1.08	276	P	Pb	13 19 22.7	-0.7
WAMI	Wamena	2.07	211	P	Pg	13 19 41.9	-0.5
BAKI	Biak	3.78	284	P	Pn	13 20 02.7	+1.7
GUMO	Guam	16.38	18	LR	LR	13 28 57.9	
	comp=Z,71nm,18.5s,baz=126,slow=36						
WRA	Warramunga Arr	18.52	196	P	Pn	13 23 19.0	-0.5
	0.1nm,0.3s,baz=18,slow=12,SNR=6.7						
FITZ	Fitzroy Crossi	21.11	220	LR	LR	13 32 50.1	
	comp=Z,62nm,20.2s,baz=46,slow=39						
ASAR	Alice Springs	22.19	194	P	P	13 23 58.0	-1.2
	2.9nm,0.8s,baz=27,slow=8.4,SNR=15						
ASAR				LR	LR	13 33 20.3	
	comp=Z,115nm,18.8s,baz=0.5,slow=39						
H11N1	WAKE ISLAND Hy	34.32	50	T	T	14 02 07.3	
	baz=233,slow=75,SNR=6.5						
H11N2	WAKE ISLAND Hy	34.34	50	T	T	14 02 07.1	
	baz=233,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	34.34	50	T	T	14 02 08.2	
	baz=233,slow=75,SNR=11						
NWAO	Narrogin (SRO)	37.26	212	LR	LR	13 42 46.5	
	comp=Z,80nm,19.1s,baz=190,slow=38						
CMAR	Chiang Mai Arr	45.08	299	P	P	13 27 19.0	-0.2
	0.6nm,0.4s,baz=119,slow=6.5,SNR=7.0						
ASAJ	Asahikawa	46.08	3	LR	LR	13 46 05.9	
	comp=Z,51nm,18.0s,baz=288,slow=35						
PETK	Petropavlovsk-	57.02	13	LR	LR	13 50 24.2	
	comp=Z,25nm,21.4s,baz=257,slow=33						
MKAR	Makanchi Array	69.97	322	P	P	13 30 14.5	+0.1
	0.5nm,0.8s,baz=107,slow=6.2,SNR=4.9						
KURBB	Kurchatov Arra	73.85	324	P	P	13 30 37.5	-0.1
	0.4nm,0.7s,baz=107,slow=5.6,SNR=2.6						

IDC 08 13:34:39.0±2.9**, 6°.72S**×**129°.77E, h154**^{km}±39^{km}**, mb3.0**/1**, mb1 3.3**/5**, mb1mx2.9**/46**, mbtmp3.7**/5**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.5**/15**, Error ellipse: s-maj=67.3km s-min=21.5km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.00	14	P	Pn	13 36 05.7	-0.2
	0.8nm,0.3s,baz=201,slow=22,SNR=1.3						
SIJI				S	Sn	13 37 07.9	-5.9
	0.9nm,0.3s,baz=193,slow=22,SNR=7.5						
FITZ	Fitzroy Crossi	12.01	199	P	Pn	13 37 26.6	+1.3
	0.1nm,0.3s,baz=13,slow=14,SNR=1.3						
FITZ				S	Sn	13 39 29.1	-9.0
	0.1nm,0.3s,baz=349,slow=22,SNR=2.2						
WRA	Warramunga Arr	13.87	162	P	Pn	13 37 48.3	-1.0
	0.3nm,0.3s,baz=342,slow=13,SNR=9.8						
WRA				S	Sn	13 40 12.2	-11
	0.2nm,0.3s,baz=338,slow=22,SNR=1.7						
ASAR	Alice Springs	17.31	167	P	P	13 38 30.2	-0.4
	0.1nm,0.3s,baz=345,slow=10,SNR=12						
ASAR				S	S	13 41 36.6	-6.6
	0.1nm,0.3s,baz=0.0,slow=18,SNR=2.8						
JCJ	Chichijima	35.70	19	LR	LR	13 55 42.3	
	comp=Z,114nm,21.1s,baz=355,slow=35						
MKAR	Makanchi Array	67.87	327	P	P	13 45 20.9	+0.1
	0.2nm,0.3s,baz=117,slow=7.5,SNR=4.4						

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*IDC **08** 13:56:37.3±0.8, 57°.83S×25°.30W, h0^{km}, mb4.1/6, mb1 4.2/6, mb1mx3.9/30, mbtmp4.0/6, Error ellipse: s-maj=36.7km s-min=22.9km az=75.0*

ISC 08 13:56:44.0±0.8**, 57°.9S**±0°.1×**25°.3W**±0°.2**, h49**^{km}**, n13, σ0^{s}.67**/13**, mb4.0**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	14.70	157	P	Pn	14 00 07.9	-0.7
SNAA	Sanae	16.64	155	P	Pn	14 00 33.5	0.0
QSPA	South Pole Qui	32.35	180	P	P	14 03 09.2	+0.8
	1.9nm,0.5s,baz=189,slow=2.8,SNR=42						
PLCA	Paso Flores	33.35	281	P	P	14 03 17.4	+0.2
	0.8nm,0.4s,baz=127,slow=6.7,SNR=4.9						
VNDA	Vanda	44.77	182	P	P	14 04 52.6	+0.6
	1.9nm,0.7s,baz=192,slow=7.5,SNR=11						
SIV	San Ignacio	49.59	312	P	P	14 05 29.8	-0.4
	0.6nm,0.5s,baz=168,slow=13,SNR=2.8						
TORD	Torodi Ar. Bea	74.19	27	P	P	14 08 16.3	+1.0
	0.9nm,0.5s,baz=199,slow=7.0,SNR=4.5						
ASAR	Alice Springs	96.92	161	P	P	14 10 09.4	-0.6
	0.3nm,0.7s,baz=187,slow=3.7,SNR=4.2						
PDAR	Pinedale Array	122.18	300	PKP	PKPdf	14 15 31.7	-0.9
	0.2nm,0.5s,baz=158,slow=2.9,SNR=2.0						
NVAR	Mina Array Bea	123.04	291	PKP	PKiKP	14 15 34.4	-0.3
	0.2nm,0.5s,baz=159,slow=5.0,SNR=1.8						
YKA	Yellowknife Ar	138.22	316	PKP	PKPdf	14 16 02.2	+0.3
	0.5nm,0.5s,baz=119,slow=3.2,SNR=13						
SONM	Songino Array	149.79	88	PKPbc	PKiKP	14 16 27.8	-0.7
	0.9nm,0.6s,baz=225,slow=3.2,SNR=5.3						
ILAR	Eielson Array	152.09	309	PKPbc	PKiKP	14 16 32.5	-0.1
	1.2nm,0.4s,baz=155,slow=1.6,SNR=30						

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*NOU **08** 14:08:51.9, 34°.92S×177°.46W, h145^{km}, mb4.5, South of Kermadec Islands*

*WEL **08** 14:09:02.2±0.7, 35°S±8°×17°9W±1°6, h166^{km}±15^{km}, M4.4/23, mB4.4/3, MLv4.5/23, Mw(mB)3.6/3, Error ellipse: s-maj=0.0km s-min=0.0km az=113.0*

*NEIC **08** 14:09:07.0±2.3, 35°.14S±0°.09×179°.2W±0°.2, h35^{km}±2^{km}, mb4.6/1, Error ellipse: s-maj=34.2km s-min=14.3km az=95.0*

*IDC **08** 14:09:08.3±1.0, 35°.10S×179°.12W, h44^{km}±6^{km}, mb4.0/5, mb1 4.1/7, mb1mx3.8/24, mbtmp4.2/7, ML4.2/2, MS3.6/3, Ms1 3.6/3, ms1mx2.9/34, Error ellipse: s-maj=24.9km s-min=14.8km az=123.0*

ISC 08 14:09:07.2±0.8**, 35°.35S**±0°.09×**178°.8W**±0°.1**, h50**^{km}**, n59, σ2^{s}.22**/84**, mb4.4**/5**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.23	226	Pn	Pn	14 09 54.4	-1.0
MXZ	Matakaoa Point	3.23	226	P	Pn	14 09 54.4	-1.0
MXZ				S	Sn	14 10 33.6	+1.0
WMGZ	Waiomatatini S	3.35	222	P	Pn	14 09 57.2	+0.2
WMGZ				S	Sn	14 10 37.5	+2.0
PKGZ	Pakihiroa	3.58	224	P	Pn	14 09 59.8	-0.5
PKGZ				S	Sn	14 10 44.0	+2.5
PUZ	Puketiti	3.62	221	P	Pn	14 10 00.3	-0.4
PUZ				S	Sn	14 10 43.6	+1.4
HAZ	Te Kaha	3.67	228	P	Pn	14 10 01.8	+0.3
HAZ				S	Sn	14 10 47.1	+3.6
TWGZ	Tauwhareparae	3.84	222	P	Pn	14 10 04.6	+0.7
TWGZ				S	Sn	14 10 51.2	+3.5
RUGZ	Raukumara Rang	3.87	227	P	Pn	14 10 04.4	+0.1
RUGZ				S	Sn	14 10 51.5	+2.9
CNGZ	Carnagh Statio	3.96	217	P	Pn	14 10 05.0	-0.3

CNGZ				S	**Sn**	**14 10 52.8**	**+2.4**
MWZ	**Matawai**	**4.21**	**224**	P	**Pn**	**14 10 08.3**	**-0.5**
MWZ				S	**Sn**	**14 10 58.1**	**+1.4**
RIGZ	**Rimuhau**	**4.35**	**219**	P	**Pn**	**14 10 09.7**	**-1.2**
RIGZ				S	**Sn**	**14 11 01.7**	**+1.5**
RAGZ	**Rawiri**	**4.38**	**223**	P	**Pn**	**14 10 11.0**	**-0.3**
RAGZ				S	**Sn**	**14 11 02.2**	**+1.1**
URZ	**Urewera**	**4.40**	**228**	P	**Pn**	**14 10 11.0**	**-0.5**
	11nm,0.3s,baz=66,slow=3.4,SNR=103						
URZ				S	**Sn**	**14 11 02.7**	**+1.3**
	11nm,0.3s,baz=342,slow=20,SNR=8.6						
URZ	**Urewera**	**4.40**	**228**		**Pn**	**14 10 11.0**	**-0.5**
URZ	**Urewera**	**4.40**	**228**	P	**Pn**	**14 10 10.2**	**-1.2**
URZ				S	**Sn**	**14 11 03.0**	**+1.6**
PRGZ	**Paritu Road**	**4.46**	**216**	P	**Pn**	**14 10 10.9**	**-1.4**
PRGZ				S	**Sn**	**14 11 05.0**	**+2.1**
SNGZ	**Shannon Statio**	**4.63**	**221**	P	**Pn**	**14 10 13.5**	**-1.1**
SNGZ				S	**Sn**	**14 11 09.0**	**+1.9**
KNZ	**Kokohu**	**4.64**	**217**	P	**Pn**	**14 10 10.8**	**-3.9**
KNZ				S	**Sn**	**14 11 08.8**	**+1.6**
KUZ	**Kuaotunu**	**4.68**	**251**	P	**Pn**	**14 10 14.0**	**-1.3**
MUGZ	**Murupara**	**4.75**	**228**	P	**Pn**	**14 10 15.1**	**-1.1**
MUGZ				S	**Sn**	**14 11 10.6**	**+0.7**
NMHZ	**Naumai**	**5.14**	**222**	P	**Pn**	**14 10 21.4**	**-0.3**
NMHZ				S	**Sn**	**14 11 20.1**	**+0.3**
TOZ	**Tahuroa Road**	**5.19**	**241**	P	**Pn**	**14 10 20.5**	**-1.8**
BKZ	**Black Stump Fm**	**5.37**	**223**	Pn	**Pn**	**14 10 24.0**	**-0.7**
GLKZ	**Green Lake**	**6.12**	**7**	S	Sn	14 11 31.9	-12
BFZ	**Birch Farm**	**6.62**	**215**	Pn	**Pn**	**14 10 38.5**	**-3.3**
POWZ	**Post Office Ro**	**6.63**	**219**	P	**Pn**	**14 10 40.4**	**-1.6**
POWZ				S	**Sn**	**14 11 53.7**	**-2.6**
TIWZ	**Tintock**	**6.86**	**216**	P	**Pn**	**14 10 41.8**	**-3.5**
TIWZ				S	**Sn**	**14 11 59.5**	**-2.5**
MRZ	**Mangatainoka R**	**6.93**	**218**	P	**Pn**	**14 10 42.8**	**-3.3**
MRZ				S	**Sn**	**14 11 59.4**	**-4.2**
TMWZ	**Te Maipa**	**7.12**	**215**	P	**Pn**	**14 10 45.4**	**-3.4**
TMWZ				S	**Sn**	**14 12 04.2**	**-4.0**
HOWZ	**Holdsworth Sta**	**7.14**	**217**	P	**Pn**	**14 10 44.9**	**-4.2**
MTW	**Mount Morrison**	**7.34**	**216**	P	**Pn**	**14 10 47.9**	**-3.9**
KIW	**Kapiti Island**	**7.42**	**220**	P	**Pn**	**14 10 50.5**	**-2.4**
PAWZ	**Paruwai Farm**	**7.55**	**215**	P	**Pn**	**14 10 50.1**	**-4.6**
MSWZ	**Moikau Station**	**7.66**	**216**	Pn	**Pn**	**14 10 52.1**	**-4.1**
MSWZ	**Moikau Station**	**7.66**	**216**	P	**Pn**	**14 10 52.0**	**-4.1**
PLWZ	**Palliser**	**7.78**	**215**	Pn	**Pn**	**14 10 55.5**	**-2.3**
PLWZ	**Palliser**	**7.78**	**215**	P	**Pn**	**14 10 54.7**	**-3.1**
SNZO	**South Karori**	**7.85**	**219**	Pn	**Pn**	**14 10 56.6**	**-2.2**
TUWZ	**Tuamarina**	**8.34**	**221**	Pn	**Pn**	**14 11 01.6**	**-3.8**
BSWZ	**Blackbirch Sta**	**8.58**	**220**	Pn	**Pn**	**14 11 06.7**	**-2.0**
THZ	**Tophouse**	**9.13**	**223**	Pn	**Pn**	**14 11 14.4**	**-2.0**
KHZ	**Kahutara**	**9.26**	**218**	Pn	**Pn**	**14 11 18.5**	**+0.5**
RPZ	**Rata Peaks**	**11.46**	**220**	P	**Pn**	**14 11 50.6**	**+2.4**
	1.6nm,0.3s,baz=25,slow=4.2,SNR=9.3						
RPZ				S	Sn	14 13 44.5	-10
	1.1nm,0.3s,baz=330,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**18.50**	**312**	LR	LR	14 18 58.8	
	comp=Z,93nm,19.1s,baz=154,slow=33						
CTA	**Charters Tower**	**34.29**	**287**	P	**P**	**14 15 46.5**	**-2.4**
	1.6nm,0.5s,baz=130,slow=7.9,SNR=1.0						
ASAR	**Alice Springs**	**42.45**	**273**	P	**P**	**14 16 56.8**	**-0.7**
	1.4nm,0.7s,baz=114,slow=7.1,SNR=20						
ASAR				pP	**pP**	**14 17 08.1**	**-0.9**
	5.3nm,0.7s,baz=117,slow=7.6,SNR=19						
ASAR				PcP	**PcP**	**14 18 49.9**	**+0.2**
	0.5nm,0.8s,baz=119,slow=3.5,SNR=2.6						
ASAR				LR	LR	14 34 27.8	
	comp=Z,55nm,18.3s,baz=277,slow=36						
WRA	**Warramunga Arr**	**43.88**	**278**	P	**P**	**14 17 08.6**	**-0.4**
	2.3nm,0.8s,baz=120,slow=7.5,SNR=14						
WRA				pP	**pP**	**14 17 19.9**	**-0.6**
	4.3nm,0.6s,baz=120,slow=7.6,SNR=14						
WRA				PcP	**PcP**	**14 18 55.0**	**+0.5**
	0.5nm,0.8s,baz=112,slow=2.5,SNR=1.6						
QSPA	**South Pole Qui**	**54.77**	**180**	P	**P**	**14 18 35.0**	**+3.4**
	2.2nm,0.8s,baz=340,slow=0.3,SNR=11						
QSPA	**South Pole Qui**	**54.77**	**180**	P	**P**	**14 18 34.6**	**+3.0**
QSPA				IAmb	IAmb	14 20 35.8	
	comp=Z,10nm,1.6s						
KAPI	**Kappang**	**63.97**	**283**	LR	LR	14 48 02.2	
	comp=Z,79nm,19.0s,baz=207,slow=37						
PETK	**Petropavlovsk-**	**90.44**	**346**	P	**P**	**14 22 04.0**	**+1.2**
	comp=Z,2.6nm,0.8s,baz=169,slow=8.2,SNR=2.1						
MKAR	**Makanchi Array**	**120.39**	**308**	PKP	**PKiKP**	**14 27 53.0**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=147,slow=2.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**121.24**	**317**	PKP	**PKPdf**	**14 27 53.0**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=98,slow=2.9,SNR=2.1						
KURK	**Kurchatov**	**123.93**	**312**		**PKiKP**	**14 27 59.7**	**+0.2**
KURBB	**Kurchatov Arra**	**123.95**	**311**	PKP	**PKiKP**	**14 27 59.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=102,slow=2.2,SNR=5.1						
FINES	**FINESS Array B**	**149.50**	**337**	PKPbc	**PKiKP**	**14 28 50.8**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=41,slow=4.5,SNR=10						
FINES				pPKPbc	**sPKPbc**	**14 29 04.5**	**-2.8**
	comp=Z,3.0nm,0.8s,baz=124,slow=0.7,SNR=1.9						
DBIC	**Dimbokro**	**150.91**	**167**	PKPbc	**PKiKP**	**14 28 57.2**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=146,slow=3.6,SNR=2.5						
DBIC	**Dimbokro**	**150.91**	**167**		**PKiKP**	**14 28 57.1**	**+1.5**
BRTR	**Keskin Array B**	**154.02**	**289**	PKPbc	**PKiKP**	**14 29 03.2**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=113,slow=3.6,SNR=2.0						
BRTR				pPKPbc	**sPKPbc**	**14 29 16.2**	**-2.9**
	comp=Z,0.9nm,0.8s,baz=176,slow=2.3,SNR=3.2						

IDC 08 14:10:51.5±8.4**,25°.96S**×**28°.75E,h0**^{km}**,mb1 3.0**/1**,**
mb1mx2.8/46**,mbtmp3.1**/1**,ML2.2**/1**,Error ellipse:**
s-maj=83.6km s-min=58.2km az=138.0,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**4.08**	**229**	Pn	Pn	14 11 55.6	+0.2
	0.1nm,0.3s,baz=46,slow=12,SNR=2.4						
BOSA				Pg	Pb	14 12 04.8	+0.4
	0.3nm,0.3s,baz=51,slow=12,SNR=7.4						
BOSA				Lg	Lg	14 13 03.0	
	0.6nm,0.3s,baz=157,slow=18,SNR=2.2						
I47ZA	**BOSHOF INFRASO**	**4.10**	**229**	*i*		14 34 00.0	
	baz=50,slow=317,SNR=1.4						
I35NA	**TSUMEB INFRASO**	**12.32**	**301**	*i*		15 26 00.0	
	baz=131,slow=305,SNR=2.9						

IDC ***08*** *14:12:36.2±0.8, 30°.30N×69°.87E, h0^{km}, mb3.8/19,*
mb1 4.0/22, mb1mx3.8/58, mbtmp3.9/22, ML3.8/3, MS3.2/1,
Ms1 3.2/1, ms1mx2.7/46, Error ellipse: s-maj=19.2km
s-min=15.3km az=36.0

NDI ***08*** *14:12:39.5±2.0, 30°.27N×69°.59E, h33^{km}, ML3.8*

ISC 08 14:12:40.7±0.6**,30°.37N**±0°.07×**69°.84E**±0°.05**,h35**^{km}**,n48,**
σ**2.^{s}29**/58**,mb3.9**/20**,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHK	**Bhakra**	**5.75**	**78**	*e*P	**Pn**	**14 14 06.0**	**+2.4**
DHRM	**DHARAMSHALA**	**5.84**	**70**	*e*P	**Pn**	**14 14 06.5**	**+1.5**
DHRM				*e*S	**Sn**	**14 15 10.0**	**-0.8**
DHRM				IAML		14 15 15.3	
	comp=N,124nm,0.8s						
DHRM				IAML		14 15 17.4	
	comp=E,131nm,0.7s						
SMLA	**Simla**	**6.35**	**81**	*e*P	**Pn**	**14 14 12.8**	**+1.0**
SMLA				*e*S	**Sn**	**14 15 23.4**	**+0.3**
SMLA				IAML		14 15 29.9	
	comp=N,112nm,0.5s						
SMLA				IAML		14 15 30.1	
	comp=E,110nm,0.7s						
NDI	**New Delhi**	**6.64**	**103**	*e*P	**Pn**	**14 14 18.0**	**+2.1**
NDI				*e*S	**Sn**	**14 15 27.0**	**-3.4**
NDI				*e*x	x	14 16 06.0	
DDI	**Dehra Dun**	**7.10**	**88**	*e*P	**Pn**	**14 14 23.4**	**+1.2**
DDI				*e*S	**Sn**	**14 15 40.7**	**-1.0**
PYUN	**Piuthan**	**11.71**	**98**	*e*P	**Pn**	**14 15 24.4**	**-1.1**
	comp=E,49nm,0.4s						
IUG	**Iuzhnay**	**11.75**	**1**	*e*P	**Pn**	**14 15 26.3**	**+0.4**
	comp=E,2.2nm,0.5s,baz=1.0						
WSAR	**Wadi Sarin**	**12.27**	**237**	Pn	**Pn**	**14 15 31.6**	**-1.4**
	comp=E,0.2nm,0.3s,baz=16,slow=21,SNR=1.8						
WSAR				Sn	Sn	14 17 38.8	-10
	comp=E,0.1nm,0.3s,baz=75,slow=22,SNR=1.5						
GEYT	**Alibeck**	**12.29**	**311**	LR	LR	14 20 34.9	
	comp=E,111nm,19.4s,baz=310,slow=39						
DANN	**Dangsing**	**12.31**	**96**	*e*P	**Pn**	**14 15 32.0**	**-1.8**
	comp=E,20nm,0.3s						
KOLN	**Koldanda**	**12.31**	**99**	*e*P	**Pn**	**14 15 32.3**	**-1.5**
	comp=E,20nm,0.5s						
DZA	**Taraz**	**12.55**	**5**	*e*P	**Pn**	**14 15 37.3**	**+0.5**
	baz=5.4						
AAK	**Ala-Archa**	**12.80**	**16**	Pn	**Pn**	**14 15 40.0**	**-0.2**
	comp=E,2.3nm,0.3s,baz=180,slow=6.8,SNR=7.1						
AAK				Sn	**Sn**	**14 17 57.3**	**-4.2**
	baz=180,slow=20,SNR=3.4						
GKN	**Gorkha**	**13.14**	**97**	*e*P	**Pn**	**14 15 42.1**	**-3.0**
	comp=E,25nm,0.4s						
SGDS	**Sogindy**	**13.60**	**15**	*e*P	**Pn**	**14 15 52.0**	**+0.9**
	baz=15						
KKN	**Kakani**	**13.75**	**97**	*e*P	**Pn**	**14 15 49.7**	**-3.6**
	comp=E,15nm,0.4s						
MTBS	**Maitube**	**13.78**	**21**	*e*P	**Pn**	**14 15 53.7**	**+0.1**
	baz=21						
TNSS	**Tian-Shan**	**13.86**	**22**	*e*P	**Pn**	**14 15 56.4**	**+1.4**
	baz=23						
PKI	**Pulchoki**	**13.91**	**98**	*e*P	**Pn**	**14 15 52.1**	**-3.6**
	comp=E,8.8nm,0.4s						
AAA	**Alma-Ata**	**14.00**	**22**	*e*P	**Pn**	**14 15 58.2**	**+1.6**
	comp=E,5.5nm,0.4s,baz=22						
MDOK	**Medeo**	**14.00**	**22**	*e*P	**Pn**	**14 15 58.1**	**+1.4**
	baz=23						
GUN	**Gumba**	**14.23**	**96**	*e*P	**Pn**	**14 15 55.7**	**-4.4**
	comp=E,42nm,0.4s						
SATY	**Saty**	**14.39**	**26**	*e*P	**Pn**	**14 16 03.6**	**+1.6**
	baz=27						
ODAN	**Odare**	**15.80**	**98**	*e*P	**Pn**	**14 16 13.7**	**-7.2**
	comp=E,3.8nm,0.4s						
MKAR	**Makanchi Array**	**19.03**	**27**	P	**P**	**14 16 59.6**	**0.0**
	comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=20						
BRZS	**Berezniki**	**19.70**	**5**	*e*P	**Pn**	**14 17 09.1**	**+0.5**
	baz=5.6						
ZSN	**Zaisan**	**20.61**	**30**	*e*P	Pn	14 17 19.5	+0.2
	baz=30						
KURBB	**Kurchatov Arra**	**21.25**	**15**	P	**P**	**14 17 24.4**	**+0.7**
	comp=E,2.3nm,0.7s,baz=208,slow=10,SNR=13						
SEM	**Semipalatinsk**	**21.49**	**18**	*e*P	**P**	**14 17 26.7**	**+0.2**
	baz=19						
AKTO	**Aktyubinsk**	**21.92**	**339**	P	**P**	**14 17 31.9**	**+1.1**
	comp=E,3.3nm,0.6s,baz=133,slow=8.6,SNR=8.1						
BVAR	**Borovoye Array**	**22.64**	**1**	P	**P**	**14 17 39.0**	**+0.5**
	comp=E,0.5nm,0.5s,baz=181,slow=10,SNR=4.0						
ZALV	**Zalesovo Beam**	**25.94**	**20**	P	**P**	**14 18 10.8**	**+1.3**
	comp=E,3.4nm,0.5s,baz=215,slow=10,SNR=16						
CMAR	**Chiang Mai Arr**	**28.95**	**107**	P	**P**	**14 18 37.8**	**+0.9**
	comp=E,0.8nm,0.6s,baz=296,slow=10.0,SNR=7.8						
BRTR	**Keskin Array B**	**30.90**	**297**	P	**P**	**14 18 55.7**	**+1.5**
	comp=E,0.4nm,0.7s,baz=88,slow=7.6,SNR=1.9						
SONM	**Songino Array**	**32.91**	**48**	P	**P**	**14 19 14.2**	**+2.5**
	comp=E,0.6nm,0.5s,baz=250,slow=9.3,SNR=4.7						
AKASG	**Malin Array Be**	**36.35**	**316**	P	**P**	**14 19 42.6**	**+1.4**
	comp=E,1.0nm,0.5s,baz=97,slow=7.2,SNR=8.2						
MNK	**Minsk**	**38.42**	**321**	*i* P	**P**	**14 19 55.6**	**-3.1**
	comp=E,2.0nm,0.5s						
MNK				*i* P	**P**	**14 19 55.6**	**-3.1**
	comp=N,48nm,0.6s						
MNK				*i* P	**P**	**14 19 55.6**	**-3.1**
	comp=Z,18nm,0.6s						
MNK				*i* PP	**PP**	**14 21 23.3**	**-3.5**
MNK				*i* PPP	PPP	14 21 43.0	
MNK				*i* PcP	**PcP**	**14 22 09.5**	**-2.0**
MNK				*i* S	**S**	**14 25 46.5**	**-4.7**
MNK				*i* SS	**SnSn**	**14 28 34.3**	**-4.4**
MNK				*i* SSS	SSS	14 28 52.1	
MNK				*i* ScS	**ScS**	**14 30 04.3**	**-2.2**
MNK				*i* LQ	LQ	14 32 34.5	
MNK				*i* LR	LR	14 35 43.0	
MNK				*i* LRM	MLR	14 37 23.9	
	comp=E,23nm,15.2s						
MNK				*i* LRM	MLR	14 37 23.9	
	comp=N,200nm,18.8s						
MNK				*i* LRM	MLR	14 37 23.9	
	comp=Z,103nm,13.0s						
FINES	**FINESS Array B**	**42.17**	**330**	P	**P**	**14 20 31.0**	**+1.4**
	comp=Z,7.0nm,1.1s,baz=109,slow=10,SNR=3.6						
ARCES	**ARCESS Array B**	**46.50**	**340**	P	**P**	**14 21 05.8**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=122,slow=1.6,SNR=7.7						
KSRS	**Korea Array**	**48.07**	**65**	P	**P**	**14 21 16.7**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=284,slow=9.7,SNR=2.2						
NOA	**NORSAR Array B**	**48.82**	**326**	P	**P**	**14 21 23.5**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=104,slow=7.7,SNR=1.7						
ESDC	**Sonseca Array**	**59.60**	**301**	P	**P**	**14 22 42.2**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=62,slow=8.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**64.72**	**271**	P	**P**	**14 23 16.6**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=64,slow=5.0,SNR=3.0						
WRA	**Warramunga Arr**	**79.66**	**120**	P	**P**	**14 24 45.4**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=321,slow=5.2,SNR=9.4						
INK	**Inuvik**	**80.09**	**9**	P	**P**	**14 24 47.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=340,slow=5.4,SNR=5.2						
ILAR	**Eielson Array**	**80.93**	**15**	P	**P**	**14 24 50.7**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=321,slow=5.0,SNR=7.3						
ASAR	**Alice Springs**	**81.62**	**124**	P	**P**	**14 24 56.0**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=305,slow=5.9,SNR=13						
YKA	**Yellowknife Ar**	**87.39**	**2**	P	**P**	**14 25 25.4**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=5.7,slow=4.8,SNR=8.4						

IDC 08 14:28:24.9±6.0**,21°.30S**×**177°.35W,h456**^{km}±45^{km}**,**
mb2.6/3**,mb1 3.0**/5**,mb1mx2.8**/32**,mbtmp3.6**/5**,Error**
ellipse: s-maj=127.5km s-min=23.9km az=149.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.60**	**308**	P	P	14 29 55.4	-0.3
	0.7nm,0.3s,baz=60,slow=19,SNR=7.1						
AFI	**Afiamalu**	**9.07**	**37**	P	P	14 30 32.3	+0.2
	3.4nm,0.3s,baz=15,slow=20,SNR=5.5						
ASAR	**Alice Springs**	**44.93**	**257**	P	P	14 35 58.0	-0.1
	0.2nm,0.4s,baz=92,slow=8.2,SNR=9.5						
WRA	**Warramunga Arr**	**45.10**	**263**	P	P	14 35 59.6	+0.2
	0.1nm,0.3s,baz=100,slow=9.5,SNR=1.6						
ILAR	**Eielson Array**	**88.95**	**13**	P	P	14 40 29.9	+0.5
	0.1nm,0.3s,baz=216,slow=4.5,SNR=4.6						
AKASG	**Malin Array Be**	**144.00**	**331**	PKP	PKPbc	14 47 05.5	-1.0
	0.7nm,0.4s,baz=42,slow=4.3,SNR=4.9						

IDC 08 14:38:18.0±2.5**,2°.92N**×**125°.74E,h0**^{km}**,mb3.2**/3**,**
mb1 3.4/3**,mb1mx3.1**/36**,mbtmp3.2**/3**,MS3.3**/1**,Ms1 3.3**/1**,**
ms1mx2.6/17**,Error ellipse: s-maj=240.1km**
s-min=29.7km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.24**	**160**	P	P	14 43 35.6	-1.3
	0.3nm,0.4s,baz=339,slow=11,SNR=1.9						
ASAR	**Alice Springs**	**27.60**	**164**	P	P	14 44 08.7	+1.5
	0.1nm,0.4s,baz=338,slow=9.7,SNR=4.4						
KLR	**Kul'dur**	**46.42**	**5**	LR	LR	15 06 41.7	
	comp=Z,36nm,19.7s,baz=154,slow=37						
MKAR	**Makanchi Array**	**57.66**	**326**	P	P	14 48 09.8	-0.4
	0.2nm,0.4s,baz=134,slow=8.5,SNR=2.1						

IDC ***08*** *14:56:29.6±0.4, 61°.69S×161°.36E, h0^{km}, mb5.0/17,*
mb1 5.1/19, mb1mx5.0/37, mbtmp5.0/19, ML5.0/2, MS5.2/17,
Ms1 5.2/17, ms1mx5.1/22, Error ellipse: s-maj=20.8km
s-min=12.0km az=76.0

BJI ***08*** *14:56:30.3±0.0, 61°.70S×161°.56E, h17^{km}, mB6.0/8,*
mb5.5/7, Ms5.5/12, Ms7 5.1/13

MOS ***08*** *14:56:30.2±1.3, 61°.76S×161°.32E, h10^{km}, mb5.7/15, Error*
ellipse: s-maj=33.2km s-min=9.2km az=97.9

NEIC ***08*** *14:56:30.9, 61°.66S×161°.33E, h4^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.18;
$M_{\theta\theta}$3.11; $M_{\phi\phi}$-3.29; $M_{r\theta}$-1.86; $M_{\theta\phi}$-0.77; $M_{\phi r}$0.27; Fault
plane solution: $M_0$3.80000×10^{17} NP1:ϕ_s324.67000°,
δ72.92000°, λ19.37000°. NP2:ϕ_s228.77000°, δ71.51000°,
λ161.96000°. Principal axes: T 4.1055, Plg26.0000°,
Azm187.0000°; N -0.7229, Plg64.0000°, Azm5.0000°; P
-3.3826, Plg1.0000°, Azm97.0000°;

NEIC ***08*** *14:56:30.7±1.6, 61°.61S±0°.09×161°.3E±0°.3, h10^{km}±1^{km},*
mb5.4/62, Ms_20 5.4/249, Mwb5.7/19, Mwc5.7(GCMT) Error
ellipse: s-maj=21.3km s-min=14.1km az=79.0

GCMT ***08*** *14:56:34.7±0.1, 61°.65S±0°.01×161°.23E±0°.02, h17^{km},*
MW5.7/151, Moment Tensor Solution. s131,c233;
s151,c279; Duration: 1.^{s}7 Moment tensor: Scale 10^{17}
Nm; M_{rr}-0.44±.05; $M_{\theta\theta}$4.43±.05; $M_{\phi\phi}$-3.99±.05;
$M_{r\theta}$-0.95±.12; $M_{\theta\phi}$-1.44±.04; $M_{\phi r}$-0.09±.13; Best double
couple: $M_0$4.53900×10^{17} NP1:ϕ_s325.00000°, δ80.00000°,
λ4.00000°. NP2:ϕ_s234.00000°, δ86.00000°, λ170.00000°.
Principal axes: T 4.8320, Plg10.0000°, Azm189.0000°; N
-0.5860, Plg79.0000°, Azm30.0000°; P -4.2460,
Plg4.0000°, Azm280.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

NEIC ***08*** *14:56:35, 61°.65S×161°.24E, h17^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.33;
$M_{\theta\theta}$4.50; $M_{\phi\phi}$-4.17; $M_{r\theta}$-0.38; $M_{\theta\phi}$-1.46; $M_{\phi r}$0.09; Fault
plane solution: $M_0$4.60000×10^{17} NP1:ϕ_s234.00000°,
δ87.00000°, λ177.00000°. NP2:ϕ_s324.00000°, δ87.00000°,
λ3.00000°. Principal axes: T 4.7695, Plg4.0000°,
Azm189.0000°; N -0.3607, Plg86.0000°, Azm4.0000°; P
-4.4088, Plg0.0000°, Azm99.0000°;

ISC 08 14:56:31.1±0.2**,61°.78S**±0°.05×**161°.27E**±0°.07**,h10**^{km}**,n533,**
σ**1.^{s}78**/402**,mb5.3**/58**,MS5.4**/146**,43C-2D,Balleny Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**7.40**	**349**	P	Pn	14 58 13.2	-5.8
MCQ	**Macquarie Isla**	**7.40**	**349**	Pn	Pn	14 58 13.2	-5.9
VNDA	**Vanda**	**15.82**	**180**	Pn	**Pn**	**15 00 12.4**	**-1.1**
	18nm,0.3s,baz=351,slow=13,SNR=199						
VNDA	**Vanda**	**15.82**	**180**	Pn	**Pn**	**15 00 11.7**	**-1.8**
PYZ	**Puysegur Point**	**15.95**	**14**		**Pn**	**15 00 12.0**	**-3.4**
WHZ	**Wether Hill Ro**	**16.38**	**17**	P	**Pn**	**15 00 19.9**	**-1.0**
DCZ	**Deep Cove**	**16.70**	**15**		**Pn**	**15 00 23.1**	**-1.7**
DCZ				IAmb	IAmb	15 00 32.5	
	comp=Z,371nm,1.4s						
WKZ	**Wanaka**	**17.58**	**19**	P	**Pn**	**15 00 34.5**	**-1.4**
WKZ				IAmb	IAmb	15 00 51.6	
	comp=Z,367nm,1.5s						
ODZ	**Otahua Downs**	**17.64**	**22**	P	**Pn**	**15 00 35.5**	**-1.1**
LBZ	**Lake Benmore**	**18.19**	**21**	P	**Pn**	**15 00 40.2**	**-3.3**
FOZ	**Fox Glacier**	**18.96**	**19**	P	**Pn**	**15 00 53.5**	**+0.7**
RPZ	**Rata Peaks**	**19.00**	**22**	P	**P**	**15 00 51.1**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=181,slow=8.4,SNR=8.1						
RPZ				LR	LR	15 07 33.4	
	comp=Z,15µm,18.6s,baz=202,slow=35						
RPZ	**Rata Peaks**	**19.00**	**22**		**P**	**15 00 52.1**	**-0.5**
MQZ	**McQueen's Vall**	**19.31**	**26**	P	**Pn**	**15 00 57.2**	**+0.1**
KHZ	**Kahutara**	**20.73**	**26**	P	**P**	**15 01 12.4**	**+0.9**
KHZ				IAmb	IAmb	15 01 21.3	
	comp=Z,215nm,1.2s						
KHZ				IAMs_20	IAMs_20	15 08 09.1	
	comp=Z,14µm,18.0s						
THZ	**Tophouse**	**21.23**	**25**	P	**P**	**15 01 18.7**	**+1.8**
THZ				IAmb	IAmb	15 01 24.0	
	comp=Z,261nm,1.4s						
THZ				IAMs_20	IAMs_20	15 08 28.3	
	comp=Z,12µm,20.0s						
BSWZ	**Blackbirch Sta**	**21.48**	**26**	P	**P**	**15 01 20.6**	**+1.0**
TUWZ	**Tuamarina**	**21.76**	**26**	P	**P**	**15 01 20.8**	**-1.8**
NNZ	**Nelson**	**21.85**	**25**	IAMs_20	IAMs_20	15 09 26.7	
	comp=Z,13µm,18.0s						
SNZO	**South Karori**	**22.04**	**28**	P	**P**	**15 01 21.6**	**-4.0**
SNZO	**South Karori**	**22.04**	**28**	IAMs_20	IAMs_20	15 09 19.8	
	comp=Z,15µm,20.0s						
QRZ	**Quartz Range**	**22.06**	**23**	P	**P**	**15 01 25.9**	**+0.1**
QRZ				IAmb	IAmb	15 01 31.2	
	comp=Z,150nm,1.3s						
QRZ				IAMs_20	IAMs_20	15 09 48.3	
	comp=Z,16µm,20.0s						
BFZ	**Birch Farm**	**23.00**	**30**	IAMs_20	IAMs_20	15 08 58.1	
	comp=Z,11µm,20.0s						
BKZ	**Black Stump Fm**	**24.50**	**29**	IAMs_20	IAMs_20	15 10 18.7	
	comp=Z,15µm,19.0s						
HIZ	**Hauiti**	**24.76**	**26**	IAMs_20	IAMs_20	15 11 23.6	
	comp=Z,9µm,21.0s						
URZ	**Urewera**	**25.50**	**30**	P	**P**	**15 01 59.7**	**+0.4**
	comp=Z,12nm,1.0s,baz=178,slow=7.1,SNR=4.7						
URZ				LR	LR	15 11 12.7	
	comp=Z,13µm,18.6s,baz=201,slow=35						
URZ	**Urewera**	**25.50**	**30**	IAMs_20	IAMs_20	15 11 10.4	
	comp=Z,13µm,19.0s						
TOO	**Toolangi**	**26.15**	**331**	P	**P**	**15 02 03.5**	**-1.8**
TOO				pmax	pmax		
	comp=Z,40nm,1.5s						
TOO	**Toolangi**	**26.15**	**331**	P	**P**	**15 02 03.5**	**-1.8**
MXZ	**Matakaoa Point**	**26.46**	**31**	IAMs_20	IAMs_20	15 11 50.6	
	comp=Z,10µm,18.0s						
OUZ	**Omahuta**	**27.70**	**22**	IAMs_20	IAMs_20	15 11 47.6	
	comp=Z,9µm,20.0s						
QSPA	**South Pole Qui**	**28.32**	**180**	P	**P**	**15 02 26.2**	**+1.5**
	comp=Z,50nm,0.9s,baz=12,slow=3.2,SNR=75						
QSPA				LR	LR	15 12 29.4	
	comp=Z,8µm,19.4s,baz=28,slow=34						
QSPA	**South Pole Qui**	**28.32**	**180**	P	**P**	**15 02 26.4**	**+1.7**
QSPA	**South Pole Qui**	**28.32**	**180**	IAMs_20	IAMs_20	15 12 08.3	
	comp=Z,8µm,21.0s						
LHI	**Lord Howe Isla**	**30.30**	**356**	IAMs_20	IAMs_20	15 11 23.8	
	comp=Z,6µm,20.0s						
HTT	**Hallett**	**31.78**	**323**	P	**P**	**15 02 56.5**	**+1.1**
	baz=32,SNR=4.2						
STKA	**Stephens Creek**	**32.52**	**328**	P	**P**	**15 03 02.5**	**+0.6**
	baz=32,SNR=6.0						
STKA	**Stephens Creek**	**32.52**	**328**	P	**P**	**15 03 02.6**	**+0.8**
	comp=Z,36nm,1.4s,baz=150,slow=12,SNR=11						
STKA				LR	LR	15 14 19.1	
	comp=Z,7µm,18.3s,baz=157,slow=33						
STKA	**Stephens Creek**	**32.52**	**328**	P	**P**	**15 02 58.6**	**-3.2**
BBOO	**Buckleboo**	**33.21**	**319**	P	**P**	**15 03 05.5**	**-2.4**
BBOO				IAmb	IAmb	15 03 12.3	
	comp=Z,83nm,1.4s						
RAO	**Raoul Island**	**35.31**	**32**	IAMs_20	IAMs_20	15 18 03.2	
	comp=Z,4µm,18.0s						
RMQ	**Roma**	**36.27**	**341**	P	**P**	**15 03 35.3**	**+0.9**
	baz=36,SNR=6.7						
QLP	**Quilpie**	**37.00**	**334**	P	**P**	**15 03 40.8**	**+0.2**
	baz=37,SNR=5.5						
EIDS	**Eidsvold**	**37.05**	**345**	P	**P**	**15 03 42.8**	**+1.8**
	baz=37,SNR=6.2						
EIDS	**Eidsvold**	**37.05**	**345**	P	**P**	**15 03 39.3**	**-1.7**
EIDS				IAmb	IAmb	15 03 44.4	
	comp=Z,97nm,1.5s						
MAW	**Mawson**	**38.19**	**218**	P	**P**	**15 03 52.9**	**+2.7**
	baz=38,SNR=5.1						
MAW	**Mawson**	**38.19**	**218**	P	**P**	**15 03 51.9**	**+1.7**
	comp=Z,19nm,1.1s,baz=117,slow=9.4,SNR=8.3						
MAW				LR	LR	15 19 54.5	
	comp=Z,8µm,19.0s,baz=122,slow=37						
MAW	**Mawson**	**38.19**	**218**	P	**P**	**15 03 50.4**	**+0.3**
MAW				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MAW				MLR	MLR		
	comp=Z,2µm,19.0s						
MAW	**Mawson**	**38.19**	**218**	P	**P**	**15 03 50.4**	**+0.3**
DZM	**Mont Dzumac**	**39.84**	**7**	P	**P**	**15 04 03.4**	**-1.1**
	comp=Z,19nm,1.1s,baz=217,slow=20,SNR=3.9						
DZM				LR	LR	15 17 44.2	
	comp=Z,4µm,19.4s,baz=174,slow=32						
DZM	**Mont Dzumac**	**39.84**	**7**	*e*P	**P**	**15 04 07.2**	**+2.6**
	comp=Z,70nm,1.3s						
DZM				*e*S	**S**	**15 10 10.8**	**+1.9**
	comp=Z,1µm,25.1s						
DZM				*e*LQ	LQ	15 13 14.2	
	comp=Z,2µm,27.1s						
DZM				*e*LR	LR	15 14 53.3	
	comp=Z,5µm,23.9s						
H01W1	**Cape Leeuwin H**	**39.92**	**290**	T	T	15 46 57.2	
	baz=147,slow=76						
H01W2	**Cape Leeuwin H**	**39.93**	**290**	T	T	15 46 55.1	
	baz=147,slow=76						
H01W3	**Cape Leeuwin H**	**39.94**	**290**	T	T	15 46 58.4	
	baz=147,slow=76						
NWAO	**Narrogin (SRO)**	**40.24**	**295**	IAMs_20	IAMs_20	15 16 22.0	
	comp=Z,6µm,22.0s						
BELA	**Belgrano 2**	**40.25**	**175**	P	**P**	**15 04 08.0**	**+0.6**
ASAR	**Alice Springs**	**42.42**	**321**	P	**P**	**15 04 25.1**	**-0.6**
	comp=Z,37nm,1.1s,baz=162,slow=8.3,SNR=126						
ASAR				PcP	**PcP**	**15 06 17.2**	**-1.5**
	comp=Z,4.5nm,1.0s,baz=163,slow=4.6,SNR=3.0						
ASAR				LR	LR	15 19 37.8	
	comp=Z,1µm,20.3s,baz=154,slow=33						
AS31	**Alice Springs**	**42.42**	**321**	P	**P**	**15 04 25.2**	**-0.5**
CTA	**Charters Tower**	**42.95**	**339**	P	**P**	**15 04 30.0**	**0.0**
	comp=Z,42nm,1.2s,baz=183,slow=7.7,SNR=11						
CTA				LR	LR	15 20 53.5	
	comp=Z,2µm,18.3s,baz=164,slow=34						
CTAO	**Charters Tower**	**42.95**	**339**	P	**P**	**15 04 31.2**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,162nm,1.5s						
CTAO	**Charters Tower**	**42.95**	**339**	P	**P**	**15 04 31.2**	**+1.2**
CTAO				IAmb	IAmb	15 04 34.5	
	comp=Z,162nm,1.5s						
SYO	**Syowa Base**	**43.05**	**207**	⇑*i*P	**P**	**15 04 31.2**	**+0.9**
SYO	**Syowa Base**	**43.05**	**207**	⇑*e*X	P	15 04 42.1	+12
SYO	**Syowa Base**	**43.05**	**207**	⇓*e*PP	PP	15 06 09.2	-0.7
MORW	**Morawa**	**44.08**	**297**	IAMs_20	IAMs_20	15 18 44.9	

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      comp=Z,5µm,20.0s
MSVF  Nonsavu          45.56  23   LR       LR        15 20 41.2
      comp=Z,4µm,21.5s,baz=216,slow=32
MSVF  Nonsavu          45.56  23  iP        P         15 04 49.3  -1.7
MSVF                               pmax     pmax
      comp=Z,14nm,1.3s
MSVF  Nonsavu          45.56  23   IAMs_20  IAMs_20   15 19 58.3
      comp=Z,6µm,22.0s
WR0   Warramunga Arr   45.74 324   P        P         15 04 51.0  -1.4
WB2   Warramunga Arr   45.81 324   P        P         15 04 50.4  -2.5
WB2                                IAmb     IAmb      15 04 55.2
      comp=Z,84nm,1.5s
WRA   Warramunga Arr   45.81 324   P        P         15 04 51.6  -1.3
      comp=Z,20nm,1.2s,baz=160,slow=6.3,SNR=20
WRA                                PcP      PcP       15 06 29.4  -0.9
      comp=Z,7.4nm,1.0s,baz=166,slow=3.2,SNR=7.7
WRAB  Tennant Creek    45.82 324 ceP        P         15 04 51.3  -1.7
WRAB                               pmax     pmax
      comp=Z,71nm,2.5s
WRAB  Tennant Creek    45.82 324   P        P         15 04 52.0  -1.0
WRAB                               IAmb     IAmb      15 04 55.3
      comp=Z,88nm,1.5s
WB4   Warramunga Arr   45.84 324   IAMs_20  IAMs_20   15 23 47.4
      comp=Z,3µm,18.0s
WB7   Warramunga Arr   45.90 324   IAMs_20  IAMs_20   15 21 38.2
      comp=Z,4µm,18.0s
NVL   N'lazarevskaya   46.02 194⇑iP        P         15 04 53.0  -1.0
NVL                               eS        S         15 11 34.2  -4.3
NVL                               eSSS      SSS       15 15 59.4
NVL                                pmax     pmax
      comp=Z,140nm,1.2s
NVL                                MLR      MLR
      comp=Z,25µm,14.0s
SNAA  Sanae            46.38 187   P        P         15 04 57.9  +1.0
SNAA  Sanae            46.38 187   P        P         15 04 57.9  +1.0
      comp=Z,85nm,0.9s,baz=171,slow=8.3,SNR=168
SNAA  Sanae            46.38 187 ceP        P         15 04 57.5  +0.6
SNAA                               pmax     pmax
      comp=Z,146nm,1.0s
SNAA  Sanae            46.38 187   P        P         15 04 57.8  +1.0
SNAA                               IAMs_20  IAMs_20   15 23 53.3
      comp=Z,5µm,20.0s
SANVU Saraoutou        46.46   8   P        P         15 04 56.5  -1.5
SANVU                              IAmb     IAmb      15 05 12.2
      comp=Z,31nm,0.9s
VNA2  Neumayer--Watz   47.34 185   P        P         15 05 05.1  +0.7
      baz=163,slow=6.4
VNA1  Neumayer--Stat   47.65 185   P        P         15 05 07.8  +1.1
RAR   Rarotonga        48.59  51   LR       LR        15 21 17.7
      comp=Z,1µm,19.5s,baz=200,slow=31
PSAC1 Pilbara Seismi   49.25 306   IAMs_20  IAMs_20   15 23 57.4
      comp=Z,3µm,18.0s
PMSA  Palmer Station   49.33 156   P        P         15 05 20.9  +1.2
COEN  Coen             49.49 337   P        P         15 05 20.0  -1.5
FITZ  Fitzroy Crossi   50.27 314   P        P         15 05 27.2  -0.2
      comp=Z,15nm,1.0s,baz=142,slow=9.1,SNR=4.5
FITZ  Fitzroy Crossi   50.27 314   P        P         15 05 26.5  -0.9
FITZ                               IAmb     IAmb      15 05 37.1
      comp=Z,62nm,1.4s
GIRL  Giralia          50.50 299   IAMs_20  IAMs_20   15 22 50.8
      comp=Z,3µm,20.0s
TBI   Tubuai           50.81  64  eS        S         15 12 48.0  +0.8
      comp=Z,394nm,27.5s
TBI                               eLQ       LQ        15 17 15.9
      comp=Z,7µm,27.8s
TBI                               eLR       LR        15 19 52.2
      comp=Z,2µm,28.5s,baz=205
TBI   Tubuai           50.81  64  eT        T         15 59 58.6
      comp=Z,122nm,0.3s
HNR   Honiara          52.26 358   LR       LR        15 23 15.7
      comp=Z,4µm,20.6s,baz=194,slow=31
HNR   Honiara          52.26 358   IAMs_20  IAMs_20   15 23 04.2
      comp=Z,5µm,20.0s
PMG   Port Moresby     53.29 343  iP        P         15 05 50.5  +0.6
PMG                                pmax     pmax
      comp=Z,38nm,1.2s
PMG   Port Moresby     53.29 343   IAMs_20  IAMs_20   15 27 25.1
      comp=Z,3µm,18.0s
PAE   Paea             55.82  61  eT        T         16 06 13.4
      comp=Z,21nm,0.3s
TVO   Taravao          55.85  61  eT        T         16 06 14.7
      comp=Z,10.0nm,0.3s
PPT2  Papeete2         55.89  61  eS        S         15 13 56.9  +0.6
      comp=Z,1µm,26.8s
PPT2                              eLQ       LQ        15 19 26.0
      comp=Z,3µm,24.0s
PPT2                              eLR       LR        15 22 23.8
      comp=Z,3µm,26.2s,baz=198
PPT2  Papeete2         55.89  61  eT        T         16 06 18.3
      comp=Z,26nm,0.3s
PPT   Papeete          55.91  61   LR       LR        15 23 54.0
      comp=Z,578nm,21.8s,baz=208,slow=30
TIAR  Tiarei           56.01  61  eP        P         15 06 13.2  +3.5
      comp=Z,9.3nm,0.8s
TIAR  Tiarei           56.01  61  eT        T         16 06 27.0
      comp=Z,13nm,0.3s
MEH   Mehetia          56.26  62  eT        T         16 06 46.6
      comp=Z,57nm,0.3s
RKT   Rikitea          57.52  78  eS        S         15 14 19.2  +1.5
      comp=Z,2µm,29.2s
RKT                               eLQ       LQ        15 20 45.2
      comp=Z,2µm,28.0s
RKT                               eLR       LR        15 23 06.8
      comp=Z,3µm,27.5s
SAUI  Saumlaki         58.05 324   IAMs_20  IAMs_20   15 27 13.7
      comp=Z,2µm,18.0s
SOEI  Soe              58.51 316   IAMs_20  IAMs_20   15 29 06.4
      comp=Z,3µm,18.0s
VAH   Vaihoa           58.81  61  eT        T         16 09 56.9
      comp=Z,321nm,0.2s
GO09  Cerro Castillo   59.51 144   P        P         15 06 34.3  +0.4
EFI   East Falkland    62.65 154 ceP        P         15 06 53.7  -1.5
EFI                                pmax     pmax
      comp=Z,246nm,2.5s
HOPE  Hope Point       63.44 168   IAMs_20  IAMs_20   15 30 14.1
      comp=Z,3µm,22.0s
NLAI  Namlea           63.77 321   P        P         15 07 03.8  +0.8
      comp=Z,3µmcomp=Z,58nm,1.4s
SANI  Sanana           65.22 321   P        P         15 07 11.8  -0.7
      comp=Z,997nmcomp=Z,25nm,1.2s
TAOE  Nuku Hiva Isla   67.70  66  eLR       LR        15 27 36.1
      comp=Z,800nm,22.7s
DBJI  Dramaga          68.05 299   P        P         15 07 31.8  +1.2
      comp=Z,32nm,1.3s
MPSI  Mapaga           69.42 315   P        P         15 07 41.0  +1.9
      comp=Z,832nmcomp=Z,41nm,1.7s
PLCA  Paso Flores      69.60 140   P        P         15 07 40.3  +0.2
      comp=Z,9.0nm,0.9s,baz=200,slow=6.0,SNR=16
PLCA  Paso Flores      69.60 140   P        P         15 07 40.5  +0.4
PLCA                               IAmb     IAmb      15 07 41.1
      comp=Z,51nm,1.4s
MTKI  Muara Teweh, K   69.98 310   P        P         15 07 42.9  +0.3
      comp=Z,33nm,2.1s
LWLI  Liwa             70.56 297   P        P         15 07 45.1  -1.2
      comp=Z,76nm,0.9s
KLSI                   70.57 298   P        P         15 07 47.6  +1.4
      comp=Z,9.7nm,1.4s
LC01  Cunco            70.87 139   P        P         15 07 47.6  -0.2
LC01                               IAmb     IAmb      15 07 48.9
      comp=Z,28nm,1.2s
PMBI  Palembang        72.14 299   IAMs_20  IAMs_20   15 34 03.6
      comp=Z,2µm,21.0s
H03S2 Juan Fernandez   73.08 131   T        T         16 28 37.5
      baz=203,slow=74,SNR=2540
H03S1 Juan Fernandez   73.08 131   T        T         16 28 38.9
      baz=203,slow=74,SNR=2731
H03S3 Juan Fernandez   73.10 131   T        T         16 28 38.2
      baz=203,slow=74,SNR=3053
KSM   Kuching          73.93 306   P        P         15 08 07.9  +1.6
KSM                                IAmb     IAmb      15 08 09.4
      comp=Z,52nm,1.3s
PDSI  Padang           75.78 296   P        P         15 08 19.2  +2.2
      comp=Z,15nm,0.7s
MNSI  Mandailing Nat   77.69 296   P        P         15 08 29.2  +1.5
      comp=Z,30nm,1.0s
CO02  Combarbal        78.21 136   P        P         15 08 31.0  +0.3
ZON   Zonda            78.64 138   P        P         15 08 32.7  -0.3
ZON                                pmax     pmax
      comp=Z,33nm,1.3s
ZON   Zonda            78.64 138   P        P         15 08 32.7  -0.3
CO03  El Pedregal      78.65 136   P        P         15 08 33.1   0.0
CO03                               IAmb     IAmb      15 08 36.8
      comp=Z,60nm,1.3s
CO01  Juntas del Tor   79.64 136   P        P         15 08 39.0  +0.3
CO01                               IAmb     IAmb      15 08 42.9
      comp=Z,58nm,1.4s
RPSI  Rantau Prapat    79.67 296   P        P         15 08 38.9  +0.2
PSI   Prapat           79.77 296   P        P         15 08 38.9  -0.5
      comp=Z,5.6nm,0.6s,baz=178,slow=1.4,SNR=4.7
LCO   Las Campanas     80.33 136   P        P         15 08 42.3  -0.2
LCO                                pmax     pmax
      comp=Z,52nm,1.4s
LCO   Las Campanas     80.33 136   P        P         15 08 42.3  -0.2
LCO                                IAmb     IAmb      15 08 55.4
      comp=Z,52nm,1.4s
AC05  El Transito      80.63 136   P        P         15 08 44.0   0.0
AC05                               IAmb     IAmb      15 08 46.1
      comp=Z,60nm,1.4s
AC04  Llanos de Chal   80.95 135   P        P         15 08 44.2  -1.3
GO03  Copiap           81.79 135   P        P         15 08 50.1  +0.1
GO03                               IAmb     IAmb      15 08 54.1
      comp=Z,50nm,1.2s
H08S2 Diego Garcia H   82.74 267   T        T         16 40 32.3
      baz=152,slow=76,SNR=1187
H08S1 Diego Carcia H   82.75 267   T        T         16 40 35.1
      baz=152,slow=76,SNR=1010
H08S3 Diego Garcia H   82.76 267   T        T         16 40 33.8
      baz=152,slow=76,SNR=1845
AC02  Maricunga        82.86 136   P        P         15 08 55.9  -0.3
AC02                               IAmb     IAmb      15 08 58.1
      comp=Z,50nm,1.5s
BOSA  Boshof           83.20 218   P        P         15 08 58.2  +0.7
      comp=Z,20nm,0.9s,baz=165,slow=4.0,SNR=16
BOSA                               LR       LR        15 42 51.8
      comp=Z,1µm,20.3s,baz=160,slow=33
BOSA  Boshof           83.20 218   P        P         15 08 57.9  +0.4
BOSA                               pmax     pmax
      comp=Z,53nm,1.2s
BOSA  Boshof           83.20 218   P        P         15 08 57.9  +0.4
GO02  Mina Guanaco     84.25 135   P        P         15 09 01.4  -1.8
GO02                               IAmb     IAmb      15 09 17.9
      comp=Z,34nm,1.2s
PB14  IPOC Station P   84.47 134   P        P         15 09 03.6  -0.7
PB14                               IAmb     IAmb      15 09 12.0
      comp=Z,43nm,1.3s
PB15  IPOC Station P   86.10 134   P        P         15 09 12.5  +0.2
PB15                               IAmb     IAmb      15 09 13.3
      comp=Z,28nm,1.2s
LBTB  Lobatse          86.48 219   P        P         15 09 14.3  +0.3
LBTB                               pmax     pmax
      comp=Z,45nm,1.3s
LBTB  Lobatse          86.48 219   P        P         15 09 14.3  +0.3
LBTB                               IAmb     IAmb      15 09 15.7
      comp=Z,45nm,1.3s
PB06  IPOC Station P   86.53 134   P        P         15 09 14.0  -0.4
PB06                               IAmb     IAmb      15 09 16.6
      comp=Z,40nm,1.2s
LVC   Limon Verde      86.85 135   P        P         15 09 16.7  +0.5
      comp=Z,14nm,1.0s,baz=185,slow=4.1,SNR=14
LVC   Limon Verde      86.85 135   P        P         15 09 16.3  +0.2
LVC                                pmax     pmax
      comp=Z,45nm,1.3s
LVC   Limon Verde      86.85 135   P        P         15 09 16.3  +0.2
LVC                                IAmb     IAmb      15 09 18.2
      comp=Z,45nm,1.2s
CPUP  Villa Florida    86.86 146   P        P         15 09 15.2  -0.5
      comp=Z,7.5nm,1.0s,baz=205,slow=3.9,SNR=9.6
CPUP                               LR       LR        15 44 05.1
      comp=Z,1µm,19.7s,baz=199,slow=33
CPUP  Villa Florida    86.86 146   P        P         15 09 15.6  -0.2
CPUP                               IAmb     IAmb      15 09 16.3
      comp=Z,24nm,1.2s
PB07  IPOC Station P   87.33 134   P        P         15 09 17.8  -0.5
PB09  IPOC Station P   87.49 134   P        P         15 09 19.8  +0.8
PB01  IPOC Station P   88.10 134   P        P         15 09 22.0  +0.2
PB01                               IAmb     IAmb      15 09 36.6
      comp=Z,25nm,1.3s
TA01  Diego Aracena    88.30 133   P        P         15 09 22.4  -0.3
PB08  IPOC Station P   89.05 134   P        P         15 09 26.9  +0.2
PB08                               IAmb     IAmb      15 09 28.7
      comp=Z,40nm,1.3s
PSGCX Pisagua          89.22 133   P        P         15 09 27.0  -0.1
GO01  Chusmiza         89.47 133   P        P         15 09 29.5  +0.6
MNMC  Minye Minye      89.83 133   P        P         15 09 30.3   0.0
AP01  Chacalluta       90.27 132   IAMs_20  IAMs_20   15 41 08.9
      comp=Z,2µm,19.0s
QIZ   Qiongzhong       90.27 312   P        P         15 09 31.6  -0.1
QIZ                                S        S         15 20 26.2  +0.6
QIZ                                SS       SS        15 26 28.7  +3.0
QIZ                                LR       LR
      comp=Z,390nm,8.6s
QIZ                                LR       LR
      comp=Z,490nm,17.8s
QIZ                                LR       LR
      comp=Z,540nm,18.5s
PBA   Port Blair       90.35 294   IAMs_20  IAMs_20   15 43 17.0
      comp=Z,1µm,22.0s
PB16  IPOC Station P   90.60 133   P        P         15 09 34.4  +0.2
PB16                               IAmb     IAmb      15 09 35.8
      comp=Z,25nm,1.3s
PB16                               IAMs_20  IAMs_20   15 39 50.6
      comp=Z,1µm,21.0s
NNA   Nana             93.68 124   IAMs_20  IAMs_20   15 42 21.2
      comp=Z,1µm,20.0s
CM04  Chiang Mai Arr   93.79 303   P        P         15 09 51.9  +3.8
CM05  Chiang Mai Arr   93.81 303   P        P         15 09 51.0  +2.9
CM01  Chiang Mai Arr   93.82 303   P        P         15 09 53.2  +5.1
CM09  Chiang Mai Arr   93.83 303   P        P         15 09 52.0  +3.8
CM02  Chiang Mai Arr   93.84 303   P        P         15 09 52.5  +4.2
CM13  Chiang Mai Arr   93.84 303   P        P         15 09 52.0  +3.7
CM36  Chiang Mai Arr   93.85 303   P        P         15 09 51.0  +2.7
CM31  Chiang Mai Arr   93.86 303   P        P         15 09 52.0  +3.6
CMAR  Chiang Mai Arr   93.86 303   P        P         15 09 48.5  +0.1
      comp=Z,3.3nm,1.0s,baz=187,slow=3.9,SNR=16
CMAR                               LR       LR        15 49 53.7
      comp=Z,552nm,19.3s,baz=198,slow=34
CM15  Chiang Mai Arr   93.86 303   P        P         15 09 51.0  +2.6
CM35  Chiang Mai Arr   93.97 303   P        P         15 09 50.0  +1.1
CM34  Chiang Mai Arr   94.13 303   P        P         15 09 52.0  +2.4
CMMT  Chiang Mai       94.18 303   P        P         15 09 52.6  +2.7
CHTO  Chiang Mai       94.18 303   P        P         15 09 49.8   0.0
CHTO                               pmax     pmax
      comp=Z,15nm,1.2s
CHTO  Chiang Mai       94.18 303   P        P         15 09 49.8   0.0
CM33  Chiang Mai Arr   94.18 303   P        P         15 09 52.0  +2.2
LSZ   Lusaka           94.76 225   IAMs_20  IAMs_20   15 54 27.2
      comp=Z,2µm,19.0s
SIV   San Ignacio      95.57 139   P        P         15 09 56.2  -0.2
      comp=Z,6.5nm,1.1s,baz=208,slow=7.0,SNR=12
JMN   Monobe           97.73 337   IAMs_20  IAMs_20   16 01 53.6
      comp=Z,1µm,20.0s
KMI   Kunming          98.43 309  eP        Pdif      15 10 09.8  +0.5
KMI                                pP       pwP       15 10 14.7  +0.4
KMI                                PP       PP        15 14 11.2  +1.4
KMI                                S        S         15 21 36.0  -1.5
KMI                                sS       sS        15 21 43.6  +1.9
KMI                                pmax     pmax
      comp=Z,6.0nm,0.7s
KMI                                pmax     pmax
      comp=Z,210nm,4.7s
KMI                                LR       LR
      comp=Z,570nm,18.8s
KMI                                LR       LR
      comp=Z,360nm,23.2s
KMI                                LR       LR
      comp=Z,680nm,22.1s
BDFB  Brasilia         99.42 151   LR       LR        15 51 28.4
      comp=Z,662nm,21.8s,baz=160,slow=33
NJ2   Nanjing          99.59 324  eP        Pdif      15 10 14.7  +0.7
NJ2                                pmax     pmax
      comp=Z,7.0nm,0.5s
MJAR  Matsushiro Arr   99.75 341   LR       LR        15 55 50.4
      comp=Z,270nm,18.3s,baz=180,slow=36
KMBO  Kilima Mbogo    104.40 239   PKKPbc   PKKPbc    15 26 25.4  +5.8
      comp=Z,4.9nm,0.8s,baz=197,slow=23,SNR=11
H06S1 SOCORRO T       105.27  79   T        T         17 08 16.8
      SNR=83
MBAR  Mbarara         107.44 233   IAMs_20  IAMs_20   16 03 43.4
      comp=Z,1µm,20.0s
LZH   Lanzhou         107.98 314   Pdif     Pdif      15 10 50.9  -0.5
LZH                                LR       LR
      comp=Z,330nm,15.5s
LZH                                LR       LR
      comp=Z,520nm,16.3s
LZH                                LR       LR
      comp=Z,330nm,16.8s
ROSC  El Rosal        109.96 119   IAMs_20  IAMs_20   15 52 46.5
      comp=Z,1µm,19.0s
JTS   Las Juntas de   110.17 106   IAMs_20  IAMs_20   15 50 27.2
      comp=Z,1µm,21.0s
RCBR  Riachuelo       111.29 162   IAMs_20  IAMs_20   16 02 21.3
      comp=Z,799nm,19.0s
MTO3  Montecristo     111.72 100   IAMs_20  IAMs_20   16 05 59.4
      comp=Z,1µm,21.0s
SRIG  Santa Rosalia   112.07  73   IAMs_20  IAMs_20   15 57 42.9
      comp=Z,1µm,18.0s
ESPN  Las Esperanzas  112.14 106   IAMs_20  IAMs_20   15 51 43.5
      comp=Z,771nm,19.0s
ZAIG  Zacatecas       112.68  84   IAMs_20  IAMs_20   15 53 21.5
      comp=Z,843nm,19.0s
HSIG                  114.11  73   IAMs_20  IAMs_20   15 56 32.9
      comp=Z,783nm,19.0s
ESJX  Sierra Juarez   114.41  68   IAMs_20  IAMs_20   15 54 47.7
      comp=Z,863nm,20.0s
TKX   Tecate          114.60  67   IAMs_20  IAMs_20   16 06 20.8
      comp=Z,830nm,19.0s
109C  Camp Elliot, M  114.66  66   IAMs_20  IAMs_20   15 55 36.2
      comp=Z,796nm,20.0s
BAR   Barrett         114.67  67   IAMs_20  IAMs_20   15 58 10.5
      comp=Z,824nm,18.0s
HPIG                  114.78  79   IAMs_20  IAMs_20   15 53 11.8
      comp=Z,1µm,19.0s
RMX   La Rumorosa     114.86  67   IAMs_20  IAMs_20   15 55 17.2
      comp=Z,1µm,20.0s
UABX  UABC, Campus M115.17  68   IAMs_20  IAMs_20   15 55 23.7
      comp=Z,954nm,22.0s
PFO   Pinyon Flats O  115.55  66   IAMs_20  IAMs_20   15 59 38.0
      comp=Z,1µm,18.0s
XPFO  Pion Flat       115.56  66   IAMs_20  IAMs_20   15 59 38.3
      comp=Z,1µm,18.0s
214A  Organ Pipe Nat  115.76  70   IAMs_20  IAMs_20   15 58 23.6
      comp=Z,640nm,19.0s
GLA   Glamis          115.79  68   IAMs_20  IAMs_20   16 03 06.4
      comp=Z,885nm,18.0s
319A  Douglas         116.86  73   IAMs_20  IAMs_20   16 01 01.9
      comp=Z,772nm,18.0s
TUC   Tucson          116.97  72   IAMs_20  IAMs_20   15 52 01.7
      comp=Z,704nm,18.0s
ULN   Ulaanbaatar     117.60 322  iPKIKP    PKiKP     15 15 16.5  +0.3
CMB   Columbia Colle  117.64  61   IAMs_20  IAMs_20   15 52 40.0
      comp=Z,1µm,21.0s
TXAR  Lajitas Array   117.74  79   PKP      PKiKP     15 15 18.5  +1.4
      comp=Z,0.5nm,1.0s,baz=182,slow=6.3,SNR=2.2
TXAR                               PKKP     PKKPdf    15 25 54.0   -10
      comp=Z,0.5nm,0.8s,baz=77,slow=2.9,SNR=4.6
SONM  Songino Array   117.77 321   PKP      PKPdf     15 15 16.1  -0.4
      comp=Z,0.3nm,0.6s,baz=145,slow=5.3,SNR=2.5
SONM                               PKKPbc   PKKPab    15 25 37.9  -0.3
      comp=Z,0.9nm,1.0s,baz=357,slow=0.9,SNR=4.9
MDPB  Devils Postpil  117.85  62   IAMs_20  IAMs_20   15 53 00.5
      comp=Z,989nm,22.0s
W13A  Hualapai Mount  117.94  68   IAMs_20  IAMs_20   15 57 20.2
      comp=Z,782nm,20.0s
AFDM  Forest Hills D  118.17  60   IAMs_20  IAMs_20   15 58 17.1
      comp=Z,1µm,18.0s
WAKR  Walker          118.43  61   IAMs_20  IAMs_20   15 58 56.2
      comp=Z,1µm,18.0s
EPT   El Paso         118.47  76   IAMs_20  IAMs_20   15 54 20.5
      comp=Z,984nm,18.0s
ORV   Oroville        118.47  59   PKIKP    PKPdf     15 15 17.2  -0.8
ORV   Oroville        118.47  59   PKPdf    PKPdf     15 15 17.2  -0.8
ORV                                IAMs_20  IAMs_20   15 58 27.0
      comp=Z,819nm,18.0s
121A  Cookes Peak, D  118.52  74   IAMs_20  IAMs_20   16 02 41.8
      comp=Z,784nm,19.0s
SHPR  Sheep Range     118.57  66   IAMs_20  IAMs_20   15 58 45.8
      comp=Z,748nm,21.0s
RUBR  Rubicon Trail   118.60  60   IAMs_20  IAMs_20   15 54 25.4
      comp=Z,1µm,22.0s
LHV   Little Huntoon  118.61  62   IAMs_20  IAMs_20   15 53 14.8
      comp=Z,1µm,21.0s
NVAR  Mina Array Bea  118.85  62   PKP      PKPdf     15 15 18.8  -0.3
      comp=Z,0.4nm,0.5s,baz=182,slow=2.5,SNR=7.4
NVAR                               PKKPbc   PKKPab    15 25 36.3  +1.6
      comp=Z,0.6nm,0.9s,baz=67,slow=5.0,SNR=5.3
PNTR  Pine Nut        118.86  61   IAMs_20  IAMs_20   16 04 15.3
      comp=Z,1µm,20.0s
NV11  Mina Array Sit  118.91  62   IAMs_20  IAMs_20   15 54 32.7
      comp=Z,1µm,21.0s
RYN   Ryan            118.92  62   IAMs_20  IAMs_20   15 54 43.1
      comp=Z,1µm,21.0s
WDC   Whiskeytown Da  118.92  58   IAMs_20  IAMs_20   15 55 12.8
      comp=Z,1µm,22.0s
MNTX  Cornudas Mount  118.92  76   IAMs_20  IAMs_20   15 56 26.6
      comp=Z,1µm,20.0s
O03E  Paynes Creek    118.98  58   P        PKiKP     15 15 21.5  +2.5
      baz=212
VCNR  Virginia City   119.02  61   IAMs_20  IAMs_20   15 54 38.5
      comp=Z,1µm,20.0s
BEKR  Beckworth       119.20  60   IAMs_20  IAMs_20   15 55 53.3
      comp=Z,940nm,20.0s
X18A  Snowflake       119.21  71   IAMs_20  IAMs_20   16 00 40.0
      comp=Z,592nm,19.0s
PAHR  Pah Rah Range   119.47  61   IAMs_20  IAMs_20   15 55 05.6
      comp=Z,1µm,22.0s
M02C  Callahan        119.49  57   P        PKiKP     15 15 22.4  +2.4
      baz=212
R11A  Troy Canyon, C  119.93  64   P        PKiKP     15 15 23.0  +1.9
      baz=213
R11A  Troy Canyon, C  119.93  64   IAMs_20  IAMs_20   16 00 40.9
      comp=Z,870nm,20.0s
Y22D  IRIS PASSCAL I  120.20  74   IAMs_20  IAMs_20   16 03 52.3
      comp=Z,883nm,18.0s
HUMO  Hull Mountain   120.47  56   PKPdf    PKiKP     15 15 23.5  +1.7
MTDJ  Mount Denham    120.50 109   IAMs_20  IAMs_20   15 54 28.1
      comp=Z,601nm,18.0s
WMQ   Urumqi          120.65 306  ePKP      PKiKP     15 15 23.3  +1.1
WMQ                                LR       LR
      comp=Z,950nm,24.1s
WMQ                                LR       LR
      comp=Z,760nm,24.9s
KBL   Kabul           120.79 286   IAMs_20  IAMs_20   15 59 00.2
      comp=Z,677nm,20.0s
MOD   Modoc Plateau   120.94  59   IAMs_20  IAMs_20   15 55 37.3
      comp=Z,1µm,19.0s
ZAK   Zakamensk       120.97 321  ePKIKP    PKiKP     15 15 23.6  +0.9
ZAK                                pmax     pmax
      comp=Z,3.0nm,1.4s
ANMO  Albuquerque     121.14  74   IAMs_20  IAMs_20   16 04 49.1
      comp=Z,828nm,18.0s
KSH   Kashi           121.83 295   PKP      PKiKP     15 15 27.1  +2.3
TLY   Talaya          122.00 322  iPKIKP    PKPdf     15 15 22.4  -2.0
TLY                                pmax     pmax
      comp=Z,16nm,1.3s
MSTX  Muleshoe        122.03  77   IAMs_20  IAMs_20   15 57 28.7
      comp=Z,953nm,18.0s
ELK   Elko            122.08  63   IAMs_20  IAMs_20   15 55 18.5
      comp=Z,1µm,20.0s
PINE  Pine Mountain   122.27  57   PKPdf    PKiKP     15 15 26.2  +0.6
ABTX  Abilene, Hawle  122.37  81   IAMs_20  IAMs_20   15 57 55.9
      comp=Z,926nm,19.0s
I05D  Terrebonne, OR  122.57  56   P        PKiKP     15 15 27.9  +1.9
      baz=213
RAYN  Ar Rayn         122.61 259   PKIKP    PKiKP     15 15 27.2  +0.5
RAYN  Ar Rayn         122.61 259            PKiKP     15 15 27.2  +0.5
PV14  Lion Creek, Pa  122.82  69   IAMs_20  IAMs_20   16 04 43.4
      comp=Z,800nm,19.0s
PV07  Paradox Valley  123.04  70   IAMs_20  IAMs_20   15 57 48.3
      comp=Z,790nm,20.0s
AMTX  Amarillo        123.29  77   IAMs_20  IAMs_20   15 58 19.1
      comp=Z,944nm,20.0s
SHLS  Shalkode        123.37 300  ePKP      PKiKP     15 15 27.5  -0.2
      baz=300
SHLS  Shalkode        123.37 300  ePKIKP    PKiKP     15 15 27.5  -0.2
SATY  Saty            123.73 299  ePKP      PKiKP     15 15 28.8  +0.4
      baz=299
SATY  Saty            123.73 299  ePKIKP    PKiKP     15 15 28.8  +0.4
T25A  Trinidad        123.88  74   IAMs_20  IAMs_20   15 57 39.8
      comp=Z,736nm,20.0s
KPKS  Kokpek          123.95 300  ePKP      PKiKP     15 15 29.1  +0.3
      baz=299
KPKS  Kokpek          123.95 300  ePKIKP    PKiKP     15 15 29.0  +0.3
NATX  Nacogdoches     124.00  85   IAMs_20  IAMs_20   16 08 39.4
      comp=Z,551nm,18.0s
MFID  Camas Ranch     124.03  61   PKPdf    PKiKP     15 15 29.7  +0.7
DBIC  Dimbokro        124.05 197   PKP      PKPdf     15 15 29.4  -0.1
      comp=Z,3.7nm,0.8s,baz=163,slow=1.7,SNR=5.2
G08A  Pilot Rock      124.30  57            PKiKP     15 15 29.9  +0.5
G08A                               IAMs_20  IAMs_20   15 57 02.2
      comp=Z,963nm,21.0s
TNSS  Tian-Shan       124.32 298  ePKP      PKPdf     15 15 29.6  -0.1
      baz=298
TNSS  Tian-Shan       124.32 298  ePKIKP    PKPdf     15 15 29.5  -0.1
MDOK  Medeo           124.38 298  ePKP      PKiKP     15 15 29.8  +0.1
      baz=298
MDOK                              ePP       PP        15 17 16.0  -0.1
      baz=298
MDOK  Medeo           124.38 298  ePKIKP    PKiKP     15 15 29.8  +0.1
MDOK                              e                   15 17 15.9
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WMOK	Wichita Mounta	124.52	80	PKIKP	PKPdf	15 15 27.0	-2.8
WMOK	Wichita Mounta	124.52	80		PKPdf	15 15 27.0	-2.8
WMOK	Wichita Mounta	124.52	80	IAMs_20	IAMs_20	16 00 37.8	
	comp=Z,794nm,20.0s						
BMO	Blue Mountains	124.61	59	PKIKP	PKPdf	15 15 28.7	-1.0
BMO				MLR	MLR		
	comp=Z,1µm,18.0s						
BMO	Blue Mountains	124.61	59	PKPdf	PKPdf	15 15 28.7	-1.0
BMO				IAMs_20	IAMs_20	16 06 48.3	
	comp=Z,961nm,18.0s						
HLID	Hailey	124.74	62	IAMs_20	IAMs_20	15 59 04.1	
	comp=Z,806nm,18.0s						
ZSN	Zaisan	124.77	307	*e*PKP	PKiKP	15 15 30.6	+0.4
	baz=306						
ZSN	Zaisan	124.77	307	*e*PKIKP	PKiKP	15 15 30.5	+0.4
HAWA	Hanford	124.98	56	PKPdf	PKiKP	15 15 30.8	+0.2
E07A	Sunnyside	124.99	56	PKPdf	PKPdf	15 15 29.7	-0.6
AAK	Ala-Archa	125.03	296	PKP	PKPdf	15 15 29.8	-0.9
	comp=Z,1.0nm,0.8s,baz=142,slow=2.6,SNR=6.4						
Q24A	Divide	125.04	72	IAMs_20	IAMs_20	16 04 59.3	
	comp=Z,736nm,19.0s						
MK31	Makanchi Array	125.23	304	PKIKP	PKPdf	15 15 30.1	-0.7
MK31	Makanchi Array	125.23	304	PKPdf	PKPdf	15 15 30.1	-0.7
MKAR	Makanchi Array	125.23	304	PKP	PKPdf	15 15 30.1	-0.7
	comp=Z,2.5nm,1.0s,baz=153,slow=1.4,SNR=14						
KUU	Kurty	125.27	298	*e*PKP	PKiKP	15 15 31.4	+0.1
	baz=298						
KUU	Kurty	125.27	298	*e*PKIKP	PKiKP	15 15 31.4	+0.1
TDK	Taldyqorghan	125.32	300	*e*PKP	PKiKP	15 15 31.8	+0.5
	baz=300						
TDK	Taldyqorghan	125.32	300	*e*PKIKP	PKiKP	15 15 31.8	+0.5
ISCO	Idaho Springs	125.51	71	IAMs_20	IAMs_20	16 02 12.6	
	comp=Z,600nm,20.0s						
DGZ	Jazzator, Alta	125.68	310	*i* PKIKP	PKPdf	15 15 31.1	-0.6
YAK	Yakutsk	125.80	342	*e*PKIKP	PKiKP	15 15 32.9	+1.2
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
BW06	Boulder Array	126.17	66	P	PKiKP	15 15 34.5	+1.1
	baz=216						
BW06	Boulder Array	126.17	66	PKPdf	PKiKP	15 15 34.0	+0.6
PD31	Pinedale Array	126.17	66		PKiKP	15 15 33.8	+0.4
PDAR	Pinedale Array	126.17	66	PKP	PKiKP	15 15 33.1	-0.2
	comp=E,3.4nm,1.1s,baz=211,slow=1.7,SNR=13						
N23A	Red Feather La	126.25	70	IAMs_20	IAMs_20	16 07 56.2	
	comp=Z,807nm,18.0s						
LOHW	Long Hollow	126.40	64		PKiKP	15 15 34.0	+0.2
LOHW				IAMs_20	IAMs_20	16 13 25.3	
	comp=Z,829nm,19.0s						
OK030	Cody Creek RV	126.43	81	IAMs_20	IAMs_20	16 01 38.5	
	comp=Z,879nm,19.0s						
MOOW	Moose Ponds	126.45	64	PKPdf	PKiKP	15 15 33.8	-0.1
IUG	Iuzhnay	126.57	292	*e*PKP	PKPdf	15 15 33.6	0.0
	baz=292						
IUG	Iuzhnay	126.57	292	*e*PKIKP	PKPdf	15 15 33.6	0.0
GAMB	Gambell	126.87	15	IAMs_20	IAMs_20	15 57 13.5	
	comp=Z,780nm,20.0s						
DLMT	Dillon	126.96	62	IAMs_20	IAMs_20	16 11 53.8	
	comp=Z,839nm,19.0s						
BTLS	Baital	127.17	297	*e*PKP	PKiKP	15 15 35.1	+0.1
	baz=297						
BTLS	Baital	127.17	297	*e*PKIKP	PKiKP	15 15 35.1	+0.1
YHH	Holmes Hill	127.24	63	PKPdf	PKiKP	15 15 36.7	+1.1
T35A	Sooner Cattle	127.36	80	IAMs_20	IAMs_20	16 01 13.0	
	comp=Z,952nm,19.0s						
R32A	Long Quarter,	127.55	77	IAMs_20	IAMs_20	16 03 51.9	
	comp=Z,1µm,20.0s						
BOZ	Bozeman (W)	127.56	62	PKIKP	PKiKP	15 15 36.0	+0.1
BOZ	Bozeman (W)	127.56	62	P	PKiKP	15 15 36.6	+0.6
	baz=217						
BOZ	Bozeman (W)	127.56	62		PKiKP	15 15 36.0	+0.1
BOZ				IAMs_20	IAMs_20	16 03 38.6	
	comp=Z,892nm,18.0s						
MSO	Missoula	127.59	60	P	PKiKP	15 15 37.1	+1.2
	baz=217						
MSO	Missoula	127.59	60	PKPdf	PKiKP	15 15 35.8	-0.1
ANM	Nome	128.46	18	PKIKP	PKiKP	15 15 37.3	+0.3
ANM	Nome	128.46	18	PKPdf	PKiKP	15 15 37.3	+0.3
SEM	Semipalatinsk	128.95	306	*e*PKP	PKPdf	15 15 38.0	0.0
	baz=306						
SEM	Semipalatinsk	128.95	306	*e*PKIKP	PKPdf	15 15 37.9	0.0
SML	Sawmill	129.07	28	IAMs_20	IAMs_20	16 09 43.3	
	comp=Z,585nm,19.0s						
TOA0	Torodi Ar. Sit	129.26	206	PKPdf	PKPdf	15 15 38.8	-0.6
TORD	Torodi Ar. Bea	129.26	206	PKP	PKPdf	15 15 39.1	-0.3
	comp=Z,9.8nm,1.0s,baz=297,slow=0.2,SNR=28						
WALA	Waterton Lakes	129.37	58	IAMs_20	IAMs_20	16 08 31.4	
	comp=Z,989nm,19.0s						
KURBB	Kurchatov Arra	129.79	305	PKP	PKPdf	15 15 38.5	-0.7
	comp=Z,2.6nm,1.0s,baz=168,slow=1.9,SNR=13						
KURK	Kurchatov	129.83	305	PKIKP	PKPdf	15 15 38.5	-0.8
KURK	Kurchatov	129.83	305		PKiKP	15 15 40.1	0.0
ZALV	Zalesovo Beam	130.08	311	PKP	PKPdf	15 15 38.3	-1.3
	comp=Z,0.4nm,0.5s,baz=46,slow=4.7,SNR=4.2						
ZALV				PP	PP	15 17 58.8	+5.4
	comp=Z,0.3nm,0.4s,baz=90,slow=4.3,SNR=2.0						
TRF	Thorofare Moun	130.11	26	IAMs_20	IAMs_20	16 01 20.6	
	comp=Z,881nm,20.0s						
L34A	Svendsen Farm,	131.45	76	IAMs_20	IAMs_20	16 09 19.1	
	comp=Z,808nm,19.0s						
WRH	Wood River Hil	131.47	27	IAMs_20	IAMs_20	16 02 37.6	
	comp=Z,786nm,21.0s						
KOWA	Kowa	131.62	199	PKPdf	PKPdf	15 15 42.9	-1.0
BRZS	Berezniki	131.63	300	*e*PKP	PKiKP	15 15 43.6	-0.2
	baz=300						
BRZS	Berezniki	131.63	300	*e*PKIKP	PKiKP	15 15 43.6	-0.2
CCB	Clear Creek Bu	131.69	27	IAMs_20	IAMs_20	16 01 55.2	
	comp=Z,835nm,22.0s						
COLA	College	131.87	26	*i* PKIKP	PKPdf	15 15 43.1	+0.4
SCRK	Sand Creek	131.95	29	P	PKiKP	15 15 45.7	+1.5
	baz=212						
IL31		131.99	27		PKPdf	15 15 42.5	-0.5
ILAR	Eielson Array	131.99	27	PKP	PKPdf	15 15 42.9	-0.2
	comp=Z,3.2nm,1.0s,baz=298,slow=1.4,SNR=13						
POKR	Poker Plat Res	132.17	26	IAMs_20	IAMs_20	16 02 58.2	
	comp=Z,806nm,22.0s						
PRP	Porcupine Dome	132.93	27	IAMs_20	IAMs_20	16 03 22.5	
	comp=Z,864nm,21.0s						
COLD	Coldfoot	133.46	24	IAMs_20	IAMs_20	16 06 10.0	
	comp=Z,995nm,20.0s						
FYU	Fort Yukon	133.89	26	IAMs_20	IAMs_20	16 03 41.8	
	comp=Z,681nm,21.0s						
TOLK	Toolik Lake Re	134.81	23	IAMs_20	IAMs_20	16 07 35.7	
	comp=Z,994nm,21.0s						
BVAR	Borovoye Array	134.88	302	PKP	PKPdf	15 15 47.8	-1.0
	comp=Z,0.2nm,0.4s,baz=77,slow=6.2,SNR=1.9						
BRVK	Borovoye	134.94	302	*i* PKIKP	PKPdf	15 15 49.2	+0.3
TIXI	Tiksi	135.02	346	PKIKP	PKPdf	15 15 47.2	-1.3
TIXI	Tiksi	135.02	346		PKPdf	15 15 47.2	-1.3
MAK	Makhachkala	137.57	275	*e*P	Pdif	15 13 01.7	-0.9
MAK				*i*		15 15 53.2	
MAK				*e*		15 18 38.4	
MAK				*e*		15 23 03.6	
MAK				pmax	pmax		
	comp=Z,450nm,1.5s						
TAM	Tamanrasset	137.63	214	IAMs_20	IAMs_20	16 11 00.9	
	comp=Z,945nm,22.0s						
INK	Inuvik	137.95	30	PKhKP	PKPpre	15 15 49.8	
	comp=Z,4.1nm,1.0s,baz=197,slow=8.2,SNR=5.7						
INK	Inuvik	137.95	30	PKIKP	PKPdf	15 15 51.7	-2.3
INK	Inuvik	137.95	30	PKPdf	PKPdf	15 15 51.7	-2.3
INK				IAMs_20	IAMs_20	16 08 14.1	
	comp=Z,949nm,21.0s						
EYMN	Ely	138.24	75	IAMs_20	IAMs_20	16 09 45.8	
	comp=Z,926nm,20.0s						
YKA	Yellowknife Ar	139.16	45	PKhKP	PKPpre	15 15 48.4	
	comp=Z,3.5nm,0.9s,baz=222,slow=3.0,SNR=14						
KIV	Kislovodsk	140.61	272	IAMs_20	IAMs_20	16 11 10.4	
	comp=Z,559nm,22.0s						
NRIK	Noril'sk	140.82	327	PKP	PKPdf	15 15 57.7	-1.5
	comp=Z,2.6nm,0.7s,baz=121,slow=2.4,SNR=5.6						
NRIK	Noril'sk	140.82	327	*i* PKIKP	PKPdf	15 15 59.8	+0.5
NRIK	Noril'sk	140.82	327	PKPdf	PKPdf	15 15 59.8	+0.5
NRIK				IAMs_20	IAMs_20	16 17 01.8	
	comp=Z,919nm,21.0s						
SVE	Sverdlovsk	141.55	300	*e*PKIKP	PKPdf	15 15 58.9	-2.0
BRTR	Keskin Array B	141.62	260	PKhKP	PKPpre	15 15 57.7	
	comp=Z,0.6nm,0.6s,baz=140,slow=2.8,SNR=2.0						
BRTR				PP	PP	15 19 06.1	-0.1
	comp=Z,1.1nm,1.0s,baz=104,slow=6.1,SNR=2.3						
ARU	Arti	142.15	298	*i* PKIKP	PKPdf	15 16 00.7	-1.3
ARU				SS	SS	15 37 36.9	-6.0
DELO	Deloro Mine	142.23	89	IAMs_20	IAMs_20	16 28 29.9	
	comp=Z,658nm,19.0s						
BELG	Belogornoye	144.30	286	*i* PKIKP	PKPdf	15 16 06.1	+0.2
FCC	Fort Churchill	144.44	60	PKIKP	PKPab	15 16 04.0	-0.3
FCC	Fort Churchill	144.44	60	PKPdf	PKPab	15 16 04.0	-0.3
H60A	Morristown	144.59	94	P	PKPab	15 16 05.4	0.0
	baz=222						
I62A	Tamworth	144.72	96	P	PKPbc	15 16 06.0	+0.1
	baz=221						
G59A	Clarenceville	144.75	93	P	PKPdf	15 16 06.4	-0.5
	baz=222						
ITM	Ithomi	144.83	245	PKPdf	PKPab	15 16 05.8	-0.6
VLDQ	Val d'Or	144.92	85	PKPdf	PKPab	15 16 05.4	-1.0
H61A	Lyndonville	144.94	94	P	PKPdf	15 16 07.4	0.0
	baz=222						
E56A	St. Veronique	144.95	89	P	PKPab	15 16 06.4	-0.2
	baz=224						
D55A	Sainte-Anne-du	145.08	88	P	PKPab	15 16 07.1	+0.1
	baz=224						
G60A	Masonville	145.17	93	P	PKPbc	15 16 06.9	-0.5
	baz=222						
I63A	Otisfield	145.22	96	P	PKPbc	15 16 07.3	-0.2
	baz=221						
H62A	Milan	145.34	95	P	PKPab	15 16 09.0	+1.0
	baz=222						
H62A	Milan	145.34	95		PKPbc	15 16 07.9	0.0
MOQ	Mont Orford	145.37	93		PKPbc	15 16 07.7	-0.4
SIM	Simferopol'	145.42	266	PKHKP	PKPpre	15 16 04.8	
SIM				*i*		15 16 08.4	
SIM				pmax	pmax		
	comp=Z,15nm,1.0s						
SIM				pmax	pmax		
	comp=Z,50nm,1.3s						
F59A	Saint Guilaume	145.51	92	P	PKPab	15 16 08.6	0.0
	baz=223						
I64A	Boothbay	145.56	97	P	PKPab	15 16 08.8	-0.1
	baz=221						
E58A	La Victoria	145.66	91	P	PKPbc	15 16 08.9	+0.1
	baz=224						
LSQQ	Lebel-sur-Quev	145.81	85	P	PKPab	15 16 09.6	-0.1
	baz=226						
H63A	New Sharon	145.93	96	P	PKPab	15 16 11.0	+0.7
	baz=222						
MATQ	Matagami	145.98	83	P	PKPbc	15 16 09.8	+0.1
	baz=227						
AGG	Agios Georgios	146.19	247	PKP2	PKPdf	15 16 10.1	+0.4
AGG	Agios Georgios	146.19	247	PKPdf	PKPdf	15 16 10.1	+0.4
VRH	Novokhopyorsk	146.24	280	*e*PKP2	PKPbc	15 16 09.9	-0.5
VRH				pmax	pmax		
	comp=Z,60nm,1.8s						
D58A	Chemin du LacG	146.37	91	P	PKPbc	15 16 11.2	+0.2
	baz=224						
LIT	Litokhoron	147.01	248	PKP2	PKPdf	15 16 11.9	+0.9
LIT	Litokhoron	147.01	248	PKPdf	PKPdf	15 16 11.9	+0.9
VORD	Divnogorie	147.22	278	*e*PKIKP	PKPdf	15 16 11.0	+0.1
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
KIRV	Kirov	147.37	296	PKPbc	PKPbc	15 16 12.9	-0.5
	comp=Z,13nm,0.7s,baz=103,slow=3.4,SNR=11						
KIRV	Kirov	147.37	296	*i* PKIKP	PKPdf	15 16 11.6	+0.7
VSR	Storozhevoye	147.45	278	*e*PKP2	PKPdf	15 16 12.5	+1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIRR	Tirgusor	147.74	260	⇑P	PKPbc	15 16 14.4	-0.5
TIRR	Tirgusor	147.74	260	⇑PKP2	PKPbc	15 16 14.4	-0.5
TIRR	Tirgusor	147.74	260		PKPbc	15 16 13.7	-1.2
E63A	Oxbow	148.00	95	P	PKPab	15 16 18.3	0.0
	baz=223						
E63A	Oxbow	148.00	95		PKiKP	15 16 17.5	+0.2
TPGR	Topolog	148.04	260	⇑P	PKPbc	15 16 15.1	-0.7
FNA	Florina	148.06	248	PKP2	PKPbc	15 16 15.0	-1.0
FNA	Florina	148.06	248		PKPbc	15 16 15.0	-1.0
CEL	Celeste	148.27	238		PKPbc	15 16 16.5	-0.1
PQI	Presque Isle	148.37	96		PKiKP	15 16 18.7	+0.6
CFR	Carcaliu	148.41	260	⇑P	PKPbc	15 16 16.4	-0.3
CFR	Carcaliu	148.41	260	⇑PKP2	PKPbc	15 16 16.4	-0.3
LPSR	Galich'ya Gora	148.46	280	*e*PKP2	PKPbc	15 16 16.0	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,1.1s						
KEST	Kesra	148.52	227	PKPbc	PKPbc	15 16 18.0	+0.6
	comp=Z,11nm,0.9s,baz=203,slow=1.4,SNR=9.3						
KEST	Kesra	148.52	227		PKPbc	15 16 17.4	+0.1
OHR	Ohrid	148.58	247	*i* P	PKPbc	15 16 17.7	+0.3
TIP	Timpagrande	148.69	240	⇑P	PKPbc	15 16 18.0	+0.3
TIP	Timpagrande	148.69	240		PKPbc	15 16 17.8	+0.1
VTS	Vitosha	148.70	252	⇑P	PKPbc	15 16 16.8	-0.9
VTS	Vitosha	148.70	252	⇑PKP2	PKPbc	15 16 16.8	-0.9
SCTE	Santa Cesarea	148.73	243	IAMs_20	IAMs_20	16 30 06.1	
	comp=Z,682nm,18.0s						
HAL	Halifax	148.94	103	IAMs_20	IAMs_20	16 14 51.9	
	comp=Z,812nm,20.0s						
CORL	Corleone	148.98	234		PKPbc	15 16 18.9	+0.4
SKO	Skopje	148.99	249	*i* P	PKPbc	15 16 18.2	-0.1
BISRR	Bisoca	149.36	259	⇑P	PKiKP	15 16 19.7	-0.6
MILM	Milestii Mici	149.38	263	⇑P	PKPbc	15 16 19.2	+0.1
NEHR	Nehoiu	149.46	259	⇑P	PKPbc	15 16 18.7	-0.7
VRI	Vrincioaia	149.59	260	⇑P	PKPbc	15 16 18.8	-0.8
VRI	Vrincioaia	149.59	260	⇑PKP2	PKPbc	15 16 18.8	-0.8
ABSA	Djebel Ababsia	149.65	225	P	PKiKP	15 16 21.1	-0.1
VASR	Vaslui	149.66	262	⇑P	PKPbc	15 16 18.8	-1.0
MLR	Muntele Rosu	149.67	258	⇑P	PKPbc	15 16 19.4	-0.6
MLR	Muntele Rosu	149.67	258	⇑PKP2	PKPbc	15 16 19.4	-0.6
MLR	Muntele Rosu	149.67	258		PKPbc	15 16 19.5	-0.6
CASM	Ain Smara	149.96	223	P	PKPbc	15 16 21.3	+0.4
CMAH	Djebel Manchou	149.98	225	P	PKPbc	15 16 21.3	+0.3
CKFL	Kef-Lekhel	150.01	224	P	PKiKP	15 16 21.9	-0.1
VOIR		150.05	257	⇑P	PKPbc	15 16 19.8	-1.0
VOIR		150.05	257	⇑PKIKP	PKPbc	15 16 19.8	-1.0
TESR	Tescani	150.10	260	⇑P	PKPbc	15 16 20.2	-0.6
OZUR		150.19	259	⇑P	PKPbc	15 16 20.3	-0.8
DOPR	Dopca	150.28	258	⇑P	PKPbc	15 16 20.9	-0.4
PDG	Podgorica	150.32	247	⇑P	PKPbc	15 16 21.3	-0.2
PDG	Podgorica	150.32	247		PKPbc	15 16 20.9	-0.5
DFRA	Djebel Bou Aff	150.42	223	P	PKiKP	15 16 22.9	+0.1
SORM	Soroca	150.47	264	⇑P	PKPbc	15 16 19.5	-2.1
SORM	Soroca	150.47	264	⇑PKIKP	PKPbc	15 16 19.5	-2.1
LOT	Lotru	150.65	256	⇑P	PKPbc	15 16 21.9	-0.4
BIZ	Bicaz	150.67	260	⇑P	PKPbc	15 16 21.1	-1.1
HERR	Herculane	150.84	254	⇑P	PKPbc	15 16 22.0	-0.6
PRAR	RASCA	150.92	261	⇑P	PKPbc	15 16 22.2	-0.5
MOS	Moscow	150.99	284	*i* PKIKP	PKiKP	15 16 23.5	+0.3
MOS				pmax	pmax		
	comp=Z,103nm,1.7s						
GZR	Gura Zlata	151.06	255	⇑P	PKPbc	15 16 22.9	-0.3
GZR	Gura Zlata	151.06	255	⇑PKIKP	PKPbc	15 16 23.0	-0.3
MDVR	Moldovita	151.08	253	⇑P	PKPbc	15 16 23.1	-0.2
OBN	Obninsk	151.11	282	⇑P	PKPbc	15 16 22.8	-0.1
OBN	Obninsk	151.11	282	⇓*e*PKIKP	PKPdf	15 16 16.7	-0.3
OBN				*i*		15 16 22.3	
OBN				*e*		15 16 30.6	
OBN						15 20 01.0	
OBN				pmax	pmax		
	comp=Z,26nm,1.9s						
OBN				pmax	pmax		
	comp=Z,53nm,0.9s						
DIVS	Divibare	151.32	250		PKPbc	15 16 23.4	-0.5
RES	Resolute Bay	151.44	33	PKIKP	PKPbc	15 16 22.2	-1.0
RES	Resolute Bay	151.44	33		PKPbc	15 16 22.2	-1.0
BURAR	Bucovina Array	151.57	261	⇑P	PKiKP	15 16 24.6	-0.2
BURAR	Bucovina Array	151.57	261	⇑PKIKP	PKiKP	15 16 24.6	-0.2
ARCR	ARCALIA	151.59	259	⇑P	PKPbc	15 16 23.3	-1.0
BUR08	Bucovina Ar. S	151.60	261		PKiKP	15 16 24.8	-0.1
BZS	Buzias	151.76	254	⇑P	PKPbc	15 16 24.0	-0.8
BZS	Buzias	151.76	254	⇑PKIKP	PKPbc	15 16 24.0	-0.8
AKASG	Malin Array Be	151.82	269	PKPbc	PKPbc	15 16 23.7	-1.0
	comp=Z,5.8nm,0.7s,baz=84,slow=2.4,SNR=19						
AKBB	Malin Array Si	151.82	269	PKIKP	PKPbc	15 16 23.9	-0.8
AKBB	Malin Array Si	151.82	269		PKPbc	15 16 23.9	-0.8
AMBH	Ambrzfalva	152.72	254	*e*P	PKiKP	15 16 27.1	0.0
KLMR	Klimovskoe	152.83	294	*e*PKIKP	PKPbc	15 16 25.8	-0.8
KLMR				pmax	pmax		
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	152.83	294	*e*PKPdf	PKPbc	15 16 25.9	-0.7
KLMR				AMP		15 16 38.0	
	comp=Z,49nm,1.4s						
LTVH	Ltavrtes, Hu	152.95	257	*e*P	PKPbc	15 16 27.1	-0.3
NRCA	Norcia	153.26	240		PKPbc	15 16 26.9	-1.4
CART	Cartagena	153.39	213	PKPdf	PKPdf	15 16 20.5	-0.6
MORH	Mrgy, Hungar	153.56	251	*e*P	PKPbc	15 16 26.0	-2.7
LATE	Laterza	153.61	238		PKPbc	15 16 27.5	-1.5
UZH	Uzhgorod	153.67	259	*e*PKIKP	PKPdf	15 16 24.8	+3.7
UZH				*e*		15 16 28.7	
LVV	L'vov	153.68	263	*e*PKIKP	PKPab	15 16 35.9	-5.9
CASP	Castiglione de	154.13	236	IAMs_20	IAMs_20	16 05 12.1	
	comp=Z,724nm,19.0s						
PSZ	Piszkesteto	154.27	255	*e*P	PKPbc	15 16 27.6	-2.7
CSKK	Cskako	154.60	252	*e*P	PKPbc	15 16 28.6	-2.3
MPLH	Magyarpolny	154.78	251	*e*P	PKPbc	15 16 28.1	-3.2
TMCR	Tamitsa	154.82	301	*e*PKIKP	PKPdf	15 16 21.7	-0.5
TMCR				pmax	pmax		
	comp=Z,12nm,0.9s						
MNK	Minsk	154.84	275	*i* PKP	PKPdf	15 16 17.4	-5.1
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	15 16 17.4	-5.1
	comp=N,25nm,1.0s						
MNK				*i* PKP	PKPdf	15 16 17.4	-5.1
	comp=Z,7.0nm,0.9s						
MNK				*i* PP	PP	15 20 18.1	-5.1
MNK				*i* SKS	SKSdf	15 23 24.2	-4.3
MNK				*i* PPP	PPP	15 23 48.6	
MNK				*i* SKKS	SKKSdf	15 32 01.5	-3.5
MNK				*i* SS	SS	15 40 02.5	-2.8
MNK				*i* SSS	SSS	15 45 56.9	
MNK				*i* LR	LR	16 21 09.6	
MNK				*i* LRM	MLR	16 24 35.1	
	comp=N,333nm,19.6s						
MNK				*i* LRM	MLR	16 24 43.0	
	comp=E,50nm,17.4s						
MNK				*i* LRM	MLR	16 24 43.0	
	comp=Z,60nm,9.4s						
EGYH	Egyhazaskeszo	155.06	251	*e*P	PKPdf	15 16 30.5	+7.4
VYHS	Vyhne	155.17	255	*e*PKP2	PKPab	15 16 54.3	+6.1
ZCCA	Zocca	155.39	239		PKPdf	15 16 31.2	+7.5
SOKA	Soboth	155.53	247	*e*P	PKPdf	15 16 23.2	-0.6
	comp=Z,9.2nm,1.3s						
NACGM	Naroch	155.59	274	*i* PKP	PKPab	15 16 36.7	-13
NACGM				*i* PKP	PKPab	15 16 36.7	-13
NACGM				*i* PKP	PKPab	15 16 36.7	-13
NACGM				*i* Pb	sPKPbc	15 16 44.1	+7.7
	comp=Z,23nm,1.2s						
NACGM				*i* SKP		15 20 05.2	
NACGM				*i* PKS	PKSdf	15 20 09.8	+13
NACGM				*i* SKS	SKSdf	15 23 42.0	+13
NACGM				*i* PPP	PPP	15 24 59.3	
NACGM				*i* SKKS	SKKSac	15 26 48.1	-28
NACGM				*i* SSS	SSS	15 48 43.9	
NACGM				*i* LQ	LQ	16 22 29.0	
NACGM				*i* LR	LR	16 34 30.7	
OBKA	Obir	155.61	247	*e*P	PKPab	15 16 49.6	-0.6
	comp=Z,9.1nm,1.4s						
ARSA	Arzberg	155.75	249	*e*P	PKPdf	15 16 25.7	+1.6
	comp=Z,6.0nm,1.3s						
MODS	Modra-Piesok	155.80	253	*e*PKP2	PKPab	15 16 47.1	-3.8
MODS	Modra-Piesok	155.80	253	*e*	PKPab	15 16 47.1	-3.8
ESDC	Sonseca Array	156.09	209	PKP	PKPdf	15 16 24.6	-0.2
	comp=Z,1.3nm,1.0s,baz=54,slow=0.5,SNR=6.0						
ESDC				PKPbc	sPKPdf	15 16 33.2	+4.6
	comp=Z,5.9nm,1.1s,baz=159,slow=1.4,SNR=14						
MYKA	Terra Mystica	156.09	246	*e*P	PKPdf	15 16 23.4	-1.2
	comp=Z,7.5nm,1.1s						
CONA	Conrad Observa	156.11	250	*e*P	PKPdf	15 16 23.0	-1.5
	comp=Z,5.3nm,1.6s						
CONA				*e*P	PKPab	15 16 52.3	0.0
	comp=Z,3.6nm,0.7s						
KBA	Koelnbreinsper	156.57	246	*e*P	PKPdf	15 16 24.5	-0.9
	comp=Z,1.7nm,0.7s						
KBA				*e*P	PKPab	15 16 54.3	-0.1
	comp=Z,6.7nm,0.9s						
ABTA	Abfaltersbach	156.67	244	*e*P	PKPdf	15 16 23.0	-2.3
	comp=Z,12nm,0.9s						
ABTA				*e*P	PKPab	15 16 56.0	+1.2
	comp=Z,12nm,1.2s						
MOA	Molln	156.76	248	*e*P	PKPab	15 16 55.7	+0.7
	comp=Z,6.8nm,0.8s						
WTTA	Wattenberg	157.45	244	*e*P	PKPab	15 17 00.1	+1.9
	comp=Z,12nm,1.1s						
WATA	Walderalm	157.53	244	*e*P	PKPab	15 16 59.5	+1.0
	comp=Z,11nm,1.1s						
SQTA	Sankt Quirin	157.60	243	*e*P	PKPab	15 16 59.3	+0.5
	comp=Z,10nm,1.3s						
FETA	Feichten	157.65	242	*e*P	PKPab	15 16 58.7	-0.3
	comp=Z,18nm,1.5s						
DPC	Dobruska-Polom	157.65	255	*e*PKP2	PKPab	15 17 05.9	+7.1
DPC	Dobruska-Polom	157.65	255	*e*PKP	PKPab	15 17 05.9	+7.1
MOTA	Moosalm	157.74	243	*e*P	PKPab	15 17 00.3	+0.8
	comp=Z,15nm,1.2s						
GERES	GERESS Array B	157.75	249	PKP	PKPdf	15 16 27.1	+0.5
	comp=Z,0.1nm,0.3s,baz=230,slow=2.4,SNR=1.7						
DAVOX	Davos/Dischmat	157.81	241	PKPab	PKPab	15 16 59.5	-0.2
	comp=Z,7.3nm,0.9s,baz=170,slow=7.2,SNR=6.1						
OSTC	Ostas	157.84	256	*e*PKP	PKPab	15 17 07.0	+7.4
RETA	Reutte	158.00	243	*e*P	PKPab	15 17 01.6	+1.1
	comp=Z,12nm,1.2s						
KHC	Kasperske Hory	158.02	250	*e*PKP2	PKPab	15 17 00.1	-0.4
KHC	Kasperske Hory	158.02	250	*e*PKP	PKPab	15 17 00.1	-0.4
DAVA	Damuels	158.21	241	*e*P	PKPab	15 17 02.1	+0.6
	comp=Z,19nm,1.4s						
FINES	FINESS Array B	159.01	289	PKPab	PKPab	15 17 05.7	+1.4
	comp=Z,8.1nm,1.1s,baz=126,slow=1.9,SNR=3.1						
BRG	Berggiesshubel	159.10	253	Amp		15 17 15.6	
	comp=Z,3.9nm,0.9s						
BRG	Berggiesshubel	159.10	253	*e*PKP2	PKPab	15 17 10.6	+5.6
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG	Berggiesshubel	159.10	253	Amp		15 17 15.6	
	comp=Z,3.9nm,0.9s						
BRG	Berggiesshubel	159.10	253	*e*(PKP)	PKPab	15 17 10.7	+5.6
BRG	Berggiesshubel	159.10	253	*e*(PKP)	PKPab	15 17 10.7	+5.6
GRF	Grafenberg Arr	159.47	248	*e*PKP	PKPab	15 17 05.8	-0.9
	baz=138,slow=5.1						
GRF				*e*L	L	16 29 10.2	
	comp=Z,503nm,21.7s						
CLL	Collm	159.83	253	LmV		16 38 00.0	
	comp=Z,900nm,20.2s						
CLL	Collm	159.83	253	*e*(PKPab)	PKPab	15 17 14.0	+5.8
CLL	Collm	159.83	253	*e*SS	SS	15 40 53.0	-5.6
CLL	Collm	159.83	253	*e*SSS	SSS	15 47 12.0	

WEL 08 14:59:48.3, 38°S±7°×17°6E±°, h238^{km}±16^{km}, M2.6/27, mB5.4/1, ML2.2/11, MLv2.6/27, Mw(mB)4.8/1, Error ellipse: s-maj=0.0km s-min=0.0km az=121.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TLZ	Tolley Road	0.38	238	P	Pn	15 00 18.9	-0.6
TARZ	Mount Tarawera	0.45	103	P	Pn	15 00 12.8	-6.9
MRHZ	Matea Rd	0.79	152	P	Pn	15 00 20.1	-0.9
URZ	Urewera	0.93	98	P	Pn	15 00 20.8	-0.7
RTZ	Ruatahuna	0.95	121	P	Pn	15 00 21.5	-0.2
TMVZ	Te Maari	1.00	191	P	Pn	15 00 22.2	+0.1
MTHZ	Maungataniwha	1.01	136	P	Pn	15 00 22.2	+0.1
ETVZ	East Tongariro	1.02	190	P	Pn	15 00 22.3	+0.1
OTVZ	Oturere	1.05	192	P	Pn	15 00 22.6	+0.1
NGZ	Ngauruhoe	1.07	194	P	Pn	15 00 22.7	+0.1
BKZ	Black Stump Fm	1.12	158	P	Pn	15 00 22.6	-0.2
RAHZ	Arahi	1.19	131	P	Pn	15 00 23.9	+0.7
WNVZ	Wahianoa	1.22	193	P	Pn	15 00 23.7	+0.1
MWZ	Matawai	1.26	100	P	Pn	15 00 23.8	+0.1
KWHZ	Kaweka Forest	1.34	164	P	Pn	15 00 24.8	+0.6
VRZ	Vera Road	1.36	223	P	Pn	15 00 24.7	+0.4
BHHZ	Black Hill Sta	1.36	176	P	Pn	15 00 24.3	-0.1
RUGZ	Raukumara Rang	1.38	84	P	Pn	15 00 24.0	-0.7
RIGZ	Rimuhau	1.54	112	P	Pn	15 00 26.8	+1.0
KRHZ	Kereru	1.54	168	P	Pn	15 00 26.2	+0.5
PNHZ	Pukenui	1.79	174	P	Pn	15 00 28.2	+0.4
KAHZ	Kahuranaki	1.81	157	P	Pn	15 00 29.1	+1.1
NEZ	North Egmont	1.84	231	P	Pn	15 00 29.9	+1.6
PKE	Pukeiti	1.86	235	P	Pn	15 00 29.4	+0.9
TSZ	Takapari Road	1.92	180	P	Pn	15 00 29.0	0.0
WPHZ	Waipukurau	1.97	169	P	Pn	15 00 30.0	+0.6
PXZ	Pawanui	2.02	160	P	Pn	15 00 30.9	+1.0
DVHZ	Dannevirke	2.17	176	P	Pn	15 00 31.4	+0.1
ANWZ	Angora Road	2.36	170	P	Pn	15 00 33.9	+0.7
MRZ	Mangatainoka R	2.54	186	P	Pn	15 00 35.1	+0.1
BFZ	Birch Farm	2.56	175	P	Pn	15 00 35.7	+0.6
TIWZ	Tintock	2.64	181	P	Pn	15 00 36.3	+0.3
OGWZ	Otaki Gorge	2.75	192	P	Pn	15 00 37.3	+0.2
CAW	Cannon Point	3.05	193	P	Pn	15 00 40.5	0.0
KHZ	Kahutara	4.66	203	P	Pn	15 00 59.3	0.0
LTZ	Lake Taylor	5.42	210	P	Pn	15 01 08.6	-0.3

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*IDC **08** 15:09:24.0±1.5, 5°.93S×146°.82E, h0^{km}, mb3.3/3, mb1 3.7/5, mb1mx3.4/48, mbtmp3.5/5, ML3.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/16, Error ellipse: s-maj=56.7km* *s-min=24.2km az=98.0*

ISC 08 15:09:33.4±1.2,**6°.1S**±0°.1×**146°.8E**±0°.3,**h78^{km},n7,**σ**1^{s}67**/7,
mb3.3/3,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 2.3nm,0.3s,baz=213,slow=8.7,SNR=3.2	**3.27**	**173**	Pn	**Pn**	**15 10 20.6**	**-1.8**
PMG	5.4nm,0.3s,baz=32,slow=12,SNR=2.0			Sn	**Sn**	**15 11 02.3**	**+2.1**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=46,slow=12,SNR=10	**18.27**	**220**	P	**Pn**	**15 13 40.5**	**-1.3**
GUMO	**Guam** comp=Z,118nm,21.8s,baz=262,slow=33	**19.70**	**355**	LR	LR	15 20 06.3	
ASAR	**Alice Springs** 0.3nm,0.4s,baz=53,slow=8.7,SNR=7.9	**21.36**	**214**	P	**P**	**15 14 15.7**	**+1.1**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=97,slow=5.8,SNR=2.3	**77.45**	**321**	P	**P**	**15 21 21.0**	**+0.6**
ILAR	**Eielson Array** 0.3nm,0.5s,baz=246,slow=4.5,SNR=1.3	**85.71**	**23**	P	**P**	**15 22 03.4**	**-0.1**
TORD	**Torodi Ar. Bea** 1.8nm,0.7s,baz=64,slow=3.3,SNR=7.0	**144.89**	**284**	PKP	**PKPdf**	**15 29 03.0**	**+0.4**

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*DNK **08** 15:14:28.4±0.8,59°.58N×10°.59E,h0^{km},ML1.5(UPP),
Suspected explosion*

BER 08 15:14:28.7±1.0,**59°.54N×10°.64E,h0^{km},ML0.8,
Suspected explosion,Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KONO	**Kongsberg**	**0.54**	**282**	*e*P	Pg	15 14 38.1	-0.9
KONO				*e*S	Sg	15 14 45.2	-0.8
KONO	comp=Z,3.1nm,0.1s			IAML		15 14 45.4	
FINU	**Finntorp**	**0.95**	**97**	P	Pg	15 14 46.2	-0.7
FINU				S	Sg	15 14 59.6	+0.4
NC602	**NORSAR Array S**	**1.28**	**20**	*e*P	Pg	15 14 51.2	-2.0
NC602				*e*S	Sg	15 15 08.0	-1.9
NC602	comp=Z,2.5nm,0.1s			IAML		15 15 10.8	
VANU	**Vaenersborg**	**1.29**	**144**	P	Pg	15 14 52.6	-0.7
VANU				S	Sg	15 15 10.4	+0.4
NAO01	**NORSAR Array S**	**1.32**	**5**	*e*P	Pg	15 14 51.9	-2.0
NAO01				*e*S	Sg	15 15 09.1	-1.9
NASU	**Vaermlandsnaes**	**1.45**	**114**	P	Pn	15 14 55.4	-0.7
NASU				S	Sg	15 15 14.8	-0.3
NBO00	**NORSAR Array S**	**1.50**	**3**	*e*P	Pn	15 14 54.8	-2.0
NBO00				*e*S	Sg	15 15 14.6	-2.2
NBO00	comp=Z,2.2nm,0.2s			IAML		15 15 15.5	
NB201	**NORSAR Array S**	**1.55**	**12**	*e*P	Pn	15 14 56.1	-1.5
NB201				*e*S	Sn	15 15 16.3	-2.1
SKAR	**Skarslia**	**1.64**	**315**	*e*P	Pn	15 14 56.9	-1.9
SKAR				*e*S	Sn	15 15 18.1	-2.5
SKAR	comp=Z,4.3nm,0.6s			IAML		15 15 22.9	
NC204	**NORSAR Array S**	**1.74**	**2**	*e*P	Pn	15 14 58.5	-1.8
ASKU	**Askersund**	**2.25**	**105**	P	Pn	15 15 06.5	-0.7

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*SOME **08** 15:20:23.5,39°.27N×72°.68E,h15^{km}*
*IDC **08** 15:20:29.2±1.4,39°.36N×72°.57E,h0^{km},mb3.8/5,
mb1 3.7/12,mb1mx3.4/43,mbtmp3.6/12,ML3.2/7,MS3.9/3,
Ms1 4.0/3,ms1mx3.1/46,Error ellipse: s-maj=24.6km
s-min=15.6km az=136.0*
*KRNET **08** 15:20:30.4±0.1,39°.50N×72°.62E,h11^{km},mb3.5*
*ISU **08** 15:20:31,39°.56N×72°.58E,h5^{km},Hypocentre not
reviewed by the ISC*
*NNC **08** 15:20:35.1±2.4,39°.75N×72°.75E,h0^{km},mb4.0,mpv3.6,
Error ellipse: s-maj=23.8km s-min=14.4km az=159.0*

ISC 08 15:20:23.9±1.7,**39°.31N**±0°.06×**72°.79E**±0°.03,**h2^{km}**±11^{km},
n73,σ**2^{s}20**/94,**mb3.9**/5,**MS3.5**/3,**29C-18D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk** baz=69	**0.78**	**283**	⇑*i*P	**Pn**	**15 20 42.6**	**+0.2**
DRK	baz=69			⇑*i*S	**Sn**	**15 20 51.7**	**-3.2**
SFK	**Sufi-Kurgan** baz=53	**0.90**	**38**	⇑*i*P	**Pn**	**15 20 46.9**	**+3.1**
SFK	baz=53			⇑*i*S	**Sn**	**15 20 58.9**	**+1.3**
SHAK	**Shakhimardan**	**1.04**	**309**	*e*P		15 20 46.0	
SHAK				*e*S		15 20 56.0	
OHH	**Osh** baz=7.0	**1.22**	**360**	⇓*i*P	**Pg**	**15 20 50.1**	**+2.9**
OHH	baz=7.0			⇓*i*S	**Sg**	**15 21 04.5**	**+1.5**
OHH	**Osh**	**1.22**	**360**	*e*P		15 20 50.0	
OHH				*e*S		15 21 03.0	
FRG	**Fergana**	**1.62**	**332**	*e*P		15 20 16.0	
FRG				*e*S		15 21 05.0	
BTK	**Batken** baz=92	**1.69**	**297**	⇑*i*P	**Pg**	**15 20 57.8**	**+1.4**
BTK	baz=92			⇑*i*S	**Sg**	**15 21 19.5**	**+1.1**
BTK	**Batken**	**1.69**	**297**	*e*P		15 20 58.0	
BTK				*e*S		15 21 15.0	
ARSB	**Arslanbob** baz=9.0	**2.02**	**4**	⇑*i*P	**Pg**	**15 21 05.1**	**+2.4**
ARSB	baz=9.0			⇑*i*S	**Sg**	**15 21 30.5**	**+1.6**
ARSB	**Arslanbob**	**2.02**	**4**	*e*P		15 21 05.0	
ARSB				*e*S		15 21 31.0	
TRKS	**Terek-Say** baz=31	**2.55**	**331**	⇓*i*P	**Pg**	**15 21 10.8**	**-2.0**
TRKS	baz=31			⇓*i*S	**Sb**	**15 21 40.1**	**-2.4**
ARLS	**Aral** baz=28	**2.81**	**24**	⇑*i*P	**Pg**	**15 21 17.8**	**+0.1**
ARLS	baz=28			⇑*e*S	**Sb**	**15 21 52.1**	**+2.3**
AML	**Almayashu** baz=17	**2.91**	**13**	⇓*i*P	**Pg**	**15 21 18.8**	**-0.8**
AML	baz=17			⇓*i*S	**Sb**	**15 21 53.4**	**+0.5**
AML	**Almayashu** SNR=69	**2.91**	**13**	P	**Pg**	**15 21 19.0**	**-0.6**
CHMG	**Chimgan**	**3.08**	**317**	*e*P		15 21 24.0	
CHMG				*e*S		15 22 01.0	
MNAS	**Manas** baz=58	**3.19**	**356**	⇑*i*P	**Pb**	**15 21 21.5**	**+0.2**
MNAS	baz=58			⇑*i*S	**Sb**	**15 21 58.5**	**-2.2**
UCH	**Uchtor** baz=27	**3.20**	**24**	⇓*i*P	**Pb**	**15 21 22.5**	**+0.7**
UCH	baz=27			⇓*i*S	**Sb**	**15 22 00.5**	**-0.9**
UCH	**Uchtor** SNR=17	**3.20**	**24**	P	**Pg**	**15 21 24.3**	**-0.9**
EKS2	**Erkin-Say** baz=15	**3.43**	**12**	⇓*i*P	**Pb**	**15 21 25.9**	**+0.3**
EKS2	baz=15			⇓*i*S	**Sb**	**15 22 06.7**	**-1.1**
EKS2	**Erkin-Say** SNR=20	**3.43**	**12**	P	**Pg**	**15 21 28.0**	**-1.8**
MRKS	**Merke** 23nm,0.3s	**3.45**	**5**	*e*P	**Pb**	**15 21 27.3**	**+1.4**
MRKS	88nm,0.4s			*e*S	**Sg**	**15 22 14.0**	**-0.8**
IUG	**Iuzhnay** 10nm,0.2s	**3.53**	**324**	*e*P	**Pb**	**15 21 27.2**	**0.0**
IUG	125nm,0.6s			*e*S	**Sg**	**15 22 13.9**	**-3.3**
AAK	**Ala-Archa** 5.3nm,0.3s,baz=193,slow=5.3,SNR=96	**3.57**	**21**	Pn	**Pb**	**15 21 28.4**	**+0.5**
AAK	3.3nm,0.3s,baz=32,slow=20,SNR=2.0			Sn	**Sb**	**15 22 13.0**	**+1.3**
AAK	**Ala-Archa** baz=24	**3.57**	**21**	⇓*i*P	**Pb**	**15 21 28.4**	**+0.5**
AAK	baz=24			⇓*i*S	**Sb**	**15 22 10.4**	**-1.4**
AAK	**Ala-Archa** SNR=14	**3.57**	**21**	P	**Pb**	**15 21 29.6**	**+1.7**
AAK	**Ala-Archa** 19nm,0.5s	**3.57**	**21**	⇑Pn	**Pb**	**15 21 28.9**	**+1.0**
AAK	28nm,0.5s			⇑Lg	Lg	15 22 13.2	
KBK	**Karagaybulak** baz=28	**3.73**	**25**	⇑*i*P	**Pb**	**15 21 30.3**	**-0.3**
KBK	baz=28			⇑*i*S	**Sb**	**15 22 14.3**	**-2.0**
KBK	**Karagaybulak** SNR=10	**3.73**	**25**	P	**Pb**	**15 21 32.3**	**+1.7**
ULHL	**Ulahol** baz=44	**3.94**	**41**	⇓*i*P	**Pb**	**15 21 33.5**	**-0.7**
ULHL	baz=44			⇓*i*S	**Sb**	**15 22 19.7**	**-2.7**
ULHL	**Ulahol** SNR=9.9	**3.94**	**41**	P	**Pb**	**15 21 35.6**	**+1.4**
CHMS	**Chumysh** baz=24	**3.98**	**21**	⇑*i*P	**Pb**	**15 21 33.7**	**-1.1**
CHMS	baz=24			⇑*i*S	**Sb**	**15 22 19.7**	**-3.6**
CHMS	**Chumysh** SNR=6.0	**3.98**	**21**	P	**Pb**	**15 21 34.7**	**-0.1**
BOOM	**Boomskoye usch** baz=39	**3.98**	**36**	⇑*i*P	**Pb**	**15 21 33.8**	**-1.1**
BOOM	baz=39			⇑*i*S	**Sb**	**15 22 20.3**	**-3.2**
KK31	**Karatay Array** 5.3nm,0.4s,baz=160,slow=12,SNR=61	**4.16**	**336**	⇑Pn	**Pb**	**15 21 34.2**	**-3.7**
KK31	11nm,0.3s,baz=152,slow=29,SNR=4.2			⇓Lg	Lg	15 22 31.8	
TKM2	**Tokmak 2** baz=32	**4.19**	**30**	⇑*e*P	**Pb**	**15 21 37.0**	**-1.5**
TKM2	baz=32			⇑*i*S	**Sb**	**15 22 25.1**	**-4.5**
TKM2	**Tokmak 2** 2.8nm,0.3s	**4.19**	**30**	⇑Pn	**Pb**	**15 21 38.1**	**-0.4**
TKM2	26nm,0.8s			⇑Lg	Lg	15 22 39.0	
BRLS	**Borolday** 6.7nm,0.4s	**4.33**	**330**	*e*P	**Pb**	**15 21 40.1**	**-0.7**
BRLS	31nm,0.5s			*e*S	**Sb**	**15 22 35.9**	**+2.3**
KDJ	**Kajisay** baz=51	**4.37**	**48**	⇑*i*P	**Pb**	**15 21 40.4**	**-1.2**
KDJ	baz=51			⇑*i*S	**Sb**	**15 22 31.0**	**-3.8**
KST	**Kastek** 7.1nm,0.8s	**4.44**	**32**	*e*P	**Pg**	**15 21 46.3**	**-2.6**
KST	23nm,0.7s			*e*S	**Sg**	**15 22 46.8**	**+0.4**
KST	**Kastek** 7.1nm,0.8s	**4.44**	**32**	Pg	**Pg**	**15 21 46.3**	**-2.6**
KST	23nm,0.7s			Lg	Lg	15 22 46.8	
DGS	**Degeres** 27nm,0.6s	**4.53**	**29**	*e*P	**Pg**	**15 21 47.9**	**-2.8**
DGS	22nm,0.5s			*e*S	**Sg**	**15 22 49.5**	**+0.1**
DGS	**Degeres** 27nm,0.6s	**4.53**	**29**	Pg	**Pg**	**15 21 47.9**	**-2.8**
DGS	22nm,0.5s			Lg	Lg	15 22 49.5	
IZV	**Izvestkoviy** 6.3nm,0.8s	**4.71**	**37**	*e*P	**Pg**	**15 21 53.0**	**-1.3**
IZV	32nm,0.6s			*e*S	**Sg**	**15 22 58.2**	**+2.9**
IZV	**Izvestkoviy** 6.3nm,0.8s	**4.71**	**37**	Pg	**Pg**	**15 21 52.9**	**-1.3**
IZV	32nm,0.6s			Lg	Lg	15 22 58.2	
TNSS	**Tian-Shan** 2.8nm,0.5s	**4.87**	**39**	*e*P	**Pg**	**15 21 54.9**	**-2.4**
TNSS	9.6nm,0.5s			*e*S	**Sg**	**15 23 01.5**	**+1.1**
TNSS	**Tian-Shan** 2.8nm,0.5s	**4.87**	**39**	Pg	**Pg**	**15 21 54.4**	**-2.8**
TNSS	9.6nm,0.5s			Lg	Lg	15 23 01.5	
MDOK	**Medeo** 2.7nm,0.4s	**5.02**	**38**	*e*P	**Pg**	**15 21 58.9**	**-1.2**
MDOK	24nm,0.8s			*e*S	**Sg**	**15 23 07.8**	**+2.8**
MDOK	**Medeo** 6.2nm,0.6s	**5.02**	**38**	⇑Pn	**Pb**	**15 21 50.4**	**-2.1**
MDOK	10.0nm,0.6s			⇑Pg	**Pg**	**15 22 03.9**	**+3.9**
MDOK	16nm,0.8s			⇓Lg	Lg	15 23 07.3	
MDOK	**Medeo** 2.7nm,0.4s	**5.02**	**38**	Pg	**Pg**	**15 21 58.9**	**-1.2**
MDOK	24nm,0.8s			Lg	Lg	15 23 07.8	
KOTS	**Kotyrbulak** 3.8nm,0.4s	**5.10**	**38**	*e*P	**Pg**	**15 21 58.7**	**-2.9**
KOTS	85nm,0.6s			*e*S	**Sg**	**15 23 08.2**	**+0.5**
KOTS	**Kotyrbulak** 3.8nm,0.4s	**5.10**	**38**	Pg	**Pg**	**15 21 58.7**	**-2.9**
KOTS	85nm,0.6s			Lg	Lg	15 23 08.2	
KTBS	**Karatobe** 12nm,0.8s	**5.28**	**32**	*e*P	**Pg**	**15 22 03.1**	**-2.1**
KTBS	33nm,0.8s			*e*S	**Sg**	**15 23 15.2**	**+1.6**
KTBS	**Karatobe** 12nm,0.8s	**5.28**	**32**	Pg	**Pg**	**15 22 03.1**	**-2.1**
KTBS	33nm,0.8s			Lg	Lg	15 23 15.2	
KUU	**Kurty** 5.8nm,0.4s	**5.30**	**29**	*e*P	**Pg**	**15 22 01.8**	**-3.6**
KUU	18nm,0.8s			*e*S	**Sg**	**15 23 12.9**	**-1.2**
KUU	**Kurty** 5.8nm,0.4s	**5.30**	**29**	Pg	**Pg**	**15 22 01.8**	**-3.6**
KUU	18nm,0.8s			Lg	Lg	15 23 12.9	
CHKK	**Chushkaly** 1.3nm,0.1s	**5.53**	**33**	*e*P	**Pg**	**15 22 06.8**	**-3.0**
CHKK	12nm,0.6s			*e*S	**Sg**	**15 23 21.8**	**+0.4**
CHKK	**Chushkaly** 1.3nm,0.1s	**5.53**	**33**	Pg	**Pg**	**15 22 06.8**	**-3.0**
CHKK	12nm,0.6s			Lg	Lg	15 23 21.8	
SATY	**Saty** 2.9nm,0.8s	**5.66**	**47**	Pg	**Pg**	**15 22 11.2**	**-1.1**
SATY	28nm,1.1s			Lg	Lg	15 23 28.8	
UZB	**Uzynbulak** 3.1nm,0.6s	**6.07**	**49**	Pg	**Pg**	**15 22 18.4**	**-1.7**
UZB	8.3nm,0.9s			Lg	Lg	15 23 41.2	
ARXS	**Arharly** 3.3nm,1.0s	**6.18**	**36**	Pg	Pg	15 22 18.5	-3.9
ARXS	13nm,0.5s			Lg	Lg	15 23 41.7	
SHLS	**Shalkode** 7.8nm,0.8s	**6.33**	**50**	Pg	**Pg**	**15 22 28.9**	**+3.7**
SHLS	16nm,0.8s			Lg	Lg	15 23 59.2	
MNBS	**Baschi** 1.6nm,0.3s	**6.35**	**40**	Pg	**Pg**	**15 22 23.2**	**-2.4**
MNBS	24nm,0.7s			Lg	Lg	15 23 49.5	
PDGK	**Podgornoye** 1.3nm,0.7s	**6.45**	**49**	Pg	**Pg**	**15 22 25.3**	**-2.2**
PDGK	6.0nm,1.0s			Lg	Lg	15 23 53.0	
PDGK	**Podgornoye** 4.1nm,0.9s	**6.45**	**49**	⇓Pn	Pb	15 22 08.7	-8.3
PDGK	14nm,1.1s			⇓Lg	Lg	15 23 53.8	
KTMS	**Ketmen** 0.2nm,0.1s	**7.03**	**52**	Pg	**Pg**	**15 22 36.0**	**-2.6**
KTMS	4.1nm,0.7s			Lg	Lg	15 24 11.5	
DJR	**Jarkent** 2.4nm,0.8s	**7.25**	**44**	Pg	**Pg**	**15 22 39.8**	**-3.0**
DJR	6.8nm,1.0s			Lg	Lg	15 24 18.1	
MKAR	**Makanchi Array** 0.0nm,0.3s,baz=214,slow=15,SNR=4.1	**10.21**	**40**	Pn	Pn	15 23 00.6	+9.1
MKAR	0.1nm,0.3s,baz=235,slow=28,SNR=2.9			Lg	Lg	15 25 50.7	
GEYT	**Alibeck** 0.2nm,0.3s,baz=204,slow=32,SNR=1.8	**11.56**	**268**	Pn	**Pn**	**15 23 11.5**	**+1.5**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=216,slow=12,SNR=8.1	**12.02**	**18**	Pn	Pn	15 23 20.3	+4.1
KURBB	0.0nm,0.3s,baz=202,slow=27,SNR=4.3			Lg	Lg	15 26 46.8	
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=171,slow=11,SNR=2.3	**13.82**	**354**	Pn	P	15 23 43.7	-5.8
AKTO	**Aktyubinsk** 0.2nm,0.3s,baz=136,slow=23,SNR=2.5	**15.25**	**322**	Pn	**P**	**15 24 01.9**	**-3.4**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=219,slow=13,SNR=7.5	**16.78**	**25**	Pn	**P**	**15 24 25.6**	**+3.3**
WSAR	**Wadi Sarin** comp=Z,132nm,21.4s,baz=12,slow=44	**20.03**	**221**	LR	LR	15 35 01.7	
BELG	**Belogornoye** 9.7nm,0.9s,baz=60,slow=11,SNR=2.4	**21.74**	**315**	P	**P**	**15 25 20.3**	**+3.9**
BELG	comp=Z,187nm,20.0s,baz=138,slow=40			LR	LR	15 34 49.3	
FINES	**FINESS Array B** 2.6nm,0.9s,baz=115,slow=9.4,SNR=1.7	**36.01**	**323**	P	P	15 27 31.4	+5.3
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=56,slow=4.8,SNR=1.5	**67.20**	**269**	P	P	15 31 23.7	+3.8
ILAR	**Eielson Array** comp=Z,346nm,18.1s,baz=225,slow=42	**71.69**	**17**	LR	LR	16 10 20.0	
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=4.5,slow=5.7,SNR=2.6	**78.37**	**3**	P	P	15 32 31.0	+5.5
WRA	**Warramunga Arr** 1.0nm,1.1s,baz=324,slow=4.9,SNR=2.5	**82.31**	**123**	P	P	15 32 53.8	+6.5

JMA 08 15:33:32.4±0.2,**38°.45N×144°.60E,h44^{km},M3.5,Off east
coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.38**	**286**	P	Pn	15 34 10.2	+1.4
OFUJ				*e*S	Sn	15 34 37.9	+1.1
MIYJ	**Miyakonagasawa**	**2.44**	**298**	P	Pn	15 34 10.7	+1.0
MIYJ				*e*S	Sn	15 34 39.2	+0.9
JIKH	**Ishinomakikobu**	**2.47**	**268**	S	Sn	15 34 40.2	+1.2
JKMT	**Kesennumamotoy**	**2.48**	**279**	P	Pn	15 34 11.4	+1.2
JKMT				*e*S	Sn	15 34 40.4	+1.2
JMK	**Ichinoseki**	**2.69**	**282**	P	Pn	15 34 14.9	+1.7
JMK				*e*S	Sn	15 34 46.1	+1.6
JOM	**Ohasama**	**2.77**	**293**	P	Pn	15 34 16.0	+1.7
JOM				S	Sn	15 34 48.5	+2.0
JANG	**Nango**	**3.07**	**310**	P	Pn	15 34 19.0	+0.7
JANG				*e*S	Sn	15 34 55.1	+1.3
JFT	**Otama**	**3.50**	**256**	P	Pn	15 34 26.9	+2.7
JFT				S	Sn	15 35 06.8	+2.5
JCH	**Churui**	**4.26**	**348**	P	Pn	15 34 34.9	+0.1
JCH				*e*S	Sn	15 35 21.5	-1.8
NEM2	**Nemuro 2**	**4.99**	**10**	P	Pn	15 34 42.7	-1.9
NEM2				*e*S	Sn	15 35 35.5	-5.5
JRY	**Ryogami san**	**5.16**	**244**	P	Pn	15 34 48.4	+1.4
JRY				*e*S	Sn	15 35 44.9	-0.4
JTKR	**Abashiri--Toko**	**5.54**	**355**	P	Pn	15 34 51.8	-0.5
JTKR				*e*S	Sn	15 35 50.9	-3.7

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*NNC **08** 15:33:45.3±0.6,47°.45N×81°.19E,h0^{km},mb3.5,mpv3.2,
Error ellipse: s-maj=4.3km s-min=2.9km az=26.0*
*SOME **08** 15:33:46.9,47°.45N×81°.02E,h10^{km}*

ISC 08 15:33:46.0±0.9,**47°.47N**±0°.03×**81°.09E**±0°.03,**h10^{km},n28,**
σ**3^{s}09**/43,**6C-4D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi** 7.8nm,0.5s	**0.89**	**137**	⇑P	**Pg**	**15 34 01.7**	**-1.5**
MAKZ	68nm,0.3s			⇓S	**Sg**	**15 34 13.2**	**-1.7**
MK31	**Makanchi Array** 1.0nm,0.2s,baz=312,slow=16,SNR=900	**1.06**	**129**	⇑P	**Pg**	**15 34 04.6**	**-1.8**
MK31	18nm,0.2s,baz=311,slow=28,SNR=69			⇑S	**Sg**	**15 34 18.1**	**-2.0**
KAPS	**Kapalarasan** 3.4nm,0.2s	**2.49**	**209**	*e*P	**Pb**	**15 34 31.6**	**+0.8**
KAPS	19nm,0.3s			*e*S	**Sb**	**15 35 03.2**	**+1.6**
KAPS	**Kapalarasan** 3.4nm,0.2s	**2.49**	**209**	Pg	**Pb**	**15 34 31.6**	**+0.8**
KAPS	19nm,0.3s			Lg	Lg	15 35 03.2	
ZSN	**Zaisan** 1.6nm,0.1s	**2.56**	**89**	*e*P	**Pb**	**15 34 30.9**	**-1.2**
ZSN	33nm,0.4s			*e*S	**Sn**	**15 35 01.5**	**+2.7**
SEM	**Semipalatinsk** 2.0nm,0.1s	**3.00**	**350**	*e*P	**Pb**	**15 34 41.0**	**+1.5**
SEM	29nm,0.2s			*e*S	**Sb**	**15 35 19.5**	**+3.3**
DJR	**Jarkent** 1.1nm,0.2s	**3.27**	**197**	*e*P	**Pb**	**15 34 45.9**	**+1.9**
DJR	4.4nm,0.2s			*e*S	**Sb**	**15 35 27.5**	**+3.6**
DJR	**Jarkent** 1.1nm,0.2s	**3.27**	**197**	Pg	**Pb**	**15 34 45.9**	**+1.9**
DJR	4.4nm,0.2s			Lg	Lg	15 35 27.5	
KURBB	**Kurchatov Arra** 3.8nm,0.6s	**3.58**	**333**	⇓Pg	**Pb**	**15 34 49.6**	**+0.3**
KURBB	46nm,0.6s			⇓Lg	Lg	15 35 39.7	
KURK	**Kurchatov** 2.4nm,0.5s	**3.63**	**334**	⇑Pg	**Pb**	**15 34 52.2**	**+2.0**
KURK	17nm,0.6s			⇑Lg	Lg	15 35 39.3	
MNBS	**Baschi** 0.9nm,0.1s	**3.88**	**210**	*e*P	**Pb**	**15 34 57.2**	**+2.6**
MNBS	16nm,0.3s			*e*S	**Sb**	**15 35 46.2**	**+4.6**
MNBS	**Baschi** 0.9nm,0.1s	**3.88**	**210**	Pg	**Pb**	**15 34 57.2**	**+2.6**
MNBS	16nm,0.3s			Lg	Lg	15 35 46.2	
PDGK	**Podgornoye** 0.5nm,0.2s	**4.29**	**196**	Pg	**Pg**	**15 35 05.5**	**-2.7**
PDGK	3.1nm,0.5s			Lg	Lg	15 36 00.3	
PDGK	**Podgornoye** 0.8nm,0.4s	**4.29**	**196**	⇑Pg	**Pg**	**15 35 05.5**	**-2.7**
PDGK	5.7nm,0.7s			⇓Lg	Lg	15 36 01.4	
KPKS	**Kokpek** 1.9nm,0.1s	**4.34**	**204**	*e*P	**Pg**	**15 35 07.5**	**-1.7**
KPKS	11nm,0.5s			*e*S	**Sg**	**15 36 03.6**	**-1.9**
UZB	**Uzynbulak** 0.9nm,0.0s	**4.56**	**199**	*e*P	**Pb**	**15 35 09.9**	**+3.7**
UZB	5.2nm,0.3s			*e*S	**Sg**	**15 36 08.0**	**-4.4**
UZB	**Uzynbulak** 0.9nm,0.0s	**4.56**	**199**	Pg	**Pb**	**15 35 09.9**	**+3.7**
UZB	5.2nm,0.3s			Lg	Lg	15 36 08.0	
CHKK	**Chushkaly**	**4.62**	**220**	*e*P	**Pb**	**15 35 10.4**	**+3.3**
CHKK				*e*S	**Sg**	**15 36 09.2**	**-5.1**
CHKK	**Chushkaly**	**4.62**	**220**	Pg	**Pb**	**15 35 10.4**	**+3.3**
CHKK				Lg	Lg	15 36 09.2	
SATY	**Saty** 0.8nm,0.1s	**4.80**	**204**	*e*P	**Pg**	**15 35 15.5**	**-2.4**
SATY	6.7nm,0.2s			*e*S	**Sg**	**15 36 17.4**	**-2.7**
SATY	**Saty** 0.8nm,0.1s	**4.80**	**204**	Pg	**Pg**	**15 35 15.5**	**-2.4**
SATY	6.7nm,0.2s			Lg	Lg	15 36 17.4	
KUU	**Kurty** 0.7nm,0.1s	**4.89**	**225**	*e*P	**Pb**	**15 35 15.2**	**+3.6**
KUU	13nm,0.5s			*e*S	**Sg**	**15 36 17.2**	**-5.6**
KUU	**Kurty** 0.7nm,0.1s	**4.89**	**225**	Pg	**Pb**	**15 35 15.2**	**+3.6**
KUU	13nm,0.5s			Lg	Lg	15 36 17.2	
MDOK	**Medeo** 1.0nm,0.3s	**5.16**	**215**	*e*P	**Pg**	**15 35 22.4**	**-2.4**
MDOK	3.8nm,0.2s			*e*S	**Sg**	**15 36 29.2**	**-2.5**
MDOK	**Medeo** 1.0nm,0.3s	**5.16**	**215**	Pg	**Pg**	**15 35 22.4**	**-2.4**
MDOK	3.8nm,0.2s			Lg	Lg	15 36 29.2	
TNSS	**Tian-Shan** 0.4nm,0.1s	**5.31**	**215**	*e*P	**Pb**	**15 35 23.0**	**+3.9**
TNSS	1.4nm,0.4s			*e*S	**Sg**	**15 36 30.4**	**-6.1**
TNSS	**Tian-Shan** 0.4nm,0.1s	**5.31**	**215**	Pg	**Pb**	**15 35 23.0**	**+3.9**
TNSS	1.4nm,0.4s			Lg	Lg	15 36 30.4	
BTLS	**Baital** 1.3nm,0.2s	**5.46**	**246**	*e*P	**Pg**	**15 35 28.1**	**-2.3**
BTLS	3.0nm,0.5s			*e*S	**Sg**	**15 36 38.9**	**-2.2**

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*BGR **08** 15:43:02.6±0.0,64°.42N×19°.70W,h33^{km},mb4.5*
*REY **08** 15:43:06.4,64°.66N×17°.39W,h1^{km}*

*IDC **08** 15:43:07.5±0.6, 64°.58N×17°.48W, h0^{km}, mb3.8/17, mb1 4.1/22, mb1mx4.0/40, mbtmp3.9/22, ML2.7/4, MS3.7/2, Ms1 3.7/2, ms1mx3.2/39, Error ellipse: s-maj=19.4km s-min=8.9km az=11.0*

*MOS **08** 15:43:08.6±1.3, 64°.64N×17°.29W, h17^{km}, mb4.6/23, Error ellipse: s-maj=12.9km s-min=8.1km az=99.3*

*NEIC **08** 15:43:09.6±2.2, 64°.60N±0°.08×17°.5W±0°.1, h10^{km}±4^{km}, mb4.6/50, Error ellipse: s-maj=11.7km s-min=8.3km az=183.0*

ISC 08 15:43:09.0±0.3**, 64°.58N**±0°.03×**17°.39W**±0°.03**, h10**^{km}**, n160, σ1^{s}79**/164**, mb4.5**/57**, 7C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.21	3	P	Pg	15 43 09.6	-3.8
	baz=4.1						
IDYN				S	Sg	15 43 12.6	-3.9
	baz=4.1						
IKVE	Kverkfjoll	0.32	72	P	Pg	15 43 13.3	-2.2
	baz=86						
IKVE				S	Sg	15 43 18.1	-1.7
	baz=86						
ISKR	Skrokkalda	0.43	268	P	Pg	15 43 15.2	-2.1
	baz=258						
IJOK	Jokulheimar	0.45	234	P	Pg	15 43 16.1	-1.7
	baz=227						
IJOK				S	Sb	15 43 24.2	-1.5
	baz=227						
IKSK	Karasker	0.58	136	P	Pg	15 43 17.7	-2.5
	baz=141						
IKSK				S	Sg	15 43 27.2	-0.7
	baz=141						
IIEY	Innrieyrar	0.58	213	P	Pg	15 43 18.5	-1.7
	baz=210						
IIEY				S	Sb	15 43 27.9	-1.6
	baz=210						
IKAL	Kalfafell	0.65	192	P	Pg	15 43 19.9	-1.6
	baz=190						
IKAL				S	Sb	15 43 29.9	-1.4
	baz=190						
IVSH	V-Sauoahnukur	0.75	72	P	Pg	15 43 19.7	-3.8
	baz=77						
IVSH				S	Sg	15 43 30.2	-3.0
	baz=77						
ISVA	Svartarkot	0.76	4	P	Pg	15 43 19.1	-4.5
	baz=4.7						
ISVA				S	Sg	15 43 28.6	-5.0
	baz=4.7						
IFAG	Fagurholsmyri	0.78	155	P	Pg	15 43 22.0	-1.9
	baz=157						
IFAG				S	Sb	15 43 33.8	-1.4
	baz=157						
IADA	Aoalbol	0.90	60	P	Pg	15 43 21.8	-4.4
	baz=64						
IADA				S	Sg	15 43 33.8	-4.0
	baz=64						
ISNB	Snabyli	1.01	213	P	Pg	15 43 26.2	-2.1
	baz=211						
IMEL	Melhnausar	1.04	17	P	Pb	15 43 23.9	-5.2
	baz=18						
IREN	Reynihlio	1.09	11	P	Pb	15 43 24.6	-5.3
	baz=11						
IRJU	Rjupnafell	1.12	211	P	Pg	15 43 27.9	-2.5
	baz=209						
IKVO	Krokottuvotn	1.16	11	P	Pn	15 43 25.8	-5.4
	baz=11						
IMJO	Mjoaskard	1.19	238	P	Pb	15 43 29.1	-2.5
	baz=235						
IGRS	Grimsstaoir	1.19	26	P	Pn	15 43 26.3	-5.3
	baz=28						
IHAU	Haukadalur	1.28	242	P	Pn	15 43 29.9	-2.9
	baz=240						
ISKI	Skildingahlsh	1.30	7	P	Pn	15 43 27.9	-5.4
	baz=7.0						
IGHA	Grjothals	1.30	13	P	Pn	15 43 28.1	-5.1
	baz=14						
IGRA	Granastaoir	1.35	357	P	Pn	15 43 28.7	-5.0
	baz=356						
IALF	Alftagrof	1.35	217	P	Pn	15 43 31.5	-2.3
	baz=215						
IDIM	Dimmadalss	1.40	8	P	Pn	15 43 29.9	-4.7
	baz=8.1						
IHLA	Hella	1.43	343	P	Pn	15 43 30.5	-4.4
	baz=342						
ISAU	Saurbar	1.45	247	P	Pn	15 43 32.4	-2.7
	baz=244						
IHED	Heoinshofoi	1.51	1	P	Pn	15 43 31.3	-4.7
	baz=1.3						
IBRE	Brettingsstaoi	1.56	352	P	Pn	15 43 32.2	-4.6
	baz=352						
BORG	Borgarnes	1.70	277	Pg	Pn	15 43 35.9	-2.7
	21nm,0.3s,baz=92,slow=8.7,SNR=39						
BORG				Lg	Lg	15 43 59.3	
	21nm,0.3s,baz=245,slow=22,SNR=10						
BORG	Borgarnes	1.70	277	P	Pn	15 43 36.0	-2.7
BORG						15 43 59.7	
BORG	Borgarnes	1.70	277	Pn	Pn	15 43 36.0	-2.7
BORG				Sn	Sn	15 43 59.7	-0.6
SCO	Scoresbysund	6.18	346	P	Pn	15 44 38.5	-1.6
SCO						15 45 50.8	
SCO	Scoresbysund	6.18	346		Pn	15 44 38.5	-1.6
SCO				Sn	Sn	15 45 50.8	+0.1
SCO	Scoresbysund	6.18	346	e	Pn	15 44 31.7	-8.3
	baz=165,slow=9.3						
SCO				i S	Sn	15 45 51.1	+0.5
SCO				IAML		15 45 57.1	
	comp=Z,1.5nm,0.4s						
EKA	Eskdalemuir Ar	11.66	136	Pn	Pn	15 45 55.4	+0.1
	baz=329,slow=13,SNR=7.3						
ESK	Eskdalemuir	11.66	136	P	Pn	15 45 56.6	+1.4
ESK	Eskdalemuir	11.66	136		Pn	15 45 56.6	+1.4
DAG	Danmarks Havn	12.26	359	i P	Pn	15 46 05.6	+2.3
DAG	Danmarks Havn	12.26	359	i P	Pn	15 46 05.6	+2.3
DAG	Danmarks Havn	12.26	359	i P	Pn	15 46 05.6	+2.3
NC204	NORSAR Array S	13.18	92	Pn	Pn	15 46 17.8	+1.8
NOA	NORSAR Array B	13.48	92	Pn	Pn	15 46 18.9	-1.2
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.9						
SFJD	Kangerlussuaq	13.74	295	LR	LR	15 50 39.5	
	comp=Z,96nm,19.2s,baz=120,slow=33						
HFS	Hagfors	15.00	93	Pn	Pn	15 46 39.4	-1.3
	comp=Z,0.1nm,0.3s,baz=311,slow=16,SNR=1.7						
ARCES	ARCESS Array B	17.13	54	P	Pn	15 47 08.9	+0.8
	baz=290,slow=8.6,SNR=1.5						
FINES	FINESS Array B	19.68	79	P	P	15 47 37.5	-0.2
	comp=Z,0.1nm,0.3s,baz=318,slow=5.6,SNR=3.1						
CLL	Collm	20.63	116	eP	P	15 47 48.0	-0.1
	comp=Z,41nm,1.7s						
CLL	Collm	20.63	116	eP	P	15 47 48.0	-0.1
CLL				pmax	pmax		
	comp=Z,41nm,1.7s						
GRF	Grafenberg Arr	21.25	121	eP	P	15 47 54.1	-0.8
	comp=Z,42nm,1.9s,baz=322,slow=11						
BRG	Berggiesshubel	21.34	115	eP	P	15 47 56.1	+0.3
BRG				Amp		15 47 59.1	
	comp=Z,60nm,2.1s						
BRG	Berggiesshubel	21.34	115	eP	P	15 47 56.0	+0.3
BRG				pmax	pmax		
	comp=Z,60nm,2.1s						
BRG	Berggiesshubel	21.34	115	eP	P	15 47 56.1	+0.3
BRG				Amp		15 47 59.1	
	comp=Z,60nm,2.1s						
BFO	Black Forest	21.36	127	P	P	15 47 59.7	+3.6
BFO				pmax	pmax		
	comp=Z,20nm,1.3s						
BFO	Black Forest	21.36	127	P	P	15 47 59.7	+3.6
FRB	Frobisher Bay	21.82	291	P	P	15 48 00.8	0.0
	comp=Z,2.4nm,0.7s,baz=52,slow=16,SNR=3.3						
KHC	Kasperske Hory	22.59	118	ceP	P	15 48 10.0	+0.7
KHC				pmax	pmax		
	comp=Z,36nm,2.5s						
KHC	Kasperske Hory	22.59	118	eP	P	15 48 11.0	+1.7
KHC	Kasperske Hory	22.59	118	P	P	15 48 10.2	+0.8
DPC	Dobruska-Polom	22.68	113	eP	P	15 48 11.6	+1.3
DPC	Dobruska-Polom	22.68	113	eP	P	15 48 11.6	+1.3
GEC2	GERESS Array S	22.87	119	P	P	15 48 12.6	+0.2
GEC2				IAmb	IAmb	15 48 33.4	
	comp=Z,27nm,1.8s						
GERES	GERESS Array B	22.87	119	P	P	15 48 12.8	+0.4
	comp=Z,2.5nm,1.1s,baz=354,slow=11,SNR=5.9						
TUE	Stuetta	23.32	128	P	P	15 48 18.7	+1.7
TUE				IAmb	IAmb	15 48 37.6	
	comp=Z,20nm,1.4s						
TMCR	Tamitsa	23.34	66	eP	P	15 48 15.5	-1.4
TMCR				pmax	pmax		
	comp=Z,13nm,0.4s						
EUNU	Eureka	23.77	336	P	P	15 48 22.7	+1.6
MNK	Minsk	24.51	93	i P	P	15 48 26.1	-2.0
	comp=E,3.0nm,1.0s						
MNK				i P	P	15 48 26.1	-2.0
	comp=N,14nm,0.8s						
MNK				i P	P	15 48 26.1	-2.0
	comp=Z,5.0nm,0.7s						
MNK				i PP	PnPn	15 48 56.8	-1.9
MNK				i PPP	PPP	15 49 04.8	
MNK				i S	S	15 52 46.2	-2.0
MNK				i SS	SnSn	15 53 33.0	+0.8
MNK				i SSS	SSS	15 53 46.6	
MNK				i LQ	LQ	15 56 04.8	
MNK				i LR	LR	15 57 56.6	
MNK				i LRM	MLR	15 58 49.3	
	comp=N,59nm,8.6s						
MNK				i LRM	MLR	15 58 49.3	
	comp=Z,60nm,7.7s						
MNK				i LRM	MLR	15 58 52.6	
	comp=E,6.0nm,7.2s						
VYHS	Vyhne	25.16	112	eP	P	15 48 37.3	+3.3
VYHS	Vyhne	25.16	112	eP	P	15 48 37.3	+3.3
TRI	Trieste	25.53	123	P	P	15 48 37.2	-0.1
TRI				pmax	pmax		
	comp=Z,40nm,1.9s						
TRI	Trieste	25.53	123	P	P	15 48 37.2	-0.1
KLMR	Klimovskoe	25.59	72	eP	P	15 48 34.8	-2.9
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	Klimovskoe	25.59	72	eP	P	15 48 34.9	-2.8
KLMR				AMP		15 48 38.8	
	comp=Z,17nm,1.3s						
PSZ	Piszkesteto	26.04	112	P	P	15 48 43.7	+1.6
PSZ				pmax	pmax		
	comp=Z,33nm,1.6s						
PSZ	Piszkesteto	26.04	112	P	P	15 48 43.7	+1.6
PSZ				IAmb	IAmb	15 48 46.0	
	comp=Z,33nm,1.6s						
ESDC	Sonseca Array	26.16	156	P	P	15 48 44.0	+0.8
	comp=Z,0.8nm,0.8s,baz=358,slow=7.7,SNR=5.4						
KOLS	Kolonicke sedl	26.20	108	eP	P	15 48 47.7	+4.2
KOLS	Kolonicke sedl	26.20	108	eP	P	15 48 47.7	+4.2
AKASG	Malin Array Be	27.79	98	P	P	15 48 56.7	-1.0
	comp=Z,0.1nm,0.2s,baz=329,slow=9.7,SNR=5.0						
AKASG	Malin Array Be	27.79	98	ceP	P	15 48 59.0	+1.4
KIRV	Kirov	30.97	69	i P	P	15 49 27.1	+1.4
BELG	Belogornoye	34.46	79	i P	P	15 49 56.0	-0.3
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARU	Arti	36.08	66	P	P	15 50 10.1	-0.1
ARU				S	S	15 55 47.4	-1.6
ARU				SS	SnSn	15 58 05.4	-8.0
NRIK	Noril'sk	36.50	35	P	P	15 50 14.5	+0.8
	comp=Z,1.6nm,0.8s,baz=352,slow=7.0,SNR=5.3						
NRIK	Noril'sk	36.50	35	ceP	P	15 50 13.9	+0.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NRIK	Noril'sk	36.50	35	P	P	15 50 14.0	+0.3
NRIK				IAmb	IAmb	15 50 17.2	
	comp=Z,13nm,1.6s						
BRTR	Keskin Array B	38.41	105	P	P	15 50 31.2	+0.8
	comp=Z,1.0nm,0.7s,baz=305,slow=4.4,SNR=3.9						
KBZ	Khabaz	39.07	92	P	P	15 50 36.8	+1.2
	comp=Z,5.3nm,0.9s,baz=330,slow=11,SNR=3.2						
YKA	Yellowknife Ar	39.30	313	P	P	15 50 37.5	+0.1
	comp=Z,2.7nm,1.1s,baz=39,slow=8.9,SNR=12						
YKA				PcP	PcP	15 52 46.0	+0.2
	comp=Z,0.2nm,0.4s,baz=34,slow=4.2,SNR=6.1						
INK	Inuvik	39.94	329	P	P	15 50 42.5	-0.1
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	39.94	329	P	P	15 50 42.5	-0.1
FFC	Flin Flon	40.68	298	P	P	15 50 50.8	+1.9
FFC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FFC	Flin Flon	40.68	298	P	P	15 50 50.8	+1.9
AB02	Akbulak array	41.97	73	P	P	15 50 58.5	-1.1
TOLK	Toolik Lake Re	42.84	336	P	P	15 51 07.5	+1.0
TOLK				IAmb	IAmb	15 51 10.6	
	comp=Z,14nm,1.1s						
BRVK	Borovoye	43.13	62	ceP	P	15 51 07.9	-1.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BRVK	Borovoye	43.13	62	P	P	15 51 08.8	-0.1
DAWY	Dawson	44.80	328	P	P	15 51 23.6	+1.3
DAWY				IAmb	IAmb	15 51 25.8	
	comp=Z,11nm,1.2s						
IL31		45.78	333	P	P	15 51 31.7	+1.7
IL31				IAmb	IAmb	15 51 33.8	
	comp=Z,11nm,1.3s						
ILAR	Eielson Array	45.78	333	P	P	15 51 30.9	+0.9
	comp=Z,3.5nm,1.0s,baz=24,slow=6.1,SNR=16						
ILAR				PcP	PcP	15 53 07.2	-0.2
	comp=Z,1.3nm,1.0s,baz=350,slow=3.7,SNR=6.6						
MDM	Murphy Dome	45.88	333	P	P	15 51 31.4	+0.6
ZAA0	Zalesovo Array	47.65	51	P	P	15 51 45.5	+0.8
ZAA0				IAmb	IAmb	15 51 46.9	
	comp=Z,11nm,1.8s						
ZALV	Zalesovo Beam	47.65	51	P	P	15 51 44.3	-0.5
	comp=Z,0.7nm,0.6s,baz=330,slow=8.6,SNR=5.2						
KURK	Kurchatov	48.12	58	ceP	P	15 51 47.1	-1.3
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	48.12	58	P	P	15 51 47.8	-0.6
KURK				IAmb	IAmb	15 51 50.3	
	comp=Z,6.1nm,1.0s						
ANM	Nome	49.04	342	P	P	15 51 58.0	+2.7
ANM				pmax	pmax		
	comp=Z,11nm,1.3s						
ANM	Nome	49.04	342	P	P	15 51 58.0	+2.7
ANM				IAmb	IAmb	15 52 00.2	
	comp=Z,11nm,1.3s						
KK09	Karatay Array	51.24	70	P	P	15 52 14.5	+2.1
KK08	Karatay Array	51.25	70	P	P	15 52 13.6	+1.2
KK04	Karatay Array	51.26	70	P	P	15 52 13.3	+0.9
KK01	Karatay Array	51.26	70	P	P	15 52 13.7	+1.2
KKAR	Karatay Array	51.26	70	P	P	15 52 13.1	+0.6
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KKAR	Karatay Array	51.26	70	P	P	15 52 13.1	+0.6
KKAR				IAmb	IAmb	15 52 19.5	
	comp=Z,8.8nm,1.6s						
YNE	Yellowstone No	51.55	295	P	P	15 52 15.2	+0.2
BOZ	Bozeman (W)	51.69	297	P	P	15 52 17.0	+1.2
BOZ				pmax	pmax		
	comp=Z,13nm,1.2s						
BOZ	Bozeman (W)	51.69	297	P	P	15 52 17.0	+1.2
BOZ				IAmb	IAmb	15 52 19.2	
	comp=Z,13nm,1.2s						
U40A	Yellville	51.69	275	P	P	15 52 17.4	+1.6
U40A				IAmb	IAmb	15 52 17.9	
	comp=Z,15nm,1.4s						
YMP	Mirror Lake Pl	51.83	295	P	P	15 52 19.1	+2.0
DGZ	Jazzator, Alta	52.10	53	i P	P	15 52 19.4	+0.6
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YHL	Hebgen Lake	52.14	296	P	P	15 52 21.4	+2.0
YHB	Horse Butte	52.23	296	P	P	15 52 19.0	-0.9
H17A	Grant Village	52.28	295	P	P	15 52 22.4	+2.0
H17A				IAmb	IAmb	15 52 25.6	
	comp=Z,7.6nm,1.1s						
YPP	Pitchstone Pla	52.48	295	P	P	15 52 23.2	+1.3
MK31	Makanchi Array	52.73	58	ceP	P	15 52 23.2	-0.2
MK31	Makanchi Array	52.73	58	P	P	15 52 23.1	-0.3
MKAR	Makanchi Array	52.73	58	P	P	15 52 23.2	-0.2
	comp=Z,1.3nm,0.9s,baz=329,slow=6.4,SNR=10.0						
MOOW	Moose Ponds	52.89	295	P	P	15 52 25.4	+0.6
TORD	Torodi Ar. Bea	53.04	157	P	P	15 52 25.6	-0.4
	comp=Z,1.5nm,0.9s,baz=348,slow=7.9,SNR=4.2						
AAK	Ala-Archa	53.25	67	ceP	P	15 52 28.2	+0.7
AAK				pmax	pmax		
	comp=Z,22nm,1.7s						
AAK	Ala-Archa	53.25	67	P	P	15 52 28.1	+0.7
BW06	Boulder Array	53.25	293	P	P	15 52 27.0	-0.6
PD31	Pinedale Array	53.25	293	P	P	15 52 26.9	-0.7
PD31				IAmb	IAmb	15 52 30.1	
	comp=Z,16nm,1.6s						
PDAR	Pinedale Array	53.25	293	P	P	15 52 27.6	+0.1
	comp=Z,2.7nm,0.8s,baz=56,slow=5.6,SNR=10						
REDW	Red Top Meadow	53.26	295	P	P	15 52 29.3	+1.7
REDW				IAmb	IAmb	15 52 32.4	
	comp=Z,13nm,1.4s						
N23A	Red Feather La	53.38	289	P	P	15 52 29.9	+1.3
N23A				IAmb	IAmb	15 52 33.8	
	comp=Z,8.9nm,1.1s						
KSH	Kashi	56.49	68	P	P	15 52 52.8	+1.9
KSH				sP	sP	15 53 00.0	+4.0
KSH				S	S	16 00 41.7	-0.2
KSH				pmax	pmax		
	comp=Z,29nm,1.3s						
KSH				pmax	pmax		
	comp=Z,820nm,6.0s						
ZAK	Zakamensk	56.49	41	eP	P	15 52 48.7	-2.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SRU	San Rafael Swe	56.74	292	P	P	15 52 53.1	+0.3
SRU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SRU	San Rafael Swe	56.74	292	P	P	15 52 53.1	+0.3
PV14	Lion Creek, Pa	56.77	290	P	P	15 52 53.0	0.0
PV14				IAmb	IAmb	15 52 55.3	
	comp=Z,5.3nm,0.9s						
PV02	Paradox Valley	56.79	290	P	P	15 52 53.5	+0.3
PV02				IAmb	IAmb	15 52 55.8	
	comp=Z,5.7nm,0.9s						
PV03	Paradox Valley	56.80	290	P	P	15 52 53.8	+0.5
PV13	Radium Mtn., P	56.87	290	P	P	15 52 54.3	+0.5
WMQ	Urumqi	57.24	56	eP	P	15 52 58.9	+2.8
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,5.7s						
ANMO	Albuquerque	58.66	286	i P	P	15 53 08.3	+2.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	59.68	40	P	P	15 53 12.4	-0.8
	comp=Z,1.1nm,0.9s,baz=353,slow=6.0,SNR=6.9						
U15A	North Rim	59.76	292	IAmb	IAmb	15 53 16.0	
	comp=Z,5.3nm,1.1s						
ULN	Ulaanbaatar	59.83	40	i P	P	15 53 13.4	-0.8
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WUAZ	Wupatki	60.18	290	P	P	15 53 17.0	+0.2
NVAR	Mina Array Bea	60.38	297	P	P	15 53 18.6	+0.4
	comp=Z,0.9nm,0.9s,baz=48,slow=2.2,SNR=4.2						
NIL	Nilore	60.43	74	P	P	15 53 18.2	-0.2
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	60.43	74	P	P	15 53 18.2	-0.2
NIL				IAmb	IAmb	15 53 20.6	
	comp=Z,5.9nm,0.8s						
X16A	Lo Mia Camp, P	61.16	290	P	P	15 53 23.9	+0.4
X16A				IAmb	IAmb	15 53 27.8	
	comp=Z,12nm,1.6s						
MDPB	Devils Postpil	61.38	298	P	P	15 53 26.7	+1.6
TXAR	Lajitas Array	62.34	280	P	P	15 53 32.0	+0.6
	comp=Z,1.1nm,0.9s,baz=42,slow=5.8,SNR=8.6						
HHC	Hu-ho-hao-te	67.55	40	eP	P	15 54 07.2	+2.0
HHC				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC				pmax	pmax		
	comp=Z,270nm,7.8s						
LZH	Lanzhou	69.65	48	eP	P	15 54 18.9	+0.5
LZH				pP	pP	15 54 22.5	+0.3
LZH				sP	sP	15 54 25.7	+2.0
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
ROSC	El Rosal	71.92	241	LR	LR	16 25 27.8	
	comp=Z,146nm,18.1s,baz=106,slow=35						
NJ2	Nanjing	77.78	37	eP	P	15 55 07.2	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	84.14	59	P	P	15 55 39.7	-0.4
	comp=Z,0.3nm,0.3s,baz=318,slow=6.9,SNR=5.4						
CMAR	Chiang Mai Arr	84.14	59	i P	P	15 55 41.7	+1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*ECX **08** 15:57:55.8±0.7, 31°.55N×115°.49W, h6^{km}±3^{km}, MD2.3, ML2.5*

*MEX **08** 15:57:55.5±0.5, 31°.55N×115°.17W, h16^{km}±7^{km}, MD3.4*

ISC 08 15:57:52.5±1.2**, 31°.61N**±0°.03×**115°.34W**±0°.04**, h16**^{km}±9^{km}**, n16, σ1^{s}50**/30**, 5C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBX	El Chinero	0.28	120	⇑iP	Pn	15 58 02.9	+1.0
ECBX				eS	Sn	15 58 07.9	0.0
VTX	Valle De La Tr	0.44	240	⇑eP	Pg	15 58 00.5	-0.9
VTX				eS	Sg	15 58 04.8	-2.6
SJX	San Joaquin	0.55	286	⇑eP	Pn	15 58 06.5	+0.8
SJX				eS	Sn	15 58 14.4	-0.2
SJX				IAML		15 58 18.6	
	comp=E,314nm,0.1s						
SJX				⇓e		15 58 18.6	
SPIG	San Pedro Mart	0.58	191	eP	Pg	15 58 05.2	+1.2
	baz=27,slow=6.5						
SPIG				eS	Sb	15 58 12.2	-0.3
SPIG	San Pedro Mart	0.58	191	eP	Pg	15 58 04.8	+0.8
SPIG				eS	Sg	15 58 12.0	+0.3
SPX	San Pedro Mart	0.59	191	⇑eP	Pg	15 58 05.2	+1.0
SPX				eS	Sg	15 58 11.9	-0.1
SFX	San Felipe	0.71	144	eP	Pn	15 58 09.8	+2.0
SFX				eS	Sn	15 58 20.0	+1.6
SVX	San Vicente	0.83	250	eP	Pb	15 58 08.0	-0.6
SVX				eS	Sb	15 58 17.2	-2.3
SQX	San Quintin	1.13	204	eP	Pb	15 58 13.9	+0.2
SQX				eS	Sb	15 58 27.3	-0.9
SQX				IAML		15 58 28.4	
	comp=N,167nm,0.2s						
SQX				⇓e		15 58 28.4	
RMX	La Rumorosa	1.17	328	eP	Pb	15 58 15.2	+0.8
RMX				eS	Sb	15 58 29.9	+0.4
IKP	In-Ko-Pah, Jac	1.23	328	eP	Pg	15 58 17.1	+1.0
CBX	Cerro Bola	1.33	302	eP	Pb	15 58 17.8	+0.7
CBX				eS	Sb	15 58 34.5	+0.6
CBX				IAML		15 58 37.7	
	comp=N,89nm,0.3s						
CBX				⇑e		15 58 37.7	
TJIG	Tijuana	1.40	306	eP	Pb	15 58 19.3	+1.0
TJIG				eS	Sb	15 58 36.8	+0.8
TJIG	Tijuana	1.40	306	eP	Pg	15 58 19.5	0.0
TJIG				eS	Sb	15 58 36.4	+0.4
BAR	Barrett	1.56	314	eP	Pb	15 58 22.1	+1.1
214A	Organ Pipe Nat	2.18	80	i P	Pn	15 58 26.4	-1.7
214A				i S	Sn	15 58 49.9	-4.9

IDC 08 16:03:37.6±8.0**, 26°.18S**×**28°.80E, h0**^{km}**, mb1 2.7**/1**, mb1mx2.6**/25**, mbtmp2.7**/1**, ML2.6**/1**, Error ellipse: s-maj=75.3km s-min=55.6km az=141.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	3.97	232	Pn	Pn	16 04 39.7	-0.2
	0.3nm,0.3s,baz=55,slow=11,SNR=13						
BOSA				Pg	Pb	16 04 50.5	+2.0
	1.3nm,0.3s,baz=55,slow=16,SNR=13						
BOSA				Lg	Lg	16 05 43.6	
	3.1nm,0.3s,baz=142,slow=17,SNR=7.2						
I47ZA	BOSHOF INFRASO	3.99	232	i		16 29 00.0	
	baz=53,slow=317,SNR=0.7						
I35NA	TSUMEB INFRASO	12.47	302	i		17 18 39.2	
	baz=125,slow=304,SNR=2.6						

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*NEIC **08** 16:17:40.4±2.6, 61°.70S±0°.08×161°.1E±0°.6, h13^{km}±4^{km}, mb4.7/9, Error ellipse: s-maj=37.9km s-min=10.8km az=91.0*

*IDC **08** 16:17:41.6±5.7, 62°.10S×158°.53E, h0^{km}, mb4.2/3, mb1 4.5/4, mb1mx4.1/21, mbtmp4.2/4, ML4.0/1, MS3.9/13, Ms1 3.9/13, ms1mx3.7/22, Error ellipse: s-maj=323.7km s-min=24.2km az=74.0*

ISC 08 16:17:41.2±0.9**, 61°.78S**±0°.10×**160°.9E**±0°.2**, h10**^{km}**, n37, σ1^{s}56**/16**, mb4.5**/6**, MS4.0**/11**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.37	351	Pn	Pn	16 19 22.7	-6.0
MCQ				Sn	Sn	16 20 39.8	-12
VNDA	Vanda	15.82	179	Pn	Pn	16 21 21.9	-1.6
	0.6nm,0.3s,baz=350,slow=15,SNR=26						
VNDA				LR	LR	16 25 32.3	
	comp=Z,57nm,19.9s,baz=346,slow=30						
VNDA	Vanda	15.82	179		Pn	16 21 22.5	-1.1
DCZ	Deep Cove	16.75	16		Pn	16 21 33.6	-2.0
DCZ				IAmb	IAmb	16 21 48.2	
	comp=Z,31nm,1.1s						
MLZ	Mavora Lakes	16.98	18	P	Pn	16 21 39.5	+0.9

MLZ				IAmb	IAmb	16 21 59.8	
	comp=Z,110nm,1.9s						
RPZ	**Rata Peaks**	**19.08**	**23**	LR	LR	16 28 41.2	
	comp=Z,495nm,18.2s,baz=206,slow=33						
CASY	**Casey**	**21.97**	**236**	P	**P**	**16 22 34.2**	**-0.4**
CASY				IAmb	IAmb	16 23 12.1	
	comp=Z,55nm,1.6s						
URZ	**Urewera**	**25.61**	**31**	LR	LR	16 32 20.5	
	comp=Z,440nm,18.3s,baz=211,slow=33						
QSPA	**South Pole Qui**	**28.31**	**180**	P	**P**	**16 23 34.3**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=13,slow=3.8,SNR=5.5						
QSPA				LR	LR	16 33 18.5	
	comp=Z,364nm,20.4s,baz=2.0,slow=34						
STKA	**Stephens Creek**	**32.42**	**328**	LR	LR	16 35 35.1	
	comp=Z,297nm,18.6s,baz=184,slow=33						
MAW	**Mawson**	**38.06**	**218**	LR	LR	16 40 54.3	
	comp=Z,234nm,18.4s,baz=64,slow=38						
H01W1	**Cape Leeuwin H**	**39.74**	**291**	T	T	17 07 49.3	
	baz=147,slow=76,SNR=208						
H01W2	**Cape Leeuwin H**	**39.74**	**291**	T	T	17 07 45.5	
	baz=147,slow=76,SNR=166						
H01W3	**Cape Leeuwin H**	**39.75**	**291**	T	T	17 07 50.5	
	baz=147,slow=76,SNR=221						
ASAR	**Alice Springs**	**42.30**	**322**	P	**P**	**16 25 34.6**	**-0.2**
	comp=Z,5.9nm,0.8s,baz=159,slow=8.3,SNR=66						
AS31	**Alice Springs**	**42.30**	**322**	P	**P**	**16 25 34.7**	**-0.1**
MSVF	**Nonsavu**	**45.64**	**23**	LR	LR	16 43 48.4	
	comp=Z,131nm,18.2s,baz=212,slow=34						
WB2	**Warramunga Arr**	**45.69**	**324**	P	**P**	**16 26 01.6**	**-0.5**
WRA	**Warramunga Arr**	**45.70**	**324**	P	**P**	**16 26 00.4**	**-1.7**
	comp=Z,3.0nm,1.1s,baz=164,slow=7.1,SNR=5.5						
WB0	**Warramunga Arr**	**45.85**	**324**	P	**P**	**16 26 01.8**	**-1.5**
WB0				IAmb	IAmb	16 26 38.6	
	comp=Z,42nm,1.9s						
SNAA	**Sanae**	**46.35**	**187**	P	**P**	**16 26 07.5**	**+0.8**
SNAA	**Sanae**	**46.35**	**187**	P	**P**	**16 26 06.5**	**-0.2**
SNAA				IAmb	IAmb	16 26 08.4	
	comp=Z,7.7nm,1.0s						
VNA2	**Neumayer--Watz**	**47.32**	**185**	P	**P**	**16 26 14.8**	**+0.6**
	baz=183,slow=7.7						
FITZ	**Fitzroy Crossi**	**50.13**	**314**	LR	LR	16 45 06.7	
	comp=Z,110nm,18.7s,baz=196,slow=33						
HNR	**Honiara**	**52.25**	**359**	LR	LR	16 43 39.3	
	comp=Z,136nm,21.4s,baz=182,slow=30						
PMG	**Port Moresby**	**53.23**	**343**	LR	LR	16 47 19.1	
	comp=Z,59nm,20.1s,baz=254,slow=33						
PPT	**Papeete**	**56.08**	**61**	LR	LR	16 47 22.5	
	comp=Z,39nm,20.5s,baz=279,slow=31						
KAPI	**Kappang**	**64.33**	**313**	LR	LR	16 52 51.3	
	comp=Z,95nm,18.2s,baz=260,slow=33						
H03S2	**Juan Fernandez**	**73.23**	**131**	T	T	17 49 58.3	
	baz=203,slow=74,SNR=93						
H03S1	**Juan Fernandez**	**73.23**	**131**	T	T	17 50 00.6	
	baz=203,slow=74,SNR=78						
H03S3	**Juan Fernandez**	**73.25**	**131**	T	T	17 49 59.1	
	baz=203,slow=74,SNR=69						
H08S2	**Diego Garcia H**	**82.54**	**268**	T	T	18 01 34.0	
	baz=152,slow=75,SNR=26						
H08S1	**Diego Carcia H**	**82.55**	**268**	T	T	18 01 27.5	
	baz=152,slow=75,SNR=29						
H08S3	**Diego Garcia H**	**82.56**	**268**	T	T	18 01 30.2	
	baz=152,slow=75,SNR=24						
BOSA	**Boshof**	**83.07**	**218**	P	**P**	**16 30 07.6**	**+0.7**
BDFB	**Brasilia**	**99.52**	**152**	LR	LR	17 13 30.7	
	comp=Z,101nm,20.4s,baz=7.8,slow=34						
AKASG	**Malin Array Be**	**151.62**	**269**	PKPbc	**PKPdf**	**16 37 32.0**	**+4.0**
	comp=Z,0.9nm,0.7s,baz=107,slow=2.5,SNR=3.5						

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*IDC **08** 16:29:23.5±5.1, 36°.48N×71°.16E, h189^{km}±35^{km}, mb3.4/9, mb1 3.4/15, mb1mx3.1/56, mbtmp3.9/15, Error ellipse: s-maj=48.6km s-min=23.9km az=163.0*

*NEIC **08** 16:29:26.4±1.1, 36°.66N±0°.06×71°.08E±0°.08, h206^{km}±5^{km}, mb4.3/6, Error ellipse: s-maj=10.4km s-min=6.9km az=55.0*

*NNC **08** 16:29:30.3±5.0, 37°.19N×71°.05E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=38.6km s-min=35.4km az=160.0*

ISC 08 16:29:25.0±0.5, **36°.66N**±0°.05×**71°.11E**±0°.05, **h188^{km}, n61,** σ**1^s.58**/71, **mb3.9**/11, **7C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.70**	**219**		**Pn**	**16 30 12.4**	**+1.7**
KBL				Sn	**Sn**	**16 30 46.6**	**+0.2**
DRK	**Karamyk**	**2.87**	**11**		**Pn**	**16 30 15.8**	**+3.0**
DRK				Sn	**Sn**	**16 30 53.0**	**+2.8**
CEP	**Cherat**	**2.91**	**167**	⇑P	**Pn**	**16 30 15.5**	**+2.4**
CEP				S	**Sn**	**16 30 52.0**	**+1.4**
NIL	**Nilore**	**3.48**	**149**		**Pn**	**16 30 22.5**	**+2.5**
NIL				Sn	**Sn**	**16 31 05.4**	**+2.5**
THW	**Thamme Wali**	**3.89**	**172**	⇑P	**Pn**	**16 30 26.8**	**+1.7**
TAS	**Tashkent**	**4.87**	**344**	Pn	**Pn**	**16 30 38.6**	**+1.2**
SARP	**Sargodha**	**4.90**	**164**	P	**Pn**	**16 30 38.9**	**+1.0**
THN	**Thein Dam**	**5.68**	**137**	*e*P	**Pn**	**16 30 49.5**	**+1.5**
THN				*e*S	**Sn**	**16 31 52.0**	**-1.3**
AML	**Almayashu**	**5.82**	**19**	P	**Pn**	**16 30 51.9**	**+1.8**
	SNR=100						
DHRM	**DHARAMSHALA**	**6.14**	**134**	*e*P	**Pn**	**16 30 55.4**	**+1.2**
DHRM				*e*S	**Sn**	**16 32 02.1**	**-2.5**
DHRM				IAML		16 32 04.7	
	comp=N,251nm,0.3s						
DHRM				IAML		16 32 04.7	
	comp=E,204nm,0.3s						
UCH	**Uchtor**	**6.15**	**24**	P	**Pn**	**16 30 56.5**	**+2.0**
	SNR=62						
EKS2	**Erkin-Say**	**6.34**	**18**	P	**Pn**	**16 30 58.8**	**+2.2**
	SNR=13						
KK31	**Karatay Array**	**6.45**	**356**	⇑Pn	**Pn**	**16 31 00.8**	**+2.8**
	comp=E,3.2nm,0.3s,baz=177,slow=12,SNR=54						
KK31				⇑Sn	**Sn**	**16 32 08.2**	**-3.2**
	comp=E,12nm,0.5s,baz=185,slow=23,SNR=22						
KK31	**Karatay Array**	**6.45**	**356**		**Pn**	**16 30 59.1**	**+1.1**
KKAR	**Karatay Array**	**6.45**	**356**		**Pn**	**16 30 59.2**	**+1.2**
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**16 31 00.9**	**+2.0**
	comp=E,7.1nm,0.3s,baz=173,slow=5.6,SNR=82						
AAK				S	**Sn**	**16 32 13.4**	**+0.2**
	comp=E,3.1nm,0.3s,baz=358,slow=24,SNR=14						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**16 31 01.1**	**+2.1**
	SNR=30						
AAK	**Ala-Archa**	**6.52**	**23**	⇑Pn	**Pn**	**16 31 00.9**	**+2.0**
	comp=E,7.7nm,0.3s						
AAK				⇑Sn	**Sn**	**16 32 13.4**	**+0.2**
	comp=E,14nm,0.5s						
AAK	**Ala-Archa**	**6.52**	**23**		**Pn**	**16 31 00.7**	**+1.7**
KBK	**Karagaybulak**	**6.68**	**25**	P	**Pn**	**16 31 03.4**	**+2.3**
	SNR=22						
FRU1	**Bishkek**	**6.72**	**23**	Pn	**Pn**	**16 31 03.4**	**+1.9**
ULHL	**Ulahol**	**6.85**	**34**	P	**Pn**	**16 31 05.1**	**+1.7**
	SNR=16						
BOOM	**Boomskoye usch**	**6.92**	**31**	Pn	**Pn**	**16 31 06.1**	**+1.9**
TKM2	**Tokmak 2**	**7.14**	**28**	P	**Pn**	**16 31 09.0**	**+1.8**
	SNR=26						
TKM2	**Tokmak 2**	**7.14**	**28**	⇑Pn	**Pn**	**16 31 08.8**	**+1.6**
	comp=E,20nm,0.6s						
TKM2				⇓Sn	**Sn**	**16 32 27.9**	**-0.2**
	comp=E,16nm,1.1s						
KDJ	**Kajisay**	**7.21**	**39**	Pn	**Pn**	**16 31 09.7**	**+1.7**
SMLA	**Simla**	**7.47**	**136**	*e*P	**Pn**	**16 31 11.6**	**+0.2**
SMLA				*e*S	**Sn**	**16 32 31.8**	**-3.9**
SMLA				IAML		16 32 34.1	
	comp=E,83nm,0.4s						
SMLA				IAML		16 32 34.1	
	comp=E,83nm,0.4s						
SMLA				IAML		16 32 34.6	
	comp=N,114nm,0.3s						
HRA	**Herat**	**7.57**	**255**	Pn	**Pn**	**16 31 13.5**	**+0.6**
PRZ	**Przheval'sk**	**8.09**	**42**		**Pn**	**16 31 20.9**	**+1.3**
GEYT	**Alibeck**	**10.43**	**281**	P	**P**	**16 31 57.8**	**0.0**
	comp=N,0.2nm,0.3s,baz=245,slow=10,SNR=2.9						
MAKZ	**Makanchi**	**12.98**	**35**	Pn	**Pn**	**16 32 23.0**	**+0.5**
MK31	**Makanchi Array**	**13.11**	**36**		**Pn**	**16 32 25.0**	**+0.8**
MKAR	**Makanchi Array**	**13.11**	**36**	P	**Pn**	**16 32 25.3**	**+1.1**
	comp=N,0.3nm,0.3s,baz=211,slow=13,SNR=10						
DANN	**Dangsing**	**13.51**	**124**	*e*P	**Pn**	**16 32 30.3**	**+0.7**
	comp=N,7.9nm,0.3s						
DMN	**Daman**	**14.89**	**123**	*e*P	**Pn**	**16 32 48.2**	**+1.5**
	comp=N,6.4nm,0.3s						
KKN	**Kakani**	**14.89**	**122**	*e*P	**Pn**	**16 32 47.3**	**+0.6**
KURBB	**Kurchatov Arra**	**14.94**	**19**	P	**Pn**	**16 32 47.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=4.7,slow=14,SNR=1.9						
ABKAR	**Akbulak array**	**14.99**	**331**	P	**Pn**	**16 32 46.8**	**-0.5**
PKI	**Pulchoki**	**15.12**	**123**	*e*P	**Pn**	**16 32 50.8**	**+1.2**
	comp=N,6.5nm,0.3s						
GUN	**Gumba**	**15.22**	**121**	*e*P	**Pn**	**16 32 52.8**	**+1.9**
	comp=N,4.9nm,0.3s						
RAMN	**Ramite**	**16.33**	**122**	*e*P	**P**	**16 33 03.3**	**-0.3**
	comp=N,8.1nm,0.6s						
BVAR	**Borovoye Array**	**16.37**	**358**	P	**P**	**16 33 02.6**	**-1.0**
	comp=N,0.1nm,0.3s,baz=317,slow=52,SNR=2.4						
BRVK	**Borovoye**	**16.41**	**358**	P	**P**	**16 33 04.5**	**+0.6**
BRVK				IAmb	IAmb	16 33 12.1	
	comp=Z,2.3nm,0.8s						
AKTO	**Aktyubinsk**	**16.68**	**330**	P	**P**	**16 33 08.0**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=135,slow=8.9,SNR=11						
ODAN	**Odare**	**16.93**	**121**	*e*P	**P**	**16 33 11.0**	**+0.8**
	comp=Z,3.7nm,0.3s						
ZAA0	**Zalesovo Array**	**19.73**	**25**	P	**P**	**16 33 40.7**	**+0.6**
ZALV	**Zalesovo Beam**	**19.73**	**25**	P	**P**	**16 33 39.9**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=216,slow=11,SNR=7.5						
BELG	**Belogornoye**	**22.82**	**321**	P	**P**	**16 34 11.7**	**+0.3**
	comp=Z,4.3nm,0.6s,baz=200,slow=22,SNR=2.0						
CM31	**Chiang Mai Arr**	**30.46**	**119**	P	**P**	**16 35 19.9**	**-0.3**
CM31				IAmb	IAmb	16 35 27.8	
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**32.91**	**309**	P	**P**	**16 35 41.1**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=99,slow=9.5,SNR=3.5						
NRIK	**Noril'sk**	**33.95**	**10**	P	**P**	**16 35 49.5**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=212,slow=8.1,SNR=4.1						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**16 36 19.5**	**0.0**
	comp=Z,4.1nm,0.9s,baz=111,slow=10,SNR=6.7						
ARCES	**ARCESS Array B**	**41.03**	**337**	P	**P**	**16 36 49.8**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=79,slow=6.3,SNR=7.1						
NC303	**NORSAR Array S**	**44.25**	**323**	P	**P**	**16 37 15.2**	**-0.2**
NB201	**NORSAR Array S**	**44.27**	**323**	P	**P**	**16 37 14.9**	**-0.7**
NB201				IAmb	IAmb	16 37 35.8	
	comp=Z,51nm,1.4s						
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**16 37 15.2**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**16 37 15.1**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=96,slow=7.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**16 39 47.9**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=47,slow=4.7,SNR=2.3						
INK	**Inuvik**	**73.73**	**9**	P	**P**	**16 40 37.3**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=340,slow=8.0,SNR=4.6						
INK	**Inuvik**	**73.73**	**9**	IAmb	IAmb	16 40 40.0	
	comp=Z,10nm,1.6s						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	**P**	**16 41 18.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=355,slow=4.8,SNR=7.5						

IDC 08 16:36:25.9±3.8, **5°.85S**×**146°.69E, h0^{km}, mb2.7**/1, **mb1 3.4**/3, **mb1mx3.2**/28, **mbtmp3.2**/3, **ML2.4**/2, **Error ellipse: s-maj=79.7km s-min=53.6km az=89.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.56**	**172**	Pn	Pn	16 37 22.9	+0.4
	2.8nm,0.3s,baz=317,slow=16,SNR=8.2						
PMG				Sn	Sn	16 38 00.8	-4.5
	2.8nm,0.3s,baz=245,slow=22,SNR=1.2						
WRA	**Warramunga Arr**	**18.45**	**219**	P	Pn	16 40 42.8	-0.4
	0.1nm,0.3s,baz=48,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**21.57**	**213**	P	P	16 41 17.3	+0.1
	0.1nm,0.3s,baz=51,slow=8.6,SNR=1.5						
TORD	**Torodi Ar. Bea**	**144.75**	**284**	PKP	PKPbc	16 56 05.1	+0.3
	0.4nm,0.4s,baz=57,slow=2.4,SNR=3.3						

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*NEIC **08** 16:50:42.1±1.4, 52°.5N±0°.2×173°.0W±0°.2, h215^{km}±13^{km}, Error ellipse: s-maj=37.8km s-min=9.6km az=162.0*

AEIC 08 16:50:41.2±2.7, **52°.8N**±0°.2×**173°.0W**±0°.1, **h201**^{km}±3^{km}, **ML3.0**/18, **mb4.0**/15(NEIC), **Error ellipse: s-maj=31.0km s-min=7.9km az=160.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.86**	**230**		Pn	16 51 12.1	+1.9
KOFP					S	16 51 35.3	+2.7
KOWE	**Korovin West**	**0.88**	**238**		Pn	16 51 12.3	+2.0
ATKA	**Atka Island**	**0.95**	**229**	Pn	Pn	16 51 12.2	+1.5
ATKA	**Atka Island**	**0.95**	**229**		S	16 51 34.6	+1.2
GSTR	**Great Sitkin T**	**2.00**	**249**	Pn	Pn	16 51 21.2	+1.5
GSMY	**Great Sitkin M**	**2.01**	**248**		Pn	16 51 20.7	+0.8
GSTD	**Great Sitkin T**	**2.06**	**249**		Pn	16 51 21.2	+0.8
GSTD					S	16 51 52.8	+2.4
ADAG	**Mount Adagdak**	**2.35**	**250**		Pn	16 51 25.0	+1.6
ADK	**Adak**	**2.43**	**249**	Pn	Pn	16 51 25.5	+1.2
ADK				Sn	S	16 51 58.4	+1.1
NIKH	**Nikolski High**	**2.53**	**85**	Pn	Pn	16 51 28.3	+2.9
NIKH	**Nikolski High**	**2.53**	**85**		S	16 52 01.5	+2.2
KIKV	**Kanaga Island**	**2.71**	**251**		Pn	16 51 28.9	+1.4
KIMD	**Kanaga Island**	**2.80**	**249**		Pn	16 51 29.7	+1.2
TAFP	**Tanaga Falls P**	**3.18**	**255**		Pn	16 51 34.5	+1.6
MAPS	**Pakushin South**	**3.78**	**73**		Pn	16 51 42.9	+2.7
MREP	**Makushin Rep't**	**3.89**	**73**		Pn	16 51 44.4	+2.8
UNV	**Unalaska Valle**	**4.04**	**73**	Pn	Pn	16 51 45.9	+2.6
AKUT	**Akutan**	**4.53**	**70**	Pn	Pn	16 51 52.6	+3.1
AKUT				Sn	S	16 52 45.9	+3.2
AMKA	**Amchitka**	**4.95**	**256**	Pn	Pn	16 51 55.5	+0.7
OHAK	**Old Harbor**	**12.14**	**61**	Pn	Pn	16 53 26.6	-0.9
KDAK	**Kodiak Island**	**12.64**	**59**		Pn	16 53 35.4	+1.7
RSO	**Redoubt South**	**13.48**	**47**	Pn	Pn	16 53 43.9	-0.6
TTA	**Tatalina**	**13.53**	**35**		P	16 53 46.3	-1.1
CNPM	**China Poot**	**13.82**	**52**		P	16 53 50.2	-0.5
GHO	**Glory Hole Cre**	**15.71**	**46**		Pn	16 54 13.3	+1.6
GHO				IAmb	IAmb	16 54 31.2	
	comp=Z,11nm,1.0s						
KTH	**Kantishna Hill**	**15.75**	**38**	Pn	Pn	16 54 15.0	+2.8
KTH				IAmb	IAmb	16 54 19.2	
	comp=Z,5.3nm,1.1s						
KNK	**Knik Glacier**	**15.78**	**47**	Pn	Pn	16 54 14.4	+1.9
KNK				IAmb	IAmb	16 54 19.6	
	comp=Z,9.7nm,1.2s						
SCM	**Sheep Creek Mo**	**16.44**	**47**	Pn	Pn	16 54 22.8	+2.3
SCM				IAmb	IAmb	16 54 37.7	
	comp=Z,6.3nm,0.9s						
FID	**Port Fidalgo**	**16.47**	**51**	Pn	Pn	16 54 20.8	+0.1
RND	**Reindeer**	**16.47**	**41**	Pn	Pn	16 54 21.4	+0.6
RND				IAmb	IAmb	16 54 29.2	
	comp=Z,5.2nm,1.2s						
KLU	**Klutina**	**16.95**	**49**	Pn	Pn	16 54 27.9	+1.4
KLU				IAmb	IAmb	16 54 33.3	
	comp=Z,4.5nm,0.9s						
M24K	**Tolsona, Glenn**	**17.04**	**46**	Pn	Pn	16 54 30.5	+2.9
I23K	**Minto, Yukon-K**	**17.20**	**35**	P	Pn	16 54 31.4	+2.1
N25K	**Chitina, Valde**	**17.59**	**49**	P	Pn	16 54 35.3	+1.2
N25K				IAmb	IAmb	16 54 46.2	
	comp=Z,11nm,1.1s						
IL31		**17.89**	**38**	P	Pn	16 54 38.1	+0.7
GLB	**Gilahina Butte**	**17.91**	**50**	P	Pn	16 54 39.9	+2.2
GLB				IAmb	IAmb	16 54 54.9	
	comp=Z,6.3nm,1.1s						
CTGM	**Chitina Glacie**	**18.96**	**52**	P	P	16 54 45.1	-2.0
CTGM				IAmb	IAmb	16 54 55.3	
	comp=Z,7.9nm,1.1s						
PCA	**Pinnacle**	**19.34**	**55**	P	P	16 54 52.4	+1.2
K27K	**Chicken**	**19.47**	**43**	P	Pn	16 54 54.5	-1.6

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*IDC **08** 17:16:10.7±2.0, 7°.99S×122°.75E, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.3/28, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=297.2km s-min=29.0km az=56.0*

*DJA **08** 17:16:14.9±0.4, 8°S±3°×12°2E±°, h10^{km}, M3.9/7, mb4.0/1, MLv3.9/7*

ISC 08 17:16:11.0±1.0, **8°.50S**±0°.07×**122°.46E**±0°.06, **h10^{km}, n12,** σ**1^s.97**/15, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.26**	**239**	P	**Pn**	**17 16 20.4**	**-0.6**
MMRI				S	**Sb**	**17 16 24.8**	**+2.4**
EDFI	**Ende, Flores**	**0.80**	**252**	P	**Pg**	**17 16 26.7**	**+0.1**
EDFI				S	**Sg**	**17 16 35.3**	**-1.8**
SOEI	**Soe**	**2.17**	**125**	P	Pg	17 16 57.6	+4.8
BSSI	**Bau Bau, Buton**	**3.05**	**320**	P	**Pn**	**17 16 58.3**	**-1.1**
BKSI	**Bulukumba**	**3.92**	**324**	P	**Pn**	**17 17 10.3**	**-1.0**
PLAI	**Plampang**	**4.64**	**266**	P	**Pn**	**17 17 21.5**	**+0.2**
BNSI	**Bone**	**4.70**	**330**	P	**Pn**	**17 17 23.2**	**+1.2**
SPSI	**Sidrap Palu**	**5.24**	**329**	P	**Pn**	**17 17 30.0**	**+0.5**
TWSI	**Taliwang, Sumb**	**5.52**	**267**	P	**Pn**	**17 17 32.9**	**-0.5**
WRA	**Warramunga Arr**	**16.17**	**136**	Pn	**P**	**17 20 00.2**	**-1.6**
	0.1nm,0.3s,baz=313,slow=12,SNR=2.6						
WRA				Sn	**Sn**	**17 22 56.9**	**-1.2**
	0.1nm,0.3s,baz=308,slow=21,SNR=1.8						
ASAR	**Alice Springs**	**18.64**	**145**	P	**Pn**	**17 20 33.9**	**+4.5**
	0.1nm,0.3s,baz=320,slow=12,SNR=7.4						
ASAR				S	**Sn**	**17 23 55.2**	**-2.9**
	0.0nm,0.3s,baz=315,slow=22,SNR=3.0						
MKAR	**Makanchi Array**	**65.63**	**331**	P	**P**	**17 26 54.6**	**-0.8**
	0.5nm,0.5s,baz=133,slow=7.8,SNR=9.2						

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*IDC **08** 17:17:10.2±2.8, 31°.59S×69°.73W, h94^{km}±26^{km}, mb3.2/1, mb1 3.7/4, mb1mx3.4/21, mbtmp3.7/4, Error ellipse: s-maj=47.8km s-min=26.3km az=96.0*

*GUC **08** 17:17:12.5±0.7, 31°.56S×70°.23W, h133^{km}±6^{km}, ML4.2*

*SJA **08** 17:17:12.5±0.7, 31°.55S×69°.94W, h111^{km}±4^{km}, ML4.0, MW3.9*

ISC 08 17:17:12.3±0.8, **31°.55S**±0°.03×**69°.89W**±0°.04, **h123**^{km}±6^{km}, **n44,** σ**1^s.24**/64, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.56**	**116**	*e*P	**Pn**	**17 17 31.4**	**+0.1**
RTLS				*e*S	**Sn**	**17 17 45.7**	**0.0**
RTLS				IAML		17 17 47.1	
	comp=Z,3μm,0.2s						
AUSP	**Uspallata**	**0.79**	**148**	*e*P	**Pn**	**17 17 33.6**	**+0.5**
AUSP				*e*S	**Sn**	**17 17 48.6**	**-0.2**
CO03	**El Pedregal**	**0.99**	**316**	*e*P	**Pn**	**17 17 34.9**	**+0.3**
CO03				*i* S	**Sn**	**17 17 51.5**	**0.0**
CO03				IAML		17 17 53.2	
	comp=E,10μm,0.2s						
ZON	**Zonda**	**1.03**	**90**	*e*P	**Pn**	**17 17 35.2**	**+0.2**
ZON				*e*S	**Sn**	**17 17 52.5**	**+0.4**
RTCV	**Cerro Valdivia**	**1.19**	**105**	*e*P	**Pn**	**17 17 36.9**	**+0.4**
ACCO	**Cerro Coronel**	**1.19**	**36**	*e*P	**Pn**	**17 17 37.5**	**+0.6**
ACCO				IAML		17 17 58.4	
	comp=Z,2μm,1.9s						
RTLL	**Cerro Villicun**	**1.23**	**80**	*e*P	**Pn**	**17 17 36.9**	**0.0**
RTLL				*e*S	**Sn**	**17 17 55.4**	**-0.3**
RTLL				IAML		17 17 56.9	
	comp=Z,1μm,0.3s						
VA03	**San Esteban**	**1.33**	**205**	*e*P	**Pn**	**17 17 38.5**	**+0.4**
VA03				*i* S	**Sn**	**17 17 58.1**	**+0.3**
VA03				IAML		17 17 59.2	
	comp=E,5μm,0.3s						
ASAL	**Salagasta**	**1.37**	**139**	*e*P	**Pn**	**17 17 39.4**	**+0.9**
ASAL				*e*S	**Sn**	**17 17 58.8**	**+0.4**
ASAL				IAML		17 17 59.9	
	comp=Z,967nm,0.5s						
AROD	**Rodeo**	**1.43**	**15**	*e*P	**Pn**	**17 17 40.8**	**+1.3**
ARCO	**CERRO ARCO**	**1.52**	**148**	*e*P	**Pn**	**17 17 41.3**	**+1.0**
ARCO				*e*S	**Sn**	**17 18 03.2**	**+1.5**
ARCO				IAML		17 18 05.4	
	comp=Z,3μm,0.7s						
ACDV	**Cuesta del Vie**	**1.53**	**26**	*e*P	**Pn**	**17 17 41.4**	**+0.9**
ACDV				*e*S	**Sn**	**17 18 03.8**	**+2.0**
ACDV				IAML		17 18 04.9	
	comp=Z,952nm,0.5s						
CO01	**Juntas del Tor**	**1.58**	**353**	*e*P	**Pn**	**17 17 42.6**	**+1.4**
CO01				*i* S	**Sn**	**17 18 05.2**	**+2.1**
GO04	**Tololo Observa**	**1.58**	**330**	*e*P	**Pn**	**17 17 41.3**	**+0.1**
GO04				*i* S	**Sn**	**17 18 03.2**	**0.0**
GO04	**Tololo Observa**	**1.58**	**330**	*e*P	**Pn**	**17 17 41.4**	**+0.1**
GO04				*e*S	**Sn**	**17 18 02.7**	**-0.4**
ROCH	**El Roble**	**1.71**	**214**	*e*P	**Pn**	**17 17 42.2**	**-0.3**
ROCH				*i* S	**Sn**	**17 18 04.7**	**-1.0**
ROC1	**El Roble**	**1.71**	**214**	*e*P	**Pn**	**17 17 42.3**	**-0.3**
PEL	**Peldehue**	**1.72**	**203**	*e*P	**Pn**	**17 17 42.4**	**-0.2**
PEL				*i* S	**Sn**	**17 18 05.3**	**-0.4**
PEL				IAML		17 18 07.7	
	comp=N,2μm,0.4s						
PEL	**Peldehue**	**1.72**	**203**	*e*P	**Pn**	**17 17 42.5**	**-0.1**
PEL				*e*S	**Sn**	**17 18 05.6**	**-0.1**
AAGR	**Agrelo**	**1.77**	**150**	*e*P	**Pn**	**17 17 44.2**	**+0.9**
AAGR				*e*S	**Sn**	**17 18 08.3**	**+1.4**
AAGR				IAML		17 18 11.3	
	comp=Z,900nm,1.1s						
MT05	**Renca**	**1.97**	**201**	*e*P	**Pn**	**17 17 45.8**	**+0.2**
MT05				*i* S	**Sn**	**17 18 11.3**	**+0.2**
MT03	**Universidad Ad**	**2.00**	**195**	*e*P	**Pn**	**17 17 46.7**	**+0.6**
MT03				*i* S	**Sn**	**17 18 12.5**	**+0.5**
AVIZ	**Vizcacheras**	**2.24**	**149**	*e*P	**Pn**	**17 17 50.2**	**+1.3**
AVFE	**Valle Fertil**	**2.27**	**67**	*e*P	**Pn**	**17 17 49.6**	**+0.2**
AVFE				*e*S	**Sn**	**17 18 17.8**	**+0.1**
AVFE				IAML		17 18 19.3	
	comp=Z,626nm,0.7s						
AGUA	**GUANDACOL**	**2.39**	**31**	*e*P	**Pn**	**17 17 52.5**	**+1.5**
AGUA				IAML		17 18 24.3	
	comp=Z,1μm,0.4s						
ACHE	**Chepes**	**2.79**	**83**	*e*P	**Pn**	**17 17 56.2**	**+0.2**
APLL	**PUNTA DE LOS L**	**3.11**	**69**	*e*P	**Pn**	**17 18 00.7**	**+0.5**
VCA	**Vinchina**	**3.16**	**28**	*e*P	**Pn**	**17 18 02.3**	**+1.2**
VCA				*e*S	**Sn**	**17 18 34.7**	**-3.9**
VCA				IAML		17 18 46.6	
	comp=Z,561nm,0.3s						
ACLC	**CERRO LA CRUZ**	**3.30**	**51**	*e*P	**Pn**	**17 18 02.9**	**+0.1**
ACLC				IAML		17 18 44.1	
	comp=Z,371nm,0.3s						
LAMA	**Las Malvinas**	**3.42**	**171**	*e*P	**Pn**	**17 18 04.9**	**+0.7**
RFA	**San Rafael**	**3.42**	**160**	*e*P	**Pn**	**17 18 04.3**	**0.0**
COIS	**El Sosneado**	**3.55**	**176**	*e*P	**Pn**	**17 18 03.2**	**-2.8**
EDS3	**Malargue**	**4.22**	**175**	*e*P	**Pn**	**17 18 16.1**	**+1.0**
EDS3				*e*S	Sn	17 18 53.1	-11
TCA	**Tanti**	**4.53**	**89**	*e*P	**Pn**	**17 18 18.4**	**-0.6**
TCA				IAML		17 19 45.3	
	comp=Z,165nm,0.7s						
CYA	**Choya**	**4.71**	**50**	*e*P	**Pn**	**17 18 20.2**	**-1.2**
CYA				IAML		17 19 14.9	
	comp=Z,61nm,0.4s						
AHML	**Horco Molle**	**6.20**	**41**	*e*P	**Pn**	**17 18 39.6**	**-1.9**
AHML				IAML		17 20 00.6	
	comp=Z,20nm,0.6s						
FSA	**Cafayete**	**6.42**	**33**	*e*P	**Pn**	**17 18 44.4**	**-0.2**
LVC	**Limon Verde**	**8.95**	**6**	P	**Pn**	**17 19 15.4**	**-3.6**
	comp=Z,0.7nm,0.3s,baz=194,slow=6.5,SNR=3.4						
LVC				S	Sn	17 20 48.5	-10
	comp=Z,0.8nm,0.3s,baz=216,slow=15,SNR=1.5						
PLCA	**Paso Flores**	**9.18**	**183**	P	**Pn**	**17 19 20.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=4.4,slow=11,SNR=5.7						
CPUP	**Villa Florida**	**12.16**	**68**	P	**Pn**	**17 19 59.1**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=239,slow=14,SNR=5.6						
TXAR	**Lajitas Array**	**68.54**	**329**	P	**P**	**17 28 04.5**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=161,slow=9.6,SNR=4.5						
ASAR	**Alice Springs**	**120.56**	**205**	PKP	**PKiKP**	**17 35 49.4**	**-0.8**
	comp=Z,0.2nm,0.8s,baz=163,slow=1.9,SNR=1.1						
WRA	**Warramunga Arr**	**123.77**	**208**	PKP	**PKiKP**	**17 35 56.8**	**+0.3**
	comp=Z,0.5nm,1.0s,baz=173,slow=1.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**151.20**	**32**	PKPbc	**PKiKP**	**17 36 52.7**	**+1.7**
	comp=Z,0.9nm,0.4s,baz=320,slow=2.4,SNR=5.6						

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*JMA **08** 17:34:08.3±0.2, 34°.30N×140°.41E, h54^{km}±3^{km}, M3.5*

*IDC **08** 17:34:08.9±2.1, 34°.18N×140°.39E, h67^{km}±16^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.4/44, mbtmp3.7/10, Error ellipse: s-maj=34.8km s-min=9.1km az=78.0*

ISC 08 17:34:07.8±1.0, **34°.26N**±0°.04×**140°.46E**±0°.06, **h55**^{km}±9^{km}, **n30,** σ**0^s.98**/36, **mb3.6**/8, **5C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.54**	**4**	⇑P	**Pn**	**17 34 20.3**	**+0.7**
BSO3				X		17 34 28.8	
BSO1	**Boso 1**	**0.58**	**47**	⇓P	**Pn**	**17 34 20.5**	**+0.8**
BSO1				X		17 34 30.8	
BSO4	**Boso 4**	**0.73**	**352**	⇑P	**Pn**	**17 34 22.8**	**+0.7**
JMKN	**Mikurajimanish**	**0.81**	**243**	⇑P	**Pn**	**17 34 23.6**	**+0.4**
JMKN				S	**Sn**	**17 34 34.5**	**+0.1**
KTR	**Katsuura**	**0.89**	**352**	⇑P	**Pn**	**17 34 24.4**	**+0.2**
TATJ	**Tateyama 2**	**0.90**	**329**	⇑P	**Pn**	**17 34 24.9**	**+0.6**
TATJ				S	**Sn**	**17 34 36.2**	**-0.3**
JIM2	**Oshima 3**	**0.97**	**298**	⇓P	**Pn**	**17 34 25.0**	**-0.2**
JIM2				S	**Sn**	**17 34 37.0**	**-1.1**
JTHY	**Toshimahigashi**	**1.00**	**285**	P	**Pn**	**17 34 26.0**	**+0.3**
JKO	**Kozu shima**	**1.10**	**266**	P	**Pn**	**17 34 27.3**	**+0.3**
JKO				S	**Sn**	**17 34 41.7**	**+0.5**
JHJ2	**Mitsune**	**1.27**	**205**	P	**Pn**	**17 34 29.8**	**+0.6**
JHJ	**Hachijo jima 2**	**1.27**	**207**	P	**Pn**	**17 34 29.9**	**+0.6**
	160nm,0.3s,baz=329,slow=17,SNR=46						
JHJ				S	**Sn**	**17 34 44.5**	**-0.8**
	264nm,0.3s,baz=80,slow=22,SNR=11						
KTJ3	**Kamata3**	**1.33**	**301**	⇓P	**Pn**	**17 34 29.8**	**-0.2**
KTJ3				S	**Sn**	**17 34 45.3**	**-1.4**
JSMT	**Sammumatsuo**	**1.38**	**360**	P	**Pn**	**17 34 31.1**	**+0.4**
JIZS	**Izushimoda**	**1.39**	**290**	⇓P	**Pn**	**17 34 31.0**	**+0.2**
JOD2	**Odawara 2**	**1.51**	**312**	P	**Pn**	**17 34 32.3**	**-0.2**
JOD2				S	**Sn**	**17 34 50.1**	**-1.0**

MJAR	**Matsushiro Arr** 2.1nm,0.3s,baz=163,slow=12,SNR=76	2.93	322	P	Pn	17 34 53.5	+1.6
MJAR	2.5nm,0.3s,baz=220,slow=23,SNR=3.3			S	Sn	17 35 27.0	+1.2
MAT	**Matsushiro**	2.93	322	P	Pn	17 34 53.5	+1.6
MAT				S	Sn	17 35 26.2	+0.4
JNU	**Nakatsue** 0.5nm,0.3s,baz=147,slow=18,SNR=1.9	8.07	265	P	Pn	17 36 04.1	+1.7
ASAJ	**Asahikawa** 0.5nm,0.3s,baz=204,slow=21,SNR=6.0	9.98	9	P	Pn	17 36 26.1	-2.3
H11N2	**WAKE ISLAND Hy** baz=306,slow=75,SNR=14	27.54	115	T	T	18 08 59.7	
H11N1	**WAKE ISLAND Hy** baz=306,slow=75,SNR=11	27.55	115	T	T	18 08 56.8	
H11N3	**WAKE ISLAND Hy** baz=306,slow=75,SNR=9.5	27.56	115	T	T	18 08 55.7	
SONM	**Songino Array** 0.9nm,0.9s,baz=105,slow=9.8,SNR=4.3	28.79	308	P	P	17 40 01.1	+0.6
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=111,slow=7.9,SNR=2.5	43.26	315	P	P	17 42 03.4	-0.1
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=88,slow=10,SNR=9.4	44.99	304	P	P	17 42 17.0	-0.5
ILAR	**Eielson Array** 0.2nm,0.6s,baz=263,slow=5.9,SNR=2.0	52.25	31	P	P	17 43 13.2	+0.2
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=5.0,slow=7.6,SNR=5.9	54.22	187	P	P	17 43 26.6	-1.3
ASAR	**Alice Springs** 0.3nm,0.7s,baz=20,slow=11,SNR=1.7	57.95	187	P	P	17 43 53.3	-1.1
FINES	**FINESS Array B** 8.6nm,1.2s,baz=71,slow=6.0,SNR=1.7	70.90	332	P	P	17 45 20.4	+1.7
AKASG	**Malin Array Be** 0.4nm,0.4s,baz=49,slow=5.7,SNR=3.1	76.01	322	P	P	17 45 48.2	-0.7

*IDC **08** 17:55:43.6±2.1, 64°.45N×17°.61W, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/46, mbtmp3.5/5, ML2.0/1, Error ellipse: s-maj=76.3km s-min=29.6km az=9.0*

ISC 08 17:55:44.8±1.6**, 64°.4N**±0°.2×**17°.4W**±0°.2**, h9^{km}, n7,** σ1^{s}**29**/7**,**
mb3.5/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	6.33	346	*i* P	Pn	17 57 18.1	0.0
SCO	**Scoresbysund**	6.33	346	*e*P	Pn	17 57 18.1	0.0
NOA	**NORSAR Array B** 0.0nm,0.3s,baz=292,slow=6.2,SNR=2.3	13.48	91	Pn	Pn	17 58 54.3	-1.7
BRTR	**Keskin Array B** 0.9nm,0.9s,baz=332,slow=8.7,SNR=4.1	38.37	105	P	P	18 03 07.4	+1.3
KURBB	**Kurchatov Arra** 0.9nm,0.9s,baz=321,slow=7.1,SNR=6.0	48.24	58	P	P	18 04 26.0	+0.6
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=317,slow=5.9,SNR=2.2	52.81	58	P	P	18 05 01.1	+1.1
PDAR	**Pinedale Array** 0.3nm,0.6s,baz=65,slow=4.3,SNR=2.7	53.31	293	P	P	18 05 03.3	-0.8

TAP 08 17:56:57.2, 24°.83N×122°.02E, h12^{km}±1^{km}, ML1.4, B,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng** baz=278	0.17	279	*e*P	Pg	17 57 01.3	+0.1
NTC	baz=278			*e*S	Sg	17 57 03.8	0.0
TWB1	**Santiao Chiao** baz=354	0.18	352	P	Pg	17 57 01.3	0.0
TWB1	baz=354			S	Sg	17 57 03.9	-0.3
TIPB	**Shuangxi** baz=309	0.23	310	P	Pg	17 57 02.2	+0.1
TIPB	baz=309			S	Sg	17 57 05.3	0.0
TWC	**Suao** baz=212	0.27	215	*e*P	Pg	17 57 02.7	-0.1
TWE	**Neicheng** baz=250	0.34	252	*e*P	Pg	17 57 04.2	+0.1
TWE	baz=250			*e*S	Sg	17 57 08.5	0.0
ENAH	**Nanao** baz=206	0.42	206	*e*P	Pg	17 57 05.5	-0.2
ENTT	**Nioudou** baz=244	0.45	246	P	Pg	17 57 06.3	+0.2
ENTT	baz=244			S	Sg	17 57 12.4	+0.3
NWLT	**Wulai** baz=263	0.47	264	*e*P	Pg	17 57 06.1	-0.4
NWLT	baz=263			*e*S	Sg	17 57 12.8	+0.1
ENA	**Nanau** baz=211	0.47	212	*e*P	Pg	17 57 06.6	+0.1
ENA	baz=211			S	Sg	17 57 12.2	-0.6
NDT	**Datong Townshi** baz=243	0.51	244	*e*P	Pg	17 57 07.0	-0.3
NDT	baz=243			*e*S	Sg	17 57 14.0	-0.1
YHNB	**Yeheng** baz=254	0.60	255	*e*P	Pg	17 57 09.0	0.0
NSK	**Sanguang** baz=255	0.62	256	*e*P	Pg	17 57 09.5	+0.2
NSK	baz=255			*e*S	Sg	17 57 16.8	-0.6
NNSB	**Datong** baz=235	0.70	236	*e*P	Pg	17 57 10.2	-0.7
NNSB	baz=235			*e*S	Sg	17 57 19.3	-0.8
NNS	**Nan Shan** baz=236	0.70	237	*e*S	Sg	17 57 20.0	-0.2
NACB	**Ninganchiao** baz=210	0.76	211	*e*P	Pg	17 57 11.3	-0.6
NACB	baz=210			*e*S	Sg	17 57 21.2	-0.6
ETLH	**Xiulin Townshi** baz=218	0.79	218	*e*S	Sg	17 57 23.0	+0.1

JMA 08 17:56:59.9±0.1**, 24°.30N×123°.85E, h10^{km}**±2^{km}**, M1.8,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	0.12	288	P	Pg	17 57 02.7	0.0
IRIF				S	Sg	17 57 05.2	+0.5
JKRS	**Kuro-shima**	0.16	113	P	Pg	17 57 03.5	+0.1
JKRS				*e*S	Sg	17 57 06.6	+0.8
HATJ	**Hateruma jima**	0.25	190	P	Pg	17 57 04.8	-0.1
HATJ				*e*S	Sg	17 57 08.8	+0.5
JIJ	**Ishigaki jima**	0.28	77	P	Pg	17 57 05.4	-0.1
JIJ				S	Sg	17 57 09.6	+0.4
JISG	**Ishigakijimahi**	0.51	56	P	Pg	17 57 10.1	+0.3
JISG				S	Sb	17 57 17.8	-0.6
YOJ	**Yonaguni jima**	0.78	282	P	Pg	17 57 15.2	+0.2
YOJ				*e*S	Sb	17 57 25.8	-0.5
YOJ	**Yonaguni jima** baz=111	0.78	282	*e*P	Pg	17 57 15.2	+0.2
JYNG	**Yonagunijimaku**	0.84	281	*e*S	Sb	17 57 28.0	+0.1
JTJ	**Tarama**	0.85	66	P	Pg	17 57 16.4	+0.2
JTJ				S	Sb	17 57 28.6	+0.5

*IDC **08** 18:01:58.9±1.1, 67°.04N×20°.94E, h0^{km}, mb1 3.1/3, mb1mx2.9/42, mbtmp3.0/3, ML1.9/3, Error ellipse: s-maj=16.9km s-min=8.6km az=105.0*
*UPP **08** 18:01:58.2±0.1, 67°.05N×20°.95E, h0^{km}, ML2.2, Explosion*
*HEL **08** 18:01:59.1±0.1, 67°.06N×20°.97E, h0^{km}, ML2.2, ML2.2(UPP), Explosion*
*NAO **08** 18:01:59.3±0.8, 67°.04N×21°.31E, ML2.5*
*BER **08** 18:02:01.8±4.0, 67°.04N×21°.14E, h0^{km}, ML1.7, ML2.5(NAO), Suspected explosion*

ISC 08 18:01:58.1±0.7**, 67°.05N**±0°.02×**20°.90E**±0°.02**, h0^{km}, n55,**
σ**0^{s}96**/80**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	0.59	46	P	Pg	18 02 09.3	-0.1
MASU	**Masugnsbyn**	0.59	46	*i* P	Pg	18 02 09.3	-0.1
ERTU	**Ertsjaerv**	0.71	134	P	Pg	18 02 11.3	-0.3
ERTU				S	Sg	18 02 21.0	+0.1
ERTU	**Ertsjaerv**	0.71	134	*e*P	Pg	18 02 11.1	-0.5
ERTU				*e*S	Sg	18 02 20.9	0.0
PAJU	**Pajala**	0.87	91	P	Pg	18 02 14.0	-0.7
PAJU	**Pajala** baz=277	0.87	91	*e*P	Pg	18 02 13.9	-0.7
HARU	**Harads**	0.89	178	P	Pg	18 02 14.9	-0.1
HARU	**Harads**	0.89	178	*i* P	Pg	18 02 14.9	-0.1
RATU	**Laukkuluspa**	0.93	328	P	Pg	18 02 15.7	-0.1
RATU	**Laukkuluspa**	0.93	328	*e*P	Pg	18 02 15.7	-0.1
KUA	**Kurravaara**	0.94	347	P	Pg	18 02 15.6	-0.3
KUA	**Kurravaara**	0.94	347	*e*P	Pg	18 02 15.6	-0.3
SALU	**Saltoluokta**	0.99	291	P	Pg	18 02 17.5	+0.5
SALU	**Saltoluokta**	0.99	291	*e*P	Pg	18 02 17.5	+0.5
LANU	**Lannavaara**	1.09	22	P	Pg	18 02 18.1	-0.8
LANU	**Lannavaara**	1.09	22	*e*P	Pg	18 02 18.4	-0.5
NIKU	**Nikkaluokta**	1.09	320	P	Pg	18 02 18.7	-0.3
NIKU	**Nikkaluokta**	1.09	320	*e*P	Pg	18 02 18.7	-0.3
TOF	**Tornio** baz=313	1.68	124	*e*P	Pn	18 02 28.6	-0.1
TOF	comp=Z,28nm,0.2s			MSG		18 02 48.3	
TOF				*e*SG	Sn	18 02 50.5	-0.3
KIF	**Kilpisjarvi**	1.97	359	Pn	Pb	18 02 34.4	-0.3
KIF				Sn	Sg	18 03 01.4	+0.3
KIF	**Kilpisjarvi**	1.97	359	Pn	Pb	18 02 34.4	-0.3
KIF				Sn	Sg	18 03 01.4	+0.3
KIF	**Kilpisjarvi**	1.97	359	*e*PB	Pb	18 02 34.1	-0.6
KIF	comp=Z,36nm,0.2s			MSG		18 02 58.6	
KIF				*e*SG	Sg	18 03 01.5	+0.3
RNF	**Rovaniemi** baz=290	2.07	100	*e*PB	Pn	18 02 34.8	+0.8
RNF				*e*SG	Sb	18 03 03.0	+0.3
KTK1	**Kautokeino**	2.16	23	Pn	Pb	18 02 36.8	-1.2
KTK1				Sn	Sb	18 03 05.3	0.0
KTK1	**Kautokeino**	2.16	23	*e*P	Pb	18 02 36.8	-1.2
KTK1				*e*S	Sn	18 03 02.9	+0.2
KTK1	comp=Z,11nm,0.1s			IAML		18 03 09.8	
FAUS	**Fauske**	2.21	281	*e*P	Pb	18 02 38.2	-0.6
FAUS				*e*S	Sg	18 03 08.7	-0.3
FAUS	comp=Z,16nm,0.1s			IAML		18 03 11.8	
SGF	**Sodankyl**	2.22	77	*e*P	Pn	18 02 36.9	+0.8
SGF				*e*SG	Sb	18 03 07.3	+0.2
STEI	**Steigen**	2.35	295	*e*P	Pn	18 02 39.1	+1.3
STEI	comp=Z,4.2nm,0.8s			IAML		18 03 31.1	
BURU	**Burvik** baz=359	2.48	175	*e*P	Pn	18 02 41.1	+1.4
MOR8	**Moi Rana**	2.72	254	*e*P	Pn	18 02 44.2	+1.2
MOR8				*e*S	Sb	18 03 19.5	-2.0
OUL	**Oulu**	2.83	132	*e*P	Pn	18 02 45.8	+1.4
OUL				*e*SB	Sb	18 03 24.6	0.0
ARA0	**ARCESS Array S** baz=211,slow=14	3.03	32	Pn	Pn	18 02 47.6	+0.4
ARA0	baz=219,slow=18			Sn	Sn	18 03 22.4	-1.8
ARA0	**ARCESS Array S** baz=211,slow=14	3.03	32	Pn	Pn	18 02 47.6	+0.4
ARA0	baz=219,slow=18			Sn	Sn	18 03 22.4	-1.8
ARA0	**ARCESS Array S** baz=213	3.03	32	*e*P	Pn	18 02 47.7	+0.5
ARCES	**ARCESS Array B** baz=212,slow=15,SNR=49	3.03	32	Pn	Pn	18 02 47.8	+0.6
ARCES	baz=212,slow=22,SNR=8.9			Sn	Sn	18 03 26.1	+2.0
OUF	**Merijarvi** baz=336	3.12	148	*e*P	Pn	18 02 49.6	+1.1
OUF	comp=Z,3.1nm,0.2s			MSG		18 03 30.8	
VRF	**Varrio**	3.44	74	*e*P	Pn	18 02 53.5	+0.7
VRF				*e*SG	Sb	18 03 43.5	+1.5
MSF	**Maaselka**	3.46	105	*e*P	Pn	18 02 54.1	+1.0
KU6	**Riekki** baz=290	3.74	102	*e*P	Pn	18 02 57.8	+0.8
KU6				*e*S	Sn	18 03 43.9	+2.3
HUSU	**Husum**	3.79	192	*e*P	Pn	18 02 59.2	+1.6
HUSU				*e*S	Sn	18 03 43.5	+0.8
VAF	**Ylistaro** baz=351	4.09	169	*e*P	Pn	18 03 03.8	+2.0
APA0	**Apatity Array** baz=271,slow=11	4.71	78	Pn	Pn	18 03 10.1	-0.2
APA0	baz=261,slow=28			Sn	Sn	18 04 05.2	-0.4
APA0	baz=295,slow=37			Lg	Lg	18 04 22.1	
APA0	**Apatity Array** baz=271,slow=11	4.71	78	Pn	Pn	18 03 10.1	-0.2
APA0	baz=261,slow=28			Sn	Sn	18 04 05.2	-0.4
FIA0	**FINESS Array S** baz=347,slow=14	6.06	156	Pn	Pn	18 03 29.9	+1.1
FIA0	baz=344,slow=28			Sn	Sn	18 04 38.2	-0.5
FIA0	**FINESS Array S** baz=347,slow=14	6.06	156	Pn	Pn	18 03 29.9	+1.1
FIA0	baz=344,slow=28			Sn	Sn	18 04 38.2	-0.5
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=8.8	6.06	156	Pn	Pn	18 03 30.1	+1.3
FINES	comp=Z,0.2nm,0.3s,baz=346,slow=22,SNR=8.9			Sn	Sn	18 04 38.4	-0.3
FINES	comp=Z,0.2nm,0.3s,baz=340,slow=24,SNR=1.4			Lg	Lg	18 05 09.1	
NB2	**NORSAR Subarra** baz=29,slow=14	7.37	220	Pn	Pn	18 03 46.7	-0.1
NB2	**NORSAR Subarra** baz=29,slow=14	7.37	220	Pn	Pn	18 03 46.7	-0.1
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=6.1,slow=14,SNR=2.1	7.37	220	Pn	Pn	18 03 46.3	-0.5
NOA	comp=Z,0.0nm,0.3s,baz=315,slow=14,SNR=1.0			Sn	Sn	18 05 07.4	-3.6
NRA0	**NORESS Array S** baz=34,slow=14	7.55	217	Pn	Pn	18 03 50.4	+1.1
NRA0	**NORESS Array S** baz=34,slow=14	7.55	217	Pn	Pn	18 03 50.4	+1.1
HFS	**Hagfors** baz=28,slow=16	7.64	208	Pn	Pn	18 03 50.5	0.0
HFS	**Hagfors** baz=28,slow=16	7.64	208	Pn	Pn	18 03 50.5	0.0
SPA0	**Spitsbergen Ar** baz=165,slow=16	11.27	355	Pn	Pn	18 04 40.6	+0.6
SPA0	**Spitsbergen Ar** baz=165,slow=16	11.27	355	Pn	Pn	18 04 40.6	+0.6

*JMA **08** 18:10:41.4±0.1, 23°.96N×122°.42E, h23^{km}±3^{km}, M2.2*
*TAP **08** 18:10:41.5, 23°.96N×122°.43E, h20^{km}, ML2.7, D*

ISC 08 18:10:41.2±1.1**, 23°.98N**±0°.02×**122°.41E**±0°.02**, h17^{km}**±9^{km}**,**
n76, σ**0^{s}51**/149**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.68	46	P	Pg	18 10 54.4	-0.1
JYNG				S	Sb	18 11 04.3	+0.6
ENAH	**Nanao** baz=311	0.72	311	*e*P	Pb	18 10 55.0	-0.3
ENAH	baz=311			*e*S	Sg	18 11 05.5	+0.5
YOJ	**Yonaguni jima**	0.73	48	P	Pb	18 10 55.3	-0.1
YOJ				*e*S	Sg	18 11 05.4	+0.2
YOJ	**Yonaguni jima** baz=45	0.73	48	P	Pb	18 10 55.3	-0.1
YOJ	baz=45			*e*S	Sb	18 11 05.2	+0.1
ENA	**Nanau** baz=307	0.76	306	*e*P	Pb	18 10 55.9	0.0
ENA	baz=307			S	Sg	18 11 06.9	+0.7
NACB	**Ninganchiao** baz=285	0.77	285	*e*P	Pb	18 10 56.0	-0.1
NACB	baz=285			S	Sg	18 11 06.7	+0.2
TWC	**Suao** baz=321	0.81	321	*e*P	Pb	18 10 56.5	-0.3
TWC	baz=321			*e*S	Sb	18 11 07.3	-0.2
ETLH	**Xiulin Townshi** baz=286	0.88	285	*e*P	Pb	18 10 57.7	-0.4
ETLH	baz=286			S	Sb	18 11 09.6	0.0
TWE	**Neicheng** baz=318	1.00	318	*e*P	Pb	18 10 59.6	-0.5
TWE	baz=318			S	Sg	18 11 13.8	-0.1
ENTT	**Nioudou** baz=311	1.02	311	*e*P	Pb	18 11 00.1	-0.2
ENTT	baz=311			S	Sb	18 11 13.8	+0.4
NTC	**Toucheng** baz=328	1.02	329	*e*P	Pb	18 11 00.5	0.0
NTC	baz=328			*e*S	Sb	18 11 13.7	+0.1
HGSD	**Ruisui** baz=243	1.03	242	*e*P	Pb	18 10 59.8	-0.7
HGSD	baz=243			*e*S	Sb	18 11 13.7	0.0
NDT	**Datong Townshi** baz=307	1.03	307	*e*P	Pb	18 11 00.8	+0.2
NDT	baz=307			*e*S	Sg	18 11 14.6	-0.1
NNSB	**Datong** baz=296	1.04	296	*e*P	Pb	18 11 00.5	-0.4
NNSB	baz=296			*e*S	Sb	18 11 14.7	+0.5
NNS	**Nan Shan** baz=296	1.05	296	*e*P	Pb	18 11 00.9	-0.2
NNS	baz=296			S	Sb	18 11 14.5	-0.1
WHF	**Hehuan Shan** baz=279	1.06	279	*e*P	Pb	18 11 00.9	-0.5
WHF	baz=279			*e*S	Sb	18 11 14.9	-0.2
TWB1	**Santiao Chiao** baz=339	1.10	339	*e*P	Pb	18 11 01.3	-0.4
TWB1	baz=339			*e*S	Sb	18 11 15.6	-0.2
FUSS	**Fushou** baz=284	1.10	284	*e*P	Pb	18 11 02.0	+0.1
FUSS	baz=284			*e*S	Sb	18 11 16.2	+0.1
EHY	**Hungye** baz=245	1.10	245	*e*P	Pb	18 11 01.6	-0.2
EHY	baz=245			S	Sb	18 11 15.9	-0.1
TIPB	**Shuangxi** baz=331	1.12	332	*e*P	Pn	18 11 01.8	-0.4
TIPB	baz=331			*e*S	Sb	18 11 16.4	-0.2
CHGB	**Renai** baz=275	1.14	274	*e*P	Pb	18 11 01.8	-0.7
CHGB	baz=275			*e*S	Sb	18 11 16.9	-0.2
NWLT	**Wulai** baz=314	1.15	314	*e*P	Pn	18 11 02.3	-0.2
NWLT	baz=314			*e*S	Sn	18 11 18.1	+0.3
TWT	**Tachien** baz=284	1.16	284	*e*P	Pn	18 11 02.1	-0.7
YHNB	**Yeheng** baz=306	1.17	306	P	Pn	18 11 02.3	-0.5
YHNB	baz=306			*e*S	Sb	18 11 18.1	+0.2
YULB	**Yu-li** baz=241	1.18	241	*e*P	Pn	18 11 02.4	-0.4
YULB	baz=241			*e*S	Sb	18 11 17.4	-0.7
TDCB	**Techi** baz=284	1.18	284	*e*P	Pn	18 11 03.2	+0.2
TDCB	baz=284			*e*S	Sb	18 11 18.0	-0.2
EYUL	**Yuli** baz=239	1.18	238	*e*P	Pn	18 11 02.6	-0.3
EYUL	baz=239			*e*S	Sn	18 11 19.0	+0.3
NSK	**Sanguang** baz=306	1.19	306	*e*P	Pn	18 11 02.5	-0.5
NSK	baz=306			S	Sn	18 11 19.3	+0.4
TWF1	**Yuli** baz=239	1.20	239	*e*P	Pn	18 11 02.7	-0.4
TWF1	baz=239			*e*S	Sb	18 11 18.2	-0.4
NWF	**Wu-fen Shan** baz=332	1.23	332	*e*P	Pn	18 11 03.9	+0.2
NWF	baz=332			*e*S	Sb	18 11 19.4	-0.2
WFSB	**Wu-fen Shan** baz=332	1.23	332	*e*P	Pn	18 11 02.6	-1.0
WFSB	baz=332			*e*S	Sb	18 11 19.2	-0.4
TWA	**Mucha** baz=323	1.25	323	*e*P	Pn	18 11 02.8	-1.1
TWA	baz=323			*e*S	Sn	18 11 20.6	+0.3
IRIF	**Iriomote-Funau**	1.26	73	P	Pn	18 11 04.1	+0.2
IRIF				*e*S	Sn	18 11 21.0	+0.6
NHDH	**Xindian Distri** baz=320	1.27	321	*e*P	Pn	18 11 04.3	+0.1
NHDH	baz=320			*e*S	Sb	18 11 20.7	0.0
FULB	**Fuli** baz=233	1.29	233	*e*P	Pn	18 11 03.6	-0.8
FULB	baz=233			*e*S	Sb	18 11 20.6	-0.6
SSLB	**Suanglung** baz=262	1.35	262	*e*P	Pn	18 11 05.5	+0.2
SSLB	baz=262			*e*S	Sn	18 11 22.1	-0.7
DPDB	**Guoxing** baz=273	1.36	273	*e*P	Pn	18 11 05.8	+0.4
DPDB	baz=273			*e*S	Sn	18 11 23.4	+0.2
WHP	**Taichung City** baz=283	1.37	283	*e*P	Pn	18 11 05.9	+0.3
WHP	baz=283			*e*S	Sn	18 11 23.7	+0.2
SMLT	**Sun Moon Lake** baz=266	1.39	266	*e*P	Pn	18 11 06.2	+0.4
SMLT	baz=266			*e*S	Sn	18 11 23.9	0.0
YM01	**YM01** baz=326	1.39	327	*e*P	Pn	18 11 06.0	+0.1
YM01	baz=326			*e*S	Sn	18 11 24.2	+0.2
YM10	**YM10** baz=326	1.41	327	*e*P	Pn	18 11 06.3	+0.2
YM10	baz=326			*e*S	Sn	18 11 23.9	-0.4
YM11	**YM11** baz=327	1.41	327	*e*P	Pn	18 11 06.5	+0.4
YM11	baz=327			*e*S	Sn	18 11 24.7	+0.3
YM05	**YM05** baz=326	1.41	327	*e*P	Pn	18 11 06.3	+0.1
YM05	baz=326			*e*S	Sn	18 11 24.0	-0.4
YM04	**YM04** baz=325	1.42	326	*e*P	Pn	18 11 06.3	+0.1
YM04	baz=325			*e*S	Sn	18 11 23.9	-0.5
YM08	**YM08** baz=328	1.42	328	*e*P	Pn	18 11 06.8	+0.5
YM08	baz=328			*e*S	Sb	18 11 25.1	+0.1
TYC	**Yuchr** baz=267	1.43	267	*e*P	Pn	18 11 06.6	+0.4
TYC	baz=267			*e*S	Sn	18 11 23.8	-0.8
EDH	**Donghe** baz=226	1.43	226	*e*P	Pn	18 11 05.9	-0.4
EDH	baz=226			*e*S	Sn	18 11 23.6	-1.1
LIOB	**Emei** baz=298	1.44	298	*e*P	Pn	18 11 06.9	+0.5
LIOB	baz=298			*e*S	Sn	18 11 25.4	+0.4
NSTT	**Nanjuang** baz=297	1.44	297	*e*P	Pn	18 11 06.5	0.0
NSTT	baz=297			*e*S	Sn	18 11 24.4	-0.7
ANP	**Anpu** baz=326	1.45	326	*e*P	Pn	18 11 06.8	+0.1
ANP	baz=326			*e*S	Sn	18 11 25.5	0.0
WHYT	**Xinyi Township** baz=259	1.45	259	*e*P	Pb	18 11 07.6	-0.2
WHYT	baz=259			*e*S	Sb	18 11 26.5	+0.5
JKRS	**Kuro-shima**	1.48	80	P	Pn	18 11 07.3	+0.2
ELDTW	**Lidau** baz=239	1.50	239	*e*P	Pn	18 11 06.9	-0.6
ELDTW	baz=239			*e*S	Sn	18 11 25.7	-1.0
TWQ1	**Liyutan** baz=284	1.54	284	*e*P	Pn	18 11 08.0	+0.1
TWQ1	baz=284			*e*S	Sn	18 11 27.8	+0.3

ALS	**Alishan** baz=253	1.54	253	*e*P	Pn	18 11 08.2	0.0
ALS	baz=253			*e*S	Sn	18 11 27.4	-0.6
WJS	**Zhushan** baz=265	1.55	265	*e*P	Pn	18 11 08.6	+0.6
WJS	baz=265			*e*S	Sn	18 11 28.3	+0.6
WNT	**Mingjian** baz=267	1.58	267	*e*S	Sn	18 11 29.1	+0.6
JIJ	**Ishigaki jima**	1.63	76	P	Pn	18 11 09.2	+0.1
JIJ				*e*S	Sn	18 11 29.1	-0.5
CHN5	**Tsauling** baz=257	1.63	257	*e*P	Pn	18 11 09.4	+0.2
CHN5	baz=257			*e*S	Sb	18 11 30.7	-0.5
STYT	**Tauyuan** baz=242	1.72	242	*e*P	Pn	18 11 10.7	+0.3
STYT	baz=242			*e*S	Sn	18 11 32.2	+0.2
WDLH	**Douliu** baz=261	1.74	261	*e*P	Pn	18 11 11.4	+0.8
WDLH	baz=261			*e*S	Sb	18 11 33.6	-0.6
TPUB	**Ta-pu** baz=248	1.77	248	*e*P	Pn	18 11 11.9	+0.9
TPUB	baz=248			*e*S	Sn	18 11 33.8	+0.7
CHN4	**Tsaushan** baz=250	1.78	250	*e*P	Pb	18 11 12.5	-0.9
CHN4	baz=250			*e*S	Sn	18 11 34.5	+1.1
WTP	**Ta-pu** baz=246	1.80	247	*e*P	Pn	18 11 11.9	+0.3
WTP	baz=246			*e*S	Sn	18 11 34.8	+0.8
JISG	**Ishigakijimahi**	1.84	70	P	Pn	18 11 12.5	+0.6
JISG				*e*S	Sn	18 11 33.2	-1.6
WTK	**Tuku** baz=261	1.88	262	*e*P	Pn	18 11 13.2	+0.7
WTK	baz=261			*e*S	Sn	18 11 36.7	+1.0
SLGT	**Liugui** baz=239	1.89	239	*e*P	Pn	18 11 13.2	+0.4
SLGT	baz=239			*e*S	Sn	18 11 37.2	+1.0
CHN1	**Nanshi** baz=246	1.90	246	*e*P	Pn	18 11 13.2	+0.3
CHN1	baz=246			*e*S	Sn	18 11 37.4	+1.0
SGST	**Jiashian** baz=242	1.90	242	*e*P	Pn	18 11 13.4	+0.6
SGST	baz=242			*e*S	Sn	18 11 35.9	-0.5
TWK	**Hsinying** baz=248	1.90	249	*e*P	Pn	18 11 13.2	+0.3
TWK	baz=248			*e*S	Sn	18 11 36.7	+0.2
SSD	**Sandimen** baz=233	2.04	234	*e*P	Pn	18 11 15.5	+0.7
SSD	baz=233			*e*S	Sn	18 11 40.1	+0.2
TSMG	**Majia** baz=232	2.06	232	*e*P	Pn	18 11 15.7	+0.6
TSMG	baz=232			*e*S	Sn	18 11 40.9	+0.6
MASBT	**Mashibuluo** baz=230	2.13	231	*e*P	Pn	18 11 16.5	+0.5
MASBT	baz=230			*e*S	Sn	18 11 42.9	+0.9
EAST	**Anshuo** baz=222	2.14	223	*e*P	Pn	18 11 16.8	+0.6
EAST	baz=222			*e*S	Sn	18 11 42.9	+0.5
SCZT	**Fangliau** baz=226	2.30	226	*e*P	Pn	18 11 19.1	+0.8
SCZT	baz=226			*e*S	Sn	18 11 46.5	+0.4
SLIU	**Shizi** baz=220	2.30	221	*e*P	Pn	18 11 19.2	+0.9
SLIU	baz=220			*e*S	Sn	18 11 46.3	+0.1

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*TAP **08** 18:12:05.9, 23°.98N×122°.42E, h27^{km}, ML2.5, D*
*JMA **08** 18:12:06.1±0.1, 24°.00N×122°.41E, h28^{km}±4^{km}, M1.8*
ISC 08 18:12:04.7±1.1**, 23°.99N**±0°.02×**122°.43E**±0°.02**, h15**^{km}±9^{km}**,**
n65, σ0^{s}.61/124**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.66	46	P	Pb	18 12 18.7	+0.8
JYNG				S	Sb	18 12 27.2	+0.3
YOJ	**Yonaguni jima**	0.71	48	P	Pn	18 12 19.7	-0.5
YOJ				S	Sn	18 12 29.8	-1.1
YOJ	**Yonaguni jima** baz=47	0.71	48	*e*P	Pb	18 12 19.4	+0.6
YOJ	baz=47			*e*S	Sb	18 12 28.7	+0.3
ENAH	**Nanao** baz=309	0.73	309	*e*P	Pb	18 12 19.4	+0.3
ENAH	baz=309			*e*S	Sb	18 12 29.7	+0.9
ENA	**Nanau** baz=305	0.76	305	P	Pb	18 12 20.2	+0.5
ENA	baz=305			S	Sb	18 12 30.8	+0.9
NACB	**Ninganchiao** baz=284	0.78	284	*e*P	Pb	18 12 20.3	+0.3
NACB	baz=284			*e*S	Sb	18 12 30.8	+0.3
TWC	**Suao** baz=320	0.81	320	*e*P	Pg	18 12 19.9	-0.5
TWC	baz=320			*e*S	Sg	18 12 30.9	-0.3
ETLH	**Xiulin Townshi** baz=284	0.89	284	*e*P	Pb	18 12 22.4	+0.5
ETLH	baz=284			*e*S	Sb	18 12 33.9	+0.2
ESL	**Shilin** baz=259	0.93	259	*e*P	Pn	18 12 23.2	0.0
ESL	baz=259			*e*S	Sg	18 12 34.7	-0.1
TWE	**Neicheng** baz=317	1.00	317	*e*P	Pg	18 12 24.2	0.0
TWE	baz=317			*e*S	Sb	18 12 36.7	-0.2
ENTT	**Nioudou** baz=310	1.02	310	*e*P	Pg	18 12 24.4	0.0
ENTT	baz=310			*e*S	Sb	18 12 37.4	+0.1
NTC	**Toucheng** baz=328	1.02	328	*e*P	Pb	18 12 23.9	-0.1
NTC	baz=328			*e*S	Sg	18 12 37.6	-0.1
NDT	**Datong Townshi** baz=306	1.03	306	*e*P	Pb	18 12 24.4	+0.1
NDT	baz=306			*e*S	Sg	18 12 38.2	-0.1
HGSD	**Ruisui** baz=241	1.04	242	*e*P	Pg	18 12 24.9	+0.1
HGSD	baz=241			*e*S	Sb	18 12 37.9	-0.2
NNSB	**Datong** baz=295	1.05	295	*e*P	Pb	18 12 24.6	-0.1
NNSB	baz=295			*e*S	Sb	18 12 38.0	-0.3
NNS	**Nan Shan** baz=295	1.06	295	*e*P	Pb	18 12 25.0	+0.2
NNS	baz=295			*e*S	Sb	18 12 38.7	0.0
WHF	**Hehuan Shan** baz=278	1.07	279	*e*P	Pb	18 12 25.4	+0.1
WHF	baz=278			*e*S	Sb	18 12 38.9	-0.3
FUSS	**Fushou** baz=283	1.11	284	*e*P	Pg	18 12 26.2	0.0
FUSS	baz=283			*e*S	Sb	18 12 40.5	+0.3
EHY	**Hungye** baz=244	1.12	245	*e*P	Pb	18 12 25.8	0.0
EHY	baz=244			*e*S	Sb	18 12 39.9	-0.3
TIPB	**Shuangxi** baz=331	1.12	331	*e*P	Pn	18 12 26.1	+0.2
TIPB	baz=331			*e*S	Sb	18 12 39.9	-0.4
CHGB	**Renai** baz=273	1.15	274	*e*P	Pb	18 12 26.1	-0.3
CHGB	baz=273			*e*S	Sb	18 12 40.4	-0.8
NWLT	**Wulai** baz=313	1.15	313	*e*P	Pb	18 12 26.2	-0.1
NWLT	baz=313			*e*S	Sb	18 12 41.0	-0.1
YHNB	**Yeheng** baz=305	1.17	305	*e*P	Pn	18 12 26.7	0.0
YHNB	baz=305			*e*S	Sb	18 12 40.8	-1.1
NSK	**Sanguang** baz=305	1.19	305	*e*P	Pn	18 12 26.8	-0.1
NSK	baz=305			*e*S	Sb	18 12 40.7	-1.6
YULB	**Yu-li** baz=240	1.19	240	*e*P	Pn	18 12 26.8	-0.1
YULB	baz=240			*e*S	Sb	18 12 41.4	-1.0
EYUL	**Yuli** baz=238	1.20	238	*e*P	Pn	18 12 27.2	+0.2
EYUL	baz=238			*e*S	Sn	18 12 43.4	+0.3
TWF1	**Yuli** baz=238	1.22	239	*e*P	Pn	18 12 27.1	-0.1
TWF1	baz=238			*e*S	Sb	18 12 42.9	0.0
IRIF	**Iriomote-Funau**	1.24	74	P	Pg	18 12 28.4	-0.2
IRIF				*e*S	Sg	18 12 45.2	+0.5
HATJ	**Hateruma jima**	1.26	87	*e*S	Sb	18 12 44.3	0.0
TATO	**Taipei** baz=319	1.30	319	*e*P	Pn	18 12 28.6	+0.2
TATO	baz=319			*e*S	Sb	18 12 45.5	+0.1
FULB	**Fuli** baz=233	1.30	233	*e*P	Pn	18 12 28.1	-0.3
FULB	baz=233			*e*S	Sb	18 12 45.1	-0.5
CHKT	**Chengkung** baz=227	1.32	228	*e*P	Pn	18 12 29.2	+0.6
CHKT	baz=227			*e*S	Sb	18 12 44.4	-1.5
SSLB	**Suanglung** baz=261	1.36	262	*e*P	Pb	18 12 30.0	+0.1
DPDB	**Guoxing** baz=272	1.37	272	*e*P	Pn	18 12 29.9	+0.5
DPDB	baz=272			*e*S	Sn	18 12 47.4	0.0
WHP	**Taichung City** baz=282	1.38	282	*e*P	Pb	18 12 30.6	+0.3
WHP	baz=282			*e*S	Sn	18 12 47.3	-0.4
YM01	**YM01** baz=326	1.39	326	*e*P	Pb	18 12 30.6	+0.2
YM01	baz=326			*e*S	Sn	18 12 47.4	-0.4
SMLT	**Sun Moon Lake** baz=265	1.40	266	*e*S	Sb	18 12 48.9	+0.4
YM10	**YM10** baz=326	1.40	326	*e*P	Pn	18 12 29.8	0.0
YM10	baz=326			*e*S	Sn	18 12 47.8	-0.3
YM11	**YM11** baz=326	1.41	327	*e*P	Pn	18 12 29.9	+0.1
YM11	baz=326			*e*S	Sn	18 12 48.2	0.0
YM05	**YM05** baz=326	1.41	326	*e*P	Pb	18 12 30.6	-0.1
YM05	baz=326			*e*S	Sn	18 12 47.9	-0.4
YM04	**YM04** baz=325	1.41	325	*e*P	Pb	18 12 30.7	-0.1
YM04	baz=325			*e*S	Sn	18 12 47.0	-1.4
TYC	**Yuchr** baz=266	1.44	267	*e*P	Pn	18 12 31.0	+0.7
TYC	baz=266			*e*S	Sn	18 12 49.4	+0.5
LIOB	**Emei** baz=297	1.44	297	*e*P	Pn	18 12 31.0	+0.6
LIOB	baz=297			*e*S	Sn	18 12 48.9	-0.2
EDH	**Donghe** baz=225	1.45	226	*e*P	Pn	18 12 29.9	-0.4
EDH	baz=225			*e*S	Sn	18 12 47.5	-1.6
ELDTW	**Lidau** baz=238	1.52	239	*e*P	Pn	18 12 31.3	-0.2
ELDTW	baz=238			*e*S	Sn	18 12 49.6	-1.5
ALS	**Alishan** baz=252	1.56	253	*e*P	Pn	18 12 32.4	+0.2
ALS	baz=252			*e*S	Sn	18 12 51.9	-0.5
WJS	**Zhushan** baz=264	1.56	264	*e*P	Pn	18 12 32.7	+0.7
WJS	baz=264			*e*S	Sn	18 12 52.4	+0.4
WNT	**Mingjian** baz=266	1.60	266	*e*S	Sn	18 12 53.2	+0.3
JIJ	**Ishigaki jima**	1.61	76	P	Pb	18 12 33.6	-0.6
JIJ				*e*S	Sb	18 12 54.1	-0.2
CHN5	**Tsauling** baz=256	1.65	257	*e*P	Pb	18 12 34.5	-0.4
CHN5	baz=256			*e*S	Sn	18 12 54.1	-0.1
STYT	**Tauyuan** baz=241	1.74	242	*e*P	Pn	18 12 35.4	+0.9
STYT	baz=241			*e*S	Sn	18 12 55.9	-0.5
WDLH	**Douliu** baz=260	1.76	261	*e*S	Sn	18 12 57.3	+0.6
TPUB	**Ta-pu** baz=247	1.79	248	*e*P	Pn	18 12 36.3	+1.2
TPUB	baz=247			*e*S	Sn	18 12 57.8	+0.3
CHN4	**Tsaushan** baz=249	1.80	250	*e*P	Pb	18 12 36.9	-0.5
CHN4	baz=249			*e*S	Sn	18 12 58.6	+0.8
JISG	**Ishigakijimahi**	1.82	71	P	Pn	18 12 36.5	+1.0
JISG				*e*S	Sn	18 12 57.8	-0.5
WTP	**Ta-pu** baz=246	1.82	246	*e*P	Pn	18 12 36.6	+1.1
WTP	baz=246			*e*S	Sn	18 12 58.7	+0.2
CHN1	**Nanshi** baz=245	1.92	246	*e*P	Pn	18 12 38.4	+1.5
CHN1	baz=245			*e*S	Sn	18 13 01.3	+0.5
SGST	**Jiashian** baz=241	1.92	242	*e*P	Pn	18 12 37.0	+0.1
SGST	baz=241			*e*S	Sn	18 12 59.9	-0.9
TWK	**Hsinying** baz=247	1.92	248	*e*P	Pn	18 12 38.0	+1.1
TWK	baz=247			*e*S	Sn	18 13 01.1	+0.2
SSD	**Sandimen** baz=233	2.06	233	*e*P	Pn	18 12 39.8	+1.0
SSD	baz=233			*e*S	Sn	18 13 04.4	+0.1
TSMG	**Majia** baz=232	2.08	232	*e*P	Pn	18 12 39.8	+0.8
TSMG	baz=232			*e*S	Sn	18 13 04.8	+0.1
CHN3	**Shinhua** baz=244	2.10	245	*e*S	Sn	18 13 05.2	0.0
MASBT	**Mashibuluo** baz=230	2.15	231	*e*P	Pn	18 12 41.0	+1.0
MASBT	baz=230			*e*S	Sn	18 13 06.8	+0.5
EAST	**Anshuo** baz=222	2.16	223	*e*P	Pn	18 12 41.2	+1.0
EAST	baz=222			*e*S	Sn	18 13 05.6	-1.2
SCZT	**Fangliau** baz=225	2.31	226	*e*P	Pn	18 12 43.8	+1.5
SCZT	baz=225			*e*S	Sn	18 13 10.5	0.0

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*TAP **08** 18:13:06.9, 23°.99N×122°.41E, h15^{km}±1^{km}, ML2.5, D*
*JMA **08** 18:13:07.1±0.1, 24°.01N×122°.41E, h27^{km}, M1.7*
ISC 08 18:13:05.7±1.1**, 23°.99N**±0°.02×**122°.41E**±0°.02**, h11**^{km}±9^{km}**,**
n79, σ0^{s}.58/147**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.67	47	P	Pb	18 13 19.7	+0.3
JYNG				*e*S	Sg	18 13 27.8	+0.2
ENAH	**Nanao** baz=309	0.71	310	*e*P	Pb	18 13 20.1	-0.1
ENAH	baz=309			*e*S	Sb	18 13 30.5	+0.5
YOJ	**Yonaguni jima**	0.72	49	P	Pb	18 13 20.5	+0.2
YOJ				S	Sg	18 13 29.7	+0.4
YOJ	**Yonaguni jima** baz=48	0.72	49	*e*P	Pb	18 13 20.5	+0.2
YOJ	baz=48			*e*S	Sg	18 13 29.6	+0.4
TWD	**Chiawan** baz=277	0.75	277	*e*P	Pg	18 13 20.5	+0.2
TWD	baz=277			*e*S	Sb	18 13 30.9	-0.1
ENA	**Nanau** baz=305	0.75	306	*e*P	Pb	18 13 21.3	+0.5
ENA	baz=305			*e*S	Sb	18 13 31.4	+0.3
NACB	**Ninganchiao** baz=283	0.77	284	*e*P	Pb	18 13 21.5	+0.5
NACB	baz=283			*e*S	Sg	18 13 31.0	+0.4
TWC	**Suao** baz=320	0.80	320	*e*P	Pg	18 13 21.5	+0.2
TWC	baz=320			S	Sg	18 13 31.8	+0.1
ETLH	**Xiulin Townshi** baz=284	0.88	285	*e*P	Pb	18 13 23.4	+0.4
ETLH	baz=284			*e*S	Sb	18 13 34.5	-0.2
ESL	**Shilin** baz=258	0.91	259	*e*P	Pg	18 13 22.4	-0.9
ESL	baz=258			*e*S	Sg	18 13 35.1	-0.1
TWE	**Neicheng** baz=317	1.00	317	*e*P	Pb	18 13 25.1	+0.1
TWE	baz=317			S	Sg	18 13 37.6	-0.3
ENTT	**Nioudou** baz=310	1.01	310	*e*P	Pg	18 13 25.1	0.0
ENTT	baz=310			*e*S	Sb	18 13 39.0	+0.5
NTC	**Toucheng** baz=328	1.01	329	*e*P	Pg	18 13 25.2	0.0
NTC	baz=328			*e*S	Sn	18 13 39.6	-0.5
NDT	**Datong Townshi** baz=306	1.02	307	*e*P	Pn	18 13 25.9	-0.1
NDT	baz=306			*e*S	Sb	18 13 39.5	+0.6
HGSD	**Ruisui** baz=241	1.03	242	*e*P	Pb	18 13 25.1	-0.4
HGSD	baz=241			*e*S	Sg	18 13 38.6	-0.3
NNSB	**Datong** baz=294	1.03	295	*e*P	Pg	18 13 25.5	-0.2
NNSB	baz=294			S	Sg	18 13 38.6	-0.5
NNS	**Nan Shan** baz=295	1.05	296	*e*P	Pg	18 13 25.9	0.0
NNS	baz=295			S	Sg	18 13 39.0	-0.6
WHF	**Hehuan Shan** baz=278	1.06	279	*e*P	Pg	18 13 26.3	+0.1
WHF	baz=278			*e*S	Sg	18 13 40.2	+0.2
TWB1	**Santiao Chiao** baz=339	1.09	339	*e*P	Pn	18 13 27.0	+0.1
FUSS	**Fushou** baz=283	1.10	284	*e*P	Pg	18 13 27.0	+0.2
FUSS	baz=283			*e*S	Sb	18 13 41.2	0.0
EHY	**Hungye** baz=243	1.11	245	*e*P	Pb	18 13 26.9	0.0
EHY	baz=243			*e*S	Sb	18 13 41.0	-0.3
TIPB	**Shuangxi** baz=331	1.11	332	*e*P	Pb	18 13 27.0	0.0
TIPB	baz=331			*e*S	Sb	18 13 40.6	-1.0
CHGB	**Renai** baz=273	1.13	274	*e*P	Pb	18 13 27.3	-0.1
CHGB	baz=273			*e*S	Sb	18 13 42.0	-0.2
NWLT	**Wulai** baz=313	1.14	314	*e*P	Pb	18 13 27.5	0.0
NWLT	baz=313			S	Sb	18 13 42.0	-0.3
YHNB	**Yeheng** baz=305	1.16	306	*e*P	Pb	18 13 27.8	-0.1
YHNB	baz=305			*e*S	Sb	18 13 42.4	-0.6
NSK	**Sanguang** baz=305	1.18	306	*e*P	Pb	18 13 27.8	-0.3
NSK	baz=305			*e*S	Sb	18 13 42.6	-0.8
YULB	**Yu-li** baz=239	1.18	240	*e*P	Pb	18 13 27.7	-0.4
YULB	baz=239			*e*S	Sb	18 13 42.5	-0.9
EYUL	**Yuli** baz=237	1.19	238	*e*P	Pb	18 13 27.8	-0.4
EYUL	baz=237			*e*S	Sb	18 13 43.3	-0.2
TWF1	**Yuli** baz=237	1.20	238	*e*P	Pn	18 13 28.2	-0.2
TWF1	baz=237			*e*S	Sb	18 13 43.4	-0.6
TWA	**Mucha** baz=322	1.24	323	*e*P	Pn	18 13 28.4	-0.6
TWA	baz=322			*e*S	Sg	18 13 45.6	-0.2
IRIF	**Iriomote-Funau**	1.25	74	P	Pn	18 13 29.4	+0.3
IRIF				*e*S	Sb	18 13 43.8	-1.7
NHDH	**Xindian Distri** baz=320	1.26	320	*e*P	Pg	18 13 30.0	0.0
NHDH	baz=320			*e*S	Sn	18 13 46.0	-0.2
FULB	**Fuli** baz=232	1.29	233	*e*P	Pn	18 13 29.6	-0.1
FULB	baz=232			*e*S	Sb	18 13 45.9	-0.7
TATO	**Taipei** baz=319	1.29	320	*e*P	Pn	18 13 29.4	-0.2
TATO	baz=319			*e*S	Sb	18 13 46.0	-0.7
SSLB	**Suanglung** baz=261	1.35	262	*e*P	Pb	18 13 31.1	+0.1
SSLB	baz=261			*e*S	Sb	18 13 47.9	-0.3
DPDB	**Guoxing** baz=271	1.36	272	*e*P	Pg	18 13 31.7	-0.1
WHP	**Taichung City** baz=282	1.37	282	*e*P	Pg	18 13 32.3	+0.3
WHP	baz=282			*e*S	Sb	18 13 49.0	0.0
YM01	**YM01** baz=326	1.38	327	*e*P	Pg	18 13 32.1	-0.2
YM01	baz=326			*e*S	Sb	18 13 49.2	-0.1
SMLT	**Sun Moon Lake** baz=265	1.39	266	*e*P	Pb	18 13 31.8	+0.1
YM10	**YM10** baz=326	1.40	327	*e*P	Pn	18 13 31.4	+0.3
YM10	baz=326			*e*S	Sn	18 13 49.1	-0.5
YM11	**YM11** baz=326	1.40	327	*e*P	Pn	18 13 31.2	0.0
YM11	baz=326			*e*S	Sn	18 13 49.1	-0.6
YM05	**YM05** baz=326	1.40	327	*e*P	Pn	18 13 31.4	+0.2
YM05	baz=326			*e*S	Sn	18 13 49.3	-0.5
YM04	**YM04** baz=325	1.41	326	*e*P	Pn	18 13 31.6	+0.3
YM04	baz=325			*e*S	Sn	18 13 48.9	-0.9
YM08	**YM08** baz=327	1.41	328	*e*P	Pn	18 13 31.4	+0.1
TYC	**Yuchr** baz=266	1.42	267	*e*P	Pb	18 13 32.6	+0.4
TYC	baz=266			*e*S	Sb	18 13 50.8	+0.4

LIOB	Emei baz=297	1.43	298	eP	Pb	18 13 32.6	+0.2
LIOB	baz=297			eS	Sb	18 13 51.0	+0.4
EDH	Donghe baz=225	1.43	225	eP	Pn	18 13 31.5	-0.2
EDH	baz=225			eS	Sn	18 13 48.8	-1.7
NSTT	Nanjuang baz=296	1.44	297	eP	Pb	18 13 32.9	+0.5
NSTT	baz=296			eS	Sn	18 13 50.2	-0.3
WHYT	Xinyi Township baz=258	1.46	259	eP	Pb	18 13 33.2	+0.4
WHYT	baz=258			eS	Sg	18 13 52.4	-0.2
ELDTW	Lidau baz=237	1.50	238	eP	Pn	18 13 32.8	+0.1
ELDTW	baz=237			eS	Sn	18 13 51.0	-1.4
TWQ1	Liyutan baz=283	1.54	284	eP	Pb	18 13 34.5	+0.3
TWQ1	baz=283			eS	Sb	18 13 53.9	+0.2
ALS	Alishan baz=251	1.55	252	eP	Pb	18 13 34.3	-0.2
ALS	baz=251			eS	Sn	18 13 53.3	-0.3
WJS	Zhushan baz=263	1.55	264	eP	Pb	18 13 34.2	-0.2
WJS	baz=263			eS	Sb	18 13 54.7	+0.7
NSY	Sanyi baz=285	1.56	286	eP	Pn	18 13 32.8	-0.6
WNT	Mingjian baz=265	1.58	266	eP	Pb	18 13 34.7	-0.3
WNT	baz=265			eS	Sb	18 13 54.7	-0.3
JIJ	Ishigaki jima	1.63	76	P	Pn	18 13 34.8	+0.5
JIJ				S	Sn	18 13 55.1	-0.1
CHN5	Tsauling baz=256	1.63	257	eP	Pn	18 13 35.4	+0.9
CHN5	baz=256			eS	Sb	18 13 56.4	-0.2
WCHH	Zhanghua baz=273	1.69	273	eS	Sn	18 13 56.7	-0.2
STYT	Tauyuan baz=241	1.73	242	eP	Pb	18 13 36.9	-0.5
STYT	baz=241			eS	Sn	18 13 58.3	+0.6
WDLH	Douliu baz=260	1.74	261	eP	Pn	18 13 35.8	0.0
WDLH	baz=260			eS	Sb	18 13 59.0	-0.5
TPUB	Ta-pu baz=247	1.77	248	eP	Pb	18 13 37.7	-0.5
TPUB	baz=247			eS	Sn	18 13 59.5	+0.7
CHN4	Tsaushan baz=249	1.78	250	eP	Pb	18 13 37.8	-0.6
CHN4	baz=249			eS	Sb	18 14 00.2	-0.5
WTP	Ta-pu baz=245	1.81	246	eP	Pb	18 13 38.2	-0.6
WTP	baz=245			eS	Sn	18 14 00.1	+0.4
JISG	Ishigakijimahi	1.83	71	P	Pn	18 13 37.8	+0.7
WTK	Tuku baz=260	1.88	261	eP	Pn	18 13 38.2	+0.6
WTK	baz=260			eS	Sn	18 14 00.7	-0.6
SLGT	Liugui baz=238	1.90	239	eS	Sn	18 14 03.2	+1.3
CHN1	Nanshi baz=245	1.90	246	eP	Pn	18 13 39.4	+1.3
CHN1	baz=245			eS	Sn	18 14 03.2	+1.1
TWK	Hsinying baz=247	1.90	248	eP	Pb	18 13 39.7	-0.8
TWK	baz=247			eS	Sn	18 14 02.9	+0.8
SGST	Jiashian baz=241	1.90	242	eP	Pn	18 13 37.9	-0.2
SGST	baz=241			eS	Sn	18 14 02.9	+0.8
SNST	Tainan City baz=246	1.91	247	eS	Sn	18 14 03.5	+1.2
ECL	Taimali baz=223	1.93	224	eS	Sn	18 14 02.3	-0.3
WSF	Szhu baz=260	2.03	261	eS	Sn	18 14 06.2	+1.0
SSD	Sandimen baz=232	2.05	233	eP	Pn	18 13 41.2	+1.2
SSD	baz=232			eS	Sn	18 14 06.3	+0.7
TSMG	Majia baz=231	2.06	232	eP	Pn	18 13 41.8	+1.5
TSMG	baz=231			eS	Sn	18 14 06.8	+0.8
SCST	Cishan baz=238	2.07	238	eP	Pn	18 13 41.5	+1.0
SCST	baz=238			eS	Sn	18 14 06.9	+0.6
MASBT	Mashibuluo baz=229	2.13	230	eP	Pn	18 13 42.2	+1.0
MASBT	baz=229			eS	Sn	18 14 08.4	+0.7
EAST	Anshuo baz=221	2.15	222	eP	Pn	18 13 42.4	+0.9
EAST	baz=221			eS	Sn	18 14 07.7	-0.5
SCZT	Fangliau baz=225	2.30	226	eP	Pn	18 13 44.8	+1.3
SCZT	baz=225			eS	Sn	18 14 12.5	+0.6
SLIU	Shizi baz=220	2.30	220	eP	Pn	18 13 44.4	+0.7
SLIU	baz=220			eS	Sn	18 14 11.3	-0.6

JMA 08 18:23:56.6±0.4,20°.44N×122°.12E,h0^{km},M4.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	3.92	23	S	Sn	18 25 46.6	+1.7
JYNG	Yonagunijimaku	4.06	11	eS	Sn	18 25 51.6	+3.2
YOJ	Yonaguni jima	4.09	11	P	Pn	18 25 03.1	+2.7
IRIF	Iriomote-Funau	4.15	21	P	Pn	18 25 03.3	+2.0
IRIF				eS	Sn	18 25 53.2	+2.7
JKRS	Kuro-shima	4.16	24	P	Pn	18 25 03.6	+2.2
JKRS				S	Sn	18 25 53.9	+3.1
JIJ	Ishigaki jima	4.33	25	P	Pn	18 25 05.7	+2.0
JIJ				eS	Sn	18 25 56.7	+1.8
JISG	Ishigakijimahi	4.60	26	P	Pn	18 25 09.3	+1.9
JISG				S	Sn	18 26 04.1	+2.6
JTJ	Tarama	4.81	29	P	Pn	18 25 12.0	+1.6
JTJ				S	Sn	18 26 08.0	+1.1
JIRB	Irabujima	5.20	32	P	Pn	18 25 17.3	+1.6
JMJ2	Miyako jima3	5.21	34	P	Pn	18 25 17.8	+2.0
JOGS	Gusukube	5.26	35	P	Pn	18 25 18.6	+2.0

IDC 08 18:30:07.2±3.4,11°.14N×125°.46E,h0^{km},mb3.4/3, mb1 3.6/3,mb1mx3.2/40,mbtmp3.4/3,Error ellipse: s-maj=267.7km s-min=27.8km az=65.0,Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.5nm,0.6s,baz=344,slow=8.9,SNR=1.9	32.10	164	P	P	18 36 35.5	-0.9
ASAR	Alice Springs 0.2nm,0.5s,baz=351,slow=7.6,SNR=11	35.57	167	P	P	18 37 06.9	+0.4
MKAR	Makanchi Array 0.3nm,0.6s,baz=115,slow=8.7,SNR=5.2	50.86	323	P	P	18 39 09.8	-0.1

BGR 08 18:42:03.0±0.0,43°.86N×144°.30E,h33^{km},mb5.9

BJI 08 18:42:09.5±0.0,43°.67N×144°.90E,h125^{km},mB5.2/58, mb5.3/79

NOU 08 18:42:09.3,43°.61N×145°.09E,h95^{km},mb5.6,Hokkaido, Japan Region

MOS 08 18:42:09.9±0.9,43°.67N×144°.92E,h132^{km},mb5.7/46, Error ellipse: s-maj=5.2km s-min=4.1km az=94.4

MOS Felt (II) at Malokuril'skoye, Yuzhno-Kuril'sk, Goryachiy Plyazh.

JMA 08 18:42:10.9±0.1,43°.55N×145°.05E,h126^{km}±1^{km},M5.5

JMA Felt IV J1.

SKHL 08 18:42:10.8±0.8,43°.61N×145°.06E,h136^{km}±13^{km},mb5.7/6, Ms4.4/4,msh5.8/1,msh6.1/4

SKHL Felt (II) at Malokuril'skoye, Yushno-Kuril'sk, Goryachiy Plyazh.

NIED 08 18:42:10.9,43°.55N×145°.05E,h126^{km},MW5.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.10; M$_{\theta\theta}$0.80; M$_{\phi\phi}$-0.69; M$_{r\theta}$0.77; M$_{\theta\phi}$-0.40; M$_{\phi r}$0.16; Fault plane solution: M$_0$1.13000×10^{17} NP1: ϕ_s242.00000°,δ90.00000°,λ-138.00000°. NP2: ϕ_s152.00000°,δ48.00000°,λ0.00000°.

IDC 08 18:42:11.8±0.4,43°.71N×144°.98E,h128^{km}±2^{km},mb5.1/63, mb1 5.2/68,mb1mx5.1/81,mbtmp5.5/68,MS4.2/15, Ms1 4.2/15,ms1mx3.9/42 Error ellipse: s-maj=6.1km s-min=5.6km az=39.0

NEIC 08 18:42:12,43°.70N×145°.08E,h119^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.10; M$_{\theta\theta}$1.07; M$_{\phi\phi}$-0.98; M$_{r\theta}$0.97; M$_{\theta\phi}$-0.52; M$_{\phi r}$0.15; Fault plane solution: M$_0$1.51000×10^{17} NP1:ϕ_s152.00000°, δ52.00000°,λ3.00000°. NP2:ϕ_s60.00000°,δ87.00000°, λ142.00000°. Principal axes: T 1.6773, Plg28.0000°, Azm9.0000°; N -0.4122, Plg52.0000°, Azm237.0000°; P -1.2650, Plg24.0000°, Azm113.0000°;

NEIC 08 18:42:12.2±1.1,43°.69N±0°.06×144°.9E±0°.1,h132^{km}±4^{km}, mb5.5/618,Mww5.3,Mwc5.4(GCMT) Error ellipse: s-maj=11.1km s-min=8.8km az=100.0

NEIC 08 18:42:12,43°.56N×145°.01E,h130^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.03; M$_{\theta\theta}$0.53; M$_{\phi\phi}$-0.55; M$_{r\theta}$0.82; M$_{\theta\phi}$-0.52; M$_{\phi r}$0.10; Fault plane solution: M$_0$1.11000×10^{17} NP1:ϕ_s162.00000°, δ43.00000°,λ4.00000°. NP2:ϕ_s69.00000°,δ87.00000°, λ133.00000°. Principal axes: T 1.2085, Plg33.0000°, Azm14.0000°; N -0.2213, Plg43.0000°, Azm247.0000°; P -0.9872, Plg29.0000°, Azm125.0000°;

GCMT 08 18:42:13.2±0.2,43°.69N±0°.01×145°.05E±0°.01, h116^{km}±1^{km},MW5.4/131,Moment Tensor Solution. s92,c136; s131,c243; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.12±.02; M$_{\theta\theta}$1.08±.03; M$_{\phi\phi}$-0.95±.02; M$_{r\theta}$0.92±.02; M$_{\theta\phi}$-0.50±.02; M$_{\phi r}$0.18±.02; Best double couple: M$_0$1.43900×10^{17} NP1:ϕ_s151.00000°,δ52.00000°, λ2.00000°. NP2:ϕ_s60.00000°,δ89.00000°,λ142.00000°. Principal axes: T 1.6280, Plg27.0000°, Azm9.0000°; N -0.3730, Plg52.0000°, Azm238.0000°; P -1.2500, Plg25.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 08 18:42:11.4±0.2,43°.65N±0°.03×144°.93E±0°.03,h129^{km}±1^{km}, h129^{km}:pP-P,n1874,σ1^{s}14/2043,mb5.5/601,133C-48D, Fault plane solution: NP1:ϕ_s191.59287°,δ38.03319°, λ55.81245°. NP2:ϕ_s52.36773°,δ59.35919°,λ113.72701°. Principal axes: T Plg66.5396°, Azm7.9848°; N Plg20.2550°, Azm219.7414°; P Plg11.3368°, Azm125.4986°; Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNSB	Nemuroshibetsu	0.14	24	⇓P	Pn	18 42 28.6	-0.3
JNSB				eS	Sn	18 42 42.2	0.0
JNK	Nakash	0.16	247	⇓P	Pn	18 42 28.4	-0.5
JNK				eS	Sn	18 42 41.4	-0.8
JRA	Rausu	0.32	26	⇓P	Pn	18 42 28.9	-0.5
JRA				eS	Sn	18 42 42.5	-0.5
RUSJ	Misakicho	0.51	27	⇓iPN	Pn	18 42 30.2	-0.1
RUSJ				iS	Sn	18 42 44.7	0.0
JKHN	Kushirohamanak	0.59	163	⇑P	Pn	18 42 29.4	-1.4
JKHN				eS	Sn	18 42 43.4	-2.1
NMR	Nemuro--Hokkai	0.65	115	iP	Pn	18 42 29.6	-1.6
NMR				iS	Sn	18 42 43.0	-3.1
NMR	Nemuro--Hokkai	0.65	115	⇑iPN	Pn	18 42 29.6	-1.6
NMR				iS	Sn	18 42 43.2	-2.9
NEM2	Nemuro 2	0.66	115	⇑P	Pn	18 42 29.6	-1.6
NEM2				eS	Sn	18 42 43.2	-3.1
JAK	Akkeshi	0.67	194	⇑P	Pn	18 42 30.3	-1.1
JAK				eS	Sn	18 42 44.7	-1.8
GRPR	Tuman	0.70	60	iP	Pn	18 42 31.0	-0.6
GRPR	17µm,0.4s			AMB	AMB	18 42 32.0	
GRPR	29µm,1.1s			AMB	AMB	18 42 32.0	
GRPR				iS	Sn	18 42 46.0	-0.9
GRPR	21µm,0.4s			A	A	18 42 48.0	
GRPR	37µm,0.4s			A	A	18 42 48.0	
GRPR	Tuman	0.70	60	⇓iPN	Pn	18 42 31.0	-0.6
GRPR				iS	Sn	18 42 46.5	-0.4
GRPR	comp=E,8µm,0.3s			pmax	pmax		
GRPR	comp=Z,17µm,0.3s			pmax	pmax		
GRPR	comp=Z,29µm,1.1s			pmax	pmax		
GRPR	comp=E,37µm,0.3s			smax	smax		
GRPR	comp=N,21µm,0.2s			smax	smax		
YUK	Yuzh-Kuril'sk	0.78	60	iP	Pn	18 42 31.6	-0.5
YUK	comp=N,62µm,1.3s			AMB	AMB	18 42 32.0	
YUK	comp=N,30µm,0.5s			AMB	AMB	18 42 33.0	
YUK				iS	Sn	18 42 48.0	+0.1
YUK	comp=N,66µm,0.5s			A	A	18 42 50.0	
YUK	comp=N,42µm,0.5s			A	A	18 42 50.0	
YUK	Yuzh-Kuril'sk	0.78	60	d iPN	Pn	18 42 31.6	-0.5
YUK				iS	Sn	18 42 48.8	+0.9
YUK	comp=Z,62µm,1.3s			pmax	pmax		
YUK	comp=E,11µm,0.4s			pmax	pmax		
YUK	comp=Z,30µm,0.4s			pmax	pmax		
YUK	comp=N,14µm,0.5s			pmax	pmax		
YUK	comp=N,67µm,0.4s			smax	smax		
YUK	comp=E,42µm,0.4s			smax	smax		
JTKR	Abashiri--Toko	0.80	294	⇓P	Pn	18 42 32.7	+0.4
JTKR				eS	Sn	18 42 49.0	+0.7
JAR	Ashorobuto	0.91	248	⇓P	Pn	18 42 33.5	+0.2
JAR				eS	Sn	18 42 50.5	+0.6
JOB	Onbets	1.09	227	⇓P	Pn	18 42 34.8	-0.2
JOB				eS	Sn	18 42 52.3	-0.6
JMP	Maruseppu	1.19	288	⇓P	Pn	18 42 36.5	+0.5
JMP				eS	Sn	18 42 55.7	+1.0
JCH	Churui	1.54	228	⇓P	Pn	18 42 39.4	-0.4
JCH				eS	Sn	18 43 00.1	-1.3
JKK2	Kamakawa 2	1.59	279	⇓P	Pn	18 42 41.3	+0.9
JKA	Kamikawa-asahi	1.75	286	Pn	Pn	18 42 43.4	+1.3
ASAJ	Asahikawa comp=E,4µm,0.3s,baz=151,slow=6.6	1.75	286	P	Pn	18 42 43.7	+1.6
ASAJ	comp=E,211nm,0.3s,baz=208,slow=31,SNR=12			S	Sn	18 43 07.4	+1.7
ASAJ	comp=E,3µm,18.6s,baz=130,slow=44			LR	LR	18 43 30.0	
ASAJ	Asahikawa	1.75	286	⇓P	Pn	18 42 43.6	+1.4
JFR	Furan	1.77	255	⇓P	Pn	18 42 42.9	+0.5
JFR				eS	Sn	18 43 06.9	+0.7
JTHR	Tokachihiroo	1.81	222	⇑P	Pn	18 42 42.2	-0.7
JBT2	Biratori 2	2.06	246	⇓P	Pn	18 42 45.9	-0.1
JEM	Erimo	2.09	219		Pn	18 42 44.7	-1.6
ERM	Erimo	2.09	219	iPN	Pn	18 42 45.2	-1.1
ERM	Erimo	2.09	219	Pn	Pn	18 42 45.1	-1.1
JNBK	Urakawa-nobuka	2.10	230	⇑P	Pn	18 42 45.5	-0.9
KUR	Kuril'sk	2.64	52	iP	Pn	18 42 53.0	-0.1
KUR	comp=E,2µm,0.4s			AMB	AMB	18 42 56.2	
KUR	comp=E,3µm,1.1s			AMB	AMB	18 42 56.2	
KUR				iS	Sn	18 43 25.5	+0.1
KUR	comp=E,44µm,1.3s			A	A	18 43 26.0	
KUR	comp=E,27µm,1.3s			A	A	18 43 26.0	
KUR	comp=E,4µm,0.4s			A	A	18 43 29.0	
KUR	comp=E,6µm,0.4s			A	A	18 43 29.0	
KUR	comp=E,11µm,4.0s			AMS	AMS	18 44 22.3	
KUR	Kuril'sk	2.64	52	c iPN	Pn	18 42 53.5	+0.4
KUR				iS	Sn	18 43 25.5	+0.1
KUR	comp=E,434nm,0.3s			pmax	pmax		
KUR	comp=Z,2µm,0.3s			pmax	pmax		
KUR	comp=N,244nm,0.2s			pmax	pmax		
KUR	comp=Z,3µm,1.1s			pmax	pmax		
KUR	comp=N,44µm,1.3s			smax	smax		
KUR	comp=E,27µm,1.3s			smax	smax		
KUR	comp=E,6µm,0.4s			smax	smax		
KUR	comp=N,4µm,0.2s			smax	smax		
JEW	Eniwo	2.66	254	Pn	Pn	18 42 54.7	+1.1
YSS	Yuzh-Sakhalins	3.64	336	eP	Pn	18 43 07.2	+0.9
YSS	comp=N,530nm,0.5s			AMB	AMB	18 43 07.7	
YSS	comp=N,1µm,4.0s			AMB	AMB	18 43 08.5	
YSS				eS	Sn	18 43 49.8	+1.0
YSS	comp=N,2µm,1.0s			A	A	18 43 51.1	
YSS	comp=N,14µm,3.0s			A	A	18 43 52.9	
YSS	comp=N,6µm,15.0s			AMS	AMS	18 45 00.1	
YSS	Yuzh-Sakhalins	3.64	336	⇓iPN	Pn	18 43 07.2	+0.9
YSS				eS	Sn	18 43 49.8	+1.0
YSS	comp=Z,530nm,0.5s			pmax	pmax		
YSS	comp=Z,1µm,1.7s			pmax	pmax		
YSS	comp=N,2µm,1.4s			smax	smax		
YSS	comp=N,14µm,2.6s			smax	smax		
YSS	comp=Z,6µm,15.0s			MLR	MLR		
YSS	Yuzh-Sakhalins	3.64	336	Pn	Pn	18 43 06.9	+0.6
JOT	Ohata	3.65	233	⇑P	Pn	18 43 05.4	-1.0
JARK	Aomorirokkasho	3.73	226	⇑P	Pn	18 43 05.9	-1.6
JKZ	Kuzumaki	4.54	217	⇑P	Pn	18 43 16.2	-2.1
MIYJ	Miyakonagasawa	4.69	211	⇑P	Pn	18 43 17.3	-2.9
JAH	Hinai	4.71	224	⇑P	Pn	18 43 19.0	-1.5
JSZI	Iwateshizukuis	4.91	219	⇑P	Pn	18 43 21.7	-1.4
JOM	Ohasama	4.98	214	⇑P	Pn	18 43 22.0	-2.2
JRG	Rokugo	5.33	219	⇑P	Pn	18 43 27.4	-1.4
JMK	Ichinoseki	5.46	212	⇑P	Pn	18 43 28.1	-2.4
JKMT	Kesennumamotoy	5.49	209	⇑P	Pn	18 43 28.2	-2.7
UGL	Uglegorsk	5.78	341	iP	Pn	18 43 35.9	+1.1
UGL	comp=Z,4µm,2.0s			AMB	AMB	18 43 37.0	
UGL	comp=Z,2µm,0.9s			AMB	AMB	18 43 38.0	
UGL				iS	Sn	18 44 41.0	+1.1
UGL	comp=Z,17µm,7.0s			A	A	18 44 51.0	
UGL	comp=Z,6µm,7.0s			A	A	18 44 51.0	
UGL	comp=Z,10µm,7.0s			A	A	18 44 51.0	
UGL	Uglegorsk	5.78	341	⇑iPN	Pn	18 43 35.8	+1.0
UGL				iS	Sn	18 44 43.3	+3.4
UGL	comp=Z,4µm,1.6s			pmax	pmax		
UGL	comp=E,1µm,0.9s			pmax	pmax		
UGL	comp=Z,2µm,0.9s			pmax	pmax		
UGL	comp=E,6µm,7.0s			smax	smax		
UGL	comp=N,17µm,6.0s			smax	smax		
JYK	Kaneyama	5.84	218	⇑P	Pn	18 43 34.1	-1.6
JIO	Ouri	5.85	209	⇑P	Pn	18 43 32.8	-3.0
TEY	Ternei	6.13	286	eP	Pn	18 43 40.8	+1.3
TEY	comp=N,1µm,4.0s			AMB	AMB	18 43 41.5	
TEY	comp=N,4µm,4.0s			AMB	AMB	18 43 41.5	
TEY	comp=N,4µm,4.0s			AMB	AMB	18 43 41.5	
TEY	comp=N,360nm,0.9s			AMB	AMB	18 43 41.7	
TEY	comp=N,1µm,0.9s			AMB	AMB	18 43 41.7	
TEY	comp=N,1µm,0.9s			AMB	AMB	18 43 41.7	
TEY				eS	Sn	18 44 51.1	+2.8
TEY	comp=N,150nm,1.0s			A	A	18 44 52.1	
TEY	Ternei	6.13	286	⇓iPN	Pn	18 43 40.8	+1.3
TEY				eS	Sn	18 44 51.1	+2.8
TEY	comp=E,4µm,4.2s			pmax	pmax		
TEY	comp=Z,4µm,4.0s			pmax	pmax		
TEY	comp=E,1µm,0.9s			pmax	pmax		
TEY	comp=Z,1µm,0.9s			pmax	pmax		
TEY	comp=N,1µm,4.2s			pmax	pmax		
TEY	comp=N,360nm,0.9s			pmax	pmax		
TEY	comp=N,150nm,1.1s			smax	smax		
JMM	Marumori	6.57	210		Pn	18 43 42.1	-3.4
JFT	Otama	7.05	211	⇑P	Pn	18 43 49.9	-2.1
ONAJ	Iwakimizuishiy	7.26	207	P	Pn	18 43 52.1	-2.7
TYV	Tymovskoe	7.38	349	eP	Pn	18 43 56.5	+0.2
TYV	comp=N,800nm,3.0s			AMB	AMB	18 43 57.0	
TYV	comp=N,70nm,0.7s			AMB	AMB	18 43 58.0	
TYV				eS	Sn	18 45 18.3	-0.2
TYV	comp=N,25nm,0.7s			A	A	18 45 21.0	
TYV	comp=N,1µm,3.0s			A	A	18 45 21.0	
TYV	Tymovskoe	7.38	349	ePN	Pn	18 43 56.1	-0.2
TYV				eS	Sn	18 45 20.3	+1.8
TYV	comp=Z,800nm,3.3s			pmax	pmax		
TYV	comp=Z,68nm,1.2s			pmax	pmax		
TYV	comp=N,25nm,0.7s			smax	smax		
TYV	comp=N,1µm,2.7s			smax	smax		
JSD	Sado	7.54	224	⇑P	Pn	18 43 57.4	-1.2
JSD	Sado	7.54	224	Pn	Pn	18 43 57.2	-1.4
JHO	Hitachi	7.78	207	P	Pn	18 43 57.9	-3.9
JHK	Hiroka	7.82	217	⇑P	Pn	18 44 00.5	-1.8
JKT	Katashina	8.13	214	⇑P	Pn	18 44 04.9	-1.7
JYT	Yasato	8.25	208	Pn	Pn	18 44 03.8	-4.3
JAG	Ashikaga	8.34	212	⇑P	Pn	18 44 06.8	-2.6
MJB9	Matsu-Tunnel	8.76	218		Pn	18 44 13.2	-1.9
MAJO	Matsushiro	8.76	218	PN	Pn	18 44 13.3	-1.8
MAJO	Matsushiro	8.76	218	Pn	Pn	18 44 13.3	-1.8
MAT	Matsushiro	8.76	218	P	Pn	18 44 12.9	-2.2
MAT				S	Sn	18 45 46.9	-5.3
MAT	Matsushiro	8.76	218	P	Pn	18 44 13.3	-1.8
MJAR	Matsushiro Arr comp=N,5.2nm,0.3s,baz=29,slow=12,SNR=300	8.76	218	P	Pn	18 44 13.7	-1.4
MJAR	comp=N,994nm,19.5s,baz=30,slow=41			LR	LR	18 48 13.7	
JNG	Nsakai	8.92	218	P	Pn	18 44 15.7	-1.6
GRNR	Gornyy	9.17	324	eP	Pn	18 44 21.5	+1.1
GRNR	comp=N,110nm,0.8s			AMB	AMB	18 44 24.5	
GRNR	comp=N,120nm,0.8s			AMB	AMB	18 44 24.5	

GRNR				AMB	AMB	18 44 24.5	
	comp=N,150nm,0.8s						
GRNR				AMS	AMS	18 48 50.5	
	comp=N,1µm,15.0s						
GRNR				AMS	AMS	18 48 50.5	
	comp=N,700nm,15.0s						
GRNR				AMS	AMS	18 48 50.5	
	comp=N,2µm,15.0s						
GRNR	**Gornyy**	**9.17**	**324**	⇑*i*PN	**Pn**	**18 44 21.5**	**+1.1**
GRNR				*e*S	**Sn**	**18 46 05.9**	**+4.0**
GRNR				pmax	pmax		
	comp=E,120nm,0.8s						
GRNR				pmax	pmax		
	comp=N,110nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,150nm,0.8s						
GRNR				smax	smax		
	comp=N,20nm,0.8s						
GRNR				MLR	MLR		
	comp=E,700nm,17.0s						
GRNR				MLR	MLR		
	comp=N,1µm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,12.0s						
USA0B	**Ussuriysk Arra**	**9.35**	**278**	*d* *i*PN	**Pn**	**18 44 23.0**	**+0.1**
USA0B	**Ussuriysk Arra**	**9.35**	**278**	Pn	**Pn**	**18 44 23.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**9.35**	**278**	P	**Pn**	**18 44 23.6**	**+0.7**
	baz=87,slow=13,SNR=106						
USRK				LR	LR	18 48 09.2	
	comp=Z,875nm,18.9s,baz=86,slow=38						
NKL	**Nikolayevsk**	**9.92**	**345**	*e*P	**Pn**	**18 44 28.0**	**-2.4**
NKL				AMB	AMB	18 44 28.6	
	comp=Z,8.0nm,0.9s						
NKL				AMB	AMB	18 44 28.6	
	comp=Z,44nm,0.9s						
NKL				AMB	AMB	18 44 28.6	
	comp=Z,490nm,0.9s						
NKL				AMS	AMS	18 49 14.1	
	comp=Z,110nm,12.0s						
NKL				AMS	AMS	18 49 14.1	
	comp=Z,480nm,12.0s						
NKL				AMS	AMS	18 49 14.1	
	comp=Z,780nm,12.0s						
NKL	**Nikolayevsk**	**9.92**	**345**	*e*PN	**Pn**	**18 44 28.0**	**-2.4**
NKL				*e*S	**Sn**	**18 46 15.3**	**-4.4**
NKL				pmax	pmax		
	comp=E,44nm,0.8s						
NKL				pmax	pmax		
	comp=N,8.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,497nm,1.3s						
NKL				MLR	MLR		
	comp=N,105nm,10.0s						
NKL				MLR	MLR		
	comp=E,478nm,10.0s						
NKL				MLR	MLR		
	comp=Z,778nm,15.0s						
JGF	**Kuroka**	**9.93**	**219**	Pn	**Pn**	**18 44 28.5**	**-2.2**
OKH	**Okha**	**10.00**	**353**	*e*P	**Pn**	**18 44 33.0**	**+1.6**
OKH				AMB	AMB	18 44 40.0	
	comp=Z,700nm,13.0s						
OKH				AMS	AMS	18 49 30.1	
	comp=Z,1µm,15.0s						
OKH				AMS	AMS	18 49 30.1	
	comp=Z,3µm,15.0s						
OKH				AMS	AMS	18 49 30.1	
	comp=Z,900nm,15.0s						
OKH	**Okha**	**10.00**	**353**	*de*PN	**Pn**	**18 44 33.1**	**+1.6**
OKH				*e*S	**Sn**	**18 46 27.0**	**+5.3**
OKH				pmax	pmax		
	comp=Z,700nm,12.7s						
OKH				MLR	MLR		
	comp=E,3µm,16.0s						
OKH				MLR	MLR		
	comp=N,1µm,13.0s						
OKH				MLR	MLR		
	comp=Z,900nm,15.0s						
MSHR	**Mys Shultsa**	**10.13**	**269**	*ce*PN	**Pn**	**18 44 33.2**	**-0.1**
MSHR				pmax	pmax		
	comp=Z,861nm,1.7s						
JYZW	**Yoshizawa**	**10.28**	**215**	P	**Pn**	**18 44 32.3**	**-3.0**
INU	**Inuyama**	**10.29**	**219**	Pn	**Pn**	**18 44 33.4**	**-2.1**
SKR	**Severo-Kuril's**	**10.37**	**43**	*e*P	**Pn**	**18 44 35.0**	**-1.4**
SKR				AMB	AMB	18 44 37.0	
	comp=Z,370nm,0.8s						
SKR				*e*S	**Sn**	**18 46 24.0**	**-6.6**
SKR				A	A	18 46 32.0	
	comp=Z,270nm,0.8s						
SKR				A	A	18 46 32.0	
	comp=Z,250nm,0.8s						
SKR	**Severo-Kuril's**	**10.37**	**43**	*e*PN	**Pn**	**18 44 35.6**	**-0.8**
SKR				pmax	pmax		
	comp=Z,373nm,0.8s						
JSG	**Sagara**	**10.37**	**212**	Pn	**Pn**	**18 44 34.4**	**-2.3**
MDJ	**Mudanjiang**	**11.07**	**280**	P	**Pn**	**18 44 45.4**	**-0.4**
MDJ				S	**Sn**	**18 46 46.9**	**-0.8**
MDJ				pmax	pmax		
	comp=Z,270nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,820nm,9.5s						
MDJ				LR	LR		
	comp=Z,1µm,11.9s						
MDJ				LR	LR		
	comp=Z,870nm,12.0s						
MDJ				LR	LR		
	comp=Z,1µm,17.5s						
MDJ	**Mudanjiang**	**11.07**	**280**		**Pn**	**18 44 45.5**	**-0.3**
JWT	**Wachi**	**11.13**	**225**	Pn	**Pn**	**18 44 45.6**	**-1.1**
PAU	**Pauzhetka**	**11.20**	**42**	*e*P	**Pn**	**18 44 43.8**	**-3.7**
JHJ	**Hachijo jima 2**	**11.26**	**203**	P	**Pn**	**18 44 45.5**	**-3.0**
	comp=Z,242nm,0.3s,baz=327,slow=14,SNR=27						
JHJ				S	Sn	18 46 42.7	-10
	comp=Z,253nm,0.3s,baz=65,slow=23,SNR=8.9						
JHJ				LR	LR	18 49 52.2	
	comp=Z,987nm,19.3s,baz=76,slow=41						
EKMR	**Ekimchan**	**12.32**	**324**	*e*P	**Pn**	**18 45 00.5**	**-1.8**
EKMR				AMB	AMB	18 45 10.0	
	comp=Z,55nm,0.9s						
EKMR				AMB	AMB	18 45 10.0	
	comp=Z,14nm,0.9s						
EKMR				AMB	AMB	18 45 10.0	
	comp=Z,75nm,0.9s						
JHS	**Saijyo**	**12.57**	**231**	Pn	**Pn**	**18 45 04.8**	**-0.9**
PEA0B	**Petropavlovsk-**	**12.70**	**37**	PN	**Pn**	**18 45 04.8**	**-2.4**
PEA0B	**Petropavlovsk-**	**12.70**	**37**	Pn	**Pn**	**18 45 04.8**	**-2.4**
PETK	**Petropavlovsk-**	**12.70**	**37**	P	**Pn**	**18 45 04.7**	**-2.4**
	comp=Z,2.2nm,0.3s,baz=17,slow=21,SNR=4.8						
PET	**Petropavlovsk**	**13.07**	**39**	*e*P	**Pn**	**18 45 09.5**	**-2.4**
PET				AMB	AMB	18 45 39.6	
	comp=Z,200nm,1.0s						
PET				AMS	AMS	18 51 46.1	
	comp=Z,570nm,18.0s						
PET	**Petropavlovsk**	**13.07**	**39**	*e*PN	**Pn**	**18 45 09.6**	**-2.4**
PET				*e*S	**Sn**	**18 47 31.8**	**-4.1**
PET				pmax	pmax		
	comp=Z,206nm,1.3s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s						
PET	**Petropavlovsk**	**13.07**	**39**	Pn	**Pn**	**18 45 09.6**	**-2.4**
JMN	**Monobe**	**13.12**	**225**	Pn	**Pn**	**18 45 12.2**	**-0.7**
CN2	**Changchun**	**14.09**	**277**	*e*P	**Pn**	**18 45 23.3**	**-1.8**
CN2				pmax	pmax		
	comp=Z,150nm,1.1s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
KSRS	**Korea Array**	**14.32**	**250**	P	**Pn**	**18 45 27.9**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=61,slow=12,SNR=128						
KSRS				S	**S**	**18 48 13.7**	**-3.7**
	comp=Z,1.5nm,0.3s,baz=65,slow=24,SNR=12						
KSRS				PcP	**PcP**	**18 50 36.7**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=65,slow=1.3,SNR=4.4						
KSRS				ScP	**ScP**	**18 53 58.9**	**+2.0**
	baz=80,slow=0.5,SNR=12						
KS19	**Wonju Array Si**	**14.33**	**250**	Pn	**Pn**	**18 45 27.7**	**-0.6**
INCN	**Inchon**	**15.19**	**252**	P	**Pn**	**18 45 38.5**	**-0.6**
INCN				pmax	pmax		
	comp=Z,96nm,1.1s						
INCN	**Inchon**	**15.19**	**252**	Pn	**Pn**	**18 45 38.5**	**-0.6**
JNU	**Nakatsue**	**15.20**	**231**	P	**Pn**	**18 45 38.1**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=30,slow=7.6,SNR=9.6						
JNU	**Nakatsue**	**15.20**	**231**	Pn	**Pn**	**18 45 37.3**	**-2.0**
BMKR	**Bomnak**	**15.23**	**322**	*e*P	**Pn**	**18 45 38.0**	**-1.3**
BMKR				AMB	AMB	18 46 11.8	
	comp=Z,21nm,0.5s						
TJN	**Taejon**	**15.27**	**248**	*ce*P	**Pn**	**18 45 39.1**	**-1.0**
ZEA	**Zeya**	**15.39**	**317**	*e*P	**Pn**	**18 45 39.4**	**-1.9**
ZEA				AMB	AMB	18 45 45.4	
	comp=Z,40nm,1.0s						
ZEA				AMB	AMB	18 45 45.4	
	comp=Z,40nm,1.0s						
ZEA				AMB	AMB	18 45 45.4	
	comp=Z,70nm,1.0s						
ZEA				AMS	AMS	18 53 04.0	
	comp=Z,500nm,7.0s						
ZEA				AMS	AMS	18 53 04.0	
	comp=Z,800nm,7.0s						
ZEA	**Zeya**	**15.39**	**317**	*e*P	**Pn**	**18 45 39.4**	**-1.9**
ZEA				*e*S	Sn	18 48 18.3	-13
ZEA				pmax	pmax		
	comp=N,40nm,0.9s						
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.1s						
ZEA				smax	smax		
	comp=E,800nm,8.1s						
ZEA				smax	smax		
	comp=N,1µm,6.5s						
ZEA				MLR	MLR		
	comp=E,500nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,9.0s						
SNY	**Shenyang**	**15.79**	**271**	⇓P	**Pn**	**18 45 45.4**	**-1.0**
SNY				pmax	pmax		
	comp=Z,37nm,1.1s						
SNY				pmax	pmax		
	comp=Z,370nm,4.0s						
SNY				LR	LR		
	comp=Z,370nm,6.7s						
SNY				LR	LR		
	comp=Z,630nm,11.1s						
SNY				LR	LR		
	comp=Z,830nm,11.8s						
KROS	**Kirovskiy**	**15.92**	**319**	*e*P	**Pn**	**18 45 47.0**	**-0.9**
KROS				AMB	AMB	18 45 51.1	
	comp=Z,6.0nm,0.5s						
KROS				AMB	AMB	18 45 51.1	
	comp=Z,10.0nm,0.5s						
KROS				AMB	AMB	18 45 51.1	
	comp=Z,12nm,0.5s						
MA2	**Magadan**	**16.35**	**11**	P	**Pn**	**18 45 51.9**	**-1.2**
	comp=Z,4.3nm,0.3s,baz=193,slow=8.7,SNR=50						
MA2	**Magadan**	**16.35**	**11**	*e*P	**Pn**	**18 45 52.0**	**-1.1**
MA2	**Magadan**	**16.35**	**11**	*ce*P	**Pn**	**18 45 52.0**	**-1.1**
MA2				pmax	pmax		
	comp=Z,569nm,1.7s						
MA2	**Magadan**	**16.35**	**11**		**Pn**	**18 45 51.5**	**-1.6**
MA2				IAmb	IAmb	18 45 54.7	
	comp=Z,261nm,1.0s						
JSU	**Suzuyama**	**16.66**	**228**		**Pn**	**18 45 56.7**	**-0.5**
JCJ	**Chichijima**	**16.66**	**189**	P	**P**	**18 45 57.3**	**-0.1**
	comp=Z,65nm,0.3s,baz=283,slow=23,SNR=8.1						
JCJ				S	**Sn**	**18 48 52.4**	**-10**
	comp=Z,33nm,0.3s,baz=288,slow=23,SNR=4.7						
JCJ	**Chichijima**	**16.66**	**189**		**P**	**18 45 57.3**	**-0.1**
DL2	**Dalian**	**18.12**	**263**	P	**P**	**18 46 11.5**	**-1.8**
DL2				S	**S**	**18 49 33.1**	**-1.2**
DL2				pmax	pmax		
	comp=Z,250nm,1.1s						
DL2				pmax	pmax		
	comp=Z,1µm,3.5s						
HIA	**Hailar**	**18.20**	**297**	P	**P**	**18 46 13.5**	**-0.6**
HIA				pmax	pmax		
	comp=Z,42nm,1.0s						
HIA	**Hailar**	**18.20**	**297**	P	**P**	**18 46 13.5**	**-0.6**
YAK	**Yakutsk**	**20.49**	**339**	P	**P**	**18 46 35.5**	**-3.2**
	comp=Z,70nm,0.2s,baz=106,slow=2.3,SNR=55						
YAK				S	**S**	**18 50 16.6**	**-4.1**
	comp=Z,64nm,0.9s,baz=195,slow=20,SNR=9.5						
YAK				LR	LR	18 54 37.7	
	comp=Z,495nm,20.9s,baz=148,slow=36						
YAK	**Yakutsk**	**20.49**	**339**	*e*P	**P**	**18 46 34.9**	**-3.8**
YAK				*e*S	**S**	**18 50 16.0**	**-4.7**
YAK				*e**SS	sS	18 50 47.0	-13
YAK				*e*		18 57 50.0	
YAK				pmax	pmax		
	comp=Z,313nm,1.0s						
YAK				pmax	pmax		
	comp=E,26nm,0.9s						
YAK				pmax	pmax		
	comp=N,36nm,1.0s						
YAK				smax	smax		
	comp=N,1µm,1.9s						
YAK				smax	smax		
	comp=E,173nm,1.4s						
SMY	**Shemya**	**21.34**	**55**	P	**P**	**18 46 48.8**	**+0.9**
SMY				pmax	pmax		
	comp=Z,688nm,1.1s						
SMY	**Shemya**	**21.34**	**55**	P	**P**	**18 46 48.8**	**+0.9**
BJI	**Beijing**	**21.67**	**270**	P	**P**	**18 46 51.1**	**-0.5**
BJI				pP	**pP**	**18 47 19.1**	**+3.6**
BJI				S	**S**	**18 50 43.8**	**+0.4**
BJI				PcP	**PcP**	**18 50 50.6**	**+3.1**
BJI				sS	**sS**	**18 51 24.8**	**+1.1**
BJI				pmax	pmax		
	comp=Z,170nm,0.9s						
BJI				LR	LR		
	comp=Z,2µm,17.2s						
BJI				LR	LR		
	comp=Z,460nm,9.3s						
BJI				LR	LR		
	comp=Z,310nm,21.6s						
BJT	**Baijiatuau**	**21.68**	**270**	P	**P**	**18 46 50.8**	**-0.9**
BJT				pmax	pmax		
	comp=Z,147nm,0.9s						
BJT	**Baijiatuau**	**21.68**	**270**	P	**P**	**18 46 50.8**	**-0.9**
BJT				IAmb	IAmb	18 46 52.1	
	comp=Z,147nm,0.9s						
CIT	**Chita**	**22.52**	**303**	*e*P	**P**	**18 46 56.8**	**-3.4**
CIT				*e*		18 50 54.2	
CIT				*e*		18 51 41.0	
CIT				pmax	pmax		
	comp=Z,230nm,2.0s						
SSE	**Sheshan**	**22.56**	**244**	P	**P**	**18 47 01.0**	**+0.3**
SSE				S	**S**	**18 50 57.5**	**-0.9**
SSE				LR	LR		
	comp=Z,580nm,13.5s						
SSE				LR	LR		
	comp=Z,520nm,13.8s						
SSE	**Sheshan**	**22.56**	**244**	P	**P**	**18 47 01.4**	**+0.7**
SSE				IAmb	IAmb	18 47 04.0	
	comp=Z,159nm,1.2s						
NJ2	**Nanjing**	**23.52**	**249**	*e*P	**P**	**18 47 10.1**	**+0.4**
NJ2				pP	**pP**	**18 47 38.1**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,170nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,400nm,3.5s						
BOD	**Bodaibo**	**23.90**	**317**	*e*P	**P**	**18 47 09.9**	**-2.9**
BOD				pmax	pmax		
	comp=Z,60nm,1.5s						
AMKA	**Amchitka**	**24.30**	**59**	P	**P**	**18 47 16.6**	**+0.1**
HHC	**Hu-ho-hao-te**	**24.76**	**275**	*e*P	**P**	**18 47 21.7**	**+0.7**
HHC				PP	**sP**	**18 48 04.4**	**+0.9**
HHC				S	**S**	**18 51 33.0**	**-0.8**
HHC				SS	**SnSn**	**18 52 39.5**	**+3.6**
HHC				pmax	pmax		
	comp=Z,48nm,1.6s						
HHC				pmax	pmax		
	comp=Z,210nm,6.7s						
HHC				LR	LR		
	comp=Z,420nm,11.9s						
HHC				LR	LR		
	comp=Z,730nm,14.2s						
HHC				LR	LR		
	comp=Z,440nm,12.6s						
BTO	**Baotou**	**25.95**	**275**	*e*P	**P**	**18 47 32.1**	**+0.3**
BTO				S	**S**	**18 51 42.4**	**-10**
ULN	**Ulaanbaatar**	**26.58**	**292**	P	**P**	**18 47 37.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,78nm,1.0s						
ULN	**Ulaanbaatar**	**26.58**	**292**	P	**P**	**18 47 37.7**	**+0.3**
ULN				IAmb	IAmb	18 48 07.2	
	comp=Z,78nm,1.0s						
ADK	**Adak**	**26.82**	**59**	P	**P**	**18 47 39.3**	**0.0**
ADK				pmax	pmax		
	comp=Z,147nm,1.4s						
ADK	**Adak**	**26.82**	**59**	P	**P**	**18 47 39.3**	**0.0**
ADK				IAmb	IAmb	18 47 39.7	
	comp=Z,147nm,1.4s						
SONM	**Songino Array**	**27.02**	**293**	P	**P**	**18 47 42.5**	**+1.2**
	comp=Z,63nm,0.8s,baz=92,slow=8.4,SNR=250						
SONM				pP	**pP**	**18 48 09.9**	**+1.1**
	comp=Z,103nm,0.9s,baz=87,slow=8.6,SNR=13						
SONM				ScP	**ScP**	**18 54 28.4**	**+1.0**
	comp=Z,3.8nm,1.0s,baz=122,slow=3.1,SNR=5.4						
SONM				LR	LR	18 58 30.7	
	comp=Z,546nm,21.5s,baz=100,slow=36						
WHN	**Wuhan**	**27.50**	**252**	⇓*i*P	**P**	**18 47 46.5**	**+0.9**
WHN				pP	**pP**	**18 48 14.2**	**+0.9**
WHN				S	**S**	**18 52 12.8**	**-4.2**
WHN				pmax	pmax		
	comp=Z,210nm,1.1s						
WHN				LR	LR		
	comp=Z,1µm,10.3s						
WHN				LR	LR		
	comp=Z,1µm,11.8s						
WHN				LR	LR		
	comp=Z,1µm,15.1s						
QZH	**Quanzhou**	**28.47**	**238**	P	**P**	**18 47 55.8**	**+1.5**
QZH				S	**S**	**18 52 31.1**	**-1.2**
TLY	**Talaya**	**28.61**	**301**	*e*P	**P**	**18 47 54.3**	**-1.0**
TLY	**Talaya**	**28.61**	**301**	*e*P	**P**	**18 47 57.1**	**+1.8**
TLY				*e*		18 48 38.2	
TLY				*e*S	**S**	**18 52 35.4**	**+1.2**
TLY				*e*SS	SnSn	18 53 28.4	-41
TLY				pmax	pmax		
	comp=Z,36nm,1.0s						
TLY				MLR	MLR		
	comp=Z,2µm,15.0s						
TLY	**Talaya**	**28.61**	**301**	P	**P**	**18 47 55.4**	**+0.1**
ZAK	**Zakamensk**	**28.88**	**298**	*e*P	**P**	**18 47 58.3**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,43nm,1.1s						
XAN	**Xi'an**	**29.44**	**263**	P	**P**	**18 48 03.2**	**+0.3**
XAN				pP	pP	18 48 30.8	+0.1
XAN				PP	**PnPn**	**18 48 59.0**	**-4.2**
XAN				PcP	**PcP**	**18 51 08.9**	**+3.5**
XAN				S	S	18 52 37.5	-10
XAN				pmax	pmax		
	comp=Z,28nm,1.4s						
XAN				LR	LR		
	comp=Z,840nm,23.5s						
XAN				LR	LR		
	comp=Z,770nm,18.6s						
XAN				LR	LR		
	comp=Z,830nm,15.2s						
XAN	**Xi'an**	**29.44**	**263**	P	**P**	**18 48 02.7**	**-0.2**
XAN				pmax	pmax		
	comp=Z,36nm,0.6s						
XAN	**Xi'an**	**29.44**	**263**	P	**P**	**18 48 02.7**	**-0.2**
ENH	**Enshi**	**31.06**	**256**	P	**P**	**18 48 16.2**	**-0.9**
ENH				IAmb	IAmb	18 48 18.5	
	comp=Z,58nm,0.9s						
LZH	**Lanzhou**	**32.16**	**271**	*e*P	**P**	**18 48 28.1**	**+1.2**
LZH				pP	pP	18 48 55.8	+0.9
LZH				sP	sP	18 49 10.0	+0.2
LZH				S	**S**	**18 53 30.1**	**-0.1**
LZH				pmax	pmax		
	comp=Z,74nm,1.1s						
LZH				pmax	pmax		
	comp=Z,180nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,14.4s						
LZH				LR	LR		
	comp=Z,900nm,12.2s						
LZH				LR	LR		
	comp=Z,2µm,14.4s						
GTA	**Gaotai**	**33.72**	**279**	P	**P**	**18 48 41.2**	**+0.8**
GTA				pP	pP	18 49 09.0	+0.5
GTA				sP	sP	18 49 22.8	-0.5
GTA				sS	sS	18 54 43.8	+0.7
GTA				ScP	**ScP**	**18 54 50.3**	**+0.8**
GTA				ScS	**ScS**	**18 58 50.3**	**-1.1**
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				pmax	pmax		
	comp=Z,120nm,9.6s						
GTA				LR	LR		
	comp=Z,720nm,17.9s						
GTA				LR	LR		
	comp=Z,460nm,17.9s						
GTA				LR	LR		
	comp=Z,460nm,18.3s						
ANM	**Nome**	**34.60**	**35**	P	**P**	**18 48 48.0**	**+0.4**
ANM				pmax	pmax		
	comp=Z,130nm,1.0s						
ANM	**Nome**	**34.60**	**35**	P	**P**	**18 48 48.0**	**+0.4**
CD2	**Chengdu**	**34.79**	**263**	P	**P**	**18 48 50.1**	**+0.5**
CD2				pP	pP	18 49 17.9	0.0
CD2				S	**S**	**18 54 10.9**	**+0.2**
CD2				pmax	pmax		
	comp=Z,90nm,0.7s						
CD2				LR	LR		
	comp=Z,810nm,11.0s						
CD2				LR	LR		
	comp=Z,780nm,10.6s						
CD2				LR	LR		
	comp=Z,700nm,9.0s						
GYA	**Guiyang**	**35.34**	**254**	⇓P	**P**	**18 48 54.6**	**+0.2**
GYA				pP	pP	18 49 22.8	+0.1
GYA				PP	**PP**	**18 50 16.3**	**-0.8**
GYA				S	**S**	**18 54 14.4**	**-4.9**
GYA				ScP	**ScP**	**18 54 58.0**	**+2.5**
GYA				ScS	**ScS**	**18 58 59.4**	**-1.0**
GYA				pmax	pmax		
	comp=Z,29nm,1.0s						
GYA				pmax	pmax		
	comp=Z,320nm,4.6s						
GYA				LR	LR		
	comp=Z,500nm,17.8s						
RDOG	**Red Dog Mine**	**36.42**	**30**	P	**P**	**18 49 02.5**	**-0.5**
QIZ	**Qiongzhong**	**38.29**	**241**	P	**P**	**18 49 18.6**	**-0.7**
QIZ				S	**S**	**18 55 03.7**	**-0.2**
QIZ				LR	LR		
	comp=Z,660nm,15.4s						
QIZ				LR	LR		
	comp=Z,950nm,15.0s						
QIZ				LR	LR		
	comp=Z,480nm,4.7s						
TTA	**Tatalina**	**38.53**	**39**	P	**P**	**18 49 21.3**	**+0.4**
TTA				pmax	pmax		
	comp=Z,191nm,1.2s						
TTA	**Tatalina**	**38.53**	**39**	P	**P**	**18 49 21.3**	**+0.4**
NRIK	**Noril'sk**	**38.56**	**331**	P	**P**	**18 49 19.4**	**-1.6**
	comp=Z,14nm,0.9s,baz=104,slow=10,SNR=12						
NRIK				ScP	**S**	**18 55 07.5**	**+0.5**
	comp=Z,10.0nm,0.9s,baz=83,slow=8.1,SNR=5.8						
NRIK				LR	LR	19 05 31.9	
	comp=Z,472nm,20.2s,baz=104,slow=36						
NRIK	**Noril'sk**	**38.56**	**331**	*ce*P	**P**	**18 49 18.1**	**-2.9**
NRIK				pmax	pmax		
	comp=Z,22nm,1.1s						
NRIK	**Noril'sk**	**38.56**	**331**	P	**P**	**18 49 18.6**	**-2.5**
KMI	**Kunming**	**38.92**	**256**	⇓*i*P	**P**	**18 49 25.7**	**+0.9**
KMI				pP	pP	18 49 54.2	+0.7
KMI				sP	sP	18 50 10.8	+2.7
KMI				PP	**PnPn**	**18 51 00.9**	**+0.6**
KMI				S	**S**	**18 55 15.4**	**+1.6**
KMI				sS	sS	18 56 03.6	+0.1
KMI				SS	**SS**	**18 58 01.5**	**-9.0**
KMI				pmax	pmax		
	comp=Z,59nm,1.0s						
KMI				pmax	pmax		
	comp=Z,190nm,4.5s						
KMI				LR	LR		
	comp=Z,600nm,14.2s						
KMI				LR	LR		
	comp=Z,400nm,11.4s						
KMI				LR	LR		
	comp=Z,330nm,10.9s						
KMI	**Kunming**	**38.92**	**256**	P	**P**	**18 49 25.6**	**+0.8**
KMI				*PP	**pP**	**18 49 53.4**	**-0.1**
KMI				pmax	pmax		
	comp=Z,65nm,1.1s						
KMI	**Kunming**	**38.92**	**256**	P	**P**	**18 49 25.6**	**+0.8**
KMI				IAmb	IAmb	18 49 26.9	
	comp=Z,65nm,1.1s						
KMI				pP	**pP**	**18 49 53.4**	**-0.1**
DGZ	**Jazzator, Alta**	**39.07**	**300**	*c* *i*P	**P**	**18 49 24.6**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,74nm,1.2s						
A21K	**Barrow**	**39.33**	**26**	P	**P**	**18 49 25.2**	**-2.2**
	baz=258,SNR=42						
A21K	**Barrow**	**39.33**	**26**	P	**P**	**18 49 25.5**	**-1.9**

ZAA0	**Zalesovo Array**	**39.77**	**307**	P	**P**	**18 49 30.9**	**-0.4**
ZAA0				IAmb	IAmb	18 49 33.1	
	comp=Z,88nm,1.1s						
ZALV	**Zalesovo Beam**	**39.77**	**307**	P	**P**	**18 49 30.9**	**-0.3**
	comp=Z,30nm,0.6s,baz=79,slow=7.7,SNR=150						
ZALV				PcP	**PcP**	**18 51 35.7**	**+0.9**
	comp=Z,14nm,0.7s,baz=75,slow=3.3,SNR=4.9						
ZALV				ScP	**ScP**	**18 55 12.3**	**+0.7**
	comp=Z,17nm,1.0s,baz=88,slow=3.6,SNR=11						
ZALV				LR	LR	19 06 47.6	
	comp=Z,212nm,21.0s,baz=45,slow=37						
ZALV	**Zalesovo Beam**	**39.77**	**307**	*i* P	**P**	**18 49 31.0**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,30nm,0.6s						
RSO	**Redoubt South**	**40.14**	**43**	P	**P**	**18 49 35.3**	**+0.8**
DAV	**Davao City (W)**	**40.19**	**211**	LR	LR	19 04 35.2	
	comp=Z,216nm,21.2s,baz=78,slow=33						
OHAK	**Old Harbor**	**40.20**	**48**	P	**P**	**18 49 34.2**	**-0.5**
PPLA	**Purkeypile**	**40.28**	**39**	P	**P**	**18 49 36.7**	**+1.2**
KDAK	**Kodiak Island**	**40.50**	**47**	P	**P**	**18 49 36.9**	**-0.3**
	comp=Z,159nm,0.8s,baz=310,slow=4.8,SNR=38						
KDAK				pP	**pP**	**18 50 05.4**	**-0.5**
	comp=Z,46nm,0.7s,baz=307,slow=5.6,SNR=2.3						
KDAK	**Kodiak Island**	**40.50**	**47**	P	**P**	**18 49 37.1**	**-0.1**
SKT	**Skwentna**	**40.62**	**40**	P	**P**	**18 49 38.1**	**-0.1**
WMQ	**Urumqi**	**40.63**	**291**	*e*P	**P**	**18 49 39.8**	**+1.3**
WMQ				pP	pP	18 50 08.8	+1.5
WMQ				pmax	pmax		
	comp=Z,190nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,900nm,3.9s						
WMQ	**Urumqi**	**40.63**	**291**	P	**P**	**18 49 39.3**	**+0.7**
WMQ				*PP	**pP**	**18 50 08.6**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,22nm,0.8s						
WMQ	**Urumqi**	**40.63**	**291**	P	**P**	**18 49 39.3**	**+0.7**
WMQ				pP	**pP**	**18 50 08.6**	**+1.3**
BPAW	**Bear Paw Mtn.**	**40.78**	**37**	P	**P**	**18 49 39.8**	**+0.3**
KTH	**Kantishna Hill**	**40.83**	**38**	P	**P**	**18 49 40.8**	**+0.9**
MLY	**Manley**	**40.87**	**36**	P	**P**	**18 49 41.0**	**+0.8**
	baz=271,SNR=48						
CNPM	**China Poot**	**40.99**	**44**	P	**P**	**18 49 40.4**	**-0.8**
CNPM				IAmb	IAmb	18 49 47.9	
	comp=Z,76nm,0.8s						
SUA	**Susitna One**	**41.03**	**41**	P	**P**	**18 49 41.3**	**-0.4**
SUA				IAmb	IAmb	18 49 46.9	
	comp=Z,121nm,1.1s						
COLD	**Coldfoot**	**41.10**	**32**	P	**P**	**18 49 42.3**	**+0.2**
	baz=269,SNR=94						
COLD	**Coldfoot**	**41.10**	**32**	P	**P**	**18 49 41.9**	**-0.1**
COLD				IAmb	IAmb	18 49 43.4	
	comp=Z,124nm,1.1s						
TRF	**Thorofare Moun**	**41.11**	**38**	P	**P**	**18 49 42.1**	**-0.3**
TRF				IAmb	IAmb	18 49 44.6	
	comp=Z,154nm,1.2s						
BRLK	**Bradley Lake**	**41.13**	**44**	P	**P**	**18 49 41.5**	**-1.0**
BRLK				IAmb	IAmb	18 49 45.4	
	comp=Z,80nm,0.8s						
CUT	**Chulitna**	**41.19**	**40**	P	**P**	**18 49 42.9**	**+0.1**
	baz=274,SNR=15						
ZSN	**Zaisan**	**41.32**	**297**	*e*P	**P**	**18 49 43.8**	**-0.4**
	comp=Z,77nm,2.1s,baz=297						
ZSN	**Zaisan**	**41.32**	**297**	*e*P	**P**	**18 49 43.7**	**-0.4**
ZSN				pmax	pmax		
	comp=Z,77nm,2.1s						
TOLK	**Toolik Lake Re**	**41.39**	**30**	P	**P**	**18 49 44.4**	**-0.1**
	baz=268,SNR=120						
TOLK	**Toolik Lake Re**	**41.39**	**30**	P	**P**	**18 49 43.2**	**-1.2**
BWN	**Browne**	**41.44**	**37**	P	**P**	**18 49 45.2**	**+0.4**
I23K	**Minto, Yukon-K**	**41.45**	**36**	P	**P**	**18 49 45.8**	**+0.9**
	baz=272,SNR=124						
I23K	**Minto, Yukon-K**	**41.45**	**36**	P	**P**	**18 49 45.4**	**+0.5**
RC01	**Rabbit Creek A**	**41.56**	**42**	P	**P**	**18 49 45.6**	**-0.2**
	baz=276,SNR=16						
NEA2	**Nenana**	**41.60**	**36**	P	**P**	**18 49 46.8**	**+0.7**
	baz=273,SNR=30						
O22K	**Cooper Landing**	**41.63**	**43**	P	**P**	**18 49 46.0**	**-0.4**
	baz=277,SNR=7.5						
O22K	**Cooper Landing**	**41.63**	**43**	P	**P**	**18 49 46.2**	**-0.2**
MCK	**McKinley**	**41.70**	**38**	P	**P**	**18 49 47.3**	**+0.3**
	baz=274,SNR=51						
RND	**Reindeer**	**41.76**	**38**	P	**P**	**18 49 47.2**	**-0.4**
RND				pmax	pmax		
	comp=Z,214nm,1.0s						
RND	**Reindeer**	**41.76**	**38**	P	**P**	**18 49 47.2**	**-0.4**
PMR	**Palmer**	**41.79**	**41**	P	**P**	**18 49 47.2**	**-0.5**
PMR				pmax	pmax		
	comp=Z,116nm,1.0s						
PMR	**Palmer**	**41.79**	**41**	P	**P**	**18 49 47.2**	**-0.5**
PMR				IAmb	IAmb	18 49 49.6	
	comp=Z,116nm,1.0s						
SEW	**Seward**	**41.81**	**43**	P	**P**	**18 49 47.6**	**-0.3**
SEW				IAmb	IAmb	18 49 51.1	
	comp=Z,114nm,0.9s						
GHO	**Glory Hole Cre**	**41.87**	**41**	P	**P**	**18 49 48.7**	**+0.2**
MDM	**Murphy Dome**	**41.94**	**36**	P	**P**	**18 49 49.2**	**+0.3**
WRH	**Wood River Hil**	**42.03**	**37**	P	**P**	**18 49 49.5**	**-0.1**
TCOL	**CIGO, UAF Yank**	**42.10**	**36**	P	**P**	**18 49 51.0**	**+0.9**
	baz=273,SNR=90						
TCOL	**CIGO, UAF Yank**	**42.10**	**36**	P	**P**	**18 49 50.8**	**+0.7**
COLA	**College**	**42.10**	**36**	P	**P**	**18 49 50.9**	**+0.7**
COLA				pmax	pmax		
	comp=Z,643nm,1.0s						
COLA	**College**	**42.10**	**36**	P	**P**	**18 49 50.9**	**+0.7**
KNK	**Knik Glacier**	**42.13**	**41**	P	**P**	**18 49 50.2**	**-0.3**
CCB	**Clear Creek Bu**	**42.14**	**36**	P	**P**	**18 49 50.5**	**+0.1**
CCB				IAmb	IAmb	18 49 52.1	
	comp=Z,130nm,1.0s						
SML	**Sawmill**	**42.15**	**41**	P	**P**	**18 49 50.9**	**+0.2**
POKR	**Poker Plat Res**	**42.27**	**36**	P	**P**	**18 49 52.3**	**+0.8**
	baz=274,SNR=192						
POKR	**Poker Plat Res**	**42.27**	**36**	P	**P**	**18 49 52.1**	**+0.6**
LKP	**Lekhapani**	**42.51**	**264**	*e*P	**P**	**18 49 54.6**	**+0.6**
IL31		**42.52**	**36**	P	**P**	**18 49 53.6**	**0.0**
ILAR	**Eielson Array**	**42.52**	**36**	P	**P**	**18 49 53.5**	**-0.1**
	comp=Z,321nm,1.0s,baz=263,slow=5.7,SNR=570						
ILAR				ScP	**ScP**	**18 55 21.9**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=269,slow=4.1,SNR=4.3						
HDA	**Harding Lake**	**42.52**	**37**	P	**P**	**18 49 53.2**	**-0.4**
	baz=275,SNR=22						
HDA	**Harding Lake**	**42.52**	**37**	P	**P**	**18 49 53.6**	**-0.1**
SCM	**Sheep Creek Mo**	**42.62**	**40**	P	**P**	**18 49 55.0**	**+0.5**
SCM				pmax	pmax		
	comp=Z,159nm,0.9s						
SCM	**Sheep Creek Mo**	**42.62**	**40**	P	**P**	**18 49 55.0**	**+0.5**
GLI	**Glacier Island**	**42.86**	**42**	P	**P**	**18 49 56.4**	**0.0**
GLI				IAmb	IAmb	18 49 57.4	
	comp=Z,70nm,0.8s						
PRP	**Porcupine Dome**	**43.04**	**35**	P	**P**	**18 49 57.9**	**0.0**
FYU	**Fort Yukon**	**43.08**	**33**	P	**P**	**18 49 59.1**	**+1.1**
M24K	**Tolsona, Glenn**	**43.12**	**40**	P	**P**	**18 49 59.7**	**+1.1**
	baz=278,SNR=20						
M24K	**Tolsona, Glenn**	**43.12**	**40**	P	**P**	**18 49 59.2**	**+0.6**
FID	**Port Fidalgo**	**43.18**	**42**	P	**P**	**18 49 58.5**	**-0.4**
FID				IAmb	IAmb	18 50 00.2	
	comp=Z,177nm,1.2s						
MK31	**Makanchi Array**	**43.20**	**297**	*c i*P	**P**	**18 49 59.8**	**+0.4**
MK31	**Makanchi Array**	**43.20**	**297**	P	**P**	**18 49 59.7**	**+0.4**
MKAR	**Makanchi Array**	**43.20**	**297**	P	**P**	**18 50 00.0**	**+0.7**
	comp=Z,39nm,0.6s,baz=82,slow=9.7,SNR=527						
MKAR				ScP	**ScP**	**18 55 26.0**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=114,slow=1.5,SNR=3.6						
KLU	**Klutina**	**43.33**	**41**	P	**P**	**18 50 00.6**	**+0.3**
PAX	**Paxson**	**43.33**	**39**	P	**P**	**18 50 00.1**	**-0.2**
PAX				pmax	pmax		
	comp=Z,72nm,1.2s						
PAX	**Paxson**	**43.33**	**39**	P	**P**	**18 50 00.1**	**-0.2**
PAX				IAmb	IAmb	18 50 08.0	
	comp=Z,72nm,1.2s						
SEM	**Semipalatinsk**	**43.34**	**303**	*e*P	**P**	**18 49 58.2**	**-2.5**
	comp=Z,104nm,1.1s,baz=302						
SEM				*e*S	**S**	**18 56 16.3**	**-2.4**
	baz=302						
SEM	**Semipalatinsk**	**43.34**	**303**	*e*P	**P**	**18 49 58.2**	**-2.5**
SEM				*e*S	**S**	**18 56 16.2**	**-2.4**
SEM				pmax	pmax		
	comp=Z,104nm,1.1s						
NONG	**Nongkai**	**43.37**	**247**	P	**P**	**18 50 02.5**	**+1.6**
	comp=Z,13µmcomp=Z,82nm,1.0s						
MAKZ	**Makanchi**	**43.40**	**297**	P	**P**	**18 50 00.9**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,42nm,0.6s						
MAKZ	**Makanchi**	**43.40**	**297**	P	**P**	**18 50 00.9**	**0.0**
MAKZ				IAmb	IAmb	18 50 03.8	
	comp=Z,42nm,0.6s						
RIDG	**Independent Ri**	**43.51**	**37**	P	**P**	**18 50 01.4**	**-0.3**
EYAK	**Cordova Ski Ar**	**43.56**	**42**	P	**P**	**18 50 02.5**	**+0.5**
ZIRO	**ZIRO**	**43.84**	**266**	*e*P	**P**	**18 50 06.0**	**+1.1**
ZIRO				IAmb	IAmb	18 50 07.8	
	comp=Z,56nm,0.4s						
SCRK	**Sand Creek**	**43.86**	**37**	P	**P**	**18 50 04.3**	**-0.2**
	baz=278,SNR=136						
DOT	**Dot Lake**	**43.87**	**38**	P	**P**	**18 50 03.8**	**-0.7**
DOT				IAmb	IAmb	18 50 06.8	
	comp=Z,69nm,0.8s						
N25K	**Chitina, Valde**	**43.94**	**40**	P	**P**	**18 50 06.0**	**+0.9**
	baz=280,SNR=11						
N25K	**Chitina, Valde**	**43.94**	**40**	P	**P**	**18 50 05.6**	**+0.5**
MOKO	**MOKOCHONG**	**44.07**	**264**	*e*P	**P**	**18 50 07.6**	**+1.0**
MOKO				IAmb	IAmb	18 50 08.9	
	comp=Z,39nm,0.8s						
MENT	**Mentasta**	**44.13**	**38**	P	**P**	**18 50 06.6**	**0.0**
MENT				IAmb	IAmb	18 50 09.2	
	comp=Z,166nm,1.4s						
KURK	**Kurchatov**	**44.24**	**303**	*e*P	**P**	**18 50 07.6**	**0.0**
KURK	**Kurchatov**	**44.24**	**303**	P	**P**	**18 50 08.7**	**+1.1**
KURK				S	**S**	**18 56 32.7**	**+1.5**
KURK	**Kurchatov**	**44.24**	**303**	P	**P**	**18 50 07.6**	**0.0**
KURK					**ScP**	**18 55 30.0**	**+0.4**
L26K	**Log Cabin Wild**	**44.28**	**38**	P	**P**	**18 50 08.9**	**+1.1**
	baz=279,SNR=85						
KURBB	**Kurchatov Arra**	**44.33**	**303**	P	**P**	**18 50 08.7**	**+0.5**
	comp=Z,135nm,0.9s,baz=70,slow=9.0,SNR=401						
KURBB				ScP	**ScP**	**18 55 30.6**	**+0.7**
	comp=Z,8.8nm,1.2s,baz=74,slow=3.9,SNR=9.0						
KURBB				S	**S**	**18 56 32.7**	**+0.2**
	comp=Z,6.0nm,1.1s,baz=78,slow=17,SNR=5.5						
GLB	**Gilahina Butte**	**44.34**	**41**	P	**P**	**18 50 08.8**	**+0.5**
GLB				IAmb	IAmb	18 50 14.0	
	comp=Z,84nm,0.9s						
VRDI	**Verde Repeater**	**44.55**	**41**	P	**P**	**18 50 10.8**	**+0.7**
VRDI				IAmb	IAmb	18 50 12.0	
	comp=Z,98nm,1.0s						
LSA	**Lhasa**	**44.58**	**270**	P	**P**	**18 50 12.7**	**+1.6**
LSA				pmax	pmax		
	comp=Z,75nm,0.8s						
LSA	**Lhasa**	**44.58**	**270**	*i* P	**P**	**18 50 12.6**	**+1.5**
	SNR=14						
LSA	**Lhasa**	**44.58**	**270**	P	**P**	**18 50 11.8**	**+0.7**
LSA				pmax	pmax		
	comp=Z,16nm,0.9s						
LSA	**Lhasa**	**44.58**	**270**	P	**P**	**18 50 11.8**	**+0.7**
K27K	**Chicken**	**44.69**	**37**	P	**P**	**18 50 11.8**	**+0.9**
	baz=279,SNR=306						
K27K	**Chicken**	**44.69**	**37**	P	**P**	**18 50 11.4**	**+0.5**
PAYA	**Payao**	**44.70**	**252**	P	**P**	**18 50 13.2**	**+1.6**
	comp=Z,4µmcomp=Z,566nm,0.9s						
PAYA	**Payao**	**44.70**	**252**	P	**P**	**18 50 13.2**	**+1.6**
KOHI	**KOHIMA**	**44.72**	**264**	*e*P	**P**	**18 50 12.1**	**+0.3**
	comp=Z,62nm,0.9s						
KOHI				IAmb	IAmb	18 50 21.3	
	comp=Z,62nm,0.9s						
MCARA	**McCarthy VSAT**	**44.72**	**41**	P	**P**	**18 50 12.2**	**+1.0**
CRQM	**Cirque**	**44.79**	**41**	P	**P**	**18 50 13.0**	**+1.0**
TGL	**Tana Glacier**	**44.94**	**41**	P	**P**	**18 50 13.4**	**+0.3**
TGL				IAmb	IAmb	18 50 15.3	
	comp=Z,130nm,1.0s						
EGAK	**Eagle**	**44.96**	**36**	P	**P**	**18 50 12.6**	**-0.5**
BALM	**Baldy**	**45.11**	**41**	P	**P**	**18 50 14.8**	**+0.3**
BALM				IAmb	IAmb	18 50 16.4	
	comp=Z,106nm,0.8s						
ISLE	**Juniper Island**	**45.21**	**42**	P	**P**	**18 50 15.9**	**+0.6**
ISLE				IAmb	IAmb	18 50 19.8	
	comp=Z,115nm,0.8s						
BAKI	**Biak**	**45.33**	**192**	P	**P**	**18 50 17.0**	**+0.4**
	comp=Z,138nm,1.2s						
UTTA	**Uttaradit**	**45.34**	**250**	P	**P**	**18 50 17.9**	**+1.2**
	comp=Z,374nmcomp=Z,50nm,0.9s						
BARN	**Barnard Glacie**	**45.43**	**41**	P	**P**	**18 50 17.9**	**+0.8**
BARN				IAmb	IAmb	18 50 19.2	
	comp=Z,87nm,0.8s						
LAMP	**Lampang**	**45.44**	**251**	P	**P**	**18 50 18.9**	**+1.5**
	comp=Z,70nm,0.8s						
TNTI	**Ternate**	**45.47**	**205**	P	**P**	**18 50 18.1**	**+0.4**
TNTI	**Ternate**	**45.47**	**205**	P	**P**	**18 50 18.7**	**+1.0**
	comp=Z,66nm,1.3s						
MESA	**MESA**	**45.49**	**42**	P	**P**	**18 50 17.1**	**-0.4**
MESA				IAmb	IAmb	18 50 19.8	
	comp=Z,141nm,1.0s						
CM34	**Chiang Mai Arr**	**45.54**	**252**	P	**P**	**18 50 19.0**	**+0.7**
YAH	**Yahtse**	**45.55**	**42**	P	**P**	**18 50 18.4**	**+0.4**
CTGM	**Chitina Glacie**	**45.61**	**41**	P	**P**	**18 50 18.9**	**+0.5**
CTGM				IAmb	IAmb	18 50 20.5	
	comp=Z,143nm,1.0s						
CM35	**Chiang Mai Arr**	**45.66**	**252**	P	**P**	**18 50 20.0**	**+0.8**
CHAI	**Chaiyaphum**	**45.68**	**246**	P	**P**	**18 50 20.4**	**+1.1**
	comp=Z,686nmcomp=Z,65nm,1.0s						
CM33	**Chiang Mai Arr**	**45.71**	**252**	P	**P**	**18 50 20.0**	**+0.5**
CMMT	**Chiang Mai**	**45.71**	**252**	P	**P**	**18 50 20.0**	**+0.4**
	comp=Z,30nm,0.9s						
CMMT	**Chiang Mai**	**45.71**	**252**	P	**P**	**18 50 20.0**	**+0.4**
	comp=Z,30nm,0.9s						
CHTO	**Chiang Mai**	**45.71**	**252**	P	**P**	**18 50 20.2**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,28nm,0.9s						
CHTO	**Chiang Mai**	**45.71**	**252**	P	**P**	**18 50 20.2**	**+0.6**
CM36	**Chiang Mai Arr**	**45.81**	**252**	P	**P**	**18 50 21.0**	**+0.7**
TABL	**Table Mountain**	**45.82**	**42**	P	**P**	**18 50 20.6**	**+0.5**
TABL				IAmb	IAmb	18 50 23.4	
	comp=Z,116nm,1.0s						
DAWY	**Dawson**	**45.84**	**36**	P	**P**	**18 50 19.8**	**-0.3**
CM32	**Chiang Mai Arr**	**45.89**	**252**	P	**P**	**18 50 22.0**	**+1.0**
CM09	**Chiang Mai Arr**	**45.93**	**252**	P	**P**	**18 50 23.0**	**+1.7**
	comp=Z,150nmcomp=Z,19nm,0.9s						
CM31	**Chiang Mai Arr**	**45.95**	**252**	P	**P**	**18 50 23.1**	**+1.6**
	comp=Z,5µmcomp=Z,539nm,0.8s						
CM31	**Chiang Mai Arr**	**45.95**	**252**	P	**P**	**18 50 22.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**45.95**	**252**	P	**P**	**18 50 22.7**	**+1.2**
	comp=Z,8.7nm,0.8s,baz=42,slow=7.5,SNR=31						
CMAR				pP	**pP**	**18 50 51.5**	**+0.5**
	comp=Z,12nm,0.8s,baz=47,slow=6.7,SNR=11						
CM02	**Chiang Mai Arr**	**45.97**	**252**	P	**P**	**18 50 23.2**	**+1.6**
	comp=Z,174nmcomp=Z,22nm,0.9s						
CM01	**Chiang Mai Arr**	**45.97**	**252**	P	**P**	**18 50 23.2**	**+1.7**
	comp=Z,164nmcomp=Z,19nm,0.8s						
CM04	**Chiang Mai Arr**	**45.97**	**252**	P	**P**	**18 50 23.4**	**+1.8**
	comp=Z,181nmcomp=Z,23nm,0.8s						
CM15	**Chiang Mai Arr**	**45.97**	**252**	P	**P**	**18 50 23.1**	**+1.5**
	comp=Z,177nmcomp=Z,23nm,0.9s						
SWI	**Sorong**	**45.97**	**199**	P	**P**	**18 50 22.7**	**+1.1**
	comp=Z,1µmcomp=Z,106nm,1.1s						
SIJI	**Sorong**	**45.98**	**199**	P	**P**	**18 50 22.4**	**+0.8**
	comp=Z,52nm,0.7s,baz=8.3,slow=12,SNR=18						
CM05	**Chiang Mai Arr**	**45.99**	**252**	P	**P**	**18 50 23.4**	**+1.6**
	comp=Z,119nmcomp=Z,16nm,0.7s						
CM13	**Chiang Mai Arr**	**46.00**	**252**	P	**P**	**18 50 23.0**	**+1.1**
	comp=Z,147nmcomp=Z,20nm,0.9s						
JAY	**Jayapura**	**46.11**	**186**	P	**P**	**18 50 23.1**	**+0.4**
	comp=Z,34nm,0.8s,baz=330,slow=0.4,SNR=5.6						
JAY	**Jayapura**	**46.11**	**186**	P	**P**	**18 50 23.5**	**+0.8**
	comp=Z,36nm,1.0s						
SUKH	**Sukhothai**	**46.15**	**250**	P	**P**	**18 50 24.8**	**+1.8**
	comp=Z,48nm,1.0s						
GENI	**Genyem**	**46.23**	**187**	P	**P**	**18 50 25.1**	**+1.5**
	comp=Z,53nm,1.2s						
PCA	**Pinnacle**	**46.33**	**42**	P	**P**	**18 50 24.5**	**+0.5**
PCA				IAmb	IAmb	18 50 27.2	
	comp=Z,116nm,1.0s						
TDK	**Taldyqorghan**	**46.38**	**296**	*e*P	**P**	**18 50 24.0**	**-0.6**
	comp=Z,72nm,0.5s,baz=296						
TDK				*e*S	**S**	**18 57 02.2**	**0.0**
	baz=296						
TDK	**Taldyqorghan**	**46.38**	**296**	*e*P	**P**	**18 50 23.9**	**-0.6**
TDK				*e*S	**S**	**18 57 02.1**	**0.0**
TDK				pmax	pmax		
	comp=Z,72nm,0.5s						
SHL	**Shillong**	**46.42**	**265**	P	**P**	**18 50 25.2**	**-0.1**
SHL				pmax	pmax		
	comp=Z,27nm,0.9s						
SHL	**Shillong**	**46.42**	**265**	P	**P**	**18 50 25.1**	**-0.1**
SHLS	**Shalkode**	**46.42**	**293**	*e*P	**P**	**18 50 21.8**	**-3.3**
	comp=Z,15nm,0.5s,baz=293						
SHLS				*e*S	**S**	**18 56 58.5**	**-4.5**
	baz=293						
SHLS	**Shalkode**	**46.42**	**293**	*e*P	**P**	**18 50 21.7**	**-3.3**
SHLS				*e*S	**S**	**18 56 58.5**	**-4.5**
SHLS				pmax	pmax		
	comp=Z,15nm,0.5s						
KMSI	**Cibinong**	**46.78**	**209**	P	**P**	**18 50 28.2**	**+0.3**
	comp=Z,1µmcomp=Z,82nm,0.9s						
KPKS	**Kokpek**	**46.81**	**294**	*e*P	**P**	**18 50 27.3**	**-0.7**
	comp=Z,18nm,0.4s,baz=294						
KPKS				*e*S	**S**	**18 57 08.3**	**-0.3**
	baz=294						
KPKS	**Kokpek**	**46.81**	**294**	*e*P	**P**	**18 50 27.3**	**-0.7**
KPKS				*e*S	**S**	**18 57 08.2**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,18nm,0.4s						
MHMT	**Maesarieng**	**46.84**	**252**	P	**P**	**18 50 30.2**	**+1.8**
	comp=Z,879nmcomp=Z,74nm,0.8s						
SRAK	**Srakaew**	**47.02**	**245**	P	**P**	**18 50 28.7**	**-1.1**
	comp=Z,4µmcomp=Z,417nm,0.8s						
GTOI	**Gorontalo**	**47.08**	**211**	P	**P**	**18 50 30.4**	**+0.2**
	comp=Z,646nmcomp=Z,76nm,0.7s						
SATY	**Saty**	**47.16**	**294**	*e*P	**P**	**18 50 30.2**	**-0.7**
	baz=293						
SATY				*e*S	**S**	**18 57 13.4**	**-0.2**
	baz=293						
SATY	**Saty**	**47.16**	**294**	*e*P	**P**	**18 50 30.1**	**-0.7**
SATY				*e*S	**S**	**18 57 13.4**	**-0.2**
INK	**Inuvik**	**47.30**	**30**	P	**P**	**18 50 31.4**	**+0.1**
	comp=Z,115nm,0.7s,baz=295,slow=7.0,SNR=341						
INK	**Inuvik**	**47.30**	**30**	P	**P**	**18 50 31.1**	**-0.1**
HYT	**Haines Junctio**	**47.46**	**40**	P	**P**	**18 50 34.4**	**+1.5**
TOLI2	**Tolitoli**	**47.50**	**214**	P	**P**	**18 50 33.1**	**-0.4**
SAIH	**SAIHA**	**47.51**	**261**	*e*P	**P**	**18 50 33.7**	**0.0**
SAIH				IAmb	IAmb	18 50 34.3	
	comp=Z,58nm,0.7s						
MRSI	**Marisa**	**47.63**	**212**	P	**P**	**18 50 35.3**	**+0.8**
	comp=Z,2µmcomp=Z,303nm,1.0s						
FAKI	**Fak Fak**	**47.74**	**197**	P	**P**	**18 50 35.5**	**+0.2**
FAKI				IAmb	IAmb	18 50 36.2	
	comp=Z,87nm,0.8s						
FAKI	**Fak Fak**	**47.74**	**197**	P	**P**	**18 50 35.7**	**+0.4**
	comp=Z,179nm,1.4s						
GTK	**Tadong**	**47.77**	**269**	*e*P	**P**	**18 50 36.7**	**+1.0**
CHKK	**Chushkaly**	**47.77**	**295**	*e*P	**P**	**18 50 34.9**	**-0.4**
	baz=295						
CHKK	**Chushkaly**	**47.77**	**295**	*e*P	**P**	**18 50 34.9**	**-0.4**
AGT	**Agartala**	**47.89**	**264⥣**	*e*P	**P**	**18 50 37.3**	**+0.8**
MDOK	**Medeo**	**48.02**	**294**	*e*P	**P**	**18 50 36.2**	**-1.3**
	baz=294						
MDOK				*e*S	**S**	**18 57 25.3**	**-0.5**
	baz=294						
MDOK	**Medeo**	**48.02**	**294**	*e*P	**P**	**18 50 36.1**	**-1.3**
MDOK				*e*S	**S**	**18 57 25.2**	**-0.5**
BRZS	**Berezniki**	**48.08**	**304**	*e*P	**P**	**18 50 36.4**	**-1.2**
	comp=Z,45nm,0.5s,baz=304						
BRZS				*e*S	**S**	**18 57 25.3**	**-0.8**
	baz=304						
BRZS	**Berezniki**	**48.08**	**304**	*e*P	**P**	**18 50 36.4**	**-1.2**
BRZS				*e*S	**S**	**18 57 25.2**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,45nm,0.5s						
AAA	**Alma-Ata**	**48.09**	**294**	*e*P	**P**	**18 50 37.8**	**-0.1**
	baz=294						
AAA				*e*S	**S**	**18 57 27.2**	**+0.6**
	baz=294						
AAA	**Alma-Ata**	**48.09**	**294**	*e*P	**P**	**18 50 37.8**	**-0.1**
AAA				*e*S	**S**	**18 57 27.2**	**+0.6**
BELO	**BELONIA**	**48.14**	**263**	*e*P	**P**	**18 50 40.5**	**+2.2**
TNSS	**Tian-Shan**	**48.14**	**294**	*e*P	**P**	**18 50 38.5**	**-0.3**
	baz=294						
TNSS	**Tian-Shan**	**48.14**	**294**	*e*P	**P**	**18 50 38.4**	**-0.3**
KUU	**Kurty**	**48.18**	**295**	*e*P	**P**	**18 50 37.3**	**-1.2**
	comp=Z,44nm,0.9s,baz=295						
KUU				*e*S	**S**	**18 57 27.2**	**-0.5**
	baz=295						
KUU	**Kurty**	**48.18**	**295**	*e*P	**P**	**18 50 37.3**	**-1.2**
KUU				*e*S	**S**	**18 57 27.2**	**-0.5**
KUU				pmax	pmax		
	comp=Z,44nm,0.9s						
BVAR	**Borovoye Array**	**48.31**	**309**	P	**P**	**18 50 40.1**	**+0.7**
	comp=Z,10nm,0.4s,baz=317,slow=40,SNR=40						
BVAR	**Borovoye Array**	**48.31**	**309**	P	**P**	**18 50 40.1**	**+0.7**
BRVK	**Borovoye**	**48.36**	**309**	*e*P	**P**	**18 50 38.5**	**-1.2**
BRVK	**Borovoye**	**48.36**	**309**	P	**P**	**18 50 39.8**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,137nm,1.1s						
BRVK	**Borovoye**	**48.36**	**309**	P	**P**	**18 50 39.8**	**+0.1**
BRVK				IAmb	IAmb	18 50 41.5	
	comp=Z,137nm,1.1s						
BRVK	**Borovoye**	**48.36**	**309**	*i* P	**P**	**18 50 38.5**	**-1.2**
TAPN	**Taplejung**	**48.40**	**270**	*e*P	**P**	**18 50 41.8**	**+1.1**
	comp=Z,44nm,0.6s						
MTBS	**Maitube**	**48.45**	**294**	*e*P	**P**	**18 50 39.8**	**-0.9**
	baz=294						
MTBS	**Maitube**	**48.45**	**294**	*e*P	**P**	**18 50 39.7**	**-0.9**
MPSI	**Mapaga**	**48.56**	**214**	P	**P**	**18 50 42.3**	**+0.6**
	comp=Z,556nmcomp=Z,47nm,1.0s						
SANI	**Sanana**	**48.57**	**206**	P	**P**	**18 50 41.5**	**-0.2**
	comp=Z,2µmcomp=Z,198nm,1.0s						
PATY	**Pattaya**	**48.59**	**245**	P	**P**	**18 50 44.0**	**+2.1**
LUWI	**Luwuk**	**48.72**	**210**	P	**P**	**18 50 41.8**	**-1.0**
	comp=Z,1µmcomp=Z,94nm,1.3s						
WHY	**Whitehorse**	**48.74**	**40**	P	**P**	**18 50 43.9**	**+1.2**
WHY				IAmb	IAmb	18 50 45.2	
	comp=Z,83nm,0.8s						
SKAG	**Skagway**	**48.90**	**42**	P	**P**	**18 50 44.0**	**+0.3**
ODAN	**Odare**	**48.91**	**270**	*e*P	**P**	**18 50 45.4**	**+0.8**
	comp=Z,21nm,0.4s						
APSI	**Ampana**	**49.01**	**212**	P	**P**	**18 50 45.4**	**+0.3**
	comp=Z,1µmcomp=Z,128nm,1.1s						
TKM2	**Tokmak 2**	**49.09**	**295**	P	**P**	**18 50 47.0**	**+1.4**
	SNR=57						
BTLS	**Baital**	**49.18**	**298**	*e*P	**P**	**18 50 44.3**	**-1.9**
	baz=298						
BTLS				*e*S	**S**	**18 57 40.4**	**-1.4**
	baz=298						
BTLS	**Baital**	**49.18**	**298**	*e*P	**P**	**18 50 44.2**	**-1.9**
BTLS				*e*S	**S**	**18 57 40.3**	**-1.4**
NLAI	**Namlea**	**49.35**	**204**	P	**P**	**18 50 46.5**	**-1.2**
	comp=Z,84nm,0.8s						
GUN	**Gumba**	**49.41**	**272**	*e*P	**P**	**18 50 49.4**	**+0.9**
	comp=Z,301nm,0.8s						
BESE	**Bessie Mountai**	**49.42**	**43**	P	**P**	**18 50 49.3**	**+1.5**
BESE				IAmb	IAmb	18 50 49.9	
	comp=Z,51nm,1.0s						
RAMN	**Ramite**	**49.44**	**270**	*e*P	**P**	**18 50 49.3**	**+0.7**
	comp=Z,243nm,0.7s						
SGDS	**Sogindy**	**49.49**	**296**	*e*P	**P**	**18 50 48.6**	**0.0**
	comp=Z,39nm,1.7s,baz=295						
SGDS				*e*S	**S**	**18 57 46.8**	**+0.6**
	baz=295						
SGDS	**Sogindy**	**49.49**	**296**	*e*P	**P**	**18 50 48.6**	**0.0**
SGDS				*e*S	**S**	**18 57 46.7**	**+0.6**
SGDS				pmax	pmax		
	comp=Z,39nm,1.7s						
CHMS	**Chumysh**	**49.61**	**295**	P	**P**	**18 50 50.1**	**+0.7**
	SNR=7.7						
KBK	**Karagaybulak**	**49.63**	**295**	P	**P**	**18 50 50.9**	**+1.1**
	SNR=40						
SIT	**Sitka**	**49.71**	**45**	P	**P**	**18 50 51.6**	**+1.7**
SIT				pmax	pmax		
	comp=Z,106nm,1.0s						
SIT	**Sitka**	**49.71**	**45**	P	**P**	**18 50 51.6**	**+1.7**
SIT				IAmb	IAmb	18 50 53.0	
	comp=Z,106nm,1.0s						
JIS	**Juneau Island**	**49.76**	**43**	P	**P**	**18 50 51.7**	**+1.5**
KKN	**Kakani**	**49.91**	**272**	*e*P	**P**	**18 50 52.9**	**+0.8**
	comp=Z,66nm,0.5s						
AAK	**Ala-Archa**	**49.94**	**295**	P	**P**	**18 50 52.9**	**+0.8**
	comp=Z,8.9nm,0.5s,baz=111,slow=5.3,SNR=45						
AAK	**Ala-Archa**	**49.94**	**295**	P	**P**	**18 50 52.9**	**+0.8**
	SNR=20						
AAK	**Ala-Archa**	**49.94**	**295**	*i* P	**P**	**18 50 52.6**	**+0.5**
	SNR=5.7						
AAK	**Ala-Archa**	**49.94**	**295**	*e*P	**P**	**18 50 51.2**	**-0.9**
AAK	**Ala-Archa**	**49.94**	**295**	*i* P	**P**	**18 50 51.2**	**-0.9**
AAK	**Ala-Archa**	**49.94**	**295**	P	**P**	**18 50 52.0**	**-0.1**
AAK	**Ala-Archa**	**49.94**	**295**	pmax	pmax		
	comp=Z,21nm,0.8s						
PKI	**Pulchoki**	**49.94**	**272**	*e*P	**P**	**18 50 53.1**	**+0.6**
	comp=Z,172nm,1.1s						
DMN	**Daman**	**50.14**	**272**	*e*P	**P**	**18 50 54.6**	**+0.7**
	comp=Z,128nm,0.7s						
SBUM	**Sibu**	**50.25**	**225**	P	**P**	**18 50 52.5**	**-1.9**
SBUM	**Sibu**	**50.25**	**225**	P	**P**	**18 50 56.0**	**+1.6**
C36M	**Paulatuk**	**50.32**	**27**	P	**P**	**18 50 54.1**	**-0.2**
	baz=290,SNR=56						
C36M	**Paulatuk**	**50.32**	**27**	P	**P**	**18 50 53.9**	**-0.4**
C36M				IAmb	IAmb	18 50 54.8	
	comp=Z,71nm,0.7s						
KSH	**Kashi**	**50.39**	**290**	P	**P**	**18 51 00.0**	**+4.5**
KSH				pP	pP	18 51 27.7	+2.4
KSH				pmax	pmax		
	comp=Z,25nm,0.8s						

KSH				pmax	pmax		
	comp=Z,800nm,5.8s						
EKS2	Erkin-Say	50.40	295	P	P	18 50 56.4	+0.9
	SNR=25						
DANN	Dangsing	50.69	274	eP	P	18 50 59.6	+1.5
	comp=Z,531nm,0.6s						
AML	Almayashu	50.70	294	P	P	18 50 59.3	+1.2
	SNR=17						
BKB	Balikpapan	51.27	217	P	P	18 51 02.6	+0.5
BKB	Balikpapan	51.27	217	P	P	18 51 03.6	+1.5
	comp=Z,4µmcomp=Z,424nm,0.9s						
WRAK	Wrangell Islan	51.47	45	P	P	18 51 04.8	+1.7
WRAK				IAmb	IAmb	18 51 06.2	
	comp=Z,72nm,1.2s						
DLBC	Dease Lake	51.84	42	P	P	18 51 07.3	+1.3
	comp=Z,38nm,0.9s,baz=286,slow=4.7,SNR=30						
DLBC	Dease Lake	51.84	42	P	P	18 51 07.8	+1.9
DLBC				IAmb	IAmb	18 51 09.1	
	comp=Z,106nm,1.2s						
MTKI	Muara Teweh, K	51.89	219	P	P	18 51 08.0	+1.3
	comp=Z,997nmcomp=Z,105nm,1.1s						
DZA	Taraz	51.90	296	eP	P	18 51 06.7	+0.2
	baz=296						
DZA				eS	S	18 58 20.2	+0.9
	baz=296						
DZA	Taraz	51.90	296	eP	P	18 51 06.7	+0.2
DZA				eS	S	18 58 20.2	+0.9
KSM	Kuching	52.06	226	P	P	18 51 08.4	+0.4
KSM				IAmb	IAmb	18 51 10.6	
	comp=Z,53nm,1.0s						
KSM	Kuching	52.06	226	P	P	18 51 10.0	+2.0
SVE	Sverdlovsk	52.10	316 d	iP	P	18 51 07.8	0.0
SVE				eS	S	18 58 19.2	-2.4
SVE				pmax	pmax		
	comp=Z,228nm,1.2s						
KK05	Karatay Array	52.31	297	P	P	18 51 09.5	-0.1
KK06	Karatay Array	52.32	297	P	P	18 51 09.9	+0.2
KK31	Karatay Array	52.33	297	P	P	18 51 10.0	+0.3
KK31				pmax	pmax		
	comp=Z,58nm,1.4s						
KK31	Karatay Array	52.33	297	P	P	18 51 10.0	+0.3
KKAR	Karatay Array	52.33	297	P	P	18 51 09.8	+0.1
KKAR				pmax	pmax		
	comp=Z,58nm,1.4s						
KKAR	Karatay Array	52.33	297	P	P	18 51 09.8	+0.1
SPSI	Sidrap Palu	52.53	212	P	P	18 51 11.0	-0.4
	comp=Z,33nm,0.8s						
STKI	Sintang	52.66	224	P	P	18 51 14.3	+1.9
	comp=Z,3µmcomp=Z,36nm,0.8s						
DIB	Dawson Inlet,	52.72	49	P	P	18 51 13.4	+1.0
DIB				IAmb	IAmb	18 51 14.1	
	comp=Z,59nm,0.7s						
BNSI	Bone	52.80	212	P	P	18 51 14.0	+0.6
	comp=Z,58nm,1.1s						
PMG	Port Moresby	52.84	177	P	P	18 51 14.2	+0.5
	baz=313,slow=12,SNR=1.0						
IUG	Iuzhnay	53.09	296	eP	P	18 51 15.8	+0.3
	comp=Z,87nm,2.3s,baz=296						
IUG				eS	S	18 58 36.5	+0.7
	baz=296						
IUG	Iuzhnay	53.09	296	eP	P	18 51 15.8	+0.3
IUG				eS	S	18 58 36.5	+0.7
IUG				pmax	pmax		
	comp=Z,87nm,2.3s						
EUNU	Eureka	53.24	10	P	P	18 51 14.4	-1.5
ARU	Arti	53.31	316	P	P	18 51 17.0	+0.3
	comp=Z,41nm,0.9s,baz=62,slow=5.6,SNR=77						
ARU	Arti	53.31	316	eP	P	18 51 16.2	-0.5
ARU	Arti	53.31	316c	iP	P	18 51 16.4	-0.3
ARU				*PP	pP	18 51 45.7	-1.1
ARU						18 52 17.9	
ARU						18 53 19.6	
ARU				S	S	18 58 41.1	+3.0
ARU						19 00 47.9	
ARU				SS	SS	19 02 15.9	-3.0
ARU				pmax	pmax		
	comp=Z,272nm,1.1s						
ARU	Arti	53.31	316	P	P	18 51 16.0	-0.7
KBKI	Kotabaru	53.41	217	P	P	18 51 17.0	-0.9
	comp=Z,74nm,0.9s						
KAPI	Kappang	53.50	212	P	P	18 51 19.1	+0.5
	comp=Z,40nm,0.6s,baz=24,slow=4.4,SNR=14						
KAPI	Kappang	53.50	212	P	P	18 51 19.0	+0.5
KAPI				IAmb	IAmb	18 51 20.0	
	comp=Z,42nm,0.7s						
BKSI	Bulukumba	53.65	211	P	P	18 51 19.8	+0.2
	comp=Z,61nm,1.1s						
DGPR	DIGLIPUR	53.76	252	eP	P	18 51 21.7	+1.2
DGPR				IAmb	IAmb	18 51 23.0	
	comp=Z,32nm,0.8s						
DHRM	DHARAMSHALA	53.88	282	eP	P	18 51 21.6	+0.1
DHRM				eP	P	18 51 21.7	+0.2
DHRM				IAmb	IAmb	18 51 22.4	
	comp=Z,75nm,0.6s						
DHRM				IAmb	IAmb	18 51 22.4	
	comp=Z,82nm,0.5s						
SMLA	Simla	53.88	281	eP	P	18 51 21.6	+0.4
SMLA				eP	P	18 51 21.6	+0.4
SMLA				IAmb	IAmb	18 51 22.8	
	comp=Z,268nm,0.4s						
SMLA				IAmb	IAmb	18 51 22.8	
	comp=Z,238nm,0.4s						
BBKI	Banjar Baru	54.15	218	P	P	18 51 23.5	+0.3
	comp=Z,62nm,1.2s						
KULM	Kulim	54.51	239	P	P	18 51 26.9	+1.0
KULM				IAmb	IAmb	18 51 28.5	
	comp=Z,68nm,0.9s						
KULM	Kulim	54.51	239	P	P	18 51 28.0	+2.1
HNR	Honiara	54.56	162	P	P	18 51 26.6	+0.4
	comp=Z,140nm,0.8s,baz=178,slow=23,SNR=6.2						
HNR	Honiara	54.56	162	P	P	18 51 25.9	-0.3
SPA0	Spitsbergen Ar	54.57	349	eP	P	18 51 25.5	-0.1
SPITS	Spitsbergen Ar	54.57	349	P	P	18 51 24.1	-1.5
	comp=Z,27nm,0.9s,baz=68,slow=9.1,SNR=34						
POHA	Pohakuloa	54.71	96	P	P	18 51 27.8	+0.1
HMH	Humu‘ula Sheep	54.85	96	P	P	18 51 29.7	+1.0
HMH				IAmb	IAmb	18 51 30.6	
	comp=Z,94nm,1.1s						
IPM	Ipoh	54.91	238	P	P	18 51 29.6	+0.8
IPM	Ipoh	54.91	238	P	P	18 51 30.0	+1.2
KHU	Kahuku	54.98	96	P	P	18 51 30.9	+1.3
KHU				pmax	pmax		
	comp=Z,135nm,0.9s						
KHU	Kahuku	54.98	96	P	P	18 51 30.9	+1.3
MLH	Mauna Loa	54.99	96	P	P	18 51 30.6	+0.9
AIN	Ainahou	55.01	96	P	P	18 51 31.4	+1.7
NDI	New Delhi	55.23	278	eP	P	18 51 30.0	-1.0
NIL	Nilore	55.27	286	P	P	18 51 32.0	+0.7
NIL				pmax	pmax		
	comp=Z,38nm,0.8s						
NIL	Nilore	55.27	286	P	P	18 51 32.0	+0.7
NIL				IAmb	IAmb	18 51 33.3	
	comp=Z,38nm,0.8s						
MYKOM	Kota Tinggi	55.37	233	P	P	18 51 33.0	+0.9
RES	Resolute Bay	55.52	16	P	P	18 51 32.0	-0.4
	comp=Z,374nm,0.9s,baz=302,slow=6.6,SNR=247						
RES	Resolute Bay	55.52	16	P	P	18 51 31.4	-1.0
BBB	Bella Bella	55.55	48	P	P	18 51 33.5	+0.6
BBB				IAmb	IAmb	18 51 34.8	
	comp=Z,69nm,1.1s						
HSPB	Hornsund (broa	55.55	348	eP	P	18 51 31.1	-1.5
HSPB	Hornsund (broa	55.55	348	eP	P	18 51 32.1	-0.5
EDFI	Ende, Flores	56.26	208	P	P	18 51 37.8	-0.7
	comp=Z,21nm,0.8s						
AKTO	Aktyubinsk	56.37	310	P	P	18 51 39.0	+0.2
	comp=Z,30nm,1.0s,baz=52,slow=6.8,SNR=42						
AKTO	Aktyubinsk	56.37	310	P	P	18 51 39.0	+0.2
SOEI	Soe	56.38	205	P	P	18 51 39.1	-0.2
SOEI				IAmb	IAmb	18 51 40.0	
	comp=Z,82nm,1.1s						
SOEI	Soe	56.38	205	P	P	18 51 39.3	0.0
	comp=Z,68nm,0.9s						
KIRV	Kirov	56.67	321	P	P	18 51 40.9	+0.2
	comp=Z,82nm,0.6s,baz=68,slow=3.6,SNR=35						
YKA	Yellowknife Ar	56.78	33	P	P	18 51 41.6	+0.2
	comp=Z,87nm,0.9s,baz=304,slow=6.6,SNR=611						
TPI	Tanjungpandan	57.03	226	P	P	18 51 43.6	-0.3
	comp=Z,45nm,1.0s						
LVZ	Lovozero	57.22	335	P	P	18 51 43.6	-1.0
LVZ				pmax	pmax		
	comp=Z,153nm,1.1s						
LVZ	Lovozero	57.22	335	P	P	18 51 43.6	-1.0
PPBI	Pangkal Pinang	57.34	228	P	P	18 51 46.1	+0.1
COEN	Coen	57.34	182	P	P	18 51 46.7	+0.8
PSI	Prapat	57.52	238	P	P	18 51 48.1	+0.6
	comp=Z,19nm,0.9s,baz=360,slow=5.3,SNR=11						
RPSI	Rantau Prapat	57.60	238	P	P	18 51 48.1	+0.2
MTN	Manton Dam	57.61	196	P	P	18 51 47.9	0.0
KBL	Kabul	57.70	289	P	P	18 51 48.1	-0.6
KBL				pmax	pmax		
	comp=Z,20nm,0.8s						
KBL	Kabul	57.70	289	P	P	18 51 48.0	-0.6
APA	Apatity	57.80	335⇓	iP	P	18 51 46.9	-1.6
APA				i *PP	pP	18 52 23.0	+4.1
APA				pmax	pmax		
	comp=Z,63nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,19.0s						
SRBI	Singaraja	58.12	215	P	P	18 51 52.0	+0.6
	comp=Z,141nm,1.4s						
TULEG	Thule	58.18	9	P	P	18 51 49.9	-1.3
TULEG	Thule	58.18	9	i P	P	18 51 50.3	-0.8
TULEG				IAmb	IAmb	18 51 50.9	
	comp=Z,293nm,1.2s						
BKNI	Bangkinang	58.19	235	P	P	18 51 52.7	+0.7
BKNI	Bangkinang	58.19	235	P	P	18 51 53.3	+1.3
	comp=Z,145nm,0.8s						
KEV	Kevo	58.23	339	P	P	18 51 50.0	-1.5
KEV				pmax	pmax		
	comp=Z,80nm,0.9s						
KEV	Kevo	58.23	339	P	P	18 51 50.0	-1.5
TMCR	Tamitsa	58.27	330	eP	P	18 51 49.5	-2.4
TMCR				pmax	pmax		
	comp=Z,259nm,1.5s						
BHPL	Bhopal	58.31	273	eP	P	18 51 52.9	0.0
BHPL				eP	P	18 51 53.1	+0.3
BHPL				IAmb	IAmb	18 51 54.1	
	comp=Z,51nm,0.9s						
BHPL				IAmb	IAmb	18 51 54.2	
	comp=Z,40nm,0.8s						
ARA0	ARCESS Array S	58.77	339	eP	P	18 51 55.7	+0.4
ARCES	ARCESS Array B	58.77	339	P	P	18 51 54.8	-0.6
	comp=Z,59nm,1.0s,baz=40,slow=7.6,SNR=31						
SDSI	Sungai Dareh	58.98	233	P	P	18 51 59.1	+1.7
	comp=Z,1µmcomp=Z,62nm,1.3s						
DAG	Danmarks Havn	59.41	356⇑	iP	P	18 51 58.5	-1.1
DAG				pmax	pmax		
	comp=Z,310nm,1.6s						
DAG	Danmarks Havn	59.41	356⇑	iP	P	18 51 58.5	-1.1
	comp=Z,305nm,1.6s						
DAG	Danmarks Havn	59.41	356⇑	iP	P	18 51 58.5	-1.1
DAG				IAmb	IAmb	18 51 59.5	
	comp=Z,305nm,1.6s						
GSI	Gunungsitoli	59.52	239	P	P	18 52 01.9	+0.7
GSI				IAmb	IAmb	18 52 04.5	
	comp=Z,26nm,0.8s						
GSI	Gunungsitoli	59.52	239	P	P	18 52 02.3	+1.1
	comp=Z,1µmcomp=Z,46nm,1.0s						
PDSI	Padang	59.53	234	P	P	18 52 02.5	+1.2
	comp=Z,10nm,1.1s						
PWJI	Pagerwojo	59.55	219	P	P	18 52 01.0	-0.3
	comp=Z,117nm,1.1s						
KLMR	Klimovskoe	59.65	327	eP	P	18 51 57.6	-3.8
KLMR				pmax	pmax		
	comp=Z,303nm,1.5s						
KLMR	Klimovskoe	59.65	327	eP	P	18 51 57.7	-3.7
KLMR				AMP		18 52 03.1	
	comp=Z,303nm,1.5s						
KTK1	Kautokeino	59.72	339	eP	P	18 52 01.6	-0.3
PGC	Sidney	59.92	50	P	P	18 52 04.1	+0.6
PGC				IAmb	IAmb	18 52 05.2	
	comp=Z,35nm,0.8s						
LHSI	Lahat	60.15	230	P	P	18 52 07.0	+1.5
	comp=Z,4µmcomp=Z,79nm,0.9s						
A04D	Lummi Island	60.30	50	P	P	18 52 06.9	+0.8
	baz=304						
KPJI	Karang Pucung	60.31	222	P	P	18 52 07.8	+1.3
	comp=Z,41nm,1.3s						
TRO	Tromso	60.34	341	eP	P	18 52 05.7	-0.3
NLWA	Neilton Lookou	60.38	51	P	P	18 52 07.9	+1.1
NLWA				IAmb	IAmb	18 52 09.2	
	comp=Z,62nm,1.1s						
LEM	Lembang	60.52	224	P	P	18 52 09.0	+0.8
	comp=Z,29nm,0.7s,baz=30,slow=9.6,SNR=6.3						
LEM	Lembang	60.52	224	P	P	18 52 09.0	+0.8
D03D	Eldon	60.74	51	P	P	18 52 10.6	+1.5
	baz=304,SNR=22						
BELG	Belogornoye	60.86	316	P	P	18 52 10.4	+0.6
	comp=Z,143nm,0.8s,baz=263,slow=0.6,SNR=53						
BELG	Belogornoye	60.86	316c	iP	P	18 52 09.8	0.0
BELG				pmax	pmax		
	comp=Z,44nm,1.0s						
B05A	Bryant	60.89	50	P	P	18 52 11.1	+1.0
	baz=304,SNR=16						
E03A	Lebam	61.02	52	P	P	18 52 12.7	+1.6
B06A	Marblemount	61.08	49	P	P	18 52 12.0	+0.6
D04E	Lakebay	61.12	51	P	P	18 52 13.5	+1.9
	baz=304						
HYB	Hyderabad	61.16	267	i P	P	18 52 12.0	-0.4
HYB				epP	pP	18 52 44.0	+0.7
HYB				ePcP	PcP	18 52 55.0	+1.0
HYB				esP	sP	18 53 00.0	+2.6
HYB	Hyderabad	61.16	267	eP	P	18 52 12.8	+0.4
D05A	Enumclaw	61.55	51	P	P	18 52 15.7	+1.1
D05A				IAmb	IAmb	18 52 17.3	
	comp=Z,57nm,0.9s						
E04D	Cinebar	61.58	52	P	P	18 52 16.3	+1.5
	baz=305,SNR=22						
F04D	Rainier, OR	61.60	52	P	P	18 52 16.1	+1.1
	baz=305						
C06D	Leavenworth	61.75	50	P	P	18 52 16.8	+0.9
	baz=305						
LON	Longmire	61.90	51	P	P	18 52 17.5	+0.4
LON				pmax	pmax		
	comp=Z,25nm,1.1s						
LON	Longmire	61.90	51	P	P	18 52 17.5	+0.4
DBG	Daneborg	61.91	355	i P	P	18 52 15.4	-1.1
DBG				IAmb	IAmb	18 52 16.7	
	comp=Z,142nm,1.2s						
G03D	McMinnville, O	61.95	53	P	P	18 52 18.5	+1.3
	baz=305						
I02D	Swisshome	62.24	54	P	P	18 52 20.5	+1.3
	baz=305						
SANVU	Saraoutou	62.24	156	P	P	18 52 20.0	+0.5
SANVU	Saraoutou	62.24	156	P	P	18 52 20.8	+1.4
LTY	Liberty	62.25	50	P	P	18 52 19.6	+0.2
LTY				IAmb	IAmb	18 52 21.1	
	comp=Z,70nm,1.3s						
COR	Corvallis	62.28	54	P	P	18 52 20.7	+1.2
COR				pmax	pmax		
	comp=Z,65nm,1.0s						
COR	Corvallis	62.28	54	P	P	18 52 20.7	+1.2
COR				IAmb	IAmb	18 52 22.4	
	comp=Z,65nm,0.9s						
N2IH	Innhavet	62.31	341	eP	P	18 52 18.8	-0.5
HRA	Herat	62.41	292	P	P	18 52 21.5	+0.7
N2VI	Vinje	62.45	341	eP	P	18 52 20.0	-0.2
STEI	Steigen	62.51	341	eP	P	18 52 20.0	-0.6
F05D	White Salmon	62.60	52	P	P	18 52 22.8	+1.1
	baz=305,SNR=5.9						
H04D	Lebanon	62.65	54	P	P	18 52 23.4	+1.4
	baz=305,SNR=7.0						
KEBM	Edson Butte	62.65	56	P	P	18 52 23.6	+1.5
KEBM				IAmb	IAmb	18 52 24.7	
	comp=Z,76nm,1.0s						
J01E	Myrtle Point	62.73	55	P	P	18 52 24.1	+1.6
	baz=305,SNR=9.1						
LOF	Lofoten	62.75	342	eP	P	18 52 21.6	-0.6
I03D	Drain, OR	62.77	55	P	P	18 52 24.2	+1.5
	baz=305,SNR=11						
N2TV	T¥rnvik	62.82	341	eP	P	18 52 23.1	+0.4
H04A	Detroit Lake	62.88	53	P	P	18 52 24.4	+0.8
H04A				IAmb	IAmb	18 52 25.6	
	comp=Z,61nm,0.9s						
FAUS	Fauske	62.93	340	eP	P	18 52 23.2	-0.2
UPNV	Upernavik	62.95	7⇑	iP	P	18 52 22.7	-0.7
UPNV				IAmb	IAmb	18 52 23.6	
	comp=Z,484nm,1.2s						
G05D	Wamic, OR	63.05	52	P	P	18 52 26.0	+1.4
	baz=306,SNR=17						
GEYT	Alibeck	63.06	298	P	P	18 52 25.6	+0.8
	comp=Z,8.1nm,0.5s,baz=51,slow=3.4,SNR=17						
KBO	Bosley Butte	63.10	56	P	P	18 52 26.6	+1.4
KBO				IAmb	IAmb	18 52 27.8	
	comp=Z,83nm,1.2s						
E07A	Sunnyside	63.11	50	P	P	18 52 26.1	+1.0
E07A				IAmb	IAmb	18 52 27.3	
	comp=Z,66nm,0.9s						
K02D	Willamette Mer	63.16	56	P	P	18 52 26.7	+1.2
	baz=306,SNR=15						
I04A	Tendick Farm,	63.26	54	P	P	18 52 27.1	+1.0
	baz=306,SNR=25						
N2VA	Vr¸y	63.32	342	eP	P	18 52 26.2	+0.3
D08A	Wollman Farm,	63.34	50	P	P	18 52 26.9	+0.4
D08A				IAmb	IAmb	18 52 28.2	
	comp=Z,42nm,0.8s						
HAWA	Hanford	63.39	50	P	P	18 52 27.5	+0.6
HAWA				IAmb	IAmb	18 52 29.0	
	comp=Z,51nm,1.0s						
CTA	Charters Tower	63.43	179	P	P	18 52 27.3	0.0
	comp=Z,7.9nm,0.5s,baz=340,slow=8.3,SNR=11						
CTAO	Charters Tower	63.43	179	P	P	18 52 27.1	-0.1
CTAO				pmax	pmax		
	comp=Z,28nm,1.1s						
CTAO	Charters Tower	63.43	179	P	P	18 52 27.1	-0.1
NBB05	Inndyr	63.50	341	eP	P	18 52 27.4	+0.3
L02E	Cave Junction	63.51	56	P	P	18 52 29.1	+1.4
	baz=306,SNR=11						
N2RO	R¸st	63.57	342	eP	P	18 52 28.0	+0.5
MOS	Moscow	63.57	323	eP	P	18 52 26.2	-1.6
MOS				e*PP	pP	18 52 57.0	-1.7
MOS				e*SP	sP	18 53 12.8	+0.1
MOS				eS	S	19 00 47.0	-3.9
MOS				pmax	pmax		
	comp=Z,206nm,1.4s						
I05D	Terrebonne, OR	63.57	53	P	P	18 52 29.1	+1.0
	baz=306,SNR=7.3						
E08A	Dider Farm, El	63.60	50	P	P	18 52 29.0	+0.8
E08A				IAmb	IAmb	18 52 30.1	
	comp=Z,62nm,0.9s						
NEW	Newport	63.60	48	P	P	18 52 28.7	+0.4
NEW				pmax	pmax		
	comp=Z,66nm,0.9s						
NEW	Newport	63.60	48	P	P	18 52 29.0	+0.7
	baz=307,SNR=10						
NEW	Newport	63.60	48	P	P	18 52 28.7	+0.4
NEW				IAmb	IAmb	18 52 30.1	
	comp=Z,66nm,0.9s						
NBB30	Finnes	63.62	341	eP	P	18 52 28.4	+0.4
HUMO	Hull Mountain	63.63	55	P	P	18 52 29.4	+0.8
NBB17	Glomfjord B¥r	63.69	341	eP	P	18 52 28.6	+0.1
KRMB	Red Mountain	63.70	57	P	P	18 52 29.9	+0.8
J04D	Umpqua Nationa	63.77	54	P	P	18 52 30.9	+1.3
	baz=306,SNR=28						
WB0	Warramunga Arr	63.84	191	P	P	18 52 30.1	+0.1
POO	Poona	63.86	271	eP	P	18 52 30.0	-0.3
POO				eP	P	18 52 30.7	+0.4
PUL	Pulkovo	63.87	329	eP	P	18 52 29.3	-0.4
PUL	Pulkovo	63.87	329	i P	P	18 52 29.3	-0.4
PUL				pmax	pmax		
	comp=Z,296nm,1.0s						
FITZ	Fitzroy Crossi	63.94	200	P	P	18 52 31.5	+0.9
	comp=Z,60nm,0.8s,baz=24,slow=4.6,SNR=28						
FITZ	Fitzroy Crossi	63.94	200	P	P	18 52 31.5	+0.9
FITZ				IAmb	IAmb	18 52 32.6	
	comp=Z,65nm,0.8s						
WR0	Warramunga Arr	64.01	191	P	P	18 52 30.6	-0.4
WRAB	Tennant Creek	64.01	191	P	P	18 52 30.9	-0.2
WRAB				pmax	pmax		
	comp=Z,190nm,1.0s						
WRAB	Tennant Creek	64.01	191	P	P	18 52 30.9	-0.2
WB2	Warramunga Arr	64.02	191	P	P	18 52 30.5	-0.6
WRA	Warramunga Arr	64.02	191	P	P	18 52 30.9	-0.2
	comp=Z,147nm,1.0s,baz=12,slow=6.9,SNR=172						
WRA				pP	pP	18 53 03.0	+0.7
	comp=Z,15nm,0.9s,baz=11,slow=6.9,SNR=2.0						
WRA				PKP2bc		19 21 27.4	
	comp=Z,2.6nm,0.9s,baz=198,slow=2.5,SNR=8.5						
JCC	Jacoby Creek,	64.04	58	P	P	18 52 31.7	+0.6
JCC				IAmb	IAmb	18 52 33.8	
	comp=Z,70nm,1.2s						
SUMG	Summit	64.05	1⇑	iP	P	18 52 31.9	+0.7
SUMG	Summit	64.05	1	P	P	18 52 31.2	0.0
SUMG	Summit	64.05	1⇑	iP	P	18 52 31.9	+0.7
	comp=Z,1µm,0.9s						
SUMG	Summit	64.05	1⇑	iP	P	18 52 31.9	+0.7
SUMG				IAmb	IAmb	18 52 32.8	
	comp=Z,1µm,0.9s						
MOR8	Moi Rana	64.09	340	eP	P	18 52 29.7	-1.4
E09A	Wood Farm, Sta	64.09	50	P	P	18 52 32.0	+0.6
PINE	Pine Mountain	64.12	53	P	P	18 52 33.2	+1.3
KONS	Konsvik	64.15	341	eP	P	18 52 31.2	-0.2
NBB40	Tonnes	64.17	341	eP	P	18 52 31.0	-0.5
KHMM	Horse Mountain	64.19	57	P	P	18 52 33.8	+1.5
KHMM				IAmb	IAmb	18 52 35.1	
	comp=Z,71nm,1.1s						
FIA1	FINESS Array S	64.22	332	P	P	18 52 31.7	-0.2
FINES	FINESS Array B	64.22	332	P	P	18 52 31.7	-0.3
	comp=Z,220nm,0.8s,baz=48,slow=6.8,SNR=162						
FINES				LR	LR	19 22 19.1	
	comp=Z,309nm,18.6s,baz=35,slow=38						
L04D	Klamath Falls	64.25	55	P	P	18 52 33.9	+1.2
	baz=306,SNR=47						
J05D	Fort Rock, OR	64.25	54	P	P	18 52 34.1	+1.3
	baz=307,SNR=44						
YBH	Yreka Blue Hor	64.30	56	P	P	18 52 34.1	+1.1
YBH				pmax	pmax		
	comp=Z,36nm,1.1s						
YBH	Yreka Blue Hor	64.30	56	P	P	18 52 34.1	+1.1
K04D	Chiloquin, OR	64.34	55	P	P	18 52 34.5	+1.2
	baz=307						
G08A	Pilot Rock	64.37	51	P	P	18 52 34.1	+0.7
NUUG	Nuugaatsiaq	64.39	6	i P	P	18 52 32.4	-0.5
NUUG				IAmb	IAmb	18 52 33.3	
	comp=Z,204nm,1.1s						
M02C	Callahan	64.41	56	P	P	18 52 35.4	+1.7
	baz=307,SNR=28						
OBN	Obninsk	64.43	323	P	P	18 52 33.3	-0.1
	comp=Z,24nm,0.9s,baz=59,slow=3.0,SNR=31						
OBN	Obninsk	64.43	323	eP	P	18 52 32.7	-0.7
OBN	Obninsk	64.43	323c	iP	P	18 52 32.9	-0.5
OBN				e		18 54 56.2	
OBN				S	S	19 01 02.0	+0.5
OBN				e		19 01 25.7	
OBN				SS	SS	19 05 10.0	-3.0
OBN				pmax	pmax		
	comp=Z,171nm,1.1s						
OBN				MLR	MLR		
	comp=Z,602nm,18.0s						
OBN	Obninsk	64.43	323	P	P	18 52 33.1	-0.3
VRH	Novokhopyorsk	64.51	317	eP	P	18 52 33.1	-0.9
VRH				e		18 53 04.9	
VRH				pmax	pmax		
	comp=Z,210nm,1.4s						
KMRM	Mail Ridge	64.59	58	P	P	18 52 36.2	+1.4
KMRM				IAmb	IAmb	18 52 37.5	
	comp=Z,37nm,0.9s						
N02D	Trinity Center	64.75	57	P	P	18 52 37.5	+1.6
	baz=307,SNR=41						
I07A	Izee	64.78	52	P	P	18 52 37.1	+1.0
K05A	Summer Lake	64.79	54	P	P	18 52 37.6	+1.3
M04C	Macdoel	64.79	56	P	P	18 52 37.5	+1.3
	baz=307,SNR=36						
WALA	Waterton Lakes	64.81	45	P	P	18 52 36.6	+0.4
WALA				IAmb	IAmb	18 52 38.0	
	comp=Z,57nm,0.9s						
F10A	Beach Ranch, E	64.92	50	P	P	18 52 37.9	+0.9
LPSR	Galich'ya Gora	64.97	320	eP	P	18 52 36.9	-0.1
LPSR				e		18 53 07.3	
LPSR				pmax	pmax		
	comp=Z,220nm,1.4s						
KCPM	Cahto Peak	64.98	58	P	P	18 52 38.6	+1.1
KCPM				IAmb	IAmb	18 52 39.8	
	comp=Z,50nm,0.9s						
WDC	Whiskeytown Da	65.09	57	P	P	18 52 38.8	+0.8
WDC				pmax	pmax		
	comp=Z,40nm,1.1s						
WDC	Whiskeytown Da	65.09	57	P	P	18 52 38.8	+0.8
WDC				IAmb	IAmb	18 52 43.7	
	comp=Z,40nm,1.1s						
O02D	Mt. Diablo Mer	65.18	58	P	P	18 52 40.2	+1.5
	baz=307,SNR=42						
JTMT	Jette	65.43	47	P	P	18 52 41.2	+1.0
JTMT				IAmb	IAmb	18 52 42.5	
	comp=Z,72nm,0.9s						
VORR	Voronezh	65.44	319	eP	P	18 52 38.0	-2.0
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
BMO	Blue Mountains	65.57	51	P	P	18 52 42.0	+0.9
BMO				pmax	pmax		
	comp=Z,35nm,1.0s						
BMO	Blue Mountains	65.57	51	P	P	18 52 42.0	+0.9
BMO				IAmb	IAmb	18 52 43.2	
	comp=Z,35nm,0.9s						
MOD	Modoc Plateau	65.63	55	P	P	18 52 42.5	+0.8

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O03E  Paynes Creek      65.71  57    P       P      18 52 42.6 +0.5
      baz=308,SNR=52
HOPS  Hopland Field     65.72  59    P       P      18 52 42.5 +0.4
HOPS                                 IAmb    IAmb   18 52 44.0
      comp=Z,47nm,1.2s
VSR   Storozhevoye      65.75 318   eP       P      18 52 41.8 -0.2
VSR                                 e               18 53 12.7
VSR                                  pmax    pmax
      comp=Z,180nm,1.1s
SCO   Scoresbysund      65.78 355    P       P      18 52 42.3 +0.3
SCO                                  pmax    pmax
      comp=Z,231nm,1.2s
SCO   Scoresbysund      65.78 355    P       P      18 52 42.3 +0.3
SCO   Scoresbysund      65.78 355   i P      P      18 52 42.2 +0.3
      comp=Z,124nm,1.0s
SCO   Scoresbysund      65.78 355   i P      P      18 52 42.2 +0.3
SCO                                  IAmb    IAmb   18 52 43.3
      comp=Z,124nm,1.0s
VORD  Divnogorie        65.85 318   eP       P      18 52 42.5 -0.2
VORD                                e               18 53 12.6
VORD                                 pmax    pmax
      comp=Z,120nm,1.0s
GDXM  Geysers           66.00  59    P       P      18 52 45.0 +1.1
NSS   Namsos            66.03 340   eP       P      18 52 43.3 -0.3
VSU   Vasula            66.12 330   eP       P      18 52 44.8 +0.6
VSU   Vasula            66.12 330   i P      P      18 52 43.7 -0.5
VSU                                  pmax    pmax
      comp=Z,564nm,1.0s
MSO   Missoula          66.19  47    P       P      18 52 45.7 +0.6
      baz=309,SNR=40
MSO   Missoula          66.19  47    P       P      18 52 45.7 +0.6
MSO                                  IAmb    IAmb   18 52 46.9
      comp=Z,90nm,1.2s
WVOR  Wild Horse Val    66.29  53    P       P      18 52 46.6 +0.8
WVOR                                 pmax    pmax
      comp=Z,49nm,1.0s
WVOR  Wild Horse Val    66.29  53    P       P      18 52 46.6 +0.8
WVOR                                 IAmb    IAmb   18 52 47.9
      comp=Z,48nm,1.0s
ORV   Oroville          66.34  57    P       P      18 52 46.4 +0.3
ORV                                  pmax    pmax
      comp=Z,27nm,0.9s
ORV   Oroville          66.34  57    P       P      18 52 46.4 +0.3
PALK  Pallekele         66.44 257    P       P      18 52 47.7 +0.6
      comp=Z,14nm,1.0s,baz=148,slow=7.4,SNR=5.4
MAK   Makhachkala       66.53 307   eP       P      18 52 44.2 -3.0
MAK                                 e*PP     PcP    18 53 16.2 +0.6
MAK                                 e*SP     sP     18 53 29.5 -3.0
MAK                                 e               18 55 11.2
MAK                                 ePPP     PPP    18 56 49.0
MAK                                 eS       S      19 01 24.5 -3.0
MAK                                 e*SS     sS     19 02 20.7 -0.8
MAK                                  pmax    pmax
      comp=Z,334nm,1.2s
FFC   Flin Flon         66.73  36    P       P      18 52 48.6 +0.3
FFC                                  pmax    pmax
      comp=Z,118nm,1.0s
FFC   Flin Flon         66.73  36    P       P      18 52 48.6 +0.3
ILULI Ilulissat         66.83   6    P       P      18 52 48.4 -0.2
ILULI                                pmax    pmax
      comp=Z,428nm,0.9s
ILULI Ilulissat         66.83   6    P       P      18 52 48.4 -0.2
ILULI Ilulissat         66.83   6⇑iP         P      18 52 48.4 -0.2
      comp=Z,467nm,0.9s
ILULI Ilulissat         66.83   6⇑iP         P      18 52 48.5 -0.2
ILULI                                IAmb    IAmb   18 52 49.4
      comp=Z,468nm,0.9s
BEKR  Beckworth         66.85  57    P       P      18 52 50.0 +0.5
BEKR                                 IAmb    IAmb   18 52 51.2
      comp=Z,54nm,0.9s
FCC   Fort Churchill    66.91  29    P       P      18 52 49.4 +0.1
FCC                                  pmax    pmax
      comp=Z,255nm,1.3s
FCC   Fort Churchill    66.91  29    P       P      18 52 49.4 +0.1
MTSE  Matsula           66.98 331   eP       P      18 52 50.5 +0.7
AFDM  Forest Hills D    67.04  58    P       P      18 52 51.1 +0.5
AAL   Aland             67.17 334   eP       P      18 52 50.8 -0.1
MFID  Camas Ranch       67.29  51    P       P      18 52 53.0 +0.9
AKT   Akhty             67.32 306   eP       P      18 52 53.2 +0.8
AKT                                 e               18 53 18.8
AKT                                 e*PP     pP     18 53 24.7 +0.9
AKT                                 e*SP     sP     18 53 37.1 -0.6
AKT                                  pmax    pmax
      comp=Z,113nm,1.4s
HRY   Holter Researc    67.38  47    P       P      18 52 53.6 +0.9
RUBR  Rubicon Trail     67.47  57    P       P      18 52 54.7 +1.1
RUBR                                 IAmb    IAmb   18 52 55.5
      comp=Z,57nm,0.9s
TBLU  Trondheim         67.51 340   eP       P      18 52 52.3 -0.7
ICESG Greenland Ices    67.53   2⇑iP         P      18 52 54.1 +0.6
ICESG                                IAmb    IAmb   18 52 55.1
      comp=Z,674nm,1.0s
PAHR  Pah Rah Range     67.53  56    P       P      18 52 54.6 +0.8
PAHR                                 IAmb    IAmb   18 52 55.7
      comp=Z,51nm,1.0s
EGMT  Eagleton          67.60  44    P       P      18 52 54.6 +0.6
      baz=311,SNR=27
EGMT  Eagleton          67.60  44    P       P      18 52 54.4 +0.4
LRM   Limekiln Ridge    67.62  48    P       P      18 52 55.0 +0.7
VCNR  Virginia City     67.63  57    P       P      18 52 55.5 +1.1
GOF   Gofitskoye        67.71 311⇑iP         P      18 52 55.4 +0.8
GOF                                 eS       S      19 01 43.7 +2.0
GOF                                  pmax    pmax
      comp=Z,371nm,1.3s
GOF                                  smax    smax
      comp=N,109nm,1.5s
GOF                                  smax    smax
      comp=E,220nm,1.5s
AS31  Alice Springs     67.74 191    P       P      18 52 55.6 +0.7
ASAR  Alice Springs     67.74 191    P       P      18 52 55.8 +0.8
      comp=E,78nm,0.8s,baz=11,slow=6.1,SNR=194
ASAR                                 PKP2bc         19 21 17.1
      comp=E,3.3nm,1.0s,baz=194,slow=3.1,SNR=9.8
PNTR  Pine Nut          67.79  57    P       P      18 52 56.3 +0.8
PNTR                                 IAmb    IAmb   18 52 57.7
      comp=Z,42nm,0.9s
DLMT  Dillon            67.84  48    P       P      18 52 56.3 +0.7
DLMT                                 IAmb    IAmb   18 52 57.6
      comp=Z,81nm,0.9s
CMB   Columbia Colle    67.97  58    P       P      18 52 57.1 +0.7
CMB                                  pmax    pmax
      comp=Z,35nm,1.0s
CMB   Columbia Colle    67.97  58    P       P      18 52 57.1 +0.7
HLID  Hailey            68.00  50    P       P      18 52 57.7 +1.0
      baz=310,SNR=48
HLID  Hailey            68.00  50    P       P      18 52 57.4 +0.8
MCMT  McKenzie Canyo    68.05  49    P       P      18 52 57.4 +0.3
BCYI  Bear Canyon       68.08  49    P       P      18 52 57.3 +0.1
SAO   San Andreas Ge    68.10  60    P       P      18 52 57.8 +0.6
SAO                                  pmax    pmax
      comp=Z,19nm,1.3s
SAO   San Andreas Ge    68.10  60    P       P      18 52 57.8 +0.6
UPP   Uppsala           68.17 334   eP       P      18 52 57.6 +0.5
BOZ   Bozeman (W)       68.21  47    P       P      18 52 58.8 +0.9
BOZ                                  pmax    pmax
      comp=Z,94nm,0.9s
BOZ   Bozeman (W)       68.21  47    P       P      18 52 58.8 +0.9
      baz=311,SNR=113
BOZ   Bozeman (W)       68.21  47    P       P      18 52 58.8 +0.9
MSVF  Nonsavu           68.21 146    P       P      18 53 00.5 +2.5
      comp=Z,11nm,0.3s,baz=329,slow=5.4,SNR=16
MSVF  Nonsavu           68.21 146    P       P      18 53 00.5 +2.5
MSVF                                 IAmb    IAmb   18 53 01.8
      comp=Z,67nm,1.0s
WAKR  Walker            68.25  57    P       P      18 52 59.4 +1.0
DZM   Mont Dzumac       68.32 159    P       P      18 53 00.8 +2.1
      comp=Z,65nm,0.8s,baz=45,slow=9.2,SNR=30
DZM   Mont Dzumac       68.32 159   eP       P      18 53 00.8 +2.1
      comp=Z,240nm,1.1s
DZM   Mont Dzumac       68.32 159   eLR      LR     19 13 51.4
      comp=Z,436nm,24.9s
DZM   Mont Dzumac       68.32 159    P       P      18 53 00.7 +2.1
DZM                                  IAmb    IAmb   18 53 02.2
      comp=Z,86nm,0.9s
DZM   Mont Dzumac       68.32 159    P       P      18 53 01.4 +2.8
SLIT  Slitere, Latvi    68.33 331   eP       P      18 52 58.5 +0.3
IDID  Didziasalis       68.39 327   eP       P      18 52 59.3 +0.6
NCK   Nalchik           68.41 310   i P      P      18 52 59.3 +0.3
NCK                                  pmax    pmax
      comp=Z,78nm,1.1s
ISAL  Salakas           68.44 328   eP       P      18 52 59.5 +0.5
IIGN  Ignalina          68.56 327   eP       P      18 53 00.5 +0.7
KVAR  Kislovodsk Arr    68.61 311    P       P      18 53 01.8 +1.4
      comp=Z,73nm,1.0s,baz=93,slow=21,SNR=20
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KIV   Kislovodsk        68.62 311 ⇑P         P      18 53 02.4 +2.0
KIV   Kislovodsk        68.62 311   i P      P      18 53 01.6 +1.3
      SNR=47
KIV   Kislovodsk        68.62 311   eP       P      18 52 58.8 -1.6
KIV   Kislovodsk        68.62 311⇓eP         P      18 53 00.2 -0.2
KIV                                 e               18 53 18.6
KIV                                 i *PP    pP     18 53 33.1 +1.2
KIV                                 i *SP    sP     18 53 44.0 -1.8
KIV                                 eS       S      19 01 54.4 +1.7
KIV                                  pmax    pmax
      comp=Z,193nm,1.2s
KIV                                  MLR     MLR
      comp=Z,301nm,19.0s
KIV   Kislovodsk        68.62 311    P       P      18 53 01.7 +1.3
KBZ   Khabaz            68.65 310    P       P      18 53 01.7 +1.3
      comp=Z,69nm,0.9s,baz=56,slow=3.7,SNR=58
KBZ   Khabaz            68.65 310   eP       P      18 52 59.4 -1.0
KBZ   Khabaz            68.65 310c iP        P      18 52 59.4 -1.0
KBZ                                  pmax    pmax
      comp=Z,92nm,1.0s
NACGM Naroch            68.67 327   i P      P      18 53 01.1 +0.8
NACGM                               i P      P      18 53 01.1 +0.8
NACGM                               i P      P      18 53 01.1 +0.8
NACGM                               i Pb     PcP    18 53 02.2  -22
      comp=Z,173nm,1.1s
NACGM                               i PP     sP     18 53 43.6 -2.0
NACGM                               i PPP    PPP    18 53 51.8
NACGM                               i SSS    SSS    18 59 28.1
NACGM                               i LQ     LQ     19 00 46.6
NACGM                               i LR     LR     19 01 24.7
ZEI   Tsey              68.69 309   eP       P      18 52 58.8 -2.3
ZEI                                  pmax    pmax
      comp=Z,43nm,0.9s
RYN   Ryan              68.73  57    P       P      18 53 02.3 +1.0
OUENC Ouen Island, N    68.75 158    P       P      18 53 03.4 +2.2
      comp=Z,127nm,0.9s
PSAD1 Pilbara Seismi    68.76 205    P       P      18 53 01.9 +0.7
PSAD1                                IAmb    IAmb   18 53 02.9
      comp=Z,68nm,0.9s
MOL   Molde             68.76 340   eP       P      18 52 59.9 -1.0
QLMT  Earthquake Lak    68.81  48    P       P      18 53 02.5 +0.7
DOMB  Dombas            68.83 339   eP       P      18 53 01.8 +0.5
PSAC1 Pilbara Seismi    68.84 205    P       P      18 53 02.3 +0.5
PSAC1                                IAmb    IAmb   18 53 03.3
      comp=Z,58nm,0.9s
PSAB2 Pilbara Seismi    68.84 205    P       P      18 53 02.3 +0.5
PSAB2                                IAmb    IAmb   18 53 03.4
      comp=Z,73nm,1.0s
PMPB  Monarch Peak      68.85  60    P       P      18 53 02.9 +0.9
PSAA2 Pilbara Seismi    68.86 205    P       P      18 53 02.5 +0.6
PSAA2                                IAmb    IAmb   18 53 03.4
      comp=Z,70nm,1.0s
PSA00 Pilbara Seismi    68.87 205    P       P      18 53 02.7 +0.8
PSA00                                IAmb    IAmb   18 53 03.5
      comp=Z,60nm,0.9s
PSAA3 Pilbara Seismi    68.87 205    P       P      18 53 02.9 +0.9
PSAA3                                IAmb    IAmb   18 53 03.5
      comp=Z,53nm,0.9s
PSAD2 Pilbara Seismi    68.87 205    P       P      18 53 02.2 +0.2
PSAD2                                IAmb    IAmb   18 53 03.5
      comp=Z,54nm,0.9s
PSAA1 Pilbara Seismi    68.87 205    P       P      18 53 02.6 +0.7
PSAA1                                IAmb    IAmb   18 53 03.6
      comp=Z,62nm,0.9s
PSAB3 Pilbara Seismi    68.88 205    P       P      18 53 02.3 +0.2
PSAB3                                IAmb    IAmb   18 53 03.6
      comp=Z,43nm,0.9s
NC405 NORSAR Array S    68.90 338    P       P      18 53 01.9 +0.2
NC303 NORSAR Array S    68.91 338    P       P      18 53 02.1 +0.3
EIDS  Eidsvold          68.91 174    P       P      18 53 03.3 +1.2
PSAC3 Pilbara Seismi    68.92 205    P       P      18 53 03.2 +1.0
PSAC3                                IAmb    IAmb   18 53 03.8
      comp=Z,60nm,0.9s
YHL   Hebgen Lake       68.93  48    P       P      18 53 03.6 +1.0
PSAD3 Pilbara Seismi    68.95 205    P       P      18 53 03.3 +0.8
PSAD3                                IAmb    IAmb   18 53 04.1
      comp=Z,58nm,0.9s
LHV   Little Huntoon    68.98  57    P       P      18 53 04.3 +1.7
LHV                                  IAmb    IAmb   18 53 05.4
      comp=Z,94nm,1.0s
NVAR  Mina Array Bea    68.99  57    P       P      18 53 03.8 +0.8
      comp=Z,27nm,0.8s,baz=288,slow=6.3,SNR=178
NVAR                                 pP      pP     18 53 34.2 -0.2
      comp=Z,9.1nm,0.8s,baz=291,slow=7.6,SNR=3.2
YHB   Horse Butte       68.99  48    P       P      18 53 03.9 +1.0
MDPB  Devils Postpil    69.02  58    P       P      18 53 04.2 +1.0
NC204 NORSAR Array S    69.03 338    P       P      18 53 02.8 +0.2
SFJD  Kangerlussuaq     69.05   6    P       P      18 53 02.4 -0.1
      comp=Z,171nm,0.9s,baz=346,slow=6.7,SNR=50
SFJD  Kangerlussuaq     69.05   6   i P      P      18 53 02.6 +0.1
SFJD  Kangerlussuaq     69.05   6    P       P      18 53 02.1 -0.4
SFJD  Kangerlussuaq     69.05   6   i P      P      18 53 02.6 +0.1
SFJD  Kangerlussuaq     69.05   6   i P      P      18 53 02.6 +0.1
NB201 NORSAR Array S    69.07 338    P       P      18 53 02.9  0.0
NV11  Mina Array Sit    69.08  57    P       P      18 53 04.5 +1.1
OMMB  Old Mammoth Mi    69.08  58    P       P      18 53 04.6 +0.9
NB2   NORSAR Subarra    69.10 338    P       P      18 53 02.9 -0.1
      comp=Z,319nm,1.0s,baz=33,slow=6.5
NB2   NORSAR Subarra    69.10 338    P       P      18 53 02.9 -0.1
      baz=33,slow=6.5
NOA   NORSAR Array B    69.10 338    P       P      18 53 03.0 -0.1
      comp=Z,150nm,0.9s,baz=34,slow=6.2,SNR=217
NOA                                  LR      LR     19 28 33.5
      comp=Z,239nm,18.4s,baz=260,slow=40
NOA   NORSAR Array B    69.10 338    P       P      18 53 03.0 -0.1
GCMT  Greycliff         69.12  46    P       P      18 53 04.5 +1.0
HFS   Hagfors           69.15 336    P       P      18 53 03.0 -0.2
      comp=Z,176nm,0.9s,baz=46,slow=6.4,SNR=175
YHH   Holmes Hill       69.15  48    P       P      18 53 04.8 +0.9
YMR   Madison River     69.17  48    P       P      18 53 05.3 +1.3
NBO00 NORSAR Array S    69.23 338    P       P      18 53 03.9 +0.1
AKN   Aaknes            69.23 340   eP       P      18 53 04.6 +0.8
NC602 NORSAR Array S    69.27 338    P       P      18 53 03.5 -0.5
NC602 NORSAR Array S    69.27 338   eP       P      18 53 03.8 -0.2
NC605 NORSAR Array S    69.27 338    P       P      18 53 03.0 -1.0
YNM   Yellowstone No    69.27  48    P       P      18 53 06.1 +1.4
PABE  Paberze           69.32 329   eP       P      18 53 04.5 +0.1
ELK   Elko              69.33  53    P       P      18 53 06.0 +0.9
ELK                                  pmax    pmax
      comp=Z,16nm,0.9s
ELK   Elko              69.33  53    P       P      18 53 06.0 +0.9
NAO01 NORSAR Array S    69.35 338    P       P      18 53 04.5  0.0
NAO01 NORSAR Array S    69.35 338   eP       P      18 53 04.7 +0.1
YNE   Yellowstone No    69.46  47    P       P      18 53 06.5 +0.7
PAGB  Antelope Grade    69.50  60    P       P      18 53 07.0 +1.1
PAGB                                 IAmb    IAmb   18 53 08.1
      comp=Z,57nm,1.2s
YPP   Pitchstone Pla    69.52  48    P       P      18 53 08.1 +1.8
LKWY  Lake              69.54  48    P       P      18 53 08.7 +2.4
LKWY                                 pmax    pmax
      comp=Z,49nm,0.9s
LKWY  Lake              69.54  48    P       P      18 53 08.7 +2.4
LKWY                                 IAmb    IAmb   18 53 09.8
      comp=Z,49nm,0.9s
YMP   Mirror Lake Pl    69.56  47    P       P      18 53 07.7 +1.2
H17A  Grant Village     69.56  48    P       P      18 53 08.9 +2.5
      baz=312,SNR=81
AFI   Afiamalu          69.59 135    P       P      18 53 07.6 +1.0
FLWY  Flagg Ranch       69.70  48    P       P      18 53 08.8 +1.6
FLWY                                 IAmb    IAmb   18 53 10.2
      comp=Z,44nm,0.9s
FRB   Frobisher Bay     69.71  15    P       P      18 53 06.1 -0.5
      comp=Z,63nm,0.7s,baz=336,slow=7.1,SNR=66
CHVG  Ch'k'valeri       69.76 310 ⇑P         P      18 53 08.9 +1.5
RLMT  Red Lodge         69.77  47    P       P      18 53 08.8 +1.1
      baz=312,SNR=24
RLMT  Red Lodge         69.77  47    P       P      18 53 08.7 +1.0
RLMT                                 IAmb    IAmb   18 53 09.8
      comp=Z,93nm,1.4s
TPH   Tonopah           69.87  56    P       P      18 53 09.3 +0.9
TPH                                  pmax    pmax
      comp=Z,235nm,1.1s
TPH   Tonopah           69.87  56    P       P      18 53 09.3 +0.9
MOOW  Moose Ponds       69.90  48    P       P      18 53 09.7 +1.2
MOOW                                 IAmb    IAmb   18 53 11.1
      comp=Z,88nm,1.1s
TIN   Tinemaha, Big     69.91  58    P       P      18 53 09.8 +1.2
      baz=310,SNR=5.6
GNI   Garni             69.92 307    P       P      18 53 09.8 +1.2
      comp=Z,47nm,1.2s,baz=191,slow=5.9,SNR=6.9
GNI   Garni             69.92 307    P       P      18 53 10.1 +1.5
GNI   Garni             69.92 307   i P      P      18 53 06.9 -1.7
GNI                                  pmax    pmax
      comp=Z,61nm,1.4s
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SMMC  Simmler           69.92  60    P       P      18 53 09.7 +1.1
      baz=310,SNR=6.4
ECR   Eagle Creek       70.01  49    P       P      18 53 10.5 +1.3
DGMT  Dagmar            70.05  41    P       P      18 53 09.6 +0.5
      baz=314,SNR=12
DGMT  Dagmar            70.05  41    P       P      18 53 09.5 +0.5
LOHW  Long Hollow       70.06  48    P       P      18 53 10.7 +1.2
HVU   Hansel Valley     70.07  51    P       P      18 53 10.6 +1.1
HVU                                  pmax    pmax
      comp=Z,50nm,0.9s
HVU   Hansel Valley     70.07  51    P       P      18 53 10.6 +1.1
REDW  Red Top Meadow    70.09  49    P       P      18 53 10.6 +1.0
REDW                                 IAmb    IAmb   18 53 12.2
      comp=Z,70nm,0.9s
OSL   Oslo              70.16 337   eP       P      18 53 10.1 +0.7
VES   Vestal, Richgr    70.16  59    P       P      18 53 09.9  0.0
      baz=310,SNR=5.2
SKAR  Skarslia          70.18 339   eP       P      18 53 10.2 +0.6
LAO   LASA Array        70.28  44    P       P      18 53 11.3 +0.8
      baz=313,SNR=6.3
LAO   LASA Array        70.28  44    P       P      18 53 11.5 +1.0
LAO                                  IAmb    IAmb   18 53 12.5
      comp=Z,86nm,0.9s
HYA   Hoyanger          70.30 340   eP       P      18 53 10.8 +0.6
PKM   Mcpherson Peak    70.31  60    P       P      18 53 12.2 +1.1
      baz=310,SNR=16
AHID  Auburn Hatcher    70.35  49    P       P      18 53 12.0 +0.7
AHID                                 IAmb    IAmb   18 53 13.1
      comp=Z,53nm,1.0s
CWC   Cottonwood Cre    70.40  58    P       P      18 53 12.2 +0.7
      baz=310
GRAC  Grapevine Rang    70.48  57    P       P      18 53 13.2 +1.3
      baz=310,SNR=22
SOC   Sochi             70.48 312   eP       P      18 53 12.3 +0.6
SOC                                 e*SP     pP     18 53 49.0 +5.7
SOC                                 e               18 55 50.9
SOC                                 ePPP     PPP    18 57 33.1
SOC                                 eS       S      19 02 19.8 +5.5
SOC                                  pmax    pmax
      comp=Z,40nm,0.9s
BGU   Big Grassy Mou    70.49  52    P       P      18 53 12.9 +0.8
SPUT  South Promonto    70.56  51    P       P      18 53 13.5 +1.0
ISA   Isabella, Lake    70.66  59    P       P      18 53 12.9 -0.1
ISA                                  pmax    pmax
      comp=Z,25nm,1.2s
ISA   Isabella, Lake    70.66  59    P       P      18 53 12.9 -0.1
      baz=310,SNR=16
ISA   Isabella, Lake    70.66  59    P       P      18 53 12.9 -0.1
R11A  Troy Canyon, C    70.68  55    P       P      18 53 14.0 +0.7
      baz=311,SNR=50
AKASG Malin Array Be    70.69 323    P       P      18 53 13.1 +0.3
      comp=Z,64nm,0.7s,baz=42,slow=6.5,SNR=158
AKASG                                pP      pP     18 53 44.5  0.0
      comp=Z,19nm,0.9s,baz=41,slow=5.8,SNR=2.3
AKASG                                PKPPKP  P'P'df 19 21 11.3 -1.2
      comp=Z,0.8nm,0.6s,baz=237,slow=4.5,SNR=4.9
AKBB  Malin Array Si    70.69 323    P       P      18 53 13.0 +0.1
AKBB                                 pmax    pmax
      comp=Z,145nm,1.0s
AKBB  Malin Array Si    70.69 323    P       P      18 53 13.0 +0.1
KONO  Kongsberg         70.71 338    P       P      18 53 13.4 +0.6
KONO                                 pmax    pmax
      comp=Z,68nm,1.2s
KONO  Kongsberg         70.71 338    P       P      18 53 13.4 +0.6
KONO                                 IAmb    IAmb   18 53 14.3
      comp=Z,68nm,1.1s
SUW   Suwalki           70.74 328   eP       P      18 53 13.1  0.0
SUW   Suwalki           70.74 328   eP       P      18 53 13.6 +0.5
SUW   Suwalki           70.74 328    P       P      18 53 13.1  0.0
SUW                                  pmax    pmax
      comp=Z,193nm,1.1s
SUW   Suwalki           70.74 328    P       P      18 53 13.1  0.0
SUE   Sulen             70.74 341   eP       P      18 53 13.9 +0.9
ARVC  Arvin             70.78  60    P       P      18 53 14.2 +0.5
      baz=310
HWUT  Hardware Ranch    70.86  51    P       P      18 53 15.4 +1.1
HWUT                                 IAmb    IAmb   18 53 16.6
      comp=Z,81nm,1.1s
ANN   Anapa             70.87 314   eP       P      18 53 11.8 -2.2
ANN                                 e*PP     pP     18 53 43.7 -2.0
ANN                                 eS       S      19 02 15.2 -3.5
ANN                                  pmax    pmax
      comp=Z,82nm,0.7s
SCZ2  Santa Cruz Isl    71.00  61    P       P      18 53 15.5 +0.4
      baz=310
MPMC  Manual Prospec    71.01  58    P       P      18 53 15.9 +0.6
      baz=311,SNR=49
ANGG  Ammassalik, Gr    71.06   1   i P      P      18 53 14.6 -0.2
ANGG                                 IAmb    IAmb   18 53 15.2
      comp=Z,43nm,0.7s
DUG   Dugway, Tooele    71.09  52    P       P      18 53 16.8 +1.1
DUG                                  pmax    pmax
      comp=Z,70nm,1.0s
DUG   Dugway, Tooele    71.09  52    P       P      18 53 16.8 +1.1
      baz=312,SNR=56
DUG   Dugway, Tooele    71.09  52    P       P      18 53 16.8 +1.1
DUG                                  IAmb    IAmb   18 53 17.9
      comp=Z,70nm,1.0s
ISOG  Isortoq, Green    71.10   2   i P      P      18 53 14.7 -0.3
ISOG                                 IAmb    IAmb   18 53 15.7
      comp=Z,57nm,0.9s
FURC  Furnace Creek,    71.13  57    P       P      18 53 16.8 +1.1
      baz=311,SNR=12
ASK   Askoy             71.14 340   eP       P      18 53 15.9 +0.6
OSI   Osito Audit: C    71.17  60    P       P      18 53 17.0 +0.9
      baz=310
OSI   Osito Audit: C    71.17  60    P       P      18 53 17.2 +1.0
TPNV  Topopah Spring    71.19  57    P       P      18 53 17.2 +0.8
TPNV                                 pmax    pmax
      comp=Z,50nm,1.0s
TPNV  Topopah Spring    71.19  57    P       P      18 53 17.1 +0.8
      baz=311,SNR=51
TPNV  Topopah Spring    71.19  57    P       P      18 53 17.2 +0.8
TPNV                                 IAmb    IAmb   18 53 18.3
      comp=Z,50nm,0.9s
BER   Bergen            71.19 340   eP       P      18 53 16.7 +1.0
BW06  Boulder Array     71.20  49    P       P      18 53 16.8 +0.4
      baz=312,SNR=68
BW06  Boulder Array     71.20  49    P       P      18 53 16.7 +0.3
BW06                                 IAmb    IAmb   18 53 17.9
      comp=Z,61nm,0.9s
PD31  Pinedale Array    71.20  49    P       P      18 53 16.9 +0.4
PD31                                 IAmb    IAmb   18 53 17.9
      comp=Z,55nm,0.9s
PDAR  Pinedale Array    71.20  49    P       P      18 53 16.8 +0.4
      comp=Z,45nm,0.8s,baz=272,slow=2.2,SNR=168
PDAR                                 pP      pP     18 53 48.0 +0.2
      comp=Z,11nm,0.8s,baz=285,slow=2.0,SNR=3.3
LRMC  Laurel Mtn Rad    71.27  59    P       P      18 53 17.2 +0.4
      baz=311,SNR=12
ODD1  Odda              71.27 339   eP       P      18 53 17.1 +0.9
TCUT  Toone Canyon      71.28  51    P       P      18 53 17.9 +1.0
CTU   Camp Tracy        71.37  51    P       P      18 53 18.4 +1.0
EDW2  Edwards Air Fo    71.46  59    P       P      18 53 18.8 +0.9
      baz=311,SNR=116
SNCC  San Nicolas Is    71.55  62    P       P      18 53 19.0 +0.6
      baz=311
SNCC  San Nicolas Is    71.55  62    P       P      18 53 19.0 +0.6
PSUT  Pine Spring       71.58  54    P       P      18 53 19.4 +0.7
JLU   Jordanelle        71.60  51    P       P      18 53 19.8 +1.0
PRN   Pahroc Range      71.61  56    P       P      18 53 19.8 +1.0
DECC  Green Verdugo     71.65  60    P       P      18 53 19.3 +0.3
      baz=311
SHME  Shamm             71.68 289    P       P      18 53 19.7 +0.5
NUUK  Nuuk              71.71   8⇑iP         P      18 53 19.3 +0.6
NUUK                                 IAmb    IAmb   18 53 21.2
      comp=Z,266nm,0.9s
BLS5  Blasjo            71.74 339   eP       P      18 53 20.1 +1.0
WSAR  Wadi Sarin        71.76 285    P       P      18 53 20.9 +1.1
      comp=Z,4.6nm,0.7s,baz=224,slow=8.5,SNR=4.5
PASC  Pasadena Art C    71.80  60            P      18 53 20.1 +0.3
MWC   Mount Wilson      71.85  60    P       P      18 53 20.7 +0.3
MWC                                  pmax    pmax
      comp=Z,48nm,1.3s
MWC   Mount Wilson      71.85  60    P       P      18 53 20.7 +0.3
SHOC  Shoshone, Teco    71.86  58    P       P      18 53 20.6 +0.4
      baz=311
MPU   Maple Canyon      71.89  52    P       P      18 53 21.5 +0.9
GSC   Goldstone, Bar    71.92  58    P       P      18 53 21.3 +0.6
GSC                                  pmax    pmax
      comp=Z,28nm,1.1s
GSC   Goldstone, Bar    71.92  58    P       P      18 53 21.3 +0.6
      baz=311,SNR=19
GSC   Goldstone, Bar    71.92  58    P       P      18 53 21.3 +0.6
BFSC  Mount Baldy Ra    72.09  60    P       P      18 53 22.0 +0.3
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	baz=311,SNR=11						
MSFE	Esma-Masafi	72.11	288	P	P	18 53 22.5	+0.6
SHPR	Sheep Range	72.14	56	P	P	18 53 23.1	+1.1
HOMB	Homborsund	72.18	338	eP	P	18 53 21.6	0.0
HOMB	Homborsund	72.18	338	i P	P	18 53 22.0	+0.4
KMY	Karmoy	72.23	340	eP	P	18 53 23.1	+1.1
SCI2	San Clemente I	72.35	61	P	P	18 53 23.4	+0.3
	baz=311						
UMQ	Umm Al-Quwin	72.35	289	P	P	18 53 24.0	+0.7
UOSS	Minazif	72.35	288	P	P	18 53 23.7	+0.5
UOSS	Minazif	72.35	288	P	P	18 53 23.3	0.0
TCRU	Three Creeks R	72.36	53	P	P	18 53 24.4	+1.0
SIM	Simferopol'	72.47	316c	iP	P	18 53 23.1	-0.6
SIM				pmax	pmax		
	comp=Z,95nm,1.0s						
HATD	Hatta, Dubai	72.48	288	P	P	18 53 24.8	+0.7
SNART	Snartemo	72.48	338	eP	P	18 53 24.3	+0.9
SNART	Snartemo	72.48	338	i P	P	18 53 24.2	+0.8
HEC	Hector,Ludlow	72.52	58	P	P	18 53 24.9	+0.6
	baz=311,SNR=13						
CCUT	Cedar City	72.53	55	P	P	18 53 25.4	+1.0
BBRC	Big Bear Solar	72.53	59	P	P	18 53 24.8	+0.3
	baz=311						
ULM	Lac du Bonnet	72.54	36	P	P	18 53 23.6	-0.4
	comp=Z,36nm,0.9s,baz=313,slow=6.8,SNR=32						
ULM	Lac du Bonnet	72.54	36	P	P	18 53 23.5	-0.5
ULM				IAmb	IAmb	18 53 24.8	
	comp=Z,61nm,1.1s						
MVU	Marysvale	72.56	53	P	P	18 53 25.7	+1.1
MSU	Marysvale	72.58	53	P	P	18 53 26.1	+1.4
MSU	Marysvale	72.58	53	P	P	18 53 26.1	+1.4
TMUT	Trail Mountain	72.61	52	P	P	18 53 25.8	+0.8
MDND	Maddock	72.66	40	P	P	18 53 25.1	+0.4
	baz=317,SNR=7.1						
SZCU	Shurtz Canyon	72.66	54	P	P	18 53 25.8	+0.7
RDMU	Red Mountain	72.68	50	P	P	18 53 26.1	+0.9
NAZ	Nazwa, Dubai	72.70	288	P	P	18 53 25.7	+0.4
P17A	Butcher Ranch,	72.76	52	P	P	18 53 26.5	+0.8
MURC	Murrieta	72.80	60	P	P	18 53 26.1	+0.3
	baz=311						
BSD	Bornholm Skovb	72.85	333	eP	P	18 53 26.2	+0.5
BSD	Bornholm Skovb	72.85	333	i P	P	18 53 26.2	+0.5
BSD				pmax	pmax		
	comp=Z,160nm,0.8s						
BSD	Bornholm Skovb	72.85	333	i P	P	18 53 26.2	+0.5
	comp=Z,158nm,0.8s						
BSD	Bornholm Skovb	72.85	333	i P	P	18 53 26.3	+0.5
BSD				IAmb	IAmb	18 53 27.5	
	comp=Z,158nm,0.8s						
Q16A	Castle Valley	72.89	52	P	P	18 53 27.4	+0.9
MTPU	Mount Pierson	72.89	54	P	P	18 53 28.2	+1.5
FAQ	Al Faqa, Dubai	72.90	288	i P	P	18 53 27.0	+0.5
	SNR=6.4						
K22A	Casper	72.91	47	P	P	18 53 26.7	+0.2
	baz=314,SNR=15						
LCMT	Little Creek M	72.95	55	P	P	18 53 27.8	+1.0
GMRC	Granite Mounta	72.97	58	P	P	18 53 27.7	+0.8
	baz=312,SNR=23						
GOET	G??ttrup	73.03	336	i P	P	18 53 27.6	+0.9
GOET	G??ttrup	73.03	336	i P	P	18 53 27.6	+0.9
E28A	Huff	73.07	41	P	P	18 53 27.8	+0.6
E28A				IAmb	IAmb	18 53 28.6	
	comp=Z,107nm,0.9s						
SRU	San Rafael Swe	73.13	52	P	P	18 53 28.6	+0.7
SRU	San Rafael Swe	73.13	52	P	P	18 53 28.6	+0.7
ASUD	Al Ashush, Dub	73.16	288	i P	P	18 53 29.0	+1.0
	SNR=7.3						
RSSD	Black Hills	73.17	45	P	P	18 53 28.1	0.0
RSSD				pmax	pmax		
	comp=Z,60nm,1.0s						
RSSD	Black Hills	73.17	45	P	P	18 53 28.2	+0.1
	baz=315						
RSSD	Black Hills	73.17	45	P	P	18 53 28.1	0.0
RSSD				IAmb	IAmb	18 53 29.4	
	comp=Z,60nm,0.9s						
COP	Copenhagen	73.19	334	i P	P	18 53 28.4	+0.8
COP				pmax	pmax		
	comp=Z,160nm,1.0s						
COP	Copenhagen	73.19	334	i P	P	18 53 28.4	+0.8
	comp=Z,155nm,1.0s						
COP	Copenhagen	73.19	334	i P	P	18 53 28.5	+0.8
COP				IAmb	IAmb	18 53 30.3	
	comp=Z,156nm,1.0s						
KNB	Kanab	73.20	55	P	P	18 53 29.6	+1.3
KNB				pmax	pmax		
	comp=Z,55nm,1.2s						
KNB	Kanab	73.20	55	P	P	18 53 29.6	+1.3
RWWY	Rawlins	73.21	48	P	P	18 53 28.6	+0.2
RWWY				IAmb	IAmb	18 53 29.9	
	comp=Z,92nm,0.9s						
PKCU	Pink Cliffs	73.22	54	P	P	18 53 30.0	+1.4
ALNE	Al Ain	73.24	287	i P	P	18 53 29.3	+0.8
	SNR=6.7						
PFO	Pinyon Flats O	73.25	60	P	P	18 53 28.9	+0.3
PFO				pmax	pmax		
	comp=Z,25nm,1.1s						
PFO	Pinyon Flats O	73.25	60	P	P	18 53 28.9	+0.3
	baz=312,SNR=11						
PFO	Pinyon Flats O	73.25	60	P	P	18 53 28.9	+0.3
XPFO	Pion Flat	73.25	60	P	P	18 53 28.8	+0.1
TPFO	Pinon Flats	73.26	60	P	P	18 53 28.9	+0.2
	baz=312,SNR=11						
BELC	Belle Mtn. Jos	73.28	59	P	P	18 53 29.0	+0.2
	baz=312,SNR=16						
109C	Camp Elliot, M	73.32	60	P	P	18 53 29.1	+0.3
	baz=312						
109C	Camp Elliot, M	73.32	60	P	P	18 53 29.3	+0.4
BEL	Belsk	73.34	328	eP	P	18 53 29.8	+1.2
MUD	Monsted U'grnd	73.54	336	i P	P	18 53 30.4	+0.7
MUD				pmax	pmax		
	comp=Z,72nm,1.0s						
MUD	Monsted U'grnd	73.54	336	i P	P	18 53 30.4	+0.7
	comp=Z,72nm,1.0s						
MUD	Monsted U'grnd	73.54	336	i P	P	18 53 30.4	+0.7
MUD				IAmb	IAmb	18 53 31.1	
	comp=Z,72nm,1.0s						
GKP	Gorka Klasztor	73.54	330	eP	P	18 53 30.3	+0.6
GKP	Gorka Klasztor	73.54	330	eP	P	18 53 30.6	+0.9
KIS	Kishinev	73.57	320	eP	P	18 53 30.0	-0.1
	comp=Z,2μm,1.3s						
KIS	Kishinev	73.57	320	eP	P	18 53 30.0	-0.1
KIS				pmax	pmax		
	comp=Z,2μm,1.3s						
LVV	L'vov	73.59	325	eP	P	18 53 30.7	+0.6
NEE2	Needles Airpor	73.62	58	P	P	18 53 30.7	+0.1
	baz=312						
MILM	Milestii Mici	73.63	320	⇓P	P	18 53 30.7	+0.3
IRM	Iron Mountain	73.70	58	P	P	18 53 31.9	+0.8
	baz=312,SNR=20						
O20A	White River Ci	73.71	50	P	P	18 53 31.8	+0.5
	baz=314,SNR=14						
BAR	Barrett	73.73	60	P	P	18 53 31.5	+0.2
MONP2	Monument Peak	73.75	60	P	P	18 53 32.0	+0.4
	baz=312,SNR=13						
TKX	Tecate	73.85	60	P	P	18 53 31.5	-0.4
TKX				IAmb	IAmb	18 53 42.0	
	comp=Z,40nm,0.5s						
BC3	Big Chuckawall	73.85	59	P	P	18 53 32.5	+0.4
	baz=312,SNR=16						
RGN	Rugen	73.85	333	P	P	18 53 32.7	+1.2
RGN	Rugen	73.85	333	eP	P	18 53 32.1	+0.6
	comp=Z,368nm,1.2s,baz=33,slow=5.6						
W13A	Hualapai Mount	73.85	57	P	P	18 53 32.8	+0.6
U15A	North Rim	73.91	55	P	P	18 53 33.7	+1.1
ARMA	Armidale	73.96	174	P	P	18 53 34.3	+1.8
CBX	Cerro Bola	73.98	61	P	P	18 53 33.3	+0.4
IAS	Iasi	74.01	321	⇑P	P	18 53 33.3	+0.7
AGMN	Agassiz Nation	74.01	37	P	P	18 53 32.2	-0.4
	baz=319,SNR=12						
AGMN	Agassiz Nation	74.01	37	P	P	18 53 32.2	-0.4
AGMN				IAmb	IAmb	18 53 33.3	
	comp=Z,65nm,1.1s						
SWSC	Sam W. Stewart	74.10	60	P	P	18 53 33.8	+0.4
	baz=312,SNR=6.5						
IKP	In-Ko-Pah, Jac	74.11	60	P	P	18 53 34.1	+0.5
	baz=312,SNR=16						
RMX	La Rumorosa	74.16	60	P	P	18 53 34.9	+0.9
PDMCI	Parker Dam,Lak	74.22	58	P	P	18 53 34.6	+0.5
	baz=312,SNR=21						
CCX	Cicese	74.27	61	P	P	18 53 34.1	-0.3
KWP	Kalwaria Pacla	74.28	325	eP	P	18 53 35.3	+1.1
KWP				epP	pP	18 54 06.9	+0.9
KWP	Kalwaria Pacla	74.28	325	P	P	18 53 35.7	+1.5
KWP				pmax	pmax		
	comp=Z,405nm,1.1s						
KWP	Kalwaria Pacla	74.28	325	P	P	18 53 35.7	+1.5
VASR	Vaslui	74.31	320	⇑P	P	18 53 35.3	+0.9
D32A	Dogwood Acres,	74.37	39	P	P	18 53 34.6	-0.1
PHWY	Pilot Hill	74.42	47	P	P	18 53 35.8	+0.3
PV23	Carpenter Ridg	74.44	52	P	P	18 53 36.5	+0.8
PV23				IAmb	IAmb	18 53 37.6	
	comp=Z,94nm,1.0s						
N23A	Red Feather La	74.44	48	P	P	18 53 36.6	+0.9
	baz=315,SNR=16						
TOKA	Tokat	74.47	311	P	P	18 53 36.6	+1.1
PV10	Paradox Valley	74.48	52	P	P	18 53 37.0	+1.2
PRAR	RASCA	74.49	322	⇑P	P	18 53 36.3	+0.9
PV14	Lion Creek, Pa	74.49	52	P	P	18 53 36.6	+0.7
PV14				IAmb	IAmb	18 53 37.8	
	comp=Z,86nm,1.0s						
PV22	Blue Mesa, Par	74.51	51	P	P	18 53 36.7	+0.7
PV22				IAmb	IAmb	18 53 37.8	
	comp=Z,80nm,1.0s						
PV04	Paradox Valley	74.54	52	P	P	18 53 36.9	+0.8
PV04				IAmb	IAmb	18 53 38.1	
	comp=Z,79nm,1.0s						
PV20	West Nyswonger	74.54	52	P	P	18 53 36.9	+0.7
PV20				IAmb	IAmb	18 53 38.0	
	comp=Z,85nm,1.0s						
PV19	Morning Glory	74.56	52	P	P	18 53 36.9	+0.7
PV19				IAmb	IAmb	18 53 38.2	
	comp=Z,85nm,0.9s						
PV17	East Wray Mesa	74.59	52	P	P	18 53 37.1	+0.6
PV16	Nyswonger Mesa	74.59	52	P	P	18 53 37.1	+0.6
PV16				IAmb	IAmb	18 53 38.4	
	comp=Z,72nm,1.0s						
PV11	David Mesa, Pa	74.62	52	P	P	18 53 37.5	+0.9
PV11				IAmb	IAmb	18 53 38.6	
	comp=Z,105nm,1.1s						
ESJX	Sierra Juarez	74.64	60	P	P	18 53 37.4	+0.7
GLA	Glamis	74.64	59	P	P	18 53 37.3	+0.7
GLA				pmax	pmax		
	comp=Z,42nm,1.0s						
GLA	Glamis	74.64	59	P	P	18 53 37.4	+0.7
	baz=312,SNR=16						
GLA	Glamis	74.64	59	P	P	18 53 37.3	+0.7
PV18	Skein Mesa, Pa	74.64	52	P	P	18 53 37.5	+0.7
PV18				IAmb	IAmb	18 53 38.7	
	comp=Z,77nm,1.0s						
PV05	Paradox Valley	74.65	52	P	P	18 53 37.6	+0.8
PV05				IAmb	IAmb	18 53 38.9	
	comp=Z,108nm,1.0s						
PV12	Saucer Basin,	74.65	52	P	P	18 53 37.4	+0.6
PV12				IAmb	IAmb	18 53 39.6	
	comp=Z,59nm,1.2s						
PV07	Paradox Valley	74.66	51	P	P	18 53 37.2	+0.3
BIR	Birlad	74.67	320	⇑P	P	18 53 38.0	+1.5
PV03	Paradox Valley	74.67	52	P	P	18 53 37.6	+0.7
PV03				IAmb	IAmb	18 53 38.8	
	comp=Z,68nm,1.1s						
BUR08	Bucovina Ar. S	74.73	323	P	P	18 53 37.4	+0.5
BUR08				IAmb	IAmb	18 53 38.8	
	comp=Z,79nm,1.1s						
BURAR	Bucovina Array	74.75	322	⇑P	P	18 53 37.8	+0.8
PV13	Radium Mtn., P	74.75	52	P	P	18 53 38.0	+0.6
PV13				IAmb	IAmb	18 53 39.4	
	comp=Z,91nm,1.0s						
PV02	Paradox Valley	74.77	52	P	P	18 53 38.1	+0.6
PV15	Paradox Valley	74.82	51	P	P	18 53 38.3	+0.5
VARL	Varlezi	74.84	320	⇑P	P	18 53 39.2	+1.8
BIZ	Bicaz	74.86	322	⇑P	P	18 53 38.6	+1.0
B35A	Bob, Littlefor	74.89	36	P	P	18 53 37.5	-0.3
B35A				IAmb	IAmb	18 53 38.4	
	comp=Z,52nm,0.8s						
PV01	Paradox Valley	74.91	52	P	P	18 53 39.0	+0.7
TESR	Tescani	74.94	321	⇑P	P	18 53 38.6	+0.6
SKMB	Sankelmark Bun	74.94	335	eP	P	18 53 38.7	+0.9
	comp=Z,400nm,1.4s,baz=33,slow=5.6						
GIUM	Giurgiulesti	74.98	319	⇑P	P	18 53 39.3	+1.1
OJC	Ojcow	75.00	327	eP	P	18 53 39.2	+0.9
OJC				epP	pP	18 54 11.0	+0.7
OJC	Ojcow	75.00	327	P	P	18 53 39.3	+1.0
OJC				pmax	pmax		
	comp=Z,281nm,1.0s						
OJC	Ojcow	75.00	327	P	P	18 53 39.3	+1.0
KOLS	Kolonicke sedl	75.00	325	eP	P	18 53 39.1	+0.7
KOLS				pmax	pmax		
	comp=Z,58nm,1.0s						
KOLS	Kolonicke sedl	75.00	325	eP	P	18 53 39.1	+0.7
UMR	Umm Al-Rimmam	75.04	297	eP		18 53 38.7	
WUAZ	Wupatki	75.08	55	P	P	18 53 40.3	+1.1
	baz=313,SNR=13						
WUAZ	Wupatki	75.08	55	P	P	18 53 40.3	+1.1
SMCO	Snowmass	75.08	50	P	P	18 53 40.1	+0.6
MIB	Mutribah	75.12	297	eP		18 53 39.5	
JURR	Jurilovca	75.19	319	⇑P	P	18 53 40.0	+0.5
STKA	Stephens Creek	75.22	183	P	P	18 53 40.4	+0.8
	comp=Z,15nm,0.8s,baz=340,slow=8.3,SNR=18						
STKA				LR	LR	19 26 39.5	
	comp=Z,45nm,20.2s,baz=11,slow=35						
STKA	Stephens Creek	75.22	183	P	P	18 53 40.6	+1.0
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	75.22	183	P	P	18 53 40.6	+1.0
UZH	Uzhgorod	75.23	325	eP	P	18 53 40.5	+0.9
UZH				e		18 53 58.8	
UZH				e		18 54 11.5	
CFR	Carcaliu	75.24	319	⇑P	P	18 53 40.1	+0.3
PETR	Petresti	75.26	320	⇑P	P	18 53 41.6	+1.8
KBD	Kabd	75.31	296	eP		18 53 40.0	
ODBI	Odobesti	75.31	320	⇑P	P	18 53 42.6	+2.4
BSEG	Bad Segeberg	75.33	334	eP	P	18 53 40.5	+0.4
	comp=Z,174nm,1.1s,baz=33,slow=5.6						
CRVS	Cervenica-Dubn	75.36	325	eP	P	18 53 41.3	+0.9
CRVS				pmax	pmax		
	comp=Z,181nm,1.4s						
CRVS	Cervenica-Dubn	75.36	325	eP	P	18 53 41.3	+0.9
VRI	Vrincioaia	75.38	320	⇑P	P	18 53 42.2	+1.6
ISCO	Idaho Springs	75.39	49	P	P	18 53 42.0	+0.8
ISCO				pmax	pmax		
	comp=Z,32nm,1.2s						
ISCO	Idaho Springs	75.39	49	P	P	18 53 41.9	+0.8
	baz=315,SNR=12						
ISCO	Idaho Springs	75.39	49	P	P	18 53 42.0	+0.8
RUE	Ruedersdorf	75.40	332	eP	P	18 53 40.9	+0.4
	comp=Z,234nm,1.1s,baz=33,slow=5.6						
PLOR	Plostina	75.43	321	⇑P	P	18 53 41.7	+0.8
NIE	Niedzica	75.43	326	eP	P	18 53 42.1	+1.3
QRN	Al-Qurain	75.45	296	eP		18 53 41.5	
BMR	Baia Mare	75.45	323	⇑P	P	18 53 42.2	+1.2
SUSD	Miller	75.46	42	P	P	18 53 40.9	-0.2
	baz=318						
ARCR	ARCALIA	75.53	323	⇑P	P	18 53 43.3	+1.8
RST	Umm Al-Ruwaisa	75.54	297	eP		18 53 41.7	
RDF	Al-Radifah	75.57	296	eP		18 53 42.1	
SPX	San Pedro Mart	75.59	61	P	P	18 53 43.2	+0.8
MVCO	Mesa Verde	75.59	52	P	P	18 53 42.8	+0.6
	baz=314,SNR=19						
MVCO	Mesa Verde	75.59	52	P	P	18 53 42.9	+0.6
BISRR	Bisoca	75.63	320	⇑P	P	18 53 44.0	+1.9
TIRR	Tirgusor	75.64	319	⇓P	P	18 53 42.7	+0.7
TIRR	Tirgusor	75.64	319	⇓P	P	18 53 42.7	+0.7
TIRR	Tirgusor	75.64	319	P	P	18 53 42.5	+0.5
TIRR				pmax	pmax		
	comp=Z,114nm,1.1s						
TIRR	Tirgusor	75.64	319	P	P	18 53 42.5	+0.5
TIRR				IAmb	IAmb	18 53 43.9	
	comp=Z,114nm,1.1s						
OZUR		75.64	321	⇑P	P	18 53 43.8	+1.7
FORT	Forrest	75.66	195	P	P	18 53 43.0	+0.9
FORT				IAmb	IAmb	18 53 44.8	
	comp=Z,88nm,0.7s						
F33A	5 Mile Ranch,	75.67	39	P	P	18 53 42.1	-0.1
F33A				IAmb	IAmb	18 53 43.3	
	comp=Z,114nm,1.2s						
HARR	Harsova	75.70	319	⇑P	P	18 53 43.2	+0.9
X16A	Lo Mia Camp, P	75.79	56	P	P	18 53 44.5	+1.1
KSP	Ksiaz	75.84	329	eP	P	18 53 43.8	+0.7
HLG	Helgoland	75.86	336	eP	P	18 53 43.6	+0.5
	comp=Z,416nm,1.3s,baz=33,slow=5.6						
DOPR	Dopca	75.92	321	⇑P	P	18 53 45.4	+1.7
OKC	Ostrava-Krasne	75.95	328	eP	P	18 53 45.2	+1.5
OKC	Ostrava-Krasne	75.95	328	eP	P	18 53 45.2	+1.5
LANS	Liptovska Anna	75.98	327	eP	P	18 53 45.8	+1.8
LANS				pmax	pmax		
	comp=Z,94nm,1.1s						
LANS	Liptovska Anna	75.98	327	eP	P	18 53 45.8	+1.8
SFX	San Felipe	75.98	61	P	P	18 53 44.6	+0.4
MLR	Muntele Rosu	76.03	321	P	P	18 53 45.1	+0.7
	comp=Z,24nm,0.9s,baz=10,slow=4.0,SNR=17						
MLR	Muntele Rosu	76.03	321	⇑P	P	18 53 44.5	+0.1
ISR	Istrita	76.03	320	⇑P	P	18 53 45.0	+0.7
AMRR	Amara	76.04	319	⇑P	P	18 53 45.8	+1.5
KECS	Kecovo	76.09	326	eP	P	18 53 45.7	+1.1
KECS				pmax	pmax		
	comp=Z,29nm,1.0s						
KECS	Kecovo	76.09	326	eP	P	18 53 45.7	+1.1
OSTC	Ostas	76.11	329	eP	P	18 53 45.5	+0.9
DRUM	Mains of Drumt	76.14	342	eP	P	18 53 44.9	+0.3
DRUM				IAmb	IAmb	18 53 46.0	
	comp=Z,208nm,1.0s						
CHVC	Chvalec	76.14	329	eP	P	18 53 45.7	+0.9
CJR	Cluj-Napoca	76.15	323	⇑P	P	18 53 46.2	+1.2
EYMN	Ely	76.16	35	P	P	18 53 44.6	-0.4
	baz=322,SNR=14						
EYMN	Ely	76.16	35	P	P	18 53 44.6	-0.4
EYMN				IAmb	IAmb	18 53 45.8	
	comp=Z,110nm,1.1s						
S22A	4UR Ranch, Cre	76.17	51	P	P	18 53 46.6	+1.1
	baz=315,SNR=27						
KAC	Achnashellach	76.19	344	eP	P	18 53 45.4	+0.5
UPC	Upice	76.22	329	eP	P	18 53 46.2	+0.9
UPC	Upice	76.22	329	eP	P	18 53 46.2	+0.9
DPC	Dobruska-Polom	76.23	329	eP	P	18 53 46.7	+1.3
DPC	Dobruska-Polom	76.23	329	eP	P	18 53 46.7	+1.3
MORC	Moravsky Berou	76.23	328	⇑P	P	18 53 46.2	+0.8
MORC	Moravsky Berou	76.23	328	⇑iP	P	18 53 46.3	+0.9
MORC	Moravsky Berou	76.23	328	P	P	18 53 46.2	+0.8
MORC				pmax	pmax		
	comp=Z,177nm,1.1s						
MORC	Moravsky Berou	76.23	328	P	P	18 53 46.2	+0.8
Q24A	Divide	76.24	49	P	P	18 53 46.5	+0.5
	baz=316,SNR=8.4						
GAZ	Gaziantep	76.27	308	P	P	18 53 46.6	+0.8
KRLC	Kraliky	76.28	329	eP	P	18 53 46.5	+0.8
KRLC	Kraliky	76.28	329	eP	P	18 53 46.5	+0.8
W18A	Petrified Fore	76.32	54	P	P	18 53 47.0	+0.7
	baz=314						
LTVH	Ltavrtes, Hu	76.36	324	⇑eP	P	18 53 47.5	+1.4
FLTG	Flechtingen	76.39	333	eP	P	18 53 45.8	-0.3
	comp=Z,176nm,1.0s,baz=33,slow=5.6						
KPL	Plockton	76.41	344	eP	P	18 53 46.5	+0.4
KPL				IAmb	IAmb	18 53 47.6	
	comp=Z,209nm,1.0s						
BR131	Keskin Array S	76.43	312	P	P	18 53 47.6	+0.8
BR131				pmax	pmax		
	comp=Z,16nm,0.7s						
BR131	Keskin Array S	76.43	312	P	P	18 53 47.6	+0.8
BRTR	Keskin Array B	76.43	312	P	P	18 53 47.8	+1.0
	comp=Z,8.0nm,0.7s,baz=83,slow=2.5,SNR=48						
BRTR				pP	pP	18 54 19.8	+0.9
	comp=Z,6.7nm,0.9s,baz=88,slow=2.8,SNR=4.2						
DRGR		76.48	323	⇑P	P	18 53 47.9	+1.0
VOIR		76.48	321	⇑P	P	18 53 48.0	+1.1
OGNE	Ogallala	76.48	46	P	P	18 53 47.2	+0.2
	baz=317,SNR=18						
OGNE	Ogallala	76.48	46	P	P	18 53 47.2	+0.2
PIX	Pinacate	76.50	59	P	P	18 53 47.6	+0.5
BBOO	Buckleboo	76.52	188	P	P	18 53 48.0	+1.1
X18A	Snowflake	76.60	55	P	P	18 53 48.9	+1.0
NRDL	Niedersach Rie	76.62	334	eP	P	18 53 47.4	0.0
	comp=Z,92nm,1.3s,baz=33,slow=5.6						
214A	Organ Pipe Nat	76.63	59	P	P	18 53 48.7	+0.8
	baz=313,SNR=8.2						
CLL	Collm	76.64	331	⇑iP	P	18 53 47.6	0.0
	comp=Z,194nm,1.0s						
CLL				ePcP	PcP	18 53 57.0	-1.5
CLL				epP	pP	18 54 18.0	-1.7
CLL				eS	S	19 03 22.0	-1.3
CLL	Collm	76.64	331	⇑iP	P	18 53 47.6	0.0
CLL				e*PP	pP	18 54 18.0	-1.7
CLL				eS	S	19 03 22.0	-1.3
CLL				pmax	pmax		
	comp=Z,194nm,1.0s						
CLL	Collm	76.64	331	P	P	18 53 47.7	0.0
CLL	Collm	76.64	331	eP	P	18 53 47.4	-0.2
	comp=Z,194nm,1.0s,baz=33,slow=5.6						
BRG	Berggiesshubel	76.67	331	i P	P	18 53 48.2	+0.4
BRG				Amp		18 53 49.5	
	comp=Z,81nm,1.2s						
BRG				pP	pP	18 54 20.3	+0.4
BRG				Amp		18 54 23.2	
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	76.67	331	i P	P	18 53 48.1	+0.4
BRG						18 54 20.2	
BRG				S	S	19 03 25.0	+1.4
BRG				pmax	pmax		
	comp=Z,81nm,1.2s						
BRG	Berggiesshubel	76.67	331	i P	P	18 53 48.2	+0.4
BRG				Amp		18 53 49.5	
	comp=Z,81nm,1.2s						
BRG				pP	pP	18 54 20.3	+0.4
BRG				Amp		18 54 23.2	
	comp=Z,18nm,0.9s						
BRG	Berggiesshubel	76.67	331	eP	P	18 53 47.9	+0.1
	comp=Z,81nm,1.2s,baz=33,slow=5.6						
ARR	Arges	76.72	321	⇑P	P	18 53 50.4	+2.1
PVCC	Panska Ves	76.73	330	eP	P	18 53 49.1	+1.0
PVCC	Panska Ves	76.73	330	eP	P	18 53 49.1	+1.0
ASSE	Asse, Remlinge	76.74	333	eP	P	18 53 48.4	+0.3
	comp=Z,108nm,1.2s,baz=33,slow=5.6						
VYHS	Vyhne	76.75	326	eP	P	18 53 49.4	+1.1
VYHS				pmax	pmax		
	comp=Z,127nm,1.3s						
VYHS	Vyhne	76.75	326	eP	P	18 53 49.4	+1.1
PSZ	Piszkesteto	76.78	326	⇑P	P	18 53 49.9	+1.4
PSZ	Piszkesteto	76.78	326	⇑eP	P	18 53 49.6	+1.1
PSZ	Piszkesteto	76.78	326	P	P	18 53 49.4	+0.8
PSZ				pmax	pmax		
	comp=Z,134nm,1.1s						
PSZ	Piszkesteto	76.78	326	P	P	18 53 49.4	+0.8
PSZ				IAmb	IAmb	18 53 51.0	
	comp=Z,134nm,1.1s						
BR231	Keskin MP Arra	76.81	313	P	P	18 53 49.9	+1.0
FBE	Freiberg	76.84	331	eP	P	18 53 49.0	+0.3
	comp=Z,144nm,1.2s,baz=33,slow=5.6						
F36A	Milaca	76.91	38	P	P	18 53 48.4	-0.8
K31A	O'Neill	76.91	43	P	P	18 53 48.8	-0.5
SDCO	Great Sand Dun	76.91	50	P	P	18 53 50.4	+0.7
	baz=316,SNR=22						
SDCO	Great Sand Dun	76.91	50	P	P	18 53 50.2	+0.5
INVG	Invergeldie, C	76.92	343	eP	P	18 53 49.2	+0.1
INVG				IAmb	IAmb	18 53 50.8	
	comp=Z,75nm,0.9s						
JAVC	Velka Javorina	76.92	327	⇑iP	P	18 53 51.3	+2.0
VRAC	Vranov	76.98	328	P	P	18 53 50.8	+1.2
	comp=Z,105nm,1.1s,baz=38,slow=5.5,SNR=31						
VRAC	Vranov	76.98	328	⇑P	P	18 53 51.0	+1.5
VRAC	Vranov	76.98	328	⇑iP	P	18 53 50.6	+1.1
MORW	Morawa	77.06	206	P	P	18 53 51.1	+1.1
ESY	Stoneypath	77.08	342	eP	P	18 53 50.5	+0.5
CLZ	Clausthal	77.09	333	eP	P	18 53 50.6	+0.4
	comp=Z,228nm,1.3s,baz=33,slow=5.6						
DEV	Deva	77.10	323	⇑P	P	18 53 51.2	+1.0
ECSD	EROS Data Cent	77.11	41	P	P	18 53 50.3	-0.1
	baz=319,SNR=33						
ECSD	EROS Data Cent	77.11	41	P	P	18 53 50.4	-0.1
ECSD				IAmb	IAmb	18 53 51.5	
	comp=Z,88nm,1.1s						
NEUB	Neuenburg	77.15	332	eP	P	18 53 50.4	-0.1
	comp=Z,183nm,1.0s,baz=33,slow=5.6						
PRA	Prague	77.16	330	eP	P	18 53 51.6	+1.1
PRA	Prague	77.16	330	eP	P	18 53 51.6	+1.1
MDUB	Mudurnu	77.18	314	P	P	18 53 51.6	+0.7
E38A	The Farm, Brul	77.19	36	P	P	18 53 50.2	-0.5
E38A				IAmb	IAmb	18 53 51.4	
	comp=Z,132nm,1.1s						
PRU	Pruhonice	77.19	330	eP	P	18 53 51.6	+0.9
PRU	Pruhonice	77.19	330	eP	P	18 53 51.6	+0.9
EDI	Edinburgh	77.20	342	eP	P	18 53 51.2	+0.6
EDI				IAmb	IAmb	18 53 52.9	
	comp=Z,92nm,0.9s						
EAB	Aberfoyle	77.21	343	eP	P	18 53 51.2	+0.6
KRUC	Moravsky	77.25	328	⇑iP	P	18 53 52.0	+0.9
SMOL	Smolenice	77.30	327	eP	P	18 53 53.0	+1.7
SMOL				pmax	pmax		
	comp=Z,76nm,1.3s						
SMOL	Smolenice	77.30	327	eP	P	18 53 53.0	+1.7
EBL	Broad Law	77.31	342	eP	P	18 53 51.6	+0.4
LAWE	Loch Awe, Argy	77.36	344	eP	P	18 53 52.1	+0.6
LAWE				IAmb	IAmb	18 53 53.0	
	comp=Z,140nm,1.0s						

COPA	Copaceanca	77.39	320	⇑P	P	18 53 52.0	+0.1
TREC	Trest	77.41	329	eP	P	18 53 52.7	+0.7
TREC	Trest	77.41	329	eP	P	18 53 52.7	+0.7
MODS	Modra-Piesok	77.47	327	eP	P	18 53 52.6	+0.3
MODS				pmax	pmax		
	comp=Z,135nm,1.2s						
MODS	Modra-Piesok	77.47	327	eP	P	18 53 52.6	+0.3
GTTG	Gottingen	77.47	333	eP	P	18 53 52.5	+0.2
	comp=Z,142nm,1.1s,baz=33,slow=5.6						
BUD	Budapest	77.48	326	⇑eP	P	18 53 53.9	+1.5
SRO	Srobarova	77.51	326	eP	P	18 53 54.4	+1.9
SRO				pmax	pmax		
	comp=Z,162nm,1.2s						
SRO	Srobarova	77.51	326	eP	P	18 53 54.3	+1.8
IBBN	Ibbenburen	77.53	335	eP	P	18 53 52.5	0.0
	comp=Z,164nm,1.0s,baz=33,slow=5.6						
GZR	Gura Zlata	77.53	322	⇑P	P	18 53 53.3	+0.5
KSCO	Kaye Shedlock'	77.57	48	P	P	18 53 53.2	0.0
	baz=317						
TANN	Tannenbergstha	77.58	331	eP	P	18 53 53.1	+0.1
	comp=Z,79nm,1.5s,baz=33,slow=5.6						
WERD	Werda	77.61	331	eP	P	18 53 53.2	+0.2
	comp=Z,74nm,1.4s,baz=33,slow=5.6						
PLN	Plauen	77.63	331	eP	P	18 53 53.4	+0.2
	comp=Z,93nm,1.4s,baz=33,slow=5.6						
TUC	Tucson	77.64	57	P	P	18 53 54.2	+0.6
TUC				pmax	pmax		
	comp=Z,23nm,1.1s						
TUC	Tucson	77.64	57	P	P	18 53 54.3	+0.6
	baz=314						
TUC	Tucson	77.64	57	P	P	18 53 54.2	+0.6
PBCC	Pribram	77.64	330	eP	P	18 53 54.0	+0.8
GUNZ	Gunzen	77.67	331	eP	P	18 53 53.7	+0.3
	comp=Z,101nm,1.4s,baz=33,slow=5.6						
AMBH	Ambrzfalva	77.67	324	⇑eP	P	18 53 55.2	+1.8
MOX	Moxa	77.68	332	eP	P	18 53 53.6	+0.2
	comp=Z,96nm,1.3s,baz=33,slow=5.6						
ZST	Bratislava	77.68	327	eP	P	18 53 55.1	+1.6
ZST				pmax	pmax		
	comp=Z,295nm,1.3s						
ZST	Bratislava	77.68	327	eP	P	18 53 55.1	+1.6
EKB10	Eskdalemuir Ar	77.69	342	P	P	18 53 54.3	+1.0
EKB10				IAmb	IAmb	18 53 55.2	
	comp=Z,132nm,1.1s						
EKB9	Eskdalemuir Ar	77.70	342	P	P	18 53 54.4	+0.9
EKB8	Eskdalemuir Ar	77.71	342	P	P	18 53 54.1	+0.7
EKB8				IAmb	IAmb	18 53 55.3	
	comp=Z,144nm,1.1s						
EKB7	Eskdalemuir Ar	77.72	342	P	P	18 53 54.0	+0.4
EKB7				IAmb	IAmb	18 53 55.3	
	comp=Z,130nm,1.1s						
WERN	Wernitzgruen	77.72	331	eP	P	18 53 54.0	+0.3
	comp=Z,80nm,1.2s,baz=33,slow=5.6						
SPMN	Marine on St.	77.72	38	P	P	18 53 53.4	-0.3
	baz=321						
EKB6	Eskdalemuir Ar	77.72	342	P	P	18 53 53.7	+0.2
EKB6				IAmb	IAmb	18 53 55.3	
	comp=Z,131nm,1.1s						
EKB5	Eskdalemuir Ar	77.73	342	P	P	18 53 53.6	0.0
EKB5				IAmb	IAmb	18 53 55.4	
	comp=Z,134nm,1.1s						
EKR10	Eskdalemuir Ar	77.74	342	P	P	18 53 53.9	+0.3
EKR10				IAmb	IAmb	18 53 55.5	
	comp=Z,142nm,1.1s						
EKR7	Eskdalemuir Ar	77.74	342	P	P	18 53 54.5	+0.9
EKR7				IAmb	IAmb	18 53 55.4	
	comp=Z,147nm,1.1s						
EKR8	Eskdalemuir Ar	77.74	342	P	P	18 53 54.4	+0.8
EKR8				IAmb	IAmb	18 53 55.4	
	comp=Z,144nm,1.1s						
EKR9	Eskdalemuir Ar	77.74	342	P	P	18 53 53.9	+0.2
NKC	Novy Kostel	77.74	331	eP	P	18 53 54.0	+0.2
NKC	Novy Kostel	77.74	331	eP	P	18 53 54.0	+0.2
EKA	Eskdalemuir Ar	77.74	342	P	P	18 53 54.4	+0.7
	comp=Z,45nm,0.6s,baz=25,slow=5.1,SNR=94						
EKA				pP	pP	18 54 27.7	+2.1
	comp=Z,2.5nm,0.5s,baz=30,slow=5.2,SNR=1.3						
EKR1	Eskdalemuir Ar	77.74	342	P	P	18 53 54.2	+0.5
EKR1				IAmb	IAmb	18 53 55.4	
	comp=Z,111nm,1.1s						
EKR2	Eskdalemuir Ar	77.74	342	P	P	18 53 54.3	+0.6
EKR2				IAmb	IAmb	18 53 55.4	
	comp=Z,127nm,1.1s						
EKR4	Eskdalemuir Ar	77.74	342	P	P	18 53 54.5	+0.9
EKR4				IAmb	IAmb	18 53 55.4	
	comp=Z,144nm,1.1s						
EKR5	Eskdalemuir Ar	77.74	342	P	P	18 53 54.5	+0.8
EKR5				IAmb	IAmb	18 53 55.4	
	comp=Z,143nm,1.1s						
EKR6	Eskdalemuir Ar	77.74	342	P	P	18 53 54.2	+0.6
EKR6				IAmb	IAmb	18 53 55.4	
	comp=Z,137nm,1.1s						
ESK	Eskdalemuir	77.76	342	eP	P	18 53 54.2	+0.5
ESK				IAmb	IAmb	18 53 55.7	
	comp=Z,109nm,1.1s						
BZS	Buzias	77.87	323	⇑P	P	18 53 55.1	+0.6
VLAD	Vladila	77.88	321	⇑P	P	18 53 54.9	+0.3
CSKK	Cskako	77.89	326	⇑eP	P	18 53 56.0	+1.3
EDMD	Edmundbyers	77.92	341	eP	P	18 53 54.5	-0.2
EDMD				IAmb	IAmb	18 53 55.9	
	comp=Z,76nm,1.0s						
T25A	Trinidad	77.95	50	P	P	18 53 56.0	+0.5
	baz=316,SNR=19						
UBBA	Unterbreizbach	78.08	333	eP	P	18 53 55.7	+0.3
	comp=Z,72nm,1.4s,baz=33,slow=5.6						
HERR	Herculane	78.09	322	⇑P	P	18 53 56.1	+0.3
BGNE	Belgrade	78.11	43	P	P	18 53 55.9	-0.1
	baz=319						
ROTZ	Rotzenmuhle	78.21	331	eP	P	18 53 57.0	+0.6
	comp=Z,88nm,1.2s,baz=33,slow=5.6						
EGYH	Egyhazaskeszo	78.22	327	⇑eP	P	18 53 54.4	-2.1
KHC	Kasperske Hory	78.25	330	eP	P	18 53 57.3	+0.7
KHC				e		18 54 28.0	
KHC	Kasperske Hory	78.25	330	eP	P	18 53 57.3	+0.7
KHC				epP	pP	18 54 28.0	-0.8
KHC	Kasperske Hory	78.25	330	P	P	18 53 57.4	+0.7
KHC				IAmb	IAmb	18 53 58.8	
	comp=Z,144nm,1.2s						
BANR	Banloc	78.26	323	⇑P	P	18 53 58.0	+1.3
KASTN	Kahler Asten	78.27	334	eP	P	18 53 56.8	+0.1
	comp=Z,105nm,1.2s,baz=33,slow=5.6						
SOP	Sopron	78.31	327	⇑eP	P	18 53 58.4	+1.4
MPLH	Magyarpolny	78.34	326	⇑eP	P	18 53 58.1	+1.0
BAIL	Bailesti	78.34	321	⇑P	P	18 53 58.6	+1.4
ANMO	Albuquerque	78.36	53	P	P	18 53 58.6	+0.9
ANMO				pmax	pmax		
	comp=Z,16nm,1.0s						
ANMO	Albuquerque	78.36	53	P	P	18 53 58.7	+0.9
	baz=316						
ANMO	Albuquerque	78.36	53	P	P	18 53 58.6	+0.9
CONA	Conrad Observa	78.38	328	i P	P	18 53 58.5	+1.0
	comp=Z,122nm,1.5s,SNR=18						
I37A	Lemond, Waseca	78.39	39	P	P	18 53 57.8	+0.3
KESW	Keswick, Cumbr	78.41	342	eP	P	18 53 58.1	+0.8
KESW				IAmb	IAmb	18 53 59.3	
	comp=Z,374nm,1.1s						
TIH	Tihany	78.41	326	eP	P	18 53 58.1	+0.6
BUG	Bochum--Univer	78.43	335	eP	P	18 53 57.5	0.0
	comp=Z,171nm,1.2s,baz=33,slow=5.6						
GEC2	GERESS Array S	78.44	330	P	P	18 53 58.1	+0.3
GEC2	GERESS Array S	78.44	330	eP	P	18 53 57.9	+0.1
	comp=Z,54nm,1.2s,baz=33,slow=5.6						
GEC2B	GERESS ARRAY S	78.44	330	P	P	18 53 58.1	+0.3
GERES	GERESS Array B	78.44	330	P	P	18 53 58.3	+0.5
	comp=Z,13nm,0.7s,baz=40,slow=6.2,SNR=41						
GERES				LR	LR	19 33 27.5	
	comp=Z,372nm,19.4s,baz=11,slow=39						
MDVR	Moldovita	78.48	323	⇑P	P	18 53 58.4	+0.4
WET	Wettzell	78.49	330	eP	P	18 53 58.6	+0.7
	comp=Z,129nm,1.2s,baz=33,slow=5.6						
L34A	Svendsen Farm,	78.56	42	P	P	18 53 58.4	-0.1
LENM	Lemitar	78.61	54	P	P	18 54 00.8	+1.7
GRA1	Grafenberg Arr	78.62	331	P	P	18 53 59.8	+1.1
GRF	Grafenberg Arr	78.62	331	P	P	18 53 59.8	+1.1
GRF				pmax	pmax		
	comp=Z,173nm,1.2s						
GRF	Grafenberg Arr	78.62	331	eP	P	18 53 59.3	+0.6
	comp=Z,218nm,1.4s,baz=33,slow=5.6						
HPK	Haverah Park	78.64	341	eP	P	18 53 59.4	+0.8
HPK				IAmb	IAmb	18 54 01.5	
	comp=Z,378nm,1.1s						
MORH	Mrgy, Hungar	78.66	325	⇑eP	P	18 53 58.9	+0.1
MORH	Mrgy, Hungar	78.66	325	⇑iP	P	18 53 58.7	-0.2
G40A	Rib Lake	78.82	36	P	P	18 53 59.7	-0.1
G40A				IAmb	IAmb	18 54 00.7	
	comp=Z,60nm,1.1s						
BNM	Barren Site	78.82	53	P	P	18 54 01.1	+0.8
FRGS	Fruska Gora	79.01	324	⇑iP	P	18 54 01.2	+0.3
IOMK	Kirk Michael	79.04	342	eP	P	18 54 00.7	-0.1
IOMK				IAmb	IAmb	18 54 02.8	
	comp=Z,321nm,1.1s						
MOA	Molln	79.06	329	i P	P	18 54 01.6	+0.6
	comp=Z,18nm,0.8s,SNR=5.6						
ARSA	Arzberg	79.07	328	i P	P	18 54 02.1	+1.0
	comp=Z,46nm,1.4s,SNR=8.4						
TNS	Taunus Mts	79.10	333	eP	P	18 54 01.4	+0.1
	comp=Z,134nm,1.4s,baz=33,slow=5.6						
WIM	Isle of Man	79.17	342	eP	P	18 54 02.1	+0.6
LBWR	Ladybower, Pea	79.18	340	eP	P	18 54 02.3	+0.7
LBWR				IAmb	IAmb	18 54 03.9	
	comp=Z,604nm,1.2s						
319A	Douglas	79.20	57	P	P	18 54 02.9	+0.7
319A				IAmb	IAmb	18 54 04.4	
	comp=Z,71nm,0.9s						
BEHE	Becsehely	79.21	326	⇑eP	P	18 54 05.5	+3.6
CBKS	Cedar Bluff	79.24	46	P	P	18 54 02.0	-0.3
CBKS				pmax	pmax		
	comp=Z,57nm,1.0s						
CBKS	Cedar Bluff	79.24	46	P	P	18 54 01.8	-0.5
	baz=318,SNR=6.8						
CBKS	Cedar Bluff	79.24	46	P	P	18 54 02.0	-0.3
CBKS				IAmb	IAmb	18 54 02.8	
	comp=Z,56nm,1.0s						
AHRW	Bad Neuenahr-A	79.27	334	eP	P	18 54 02.3	+0.2
	comp=Z,134nm,1.3s,baz=33,slow=5.6						
121A	Cookes Peak, D	79.29	55	P	P	18 54 04.1	+1.3
	baz=315,SNR=22						
F42A	Maple Grove Fa	79.30	35	P	P	18 54 02.3	-0.1
KOGS	Kog	79.44	327	i P	P	18 54 03.3	+0.1
ALN	Alexandroupoli	79.47	318	P	P	18 54 03.5	+0.1
ALN	Alexandroupoli	79.47	318	P	P	18 54 04.5	+1.1
ALN				pmax	pmax		
	comp=Z,119nm,1.4s						
ALN	Alexandroupoli	79.47	318	P	P	18 54 04.5	+1.1
ALN				IAmb	IAmb	18 54 05.4	
	comp=Z,119nm,1.4s						
BEBN	Eben Emael	79.48	335	bP	P	18 54 03.1	-0.1
	comp=Z,105nm,1.1s						
BEBN				dpP	pP	18 54 35.9	+0.4
VTS	Vitosha	79.48	320	⇑P	P	18 54 05.0	+1.3
RDO	Rodhopi	79.53	318	P	P	18 54 04.7	+1.0
BTNL	Ternell	79.53	335	bP	P	18 54 03.6	+0.1
	comp=Z,56nm,1.4s						
BTNL				dpP	pP	18 54 35.3	-0.5
MEM	Membach	79.54	335	dP	P	18 54 03.9	+0.3
	comp=Z,64nm,1.5s						
MEM				dpP	pP	18 54 34.6	-1.3
TEKS	Tekeris	79.62	324	eP	P	18 54 04.7	+0.5
KALN	Kalnik	79.62	326	P	P	18 54 04.5	+0.4
BSTI	Sart Tilman	79.70	335	dP	P	18 54 05.0	+0.6
	comp=Z,25nm,1.7s						
I40A	Norwalk	79.73	37	P	P	18 54 04.5	-0.3
I40A				IAmb	IAmb	18 54 05.5	
	comp=Z,111nm,1.4s						
SOKA	Soboth	79.73	328	i P	P	18 54 05.6	+0.7
	comp=Z,141nm,1.5s,SNR=31						
PERS	Pernice	79.73	327	i P	P	18 54 05.4	+0.6
N35A	Tabor	79.77	42	P	P	18 54 05.2	+0.2
N35A				IAmb	IAmb	18 54 06.2	
	comp=Z,73nm,0.8s						
BHOU	Houvegnez	79.77	335	bP	P	18 54 05.0	+0.2
	comp=Z,52nm,1.3s						
DIVS	Divibare	79.78	323	⇑iP	P	18 54 05.2	+0.1
DIVS	Divibare	79.78	323	P	P	18 54 05.4	+0.3
DIVS				IAmb	IAmb	18 54 06.7	
	comp=Z,79nm,1.4s						
WME	Myndd Eilian	79.79	342	eP	P	18 54 05.1	+0.2
MATQ	Matagami	79.82	26	P	P	18 54 04.7	-0.4
	baz=330,SNR=12						
HSIG		79.82	60	P	P	18 54 06.0	+0.5
UCC	Uccle	79.88	336	dP	P	18 54 05.5	+0.2
UCC	Uccle	79.88	336	P	P	18 54 05.4	0.0
UCC				pmax	pmax		
	comp=Z,84nm,1.4s						
UCC	Uccle	79.88	336	P	P	18 54 05.4	0.0
UCC				IAmb	IAmb	18 54 07.3	
	comp=Z,84nm,1.4s						
FUR	Furstenfeldbru	79.89	331	eP	P	18 54 06.1	+0.5
	comp=Z,199nm,1.3s,baz=33,slow=5.6						
WLF1	Llynfaes	79.91	342	eP	P	18 54 06.1	+0.6
WLF1				IAmb	IAmb	18 54 08.3	
	comp=Z,209nm,1.2s						
BCLA	Clavier	79.93	335	bP	P	18 54 05.6	0.0
	comp=Z,44nm,1.4s						
BCLA				dpP	pP	18 54 39.2	+1.3
YLL	Llanberis	79.99	342	eP	P	18 54 06.3	+0.3
PTJ	Puntijarka	80.00	327	P	P	18 54 06.3	0.0
MANT	Manisa	80.02	314	P	P	18 54 07.0	+0.3
MANT				IAmb	IAmb	18 54 08.3	
	comp=Z,102nm,0.9s						
BGES	Gesves	80.02	335	bP	P	18 54 06.2	0.0
	comp=Z,56nm,1.5s						
CSS	Mathiatis	80.04	309	P	P	18 54 07.3	+0.7
CSS				IAmb	IAmb	18 54 08.5	
	comp=Z,120nm,1.4s						
KBA	Koelnbreinsper	80.05	329	i P	P	18 54 07.6	+0.9
	comp=Z,44nm,0.6s,SNR=16						
OBKA	Obir	80.06	328	i P	P	18 54 07.4	+0.7
	comp=Z,25nm,0.7s,SNR=8.6						
R32A	Long Quarter,	80.07	46	P	P	18 54 06.2	-0.5
STU	Stuttgart	80.10	332	P	P	18 54 07.1	+0.4
STU				pmax	pmax		
	comp=Z,87nm,1.1s						
STU	Stuttgart	80.10	332	P	P	18 54 07.1	+0.4
STU				IAmb	IAmb	18 54 08.3	
	comp=Z,87nm,1.1s						
STU	Stuttgart	80.10	332	eP	P	18 54 06.8	+0.2
	comp=Z,152nm,1.5s,baz=33,slow=5.6						
SCIA	State Center	80.11	40	P	P	18 54 07.1	+0.3
	baz=321,SNR=5.2						
SCIA	State Center	80.11	40	P	P	18 54 06.9	0.0
LLW	Llanuwychllyn	80.15	341	eP	P	18 54 07.5	+0.7
SNF	Seneffe	80.16	336	dP	P	18 54 06.9	0.0
	comp=Z,52nm,1.4s						
SNF				dpP	pP	18 54 38.2	-1.0
NVR	Nevrokopi	80.17	319	P	P	18 54 06.9	-0.3
RCHB	Rochefort	80.18	335	dP	P	18 54 07.1	+0.1
	comp=Z,47nm,1.3s						
BMRD	Maredsous	80.19	335	dP	P	18 54 07.2	+0.1
	comp=Z,70nm,1.3s						
BBLS	Lazići	80.22	323	⇑iP	P	18 54 08.2	+0.7
HAPS	Han Pijesak,Bl	80.24	324	eP	P	18 54 07.1	-0.5
MMAI	Mount Meron Ar	80.26	307	P	P	18 54 09.2	+1.3
	comp=Z,29nm,0.7s,baz=39,slow=5.4,SNR=29						
MMAI				pP	pP	18 54 40.0	-0.3
	comp=Z,42nm,1.0s,baz=31,slow=6.9,SNR=7.4						
CRES	Cresnjev	80.27	327	⇑iP	P	18 54 07.6	0.0
NWAO	Narrogin (SRO)	80.30	203	P	P	18 54 08.7	+1.0
NWAO				pmax	pmax		
	comp=Z,28nm,0.7s						
NWAO	Narrogin (SRO)	80.30	203	P	P	18 54 08.7	+1.0
NWAO	Narrogin (SRO)	80.30	203	P	P	18 54 08.7	+1.0
MYKA	Terra Mystica	80.31	328	i P	P	18 54 08.3	+0.4
	comp=Z,61nm,1.4s,SNR=10						
WLF	Walferdange	80.33	334	dP	P	18 54 08.6	+0.8
	comp=Z,46nm,1.7s						
WLF	Walferdange	80.33	334	P	P	18 54 08.5	+0.6
WLF				pmax	pmax		
	comp=Z,88nm,1.4s						
WLF	Walferdange	80.33	334	P	P	18 54 08.5	+0.6
WLF				IAmb	IAmb	18 54 10.7	
	comp=Z,88nm,1.4s						
WLF	Walferdange	80.33	334	eP	P	18 54 09.9	+2.0
	comp=Z,114nm,1.5s,baz=33,slow=5.6						
E46A	Sault Ste Mari	80.33	32	P	P	18 54 07.4	-0.5
E46A				IAmb	IAmb	18 54 08.5	
	comp=Z,131nm,1.4s						
DSB	Dublin	80.38	343	P	P	18 54 08.3	+0.3
DSB				IAmb	IAmb	18 54 09.8	
	comp=Z,102nm,1.2s						
DOU	Dourbes	80.43	335	dP	P	18 54 08.3	-0.1
BLY	Banja Luka	80.45	325	⇑iP	P	18 54 08.7	+0.1
SJES	Sjenica	80.45	323	⇑iP	P	18 54 09.6	+0.8
LJU	Ljubljana	80.45	327	i P	P	18 54 08.6	0.0
LJU	Ljubljana	80.45	327	⇑iP	P	18 54 08.4	-0.2
WATA	Walderalm	80.49	330	i P	P	18 54 09.8	+0.8
	SNR=16						
WTTA	Wattenberg	80.53	330	i P	P	18 54 10.0	+0.8
	SNR=17						
ELL	Elmali	80.61	312	P	P	18 54 10.4	+0.6
ELL				pmax	pmax		
	comp=Z,122nm,1.0s						
ELL	Elmali	80.61	312	P	P	18 54 10.4	+0.6
ELL				IAmb	IAmb	18 54 11.1	
	comp=Z,122nm,1.0s						
BOJS	Bojanci	80.61	327	i P	P	18 54 09.6	+0.1
ZOU	Zoufplan	80.62	329	P	P	18 54 09.4	-0.4
KSU1	Kansas State U	80.63	44	P	P	18 54 09.1	-0.6
	baz=320,SNR=5.3						
KSU1	Kansas State U	80.63	44	P	P	18 54 09.1	-0.6
ABTA	Abfaltersbach	80.64	329	i P	P	18 54 09.9	+0.3
	SNR=7.1						
LSQQ	Lebel-sur-Quev	80.64	26	P	P	18 54 09.4	-0.2
	baz=331						
MOTA	Moosalm	80.65	330	i P	P	18 54 10.5	+0.7
	SNR=19						
RETA	Reutte	80.65	330	i P	P	18 54 10.9	+1.2
	SNR=12						
JFWS	Jewell Farm	80.67	38	P	P	18 54 09.0	-0.8
	baz=323						
SQTA	Sankt Quirin	80.72	330	i P	P	18 54 10.9	+0.8
	SNR=11						
UBR	Ueberruh	80.72	331	eP	P	18 54 10.3	+0.2
	comp=Z,101nm,1.9s,baz=33,slow=5.6						
CEY	Cerknica	80.75	327	i P	P	18 54 10.3	+0.1
CEY				epP	pP	18 54 44.8	+2.3
CEY	Cerknica	80.75	327	⇑iP	P	18 54 10.1	-0.1
STRD	Stroud	80.78	340	eP	P	18 54 10.8	+0.6
STRD				IAmb	IAmb	18 54 11.8	
	comp=Z,290nm,1.0s						
BFO	Black Forest	80.78	332	P	P	18 54 10.5	+0.2
BFO				pmax	pmax		
	comp=Z,112nm,1.5s						
BFO	Black Forest	80.78	332	P	P	18 54 10.5	+0.2
BFO				IAmb	IAmb	18 54 11.9	
	comp=Z,112nm,1.5s						
BFO	Black Forest	80.78	332	eP	P	18 54 10.4	+0.1
	comp=Z,156nm,1.7s,baz=33,slow=5.6						
MCH1	Michaelchurch	80.78	341	eP	P	18 54 10.6	+0.4
MCH1				IAmb	IAmb	18 54 11.8	
	comp=Z,155nm,1.0s						
SKO	Skopje	80.82	321	i P	P	18 54 12.2	+1.6
MONM	Monmouth	80.88	340	eP	P	18 54 10.7	0.0
MONM				IAmb	IAmb	18 54 12.9	
	comp=Z,198nm,1.2s						
L40A	Anamosa	80.91	39	P	P	18 54 10.7	-0.4
L40A				IAmb	IAmb	18 54 11.7	
	comp=Z,48nm,0.9s						
SWN1	Swindon	80.93	340	eP	P	18 54 11.6	+0.6
SWN1				IAmb	IAmb	18 54 13.3	
	comp=Z,431nm,1.2s						
WOL	Wolverton	80.96	339	eP	P	18 54 11.7	+0.5
UPM	Unac-Piva	80.97	323	eP	P	18 54 11.8	+0.2
N38A	Joes South For	80.97	41	P	P	18 54 11.4	-0.1
N38A				IAmb	IAmb	18 54 12.6	
	comp=Z,112nm,0.9s						
TRI	Trieste	81.03	328	P	P	18 54 11.2	-0.4
TRI				pmax	pmax		
	comp=Z,84nm,1.2s						
TRI	Trieste	81.03	328	P	P	18 54 11.2	-0.4
TRI				IAmb	IAmb	18 54 12.2	
	comp=Z,84nm,1.2s						
FETA	Feichten	81.06	330	i P	P	18 54 12.8	+0.8
	SNR=9.5						
RIY	Rijeka	81.07	327	⇑iP	P	18 54 11.4	-0.5
SKDS	Skadanscina	81.07	327	i P	P	18 54 11.3	-0.6
SKDS				i pP	pP	18 54 46.0	+1.7
AMTX	Amarillo	81.11	50	P	P	18 54 13.1	+0.6
	baz=318						
AMTX	Amarillo	81.11	50	P	P	18 54 13.0	+0.6
PLG	Polygyros	81.13	319	P	P	18 54 11.5	-0.8
DAVA	Damuels	81.14	331	i P	P	18 54 13.1	+0.7
	SNR=7.9						
MSTX	Muleshoe	81.17	51	P	P	18 54 12.9	+0.2
	baz=317,SNR=7.6						
UDBI	Udbina	81.21	326	P	P	18 54 12.6	-0.1
RSBS	Rosebush, Pemb	81.23	342	IAmb	IAmb	18 54 13.1	
	comp=Z,285nm,1.2s						
RSBS				eP	P	18 54 13.2	+0.6
ECH	Echery	81.27	333	P	P	18 54 13.1	+0.2
ECH				pmax	pmax		
	comp=Z,46nm,1.0s						
ECH	Echery	81.27	333	P	P	18 54 13.1	+0.2
MNTX	Cornudas Mount	81.31	54	P	P	18 54 14.2	+0.8
	baz=316,SNR=33						
MNTX	Cornudas Mount	81.31	54	P	P	18 54 14.0	+0.6
BRY	Bratogost	81.37	323	⇑iP	P	18 54 13.4	-0.3
KIJV	Kijevo	81.38	325	P	P	18 54 14.1	+0.5
PDG	Podgorica	81.43	323	⇑iP	P	18 54 14.0	+0.2
PDG	Podgorica	81.43	323	P	P	18 54 14.0	+0.2
PDG				IAmb	IAmb	18 54 15.3	
	comp=Z,117nm,1.0s						
U32A	Winter Ranch,	81.45	47	P	P	18 54 14.6	+0.5
GLMI	Grayling	81.49	33	P	P	18 54 14.1	0.0
	baz=326						
GLMI	Grayling	81.49	33	P	P	18 54 14.4	+0.3
PHP	Peshkopia	81.50	321	P	P	18 54 13.5	-0.8
GDL2	Guadalupe Moun	81.54	53	P	P	18 54 15.6	+0.8
NVLJ	Novalja	81.54	326	P	P	18 54 13.3	-1.1
CTI	Castel Tesino	81.55	329	P	P	18 54 14.1	-0.4
CTI				pmax	pmax		
	comp=Z,74nm,1.2s						
CTI	Castel Tesino	81.55	329	P	P	18 54 14.1	-0.4
CTI				IAmb	IAmb	18 54 15.0	
	comp=Z,74nm,1.2s						
DAVOX	Davos/Dischmat	81.57	331	P	P	18 54 15.4	+0.7
	comp=Z,12nm,0.6s,baz=20,slow=3.0,SNR=18						
TREB	Trebinje	81.60	323	eP	P	18 54 14.4	-0.3
L42A	Oliver, Polo	81.66	38	P	P	18 54 14.5	-0.6
DRME	Dracevica, Mon	81.66	322	⇑iP	P	18 54 15.5	+0.4
MAKA	Makarska	81.71	324	P	P	18 54 14.9	-0.4
P38A	Dawn	81.74	42	P	P	18 54 15.7	+0.2
P38A				IAmb	IAmb	18 54 16.8	
	comp=Z,85nm,1.1s						
HCY	Herceg Novi	81.75	323	⇑iP	P	18 54 15.0	-0.6
STON	Ston	81.75	324	P	P	18 54 14.9	-0.6
STON	Ston	81.75	324	⇑iP	P	18 54 14.5	-1.0
KAN13	South Haven SW	81.77	46	P	P	18 54 15.7	-0.1
MORI	Morici	81.78	326	P	P	18 54 15.5	-0.1
OHR	Ohrid	81.79	321	i P	P	18 54 16.5	+0.7
LIT	Litokhoron	81.80	319	P	P	18 54 15.4	-0.4
LIT				pmax	pmax		
	comp=Z,24nm,0.9s						
LIT	Litokhoron	81.80	319	P	P	18 54 15.4	-0.4
CROK	Carrier	81.89	46	P	P	18 54 16.6	+0.2
DUGI	Dugi Otok	81.94	326	P	P	18 54 16.4	-0.1
ZIRJ	Zirje	81.98	325	P	P	18 54 16.5	-0.2
TUE	Stuetta	82.02	331	P	P	18 54 17.5	+0.3
TIR	Tirane	82.03	322	⇑P	P	18 54 17.5	+0.5
TIR	Tirane	82.03	322	P	P	18 54 17.5	+0.5
TIR				pmax	pmax		
	comp=Z,286nm,1.5s						
TIR	Tirane	82.03	322	P	P	18 54 17.5	+0.5
HVAR	Hvar	82.04	325	P	P	18 54 16.4	-0.6
TEOL	Teolo	82.12	329	P	P	18 54 17.2	-0.3
TEOL				IAmb	IAmb	18 54 18.6	
	comp=Z,64nm,0.9s						
N41A	Harden Midland	82.15	39	P	P	18 54 17.4	-0.3
N41A				IAmb	IAmb	18 54 18.7	
	comp=Z,103nm,1.0s						
KYMI	Kymi, Euboea I	82.17	317	P	P	18 54 24.7	+6.9
L44A	Lake County Fo	82.29	37	P	P	18 54 17.8	-0.6
	baz=324						
L44A	Lake County Fo	82.29	37	P	P	18 54 18.8	+0.5
L44A				IAmb	IAmb	18 54 19.1	
	comp=Z,121nm,1.1s						
SALO	Salr	82.33	330	P	P	18 54 18.6	+0.1
T35A	Sooner Cattle	82.35	45	P	P	18 54 19.4	+0.6
T35A				IAmb	IAmb	18 54 20.3	
	comp=Z,102nm,1.1s						
P40A	Paris	82.53	41	P	P	18 54 19.7	+0.1
P40A				IAmb	IAmb	18 54 21.0	
	comp=Z,79nm,1.1s						
HQIL	Hanson Quary C	82.62	37	P	P	18 54 20.0	0.0
HQIL				IAmb	IAmb	18 54 21.0	
	comp=Z,81nm,1.0s						
ATAL	Atalanti	82.65	318	P	P	18 54 19.0	-1.3
LKR	Lokris	82.69	318	P	P	18 54 19.3	-1.2
AXAR	Agios Charalam	82.77	318	P	P	18 54 19.6	-1.3
WMOK	Wichita Mounta	82.80	48	P	P	18 54 20.9	-0.3
WMOK				pmax	pmax		
	comp=Z,33nm,1.1s						
WMOK	Wichita Mounta	82.80	48	P	P	18 54 21.5	+0.3
	baz=319,SNR=13						

WMOK	Wichita Mounta	82.80	48	P	P	18 54 20.9	-0.3
QUOK	Quay	82.81	46	P	P	18 54 21.6	+0.4
QUOK				IAmb	IAmb	18 54 22.6	
	comp=Z,68nm,1.1s						
SENIN	Lac Senin/Sane	82.83	332	P	P	18 54 21.8	+0.4
M44A	Midewin, Midew	82.87	37	P	P	18 54 21.4	0.0
OK025	Westminster Rd	82.93	47	P	P	18 54 22.2	+0.4
OK025				IAmb	IAmb	18 54 23.3	
	comp=Z,97nm,0.9s						
EIL	Elat	82.94	304	P	P	18 54 23.2	+1.3
	comp=Z,24nm,0.8s,baz=153,slow=0.8,SNR=14						
EIL				pP	pP	18 54 53.8	-0.7
	comp=Z,21nm,1.0s,baz=52,slow=4.3,SNR=3.5						
ALGO	Algonquin Park	82.98	29	P	P	18 54 21.2	-0.7
	baz=330						
CCA1	Carnmenellis	82.99	341	*e*P	P	18 54 22.5	+0.7
CCA1				IAmb	IAmb	18 54 23.4	
	comp=Z,186nm,1.0s						
OKCFA	Oklahoma City	83.00	47	P	P	18 54 22.9	+0.7
OKCFA				IAmb	IAmb	18 54 23.8	
	comp=Z,97nm,1.0s						
DSF	Desfina	83.11	318	P	P	18 54 20.4	-2.3
L46A	Eue Claire	83.12	36	P	P	18 54 22.7	+0.1
FNO	Franklin	83.15	47	P	P	18 54 23.6	+0.7
E55A	Montcerf-Lytto	83.22	27	P	P	18 54 22.5	-0.5
	baz=332						
ZCCA	Zocca	83.24	329	P	P	18 54 24.0	+0.7
ZCCA				IAmb	IAmb	18 54 37.1	
	comp=Z,118nm,1.2s						
ANX	Ano Chora	83.26	319	P	P	18 54 22.4	-1.1
IGT	Igoumenitsa	83.26	320	P	P	18 54 21.3	-2.1
KALE	Kalithea	83.31	318	P	P	18 54 22.1	-1.7
SERG	Sergoula	83.33	318	P	P	18 54 21.3	-2.5
S39A	Bolivar	83.36	43	P	P	18 54 23.4	-0.5
S39A				IAmb	IAmb	18 54 24.4	
	comp=Z,44nm,0.9s						
EFP	Efpalio	83.39	318	P	P	18 54 23.0	-1.1
R40A	Maddies Statio	83.40	42	P	P	18 54 24.0	-0.2
R40A				IAmb	IAmb	18 54 24.6	
	comp=Z,35nm,0.8s						
G54A	Lake Saint Pet	83.45	29	P	P	18 54 23.5	-0.8
	baz=330						
E56A	St. Veronique	83.48	26	P	P	18 54 24.0	-0.3
	baz=332,SNR=7.5						
TUL1	Leonard	83.49	45	P	P	18 54 25.0	+0.4
	baz=321,SNR=9.0						
SGRT	San Giovanni R	83.50	324	P	P	18 54 24.7	-0.1
W35A	Tecumseh	83.50	47	P	P	18 54 24.9	+0.1
MURB	Monte Urbino	83.56	327	P	P	18 54 26.6	+1.6
KLV	Kalavryta, Ach	83.58	318	P	P	18 54 23.3	-1.9
PDO	Prodromos	83.61	319	P	P	18 54 24.1	-1.1
P43A	Skaggs, Pawnee	83.62	39	P	P	18 54 25.4	+0.1
P43A				IAmb	IAmb	18 54 26.2	
	comp=Z,42nm,0.8s						
VLC	Villacollemand	83.62	329	P	P	18 54 26.2	+1.0
VLC				IAmb	IAmb	18 54 27.2	
	comp=Z,38nm,0.9s						
D58A	Chemin du LacG	83.66	25	P	P	18 54 25.0	-0.4
	baz=334						
TSLK	Tsoukalades, L	83.67	319	P	P	18 54 25.0	-0.5
SCTE	Santa Cesarea	83.68	322	P	P	18 54 25.9	+0.4
O44A	Mansfield	83.69	38	P	P	18 54 25.5	-0.1
O44A				IAmb	IAmb	18 54 25.9	
	comp=Z,37nm,0.9s						
NRCA	Norcia	83.69	327	P	P	18 54 26.2	+0.5
LKD2	Lefkada island	83.70	319	P	P	18 54 24.7	-1.0
I51A	Listowel	83.74	32	P	P	18 54 25.5	-0.3
	baz=328						
NYDR	Nydri-Lefkada	83.74	319	P	P	18 54 25.0	-0.9
U38A	Gravette	83.80	44	P	P	18 54 26.2	-0.1
MSSA	Maissana	83.81	330	P	P	18 54 25.7	-0.5
MSSA				IAmb	IAmb	18 54 26.9	
	comp=Z,62nm,1.1s						
EVGI	Lefkada island	83.84	319	P	P	18 54 25.6	-0.8
OSSC	Osservatorio P	83.84	328	P	P	18 54 26.6	+0.3
OSSC				IAmb	IAmb	18 54 27.3	
	comp=Z,66nm,1.1s						
DRO	Drossia	83.86	318	P	P	18 54 25.9	-0.7
RLS	Riolos of Patr	83.90	319	P	P	18 54 26.7	0.0
TRQ	Mont Tremblant	83.92	26	P	P	18 54 26.2	-0.5
ABTX	Abilene, Hawle	83.92	50	P	P	18 54 27.3	+0.4
	baz=319,SNR=6.2						
L48A	N Adams	83.96	35	P	P	18 54 26.9	0.0
AQU	L'Aquila	83.97	326	P	P	18 54 27.6	+0.5
AQU				pmax	pmax		
	comp=Z,61nm,1.0s						
AQU	L'Aquila	83.97	326	⇑*i*P	P	18 54 27.5	+0.5
AQU	L'Aquila	83.97	326	P	P	18 54 27.6	+0.5
AQU				IAmb	IAmb	18 54 29.0	
	comp=Z,61nm,1.0s						
AAM	Ann Arbor	83.98	34	P	P	18 54 27.4	+0.4
AAM				pmax	pmax		
	comp=Z,70nm,1.1s						
AAM	Ann Arbor	83.98	34	P	P	18 54 27.2	+0.2
	baz=327						
AAM	Ann Arbor	83.98	34	P	P	18 54 27.4	+0.4
AAM				IAmb	IAmb	18 54 28.4	
	comp=Z,70nm,1.1s						
H53A	Bobcaygeon	83.98	30	P	P	18 54 26.5	-0.5
	baz=330,SNR=5.2						
K50A	Casco	83.99	33	P	P	18 54 27.5	+0.4
K50A				IAmb	IAmb	18 54 28.4	
	comp=Z,76nm,1.0s						
MATE	Matera	84.00	323	⇑P	P	18 54 27.7	+0.6
FSK	Fiskardo	84.01	319	P	P	18 54 25.6	-1.6
TX31	Lajitas Ar. Si	84.04	55	P	P	18 54 28.3	+0.6
TX31				IAmb	IAmb	18 54 29.5	
	comp=Z,100nm,1.0s						
TX32	Lajitas Array	84.04	55	P	P	18 54 28.1	+0.4
TXAR	Lajitas Array	84.04	55	P	P	18 54 28.2	+0.5
	comp=Z,22nm,0.9s,baz=294,slow=3.8,SNR=172						
TXAR				pP	pP	18 54 59.8	-0.6
	comp=Z,5.1nm,0.7s,baz=293,slow=3.1,SNR=3.1						
INTR	Introdacqua	84.06	326	P	P	18 54 27.4	-0.1
INTR				IAmb	IAmb	18 54 30.0	
	comp=Z,114nm,1.4s						
D59A	Saint-Raymond	84.06	24	P	P	18 54 26.8	-0.5
	baz=334						
CCM	Cathedral Cave	84.08	41	P	P	18 54 27.4	-0.2
CCM				pmax	pmax		
	comp=Z,65nm,1.0s						
CCM	Cathedral Cave	84.08	41	P	P	18 54 27.7	+0.1
	baz=323						
CCM	Cathedral Cave	84.08	41	P	P	18 54 27.4	-0.2
CCM				IAmb	IAmb	18 54 28.7	
	comp=Z,65nm,0.9s						
SLM	Saint Louis	84.09	40	P	P	18 54 27.9	+0.2
SLM				pmax	pmax		
	comp=Z,63nm,1.0s						
SLM	Saint Louis	84.09	40		P	18 54 27.9	+0.2
SLM				IAmb	IAmb	18 54 28.8	
	comp=Z,63nm,0.9s						
SFIN	Lafayette	84.11	37	P	P	18 54 27.5	-0.2
	baz=325						
PLVO	Plevna	84.11	28	P	P	18 54 27.4	-0.3
PLVO				IAmb	IAmb	18 54 28.2	
	comp=Z,68nm,0.9s						
HHAR	Hobbs	84.15	44	P	P	18 54 27.8	-0.2
BNI	Bardonecchia	84.19	332	P	P	18 54 28.6	+0.4
BNI				pmax	pmax		
	comp=Z,29nm,1.1s						
BNI	Bardonecchia	84.19	332	P	P	18 54 28.6	+0.4
E58A	La Victoria	84.19	25	P	P	18 54 27.7	-0.3
	baz=333,SNR=10						
SLBS	Sierra La Lagu	84.20	63	P	P	18 54 27.8	-0.7
F57A	Harrington	84.23	27	P	P	18 54 27.6	-0.7
	baz=332						
KEF4	Livadi, Kephal	84.24	319	P	P	18 54 28.1	-0.3
MGMO	Mountain Grove	84.30	42	P	P	18 54 28.3	-0.5
N47A	Urbana	84.31	36	P	P	18 54 28.4	-0.3
N47A				IAmb	IAmb	18 54 29.5	
	comp=Z,96nm,1.1s						
IDI	Anoyia	84.36	315	P	P	18 54 28.7	-0.4
	comp=Z,33nm,0.4s,baz=45,slow=8.8,SNR=42						
IDI				pP	pP	18 55 02.6	+0.8
	comp=Z,22nm,0.6s,baz=30,slow=6.5,SNR=2.4						
IDI	Anoyia	84.36	315	P	P	18 54 28.5	-0.7
IDI				IAmb	IAmb	18 54 33.6	
	comp=Z,49nm,0.9s						
D61A	St Aubert, Com	84.36	23	P	P	18 54 28.8	0.0
	baz=335,SNR=5.7						
ITM	Ithomi	84.37	318	P	P	18 54 27.9	-1.2
ITM	Ithomi	84.37	318	P	P	18 54 28.9	-0.2
DELO	Deloro Mine	84.38	29	P	P	18 54 28.7	-0.3
DELO				IAmb	IAmb	18 54 29.7	
	comp=Z,66nm,1.0s						
LATE	Laterza	84.39	327	P	P	18 54 29.1	-0.1
D60A	Saint Jean D'O	84.41	24	P	P	18 54 28.7	-0.4
	baz=335,SNR=13						
Q44A	Meyer Farm, Va	84.44	39	P	P	18 54 29.5	0.0
Q44A				IAmb	IAmb	18 54 30.6	
	comp=Z,75nm,1.1s						
F58A	St-Lin Laurent	84.47	26	P	P	18 54 29.2	-0.2
	baz=333						
FVM	French Village	84.53	41	P	P	18 54 30.0	+0.1
FVM				pmax	pmax		
	comp=Z,43nm,1.2s						
FVM	French Village	84.53	41	P	P	18 54 30.0	+0.1
HPIG		84.58	58	P	P	18 54 30.7	+0.2
PAOL	Paolisi	84.60	325	P	P	18 54 30.1	-0.1
PAOL				IAmb	IAmb	18 54 31.0	
	comp=Z,46nm,1.1s						
SIVA	Sivas	84.61	315	P	P	18 54 30.4	+0.1
U40A	Yellville	84.64	43	P	P	18 54 30.2	-0.3
	baz=322,SNR=31						
U40A	Yellville	84.64	43	P	P	18 54 30.2	-0.3
U40A				IAmb	IAmb	18 54 31.5	
	comp=Z,95nm,1.1s						
P46A	Rosedale	84.68	38	P	P	18 54 30.6	0.0
P46A				IAmb	IAmb	18 54 31.8	
	comp=Z,86nm,0.9s						
PYL	PYLOS	84.68	318	P	P	18 54 28.7	-2.0
Z35A	Perchaven, San	84.69	48	P	P	18 54 31.0	+0.2
SSB	Saint Sauveur	84.71	333	P	P	18 54 31.0	+0.3
SSB				pmax	pmax		
	comp=Z,23nm,1.0s						
SSB	Saint Sauveur	84.71	333	P	P	18 54 31.0	+0.3
X37A	Clayton	84.73	46	P	P	18 54 31.0	+0.1
E60A	Ste Agathe de	84.75	24	P	P	18 54 30.4	-0.4
	baz=334,SNR=5.2						
G57A	Newington	84.76	27	P	P	18 54 30.4	-0.5
	baz=332,SNR=5.3						
F59A	Saint Guilaume	84.81	25	P	P	18 54 31.1	0.0
	baz=334,SNR=8.2						
N49A	Columbus Grove	84.91	35	P	P	18 54 31.7	-0.1
N49A				IAmb	IAmb	18 54 33.0	
	comp=Z,63nm,1.1s						
F60A	Warwick	84.96	25	P	P	18 54 31.7	-0.2
	baz=334						
E61A	Lac Etchemin	84.98	24	P	P	18 54 31.6	-0.4
	baz=335						
OLIL	Olney	85.00	39	P	P	18 54 32.1	-0.1
OLIL				IAmb	IAmb	18 54 33.6	
	comp=Z,54nm,0.9s						
G58A	Ormstown	85.03	27	P	P	18 54 31.9	-0.3
	baz=333,SNR=8.1						
W39A	Magazine	85.07	45	P	P	18 54 32.7	0.0
	baz=322,SNR=7.3						
W39A	Magazine	85.07	45	P	P	18 54 32.6	0.0
W39A				IAmb	IAmb	18 54 33.9	
	comp=Z,56nm,1.3s						
J54A	Appleton	85.09	30		P	18 54 32.6	0.0
J54A				IAmb	IAmb	18 54 33.5	
	comp=Z,74nm,0.9s						
D63A	Stockholm	85.10	22	P	P	18 54 32.5	0.0
	baz=337,SNR=5.1						
TIP	Timpagrande	85.18	322	⇑P	P	18 54 33.8	+0.6
TIP	Timpagrande	85.18	322	P	P	18 54 33.3	+0.1
TIP				IAmb	IAmb	18 54 34.9	
	comp=Z,135nm,1.4s						
F61A	St Evariste	85.24	24	P	P	18 54 33.5	+0.2
	baz=335,SNR=11						
S44A	Carbondale	85.31	40	P	P	18 54 34.3	+0.5
SIUC	Southern Illin	85.31	40	P	P	18 54 34.2	+0.4
LONY	Lake Ozonia	85.33	27	P	P	18 54 33.2	-0.6
	baz=332						
PPT	Papeete	85.36	119	LR	LR	19 31 26.5	
	comp=Z,118nm,19.0s,baz=344,slow=35						
FCAR	Ozark Folk Cen	85.36	43	P	P	18 54 34.0	-0.1
FCAR				IAmb	IAmb	18 54 34.9	
	comp=Z,40nm,0.8s						
G59A	Clarenceville	85.37	26	P	P	18 54 33.7	-0.3
	baz=333						
PPT2	Papeete2	85.38	119	*e*LR	LR	19 21 11.7	
	comp=Z,581nm,31.2s						
PPT2	Papeete2	85.38	119	*e*T	T	20 28 16.5	
	comp=Z,20nm,0.3s						
DRLN	Deer Lake	85.41	15	P	P	18 54 34.2	+0.1
BATG	Bathurst New B	85.41	21	P	P	18 54 34.8	+0.7
BATG				IAmb	IAmb	18 54 35.6	
	comp=Z,92nm,1.0s						
PAE	Paea	85.43	120	*e*T	T	20 28 19.9	
	comp=Z,4.0nm,0.3s						
JCT	Junction City	85.44	52	P	P	18 54 35.1	+0.5
JCT				pmax	pmax		
	comp=Z,48nm,1.1s						
JCT	Junction City	85.44	52	P	P	18 54 34.9	+0.3
	baz=319,SNR=8.8						
JCT	Junction City	85.44	52	P	P	18 54 35.1	+0.5
JCT				IAmb	IAmb	18 54 36.0	
	comp=Z,48nm,1.1s						
MOQ	Mont Orford	85.45	25	P	P	18 54 34.6	+0.1
PQI	Presque Isle	85.46	22	P	P	18 54 34.0	-0.3
PQI				IAmb	IAmb	18 54 34.6	
	comp=Z,46nm,1.1s						
O49A	Covington	85.46	36	P	P	18 54 34.5	0.0
PBMO	Poplar Bluff	85.49	41	P	P	18 54 34.9	+0.3
PBMO				IAmb	IAmb	18 54 36.1	
	comp=Z,85nm,1.1s						
TIAR	Tiarei	85.50	119	*e*T	T	20 28 23.7	
	comp=Z,6.9nm,0.3s						
M52A	Chesterland	85.54	33	P	P	18 54 35.4	+0.5
M52A				IAmb	IAmb	18 54 36.3	
	comp=Z,56nm,0.9s						
I57A	Carthage	85.57	28	P	P	18 54 34.4	-0.5
	baz=332						
E63A	Oxbow	85.57	22	P	P	18 54 34.6	-0.3
	baz=336						
E63A	Oxbow	85.57	22	P	P	18 54 34.8	-0.1
E63A				IAmb	IAmb	18 54 35.7	
	comp=Z,52nm,1.1s						
ERPA	Erie	85.58	32	P	P	18 54 35.1	0.0
	baz=329						
H59A	Cadyville	85.59	27	P	P	18 54 34.6	-0.5
	baz=333						
P48A	Milroy	85.60	37	P	P	18 54 35.1	-0.1
WHTX	Lake Whitney,	85.60	49	P	P	18 54 35.8	+0.4
	baz=320,SNR=7.0						
G60A	Masonville	85.62	25	P	P	18 54 34.3	-0.9
	baz=334						
H58A	Gabriels	85.64	27	P	P	18 54 35.2	-0.1
	baz=333,SNR=6.9						
N51A	Ashland	85.66	34	P	P	18 54 35.6	+0.1
N51A				IAmb	IAmb	18 54 36.5	
	comp=Z,61nm,1.1s						
MIAR	Mount Ida	85.69	45	P	P	18 54 36.0	+0.3
MIAR				pmax	pmax		
	comp=Z,65nm,1.1s						
MIAR	Mount Ida	85.69	45	P	P	18 54 35.9	+0.2
	baz=322,SNR=20						
MIAR	Mount Ida	85.69	45	P	P	18 54 36.0	+0.3
MIAR				IAmb	IAmb	18 54 37.3	
	comp=Z,65nm,1.1s						
LCAR	Lake Charles	85.70	42	P	P	18 54 35.7	0.0
G61A	St-Isidore-de-	85.70	25	P	P	18 54 35.9	+0.3
	baz=334,SNR=11						
J56A	Wolcott	85.73	29	P	P	18 54 35.3	-0.4
	baz=331						
E64A	Bridgewater	85.74	22	P	P	18 54 35.6	-0.1
	baz=337,SNR=7.7						
WHAR	Wooly Hollow	85.76	44	P	P	18 54 36.2	+0.2
WHAR				IAmb	IAmb	18 54 37.2	
	comp=Z,82nm,0.9s						
P49A	Miami Univ. Ec	85.84	36	P	P	18 54 36.3	-0.1
	baz=326,SNR=9.3						
P49A	Miami Univ. Ec	85.84	36	P	P	18 54 35.9	-0.5
P49A				IAmb	IAmb	18 54 37.4	
	comp=Z,70nm,1.1s						
WVNY	West Valley, N	85.85	31	P	P	18 54 36.6	+0.2
WVNY				IAmb	IAmb	18 54 37.5	
	comp=Z,99nm,1.1s						
W41B	Gary Mavity, V	85.87	44	P	P	18 54 36.7	+0.1
	baz=322,SNR=11						
M53A	WI Miller and	85.89	33	P	P	18 54 36.9	+0.2
	baz=329,SNR=5.2						
M53A	WI Miller and	85.89	33	P	P	18 54 36.8	+0.2
PARMO	Parma	85.90	41	P	P	18 54 37.5	+0.8
Z38A	Mt. Pleasant	85.96	47	P	P	18 54 37.4	+0.4
Z38A				IAmb	IAmb	18 54 38.5	
	comp=Z,69nm,1.0s						
ACSO	Alum Creek Sta	85.99	35	P	P	18 54 37.1	0.0
	baz=327,SNR=7.6						
ACSO	Alum Creek Sta	85.99	35	P	P	18 54 37.3	+0.2
ACSO				IAmb	IAmb	18 54 38.4	
	comp=Z,73nm,1.1s						
H60A	Morristown	85.99	26	P	P	18 54 37.1	0.0
	baz=334						
I58A	Old Forge	86.02	28	P	P	18 54 36.6	-0.6
	baz=332						
NCB	Newcomb	86.02	27	P	P	18 54 37.2	0.0
G62A	West of Eustis	86.06	24	P	P	18 54 37.6	+0.2
	baz=335						
G62A	West of Eustis	86.06	24	P	P	18 54 37.9	+0.5
G62A				IAmb	IAmb	18 54 39.1	
	comp=Z,38nm,0.9s						
K56A	Middlesex	86.07	30	P	P	18 54 37.3	-0.2
	baz=331,SNR=5.4						
F64A	Sherman	86.11	23	P	P	18 54 37.4	-0.2
	baz=337						
F64A	Sherman	86.11	23	P	P	18 54 37.5	0.0
F64A				IAmb	IAmb	18 54 39.3	
	comp=Z,62nm,1.2s						
X40A	Basin Creek Fa	86.11	44	P	P	18 54 38.2	+0.4
	baz=322,SNR=13						
X40A	Basin Creek Fa	86.11	44	P	P	18 54 38.0	+0.2
X40A				IAmb	IAmb	18 54 39.4	
	comp=Z,48nm,1.1s						
T45A	Paducah	86.14	40	P	P	18 54 38.2	+0.3
T45A				IAmb	IAmb	18 54 39.4	
	comp=Z,44nm,0.8s						
VT1	Waterbury	86.18	26	P	P	18 54 38.3	+0.3
VT1				IAmb	IAmb	18 54 39.4	
	comp=Z,81nm,1.2s						
J58A	Remsen	86.20	28	P	P	18 54 37.8	-0.3
	baz=332,SNR=5.6						
J58A	Remsen	86.20	28	P	P	18 54 37.9	-0.3
J58A				IAmb	IAmb	18 54 38.9	
	comp=Z,81nm,1.1s						
M54A	Oil Creek Stat	86.23	32	P	P	18 54 38.4	+0.2
	baz=329,SNR=5.7						
M54A	Oil Creek Stat	86.23	32	P	P	18 54 38.2	0.0
M54A				IAmb	IAmb	18 54 39.1	
	comp=Z,45nm,0.9s						
WCI	Wyandotte Cave	86.23	38	P	P	18 54 38.4	+0.1
WCI				pmax	pmax		
	comp=Z,79nm,1.5s						
WCI	Wyandotte Cave	86.23	38	P	P	18 54 38.4	+0.1
	baz=326						
WCI	Wyandotte Cave	86.23	38	P	P	18 54 38.4	+0.1
WCI				IAmb	IAmb	18 54 39.7	
	comp=Z,79nm,1.5s						
H61A	Lyndonville	86.26	25	P	P	18 54 38.6	+0.3
	baz=334,SNR=8.5						
K57A	Scipio Center	86.33	29	P	P	18 54 38.5	-0.2
	baz=331						
HBAR	Harrisburg	86.35	42	P	P	18 54 39.7	+0.8
N53A	Lisbon	86.37	33	P	P	18 54 39.2	+0.3
N53A				IAmb	IAmb	18 54 40.4	
	comp=Z,87nm,1.1s						
J59A	Piesco	86.38	28	P	P	18 54 38.7	-0.2
	baz=333						
J59A	Piesco	86.38	28	P	P	18 54 38.6	-0.4
PKME	Peaks-Kenny Pk	86.39	23	P	P	18 54 39.1	+0.2
	baz=336						
G63A	Kingsbury	86.43	24	P	P	18 54 39.5	+0.3
	baz=336						
I60A	Shoreham	86.44	27	P	P	18 54 39.4	+0.2
	baz=333						
435B	Jarrell	86.45	50	P	P	18 54 39.8	+0.3
	baz=320						
H62A	Milan	86.46	25	P	P	18 54 39.7	+0.4
	baz=335,SNR=9.4						
H62A	Milan	86.46	25	P	P	18 54 39.7	+0.4
L56A	Greenwood	86.47	30	P	P	18 54 39.3	-0.2
	baz=331,SNR=6.4						
L56A	Greenwood	86.47	30	P	P	18 54 39.3	-0.2
L56A				IAmb	IAmb	18 54 40.4	
	comp=Z,36nm,0.8s						
LBNH	Lisbon	86.52	26	P	P	18 54 39.8	+0.2
	baz=334						
G64A	Maxfield	86.55	23	P	P	18 54 39.9	+0.2
	baz=336,SNR=6.2						
MEH	Mehetia	86.55	119	*e*T	T	20 29 44.3	
	comp=Z,30nm,0.2s						
O52A	Adamsville	86.56	34	P	P	18 54 40.0	+0.1
O52A				IAmb	IAmb	18 54 41.1	
	comp=Z,64nm,1.1s						
N54A	Moraine State	86.57	32	P	P	18 54 40.4	+0.4
	baz=329,SNR=6.6						
N54A	Moraine State	86.57	32	P	P	18 54 40.2	+0.2
UTMT	University of	86.58	41	P	P	18 54 40.6	+0.5
P51A	Williamsport	86.59	35	P	P	18 54 39.7	-0.3
P51A				IAmb	IAmb	18 54 41.0	
	comp=Z,50nm,1.0s						
URZ	Urewera	86.59	155	P	P	18 54 41.1	+1.4
	comp=Z,11nm,0.8s,baz=321,slow=8.7,SNR=4.7						
WLAR	White Oak Lake	86.60	45	P	P	18 54 40.3	+0.1
M55A	Ridgway	86.60	31	P	P	18 54 40.2	+0.1
M55A				IAmb	IAmb	18 54 41.6	
	comp=Z,99nm,1.2s						
K58A	Earlville	86.60	29	P	P	18 54 40.1	0.0
	baz=332,SNR=6.9						
K58A	Earlville	86.60	29	P	P	18 54 40.0	-0.1
K58A				IAmb	IAmb	18 54 41.2	
	comp=Z,75nm,1.1s						
R49A	Shelbyville	86.67	37	P	P	18 54 40.9	+0.4
O53A	New Philadelph	86.69	34	P	P	18 54 40.8	+0.2
	baz=328,SNR=10						
O53A	New Philadelph	86.69	34	P	P	18 54 40.8	+0.2
O53A				IAmb	IAmb	18 54 41.9	
	comp=Z,71nm,1.0s						
I61A	Oroboro, Fairl	86.71	26	P	P	18 54 41.1	+0.5
	baz=334						
H63A	New Sharon	86.72	24	P	P	18 54 41.0	+0.4
	baz=336						
ACCN	Adirondack Com	86.73	27	P	P	18 54 40.4	-0.2
ACCN				IAmb	IAmb	18 54 41.8	
	comp=Z,37nm,1.1s						
M56A	Emporium	86.81	31	P	P	18 54 41.1	0.0
	baz=330						
M56A	Emporium	86.81	31	P	P	18 54 41.4	+0.2
M56A				IAmb	IAmb	18 54 41.7	
	comp=Z,35nm,0.9s						
P52A	Corning	86.84	34	P	P	18 54 41.1	-0.2
	baz=328						
P52A	Corning	86.84	34	P	P	18 54 40.9	-0.4
P52A				IAmb	IAmb	18 54 42.2	
	comp=Z,35nm,1.1s						
L57A	Andrews Acres	86.85	30	P	P	18 54 41.2	-0.1
	baz=331						
Q51A	Peebles	86.85	36	P	P	18 54 41.4	+0.1
K59A	Cooperstown	86.87	28	P	P	18 54 41.3	-0.1
	baz=332,SNR=6.1						
G65A	Princeton	86.93	22	P	P	18 54 41.8	+0.2
	baz=337						
G65A	Princeton	86.93	22	P	P	18 54 41.6	+0.1
G65A				IAmb	IAmb	18 54 43.0	
	comp=Z,41nm,1.1s						
J60A	Lant Hill Farm	86.93	27	P	P	18 54 41.7	0.0
	baz=333						
H64A	Troy	86.98	24	P	P	18 54 42.0	+0.2
	baz=336						
BINY	Binghamton	86.98	29	P	P	18 54 42.0	0.0
	baz=332						
I62A	Tamworth	87.03	25	P	P	18 54 42.5	+0.4
	baz=335						
R50A	Paris	87.05	37	P	P	18 54 42.4	+0.1
R50A				IAmb	IAmb	18 54 43.8	
	comp=Z,49nm,1.2s						
LMN	Caledonia Moun	87.06	20	P	P	18 54 42.5	+0.2
LMN				IAmb	IAmb	18 54 43.5	
	comp=Z,54nm,0.9s						
X43A	Marvell	87.07	43	P	P	18 54 42.9	+0.4
	baz=323						
O54A	Avella	87.08	33	P	P	18 54 43.2	+0.7
O54A				IAmb	IAmb	18 54 44.0	
	comp=Z,70nm,0.9s						
Z41A	Richland Creek	87.10	45	P	P	18 54 43.1	+0.5
	baz=322						
CCAR	Cane Creek	87.10	44	P	P	18 54 43.3	+0.7
I63A	Otisfield	87.11	25	P	P	18 54 43.3	+0.9
	baz=335,SNR=5.9						
I63A	Otisfield	87.11	25	P	P	18 54 43.4	+0.9
I63A				IAmb	IAmb	18 54 44.4	
	comp=Z,82nm,1.1s						
J61A	Chester	87.12	26	P	P	18 54 42.8	+0.3
	baz=334						

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L58A  Harry Jones Me   87.17  29  P       P        18 54 42.8  0.0
      baz=332,SNR=5.1
H65A  Eastbrook        87.20  23  P       P        18 54 43.0 +0.1
      baz=337
WVT   Waverly          87.24  40  P       P        18 54 43.5 +0.2
WVT                               pmax    pmax
      comp=Z,36nm,1.0s
WVT   Waverly          87.24  40  P       P        18 54 43.5 +0.2
      baz=325
WVT   Waverly          87.24  40  P       P        18 54 43.5 +0.2
WVT                               IAmb    IAmb     18 54 44.7
      comp=Z,36nm,1.0s
N56A  West Decatur     87.26  31  P       P        18 54 43.6 +0.3
      baz=330,SNR=6.9
P53A  Whipple          87.27  34  P       P        18 54 43.7 +0.3
P53A                              IAmb    IAmb     18 54 44.8
      comp=Z,86nm,1.3s
NATX  Nacogdoches      87.29  47  P       P        18 54 44.3 +0.7
      baz=321
NATX  Nacogdoches      87.29  47  P       P        18 54 44.0 +0.4
NATX                              IAmb    IAmb     18 54 45.7
      comp=Z,73nm,1.1s
L59A  Walton           87.32  29  P       P        18 54 43.6  0.0
      baz=332,SNR=7.8
L59A  Walton           87.32  29  P       P        18 54 43.6  0.0
L59A                              IAmb    IAmb     18 54 44.8
      comp=Z,66nm,1.1s
M57A  Sunshine Farm,   87.33  30  P       P        18 54 43.9 +0.3
      baz=331,SNR=7.8
M57A  Sunshine Farm,   87.33  30  P       P        18 54 44.0 +0.3
K60A  Five Rivers En   87.34  28  P       P        18 54 43.7 +0.1
      baz=333
Q52A  Bidwell          87.36  35  P       P        18 54 43.2 -0.6
Q52A                              IAmb    IAmb     18 54 44.3
      comp=Z,35nm,1.1s
H66A  Whiting          87.38  22  P       P        18 54 44.1 +0.3
      baz=337
W45A  Hickory Valley   87.39  42  P       P        18 54 44.6 +0.6
J62A  Henniker         87.47  26  P       P        18 54 44.7 +0.5
      baz=334
K61A  Williamstown     87.50  27  P       P        18 54 44.8 +0.4
      baz=333
I64A  Boothbay         87.51  24  P       P        18 54 44.8 +0.5
      baz=336
M58A  Price's Panora   87.54  30  P       P        18 54 44.8 +0.1
      baz=331,SNR=6.5
KSPA  Keystone Colle   87.62  29  P       P        18 54 45.0  0.0
KSPA                              IAmb    IAmb     18 54 46.0
      comp=Z,71nm,1.4s
J63A  Strafford        87.65  25  P       P        18 54 45.7 +0.6
      baz=335
N57A  Milroy           87.68  31  P       P        18 54 45.7 +0.4
      baz=331,SNR=15
O56A  Blue Knob Stat   87.72  32  P       P        18 54 45.9 +0.3
      baz=330,SNR=15
O56A  Blue Knob Stat   87.72  32  P       P        18 54 45.7 +0.1
MCWV  Mont Chateau     87.74  33  P       P        18 54 46.4 +0.8
      baz=329,SNR=5.2
MCWV  Mont Chateau     87.74  33  P       P        18 54 46.5 +0.9
MCWV                              IAmb    IAmb     18 54 47.5
      comp=Z,41nm,1.1s
Q53A  Leroy            87.75  34  P       P        18 54 46.2 +0.5
      baz=328,SNR=14
M59A  Waymart          87.76  29  P       P        18 54 45.8 +0.2
      baz=332
L60A  Shokan           87.78  28  P       P        18 54 46.1 +0.3
      baz=333
OXF   Oxford           87.80  42  P       P        18 54 45.9 -0.1
OXF   Oxford           87.80  42  P       P        18 54 46.0 +0.1
      baz=324,SNR=8.7
OXF   Oxford           87.80  42  P       P        18 54 45.9 -0.1
L61A  Hillsdale 1, H   87.83  28  P       P        18 54 46.2 +0.3
      baz=333
K62A  Royalston        87.84  26  P       P        18 54 46.4 +0.4
      baz=334
U49A  Red Boiling Sp   87.87  39  P       P        18 54 46.5 +0.2
U49A                              IAmb    IAmb     18 54 47.6
      comp=Z,52nm,0.9s
T50A  Nancy            87.88  38  P       P        18 54 46.4 +0.2
T50A                              IAmb    IAmb     18 54 47.6
      comp=Z,46nm,0.8s
L61B  Northampton      87.89  27  P       P        18 54 46.4 +0.2
      baz=334
S51A  Beattyville      87.91  37  P       P        18 54 46.6 +0.2
S51A                              IAmb    IAmb     18 54 47.6
      comp=Z,28nm,0.9s
N58A  Sunbury          87.91  30  P       P        18 54 46.6 +0.2
      baz=331,SNR=9.3
N58A  Sunbury          87.91  30  P       P        18 54 46.5 +0.2
Q54A  Coxs Mills       87.92  34  P       P        18 54 47.0 +0.5
CLTN  Cedars of Leba   87.97  39  P       P        18 54 47.3 +0.6
CLTN                              IAmb    IAmb     18 54 48.2
      comp=Z,37nm,1.0s
R53A  Hurricane        88.02  35  P       P        18 54 47.3 +0.3
R53A                              IAmb    IAmb     18 54 48.4
      comp=Z,48nm,1.2s
V48A  Smith Brothers   88.03  40  P       P        18 54 47.1 +0.1
V48A                              IAmb    IAmb     18 54 48.3
      comp=Z,51nm,1.1s
K63A  Dunstable        88.04  26  P       P        18 54 47.6 +0.7
      baz=335
PLAL  Pickwick Lake    88.06  41  P       P        18 54 47.2  0.0
O57A  Amberson         88.12  31  P       P        18 54 47.8 +0.4
      baz=331,SNR=16
N59A  State Game Lan   88.19  30  P       P        18 54 48.1 +0.4
      baz=332,SNR=14
N59A  State Game Lan   88.19  30  P       P        18 54 48.2 +0.5
HRV   Adam Dziewonsk   88.20  26  P       P        18 54 48.3 +0.6
      baz=334
M60A  Port Jervis      88.23  29  P       P        18 54 48.0 +0.2
      baz=333
143A  Socs Landing,    88.25  45  P       P        18 54 48.9 +0.8
143A                              IAmb    IAmb     18 54 50.1
      comp=Z,64nm,1.1s
Y45A  Yeager Farm, C   88.25  43  P       P        18 54 48.6 +0.5
L62A  Suffield         88.27  27  P       P        18 54 48.3 +0.3
      baz=334
P56A  Dayton Farm, R   88.27  32  P       P        18 54 48.6 +0.5
      baz=330,SNR=15
WES   Weston           88.38  26  P       P        18 54 48.7 +0.2
WES                               pmax    pmax
      comp=Z,51nm,1.0s
WES   Weston           88.38  26  P       P        18 54 48.7 +0.2
WES                               IAmb    IAmb     18 54 50.2
      comp=Z,51nm,1.0s
PAGS  Pennsylvania G   88.44  31  P       P        18 54 48.8  0.0
ODNJ  Ogdensburg       88.45  29  P       P        18 54 48.9  0.0
O58A  Lewisberry       88.46  31  P       P        18 54 49.1 +0.1
      baz=331,SNR=12
N60A  Cedar Hill Far   88.47  29  P       P        18 54 48.9  0.0
      baz=332
TRNY  Table Rock, Ra   88.53  28  P       P        18 54 49.8 +0.5
TRNY                              IAmb    IAmb     18 54 50.1
      comp=Z,51nm,0.9s
Q56A  Snyder Ridge,    88.53  33  P       P        18 54 49.4 +0.1
      baz=330,SNR=6.2
Q56A  Snyder Ridge,    88.53  33  P       P        18 54 49.9 +0.5
Q56A                              IAmb    IAmb     18 54 50.9
      comp=Z,49nm,1.0s
M61A  Granite Spring   88.54  28  P       P        18 54 49.4 +0.1
      baz=333,SNR=5.5
R54A  Victor           88.55  34  P       P        18 54 49.8 +0.3
      baz=329,SNR=7.4
O59A  Robesonia        88.57  30  P       P        18 54 49.6 +0.2
      baz=332,SNR=7.6
P57A  Homestead Farm   88.61  32  P       P        18 54 49.9 +0.2
      baz=330
P57A  Homestead Farm   88.61  32  P       P        18 54 49.8 +0.1
P57A                              IAmb    IAmb     18 54 51.1
      comp=Z,35nm,1.0s
LUPA  Lehigh Univers   88.61  30  P       P        18 54 50.0 +0.3
LUPA                              IAmb    IAmb     18 54 50.9
      comp=Z,63nm,1.2s
TUWZ  Tuamarina        88.63 159  P       P        18 54 50.2 +0.8
THZ   Tophouse         88.67 159  P       P        18 54 50.8 +1.2
THZ                               IAmb    IAmb     18 54 52.5
      comp=Z,34nm,0.8s
M62A  Hamden           88.72  27  P       P        18 54 50.2 +0.1
      baz=334
S54A  Dingess, Beckl   88.74  35  P       P        18 54 50.8 +0.4
      baz=328
S54A  Dingess, Beckl   88.74  35  P       P        18 54 50.6 +0.2
S54A                              IAmb    IAmb     18 54 51.8
      comp=Z,32nm,0.9s
L63A  North Scituate   88.76  26  P       P        18 54 50.8 +0.5
      baz=334
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PAL   Palisades        88.76  28  P       P        18 54 49.6 -0.7
PAL                               pmax    pmax
      comp=Z,31nm,0.8s
PAL   Palisades        88.76  28  P       P        18 54 50.7 +0.3
      baz=333
PAL   Palisades        88.76  28  P       P        18 54 49.6 -0.7
PAL                               IAmb    IAmb     18 54 51.2
      comp=Z,31nm,0.8s
MVL   Millersville     88.78  30  P       P        18 54 50.5 +0.1
MVL                               IAmb    IAmb     18 54 51.9
      comp=Z,49nm,1.1s
R55A  Marlinton        88.81  34  P       P        18 54 51.2 +0.4
      baz=329,SNR=9.1
R55A  Marlinton        88.81  34  P       P        18 54 51.4 +0.6
R55A                              IAmb    IAmb     18 54 52.4
      comp=Z,67nm,1.0s
BRNJ  Basking Ridge    88.82  29  P       P        18 54 50.9 +0.3
BRNJ                              IAmb    IAmb     18 54 52.3
      comp=Z,45nm,0.8s
Q57A  Strasburg        88.84  32  P       P        18 54 51.1 +0.3
      baz=330
TZTN  Tazewell         88.84  37  P       P        18 54 51.2 +0.3
      baz=327
TZTN  Tazewell         88.84  37  P       P        18 54 51.3 +0.4
TZTN                              IAmb    IAmb     18 54 52.3
      comp=Z,39nm,1.0s
O60A  Telford          88.84  30  P       P        18 54 51.0 +0.3
      baz=332
N61A  South Mountain   88.85  29  P       P        18 54 51.1 +0.3
      baz=333
BHW   Baring Head      88.86 158  P       P        18 54 51.7 +1.3
P58A  Pank, Wackersv   88.87  31  P       P        18 54 51.3 +0.4
      baz=331,SNR=9.1
SWET  Sewanee          88.87  39  P       P        18 54 50.8 -0.2
SWET                              IAmb    IAmb     18 54 52.0
      comp=Z,47nm,1.0s
BSWZ  Blackbirch Sta   88.88 159  P       P        18 54 51.6 +1.0
CPNY  Central Park     88.94  28  P       P        18 54 51.6 +0.4
CPNY                              IAmb    IAmb     18 54 52.6
      comp=Z,60nm,1.1s
L64A  Middleborough    88.94  26  P       P        18 54 51.5 +0.4
      baz=335,SNR=6.1
MSWZ  Moikau Station   88.97 158  P       P        18 54 52.4 +1.4
X48A  Hartselle        88.98  41  P       P        18 54 51.4 -0.1
X48A                              IAmb    IAmb     18 54 52.3
      comp=Z,34nm,1.1s
R56A  Bull Pasture M   88.99  33  P       P        18 54 51.8 +0.2
      baz=330
M63A  Gales Ferry      89.03  27  P       P        18 54 51.9 +0.3
      baz=334
VBMS  Vicksburg        89.09  44  P       P        18 54 50.4 -1.6
P59A  Jarrettsville    89.09  31  P       P        18 54 52.2 +0.3
      baz=332,SNR=6.5
V51A  Loudon           89.11  38  P       P        18 54 52.2 +0.1
V51A                              IAmb    IAmb     18 54 53.4
      comp=Z,43nm,1.0s
PLWZ  Palliser         89.11 158  P       P        18 54 53.3 +1.6
WUPA  West Chester U   89.11  30  P       P        18 54 52.2 +0.2
SDMD  Soldier's Deli   89.11  31  P       P        18 54 52.0  0.0
PSUB  Penn St. - Bra   89.17  30  P       P        18 54 52.2 -0.1
PSUB                              IAmb    IAmb     18 54 53.4
      comp=Z,59nm,1.1s
W50A  Signal Mountai   89.17  39  P       P        18 54 52.4 -0.1
Q58A  Fox Den Farm,    89.20  32  P       P        18 54 52.8 +0.3
      baz=331
P60A  Greenville       89.21  30  P       P        18 54 52.6 +0.1
      baz=332,SNR=7.2
P60A  Greenville       89.21  30  P       P        18 54 52.4  0.0
CPCT  Cooper Cave      89.32  38  P       P        18 54 53.5 +0.4
CPCT                              IAmb    IAmb     18 54 54.4
      comp=Z,38nm,1.0s
V52A  Sevierville      89.41  38  P       P        18 54 53.9 +0.4
V52A                              IAmb    IAmb     18 54 55.0
      comp=Z,52nm,1.1s
R57A  Stanardsville    89.44  33  P       P        18 54 54.1 +0.6
      baz=330,SNR=5.1
LTZ   Lake Taylor      89.47 160  P       P        18 54 55.0 +1.7
146A  Union            89.48  43  P       P        18 54 54.5 +0.6
TKL   Tuckaleechee C   89.48  38  P       P        18 54 54.4 +0.5
TKL                               pmax    pmax
      comp=Z,46nm,1.0s
TKL   Tuckaleechee C   89.48  38  P       P        18 54 54.4 +0.5
TKL                               IAmb    IAmb     18 54 55.2
      comp=Z,46nm,1.0s
Z47A  Carrollton       89.51  42  P       P        18 54 54.6 +0.6
Z47A                              IAmb    IAmb     18 54 55.3
      comp=Z,63nm,1.1s
S56A  Natural Bridge   89.56  34  P       P        18 54 54.5 +0.3
      baz=330
FPAL  Fort Paine       89.58  40  P       P        18 54 54.3 -0.1
FPAL                              IAmb    IAmb     18 54 55.4
      comp=Z,38nm,1.3s
BLA   Blacksburg       89.61  35  P       P        18 54 54.7 +0.2
BLA                               pmax    pmax
      comp=Z,53nm,1.1s
BLA   Blacksburg       89.61  35  P       P        18 54 54.8 +0.2
      baz=329,SNR=5.7
BLA   Blacksburg       89.61  35  P       P        18 54 54.7 +0.2
BLA                               IAmb    IAmb     18 54 55.9
      comp=Z,53nm,1.1s
FOZ   Fox Glacier      89.61 162  P       P        18 54 55.1 +1.3
FOZ                               IAmb    IAmb     18 54 57.0
      comp=Z,32nm,1.1s
U54A  Nelsons Funny    89.61  36  P       P        18 54 54.7 +0.2
      baz=328
U54A  Nelsons Funny    89.61  36  P       P        18 54 54.9 +0.4
U54A                              IAmb    IAmb     18 54 55.8
      comp=Z,31nm,1.0s
R58A  Rapidan          89.64  32  P       P        18 54 54.8 +0.3
      baz=330
S57A  Dark Hollow, R   89.73  33  P       P        18 54 55.4 +0.5
      baz=330
S57A  Dark Hollow, R   89.73  33  P       P        18 54 55.5 +0.5
TBI   Tubuai           89.75 123  eLR     LR       19 22 53.7
      comp=Z,153nm,37.5s
TBI   Tubuai           89.75 123  eT      T        20 33 43.6
      comp=Z,47nm,0.3s
Y49A  Blount Mountai   89.77  41  P       P        18 54 55.2  0.0
T56A  Rocky Mt         89.92  34  P       P        18 54 56.1 +0.2
      baz=329
OXZ   Oxford           89.93 161  P       P        18 54 57.3 +2.0
CBN   Corbin Frederi   89.97  32  P       P        18 54 56.2 +0.1
      baz=331
R58B  Mineral          89.98  32  P       P        18 54 56.3 +0.2
      baz=331
RPZ   Rata Peaks       90.06 161  P       P        18 54 57.6 +1.6
      comp=Z,15nm,0.7s,baz=163,slow=5.7,SNR=6.9
R59A  King George, V   90.07  32  P       P        18 54 57.4 +0.9
      baz=331
Q61A  Milford          90.14  30  P       P        18 54 57.7 +0.9
      baz=332
LRAL  Lakeview Retre   90.17  41  P       P        18 54 56.8 -0.2
      baz=325
JSRW  J. Sargeant Re   90.21  33  P       P        18 54 57.3 +0.1
S58A  Poland Farm, P   90.22  33  P       P        18 54 56.9 -0.3
      baz=330
T57A  Hurt             90.27  34  P       P        18 54 57.7 +0.2
      baz=330
T57A  Hurt             90.27  34  P       P        18 54 57.7 +0.2
U56A  King             90.36  35  P       P        18 54 58.1 +0.1
      baz=329
U56A  King             90.36  35  P       P        18 54 58.0 +0.1
U56A                              IAmb    IAmb     18 54 59.3
      comp=Z,30nm,1.1s
S59A  Mechanicsville   90.38  32  P       P        18 54 58.1 +0.1
      baz=331
BG3   Lake Jocassee    90.42  38  P       P        18 54 58.8 +0.5
BG3                               IAmb    IAmb     18 54 59.9
      comp=Z,26nm,1.1s
LBZ   Lake Benmore     90.50 162  P       P        18 54 59.2 +1.2
LBZ                               IAmb    IAmb     18 55 01.5
      comp=Z,46nm,0.9s
T58A  Grand View Acr   90.60  33  P       P        18 54 59.2 +0.1
      baz=330
S60A  Water View       90.68  32  P       P        18 54 59.9 +0.5
      baz=331
U57A  Blanch           90.72  34  P       P        18 54 59.8 +0.2
      baz=330
V56A  Mocksville       90.77  35  P       P        18 55 00.0 +0.2
      baz=329
Z51A  Franklin         90.80  40  P       P        18 55 00.2 +0.1
T59A  Double "B" Far   90.97  33  P       P        18 55 00.9 +0.2
      baz=331
V57A  Coltrane Farms   91.01  35  P       P        18 55 00.9  0.0
      baz=329
PAULI Pauline          91.05  37  P       P        18 55 01.4 +0.3
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S61A  Accomac          91.07  31  P       P        18 55 01.3 +0.1
      baz=332
U58A  Oxford           91.07  34  P       P        18 55 01.2  0.0
      baz=330,SNR=6.3
T60A  Surry            91.14  32  P       P        18 55 01.9 +0.4
      baz=331
PBRG  Braganca         91.20 339  eP      P        18 55 01.5 -0.3
      comp=Z,48nm,2.0s
KEST  Kesra            91.26 325  P       P        18 55 02.1 -0.1
      comp=Z,14nm,0.8s,baz=71,slow=1.4,SNR=14
KEST                              LR      LR       19 41 33.8
      comp=Z,160nm,19.1s,baz=342,slow=39
KEST  Kesra            91.26 325  P       P        18 55 02.3 +0.1
KEST                              IAmb    IAmb     18 55 03.3
      comp=Z,25nm,1.0s
HODGE Hodges           91.35  37  P       P        18 55 02.6  0.0
HODGE                             IAmb    IAmb     18 55 04.2
      comp=Z,35nm,1.2s
V58A  Windy Hill, Pi   91.36  34  P       P        18 55 03.3 +0.7
      baz=330
V58A  Windy Hill, Pi   91.36  34  P       P        18 55 02.9 +0.3
V58A                              IAmb    IAmb     18 55 14.6
      comp=Z,56nm,1.4s
U59A  Littleton        91.41  33  P       P        18 55 03.0 +0.2
      baz=331
PGAV  Gavieira, Arco   91.43 340  eP      P        18 55 01.9 -1.0
      comp=Z,44nm,1.5s
GOGA  Godfrey          91.50  39  P       P        18 55 03.6 +0.4
      baz=327
W57A  Gilead           91.55  35  P       P        18 55 03.5 +0.1
      baz=329
X56A  White Oak        91.67  36  P       P        18 55 04.2 +0.2
      baz=329
V59A  Middlesex        91.74  34  P       P        18 55 05.0 +0.7
      baz=330
POLO  Lamas de Olo     91.87 340  eP      P        18 55 04.7 -0.3
      comp=Z,37nm,1.3s
MVO   Moncorvo         91.88 339  eP      P        18 55 04.6 -0.4
      comp=Z,46nm,1.7s
PVRL  Vila Real        91.94 340  eP      P        18 55 05.2  0.0
      comp=Z,33nm,1.5s
U61A  Possum Corner    91.96  32  P       P        18 55 05.8 +0.5
      baz=331
ESBB  Sonseca Array    92.42 336  P       P        18 55 07.8 +0.3
ESDC  Sonseca Array    92.42 336  P       P        18 55 07.4 -0.1
      comp=Z,11nm,0.8s,baz=15,slow=4.1,SNR=51
ESDC                              pP      pP       18 55 41.1 +0.7
      comp=Z,1.9nm,0.5s,baz=15,slow=3.9,SNR=2.3
ESDC                              LR      LR       19 41 45.2
      comp=Z,154nm,18.5s,baz=330,slow=39
PVIS  Viseu            92.52 340  eP      P        18 55 06.7 -1.2
      comp=Z,41nm,1.4s
PAB   San Pablo        92.66 337  P       P        18 55 08.6  0.0
PAB                               pmax    pmax
      comp=Z,17nm,1.1s
PAB   San Pablo        92.66 337  P       P        18 55 08.6  0.0
MTE   Manteigas        92.73 339  eP      P        18 55 08.8 -0.1
      comp=Z,39nm,1.5s
PMRV  Marv??o          93.60 339  eP      P        18 55 10.9 -2.0
      comp=Z,28nm,1.4s
PMTG  Montargil        94.15 339  eP      P        18 55 14.9 -0.5
      comp=Z,21nm,2.2s
EVO   Evora            94.61 339  eP      P        18 55 17.5  0.0
      comp=Z,53nm,1.5s
PNCL  Nicolau / Gran   95.14 339  eP      P        18 55 19.8 -0.1
      comp=Z,32nm,1.6s
MESJ  Messejana        95.31 339  eP      P        18 55 19.3 -1.4
      comp=Z,28nm,1.6s
TORD  Torodi Ar. Bea  114.27 320  PKP     PKiKP    19 00 35.4 -0.7
      comp=Z,0.7nm,0.4s,baz=20,slow=1.6,SNR=8.0
TORD                              PKKPbc  PKKPbc   19 11 13.5 -1.0
      comp=Z,2.0nm,0.6s,baz=210,slow=2.4,SNR=7.1
VNDA  Vanda           121.35 176  PKP     PKiKP    19 00 48.3 +0.4
      comp=Z,3.5nm,0.7s,baz=311,slow=4.7,SNR=21
VNDA                              pPKP    pPKPdf   19 01 20.9 -1.3
      comp=Z,2.8nm,0.9s,baz=326,slow=3.2,SNR=4.6
VNDA                              PKKPbc  PKKPbc   19 10 50.4  0.0
      comp=Z,1.7nm,1.0s,baz=245,slow=3.2,SNR=4.0
VNDA                              PKPPKP  P'P'df   19 19 35.2 +2.0
      comp=Z,0.8nm,0.5s,baz=78,slow=8.6,SNR=4.6
VNDA  Vanda           121.35 176  PKPdf   PKiKP    19 00 48.7 +0.8
DBIC  Dimbokro        122.94 323  PKP     PKPdf    19 00 52.4 -0.4
      comp=Z,2.2nm,0.5s,baz=21,slow=1.2,SNR=8.1
DBIC                              pPKP    pPKPdf   19 01 25.6 -1.7
      comp=Z,1.9nm,0.6s,baz=43,slow=3.2,SNR=3.1
DBIC                              PP      PP       19 02 25.1 -7.0
      comp=Z,4.1nm,0.8s,baz=0.0,slow=11,SNR=5.8
DBIC                              PKKPbc  PKKPbc   19 10 43.7 +0.4
      comp=Z,2.7nm,0.9s,baz=178,slow=8.0,SNR=4.6
MNMC  Minye Minye     142.14  61          PKPpre   19 01 23.7
GO01  Chusmiza        142.79  61          PKPpre   19 01 24.5
PB07  IPOC Station P  143.83  64          PKPbc    19 01 30.5 +0.8
PB09  IPOC Station P  144.30  63          PKPbc    19 01 31.7 +0.6
NVL   N'lazarevskaya  144.42 205⇓iPKIKP   PKPbc    19 01 29.7  0.0
NVL                               pmax    pmax
      comp=Z,131nm,1.0s
PB06  IPOC Station P  144.73  65          PKPdf    19 01 32.8 -0.3
LVC   Limon Verde     145.09  64  PKIKP   PKPdf    19 01 34.4 +0.4
LVC   Limon Verde     145.09  64          PKPdf    19 01 34.4 +0.4
LVC   Limon Verde     145.09  64  eP      PKiKP    19 01 39.4 +1.4
PB15  IPOC Station P  145.14  65          PKPdf    19 01 34.2 +0.3
BELA  Belgrano 2      145.66 180  PKPdf   PKPdf    19 01 32.6 -0.3
GO02  Mina Guanaco    146.39  68  PKPdf   PKPbc    19 01 36.9 -0.7
PEXB  Peixe           146.56  24  eP      PKiKP    19 01 40.8  0.0
GO03  Copiap          147.53  72          PKPbc    19 01 40.4  0.0
SDBA  SAO DESIDERIO   147.74  18  eP      PKPab    19 01 44.1 +0.2
SNAA  Sanae           147.86 198  PKPbc   PKPbc    19 01 40.4 +0.4
SNAA  Sanae           147.86 198  PKP2    PKPbc    19 01 40.0  0.0
SNAA  Sanae           147.86 198          PKPbc    19 01 40.0  0.0
LCO   Las Campanas    148.07  75  PKP2    PKPdf    19 01 40.0 +1.2
LCO   Las Campanas    148.07  75          PKPdf    19 01 40.0 +1.2
AC05  El Transito     148.26  74          PKPdf    19 01 39.3 +0.4
GO04  Tololo Observa  148.68  77          PKPbc    19 01 43.7 +0.1
CO01  Juntas del Tor  149.06  76          PKPbc    19 01 44.7 +0.2
PP1B  Ponte de Pedra  149.10  39  eP      PKiKP    19 01 46.3 +0.4
VNA2  Neumayer--Watz  149.42 197  PKPbc   PKiKP    19 01 44.7 -0.2
VNA1  Neumayer--Stat  149.81 197  PKPbc   PKiKP    19 01 45.8 +0.1
BDFB  Brasilia        149.99  26  PKPbc   PKiKP    19 01 47.5 -0.4
      comp=Z,18nm,0.8s,baz=107,slow=0.9,SNR=17
BDFB  Brasilia        149.99  26  PKP2    PKPbc    19 01 47.1 +0.1
BDFB  Brasilia        149.99  26          PKPbc    19 01 47.1 +0.1
VA03  San Esteban     150.29  81          PKPbc    19 01 47.2 -0.1
ZON   Zonda           150.96  77  PKIKP   PKPbc    19 01 48.4 -0.5
ZON   Zonda           150.96  77          PKPbc    19 01 48.4 -0.5
BO02  Sierra Bellavi  151.14  84          PKPbc    19 01 49.1 -0.1
AQDB  Aquidauana      151.18  43  eP      PKPbc    19 01 48.8 -0.7
LC01  Cunco           152.09  93          PKPbc    19 01 50.9 -0.2
PLCA  Paso Flores     153.68  96  PKPbc   PKiKP    19 01 55.3 +0.5
      comp=Z,3.6nm,0.6s,baz=273,slow=3.1,SNR=16
PLCA  Paso Flores     153.68  96  P       PKiKP    19 01 55.3 +0.5
CPUP  Villa Florida   155.01  54  PKPab   PKPab    19 02 13.9  0.0
      comp=Z,8.6nm,1.0s,baz=320,slow=5.7,SNR=8.8
CPUP  Villa Florida   155.01  54  PKP2    PKPab    19 02 13.3 -0.5
CPUP  Villa Florida   155.01  54  PKPab   PKPab    19 02 13.3 -0.5
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*IDC **08** 18:43:42.5±1.3, 7.°10S×151.°06E, h0km, mb4.6/6, mb1 4.8/8, mb1mx4.1/52, mbtmp4.7/8, ML3.2/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/37 Error ellipse: s-maj=46.9km s-min=16.5km az=122.0*

*NEIC **08** 18:43:46.3±0.4, 7.°1S±0.°1×151.°0E±0.°1, h26km±5km, mb4.5/7, Error ellipse: s-maj=24.1km s-min=7.6km az=131.0*

*NOU **08** 18:43:50.8, 6.°90S×150.°77E, h64km, mb4.5, New Britain Region, P.N.G.*

ISC 08 18:43:48.7±0.8**, 6.°99S**±0.°08×**150.°90E**±0.°10**, h40km, n25, σ1.s04**/25**, mb4.5**/7**, New Britain region**

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Code  Station Name       Δ°   AZ°     Phase ID               Time      Res
                                  Op      ISC          h  m  s    ISC
KRVT  Keravat (AS076    2.89  23  Pn      Pn       18 44 31.8 -0.5
      36nm,0.3s,baz=257,slow=1.4,SNR=35
KRVT                              Sn      Sn       18 45 06.5 +0.8
      172nm,0.3s,baz=32,slow=21,SNR=14
KRVT                              LR      LR       18 45 45.4
      comp=Z,191nm,20.4s,baz=225,slow=42
RABL  Rabaul            3.05  25          Pn       18 44 33.7 -0.8
RABL  Rabaul            3.05  25  P       Pn       18 44 36.2 +1.8
PMG   Port Moresby      4.41 237  Pn      Pn       18 44 53.6 +0.4
      20nm,0.3s,baz=50,slow=3.8,SNR=46
PMG                               Sn      Sn       18 45 44.4 +1.1
      103nm,0.3s,baz=307,slow=23,SNR=18
PMG   Port Moresby      4.41 237          Pn       18 44 53.1 -0.1
PMG   Port Moresby      4.41 237  P       Pn       18 44 54.9 +1.8
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MANU	Manus Island	6.04	324	Pn	Pn	18 45 15.9	+0.4
HNR	Honiara	9.28	106	LR	LR	18 49 00.2	
	comp=Z,166nm,19.0s,baz=274,slow=35						
JAY	Jayapura	11.08	293	LR	LR	18 51 26.6	
	comp=Z,312nm,19.4s,baz=122,slow=41						
KOUNC	Koumac, New Ca	18.71	137	P	Pn	18 48 06.1	+1.5
WB0	Warramunga Arr	20.45	230	P	P	18 48 22.4	-0.6
WR0	Warramunga Arr	20.45	229	P	P	18 48 22.4	-0.5
WR0				IAmb	IAmb	18 48 23.2	
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	20.58	230	P	P	18 48 23.6	-0.7
WB2	Warramunga Arr	20.58	230	P	P	18 48 23.6	-0.7
WRA	Warramunga Arr	20.59	230	P	P	18 48 23.8	-0.7
	comp=Z,26nm,0.7s,baz=54,slow=11,SNR=58						
AS31	Alice Springs	23.27	223	P	P	18 48 52.4	-0.6
AS31				IAmb	IAmb	18 48 54.8	
	comp=Z,14nm,1.3s						
ASAR	Alice Springs	23.27	223	P	P	18 48 52.4	-0.6
	comp=Z,15nm,0.8s,baz=56,slow=8.8,SNR=226						
STKA	Stephens Creek	26.24	198	P	P	18 49 18.5	-1.6
	comp=Z,4.5nm,0.6s,baz=26,slow=13,SNR=14						
STKA	Stephens Creek	26.24	198	P	P	18 49 18.2	-1.9
FITZ	Fitzroy Crossi	26.97	243	P	P	18 49 26.5	-0.3
	comp=Z,20nm,0.6s,baz=65,slow=7.8,SNR=45						
FITZ	Fitzroy Crossi	26.97	243	P	P	18 49 26.7	-0.2
KLSI		45.97	270	P	P	18 52 07.0	-1.3
	comp=Z,17nm,1.6s						
AAK	Ala-Archa	84.80	314	P	P	18 56 20.6	+1.3
	comp=Z,2.3nm,0.7s,baz=162,slow=6.4,SNR=4.1						
ILAR	Eielson Array	84.89	22	P	P	18 56 19.1	+0.1
	comp=Z,1.7nm,0.8s,baz=245,slow=5.8,SNR=4.9						
TORD	Torodi Ar. Bea	149.08	284	PKPbc	PKPbc	19 03 33.6	-0.1
	comp=Z,3.6nm,0.6s,baz=65,slow=3.3,SNR=6.9						

IDC ***08*** *18:44:14.2±2.1, 20.°85N×122.°18E, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.7/73, mbtmp4.0/4, MS3.6/2, Ms1 3.6/2, ms1mx3.1/37, Error ellipse: s-maj=67.3km s-min=24.9km az=47.0*

JMA ***08*** *18:44:14.2±0.4, 21.°27N×122.°06E, h0^{km}, M4.2*

TAP ***08*** *18:44:15.0, 21.°13N×122.°23E, h46^{km}±1^{km}, ML4.6, D*

NIED ***08*** *18:44:14.3, 21.°27N×122.°06E, h0^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.76; $M_{\theta\theta}$-1.23; $M_{\phi\phi}$-2.53; $M_{r\theta}$3.16; $M_{\theta\phi}$-4.41; $M_{\phi r}$-2.10; Fault plane solution: $M_0$6.68000×10^{15} NP1:ϕ_s74.00000°, δ60.00000°, λ138.00000°. NP2:ϕ_s188.00000°, δ55.00000°, λ38.00000°.*

ISC 08 18:44:13.8±1.5**, 21.°06N**±0.°03×**122.°13E**±0.°03**, h6**^{km}±11^{km}**, n159, σ1.°63**/282**, mb4.0**/4**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBP	Basco	0.64	194	eP	Pg	18 44 25.7	-0.4
BBP				eS	Sg	18 44 35.0	+0.6
LAY	Lan-yu	1.11	331	eP	Pb	18 44 33.9	-1.5
	baz=325						
TSEB	Hengchuen, Pin	1.41	306	P	Pn	18 44 40.3	+0.3
	baz=301						
TSEB				eS	Sn	18 44 58.9	-0.1
	baz=301						
TWKBT	Hengchun	1.50	306	P	Pn	18 44 40.6	-0.7
	baz=302						
TWKBT				S	Sn	18 45 01.0	-0.2
	baz=302						
TWK1	Hengchun	1.51	306	P	Pn	18 44 40.6	-0.7
	baz=302						
TWK1				eS	Sn	18 45 01.2	-0.2
	baz=302						
HEN	Hengchun	1.60	306	P	Pn	18 44 43.4	+0.8
	baz=302						
HEN				eS	Sn	18 45 03.3	-0.2
	baz=302						
SLIU	Shizi	1.69	313	eP	Pn	18 44 43.5	-0.3
	baz=309						
SLIU				eS	Sn	18 45 03.5	-2.2
	baz=309						
LDUT	Ludao	1.71	339	P	Pn	18 44 42.2	-2.0
	baz=335						
LDUT				S	Sn	18 45 02.9	-3.6
	baz=335						
TAW	Tawu	1.72	319	eP	Pn	18 44 44.0	-0.3
	baz=315						
TAW				eS	Sn	18 45 04.0	-2.7
	baz=315						
EAST	Anshuo	1.77	318	eP	Pn	18 44 43.7	-1.4
	baz=314						
EAST				eS	Sn	18 45 05.9	-2.0
	baz=314						
ECL	Taimali	1.88	325	eP	Pn	18 44 45.4	-1.0
	baz=321						
ECL				eS	Sn	18 45 07.1	-3.3
	baz=321						
SCZT	Fangliau	1.91	313	eP	Pn	18 44 47.2	+0.3
	baz=318						
SCZT				eS	Sn	18 45 10.8	-0.5
	baz=318						
TTN	Taitung	1.91	332	eP	Pn	18 44 47.2	+0.3
	baz=328						
TTN				eS	Sn	18 45 10.5	-0.8
	baz=328						
TWGBT	Beinan	2.00	331	eP	Pn	18 44 47.2	-0.9
	baz=316						
TWGBT				S	Sn	18 45 10.9	-2.6
	baz=316						
SSPT	Xinbi	2.02	315	eP	Pn	18 44 49.1	+0.7
	baz=321						
SSPT				eS	Sn	18 45 13.6	-0.5
	baz=321						
EDH	Donghe	2.05	338	eP	Pn	18 44 46.8	-2.0
	baz=343						
EDH				eS	Sn	18 45 10.4	-4.2
	baz=343						
LONT	Longtian	2.05	333	eP	Pn	18 44 48.4	-0.5
	baz=320						
LONT				eS	Sn	18 45 13.7	-1.1
	baz=320						
WLCH	Liuqiu	2.07	309	eP	Pn	18 44 51.8	+2.7
	baz=305						
MASBT	Mashibuluo	2.07	318	P	Pn	18 44 49.2	0.0
	baz=324						
MASBT				eS	Sn	18 45 13.9	-1.4
	baz=324						
TWP	Hsiaoliuchiu	2.08	308	eP	Pn	18 44 51.3	+2.1
	baz=305						
TWP				eS	Sn	18 45 16.1	+0.6
	baz=305						
TSMG	Majia	2.14	320	eP	Pn	18 44 50.4	+0.3
	baz=323						
TSMG				eS	Sn	18 45 16.0	-0.9
	baz=323						
CHKT	Chengkung	2.15	341	P	Pn	18 44 48.1	-2.0
	baz=346						
CHKT				S	Sn	18 45 12.8	-4.3
	baz=346						
SSD	Sandimen	2.17	321	P	Pn	18 44 50.9	+0.3
	baz=323						
SSD				eS	Sn	18 45 19.0	+1.2
	baz=323						
TSPT	Pingtung City	2.21	317	eP	Pn	18 44 51.7	+0.8
	baz=321						
TSPT				eS	Sn	18 45 19.9	+1.3
	baz=321						
SGLT	Jiouru	2.25	318	eP	Pn	18 44 53.9	+2.5
	baz=324						
SGLT				eS	Sn	18 45 20.4	+0.8
	baz=324						
FULB	Fuli	2.26	340	eP	Pn	18 44 50.5	-1.2
	baz=347						
FULB				eS	Sn	18 45 17.6	-2.4
	baz=347						
ELDTW	Lidau	2.35	334	eP	Pn	18 44 52.6	-0.5
	baz=323						
ELDTW				eS	Sn	18 45 20.0	-2.4
	baz=323						
TWM1	Shoushan	2.36	318	eP	Pn	18 44 55.0	+1.8
	baz=324						
TWM1				eS	Sn	18 45 25.2	+2.8
	baz=324						
SLGT	Liugui	2.36	325	P	Pn	18 44 54.3	+1.2
	baz=326						
SLGT				eS	Sn	18 45 22.4	-0.1
	baz=326						
SCST	Cishan	2.36	320	P	Pn	18 44 53.9	+0.7
	baz=318						
SCST				eS	Sn	18 45 23.4	+1.0
	baz=318						
SNJT	Kaohsiung City	2.37	316	eP	Pn	18 44 56.0	+2.9
	baz=313						
EYUL	Yuli	2.39	342	eP	Pn	18 44 52.5	-1.0
	baz=347						
EYUL				eS	Sn	18 45 21.9	-1.3
	baz=347						
TWF1	Yuli	2.40	342	eP	Pn	18 44 52.8	-0.9
	baz=347						
TWF1				eS	Sn	18 45 22.0	-1.5
	baz=347						
YULB	Yu-li	2.44	342	P	Pn	18 44 52.9	-1.3
	baz=347						
YULB				eS	Sn	18 45 22.1	-2.3
	baz=347						
STYT	Tauyuan	2.44	329	eP	Pn	18 44 54.5	+0.2
	baz=326						
STYT				eS	Sn	18 45 23.2	-1.4
	baz=326						
SGST	Jiashian	2.47	325	eP	Pn	18 44 55.9	+1.4
	baz=322						
SGST				eS	Sn	18 45 25.9	+0.9
	baz=322						
HGSD	Ruisui	2.50	345	P	Pn	18 44 53.4	-1.7
	baz=349						
HGSD				eS	Sn	18 45 24.5	-1.4
	baz=349						
EHY	Hungye	2.54	343	eP	Pn	18 44 54.9	-0.7
	baz=347						
EHY				eS	Sn	18 45 24.1	-2.8
	baz=347						
CHN1	Nanshi	2.58	325	P	Pn	18 44 58.0	+1.8
	baz=323						
CHN1				eS	Sn	18 45 28.7	+0.9
	baz=323						
CHN3	Shinhua	2.58	321	eP	Pn	18 44 59.4	+3.2
	baz=318						
CHN3				eS	Sn	18 45 30.7	+2.8
	baz=318						
WTP	Ta-pu	2.58	327	P	Pn	18 44 57.5	+1.3
	baz=310						
WTP				S	Sn	18 45 28.6	+0.6
	baz=310						
TPUB	Ta-pu	2.62	328	P	Pn	18 44 58.2	+1.5
	baz=311						
TPUB				eS	Sn	18 45 29.7	+0.8
	baz=311						
SNST	Tainan City	2.62	325	eP	Pn	18 44 59.0	+2.3
	baz=323						
SNST				eS	Sn	18 45 30.2	+1.3
	baz=323						
TWK	Hsinying	2.67	326	eP	Pn	18 44 59.0	+1.6
	baz=323						
TWK				eS	Sn	18 45 30.7	+0.7
	baz=323						
CHN4	Tsaushan	2.68	328	eP	Pn	18 44 59.3	+1.8
	baz=311						
CHN4				eS	Sn	18 45 31.4	+1.0
	baz=311						
ALS	Alishan	2.73	334	eP	Pn	18 44 59.2	+0.9
	baz=331						
ALS				eS	Sn	18 45 32.4	+0.6
	baz=331						
SCLT	Jiali	2.76	320	eP	Pn	18 44 59.2	+0.6
	baz=317						
SCLT				eS	Sn	18 45 32.1	-0.2
	baz=317						
SGCP	Mt. Cagua	2.81	182	eP	Pn	18 44 58.0	-1.2
SGCP				eS	Sn	18 45 29.6	-3.8
ESL	Shilin	2.81	347	eP	Pn	18 44 58.5	-0.8
	baz=351						
ESL				eS	Sn	18 45 30.8	-2.7
	baz=351						
CHN5	Tsauling	2.85	332	eP	Pn	18 45 01.9	+1.9
	baz=316						
CHN5				eS	Sn	18 45 35.9	+1.1
	baz=316						
ICHU	Yijhu	2.85	324	eP	Pn	18 45 01.0	+1.1
	baz=321						
ICHU				eS	Sn	18 45 34.9	+0.3
	baz=321						
WHYT	Xinyi Township	2.87	336	eP	Pn	18 45 01.6	+1.4
	baz=321						
WHYT				eS	Sn	18 45 36.5	+1.4
	baz=321						
CHN8	Yiju	2.88	322	eP	Pn	18 45 00.5	+0.3
	baz=320						
CHN8				eS	Sn	18 45 35.3	+0.1
	baz=320						
CHY	Chiayi	2.89	327	eP	Pn	18 45 02.1	+1.7
	baz=312						
CHY				eS	Sn	18 45 35.5	+0.1
	baz=312						
CHN2	Minshiung	2.89	328	eP	Pn	18 45 02.8	+2.4
	baz=312						
CHN2				eS	Sn	18 45 36.5	+1.0
	baz=312						
SSLB	Suanglung	2.92	338	eP	Pn	18 45 01.4	+0.6
	baz=345						
SSLB				eS	Sn	18 45 35.6	-0.7
	baz=345						
WLGB	Puzi	2.94	325	eP	Pn	18 45 00.3	-0.8
	baz=323						
WLGB				eS	Sn	18 45 36.2	-0.4
	baz=323						
WGK	Gukeng	2.98	331	eP	Pn	18 45 02.7	+1.0
	baz=316						
WDLH	Douliu	3.00	331	eP	Pn	18 45 03.2	+1.4
	baz=315						
WDLH				eS	Sn	18 45 39.6	+1.5
	baz=315						
SMLT	Sun Moon Lake	3.03	338	eP	Pn	18 45 03.7	+1.3
	baz=321						
SMLT				eS	Sn	18 45 39.8	+0.8
	baz=321						
WJS	Zhushan	3.03	335	eP	Pn	18 45 04.6	+2.2
	baz=320						
WJS				eS	Sn	18 45 40.5	+1.4
	baz=320						
TWD	Chiawan	3.04	351	eP	Pn	18 45 01.6	-0.8
	baz=349						
TWD				eS	Sn	18 45 36.1	-3.1
	baz=349						
TYC	Yuchr	3.06	338	eP	Pn	18 45 04.3	+1.6
	baz=321						
TYC				eS	Sn	18 45 39.7	+0.1
	baz=321						
WTK	Tuku	3.07	329	eP	Pn	18 45 04.3	+1.6
	baz=326						
WTK				eS	Sn	18 45 39.4	-0.4
	baz=326						
WNT	Mingjian	3.10	335	eP	Pn	18 45 05.2	+1.9
	baz=319						
WNT				eS	Sn	18 45 41.5	+0.8
	baz=319						
CHGB	Renai	3.11	344	eP	Pn	18 45 03.5	-0.1
	baz=350						
CHGB				eS	Sn	18 45 40.5	-0.8
	baz=350						
WSF	Szhu	3.11	326	eP	Pn	18 45 04.0	+0.6
	baz=312						
WSF				eS	Sn	18 45 39.9	-1.0
	baz=312						
WPL	Puli Township	3.13	340	eP	Pn	18 45 04.5	+0.9
	baz=322						
WPL				eS	Sn	18 45 41.3	-0.1
	baz=322						
WNT1	Nantou City	3.13	335	eP	Pn	18 45 05.7	+2.0
	baz=319						
WNT1				eS	Sn	18 45 42.4	+1.0
	baz=319						
NACB	Ninganchiao	3.13	351	eP	Pn	18 45 02.3	-1.4
	baz=356						
NACB				eS	Sn	18 45 37.9	-3.6
	baz=356						
DPDB	Guoxing	3.16	340	eP	Pn	18 45 05.2	+1.1
	baz=322						
DPDB				eS	Sn	18 45 42.4	+0.2
	baz=322						
WDGT	Dungji	3.16	314	eP	Pn	18 45 03.5	-0.6
	baz=312						
WDGT				eS	Sn	18 45 38.4	-3.8
	baz=312						
WHF	Hehuan Shan	3.17	346	eP	Pn	18 45 04.2	-0.4
	baz=344						
WHF				eS	Sn	18 45 41.8	-1.2
	baz=344						
ETLH	Xiulin Townshi	3.18	349	eP	Pn	18 45 03.5	-1.0
	baz=355						
ETLH				eS	Sn	18 45 40.7	-2.2
	baz=355						
RLNB	Erlin	3.25	330	eP	Pn	18 45 06.1	+0.8
	baz=328						
RLNB				eS	Sn	18 45 43.3	-1.1
	baz=328						
FUSS	Fushou	3.27	346	eP	Pn	18 45 06.3	+0.5
	baz=353						
FUSS				eS	Sn	18 45 43.9	-1.3
	baz=353						
VCHM	Qimei	3.29	311	eP	Pn	18 45 05.1	-0.7
	baz=309						
VCHM				eS	Sn	18 45 41.9	-3.3
	baz=309						
APYP	Conner	3.29	195	eP	Pn	18 45 05.3	-0.6
APYP				eS	Sn	18 45 44.0	-1.4
TWT	Tachien	3.29	345	eP	Pn	18 45 06.1	0.0
	baz=350						
TWT				eS	Sn	18 45 44.4	-1.3
	baz=350						
TDCB	Techi	3.30	344	eP	Pn	18 45 06.1	0.0
	baz=349						
TDCB				eS	Sn	18 45 45.1	-0.6
	baz=349						
WCHH	Zhanghua	3.33	335	eP	Pn	18 45 06.6	+0.1
	baz=320						
WCHH				eS	Sn	18 45 46.8	+0.4
	baz=320						
TCU	Taichung	3.35	337	eP	Pn	18 45 08.3	+1.6
	baz=321						
TCU				eS	Sn	18 45 47.5	+0.7
	baz=321						
CVP	Callao Caves	3.35	185	⇑iP	Pn	18 45 07.0	+0.3
CVP				i S	Sn	18 45 47.6	+0.7
HATJ	Hateruma jima	3.36	27	P	Pn	18 45 07.5	+0.7
HATJ				S	Sn	18 45 46.1	-0.9
ENA	Nanau	3.37	354	eP	Pn	18 45 07.0	0.0
	baz=352						
ENA				eS	Sn	18 45 44.6	-2.6
	baz=352						
WHP	Taichung City	3.38	341	eP	Pn	18 45 08.9	+1.7
	baz=347						
WHP				eS	Sn	18 45 49.0	+1.4
	baz=347						
ENAH	Nanao	3.38	355	eP	Pn	18 45 06.8	-0.4
	baz=353						
ENAH				eS	Sn	18 45 44.6	-3.0
	baz=353						
NNSB	Datong	3.42	349	eP	Pn	18 45 08.1	+0.3
	baz=347						
NNSB				eS	Sn	18 45 45.5	-3.2
	baz=347						
NNS	Nan Shan	3.43	348	eP	Pn	18 45 08.4	+0.5
	baz=347						
NNS				eS	Sn	18 45 46.8	-2.3
	baz=347						
PNG	Penghu	3.45	317	eP	Pn	18 45 07.9	-0.1
	baz=306						
PNG				eS	Sn	18 45 46.5	-2.7
	baz=306						
JYNG	Yonagunijimaku	3.46	12	P	Pn	18 45 09.6	+1.5
JYNG				S	Sn	18 45 48.5	-0.9
YOJ	Yonaguni jima	3.48	13	P	Pn	18 45 09.0	+0.5
YOJ				S	Sn	18 45 48.9	-1.1
YOJ	Yonaguni jima	3.48	13	eP	Pn	18 45 09.2	+0.8
	baz=22						
YOJ				eS	Sn	18 45 47.7	-2.3
	baz=22						
TWQ1	Liyutan	3.50	339	eP	Pn	18 45 10.6	+1.9
	baz=323						
TWQ1				eS	Sn	18 45 51.2	+0.7
	baz=323						
TWC	Suao	3.54	356	eP	Pn	18 45 08.8	-0.4
	baz=3.0						
TWC				eS	Sn	18 45 49.0	-2.4
	baz=3.0						
WDJ	Dajia District	3.54	338	eP	Pn	18 45 09.8	+0.4
	baz=323						
WDJ				eS	Sn	18 45 52.5	+0.9
	baz=323						
NSY	Sanyi	3.57	340	eP	Pn	18 45 12.3	+2.6
	baz=323						
NSY				eS	Sn	18 45 54.2	+2.0
	baz=323						
NDT	Datong Townshi	3.57	351	eP	Pn	18 45 10.2	+0.4
	baz=358						
NDT				eS	Sn	18 45 50.4	-1.8
	baz=358						
IRIF	Iriomote-Funau	3.58	24	P	Pn	18 45 10.8	+1.0
IRIF				S	Sn	18 45 52.6	+0.2
ENTT	Nioudou	3.60	352	eP	Pn	18 45 10.8	+0.7
	baz=358						
ENTT				eS	Sn	18 45 50.9	-2.0
	baz=358						
JKRS	Kuro-shima	3.61	28	P	Pn	18 45 11.1	+0.9
JKRS				S	Sn	18 45 52.7	-0.4
YHNB	Yeheng	3.66	349	eP	Pn	18 45 11.5	+0.6
	baz=357						
YHNB				eS	Sn	18 45 52.5	-2.0
	baz=357						
NSK	Sanguang	3.66	349	eP	Pn	18 45 12.6	+1.5
	baz=357						
NSK				eS	Sn	18 45 52.6	-2.0
	baz=357						
NMLH	Miaoli	3.67	341	eP	Pn	18 45 12.8	+1.7
	baz=339						
NMLH				eS	Sn	18 45 56.0	+1.3
	baz=339						
NSTT	Nanjuang	3.70	344	eP	Pn	18 45 14.2	+2.7
	baz=327						
NSTT				eS	Sn	18 45 55.6	+0.2
	baz=327						
ILA	Ilan	3.70	355	eP	Pn	18 45 12.8	+1.3
	baz=353						
LIOB	Emei	3.71	344	eP	Pn	18 45 14.3	+2.6
	baz=327						
LIOB				eS	Sn	18 45 57.0	+1.3
	baz=327						
NWLT	Wulai	3.74	351	eP	Pn	18 45 12.7	+0.6
	baz=350						
NWLT				eS	Sn	18 45 54.4	-2.1
	baz=350						
JIJ	Ishigaki jima	3.77	29	P	Pn	18 45 13.3	+0.8
JIJ				S	Sn	18 45 55.9	-1.4
NTC	Toucheng	3.78	356	eP	Pn	18 45 13.8	+1.1
	baz=3.0						
NTC				eS	Sn	18 45 55.2	-2.3
	baz=3.0						
TIPB	Shuangxi	3.90	356	eP	Pn	18 45 15.3	+1.0
	baz=3.0						
TIPB				eS	Sn	18 45 58.2	-2.2
	baz=3.0						
NHDH	Xindian Distri	3.92	352	eP	Pn	18 45 16.4	+1.9
	baz=350						
NHDH				eS	Sn	18 45 56.4	-4.4
	baz=350						
TWA	Mucha	3.93	353	eP	Pn	18 45 16.4	+1.7
	baz=351						
TWA				eS	Sn	18 45 57.6	-3.5
	baz=351						
NWF	Wu-fen Shan	4.00	356	eP	Pn	18 45 17.3	+1.6
	baz=3.0						
NWF				eS	Sn	18 46 01.6	-1.4
	baz=3.0						
WFSB	Wu-fen Shan	4.00	356	eP	Pn	18 45 17.3	+1.6
	baz=2.0						
WFSB				eS	Sn	18 46 01.6	-1.3
	baz=2.0						
JISG	Ishigakijimahi	4.04	29	P	Pn	18 45 16.6	+0.4
JISG				S	Sn	18 46 02.7	-1.2
TWS1	Kuangyinshan	4.07	351	eP	Pn	18 45 18.2	+1.5
	baz=349						
YM01	YM01	4.10	353	eP	Pn	18 45 18.3	+1.3
	baz=351						
YM01				eS	Sn	18 46 03.8	-1.5
	baz=351						
YM10	YM10	4.11	353	eP	Pn	18 45 18.3	+1.1
	baz=351						
YM10				eS	Sn	18 46 04.0	-1.5
	baz=351						
YM04	YM04	4.11	353	eP	Pn	18 45 18.4	+1.2
	baz=351						
YM04				eS	Sn	18 46 04.2	-1.4
	baz=351						
CAUP	Cauayan	4.11	184	eP	Pn	18 45 18.4	+1.2
CAUP				eS	Sn	18 46 07.6	+2.0
YM05	YM05	4.11	353	eP	Pn	18 45 18.4	+1.1

	baz=351						
YM05				eS	Sn	18 46 03.3	-2.4
	baz=351						
YM11	YM11	4.11	353	eP	Pn	18 45 18.9	+1.6
	baz=351						
YM11				eS	Sn	18 46 04.6	-1.2
	baz=351						
YM08	YM08	4.13	353	eP	Pn	18 45 18.6	+1.1
	baz=352						
YM08				eS	Sn	18 46 04.0	-2.2
	baz=352						
ANP	Anpu	4.14	352	eP	Pn	18 45 18.7	+1.0
	baz=351						
JTJ	Tarama	4.28	33	P	Pn	18 45 20.3	+0.8
JTJ				S	Sn	18 46 09.4	-0.4
VWUC	VWUC	4.62	328	eP	Pn	18 45 24.6	+0.4
	baz=327						
VWUC				eS	Sn	18 46 15.8	-2.4
	baz=327						
JIRB	Irabujima	4.68	36	P	Pn	18 45 26.9	+1.9
JIRB				S	Sn	18 46 18.4	-1.3
JMJ2	Miyako jima3	4.70	38	P	Pn	18 45 26.5	+1.2
JMJ2				S	Sn	18 46 20.1	-0.1
JMJ	Miyako jima 2	4.74	37	eP	Pn	18 45 26.1	+0.3
	baz=37						
JMJ				eS	Sn	18 46 19.7	-1.4
	baz=37						
JOGS	Gusukube	4.76	39	P	Pn	18 45 27.8	+1.7
JOGS				S	Sn	18 46 22.5	+0.8
KNM	Kinmen	4.77	315	eP	Pn	18 45 27.6	+1.4
	baz=312						
KNM				eS	Sn	18 46 21.9	+0.1
	baz=312						
PTMZ	Houxiangcun	4.83	326	eP	Pn	18 45 26.9	-0.1
	baz=324						
PTMZ				eS	Sn	18 46 19.9	-3.4
	baz=324						
KNMB	Chin-men Tao	4.83	315	eP	Pn	18 45 26.7	-0.4
	baz=313						
KNMB				eS	Sn	18 46 20.3	-3.1
	baz=313						
PTTC	Pingtan	4.92	334	eP	Pn	18 45 28.5	+0.2
	baz=333						
PTTC				eS	Sn	18 46 24.0	-1.5
	baz=333						
VDOS	Pratas Island	5.06	267	eP	Pn	18 45 29.4	-0.8
	baz=265						
VDOS				eS	Sn	18 46 23.3	-5.6
	baz=265						
SMPP	San Manuel, Pa	5.08	196	eP	Pn	18 45 30.1	-0.4
SMPP				eS	Sn	18 46 27.0	-2.4
BALP	Baler	5.32	186	eP	Pn	18 45 33.9	+0.1
AXDP	Jialang	5.41	316	eP	Pn	18 45 34.7	-0.3
	baz=314						
AXDP				eS	Sn	18 46 35.6	-2.0
	baz=314						
MATB	Ma-tsu	5.45	339	eP	Pn	18 45 35.1	-0.4
	baz=328						
MATB				eS	Sn	18 46 34.3	-4.2
	baz=328						
MSUT	Lienchiang	5.47	339	eP	Pn	18 45 35.6	-0.3
	baz=337						
MHZQ	Yeshan	5.76	331	eP	Pn	18 45 41.0	+1.1
	baz=329						
LYJJ	Jianjiangzhen	5.88	339	eP	Pn	18 45 41.8	+0.4
	baz=337						
XPSS	Dashiqiu	6.10	344	eP	Pn	18 45 45.7	+1.2
	baz=342						
POLP	Polilio Island	6.30	182	eP	Pn	18 45 49.0	+1.7
LQP	Lukban	6.94	185	⇓eP	Pn	18 45 57.7	+1.5
BOAC	Boac	7.57	182	eP	Pn	18 46 01.1	-3.6
JNU	Nakatsue	14.31	31	LR	LR	18 51 51.7	
	comp=Z,303nm,21.6s,baz=46,slow=32						
KSRS	Korea Array	17.09	16	LR	LR	18 55 23.2	
	comp=Z,178nm,18.6s,baz=45,slow=39						
CMAR	Chiang Mai Arr	21.97	267	P	P	18 49 10.4	+1.9
	1.8nm,0.8s,baz=72,slow=9.2,SNR=17						
MKAR	Makanchi Array	41.20	318	P	P	18 52 02.1	+2.8
	6.6nm,0.8s,baz=122,slow=8.1,SNR=1.3						
H11N1	WAKE ISLAND Hy	41.88	84	T	T	19 36 55.7	
	baz=280,slow=74,SNR=333						
H11N2	WAKE ISLAND Hy	41.88	84	T	T	19 37 00.1	
	baz=280,slow=74,SNR=172						
H11N3	WAKE ISLAND Hy	41.90	84	T	T	19 37 02.0	
	baz=280,slow=74,SNR=134						
H11S3	WAKE ISLAND Hy	41.91	85	T	T	19 36 58.8	
	baz=281,slow=75,SNR=586						
H11S1	WAKE ISLAND Hy	41.92	85	T	T	19 36 59.5	
	baz=281,slow=75,SNR=759						
H11S2	WAKE ISLAND Hy	41.93	85	T	T	19 37 01.1	
	baz=281,slow=75,SNR=471						
WRA	Warramunga Arr	42.47	163	P	P	18 52 09.5	-0.4
	1.2nm,0.5s,baz=343,slow=9.1,SNR=7.1						
ASAR	Alice Springs	45.92	165	P	P	18 52 36.9	-0.6
	1.2nm,0.5s,baz=345,slow=7.0,SNR=15						

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*NIC **08** 18:44:44.9±0.0, 37°.26N×36°.77E, h2^{km}±1^{km}, Ml4.5/4*

*ISK **08** 18:44:46.2, 37°.08N×36°.85E, h10^{km}, ML4.4/14*

*MOS **08** 18:44:46.7±1.3, 37°.12N×36°.92E, h18^{km}, mb4.3/10, Error ellipse: s-maj=7.6km s-min=4.1km az=105.5*

*MED_RC **08** 18:44:46.0±1.3, 37°.03N×36°.86E, h22^{km}±3^{km}, MW4.5/12, Moment Tensor Solution.Mantle waves: s12,c16; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.61±1.30; $M_{\theta\theta}$-4.50±.92; $M_{\phi\phi}$3.89±.76; $M_{r\theta}$0.57±1.13; $M_{\theta\phi}$-6.21±.74; $M_{\phi r}$-2.20±.87; Best double couple: $M_0$7.85000×10^{15} NP1:ϕ_s106.00000°,δ75.00000°, λ170.00000°. NP2:ϕ_s198.00000°,δ81.00000°,λ15.00000°. Principal axes: T 7.8600, Plg17.0000°, Azm63.0000°; N -0.0300, Plg73.0000°, Azm229.0000°; P -7.8300, Plg4.0000°, Azm331.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*DDA **08** 18:44:46.4, 37°.09N×36°.81E, h8^{km}±1^{km}, MW4.6*

*IDC **08** 18:44:46.5±1.1, 37°.05N×36°.69E, h0^{km}, mb4.0/10, mb1 4.1/19, mb1mx3.9/68, mbtmp4.0/19, ML3.6/9, MS3.7/6, Ms1 3.7/6, ms1mx3.2/50, Error ellipse: s-maj=18.6km s-min=14.4km az=121.0*

*NEIC **08** 18:44:48.7±2.3, 37°.04N±0°.07×36°.82E±0°.05, h22^{km}±5^{km}, Error ellipse: s-maj=10.2km s-min=5.2km az=170.0*

ISC 08 18:44:47.4±0.6**, 37°.08N**±0°.02×**36°.84E**±0°.02**, h10**^{km}±3^{km}**,**
n232, σ1^{s}**70**/273**, mb4.2**/28**, MS3.7**/4**, 29C-19D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMA	Osmaniye	0.18	308	⇓iP	Pg	18 44 50.1	-1.1
KAMA				iS	Sg	18 44 52.5	-1.4
KAMA				IAML		18 44 53.0	
	comp=N,56µm,0.5s						
KAMA				IAML		18 44 54.0	
	comp=E,40µm,0.9s						
HCB	Kahramanmara	0.27	11	⇓iP	Pg	18 44 51.8	-1.1
HCB				iS	Sg	18 44 55.7	-0.9
HCB				IAML		18 44 56.0	
	comp=N,37µm,0.5s						
HCB				IAML		18 44 56.0	
	comp=E,57µm,0.9s						
GAZ	Gaziantep	0.31	72	PG	Pg	18 44 52.9	-0.7
GAZ				SG	Sg	18 44 57.6	-0.2
GAZ	Gaziantep	0.31	72	Pg	Pg	18 44 52.9	-0.7
GAZ	Gaziantep	0.31	72	P	Pg	18 44 53.1	-0.6
GAZ				S	Sg	18 44 58.4	+0.6
GAZ				AML	AML	18 45 01.1	
	comp=E,114nm,0.9s						
GAZ				AML	AML	18 45 01.1	
	comp=E,114nm,0.9s						
GAZ				AML	AML	18 45 05.3	
	comp=E,132nm,0.8s						
GAZ				AML	AML	18 45 05.3	
	comp=E,132nm,0.8s						
KUZU	Kuzuini	0.36	148	⇓iP	Pg	18 44 54.6	+0.1
KUZU				iS	Sb	18 45 00.2	-1.4
KUZU				IAML		18 45 02.0	
	comp=N,48µm,0.5s						
KUZU				IAML		18 45 02.0	
	comp=E,58µm,0.9s						
KHMN	Narli-Kahraman	0.40	39	PG	Pg	18 44 54.8	-0.5
KHMN				SG	Sg	18 45 00.4	-0.3
KMRS	Kahramanmaras	0.43	6	PG	Pg	18 44 55.1	-0.8
KMRS				SG	Sg	18 45 01.3	-0.2
KAHM	Kahramanmaras,	0.45	15	⇑iP	Pg	18 44 55.3	-1.0
KAHM				iS	Sg	18 45 01.4	-0.9
KAHM				IAML		18 45 03.0	
	comp=N,21µm,0.4s						
KAHM				IAML		18 45 04.0	
	comp=E,55µm,0.9s						
ANDN	Andirin	0.64	322	⇓iP	Pg	18 44 58.7	-1.1
ANDN				iS	Sg	18 45 07.5	-0.8
ANDN				IAML		18 45 10.0	
	comp=E,9µm,0.7s						
ANDN				IAML		18 45 13.0	
	comp=N,9µm,0.4s						
GZT	Gaziantep	0.64	64	⇑iP	Pg	18 44 59.2	-0.6
GZT				iS	Sn	18 45 12.1	-0.9
GZT				IAML		18 45 13.0	
	comp=E,22µm,0.4s						
GZT				IAML		18 45 22.0	
	comp=N,20µm,1.0s						
CEYT	Ceyhan	0.88	266	PG	Pg	18 45 03.5	-0.8
CEYT				SG	Sb	18 45 17.2	+0.7
KOZT	Kozan	0.90	297	PG	Pg	18 45 03.9	-0.9
KOZT				SG	Sg	18 45 16.2	-0.4
YURE	YUREGIR	1.00	256	PG	Pg	18 45 06.1	-0.6
SAIM	ADANA	1.08	326	⇓iP	Pg	18 45 06.5	-1.7
SAIM				IAML		18 45 24.0	
	comp=N,17µm,0.5s						
SAIM				IAML		18 45 24.0	
	comp=E,18µm,0.4s						
SAIM				iS	Sn	18 45 24.1	+0.3
ATAB	Bozova	1.22	71	⇑iP	Pn	18 45 09.5	-1.1
ATAB				iS	Sn	18 45 28.0	+0.8
ATAB				IAML		18 45 28.0	
	comp=E,21µm,0.4s						
KRTD	Karatas-Adana	1.24	247	PN	Pb	18 45 10.6	-0.3
ELBS	KAHRAMANMARAS	1.27	10	⇓iP	Pn	18 45 10.6	-0.7
ELBS				iS	Sn	18 45 29.5	+1.1
ELBS				IAML		18 45 30.0	
	comp=N,14µm,0.5s						
ELBS				IAML		18 45 30.0	
	comp=E,29µm,0.6s						
KRTS	Karatas	1.28	247	PN	Pn	18 45 10.7	-0.6
SURC	SANLIURFA_SURC	1.43	97	iP	Pn	18 45 12.8	-0.7
SURC				iS	Sn	18 45 32.1	-0.3
SURC				IAML		18 45 34.0	
	comp=N,13µm,0.9s						
SURC				IAML		18 45 35.0	
	comp=E,15µm,0.7s						
KARA	Karaisali	1.44	278	PN	Pn	18 45 12.4	-1.2
AKCD	Akcadag	1.49	35	⇑iP	Pn	18 45 13.9	-0.5
AKCD				iS	Sg	18 45 35.4	+0.1
AKCD				IAML		18 45 37.0	
	comp=N,15µm,0.5s						
AKCD				IAML		18 45 37.0	
	comp=E,15µm,0.5s						
YAHY	KAYSERI_Yahyal	1.55	311	⇓iP	Pn	18 45 14.7	-0.6
YAHY				iS	Sg	18 45 37.3	-0.1
YAHY				IAML		18 45 39.0	
	comp=N,3µm,0.6s						
YAHY				IAML		18 45 40.0	
	comp=E,4µm,0.9s						
DARE	Darende-Malaty	1.57	19	PN	Pn	18 45 15.0	-0.5
CMRD	Camardi-Nigde	1.59	292	PN	Pn	18 45 14.8	-0.9
SANL	SANLIURFA_Merk	1.72	86	⇑iP	Pn	18 45 16.2	-1.2
SANL				iS	Sg	18 45 41.9	-0.8
SANL				IAML		18 45 46.0	
	comp=N,5µm,0.3s						
SANL				IAML		18 45 47.0	
	comp=E,8µm,0.5s						
MALT	Malatya	1.76	45	PN	Pn	18 45 17.7	-0.4
NIDE	Nigde/Merkez-G	1.88	300	⇓iP	Pn	18 45 19.9	+0.1
NIDE				iS	Sn	18 45 44.2	+0.6
NIDE				IAML		18 45 48.0	
	comp=N,4µm,0.9s						
NIDE				IAML		18 45 50.0	
	comp=E,4µm,0.7s						
BNN	Bunyan	1.94	336	PN	Pn	18 45 20.6	+0.1
NIG	Nigde	2.05	301	PN	Pn	18 45 22.1	-0.1
GUNE	Kayseri	2.06	333	⇓iP	Pb	18 45 25.3	+0.4
GUNE				iS	Sg	18 45 57.8	+4.2
GUNE				IAML		18 46 01.0	
	comp=E,6µm,1.3s						
GUNE				IAML		18 46 18.0	
	comp=N,5µm,0.8s						
CUALT	Altinyayla-SIV	2.19	358	iP	Pn	18 45 24.9	+0.8
CUALT				iS	Sb	18 45 55.9	+1.3
CUALT				IAML		18 45 59.0	
	comp=E,4µm,0.6s						
CUALT				IAML		18 46 08.0	
	comp=N,3µm,1.1s						
KIZK	Mersin	2.25	255	PN	Pn	18 45 23.7	-0.9
KIZK	Mersin	2.25	255	iP	Pn	18 45 24.1	-0.6
KIZK				iS	Sn	18 45 53.5	+1.1
KIZK				IAML		18 45 58.0	
	comp=E,2µm,0.7s						
KIZK				IAML		18 46 11.0	
	comp=N,980nm,0.7s						
AVNS	Nevsehir-Avano	2.34	318	iP	Pn	18 45 25.9	-0.2
AVNS				iS	Sg	18 46 03.8	+1.3
AVNS				IAML		18 46 06.0	
	comp=E,2µm,0.8s						
AVNS				IAML		18 46 18.0	
	comp=N,2µm,0.7s						
CUSAR	Sarkisla-SIVAS	2.38	349	iP	Pn	18 45 26.5	-0.2
CUSAR				iS	Sg	18 46 03.2	-0.8
CUSAR				IAML		18 46 07.0	
	comp=E,869nm,0.7s						
CUSAR				IAML		18 46 11.0	
	comp=N,1µm,1.0s						
GULA	Gulagac	2.42	302	PN	Pn	18 45 27.3	+0.1
KEMA	Kemaliye	2.54	30	iP	Pn	18 45 28.6	-0.2
KEMA				iS	Sg	18 46 09.0	-0.2
KEMA				IAML		18 46 15.0	
	comp=N,2µm,0.8s						
KEMA				IAML		18 46 16.0	
	comp=E,2µm,0.9s						
SIRC	Yozgat	2.62	330	iP	Pn	18 45 29.5	-0.4
SIRC				iS	Sb	18 46 08.6	+1.8
SIRC				IAML		18 46 13.0	
	comp=N,474nm,0.7s						
SIRC				IAML		18 46 18.0	
	comp=E,424nm,0.7s						
DIYA	Diyarbakir	2.74	71	iP	Pn	18 45 30.8	-0.7
DIYA				iS	Sg	18 46 13.7	-1.8
DIYA				IAML		18 46 22.0	
	comp=E,4µm,0.6s						
DIYA				IAML		18 46 26.0	
	comp=N,4µm,1.0s						
DYBB	Diyarbakir	2.76	71	PN	Pn	18 45 31.2	-0.6
GULN	MERSIN_Gulnar	2.80	252	iP	Pn	18 45 31.5	-0.7
GULN				iS	Sn	18 46 05.0	-1.1
GULN				IAML		18 46 08.0	
	comp=E,494nm,0.6s						
GULN				IAML		18 46 14.0	
	comp=N,418nm,0.8s						
KOVA	Elazig, Kovanc	2.86	54	iP	Pn	18 45 33.1	-0.1
KOVA				iS	Sg	18 46 22.2	+3.0
HWQ	Hawqa	2.89	195	eP	Pn	18 45 34.7	+1.1
AKSY	AKSARAY - Alti	2.90	304	iP	Pn	18 45 33.6	-0.1
AKSY				iS	Sb	18 46 14.1	-0.7
AKSY				IAML		18 46 27.0	
	comp=E,797nm,1.0s						
AKSY				IAML		18 46 28.0	
	comp=N,611nm,1.3s						
CUZAR	Zara_SIVAS	2.90	14	iP	Pn	18 45 33.5	-0.3
CUZAR				iS	Sg	18 46 21.1	+0.6
CUZAR				IAML		18 46 28.0	
	comp=E,2µm,0.9s						
CUZAR				IAML		18 46 33.0	
	comp=N,2µm,0.8s						
MAZI	Mazidag	2.90	81	PN	Pn	18 45 32.9	-0.9
TNCL	Tunceli-Merkez	2.94	46	iP	Pn	18 45 34.1	-0.3
TNCL				iS	Sg	18 46 22.6	+0.6
KIRS	Kırehir-Merke	3.09	313	iP	Pn	18 45 36.0	-0.3
KIRS				iS	Sg	18 46 27.9	+1.4
HANI	Diyarbakir_Han	3.12	64	iP	Pn	18 45 35.9	-0.9
HANI				iS	Sg	18 46 25.8	-1.8
KKBE	Karaman, Kazim	3.12	274	iP	Pn	18 45 37.6	+0.8
KKBE				iS	Sn	18 46 14.9	+0.7
CKRK	Yozgat, Cekere	3.17	341	iP	Pn	18 45 37.5	0.0
CKRK				iS	Sb	18 46 25.5	+2.9
CDAG	Cicekdag	3.20	323	iP	Pn	18 45 38.0	+0.1
CDAG				iS	Sg	18 46 32.4	+2.2
TOKA	Tokat	3.25	355	iP	Pn	18 45 38.6	+0.1
TOKA				iS	Sg	18 46 33.7	+1.9
TOKA	Tokat	3.25	355		Pn	18 45 38.5	-0.1
SUSE	Susehri	3.30	18	iP	Pn	18 45 39.3	0.0
SUSE				iS	Sg	18 46 34.5	+1.0
BHL	Bhannes	3.31	197	eP	Pn	18 45 40.9	+1.5
MVOU	Mavrovouni	3.32	233	⇑P	Pn	18 45 37.6	-1.7
MVOU				AML	AML	18 46 34.1	
	comp=N,2.8nm,0.8s						
MVOU				AML	AML	18 46 36.7	
	comp=N,3.5nm,0.7s						
ATHAL	Athalassa	3.39	236	P	Pn	18 45 40.3	-0.1
COAL	Corum-Alaca	3.49	336	iP	Pn	18 45 41.7	-0.1
COAL				iS	Sg	18 46 38.6	-0.8
CSS	Mathiatis	3.54	234	Pn	Pn	18 45 39.2	-3.3
CSS	Mathiatis	3.54	234	S	Sn	18 46 26.8	+2.4
ALUC	Giresun/Alucra	3.59	24	iP	Pn	18 45 44.0	+0.7
ALUC				iS	Sg	18 46 44.5	+1.7
KELT	Kelkit	3.60	31	iP	Pn	18 45 43.5	0.0
KELT				iS	Sg	18 46 40.5	-2.6
BTMN	Batman	3.62	76	iP	Pn	18 45 42.7	-0.8
BTMN				iS	Sb	18 46 35.1	-0.3
SVAN	Silvan-Diyarba	3.62	71	iP	Pn	18 45 42.2	-1.4
SVAN				iS	Sb	18 46 39.5	+3.9
BRTR	Keskin Array B	3.65	317	Pn	Pn	18 45 44.4	+0.3
	comp=N,4.7nm,0.3s,baz=160,slow=14,SNR=143						
BR131	Keskin Array S	3.65	317	d iP	Pn	18 45 43.4	-0.7
BR131	Keskin Array S	3.65	317	Pn	Pn	18 45 44.2	+0.1
MIDY	Mardin/Midyat-	3.65	83	iP	Pn	18 45 43.1	-0.9
MIDY				iS	Sb	18 46 40.2	+3.8
RCY	Rachaya	3.67	193	eP	Pn	18 45 44.9	+0.6
ASGA	Asgata	3.71	233	P	Pn	18 45 44.3	-0.5
ASGA				AML	AML	18 46 42.0	
	comp=N,2.4nm,0.7s						
ASGA				AML	AML	18 46 43.7	
	comp=N,3.1nm,0.9s						
SZAC	Souni	3.96	235	⇑P	Pn	18 45 47.6	-0.7
SZAC				AML	AML	18 46 47.7	
	comp=N,9.6nm,0.9s						
SZAC				AML	AML	18 46 50.1	
	comp=N,6.7nm,0.7s						
KOPT	Kop Dagi	4.10	43	Pn	Pn	18 45 51.1	+0.7
NATA	Nata	4.16	238	P	Pn	18 45 50.5	-0.5
AKMS	Akamas	4.19	242	P	Pn	18 45 50.8	-0.6
BR231	Keskin MP Arra	4.22	312		Pn	18 45 53.0	+1.1
MMAI	Mount Meron Ar	4.22	197	Pn	Pn	18 45 52.1	+0.2
	comp=N,8.9nm,0.3s,baz=11,slow=14,SNR=36						
MMLI	Mount Malkishu	4.78	195	⇑P	Pn	18 46 00.8	+1.4
GEVA	Gevas	5.08	74		Pn	18 46 05.5	+1.7
ISP	Isparta	5.08	280	P	Pn	18 46 04.1	+0.4
ISP	Isparta	5.08	280	Pn	Pn	18 46 04.1	+0.4
OSC2	CSNet OBS 4	5.48	225	P	Pn	18 46 09.1	0.0
MDUB	Mudurnu	5.56	309		Pn	18 46 10.7	+0.4
ELL	Elmali	5.56	269	P	Pn	18 46 13.3	+2.9
ELL	Elmali	5.56	269	Pn	Pn	18 46 13.3	+2.9
AMAZ	Amatzia	5.76	197	⇑P	Pn	18 46 14.3	+1.3
OSC1	CSNet OBS 1	5.78	234	P	Pn	18 46 13.1	-0.1
AKAS	Kas	5.88	264	Pn	Pn	18 46 13.6	-1.1
MANT	Manisa	6.71	285	Pn	Pn	18 46 27.9	+1.7
GNI	Garni	6.90	61	Pn	Pn	18 46 29.9	+1.1
	comp=N,0.6nm,0.3s,baz=323,slow=19,SNR=2.8						
GNI	Garni	6.90	61	P	Pn	18 46 29.2	+0.4
GNI	Garni	6.90	61		Pn	18 46 29.2	+0.4
GUZR	Guzeripl'	7.35	19	iP	Pn	18 46 33.9	-0.9
EIL	Elat	7.56	193	Pn	Pn	18 46 37.6	0.0
	comp=N,0.1nm,0.3s,baz=336,slow=21,SNR=2.6						
EIL				Lg	Lg	18 48 48.8	
	comp=N,1.2nm,0.3s,baz=33,slow=13,SNR=4.6						
EIL				LR	LR	18 49 44.0	
	comp=N,408nm,20.1s,baz=332,slow=40						
ANN	Anapa	7.73	3	eP	Pn	18 46 34.3	-5.6
ANN				pmax	pmax		
	comp=Z,67nm,0.9s						
ALU	Alushta	7.82	347	eP	Pn	18 46 44.6	+3.5
SEV	Sevastopol'	7.84	343	eP	Pn	18 46 43.5	+2.1
ZEI	Tsey	7.87	41	eP	Pn	18 46 47.5	+5.4
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SUDU	Sudak	7.93	350	eP	Pn	18 46 46.3	+3.7
SUDU				eS	Sn	18 48 15.6	+3.2
KBZ	Khabaz	8.09	33	Pn	Pn	18 46 49.5	+4.6
	comp=Z,0.1nm,0.3s,baz=270,slow=14,SNR=2.7						
KIV	Kislovodsk	8.18	31	⇓eP	Pn	18 46 45.8	-0.5
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,308nm,15.0s						
KVAR	Kislovodsk Arr	8.19	31	Pn	Pn	18 46 47.5	+1.2
	baz=276,slow=19,SNR=2.1						
NCK	Nalchik	8.23	37	iP	Pn	18 46 45.2	-1.6
TIRR	Tirgusor	9.75	322	⇑P	Pn	18 47 08.9	+1.2
TIRR	Tirgusor	9.75	322	⇑P	Pn	18 47 08.9	+1.2
IDI	Anoyia	9.83	263	Pn	Pn	18 47 07.9	-0.9
	comp=Z,2.7nm,0.3s,baz=104,slow=12,SNR=12						
IDI	Anoyia	9.83	263	Pn	Pn	18 47 08.3	-0.5
ICOR	Ion Corvin	9.83	318	⇓P	Pn	18 47 09.8	+1.1
HARR	Harsova	10.16	321	⇑P	Pn	18 47 13.9	+0.7
HARR	Harsova	10.16	321	⇑P	Pn	18 47 13.9	+0.7
CFR	Carcaliu	10.41	324	⇑P	Pn	18 47 17.9	+1.2
CFR	Carcaliu	10.41	324	⇑P	Pn	18 47 17.9	+1.2
BISRR	Bisoca	11.38	321	⇓P	Pn	18 47 30.3	+0.3
MILM	Milestii Mici	11.50	331	⇑P	Pn	18 47 32.5	+0.9
NEHR	Nehoiu	11.51	320	⇑P	Pn	18 47 34.0	+2.2
VRI	Vrincioaia	11.59	322	⇑P	Pn	18 47 34.0	+1.1
VRI	Vrincioaia	11.59	322	⇑P	Pn	18 47 34.0	+1.1
PLOR	Plostina	11.62	322	⇑P	Pn	18 47 34.4	+1.1
PLOR	Plostina	11.62	322	⇑P	Pn	18 47 34.4	+1.1
MLR	Muntele Rosu	11.73	319	Pn	Pn	18 47 36.3	+1.4
	comp=Z,0.1nm,0.3s,baz=106,slow=18,SNR=2.8						
MLR	Muntele Rosu	11.73	319	⇑P	Pn	18 47 36.8	+2.0
MLR	Muntele Rosu	11.73	319		Pn	18 47 34.3	-0.6
VTS	Vitosha	11.83	302	⇑P	Pn	18 47 37.2	+1.0
VTS	Vitosha	11.83	302	⇑P	Pn	18 47 37.2	+1.0
TESR	Tescani	12.10	324	⇓P	Pn	18 47 40.4	+0.5
VOIR		12.17	317	⇑P	Pn	18 47 42.8	+1.9
VOIR		12.17	317	⇑P	Pn	18 47 42.8	+1.9
OZUR		12.22	321	⇑P	Pn	18 47 43.3	+1.8
DOPR	Dopca	12.34	320	⇓P	Pn	18 47 44.0	+0.9
SORM	Soroca	12.69	333	⇓P	Pn	18 47 49.1	+1.3
SORM	Soroca	12.69	333	⇓P	Pn	18 47 49.1	+1.3
BURAR	Bucovina Array	13.57	324	⇓P	Pn	18 48 01.9	+1.9
BURAR	Bucovina Array	13.57	324	⇓P	Pn	18 48 01.9	+1.9
BUR08	Bucovina Ar. S	13.60	325	Pn	Pn	18 48 01.6	+1.2
VORD	Divnogorie	13.99	6	eP	Pn	18 48 06.5	+0.9
VORD				pmax	pmax		
	comp=Z,20nm,1.4s						
VSR	Storozhevoye	14.23	6	eP	Pn	18 48 07.3	-1.6
VSR				pmax	pmax		
	comp=Z,20nm,1.6s						
VRH	Novokhopyorsk	14.54	12	eP	Pn	18 48 13.6	+0.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DIVS	Divibare	14.58	304		P	18 48 19.0	-1.4
AKASG	Malin Array Be	14.67	341	Pn	Pn	18 48 14.5	-0.4
	comp=Z,0.7nm,0.3s,baz=166,slow=12,SNR=5.1						
AKBB	Malin Array Si	14.67	341	P	Pn	18 48 14.8	-0.1
AKBB	Malin Array Si	14.67	341		Pn	18 48 14.8	-0.1
LPSR	Galich'ya Gora	15.59	5	eP	Pn	18 48 29.2	+2.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
UZH	Uzhgorod	15.69	322	eP	P	18 48 31.6	-0.9
TIP	Timpagrande	15.94	284	⇑P	Pn	18 48 30.3	-1.5
TIP	Timpagrande	15.94	284		Pn	18 48 30.0	-1.8
CRVS	Cervenica-Dubn	16.28	321	eP	P	18 48 40.9	+1.8
CRVS	Cervenica-Dubn	16.28	321	eP	P	18 48 40.9	+1.8
PSZ	Piszkesteto	16.50	316	ePN	P	18 48 41.7	+0.1
PSZ	Piszkesteto	16.50	316	P	P	18 48 40.9	-0.7
PSZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PSZ	Piszkesteto	16.50	316		P	18 48 40.9	-0.7
GEYT	Alibeck	16.91	81	Pn	P	18 48 46.2	+0.1
	comp=Z,0.2nm,0.3s,baz=336,slow=3.3,SNR=7.5						
GEYT				LR	LR	18 56 58.0	
	comp=Z,145nm,18.2s,baz=280,slow=43						
BELG	Belogornoye	17.09	23	iP	Pn	18 48 43.5	-2.7
LANS	Liptovska Anna	17.46	319	eP	P	18 48 54.6	+2.5
LANS	Liptovska Anna	17.46	319	eP	P	18 48 54.6	+2.5
OBN	Obninsk	18.04	359	⇑eP	Pn	18 48 55.8	-2.2
OBN				pmax	pmax		
	comp=Z,20nm,1.2s						
MNK	Minsk	18.48	343	iP	P	18 48 57.8	-5.5
	comp=E,4.0nm,1.1s						
MNK				iP	P	18 48 57.8	-5.5
	comp=N,16nm,1.0s						
MNK				iP	P	18 48 57.8	-5.5
	comp=Z,5.0nm,0.8s						
MNK				iPP	sP	18 49 09.2	+1.5
MNK				iPPP	PPP	18 49 16.9	
MNK				iS	Sn	18 52 21.1	-8.7

MNK				i SS	S	18 52 37.8	+3.7
MNK				i SSS	SSS	18 52 50.6	
MNK				i LQ	LQ	18 54 24.4	
MNK				i LR	LR	18 55 47.8	
MNK				i LRM	MLR	18 57 08.1	
	comp=E,58nm,12.9s						
MNK				i LRM	MLR	18 57 08.1	
	comp=N,127nm,11.6s						
MNK				i LRM	MLR	18 57 12.1	
	comp=Z,62nm,9.4s						
MOS	Moscow	18.67	1	eP	Pn	18 49 07.3	+1.6
MOS				pmax	pmax		
	comp=Z,38nm,1.2s						
ARSA	Arzberg	18.73	310	eP	Pn	18 49 19.8	+13
	comp=Z,3.3nm,1.1s						
CONA	Conrad Observa	18.83	312	eP	Pn	18 49 16.8	+9.0
	comp=Z,3.0nm,1.1s						
NRCA	Norcia	19.05	295	P	Pn	18 49 10.5	0.0
NRCA				IAmb	IAmb	18 49 16.9	
	comp=Z,8.8nm,0.8s						
OBKA	Obir	19.05	307	eP	Pn	18 49 19.7	+9.2
	comp=Z,8.0nm,1.2s						
VRAC	Vranov	19.09	316	P	Pn	18 49 11.0	+0.1
	comp=Z,0.1nm,0.3s,baz=135,slow=6.0,SNR=2.0						
SUW	Suwalki	19.39	335	eP	Pn	18 49 16.4	+2.0
MYKA	Terra Mystica	19.68	306	eP	Pn	18 49 19.7	+1.7
	comp=Z,11nm,0.9s						
DPC	Dobruska-Polom	19.81	319	eP	Pn	18 49 23.0	+3.4
DPC	Dobruska-Polom	19.81	319	eP	Pn	18 49 23.0	+3.4
DPC				epP	sP	18 49 34.0	+12
LATE	Laterza	19.97	294	P	P	18 49 19.9	+0.1
LATE				IAmb	IAmb	18 49 33.5	
	comp=Z,7.7nm,0.9s						
KBA	Koelnbreinsper	20.03	307	eP	Pn	18 49 28.1	+5.7
	comp=Z,9.4nm,0.9s						
ZOU	Zoufplan	20.09	306		P	18 49 17.7	-3.5
ZOU				IAmb	IAmb	18 49 32.8	
	comp=Z,11nm,0.8s						
KSP	Ksiaz	20.11	320	eP	P	18 49 22.0	+0.8
AKTO	Aktyubinsk	20.21	42	P	Pn	18 49 23.3	-0.9
	comp=Z,1.9nm,0.8s,baz=251,slow=11,SNR=6.1						
AKTO				LR	LR	18 59 26.6	
	comp=Z,140nm,18.9s,baz=253,slow=43						
ABTA	Abfaltersbach	20.45	306	eP	Pn	18 49 27.9	+0.7
	comp=Z,4.4nm,0.9s						
GEC2	GERESS Array S	20.53	312	P	P	18 49 24.0	-1.9
GERES	GERESS Array B	20.53	312	P	P	18 49 25.9	0.0
	comp=Z,2.8nm,0.8s,baz=113,slow=9.5,SNR=8.3						
PRU	Pruhonice	20.59	316	eP	Pn	18 49 29.0	+0.4
PRU	Pruhonice	20.59	316	eP	Pn	18 49 29.0	+0.4
TEOL	Teolo	20.60	302	P	P	18 49 25.5	-1.1
ABKAR	Akbulak array	20.69	47	P	P	18 49 26.4	-1.1
KHC	Kasperske Hory	20.73	313	eP	P	18 49 27.8	-0.2
KHC				e		18 49 46.9	
KHC	Kasperske Hory	20.73	313	eP	P	18 49 27.8	-0.2
KHC				ex	x	18 49 46.9	
HRA	Herat	20.78	90	P	P	18 49 27.3	-1.5
CTI	Castel Tesino	20.80	303	P	P	18 49 28.2	-0.7
CTI				pmax	pmax		
	comp=Z,13nm,0.8s						
CTI	Castel Tesino	20.80	303	P	P	18 49 28.2	-0.7
CTI				IAmb	IAmb	18 49 32.8	
	comp=Z,13nm,0.8s						
WTTA	Wattenberg	21.19	307	eP	P	18 49 32.9	-0.2
	comp=Z,18nm,1.5s						
WATA	Walderalm	21.25	307	eP	P	18 49 35.9	+2.2
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	21.45	306	eP	P	18 49 38.3	+2.5
	comp=Z,6.8nm,0.9s						
MOTA	Moosalm	21.56	307	eP	P	18 49 39.4	+2.4
	comp=Z,4.2nm,0.5s						
FETA	Feichten	21.70	305	eP	P	18 49 44.4	+5.8
	comp=Z,5.7nm,0.8s						
RETA	Reutte	21.82	307	eP	P	18 49 41.2	+1.4
	comp=Z,4.2nm,0.9s						
CLL	Collm	22.10	318	e(P)	P	18 49 44.0	+1.3
CLL				esP	sP	18 49 47.0	-0.1
CLL				ePP	PnPn	18 50 02.0	-2.6
CLL	Collm	22.10	318	eP	P	18 49 44.0	+1.3
CLL				e		18 49 47.0	
KEST	Kesra	22.15	275	P	P	18 49 41.9	-1.5
	comp=Z,18nm,1.0s,baz=358,slow=12,SNR=15						
KEST	Kesra	22.15	275	P	P	18 49 44.5	+1.1
DAVOX	Davos/Dischmat	22.18	304	P	P	18 49 44.4	+0.6
	comp=Z,1.0nm,0.3s,baz=132,slow=17,SNR=2.2						
DAVA	Damuels	22.33	306	eP	P	18 49 46.2	+0.8
	comp=Z,4.3nm,0.6s						
VSU	Vasula	22.40	346	i P	P	18 49 43.5	-2.2
KIRV	Kirov	23.04	17	i P	P	18 49 51.7	-0.8
WSAR	Wadi Sarin	23.28	120	P	P	18 50 00.7	+5.4
	comp=Z,4.5nm,0.7s,baz=317,slow=12,SNR=7.8						
BFO	Black Forest	23.64	307	P	P	18 49 58.3	-0.4
BFO				pmax	pmax		
	comp=Z,20nm,1.1s						
BFO	Black Forest	23.64	307	P	P	18 49 58.3	-0.4
SENIN	Lac Senin/Sane	23.81	302	P	P	18 50 01.4	+0.8
SENIN				IAmb	IAmb	18 50 04.7	
	comp=Z,4.6nm,0.8s						
KLMR	Klimovskoe	23.86	3	P	P	18 49 56.8	-3.8
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
KLMR	Klimovskoe	23.86	3	P	P	18 49 56.8	-3.8
KLMR				AMP		18 50 10.4	
	comp=Z,22nm,1.3s						
BNI	Bardonecchia	23.99	299	P	P	18 50 02.4	+0.1
BNI				pmax	pmax		
	comp=Z,17nm,1.0s						
BNI	Bardonecchia	23.99	299	P	P	18 50 02.4	+0.1
BNI				IAmb	IAmb	18 50 10.2	
	comp=Z,17nm,1.0s						
ARU	Arti	24.23	30	P	P	18 50 01.7	-2.5
ARU				S	S	18 54 19.9	-2.5
ECH	Echery	24.36	307	P	P	18 50 04.9	-0.6
ECH				pmax	pmax		
	comp=Z,19nm,1.1s						
ECH	Echery	24.36	307	P	P	18 50 04.9	-0.6
FINES	FINESS Array B	25.31	348	P	P	18 50 13.5	-0.4
	comp=Z,6.8nm,0.9s,baz=151,slow=9.3,SNR=12						
FINES	FINESS Array B	25.31	348	i P	P	18 50 13.5	-0.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	Karatay Array	26.33	66	P	P	18 50 22.2	-1.3
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	Karatay Array	26.33	66	P	P	18 50 22.1	-1.3
KK31				IAmb	IAmb	18 50 40.5	
	comp=Z,5.1nm,0.9s						
KKAR	Karatay Array	26.33	66	P	P	18 50 23.5	+0.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	26.33	66	P	P	18 50 23.5	+0.1
KKAR				IAmb	IAmb	18 50 40.5	
	comp=Z,5.1nm,0.9s						
HFS	Hagfors	27.40	335	P	P	18 50 33.0	+0.2
	comp=Z,7.6nm,1.1s,baz=169,slow=25,SNR=3.0						
BRVK	Borovoye	28.18	45	pmax	pmax		
	comp=Z,97nm,1.0s						
AAK	Ala-Archa	29.26	67	LR	LR	19 03 59.8	
	comp=Z,164nm,21.4s,baz=246,slow=39						
LVZ	Lovozero	30.89	358	i P	P	18 51 01.7	-2.1
ESDC	Sonseca Array	31.90	287	P	P	18 51 14.1	+1.1
	comp=Z,1.2nm,0.8s,baz=66,slow=8.9,SNR=7.8						
WMQ	Urumqi	38.77	64	eP	P	18 52 12.8	+0.7
TORD	Torodi Ar. Bea	39.40	242	P	P	18 52 16.1	-1.4
	comp=Z,1.3nm,0.9s,baz=41,slow=8.6,SNR=5.6						
JMIC	Jan Mayen	41.29	339	LR	LR	19 08 07.4	
	comp=Z,149nm,20.4s,baz=140,slow=34						
KOWA	Kowa	42.68	249	P	P	18 52 43.9	-0.6
KOWA				IAmb	IAmb	18 52 52.0	
	comp=Z,3.1nm,0.7s						
DBIC	Dimbokro	48.52	242	P	P	18 53 29.5	-1.2
	comp=Z,1.9nm,0.7s,baz=13,slow=9.2,SNR=3.9						
DBIC	Dimbokro	48.52	242	P	P	18 53 29.0	-1.7
TIC	Toumodi	48.65	242	eP	P	18 53 31.5	-0.3
KIC	Kosan Boka	48.65	241	eP	P	18 53 30.7	-1.1
	comp=Z,4.0nm,0.6s						
LIC	Lamto	48.95	242	eP	P	18 53 33.1	-1.0
	comp=Z,0.6nm,0.2s						
HHC	Hu-ho-hao-te	56.56	61	eP	P	18 54 30.6	+0.3
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,7.8s						
MJAR	Matsushiro Arr	76.77	54	LR	LR	19 33 18.5	
	comp=Z,74nm,18.2s,baz=315,slow=38						
YKA	Yellowknife Ar	78.14	347	P	P	18 56 48.4	+2.0
	comp=Z,2.7nm,0.9s,baz=24,slow=6.2,SNR=5.4						

IASPEI **08** *18:47:08.8±0.9, 64°.66N±0°.03×17°.49W±0°.03, h13^{km}±7^{km}, mb4.9/149, MS4.5/45, Error ellipse: s-maj=4.8km s-min=3.0km az=130.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

BJI **08** *18:47:09.0±0.0, 64°.60N×17°.80W, h5^{km}, mB5.4/18, mb4.6/31, Ms5.1/8, Ms7 4.7/9*

REY **08** *18:47:10.1, 64°.65N×17°.49W, h3^{km}*

IDC **08** *18:47:11.6±0.6, 64°.60N×17°.67W, h0^{km}, mb4.3/16, mb1 4.5/19, mb1mx4.1/70, mbtmp4.3/19, ML2.9/2, MS4.4/37, Ms1 4.4/37, ms1mx4.3/46, Error ellipse: s-maj=18.0km s-min=9.2km az=20.0*

MOS **08** *18:47:11.5±0.9, 64°.76N×17°.67W, h10^{km}, mb5.1/25, MS4.7/9, Error ellipse: s-maj=16.1km s-min=7.9km az=125.5*

NEIC **08** *18:47:12.9±1.4, 64°.56N±0°.08×17°.77W±0°.09, h9^{km}±4^{km}, mb5.1/130, Error ellipse: s-maj=13.5km s-min=2.3km az=204.0*

GCMT **08** *18:47:14.9±0.2, 64°.72N±0°.02×17°.43W±0°.03, h12^{km}, MW5.0/118, Moment Tensor Solution. s36,c40; s118,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.55±.09; $M_{\theta\theta}$-0.53±.10; $M_{\phi\phi}$3.08±.07; $M_{r\theta}$-1.40±.32; $M_{\theta\phi}$-1.89±.07; $M_{\phi r}$-0.51±.26; Best double couple: $M_0$3.72100×10^{16} NP1:ϕ_s6.00000°, δ53.00000°, λ-46.00000°. NP2:ϕ_s128.00000°, δ55.00000°, λ-133.00000°. Principal axes: T 3.8900, Plg1.0000°, Azm247.0000°; N -0.3380, Plg34.0000°, Azm156.0000°; P -3.5520, Plg56.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **08** *18:47:21.9±0.0, 64°.15N×16°.56W, h33^{km}, mb4.7*

ISC 08 18:47:11.8±0.6**, 64°.67N**±0°.02×**17°.61W**±0°.02**, h3**^{km}±3^{km}**,**
n452, σ1^s**87**/462**, mb4.9**/149**, MS4.5**/45**, 8C-11D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARD	Bardarbunga	0.08	115	P	Pg	18 47 10.8	-2.6
	baz=117						
IDYN	Dyngjuhals	0.16	41	P	Pg	18 47 13.4	-1.5
	baz=21						
IHAM	Hamarinn	0.21	206	P	Pg	18 47 14.6	-1.3
	baz=220						
IURH	Urdarhals	0.25	53	P	Pg	18 47 14.7	-1.8
	baz=41						
ISKR	Skrokkalda	0.35	252	P	Pg	18 47 17.5	-1.1
	baz=257						
IKVE	Kverkfjoll	0.40	89	P	Pg	18 47 17.3	-2.2
	baz=85						
IJOK	Jokulheimar	0.45	217	P	Pg	18 47 18.7	-1.6
	baz=224						
IASK	Askja	0.56	47	P	Pg	18 47 19.8	-2.7
	baz=42						
IASK				S	Sg	18 47 28.1	-1.6
	baz=42						
IIEY	Innrieyrar	0.62	201	P	Pg	18 47 21.6	-2.1
	baz=206						
IIEY				S	Sg	18 47 30.4	-1.3
	baz=206						
IMKO	Mokollar	0.62	60	P	Pg	18 47 20.9	-2.8
	baz=56						
ISVA	Svartarkot	0.68	12	P	Pg	18 47 22.5	-2.4
	baz=8.2						
IKSK	Karasker	0.71	136	P	Pg	18 47 21.9	-3.5
	baz=138						
IKAL	Kalfafell	0.73	183	P	Pg	18 47 23.0	-2.8
	baz=187						
IKAL				S	Sg	18 47 32.8	-2.3
	baz=187						
IVSH	V-Sauoahnukur	0.82	80	P	Pg	18 47 23.7	-3.7
	baz=78						
IVSH				S	Sg	18 47 34.7	-3.3
	baz=78						
IHVE	Hveravellir	0.86	284	P	Pg	18 47 25.9	-2.4
	baz=285						
IHVE				S	Sg	18 47 38.3	-1.2
	baz=285						
IFAG	Fagurholsmyri	0.90	152	P	Pg	18 47 25.7	-3.3
	baz=154						
IFAG				S	Sg	18 47 37.0	-3.7
	baz=154						
IADA	Aoalbol	0.94	67	P	Pg	18 47 25.8	-3.9
	baz=65						
IMEL	Melhnausar	0.99	24	P	Pg	18 47 27.2	-3.4
	baz=21						
IREN	Reynihlio	1.02	17	P	Pg	18 47 27.9	-3.4
	baz=14						
ISNB	Snabyli	1.04	206	P	Pg	18 47 28.8	-2.9
	baz=209						
ISNB				S	Sg	18 47 41.9	-3.3
	baz=209						
IKVO	Krokottuvotn	1.09	16	P	Pg	18 47 29.1	-3.6
	baz=13						
IFED	Fedgar	1.12	235	P	Pg	18 47 30.9	-2.3
	baz=238						
IGRS	Grimsstaoir	1.15	32	P	Pg	18 47 30.0	-3.8
	baz=30						
IRJU	Rjupnafell	1.16	204	P	Pg	18 47 30.9	-3.0
	baz=207						
IMJO	Mjoaskard	1.17	231	P	Pg	18 47 31.6	-2.5
	baz=234						
IGYG	Gygjarholskot	1.20	252	P	Pg	18 47 31.4	-3.2
	baz=254						
IGYG				S	Sg	18 47 47.4	-2.8
	baz=254						
ISKI	Skildingahlsh	1.23	11	P	Pg	18 47 31.4	-3.8
	baz=8.9						
ISKI				S	Sg	18 47 48.0	-3.2
	baz=8.9						
IGHA	Grjothals	1.24	18	P	Pg	18 47 31.6	-4.0
	baz=16						
IGHA				S	Sg	18 47 48.2	-3.4
	baz=16						
IHAU	Haukadalur	1.25	237	P	Pg	18 47 32.4	-3.2
	baz=239						
IGRA	Granastaoir	1.25	1	P	Pg	18 47 32.1	-3.6
	baz=358						
IHVO	Lagu-Hvolar	1.27	206	P	Pg	18 47 33.2	-2.9
	baz=208						
IHLA	Hella	1.32	346	P	Pg	18 47 33.2	-3.8
	baz=344						
IDIM	Dimmadalss	1.32	12	P	Pg	18 47 33.1	-4.0
	baz=9.9						
ISAU	Saurbar	1.40	242	P	Pn	18 47 34.6	-3.6
	baz=244						
BORG	Borgarnes	1.60	274	Pg	Pn	18 47 38.3	-2.6
	194nm,0.3s,baz=99,slow=7.9,SNR=140						
BORG				Lg	Lg	18 48 01.9	
	144nm,0.3s,baz=273,slow=22,SNR=9.4						
BORG	Borgarnes	1.60	274	Pn	Pn	18 47 37.7	-3.2
SCO	Scoresbysund	6.07	346	e	Pn	18 48 37.6	-4.6
	baz=157,slow=8.6						
SCO				i P	Pn	18 48 41.2	-1.1
SCO				i S	Sn	18 49 55.1	+3.1
SCO				IAML		18 49 59.1	
	comp=Z,3.8nm,0.4s						
JMIC	Jan Mayen	7.21	24	LR	LR	18 51 16.0	
	comp=Z,2µm,20.5s,baz=213,slow=34						
SUMG	Summit	10.91	325	P	Pn	18 49 51.4	+2.5
SUMG	Summit	10.91	325	Pn	Pn	18 49 51.4	+2.5
EKA	Eskdalemuir Ar	11.80	136	Pn	Pn	18 49 58.7	-2.0
	baz=322,slow=13,SNR=28						
ESK	Eskdalemuir	11.80	136	P	Pn	18 49 59.6	-1.2
ESK	Eskdalemuir	11.80	136	Pn	Pn	18 49 59.6	-1.2
NRS	Narsarsuaq	13.09	267	P	Pn	18 50 15.7	-2.6
NRS	Narsarsuaq	13.09	267	Pn	Pn	18 50 15.7	-2.6
NC204	NORSAR Array S	13.28	92	Pn	Pn	18 50 21.1	+0.2
NOA	NORSAR Array B	13.58	92	Pn	Pn	18 50 22.1	-3.0
	comp=Z,0.0nm,0.3s,baz=319,slow=16,SNR=3.0						
NOA				LR	LR	18 55 39.7	
	comp=Z,815nm,18.4s,baz=300,slow=37						
SFJD	Kangerlussuaq	13.62	295	LR	LR	18 55 02.6	
	comp=Z,2µm,21.6s,baz=86,slow=35						
HFS	Hagfors	15.09	93	LR	LR	18 55 32.0	
	comp=Z,1µm,21.5s,baz=294,slow=33						
ARCES	ARCESS Array B	17.15	55	P	Pn	18 51 12.1	0.0
	baz=53,slow=8.4,SNR=4.6						
ARCES				LR	LR	18 56 12.2	
	comp=Z,1µm,21.8s,baz=265,slow=31						
SNF	Seneffe	18.26	131	dPn	Pn	18 51 25.5	-0.4
SNF				dx	x	18 51 29.6	
BMRD	Maredsous	18.60	130	dPn	P	18 51 29.0	-0.9
BCLA	Clavier	18.68	129	dPn	P	18 51 27.9	-2.9
DOU	Dourbes	18.72	131	dPn	Pn	18 51 31.9	+0.4
MEM	Membach	18.75	127	dPn	P	18 51 31.4	-0.1
BTNL	Ternell	18.82	127	dPn	Pn	18 51 32.7	0.0
WLF	Walferdange	19.61	129	dPn	P	18 51 40.3	-0.6
FINES	FINESS Array B	19.75	79	P	Pn	18 51 44.9	+1.1
	comp=Z,0.1nm,0.3s,baz=351,slow=10.0,SNR=3.5						
FINES				LR	LR	18 59 12.5	
	comp=Z,861nm,18.7s,baz=293,slow=36						
TULEG	Thule	19.82	327		Pn	18 51 44.7	+0.2
APA	Apatity	20.36	59	⇓i P	Pn	18 51 54.3	+3.3
APA				pmax	pmax		
	comp=Z,41nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
CLL	Collm	20.75	116	eP	P	18 51 53.0	-0.3
	comp=Z,84nm,1.4s						
CLL				eS	Sn	18 55 48.0	-1.9
CLL				eSS	SnSn	18 56 16.0	+12
CLL	Collm	20.75	116	P	P	18 51 53.7	+0.4
CLL				pmax	pmax		
	comp=Z,90nm,1.4s						
CLL	Collm	20.75	116	P	P	18 51 53.7	+0.4
CLL				IAmb	IAmb	18 51 57.1	
	comp=Z,90nm,1.4s						
GKP	Gorka Klasztor	20.96	106	eP	Pn	18 51 57.7	-0.4
ECH	Echery	21.19	129	P	P	18 51 59.1	+0.9
ECH				pmax	pmax		
	comp=Z,46nm,1.2s						
ECH	Echery	21.19	129	P	P	18 51 59.1	+0.9
GRA1	Grafenberg Arr	21.38	121	P	P	18 52 00.7	+0.6
GRA1				IAmb	IAmb	18 52 19.5	
	comp=Z,68nm,1.2s						
GRF	Grafenberg Arr	21.38	121	P	P	18 52 00.7	+0.6
GRF				pmax	pmax		
	comp=Z,68nm,1.2s						
GRF	Grafenberg Arr	21.38	121	eP	P	18 51 59.1	-1.0
	comp=Z,45nm,1.2s,baz=324,slow=11						
NKC	Novy Kostel	21.39	118	eP	P	18 52 02.2	+1.9
NKC				MLR	MLR		
	comp=Z,4µm,9.1s						
NKC	Novy Kostel	21.39	118	eP	P	18 52 02.2	+1.9
NKC				AMS	AMS	19 04 10.0	
	comp=Z,4µm,9.1s						
STU	Stuttgart	21.41	125	P	P	18 52 01.1	+0.6
STU				pmax	pmax		
	comp=Z,105nm,1.3s						
STU	Stuttgart	21.41	125	P	P	18 52 01.1	+0.6
STU				IAmb	IAmb	18 52 09.5	
	comp=Z,105nm,1.3s						
BRG	Berggiesshubel	21.46	115	i P	P	18 52 00.9	-0.1
BRG				Amp		18 52 05.3	
	comp=Z,137nm,1.7s						
BRG	Berggiesshubel	21.46	115	i P	P	18 52 00.8	-0.1
BRG				S	Sn	18 56 07.0	0.0
BRG				pmax	pmax		
	comp=Z,137nm,1.7s						
BRG	Berggiesshubel	21.46	115	i P	P	18 52 00.9	-0.1
BRG				Amp		18 52 05.3	
	comp=Z,137nm,1.7s						
BFO	Black Forest	21.49	127	P	P	18 52 01.6	+0.2
BFO				pmax	pmax		
	comp=Z,161nm,1.9s						
BFO	Black Forest	21.49	127	P	P	18 52 01.6	+0.2
BFO				IAmb	IAmb	18 52 16.9	
	comp=Z,161nm,1.9s						
VSU	Vasula	21.61	86	i P	P	18 52 03.1	+0.6
FRB	Frobisher Bay	21.70	291	P	P	18 52 04.5	+1.0
	comp=Z,8.1nm,0.9s,baz=66,slow=9.9,SNR=12						
FRB				LR	LR	18 59 45.3	
	comp=Z,908nm,20.5s,baz=70,slow=35						
PVCC	Panska Ves	21.98	115	eP	P	18 52 12.4	+5.9
PVCC				MLR	MLR		
	comp=Z,3µm,9.7s						
PVCC	Panska Ves	21.98	115	eP	P	18 52 12.4	+5.9
PVCC				AMS	AMS	19 04 40.0	
	comp=Z,3µm,9.7s						
PRA	Prague	22.29	116	eS	S	18 56 20.9	+5.5
PRA				AMS	AMS	19 03 10.0	
	comp=Z,1µm,9.7s						
PRU	Pruhonice	22.39	116	eP	P	18 52 12.1	+1.1
PRU				e		18 52 18.2	
PRU				eS	S	18 56 22.3	+4.9
PRU				MLR	MLR		
	comp=Z,2µm,10.1s						
PRU	Pruhonice	22.39	116	eP	P	18 52 12.1	+1.1
PRU				epP	sP	18 52 18.2	+5.7
PRU				eS	S	18 56 22.3	+4.9
PRU				AMS	AMS	19 03 20.0	
	comp=Z,2µm,10.1s						
KSP	Ksiaz	22.41	112	eP	P	18 52 11.4	+0.3
KSP				epP	sP	18 52 13.5	+0.8
PBCC	Pribram	22.43	117	eP	P	18 52 14.2	+2.8
CHVC	Chvalec	22.51	113	eP	P	18 52 13.9	+1.6
CHVC				ex	x	18 52 29.2	
UPC	Upice	22.56	113	eP	P	18 52 13.9	+1.1
UPC				MLR	MLR		
	comp=Z,3µm,9.9s						
UPC	Upice	22.56	113	eP	P	18 52 13.9	+1.1
UPC				AMS	AMS	19 05 40.0	
	comp=Z,3µm,9.9s						
OSTC	Ostas	22.60	113	eP	P	18 52 14.8	+1.5
OSTC				eS	S	18 56 24.5	+3.2
OSTC				AMS	AMS	19 05 10.0	
	comp=Z,3µm,9.9s						
KHC	Kasperske Hory	22.72	118	eP	P	18 52 14.1	-0.4
KHC				e		18 52 21.8	
KHC				MLR	MLR		
	comp=Z,2µm,11.8s						
KHC	Kasperske Hory	22.72	118	eP	P	18 52 14.1	-0.4
KHC				ex	x	18 52 21.8	
KHC				eS	Sn	18 56 30.5	-6.8
KHC				AMS	AMS	19 02 50.0	
	comp=Z,2µm,11.8s						
KHC	Kasperske Hory	22.72	118	P	P	18 52 14.4	-0.1
DPC	Dobruska-Polom	22.81	113	eP	P	18 52 15.7	+0.3
DPC				MLR	MLR		
	comp=Z,2µm,10.3s						
DPC	Dobruska-Polom	22.81	113	eP	P	18 52 15.7	+0.3
DPC				ex	x	18 52 35.2	
DPC				AMS	AMS	19 05 40.0	
	comp=Z,2µm,10.3s						
SENIN	Lac Senin/Sane	22.86	131	P	P	18 52 16.2	0.0
SENIN				IAmb	IAmb	18 52 32.5	
	comp=Z,58nm,1.4s						
DAVA	Damuels	22.92	126	eP	P	18 52 18.4	+1.6
	comp=Z,30nm,1.1s						
SUW	Suwalki	22.93	98	eP	P	18 52 17.7	+1.0
SUW				epP	sP	18 52 22.2	+4.1
SUW	Suwalki	22.93	98	P	P	18 52 17.6	+1.0
SUW				pmax	pmax		
	comp=Z,120nm,1.4s						
SUW	Suwalki	22.93	98	P	P	18 52 17.6	+1.0
SSB	Saint Sauveur	22.99	137	P	P	18 52 18.2	+0.9
SSB				pmax	pmax		
	comp=Z,76nm,1.7s						
SSB	Saint Sauveur	22.99	137	P	P	18 52 18.2	+0.9
SSB				IAmb	IAmb	18 52 34.6	
	comp=Z,76nm,1.7s						
GEC2	GERESS Array S	23.00	119	P	P	18 52 17.6	+0.1
GEC2				IAmb	IAmb	18 52 28.7	
	comp=Z,81nm,1.5s						
GERES	GERESS Array B	23.00	119	P	P	18 52 18.4	+0.8
	comp=Z,11nm,1.1s,baz=330,slow=7.7,SNR=16						
GERES				LR	LR	19 01 27.5	
	comp=Z,532nm,19.6s,baz=330,slow=37						
RETA	Reutte	23.06	125	eP	P	18 52 22.1	+3.9
	comp=Z,14nm,0.9s						
MOTA	Moosalm	23.30	124	eP	P	18 52 23.4	+2.7
	comp=Z,37nm,1.4s						
TREC	Trest	23.32	115	eP	P	18 52 21.3	+0.6
TREC	Trest	23.32	115	eP	P	18 52 21.3	+0.6
DAVOX	Davos/Dischmat	23.36	127	P	P	18 52 22.0	+0.7
	comp=Z,13nm,1.1s,baz=351,slow=10,SNR=6.1						
DAVOX				LR	LR	19 02 02.1	
	comp=Z,714nm,20.1s,baz=298,slow=38						
PGAV	Gavieira, Arco	23.37	162	eP	P	18 52 21.9	+0.5
	comp=Z,62nm,1.9s						
PGAV				eLR	LR	18 58 51.7	
	comp=Z,2µm,20.0s						

TMCR	Tamitsa	23.39	66	*e*P	P	18 52 20.4	-0.8
TMCR				pmax	pmax		
	comp=Z,71nm,1.0s						
TUE	Stuetta	23.45	128	P	P	18 52 23.2	+1.0
TUE				IAmb	IAmb	18 52 48.4	
	comp=Z,45nm,1.2s						
SQTA	Sankt Quirin	23.45	124	*e*P	P	18 52 25.2	+3.1
	comp=Z,55nm,1.4s						
FETA	Feichten	23.45	125	*e*P	P	18 52 24.9	+2.8
	comp=Z,42nm,1.3s						
WATA	Walderalm	23.48	124	*e*P	P	18 52 23.5	+1.0
	comp=Z,24nm,1.4s						
BEL	Belsk	23.49	105	*e*P	P	18 52 23.4	+1.0
WTTA	Wattenberg	23.56	124	*i* P	P	18 52 23.5	+0.1
	comp=Z,37nm,1.5s,SNR=7.3						
VRAC	Vranov	23.74	114	P	P	18 52 25.4	+0.5
	comp=Z,12nm,1.1s,baz=319,slow=12,SNR=10						
VRAC				LR	LR	19 02 43.6	
	comp=Z,591nm,20.5s,baz=332,slow=39						
VRAC	Vranov	23.74	114	*e*P	P	18 52 25.2	+0.3
MORC	Moravsky Berou	23.74	112	*e*P	P	18 52 25.1	+0.1
MORC	Moravsky Berou	23.74	112	P	P	18 52 25.0	+0.1
MORC				pmax	pmax		
	comp=Z,169nm,2.0s						
MORC	Moravsky Berou	23.74	112	P	P	18 52 25.0	0.0
BNI	Bardonecchia	23.84	134	P	P	18 52 27.6	+1.6
BNI				pmax	pmax		
	comp=Z,70nm,1.6s						
BNI	Bardonecchia	23.84	134	P	P	18 52 27.6	+1.6
BNI				IAmb	IAmb	18 52 38.7	
	comp=Z,70nm,1.6s						
KRUC	Moravsky	23.86	115	*e*P	P	18 52 25.8	-0.2
NACGM	Naroch	23.86	93	*i* P	P	18 52 25.7	-0.3
NACGM				*i* P	P	18 52 25.7	-0.3
NACGM				*i* P	P	18 52 25.7	-0.3
NACGM				*i* PP		18 54 44.6	
NACGM				*i* PPP	PPP	18 56 13.4	
NACGM				*i* SS		19 05 20.4	
NACGM				*i* SSS	SSS	19 07 59.5	
OKC	Ostrava-Krasne	23.94	111	*e*S	S	18 56 54.6	+11
POLO	Lamas de Olo	24.02	162	*e*P	P	18 52 29.4	+1.7
	comp=Z,37nm,1.6s						
MOA	Molln	24.03	119	*e*P	P	18 52 29.4	+1.7
	comp=Z,16nm,1.6s						
PVRL	Vila Real	24.12	162	*e*P	P	18 52 29.9	+1.3
	comp=Z,51nm,1.6s						
OJC	Ojcow	24.31	109	*e*P	P	18 52 31.0	+0.8
OJC	Ojcow	24.31	109	P	P	18 52 29.9	-0.3
OJC				pmax	pmax		
	comp=Z,53nm,1.5s						
OJC	Ojcow	24.31	109	P	P	18 52 29.9	-0.3
OJC				IAmb	IAmb	18 52 31.7	
	comp=Z,53nm,1.5s						
ABTA	Abfaltersbach	24.32	123	*e*P	P	18 52 30.7	+0.3
	comp=Z,16nm,1.4s						
MVO	Moncorvo	24.33	160	*e*P	P	18 52 32.1	+1.5
	comp=Z,52nm,1.7s						
MVO				*e*LR	LR	18 59 41.0	
	comp=Z,1µm,18.0s						
KBA	Koelnbreinsper	24.34	121	*e*P	P	18 52 34.8	+4.1
	comp=Z,12nm,1.4s						
JAVC	Velka Javorina	24.52	113	*e*P	P	18 52 33.5	+1.2
CONA	Conrad Observa	24.57	117	*e*P	P	18 52 32.4	-0.4
	comp=Z,15nm,1.2s						
CTI	Castel Tesino	24.61	125	P	P	18 52 33.5	+0.4
CTI				pmax	pmax		
	comp=Z,91nm,1.9s						
CTI	Castel Tesino	24.61	125	P	P	18 52 33.5	+0.4
CTI				IAmb	IAmb	18 52 41.1	
	comp=Z,91nm,1.9s						
MNK	Minsk	24.61	93	*i* P	P	18 52 30.1	-2.8
	comp=E,3.0nm,1.1s						
MNK				*i* P	P	18 52 30.1	-2.8
	comp=N,31nm,1.1s						
MNK				*i* P	P	18 52 30.1	-2.8
	comp=Z,14nm,1.0s						
MNK				*i* PP	PnPn	18 53 01.7	-2.0
MNK				*i* PPP	PPP	18 53 09.7	
MNK				*i* PcP	PcP	18 56 06.8	-3.4
MNK				*i* S	S	18 56 51.6	-2.7
MNK				*i* SS	SnSn	18 57 40.0	+1.3
MNK				*i* SSS	SSS	18 57 53.6	
MNK				*i* LR	LR	19 01 28.4	
MNK				*i* LRM	MLR	19 02 47.1	
	comp=Z,259nm,15.5s						
MNK				*i* LRM	MLR	19 02 57.9	
	comp=E,82nm,16.8s						
MNK				*i* LRM	MLR	19 02 57.9	
	comp=N,695nm,12.9s						
MNK	Minsk	24.61	93	⇑*e*P	P	18 52 33.0	+0.1
MNK				pmax	pmax		
	comp=Z,220nm,1.0s						
ZOU	Zoufplan	24.64	123	P	P	18 52 35.4	+1.9
PVIS	Viseu	24.65	162	*e*P	P	18 52 36.0	+2.6
	comp=Z,42nm,2.3s						
SMOL	Smolenice	24.71	114	*e*P	P	18 52 34.8	+1.0
SMOL				pmax	pmax		
	comp=Z,87nm,2.3s						
SMOL	Smolenice	24.71	114	*e*P	P	18 52 34.8	+1.0
MODS	Modra-Piesok	24.76	114	*e*P	P	18 52 35.0	+0.7
MODS				pmax	pmax		
	comp=Z,59nm,1.5s						
MODS	Modra-Piesok	24.76	114	*e*P	P	18 52 35.0	+0.7
STAL	STALIGIAL	24.80	123	P	P	18 52 35.0	+0.2
MYKA	Terra Mystica	24.83	122	*e*P	P	18 52 40.1	+5.1
	comp=Z,9.9nm,1.1s						
ZST	Bratislava	24.84	115	*e*P	P	18 52 37.4	+2.4
ZST	Bratislava	24.84	115	*e*P	P	18 52 37.4	+2.4
ARSA	Arzberg	25.01	118	*e*P	P	18 52 37.2	+0.6
	comp=Z,17nm,1.4s						
MTE	Manteigas	25.01	162	*e*P	P	18 52 38.1	+1.4
	comp=Z,57nm,1.5s						
MTE				*e*LR	LR	18 59 33.1	
	comp=Z,2µm,18.0s						
LANS	Liptovska Anna	25.01	111	*e*P	P	18 52 37.8	+1.2
LANS	Liptovska Anna	25.01	111	*e*P	P	18 52 37.8	+1.2
NIE	Niedzica	25.14	109	*e*P	P	18 52 38.3	+0.5
TEOL	Teolo	25.21	126	P	P	18 52 38.7	+0.3
OBKA	Obir	25.26	121	*e*P	P	18 52 40.3	+1.3
	comp=Z,19nm,1.2s						
VYHS	Vyhne	25.28	112	*e*P	P	18 52 39.7	+0.7
VYHS				pmax	pmax		
	comp=Z,57nm,1.4s						
VYHS	Vyhne	25.28	112	*e*P	P	18 52 39.7	+0.7
SOKA	Soboth	25.30	120	*e*P	P	18 52 39.8	+0.5
	comp=Z,8.0nm,1.2s						
VOJS	Vojsko	25.42	122	*e*P	P	18 52 40.3	-0.1
PCBR	Castelo Branco	25.57	162	*e*P	P	18 52 43.5	+1.9
	comp=Z,24nm,1.5s						
SRO	Srobarova	25.62	114	*e*P	P	18 52 43.8	+1.7
SRO	Srobarova	25.62	114	*e*P	P	18 52 43.8	+1.7
KLMR	Klimovskoe	25.64	72	*e*P	P	18 52 41.9	-0.3
KLMR				pmax	pmax		
	comp=Z,78nm,1.2s						
KLMR	Klimovskoe	25.64	72	*e*P	P	18 52 41.9	-0.3
KLMR				AMP		18 52 47.1	
	comp=Z,78nm,1.2s						
LJU	Ljubljana	25.65	121	*e*P	P	18 52 42.6	+0.2
ZCCA	Zocca	25.86	128	P	P	18 52 45.4	+1.1
ZCCA				IAmb	IAmb	18 52 59.8	
	comp=Z,72nm,1.4s						
KOGS	Kog	25.95	118	*e*P	P	18 52 45.0	-0.1
KWP	Kalwaria Pacla	25.96	106	*e*P	P	18 52 47.0	+1.9
KWP				*e*pP	sP	18 52 50.5	+3.8
KWP	Kalwaria Pacla	25.96	106	P	P	18 52 46.1	+0.9
KWP				pmax	pmax		
	comp=Z,142nm,1.5s						
KWP	Kalwaria Pacla	25.96	106	P	P	18 52 46.1	+0.9
PMRV	Marv??o	25.98	162	*e*P	P	18 52 48.3	+2.8
	comp=Z,36nm,1.7s						
PMRV				*e*LR	LR	19 01 01.0	
	comp=Z,2µm,20.0s						
CRVS	Cervenica-Dubn	26.01	109	*e*P	P	18 52 46.5	+0.8
CRVS	Cervenica-Dubn	26.01	109	*e*P	P	18 52 46.5	+0.8
PSZ	Piszkesteto	26.16	112	P	P	18 52 47.5	+0.4
PSZ				pmax	pmax		
	comp=Z,60nm,1.5s						
PSZ	Piszkesteto	26.16	112	P	P	18 52 47.5	+0.4
PSZ				IAmb	IAmb	18 53 00.8	
	comp=Z,60nm,1.5s						
ESBB	Sonseca Array	26.28	156	P	P	18 52 49.5	+1.4
ESDC	Sonseca Array	26.28	156	P	P	18 52 48.5	+0.3
	comp=Z,4.2nm,0.8s,baz=348,slow=8.9,SNR=20						
ESDC				LR	LR	19 02 57.6	
	comp=Z,1µm,18.6s,baz=330,slow=36						
KOLS	Kolonicke sedl	26.32	108	*e*P	P	18 52 49.6	+1.1
KOLS				pmax	pmax		
	comp=Z,30nm,1.2s						
KOLS	Kolonicke sedl	26.32	108	*e*P	P	18 52 49.6	+1.1
LVV	L'vov	26.36	104	*e*P	P	18 52 49.4	+0.6
LVV				*e*S	S	18 57 17.0	-5.3
LVV				MLR	MLR		
	comp=Z,700nm,15.0s						
RES	Resolute Bay	26.43	324	LR	LR	19 02 37.6	
	comp=Z,912nm,19.4s,baz=72,slow=35						
UZH	Uzhgorod	26.57	108	*e*P	P	18 52 52.6	+2.0
UZH				*e*		18 53 00.4	
OSSC	Osservatorio P	26.68	129	P	P	18 52 52.2	+0.5
OSSC				IAmb	IAmb	18 53 15.8	
	comp=Z,62nm,1.3s						
MURB	Monte Urbino	27.34	127	P	P	18 52 58.4	+0.6
MURB				IAmb	IAmb	18 53 14.3	
	comp=Z,55nm,1.4s						
AKASG	Malin Array Be	27.89	97	P	P	18 53 02.4	-0.1
	comp=Z,2.7nm,0.7s,baz=321,slow=9.6,SNR=9.9						
AKASG				LR	LR	19 04 27.4	
	comp=Z,607nm,18.3s,baz=315,slow=37						
AKBB	Malin Array Si	27.89	97	P	P	18 53 03.3	+0.8
AKBB				pmax	pmax		
	comp=Z,145nm,1.0s						
AKBB	Malin Array Si	27.89	97	P	P	18 53 03.3	+0.8
AKBB				IAmb	IAmb	18 53 14.0	
	comp=Z,145nm,1.0s						
NRCA	Norcia	27.93	127	P	P	18 53 04.3	+1.3
OBN	Obninsk	27.93	84	LR	LR	19 02 46.6	
	comp=Z,154nm,21.8s,baz=296,slow=33						
OBN	Obninsk	27.93	84	⇓*e*P	P	18 53 03.9	+1.1
OBN				S	S	18 57 44.0	-2.8
OBN				pmax	pmax		
	comp=Z,48nm,1.2s						
OBN				MLR	MLR		
	comp=Z,751nm,15.0s						
PVAQ	Vaqueiros	27.93	163	*e*LR	LR	19 00 53.9	
	comp=Z,1µm,20.0s						
BUR08	Bucovina Ar. S	28.54	106	P	P	18 53 09.5	+1.0
INTR	Introdacqua	28.93	126	P	P	18 53 11.1	-0.8
MLR	Muntele Rosu	30.58	108	P	P	18 53 27.5	+1.0
MLR				pmax	pmax		
	comp=Z,115nm,1.4s						
MLR	Muntele Rosu	30.58	108	P	P	18 53 27.5	+1.0
KIRV	Kirov	31.02	69	LR	LR	19 05 43.3	
	comp=Z,812nm,19.8s,baz=309,slow=36						
KIRV	Kirov	31.02	69	*i* P	P	18 53 29.4	-0.7
VORR	Voronezh	31.46	87	*e*P	P	18 53 32.0	-2.1
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
PMOZ	Porto Moniz, M	31.88	179	*e*LR	LR	19 02 27.4	
	comp=Z,776nm,16.0s						
TLCR		32.01	105	⇑P	P	18 53 39.1	+0.2
TPGR	Topolog	32.11	106	⇑P	P	18 53 40.7	+0.7
TLBR	Topalu	32.21	106	⇑P	P	18 53 43.7	+3.0
CORL	Corleone	32.42	131	P	P	18 53 44.2	+1.4
ICOR	Ion Corvin	32.46	107	⇑P	P	18 53 46.4	+3.5
MFTR	Murfatlar	32.67	106	⇑P	P	18 53 44.3	-0.4
CLTB	Caltabellotta	32.68	131	P	P	18 53 44.0	-1.1
KEST	Kesra	33.19	138	P	P	18 53 50.3	+0.7
	comp=Z,4.5nm,0.9s,baz=342,slow=4.9,SNR=2.9						
KEST				LR	LR	19 07 09.3	
	comp=Z,744nm,19.1s,baz=334,slow=36						
SIM	Simferopol'	34.43	100	*d i*P	P	18 53 55.1	-5.0
SIM				pmax	pmax		
	comp=Z,48nm,0.9s						
BELG	Belogornoye	34.53	79	*i* P	P	18 53 59.7	-1.2
BELG				pmax	pmax		
	comp=Z,12nm,1.3s						
AGG	Agios Georgios	34.61	118	P	P	18 54 00.0	-1.8
AGG				pmax	pmax		
	comp=Z,28nm,1.0s						
AGG	Agios Georgios	34.61	118	P	P	18 54 00.0	-1.8
AGG				IAmb	IAmb	18 54 20.6	
	comp=Z,28nm,1.0s						
VLDQ	Val d'Or	35.43	272	P	P	18 54 11.5	+2.9
ANN	Anapa	35.96	96	*e*P	P	18 54 10.0	-3.3
ANN				*e*		18 55 29.7	
ANN				pmax	pmax		
	comp=Z,116nm,1.2s						
ARU	Arti	36.12	66	LR	LR	19 08 10.8	
	comp=Z,694nm,18.5s,baz=306,slow=35						
ARU	Arti	36.12	66	*c i*P	P	18 54 14.9	+0.3
ARU						18 55 36.2	
ARU				S	S	18 59 57.6	+3.2
ARU				SS	SnSn	19 02 21.7	+3.0
ARU				pmax	pmax		
	comp=Z,35nm,1.8s						
NRIK	Noril'sk	36.48	35	*i* P	P	18 54 17.2	-0.3
NRIK				pmax	pmax		
	comp=Z,15nm,1.3s						
SOC	Sochi	37.91	95	*e*P	P	18 54 27.8	-2.1
SOC				*e*		18 55 55.0	
SOC				*e*S	S	19 00 21.0	-0.9
SOC				*e*SS	SnSn	19 03 04.2	+1.9
SOC				*e*SSS	SSS	19 03 26.1	
SOC				pmax	pmax		
	comp=Z,30nm,0.8s						
SOC				MLR	MLR		
	comp=Z,551nm,13.0s						
SADO	Sadowa	38.77	270	LR	LR	19 09 08.4	
	comp=Z,632nm,19.2s,baz=96,slow=34						
KBZ	Khabaz	39.16	92	LR	LR	19 11 04.0	
	comp=Z,556nm,20.3s,baz=346,slow=36						
YKA	Yellowknife Ar	39.17	313	P	P	18 54 40.8	+0.5
	comp=Z,2.3nm,1.0s,baz=58,slow=9.5,SNR=2.2						
NCK	Nalchik	39.65	92	*i* P	P	18 54 44.5	0.0
NCK				pmax	pmax		
	comp=Z,19nm,1.0s						
ULM	Lac du Bonnet	41.55	289	LR	LR	19 10 48.9	
	comp=Z,544nm,20.4s,baz=62,slow=34						
MAK	Makhachkala	41.76	89	*e*P	P	18 54 56.5	-5.4
MAK				*e*S	S	19 01 11.6	-7.9
MAK				pmax	pmax		
	comp=Z,359nm,1.4s						
MAK				MLR	MLR		
	comp=Z,665nm,10.0s						
TIXI	Tiksi	42.04	15	*i* P	P	18 55 04.8	+1.0
TIXI	Tiksi	42.04	15	P	P	18 55 05.0	+1.2
TOLK	Toolik Lake Re	42.72	336	P	P	18 55 11.0	+1.5
TOLK				IAmb	IAmb	18 55 16.4	
	comp=Z,69nm,1.6s						
BRVK	Borovoye	43.17	62	*i* P	P	18 55 11.4	-1.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
P52A	Corning	44.24	268	P	P	18 55 20.2	-1.8
D32A	Dogwood Acres,	44.47	287	P	P	18 55 23.5	-0.3
TAM	Tamanrasset	44.54	149	P	P	18 55 23.4	-1.3
TAM				pmax	pmax		
	comp=Z,27nm,2.0s						
TAM	Tamanrasset	44.54	149	P	P	18 55 23.4	-1.3
DAWY	Dawson	44.67	328	P	P	18 55 24.6	-0.6
PRP	Porcupine Dome	44.73	332		P	18 55 24.6	-1.2
P51A	Williamsport	44.77	269	P	P	18 55 24.1	-2.1
RDOG	Red Dog Mine	45.28	342	P	P	18 55 31.3	+1.3
RDOG				IAmb	IAmb	18 55 35.8	
	comp=Z,26nm,1.3s						
K27K	Chicken	45.30	329	P	P	18 55 31.2	+1.0
L42A	Oliver, Polo	45.52	276	P	P	18 55 32.0	-0.2
IL18	Eielson Array	45.65	332	P	P	18 55 33.4	+0.5
IL31		45.66	332	P	P	18 55 34.6	+1.6
IL31				IAmb	IAmb	18 55 38.6	
	comp=Z,26nm,1.4s						
ILAR	Eielson Array	45.66	332	P	P	18 55 34.6	+1.5
	comp=Z,9.9nm,1.2s,baz=22,slow=3.8,SNR=10						
ILAR				PcP	PcP	18 57 11.2	+0.2
	comp=Z,1.9nm,0.9s,baz=358,slow=3.0,SNR=6.3						
ILAR				LR	LR	19 17 08.7	
	comp=Z,480nm,19.0s,baz=31,slow=39						
MDM	Murphy Dome	45.76	333	P	P	18 55 35.5	+1.7
COLA	College	45.76	333	P	P	18 55 34.7	+1.0
COLA				pmax	pmax		
	comp=Z,13nm,0.9s						
COLA	College	45.76	333	P	P	18 55 34.7	+1.0
COLA				IAmb	IAmb	18 55 39.0	
	comp=Z,13nm,0.9s						
TCOL	CIGO, UAF Yank	45.76	333	P	P	18 55 34.6	+0.8
TCOL				IAmb	IAmb	18 55 39.0	
	comp=Z,12nm,0.8s						
P48A	Milroy	45.80	271	P	P	18 55 35.0	+0.5
P48A				IAmb	IAmb	18 55 39.5	
	comp=Z,41nm,1.4s						
BRZS	Berezniki	46.52	63	*e*P	P	18 55 41.4	+1.3
	comp=Z,5.1nm,1.1s,baz=63						
BRZS	Berezniki	46.52	63	*e*P	P	18 55 41.3	+1.3
BRZS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DLBC	Dease Lake	47.04	318	LR	LR	19 15 56.8	
	comp=Z,619nm,18.5s,baz=38,slow=37						
KURK	Kurchatov	48.15	58	P	P	18 55 52.3	-0.3
KURBB	Kurchatov Arra	48.19	58	P	P	18 55 52.3	-0.7
	comp=Z,6.0nm,1.0s,baz=323,slow=7.2,SNR=7.2						
TKL	Tuckaleechee C	48.28	266	LR	LR	19 14 21.5	
	comp=Z,641nm,20.9s,baz=32,slow=34						
EGMT	Eagleton	48.83	297	P	P	18 55 59.9	+1.8
	baz=35						
EGMT	Eagleton	48.83	297	P	P	18 55 58.8	+0.7
ANM	Nome	48.92	342	P	P	18 55 59.8	+1.4
ANM				pmax	pmax		
	comp=Z,40nm,1.5s						
ANM	Nome	48.92	342	P	P	18 55 59.8	+1.4
SEM	Semipalatinsk	48.99	57	*e*P	P	18 56 00.6	+1.1
	baz=57						
SEM				*e*S	S	19 03 06.3	+2.0
	baz=57						
SEM	Semipalatinsk	48.99	57	*e*P	P	18 56 00.5	+1.1
SEM				*e*S	S	19 03 06.2	+2.0
TTA	Tatalina	49.04	336	P	P	18 55 59.3	-0.1
TTA				pmax	pmax		
	comp=Z,26nm,1.5s						
TTA	Tatalina	49.04	336	P	P	18 55 59.3	-0.1
TTA				IAmb	IAmb	18 56 05.9	
	comp=Z,26nm,1.5s						
GEYT	Alibeck	50.47	84	LR	LR	19 19 22.2	
	comp=Z,320nm,18.3s,baz=235,slow=38						
PLAL	Pickwick Lake	50.70	270	P	P	18 56 11.1	-1.2
KOWA	Kowa	50.99	163	P	P	18 56 14.0	-0.6
RLMT	Red Lodge	51.04	294	P	P	18 56 16.7	+1.7
	baz=34						
RLMT	Red Lodge	51.04	294	P	P	18 56 15.4	+0.4
BTLS	Baital	51.11	66	*e*P	P	18 56 17.4	+2.1
	baz=65						
BTLS				*e*S	S	19 03 36.6	+3.2
	baz=65						
BTLS	Baital	51.11	66	*e*P	P	18 56 17.3	+2.1
BTLS				*e*S	S	19 03 36.5	+3.2
KK09	Karatay Array	51.30	70	P	P	18 56 16.6	-0.1
KK08	Karatay Array	51.31	70	P	P	18 56 16.5	-0.3
KK04	Karatay Array	51.31	70	P	P	18 56 16.4	-0.4
KK31	Karatay Array	51.32	70	P	P	18 56 16.9	0.0
KK31				pmax	pmax		
	comp=Z,17nm,1.4s						
KK31	Karatay Array	51.32	70	P	P	18 56 16.9	0.0
KKAR	Karatay Array	51.32	70	P	P	18 56 16.9	0.0
KKAR				pmax	pmax		
	comp=Z,17nm,1.4s						
KKAR	Karatay Array	51.32	70	P	P	18 56 16.9	0.0
MSO	Missoula	51.41	299	P	P	18 56 17.2	-0.5
MSO				IAmb	IAmb	18 56 22.0	
	comp=Z,30nm,1.7s						
YNE	Yellowstone No	51.43	295	P	P	18 56 18.1	+0.1
BOZ	Bozeman (W)	51.56	297	P	P	18 56 18.6	-0.3
BOZ				pmax	pmax		
	comp=Z,39nm,1.3s						
BOZ	Bozeman (W)	51.56	297	P	P	18 56 20.1	+1.2
	baz=33						
BOZ	Bozeman (W)	51.56	297	P	P	18 56 18.6	-0.3
BOZ				IAmb	IAmb	18 56 24.8	
	comp=Z,39nm,1.3s						
YMP	Mirror Lake Pl	51.71	295	P	P	18 56 19.6	-0.6
DZA	Taraz	51.82	69	*e*P	P	18 56 21.9	+1.2
	comp=Z,11nm,1.6s,baz=69						
DZA	Taraz	51.82	69	*e*P	P	18 56 21.9	+1.2
DZA				pmax	pmax		
	comp=Z,11nm,1.6s						
IUG	Iuzhnay	51.92	71	*e*P	P	18 56 22.3	+0.7
	comp=Z,8.6nm,1.5s,baz=70						
IUG	Iuzhnay	51.92	71	*e*P	P	18 56 22.2	+0.7
IUG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
DGZ	Jazzator, Alta	52.11	53	*i* P	P	18 56 22.3	-0.6
DGZ				pmax	pmax		
	comp=Z,19nm,1.4s						
H17A	Grant Village	52.16	295	P	P	18 56 26.6	+3.1
	baz=33						
YPP	Pitchstone Pla	52.35	295	P	P	18 56 23.0	-2.0
SEY	Seymchan	52.48	6	LR	LR	19 19 13.0	
	comp=Z,206nm,18.5s,baz=352,slow=37						
SGDS	Sogindy	52.67	66	*e*P	P	18 56 28.0	+1.0
	comp=Z,5.4nm,1.5s,baz=66						
SGDS				*e*S	S	19 03 56.7	+1.6
	baz=66						
SGDS	Sogindy	52.67	66	*e*P	P	18 56 28.0	+1.0
SGDS				*e*S	S	19 03 56.6	+1.6
SGDS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
PHWY	Pilot Hill	52.72	289	P	P	18 56 27.5	-0.2
PHWY				IAmb	IAmb	18 56 32.3	
	comp=Z,24nm,1.3s						
MK31	Makanchi Array	52.76	58	P	P	18 56 26.2	-1.4
MK31				pmax	pmax		
	comp=Z,11nm,1.3s						
MK31	Makanchi Array	52.76	58	P	P	18 56 26.2	-1.4
MOOW	Moose Ponds	52.77	295	P	P	18 56 27.6	-0.3
TDK	Taldyqorghan	52.82	62	*e*P	P	18 56 28.8	+0.7
	comp=Z,14nm,1.5s,baz=62						
TDK	Taldyqorghan	52.82	62	*e*P	P	18 56 28.8	+0.7
TDK				pmax	pmax		
	comp=Z,14nm,1.5s						
LOHW	Long Hollow	52.83	294	P	P	18 56 28.3	-0.1
KUU	Kurty	52.96	65	*e*P	P	18 56 28.1	-1.0
	comp=Z,14nm,1.6s,baz=64						
KUU	Kurty	52.96	65	*e*P	P	18 56 28.9	-0.2
KUU				pmax	pmax		
	comp=Z,14nm,1.6s						
BW06	Boulder Array	53.13	293	P	P	18 56 31.2	+0.5
	baz=33						
BW06	Boulder Array	53.13	293	P	P	18 56 30.6	0.0
BW06				IAmb	IAmb	18 56 35.5	
	comp=Z,32nm,1.1s						
PD31	Pinedale Array	53.13	293	P	P	18 56 31.0	+0.4
PD31				IAmb	IAmb	18 56 35.5	
	comp=Z,29nm,1.1s						
PDAR	Pinedale Array	53.13	293	P	P	18 56 30.5	-0.1
	comp=Z,6.1nm,0.8s,baz=54,slow=7.5,SNR=9.2						
PDAR				LR	LR	19 19 25.6	
	comp=Z,430nm,19.0s,baz=30,slow=36						
ZSN	Zaisan	53.13	56	*e*P	P	18 56 30.4	+0.1
	baz=56						
ZSN	Zaisan	53.13	56	*e*P	P	18 56 30.4	+0.1
TOA0	Torodi Ar. Sit	53.17	156	P	P	18 56 29.9	-0.9
TORD	Torodi Ar. Bea	53.17	156	P	P	18 56 30.1	-0.7
	comp=Z,6.6nm,0.9s,baz=343,slow=7.5,SNR=13						
TORD				LR	LR	19 19 12.1	
	comp=Z,315nm,18.4s,baz=330,slow=36						
KDAK	Kodiak Island	53.17	332	LR	LR	19 20 42.8	
	comp=Z,456nm,19.9s,baz=51,slow=38						
FRU1	Bishkek	53.21	67	P	P	18 56 32.6	+1.6
FRU1				pmax	pmax		
	comp=Z,14nm,1.0s						
FRU1	Bishkek	53.21	67	P	P	18 56 32.6	+1.6
CHKK	Chushkaly	53.25	64	*e*P	P	18 56 32.7	+1.5
	baz=64						
CHKK	Chushkaly	53.25	64	*e*P	P	18 56 32.7	+1.5
N23A	Red Feather La	53.26	289	P	P	18 56 34.4	+2.7
	baz=32						
AAK	Ala-Archa	53.30	67	P	P	18 56 33.0	+1.2
AAK				pmax	pmax		
	comp=Z,17nm,1.3s						
AAK	Ala-Archa	53.30	67	P	P	18 56 33.0	+1.2
MTBS	Maitube	53.64	65	*e*P	P	18 56 35.2	+0.9
	baz=65						
MTBS	Maitube	53.64	65	*e*P	P	18 56 35.1	+0.9
MDOK	Medeo	53.86	65	*e*P	P	18 56 36.1	+0.2
	baz=64						
MDOK	Medeo	53.86	65	*e*P	P	18 56 36.9	+1.0
TNSS	Tian-Shan	53.92	65	*e*P	P	18 56 37.1	+0.4
	baz=64						
TNSS	Tian-Shan	53.92	65	*e*P	P	18 56 37.1	+0.4
BTK	Batken	54.00	72	P	P	18 56 37.4	+0.5
BTK				pmax	pmax		
	comp=Z,34nm,1.3s						
BTK	Batken	54.00	72	P	P	18 56 37.4	+0.5
ISCO	Idaho Springs	54.05	288	P	P	18 56 36.2	-1.3
ISCO				pmax	pmax		
	comp=Z,15nm,1.4s						
ISCO	Idaho Springs	54.05	288	P	P	18 56 36.2	-1.3
U32A	Winter Ranch,	54.19	280	P	P	18 56 38.0	-0.2
BMO	Blue Mountains	54.34	300	P	P	18 56 38.8	-0.5

BMO				pmax	pmax		
	comp=Z,27nm,1.8s						
BMO	**Blue Mountains**	**54.34**	**300**	P	**P**	**18 56 38.8**	**-0.5**
BMO				IAmb	IAmb	18 56 44.0	
	comp=Z,27nm,1.8s						
HLID	**Hailey**	**54.35**	**297**	P	**P**	**18 56 39.4**	**-0.1**
SHLS	**Shalkode**	**54.79**	**63**	*e*P	**P**	**18 56 44.4**	**+1.8**
	comp=Z,10nm,1.3s,baz=62						
SHLS	**Shalkode**	**54.79**	**63**	*e*P	**P**	**18 56 44.4**	**+1.8**
SHLS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HWUT	**Hardware Ranch**	**54.91**	**294**	P	**P**	**18 56 44.0**	**+0.4**
RDMU	**Red Mountain**	**54.99**	**292**	P	**P**	**18 56 42.9**	**-1.4**
TCUT	**Toone Canyon**	**55.26**	**293**	P	**P**	**18 56 46.2**	**0.0**
TLY	**Talaya**	**55.42**	**40**	*i* P	**P**	**18 56 47.0**	**0.0**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WMOK	**Wichita Mounta**	**55.50**	**279**	P	**P**	**18 56 48.0**	**+0.3**
WMOK				pmax	pmax		
	comp=Z,27nm,1.5s						
WMOK	**Wichita Mounta**	**55.50**	**279**	P	**P**	**18 56 48.8**	**+1.1**
	baz=31						
WMOK	**Wichita Mounta**	**55.50**	**279**	P	**P**	**18 56 48.0**	**+0.3**
WMOK				IAmb	IAmb	18 56 53.0	
	comp=Z,27nm,1.4s						
SDCO	**Great Sand Dun**	**55.75**	**287**	P	**P**	**18 56 46.8**	**-3.0**
	baz=31						
CTU	**Camp Tracy**	**55.76**	**293**	P	**P**	**18 56 49.5**	**-0.2**
T25A	**Trinidad**	**55.81**	**285**	P	**P**	**18 56 53.4**	**+3.2**
	baz=31						
Z35A	**Perchaven, San**	**56.05**	**277**	P	**P**	**18 56 51.1**	**-0.5**
BGU	**Big Grassy Mou**	**56.06**	**295**	P	**P**	**18 56 52.7**	**+0.8**
MPU	**Maple Canyon**	**56.29**	**293**	P	**P**	**18 56 53.9**	**+0.4**
P17A	**Butcher Ranch,**	**56.40**	**292**	P	**P**	**18 56 54.3**	**0.0**
ZAK	**Zakamensk**	**56.49**	**41**	*e*P	**P**	**18 56 54.4**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DUG	**Dugway, Tooele**	**56.60**	**294**	P	**P**	**18 56 56.3**	**+0.6**
DUG				pmax	pmax		
	comp=Z,22nm,1.4s						
DUG	**Dugway, Tooele**	**56.60**	**294**	P	**P**	**18 56 57.5**	**+1.8**
	baz=31						
DUG	**Dugway, Tooele**	**56.60**	**294**	P	**P**	**18 56 56.3**	**+0.6**
DUG				IAmb	IAmb	18 57 02.0	
	comp=Z,22nm,1.4s						
PV01	**Paradox Valley**	**56.67**	**289**	P	**P**	**18 56 56.6**	**+0.3**
PV01				IAmb	IAmb	18 57 01.2	
	comp=Z,35nm,1.5s						
PV02	**Paradox Valley**	**56.68**	**290**	P	**P**	**18 56 56.6**	**+0.3**
PV02				IAmb	IAmb	18 57 00.6	
	comp=Z,18nm,1.0s						
PV03	**Paradox Valley**	**56.68**	**290**	P	**P**	**18 56 56.2**	**-0.1**
PV03				IAmb	IAmb	18 57 01.8	
	comp=Z,29nm,1.3s						
TMUT	**Trail Mountain**	**56.74**	**292**	P	**P**	**18 56 56.0**	**-0.9**
PV13	**Radium Mtn., P**	**56.75**	**290**	P	**P**	**18 56 56.9**	**0.0**
PV13				IAmb	IAmb	18 57 01.1	
	comp=Z,25nm,0.9s						
PV05	**Paradox Valley**	**56.93**	**290**	P	**P**	**18 56 57.0**	**-1.2**
PV05				IAmb	IAmb	18 57 02.9	
	comp=Z,28nm,1.1s						
ELK	**Elko**	**57.08**	**296**	P	**P**	**18 57 00.8**	**+1.7**
	comp=Z,3.6nm,1.1s,baz=30,slow=7.4,SNR=4.9						
ELK	**Elko**	**57.08**	**296**	P	**P**	**18 56 58.4**	**-0.8**
J05D	**Fort Rock, OR**	**57.13**	**302**	P	**P**	**18 57 00.7**	**+1.3**
	baz=30						
WMQ	**Urumqi**	**57.27**	**56**	*e*P	**P**	**18 57 04.4**	**+4.1**
WMQ				pP	sP	18 57 08.0	+6.1
WMQ				sP	pP	18 57 11.2	+10
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,500nm,5.7s						
WMQ				LR	LR		
	comp=Z,1µm,14.1s						
WMQ				LR	LR		
	comp=Z,1µm,14.7s						
WMQ				LR	LR		
	comp=Z,730nm,17.1s						
ABTX	**Abilene, Hawle**	**57.68**	**279**	P	**P**	**18 57 06.7**	**+3.5**
	baz=30						
MSU	**Marysvale**	**57.80**	**292**	P	**P**	**18 57 04.2**	**-0.1**
MSU	**Marysvale**	**57.80**	**292**	P	**P**	**18 57 04.2**	**-0.1**
MVU	**Marysvale**	**57.82**	**292**	P	**P**	**18 57 04.5**	**0.0**
TCRU	**Three Creeks R**	**57.82**	**293**	P	**P**	**18 57 04.6**	**+0.2**
MOD	**Modoc Plateau**	**57.99**	**301**	P	**P**	**18 57 04.2**	**-1.3**
MOD				IAmb	IAmb	18 57 11.0	
	comp=Z,23nm,1.5s						
MTPU	**Mount Pierson**	**58.20**	**292**	P	**P**	**18 57 08.1**	**+0.8**
HKT	**Hockley**	**58.36**	**274**	P	**P**	**18 57 07.7**	**-0.2**
HKT				pmax	pmax		
	comp=Z,17nm,1.5s						
HKT	**Hockley**	**58.36**	**274**	P	**P**	**18 57 07.7**	**-0.2**
ANMO	**Albuquerque**	**58.54**	**286**	P	**P**	**18 57 08.6**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,22nm,1.8s						
ANMO	**Albuquerque**	**58.54**	**286**	P	**P**	**18 57 08.6**	**-0.9**
ANMO				IAmb	IAmb	18 57 14.9	
	comp=Z,22nm,1.8s						
DBIC	**Dimbokro**	**58.61**	**165**	P	**P**	**18 57 08.9**	**-0.9**
	comp=Z,6.4nm,0.9s,baz=334,slow=9.2,SNR=7.8						
DBIC				LR	LR	19 22 55.8	
	comp=Z,482nm,18.9s,baz=351,slow=37						
DBIC	**Dimbokro**	**58.61**	**165**	P	**P**	**18 57 09.5**	**-0.3**
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DBIC	**Dimbokro**	**58.61**	**165**	P	**P**	**18 57 09.5**	**-0.3**
PKCU	**Pink Cliffs**	**58.77**	**292**	P	**P**	**18 57 10.6**	**-0.6**
SZCU	**Shurtz Canyon**	**58.95**	**293**	P	**P**	**18 57 11.8**	**-0.5**
CCUT	**Cedar City**	**59.10**	**293**	P	**P**	**18 57 12.0**	**-1.4**
R11A	**Troy Canyon, C**	**59.28**	**295**	P	**P**	**18 57 16.1**	**+1.5**
	baz=30						
BNM	**Barren Site**	**59.30**	**285**	P	**P**	**18 57 14.8**	**0.0**
LCMT	**Little Creek M**	**59.52**	**292**	P	**P**	**18 57 16.0**	**-0.2**
PAHR	**Pah Rah Range**	**59.55**	**299**	P	**P**	**18 57 15.4**	**-1.0**
PAHR				IAmb	IAmb	18 57 21.6	
	comp=Z,16nm,1.2s						
JCT	**Junction City**	**59.60**	**277**	P	**P**	**18 57 15.9**	**-0.8**
JCT				pmax	pmax		
	comp=Z,50nm,1.4s						
JCT	**Junction City**	**59.60**	**277**	P	**P**	**18 57 18.0**	**+1.4**
	baz=30						
JCT	**Junction City**	**59.60**	**277**	P	**P**	**18 57 15.9**	**-0.8**
U15A	**North Rim**	**59.64**	**291**	P	**P**	**18 57 16.8**	**-0.4**
U15A				IAmb	IAmb	18 57 21.4	
	comp=Z,20nm,1.3s						
SONM	**Songino Array**	**59.67**	**40**	P	**P**	**18 57 17.5**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=322,slow=4.7,SNR=5.7						
PRN	**Pahroc Range**	**59.89**	**294**	P	**P**	**18 57 18.4**	**-0.3**
PRN				IAmb	IAmb	18 57 25.6	
	comp=Z,35nm,1.7s						
WDC	**Whiskeytown Da**	**59.96**	**302**	P	**P**	**18 57 19.1**	**+0.1**
WDC	**Whiskeytown Da**	**59.96**	**302**	P	**P**	**18 57 19.1**	**+0.1**
WDC				IAmb	IAmb	18 57 26.9	
	comp=Z,22nm,2.0s						
WUAZ	**Wupatki**	**60.06**	**290**	P	**P**	**18 57 20.9**	**+1.0**
	baz=30						
WUAZ	**Wupatki**	**60.06**	**290**	P	**P**	**18 57 19.3**	**-0.7**
LHV	**Little Huntoon**	**60.49**	**297**	P	**P**	**18 57 22.9**	**+0.3**
LHV				IAmb	IAmb	18 57 27.8	
	comp=Z,20nm,1.4s						
WAKR	**Walker**	**60.62**	**298**	P	**P**	**18 57 23.5**	**-0.3**
WAKR				IAmb	IAmb	18 57 29.8	
	comp=Z,23nm,1.6s						
SHPR	**Sheep Range**	**60.71**	**294**	P	**P**	**18 57 24.1**	**-0.3**
SHPR				IAmb	IAmb	18 57 29.9	
	comp=Z,23nm,1.5s						
X16A	**Lo Mia Camp, P**	**61.04**	**289**	P	**P**	**18 57 26.0**	**-0.7**
X16A				IAmb	IAmb	18 57 32.8	
	comp=Z,22nm,1.2s						
OMMB	**Old Mammoth Mi**	**61.24**	**297**	P	**P**	**18 57 28.3**	**+0.2**
OMMB				IAmb	IAmb	18 57 34.6	
	comp=Z,20nm,1.6s						
MDPB	**Devils Postpil**	**61.25**	**297**	P	**P**	**18 57 28.2**	**0.0**
HIA	**Hailar**	**61.65**	**30**	*i* P	**P**	**18 57 31.2**	**+0.8**
HIA				pmax	pmax		
	comp=Z,11nm,1.9s						
MPMC	**Manual Prospec**	**62.02**	**295**	P	**P**	**18 57 34.8**	**+1.6**
	baz=29						
PDMCI	**Parker Dam,Lak**	**62.23**	**292**	P	**P**	**18 57 35.9**	**+1.4**
	baz=29						
TXAR	**Lajitas Array**	**62.24**	**280**	LR	LR	19 23 38.1	
	comp=Z,621nm,20.9s,baz=0.0,slow=35						
GMRC	**Granite Mounta**	**62.41**	**293**	P	**P**	**18 57 37.1**	**+1.2**
	baz=29						
TUC	**Tucson**	**62.61**	**288**	P	**P**	**18 57 36.4**	**-0.8**
TUC				pmax	pmax		
	comp=Z,16nm,1.4s						
TUC	**Tucson**	**62.61**	**288**	P	**P**	**18 57 38.7**	**+1.5**
	baz=29						
TUC	**Tucson**	**62.61**	**288**	P	**P**	**18 57 36.4**	**-0.8**
TUC				IAmb	IAmb	18 57 42.7	
	comp=Z,16nm,1.4s						
ISA	**Isabella, Lake**	**62.74**	**296**	P	**P**	**18 57 37.2**	**-0.8**
ISA				pmax	pmax		
	comp=Z,35nm,2.0s						
ISA	**Isabella, Lake**	**62.74**	**296**	P	**P**	**18 57 39.2**	**+1.2**
	baz=28						
ISA	**Isabella, Lake**	**62.74**	**296**	P	**P**	**18 57 37.2**	**-0.8**
ISA				IAmb	IAmb	18 57 44.2	
	comp=Z,35nm,2.0s						
BELC	**Belle Mtn. Jos**	**63.23**	**293**	P	**P**	**18 57 42.8**	**+1.5**
	baz=28						
EDW2	**Edwards Air Fo**	**63.24**	**295**	P	**P**	**18 57 42.9**	**+1.6**
	baz=28						
BC3	**Big Chuckawall**	**63.32**	**292**	P	**P**	**18 57 43.2**	**+1.3**
	baz=28						
GLA	**Glamis**	**63.60**	**292**	P	**P**	**18 57 43.6**	**-0.1**
GLA				pmax	pmax		
	comp=Z,26nm,1.5s						
GLA	**Glamis**	**63.60**	**292**	P	**P**	**18 57 43.6**	**-0.1**
GLA				IAmb	IAmb	18 57 49.1	
	comp=Z,26nm,1.4s						
PIX	**Pinacate**	**64.36**	**290**	P	**P**	**18 57 48.6**	**+0.1**
PIX				IAmb	IAmb	18 57 53.5	
	comp=Z,13nm,1.5s						
MONP2	**Monument Peak**	**64.38**	**293**	P	**P**	**18 57 50.7**	**+1.7**
	baz=28						
IKP	**In-Ko-Pah, Jac**	**64.46**	**292**	P	**P**	**18 57 50.7**	**+1.3**
	baz=28						
RMX	**La Rumorosa**	**64.49**	**292**	P	**P**	**18 57 49.9**	**+0.2**
RMX				IAmb	IAmb	18 57 56.3	
	comp=Z,14nm,1.3s						
GTA	**Gaotai**	**65.33**	**49**	*e*P	**P**	**18 57 55.6**	**+0.6**
GTA				pP	sP	18 57 59.8	+3.1
GTA				sP	pP	18 58 02.6	+6.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,220nm,7.6s						
GTA				LR	LR		
	comp=Z,220nm,15.5s						
GTA				LR	LR		
	comp=Z,350nm,17.5s						
GTA				LR	LR		
	comp=Z,220nm,16.7s						
HSIG		**65.56**	**286**	P	**P**	**18 57 56.2**	**-0.3**
HSIG				IAmb	IAmb	18 58 02.0	
	comp=Z,14nm,1.2s						
SPX	**San Pedro Mart**	**65.63**	**291**	P	**P**	**18 57 56.8**	**-0.5**
SPX				IAmb	IAmb	18 58 02.8	
	comp=Z,14nm,1.2s						
SDV	**Santo Domingo**	**66.78**	**239**	P	**P**	**18 58 04.0**	**-0.7**
SDV				IAmb	IAmb	18 58 23.2	
	comp=Z,21nm,1.4s						
HHC	**Hu-ho-hao-te**	**67.54**	**40**	*e*P	**P**	**18 58 10.8**	**+1.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,290nm,7.4s						
LZH	**Lanzhou**	**69.66**	**47**	*e*P	**P**	**18 58 25.7**	**+3.2**
LZH				pP	sP	18 58 29.0	+4.9
LZH				sP	pP	18 58 32.2	+8.5
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LSA	**Lhasa**	**71.05**	**61**	P	**P**	**18 58 32.1**	**+0.6**
LSA				pmax	pmax		
	comp=Z,22nm,1.7s						
LSA	**Lhasa**	**71.05**	**61**	P	**P**	**18 58 32.1**	**+0.6**
LSA				IAmb	IAmb	18 58 36.0	
	comp=Z,22nm,1.7s						
ROSC	**El Rosal**	**71.89**	**241**	LR	LR	19 29 13.3	
	comp=Z,86nm,18.8s,baz=46,slow=35						
CD2	**Chengdu**	**74.39**	**50**	*e*P	**P**	**18 58 50.5**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**74.67**	**28**	LR	LR	19 33 09.4	
	comp=Z,96nm,18.4s,baz=354,slow=37						
KMBO	**Kilima Mbogo**	**76.71**	**123**	LR	LR	19 36 32.1	
	comp=Z,251nm,19.0s,baz=88,slow=39						
OTAV	**Otavalo**	**77.69**	**243**	P	**P**	**18 59 09.2**	**-0.9**
OTAV				pmax	pmax		
	comp=Z,15nm,1.5s						
OTAV	**Otavalo**	**77.69**	**243**	P	**P**	**18 59 09.2**	**-0.9**
NJ2	**Nanjing**	**77.76**	**37**	*e*P	**P**	**18 59 11.1**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	**79.39**	**53**	*e*P	**P**	**18 59 20.0**	**+0.8**
KMI				pP	sP	18 59 23.6	+2.7
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,200nm,5.3s						
KMI				LR	LR		
	comp=Z,260nm,9.6s						
KMI				LR	LR		
	comp=Z,160nm,10.9s						
KMI				LR	LR		
	comp=Z,150nm,11.7s						
GYA	**Guiyang**	**79.46**	**49**	⇑P	**P**	**18 59 21.4**	**+1.9**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SAML	**Samuel**	**80.91**	**226**	P	**P**	**18 59 25.8**	**-1.3**
SAML				pmax	pmax		
	comp=Z,14nm,1.5s						
SAML	**Samuel**	**80.91**	**226**	P	**P**	**18 59 25.8**	**-1.3**
BDFB	**Brasilia**	**83.37**	**209**	LR	LR	19 30 36.9	
	comp=Z,274nm,21.4s,baz=343,slow=31						
CHTO	**Chiang Mai**	**83.84**	**58**	P	**P**	**18 59 42.4**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,11nm,1.5s						
CHTO	**Chiang Mai**	**83.84**	**58**	P	**P**	**18 59 42.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**84.17**	**59**	P	**P**	**18 59 44.0**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=321,slow=6.4,SNR=8.7						
CMAR				LR	LR	19 40 27.7	
	comp=Z,72nm,18.3s,baz=10.0,slow=38						
CPUP	**Villa Florida**	**95.82**	**215**	LR	LR	19 39 59.7	
	comp=Z,119nm,18.9s,baz=24,slow=33						
BOSA	**Boshof**	**98.80**	**143**	LR	LR	19 47 52.9	
	comp=Z,584nm,18.7s,baz=6.0,slow=37						
PPT2	**Papeete2**	**123.06**	**302**	*e*LR	LR	19 44 22.4	
	comp=Z,166nm,24.0s						
TBI	**Tubuai**	**128.28**	**299**	*e*LR	LR	19 46 47.3	
	comp=Z,191nm,23.5s						
ASAR	**Alice Springs**	**134.99**	**38**	PKP	**PKiKP**	**19 06 34.7**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=339,slow=1.2,SNR=5.1						
DZM	**Mont Dzumac**	**137.33**	**354**	*e*LR	LR	19 50 51.3	
	comp=Z,240nm,23.4s						
STKA	**Stephens Creek**	**144.74**	**32**	PKP	**PKiKP**	**19 06 51.7**	**-1.3**
	comp=Z,2.1nm,0.6s,baz=331,slow=9.6,SNR=5.5						
STKA	**Stephens Creek**	**144.74**	**32**	PKIKP	**PKPdf**	**19 06 49.9**	**+0.6**
STKA	**Stephens Creek**	**144.74**	**32**		**PKPdf**	**19 06 49.9**	**+0.6**

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*THE **08** 18:51:35.1, 38°.36N×21°.78E, $h3^{km}\pm2^{km}$, ML2.6/13, Error ellipse: s-maj=2.8km s-min=0.3km az=41.0*

ATH 08 18:51:35.7, 38°.36N×21°.78E, $h6^{km}\pm1^{km}$, ML2.5/28, Error ellipse: s-maj=1.8km s-min=0.6km az=295.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.12**	**57**	P	Pg	18 51 37.4	-0.8
EFP				S	Sg	18 51 39.7	-0.2
EFP				AML	AML	18 51 39.9	
	comp=E,7430µm,0.2s						
EFP				AML	AML	18 51 40.5	
	comp=N,6713µm,0.7s						
EFP	**Efpalio**	**0.12**	**57**	P	Pg	18 51 37.4	-0.8
EFP				S	Sg	18 51 39.5	-0.4
	comp=N,4µm,0.4s						
LAKA	**Lakka**	**0.20**	**128**	P	Pg	18 51 39.1	-0.6
SERG	**Sergoula**	**0.22**	**77**	P	Pg	18 51 39.3	-0.8
SERG				S	Sg	18 51 43.5	+0.5
SERG				AML	AML	18 51 46.4	
	comp=N,2635µm,0.3s						
SERG				AML	AML	18 51 48.5	
	comp=E,2920µm,0.5s						
SERG	**Sergoula**	**0.22**	**77**	P	Pg	18 51 39.1	-1.0
SERG				S	Sg	18 51 43.1	0.0
	comp=E,1µm,0.4s						
TRIZ	**Trizonia**	**0.23**	**89**	P	Pg	18 51 39.5	-0.8
TRIZ				S	Sg	18 51 43.4	+0.2
TRIZ	**Trizonia**	**0.23**	**89**	P	Pg	18 51 39.4	-0.8
TRIZ				S	Sg	18 51 43.2	-0.1
	comp=E,3µm,0.4s						
ANX	**Ano Chora**	**0.26**	**26**	P	Pg	18 51 39.9	-0.9
ANX				S	Sg	18 51 44.4	+0.3
ANX				AML	AML	18 51 47.4	
	comp=N,4798µm,0.5s						
ANX				AML	AML	18 51 47.9	
	comp=E,4019µm,0.4s						
ANX	**Ano Chora**	**0.26**	**26**	P	Pg	18 51 39.9	-0.8
ANX				S	Sg	18 51 44.0	-0.2
	comp=E,2µm,0.4s						
ALIK	**Aliki, Aigiali**	**0.28**	**111**	P	Pg	18 51 40.5	-0.7
ALIK				S	Sg	18 51 45.0	+0.1
KALE	**Kalithea**	**0.28**	**84**	P	Pg	18 51 40.4	-0.9
KALE				S	Sg	18 51 45.4	+0.4
KALE				AML	AML	18 51 50.1	
	comp=E,1680µm,0.3s						
KALE				AML	AML	18 51 52.8	
	comp=N,1810µm,0.5s						
KALE	**Kalithea**	**0.28**	**84**	P	Pg	18 51 40.3	-1.0
RLS	**Riolos of Patr**	**0.39**	**219**	P	Pg	18 51 42.6	-0.7
RLS				S	Sg	18 51 49.2	+0.8
RLS				AML	AML	18 51 50.6	
	comp=E,2993µm,0.4s						
RLS				AML	AML	18 51 50.8	
	comp=N,2692µm,0.3s						
RLS	**Riolos of Patr**	**0.39**	**219**	P	Pg	18 51 42.5	-0.8
RLS				S	Sg	18 51 48.8	+0.4
	comp=N,1µm,0.3s						
DRO	**Drossia**	**0.41**	**188**	P	Pg	18 51 42.6	-1.0
DRO				S	Sg	18 51 49.5	+0.4
DRO				AML	AML	18 51 51.4	
	comp=E,1885µm,0.2s						
DRO				AML	AML	18 51 51.6	
	comp=N,3735µm,0.3s						
DRO	**Drossia**	**0.41**	**188**	P	Pg	18 51 42.6	-1.1
DRO				S	Sg	18 51 49.0	-0.1
	comp=N,1µm,0.2s						
KLV	**Kalavryta, Ach**	**0.43**	**137**	P	Pg	18 51 43.0	-1.1
KLV				S	Sg	18 51 50.3	+0.6
KLV				AML	AML	18 51 50.8	
	comp=N,630µm,0.3s						
KLV				AML	AML	18 51 52.0	
	comp=E,658µm,0.3s						
KLV	**Kalavryta, Ach**	**0.43**	**137**	P	Pg	18 51 42.9	-1.2
KLV				S	Sg	18 51 49.7	0.0
	comp=E,320nm,0.3s						
PDO	**Prodromos**	**0.52**	**297**	P	Pg	18 51 44.8	-1.0
PDO				S	Sg	18 51 52.7	+0.1
PDO				AML	AML	18 51 56.1	
	comp=N,2943µm,0.3s						
PDO				AML	AML	18 51 56.5	
	comp=E,2079µm,0.3s						
PDO	**Prodromos**	**0.52**	**297**	P	Pg	18 51 44.8	-1.0
PDO				S	Sg	18 51 53.0	+0.4
	comp=E,2µm,0.3s						
EVR	**Evrytania**	**0.55**	**2**	P	Pg	18 51 45.3	-1.1
EVR				S	Sg	18 51 52.6	-1.1
EVR				AML	AML	18 52 01.0	
	comp=E,1523µm,0.6s						
EVR				AML	AML	18 52 03.9	
	comp=N,1418µm,0.6s						
EVR	**Evrytania**	**0.55**	**2**	P	Pg	18 51 45.5	-0.9
EVR				S	Sg	18 51 53.6	0.0
	comp=N,742nm,0.8s						
DLFA	**Delphi**	**0.57**	**78**	P	Pg	18 51 45.4	-1.3
DLFA				S	Sg	18 51 54.7	+0.5
DSF	**Desfina**	**0.59**	**85**	P	Pg	18 51 45.3	-1.8
DSF				S	Sg	18 51 55.7	+0.9
DSF				AML	AML	18 51 56.4	
	comp=N,588µm,0.1s						
DSF				AML	AML	18 51 57.0	
	comp=E,374µm,0.3s						
DSF	**Desfina**	**0.59**	**85**	P	Pg	18 51 45.4	-1.6
MAKR	**Makrakomi, Fth**	**0.70**	**23**	P	Pg	18 51 48.2	-1.0
MAKR				S	Sg	18 51 57.3	-1.2
MAKR				AML	AML	18 52 06.7	
	comp=N,637µm,0.8s						
MAKR				AML	AML	18 52 09.9	
	comp=E,779µm,1.1s						
MAKR	**Makrakomi, Fth**	**0.70**	**23**	P	Pg	18 51 48.2	-1.1
MAKR				S	Sg	18 51 58.6	+0.2
	comp=E,898nm,0.7s						
THAL	**Thalero**	**0.77**	**115**	P	Pg	18 51 49.2	-1.3
THAL				AML	AML	18 52 06.1	
	comp=N,1206µm,0.4s						
THAL				AML	AML	18 52 21.0	
	comp=E,933µm,0.7s						
THAL	**Thalero**	**0.77**	**115**	P	Pg	18 51 49.4	-1.0
THAL				S	Sg	18 52 00.6	+0.2
	comp=E,660nm,0.4s						
AGG	**Agios Georgios**	**0.79**	**33**	P	Pg	18 51 48.9	-1.9
AGG				S	Sg	18 52 01.5	+0.4
AGG				AML	AML	18 52 02.8	
	comp=E,405µm,0.3s						
AGG				AML	AML	18 52 03.5	
	comp=N,481µm,0.7s						
AGG	**Agios Georgios**	**0.79**	**33**	P	Pg	18 51 49.6	-1.2
AGG				S	Sg	18 52 01.7	+0.7
	comp=N,220nm,0.5s						
AXAR	**Agios Charalam**	**0.80**	**59**	P	Pg	18 51 49.4	-1.6
AXAR				S	Sg	18 52 01.9	+0.5
AXAR				AML	AML	18 52 04.8	
	comp=E,1072µm,0.3s						
AXAR				AML	AML	18 52 10.6	
	comp=N,1091µm,0.7s						
AXAR	**Agios Charalam**	**0.80**	**59**	P	Pg	18 51 49.8	-1.2
AMT	**Artemida-Makis**	**0.83**	**184**	P	Pg	18 51 50.9	-0.8
AMT				AML	AML	18 52 11.0	
	comp=E,1676µm,0.7s						
AMT				AML	AML	18 52 11.5	
	comp=N,1995µm,0.6s						
AMT	**Artemida-Makis**	**0.83**	**184**	P	Pg	18 51 50.9	-0.7
NYDR	**Nydri-Lefkada**	**0.92**	**293**	P	Pg	18 51 51.6	-1.7
NYDR				S	Sb	18 52 06.1	-0.4
NYDR	**Nydri-Lefkada**	**0.92**	**293**	P	Pg	18 51 52.0	-1.3
EVGI	**Lefkada island**	**0.92**	**287**	P	Pg	18 51 51.8	-1.5
EVGI				S	Sg	18 52 05.0	-0.2
EVGI	**Lefkada island**	**0.92**	**287**	P	Pg	18 51 52.0	-1.3
TRIP	**Tripoli**	**0.92**	**155**	P	Pg	18 51 51.7	-1.6
TRIP				S	Sg	18 52 05.3	0.0
TRIP				AML	AML	18 52 09.5	
	comp=E,765µm,0.6s						
TRIP				AML	AML	18 52 15.2	
	comp=N,559µm,0.6s						
TRIP	**Tripoli**	**0.92**	**155**	P	Pg	18 51 52.1	-1.2
TRIP				S	Sg	18 52 05.7	+0.4
	comp=N,335nm,0.6s						
VLS	**Valsamata**	**0.95**	**259**	P	Pg	18 51 52.4	-1.6
VLS				S	Sg	18 52 06.5	+0.1
VLS				AML	AML	18 52 09.0	
	comp=N,1954µm,0.2s						
VLS				AML	AML	18 52 10.4	
	comp=E,749µm,0.2s						
VLS	**Valsamata**	**0.95**	**259**	P	Pg	18 51 52.6	-1.4
VLS				S	Sb	18 52 07.5	0.0
FSK	**Fiskardo**	**0.96**	**276**	P	Pg	18 51 53.2	-0.9
FSK				S	Sg	18 52 06.1	-0.5
FSK				AML	AML	18 52 10.8	
	comp=E,885µm,0.3s						
FSK				AML	AML	18 52 12.8	
	comp=N,485µm,0.3s						
FSK	**Fiskardo**	**0.96**	**276**	P	Pg	18 51 52.2	-1.9
PSDA	**Pessada-Kefalo**	**0.97**	**256**	P	Pg	18 51 52.8	-1.6
PSDA				S	Sb	18 52 07.7	-0.3
PSDA	**Pessada-Kefalo**	**0.97**	**256**	P	Pg	18 51 52.4	-2.0
LKD2	**Lefkada island**	**0.98**	**296**	P	Pg	18 51 52.9	-1.5
LKD2				S	Sb	18 52 08.3	+0.1
LKD2				AML	AML	18 52 15.2	
	comp=N,719µm,0.4s						
LKD2				AML	AML	18 52 15.5	
	comp=E,742µm,0.9s						
LKD2	**Lefkada island**	**0.98**	**296**	P	Pg	18 51 53.0	-1.4
TSLK	**Tsoukalades, L**	**0.99**	**298**	P	Pg	18 51 53.8	-0.9
TSLK				S	Sg	18 52 07.5	-0.2
TSLK				AML	AML	18 52 18.1	
	comp=N,660µm,0.8s						
TSLK				AML	AML	18 52 24.3	
	comp=E,540µm,0.6s						
TSLK	**Tsoukalades, L**	**0.99**	**298**	P	Pg	18 51 54.2	-0.6
LKR	**Lokris**	**1.00**	**73**	P	Pg	18 51 53.1	-1.7
LKR				S	Sg	18 52 06.8	-1.0

LKR				AML	AML	18 52 11.7	
	comp=N,310µm,0.4s						
LKR				AML	AML	18 52 12.6	
	comp=E,300µm,0.2s						
LKR	**Lokris**	**1.00**	**73**	P	Pg	18 51 53.9	-0.9
VLMS	**Volimes, Zakyn**	**1.01**	**241**	P	Pg	18 51 53.7	-1.3
VLMS				AML	AML	18 52 11.4	
	comp=E,1360µm,0.2s						
VLMS				AML	AML	18 52 13.2	
	comp=N,1705µm,0.2s						
VLMS	**Volimes, Zakyn**	**1.01**	**241**	P	Pg	18 51 53.8	-1.2
ATAL	**Atalanti**	**1.03**	**71**	P	Pg	18 51 53.9	-1.5
ATAL				S	Sg	18 52 08.4	-0.4
ATAL				AML	AML	18 52 12.3	
	comp=N,238µm,0.9s						
ATAL				AML	AML	18 52 13.3	
	comp=E,345µm,1.0s						
KEF5	**Kardakata, Kep**	**1.03**	**266**	P	Pg	18 51 53.8	-1.7
KEF5				S	Sg	18 52 09.0	0.0
KEF4	**Livadi, Kephal**	**1.07**	**265**	P	Pg	18 51 54.4	-1.8
KEF4				S	Sb	18 52 10.9	+0.1
VLX	**Vlachokerasia**	**1.10**	**154**	P	Pg	18 51 54.9	-1.8
VLX				S	Sg	18 52 11.2	+0.2
VLX				AML	AML	18 52 20.0	
	comp=N,873µm,0.6s						
VLX				AML	AML	18 52 22.4	
	comp=E,550µm,0.7s						
VLX	**Vlachokerasia**	**1.10**	**154**	P	Pg	18 51 55.4	-1.4
DMLN	**Damoulianata-K**	**1.11**	**264**	P	Pg	18 51 55.6	-1.5
DMLN				S	Sg	18 52 11.5	+0.1
KEF3	**Kipouria, Keph**	**1.14**	**262**	P	Pg	18 51 55.6	-1.9
VIL2	**Platees**	**1.18**	**97**	P	Pb	18 51 58.5	0.0
VIL2				S	Sb	18 52 14.5	+0.5
ITM	**Ithomi**	**1.19**	**174**	P	Pg	18 51 57.0	-1.4
ITM				AML	AML	18 52 17.4	
	comp=N,709µm,0.8s						
ITM				AML	AML	18 52 23.6	
	comp=E,558µm,0.9s						
THL	**Klokotos Trika**	**1.21**	**9**	P	Pg	18 51 58.0	-0.9
THL				S	Sb	18 52 15.3	+0.3
THL				AML	AML	18 52 18.8	
	comp=N,229µm,0.7s						
THL				AML	AML	18 52 22.6	
	comp=E,362µm,0.8s						
THL	**Klokotos Trika**	**1.21**	**9**	P	Pg	18 51 58.1	-0.9
VILL	**Villia**	**1.22**	**99**	P	Pg	18 51 58.2	-0.9
SMIA	**Simia**	**1.23**	**65**	P	Pg	18 51 58.2	-1.1
SMIA				S	Sb	18 52 15.6	+0.1
SMIA				AML	AML	18 52 22.0	
	comp=N,494µm,1.0s						
SMIA				AML	AML	18 52 30.4	
	comp=E,363µm,0.6s						
EPID	**Epidavros**	**1.29**	**125**	P	Pn	18 51 59.4	-0.9
KRND	**KRANIDI**	**1.46**	**132**	P	Pn	18 52 02.7	+0.1
NEO	**Neokhori**	**1.47**	**50**	P	Pn	18 52 01.9	-0.8
NEO				AML	AML	18 52 24.2	
	comp=E,112µm,0.7s						
NEO				AML	AML	18 52 31.6	
	comp=N,166µm,0.5s						
XOR	**Xorichti**	**1.49**	**47**	P	Pn	18 52 02.0	-1.0
IGT	**Igoumenitsa**	**1.62**	**316**	P	Pn	18 52 05.0	+0.2
DION	**Dionisos Attik**	**1.72**	**99**	P	Pn	18 52 05.4	-0.7
LIT	**Litokhoron**	**1.82**	**17**	P	Pn	18 52 07.3	-0.3
VLI	**Veliai**	**1.88**	**150**	P	Pn	18 52 08.7	+0.4
KEK	**Kerkira**	**2.05**	**312**	P	Pn	18 52 10.5	-0.2

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*NEIC **08** 18:59:57.0±0.9, 43°.82N±0°.05×105°.28W±0°.04, h0^{km}±2^{km}, ML3.5/56, Error ellipse: s-maj=9.2km s-min=3.0km az=151.0*

*IDC **08** 18:59:56.1±0.9, 43°.86N×105°.54W, h0^{km}, mb3.8/3, mb1 3.8/9, mb1mx3.6/51, mbtmp3.6/9, ML3.6/6, MS4.0/3, Ms1 4.0/3, ms1mx3.1/49, Error ellipse: s-maj=22.0km s-min=7.7km az=146.0*

ISC 08 18:59:56.5±0.8, **43°.84N**±0°.06×**105°.28W**±0°.07, **h0**^{km}, **n96**, σ**0^s.65**/93, **mb4.0**/3, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**72**	Pg	**Pg**	**19 00 15.2**	**+0.6**
PHWY	**Pilot Hill**	**2.54**	**183**		**Pn**	**19 00 38.4**	**-0.8**
PHWY				IAML		19 01 17.8	
	109nm,0.6s						
RWWY	**Rawlins**	**2.58**	**214**		**Pn**	**19 00 39.6**	**-0.1**
RWWY				IAML		19 01 14.9	
	246nm,0.8s						
RWWY				IAML		19 01 18.3	
	277nm,0.9s						
LAO	**LASA Array**	**2.93**	**347**		**Pn**	**19 00 45.4**	**+1.0**
RLMT	**Red Lodge**	**3.13**	**296**		**Pn**	**19 00 47.8**	**+0.5**
RLMT				IAML		19 01 41.1	
	110nm,0.6s						
RLMT				IAML		19 01 49.5	
	83nm,0.9s						
BW06	**Boulder Array**	**3.30**	**253**	Pn	**Pn**	**19 00 49.2**	**-0.5**
BW06				IAML		19 01 37.6	
	59nm,0.3s						
BW06				IAML		19 01 45.2	
	69nm,0.6s						
PD31	**Pinedale Array**	**3.30**	**253**		**Pn**	**19 00 49.4**	**-0.3**
PDAR	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**19 00 49.5**	**-0.3**
	7.8nm,0.3s,baz=68,slow=16,SNR=132						
PDAR				Lg	Lg	19 01 34.2	
	23nm,0.3s,baz=72,slow=32,SNR=15						
YNE	**Yellowstone No**	**3.58**	**291**		**Pn**	**19 00 53.7**	**+0.1**
YMP	**Mirror Lake Pl**	**3.62**	**286**		**Pn**	**19 00 54.5**	**+0.4**
GCMT	**Greycliff**	**3.68**	**304**		**Pn**	**19 00 55.6**	**+0.7**
LKWY	**Lake**	**3.75**	**283**		**Pn**	**19 00 57.1**	**+1.2**
LKWY				IAML		19 01 23.2	
	102nm,0.6s						
LKWY				IAML		19 02 10.2	
	48nm,1.1s						
OGNE	**Ogallala**	**3.76**	**139**	Pn	**Pn**	**19 00 55.4**	**-0.5**
LOHW	**Long Hollow**	**3.87**	**269**		**Pn**	**19 00 58.0**	**+0.5**
FLWY	**Flagg Ranch**	**3.92**	**275**		**Pn**	**19 00 58.9**	**+0.7**
FLWY				IAML		19 02 12.3	
	60nm,1.0s						
FLWY				IAML		19 02 34.7	
	70nm,1.2s						
MOOW	**Moose Ponds**	**3.96**	**271**	Pn	**Pn**	**19 00 59.5**	**+0.8**
YPP	**Pitchstone Pla**	**4.01**	**278**		**Pn**	**19 00 59.9**	**+0.5**
ISCO	**Idaho Springs**	**4.04**	**184**	Pn	**Pn**	**19 00 59.8**	**-0.2**
REDW	**Red Top Meadow**	**4.08**	**265**		**Pn**	**19 01 00.7**	**+0.3**
REDW				IAML		19 02 07.1	
	64nm,1.2s						
REDW				IAML		19 02 07.4	
	68nm,1.1s						
YHH	**Holmes Hill**	**4.11**	**285**		**Pn**	**19 01 01.1**	**+0.3**
YMR	**Madison River**	**4.17**	**283**		**Pn**	**19 01 01.2**	**-0.4**
YHB	**Horse Butte**	**4.34**	**284**		**Pn**	**19 01 04.0**	**-0.1**
YHL	**Hebgen Lake**	**4.35**	**285**		**Pn**	**19 01 04.1**	**-0.1**
AHID	**Auburn Hatcher**	**4.38**	**258**		**Pn**	**19 01 04.5**	**0.0**
AHID				IAML		19 02 17.7	
	comp=E,65nm,1.1s						
AHID				IAML		19 02 23.9	
	comp=N,65nm,0.8s						
ECR	**Eagle Creek**	**4.50**	**262**		**Pn**	**19 01 06.0**	**-0.2**
QLMT	**Earthquake Lak**	**4.52**	**285**		**Pn**	**19 01 06.6**	**+0.2**
RDMU	**Red Mountain**	**4.56**	**226**	Pn	**Pn**	**19 01 07.2**	**+0.2**
DGMT	**Dagmar**	**4.69**	**9**	Pn	**Pn**	**19 01 09.6**	**+1.0**
SMCO	**Snowmass**	**4.83**	**196**	Pn	**Pn**	**19 01 11.2**	**+0.3**
SMCO				IAML		19 02 31.0	
	comp=N,33nm,1.1s						
SMCO				IAML		19 02 35.6	
	comp=N,32nm,1.0s						
BOZ	**Bozeman (W)**	**4.86**	**293**		**Pn**	**19 01 10.8**	**-0.2**
BOZ				IAML		19 02 37.6	
	comp=N,27nm,0.8s						
BOZ				IAML		19 02 38.6	
	comp=N,27nm,0.8s						
HWUT	**Hardware Ranch**	**5.14**	**246**		**Pn**	**19 01 14.5**	**-0.4**
HWUT				IAML		19 02 49.4	
	comp=N,50nm,1.0s						
EGMT	**Eagleton**	**5.22**	**325**	Pn	**Pn**	**19 01 16.3**	**+0.4**
TCUT	**Toone Canyon**	**5.29**	**241**		**Pn**	**19 01 17.1**	**+0.2**
DLMT	**Dillon**	**5.44**	**289**	Pn	**Pn**	**19 01 20.3**	**+1.3**
HRY	**Holter Researc**	**5.44**	**304**		**Pn**	**19 01 19.7**	**+0.6**
LRM	**Limekiln Ridge**	**5.47**	**294**	Pn	**Pn**	**19 01 20.4**	**+0.9**
MCMT	**McKenzie Canyo**	**5.52**	**283**	Pn	**Pn**	**19 01 21.1**	**+1.0**
JLU	**Jordanelle**	**5.61**	**237**		**Pn**	**19 01 21.5**	**+0.1**
CTU	**Camp Tracy**	**5.74**	**239**	Pn	**Pn**	**19 01 21.9**	**-1.2**
SPUT	**South Promonto**	**5.87**	**247**		**Pn**	**19 01 24.0**	**-0.9**
BCYI	**Bear Canyon**	**5.87**	**277**		**Pn**	**19 01 24.6**	**-0.4**
HVU	**Hansel Valley**	**5.88**	**252**		**Pn**	**19 01 23.6**	**-1.6**
PV22	**Blue Mesa, Par**	**5.92**	**208**		**Pn**	**19 01 25.7**	**0.0**
PV07	**Paradox Valley**	**5.96**	**206**		**Pn**	**19 01 26.4**	**+0.1**
P17A	**Butcher Ranch,**	**5.98**	**225**		**Pn**	**19 01 26.6**	**+0.2**
PV15	**Paradox Valley**	**6.00**	**205**	Pn	**Pn**	**19 01 26.6**	**-0.2**
PV23	**Carpenter Ridg**	**6.07**	**209**		**Pn**	**19 01 27.9**	**0.0**
PV04	**Paradox Valley**	**6.09**	**208**		**Pn**	**19 01 28.1**	**+0.2**
SDCO	**Great Sand Dun**	**6.09**	**182**	Pn	**Pn**	**19 01 27.6**	**-0.4**
PV12	**Saucer Basin,**	**6.12**	**207**		**Pn**	**19 01 28.7**	**+0.2**
PV14	**Lion Creek, Pa**	**6.15**	**209**		**Pn**	**19 01 28.8**	**0.0**
SRU	**San Rafael Swe**	**6.15**	**222**	Pn	**Pn**	**19 01 27.9**	**-0.9**
PV10	**Paradox Valley**	**6.15**	**209**	Pn	**Pn**	**19 01 29.9**	**+1.0**
PV20	**West Nyswonger**	**6.16**	**208**	Pn	**Pn**	**19 01 28.9**	**0.0**
PV11	**David Mesa, Pa**	**6.16**	**207**	Pn	**Pn**	**19 01 29.1**	**+0.1**
PV16	**Nyswonger Mesa**	**6.17**	**208**		**Pn**	**19 01 29.1**	**0.0**
PV19	**Morning Glory**	**6.19**	**208**		**Pn**	**19 01 29.6**	**+0.2**
PV03	**Paradox Valley**	**6.20**	**207**		**Pn**	**19 01 29.4**	**0.0**
PV02	**Paradox Valley**	**6.20**	**206**		**Pn**	**19 01 29.8**	**+0.2**
PV17	**East Wray Mesa**	**6.21**	**208**		**Pn**	**19 01 29.9**	**+0.3**
PV01	**Paradox Valley**	**6.22**	**205**		**Pn**	**19 01 30.0**	**+0.2**
PV18	**Skein Mesa, Pa**	**6.22**	**207**	Pn	**Pn**	**19 01 30.1**	**+0.3**
PV13	**Radium Mtn., P**	**6.27**	**206**		**Pn**	**19 01 30.5**	**-0.1**
ECSD	**EROS Data Cent**	**6.27**	**88**	Pn	**Pn**	**19 01 30.3**	**0.0**
TMUT	**Trail Mountain**	**6.35**	**226**		**Pn**	**19 01 31.9**	**+0.2**
BGU	**Big Grassy Mou**	**6.43**	**246**	Pn	**Pn**	**19 01 33.6**	**+1.0**
PV05	**Paradox Valley**	**6.44**	**208**		**Pn**	**19 01 31.4**	**-1.4**
Q16A	**Castle Valley**	**6.62**	**224**		**Pn**	**19 01 35.2**	**0.0**
HLID	**Hailey**	**6.63**	**271**	Pn	**Pn**	**19 01 37.1**	**+1.7**
DUG	**Dugway, Tooele**	**6.69**	**240**	Pn	**Pn**	**19 01 36.0**	**-0.2**
MVCO	**Mesa Verde**	**7.06**	**201**	Pn	**Pn**	**19 01 42.0**	**+0.7**
JTMT	**Jette**	**7.41**	**305**	Pn	**Pn**	**19 01 47.0**	**+1.1**
MSU	**Marysvale**	**7.44**	**227**	Pn	**Pn**	**19 01 47.1**	**+0.6**
MVU	**Marysvale**	**7.46**	**227**		**Pn**	**19 01 47.0**	**+0.1**
MTPU	**Mount Pierson**	**7.80**	**224**	Pn	**Pn**	**19 01 51.2**	**-0.4**
WALA	**Waterton Lakes**	**7.92**	**314**	Pn	**Pn**	**19 01 52.6**	**-0.4**
ELK	**Elko**	**8.00**	**251**	Pn	**Pn**	**19 01 52.9**	**-1.3**
	comp=N,0.7nm,0.3s,baz=58,slow=9.1,SNR=8.8						
ELK				LR	LR	19 05 39.9	
	comp=N,150nm,19.1s,baz=355,slow=44						
PSUT	**Pine Spring**	**8.36**	**234**	Pn	**Pn**	**19 01 59.9**	**+0.8**
F36A	**Milaca**	**8.59**	**72**	Pn	**Pn**	**19 02 01.1**	**-1.0**
CCUT	**Cedar City**	**8.78**	**227**	Pn	**Pn**	**19 02 05.6**	**+0.6**
ULM	**Lac du Bonnet**	**9.07**	**42**	Pn	**Pn**	**19 02 07.5**	**-1.2**
	comp=N,1.8nm,0.3s,baz=235,slow=12,SNR=14						
ULM				Lg	Lg	19 04 38.2	
	comp=N,0.4nm,0.3s,baz=311,slow=19,SNR=1.5						
ULM	**Lac du Bonnet**	**9.07**	**42**	Pn	**Pn**	**19 02 08.0**	**-0.7**
U15A	**North Rim**	**9.14**	**218**	Pn	**Pn**	**19 02 10.1**	**+0.2**
NEW	**Newport**	**9.35**	**302**	Lg	Lg	19 04 46.7	
	comp=N,0.4nm,0.3s,baz=51,slow=15,SNR=2.1						
WUAZ	**Wupatki**	**9.54**	**211**	Pn	**Pn**	**19 02 15.1**	**-0.2**
FFC	**Flin Flon**	**11.11**	**10**	Pn	**Pn**	**19 02 36.3**	**-0.2**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**19 02 39.1**	**+1.0**
	comp=N,0.2nm,0.3s,baz=52,slow=11,SNR=6.3						
TXAR	**Lajitas Array**	**14.53**	**174**	Pn	**Pn**	**19 03 24.8**	**+1.3**
	comp=N,0.1nm,0.3s,baz=348,slow=8.3,SNR=1.7						
TXAR				Lg	Lg	19 07 30.1	
	baz=359,slow=21,SNR=2.4						
YKA	**Yellowknife Ar**	**19.47**	**347**	P	**P**	**19 04 24.2**	**-0.4**
	comp=N,0.1nm,0.3s,baz=160,slow=13,SNR=8.9						
O22K	**Cooper Landing**	**31.19**	**318**	P	**P**	**19 06 16.4**	**-0.6**
ZALV	**Zalesovo Beam**	**82.21**	**354**	P	**P**	**19 12 18.6**	**-0.5**
	comp=N,0.7nm,0.5s,baz=0.0,slow=4.4,SNR=4.8						
KURK	**Kurchatov**	**85.77**	**358**	P	**P**	**19 12 37.3**	**0.0**
KURBB	**Kurchatov Arra**	**85.86**	**358**	P	**P**	**19 12 37.3**	**-0.5**
	comp=N,0.6nm,0.3s,baz=0.9,slow=3.3,SNR=8.6						
KVAR	**Kislovodsk Arr**	**88.03**	**23**	LR	LR	19 51 15.1	
	comp=N,223nm,18.2s,baz=85,slow=35						
MKAR	**Makanchi Array**	**89.50**	**355**	P	**P**	**19 12 55.2**	**-0.3**
	comp=N,0.5nm,0.6s,baz=18,slow=4.4,SNR=5.8						
PLCA	**Paso Flores**	**89.81**	**154**	LR	LR	19 50 34.3	
	comp=N,118nm,20.8s,baz=16,slow=34						

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*IDC **08** 19:02:03.5±1.4, 24°.18N×122°.98E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.3/41, mbtmp3.5/5, Error ellipse: s-maj=65.6km s-min=28.8km az=63.0*

*JMA **08** 19:02:06.4±0.1, 23°.67N×122°.47E, h29^{km}, M3.4*

*TAP **08** 19:02:07.3, 23°.70N×122°.50E, h36^{km}±1^{km}, ML3.8, D*

ISC 08 19:02:05.9±0.8, **23°.68N**±0°.02×**122°.49E**±0°.02, **h21**^{km}±3^{km}, **n156**, σ**0^s.93**/285, **mb3.4**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.86**	**290**	*e*P	**Pn**	**19 02 22.3**	**-0.5**
	baz=279						
JYNG	**Yonagunijimaku**	**0.87**	**28**	P	**Pb**	**19 02 22.7**	**+0.4**
JYNG				S	**Sn**	**19 02 34.2**	**-0.8**
TWD	**Chiawan**	**0.91**	**296**	P	**Pn**	**19 02 22.7**	**-0.7**
	baz=284						
TWD				S	**Sn**	**19 02 34.4**	**-1.5**
	baz=284						
YOJ	**Yonaguni jima**	**0.91**	**31**	P	**Pb**	**19 02 23.3**	**+0.3**
YOJ				S	**Sb**	**19 02 34.9**	**+0.3**
YOJ	**Yonaguni jima**	**0.91**	**31**	*e*P	**Pb**	**19 02 23.7**	**+0.7**
	baz=31						
YOJ				*e*S	**Sn**	**19 02 36.3**	**+0.3**
	baz=31						
NACB	**Ninganchiao**	**0.95**	**301**	P	**Pn**	**19 02 23.2**	**-0.9**
	baz=291						
NACB				S	**Sn**	**19 02 35.6**	**-1.5**
	baz=291						
ESL	**Shilin**	**0.98**	**278**	*e*P	**Pn**	**19 02 23.7**	**-0.7**
	baz=276						
ESL				*e*S	**Sn**	**19 02 36.8**	**-0.8**
	baz=276						
ENAH	**Nanao**	**0.98**	**321**	P	**Pb**	**19 02 24.9**	**+0.7**
	baz=319						
ENAH				S	**Sb**	**19 02 38.3**	**+1.5**
	baz=319						
HGSD	**Ruisui**	**1.00**	**259**	P	**Pn**	**19 02 24.0**	**-0.7**
	baz=258						
HGSD				S	**Sn**	**19 02 36.5**	**-1.6**
	baz=258						
ENA	**Nanau**	**1.01**	**317**	P	**Pb**	**19 02 25.2**	**+0.6**
	baz=316						
ENA				S	**Sb**	**19 02 38.7**	**+1.2**
	baz=316						
ETLH	**Xiulin Townshi**	**1.06**	**300**	*e*P	**Pn**	**19 02 25.0**	**-0.6**
	baz=298						
ETLH				*e*S	**Sn**	**19 02 38.9**	**-0.9**
	baz=298						
EHY	**Hungye**	**1.09**	**261**	*e*P	**Pn**	**19 02 25.7**	**-0.2**
	baz=259						
EHY				S	**Sn**	**19 02 39.6**	**-0.8**
	baz=259						
TWC	**Suao**	**1.09**	**328**	P	**Pb**	**19 02 26.8**	**+0.7**
	baz=327						
TWC				*e*S	**Sb**	**19 02 40.6**	**+0.7**
	baz=327						
EYUL	**Yuli**	**1.13**	**253**	P	**Pn**	**19 02 26.5**	**+0.1**
	baz=244						
EYUL				S	**Sn**	**19 02 40.9**	**-0.4**
	baz=244						
YULB	**Yu-li**	**1.13**	**255**	P	**Pn**	**19 02 26.7**	**+0.1**
	baz=254						
YULB				S	**Sn**	**19 02 41.1**	**-0.4**
	baz=254						
TWF1	**Yuli**	**1.14**	**253**	P	**Pn**	**19 02 26.4**	**-0.3**
	baz=245						
TWF1				S	**Sn**	**19 02 40.9**	**-0.8**
	baz=245						
CHKT	**Chengkung**	**1.19**	**241**	*e*P	**Pn**	**19 02 27.0**	**-0.3**
	baz=231						
CHKT				*e*S	**Sn**	**19 02 41.8**	**-1.0**
	baz=231						
FULB	**Fuli**	**1.20**	**247**	P	**Pn**	**19 02 27.3**	**-0.2**
	baz=236						
FULB				*e*S	**Sn**	**19 02 42.2**	**-1.0**
	baz=236						
WHF	**Hehuan Shan**	**1.21**	**293**	P	**Pn**	**19 02 27.8**	**-0.2**
	baz=282						
WHF				*e*S	**Sn**	**19 02 43.2**	**-0.8**
	baz=282						
NNSB	**Datong**	**1.25**	**306**	P	**Pn**	**19 02 28.6**	**+0.2**
	baz=305						
NNSB				S	**Sn**	**19 02 44.4**	**-0.3**
	baz=305						
NNSH	**Datong**	**1.25**	**306**	*e*P	**Pn**	**19 02 28.7**	**+0.4**
	baz=295						
HATJ	**Hateruma jima**	**1.26**	**73**	P	**Pb**	**19 02 28.9**	**0.0**
HATJ				S	**Sb**	**19 02 44.6**	**-0.1**
CHGB	**Renai**	**1.26**	**288**	*e*P	**Pn**	**19 02 28.6**	**+0.1**
	baz=279						
CHGB				*e*S	**Sb**	**19 02 45.2**	**+0.2**
	baz=279						
NNS	**Nan Shan**	**1.27**	**307**	P	**Pn**	**19 02 28.8**	**+0.2**
	baz=305						
NNS				*e*S	**Sn**	**19 02 45.0**	**-0.1**
	baz=305						
FUSS	**Fushou**	**1.27**	**296**	*e*P	**Pn**	**19 02 28.9**	**+0.2**
	baz=295						
FUSS				*e*S	**Sn**	**19 02 44.9**	**-0.3**
	baz=295						
ENTT	**Nioudou**	**1.27**	**319**	P	**Pb**	**19 02 29.2**	**0.0**
	baz=318						
ENTT				S	**Sb**	**19 02 45.8**	**+0.6**
	baz=318						
ILA	**Ilan**	**1.27**	**328**	*e*P	**Pb**	**19 02 29.8**	**+0.7**
	baz=327						
ILA				*e*S	**Sb**	**19 02 45.9**	**+0.8**
	baz=327						
TWE	**Neicheng**	**1.28**	**324**	P	**Pb**	**19 02 29.4**	**+0.2**
	baz=323						
TWE				S	**Sb**	**19 02 45.7**	**+0.5**
	baz=323						
NDT	**Datong Townshi**	**1.28**	**316**	*e*P	**Pb**	**19 02 29.2**	**-0.1**
	baz=315						
NDT				*e*S	**Sb**	**19 02 46.6**	**+1.3**
	baz=315						
EDH	**Donghe**	**1.30**	**237**	*e*P	**Pn**	**19 02 29.2**	**+0.4**
	baz=230						
EDH				*e*S	**Sn**	**19 02 44.8**	**-0.8**
	baz=230						
IRIF	**Iriomote-Funau**	**1.31**	**60**	P	**Pb**	**19 02 29.4**	**-0.3**
IRIF				*e*S	**Sb**	**19 02 46.1**	**0.0**
NTC	**Toucheng**	**1.31**	**333**	*e*P	**Pb**	**19 02 30.6**	**+0.8**
	baz=332						
NTC				*e*S	**Sb**	**19 02 47.9**	**+1.7**
	baz=332						
TWT	**Tachien**	**1.33**	**296**	*e*P	**Pb**	**19 02 30.1**	**-0.2**
	baz=284						
TWT				*e*S	**Sb**	**19 02 47.2**	**+0.3**
	baz=284						
TDCB	**Techi**	**1.34**	**295**	*e*P	**Pn**	**19 02 30.1**	**+0.5**
	baz=285						
TDCB				*e*S	**Sn**	**19 02 46.8**	**-0.1**
	baz=285						
LDUT	**Ludao**	**1.38**	**223**	*e*P	**Pn**	**19 02 30.5**	**+0.7**
	baz=223						
LDUT				*e*S	**Sn**	**19 02 46.6**	**-0.9**
	baz=223						
TWB1	**Santiao Chiao**	**1.40**	**341**	*e*P	**Pb**	**19 02 32.2**	**+0.9**
	baz=355						
TWB1				*e*S	**Sb**	**19 02 50.2**	**+1.6**
	baz=355						
SSLB	**Suanglung**	**1.41**	**275**	*e*P	**Pn**	**19 02 30.5**	**+0.1**
	baz=273						
SSLB				*e*S	**Sn**	**19 02 48.6**	**+0.2**
	baz=273						
NWLT	**Wulai**	**1.41**	**321**	*e*P	**Pb**	**19 02 31.6**	**0.0**
	baz=319						
NWLT				*e*S	**Sb**	**19 02 49.7**	**+0.5**
	baz=319						
YHNB	**Yeheng**	**1.41**	**314**	*e*P	**Pn**	**19 02 31.2**	**+0.7**
	baz=313						
YHNB				*e*S	**Sb**	**19 02 50.4**	**+1.2**
	baz=313						
TIPB	**Shuangxi**	**1.42**	**335**	*e*P	**Pb**	**19 02 32.7**	**+1.0**
	baz=334						
TIPB				*e*S	**Sb**	**19 02 50.9**	**+1.5**
	baz=334						
NSK	**Sanguang**	**1.43**	**314**	*e*P	**Pb**	**19 02 31.6**	**-0.4**
	baz=313						
NSK				*e*S	**Sb**	**19 02 49.5**	**-0.2**
	baz=313						
ELDTW	**Lidau**	**1.44**	**250**	*e*P	**Pn**	**19 02 30.9**	**0.0**
	baz=249						
ELDTW				*e*S	**Sn**	**19 02 48.5**	**-0.7**
	baz=249						
WPL	**Puli Township**	**1.44**	**283**	*e*P	**Pb**	**19 02 31.7**	**-0.3**
	baz=274						
WPL				*e*S	**Sn**	**19 02 49.6**	**+0.5**
	baz=274						
LONT	**Longtian**	**1.47**	**239**	*e*P	**Pn**	**19 02 31.7**	**+0.5**
	baz=231						
LONT				*e*S	**Sb**	**19 02 50.8**	**0.0**
	baz=231						
SMLT	**Sun Moon Lake**	**1.47**	**278**	P	**Pn**	**19 02 31.9**	**+0.6**
	baz=277						
SMLT				S	**Sb**	**19 02 51.2**	**+0.3**
	baz=277						
DPDB	**Guoxing**	**1.47**	**284**	*e*P	**Pn**	**19 02 32.1**	**+0.8**
	baz=274						
DPDB				*e*S	**Sb**	**19 02 51.6**	**+0.6**
	baz=274						
JKRS	**Kuro-shima**	**1.50**	**68**	P	**Pb**	**19 02 32.5**	**-0.5**
JKRS				*e*S	**Sb**	**19 02 51.1**	**-0.4**
WHYT	**Xinyi Township**	**1.50**	**271**	*e*P	**Pb**	**19 02 32.9**	**-0.2**
	baz=269						
WHYT				*e*S	**Sb**	**19 02 52.1**	**+0.4**
	baz=269						
NWF	**Wu-fen Shan**	**1.52**	**335**	*e*P	**Pb**	**19 02 33.1**	**-0.4**
	baz=349						
NWF				*e*S	**Sb**	**19 02 54.4**	**+1.9**
	baz=349						
WFSB	**Wu-fen Shan**	**1.52**	**335**	*e*P	**Pb**	**19 02 33.7**	**+0.2**
	baz=349						
WFSB				*e*S	**Sb**	**19 02 52.1**	**-0.3**
	baz=349						
WHP	**Taichung City**	**1.53**	**293**	*e*P	**Pb**	**19 02 33.9**	**+0.2**
	baz=292						
WHP				*e*S	**Sb**	**19 02 53.4**	**+0.7**
	baz=292						
TWA	**Mucha**	**1.53**	**328**	*e*P	**Pb**	**19 02 34.1**	**+0.5**
	baz=327						
TWA				*e*S	**Sb**	**19 02 53.3**	**+0.7**
	baz=327						
TTN	**Taitung**	**1.54**	**233**	*e*P	**Pb**	**19 02 34.1**	**+0.4**
	baz=232						
TTN				*e*S	**Sb**	**19 02 52.7**	**-0.2**
	baz=232						
NHDH	**Xindian Distri**	**1.55**	**326**	*e*P	**Pb**	**19 02 34.2**	**+0.3**
	baz=325						
NHDH				*e*S	**Sb**	**19 02 53.1**	**+0.1**
	baz=325						
ALS	**Alishan**	**1.56**	**264**	*e*P	**Pb**	**19 02 33.8**	**-0.4**
	baz=263						
TWGBT	**Beinan**	**1.56**	**237**	*e*P	**Pn**	**19 02 32.8**	**+0.4**
	baz=228						
TWGBT				*e*S	**Sn**	**19 02 52.0**	**0.0**
	baz=228						
TWG	**Pinlang**	**1.56**	**237**	*e*P	**Pn**	**19 02 32.8**	**+0.3**
	baz=228						
TWG				*e*S	**Sn**	**19 02 52.3**	**+0.2**
	baz=228						
TATO	**Taipei**	**1.58**	**325**	*e*P	**Pb**	**19 02 34.3**	**-0.1**
	baz=324						
TATO				*e*S	**Sb**	**19 02 54.1**	**+0.2**
	baz=324						
TNOU	**National Taiwa**	**1.60**	**336**	*e*P	**Pn**	**19 02 32.3**	**-0.7**
	baz=335						
TNOU				*e*S	**Sb**	**19 02 54.6**	**+0.1**
	baz=335						
TAP1	**Taipei**	**1.61**	**327**	*e*P	**Pb**	**19 02 35.6**	**+0.7**
	baz=326						
TAP1				*e*S	**Sb**	**19 02 55.7**	**+0.9**
	baz=326						
BACT	**New Taipei Cit**	**1.62**	**324**	*e*S	**Sb**	**19 02 55.9**	**+0.8**
	baz=323						
TAP	**Taipei**	**1.62**	**327**	*e*P	**Pb**	**19 02 35.7**	**+0.6**
	baz=326						
TAP				*e*S	**Sb**	**19 02 56.8**	**+1.7**
	baz=326						
WJS	**Zhushan**	**1.62**	**275**	*e*P	**Pb**	**19 02 35.1**	**0.0**
	baz=274						
WJS				*e*S	**Sb**	**19 02 56.3**	**+1.1**
	baz=274						
LIOB	**Emei**	**1.65**	**306**	P	**Pb**	**19 02 36.0**	**+0.3**
	baz=295						
LIOB				S	**Sb**	**19 02 56.3**	**+0.2**
	baz=295						
NSTT	**Nanjuang**	**1.66**	**305**	P	**Pb**	**19 02 35.5**	**-0.2**
	baz=304						
NSTT				*e*S	**Sb**	**19 02 55.9**	**-0.2**
	baz=304						
JIJ	**Ishigaki jima**	**1.66**	**66**	P	**Pn**	**19 02 34.0**	**+0.3**
CHN5	**Tsauling**	**1.66**	**267**	*e*P	**Pb**	**19 02 35.7**	**-0.2**
	baz=266						
CHN5				*e*S	**Sb**	**19 02 57.2**	**+0.7**
	baz=266						
WNT	**Mingjian**	**1.67**	**277**	*e*P	**Pb**	**19 02 35.6**	**-0.3**
	baz=275						

WNT	baz=275			*e*S	Sb	19 02 56.6	+0.2
WNT1	**Nantou City** baz=276	1.67	278	*e*P	Pb	19 02 36.1	+0.1
WNT1	baz=276			*e*S	Sb	19 02 57.5	+0.9
STYT	**Tauyuan** baz=244	1.67	252	P	Pn	19 02 35.0	+0.9
STYT	baz=244			*e*S	Sn	19 02 55.8	+0.9
WWF	**Wufeng** baz=281	1.68	283	*e*P	Pb	19 02 36.1	0.0
WWF	baz=281			*e*S	Sb	19 02 58.2	+1.4
YM01	**YM01** baz=343	1.68	330	*e*P	Pb	19 02 36.5	+0.4
YM01	baz=343			*e*S	Sb	19 02 57.2	+0.3
YM10	**YM10** baz=344	1.69	330	*e*P	Pb	19 02 36.2	-0.2
YM10	baz=344			*e*S	Sb	19 02 56.4	-0.9
YM11	**YM11** baz=343	1.70	331	*e*P	Pb	19 02 36.8	+0.4
YM11	baz=343			*e*S	Sb	19 02 56.8	-0.6
YM05	**YM05** baz=343	1.70	330	*e*P	Pb	19 02 36.1	-0.4
YM05	baz=343			*e*S	Sb	19 02 57.2	-0.2
NTY	**Taoyuan** baz=320	1.70	321	*e*P	Pb	19 02 37.0	+0.5
NTY	baz=320			*e*S	Sb	19 02 57.2	-0.3
YM04	**YM04** baz=343	1.70	329	*e*P	Pb	19 02 36.3	-0.3
YM04	baz=343			*e*S	Sb	19 02 57.3	-0.2
TWQ1	**Liyutan** baz=283	1.70	293	*e*P	Pb	19 02 36.6	0.0
TWQ1	baz=283			*e*S	Sb	19 02 57.4	-0.2
YM08	**YM08** baz=344	1.71	331	*e*P	Pb	19 02 36.3	-0.3
YM08	baz=344			*e*S	Sb	19 02 56.5	-1.1
TWS1	**Kuangyinshan** baz=325	1.72	326	*e*P	Pb	19 02 36.3	-0.4
TWS1	baz=325			*e*S	Sb	19 02 57.8	-0.1
TCU	**Taichung** baz=284	1.72	286	*e*P	Pb	19 02 36.9	+0.1
TCU	baz=284			*e*S	Sb	19 02 58.7	+0.6
HSN1	**Hsinchu** baz=308	1.73	309	*e*P	Pb	19 02 36.8	-0.2
HSN1	baz=308			*e*S	Sb	19 02 58.9	+0.6
ANP	**Anpu** baz=343	1.74	330	*e*P	Pb	19 02 36.6	-0.6
ANP	baz=343			*e*S	Sn	19 02 57.1	+0.6
NSY	**Sanyi** baz=281	1.74	295	*e*P	Pb	19 02 37.0	-0.2
NSY	baz=281			*e*S	Sb	19 02 58.4	-0.2
NCUH	**Zhongli** baz=316	1.75	317	*e*P	Pn	19 02 36.1	+1.1
NCUH	baz=316			*e*S	Sb	19 02 59.2	+0.4
NCU	**National Centr** baz=316	1.75	317	*e*S	Sb	19 02 59.2	+0.4
TPUB	**Ta-pu** baz=256	1.75	258	P	Pb	19 02 36.8	-0.6
TPUB	baz=256			*e*S	Sb	19 02 59.0	+0.1
NTST	**Danshui** baz=340	1.75	327	*e*S	Sb	19 02 58.6	-0.4
SBCB	**Hsinchu** baz=308	1.76	309	*e*P	Pn	19 02 36.5	+1.2
SBCB	baz=308			*e*S	Sb	19 02 59.5	+0.3
WGK	**Gukeng** baz=269	1.77	270	*e*P	Pb	19 02 37.3	-0.3
WGK	baz=269			*e*S	Sb	19 02 59.6	+0.3
NMLH	**Miaoli** baz=284	1.77	299	*e*P	Pb	19 02 37.6	0.0
NMLH	baz=284			*e*S	Sb	19 02 59.7	+0.2
CHN4	**Tsaushan** baz=258	1.77	260	*e*P	Pb	19 02 37.3	-0.4
CHN4	baz=258			*e*S	Sb	19 02 59.6	+0.1
WTP	**Ta-pu** baz=255	1.78	256	*e*P	Pb	19 02 37.5	-0.3
WTP	baz=255			*e*S	Sb	19 03 00.2	+0.5
ECL	**Taimali** baz=242	1.78	233	*e*P	Pn	19 02 35.7	+0.2
ECL	baz=242			*e*S	Sn	19 02 57.9	+0.4
HSN	**Hsinchu** baz=309	1.78	309	*e*S	Sb	19 02 59.4	-0.3
TWY	**Chenhua** baz=346	1.78	333	*e*P	Pb	19 02 36.7	-1.1
TWY	baz=346			*e*S	Sb	19 02 59.9	+0.1
WDLH	**Douliu** baz=269	1.79	271	*e*P	Pb	19 02 37.7	-0.3
WDLH	baz=269			*e*S	Sb	19 03 00.6	+0.6
WCHH	**Zhanghua** baz=281	1.81	283	*e*P	Pb	19 02 37.8	-0.6
WCHH	baz=281			*e*S	Sb	19 03 00.6	0.0
WDJ	**Dajia District** baz=290	1.82	292	*e*P	Pb	19 02 37.4	-1.0
WDJ	baz=290			*e*S	Sb	19 03 00.8	+0.1
SLGT	**Liugui** baz=242	1.83	248	*e*P	Pb	19 02 38.2	-0.5
SLGT	baz=242			*e*S	Sb	19 03 00.8	-0.3
LAY	**Lan-yu** baz=208	1.85	208	*e*S	Sn	19 02 59.7	+0.4
SGST	**Jiashian** baz=242	1.85	252	*e*P	Pn	19 02 37.8	+1.4
SGST	baz=242			*e*S	Sn	19 03 00.8	+1.6
CHN2	**Minshiung** baz=264	1.85	266	*e*P	Pb	19 02 39.0	-0.1
CHN2	baz=264			*e*S	Sb	19 03 01.9	+0.1
CHN1	**Nanshi** baz=254	1.87	255	*e*P	Pb	19 02 38.8	-0.6
CHN1	baz=254			*e*S	Sb	19 03 01.9	-0.4
TWK	**Hsinying** baz=256	1.89	258	*e*P	Pb	19 02 39.0	-0.6
TWK	baz=256			*e*S	Sb	19 03 02.7	-0.1
SNST	**Tainan City** baz=255	1.89	256	*e*P	Pb	19 02 39.3	-0.3
SNST	baz=255			*e*S	Sb	19 03 02.8	0.0
JISG	**Ishigakijimahi**	1.89	61	P	Pn	19 02 36.8	-0.2
JISG				*e*S	Sn	19 02 59.2	-1.0
CHY	**Chiayi** baz=263	1.90	265	*e*P	Pb	19 02 39.2	-0.8
CHY	baz=263			*e*S	Sb	19 03 02.6	-0.6
WTK	**Tuku** baz=269	1.93	271	*e*P	Pb	19 02 39.6	-0.7
WTK	baz=269			*e*S	Sb	19 03 03.8	-0.2
SSD	**Sandimen** baz=235	1.95	242	*e*P	Pb	19 02 40.0	-0.7
TSMG	**Majia** baz=234	1.96	241	*e*P	Pb	19 02 40.2	-0.7
RLNB	**Erlin** baz=275	1.96	276	*e*P	Pb	19 02 40.1	-0.9
RLNB	baz=275			*e*S	Sb	19 03 04.6	-0.4
TAW	**Tawu** baz=236	1.97	228	*e*P	Pb	19 02 40.3	-0.8
TAW	baz=236			*e*S	Sn	19 03 02.7	+0.5
EAST	**Anshuo** baz=237	1.99	230	*e*P	Pn	19 02 40.2	+1.8
EAST	baz=237			*e*S	Sn	19 03 04.3	+1.6
SCST	**Cishan** baz=246	2.00	247	*e*P	Pn	19 02 40.2	+1.7
SCST	baz=246			*e*S	Sn	19 03 04.7	+1.8
MASBT	**Mashibuluo** baz=233	2.02	238	*e*P	Pn	19 02 40.2	+1.5
MASBT	baz=233			*e*S	Sb	19 03 05.6	-0.8
WLGB	**Puzi** baz=263	2.02	265	*e*P	Pn	19 02 40.4	+1.6
WLGB	baz=263			*e*S	Sb	19 03 05.6	-1.0
CHN3	**Shinhua** baz=252	2.04	253	*e*P	Pb	19 02 41.3	-1.0
CHN3	baz=252			*e*S	Sb	19 03 07.0	-0.3
ICHU	**Yijhu** baz=260	2.06	261	*e*P	Pb	19 02 41.5	-1.0
ICHU	baz=260			*e*S	Sb	19 03 06.4	-1.2
SGLT	**Jiouru** baz=238	2.07	243	*e*P	Pb	19 02 44.2	+1.5
WSF	**Szhu** baz=267	2.08	269	*e*P	Pb	19 02 42.0	-0.9
WSF	baz=267			*e*S	Sb	19 03 07.7	-0.6
TWM1	**Shoushan** baz=245	2.08	246	*e*P	Pb	19 02 42.3	-0.8
TWM1	baz=245			*e*S	Sb	19 03 07.6	-0.9
TSPT	**Pingtung City** baz=239	2.09	242	*e*P	Pb	19 02 42.1	-1.0
TSPT	baz=239			*e*S	Sb	19 03 08.1	-0.6
CHN8	**Yiju** baz=260	2.12	261	*e*P	Pb	19 02 42.3	-1.3
CHN8	baz=260			*e*S	Sb	19 03 08.4	-1.1
SSPT	**Xinbi** baz=230	2.13	236	*e*P	Pb	19 02 42.7	-1.1
SLIU	**Shizi** baz=227	2.14	227	*e*P	Pn	19 02 41.9	+1.5
SLIU	baz=227			*e*S	Sn	19 03 07.5	+1.3
SCZT	**Fangliau** baz=232	2.16	233	*e*P	Pb	19 02 43.1	-1.2
SCLT	**Jiali** baz=255	2.17	257	*e*S	Sb	19 03 09.7	-1.2
SNJT	**Kaohsiung City** baz=244	2.19	245	*e*P	Pb	19 02 43.4	-1.3
JTJ	**Tarama**	2.23	64	P	Pn	19 02 42.5	+0.8
JTJ				*e*S	Sn	19 03 09.3	+0.7
TSEB	**Hengchuen, Pin** baz=229	2.30	220	*e*S	Sn	19 03 12.0	+1.7
HEN	**Hengchun** baz=224	2.32	224	*e*P	Pb	19 02 45.8	-1.3
HEN	baz=224			*e*S	Sn	19 03 13.0	+2.1
TWKBT	**Hengchun** baz=222	2.33	222	*e*P	Pb	19 02 45.7	-1.4
TWKBT	baz=222			*e*S	Sn	19 03 13.0	+2.1
TWK1	**Hengchun** baz=222	2.33	222	*e*P	Pb	19 02 45.8	-1.3
TWK1	baz=222			*e*S	Sn	19 03 12.3	+1.4
WLCH	**Liuqiu** baz=232	2.35	236	*e*P	Pb	19 02 46.2	-1.4
WLCH	baz=232			*e*S	Sb	19 03 14.7	-1.6
TWP	**Hsiaoliuchiu** baz=232	2.37	236	*e*S	Sb	19 03 14.8	-1.9
WDGT	**Dungji** baz=260	2.63	261	*e*P	Pn	19 02 49.0	+1.9
PNG	**Penghu** baz=266	2.69	268	*e*P	Pn	19 02 49.5	+1.5
PNG	baz=266			*e*S	Sn	19 03 20.9	+0.9
JMJ	**Miyako jima 2** baz=67	2.80	66	*e*P	Pb	19 02 53.0	-2.2
VCHM	**Qimei** baz=259	2.85	261	*e*P	Pn	19 02 51.5	+1.3
VWUC	**VWUC** baz=294	3.06	296	*e*P	Pn	19 02 53.5	+0.4
PTTC	**Pingtan** baz=317	3.07	307	*e*P	Pn	19 02 53.5	+0.4
PTTC	baz=317			*e*S	Sn	19 03 27.7	-1.5
PTMZ	**Houxiangcun** baz=280	3.36	294	*e*P	Pn	19 02 58.0	+0.8
PTMZ	baz=280			*e*S	Sn	19 03 34.6	-1.8
MATB	**Ma-tsu** baz=316	3.37	317	*e*P	Pn	19 02 57.7	+0.4
MATB	baz=316			*e*S	Sn	19 03 35.3	-1.5
MSUT	**Lienchiang** baz=316	3.40	317	*e*P	Pn	19 02 58.3	+0.5
MSUT	baz=316			*e*S	Sn	19 03 34.9	-2.6
LYJJ	**Jianjiangzhen** baz=319	3.78	320	*e*P	Pn	19 03 04.5	+1.6
LYJJ	baz=319			*e*S	Sn	19 03 44.4	-2.3
KNM	**Kinmen** baz=278	3.78	282	*e*P	Pn	19 03 06.4	+3.4
KNM	baz=278			*e*S	Sn	19 03 48.5	+1.7
KNMB	**Chin-men Tao** baz=280	3.83	283	*e*P	Pn	19 03 04.4	+0.7
KNMB	baz=280			*e*S	Sn	19 03 46.1	-1.9
XPSS	**Dashiqiu** baz=317	3.84	328	*e*P	Pn	19 03 04.0	+0.2
XPSS	baz=317			*e*S	Sn	19 03 46.2	-2.2
MHZQ	**Yeshan** baz=318	3.96	308	*e*P	Pn	19 03 05.6	+0.2
MHZQ	baz=318			*e*S	Sn	19 03 49.0	-2.2
AXDP	**Jialang** baz=284	4.30	287	*e*P	Pn	19 03 11.0	+0.9
AXDP	baz=284			*e*S	Sn	19 04 00.1	+0.5
SONM	**Songino Array** 0.5nm,0.6s,baz=146,slow=9.7,SNR=3.0	27.30	336	P	P	19 07 46.9	-2.2
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=98,slow=9.5,SNR=8.8	39.53	316	P	P	19 09 35.9	+0.6
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=109,slow=7.8,SNR=2.2	41.31	327	P	P	19 09 49.2	-0.6
ASAR	**Alice Springs** 0.2nm,0.6s,baz=343,slow=7.4,SNR=1.3	48.35	166	P	P	19 10 49.9	+3.6
YKA	**Yellowknife Ar** 0.3nm,0.8s,baz=316,slow=5.3,SNR=5.5	82.96	23	P	P	19 14 27.0	-2.1

IDC ***08*** *19:12:43.9±1.2, 51°.41N×173°.26W, h0^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.5/43, mbtmp3.4/8, ML3.8/1, Error ellipse: s-maj=42.5km s-min=21.7km az=0.0*

AEIC ***08*** *19:12:49.7±2.3, 51°.60N±0°.09×173°.18W±0°.06, h26^{km}±5^{km}, ML3.4/14, Error ellipse: s-maj=13.0km s-min=4.6km az=193.0*

NEIC ***08*** *19:12:51.0±2.1, 51°.68N±0°.08×173°.20W±0°.06, h46^{km}±10^{km}, Error ellipse: s-maj=12.0km s-min=3.0km az=160.0*

ISC 08 19:12:50.2±0.8**, 51°.6N**±0°.1×**173°.15W**±0°.05**, h37^{km}, n23, σ1^{s}17**/25**, mb3.5**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	0.86	312		Pn	19 13 05.3	-0.5
ATKA					Sn	19 13 15.9	-1.2
KOFP	**Korovin Flat P**	0.87	318		Pn	19 13 06.2	+0.2
KOWE	**Korovin West**	1.00	318		Pn	19 13 08.2	+0.5
GSMY	**Great Sitkin M**	1.85	284		Pn	19 13 18.8	-0.5
GSTR	**Great Sitkin T**	1.86	286	Pn	Pn	19 13 19.5	0.0
GSTD	**Great Sitkin T**	1.91	284		Pn	19 13 19.2	-0.9
GSTD					Sn	19 13 46.2	+3.3
ADAG	**Mount Adagdak**	2.17	281		Pn	19 13 25.2	+1.5
ADK	**Adak**	2.21	278		Pn	19 13 24.3	0.0
ADK	**Adak**	2.21	278	Pn	Pn	19 13 23.5	-0.7
KIKV	**Kanaga Island**	2.51	277		Pn	19 13 29.6	+1.2
KIMD	**Kanaga Island**	2.54	275		Pn	19 13 29.8	+1.0
NIKH	**Nikolski High**	2.96	61	Pn	Pn	19 13 34.4	-0.1
TASE	**Tanaga Southea**	3.04	276		Pn	19 13 36.9	+1.1
OKFG	**Magazine Ridge**	3.66	59		Pn	19 13 45.4	+1.2
UNV	**Unalaska Valle**	4.61	59	Pn	Pn	19 13 58.3	+1.2
ILAR	**Eielson Array** 0.3nm,0.3s,baz=230,slow=8.9,SNR=10	18.90	36	P	Pn	19 17 07.7	-0.3
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=274,slow=8.7,SNR=1.7	32.48	48	P	P	19 19 16.9	+0.3
NVAR	**Mina Array Bea** 0.2nm,0.4s,baz=291,slow=10,SNR=4.3	40.01	87	P	P	19 20 21.7	+0.3
PDAR	**Pinedale Array** 0.5nm,0.6s,baz=306,slow=5.8,SNR=4.7	42.84	76	P	P	19 20 44.9	+0.2
SONM	**Songino Array** 0.1nm,0.3s,baz=67,slow=5.7,SNR=2.1	49.65	299	P	P	19 21 39.0	+1.1
TXAR	**Lajitas Array** 0.3nm,0.4s,baz=314,slow=7.3,SNR=5.9	55.12	85	P	P	19 22 18.3	-0.4
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=48,slow=5.8,SNR=6.5	62.58	311	P	P	19 23 09.4	-0.7
ASAR	**Alice Springs** 0.2nm,0.5s,baz=25,slow=4.4,SNR=1.1	88.15	227	P	P	19 25 34.7	-2.2

IDC ***08*** *19:43:07.2±12.0, 10°.43N×93°.30E, h134^{km}±102^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.9/46, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=130.6km s-min=20.9km az=62.0*

ISC 08 19:43:08.0±1.6**, 10°.6N**±0°.1×**93°.1E**±0°.2**, h150^{km}, n11, σ2^{s}04**/8**, mb3.2**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	1.14	342	*e*P	Pn	19 43 24.3	-10
PBA				*e*S	Sn	19 43 43.5	-10
PBA	comp=E,283nm,0.3s			IAML		19 43 45.7	
PBA	comp=N,287nm,0.3s			IAML		19 43 46.9	
DGPR	**DIGLIPUR**	2.60	356	*e*P	Pn	19 43 47.9	-2.5
DGPR				*e*S	Sn	19 44 22.1	-1.0
DGPR	comp=N,102nm,0.3s			IAML		19 44 28.0	
CMAR	**Chiang Mai Arr** comp=N,0.2nm,0.3s,baz=225,slow=15,SNR=13	9.67	35	P	Pn	19 45 23.1	-0.5
H08S3	**Diego Garcia H** baz=48,slow=75,SNR=8.2	27.35	229	T	T	20 16 33.1	
H08S2	**Diego Garcia H** baz=48,slow=75,SNR=4.1	27.36	229	T	T	20 16 33.9	
H08S1	**Diego Carcia H** baz=48,slow=75,SNR=3.7	27.37	229	T	T	20 16 40.1	
MKAR	**Makanchi Array** comp=N,0.1nm,0.5s,baz=167,slow=8.2,SNR=4.6	37.26	348	P	P	19 50 06.7	+1.6
SONM	**Songino Array** comp=N,0.3nm,0.6s,baz=198,slow=7.4,SNR=3.4	38.80	14	P	P	19 50 19.3	+1.1
ZALV	**Zalesovo Beam** comp=N,0.3nm,0.4s,baz=160,slow=6.6,SNR=2.2	43.77	353	P	P	19 51 01.2	+2.7
WRA	**Warramunga Arr** comp=N,1.0nm,1.0s,baz=304,slow=8.3,SNR=2.5	50.66	127	P	P	19 51 51.0	-1.3
ASAR	**Alice Springs** comp=N,0.4nm,0.6s,baz=309,slow=6.6,SNR=6.4	52.43	131	P	P	19 52 04.6	-0.8

JMA 08 20:00:26.5, 35°.28N×137°.98E, h40^{km}±1^{km}, M3.2, 3C Broadband fault plane solution: P waves. NP1: ϕ_s185.00000°, δ45.00000°, λ-151.00000°. **NP2:** ϕ_s73.00000°, δ70.00000°, λ-49.00000°. **Principal axes:** T Plg15.0000°, Azm135.0000°; N Plg38.0000°, Azm237.0000°; P Plg48.0000°, Azm27.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNY	**Yasuok**	0.12	309	⇑P	Pn	20 00 33.2	-0.2
JNY				S	Sn	20 00 38.2	0.0
SHZ3	**Shizuoka 3**	0.28	139	P	Pn	20 00 34.3	-0.4
SHZ3				*e*S	Sn	20 00 40.5	+0.1
JYN	**Shimob**	0.51	65	⇑P	Pn	20 00 37.5	0.0
JYN				*e*S	Sn	20 00 45.2	0.0
JFNN	**Fujinakano**	0.58	98	P	Pn	20 00 38.5	+0.1
TK04	**Tokai 4**	0.90	186	P	Pn	20 00 43.1	+0.6
JOD2	**Odawara 2**	0.91	91	P	Pn	20 00 42.8	0.0
JOD2				*e*S	Sn	20 00 56.0	+1.3
JIZS	**Izushimoda**	0.93	127	⇑P	Pn	20 00 43.0	0.0
JIZS				*e*S	Sn	20 00 55.2	+0.1
MAT	**Matsushiro**	1.27	8	P	Pn	20 00 48.7	+0.9
MAT				S	Sn	20 01 06.3	+2.6

IDC 08 20:04:15.8±2.1**, 44°.68N**×**114°.16W, h0^{km}, mb1 4.0**/4**, mb1mx3.5**/47**, mbtmp3.7**/4**, ML3.5**/4 **Error ellipse: s-maj=49.0km s-min=16.4km az=117.0, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFO	**Pinyon Flats O** 0.6nm,0.3s,baz=321,slow=6.5,SNR=10.0	11.19	190	Pn	Pn	20 06 59.6	+2.4
ULM	**Lac du Bonnet** 0.5nm,0.3s,baz=260,slow=19,SNR=16	13.55	59	Pn	Pn	20 07 26.4	-2.8
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=335,slow=12,SNR=5.9	17.43	148	P	Pn	20 08 19.2	-1.2
YKA	**Yellowknife Ar** 0.3nm,0.3s,baz=176,slow=13,SNR=10.0	17.85	359	P	Pn	20 08 24.9	-0.5

PGC 08 20:05:31.7, 50°.12N×**114°.84W, h0^{km}, ML3.1**/6**, 95km northeast of Cranbrook, Bc Alberta, Canada Mining explosion., Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRDA	**Priddis**	0.83	25	P	Pg	20 05 45.9	-1.6
WALA	**Waterton Lakes**	1.22	150	P	Pg	20 05 54.1	-0.9
BSMT	**Bassoo Peak**	2.27	179	Pn	Pn	20 06 10.3	-0.3
YBMT	**Yellow Bay**	2.32	166	Pn	Pn	20 06 11.7	+0.4
SLEB	**Sale Mountain**	2.34	298	Pg	Pn	20 06 12.7	+1.1
SLEB				Sg	Sb	20 06 44.1	-0.3
JTMT	**Jette**	2.40	171	Pn	Pn	20 06 12.5	+0.1
JTMT				Sg	Sb	20 06 45.8	-0.3
SWMT	**Swartz Lake**	2.67	168	Pn	Pn	20 06 15.8	-0.2
FBMT	**Ferry Basin**	2.73	174	Pn	Pn	20 06 17.1	+0.2
MNB	**Mounoet Dainar**	3.05	314	Pn	Pn	20 06 21.2	-0.1
PNT	**Penticton**	3.20	257	Pn	Pn	20 06 22.8	-0.5
PNT				Sn	Sn	20 07 00.1	-1.9
EDM	**Edmonton**	3.24	16	Pn	Pn	20 06 23.3	-0.6
BLBC	**Blue River**	3.38	306	Pn	Pn	20 06 26.0	+0.1

SOME ***08*** *20:06:30.5, 48°.47N×84°.38E, h0^{km}*

ASRS ***08*** *20:06:36.7±0.6, 49°N±3°×8°5E±°, h1^{km}, MLh3.1/10, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***08*** *20:06:37.0±3.0, 48°.66N×84°.81E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=27.2km s-min=11.3km az=81.0*

ISC 08 20:06:35.0±1.9**, 48°.83N**±0°.07×**85°.35E**±0°.04**, h2^{km}**±14^{km}**, n25, σ1^{s}86**/43**, 7C-3D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan** 33nm,0.2s	1.42	193	*e*P	Pn	20 06 54.5	-7.3
ZSN	44nm,0.2s			*e*S	Sn	20 07 11.2	-10
DGZ	**Jazzator, Alta**	1.62	57	Pg	Pg	20 07 06.0	0.0
DGZ				Sg	Sn	20 07 28.6	+2.5
CHBI	**Chibit, Altay**	2.04	42	Pn	Pn	20 07 11.1	+0.6
CHBI				Pg	Pg	20 07 14.2	+0.1
CHBI				Sg	Sg	20 07 41.3	+0.8
UKR	**Ust'-Kan**	2.14	350	Pn	Pb	20 07 14.7	+0.2
UKR				Pg	Pg	20 07 16.3	+0.2
UKR				Sg	Sg	20 07 45.9	+2.1
CUR	**Chagan-Uzun**	2.33	56	Pg	Pb	20 07 18.3	+0.5
CUR				Sg	Sg	20 07 50.2	+0.3
ULGR	**Ulagan, Altay**	2.47	42	Pn	Pb	20 07 18.9	-1.2
ULGR				Pg	Pg	20 07 22.3	+0.1
ULGR				Sg	Sg	20 07 53.5	-0.7
MK31	**Makanchi Array** 0.1nm,0.2s,baz=60,slow=14,SNR=178	2.90	227	⇑Pn	Pn	20 07 18.6	-3.6
MK31	2.0nm,0.2s,baz=50,slow=16,SNR=30			⇑Pg	Pb	20 07 24.2	-3.2
MK31	3.6nm,0.3s,baz=54,slow=26,SNR=7.4			⇑Lg	Lg	20 07 55.1	
MAKZ	**Makanchi** 4.1nm,0.4s	3.04	230	⇓Pg	Pn	20 07 27.0	+2.9

MAKZ				⇑Lg	Lg	20 07 59.5	
	4.3nm,0.3s						
GALT	Gorno-Altaysk,	3.16	7	Pg	Pg	20 07 36.2	+0.7
GALT				Sg	Sg	20 08 16.8	+0.5
ARTR	Artybash	3.22	22	Pg	Pg	20 07 36.0	-0.7
ARTR				Sg	Sg	20 08 20.9	+2.5
SEM	Semipalatinsk	3.67	297	eP	Pn	20 07 36.1	+3.1
SEM				eS	Sb	20 08 24.4	-1.4
TEL	Teeli	3.82	53	Pg	Pg	20 07 47.1	-1.2
TEL				Sg	Sg	20 08 37.0	-0.7
TASR	Tashtagol	4.25	21	Pg	Pg	20 07 56.3	-0.1
TASR				Sg	Sg	20 08 51.4	0.0
ELT	Eltsovka	4.47	7	Pg	Pg	20 07 59.8	-0.9
ELT				Sg	Sg	20 09 00.4	+1.8
KURK	Kurchatov	4.75	296	⇑Pn	Pn	20 07 45.9	-1.7
	5.5nm,1.4s						
KURK				⇑Sn	Sn	20 08 40.7	-2.5
	3.4nm,0.9s						
KURK				⇓Lg	Lg	20 09 02.6	
	9.4nm,0.6s						
KURBB	Kurchatov Arra	4.78	295	⇓Pn	Pn	20 07 46.2	-1.7
	0.8nm,0.3s						
KURBB				⇑Lg	Lg	20 09 02.9	
	29nm,0.7s						
LUZB	Luzhba, Kemero	5.33	23	Pg	Pg	20 08 15.3	-1.7
LUZB				Sg	Sg	20 09 28.2	+2.3
TBTR	Tabat	5.33	38	Pg	Pg	20 08 15.4	-1.6
TBTR				Sg	Sg	20 09 25.9	-0.1
KAPS	Kapalarasan	5.42	231	eP	Pn	20 07 54.0	-2.8
	1.0nm,0.3s						
KAPS				eS	Sn	20 08 53.4	-6.4
	6.2nm,0.9s						
VEH	Verkhnyaya Baz	5.42	33	Sg	Sg	20 09 29.8	+0.7
CERR	Cheremushki	5.56	41	Sg	Sg	20 09 36.3	+2.7
BLRR	Bol'shaya Rech	6.14	44	Pg	Pg	20 08 29.9	-2.7
BLRR				Sg	Sg	20 09 55.0	+2.8
NVS	Novosibirsk	6.16	349	Pg	Pg	20 08 30.1	-2.9
NVS				Sg	Sg	20 09 55.5	+2.8
ARDR	Aradan	6.36	51	Pg	Pg	20 08 34.1	-2.6
ARDR				Sg	Sg	20 09 57.7	-1.3
SHRR	Shira	6.41	26	Pg	Pg	20 08 35.1	-2.7
SHRR				Sg	Sg	20 10 03.9	+3.1

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*IDC **08** 20:10:17.0±0.6, 11°.48N×126°.08E, h0^{km}, mb4.1/18, mb1 4.2/18, mb1mx4.1/42, mbtmp4.1/18, MS3.3/4, Ms1 3.3/4, ms1mx2.9/46, Error ellipse: s-maj=29.8km s-min=13.6km az=76.0*

*NEIC **08** 20:10:23.2±1.0, 11°.47N±0°.06×126°.1E±0°.2, h48^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=26.1km s-min=7.2km az=77.0*

ISC 08 20:10:23.6±1.5**, 11°.57N**±0°.04×**125°.97E**±0°.09**, h43**^{km}±14^{km}**, n56,** σ**2^{s}.30**/55**, mb4.2**/21**, 3D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.53	274	eP	Pn	20 10 29.7	-5.1
BESP				eS	Sn	20 10 38.4	-4.4
CNP	Catarman	1.59	306	eP	Pn	20 10 49.8	+0.5
CNP				eS	Sn	20 11 13.9	+5.2
GLSP	General Luna,	1.78	175	eP	Pn	20 10 46.8	-5.1
MSLP	Maasin	1.80	218	eP	Pn	20 10 51.1	-1.0
MSLP				eS	Sn	20 11 17.5	+3.8
LLP	Lapu-Lapu	2.33	238	eP	Pn	20 10 59.7	+0.2
LLP				i S	Sn	20 11 30.8	+3.8
BUTP	Butuan	2.60	188	eP	Pn	20 11 03.3	0.0
BUTP				eS	Sn	20 11 39.3	+5.6
PVCP	Virac	2.69	319	eP	Pn	20 11 02.5	-1.9
PVCP				eS	Sn	20 11 44.2	+8.5
CGP	Cagayan de Oro	3.34	202	⇓iP	Pn	20 11 14.3	+0.9
CGP				i S	Sn	20 11 52.9	+1.1
GUIM	Jordan	3.45	255	eP	Pn	20 11 14.1	-0.8
CNOP	Candoni, Negro	3.71	243	eP	Pn	20 11 16.7	-1.6
CNOP				eS	Sn	20 12 01.9	+1.1
BUKP	Musuan	3.77	194	eP	Pn	20 11 18.7	-0.7
BUKP				eS	Sn	20 12 11.5	+8.9
DAV	Davao City (W)	4.49	185	LR	LR	20 13 27.4	
	comp=Z,612nm,19.0s,baz=26,slow=43						
PAGZ	Pagadian	4.49	215	eP	Pn	20 11 27.7	-1.5
KCP	Kidapawan	4.61	191	⇓eP	Pn	20 11 31.4	+0.5
KCP				i S	Sn	20 12 29.6	+6.3
LQP	Lukban	5.01	301	⇓eP	Pn	20 11 46.9	+10
CAUP	Cauayan	6.69	324	eP	Pn	20 11 57.4	-2.0
SBUM	Sibu	16.37	237		P	20 14 13.5	+0.6
KAPI	Kappang	17.60	201	LR	LR	20 21 35.7	
	comp=Z,96nm,19.5s,baz=280,slow=39						
GUMO	Guam	18.55	82	LR	LR	20 21 04.3	
	comp=Z,76nm,18.6s,baz=268,slow=35						
KSRS	Korea Array	25.84	4	P	P	20 15 51.8	+0.7
	3.0nm,1.0s,baz=180,slow=9.8,SNR=6.2						
CMAR	Chiang Mai Arr	26.97	288	P	P	20 16 01.7	+0.2
	1.9nm,0.8s,baz=100,slow=7.8,SNR=8.4						
CMAR	Chiang Mai Arr	26.97	288	P	P	20 16 00.6	-0.9
MJAR	Matsushiro Arr	27.21	22	LR	LR	20 26 06.4	
	comp=Z,42nm,21.4s,baz=100,slow=35						
FITZ	Fitzroy Crossi	29.48	181	P	P	20 16 22.6	-1.1
	2.0nm,0.7s,baz=78,slow=21,SNR=1.0						
FITZ	Fitzroy Crossi	29.48	181	P	P	20 16 22.5	-1.3
WRA	Warramunga Arr	32.38	165	P	P	20 16 46.9	-2.5
	0.9nm,0.8s,baz=333,slow=10,SNR=4.7						
USRK	Ussuriysk Ar.	32.93	8	P	P	20 16 54.0	0.0
	3.0nm,0.9s,baz=202,slow=7.4,SNR=3.7						
ASAR	Alice Springs	35.87	168	P	P	20 17 17.9	-1.7
	0.7nm,0.3s,baz=352,slow=7.3,SNR=26						
ASAR	Alice Springs	35.87	168	P	P	20 17 17.5	-2.2
LSA	Lhasa	37.05	304	P	P	20 17 31.3	+1.1
LSA				IAmb	IAmb	20 17 44.5	
	comp=Z,8.7nm,1.5s						
SONM	Songino Array	39.71	339	P	P	20 17 52.7	+0.7
	comp=Z,1.6nm,0.9s,baz=156,slow=7.9,SNR=8.5						
SONM	Songino Array	39.71	339	P	P	20 17 51.7	-0.2
H11N1	WAKE ISLAND Hy	40.14	73	T	T	21 01 22.8	
	baz=264,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	40.15	73	T	T	21 01 21.2	
	baz=264,slow=75,SNR=9.9						
H11N3	WAKE ISLAND Hy	40.16	73	T	T	21 01 25.6	
	baz=264,slow=75,SNR=5.3						
STKA	Stephens Creek	45.72	161	P	P	20 18 39.5	-1.2
	comp=Z,7.4nm,0.7s,baz=332,slow=9.9,SNR=12						
STKA	Stephens Creek	45.72	161	P	P	20 18 38.7	-1.9
PETK	Petropavlovsk-	48.59	25	P	P	20 19 02.1	-0.7
	comp=Z,4.3nm,0.9s,baz=201,slow=6.8,SNR=2.3						
PETK	Petropavlovsk-	48.59	25	P	P	20 19 02.0	-0.8
MK31	Makanchi Array	50.83	322	P	P	20 19 20.7	+0.7
MK31				IAmb	IAmb	20 19 22.6	
	comp=Z,4.6nm,1.1s						
MKAR	Makanchi Array	50.83	322	P	P	20 19 20.7	+0.7
	comp=Z,3.1nm,0.8s,baz=114,slow=7.6,SNR=19						
MKAR	Makanchi Array	50.83	322	P	P	20 19 20.3	+0.3
ZALV	Zalesovo Beam	53.36	331	P	P	20 19 38.9	+0.3
	comp=Z,0.9nm,0.6s,baz=155,slow=4.4,SNR=5.1						
ZALV	Zalesovo Beam	53.36	331	P	P	20 19 38.6	0.0
KURK	Kurchatov	54.84	325		P	20 19 49.8	+0.3
KKAR	Karatay Array	57.14	314		P	20 20 06.4	+0.3
BRVK	Borovoye	60.51	325	P	P	20 20 29.2	-0.1
NRIK	Noril'sk	62.69	346	P	P	20 20 44.1	+0.4
	comp=Z,2.1nm,0.8s,baz=158,slow=6.2,SNR=3.7						
NRIK	Noril'sk	62.69	346	P	P	20 20 43.9	+0.2
NRIK				IAmb	IAmb	20 20 45.6	
	comp=Z,3.3nm,1.0s						
ABKAR	Akbulak array	65.71	319	P	P	20 21 03.7	-0.2
ABKAR				IAmb	IAmb	20 21 19.6	
	comp=Z,2.2nm,0.9s						
ILAR	Eielson Array	78.41	26	P	P	20 22 18.8	-0.8
	comp=Z,0.3nm,0.7s,baz=240,slow=6.5,SNR=2.8						
ARCES	ARCESS Array B	82.89	340	P	P	20 22 44.7	+1.3
	comp=Z,6.7nm,0.9s,baz=69,slow=5.0,SNR=4.9						
BRTR	Keskin Array B	84.49	309	P	P	20 22 53.6	+1.1
	comp=Z,0.4nm,0.6s,baz=102,slow=2.1,SNR=1.7						
FINES	FINESS Array B	84.62	332	P	P	20 22 52.4	-0.1
	comp=Z,3.7nm,0.8s,baz=70,slow=4.5,SNR=12						
AKASG	Malin Array Be	85.38	321	P	P	20 22 55.3	-1.2
	comp=Z,3.1nm,1.0s,baz=67,slow=4.3,SNR=5.7						
YKA	Yellowknife Ar	92.70	24	P	P	20 23 30.6	-0.3
	comp=Z,0.5nm,0.9s,baz=297,slow=4.8,SNR=5.3						

DJA 08 20:20:26.8±0.6**, 9°S**±4°×**11°2E**±°**, h10**^{km}**, M3.7**/8**, MLv3.7**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PWJI	Pagerwojo	1.41	5	P	Pn	20 20 50.6	-1.9
PWJI				S	Sn	20 21 11.0	-0.1
UGM	Wanagama	1.89	323	P	Pn	20 20 58.1	-1.0
UGM				S	Sb	20 21 24.7	-0.4
GRJI	Gresik	2.62	18	P	Pn	20 21 10.7	+1.4
JAGI	Jajag, Banyuwa	2.63	69	P	Pn	20 21 09.2	-0.2
SMRI	Semarang	2.66	333	P	Pn	20 21 08.3	-1.5
ABJI	Asem Bagus	3.01	58	P	Pn	20 21 15.4	+0.8
KPJI	Karang Pucung	3.42	307	P	Pn	20 21 21.6	+1.4
CISI	Cisompet, Garu	4.24	296	P	Pn	20 21 31.6	0.0

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*NEIC **08** 21:06:17.3±1.8, 11°.48N±0°.08×126°.1E±0°.1, h35^{km}±2^{km}, mb4.7/30, Error ellipse: s-maj=18.4km s-min=12.8km az=90.0*

*IDC **08** 21:06:24.0±2.4, 11°.43N×125°.95E, h101^{km}±22^{km}, mb3.7/20, mb1 3.9/23, mb1mx3.8/41, mbtmp4.1/23, MS3.3/7, Ms1 3.3/7, ms1mx3.1/40, Error ellipse: s-maj=23.0km s-min=10.5km az=73.0*

ISC 08 21:06:17.2±0.4**, 11°.52N**±0°.04×**126°.12E**±0°.05**, h33**^{km}**, n114,** σ**2^{s}.46**/107**, mb4.5**/39**, MS3.0**/5**, 1C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.67	277	eP	Pn	21 06 26.4	-4.0
BESP				eS	Sb	21 06 33.7	-6.0
GLSP	General Luna,	1.72	180	eP	Pn	21 06 41.9	-2.9
CNP	Catarman	1.73	305	eP	Pn	21 06 43.6	-1.4
MSLP	Maasin	1.85	222	eP	Pn	21 06 47.1	+0.5
MSLP				eS	Sb	21 07 15.2	+2.1
LLP	Lapu-Lapu	2.43	241	eP	Pn	21 06 54.2	-0.3
LLP				eS	Sb	21 07 28.4	-1.4
BUTP	Butuan	2.58	191	eP	Pn	21 06 56.1	-0.5
BUTP				eS	Sb	21 07 36.2	+2.1
PVCP	Virac	2.82	317	eP	Pn	21 07 02.3	+2.4
CGP	Cagayan de Oro	3.35	205	⇓iP	Pn	21 07 10.2	+2.9
CGP				i S	Sn	21 07 49.0	+3.1
BUKP	Musuan	3.76	196	eP	Pn	21 07 13.2	+0.3
CNOP	Candoni, Negro	3.81	244	eP	Pn	21 07 12.2	-1.3
OTRP	Odiongan	4.10	282	eP	Pn	21 07 16.7	-0.8
JAP	San Jose, Anti	4.17	260	⇑eP	Pb	21 07 24.2	-5.5
JAP				eS	Sb	21 08 21.1	+1.4
GQP	Guinayangan	4.30	304	⇓eP	Pn	21 07 22.0	+1.8
GQP				eS	Sn	21 08 09.7	+0.4
DAV	Davao City (W)	4.45	187	P	Pb	21 07 28.7	-6.0
	81nm,0.3s,baz=354,slow=10,SNR=2.4						
DAV				S	Sn	21 08 14.8	+1.7
	17nm,0.3s,baz=28,slow=15,SNR=4.4						
DAV				LR	LR	21 09 51.8	
	comp=Z,694nm,19.1s,baz=60,slow=48						
PAGZ	Pagadian	4.54	217	eP	Pn	21 07 22.7	-0.8
KCP	Kidapawan	4.59	193	⇓eP	Pn	21 07 29.5	+5.1
BOAC	Boac	4.60	295	eP	Pn	21 07 24.1	-0.3
SJMP	San Jose	4.98	281	eP	Pn	21 07 30.5	+0.9
LQP	Lukban	5.16	300	⇓eP	Pn	21 07 32.5	+0.2
POLP	Polilio Island	5.17	309	eP	Pn	21 07 36.5	+4.2
TGY	Tagaytay City	5.67	297	P	Pn	21 07 44.0	+4.8
	6.6nm,0.3s,baz=170,slow=16,SNR=2.0						
BUSP	Coron	5.82	275	eP	Pn	21 07 34.9	-6.3
APYP	Conner	7.88	324	eP	Pn	21 08 14.2	+4.7
MYLDM	Lahad Datu	9.82	231	Pn	Pn	21 08 37.8	+1.6
SSLB	Suanglung	13.15	339	Pn	Pn	21 09 20.5	-1.3
SIJI	Sorong	13.33	157	P	P	21 09 30.6	-2.7
	0.4nm,0.3s,baz=294,slow=19,SNR=1.0						
SBUM	Sibu	16.46	238	P	Pn	21 10 05.7	-0.1
QIZ	Qiongzhong	17.38	297		P	21 10 18.2	-0.2
QIZ				IAmb	IAmb	21 10 20.6	
	comp=Z,51nm,1.2s						
GUMO	Guam	18.42	82	LR	LR	21 16 05.7	
	comp=Z,176nm,20.3s,baz=278,slow=31						
UBPT	Khong Chiam	20.43	283	P	P	21 10 52.9	+1.1
SOEI	Soe	21.21	185	P	P	21 11 02.0	+1.5
SOEI				IAmb	IAmb	21 11 20.7	
	comp=Z,36nm,0.9s						
JNU	Nakatsue	21.94	11	LR	LR	21 18 57.8	
	comp=Z,99nm,19.9s,baz=303,slow=34						
JHS	Saijyo	24.23	14	P	P	21 11 30.9	-0.1
JHS				IAmb	IAmb	21 11 36.3	
	comp=Z,17nm,1.1s						
MTN	Manton Dam	24.71	168	P	P	21 11 35.0	-0.5
MTN				IAmb	IAmb	21 11 36.8	
	comp=Z,24nm,1.1s						
JWT	Wachi	25.12	18	P	P	21 11 39.1	0.0
JWT				IAmb	IAmb	21 11 50.0	
	comp=Z,19nm,1.1s						
IPM	Ipoh	25.80	256	P	P	21 11 45.8	+0.2
IPM				IAmb	IAmb	21 11 52.2	
	comp=Z,25nm,0.8s						
KSRS	Korea Array	25.88	3	P	P	21 11 45.9	0.0
	comp=Z,3.3nm,0.9s,baz=181,slow=12,SNR=6.6						
KSRS				LR	LR	21 22 47.1	
	comp=Z,25nm,19.8s,baz=165,slow=38						
KULM	Kulim	25.93	258	P	P	21 11 46.6	-0.1
KULM				IAmb	IAmb	21 11 54.3	
	comp=Z,22nm,1.0s						
SUKH	Sukhothai	26.30	286	P	P	21 11 55.0	+5.0
PAYA	Payao	26.45	290	P	P	21 11 57.5	+6.1
CM36	Chiang Mai Arr	26.99	288	P	P	21 12 01.0	+4.8
CM34	Chiang Mai Arr	27.00	289	P	P	21 12 02.0	+5.6
CM09	Chiang Mai Arr	27.07	288	P	P	21 12 03.0	+6.0
CM04	Chiang Mai Arr	27.07	288	P	P	21 12 03.0	+6.0
CM01	Chiang Mai Arr	27.10	288	P	P	21 12 10.0	+13
CM02	Chiang Mai Arr	27.11	288	P	P	21 12 04.0	+6.7
CM31	Chiang Mai Arr	27.12	288	P	P	21 12 04.7	+7.2
CMAR	Chiang Mai Arr	27.12	288	P	P	21 11 56.3	-1.1
	comp=Z,2.0nm,0.9s,baz=100,slow=7.5,SNR=13						
CMAR				LR	LR	21 23 32.7	
	comp=Z,37nm,19.0s,baz=110,slow=38						
CM15	Chiang Mai Arr	27.14	288	P	P	21 12 02.0	+4.4
CM13	Chiang Mai Arr	27.15	288	P	P	21 12 04.0	+6.4
CM33	Chiang Mai Arr	27.19	289	P	P	21 12 04.0	+6.0
MJAR	Matsushiro Arr	27.20	22	P	P	21 11 59.4	+1.4
	comp=Z,1.6nm,0.7s,baz=197,slow=9.4,SNR=3.1						
MJAR				LR	LR	21 21 20.0	
	comp=Z,64nm,20.0s,baz=245,slow=33						
CM32	Chiang Mai Arr	27.25	288	P	P	21 12 04.0	+5.5
MHMT	Maesarieng	28.02	287	P	P	21 12 17.0	+12
FITZ	Fitzroy Crossi	29.43	181	P	P	21 12 17.1	-0.8
	comp=Z,3.5nm,0.8s,baz=2.3,slow=10.0,SNR=1.2						
PMG	Port Moresby	29.49	134	LR	LR	21 25 54.6	
	comp=Z,37nm,19.5s,baz=189,slow=40						
GSI	Gunungsitoli	30.09	252	P	P	21 12 23.9	0.0
GSI				IAmb	IAmb	21 12 41.7	
	comp=Z,20nm,1.1s						
COEN	Coen	30.44	146	P	P	21 12 25.7	-1.2
COEN				IAmb	IAmb	21 12 41.2	
	comp=Z,10.0nm,1.1s						
WB0	Warramunga Arr	32.14	165	P	P	21 12 40.5	-1.3
WRA	Warramunga Arr	32.29	165	P	P	21 12 42.4	-0.8
	comp=Z,0.6nm,0.7s,baz=345,slow=9.2,SNR=2.6						
WRA				PcP	PcP	21 15 30.3	-0.7
	comp=Z,0.9nm,0.7s,baz=336,slow=3.5,SNR=2.7						
WB2	Warramunga Arr	32.30	165	P	P	21 12 41.8	-1.4
WB2				IAmb	IAmb	21 12 52.7	
	comp=Z,6.0nm,1.1s						
USRK	Ussuriysk Ar.	32.96	8	P	P	21 12 49.3	+0.6
	comp=Z,5.5nm,0.8s,baz=140,slow=10.0,SNR=4.2						
AS31	Alice Springs	35.79	168	P	P	21 13 13.2	-0.3
ASAR	Alice Springs	35.79	168	P	P	21 13 12.4	-1.1
	comp=Z,0.5nm,0.3s,baz=351,slow=7.5,SNR=17						
ASAR				PcP	PcP	21 15 39.8	-1.2
	comp=Z,1.0nm,0.9s,baz=351,slow=3.4,SNR=1.7						
ASAR	Alice Springs	35.79	168	P	P	21 13 13.2	-0.4
LSA	Lhasa	37.19	304	P	P	21 13 26.0	0.0
ODAN	Odare	39.45	298	eP	P	21 13 42.8	-2.0
	comp=Z,32nm,0.7s						
ULN	Ulaanbaatar	39.61	340	P	P	21 13 46.6	+0.9
H11S3	WAKE ISLAND Hy	39.73	75	T	T	21 56 57.7	
	baz=262,slow=74						
H11S1	WAKE ISLAND Hy	39.74	75	T	T	21 57 05.0	
	baz=262,slow=74						
H11S2	WAKE ISLAND Hy	39.74	75	T	T	21 57 00.8	
	baz=262,slow=74						
SONM	Songino Array	39.81	339	P	P	21 13 47.3	0.0
	comp=Z,1.1nm,0.9s,baz=148,slow=8.5,SNR=7.1						
H11N1	WAKE ISLAND Hy	40.02	73	T	T	21 57 16.1	
	baz=265,slow=74						
H11N2	WAKE ISLAND Hy	40.03	73	T	T	21 57 16.5	
	baz=265,slow=74						
H11N3	WAKE ISLAND Hy	40.04	73	T	T	21 57 16.6	
	baz=265,slow=74						
RAMN	Ramite	40.15	298	eP	P	21 13 49.5	-1.2
	comp=Z,19nm,0.7s						
GUN	Gumba	41.02	299	eP	P	21 13 56.1	-1.8
	comp=Z,30nm,0.8s						
PKI	Pulchoki	41.33	299	eP	P	21 13 58.0	-2.5
	comp=Z,11nm,0.7s						
KKN	Kakani	41.50	299	eP	P	21 13 59.5	-2.2
	comp=Z,14nm,0.8s						
MORW	Morawa	41.51	193	P	P	21 14 00.5	-0.9
MORW				IAmb	IAmb	21 14 11.9	
	comp=Z,11nm,1.0s						
FORT	Forrest	42.09	178	P	P	21 14 06.5	+0.4
DANN	Dangsing	42.94	299	eP	P	21 14 11.7	-1.9
	comp=Z,12nm,0.6s						
BBOO	Buckleboo	45.09	168	P	P	21 14 30.7	+0.5
STKA	Stephens Creek	45.62	161	P	P	21 14 34.2	-0.3
	comp=Z,6.9nm,0.7s,baz=338,slow=8.9,SNR=12						
STKA	Stephens Creek	45.62	161	P	P	21 14 35.1	+0.6
PEA0B	Petropavlovsk-	48.57	25	P	P	21 14 58.5	+1.2
PETK	Petropavlovsk-	48.57	25	P	P	21 14 59.4	+2.1
	comp=Z,3.5nm,0.9s,baz=180,slow=7.2,SNR=1.8						
PETK	Petropavlovsk-	48.57	25	P	P	21 14 57.9	+0.6
MK31	Makanchi Array	50.95	322	IAmb	IAmb	21 15 31.3	
	comp=Z,7.7nm,0.9s						
MKAR	Makanchi Array	50.95	322	P	P	21 15 16.0	+0.4
	comp=Z,3.8nm,0.9s,baz=119,slow=8.1,SNR=30						
MKAR	Makanchi Array	50.95	322	P	P	21 15 15.7	+0.1
ZALV	Zalesovo Beam	53.47	331	P	P	21 15 34.8	+0.7
	comp=Z,0.2nm,0.3s,baz=142,slow=7.3,SNR=4.3						
ZALV	Zalesovo Beam	53.47	331	P	P	21 15 36.4	+2.3
KURK	Kurchatov	54.96	325		P	21 15 45.0	0.0
KKAR	Karatay Array	57.28	314	P	P	21 16 02.1	+0.4
BRVK	Borovoye	60.63	325	P	P	21 16 24.9	+0.1
NRIK	Noril'sk	62.78	346	P	P	21 16 39.1	+0.1
	comp=Z,1.2nm,0.4s,baz=180,slow=16,SNR=2.5						
NRIK	Noril'sk	62.78	346	P	P	21 16 38.8	-0.1
NRIK				IAmb	IAmb	21 16 55.5	
	comp=Z,9.5nm,1.1s						
GEYT	Alibeck	65.69	306	P	P	21 16 57.7	-1.0
	comp=Z,1.2nm,0.4s,baz=151,slow=34,SNR=1.6						
ABKAR	Akbulak array	65.84	319	P	P	21 16 58.6	-0.7
ABKAR	Akbulak array	65.84	319	P	P	21 16 59.0	-0.4
ABKAR				IAmb	IAmb	21 17 15.3	
	comp=Z,6.2nm,1.1s						
ARU	Arti	68.11	326	P	P	21 17 13.1	-0.6
ARU				IAmb	IAmb	21 17 20.2	
	comp=Z,6.4nm,0.7s						
BMAR	Burnt Mountain	79.19	23	P	P	21 18 19.0	+0.4
ARCES	ARCESS Array B	82.98	340	P	P	21 18 37.2	-1.5
	comp=Z,4.0nm,0.9s,baz=83,slow=7.4,SNR=1.7						
WHY	Whitehorse	84.42	29	P	P	21 18 48.9	+2.5
BRTR	Keskin Array B	84.63	309	P	P	21 18 46.5	-1.4
	comp=Z,0.5nm,0.8s,baz=96,slow=4.0,SNR=1.8						
BRTR	Keskin Array B	84.63	309	P	P	21 18 46.4	-1.5
FIA1	FINESS Array S	84.73	332	P	P	21 18 46.4	-1.3
FINES	FINESS Array B	84.73	332	P	P	21 18 45.3	-2.4
	comp=Z,3.1nm,0.7s,baz=82,slow=4.0,SNR=7.6						
FINES	FINESS Array B	84.73	332	P	P	21 18 47.2	-0.5
AKASG	Malin Array Be	85.51	321	P	P	21 18 50.2	-1.6
	comp=Z,0.2nm,0.4s,baz=61,slow=4.3,SNR=4.4						
VNDA	Vanda	91.18	173	P	P	21 19 17.7	-0.5
	comp=Z,0.9nm,1.0s,baz=326,slow=6.8,SNR=2.7						
YKA	Yellowknife Ar	92.68	24	P	P	21 19 26.1	+0.5
	comp=Z,1.3nm,0.9s,baz=298,slow=5.5,SNR=6.1						
PLCA	Paso Flores	147.40	156	PKPbc	PKPdf	21 25 54.2	-1.4
	comp=Z,3.6nm,1.0s,baz=112,slow=1.4,SNR=3.5						

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*IDC **08** 21:14:04.5±1.1, 11°.43N×125°.96E, h0^{km}, mb4.0/8, mb1 4.1/8, mb1mx3.7/43, mbtmp4.0/8, Error ellipse: s-maj=67.8km s-min=17.7km az=66.0*

*NEIC **08** 21:14:09.3±1.8, 11°.44N±0°.08×126°.1E±0°.2, h35^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=29.5km s-min=8.8km az=67.0*

ISC 08 21:14:08.6±0.7**, 11°.44N**±0°.04×**126°.10E**±0°.08**, h33**^{km}**, n27,** σ**1^{s}.65**/31**, mb4.3**/15**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	1.76	307	eP	Pn	21 14 37.9	+1.0
CNP				eS	Pb	21 14 40.5	+0.1
MSLP	Maasin	1.78	223	eP	Pb	21 14 39.4	-1.2
MSLP				eS	Sb	21 15 03.5	+1.0
LLP	Lapu-Lapu	2.37	242	eP	Pn	21 14 46.9	+1.6
LLP				eS	Sb	21 15 20.8	+1.2
BUTP	Butuan	2.50	191	eP	Pb	21 14 50.6	-2.2
BUTP				eS	Sb	21 15 25.5	+2.3
PVCP	Virac	2.87	319	eP	Pb	21 14 55.8	-3.3
CGP	Cagayan de Oro	3.27	205	⇓eP	Pn	21 14 57.5	-0.2
CGP				eS	Sb	21 15 40.9	-4.5
TWG	Pinlang	12.29	338	Pn	Pn	21 17 01.4	-0.1
IPM	Ipoh	25.76	256	P	P	21 19 36.7	+0.1
IPM				IAmb	IAmb	21 19 38.2	
	comp=Z,8.5nm,1.1s						
CMAR	Chiang Mai Arr	27.12	288	P	P	21 19 48.2	-0.8
	comp=Z,0.4nm,0.5s,baz=98,slow=7.4,SNR=2.8						
CMAR	Chiang Mai Arr	27.12	288		S	21 24 21.9	-3.5
FITZ	Fitzroy Crossi	29.35	181	P	P	21 20 07.5	-1.1
FITZ				IAmb	IAmb	21 20 16.5	
	comp=Z,12nm,1.1s						
WB0	Warramunga Arr	32.06	165	P	P	21 20 32.2	-0.5
JTM	Tenmabayashi	32.08	22	P	P	21 20 31.2	-1.3
WRA	Warramunga Arr	32.22	165	P	P	21 20 34.2	+0.1
	comp=Z,0.3nm,0.4s,baz=344,slow=8.8,SNR=1.5						
WB2	Warramunga Arr	32.22	165	P	P	21 20 34.5	+0.5
WB2				IAmb	IAmb	21 20 48.3	
	comp=Z,8.4nm,1.1s						
WR0	Warramunga Arr	32.29	165	P	P	21 20 35.1	+0.5
WR0				IAmb	IAmb	21 20 50.0	
	comp=Z,4.0nm,1.1s						
PBA	Port Blair	32.67	274	P	P	21 20 39.8	+1.8
PSA00	Pilbara Seismi	33.37	191	P	P	21 20 44.5	+0.4
PSA00				IAmb	IAmb	21 20 46.5	
	comp=Z,16nm,1.1s						
ASAR	Alice Springs	35.71	168	P	P	21 21 05.3	+1.0
	comp=Z,0.4nm,0.5s,baz=352,slow=7.3,SNR=11						
SONM	Songino Array	39.88	339	P	P	21 21 40.0	+0.6
	comp=Z,0.7nm,0.8s,baz=160,slow=9.1,SNR=4.7						
STKA	Stephens Creek	45.55	161	P	P	21 22 26.9	+1.4
	comp=Z,4.0nm,0.7s,baz=343,slow=10.0,SNR=6.3						
STKA	Stephens Creek	45.55	161	P	P	21 22 27.5	+2.0
MK31	Makanchi Array	51.00	322	P	P	21 23 08.6	+1.1
MK31				IAmb	IAmb	21 23 09.2	
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	51.00	322	P	P	21 23 08.2	+0.8
	comp=Z,2.5nm,0.8s,baz=114,slow=8.5,SNR=16						
KURK	Kurchatov	55.02	325	P	P	21 23 37.3	+0.4
KURK				IAmb	IAmb	21 23 38.5	
	comp=Z,5.3nm,0.9s						
ARCES	ARCESS Array B	83.05	340	P	P	21 26 31.1	+0.5
	comp=Z,3.5nm,0.8s,baz=40,slow=6.3,SNR=1.9						
FINES	FINESS Array B	84.79	332	P	P	21 26 39.4	-0.1
	comp=Z,2.1nm,0.8s,baz=103,slow=6.1,SNR=5.1						

TAP 08 21:19:21.0, 24°.32N×121°.71E, h14^{km}, ML1.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.12	13	P	Pg	21 19 24.2	-0.1
	baz=16						
ENA				S	Sg	21 19 26.6	0.0
	baz=16						
NACB	Ninganchiao	0.18	218	eP	Pg	21 19 25.0	-0.2
	baz=217						
NACB				S	Sg	21 19 28.1	+0.1
	baz=217						
ETLH	Xiulin Townshi	0.24	243	eP	Pg	21 19 26.0	-0.2
	baz=242						
ETLH				eS	Sg	21 19 29.9	+0.1
	baz=242						
NNSB	Datong	0.32	291	eP	Pg	21 19 27.7	0.0
	baz=290						
NNSB				S	Sg	21 19 32.2	0.0
	baz=290						
NNS	Nan Shan	0.33	292	eP	Pg	21 19 27.8	-0.1
	baz=291						
NNS				eS	Sg	21 19 32.5	-0.2
	baz=291						
FUSS	Fushou	0.43	261	eP	Pb	21 19 30.4	-0.1
	baz=261						
FUSS				eS	Sg	21 19 35.7	0.0
	baz=261						
TDCB	Techi	0.51	263	eP	Pg	21 19 30.5	-0.6
	baz=262						
TDCB				eS	Sg	21 19 37.1	-0.9
	baz=262						

JMA 08 21:19:45.3±0.3**, 24°.94N×123°.48E, h13^{km}, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.64	222	P	Pg	21 19 57.4	-0.4
YOJ				eS	Sg	21 20 06.0	-0.2
IRIF	**Iriomote-Funau**	0.64	159	P	Pg	21 19 57.7	-0.2
IRIF				eS	Sg	21 20 06.0	-0.4
JIJ	**Ishigaki jima**	0.83	133	P	Pg	21 20 00.7	-0.7
JIJ				eS	Sg	21 20 11.3	-1.0
JISG	**Ishigakijimahi**	0.83	115	P	Pg	21 20 01.2	-0.2
JISG				eS	Sg	21 20 11.9	-0.5
JKRS	**Kuro-shima**	0.85	145	P	Pb	21 20 02.0	+0.1

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*ISK **08** 21:39:41.4, 41°.21N×43°.69E, h5^{km}, ML3.1/8*
*NSSP **08** 21:39:41.3, 41°.25N×43°.67E, h10^{km}, Ms3.1*
*DDA **08** 21:39:41.9, 41°.28N×43°.67E, h11^{km}±4^{km}, ML2.9*
*TIF **08** 21:39:41.2, 41°.26N×43°.69E, h15^{km}*
*MOS **08** 21:39:42.8±1.2, 41°.17N×43°.66E, h14^{km}, mb3.7/1, Error ellipse: s-maj=6.8km s-min=4.3km az=81.3*
*NORS **08** 21:39:44.3±0.0, 41°.48N×43°.79E, h1^{km}, MPVA4.1*
ISC 08 21:39:42.2±1.1**, 41°.25N**±0°.01×**43°.69E**±0°.02**, h4**^{km}±9^{km}**, n93, σ0^{s}.97**/155**, 3C-13D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	0.38	78	P	Pg	21 39 49.7	+0.1
DMNI				S	Sg	21 39 55.3	+0.6
DMNI	**Dmanisi**	0.38	78	PG	Pg	21 39 49.7	+0.1
BRNG	**Burnasheti**	0.38	15	P	Pg	21 39 49.8	+0.1
BRNG				S	Sb	21 39 55.9	-2.3
KZRT	**Kazreti**	0.55	76	P	Pg	21 39 52.6	-0.2
KZRT				S	Sb	21 40 01.1	-1.6
KZRT	**Kazreti**	0.55	76	i P	Pg	21 39 52.5	-0.2
KZRT				i S	Sg	21 40 00.1	+0.2
KZRT	**Kazreti**	0.55	76	PG	Pg	21 39 52.6	-0.2
KZRT				S	Sb	21 40 01.1	-1.6
EAK	**Akyaka**	0.57	187	i P	Pg	21 39 52.9	-0.2
EAK				IAML		21 40 04.0	
	comp=N,1µm,0.4s						
EAK				IAML		21 40 06.0	
	comp=E,2µm,0.4s						
STE	**Stepanavan**	0.57	116	eP	Pb	21 39 53.8	-1.1
STE				eS	Sb	21 40 02.3	-1.1
EPOS	**Posof**	0.77	289	i P	Pg	21 39 56.4	-0.6
EPOS				IAML		21 40 07.0	
	comp=E,245nm,0.3s						
EPOS				i S	Sg	21 40 07.2	+0.3
EPOS				IAML		21 40 08.0	
	comp=N,816nm,0.6s						
KARS	**Kars**	0.78	217	PG	Pg	21 39 57.1	-0.1
KARS				SG	Sg	21 40 08.4	+1.1
ABS	**Abastumani**	0.83	308	P	Pg	21 39 57.6	-0.6
ABS				S	Sg	21 40 09.1	+0.2
ABS	**Abastumani**	0.83	308	PG	Pg	21 39 57.6	-0.6
ABS				S	Sg	21 40 09.1	+0.2
BTNK	**Botanikuri**	0.94	62	P	Pb	21 40 00.2	-0.9
BTNK				S	Sb	21 40 13.1	-0.8
BTNK	**Botanikuri**	0.94	62	i P	Pb	21 40 00.4	-0.7
BTNK				i S	Sb	21 40 13.6	-0.3
BTNK				IAML		21 40 15.0	
	comp=E,1µm,0.1s						
BTNK	**Botanikuri**	0.94	62	PG	Pb	21 40 00.2	-0.9
BTNK				S	Sb	21 40 13.1	-0.8
SEAG	**Tbilisi Sea**	0.98	58	P	Pg	21 40 00.4	-0.6
SEAG				S	Sb	21 40 13.8	-1.3
SEAG	**Tbilisi Sea**	0.98	58	PG	Pg	21 40 00.4	-0.6
SEAG				S	Sb	21 40 13.8	-1.3
METS	**Metsamor**	1.14	165	⇓iP	Pg	21 40 03.9	-0.1
METS				⇓iS	Sb	21 40 19.9	+0.2
VNNZ	**Vanand**	1.15	175	⇓iP	Pg	21 40 04.2	-0.2
VNNZ				⇓iS	Sb	21 40 20.2	0.0
KAPZ	**Kaputan**	1.20	140	⇓iP	Pg	21 40 05.1	-0.2
KAPZ				⇓iS	Sb	21 40 21.9	+0.2
TKB	**Tkibuli**	1.22	335	P	Pg	21 40 04.4	-1.1
TKB				S	Sg	21 40 20.7	-0.6
TKB	**Tkibuli**	1.22	335	PG	Pg	21 40 04.4	-1.1
TKB				S	Sg	21 40 20.7	-0.6
SENK	**Senkaya-Erzuru**	1.23	236	PN	Pg	21 40 05.3	-0.5
SENK				SN	Sb	21 40 23.2	+0.7
TASB	**TASBURUN-IGDIR**	1.33	162	PN	Pn	21 40 07.2	-0.5
GUDG	**Gudauri**	1.34	26	P	Pb	21 40 07.8	-0.4
GUDG				S	Sn	21 40 26.4	-0.1
GUDG	**Gudauri**	1.34	26	i Pg	Pb	21 40 08.0	-0.2
GUDG				eSg	Sn	21 40 26.6	+0.1
GUDG	**Gudauri**	1.34	26	⇓iPG	Pb	21 40 08.0	-0.2
GUDG				eS	Sn	21 40 26.6	+0.1
GNI	**Garni**	1.36	144	⇓iP	Pn	21 40 07.8	-0.3
GNI				⇓iS	Sn	21 40 26.6	-0.1
GNI	**Garni**	1.36	144	PN	Pn	21 40 07.9	-0.3
GNI	**Garni**	1.36	144	d iPG	Pn	21 40 07.7	-0.5
IGDI	**IGDIR**	1.41	168	i P	Pn	21 40 07.5	-1.3
IGDI				i S	Sb	21 40 27.4	-0.3
IGDI				IAML		21 40 28.0	
	comp=N,151nm,0.3s						
IGDI				IAML		21 40 28.0	
	comp=E,191nm,0.3s						
NRKZ	**NAREK**	1.45	149	⇓iP	Pn	21 40 09.1	-0.3
NRKZ				⇓iS	Sg	21 40 28.9	0.0
KOTA	**Agri, Merkez-K**	1.50	195	i P	Pg	21 40 11.0	+0.1
DBAD	**Bademkaya**	1.53	262	i P	Pn	21 40 09.3	-1.2
DBAD				i S	Sn	21 40 30.0	-0.9
DBAD				IAML		21 40 30.0	
	comp=N,158nm,0.6s						
DBAD				IAML		21 40 34.0	
	comp=E,211nm,0.3s						
DBOC	**Borcka**	1.53	274	i P	Pn	21 40 09.7	-0.7
ZEI	**Tsey**	1.54	6	ePg	Pn	21 40 10.6	-0.1
ZEI				eSg	Sg	21 40 32.8	+1.0
ZEI	**Tsey**	1.54	6	ePN	Pn	21 40 10.6	-0.1
ZEI				eS	Sg	21 40 32.8	+1.0
PNSH	**Pansheti**	1.54	26	P	Pn	21 40 10.4	-0.4
PNSH				S	Sg	21 40 31.3	-0.6
PNSH	**Pansheti**	1.54	26	PN	Pn	21 40 10.4	-0.4
LACR	**Lac**	1.64	16	ePg	Pn	21 40 11.9	-0.1
LACR				eSg	Sg	21 40 34.4	-0.4
LACR	**Lac**	1.64	16	ePN	Pn	21 40 11.9	-0.1
DIGR	**Digorskoe uzhe**	1.65	357	ePg	Pb	21 40 12.9	-0.4
DIGR				eSg	Sg	21 40 35.3	+0.1
DIGR	**Digorskoe uzhe**	1.65	357	ePN	Pb	21 40 12.9	-0.4
AGRB	**Hanur-Agry**	1.76	198	PN	Pn	21 40 13.9	+0.2
DDFL	**Dedoflistskaro**	1.84	83	P	Pg	21 40 16.9	-0.5
DDFL				S	Sg	21 40 40.7	-0.5
DDFL	**Dedoflistskaro**	1.84	83	i P	Pg	21 40 16.8	-0.6
DDFL				i S	Sg	21 40 45.6	+4.3
DDFL	**Dedoflistskaro**	1.84	83	PN	Pg	21 40 16.9	-0.5
KORR	**Kora**	1.85	9	ePg	Pg	21 40 17.6	-0.2
KORR				eSg	Sg	21 40 43.4	+1.6
KORR	**Kora**	1.85	9	ePN	Pg	21 40 17.6	-0.2
KORR				eS	Sg	21 40 43.4	+1.6
KOPR	**Koprukoy-ERZUR**	1.88	229	PN	Pn	21 40 15.7	+0.3
CHVG	**Ch'k'valeri**	1.89	321	P	Pb	21 40 16.6	-0.8
CHVG				S	Sb	21 40 40.8	-0.6
CHVG	**Ch'k'valeri**	1.89	321	PN	Pb	21 40 16.6	-0.8
VLKR	**Vladikavkaz**	1.94	22	ePg	Pg	21 40 18.7	-0.6
VLKR				eSg	Sg	21 40 45.5	+1.0
VLKR	**Vladikavkaz**	1.94	22	ePN	Pg	21 40 18.7	-0.6
ARNR	**Ardon**	1.98	13	i Pg	Pg	21 40 20.0	-0.1
ARNR				eSg	Sg	21 40 46.6	+0.9
ARNR	**Ardon**	1.98	13	⇓iPN	Pg	21 40 20.0	-0.1
LGD	**Lagodekhi**	2.00	72	P	Pn	21 40 17.5	+0.7
LGD				S	Sg	21 40 45.9	-0.6
LGD	**Lagodekhi**	2.00	72	PN	Pn	21 40 17.5	+0.7
KMGR	**Komgaron**	2.00	25	i Pg	Pg	21 40 19.6	-1.0
KMGR				eSg	Sg	21 40 48.2	+1.6
KMGR	**Komgaron**	2.00	25	⇑iPN	Pg	21 40 19.6	-1.0
KMGR				eS	Sg	21 40 48.2	+1.6
LSNR	**Lesken**	2.03	3	ePg	Pg	21 40 20.1	-1.1
LSNR				eSg	Sg	21 40 47.9	+0.6
LSNR	**Lesken**	2.03	3	ePN	Pg	21 40 20.0	-1.1
LSNR				eS	Sg	21 40 47.9	+0.6
GANJ	**Ganja**	2.08	106	PN	Pn	21 40 18.7	+0.7
CLDR	**Caldiran**	2.11	175	PN	Pn	21 40 18.9	+0.3
STDR	**Stavd-Durt**	2.13	7	ePg	Pb	21 40 21.7	+0.2
STDR				eSg	Sg	21 40 51.7	+0.9
STDR	**Stavd-Durt**	2.13	7	ePN	Pb	21 40 21.7	+0.2
STDR				eS	Sg	21 40 51.7	+0.9
NCK	**Nalchik**	2.24	358	ePg	Pb	21 40 23.8	+0.5
NCK				eSg	Sg	21 40 55.1	+0.8
NCK	**Nalchik**	2.24	358	ePN	Pb	21 40 23.8	+0.5
NCK				eS	Sg	21 40 55.1	+0.8
MLAZ	**Malazgirt-MUS**	2.28	203	PN	Pn	21 40 20.9	0.0
BTLR	**Botlikh**	2.35	52	ePg	Pb	21 40 25.1	-0.2
BTLR				eSg	Sb	21 40 55.6	+0.8
BTLR	**Botlikh**	2.35	52	ePN	Pb	21 40 25.1	-0.2
BTLR				eS	Sb	21 40 55.6	+0.8
DVE	**Vedeno**	2.48	46	ePn	Pb	21 40 26.9	-0.6
DVE				eSn	Sg	21 41 00.3	-1.8
DVE	**Vedeno**	2.48	46	ePN	Pb	21 40 26.9	-0.6
DVE				eS	Sg	21 41 00.3	-1.8
NAX	**Nakhchivan**	2.49	146	PN	Pb	21 40 26.6	-1.0
KBZ	**Khabaz**	2.54	347	i PN	Pb	21 40 26.5	-1.9
KBTC	**Kuba-Taba**	2.57	355	ePn	Pb	21 40 29.9	+0.9
KBTC				eSn	Sg	21 41 02.6	-2.2
KBTC	**Kuba-Taba**	2.57	355	ePN	Pb	21 40 29.9	+0.9
KBTC				eS	Sg	21 41 02.6	-2.2
MNGR	**Mingechevir, A**	2.61	99	PN	Pn	21 40 25.3	+0.1
SEKA	**Sheki**	2.64	90	PN	Pn	21 40 27.2	+1.4
KIV	**Kislovodsk**	2.80	345	PN	Pn	21 40 29.7	+1.7
KIV	**Kislovodsk**	2.80	345	c ePN	Pn	21 40 29.0	+1.0
KIV				i		21 40 37.5	
KIV				eS	Sb	21 41 06.3	-1.3
KIV				e		21 41 11.8	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KIV				pmax	pmax		
	comp=Z,15nm,0.9s						
KIV				smax	smax		
	comp=E,11nm,0.7s						
KIV				smax	smax		
	comp=E,38nm,0.6s						
DBC	**Dubki**	2.93	52	ePn	Pb	21 40 35.2	+0.2
DBC				eSn	Sg	21 41 14.4	-1.8
DBC	**Dubki**	2.93	52	ePN	Pb	21 40 35.2	+0.2
DBC				eS	Sg	21 41 14.4	-1.8
AKT	**Akhty**	3.05	84	ePn	Pn	21 40 32.9	+1.6
AKT				eSn	Sb	21 41 14.2	-0.6
AKT	**Akhty**	3.05	84	ePN	Pn	21 40 32.8	+1.5
AKT				e		21 40 40.1	
AKT				e		21 40 44.8	
AKT				eS	Sb	21 41 14.0	-0.7
AKT				e		21 41 23.4	
AKT				pmax	pmax		
	comp=Z,20nm,0.4s						
AKT				smax	smax		
	comp=N,55nm,0.4s						
AKT				smax	smax		
	comp=E,69nm,0.4s						
AKT				smax	smax		
	comp=E,58nm,0.4s						
MAK	**Makhachkala**	3.31	58	ePN	Pn	21 40 36.0	+1.2
MAK				e		21 40 46.6	
MAK				e		21 41 18.4	
MAK				e		21 41 24.2	
MAK				e		21 41 32.6	
MAK				pmax	pmax		
	comp=Z,63nm,1.3s						
MAK				smax	smax		
	comp=N,175nm,0.6s						
MAK				smax	smax		
	comp=N,152nm,0.3s						
MAK				MLR	MLR		
	comp=Z,606nm,3.0s						
SOC	**Sochi**	3.75	310	ePN	Pn	21 40 42.8	+1.9
SOC				e		21 40 50.7	
SOC				e		21 41 28.3	
SOC				eSS	Sb	21 41 35.3	+0.4
SOC				pmax	pmax		
	comp=Z,23nm,0.8s						
SOC				smax	smax		
	comp=N,82nm,1.4s						
SOC				smax	smax		
	comp=E,67nm,1.2s						
GUZR	**Guzeripl'**	3.81	317	i PN	Pn	21 40 42.9	+1.2
GOF	**Gofitskoye**	3.83	353	⇑ePN	Pb	21 40 51.7	+1.3
GOF				eS	Sg	21 41 46.8	+1.5
GOF				pmax	pmax		
	comp=Z,14nm,0.8s						
GOF				smax	smax		
	comp=E,20nm,0.6s						
GOF				smax	smax		
	comp=N,38nm,0.8s						
ANN	**Anapa**	5.80	310	eP	Pn	21 41 09.8	+0.8
ANN				pmax	pmax		
	comp=Z,71nm,1.2s						
ARU	**Arti**	18.00	27	i P	P	21 43 55.3	+1.5
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRVK	**Borovoye**	21.46	48	i P	P	21 44 32.7	+1.3
KURK	**Kurchatov**	25.84	57	i P	P	21 45 13.4	-1.1
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*IDC **08** 21:47:22.9±1.4, 1°.96N×126°.41E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.5/38, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=109.0km s-min=19.9km az=71.0*
*NEIC **08** 21:47:26.3±0.7, 2°.0N±0°.1×126°.6E±0°.1, h25^{km}±4^{km}, mb4.2/8, Error ellipse: s-maj=25.9km s-min=8.6km az=45.0*
ISC 08 21:47:28.8±0.8**, 1°.9N**±0°.1×**126°.5E**±0°.1**, h47**^{km}**, n18, σ0^{s}.76**/18**, mb4.0**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.45	143	Pn	Pn	21 47 51.9	-0.7
TOLI2	**Tolitoli**	5.78	262	Pn	Pn	21 48 52.5	+0.4
MYLDM	**Lahad Datu**	8.61	292	Pn	Pn	21 49 29.4	-1.5
FITZ	**Fitzroy Crossi**	19.93	182	P	Pn	21 51 58.3	-0.6
	0.1nm,0.3s,baz=356,slow=13,SNR=1.5						
FITZ	**Fitzroy Crossi**	19.93	182	P	P	21 51 57.1	+0.2
FITZ				IAmb	IAmb	21 52 05.5	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	22.92	161	P	P	21 52 29.0	-0.1
WB0				IAmb	IAmb	21 52 45.7	
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	23.07	161	P	P	21 52 29.8	-0.7
	comp=Z,0.9nm,0.4s,baz=338,slow=11,SNR=10						
WRA	**Warramunga Arr**	23.07	161	P	P	21 52 28.7	-1.8
WB2	**Warramunga Arr**	23.07	161	P	P	21 52 30.3	-0.3
WR0	**Warramunga Arr**	23.15	160	P	P	21 52 31.2	-0.1
WR0				IAmb	IAmb	21 52 33.2	
	comp=Z,12nm,1.4s						
ASAR	**Alice Springs**	26.45	165	P	P	21 53 02.2	+0.6
	comp=Z,0.8nm,0.5s,baz=339,slow=7.7,SNR=6.3						
ARMA	**Armidale**	40.12	145	P	P	21 55 00.7	+0.3
ARMA				IAmb	IAmb	21 55 03.4	
	comp=Z,5.8nm,1.0s						
SONM	**Songino Array**	48.91	342	P	P	21 56 11.0	+0.7
	comp=Z,0.3nm,0.5s,baz=166,slow=8.1,SNR=2.1						
MK31	**Makanchi Array**	58.89	326	P	P	21 57 23.2	+0.1
MKAR	**Makanchi Array**	58.89	326	P	P	21 57 23.0	-0.1
	comp=Z,0.6nm,0.4s,baz=119,slow=8.1,SNR=14						
PLWZ	**Palliser**	61.83	140	P	P	21 57 43.9	+0.7
ABKAR	**Akbulak array**	73.38	321	P	P	21 58 56.0	+0.1
ABKAR	**Akbulak array**	73.38	321	P	P	21 58 56.2	+0.2
ABKAR				IAmb	IAmb	21 58 56.5	
	comp=Z,1.9nm,1.4s						

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*DDA **08** 21:51:44.1, 40°.24N×35°.62E, h7^{km}±1^{km}, ML1.9*
*ISK **08** 21:51:44.0, 40°.39N×35°.62E, h4^{km}, ML2.5/9*
ISC 08 21:51:44.4±1.2**, 40°.28N**±0°.04×**35°.63E**±0°.03**, h6**^{km}±12^{km}**, n18, σ0^{s}.72**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKRK	**Yozgat, Cekere**	0.23	206	i P	Pg	21 51 48.9	0.0
CKRK				i S	Sg	21 51 51.9	0.0
CKRK				IAML		21 51 53.0	
	comp=E,160nm,0.3s						
CKRK				IAML		21 51 53.0	
	comp=N,287nm,0.2s						
COAL	**Corum-Alaca**	0.49	268	i P	Pg	21 51 53.8	-0.1
COAL				i S	Sg	21 52 01.0	+0.7
COAL				IAML		21 52 02.0	
	comp=N,50nm,0.2s						
COAL				IAML		21 52 03.0	
	comp=E,102nm,0.4s						
TOKA	**Tokat**	0.65	86	i P	Pb	21 51 57.7	-0.5
TOKA				i S	Sb	21 52 06.5	-1.0
TOKA				IAML		21 52 12.0	
	comp=N,78nm,0.3s						
TOKT	**Tokat**	0.70	86	PG	Pg	21 51 58.2	+0.3
TOKT				SG	Sb	21 52 09.1	+0.1
CORM	**Corum**	0.77	263	PG	Pg	21 51 58.9	-0.3
CORM				SG	Sb	21 52 11.4	+0.4
SIRC	**Yozgat**	1.01	202	i P	Pg	21 52 02.8	-1.0
SIRC				i S	Sg	21 52 17.2	+0.3
SIRC				IAML		21 52 18.0	
	comp=E,28nm,0.3s						
SIRC				IAML		21 52 18.0	
	comp=N,40nm,0.3s						
SVSK	**Karacayir**	1.11	108	PN	Pn	21 52 06.8	+0.4
CDAG	**Cicekdag**	1.17	236	i P	Pg	21 52 06.1	-0.6
CDAG				i S	Sb	21 52 23.1	+0.7
CDAG				IAML		21 52 25.0	
	comp=E,33nm,0.4s						
CDAG				IAML		21 52 26.0	
	comp=N,25nm,0.3s						
DELI	**KIRIKKALE**	1.34	258	i P	Pb	21 52 09.7	-0.3
DELI				IAML		21 52 27.0	
	comp=E,9.0nm,0.3s						
DELI				i S	Sb	21 52 27.3	-0.1
DELI				IAML		21 52 29.0	
	comp=N,16nm,0.2s						
BNN	**Bunyan**	1.43	173	PN	Pg	21 52 13.1	+1.2
CANT	**Cankiri**	1.57	283	PN	Pb	21 52 13.2	-0.6
AVNS	**Nevsehir-Avano**	1.59	203	i P	Pb	21 52 14.2	0.0
AVNS				i S	Sg	21 52 36.0	+0.6
AVNS				IAML		21 52 39.0	
	comp=N,38nm,0.3s						
AVNS				IAML		21 52 42.0	
	comp=E,73nm,0.4s						
BRTR	**Keskin Array B**	1.62	251	PN	Pb	21 52 14.7	-0.1
BRTR				SN	Sg	21 52 36.9	+0.3
KIRS	**Kırehir-Merke**	1.75	230	i P	Pn	21 52 16.0	+0.7
KIRS				i S	Sb	21 52 39.2	+0.1
KIRS				IAML		21 52 41.0	
	comp=E,25nm,0.4s						
KIRS				IAML		21 52 41.0	
	comp=N,29nm,0.6s						
SERE	**Sereflikochisa**	2.08	231	PN	Pb	21 52 21.8	-0.7
AFSR	**Afar-Bala (An**	2.14	248	PN	Pb	21 52 22.4	-1.1
GULA	**Gulagac**	2.21	210	PN	Pb	21 52 24.1	-0.7
CMRD	**Camardi-Nigde**	2.66	191	PN	Pb	21 52 30.6	-1.8

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*IDC **08** 22:10:52.1±1.4, 7°.10S×128°.02E, h0^{km}, mb3.7/3, mb1 4.0/7, mb1mx3.6/50, mbtmp3.9/7, ML3.8/4, MS3.2/1, Ms1 3.2/1, ms1mx2.5/38, Error ellipse: s-maj=57.3km s-min=21.7km az=63.0*
*NOU **08** 22:10:54.2, 6°.70S×127°.29E, h141^{km}, mb4.0, Banda Sea*
*NEIC **08** 22:11:07.9±1.4, 7°.74S±0°.10×127°.70E±0°.10, h140^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=15.0km s-min=12.9km az=142.0*
ISC 08 22:11:08.3±0.7**, 7°.90S**±0°.07×**127°.74E**±0°.10**, h150**^{km}**, n22, σ2^{s}.38**/24**, mb3.8**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	3.90	241	Pn	Pn	22 12 07.3	-0.1
FAKI	**Fak Fak**	6.68	42	Pn	Pn	22 12 42.3	-1.8
KAPI	**Kappang**	8.44	289	Pn	Pn	22 12 56.9	-11
	3.3nm,0.3s,baz=178,slow=14,SNR=2.2						
FITZ	**Fitzroy Crossi**	10.35	191	Pn	Pn	22 13 32.9	0.0
	0.5nm,0.3s,baz=358,slow=7.6,SNR=12						
FITZ				Sn	Sn	22 15 23.7	-3.7
	0.5nm,0.3s,baz=140,slow=16,SNR=1.2						
FITZ	**Fitzroy Crossi**	10.35	191		Pn	22 13 33.5	+0.6
WB0	**Warramunga Arr**	13.45	152	Pn	Pn	22 14 14.6	+1.4
WRA	**Warramunga Arr**	13.57	153	Pn	Pn	22 14 14.7	-0.2
	0.2nm,0.3s,baz=329,slow=13,SNR=2.7						
WRA				Sn	Sn	22 16 41.7	-3.6
	0.6nm,0.3s,baz=329,slow=24,SNR=6.8						
WB2	**Warramunga Arr**	13.58	153	Pn	Pn	22 14 16.4	+1.5
WR0	**Warramunga Arr**	13.68	152	Pn	Pn	22 14 17.2	+0.9
COEN	**Coen**	16.30	113	P	P	22 14 50.4	+1.4
AS31	**Alice Springs**	16.76	160	Pn	Pn	22 14 58.5	+4.2
ASAR	**Alice Springs**	16.76	160	P	Pn	22 14 58.4	+4.1
	0.5nm,0.3s,baz=337,slow=11,SNR=45						
ASAR				S	S	22 17 57.7	-3.1
	0.1nm,0.3s,baz=324,slow=12,SNR=1.5						
ASAR				LR	LR	22 23 07.3	
	comp=Z,70nm,18.6s,baz=330,slow=42						
BBOO	**Buckleboo**	25.96	164	P	P	22 16 29.1	+2.1
STKA	**Stephens Creek**	27.12	153	P	P	22 16 41.5	+4.2
	1.0nm,0.4s,baz=325,slow=12,SNR=4.6						
STKA	**Stephens Creek**	27.12	153	P	P	22 16 41.0	+3.6
JOW	**Kunigami**	34.52	1	P	P	22 17 41.9	-0.5
JOW				IAmb	IAmb	22 17 44.6	
	comp=Z,2.6nm,0.5s						
MKAR	**Makanchi Array**	67.77	328	P	P	22 21 48.6	-1.3
	comp=Z,0.1nm,0.3s,baz=123,slow=7.2,SNR=3.6						
KURBB	**Kurchatov Arra**	72.12	330	P	P	22 22 15.2	-1.0
	comp=Z,0.3nm,0.5s,baz=112,slow=6.1,SNR=2.4						
KK31	**Karatay Array**	72.55	320	P	P	22 22 19.0	0.0
KK31				IAmb	IAmb	22 23 33.8	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	72.55	320	P	P	22 22 18.9	-0.2
KKAR	**Karatay Array**	72.55	320	P	P	22 22 19.1	0.0
KKAR				IAmb	IAmb	22 23 33.8	
	comp=Z,1.7nm,0.8s						
MAW	**Mawson**	73.31	201	P	P	22 22 22.8	-0.2
MAW				IAmb	IAmb	22 22 44.9	
	comp=Z,20nm,2.0s						

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*AUST **08** 22:19:59.5±3.0, 30°.39S×138°.42E, h0^{km}, Error ellipse: s-maj=42.2km s-min=11.1km az=5.0*
*IDC **08** 22:20:01.7±2.5, 29°.77S×139°.10E, h0^{km}, mb1 2.9/3, mb1mx2.9/29, mbtmp2.7/3, ML2.6/3, Error ellipse: s-maj=106.9km s-min=15.7km az=49.0*
ISC 08 22:20:00.4±0.9**, 30°.49S**±0°.08×**138°.24E**±0°.06**, h15**^{km}±6^{km}**, n8, σ1^{s}.33**/13**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	0.04	331	P	Pg	22 20 03.1	-0.1
	baz=0.2						
LCRK				S	Sg	22 20 05.3	+0.4
	baz=0.2						
BBOO	**Buckleboo**	2.97	218	P	Pb	22 20 51.2	-1.8
	baz=3.1,SNR=7.2						
HTT	**Hallett**	2.99	169	P	Pn	22 20 49.0	+1.6
	baz=3.1						
STKA	**Stephens Creek**	3.19	117	P	Pn	22 20 50.0	0.0
	baz=3.1,SNR=7.7						
STKA				S	Sn	22 21 28.4	+0.6
	baz=3.1						
STKA	**Stephens Creek**	3.19	117	Pn	Pn	22 20 50.0	0.0
	0.3nm,0.3s,baz=313,slow=15,SNR=4.0						
STKA				Pg	Pb	22 20 57.1	+0.3
	1.6nm,0.3s,baz=296,slow=15,SNR=9.7						
STKA				Sn	Sn	22 21 27.3	-0.5
	2.2nm,0.3s,baz=259,slow=15,SNR=7.6						
STKA				Lg	Lg	22 21 37.0	
	1.7nm,0.3s,baz=8.3,slow=21,SNR=3.4						
MULG	**Mulgathing**	3.62	272	P	Pn	22 20 58.6	+2.7
	baz=3.8						
ASAR	**Alice Springs**	7.81	329	Pn	Pn	22 21 54.1	+0.5
	0.1nm,0.3s,baz=145,slow=14,SNR=0.9						
ASAR				Sn	Sn	22 23 22.1	+0.3
	0.1nm,0.3s,baz=153,slow=22,SNR=4.1						
WRA	**Warramunga Arr**	11.07	341	Pn	Pn	22 22 37.0	-1.3
	0.1nm,0.3s,baz=154,slow=12,SNR=1.4						

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*NEIC **08** 22:46:12.3±1.6, 41°.28N±0°.04×117°.17W±0°.07, h0^{km}±2^{km}, ML2.6/74, Error ellipse: s-maj=8.5km s-min=6.7km az=105.0*
*IDC **08** 22:46:12.1±1.0, 41°.26N×117°.12W, h0^{km}, mb2.7/1, mb1 2.9/3, mb1mx2.9/57, mbtmp2.6/3, ML2.2/2, Error ellipse: s-maj=10.6km s-min=6.3km az=176.0*
ISC 08 22:46:11.8±1.0**, 41°.25N**±0°.04×**117°.16W**±0°.04**, h0**^{km}**, n44, σ0^{s}.97**/44**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELK	**Elko**	1.54	109	Pg	Pn	22 46 40.1	-0.7
	2.4nm,0.3s,baz=290,slow=11,SNR=12						
ELK				Lg	Lg	22 46 59.8	

	6.0nm,0.3s,baz=34,slow=21,SNR=8.9						
ELK	**Elko**	**1.54**	**109**	Pn	**Pn**	**22 46 39.9**	**-0.8**
WVOR	**Wild Horse Val**	**1.62**	**317**	Pn	**Pn**	**22 46 41.4**	**-0.4**
PAHR	**Pah Rah Range**	**2.29**	**228**	Pn	**Pn**	**22 46 49.9**	**-1.1**
MFID	**Camas Ranch**	**2.38**	**24**		**Pn**	**22 46 52.4**	**+0.2**
MFID				IAML		22 47 32.9	
	22nm,1.2s						
MFID				IAML		22 47 35.1	
	23nm,0.5s						
MOD	**Modoc Plateau**	**2.45**	**286**	Pn	**Pn**	**22 46 52.2**	**-0.9**
MOD				IAML		22 47 38.5	
	comp=E,29nm,0.8s						
BEKR	**Beckworth**	**2.80**	**241**	Pn	**Pn**	**22 46 58.4**	**+0.3**
RYN	**Ryan**	**2.82**	**202**	Pn	**Pn**	**22 46 58.8**	**+0.5**
RYN				IAML		22 47 49.8	
	comp=N,18nm,0.9s						
RYN				IAML		22 48 21.7	
	comp=E,17nm,4.5s						
PNTR	**Pine Nut**	**2.86**	**222**	Pn	**Pn**	**22 46 59.8**	**+1.0**
PNTR				IAML		22 47 50.3	
	comp=E,27nm,1.0s						
PNTR				IAML		22 47 52.6	
	comp=N,18nm,1.7s						
NV11	**Mina Array Sit**	**2.92**	**196**	Pn	**Pn**	**22 47 00.3**	**+0.7**
NV11				IAML		22 47 49.1	
	comp=E,13nm,2.6s						
NVAR	**Mina Array Bea**	**2.95**	**198**	Pn	**Pn**	**22 46 59.5**	**-0.6**
	comp=E,0.3nm,0.3s,baz=18,slow=12,SNR=4.1						
NVAR				Pg	**Pg**	**22 47 07.4**	**-1.0**
	comp=E,1.6nm,0.3s,baz=307,slow=5.5,SNR=11						
NVAR				Lg	Lg	22 47 44.6	
	comp=E,0.6nm,0.3s,baz=121,slow=39,SNR=1.1						
NVAR	**Mina Array Bea**	**2.95**	**198**	Pn	**Pn**	**22 47 00.2**	**0.0**
HLID	**Hailey**	**3.08**	**40**		**Pn**	**22 47 02.1**	**+0.2**
BGU	**Big Grassy Mou**	**3.14**	**95**		**Pn**	**22 47 03.3**	**+0.6**
BGU				IAML		22 48 12.7	
	comp=E,11nm,4.1s						
K05A	**Summer Lake**	**3.15**	**299**		**Pn**	**22 47 03.8**	**+0.9**
K05A				IAML		22 48 02.8	
	comp=N,23nm,4.8s						
LHV	**Little Huntoon**	**3.17**	**200**	Pn	**Pn**	**22 47 03.0**	**+0.1**
LHV				IAML		22 48 09.0	
	comp=N,22nm,0.9s						
TPH	**Tonopah**	**3.17**	**181**	Pn	**Pn**	**22 47 04.3**	**+1.2**
TPH	**Tonopah**	**3.17**	**181**	IAML		22 48 07.5	
	comp=N,11nm,0.8s						
TPH				IAML		22 48 07.8	
	comp=E,10nm,3.4s						
RUBR	**Rubicon Trail**	**3.18**	**227**	Pn	**Pn**	**22 47 03.8**	**+0.5**
RUBR				IAML		22 48 16.1	
	comp=N,13nm,4.0s						
RUBR				IAML		22 48 43.0	
	comp=E,21nm,4.4s						
WAKR	**Walker**	**3.25**	**213**		**Pn**	**22 47 04.3**	**0.0**
WAKR				IAML		22 48 02.2	
	comp=E,11nm,1.4s						
I07A	**Izee**	**3.32**	**329**		**Pn**	**22 47 04.2**	**-0.9**
I07A				IAML		22 48 12.8	
	comp=N,10nm,2.1s						
I07A				IAML		22 48 22.7	
	comp=E,14nm,4.3s						
HVU	**Hansel Valley**	**3.33**	**79**		**Pn**	**22 47 05.6**	**+0.2**
DUG	**Dugway, Tooele**	**3.47**	**106**		**Pn**	**22 47 08.3**	**+1.2**
DUG				IAML		22 48 03.5	
	comp=E,12nm,4.7s						
DUG				IAML		22 48 43.6	
	comp=E,10nm,4.9s						
SPUT	**South Promonto**	**3.55**	**88**		**Pn**	**22 47 09.3**	**+1.0**
SPUT				IAML		22 48 15.1	
	comp=N,8.0nm,0.7s						
SPUT				IAML		22 48 26.3	
	comp=E,13nm,4.0s						
BMO	**Blue Mountains**	**3.60**	**358**		**Pn**	**22 47 09.8**	**+0.8**
BMO				IAML		22 47 43.4	
	comp=E,9.1nm,4.8s						
BMO				IAML		22 49 30.0	
	comp=E,8.6nm,4.9s						
PSUT	**Pine Spring**	**3.72**	**136**	Pn	**Pn**	**22 47 11.6**	**+0.9**
PSUT				IAML		22 48 12.7	
	comp=N,11nm,0.8s						
AFDM	**Forest Hills D**	**3.72**	**233**	Pn	**Pn**	**22 47 11.0**	**+0.5**
AFDM				IAML		22 48 52.2	
	comp=E,7.8nm,4.5s						
ORV	**Oroville**	**3.72**	**244**		**Pn**	**22 47 10.4**	**-0.1**
ORV				IAML		22 47 44.5	
	comp=N,6.9nm,4.8s						
ORV				IAML		22 48 28.4	
	comp=E,6.8nm,5.0s						
PINE	**Pine Mountain**	**3.78**	**314**		**Pn**	**22 47 12.9**	**+1.4**
OMMB	**Old Mammoth Mi**	**3.90**	**202**	Pn	**Pn**	**22 47 14.2**	**+0.9**
OMMB				IAML		22 48 26.8	
	comp=E,8.3nm,5.0s						
MDPB	**Devils Postpil**	**3.91**	**203**	Pn	**Pn**	**22 47 14.0**	**+0.6**
MDPB				IAML		22 48 21.5	
	comp=E,6.6nm,3.8s						
CMB	**Columbia Colle**	**4.06**	**219**	Pn	**Pn**	**22 47 16.9**	**+1.6**
CMB				IAML		22 47 55.0	
	comp=N,6.8nm,4.5s						
BCYI	**Bear Canyon**	**4.12**	**41**		**Pn**	**22 47 16.8**	**+0.6**
WDC	**Whiskeytown Da**	**4.13**	**262**	Pn	**Pn**	**22 47 15.7**	**-0.5**
WDC				IAML		22 49 01.6	
	comp=N,8.5nm,4.8s						
PRN	**Pahroc Range**	**4.17**	**156**	Pn	**Pn**	**22 47 18.6**	**+1.8**
PRN				IAML		22 48 47.4	
	comp=N,9.2nm,1.0s						
PRN				IAML		22 49 30.6	
	comp=E,9.6nm,4.5s						
YBH	**Yreka Blue Hor**	**4.20**	**278**	Pn	**Pn**	**22 47 19.9**	**+2.7**
	comp=E,0.1nm,0.3s,baz=90,slow=11,SNR=1.9						
YBH				Lg	Lg	22 48 24.9	
	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=2.7						
YBH	**Yreka Blue Hor**	**4.20**	**278**		**Pn**	**22 47 16.2**	**-1.0**
YBH				IAML		22 48 21.9	
	comp=E,9.6nm,4.9s						
HWUT	**Hardware Ranch**	**4.22**	**83**		**Pn**	**22 47 16.6**	**-1.0**
HWUT				IAML		22 49 46.6	
	comp=E,9.8nm,4.4s						
MSU	**Marysvale**	**4.71**	**124**	Pn	**Pn**	**22 47 22.3**	**-2.0**
MCMT	**McKenzie Canyo**	**4.77**	**40**	Pn	**Pn**	**22 47 25.9**	**+0.7**
TMUT	**Trail Mountain**	**4.95**	**111**	Pn	**Pn**	**22 47 27.1**	**-0.6**
MTPU	**Mount Pierson**	**5.00**	**128**	Pn	**Pn**	**22 47 28.7**	**+0.2**
PDAR	**Pinedale Array**	**5.86**	**73**	Pg	**Pb**	**22 47 55.4**	**+0.3**
	baz=250,slow=16,SNR=1.9						
YKA	**Yellowknife Ar**	**21.33**	**3**	P	**P**	**22 51 00.1**	**0.0**
	comp=E,0.3nm,0.7s,baz=182,slow=11,SNR=5.9						

WEL 08 23:05:41.4,40°.5S±0°.6×**176°.0E**±0°.9,**h25**^{km}±1^{km},**M3.6**/22,**ML3.9**/22,**MLv3.6**/22,**Error ellipse: s-maj=0.0km s-min=0.0km az=106.1,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.02**	**133**	P	Pb	23 05 46.0	+0.3
PRWZ				S	Sb	23 05 49.4	+0.9
POWZ	**Post Office Ro**	**0.20**	**317**	P	Pb	23 05 47.5	+0.4
TIWZ	**Tintock**	**0.24**	**192**	P	Pb	23 05 48.3	+0.7
TIWZ				S	Sb	23 05 53.3	+1.5
BFZ	**Birch Farm**	**0.26**	**122**	P	Pb	23 05 48.2	+0.4
BFZ				S	Sb	23 05 53.4	+1.1
DVHZ	**Dannevirke**	**0.29**	**34**	P	Pb	23 05 48.1	-0.2
DVHZ				S	Sb	23 05 52.9	-0.1
MRZ	**Mangatainoka R**	**0.31**	**247**	P	Pb	23 05 49.0	+0.5
MRZ				S	Sb	23 05 54.6	+1.2
ANWZ	**Angora Road**	**0.41**	**79**	P	Pb	23 05 50.6	+0.6
ANWZ				S	Sn	23 05 58.5	0.0
CPWZ	**Castlepoint**	**0.41**	**153**	P	Pn	23 05 51.7	-0.1
CPWZ				S	Sn	23 06 00.3	+1.6
TSZ	**Takapari Road**	**0.48**	**1**	P	Pb	23 05 51.4	+0.1
HOWZ	**Holdsworth Sta**	**0.49**	**223**	P	Pb	23 05 52.1	+0.7
HOWZ				S	Sn	23 05 59.7	-0.9
TMWZ	**Te Maipa**	**0.57**	**185**	P	Pn	23 05 53.7	-0.3
PRHZ	**Porangahau**	**0.59**	**62**	P	Pb	23 05 53.6	+0.5
PRHZ				S	Sn	23 06 03.7	+0.7
OHWZ	**Ohakea**	**0.59**	**304**	P	Pn	23 05 54.4	+0.2
WPHZ	**Waipukurau**	**0.60**	**38**	P	Pn	23 05 54.0	-0.5
OGWZ	**Otaki Gorge**	**0.66**	**245**	P	Pn	23 05 54.9	-0.2
PNHZ	**Pukenui**	**0.66**	**17**	P	Pb	23 05 54.5	+0.3
MTW	**Mount Morrison**	**0.70**	**209**	P	Pn	23 05 55.4	-0.4
KIW	**Kapiti Island**	**0.85**	**248**	P	Pn	23 05 58.3	+0.4
PXZ	**Pawanui**	**0.86**	**54**	P	Pb	23 05 57.4	-0.3
CAW	**Cannon Point**	**0.88**	**230**	P	Pn	23 05 58.3	+0.1
TRWZ	**Traveller**	**0.88**	**193**	P	Pb	23 05 57.8	-0.2
PAWZ	**Paruwai Farm**	**0.93**	**205**	P	Pb	23 05 58.4	-0.4
KRHZ	**Kereru**	**0.95**	**20**	P	Pn	23 05 59.3	0.0
MSWZ	**Moikau Station**	**1.02**	**211**	P	Pn	23 05 59.5	-0.8
KAHZ	**Kahuranaki**	**1.03**	**44**	P	Pn	23 06 00.0	-0.3
BHHZ	**Black Hill Sta**	**1.05**	**5**	P	Pb	23 06 01.1	+0.1
WAZ	**Wanganui**	**1.08**	**316**	P	Pb	23 06 02.7	+1.3
MOVZ	**Moawhango**	**1.14**	**352**	P	Pb	23 06 02.6	0.0
PLWZ	**Palliser**	**1.15**	**207**	P	Pn	23 06 01.1	-0.9
WEL	**Wellington**	**1.16**	**230**	P	Pn	23 06 01.9	-0.2
KWHZ	**Kaweka Forest**	**1.17**	**18**	P	Pn	23 06 02.5	+0.2
BHW	**Baring Head**	**1.19**	**223**	P	Pn	23 06 02.0	-0.5
MTVZ	**Mangateitei**	**1.21**	**342**	P	Pb	23 06 04.2	+0.5
CKHZ	**Cape Kidnapper**	**1.23**	**45**	P	Pn	23 06 02.3	-0.8
MCHZ	**McNeill Hill**	**1.24**	**28**	P	Pn	23 06 03.2	+0.1
WNVZ	**Wahianoa**	**1.24**	**347**	P	Pb	23 06 04.4	+0.2
TRVZ	**Turoa**	**1.28**	**346**	P	Pb	23 06 05.1	+0.2
WHVZ	**Whangaehu Hut**	**1.29**	**347**	P	Pb	23 06 05.3	+0.2
TUVZ	**Tukino**	**1.29**	**350**	P	Pb	23 06 05.4	+0.3
FWVZ	**Far West T-bar**	**1.32**	**346**	P	Pb	23 06 05.7	+0.1
PKVZ	**Pokaka**	**1.33**	**339**	P	Pb	23 06 05.9	+0.1
NGZ	**Ngauruhoe**	**1.39**	**349**	P	Pb	23 06 06.8	0.0
OTVZ	**Oturere**	**1.39**	**351**	P	Pb	23 06 06.7	-0.2
ETVZ	**East Tongariro**	**1.42**	**352**	P	Pb	23 06 07.0	-0.2
BKZ	**Black Stump Fm**	**1.44**	**17**	P	Pn	23 06 05.8	-0.1
TCW	**Tory Channel**	**1.44**	**242**	P	Pn	23 06 05.6	-0.2
TMVZ	**Te Maari**	**1.44**	**352**	P	Pb	23 06 07.3	-0.2
WTVZ	**West Tongariro**	**1.45**	**349**	P	Pb	23 06 07.4	-0.4
KRVZ	**Karewarewa**	**1.47**	**350**	P	Pb	23 06 07.9	-0.1
ARHZ	**Aropaoanui**	**1.51**	**33**	P	Pn	23 06 06.7	-0.1
TWVZ	**Taurewa**	**1.52**	**345**	P	Pb	23 06 08.6	-0.4
RITZ	**Rihia Road**	**1.56**	**357**	P	Pb	23 06 10.3	+0.6
DUWZ	**D'Urville Isla**	**1.57**	**260**	P	Pn	23 06 07.8	+0.1
KATZ	**Kakaramea**	**1.58**	**353**	P	Pb	23 06 09.8	-0.2
NMHZ	**Naumai**	**1.58**	**25**	P	Pb	23 06 09.2	-0.9
LREZ	**Lake Rotokare**	**1.61**	**312**	P	Pb	23 06 10.7	+0.3
RATZ	**Rangitukua**	**1.68**	**355**	P	Pb	23 06 12.3	+0.7
VRZ	**Vera Road**	**1.69**	**327**	P	Pb	23 06 10.8	-0.9
MRHZ	**Matea Rd**	**1.74**	**12**	P	Pb	23 06 11.6	-1.1
TUWZ	**Tuamarina**	**1.76**	**239**	P	Pn	23 06 09.6	-0.8
CMWZ	**Cape Campbell**	**1.78**	**227**	P	Pb	23 06 14.2	+0.8
MTHZ	**Maungataniwha**	**1.82**	**22**	P	Pn	23 06 11.2	0.0
PREZ	**Palmer Road**	**1.83**	**310**	P	Pb	23 06 13.9	-0.3
WATZ	**Wairara**	**1.84**	**355**	P	Pn	23 06 12.5	+1.0
RAHZ	**Arahi**	**1.84**	**29**	P	Pn	23 06 11.2	-0.3
DREZ	**Durham Road**	**1.91**	**315**	P	Pb	23 06 15.4	-0.1
NEZ	**North Egmont**	**1.91**	**311**	P	Pb	23 06 15.0	-0.6
KHEZ	**Kahui Hut**	**1.94**	**309**	P	Pb	23 06 15.4	-0.7
BSWZ	**Blackbirch Sta**	**1.96**	**233**	P	Pn	23 06 12.3	-0.8
ALRZ	**Allen Road**	**2.00**	**9**	P	Pn	23 06 15.0	+1.4
KNZ	**Kokohu**	**2.02**	**42**	P	Pn	23 06 12.6	-1.2
PKE	**Pukeiti**	**2.02**	**311**	P	Pb	23 06 16.4	-1.1
NBEZ	**Newall Road No**	**2.05**	**308**	P	Pb	23 06 17.7	-0.2
MHGZ	**Mahia Peninsul**	**2.05**	**48**	P	Pn	23 06 13.0	-1.3
SNGZ	**Shannon Statio**	**2.06**	**32**	P	Pn	23 06 13.7	-0.7
NNZ	**Nelson**	**2.06**	**250**	P	Pn	23 06 14.4	0.0
RTZ	**Ruatahuna**	**2.08**	**23**	P	Pn	23 06 14.4	-0.4
HIZ	**Hauiti**	**2.20**	**337**	P	Pb	23 06 19.1	-1.3
PRGZ	**Paritu Road**	**2.20**	**43**	P	Pn	23 06 15.3	-1.0
TLZ	**Tolley Road**	**2.23**	**352**	P	Pb	23 06 21.3	+0.3
RIGZ	**Rimuhau**	**2.31**	**38**	P	Pn	23 06 16.5	-1.4
RAGZ	**Rawiri**	**2.34**	**29**	P	Pn	23 06 17.2	-1.1
TARZ	**Mount Tarawera**	**2.34**	**11**	P	Pn	23 06 18.7	+0.3
URZ	**Urewera**	**2.45**	**22**	P	Pn	23 06 18.6	-1.2
MWZ	**Matawai**	**2.52**	**29**	P	Pn	23 06 19.3	-1.5
KHZ	**Kahutara**	**2.61**	**223**	P	Pn	23 06 20.1	-1.8
QRZ	**Quartz Range**	**2.62**	**263**	P	Pn	23 06 21.8	-0.3
CNGZ	**Carnagh Statio**	**2.69**	**41**	P	Pn	23 06 22.0	-1.2
TWGZ	**Tauwhareparae**	**2.84**	**34**	P	Pn	23 06 24.3	-0.9
RUGZ	**Raukumara Rang**	**2.90**	**28**	P	Pn	23 06 24.8	-1.3
PKGZ	**Pakihiroa**	**3.12**	**33**	P	Pn	23 06 27.6	-1.5
HAZ	**Te Kaha**	**3.12**	**28**	P	Pn	23 06 27.8	-1.3
GVZ	**Greta Valley S**	**3.26**	**221**	P	Pn	23 06 28.8	-2.2
WMGZ	**Waiomatatini S**	**3.32**	**36**	P	Pn	23 06 29.7	-2.1
LTZ	**Lake Taylor**	**3.55**	**230**	P	Pn	23 06 33.3	-1.7
AKCZ	**Akaroa Harbour**	**4.02**	**213**	P	Pn	23 06 41.6	+0.2
TMZ	**Timaru**	**5.30**	**222**	P	Pn	23 06 57.1	-1.9
FOZ	**Fox Glacier**	**5.46**	**235**	P	Pn	23 07 01.0	-0.2

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*IDC **08** 23:12:13.2±2.0,24°.36N×141°.73E,h121^{km}±24^{km},mb3.4/6,mb1 3.6/9,mb1mx3.3/44,mbtmp3.8/9,Error ellipse: s-maj=40.9km s-min=17.5km az=85.0*

*NEIC **08** 23:12:14.7±2.2,24°.38N±0°.07×141°.7E±0°.2,h144^{km}±9^{km},mb4.5/6,Error ellipse: s-maj=20.1km s-min=10.3km az=100.0*

*JMA **08** 23:12:16.0±0.2,24°.59N×141°.49E,h141^{km},M4.7*

ISC 08 23:12:14.9±0.7,**24°.45N**±0°.07×**141°.7E**±0°.1,**h148**^{km},**n26,** σ**1^{s}.00**/29,**mb4.0**/9,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**2.21**	**11**	P	**Pn**	**23 12 52.3**	**-0.1**
JHH2				*e*S	**Sn**	**23 13 20.3**	**-1.1**
JCJ	**Chichijima**	**2.67**	**9**	P	**Pn**	**23 12 57.3**	**-0.7**
	22nm,0.3s,baz=288,slow=19,SNR=1.6						
JCJ				S	**Sn**	**23 13 29.8**	**-1.6**
	124nm,0.3s,baz=148,slow=23,SNR=20						
JCJ	**Chichijima**	**2.67**	**9**		**Pn**	**23 12 58.5**	**+0.5**
JCJ					**Sn**	**23 13 30.8**	**-0.6**
CBIJ	**Chichi jima**	**2.67**	**9**	P	**Pn**	**23 12 58.2**	**+0.2**
CBIJ				*e*S	**Sn**	**23 13 30.4**	**-0.9**
JMZ	**Minamidaito 2**	**9.60**	**280**	Pn	**Pn**	**23 14 28.4**	**-1.3**
JGF	**Kuroka**	**11.73**	**342**	Pn	**Pn**	**23 14 57.6**	**-0.1**
JAG	**Ashikaga**	**12.09**	**351**	P	Pn	23 14 57.9	-4.5
MJAR	**Matsushiro Arr**	**12.42**	**347**	P	**Pn**	**23 15 06.7**	**0.0**
	0.1nm,0.3s,baz=282,slow=36,SNR=1.7						
MJAR	**Matsushiro Arr**	**12.42**	**347**		**Pn**	**23 15 05.8**	**-0.8**
JHS	**Saijyo**	**12.89**	**327**	Pn	**Pn**	**23 15 13.6**	**+0.9**
JMM	**Marumori**	**13.40**	**357**	Pn	**Pn**	**23 15 17.7**	**-1.4**
KSRS	**Korea Array**	**17.52**	**321**	P	**Pn**	**23 16 10.8**	**+0.8**
	0.4nm,0.3s,baz=134,slow=12,SNR=4.0						
JEW	**Eniwo**	**18.34**	**359**	P	**P**	**23 16 19.6**	**+1.7**
USRK	**Ussuriysk Ar.**	**21.24**	**340**	P	**P**	**23 16 50.6**	**+1.4**
	2.6nm,0.8s,baz=157,slow=12,SNR=5.3						
USRK	**Ussuriysk Ar.**	**21.24**	**340**	P	**P**	**23 16 48.3**	**-0.8**
WRA	**Warramunga Arr**	**44.70**	**190**	P	**P**	**23 20 13.5**	**+0.1**
	1.7nm,0.5s,baz=7.4,slow=8.6,SNR=8.6						
FITZ	**Fitzroy Crossi**	**45.10**	**202**	P	**P**	**23 20 17.1**	**+0.6**
	6.1nm,1.1s,baz=27,slow=9.0,SNR=1.0						
FITZ	**Fitzroy Crossi**	**45.10**	**202**	P	**P**	**23 20 16.8**	**+0.4**
FITZ				IAmb	IAmb	23 20 23.9	
	comp=Z,9.4nm,1.1s						
ASAR	**Alice Springs**	**48.43**	**190**	P	**P**	**23 20 42.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=22,slow=11,SNR=7.4						
GSI	**Gunungsitoli**	**48.45**	**248**	P	**P**	**23 20 42.2**	**-0.6**
GSI				IAmb	IAmb	23 20 44.6	
	comp=Z,16nm,1.0s						
EIDS	**Eidsvold**	**50.35**	**169**	P	**P**	**23 20 57.0**	**+0.1**
EIDS				IAmb	IAmb	23 21 10.1	
	comp=Z,5.5nm,1.0s						
MKAR	**Makanchi Array**	**51.86**	**311**	P	**P**	**23 21 09.2**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=88,slow=9.4,SNR=9.9						
DZM	**Mont Dzumac**	**52.12**	**151**	P	**P**	**23 21 08.8**	**-1.4**
DZM				IAmb	IAmb	23 21 09.2	
	comp=Z,12nm,1.0s						
SKT	**Skwentna**	**57.81**	**31**	P	**P**	**23 21 51.7**	**+1.2**
ILAR	**Eielson Array**	**60.23**	**28**	P	**P**	**23 22 08.9**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=252,slow=4.6,SNR=2.9						
ILAR	**Eielson Array**	**60.23**	**28**	P	**P**	**23 22 07.8**	**+0.7**

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*IDC **08** 23:17:11.9±1.5,11°.48N×126°.11E,h0^{km},mb3.9/6,mb1 4.0/6,mb1mx3.7/43,mbtmp3.9/6,MS3.4/2,Ms1 3.5/2,ms1mx2.8/44,Error ellipse: s-maj=188.6km s-min=18.6km az=68.0*

*NEIC **08** 23:17:17.0±1.1,11°.46N±0°.08×126°.2E±0°.2,h35^{km}±2^{km},mb4.3/15,Error ellipse: s-maj=33.1km s-min=4.3km az=65.0*

ISC 08 23:17:16.9±0.7,**11°.51N**±0°.04×**126°.03E**±0°.07,**h33**^{km},**n36,** σ**1^{s}.66**/40,**mb4.2**/14,**1C-1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.59**	**279**	*e*P	**Pn**	**23 17 26.5**	**-2.5**
BESP				*e*S	**Sn**	**23 17 34.2**	**-3.2**
CNP	**Catarman**	**1.67**	**307**	*e*P	**Pn**	**23 17 43.0**	**-0.9**
CNP				*e*S	**Sn**	**23 18 04.9**	**+0.7**
GLSP	**General Luna,**	**1.71**	**177**	*e*P	**Pn**	**23 17 43.1**	**-1.3**
MSLP	**Maasin**	**1.79**	**220**	*e*P	**Pn**	**23 17 46.5**	**+1.1**
MSLP				*e*S	**Sb**	**23 18 12.8**	**+1.8**
LLP	**Lapu-Lapu**	**2.35**	**240**	*e*P	**Pn**	**23 17 55.2**	**+2.0**
LLP				*e*S	**Sb**	**23 18 29.0**	**+1.8**
BUTP	**Butuan**	**2.55**	**189**	*e*P	**Pb**	**23 17 58.2**	**-3.8**
PVCP	**Virac**	**2.77**	**319**	*e*P	**Pn**	**23 17 57.8**	**-1.2**
CGP	**Cagayan de Oro**	**3.31**	**204**⇓	*e*P	**Pb**	**23 18 11.6**	**-3.2**
CGP				*e*S	**Sn**	**23 18 42.2**	**-2.3**
BUKP	**Musuan**	**3.73**	**195**	*e*P	**Pn**	**23 18 13.8**	**+1.6**
BUKP				*e*S	**Sn**	**23 18 53.1**	**-1.9**
KCP	**Kidapawan**	**4.56**	**192**⇑	*e*P	**Pn**	**23 18 25.7**	**+2.0**
TPUB	**Ta-pu**	**12.81**	**337**	Pn	**Pn**	**23 20 18.1**	**+1.3**
SOEI	**Soe**	**21.19**	**185**	P	**P**	**23 22 00.5**	**+0.6**
JAGI	**Jajag, Banyuwa**	**23.10**	**211**	P	**P**	**23 22 20.5**	**+0.4**
MTN	**Manton Dam**	**24.71**	**168**	P	**P**	**23 22 34.8**	**-0.4**
KULM	**Kulim**	**25.85**	**258**	P	**P**	**23 22 47.4**	**+1.8**
KULM				IAmb	IAmb	23 23 02.0	
	comp=Z,3.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.04**	**288**	LR	LR	23 33 21.8	
	comp=Z,34nm,19.2s,baz=195,slow=36						
PSI	**Prapat**	**28.23**	**254**	LR	LR	23 36 19.8	
	comp=Z,153nm,18.3s,baz=93,slow=40						
FITZ	**Fitzroy Crossi**	**29.42**	**181**	P	**P**	**23 23 15.1**	**-2.3**
FITZ				IAmb	IAmb	23 23 29.9	
	comp=Z,4.5nm,1.0s						
WB0	**Warramunga Arr**	**32.15**	**165**	P	**P**	**23 23 39.8**	**-1.8**
WB0				IAmb	IAmb	23 23 42.1	
	comp=Z,7.6nm,1.1s						
WRA	**Warramunga Arr**	**32.30**	**165**	P	**P**	**23 23 41.4**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=344,slow=9.4,SNR=1.8						
WRA	**Warramunga Arr**	**32.30**	**165**	P	**P**	**23 23 42.0**	**-0.9**
WB2	**Warramunga Arr**	**32.30**	**165**	P	**P**	**23 23 41.6**	**-1.4**
WB2				IAmb	IAmb	23 23 54.9	
	comp=Z,5.7nm,1.1s						
WR0	**Warramunga Arr**	**32.37**	**165**	P	**P**	**23 23 42.3**	**-1.2**
WR0				IAmb	IAmb	23 23 57.3	
	comp=Z,2.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**32.98**	**8**	P	**P**	**23 23 49.1**	**+0.5**
PSAD1	**Pilbara Seismi**	**33.32**	**191**	P	**P**	**23 23 52.8**	**+1.0**
PSAD1				IAmb	IAmb	23 23 57.8	
	comp=Z,9.3nm,0.9s						
PSAB2	**Pilbara Seismi**	**33.41**	**190**	P	**P**	**23 23 52.7**	**0.0**
PSAB2				IAmb	IAmb	23 24 10.2	
	comp=Z,6.6nm,1.1s						
AS31	**Alice Springs**	**35.79**	**168**	P	**P**	**23 24 12.3**	**-1.0**
ASAR	**Alice Springs**	**35.79**	**168**	P	**P**	**23 24 12.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=351,slow=7.4,SNR=18						
ASAR				PcP	**PcP**	**23 26 41.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=334,slow=2.5,SNR=1.9						
SONM	**Songino Array**	**39.79**	**339**	P	**P**	**23 24 47.3**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=150,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**45.64**	**161**	P	**P**	**23 25 34.5**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=345,slow=5.3,SNR=4.9						
STKA	**Stephens Creek**	**45.64**	**161**	IAmb	IAmb	23 25 35.3	
	comp=Z,1.0nm,0.8s						
MK31	**Makanchi Array**	**50.91**	**322**	P	**P**	**23 26 16.2**	**+1.2**
MKAR	**Makanchi Array**	**50.91**	**322**	P	**P**	**23 26 15.6**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=116,slow=8.4,SNR=16						
MKAR	**Makanchi Array**	**50.91**	**322**	P	**P**	**23 26 15.8**	**+0.8**
KURK	**Kurchatov**	**54.93**	**325**	P	**P**	**23 26 45.3**	**+0.9**
KURK				IAmb	IAmb	23 26 56.5	
	comp=Z,4.7nm,1.1s						
FINES	**FINESS Array B**	**84.70**	**332**	P	**P**	**23 29 47.1**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=66,slow=3.5,SNR=8.1						

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*IDC **08** 23:36:27.2±4.7,30°.33N×141°.54E,h0^{km},mb3.7/3,mb1 3.9/4,mb1mx3.4/38,mbtmp3.6/4,ML3.0/1,Error ellipse: s-maj=189.5km s-min=26.6km az=73.0*

*JMA **08** 23:36:29.2±0.2,31°.03N×142°.75E,h73^{km},M3.7*

*NEIC **08** 23:36:30.4±1.7,30°.6N±0°.1×142°.0E±0°.1,h28^{km}±4^{km},mb4.4/12,Error ellipse: s-maj=17.0km s-min=14.8km az=88.0*

ISC 08 23:36:29.5±0.8,**30°.69N**±0°.08×**142°.0E**±0°.1,**h23**^{km},**n33,** σ**1^{s}.87**/34,**mb4.3**/9,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.02**	**323**	Pn	**Pn**	**23 37 18.1**	**+2.1**
JHU	**Hanno**	**5.61**	**337**	S	**Sn**	**23 38 55.2**	**-0.1**
JRY	**Ryogami san**	**5.89**	**335**	S	**Sn**	**23 39 03.3**	**+1.0**
JHO	**Hitachi**	**6.02**	**349**	S	**Sn**	**23 39 01.5**	**-3.7**
JGF	**Kuroka**	**6.24**	**323**	Pn	**Pn**	**23 38 02.4**	**+2.3**
MJAR	**Matsushiro Arr**	**6.62**	**333**	Pn	**Pn**	**23 38 07.2**	**+1.9**
	0.3nm,0.3s,baz=161,slow=12,SNR=8.9						
MJAR	**Matsushiro Arr**	**6.62**	**333**		**Pn**	**23 38 07.1**	**+1.7**
MAJO	**Matsushiro**	**6.62**	**333**	Pn	**Pn**	**23 38 08.0**	**+2.6**
JMM	**Marumori**	**7.22**	**353**	Pn	**Pn**	**23 38 13.8**	**+0.2**
JMM				Sn	**Sn**	**23 39 30.9**	**-4.0**
JSD	**Sado**	**7.94**	**338**	Pn	**Pn**	**23 38 23.1**	**-0.3**
NACB	**Ninganchiao**	**19.20**	**255**	P	**P**	**23 40 48.8**	**-3.0**
NACB				IAmb	IAmb	23 40 57.3	
	comp=Z,25nm,1.1s						
UNV	**Unalaska Valle**	**43.39**	**42**	P	**P**	**23 44 30.6**	**+0.7**
MK31	**Makanchi Array**	**48.10**	**307**	P	**P**	**23 45 06.4**	**-0.9**
MKAR	**Makanchi Array**	**48.10**	**307**	P	**P**	**23 45 08.3**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=89,slow=9.1,SNR=5.2						
MKAR	**Makanchi Array**	**48.10**	**307**	P	**P**	**23 45 07.8**	**+0.4**
MAKZ	**Makanchi**	**48.31**	**307**	P	**P**	**23 45 04.8**	**-4.2**
MAKZ				IAmb	IAmb	23 45 11.7	
	comp=Z,2.7nm,0.7s						
WB0	**Warramunga Arr**	**50.69**	**189**	P	**P**	**23 45 26.7**	**-0.6**
WB0				IAmb	IAmb	23 45 40.4	
	comp=Z,4.4nm,1.0s						
WB2	**Warramunga Arr**	**50.87**	**189**	P	**P**	**23 45 28.1**	**-0.5**
WB2				IAmb	IAmb	23 45 46.2	
	comp=Z,5.8nm,1.1s						
WRA	**Warramunga Arr**	**50.87**	**189**	P	**P**	**23 45 26.8**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=7.6,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	**50.87**	**189**	P	**P**	**23 45 30.0**	**+1.3**
ASAR	**Alice Springs**	**54.60**	**189**	P	**P**	**23 45 54.3**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=360,slow=5.1,SNR=4.9						
ASAR	**Alice Springs**	**54.60**	**189**	P	**P**	**23 45 55.0**	**-1.2**
BALM	**Baldy**	**56.82**	**34**	P	**P**	**23 46 14.2**	**+2.3**
BALM				IAmb	IAmb	23 46 19.8	
	comp=Z,3.1nm,0.9s						
ISLE	**Juniper Island**	**56.85**	**35**	P	**P**	**23 46 12.5**	**+0.3**
ISLE				IAmb	IAmb	23 46 23.8	
	comp=Z,20nm,1.2s						
AB01	**Akbulak array**	**62.48**	**313**	P	**P**	**23 46 52.1**	**+1.2**
AB31	**Akbulak array**	**62.48**	**313**	P	**P**	**23 46 52.3**	**+1.4**
AB31				IAmb	IAmb	23 46 56.3	
	comp=Z,1.6nm,1.1s						
ABKAR	**Akbulak array**	**62.48**	**313**		**P**	**23 46 52.3**	**+1.4**
ABKAR	**Akbulak array**	**62.48**	**313**	P	**P**	**23 46 51.9**	**+1.0**
AB03	**Akbulak array**	**62.48**	**313**	P	**P**	**23 46 51.7**	**+0.8**
AB04	**Akbulak array**	**62.48**	**313**	P	**P**	**23 46 51.6**	**+0.7**
AB08	**Akbulak array**	**62.49**	**313**	P	**P**	**23 46 51.5**	**+0.6**
AB09	**Akbulak array**	**62.49**	**313**	P	**P**	**23 46 52.1**	**+1.1**
LTY	**Liberty**	**72.75**	**45**	P	**P**	**23 47 56.8**	**+0.9**

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*IDC **08** 23:51:42.2±0.5,54°.21S×132°.88W,h0^{km},mb4.5/14,mb1 4.7/14,mb1mx4.6/31,mbtmp4.5/14,MS5.0/22,Ms1 5.0/22,ms1mx4.9/26,Error ellipse: s-maj=21.2km s-min=14.8km az=165.0*

*NEIC **08** 23:51:45.2±2.5,54°.52S±0°.10×132°.8W±0°.2,h10^{km}±1^{km},mb5.1/101,Ms_20 5.3/268,Mwb5.4/23,Mwc5.4(GCMT),Error ellipse: s-maj=17.1km s-min=15.4km az=32.0*

*NEIC **08** 23:51:45.7,54°.49S×132°.68W,h7^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.09; M$_{\theta\theta}$1.15; M$_{\phi\phi}$-1.24; M$_{r\theta}$-0.03; M$_{\theta\phi}$1.02; M$_{\phi r}$0.45; Fault plane solution: M$_0$1.63000×10^{17} NP1:φ$_s$205.37000°,δ84.17000°,λ-166.78000°. NP2:φ$_s$114.01000°,δ76.85000°,λ-5.99000°. Principal axes: T 1.5338, Plg5.0000°, Azm339.0000°; N 0.1801, Plg76.0000°, Azm229.0000°; P -1.7139, Plg13.0000°, Azm70.0000°;*

*BJI **08** 23:51:46.0±0.0,54°.40S×132°.70W,h30^{km},mB5.5/1,Ms5.5/4,Ms7 5.2/4*

*GCMT **08** 23:51:49.2±0.1,54°.36S±0°.01×132°.88W±0°.01,h12^{km},MW5.4/138,Moment Tensor Solution. s109,c185; s138,c248; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.01±.02; M$_{\theta\theta}$1.26±.03; M$_{\phi\phi}$-1.26±.02; M$_{r\theta}$-0.08±.05; M$_{\theta\phi}$1.15±.02; M$_{\phi r}$0.22±.05; Best double couple: M$_0$1.72100×10^{17} NP1:φ$_s$204.00000°,δ85.00000°,λ-175.00000°. NP2:φ$_s$114.00000°,δ85.00000°,λ-5.00000°. Principal axes: T 1.7060, Plg0.0000°, Azm159.0000°; N 0.0400, Plg82.0000°, Azm249.0000°; P -1.7370, Plg8.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 23:51:49,54°.33S×132°.85W,h15^{km},Moment Tensor*

Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$1.32; $M_{\phi\phi}$-1.38; $M_{r\theta}$0.05; $M_{\theta\phi}$1.25; $M_{\phi r}$0.24; Fault plane solution: $M_0$1.86000×10^{17} NP1:ϕ_s114.00000°, δ83.00000°,λ-1.00000°. NP2:ϕ_s204.00000°,δ89.00000°, λ-173.00000°. Principal axes: T 1.8217, Plg4.0000°, Azm338.0000°; N 0.0690, Plg82.0000°, Azm212.0000°; P -1.8907, Plg6.0000°, Azm69.0000°;

ISC 08 23:51:44.5±0.3,**54°.27S**±0°.07×**132°.93W**±0°.06,**h10**km, **n314**,σ**1ˢ.89**/176,**mb5.1**/58,**MS5.3**/155,**Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	31.14	356	*e*S	S	00 03 05.6	-3.2
	596nm,25.8s						
RKT				*e*LQ	LQ	00 04 46.4	
	1µm,28.8s						
RKT				*e*LR	LR	00 06 07.1	
	comp=Z,8µm,26.2s						
RPN	Rapa Nui	32.18	42	LR	LR	00 07 58.0	
	comp=Z,2µm,18.2s,baz=210,slow=30						
RPN	Rapa Nui	32.18	42	P	P	23 58 12.8	+0.5
VNDA	Vanda	32.44	202	P	P	23 58 15.5	+1.3
	2.0nm,0.9s,baz=86,slow=8.5,SNR=7.5						
VNDA				PcP	PcP	00 01 01.4	+0.5
	2.0nm,0.9s,baz=75,slow=1.0,SNR=5.5						
VNDA	Vanda	32.44	202	P	P	23 58 14.7	+0.5
TBI	Tubuai	33.28	332	*e*S	S	00 03 39.3	-2.8
	330nm,26.5s						
TBI				*e*LQ	LQ	00 05 42.8	
	924nm,30.8s						
TBI				*e*LR	LR	00 06 53.9	
	comp=Z,7µm,28.2s,baz=165						
TBI	Tubuai	33.28	332	*e*T	T	00 33 08.4	
	180nm,0.3s						
PMSA	Palmer Station	34.68	135	LR	LR	00 08 50.8	
	comp=Z,3µm,20.1s,baz=247,slow=30						
PMSA	Palmer Station	34.68	135	P	P	23 58 34.0	+0.3
QSPA	South Pole Qui	35.91	180	P	P	23 58 45.8	+1.2
	19nm,0.9s,baz=86,slow=2.8,SNR=43						
QSPA				LR	LR	00 10 58.5	
	comp=Z,2µm,20.9s,baz=76,slow=32						
QSPA	South Pole Qui	35.91	180	P	P	23 58 43.7	-0.8
QSPA				IAmb	IAmb	23 58 48.8	
	comp=Z,39nm,1.2s						
PLWZ	Palliser	36.16	269	P	P	23 58 47.8	+1.0
MG01	Puerto William	36.59	118	P	P	23 58 46.7	-3.5
ODZ	Otahua Downs	36.76	261	P	P	23 58 54.3	+2.4
ODZ				IAmb	IAmb	23 59 02.7	
	comp=Z,96nm,2.0s						
ODZ				IAMs_20	IAMs_20	00 10 20.5	
	comp=Z,4µm,20.0s						
OXZ	Oxford	36.96	264	IAMs_20	IAMs_20	00 11 17.2	
	comp=Z,4µm,19.0s						
BKZ	Black Stump Fm	36.97	273	P	P	23 58 57.4	+3.7
BKZ				IAmb	IAmb	23 59 07.5	
	comp=Z,70nm,1.9s						
BKZ				IAMs_20	IAMs_20	00 09 55.3	
	comp=Z,4µm,19.0s						
MXZ	Matakaoa Point	36.98	276	P	P	23 58 56.6	+2.9
MXZ				IAmb	IAmb	00 00 16.0	
	comp=Z,54nm,1.1s						
LTZ	Lake Taylor	37.16	265	IAMs_20	IAMs_20	00 10 08.4	
	comp=Z,4µm,20.0s						
URZ	Urewera	37.21	275	LR	LR	00 10 13.1	
	comp=Z,3µm,21.9s,baz=198,slow=30						
URZ	Urewera	37.21	275	P	P	23 58 56.3	+0.6
URZ				IAmb	IAmb	23 59 18.0	
	comp=Z,52nm,1.6s						
RPZ	Rata Peaks	37.30	263	LR	LR	00 11 06.4	
	comp=Z,4µm,18.7s,baz=105,slow=31						
RPZ	Rata Peaks	37.30	263	IAMs_20	IAMs_20	00 10 15.1	
	comp=Z,4µm,21.0s						
LBZ	Lake Benmore	37.41	261	IAMs_20	IAMs_20	00 10 49.8	
	comp=Z,5µm,20.0s						
NNZ	Nelson	37.48	268	P	P	23 58 57.7	-0.2
WHZ	Wether Hill Ro	37.83	258	P	P	23 59 01.6	+0.7
WHZ				IAmb	IAmb	23 59 20.0	
	comp=Z,78nm,1.6s						
WKZ	Wanaka	37.83	260	IAMs_20	IAMs_20	00 10 24.6	
	comp=Z,5µm,21.0s						
FOZ	Fox Glacier	38.13	262	P	P	23 59 01.1	-2.3
FOZ				IAmb	IAmb	00 00 26.5	
	comp=Z,98nm,1.9s						
FOZ				IAMs_20	IAMs_20	00 11 23.0	
	comp=Z,6µm,19.0s						
MEH	Mehetia	38.16	336	*e*T	T	00 39 13.5	
	comp=Z,18nm,0.2s						
HIZ	Hauiti	38.36	272	P	P	23 59 06.9	+1.4
HIZ				IAMs_20	IAMs_20	00 12 17.1	
	comp=Z,3µm,19.0s						
PYZ	Puysegur Point	38.40	257	P	P	23 59 07.2	+1.5
TVO	Taravao	38.54	335	*e*T	T	00 39 46.0	
	comp=Z,2.3nm,0.3s						
RAR	Rarotonga	38.77	318	LR	LR	00 12 38.5	
	comp=Z,2µm,19.4s,baz=128,slow=32						
RAR	Rarotonga	38.77	318	IAMs_20	IAMs_20	00 09 28.9	
	comp=Z,4µm,21.0s						
TIAR	Tiarei	38.77	334	*e*T	T	00 40 00.7	
	comp=Z,3.2nm,0.4s						
PPTF	Pamatai, Papee	38.80	334	IAMs_20	IAMs_20	00 11 02.3	
	comp=Z,4µm,19.0s						
PPT2	Papeete2	38.80	334	*e*S	S	00 05 02.6	-4.3
	comp=Z,576nm,25.8s						
PPT2				*e*LR	LR	00 09 39.7	
	comp=Z,8µm,25.5s,baz=169						
PPT2	Papeete2	38.80	334	*e*T	T	00 40 04.2	
	comp=Z,7.1nm,0.4s						
PPT	Papeete	38.82	334	LR	LR	00 11 34.3	
	comp=Z,3µm,19.0s,baz=154,slow=31						
BELA	Belgrano 2	39.31	161	P	P	23 59 13.6	+0.6
GO07	Milladeo Hill,	39.55	99	IAMs_20	IAMs_20	00 11 15.7	
	comp=Z,5µm,19.0s						
VAH	Vaihoa	40.60	338	*e*T	T	00 42 21.8	
	comp=Z,50nm,0.3s						
LL01	San Ignacio de	40.73	99	IAMs_20	IAMs_20	00 11 53.9	
	comp=Z,3µm,19.0s						
RAO	Raoul Island	40.87	289	LR	LR	00 11 59.0	
	comp=Z,819nm,21.9s,baz=142,slow=30						
OUZ	Omahuta	41.34	275	P	P	23 59 33.3	+3.1
OUZ				IAmb	IAmb	23 59 42.2	
	comp=Z,60nm,1.4s						
OUZ				IAMs_20	IAMs_20	00 12 19.3	
	comp=Z,3µm,22.0s						
H03S2	Juan Fernandez	42.62	84	T	T	00 45 14.4	
	baz=222,slow=74,SNR=170						
H03S1	Juan Fernandez	42.63	84	T	T	00 45 15.1	
	baz=222,slow=74,SNR=185						
H03S3	Juan Fernandez	42.64	84	T	T	00 45 17.9	
	baz=222,slow=74,SNR=173						
PLCA	Paso Flores	42.85	98	P	P	23 59 41.5	-1.2
	comp=Z,4.6nm,0.9s,baz=218,slow=9.0,SNR=5.9						
PLCA				LR	LR	00 13 00.6	
	comp=Z,2µm,20.5s,baz=228,slow=30						
PLCA	Paso Flores	42.85	98	P	P	23 59 42.7	+0.1
H03N3	Juan Fernandez	42.89	84	T	T	00 45 30.2	
	baz=226,slow=72,SNR=158						
H03N2	Juan Fernandez	42.90	84	T	T	00 45 26.2	
	baz=226,slow=72,SNR=226						
H03N1	Juan Fernandez	42.91	84	T	T	00 45 32.4	
	baz=226,slow=72,SNR=165						
EFI	East Falkland	43.19	119	P	P	23 59 42.3	-2.8
LC01	Cunco	43.28	95	P	P	23 59 46.8	+0.8
BI03	Tigo	43.98	92	P	P	23 59 52.2	+0.5
NIUE	Niue	45.08	306	P	P	00 00 03.3	+2.7
TAOE	Nuku Hiva Isla	45.66	350	*e*S	S	00 06 44.9	-3.2
	comp=Z,314nm,24.0s						
TAOE				*e*LR	LR	00 12 48.3	
	comp=Z,5µm,24.9s						
TAOE	Nuku Hiva Isla	45.66	350	IAMs_20	IAMs_20	00 14 03.2	
	comp=Z,3µm,20.0s						
BO02	Sierra Bellavi	46.72	92	P	P	00 00 13.5	0.0
BO02				IAmb	IAmb	00 00 15.0	
	comp=Z,17nm,0.8s						
MT05	Renca	47.73	90	P	P	00 00 20.0	-1.4
ROC1	El Roble	47.86	90	P	P	00 00 22.9	+0.2
PEL	Peldehue	47.94	90	P	P	00 00 23.9	+0.9
VA03	San Esteban	48.29	90	P	P	00 00 25.9	+0.2
CO02	Combarbal	49.15	88	P	P	00 00 31.7	-0.7
CO02				IAmb	IAmb	00 00 34.1	
	comp=Z,26nm,0.9s						
VNA2	Neumayer--Watz	49.25	159	P	P	00 00 32.7	+0.2
	baz=207,slow=9.6						
VNA1	Neumayer--Stat	49.28	159	P	P	00 00 33.1	+0.4
SNAA	Sanae	49.55	161	P	P	00 00 34.5	-0.4
SNAA	Sanae	49.55	161	P	P	00 00 33.8	-1.1
SNAA				IAMs_20	IAMs_20	00 19 17.1	
	comp=Z,3µm,21.0s						
CO03	El Pedregal	49.60	88	P	P	00 00 35.8	0.0
CO03				IAmb	IAmb	00 00 45.4	
	comp=Z,35nm,1.4s						
ZON	Zonda	50.26	90	P	P	00 00 40.7	-0.2
ZON				IAmb	IAmb	00 00 49.6	
	comp=Z,29nm,1.4s						
CASY	Casey	50.61	208	P	P	00 00 42.7	-0.2
CASY				IAmb	IAmb	00 01 00.6	
	comp=Z,47nm,1.3s						
LCO	Las Campanas	50.94	86	P	P	00 00 46.3	+0.2
LCO				IAmb	IAmb	00 00 49.4	
	comp=Z,26nm,1.2s						
AC05	El Transito	51.31	87	P	P	00 00 50.5	+1.6
GO03	Copiap	52.26	86	IAMs_20	IAMs_20	00 16 57.9	
	comp=Z,2µm,18.0s						
PB14	IPOC Station P	54.41	83	P	P	00 01 11.7	-0.3
PB14				IAmb	IAmb	00 01 17.8	
	comp=Z,34nm,1.3s						
GO02	Mina Guanaco	54.48	84	P	P	00 01 11.9	-0.6
DZM	Mont Dzumac	55.29	280	*e*S	S	00 08 57.4	-4.6
	comp=Z,244nm,23.4s						
DZM				*e*LR	LR	00 17 19.3	
	comp=Z,3µm,28.6s						
DZM	Mont Dzumac	55.29	280	P	P	00 01 17.9	-0.2
DZM				IAmb	IAmb	00 01 20.0	
	comp=Z,60nm,1.8s						
TOO	Toolangi	55.95	252	IAMs_20	IAMs_20	00 20 12.1	
	comp=Z,2µm,20.0s						
LVC	Limon Verde	56.83	83	P	P	00 01 28.3	-1.2
	comp=Z,5.3nm,0.8s,baz=236,slow=7.6,SNR=4.7						
LVC	Limon Verde	56.83	83	P	P	00 01 27.7	-1.8
ARMA	Armidale	57.63	262	P	P	00 01 34.3	-0.5
ARMA				IAmb	IAmb	00 01 48.6	
	comp=Z,43nm,1.8s						
ARMA				IAMs_20	IAMs_20	00 24 02.1	
	comp=Z,2µm,18.0s						
PB01	IPOC Station P	57.71	81	P	P	00 01 35.4	0.0
PB01				IAmb	IAmb	00 01 37.2	
	comp=Z,14nm,1.0s						
MAW	Mawson	57.88	187	P	P	00 01 34.6	-1.1
	comp=Z,3.8nm,0.6s,baz=213,slow=9.9,SNR=2.1						
MAW				LR	LR	00 26 25.2	
	comp=Z,591nm,18.5s,baz=168,slow=36						
PSGCX	Pisagua	58.48	80	P	P	00 01 41.0	+0.2
MNMC	Minye Minye	59.15	80	P	P	00 01 45.3	-0.4
PB16	IPOC Station P	59.83	79	P	P	00 01 51.0	+0.3
PB16				IAmb	IAmb	00 01 59.7	
	comp=Z,13nm,1.2s						
KNTN	Kanton	60.29	314	P	P	00 01 55.9	+2.8
CPUP	Villa Florida	60.77	95	P	P	00 01 54.2	-2.2
	comp=Z,3.4nm,0.8s,baz=231,slow=7.3,SNR=8.3						
CPUP				LR	LR	00 23 55.8	
	comp=Z,2µm,20.7s,baz=222,slow=32						
CPUP	Villa Florida	60.77	95	P	P	00 01 55.2	-1.2
CPUP				IAmb	IAmb	00 03 22.4	
	comp=Z,32nm,1.9s						
NNA	Nana	60.83	68	LR	LR	00 21 55.5	
	comp=Z,3µm,19.2s,baz=252,slow=30						
NNA	Nana	60.83	68	P	P	00 01 58.8	+1.9
NNA				IAmb	IAmb	00 02 06.9	
	comp=Z,21nm,1.0s						
EIDS	Eidsvold	61.74	265	IAMs_20	IAMs_20	00 24 33.2	
	comp=Z,2µm,20.0s						
STKA	Stephens Creek	62.29	253	P	P	00 02 06.0	-0.6
	comp=Z,8.9nm,0.9s,baz=123,slow=7.5,SNR=9.1						
STKA				LR	LR	00 24 58.9	
	comp=Z,2µm,19.2s,baz=140,slow=32						
STKA	Stephens Creek	62.29	253	P	P	00 02 07.5	+0.9
ATAH	Atahualpa	64.04	64	LR	LR	00 24 06.3	
	comp=Z,857nm,18.3s,baz=281,slow=30						
SIV	San Ignacio	66.58	85	P	P	00 02 33.7	-1.2
	comp=Z,6.4nm,0.9s,baz=228,slow=6.4,SNR=23						
SPB	Sao Paulo	68.62	101	IAMs_20	IAMs_20	00 29 20.2	
	comp=Z,2µm,19.0s						
OTAV	Otavalo	70.27	60	P	P	00 03 00.8	+2.3
OTAV				IAmb	IAmb	00 03 20.4	
	comp=Z,23nm,1.4s						
FORT	Forrest	70.53	244	IAMs_20	IAMs_20	00 28 45.2	
	comp=Z,1µm,20.0s						
SAML	Samuel	70.98	79	P	P	00 03 02.5	+0.2
AS31	Alice Springs	72.93	253	P	P	00 03 14.3	+0.4
ASAR	Alice Springs	72.93	253	P	P	00 03 12.3	-1.6
	comp=Z,10.0nm,0.9s,baz=138,slow=5.7,SNR=40						
ASAR				LR	LR	00 31 31.7	
	comp=Z,2µm,18.8s,baz=148,slow=33						
ASAR	Alice Springs	72.93	253	P	P	00 03 12.1	-1.8
H01W1	Cape Leeuwin H	74.13	232	T	T	01 25 14.5	
	baz=145,slow=76,SNR=44						
H01W2	Cape Leeuwin H	74.14	232	T	T	01 25 14.8	
	baz=145,slow=76,SNR=40						
H01W3	Cape Leeuwin H	74.15	232	T	T	01 25 15.7	
	baz=145,slow=76,SNR=37						
BDFB	Brasilia	74.51	95	P	P	00 03 21.9	-1.4
	comp=Z,3.9nm,0.9s,baz=250,slow=6.7,SNR=5.7						
BDFB				LR	LR	00 33 05.3	
	comp=Z,826nm,19.8s,baz=215,slow=33						
WR0	Warramunga Arr	75.50	256	IAMs_20	IAMs_20	00 33 09.5	
	comp=Z,2µm,21.0s						
WR9	Warramunga Arr	75.51	256	IAMs_20	IAMs_20	00 33 19.9	
	comp=Z,2µm,20.0s						
WR8	Warramunga Arr	75.52	256	IAMs_20	IAMs_20	00 33 31.2	
	comp=Z,2µm,20.0s						
WR6	Warramunga Arr	75.55	256	IAMs_20	IAMs_20	00 33 20.9	
	comp=Z,2µm,20.0s						
WR3	Warramunga Arr	75.59	256	IAMs_20	IAMs_20	00 34 18.0	
	comp=Z,2µm,21.0s						
WB2	Warramunga Arr	75.62	256	IAMs_20	IAMs_20	00 33 22.7	
	comp=Z,2µm,20.0s						
WC2	Warramunga Arr	75.62	256	IAMs_20	IAMs_20	00 33 52.8	
	comp=Z,2µm,19.0s						
WRA	Warramunga Arr	75.63	256	P	P	00 03 28.1	-1.5
	comp=Z,8.6nm,1.1s,baz=142,slow=5.2,SNR=17						
WRA				LR	LR	00 33 14.2	
	comp=Z,2µm,20.2s,baz=140,slow=33						
WRA	Warramunga Arr	75.63	256	P	P	00 03 30.4	+0.7
WRAB	Tennant Creek	75.63	256	IAMs_20	IAMs_20	00 32 52.7	
	comp=Z,2µm,20.0s						
WC1	Warramunga Arr	75.64	256	IAMs_20	IAMs_20	00 32 52.2	
	comp=Z,2µm,21.0s						
WB4	Warramunga Arr	75.65	256	IAMs_20	IAMs_20	00 34 38.4	
	comp=Z,2µm,20.0s						
WB6	Warramunga Arr	75.68	256	IAMs_20	IAMs_20	00 33 44.3	
	comp=Z,2µm,20.0s						
WB7	Warramunga Arr	75.68	256	IAMs_20	IAMs_20	00 33 21.5	
	comp=Z,2µm,21.0s						
WB8	Warramunga Arr	75.70	256	IAMs_20	IAMs_20	00 33 44.8	
	comp=Z,2µm,20.0s						
WB0	Warramunga Arr	75.73	256	IAMs_20	IAMs_20	00 33 35.8	
	comp=Z,2µm,20.0s						
JTS	Las Juntas de	75.95	49	IAMs_20	IAMs_20	00 28 38.6	
	comp=Z,2µm,22.0s						
HDC	Heredia	76.07	50	IAMs_20	IAMs_20	00 28 44.6	
	comp=Z,2µm,21.0s						
ROSC	El Rosal	76.31	61	LR	LR	00 30 44.4	
	comp=Z,1µm,20.9s,baz=223,slow=31						
ROSC	El Rosal	76.31	61	IAMs_20	IAMs_20	00 30 33.7	
	comp=Z,1µm,22.0s						
PMG	Port Moresby	76.54	273	IAMs_20	IAMs_20	00 32 52.4	
	comp=Z,1µm,19.0s						
PSAC3	Pilbara Seismi	82.25	244	IAMs_20	IAMs_20	00 37 36.5	
	comp=Z,2µm,21.0s						
PSAB1	Pilbara Seismi	82.30	244	IAMs_20	IAMs_20	00 37 16.7	
	comp=Z,1µm,20.0s						
PSAD1	Pilbara Seismi	82.39	244	IAMs_20	IAMs_20	00 38 21.1	
	comp=Z,1µm,20.0s						
MBWA	Marble Bar	82.68	244	IAMs_20	IAMs_20	00 39 20.9	
	comp=Z,1µm,18.0s						
HSIG		85.09	19	IAMs_20	IAMs_20	00 33 10.9	
	comp=Z,884nm,18.0s						
SPX	San Pedro Mart	86.28	15	P	P	00 04 28.5	+2.1
TXAR	Lajitas Array	87.01	25	P	P	00 04 30.2	+0.5
	comp=Z,2.7nm,1.0s,baz=195,slow=6.5,SNR=11						
TX31	Lajitas Ar. Si	87.01	25	P	P	00 04 32.0	+2.3
TX31				IAmb	IAmb	00 04 36.5	
	comp=Z,12nm,1.0s						
PIX	Pinacate	87.12	17	P	P	00 04 32.4	+2.3
CBX	Cerro Bola	87.36	14	P	P	00 04 33.0	+1.6
214A	Organ Pipe Nat	87.61	17	P	P	00 04 35.2	+2.7
	baz=191						
214A	Organ Pipe Nat	87.61	17	IAMs_20	IAMs_20	00 34 07.1	
	comp=Z,906nm,21.0s						
TKX	Tecate	87.62	14	IAMs_20	IAMs_20	00 37 19.7	
	comp=Z,1µm,18.0s						
319A	Douglas	87.71	20	IAmb	IAmb	00 04 45.7	
	comp=Z,8.2nm,0.8s						
BAR	Barrett	87.72	14	P	P	00 04 35.8	+2.8
BAR				IAmb	IAmb	00 04 41.6	
	comp=Z,12nm,1.3s						
BAR				IAMs_20	IAMs_20	00 46 32.3	
	comp=Z,886nm,21.0s						
RMX	La Rumorosa	87.73	14	P	P	00 04 36.4	+3.2
RMX				IAmb	IAmb	00 04 42.6	
	comp=Z,9.0nm,1.0s						
IKP	In-Ko-Pah, Jac	87.77	14	P	P	00 04 35.9	+2.6
	baz=190						
MONP2	Monument Peak	87.97	14	P	P	00 04 36.3	+1.9
	baz=189						
TUC	Tucson	88.32	19	P	P	00 04 38.5	+2.6
	baz=193						
TUC	Tucson	88.32	19	P	P	00 04 38.5	+2.6
TUC				IAmb	IAmb	00 04 41.6	
	comp=Z,16nm,1.6s						
TUC	Tucson	88.32	19	IAMs_20	IAMs_20	00 35 15.7	
	comp=Z,894nm,20.0s						
GLA	Glamis	88.36	15	P	P	00 04 38.6	+2.6
GLA				IAmb	IAmb	00 04 39.7	
	comp=Z,9.7nm,0.8s						
TPFO	Pinon Flats	88.66	14	P	P	00 04 39.9	+2.4
	baz=189						
PFO	Pinyon Flats O	88.67	14	P	P	00 04 39.5	+1.9
	baz=189						
PFO	Pinyon Flats O	88.67	14	P	P	00 04 38.9	+1.4
PFO				IAMs_20	IAMs_20	00 47 52.4	
	comp=Z,1µm,19.0s						
XPFO	Pion Flat	88.67	14	P	P	00 04 38.2	+0.6
XPFO				IAMs_20	IAMs_20	00 36 18.4	
	comp=Z,1µm,18.0s						
BC3	Big Chuckawall	88.86	15	P	P	00 04 41.2	+2.8
	baz=190						
MNTX	Cornudas Mount	88.86	23	P	P	00 04 40.3	+1.9
	baz=196						
MNTX	Cornudas Mount	88.86	23	P	P	00 04 39.0	+0.6
MNTX				IAmb	IAmb	00 04 43.3	
	comp=Z,12nm,1.5s						
GTBY	Guantanamo Bay	88.88	53	P	P	00 04 38.1	-0.6
PASC	Pasadena Art C	88.99	12	IAMs_20	IAMs_20	00 34 41.1	
	comp=Z,948nm,21.0s						
MWC	Mount Wilson	89.06	12	P	P	00 04 41.6	+2.2
MWC				IAmb	IAmb	00 04 48.3	
	comp=Z,22nm,1.4s						
MWC				IAMs_20	IAMs_20	00 47 18.9	
	comp=Z,1µm,18.0s						
BELC	Belle Mtn. Jos	89.12	14	P	P	00 04 41.9	+2.2
	baz=190						
JCT	Junction City	89.12	28	P	P	00 04 41.8	+2.1
JCT				IAmb	IAmb	00 05 14.1	
	comp=Z,28nm,1.6s						
BFSC	Mount Baldy Ra	89.13	13	P	P	00 04 42.2	+2.5
	baz=189						
GRGR	Grenville	89.14	68	IAMs_20	IAMs_20	00 39 27.6	
	comp=Z,1µm,19.0s						
OSI	Osito Audit: C	89.37	12	IAMs_20	IAMs_20	00 36 09.0	
	comp=Z,1µm,21.0s						
RCBR	Riachuelo	89.41	99	IAMs_20	IAMs_20	00 42 08.3	
	comp=Z,1µm,18.0s						
PKM	Mcpherson Peak	89.51	11	P	P	00 04 43.8	+2.2
	baz=188						
EDW2	Edwards Air Fo	89.72	12	P	P	00 04 44.1	+1.7
	baz=188						
H11N3	WAKE ISLAND Hy	89.81	305	T	T	01 44 07.1	
	baz=148,slow=76,SNR=28						
H11N1	WAKE ISLAND Hy	89.82	305	T	T	01 44 06.5	
	baz=148,slow=76,SNR=35						
H11N2	WAKE ISLAND Hy	89.83	305	T	T	01 44 09.8	
	baz=148,slow=76,SNR=35						
HEC	Hector,Ludlow	89.88	14	P	P	00 04 45.9	+2.8
	baz=190						
GMRC	Granite Mounta	89.94	14	P	P	00 04 46.7	+3.2
	baz=190						
X16A	Lo Mia Camp, P	90.25	18	P	P	00 04 47.8	+2.8
X16A				IAMs_20	IAMs_20	00 36 01.0	
	comp=Z,924nm,20.0s						
PAGB	Antelope Grade	90.30	10	P	P	00 04 47.9	+2.8
PAGB				IAmb	IAmb	00 04 53.5	
	comp=Z,24nm,1.5s						
ISA	Isabella, Lake	90.43	12	P	P	00 04 48.0	+2.3
	baz=188						
ISA	Isabella, Lake	90.43	12	IAmb	IAmb	00 04 49.9	
	comp=Z,13nm,1.5s						
ISA				IAMs_20	IAMs_20	00 35 13.2	
	comp=Z,1µm,21.0s						
W13A	Hualapai Mount	90.51	16	P	P	00 04 48.6	+2.4
X18A	Snowflake	90.64	19	P	P	00 04 48.7	+1.9
MCLT	Moule a Chique	90.83	68	IAMs_20	IAMs_20	00 51 30.2	
	comp=Z,900nm,21.0s						
MPMC	Manual Prospec	90.94	12	P	P	00 04 50.4	+2.2
	baz=189						
WUAZ	Wupatki	91.34	17	P	P	00 04 53.5	+3.4
	baz=192						
WUAZ	Wupatki	91.34	17	P	P	00 04 52.6	+2.5
WUAZ				IAmb	IAmb	00 05 08.5	
	comp=Z,7.0nm,1.1s						
WUAZ				IAMs_20	IAMs_20	00 37 05.7	
	comp=Z,815nm,20.0s						
FURC	Furnace Creek,	91.42	13	P	P	00 04 54.0	+3.9
	baz=189						
FDF	Fort de France	91.56	67	IAMs_20	IAMs_20	00 41 14.0	
	comp=Z,1µm,20.0s						
MMRI	Maumere	91.59	253	IAMs_20	IAMs_20	00 49 33.4	
	comp=Z,828nm,20.0s						
SHPR	Sheep Range	91.70	14	P	P	00 04 53.9	+2.2
SHPR				IAMs_20	IAMs_20	00 38 16.5	
	comp=Z,865nm,19.0s						
ANMO	Albuquerque	91.74	21	P	P	00 04 53.3	+1.4
	baz=195						
ANMO	Albuquerque	91.74	21	P	P	00 04 54.2	+2.2
GRAC	Grapevine Rang	91.88	12	P	P	00 04 54.4	+2.1
	baz=189						
TPNV	Topopah Spring	91.98	13	P	P	00 04 56.2	+3.2
	baz=190						
TPNV	Topopah Spring	91.98	13	IAMs_20	IAMs_20	00 38 47.1	
	comp=Z,872nm,18.0s						
U15A	North Rim	92.07	17	IAmb	IAmb	00 04 57.7	
	comp=Z,11nm,1.2s						
U15A				IAMs_20	IAMs_20	00 37 23.1	
	comp=Z,920nm,20.0s						
OMMB	Old Mammoth Mi	92.30	11	P	P	00 04 57.4	+2.8
OMMB				IAmb	IAmb	00 05 33.6	
	comp=Z,12nm,1.5s						
OMMB				IAMs_20	IAMs_20	00 37 07.6	
	comp=Z,1µm,20.0s						
MDPB	Devils Postpil	92.31	11	P	P	00 04 57.2	+2.6
MDPB				IAmb	IAmb	00 04 58.8	
	comp=Z,18nm,1.6s						
MDPB				IAMs_20	IAMs_20	00 37 16.9	
	comp=Z,1µm,19.0s						
MCCM	Marconi Confer	92.45	8	IAMs_20	IAMs_20	00 39 06.9	
	comp=Z,1µm,18.0s						
KNB	Kanab	92.56	16	P	P	00 04 56.7	+1.0
CMB	Columbia Colle	92.56	10	P	P	00 04 57.7	+2.2
CMB				IAmb	IAmb	00 04 59.4	
	comp=Z,25nm,1.9s						
CMB				IAMs_20	IAMs_20	00 37 08.8	
	comp=Z,965nm,18.0s						
PRN	Pahroc Range	92.60	14	P	P	00 04 57.8	+2.0
PRN				IAmb	IAmb	00 05 30.2	
	comp=Z,15nm,1.5s						
PRN				IAMs_20	IAMs_20	00 38 43.3	
	comp=Z,1µm,19.0s						
AMTX	Amarillo	92.80	25	P	P	00 04 56.9	+0.2
TPH	Tonopah	92.96	12	P	P	00 04 59.1	+1.5
LHV	Little Huntoon	92.98	11	P	P	00 05 01.2	+3.9
LHV				IAmb	IAmb	00 05 20.6	
	comp=Z,7.4nm,1.4s						
LHV				IAMs_20	IAMs_20	00 38 47.8	
	comp=Z,970nm,20.0s						
CCUT	Cedar City	92.99	15	P	P	00 05 00.4	+2.7
PKCU	Pink Cliffs	93.06	16	P	P	00 04 58.7	+0.5
SZCU	Shurtz Canyon	93.08	16	P	P	00 05 00.2	+2.1
GDXM	Geysers	93.11	8	P	P	00 05 00.5	+2.5
WAKR	Walker	93.13	11	P	P	00 05 00.8	+2.5
WAKR				IAmb	IAmb	00 05 12.6	
	comp=Z,22nm,1.8s						
NVAR	Mina Array Bea	93.18	11	P	P	00 04 59.1	+0.6
	comp=Z,1.1nm,0.9s,baz=197,slow=7.1,SNR=6.1						
NVAR				LR	LR	00 38 42.3	
	comp=Z,836nm,18.9s,baz=195,slow=30						
NVAR	Mina Array Bea	93.18	11	P	P	00 05 00.0	+1.4
NV11	Mina Array Sit	93.20	12	P	P	00 05 01.1	+2.6
NV11				IAmb	IAmb	00 05 07.6	
	comp=Z,18nm,1.9s						
NV11				IAMs_20	IAMs_20	00 38 10.6	

	comp=Z,1µm,19.0s						
HOPS	**Hopland Field**	**93.28**	**8**	P	**P**	**00 04 59.5**	**+0.8**
HOPS				IAMs_20	IAMs_20	00 36 05.8	
	comp=Z,1µm,21.0s						
RYN	**Ryan**	**93.35**	**11**	P	**P**	**00 05 01.4**	**+2.2**
RYN				IAmb	IAmb	00 05 03.4	
	comp=Z,12nm,1.6s						
RYN				IAMs_20	IAMs_20	00 39 18.6	
	comp=Z,939nm,19.0s						
AFDM	**Forest Hills D**	**93.41**	**9**	IAMs_20	IAMs_20	00 37 31.3	
	comp=Z,996nm,19.0s						
R11A	**Troy Canyon, C**	**93.45**	**14**	P	**P**	**00 05 02.6**	**+2.9**
	baz=190						
MVCO	**Mesa Verde**	**93.51**	**19**	P	**P**	**00 04 58.7**	**-1.5**
MVCO				IAmb	IAmb	00 05 05.0	
	comp=Z,15nm,1.6s						
RUBR	**Rubicon Trail**	**93.59**	**10**	IAMs_20	IAMs_20	00 37 33.1	
	comp=Z,1µm,19.0s						
PNTR	**Pine Nut**	**93.69**	**10**	P	**P**	**00 05 01.7**	**+0.8**
PNTR				IAMs_20	IAMs_20	00 39 19.6	
	comp=Z,1µm,18.0s						
PSUT	**Pine Spring**	**93.88**	**15**	P	**P**	**00 05 04.2**	**+2.4**
VCNR	**Virginia City**	**93.89**	**10**	IAMs_20	IAMs_20	00 39 26.8	
	comp=Z,1µm,18.0s						
656A	**Willston**	**93.94**	**42**	P	**P**	**00 05 02.9**	**+0.9**
ORV	**Oroville**	**93.97**	**9**	P	**P**	**00 05 03.9**	**+2.0**
ORV				IAmb	IAmb	00 05 30.2	
	comp=Z,12nm,1.9s						
MVU	**Marysvale**	**94.11**	**16**	P	**P**	**00 05 05.7**	**+2.8**
MSU	**Marysvale**	**94.12**	**16**	P	**P**	**00 05 04.9**	**+2.0**
PAHR	**Pah Rah Range**	**94.32**	**10**	IAMs_20	IAMs_20	00 37 58.4	
	comp=Z,1µm,20.0s						
S22A	**4UR Ranch, Cre**	**94.36**	**20**	IAMs_20	IAMs_20	00 41 07.5	
	comp=Z,815nm,19.0s						
BEKR	**Beckworth**	**94.38**	**10**	IAMs_20	IAMs_20	00 40 18.9	
	comp=Z,1µm,18.0s						
PV16	**Nyswonger Mesa**	**94.50**	**19**	P	**P**	**00 05 02.8**	**-1.9**
PV16				IAmb	IAmb	00 05 05.0	
	comp=Z,18nm,1.7s						
PV16				IAMs_20	IAMs_20	00 37 43.3	
	comp=Z,771nm,21.0s						
SDCO	**Great Sand Dun**	**94.64**	**21**	IAMs_20	IAMs_20	00 39 57.8	
	comp=Z,776nm,19.0s						
WDC	**Whiskeytown Da**	**94.89**	**8**	IAMs_20	IAMs_20	00 38 22.6	
	comp=Z,1µm,19.0s						
BOSA	**Boshof**	**95.33**	**161**	LR	LR	00 43 36.6	
	comp=Z,949nm,19.2s,baz=175,slow=33						
DUG	**Dugway, Tooele**	**95.67**	**15**	IAMs_20	IAMs_20	00 40 55.4	
	comp=Z,760nm,18.0s						
Q24A	**Divide**	**95.89**	**21**	IAMs_20	IAMs_20	00 40 26.8	
	comp=Z,729nm,20.0s						
KAPI	**Kappang**	**95.95**	**253**	IAMs_20	IAMs_20	00 46 52.0	
	comp=Z,812nm,18.0s						
YBH	**Yreka Blue Hor**	**96.03**	**8**	IAMs_20	IAMs_20	00 37 58.6	
	comp=Z,1µm,21.0s						
JAGI	**Jajag, Banyuwa**	**96.17**	**246**	IAMs_20	IAMs_20	00 43 00.8	
	comp=Z,1µm,22.0s						
MOD	**Modoc Plateau**	**96.41**	**9**	IAMs_20	IAMs_20	00 42 14.5	
	comp=Z,915nm,18.0s						
GUMO	**Guam**	**96.42**	**284**	LR	LR	00 41 32.8	
	comp=Z,76nm,22.0s,baz=129,slow=31						
ISCO	**Idaho Springs**	**96.59**	**21**	IAMs_20	IAMs_20	00 40 07.5	
	comp=Z,870nm,20.0s						
WVOR	**Wild Horse Val**	**97.10**	**11**	IAMs_20	IAMs_20	00 39 47.8	
	comp=Z,1µm,20.0s						
MFID	**Camas Ranch**	**98.40**	**13**	IAMs_20	IAMs_20	00 41 49.0	
	comp=Z,1µm,19.0s						
BW06	**Boulder Array**	**98.71**	**17**	IAMs_20	IAMs_20	00 41 34.8	
	comp=Z,947nm,18.0s						
PDAR	**Pinedale Array**	**98.71**	**17**	P	**P**	**00 05 22.3**	**-1.4**
	comp=Z,0.2nm,0.7s,baz=153,slow=4.6,SNR=2.0						
PDAR				LR	LR	00 42 23.0	
	comp=Z,736nm,19.1s,baz=204,slow=31						
H04A	**Detroit Lake**	**99.00**	**8**	IAMs_20	IAMs_20	00 40 33.3	
	comp=Z,772nm,19.0s						
BMO	**Blue Mountains**	**99.64**	**11**	IAMs_20	IAMs_20	00 43 04.9	
	comp=Z,834nm,19.0s						
G08A	**Pilot Rock**	**99.89**	**10**	IAMs_20	IAMs_20	00 53 54.8	
	comp=Z,689nm,20.0s						
TOLI2	**Tolitoli**	**100.38**	**257**	IAMs_20	IAMs_20	00 48 02.0	
	comp=Z,733nm,20.0s						
BKB	**Balikpapan**	**100.64**	**253**	IAMs_20	IAMs_20	00 53 41.4	
	comp=Z,1µm,18.0s						
HAWA	**Hanford**	**100.93**	**9**	IAMs_20	IAMs_20	00 40 18.2	
	comp=Z,818nm,21.0s						
E07A	**Sunnyside**	**101.06**	**9**	IAMs_20	IAMs_20	00 44 41.7	
	comp=Z,1µm,19.0s						
BOZ	**Bozeman (W)**	**101.13**	**15**	IAMs_20	IAMs_20	00 44 07.0	
	comp=Z,726nm,19.0s						
LTY	**Liberty**	**101.68**	**8**	IAMs_20	IAMs_20	00 42 14.1	
	comp=Z,916nm,20.0s						
TSUM	**Tsumeb**	**102.58**	**152**	IAMs_20	IAMs_20	00 49 41.3	
	comp=Z,1µm,19.0s						
JTMT	**Jette**	**102.86**	**13**	IAMs_20	IAMs_20	00 42 40.0	
	comp=Z,859nm,19.0s						
WALA	**Waterton Lakes**	**104.19**	**13**	IAMs_20	IAMs_20	00 43 31.3	
	comp=Z,927nm,20.0s						
MDND	**Maddock**	**105.57**	**23**	IAMs_20	IAMs_20	00 45 34.9	
	comp=Z,1µm,21.0s						
SBUM	**Sibu**	**106.30**	**251**	IAMs_20	IAMs_20	00 52 28.2	
	comp=Z,728nm,21.0s						
LSZ	**Lusaka**	**108.88**	**161**	IAMs_20	IAMs_20	00 49 49.0	
	comp=Z,1µm,21.0s						
BCX	**Boston College**	**109.73**	**44**	IAMs_20	IAMs_20	01 00 49.8	
	comp=Z,957nm,21.0s						
MYKOM	**Kota Tinggi**	**110.27**	**243**	IAMs_20	IAMs_20	00 57 53.9	
	comp=Z,610nm,18.0s						
BESE	**Bessie Mountai**	**112.50**	**359**	IAMs_20	IAMs_20	00 47 34.0	
	comp=Z,972nm,19.0s						
GGN	**Saint George**	**113.80**	**45**	IAMs_20	IAMs_20	00 50 46.6	
	comp=Z,661nm,20.0s						
HYT	**Haines Junctio**	**114.80**	**358**	IAMs_20	IAMs_20	00 47 22.9	
	comp=Z,986nm,20.0s						
KULM	**Kulim**	**114.90**	**242**	IAMs_20	IAMs_20	01 01 02.4	
	comp=Z,610nm,19.0s						
N25K	**Chitina, Valde**	**115.90**	**354**	IAMs_20	IAMs_20	00 49 00.1	
	comp=Z,966nm,20.0s						
YKA	**Yellowknife Ar**	**117.31**	**9**	PKP	**PKPdf**	**00 10 27.8**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=184,slow=2.3,SNR=6.1						
TRF	**Thorofare Moun**	**118.16**	**351**	IAMs_20	IAMs_20	00 52 06.9	
	comp=Z,972nm,20.0s						
TTA	**Tatalina**	**118.25**	**348**	IAMs_20	IAMs_20	00 53 46.0	
	comp=Z,934nm,20.0s						
BPAW	**Bear Paw Mtn.**	**118.86**	**351**	IAMs_20	IAMs_20	00 51 01.5	
	comp=Z,1µm,21.0s						
IL31		**119.19**	**353**		**PKPdf**	**00 10 33.2**	**+1.1**
ILAR	**Eielson Array**	**119.19**	**353**	PKP	**PKPdf**	**00 10 31.3**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=195,slow=2.0,SNR=16						
ILAR	**Eielson Array**	**119.19**	**353**		**PKPdf**	**00 10 31.8**	**-0.3**
MDM	**Murphy Dome**	**119.48**	**353**	IAMs_20	IAMs_20	00 50 50.8	
	comp=Z,988nm,21.0s						
I23K	**Minto, Yukon-K**	**119.75**	**352**	IAMs_20	IAMs_20	00 54 19.0	
	comp=Z,855nm,19.0s						
EPYK	**Eagle Plains**	**120.35**	**358**	IAMs_20	IAMs_20	00 53 33.4	
	comp=Z,963nm,20.0s						
ANM	**Nome**	**121.11**	**344**	IAMs_20	IAMs_20	00 58 49.8	
	comp=Z,730nm,20.0s						
PETK	**Petropavlovsk-**	**121.44**	**319**	PKP	**PKPdf**	**00 10 35.5**	**-1.3**
	comp=Z,8.2nm,0.9s,baz=108,slow=4.7,SNR=3.1						
COLD	**Coldfoot**	**121.87**	**352**	IAMs_20	IAMs_20	01 05 35.9	
	comp=Z,842nm,20.0s						
TOLK	**Toolik Lake Re**	**123.21**	**353**	P	**PKiKP**	**00 10 42.2**	**+2.1**
	baz=168						
TOLK	**Toolik Lake Re**	**123.21**	**353**	PKPdf	**PKiKP**	**00 10 41.9**	**+1.8**
A21K	**Barrow**	**126.42**	**351**	IAMs_20	IAMs_20	00 56 18.2	
	comp=Z,874nm,21.0s						
CD2	**Chengdu**	**133.70**	**263**	*e*P	**PKiKP**	**00 11 02.7**	**+0.4**
CD2	**Chengdu**	**133.70**	**263**	*e*PKP	**PKiKP**	**00 11 02.7**	**+0.4**
HHC	**Hu-ho-hao-te**	**136.00**	**280**	*e*P	PKPdf	00 10 55.2	-10
ATD	**Arta Tunnel**	**137.24**	**174**	IAMs_20	IAMs_20	01 10 19.8	
	comp=Z,490nm,19.0s						
LZH	**Lanzhou**	**137.34**	**269**	*e*PKP	**PKPdf**	**00 11 05.3**	**-2.5**
LZH				sPKP		00 11 19.6	
SOCY	**Socotra**	**137.67**	**190**	IAMs_20	IAMs_20	01 15 33.9	
	comp=Z,642nm,20.0s						
TIXI	**Tiksi**	**142.63**	**329**		PKPpre	00 11 13.1	
TIXI				IAMs_20	IAMs_20	01 21 08.8	
	comp=Z,423nm,19.0s						
ULN	**Ulaanbaatar**	**142.79**	**285**		**PKPdf**	**00 11 15.8**	**-1.4**
SONM	**Songino Array**	**143.14**	**285**	PKP	PKPab	00 11 14.6	+1.2
	comp=Z,3.0nm,0.9s,baz=142,slow=2.1,SNR=12						
SONM	**Songino Array**	**143.14**	**285**	PKPdf	PKPbc	00 11 16.0	+1.2
DAG	**Danmarks Havn**	**147.53**	**23**	*i* P	**PKPdf**	**00 11 26.4**	**+2.1**
	comp=Z,5.9nm,0.7s						
DAG	**Danmarks Havn**	**147.53**	**23**	*i* P	**PKPdf**	**00 11 26.5**	**+2.1**
DAG				IAmb	IAmb	00 11 30.5	
	comp=Z,5.9nm,0.7s						
RAYN	**Ar Rayn**	**149.28**	**177**		**PKPbc**	**00 11 33.3**	**+0.1**
RAYN				IAMs_20	IAMs_20	01 14 19.8	
	comp=Z,665nm,20.0s						
UOSS	**Minazif**	**149.93**	**197**	IAMs_20	IAMs_20	01 18 51.9	
	comp=Z,493nm,19.0s						
WMQ	**Urumqi**	**151.77**	**265**	*e*PKPbc	**PKPdf**	**00 11 34.6**	**+2.4**
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						
WMQ				LR	LR		
	comp=Z,1µm,27.5s						
CORL	**Corleone**	**151.78**	**112**	IAMs_20	IAMs_20	01 31 25.0	
	comp=Z,488nm,19.0s						
NIL	**Nilore**	**152.35**	**232**		**PKiKP**	**00 11 41.2**	**+0.8**
KSH	**Kashi**	**155.58**	**245**	PKP	**PKPdf**	**00 11 39.8**	**+2.0**
NRIK	**Noril'sk**	**156.28**	**325**	PKPab	**PKPab**	**00 12 06.3**	**+0.4**
	comp=Z,6.5nm,1.0s,baz=88,slow=2.8,SNR=11						
NRIK	**Noril'sk**	**156.28**	**325**	PKPab	**PKPab**	**00 12 07.8**	**+1.8**
MK31	**Makanchi Array**	**156.60**	**266**	PKPab	**PKPab**	**00 12 08.5**	**+0.5**
MKAR	**Makanchi Array**	**156.60**	**266**	PKP	**PKPdf**	**00 11 38.1**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=90,slow=1.4,SNR=2.6						
MKAR				PKPab	**PKPab**	**00 12 08.5**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=115,slow=5.5,SNR=21						
MKAR	**Makanchi Array**	**156.60**	**266**	PKPab	**PKPab**	**00 12 07.5**	**-0.5**
HRA	**Herat**	**157.45**	**214**	PKPab	**PKPab**	**00 12 11.2**	**-0.9**
ZAA0	**Zalesovo Array**	**158.04**	**285**	PKPab	**PKPab**	**00 12 13.6**	**-0.4**
ZALV	**Zalesovo Beam**	**158.04**	**285**	PKPab	**PKPab**	**00 12 11.8**	**-2.2**
	comp=Z,2.2nm,0.7s,baz=100,slow=3.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**158.04**	**285**		**PKPab**	**00 12 12.4**	**-1.5**
AAK	**Ala-Archa**	**158.56**	**248**	PKPab	**PKPab**	**00 12 17.4**	**+0.7**
KURBB	**Kurchatov Arra**	**160.57**	**272**	PKP	**PKPdf**	**00 11 43.5**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=137,slow=0.9,SNR=3.6						
BR131	**Keskin Array S**	**162.85**	**143**	PKPab	**PKPab**	**00 12 35.0**	**-0.5**
BRTR	**Keskin Array B**	**162.85**	**143**	PKPab	**PKPab**	**00 12 34.4**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=180,slow=4.7,SNR=8.3						
BVAR	**Borovoye Array**	**166.13**	**274**	PKPab	**PKPab**	**00 12 47.1**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=52,slow=5.7,SNR=1.8						
AKASG	**Malin Array Be**	**168.55**	**101**	PKP	**PKPdf**	**00 11 49.1**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=225,slow=1.2,SNR=2.5						

BJI ***09*** *00:03:54.8±0.0, 1°.47S×127°.76E, h46^{km}, mB5.1/30, mb4.8/48, Ms4.6/5, Ms7 4.4/5*

DJA ***09*** *00:03:56.8±0.2, 1°S±2°×12°7E±°, h10^{km}, M4.7/16, mb5.1/6, mB5.2/6, MLv4.6/16, Mw(mB)4.5/6*

NEIC ***09*** *00:03:59.6±1.7, 1°.14S±0°.05×127°.44E±0°.04, h51^{km}±7^{km}, mb4.8/44, Error ellipse: s-maj=9.2km s-min=2.6km az=139.0*

IDC ***09*** *00:04:00.7±1.9, 1°.17S×127°.41E, h54^{km}±17^{km}, mb4.3/22, mb1 4.4/26, mb1mx4.2/53, mbtmp4.6/26, ML4.3/4, MS3.6/5, Ms1 3.6/5, ms1mx3.2/41, Error ellipse: s-maj=13.8km s-min=8.4km az=66.0*

ISC 09 00:03:58.2±0.3**, 1°.15S**±0°.04×**127°.41E**±0°.05**, h31^{km}, n147,** σ**1^{s}.27**/154**, mb4.8**/64**, 6C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**1.68**	**238**	P	**Pn**	**00 04 23.7**	**-1.8**
SANI				S	**Sb**	**00 04 48.4**	**-0.9**
TNTI	**Ternate**	**1.90**	**359**		**Pn**	**00 04 28.5**	**-0.1**
TNTI	**Ternate**	**1.90**	**359**	P	**Pn**	**00 04 28.4**	**-0.1**
TNTI				S	**Sb**	**00 04 53.8**	**-1.9**
NLAI	**Namlea**	**2.10**	**189**	P	**Pn**	**00 04 31.4**	**+0.1**
NLAI				S	**Sn**	**00 04 57.6**	**+1.2**
MSAI	**Masohi**	**2.66**	**145**	P	**Pn**	**00 04 42.0**	**+3.1**
MSAI				S	**Sb**	**00 05 15.8**	**-1.6**
KMSI	**Cibinong**	**3.83**	**296**	P	**Pn**	**00 04 54.5**	**-0.6**
SWI	**Sorong**	**3.86**	**86**	P	**Pn**	**00 04 56.8**	**+1.4**
SIJI	**Sorong**	**3.86**	**86**	P	**Pn**	**00 04 57.5**	**+2.0**
	22nm,0.3s,baz=252,slow=23,SNR=21						
SIJI				S	**Sn**	**00 05 43.2**	**+3.3**
	3.5nm,0.3s,baz=75,slow=20,SNR=1.2						
SIJI				LR	LR	00 06 31.1	
	comp=Z,386nm,21.3s,baz=219,slow=39						
LUWI	**Luwuk**	**4.64**	**271**	Pn	**Pn**	**00 05 05.4**	**-0.7**
LUWI	**Luwuk**	**4.64**	**271**	P	**Pn**	**00 05 05.7**	**-0.5**
FAKI	**Fak Fak**	**5.14**	**110**	Pn	**Pn**	**00 05 13.0**	**-0.1**
FAKI	**Fak Fak**	**5.14**	**110**	P	**Pn**	**00 05 13.2**	**+0.1**
	0.6nm2µm163nm,0.9s						
MRSI	**Marisa**	**5.70**	**286**	P	**Pn**	**00 05 20.6**	**-0.2**
	1.0nm2µm66nm,0.6s						
APSI	**Ampana**	**5.77**	**272**	P	**Pn**	**00 05 21.4**	**-0.3**
	2.4nm7µm535nm,0.5s						
TOLI2	**Tolitoli**	**7.00**	**289**	Pn	**Pn**	**00 05 40.2**	**+1.6**
MPSI	**Mapaga**	**7.66**	**281**	P	**Pn**	**00 05 48.1**	**+0.5**
	0.2nm540nm31nm,0.7s						
SPSI	**Sidrap Palu**	**8.13**	**250**	P	**Pn**	**00 05 55.8**	**+1.6**
KAPI	**Kappang**	**8.56**	**243**	P	**Pn**	**00 06 02.5**	**+2.4**
	7.3nm,0.3s,baz=89,slow=8.0,SNR=6.5						
KAPI	**Kappang**	**8.56**	**243**		**Pn**	**00 06 02.4**	**+2.3**
BKB	**Balikpapan**	**10.51**	**269**	Pn	**Pn**	**00 06 27.2**	**+0.3**
MYLDM	**Lahad Datu**	**10.90**	**305**		**Pn**	**00 06 33.9**	**+1.8**
MTN	**Manton Dam**	**12.19**	**163**	Pn	**Pn**	**00 06 50.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**16.94**	**186**	P	**P**	**00 07 54.1**	**-0.5**
	0.2nm,0.3s,baz=10,slow=14,SNR=1.4						
FITZ				LR	LR	00 15 35.5	
	comp=Z,103nm,19.6s,baz=352,slow=41						
KSM	**Kuching**	**17.30**	**279**	Pn	**Pn**	**00 07 57.3**	**-0.2**
WB0	**Warramunga Arr**	**19.73**	**160**	P	**P**	**00 08 25.6**	**+0.2**
WRAB	**Tennant Creek**	**19.87**	**160**	P	**P**	**00 08 26.3**	**-0.6**
WRA	**Warramunga Arr**	**19.87**	**161**	P	**P**	**00 08 26.1**	**-0.9**
	1.6nm,0.3s,baz=341,slow=12,SNR=24						
WRA				S	**S**	**00 12 07.8**	**-1.4**
	0.2nm,0.3s,baz=344,slow=21,SNR=2.6						
WRA	**Warramunga Arr**	**19.87**	**161**	P	**P**	**00 08 26.3**	**-0.7**
WB2	**Warramunga Arr**	**19.88**	**160**	P	**P**	**00 08 26.7**	**-0.3**
WR0	**Warramunga Arr**	**19.96**	**160**	P	**P**	**00 08 27.4**	**-0.5**
COEN	**Coen**	**20.13**	**130**		**P**	**00 08 29.2**	**-0.7**
COEN				IAmb	IAmb	00 08 32.3	
	comp=Z,57nm,1.1s						
PMG	**Port Moresby**	**21.29**	**113**	LR	LR	00 19 25.5	
	comp=Z,174nm,18.1s,baz=257,slow=44						
ASAR	**Alice Springs**	**23.26**	**165**	P	**P**	**00 09 02.4**	**-0.8**
	comp=Z,7.1nm,0.7s,baz=345,slow=10,SNR=53						
ASAR				PcP	**PcP**	**00 12 50.2**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=353,slow=2.3,SNR=4.6						
ASAR				S	**S**	**00 13 12.2**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=350,slow=20,SNR=4.7						
ASAR	**Alice Springs**	**23.26**	**165**	P	**P**	**00 09 01.7**	**-1.4**
TPUB	**Ta-pu**	**25.18**	**345**	P	**P**	**00 09 21.5**	**+0.5**
SSLB	**Suanglung**	**25.57**	**346**	P	**P**	**00 09 23.5**	**-1.1**
YHNB	**Yeheng**	**26.32**	**348**	P	**P**	**00 09 31.4**	**0.0**
YHNB				IAmb	IAmb	00 09 36.3	
	comp=Z,52nm,1.1s						
RPSI	**Rantau Prapat**	**28.73**	**278**	P	**P**	**00 09 53.5**	**+0.4**
PSI	**Prapat**	**28.75**	**278**	P	**P**	**00 09 53.5**	**+0.1**
	comp=Z,5.0nm,0.6s,baz=179,slow=3.1,SNR=5.2						
PSI				LR	LR	00 22 35.8	
	comp=Z,233nm,18.5s,baz=271,slow=39						
FORT	**Forrest**	**29.48**	**179**	P	**P**	**00 09 59.4**	**-0.1**
FORT				IAmb	IAmb	00 10 09.0	
	comp=Z,26nm,0.8s						
GSI	**Gunungsitoli**	**29.93**	**275**	P	**P**	**00 10 04.0**	**+0.2**
GSI				IAmb	IAmb	00 10 06.1	
	comp=Z,21nm,0.6s						
STKA	**Stephens Creek**	**33.37**	**158**	P	**P**	**00 10 33.9**	**+0.1**
	comp=Z,7.5nm,0.8s,baz=328,slow=8.2,SNR=10						
STKA	**Stephens Creek**	**33.37**	**158**	P	**P**	**00 10 34.8**	**+1.0**
WHN	**Wuhan**	**33.88**	**340**	⇑P	**P**	**00 10 40.3**	**+2.1**
WHN				pmax	pmax		
	comp=Z,56nm,0.9s						
WHN	**Wuhan**	**33.88**	**340**	⇑P	**P**	**00 10 40.3**	**+2.1**
WHN				pmax	pmax		
	comp=Z,56nm,0.9s						
GYA	**Guiyang**	**33.97**	**325**	*e*P	**P**	**00 10 40.5**	**+1.3**
GYA				pP	sP	00 11 09.5	+18
GYA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GYA				pmax	pmax		
	comp=Z,220nm,5.4s						
GYA	**Guiyang**	**33.97**	**325**	*e*P	**P**	**00 10 40.5**	**+1.3**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GYA				pmax	pmax		
	comp=Z,220nm,5.4s						
NJ2	**Nanjing**	**34.00**	**347**	*e*P	**P**	**00 10 40.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NJ2	**Nanjing**	**34.00**	**347**	*e*P	**P**	**00 10 40.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
CMAR	**Chiang Mai Arr**	**34.11**	**306**	P	**P**	**00 10 40.7**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=136,slow=7.3,SNR=5.3						
KMI	**Kunming**	**35.39**	**319**	⇑P	**P**	**00 10 55.1**	**+3.4**
KMI				sP	sP	00 11 11.2	+7.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI	**Kunming**	**35.39**	**319**	⇑P	**P**	**00 10 55.1**	**+3.4**
KMI				sP	sP	00 11 11.2	+7.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARMA	**Armidale**	**37.09**	**144**	P	**P**	**00 11 03.5**	**-2.5**
ARMA				IAmb	IAmb	00 11 20.9	
	comp=Z,13nm,1.2s						
JGF	**Kuroka**	**37.72**	**13**	P	**P**	**00 11 08.1**	**-3.0**
KSRS	**Korea Array**	**38.41**	**1**	P	**P**	**00 11 17.3**	**+0.5**
	comp=Z,4.6nm,0.7s,baz=176,slow=9.8,SNR=15						
KS19	**Wonju Array Si**	**38.46**	**1**	P	**P**	**00 11 16.5**	**-0.8**
KS19				IAmb	IAmb	00 11 17.4	
	comp=Z,15nm,1.1s						
MAJO	**Matsushiro**	**38.82**	**14**	P	**P**	**00 11 18.8**	**-1.6**
MJAR	**Matsushiro Arr**	**38.82**	**14**	P	**P**	**00 11 19.4**	**-0.9**
	comp=Z,1.6nm,0.4s,baz=198,slow=11,SNR=4.9						
MJAR	**Matsushiro Arr**	**38.82**	**14**	IAmb	IAmb	00 11 23.7	
	comp=Z,2.2nm,0.7s						
XAN	**Xi'an**	**39.08**	**335**	P	**P**	**00 11 22.7**	**+0.1**
XAN				pP	sP	00 11 35.3	+0.2
XAN				pmax	pmax		
	comp=Z,30nm,0.7s						
XAN				pmax	pmax		
	comp=Z,220nm,6.1s						
XAN	**Xi'an**	**39.08**	**335**	P	**P**	**00 11 22.7**	**+0.1**
XAN				pP	sP	00 11 35.3	+0.2
XAN				pmax	pmax		
	comp=Z,30nm,0.7s						
XAN				pmax	pmax		
	comp=Z,220nm,6.1s						
XAN	**Xi'an**	**39.08**	**335**	P	**P**	**00 11 21.3**	**-1.2**
XAN				IAmb	IAmb	00 11 23.6	
	comp=Z,19nm,0.6s						
LZH	**Lanzhou**	**43.06**	**332**	⇑P	**P**	**00 11 57.3**	**+1.8**
LZH				pP	sP	00 12 11.0	+3.0
LZH				sP	pP	00 12 15.0	+11
LZH				PP	**PP**	**00 13 40.4**	**+4.5**
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=N,230nm,15.4s						
LZH				LR	LR		
	comp=E,240nm,15.6s						
LZH				LR	LR		
	comp=Z,370nm,18.0s						
LZH	**Lanzhou**	**43.06**	**332**	⇑P	**P**	**00 11 57.3**	**+1.8**
LZH				pP	sP	00 12 11.0	+3.0
LZH				sP	pP	00 12 15.0	+11
LZH				PP	**PP**	**00 13 40.4**	**+4.5**
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=Z,230nm,15.4s						
LZH				LR	LR		
	comp=Z,240nm,15.6s						
LZH				LR	LR		
	comp=Z,370nm,18.0s						
HHC	**Hu-ho-hao-te**	**44.22**	**343**	*e*P	**P**	**00 12 05.4**	**+0.7**
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,100nm,7.1s						
HHC	**Hu-ho-hao-te**	**44.22**	**343**	*e*P	**P**	**00 12 05.4**	**+0.7**
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,100nm,7.1s						
USRK	**Ussuriysk Ar.**	**45.33**	**5**	P	**P**	**00 12 13.4**	**+0.1**
	comp=Z,8.7nm,0.5s,baz=178,slow=6.8,SNR=44						
MDJ	**Mudanjiang**	**45.60**	**2**	P	**P**	**00 12 15.7**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,13nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,260nm,3.3s						
LSA	**Lhasa**	**46.24**	**315**	P	**P**	**00 12 21.2**	**-0.1**
LSA				IAmb	IAmb	00 12 23.9	
	comp=Z,8.1nm,0.9s						
TAPN	**Taplejung**	**47.54**	**310**	*e*P	**P**	**00 12 31.7**	**+0.4**
	comp=Z,30nm,0.7s						
ODAN	**Odare**	**47.54**	**309**	*e*P	**P**	**00 12 31.9**	**+0.6**
	comp=Z,28nm,0.6s						
GTA	**Gaotai**	**47.63**	**331**	P	**P**	**00 12 32.5**	**+0.8**
GTA				pP	sP	00 12 44.4	+0.1
GTA				sP	pP	00 12 49.7	+9.0
GTA				PcP	**PcP**	**00 14 02.0**	**+1.0**
GTA				pmax	pmax		
	comp=Z,17nm,0.8s						
RAMN	**Ramite**	**48.20**	**309**	*e*P	**P**	**00 12 37.4**	**+1.0**
	comp=Z,53nm,0.6s						
GUN	**Gumba**	**49.22**	**309**	*e*P	**P**	**00 12 45.0**	**+0.6**
	comp=Z,34nm,0.6s						
PKI	**Pulchoki**	**49.43**	**309**	*e*P	**P**	**00 12 46.1**	**+0.2**
	comp=Z,13nm,0.6s						
KKN	**Kakani**	**49.63**	**309**	*e*P	**P**	**00 12 47.8**	**+0.4**
	comp=Z,20nm,0.6s						
DMN	**Daman**	**49.68**	**308**	*e*P	**P**	**00 12 48.5**	**+0.7**
	comp=Z,26nm,0.8s						
DANN	**Dangsing**	**51.08**	**309**	*e*P	**P**	**00 12 59.0**	**+0.6**
	comp=Z,89nm,0.6s						
HYB	**Hyderabad**	**51.53**	**293**	*i* P	**P**	**00 13 01.5**	**-0.1**
ULN	**Ulaanbaatar**	**51.94**	**343**	P	**P**	**00 13 04.0**	**-0.4**
ULN				IAmb	IAmb	00 13 05.6	
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**52.11**	**342**	P	**P**	**00 13 05.8**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=154,slow=8.3,SNR=12						
SONM				PcP	**PcP**	**00 14 17.4**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=144,slow=3.4,SNR=2.2						
SONM	**Songino Array**	**52.11**	**342**	P	**P**	**00 13 05.2**	**-0.3**
WMQ	**Urumqi**	**57.11**	**327**	*e*P	**P**	**00 13 43.1**	**+1.2**
PETK	**Petropavlovsk-**	**59.69**	**21**	P	**P**	**00 14 00.2**	**+0.6**
	comp=Z,3.8nm,0.7s,baz=180,slow=5.6,SNR=5.1						
PETK	**Petropavlovsk-**	**59.69**	**21**	P	**P**	**00 13 57.6**	**-2.0**
ZSN	**Zaisan**	**60.97**	**328**	*e*P	**P**	**00 14 07.1**	**-1.3**
	comp=Z,2.2nm,1.0s,baz=328						
NIL	**Nilore**	**61.49**	**310**	P	**P**	**00 14 11.1**	**-1.2**
NIL				IAmb	IAmb	00 14 19.4	
	comp=Z,6.4nm,0.9s						
SHLS	**Shalkode**	**61.54**	**322**	*e*P	**P**	**00 14 10.4**	**-2.2**
	comp=Z,4.5nm,0.8s,baz=322						
PRZ	**Przheval'sk**	**61.85**	**321**	P	**P**	**00 14 14.6**	**-0.2**
MK31	**Makanchi Array**	**61.95**	**327**	P	**P**	**00 14 15.3**	**+0.1**
MKAR	**Makanchi Array**	**61.95**	**327**	P	**P**	**00 14 15.3**	**+0.2**
	comp=Z,11nm,0.4s,baz=115,slow=7.9,SNR=246						
MKAR				PcP	**PcP**	**00 14 54.0**	**-1.6**
	comp=Z,2.9nm,0.7s,baz=151,slow=4.7,SNR=3.9						
MKAR	**Makanchi Array**	**61.95**	**327**	P	**P**	**00 14 15.1**	**0.0**
KSH	**Kashi**	**62.00**	**317**	P	**P**	**00 14 17.3**	**+1.6**
KSH				pmax	pmax		
	comp=Z,18nm,0.9s						
KSH				pmax	pmax		
	comp=Z,390nm,7.7s						
MAKZ	**Makanchi**	**62.13**	**326**	P	**P**	**00 14 16.4**	**+0.1**
KPKS	**Kokpek**	**62.19**	**322**	*e*P	**P**	**00 14 16.8**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=322						
KDJ	**Kajisay**	**62.45**	**320**	P	**P**	**00 14 17.8**	**-1.0**
KDJ				IAmb	IAmb	00 14 20.1	
	comp=Z,7.7nm,0.6s						
YAK	**Yakutsk**	**63.03**	**1**	P	**P**	**00 14 21.5**	**-0.5**
MDOK	**Medeo**	**63.05**	**321**	*e*P	**P**	**00 14 22.8**	**+0.1**
	baz=321						
TNSS	**Tian-Shan**	**63.06**	**321**	*e*P	**P**	**00 14 23.5**	**+0.4**
	baz=321						
AAA	**Alma-Ata**	**63.16**	**321**	*e*P	**P**	**00 14 24.1**	**+0.7**
	comp=Z,7.1nm,0.8s,baz=321						
CHKK	**Chushkaly**	**63.44**	**321**	*e*P	**P**	**00 14 24.7**	**-0.4**
	baz=321						
TKM2	**Tokmak 2**	**63.86**	**320**	P	**P**	**00 14 28.8**	**+0.6**
	SNR=11						
KUU	**Kurty**	**63.87**	**321**	*e*P	**P**	**00 14 27.9**	**0.0**
	comp=Z,14nm,0.6s,baz=321						
UCH	**Uchtor**	**64.24**	**319**	P	**P**	**00 14 32.3**	**+1.4**
	SNR=10.0						
AAK	**Ala-Archa**	**64.44**	**319**	P	**P**	**00 14 32.4**	**+0.5**
USP	**Ospenovka**	**64.73**	**320**	P	**P**	**00 14 34.1**	**+0.4**
	SNR=15						
AML	**Almayashu**	**64.73**	**318**	P	**P**	**00 14 35.0**	**+0.9**
	SNR=11						
SGDS	**Sogindy**	**64.74**	**320**	*e*P	**P**	**00 14 33.3**	**-0.4**

	baz=320						
DRK	Karamyk	64.88	315	P	P	00 14 34.3	-0.7
DRK				IAmb	IAmb	00 14 36.8	
	comp=Z,5.1nm,0.7s						
EKS2	Erkin-Say	64.92	319	P	P	00 14 35.8	+0.8
	SNR=8.6						
KBL	Kabul	65.06	309	P	P	00 14 35.7	-0.5
KBL				IAmb	IAmb	00 14 37.0	
	comp=Z,7.4nm,0.8s						
SEM	Semipalatinsk	65.18	329	*e*P	P	00 14 35.1	-1.6
	baz=329						
ZALV	Zalesovo Beam	65.22	334	P	P	00 14 35.7	-0.9
	comp=Z,3.0nm,0.8s,baz=113,slow=5.0,SNR=7.6						
ZALV	Zalesovo Beam	65.22	334	P	P	00 14 35.3	-1.2
BTLS	Baital	65.86	321	*e*P	P	00 14 40.1	-0.8
	baz=321						
KURBB	Kurchatov Arra	66.20	328	P	P	00 14 42.7	-0.3
	comp=Z,12nm,0.6s,baz=131,slow=6.2,SNR=90						
KURK	Kurchatov	66.21	328	P	P	00 14 42.7	-0.2
DZA	Taraz	66.64	318	*e*P	P	00 14 45.8	-0.1
	comp=Z,4.8nm,0.7s,baz=318						
IUG	Iuzhnay	67.20	317	*e*P	P	00 14 49.1	-0.5
	comp=Z,4.4nm,0.7s,baz=317						
KK31	Karatay Array	67.27	318	P	P	00 14 49.4	-0.6
KK31				IAmb	IAmb	00 14 50.8	
	comp=Z,6.6nm,0.9s						
KKAR	Karatay Array	67.27	318	P	P	00 14 48.7	-1.3
KKAR	Karatay Array	67.27	318	IAmb	IAmb	00 14 50.8	
	comp=Z,6.6nm,0.9s						
BRZS	Berezniki	69.05	326	*e*P	P	00 15 00.3	-0.7
	baz=326						
WSAR	Wadi Sarin	71.03	295	P	P	00 15 13.6	-0.1
	comp=Z,4.1nm,0.7s,baz=121,slow=5.5,SNR=6.2						
BVAR	Borovoye Array	71.77	328	P	P	00 15 16.9	-0.6
	comp=Z,1.3nm,0.5s,baz=90,slow=1.6,SNR=14						
BRVK	Borovoye	71.84	328	P	P	00 15 17.7	-0.2
BRVK				IAmb	IAmb	00 15 18.4	
	comp=Z,17nm,1.1s						
RER	Riviere de l'E	72.50	248	P	P	00 15 20.2	-2.5
TIXI	Tiksi	72.68	0	P	P	00 15 21.0	-1.5
TIXI				IAmb	IAmb	00 15 23.6	
	comp=Z,6.4nm,0.5s						
GEYT	Alibeck	74.49	310	P	P	00 15 33.9	0.0
	comp=Z,4.5nm,0.8s,baz=120,slow=5.8,SNR=7.1						
GEYT	Alibeck	74.49	310	P	P	00 15 34.5	+0.6
GYA0B	ALIBECK ARRAY	74.49	310	P	P	00 15 33.0	-1.0
NRIK	Noril'sk	75.30	346	P	P	00 15 38.0	+0.2
	comp=Z,14nm,0.6s,baz=127,slow=6.2,SNR=32						
NRIK	Noril'sk	75.30	346	IAmb	IAmb	00 15 38.8	
	comp=Z,16nm,0.7s						
ABKAR	Akbulak array	76.35	321	P	P	00 15 43.5	-0.9
ABKAR	Akbulak array	76.35	321	IAmb	IAmb	00 15 44.2	
	comp=Z,5.2nm,0.7s						
VNDA	Vanda	78.54	173	P	P	00 15 56.8	+0.7
	comp=Z,1.6nm,0.8s,baz=320,slow=6.4,SNR=4.9						
VNDA				LR	LR	00 48 54.6	
	comp=Z,62nm,19.5s,baz=335,slow=34						
ARU	Arti	79.40	328	P	P	00 15 59.6	-1.5
ARU				IAmb	IAmb	00 16 00.8	
	comp=Z,6.8nm,0.7s						
OPO	Ambohidratompo	80.37	251	P	P	00 16 07.9	+0.5
	comp=Z,5.1nm,0.8s,baz=93,slow=8.8,SNR=3.7						
KIRV	Kirov	84.72	329	P	P	00 16 28.9	0.0
	comp=Z,15nm,0.7s,baz=156,slow=1.2,SNR=8.7						
SYO	Syowa Base	88.15	201⇓	*e*PcP	PcP	00 16 49.0	+1.6
QSPA	South Pole Qui	88.79	180	P	P	00 16 49.2	+0.3
	comp=Z,2.1nm,0.5s,baz=279,slow=2.3,SNR=3.8						
ILAR	Eielson Array	89.19	25	P	P	00 16 49.1	-1.5
	comp=Z,0.5nm,0.6s,baz=233,slow=5.4,SNR=12						
ILAR				LR	LR	00 50 32.3	
	comp=Z,550nm,21.9s,baz=182,slow=31						
N25K	Chitina, Valde	90.04	29	P	P	00 16 49.8	-5.0
ARCES	ARCESS Array B	95.23	340	P	P	00 17 16.7	-1.8
	comp=Z,2.9nm,0.7s,baz=89,slow=5.5,SNR=7.4						
TXAR	Lajitas Array	123.93	55	PKP	PKiKP	00 22 55.1	+0.7
	comp=Z,0.2nm,0.7s,baz=189,slow=3.2,SNR=3.4						
TORD	Torodi Ar. Bea	124.96	285	PKP	PKPdf	00 22 55.9	-0.4
	comp=Z,1.5nm,0.8s,baz=80,slow=2.3,SNR=5.6						
CPUP	Villa Florida	152.30	171	PKPbc	PKiKP	00 23 52.2	+0.2
	comp=Z,2.1nm,0.6s,baz=170,slow=1.6,SNR=4.6						

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*IDC **09** 00:04:54.0±0.5, 54.°11S×133.°24W, h0^{km}, mb4.4/12, mb1 4.6/12, mb1mx4.4/33, mbtmp4.4/12, MS4.8/16, Ms1 4.7/16, ms1mx4.7/21, Error ellipse: s-maj=22.8km s-min=16.3km az=150.0*

*NEIC **09** 00:04:55.9±2.3, 54.°2S±0.°1×134.°0W±0.°2, h10^{km}±1^{km}, mb5.1/98, Error ellipse: s-maj=19.6km s-min=16.4km az=359.0*

*GCMT **09** 00:04:57.9±0.2, 54.°29S±0.°01×132.°91W±0.°01, h13^{km}±1^{km}, MW5.3/132, Moment Tensor Solution. s50,c70; s132,c220; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$0.89±.03; $M_{\phi\phi}$-0.74±.02; $M_{r\theta}$0.10±.05; $M_{\theta\phi}$0.72±.02; $M_{\phi r}$0.24±.06; Best double couple: $M_0$1.11900×10^{17} NP1:ϕ_s114.00000°, δ76.00000°, λ-3.00000°. NP2:ϕ_s205.00000°, δ87.00000°, λ-166.00000°. Principal axes: T 1.1860, Plg8.0000°, Azm339.0000°; N -0.1350, Plg76.0000°, Azm217.0000°; P -1.0510, Plg12.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **09** 00:04:58.0±0.0, 54.°00S×134.°20W, h20^{km}, mB5.5/1, Ms5.4/4, Ms7 5.1/4*

ISC 09 00:04:55.8±0.3**, 54.°14S**±0.°08×**133.°99W**±0.°07**, h10**^{km}**, n196,** σ1^s**48**/164**, mb5.0**/58**, MS4.9**/23**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	32.33	201	P	P	00 11 27.1	+2.7
	3.1nm,1.1s,baz=77,slow=9.2,SNR=6.9						
VNDA				LR	LR	00 21 27.8	
	comp=Z,664nm,19.3s,baz=84,slow=31						
VNDA	Vanda	32.33	201	P	P	00 11 25.6	+1.1
RPN	Rapa Nui	32.51	44	LR	LR	00 20 59.0	
	comp=Z,1μm,20.5s,baz=214,slow=30						
TBI	Tubuai	32.88	333	*e*S	S	00 16 47.4	+0.3
	227nm,27.8s						
TBI				*e*LR	LR	00 20 02.7	
	comp=Z,5μm,28.2s,baz=165						
TBI	Tubuai	32.88	333	*e*T	T	00 46 13.7	
	149nm,0.3s						
PMSA	Palmer Station	35.21	136	LR	LR	00 22 02.2	
	comp=Z,2μm,20.0s,baz=250,slow=29						
PMSA	Palmer Station	35.21	136	P	P	00 11 46.7	-2.9
PMSA				IAmb	IAmb	00 12 05.5	
	comp=Z,29nm,1.2s						
QSPA	South Pole Qui	36.03	180	P	P	00 11 57.3	+0.4
	comp=Z,16nm,1.0s,baz=85,slow=4.9,SNR=23						
QSPA	South Pole Qui	36.03	180	P	P	00 11 57.5	+0.6
ODZ	Otahua Downs	36.16	261	P	P	00 11 58.9	+0.8
OXZ	Oxford	36.35	265	P	P	00 11 56.6	-3.1
GO09	Cerro Castillo	36.43	111	P	P	00 12 01.6	+1.3
GO09				IAmb	IAmb	00 12 09.8	
	comp=Z,46nm,1.5s						
RPZ	Rata Peaks	36.70	263	P	P	00 12 02.3	-0.4
RPZ				IAmb	IAmb	00 12 09.6	
	comp=Z,36nm,1.4s						
MG01	Puerto William	37.20	119	P	P	00 12 10.5	+3.7
MG01				IAmb	IAmb	00 12 21.4	
	comp=Z,21nm,0.9s						
WKZ	Wanaka	37.23	260	P	P	00 12 04.9	-2.3
WKZ				IAmb	IAmb	00 12 14.7	
	comp=Z,46nm,1.1s						
WHZ	Wether Hill Ro	37.24	258	P	P	00 12 05.7	-1.6
MLZ	Mavora Lakes	37.44	259	P	P	00 12 06.1	-2.9
MLZ				IAmb	IAmb	00 12 07.9	
	comp=Z,60nm,1.4s						
QRZ	Quartz Range	37.60	268	P	P	00 12 10.9	+0.6
QRZ				IAmb	IAmb	00 12 22.2	
	comp=Z,37nm,1.5s						
PYZ	Puysegur Point	37.82	257	P	P	00 12 10.6	-1.4
TIAR	Tiarei	38.40	336	*e*T	T	00 53 05.7	
	comp=Z,1.4nm,0.2s						
PPT2	Papeete2	38.42	336	*e*S	S	00 18 10.0	-2.4
	comp=Z,422nm,25.2s						
PPT2				*e*LR	LR	00 22 48.0	
	comp=Z,5μm,25.5s,baz=168						
PPT	Papeete	38.44	336	LR	LR	00 24 03.1	
	comp=Z,2μm,19.5s,baz=174,slow=30						
BELA	Belgrano 2	39.64	161	P	P	00 12 26.9	-0.2
VAH	Vaihoa	40.26	339	*e*T	T	00 55 23.3	
	comp=Z,38nm,0.2s						
H03S2	Juan Fernandez	43.23	85	T	T	00 58 35.8	
	baz=222,slow=74,SNR=86						
H03S1	Juan Fernandez	43.24	85	T	T	00 58 30.7	
	baz=222,slow=74,SNR=79						
H03S3	Juan Fernandez	43.25	85	T	T	00 58 36.1	
	baz=222,slow=74,SNR=97						
PLCA	Paso Flores	43.49	99	P	P	00 12 54.3	-4.8
	comp=Z,2.9nm,1.0s,baz=206,slow=6.2,SNR=2.6						
PLCA				LR	LR	00 26 21.7	
	comp=Z,1μm,19.6s,baz=228,slow=30						
H03N3	Juan Fernandez	43.50	85	T	T	00 58 46.4	
	baz=226,slow=72,SNR=134						
H03N2	Juan Fernandez	43.51	85	T	T	00 58 49.2	
	baz=226,slow=72,SNR=190						
H03N1	Juan Fernandez	43.52	85	T	T	00 58 39.4	
	baz=226,slow=72,SNR=124						
TAOE	Nuku Hiva Isla	45.43	351	*e*LR	LR	00 25 56.6	
	comp=Z,3μm,24.9s						
BO02	Sierra Bellavi	47.35	93	P	P	00 13 29.0	-0.7
BO02				IAmb	IAmb	00 13 31.9	
	comp=Z,10nm,0.8s						
MT05	Renca	48.36	91	P	P	00 13 38.2	+0.7
ROC1	El Roble	48.49	91	P	P	00 13 37.4	-1.4
PEL	Peldehue	48.57	91	P	P	00 13 34.3	-4.9
VA03	San Esteban	48.92	91	P	P	00 13 36.8	-5.1
VA03				IAmb	IAmb	00 13 45.5	
	comp=Z,22nm,0.9s						
VNA2	Neumayer--Watz	49.59	160	P	P	00 13 42.7	-3.7
	baz=205,slow=9.5						
VNA1	Neumayer--Stat	49.62	159	P	P	00 13 45.2	-1.4
CO02	Combarbal	49.77	89	P	P	00 13 49.2	+0.7
AFI	Afiamalu	49.86	309	P	P	00 13 45.0	-4.2
SNAA	Sanae	49.87	162	P	P	00 13 45.3	-3.3
SNAA	Sanae	49.87	162	P	P	00 13 46.2	-2.4
CO03	El Pedregal	50.22	89	P	P	00 13 49.6	-2.3
CO03				IAmb	IAmb	00 13 56.1	
	comp=Z,24nm,1.1s						
CASY	Casey	50.43	208	P	P	00 13 51.9	-0.9
GO04	Tololo Observa	50.64	88	P	P	00 13 50.8	-4.5
ZON	Zonda	50.89	91	P	P	00 13 57.7	+0.8
MSVF	Nonsavu	51.66	296	P	P	00 14 03.1	+0.4
AC05	El Transito	51.93	88	P	P	00 14 05.1	+0.3
GO03	Copiap	52.88	87	P	P	00 14 13.5	+1.7
AC02	Maricunga	54.10	87	P	P	00 14 21.7	+0.5
AC02				IAmb	IAmb	00 14 25.6	
	comp=Z,24nm,1.4s						
DZM	Mont Dzumac	54.65	281	*e*LR	LR	00 30 36.8	
	comp=Z,1μm,28.8s						
CAN	Canberra	55.00	257	P	P	00 14 29.0	+1.8
PB15	IPOC Station P	56.65	84	P	P	00 14 38.3	-1.0
LVC	Limon Verde	57.44	84	LR	LR	00 32 35.9	
	comp=Z,373nm,18.1s,baz=213,slow=29						
LVC	Limon Verde	57.44	84	P	P	00 14 46.8	+1.7
LVC				IAmb	IAmb	00 14 49.6	
	comp=Z,33nm,1.4s						
MAW	Mawson	57.92	188	P	P	00 14 48.0	+0.6
	comp=Z,5.1nm,0.9s,baz=182,slow=9.2,SNR=2.8						
MAW				LR	LR	00 38 32.7	
	comp=Z,435nm,19.2s,baz=184,slow=35						
PB01	IPOC Station P	58.32	82	P	P	00 14 52.4	+1.5
PB01				IAmb	IAmb	00 14 55.4	
	comp=Z,15nm,1.1s						
PSGCX	Pisagua	59.08	81	P	P	00 14 57.9	+1.7
PSGCX				IAmb	IAmb	00 15 01.2	
	comp=Z,29nm,1.4s						
MNMC	Minye Minye	59.75	81	P	P	00 15 01.9	+0.8
PB16	IPOC Station P	60.42	80	P	P	00 15 07.6	+1.5
EIDS	Eidsvold	61.12	266	P	P	00 15 09.6	-0.5
EIDS				IAmb	IAmb	00 15 16.3	
	comp=Z,12nm,1.1s						
NNA	Nana	61.37	69	P	P	00 15 08.3	-3.6
	comp=Z,8.1nm,0.7s,baz=189,slow=13,SNR=2.0						
NNA				LR	LR	00 35 06.3	
	comp=Z,2μm,19.0s,baz=276,slow=30						
NNA	Nana	61.37	69	P	P	00 15 13.0	+1.1
CPUP	Villa Florida	61.41	96	LR	LR	00 37 07.0	
	comp=Z,1μm,20.9s,baz=219,slow=32						
STKA	Stephens Creek	61.73	254	P	P	00 15 16.8	+2.6
	comp=Z,7.6nm,1.0s,baz=139,slow=9.6,SNR=5.5						
STKA				LR	LR	00 37 58.0	
	comp=Z,853nm,19.3s,baz=151,slow=32						
STKA	Stephens Creek	61.73	254	P	P	00 15 13.7	-0.4
ATAH	Atahualpa	64.55	65	P	P	00 15 31.8	-1.7
	comp=Z,3.6nm,0.7s,baz=209,slow=8.5,SNR=8.2						
SIV	San Ignacio	67.19	86	P	P	00 15 45.9	-4.2
	comp=Z,2.9nm,0.8s,baz=250,slow=12,SNR=4.1						
SIV				LR	LR	00 39 29.3	
	comp=Z,281nm,18.9s,baz=240,slow=31						
OTAV	Otavalo	70.76	61	P	P	00 16 10.7	-2.0
OTAV				IAmb	IAmb	00 16 17.5	
	comp=Z,27nm,1.4s						
OTAV	Otavalo	70.76	61		P	00 16 11.2	-1.5
ASAR	Alice Springs	72.37	254	P	P	00 16 23.7	+1.8
	comp=Z,7.0nm,0.9s,baz=135,slow=6.2,SNR=26						
ASAR				LR	LR	00 44 40.5	
	comp=Z,1μm,18.9s,baz=141,slow=33						
ASAR	Alice Springs	72.37	254	P	P	00 16 23.1	+1.2
AS31	Alice Springs	72.37	254	P	P	00 16 21.6	-0.3
H01W1	Cape Leeuwin H	73.72	233	T	T	01 38 20.5	
	baz=145,slow=76,SNR=42						
H01W2	Cape Leeuwin H	73.72	233	T	T	01 38 20.9	
	baz=145,slow=76,SNR=56						
H01W3	Cape Leeuwin H	73.73	233	T	T	01 38 21.8	
	baz=145,slow=76,SNR=44						
WRA	Warramunga Arr	75.05	257	P	P	00 16 39.5	+1.9
	comp=Z,5.0nm,0.9s,baz=146,slow=5.3,SNR=13						
WRA	Warramunga Arr	75.05	257	P	P	00 16 36.9	-0.8
BDFB	Brasilia	75.14	96	P	P	00 16 39.1	+0.8
JTS	Las Juntas de	76.34	50	P	P	00 16 44.5	-0.5
JTS				IAmb	IAmb	00 16 45.4	
	comp=Z,31nm,1.3s						
ROSC	El Rosal	76.80	62	LR	LR	00 44 05.5	
	comp=Z,642nm,20.1s,baz=234,slow=31						
ROSC	El Rosal	76.80	62	P	P	00 16 48.3	+0.2
ROSC				IAmb	IAmb	00 16 55.8	
	comp=Z,17nm,1.0s						
TGUH	Tegucigalpa,Un	78.68	46	P	P	00 16 57.0	-1.1
SDV	Santo Domingo	82.15	63	P	P	00 17 16.7	-0.2
HPIG		84.37	25	P	P	00 17 28.5	+0.4
HPIG				IAmb	IAmb	00 17 36.0	
	comp=Z,14nm,1.2s						
HSIG		85.18	20	P	P	00 17 32.6	+0.8
SPX	San Pedro Mart	86.33	16	P	P	00 17 38.5	+0.6
SPX				IAmb	IAmb	00 17 50.3	
	comp=Z,13nm,1.4s						
KVTX	Kingsville	87.12	32	P	P	00 17 41.4	-0.1
TX31	Lajitas Ar. Si	87.17	26	P	P	00 17 42.2	+0.4
TX32	Lajitas Array	87.17	26	P	P	00 17 42.2	+0.4
TXAR	Lajitas Array	87.17	26	P	P	00 17 40.6	-1.2
	comp=Z,1.3nm,0.9s,baz=186,slow=7.7,SNR=10						
TXAR				LR	LR	00 48 28.0	
	comp=Z,152nm,19.3s,baz=0.0,slow=30						
PIX	Pinacate	87.18	17	P	P	00 17 41.8	+0.2
ESJX	Sierra Juarez	87.20	15	P	P	00 17 41.5	-0.5
ESJX				IAmb	IAmb	00 17 50.2	
	comp=Z,13nm,1.3s						
CBX	Cerro Bola	87.39	15	P	P	00 17 43.4	+0.6
833A	Chaparral WMA,	87.40	30	P	P	00 17 43.6	+0.9
214A	Organ Pipe Nat	87.68	18	P	P	00 17 44.4	+0.3
	baz=192						
214A	Organ Pipe Nat	87.68	18	P	P	00 17 43.6	-0.5
214A				IAmb	IAmb	00 17 53.2	
	comp=Z,18nm,1.2s						
BAR	Barrett	87.75	15	IAmb	IAmb	00 17 53.4	
	comp=Z,9.8nm,1.1s						
RMX	La Rumorosa	87.77	15	P	P	00 17 44.1	-0.6
RMX				IAmb	IAmb	00 17 53.4	
	comp=Z,14nm,1.1s						
319A	Douglas	87.81	21	P	P	00 17 44.6	-0.2
IKP	In-Ko-Pah, Jac	87.81	15	P	P	00 17 44.9	+0.2
	baz=190						
MONP2	Monument Peak	88.00	15	P	P	00 17 46.0	+0.2
	baz=190						
GLA	Glamis	88.40	16	P	P	00 17 47.9	+0.3
GLA				IAmb	IAmb	00 17 56.8	
	comp=Z,11nm,1.1s						
TUC	Tucson	88.41	20	P	P	00 17 47.8	+0.2
	baz=193						
TUC	Tucson	88.41	20	P	P	00 17 47.9	+0.2
TUC				IAmb	IAmb	00 17 56.7	
	comp=Z,16nm,1.4s						
PFO	Pinyon Flats O	88.70	15	P	P	00 17 49.4	+0.4
	baz=190						
PFO	Pinyon Flats O	88.70	15	P	P	00 17 50.0	+1.0
PFO				IAmb	IAmb	00 17 58.3	
	comp=Z,20nm,1.4s						
XPFO	Pion Flat	88.70	15	P	P	00 17 49.6	+0.6
XPFO				IAmb	IAmb	00 17 58.3	
	comp=Z,22nm,1.4s						
BC3	Big Chuckawall	88.89	15	P	P	00 17 50.1	+0.2
	baz=191						
MNTX	Cornudas Mount	89.00	24	P	P	00 17 50.4	+0.1
	baz=196						
MNTX	Cornudas Mount	89.00	24	P	P	00 17 50.2	-0.1
MNTX				IAmb	IAmb	00 17 58.1	
	comp=Z,11nm,1.2s						
MWC	Mount Wilson	89.08	13	P	P	00 17 51.4	+0.6
MWC				IAmb	IAmb	00 18 04.1	
	comp=Z,23nm,1.4s						
BFSC	Mount Baldy Ra	89.14	13	P	P	00 17 51.6	+0.5
	baz=190						
BELC	Belle Mtn. Jos	89.15	15	P	P	00 17 51.5	+0.3
	baz=190						
121A	Cookes Peak, D	89.24	22	P	P	00 17 51.3	-0.4
121A				IAmb	IAmb	00 18 00.2	
	comp=Z,10nm,1.2s						
JCT	Junction City	89.31	29	P	P	00 17 53.0	+1.1
IRM	Iron Mountain	89.43	16	P	P	00 17 53.4	+1.1
	baz=191						
PKM	Mcpherson Peak	89.51	12	P	P	00 17 53.2	+0.4
	baz=188						
EDW2	Edwards Air Fo	89.73	13	P	P	00 17 53.9	+0.1
	baz=189						
HEC	Hector,Ludlow	89.91	14	P	P	00 17 54.8	+0.2
	baz=190						
GMRC	Granite Mounta	89.97	15	P	P	00 17 55.3	+0.4
	baz=191						
HKT	Hockley	90.00	32	P	P	00 17 56.2	+1.2
HKT				IAmb	IAmb	00 18 03.4	
	comp=Z,21nm,1.5s						
PAGB	Antelope Grade	90.29	11	P	P	00 17 57.7	+1.4
PAGB				IAmb	IAmb	00 18 10.9	
	comp=Z,12nm,1.0s						
GSC	Goldstone, Bar	90.31	14	P	P	00 17 57.0	+0.6
	baz=190						
GSC	Goldstone, Bar	90.31	14	IAmb	IAmb	00 18 05.6	
	comp=Z,8.5nm,1.1s						
SDDR	Presa de Saban	90.35	57	P	P	00 17 57.9	+0.9
LRMC	Laurel Mtn Rad	90.36	13	P	P	00 17 57.4	+0.6
	baz=190						
ISA	Isabella, Lake	90.44	13	P	P	00 17 57.4	+0.4
	baz=189						
ISA	Isabella, Lake	90.44	13	IAmb	IAmb	00 18 06.3	
	comp=Z,12nm,1.4s						
PMPB	Monarch Peak	90.71	11	P	P	00 17 59.0	+0.7
X18A	Snowflake	90.72	20	P	P	00 17 59.2	+0.7
X18A				IAmb	IAmb	00 18 08.2	
	comp=Z,16nm,1.5s						
MPMC	Manual Prospec	90.96	13	P	P	00 18 00.5	+0.9
	baz=190						
BNM	Barren Site	91.06	22	P	P	00 18 00.6	+0.4
SAO	San Andreas Ge	91.18	10	P	P	00 17 59.5	-0.8
SAO				IAmb	IAmb	00 18 09.7	
	comp=Z,10nm,1.2s						
CWC	Cottonwood Cre	91.25	13	P	P	00 18 01.4	+0.5
	baz=189						
WUAZ	Wupatki	91.41	18	P	P	00 18 02.2	+0.5
	baz=193						
WUAZ	Wupatki	91.41	18	P	P	00 18 02.3	+0.6
WUAZ				IAmb	IAmb	00 18 05.3	
	comp=Z,8.6nm,1.2s						
SHPR	Sheep Range	91.73	15	P	P	00 18 02.6	-0.6
SHPR				IAmb	IAmb	00 18 12.5	
	comp=Z,11nm,1.3s						
ANMO	Albuquerque	91.86	22	P	P	00 18 03.6	-0.2
	baz=196						
ANMO	Albuquerque	91.86	22	P	P	00 18 04.4	+0.6
TPNV	Topopah Spring	92.00	14	P	P	00 18 04.5	+0.1
	baz=190						
U15A	North Rim	92.13	17	IAmb	IAmb	00 18 12.6	
	comp=Z,8.9nm,1.0s						
OMMB	Old Mammoth Mi	92.30	12	IAmb	IAmb	00 18 19.1	
	comp=Z,14nm,1.4s						
MDPB	Devils Postpil	92.30	12	P	P	00 18 06.4	+0.5
MDPB				IAmb	IAmb	00 18 15.9	
	comp=Z,7.9nm,1.2s						
KNB	Kanab	92.61	17	P	P	00 18 07.6	+0.4
PRN	Pahroc Range	92.63	15	P	P	00 18 08.5	+1.3
PRN				IAmb	IAmb	00 18 20.0	
	comp=Z,10nm,1.2s						
TPH	Tonopah	92.98	13	P	P	00 18 08.8	-0.1
WAKR	Walker	93.12	11	P	P	00 18 10.3	+0.8
WAKR				IAmb	IAmb	00 18 14.1	
	comp=Z,11nm,1.5s						
NVAR	Mina Array Bea	93.19	12	P	P	00 18 09.6	-0.2
	comp=Z,0.2nm,0.4s,baz=178,slow=5.2,SNR=5.5						
NVAR				LR	LR	00 52 10.4	
	comp=Z,578nm,18.1s,baz=190,slow=30						
NVAR	Mina Array Bea	93.19	12	P	P	00 18 09.2	-0.6
RYN	Ryan	93.35	12	P	P	00 18 11.3	+0.7
RYN				IAmb	IAmb	00 18 18.2	
	comp=Z,7.8nm,1.4s						
AFDM	Forest Hills D	93.39	10	P	P	00 18 11.9	+1.4
R11A	Troy Canyon, C	93.47	14	P	P	00 18 11.9	+0.8
	baz=191						
R11A	Troy Canyon, C	93.47	14	P	P	00 18 11.2	0.0
WMOK	Wichita Mounta	93.60	28	P	P	00 18 12.6	+0.9
WMOK				IAmb	IAmb	00 18 14.1	
	comp=Z,11nm,1.4s						
PSUT	Pine Spring	93.92	16	P	P	00 18 13.4	+0.1
MSU	Marysvale	94.18	17	P	P	00 18 13.6	-0.8
PDAR	Pinedale Array	98.77	18	LR	LR	00 55 03.8	
	comp=Z,456nm,19.4s,baz=208,slow=30						
YKA	Yellowknife Ar	117.28	10	PKP	PKPdf	00 23 39.1	-0.7
	comp=Z,0.2nm,0.8s,baz=176,slow=3.2,SNR=2.5						
IL31		118.99	354		PKPdf	00 23 42.4	-0.6
ILAR	Eielson Array	118.99	354	PKP	PKPdf	00 23 42.2	-0.9
	comp=Z,1.5nm,0.7s,baz=213,slow=2.2,SNR=18						
ILAR	Eielson Array	118.99	354		PKPdf	00 23 41.6	-1.4
EPYK	Eagle Plains	120.20	359	P	PKPdf	00 23 45.2	-0.2
	baz=178						
PETK	Petropavlovsk-	120.93	319	PKP	PKiKP	00 23 48.6	+1.3
	comp=Z,9.6nm,1.0s,baz=126,slow=2.5,SNR=3.9						
TOLK	Toolik Lake Re	123.00	353	P	PKiKP	00 23 52.1	+1.1
	baz=169						
TOLK	Toolik Lake Re	123.00	353		PKiKP	00 23 52.4	+1.4
NJ2	Nanjing	125.06	278	*e*PKP	PKPdf	00 23 54.4	-1.3
KMI	Kunming	129.35	259	PKP	PKiKP	00 24 05.1	-0.1
KMI				LR	LR		
	comp=Z,310nm,20.1s						
KMI				LR	LR		
	comp=Z,230nm,16.7s						
KMI				LR	LR		
	comp=Z,430nm,33.6s						
GTA	Gaotai	141.30	270	*e*PKP	PKPdf	00 24 27.1	+0.9
GTA				LR	LR		
	comp=Z,320nm,17.5s						
GTA				LR	LR		
	comp=Z,240nm,19.1s						
ULN	Ulaanbaatar	142.15	286		PKPpre	00 24 24.2	
TIXI	Tiksi	142.19	329		PKPpre	00 24 22.4	
SONM	Songino Array	142.50	286	PKhKP	PKPpre	00 24 24.6	
	comp=Z,2.4nm,0.9s,baz=141,slow=2.1,SNR=11						
SONM	Songino Array	142.50	286		PKPpre	00 24 24.9	
ESDC	Sonseca Array	143.73	93	PKP	PKPdf	00 24 30.1	-0.3
	comp=Z,0.9nm,1.1s,baz=214,slow=1.3,SNR=3.3						
DBG	Daneborg	147.41	28	*i* P	PKPab	00 24 43.5	+3.4
DBG				IAmb	IAmb	00 24 46.6	
	comp=Z,9.2nm,1.1s						
DAG	Danmarks Havn	147.65	23	*i* P	PKPab	00 24 42.2	+1.2
	comp=Z,18nm,1.2s						
DAG	Danmarks Havn	147.65	23	*i* P	PKPab	00 24 42.3	+1.2
DAG				IAmb	IAmb	00 24 46.0	
	comp=Z,18nm,1.2s						
KEST	Kesra	148.66	111	PKPbc	PKPbc	00 24 42.2	-0.4
	comp=Z,4.6nm,1.1s,baz=268,slow=2.1,SNR=2.8						
RAYN	Ar Rayn	149.42	179		PKPbc	00 24 44.7	-0.2
WMQ	Urumqi	151.16	266	*e*PKPbc	PKPdf	00 24 43.3	+0.7
WMQ				sPKP		00 24 56.7	
WMQ				LR	LR		
	comp=Z,910nm,28.1s						
WMQ				LR	LR		
	comp=Z,530nm,18.9s						
KBL	Kabul	154.60	229		PKPab	00 25 12.2	+0.9
KSH	Kashi	155.06	246	PKPbc	PKPdf	00 24 51.7	+3.3
NRIK	Noril'sk	155.81	325	PKPab	PKPab	00 25 17.1	+1.9
	comp=Z,5.5nm,0.9s,baz=106,slow=3.7,SNR=9.5						
NRIK	Noril'sk	155.81	325	PKPab	PKPab	00 25 17.7	+2.5
MK31	Makanchi Array	155.98	267	PKPab	PKPab	00 25 17.4	+0.7
MKAR	Makanchi Array	155.98	267	PKP	PKPdf	00 24 48.7	-0.6
	comp=Z,0.8nm,1.0s,baz=72,slow=4.7,SNR=4.2						

MKAR				PKPab	pPKPab	00 25 18.0	-1.0
	comp=Z,3.0nm,0.8s,baz=122,slow=4.3,SNR=12						
HRA	Herat	157.19	217	PKPab	PKPab	00 25 22.1	-0.3
ZAA0	Zalesovo Array	157.40	285	PKPab	PKPab	00 25 24.0	+1.5
ZALV	Zalesovo Beam	157.40	285	PKPab	PKPab	00 25 23.3	+0.8
	comp=Z,2.7nm,0.8s,baz=101,slow=4.7,SNR=11						
ZALV	Zalesovo Beam	157.40	285		PKPab	00 25 22.1	-0.4
AAK	Ala-Archa	158.02	250	PKPab	PKPab	00 25 27.6	+1.9
CLL	Collm	159.91	85	*e*(PKPab)	PKPab	00 25 39.0	+5.5
BRTR	Keskin Array B	163.33	145	PKPab	PKPab	00 25 46.5	-2.4
	comp=Z,1.5nm,1.0s,baz=193,slow=5.5,SNR=4.1						
BRTR	Keskin Array B	163.33	145		PKPab	00 25 47.0	-1.9
AKASG	Malin Array Be	169.19	102	PKP	PKPdf	00 25 00.1	-2.0
	comp=Z,0.3nm,0.4s,baz=338,slow=0.5,SNR=4.5						

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*JMA **09** 00:26:46.3±0.1, 38°.70N×142°.26E, h38km±2km, M4.1*
JMA Felt I J1.
*IDC **09** 00:27:00.8±2.8, 38°.39N×140°.94E, h125km±28km, mb3.1/4, mb1 3.2/7, mb1mx3.0/34, mbtmp3.5/7, Error ellipse: s-maj=35.7km s-min=27.0km az=128.0*
ISC 09 00:26:45.1±2.4, 38°.73N±0°.05×142°.3E±0°.1, h26km±12km, n25, σ1.s22/25, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.63	304	P	Pb	00 26 58.3	+0.8
OFUJ				*e*S	Sb	00 27 06.8	+0.9
JKMT	Kesennumamotoy	0.68	277	P	Pb	00 26 58.7	+0.4
JKMT				S	Sb	00 27 07.1	-0.2
JIKH	Ishinomakikobu	0.80	239	P	Pb	00 27 00.1	-0.2
JIKH				S	Sb	00 27 09.7	-1.1
JIO	Ouri	0.82	251	P	Pb	00 27 00.4	-0.3
JIO				S	Sb	00 27 10.1	-1.2
JMK	Ichinoseki	0.90	285	P	Pn	00 27 02.0	-0.1
JMK				S	Sb	00 27 13.0	-0.6
JOM	Ohasama	1.10	313	P	Pn	00 27 05.5	+0.6
JOM				*e*S	Sn	00 27 19.1	-0.1
JTH	Tanohata	1.26	343	P	Pn	00 27 07.8	+0.7
JOU	Okura	1.36	255	P	Pn	00 27 08.4	0.0
JOU				*e*S	Sn	00 27 24.9	-0.7
JRG	Rokugo	1.48	297	P	Pn	00 27 10.7	+0.6
JMM	Marumori	1.49	235	P	Pn	00 27 09.8	-0.3
JYK	Kaneyama	1.56	278	P	Pn	00 27 11.6	+0.5
MAT	Matsushiro	3.94	238	P	Pn	00 27 45.9	+2.0
MAT				*e*S	Sn	00 28 32.9	+3.7
MJAR	Matsushiro Arr	3.94	238	P	Pn	00 27 45.9	+2.1
	0.6nm,0.3s,baz=38,slow=12,SNR=14						
MJAR				S	Sn	00 28 19.4	-10
	0.2nm,0.3s,baz=35,slow=17,SNR=4.2						
USRK	Ussuriysk Ar.	9.49	308	P	Pn	00 29 06.2	+6.1
	baz=116,slow=15,SNR=7.6						
KLR	Kul'dur	12.96	328	P	P	00 29 56.5	-1.2
	0.1nm,0.3s,baz=141,slow=14,SNR=2.4						
SONM	Songino Array	27.49	301	P	P	00 32 28.8	-0.5
	0.2nm,0.4s,baz=106,slow=9.1,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.45	125	T	T	01 02 55.8	
	baz=316,slow=75,SNR=86						
H11N1	WAKE ISLAND Hy	28.46	125	T	T	01 03 03.5	
	baz=316,slow=75,SNR=45						
H11N3	WAKE ISLAND Hy	28.47	125	T	T	01 02 60.0	
	baz=316,slow=75,SNR=67						
H11S1	WAKE ISLAND Hy	29.23	127	T	T	01 03 54.6	
	baz=318,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	29.23	127	T	T	01 03 55.7	
	baz=318,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	29.24	127	T	T	01 03 58.3	
	baz=318,slow=76,SNR=17						
ZALV	Zalesovo Beam	41.34	311	P	P	00 34 28.5	+0.1
	0.9nm,0.5s,baz=99,slow=7.6,SNR=5.7						
MKAR	Makanchi Array	43.86	301	P	P	00 34 48.5	-0.6
	0.5nm,0.6s,baz=86,slow=8.7,SNR=5.7						
ILAR	Eielson Array	47.68	33	P	P	00 35 30.7	+12
	0.5nm,0.8s,baz=264,slow=6.1,SNR=4.9						

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*TIR **09** 00:30:58.2, 40°.72N×19°.61E, h2km±11km, Md2.9, Ml2.9*
*THE **09** 00:31:00.3, 40°.71N×19°.73E, h9km, ML2.0/7, Error ellipse: s-maj=1.4km s-min=0.9km az=131.0*
ISC 09 00:30:58.8±1.1, 40°.72N±0°.03×19°.63E±0°.03, h9km±9km, n22, σ0.s90/36, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.27	203	P	Pg	00 31 04.1	-0.1
	baz=199						
VLO				S	Sg	00 31 08.5	+0.6
	baz=199						
VLO				AMP			
	comp=N,9.1nm,0.5s,baz=199						
KBN	Korca	0.88	96	P	Pg	00 31 15.1	-0.7
KBN				S	Sg	00 31 27.5	+0.2
	comp=N,152nm,0.7s						
KBN	Korca	0.88	96	P	Pb	00 31 16.5	+0.2
	baz=95						
KBN				S	Sn	00 31 29.9	-0.6
	baz=95						
SRN	Sarande	0.89	161	P	Pb	00 31 16.8	+0.5
SRN	Sarande	0.89	161	P	Pb	00 31 16.3	0.0
	baz=160						
SRN				S	Sn	00 31 29.6	-0.8
	baz=160						
LSK	Leskovik	0.93	127	P	Pg	00 31 16.3	-0.4
LSK				S	Sb	00 31 29.5	-0.2
	comp=N,118nm,0.7s						
LSK	Leskovik	0.93	127	P	Pb	00 31 17.7	+0.5
	baz=126						
LSK				S	Sn	00 31 31.6	-0.1
	baz=126						
KEK	Kerkira	1.01	173	P	Pb	00 31 19.0	+0.5
KEK				S	Sb	00 31 32.9	+1.0
	comp=N,62nm,0.6s						
SCTE	Santa Cesarea	1.10	234	P	Pg	00 31 19.6	-0.3
	baz=235						
SCTE				S	Sn	00 31 36.3	+0.6
	baz=235						
NEST	Nestorio	1.12	105	P	Pg	00 31 19.8	-0.5
NEST				S	Sg	00 31 34.8	-0.1
	comp=N,48nm,0.6s						
PHP	Peshkopia	1.14	32	P	Pn	00 31 21.5	+0.5
PHP	Peshkopia	1.14	32	P	Pn	00 31 21.6	+0.6
	baz=32						
PHP				S	Sn	00 31 38.4	+1.6
	baz=32						
PENT	Pentalofos	1.26	114	P	Pn	00 31 22.2	-0.5
PENT				S	Sg	00 31 39.3	-0.1
	comp=N,45nm,0.7s						
IGT	Igoumenitsa	1.30	155	P	Pn	00 31 23.1	-0.1
IGT				S	Sn	00 31 41.4	+0.7
	comp=N,52nm,0.7s						
IGT	Igoumenitsa	1.30	155	P	Pg	00 31 24.2	+0.4
	baz=154						
FNA	Florina	1.33	87	P	Pn	00 31 22.3	-1.2
FNA				S	Sg	00 31 41.3	-0.1
	comp=N,152nm,0.5s						
PUK	Puka	1.34	8	P	Pg	00 31 24.4	-0.1
	baz=9.0						
PUK				S	Sn	00 31 44.5	+2.8
	baz=9.0						
KPRO	Kipourio	1.53	119	P	Pn	00 31 25.6	-0.7
STON	Ston	2.59	327	*e*Pn	Pn	00 31 39.2	-1.6
STON				Sn	Sn	00 32 12.2	-0.2
MAKA	Makarska	3.22	324	Sn	Sn	00 32 25.9	-2.1
KIJV	Kijevo	4.06	325	Sn	Sn	00 32 39.6	-9.2
NVLJ	Novalja	5.20	319	*e*Pn	Pn	00 32 16.1	-0.6

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*IDC **09** 01:27:03.5±1.4, 5°.41S×146°.38E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.5/29, mbtmp3.4/5, ML2.8/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/16, Error ellipse: s-maj=52.5km s-min=24.1km az=96.0*
ISC 09 01:27:08.8±1.2, 5°.5S±0°.1×146°.3E±0°.2, h35km, n9, σ0.s93/7, mb3.2/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.02	168	Pn	Pn	01 28 08.0	+0.1
	12nm,0.3s,baz=15,slow=12,SNR=11						
PMG				Sn	Sn	01 28 53.9	+0.1
	7.4nm,0.3s,baz=132,slow=3.7,SNR=4.6						
WRA	Warramunga Arr	18.50	218	P	Pn	01 31 21.5	-1.1
	0.1nm,0.3s,baz=42,slow=12,SNR=2.5						
GUMO	Guam	18.98	356	LR	LR	01 37 43.7	
	comp=Z,99nm,18.4s,baz=174,slow=34						
ASAR	Alice Springs	21.68	212	P	P	01 31 57.7	+1.0
	0.3nm,0.6s,baz=51,slow=8.8,SNR=1.9						
FITZ	Fitzroy Crossi	23.76	236	LR	LR	01 43 26.3	
	comp=Z,42nm,19.2s,baz=252,slow=41						
DZM	Mont Dzumac	25.56	132	LR	LR	01 41 39.1	
	comp=Z,123nm,19.3s,baz=251,slow=34						
MKAR	Makanchi Array	76.63	321	P	P	01 38 56.8	+0.7
	0.1nm,0.4s,baz=111,slow=6.5,SNR=1.9						
ILAR	Eielson Array	85.27	23	P	P	01 39 41.5	-0.2
	0.5nm,0.6s,baz=254,slow=5.0,SNR=7.1						
TORD	Torodi Ar. Bea	144.26	285	PKP	PKPdf	01 46 41.4	-0.8
	0.8nm,0.6s,baz=71,slow=3.0,SNR=2.8						

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*DJA **09** 02:04:15.3±1.0, 5°N±5°×9°6E±1°0, h179km±9km, M4.0/6, MLv4.0/6*
*IDC **09** 02:04:25.5±4.3, 5°.83N×95°.75E, h276km±45km, mb3.2/8, mb1 3.4/10, mb1mx3.1/51, mbtmp3.9/10, Error ellipse: s-maj=31.3km s-min=14.5km az=50.0*
ISC 09 02:04:16.4±0.7, 5°.47N±0°.06×95°.9E±0°.1, h200km, n24, σ1.s36/28, mb3.4/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.11	103	P	Pn	02 04 44.9	-2.0
LHMI				S	Sn	02 05 08.6	-1.8
TPTI		2.56	149	P	Pn	02 04 59.8	-1.2
TPTI				S	Sn	02 05 35.1	-0.7
KCSI	Kotacane, Aceh	2.72	135	P	Pn	02 05 02.9	+0.1
KCSI				S	Sn	02 05 38.9	-0.1
SNSI	Sinabang, Aceh	3.08	171	P	Pn	02 05 04.6	-2.4
SNSI				S	Sn	02 05 45.2	-1.4
GSI	Gunungsitoli	4.48	158	P	Pn	02 05 23.8	-0.4
GSI				S	Sn	02 06 16.3	-1.4
CHAI	Chaiyaphum	11.98	30	P	Pn	02 07 00.7	-0.3
	2µm32nm,0.6s						
SUKH	Sukhothai	12.49	17	P	P	02 07 12.6	+1.2
	17nm,0.8s						
CM04	Chiang Mai Arr	13.20	13	P	P	02 07 20.1	+0.7
	12nm,0.8s						
CM13	Chiang Mai Arr	13.21	13	P	P	02 07 20.0	+0.6
	117nm14nm,0.8s						
CM02	Chiang Mai Arr	13.23	13	P	P	02 07 20.0	+0.3
	9.9nm,0.7s						
CM15	Chiang Mai Arr	13.24	13	P	P	02 07 20.7	+0.9
	11nm,0.8s						
CM09	Chiang Mai Arr	13.25	13	P	P	02 07 20.6	+0.8
	14nm,0.8s						
CMAR	Chiang Mai Arr	13.25	13	P	P	02 07 20.1	+0.2
	0.7nm,0.3s,baz=202,slow=11,SNR=28						
LAMP	Lampang	13.48	16	P	P	02 07 23.0	+0.5
	20nm,0.9s						
CMMT	Chiang Mai	13.60	13	P	P	02 07 24.1	+0.4
PALK	Pallekele	15.17	278	P	P	02 07 43.1	+1.8
	0.3nm,0.3s,baz=177,slow=11,SNR=4.0						
PALK				S	S	02 10 16.3	-13
	0.4nm,0.3s,baz=294,slow=20,SNR=1.7						
WSAR	Wadi Sarin	39.98	300	P	P	02 11 33.0	+1.2
	3.0nm,0.8s,baz=117,slow=9.0,SNR=2.7						
MKAR	Makanchi Array	42.80	346	P	P	02 11 53.1	-1.3
	0.3nm,0.4s,baz=158,slow=7.4,SNR=5.0						
SONM	Songino Array	43.16	10	P	P	02 11 56.9	-0.4
	0.2nm,0.4s,baz=198,slow=9.6,SNR=3.4						
WRA	Warramunga Arr	45.49	125	P	P	02 12 20.7	+4.6
	0.3nm,0.2s,baz=309,slow=8.6,SNR=9.4						
ASAR	Alice Springs	47.08	130	P	P	02 12 32.1	+3.7
	0.3nm,0.4s,baz=300,slow=7.7,SNR=6.4						
ZALV	Zalesovo Beam	49.16	351	P	P	02 12 43.0	-0.8
	0.6nm,0.4s,baz=169,slow=8.6,SNR=3.8						
FINES	FINESS Array B	75.62	332	P	P	02 15 37.6	-1.4
	2.7nm,0.8s,baz=132,slow=8.2,SNR=9.0						
ARCES	ARCESS Array B	78.09	340	P	P	02 15 51.8	-0.9
	4.1nm,1.0s,baz=100,slow=6.4,SNR=9.2						

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*IDC **09** 02:08:11.9±1.4, 3°.19S×146°.35E, h0km, mb4.0/7, mb1 4.3/8, mb1mx3.9/31, mbtmp4.1/8, ML2.0/1, MS3.3/9, Ms1 3.3/9, ms1mx3.2/30, Error ellipse: s-maj=46.6km s-min=21.1km az=100.0*
*NEIC **09** 02:08:12.9±2.4, 3°.28S±0°.09×146°.6E±0°.1, h15km±6km, mb4.3/10, Error ellipse: s-maj=17.0km s-min=10.2km az=120.0*
ISC 09 02:08:12.5±0.9, 3°.28S±0°.09×146°.6E±0°.2, h10km, n27, σ0.s86/20, mb4.0/8, MS3.2/5, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.44	32	Pn	Pn	02 08 37.7	-1.0
JAY	Jayapura	5.94	277	LR	LR	02 11 34.3	
	comp=Z,327nm,18.4s,baz=127,slow=36						
PMG	Port Moresby	6.11	175	Pn	Pn	02 09 46.8	+3.9
	2.0nm,0.3s,baz=349,slow=16,SNR=3.8						
PMG				LR	LR	02 12 16.8	
	comp=Z,210nm,20.4s,baz=56,slow=39						
PMG	Port Moresby	6.11	175		Pn	02 09 42.7	-0.3
HNR	Honiara	14.60	115	LR	LR	02 16 46.7	
	comp=Z,71nm,19.8s,baz=6.0,slow=35						
GUMO	Guam	16.85	354	LR	LR	02 16 42.4	
	comp=Z,93nm,21.6s,baz=180,slow=30						
WB0	Warramunga Arr	20.27	215	P	P	02 12 46.7	-1.7
WR0	Warramunga Arr	20.34	214	P	P	02 12 48.8	-0.3
WR0				IAmb	IAmb	02 12 51.4	
	comp=Z,16nm,0.9s						
WB2	Warramunga Arr	20.43	215	P	P	02 12 50.0	-0.2
WB2				IAmb	IAmb	02 12 52.5	
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	20.44	215	P	P	02 12 50.2	0.0
	comp=Z,7.9nm,0.8s,baz=38,slow=12,SNR=23						
WRA				LR	LR	02 21 47.5	
	comp=Z,74nm,18.4s,baz=260,slow=40						
AS31	Alice Springs	23.70	210	P	P	02 13 24.6	-0.2
ASAR	Alice Springs	23.70	210	P	P	02 13 25.1	+0.4
	comp=Z,6.3nm,0.8s,baz=40,slow=8.6,SNR=46						
ASAR	Alice Springs	23.70	210	P	P	02 13 24.5	-0.2
FITZ	Fitzroy Crossi	25.27	233	P	P	02 13 37.6	-1.6
	comp=Z,2.7nm,0.7s,baz=49,slow=11,SNR=1.7						
FITZ				LR	LR	02 23 55.9	
	comp=Z,85nm,18.3s,baz=44,slow=38						
DZM	Mont Dzumac	26.83	136	LR	LR	02 23 07.0	
	comp=Z,74nm,20.1s,baz=355,slow=33						
STKA	Stephens Creek	28.84	189	LR	LR	02 27 26.3	
	comp=Z,144nm,18.7s,baz=19,slow=40						
KSRS	Korea Array	44.09	339	LR	LR	02 32 42.3	
	comp=Z,22nm,18.9s,baz=20,slow=34						
CMAR	Chiang Mai Arr	51.66	297	P	P	02 17 19.5	-0.5
	comp=Z,0.7nm,0.3s,baz=127,slow=5.3,SNR=1.5						
MK31	Makanchi Array	75.16	320	P	P	02 19 56.8	+1.6
MKAR	Makanchi Array	75.16	320	P	P	02 19 55.1	-0.1
	comp=Z,1.3nm,0.8s,baz=102,slow=7.2,SNR=11						
MKAR	Makanchi Array	75.16	320	P	P	02 19 55.8	+0.6
MAKZ	Makanchi	75.37	320	P	P	02 19 57.1	+0.7
MAKZ				IAmb	IAmb	02 20 01.2	
	comp=Z,3.0nm,0.9s						
ZAA0	Zalesovo Array	76.52	328	P	P	02 20 03.0	+0.3
ZAA0				IAmb	IAmb	02 20 20.9	
	comp=Z,1.3nm,0.7s						
ZALV	Zalesovo Beam	76.52	328	P	P	02 20 03.2	+0.5
	comp=Z,0.3nm,0.3s,baz=88,slow=4.9,SNR=2.2						
NIL	Nilore	78.04	305	P	P	02 20 12.4	+0.6
IL31		83.15	23	P	P	02 20 39.6	+1.1
ILAR	Eielson Array	83.15	23	P	P	02 20 39.0	+0.5
	comp=Z,0.7nm,0.8s,baz=248,slow=4.7,SNR=5.4						

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*IDC **09** 02:20:37.5±4.7, 24°.00N×90°.42E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/31, mbtmp3.6/3, ML4.2/1, Error ellipse: s-maj=110.5km s-min=35.2km az=52.0*
*DMN **09** 02:20:44.8±0.8, 24°.00N×90°.42E, h25km, Ml4.6/7, Error ellipse: s-maj=37.0km s-min=14.8km az=34.0*
ISC 09 02:20:41.6±1.4, 23°.9N±0°.2×90°.3E±0°.1, h35km, n14, σ2.s23/21, Bangladesh

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODAN	Odare	3.95	319	*e*Pn	Pn	02 21 41.5	+1.5
TAPN	Taplejung	4.16	327	*e*Pn	Pn	02 21 44.2	+1.3
RAMN	Ramite	4.52	313	*e*Pn	Pn	02 21 49.3	+1.6
RAMN				*e*Sn	Sn	02 22 39.3	+0.1
	139nm,0.3s						
GUN	Gumba	5.64	316	*e*Pn	Pn	02 22 06.1	+2.9
GUN				*e*Sn	Sn	02 23 06.0	-1.0
	109nm,0.3s						
PKI	Pulchoki	5.73	311	*e*Pn	Pn	02 22 06.4	+2.0
PKI				*e*Sn	Sn	02 23 07.9	-1.2
	79nm,0.3s						
KKN	Kakani	5.95	312	*e*Pn	Pn	02 22 10.9	+3.5
DMN	Daman	5.96	310	*e*Pn	Pn	02 22 10.8	+3.2
GKN	Gorkha	6.53	310	*e*Pn	Pn	02 22 17.7	+2.4
GKN				*e*Sn	Sn	02 23 26.9	-1.7
	99nm,0.3s						
KOLN	Koldanda	7.16	304	*e*Pn	Pn	02 22 25.9	+2.0
KOLN				*e*Sn	Sn	02 23 41.7	-2.4
	105nm,0.4s						
DANN	Dangsing	7.36	309	*e*Pn	Pn	02 22 27.7	+0.9
DANN				*e*Sn	Sn	02 23 45.9	-3.3
	59nm,0.3s						
PYUN	Piuthan	7.79	304	*e*Pn	Pn	02 22 34.9	+2.3
PYUN				*e*Sn	Sn	02 23 56.7	-3.0
	78nm,0.3s						
CMAR	Chiang Mai Arr	9.72	122	Pn	Pn	02 22 58.2	-0.8
	0.6nm,0.3s,baz=300,slow=13,SNR=7.2						
MKAR	Makanchi Array	23.75	346	P	P	02 25 50.7	+0.1
	1.2nm,0.7s,baz=160,slow=9.7,SNR=16						
SONM	Songino Array	27.13	24	P	P	02 26 20.7	-0.7
	0.4nm,0.6s,baz=207,slow=9.9,SNR=2.5						

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*IDC **09** 02:38:47.3±0.6, 11°.21N×126°.02E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.1/42, mbtmp4.1/18, Error ellipse: s-maj=30.5km s-min=13.2km az=75.0*
*MAN **09** 02:38:51.0, 11°.31N×126°.21E, h43km, mb4.7, ML3.6, MS3.5*
*NEIC **09** 02:38:54.9±1.0, 11°.16N±0°.08×126°.0E±0°.1, h60km±9km, mb4.5/25, Error ellipse: s-maj=22.0km s-min=9.0km az=110.0*
ISC 09 02:38:52.3±0.7, 11°.29N±0°.05×126°.23E±0°.09, h38km±2km, n70, σ1.s40/70, mb4.5/32, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.84	292	*e*P	Pn	02 39 06.5	-1.1
BESP				*e*S	Sn	02 39 18.8	+0.1
GLSP	General Luna,	1.50	184	*e*P	Pn	02 39 16.3	-0.3
GLSP				*e*S	Sn	02 39 32.6	-2.3
MSLP	Maasin	1.77	230	*e*P	Pn	02 39 20.5	+0.1
MSLP				*e*S	Sn	02 39 45.4	+3.8
CNP	Catarman	1.96	308	*e*P	Pn	02 39 22.4	-0.5
CNP				*e*S	Sn	02 39 45.7	-0.5
BUTP	Butuan	2.38	195	*e*P	Pn	02 39 29.1	+0.3
LLP	Lapu-Lapu	2.43	247	*e*P	Pn	02 39 31.0	+1.6
LLP				*i* S	Sn	02 40 06.4	+8.6
PVCP	Virac	3.06	319	*e*P	Pn	02 39 37.8	-0.3
PVCP				*e*S	Sn	02 40 30.0	+16
CGP	Cagayan de Oro	3.20	208⇓	*e*P	Pn	02 39 44.5	+4.5
CGP				*e*S	Sn	02 40 23.0	+6.1
BUKP	Musuan	3.58	199	*e*P	Pn	02 39 43.0	-2.3
BUKP				*e*S	Sn	02 40 27.6	+1.3
CNOP	Candoni, Negro	3.82	248	*e*P	Pn	02 39 48.9	+0.4
CNOP				*e*S	Sn	02 40 32.7	+0.5
KCP	Kidapawan	4.40	195⇑	*i*P	Pn	02 40 04.5	+7.9
LQP	Lukban	5.37	302⇓	*e*P	Pn	02 40 09.9	-0.1
BKB	Balikpapan	15.54	217	Pn	Pn	02 42 24.1	-4.7
MMRI	Maumere	20.19	192	P	P	02 43 22.5	-1.3
IPM	Ipoh	25.85	257	P	P	02 44 20.3	-0.3
IPM				IAmb	IAmb	02 44 21.6	
	comp=Z,11nm,0.7s						
KSRS	Korea Array	26.10	3	P	P	02 44 25.2	+2.7
	comp=Z,1.3nm,0.6s,baz=185,slow=9.2,SNR=2.8						
CM31	Chiang Mai Arr	27.30	288	P	P	02 44 32.5	-1.0
CMAR	Chiang Mai Arr	27.30	288	P	P	02 44 32.6	-0.9
	comp=Z,2.7nm,0.7s,baz=101,slow=6.8,SNR=11						
CMAR	Chiang Mai Arr	27.30	288	P	P	02 44 32.2	-1.3
XAN	Xi'an	27.62	328	P	P	02 44 36.1	-0.3
XAN				IAmb	IAmb	02 44 40.0	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	29.21	181	P	P	02 44 50.4	-0.1
	comp=Z,2.9nm,0.9s,baz=11,slow=5.2,SNR=1.7						
WRAB	Tennant Creek	32.04	165	P	P	02 45 14.9	-0.6
WRAB				IAmb	IAmb	02 45 15.0	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	32.05	166	P	P	02 45 15.7	+0.1
	comp=Z,1.0nm,0.6s,baz=346,slow=9.1,SNR=6.3						
USRK	Ussuriysk Ar.	33.17	8	P	P	02 45 27.3	+2.2
	comp=Z,1.3nm,0.6s,baz=188,slow=8.7,SNR=2.4						
SHL	Shillong	35.42	298	P	P	02 45 43.8	-1.3
ASAR	Alice Springs	35.54	168	P	P	02 45 46.7	+0.8
	comp=Z,1.0nm,0.6s,baz=347,slow=6.4,SNR=15						
KLR	Kul'dur	38.10	6	P	P	02 46 08.9	+1.5
	comp=Z,0.8nm,0.6s,baz=194,slow=8.5,SNR=5.1						
TAPN	Taplejung	39.51	299	*e*P	P	02 46 19.1	-0.8
	comp=Z,13nm,0.7s						
ODAN	Odare	39.65	299	*e*P	P	02 46 20.1	-0.9
	comp=Z,39nm,0.7s						
ULN	Ulaanbaatar	39.86	340	P	P	02 46 23.2	+0.9
H11N1	WAKE ISLAND Hy	39.98	73	T	T	03 29 55.4	
	baz=266,slow=74,SNR=5.0						
H11N2	WAKE ISLAND Hy	39.99	73	T	T	03 29 55.9	
	baz=266,slow=74,SNR=5.3						
H11N3	WAKE ISLAND Hy	40.00	73	T	T	03 29 52.0	
	baz=266,slow=74,SNR=5.7						
SONM	Songino Array	40.06	339	P	P	02 46 24.8	+0.8
	comp=Z,2.2nm,0.9s,baz=156,slow=9.3,SNR=11						
SONM	Songino Array	40.06	339	P	P	02 46 25.1	+1.1
RAMN	Ramite	40.36	298	*e*P	P	02 46 26.3	-0.6
	comp=Z,21nm,0.7s						
GUN	Gumba	41.23	300	*e*P	P	02 46 33.3	-0.9
	comp=Z,37nm,0.9s						
KOLN	Koldanda	43.15	299	*e*P	P	02 46 48.8	-0.8
	comp=Z,22nm,0.8s						
DANN	Dangsing	43.15	300	*e*P	P	02 46 48.6	-1.2
	comp=Z,23nm,0.9s						
PYUN	Piuthan	43.75	299	*e*P	P	02 46 53.5	-1.0
	comp=Z,42nm,0.9s						
STKA	Stephens Creek	45.37	162	P	P	02 47 07.5	+0.4
	comp=Z,4.0nm,0.5s,baz=337,slow=6.6,SNR=8.6						
WMQ	Urumqi	46.40	321	P	P	02 47 15.1	-0.1
WMQ				IAmb	IAmb	02 47 34.2	
	comp=Z,7.5nm,0.9s						
MK31	Makanchi Array	51.20	322	P	P	02 47 52.4	+0.4
MKAR	Makanchi Array	51.20	322	P	P	02 47 52.9	+1.0
	comp=Z,7.5nm,0.7s,baz=119,slow=8.4,SNR=82						
MKAR	Makanchi Array	51.20	322	P	P	02 47 52.7	+0.7
MAKZ	Makanchi	51.40	322	P	P	02 47 54.0	+0.6
NIL	Nilore	53.14	304	P	P	02 48 05.8	-0.7
ZAA0	Zalesovo Array	53.72	331	P	P	02 48 10.6	+0.2
ZAA0				IAmb	IAmb	02 48 11.7	
	comp=Z,5.3nm,1.2s						
ZALV	Zalesovo Beam	53.72	331	P	P	02 48 10.9	+0.5
	comp=Z,2.0nm,0.8s,baz=110,slow=6.8,SNR=7.1						
ZALV	Zalesovo Beam	53.72	331	P	P	02 48 10.6	+0.2
KURK	Kurchatov	55.21	325	P	P	02 48 21.8	+0.4
KBL	Kabul	56.73	304	P	P	02 48 31.6	-1.1
KBL				IAmb	IAmb	02 48 32.9	
	comp=Z,3.8nm,0.8s						
KK31	Karatay Array	57.52	314	P	P	02 48 37.6	-0.3
KKAR	Karatay Array	57.52	314	P	P	02 48 37.9	0.0
BRVK	Borovoye	60.88	325	P	P	02 49 01.3	+0.3
NRIK	Noril'sk	63.02	346	P	P	02 49 15.6	+0.5
	comp=Z,1.6nm,0.5s,baz=135,slow=7.2,SNR=4.4						
NRIK	Noril'sk	63.02	346	IAmb	IAmb	02 49 18.0	
	comp=Z,4.9nm,1.2s						
ABKAR	Akbulak array	66.08	319	P	P	02 49 35.7	+0.2
ABKAR				IAmb	IAmb	02 49 36.1	
	comp=Z,4.3nm,0.8s						
ARU	Arti	68.36	326	P	P	02 49 49.6	-0.1
ILAR	Eielson Array	78.55	26	P	P	02 50 50.5	+0.9
	comp=Z,0.4nm,0.7s,baz=247,slow=5.0,SNR=4.4						
ARCES	ARCESS Array B	83.23	340	P	P	02 51 14.3	-0.1
	comp=Z,2.3nm,0.7s,baz=85,slow=5.5,SNR=1.6						
ARCES	ARCESS Array B	83.23	340	IAmb	IAmb	02 51 14.9	
	comp=Z,7.7nm,1.1s						
BR131	Keskin Array S	84.86	309	P	P	02 51 23.1	-0.4
BR131				IAmb	IAmb	02 51 41.8	
	comp=Z,8.0nm,1.3s						
BRTR	Keskin Array B	84.86	309	P	P	02 51 22.9	-0.6
	comp=Z,1.2nm,0.8s,baz=91,slow=3.0,SNR=5.7						
FINES	FINESS Array B	84.98	332	P	P	02 51 23.8	+0.4
	comp=Z,2.0nm,0.8s,baz=84,slow=5.9,SNR=8.6						
AKASG	Malin Array Be	85.76	321	P	P	02 51 27.0	-0.5
	comp=Z,3.1nm,0.8s,baz=68,slow=4.4,SNR=10						
AKASG	Malin Array Be	85.76	321	P	P	02 51 27.3	-0.2
BURAR	Bucovina Array	89.06	318	P	P	02 51 43.9	+0.2
YKA	Yellowknife Ar	92.85	24	P	P	02 52 01.6	+0.8
	comp=Z,0.2nm,0.6s,baz=302,slow=3.5,SNR=3.8						
PLCA	Paso Flores	147.15	156	PKPbc	PKPbc	02 58 32.0	+0.3
	comp=Z,1.6nm,0.9s,baz=113,slow=3.4,SNR=4.5						

*DDA **09** 03:31:05.2, 35°.42N×27°.44E, h6^{km}±1^{km}, ML3.0*
*NIC **09** 03:31:08.5±0.0, 35°.51N×27°.75E, h8^{km}±3^{km}, Ml2.5/1*
*ISK **09** 03:31:08.5, 35°.48N×27°.74E, h9^{km}, ML3.2/11*
*ATH **09** 03:31:09.3, 35°.52N×27°.75E, h6^{km}±2^{km}, ML2.7/3, Error ellipse: s-maj=6.5km s-min=1.2km az=327.0*
*THE **09** 03:31:09.7, 35°.62N×27°.67E, h0^{km}±1^{km}, ML2.7/3, Error ellipse: s-maj=2.0km s-min=0.7km az=154.0*
ISC 09 03:31:09.0±1.2**, 35°.50N**±0°.04×**27°.73E**±0°.03**, h10**^{km}±10^{km}**,** **n45, σ0^{s}.96**/59**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.47	276	P	Pg	03 31 18.0	0.0
KARP				S	Sg	03 31 25.0	+0.7
KARP				AML	AML	03 31 26.3	
	comp=N,1424µm,0.4s						
KARP				AML	AML	03 31 31.7	
	comp=E,1564µm,0.4s						
KARP	Karpathos	0.47	276	P	Pg	03 31 18.1	0.0
KARP				S	Sb	03 31 25.8	-0.6
	comp=E,932nm,0.5s						
KARP	Karpathos	0.47	276	PG	Pg	03 31 18.1	0.0
KARP				SG	Sb	03 31 25.2	-1.2
KARP	Karpathos	0.47	276	P	Pg	03 31 18.0	0.0
KARP				S	Sb	03 31 25.7	-0.7
KARP				AML	AML	03 31 26.1	
	comp=E,2.0nm,0.7s						
KARP				AML	AML	03 31 26.1	
	comp=E,2.0nm,0.7s						
KARP				AML	AML	03 31 31.3	
	comp=E,1.6nm,0.4s						
KARP				AML	AML	03 31 31.3	
	comp=E,1.6nm,0.4s						
ARG	Arkhangelos	0.78	24	P	Pg	03 31 23.3	-0.7
ARG				S	Sg	03 31 33.6	-0.7
ARG				AML	AML	03 31 38.7	
	comp=E,1767µm,0.3s						
ARG				AML	AML	03 31 39.1	
	comp=N,1175µm,0.5s						
ARG	Arkhangelos	0.78	24	P	Pg	03 31 23.7	-0.3
ARG				S	Sb	03 31 34.7	-0.7
	comp=N,740nm,0.4s						
ARG	Arkhangelos	0.78	24	PG	Pb	03 31 24.4	-0.3
ARG				SG	Sb	03 31 36.0	+0.6
ARG	Arkhangelos	0.78	24	P	Pg	03 31 23.8	-0.3
ARG				S	Sb	03 31 34.7	-0.7
MRSB	Marmaris-Mugla	1.27	17	PN	Pn	03 31 32.7	-0.2
ZKR	Zakros	1.30	253	P	Pg	03 31 33.8	-0.1
ZKR				AML	AML	03 32 00.5	
	comp=E,1588µm,0.6s						
ZKR				AML	AML	03 32 01.1	
	comp=N,494µm,0.6s						
ZKR	Zakros	1.30	253	PN	Pb	03 31 33.3	-0.2
TURN	Turunc	1.34	18	PN	Pb	03 31 33.8	-0.4
TURN				SN	Sn	03 31 53.2	+1.6
TURN	Turunc	1.34	18	*i* P	Pn	03 31 33.4	-0.3
TURN				*i* S	Sn	03 31 53.0	+1.3
TURN				IAML		03 31 59.0	
	comp=E,355nm,0.6s						
TURN				IAML		03 32 00.0	
	comp=N,370nm,0.4s						
DALY	Dalyan (Mula)	1.51	29	*i* P	Pb	03 31 36.6	-0.5
DALY				*i* S	Sg	03 32 01.2	+3.6
DALY				IAML		03 32 06.0	
	comp=N,172nm,0.4s						
BDRM	Kayabasi	1.58	352	*i* P	Pn	03 31 36.1	-1.0
BODT	Bodrum	1.59	348	P	Pn	03 31 36.5	-0.8
BODT				S	Sn	03 31 56.2	-1.8
BODT	Bodrum	1.59	348	PN	Pb	03 31 37.9	-0.7
KSL	Kastellorizon	1.64	66	P	Pb	03 31 38.6	-0.7
KSL				S	Sg	03 32 00.6	-1.1
	comp=N,270nm,2.0s						
KSL	Kastellorizon	1.64	66	P	Pb	03 31 38.6	-0.7
AKAS	Kas	1.69	64	PN	Pn	03 31 39.1	+0.4
YER	Yerkesik	1.69	15	PN	Pb	03 31 39.4	-0.8
NPS	Neapolis	1.75	263	P	Pn	03 31 40.2	+0.7
MULA	Mugla, Merkez-	1.81	15	*i* P	Pb	03 31 42.6	+0.2
MULA				*i* S	Sg	03 32 09.2	+1.8
MULA				IAML		03 32 12.0	
	comp=E,108nm,0.6s						
CAEL	Denizli, Camel	2.06	38	*i* P	Pb	03 31 45.9	-0.8
ELL	Elmali	2.16	54	PN	Pn	03 31 45.7	+0.5
ELL	Elmali	2.16	54	P	Pn	03 31 46.2	+1.0
TAVA	DENIZLI_Tavas	2.18	26	*i* P	Pb	03 31 47.1	-1.5
TAVA				IAML		03 32 23.0	
	comp=N,63nm,0.4s						
TAVA				IAML		03 32 26.0	
	comp=E,96nm,0.5s						
GOLH	Golhisar	2.28	40	*i* P	Pb	03 31 49.1	-1.1
SMG	Samos	2.32	342	P	Pn	03 31 47.1	-0.2
IDI	Anoyia	2.33	266	P	Pn	03 31 47.0	-0.5
IDI	Anoyia	2.33	266	PN	Pn	03 31 48.2	+0.7
APE	Apeiranthos	2.37	312	P	Pn	03 31 47.8	-0.2
APE	Apeiranthos	2.37	312	PN	Pn	03 31 48.9	+0.9
APE	Apeiranthos	2.37	312	P	Pn	03 31 48.5	+0.5
KORT	Korkueli	2.59	54	PN	Pn	03 31 52.1	+0.9
BCK	Bucak	3.02	49	PN	Pn	03 31 58.2	+1.2
BASM	Basmaki-Afyon	3.05	37	PN	Pn	03 31 58.2	+0.8
KULA	Kula-Manisa	3.10	14	PN	Pn	03 31 59.6	+1.5
OSC1	CSNet OBS 1	3.54	123	S	Sn	03 32 47.2	+1.1
AKMS	Akamas	3.80	96	P	Pn	03 32 07.9	+0.2
NATA	Nata	4.03	99	P	Pn	03 32 10.7	-0.1
SZAC	Souni	4.29	99	P	Pn	03 32 13.9	-0.4
ASGA	Asgata	4.58	97	P	Pn	03 32 18.3	0.0
CSS	Mathiatis	4.62	95	P	Pn	03 32 18.8	-0.1
MVOU	Mavrovouni	4.85	94	P	Pn	03 32 21.7	-0.4

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*MOS **09** 03:49:18.7±1.1, 51°.50N×95°.80E, h4^{km}, mb4.0/3, Error ellipse: s-maj=8.4km s-min=7.5km az=170.0*
*ASRS **09** 03:49:19.9±0.1, 52°N±1°×95°.8E±0°.8, h10^{km}, MLh4.9/20, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*IDC **09** 03:49:20.4±0.8, 51°.48N×95°.93E, h0^{km}, mb3.7/11, mb1 3.8/18, mb1mx3.7/48, mbtmp3.8/18, ML3.2/7, Error ellipse: s-maj=19.0km s-min=11.9km az=179.0*
*NEIC **09** 03:49:21.6±2.5, 51°.47N±0°.09×95°.9E±0°.1, h10^{km}±1^{km}, mb4.0/10, Error ellipse: s-maj=15.5km s-min=11.7km az=179.0*
*NNC **09** 03:49:37.2±6.9, 51°.63N×93°.94E, h0^{km}, mb3.9, mpv2.9, Error ellipse: s-maj=66.0km s-min=39.2km az=76.0*
ISC 09 03:49:21.6±0.4**, 51°.52N**±0°.03×**95°.86E**±0°.02**, h10**^{km}**, n108,** **σ2^{s}.83**/158**, mb3.7**/13**, 9C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	0.89	10	Pg	Pg	03 49 35.5	-3.3
TDJR				Sg	Sg	03 49 47.3	-3.2
TDJR	Todzha	0.89	10	*e*PG	Pg	03 49 35.5	-3.3
TDJR				*e*S	Sg	03 49 47.2	-3.2
KZLR	Kyzyl	0.90	282	Pg	Pg	03 49 36.6	-2.2
KZLR				Sg	Sg	03 49 48.7	-1.7
KZLR	Kyzyl	0.90	282	*e*PG	Pg	03 49 36.6	-2.2
KZLR				*e*S	Sg	03 49 48.7	-1.7
ERNS	Erzin	1.34	200	Pg	Pn	03 49 44.2	-2.1
ERNS				Sg	Sb	03 50 02.1	-1.8
KNGR	Kungurtug, Tuv	1.39	131	Pg	Pn	03 49 44.5	-2.7
KNGR				Sg	Sb	03 50 03.0	-2.6
ARDR	Aradan	1.84	306	Pg	Pn	03 49 52.7	-0.5
ARDR				Sg	Sn	03 50 17.4	+0.8
BLRR	Bol’shaya Rech	2.60	307	Pg	Pb	03 50 06.5	-1.7
BLRR				Sg	Sb	03 50 39.8	-0.4
ORL	Orlik	2.65	66	⇓*i*PN	Pn	03 50 04.1	-0.3
ORL				*e*		03 50 37.7	
ORL				pmax	pmax		
	comp=Z,400nm,0.7s						
ORL				smax	smax		
	comp=E,757nm,1.4s						
DJOS	Djoyskaya Sosn	3.03	297	Pn	Pn	03 50 10.7	+1.1
DJOS				Pg	Pb	03 50 15.4	-0.1
DJOS				Sg	Sb	03 50 52.9	+0.3
CERR	Cheremushki	3.04	298	Pn	Pn	03 50 10.8	+1.1
CERR				Pg	Pb	03 50 14.8	-1.0
CERR				Sg	Sb	03 50 52.8	-0.2
DJO	Djoy, Khakassi	3.12	296	Pn	Pn	03 50 12.2	+1.3
DJO				Pg	Pb	03 50 16.4	-0.7
DJO				Sg	Sb	03 50 55.8	+0.5
MOY	Mondy	3.21	85	Pg	Pn	03 50 15.1	+3.0
MOY				Sg	Sb	03 50 58.2	+0.5
MOY	Mondy	3.21	85	*e*PN	Pn	03 50 14.7	+2.6
MOY				*e*		03 50 56.4	
MOY				pmax	pmax		
	comp=Z,433nm,1.0s						
MOY				smax	smax		
	comp=N,1µm,1.1s						
TBTR	Tabat	3.46	296	Pg	Pb	03 50 22.7	-0.2
TBTR				Sg	Sb	03 51 06.2	+1.2
ABNR	Abakan	3.48	311	Pg	Pb	03 50 21.6	-1.6
ABNR				Sg	Sb	03 51 08.3	+2.7
KTRR	Kuturchin	3.56	345	Pg	Pb	03 50 22.4	-2.2
KTRR				Sg	Sb	03 51 07.8	-0.1
TEL	Teeli	3.59	264	Pg	Pb	03 50 24.1	-1.0
TEL				Sg	Sb	03 51 09.4	+0.7
VEH	Verkhnyaya Baz	3.81	299	Pg	Pb	03 50 28.6	-0.4
VEH				Sg	Sb	03 51 17.3	+2.2
SHRR	Shira	4.55	313	Pn	Pn	03 50 31.5	+1.1
SHRR				Pg	Pb	03 50 41.2	-0.2
SHRR				Sg	Sb	03 51 41.2	+5.0
LUZB	Luzhba, Kemero	4.75	300	Pn	Pn	03 50 34.3	+1.1
LUZB				Pg	Pb	03 50 43.6	-1.3
ZAK	Zakamensk	4.83	101	Pg	Pb	03 50 45.0	-1.2
ZAK				Sg	Sb	03 51 46.9	+2.5
TLY	Talaya	4.86	85	Pg	Pb	03 50 46.9	+0.2
TLY				Sg	Sb	03 51 47.3	+2.2
TLY	Talaya	4.86	85	PN	Pn	03 50 34.9	+0.2
TLY	Talaya	4.86	85	Pn	Pn	03 50 34.9	+0.2
CUR	Chagan-Uzun	4.97	256	Pn	Pn	03 50 37.6	+1.3
CUR				Pg	Pb	03 50 50.1	+1.4
CUR				Sg	Sb	03 51 53.8	+5.3
ULGR	Ulagan, Altay	5.06	263	Pn	Pn	03 50 39.5	+2.0
ULGR				Pg	Pb	03 50 53.2	+3.0
ULGR				Sg	Sb	03 51 55.4	+4.3
TASR	Tashtagol	5.07	287	Pn	Pn	03 50 38.7	+1.1
TASR				Pg	Pb	03 50 52.6	+2.3
TASR				Sg	Sb	03 51 55.9	+4.7
IRK	Irkutsk	5.26	79	Pg	Pb	03 50 52.8	-0.8
IRK				Sg	Sb	03 51 60.0	+3.2
ARTR	Artybash	5.35	276	Pn	Pn	03 50 44.2	+2.8
ARTR				Pg	Pb	03 50 57.3	+2.2
ARTR				Sg	Sb	03 52 05.7	+6.5
CHBI	Chibit, Altay	5.42	260	Pn	Pn	03 50 44.7	+2.2
CHBI				Pg	Pb	03 50 59.2	+2.9
CHBI				Sg	Sb	03 52 07.9	+6.5
DGZ	Jazzator, Alta	5.67	255	Pn	Pn	03 50 47.2	+1.3
DGZ				Pg	Pb	03 51 03.1	+2.5
DGZ				Sg	Sb	03 52 14.9	+6.4
DGZ	Jazzator, Alta	5.67	255	*i* PN	Pn	03 50 45.6	-0.3
BRCR	Berchikul'	6.10	316	Pn	Pn	03 50 51.0	-0.6
BRCR				Pg	Pb	03 51 09.0	+1.3
BRCR				Sg	Sb	03 52 27.6	+6.9
ELT	Eltsovka	6.14	290	Pg	Pb	03 51 09.6	+1.1
ELT				Sg	Sb	03 52 29.0	+7.0
TUNR	Tungur	6.19	261	Pn	Pn	03 50 55.9	+2.9
TUNR				Pg	Pg	03 51 15.1	-4.9
TUNR				Sg	Sg	03 52 33.3	-6.8
POMOR	Pomortsevo, Ku	6.33	301	Pn	Pn	03 50 56.0	+1.0
POMOR				Pg	Pb	03 51 15.2	+3.3
POMOR				Sg	Sb	03 52 35.7	+8.2
BJR4	Bachatsky-4, K	6.43	299	Pn	Pn	03 50 56.2	0.0
BJR4				Pg	Pb	03 51 17.1	+3.7
BJR4				Sg	Sg	03 52 40.9	-6.9
TRG	Tyrgan	6.58	75	Pn	Pn	03 51 00.7	+2.4
TRG				Pg	Pb	03 51 18.0	+2.1
TRG				Sg	Sb	03 52 39.6	+5.0
TRG	Tyrgan	6.58	75	*e*PN	Pn	03 50 57.8	-0.5
TRG				*e*		03 52 38.9	
TRG				pmax	pmax		
	comp=Z,53nm,0.9s						
TRG				smax	smax		
	comp=N,370nm,1.4s						
SALR	Pechorkino, Sa	6.78	299	Pg	Pb	03 51 20.3	+0.8
SALR				Sg	Sb	03 52 49.4	+8.9
KEM	Kemerovo	6.98	307	Pg	Pb	03 51 27.0	+4.2
KEM				Sg	Sb	03 52 55.7	+10
UKR	Ust'-Kan	6.99	270	Pn	Pn	03 51 03.9	-0.1
UKR				Pg	Pb	03 51 25.5	+2.5
UKR				Sg	Sg	03 52 57.6	-8.1
ZAA0	Zalesovo Array	7.13	294	⇑Pn	Pn	03 51 07.6	+1.8
	comp=N,0.4nm,0.8s						
ZAA0				⇓Pg	Pb	03 51 25.4	0.0
	comp=N,1.5nm,0.7s						
ZAA0				⇑Lg	Lg	03 52 51.1	
	comp=N,16nm,0.7s						
ZAA0	Zalesovo Array	7.13	294		Pn	03 51 05.3	-0.5
ZALV	Zalesovo Beam	7.13	294	Pn	Pn	03 51 07.4	+1.6
	comp=N,0.9nm,0.3s,baz=95,slow=13,SNR=13						
ZALV				Lg	Lg	03 52 57.2	
	comp=N,3.4nm,0.3s,baz=108,slow=27,SNR=8.1						
BALAH	Balakhonka, Ku	7.15	309	Pg	Pb	03 51 28.9	+3.2
BALAH				Sg	Sb	03 53 00.9	+10
ASR1	Anjero-Sudjens	7.41	312	Sg	Sg	03 53 13.5	-5.5
SONM	Songino Array	7.77	114	Pn	Pn	03 51 14.9	+0.2
	comp=N,0.3nm,0.3s,baz=297,slow=13,SNR=5.3						
SONM				Pg	Pb	03 51 38.2	+1.9
	comp=N,1.2nm,0.3s,baz=300,slow=18,SNR=28						
SONM				Lg	Lg	03 53 24.8	
	comp=N,5.4nm,0.3s,baz=300,slow=27,SNR=15						
KHAR	Kharino, NSO,	8.01	298	Sg	Sg	03 53 28.6	-10
ULN	Ulaanbaatar	8.13	112	Pg	Pb	03 51 45.4	+2.9
ULN				Sg	Sg	03 53 32.1	-10
ULN	Ulaanbaatar	8.13	112	*i* P	Pn	03 51 21.3	+1.6
ULN	Ulaanbaatar	8.13	112		Pb	03 51 44.1	+1.6
NVSII	Novosibirsk	8.28	299	Pg	Pb	03 51 47.4	+2.5
NVSII				Sg	Sg	03 53 38.8	-8.2
NVS	Novosibirsk	8.28	299	Pg	Pb	03 51 47.7	+2.9
NVS				Sg	Sg	03 53 38.6	-8.4
NHES	Novosibirsk, N	8.42	298	Sg	Sg	03 53 41.8	-10
BSTK	Bystrovka, Nov	8.52	296	Sg	Sg	03 53 45.4	-9.3
WMQ	Urumqi	9.46	219	P	Pn	03 51 39.2	+1.3
WMQ	Urumqi	9.46	219	Pn	Pn	03 51 39.2	+1.3
YLYR	Ulyunkhan	9.78	64	Sg	Sn	03 54 20.4	+49
MK31	Makanchi Array	10.06	247	Pn	Pn	03 51 47.1	+1.0
	comp=N,4.1nm,0.8s,baz=54,slow=14,SNR=16						
MK31				⇑Pg		03 52 23.8	
	comp=N,3.6nm,0.5s,baz=51,slow=18,SNR=4.8						
MK31				⇓Lg	Lg	03 54 28.6	
	comp=N,27nm,0.8s,baz=48,slow=28,SNR=5.0						
MK31	Makanchi Array	10.06	247	*i* P	Pn	03 51 45.7	-0.4
MK31	Makanchi Array	10.06	247		Pn	03 51 45.4	-0.7
MKAR	Makanchi Array	10.06	247	Pn	Pn	03 51 46.4	+0.3
	comp=N,0.2nm,0.3s,baz=72,slow=12,SNR=15						
MKAR				Pg		03 52 24.6	
	comp=N,0.7nm,0.3s,baz=67,slow=19,SNR=8.2						
MKAR				Lg	Lg	03 54 41.3	
	comp=N,1.3nm,0.3s,baz=62,slow=23,SNR=3.9						
MAKZ	Makanchi	10.24	248	⇓Pn	Pn	03 51 47.5	-1.0
	comp=N,5.4nm,0.8s						
MAKZ				⇓Pg		03 52 21.0	
	comp=N,3.4nm,0.8s						
MAKZ				⇑Lg	Lg	03 54 32.6	
	comp=N,30nm,0.8s						
MAKZ	Makanchi	10.24	248	P	Pn	03 51 46.4	-2.1
MAKZ	Makanchi	10.24	248	Pn	Pn	03 51 46.4	-2.1
KURK	Kurchatov	10.87	272	⇑Pn	Pn	03 51 58.8	+1.8
	comp=N,3.0nm,1.1s						
KURK				⇑Lg	Lg	03 54 44.9	
	comp=N,69nm,0.9s						
KURK	Kurchatov	10.87	272	P	Pn	03 51 59.0	+2.0
KURK	Kurchatov	10.87	272		Pn	03 51 59.0	+2.0
KURBB	Kurchatov Arra	10.94	272	Pn	Pn	03 51 59.0	+0.9
	comp=N,0.1nm,0.3s,baz=74,slow=15,SNR=2.4						
KURBB				Lg	Lg	03 55 02.9	
	comp=N,0.1nm,0.3s,baz=83,slow=31,SNR=3.9						
KURBB	Kurchatov Arra	10.94	272	⇑Pn	Pn	03 52 02.5	+4.5
	comp=N,0.4nm,0.2s						
KURBB				⇑Lg	Lg	03 54 47.3	
	comp=N,58nm,0.7s						
BOD	Bodaibo	12.23	52	*e*P	Pn	03 52 13.1	-2.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HIA	Hailar	15.38	89	P	Pn	03 53 00.1	+1.5
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HIA	Hailar	15.38	89	Pn	Pn	03 53 00.1	+1.5
HIA				IAmb	IAmb	03 53 49.0	
	comp=Z,6.2nm,0.6s						
BVAR	Borovoye Array	15.64	286	Pn	Pn	03 53 01.1	-0.8
	comp=Z,0.2nm,0.3s,baz=200,slow=25,SNR=7.4						
BRVK	Borovoye	15.70	286	*i* P	Pn	03 53 01.5	-1.1
BRVK	Borovoye	15.70	286	Pn	Pn	03 53 02.1	-0.5
BRVK				IAmb	IAmb	03 53 17.1	
	comp=Z,9.2nm,1.6s						
AAK	Ala-Archa	17.00	247	P	Pn	03 53 18.8	-0.6
	comp=Z,0.1nm,0.3s,baz=42,slow=14,SNR=2.5						
BJT	Baijiatuau	18.18	121	P	Pn	03 53 31.9	-2.0
BJT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJT	Baijiatuau	18.18	121	Pn	Pn	03 53 31.9	-2.0
BJT				IAmb	IAmb	03 54 28.5	
	comp=Z,4.0nm,0.7s						
NRIK	Noril'sk	18.31	351	P	P	03 53 37.5	+2.1
	comp=Z,0.3nm,0.3s,baz=167,slow=18,SNR=4.0						
NRIK	Noril'sk	18.31	351	*i* P	Pn	03 53 33.8	-1.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NRIK	Noril'sk	18.31	351	IAmb	IAmb	03 53 38.4	
	comp=Z,2.7nm,0.7s						
KK31	Karatay Array	19.06	254	P	P	03 53 43.1	-0.8
KK31				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KK31	Karatay Array	19.06	254	P	P	03 53 43.1	-0.8
KKAR	Karatay Array	19.06	254	P	P	03 53 42.8	-1.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KKAR	Karatay Array	19.06	254	P	P	03 53 42.8	-1.1
ZEA	Zeya	19.11	71	*e*P	Pn	03 53 57.5	+12
SVE	Sverdlovsk	21.12	298	*e*P	P	03 54 07.2	+1.1
ARU	Arti	22.28	297	P	P	03 54 19.9	+1.3
	comp=Z,1.0nm,0.6s,baz=77,slow=10.0,SNR=4.8						
ARU	Arti	22.28	297	*c i*P	P	03 54 18.0	-0.6
ARU						03 54 37.7	
ARU				S	S	03 58 24.4	+1.0
ARU				pmax	pmax		
	comp=Z,12nm,2.8s						
KLR	Kul'dur	22.86	82	*i* P	P	03 54 23.9	-1.0
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AKTO	Aktyubinsk	23.68	282	P	P	03 54 33.9	+0.8
	comp=Z,2.6nm,0.6s,baz=78,slow=12,SNR=11						
NIL	Nilore	24.25	231	P	P	03 54 36.8	-1.9
NIL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	Nilore	24.25	231	P	P	03 54 36.8	-1.9
NIL				IAmb	IAmb	03 54 58.8	
	comp=Z,4.4nm,0.8s						
TIXI	Tiksi	24.97	24	*i* P	P	03 54 44.0	-0.7
TIXI	Tiksi	24.97	24	P	P	03 54 45.8	+1.1
KSRS	Korea Array	26.60	109	P	P	03 55 00.3	+0.5
	comp=Z,1.3nm,0.7s,baz=319,slow=5.5,SNR=5.1						
FINES	FINESS Array B	37.95	313	P	P	03 56 39.1	+0.2
	comp=Z,2.1nm,0.6s,baz=78,slow=7.8,SNR=15						
AKASG	Malin Array Be	40.52	296	P	P	03 57 00.6	+0.2
	comp=Z,0.8nm,0.5s,baz=56,slow=8.3,SNR=4.3						
BRTR	Keskin Array B	43.81	280	P	P	03 57 28.2	+0.6
	comp=Z,0.8nm,0.8s,baz=73,slow=6.2,SNR=4.7						
NB2	NORSAR Subarra	44.73	316	P	P	03 57 33.9	-0.6
	comp=Z,4.1nm,1.0s,baz=62,slow=7.9						
NOA	NORSAR Array B	44.73	316	P	P	03 57 34.4	-0.1
	comp=Z,0.6nm,0.7s,baz=62,slow=7.6,SNR=4.9						
ILAR	Eielson Array	54.35	28	P	P	03 58 49.1	+1.3
	comp=Z,0.4nm,0.8s,baz=320,slow=5.0,SNR=3.5						
YKA	Yellowknife Ar	63.80	15	P	P	03 59 52.5	-0.8
	comp=Z,0.4nm,1.0s,baz=340,slow=7.3,SNR=4.3						
ESDC	Sonseca Array	65.53	303	P	P	04 00 05.5	+0.5
	comp=Z,0.5nm,0.9s,baz=45,slow=6.9,SNR=5.5						
WRA	Warramunga Arr	78.73	143	P	P	04 01 24.2	+0.2
	comp=Z,1.3nm,1.1s,baz=345,slow=6.4,SNR=2.8						

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*MOS **09** 03:56:13.3±1.3, 43°.49N×147°.07E, h52^{km}, mb4.5/7, Error ellipse: s-maj=9.5km s-min=8.1km az=98.4*
*JMA **09** 03:56:13.1±0.3, 43°.40N×147°.03E, h30^{km}±4^{km}, M4.0*
JMA Felt I J1.
*NIED **09** 03:56:13.1, 43°.40N×147°.03E, h30^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.20; $M_{\theta\theta}$2.74; $M_{\phi\phi}$-2.94; $M_{r\theta}$0.87; $M_{\theta\phi}$-1.12; $M_{\phi r}$-0.24; Fault plane solution: $M_0$3.19000×10^{15} NP1: ϕ_s147.00000°, δ79.00000°, λ13.00000°. NP2:ϕ_s55.00000°, δ77.00000°, λ169.00000°.*
*SKHL **09** 03:56:14.2±0.2, 43°.44N×147°.11E, h58^{km}±6^{km}, mb4.7/9*
*NEIC **09** 03:56:15.2±2.0, 43°.25N±0°.09×147°.1E±0°.1, h55^{km}±8^{km}, mb4.4/14, Error ellipse: s-maj=14.5km s-min=11.3km az=126.0*
*IDC **09** 03:56:18.9±3.0, 43°.56N×146°.99E, h77^{km}±26^{km}, mb3.7/14, mb1 4.0/17, mb1mx3.7/47, mbtmp4.0/17, MS3.1/6, Ms1 3.1/6, ms1mx2.9/38, Error ellipse: s-maj=26.5km s-min=16.0km az=163.0*
ISC 09 03:56:12.8±1.1**, 43°.50N**±0°.05×**147°.00E**±0°.04**, h31**^{km}±4^{km}**,** **n108, σ1^{s}.83**/111**, mb4.2**/27**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.93	262	P	Pb	03 56 30.2	-0.1
NEM2				*e*S	Sb	03 56 42.7	+0.4
NMR	Nemuro--Hokkai	0.94	263	*e*S	Sb	03 56 43.0	+0.4
YUK	Yuzh-Kuril'sk	0.98	304	*i* P	Pb	03 56 31.7	+0.4
YUK				AMB	AMB	03 56 32.0	
	1µm,0.4s						
YUK				*i* S	Sb	03 56 45.0	+1.0
YUK				A	A	03 56 45.0	
	5µm,0.4s						
YUK				A	A	03 56 45.0	
	7µm,0.4s						
YUK				A	A	03 56 47.0	
	14µm,1.2s						
YUK				A	A	03 56 47.0	
	11µm,1.2s						
YUK	Yuzh-Kuril'sk	0.98	304	*i* PN	Pb	03 56 31.7	+0.4
GRPR	Tuman	1.02	300	*i* P	Pb	03 56 32.0	+0.1
GRPR				AMB	AMB	03 56 33.0	
	1µm,0.4s						
GRPR				*i* S	Sb	03 56 45.2	+0.2
GRPR				A	A	03 56 46.0	
	17µm,1.3s						
GRPR				A	A	03 56 46.0	
	10µm,1.3s						
GRPR				A	A	03 56 46.0	
	10µm,0.4s						
GRPR				A	A	03 56 46.0	
	8µm,0.4s						
GRPR	Tuman	1.02	300	⇑*i*PN	Pb	03 56 32.2	+0.3
GRPR				*i* S	Sn	03 56 44.2	-0.1
GRPR				pmax	pmax		
	comp=Z,1µm,0.2s						
GRPR				pmax	pmax		
	comp=N,423nm,0.1s						
GRPR				pmax	pmax		
	comp=E,63nm,0.1s						
GRPR				smax	smax		
	comp=E,10µm,1.1s						
GRPR				smax	smax		
	comp=N,17µm,1.3s						
GRPR				smax	smax		
	comp=E,8µm,0.4s						
GRPR				smax	smax		
	comp=N,10µm,0.3s						
JKHN	Kushirohamanak	1.41	254	P	Pb	03 56 37.3	-1.1
JKHN				*e*S	Sb	03 56 55.3	-0.6
RUSJ	Misakicho	1.41	296	⇓*i*PN	Pb	03 56 38.5	0.0
RUSJ				*e*S	Sb	03 56 59.2	+3.2
JRA	Rausu	1.43	289	P	Pb	03 56 38.2	-0.7
JNSB	Nemuroshibetsu	1.48	282	P	Pb	03 56 38.9	-0.7
JNSB				*e*S	Sb	03 56 58.1	+0.1
JNK	Nakash	1.66	274	P	Pn	03 56 41.0	+1.2
JAK	Akkeshi	1.76	254	P	Pn	03 56 41.9	+0.8
KUR	Kuril'sk	1.84	19	*i* P	Pn	03 56 43.4	+1.1
KUR				AMB	AMB	03 56 45.0	
	comp=N,690nm,1.1s						
KUR				AMB	AMB	03 56 46.0	
	comp=N,350nm,0.4s						
KUR				*i* S	Sn	03 57 05.5	+0.9
KUR				A	A	03 57 08.0	
	comp=N,1µm,1.4s						
KUR				A	A	03 57 08.0	
	comp=N,2µm,1.4s						
KUR				A	A	03 57 10.0	
	comp=N,2µm,0.3s						
KUR				A	A	03 57 10.0	
	comp=N,988nm,0.3s						
KUR	Kuril'sk	1.84	19	*c i*PN	Pn	03 56 43.7	+1.4
KUR				*i* S	Sn	03 57 06.5	+1.9
KUR				pmax	pmax		
	comp=Z,691nm,1.1s						
KUR				pmax	pmax		
	comp=Z,350nm,0.6s						

KUR				pmax	pmax		
	comp=N,122nm,0.2s						
KUR				pmax	pmax		
	comp=E,148nm,0.3s						
KUR				smax	smax		
	comp=E,2µm,0.5s						
KUR				smax	smax		
	comp=N,1µm,1.4s						
KUR				smax	smax		
	comp=N,2µm,0.2s						
KUR				smax	smax		
	comp=E,788nm,0.2s						
JTKR	Abashiri--Toko	2.29	283	P	Pb	03 56 51.1	-2.4
JAR	Ashorobuto	2.36	266	P	Pn	03 56 51.2	+1.7
JAR				eS	Sn	03 57 19.8	+2.4
JOB	Onbets	2.39	257	P	Pn	03 56 51.6	+1.8
JOB				eS	Sn	03 57 20.5	+2.5
JMP	Maruseppu	2.69	282	P	Pn	03 56 56.7	+2.7
JCH	Churui	2.81	253	P	Pn	03 56 57.2	+1.6
JKK2	Kamakawa 2	3.11	278	P	Pb	03 57 03.6	-3.8
ERM	Erimo	3.19	244	i PN	Pn	03 57 04.3	+3.4
ERM	Erimo	3.19	244	Pn	Pn	03 57 03.9	+3.0
JEM	Erimo	3.19	244		Pb	03 57 05.7	-3.1
JFR	Furan	3.23	266	P	Pn	03 57 04.4	+3.0
JFR				eS	Sn	03 57 41.8	+2.9
JKA	Kamikawa-asahi	3.25	283	eP	Pb	03 57 06.5	-3.2
JKA	Kamikawa-asahi	3.25	283		Pb	03 57 06.5	-3.2
JKA	Kamikawa-asahi	3.25	283		Sb	03 57 49.1	+0.3
ASAJ	Asahikawa	3.25	283	P	Pb	03 57 06.4	-3.3
	comp=E,11nm,0.3s,baz=107,slow=10,SNR=28						
ASAJ				S	Sb	03 57 49.1	+0.2
	comp=E,9.8nm,0.3s,baz=18,slow=17,SNR=2.0						
ASAJ				LR	LR	03 58 31.8	
	comp=E,241nm,19.8s,baz=338,slow=41						
ASAJ	Asahikawa	3.25	283	P	Pb	03 57 06.1	-3.6
JEW	Eniwo	4.11	263	Pn	Pn	03 57 16.8	+3.3
YSS	Yuzh-Sakhalins	4.58	321	eP	Pn	03 57 22.9	+3.0
YSS				AMB	AMB	03 57 28.2	
	comp=E,25nm,0.5s						
YSS				eS	Sn	03 58 14.3	+2.3
YSS	Yuzh-Sakhalins	4.58	321	ePN	Pn	03 57 23.2	+3.3
YSS				eS	Sn	03 58 13.3	+1.3
YSS				smax	smax		
	comp=E,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,600nm,12.0s						
YSS	Yuzh-Sakhalins	4.58	321	Pn	Pb	03 57 27.4	-5.0
JTM	Tenmabayashi	5.17	240	Pn	Pn	03 57 30.9	+2.8
TYV	Tymovskoe	7.94	340	eP	Pn	03 58 09.1	+3.1
TYV				AMB	AMB	03 58 13.9	
	comp=Z,6.0nm,0.5s						
SKR	Severo-Kuril's	9.50	38	eP	Pn	03 58 28.8	+1.4
SKR				AMB	AMB	03 58 38.4	
	comp=Z,40nm,0.8s						
SKR	Severo-Kuril's	9.50	38	i PN	Pn	03 58 28.3	+0.9
MJAR	Matsushiro Arr	9.68	227	P	Pn	03 58 31.0	+1.1
	comp=Z,0.2nm,0.3s,baz=30,slow=14,SNR=5.5						
MJAR				LR	LR	04 01 35.7	
	comp=Z,35nm,18.9s,baz=30,slow=33						
MAJO	Matsushiro	9.68	227	i PN	Pn	03 58 31.0	+1.1
PAU	Pauzhetka	10.37	36	eP	Pn	03 58 42.6	+3.3
USRK	Ussuriysk Ar.	10.87	279	P	Pn	03 58 51.6	+5.4
	baz=87,slow=12,SNR=4.8						
USRK				LR	LR	04 03 14.4	
	comp=Z,114nm,18.4s,baz=144,slow=38						
PETK	Petropavlovsk-	11.96	33	P	Pn	03 59 02.1	+1.1
	comp=Z,0.9nm,0.3s,baz=209,slow=12,SNR=4.8						
KLR	Kul'dur	11.99	304	P	Pn	03 59 07.2	+5.7
	comp=Z,0.1nm,0.3s,baz=107,slow=16,SNR=9.4						
KLR	Kul'dur	11.99	304	eP	Pn	03 59 02.0	+0.5
KLR	Kul'dur	11.99	304	i PN	Pn	03 59 02.0	+0.5
KLR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EKMR	Ekimchan	13.37	321	eP	Pn	03 59 21.0	+0.7
EKMR				AMB	AMB	03 59 28.0	
	comp=Z,11nm,1.0s						
KSRS	Korea Array	15.71	254	LR	LR	04 06 05.8	
	comp=Z,49nm,19.5s,baz=55,slow=37						
BMKR	Bomnak	16.29	320	eP	Pn	03 59 58.0	-1.2
ZEA	Zeya	16.54	315	eP	Pn	04 00 00.7	-1.6
ZEA				AMB	AMB	04 00 01.6	
	comp=Z,10.0nm,1.0s						
KROS	Kirovskiy	17.04	317	eP	Pn	04 00 08.0	-0.6
KROS				AMB	AMB	04 00 10.0	
	comp=Z,4.0nm,0.5s						
HIA	Hailar	19.61	297	i P	P	04 00 36.3	-2.2
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SEY	Seymchan	19.72	7	i P	P	04 00 35.9	-3.7
YAK	Yakutsk	21.19	337	LR	LR	04 10 24.3	
	comp=Z,85nm,19.5s,baz=269,slow=40						
HHC	Hu-ho-hao-te	26.28	277	eP	P	04 01 46.2	+0.7
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,8.0s						
ULN	Ulaanbaatar	28.02	293	i P	P	04 01 58.3	-2.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	28.47	293	P	P	04 02 06.6	+1.5
	comp=Z,2.2nm,0.8s,baz=81,slow=8.5,SNR=9.2						
H11N2	WAKE ISLAND Hy	28.98	139	T	T	04 32 50.7	
	baz=330,slow=76,SNR=414						
H11N1	WAKE ISLAND Hy	28.99	139	T	T	04 32 55.9	
	baz=330,slow=76,SNR=364						
H11N3	WAKE ISLAND Hy	29.00	139	T	T	04 32 59.1	
	baz=330,slow=76,SNR=456						
TIXI	Tiksi	29.59	348	i P	P	04 02 10.7	-3.9
H11S1	WAKE ISLAND Hy	29.94	140	T	T	04 34 00.1	
	baz=331,slow=76,SNR=926						
H11S3	WAKE ISLAND Hy	29.95	140	T	T	04 34 03.9	
	baz=331,slow=76,SNR=859						
H11S2	WAKE ISLAND Hy	29.96	140	T	T	04 34 04.9	
	baz=331,slow=76,SNR=645						
LZH	Lanzhou	33.67	272	eP	P	04 02 51.4	+0.3
LZH				pP	sP	04 03 09.4	+5.7
LZH				sP	pP	04 03 18.4	+18
LZH				PP	PP	04 04 12.6	+5.2
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,77nm,4.3s						
LZH				LR	LR		
	comp=N,290nm,16.3s						
LZH				LR	LR		
	comp=E,340nm,14.6s						
LZH				LR	LR		
	comp=Z,230nm,15.7s						
COLD	Coldfoot	40.42	32	P	P	04 03 48.6	+0.8
COLD				IAmb	IAmb	04 03 49.1	
	comp=Z,3.6nm,0.7s						
DGZ	Jazzator, Alta	40.45	300	i P	P	04 03 47.3	-1.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TOLK	Toolik Lake Re	40.76	30	P	P	04 03 51.1	+0.5
TOLK				IAmb	IAmb	04 03 51.9	
	comp=Z,3.8nm,0.7s						
COLA	College	41.34	36	P	P	04 03 57.0	+1.6
COLA				pmax	pmax		
	comp=Z,16nm,1.3s						
COLA	College	41.34	36	P	P	04 03 57.0	+1.6
COLA				IAmb	IAmb	04 03 57.5	
	comp=Z,16nm,1.2s						
POKR	Poker Plat Res	41.51	36	P	P	04 03 58.0	+1.2
IL31		41.76	36	P	P	04 03 59.3	+0.6
ILAR	Eielson Array	41.76	36	P	P	04 03 59.3	+0.5
	comp=Z,2.4nm,0.8s,baz=264,slow=7.0,SNR=23						
WMQ	Urumqi	42.09	292	eP	P	04 04 04.0	+2.1
PRP	Porcupine Dome	42.30	35	P	P	04 04 04.4	+1.0
PRP				IAmb	IAmb	04 04 07.5	
	comp=Z,6.0nm,1.0s						
K27K	Chicken	43.90	37	P	P	04 04 17.7	+1.5
MK31	Makanchi Array	44.61	298	P	P	04 04 22.8	+0.7
MK31				pmax	pmax		
	comp=Z,9.0nm,2.0s						
MK31	Makanchi Array	44.61	298	P	P	04 04 22.8	+0.7
MKAR	Makanchi Array	44.61	298	P	P	04 04 22.7	+0.6
	comp=Z,0.6nm,0.5s,baz=83,slow=8.8,SNR=9.2						
MKAR	Makanchi Array	44.61	298	eP	P	04 04 23.5	+1.5
MKAR	Makanchi Array	44.61	298	i P	P	04 04 23.6	+1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	Inuvik	46.68	30	P	P	04 04 39.0	+0.9
	comp=Z,6.2nm,0.7s,baz=280,slow=6.9,SNR=26						
INK	Inuvik	46.68	30	P	P	04 04 39.0	+0.9
INK	Inuvik	46.68	30	P	P	04 04 39.0	+0.9
CMAR	Chiang Mai Arr	47.35	254	P	P	04 04 46.1	+2.1
	comp=Z,0.7nm,0.4s,baz=45,slow=7.8,SNR=1.0						
C36M	Paulatuk	49.75	28	P	P	04 05 02.3	+0.6
KK31	Karatay Array	53.74	298	P	P	04 05 32.3	+0.3
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	Karatay Array	53.74	298	P	P	04 05 32.3	+0.3
HNR	Honiara	53.98	164	LR	LR	04 23 11.4	
	comp=Z,36nm,21.6s,baz=54,slow=30						
ARU	Arti	54.46	317	eP	P	04 05 35.4	-1.6
ARU	Arti	54.46	317	d iP	P	04 05 35.3	-1.7
ARU				S	S	04 13 12.8	-0.6
ARU				SS	SS	04 16 53.6	-1.7
ARU				pmax	pmax		
	comp=Z,14nm,2.5s						
RES	Resolute Bay	55.24	17	P	P	04 05 42.3	-0.1
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RES	Resolute Bay	55.24	17	P	P	04 05 42.3	-0.1
YKA	Yellowknife Ar	56.07	34	P	P	04 05 48.9	+0.4
	comp=Z,1.8nm,0.7s,baz=304,slow=6.2,SNR=30						
ABKAR	Akbulak array	57.14	309	P	P	04 05 57.0	+0.7
BELG	Belogornoye	62.01	317	i P	P	04 06 28.5	-1.2
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	Warramunga Arr	64.19	193	P	P	04 06 45.1	+0.6
	comp=Z,0.3nm,0.5s,baz=8.5,slow=6.7,SNR=1.5						
FINES	FINESS Array B	65.05	333	P	P	04 06 49.8	+0.1
	comp=Z,4.4nm,0.6s,baz=43,slow=7.5,SNR=30						
FINES	FINESS Array B	65.05	333	i P	P	04 06 49.7	0.0
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NVAR	Mina Array Bea	67.81	58	P	P	04 07 09.0	+0.9
	comp=Z,0.6nm,0.6s,baz=295,slow=6.5,SNR=6.7						
NB2	NORSAR Subarra	69.80	339	P	P	04 07 19.8	0.0
	comp=Z,5.8nm,0.7s,baz=32,slow=6.9						
NOA	NORSAR Array B	69.80	339	P	P	04 07 20.0	+0.2
	comp=Z,0.6nm,0.6s,baz=34,slow=4.6,SNR=12						
KBZ	Khabaz	69.89	312	P	P	04 07 21.9	+1.3
	comp=Z,1.5nm,0.7s,baz=69,slow=6.9,SNR=1.6						
PDAR	Pinedale Array	70.16	50	P	P	04 07 23.1	+0.5
	comp=Z,0.4nm,0.7s,baz=320,slow=3.9,SNR=4.6						
AKASG	Malin Array Be	71.72	324	P	P	04 07 31.5	-0.1
	comp=Z,0.8nm,0.4s,baz=38,slow=6.2,SNR=5.3						
TXAR	Lajitas Array	82.88	56	P	P	04 08 35.3	+0.7
	comp=Z,0.5nm,0.6s,baz=290,slow=3.3,SNR=14						
H03N2	Juan Fernandez	143.07	90	T	T	06 55 03.7	
	baz=304,slow=77,SNR=7.8						
H03N3	Juan Fernandez	143.09	90	T	T	06 55 01.6	
	baz=304,slow=77,SNR=8.0						
H03N1	Juan Fernandez	143.09	90	T	T	06 55 04.9	
	baz=304,slow=77,SNR=7.6						

IDC 09 04:08:54.7±64.0**, 15°.22S**×**167°.59E, h115**^{km}±153^{km}**, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.2**/30**, mbtmp3.8**/4**, ML3.5**/1**, Error ellipse: s-maj=1232.0km s-min=117.8km az=66.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.90	189	P	Pn	04 10 33.3	0.0
	0.9nm,0.3s,baz=15,slow=20,SNR=10						
DZM				S	Sn	04 11 41.6	-8.9
	0.2nm,0.3s,baz=203,slow=19,SNR=1.0						
STKA	Stephens Creek	28.92	230	P	P	04 14 42.6	-0.4
	0.8nm,0.4s,baz=45,slow=10.0,SNR=3.7						
WRA	Warramunga Arr	32.01	257	P	P	04 15 10.3	-0.1
	0.4nm,0.6s,baz=87,slow=9.0,SNR=1.7						
ASAR	Alice Springs	32.79	250	P	P	04 15 17.4	+0.2
	1.3nm,0.6s,baz=77,slow=9.3,SNR=21						

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*IDC **09** 04:09:01.2±2.8, 36°.14N×70°.41E, h186^{km}±24^{km}, mb3.5/14, mb1 3.5/20, mb1mx3.3/56, mbtmp4.0/20, Error ellipse: s-maj=21.5km s-min=14.5km az=169.0*

*NEIC **09** 04:09:05.3±1.6, 36°.50N±0°.07×70°.19E±0°.04, h218^{km}±7^{km}, mb4.0/4, Error ellipse: s-maj=10.7km s-min=3.8km az=165.0*

*NNC **09** 04:09:11.2±5.2, 36°.96N×70°.45E, h223^{km}±70^{km}, mb3.2, mpv4.5, Error ellipse: s-maj=51.0km s-min=28.9km az=9.0*

ISC 09 04:09:04.2±0.5**, 36°.44N**±0°.05×**70°.32E**±0°.06**, h204**^{km}**, n71,** $\sigma 1^{s}.$**81**/81**, mb3.5**/13**, 4C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.16	209		Pn	04 09 46.9	+2.0
CEP	Cherat	2.92	153	⇑P	Pn	04 09 56.6	+3.4
CEP				S	S	04 10 34.0	+3.1
DRK	Karamyk	3.25	21		Pn	04 09 59.1	+1.9
DRK					S	04 10 39.8	+1.4
NIL	Nilore	3.68	138		Pn	04 10 05.4	+3.2
THW	Thamme Wali	3.82	162	P	Pn	04 10 06.6	+2.6
SARP	Sargodha	4.91	156	P	Pn	04 10 19.6	+2.1
TAS	Tashkent	4.94	351	Pn	Pn	04 10 18.6	+0.8
ARSB	Arslanbob	5.30	22	Pn	Pn	04 10 23.2	+0.7
AML	Almayashu	6.26	24	P	Pn	04 10 35.9	+0.8
	SNR=262						
DHRM	DHARAMSHALA	6.47	128	eP	Pn	04 10 39.9	+2.0
DHRM				eS	S	04 11 51.5	-0.3
DHRM				IAML		04 11 52.5	
	comp=E,324nm,0.5s						
DHRM				IAML		04 11 53.1	
	comp=N,166nm,0.4s						
UCH	Uchtor	6.63	28	P	Pn	04 10 40.9	+1.0
	SNR=68						
KK07	Karatay Array	6.64	1	Pn	Pn	04 10 39.9	+0.2
KK31	Karatay Array	6.66	1	P	Pn	04 10 40.0	+0.1
	comp=N,6.7nm,0.3s,baz=171,slow=12,SNR=150						
KK31				⇓S	S	04 11 51.3	-4.4
	comp=N,9.7nm,0.4s,baz=179,slow=22						
KK31	Karatay Array	6.66	1		Pn	04 10 40.2	+0.4
KKAR	Karatay Array	6.66	1		Pn	04 10 40.2	+0.4
EKS2	Erkin-Say	6.76	22	P	Pn	04 10 42.4	+1.1
	SNR=51						
AAK	Ala-Archa	6.98	26	P	Pn	04 10 45.1	+0.9
	comp=N,11nm,0.3s,baz=166,slow=4.8,SNR=86						
AAK				S	S	04 12 03.4	-0.1
	comp=N,2.0nm,0.3s,baz=323,slow=23,SNR=9.0						
AAK	Ala-Archa	6.98	26	P	Pn	04 10 45.0	+0.8
	SNR=38						
AAK	Ala-Archa	6.98	26	⇓P	Pn	04 10 45.1	+0.9
	comp=N,22nm,0.5s						
AAK				⇑S	S	04 12 00.6	-2.9
	comp=N,21nm,0.5s						
AAK	Ala-Archa	6.98	26		Pn	04 10 45.2	+1.1
BHK	Bhakra	7.12	133	eS	S	04 12 10.0	+3.1
KBK	Karagaybulak	7.16	29	P	Pn	04 10 47.9	+1.4
	SNR=11						
FRU1	Bishkek	7.18	26	Pn	Pn	04 10 47.7	+1.0
CHMS	Chumysh	7.38	26	P	Pn	04 10 49.9	+0.6
	SNR=17						
ULHL	Ulahol	7.39	37	P	Pn	04 10 50.7	+1.1
	SNR=6.2						
BOOM	Boomskoye usch	7.44	34		Pn	04 10 51.1	+0.9
TKM2	Tokmak 2	7.64	31	P	Pn	04 10 53.8	+0.9
	SNR=28						
TKM2	Tokmak 2	7.64	31	⇑P	Pn	04 10 53.6	+0.7
	comp=N,30nm,0.8s						
TKM2				⇑S	S	04 12 15.8	-3.5
	comp=N,14nm,1.0s						
SMLA	Simla	7.78	131	eP	Pn	04 10 53.8	-0.7
SMLA				eS	S	04 12 20.3	-2.1
SMLA				IAML		04 12 22.2	
	comp=N,109nm,0.5s						
SMLA				IAML		04 12 22.9	
	comp=E,66nm,0.4s						
MDOK	Medeo	8.48	36	P	Pn	04 11 04.6	+1.0
	comp=E,30nm,1.1s						
PRZ	Przheval'sk	8.68	44		Pn	04 11 07.6	+1.2
PDGK	Podgornoye	9.84	43	⇓P	Pn	04 11 22.4	+1.1
	comp=E,6.9nm,0.8s						
GEYT	Alibeck	9.85	282	P	Pn	04 11 20.9	-0.5
	comp=E,1.3nm,0.3s,baz=70,slow=13,SNR=4.0						
MAKZ	Makanchi	13.52	36		P	04 12 08.7	-1.6
PYUN	Piuthan	13.56	124	eP	P	04 12 09.7	-1.3
	comp=E,23nm,0.4s						
MK31	Makanchi Array	13.66	37	P	P	04 12 10.1	-1.7
	comp=E,1.6nm,0.6s,baz=228,slow=12,SNR=19						
MK31	Makanchi Array	13.66	37		P	04 12 10.3	-1.6
MKAR	Makanchi Array	13.66	37	P	P	04 12 10.1	-1.7
	comp=E,0.4nm,0.3s,baz=229,slow=13,SNR=20						
DANN	Dangsing	13.92	122	eP	P	04 12 14.3	-0.8
	comp=E,13nm,0.6s						
KOLN	Koldanda	14.18	124	eP	P	04 12 17.5	-0.4
	comp=E,5.2nm,0.4s						
BHPL	Bhopal	14.52	153	eP	P	04 12 22.1	+0.6
BHPL				eS	S	04 14 53.9	-7.8
AB31	Akbulak array	14.88	333	P	Pn	04 12 23.5	-1.0
	comp=E,1.2nm,0.3s,baz=148,slow=13,SNR=134						
ABKAR	Akbulak array	14.88	333		Pn	04 12 22.6	-1.9
KKN	Kakani	15.32	120	eP	P	04 12 31.7	+1.2
	comp=E,28nm,0.5s						
KURBB	Kurchatov Arra	15.36	20	P	P	04 12 30.4	-0.1
	comp=E,0.2nm,0.3s,baz=210,slow=11,SNR=2.4						
KURK	Kurchatov	15.47	20	P	P	04 12 31.9	+0.2
PKI	Pulchoki	15.54	120	eP	P	04 12 35.3	+2.2
	comp=E,21nm,0.6s						
GUN	Gumba	15.66	118	eP	Pn	04 12 36.9	+2.3
	comp=E,24nm,0.7s						
AKTO	Aktyubinsk	16.57	331	P	Pn	04 12 45.4	+0.6
	comp=E,0.8nm,0.3s,baz=145,slow=8.8,SNR=16						
AKTO				S	S	04 15 44.8	-1.7
	comp=E,0.1nm,0.3s,baz=155,slow=19,SNR=2.0						
BVAR	Borovoye Array	16.58	0	P	Pn	04 12 46.0	+1.0
	comp=E,0.6nm,0.3s,baz=120,slow=8.8,SNR=9.0						
BRVK	Borovoye	16.62	360	⇓P	Pn	04 12 46.4	+1.0
	comp=E,2.4nm,0.7s						
BRVK	Borovoye	16.62	360	P	Pn	04 12 44.8	-0.6
BRVK				IAmb	IAmb	04 12 54.0	
	comp=Z,8.8nm,1.4s						
RAMN	Ramite	16.76	120	eP	Pn	04 12 48.9	+1.3
	comp=Z,24nm,0.6s						
TAPN	Taplejung	17.30	117	eP	Pn	04 12 55.0	+0.9
	comp=Z,6.7nm,0.4s						
ODAN	Odare	17.37	119	eP	Pn	04 12 56.1	+1.3
	comp=Z,22nm,0.6s						
ZAA0	Zalesovo Array	20.20	25	P	P	04 13 23.6	+0.5
ZAA0				IAmb	IAmb	04 13 44.2	
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	20.20	25	P	P	04 13 24.2	+1.1
	comp=Z,2.4nm,0.4s,baz=217,slow=9.8,SNR=13						
ARU	Arti	21.52	342	P	P	04 13 38.5	+1.6
	comp=Z,2.2nm,0.2s,baz=145,slow=8.8,SNR=6.0						
ARU	Arti	21.52	342	P	P	04 13 37.4	+0.5
BELG	Belogornoye	22.60	322	P	P	04 13 48.4	+1.2
	comp=Z,16nm,0.7s,baz=180,slow=3.0,SNR=3.9						
SONM	Songino Array	28.82	55	P	P	04 14 44.5	+1.2
	comp=Z,0.4nm,0.5s,baz=270,slow=11,SNR=3.3						
BRTR	Keskin Array B	28.93	288	P	P	04 14 45.3	+0.9
	comp=Z,0.3nm,0.6s,baz=92,slow=10,SNR=1.6						
NRIK	Noril'sk	34.28	11	P	P	04 15 32.4	+1.8
	comp=Z,2.7nm,0.5s,baz=209,slow=13,SNR=4.6						
FINES	FINESS Array B	37.23	326	P	P	04 15 56.6	+1.0
	comp=Z,1.9nm,0.7s,baz=104,slow=6.1,SNR=6.4						
ARCES	ARCESS Array B	40.99	338	P	P	04 16 27.8	+1.1
	comp=Z,2.2nm,0.5s,baz=108,slow=7.1,SNR=18						
NOA	NORSAR Array B	44.10	323	P	P	04 16 52.6	+0.8
	comp=Z,0.5nm,0.5s,baz=103,slow=7.8,SNR=1.8						
TORD	Torodi Ar. Bea	65.17	268	P	P	04 19 22.6	-1.1
	comp=Z,2.6nm,0.7s,baz=39,slow=7.4,SNR=13						
ILAR	Eielson Array	74.98	16	P	P	04 20 22.8	+0.2
	comp=Z,0.2nm,0.7s,baz=293,slow=5.4,SNR=4.4						
YKA	Yellowknife Ar	81.33	2	P	P	04 20 57.8	+0.4
	comp=Z,0.7nm,0.7s,baz=353,slow=5.0,SNR=12						
WRA	Warramunga Arr	82.42	121	P	P	04 21 01.5	-2.2
	comp=Z,0.8nm,0.8s,baz=313,slow=5.8,SNR=2.0						
ASAR	Alice Springs	84.67	124	P	P	04 21 12.5	-2.6
	comp=Z,0.3nm,0.6s,baz=316,slow=5.2,SNR=2.5						

IDC 09 04:10:15.7±6.9**, 19°.67S**×**176°.51W, h0**^{km}**, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.6**/25**, mbtmp3.8**/2**, Error ellipse: s-maj=340.0km s-min=103.8km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.08	256	P	P	04 18 41.7	-0.1
	1.1nm,0.8s,baz=93,slow=8.0,SNR=9.0						
WRA	Warramunga Arr	46.11	261	P	P	04 18 41.9	-0.2
	0.3nm,0.3s,baz=97,slow=8.1,SNR=8.7						
AKASG	Malin Array Be	142.94	333	PKP	PKPdf	04 29 50.6	-0.6
	0.8nm,0.4s,baz=42,slow=4.0,SNR=6.0						

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*THE **09** 05:10:10.1, 38°.31N×20°.39E, h14^{km}, ML3.0/13, Error ellipse: s-maj=0.8km s-min=0.3km az=274.0*

*ATH **09** 05:10:10.5, 38°.32N×20°.40E, h11^{km}±1^{km}, ML2.5/5, Error ellipse: s-maj=1.7km s-min=0.7km az=263.0*

ISC 09 05:10:09.5±0.8**, 38°.32N**±0°.02×**20°.36E**±0°.04**, h17**^{km}±4^{km}**, n39,** $\sigma 0^{s}.$**57**/67**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.07	140	P	Pg	05 10 12.7	-0.1
KEF4				S	Sg	05 10 14.6	-0.3
KEF4	Livadi, Kephal	0.07	140	P	Pg	05 10 12.7	-0.1
KEF4				S	Sg	05 10 14.7	-0.2
	90µm,0.1s						
DMLN	Damoulianata-K	0.08	174	P	Pg	05 10 12.8	+0.1
DMLN				S	Sg	05 10 14.8	-0.2
DMLN	Damoulianata-K	0.08	174	P	Pg	05 10 12.9	+0.1
DMLN				S	Sg	05 10 15.0	0.0
	18µm,0.1s						
KEF5	Kardakata, Kep	0.09	115	P	Pg	05 10 12.7	-0.2
KEF5				S	Sg	05 10 14.4	-0.8
KEF5	Kardakata, Kep	0.09	115	P	Pg	05 10 12.8	-0.1
KEF5				S	Sg	05 10 14.6	-0.6
	81µm,0.2s						
KEF3	Kipouria, Keph	0.11	186	P	Pg	05 10 13.0	-0.1
KEF3				S	Sg	05 10 15.0	-0.5
KEF3	Kipouria, Keph	0.11	186	P	Pg	05 10 13.1	-0.1
KEF3				S	Sg	05 10 15.3	-0.2
	41µm,0.2s						
LXR1	Lixouri, Cepha	0.13	153	P	Pg	05 10 13.6	+0.3
LXR1				S	Sg	05 10 16.4	+0.6
	37µm,0.1s						
LXRA	Lixouri, Kepha	0.13	153	P	Pg	05 10 13.5	+0.2
LXRA				S	Sg	05 10 16.0	+0.2
ARGA	Argostoli. Kep	0.17	147	P	Pg	05 10 13.8	+0.1
ARGA				S	Sg	05 10 16.7	+0.1
ARG2	Argostoli	0.17	144	P	Pg	05 10 14.0	+0.2
ARG2				S	Sg	05 10 16.8	+0.1
	40µm,0.1s						
FSK	Fiskardo	0.21	47	P	Pg	05 10 14.4	-0.1
FSK				S	Sg	05 10 17.2	-0.7
FSK				AML	AML	05 10 18.2	
	comp=N,3278µm,0.4s						
FSK				AML	AML	05 10 18.3	
	comp=E,3595µm,0.3s						
FSK	Fiskardo	0.21	47	P	Pg	05 10 14.6	+0.1
FSK				S	Sg	05 10 18.2	+0.3
	comp=E,2µm,0.3s						
VLS	Valsamata	0.23	128	P	Pg	05 10 14.6	-0.1
VLS				S	Sg	05 10 17.9	-0.3
VLS				AML	AML	05 10 18.1	
	comp=N,20122µm,0.1s						
VLS				AML	AML	05 10 18.1	
	comp=E,22429µm,0.1s						
VLS	Valsamata	0.23	128	P	Pg	05 10 14.6	-0.1
VLS				S	Sg	05 10 18.0	-0.3
	comp=E,11µm,0.1s						
PSDA	Pessada-Kefalo	0.27	139	P	Pg	05 10 15.4	+0.1
PSDA				S	Sg	05 10 19.2	-0.1
PSDA	Pessada-Kefalo	0.27	139	P	Pg	05 10 15.4	+0.1
PSDA				S	Sg	05 10 19.4	+0.1
	comp=E,252nm,0.2s						
EVGI	Lefkada island	0.38	37	P	Pg	05 10 17.4	0.0
EVGI				S	Sg	05 10 22.9	+0.2
EVGI	Lefkada island	0.38	37	P	Pg	05 10 17.6	+0.2
EVGI				S	Sg	05 10 23.4	+0.7
	comp=E,220nm,0.1s						
NYDR	Nydri-Lefkada	0.48	33	P	Pg	05 10 18.9	-0.1
NYDR	Nydri-Lefkada	0.48	33	P	Pg	05 10 19.1	0.0
NYDR				S	Sb	05 10 26.5	+0.3
	comp=E,238nm,0.5s						
VLMS	Volimes, Zakyn	0.50	152	P	Pg	05 10 19.3	-0.1
VLMS				S	Sg	05 10 27.0	+0.8
VLMS				AML	AML	05 10 28.8	
	comp=N,1374µm,0.2s						
VLMS				AML	AML	05 10 28.8	
	comp=E,2116µm,0.1s						
VLMS	Volimes, Zakyn	0.50	152	P	Pg	05 10 19.4	-0.1
VLMS				S	Sg	05 10 26.9	+0.8
	comp=E,892nm,0.1s						
LKD2	Lefkada island	0.53	26	P	Pg	05 10 19.9	0.0
LKD2				S	Sg	05 10 27.4	+0.3
LKD2				AML	AML	05 10 35.5	

	comp=E,308μm,0.2s						
LKD2				AML	AML	05 10 36.1	
	comp=N,408μm,0.3s						
LKD2	**Lefkada island**	**0.53**	**26**	P	**Pg**	**05 10 20.0**	**0.0**
TSLK	**Tsoukalades, L**	**0.56**	**24**	P	**Pg**	**05 10 20.6**	**0.0**
AST1	**Astakos**	**0.61**	**68**	P	**Pg**	**05 10 21.5**	**-0.1**
AST1				S	**Sb**	**05 10 30.3**	**+0.2**
	comp=N,15μm,0.3s						
PDO	**Prodromos**	**0.70**	**66**	P	**Pg**	**05 10 22.9**	**-0.4**
PDO				AML	AML	05 10 37.2	
	comp=N,668μm,0.5s						
PDO				AML	AML	05 10 38.7	
	comp=E,713μm,0.4s						
PDO	**Prodromos**	**0.70**	**66**	P	**Pg**	**05 10 23.1**	**-0.2**
RLS	**Riolos of Patr**	**0.91**	**106**	P	**Pg**	**05 10 26.6**	**-0.5**
RLS	**Riolos of Patr**	**0.91**	**106**	P	**Pg**	**05 10 26.3**	**-0.8**
DRO	**Drossia**	**1.12**	**108**	P	**Pb**	**05 10 30.6**	**+0.1**
IGT	**Igoumenitsa**	**1.22**	**359**	P	**Pb**	**05 10 33.3**	**+1.2**
KLV	**Kalavryta, Ach**	**1.43**	**100**	P	**Pn**	**05 10 35.6**	**+0.8**
STON	**Ston**	**4.98**	**337**	*e*Pn	**Pn**	**05 11 23.4**	**0.0**
STON				Sn	**Sn**	**05 12 19.1**	**-1.6**
HVAR	**Hvar**	**5.69**	**330**	*e*Pn	**Pn**	**05 11 33.6**	**+0.3**
HVAR				Sn	**Sn**	**05 12 35.9**	**-2.4**
KIJV	**Kijevo**	**6.42**	**334**	*e*Pn	**Pn**	**05 11 44.1**	**+0.8**
KIJV				Sn	**Sn**	**05 12 54.5**	**-1.7**
MORI	**Morici**	**6.56**	**329**	*e*Pn	**Pn**	**05 11 46.1**	**+0.9**

IDC 09 05:23:58.9±1.3**, 0°.17N×126°.09E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/29**, mbtmp3.6**/5**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.6**/36**, Error ellipse: s-maj=138.0km s-min=21.4km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.28**	**101**	LR	LR	05 28 14.3	
	comp=Z,106nm,18.8s,baz=251,slow=48						
WRA	**Warramunga Arr**	**21.56**	**158**	P	P	05 28 49.8	-0.4
	1.3nm,0.7s,baz=338,slow=10,SNR=6.6						
GUMO	**Guam**	**22.89**	**54**	LR	LR	05 38 09.3	
	comp=Z,20nm,18.1s,baz=228,slow=37						
ASAR	**Alice Springs**	**24.88**	**163**	P	P	05 29 23.5	0.0
	0.9nm,0.7s,baz=339,slow=6.3,SNR=13						
STKA	**Stephens Creek**	**35.09**	**157**	P	P	05 30 54.4	+0.4
	1.7nm,0.7s,baz=333,slow=11,SNR=2.8						
SONM	**Songino Array**	**50.47**	**343**	P	P	05 32 59.4	+0.8
	0.4nm,0.7s,baz=159,slow=9.3,SNR=2.4						
MKAR	**Makanchi Array**	**60.13**	**327**	P	P	05 34 07.4	-0.9
	0.3nm,0.5s,baz=121,slow=8.8,SNR=3.6						

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*SNET **09** 05:33:30.0±1.2, 14°.46N×89°.12W, h10^{km}±8^{km}, ML2.8*
*GCG **09** 05:33:31.6±0.4, 15°.47N×89°.59W, h77^{km}, MD3.3*
ISC 09 05:33:29.1±1.1**, 14°.55N**±0°.05×**89°.08W**±0°.05**, h10^{km}, n9, σ0^{s}.36**/17**, 1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TACO	**Tacachico**	**0.63**	**205**	*e*P	**Pg**	**05 33 41.3**	**0.0**
TACO				*e*S	**Sg**	**05 33 49.5**	**-0.2**
MRL	**Marmol**	**0.79**	**312**	*e*P	**Pb**	**05 33 44.8**	**-0.2**
MRL				*e*S	**Sb**	**05 33 55.6**	**-0.3**
CEDA	**San Andres**	**0.80**	**202**	*e*P	**Pg**	**05 33 44.1**	**-0.5**
CEDA				*e*S	**Sb**	**05 33 56.1**	**0.0**
CEDA				IAML		05 34 03.7	
	comp=Z,214nm,0.2s						
COEG	**Centro de Oper**	**0.94**	**168**	*e*P	**Pg**	**05 33 47.2**	**0.0**
COEG				*e*S	**Sb**	**05 34 00.7**	**+0.5**
COEG				IAML		05 34 04.1	
	comp=Z,295nm,0.3s						
COEB	**Comit de Eme**	**1.17**	**153**	*e*P	**Pb**	**05 33 51.2**	**-0.3**
COEB				*e*S	**Sn**	**05 34 08.4**	**+0.6**
COEB				IAML		05 34 14.2	
	comp=Z,280nm,0.3s						
NBG	**Las Nubes**	**1.23**	**272**	*e*P	**Pg**	**05 33 53.2**	**+0.5**
NBG				*e*S	**Sn**	**05 34 10.0**	**+0.6**
FAGO	**Alcalda de S**	**1.27**	**132**	*e*P	**Pn**	**05 33 52.8**	**-0.2**
FAGO				*e*S	**Sg**	**05 34 10.1**	**+0.1**
PCG	**Pacaya**	**1.49**	**264**	*e*P	**Pg**	**05 33 57.4**	**-0.3**
LCND	**La Caada**	**1.69**	**137**	⇓*i*P	**Pb**	**05 34 00.2**	**-0.1**
LCND				*e*S	**Sg**	**05 34 23.4**	**-0.1**
LCND				IAML		05 34 26.1	
	comp=Z,219nm,0.5s						

IDC 09 05:53:17.0±2.3**, 6°.60S×130°.10E, h0^{km}, mb3.8**/1**, mb1 3.8**/4**, mb1mx3.6**/30**, mbtmp3.6**/4**, ML3.5**/3**, Error ellipse: s-maj=88.7km s-min=29.2km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.23**	**200**	Pn	Pn	05 56 12.8	+0.3
	0.4nm,0.3s,baz=25,slow=11,SNR=17						
FITZ				Sn	Sn	05 58 15.4	-14
	0.5nm,0.3s,baz=162,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**13.89**	**163**	Pn	Pn	05 56 35.7	+0.4
	0.2nm,0.3s,baz=346,slow=14,SNR=1.8						
WRA				Sn	Sn	05 58 56.2	-14
	0.4nm,0.3s,baz=338,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**17.36**	**168**	P	Pn	05 57 20.4	-0.5
	0.1nm,0.3s,baz=341,slow=9.8,SNR=1.5						
ASAR				S	Sn	06 00 22.0	-13
	0.1nm,0.3s,baz=353,slow=28,SNR=1.5						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	06 04 17.8	0.0
	0.5nm,0.5s,baz=126,slow=6.3,SNR=5.5						

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*NOU **09** 05:54:24.5, 37°.28S×176°.91E, h267^{km}, MLv4.3, North Island, New Zealand*
*WEL **09** 05:54:27.6, 37°S±3°×17°7E±°, h240^{km}±4^{km}, M3.6/68, MLv3.6/68, Error ellipse: s-maj=0.0km s-min=0.0km az=5.2*
*IDC **09** 05:54:28.3±1.2, 37°.79S×176°.89E, h239^{km}±12^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/17, mbtmp4.1/4, Error ellipse: s-maj=50.2km s-min=23.2km az=127.0*
*NEIC **09** 05:54:29.7±1.2, 37°.50S±0°.09×176°.5E±0°.2, h231^{km}±11^{km}, mb4.2/4, ML4.2(WEL), Error ellipse: s-maj=19.5km s-min=12.9km az=92.0*
ISC 09 05:54:29.1±0.8**, 37°.50S**±0°.06×**176°.62E**±0°.06**, h238^{km}**±5^{km}**, n197, σ1^{s}.21**/211**, mb4.0**/5**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.35**	**188**	P	**Pn**	**05 54 59.3**	**-0.8**
OPRZ				S	**S**	**05 55 23.5**	**-1.1**
TGRZ	**Tauranga**	**0.37**	**231**	P	**Pn**	**05 54 59.5**	**-0.7**
TGRZ				S	**S**	**05 55 23.9**	**-0.7**
MYRZ	**Mayor Island**	**0.37**	**306**	P	**Pn**	**05 54 58.8**	**-1.5**
WHRZ	**Whale Island**	**0.46**	**142**	P	**Pn**	**05 55 00.3**	**-0.1**
WHRZ				S	**S**	**05 55 23.7**	**-1.5**
MARZ	**Manawahe**	**0.49**	**175**	P	**Pn**	**05 55 00.2**	**-0.3**
MARZ				S	**S**	**05 55 24.8**	**-0.6**
KARZ	**Kaharoa**	**0.60**	**210**	P	**Pn**	**05 55 00.9**	**0.0**
EDRZ	**Edgecumbe**	**0.61**	**171**	P	**Pn**	**05 55 00.7**	**-0.4**
EDRZ				S	**S**	**05 55 27.5**	**+1.3**
OMRZ	**Omania**	**0.64**	**198**	P	**Pn**	**05 55 01.1**	**+0.1**
OMRZ				S	**S**	**05 55 26.5**	**+0.2**
KMRZ	**Kaimai**	**0.64**	**237**	P	**Pn**	**05 55 00.9**	**-0.2**
MKRZ	**Makatiti**	**0.65**	**191**	P	**Pn**	**05 55 01.9**	**+0.7**
NGRZ	**Ngongotaha**	**0.69**	**209**	P	**Pn**	**05 55 01.7**	**+0.4**
TARZ	**Mount Tarawera**	**0.74**	**187**	P	**Pn**	**05 55 01.9**	**+0.3**
UTU	**Utuhina**	**0.76**	**206**	P	**Pn**	**05 55 02.3**	**+0.7**
HLRZ	**Highlands Stat**	**0.78**	**196**	P	**Pn**	**05 55 02.1**	**+0.4**
RRRZ	**Republican Roa**	**0.84**	**186**	P	**Pn**	**05 55 02.0**	**+0.1**
URZ	**Urewera**	**0.85**	**153**	P	**Pn**	**05 55 01.0**	**-0.9**
	106nm,0.3s,baz=277,slow=2.7,SNR=781						
URZ				S	**S**	**05 55 25.4**	**-2.5**
	45nm,0.3s,baz=36,slow=9.2,SNR=5.9						
URZ	**Urewera**	**0.85**	**153**	P	**Pn**	**05 55 01.0**	**-0.9**
URZ				S	**S**	**05 55 25.0**	**-2.9**
HSRZ	**Hossack Road**	**0.86**	**200**	P	**Pn**	**05 55 02.8**	**+0.7**
TOZ	**Tahuroa Road**	**0.92**	**255**	P	**Pn**	**05 55 02.2**	**-0.1**
HRRZ	**Handcock Road**	**0.93**	**196**	P	**Pn**	**05 55 02.9**	**+0.5**
GRRZ	**Galatos Road**	**0.94**	**205**	P	**Pn**	**05 55 03.2**	**+0.8**
HAZ	**Te Kaha**	**0.96**	**106**	P	**Pn**	**05 55 00.7**	**-1.8**
HAZ				S	**S**	**05 55 24.7**	**-4.1**
RUGZ	**Raukumara Rang**	**0.96**	**119**	P	**Pn**	**05 55 00.6**	**-2.1**
MUGZ	**Murupara**	**0.98**	**173**	P	**Pn**	**05 55 02.4**	**-0.3**
MUGZ				S	**S**	**05 55 27.4**	**-1.8**
PRRZ	**Plateau Road**	**1.02**	**190**	P	**Pn**	**05 55 03.2**	**+0.4**
KUZ	**Kuaotunu**	**1.04**	**316**	P	**Pn**	**05 55 00.9**	**-2.2**
KUZ				S	**S**	**05 55 24.9**	**-4.8**
WPRZ	**Whakapapatarin**	**1.08**	**199**	P	**Pn**	**05 55 04.0**	**+0.7**
ALRZ	**Allen Road**	**1.08**	**192**	P	**Pn**	**05 55 03.6**	**+0.3**
MWZ	**Matawai**	**1.10**	**140**	P	**Pn**	**05 55 02.6**	**-0.8**
RTZ	**Ruatahuna**	**1.15**	**166**	P	**Pn**	**05 55 03.6**	**-0.2**
KUTZ	**Kaahu Road**	**1.17**	**212**	P	**Pn**	**05 55 04.9**	**+1.0**
RAGZ	**Rawiri**	**1.18**	**148**	P	**Pn**	**05 55 03.6**	**-0.4**
TLZ	**Tolley Road**	**1.19**	**226**	P	**Pn**	**05 55 05.0**	**+0.9**
PKGZ	**Pakihiroa**	**1.22**	**109**	P	**Pn**	**05 55 03.2**	**-1.0**
TWGZ	**Tauwhareparae**	**1.27**	**123**	P	**Pn**	**05 55 04.2**	**-0.3**
TWGZ				S	**S**	**05 55 30.4**	**-2.1**
MXZ	**Matakaoa Point**	**1.34**	**93**	P	**Pn**	**05 55 03.2**	**-1.8**
MRHZ	**Matea Rd**	**1.34**	**187**	P	**Pn**	**05 55 05.4**	**+0.3**
TKGZ	**Te Karaka**	**1.35**	**134**	P	**Pn**	**05 55 04.7**	**-0.4**
MTHZ	**Maungataniwha**	**1.36**	**173**	P	**Pn**	**05 55 05.4**	**+0.2**
WIAZ	**Waiheke Island**	**1.38**	**300**	P	**Pn**	**05 55 03.9**	**-1.4**
WATZ	**Wairara**	**1.40**	**210**	P	**Pn**	**05 55 06.6**	**+1.2**
SNGZ	**Shannon Statio**	**1.40**	**156**	P	**Pn**	**05 55 05.8**	**+0.3**
SNGZ				S	**S**	**05 55 32.7**	**-1.4**
PUZ	**Puketiti**	**1.42**	**114**	P	**Pn**	**05 55 04.6**	**-1.0**
HATZ	**Hinemaiaia**	**1.45**	**196**	P	**Pn**	**05 55 06.5**	**+0.7**
ETAZ	**East Tamaki Re**	**1.46**	**291**	P	**Pn**	**05 55 05.0**	**-0.9**
WMGZ	**Waiomatatini S**	**1.46**	**103**	P	**Pn**	**05 55 04.8**	**-1.1**
RAHZ	**Arahi**	**1.46**	**166**	P	**Pn**	**05 55 06.6**	**+0.7**
RIGZ	**Rimuhau**	**1.51**	**144**	P	**Pn**	**05 55 06.6**	**+0.4**
RIGZ				S	**S**	**05 55 35.2**	**-0.4**
RATZ	**Rangitukua**	**1.52**	**206**	P	**Pn**	**05 55 07.4**	**+1.0**
GRZ	**Great Barrier**	**1.56**	**323**	P	**Pn**	**05 55 04.2**	**-2.4**
MBAZ	**Motutapu North**	**1.56**	**297**	P	**Pn**	**05 55 05.6**	**-1.1**
RITZ	**Rihia Road**	**1.59**	**202**	P	**Pn**	**05 55 08.3**	**+1.3**
CNGZ	**Carnagh Statio**	**1.59**	**129**	P	**Pn**	**05 55 07.1**	**+0.2**
NMHZ	**Naumai**	**1.60**	**175**	P	**Pn**	**05 55 08.2**	**+1.1**
EPAZ	**Eden Park BICE**	**1.62**	**292**	P	**Pn**	**05 55 06.4**	**-0.8**
AWAZ	**Awhitu Peninsu**	**1.64**	**285**	P	**Pn**	**05 55 06.6**	**-0.7**
HBAZ	**Herne Bay Bore**	**1.64**	**293**	P	**Pn**	**05 55 06.1**	**-1.2**
KATZ	**Kakaramea**	**1.65**	**206**	P	**Pn**	**05 55 09.4**	**+1.9**
WHHZ	**Waihua**	**1.65**	**163**	P	**Pn**	**05 55 08.1**	**+0.8**
BKZ	**Black Stump Fm**	**1.67**	**183**	Pn	**Pn**	**05 55 07.8**	**+0.1**
BKZ	**Black Stump Fm**	**1.67**	**183**	P	**Pn**	**05 55 07.9**	**+0.3**
ABAZ	**Army Bay**	**1.69**	**302**	P	**Pn**	**05 55 06.6**	**-1.1**
HIZ	**Hauiti**	**1.72**	**233**		**Pn**	**05 55 09.4**	**+1.4**
HIZ	**Hauiti**	**1.72**	**233**	P	**Pn**	**05 55 09.4**	**+1.4**
WTAZ	**Waiatarua**	**1.73**	**288**	P	**Pn**	**05 55 07.4**	**-0.7**
KNZ	**Kokohu**	**1.73**	**152**	P	**Pn**	**05 55 08.3**	**+0.3**
PRGZ	**Paritu Road**	**1.74**	**145**	P	**Pn**	**05 55 08.3**	**+0.2**
TMVZ	**Te Maari**	**1.77**	**204**	P	**Pn**	**05 55 09.5**	**+0.9**
KRVZ	**Karewarewa**	**1.77**	**205**	P	**Pn**	**05 55 09.5**	**+0.9**
ETVZ	**East Tongariro**	**1.79**	**203**	P	**Pn**	**05 55 09.9**	**+1.2**
RVAZ	**Riverhead Bore**	**1.79**	**293**	P	Pn	05 55 05.5	-3.1
ARHZ	**Aropaoanui**	**1.79**	**171**	P	**Pn**	**05 55 09.6**	**+1.0**
WTVZ	**West Tongariro**	**1.81**	**206**	P	**Pn**	**05 55 09.9**	**+1.0**
OTVZ	**Oturere**	**1.82**	**204**	P	**Pn**	**05 55 10.2**	**+1.2**
TWVZ	**Taurewa**	**1.82**	**210**	P	**Pn**	**05 55 10.1**	**+1.0**
NGZ	**Ngauruhoe**	**1.86**	**205**	P	**Pn**	**05 55 10.4**	**+1.1**
TUVZ	**Tukino**	**1.92**	**203**	P	**Pn**	**05 55 11.1**	**+1.1**
KWHZ	**Kaweka Forest**	**1.93**	**185**	P	**Pn**	**05 55 10.8**	**+0.9**
MHGZ	**Mahia Peninsul**	**1.94**	**149**	P	**Pn**	**05 55 10.3**	**+0.4**
FWVZ	**Far West T-bar**	**1.94**	**205**	P	**Pn**	**05 55 11.2**	**+1.0**
MCHZ	**McNeill Hill**	**1.94**	**178**	P	**Pn**	**05 55 11.2**	**+1.3**
WHVZ	**Whangaehu Hut**	**1.96**	**204**	P	**Pn**	**05 55 11.4**	**+1.0**
DRZ	**Dome Shelter**	**1.96**	**205**	P	**Pn**	**05 55 12.4**	**+1.9**
TRVZ	**Turoa**	**1.99**	**205**	P	**Pn**	**05 55 11.7**	**+1.1**
WNVZ	**Wahianoa**	**2.00**	**203**	P	**Pn**	**05 55 11.5**	**+0.9**
MOVZ	**Moawhango**	**2.02**	**199**	P	**Pn**	**05 55 11.2**	**+0.4**
BHHZ	**Black Hill Sta**	**2.04**	**192**	P	**Pn**	**05 55 11.5**	**+0.6**
PKVZ	**Pokaka**	**2.05**	**209**	P	**Pn**	**05 55 12.1**	**+1.1**
MTVZ	**Mangateitei**	**2.09**	**205**	P	**Pn**	**05 55 12.7**	**+1.3**
KRHZ	**Kereru**	**2.15**	**185**	P	**Pn**	**05 55 12.7**	**+0.7**
VRZ	**Vera Road**	**2.19**	**221**	P	**Pn**	**05 55 14.2**	**+2.0**
CKHZ	**Cape Kidnapper**	**2.19**	**171**	P	**Pn**	**05 55 13.3**	**+1.1**
KAHZ	**Kahuranaki**	**2.30**	**175**	P	**Pn**	**05 55 14.4**	**+1.0**
WCZ	**Waipu Caves**	**2.40**	**310**	P	**Pn**	**05 55 12.7**	**-1.7**
PNHZ	**Pukenui**	**2.44**	**188**	P	**Pn**	**05 55 15.4**	**+0.6**
PXZ	**Pawanui**	**2.54**	**176**	P	**Pn**	**05 55 16.5**	**+0.8**
DREZ	**Durham Road**	**2.54**	**228**	P	**Pn**	**05 55 18.6**	**+2.8**
WPHZ	**Waipukurau**	**2.57**	**183**	P	**Pn**	**05 55 16.8**	**+0.7**
WAZ	**Wanganui**	**2.59**	**209**	P	**Pn**	**05 55 17.6**	**+1.2**
TSZ	**Takapari Road**	**2.61**	**191**	P	**Pn**	**05 55 17.1**	**+0.6**
LREZ	**Lake Rotokare**	**2.62**	**221**	P	**Pn**	**05 55 19.0**	**+2.3**
NEZ	**North Egmont**	**2.66**	**227**	P	**Pn**	**05 55 19.7**	**+2.6**
PREZ	**Palmer Road**	**2.67**	**226**	P	**Pn**	**05 55 20.0**	**+2.8**
PKE	**Pukeiti**	**2.67**	**230**	P	**Pn**	**05 55 19.9**	**+2.6**
KHEZ	**Kahui Hut**	**2.72**	**228**	P	**Pn**	**05 55 20.5**	**+2.7**
PRHZ	**Porangahau**	**2.77**	**180**	P	**Pn**	**05 55 19.0**	**+0.8**
NBEZ	**Newall Road No**	**2.79**	**230**	P	**Pn**	**05 55 21.3**	**+2.8**
DVHZ	**Dannevirke**	**2.82**	**187**	P	**Pn**	**05 55 19.2**	**+0.4**
NMEZ	**Namu Road**	**2.88**	**228**	P	**Pn**	**05 55 22.5**	**+3.1**
OHWZ	**Ohakea**	**2.89**	**200**	P	**Pn**	**05 55 20.7**	**+1.2**
ANWZ	**Angora Road**	**2.96**	**182**	P	**Pn**	**05 55 21.0**	**+0.8**
POWZ	**Post Office Ro**	**2.96**	**193**	P	**Pn**	**05 55 20.8**	**+0.5**
PRWZ	**Pori Road**	**3.09**	**189**	P	**Pn**	**05 55 22.5**	**+0.7**
BFZ	**Birch Farm**	**3.19**	**185**		**Pn**	**05 55 23.5**	**+0.6**
BFZ	**Birch Farm**	**3.19**	**185**	P	**Pn**	**05 55 23.2**	**+0.3**
MRZ	**Mangatainoka R**	**3.26**	**194**	P	**Pn**	**05 55 23.7**	**0.0**
TIWZ	**Tintock**	**3.32**	**190**	P	**Pn**	**05 55 25.0**	**+0.6**
OUZ	**Omahuta**	**3.33**	**312**		**Pn**	**05 55 22.9**	**-1.7**
OUZ	**Omahuta**	**3.33**	**312**	P	**Pn**	**05 55 22.8**	**-1.8**
CPWZ	**Castlepoint**	**3.42**	**185**	P	**Pn**	**05 55 26.4**	**+0.9**
OGWZ	**Otaki Gorge**	**3.50**	**198**	P	**Pn**	**05 55 26.5**	**+0.2**
HOWZ	**Holdsworth Sta**	**3.50**	**194**	P	**Pn**	**05 55 26.3**	**-0.1**
KIW	**Kapiti Island**	**3.61**	**201**	P	**Pn**	**05 55 27.6**	**-0.1**
TMWZ	**Te Maipa**	**3.65**	**189**	P	**Pn**	**05 55 28.7**	**+0.5**
MTW	**Mount Morrison**	**3.76**	**193**	P	**Pn**	**05 55 29.1**	**-0.3**
CAW	**Cannon Point**	**3.80**	**198**	P	**Pn**	**05 55 29.7**	**-0.2**
DUWZ	**D'Urville Isla**	**3.91**	**212**	P	**Pn**	**05 55 30.9**	**-0.3**
TRWZ	**Traveller**	**3.96**	**190**	P	**Pn**	**05 55 31.7**	**-0.1**
PAWZ	**Paruwai Farm**	**3.99**	**193**	P	**Pn**	**05 55 32.0**	**-0.1**
WEL	**Wellington**	**4.04**	**200**	P	**Pn**	**05 55 32.7**	**-0.1**
MSWZ	**Moikau Station**	**4.05**	**195**		**Pn**	**05 55 32.7**	**-0.2**
MSWZ	**Moikau Station**	**4.05**	**195**	P	**Pn**	**05 55 32.4**	**-0.5**
SNZO	**South Karori**	**4.09**	**201**	Pn	**Pn**	**05 55 32.8**	**-0.4**
TCW	**Tory Channel**	**4.13**	**205**	P	**Pn**	**05 55 33.4**	**-0.3**
BHW	**Baring Head**	**4.13**	**199**	Pn	**Pn**	**05 55 33.5**	**-0.3**
BHW	**Baring Head**	**4.13**	**199**	P	**Pn**	**05 55 33.3**	**-0.5**
PLWZ	**Palliser**	**4.20**	**194**		**Pn**	**05 55 34.4**	**-0.3**
PLWZ	**Palliser**	**4.20**	**194**	P	**Pn**	**05 55 34.2**	**-0.5**
TUWZ	**Tuamarina**	**4.44**	**207**		**Pn**	**05 55 37.1**	**-0.4**
TUWZ	**Tuamarina**	**4.44**	**207**	P	**Pn**	**05 55 37.4**	**-0.1**
NNZ	**Nelson**	**4.48**	**213**		**Pn**	**05 55 37.9**	**-0.1**
NNZ	**Nelson**	**4.48**	**213**	P	**Pn**	**05 55 37.3**	**-0.8**
QRZ	**Quartz Range**	**4.60**	**222**	Pn	**Pn**	**05 55 38.6**	**-0.9**
QRZ	**Quartz Range**	**4.60**	**222**	P	**Pn**	**05 55 38.9**	**-0.6**
CMWZ	**Cape Campbell**	**4.63**	**203**	Pn	**Pn**	**05 55 39.8**	**-0.1**
CMWZ	**Cape Campbell**	**4.63**	**203**	P	**Pn**	**05 55 41.0**	**+1.1**
BSWZ	**Blackbirch Sta**	**4.71**	**206**		**Pn**	**05 55 41.2**	**+0.3**
BSWZ	**Blackbirch Sta**	**4.71**	**206**	P	**Pn**	**05 55 40.8**	**-0.1**
THZ	**Tophouse**	**5.13**	**213**		**Pn**	**05 55 46.3**	**+0.2**
THZ	**Tophouse**	**5.13**	**213**	P	**Pn**	**05 55 46.0**	**-0.1**
KHZ	**Kahutara**	**5.45**	**205**		**Pn**	**05 55 50.1**	**+0.1**
KHZ	**Kahutara**	**5.45**	**205**	P	**Pn**	**05 55 49.8**	**-0.1**
DSZ	**Denniston Nort**	**5.64**	**220**	P	**Pn**	**05 55 51.1**	**-1.3**
GVZ	**Greta Valley S**	**6.11**	**206**	P	**Pn**	**05 55 58.0**	**-0.3**
LTZ	**Lake Taylor**	**6.24**	**211**		**Pn**	**05 56 00.3**	**+0.4**
LTZ	**Lake Taylor**	**6.24**	**211**	P	**Pn**	**05 55 59.2**	**-0.8**
AMCZ	**Amberley**	**6.43**	**207**	P	**Pn**	**05 56 01.8**	**-0.4**
INZ	**Inchbonnie**	**6.55**	**216**	P	**Pn**	**05 56 03.0**	**-0.8**
OKCZ	**Okains Bay**	**6.78**	**202**	P	**Pn**	**05 56 06.3**	**-0.5**
OXZ	**Oxford**	**6.79**	**210**		**Pn**	**05 56 05.9**	**-0.9**
OXZ	**Oxford**	**6.79**	**210**	P	**Pn**	**05 56 05.9**	**-0.9**
MQZ	**McQueen's Vall**	**6.90**	**205**	Pn	**Pn**	**05 56 06.8**	**-1.3**
MQZ	**McQueen's Vall**	**6.90**	**205**	P	**Pn**	**05 56 06.7**	**-1.5**
AKCZ	**Akaroa Harbour**	**6.96**	**203**	P	**Pn**	**05 56 08.5**	**-0.6**
RACZ	**Rakaia**	**7.09**	**207**	P	**Pn**	**05 56 09.5**	**-1.1**
WVZ	**Waitaha Valley**	**7.16**	**217**	P	**Pn**	**05 56 10.9**	**-0.5**
WACZ	**Wakanui South**	**7.39**	**208**	P	**Pn**	**05 56 13.6**	**-0.8**
RPZ	**Rata Peaks**	**7.51**	**213**	P	**Pn**	**05 56 15.1**	**-0.9**
	2.1nm,0.3s,baz=45,slow=17,SNR=19						
RPZ				S	**S**	**05 57 37.6**	**-4.2**
	7.2nm,0.3s,baz=31,slow=15,SNR=18						
RPZ	**Rata Peaks**	**7.51**	**213**	P	**Pn**	**05 56 15.8**	**-0.2**
GCSZ	**Gaunt Creek Bo**	**7.54**	**218**	P	**Pn**	**05 56 15.9**	**-0.4**
ARCZ	**Arundel**	**7.65**	**211**	P	**Pn**	**05 56 16.9**	**-0.9**
FOZ	**Fox Glacier**	**7.95**	**219**	Pn	**Pn**	**05 56 21.5**	**0.0**
FOZ	**Fox Glacier**	**7.95**	**219**	P	**Pn**	**05 56 21.1**	**-0.4**
TMZ	**Timaru**	**8.08**	**210**	P	**Pn**	**05 56 22.2**	**-1.0**
LBZ	**Lake Benmore**	**8.43**	**213**	Pn	**Pn**	**05 56 28.3**	**+0.7**
LBZ	**Lake Benmore**	**8.43**	**213**	P	**Pn**	**05 56 27.2**	**-0.5**
ODZ	**Otahua Downs**	**8.78**	**209**	Pn	**Pn**	**05 56 31.9**	**-0.2**
JCZ	**Jackson Bay**	**8.85**	**220**	P	**Pn**	**05 56 32.0**	**-1.2**
WKZ	**Wanaka**	**9.29**	**216**	Pn	**Pn**	**05 56 37.5**	**-1.2**
WKZ	**Wanaka**	**9.29**	**216**	P	**Pn**	**05 56 37.5**	**-1.2**
RAO	**Raoul Island**	**9.40**	**31**	Pn	**Pn**	**05 56 40.5**	**+0.2**
EAZ	**Earnscleugh**	**9.48**	**213**	P	**Pn**	**05 56 40.5**	**-0.5**
HHSZ	**Highcliff Hill**	**9.51**	**206**	P	**Pn**	**05 56 42.4**	**+1.0**
TUZ	**Tuapeka**	**9.93**	**209**	P	**Pn**	**05 56 48.3**	**+1.6**
MLZ	**Mavora Lakes**	**10.12**	**216**	Pn	**Pn**	**05 56 48.8**	**-0.4**
MLZ	**Mavora Lakes**	**10.12**	**216**	P	**Pn**	**05 56 49.5**	**+0.3**
WHZ	**Wether Hill Ro**	**10.60**	**215**	Pn	**Pn**	**05 56 55.2**	**0.0**
SYZ	**Scrubby Hill**	**10.60**	**209**	P	**Pn**	**05 56 56.7**	**+1.5**
DCZ	**Deep Cove**	**10.66**	**219**	Pn	**Pn**	**05 56 58.4**	**+2.5**
COEN	**Coen**	**37.85**	**299**	P	**P**	**06 01 24.6**	**+1.3**
ASAR	**Alice Springs**	**38.95**	**278**	P	**P**	**06 01 33.4**	**+1.0**
	0.6nm,0.4s,baz=119,slow=8.4,SNR=6.6						
WR0	**Warramunga Arr**	**40.45**	**284**	P	**P**	**06 01 45.7**	**+1.0**
WB2	**Warramunga Arr**	**40.60**	**284**	P	**P**	**06 01 46.8**	**+0.8**
WB2				IAmb	IAmb	06 02 07.3	
	comp=Z,24nm,1.5s						
WRA	**Warramunga Arr**	**40.61**	**284**	P	**P**	**06 01 46.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=126,slow=6.5,SNR=4.9						
WB0	**Warramunga Arr**	**40.67**	**284**	P	**P**	**06 01 47.4**	**+0.8**
WB0				IAmb	IAmb	06 01 55.3	
	comp=Z,7.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**91.70**	**292**	P	**P**	**06 07 11.2**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=147,slow=5.1,SNR=4.4						
ARCES	**ARCESS Array B**	**144.33**	**343**	PKP	**PKPdf**	**06 13 33.7**	**-1.9**
	comp=Z,4.3nm,0.9s,baz=41,slow=2.2,SNR=15						

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*IDC **09** 06:44:15.5±0.8, 35°.92N×97°.51W, h0^{km}, mb3.6/4, mb1 3.8/11, mb1mx3.7/38, mbtmp3.6/11, ML3.1/6, MS2.8/1, Ms1 2.8/1, ms1mx2.4/45, Error ellipse: s-maj=12.0km s-min=10.0km az=159.0*
*TUL **09** 06:44:16.4±1.7, 35°.81N±0°.02×97°.42W±0°.02, h7^{km}±6^{km}, ML3.8, mb4.0/11(NEIC), mb_Lg3.9/166(NEIC), Mwr3.5/15(NEIC), Error ellipse: s-maj=2.8km s-min=2.1km az=105.0*
*NEIC **09** 06:44:16.6±1.7, 35°.83N±0°.01×97°.41W±0°.06, h6^{km}±8^{km}, Error ellipse: s-maj=6.7km s-min=1.1km az=75.0*
*NEIC **09** 06:44:16.5, 35°.81N×97°.42W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.45; $M_{\theta\theta}$2.49; $M_{\phi\phi}$-2.05; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.69; $M_{\phi r}$-0.85; Fault plane solution: $M_0$2.59000×10^{14} NP1:ϕ_s321.60000°, δ82.69000°, λ-23.41000°. NP2:ϕ_s54.76000°, δ66.80000°, λ-172.04000°. Principal axes: T 2.7089, Plg11.0000°, Azm10.0000°; N -0.2526, Plg66.0000°, Azm125.0000°; P -2.4563, Plg22.0000°, Azm276.0000°;*
*ANF **09** 06:44:18.3±0.7, 35°.83N×97°.42W, h25^{km}±6^{km}, ML4.8/16 Error ellipse: s-maj=2.0km s-min=1.6km az=15.0*
ISC 09 06:44:16.8±0.9**, 35°.83N**±0°.02×**97°.42W**±0°.02**, h13^{km}**±6^{km}**, n241, σ1^{s}.10**/247**, mb3.8**/4**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.25**	**180**		**Pg**	**06 44 21.3**	**-0.6**
OK025	**Westminster Rd**	**0.26**	**164**		**Pg**	**06 44 21.6**	**-0.6**
OK025				Sg	**Sg**	**06 44 25.4**	**-0.4**
OKCFA	**Oklahoma City**	**0.41**	**183**		**Pg**	**06 44 24.3**	**-0.6**
OKCFA				Sg	**Sg**	**06 44 30.2**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.42**	**182**		**Pg**	**06 44 24.5**	**-0.6**
OKCSW				Sg	**Sg**	**06 44 30.7**	**-0.1**
OK031	**S. Brethren Rd**	**0.49**	**75**		**Pg**	**06 44 26.1**	**-0.3**
OK031				Sg	**Sg**	**06 44 32.9**	**0.0**
OK030	**Cody Creek RV**	**0.53**	**79**		**Pg**	**06 44 26.8**	**-0.3**
OK030				Sg	**Sg**	**06 44 34.0**	**-0.1**
FNO	**Franklin**	**0.57**	**178**		**Pg**	**06 44 27.2**	**-0.7**
FNO				Sg	**Sg**	**06 44 35.1**	**-0.3**
QUOK	**Quay**	**0.67**	**59**		**Pg**	**06 44 29.5**	**-0.4**
QUOK				Sg	**Sg**	**06 44 38.6**	**-0.2**
OK011	**Prague**	**0.69**	**119**	Pg	**Pg**	**06 44 29.9**	**-0.2**
W35A	**Tecumseh**	**0.81**	**146**		**Pg**	**06 44 31.3**	**-1.1**
W35A				Sg	**Sg**	**06 44 42.3**	**-0.7**
CROK	**Carrier**	**0.81**	**326**		**Pg**	**06 44 32.1**	**-0.5**
CROK				Sg	**Sg**	**06 44 43.2**	**0.0**
GC02	**Grant County #**	**1.08**	**341**		**Pg**	**06 44 36.8**	**-0.8**
GC02				Sg	**Sg**	**06 44 51.6**	**-0.1**
KAN13	**South Haven SW**	**1.18**	**358**	Pg	**Pg**	**06 44 38.8**	**-0.8**
KAN13				Sg	**Sg**	**06 44 54.6**	**-0.4**
KAN14	**Manchester OK**	**1.21**	**339**		**Pg**	**06 44 39.0**	**-1.0**
T35A	**Sooner Cattle**	**1.31**	**34**	Pn	**Pn**	**06 44 40.9**	**+0.1**
T35B	**Sooner Cattle**	**1.31**	**34**	P		06 44 40.8	
	baz=214						
T35B				S		06 44 58.7	
	baz=214						
TUL1	**Leonard**	**1.33**	**86**	P	**Pn**	**06 44 40.2**	**-0.9**
	baz=266,SNR=590						
TUL1				S	**Sb**	**06 44 58.2**	**-0.3**
	baz=266						
TUL1	**Leonard**	**1.33**	**86**		**Pn**	**06 44 40.1**	**-0.9**
TUL1				IAmb_Lg		06 44 59.4	
	comp=Z,972nm,0.9s						
TUL1	**Leonard**	**1.33**	**86**	P		06 44 40.2	
	baz=266						
TUL1				S		06 44 58.6	
	baz=266						
U32A	**Winter Ranch,**	**1.39**	**294**		**Pn**	**06 44 41.8**	**-0.2**
U32A	**Winter Ranch,**	**1.39**	**294**	P		06 44 42.0	
	baz=113						
U32A				S		06 45 01.6	
	baz=113						
KAN10	**Anthony SW Sta**	**1.40**	**337**		**Pn**	**06 44 42.2**	**+0.1**
KAN08	**Anthony NE Sta**	**1.47**	**343**		**Pn**	**06 44 43.5**	**+0.5**
KS21	**Milan North St**	**1.47**	**352**		**Pn**	**06 44 43.7**	**+0.7**
KS21	**Milan North St**	**1.47**	**352**	IAmb_Lg		06 45 04.1	
	comp=Z,1μm,0.9s						
KAN12	**Harper NE Stat**	**1.54**	**343**		**Pn**	**06 44 44.7**	**+0.7**
WMOK	**Wichita Mounta**	**1.56**	**226**	P	**Pn**	**06 44 44.5**	**+0.3**
	baz=46,SNR=428						
WMOK				S	**Sn**	**06 45 05.0**	**+0.7**
	baz=46						
WMOK	**Wichita Mounta**	**1.56**	**226**	Pn	**Pn**	**06 44 44.5**	**+0.3**
WMOK	**Wichita Mounta**	**1.56**	**226**	P		06 44 44.4	
	baz=46,SNR=835						
WMOK				S		06 45 05.0	
	baz=46						
X37A	**Clayton**	**2.08**	**126**	Pn	**Pn**	**06 44 52.2**	**+0.7**
X37A	**Clayton**	**2.08**	**126**	P		06 44 52.4	
	baz=307						
X37A				S		06 45 19.1	
	baz=307						
Z35A	**Perchaven, San**	**2.50**	**177**		**Pn**	**06 44 58.1**	**+1.0**
Z35A	**Perchaven, San**	**2.50**	**177**	P		06 44 57.9	
	baz=357,SNR=68						
Z35A				S		06 45 29.5	
	baz=357						
U38A	**Gravette**	**2.53**	**75**		**Pn**	**06 44 58.7**	**+1.1**
U38A				IAmb_Lg		06 45 38.3	
	comp=Z,448nm,0.8s						
U38A	**Gravette**	**2.53**	**75**	P		06 44 59.0	
	baz=257,SNR=192						
R32A	**Long Quarter,**	**2.79**	**339**		**Pn**	**06 45 03.3**	**+2.1**
R32A				IAmb_Lg		06 45 52.0	
	comp=Z,334nm,0.9s						
HHAR	**Hobbs**	**2.86**	**80**		**Pn**	**06 45 03.4**	**+1.3**
W39A	**Magazine**	**3.03**	**101**	P	**Pn**	**06 45 05.2**	**+0.7**
	baz=283,SNR=28						
W39A				S	**Sn**	**06 45 42.0**	**+1.2**
	baz=283						
W39A	**Magazine**	**3.03**	**101**		**Pn**	**06 45 05.6**	**+1.1**
W39A				IAmb_Lg		06 45 55.0	
	comp=Z,377nm,0.8s						
W39A	**Magazine**	**3.03**	**101**	P		06 45 05.3	
	baz=283,SNR=29						
W39A				S		06 45 42.3	
	baz=283						
Z38A	**Mt. Pleasant**	**3.26**	**141**		**Pn**	**06 45 08.0**	**+0.4**
Z38A				IAmb_Lg		06 46 05.0	
	comp=Z,239nm,0.7s						
Z38A	**Mt. Pleasant**	**3.26**	**141**	P		06 45 08.0	
	baz=323						
Z38A				S		06 45 47.4	
	baz=323						
KSU1	**Kansas State U**	**3.33**	**11**	P	**Pn**	**06 45 09.3**	**+0.7**
	baz=191,SNR=17						
KSU1				S	**Sn**	**06 45 48.9**	**+0.9**
	baz=191						
KSU1	**Kansas State U**	**3.33**	**11**	Pn	**Pn**	**06 45 10.1**	**+1.5**
KSU1				IAmb_Lg		06 46 09.0	
	comp=Z,491nm,0.7s						
KSU1	**Kansas State U**	**3.33**	**11**	P		06 45 09.8	
	baz=191,SNR=12						
MIAR	**Mount Ida**	**3.40**	**111**	P	**Pn**	**06 45 10.3**	**+0.8**
	baz=293,SNR=91						

MIAR				S	Sn	06 45 50.6	+0.9
	baz=293						
MIAR	Mount Ida	3.40	111	Pn	Pn	06 45 11.0	+1.5
MIAR	Mount Ida	3.40	111	P		06 45 10.4	
	baz=293,SNR=294						
MIAR				S		06 45 51.4	
	baz=293						
CBKS	Cedar Bluff	3.51	329	P	Pn	06 45 11.5	+0.5
	baz=148,SNR=12						
CBKS				S	Sn	06 45 53.1	+0.7
	baz=148						
CBKS	Cedar Bluff	3.51	329	Pn	Pn	06 45 13.2	+2.2
CBKS	Cedar Bluff	3.51	329	P		06 45 12.7	
	baz=148,SNR=21						
CBKS				S		06 45 54.2	
	baz=148						
AMTX	Amarillo	3.61	256	S	Sn	06 45 54.7	-0.3
	baz=74						
AMTX	Amarillo	3.61	256	Pn	Pn	06 45 13.7	+1.2
AMTX				IAmb_Lg		06 46 16.4	
	comp=Z,296nm,0.9s						
AMTX	Amarillo	3.61	256	P		06 45 13.5	
	baz=74						
ABTX	Abilene, Hawle	3.69	211	P	Pn	06 45 13.9	+0.3
	baz=29,SNR=37						
ABTX				S	Sn	06 45 57.3	+0.4
	baz=29						
ABTX	Abilene, Hawle	3.69	211		Pn	06 45 14.2	+0.6
ABTX				IAmb_Lg		06 46 16.9	
	comp=Z,518nm,1.0s						
ABTX	Abilene, Hawle	3.69	211	P		06 45 14.1	
	baz=29,SNR=9.6						
U40A	Yellville	3.74	81	P	Pn	06 45 14.6	+0.4
	baz=263,SNR=19						
U40A				Sb	Sb	06 46 10.8	+2.9
	baz=263						
U40A	Yellville	3.74	81		Pn	06 45 14.8	+0.6
U40A				IAmb_Lg		06 46 14.2	
	comp=Z,371nm,0.7s						
U40A	Yellville	3.74	81	P		06 45 14.7	
	baz=263,SNR=83						
U40A				P		06 45 14.7	
	baz=263,SNR=83						
S39A	Bolivar	3.78	59		Pn	06 45 16.1	+1.3
S39A				IAmb_Lg		06 46 20.7	
	comp=Z,299nm,0.7s						
S39A	Bolivar	3.78	59	P		06 45 15.7	
	baz=241,SNR=41						
WHTX	Lake Whitney,	3.83	180	P	Pn	06 45 15.6	+0.2
	baz=0.5,SNR=25						
WHTX				S	Sn	06 46 01.7	+1.4
	baz=0.5						
WHTX	Lake Whitney,	3.83	180		Pn	06 45 16.0	+0.6
WHTX				IAmb_Lg		06 46 23.3	
	comp=Z,222nm,1.1s						
WHTX	Lake Whitney,	3.83	180	P		06 45 15.8	
	baz=0.5,SNR=26						
X40A	Basin Creek Fa	3.99	108	P	Pn	06 45 18.4	+0.7
	baz=291,SNR=27						
X40A	Basin Creek Fa	3.99	108		Pn	06 45 18.7	+1.1
X40A				IAmb_Lg		06 46 25.7	
	comp=Z,393nm,1.1s						
X40A	Basin Creek Fa	3.99	108	P		06 45 18.3	
	baz=291,SNR=47						
X40A				P		06 45 18.3	
	baz=291,SNR=47						
237A	Washetta, Mont	4.04	160		Pn	06 45 18.3	-0.1
WLAR	White Oak Lake	4.14	120	Pn	Pn	06 45 20.4	+0.7
WLAR				IAmb_Lg		06 46 37.6	
	comp=Z,237nm,0.8s						
WHAR	Wooly Hollow	4.22	96		Pn	06 45 21.6	+0.8
WHAR				IAmb_Lg		06 46 33.6	
	comp=Z,424nm,1.0s						
W41B	Gary Mavity, V	4.27	97	P	Pn	06 45 22.0	+0.5
	baz=280,SNR=26						
W41B				S	Sn	06 46 12.1	+0.9
	baz=280						
W41B	Gary Mavity, V	4.27	97		Pn	06 45 22.5	+1.0
W41B				IAmb_Lg		06 46 31.9	
	comp=Z,288nm,0.9s						
W41B	Gary Mavity, V	4.27	97	P		06 45 22.2	
	baz=280,SNR=139						
UALR	University of	4.28	103		Pn	06 45 22.9	+1.2
UALR				IAmb_Lg		06 46 36.2	
	comp=Z,177nm,0.8s						
FCAR	Ozark Folk Cen	4.30	88		Pn	06 45 23.1	+1.1
FCAR				IAmb_Lg		06 46 40.9	
	comp=Z,183nm,0.7s						
MGMO	Mountain Grove	4.36	71		Pn	06 45 23.8	+1.1
MGMO				IAmb_Lg		06 46 35.3	
	comp=Z,288nm,0.8s						
Z41A	Richland Creek	4.59	123	P	Pn	06 45 25.8	-0.1
	baz=305						
Z41A				S	Sn	06 46 19.5	+0.3
	baz=305						
Z41A	Richland Creek	4.59	123		Pn	06 45 26.1	+0.2
MSTX	Muleshoe	4.77	249	P	Pn	06 45 28.8	+0.3
	baz=66,SNR=7.6						
MSTX	Muleshoe	4.77	249		Pn	06 45 28.4	-0.1
MSTX	Muleshoe	4.77	249	P		06 45 29.1	
	baz=66,SNR=6.9						
R40A	Maddies Statio	4.80	58		Pn	06 45 30.3	+1.5
R40A				IAmb_Lg		06 46 60.0	
	comp=Z,191nm,0.7s						
P38A	Dawn	4.89	38		Pn	06 45 30.8	+0.9
P38A				IAmb_Lg		06 46 52.1	
	comp=Z,184nm,0.7s						
P38A	Dawn	4.89	38	P		06 45 31.1	
	baz=220,SNR=9.7						
N33A	J Bar K, Exete	4.90	360	IAmb_Lg		06 47 01.0	
	comp=Z,239nm,0.9s						
CCAR	Cane Creek	5.02	111	Pn	Pn	06 45 32.5	+0.7
CCAR				IAmb_Lg		06 47 01.8	
	comp=Z,231nm,0.9s						
435B	Jarrell	5.03	182	P	Pn	06 45 32.4	+0.4
	baz=1.6,SNR=5.2						
435B				S	Sn	06 46 29.7	-0.4
	baz=1.6						
435B	Jarrell	5.03	182		Pn	06 45 33.0	+1.0
435B				IAmb_Lg		06 47 10.7	
	comp=Z,302nm,0.7s						
LCAR	Lake Charles	5.09	85		Pn	06 45 33.5	+0.8
N35A	Tabor	5.22	15		Pn	06 45 35.3	+0.8
KSCO	Kaye Shedlock’	5.22	309	P	Pn	06 45 35.1	+0.4
	baz=126						
KSCO				S	Sn	06 46 33.9	-1.0
	baz=126						
KSCO	Kaye Shedlock’	5.22	309	Pn	Pn	06 45 36.2	+1.5
KSCO				IAmb_Lg		06 47 16.6	
	comp=Z,193nm,0.7s						
T42A	Van Buren	5.24	75	Pn	Pn	06 45 36.4	+1.5
T42A				IAmb_Lg		06 47 11.6	
	comp=Z,177nm,1.0s						
T42A	Van Buren	5.24	75	P		06 45 35.7	
	baz=258,SNR=26						
CCM	Cathedral Cave	5.42	64	P	Pn	06 45 38.4	+1.0
	baz=247						
CCM				S	Sn	06 46 39.4	-0.2
	baz=247						
CCM	Cathedral Cave	5.42	64	Pn	Pn	06 45 39.0	+1.7
CCM				IAmb_Lg		06 47 15.7	
	comp=Z,178nm,0.8s						
CCM	Cathedral Cave	5.42	64	P		06 45 38.8	
	baz=247,SNR=7.0						
HBAR	Harrisburg	5.51	91	Pn	Pn	06 45 40.0	+1.4
X43A	Marvell	5.51	102	P	Pn	06 45 39.7	+1.1
	baz=286						
X43A	Marvell	5.51	102	Pn	Pn	06 45 41.7	+3.1
X43A				IAmb_Lg		06 47 16.7	
	comp=Z,198nm,0.9s						
BGNE	Belgrade	5.60	354	S	Sn	06 46 44.1	0.0
	baz=174						
BGNE	Belgrade	5.60	354	IAmb_Lg		06 47 19.0	
	comp=Z,252nm,0.7s						
JCT	Junction City	5.70	201	P	Pn	06 45 40.9	-0.3
	baz=20						
JCT	Junction City	5.70	201	Pn	Pn	06 45 41.1	-0.1
JCT	Junction City	5.70	201	P		06 45 40.9	
	baz=20,SNR=14						
PBMO	Poplar Bluff	5.73	78	Pn	Pn	06 45 42.7	+1.2
PBMO				IAmb_Lg		06 47 23.0	
	comp=Z,311nm,0.7s						
T25A	Trinidad	5.78	285	P	Pn	06 45 42.7	+0.2
	baz=101,SNR=14						
T25A				S	Sn	06 46 48.8	0.0
	baz=101						
T25A	Trinidad	5.78	285	Pn	Pn	06 45 43.1	+0.6
T25A				IAmb_Lg		06 47 28.2	
	comp=Z,162nm,0.7s						
LPAR	Lepanto	5.80	90	Pn	Pn	06 45 43.7	+1.2
143A	Socs Landing,	5.88	120	Pn	Pn	06 45 43.9	+0.3
N38A	Joes South For	5.95	32	Pn	Pn	06 45 45.1	+0.5
FVM	French Village	6.00	67		Pn	06 45 47.6	+2.3
FVM				IAmb_Lg		06 47 43.6	
	comp=Z,242nm,1.1s						
CPRX	Cap Rock	6.01	244	Pn	Pn	06 45 47.3	+1.7
HKT	Hockley	6.01	167	IAmb_Lg		06 47 33.4	
	comp=Z,19nm,1.2s						
PEBM	Pemiscott Bayo	6.14	85	IAmb_Lg		06 47 38.2	
	comp=Z,301nm,0.8s						
342A	Flagon Creek P	6.15	135	Pn	Pn	06 45 47.7	+0.4
MET	Memphis--Engin	6.15	94	IAmb_Lg		06 47 44.8	
	comp=Z,183nm,0.7s						
OGNE	Ogallala	6.26	326	P	Pn	06 45 50.1	+1.1
	baz=143						
OGNE				S	Sn	06 47 00.1	-0.3
	baz=143						
OGNE	Ogallala	6.26	326	Pn	Pn	06 45 50.8	+1.8
PVMO	Portageville	6.28	82	IAmb_Lg		06 47 34.1	
	comp=Z,220nm,0.8s						
PENMO	Penman	6.34	82	IAmb_Lg		06 47 42.6	
	comp=Z,293nm,0.8s						
SLM	Saint Louis	6.38	62	IAmb_Lg		06 47 37.8	
	comp=Z,261nm,0.8s						
HALT	Halls	6.56	87	IAmb_Lg		06 47 42.4	
	comp=Z,176nm,0.7s						
OXF	Oxford	6.69	99	P	Pn	06 45 54.9	+0.1
	baz=284,SNR=10						
OXF	Oxford	6.69	99	Pn	Pn	06 45 54.5	-0.2
OXF				IAmb_Lg		06 48 02.9	
	comp=Z,127nm,0.9s						
OXF	Oxford	6.69	99	P		06 45 54.9	
	baz=284,SNR=8.8						
W45A	Hickory Valley	6.75	93	Pn	Pn	06 45 56.2	+0.6
W45A				IAmb_Lg		06 48 04.0	
	comp=Z,158nm,0.7s						
SDCO	Great Sand Dun	6.76	289	P	Pn	06 45 57.1	+1.1
	baz=104,SNR=63						
SDCO	Great Sand Dun	6.76	289	Pn	Pn	06 45 57.4	+1.4
SDCO	Great Sand Dun	6.76	289	P		06 45 57.2	
	baz=104,SNR=49						
Y45A	Yeager Farm, C	6.77	105	Pn	Pn	06 45 55.8	0.0
GDL2	Guadalupe Moun	6.80	240	Pn	Pn	06 45 57.5	+1.1
S44A	Carbondale	6.81	72	Pn	Pn	06 45 57.7	+1.2
S44A				IAmb_Lg		06 47 56.4	
	comp=Z,252nm,0.9s						
SIUC	Southern Illin	6.85	72	Pn	Pn	06 45 58.8	+1.9
SCIA	State Center	6.90	27	IAmb_Lg		06 48 11.6	
	comp=Z,259nm,0.7s						
Q24A	Divide	6.90	299	P	Pn	06 45 58.0	+0.1
	baz=115,SNR=6.4						
Q24A	Divide	6.90	299	Pn	Pn	06 45 57.7	-0.2
Q24A				IAmb_Lg		06 47 58.7	
	comp=Z,121nm,0.8s						
735A	Kenedy	6.96	183	IAmb_Lg		06 48 07.3	
	comp=Z,130nm,0.8s						
344A	Westbrook Farm	7.08	126	Pn	Pn	06 46 00.4	+0.3
344A				IAmb_Lg		06 48 07.0	
	comp=Z,87nm,1.2s						
N41A	Harden Midland	7.10	45	Pn	Pn	06 46 01.9	+1.6
T45A	Paducah	7.18	78	Pn	Pn	06 46 02.5	+1.1
P43A	Skaggs, Pawnee	7.33	56	Pn	Pn	06 46 05.1	+1.6
Q44A	Meyer Farm, Va	7.36	63	Pn	Pn	06 46 05.5	+1.5
ANMO	Albuquerque	7.43	266	Pn	Pn	06 46 05.2	+0.1
	comp=Z,0.2nm,0.3s,baz=83,slow=14,SNR=3.9						
ANMO				Pg	Pb	06 46 29.7	+4.0
	comp=Z,1.3nm,0.3s,baz=78,slow=15,SNR=13						
ANMO				Lg	Lg	06 48 07.0	
	comp=Z,3.4nm,0.3s,baz=345,slow=14,SNR=3.5						
ANMO	Albuquerque	7.43	266	P	Pn	06 46 05.6	+0.5
	baz=81						
ANMO	Albuquerque	7.43	266	Pn	Pn	06 46 06.2	+1.1
ISCO	Idaho Springs	7.60	304	P	Pn	06 46 07.7	+0.2
	baz=119,SNR=21						
ISCO	Idaho Springs	7.60	304	Pn	Pn	06 46 07.9	+0.4
ISCO	Idaho Springs	7.60	304	P		06 46 07.8	
	baz=119,SNR=18						
146A	Union	7.62	112	Pn	Pn	06 46 07.6	0.0
833A	Chaparral WMA,	7.67	193	P	Pn	06 46 08.1	-0.1
	baz=12						
833A	Chaparral WMA,	7.67	193	IAmb_Lg		06 48 34.3	
	comp=Z,109nm,0.8s						
BNM	Barren Site	7.74	260	Pn	Pn	06 46 09.7	+0.4
WVT	Waverly	7.78	85	P	Pn	06 46 09.5	-0.2
	baz=270						
WVT	Waverly	7.78	85	Pn	Pn	06 46 09.8	0.0
S22A	4UR Ranch, Cre	7.79	287	Pn	Pn	06 46 11.5	+1.4
MNTX	Cornudas Mount	7.80	240	P	Pn	06 46 10.0	-0.1
	baz=56,SNR=20						
MNTX	Cornudas Mount	7.80	240	Pn	Pn	06 46 10.2	+0.1
MNTX				IAmb_Lg		06 48 21.0	
	comp=Z,79nm,0.9s						
MNTX	Cornudas Mount	7.80	240	P		06 46 10.0	
	baz=56,SNR=16						
L40A	Anamosa	7.88	36	Pn	Pn	06 46 11.2	+0.1
L40A				IAmb_Lg		06 48 29.6	
	comp=Z,169nm,0.8s						
ECSD	EROS Data Cent	7.92	4	P	Pn	06 46 10.6	-1.0
	baz=185,SNR=5.5						
ECSD	EROS Data Cent	7.92	4	Pn	Pn	06 46 11.0	-0.6
OLIL	Olney	7.98	66	Pn	Pn	06 46 12.9	+0.5
Y22D	IRIS PASSCAL I	7.99	260	IAmb_Lg		06 48 48.0	
	comp=Z,171nm,0.9s						
USIN	University of	8.10	72	IAmb_Lg		06 48 38.3	
	comp=Z,188nm,1.0s						
Z47A	Carrollton	8.15	106	Pn	Pn	06 46 15.3	+0.5
O44A	Mansfield	8.28	56	Pn	Pn	06 46 18.1	+1.5
SMCO	Snowmass	8.29	297	Pn	Pn	06 46 18.4	+1.2
PHWY	Pilot Hill	8.33	313	Pn	Pn	06 46 17.7	+0.1
TX31	Lajitas Ar. Si	8.35	221	Pn	Pn	06 46 16.8	-0.8
TX32	Lajitas Array	8.35	221	Pn	Pn	06 46 17.1	-0.5
TXAR	Lajitas Array	8.35	221	Pn	Pn	06 46 16.8	-0.8
	comp=Z,0.4nm,0.3s,baz=43,slow=12,SNR=30						
TXAR				Pg	Pb	06 46 47.5	+6.3
	comp=Z,2.0nm,0.3s,baz=47,slow=14,SNR=19						
TXAR				Lg	Lg	06 48 35.5	
	comp=Z,7.1nm,0.3s,baz=43,slow=29,SNR=6.2						
TXAR				LR	LR	06 50 05.2	
	comp=Z,54nm,18.6s,baz=0.0,slow=42						
N23A	Red Feather La	8.39	310	P	Pn	06 46 18.9	+0.6
	baz=124,SNR=17						
N23A	Red Feather La	8.39	310	Pn	Pn	06 46 19.6	+1.3
L42A	Oliver, Polo	8.63	42	Pn	Pn	06 46 21.9	+0.6
L42A				IAmb_Lg		06 49 00.5	
	comp=Z,189nm,0.8s						
SUSD	Miller	8.69	353	IAmb_Lg		06 48 59.4	
	comp=Z,134nm,0.8s						
I37A	Lemond, Waseca	8.74	19	IAmb_Lg		06 49 13.4	
	comp=Z,96nm,0.7s						
P46A	Rosedale	8.93	62	Pn	Pn	06 46 26.9	+1.4
P46A				IAmb_Lg		06 49 09.3	
	comp=Z,152nm,0.8s						
JFWS	Jewell Farm	8.99	36	P	Pn	06 46 26.6	+0.2
	baz=220						
JFWS	Jewell Farm	8.99	36	Pn	Pn	06 46 26.5	+0.2
CLTN	Cedars of Leba	9.00	85	Pn	Pn	06 46 27.6	+1.2
CLTN				IAmb_Lg		06 49 12.2	
	comp=Z,88nm,1.3s						
LRAL	Lakeview Retre	9.05	105	P	Pn	06 46 26.4	-0.7
	baz=291						
LRAL	Lakeview Retre	9.05	105	Pn	Pn	06 46 26.4	-0.7
LRAL	Lakeview Retre	9.05	105	P		06 46 26.3	
	baz=291,SNR=7.1						
121A	Cookes Peak, D	9.19	252	IAmb_Lg		06 49 21.7	
	comp=Z,74nm,1.2s						
M44A	Midewin, Midew	9.20	50	Pn	Pn	06 46 30.5	+1.3
WCI	Wyandotte Cave	9.22	72	IAmb_Lg		06 49 08.1	
	comp=Z,106nm,0.9s						
Y49A	Blount Mountai	9.26	99	Pn	Pn	06 46 30.5	+0.4
Y49A				IAmb_Lg		06 49 27.9	
	comp=Z,74nm,1.2s						
BLO	Bloomington	9.28	66	Pn	Pn	06 46 32.6	+2.3
SFIN	Lafayette	9.32	58	Pn	Pn	06 46 31.8	+1.0
SFIN				IAmb_Lg		06 49 07.6	
	comp=Z,172nm,1.0s						
SWET	Sewanee	9.39	90	Pn	Pn	06 46 32.7	+0.9
U49A	Red Boiling Sp	9.44	82	Pn	Pn	06 46 33.9	+1.5
HQIL	Hanson Quary C	9.55	49	IAmb_Lg		06 49 19.2	
	comp=Z,136nm,0.8s						
O20A	White River Ci	9.56	300	Pn	Pn	06 46 35.8	+1.4
I40A	Norwalk	9.60	31	IAmb_Lg		06 49 26.4	
	comp=Z,89nm,0.9s						
PV23	Carpenter Ridg	9.62	289	Pn	Pn	06 46 36.3	+1.1
RWWY	Rawlins	9.62	310	Pn	Pn	06 46 37.0	+1.8
RSSD	Black Hills	9.71	331	P	Pn	06 46 37.7	+1.3
	baz=146						
RSSD	Black Hills	9.71	331	Pn	Pn	06 46 37.9	+1.5
RSSD				IAmb_Lg		06 49 40.3	
	comp=Z,58nm,0.7s						
FPAL	Fort Paine	9.75	94	Pn	Pn	06 46 37.7	+0.9
K22A	Casper	9.81	317	P	Pn	06 46 37.8	+0.2
	baz=131						
K22A	Casper	9.81	317	Pn	Pn	06 46 38.0	+0.4
K22A				IAmb_Lg		06 49 47.6	
	comp=Z,119nm,0.9s						
K43A	Burlington	9.84	43	Pn	Pn	06 46 38.2	+0.3
W50A	Signal Mountai	9.89	90	IAmb_Lg		06 49 36.2	
	comp=Z,73nm,0.8s						
P48A	Milroy	10.18	66	Pn	Pn	06 46 43.3	+0.7
I42A	Draeger Farm,	10.37	36	Pn	Pn	06 46 46.7	+1.5
CPCT	Cooper Cave	10.51	88	Pn	Pn	06 46 48.0	+0.9
V51A	Loudon	10.62	86	Pn	Pn	06 46 49.4	+0.8
V51A	Loudon	10.62	86	P		06 46 49.6	
	baz=274,SNR=7.0						
L46A	Eue Claire	10.64	51	Pn	Pn	06 46 49.5	+0.6
R50A	Paris	10.75	73	Pn	Pn	06 46 50.8	+0.4
G40A	Rib Lake	10.91	28	Pn	Pn	06 46 51.7	-0.8
SRU	San Rafael Swe	10.92	291	Pn	Pn	06 46 53.8	+0.9
152A	Waverly Hall	10.97	103	Pn	Pn	06 46 54.3	+0.8
W52A	Murphy	11.03	90	Pn	Pn	06 46 54.4	0.0
TKL	Tuckaleechee C	11.10	87	Pn	Pn	06 46 54.4	-0.8
	comp=Z,0.5nm,0.3s,baz=226,slow=9.8,SNR=7.5						
TKL				Lg	Lg	06 50 01.4	
	comp=Z,2.0nm,0.3s,baz=152,slow=22,SNR=8.6						
TKL	Tuckaleechee C	11.10	87	Pn	Pn	06 46 54.8	-0.3
V52A	Sevierville	11.22	86	Pn	Pn	06 46 57.3	+0.4
S51A	Beattyville	11.24	77	Pn	Pn	06 46 58.1	+0.9
Q51A	Peebles	11.64	70	Pn	Pn	06 47 02.6	0.0
PD31	Pinedale Array	11.67	310	Pn	Pn	06 47 03.1	-0.1
PDAR	Pinedale Array	11.67	310	Pn	Pn	06 47 02.4	-0.8
	comp=Z,0.4nm,0.3s,baz=122,slow=14,SNR=17						
PDAR				Sn	Sn	06 49 09.2	-4.3
	comp=Z,0.2nm,0.3s,baz=130,slow=24,SNR=2.2						
PDAR				Lg	Lg	06 50 21.8	
	comp=Z,0.7nm,0.3s,baz=106,slow=34,SNR=2.3						
BW06	Boulder Array	11.67	310	P	Pn	06 47 02.6	-0.6
	baz=122						
BW06	Boulder Array	11.67	310	Pn	Pn	06 47 03.3	+0.1
GOGA	Godfrey	11.75	98	Pn	Pn	06 47 04.4	+0.3
L48A	N Adams	11.81	55	Pn	Pn	06 47 03.8	-1.2
V53A	Saluda	11.87	86	Pn	Pn	06 47 06.7	+0.9
ACSO	Alum Creek Sta	12.20	65	Pn	Pn	06 47 09.6	-0.7
J47A	Sunmer	12.21	49	Pn	Pn	06 47 09.7	-0.7
TCRU	Three Creeks R	12.30	288	Pn	Pn	06 47 14.5	+2.7
Q52A	Bidwell	12.45	71	Pn	Pn	06 47 14.5	+0.8
U54A	Nelsons Funny	12.63	82	Pn	Pn	06 47 16.0	-0.1
P52A	Corning	12.69	68	Pn	Pn	06 47 17.3	+0.4
LOHW	Long Hollow	12.77	311	Pn	Pn	06 47 19.1	+0.8
REDW	Red Top Meadow	12.79	310	Pn	Pn	06 47 19.7	+1.1
B35A	Bob, Littlefor	12.82	11	Pn	Pn	06 47 17.3	-1.4
N51A	Ashland	12.85	62	Pn	Pn	06 47 19.2	0.0
EYMN	Ely	12.88	18	Pn	Pn	06 47 17.0	-2.6
RLMT	Red Lodge	12.93	319	Pn	Pn	06 47 19.7	-0.7
S54A	Dingess, Beckl	13.06	77	Pn	Pn	06 47 21.0	-1.0
P53A	Whipple	13.22	69	Pn	Pn	06 47 23.3	-0.8
YNE	Yellowstone No	13.25	318		Pn	06 47 24.5	-0.4
BIRD	Birdtown, Kers	13.92	90	Pn	Pn	06 47 32.5	-1.2
N53A	Lisbon	13.93	64	Pn	Pn	06 47 31.3	-2.6
R55A	Marlinton	14.04	75	Pn	Pn	06 47 34.8	-0.6
E46A	Sault Ste Mari	14.42	39	Pn	Pn	06 47 38.5	-2.1
ULM	Lac du Bonnet	14.46	4	Pn	Pn	06 47 36.4	-4.7
	comp=Z,0.3nm,0.3s,baz=176,slow=12,SNR=5.2						
ULM				Sn	Sn	06 50 06.9	-14
	comp=Z,0.6nm,0.3s,baz=103,slow=16,SNR=3.1						
ULM				Lg	Lg	06 51 45.1	
	comp=Z,0.5nm,0.3s,baz=290,slow=19,SNR=3.1						
ULM	Lac du Bonnet	14.46	4	Pn	Pn	06 47 38.4	-2.7
N54A	Moraine State	14.59	64	Pn	Pn	06 47 41.0	-1.9
T57A	Hurt	14.68	80	Pn	Pn	06 47 43.1	-1.1
ELK	Elko	14.82	295	Pn	Pn	06 47 45.0	-1.3
	comp=Z,0.1nm,0.3s,baz=171,slow=23,SNR=3.5						
ELK				Lg	Lg	06 52 03.7	
	comp=Z,0.0nm,0.3s,baz=311,slow=9.9,SNR=1.7						
S57A	Dark Hollow, R	14.93	77	Pn	Pn	06 47 45.7	-1.8
M54A	Oil Creek Stat	14.98	62	Pn	Pn	06 47 46.1	-2.1
EGMT	Eagleton	15.23	327	Pn	Pn	06 47 51.2	-0.3
EGMT				IAmb	IAmb	06 48 04.1	
	comp=Z,8.9nm,1.1s						
M55A	Ridgway	15.62	63	Pn	Pn	06 47 53.4	-3.2
M56A	Emporium	16.05	64	Pn	Pn	06 47 58.4	-3.8
M56A				IAmb	IAmb	06 48 23.6	
	comp=Z,26nm,1.2s						
SADO	Sadowa	16.53	52	Lg	Lg	06 52 49.6	
	comp=Z,0.7nm,0.3s,baz=348,slow=22,SNR=3.8						
NVAR	Mina Array Bea	16.85	285	Pn	Pn	06 48 12.5	-0.2
	comp=Z,0.1nm,0.3s,baz=92,slow=11,SNR=5.3						
N58A	Sunbury	16.99	67	P	Pn	06 48 13.7	-0.4
N58A				IAmb	IAmb	06 48 41.1	
	comp=Z,19nm,1.2s						
F10A	Beach Ranch, E	18.04	310	P	Pn	06 48 27.2	+0.1
F10A				IAmb	IAmb	06 48 33.3	
	comp=Z,6.8nm,1.1s						
K58A	Earlville	18.19	61	P	Pn	06 48 28.6	-0.4
NCB	Newcomb	19.52	58	P	P	06 48 43.1	-0.8
NCB				IAmb	IAmb	06 49 14.0	
	comp=Z,19nm,1.4s						
PINE	Pine Mountain	19.70	301	P	P	06 48 46.6	+0.6
YBH	Yreka Blue Hor	20.54	294	P	P	06 48 54.6	-0.5
	comp=Z,2.3nm,0.7s,baz=98,slow=5.0,SNR=9.8						
YBH	Yreka Blue Hor	20.54	294	P	P	06 48 55.4	+0.3
YBH				IAmb	IAmb	06 49 00.5	
	comp=Z,3.8nm,1.1s						
HUMO	Hull Mountain	20.86	297	P	P	06 48 58.0	-0.5
KMRM	Mail Ridge	21.14	290	P	P	06 49 02.1	+0.6
KMRM				IAmb	IAmb	06 49 33.9	
	comp=Z,9.7nm,1.3s						
YKA	Yellowknife Ar	28.76	343	P	P	06 50 13.9	0.0
	comp=Z,0.2nm,0.8s,baz=9.9,slow=37,SNR=2.7						
YKA				PcP	PcP	06 53 24.3	+0.8
	comp=Z,0.2nm,0.7s,baz=141,slow=3.1,SNR=3.9						
ILAR	Eielson Array	41.16	330	P	P	06 52 01.4	+0.9
	comp=Z,0.7nm,0.7s,baz=106,slow=7.5,SNR=10.0						
FINES	FINESS Array B	72.81	25	P	P	06 55 45.2	+0.5
	comp=Z,2.8nm,1.0s,baz=286,slow=7.1,SNR=2.1						

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*KNET **09** 06:48:48.6±0.2, 43.°06N×74.°90E, h7^{km}±4^{km}, ml1.0, Error ellipse: s-maj=1.6km s-min=1.1km az=35.0*

*NNC **09** 06:48:48.8±0.3, 43.°05N×74.°92E, h0^{km}, mb2.7, mpv2.2, Error ellipse: s-maj=2.6km s-min=1.3km az=157.0, Suspected Mining explosion.*

*SOME **09** 06:48:48.0, 43.°05N×74.°83E*

ISC 09 06:48:49.2±0.9, **43.°06N**±0.°03×**74.°89E**±0.°02, **h0^{km}, n15, σ0.°71**/28, **9C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.12	239	⇑P	Pg	06 48 51.0	-0.5
	7.7nm,0.1s,SNR=36						
CHMS				⇑S	Sg	06 48 53.6	+0.5
	29nm,0.1s						
USP	Ospenovka	0.35	305	⇑P	Pg	06 48 55.9	-0.1
	4.8nm,0.1s,SNR=19						
USP				⇓S	Sg	06 49 01.5	+1.0
	5.6nm,0.2s						
KBK	Karagaybulak	0.41	174	⇓P	Pg	06 48 56.7	-0.3
	4.9nm,0.1s,SNR=8.3						
KBK				⇑S	Sg	06 49 03.6	+1.3
	10.0nm,0.2s						
SGDS	Sogindy	0.43	334	P	Pg	06 48 56.8	-0.7
	1.0nm,0.2s						
SGDS				S	Sg	06 49 03.5	+0.3
	2.3nm,0.2s						
AAK	Ala-Archa	0.52	215	⇓P	Pg	06 48 58.5	-0.5
	1.0nm,0.1s,SNR=6.2						
AAK				⇑S	Sg	06 49 06.6	+0.8
	1.5nm,0.2s						
AAK	Ala-Archa	0.52	215	⇑P	Pg	06 48 59.0	0.0
	1.0nm,0.5s						
AAK				⇓S	Sg	06 49 06.4	+0.6
	4.9nm,0.7s						
TKM2	Tokmak 2	0.53	105	⇑P	Pg	06 48 58.9	-0.5
	1.4nm,0.1s,SNR=6.8						
TKM2				⇑S	Sg	06 49 06.9	+0.5
	8.1nm,0.1s						
TKM2	Tokmak 2	0.53	105	⇑P	Pg	06 48 58.8	-0.7
	0.3nm,0.3s						

TKM2	1.9nm,0.5s			⇓S	Sg	06 49 06.0	-0.3
DGS	**Degeres** 1.4nm,0.3s	0.67	74	P	Pg	06 49 01.6	-0.4
DGS	2.1nm,0.3s			S	Sg	06 49 11.6	+1.0
KRBS	**Karabastau** 0.8nm,0.1s	0.85	42	P	Pg	06 49 05.3	-0.2
KRBS	4.4nm,0.3s			S	Sg	06 49 17.7	+1.1
EKS2	**Erkin-Say** 1.0nm,0.1s,SNR=5.9	0.91	244	⇓P	Pg	06 49 06.0	-0.7
IZV	**Izvestkoviy** 1.3nm,0.1s	1.26	91	P	Pg	06 49 12.2	-1.1
IZV	1.9nm,0.2s			S	Sg	06 49 29.9	+0.2
MRKS	**Merke** 0.9nm,0.2s	1.27	256	P	Pg	06 49 12.3	-1.2
MRKS	4.0nm,0.2s			S	Sg	06 49 30.1	+0.3
KTBS	**Karatobe** 1.3nm,0.1s	1.46	63	P	Pn	06 49 16.7	-0.1
KTBS	8.1nm,0.6s			S	Sn	06 49 37.5	+0.8
BTLS	**Baital** 1.0nm,0.5s	2.07	343	Pg	Pb	06 49 27.3	-0.3
BTLS	2.2nm,0.6s			Lg	Lg	06 49 56.2	

PRU ***09*** *06:56:21.0±0.0, 51°.51N×16°.07E, h0^{km}*
VIE ***09*** *06:56:22.6±0.7, 51°.37N×15°.85E, h0^{km}, mb2.1/1, ml2.5/5, Error ellipse: s-maj=7.9km s-min=3.4km az=43.0   83 km NE of Liberec Suspected Mining induced.*
ISC 09 06:56:18.4±1.9**, 51°.59N**±0°.08×**16°.22E**±0°.06**, h0**^{km}**, n19, σ0ˢ.81**/39**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.75	176	*i* Pg	Pb	06 56 33.5	-0.7
KSP				*e*Sg	Sg	06 56 42.6	+0.3
CHVC	**Chvalec**	1.00	186	*e*PG	Pb	06 56 38.4	-0.3
CHVC				*e*SG	Sg	06 56 51.1	+0.5
OSTC	**Ostas**	1.03	180	*e*PG	Pb	06 56 39.0	-0.1
OSTC	comp=Z,32nm,0.7s			*e*SG	Sg	06 56 51.7	+0.2
UPC	**Upice**	1.09	187	*e*PG	Pb	06 56 39.6	-0.5
UPC	comp=Z,35nm,0.3s			*e*SG	Sg	06 56 53.2	-0.1
DPC	**Dobruska-Polom**	1.24	177	*e*PG	Pb	06 56 42.4	-0.3
DPC	comp=Z,14nm,0.2s			*e*SG	Sg	06 56 57.5	-0.7
PVCC	**Panska Ves**	1.48	225	*e*PG	Pb	06 56 46.8	0.0
PVCC				*e*SG	Sg	06 57 05.8	-0.2
BRG	**Berggiesshubel**	1.60	244	Pg	Pb	06 56 48.6	-0.2
BRG				Sg	Sn	06 57 09.1	-0.1
BRG	comp=Z,22nm,0.4s			Amp		06 57 09.8	
BRG	**Berggiesshubel**	1.60	244	Pg	Pb	06 56 48.6	-0.2
BRG				Sg	Sn	06 57 09.1	-0.1
BRG	comp=Z,22nm,0.4s			Amp		06 57 09.8	
PRU	**Pruhonice**	1.92	214	*e*PG	Pb	06 56 53.9	-0.4
PRU				*e*SG	Sb	06 57 18.1	-0.7
MORC	**Moravsky Berou**	2.00	155	*e*PN	Pn	06 56 53.8	+0.4
MORC				*e*SG	Sg	06 57 21.6	-0.9
CLL	**Collm**	2.03	263	*e*Pg	Pb	06 56 56.0	-0.1
CLL	comp=Z,8.0nm,0.5s			*i* Sg	Sb	06 57 22.1	+0.2
VRAC	**Vranov**	2.29	174	*e*PN	Pn	06 56 58.4	+0.9
VRAC				*e*SG	Sg	06 57 30.7	-1.3
KRUC	**Moravsky**	2.53	177	*e*PN	Pn	06 57 01.7	+1.0
KRUC				*e*SG	Sg	06 57 38.4	-1.2
NKC	**Novy Kostel**	2.74	242	*e*PN	Pn	06 57 04.1	+0.4
NKC				*e*PG	Pg	06 57 10.5	-0.4
NKC	comp=Z,12nm,0.3s			*e*SG	Sg	06 57 45.4	-1.1
KHC	**Kasperske Hory**	2.98	216	*e*PN	Pn	06 57 08.5	+1.5
KHC				*e*PG	Pb	06 57 12.6	+0.2
KHC				*e*SN	Sn	06 57 42.0	-1.4
KHC				*e*SG	Sb	06 57 51.3	+1.9
MODS	**Modra-Piesok**	3.29	168	*e*SG	Sg	06 58 04.7	+0.7
CONA	**Conrad Observa** comp=Z,0.5nm,0.2s	3.67	184	*i* Pn	Pn	06 57 18.1	+1.7
CONA	comp=Z,2.6nm,0.3s			Sg	Sg	06 58 15.1	-1.1
MOA	**Molln** comp=Z,1.0nm,0.2s	3.95	199	*e*Pn	Pn	06 57 20.0	-0.2
MOA	comp=Z,4.2nm,0.5s			Sg	Sg	06 58 25.0	-0.2
ARSA	**Arzberg** comp=Z,4.5nm,0.7s	4.36	186	Sg	Sg	06 58 39.4	+0.9

RSNC ***09*** *07:05:32.0±1.4, 5°.63N×77°.51W, h31^{km}±16^{km}, ML3.3, Mw3.9*
IDC ***09*** *07:05:40.0±2.9, 5°.59N×77°.16W, h100^{km}±25^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.4/30, mbtmp3.7/9, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=28.2km s-min=18.6km az=50.0*
ISC 09 07:05:31.6±1.2**, 5°.62N**±0°.03×**77°.48W**±0°.05**, h27**^{km}±9^{km}**, n46, σ1ˢ.82**/52**, mb3.4**/7**, 4C, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	0.60	6	⇑*i*P	Pb	07 05 43.1	-0.5
SOLC				*e*S	Sb	07 05 52.6	+0.9
SOLC	comp=Z,2µm,0.5s			*i*		07 06 00.1	
PIZC	**Pizarro, Choco**	0.66	170	*e*P	Pb	07 05 44.3	-0.3
PIZC				*e*S	Sb	07 05 54.4	+0.9
PIZC	comp=Z,1µm,0.6s			*i*		07 06 12.4	
PLMC	**San Jos del P**	1.39	121	⇑*i*P	Pn	07 05 53.7	-1.5
PLMC				*e*S	Sn	07 06 11.9	-0.8
PLMC	comp=Z,789nm,0.5s			*i*		07 06 15.0	
CBOC	**Ciudad Bolivar**	1.48	81	⇑*i*P	Pn	07 05 55.1	-1.5
CBOC				*e*S	Sn	07 06 14.8	-0.3
CBOC	comp=Z,313nm,0.4s			*i*		07 06 17.8	
PTAC	**Punta Ardita,**	1.55	348	*e*P	Pn	07 05 55.9	-1.5
PTAC				*e*S	Sn	07 06 15.2	-1.4
MALC	**Bahia Malaga**	1.61	175	*e*P	Pn	07 05 58.0	-0.1
DBBC	**Dabeiba**	1.87	42	*e*P	Pn	07 06 02.1	+0.2
YOTC	**Yotoco, Valle**	1.98	145	*e*P	Pn	07 06 02.2	-1.2
HELC	**Santa Helena**	2.02	74	⇑*e*P	Pn	07 06 03.9	-0.3
HELC				*e*S	Sn	07 06 29.7	+1.0
HELC	comp=Z,94nm,0.5s			*i*		07 06 36.5	
RREF	**El Recreo**	2.24	109	*e*P	Pn	07 06 08.2	+0.8
ANIL	**Santa Ana**	2.35	118	*e*P	Pn	07 06 09.4	+0.7
NORC	**Norcasia**	2.59	91	*e*P	Pn	07 06 13.3	+1.4
ORTC	**Ortega, Tolima**	2.80	127	*e*P	Pn	07 06 15.5	+0.9
ORTC	comp=Z,70nm,0.6s			*i*		07 07 04.0	
UREC	**San Jos de Ur**	2.86	42	*e*P	Pn	07 06 18.2	+2.7
UPD2	**Meteti**	2.95	350	*e*P	Pn	07 06 17.8	+1.1
UPD2				*e*S	Sn	07 06 51.8	+0.5
UPD2	comp=Z,88nm,0.5s			*i*		07 06 58.3	
PTBC	**PUERTO BERRIO,**	3.14	73	*e*P	Pn	07 06 20.5	+1.2
MARP	**Paez Belalcaza**	3.15	151	*e*P	Pn	07 06 21.8	+2.1
ZARC	**Zaragoza, Cauc**	3.20	54	*e*P	Pn	07 06 21.9	+1.8
ROSC	**El Rosal** comp=Z,12nm,0.3s,baz=276,slow=1.8,SNR=24	3.24	104	P	Pb	07 06 26.3	-2.3
ROSC	comp=Z,2.9nm,0.3s,baz=152,slow=21,SNR=1.2			S	Sn	07 07 00.6	+1.7
ROSC	**El Rosal**	3.24	104	*e*P	Pb	07 06 26.1	-2.5
SPBC	**San Pablo de B**	3.39	89	*e*P	Pn	07 06 24.4	+1.6
BETC	**Betania**	3.56	145	*e*P	Pn	07 06 27.9	+2.8
BBAC	**Balboa, Cauca**	3.58	176	*e*P	Pn	07 06 28.2	+2.6
MOTC	**Monteria, Cord**	3.61	30	*e*P	Pn	07 06 25.9	+0.1
CHIC	**Chingaza**	3.86	105	*e*P	Pn	07 06 32.6	+3.1
GARC	**Garzon, Huila**	3.95	150	*e*P	Pn	07 06 32.4	+1.8
BRRC	**Barranca, Sant**	4.02	68	*e*P	Pn	07 06 33.7	+2.3
VILC	**Villavicencio,**	4.06	112	*e*P	Pn	07 06 35.6	+3.6
BARC	**Barichara**	4.38	77	*e*P	Pn	07 06 38.8	+2.3
SMLC	**San Martn de**	4.62	47	*e*P	Pn	07 06 41.5	+1.8
MACC	**Macarena, Meta**	5.00	134	*e*P	Pn	07 06 46.5	+1.6
TAMC	**Tame, Arauca**	5.71	82	*e*P	Pn	07 06 57.4	+2.8
GUVC	**San Jose del G**	5.72	122	*e*		07 01 02.5	
SDV	**Santo Domingo** comp=Z,1.6nm,0.3s,baz=241,slow=11,SNR=10	7.52	64	P	Pn	07 07 21.8	+2.1
SDV	baz=300,slow=21,SNR=0.7			S	Sn	07 08 45.8	+1.6
ATAH	**Atahualpa** comp=Z,116nm,19.9s,baz=347,slow=41	12.71	184	LR	LR	07 14 17.7	
TRN	**Trinidad (W)**	16.67	72	*e*P	Pn	07 09 20.0	-3.5
GRGR	**Grenville**	16.91	66	*e*P	Pn	07 09 27.2	+0.7
SIV	**San Ignacio** comp=Z,0.9nm,0.6s,baz=6.3,slow=11,SNR=5.6	26.92	143	P	P	07 11 08.5	-2.3
PDAR	**Pinedale Array** comp=Z,0.3nm,0.7s,baz=290,slow=39,SNR=2.4	46.62	327	P	P	07 14 00.3	+2.5
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.5s,baz=139,slow=6.2,SNR=2.7	49.33	317	P	P	07 14 20.3	+1.5
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=130,slow=7.5,SNR=4.1	62.96	342	P	P	07 15 56.0	+0.5
DBIC	**Dimbokro** comp=Z,3.4nm,0.9s,baz=279,slow=3.1,SNR=4.6	72.15	85	P	P	07 16 52.3	-2.2
ILAR	**Eielson Array** comp=Z,0.3nm,0.9s,baz=131,slow=5.9,SNR=4.4	76.23	336	P	P	07 17 18.6	+1.2
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.7s,baz=278,slow=6.6,SNR=6.5	78.22	78	P	P	07 17 28.4	-1.1
ASAR	**Alice Springs** comp=Z,1.2nm,0.9s,baz=140,slow=4.5,SNR=6.5	144.88	236	PKPbc	PKPbc	07 25 06.3	+0.1
WRA	**Warramunga Arr** comp=Z,1.0nm,0.8s,baz=105,slow=2.8,SNR=2.4	145.96	242	PKPbc	PKPab	07 25 10.1	-0.2

NNC 09 07:08:02.4±0.6**, 50°.01N**×**78°.71E, h0**^{km}**, mb3.5, mpv3.1, 6C-3D, Error ellipse: s-maj=6.5km s-min=2.9km az=68.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra** 14nm,0.3s	0.63	349	⇓P	Pg	07 08 14.7	+0.3
KURBB	72nm,0.8s			⇓S	Sg	07 08 23.6	+1.1
KURK	**Kurchatov** 9.7nm,0.5s	0.71	355	⇑P	Pg	07 08 16.0	0.0
KURK	12nm,0.5s			⇑S	Sg	07 08 26.1	+0.9
SEM	**Semipalatinsk** 8.6nm,0.2s	1.06	67	P	Pg	07 08 23.1	+0.3
SEM	42nm,0.2s			S	Sb	07 08 37.6	-0.8
MAKZ	**Makanchi** 0.7nm,0.3s	3.87	145	⇑Pg	Pb	07 09 10.8	-0.7
MAKZ	5.7nm,0.5s			⇓Lg	Lg	07 10 00.4	
BRZS	**Berezniki** 2.6nm,0.4s	3.89	272	Pg	Pg	07 09 15.1	-1.9
BRZS	22nm,0.5s			Lg	Lg	07 10 07.6	
MK31	**Makanchi Array** 0.4nm,0.4s,baz=322,slow=11,SNR=21	4.00	142	⇑Pn	Pn	07 09 06.6	+1.5
MK31	0.3nm,0.3s,baz=329,slow=12,SNR=6.6			⇑Pg	Pb	07 09 14.8	+1.0
MK31	6.6nm,0.6s,baz=325,slow=26,SNR=15			⇑Lg	Lg	07 10 08.2	
KAPS	**Kapalarasan** 1.7nm,0.4s	4.75	175	Pg	Pb	07 09 29.2	+2.7
KAPS	12nm,0.6s			Lg	Lg	07 10 32.6	
ZSN	**Zaisan** 3.8nm,0.4s	4.81	120	Pg	Pb	07 09 30.0	+2.5
ZSN	9.6nm,0.5s			Lg	Lg	07 10 33.4	
DJR	**Jarkent** 2.3nm,0.2s	5.73	172	Pg	Pb	07 09 47.5	+4.3
DJR	3.7nm,0.6s			Lg	Lg	07 11 02.8	
ARXS	**Arharly** 3.7nm,0.8s	5.83	186	Pg	Pg	07 09 49.7	-4.4
ARXS	19nm,0.5s			Lg	Lg	07 11 05.8	
MNBS	**Baschi** 2.0nm,0.4s	5.94	182	Pg	Pb	07 09 51.0	+4.3
MNBS	15nm,0.4s			Lg	Lg	07 11 08.3	

AUST ***09*** *07:32:41.3±0.0, 32°.88S×138°.48E, h6^{km}, Error ellipse: s-maj=0.6km s-min=0.1km az=32.0*
NOU ***09*** *07:32:41.1, 32°.84S×138°.40E, h0^{km}, MLv3.2, Near Coast of South Australia*
IDC ***09*** *07:32:44.2±6.7, 32°.70S×138°.31E, h0^{km}, mb1 3.1/3, mb1mx3.0/18, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=90.9km s-min=22.4km az=11.0*
ISC 09 07:32:41.5±0.9**, 32°.88S**±0°.08×**138°.41E**±0°.05**, h10**^{km}**, n6, σ1ˢ.99**/11**, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBOO	**Buckleboo** baz=2.0	1.98	271	P	Pn	07 33 16.2	+1.0
BBOO	baz=2.0			S	Sn	07 33 39.9	-0.1
STKA	**Stephens Creek** 1.0nm,0.3s,baz=244,slow=12,SNR=22	2.87	71	Pn	Pb	07 33 32.1	-0.8
STKA	1.0nm,0.3s,baz=254,slow=12,SNR=5.0			Pg	Pg	07 33 36.2	-0.4
STKA	2.0nm,0.3s,baz=266,slow=13,SNR=4.8			Sn	Sb	07 34 10.3	+2.2
STKA	3.7nm,0.3s,baz=323,slow=10,SNR=7.2			Lg	Lg	07 34 16.3	
ARPS	**Mount Arapiles** baz=4.8	4.80	145	P	Pn	07 33 54.9	+1.1
ARPS	baz=4.8			S	Sn	07 34 47.2	-2.3
FORT	**Forrest** baz=9.1	9.05	281	P	Pn	07 34 52.3	+0.1
ASAR	**Alice Springs** 0.1nm,0.3s,baz=177,slow=8.8,SNR=5.2	10.00	335	Pn	Pn	07 35 06.2	+0.8
ASAR	0.1nm,0.3s,baz=160,slow=22,SNR=1.6			Sn	Sn	07 36 53.8	-3.8
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=175,slow=10.0,SNR=1.9	13.39	343	Pn	Pn	07 35 53.5	+1.8

IGIL ***09*** *07:35:01.1, 34°.96N×5°.30W, h7^{km}, ML3.0*
MDD ***09*** *07:35:01.4±1.1, 34°.82N×5°.23W, h73^{km}±14^{km}, mb3.8/14, Error ellipse: s-maj=10.6km s-min=6.2km az=9.0, PRXIMO*
INMG ***09*** *07:35:02.0±1.3, 34°.92N×5°.26W, h31^{km}±12^{km}, ML2.9, Error ellipse: s-maj=4.7km s-min=3.4km az=175.0*
SFS ***09*** *07:35:02.0, 34°.89N×5°.24W, h86^{km}, ML3.4, MOKRISSET (MARRUECOS)*
CNRM ***09*** *07:35:03.2, 35°.04N×5°.28W, h38^{km}, ml3.3, Hypocentre not reviewed by the ISC*
ISC 09 07:35:02.1±1.2**, 34°.99N**±0°.03×**5°.26W**±0°.03**, h35**^{km}**, n79, σ1ˢ.80**/146**, 1C-1D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	0.81	76	P	Pn	07 35 16.9	-0.1
PVLZ				S	Sn	07 35 28.4	+0.7
PVLZ	**Peæn de**	0.81	76	⇑*i*P	Pn	07 35 16.9	-0.1
PVLZ				*e*S	Sn	07 35 28.4	+0.7
ECEU	**Ceuta** 30nm,0.1s,SNR=21	0.91	354	P	Pn	07 35 20.9	+2.5
CEU	**Ceuta**	0.92	354	P	Pn	07 35 20.8	+2.3
CEU				S	Sn	07 35 35.5	+5.1
CEU	**Ceuta**	0.92	354	*e*P	Pn	07 35 20.8	+2.3
CEU				*e*S	Sn	07 35 35.5	+5.1
PALE	**Palemas**	1.11	78	P		07 35 22.0	
AKLM	**AKL**	1.24	112	P		07 35 23.0	
IFR	**Ifrane**	1.47	176	*e*P	Pn	07 35 25.3	-0.9
IFR				*e*S	Sn	07 35 42.6	-1.8
EJIF	**Jimena Fronter** SNR=7.9	1.47	353	P	Pn	07 35 29.0	+2.9
EMAL	**Malaga-Limoner**	1.90	21	P	Pn	07 35 34.3	+2.4
EMAL				S	Sn	07 35 58.1	+3.5
EMAL	**Malaga-Limoner**	1.90	21	*e*P	Pn	07 35 34.3	+2.4
EMAL				*e*S	Sn	07 35 58.1	+3.5
ZHG	**ZHG**	1.92	217	P		07 35 36.0	
ESPR	**Espera** 3.3nm,0.1s,SNR=6.3	1.94	346	P	Pn	07 35 34.2	+1.7
ESPR	15nm,0.2s,SNR=5.9			S	Sn	07 35 58.1	+2.4
EALB	**Alboran** SNR=7.9	2.05	62	S	Sn	07 35 56.9	-1.5
ELGU	**Los Guajares,** 3.3nm,0.1s,SNR=7.9	2.30	35	P	Pn	07 35 36.9	-0.6
ELGU	19nm,0.1s,SNR=7.9			S	Sn	07 36 05.0	+0.3
AVE	**Averroes**	2.46	227	*e*P	Pn	07 35 48.9	+9.2
AVE				*e*S	Sn	07 36 16.4	+8.0
EQUE	**Quentar** 2.0nm,0.2s,SNR=6.9	2.66	33	P	Pn	07 35 44.3	+1.8
EQUE	2.0nm,0.2s			S	Sn	07 36 14.6	+1.0
EBER	**Berja** 2.6nm,0.2s,SNR=12	2.71	45	P	Pn	07 35 43.8	+0.6
EBER	12nm,0.2s,SNR=7.0			S	Sn	07 36 15.2	+0.2
HORN	**Hornachuelos**	2.85	0	P		07 35 45.7	
EMIN	**Mina Concepcio** 2.2nm,0.2s,SNR=18	3.00	338	⇓P	Pn	07 35 47.6	+0.4
EMIN	6.5nm,0.1s,SNR=6.3			S	Sn	07 36 21.6	-0.3
ECAB	**El Cabril** 1.6nm,0.2s,SNR=27	3.08	358	P	Pn	07 35 48.6	+0.2
ECAB	1.0nm,0.1s,SNR=5.8			S	Sn	07 36 23.1	-0.9
EGRO	**El Granado** 11nm,0.1s,SNR=54	3.11	325	P	Pn	07 35 49.3	+0.6
EGRO	27nm,0.1s,SNR=9.9			S	Sn	07 36 24.4	-0.2
PBDV	**Barranco-do-Ve**	3.12	317	P	Pn	07 35 49.2	+0.4
PBDV	13nm,0.2s			S	Sn	07 36 24.3	-0.6
PBDV	**Barranco-do-Ve**	3.12	317	*e*Pn	Pn	07 35 49.2	+0.4
PBDV				*e*Sn	Sn	07 36 24.3	-0.6
PBDV	13nm,0.2s			A	A	07 36 28.8	
PVAQ	**Vaqueiros**	3.13	321	P	Pn	07 35 49.3	+0.4
PVAQ	75nm,0.1s			S	Sn	07 36 24.5	-0.5
PVAQ	**Vaqueiros**	3.13	321	*e*Pn	Pn	07 35 49.3	+0.4
PVAQ				*e*Sn	Sn	07 36 24.5	-0.5
PVAQ	75nm,0.1s			A	A	07 36 25.9	
PVAQ	**Vaqueiros**	3.13	321	P		07 35 49.3	
ENIJ	**Nijar** 16nm,0.3s,SNR=7.9	3.17	50	S	Sn	07 36 23.7	-2.4
EADA	**Adamuz** 3.5nm,0.1s,SNR=30	3.22	10	P	Pn	07 35 51.1	+0.9
EADA	3.4nm,0.1s			S	Sn	07 36 27.9	+0.5
EQES	**Quesada** 0.8nm,0.1s,SNR=7.9	3.32	31	S	Sn	07 36 33.4	+3.5
PCVE	**Castro Verde**	3.46	320	P	Pn	07 35 54.0	+0.5
PCVE	10nm,0.1s			S	Sn	07 36 32.6	-0.7
PCVE	**Castro Verde**	3.46	320	*e*Pn	Pn	07 35 54.0	+0.5
PCVE				*e*Sn	Sn	07 36 32.6	-0.7
PCVE	10nm,0.1s			A	A	07 36 34.1	
MORF	**Marmelete**	3.59	311	*e*P	Pn	07 35 55.1	-0.2
MORF				*e*S	Sn	07 36 35.1	-1.4
MORF	comp=N,34nm,0.2s			AML	AML	07 36 36.8	
MORF	**Marmelete**	3.59	311	P	Pn	07 35 55.1	-0.2
MORF	comp=N,22nm,0.3s			S	Sn	07 36 35.6	-0.9
MORF	**Marmelete**	3.59	311	*e*Pn	Pn	07 35 55.1	-0.2
MORF				*e*Sn	Sn	07 36 35.6	-0.9
MORF	comp=N,22nm,0.3s			A	A	07 36 37.0	
PFVI	**Vila Bisbo** comp=N,3.0nm,0.2s,SNR=7.9	3.60	308	P	Pn	07 35 55.9	+0.5
PFVI	comp=N,24nm,0.1s,SNR=9.9			S	Sn	07 36 35.4	-1.2
PFVI	**Vila Bisbo**	3.60	308	*e*Pn	Pn	07 35 56.0	+0.7
PFVI				*e*Sn	Sn	07 36 35.5	-1.1
PFVI	comp=N,15nm,0.7s			A	A	07 36 41.5	
PFVI	**Vila Bisbo**	3.60	308	S		07 36 36.4	
PBEJ	**Beja** comp=N,5.8nm,0.1s	3.69	326	S	Sn	07 36 38.2	-0.7
PBEJ	**Beja**	3.69	326	*e*Sn	Sn	07 36 38.2	-0.7
PBEJ	comp=N,12nm,0.1s			A	A	07 36 40.4	
MESJ	**Messejana**	3.72	321	*e*P	Pn	07 35 57.2	+0.3
MESJ				*e*S	Sn	07 36 38.0	-1.6
MESJ	comp=N,38nm,0.1s			AML	AML	07 36 40.7	
MESJ	**Messejana**	3.72	321	P	Pn	07 35 57.6	+0.6
MESJ	comp=N,20nm,0.3s			S	Sn	07 36 38.5	-1.0
MESJ	**Messejana**	3.72	321	*e*Pn	Pn	07 35 57.6	+0.6
MESJ				*e*Sn	Sn	07 36 38.5	-1.0
MESJ	comp=N,20nm,0.3s			A	A	07 36 42.8	
PTEO	**Sao Teotonio**	3.79	313	P	Pn	07 35 58.3	+0.3
PTEO	comp=N,7.8nm,0.3s			S	Sn	07 36 40.2	-1.1
PTEO	**Sao Teotonio**	3.79	313	*e*Pn	Pn	07 35 58.3	+0.3
PTEO				*e*Sn	Sn	07 36 40.2	-1.1
PTEO	comp=N,16nm,0.3s			A	A	07 36 42.8	
PNCL	**Nicolau / Gran**	4.08	321	P	Pn	07 36 02.6	+0.6
PNCL	comp=N,14nm,0.3s			S	Sn	07 36 47.5	-1.0
PNCL	**Nicolau / Gran**	4.08	321	*e*Pn	Pn	07 36 02.6	+0.6
PNCL				*e*Sn	Sn	07 36 47.5	-1.0
PNCL	comp=N,14nm,0.3s			A	A	07 36 49.0	
EVO	**Evora**	4.17	329	P	Pn	07 36 03.9	+0.7
EVO	comp=N,32nm,0.2s			S	Sn	07 36 50.2	-0.6
EVO	**Evora**	4.17	329	*e*Pn	Pn	07 36 03.9	+0.7
EVO				*e*Sn	Sn	07 36 50.2	-0.6
EVO	comp=N,32nm,0.2s			A	A	07 36 51.0	
PESTR	**Estremoz**	4.30	335	*e*Pn	Pn	07 36 05.8	+0.8
PESTR				*e*Sn	Sn	07 36 52.6	-1.3
PESTR	comp=N,3.7nm,0.1s			A	A	07 36 55.8	
PESTR	**Estremoz**	4.30	335	P		07 36 06.7	
PAB	**San Pablo** comp=N,0.4nm,0.1s,SNR=7.9	4.61	9	P	Pn	07 36 09.9	+0.6
PAB	comp=N,0.9nm,0.1s,SNR=7.9			S	Sn	07 36 59.1	-2.5
ETOB	**Tobarra** comp=N,0.5nm,0.1s,SNR=5.7	4.71	38	P	Pn	07 36 11.8	+1.0
ETOB	comp=N,0.1nm,0.1s			S	Sn	07 37 05.0	+0.8
PMTG	**Montargil**	4.71	331	P	Pn	07 36 11.4	+0.7
PMTG	comp=N,9.2nm,0.5s			S	Sn	07 37 03.6	-0.5
PMTG	**Montargil**	4.71	331	*e*Pn	Pn	07 36 11.4	+0.7
PMTG				*e*Sn	Sn	07 37 03.6	-0.5
PMTG	comp=N,9.2nm,0.5s			A	A	07 37 04.7	
PMRV	**Marv??o**	4.75	340	P	Pn	07 36 11.9	+0.7
PMRV	comp=N,8.2nm,0.7s			S	Sn	07 37 03.5	-1.5
PMRV	**Marv??o**	4.75	340	*e*Pn	Pn	07 36 11.9	+0.7
PMRV				*e*Sn	Sn	07 37 03.5	-1.5
PMRV	comp=N,8.2nm,0.7s			A	A	07 37 05.8	
ESDC	**Sonseca Array** comp=N,2.1nm,0.2s,baz=196,slow=12,SNR=12	4.79	12	P	Pn	07 36 12.3	+0.5
ESDC	comp=N,1.2nm,0.2s,baz=192,slow=22,SNR=5.3			S	Sn	07 37 04.0	-2.1
PMAFR	**Mafra** comp=N,1.9nm,0.1s,SNR=5.8	5.11	322	S	Sn	07 37 11.9	-1.9
PMAFR	**Mafra**	5.11	322	*e*Sn	Sn	07 37 13.0	-0.8
PMAFR	comp=N,19nm,0.6s			A	A	07 37 19.9	
EPLA	**Plasencia** comp=N,2.5nm,0.1s,SNR=14	5.11	353	P	Pn	07 36 16.2	0.0
EPLA	comp=N,1.9nm,0.1s,SNR=6.0			S	Sn	07 37 11.8	-2.2
PCBR	**Castelo Branco**	5.16	341	P	Pn	07 36 17.8	+1.0
PCBR	comp=N,2.7nm,0.4s			S	Sn	07 37 13.3	-1.7
PCBR	**Castelo Branco**	5.16	341	*e*Pn	Pn	07 36 17.8	+1.0
PCBR				*e*Sn	Sn	07 37 13.3	-1.7
PCBR	comp=N,5.4nm,0.4s			A	A	07 37 15.5	
PSBE	**So Bento**	5.33	329	*e*Pn	Pn	07 36 20.3	+1.2
PSBE				*e*Sn	Sn	07 37 17.1	-2.2
PSBE	comp=N,3.9nm,0.2s			A	A	07 37 22.4	
PCAS	**Casmilo, Conde**	5.67	334	P	Pn	07 36 25.0	+1.1
PCAS	comp=N,3.4nm,0.7s			S	Sn	07 37 25.9	-1.9
PCAS	**Casmilo, Conde**	5.67	334	*e*Pn	Pn	07 36 25.0	+1.1
PCAS				*e*Sn	Sn	07 37 25.9	-1.9

PCAS				A	A	07 37 30.7	
	comp=N,3.4nm,0.7s						
MTE	Manteigas	5.70	342	P	Pn	07 36 25.4	+1.1
MTE				S	Sn	07 37 26.5	-2.0
	comp=N,3.2nm,0.5s						
MTE	Manteigas	5.70	342	*e*Pn	Pn	07 36 25.4	+1.1
MTE				*e*Sn	Sn	07 37 26.5	-2.0
MTE				A	A	07 37 28.4	
	comp=N,6.4nm,0.5s						
GUD	Guadarrama	5.71	8	P	Pn	07 36 24.9	+0.3
	comp=N,0.4nm,0.2s,SNR=7.9						
GUD				S	Sn	07 37 25.4	-3.5
	SNR=7.9						
PVIS	Viseu	6.09	341	P	Pn	07 36 30.6	+1.0
PVIS				S	Sn	07 37 35.8	-2.2
	comp=N,2.7nm,0.5s						
PVIS	Viseu	6.09	341	*e*Pn	Pn	07 36 30.6	+1.0
PVIS				*e*Sn	Sn	07 37 35.8	-2.2
PVIS				A	A	07 37 36.9	
	comp=N,5.3nm,0.5s						
MVO	Moncorvo	6.32	348	P	Pn	07 36 33.6	+0.7
	comp=N,12nm,0.1s,SNR=33						
MVO				S	Sn	07 37 41.0	-2.9
	comp=N,8.9nm,0.9s						
MVO	Moncorvo	6.32	348	*e*Pn	Pn	07 36 33.6	+0.7
MVO				*e*Sn	Sn	07 37 42.4	-1.5
MVO				A	A	07 37 43.8	
	comp=N,5.3nm,0.3s						
ETOR	Torete	6.35	23	P	Pn	07 36 33.8	+0.5
	comp=N,9.8nm,0.2s,SNR=15						
ETOR				S	Sn	07 37 40.8	-3.8
	comp=N,0.2nm,0.1s						
PVRL	Vila Real	6.57	344	P	Pn	07 36 37.2	+1.0
PVRL				S	Sn	07 37 47.2	-2.7
	comp=N,8.1nm,0.3s						
PVRL	Vila Real	6.57	344	*e*Pn	Pn	07 36 37.2	+1.0
PVRL				*e*Sn	Sn	07 37 47.2	-2.7
PVRL				A	A	07 37 49.8	
	comp=N,16nm,0.3s						
POLO	Lamas de Olo	6.68	343	P	Pn	07 36 38.7	+0.9
POLO				S	Sn	07 37 50.3	-2.4
	comp=N,2.6nm,0.4s						
POLO	Lamas de Olo	6.68	343	*e*Pn	Pn	07 36 38.7	+0.9
POLO				*e*Sn	Sn	07 37 50.3	-2.4
POLO				A	A	07 37 51.1	
	comp=N,2.6nm,0.4s						
PBRG	Braganca	6.91	351	P	Pn	07 36 41.8	+1.0
PBRG	Braganca	6.91	351	*e*Pn	Pn	07 36 41.8	+1.0
ECAL	Calabor	7.04	351	P	Pn	07 36 43.5	+0.8
	comp=N,1.1nm,0.1s,SNR=8.8						
ECAL				S	Sn	07 37 58.2	-3.3
	comp=N,0.8nm,0.1s						
PCAB	Cabril	7.06	343	P	Pn	07 36 43.6	+0.7
PCAB				S	Sn	07 37 58.3	-3.5
PCAB	Cabril	7.06	343	*e*Pn	Pn	07 36 43.6	+0.7
PCAB				*e*Sn	Sn	07 37 58.3	-3.5
ELOB	Lobios	7.21	343	P	Pn	07 36 46.0	+0.9
	comp=N,3.8nm,0.1s,SNR=13						
ELOB				S	Sn	07 38 01.9	-3.9
	comp=N,0.8nm,0.0s						
PGAV	Gavieira, Arco	7.36	342	P	Pn	07 36 47.9	+0.8
PGAV				S	Sn	07 38 06.1	-3.2
PGAV	Gavieira, Arco	7.36	342	*e*Pn	Pn	07 36 47.9	+0.8
PGAV				*e*Sn	Sn	07 38 06.1	-3.2

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*IDC **09** 07:57:11.2±0.8, 10°.25N×126°.40E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.7/42, mbtmp3.8/10, Error ellipse: s-maj=63.6km s-min=18.3km az=73.0*

*MAN **09** 07:57:18.5, 10°.19N×126°.06E, h15km, mb4.6, ML3.5, MS3.3*

ISC 09 07:57:16.5±1.3, **10°.30N**±0°.04×**126°.25E**±0°.08, **h31**km±9km, **n28**, σ**1s.74**/32, **mb3.9**/10, **3C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.53	193	*e*P	Pb	07 57 26.9	-0.6
GLSP				*e*S	Sb	07 57 33.4	-1.6
MSLP	Maasin	1.38	263	*e*P	Pn	07 57 39.6	0.0
MSLP				*e*S	Sn	07 57 56.1	-0.6
BUTP	Butuan	1.46	205	*e*P	Pn	07 57 41.1	+0.3
BUTP				*e*S	Sn	07 57 59.2	+0.3
BESP	Borongan	1.52	328	*e*P	Pb	07 57 43.6	-0.4
BESP				*e*S	Sb	07 58 06.1	+3.2
LLP	Lapu-Lapu	2.25	271	⇑*e*P	Pn	07 57 52.7	+1.1
LLP				*e*S	Sn	07 58 19.0	+0.8
CGP	Cagayan de Oro	2.39	220	⇑*i*P	Pn	07 57 55.0	+1.4
CGP				*i* S	Sn	07 58 22.4	+0.5
BUKP	Musuan	2.68	206	*e*P	Pn	07 57 59.9	+2.4
BUKP				*e*S	Sn	07 58 32.2	+3.2
DAV	Davao City (W)	3.28	192	Pn	Pn	07 58 08.4	+2.6
	105nm,0.3s,baz=168,slow=4.3,SNR=2.8						
DAV				Sn	Sn	07 58 47.9	+4.1
	72nm,0.3s,baz=294,slow=8.2,SNR=2.1						
KCP	Kidapawan	3.47	199	⇑*i*P	Pn	07 58 11.3	+2.8
KCP				*i* S	Sb	07 58 58.8	-0.3
CNOP	Candoni, Negro	3.59	263	*e*P	Pn	07 58 11.1	+1.1
PAGZ	Pagadian	3.74	229	*e*P	Pn	07 58 13.9	+1.9
PAGZ				*e*S	Sn	07 58 55.7	+0.7
DDMP	Don Marcelino,	4.21	187	*e*P	Pn	07 58 20.8	+2.3
WRA	Warramunga Arr	31.09	165	P	P	08 03 30.5	-1.8
	0.7nm,0.7s,baz=330,slow=11,SNR=2.8						
ASAR	Alice Springs	34.58	168	P	P	08 04 01.4	-1.3
	0.5nm,0.3s,baz=352,slow=7.1,SNR=16						
H11S3	WAKE ISLAND Hy	39.93	74	T	T	08 47 48.1	
	baz=263,slow=76,SNR=16						
H11S1	WAKE ISLAND Hy	39.95	74	T	T	08 47 46.0	
	baz=263,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	39.95	74	T	T	08 47 44.3	
	baz=263,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	40.27	72	T	T	08 48 10.4	
	baz=264,slow=74,SNR=33						
H11N2	WAKE ISLAND Hy	40.27	72	T	T	08 48 15.6	
	baz=264,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	40.28	72	T	T	08 48 14.9	
	baz=264,slow=74,SNR=34						
SONM	Songino Array	40.98	340	P	P	08 04 56.9	+0.3
	0.2nm,0.5s,baz=161,slow=5.7,SNR=1.7						
STKA	Stephens Creek	44.44	161	P	P	08 05 22.8	-1.9
	3.3nm,1.0s,baz=262,slow=12,SNR=2.1						
MKAR	Makanchi Array	51.99	323	P	P	08 06 22.9	-0.1
	0.3nm,0.5s,baz=111,slow=9.6,SNR=1.8						
ZALV	Zalesovo Beam	54.59	331	P	P	08 06 42.2	+0.4
	0.4nm,0.3s,baz=55,slow=38,SNR=1.6						
ILAR	Eielson Array	79.42	26	P	P	08 09 19.1	-0.4
	0.3nm,0.7s,baz=257,slow=7.0,SNR=1.7						
FINES	FINESS Array B	85.85	332	P	P	08 09 53.2	+0.3
	1.5nm,0.9s,baz=71,slow=9.0,SNR=1.5						
NOA	NORSAR Array B	92.72	334	P	P	08 10 25.3	-0.2
	0.5nm,0.7s,baz=156,slow=5.8,SNR=3.4						
YKA	Yellowknife Ar	93.73	24	P	P	08 10 29.5	-0.5
	0.5nm,0.8s,baz=298,slow=4.2,SNR=8.5						

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*IDC **09** 07:59:30.7±1.2, 2°.84S×100°.27E, h0km, mb4.1/11, mb1 4.2/12, mb1mx3.9/44, mbtmp4.1/12, ML3.5/1, Error ellipse: s-maj=45.5km s-min=17.0km az=57.0*

*DJA **09** 07:59:30.0±0.4, 3°S±3°×10°0E±°, h10km, M4.1/10, mb4.0/1, MLv4.2/10*

*NEIC **09** 07:59:35.1±1.6, 2°.91S±0°.07×100°.20E±0°.07, h35km±4km, mb4.4/7, Error ellipse: s-maj=11.0km s-min=8.5km az=50.0*

ISC 09 07:59:33.8±0.6, **3°.00S**±0°.06×**100°.01E**±0°.06, **h27**km, **n50**, σ**1s.23**/52, **mb4.3**/16, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.71	58	P	Pn	08 00 00.7	-1.2
KRJI				S	Sn	08 00 24.3	+1.3
SISI	Saibi	1.90	331	P	Pn	08 00 03.5	-1.0
SISI				S	Sn	08 00 27.8	+0.2
PDSI	Padang	2.13	12	P	Pn	08 00 06.6	-1.0
PDSI				S	Sn	08 00 33.8	+0.6
MASI	Maura Aman, Be	2.23	94	P	Pn	08 00 08.5	-0.5
MASI				S	Sn	08 00 37.6	+1.9
SDSI	Sungai Dareh	2.50	35	P	Pn	08 00 12.7	0.0
MNAI	Manna	3.23	115	Pn	Pn	08 00 21.9	-0.9
MNAI				Sn	Sn	08 00 56.8	-3.7
MNAI	Manna	3.23	115	P	Pn	08 00 21.6	-1.2
MNAI				S	Sn	08 00 57.4	-3.1
PBSI	Pulau Batu	3.40	329	P	Pn	08 00 24.3	-0.8
PBSI				S	Sn	08 01 02.8	-1.9
BKNI	Bangkinang	3.46	17	Pn	Pn	08 00 25.0	-1.0
LHSI	Lahat	3.60	103	P	Pn	08 00 28.1	+0.3
LHSI				S	Sn	08 01 10.4	+0.9
MDSI	Maura Dua	4.41	110	P	Pn	08 00 39.1	+0.1
MDSI				S	Sn	08 01 30.3	+0.8
GSI	Gunungsitoli	4.92	330	Pn	Pn	08 00 45.4	-0.6
KLSI		5.00	110	P	Pn	08 00 47.7	+0.6
RPSI	Rantau Prapat	5.76	349		Pn	08 00 57.3	-0.4
PSI	Prapat	5.87	349	Pn	Pn	08 00 57.3	-1.9
	1.4nm,0.3s,baz=0.1,slow=11,SNR=3.0						
KULM	Kulim	8.26	4	Pn	Pn	08 01 30.4	-1.6
CISI	Cisompet, Garu	8.99	121	Pn	Pn	08 01 39.0	-3.0
CMAR	Chiang Mai Arr	21.35	357	P	P	08 04 17.9	-1.3
	1.6nm,0.5s,baz=187,slow=9.6,SNR=8.2						
H08S2	Diego Garcia H	27.78	259	T	T	08 34 24.2	
	baz=82,slow=75,SNR=2124						
H08S3	Diego Garcia H	27.78	259	T	T	08 34 24.7	
	baz=82,slow=75,SNR=1456						
H08S1	Diego Carcia H	27.80	259	T	T	08 34 25.6	
	baz=82,slow=75,SNR=766						
H01W3	Cape Leeuwin H	34.33	159	T	T	08 42 28.4	
	baz=335,slow=76,SNR=30						
H01W2	Cape Leeuwin H	34.34	159	T	T	08 42 24.6	
	baz=335,slow=76,SNR=34						
H01W1	Cape Leeuwin H	34.34	159	T	T	08 42 30.9	
	baz=335,slow=76,SNR=28						
WRA	Warramunga Arr	37.48	119	P	P	08 06 45.4	-0.2
	0.7nm,0.8s,baz=298,slow=11,SNR=4.6						
WB2	Warramunga Arr	37.50	119	P	P	08 06 45.6	-0.1
WB2				IAmb	IAmb	08 07 11.3	
	comp=Z,17nm,1.4s						
ASAR	Alice Springs	38.66	125	P	P	08 06 54.4	-1.1
	comp=Z,0.6nm,0.6s,baz=302,slow=8.4,SNR=7.5						
AS31	Alice Springs	38.66	125	P	P	08 06 55.5	+0.1
STKA	Stephens Creek	48.48	131	P	P	08 08 15.7	+1.3
	comp=Z,0.9nm,0.5s,baz=349,slow=5.2,SNR=1.5						
SONM	Songino Array	50.94	6	P	P	08 08 32.8	-0.1
	comp=Z,2.7nm,0.7s,baz=187,slow=9.3,SNR=16						
MK31	Makanchi Array	51.99	345	P	P	08 08 41.2	+0.4
MK31				IAmb	IAmb	08 08 49.5	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	51.99	345	P	P	08 08 41.4	+0.6
	comp=Z,3.7nm,0.7s,baz=150,slow=8.4,SNR=24						
USRK	Ussuriysk Ar.	55.03	28	P	P	08 09 01.9	-1.2
	comp=Z,2.0nm,0.6s,baz=229,slow=5.2,SNR=9.1						
KURK	Kurchatov	56.57	344	P	P	08 09 14.4	+0.4
KURK				IAmb	IAmb	08 09 22.6	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	58.15	349	P	P	08 09 24.8	-0.2
	comp=Z,1.1nm,0.3s,baz=176,slow=4.5,SNR=9.2						
KLR	Kul'dur	58.84	24	P	P	08 09 29.4	-0.6
	baz=246,slow=10.0						
ABKAR	Akbulak array	62.52	332	P	P	08 09 55.0	-0.1
ABKAR				IAmb	IAmb	08 10 03.2	
	comp=Z,3.0nm,0.8s						
CASY	Casey	63.59	175	P	P	08 10 02.5	+0.7
MAW	Mawson	69.32	194	P	P	08 10 40.1	+1.7
MAW				IAmb	IAmb	08 10 54.1	
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	74.01	313	P	P	08 11 09.6	+2.1
	comp=Z,0.6nm,1.0s,baz=128,slow=9.2,SNR=1.3						
FINES	FINESS Array B	85.00	332	P	P	08 12 06.8	+0.2
	comp=Z,5.3nm,1.1s,baz=128,slow=5.3,SNR=1.5						
ARCES	ARCESS Array B	87.42	340	P	P	08 12 19.0	+0.6
	comp=Z,6.9nm,1.0s,baz=45,slow=1.9,SNR=2.7						
R53A	Hurricane	144.79	3	PKPdf	PKPbc	08 19 07.4	-0.3
PBMO	Poplar Bluff	145.04	15	PKPdf	PKPbc	08 19 07.9	-0.7
S51A	Beattyville	145.37	5		PKPbc	08 19 08.9	-0.7
FCAR	Ozark Folk Cen	145.40	17		PKPdf	08 19 09.2	-0.7
TX31	Lajitas Ar. Si	145.48	38		PKPab	08 19 10.9	+0.3
TX32	Lajitas Array	145.48	38		PKPab	08 19 11.1	+0.5
TXAR	Lajitas Array	145.48	38	PKPbc	PKPab	08 19 10.8	+0.2
	comp=Z,2.7nm,0.7s,baz=221,slow=0.9,SNR=40						
MIAR	Mount Ida	146.16	20	PKPab	PKPab	08 19 12.4	-0.4

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*VAO **09** 08:11:44.4±0.4, 21°.65S×66°.69W, h253km±9km, mb3.8*

*GUC **09** 08:11:45.8±0.6, 21°.48S×67°.02W, h264km±8km, ML4.1*

ISC 09 08:11:43.5±0.7, **21°.58S**±0°.06×**66°.9W**±0°.1, **h252**km±16km, **n30**, σ**1s.47**/44, **4C-5D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.17	241	*e*P	Pn	08 12 29.4	+1.3
PB09	IPOC Station P	2.24	264	*e*P	Pn	08 12 30.2	+1.7
PB09				*i* S	S	08 13 04.3	+0.2
PB09				IAML		08 13 08.4	
	comp=E,154nm,0.6s						
PB01	IPOC Station P	2.52	282	*e*P	Pn	08 12 32.2	+1.0
PB01				*i* S	S	08 13 07.7	-1.2
PB01				IAML		08 13 09.5	
	comp=N,314nm,0.3s						
PB08	IPOC Station P	2.59	303	⇓*i*P	Pn	08 12 33.2	+1.0
PB08				*i* S	S	08 13 09.8	-0.9
PB08				IAML		08 13 12.9	
	comp=E,126nm,0.2s						
PB03	IPOC Station P	2.74	260	⇑*i*P	Pn	08 12 35.0	+1.5
PB03				*i* S	S	08 13 12.1	-1.0
PB03				IAML		08 13 13.4	
	comp=E,353nm,0.1s						
PB07	IPOC Station P	2.83	266	⇑*i*P	Pn	08 12 35.9	+1.4
PB07				*i* S	S	08 13 13.7	-1.1
GO01	Chusmiza	2.91	310	⇓*i*P	Pn	08 12 36.3	+0.6
GO01				*i* S	S	08 13 18.1	+1.3
GO01				IAML		08 13 22.2	
	comp=N,320nm,0.1s						
HMBC	Humberstone	3.12	294	⇓*i*P	Pn	08 12 37.8	+0.2
HMBC				*i* S	S	08 13 18.2	-2.2
PB04	IPOC Station P	3.16	256	⇑*i*P	Pn	08 12 39.6	+1.6
PB04				*i* S	S	08 13 19.9	-1.2
PB04				IAML		08 13 22.6	
	comp=E,245nm,0.2s						
PATCX	Punta Patache	3.18	283	*e*P	Pn	08 12 38.9	+0.8
PATCX				*i* S	S	08 13 19.1	-2.2
TA01	Diego Aracena	3.27	287	*e*P	Pn	08 12 39.4	+0.3
TA01				*i* S	S	08 13 20.2	-2.9
TA01				IAML		08 13 21.3	
	comp=E,250nm,0.2s						
TA02	Huaiquique	3.33	292	*i* S	S	08 13 21.3	-3.1
PB05	IPOC Station P	3.36	247	⇑*i*P	Pn	08 12 41.9	+1.7
PB05				*i* S	S	08 13 23.8	-1.3
PB05				IAML		08 13 25.2	
	comp=E,120nm,0.3s						
MNMC	Minye Minye	3.55	313	⇓*i*P	Pn	08 12 43.2	+0.7
MNMC				*i* S	S	08 13 27.6	-1.6
PSGC	Pisagua	3.65	302	*e*P	Pn	08 12 43.1	-0.3
PSGC				*i* S	S	08 13 27.6	-3.4
PSGC				IAML		08 13 29.8	
	comp=E,108nm,0.2s						
PB16	IPOC Station P	4.08	322	⇓*i*P	Pn	08 12 50.2	+1.2
PB16				*i* S	S	08 13 39.7	-1.2
CPUP	Villa Florida	9.90	120	*e*P	Pn	08 14 00.1	-0.8
VILB	Vilhena	10.67	38	*e*P	Pn	08 14 11.7	+1.1
PCMB	Pacaembu	14.50	93	*e*P	P	08 14 56.6	-1.2
CZSB	Cruzeiro do Su	14.88	337	*e*P	Pn	08 15 04.7	+2.4
ARAG	Araguaiana, MT	15.39	70	*e*P	P	08 15 06.6	-1.1
PLTB	Pedras Altas	15.57	133	*e*P	P	08 15 08.3	-1.2
SNDB	Serra Nova Dou	17.67	60	*e*P	P	08 15 32.8	+0.1
NPGB	Novo Progresso	18.22	39	*e*P	P	08 15 38.2	-0.3
ITTB	Itaituba	20.22	34	*e*P	P	08 15 59.2	-0.8
BSCB	Bom Sucesso	20.58	92	*e*P	P	08 16 02.5	-1.3
JANB	Januaria	22.34	77	*e*P	P	08 16 20.6	-0.1
SMTB	Santa Maria do	22.44	59	*e*P	P	08 16 22.5	+0.9
PRPB	Parauapebas	22.50	50	*e*P	P	08 16 22.0	-0.1
MALB	Monte Alegre	23.12	34	*e*P	P	08 16 28.7	+0.9

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*SKHL **09** 08:12:51.0±0.4, 44°.21N×148°.66E, h39km±7km, mb4.3/3*

*JMA **09** 08:12:51.4±0.3, 43°.99N×148°.35E, h0km, M3.7*

ISC 09 08:12:35.8±5.5, **43°.9N**±0°.1×**149°.4E**±0°.3, **h17**km±17km, **n13**, σ**1s.65**/21, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.73	320	*e*P	Pg	08 13 10.0	+1.1
KUR				AMB	AMB	08 13 11.0	
	45nm,0.3s						
KUR				*e*S	Sn	08 13 24.2	-2.4
KUR				A	A	08 13 25.0	
	612nm,0.3s						
KUR				A	A	08 13 25.0	
	565nm,0.3s						
YUK	Yuzh-Kuril'sk	2.59	274	*e*P	Pb	08 13 22.6	+0.9
YUK				AMB	AMB	08 13 23.0	
	74nm,0.4s						
YUK				AMB	AMB	08 13 24.0	
	293nm,1.5s						
YUK				*e*S	Sn	08 13 46.0	-1.9
YUK				A	A	08 13 47.0	
	438nm,1.2s						
YUK				A	A	08 13 47.0	
	472nm,1.2s						
YUK				A	A	08 13 52.0	
	267nm,0.2s						
YUK				A	A	08 13 52.0	
	112nm,0.2s						
GRPR	Tuman	2.65	273	*e*P	Pb	08 13 23.1	+0.3
GRPR				AMB	AMB	08 13 23.7	
	43nm,0.2s						
GRPR				*e*S	Sn	08 13 47.8	-1.7
GRPR				A	A	08 13 49.0	
	310nm,1.5s						
GRPR				A	A	08 13 49.0	
	272nm,1.5s						
GRPR				A	A	08 13 52.0	
	215nm,0.2s						
GRPR				A	A	08 13 52.0	
	166nm,0.2s						
NEM2	Nemuro 2	2.74	259	P	Pg	08 13 26.9	-1.4
NEM2				*e*S	Sn	08 13 53.1	+1.4
NMR	Nemuro--Hokkai	2.75	260	*e*P	Pb	08 13 26.0	+1.5
NMR				*e*S	Sn	08 13 52.6	+0.6
JKHN	Kushirohamanak	3.23	256	P	Pb	08 13 34.2	+1.6
JNK	Nakash	3.44	266	*e*S	Sn	08 14 09.8	+0.9
JAK	Akkeshi	3.58	257	P	Pb	08 13 38.8	+0.2
JAK				*e*S	Sn	08 14 14.2	+1.9
JAR	Ashorobuto	4.17	263	P	Pb	08 13 47.7	-0.9
JAR				*e*S	Sn	08 14 29.3	+2.4
JCH	Churui	4.63	256	P	Pb	08 13 54.3	-2.2
JCH				*e*S	Sn	08 14 40.6	+2.3
JKB	Kayabe	6.50	255	*e*S	Sn	08 15 24.0	-0.4
JOT	Ohata	6.69	251	*e*S	Sn	08 15 28.2	-0.8
JANG	Nango	6.88	242	*e*S	Sn	08 15 33.0	-0.7

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*BUC **09** 08:19:26.2±0.3, 45°.72N×26°.63E, h102km±2km, ml3.5/38, Error ellipse: s-maj=1.8km s-min=1.7km az=140.0*

ISC 09 08:19:26.0±1.3, **45°.72N**±0°.02×**26°.63E**±0°.02, **h107**km±5km, **n93**, σ**0s.66**/170, **108C-60D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.13	8	⇑P	Pn	08 19 40.8	-0.2
PLOR				⇑S	Sn	08 19 51.0	-1.3
PLOR	Plostina	0.13	8	⇑P	Pn	08 19 40.8	-0.2
PLOR				⇑S	Sn	08 19 51.0	-1.3
VRI	Vrincioaia	0.16	27	⇑P	Pn	08 19 40.9	-0.1
VRI				⇑S	Sn	08 19 51.6	-0.7
VRI	Vrincioaia	0.16	27	⇑P	Pn	08 19 40.9	-0.1
VRI				⇑S	Sn	08 19 51.6	-0.7
BISRR	Bisoca	0.19	161	⇓P	Pn	08 19 41.5	+0.3
BISRR				⇑S	Sn	08 19 52.6	+0.1
BISRR	Bisoca	0.19	161	⇓P	Pn	08 19 41.5	+0.3
BISRR				⇑S	Sn	08 19 52.6	+0.1
ODBI	Odobesti	0.30	82	⇑P	Pn	08 19 42.3	+0.9
ODBI				⇑S	Sn	08 19 53.9	+0.9
ODBI	Odobesti	0.30	82	⇑P	Pn	08 19 42.3	+0.9
ODBI				⇑S	Sn	08 19 53.9	+0.9
NEHR	Nehoiu	0.38	218	⇑P	Pn	08 19 42.8	+0.9
NEHR				⇑S	Sn	08 19 54.0	+0.2
NEHR	Nehoiu	0.38	218	⇑P	Pn	08 19 42.8	+0.9
NEHR				⇑S	Sn	08 19 54.0	+0.2
GRER		0.42	144	⇓P	Pn	08 19 43.1	+1.0
GRER				⇑S	Sn	08 19 54.5	+0.3
GRER		0.42	144	⇓P	Pn	08 19 43.1	+1.0
GRER				⇑S	Sn	08 19 54.5	+0.3
PETR	Petresti	0.42	90	⇓P	Pn	08 19 42.5	+0.4
PETR				⇓S	Sn	08 19 54.5	+0.4
PETR	Petresti	0.42	90	⇓P	Pn	08 19 42.5	+0.4
PETR				⇓S	Sn	08 19 54.5	+0.4
MLR	Muntele Rosu	0.53	244	⇓P	Pn	08 19 43.2	+0.2
MLR				⇓S	Sn	08 19 55.4	-0.2
MLR	Muntele Rosu	0.53	244	⇓P	Pn	08 19 43.2	+0.2
MLR				⇓S	Sn	08 19 55.4	-0.2
ISR	Istrita	0.61	185	⇓P	Pn	08 19 43.9	+0.5
ISR				⇑S	Sn	08 19 56.5	-0.1
ISR	Istrita	0.61	185	⇓P	Pn	08 19 43.9	+0.5
ISR				⇑S	Sn	08 19 56.5	-0.1
OZUR		0.69	303	⇑P	Pn	08 19 43.7	-0.4
OZUR				⇑S	Sn	08 19 56.2	-1.5
OZUR		0.69	303	⇑P	Pn	08 19 43.7	-0.4
OZUR				⇑S	Sn	08 19 56.2	-1.5
TUDR		0.74	100	⇑P	Pn	08 19 44.4	-0.1
TUDR				⇑S	Sn	08 19 57.9	-0.4
TUDR		0.74	100	⇑P	Pn	08 19 44.4	-0.1
TUDR				⇑S	Sn	08 19 57.9	-0.4
TESR	Tescani	0.79	1	⇓P	Pn	08 19 44.6	-0.3
TESR				⇓S	Sn	08 19 57.4	-1.8
TESR	Tescani	0.79	1	⇓P	Pn	08 19 44.6	-0.3
TESR				⇓S	Sn	08 19 57.4	-1.8
PGOR	Pogoanele	0.85	163	⇓P	Pn	08 19 46.0	+0.5
PGOR				⇑S	Sn	08 19 60.0	-0.2
PGOR	Pogoanele	0.85	163	⇓P	Pn	08 19 46.0	+0.5
PGOR				⇑S	Sn	08 19 60.0	-0.2
VARL	Varlezi	0.87	78	⇑P	Pn	08 19 46.1	+0.4
VARL				⇑S	Sn	08 20 00.8	+0.3
VARL	Varlezi	0.87	78	⇑P	Pn	08 19 46.1	+0.4
VARL				⇑S	Sn	08 20 00.8	+0.3
SCHL	Schela	0.88	104	⇓P	Pn	08 19 45.5	-0.2
SCHL				⇓S	Sn	08 19 59.3	-1.2
SCHL	Schela	0.88	104	⇓P	Pn	08 19 45.5	-0.2
SCHL				⇓S	Sn	08 19 59.3	-1.2
BIR	Birlad	0.88	52	⇓P	Pn	08 19 46.2	+0.4
BIR				⇑S	Sn	08 20 01.1	+0.4
BIR	Birlad	0.88	52	⇓P	Pn	08 19 46.2	+0.4
BIR				⇑S	Sn	08 20 01.1	+0.4
DOPR	Dopca	0.90	286	⇑P	Pn	08 19 45.9	-0.1
DOPR				⇑S	Sn	08 20 00.5	-0.5
DOPR	Dopca	0.90	286	⇑P	Pn	08 19 45.9	-0.1
DOPR				⇑S	Sn	08 20 00.5	-0.5
PLAR	PLOIESTI	0.91	208	⇓S	Sn	08 20 01.2	0.0
PLAR	PLOIESTI	0.91	208	⇓S	Sn	08 20 01.2	0.0
GISR	Galati	1.04	105	⇓P	Pn	08 19 47.8	+0.4
GISR				⇓S	Sn	08 20 03.9	+0.4
GISR	Galati	1.04	105	⇓P	Pn	08 19 47.8	+0.4
GISR				⇓S	Sn	08 20 03.9	+0.4
SULR		1.08	194	⇑S	Sn	08 20 04.9	+0.7
SULR		1.08	194	⇑S	Sn	08 20 04.9	+0.7
GIUM	Giurgiulesti	1.14	102	⇓P	Pn	08 19 49.1	+0.7
GIUM				⇑S	Sn	08 20 05.2	-0.2
GIUM	Giurgiulesti	1.14	102	⇓P	Pn	08 19 49.1	+0.7
GIUM				⇑S	Sn	08 20 05.2	-0.2
VOIR		1.14	256	⇑P	Pn	08 19 48.4	-0.2
VOIR				⇑S	Sn	08 20 04.5	-1.2
VOIR		1.14	256	⇑P	Pn	08 19 48.4	-0.2
VOIR				⇑S	Sn	08 20 04.5	-1.2
CFR	Carcaliu	1.20	117	⇑P	Pn	08 19 49.0	-0.1
CFR				⇓S	Sn	08 20 05.9	-0.7
CFR	Carcaliu	1.20	117	⇑P	Pn	08 19 49.0	-0.1
CFR				⇓S	Sn	08 20 05.9	-0.7
AMRR	Amara	1.22	155	⇑P	Pn	08 19 49.7	+0.3
AMRR				⇑S	Sn	08 20 07.2	+0.1
AMRR	Amara	1.22	155	⇑P	Pn	08 19 49.7	+0.3
AMRR				⇑S	Sn	08 20 07.2	+0.1
VASR	Vaslui	1.22	41	⇑P	Pn	08 19 49.7	+0.3
VASR				⇓S	Sn	08 20 07.0	-0.1
VASR	Vaslui	1.22	41	⇑P	Pn	08 19 49.7	+0.3
VASR				⇓S	Sn	08 20 07.0	-0.1
LEHL	Lehliu	1.26	174	⇓P	Pn	08 19 50.3	+0.5
LEHL				⇑S	Sn	08 20 08.2	+0.4
LEHL	Lehliu	1.26	174	⇓P	Pn	08 19 50.3	+0.5
LEHL				⇑S	Sn	08 20 08.2	+0.4
BIZ	Bicaz	1.27	344	⇑P	Pn	08 19 50.7	+0.8
BIZ				⇑S	Sn	08 20 08.5	+0.4
BIZ	Bicaz	1.27	344	⇑P	Pn	08 19 50.7	+0.8
BIZ				⇑S	Sn	08 20 08.5	+0.4
HARR	Harsova	1.39	138	⇑P	Pn	08 19 51.3	0.0
HARR	Harsova	1.39	138	⇑P	Pn	08 19 51.3	0.0
BUC1	Bucharest	1.44	197	⇑S	Sn	08 20 11.5	-0.1
BUC1	Bucharest	1.44	197	⇑S	Sn	08 20 11.5	-0.1
ARR	Arges	1.44	256	⇓P	Pn	08 19 52.4	+0.4
ARR				⇑S	Sn	08 20 11.3	-0.5
ARR	Arges	1.44	256	⇓P	Pn	08 19 52.4	+0.4
ARR				⇑S	Sn	08 20 11.3	-0.5
TPGR	Topolog	1.54	124	⇑P	Pn	08 19 53.0	-0.1
TPGR				⇑S	Sn	08 20 12.5	-1.2

TPGR	Topolog	1.54	124	⇑P	Pn	08 19 53.0	-0.1
TPGR				⇑S	Sn	08 20 12.5	-1.2
TLBR	Topalu	1.55	139	⇓P	Pn	08 19 53.4	+0.1
TLBR				⇑S	Sn	08 20 12.9	-1.0
TLBR	Topalu	1.55	139	⇓P	Pn	08 19 53.4	+0.1
TLBR				⇑S	Sn	08 20 12.9	-1.0
RASA	Rasa	1.56	166	⇑P	Pn	08 19 53.6	+0.3
RASA				⇑S	Sn	08 20 13.6	-0.5
RASA	Rasa	1.56	166	⇑P	Pn	08 19 53.6	+0.3
RASA				⇑S	Sn	08 20 13.6	-0.5
SGRR	Singureni	1.57	197	⇑S	Sn	08 20 13.9	-0.4
SGRR	Singureni	1.57	197	⇑S	Sn	08 20 13.9	-0.4
IAS	Iasi	1.61	23	⇑P	Pn	08 19 53.6	-0.3
IAS				⇑S	Sn	08 20 14.3	-0.8
IAS	Iasi	1.61	23	⇑P	Pn	08 19 53.6	-0.3
IAS				⇑S	Sn	08 20 14.3	-0.8
TLCR		1.63	108	⇑P	Pn	08 19 54.8	+0.5
TLCR				⇓S	Sn	08 20 15.8	+0.1
TLCR		1.63	108	⇑P	Pn	08 19 54.8	+0.5
TLCR				⇓S	Sn	08 20 15.8	+0.1
HUMR	Humele	1.67	225	⇑P	Pn	08 19 54.5	-0.2
HUMR				⇑S	Sn	08 20 15.5	-1.1
HUMR	Humele	1.67	225	⇑P	Pn	08 19 54.5	-0.2
HUMR				⇑S	Sn	08 20 15.5	-1.1
CVDA	Cernavoda	1.71	144	⇓P	Pn	08 19 55.6	+0.3
CVDA				⇑S	Sn	08 20 16.6	-0.9
CVDA	Cernavoda	1.71	144	⇓P	Pn	08 19 55.6	+0.3
CVDA				⇑S	Sn	08 20 16.6	-0.9
TIRR	Tirgusor	1.79	134	⇓P	Pn	08 19 56.5	+0.3
TIRR	Tirgusor	1.79	134	⇓P	Pn	08 19 56.5	+0.3
ICOR	Ion Corvin	1.81	152	⇑P	Pn	08 19 57.1	+0.6
ICOR				⇓S	Sn	08 20 18.7	-0.9
ICOR	Ion Corvin	1.81	152	⇑P	Pn	08 19 57.1	+0.6
ICOR				⇓S	Sn	08 20 18.7	-0.9
COPA	Copaceanca	1.88	213	⇑S	Sn	08 20 20.3	-0.8
COPA	Copaceanca	1.88	213	⇑S	Sn	08 20 20.3	-0.8
MILM	Milestii Mici	1.93	51	⇓P	Pn	08 19 58.3	+0.4
MILM				⇑S	Sn	08 20 21.0	-1.3
MILM	Milestii Mici	1.93	51	⇓P	Pn	08 19 58.3	+0.4
MILM				⇑S	Sn	08 20 21.0	-1.3
KIS	Kishinev	1.98	49	*e*P	Pn	08 19 59.0	+0.4
KIS				*e*S	Sn	08 20 22.5	-1.0
	90nm,0.1s						
MFTR	Murfatlar	2.00	140	⇓P	Pn	08 19 59.2	+0.3
MFTR				⇓S	Sn	08 20 23.6	-0.5
MFTR	Murfatlar	2.00	140	⇓P	Pn	08 19 59.2	+0.3
MFTR				⇓S	Sn	08 20 23.6	-0.5
BURAR	Bucovina Array	2.12	333	⇑P	Pn	08 20 02.0	+1.5
BURAR				⇑S	Sn	08 20 28.4	+1.4
BURAR	Bucovina Array	2.12	333	⇑P	Pn	08 20 02.0	+1.5
BURAR				⇑S	Sn	08 20 28.4	+1.4
VLAD	Vladila	2.34	223	⇑P	Pn	08 20 03.8	+0.6
VLAD	Vladila	2.34	223	⇑P	Pn	08 20 03.8	+0.6
GZR	Gura Zlata	2.72	264	⇓P	Pn	08 20 08.2	-0.1
GZR				⇑S	Sn	08 20 41.4	+0.5
GZR	Gura Zlata	2.72	264	⇓P	Pn	08 20 08.2	-0.1
GZR				⇑S	Sn	08 20 41.4	+0.5

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*UPA **09** 08:24:13.2±1.2, 6°.10N×77°.63W, h0^{km}±6^{km}, MW4.7*
*RSNC **09** 08:24:15.6±0.9, 6°.32N×77°.48W, h0^{km}±5^{km}, ML2.5*
ISC 09 08:24:14.4±1.1, **6°.26N**±0°.04×**77°.58W**±0°.05, **h10**^{km}, **n19**, σ**1^{s}.44**/30, **Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.91	346	*e*P	Pg	08 24 31.4	-0.5
PTAC				*e*S	Sb	08 24 44.4	-0.1
DBBC	Dabeiba	1.56	61	*e*P	Pn	08 24 40.4	-1.9
DBBC				*i*		08 25 09.3	
	comp=Z,338nm,0.7s						
CBOC	Ciudad Bolivar	1.61	104	*e*P	Pn	08 24 42.4	-0.6
CBOC				*i*		08 25 09.8	
	comp=Z,42nm,0.4s						
PLMC	San Jos del P	1.87	136	*e*P	Pn	08 24 46.9	+0.5
PLMC				*e*S	Sb	08 25 12.6	+0.5
PLMC				*i*		08 25 24.9	
	comp=Z,24nm,0.4s						
HELC	Santa Helena	2.04	92	*e*P	Pn	08 24 49.2	+0.1
HELC				*e*S	Sb	08 25 17.4	0.0
HELC	Santa Helena	2.04	92	*e*P	Pn	08 24 49.0	-0.2
HELC				*e*S	Sn	08 25 15.2	+0.3
HELC				*i*		08 25 22.7	
	comp=Z,26nm,0.5s						
UPD2	Meteti	2.31	349	*e*P	Pb	08 24 54.4	-1.8
UPD2				*e*S	Sb	08 25 25.8	+0.9
CAP2	Capurgana	2.39	5	*e*P	Pb	08 24 56.2	-1.3
CAP2				*e*S	Sb	08 25 28.0	+1.0
UREC	San Jos de Ur	2.52	54	*e*P	Pn	08 24 55.7	+0.3
RREF	El Recreo	2.60	121	*e*P	Pb	08 24 59.8	-1.7
NORC	Norcasia	2.79	104	*e*P	Pb	08 25 01.7	-2.6
NORC				*e*S	Sn	08 25 35.8	+3.0
NORC				*i*		08 25 39.9	
	comp=N,24nm,0.4s						
ZARC	Zaragoza, Cauc	2.97	65	*e*P	Pn	08 25 02.4	+0.8
ZARC				*e*S	Sn	08 25 38.4	+1.1
ZARC				*i*		08 25 41.1	
	comp=Z,18nm,0.7s						
AZU	Azuero	3.08	300	*e*P	Pn	08 25 03.5	+0.4
AZU				*e*S	Sn	08 25 41.2	+1.3
PTBC	PUERTO BERRIO,	3.12	85	*e*P	Pn	08 25 05.7	+2.1
MOTC	Monteria, Cord	3.14	37	*e*P	Pn	08 25 04.0	+0.1
MOTC				*e*S	Sn	08 25 41.3	-0.3
MOTC				*i*		08 25 46.4	
	comp=Z,12nm,0.5s						
SPBC	San Pablo de B	3.54	100	*e*P	Pn	08 25 11.0	+1.4
SMLC	San Martn de	4.30	54	*e*P	Pn	08 25 19.5	-0.4
SJCC	San Jacinto, C	4.33	33	*e*P	Pn	08 25 21.4	+1.1
SJCC				*e*S	Sn	08 26 13.7	+2.8
PAMC	Pamplona, Colo	4.97	77	*e*P	Pn	08 25 32.2	+2.7

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*NEIC **09** 08:40:25.0±1.7, 21°.8S±0°.1×179°.42W±0°.09, h596^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=18.1km s-min=8.1km az=145.0*
*IDC **09** 08:40:26.4±1.8, 21°.72S×179°.55W, h609^{km}±20^{km}, mb3.3/11, mb1 3.6/13, mb1mx3.4/23, mbtmp4.3/13, Error ellipse: s-maj=20.7km s-min=15.9km az=132.0*
ISC 09 08:40:24.6±0.5, **21°.94S**±0°.08×**179°.44W**±0°.09, **h592**^{km}, **n34**, σ**1^{s}.60**/34, **mb4.1**/17, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.81	330	P	P	08 41 56.5	+0.9
	41nm,0.3s,baz=174,slow=5.1,SNR=290						
RAO	Raoul Island	7.41	170	P	P	08 42 18.3	+0.3
NIUE	Niue	9.36	74	P	P	08 42 37.2	+0.3
DZM	Mont Dzumac	13.10	267	P	P	08 43 14.1	-0.5
	0.4nm,0.3s,baz=87,slow=23,SNR=1.9						
SANVU	Saraoutou	14.21	295	P	P	08 43 26.2	+0.5
URZ	Urewera	16.54	190	P	P	08 43 46.3	-0.7
	1.2nm,0.3s,baz=248,slow=3.9,SNR=8.6						
URZ				S	S	08 46 25.4	-6.4
	0.7nm,0.3s,baz=49,slow=23,SNR=7.3						
URZ	Urewera	16.54	190	P	P	08 43 46.2	-0.7
URZ				IAmb	IAmb	08 43 53.6	
	comp=Z,26nm,1.2s						
EIDS	Eidsvold	27.20	257	P	P	08 45 23.8	+1.3
EIDS				IAmb	IAmb	08 45 42.5	
	comp=Z,12nm,1.2s						
ARMA	Armidale	27.25	246	P	P	08 45 25.7	+2.6
ARMA				IAmb	IAmb	08 45 25.8	
	comp=Z,5.5nm,0.7s						
STKA	Stephens Creek	35.97	246	P	P	08 46 37.4	+0.5
	comp=Z,3.2nm,0.5s,baz=95,slow=11,SNR=15						
STKA	Stephens Creek	35.97	246	P	P	08 46 38.5	+1.6
AS31	Alice Springs	42.90	258	P	P	08 47 33.2	+0.6
AS31				IAmb	IAmb	08 47 34.0	
	comp=Z,4.2nm,1.2s						
ASAR	Alice Springs	42.90	258	P	P	08 47 33.0	+0.4
	comp=Z,9.7nm,0.8s,baz=99,slow=8.1,SNR=80						
ASAR				PcP	PcP	08 49 08.8	-0.9
	comp=Z,0.8nm,0.5s,baz=114,slow=3.9,SNR=4.6						
WR0	Warramunga Arr	42.91	264	P	P	08 47 32.5	-0.1
WR0				IAmb	IAmb	08 47 35.5	
	comp=Z,7.7nm,1.0s						
WRA	Warramunga Arr	43.09	264	P	P	08 47 33.9	-0.2
	comp=Z,5.0nm,0.5s,baz=96,slow=7.7,SNR=54						
VNDA	Vanda	56.37	185	P	P	08 49 12.6	+2.4
	comp=Z,1.0nm,0.8s,baz=359,slow=6.3,SNR=8.0						
VNDA	Vanda	56.37	185	P	P	08 49 12.6	+2.4
QSPA	South Pole Qui	68.14	180	P	P	08 50 28.1	+1.7
QSPA				IAmb	IAmb	08 50 29.2	
	comp=Z,6.8nm,1.0s						
KKM	Kota Kinabalu	68.85	286	P	P	08 50 31.8	+0.2
MJAR	Matsushiro Arr	70.59	325	P	P	08 50 40.2	-1.1
	comp=Z,2.0nm,0.6s,baz=156,slow=5.5,SNR=4.9						
ADK	Adak	73.54	2	P	P	08 50 56.9	-1.0
ADK				IAmb	IAmb	08 51 03.2	
	comp=Z,39nm,1.1s						
PEA0B	Petropavlovsk-	77.33	346	P	P	08 51 18.4	-0.4
PETK	Petropavlovsk-	77.33	346	P	P	08 51 18.3	-0.6
	comp=Z,6.1nm,0.7s,baz=126,slow=7.5,SNR=4.3						
NVAR	Mina Array Bea	82.99	44	P	P	08 51 49.7	+0.8
	comp=Z,0.3nm,0.7s,baz=106,slow=14,SNR=2.0						
TXAR	Lajitas Array	88.95	58	P	P	08 52 18.1	+0.6
	comp=Z,0.5nm,0.9s,baz=211,slow=3.9,SNR=5.4						
PLCA	Paso Flores	89.25	134	P	P	08 52 18.5	-0.3
	comp=Z,1.5nm,0.9s,baz=245,slow=6.0,SNR=5.4						
CMAR	Chiang Mai Arr	89.34	290	P	P	08 52 18.4	-1.0
	comp=Z,0.9nm,0.3s,baz=133,slow=3.5,SNR=11						
ILAR	Eielson Array	90.01	13	P	P	08 52 19.8	-1.6
	comp=Z,0.4nm,0.7s,baz=223,slow=3.9,SNR=6.5						
ARCES	ARCESS Array B	130.08	349	PKP	PKPdf	08 58 26.9	-0.4
	comp=Z,5.1nm,0.9s,baz=60,slow=7.2,SNR=1.5						
FINES	FINESS Array B	136.75	342	PKP	PKPdf	08 58 40.3	+0.3
	comp=Z,2.7nm,0.9s,baz=146,slow=3.7,SNR=4.1						
AKASG	Malin Array Be	143.59	329	PKP	PKPab	08 58 50.2	-1.4
	comp=Z,1.8nm,0.3s,baz=43,slow=4.3,SNR=25						
AKBB	Malin Array Si	143.59	329		PKPab	08 58 51.0	-0.6
BRTR	Keskin Array B	146.77	310	PKPbc	PKPbc	08 59 00.9	-0.6
	comp=Z,1.4nm,0.7s,baz=154,slow=4.5,SNR=7.0						
GERES	GERESS Array B	151.18	342	PKPbc	PKPbc	08 59 11.3	-0.5
	comp=Z,0.6nm,0.5s,baz=8.6,slow=3.3,SNR=1.9						

IDC 09 09:00:45.4±2.5, **54°.15N**×**86°.16E**, **h0**^{km}, **mb1 3.0**/2, **mb1mx2.9**/50, **mbtmp3.0**/2, **ML2.5**/2, **Error ellipse: s-maj=18.9km s-min=12.4km az=51.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.81	256	*i*		09 06 00.0	
	baz=78,slow=326,SNR=1.5						
ZALV	Zalesovo Beam	0.81	256	Pg	Pg	09 00 59.5	-1.5
	0.7nm,0.3s,baz=69,slow=17,SNR=7.1						
ZALV				Lg	Lg	09 01 12.9	
	3.5nm,0.3s,baz=72,slow=28,SNR=11						
KURBB	Kurchatov Arra	5.86	236	Pn	Pn	09 02 14.7	+1.4
	0.1nm,0.3s,baz=52,slow=13,SNR=2.6						
KURBB				Lg	Lg	09 03 52.2	
	0.0nm,0.3s,baz=116,slow=37,SNR=1.6						
MKAR	Makanchi Array	7.77	200	Pn	Pn	09 02 40.7	+1.1
	0.1nm,0.3s,baz=24,slow=9.8,SNR=9.7						

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*IDC **09** 09:12:47.8±3.8, 38°.01N×142°.01E, h98^{km}±34^{km}, mb3.0/4, mb1 3.2/7, mb1mx3.1/43, mbtmp3.4/7, Error ellipse: s-maj=35.7km s-min=24.4km az=103.0*
*JMA **09** 09:12:53.6, 38°.17N×141°.21E, h65^{km}±1^{km}, M3.7*
JMA Felt I J1.
ISC 09 09:12:53.7±1.4, **38°.18N**±0°.04×**141°.28E**±0°.07, **h64**^{km}±9^{km}, **n30**, σ**1^{s}.42**/36, **mb3.2**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.20	49	P	Pn	09 13 04.0	+0.4
JIKH				S	Sn	09 13 11.5	+0.6
JIO	Ouri	0.28	12	P	Pn	09 13 04.5	+0.4
JIO				*i* S	Sn	09 13 12.0	+0.3
JMM	Marumori	0.49	231	P	Pn	09 13 05.4	-0.5
JMM				S	Sn	09 13 13.9	-0.9
JOFO	Osakifurukawao	0.51	326	P	Pn	09 13 06.0	-0.1
JOFO				S	Sn	09 13 15.7	+0.5
JOU	Okura	0.52	291	P	Pn	09 13 05.9	-0.3
JOU				S	Sn	09 13 15.0	-0.3
JMK	Ichinoseki	0.77	357	P	Pn	09 13 09.1	0.0
JMK				S	Sn	09 13 20.3	-0.1
JFK	Kawauchi	0.87	202	P	Pn	09 13 09.9	-0.4
JFK				S	Sn	09 13 21.8	-0.8
JYS	Shirataka	0.95	273	P	Pn	09 13 10.9	-0.4
JYS				S	Sn	09 13 24.2	-0.2
JFT	Otama	0.99	229	P	Pn	09 13 11.7	-0.2
JFT				S	Sn	09 13 24.8	-0.5
JYK	Kaneyama	1.03	316	P	Pn	09 13 12.1	-0.2
JYK				S	Sn	09 13 25.9	-0.2
JOM	Ohasama	1.29	1	P	Pn	09 13 15.9	+0.2
JOM				S	Sn	09 13 32.1	-0.1
JYA	Atsumi	1.29	289	P	Pn	09 13 15.3	-0.5
JYA				S	Sn	09 13 31.6	-0.7
JRG	Rokugo	1.31	338	P	Pn	09 13 16.4	+0.4
JRG				S	Sn	09 13 34.3	+1.5
JFY	Yanaizu	1.46	239	P	Pn	09 13 17.9	-0.1
JNS	Sasagawa	1.59	258	P	Pn	09 13 19.2	-0.5
JAW	Awa shima	1.62	280	P	Pn	09 13 19.9	-0.2
MJAR	Matsushiro Arr	2.94	237	P	Pn	09 13 38.9	+0.8
	0.6nm,0.3s,baz=37,slow=12,SNR=37						
MJAR				S	Sn	09 14 17.2	+5.0
	0.2nm,0.3s,baz=330,slow=10,SNR=4.2						
MAT	Matsushiro	2.94	237	P	Pn	09 13 38.7	+0.7
MAT				*e*S	Sn	09 14 13.5	+1.3
USRK	Ussuriysk Ar.	9.23	314	P	Pn	09 15 04.1	+0.1
	baz=117,slow=15,SNR=5.6						
KSRS	Korea Array	10.59	270	P	Pn	09 15 26.3	+3.7
	0.3nm,0.3s,baz=80,slow=14,SNR=2.3						
SONM	Songino Array	27.07	302	P	P	09 18 26.3	-3.9
	0.3nm,0.7s,baz=108,slow=9.3,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.84	122	T	T	09 49 00.2	
	baz=316,slow=76,SNR=42						
H11N1	WAKE ISLAND Hy	28.85	122	T	T	09 49 01.3	
	baz=316,slow=76,SNR=46						
H11N3	WAKE ISLAND Hy	28.86	122	T	T	09 49 01.7	
	baz=316,slow=76,SNR=29						
H11S1	WAKE ISLAND Hy	29.58	124	T	T	09 49 57.4	
	baz=317,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.59	124	T	T	09 50 01.3	
	baz=317,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.60	124	T	T	09 49 58.5	
	baz=317,slow=76,SNR=21						
MKAR	Makanchi Array	43.43	301	P	P	09 20 45.4	-4.7
	0.4nm,0.6s,baz=80,slow=14,SNR=4.7						
ILAR	Eielson Array	48.59	33	P	P	09 21 19.4	-11
	0.1nm,0.5s,baz=226,slow=22,SNR=1.6						
WRA	Warramunga Arr	58.18	188	P	P	09 22 30.7	-10
	0.7nm,1.0s,baz=26,slow=7.5,SNR=2.0						

WEL 09 09:18:30.2, **44°S**±3°×**17°0E**±°, **h5**^{km}±2^{km}, **M2.6**/12, **mB5.3**/1, **ML2.6**/12, **MLv2.6**/12, **Mw(mB)4.7**/1, **Error ellipse: s-maj=0.0km s-min=0.0km az=94.5**, **South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOZ	Fox Glacier	0.23	55	P	Pg	09 18 36.2	+1.5
GCSZ	Gaunt Creek Bo	0.66	58	P	Pb	09 18 43.9	-0.2
JCZ	Jackson Bay	0.69	234	P	Pb	09 18 44.8	-0.1
LBZ	Lake Benmore	0.85	148	P	Pb	09 18 47.8	+0.3
WVZ	Waitaha Valley	1.04	56	P	Pn	09 18 51.1	-0.3
RPZ	Rata Peaks	1.08	93	P	Pn	09 18 52.0	0.0
ARCZ	Arundel	1.20	104	P	Pn	09 18 54.1	+0.4
WKZ	Wanaka	1.23	198	P	Pb	09 18 53.8	-0.1
TMZ	Timaru	1.27	125	P	Pn	09 18 56.6	+2.0
MSZ	Milford Sound	1.55	229	P	Pg	09 19 00.9	+1.0
EAZ	Earnscleugh	1.58	186	P	Pg	09 19 00.2	-0.3
ODZ	Otahua Downs	1.58	151	P	Pg	09 19 00.6	+0.1
INZ	Inchbonnie	1.67	56	P	Pg	09 19 02.2	+0.1
MLZ	Mavora Lakes	1.99	211	P	Pb	09 19 07.1	+0.2
LTZ	Lake Taylor	2.17	67	P	Pb	09 19 09.7	-0.2
DSZ	Denniston Nort	2.53	42	P	Pb	09 19 14.5	-1.7
TSZ	Takapari Road	5.98	55	P	Pn	09 20 00.4	+1.0
VRZ	Vera Road	5.99	43	P	Pn	09 19 59.9	+0.5

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*SKHL **09** 09:20:26.9±0.2, 43°.31N×146°.10E, h44^{km}±4^{km}, mb4.0/2*
*JMA **09** 09:20:26.8±0.2, 43°.28N×146°.16E, h45^{km}±1^{km}, M3.2*
ISC 09 09:20:25.2±3.1, **43°.30N**±0°.09×**146°.3E**±0°.2, **h33**^{km}±4^{km}, **n12**, σ**0^{s}.60**/20, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.43	279	P	Pn	09 20 35.5	+0.5
NEM2				*e*S	Sn	09 20 41.9	+0.3
NMR	Nemuro--Hokkai	0.44	279	*i* P	Pb	09 20 35.0	+0.2
NMR				*e*S	Sb	09 20 41.0	-0.4
GRPR	Tuman	0.80	330	*i* P	Pn	09 20 40.0	-0.1
GRPR				AMB	AMB	09 20 40.0	
	98nm,0.3s						
GRPR				*i* S	Sn	09 20 50.0	-0.8
GRPR				A	A	09 20 50.0	
	2µm,0.3s						
GRPR				A	A	09 20 50.0	
	727nm,0.3s						
YUK	Yuzh-Kuril'sk	0.81	336	*i* P	Pn	09 20 40.5	+0.3
YUK				AMB	AMB	09 20 42.0	
	54nm,0.2s						
YUK				*i* S	Sn	09 20 50.9	-0.1
YUK				A	A	09 20 52.0	
	873nm,0.2s						
YUK				A	A	09 20 52.0	
	557nm,0.2s						
JKHN	Kushirohamanak	0.88	256	P	Pn	09 20 41.4	+0.2
JKHN				*e*S	Sn	09 20 52.3	-0.4
JNSB	Nemuroshibetsu	1.07	297	P	Pn	09 20 44.1	+0.3
JRA	Rausu	1.08	307	P	Pn	09 20 44.6	+0.7
JNK	Nakash	1.20	284	P	Pn	09 20 45.6	-0.1
JNK				*e*S	Sn	09 20 59.7	-1.1
JAK	Akkeshi	1.23	256	P	Pn	09 20 45.8	-0.2
JAR	Ashorobuto	1.86	271	P	Pn	09 20 55.4	+0.6
JAR				*e*S	Sn	09 21 17.2	+0.1
JOB	Onbets	1.86	259	P	Pn	09 20 55.1	+0.3
JOB				*e*S	Sn	09 21 16.6	-0.5
JTKR	Abashiri--Toko	1.88	292	P	Pn	09 20 56.2	+1.3

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*IDC **09** 09:34:21.3±6.1, 7°.14S×155°.01E, h52^{km}±53^{km}, mb3.9/9, mb1 4.2/10, mb1mx3.8/33, mbtmp4.2/10, ML2.2/1, MS3.3/8, Ms1 3.3/8, ms1mx3.1/28, Error ellipse: s-maj=34.4km s-min=24.8km az=107.0*
*NEIC **09** 09:34:24.5±2.0, 7°.10S±0°.10×154°.8E±0°.1, h78^{km}±8^{km}, mb4.3/11, Error ellipse: s-maj=19.9km s-min=5.1km az=47.0*
ISC 09 09:34:20.6±0.7, **7°.18S**±0°.08×**155°.06E**±0°.10, **h41**^{km}, **n31**, σ**1^{s}.18**/28, **mb4.3**/16, **MS3.1**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.14	316	Pn	Pn	09 35 23.3	+2.0
RABL				Sn	Sn	09 36 08.1	-0.4
HNR	Honiara	5.33	115	LR	LR	09 37 59.4	
	comp=Z,322nm,19.2s,baz=264,slow=40						
PMG	Port Moresby	8.13	254	P	Pn	09 36 16.6	+0.5
	1.9nm,0.3s,baz=241,slow=11,SNR=1.5						
PMG				S	Sn	09 37 47.7	+0.9
	1.4nm,0.3s,baz=306,slow=20,SNR=5.0						
PMG				LR	LR	09 39 08.0	
	comp=Z,132nm,19.9s,baz=142,slow=35						
PMG	Port Moresby	8.13	254		Pn	09 36 15.8	-0.3
MANU	Manus Island	9.21	303	Pn	Pn	09 36 31.2	+0.3
JAY	Jayapura	15.03	287	LR	LR	09 44 12.6	
	comp=Z,108nm,19.2s,baz=162,slow=40						
CTA	Charters Tower	15.42	213	P	P	09 37 58.9	-0.5
	0.1nm,0.3s,baz=30,slow=14,SNR=3.8						
DZM	Mont Dzumac	18.43	145	LR	LR	09 44 59.7	
	comp=Z,113nm,19.1s,baz=207,slow=34						
GUMO	Guam	22.98	334	LR	LR	09 47 06.0	
	comp=Z,38nm,19.9s,baz=154,slow=33						
WR0	Warramunga Arr	23.61	235	P	P	09 39 26.7	-1.3
WR0				IAmb	IAmb	09 39 50.1	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	23.64	236	P	P	09 39 27.6	-0.8
WB0				IAmb	IAmb	09 39 50.5	
	comp=Z,20nm,1.5s						
WRAB	Tennant Creek	23.75	236	P	P	09 39 28.8	-0.7
WRAB				IAmb	IAmb	09 39 55.7	
	comp=Z,9.1nm,1.1s						
WB2	Warramunga Arr	23.76	236	P	P	09 39 28.9	-0.5
WB2				IAmb	IAmb	09 39 29.6	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	23.77	236	P	P	09 39 27.5	-2.0
	comp=Z,4.5nm,0.9s,baz=60,slow=9.7,SNR=11						
SIJI	Sorong	24.54	284	LR	LR	09 51 27.6	
	comp=Z,38nm,18.3s,baz=154,slow=42						
AS31	Alice Springs	26.10	229	P	P	09 39 50.0	-0.8
ASAR	Alice Springs	26.10	229	P	P	09 39 49.6	-1.2
	comp=Z,2.1nm,0.8s,baz=62,slow=9.3,SNR=18						
ASAR				LR	LR	09 50 15.9	
	comp=Z,78nm,19.1s,baz=332,slow=37						
STKA	Stephens Creek	27.60	205	P	P	09 40 05.5	+1.4
	comp=Z,5.8nm,0.7s,baz=20,slow=13,SNR=10						
STKA				LR	LR	09 51 34.6	
	comp=Z,82nm,18.0s,baz=26,slow=37						
STKA	Stephens Creek	27.60	205	P	P	09 40 05.9	+1.8
CMAR	Chiang Mai Arr	60.92	296	P	P	09 44 30.1	+0.3
	comp=Z,3.9nm,0.9s,baz=108,slow=5.1,SNR=9.0						
SONM	Songino Array	69.52	327	P	P	09 45 24.3	-0.9
	comp=Z,1.7nm,0.8s,baz=137,slow=6.4,SNR=8.4						
QSPA	South Pole Qui	82.80	180	P	P	09 46 41.9	+1.5
QSPA				IAmb	IAmb	09 46 57.9	
	comp=Z,5.7nm,1.2s						
GLB	Gilahina Butte	83.03	25	P	P	09 46 42.0	+0.5
IL31		83.52	21	P	P	09 46 42.1	-1.7
IL31				IAmb	IAmb	09 47 08.5	
	comp=Z,3.6nm,1.2s						
ILAR	Eielson Array	83.52	21	P	P	09 46 42.2	-1.6
	comp=Z,2.2nm,0.9s,baz=257,slow=5.2,SNR=16						
MKAR	Makanchi Array	83.58	319	P	P	09 46 44.6	-0.1
	comp=Z,0.4nm,0.7s,baz=33,slow=12,SNR=2.4						
K27K	Chicken	84.96	23	P	P	09 46 51.2	0.0
K27K				IAmb	IAmb	09 46 53.9	
	comp=Z,3.8nm,0.8s						
HYT	Haines Junctio	85.51	27	P	P	09 46 54.6	+0.5
NVAR	Mina Array Bea	91.78	52	P	P	09 47 25.4	+0.7
	comp=Z,1.0nm,0.9s,baz=254,slow=7.0,SNR=6.2						
YKA	Yellowknife Ar	96.47	28	P	P	09 47 44.8	-0.5
	comp=Z,1.7nm,1.1s,baz=269,slow=4.6,SNR=11						
TORD	Torodi Ar. Bea	153.13	285	PKPbc	PKPbc	09 54 12.7	-2.2
	comp=Z,1.0nm,0.6s,baz=63,slow=2.0,SNR=6.0						

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*IDC **09** 09:44:02.0±3.6, 53°.69N×90°.72E, h0^{km}, mb1 2.9/3, mb1mx2.9/36, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=34.6km s-min=24.6km az=30.0*
*NNC **09** 09:44:03.8±6.5, 53°.52N×90°.54E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=56.0km s-min=43.1km az=14.0, Suspected Mining explosion.*
ISC 09 09:44:02.9±4.1, **53°.7N**±0°.2×**90°.6E**±0°.2, **h0**^{km}, **n8**, σ**1^{s}.03**/10, **3C-5D**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.41	276	*i*		10 09 50.6	
	baz=87,slow=330,SNR=1.2						
ZAA0	Zalesovo Array	3.41	276	⇓Pg	Pb	09 45 02.4	-1.8
	1.0nm,0.8s						
ZAA0				⇓Lg	Lg	09 45 53.7	
	2.9nm,0.8s						
ZALV	Zalesovo Beam	3.41	276	Pn	Pn	09 44 58.3	+1.0
	0.3nm,0.3s,baz=96,slow=17,SNR=1.9						
ZALV				Pg	Pb	09 45 03.6	-0.5
	0.6nm,0.3s,baz=99,slow=16,SNR=6.4						
ZALV				Lg	Lg	09 45 52.0	
	1.8nm,0.3s,baz=92,slow=19,SNR=12						
KURK	Kurchatov	7.93	252	⇑Pn	Pn	09 46 00.6	+1.3
	1.2nm,0.9s						
KURK				⇑Sn	Sn	09 47 29.8	+0.2
	2.0nm,0.6s						
KURK				⇓Lg	Lg	09 48 14.4	
	9.5nm,0.9s						
KURBB	Kurchatov Arra	8.02	252	Pn	Pn	09 46 00.8	+0.2
	0.1nm,0.3s,baz=67,slow=15,SNR=4.2						
KURBB				Sn	Sn	09 47 32.4	+0.4
	0.0nm,0.3s,baz=86,slow=13,SNR=1.4						
KURBB				Lg	Lg	09 48 18.7	
	0.1nm,0.3s,baz=74,slow=32,SNR=6.0						
KURBB	Kurchatov Arra	8.02	252	⇑Pn	Pn	09 46 01.6	+1.0
	0.5nm,0.4s,baz=66,slow=14						
KURBB				⇓Sn	Sn	09 47 31.9	0.0
	8.4nm,0.7s						
KURBB				⇓Lg	Lg	09 48 19.4	
	6.2nm,0.6s,baz=68,slow=34						
MKAR	Makanchi Array	8.72	221	Pn	Pn	09 46 10.5	+0.2
	0.1nm,0.3s,baz=39,slow=12,SNR=8.6						
MKAR				Lg	Lg	09 48 36.9	
	0.0nm,0.3s,baz=84,slow=12,SNR=1.5						
SONM	Songino Array	11.62	114	Lg	Lg	09 50 06.0	
	0.1nm,0.3s,baz=300,slow=24,SNR=7.4						

IDC ***09*** *09:54:03.4±2.5, 53°.75N×86°.93E, h0^{km}, mb1 3.1/2, mb1mx2.9/43, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=22.9km s-min=13.1km az=70.0*

NNC ***09*** *09:54:05.4±5.7, 53°.65N×86°.78E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=68.2km s-min=27.7km az=30.0, Suspected Mining explosion.*

ISC 09 09:54:03.9±4.6**, 53°.8N**±0°.2×**86°.9E**±0°.2**, h0^{km}, n7, σ1^{s}55**/8**, 3C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.23	279	*i*		10 03 00.0	
	baz=96,slow=327,SNR=3.0						
ZAA0	Zalesovo Array	1.23	279	⇑P	Pb	09 54 27.5	-0.6
	0.2nm,0.2s						
ZAA0				⇓S	Sb	09 54 44.6	+0.1
	6.0nm,1.1s						
ZALV	Zalesovo Beam	1.23	279	Pg	Pg	09 54 26.6	-0.9
	1.5nm,0.3s,baz=101,slow=16,SNR=29						
ZALV				Lg	Lg	09 54 43.8	
	1.4nm,0.3s,baz=101,slow=30,SNR=17						
KURK	Kurchatov	5.92	242	⇓Pn	Pn	09 55 35.6	+2.8
	2.4nm,1.1s						
KURK				⇑Lg	Lg	09 57 07.7	
	2.0nm,0.8s						
KURBB	Kurchatov Arra	6.02	242	Pn	Pn	09 55 35.4	+1.2
	0.1nm,0.3s,baz=59,slow=14,SNR=7.1						
KURBB				Lg	Lg	09 57 14.2	
	0.0nm,0.3s,baz=59,slow=31,SNR=5.2						
KURBB	Kurchatov Arra	6.02	242	⇑Pn	Pn	09 55 35.2	+1.0
	1.2nm,0.5s,baz=61,slow=14						
KURBB				⇓Lg	Lg	09 57 11.5	
	1.9nm,0.7s,baz=63,slow=31						
MKAR	Makanchi Array	7.58	205	Pn	Pn	09 55 55.9	+0.3
	0.2nm,0.3s,baz=25,slow=13,SNR=11						
MKAR				Sn	Sn	09 57 21.3	-0.8
	0.1nm,0.3s,baz=24,slow=25,SNR=2.7						
MKAR				Lg	Lg	09 58 02.7	
	0.0nm,0.3s,baz=29,slow=30,SNR=2.6						

SOME ***09*** *09:58:13.5, 43°.77N×69°.63E*

KRNET ***09*** *09:58:16.0±0.1, 43°.49N×69°.44E, mb3.0*

NNC ***09*** *09:58:16.6±1.8, 43°.65N×69°.77E, h0^{km}, mb3.8, mpv3.3, Error ellipse: s-maj=10.9km s-min=5.5km az=129.0, Suspected Mining explosion.*

ISC 09 09:58:19.3±2.2**, 43°.50N**±0°.07×**69°.72E**±0°.10**, h0^{km}, n17, σ1^{s}98**/26**, 13C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	0.70	124	⇓P	Pg	09 58 30.6	-2.0
	1.5nm,0.3s,baz=311,slow=19,SNR=81						
KK31				⇑S	Sg	09 58 42.4	+0.7
	10nm,0.5s,baz=317,slow=31,SNR=74						
IUG	Iuzhnay	1.37	170	P	Pb	09 58 44.8	-1.0
	20nm,0.2s						
IUG				S	Sn	09 59 06.8	+2.2
	64nm,0.3s						
TRKS	Terek-Say	2.23	151	⇑*i*P	Pn	09 58 58.2	+0.6
	baz=47						
TRKS				⇑*i*S	Sb	09 59 28.7	+0.1
	baz=47						
MNAS	Manas	2.28	115	⇑*e*P	Pn	09 58 58.8	+0.5
	baz=13						
MNAS				⇑*i*S	Sb	09 59 30.5	+0.4
	baz=13						
MRKS	Merke	2.67	105	Pg	Pb	09 59 05.9	-2.1
	3.3nm,0.2s						
MRKS				Lg	Lg	09 59 44.5	
	14nm,0.4s						
EKS2	Erkin-Say	3.09	104	⇑*e*P	Pn	09 59 10.8	+1.4
	baz=3.0						
EKS2				⇑*i*S	Sn	09 59 49.9	+2.9
	baz=3.0						
AML	Almayashu	3.23	114	⇓*i*P	Pn	09 59 12.2	+0.7
	baz=12						
AML				⇓*i*S	Sn	09 59 52.5	+1.7
	baz=12						
ARSB	Arslanbob	3.25	131	⇓*i*P	Pn	09 59 12.1	+0.5
	baz=28						
ARSB				⇓*i*S	Sn	09 59 52.5	+1.5
	baz=28						
BTLS	Baital	3.47	62	Pg	Pb	09 59 20.6	-1.0
	11nm,0.3s						
BTLS				Lg	Lg	10 00 09.1	
	4.1nm,0.9s						
USP	Ospenovka	3.49	92	⇑*e*P	Pn	09 59 16.1	+1.2
	baz=92						
USP				⇑*i*S	Sn	10 00 00.2	+3.3
	baz=92						
SGDS	Sogindy	3.57	89	Pg	Pb	09 59 19.7	-3.6
	3.5nm,0.3s						
SGDS				Lg	Lg	10 00 07.4	
	7.3nm,0.2s						
AAK	Ala-Archa	3.60	102	⇑Pg	Pb	09 59 20.1	-3.8
	3.2nm,0.5s						
AAK				⇓Lg	Lg	10 00 11.9	
	5.3nm,0.5s						
ARLS	Aral	3.77	114	⇑*i*P	Pn	09 59 19.7	+1.0
	baz=13						
ARLS				⇑*i*S	Sn	10 00 06.5	+2.7
	baz=13						
TKM2	Tokmak 2	4.33	96	⇑Pg	Pb	09 59 33.9	-2.5
	1.8nm,0.6s						
TKM2				⇓Lg	Lg	10 00 32.9	
	2.8nm,0.4s						
DGS	Degeres	4.42	91	Pg	Pb	09 59 36.5	-1.3
	3.3nm,0.3s						
DGS				Lg	Lg	10 00 37.4	
	7.7nm,0.6s						
KST	Kastek	4.58	94	Pg	Pb	09 59 39.8	-0.8
	6.7nm,0.5s						
KST				Lg	Lg	10 00 42.7	
	8.3nm,0.4s						
KTBS	Karatobe	5.06	85	Pg	Pb	09 59 47.6	-1.1
	2.6nm,0.4s						
KTBS				Lg	Lg	10 00 56.1	
	10.0nm,0.7s						

WEL 09 09:59:02.3, 43°S±1°×**17°1E**±°**, h11^{km}**±2^{km}**, M3.5**/9**, ML3.7**/9**, MLv3.5**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=117.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INZ	Inchbonnie	0.35	21	P	Pb	09 59 10.2	-0.3
INZ				S	Sg	09 59 14.6	+0.9
WVZ	Waitaha Valley	0.40	266	P	Pb	09 59 11.5	+0.1
WVZ				S	Sb	09 59 16.5	-1.0
MHCZ	Mount Hutt	0.53	156	P	Pb	09 59 14.0	+0.4
MHCZ				S	Sb	09 59 21.2	-0.1
OXZ	Oxford	0.62	117	P	Pb	09 59 15.7	+0.5
OXZ				S	Sb	09 59 24.5	+0.5
RPZ	Rata Peaks	0.69	194	P	Pb	09 59 16.8	+0.5
RPZ				S	Sb	09 59 26.4	+0.5
GCSZ	Gaunt Creek Bo	0.74	249	P	Pb	09 59 17.6	+0.3
LTZ	Lake Taylor	0.78	70	P	Pn	09 59 18.7	-0.6
LTZ				S	Sb	09 59 29.3	+0.8
ARCZ	Arundel	0.90	185	P	Pn	09 59 20.8	-0.2
ARCZ				S	Sn	09 59 33.1	-1.0
RACZ	Rakaia	0.93	137	P	Pn	09 59 21.6	+0.4
WACZ	Wakanui South	0.98	156	P	Pn	09 59 22.7	+0.6
WACZ				S	Sn	09 59 36.8	+0.8
AMCZ	Amberley	1.01	98	P	Pn	09 59 23.7	+1.2
AMCZ				S	Sn	09 59 38.4	+1.7
MQZ	McQueen’s Vall	1.20	124	P	Pg	09 59 25.6	+0.3
MQZ				S	Sn	09 59 41.5	+0.2
GVZ	Greta Valley S	1.29	87	P	Pg	09 59 27.3	+0.2
GVZ				S	Sg	09 59 46.1	+2.3
TMZ	Timaru	1.35	188	P	Pg	09 59 28.2	0.0
DSZ	Denniston Nort	1.36	17	P	Pg	09 59 28.2	-0.1
DSZ				S	Sg	09 59 46.9	+0.9
AKCZ	Akaroa Harbour	1.45	125	P	Pb	09 59 29.1	-0.2
OKCZ	Okains Bay	1.46	118	P	Pb	09 59 29.6	0.0
LBZ	Lake Benmore	1.55	210	P	Pb	09 59 31.2	+0.1
THZ	Tophouse	1.76	44	P	Pb	09 59 34.3	-0.3
KHZ	Kahutara	1.78	70	P	Pb	09 59 34.1	-0.9
ODZ	Otahua Downs	2.05	193	P	Pn	09 59 37.5	+0.8
JCZ	Jackson Bay	2.08	240	P	Pb	09 59 38.8	-1.4
BSWZ	Blackbirch Sta	2.34	56	P	Pb	09 59 43.5	-1.0
NNZ	Nelson	2.41	41	P	Pn	09 59 43.4	+1.8
QRZ	Quartz Range	2.41	23	P	Pn	09 59 43.3	+1.6
WKZ	Wanaka	2.41	222	P	Pn	09 59 42.3	+0.5
TUWZ	Tuamarina	2.56	52	P	Pb	09 59 46.3	-1.9
EAZ	Earnscleugh	2.60	212	P	Pn	09 59 44.5	+0.2
HHSZ	Highcliff Hill	2.88	190	P	Pn	09 59 48.8	+0.6
TCW	Tory Channel	2.89	52	P	Pn	09 59 50.3	+2.0
MSZ	Milford Sound	2.92	235	P	Pn	09 59 49.8	+1.2
DUWZ	D’Urville Isla	2.99	42	P	Pn	09 59 52.3	+2.6
TUZ	Tuapeka	3.13	202	P	Pn	09 59 52.7	+1.0
TUZ				P	Pb	09 59 52.8	-5.2
MLZ	Mavora Lakes	3.25	223	P	Pn	09 59 53.8	+0.6
MSWZ	Moikau Station	3.37	62	P	Pn	09 59 56.0	+1.1
CAW	Cannon Point	3.42	57	P	Pn	09 59 56.2	+0.6
KIW	Kapiti Island	3.48	52	P	Pn	09 59 57.7	+1.3
OGWZ	Otaki Gorge	3.66	54	P	Pn	09 59 59.6	+0.7
MTW	Mount Morrison	3.67	60	P	Pn	09 59 59.0	0.0
WHZ	Wether Hill Ro	3.71	219	P	Pn	09 59 59.3	-0.3
SYZ	Scrubby Hill	3.81	203	P	Pn	10 00 01.3	+0.5
MRZ	Mangatainoka R	4.00	55	P	Pn	10 00 03.7	+0.2
NMEZ	Namu Road	4.13	29	P	Pn	10 00 08.5	+3.2
NBEZ	Newall Road No	4.25	28	P	Pn	10 00 10.4	+3.4
KHEZ	Kahui Hut	4.28	30	P	Pn	10 00 10.3	+2.8
LREZ	Lake Rotokare	4.29	34	P	Pn	10 00 12.2	+4.7
PREZ	Palmer Road	4.29	31	P	Pn	10 00 10.8	+3.2
WAZ	Wanganui	4.31	42	P	Pn	10 00 11.6	+3.8
NEZ	North Egmont	4.33	30	P	Pn	10 00 11.2	+2.9
PKE	Pukeiti	4.36	29	P	Pn	10 00 11.4	+2.9
DREZ	Durham Road	4.44	31	P	Pn	10 00 12.8	+3.1
APZ	The Paps	4.45	211	P	Pn	10 00 09.3	-0.4
TSZ	Takapari Road	4.61	51	P	Pn	10 00 12.3	+0.3
VRZ	Vera Road	4.72	35	P	Pn	10 00 16.7	+3.2
PNHZ	Pukenui	4.84	51	P	Pb	10 00 22.9	-4.3
WNVZ	Wahianoa	4.94	43	P	Pn	10 00 21.6	+4.9
NGZ	Ngauruhoe	5.06	42	P	Pn	10 00 23.2	+4.9
OTVZ	Oturere	5.10	42	P	Pn	10 00 20.3	+1.4
WTVZ	West Tongariro	5.10	41	P	Pn	10 00 23.7	+4.8
TMVZ	Te Maari	5.16	42	P	Pb	10 00 27.3	-5.4
HIZ	Hauiti	5.28	32	P	Pn	10 00 23.3	+2.1
BKZ	Black Stump Fm	5.53	47	P	Pn	10 00 28.6	+4.0
TOZ	Tahuroa Road	6.21	33	P	Pn	10 00 35.8	+1.9
AWAZ	Awhitu Peninsu	6.51	24	P	Pn	10 00 40.7	+2.6
WTAZ	Waiatarua	6.61	24	P	Pn	10 00 42.5	+3.0
WIAZ	Waiheke Island	6.91	27	P	Pn	10 00 46.5	+2.9

BYKL 09 10:05:07.7±0.3**, 56°.16N**×**113°.77E, h7^{km}**±5^{km}**, 1C-2D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.13	250	⇓*i*Pg	Pg	10 05 09.6	-0.8
SVKR				*e*Sg	Sg	10 05 11.6	-0.7
SVKR				Pmax			
	3µm,0.2s						
SVKR				Smax			
	10µm,0.6s						
UKT	Uakit	0.68	187	⇑*i*Pg	Pg	10 05 19.1	-1.6
UKT				*e*Sg	Sg	10 05 28.0	-1.5
UKT				Pmax			
	97nm,0.6s						
UKT				Smax			
	274nm,1.0s						
NLYR	Nelyaty	1.13	72	*e*Pg	Pg	10 05 27.9	-1.4
NLYR				*e*Pb	Pn	10 05 30.4	+0.5
NLYR				*e*Sg	Sg	10 05 43.6	-0.3
NLYR				*e*Sb	Sn	10 05 47.3	+1.6
NLYR				max			
	115nm,0.5s						
NLYR				max			
	809nm,0.9s						
YOA	Uoyan	1.15	269	*e*Pg	Pg	10 05 28.4	-1.2
YOA				*e*Sg	Sg	10 05 44.6	+0.1
YOA				*e*		10 05 48.9	
YOA				Pmax			
	150nm,0.5s						
YOA				max			
	625nm,0.5s						
KMO	Kumora	1.47	260	*e*Pg	Pn	10 05 34.1	-0.5
KMO				*e*Sg	Sb	10 05 54.3	+0.1
KMO				*e*Sb	Sg	10 05 56.8	+2.0
KMO				Pmax			
	99nm,0.4s						
KMO				max			
	477nm,1.0s						
BOD	Bodaibo	1.67	4	*e*Pg	Pn	10 05 37.7	+0.4
BOD				*e*Sg	Sb	10 06 00.0	+0.1
BOD				Pmax			
	62nm,0.5s						
BOD				Smax			
	148nm,1.0s						
YLYR	Ulyunkhan	1.96	230	⇓*i*Pg	Pn	10 05 42.5	+1.1
YLYR				*e*		10 05 45.1	
YLYR				*e*Sg	Sb	10 06 08.5	+0.1
YLYR				max			
	80nm,0.6s						
YLYR				Smax			
	330nm,1.1s						
NIZ	Nizh Angarsk	2.41	263	*e*	Pn	10 05 48.5	+1.0
NIZ				*e*Pg	Pb	10 05 50.6	-0.7
NIZ				*e*Sg	Sb	10 06 22.9	+1.7
NIZ				Pmax			
	28nm,0.5s						
NIZ				Smax			
	119nm,0.9s						
CRS	Chara	2.60	72	*e*Pn	Pn	10 05 50.6	+0.4
CRS				*e*Pg	Pb	10 05 54.8	+0.2
CRS				*e*Sg	Sb	10 06 28.9	+2.1
CRS				Pmax			
	124nm,0.8s						
CRS				Smax			
	131nm,0.8s						
SYVR	Suvo	3.32	223	*e*Pn	Pn	10 06 00.1	+0.1
SYVR				*e*Pg	Pb	10 06 06.7	-0.2
SYVR				*e*Sg	Sb	10 06 50.1	+2.7
SYVR				Pmax			
	30nm,1.0s						
SYVR				Smax			
	173nm,1.3s						
TUP	Tupik	3.94	114	*e*Pn	Pn	10 06 08.6	0.0
TUP				*e*Pg	Pb	10 06 18.9	+1.5
TUP				*e*Sg	Sg	10 07 11.1	-3.0
TUP				Pmax			
	17nm,0.5s						
TUP				Smax			
	94nm,0.9s						
OGRR	Ongureny	4.37	237	*e*Pn	Pn	10 06 14.1	-0.3
OGRR				*e*Pg	Pb	10 06 26.0	+1.3
OGRR				*e*Sg	Sg	10 07 23.1	-4.7
OGRR				Pmax			
	7.0nm,1.0s						
OGRR				Smax			
	52nm,1.3s						
YKLR	Yuktali	4.41	81	*e*Pg	Pb	10 06 25.7	+0.4
YKLR				*e*Sg	Sb	10 07 22.8	+4.2
KPC	Khapcheranga	6.52	188	*e*Pn	Pn	10 06 44.8	+0.7
KPC				*e*Pg	Pb	10 07 06.0	+4.6
KPC				*e*Sg	Sg	10 08 31.2	-5.7
KPC				Pmax			
	2.0nm,0.9s						
KPC				Smax			
	29nm,1.5s						

BYKL 09 10:05:34.0±1.8**, 56°.20N**×**113°.71E, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.12	225	*e*Pg	Pg	10 05 35.2	-1.0
SVKR				*e*Sg	Sg	10 05 37.3	-0.5
SVKR				Pmax			
	1µm,0.1s						
SVKR				Smax			
	6µm,0.6s						
UKT	Uakit	0.71	184	*e*Sg	Sg	10 05 56.1	-0.8
UKT				Smax			
	109nm,1.5s						
NLYR	Nelyaty	1.15	74	*e*Sg	Sg	10 06 09.8	-1.0
NLYR				*e*Sb	Sn	10 06 13.2	-0.6
NLYR				max			
	304nm,0.8s						
KMO	Kumora	1.44	258	*e*Sg	Sg	10 06 19.4	-0.9
KMO				*e*Sb	Sn	10 06 21.9	+0.9
KMO				max			
	266nm,0.8s						
YLYR	Ulyunkhan	1.96	229	*e*Sg	Sn	10 06 34.7	+0.8
YLYR				Smax			
	220nm,1.2s						

KRNET ***09*** *10:52:09.0±0.1, 41°.28N×70°.37E, h18^{km}, mb2.5*

SOME ***09*** *10:52:10.5, 40°.93N×70°.92E, h10^{km}*

NNC ***09*** *10:52:12.8±7.9, 40°.97N×71°.07E, h0^{km}, mb3.1, mpv3.2, Error ellipse: s-maj=59.2km s-min=31.6km az=8.0*

ISC 09 10:52:12.8±1.6**, 41°.06N**±0°.05×**70°.85E**±0°.04**, h1^{km}**±12^{km}**, n12, σ1^{s}92**/21**, 10C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.52	25	⇓*i*P	Pg	10 52 21.6	-1.2
	baz=73						
TRKS				⇓*i*S	Sg	10 52 29.2	-0.4
	baz=73						
BTK	Batken	1.00	181	⇑*i*P	Pn	10 52 32.6	-1.4
	baz=64						
BTK				⇑*i*S	Sn	10 52 49.8	+1.0
	baz=64						
TAS	Tashkent	1.20	283	⇑*e*P	Pb	10 52 24.5	-12
	baz=74						
TAS				⇑*e*S	Sb	10 52 35.3	-17
	baz=74						
IUG	Iuzhnay	1.25	331	*e*P	Pg	10 52 37.3	+0.5
	16nm,0.2s						
IUG				*e*S	Sn	10 52 57.6	+2.5
	79nm,0.3s						
IUG	Iuzhnay	1.25	331	P	Pg	10 52 37.3	+0.5
	31nm,0.1s						
IUG				S	Sn	10 52 57.7	+2.5
	77nm,0.2s						
ARSB	Arslanbob	1.63	80	⇑*i*P	Pg	10 52 44.5	+0.4
	baz=88						
ARSB				⇑*i*S	Sg	10 53 10.3	+5.0
	baz=88						
MNAS	Manas	1.89	40	⇑*e*P	Pn	10 52 45.1	-1.3
	baz=52						
MNAS				⇑*i*S	Sb	10 53 11.3	-1.2
	baz=52						
KK31	Karatay Array	2.06	353	Pn	Pb	10 52 50.3	-0.8
	0.7nm,0.3s,baz=161,slow=8.9,SNR=29						
KK31				⇓Sn	Sg	10 53 19.2	+0.2
	1.7nm,0.3s,baz=160,slow=24,SNR=13						
AML	Almayashu	2.39	62	⇑*i*P	Pb	10 52 54.8	-2.1
	baz=70						
AML				⇑*i*S	Sb	10 53 26.8	-0.2
	baz=70						
MRKS	Merke	2.45	46	*e*P	Pb	10 52 57.6	-0.1
	3.2nm,0.2s						
MRKS				*e*S	Sg	10 53 32.4	+0.9
	2.4nm,0.2s						
MRKS	Merke	2.45	46	Pg	Pb	10 52 57.6	-0.1
	3.2nm,0.2s						
MRKS				Lg	Lg	10 53 32.4	
	2.4nm,0.2s						
EKS2	Erkin-Say	2.71	53	⇓*i*P	Pn	10 52 58.5	+0.8
	baz=60						
EKS2				⇓*i*S	Sb	10 53 33.0	-3.1
	baz=60						

IDC ***09*** *10:51:56.0±15.0, 10°.74N×87°.65W, h0^{km}, mb3.2/4, mb1 3.7/4, mb1mx3.5/30, mbtmp3.3/4, Error ellipse: s-maj=311.3km s-min=117.4km az=5.0*

INET ***09*** *10:52:16.6, 12°.44N×87°.93W, h15^{km}, ML3.7*

UCR ***09*** *10:52:17.9±1.5, 12°.49N×87°.99W, h36^{km}±535^{km}, ML4.2, MW3.7*

SNET ***09*** *10:52:18.4±0.9, 12°.54N×88°.01W, h32^{km}±7^{km}, ML4.2*

ISC 09 10:52:16.0±1.2**, 12°.46N**±0°.05×**87°.96W**±0°.05**, h32^{km}**±10^{km}**, n46, σ1^{s}44**/65**, mb3.1**/4**, 4C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.82	9	*i* P	Pn	10 52 32.7	+1.1
CNCH	Conchagua	0.82	9	*i* P	Pn	10 52 32.7	+1.1
LCND	La Caada	0.85	5	*i* P	Pn	10 52 32.8	+1.0
LCND				*e*S	Sn	10 52 44.8	+1.6
LCND				IAML		10 52 48.2	
	comp=Z,13µm,0.3s						
LCND	La Caada	0.85	5	*i* P	Pn	10 52 32.8	+1.0
LCND				*e*S	Sn	10 52 44.8	+1.6
LCND				IAML		10 52 48.2	
	comp=Z,13µm,0.3s						
LCY	Lacayo	1.01	341	*e*P	Pb	10 52 35.4	+0.2
LCY	Lacayo	1.01	341	*e*P	Pb	10 52 35.4	+0.2
PACA	Pacayal	1.07	341	*e*P	Pb	10 52 36.4	+0.3
PACA				*e*S	Sn	10 52 50.4	+1.8
PACA	Pacayal	1.07	341	*e*P	Pb	10 52 36.4	+0.3
PACA				*e*S	Sn	10 52 50.4	+1.8
TECA	Tecapa	1.16	333	⇑*i*P	Pb	10 52 37.5	-0.2
TECA	Tecapa	1.16	333	⇑*i*P	Pb	10 52 37.5	-0.2
COEB	Comit de Eme	1.17	332	*e*P	Pb	10 52 37.5	-0.4
COEB				*e*S	Sb	10 52 52.1	-0.7
COEB	Comit de Eme	1.17	332	*e*P	Pb	10 52 37.5	-0.4
COEB				*e*S	Sb	10 52 52.1	-0.7
FAGO	Alcalda de S	1.24	353	*i* P	Pb	10 52 38.2	-0.7
FAGO				*e*S	Sb	10 52 54.3	-0.3
FAGO	Alcalda de S	1.24	353	*i* P	Pb	10 52 38.2	-0.7
FAGO				*e*S	Sb	10 52 54.3	-0.3
COEG	Centro de Oper	1.46	322	*e*P	Pn	10 52 41.4	+1.1
COEG				*e*S	Sn	10 52 59.3	+1.0
COEG				IAML		10 53 02.5	
	comp=Z,2µm,0.2s						
COEG	Centro de Oper	1.46	322	*e*P	Pn	10 52 41.4	+1.1
COEG				*e*S	Sn	10 52 59.3	+1.0
COEG				IAML		10 53 02.5	
	comp=Z,2µm,0.2s						
PAVA	Las Pavas	1.57	323	*i* P	Pb	10 52 43.5	-1.1
PAVA				*e*S	Sn	10 53 02.4	+1.3
PAVA	Las Pavas	1.57	323	*i* P	Pb	10 52 43.5	-1.1
PAVA				*e*S	Sn	10 53 02.4	+1.3
LBRS	Las Brisas	1.65	320	*i* P	Pb	10 52 44.7	-1.3
LBRS	Las Brisas	1.65	320	*i* P	Pb	10 52 44.7	-1.3
TGUH	Tegucigalpa,Un	1.73	23	⇑*i*P	Pn	10 52 45.0	+1.0
TGUH	Tegucigalpa,Un	1.73	23	⇑*i*P	Pn	10 52 45.0	+1.0
SNET	Serv Nac Est T	1.74	315	*e*P	Pn	10 52 45.6	+1.5
SNET				*e*S	Sn	10 53 05.8	+0.5
SNET	Serv Nac Est T	1.74	315	*e*P	Pn	10 52 45.6	+1.5
SNET				*e*S	Sn	10 53 05.8	+0.5
UEES	Universidad Ev	1.77	315	*e*P	Pn	10 52 45.6	+1.1
UEES				*e*S	Sn	10 53 07.5	+1.6
UEES	Universidad Ev	1.77	315	*e*P	Pn	10 52 45.6	+1.1
UEES				*e*S	Sn	10 53 07.5	+1.6
BOQS	Boqueron	1.81	315	*e*P	Pn	10 52 46.8	+1.6
BOQS	Boqueron	1.81	315	*e*P	Pn	10 52 46.8	+1.6
JAYA	Jayaque - finc	1.88	310	*e*P	Pn	10 52 47.2	+1.2
JAYA	Jayaque - finc	1.88	310	*e*P	Pn	10 52 47.2	+1.2
TACO	Tacachico	2.03	318	*e*P	Pn	10 52 49.6	+1.7
TACO				*e*S	Sn	10 53 13.6	+1.4
TACO	Tacachico	2.03	318	*e*P	Pn	10 52 49.6	+1.7
TACO				*e*S	Sn	10 53 13.6	+1.4
SBLS	San Blas	2.12	311	*e*P	Pn	10 52 51.7	+2.1
SBLS	San Blas	2.12	311	*e*P	Pn	10 52 51.7	+2.1
JTS	Las Juntas de	3.65	126	*e*P	Pb	10 53 18.6	-1.3
JTS				*e*S	Sb	10 54 05.3	+1.5
LAFE	Finca La Fe, P	3.99	131	*e*P	Pn	10 53 16.0	+1.1
JACO	JACO, Garabito	4.27	130	*e*P	Pn	10 53 21.1	+2.3
LCR2	La Lucha 2	4.73	124	*e*P	Pn	10 53 28.6	+3.3
RIMA	Rio Macho	4.83	123	*e*P	Pn	10 53 29.6	+2.9
DRK0	Durika	5.62	124	*e*P	Pn	10 53 39.5	+2.0
DRK0				*e*S	Sn	10 54 38.8	-2.3
RIOS	Rincon, Osa	5.75	130	*e*P	Pn	10 53 40.6	+1.5
PIRO	Carate, Puerto	6.08	131	*e*P	Pn	10 53 46.1	+2.5
TXAR	Lajitas Array	22.25	321	P	P	10 57 10.5	0.0
	comp=Z,0.9nm,0.7s,baz=141,slow=10,SNR=12						
PDAR	Pinedale Array	35.53	332	P	P	10 59 09.2	-1.2
	comp=Z,0.1nm,0.4s,baz=145,slow=8.5,SNR=4.1						
NVAR	Mina Array Bea	37.37	319	P	P	10 59 23.1	-3.0
	comp=Z,0.2nm,0.7s,baz=110,slow=7.8,SNR=2.5						
YKA	Yellowknife Ar	53.48	345	P	P	11 01 30.7	-2.3
	comp=Z,0.1nm,0.4s,baz=137,slow=7.8,SNR=4.0						

SOME ***09*** *10:58:54.9, 42°.27N×79°.57E, h10^{km}*

KRNET ***09*** *10:58:54.8±0.1, 42°.25N×79°.61E, h12^{km}, mb3.1*

NNC ***09*** *10:58:55.3±1.3, 42°.34N×79°.66E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=8.5km s-min=4.8km az=140.0*

ISC 09 10:58:55.9±1.4**, 42°.32N**±0°.06×**79°.68E**±0°.04**, h10^{km}, n55, σ1^{s}08**/99**, 18C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode baz=13	0.85	349	eP	Pg	10 59 12.3	-0.2
SHLS	baz=13			eS	Sb	10 59 25.4	+0.8
SHLS	Shalkode 47nm,0.1s	0.85	349	eP	Pg	10 59 12.3	-0.2
SHLS	59nm,0.2s			eS	Sb	10 59 25.3	+0.8
SHLS	Shalkode 45nm,0.1s	0.85	349	P	Pg	10 59 12.3	-0.2
SHLS	59nm,0.2s			S	Sb	10 59 25.6	+1.0
UZB	Uzynbulak baz=35	0.96	330	eP	Pg	10 59 13.4	-1.1
UZB	baz=35			eS	Sg	10 59 27.0	0.0
UZB	Uzynbulak 1.5nm,0.1s	0.96	330	eP	Pg	10 59 13.4	-1.1
UZB	15nm,0.1s			eS	Sg	10 59 27.0	0.0
UZB	Uzynbulak 1.5nm,0.1s	0.96	330	P	Pg	10 59 13.4	-1.1
UZB	15nm,0.1s			S	Sg	10 59 27.0	0.0
PRZ	Przheval'sk baz=86	0.96	280	⇑iP	Pg	10 59 12.4	-2.1
PRZ	baz=86			⇑iS	Sg	10 59 25.3	-1.8
PDGK	Podgornoye 1.8nm,0.4s	1.02	352	P	Pg	10 59 14.0	-1.6
PDGK	1.6nm,0.2s			S	Sg	10 59 27.8	-1.1
SATY	Saty baz=13	1.20	309	eP	Pn	10 59 17.8	-1.1
SATY	baz=13			eS	Sb	10 59 34.3	-0.1
SATY	Saty 3.4nm,0.1s	1.20	309	eP	Pn	10 59 17.8	-1.1
SATY	22nm,0.1s			eS	Sb	10 59 34.3	-0.1
SATY	Saty 3.4nm,0.1s	1.20	309	P	Pn	10 59 17.8	-1.1
SATY	22nm,0.1s			S	Sb	10 59 34.3	-0.1
KTMS	Ketmen 4.7nm,0.1s	1.23	23	eP	Pn	10 59 18.2	-1.1
KTMS	11nm,0.2s			eS	Sb	10 59 35.2	-0.1
KTMS	Ketmen 4.7nm,0.1s	1.23	23	P	Pn	10 59 18.2	-1.1
KTMS	9.5nm,0.1s			S	Sb	10 59 35.2	-0.1
ZHN	Zhinishke baz=17	1.25	313	eP	Pn	10 59 18.4	-1.3
ZHN	baz=17			eS	Sb	10 59 35.5	-0.5
ZHN	Zhinishke 2.7nm,0.1s	1.25	313	eP	Pn	10 59 18.4	-1.3
ZHN	7.1nm,0.2s			eS	Sb	10 59 35.5	-0.5
KPKS	Kokpek 6.8nm,0.1s	1.36	328	eP	Pn	10 59 20.3	-0.8
KPKS	50nm,0.3s			eS	Sn	10 59 39.0	-0.3
ANVS	Anan'yevo baz=91	1.56	288	⇑iP	Pn	10 59 23.8	-0.1
ANVS	baz=91			⇑iS	Sn	10 59 44.9	+0.6
KURS	Kuram baz=20	1.61	317	eP	Pb	10 59 25.5	-0.4
KURS	baz=20			eS	Sb	10 59 47.5	+1.2
KURS	Kuram 5.0nm,0.2s	1.61	317	eP	Pb	10 59 25.5	-0.4
KURS	9.1nm,0.3s			eS	Sb	10 59 47.5	+1.2
KDJ	Kajisay baz=67	1.87	265	⇓eP	Pn	10 59 28.0	-0.2
KDJ	baz=67			⇓iS	Sn	10 59 52.4	+0.5
DJR	Jarkent 5.9nm,0.1s	2.02	2	eP	Pb	10 59 32.8	+0.1
DJR	52nm,0.4s			eS	Sg	11 00 00.5	-0.2
DJR	Jarkent 5.9nm,0.1s	2.02	2	Pg	Pb	10 59 32.8	+0.1
DJR	52nm,0.4s			Lg	Lg	11 00 00.5	
KOTS	Kotyrbulak baz=99	2.10	297	eP	Pb	10 59 33.2	-1.0
KOTS	baz=99			eS	Sb	11 00 00.9	+0.4
KOTS	Kotyrbulak 24nm,0.2s	2.10	297	eP	Pb	10 59 33.2	-1.0
KOTS	12nm,0.3s			eS	Sb	11 00 01.0	+0.4
KOTS	Kotyrbulak 24nm,0.2s	2.10	297	Pg	Pb	10 59 33.2	-1.0
KOTS	12nm,0.3s			Lg	Lg	11 00 01.0	
MDOK	Medeo baz=97	2.12	294	eP	Pb	10 59 33.0	-1.5
MDOK	baz=97			eS	Sb	11 00 00.9	0.0
MDOK	Medeo 11nm,0.3s	2.12	294	eP	Pb	10 59 33.0	-1.5
MDOK	7.1nm,0.4s			eS	Sb	11 00 01.0	0.0
MDOK	Medeo 9.2nm,0.6s	2.12	294	⇑Pn	Pn	10 59 32.9	+1.3
MDOK	7.5nm,0.9s			Sn	Sn	10 59 59.6	+1.7
MDOK	Medeo 9.5nm,0.2s	2.12	294	Pg	Pb	10 59 33.0	-1.5
MDOK	6.6nm,0.2s			Lg	Lg	11 00 01.0	
TNSS	Tian-Shan baz=93	2.14	291	eP	Pb	10 59 33.8	-1.3
TNSS	baz=93			eS	Sb	11 00 02.5	+0.7
TNSS	Tian-Shan 9.5nm,0.2s	2.14	291	eP	Pb	10 59 33.8	-1.3
TNSS	6.2nm,0.3s			eS	Sb	11 00 02.5	+0.7
TNSS	Tian-Shan 9.5nm,0.2s	2.14	291	Pg	Pb	10 59 33.8	-1.3
TNSS	6.2nm,0.3s			Lg	Lg	11 00 02.5	
ARXS	Arharly 16nm,0.3s	2.33	325	eP	Pb	10 59 37.2	-0.9
ARXS	34nm,0.3s			eS	Sb	11 00 07.6	+0.7
ARXS	Arharly 8.9nm,0.2s	2.33	325	Pg	Pb	10 59 37.6	-0.4
ARXS	29nm,0.4s			Lg	Lg	11 00 08.7	
IZV	Izvestkoviy 9.7nm,0.2s	2.38	289	eP	Pb	10 59 37.6	-1.3
IZV	18nm,0.4s			eS	Sb	11 00 08.5	+0.1
CHKK	Chushkaly 4.2nm,0.2s	2.50	309	eP	Pb	10 59 40.3	-0.6
CHKK	28nm,0.4s			eS	Sb	11 00 13.2	+1.3
ULHL	Ulahol baz=71	2.56	270	⇑eP	Pn	10 59 38.9	+1.3
ULHL	baz=71			⇑iS	Sn	11 00 09.8	+0.9
KTBS	Karatobe 11nm,0.2s	2.60	303	eP	Pb	10 59 42.5	-0.2
KTBS	85nm,0.3s			eS	Sb	11 00 16.9	+2.1
KTBS	Karatobe 11nm,0.2s	2.60	303	Pg	Pb	10 59 42.5	-0.2
KTBS	85nm,0.3s			Lg	Lg	11 00 16.9	
BOOM	Boomskoye usch baz=76	2.78	275	⇓iP	Pn	10 59 41.3	+0.7
BOOM	baz=76			⇓iS	Sn	11 00 15.3	+1.0
KST	Kastek 5.4nm,0.3s	2.84	286	eP	Pb	10 59 46.4	-0.3
KST	14nm,0.4s			eS	Sb	11 00 23.5	+1.9
KST	Kastek 3.2nm,0.2s	2.84	286	Pg	Pb	10 59 46.7	-0.1
KST	14nm,0.4s			Lg	Lg	11 00 24.0	
KUU	Kurty 1.7nm,0.2s	2.91	304	eP	Pb	10 59 47.6	-0.3
KUU	18nm,0.2s			eS	Sb	11 00 25.6	+2.0
KAPS	Kapalarasan 1.2nm,0.3s	2.98	356	eP	Pb	10 59 48.9	-0.2
KAPS	12nm,0.4s			eS	Sb	11 00 28.0	+2.5
KAPS	Kapalarasan 1.0nm,0.2s	2.98	356	Pg	Pb	10 59 48.9	-0.2
KAPS	12nm,0.4s			Lg	Lg	11 00 28.0	
DGS	Degeres 4.5nm,0.3s	3.02	289	eP	Pb	10 59 49.1	-0.9
DGS	5.5nm,0.4s			eS	Sb	11 00 28.5	+1.6
DGS	Degeres 4.5nm,0.3s	3.02	289	Pg	Pb	10 59 49.1	-0.9
DGS	5.5nm,0.4s			Lg	Lg	11 00 27.7	
TKM2	Tokmak 2 baz=84	3.08	283	⇓iP	Pn	10 59 46.6	+1.8
TKM2	baz=84			⇓iS	Sn	11 00 24.1	+2.4
TKM2	Tokmak 2 0.8nm,0.3s	3.08	283	⇓Pn	Pn	10 59 47.1	+2.4
TKM2	2.3nm,0.3s			⇑Lg	Lg	11 00 29.1	
KBK	Karagaybulak baz=78	3.52	277	⇑eP	Pn	10 59 52.6	+1.8
KBK	baz=78			⇑iS	Sn	11 00 34.5	+1.9
UCH	Uchtor baz=71	3.84	270	⇓eP	Pn	10 59 56.7	+1.2
UCH	baz=71			⇓eS	Sn	11 00 40.9	+0.1
AAK	Ala-Archa 1.1nm,0.4s	3.85	277	⇑Pg	Pb	11 00 04.6	+0.5
AAK	2.1nm,0.6s			⇑Lg	Lg	11 00 52.7	
ARLS	Aral baz=66	4.01	265	⇑iP	Pn	10 59 57.9	+0.3
ARLS	baz=66			⇑iS	Sn	11 00 45.2	+0.4
AML	Almayashu baz=70	4.45	270	⇑eP	Pn	11 00 05.0	+1.2
AML	baz=70			⇑eS	Sn	11 00 55.4	-0.5
MK31	Makanchi Array 0.1nm,0.3s,baz=194,slow=12,SNR=6.5	4.85	22	⇓Pn	Pn	11 00 09.7	+0.7
MK31	0.1nm,0.3s			⇑Sn	Sn	11 01 06.6	+1.4
MK31	0.5nm,0.5s,baz=194,slow=31			⇑Lg	Lg	11 01 24.0	

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*NOU **09** 11:03:08.8, 38°.06S×175°.81E, h254^{km}, MLv3.6, North Island, New Zealand*

WEL 09 11:03:12.5, 38°S±2°×**17°6E**±°**, h228**^{km}±4^{km}**, M2.7**/54**, MLv2.7**/54**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRZ	Kaimai	0.30	6	P	Pn	11 03 42.4	0.0
TLZ	Tolley Road	0.34	237	P	Pn	11 03 42.9	+0.4
HLRZ	Highlands Stat	0.37	107	P	Pn	11 03 42.6	+0.1
OMRZ	Omania	0.38	84	P	Pn	11 03 42.6	0.0
HRRZ	Handcock Road	0.39	129	P	Pn	11 03 42.7	+0.1
MKRZ	Makatiti	0.45	89	P	Pn	11 03 43.4	+0.6
TARZ	Mount Tarawera	0.49	101	P	Pn	11 03 43.0	+0.1
TGRZ	Tauranga	0.50	35	P	Pn	11 03 42.7	-0.2
TOZ	Tahuroa Road	0.52	323	P	Pn	11 03 43.1	+0.2
RRRZ	Republican Roa	0.52	112	P	Pn	11 03 42.8	-0.2
PRRZ	Plateau Road	0.53	133	P	Pn	11 03 42.9	0.0
PRRZ				S	S	11 04 05.8	-1.1
OPRZ	Ohinepanea	0.60	60	P	Pn	11 03 42.8	-0.4
MARZ	Manawahe	0.63	76	P	Pn	11 03 43.5	+0.1
EDRZ	Edgecumbe	0.66	87	P	Pn	11 03 43.3	-0.3
HATZ	Hinemaiaia	0.76	169	P	Pn	11 03 43.7	-0.2
HATZ				S	S	11 04 05.9	-2.7
MUGZ	Murupara	0.76	116	P	Pn	11 03 43.4	-0.4
MUGZ				S	S	11 04 07.1	-1.4
MRHZ	Matea Rd	0.80	150	P	Pn	11 03 43.9	-0.3
MRHZ				S	S	11 04 06.6	-2.4
KATZ	Kakaramea	0.84	191	P	Pn	11 03 44.5	0.0
HIZ	Hauiti	0.90	245	P	Pn	11 03 44.8	+0.2
URZ	Urewera	0.96	97	P	Pn	11 03 44.1	-0.8
URZ				S	S	11 04 07.9	-2.4
KRVZ	Karewarewa	0.97	192	P	Pn	11 03 45.2	0.0
RTZ	Ruatahuna	0.97	119	P	Pn	11 03 44.8	-0.3
RTZ				S	S	11 04 09.2	-1.4
TMVZ	Te Maari	0.98	189	P	Pn	11 03 45.4	+0.2
TWVZ	Taurewa	0.99	201	P	Pn	11 03 45.2	0.0
WTVZ	West Tongariro	1.00	194	P	Pn	11 03 45.2	0.0
WTVZ				S	S	11 04 10.1	-1.0
ETVZ	East Tongariro	1.00	188	P	Pn	11 03 45.4	+0.1
MTHZ	Maungataniwha	1.02	134	P	Pn	11 03 45.3	0.0
MTHZ				S	S	11 04 09.3	-1.8
OTVZ	Oturere	1.03	190	P	Pn	11 03 45.5	-0.1
OTVZ				S	S	11 04 10.1	-1.4
NGZ	Ngauruhoe	1.06	193	P	Pn	11 03 45.7	0.0
BKZ	Black Stump Fm	1.12	156	P	Pn	11 03 45.9	-0.1
BKZ				S	S	11 04 10.1	-2.1
TUVZ	Tukino	1.14	190	P	Pn	11 03 46.2	0.0
FWVZ	Far West T-bar	1.14	194	P	Pn	11 03 46.3	0.0
TRVZ	Turoa	1.19	193	P	Pn	11 03 46.6	-0.1
NMHZ	Naumai	1.19	144	P	Pn	11 03 47.4	+1.0
NMHZ				S	S	11 04 13.3	+0.2
WNVZ	Wahianoa	1.21	191	P	Pn	11 03 46.5	-0.1
RAHZ	Arahi	1.21	130	P	Pn	11 03 47.0	+0.5
RAHZ				S	S	11 04 12.6	-0.6
PKVZ	Pokaka	1.22	201	P	Pn	11 03 46.3	-0.4
RAGZ	Rawiri	1.24	107	P	Pn	11 03 46.7	-0.1
RAGZ				S	S	11 04 12.5	-1.2
MOVZ	Moawhango	1.27	185	P	Pn	11 03 46.5	-0.5
MOVZ				S	S	11 04 11.7	-2.5
MTVZ	Mangateitei	1.28	195	P	Pn	11 03 47.0	-0.1
MWZ	Matawai	1.30	99	P	Pn	11 03 46.9	-0.3
MWZ				S	S	11 04 12.5	-1.8
SNGZ	Shannon Statio	1.30	120	P	Pn	11 03 47.4	+0.3
SNGZ				S	S	11 04 13.0	-1.3
VRZ	Vera Road	1.32	222	P	Pn	11 03 47.5	+0.2
KWHZ	Kaweka Forest	1.34	162	P	Pn	11 03 47.9	+0.4
BHHZ	Black Hill Sta	1.35	175	P	Pn	11 03 47.3	-0.3
WHHZ	Waihua	1.40	132	P	Pn	11 03 48.4	+0.5
KUZ	Kuaotunu	1.40	354	P	Pn	11 03 47.6	-0.4
ARHZ	Aropaoanui	1.41	143	P	Pn	11 03 48.6	+0.6
RUGZ	Raukumara Rang	1.42	83	P	Pn	11 03 46.7	-1.5
MCHZ	McNeill Hill	1.44	155	P	Pn	11 03 49.0	+0.8
WIAZ	Waiheke Island	1.48	335	P	Pn	11 03 48.6	0.0
HAZ	Te Kaha	1.54	76	P	Pn	11 03 47.6	-1.4
KRHZ	Kereru	1.54	166	P	Pn	11 03 49.1	+0.1
TKGZ	Te Karaka	1.56	101	P	Pn	11 03 49.2	0.0
RIGZ	Rimuhau	1.57	112	P	Pn	11 03 49.5	+0.3
TWGZ	Tauwhareparae	1.64	92	P	Pn	11 03 50.0	+0.1
KNZ	Kokohu	1.64	123	P	Pn	11 03 50.0	+0.2
DREZ	Durham Road	1.69	231	P	Pn	11 03 50.5	+0.2
PKGZ	Pakihiroa	1.74	82	P	Pn	11 03 50.4	-0.4
PRGZ	Paritu Road	1.74	117	P	Pn	11 03 50.8	+0.1
LREZ	Lake Rotokare	1.76	221	P	Pn	11 03 51.1	+0.2
WAZ	Wanganui	1.76	204	P	Pn	11 03 50.7	-0.2
PNHZ	Pukenui	1.78	173	P	Pn	11 03 50.9	-0.3
NEZ	North Egmont	1.80	231	P	Pn	11 03 51.8	+0.4
PREZ	Palmer Road	1.81	228	P	Pn	11 03 51.7	+0.3
KAHZ	Kahuranaki	1.82	155	P	Pn	11 03 51.8	+0.4
PKE	Pukeiti	1.83	234	P	Pn	11 03 52.0	+0.4
CNGZ	Carnagh Statio	1.85	101	P	Pn	11 03 52.2	+0.5
PUZ	Puketiti	1.86	89	P	Pn	11 03 51.2	-0.6
MHGZ	Mahia Peninsul	1.87	123	P	Pn	11 03 52.1	+0.2
KHEZ	Kahui Hut	1.87	231	P	Pn	11 03 52.3	+0.4
TSZ	Takapari Road	1.91	179	P	Pn	11 03 51.9	-0.4
NBEZ	Newall Road No	1.95	234	P	Pn	11 03 52.9	+0.3
WPHZ	Waipukurau	1.96	168	P	Pn	11 03 52.7	-0.1
MXZ	Matakaoa Point	1.99	74	P	Pn	11 03 52.7	-0.4
WMGZ	Waiomatatini S	2.01	82	P	Pn	11 03 52.7	-0.6
PXZ	Pawanui	2.03	159	P	Pn	11 03 53.3	-0.1
OHWZ	Ohakea	2.11	192	P	Pn	11 03 54.2	+0.1
DVHZ	Dannevirke	2.16	175	P	Pn	11 03 53.9	-0.8
PRHZ	Porangahau	2.19	165	P	Pn	11 03 54.6	-0.4
POWZ	Post Office Ro	2.25	183	P	Pn	11 03 54.8	-0.7
ANWZ	Angora Road	2.36	169	P	Pn	11 03 56.3	-0.3
PRWZ	Pori Road	2.41	179	P	Pn	11 03 56.6	-0.6
MRZ	Mangatainoka R	2.53	186	P	Pn	11 03 57.3	-1.1
BFZ	Birch Farm	2.55	174	P	Pn	11 03 57.6	-1.0
TIWZ	Tintock	2.63	180	P	Pn	11 03 58.8	-0.8
OGWZ	Otaki Gorge	2.73	192	P	Pn	11 03 59.6	-0.9
HOWZ	Holdsworth Sta	2.77	186	P	Pn	11 03 59.6	-1.4
CPWZ	Castlepoint	2.77	175	P	Pn	11 04 00.7	-0.3
KIW	Kapiti Island	2.82	195	P	Pn	11 04 00.2	-1.4
TMWZ	Te Maipa	2.96	180	P	Pn	11 04 01.7	-1.4
MTW	Mount Morrison	3.03	186	P	Pn	11 04 02.1	-1.8
CAW	Cannon Point	3.03	192	P	Pn	11 04 02.4	-1.4
DUWZ	D'Urville Isla	3.06	209	P	Pn	11 04 02.5	-1.9
PAWZ	Paruwai Farm	3.25	186	P	Pn	11 04 04.8	-1.7
TRWZ	Traveller	3.25	183	P	Pn	11 04 04.9	-1.5
WEL	Wellington	3.25	195	P	Pn	11 04 04.8	-1.6
MSWZ	Moikau Station	3.31	188	P	Pn	11 04 05.1	-1.9
TCW	Tory Channel	3.31	202	P	Pn	11 04 05.4	-1.7
BHW	Baring Head	3.35	193	P	Pn	11 04 05.7	-1.9
PLWZ	Palliser	3.46	188	P	Pn	11 04 06.7	-2.1
TUWZ	Tuamarina	3.61	204	P	Pn	11 04 08.6	-1.9
NNZ	Nelson	3.63	212	P	Pn	11 04 08.4	-2.4
QRZ	Quartz Range	3.74	223	P	Pn	11 04 09.1	-3.0
BSWZ	Blackbirch Sta	3.89	203	P	Pn	11 04 12.2	-1.7
THZ	Tophouse	4.28	212	P	Pn	11 04 15.6	-3.1
KHZ	Kahutara	4.63	202	P	Pn	11 04 20.9	-2.0
DSZ	Denniston Nort	4.78	220	P	Pn	11 04 21.0	-3.8
GVZ	Greta Valley S	5.29	203	P	Pn	11 04 28.4	-2.7
LTZ	Lake Taylor	5.39	210	P	Pn	11 04 29.6	-2.9
INZ	Inchbonnie	5.70	215	P	Pn	11 04 33.5	-2.8
OXZ	Oxford	5.95	208	P	Pn	11 04 35.6	-3.8
OKCZ	Okains Bay	5.97	200	P	Pn	11 04 37.0	-2.7
AKCZ	Akaroa Harbour	6.15	201	P	Pn	11 04 38.9	-3.1
RACZ	Rakaia	6.26	206	P	Pn	11 04 39.7	-3.6
RPZ	Rata Peaks	6.66	212	P	Pn	11 04 44.9	-3.6
TMZ	Timaru	7.24	209	P	Pn	11 04 52.3	-3.5
ODZ	Otahua Downs	7.94	208	P	Pn	11 05 01.8	-2.9

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*ISK **09** 11:12:16.5, 38°.88N×43°.55E, h1^{km}, ML2.7/11*

*DDA **09** 11:12:17.4, 38°.91N×43°.47E, h7^{km}±4^{km}, ML2.4*

ISC 09 11:12:16.5±1.0**, 38°.86N**±0°.02×**43°.56E**±0°.03**, h17**^{km}±8^{km}**, n23, σ0^{s}.87**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.13	4	iP	Pb	11 12 20.5	-0.2
VMUR				iS	Sb	11 12 23.7	+0.3
ERCV	ERCIS-VAN	0.23	313	PG	Pg	11 12 22.0	-0.1
ERCV				SG	Sg	11 12 26.0	+0.1
VANB	Van	0.30	207	PG	Pn	11 12 25.2	-1.0
VANB				SG	Sn	11 12 31.5	-0.8
TVAN	Van	0.35	200	iP	Pb	11 12 25.1	+0.6
TVAN				iS	Sn	11 12 32.0	-1.7
TVAN	comp=N,1μm,0.3s			IAML		11 12 35.0	
OZAP	Van, Ozalp-Mer	0.39	120	iP	Pn	11 12 26.4	-1.2
OZAP				iS	Sn	11 12 34.6	-0.1
OZAP	comp=N,246nm,0.8s			IAML		11 12 35.0	
CLDR	Caldiran	0.40	44	PG	Pb	11 12 25.1	-0.1
CLDR				SG	Sb	11 12 31.6	+0.5
CLDR	Caldiran	0.40	44	iP	Pb	11 12 24.7	-0.5
CLDR				iS	Sb	11 12 31.8	+0.7
ADCV	BITLIS_Adilcev	0.66	266	iP	Pb	11 12 29.5	-0.1
ADCV	comp=E,341nm,0.6s			IAML		11 12 40.0	
ADCV				iS	Sn	11 12 40.1	-1.1
GEVA	Gevas	0.67	216	iP	Pb	11 12 29.8	-0.2
GEVA				iS	Sn	11 12 41.9	+0.2
GEVA	comp=E,113nm,0.7s			IAML		11 12 47.0	
AKDM	Akdamar-Van	0.70	221	PG	Pb	11 12 30.6	+0.2
AKDM				SG	Sn	11 12 42.0	-0.3
MLAZ	Malazgirt-MUS	0.84	290	PG	Pn	11 12 33.6	-0.1
MLAZ				SG	Sn	11 12 45.8	+0.1
AGRB	Hanur-Agry	0.84	328	PG	Pb	11 12 32.6	-0.2
BASK	Baskale_VAN	0.88	157	iP	Pn	11 12 34.6	+0.3
BASK				iS	Sn	11 12 50.1	+3.4
KOTA	Agri, Merkez-K	0.98	344	iP	Pb	11 12 35.1	-0.1
KOTA				iS	Sg	11 12 48.5	-0.1
PERV	Siirt/Pervari-	1.21	222	iP	Pg	11 12 41.5	+1.5
BLIS	Bitlis-Merkez	1.22	249	iP	Pn	11 12 38.7	-0.2
BLIS				iS	Sg	11 12 55.9	-0.1
BLIS	comp=N,84nm,0.6s			IAML		11 12 57.0	
TASB	TASBURUN-IGDIR	1.24	25	PN	Pg	11 12 41.5	+1.0
HAKT	HAKKARI	1.31	175	iP	Pg	11 12 41.0	-0.8
GNI	Garni	1.58	35	PN	Pg	11 12 46.6	-0.4
CUKT	Cukurca	1.61	179	PN	Pg	11 12 47.3	-0.3
SIRT	Sirnak	1.62	213	PN	Pg	11 12 47.5	-0.2
KOPR	Koprukoy-ERZUR	1.74	311	PN	Pb	11 12 48.8	+0.7
BNGB	Bingl	2.25	274	PN	Pb	11 12 56.5	-0.3

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*TAP **09** 11:35:06.9, 24°.84N×122°.20E, h10^{km}, ML3.1, C*

*JMA **09** 11:35:07.2, 24°.73N×122°.21E, h0^{km}, M2.3*

ISC 09 11:35:05.8±1.0**, 24°.87N**±0°.03×**122°.26E**±0°.02**, h11**^{km}±8^{km}**, n71, σ0^{s}.99**/126**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=310	0.28	299	⇑iP	Pb	11 35 12.8	-0.1
TWB1	baz=310			iS	Sb	11 35 16.4	-1.2
NTC	Toucheng baz=273	0.39	268	eP	Pb	11 35 14.5	-0.2
TIPB	Shuangxi baz=291	0.41	284	eP	Pb	11 35 15.0	-0.1
TIPB	baz=291			eS	Sg	11 35 19.8	+0.4
TWC	Suao baz=236	0.46	235	iP	Pg	11 35 14.7	-0.1
TWC	baz=236			iS	Sg	11 35 20.3	-0.5
NWF	Wu-fen Shan baz=300	0.48	295	eP	Pn	11 35 17.3	-1.4
NWF	baz=300			eS	Sb	11 35 23.7	+0.3
WFSB	Wu-fen Shan baz=300	0.48	295	P	Pn	11 35 17.4	-1.2
WFSB	baz=300			eS	Sb	11 35 23.1	-0.2
TWE	Neicheng baz=249	0.56	255	P	Pb	11 35 17.5	-0.1
TWE	baz=249			eS	Sg	11 35 24.4	+0.3
ENAH	Nanao baz=226	0.59	224	P	Pg	11 35 17.1	-0.2
ENAH	baz=226			S	Sg	11 35 24.3	-0.7
ENA	Nanau baz=216	0.65	227	P	Pg	11 35 18.2	-0.2
ENA	baz=216			S	Sg	11 35 25.4	-1.5
ENTT	Nioudou baz=252	0.67	250	eP	Pn	11 35 20.2	-1.1
ENTT	baz=252			eS	Sg	11 35 28.2	+0.5
NHDH	Xindian Distri baz=274	0.67	278	eP	Pn	11 35 21.1	-0.2
NHDH	baz=274			eS	Sb	11 35 29.9	+1.1
YM01	YM01 baz=297	0.68	294	P	Pn	11 35 21.0	-0.5
YM01	baz=297			S	Sn	11 35 30.4	-1.7
YM08	YM08 baz=301	0.69	298	eP	Pn	11 35 20.7	-0.8
YM08	baz=301			eS	Sn	11 35 30.3	-1.8
YM11	YM11 baz=299	0.69	295	eP	Pn	11 35 21.7	+0.2
NWLT	Wulai baz=258	0.69	262	eP	Pn	11 35 20.4	-1.2
NWLT	baz=258			eS	Sg	11 35 28.8	+0.4
YM05	YM05 baz=298	0.69	295	eP	Pn	11 35 20.8	-0.8
YM10	YM10 baz=297	0.69	294	eP	Pn	11 35 21.0	-0.6
YM10				eS	Sn	11 35 30.5	-1.9

	baz=297						
TATO	**Taipei**	**0.71**	**279**	P	**Pn**	**11 35 21.2**	**-0.5**
	baz=275						
TATO				eS	**Sn**	**11 35 31.3**	**-1.3**
	baz=275						
YM04	**YM04**	**0.71**	**293**	eP	**Pn**	**11 35 21.2**	**-0.7**
	baz=297						
TWY	**Chenhua**	**0.72**	**304**	eP	**Pn**	**11 35 21.5**	**-0.4**
	baz=307						
TWY				eS	**Sn**	**11 35 32.5**	**-0.4**
	baz=307						
NDT	**Datong Townshi**	**0.73**	**249**	eP	**Pn**	**11 35 21.1**	**-1.0**
	baz=251						
NDT				S	**Sg**	**11 35 29.5**	**-0.1**
	baz=251						
JYNG	**Yonagunijimaku**	**0.75**	**124**	P	**Pn**	**11 35 21.6**	**-0.7**
JYNG				S	**Sn**	**11 35 31.5**	**-2.1**
PCYT	**Pengchaiyu**	**0.78**	**347**	eP	**Pn**	**11 35 22.0**	**-0.7**
	baz=349						
YOJ	**Yonaguni jima**	**0.80**	**121**	P	**Pn**	**11 35 22.4**	**-0.5**
YOJ				S	**Sn**	**11 35 33.2**	**-1.5**
YOJ	**Yonaguni jima**	**0.80**	**121**	P	**Pn**	**11 35 22.8**	**-0.2**
	baz=118						
YOJ				S	**Sn**	**11 35 32.8**	**-1.9**
	baz=118						
TWS1	**Kuangyinshan**	**0.80**	**287**	eP	**Pn**	**11 35 22.8**	**-0.1**
	baz=290						
YHNB	**Yeheng**	**0.83**	**256**	P	**Pb**	**11 35 22.2**	**0.0**
	baz=252						
YHNB				eS	**Sg**	**11 35 33.1**	**+0.4**
	baz=252						
NSK	**Sanguang**	**0.84**	**257**	eP	**Pb**	**11 35 22.4**	**-0.1**
	baz=253						
NSK				eS	**Sg**	**11 35 33.6**	**+0.5**
	baz=253						
NNSB	**Datong**	**0.91**	**241**	eP	**Pg**	**11 35 23.3**	**-0.2**
	baz=232						
NNSB				eS	**Sg**	**11 35 34.9**	**-0.4**
	baz=232						
NNS	**Nan Shan**	**0.91**	**242**	eP	**Pb**	**11 35 23.5**	**-0.3**
	baz=233						
NNS				eS	**Sg**	**11 35 34.5**	**-0.9**
	baz=233						
NACB	**Ninganchiao**	**0.92**	**221**	P	**Pg**	**11 35 23.2**	**-0.4**
	baz=222						
NACB				S	**Sg**	**11 35 34.2**	**-1.5**
	baz=222						
ETLH	**Xiulin Townshi**	**0.97**	**227**	P	**Pb**	**11 35 24.6**	**-0.1**
	baz=228						
ETLH				eS	**Sg**	**11 35 35.4**	**-1.8**
	baz=228						
NCU	**National Centr**	**0.98**	**276**	eS	**Sn**	**11 35 39.4**	**+0.1**
	baz=277						
TWD	**Chiawan**	**0.99**	**218**	eP	**Pg**	**11 35 24.2**	**-0.7**
	baz=218						
TWD				eS	**Sg**	**11 35 36.1**	**-1.8**
	baz=218						
FUSS	**Fushou**	**1.11**	**236**	eP	**Pb**	**11 35 26.9**	**-0.3**
	baz=238						
FUSS				eS	**Sg**	**11 35 41.4**	**-0.5**
	baz=238						
HSN1	**Hsinchu**	**1.13**	**266**	eS	**Sn**	**11 35 44.7**	**+1.6**
	baz=285						
LIOB	**Emei**	**1.15**	**259**	eP	**Pg**	**11 35 28.3**	**+0.3**
	baz=260						
LIOB				eS	**Sn**	**11 35 44.1**	**+0.5**
	baz=260						
WHF	**Hehuan Shan**	**1.16**	**232**	P	**Pb**	**11 35 27.9**	**-0.2**
	baz=232						
WHF				S	**Sg**	**11 35 42.0**	**-1.3**
	baz=232						
NSTT	**Nanjuang**	**1.17**	**258**	eP	**Pg**	**11 35 29.4**	**+1.0**
	baz=259						
NSTT				eS	**Sn**	**11 35 45.0**	**+1.0**
	baz=259						
TDCB	**Techi**	**1.18**	**239**	eP	**Pg**	**11 35 28.6**	**+0.1**
	baz=232						
TDCB				eS	**Sb**	**11 35 42.8**	**-0.8**
	baz=232						
CHGB	**Renai**	**1.28**	**231**	eP	**Pb**	**11 35 29.9**	**-0.1**
	baz=232						
CHGB				eS	**Sb**	**11 35 45.6**	**-0.9**
	baz=232						
ESL	**Shilin**	**1.29**	**216**	eP	**Pb**	**11 35 30.0**	**-0.2**
	baz=224						
ESL				eS	**Sb**	**11 35 47.5**	**+0.7**
	baz=224						
WHP	**Taichung City**	**1.33**	**244**	eP	**Pg**	**11 35 31.5**	**0.0**
	baz=245						
WHP				eS	**Sn**	**11 35 48.0**	**-0.2**
	baz=245						
NMLH	**Miaoli**	**1.38**	**256**	eP	**Pg**	**11 35 33.4**	**+1.1**
	baz=257						
NMLH				eS	**Sg**	**11 35 52.2**	**+2.0**
	baz=257						
NSY	**Sanyi**	**1.44**	**252**	eP	**Pg**	**11 35 35.0**	**+1.6**
	baz=269						
IRIF	**Iriomote-Funau**	**1.44**	**111**	P	**Pg**	**11 35 34.5**	**+1.0**
IRIF				eS	**Sg**	**11 35 53.7**	**+1.5**
TWQ1	**Liyutan**	**1.45**	**249**	eP	**Pg**	**11 35 35.2**	**+1.5**
	baz=250						
TWQ1				eS	**Sg**	**11 35 54.5**	**+2.0**
	baz=250						
WPL	**Puli Township**	**1.46**	**235**	eP	**Pg**	**11 35 34.4**	**+0.5**
	baz=236						
WPL				eS	**Sn**	**11 35 51.2**	**-0.1**
	baz=236						
HGSD	**Ruisui**	**1.57**	**209**	eP	**Pb**	**11 35 34.8**	**-0.1**
	baz=209						
HGSD				eS	**Sg**	**11 35 57.8**	**+1.4**
	baz=209						
SMLT	**Sun Moon Lake**	**1.58**	**232**	eP	**Pg**	**11 35 36.0**	**-0.3**
	baz=216						
EHY	**Hungye**	**1.61**	**212**	eP	**Pn**	**11 35 34.5**	**+0.4**
	baz=211						
EHY				eS	**Sn**	**11 35 53.9**	**-0.9**
	baz=211						
SSLB	**Suanglung**	**1.61**	**228**	eP	**Pb**	**11 35 35.9**	**+0.4**
	baz=229						
SSLB				eS	**Sb**	**11 35 56.2**	**+0.4**
	baz=229						
HATJ	**Hateruma jima**	**1.62**	**120**	P	**Pg**	**11 35 36.8**	**-0.2**
HATJ				eS	**Sg**	**11 35 57.8**	**-0.3**
JKRS	**Kuro-shima**	**1.71**	**111**	P	**Pg**	**11 35 40.0**	**+1.3**
JKRS				eS	**Sg**	**11 36 01.4**	**+0.4**
YULB	**Yu-li**	**1.71**	**211**	eP	**Pb**	**11 35 37.1**	**-0.3**
	baz=206						
WJS	**Zhushan**	**1.74**	**234**	eP	**Pg**	**11 35 39.3**	**-0.1**
	baz=233						
WJS				eS	**Sg**	**11 36 02.8**	**+0.8**
	baz=233						
WNT	**Mingjian**	**1.74**	**236**	eS	**Sg**	**11 36 03.4**	**+1.5**
	baz=236						
TWF1	**Yuli**	**1.75**	**210**	eP	**Pn**	**11 35 36.4**	**+0.4**
	baz=209						
TWF1				eS	**Sn**	**11 35 59.7**	**+1.3**
	baz=209						
JIJ	**Ishigaki jima**	**1.79**	**106**	P	**Pg**	**11 35 40.0**	**-0.1**
JIJ				eS	**Sg**	**11 36 03.0**	**-0.3**
FULB	**Fuli**	**1.88**	**208**	eP	**Pn**	**11 35 38.4**	**+0.4**
	baz=199						
JISG	**Ishigakijimahi**	**1.89**	**98**	P	**Pg**	**11 35 43.0**	**+1.0**
JISG				eS	**Sg**	**11 36 08.2**	**+1.7**
ALS	**Alishan**	**1.90**	**225**	eP	**Pb**	**11 35 41.0**	**+0.4**
	baz=211						
ALS				eS	**Sg**	**11 36 06.7**	**-0.2**
	baz=211						
CHN5	**Tsauling**	**1.92**	**229**	eP	**Pg**	**11 35 41.8**	**-0.9**
	baz=228						
CHN5				eS	**Sb**	**11 36 06.9**	**+2.0**
	baz=228						
WDLH	**Douliu**	**1.96**	**234**	eS	**Sg**	**11 36 09.6**	**+0.6**
	baz=233						
TPUB	**Ta-pu**	**2.16**	**224**	eP	**Pb**	**11 35 44.2**	**-0.8**
	baz=205						
TPUB				eS	**Sb**	**11 36 13.8**	**+2.1**
	baz=205						
STYT	**Tauyuan**	**2.19**	**219**	eP	**Pn**	**11 35 42.7**	**+0.6**
	baz=218						
STYT				eS	**Sb**	**11 36 13.4**	**+0.9**
	baz=218						
WTP	**Ta-pu**	**2.21**	**223**	eP	**Pb**	**11 35 46.2**	**+0.4**
	baz=205						
WTP				eS	**Sb**	**11 36 15.6**	**+2.4**
	baz=205						
TWK	**Hsinying**	**2.27**	**226**	eP	**Pb**	**11 35 47.3**	**+0.4**
	baz=224						
TWK				eS	**Sb**	**11 36 16.5**	**+1.5**
	baz=224						
CHN1	**Nanshi**	**2.31**	**224**	eP	**Pb**	**11 35 48.5**	**+1.0**
	baz=222						
CHN1				eS	**Sb**	**11 36 17.5**	**+1.5**
	baz=222						
TSMG	**Majia**	**2.61**	**215**	eP	**Pb**	**11 35 51.5**	**-1.1**
	baz=203						
MASBT	**Mashibuluo**	**2.70**	**214**	eP	**Pb**	**11 35 52.1**	**-2.0**
	baz=203						

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*VAO **09** 11:48:20.3±0.5,20°.24S×68°.81W,h10^{km},mb4.9*

*IDC **09** 11:48:26.8±1.1,20°.25S×68°.85W,h88^{km}±11^{km},mb4.4/17, mb1 4.5/22,mb1mx4.4/34,mbtmp4.7/22,MS3.3/3, Ms1 3.3/3,ms1mx3.0/22,Error ellipse: s-maj=12.3km s-min=9.2km az=90.0*

*NEIC **09** 11:48:27.8,20°.40S×68°.98W,h112^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.12; $M_{\theta\theta}$-0.00; $M_{\phi\phi}$0.12; $M_{r\theta}$0.07; $M_{\theta\phi}$-1.53; $M_{\phi r}$-0.78; Fault plane solution: $M_0$1.72000×10^{16} NP1:ϕ_s90.82000°, δ63.07000°,λ-179.58000°. NP2:ϕ_s0.63000°,δ89.62000°, λ-26.93000°. Principal axes: T 1.7937, Plg18.0000°, Azm49.0000°; N -0.1544, Plg63.0000°, Azm180.0000°; P -1.6393, Plg19.0000°, Azm312.0000°;*

*SJA **09** 11:48:27.6±1.2,20°.43S×69°.18W,h130^{km}±9^{km},ML5.0, MW4.6*

*BJI **09** 11:48:28.3±0.0,20°.40S×68°.90W,h109^{km},mB5.2/2*

*NEIC **09** 11:48:28.2±2.3,20°.41S±0°.04×68°.95W±0°.06,h107^{km}±4^{km}, mb4.8/214,Mwr4.8/20,ML5.2(GUC),Error ellipse: s-maj=7.9km s-min=6.4km az=91.0*

*GUC **09** 11:48:29.5±0.7,20°.40S×69°.03W,h110^{km}±3^{km},ML5.2*

ISC 09 11:48:27.8±0.6,**20°.40S**±0°.03×**68°.97W**±0°.04,**h104**^{km}±5^{km}, **n476,**σ**1ˢ.44**/451,**mb4.9**/110,**11C-6D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.31**	**327**	⇓iP	**Pn**	**11 48 45.1**	**+1.6**
PB08				i S	**Sn**	**11 48 57.8**	**+2.7**
PB08	**IPOC Station P**	**0.31**	**327**		**Pn**	**11 48 45.4**	**+1.9**
PB08				Sn	**Sn**	**11 48 57.1**	**+2.0**
PB08	**IPOC Station P**	**0.31**	**327**	eP	**Pn**	**11 48 45.4**	**+1.9**
PB08				eS	**Sn**	**11 48 57.7**	**+2.7**
PB08				IAML		11 49 00.2	
	comp=Z,19µm,0.6s						
GO01	**Chusmiza**	**0.76**	**344**	⇓iP	**Pn**	**11 48 48.4**	**+1.6**
GO01				i S	**Sn**	**11 49 03.4**	**+2.5**
GO01	**Chusmiza**	**0.76**	**344**	Pn	**Pn**	**11 48 48.4**	**+1.6**
HMBC	**Humberstone**	**0.87**	**278**	⇑iP	**Pn**	**11 48 48.3**	**+1.0**
HMBC				i S	**Sn**	**11 49 03.0**	**+1.0**
HMBC				IAML		11 49 05.6	
	comp=N,104µm,0.4s						
TA02	**Huaiquique**	**1.09**	**277**	⇑iP	**Pn**	**11 48 50.7**	**+1.1**
TA02				i S	**Sn**	**11 49 06.8**	**+0.7**
TA01	**Diego Aracena**	**1.14**	**262**	⇑iP	**Pn**	**11 48 50.9**	**+0.8**
TA01				i S	**Sn**	**11 49 07.2**	**+0.2**
TA01	**Diego Aracena**	**1.14**	**262**		**Pn**	**11 48 51.0**	**+0.8**
TA01				Sn	**Sn**	**11 49 07.1**	**+0.2**
PATCX	**Punta Patache**	**1.18**	**249**	⇑iP	**Pn**	**11 48 51.6**	**+1.1**
PATCX				i S	**Sn**	**11 49 08.7**	**+0.8**
PATCX				IAML		11 49 09.3	
	comp=E,40µm,0.2s						
PATCX	**Punta Patache**	**1.18**	**249**		**Pn**	**11 48 51.8**	**+1.2**
PATCX				Sn	**Sn**	**11 49 08.5**	**+0.6**
PATCX	**Punta Patache**	**1.18**	**249**	eP	**Pn**	**11 48 51.7**	**+1.1**
PATCX				eS	**Sn**	**11 49 09.3**	**+1.4**
PATCX				IAML		11 49 11.3	
	comp=Z,14µm,0.4s						
PSGC	**Pisagua**	**1.34**	**306**	⇓iP	**Pn**	**11 48 53.2**	**+0.7**
PSGC				eS	**Sn**	**11 49 11.7**	**+0.4**
PSGCX	**Pisagua**	**1.34**	**306**	Pn	**Pn**	**11 48 53.2**	**+0.6**
PSGCX				Sn	**Sn**	**11 49 11.6**	**+0.3**
PSGCX	**Pisagua**	**1.34**	**306**	eP	**Pn**	**11 48 53.2**	**+0.6**
PSGCX				eS	**Sn**	**11 49 12.8**	**+1.5**
PSGCX				IAML		11 49 15.2	
	comp=Z,17µm,0.3s						
MNMC	**Minye Minye**	**1.39**	**335**	⇓iP	**Pn**	**11 48 55.0**	**+1.7**
MNMC				eS	**Sn**	**11 49 15.0**	**+2.4**
MNMC	**Minye Minye**	**1.39**	**335**	Pn	**Pn**	**11 48 55.2**	**+1.8**
MNMCX	**Minye Minye**	**1.39**	**335**	eP	**Pn**	**11 48 55.1**	**+1.7**
MNMCX				eS	**Sn**	**11 49 15.4**	**+2.8**
MNMCX				IAML		11 49 16.5	
	comp=Z,21µm,0.6s						
PB09	**IPOC Station P**	**1.41**	**190**	⇑iP	**Pn**	**11 48 55.5**	**+2.1**
PB09				i S	**Sn**	**11 49 15.4**	**+2.6**
PB09				IAML		11 49 16.5	
	comp=N,32µm,0.5s						
PB09	**IPOC Station P**	**1.41**	**190**		**Pn**	**11 48 55.6**	**+2.2**
PB09	**IPOC Station P**	**1.41**	**190**	eP	**Pn**	**11 48 55.6**	**+2.2**
PB09				eS	**Sn**	**11 49 15.6**	**+2.8**
PB09				IAML		11 49 16.6	
	comp=Z,18µm,0.4s						
PB07	**IPOC Station P**	**1.57**	**213**	⇑iP	**Pn**	**11 48 56.5**	**+1.2**
PB07				i S	**Sn**	**11 49 17.2**	**+1.0**
PB07				IAML		11 49 20.5	
	comp=E,46µm,0.6s						
PB07	**IPOC Station P**	**1.57**	**213**		**Pn**	**11 48 56.6**	**+1.3**
PB07	**IPOC Station P**	**1.57**	**213**	eP	**Pn**	**11 48 56.5**	**+1.2**
PB07				eS	**Sn**	**11 49 17.8**	**+1.5**
PB07				IAML		11 49 20.3	
	comp=Z,28µm,0.6s						
PB03	**IPOC Station P**	**1.79**	**204**	⇑iP	**Pn**	**11 48 59.3**	**+1.2**
PB03				i S	**Sn**	**11 49 22.2**	**+1.1**
PB03	**IPOC Station P**	**1.79**	**204**	eP	**Pn**	**11 48 59.4**	**+1.2**
PB03				eS	**Sn**	**11 49 22.2**	**+1.1**
PB03				IAML		11 49 24.8	
	comp=Z,13µm,0.3s						
PB16	**IPOC Station P**	**2.12**	**346**	⇓iP	**Pn**	**11 49 04.7**	**+2.1**
PB16				i S	**Sn**	**11 49 31.7**	**+2.5**
PB16	**IPOC Station P**	**2.12**	**346**	Pn	**Pn**	**11 49 04.8**	**+2.1**
PB16	**IPOC Station P**	**2.12**	**346**	eP	**Pn**	**11 49 04.7**	**+2.1**
PB16				eS	**Sn**	**11 49 31.9**	**+2.7**
PB16				IAML		11 49 35.9	
	comp=Z,4µm,0.6s						
LVC	**Limon Verde**	**2.20**	**178**	P	**Pn**	**11 49 05.9**	**+2.4**
	comp=Z,103nm,0.3s,baz=21,slow=5.7,SNR=360						
LVC				S	**Sn**	**11 49 32.6**	**+1.9**
	comp=Z,882nm,0.3s,baz=1.7,slow=12,SNR=47						
LVC	**Limon Verde**	**2.20**	**178**	eP	**Pn**	**11 49 05.8**	**+2.4**
LVC				eS	**Sn**	**11 49 33.4**	**+2.6**
LVC	**Limon Verde**	**2.20**	**178**	Pn	**Pn**	**11 49 05.3**	**+1.8**
LVC	**Limon Verde**	**2.20**	**178**	i P	**Pn**	**11 49 05.9**	**+2.4**
LVC				eS	**Sn**	**11 49 33.5**	**+2.8**
LVC				IAML		11 49 38.5	
	comp=Z,4µm,0.7s						
PB04	**IPOC Station P**	**2.21**	**209**	⇑iP	**Pn**	**11 49 04.0**	**+0.6**
PB04				i S	**Sn**	**11 49 30.3**	**-0.4**
PB04				IAML		11 49 38.5	
	comp=E,13µm,0.7s						
PB04	**IPOC Station P**	**2.21**	**209**	Pn	**Pn**	**11 49 04.1**	**+0.6**
PB04	**IPOC Station P**	**2.21**	**209**	eP	**Pn**	**11 49 04.0**	**+0.6**
PB04				eS	**Sn**	**11 49 29.6**	**-1.2**
PB04				IAML		11 49 40.9	
	comp=Z,10µm,0.7s						
AP01	**Chacalluta**	**2.40**	**327**	⇓iP	**Pn**	**11 49 06.2**	**+0.4**
AP01				i S	**Sn**	**11 49 35.6**	**+0.8**
AP01				IAML		11 49 42.2	
	comp=E,21µm,0.3s						
AP01	**Chacalluta**	**2.40**	**327**	Pn	**Pn**	**11 49 06.1**	**+0.4**
PB05	**IPOC Station P**	**2.69**	**205**	⇑iP	**Pn**	**11 49 10.2**	**+0.4**
PB05	**IPOC Station P**	**2.69**	**205**	i P	**Pn**	**11 49 10.2**	**+0.4**
PB05				eS	**Sn**	**11 49 36.3**	**-5.6**
PB05				IAML		11 49 56.2	
	comp=Z,4µm,1.0s						
PB10	**IPOC Station P**	**3.43**	**205**	⇑iP	**Pn**	**11 49 18.8**	**-0.5**
PB10	**IPOC Station P**	**3.43**	**205**		**Pn**	**11 49 19.1**	**-0.3**
PB10	**IPOC Station P**	**3.43**	**205**	eP	**Pn**	**11 49 18.9**	**-0.5**
PB10				IAML		11 50 21.7	
	comp=Z,2µm,0.7s						
YJA	**Yavi**	**3.68**	**119**	i P	**Pn**	**11 49 27.0**	**+3.9**
YJA				IAML		11 50 23.0	
	comp=Z,81nm,1.2s						
PB14	**IPOC Station P**	**4.41**	**197**	Pn	**Pn**	**11 49 32.0**	**-0.9**
PB14	**IPOC Station P**	**4.41**	**197**	i P	**Pn**	**11 49 31.9**	**-0.9**
PB14				IAML		11 50 53.9	
	comp=Z,1µm,0.6s						
GO02	**Mina Guanaco**	**4.77**	**187**	Pn	**Pn**	**11 49 37.9**	**+0.1**
SLA	**San Lorenzo**	**5.36**	**144**	i P	**Pn**	**11 49 48.5**	**+2.8**
SLA				IAML		11 50 56.0	
	comp=Z,49nm,0.9s						
AC01	**Pan de Azucar**	**5.91**	**194**	Pn	**Pn**	**11 49 51.0**	**-1.9**
AC02	**Maricunga**	**6.41**	**181**		**Pn**	**11 50 00.4**	**+0.3**
AHML	**Horco Molle**	**7.18**	**153**	i P	**Pn**	**11 50 11.5**	**+1.4**
AHML				IAML		11 51 37.2	
	comp=Z,21nm,1.3s						
GO03	**Copiap**	**7.25**	**189**	Pn	**Pn**	**11 50 08.5**	**-2.7**
AC04	**Llanos de Chal**	**8.00**	**193**	Pn	**Pn**	**11 50 17.1**	**-4.2**
AC05	**El Transito**	**8.48**	**188**	Pn	**Pn**	**11 50 25.4**	**-2.5**
SIV	**San Ignacio**	**8.70**	**61**	P	**Pn**	**11 50 29.4**	**-1.4**
	comp=Z,10nm,0.3s,baz=259,slow=11,SNR=236						
SIV				S	**Sn**	**11 52 00.8**	**-6.4**
	comp=Z,0.4nm,0.3s,baz=240,slow=19,SNR=1.0						
LCO	**Las Campanas**	**8.71**	**190**	Pn	**Pn**	**11 50 28.2**	**-3.0**
CO01	**Juntas del Tor**	**9.59**	**186**	Pn	**Pn**	**11 50 41.6**	**-1.5**
GO04	**Tololo Observa**	**9.87**	**189**	Pn	**Pn**	**11 50 43.4**	**-3.5**
NNA	**Nana**	**11.27**	**317**	P	**Pn**	**11 51 03.7**	**-2.1**
	comp=Z,1.9nm,0.3s,baz=185,slow=6.0,SNR=10						
NNA				S	**Sn**	**11 53 06.2**	**-3.7**
	comp=Z,6.1nm,0.3s,baz=216,slow=10,SNR=4.1						
NNA				LR	LR	11 55 27.3	
	comp=Z,95nm,20.9s,baz=166,slow=37						
NNA	**Nana**	**11.27**	**317**		**Pn**	**11 51 04.4**	**-1.5**
CPUP	**Villa Florida**	**12.21**	**121**	P	**Pn**	**11 51 17.0**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=302,slow=12,SNR=44						
CPUP				LR	LR	11 56 49.0	
	comp=Z,137nm,21.8s,baz=309,slow=41						
CPUP	**Villa Florida**	**12.21**	**121**		**Pn**	**11 51 17.6**	**-0.6**
AQDB	**Aquidauana**	**12.45**	**93**	eP	Pn	11 51 15.4	-5.9
ROC1	**El Roble**	**12.65**	**188**	Pn	**Pn**	**11 51 23.2**	**-1.0**
SAML	**Samuel**	**12.69**	**27**	Pn	**Pn**	**11 51 21.8**	**-2.8**
SAML	**Samuel**	**12.69**	**27**	eP	Pn	11 51 19.1	-5.5
PP1B	**Ponte de Pedra**	**13.62**	**81**	eP	Pn	11 51 31.1	-5.7
BO02	**Sierra Bellavi**	**14.42**	**186**		**Pn**	**11 51 45.2**	**-1.8**
ITQB	**Itaqui**	**14.50**	**132**	eP	**Pn**	**11 51 46.2**	**-1.7**
H03N1	**Juan Fernandez**	**15.71**	**212**	T	T	12 07 44.4	
	baz=35,slow=74,SNR=16						
H03N2	**Juan Fernandez**	**15.72**	**212**	T	T	12 07 38.8	
	baz=227,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**15.73**	**212**	T	T	12 07 37.7	
ATAH	**Atahualpa**	**16.04**	**324**	P	**Pn**	**11 52 08.5**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=169,slow=16,SNR=12						
PTGB	**Pitanga**	**16.20**	**108**	eP	**Pn**	**11 52 07.8**	**-1.6**
PCMB	**Pacaembu**	**16.58**	**97**	eP	**Pn**	**11 52 10.9**	**-3.2**
ITAB	**Concordia**	**16.84**	**117**	eP	**Pn**	**11 52 16.2**	**-1.0**
ARAG	**Araguaiana, MT**	**16.97**	**77**	eP	**Pn**	**11 52 15.5**	**-3.4**
CPSB	**Cacapava Do Su**	**17.19**	**128**	eP	**Pn**	**11 52 20.5**	**-1.0**
ITRB	**Iturama**	**17.50**	**91**	eP	**P**	**11 52 23.1**	**-2.0**
LC01	**Cunco**	**18.60**	**187**	P	**P**	**11 52 35.5**	**-1.4**
CNLB	**Canela**	**18.67**	**122**	eP	**Pn**	**11 52 38.6**	**-0.7**
NPGB	**Novo Progresso**	**18.72**	**47**	eP	**P**	**11 52 37.0**	**-1.4**
SNDB	**Serra Nova Dou**	**18.92**	**66**	eP	**P**	**11 52 39.7**	**-0.8**
MACA	**Manacapuru-AM**	**18.95**	**26**	eP	**P**	**11 52 39.3**	**-1.6**
BB19B	**Bebedouro**	**19.14**	**96**	eP	**P**	**11 52 42.0**	**-0.9**
IPMB	**Ipameri, GO**	**19.76**	**87**	eP	**P**	**11 52 48.7**	**-1.0**
SPB	**Sao Paulo**	**20.22**	**103**	eP	**P**	**11 52 54.2**	**-0.4**
PLCA	**Paso Flores**	**20.31**	**183**	P	Pn	11 52 57.4	-1.1
	comp=Z,2.9nm,0.7s,baz=22,slow=13,SNR=8.1						
PLCA	**Paso Flores**	**20.31**	**183**	P	**P**	**11 52 54.9**	**-0.7**
PLCA	**Paso Flores**	**20.31**	**183**	eP	Pn	11 52 57.0	-1.4
PET01	**Itanhaem-SP**	**20.43**	**105**	eP	**P**	**11 52 57.2**	**+0.3**
BDFB	**Brasilia**	**20.48**	**80**	P	**P**	**11 52 56.9**	**-0.7**
	comp=Z,28nm,0.5s,baz=267,slow=13,SNR=14						
BDFB				LR	LR	12 02 12.1	
	comp=Z,216nm,19.2s,baz=301,slow=41						
BDFB	**Brasilia**	**20.48**	**80**	P	**P**	**11 52 56.9**	**-0.7**
BDFB				IAmb	IAmb	11 53 01.4	
	comp=Z,44nm,0.9s						
ITTB	**Itaituba**	**20.50**	**41**	eP	**P**	**11 52 56.0**	**-1.6**
VAO	**Valinhos**	**20.61**	**101**	eP	**P**	**11 52 58.5**	**-0.4**
PTLC	**Puerto Leguiza**	**21.23**	**344**	eP	**P**	**11 53 06.6**	**+1.1**
PEXB	**Peixe**	**21.48**	**71**	eP	**P**	**11 53 07.5**	**-0.6**
PARB	**Paraibuna**	**21.86**	**102**	eP	**P**	**11 53 11.1**	**-1.2**
OTAV	**Otavalo**	**22.51**	**335**	P	**P**	**11 53 20.5**	**+1.0**
OTAV				IAmb	IAmb	11 53 36.4	
	comp=Z,76nm,1.4s						
OTAV	**Otavalo**	**22.51**	**335**	eP	**P**	**11 53 18.7**	**-0.8**
OTAV	**Otavalo**	**22.51**	**335**	eP	**P**	**11 53 19.9**	**+0.4**
BSCB	**Bom Sucesso**	**22.64**	**96**	eP	**P**	**11 53 20.0**	**-0.5**
ESAR	**Angra dos Reis**	**22.93**	**101**	eP	**P**	**11 53 22.1**	**-1.0**
PRPB	**Parauapebas**	**23.36**	**55**	eP	**P**	**11 53 24.9**	**-2.3**
MAN01	**Angra dos Reis**	**23.37**	**101**	eP	**P**	**11 53 27.3**	**-0.1**
MALB	**Monte Alegre**	**23.37**	**40**	eP	**P**	**11 53 25.5**	**-1.8**
SMTB	**Santa Maria do**	**23.62**	**64**	eP	**P**	**11 53 29.1**	**-0.6**
BBAC	**Balboa, Cauca**	**23.71**	**339**	eP	**P**	**11 53 31.8**	**+1.1**
VAS01	**Vassouras-RJ**	**23.85**	**99**	eP	**P**	**11 53 33.1**	**+1.4**
JANB	**Januaria**	**24.07**	**81**	eP	**P**	**11 53 32.1**	**-1.6**
SDBA	**SAO DESIDERIO**	**24.40**	**75**	eP	**P**	**11 53 35.1**	**-1.6**
DUB01	**Friburgo-RJ**	**24.84**	**99**	eP	**P**	**11 53 42.8**	**+2.1**
ORTC	**Ortega, Tolima**	**24.93**	**345**	eP	**P**	**11 53 41.0**	**-0.5**
YOTC	**Yotoco, Valle**	**25.29**	**343**	eP	**P**	**11 53 44.9**	**0.0**
CAM01	**Campos-RJ**	**25.51**	**98**	eP	**P**	**11 53 47.6**	**+1.0**
ROSC	**El Rosal**	**25.63**	**348**	P	**P**	**11 53 46.7**	**-1.4**
ROSC				IAmb	IAmb	11 53 52.7	
	comp=Z,18nm,0.7s						
MCPB	**Macapa, AP**	**25.90**	**42**	eP	**P**	**11 53 48.9**	**-1.3**
RREF	**El Recreo**	**25.91**	**345**	eP	**P**	**11 53 54.6**	**+3.6**
PLMC	**San Jos del P**	**26.16**	**343**	eP	**P**	**11 53 51.8**	**-0.8**
SJMB	**Sao Joao De Ma**	**26.23**	**91**	eP	**P**	**11 53 53.2**	**0.0**
RUSC	**La Rusia**	**26.44**	**351**	eP	**P**	**11 53 54.6**	**-1.0**
NORC	**Norcasia**	**26.45**	**347**	eP	**P**	**11 53 53.9**	**-1.3**
ALF01	**Guarapari-ES**	**26.45**	**95**	eP	**P**	**11 53 55.5**	**+0.3**
BSFB	**Barra de Sao F**	**26.53**	**91**	eP	**P**	**11 53 55.8**	**-0.1**
TMAB	**Tom-Au,PA,Br**	**27.14**	**51**	eP	**P**	**11 54 02.4**	**+1.0**
PAMC	**Pamplona, Colo**	**27.81**	**352**	eP	**P**	**11 54 07.2**	**-0.7**
DBBC	**Dabeiba**	**28.16**	**345**	eP	**P**	**11 54 09.6**	**-0.9**
SDV	**Santo Domingo**	**29.15**	**357**	P	**P**	**11 54 18.2**	**-1.2**
	comp=Z,3.6nm,0.5s,baz=176,slow=1.4,SNR=5.4						
SDV	**Santo Domingo**	**29.15**	**357**	P	**P**	**11 54 18.9**	**-0.5**
SMLC	**San Martn de**	**29.45**	**350**	⇑eP	**P**	**11 54 19.5**	**-2.3**
ROSB	**Rosrio**	**29.83**	**58**	eP	**P**	**11 54 25.4**	**0.0**
MDP	**Montagnes des**	**30.00**	**34**	P	**P**	**11 54 25.8**	**-0.9**
	comp=Z,32nm,1.1s,baz=216,slow=8.6,SNR=6.9						
JTS	**Las Juntas de**	**34.31**	**331**	P	**P**	**11 55 05.2**	**+0.7**
	comp=Z,16nm,0.8s,baz=99,slow=1.4,SNR=4.3						
RCBR	**Riachuelo**	**35.21**	**70**	P	**P**	**11 55 11.9**	**-0.5**
	comp=Z,28nm,0.6s,baz=239,slow=9.4,SNR=19						
RCBR	**Riachuelo**	**35.21**	**70**	P	**P**	**11 55 12.2**	**-0.2**
RCBR	**Riachuelo**	**35.21**	**70**	eP	**P**	**11 55 12.5**	**+0.2**
FDF	**Fort de France**	**35.75**	**13**	P	**P**	**11 55 15.2**	**-1.6**
CRPR	**Cabo Rojo, PR**	**38.21**	**3**	P	**P**	**11 55 37.4**	**-0.2**
OBIP	**Obispado Ponce**	**38.28**	**4**	P	**P**	**11 55 39.5**	**+1.4**
PDPR	**Patillas Dam,**	**38.29**	**5**	P	**P**	**11 55 36.4**	**-1.9**
SJG	**San Juan**	**38.38**	**4**	P	**P**	**11 55 37.6**	**-1.4**
	comp=Z,41nm,0.9s,baz=164,slow=4.9,SNR=9.1						
SJG	**San Juan**	**38.38**	**4**	P	**P**	**11 55 37.4**	**-1.6**
MTP	**Monte Pirata**	**38.41**	**5**	P	**P**	**11 55 39.1**	**-0.2**
HUMP	**Col San Antoni**	**38.43**	**5**	P	**P**	**11 55 39.3**	**-0.1**
HUMP				IAmb	IAmb	11 55 48.6	
	comp=Z,36nm,1.4s						
CBYP	**Canovanas**	**38.56**	**5**	P	**P**	**11 55 39.4**	**-1.2**
AOPR	**Arecibo Observ**	**38.57**	**3**	P	**P**	**11 55 39.3**	**-1.3**
GCPR	**Guaynabo City**	**38.58**	**4**	P	**P**	**11 55 39.2**	**-1.4**
GCPR				IAmb	IAmb	11 55 42.1	
	comp=Z,36nm,1.3s						
DR12	**Loma Pena Alta**	**38.95**	**359**	P	**P**	**11 55 42.9**	**-1.0**
MTO3	**Montecristo**	**39.97**	**328**	P	**P**	**11 55 52.2**	**-0.4**
MTO3				IAmb	IAmb	11 55 55.2	
	comp=Z,27nm,0.8s						
TEIG	**Tepich**	**44.58**	**334**	P	**P**	**11 56 30.3**	**+0.7**
TEIG				IAmb	IAmb	11 56 30.8	
	comp=Z,20nm,0.7s						
061Z	**Ochoppi**	**47.43**	**345**	P	**P**	**11 56 50.6**	**-1.2**
656A	**Willston**	**51.18**	**345**	P	**P**	**11 57 21.3**	**+0.9**
ZAIG	**Zacatecas**	**54.00**	**321**	P	**P**	**11 57 43.6**	**+1.9**
NHSC	**New Hope**	**54.27**	**348**	P	**P**	**11 57 43.8**	**+0.7**
	baz=167						
NHSC	**New Hope**	**54.27**	**348**	P	**P**	**11 57 44.3**	**+1.2**
Z57A	**Bowman**	**54.56**	**348**	P	**P**	**11 57 45.5**	**+0.3**
	baz=166						
Y58A	**Scranton**	**54.96**	**349**	P	**P**	**11 57 48.7**	**+0.6**
	baz=168						
JSC	**Jenkinsville**	**55.62**	**348**	P	**P**	**11 57 52.8**	**-0.1**
JSC				IAmb	IAmb	11 57 55.3	
	comp=Z,6.7nm,0.8s						
W60A	**Pink Hill**	**55.77**	**351**	P	**P**	**11 57 54.9**	**+1.0**
	baz=170						
X56A	**White Oak**	**55.78**	**348**	P	**P**	**11 57 54.6**	**+0.6**
	baz=166						
BIRD	**Birdtown, Kers**	**55.82**	**349**	P	**P**	**11 57 54.9**	**+0.7**
LRAL	**Lakeview Retre**	**55.86**	**342**	P	**P**	**11 57 54.3**	**-0.2**
	baz=160						
W58A	**Raeford**	**55.97**	**350**	P	**P**	**11 57 55.9**	**+0.6**
	baz=168						

342A	Flagon Creek P	56.15	336	P	P	11 57 56.9	+0.3
W57A	Gilead	56.23	349	P	P	11 57 57.3	+0.2
	baz=168						
W57A	Gilead	56.23	349	P	P	11 57 57.9	+0.8
W57A				IAmb	IAmb	11 57 58.3	
	comp=Z,13nm,0.8s						
W56A	Indian Trail	56.32	349	P	P	11 57 57.8	0.0
	baz=167						
Y49A	Blount Mountai	56.46	343	P	P	11 57 58.9	0.0
Y49A				IAmb	IAmb	11 57 59.1	
	comp=Z,13nm,1.1s						
KMSC	Kings Mountain	56.47	348	P	P	11 57 59.5	+0.6
	baz=166						
V59A	Middlesex	56.55	351	P	P	11 58 00.5	+1.2
	baz=170						
833A	Chaparral WMA,	56.66	328	P	P	11 58 01.1	+0.7
	baz=146,SNR=5.0						
V58A	Windy Hill, Pi	56.71	350	P	P	11 58 01.3	+0.8
	baz=169						
V57A	Coltrane Farms	56.91	350	P	P	11 58 01.9	0.0
	baz=168						
V56A	Mocksville	56.96	349	P	P	11 58 02.9	+0.6
	baz=167						
U59A	Littleton	57.06	352	P	P	11 58 03.9	+0.9
	baz=170						
X48A	Hartselle	57.20	342	P	P	11 58 03.5	-0.5
X48A				IAmb	IAmb	11 58 04.5	
	comp=Z,21nm,1.0s						
U58A	Oxford	57.21	351	P	P	11 58 05.2	+1.2
	baz=169						
U57A	Blanch	57.37	350	P	P	11 58 05.3	+0.2
	baz=168						
NATX	Nacogdoches	57.41	334	P	P	11 58 06.3	+0.7
	baz=151						
W50A	Signal Mountai	57.43	344	IAmb	IAmb	11 58 06.0	
	comp=Z,12nm,0.8s						
U56A	King	57.46	349	P	P	11 58 06.7	+0.9
	baz=167						
TKL	Tuckaleechee C	57.49	346	IAmb	IAmb	11 58 07.2	
	comp=Z,19nm,1.1s						
V52A	Sevierville	57.63	346	IAmb	IAmb	11 58 07.8	
	comp=Z,20nm,1.1s						
U54A	Nelsons Funny	57.90	348	P	P	11 58 09.2	+0.2
	baz=166						
T57A	Hurt	57.91	350	P	P	11 58 09.5	+0.5
	baz=169						
OXF	Oxford	57.97	340	P	P	11 58 09.0	-0.4
	baz=157						
OXF	Oxford	57.97	340	P	P	11 58 09.0	-0.4
PLAL	Pickwick Lake	57.99	342	P	P	11 58 08.7	-0.9
PLAL				IAmb	IAmb	11 58 10.1	
	comp=Z,14nm,0.9s						
Z41A	Richland Creek	58.01	336	P	P	11 58 10.2	+0.5
	baz=154						
T56A	Rocky Mt	58.07	350	P	P	11 58 11.0	+0.9
	baz=168						
BLA	Blacksburg	58.31	349	P	P	11 58 12.3	+0.5
	baz=167						
X43A	Marvell	58.46	339	P	P	11 58 13.5	+0.7
	baz=156						
CLTN	Cedars of Leba	58.54	344	IAmb	IAmb	11 58 14.0	
	comp=Z,15nm,0.8s						
JCT	Junction City	58.64	329	P	P	11 58 14.4	+0.2
	baz=146						
R61A	Willards	58.73	354	P	P	11 58 14.5	0.0
	baz=173						
R60A	Leonardtown, M	58.80	353	P	P	11 58 15.9	+0.9
	baz=172						
WHTX	Lake Whitney,	58.81	332	P	P	11 58 15.7	+0.3
	baz=149						
WHTX	Lake Whitney,	58.81	332	IAmb	IAmb	11 58 16.7	
	comp=Z,12nm,0.9s						
HPIG		58.98	322	IAmb	IAmb	11 58 18.4	
	comp=Z,7.4nm,0.7s						
WVT	Waverly	58.99	342	P	P	11 58 15.7	-0.8
	baz=159						
WVT	Waverly	58.99	342	P	P	11 58 15.4	-1.0
S54A	Dingess, Beckl	59.04	349	P	P	11 58 17.1	+0.2
	baz=167						
R57A	Stanardsville	59.07	351	P	P	11 58 17.7	+0.7
	baz=170						
X40A	Basin Creek Fa	59.12	337	P	P	11 58 17.8	+0.4
	baz=154						
SLBS	Sierra La Lagu	59.28	316	P	P	11 58 20.4	+1.6
R55A	Marlinton	59.30	350	P	P	11 58 19.7	+1.0
	baz=168						
R56A	Bull Pasture M	59.31	350	P	P	11 58 20.5	+1.8
	baz=169						
R54A	Victor	59.36	349	P	P	11 58 19.4	+0.4
	baz=167						
Q59A	Harwood	59.39	353	P	P	11 58 20.0	+0.8
	baz=172						
MIAR	Mount Ida	59.44	336	P	P	11 58 19.6	-0.1
	baz=153,SNR=7.6						
MIAR	Mount Ida	59.44	336	P	P	11 58 19.9	+0.3
MIAR				IAmb	IAmb	11 58 20.7	
	comp=Z,14nm,0.8s						
W41B	Gary Mavity, V	59.52	338	P	P	11 58 19.7	-0.5
	baz=155						
WHAR	Wooly Hollow	59.64	338	P	P	11 58 21.0	0.0
WHAR				IAmb	IAmb	11 58 21.3	
	comp=Z,10nm,0.9s						
TX31	Lajitas Ar. Si	59.70	325	P	P	11 58 22.3	+0.7
TX31				IAmb	IAmb	11 58 22.6	
	comp=Z,8.0nm,0.8s						
TX32	Lajitas Array	59.70	325	P	P	11 58 21.9	+0.2
TXAR	Lajitas Array	59.70	325	P	P	11 58 21.8	+0.1
	comp=Z,1.8nm,0.7s,baz=151,slow=8.8,SNR=25						
Q57A	Strasburg	59.78	352	P	P	11 58 21.8	-0.1
	baz=170						
Z35A	Perchaven, San	59.86	333	P	P	11 58 23.2	+0.7
LCAR	Lake Charles	59.96	339	P	P	11 58 23.0	-0.1
LCAR				IAmb	IAmb	11 58 23.5	
	comp=Z,11nm,0.7s						
W39A	Magazine	60.10	337	P	P	11 58 24.6	+0.5
	baz=153,SNR=8.5						
Q54A	Coxs Mills	60.11	349	P	P	11 58 23.9	-0.2
Q53A	Leroy	60.11	349	P	P	11 58 24.5	+0.3
	baz=166						
FCAR	Ozark Folk Cen	60.13	338	P	P	11 58 23.8	-0.5
FCAR				IAmb	IAmb	11 58 24.6	
	comp=Z,11nm,0.9s						
X37A	Clayton	60.17	335	P	P	11 58 24.8	+0.1
ABTX	Abilene, Hawle	60.34	330	P	P	11 58 26.1	+0.2
	baz=147						
ABTX	Abilene, Hawle	60.34	330	P	P	11 58 26.2	+0.4
ABTX				IAmb	IAmb	11 58 27.2	
	comp=Z,14nm,1.0s						
PBMO	Poplar Bluff	60.37	340	P	P	11 58 25.5	-0.5
MCWV	Mont Chateau	60.60	350	P	P	11 58 28.2	+0.7
	baz=168						
MCWV	Mont Chateau	60.60	350	P	P	11 58 28.1	+0.7
MCWV				IAmb	IAmb	11 58 29.2	
	comp=Z,7.8nm,0.7s						
P53A	Whipple	60.70	349	P	P	11 58 28.6	+0.5
U40A	Yellville	60.80	338	P	P	11 58 28.3	-0.5
	baz=154,SNR=9.0						
U40A	Yellville	60.80	338	IAmb	IAmb	11 58 29.6	
	comp=Z,16nm,0.8s						
P52A	Corning	60.98	348	P	P	11 58 29.8	-0.2
	baz=166						
O56A	Blue Knob Stat	61.02	352	P	P	11 58 30.6	+0.3
	baz=170						
HHAR	Hobbs	61.12	337	IAmb	IAmb	11 58 31.9	
	comp=Z,19nm,1.1s						
MGMO	Mountain Grove	61.32	339	P	P	11 58 32.3	-0.1
MGMO				IAmb	IAmb	11 58 33.1	
	comp=Z,12nm,0.8s						
O53A	New Philadelph	61.41	349	P	P	11 58 32.9	0.0
	baz=167						
P49A	Miami Univ. Ec	61.41	346	P	P	11 58 32.6	-0.4
	baz=163						
U38A	Gravette	61.43	337	IAmb	IAmb	11 58 38.0	
	comp=Z,9.6nm,1.2s						
TUL1	Leonard	61.50	335	P	P	11 58 33.5	-0.1
	baz=151						
TUL1	Leonard	61.50	335	IAmb	IAmb	11 58 34.8	
	comp=Z,18nm,1.1s						
ACSO	Alum Creek Sta	61.72	348	P	P	11 58 34.9	-0.1
	baz=165						
CCM	Cathedral Cave	61.80	340	P	P	11 58 35.1	-0.5
	baz=156						
CCM	Cathedral Cave	61.80	340	P	P	11 58 35.5	-0.1
CCM				IAmb	IAmb	11 58 36.3	
	comp=Z,18nm,0.9s						
N54A	Moraine State	61.90	351	P	P	11 58 36.7	+0.5
	baz=168						
QUOK	Quay	62.09	335	IAmb	IAmb	11 58 38.6	
	comp=Z,20nm,0.9s						
L65A	Cape Cod Natio	62.12	359	P	P	11 58 38.6	+1.0
	baz=179						
R40A	Maddies Statio	62.35	339	P	P	11 58 39.2	0.0
R40A				IAmb	IAmb	11 58 39.8	
	comp=Z,14nm,0.8s						
MNTX	Cornudas Mount	62.47	325	P	P	11 58 40.0	-0.1
	baz=141						
MNTX	Cornudas Mount	62.47	325	P	P	11 58 40.1	-0.1
L59A	Walton	62.53	355	P	P	11 58 40.7	+0.3
	baz=174						
T35A	Sooner Cattle	62.66	335	IAmb	IAmb	11 58 43.2	
	comp=Z,14nm,0.9s						
MSTX	Muleshoe	62.93	329	P	P	11 58 43.1	-0.2
	baz=144						
MSTX	Muleshoe	62.93	329	P	P	11 58 43.4	0.0
MSTX				IAmb	IAmb	11 58 44.4	
	comp=Z,18nm,0.9s						
AMTX	Amarillo	63.16	330	P	P	11 58 45.0	+0.2
	baz=146						
SNAA	Sanae	63.33	161	P	P	11 58 46.9	+1.4
	comp=Z,2.0nm,0.7s,baz=328,slow=7.1,SNR=6.7						
SNAA	Sanae	63.33	161	P	P	11 58 46.9	+1.4
SNAA				IAmb	IAmb	11 59 16.2	
	comp=Z,8.5nm,0.9s						
P40A	Paris	63.40	340	P	P	11 58 45.7	-0.5
L48A	N Adams	63.66	347	P	P	11 58 47.5	-0.4
HSIG		63.67	319	P	P	11 58 49.9	+1.7
HSIG				IAmb	IAmb	11 58 50.7	
	comp=Z,23nm,1.4s						
P38A	Dawn	63.97	339	IAmb	IAmb	11 58 50.7	
	comp=Z,18nm,0.7s						
319A	Douglas	64.39	322	IAmb	IAmb	11 58 55.5	
	comp=Z,20nm,0.8s						
121A	Cookes Peak, D	64.41	324	P	P	11 58 54.6	+1.4
	baz=140						
121A	Cookes Peak, D	64.41	324	IAmb	IAmb	11 58 55.9	
	comp=Z,23nm,1.4s						
KSU1	Kansas State U	64.60	336	P	P	11 58 53.7	-0.4
	baz=151						
R32A	Long Quarter,	64.83	335	IAmb	IAmb	11 58 56.9	
	comp=Z,12nm,0.8s						
ANMO	Albuquerque	65.55	327	P	P	11 59 01.3	+0.8
	baz=141						
ANMO	Albuquerque	65.55	327	P	P	11 59 01.6	+1.0
CBKS	Cedar Bluff	65.58	334	P	P	11 59 00.9	+0.4
	baz=148,SNR=5.2						
N35A	Tabor	65.80	338	P	P	11 59 02.0	+0.3
TUC	Tucson	65.94	322	P	P	11 59 04.1	+1.2
	baz=137						
TUC	Tucson	65.94	322	P	P	11 59 04.2	+1.2
TUC				IAmb	IAmb	11 59 05.6	
	comp=Z,10nm,1.3s						
F64A	Sherman	65.95	0	P	P	11 59 02.1	-0.5
F64A				IAmb	IAmb	11 59 11.5	
	comp=Z,24nm,1.1s						
JFWS	Jewell Farm	65.98	343	P	P	11 59 02.9	0.0
	baz=158						
T25A	Trinidad	66.27	330	P	P	11 59 06.0	+0.9
	baz=144						
E63A	Oxbow	66.51	0	P	P	11 59 08.7	+2.6
	baz=181						
214A	Organ Pipe Nat	66.88	320	P	P	11 59 10.9	+2.0
	baz=135						
214A	Organ Pipe Nat	66.88	320	IAmb	IAmb	11 59 12.0	
	comp=Z,16nm,0.9s						
KSCO	Kaye Shedlock’	66.98	332	P	P	11 59 10.4	+0.9
	baz=146						
KSCO	Kaye Shedlock’	66.98	332	IAmb	IAmb	11 59 11.5	
	comp=Z,12nm,0.8s						
BGNE	Belgrade	67.19	337	P	P	11 59 11.0	+0.3
	baz=150						
SDCO	Great Sand Dun	67.28	329	P	P	11 59 12.8	+1.1
	baz=143,SNR=12						
SDCO	Great Sand Dun	67.28	329	IAmb	IAmb	11 59 14.0	
	comp=Z,24nm,1.4s						
SFX	San Felipe	67.50	318	P	P	11 59 14.3	+1.6
SFX				IAmb	IAmb	11 59 15.6	
	comp=Z,11nm,0.8s						
X16A	Lo Mia Camp, P	67.85	323	P	P	11 59 16.8	+1.6
X16A				IAmb	IAmb	11 59 18.1	
	comp=Z,7.6nm,0.9s						
SPX	San Pedro Mart	67.88	318	P	P	11 59 17.4	+1.8
SPX				IAmb	IAmb	11 59 18.4	
	comp=Z,9.1nm,1.0s						
S22A	4UR Ranch, Cre	67.92	328	P	P	11 59 16.8	+1.1
	baz=142						
S22A	4UR Ranch, Cre	67.92	328	P	P	11 59 16.9	+1.1
Q24A	Divide	68.08	330	P	P	11 59 17.9	+1.2
	baz=144,SNR=5.6						
Q24A	Divide	68.08	330	P	P	11 59 17.6	+0.9
Q24A				IAmb	IAmb	11 59 18.8	
	comp=Z,14nm,1.1s						
LIC	Lamto	68.14	74	*e*P	P	11 59 16.4	-0.8
	comp=Z,33nm,0.7s						
TIC	Toumodi	68.33	74	*e*P	P	11 59 17.6	-0.8
MVCO	Mesa Verde	68.35	327	P	P	11 59 19.5	+1.2
	baz=140,SNR=7.1						
MVCO	Mesa Verde	68.35	327	P	P	11 59 18.4	+0.1
MVCO				IAmb	IAmb	11 59 20.1	
	comp=Z,9.0nm,0.9s						
KIC	Kosan Boka	68.46	74	*e*P	P	11 59 18.6	-0.6
	comp=Z,51nm,0.8s						
K31A	O'Neill	68.46	337	P	P	11 59 18.3	-0.3
DBIC	Dimbokro	68.48	74	P	P	11 59 18.9	-0.4
	comp=Z,24nm,0.8s,baz=220,slow=6.1,SNR=36						
DBIC	Dimbokro	68.48	74	P	P	11 59 17.8	-1.5
WUAZ	Wupatki	68.61	324	P	P	11 59 21.6	+1.6
	baz=137,SNR=13						
WUAZ	Wupatki	68.61	324	P	P	11 59 21.5	+1.6
WUAZ				IAmb	IAmb	11 59 22.9	
	comp=Z,16nm,0.9s						
ECSD	EROS Data Cent	68.68	339	P	P	11 59 20.4	+0.5
	baz=152						
SPMN	Marine on St.	68.83	342	P	P	11 59 20.4	-0.3
	baz=156						
ESJX	Sierra Juarez	68.84	318	P	P	11 59 22.6	+1.2
ESJX				IAmb	IAmb	11 59 23.6	
	comp=Z,12nm,1.2s						
ISCO	Idaho Springs	68.97	330	P	P	11 59 23.3	+1.2
	baz=143,SNR=6.3						
ISCO	Idaho Springs	68.97	330	P	P	11 59 21.2	-1.0
PV13	Radium Mtn., P	69.24	327	P	P	11 59 25.0	+1.3
PDMCI	Parker Dam,Lak	69.33	321	P	P	11 59 25.8	+1.7
	baz=135						
IKP	In-Ko-Pah, Jac	69.38	319	P	P	11 59 26.3	+1.7
	baz=133,SNR=7.0						
SWSC	Sam W. Stewart	69.39	319	P	P	11 59 26.2	+1.7
	baz=133						
TKX	Tecate	69.63	318	IAmb	IAmb	11 59 28.1	
	comp=Z,18nm,1.0s						
BC3	Big Chuckawall	69.66	320	P	P	11 59 28.3	+1.9
	baz=134,SNR=15						
MONP2	Monument Peak	69.73	319	P	P	11 59 29.0	+2.1
	baz=133,SNR=7.6						
W13A	Hualapai Mount	69.74	322	P	P	11 59 28.8	+1.9
W13A				IAmb	IAmb	11 59 30.0	
	comp=Z,6.8nm,0.7s						
BAR	Barrett	69.75	318	P	P	11 59 27.8	+1.0
BAR				IAmb	IAmb	11 59 29.7	
	comp=Z,13nm,0.8s						
QSPA	South Pole Qui	69.78	180	P	P	11 59 28.9	+2.2
	comp=Z,1.5nm,0.7s,baz=159,slow=1.7,SNR=14						
QSPA	South Pole Qui	69.78	180	P	P	11 59 27.4	+0.7
U15A	North Rim	69.79	324	P	P	11 59 29.1	+1.8
U15A				IAmb	IAmb	11 59 30.6	
	comp=Z,15nm,0.9s						
IRM	Iron Mountain	69.82	320	P	P	11 59 29.1	+1.9
	baz=134,SNR=8.0						
N23A	Red Feather La	69.99	331	P	P	11 59 29.5	+1.1
	baz=143						
N23A	Red Feather La	69.99	331	P	P	11 59 29.4	+1.1
PHWY	Pilot Hill	70.10	332	P	P	11 59 30.1	+1.0
BELC	Belle Mtn. Jos	70.22	320	P	P	11 59 31.8	+2.0
	baz=133,SNR=9.5						
TPFO	Pinon Flats	70.23	319	P	P	11 59 31.9	+2.0
	baz=133,SNR=10						
PFO	Pinyon Flats O	70.24	319	P	P	11 59 32.0	+2.1
	baz=133,SNR=9.8						
PFO	Pinyon Flats O	70.24	319	P	P	11 59 31.8	+1.9
PFO				IAmb	IAmb	11 59 32.9	
	comp=Z,9.2nm,0.9s						
MATQ	Matagami	70.27	354	P	P	11 59 31.5	+2.0
	baz=171						
F33A	5 Mile Ranch,	70.44	340	IAmb	IAmb	11 59 31.3	
	comp=Z,12nm,1.0s						
O20A	White River Ci	70.47	329	P	P	11 59 32.8	+1.5
	baz=141						
GMRC	Granite Mounta	70.56	321	P	P	11 59 34.0	+2.2
	baz=134,SNR=18						
MURC	Murrieta	70.69	319	P	P	11 59 34.3	+1.8
	baz=132						
LCMT	Little Creek M	70.74	324	P	P	11 59 34.9	+2.1
SRU	San Rafael Swe	70.83	327	P	P	11 59 33.6	+0.1
BBRC	Big Bear Solar	70.96	319	P	P	11 59 36.8	+2.4
	baz=133,SNR=6.9						
HEC	Hector,Ludlow	70.99	320	P	P	11 59 36.7	+2.3
	baz=133,SNR=10						
MVU	Marysvale	71.26	325	P	P	11 59 37.6	+1.5
TMUT	Trail Mountain	71.32	327	P	P	11 59 37.4	+0.8
BFSC	Mount Baldy Ra	71.40	319	P	P	11 59 38.8	+1.9
	baz=132,SNR=8.7						
FMP	Fort Macarthur	71.45	318	P	P	11 59 39.1	+2.1
	baz=132						
RDMU	Red Mountain	71.45	328	P	P	11 59 38.6	+1.4
SHPR	Sheep Range	71.46	322	P	P	11 59 38.6	+1.3
SHPR				IAmb	IAmb	11 59 40.4	
	comp=Z,9.3nm,0.9s						
GSC	Goldstone, Bar	71.60	320	P	P	11 59 40.0	+1.9
	baz=133,SNR=10.0						
MWC	Mount Wilson	71.64	319	IAmb	IAmb	11 59 40.9	
	comp=Z,11nm,0.7s						
K22A	Casper	71.66	332	P	P	11 59 39.3	+1.0
	baz=143						
PASC	Pasadena Art C	71.68	319	IAmb	IAmb	11 59 41.5	
	comp=Z,22nm,1.2s						
SHOC	Shoshone, Teco	71.69	321	P	P	11 59 40.2	+1.7
	baz=134,SNR=6.4						
RSSD	Black Hills	71.79	334	P	P	11 59 40.0	+0.9
	baz=146						
RSSD	Black Hills	71.79	334	P	P	11 59 40.9	+1.8
PRN	Pahroc Range	72.03	323	IAmb	IAmb	11 59 44.0	
	comp=Z,11nm,1.1s						
EDW2	Edwards Air Fo	72.03	319	P	P	11 59 42.3	+1.7
	baz=132,SNR=12						
PSUT	Pine Spring	72.17	324	P	P	11 59 43.4	+1.9
LRMC	Laurel Mtn Rad	72.25	320	P	P	11 59 43.8	+1.9
	baz=132,SNR=8.8						
OSI	Osito Audit: C	72.31	319	P	P	11 59 44.3	+2.1
	baz=131						
TPNV	Topopah Spring	72.40	322	P	P	11 59 45.2	+2.4
	baz=134,SNR=17						
TPNV	Topopah Spring	72.40	322	IAmb	IAmb	11 59 46.2	
	comp=Z,12nm,0.9s						
FURC	Furnace Creek,	72.42	321	P	P	11 59 45.0	+2.2
	baz=133,SNR=18						
SCZ2	Santa Cruz Isl	72.47	318	P	P	11 59 44.9	+1.6
	baz=131						
MPMC	Manual Prospec	72.52	320	P	P	11 59 45.2	+1.5
	baz=133,SNR=10						
KOWA	Kowa	72.64	67	P	P	11 59 44.5	0.0
KOWA				IAmb	IAmb	11 59 46.9	
	comp=Z,23nm,1.5s						
SBC	Santa Barbara	72.81	318	P	P	11 59 47.0	+1.8
	baz=131						
DUG	Dugway, Tooele	72.81	326	P	P	11 59 47.1	+1.8
	baz=137,SNR=12						
DUG	Dugway, Tooele	72.81	326	IAmb	IAmb	11 59 48.1	
	comp=Z,10nm,1.1s						
ISA	Isabella, Lake	72.85	320	P	P	11 59 47.6	+2.2
	baz=132,SNR=18						
ISA	Isabella, Lake	72.85	320	P	P	11 59 47.3	+1.8
ISA				IAmb	IAmb	11 59 48.5	
	comp=Z,14nm,0.8s						
R11A	Troy Canyon, C	72.99	323	P	P	11 59 48.4	+2.0
	baz=135,SNR=9.6						
R11A	Troy Canyon, C	72.99	323	P	P	11 59 47.9	+1.5
GRAC	Grapevine Rang	73.08	321	P	P	11 59 49.1	+2.3
	baz=133						
CWC	Cottonwood Cre	73.13	320	P	P	11 59 49.1	+1.9
	baz=132						
BW06	Boulder Array	73.13	330	P	P	11 59 48.3	+1.1
	baz=140						
BW06	Boulder Array	73.13	330	P	P	11 59 47.1	-0.1
PD31	Pinedale Array	73.13	330	P	P	11 59 47.2	+0.1
PDAR	Pinedale Array	73.13	330	P	P	11 59 47.3	+0.1
	comp=Z,1.9nm,0.9s,baz=125,slow=7.6,SNR=9.5						
PKM	Mcpherson Peak	73.17	318	P	P	11 59 49.6	+2.1
	baz=131,SNR=14						
HWUT	Hardware Ranch	73.22	328	P	P	11 59 48.3	+0.6
HWUT				IAmb	IAmb	11 59 51.5	
	comp=Z,9.2nm,0.8s						
MDND	Maddock	73.29	339	P	P	11 59 48.4	+0.7
	baz=150						
VES	Vestal, Richgr	73.34	319	P	P	11 59 50.0	+1.8
	baz=131,SNR=13						
SMMC	Simmler	73.55	318	P	P	11 59 51.9	+2.3
	baz=131,SNR=13						
TIN	Tinemaha, Big	73.63	321	P	P	11 59 52.2	+2.1
	baz=132						
AHID	Auburn Hatcher	73.87	329	IAmb	IAmb	11 59 53.6	
	comp=Z,9.2nm,0.8s						
PAGB	Antelope Grade	73.98	319	IAmb	IAmb	11 59 54.7	
	comp=Z,11nm,0.7s						
ULM	Lac du Bonnet	74.26	342	P	P	11 59 52.9	-0.4
	comp=Z,5.5nm,0.7s,baz=167,slow=6.5,SNR=13						
ULM	Lac du Bonnet	74.26	342	P	P	11 59 53.1	-0.2
LOHW	Long Hollow	74.27	330	P	P	11 59 54.8	+1.0
MLAC	Mammoth, Mammo	74.37	321	P	P	11 59 56.6	+2.1
	baz=132,SNR=5.1						
OMMB	Old Mammoth Mi	74.46	321	P	P	11 59 56.3	+1.2
OMMB				IAmb	IAmb	11 59 57.9	
	comp=Z,13nm,0.8s						
LHV	Little Huntoon	74.59	322	IAmb	IAmb	11 59 58.7	
	comp=Z,8.7nm,0.8s						
NVAR	Mina Array Bea	74.60	322	P	P	11 59 56.8	+0.9
	comp=Z,4.6nm,0.8s,baz=159,slow=6.7,SNR=41						
PMPB	Monarch Peak	74.64	319	IAmb	IAmb	11 59 59.1	
	comp=Z,14nm,0.7s						
FLWY	Flagg Ranch	74.68	330	IAmb	IAmb	11 59 59.0	
	comp=Z,19nm,0.9s						
LAO	LASA Array	74.77	334	P	P	11 59 57.3	+0.9
	baz=144						
LAO	LASA Array	74.77	334	IAmb	IAmb	11 59 58.6	
	comp=Z,11nm,1.0s						
RLMT	Red Lodge	74.82	332	P	P	11 59 58.3	+1.4
	baz=141						
RLMT	Red Lodge	74.82	332	IAmb	IAmb	11 59 58.9	
	comp=Z,9.4nm,0.9s						
H17A	Grant Village	74.86	330	P	P	11 59 59.1	+1.8
	baz=140						
LKWY	Lake	74.91	331	IAmb	IAmb	12 00 01.1	
	comp=Z,10nm,0.8s						
GCMT	Greycliff	75.52	332	P	P	12 00 01.3	+0.5
CMB	Columbia Colle	75.56	320	P	P	12 00 01.9	+0.8
PNTR	Pine Nut	75.79	322	IAmb	IAmb	12 00 05.8	
	comp=Z,9.8nm,0.8s						
PAHR	Pah Rah Range	76.08	322	IAmb	IAmb	12 00 07.3	
	comp=Z,20nm,0.8s						
HLID	Hailey	76.09	328	P	P	12 00 06.0	+1.8
	baz=137						
HLID	Hailey	76.09	328	IAmb	IAmb	12 00 07.3	
	comp=Z,11nm,0.9s						
MCMT	McKenzie Canyo	76.25	329	P	P	12 00 06.7	+1.6
BOZ	Bozeman (W)	76.26	331	P	P	12 00 06.3	+1.3
	baz=139						
AFDM	Forest Hills D	76.50	321	P	P	12 00 07.7	+1.2
DLMT	Dillon	76.53	330	IAmb	IAmb	12 00 09.3	
	comp=Z,18nm,1.5s						
MFID	Camas Ranch	76.70	327	IAmb	IAmb	12 00 10.6	
	comp=Z,14nm,1.2s						
BEKR	Beckworth	76.75	322	P	P	12 00 09.3	+1.4
TOA0	Torodi Ar. Sit	77.05	71	P	P	12 00 09.3	-0.6
TOA0				IAmb	IAmb	12 00 11.6	
	comp=Z,15nm,0.5s						
TORD	Torodi Ar. Bea	77.05	71	P	P	12 00 09.2	-0.7
	comp=Z,9.0nm,0.4s,baz=254,slow=5.0,SNR=82						
HRY	Holter Researc	77.19	331	P	P	12 00 11.6	+1.3
ORV	Oroville	77.21	321	IAmb	IAmb	12 00 13.4	
	comp=Z,20nm,1.2s						
EGMT	Eagleton	77.29	333	P	P	12 00 11.7	+1.0
	baz=141,SNR=9.5						
EGMT	Eagleton	77.29	333	IAmb	IAmb	12 00 12.6	
	comp=Z,16nm,0.9s						
O03E	Paynes Creek	77.86	321	P	P	12 00 14.5	+0.4
	baz=130						
MOD	Modoc Plateau	78.06	323	IAmb	IAmb	12 00 17.9	
	comp=Z,17nm,1.4s						
MSO	Missoula	78.25	330	P	P	12 00 17.7	+1.6
	baz=138						
O02D	Mt. Diablo Mer	78.37	321	P	P	12 00 17.7	+0.8
	baz=130						
BMO	Blue Mountains	78.47	327	P	P	12 00 18.5	+1.2

BMO				IAmb	IAmb	12 00 19.9	
	comp=Z,10nm,0.9s						
WDC	Whiskeytown Da	78.48	321	P	P	12 00 16.8	-0.6
N02D	Trinity Center	78.83	322	P	P	12 00 20.0	+0.6
	baz=130,SNR=8.8						
M04C	Macdoel	78.84	323	P	P	12 00 20.7	+1.2
	baz=130,SNR=9.1						
K05A	Summer Lake	78.93	324	P	P	12 00 21.9	+1.8
K05A				IAmb	IAmb	12 00 23.2	
	comp=Z,18nm,0.9s						
M02C	Callahan	79.18	322	P	P	12 00 22.3	+1.0
	baz=130						
K04D	Chiloquin, OR	79.34	323	P	P	12 00 23.6	+1.4
	baz=131						
L04D	Klamath Falls	79.39	323	P	P	12 00 23.3	+0.8
	baz=130						
J05D	Fort Rock, OR	79.48	324	P	P	12 00 24.6	+1.6
	baz=131,SNR=6.1						
PINE	Pine Mountain	79.66	325	IAmb	IAmb	12 00 27.1	
	comp=Z,12nm,0.8s						
WALA	Waterton Lakes	79.88	332	IAmb	IAmb	12 00 27.1	
	comp=Z,13nm,0.9s						
J04D	Umpqua Nationa	79.94	324	P	P	12 00 26.9	+1.4
	baz=130						
FFC	Flin Flon	79.98	341	P	P	12 00 24.7	-0.4
HUMO	Hull Mountain	80.01	323	P	P	12 00 26.3	+0.6
L02E	Cave Junction	80.10	322	P	P	12 00 27.9	+1.7
	baz=129,SNR=5.6						
I05D	Terrebonne, OR	80.23	325	P	P	12 00 29.0	+2.1
	baz=131,SNR=11						
I04A	Tendick Farm,	80.47	324	P	P	12 00 29.8	+1.7
	baz=130						
K02D	Willamette Mer	80.47	322	P	P	12 00 29.9	+1.7
	baz=129						
HAWA	Hanford	80.66	327	IAmb	IAmb	12 00 31.7	
	comp=Z,11nm,0.8s						
D08A	Wollman Farm,	80.81	328	P	P	12 00 31.1	+1.3
D08A				IAmb	IAmb	12 00 32.6	
	comp=Z,15nm,1.4s						
G05D	Wamic, OR	80.82	325	P	P	12 00 32.0	+2.1
	baz=131,SNR=5.2						
J01E	Myrtle Point	80.92	323	P	P	12 00 32.5	+2.0
	baz=129						
H04A	Detroit Lake	80.92	325	P	P	12 00 31.1	+0.6
H04A				IAmb	IAmb	12 00 32.4	
	comp=Z,8.4nm,0.7s						
I03D	Drain, OR	80.92	323	P	P	12 00 32.0	+1.5
	baz=130						
E07A	Sunnyside	80.94	327	P	P	12 00 32.5	+2.0
H04D	Lebanon	81.11	324	P	P	12 00 32.8	+1.3
	baz=130						
F05D	White Salmon	81.31	326	P	P	12 00 34.2	+1.6
	baz=131						
I02D	Swisshome	81.46	323	P	P	12 00 34.8	+1.5
	baz=129						
FCC	Fort Churchill	81.56	347	P	P	12 00 33.5	+0.1
LTY	Liberty	81.82	327	P	P	12 00 35.5	+0.3
D05A	Enumclaw	82.45	327	P	P	12 00 39.6	+1.2
D05A				IAmb	IAmb	12 00 40.4	
	comp=Z,20nm,0.8s						
B06A	Marblemount	83.07	328	P	P	12 00 41.9	+0.3
B06A				IAmb	IAmb	12 00 43.0	
	comp=Z,16nm,0.6s						
B05A	Bryant	83.21	327	P	P	12 00 42.9	+0.6
	baz=131						
D03D	Eldon	83.24	326	P	P	12 00 43.7	+1.2
	baz=130						
ESDC	Sonseca Array	85.10	45	P	P	12 00 51.7	-0.5
	comp=Z,1.9nm,1.0s,baz=221,slow=6.2,SNR=6.5						
YKA	Yellowknife Ar	90.14	341	P	P	12 01 16.4	+0.7
	comp=Z,11nm,0.9s,baz=131,slow=5.1,SNR=126						
GERES	GERESS Array B	100.44	42	PP	PP	12 06 17.0	+5.7
	comp=Z,1.7nm,1.0s,baz=252,slow=13,SNR=4.2						
ILAR	Eielson Array	103.23	334	PP	PP	12 06 31.1	-0.6
	comp=Z,0.5nm,0.9s,baz=98,slow=5.6,SNR=4.1						
H11S2	WAKE ISLAND Hy	127.67	278	T	T	14 27 17.6	
	baz=102,slow=75,SNR=156						
H11S1	WAKE ISLAND Hy	127.68	278	T	T	14 27 18.6	
	baz=102,slow=75,SNR=113						
H11S3	WAKE ISLAND Hy	127.69	278	T	T	14 27 19.0	
	baz=102,slow=75,SNR=140						
H11N3	WAKE ISLAND Hy	127.72	280	T	T	14 27 20.9	
	baz=102,slow=74,SNR=52						
H11N2	WAKE ISLAND Hy	127.74	280	T	T	14 27 24.4	
	baz=102,slow=74,SNR=97						
H11N1	WAKE ISLAND Hy	127.74	280	T	T	14 27 24.5	
	baz=102,slow=74,SNR=71						
ASAR	Alice Springs	130.85	208	PKP	PKiKP	12 07 28.2	-0.4
	comp=Z,1.1nm,0.9s,baz=125,slow=1.9,SNR=7.2						
WRA	Warramunga Arr	133.86	211	PKP	PKPdf	12 07 33.9	+0.5
	comp=Z,1.0nm,0.6s,baz=159,slow=1.8,SNR=9.5						
ZALV	Zalesovo Beam	140.99	24	PKP	PKPdf	12 07 44.2	-1.2
	comp=Z,1.1nm,0.6s,baz=343,slow=1.5,SNR=6.0						
KSH	Kashi	144.45	50	PKP	PKPdf	12 07 52.6	+0.4
MKAR	Makanchi Array	144.78	35	PKP	PKPdf	12 07 52.1	-0.4
	comp=Z,1.5nm,0.8s,baz=338,slow=2.6,SNR=12						
WMQ	Urumqi	149.61	35	*e*PKPbc	PKPdf	12 08 00.4	-0.2
USRK	Ussuriysk Ar.	150.55	328	PKPbc	PKiKP	12 08 08.3	+0.2
	comp=Z,5.3nm,0.7s,baz=344,slow=0.8,SNR=14						
SIJI	Sorong	151.02	226	PKPbc	PKiKP	12 08 10.8	+0.7
	comp=Z,8.3nm,0.6s,baz=119,slow=3.9,SNR=3.9						
MJAR	Matsushiro Arr	151.34	310	PKPbc	PKiKP	12 08 10.1	+0.1
	comp=Z,4.2nm,1.0s,baz=65,slow=1.3,SNR=8.5						
MAT	Matsushiro	151.34	310	PKP	PKiKP	12 08 10.1	0.0
SONM	Songino Array	152.38	7	PKP	PKPdf	12 08 05.8	+0.9
	comp=Z,0.9nm,0.8s,baz=250,slow=0.5,SNR=4.9						
SONM				PKPbc	PKiKP	12 08 12.0	0.0
	comp=Z,1.9nm,0.7s,baz=320,slow=1.0,SNR=8.7						
KSRS	Korea Array	157.54	323	PKPab	PKPab	12 08 45.0	+0.8
	comp=Z,2.3nm,0.9s,baz=52,slow=4.9,SNR=5.7						
HHC	Hu-ho-hao-te	159.61	359	*e*PKP	PKPdf	12 08 13.9	-0.7
LZH	Lanzhou	163.15	20	*e*PKP	PKPdf	12 08 17.2	-1.3
LZH				pPKP	pPKPdf	12 08 42.9	-5.7
LZH				sPKP		12 08 53.9	
NJ2	Nanjing	166.44	330	*e*PKP	PKPdf	12 08 20.3	-0.9
CMAR	Chiang Mai Arr	168.44	98	PKPab	PKPab	12 09 33.3	+0.5
	comp=Z,0.3nm,0.4s,baz=217,slow=50,SNR=1.5						

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*IDC **09** 11:53:46.4±1.1, 49°.22S×108°.93E, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.0/32, mbtmp4.1/7, MS3.8/7, Ms1 3.7/7, ms1mx3.6/17, Error ellipse: s-maj=44.0km s-min=18.6km az=111.0*

*NEIC **09** 11:53:48.2±1.4, 49°.31S±0°.04×109°.2E±0°.4, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=39.3km s-min=6.7km az=276.0*

ISC 09 11:53:48.0±1.0**, 49°.3S**±0°.1×**109°.1E**±0°.2**, h10^{km}, n23, σ0ˢ.94**/17**, mb4.2**/9**, MS3.7**/6**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.84	16	T	T	12 12 28.1	
	baz=193,slow=74,SNR=74						
H01W1	Cape Leeuwin H	14.85	16	T	T	12 12 28.7	
	baz=193,slow=74,SNR=43						
H01W3	Cape Leeuwin H	14.86	16	T	T	12 12 28.7	
	baz=193,slow=74,SNR=72						
NWAO	Narrogin (SRO)	17.43	23	LR	LR	12 02 39.7	
	comp=Z,160nm,18.2s,baz=165,slow=31						
MAW	Mawson	29.34	214	LR	LR	12 08 26.5	
	comp=Z,107nm,20.9s,baz=56,slow=30						
STKA	Stephens Creek	29.89	67	P	P	11 59 56.2	+0.5
	5.0nm,1.2s,baz=190,slow=12,SNR=3.2						
STKA				LR	LR	12 09 49.7	
	comp=Z,197nm,21.1s,baz=209,slow=32						
STKA	Stephens Creek	29.89	67	P	P	11 59 55.5	-0.1
ASAR	Alice Springs	32.15	46	P	P	12 00 16.1	+0.4
	2.8nm,0.8s,baz=210,slow=8.2,SNR=24						
ASAR				LR	LR	12 11 27.1	
	comp=Z,154nm,21.7s,baz=198,slow=33						
AS31	Alice Springs	32.16	46	P	P	12 00 16.3	+0.5
AS31				IAmb	IAmb	12 00 16.7	
	comp=Z,1.8nm,0.9s						
VNDA	Vanda	34.54	162	P	P	12 00 36.8	+0.9
	comp=Z,1.8nm,0.8s,baz=289,slow=8.8,SNR=10						
VNDA				LR	LR	12 13 54.7	
	comp=Z,129nm,18.5s,baz=312,slow=35						
VNDA	Vanda	34.54	162	P	P	12 00 34.0	-2.0
VNDA				IAmb	IAmb	12 00 37.6	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	35.57	44	P	P	12 00 45.3	-0.1
	comp=Z,3.5nm,0.8s,baz=207,slow=8.3,SNR=9.0						
WRA				LR	LR	12 14 03.1	
	comp=Z,149nm,20.3s,baz=160,slow=34						
WR0	Warramunga Arr	35.64	44	P	P	12 00 43.7	-2.3
WR0				IAmb	IAmb	12 01 01.1	
	comp=Z,26nm,1.6s						
WB0	Warramunga Arr	35.74	44	P	P	12 00 47.4	+0.5
QSPA	South Pole Qui	40.86	180	P	P	12 01 30.2	+0.5
	comp=Z,4.2nm,0.7s,baz=294,slow=5.7,SNR=4.7						
QSPA	South Pole Qui	40.86	180	P	P	12 01 30.3	+0.6
QSPA				IAmb	IAmb	12 01 37.7	
	comp=Z,7.7nm,0.8s						
SNAA	Sanae	50.24	202	P	P	12 02 43.5	-0.2
	comp=Z,7.2nm,1.0s,baz=136,slow=12,SNR=7.6						
SNAA	Sanae	50.24	202	P	P	12 02 43.6	-0.2
SNAA				IAmb	IAmb	12 02 50.6	
	comp=Z,7.0nm,0.9s						
BOSA	Boshof	65.04	255	LR	LR	12 26 54.2	
	comp=Z,116nm,18.2s,baz=160,slow=31						
CMAR	Chiang Mai Arr	68.03	350	P	P	12 04 47.5	+0.1
	comp=Z,0.3nm,0.5s,baz=190,slow=8.2,SNR=1.7						
NVAR	Mina Array Bea	144.69	90	PKP	PKPab	12 13 23.9	+0.4
	comp=Z,0.5nm,0.7s,baz=223,slow=5.2,SNR=5.9						
TXAR	Lajitas Array	148.14	117	PKPbc	PKPbc	12 13 34.2	+0.3
	comp=Z,0.1nm,0.4s,baz=212,slow=5.0,SNR=2.5						
YKA	Yellowknife Ar	152.77	44	PKPbc	PKPbc	12 13 43.2	-0.6
	comp=Z,0.4nm,0.9s,baz=294,slow=2.4,SNR=4.4						

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*UCR **09** 12:05:58.5±2.2, 8°.20N×82°.79W, h10^{km}, MW3.9*

*UPA **09** 12:05:58.2±0.8, 8°.23N×82°.80W, h16^{km}±1^{km}, MW4.5*

ISC 09 12:05:56.8±1.2**, 8°.14N**±0°.05×**82°.81W**±0°.03**, h13^{km}**±9^{km}**, n42, σ1ˢ.19**/59**, 6C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.27	5	*i* P	Pb	12 06 03.3	-0.2
LESP3				*e*S	Sg	12 06 05.4	-0.9
BAGA3	Bagala, Chiriq	0.43	41	⇓*i*P	Pb	12 06 06.6	+0.3
BAGA3				*e*S	Sb	12 06 12.1	-0.6
PEDE3	Pedregal, Chir	0.46	58	*i* P	Pn	12 06 16.2	+7.1
PEDE3				*e*S	Sn	12 06 22.4	+5.3
LOCO3	Loma Colorada,	0.48	55	*i* P	Pb	12 06 07.1	+0.1
LOCO3				*e*S	Sb	12 06 13.8	-0.1
PIRO	Carate, Puerto	0.58	297	*e*P	Pg	12 06 08.9	+0.7
PIRO				*e*S	Sb	12 06 18.0	+1.1
PIRO	Carate, Puerto	0.58	297	⇑*e*P	Pg	12 06 08.8	+0.7
PTJ1	Puerto Jimnez	0.62	309	*i* P	Pg	12 06 09.8	+0.7
PTJ1				*e*S	Sn	12 06 21.9	+0.7
PTJ1	Puerto Jimnez	0.62	309	*e*P	Pg	12 06 09.6	+0.6
PTAR3	Potrerillos Ar	0.64	30	*i* P	Pb	12 06 09.6	-0.2
PTAR3				*e*S	Sb	12 06 18.4	-0.2
BCO2	Palmira	0.64	26	⇓*i*P	Pb	12 06 09.8	-0.2
BCO2				*e*S	Sb	12 06 18.4	-0.5
GUAL3	Gualaca, Chiri	0.64	52	⇓*i*P	Pg	12 06 09.6	+0.2
BRU2	Volcan	0.66	11	⇑*i*P	Pb	12 06 10.1	-0.3
BRU2				*e*S	Sb	12 06 19.0	-0.5
BRU2	Volcan	0.66	11	⇑*i*P	Pb	12 06 10.1	-0.3
BRU2				*e*S	Sb	12 06 18.7	-0.8
EDSV	San Vito	0.69	347	⇑*i*P	Pb	12 06 10.5	-0.3
BC3P	Paso Ancho	0.70	17	*i* P	Pb	12 06 10.5	-0.5
BC3P				*e*S	Sb	12 06 20.0	-0.7
RIOS	Rincon, Osa	0.89	309	*e*P	Pb	12 06 13.3	-0.9
REME3	Remedios, Chir	0.98	85	*e*P	Pb	12 06 15.1	-0.5
REME3				*e*S	Sg	12 06 29.8	+1.4
CHGR2	Aguacate	1.03	40	*e*P	Pb	12 06 15.6	-1.0
CHGR2				*e*S	Sb	12 06 28.7	-1.4
EDPN	Palmar Norte	1.04	322	⇑*i*P	Pb	12 06 15.5	-1.2
NANC3	Nancito, Chiri	1.08	85	*e*P	Pb	12 06 16.6	-0.7
EDBA	Buenos Aires	1.12	336	*e*P	Pb	12 06 17.5	-0.5
DRK0	Durika	1.20	339	*e*P	Pb	12 06 18.6	-0.9
DRK0				*e*S	Sg	12 06 35.3	-0.2
DRK0	Durika	1.20	339	*e*P	Pb	12 06 18.2	-1.3
PVID3	Puerto Vidal,	1.20	94	*e*P	Pn	12 06 18.6	-0.7
PVID3				*e*S	Sb	12 06 35.1	+0.4
PEZE	Perez Zeledon,	1.50	325	*e*P	Pn	12 06 23.4	-0.2
EDDO	Dominical	1.52	317	*e*P	Pn	12 06 24.0	+0.3
GMAL	Guarumal, Vera	1.61	103	*e*P	Pn	12 06 24.2	-0.7
GMAL				*e*S	Sn	12 06 45.5	0.0
RIMA	Rio Macho	1.92	327	*e*P	Pn	12 06 29.8	+0.4
LCR2	La Lucha 2	1.98	324	*e*P	Pn	12 06 30.9	+0.7
CVTR	Volcan Turrial	2.09	334	*e*P	Pb	12 06 33.6	-1.2
HDC	Heredia	2.25	325	*i* P	Pb	12 06 36.6	-0.9
HDC				*e*S	Sb	12 07 04.9	-0.4
HDC	Heredia	2.25	325	*e*P	Pb	12 06 35.9	-1.6
JACO	JACO, Garabito	2.37	310	⇑*i*P	Pn	12 06 35.1	-0.3
AZU	Azuero	2.54	98	*e*P	Pb	12 06 41.3	-0.9
AZU				*e*S	Sb	12 07 13.3	-0.1
FORC	Fortuna	2.95	322	*i* P	Pn	12 06 45.7	+2.3
CASO	Castillo	2.97	320	*i* P	Pb	12 06 46.8	-2.7
CEDE	Laguna Cedeo	2.99	322	*i* P	Pn	12 06 46.4	+2.4
JTS	Las Juntas de	3.01	316	*i* P	Pn	12 06 46.6	+2.4
JTS				*e*S	Sb	12 07 23.7	-3.1
JTS	Las Juntas de	3.01	316	*e*P	Pn	12 06 44.8	+0.6
PTEN	Parque Tenorio	3.34	320	*i* P	Pn	12 06 52.0	+3.2
ORTG	Ortega, Santa	3.42	310	*e*P	Pn	12 06 51.2	+1.3
LAPC	Finca la Perla	3.67	316	*i* P	Pn	12 06 55.9	+2.5

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*TAP **09** 12:35:40.7, 24°.88N×122°.42E, h16^{km}, ML2.6, C*

*JMA **09** 12:35:40.8±0.1, 24°.82N×122°.41E, h1^{km}±2^{km}, M2.3*

ISC 09 12:35:40.8±1.0**, 24°.85N**±0°.03×**122°.41E**±0°.02**, h10^{km}**±10^{km}**, n50, σ0ˢ.45**/82**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.42	293	P	Pg	12 35 49.4	+0.4
	baz=288						
TWB1				S	Sg	12 35 55.0	+0.5
	baz=288						
EGS		0.43	270	*e*P	Pb	12 35 50.3	-0.2
	baz=256						
EGS				*e*S	Sb	12 35 56.4	-0.8
	baz=256						
NTC	Toucheng	0.53	271	*e*P	Pb	12 35 52.0	-0.1
	baz=267						
TIPB	Shuangxi	0.55	283	*e*P	Pb	12 35 52.3	-0.2
	baz=279						
TIPB				*e*S	Sb	12 36 00.0	-0.4
	baz=279						
TWC	Suao	0.56	245	*e*P	Pg	12 35 52.3	+0.5
	baz=242						
TWC				*e*S	Sg	12 35 59.9	+0.7
	baz=242						
NWF	Wu-fen Shan	0.61	292	P	Pb	12 35 53.8	+0.1
	baz=288						
NWF				S	Sb	12 36 02.2	-0.2
	baz=288						
WFSB	Wu-fen Shan	0.61	292	*i* P	Pb	12 35 53.7	+0.1
	baz=288						
WFSB				S	Sg	12 36 01.5	+0.7
	baz=288						
JYNG	Yonagunijimaku	0.62	129	P	Pg	12 35 52.8	-0.1
JYNG				*e*S	Sg	12 36 01.4	+0.2
TNOU	National Taiwa	0.65	298	*e*P	Pg	12 35 52.2	-1.3
	baz=294						
TNOU				*e*S	Sg	12 36 01.1	-1.0
	baz=294						
YOJ	Yonaguni jima	0.67	125	P	Pg	12 35 53.7	0.0
YOJ				*e*S	Sg	12 36 02.5	0.0
YOJ	Yonaguni jima	0.67	125	*i* P	Pg	12 35 53.8	0.0
	baz=117						
YOJ				S	Sg	12 36 02.3	-0.1
	baz=117						
ENAH	Nanao	0.68	234	*e*S	Sg	12 36 03.1	+0.3
	baz=241						
TWE	Neicheng	0.69	260	*e*P	Pg	12 35 54.4	+0.3
	baz=247						
TWE				*e*S	Sb	12 36 04.3	-0.1
	baz=247						
ENA	Nanau	0.74	236	*e*P	Pb	12 35 55.5	-0.2
	baz=233						
ENA				*e*S	Sg	12 36 04.9	+0.1
	baz=233						
TWA	Mucha	0.76	280	*e*S	Sb	12 36 06.9	+0.3
	baz=277						
ENTT	Nioudou	0.80	255	*e*P	Pn	12 35 57.5	-0.5
	baz=253						
NHDH	Xindian Distri	0.81	278	*e*P	Pb	12 35 57.2	+0.2
	baz=275						
NHDH				*e*S	Sb	12 36 08.2	+0.1
	baz=275						
YM08	YM08	0.82	295	*e*P	Pg	12 35 56.7	0.0
	baz=278						
YM08				*e*S	Sg	12 36 07.6	+0.3
	baz=278						
YM01	YM01	0.82	292	*e*P	Pb	12 35 57.0	-0.2
	baz=289						
YM01				*e*S	Sb	12 36 08.2	-0.1
	baz=289						
YM11	YM11	0.82	293	*e*P	Pn	12 35 58.1	-0.4
	baz=291						
NWLT	Wulai	0.83	265	*e*P	Pb	12 35 57.5	+0.2
	baz=263						
NWLT				*e*S	Sb	12 36 08.6	+0.1
	baz=263						
YM05	YM05	0.83	293	*e*P	Pb	12 35 57.8	+0.4
	baz=290						
YM10	YM10	0.83	292	*e*P	Pb	12 35 57.1	-0.2
	baz=290						
PCYT	Pengchaiyu	0.84	339	*e*P	Pg	12 35 57.0	-0.1
	baz=330						
TWY	Chenhua	0.85	300	*e*P	Pb	12 35 58.2	+0.5
	baz=298						
TWY				*e*S	Sb	12 36 09.2	+0.1
	baz=298						
YM04	YM04	0.85	291	*e*P	Pb	12 35 57.9	+0.2
	baz=289						
NDT	Datong Townshi	0.85	254	*e*P	Pb	12 35 57.9	+0.2
	baz=251						
NDT				*e*S	Sb	12 36 09.3	+0.2
	baz=251						
ANP	Anpu	0.88	293	*e*P	Pb	12 35 58.4	+0.3
	baz=277						
ANP				*e*S	Sb	12 36 10.0	0.0
	baz=277						
YHNB	Yeheng	0.96	260	*e*P	Pb	12 35 59.6	0.0
	baz=266						
YHNB				*e*S	Sb	12 36 12.2	-0.1
	baz=266						
NSK	Sanguang	0.97	260	*e*P	Pb	12 35 59.7	-0.1
	baz=267						
NACB	Ninganchiao	1.00	228	*e*P	Pb	12 36 00.2	0.0
	baz=237						
NACB				*e*S	Sg	12 36 12.9	-0.2
	baz=237						
NNSB	Datong	1.02	246	*e*P	Pb	12 36 00.6	-0.1
	baz=233						
NNSB				*e*S	Sb	12 36 14.5	+0.3
	baz=233						
NNS	Nan Shan	1.03	247	*e*P	Pb	12 36 00.9	+0.1
	baz=233						
NNS				*e*S	Sb	12 36 14.4	0.0
	baz=233						
ETLH	Xiulin Townshi	1.06	233	*e*P	Pb	12 36 01.3	0.0
	baz=231						
ETLH				*e*S	Sg	12 36 14.8	-0.2
	baz=231						
WHF	Hehuan Shan	1.26	236	*e*P	Pb	12 36 04.9	0.0
	baz=234						
WHF				*e*S	Sb	12 36 21.5	+0.3
	baz=234						
LIOB	Emei	1.28	261	*e*P	Pn	12 36 04.4	-0.4
	baz=260						
TDCB	Techi	1.28	243	*e*P	Pn	12 36 05.2	+0.2
	baz=233						
IRIF	Iriomote-Funau	1.30	113	P	Pb	12 36 05.5	+0.1
IRIF				*e*S	Sb	12 36 22.4	+0.2
ESL	Shilin	1.36	221	*e*P	Pb	12 36 06.4	0.0
	baz=202						
CHGB	Renai	1.37	235	*e*P	Pg	12 36 07.1	-0.1
	baz=234						
CHGB				*e*S	Sg	12 36 25.0	0.0
	baz=234						
WHP	Taichung City	1.45	247	*e*P	Pg	12 36 08.9	+0.3
	baz=245						
WHP				*e*S	Sg	12 36 28.3	+0.8
	baz=245						
HATJ	Hateruma jima	1.49	121	P	Pb	12 36 08.7	+0.1
JKRS	Kuro-shima	1.58	112	P	Pb	12 36 10.0	0.0
HGSD	Ruisui	1.62	214	*e*P	Pg	12 36 11.7	-0.3
	baz=199						
SMLT	Sun Moon Lake	1.68	235	*e*P	Pg	12 36 13.0	-0.1
	baz=220						
SSLB	Suanglung	1.70	232	*e*P	Pb	12 36 11.6	-0.5
	baz=236						
SSLB				*e*S	Sg	12 36 35.8	+0.4
	baz=236						
YULB	Yu-li	1.77	215	*e*P	Pb	12 36 12.6	-0.7
	baz=214						
YULB				*e*S	Sn	12 36 35.0	+1.0
	baz=214						
ALS	Alishan	1.98	228	*e*P	Pb	12 36 16.9	-0.2
	baz=210						
ALS				*e*S	Sg	12 36 45.7	+1.1
	baz=210						
CHN5	Tsauling	2.01	232	*e*P	Pb	12 36 16.6	-0.9
	baz=214						
CHN5				*e*S	Sg	12 36 44.4	-1.1
	baz=214						
TPUB	Ta-pu	2.24	227	*e*P	Pb	12 36 19.9	-1.5
	baz=210						

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*IDC **09** 12:36:30.9±6.0, 36°.96N×76°.18E, h85^{km}±49^{km}, mb3.3/5, mb1 3.4/9, mb1mx3.1/46, mbtmp3.6/9, ML3.3/4, Error ellipse: s-maj=45.6km s-min=27.4km az=6.0*

*NNC **09** 12:36:39.7±4.0, 37°.49N×76°.07E, h138^{km}±48^{km}, mb2.8, mpv3.3, Error ellipse: s-maj=37.4km s-min=28.7km az=21.0*

ISC 09 12:36:33.0±1.3**, 37°.1N**±0°.1×**76°.2E**±0°.1**, h100^{km}, n16, σ1ˢ.44**/20**, mb3.6**/5**, 5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.68	347	P	Pn	12 37 56.5	+1.5
	0.4nm,0.3s,baz=162,slow=9.6,SNR=6.6						
AAK				S	Sn	12 39 00.1	+1.1
	1.0nm,0.3s,baz=351,slow=18,SNR=14						
AAK	Ala-Archa	5.68	347	P	Pn	12 37 57.6	+2.5
	4.1nm,0.9s						
AAK				⇑S	Sn	12 38 57.4	-1.5
	18nm,0.8s						
TKM2	Tokmak 2	5.83	356	⇓P	Pn	12 37 59.1	+1.9
	1.7nm,0.5s						
TKM2				⇑S	Sn	12 39 01.7	-1.0
	4.4nm,0.7s						
KK31	Karatay Array	7.40	326	P	Pn	12 38 19.4	+1.2
	0.6nm,0.3s,baz=132,slow=12,SNR=13						
KK31				⇑S	Sn	12 39 37.5	-3.0
	1.8nm,0.3s,baz=140,slow=23,SNR=11						
MK31	Makanchi Array	10.70	23	⇑P	Pn	12 39 02.1	-1.0
	0.4nm,0.3s,baz=197,slow=12,SNR=27						
MKAR	Makanchi Array	10.70	23	P	Pn	12 39 02.3	-0.9
	0.6nm,0.3s,baz=209,slow=15,SNR=28						
MKAR				S	Sn	12 40 53.1	-7.8
	baz=189,slow=28,SNR=1.7						
WMQ	Urumqi	11.05	49	*e*P	Pn	12 39 07.7	-0.2
WMQ				smax	smax		
	comp=N,13nm,0.7s						
WMQ				smax	smax		
	comp=E,11nm,0.7s						
KURBB	Kurchatov Arra	13.62	6	P	Pn	12 39 40.3	-1.5
	comp=E,0.0nm,0.3s,baz=188,slow=12,SNR=2.3						
AB31	Akbulak array	16.91	321	P	P	12 40 25.1	+1.3
	comp=E,1.3nm,0.6s,baz=130,slow=13,SNR=14						
AKTO	Aktyubinsk	18.63	321	P	Pn	12 40 43.9	-0.2
	comp=E,0.3nm,0.3s,baz=117,slow=10,SNR=4.8						
AKTO	Aktyubinsk	18.63	321	⇑P	P	12 40 43.0	+0.4
	comp=E,1.4nm,0.6s						
SONM	Songino Array	24.59	55	P	P	12 41 44.0	+0.2
	comp=E,0.2nm,0.5s,baz=255,slow=11,SNR=3.2						
BRTR	Keskin Array B	33.20	288	P	P	12 42 59.8	-0.5
	comp=E,0.4nm,0.5s,baz=82,slow=11,SNR=2.1						
FINES	FINESS Array B	39.36	324	P	P	12 43 52.8	+0.6
	comp=E,0.9nm,0.4s,baz=122,slow=9.4,SNR=9.2						
NOA	NORSAR Array B	46.41	323	P	P	12 44 49.5	+0.3
	comp=E,0.6nm,0.6s,baz=96,slow=7.7,SNR=3.4						
TORD	Torodi Ar. Bea	69.86	271	P	P	12 47 32.3	-1.0
	comp=E,0.4nm,0.4s,baz=57,slow=5.2,SNR=4.6						

IDC 09 12:57:30.0±4.1**, 19°.05S**×**173°.21W, h0^{km}, mb3.5**/4**, mb1 3.9**/4**, mb1mx3.6**/27**, mbtmp3.5**/4**, Error ellipse: s-maj=221.3km s-min=30.6km az=148.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	Alice Springs	49.24	255	P	P	13 06 21.2	+0.5
	0.6nm,0.5s,baz=89,slow=7.8,SNR=13						
WRA	Warramunga Arr	49.28	260	P	P	13 06 19.7	-1.3
	0.5nm,0.8s,baz=93,slow=8.4,SNR=1.5						
NVAR	Mina Array Bea	76.92	41	P	P	13 09 23.9	-0.7
	0.2nm,0.6s,baz=246,slow=5.7,SNR=2.3						
ILAR	Eielson Array	85.98	11	P	P	13 10 12.7	+0.9
	0.5nm,1.1s,baz=208,slow=6.6,SNR=4.2						

*IDC **09** 13:25:42.6±1.6, 26°.61N×88°.81E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/44, mbtmp3.6/8, ML3.2/1, Error ellipse: s-maj=66.8km s-min=20.0km az=62.0*

ISC 09 13:25:47.7±1.6, **26°.6N**±0°.2×**88°.8E**±0°.4, **h35km, n8,** σ**0ˢ.95**/8, **mb3.5**/6, **India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	19.79	327	P	P	13 30 15.7	+0.7
	0.1nm,0.3s,baz=148,slow=9.7,SNR=6.7						
MKAR	Makanchi Array	20.77	347	P	P	13 30 26.5	+1.0
	0.8nm,0.6s,baz=171,slow=11,SNR=12						
KURBB	Kurchatov Arra	25.21	345	P	P	13 31 10.1	+0.1
	0.7nm,0.6s,baz=167,slow=8.8,SNR=9.5						
SONM	Songino Array	25.26	29	P	P	13 31 10.7	0.0
	0.2nm,0.5s,baz=206,slow=9.6,SNR=2.4						
ZALV	Zalesovo Beam	27.44	355	P	P	13 31 30.2	+0.1
	0.3nm,0.3s,baz=183,slow=10.0,SNR=3.6						
ARCES	ARCESS Array B	56.02	338	P	P	13 35 21.5	-1.0
	2.8nm,0.9s,baz=109,slow=7.9,SNR=1.3						
WRA	Warramunga Arr	63.99	132	P	P	13 36 17.0	-0.9
	0.7nm,1.0s,baz=320,slow=6.7,SNR=2.2						
ASAR	Alice Springs	66.35	135	P	P	13 36 34.3	+1.2
	0.3nm,0.7s,baz=315,slow=6.3,SNR=5.1						

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*JMA **09** 13:42:08.7±0.4, 33°.05N×139°.41E, h196km±5km, M3.2*

*IDC **09** 13:42:09.8±0.7, 33°.12N×139°.41E, h192km±5km, mb3.2/10, mb1 3.4/12, mb1mx3.1/43, mbtmp3.7/12, Error ellipse: s-maj=29.3km s-min=19.1km az=49.0*

ISC 09 13:42:10.3±0.8, **33°.06N**±0°.09×**139°.32E**±0°.08, **h200km, n24,** σ**1ˢ.39**/26, **mb3.2**/10, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.39	81	P	Pn	13 42 35.1	-2.0
	112nm,0.3s,baz=206,slow=23,SNR=33						
JHJ				S	Sn	13 42 56.5	-1.2
	68nm,0.3s,baz=60,slow=20,SNR=5.9						
JHJ2	Mitsune	0.42	83	P	Pn	13 42 34.9	-2.2
JIM2	Oshima 3	1.66	3	P	Pn	13 42 44.3	-1.2
TK04	Tokai 4	1.79	318	P	Pn	13 42 45.6	-1.0
BSO3	Boso 3	2.00	29	P	Pn	13 42 47.1	-1.4
BSO1	Boso 1	2.10	40	P	Pn	13 42 47.5	-1.8
BSO1				eX		13 43 18.7	
JOD2	Odawara 2	2.21	355	P	Pn	13 42 50.3	-0.7
JIE	Ise	2.55	302	P	Pn	13 42 53.4	-1.4
JIE				eS	Sn	13 43 27.4	-2.1
JRY	Ryogami san	2.97	353	P	Pn	13 42 59.2	-0.4
JTNC	Tanabenakahech	3.19	285	P	Pn	13 43 00.7	-1.6
JAG	Ashikaga	3.36	2	P	Pn	13 43 02.3	-1.9
MJAR	Matsushiro Arr	3.59	346	P	Pn	13 43 07.1	+0.1
	0.1nm,0.3s,baz=155,slow=12,SNR=2.4						
KSRS	Korea Array	10.30	298	P	Pn	13 44 35.2	+1.9
	0.1nm,0.3s,baz=119,slow=14,SNR=3.2						
KLR	Kul'dur	17.11	343	P	P	13 45 55.8	-0.5
	0.2nm,0.3s,baz=185,slow=8.5,SNR=5.1						
MKAR	Makanchi Array	44.89	305	P	P	13 50 04.6	-0.3
	0.2nm,0.5s,baz=86,slow=8.3,SNR=6.4						
KURBB	Kurchatov Arra	47.19	311	P	P	13 50 22.0	-0.7
	0.6nm,0.6s,baz=113,slow=5.0,SNR=5.9						
BVAR	Borovoye Array	52.05	314	P	P	13 50 59.7	+0.4
	0.2nm,0.3s,baz=118,slow=10,SNR=4.2						
WRA	Warramunga Arr	52.92	186	P	P	13 51 07.8	+1.7
	0.3nm,0.5s,baz=5.5,slow=7.9,SNR=1.6						
ARCES	ARCESS Array B	67.11	340	P	P	13 52 42.6	+0.8
	6.6nm,1.1s,baz=61,slow=6.3,SNR=1.8						
FINES	FINESS Array B	71.52	332	P	P	13 53 09.7	+0.7
	0.7nm,0.4s,baz=46,slow=8.2,SNR=7.6						
AKASG	Malin Array Be	76.38	322	P	P	13 53 37.8	+0.4
	0.5nm,0.4s,baz=50,slow=5.4,SNR=2.2						
NVAR	Mina Array Bea	78.77	51	P	P	13 53 49.8	-1.4
	0.1nm,0.4s,baz=310,slow=3.4,SNR=1.8						
BRTR	Keskin Array B	80.18	311	P	P	13 53 58.9	+0.3
	0.3nm,0.5s,baz=72,slow=5.0,SNR=1.7						
TXAR	Lajitas Array	93.92	51	P	P	13 55 07.3	+1.7
	0.1nm,0.5s,baz=328,slow=3.2,SNR=1.9						

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*IDC **09** 13:53:40.0±0.8, 2°.75S×129°.72E, h0km, mb4.1/7, mb1 4.2/9, mb1mx3.8/39, mbtmp4.2/9, ML4.2/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=27.7km s-min=16.4km az=71.0*

*NEIC **09** 13:53:43.3±2.3, 2°.8S±0°.1×130°.0E±0°.3, h33km±8km, mb4.2/10, Error ellipse: s-maj=45.2km s-min=11.2km az=70.0*

*DJA **09** 13:53:44.8±1.4, 3°S±4°×13°0E±°, h17km±13km, M4.2/9, mb4.6/1, mB5.2/1, MLv4.1/9, Mw(mB)4.5/1*

ISC 09 13:53:43.2±0.6, **2°.88S**±0°.05×**129°.61E**±0°.05, **h28km, n33,** σ**2ˢ.06**/34, **mb4.1**/8, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.83	236	P	Pb	13 54 04.0	+5.0
BNDI	Bandanaira	1.66	170	P	Pb	13 54 16.2	+3.1
NLAI	Namlea	2.54	262	P	Pb	13 54 27.1	-0.9
SIJI	Sorong	2.59	40	Pn	Pn	13 54 22.0	-1.3
	356nm,0.3s,baz=221,slow=14,SNR=919						
SIJI				Sn	Sn	13 54 51.2	-2.7
	16nm,0.3s,baz=279,slow=9.6,SNR=7.5						
SIJI				LR	LR	13 55 56.2	
	comp=Z,1µm,18.6s,baz=296,slow=56						
SWI	Sorong	2.59	39	P	Pn	13 54 23.1	-0.1
SWI				S	Sn	13 54 53.1	-0.7
FAKI	Fak Fak	2.63	91	P	Pn	13 54 24.2	+0.4
SANI	Sanana	3.71	283	P	Pn	13 54 36.8	-1.9
TNTI	Ternate	4.26	328	Pn	Pn	13 54 47.6	+1.3
LUWI	Luwuk	7.08	285	P	Pn	13 55 27.3	+2.3
BATI	Baumata	9.38	219	LR	LR	14 00 40.0	
	comp=Z,240nm,18.7s,baz=50,slow=44						
MTN	Manton Dam	10.02	171	Pn	Pn	13 56 07.3	+2.0
DAV	Davao City (W)	10.67	338	LR	LR	14 01 09.9	
	comp=Z,168nm,20.0s,baz=326,slow=42						
FITZ	Fitzroy Crossi	15.62	194	Pn	P	13 57 23.0	-2.4
	0.2nm,0.3s,baz=17,slow=14,SNR=1.4						
FITZ	Fitzroy Crossi	15.62	194	Pn	P	13 57 23.4	-2.0
FITZ				IAmb	IAmb	13 57 34.6	
	comp=Z,15nm,1.2s						
WB0	Warramunga Arr	17.42	165		Pn	13 57 43.2	-1.2
WB0				IAmb	IAmb	13 57 48.2	
	comp=Z,19nm,1.1s						
WRAB	Tennant Creek	17.57	165	Pn	Pn	13 57 41.9	-4.3
WRAB				IAmb	IAmb	13 57 50.6	
	comp=Z,24nm,1.2s						
WRA	Warramunga Arr	17.58	165	P	Pn	13 57 44.8	-1.4
	comp=Z,0.8nm,0.3s,baz=348,slow=12,SNR=23						
WRA				S	Sn	14 00 55.4	-5.9
	comp=Z,0.1nm,0.3s,baz=347,slow=21,SNR=2.9						
WB2	Warramunga Arr	17.58	165	P	Pn	13 57 45.9	-0.4
WB2				IAmb	IAmb	13 57 50.7	
	comp=Z,23nm,1.1s						
WR0	Warramunga Arr	17.65	165	P	P	13 57 47.1	-0.8
WR0				IAmb	IAmb	13 57 49.6	
	comp=Z,34nm,1.4s						
PSAC1	Pilbara Seismi	20.85	206	P	Pn	13 58 25.4	-0.2
AS31	Alice Springs	21.08	169	P	P	13 58 27.0	+1.5
AS31				IAmb	IAmb	13 58 33.3	
	comp=Z,8.1nm,0.9s						
ASAR	Alice Springs	21.08	169	P	P	13 58 26.4	+1.0
	comp=Z,9.6nm,0.8s,baz=348,slow=12,SNR=47						
ASAR				S	S	14 02 19.3	+0.5
	comp=Z,1.0nm,0.8s,baz=347,slow=25,SNR=2.8						
ASAR				PcP	PcP	14 02 33.8	+2.2
	comp=Z,0.6nm,0.6s,baz=8.2,slow=1.0,SNR=4.7						
CTA	Charters Tower	23.59	138	P	P	13 58 53.0	+1.2
	comp=Z,6.2nm,0.9s,baz=287,slow=11,SNR=2.9						
STKA	Stephens Creek	30.97	160	P	P	13 59 59.2	+1.1
	comp=Z,2.3nm,0.9s,baz=324,slow=11,SNR=2.2						
STKA	Stephens Creek	30.97	160	P	P	13 59 58.2	+0.1
CMAR	Chiang Mai Arr	36.90	306	P	P	14 00 52.2	+2.5
	comp=Z,0.6nm,0.5s,baz=127,slow=6.7,SNR=7.6						
KSRS	Korea Array	40.16	358	LR	LR	14 20 10.3	
	comp=Z,64nm,18.2s,baz=320,slow=40						
MK31	Makanchi Array	64.60	326	P	P	14 04 17.9	-0.3
MKAR	Makanchi Array	64.60	326	P	P	14 04 19.1	+1.0
	comp=Z,0.6nm,0.3s,baz=113,slow=7.7,SNR=19						
ZALV	Zalesovo Beam	67.75	333	P	P	14 04 38.0	-0.1
	comp=Z,2.4nm,0.9s,baz=103,slow=4.7,SNR=7.7						
KURBB	Kurchatov Arra	68.83	328	P	P	14 04 45.5	+0.6
	comp=Z,3.9nm,0.8s,baz=127,slow=5.7,SNR=28						
KURBB				PcP	PcP	14 05 08.5	-0.9
	comp=Z,1.2nm,0.8s,baz=118,slow=4.6,SNR=4.6						
KURK	Kurchatov	68.83	328	P	P	14 04 45.1	+0.2
CPUP	Villa Florida	150.20	167	PKPbc	PKPab	14 13 35.2	-3.1
	comp=Z,3.1nm,0.9s,baz=152,slow=1.5,SNR=3.6						

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*IDC **09** 14:54:51.9±2.2, 40°.51N×142°.65E, h91km±20km, mb3.3/7, mb1 3.5/9, mb1mx3.2/35, mbtmp3.6/9, Error ellipse: s-maj=31.2km s-min=13.8km az=105.0*

*JMA **09** 14:54:56.4±0.1, 41°.22N×140°.43E, h157km±1km, M3.2*

ISC 09 14:54:56.0±0.8, **41°.20N**±0°.04×**140°.44E**±0°.07, **h160km**±6km, **n27,** σ**0ˢ.62**/40, **mb3.4**/7, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSI2	Shiura 2	0.15	190	P	Pn	14 55 17.5	+0.1
JSI2				eS	Sn	14 55 33.3	-0.4
JSR	Shiriuchi	0.33	356	P	Pn	14 55 17.7	-0.1
JSR				eS	Sn	14 55 33.9	-0.7
JOMM	Oshimamatsumae	0.46	314	P	Pn	14 55 18.3	0.0
JOT	Ohata	0.49	68	P	Pn	14 55 18.7	+0.3
JOT				eS	Sn	14 55 35.6	0.0
JHHS	Hirosakihyakuz	0.56	187	P	Pn	14 55 19.4	+0.6
JHHS				S	Sn	14 55 36.7	+0.5
JTM	Tenmabayashi	0.63	131	P	Pn	14 55 19.4	+0.2
JTM				S	Sn	14 55 36.4	-0.4
JIW	Iwasaki	0.69	209	P	Pn	14 55 19.8	+0.2
JIW				eS	Sn	14 55 37.7	+0.1
JKB	Kayabe	0.81	33	P	Pn	14 55 20.6	+0.3
JKB				eS	Sn	14 55 39.3	+0.3
JYM2	Yakumo 2	0.92	357	P	Pn	14 55 21.2	+0.2
JYM2				eS	Sn	14 55 40.1	-0.3
JAH	Hinai	1.02	172	P	Pn	14 55 22.2	+0.3
JAH				S	Sn	14 55 42.0	+0.2
JOSM	Okushiri--Mats	1.14	321	P	Pn	14 55 22.6	-0.2
JOSM				S	Sn	14 55 42.5	-1.1
JANG	Nango	1.16	135	P	Pn	14 55 22.8	-0.3
JANG				S	Sn	14 55 43.2	-0.7
JHST	Hiyamasetana	1.29	341	P	Pn	14 55 24.4	+0.2
JNB	Noboribetsu	1.34	19	P	Pn	14 55 24.9	+0.2
JOM	Ohasama	1.85	159	P	Pn	14 55 29.7	-0.3
JOM				S	Sn	14 55 55.5	-0.7
JNBK	Urakawa-nobuka	2.04	57	P	Pn	14 55 32.5	+0.5
JNBK				eS	Sn	14 56 00.2	+0.2
JYK	Kaneyama	2.28	182	P	Pn	14 55 35.0	0.0
JMK	Ichinoseki	2.33	165	P	Pn	14 55 35.0	-0.5
JMK				eS	Sn	14 56 06.0	0.0
ASAJ	Asahikawa	3.32	28	P	Pn	14 55 47.7	0.0
	2.5nm,0.3s,baz=210,slow=17,SNR=63						
ASAJ				S	Sn	14 56 26.4	-1.4
	4.2nm,0.3s,baz=325,slow=31,SNR=21						
MJAR	Matsushiro Arr	4.97	201	P	Pn	14 56 10.0	+0.8
	0.2nm,0.3s,baz=20,slow=12,SNR=9.3						
SONM	Songino Array	25.02	297	P	P	15 00 25.6	+21
	0.2nm,0.4s,baz=95,slow=7.7,SNR=2.1						
ILAR	Eielson Array	46.43	34	P	P	15 03 07.5	+1.4
	0.1nm,0.4s,baz=282,slow=8.9,SNR=4.3						
INK	Inuvik	51.05	28	P	P	15 03 42.7	+1.6
	0.9nm,0.6s,baz=270,slow=5.7,SNR=2.7						
WRA	Warramunga Arr	61.10	187	P	P	15 04 52.1	-0.9
	0.5nm,0.4s,baz=3.9,slow=7.3,SNR=8.0						
FINES	FINESS Array B	64.79	331	P	P	15 05 29.0	+12
	0.9nm,0.4s,baz=49,slow=8.0,SNR=12						
ASAR	Alice Springs	64.82	187	P	P	15 05 17.0	-0.6
	0.2nm,0.5s,baz=9.9,slow=7.5,SNR=4.2						
NVAR	Mina Array Bea	73.11	54	P	P	15 06 08.1	-0.8
	0.2nm,0.2s,baz=295,slow=9.8,SNR=3.1						

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*TUL **09** 16:39:48.7±1.2, 36°.28N±0°.02×96°.98W±0°.02, h5km±5km, ML3.5, mb_Lg3.3/116(NEIC), Error ellipse: s-maj=3.0km s-min=1.9km az=46.0*

*NEIC **09** 16:39:49.1±2.6, 36°.292N±0°.010×96°.99W±0°.04, h12km±5km, Error ellipse: s-maj=5.2km s-min=0.9km az=76.0*

*ANF **09** 16:39:49.6±0.9, 36°.27N×96°.90W, h3km±7km, ML4.1/9, Error ellipse: s-maj=5.5km s-min=3.9km az=18.0*

ISC 09 16:39:48.8±1.1, **36°.29N**±0°.03×**96°.98W**±0°.02, **h6km**±12km, **n90,** σ**1ˢ.10**/45, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.25	117		Pg	16 39 54.0	+0.4
QUOK				Sg	Sg	16 39 57.5	+0.6
OK031	S. Brethren Rd	0.35	161		Pg	16 39 55.9	+0.3
OK031				Sg	Sg	16 40 00.8	+0.5
OK030	Cody Creek RV	0.39	156		Pg	16 39 56.7	+0.3
T35A	Sooner Cattle	0.73	31		Pg	16 40 03.0	0.0
T35B	Sooner Cattle	0.73	31	P		16 40 03.0	
	baz=212						
T35B				S		16 40 12.5	
	baz=212						
OK025	Westminster Rd	0.76	203		Pg	16 40 03.3	-0.2
KAN13	South Haven SW	0.83	331		Pg	16 40 04.7	-0.1
CROK	Carrier	0.84	285	Pg	Pg	16 40 04.9	-0.1
GC02	Grant County #	0.91	309		Pg	16 40 06.0	-0.2
OKCFA	Oklahoma City	0.95	204		Pg	16 40 06.6	-0.4
TUL1	Leonard	1.03	111	P	Pb	16 40 08.1	-1.1
	baz=292						
TUL1				S	Sb	16 40 21.8	-1.1
	baz=292						
TUL1	Leonard	1.03	111		Pb	16 40 08.0	-1.1
TUL1	Leonard	1.03	111	P		16 40 08.0	
	baz=292						
TUL1				S		16 40 21.7	
	baz=292						
KAN14	Manchester OK	1.04	311		Pb	16 40 08.4	-0.9
KAN14				Sg	Sg	16 40 22.2	-0.1
FNO	Franklin	1.08	199		Pb	16 40 08.6	-1.4
W35A	Tecumseh	1.13	176		Pb	16 40 09.4	-1.5
KAN10	Anthony SW Sta	1.23	313		Pn	16 40 11.8	-0.8
KAN08	Anthony NE Sta	1.23	320		Pn	16 40 11.9	-0.8
KAN12	Harper NE Stat	1.30	321		Pb	16 40 13.0	-0.7
U32A	Winter Ranch,	1.64	274		Pb	16 40 18.7	-0.8
U32A				IAmb_Lg		16 40 42.9	
	comp=Z,196nm,0.7s						
U32A	Winter Ranch,	1.64	274	P		16 40 18.0	
	baz=93						
U32A				S		16 40 40.8	
	baz=93						
U38A	Gravette	2.10	85		Pb	16 40 25.7	-1.6
U38A	Gravette	2.10	85	P		16 40 25.5	
	baz=267						
U38A				S		16 40 54.1	
	baz=267						
WMOK	Wichita Mounta	2.13	224	P	Pn	16 40 25.6	+0.5
	baz=43						
WMOK				S	Sb	16 40 54.7	+0.1
	baz=43						
WMOK	Wichita Mounta	2.13	224		Pn	16 40 25.5	+0.5
WMOK	Wichita Mounta	2.13	224	P		16 40 25.5	
	baz=43						
WMOK				S		16 40 54.6	
	baz=43						
X37A	Clayton	2.14	142		Pn	16 40 25.9	+0.7
X37A				IAmb_Lg		16 40 57.8	
	comp=Z,137nm,0.9s						
X37A	Clayton	2.14	142	P		16 40 25.7	
	baz=323						
X37A				S		16 40 54.8	
	baz=323						
HHAR	Hobbs	2.45	89		Pn	16 40 30.2	+0.7
R32A	Long Quarter,	2.54	328		Pn	16 40 31.1	+0.4
R32A	Long Quarter,	2.54	328	P		16 40 31.3	
	baz=147						
W39A	Magazine	2.82	112	Sb	Sb	16 41 14.9	+0.6
	baz=294						
KSU1	Kansas State U	2.83	6	Sb	Sg	16 41 17.8	-1.8
	baz=186						
KSU1	Kansas State U	2.83	6	IAmb_Lg		16 41 17.8	
	comp=Z,31nm,0.7s						
KSU1	Kansas State U	2.83	6	P		16 40 35.0	
	baz=186						
S39A	Bolivar	3.25	63		Pn	16 40 41.6	+1.3
S39A	Bolivar	3.25	63	P		16 40 40.4	
	baz=246						
MIAR	Mount Ida	3.27	121	P	Pn	16 40 41.7	+1.0
	baz=303						
MIAR	Mount Ida	3.27	121		Pn	16 40 41.4	+0.6
MIAR				IAmb_Lg		16 41 36.4	
	comp=Z,69nm,0.8s						
MIAR	Mount Ida	3.27	121	P		16 40 41.3	
	baz=303						
U40A	Yellville	3.33	88	P	Pn	16 40 42.0	+0.5
	baz=270						
U40A	Yellville	3.33	88		Pn	16 40 42.1	+0.5
U40A	Yellville	3.33	88	P		16 40 41.7	
	baz=270						
U40A				P		16 40 41.7	
	baz=270						
CBKS	Cedar Bluff	3.34	320	Pb	Pb	16 40 49.9	+1.4
	baz=138						
Z38A	Mt. Pleasant	3.44	151	IAmb_Lg		16 41 45.7	
	comp=Z,78nm,0.7s						
X40A	Basin Creek Fa	3.83	117		Pn	16 40 49.7	+1.4
X40A				IAmb_Lg		16 41 50.2	
	comp=Z,106nm,0.7s						
MGMO	Mountain Grove	3.88	76	Pn	Pn	16 40 50.1	+1.0
MGMO				IAmb_Lg		16 42 00.2	
	comp=Z,77nm,0.8s						
W41B	Gary Mavity, V	4.00	105	IAmb_Lg		16 42 02.3	
	comp=Z,111nm,0.9s						
W41B	Gary Mavity, V	4.00	105	P		16 40 50.9	
	baz=288						
W41B				S		16 41 37.9	
	baz=288						
UALR	University of	4.07	110	IAmb_Lg		16 41 57.6	
	comp=Z,89nm,0.8s						
AMTX	Amarillo	4.08	251	P	Pn	16 40 54.8	+2.9
	baz=68						
AMTX	Amarillo	4.08	251		Pn	16 40 54.6	+2.7
AMTX				IAmb_Lg		16 41 59.5	
	comp=Z,54nm,0.8s						
WLAR	White Oak Lake	4.10	128	IAmb_Lg		16 42 00.2	
	comp=Z,59nm,0.7s						
R40A	Maddies Statio	4.26	61		Pn	16 40 54.6	+0.4
R40A	Maddies Statio	4.26	61	P		16 40 54.6	
	baz=243						
ABTX	Abilene, Hawle	4.26	212	IAmb_Lg		16 42 05.2	
	comp=Z,47nm,0.9s						
P38A	Dawn	4.30	38	IAmb_Lg		16 42 17.5	
	comp=Z,61nm,0.7s						
237A	Washetta, Mont	4.38	167	S		16 41 47.3	
	baz=347						
N33A	J Bar K, Exete	4.46	355	IAmb_Lg		16 42 19.6	
	comp=Z,74nm,0.8s						
LCAR	Lake Charles	4.72	91	IAmb_Lg		16 42 17.6	
	comp=Z,70nm,0.9s						
T42A	Van Buren	4.79	79	IAmb_Lg		16 42 28.1	
	comp=Z,55nm,0.9s						
CCM	Cathedral Cave	4.91	67	P	Pn	16 41 05.2	+2.0
	baz=251						
CCM	Cathedral Cave	4.91	67	IAmb_Lg		16 42 22.3	
	comp=Z,59nm,0.8s						
P40A	Paris	5.07	49	IAmb_Lg		16 42 35.3	
	comp=Z,80nm,1.0s						
KSCO	Kaye Shedlock’	5.24	303		Pn	16 41 09.2	+1.2
KSCO				IAmb_Lg		16 42 45.9	
	comp=Z,50nm,0.7s						
PBMO	Poplar Bluff	5.30	83	IAmb_Lg		16 42 40.9	
	comp=Z,63nm,0.8s						
435B	Jarrell	5.51	185	IAmb_Lg		16 42 57.8	
	comp=Z,63nm,0.9s						
143A	Socs Landing,	5.83	126	IAmb_Lg		16 43 10.2	
	comp=Z,45nm,0.8s						
SLM	Saint Louis	5.85	64	IAmb_Lg		16 43 00.8	
	comp=Z,42nm,0.9s						
SCIA	State Center	6.33	26	IAmb_Lg		16 43 10.7	
	comp=Z,53nm,0.7s						
N41A	Harden Midland	6.52	46	IAmb_Lg		16 43 24.6	
	comp=Z,64nm,0.7s						
P43A	Skaggs, Pawnee	6.78	58	IAmb_Lg		16 43 27.4	
	comp=Z,50nm,0.8s						
Q44A	Meyer Farm, Va	6.84	65	IAmb_Lg		16 43 27.2	
	comp=Z,46nm,1.0s						
SDCO	Great Sand Dun	6.97	285	IAmb_Lg		16 43 35.9	
	comp=Z,34nm,0.9s						
Q24A	Divide	7.01	295	IAmb_Lg		16 43 44.5	
	comp=Z,34nm,0.8s						
K38A	Parkersburg	7.14	26	IAmb_Lg		16 43 55.3	
	comp=Z,58nm,0.8s						
L40A	Anamosa	7.30	36	IAmb_Lg		16 43 39.1	
	comp=Z,55nm,0.9s						
WVT	Waverly	7.40	89	IAmb_Lg		16 43 48.9	
	comp=Z,28nm,0.7s						
ECSD	EROS Data Cent	7.45	2		Pn	16 41 38.5	+0.5
OLIL	Olney	7.47	68	IAmb_Lg		16 43 57.7	
	comp=Z,39nm,0.9s						
USIN	University of	7.63	75	IAmb_Lg		16 43 58.7	
	comp=Z,49nm,1.1s						
O44A	Mansfield	7.73	57	IAmb_Lg		16 43 56.2	
	comp=Z,50nm,0.7s						
ANMO	Albuquerque	7.83	263	IAmb_Lg		16 44 04.9	
	comp=Z,13nm,1.1s						
L42A	Oliver, Polo	8.05	43	IAmb_Lg		16 44 06.2	
	comp=Z,48nm,0.8s						
I37A	Lemond, Waseca	8.19	18	IAmb_Lg		16 44 19.3	
	comp=Z,35nm,0.7s						
V48A	Smith Brothers	8.25	91	IAmb_Lg		16 44 12.4	
	comp=Z,25nm,0.9s						
SUSD	Miller	8.29	350	IAmb_Lg		16 44 25.0	
	comp=Z,37nm,0.8s						
N23A	Red Feather La	8.39	306	IAmb_Lg		16 44 34.5	
	comp=Z,35nm,1.0s						
P46A	Rosedale	8.40	64	IAmb_Lg		16 44 34.2	
	comp=Z,36nm,0.8s						
JFWS	Jewell Farm	8.41	36	IAmb_Lg		16 44 23.1	
	comp=Z,40nm,0.8s						
WCI	Wyandotte Cave	8.74	74	IAmb_Lg		16 44 26.0	
	comp=Z,34nm,1.0s						
BLO	Bloomington	8.77	68	IAmb_Lg		16 44 28.1	
	comp=Z,41nm,0.8s						
LRAL	Lakeview Retre	8.84	109	IAmb_Lg		16 44 29.2	
	comp=Z,20nm,1.0s						
Y49A	Blount Mountai	8.99	103	IAmb_Lg		16 44 40.6	
	comp=Z,26nm,0.7s						
I40A	Norwalk	9.02	31	IAmb_Lg		16 44 36.0	
	comp=Z,24nm,0.8s						
U49A	Red Boiling Sp	9.03	85	IAmb_Lg		16 44 40.6	
	comp=Z,19nm,0.8s						
SWET	Sewanee	9.04	94	IAmb_Lg		16 44 33.0	
	comp=Z,24nm,0.8s						
FPAL	Fort Paine	9.44	97	IAmb_Lg		16 45 04.7	
	comp=Z,22nm,0.8s						
RSSD	Black Hills	9.50	328	IAmb_Lg		16 45 04.8	
	comp=Z,11nm,0.8s						
F33A	5 Mile Ranch,	9.56	3	IAmb_Lg		16 44 57.8	
	comp=Z,18nm,0.9s						
PV13	Radium Mtn., P	9.63	285	IAmb_Lg		16 45 05.7	
	comp=Z,18nm,1.1s						
P48A	Milroy	9.67	67	IAmb_Lg		16 45 12.3	
	comp=Z,20nm,0.8s						
K22A	Casper	9.74	314	IAmb_Lg		16 45 18.5	
	comp=Z,18nm,0.8s						
PV10	Paradox Valley	9.83	286	IAmb_Lg		16 45 24.2	
	comp=Z,16nm,1.1s						

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*NOU **09** 16:44:47.0, 7°.16S×129°.23E, h106km, mb4.1, Banda Sea*

*IDC **09** 16:44:48.6±2.1, 7°.31S×129°.51E, h133km±25km, mb3.1/1, mb1 3.5/6, mb1mx3.2/32, mbtmp3.9/6, Error ellipse: s-maj=26.2km s-min=19.4km az=114.0*

ISC 09 16:44:53.0±2.7, **7°.9S**±0°.2×**129°.6E**±0°.1, **h100km, n6,** σ**0ˢ.74**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.28	248	P	Pn	16 46 23.3	+0.1
	15nm,0.3s,baz=303,slow=5.0,SNR=16						
BATI				S	Sn	16 47 33.3	-0.3
	14nm,0.3s,baz=79,slow=15,SNR=9.2						
SIJI	Sorong	7.14	14	P	Pn	16 46 23.4	-11
	0.6nm,0.3s,baz=71,slow=2.8,SNR=20						
SIJI				S	Sn	16 47 31.6	-23
	2.3nm,0.3s,baz=218,slow=23,SNR=8.1						
FITZ	Fitzroy Crossi	10.88	200	P	Pn	16 47 26.1	+0.4
	0.3nm,0.3s,baz=27,slow=15,SNR=10						
FITZ				S	Sn	16 49 26.1	+0.5
	0.5nm,0.3s,baz=26,slow=21,SNR=5.8						
WRA	Warramunga Arr	12.88	159	P	Pn	16 47 52.5	0.0
	0.6nm,0.3s,baz=332,slow=14,SNR=14						
WRA				S	Sn	16 50 14.4	+0.2
	1.6nm,0.3s,baz=339,slow=19,SNR=12						
ASAR	Alice Springs	16.27	166	P	P	16 48 37.3	+0.3
	0.4nm,0.3s,baz=342,slow=11,SNR=32						
ASAR				S	Sn	16 51 34.8	-1.4
	0.2nm,0.3s,baz=354,slow=26,SNR=4.0						
MKAR	Makanchi Array	68.70	327	P	P	16 55 34.8	-11
	0.2nm,0.3s,baz=120,slow=8.0,SNR=8.1						

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*DJA **09** 16:50:52.2±0.6, 1°S±2°×12°6E±°, h22km±6km, M4.3/19,*

mb4.4/7, mB4.9/4, MLv4.4/19, Mw(mB)4.2/4
IDC ***09*** *16:50:53.8±2.3, 1°.31S×126°.26E, h46^{km}±25^{km}, mb3.7/9, mb1 3.9/11, mb1mx3.7/32, mbtmp4.0/11, ML4.0/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/31, Error ellipse: s-maj=20.0km s-min=17.7km az=33.0*
NEIC ***09*** *16:50:53.3±1.4, 1°.39S±0°.10×126°.25E±0°.08, h46^{km}±9^{km}, mb4.4/10, Error ellipse: s-maj=14.5km s-min=11.0km az=201.0*
ISC 09 16:50:52.6±0.5**, 1°.37S**±0°.05×**126°.24E**±0°.05**, h35^{km}, n58,** σ**1ˢ09**/62**, mb4.4**/17**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.72**	**200**	P	**Pn**	**16 51 06.7**	**+0.3**
SANI				S	**Sn**	**16 51 16.3**	**0.0**
NLAI	**Namlea**	**2.05**	**155**	P	**Pn**	**16 51 25.2**	**+0.6**
NLAI				S	**Sn**	**16 51 50.5**	**+1.6**
TNTI	**Ternate**	**2.40**	**28**		**Pn**	**16 51 30.3**	**+0.8**
TNTI	**Ternate**	**2.40**	**28**	P	**Pn**	**16 51 29.9**	**+0.4**
KMSI	**Cibinong**	**2.97**	**310**	P	**Pn**	**16 51 38.2**	**+0.9**
KMSI				S	**Sn**	**16 52 13.9**	**+2.2**
MSAI	**Masohi**	**3.33**	**126**	P	**Pn**	**16 51 43.4**	**+1.2**
MSAI				S	**Sn**	**16 52 22.7**	**+2.1**
LUWI	**Luwuk**	**3.48**	**275**		**Pn**	**16 51 44.8**	**+0.4**
LUWI	**Luwuk**	**3.48**	**275**	P	**Pn**	**16 51 44.9**	**+0.5**
APSI	**Ampana**	**4.62**	**276**	P	**Pn**	**16 52 00.8**	**+0.9**
MRSI	**Marisa**	**4.67**	**293**	P	**Pn**	**16 52 00.4**	**-0.3**
BNDI	**Bandanaira**	**4.82**	**131**	P	**Pn**	**16 52 03.0**	**+0.3**
SWI	**Sorong**	**5.04**	**84**	P	**Pn**	**16 52 06.3**	**+0.5**
	0.2nm53nm,0.9s						
SIJI	**Sorong**	**5.05**	**84**	P	**Pn**	**16 52 06.8**	**+0.9**
	3.8nm,0.3s,baz=260,slow=13,SNR=23						
SIJI				S	**Sn**	**16 53 04.2**	**+1.2**
	baz=143,slow=22,SNR=0.7						
TOLI2	**Tolitoli**	**5.99**	**294**		**Pn**	**16 52 19.1**	**+0.3**
FAKI	**Fak Fak**	**6.20**	**105**	Pn	**Pn**	**16 52 21.3**	**-0.4**
FAKI	**Fak Fak**	**6.20**	**105**	P	**Pn**	**16 52 20.6**	**-1.1**
MPSI	**Mapaga**	**6.56**	**285**	P	**Pn**	**16 52 27.5**	**+0.8**
	0.1nm437nm16nm,0.4s						
TTSI	**Tana Toraja**	**6.63**	**255**	P	**Pn**	**16 52 28.4**	**+0.8**
	0.2nm1μm42nm,1.1s						
BNSI	**Bone**	**6.83**	**244**	P	**Pn**	**16 52 30.7**	**+0.4**
	0.2nm23nm,1.0s						
SPSI	**Sidrap Palu**	**6.96**	**248**	P	**Pn**	**16 52 32.4**	**+0.2**
	1.0nm4μm158nm,0.4s						
BKSI	**Bulukumba**	**7.26**	**237**	P	**Pn**	**16 52 35.9**	**-0.4**
	0.2nm42nm,1.6s						
KAPI	**Kappang**	**7.42**	**241**	P	**Pn**	**16 52 40.9**	**+2.4**
	3.2nm,0.3s,baz=35,slow=3.3,SNR=5.4						
KAPI				LR	LR	16 56 03.7	
	comp=Z,205nm,18.2s,baz=54,slow=42						
JAY	**Jayapura**	**14.50**	**95**	LR	LR	17 00 32.1	
	comp=Z,156nm,19.2s,baz=212,slow=40						
WB0	**Warramunga Arr**	**19.95**	**157**	P	**P**	**16 55 21.5**	**-0.3**
WRA	**Warramunga Arr**	**20.09**	**157**	P	**P**	**16 55 23.1**	**-0.2**
	2.1nm,1.0s,baz=339,slow=11,SNR=4.7						
COEN	**Coen**	**20.90**	**128**	P	**P**	**16 55 32.1**	**-0.2**
COEN				IAmb	IAmb	16 55 44.7	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**23.38**	**162**	P	**P**	**16 55 59.0**	**+0.7**
ASAR	**Alice Springs**	**23.38**	**162**	P	**P**	**16 55 58.6**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=341,slow=11,SNR=12						
CTA	**Charters Tower**	**27.00**	**135**	P	**P**	**16 56 32.8**	**+1.2**
	comp=Z,6.4nm,1.1s,baz=344,slow=7.4,SNR=1.6						
CTAO	**Charters Tower**	**27.00**	**135**	P	**P**	**16 56 29.4**	**-2.1**
CTAO				IAmb	IAmb	16 56 43.3	
	comp=Z,14nm,1.2s						
FORT	**Forrest**	**29.30**	**177**	P	**P**	**16 56 51.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**33.30**	**308**	P	**P**	**16 57 25.6**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=123,slow=5.3,SNR=4.6						
CMAR				PcP	**PcP**	**17 00 10.2**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=176,slow=2.7,SNR=4.9						
MJAR	**Matsushiro Arr**	**39.32**	**15**	LR	LR	17 16 26.2	
	comp=Z,36nm,18.3s,baz=140,slow=39						
SONM	**Songino Array**	**51.97**	**343**	P	**P**	**16 59 58.6**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=158,slow=9.0,SNR=9.0						
ZSN	**Zaisan**	**60.54**	**329**	*e*P	**P**	**17 00 58.6**	**-0.9**
	baz=329						
SHLS	**Shalkode**	**61.00**	**322**	*e*P	**P**	**17 01 00.8**	**-2.0**
	comp=Z,3.3nm,1.0s,baz=322						
MK31	**Makanchi Array**	**61.49**	**327**	P	**P**	**17 01 06.1**	**+0.1**
MK31				IAmb	IAmb	17 01 07.4	
	comp=Z,5.7nm,0.9s						
MKAR	**Makanchi Array**	**61.49**	**327**	P	**P**	**17 01 06.3**	**+0.4**
	comp=Z,4.3nm,0.7s,baz=128,slow=8.1,SNR=44						
SATY	**Saty**	**61.59**	**322**	*e*P	**P**	**17 01 06.3**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=322						
KPKS	**Kokpek**	**61.64**	**322**	*e*P	**P**	**17 01 06.6**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=322						
MAKZ	**Makanchi**	**61.67**	**327**	P	**P**	**17 01 07.5**	**+0.4**
TNSS	**Tian-Shan**	**62.49**	**321**	*e*P	**P**	**17 01 13.0**	**-0.2**
	baz=321						
MDOK	**Medeo**	**62.49**	**321**	*e*P	**P**	**17 01 12.5**	**-0.4**
	baz=321						
AAA	**Alma-Ata**	**62.60**	**321**	*e*P	**P**	**17 01 14.7**	**+1.2**
	baz=321						
TDK	**Taldyqorghan**	**62.65**	**324**	*e*P	**P**	**17 01 13.4**	**-0.3**
	comp=Z,6.6nm,1.2s,baz=324						
MTBS	**Maitube**	**62.86**	**321**	*e*P	**P**	**17 01 15.9**	**+0.6**
	baz=321						
CHKK	**Chushkaly**	**62.89**	**322**	*e*P	**P**	**17 01 15.5**	**+0.1**
	baz=322						
KUU	**Kurty**	**63.31**	**322**	*e*P	**P**	**17 01 17.4**	**-0.7**
	comp=Z,16nm,1.0s,baz=322						
ZALV	**Zalesovo Beam**	**64.91**	**334**	P	**P**	**17 01 27.1**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=102,slow=6.6,SNR=5.5						
BTLS	**Baital**	**65.31**	**322**	*e*P	**P**	**17 01 30.2**	**-0.9**
	baz=322						
KURK	**Kurchatov**	**65.79**	**329**	P	**P**	**17 01 33.5**	**-0.6**
KURK				IAmb	IAmb	17 01 35.1	
	comp=Z,5.0nm,0.8s						
DZA	**Taraz**	**66.03**	**319**	*e*P	**P**	**17 01 36.0**	**+0.1**
	baz=319						
IUG	**Iuzhnay**	**66.57**	**318**	*e*P	**P**	**17 01 39.2**	**-0.3**
	baz=318						
TIXI	**Tiksi**	**72.91**	**1**	P	**P**	**17 02 16.7**	**-1.0**
TIXI				IAmb	IAmb	17 02 17.8	
	comp=Z,3.2nm,0.6s						
NRIK	**Noril'sk**	**75.24**	**347**	P	**P**	**17 02 31.1**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=142,slow=8.6,SNR=6.9						
ABKAR	**Akbulak array**	**75.79**	**322**	P	**P**	**17 02 34.7**	**-0.4**
ABKAR				IAmb	IAmb	17 02 37.3	
	comp=Z,4.4nm,1.4s						
KLMR	**Klimovskoe**	**89.58**	**331**	*e*P	**P**	**17 03 50.3**	**+3.9**
KLMR				AMP		17 03 52.3	
	comp=Z,29nm,1.9s						
ILAR	**Eielson Array**	**89.89**	**25**	P	**P**	**17 03 46.0**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=243,slow=5.1,SNR=7.6						

BJI ***09*** *17:29:33.3±0.0, 56°.21N×114°.02E, h7^{km}, mB4.5/5, mb4.0/13, Ms4.4/4, Ms7 3.9/3*
MOS ***09*** *17:29:36.6±1.2, 56°.06N×113°.78E, h8^{km}, mb4.4/13, Error ellipse: s-maj=7.8km s-min=5.4km az=62.8*
IDC ***09*** *17:29:37.9±0.7, 56°.14N×113°.76E, h0^{km}, mb3.9/17, mb1 4.1/22, mb1mx3.9/42, mbtmp3.9/22, ML3.6/5, MS3.6/16, Ms1 3.6/16, ms1mx3.4/49, Error ellipse: s-maj=18.5km s-min=11.0km az=156.0*
BYKL ***09*** *17:29:38.1±0.2, 56°.09N×113°.73E, h6^{km}±3^{km}, Mw4.2/8(IEC), #STATIONS KDAK MAJO INCN SSE TATO ENH XAN KMI FELT I=III MSK at Taksimo*
NEIC ***09*** *17:29:40.9±2.4, 56°.07N±0°.09×113°.8E±0°.1, h17^{km}±2^{km}, mb4.6/39, Error ellipse: s-maj=13.4km s-min=10.2km az=144.0*
ISC 09 17:29:37.9±0.8**, 56°.11N**±0°.02×**113°.76E**±0°.02**, h3^{km}**±5^{km}**, n172,** σ**2ˢ20**/222**, mb4.3**/46**, MS3.5**/11**, 18C-9D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**274**	⇑*i*Pg	**Pg**	**17 29 40.1**	**-0.1**
SVKR				Pmax		17 29 40.5	
	46μm,0.3s						
SVKR				*e*Sg	**Sb**	**17 29 42.0**	**+0.3**
SVKR				Smax		17 29 47.5	
	234μm,0.8s						
SVKR	**Severomuysk**	**0.12**	**274**	⇑*i*PG	Pg	17 29 40.0	-0.2
SVKR				*e*S	**Sb**	**17 29 41.5**	**-0.2**
UKT	**Uakit**	**0.63**	**187**	⇑*i*Pg	**Pg**	**17 29 48.3**	**-1.6**
UKT				Pmax		17 29 49.6	
	338nm,0.2s						
UKT				*e*Sg	**Sg**	**17 29 57.3**	**-0.7**
UKT				Smax		17 30 03.8	
	9μm,1.4s						
UKT	**Uakit**	**0.63**	**187**	*e*PG	**Pg**	**17 29 48.4**	**-1.5**
UKT				*e*S	**Sg**	**17 29 58.5**	**+0.5**
YOA	**Uoyan**	**1.14**	**272**	⇑*i*Pg	**Pn**	**17 29 58.5**	**-2.3**
YOA				Pmax		17 30 03.8	
	3μm,0.5s						
YOA				*e*Sg	**Sb**	**17 30 14.2**	**-1.3**
YOA				*e*Sb	**Sg**	**17 30 18.1**	**+3.5**
YOA				max		17 30 31.9	
	18μm,0.9s						
YOA	**Uoyan**	**1.14**	**272**	*e*PG	**Pn**	**17 29 58.4**	**-2.3**
YOA				*e*		17 30 15.7	
YOA				pmax	pmax		
	comp=Z,957nm,0.2s						
YOA				smax	smax		
	comp=N,18μm,0.8s						
NLYR	**Nelyaty**	**1.15**	**70**	⇓*i*Pg	**Pn**	**17 29 59.4**	**-1.4**
NLYR				*e*Pb	**Pb**	**17 30 01.7**	**+1.4**
NLYR				max		17 30 02.1	
	comp=N,6μm,0.3s						
NLYR				*e*Sg	**Sb**	**17 30 14.6**	**-1.0**
NLYR				*e*Sb	**Sg**	**17 30 18.6**	**+3.9**
NLYR				max		17 30 28.9	
	comp=N,9μm,1.3s						
NLYR	**Nelyaty**	**1.15**	**70**	⇑*i*PG	**Pn**	**17 29 59.3**	**-1.5**
NLYR				*e*		17 30 15.2	
NLYR				pmax	pmax		
	comp=Z,5μm,0.8s						
NLYR				smax	smax		
	comp=E,6μm,0.9s						
KMO	**Kumora**	**1.46**	**262**	*e*Pg	**Pn**	**17 30 03.9**	**-1.2**
KMO				*e*Pb	**Pb**	**17 30 05.2**	**-0.4**
KMO				*e*		17 30 06.9	
KMO				max		17 30 08.0	
	comp=E,1μm,0.3s						
KMO				*e*Sg	**Sn**	**17 30 23.5**	**-1.1**
KMO				Smax		17 30 29.0	
	comp=E,7μm,0.9s						
KMO	**Kumora**	**1.46**	**262**	*e*PG	**Pn**	**17 30 04.2**	**-0.9**
KMO				*e*		17 30 23.3	
KMO				pmax	pmax		
	comp=Z,912nm,0.3s						
KMO				smax	smax		
	comp=N,7μm,0.9s						
BOD	**Bodaibo**	**1.72**	**4**	⇑*i*Pg	**Pn**	**17 30 09.4**	**+0.7**
BOD				Pmax		17 30 13.0	
	comp=N,1μm,0.7s						
BOD				*e*Sg	**Sn**	**17 30 32.2**	**+1.1**
BOD				Smax		17 30 34.5	
	comp=N,7μm,1.2s						
BOD	**Bodaibo**	**1.72**	**4**	⇑*i*PN	**Pn**	**17 30 09.7**	**+1.0**
BOD				*e*		17 30 32.6	
BOD				pmax	pmax		
	comp=Z,1μm,1.0s						
BOD				smax	smax		
	comp=E,7μm,1.2s						
YLYR	**Ulyunkhan**	**1.93**	**231**	⇓*i*Pn	**Pn**	**17 30 11.8**	**+0.3**
YLYR				*e*Pg	**Pb**	**17 30 12.5**	**-1.1**
YLYR				Pmax		17 30 14.8	
	comp=E,542nm,0.3s						
YLYR				*e*Sg	**Sn**	**17 30 37.2**	**+0.9**
YLYR				Smax		17 30 41.8	
	comp=E,6μm,1.3s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*PN	**Pn**	**17 30 11.8**	**+0.3**
YLYR				*e*		17 30 12.9	
YLYR				*e*S	**Sn**	**17 30 35.7**	**-0.6**
YLYR				*e*		17 30 36.9	
YLYR				pmax	pmax		
	comp=Z,726nm,0.4s						
YLYR				smax	smax		
	comp=N,6μm,0.6s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*Pn	**Pn**	**17 30 18.4**	**+0.4**
NIZ				*e*Pg	**Pb**	**17 30 21.1**	**-0.5**
NIZ				Pmax		17 30 23.9	
	comp=N,345nm,0.7s						
NIZ				*e*Sn	**Sn**	**17 30 46.2**	**-1.7**
NIZ				*e*Sg	**Sb**	**17 30 51.5**	**-0.1**
NIZ				Smax		17 30 56.1	
	comp=N,3μm,0.9s						
CRS	**Chara**	**2.62**	**71**	⇓*i*Pn	**Pn**	**17 30 22.1**	**+1.0**
CRS				*e*Pg	**Pb**	**17 30 26.3**	**+0.9**
CRS				Pmax		17 30 27.0	
	comp=N,4μm,0.7s						
CRS				*e*		17 30 39.6	
CRS				*e*Sg	**Sb**	**17 31 01.0**	**+3.0**
CRS				Smax		17 31 08.5	
	comp=N,2μm,1.4s						
CRS	**Chara**	**2.62**	**71**	*e*PN	**Pn**	**17 30 22.2**	**+1.1**
CRS				*e*		17 30 26.3	
CRS				*e*		17 31 01.2	
CRS				pmax	pmax		
	comp=Z,982nm,0.4s						
CRS				smax	smax		
	comp=E,2μm,0.8s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pn	**Pn**	**17 30 30.1**	**0.0**
SYVR				*e*Pg	**Pb**	**17 30 35.9**	**-0.8**
SYVR				*e*		17 30 40.3	
SYVR				max		17 30 44.3	
	comp=E,312nm,1.1s						
SYVR				*e*Sg	**Sb**	**17 31 18.6**	**+1.7**
SYVR				Smax		17 31 31.3	
	comp=E,4μm,1.9s						
SYVR	**Suvo**	**3.28**	**223**	⇓*i*PN	**Pn**	**17 30 30.2**	**+0.1**
SYVR				*e*		17 30 37.6	
SYVR				*e*		17 31 18.6	
SYVR				pmax	pmax		
	comp=Z,317nm,1.2s						
SYVR				smax	smax		
	comp=E,4μm,1.9s						
VTMR	**Vitim**	**3.40**	**350**	*e*Pn	**Pn**	**17 30 31.9**	**+0.1**
VTMR				*e*Pg	**Pb**	**17 30 39.7**	**+1.0**
VTMR				*e*Sn	**Sn**	**17 31 12.7**	**+0.1**
VTMR				*e*Sg	**Sb**	**17 31 23.3**	**+2.8**
TUP	**Tupik**	**3.92**	**113**	⇓*i*Pn	**Pn**	**17 30 39.1**	**+0.1**
TUP				*e*Pg	**Pb**	**17 30 48.2**	**+0.6**
TUP				Pmax		17 30 56.5	
	comp=E,193nm,0.7s						
TUP				*e*Sn	**Sn**	**17 31 24.5**	**-1.0**
TUP				*e*Sg	**Sb**	**17 31 40.0**	**+4.6**
TUP				*e*SgSg	**Sg**	**17 31 45.1**	**+1.3**
TUP				*e*		17 31 55.8	
TUP				max		17 31 57.6	
	comp=E,3μm,1.1s						
TUP				max		17 32 12.3	
TUP	**Tupik**	**3.92**	**113**	⇓*i*PN	**Pn**	**17 30 39.1**	**+0.1**
TUP				*e*		17 30 49.5	
TUP				*e*S	**Sn**	**17 31 24.5**	**-1.0**
TUP				*e*		17 31 40.9	
TUP				pmax	pmax		
	comp=Z,192nm,0.7s						
TUP				smax	smax		
	comp=E,3μm,1.1s						
MXMB	**Maximikha**	**4.08**	**228**	*e*Pn	**Pn**	**17 30 41.4**	**+0.4**
MXMB				*e*Pg	**Pb**	**17 30 51.3**	**+1.1**
MXMB				*e*Sn	**Sn**	**17 31 26.3**	**-2.9**
MXMB				*e*Sg	**Sb**	**17 31 44.2**	**+4.4**
CIT	**Chita**	**4.10**	**182**	*e*Pg	**Pb**	**17 30 51.2**	**+0.6**
CIT				Pmax		17 30 52.8	
	comp=E,190nm,1.0s						
CIT				*e*Sg	**Sb**	**17 31 44.6**	**+4.1**
CIT				Smax		17 32 00.0	
	comp=E,3μm,1.9s						
CIT	**Chita**	**4.10**	**182**	*e*PN	**Pn**	**17 30 43.2**	**+1.8**
CIT				*e*		17 30 52.2	
CIT				*e*S	**Sn**	**17 31 26.7**	**-3.1**
CIT				*e*		17 31 44.0	
CIT				pmax	pmax		
	comp=Z,189nm,1.7s						
CIT				smax	smax		
	comp=E,3μm,2.3s						
OGRR	**Ongureny**	**4.33**	**238**	*e*Pn	**Pn**	**17 30 45.5**	**+0.9**
OGRR				*e*Pg	**Pb**	**17 30 54.7**	**+0.1**
OGRR				*e*		17 30 56.5	
OGRR				max		17 30 58.5	
	comp=E,223nm,1.5s						
OGRR				*e*		17 31 39.2	
OGRR				*e*Sg	**Sb**	**17 31 51.2**	**+3.9**
OGRR				max		17 32 00.4	
	comp=E,815nm,1.5s						
OGRR	**Ongureny**	**4.33**	**238**	*e*PN	**Pn**	**17 30 45.5**	**+0.9**
OGRR				*e*		17 30 56.5	
OGRR				*e*		17 31 51.1	
OGRR				pmax	pmax		
	comp=Z,221nm,1.8s						
OGRR				smax	smax		
	comp=N,811nm,2.0s						
YKLR	**Yuktali**	**4.42**	**80**	*e*Pn	**Pn**	**17 30 46.4**	**+0.7**
YKLR				*e*Pg	**Pb**	**17 30 57.1**	**+1.1**
YKLR				*e*Sn	**Sn**	**17 31 35.6**	**-2.0**
YKLR				*e*Sg	**Sb**	**17 31 54.3**	**+4.7**
TRG	**Tyrgan**	**5.47**	**235**	*e*Pn	**Pn**	**17 31 01.1**	**+0.8**
TRG				*e*Pg	**Pb**	**17 31 15.1**	**+1.0**
TRG				Pmax		17 31 21.4	
	comp=N,77nm,1.3s						
TRG				*e*Sg	**Sb**	**17 32 25.8**	**+5.7**
TRG				*e*		17 32 39.4	
TRG				max		17 32 43.7	
	comp=N,597nm,1.4s						
TRG	**Tyrgan**	**5.47**	**235**	*e*PN	**Pn**	**17 30 58.7**	**-1.6**
TRG				*e*		17 31 14.4	
TRG				*e*S	**Sn**	**17 31 59.0**	**-4.7**
TRG				*e*		17 32 25.4	
TRG				pmax	pmax		
	comp=Z,77nm,1.3s						
TRG				smax	smax		
	comp=E,616nm,1.9s						
FFNB	**Fofonovo**	**5.79**	**228**	*e*Pn	**Pn**	**17 31 04.3**	**-0.3**
FFNB				*e*Pg	**Pb**	**17 31 21.6**	**+2.2**
FFNB				*e*Sn	**Sn**	**17 32 08.3**	**-3.1**
FFNB				*e*Sg	**Sb**	**17 32 35.7**	**+6.6**
KAB	**Kabansk**	**5.83**	**229**	*e*Pg	**Pb**	**17 31 22.5**	**+2.4**
KAB				Pmax		17 31 35.0	
	comp=E,149nm,0.9s						
KAB				*e*Sg	**Sb**	**17 32 38.5**	**+8.2**
KAB				Smax		17 33 10.4	
	comp=E,3μm,1.4s						
KAB	**Kabansk**	**5.83**	**229**	*e*PG	Pb	17 31 25.2	+5.1
KAB				*e*		17 32 39.8	
KAB				pmax	pmax		
	comp=Z,133nm,1.1s						
KAB				smax	smax		
	comp=E,3μm,1.6s						
HRMR	**Khuramsha**	**6.03**	**225**	*e*Pn	**Pn**	**17 31 08.3**	**+0.4**
HRMR				*e*Pg	**Pb**	**17 31 26.5**	**+3.0**
HRMR				Pmax		17 31 32.9	
	comp=E,101nm,0.8s						
HRMR				*e*Sn	**Sn**	**17 32 15.0**	**-2.3**
HRMR				*e*Sg	**Sb**	**17 32 44.8**	**+8.8**
HRMR				Smax		17 33 09.0	
	comp=E,2μm,1.6s						
IENR	**Iengra**	**6.20**	**84**	*e*Sg	Sb	17 32 50.6	+10
BGT	**Bolshoye Golou**	**6.38**	**234**	*e*Pn	**Pn**	**17 31 12.6**	**-0.1**
BGT				*e*Pg	**Pb**	**17 31 32.2**	**+2.7**
BGT				Pmax		17 31 36.0	
	comp=E,23nm,0.8s						
BGT				*e*Sg	Sb	17 32 55.4	+9.3
BGT				Smax		17 33 14.6	
	comp=E,305nm,1.1s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*Pn	**Pn**	**17 31 13.0**	**-1.0**
KPC				*e*Pg	**Pb**	**17 31 34.6**	**+3.6**
KPC				Pmax		17 31 37.9	
	comp=E,13nm,0.3s						
KPC				*e*Sg	**Sg**	**17 32 59.0**	**-6.5**
KPC				*e*		17 33 07.7	
KPC				max		17 33 14.7	
	comp=E,1μm,1.9s						
KPC	**Khapcheranga**	**6.47**	**188**	*e*PN	**Pn**	**17 31 12.8**	**-1.2**
KPC				*e*		17 31 32.4	
KPC				*e*S	**Sn**	**17 32 26.4**	**-1.9**
KPC				*e*		17 32 57.8	
KPC				pmax	pmax		
	comp=Z,24nm,1.0s						
KPC				smax	smax		
	comp=E,1μm,1.8s						
LSTR	**Listvyanka**	**6.76**	**235**	*e*Pn	**Pn**	**17 31 17.3**	**-0.6**
LSTR				*e*Pg	**Pb**	**17 31 38.6**	**+2.6**
LSTR				Pmax		17 31 44.3	
	comp=E,25nm,1.0s						
LSTR				*e*Sg	**Sb**	**17 33 05.9**	**+8.8**
LSTR				Smax		17 33 11.6	
	comp=E,425nm,2.0s						
IRK	**Irkutsk**	**6.78**	**239**	*e*Sg	Sb	17 33 07.7	+10
IRK				Smax		17 33 22.3	
	comp=E,550nm,1.4s						
IRK	**Irkutsk**	**6.78**	**239**	*e*PG	Pb	17 31 41.6	+5.3
IRK				*e*		17 33 08.3	
IRK				pmax	pmax		
	comp=Z,56nm,0.1s						
IRK				smax	smax		
	comp=N,551nm,1.4s						
IVK	**Ivanovka**	**7.00**	**236**	*e*Pn	**Pn**	**17 31 21.2**	**0.0**
IVK				*e*Pg	**Pb**	**17 31 43.0**	**+3.0**
IVK				Pmax		17 31 46.5	
	comp=N,40nm,0.3s						
IVK				*e*Sg	Sb	17 33 13.0	+9.1
IVK				Smax		17 33 30.0	
	comp=N,358nm,2.2s						
TLY	**Talaya**	**7.44**	**238**	Pn	**Pn**	**17 31 28.1**	**+0.8**
	comp=N,0.0nm,0.3s,baz=71,slow=9.5,SNR=1.9						
TLY				Lg	Lg	17 33 26.7	
	comp=N,0.1nm,0.3s,baz=122,slow=21,SNR=8.3						
TLY				LR	LR	17 34 34.5	
	comp=N,182nm,21.5s,baz=345,slow=40						
TLY	**Talaya**	**7.44**	**238**	*e*	Pb	17 31 53.7	+6.2
TLY				max		17 31 56.4	
	comp=N,16nm,0.8s						
TLY				*e*Sg	Sb	17 33 27.0	+10
TLY				Smax		17 33 34.0	
	comp=N,244nm,1.4s						
TLY	**Talaya**	**7.44**	**238**	⇑*e*PN	**Pn**	**17 31 27.5**	**+0.2**
TLY	**Talaya**	**7.44**	**238**		**Pn**	**17 31 28.1**	**+0.8**
TLY					Pb	17 31 54.2	+6.7
HIA	**Hailar**	**7.75**	**150**	PN	**Pn**	**17 31 29.1**	**-2.4**
HIA						17 32 54.7	
HIA	**Hailar**	**7.75**	**150**		**Pn**	**17 31 29.1**	**-2.4**
HIA				Sn	**Sn**	**17 32 54.7**	**-5.0**
ARS	**Arshan**	**7.88**	**243**	*e*Pn	**Pn**	**17 31 34.2**	**+0.8**
ARS				*e*Pg	**Pb**	**17 31 59.4**	**+4.3**
ARS				Pmax		17 32 10.2	
	comp=N,33nm,0.9s						
ARS				*e*Sg	Sb	17 33 39.8	+10
ARS				Smax		17 33 52.5	
	comp=N,698nm,0.9s						
ARS	**Arshan**	**7.88**	**243**	*e*PN	**Pn**	**17 31 34.7**	**+1.3**
ARS				*e*		17 32 00.3	
ARS				pmax	pmax		
	comp=Z,29nm,0.8s						
ZEA	**Zeya**	**8.12**	**101**	*e*PN	**Pn**	**17 31 36.8**	**+0.2**
ZEA				*e*		17 32 05.0	
ZEA				*e*S	**Sn**	**17 33 07.8**	**-1.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA				smax	smax		
	comp=N,500nm,1.1s						
ZEA				smax	smax		
	comp=N,440nm,1.0s						
ZEA				smax	smax		
	comp=E,220nm,1.0s						
ZEA				MLR	MLR		
	comp=N,200nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,6.0s						
ZAK	**Zakamensk**	**8.50**	**232**	*e*Pn	**Pn**	**17 31 43.6**	**+1.7**
ZAK				*e*Pg		17 32 10.0	
ZAK				Pmax		17 32 32.3	
	comp=Z,9.0nm,1.0s						
ZAK				*e*Sg		17 34 00.7	
ZAK				Smax		17 35 12.2	
	comp=Z,308nm,2.2s						
ZAK	**Zakamensk**	**8.50**	**232**	*e*PN	**Pn**	**17 31 44.7**	**+2.8**
ZAK				*e*		17 32 13.5	
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
MOY	**Mondy**	**8.75**	**245**	*e*Pn	**Pn**	**17 31 46.5**	**+1.2**
MOY				*e*		17 31 57.0	
MOY				max		17 32 21.9	
	comp=Z,49nm,1.2s						
MOY				*e*Sn	**Sn**	**17 33 19.9**	**-4.5**
MOY				*e*Sg	Sg	17 34 08.4	-10
MOY				Smax		17 34 20.5	
	comp=Z,452nm,1.9s						
MOY	**Mondy**	**8.75**	**245**	*e*PN	**Pn**	**17 31 45.6**	**+0.3**
MOY				*e*		17 32 15.8	
MOY				*e*		17 34 09.4	
MOY				pmax	pmax		
	comp=Z,49nm,1.4s						

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MOY                                   smax    smax
       comp=E,451nm,1.8s
ORL    Orlik              8.90 252  ePn     Pn        17 31 47.3  -0.1
ORL                                 e                 17 31 56.3
ORL                                 ePg     Pg        17 32 19.2  -9.0
ORL                                  Pmax             17 32 35.3
       comp=E,45nm,1.3s
ORL                                 eSn     Sn        17 33 24.4  -3.7
ORL                                 eSg     Sg        17 34 14.2  -9.2
ORL                                  Smax             17 34 27.4
       comp=E,327nm,1.2s
ORL    Orlik              8.90 252  ePN     Pn        17 31 47.3  -0.1
ORL                                 e                 17 32 20.2
ORL                                 e                 17 34 14.5
ORL                                  pmax   pmax
       comp=Z,49nm,0.7s
ORL                                  smax   smax
       comp=N,327nm,1.4s
ULN    Ulaanbaatar        9.23 209⇑ePn      Pn        17 31 51.1  -0.8
ULN    Ulaanbaatar        9.23 209   Pn     Pn        17 31 53.0  +1.1
SONM   Songino Array      9.45 212   Pn     Pn        17 31 56.3  +1.5
       comp=N,0.4nm,0.3s,baz=24,slow=12,SNR=11
SONM                                 Lg     Lg        17 34 35.6
       comp=N,2.6nm,0.3s,baz=24,slow=26,SNR=11
SONM                                 LR     LR        17 35 46.1
       comp=N,134nm,21.1s,baz=63,slow=39
YAK    Yakutsk           10.10  47   Pn     Pn        17 32 00.9  -2.6
       comp=N,0.1nm,0.3s,baz=193,slow=1.5,SNR=5.1
YAK                                  Lg     Lg        17 34 50.6
       comp=N,0.1nm,0.3s,baz=158,slow=24,SNR=6.6
YAK                                  LR     LR        17 35 32.5
       comp=N,89nm,20.2s,baz=266,slow=35
YAK    Yakutsk           10.10  47  eP      Pn        17 32 00.1  -3.5
YAK                                 eS      Sn        17 33 54.7  -2.5
YAK                                  pmax   pmax
       comp=Z,10.0nm,0.7s
YAK                                  pmax   pmax
       comp=N,4.0nm,1.0s
YAK                                  pmax   pmax
       comp=E,2.0nm,0.9s
YAK                                  smax   smax
       comp=N,100nm,2.3s
YAK                                  smax   smax
       comp=E,69nm,1.5s
YAK                                  MLR    MLR
       comp=Z,241nm,9.0s
YAK                                  MLR    MLR
       comp=N,242nm,6.0s
YAK                                  MLR    MLR
       comp=E,88nm,5.0s
KLR    Kul'dur           12.88 115   Pn     Pn        17 32 41.3  -0.3
       comp=E,0.5nm,0.3s,baz=298,slow=12,SNR=11
KLR                                  Lg     Lg        17 36 21.6
       comp=E,0.4nm,0.3s,baz=46,slow=20,SNR=7.0
KLR    Kul'dur           12.88 115  i P     Pn        17 32 41.9  +0.2
KLR                                  pmax   pmax
       comp=Z,3.0nm,0.8s
USRK   Ussuriysk Ar.     16.62 128   Lg     Lg        17 38 20.6
       baz=327,slow=29,SNR=8.1
ZAA0   Zalesovo Array    16.68 275   Pn     Pn        17 33 30.9  -1.4
ZALV   Zalesovo Beam     16.68 275   Pn     Pn        17 33 31.0  -1.3
       comp=Z,0.3nm,0.3s,baz=70,slow=13,SNR=9.7
ZALV                                 Lg     Lg        17 38 24.7
       comp=Z,0.1nm,0.3s,baz=50,slow=30,SNR=6.7
TIXI   Tiksi             16.86  17⇑eP       Pn        17 33 30.5  -4.0
TIXI   Tiksi             16.86  17   Pn     Pn        17 33 30.3  -4.2
DGZ    Jazzator, Alta    17.06 259⇑eP       Pn        17 33 36.3  -1.0
NRIK   Noril'sk          17.67 329   P      Pn        17 33 41.5  -3.1
       comp=Z,0.9nm,0.3s,baz=120,slow=13,SNR=13
NRIK                                 S      Sn        17 36 46.3   -15
       comp=Z,0.4nm,0.3s,baz=8.6,slow=13,SNR=6.3
NRIK                                 Lg     Lg        17 38 44.4
       baz=252,slow=12,SNR=2.2
NRIK                                 LR     LR        17 41 10.7
       comp=Z,213nm,20.9s,baz=153,slow=39
NRIK   Noril'sk          17.67 329   P      Pn        17 33 39.7  -4.9
NRIK                                 pmax   pmax
       comp=Z,12nm,1.0s
NRIK   Noril'sk          17.67 329          Pn        17 33 39.7  -4.9
GTA    Gaotai            19.09 215  eP      P         17 34 01.8  +0.2
GTA                                  pP     pP        17 34 06.2  +3.4
GTA                                  sP     sP        17 34 09.4  +6.0
GTA                                  pmax   pmax
       comp=Z,2.0nm,1.4s
ZSN    Zaisan            19.74 256  eP      P         17 34 08.5  -0.1
       baz=256
ZSN    Zaisan            19.74 256  eP      P         17 34 08.4  -0.1
MA2    Magadan           19.82  65   LR     LR        17 42 03.6
       comp=Z,107nm,19.7s,baz=5.5,slow=38
MA2    Magadan           19.82  65⇑eP       P         17 34 09.6  +0.3
MA2                                  pmax   pmax
       comp=Z,14nm,1.0s
WMQ    Urumqi            20.64 244   P      P         17 34 20.1  +1.7
WMQ                                  pmax   pmax
       comp=Z,46nm,1.8s
WMQ    Urumqi            20.64 244   P      P         17 34 20.1  +1.7
WMQ                                  IAmb   IAmb      17 34 22.0
       comp=Z,46nm,1.8s
SEM    Semipalatinsk     20.70 268  eP      P         17 34 18.0  -1.2
       baz=268
SEM    Semipalatinsk     20.70 268  eP      P         17 34 17.9  -1.2
KS19   Wonju Array Si    20.89 147   P      P         17 34 21.1  +0.1
KS19                                 IAmb   IAmb      17 35 04.6
       comp=Z,44nm,1.6s
KSRS   Korea Array       20.95 147   P      P         17 34 23.5  +1.8
       comp=Z,1.6nm,0.9s,baz=355,slow=8.6,SNR=5.7
KSRS                                 LR     LR        17 43 13.4
       comp=Z,172nm,18.9s,baz=344,slow=39
KURK   Kurchatov         21.46 270⇑eP       P         17 34 27.5  +0.4
KURK                                 pmax   pmax
       comp=Z,10.0nm,1.0s
KURK   Kurchatov         21.46 270   P      P         17 34 26.6  -0.5
KURK                                 IAmb   IAmb      17 34 32.3
       comp=Z,9.7nm,0.7s
MK31   Makanchi Array    21.54 258deP       P         17 34 27.9  -0.2
MK31   Makanchi Array    21.54 258   P      P         17 34 27.8  -0.2
MKAR   Makanchi Array    21.54 258   P      P         17 34 28.0   0.0
       comp=Z,3.2nm,0.8s,baz=60,slow=9.9,SNR=14
MKAR                                 Lg     Lg        17 40 59.3
       comp=Z,1.4nm,1.1s,baz=49,slow=31,SNR=5.4
MKAR                                 LR     LR        17 42 09.7
       comp=Z,117nm,18.6s,baz=9.0,slow=35
MKAR   Makanchi Array    21.54 258   P      P         17 34 28.0   0.0
KURBB  Kurchatov Arra    21.56 270   P      P         17 34 28.5  +0.4
       comp=Z,12nm,0.8s,baz=65,slow=12,SNR=21
KURBB                                Lg     Lg        17 40 57.2
       comp=Z,4.2nm,1.1s,baz=72,slow=34,SNR=6.8
MAKZ   Makanchi          21.70 258   P      P         17 34 29.8   0.0
MAKZ                                 pmax   pmax
       comp=Z,15nm,1.4s
MAKZ   Makanchi          21.70 258   P      P         17 34 29.8   0.0
TJN    Taejon            21.79 149  i P     P         17 34 28.3  -2.3
ERM    Erimo             23.64 114⇓eP       P         17 34 48.6  -1.4
TDK    Taldyqorghan      24.78 258  eP      P         17 34 59.9  -0.7
       comp=Z,12nm,1.0s,baz=258
TDK    Taldyqorghan      24.78 258  eP      P         17 34 59.9  -0.7
TDK                                  pmax   pmax
       comp=Z,12nm,1.0s
BVAR   Borovoye Array    25.02 281   P      P         17 35 03.5  +0.7
       comp=Z,1.2nm,0.7s,baz=51,slow=12,SNR=7.2
BRVK   Borovoye          25.07 281⇑eP       P         17 35 03.4  +0.3
BRVK                                 pmax   pmax
       comp=Z,8.0nm,1.1s
BRVK   Borovoye          25.07 281   P      P         17 35 03.6  +0.5
BRVK                                 IAmb   IAmb      17 35 06.5
       comp=Z,8.1nm,0.9s
BRZS   Berezniki         25.15 273  eP      P         17 35 03.7  -0.3
       comp=Z,7.1nm,1.3s,baz=273
BRZS   Berezniki         25.15 273  eP      P         17 35 03.6  -0.3
BRZS                                 pmax   pmax
       comp=Z,7.0nm,1.3s
PETK   Petropavlovsk-    25.30  78   P      P         17 35 04.5  -0.7
       comp=Z,5.8nm,0.9s,baz=278,slow=10.0,SNR=3.1
PETK                                 LR     LR        17 46 16.6
       comp=Z,98nm,19.3s,baz=315,slow=40
SHLS   Shalkode          25.42 254  eP      P         17 35 04.8  -1.7
       comp=Z,7.0nm,0.7s,baz=254
SHLS   Shalkode          25.42 254  eP      P         17 35 04.8  -1.7
SHLS                                 pmax   pmax
       comp=Z,7.0nm,0.7s
JWT    Wachi             25.53 136   P      P         17 35 07.8  +0.3
MJAR   Matsushiro Arr    25.61 130   LR     LR        17 45 05.9
       comp=Z,117nm,18.4s,baz=330,slow=36
KPKS   Kokpek            25.63 255  eP      P         17 35 08.6  +0.1
       comp=Z,5.1nm,0.9s,baz=255
KPKS   Kokpek            25.63 255  eP      P         17 35 08.5  +0.1
KPKS                                 pmax   pmax
       comp=Z,5.0nm,0.9s
JNU    Nakatsue          25.87 146   LR     LR        17 45 08.4
       comp=Z,130nm,19.5s,baz=350,slow=36
JNU    Nakatsue          25.87 146   P      P         17 35 11.8  +1.2
JNU                                  IAmb   IAmb      17 35 19.5
       comp=Z,42nm,1.4s
KUU    Kurty             26.63 259  eP      P         17 35 17.1  -0.3
       comp=Z,11nm,1.7s,baz=259
KUU    Kurty             26.63 259  eP      P         17 35 17.1  -0.3
KUU                                  pmax   pmax
       comp=Z,11nm,1.7s
MDOK   Medeo             26.72 257  eP      P         17 35 17.6  -0.8
       baz=257
MDOK   Medeo             26.72 257  eP      P         17 35 17.6  -0.8
BTLS   Baital            27.17 263  eP      P         17 35 21.9  -0.3
       comp=Z,6.0nm,1.4s,baz=263
BTLS   Baital            27.17 263  eP      P         17 35 21.8  -0.4
BTLS                                 pmax   pmax
       comp=Z,6.0nm,1.4s
AAK    Ala-Archa         28.47 258   P      P         17 35 36.5  +2.5
       comp=Z,1.1nm,0.7s,baz=49,slow=6.0,SNR=7.1
AAK    Ala-Archa         28.47 258⇑eP       P         17 35 35.8  +1.8
AAK                                  pmax   pmax
       comp=Z,7.0nm,1.0s
AAK    Ala-Archa         28.47 258   P      P         17 35 36.5  +2.5
AAK                                  IAmb   IAmb      17 35 38.4
       comp=Z,14nm,1.8s
ARU    Arti              29.96 294   LR     LR        17 47 41.8
       comp=Z,202nm,21.3s,baz=14,slow=36
ARU    Arti              29.96 294c iP      P         17 35 43.7  -3.2
ARU                                                   17 36 39.1
ARU                                  S      S         17 40 41.2  -3.7
ARU                                  pmax   pmax
       comp=Z,11nm,1.7s
KK31   Karatay Array     30.36 263   P      P         17 35 51.8  +1.1
KK31                                 pmax   pmax
       comp=Z,3.0nm,0.9s
KK31   Karatay Array     30.36 263   P      P         17 35 51.8  +1.1
KKAR   Karatay Array     30.36 263   P      P         17 35 51.9  +1.2
KKAR                                 pmax   pmax
       comp=Z,3.0nm,0.9s
KKAR   Karatay Array     30.36 263   P      P         17 35 51.9  +1.2
IUG    Iuzhnay           31.26 262  eP      P         17 35 59.3  +0.5
       baz=262
IUG    Iuzhnay           31.26 262  eP      P         17 35 59.2  +0.5
ABKAR  Akbulak array     32.60 281   P      P         17 36 10.4  +0.2
ABKAR                                IAmb   IAmb      17 36 52.0
       comp=Z,8.2nm,1.8s
BELG   Belogornoye       37.49 293⇑eP       P         17 36 49.3  -3.0
BELG                                 pmax   pmax
       comp=Z,2.0nm,1.1s
ARCES  ARCESS Array B    38.61 326   LR     LR        17 55 12.5
       comp=Z,122nm,19.8s,baz=265,slow=40
GSTR   Great Sitkin T    39.73  65   P      P         17 37 09.7  -1.5
GYA0B  ALIBECK ARRAY     40.80 268   P      P         17 37 22.6  +2.3
TOLK   Toolik Lake Re    41.67  33   P      P         17 37 28.0  +0.9
TOLK                                 IAmb   IAmb      17 37 28.7
       comp=Z,10nm,1.4s
FIA1   FINESS Array S    42.49 315   P      P         17 37 34.3  +0.5
FINES  FINESS Array B    42.50 315   P      P         17 37 33.6  -0.2
       comp=Z,4.4nm,0.9s,baz=24,slow=10,SNR=5.7
FINES                                LR     LR        17 55 49.8
       comp=Z,373nm,18.8s,baz=311,slow=37
TTA    Tatalina          42.64  42   P      P         17 37 34.7  -0.4
TTA                                  pmax   pmax
       comp=Z,14nm,1.6s
TTA    Tatalina          42.64  42   P      P         17 37 34.7  -0.4
TTA                                  IAmb   IAmb      17 38 15.5
       comp=Z,14nm,1.6s
I23K   Minto, Yukon-K    43.75  37   P      P         17 37 45.8  +1.9
I23K                                 IAmb   IAmb      17 39 15.2
       comp=Z,16nm,1.8s
PPLA   Purkeypile        44.09  41   P      P         17 37 48.7  +1.9
PPLA                                 IAmb   IAmb      17 39 13.3
       comp=Z,28nm,1.6s
KTH    Kantishna Hill    44.16  40   P      P         17 37 49.4  +2.1
KTH                                  IAmb   IAmb      17 39 03.2
       comp=Z,24nm,1.6s
MDM    Murphy Dome       44.24  37   P      P         17 37 50.3  +2.4
MDM                                  IAmb   IAmb      17 38 59.0
       comp=Z,11nm,1.4s
COLA   College           44.42  37⇓eP       P         17 37 50.6  +1.3
COLA                                 pmax   pmax
       comp=Z,3.0nm,0.8s
TRF    Thorofare Moun    44.45  40   P      P         17 37 51.7  +1.9
TRF                                  IAmb   IAmb      17 38 13.1
       comp=Z,34nm,1.8s
PRP    Porcupine Dome    44.80  36   P      P         17 37 54.5  +2.0
PRP                                  IAmb   IAmb      17 39 24.3
       comp=Z,13nm,1.8s
IL31                     44.81  37   P      P         17 37 52.6  +0.2
IL31                                 IAmb   IAmb      17 37 56.3
       comp=Z,7.7nm,1.3s
ILAR   Eielson Array     44.81  37   P      P         17 37 53.4  +1.0
       comp=Z,1.4nm,0.9s,baz=302,slow=10.0,SNR=19
DHY    Denali Highway    45.71  39   P      P         17 38 00.9  +1.2
DHY                                  IAmb   IAmb      17 39 34.8
       comp=Z,7.5nm,1.3s
GHO    Glory Hole Cre    45.99  41   P      P         17 38 03.0  +1.2
SML    Sawmill           46.18  41   P      P         17 38 03.8  +0.5
INK    Inuvik            46.48  28   P      P         17 38 03.2  -2.4
INK                                  pmax   pmax
       comp=Z,8.0nm,1.5s
INK    Inuvik            46.48  28   P      P         17 38 03.1  -2.4
INK                                  IAmb   IAmb      17 39 01.9
       comp=Z,8.4nm,1.4s
EGAK   Eagle             46.68  35   P      P         17 38 08.3  +1.1
EGAK                                 IAmb   IAmb      17 38 09.0
       comp=Z,4.8nm,1.0s
M24K   Tolsona, Glenn    46.76  39   P      P         17 38 09.0  +1.0
K27K   Chicken           46.89  36   P      P         17 38 10.1  +1.3
K27K                                 IAmb   IAmb      17 39 22.9
       comp=Z,16nm,1.8s
KLU    Klutina           47.26  40   P      P         17 38 13.1  +1.3
N25K   Chitina, Valde    47.66  39   P      P         17 38 17.1  +2.2
AKASG  Malin Array Be    47.69 301   P      P         17 38 14.0  -1.2
       comp=Z,0.8nm,0.6s,baz=43,slow=8.7,SNR=6.6
AKASG  Malin Array Be    47.69 301   P      P         17 38 14.0  -1.2
DAWY   Dawson            47.73  35   P      P         17 38 17.6  +2.2
DAWY                                 IAmb   IAmb      17 38 28.3
       comp=Z,5.3nm,1.2s
NOA    NORSAR Array B    48.36 321   P      P         17 38 21.5  +1.2
       comp=Z,1.4nm,0.9s,baz=51,slow=7.8,SNR=2.7
NOA                                  LR     LR        18 02 40.6
       comp=Z,100nm,19.2s,baz=330,slow=41
TGL    Tana Glacier      48.87  39   P      P         17 38 25.8  +1.6
CTGM   Chitina Glacie    49.25  38   P      P         17 38 29.2  +1.9
BRTR   Keskin Array B    53.03 288   P      P         17 38 56.1  +0.2
       comp=Z,1.0nm,0.8s,baz=4.6,slow=6.2,SNR=4.0
BRTR                                 LR     LR        18 04 23.6
       comp=Z,45nm,18.9s,baz=4.0,slow=39
BRTR   Keskin Array B    53.03 288ceP       P         17 38 59.0  +3.0
BRTR                                 pmax   pmax
       comp=Z,1.0nm,0.8s
YKA    Yellowknife Ar    55.88  25   P      P         17 39 15.8  -0.3
       comp=Z,2.4nm,0.8s,baz=334,slow=6.9,SNR=28
ESDC   Sonseca Array     71.00 314   P      P         17 40 57.5  +0.8
       comp=Z,2.5nm,0.8s,baz=26,slow=6.1,SNR=11
PDAR   Pinedale Array    74.91  32   P      P         17 41 19.7  -0.3
       comp=Z,0.5nm,0.8s,baz=332,slow=5.0,SNR=3.8
NVAR   Mina Array Bea    75.98  40   P      P         17 41 26.7  +0.5
       comp=Z,0.7nm,0.7s,baz=326,slow=3.9,SNR=5.4
WRA    Warramunga Arr    77.73 160   P      P         17 41 35.3  -0.4
       comp=Z,0.7nm,0.8s,baz=15,slow=6.0,SNR=2.4
ANMO   Albuquerque       83.05  32   LR     LR        18 22 08.5
       comp=Z,74nm,19.1s,baz=40,slow=38
TORD   Torodi Ar. Bea    91.02 295   P      P         17 42 42.9  -0.6
       comp=Z,1.5nm,1.1s,baz=44,slow=5.7,SNR=3.5
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ISK ***09*** *17:34:35.4, 38°.49N×25°.42E, h16^{km}, ML2.5/14*
THE ***09*** *17:34:36.9, 38°.50N×25°.41E, h18^{km}±3^{km}, ML2.2/8, Error ellipse: s-maj=3.3km s-min=0.8km az=109.0*
ATH ***09*** *17:34:36.9, 38°.56N×25°.32E, h14^{km}±3^{km}, ML2.1/3, Error ellipse: s-maj=4.0km s-min=1.0km az=126.0*
DDA ***09*** *17:34:37.8, 38°.50N×25°.47E, h8^{km}±2^{km}, ML2.1*
ISC 09 17:34:36.8±1.2**, 38°.50N**±0°.03×**25°.41E**±0°.02**, h24**^{km}±13^{km}**,**
n40, σ0^{s}66/64**, Aegean Sea**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
SIGR   SIGRI              0.80  26   P      Pb        17 34 51.3  -0.6
SIGR                                 S      Sb        17 35 02.9  +0.6
SIGR                                 AML    AML       17 35 05.2
       comp=E,456μm,0.5s
SIGR                                 AML    AML       17 35 05.5
       comp=N,331μm,0.3s
SIGR   SIGRI              0.80  26   P      Pb        17 34 51.4  -0.6
SIGR                                 S      Sb        17 35 02.5  +0.2
       comp=N,198nm,0.5s
SIGR   SIGRI              0.80  26   PG     Pb        17 34 51.5  -0.5
SIGR                                 SG     Sb        17 35 02.8  +0.5
KARY   Karystos           0.90 239   P      Pb        17 34 53.5  -0.2
KARY                                 S      Sb        17 35 05.7  +0.5
       comp=N,120nm,0.3s
ZEYE   Izmir, Urla-Ze     0.90 106  i P     Pb        17 34 53.7   0.0
ZEYE                                i S     Sb        17 35 04.6  -0.6
ZEYE                                 IAML             17 35 08.0
       comp=E,49nm,0.3s
ZEYE                                 IAML             17 35 10.0
       comp=N,65nm,0.5s
URLA   Izmir              0.94  98   PG     Pb        17 34 53.7  -0.8
URLA                                 SG     Sn        17 35 07.4  +0.1
URLA   Izmir              0.94  98  i P     Pn        17 34 54.6   0.0
URLA                                i S     Sn        17 35 07.3  +0.1
URLA                                 IAML             17 35 09.0
       comp=N,41nm,0.6s
PRK    Paraskevi          1.01  42   P      Pn        17 34 55.6  +0.2
PRK                                  S      Sn        17 35 09.4  +0.5
PRK                                  AML    AML       17 35 13.8
       comp=N,372μm,0.4s
PRK                                  AML    AML       17 35 16.7
       comp=E,326μm,0.6s
PRK    Paraskevi          1.01  42   P      Pn        17 34 55.8  +0.3
PRK                                  S      Sn        17 35 09.4  +0.5
       comp=E,172nm,0.5s
KYMI   Kymi, Euboea I     1.04 278   P      Pn        17 34 55.4  -0.5
KYMI                                 AML    AML       17 35 18.9
       comp=N,87μm,0.6s
KYMI                                 AML    AML       17 35 19.6
       comp=E,91μm,0.5s
KYMI   Kymi, Euboea I     1.04 278   P      Pn        17 34 55.8  -0.1
KYMI                                 S      Sn        17 35 10.9  +1.2
       comp=E,45nm,0.5s
FOCM   Foa                1.06  78   PG     Pn        17 34 55.7  -0.4
FOCM                                 SG     Sn        17 35 10.5  +0.4
KOCA   Canakkale, Ayv     1.15  29  i P     Pn        17 34 54.9  -2.7
KOCA                                i S     Sn        17 35 13.3  +0.8
KOCA                                 IAML             17 35 16.0
       comp=N,56nm,0.5s
KOCA                                 IAML             17 35 17.0
       comp=E,73nm,0.6s
EREA   Eretria            1.16 267   P      Pn        17 34 57.6  -0.1
EREA                                 S      Sn        17 35 13.4  +0.6
       comp=E,62nm,0.3s
DION   Dionisos Attik     1.23 251   P      Pn        17 34 58.5  -0.1
DION                                 S      Sn        17 35 14.4  -0.2
DION   Dionisos Attik     1.23 251   P      Pn        17 34 58.7   0.0
DION                                 S      Sn        17 35 14.3  -0.3
       comp=E,178nm,0.5s
DGB    zmir               1.24 110  i P     Pn        17 34 59.1  +0.4
DGB                                 i S     Sn        17 35 13.2  -1.5
AYVA   Ayvalik            1.29  50  i P     Pn        17 34 59.6  +0.3
AYVA                                i S     Sb        17 35 17.0  +0.6
AYVA                                 IAML             17 35 19.0
       comp=E,26nm,0.8s
AYVA                                 IAML             17 35 21.0
       comp=N,49nm,0.4s
PTL    Penteli            1.30 250   P      Pn        17 34 59.4  -0.1
PTL                                  S      Sn        17 35 16.2  +0.1
DKL    Dikili             1.30  63   PN     Pn        17 34 59.4  -0.1
ZEDA   zmir-Bergama       1.39  70  i P     Pb        17 35 04.0  +2.0
LIA    Limnos Island      1.41 353   P      Pn        17 35 00.8  -0.2
LIA                                  S      Sn        17 35 18.6  -0.3
LIA    Limnos Island      1.41 353   P      Pn        17 35 00.9  -0.2
LIA                                  S      Sn        17 35 18.4  -0.5
       comp=N,70nm,0.4s
APE    Apeiranthos        1.43 176   P      Pn        17 35 01.2  -0.2
APE    Apeiranthos        1.43 176   P      Pn        17 35 00.9  -0.4
APE                                  S      Sn        17 35 19.4   0.0
       comp=N,65nm,0.3s
APE    Apeiranthos        1.43 176   PN     Pn        17 35 00.9  -0.4
BOZC   Bozcaada           1.43  20   PN     Pn        17 35 01.2  -0.2
BOZC   Bozcaada           1.43  20  i P     Pb        17 35 02.2  -0.6
BOZC                                i S     Sn        17 35 17.7  -1.8
BOZC                                 IAML             17 35 37.0
       comp=N,36nm,0.8s
EZN    Ezine              1.51  28   PN     Pn        17 35 02.3   0.0
BAYC   CANAKKALE_Bayr     1.53  35  i P     Pb        17 35 04.6  +0.2
BAYC                                i S     Sn        17 35 21.9  +0.2
BAYC                                 IAML             17 35 29.0
       comp=E,19nm,0.4s
BUHA   Balikesir, Bur     1.64  52  i P     Pb        17 35 06.0  -0.4
BUHA                                i S     Sb        17 35 26.5  -0.2
BUHA                                 IAML             17 35 32.0
       comp=E,27nm,0.9s
BUHA                                 IAML             17 35 33.0
       comp=N,22nm,0.7s
GCAM   G?zelcaml?         1.64 118   PN     Pn        17 35 03.9  -0.3
GADA   Gvkgeada           1.73  12   PN     Pn        17 35 05.5   0.0
STEP   BALIKESIR_Sava     2.00  63  i P     Pb        17 35 12.7  +0.2
GELI   Tayfur-Gelibol     2.07  23   PN     Pn        17 35 10.2  +0.1
BALB   Balikesir          2.24  58   PN     Pn        17 35 12.5  +0.1
ERIK   Erikli-Kesan       2.33  21   PN     Pn        17 35 14.0  +0.3
KRBG   Karabiga-Canak     2.39  37   PN     Pn        17 35 14.7  +0.2
ALN    Alexandroupoli     2.45  11   PN     Pn        17 35 15.6  +0.3
MRMT   Marmara Adasi      2.70  38   PN     Pn        17 35 19.3  +0.5
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WEL 09 17:36:37.8±1.5**, 32˚S**±29˚×**17˚9E**±5˚8**, h399**^{km}±47^{km}**,**
M3.9/11**, mB3.9**/4**, ML4.2**/8**, MLv4.2**/11**, Mw(mB)2.9**/4**,**
Error ellipse: s-maj=0.1km s-min=0.0km az=111.5,
South of Kermadec Islands

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
HAZ    Te Kaha            5.43 189   P      Pn        17 38 04.6  +0.5
HAZ                                  S      S         17 39 14.4  -0.1
WMGZ   Waiomatatini S     5.44 183   P      Pn        17 38 04.6  +0.4
WMGZ                                 S      S         17 39 14.6   0.0
RUGZ   Raukumara Rang     5.65 189   P      Pn        17 38 06.3  -0.3
RUGZ                                 S      S         17 39 18.5  -0.5
URZ    Urewera            6.03 193   P      Pn        17 38 10.6  +0.1
URZ                                  S      S         17 39 25.9  -0.3
MWZ    Matawai            6.04 190   P      Pn        17 38 10.8  +0.2
RAGZ   Rawiri             6.21 190   P      Pn        17 38 13.2  +0.5
RIGZ   Rimuhau            6.37 187   P      Pn        17 38 14.5  +0.2
RIGZ                                 S      S         17 39 34.3  +1.1
RTZ    Ruatahuna          6.40 193   P      Pn        17 38 14.5  -0.2
MTHZ   Maungataniwha      6.66 193   P      P         17 38 18.2  +0.1
MTHZ                                 S      S         17 39 40.4  +1.4
BKZ    Black Stump Fm     7.03 195   P      Pn        17 38 20.9  -0.8
MCHZ   McNeill Hill       7.26 193   P      Pn        17 38 24.1  -0.1
KAHZ   Kahuranaki         7.57 191   P      Pn        17 38 27.2  -0.5
PXZ    Pawanui            7.80 191   P      Pn        17 38 29.0  -1.3
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NEIC ***09*** *17:39:30.6±1.1, 51°.52N±0°.08×168°.3W±0°.1, h58^{km}±21^{km}, mb4.0/8, ML2.5(AEIC), Error ellipse: s-maj=15.6km s-min=6.2km az=134.0*
AEIC 09 17:39:30±1.4**, 51°.53N**±0°.07×**168°.3W**±0°.1**, h41**^{km}±9^{km}**,**
Error ellipse: s-maj=15.8km s-min=3.0km az=129.0, Fox Islands

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                     Op     ISC        h  m  s     ISC
NIKH   Nikolski High      1.48 348   Pn     Pn        17 39 54.8  +0.6
UNV    Unalaska Valle     2.58  25   Pn     Pn        17 40 10.1  +0.9
AKUT   Akutan             3.04  30   Pn     Pn        17 40 17.2  +1.7
ATKA   Atka Island        3.69 283   Pn     Pn        17 40 25.9  +1.4
FALS   False Pass         4.46  40   Pn     Pn        17 40 35.6  +0.6
ADK    Adak               5.20 277   Pn     Pn        17 40 46.0  +0.8
ADK                                  Sn     Sn        17 41 42.5  -1.4
SDPT   Sand Point         6.06  48   Pn     Pn        17 40 57.8  +0.8
CNBA   Chernabura Isl     6.21  54   Pn     Pn        17 40 59.4  +0.4
CHGN   Chignik            7.56  47   Pn     Pn        17 41 19.0  +1.5
AMKA   Amchitka           7.73 274   Pn     Pn        17 41 19.7  -0.1
OHAK   Old Harbor        10.46  51   Pn     Pn        17 41 57.7  +0.5
KDAK   Kodiak Island     11.05  49   Pn     Pn        17 42 05.6  +0.3
RSO    Redoubt South     12.47  38   Pn     Pn        17 42 22.6  -2.2
CNPM   China Poot        12.54  44   Pn     Pn        17 42 25.8  +0.2
SEW    Seward            13.61  44   Pn     Pn        17 42 39.9  -0.3
SUA    Susitna One       13.86  37   Pn     Pn        17 42 44.2  +0.5
SKT    Skwentna          13.90  35   Pn     Pn        17 42 47.1  +2.9
GHO    Glory Hole Cre    14.74  38   Pn     Pn        17 42 55.4  -0.2
FID    Port Fidalgo      15.22  44   Pn     Pn        17 43 00.3  -1.4
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCM	Sheep Creek Mo	15.41	40	Pn	Pn	17 43 03.4	-0.9
BPAW	Bear Paw Mtn.	15.55	29	Pn	Pn	17 43 05.9	-0.1
KLU	Klutina	15.81	42	Pn	Pn	17 43 08.1	-1.3
KLU				IAmb	IAmb	17 43 12.2	
	comp=Z,15nm,1.3s						
N25K	Chitina, Valde	16.42	43	Pn	Pn	17 43 17.1	-0.1
N25K				IAmb	IAmb	17 43 51.5	
	comp=Z,18nm,1.6s						
GLB	Gilahina Butte	16.69	44		Pn	17 43 20.5	0.0
GLB				IAmb	IAmb	17 43 50.2	
	comp=Z,22nm,1.5s						
VRDI	Verde Repeater	16.75	45	Pn	Pn	17 43 21.2	-0.3
BALM	Baldy	17.17	46		Pn	17 43 25.8	-0.8
BALM				IAmb	IAmb	17 43 29.7	
	comp=Z,22nm,1.5s						

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*MOS **09** 17:46:55.3±1.2, 56.°06N×113.°74E, h6^{km}, mb3.7/1, Error ellipse: s-maj=11.6km s-min=7.9km az=72.6*
*IDC **09** 17:46:56.5±1.3, 56.°08N×113.°75E, h0^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.5/40, mbtmp3.6/11, ML3.1/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/50, Error ellipse: s-maj=30.2km s-min=19.4km az=142.0*
*BYKL **09** 17:46:57.0±0.2, 56.°08N×113.°74E, h8^{km}±3^{km}*
ISC 09 17:46:56.3±1.1**, 56.°03N**±0.°02×**113.°75E**±0.°02**, h3**^{km}±8^{km}**, n47, σ1.°56**/82**, mb3.6**/7**, 7C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.14	309	⇑iPg	Pg	17 46 58.9	-0.1
SVKR				eSg	Sg	17 47 02.2	+1.4
SVKR				Pmax			
	7μm,0.2s						
SVKR				Smax			
	54μm,0.8s						
SVKR	Severomuysk	0.14	309	⇑iPG	Pg	17 46 58.8	-0.2
SVKR				e		17 47 02.3	
SVKR				pmax	pmax		
	comp=Z,12μm,1.4s						
SVKR				smax	smax		
	comp=N,52μm,0.9s						
UKT	Uakit	0.55	187	⇑iPg	Pg	17 47 07.0	+0.2
UKT				eSg	Sg	17 47 15.1	+1.2
UKT				Pmax			
	comp=N,282nm,0.6s						
UKT				Smax			
	comp=N,1μm,0.7s						
YOA	Uoyan	1.14	276	⇑iPg	Pb	17 47 17.1	-1.6
YOA				ePb	Pn	17 47 18.8	-0.4
YOA				eSg	Sb	17 47 32.8	-1.1
YOA				eSb	Sn	17 47 38.7	+3.4
YOA				max			
	comp=N,584nm,0.4s						
YOA				max			
	comp=N,3μm,0.9s						
YOA	Uoyan	1.14	276	⇑iPG	Pb	17 47 17.0	-1.6
YOA				e		17 47 32.2	
YOA				pmax	pmax		
	comp=Z,190nm,0.3s						
YOA				smax	smax		
	comp=N,2μm,0.6s						
NLYR	Nelyaty	1.18	66	⇓iPg	Pb	17 47 18.3	-1.2
NLYR				ePb	Pg	17 47 20.2	+1.2
NLYR				eSg	Sn	17 47 34.6	-1.8
NLYR				eSb	Sg	17 47 38.2	+3.9
NLYR				max			
	comp=N,1μm,0.7s						
NLYR				max			
	comp=N,2μm,1.1s						
NLYR	Nelyaty	1.18	66	⇓iPG	Pb	17 47 18.2	-1.2
NLYR				e		17 47 34.3	
NLYR				pmax	pmax		
	comp=Z,950nm,0.6s						
NLYR				smax	smax		
	comp=E,2μm,0.6s						
KMO	Kumora	1.44	265	ePg	Pn	17 47 22.2	-1.1
KMO				ePb	Pb	17 47 23.4	-0.4
KMO				eSg	Sb	17 47 42.2	-0.3
KMO				eSb	Sg	17 47 44.6	+2.1
KMO				max			
	comp=E,291nm,0.4s						
KMO				max			
	comp=E,2μm,0.9s						
KMO	Kumora	1.44	265	ePG	Pn	17 47 22.5	-0.8
KMO				e		17 47 42.9	
KMO				pmax	pmax		
	comp=Z,148nm,0.4s						
KMO				smax	smax		
	comp=N,2μm,0.8s						
BOD	Bodaibo	1.80	4	⇑iPg	Pb	17 47 28.1	-1.7
BOD				eSg	Sb	17 47 50.8	-2.0
BOD				Pmax			
	comp=N,216nm,0.8s						
BOD				Smax			
	comp=N,912nm,1.2s						
BOD	Bodaibo	1.80	4	⇑iPN	Pb	17 47 28.5	-1.3
BOD				e		17 47 51.3	
BOD				pmax	pmax		
	comp=Z,238nm,0.7s						
BOD				smax	smax		
	comp=E,914nm,0.6s						
YLYR	Ulyunkhan	1.88	233	ePn	Pb	17 47 30.5	-0.7
YLYR				ePg	Pg	17 47 31.2	-1.0
YLYR				eSg	Sg	17 47 56.3	-0.2
YLYR				Pmax			
	comp=E,185nm,0.4s						
YLYR				Smax			
	comp=E,2μm,1.1s						
YLYR	Ulyunkhan	1.88	233	ePN	Pb	17 47 30.7	-0.5
YLYR				e		17 47 31.9	
YLYR				eS	Sb	17 47 54.8	-0.2
YLYR				e		17 47 56.0	
YLYR				pmax	pmax		
	comp=Z,181nm,0.3s						
YLYR				smax	smax		
	comp=E,2μm,0.5s						
NIZ	Nizh Angarsk	2.38	266	ePn	Pn	17 47 36.3	0.0
NIZ				ePg	Pb	17 47 39.6	-0.2
NIZ				eSg	Sg	17 48 11.4	-1.4
NIZ				Pmax			
	comp=E,101nm,0.6s						
NIZ				Smax			
	comp=E,568nm,0.7s						
CRS	Chara	2.66	69	ePn	Pn	17 47 40.7	+0.7
CRS				ePg	Pb	17 47 45.0	+0.5
CRS				eSg	Sg	17 48 20.1	-1.4
CRS				Pmax			
	comp=E,432nm,0.7s						
CRS				Smax			
	comp=E,557nm,0.8s						
SYVR	Suvo	3.22	224	ePn	Pn	17 47 48.6	+0.8
SYVR				ePg	Pb	17 47 54.9	+0.8
SYVR				eSg	Sg	17 48 37.6	-2.0
SYVR				Pmax			
	comp=E,85nm,0.7s						
SYVR				Smax			
	comp=E,573nm,1.8s						
SYVR	Suvo	3.22	224	ePN	Pn	17 47 48.7	+0.9
SYVR				e		17 47 55.2	
SYVR				e		17 48 37.5	
SYVR				pmax	pmax		
	comp=Z,85nm,0.7s						
SYVR				smax	smax		
	comp=E,589nm,1.5s						
VTMR	Vitim	3.48	350	ePn	Pn	17 47 50.9	-0.4
VTMR				ePg	Pb	17 47 59.0	+0.5
VTMR				eSg	Sb	17 48 42.5	+1.4
KHNR	Khani	3.57	73	ePn	Pn	17 47 53.8	+1.2
KHNR				ePg	Pb	17 48 00.7	+0.7
KHNR				ePgPg	PbPb	17 48 02.6	-0.6
KHNR				eSg	Sg	17 48 48.3	-2.5
TUP	Tupik	3.90	112	ePn	Pn	17 47 57.7	+0.6
TUP				ePg	Pb	17 48 06.4	+0.7
TUP				eSn	Sn	17 48 43.7	+0.3
TUP				eSg	Sg	17 48 58.7	-2.8
TUP				Pmax			
	comp=E,68nm,0.4s						
TUP				Smax			
	comp=E,340nm,1.0s						
TUP	Tupik	3.90	112	⇓iPN	Pn	17 47 58.1	+1.0
TUP				e		17 48 07.9	
TUP				eS	Sn	17 48 43.6	+0.2
TUP				e		17 48 58.5	
TUP				pmax	pmax		
	comp=Z,61nm,0.5s						
TUP				smax	smax		
	comp=E,340nm,0.9s						
CIT	Chita	4.02	182	ePN	Pn	17 48 00.8	+2.0
CIT				e		17 48 10.6	
CIT				eS	Sn	17 48 46.1	-0.3
CIT				e		17 49 01.1	
CIT				pmax	pmax		
	comp=Z,81nm,0.8s						
CIT				smax	smax		
	comp=E,291nm,1.6s						
OGRR	Ongureny	4.29	239	ePn	Pn	17 48 04.0	+1.6
OGRR				ePg	Pb	17 48 14.5	+2.2
OGRR				eSg	Sg	17 49 12.0	-1.9
OGRR				Pmax			
	comp=E,47nm,1.3s						
OGRR				Smax			
	comp=E,161nm,1.5s						
OGRR	Ongureny	4.29	239	ePN	Pn	17 48 04.2	+1.8
OGRR				e		17 48 15.0	
OGRR				e		17 49 09.0	
OGRR				pmax	pmax		
	comp=Z,34nm,1.4s						
OGRR				smax	smax		
	comp=N,158nm,2.2s						
YKLR	Yuktali	4.44	79	ePn	Pn	17 48 04.9	+0.4
YKLR				ePg	Pb	17 48 15.8	+1.0
YKLR				eSg	Sg	17 49 14.1	-4.6
TRG	Tyrgan	5.42	236	ePN	Pn	17 48 17.8	-0.3
TRG				e		17 48 33.1	
TRG				eS	Sn	17 49 18.2	-2.8
TRG				e		17 49 43.0	
TRG				pmax	pmax		
	comp=Z,15nm,1.0s						
TRG				smax	smax		
	comp=E,99nm,1.4s						
KPC	Khapcheranga	6.39	188	ePn	Pn	17 48 31.2	-0.2
KPC				ePg	Pb	17 48 52.7	+4.5
KPC				eSg	Sg	17 50 16.9	-4.6
KPC				Pmax			
	comp=E,9.0nm,0.3s						
KPC				Smax			
	comp=E,301nm,1.0s						
KPC	Khapcheranga	6.39	188	ePN	Pn	17 48 31.1	-0.3
KPC				e		17 48 52.0	
KPC				e		17 50 14.2	
KPC				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KPC				smax	smax		
	comp=E,300nm,1.4s						
ARS	Arshan	7.84	243	ePG	Pg	17 49 20.3	-6.1
ARS				pmax	pmax		
	comp=Z,12nm,0.5s						
ZEA	Zeya	8.12	101	ePG	Pg	17 49 24.1	-7.5
MOY	Mondy	8.71	245	ePN	Pn	17 49 05.1	+1.9
MOY				e		17 49 32.7	
MOY				eS	Sn	17 50 39.7	-2.3
MOY				e		17 51 26.5	
MOY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MOY				smax	smax		
	comp=N,88nm,1.6s						
ORL	Orlik	8.87	253	ePN	Pn	17 49 06.0	+0.6
ORL				e		17 49 35.8	
ORL				eS	Sn	17 50 44.5	-1.4
ORL				e		17 51 28.2	
ORL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ORL				smax	smax		
	comp=N,49nm,1.1s						
SONM	Songino Array	9.38	212	Pn	Pn	17 49 13.6	+1.3
	comp=N,0.1nm,0.3s,baz=21,slow=13,SNR=2.1						
SONM				Lg	Lg	17 51 53.9	
	comp=N,1.4nm,0.3s,baz=17,slow=30,SNR=16						
YAK	Yakutsk	10.16	47	Lg	Lg	17 52 09.4	
	comp=N,0.1nm,0.3s,baz=156,slow=20,SNR=6.4						
KLR	Kul'dur	12.86	114	Pn	Pn	17 50 00.7	+0.9
	comp=N,0.2nm,0.3s,baz=298,slow=11,SNR=3.8						
KLR				Lg	Lg	17 53 37.5	
	comp=N,0.1nm,0.3s,baz=195,slow=23,SNR=3.6						
ZALV	Zalesovo Beam	16.68	275	Pn	Pn	17 50 50.8	0.0
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=2.1						
ZALV				Lg	Lg	17 55 42.1	
	comp=N,0.1nm,0.3s,baz=79,slow=26,SNR=2.8						
NRIK	Noril'sk	17.73	329	P	P	17 51 03.9	-0.9
	comp=N,0.4nm,0.3s,baz=96,slow=9.1,SNR=3.9						
KURK	Kurchatov	21.46	270	P	P	17 51 48.0	+2.5
MKAR	Makanchi Array	21.52	258	P	P	17 51 47.5	+1.3
	comp=N,0.7nm,0.7s,baz=56,slow=8.0,SNR=7.6						
KURBB	Kurchatov Arra	21.55	270	P	P	17 51 48.0	+1.5
	comp=N,2.1nm,0.9s,baz=63,slow=12,SNR=9.1						
ASAJ	Asahikawa	21.84	111	LR	LR	18 00 03.4	
	comp=N,92nm,18.5s,baz=110,slow=36						
ILAR	Eielson Array	44.88	37	P	P	17 55 12.7	+1.2
	comp=N,0.3nm,0.7s,baz=303,slow=8.8,SNR=4.2						
NOA	NORSAR Array B	48.42	321	P	P	17 55 39.0	-0.3
	comp=N,1.6nm,1.0s,baz=51,slow=7.8,SNR=2.4						
NOA	NORSAR Array B	48.42	321	P	P	17 55 39.0	-0.3
YKA	Yellowknife Ar	55.96	25	P	P	17 56 34.7	-0.5
	comp=N,0.4nm,0.6s,baz=334,slow=6.6,SNR=4.5						
ESDC	Sonseca Array	71.05	314	P	P	17 58 16.4	+1.0
	comp=N,1.1nm,1.1s,baz=12,slow=6.6,SNR=4.7						
TORD	Torodi Ar. Bea	91.05	295	P	P	18 00 01.6	-0.5
	comp=N,0.7nm,0.8s,baz=282,slow=1.4,SNR=2.9						

NOU 09 17:57:53.1, 17.°43S×167.°61E, h9^{km}, MLv4.1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.62	118	P	Pg	17 58 05.6	+0.4
SANVU	Saraoutou	2.01	349	P	Pn	17 58 27.2	0.0
MARNC	Mare, Loyalty	4.05	174	P	Pn	17 58 54.7	-0.6
KOUNC	Koumac, New Ca	4.42	225	P	Pn	17 59 00.5	+0.1
YATNC	Mamie plateau,	4.66	188	P	Pn	17 59 03.4	-0.2
DZM	Mont Dzumac	4.75	193	P	Pn	17 59 04.7	-0.3
NOUC	Port Laguerre	4.81	195	P	Pn	17 59 04.7	-1.0
OUENC	Ouen Island, N	5.01	188	P	Pn	17 59 09.6	+1.0
PINNC	Pines Island,	5.16	182	P	Pn	17 59 11.2	+0.7

BYKL 09 18:14:21.4±0.2**, 56.°13N×113.°74E, h5**^{km}±4^{km}**, 1C-2D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.10	263	ePg	Pg	18 14 23.2	-0.4
SVKR				eSg	Sg	18 14 25.1	0.0
SVKR				Pmax			
	2μm,0.1s						
SVKR				Smax			
	26μm,0.3s						
UKT	Uakit	0.65	186	⇑iPg	Pg	18 14 32.3	-1.5
UKT				eSg	Sg	18 14 41.7	-0.5
UKT				Pmax			
	101nm,0.4s						
UKT				Smax			
	245nm,0.7s						
YOA	Uoyan	1.13	271	ePg	Pg	18 14 41.9	-1.1
YOA				eSg	Sg	18 14 57.2	-0.4
YOA				e		18 15 02.9	
YOA				Pmax			
	309nm,0.2s						
YOA				max			
	1μm,0.4s						
NLYR	Nelyaty	1.15	71	⇓iPg	Pg	18 14 42.2	-1.3
NLYR				ePb	Pn	18 14 44.3	+0.1
NLYR				eSg	Sg	18 14 57.9	-0.5
NLYR				eSb	Sn	18 15 01.7	+1.3
NLYR				max			
	237nm,0.4s						
NLYR				max			
	504nm,0.6s						
KMO	Kumora	1.45	261	⇓iPg	Pn	18 14 47.1	-1.1
KMO				ePb	Pb	18 14 48.7	-0.1
KMO				eSg	Sb	18 15 07.3	-0.2
KMO				eSb	Sg	18 15 09.5	+1.7
KMO				max			
	134nm,0.3s						
KMO				max			
	498nm,0.5s						
BOD	Bodaibo	1.70	5	ePg	Pn	18 14 52.0	+0.3
BOD				eSg	Sb	18 15 14.5	-0.3
BOD				Pmax			
	43nm,0.4s						
BOD				Smax			
	179nm,0.7s						
YLYR	Ulyunkhan	1.93	230	ePn	Pn	18 14 55.4	+0.5
YLYR				ePg	Pb	18 14 56.0	-1.1
YLYR				eSg	Sb	18 15 21.0	-0.5
YLYR				Pmax			
	43nm,0.5s						
YLYR				Smax			
	369nm,1.0s						
NIZ	Nizh Angarsk	2.39	263	ePn	Pn	18 15 01.9	+0.7
NIZ				ePg	Pb	18 15 04.5	-0.3
NIZ				eSg	Sb	18 15 35.7	+1.1
NIZ				Pmax			
	23nm,0.5s						
NIZ				Smax			
	165nm,0.4s						
CRS	Chara	2.63	71	ePn	Pn	18 15 05.0	+0.5
CRS				ePg	Pb	18 15 09.1	+0.2
CRS				eSg	Sg	18 15 43.7	-2.0
CRS				Pmax			
	86nm,0.6s						
CRS				Smax			
	100nm,0.5s						
SYVR	Suvo	3.29	223	ePn	Pn	18 15 14.2	+0.7
SYVR				ePg	Pb	18 15 20.2	0.0
SYVR				e		18 15 24.2	
SYVR				eSg	Sb	18 16 02.9	+2.5
SYVR				max			
	28nm,0.6s						
SYVR				Smax			
	142nm,1.8s						
VTMR	Vitim	3.38	350	ePn	Pn	18 15 14.8	0.0
VTMR				ePg	Pb	18 15 22.1	+0.4
VTMR				eSg	Sg	18 16 06.7	-3.2
TUP	Tupik	3.94	113	ePn	Pn	18 15 22.7	+0.2
TUP				ePg	Pb	18 15 33.1	+1.8
TUP				eSg	Sg	18 16 25.0	-2.9
TUP				Pmax			
	19nm,0.6s						
TUP				Smax			
	113nm,0.7s						
OGRR	Ongureny	4.33	237	ePn	Pn	18 15 28.5	+0.6
OGRR				ePg	Pb	18 15 39.0	+1.0
OGRR				eSg	Sb	18 16 34.9	+4.3
OGRR				Pmax			
	75nm,0.4s						
OGRR				Smax			
	51nm,1.3s						
YKLR	Yuktali	4.43	81	ePn	Pn	18 15 28.8	-0.4
YKLR				ePg	Pb	18 15 40.0	+0.4
YKLR				eSg	Sb	18 16 37.5	+4.3
TRG	Tyrgan	5.48	235	ePg	Pb	18 15 58.5	+1.0
TRG				eSg	Sb	18 17 09.2	+5.8
TRG				Pmax			
	3.0nm,0.4s						
TRG				Smax			
	19nm,0.8s						
KPC	Khapcheranga	6.49	188	ePn	Pn	18 15 58.3	+0.7
KPC				ePg	Pb	18 16 18.4	+3.7
KPC				eSg	Sg	18 17 42.3	-7.3
KPC				Pmax			
	3.0nm,0.3s						
KPC				Smax			
	39nm,2.0s						

BYKL 09 18:14:28.7±0.3**, 56.°11N×113.°73E, h5**^{km}±8^{km}**, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.10	274	ePg	Pg	18 14 30.3	-0.5
SVKR				eSg	Sg	18 14 32.2	0.0
SVKR				Pmax			
	4μm,0.2s						
SVKR				Smax			
	27μm,0.3s						
UKT	Uakit	0.62	185	ePg	Pg	18 14 39.1	-1.6
UKT				eSg	Sg	18 14 47.7	-1.1
UKT				Pmax			
	60nm,0.2s						
UKT				Smax			
	182nm,0.5s						
YOA	Uoyan	1.12	272	eSg	Sg	18 15 04.7	-0.1
YOA				Smax			
	1μm,0.5s						
NLYR	Nelyaty	1.16	70	ePg	Pg	18 14 49.5	-1.5
NLYR				ePb	Pn	18 14 51.5	-0.2
NLYR				eSg	Sg	18 15 05.2	-0.9
NLYR				eSb	Sn	18 15 08.7	+0.7
NLYR				max			
	285nm,0.3s						
NLYR				max			
	314nm,0.8s						
KMO	Kumora	1.44	262	eSg	Sb	18 15 13.0	-1.6
KMO				Smax			
	278nm,0.6s						
BOD	Bodaibo	1.72	5	ePg	Pn	18 14 59.0	-0.3
BOD				eSg	Sn	18 15 21.5	-0.1
BOD				Pmax			
	64nm,0.9s						
BOD				Smax			
	178nm,0.6s						
YLYR	Ulyunkhan	1.91	231	ePg	Pn	18 15 02.9	+0.9
YLYR				eSg	Sb	18 15 28.0	-0.3
YLYR				Pmax			
	45nm,0.6s						
YLYR				Smax			
	369nm,0.8s						
NIZ	Nizh Angarsk	2.38	264	ePg	Pb	18 15 11.6	-0.4
NIZ				eSg	Sg	18 15 43.5	-1.6
NIZ				Pmax			
	17nm,0.4s						
NIZ				Smax			
	116nm,0.4s						
CRS	Chara	2.64	71	ePg	Pb	18 15 16.1	-0.3
CRS				eSg	Sb	18 15 50.7	+1.6
CRS				Pmax			
	112nm,0.7s						
CRS				Smax			
	101nm,0.6s						
SYVR	Suvo	3.27	223	eSg	Sb	18 16 09.3	+2.1
SYVR				Smax			
	139nm,1.6s						
TUP	Tupik	3.94	113	ePn	Pn	18 15 29.4	-0.4
TUP				ePg	Pb	18 15 39.7	+1.1
TUP				eSg	Sg	18 16 32.1	-3.0
TUP				Pmax			
	10.0nm,0.6s						
TUP				Smax			
	92nm,0.7s						
KPC	Khapcheranga	6.47	188	eSg	Sg	18 17 48.5	-7.8
KPC				Smax			
	19nm,0.7s						

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*SJA **09** 18:18:19.9±0.4, 35.°70S×74.°88W, h10^{km}, ML4.4, MW4.5*
*GUC **09** 18:18:38.9±0.5, 35.°40S×73.°35W, h26^{km}±4^{km}, ML4.4*
ISC 09 18:18:38.1±2.3**, 35.°39S**±0.°06×**73.°7W**±0.°2**, h35**^{km}**, n21, σ1.°54**/29**, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI03	Tigo	1.54	161	eP	Pn	18 19 03.4	+0.3
BI03				i S	Sn	18 19 20.9	-1.1
BI03				IAML		18 19 32.3	
	comp=N,9μm,0.4s						
BO03	Pichilemu	1.66	58	⇑iP	Pn	18 19 03.0	-1.7
BO03				eS	Sn	18 19 21.5	-3.2
BO03				IAML		18 19 29.1	
	comp=E,5μm,0.5s						
VA05	Santo Domingo	2.42	45	eP	Pn	18 19 15.1	-0.1
VA05				eS	Sn	18 19 41.8	-1.7
VA05				IAML		18 19 57.9	
	comp=E,2μm,0.4s						
BO02	Sierra Bellavi	2.44	77	eP	Pn	18 19 14.2	-1.3
BO02				eS	Sn	18 19 42.6	-1.6
MT09	Talagante	2.73	55	eP	Pn	18 19 19.2	-0.4
MT09				eS	Sn	18 19 52.7	+1.3
MT02	Curacav	2.98	45	eP	Pn	18 19 22.2	-0.7
MT05	Renca	3.13	51	eP	Pn	18 19 27.3	+2.2
MT05				IAML		18 20 22.1	
	comp=E,2μm,0.6s						

MT03	Universidad Ad	3.22	55	eP	Pn	18 19 26.6	+0.3
MT03				eS	Sn	18 20 02.7	-0.8
MT03				IAML		18 20 22.5	
	comp=N,2μm,0.5s						
LMEL	Las Melosas	3.24	63	eP	Pn	18 19 28.2	+1.5
LMEL				eS	Sn	18 20 07.4	+3.3
LMEL				IAML		18 20 15.2	
	comp=N,895nm,0.3s						
ROC1	El Roble	3.26	43	iP	Pn	18 19 27.3	+0.3
ROC1				eS	Sn	18 20 17.1	+13
ROCH	El Roble	3.26	43	eP	Pn	18 19 27.7	+0.7
ROCH				iS	Sn	18 20 04.3	-0.4
ROCH				IAML		18 20 36.1	
	comp=N,1μm,0.4s						
PEL	Peldehue	3.33	49	eP	Pn	18 19 28.0	+0.2
PEL				eS	Sn	18 20 04.5	-1.6
PEL				IAML		18 20 25.1	
	comp=N,959nm,0.6s						
PEL	Peldehue	3.33	49	iP	Pn	18 19 28.8	+1.1
PEL				eS	Sn	18 20 20.1	+14
EDS3	Malargue	3.50	98	iP	Pn	18 19 35.2	+5.1
LAMA	Las Malvinas	3.67	84	iP	Pn	18 19 39.6	+7.1
VA03	San Esteban	3.68	46	eP	Pn	18 19 32.6	0.0
VA03				eS	Sn	18 20 13.9	-0.8
VA03				IAML		18 20 35.6	
	comp=E,803nm,0.4s						
RFA	San Rafael	4.31	83	iP	Pn	18 19 42.7	+1.5
RFA				eS	Sn	18 20 44.9	+15
RFA				IAML		18 20 47.7	
	comp=Z,596nm,0.7s						
ARCO	CERRO ARCO	4.67	58	iP	Pn	18 19 48.2	+1.9
ARCO				IAML		18 21 21.6	
	comp=Z,91nm,0.7s						
AUSP	Uspallata	4.76	50	iP	Pn	18 19 49.6	+1.9
ASAL	Salagasta	4.88	57	iP	Pn	18 19 51.0	+1.8
ASAL				IAML		18 21 28.0	
	comp=Z,84nm,1.0s						
RTCV	Cerro Valdivia	5.53	52	iP	Pn	18 19 59.3	+1.2

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*IDC **09** 18:23:12.8±1.6, 15°.59S×171°.67W, h0^{km}, mb3.8/3, mb1 4.2/3, mb1mx3.7/50, mbtmp3.8/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/51, Error ellipse: s-maj=43.6km s-min=26.9km az=111.0*

*NEIC **09** 18:23:20.5±0.6, 15°.32S±0°.04×172°.0W±0°.2, h48^{km}±10^{km}, mb4.1/5, Error ellipse: s-maj=23.4km s-min=5.4km az=83.0*

ISC 09 18:23:18.3±0.7**, 15°.36S**±0°.06×**172°.0W**±0°.1**, h23**^{km}**, n21, σ1^{s}78**/14**, mb3.9**/5**, MS3.9**/8**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.45	8	Pn	Pb	18 23 44.3	-0.4
	50nm,0.3s,baz=214,slow=15,SNR=78						
AFI				LR	LR	18 23 50.6	
	comp=Z,124nm,21.0s,baz=153,slow=23						
AFI				Sn	Sb	18 24 04.7	+1.9
	246nm,0.3s,baz=43,slow=23,SNR=14						
AFI	Afiamalu	1.45	8		Pb	18 23 44.1	-0.6
NIUE	Niue	4.19	152		Pn	18 24 22.4	+1.6
NIUE				Sn	Sn	18 25 10.7	+1.7
MSVF	Nonsavu	9.85	255	LR	LR	18 28 29.0	
	comp=Z,216nm,21.6s,baz=80,slow=31						
FUNA	Funafuti	10.98	307	Pn	Pn	18 25 56.3	+2.2
PPT	Papeete	21.60	99	LR	LR	18 34 28.8	
	comp=Z,28nm,19.1s,baz=308,slow=32						
STKA	Stephens Creek	45.24	240	P	P	18 31 32.0	-2.2
STKA				IAmb	IAmb	18 31 52.5	
	comp=Z,3.7nm,1.6s						
JAY	Jayapura	48.33	281	LR	LR	18 51 30.5	
	comp=Z,32nm,19.8s,baz=66,slow=35						
ASAR	Alice Springs	51.43	252	P	P	18 32 21.5	-0.5
	comp=Z,1.1nm,0.7s,baz=87,slow=8.2,SNR=5.1						
SOEI	Soe	62.30	267	P	P	18 33 40.5	+1.1
PFO	Pinyon Flats O	71.89	46	LR	LR	18 59 16.8	
	comp=Z,69nm,18.2s,baz=274,slow=30						
YBH	Yreka Blue Hor	72.75	36	LR	LR	19 00 25.8	
	comp=Z,61nm,18.2s,baz=272,slow=31						
NVAR	Mina Array Bea	73.39	41	P	P	18 34 47.5	-1.3
	comp=Z,0.9nm,0.9s,baz=234,slow=7.7,SNR=4.6						
QSPA	South Pole Qui	74.69	180	P	P	18 34 55.0	-0.9
ELK	Elko	76.65	41	LR	LR	18 59 52.8	
	comp=Z,56nm,20.6s,baz=296,slow=29						
G08A	Pilot Rock	77.10	35	P	P	18 35 09.0	-1.0
HLID	Hailey	78.73	39	P	P	18 35 17.6	-1.6
HLID				IAmb	IAmb	18 35 18.7	
	comp=Z,2.4nm,0.9s						
ANMO	Albuquerque	79.73	49	LR	LR	19 05 15.7	
	comp=Z,47nm,18.8s,baz=318,slow=32						
DLBC	Dease Lake	81.17	21	LR	LR	19 05 54.8	
	comp=Z,65nm,18.2s,baz=4.0,slow=32						
PDAR	Pinedale Array	81.33	41	P	P	18 35 30.5	-2.8
	comp=Z,0.4nm,0.8s,baz=198,slow=4.4,SNR=3.6						
JTS	Las Juntas de	89.86	79	LR	LR	19 07 02.0	
	comp=Z,89nm,20.5s,baz=166,slow=29						

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*IDC **09** 18:35:00.1±0.8, 34°.13S×72°.09W, h0^{km}, mb4.3/11, mb1 4.3/14, mb1mx4.2/30, mbtmp4.2/14, ML4.1/3, MS4.0/9, Ms1 4.0/9, ms1mx3.7/28, Error ellipse: s-maj=28.6km s-min=15.6km az=93.0*

*SJA **09** 18:35:00.7±1.0, 33°.97S×72°.47W, h10^{km}, ML4.5, MW4.5*

*GUC **09** 18:35:01.3±1.4, 34°.23S×72°.45W, h40^{km}±5^{km}, ML4.7*

*NEIC **09** 18:35:02.8±1.7, 34°.13S±0°.04×72°.32W±0°.05, h20^{km}±4^{km}, mb4.9/26, Mwr4.6/24, ML4.7(GUC), Error ellipse: s-maj=6.1km s-min=4.9km az=52.0*

*NEIC **09** 18:35:02.4, 34°.12S×72°.30W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.66; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-0.47; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.81; Fault plane solution: $M_0$1.09000×10^{16} NP1:ϕ_s186.76000°, δ70.71000°, λ67.24000°. NP2:ϕ_s58.54000°, δ29.50000°, λ137.87000°. Principal axes: T 1.1532, Plg58.0000°, Azm66.0000°; N -0.1296, Plg21.0000°, Azm195.0000°; P -1.0236, Plg22.0000°, Azm294.0000°;*

ISC 09 18:34:60.0±1.5**, 34°.12S**±0°.03×**72°.38W**±0°.04**, h5**^{km}±8^{km}**, n141, σ1^{s}46**/151**, mb4.8**/20**, MS4.2**/9**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	0.51	137	eP	Pb	18 35 12.0	+0.7
BO03				iS	Sb	18 35 18.5	-0.5
VA05	Santo Domingo	0.79	54	eP	Pn	18 35 17.4	-0.3
VA05				iS	Sn	18 35 29.1	-0.7
VA05				IAML		18 35 30.3	
	comp=E,82μm,0.4s						
MT09	Talagante	1.20	74	eP	Pg	18 35 23.2	+0.1
MT09				iS	Sg	18 35 39.1	+0.4
MT09				IAML		18 35 42.1	
	comp=N,22μm,0.2s						
MT02	Curacav	1.34	50	eP	Pn	18 35 25.6	+0.2
MT02				iS	Sn	18 35 44.2	+0.5
MT02				IAML		18 35 52.8	
	comp=N,14μm,0.5s						
MT02	Curacav	1.34	50		Pn	18 35 25.6	+0.2
MT02				Sn	Sb	18 35 43.0	-0.2
BO02	Sierra Bellavi	1.48	117	eP	Pn	18 35 27.2	-0.1
BO02				iS	Sn	18 35 47.0	-0.1
BO02	Sierra Bellavi	1.48	117	Pn	Pn	18 35 27.1	-0.2
BO02				Sn	Sn	18 35 46.3	-0.8
MT05	Renca	1.55	62	eP	Pn	18 35 28.6	+0.3
MT05				iS	Sb	18 35 49.1	0.0
MT05	Renca	1.55	62	Pn	Pn	18 35 28.8	+0.5
MT05				Sn	Sn	18 35 48.0	-0.7
ROC1	El Roble	1.61	45		Pn	18 35 29.8	+0.5
ROC1	El Roble	1.61	45	eP	Pb	18 35 30.4	0.0
ROC1				eS	Sg	18 35 52.8	+1.0
ROCH	El Roble	1.62	45	eP	Pb	18 35 30.2	-0.3
ROCH				iS	Sg	18 35 52.0	-0.1
MT03	Universidad Ad	1.68	68	eP	Pn	18 35 30.4	+0.4
MT03				iS	Sn	18 35 52.0	0.0
PEL	Peldehue	1.72	56	Pn	Pb	18 35 31.5	-0.5
PEL	Peldehue	1.72	56	eP	Pb	18 35 31.7	-0.3
PEL				eS	Sb	18 35 54.1	+0.2
LMEL	Las Melosas	1.83	82	eP	Pn	18 35 33.0	+0.8
LMEL				iS	Sb	18 35 57.3	+0.1
VA03	San Esteban	2.04	49	eP	Pn	18 35 36.4	+1.3
VA03				iS	Sg	18 36 05.5	-0.1
VA03	San Esteban	2.04	49		Pn	18 35 36.2	+1.1
LAMA	Las Malvinas	2.73	108	eP	Pb	18 35 47.3	-2.1
BI03	Tigo	2.77	191	eP	Pn	18 35 45.1	+0.1
BI03				iS	Sn	18 36 14.4	-4.3
BI03	Tigo	2.77	191		Pn	18 35 45.0	+0.1
PUMA	Malargue	2.77	120	eP	Pb	18 35 49.1	-0.9
PUMA				eS	Sb	18 36 25.2	+1.0
EDS3	Malargue	2.94	125	eP	Pb	18 35 52.8	-0.3
CO02	Combarbal	3.13	22	eP	Pn	18 35 51.0	+0.9
CO02	Combarbal	3.13	22		Pn	18 35 51.1	+0.9
AAGR	Agrelo	3.14	72	eP	Pb	18 35 53.7	-2.6
AAGR				IAML		18 36 50.3	
	comp=Z,922nm,1.8s						
AUSP	Uspallata	3.14	54	eP	Pb	18 35 53.7	-2.8
ARCO	CERRO ARCO	3.15	67	eP	Pn	18 35 53.4	+3.0
ARCO				IAML		18 36 47.0	
	comp=Z,1μm,1.3s						
RFA	San Rafael	3.29	102	eP	Pb	18 35 56.4	-2.5
RFA				eS	Sb	18 36 40.5	+1.1
RFA				IAML		18 36 47.0	
	comp=Z,908nm,0.8s						
ASAL	Salagasta	3.33	64	eP	Pb	18 35 56.6	-3.1
ASAL				IAML		18 36 54.3	
	comp=Z,1μm,1.4s						
RTLS	Leoncito	3.47	49	eP	Pn	18 35 57.7	+2.7
RTLS				IAML		18 36 59.0	
	comp=Z,370nm,0.5s						
CO03	El Pedregal	3.57	24	Pn	Pn	18 35 57.3	+1.1
CANA	Caviahue	3.90	165	eP	Pn	18 36 05.1	+4.3
CANA				IAML		18 37 23.1	
	comp=Z,602nm,1.3s						
RTCV	Cerro Valdivia	3.93	56	eP	Pn	18 36 04.0	+2.9
RTCV				IAML		18 37 13.8	
	comp=Z,689nm,4.6s						
ZON	Zonda	4.04	51	Pn	Pn	18 36 04.4	+1.9
GO04	Tololo Observa	4.16	19	Pn	Pn	18 36 05.3	+0.9
GO04	Tololo Observa	4.16	19	eP	Pn	18 36 05.4	+1.1
RTLL	Cerro Villicun	4.31	51	eP	Pn	18 36 09.7	+3.5
RTLL				IAML		18 37 24.6	
	comp=Z,394nm,1.6s						
ACCO	Cerro Coronel	4.50	39	eP	Pn	18 36 12.2	+3.0
ACCO				IAML		18 37 33.6	
	comp=Z,460nm,0.5s						
CO01	Juntas del Tor	4.56	26		Pn	18 36 11.6	+1.6
LC01	Cunco	4.78	175	Pn	Pn	18 36 12.5	-0.2
LCO	Las Campanas	5.29	16	Pn	Pn	18 36 20.0	0.0
VA04	Juan Fernndez	5.39	273	Pn	Pn	18 36 22.2	+1.2
H03S1	Juan Fernandez	5.43	271	T	T	18 42 22.6	
	baz=94,slow=74,SNR=1941						
H03S3	Juan Fernandez	5.44	271	T	T	18 42 23.9	
	baz=94,slow=74,SNR=1868						
H03S2	Juan Fernandez	5.45	271	T	T	18 42 19.9	
	baz=94,slow=74,SNR=2072						
AC05	El Transito	5.57	19		Pn	18 36 24.6	+0.9
AGUA	GUANDACOL	5.68	37	eP	Pn	18 36 27.4	+2.3
AGUA				IAML		18 38 22.0	
	comp=Z,201nm,1.4s						
MRA	San Martin	5.83	75	eP	Pn	18 36 29.0	+1.8
MRA				IAML		18 38 16.9	
	comp=Z,40nm,0.5s						
AC04	Llanos de Chal	6.00	11		Pn	18 36 29.3	-0.2
APLL	PUNTA DE LOS L	6.19	55	eP	Pn	18 36 33.2	+1.1
VCA	Vinchina	6.44	35	eP	Pn	18 36 37.8	+2.1
VCA				IAML		18 38 39.4	
	comp=Z,389nm,1.3s						
ACLC	CERRO LA CRUZ	6.58	46	eP	Pn	18 36 38.1	+0.5
ACLC				IAML		18 38 33.8	
	comp=Z,331nm,1.3s						
PLCA	Paso Flores	6.75	168	Pn	Pn	18 36 41.0	+1.2
	comp=Z,1.2nm,0.3s,baz=347,slow=11,SNR=16						
PLCA				Lg	Lg	18 38 32.0	
	comp=Z,1.3nm,0.3s,baz=289,slow=13,SNR=5.7						
PLCA				LR	LR	18 39 13.3	
	comp=Z,735nm,19.2s,baz=348,slow=38						
PLCA	Paso Flores	6.75	168	Pn	Pn	18 36 40.9	+1.0
GO03	Copiap	6.76	16	Pn	Pn	18 36 40.0	0.0
TCA	Tanti	7.12	69	eP	Pn	18 36 45.0	+0.1
AC02	Maricunga	7.79	22	Pn	Pn	18 36 54.6	+0.2
AC01	Pan de Azucar	8.10	11	Pn	Pn	18 36 57.0	-1.3
GO02	Mina Guanaco	9.25	16		Pn	18 37 12.9	-1.5
PB14	IPOC Station P	9.62	11		Pn	18 37 18.7	-0.7
LVC	Limon Verde	11.87	16	Pn	Pn	18 37 48.0	-2.3
	comp=Z,0.4nm,0.3s,baz=160,slow=4.6,SNR=1.5						
LVC				LR	LR	18 42 28.3	
	comp=Z,797nm,21.6s,baz=202,slow=38						
LVC	Limon Verde	11.87	16	Pn	Pn	18 37 47.3	-3.0
LPA	La Plata	11.94	98	eP	Pn	18 37 49.3	-1.6
LPA				pPP		18 38 32.0	
LPA				S	Sn	18 40 06.2	+1.7
LPA				SSS	SSS	18 41 09.5	
LPA				PCP	PcP	18 43 36.3	-1.3
LPA				SCS	ScS	18 50 43.2	-3.7
LPA				PKIKP	PKiKP	18 51 36.5	+0.9
LPA				SKIKP		18 55 06.5	
PB07	IPOC Station P	12.54	11	Pn	Pn	18 37 55.5	-3.9
ITQB	Itaqui	14.10	76	eP	P	18 38 26.3	-1.9
PB08	IPOC Station P	14.22	12	Pn	Pn	18 38 23.5	+1.1
GO01	Chusmiza	14.67	12	Pn	Pn	18 38 27.5	-1.2
CPUP	Villa Florida	15.14	63	Pn	Pn	18 38 33.5	-1.0
	comp=Z,0.4nm,0.3s,baz=229,slow=13,SNR=2.5						
CPUP				Lg	Lg	18 42 40.4	
	comp=Z,0.3nm,0.3s,baz=144,slow=4.7,SNR=4.8						
CPUP				LR	LR	18 44 46.3	
	comp=Z,961nm,20.6s,baz=240,slow=39						
CPUP	Villa Florida	15.14	63	Pn	Pn	18 38 33.0	-1.6
MNMC	Minye Minye	15.14	10		Pn	18 38 34.3	-0.5
PB16	IPOC Station P	15.93	10	P	P	18 38 47.6	-1.6
ITAB	Concordia	18.70	74	eP	Pn	18 39 21.3	+1.7
PTGB	Pitanga	19.99	67	eP	P	18 39 33.6	+0.1
EFI	East Falkland	20.37	154	P	P	18 39 36.4	-0.9
EFI				IAmb	IAmb	18 40 01.8	
	comp=Z,59nm,1.2s						
TRCB	Terra Rica	20.66	62	eP	P	18 39 40.5	-0.2
SIV	San Ignacio	20.73	32	P	P	18 39 41.9	+0.4
	comp=Z,13nm,1.0s,baz=214,slow=7.7,SNR=20						
SIV				LR	LR	18 49 06.1	
	comp=Z,975nm,18.9s,baz=224,slow=41						
PTLB	Pontes e Lacer	22.10	36	eP	P	18 39 56.7	+0.6
PCMB	Pacaembu	22.39	62	eP	P	18 39 58.2	-1.2
NNA	Nana	22.41	348	LR	LR	18 47 07.0	
	comp=Z,179nm,18.9s,baz=166,slow=32						
NNA	Nana	22.41	348	P	P	18 40 01.8	+2.2
NNA				IAmb	IAmb	18 40 37.9	
	comp=Z,32nm,1.1s						
PP1B	Ponte de Pedra	22.71	48	eP	P	18 40 01.9	-0.9
VILB	Vilhena	23.81	31	eP	P	18 40 14.0	+0.1
SPB	Sao Paulo	24.18	71	P	P	18 40 16.7	-0.7
SPB				IAmb	IAmb	18 40 18.8	
	comp=Z,54nm,1.4s						
SPB	Sao Paulo	24.18	71	eP	P	18 40 17.4	+0.1
ITRB	Iturama	24.25	59	eP	P	18 40 17.1	-1.0
BB19B	Bebedouro	24.74	64	eP	P	18 40 21.1	-1.4
ETMB	Extrema	24.84	15	eP	P	18 40 25.2	+1.8
SAML	Samuel	26.44	21		P	18 40 38.7	+0.8
SAML	Samuel	26.44	21	eP	P	18 40 39.4	+1.5
IPMB	Ipameri, GO	26.91	59	eP	P	18 40 42.9	+0.7
BDFB	Brasilia	28.64	56	P	P	18 40 56.8	-0.9
	comp=Z,3.3nm,0.4s,baz=237,slow=5.3,SNR=5.6						
BDFB				LR	LR	18 53 42.6	
	comp=Z,659nm,18.3s,baz=249,slow=40						
BDFB	Brasilia	28.64	56	P	P	18 40 56.4	-1.3
BDFB				IAmb	IAmb	18 40 57.7	
	comp=Z,11nm,1.0s						
SNDB	Serra Nova Dou	29.25	46	eP	P	18 41 03.6	+0.6
SDBA	SAO DESIDERIO	33.04	56	eP	P	18 41 35.4	-1.1
SDV	Santo Domingo	42.80	3	P	P	18 42 58.7	-0.4
RCBR	Riachuelo	43.95	58	P	P	18 43 08.4	+0.2
	comp=Z,4.4nm,0.5s,baz=217,slow=6.5,SNR=1.9						
BELA	Belgrano 2	46.81	170	P	P	18 43 30.4	+0.3
VNA2	Neumayer--Watz	50.01	157	P	P	18 43 55.8	+0.9
	baz=281,slow=9.3						
SNAA	Sanae	51.58	158	P	P	18 44 07.7	+0.9
SNAA	Sanae	51.58	158	P	P	18 44 06.8	0.0
	comp=Z,16nm,1.2s,baz=297,slow=7.1,SNR=10						
SNAA	Sanae	51.58	158	P	P	18 44 07.0	+0.3
SNAA				IAmb	IAmb	18 44 08.6	
	comp=Z,24nm,1.3s						
OBIP	Obispado Ponce	52.17	7	P	P	18 44 12.1	+0.6
SJG	San Juan	52.28	7	P	P	18 44 12.6	+0.1
SJG				IAmb	IAmb	18 44 41.6	
	comp=Z,20nm,1.1s						
QSPA	South Pole Qui	56.11	180	P	P	18 44 41.2	+1.1
	comp=Z,6.4nm,0.9s,baz=154,slow=3.3,SNR=15						
QSPA	South Pole Qui	56.11	180	P	P	18 44 40.5	+0.4
QSPA				IAmb	IAmb	18 44 51.9	
	comp=Z,12nm,1.1s						
TEIG	Tepich	56.13	342	P	P	18 44 42.0	+1.6
VNDA	Vanda	63.93	191	LR	LR	19 09 15.1	
	comp=Z,45nm,21.6s,baz=132,slow=32						
TBI	Tubuai	67.02	257	eLR	LR	19 06 09.6	
	comp=Z,268nm,25.5s						
LPIG	La Paz	68.21	323	LR	LR	19 09 20.1	
	comp=Z,39nm,20.2s,baz=19,slow=30						
MEH	Mehetia	68.55	262	eT	T	20 00 43.7	
	comp=Z,12nm,0.2s						
143A	Socs Landing,	68.84	343	P	P	18 46 06.6	+1.3
TIAR	Tiarei	69.77	262	eT	T	20 02 14.6	
	comp=Z,1.9nm,0.2s						
PPT2	Papeete2	69.94	262	eS	S	18 55 25.0	+1.3
	comp=Z,88nm,23.0s						
PPT2	Papeete2	69.94	262	eLR	LR	19 07 26.0	
	comp=Z,211nm,26.8s						
V48A	Smith Brothers	70.80	348	P	P	18 46 17.8	+0.5
V48A				IAmb	IAmb	18 46 28.0	
	comp=Z,19nm,1.1s						
T59A	Double "B" Far	70.90	356	P	P	18 46 19.2	+1.4
WVT	Waverly	71.37	347	P	P	18 46 21.5	+0.8
WVT				IAmb	IAmb	18 46 35.0	
	comp=Z,11nm,0.8s						
LIC	Lamto	75.08	72	ePKP1	P	18 46 43.8	+0.6
	comp=Z,78nm,2.3s						
TIC	Toumodi	75.34	71	ePKP1	P	18 46 45.2	+0.4
KIC	Kosan Boka	75.39	72	ePKP1	P	18 46 44.6	-0.4
	comp=Z,13nm,1.1s						
DBIC	Dimbokro	75.48	71	P	P	18 46 44.5	-1.0
	comp=Z,0.9nm,0.4s,baz=230,slow=5.1,SNR=3.7						
DBIC				LR	LR	19 18 34.0	
	comp=Z,144nm,18.5s,baz=206,slow=35						
TSUM	Tsumeb	79.45	106	P	P	18 47 08.2	+0.3
TSUM				IAmb	IAmb	18 47 20.5	
	comp=Z,14nm,1.2s						
BOSA	Boshof	80.26	118	P	P	18 47 12.5	+0.3
	comp=Z,4.2nm,0.9s,baz=190,slow=5.6,SNR=3.8						
KOWA	Kowa	80.94	66	P	P	18 47 15.3	-0.5
KOWA				IAmb	IAmb	18 47 17.0	
	comp=Z,11nm,1.1s						
SPUT	South Promonto	83.63	331	P	P	18 47 28.9	-0.5
PDAR	Pinedale Array	83.75	333	P	P	18 47 32.1	+2.0
	comp=Z,0.4nm,0.8s,baz=160,slow=4.7,SNR=3.5						
NVAR	Mina Array Bea	83.83	325	P	P	18 47 32.6	+2.0
	comp=Z,0.4nm,0.6s,baz=150,slow=6.2,SNR=2.0						
TOA0	Torodi Ar. Sit	84.52	70	P	P	18 47 34.0	-0.4
TOA0				IAmb	IAmb	18 47 35.4	
	comp=Z,8.6nm,1.1s						
TORD	Torodi Ar. Bea	84.52	70	P	P	18 47 33.9	-0.5
	comp=Z,4.5nm,1.0s,baz=249,slow=5.0,SNR=13						
YHH	Holmes Hill	85.96	334	P	P	18 47 43.0	+1.7
ULM	Lac du Bonnet	86.55	345	P	P	18 47 45.4	+1.8
	comp=Z,0.7nm,0.5s,baz=198,slow=6.4,SNR=1.5						
DZM	Mont Dzumac	100.94	234	eLR	LR	19 21 48.8	
	comp=Z,94nm,27.4s						
H11N3	WAKE ISLAND Hy	125.91	271	T	T	21 13 06.1	
	baz=121						
H11N1	WAKE ISLAND Hy	125.92	271	T	T	21 13 03.1	
	baz=121						
H11N2	WAKE ISLAND Hy	125.92	271	T	T	21 13 04.6	
	baz=121						
KSH	Kashi	154.18	69	PKPbc	PKPdf	18 54 47.7	-5.3
ZALV	Zalesovo Beam	154.48	32	PKP	PKPdf	18 54 52.5	-0.2
	comp=Z,0.3nm,0.3s,baz=288,slow=5.9,SNR=2.0						
ZALV				PKPbc	PKiKP	18 55 01.5	+0.4
	comp=Z,2.0nm,0.6s,baz=302,slow=3.3,SNR=11						
MKAR	Makanchi Array	157.06	49	PKP	PKPdf	18 54 56.3	-0.2
	comp=Z,0.2nm,0.8s,baz=311,slow=5.3,SNR=1.8						
MKAR				PKPab	PKPab	18 55 26.7	-0.2
	comp=Z,1.0nm,0.9s,baz=305,slow=4.3,SNR=6.8						
SONM	Songino Array	166.27	3	PKPab	PKPab	18 56 07.1	0.0
	comp=Z,0.7nm,0.9s,baz=8.5,slow=2.9,SNR=4.4						
LZH	Lanzhou	176.33	57	ePKP	PKPdf	18 55 09.3	-2.2
LZH				pPKP	sPKPdf	18 55 19.2	+5.8
LZH				sPKP		18 55 22.4	

BYKL 09 18:37:26.9±0.2**, 56°.10N**×**113°.68E, h8**^{km}±3^{km}**, 5C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.07	284	⇑iPg	Pg	18 37 28.8	-0.1
SVKR				eSg	Sg	18 37 30.7	+0.3
SVKR				Pmax			
	2μm,0.2s						
SVKR				Smax			
	18μm,0.5s						
UKT	Uakit	0.61	183	⇑iPg	Pg	18 37 37.3	-1.4
UKT				eSg	Sg	18 37 45.4	-1.3
UKT				Pmax			
	99nm,0.4s						
UKT				Smax			
	321nm,0.7s						
YOA	Uoyan	1.10	273	⇑iPg	Pg	18 37 47.0	-0.9
YOA				eSg	Sb	18 38 02.6	+0.1
YOA				e		18 38 09.8	
YOA				Pmax			
	316nm,0.6s						
YOA				max			
	1μm,0.5s						
NLYR	Nelyaty	1.19	70	⇑iPg	Pb	18 37 48.4	-1.4
NLYR				ePb	Pn	18 37 50.1	+0.2
NLYR				eSg	Sg	18 38 04.9	-0.4
NLYR				eSb	Sn	18 38 08.3	+2.0
NLYR				max			
	114nm,0.4s						
NLYR				max			
	743nm,0.7s						
KMO	Kumora	1.41	262	⇑iPg	Pn	18 37 52.3	-0.6
KMO				ePb	Pg	18 37 53.8	-0.1
KMO				eSg	Sb	18 38 11.2	-0.3
KMO				eSb	Sg	18 38 13.8	+1.6
KMO				max			
	109nm,0.4s						
KMO				max			
	1μm,0.8s						
BOD	Bodaibo	1.73	6	ePg	Pb	18 37 58.2	-0.7
BOD				eSg	Sb	18 38 21.1	+0.3
BOD				Pmax			
	33nm,0.4s						
BOD				Smax			
	208nm,0.4s						
YLYR	Ulyunkhan	1.89	230	⇓iPn	Pn	18 38 00.3	+0.9
YLYR				ePg	Pb	18 38 01.0	-0.6
YLYR				eSg	Sb	18 38 25.6	+0.3
YLYR				Pmax			
	54nm,0.5s						
YLYR				Smax			
	376nm,0.4s						
NIZ	Nizh Angarsk	2.35	264	ePn	Pn	18 38 06.8	+1.0
NIZ				ePg	Pb	18 38 09.2	-0.3
NIZ				eSg	Sb	18 38 40.2	+1.6
NIZ				Pmax			
	34nm,0.5s						
NIZ				Smax			
	335nm,0.4s						
CRS	Chara	2.67	71	ePg	Pb	18 38 14.8	-0.1
CRS				eSg	Sb	18 38 49.8	+2.0
CRS				Pmax			
	108nm,1.0s						
CRS				Smax			
	157nm,0.7s						
SYVR	Suvo	3.24	223	ePn	Pn	18 38 18.5	+0.5
SYVR				ePg	Pb	18 38 25.4	+0.7
SYVR				eSg	Sb	18 39 06.8	+2.5
SYVR				Pmax			
	17nm,0.6s						
SYVR				Smax			
	84nm,0.6s						
VTMR	Vitim	3.40	350	ePn	Pn	18 38 21.1	+0.9
VTMR				ePg	Pb	18 38 28.6	+1.2
VTMR				eSn	Sn	18 39 01.8	+1.1
VTMR				eSg	Sb	18 39 11.7	+2.8
TUP	Tupik	3.96	112	ePn	Pn	18 38 28.1	+0.1
TUP				ePg	Pb	18 38 38.4	+1.5
TUP				eSg	Sb	18 39 29.1	+4.1
TUP				e		18 39 34.0	
TUP				Pmax			
	20nm,0.5s						
TUP				max			
	105nm,0.8s						
OGRR	Ongureny	4.29	238	ePn	Pn	18 38 33.6	+1.2
OGRR				ePg	Pb	18 38 44.4	+1.9
OGRR				eSg	Sg	18 39 40.0	-4.6
OGRR				Pmax			
	16nm,0.6s						

OGRR				Smax			
	53nm,1.2s						
TRG	**Tyrgan**	**5.43**	**235**	*e*Pg	Pb	18 39 04.8	+2.8
TRG				*e*Sg	Sg	18 40 15.8	-5.4
TRG				Pmax			
	2.0nm,0.3s						
TRG				Smax			
	26nm,0.9s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pn	Pn	18 39 03.2	+1.0
KPC				*e*Pg	Pb	18 39 23.5	+4.1
KPC				*e*Sg	Sg	18 40 47.2	-6.8
KPC				Pmax			
	2.0nm,0.8s						
KPC				Smax			
	34nm,1.1s						

BYKL 09 18:37:44.1±0.7, 56°.08N×113°.71E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**294**	*e*Pg	Pg	18 37 45.6	-0.3
SVKR				*e*Sg	Sg	18 37 47.5	+0.4
UKT	**Uakit**	**0.59**	**185**	*e*Sg	Sg	18 38 01.8	-1.3
YOA	**Uoyan**	**1.11**	**274**	*e*Sg	Sg	18 38 19.5	-0.3
YOA				Smax			
	1µm,0.4s						
NLYR	**Nelyaty**	**1.19**	**69**	*e*Sg	Sg	18 38 21.8	-0.3
NLYR				Smax			
	149nm,0.4s						
KMO	**Kumora**	**1.42**	**263**	*e*Sg	Sg	18 38 27.6	-2.2
KMO				*e*		18 38 31.2	
KMO				max			
	429nm,0.6s						
BOD	**Bodaibo**	**1.75**	**5**	*e*Pg	Pn	18 38 14.8	-0.9
BOD				*e*Sg	Sn	18 38 38.0	-0.7
BOD				Smax			
	140nm,0.8s						
YLYR	**Ulyunkhan**	**1.89**	**231**	*e*Pg	Pn	18 38 18.3	+0.7
YLYR				*e*Sg	Sb	18 38 43.7	+0.2
YLYR				Pmax			
	31nm,0.4s						
YLYR				Smax			
	121nm,0.4s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*Sg	Sb	18 38 58.0	+0.7
NIZ				Smax			
	158nm,0.8s						
CRS	**Chara**	**2.66**	**70**	*e*Sg	Sg	18 39 07.8	-1.6
CRS				Smax			
	160nm,0.7s						
TUP	**Tupik**	**3.94**	**112**	*e*Sg	Sb	18 39 44.2	+1.6
TUP				Smax			
	101nm,0.7s						

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*NEIC **09** 18:51:29.6±0.9, 5°.6S±0°.1×149°.3E±0°.2, h153^{km}±14^{km}, mb4.5/8, Error ellipse: s-maj=29.0km s-min=9.7km az=133.0*

*IDC **09** 18:51:31.1±6.7, 5°.41S×148°.89E, h152^{km}±49^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.1/41, mbtmp3.9/4, MS3.7/1, Ms1 3.7/1, ms1mx2.6/25, Error ellipse: s-maj=91.5km s-min=55.0km az=119.0*

ISC 09 18:51:29.5±1.0, 5°.5S±0°.1×149°.3E±0°.1, h150^{km}, n15, σ0^{s}.68/17, mb4.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.18**	**66**	Pn	**Pn**	**18 52 18.7**	**-0.6**
RABL				Sn	**Sn**	**18 52 58.9**	**+1.1**
PMG	**Port Moresby**	**4.40**	**208**	P	**Pn**	**18 52 35.3**	**+0.2**
	2.3nm,0.3s,baz=20,slow=18,SNR=6.7						
PMG				S	**Sn**	**18 53 27.0**	**+0.9**
	7.2nm,0.3s,baz=141,slow=18,SNR=7.2						
PMG	**Port Moresby**	**4.40**	**208**		**Pn**	**18 52 35.1**	**+0.1**
PMG					**Sn**	**18 53 25.4**	**-0.7**
MTN	**Manton Dam**	**19.30**	**247**	P	**P**	**18 55 43.8**	**+0.7**
EIDS	**Eidsvold**	**19.83**	**175**	P	**P**	**18 55 49.1**	**+0.3**
EIDS				IAmb	IAmb	18 55 52.9	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**20.25**	**224**	P	**P**	**18 55 52.7**	**-0.6**
WB0				IAmb	IAmb	18 55 56.4	
	comp=Z,38nm,1.6s						
WR0	**Warramunga Arr**	**20.28**	**224**	P	**P**	**18 55 52.9**	**-0.7**
WB2	**Warramunga Arr**	**20.40**	**224**	P	**P**	**18 55 54.3**	**-0.6**
WB2				IAmb	IAmb	18 56 07.0	
	comp=Z,17nm,1.3s						
WRA	**Warramunga Arr**	**20.41**	**224**	P	**P**	**18 55 54.3**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=47,slow=11,SNR=14						
TNTI	**Ternate**	**22.72**	**285**	P	**P**	**18 56 19.5**	**+0.5**
TNTI				IAmb	IAmb	18 56 21.7	
	comp=Z,36nm,1.0s						
AS31	**Alice Springs**	**23.34**	**218**	P	**P**	**18 56 23.8**	**-0.8**
ASAR	**Alice Springs**	**23.34**	**218**	P	**P**	**18 56 24.2**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=50,slow=8.4,SNR=44						
FITZ	**Fitzroy Crossi**	**26.24**	**240**	P	**P**	**18 56 50.3**	**-0.5**
	comp=Z,2.8nm,0.8s,baz=48,slow=8.2,SNR=7.4						
URZ	**Urewera**	**41.28**	**146**	LR	LR	19 15 14.1	
	comp=Z,89nm,19.8s,baz=210,slow=34						
TORD	**Torodi Ar. Bea**	**147.12**	**286**	PKPbc	**PKPbc**	**19 10 55.9**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=88,slow=2.5,SNR=1.6						

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*IDC **09** 18:59:30.4±0.5, 34°.10S×72°.15W, h0^{km}, mb4.5/15, mb1 4.6/17, mb1mx4.5/36, mbtmp4.5/17, ML4.3/2, MS4.1/12, Ms1 4.1/12, ms1mx3.9/22, Error ellipse: s-maj=23.4km s-min=14.2km az=89.0*

*SJA **09** 18:59:31.8±1.1, 34°.03S×72°.59W, h32^{km}±23^{km}, ML4.8, MW5.0*

*NEIC **09** 18:59:32.4, 34°.10S×72°.26W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.51; $M_{\theta\theta}$-0.90; $M_{\phi\phi}$-1.61; $M_{r\theta}$1.75; $M_{\theta\phi}$-3.49; $M_{\phi r}$-8.88; Fault plane solution: $M_0$9.95000×10^{15} NP1:ϕ_s176.70000°, δ83.63000°, λ68.40000°. NP2:ϕ_s71.03000°, δ22.48000°, λ163.12000°. Principal axes: T 10.6660, Plg47.0000°, Azm64.0000°; N -1.6415, Plg21.0000°, Azm179.0000°; P -9.0245, Plg35.0000°, Azm285.0000°;*

*VAO **09** 18:59:32.9±0.4, 34°.09S×72°.14W, h10^{km}, mb4.8*

*GUC **09** 18:59:33.4±0.7, 34°.20S×72°.34W, h34^{km}±2^{km}, ML4.6*

*NEIC **09** 18:59:33.4±1.7, 34°.12S±0°.04×72°.30W±0°.07, h20^{km}±3^{km}, mb5.0/86, Mwr4.6/24, ML4.6(GUC), Error ellipse: s-maj=8.3km s-min=5.5km az=101.0*

ISC 09 18:59:32.4±0.9, 34°.11S±0°.03×72°.33W±0°.04, h15^{km}±5^{km}, n255, σ1^{s}.45/252, mb5.0/48, MS4.2/14, 5C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.49**	**141**	*i* P	**Pg**	**18 59 42.3**	**+0.1**
BO03				*e*S	**Sg**	**18 59 48.7**	**-0.1**
BO03				IAML		18 59 49.5	
	comp=E,70µm,0.5s						
VA05	**Santo Domingo**	**0.75**	**53**	⇓*i*P	**Pg**	**18 59 48.1**	**+1.0**
VA05				*e*S	**Sn**	**18 59 59.0**	**-0.5**
VA05				IAML		19 00 00.6	
	comp=E,39µm,0.3s						
MT09	**Talagante**	**1.17**	**74**	⇓*i*P	**Pn**	**18 59 53.8**	**-0.6**
MT09				*i* S	**Sb**	**19 00 08.7**	**-0.7**
MT02	**Curacav**	**1.31**	**50**	⇑*i*P	**Pn**	**18 59 56.2**	**0.0**
MT02				*e*S	**Sn**	**19 00 13.9**	**+0.5**
MT02	**Curacav**	**1.31**	**50**		**Pn**	**18 59 56.2**	**0.0**
MT02				Sn	**Sb**	**19 00 12.9**	**-0.4**
BO02	**Sierra Bellavi**	**1.45**	**118**	*e*P	**Pn**	**18 59 57.6**	**-0.6**
BO02				*e*S	**Sn**	**19 00 16.2**	**-0.8**
BO02	**Sierra Bellavi**	**1.45**	**118**		**Pn**	**18 59 57.6**	**-0.6**
BO02				Sn	**Sn**	**19 00 16.4**	**-0.7**
MT05	**Renca**	**1.51**	**62**	⇑*i*P	**Pn**	**18 59 59.5**	**+0.5**
MT05				*e*S	**Sb**	**19 00 18.8**	**-0.4**
MT05				IAML		19 00 27.9	
	comp=E,11µm,0.5s						
MT05	**Renca**	**1.51**	**62**		**Pn**	**18 59 59.5**	**+0.5**
MT05				Sn	**Sb**	**19 00 19.0**	**-0.2**
ROC1	**El Roble**	**1.58**	**45**		**Pn**	**19 00 00.7**	**+0.6**
ROC1	**El Roble**	**1.58**	**45**	*i* P	**Pn**	**19 00 00.9**	**+0.8**
ROC1				*e*S	**Sg**	**19 00 23.5**	**+0.1**
ROCH	**El Roble**	**1.58**	**45**	*e*P	**Pn**	**19 00 00.6**	**+0.4**
ROCH				*e*S	**Sg**	**19 00 22.8**	**-0.7**
ROCH				IAML		19 00 32.6	
	comp=E,10µm,0.7s						
FSR	**Penalolen**	**1.63**	**68**	*e*P	**Pn**	**19 00 01.1**	**+0.5**
FSR				*e*S	**Sb**	**19 00 22.7**	**0.0**
MT03	**Universidad Ad**	**1.64**	**68**	⇑*i*P	**Pn**	**19 00 01.2**	**+0.4**
MT03				*e*S	**Sb**	**19 00 22.5**	**-0.4**
MT03				IAML		19 00 29.8	
	comp=N,10µm,0.2s						
PEL	**Peldehue**	**1.68**	**55**	⇑*i*P	**Pn**	**19 00 02.3**	**+1.0**
PEL				IAML		19 00 36.8	
	comp=N,8µm,0.7s						
PEL	**Peldehue**	**1.68**	**55**		**Pn**	**19 00 02.3**	**+1.0**
PEL	**Peldehue**	**1.68**	**55**	*i* P	**Pn**	**19 00 02.4**	**+1.0**
PEL				*e*S	**Sg**	**19 00 25.5**	**-1.0**
LMEL	**Las Melosas**	**1.79**	**82**	*e*P	**Pn**	**19 00 03.6**	**+0.6**
LMEL				IAML		19 00 35.1	
	comp=N,8µm,0.5s						
VA03	**San Esteban**	**2.01**	**48**	⇑*i*P	**Pn**	**19 00 06.9**	**+1.1**
VA03				IAML		19 00 43.2	
	comp=E,8µm,0.6s						
VA03	**San Esteban**	**2.01**	**48**		**Pn**	**19 00 07.0**	**+1.1**
LAMA	**Las Malvinas**	**2.71**	**109**	*i* P	**Pb**	**19 00 18.5**	**-2.0**
LAMA				*e*S	**Sb**	**19 00 54.1**	**+0.5**
PUMA	**Malargue**	**2.75**	**121**	*i* P	**Pn**	**19 00 18.9**	**+2.9**
BI03	**Tigo**	**2.79**	**191**		**Pn**	**19 00 15.4**	**-1.1**
EDS3	**Malargue**	**2.92**	**125**	*i* P	**Pb**	**19 00 22.3**	**-2.1**
AAGR	**Agrelo**	**3.10**	**72**	*i* P	**Pn**	**19 00 24.1**	**+3.2**
AAGR				IAML		19 01 21.4	
	comp=Z,1µm,1.7s						
AUSP	**Uspallata**	**3.11**	**54**	*i* P	**Pn**	**19 00 24.0**	**+2.8**
CO02	**Combarbal**	**3.11**	**22**	*e*P	**Pn**	**19 00 21.8**	**+0.7**
CO02				*i* S	**Sn**	**19 00 58.8**	**+0.8**
CO02	**Combarbal**	**3.11**	**22**		**Pn**	**19 00 21.7**	**+0.7**
ARCO	**CERRO ARCO**	**3.11**	**67**	*i* P	**Pn**	**19 00 24.4**	**+3.3**
ARCO				IAML		19 01 18.1	
	comp=Z,2µm,1.2s						
RFA	**San Rafael**	**3.26**	**103**	*i* P	**Pn**	**19 00 25.2**	**+2.0**
RFA				IAML		19 01 17.2	
	comp=Z,992nm,0.7s						
ASAL	**Salagasta**	**3.30**	**64**	*i* P	**Pn**	**19 00 27.0**	**+3.4**
ASAL				IAML		19 01 24.8	
	comp=Z,2µm,1.2s						
RTLS	**Leoncito**	**3.44**	**49**	*i* P	**Pn**	**19 00 28.9**	**+3.1**
RTLS				IAML		19 01 28.4	
	comp=Z,1µm,0.8s						
CO03	**El Pedregal**	**3.55**	**24**	*e*P	**Pn**	**19 00 28.2**	**+1.2**
CO03	**El Pedregal**	**3.55**	**24**	Pn	**Pn**	**19 00 28.2**	**+1.2**
RTCV	**Cerro Valdivia**	**3.90**	**56**	*i* P	**Pn**	**19 00 34.4**	**+2.5**
RTCV				IAML		19 01 46.6	
	comp=Z,911nm,1.7s						
ZON	**Zonda**	**4.00**	**51**		**Pn**	**19 00 35.5**	**+2.2**
ZON	**Zonda**	**4.00**	**51**	*i* P	**Pn**	**19 00 37.4**	**+4.1**
ZON				IAML		19 01 51.2	
	comp=Z,676nm,2.3s						
GO04	**Tololo Observa**	**4.14**	**19**	Pn	**Pn**	**19 00 36.0**	**+0.7**
GO04	**Tololo Observa**	**4.14**	**19**	*i* P	**Pn**	**19 00 35.9**	**+0.7**
RTLL	**Cerro Villicun**	**4.27**	**51**	*i* P	**Pn**	**19 00 39.7**	**+2.7**
RTLL				IAML		19 01 46.5	
	comp=Z,1µm,0.6s						
ACCO	**Cerro Coronel**	**4.47**	**39**	*i* P	**Pn**	**19 00 42.8**	**+2.8**
ACCO				IAML		19 02 10.2	
	comp=Z,645nm,0.9s						
CO01	**Juntas del Tor**	**4.54**	**25**		**Pn**	**19 00 42.4**	**+1.5**
AROD	**Rodeo**	**4.62**	**32**	*i* P	**Pn**	**19 00 44.5**	**+2.4**
LC01	**Cunco**	**4.79**	**176**	Pn	**Pn**	**19 00 42.8**	**-1.3**
LCO	**Las Campanas**	**5.27**	**16**	Pn	**Pn**	**19 00 51.1**	**+0.2**
VA04	**Juan Fernndez**	**5.42**	**273**		**Pn**	**19 00 53.1**	**+0.3**
H03S1	**Juan Fernandez**	**5.47**	**271**	T	T	19 06 48.1	
	baz=96,slow=74,SNR=2662						
H03S3	**Juan Fernandez**	**5.47**	**271**	T	T	19 06 54.6	
	baz=96,slow=74,SNR=2869						
H03S2	**Juan Fernandez**	**5.48**	**271**	T	T	19 06 53.7	
	baz=96,slow=74,SNR=3078						
H03N1	**Juan Fernandez**	**5.52**	**275**	T	T	19 07 05.3	
	baz=95,slow=75,SNR=32						
H03N3	**Juan Fernandez**	**5.53**	**275**	T	T	19 07 00.8	
	baz=95,slow=75,SNR=37						
H03N2	**Juan Fernandez**	**5.54**	**275**	T	T	19 07 06.5	
	baz=95,slow=75,SNR=39						
AC05	**El Transito**	**5.54**	**19**		**Pn**	**19 00 55.3**	**+0.7**
AGUA	**GUANDACOL**	**5.65**	**36**	*i* P	**Pn**	**19 00 58.2**	**+2.2**
AGUA				IAML		19 02 38.9	
	comp=Z,708nm,1.1s						
AC04	**Llanos de Chal**	**5.99**	**11**	Pn	**Pn**	**19 01 00.1**	**-0.4**
APLL	**PUNTA DE LOS L**	**6.16**	**55**	*i* P	**Pn**	**19 01 03.9**	**+1.0**
VCA	**Vinchina**	**6.41**	**34**	*i* P	**Pn**	**19 01 08.3**	**+1.8**
VCA				IAML		19 03 01.1	
	comp=Z,738nm,1.4s						
ACLC	**CERRO LA CRUZ**	**6.54**	**46**	*i* P	**Pn**	**19 01 08.6**	**+0.3**
ACLC				IAML		19 02 41.2	
	comp=Z,568nm,0.7s						
GO03	**Copiap**	**6.74**	**16**	Pn	**Pn**	**19 01 10.7**	**-0.3**
PLCA	**Paso Flores**	**6.76**	**168**	Pn	**Pn**	**19 01 11.7**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=336,slow=12,SNR=46						
PLCA				Lg	Lg	19 02 56.7	
	comp=Z,1.0nm,0.3s,baz=23,slow=14,SNR=2.1						
PLCA				LR	LR	19 04 09.4	
	comp=Z,1µm,18.0s,baz=350,slow=41						
PLCA	**Paso Flores**	**6.76**	**168**	Pn	**Pn**	**19 01 10.3**	**-0.9**
PLCA	**Paso Flores**	**6.76**	**168**	*e*P	**Pn**	**19 01 11.8**	**+0.6**
TCA	**Tanti**	**7.08**	**69**	*i* P	**Pn**	**19 01 15.9**	**+0.3**
TCA				IAML		19 03 03.8	
	comp=Z,191nm,1.7s						
AC02	**Maricunga**	**7.76**	**22**		**Pn**	**19 01 23.2**	**-2.1**
CYA	**Choya**	**7.95**	**46**	*i* P	**Pn**	**19 01 25.5**	**-1.9**
CYA				IAML		19 03 13.3	
	comp=Z,179nm,0.9s						
AC01	**Pan de Azucar**	**8.08**	**11**		**Pn**	**19 01 26.8**	**-2.4**
LL01	**San Ignacio de**	**8.26**	**180**	Pn	**Pn**	**19 01 32.5**	**+1.0**
GO02	**Mina Guanaco**	**9.23**	**16**	Pn	**Pn**	**19 01 43.0**	**-2.3**
PB14	**IPOC Station P**	**9.60**	**11**	Pn	**Pn**	**19 01 48.0**	**-2.4**
LVC	**Limon Verde**	**11.85**	**16**	Pn	**Pn**	**19 02 17.7**	**-3.5**
	comp=Z,0.5nm,0.3s,baz=56,slow=14,SNR=3.6						
LVC				LR	LR	19 07 27.9	
	comp=Z,788nm,18.3s,baz=204,slow=40						
LVC	**Limon Verde**	**11.85**	**16**	Pn	**Pn**	**19 02 17.2**	**-4.0**
LVC	**Limon Verde**	**11.85**	**16**	*e*P	**Pn**	**19 02 20.8**	**-0.4**
LPA	**La Plata**	**11.91**	**98**	*e*P	**Pn**	**19 02 17.7**	**-4.0**
LPA				PPP	PPP	19 02 35.9	
LPA				S	**Sn**	**19 04 34.8**	**+0.6**
LPA				SS	**SbSb**	**19 05 31.5**	**+8.0**
LPA				SSS	SSS	19 06 03.3	
LPA				PCP	**PcP**	**19 08 08.0**	**-0.3**
LPA				SCS	**ScS**	**19 15 19.7**	**+3.3**
LPA				PKIKP	**PKiKP**	**19 15 59.5**	**-6.8**
LPA				PKIKS		19 19 38.4	
LPA				SKIKS		19 23 13.6	
PATCX	**Punta Patache**	**13.38**	**9**	Pn	**Pn**	**19 02 38.1**	**-3.8**
ITQB	**Itaqui**	**14.06**	**76**	*e*P	**Pn**	**19 02 50.9**	**-0.2**
PB08	**IPOC Station P**	**14.20**	**12**		**Pn**	**19 02 54.6**	**+1.3**
PSGCX	**Pisagua**	**14.59**	**8**	Pn	**Pn**	**19 02 57.6**	**-0.8**
GO01	**Chusmiza**	**14.65**	**12**		**Pn**	**19 03 01.6**	**+1.8**
CPUP	**Villa Florida**	**15.10**	**63**	Pn	**Pn**	**19 03 05.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=241,slow=12,SNR=5.9						
CPUP				LR	LR	19 09 16.7	
	comp=Z,930nm,21.8s,baz=242,slow=39						
CPUP	**Villa Florida**	**15.10**	**63**		**Pn**	**19 03 05.8**	**+0.5**
MNMC	**Minye Minye**	**15.12**	**10**		**Pn**	**19 03 05.9**	**+0.1**
PLTB	**Pedras Altas**	**15.90**	**87**	*e*P	**Pn**	**19 03 14.1**	**-1.6**
PB16	**IPOC Station P**	**15.91**	**10**	Pn	**Pn**	**19 03 15.7**	**-0.8**
CPSB	**Cacapava Do Su**	**16.40**	**82**	*e*P	**Pn**	**19 03 21.4**	**-0.7**
ITAB	**Concordia**	**18.66**	**74**	*e*P	**P**	**19 03 49.2**	**-0.7**
CNLB	**Canela**	**18.88**	**81**	*e*P	**P**	**19 03 51.9**	**-0.4**
PTGB	**Pitanga**	**19.96**	**67**	*e*P	**P**	**19 04 04.0**	**-0.1**
EFI	**East Falkland**	**20.37**	**154**	P	**P**	**19 04 06.9**	**-1.4**
EFI				IAmb	IAmb	19 04 18.6	
	comp=Z,96nm,1.4s						
TRCB	**Terra Rica**	**20.63**	**62**	*e*P	**P**	**19 04 10.7**	**-0.7**
SIV	**San Ignacio**	**20.70**	**32**	P	**P**	**19 04 11.8**	**-0.3**
	comp=Z,28nm,0.9s,baz=229,slow=9.8,SNR=53						
SIV				LR	LR	19 13 36.7	
	comp=Z,944nm,19.3s,baz=231,slow=41						
PTLB	**Pontes e Lacer**	**22.07**	**36**	*e*P	**P**	**19 04 27.0**	**+0.1**
PCMB	**Pacaembu**	**22.36**	**62**	*e*P	**P**	**19 04 28.4**	**-1.6**
NNA	**Nana**	**22.40**	**348**	LR	LR	19 11 29.2	
	comp=Z,141nm,18.7s,baz=171,slow=32						
NNA	**Nana**	**22.40**	**348**	P	**P**	**19 04 32.2**	**+1.7**
FRTB	**Fartura**	**22.62**	**68**	*e*P	**P**	**19 04 31.4**	**-1.4**
PP1B	**Ponte de Pedra**	**22.68**	**48**	*e*P	**P**	**19 04 32.4**	**-1.0**
VILB	**Vilhena**	**23.78**	**31**	*e*P	**P**	**19 04 44.5**	**0.0**
PET01	**Itanhaem-SP**	**23.91**	**72**	*e*P	**P**	**19 04 45.6**	**-0.2**
SPB	**Sao Paulo**	**24.14**	**71**	P	**P**	**19 04 46.9**	**-1.0**
SPB				IAmb	IAmb	19 04 48.6	
	comp=Z,60nm,1.0s						
SPB	**Sao Paulo**	**24.14**	**71**	*e*P	**P**	**19 04 48.1**	**+0.2**
ITRB	**Iturama**	**24.22**	**59**	*e*P	**P**	**19 04 47.6**	**-1.0**
BB19B	**Bebedouro**	**24.71**	**64**	*e*P	**P**	**19 04 53.4**	**+0.2**
VAO	**Valinhos**	**24.81**	**70**	*e*P	**P**	**19 04 54.5**	**+0.4**
PARB	**Paraibuna**	**25.70**	**72**	*e*P	**P**	**19 05 02.3**	**+0.2**
ARAG	**Araguaiana, MT**	**26.03**	**50**	*e*P	**P**	**19 05 04.4**	**-0.7**
CZSB	**Cruzeiro do Su**	**26.26**	**359**	*e*P	**P**	**19 05 08.5**	**+1.4**
SAML	**Samuel**	**26.42**	**21**	P	**P**	**19 05 08.7**	**+0.1**
SAML	**Samuel**	**26.42**	**21**	*e*P	**P**	**19 05 09.4**	**+0.8**
IPMB	**Ipameri, GO**	**26.87**	**59**	*e*P	**P**	**19 05 11.9**	**-0.9**
ATAH	**Atahualpa**	**27.42**	**347**	LR	LR	19 14 12.4	
	comp=Z,179nm,18.5s,baz=185,slow=32						
BSCB	**Bom Sucesso**	**27.61**	**69**	*e*P	**P**	**19 05 20.0**	**+0.6**
BDFB	**Brasilia**	**28.60**	**56**	P	**P**	**19 05 27.1**	**-1.2**
	comp=Z,14nm,0.8s,baz=217,slow=7.7,SNR=18						
BDFB				LR	LR	19 18 13.0	
	comp=Z,666nm,18.2s,baz=246,slow=39						
BDFB	**Brasilia**	**28.60**	**56**	P	**P**	**19 05 27.1**	**-1.2**
BDFB				IAmb	IAmb	19 05 28.1	
	comp=Z,16nm,0.9s						
SNDB	**Serra Nova Dou**	**29.21**	**46**	*e*P	**P**	**19 05 36.3**	**+2.7**
PEXB	**Peixe**	**30.97**	**51**	*e*P	**P**	**19 05 48.4**	**-0.8**
ALF01	**Guarapari-ES**	**30.98**	**72**	*e*P	**P**	**19 05 49.3**	**0.0**
PMSA	**Palmer Station**	**31.11**	**173**	P	**P**	**19 05 51.8**	**+1.9**
PMSA				IAmb	IAmb	19 06 26.7	
	comp=Z,18nm,1.1s						
NPGB	**Novo Progresso**	**31.17**	**34**	*e*P	**P**	**19 05 50.3**	**-0.6**
JANB	**Januaria**	**31.60**	**60**	*e*P	**P**	**19 05 53.9**	**-1.0**
BSFB	**Barra de Sao F**	**31.87**	**70**	*e*P	**P**	**19 05 56.6**	**-0.5**
SDBA	**SAO DESIDERIO**	**33.01**	**56**	*e*P	**P**	**19 06 06.2**	**-1.0**
ITTB	**Itaituba**	**33.38**	**31**	*e*P	**P**	**19 06 09.9**	**-0.4**
SMTB	**Santa Maria do**	**33.89**	**48**	*e*P	**P**	**19 06 14.8**	**-0.1**
PRPB	**Parauapebas**	**34.75**	**42**	*e*P	**P**	**19 06 21.9**	**-0.4**
GDU01	**Guandu, BA**	**35.94**	**64**	*e*P	**P**	**19 06 31.2**	**-1.2**
MALB	**Monte Alegre**	**36.26**	**32**	*e*P	**P**	**19 06 35.2**	**0.0**
MCPB	**Macapa, AP**	**38.58**	**34**	*e*P	**P**	**19 06 55.1**	**+0.2**
SDV	**Santo Domingo**	**42.79**	**2**	P	**P**	**19 07 30.2**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=119,slow=4.2,SNR=6.8						
SDV	**Santo Domingo**	**42.79**	**2**	P	**P**	**19 07 29.8**	**0.0**
SDV	**Santo Domingo**	**42.79**	**2**	*e*P	**P**	**19 07 30.8**	**+1.0**
RCBR	**Riachuelo**	**43.91**	**58**	P	**P**	**19 07 38.5**	**-0.3**
RCBR				IAmb	IAmb	19 08 01.8	
	comp=Z,28nm,1.2s						
RCBR	**Riachuelo**	**43.91**	**58**	*e*P	**P**	**19 07 39.2**	**+0.5**
BELA	**Belgrano 2**	**46.81**	**170**	P	**P**	**19 08 00.5**	**-0.6**
ACON	**Acoyapa**	**47.42**	**343**	P	**P**	**19 08 06.4**	**0.0**
VNA3	**Neumayer Olymp**	**49.35**	**158**	P	**P**	**19 08 21.1**	**+0.4**
VNA2	**Neumayer--Watz**	**50.01**	**157**	P	**P**	**19 08 25.9**	**+0.2**
	baz=279,slow=8.0						
SNAA	**Sanae**	**51.58**	**158**	P	**P**	**19 08 37.9**	**+0.3**
SNAA	**Sanae**	**51.58**	**158**	P	**P**	**19 08 37.6**	**0.0**
	comp=Z,8.7nm,0.8s,baz=287,slow=8.1,SNR=26						
SNAA	**Sanae**	**51.58**	**158**	P	**P**	**19 08 37.4**	**-0.2**
SNAA				IAmb	IAmb	19 08 47.1	
	comp=Z,18nm,1.0s						
SNAA				PcP	**PcP**	**19 09 49.9**	**-1.4**
SKI	**Saint Kitts**	**51.97**	**12**	P	**P**	**19 08 41.3**	**+0.3**
ICMP	**Isla Caja de M**	**52.00**	**7**	P	**P**	**19 08 41.2**	**0.0**
MLPR	**Magueyes Islan**	**52.03**	**6**	P	**P**	**19 08 40.9**	**-0.6**
MLPR				IAmb	IAmb	19 08 51.3	
	comp=Z,42nm,1.1s						
OBIP	**Obispado Ponce**	**52.15**	**7**	P	**P**	**19 08 40.9**	**-1.4**
OBIP				IAmb	IAmb	19 08 43.9	
	comp=Z,21nm,0.8s						
CUPR	**Culebra, Puert**	**52.56**	**8**	P	**P**	**19 08 45.7**	**+0.4**
CUPR				IAmb	IAmb	19 09 39.4	
	comp=Z,43nm,1.1s						
RKT	**Rikitea**	**55.32**	**264**	*e*LR	LR	19 25 09.6	
	comp=Z,199nm,27.8s						
QSPA	**South Pole Qui**	**56.12**	**180**	P	**P**	**19 09 11.9**	**+0.9**
	comp=Z,12nm,0.8s,baz=147,slow=3.1,SNR=31						
QSPA	**South Pole Qui**	**56.12**	**180**	P	**P**	**19 09 11.3**	**+0.3**
QSPA				IAmb	IAmb	19 09 13.4	
	comp=Z,15nm,0.9s						
TEIG	**Tepich**	**56.13**	**342**	P	**P**	**19 09 10.8**	**-0.5**
VNDA	**Vanda**	**63.95**	**191**	P	**P**	**19 10 05.5**	**+1.2**
	comp=Z,1.3nm,0.9s,baz=112,slow=7.5,SNR=5.2						
VNDA	**Vanda**	**63.95**	**191**	P	**P**	**19 10 06.2**	**+1.9**
VNDA				IAmb	IAmb	19 10 30.4	
	comp=Z,12nm,1.4s						
TAOE	**Nuku Hiva Isla**	**66.73**	**275**	*e*LR	LR	19 30 32.9	
	comp=Z,167nm,25.3s						
TBI	**Tubuai**	**67.05**	**257**	*e*LR	LR	19 30 44.8	
	comp=Z,331nm,28.2s,baz=119						
Z47A	**Carrollton**	**68.57**	**346**	P	**P**	**19 10 34.7**	**+0.4**
MEH	**Mehetia**	**68.59**	**262**	*e*T	T	20 25 02.8	
	comp=Z,13nm,0.2s						
143A	**Socs Landing,**	**68.84**	**343**	P	**P**	**19 10 36.7**	**+0.6**
Y49A	**Blount Mountai**	**68.89**	**347**	P	**P**	**19 10 37.3**	**+0.9**
Y49A				IAmb	IAmb	19 10 43.1	
	comp=Z,17nm,1.1s						
JCT	**Junction City**	**69.28**	**335**	P	**P**	**19 10 40.3**	**+1.3**
JCT				IAmb	IAmb	19 10 52.8	
	comp=Z,15nm,1.1s						
TXAR	**Lajitas Array**	**69.71**	**331**	P	**P**	**19 10 43.8**	**+2.1**
	comp=Z,0.4nm,0.5s,baz=154,slow=9.0,SNR=2.6						
TXAR				LR	LR	19 36 02.3	
	comp=Z,165nm,20.3s,baz=0.0,slow=31						
TIAR	**Tiarei**	**69.80**	**262**	*e*T	T	20 26 33.4	
	comp=Z,2.2nm,0.2s						
PPT2	**Papeete2**	**69.97**	**262**	*e*S	**S**	**19 19 54.7**	**+0.9**
	comp=Z,88nm,23.2s						
PPT2	**Papeete2**	**69.97**	**262**	*e*LR	LR	19 31 58.4	
	comp=Z,241nm,27.2s						
PPT	**Papeete**	**69.99**	**262**	LR	LR	19 33 50.1	
	comp=Z,80nm,21.9s,baz=90,slow=29						
W50A	**Signal Mountai**	**70.01**	**349**	P	**P**	**19 10 43.8**	**+0.4**
W50A				IAmb	IAmb	19 10 45.1	
	comp=Z,12nm,0.8s						
V53A	**Saluda**	**70.11**	**351**	P	**P**	**19 10 44.1**	**+0.1**
OXF	**Oxford**	**70.12**	**345**	P	**P**	**19 10 44.6**	**+0.6**
SWET	**Sewanee**	**70.13**	**348**	P	**P**	**19 10 44.7**	**+0.6**
SWET				IAmb	IAmb	19 10 45.8	
	comp=Z,12nm,0.7s						
CPCT	**Cooper Cave**	**70.13**	**349**	P	**P**	**19 10 44.4**	**+0.3**
TKL	**Tuckaleechee C**	**70.23**	**350**	P	**P**	**19 10 44.8**	**+0.2**
	comp=Z,3.9nm,0.7s,baz=153,slow=9.0,SNR=2.9						
TKL	**Tuckaleechee C**	**70.23**	**350**	IAmb	IAmb	19 10 54.0	
	comp=Z,46nm,1.8s						
PLAL	**Pickwick Lake**	**70.30**	**346**	P	**P**	**19 10 45.1**	**+0.1**
PLAL				IAmb	IAmb	19 10 56.6	
	comp=Z,11nm,0.9s						
V52A	**Sevierville**	**70.38**	**350**	P	**P**	**19 10 45.2**	**-0.3**
W45A	**Hickory Valley**	**70.69**	**345**	P	**P**	**19 10 47.8**	**+0.4**
V48A	**Smith Brothers**	**70.80**	**348**	P	**P**	**19 10 48.7**	**+0.6**
T59A	**Double "B" Far**	**70.89**	**356**	P	**P**	**19 10 49.7**	**+1.1**
CLTN	**Cedars of Leba**	**71.05**	**348**	P	**P**	**19 10 49.6**	**0.0**
WVT	**Waverly**	**71.36**	**347**	P	**P**	**19 10 51.9**	**+0.4**
U49A	**Red Boiling Sp**	**71.37**	**349**	P	**P**	**19 10 51.7**	**+0.1**
U49A				IAmb	IAmb	19 11 09.2	
	comp=Z,35nm,1.7s						
W41B	**Gary Mavity, V**	**71.40**	**343**	P	**P**	**19 10 51.8**	**+0.1**
W41B				IAmb	IAmb	19 11 22.2	
	comp=Z,37nm,1.8s						
JSRW	**J. Sargeant Re**	**71.63**	**355**	P	**P**	**19 10 53.7**	**+0.7**
W39A	**Magazine**	**71.81**	**342**	P	**P**	**19 10 55.4**	**+1.2**
W39A				IAmb	IAmb	19 11 07.0	
	comp=Z,17nm,1.0s						
LCAR	**Lake Charles**	**72.00**	**344**	P	**P**	**19 10 55.8**	**+0.5**
LCAR				IAmb	IAmb	19 11 07.5	
	comp=Z,10nm,0.9s						
R55A	**Marlinton**	**72.39**	**354**	P	**P**	**19 10 59.1**	**+1.4**
MNTX	**Cornudas Mount**	**72.49**	**331**	P	**P**	**19 10 58.8**	**+0.4**
U40A	**Yellville**	**72.67**	**343**	P	**P**	**19 10 59.6**	**+0.2**
Q60A	**Greensboro**	**72.82**	**357**	P	**P**	**19 11 00.8**	**+0.7**
MAW	**Mawson**	**73.14**	**164**	P	**P**	**19 11 02.2**	**+0.4**
	comp=Z,9.3nm,0.8s,baz=202,slow=6.4,SNR=6.8						
MAW				LR	LR	19 45 39.5	
	comp=Z,182nm,18.4s,baz=239,slow=38						
MAW	**Mawson**	**73.14**	**164**	P	**P**	**19 11 02.4**	**+0.5**
Q51A	**Peebles**	**73.48**	**351**	P	**P**	**19 11 04.1**	**0.0**
Q51A				IAmb	IAmb	19 11 05.4	
	comp=Z,11nm,0.8s						
MSTX	**Muleshoe**	**73.50**	**334**	P	**P**	**19 11 04.5**	**0.0**
MSTX				IAmb	IAmb	19 11 17.1	
	comp=Z,7.5nm,0.8s						
QUOK	**Quay**	**73.53**	**340**	P	**P**	**19 11 04.5**	**+0.1**
QUOK				IAmb	IAmb	19 12 15.5	
	comp=Z,39nm,1.6s						
FVM	**French Village**	**73.67**	**345**	P	**P**	**19 11 05.6**	**+0.4**
FVM				IAmb	IAmb	19 12 13.9	
	comp=Z,56nm,1.9s						
CCM	**Cathedral Cave**	**73.92**	**345**	P	**P**	**19 11 07.8**	**+1.1**
CCM				IAmb	IAmb	19 11 18.7	
	comp=Z,12nm,0.9s						
AMTX	**Amarillo**	**73.93**	**335**	P	**P**	**19 11 08.0**	**+1.0**
AMTX				IAmb	IAmb	19 11 20.0	
	comp=Z,20nm,1.4s						

S39A	**Bolivar**	74.06	343	P	P	19 11 08.2	+0.6
S39A				IAmb	IAmb	19 11 41.5	
	comp=Z,36nm,1.9s						
R40A	**Maddies Statio**	74.38	344	P	P	19 11 09.6	+0.3
R40A				IAmb	IAmb	19 11 21.2	
	comp=Z,9.9nm,0.8s						
LIC	**Lamto**	75.04	72	*e*P	P	19 11 13.0	-0.8
	comp=Z,12nm,0.8s						
TIC	**Toumodi**	75.30	71	*e*P	P	19 11 14.7	-0.6
KIC	**Kosan Boka**	75.35	72	*e*P	P	19 11 15.1	-0.5
	comp=Z,11nm,0.8s						
DBIC	**Dimbokro**	75.45	71	P	P	19 11 15.9	-0.2
	comp=Z,5.7nm,0.7s,baz=204,slow=6.0,SNR=11						
DBIC				LR	LR	19 42 55.2	
	comp=Z,146nm,18.7s,baz=214,slow=35						
DBIC	**Dimbokro**	75.45	71	P	P	19 11 16.0	-0.2
DBIC				IAmb	IAmb	19 11 16.5	
	comp=Z,8.9nm,0.8s						
P40A	**Paris**	75.51	344	P	P	19 11 16.3	+0.4
P40A				IAmb	IAmb	19 11 18.0	
	comp=Z,31nm,1.3s						
ANMO	**Albuquerque**	75.76	332	P	P	19 11 19.2	+1.5
T25A	**Trinidad**	76.92	334	P	P	19 11 26.0	+1.7
T25A				IAmb	IAmb	19 11 38.3	
	comp=Z,15nm,1.1s						
X16A	**Lo Mia Camp, P**	77.40	328	P	P	19 11 27.8	+0.9
SDCO	**Great Sand Dun**	77.86	334	P	P	19 11 30.7	+1.1
TSUM	**Tsumeb**	79.42	106	P	P	19 11 38.2	-0.3
U15A	**North Rim**	79.46	328	P	P	19 11 39.9	+1.5
KNB	**Kanab**	80.19	328	P	P	19 11 44.5	+2.3
BOSA	**Boshof**	80.24	118	P	P	19 11 42.7	-0.1
	comp=Z,9.5nm,0.9s,baz=230,slow=4.6,SNR=8.3						
BOSA	**Boshof**	80.24	118	IAmb	IAmb	19 11 51.5	
	comp=Z,20nm,1.1s						
ECSD	**EROS Data Cent**	80.58	342	P	P	19 11 44.3	+0.3
ECSD				IAmb	IAmb	19 11 57.5	
	comp=Z,9.5nm,0.8s						
KOWA	**Kowa**	80.91	66	P	P	19 11 45.9	-0.5
KOWA				IAmb	IAmb	19 11 47.6	
	comp=Z,30nm,1.5s						
LBTB	**Lobatse**	82.48	115	P	P	19 11 54.4	-0.4
LBTB				IAmb	IAmb	19 11 56.0	
	comp=Z,9.2nm,0.7s						
R11A	**Troy Canyon, C**	82.52	327	P	P	19 11 56.9	+2.3
DUG	**Dugway, Tooele**	82.84	330	P	P	19 11 56.6	+0.5
DUG				IAmb	IAmb	19 12 10.6	
	comp=Z,13nm,1.4s						
HWUT	**Hardware Ranch**	83.53	331	P	P	19 12 00.2	+0.4
HWUT				IAmb	IAmb	19 12 12.8	
	comp=Z,9.1nm,1.2s						
SPUT	**South Promonto**	83.63	331	P	P	19 12 01.0	+0.7
PDAR	**Pinedale Array**	83.75	333	P	P	19 12 01.1	+0.3
	comp=Z,0.6nm,0.8s,baz=134,slow=6.4,SNR=5.5						
NVAR	**Mina Array Bea**	83.83	325	P	P	19 12 03.6	+2.2
	comp=Z,0.9nm,0.7s,baz=148,slow=5.6,SNR=8.2						
NVAR	**Mina Array Bea**	83.83	325	P	P	19 12 03.0	+1.6
HVU	**Hansel Valley**	84.16	331	P	P	19 12 03.8	+0.9
ELK	**Elko**	84.33	329	P	P	19 12 05.1	+1.2
TOA0	**Torodi Ar. Sit**	84.48	70	P	P	19 12 04.7	-0.3
TOA0				IAmb	IAmb	19 12 05.8	
	comp=Z,11nm,0.8s						
TORD	**Torodi Ar. Bea**	84.48	70	P	P	19 12 04.7	-0.2
	comp=Z,8.4nm,0.8s,baz=260,slow=4.1,SNR=33						
TORD				LR	LR	19 49 07.7	
	comp=Z,170nm,18.4s,baz=30,slow=35						
TORD	**Torodi Ar. Bea**	84.48	70	P	P	19 12 03.3	-1.6
RLMT	**Red Lodge**	85.68	335	P	P	19 12 11.3	+0.8
YMR	**Madison River**	85.91	333	P	P	19 12 13.4	+1.7
YHH	**Holmes Hill**	85.97	334	P	P	19 12 13.4	+1.3
ORV	**Oroville**	86.25	324	P	P	19 12 15.2	+2.0
ORV				IAmb	IAmb	19 12 27.4	
	comp=Z,12nm,1.4s						
HLID	**Hailey**	86.31	331	P	P	19 12 15.2	+1.6
ULM	**Lac du Bonnet**	86.54	345	P	P	19 12 14.3	0.0
	comp=Z,1.3nm,0.5s,baz=153,slow=6.7,SNR=4.1						
ULM	**Lac du Bonnet**	86.54	345	IAmb	IAmb	19 13 00.8	
	comp=Z,29nm,1.9s						
MCMT	**McKenzie Canyo**	86.75	332	P	P	19 12 17.7	+1.8
WDC	**Whiskeytown Da**	87.55	324	P	P	19 12 19.7	+0.2
DZM	**Mont Dzumac**	100.98	234	*e*LR	LR	19 46 28.2	
	comp=Z,101nm,29.6s						
YKA	**Yellowknife Ar**	102.08	341	P	Pdif	19 13 25.4	-0.1
	comp=Z,0.2nm,0.6s,baz=139,slow=5.6,SNR=4.3						
ASAR	**Alice Springs**	117.36	207	PKP	PKPdf	19 18 16.8	-1.1
	comp=Z,0.5nm,0.7s,baz=84,slow=2.2,SNR=4.5						
WRA	**Warramunga Arr**	120.55	209	PKP	PKPdf	19 18 23.4	-0.6
	comp=Z,0.7nm,0.5s,baz=161,slow=1.8,SNR=6.4						
BRTR	**Keskin Array B**	122.10	61	PKP	PKPdf	19 18 26.6	+0.1
	comp=Z,1.1nm,0.8s,baz=195,slow=3.8,SNR=4.5						
AKASG	**Malin Array Be**	122.45	48	PKP	PKPdf	19 18 25.4	-1.1
	comp=Z,1.7nm,0.8s,baz=261,slow=2.3,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	125.52	269	T	T	21 37 06.6	
	baz=118,slow=74,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	125.54	269	T	T	21 36 59.9	
	baz=118,slow=74,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	125.54	269	T	T	21 37 01.8	
	baz=118,slow=74,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	125.94	271	T	T	21 37 38.9	
	baz=122,slow=75,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	125.95	271	T	T	21 37 37.6	
	baz=122,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	125.96	271	T	T	21 37 38.2	
	baz=122,slow=75,SNR=6.3						
POO	**Poona**	146.14	109	*e*x	x	19 19 12.0	
ZALV	**Zalesovo Beam**	154.45	32	PKP	PKPdf	19 19 23.1	-0.3
	comp=Z,1.3nm,0.6s,baz=263,slow=2.5,SNR=7.6						
ZALV				PKPbc	sPKPdf	19 19 32.1	+1.9
	comp=Z,7.2nm,0.7s,baz=294,slow=2.9,SNR=30						
MKAR	**Makanchi Array**	157.02	49	PKP	PKPdf	19 19 26.7	-0.4
	comp=Z,0.6nm,0.7s,baz=318,slow=1.6,SNR=6.5						
WMQ	**Urumqi**	161.73	52	*e*P	PKPdf	19 19 32.8	+0.1
SONM	**Songino Array**	166.26	4	PKPab	PKPab	19 20 38.8	+1.0
	comp=Z,1.3nm,0.9s,baz=335,slow=3.4,SNR=7.0						
NJ2	**Nanjing**	170.39	261	*e*P	PKPdf	19 19 41.2	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GTA	**Gaotai**	171.78	48	*e*P	PKPdf	19 19 41.3	+0.8
GTA				pP	pPKPdf	19 19 45.7	+0.1
GTA				sP	sPKPdf	19 19 48.6	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
HHC	**Hu-ho-hao-te**	172.59	336	*e*P	PKPdf	19 19 37.3	-3.5
LZH	**Lanzhou**	176.30	57	*e*PKP	PKPdf	19 19 39.4	-2.8
LZH				pPKP	pPKPdf	19 19 49.0	+1.6
LZH				sPKP		19 19 52.7	

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*IDC **09** 19:01:07.8±44.0, 7°.06S×106°.61E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.4/41, mbtmp3.9/3, MS4.5/3, Ms1 4.5/3, ms1mx3.2/48, Error ellipse: s-maj=762.7km s-min=189.6km az=131.0*

*DJA **09** 19:01:15.1±0.7, 8°S±3°×10°7E±°, h11^{km}±5^{km}, M3.9/13, MLv3.9/13*

*NEIC **09** 19:01:16.2±2.4, 7°.52S±0°.08×106°.70E±0°.06, h50^{km}±8^{km}, mb4.7/10, Error ellipse: s-maj=11.4km s-min=8.4km az=194.0*

ISC 09 19:01:16.9±1.1, **7°.59S**±0°.06×**106°.69E**±0°.04, **h55**^{km}±12^{km}, **n35**, σ**1^{s}36**/34, **mb4.4**/8, **MS4.5**/3, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	1.03	4	P	Pn	19 01 35.4	+0.2
DBJI				S	Sn	19 01 48.6	-0.2
CISI	**Cisompet, Garu**	1.12	88		Pn	19 01 35.3	-1.1
CISI				Sn	Sn	19 01 48.9	-2.1
CISI	**Cisompet, Garu**	1.12	88	P	Pn	19 01 36.0	-0.4
CISI				S	Sn	19 01 49.9	-1.0
LEM	**Lembang**	1.20	51	P	Pn	19 01 38.2	+0.7
CGJI	**Cibinong**	1.38	315	P	Pn	19 01 40.0	+0.1
CGJI				S	Sn	19 01 56.7	-0.5
TNG	**Tangerang**	1.41	358	S	Sn	19 01 58.5	+0.7
CMJI	**Cimerak**	1.76	96	P	Pn	19 01 45.3	+0.3
CMJI				S	Sn	19 02 05.3	-1.0
JCJI	**Jatiwangi**	1.92	55	P	Pn	19 01 45.9	-1.2
KPJI	**Karang Pucung**	2.24	84	P	Pn	19 01 51.9	+0.3
KPJI				S	Sn	19 02 22.2	+4.1
KASI	**Kota Agung**	2.99	313	P	Pn	19 02 02.8	+0.9
XMIS	**Christmas Isla**	3.05	199	Pn	Pn	19 02 02.3	-0.4
KLSI		3.48	326	P	Pn	19 02 09.1	+0.6
LWLI	**Liwa**	3.65	314	P	Pn	19 02 11.8	+0.7
UGM	**Wanagama**	3.82	95	Pn	Pn	19 02 11.5	-1.7
UGM	**Wanagama**	3.82	95	P	Pn	19 02 14.0	+0.8
MNAI	**Manna**	4.91	311	Pn	Pn	19 02 26.2	-2.0

GIRL	**Giralia**	16.64	155		Pn	19 05 08.4	+2.0
FITZ	**Fitzroy Crossi**	21.20	121	P	P	19 05 58.9	+0.8
FITZ				IAmb	IAmb	19 06 12.3	
	comp=Z,24nm,1.4s						
SIJI	**Sorong**	25.39	76	LR	LR	19 19 31.1	
	comp=Z,2μm,20.2s,baz=249,slow=44						
WB0	**Warramunga Arr**	29.46	117	P	P	19 07 17.0	+1.1
WRA	**Warramunga Arr**	29.47	117	P	P	19 07 17.1	+1.1
	comp=Z,0.5nm,0.6s,baz=290,slow=10,SNR=1.5						
WB2	**Warramunga Arr**	29.48	117	P	P	19 07 16.1	0.0
WB2				IAmb	IAmb	19 07 36.1	
	comp=Z,13nm,1.4s						
WR0	**Warramunga Arr**	29.66	117	P	P	19 07 17.8	+0.2
WR0				IAmb	IAmb	19 07 26.8	
	comp=Z,36nm,1.8s						
ASAR	**Alice Springs**	30.61	125	P	P	19 07 26.7	+0.7
	comp=Z,0.8nm,1.0s,baz=303,slow=8.5,SNR=6.1						
H08S2	**Diego Garcia H**	33.89	268	T	T	19 43 29.4	
	baz=91,slow=76,SNR=16						
H08S3	**Diego Garcia H**	33.90	268	T	T	19 43 26.3	
	baz=91,slow=76,SNR=19						
H08S1	**Diego Carcia H**	33.90	268	T	T	19 43 25.5	
	baz=91,slow=76,SNR=17						
SHL	**Shillong**	35.97	337	P	P	19 08 12.9	+0.2
COEN	**Coen**	36.37	103	P	P	19 08 14.2	-2.0
COEN				IAmb	IAmb	19 08 33.8	
	comp=Z,47nm,1.6s						
STKA	**Stephens Creek**	40.48	131	P	P	19 08 51.7	+1.2
	comp=Z,2.7nm,0.4s,baz=313,slow=7.2,SNR=4.6						
STKA	**Stephens Creek**	40.48	131	IAmb	IAmb	19 08 59.5	
	comp=Z,3.9nm,1.6s						
BKZ	**Black Stump Fm**	69.60	129	P	P	19 12 21.1	+0.5
BKZ				IAmb	IAmb	19 12 47.2	
	comp=Z,24nm,1.5s						
ABKAR	**Akbulak array**	69.76	329	P	P	19 12 18.9	-2.3
GERES	**GERESS Array B**	97.62	318	LR	LR	20 06 52.1	
	comp=Z,162nm,18.2s,baz=320,slow=41						
KEST	**Kesra**	100.33	305	LR	LR	19 59 49.7	
	comp=Z,122nm,21.8s,baz=258,slow=35						

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*IDC **09** 19:07:15.3±1.1, 2°.39N×126°.84E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.5/36, mbtmp3.5/6, ML2.5/1, Error ellipse: s-maj=64.8km s-min=19.9km az=67.0*

ISC 09 19:07:21.9±1.0, **2°.4N**±0°.2×**127°.1E**±0°.3, **h53**^{km}, **n6**, σ**1^{s}03**/7, **mb3.4**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	5.30	128	Pn	Pn	19 08 38.3	-0.3
	0.2nm,0.3s,baz=294,slow=19,SNR=1.4						
FITZ	**Fitzroy Crossi**	20.42	184	P	P	19 11 54.3	-0.5
	3.4nm,0.9s,baz=0.0,slow=12,SNR=1.1						
WRA	**Warramunga Arr**	23.32	163	P	P	19 12 25.2	-0.4
	0.4nm,0.4s,baz=341,slow=11,SNR=5.9						
ASAR	**Alice Springs**	26.75	166	P	P	19 12 57.9	+1.0
	0.3nm,0.9s,baz=345,slow=8.8,SNR=1.2						
ASAR				PcP	PcP	19 16 20.4	+1.3
	0.3nm,0.8s,baz=351,slow=2.2,SNR=2.1						
SONM	**Songino Array**	48.66	342	P	P	19 16 01.3	+0.4
	0.7nm,1.1s,baz=138,slow=8.9,SNR=3.7						
MKAR	**Makanchi Array**	58.84	326	P	P	19 17 14.2	-0.9
	0.2nm,0.4s,baz=121,slow=8.6,SNR=7.6						

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*JMA **09** 19:08:58.2±0.1, 35°.70N×139°.64E, h47^{km}±2^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s33.00000°, δ41.00000°, λ67.00000°. NP2: ϕ_s242.00000°, δ53.00000°, λ109.00000°. Principal axes: T Plg74.0000°, Azm208.0000°; N Plg15.0000°, Azm51.0000°; P Plg6.0000°, Azm319.0000°;*

JMA Felt II J1.

*NIED **09** 19:08:58.2, 35°.70N×139°.64E, h47^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.63; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-1.89; $M_{r\theta}$-1.01; $M_{\theta\phi}$-0.91; $M_{\phi r}$-0.36; Fault plane solution: $M_0$2.72000×10^{14} NP1: ϕ_s222.00000°, δ55.00000°, λ105.00000°. NP2: ϕ_s17.00000°, δ37.00000°, λ70.00000°.*

*IDC **09** 19:09:00.9±3.0, 35°.44N×139°.29E, h71^{km}±29^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.1/40, mbtmp3.6/3 Error ellipse: s-maj=57.0km s-min=28.9km az=61.0*

ISC 09 19:08:57.6±1.1, **35°.65N**±0°.05×**139°.67E**±0°.07, **h52**^{km}±8^{km}, **n22**, σ**0^{s}73**/22, **mb3.7**/3, **4C-5D**, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOK	**Tokyo**	0.08	63	⇑P	Pn	19 09 06.2	+0.8
JHU	**Hanno**	0.38	302	⇑P	Pn	19 09 07.5	-0.1
JHU				*e*S	Sn	19 09 14.4	-0.4
JSGW	**Sagamiharawaka**	0.38	263	⇑P	Pn	19 09 07.5	-0.1
JSGW				S	Sn	19 09 14.4	-0.4
JOD2	**Odawara 2**	0.61	231	⇑P	Pn	19 09 10.4	+0.1
JOD2				*e*S	Sn	19 09 19.4	-0.1
JRY	**Ryogami san**	0.72	300	⇓P	Pn	19 09 11.8	0.0
JAG	**Ashikaga**	0.79	347	⇓P	Pn	19 09 12.4	-0.2
JFNN	**Fujinakano**	0.93	241	P	Pn	19 09 14.8	+0.5
JYN	**Shimob**	0.93	261	⇓P	Pn	19 09 14.6	+0.1
JYN				S	Sn	19 09 27.0	+0.1
JIM2	**Oshima 3**	0.95	192	P	Pn	19 09 14.6	-0.1
BSO3	**Boso 3**	1.09	141	⇓P	Pn	19 09 16.7	+0.4
JIZS	**Izushimoda**	1.14	215	P	Pn	19 09 17.7	+0.5
JIZS				S	Sn	19 09 32.7	+1.0
JKT	**Katashina**	1.17	343	⇓P	Pn	19 09 17.6	-0.1
MJAR	**Matsushiro Arr**	1.48	307	P	Pn	19 09 22.6	+0.7
	9.9nm,0.3s,baz=142,slow=15,SNR=309						
MJAR				S	Sn	19 09 42.6	+2.4
	4.1nm,0.3s,baz=170,slow=30,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	28.72	116	T	T	19 44 27.4	
	baz=308,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	28.73	116	T	T	19 44 28.0	
	baz=308,slow=75,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	28.74	116	T	T	19 44 28.8	
	baz=308,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	29.36	118	T	T	19 45 07.1	
	baz=310,slow=74,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	29.36	118	T	T	19 45 08.2	
	baz=310						
H11S2	**WAKE ISLAND Hy**	29.38	118	T	T	19 45 04.8	
	baz=310,slow=74,SNR=4.1						
MKAR	**Makanchi Array**	43.68	303	P	P	19 16 56.7	-0.6
	0.2nm,0.5s,baz=84,slow=9.9,SNR=5.5						
WRA	**Warramunga Arr**	55.52	186	P	P	19 18 27.3	-0.2
	0.9nm,0.4s,baz=0.5,slow=7.6,SNR=4.8						
ASAR	**Alice Springs**	59.25	186	P	P	19 18 53.3	-0.4
	0.3nm,0.5s,baz=2.1,slow=5.0,SNR=6.3						

IDC 09 19:15:35.4±2.3, **6°.09S**×**129°.48E**, **h0**^{km}, **mb3.4**/1, **mb1 3.7**/4, **mb1mx3.4**/35, **mbtmp3.5**/4, **ML3.4**/3, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.5**/25, **Error ellipse: s-maj=84.6km s-min=30.4km az=75.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	12.51	197	Pn	Pn	19 18 35.8	+1.0
	0.2nm,0.3s,baz=24,slow=10.0,SNR=1.2						
FITZ				Sn	Sn	19 20 43.4	-12
	0.1nm,0.3s,baz=327,slow=17,SNR=1.2						
WRA	**Warramunga Arr**	14.56	162	Pn	Pn	19 19 03.2	+0.3
	0.1nm,0.3s,baz=340,slow=12,SNR=1.6						
WRA				Sn	Sn	19 21 28.6	-16
	0.3nm,0.3s,baz=336,slow=22,SNR=4.8						
PMG	**Port Moresby**	17.82	102	LR	LR	19 27 49.1	
	comp=Z,34nm,19.6s,baz=256,slow=41						
ASAR	**Alice Springs**	17.99	167	P	Pn	19 19 46.3	-0.8
	0.1nm,0.3s,baz=342,slow=9.1,SNR=10.0						
ASAR				S	Sn	19 22 52.1	-16
	0.1nm,0.3s,baz=327,slow=15,SNR=1.9						
MKAR	**Makanchi Array**	67.19	327	P	P	19 26 31.4	0.0
	0.4nm,0.9s,baz=111,slow=7.9,SNR=2.5						

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*IDC **09** 19:29:30.0±0.6, 44°.17N×148°.18E, h0^{km}, mb4.3/30, mb1 4.4/33, mb1mx4.4/41, mbtmp4.3/33, ML3.5/3, MS3.6/8, Ms1 3.6/8, ms1mx3.3/44, Error ellipse: s-maj=16.8km s-min=12.8km az=168.0*

*MOS **09** 19:29:35.7±0.9, 44°.20N×148°.19E, h51^{km}, mb4.8/23, Error ellipse: s-maj=7.3km s-min=5.6km az=112.4*

*SKHL **09** 19:29:35.2±0.1, 43°.98N×148°.38E, h55^{km}±4^{km}, mb4.8/11*

*JMA **09** 19:29:36.0±0.3, 43°.77N×147°.89E, h0^{km}, M4.6*

*NIED **09** 19:29:36.1, 43°.77N×147°.89E, h0^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.39; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-0.90; $M_{r\theta}$2.12; $M_{\theta\phi}$-0.63; $M_{\phi r}$0.82; Fault plane solution: $M_0$2.64000×10^{15} NP1: ϕ_s63.00000°, δ76.00000°, λ103.00000°. NP2: ϕ_s201.00000°, δ19.00000°, λ50.00000°.*

*BJI **09** 19:29:37.0±0.0, 44°.20N×148°.10E, h54^{km}, mB5.0/20, mb4.5/35, Ms4.7/7, Ms7 4.4/4*

*NEIC **09** 19:29:40.4±1.0, 44°.2N±0°.1×148°.1E±0°.1, h73^{km}±2^{km}, mb4.7/86, Error ellipse: s-maj=15.3km s-min=10.8km az=158.0*

ISC 09 19:29:36.0±0.8, **44°.05N**±0°.05×**148°.25E**±0°.05, **h44**^{km}±7^{km}, **n427**, σ**1^{s}06**/439, **mb4.6**/122, **MS4.2**/8, **25C-33D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	1.21	347	*i* P	Pn	19 29 56.5	0.0
KUR				AMB	AMB	19 29 58.0	
	2μm,0.4s						
KUR				*i* S	Sn	19 30 12.5	+0.7
KUR				A	A	19 30 17.0	
	8μm,0.4s						
KUR				A	A	19 30 17.0	
	4μm,0.4s						
KUR	**Kuril'sk**	1.21	347	*d i*PN	Pn	19 29 57.0	+0.5
KUR				*i* S	Sn	19 30 12.4	+0.7
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,730nm,0.1s						
KUR				pmax	pmax		
	comp=N,339nm,0.3s						
KUR				smax	smax		
	comp=N,8μm,0.4s						
KUR				smax	smax		
	comp=E,4μm,0.4s						
YUK	**Yuzh-Kuril'sk**	1.72	270	*i* P	Pn	19 30 03.0	-0.5
YUK				AMB	AMB	19 30 05.0	
	comp=E,2μm,0.4s						
YUK				*i* S	Sn	19 30 23.8	-0.5
YUK				A	A	19 30 24.0	
	comp=E,3μm,0.5s						
YUK				A	A	19 30 24.0	
	comp=E,5μm,0.5s						
YUK	**Yuzh-Kuril'sk**	1.72	270	*d i*PN	Pn	19 30 03.4	-0.1
GRPR	**Tuman**	1.79	269	*i* P	Pn	19 30 04.0	-0.4
GRPR				AMB	AMB	19 30 05.0	
	comp=E,1μm,0.4s						
GRPR				*i* S	Sn	19 30 24.6	-1.3
GRPR				A	A	19 30 26.0	
	comp=E,2μm,0.4s						
GRPR				A	A	19 30 26.0	
	comp=E,7μm,0.4s						
GRPR	**Tuman**	1.79	269	*d i*PN	Pn	19 30 04.3	-0.1
GRPR				*i* S	Sn	19 30 24.4	-1.5
GRPR				pmax	pmax		
	comp=Z,1μm,0.3s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,7μm,0.4s						
NEM2	**Nemuro 2**	1.94	250	P	Pn	19 30 05.9	-0.6
NEM2				*e*S	Sn	19 30 27.7	-2.0
NMR	**Nemuro--Hokkai**	1.95	250	*i* P	Pn	19 30 05.0	-1.6
NMR				*i* S	Sn	19 30 28.0	-1.9
NMR	**Nemuro--Hokkai**	1.95	250	⇓*i*PN	Pn	19 30 05.9	-0.7
NMR				*i* S	Sn	19 30 28.9	-1.0
RUSJ	**Misakicho**	2.17	272	*d i*PN	Pn	19 30 11.0	+1.5
RUSJ				*i* S	Sn	19 30 36.6	+1.5
JRA	**Rausu**	2.26	268	P	Pn	19 30 11.6	+0.8
JNSB	**Nemuroshibetsu**	2.36	264	P	Pn	19 30 13.0	+0.8
JNSB				*e*S	Sn	19 30 39.9	-0.1
JKHN	**Kushirohamanak**	2.45	248	P	Pn	19 30 13.3	-0.1
JNK	**Nakash**	2.60	261	P	Pn	19 30 15.9	+0.4
JNK				*e*S	Sn	19 30 45.4	-0.4
JAK	**Akkeshi**	2.79	249	P	Pn	19 30 17.9	-0.2
JTKR	**Abashiri--Toko**	3.13	270	P	Pn	19 30 24.3	+1.5
JAR	**Ashorobuto**	3.34	259	P	Pn	19 30 26.9	+1.2
JAR				*e*S	Sn	19 31 04.6	+0.6
JOB	**Onbets**	3.41	252	P	Pn	19 30 27.2	+0.5
JOB				*e*S	Sn	19 31 05.1	-0.8
JMP	**Maruseppu**	3.53	271	P	Pn	19 30 30.1	+1.8
JCH	**Churui**	3.84	250	P	Pn	19 30 32.9	+0.3
JCH				*e*S	Sn	19 31 14.6	-1.9
JKK2	**Kamakawa 2**	3.98	269	P	Pn	19 30 36.7	+2.3
JKA	**Kamikawa-asahi**	4.07	273		Sn	19 31 32.1	+10
JKA	**Kamikawa-asahi**	4.07	273		Pn	19 30 38.3	+2.6
ASAJ	**Asahikawa**	4.08	273	Pn	Pn	19 30 38.0	+2.3
	comp=E,5.8nm,0.3s,baz=57,slow=14,SNR=39						
ASAJ				Sn	Sn	19 31 32.1	+10
	comp=E,9.4nm,0.3s,baz=39,slow=33,SNR=2.2						
JEM	**Erimo**	4.25	243		Pn	19 30 39.5	+1.3
ERM	**Erimo**	4.25	243	⇓*e*PN	Pn	19 30 40.0	+1.8
ERM	**Erimo**	4.25	243		Pn	19 30 40.1	+1.8
JNBK	**Urakawa-nobuka**	4.39	248	P	Pn	19 30 40.7	+0.6
JWK2	**Keihoku**	4.71	288	P	Pn	19 30 47.8	+3.4
YSS	**Yuzh-Sakhalins**	4.83	309	*e*P	Pn	19 30 47.7	+1.6
YSS				AMB	AMB	19 30 49.0	
	comp=E,50nm,0.5s						
YSS				*e*S	Sn	19 31 40.5	-0.3
YSS				A	A	19 31 45.0	
	comp=E,70nm,0.7s						
YSS	**Yuzh-Sakhalins**	4.83	309	*e*PN	Pn	19 30 48.0	+1.9
YSS				*e*S	Sn	19 31 39.9	-0.9
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax	smax		
	comp=E,70nm,0.7s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	4.83	309		Pn	19 30 46.2	+0.1
JEW	**Eniwo**	5.10	259		Pn	19 30 51.7	+1.9
JRBN	**Rebuntou**	5.30	288	P	Pn	19 30 55.3	+2.7
JTM	**Tenmabayashi**	6.24	241		Pn	19 31 06.2	+0.7
SKR	**Severo-Kuril’s**	8.51	36	*e*P	Pn	19 31 37.0	+0.4
SKR				AMB	AMB	19 31 39.0	
	comp=Z,70nm,0.7s						
SKR				*e*S	Sn	19 33 09.4	-1.8
SKR				A	A	19 33 20.0	
	comp=Z,67nm,1.3s						
SKR				A	A	19 33 20.0	
	comp=Z,95nm,1.3s						
SKR	**Severo-Kuril’s**	8.51	36	*e*PN	Pn	19 31 36.9	+0.4
SKR				pmax	pmax		
	comp=Z,70nm,0.7s						
SKR				MLR	MLR		
	comp=Z,500nm,11.0s						
PAU	**Pauzhetka**	9.39	35	*e*P	Pn	19 31 48.8	+0.2
PAU				AMB	AMB	19 31 55.2	
	comp=Z,60nm,0.6s						
MJAR	**Matsushiro Arr**	10.72	229	Pn	Pn	19 32 06.5	-0.4
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=4.9						
MJAR				LR	LR	19 36 33.4	
	comp=Z,97nm,19.5s,baz=255,slow=39						
PEA0B	**Petropavlovsk-**	11.00	31	⇓*e*PN	Pn	19 32 10.4	-0.3
PETK	**Petropavlovsk-**	11.00	31	Pn	Pn	19 32 09.7	-1.0
	comp=Z,2.1nm,0.3s,baz=206,slow=13,SNR=48						
PETK				LR	LR	19 36 21.1	
	comp=Z,104nm,19.5s,baz=210,slow=38						
USRK	**Ussuriysk Ar.**	11.69	276	LR	LR	19 36 53.7	
	comp=Z,186nm,20.3s,baz=69,slow=38						
KLR	**Kul'dur**	12.46	300	Pn	Pn	19 32 35.0	+4.5
	comp=Z,0.1nm,0.3s,baz=107,slow=15,SNR=10.0						
KLR				LR	LR	19 36 48.1	
	comp=Z,157nm,18.4s,baz=95,slow=35						
KLR	**Kul'dur**	12.46	300	*e*P	Pn	19 32 30.8	+0.2
EKMR	**Ekimchan**	13.54	317	*e*P	Pn	19 32 45.2	-0.2
EKMR				AMB	AMB	19 33 05.4	
	comp=Z,11nm,1.0s						
MA2	**Magadan**	15.62	5	*e*P	Pn	19 33 12.1	-0.8
MA2	**Magadan**	15.62	5	⇓*e*P	Pn	19 33 12.1	-0.8
MA2				pmax	pmax		
	comp=Z,48nm,2.2s						
BMKR	**Bomnak**	16.48	317	*e*P	Pn	19 33 23.0	-0.8
BMKR				AMB	AMB	19 33 28.5	
	comp=Z,4.0nm,0.8s						
ZEA	**Zeya**	16.81	313	*e*P	Pn	19 33 25.5	-2.5
ZEA				AMB	AMB	19 33 27.5	
	comp=Z,10.0nm,1.0s						
ZEA	**Zeya**	16.81	313	*e*P	P	19 33 30.9	+1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KROS	**Kirovskiy**	17.28	314	*e*P	Pn	19 33 32.0	-1.8

SEY	Seymchan	19.07	6	P	P	19 33 53.5	-0.9
	comp=Z,1.0nm,0.3s,baz=189,slow=11,SNR=16						
YAK	Yakutsk	21.05	335	P	P	19 34 12.5	-3.3
	comp=Z,9.4nm,0.6s,baz=245,slow=0.9,SNR=9.9						
YAK	Yakutsk	21.05	335	eP	P	19 34 12.6	-3.3
YAK				pmax	pmax		
	comp=Z,20nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.6s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK	Yakutsk	21.05	335		P	19 34 13.0	-2.8
NJ2	Nanjing	25.92	252	eP	P	19 35 05.1	+1.1
NJ2				pmax	pmax		
	comp=E,7.0nm,0.5s						
HHC	Hu-ho-hao-te	27.12	276	eP	P	19 35 17.2	+2.4
HHC				pmax	pmax		
	comp=E,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=E,98nm,7.1s						
ULN	Ulaanbaatar	28.65	292	eP	P	19 35 28.7	+0.2
ULN	Ulaanbaatar	28.65	292⇑	eP	P	19 35 28.7	+0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
H11N2	WAKE ISLAND Hy	28.82	141	T	T	20 06 16.6	
	baz=332,slow=76,SNR=667						
H11N1	WAKE ISLAND Hy	28.84	141	T	T	20 06 15.5	
	baz=332,slow=76,SNR=722						
H11N3	WAKE ISLAND Hy	28.84	141	T	T	20 06 15.8	
	baz=332,slow=76,SNR=578						
SONM	Songino Array	29.09	292	P	P	19 35 32.2	-0.2
	comp=Z,0.8nm,0.4s,baz=79,slow=8.7,SNR=8.9						
SONM	Songino Array	29.09	292	IAmb	IAmb	19 35 33.9	
	comp=Z,0.7nm,0.6s						
TIK	Tiksi	29.22	348	eP	P	19 35 31.4	-1.7
TIXI	Tiksi	29.23	348⇑	eP	P	19 35 31.4	-1.8
H11S1	WAKE ISLAND Hy	29.81	143	T	T	20 07 27.7	
	baz=333,slow=76,SNR=735						
H11S3	WAKE ISLAND Hy	29.82	143	T	T	20 07 27.6	
	baz=333,slow=76,SNR=631						
H11S2	WAKE ISLAND Hy	29.83	143	T	T	20 07 26.0	
	baz=333,slow=76,SNR=430						
TLY	Talaya	30.48	300	eP	P	19 35 47.0	+2.5
TLY	Talaya	30.48	300	eP	P	19 35 47.0	+2.5
TLY				pmax	pmax		
	comp=Z,30nm,1.4s						
LZH	Lanzhou	34.56	272	eP	P	19 36 21.4	+0.9
LZH				pP	sP	19 36 35.2	-2.0
LZH				sP	pP	19 36 42.2	+10
LZH				PP	PP	19 37 38.6	-0.6
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,94nm,4.3s						
LZH				LR	LR		
	comp=Z,240nm,15.7s						
LZH				LR	LR		
	comp=Z,210nm,14.4s						
LZH				LR	LR		
	comp=Z,320nm,15.6s						
TTA	Tatalina	36.69	39	P	P	19 36 39.5	+1.1
TTA				pmax	pmax		
	comp=Z,13nm,1.3s						
TTA	Tatalina	36.69	39	P	P	19 36 39.5	+1.1
TTA				IAmb	IAmb	19 36 40.1	
	comp=Z,13nm,1.3s						
A21K	Barrow	37.93	25	P	P	19 36 48.2	-0.4
	baz=254						
BPAW	Bear Paw Mtn.	39.00	38	P	P	19 36 58.9	+1.1
BPAW				IAmb	IAmb	19 37 00.0	
	comp=Z,5.5nm,0.8s						
KTH	Kantishna Hill	39.02	38	P	P	19 36 59.4	+1.4
KTH				IAmb	IAmb	19 37 00.6	
	comp=Z,13nm,0.9s						
MLY	Manley	39.13	36	P	P	19 37 00.4	+1.5
	baz=268,SNR=9.6						
COLD	Coldfoot	39.47	33	P	P	19 37 02.6	+1.0
	baz=266,SNR=12						
COLD	Coldfoot	39.47	33	P	P	19 37 02.9	+1.2
COLD				IAmb	IAmb	19 37 03.5	
	comp=Z,10.0nm,0.7s						
RC01	Rabbit Creek A	39.65	42	P	P	19 37 03.6	+0.5
	baz=274						
BWN	Browne	39.67	37	P	P	19 37 05.0	+1.7
I23K	Minto, Yukon-K	39.72	36	P	P	19 37 04.7	+1.0
	baz=269,SNR=9.1						
I23K	Minto, Yukon-K	39.72	36	P	P	19 37 05.0	+1.3
I23K				IAmb	IAmb	19 37 06.1	
	comp=Z,7.7nm,0.8s						
TOLK	Toolik Lake Re	39.83	30	P	P	19 37 05.2	+0.6
	baz=265,SNR=6.4						
TOLK	Toolik Lake Re	39.83	30	P	P	19 37 05.7	+1.0
TOLK				IAmb	IAmb	19 37 06.3	
	comp=Z,6.2nm,0.7s						
NEA2	Nenana	39.84	37	P	P	19 37 05.7	+1.0
	baz=270,SNR=8.8						
MCK	McKinley	39.91	38	P	P	19 37 06.3	+0.9
	baz=272						
MDM	Murphy Dome	40.20	36	P	P	19 37 08.9	+1.2
WRH	Wood River Hil	40.26	37	P	P	19 37 09.2	+1.0
WRH				IAmb	IAmb	19 37 11.2	
	comp=Z,9.1nm,0.8s						
TCOL	CIGO, UAF Yank	40.35	36	P	P	19 37 09.7	+0.7
	baz=271						
TCOL	CIGO, UAF Yank	40.35	36	P	P	19 37 10.6	+1.6
COLA	College	40.36	36 d	iP	P	19 37 10.4	+1.4
COLA				pmax	pmax		
	comp=Z,19nm,0.9s						
COLA	College	40.36	36	P	P	19 37 10.7	+1.7
CCB	Clear Creek Bu	40.38	37	P	P	19 37 10.4	+1.2
POKR	Poker Plat Res	40.53	36	P	P	19 37 11.6	+1.1
	baz=271,SNR=12						
POKR	Poker Plat Res	40.53	36	P	P	19 37 11.8	+1.3
DHY	Denali Highway	40.63	39	P	P	19 37 12.0	+0.4
HDA	Harding Lake	40.76	37	P	P	19 37 12.3	-0.1
	baz=272,SNR=6.2						
HDA	Harding Lake	40.76	37	P	P	19 37 12.6	+0.2
HDA				IAmb	IAmb	19 37 13.7	
	comp=Z,12nm,1.0s						
IL31		40.77	36	P	P	19 37 13.0	+0.6
IL31				IAmb	IAmb	19 37 15.7	
	comp=Z,8.5nm,0.8s						
ILAR	Eielson Array	40.77	36	P	P	19 37 12.8	+0.3
	comp=Z,5.7nm,0.7s,baz=257,slow=7.6,SNR=44						
ILAR	Eielson Array	40.77	36	P	P	19 37 12.5	+0.1
DGZ	Jazzator, Alta	40.96	300⇑	eP	P	19 37 13.3	-1.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
M24K	Tolsona, Glenn	41.26	40	P	P	19 37 17.5	+0.9
	baz=276						
PRP	Porcupine Dome	41.32	35	P	P	19 37 18.3	+1.2
KMI	Kunming	41.36	258 ⇑	P	P	19 37 18.2	+0.2
KMI				sP	sP	19 37 44.0	+9.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,23.7s						
KMI				LR	LR		
	comp=Z,690nm,21.4s						
KMI				LR	LR		
	comp=Z,2µm,20.8s						
FYU	Fort Yukon	41.41	34	P	P	19 37 19.5	+1.8
ZALV	Zalesovo Beam	41.45	307	P	P	19 37 16.9	-1.3
	comp=Z,0.6nm,0.4s,baz=100,slow=8.3,SNR=4.2						
ZALV				PcP	PcP	19 39 15.4	+0.2
	comp=Z,4.0nm,0.6s,baz=77,slow=2.9,SNR=14						
N25K	Chitina, Valde	42.06	41	P	P	19 37 23.4	+0.2
	baz=278						
SCRK	Sand Creek	42.08	38	P	P	19 37 23.3	0.0
	baz=276,SNR=5.4						
RAGM	Ragged Mountai	42.19	43	P	P	19 37 26.0	+1.8
MENT	Mentasta	42.31	39	P	P	19 37 26.6	+1.5
MENT				IAmb	IAmb	19 37 27.7	
	comp=Z,6.2nm,0.5s						
L26K	Log Cabin Wild	42.47	39	P	P	19 37 27.5	+1.2
	baz=277,SNR=5.8						
WMQ	Urumqi	42.72	292	eP	P	19 37 30.1	+1.3
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
WMQ				LR	LR		
	comp=Z,1µm,20.1s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,910nm,21.5s						
CRQM	Cirque	42.88	42	P	P	19 37 31.6	+1.7
EGAK	Eagle	43.22	36	P	P	19 37 33.3	+0.9
EGAK				IAmb	IAmb	19 37 33.9	
	comp=Z,14nm,0.8s						
ZSN	Zaisan	43.27	298	eP	P	19 37 33.1	0.0
	baz=297						
ZSN	Zaisan	43.27	298	eP	P	19 37 33.0	0.0
CTGM	Chitina Glacie	43.72	42	P	P	19 37 37.9	+1.2
CTGM				IAmb	IAmb	19 37 39.0	
	comp=Z,12nm,0.9s						
DAWY	Dawson	44.08	37	P	P	19 37 40.6	+1.2
SEM	Semipalatinsk	45.15	303	eP	P	19 37 46.9	-1.5
	baz=303						
SEM	Semipalatinsk	45.15	303	eP	P	19 37 46.8	-1.5
MK31	Makanchi Array	45.15	298 d	iP	P	19 37 48.2	+0.1
MK31	Makanchi Array	45.15	298	P	P	19 37 48.3	+0.1
MK31				PcP	PcP	19 39 28.1	+0.3
MKAR	Makanchi Array	45.15	298	P	P	19 37 48.3	+0.2
	comp=Z,3.6nm,0.7s,baz=78,slow=8.5,SNR=44						
MKAR				PcP	PcP	19 39 28.0	+0.1
	comp=Z,1.4nm,0.6s,baz=63,slow=4.3,SNR=7.1						
MKAR	Makanchi Array	45.15	298	P	P	19 37 47.7	-0.4
MAKZ	Makanchi	45.34	298	P	P	19 37 49.9	+0.2
MAKZ						19 39 28.9	
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	45.34	298	P	P	19 37 49.9	+0.2
MAKZ				PcP	PcP	19 39 28.9	+0.3
HYT	Haines Junctio	45.58	41	P	P	19 37 53.8	+2.3
INK	Inuvik	45.74	31	P	P	19 37 53.7	+1.3
INK				pmax	pmax		
	comp=Z,20nm,1.2s						
INK	Inuvik	45.74	31	P	P	19 37 53.7	+1.3
INK				IAmb	IAmb	19 37 54.4	
	comp=Z,20nm,1.2s						
KURK	Kurchatov	46.02	304	eP	P	19 37 54.5	-0.4
KURK	Kurchatov	46.02	304 d	eP	P	19 37 54.5	-0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	46.02	304	P	P	19 37 54.4	-0.4
KURK				IAmb	IAmb	19 37 55.2	
	comp=Z,4.0nm,0.6s						
KURK				PcP	PcP	19 39 30.8	+0.1
KURBB	Kurchatov Arra	46.11	304	P	P	19 37 55.3	-0.3
	comp=Z,2.7nm,0.5s,baz=75,slow=8.6,SNR=23						
KURBB				PcP	PcP	19 39 31.2	+0.2
	comp=Z,2.7nm,0.7s,baz=73,slow=3.4,SNR=14						
TDK	Taldyqorghan	48.35	297	eP	P	19 38 13.4	+0.2
	comp=Z,9.8nm,0.6s,baz=296						
TDK	Taldyqorghan	48.35	297	eP	P	19 38 13.3	+0.2
TDK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	Chiang Mai Arr	48.37	254	P	P	19 38 14.4	+0.8
	comp=Z,0.7nm,0.7s,baz=42,slow=7.1,SNR=8.0						
SHLS	Shalkode	48.46	294	eP	P	19 38 11.6	-2.6
	comp=Z,3.7nm,0.7s,baz=294						
SHLS	Shalkode	48.46	294	eP	P	19 38 11.5	-2.6
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KPKS	Kokpek	48.84	295	eP	P	19 38 17.0	-0.1
	comp=Z,3.4nm,0.7s,baz=295						
KPKS	Kokpek	48.84	295	eP	P	19 38 16.9	-0.1
KPKS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
C36M	Paulatuk	48.84	28	P	P	19 38 17.0	+0.5
	baz=287,SNR=18						
C36M	Paulatuk	48.84	28	P	P	19 38 17.3	+0.8
SATY	Saty	49.20	295	eP	P	19 38 19.8	0.0
	comp=Z,2.8nm,0.8s,baz=294						
SATY	Saty	49.20	295	eP	P	19 38 19.8	0.0
SATY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHKK	Chushkaly	49.77	296	eP	P	19 38 23.3	-0.7
	baz=296						
CHKK	Chushkaly	49.77	296	eP	P	19 38 23.3	-0.7
BRZS	Berezniki	49.83	305	eP	P	19 38 23.7	-0.7
	comp=Z,2.3nm,0.9s,baz=305						
BRZS	Berezniki	49.83	305	eP	P	19 38 23.6	-0.7
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	49.93	309	P	P	19 38 23.7	-1.4
	comp=Z,0.3nm,0.3s,baz=81,slow=9.5,SNR=6.2						
BVAR				PcP	PcP	19 39 43.7	-1.1
	comp=Z,0.6nm,0.6s,baz=90,slow=5.8,SNR=3.0						
BRVK	Borovoye	49.97	310	eP	P	19 38 25.3	-0.1
BRVK	Borovoye	49.97	310⇓	eP	P	19 38 25.3	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MDOK	Medeo	50.04	295	eP	P	19 38 26.3	+0.1
	baz=295						
MDOK	Medeo	50.04	295	eP	P	19 38 26.3	+0.1
AAA	Alma-Ata	50.10	295	eP	P	19 38 26.7	+0.1
AAA	Alma-Ata	50.10	295	eP	P	19 38 26.8	+0.1
	baz=295						
AAA	Alma-Ata	50.10	295	eP	P	19 38 26.7	+0.1
TNSS	Tian-Shan	50.16	295	eP	P	19 38 28.6	+1.1
	baz=295						
TNSS	Tian-Shan	50.16	295	eP	P	19 38 28.6	+1.1
KUU	Kurty	50.17	297	eP	P	19 38 26.1	-1.0
	comp=Z,6.6nm,0.7s,baz=296						
KUU	Kurty	50.17	297	eP	P	19 38 26.0	-1.0
KUU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MTBS	Maitube	50.46	296	eP	P	19 38 29.4	+0.1
	baz=295						
MTBS	Maitube	50.46	296	eP	P	19 38 29.4	+0.1
TAPN	Taplejung	50.80	272	eP	P	19 38 31.6	-0.8
	comp=Z,6.2nm,0.6s						
TKM2	Tokmak 2	51.09	296	P	P	19 38 35.2	+0.9
	SNR=8.2						
BTLS	Baital	51.11	299	eP	P	19 38 33.1	-1.0
	baz=298						
BTLS	Baital	51.11	299	eP	P	19 38 33.1	-1.0
SGDS	Sogindy	51.47	297	eP	P	19 38 36.9	0.0
	comp=Z,1.5nm,0.5s,baz=296						
SGDS	Sogindy	51.47	297	eP	P	19 38 36.9	0.0
SGDS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBK	Karagaybulak	51.64	296	P	P	19 38 39.0	+0.7
	SNR=8.8						
USP	Ospenovka	51.64	297	P	P	19 38 38.8	+0.6
	SNR=11						
GUN	Gumba	51.79	274	eP	P	19 38 39.6	-0.2
	comp=Z,14nm,0.6s						
RAMN	Ramite	51.83	272	eP	P	19 38 40.0	0.0
	comp=Z,29nm,0.5s						
AAK	Ala-Archa	51.94	296	P	P	19 38 40.8	+0.2
	comp=Z,2.6nm,0.4s,baz=131,slow=5.3,SNR=20						
AAK	Ala-Archa	51.94	296	P	P	19 38 41.0	+0.4
	SNR=5.2						
AAK	Ala-Archa	51.94	296	eP	P	19 38 41.0	+0.4
AAK	Ala-Archa	51.94	296⇓	eP	P	19 38 41.0	+0.4
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	Ala-Archa	51.94	296	P	P	19 38 39.6	-0.9
AAK				IAmb	IAmb	19 38 41.6	
	comp=Z,12nm,1.4s						
KKN	Kakani	52.29	274	eP	P	19 38 43.5	+0.1
	comp=Z,8.2nm,0.5s						
PKI	Pulchoki	52.33	274	eP	P	19 38 43.6	-0.2
	comp=Z,5.1nm,0.5s						
PKIN	Phulchoki	52.33	274	eP	P	19 38 43.3	-0.5
	comp=Z,5.3nm,0.5s						
EKS2	Erkin-Say	52.40	296	P	P	19 38 43.1	-0.8
	SNR=9.9						
KSH	Kashi	52.49	292	P	P	19 38 48.8	+4.2
KSH				pP	sP	19 39 05.2	+3.4
KSH				PP	PP	19 40 53.0	+9.5
KSH				S	S	19 46 10.1	+2.1
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,390nm,7.5s						
DMN	Daman	52.52	274	eP	P	19 38 45.5	+0.3
	comp=Z,16nm,0.6s						
AML	Almayashu	52.71	296	P	P	19 38 47.2	+0.6
	SNR=6.0						
DANN	Dangsing	53.06	276	eP	P	19 38 49.8	+0.6
	comp=Z,32nm,0.7s						
ARSB	Arslanbob	53.57	295	P	P	19 38 52.9	+0.3
ARSB				pmax	pmax		
	comp=Z,23nm,1.1s						
ARSB	Arslanbob	53.57	295	P	P	19 38 52.9	+0.3
DZA	Taraz	53.86	298	eP	P	19 38 54.5	0.0
	comp=Z,4.2nm,0.7s,baz=297						
DZA	Taraz	53.86	298	eP	P	19 38 54.5	0.0
DZA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KK31	Karatay Array	54.27	298	P	P	19 38 57.6	+0.1
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KK31	Karatay Array	54.27	298	P	P	19 38 57.6	+0.1
KK31				IAmb	IAmb	19 38 58.2	
	comp=Z,6.4nm,0.8s						
KKAR	Karatay Array	54.27	298	P	P	19 38 57.7	+0.1
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	54.27	298	P	P	19 38 57.7	+0.1
KKAR				IAmb	IAmb	19 38 58.2	
	comp=Z,6.4nm,0.8s						
RES	Resolute Bay	54.45	17	P	P	19 38 58.0	-0.3
RES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	Resolute Bay	54.45	17	P	P	19 38 58.0	-0.3
RES				IAmb	IAmb	19 38 59.1	
	comp=Z,7.6nm,0.8s						
ARU	Arti	54.67	317	P	P	19 38 58.9	-1.3
	comp=Z,1.4nm,0.5s,baz=46,slow=5.6,SNR=8.4						
ARU	Arti	54.67	317	eP	P	19 38 59.8	-0.4
ARU	Arti	54.67	317 d	iP	P	19 38 59.6	-0.6
ARU						19 40 58.4	
ARU				S	S	19 46 33.8	-3.0
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
IUG	Iuzhnay	55.06	297	eP	P	19 39 03.5	+0.1
	comp=Z,4.2nm,1.1s,baz=297						
IUG	Iuzhnay	55.06	297	eP	P	19 39 03.4	+0.1
IUG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YKA	Yellowknife Ar	55.11	34	P	P	19 39 04.0	+0.8
	comp=Z,2.7nm,0.6s,baz=304,slow=6.0,SNR=48						
YKA				PcP	PcP	19 40 04.6	+0.5
	comp=Z,0.6nm,0.6s,baz=303,slow=2.8,SNR=3.7						
NIL	Nilore	57.47	287	P	P	19 39 20.8	+0.3
NIL				pmax	pmax		
	comp=Z,12nm,1.0s						
NIL	Nilore	57.47	287	P	P	19 39 20.8	+0.3
ABKAR	Akbulak array	57.49	309	P	P	19 39 20.3	-0.1
ABKAR				IAmb	IAmb	19 39 21.0	
	comp=Z,6.0nm,0.6s						
KIRV	Kirov	57.84	322	P	P	19 39 22.2	-0.5
	comp=Z,7.2nm,0.4s,baz=114,slow=7.8,SNR=4.2						
KIRV	Kirov	57.84	322⇑	eP	P	19 39 23.0	+0.3
AKTO	Aktyubinsk	57.94	311	P	P	19 39 23.5	-0.1
	comp=Z,1.5nm,0.6s,baz=58,slow=11,SNR=9.0						
D03D	Eldon	58.60	53	P	P	19 39 29.4	+1.1
	baz=303						
ARCES	ARCESS Array B	59.24	340	P	P	19 39 30.9	-1.5
	comp=Z,4.2nm,0.9s,baz=48,slow=7.5,SNR=5.8						
ARCES				LR	LR	20 08 17.9	
	comp=Z,350nm,18.0s,baz=225,slow=39						
KBL	Kabul	59.83	290	P	P	19 39 36.5	-0.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBL	Kabul	59.83	290	P	P	19 39 36.5	-0.7
KBL				IAmb	IAmb	19 39 37.6	
	comp=Z,5.6nm,0.8s						
J01E	Myrtle Point	60.50	57	P	P	19 39 41.4	0.0
	baz=304						
G05D	Wamic, OR	60.89	54	P	P	19 39 44.2	+0.2
	baz=305						
K02D	Willamette Mer	60.93	57	P	P	19 39 45.3	+0.9
	baz=305						
C09A	Chrisman Ranch	61.17	50	P	P	19 39 47.0	+1.1
NEW	Newport	61.53	49	P	P	19 39 49.0	+0.6
	baz=305						
J04D	Umpqua Nationa	61.56	56	P	P	19 39 49.4	+0.6
	baz=305						
PINE	Pine Mountain	61.94	55	P	P	19 39 52.5	+1.2
PINE				IAmb	IAmb	19 39 53.8	
	comp=Z,5.4nm,0.9s						
L04D	Klamath Falls	62.03	57	P	P	19 39 53.0	+1.1
	baz=306						
J05D	Fort Rock, OR	62.05	56	P	P	19 39 53.0	+1.0
	baz=306						
YBH	Yreka Blue Hor	62.06	58	LR	LR	20 06 50.8	
	comp=Z,48nm,18.1s,baz=18,slow=36						
BELG	Belogornoye	62.22	317	P	P	19 39 51.2	-1.6
	comp=Z,7.7nm,0.8s,baz=17,slow=19,SNR=2.4						
N02D	Trinity Center	62.50	59	P	P	19 39 55.7	+0.7
	baz=306						
M04C	Macdoel	62.56	57	P	P	19 39 56.3	+0.8
	baz=306						
O02D	Mt. Diablo Mer	62.92	59	P	P	19 39 58.6	+0.8
	baz=306						
O03E	Paynes Creek	63.46	59	P	P	19 40 01.9	+0.6
	baz=307						
MSO	Missoula	64.12	49	P	P	19 40 06.3	+0.6
	baz=308						
MSO	Missoula	64.12	49	P	P	19 40 06.5	+0.9
MSO				IAmb	IAmb	19 40 07.8	
	comp=Z,8.7nm,1.4s						
HRA	Herat	64.47	294	P	P	19 40 08.5	+0.3
WRA	Warramunga Arr	64.94	194	P	P	19 40 10.6	-0.5
	comp=Z,0.9nm,0.8s,baz=8.1,slow=6.8,SNR=2.6						
FINES	FINESS Array B	64.97	333	P	P	19 40 08.4	-2.3
	comp=Z,2.7nm,0.5s,baz=43,slow=7.2,SNR=31						
FFC	Flin Flon	64.98	37	P	P	19 40 11.8	+0.8
FFC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FFC	Flin Flon	64.98	37	P	P	19 40 11.8	+0.8
FFC				IAmb	IAmb	19 40 12.2	
	comp=Z,4.5nm,0.6s						
GEYT	Alibeck	64.99	299	P	P	19 40 10.2	-1.2
	comp=Z,3.6nm,0.8s,baz=42,slow=2.7,SNR=4.8						
GEYT	Alibeck	64.99	299	IAmb	IAmb	19 40 12.1	
	comp=Z,2.3nm,0.7s						
PAHR	Pah Rah Range	65.30	58	P	P	19 40 13.8	+0.4
FCC	Fort Churchill	65.36	31	P	P	19 40 13.3	0.0
FCC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FCC	Fort Churchill	65.36	31	P	P	19 40 13.3	0.0
FCC				IAmb	IAmb	19 40 14.4	
	comp=Z,6.4nm,0.8s						
PNTR	Pine Nut	65.54	59	P	P	19 40 16.6	+1.4
OBN	Obninsk	65.54	324	LR	LR	20 12 32.7	
	comp=Z,37nm,18.0s,baz=16,slow=40						
EGMT	Eagleton	65.61	46	P	P	19 40 15.3	0.0
	baz=310						
CMB	Columbia Colle	65.69	60	P	P	19 40 16.9	+0.9
CMB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMB	Columbia Colle	65.69	60	P	P	19 40 16.9	+0.9
HLID	Hailey	65.86	52	P	P	19 40 17.8	+0.7
	baz=309						
WAKR	Walker	66.00	59	P	P	19 40 19.3	+1.2
BOZ	Bozeman (W)	66.14	49	P	P	19 40 19.5	+0.6
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOZ	Bozeman (W)	66.14	49	P	P	19 40 19.5	+0.6
	baz=309						
BOZ	Bozeman (W)	66.14	49	P	P	19 40 19.5	+0.6
RYN	Ryan	66.48	59	P	P	19 40 22.2	+1.0
LHV	Little Huntoon	66.73	59	P	P	19 40 24.4	+1.9
LHV				IAmb	IAmb	19 40 25.1	
	comp=Z,7.5nm,0.8s						
NVAR	Mina Array Bea	66.74	59	P	P	19 40 24.1	+1.3
	comp=Z,3.7nm,0.7s,baz=292,slow=6.9,SNR=24						
YHH	Holmes Hill	67.08	49	P	P	19 40 25.9	+0.8
TPH	Tonopah	67.63	58	P	P	19 40 29.6	+1.1
TPH				pmax	pmax		
	comp=Z,23nm,0.8s						
TPH	Tonopah	67.63	58	P	P	19 40 29.6	+1.1
RLMT	Red Lodge	67.73	48	P	P	19 40 29.6	+0.5
	baz=311						
PKM	Mcpherson Peak	68.01	62	P	P	19 40 31.0	+0.2
	baz=309						
CWC	Cottonwood Cre	68.13	60	P	P	19 40 32.1	+0.5
	baz=310						
ISA	Isabella, Lake	68.37	61	P	P	19 40 33.3	+0.2
	baz=310						
R11A	Troy Canyon, C	68.45	57	P	P	19 40 34.4	+0.8
	baz=310						
R11A	Troy Canyon, C	68.45	57	P	P	19 40 34.1	+0.5
ASAR	Alice Springs	68.66	194	P	P	19 40 35.7	+1.0
	comp=Z,0.4nm,0.6s,baz=8.6,slow=6.2,SNR=6.4						
MPMC	Manual Prospec	68.74	60	P	P	19 40 35.6	+0.2
	baz=310						
FURC	Furnace Creek,	68.87	59	P	P	19 40 36.7	+0.7

	baz=310						
DUG	Dugway, Tooele	68.92	54	P	P	19 40 36.6	+0.1
	baz=310						
TPNV	Topopah Spring	68.94	59	P	P	19 40 37.5	+0.8
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TPNV	Topopah Spring	68.94	59	P	P	19 40 37.4	+0.8
	baz=310						
TPNV	Topopah Spring	68.94	59	P	P	19 40 37.5	+0.8
LRMC	Laurel Mtn Rad	68.98	61	P	P	19 40 37.1	+0.2
	baz=310						
AKT	Akhty	69.01	308	eP	P	19 40 37.3	+0.4
AKT				e		19 41 00.7	
AKT				e		19 43 08.7	
AKT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BW06	Boulder Array	69.11	50	P	P	19 40 37.9	+0.2
	baz=311						
PD31	Pinedale Array	69.11	50	P	P	19 40 38.2	+0.5
PDAR	Pinedale Array	69.11	50	P	P	19 40 37.7	0.0
	comp=Z,0.9nm,0.5s,baz=261,slow=0.7,SNR=14						
PDAR	Pinedale Array	69.11	50	P	P	19 40 37.9	+0.2
EDW2	Edwards Air Fo	69.17	61	P	P	19 40 38.7	+0.7
	baz=310						
SNCC	San Nicolas Is	69.23	64	P	P	19 40 38.7	+0.4
	baz=310						
NB2	NORSAR Subarra	69.61	339	P	P	19 40 39.5	-0.7
	comp=Z,1.2nm,0.5s,baz=29,slow=6.5						
NOA	NORSAR Array B	69.61	339	P	P	19 40 39.6	-0.6
	comp=Z,1.2nm,0.4s,baz=31,slow=6.6,SNR=15						
NACGM	Naroch	69.62	328	iP	P	19 40 39.7	-0.6
NACGM				iP	P	19 40 39.7	-0.6
NACGM				iP	P	19 40 39.7	-0.6
NACGM				iPcP	PcP	19 41 09.2	+6.1
NACGM				iPP	PP	19 43 02.8	-11
NACGM				iPPP	PPP	19 44 53.0	
NACGM				iS	S	19 49 43.5	-1.6
NACGM				iSS	SS	19 54 13.6	+1.1
NACGM				iSSS	SSS	19 57 16.9	
NACGM				iLQ	LQ	20 05 52.9	
NACGM				iLR	LR	20 11 52.9	
GSC	Goldstone, Bar	69.65	60	P	P	19 40 41.3	+0.3
	baz=310						
BFSC	Mount Baldy Ra	69.79	62	P	P	19 40 42.1	+0.2
	baz=310						
KIV	Kislovodsk	70.15	312	eP	P	19 40 45.2	+1.3
KIV	Kislovodsk	70.15	312	d iP	P	19 40 45.2	+1.3
KIV				*PP	pP	19 40 57.0	+0.6
KIV				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,97nm,18.0s						
KIV	Kislovodsk	70.15	312	P	P	19 40 43.4	-0.5
KBZ	Khabaz	70.19	312	P	P	19 40 45.1	+1.1
	comp=Z,8.7nm,0.7s,baz=84,slow=4.0,SNR=29						
KBZ	Khabaz	70.19	312	eP	P	19 40 44.7	+0.7
KBZ	Khabaz	70.19	312	⇓eP	P	19 40 44.7	+0.7
HEC	Hector,Ludlow	70.25	60	P	P	19 40 44.6	0.0
	baz=311						
ZEI	Tsey	70.28	311	eP	P	19 40 44.3	-0.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GMRC	Granite Mounta	70.70	60	P	P	19 40 48.0	+0.5
	baz=311						
ULM	Lac du Bonnet	70.78	38	P	P	19 40 45.7	-1.8
	comp=Z,1.3nm,0.5s,baz=302,slow=7.4,SNR=2.7						
PFO	Pinyon Flats O	70.95	62	⇑eP	P	19 40 54.0	+5.0
PFO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BELC	Belle Mtn. Jos	71.00	61	P	P	19 40 49.3	0.0
	baz=311						
RSSD	Black Hills	71.17	46	P	P	19 40 49.9	-0.5
	baz=314						
IRM	Iron Mountain	71.43	60	P	P	19 40 52.0	+0.3
	baz=311						
BC3	Big Chuckawall	71.56	61	P	P	19 40 53.2	+0.5
	baz=311						
IKP	In-Ko-Pah, Jac	71.80	62	P	P	19 40 53.7	-0.4
	baz=311						
AKASG	Malin Array Be	71.81	324	P	P	19 40 53.1	-0.5
	comp=Z,26nm,1.0s,baz=38,slow=6.0,SNR=29						
AKASG	Malin Array Be	71.81	324	P	P	19 40 53.5	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	Malin Array Be	71.81	324	P	P	19 40 53.5	-0.2
AKBB	Malin Array Si	71.81	324	P	P	19 40 53.0	-0.7
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKBB	Malin Array Si	71.81	324	P	P	19 40 53.0	-0.7
AKBB				IAmb	IAmb	19 40 53.9	
	comp=Z,9.3nm,0.8s						
PDMCI	Parker Dam,Lak	71.96	60	P	P	19 40 55.1	+0.2
	baz=312						
N23A	Red Feather La	72.36	50	P	P	19 40 57.0	-0.6
	baz=314						
PV17	East Wray Mesa	72.43	54	IAmb	IAmb	19 40 59.5	
	comp=Z,7.6nm,0.7s						
PV05	Paradox Valley	72.49	54	IAmb	IAmb	19 40 59.9	
	comp=Z,4.9nm,0.8s						
PV13	Radium Mtn., P	72.59	54	P	P	19 41 00.1	+1.2
PV13				IAmb	IAmb	19 41 00.5	
	comp=Z,4.2nm,0.7s						
WUAZ	Wupatki	72.85	57	P	P	19 41 01.7	+1.2
	baz=312						
ISCO	Idaho Springs	73.30	51	P	P	19 41 03.4	+0.2
	baz=314						
MVCO	Mesa Verde	73.42	54	P	P	19 41 04.2	+0.3
	baz=313						
X16A	Lo Mia Camp, P	73.55	58	P	P	19 41 06.0	+1.4
S22A	4UR Ranch, Cre	74.03	53	P	P	19 41 08.0	+0.5
	baz=314						
W18A	Petrified Fore	74.11	56	P	P	19 41 06.8	-1.1
	baz=313						
SORM	Soroca	74.12	323	⇑P	P	19 41 07.0	-0.4
214A	Organ Pipe Nat	74.35	61	P	P	19 41 09.3	+0.2
	baz=313						
SDCO	Great Sand Dun	74.78	52	P	P	19 41 12.8	+0.9
	baz=314						
MILM	Milestii Mici	74.84	322	⇑P	P	19 41 11.4	-0.2
ECSD	EROS Data Cent	75.21	43	P	P	19 41 13.5	-0.4
	baz=318						
VASR	Vaslui	75.50	322	⇓P	P	19 41 15.9	+0.4
T25A	Trinidad	75.83	52	P	P	19 41 18.0	+0.2
	baz=315						
BUR08	Bucovina Ar. S	75.85	324	P	P	19 41 17.8	+0.2
BUR08				IAmb	IAmb	19 41 18.5	
	comp=Z,11nm,0.9s						
BURAR	Bucovina Array	75.86	324	⇑P	P	19 41 17.7	0.0
OJC	Ojcow	75.94	329	IAmb	IAmb	19 41 19.1	
	comp=Z,15nm,1.1s						
BIZ	Bicaz	76.01	323	⇑P	P	19 41 18.8	+0.4
KOLS	Kolonicke sedl	76.02	327	eP	P	19 41 18.9	+0.5
KOLS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KOLS	Kolonicke sedl	76.02	327	eP	P	19 41 18.9	+0.5
TESR	Tescani	76.11	323	⇓P	P	19 41 19.0	0.0
TLCR		76.16	321	⇑P	P	19 41 19.2	0.0
ANMO	Albuquerque	76.18	55	⇓eP	P	19 41 21.1	+1.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,2.5s						
ANMO	Albuquerque	76.18	55	P	P	19 41 20.4	+0.6
	baz=315						
UZH	Uzhgorod	76.26	326	eP	P	19 41 18.7	-1.0
UZH				e		19 41 32.0	
UZH				e		19 41 39.3	
CRVS	Cervenica-Dubn	76.37	327	eP	P	19 41 20.5	+0.1
CRVS				pmax	pmax		
	comp=Z,12nm,1.1s						
CRVS	Cervenica-Dubn	76.37	327	eP	P	19 41 20.5	+0.1
PETR	Petresti	76.46	322	⇑P	P	19 41 20.3	-0.6
CFR	Carcaliu	76.47	321	⇑P	P	19 41 21.2	+0.2
ODBI	Odobesti	76.51	322	⇓P	P	19 41 23.1	+1.9
VRI	Vrincioaia	76.57	322	⇑P	P	19 41 22.4	+0.8
TPGR	Topolog	76.59	321	⇑P	P	19 41 22.2	+0.5
PLOR	Plostina	76.62	322	⇓P	P	19 41 23.3	+1.4
ARCR	ARCALIA	76.64	324	⇓P	P	19 41 23.3	+1.3
OZUR		76.81	323	⇑P	P	19 41 23.7	+0.7
TIRR	Tirgusor	76.90	320	⇑P	P	19 41 24.0	+0.7
LANS	Liptovska Anna	76.94	328	eP	P	19 41 25.1	+1.5
LANS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LANS	Liptovska Anna	76.94	328	eP	P	19 41 25.1	+1.5
HARR	Harsova	76.94	321	⇑P	P	19 41 23.6	0.0
319A	Douglas	76.95	59	IAmb	IAmb	19 41 25.9	
	comp=Z,5.7nm,0.8s						
UMR	Umm Al-Rimmam	76.99	298	eP		19 41 23.6	
MIB	Mutribah	77.06	299	eP		19 41 24.6	
121A	Cookes Peak, D	77.06	57	P	P	19 41 25.5	+0.7
	baz=314						
DOPR	Dopca	77.08	323	⇑P	P	19 41 25.8	+1.3
DPC	Dobruska-Polom	77.09	331	eP	P	19 41 25.2	+0.7
DPC	Dobruska-Polom	77.09	331	eP	P	19 41 25.2	+0.7
MORC	Moravsky Berou	77.13	330	⇓P	P	19 41 25.6	+0.9
MORC	Moravsky Berou	77.13	330	IAmb	IAmb	19 41 26.1	
	comp=Z,7.7nm,0.8s						
MLR	Muntele Rosu	77.21	322	⇓P	P	19 41 26.6	+1.2
CLL	Collm	77.41	333	⇓iP	P	19 41 26.1	-0.1
	comp=Z,16nm,0.9s						
CLL	Collm	77.41	333	⇓iP	P	19 41 26.1	-0.1
CLL				pmax	pmax		
	comp=Z,16nm,0.9s						
QRN	Al-Qurain	77.42	298	eP		19 41 26.3	
BRG	Berggiesshubel	77.47	332	eP	P	19 41 26.2	-0.3
BRG				Amp		19 41 27.4	
	comp=Z,6.4nm,0.9s						
BRG	Berggiesshubel	77.47	332	eP	P	19 41 26.2	-0.3
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRG	Berggiesshubel	77.47	332	eP	P	19 41 26.2	-0.3
BRG				Amp		19 41 27.4	
	comp=Z,6.4nm,0.9s						
RST	Umm Al-Ruwaisa	77.48	299	eP		19 41 26.1	
RDF	Al-Radifah	77.53	298	⇓eP		19 41 27.0	
DRGR		77.56	325	⇓P	P	19 41 27.2	0.0
VOIR		77.64	323	⇓P	P	19 41 28.7	+1.0
VYHS	Vyhne	77.71	328	eP	P	19 41 28.4	+0.5
VYHS	Vyhne	77.71	328	eP	P	19 41 28.3	+0.3
PSZ	Piszkesteto	77.78	327	⇑P	P	19 41 29.7	+1.3
VRAC	Vranov	77.87	330	⇓P	P	19 41 29.5	+0.7
ARR	Arges	77.88	323	⇑P	P	19 41 30.3	+1.3
BR131	Keskin Array S	77.91	314	d eP	P	19 41 29.8	+0.4
BRTR	Keskin Array B	77.91	314	P	P	19 41 29.7	+0.4
	comp=Z,1.7nm,0.7s,baz=63,slow=2.6,SNR=7.8						
PRU	Pruhonice	78.02	332	eP	P	19 41 30.0	+0.4
PRU	Pruhonice	78.02	332	eP	P	19 41 30.0	+0.4
MODS	Modra-Piesok	78.40	329	eP	P	19 41 31.9	+0.1
MODS	Modra-Piesok	78.40	329	eP	P	19 41 31.9	+0.1
PBCC	Pribram	78.46	332	eP	P	19 41 32.4	+0.3
COPA	Copaceanca	78.59	322	⇑P	P	19 41 32.5	-0.4
GZR	Gura Zlata	78.65	324	⇓P	P	19 41 33.0	-0.2
BZS	Buzias	78.96	325	⇑P	P	19 41 34.7	-0.1
AMTX	Amarillo	78.98	52	P	P	19 41 35.7	+0.4
	baz=317						
KHC	Kasperske Hory	79.08	332	⇑eP	P	19 41 36.1	+0.6
KHC				pmax	pmax		
	comp=Z,44nm,2.5s						
KHC	Kasperske Hory	79.08	332	eP	P	19 41 35.9	+0.4
KHC	Kasperske Hory	79.08	332	P	P	19 41 35.6	+0.1
KHC				IAmb	IAmb	19 41 36.8	
	comp=Z,7.6nm,0.7s						
MNTX	Cornudas Mount	79.10	56	P	P	19 41 36.6	+0.7
	baz=316						
LSQQ	Lebel-sur-Quev	79.17	28	P	P	19 41 34.6	-1.4
	baz=329						
GERES	GERESS Array B	79.28	331	P	P	19 41 35.4	-1.3
	comp=Z,2.2nm,0.8s,baz=35,slow=3.6,SNR=3.8						
GERES	GERESS Array B	79.28	331	P	P	19 41 36.1	-0.6
GERES	GERESS Array B	79.28	331	P	P	19 41 36.1	-0.6
CONA	Conrad Observa	79.29	330	eP	P	19 41 37.7	+1.0
	comp=Z,5.2nm,0.8s						
MDVR	Moldovita	79.59	324	⇓P	P	19 41 38.5	+0.1
MOA	Molln	79.93	331	eP	P	19 41 41.0	+0.9
	comp=Z,7.4nm,1.4s,SNR=6.0						
ARSA	Arzberg	79.98	329	eP	P	19 41 39.8	-0.7
	comp=Z,2.6nm,0.6s						
SOKA	Soboth	80.65	329	eP	P	19 41 44.6	+0.5
	comp=Z,5.2nm,0.8s						
VTS	Vitosha	80.67	322	⇑P	P	19 41 44.9	+0.5
KBA	Koelnbreinsper	80.92	331	eP	P	19 41 46.5	+0.9
	comp=Z,5.9nm,0.6s						
OBKA	Obir	80.97	330	eP	P	19 41 46.0	+0.2
	comp=Z,8.6nm,1.4s						
WATA	Walderalm	81.31	332	iP	P	19 41 48.3	+0.6
	comp=Z,6.1nm,0.7s						
WTTA	Wattenberg	81.35	332	iP	P	19 41 48.6	+0.6
	comp=Z,8.0nm,0.7s						
MOTA	Moosalm	81.46	332	eP	P	19 41 49.0	+0.5
	comp=Z,7.8nm,0.8s,SNR=5.1						
SQTA	Sankt Quirin	81.53	332	eP	P	19 41 49.4	+0.6
	comp=Z,5.2nm,0.6s,SNR=4.2						
TX31	Lajitas Ar. Si	81.82	57	P	P	19 41 51.2	+0.6
TX32	Lajitas Array	81.82	57	IAmb	IAmb	19 41 52.1	
	comp=Z,5.2nm,0.7s						
TXAR	Lajitas Array	81.82	57	P	P	19 41 50.9	+0.2
	comp=Z,6.1nm,0.7s,baz=295,slow=3.9,SNR=20						
TXAR	Lajitas Array	81.82	57	P	P	19 41 51.2	+0.6
FETA	Feichten	81.87	332	eP	P	19 41 51.6	+0.9
	comp=Z,5.2nm,1.2s						
U40A	Yellville	82.66	45	P	P	19 41 54.5	-0.3
	baz=321						
TUE	Stuetta	82.81	333	P	P	19 41 55.5	-0.2
TUE				IAmb	IAmb	19 41 59.3	
	comp=Z,5.4nm,0.8s						
JCT	Junction City	83.28	54	P	P	19 41 58.1	0.0
	baz=318						
MIAR	Mount Ida	83.68	47	P	P	19 42 00.2	+0.1
	baz=321						
D63A	Stockholm	83.78	24	P	P	19 42 00.5	+0.1
	baz=335						
W41B	Gary Mavity, V	83.89	46	P	P	19 42 00.8	-0.4
	baz=321						
E64A	Bridgewater	84.42	24	P	P	19 42 02.8	-0.8
	baz=335						
NRCA	Norcia	84.64	329	P	P	19 42 05.0	+0.1
NRCA				IAmb	IAmb	19 42 06.1	
	comp=Z,9.4nm,0.8s						
F64A	Sherman	84.77	25	P	P	19 42 04.9	-0.5
	baz=335						
L59A	Walton	85.78	31	P	P	19 42 10.9	+0.3
	baz=331						
M58A	Price's Panora	85.95	32	P	P	19 42 11.1	-0.3
	baz=330						
P56A	Dayton Farm, R	86.61	35	P	P	19 42 15.0	+0.4
	baz=328						
N60A	Cedar Hill Far	86.90	31	P	P	19 42 16.1	+0.1
	baz=331						
R55A	Marlinton	87.10	36	P	P	19 42 17.3	+0.1
	baz=328						
JSC	Jenkinsville	89.95	39	P	P	19 42 31.2	+0.6
JSC				pmax	pmax		
	comp=Z,35nm,1.2s						
JSC	Jenkinsville	89.95	39	P	P	19 42 31.2	+0.6
KEST	Kesra	92.25	328	P	P	19 42 39.7	-1.7
	comp=Z,2.5nm,0.9s,baz=335,slow=1.3,SNR=5.2						
KEST	Kesra	92.25	328	P	P	19 42 41.0	-0.3
ESDC	Sonseca Array	92.97	339	P	P	19 42 42.8	-1.8
	comp=Z,0.6nm,0.7s,baz=3.1,slow=4.9,SNR=3.1						
ESDC				LR	LR	20 29 27.0	
	comp=Z,67nm,18.1s,baz=350,slow=39						
H03N2	Juan Fernandez	142.17	90	T	T	22 27 44.9	
	baz=304,slow=77,SNR=22						
H03N3	Juan Fernandez	142.18	90	T	T	22 27 44.9	
	baz=304,slow=77,SNR=34						
H03N1	Juan Fernandez	142.18	90	T	T	22 27 47.8	
	baz=304,slow=77,SNR=29						
BDFB	Brasilia	148.49	31	PKPbc	PKPbc	19 49 17.1	-1.2
	comp=Z,2.2nm,0.5s,baz=0.2,slow=6.9,SNR=3.9						
PLCA	Paso Flores	151.33	97	PKPbc	PKiKP	19 49 25.1	+0.2
	comp=Z,0.8nm,0.5s,baz=293,slow=7.7,SNR=2.0						

IDC ***09*** *19:35:44.6±1.6, 56°.17N×113°.75E, h0^{km}, mb3.3/3, mb1 3.5/6, mb1mx3.2/39, mbtmp3.4/6, ML2.8/3, MS3.8/1, Ms1 3.8/1, ms1mx2.8/37, Error ellipse: s-maj=38.9km s-min=20.1km az=144.0*

MOS ***09*** *19:35:44.1±0.9, 56°.04N×113°.74E, h8^{km}, mb3.7/1, Error ellipse: s-maj=12.7km s-min=7.8km az=74.6*

BYKL ***09*** *19:35:45.6±0.2, 56°.07N×113°.74E, h6^{km}±4^{km}*

ISC 09 19:35:45.4±0.9, **56°.07N**±0°.02×**113°.74E**±0°.02, **h8**^{km}±6^{km}, **n44**, σ**2**^{s}**.21**/78, **mb3.4**/3, **8C-3D**, **East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.11	293	⇑iPg	Pg	19 35 47.5	-0.5
SVKR				eSg	Sg	19 35 50.1	+0.3
SVKR				Pmax			
	5μm,0.2s						
SVKR				Smax			
	45μm,1.0s						
SVKR	Severomuysk	0.11	293	⇑iPG	Pg	19 35 47.6	-0.5
SVKR				e		19 35 50.0	
SVKR				pmax	pmax		
	comp=Z,7μm,0.8s						
SVKR				smax	smax		
	comp=N,47μm,0.6s						
UKT	Uakit	0.59	186	⇑iPg	Pg	19 35 55.5	-1.3
UKT				eSg	Sg	19 36 03.8	-0.7
UKT				Pmax			
	comp=N,257nm,0.5s						
UKT				Smax			
	comp=N,2μm,1.7s						
UKT	Uakit	0.59	186	⇑iPG	Pg	19 35 55.5	-1.3
UKT				eS	Sg	19 36 06.1	+1.6
YOA	Uoyan	1.13	274	⇑iPg	Pb	19 36 05.7	-1.5
YOA				e		19 36 08.6	
YOA				eSg	Sg	19 36 22.2	+0.4
YOA				max			
	comp=N,472nm,0.3s						
YOA				Smax			
	comp=N,3μm,1.4s						
YOA	Uoyan	1.13	274	ePG	Pb	19 36 05.7	-1.5
YOA				e		19 36 22.5	
YOA				pmax	pmax		
	comp=Z,318nm,0.3s						
YOA				smax	smax		
	comp=N,3μm,0.5s						
NLYR	Nelyaty	1.17	68	⇓iPg	Pb	19 36 07.1	-0.8
NLYR				e		19 36 10.2	
NLYR				eSg	Sn	19 36 23.2	-1.0
NLYR				eSb	Sg	19 36 27.1	+4.1
NLYR				max			
	comp=N,762nm,0.4s						
NLYR				max			
	comp=N,2μm,0.8s						
KMO	Kumora	1.44	264	ePg	Pn	19 36 10.9	-0.8
KMO				ePb	Pb	19 36 12.6	+0.2
KMO				eSg	Sb	19 36 31.1	+0.2
KMO				eSb	Sg	19 36 33.5	+1.9
KMO				max			
	comp=N,294nm,0.4s						
KMO				max			
	comp=N,1μm,0.8s						
KMO	Kumora	1.44	264	⇑iPG	Pn	19 36 10.8	-0.9
KMO				e		19 36 30.9	
KMO				pmax	pmax		
	comp=Z,34nm,0.3s						
KMO				smax	smax		
	comp=N,1μm,0.8s						
BOD	Bodaibo	1.75	5	⇑iPg	Pb	19 36 17.1	-0.7
BOD				eSg	Sg	19 36 40.3	-1.4
BOD				Pmax			
	comp=N,221nm,0.6s						
BOD				Smax			
	comp=N,1μm,0.5s						
BOD	Bodaibo	1.75	5	ePN	Pb	19 36 16.8	-1.0
BOD				e		19 36 40.5	
BOD				pmax	pmax		
	comp=Z,197nm,0.7s						
BOD				smax	smax		
	comp=E,1μm,0.7s						
YLYR	Ulyunkhan	1.90	232	ePn	Pn	19 36 19.1	+1.1
YLYR				ePg	Pb	19 36 19.8	-0.4
YLYR				eSg	Sb	19 36 45.1	+1.1
YLYR				Pmax			
	comp=E,182nm,0.4s						
YLYR				Smax			
	comp=E,1μm,1.3s						
NIZ	Nizh Angarsk	2.38	265	ePn	Pn	19 36 25.7	+1.0
NIZ				ePg	Pb	19 36 28.0	-0.5
NIZ				eSg	Sb	19 36 58.7	+0.7
NIZ				Pmax			
	comp=E,63nm,0.8s						
NIZ				Smax			
	comp=E,344nm,0.8s						
CRS	Chara	2.64	70	ePn	Pn	19 36 29.6	+1.3
CRS				⇑iPg	Pg	19 36 34.0	-2.0
CRS				eSg	Sg	19 37 08.7	-1.5
CRS				Pmax			
	comp=E,367nm,0.5s						
CRS				Smax			
	comp=E,733nm,0.6s						
CRS	Chara	2.64	70	ePN	Pn	19 36 29.8	+1.5
CRS				e		19 36 34.0	
CRS				e		19 37 08.6	
CRS				pmax	pmax		
	comp=Z,345nm,0.7s						
CRS				smax	smax		
	comp=E,725nm,0.7s						
SYVR	Suvo	3.25	223	ePn	Pn	19 36 37.2	+0.7
SYVR				ePg	Pb	19 36 44.2	+1.0
SYVR				e		19 36 47.6	
SYVR				eSg	Sb	19 37 26.3	+3.5
SYVR				max			
	comp=E,84nm,0.6s						
SYVR				Smax			
	comp=E,524nm,1.6s						
SYVR	Suvo	3.25	223	ePN	Pn	19 36 37.3	+0.7
SYVR				e		19 36 43.7	
SYVR				e		19 37 25.9	
SYVR				pmax	pmax		
	comp=Z,71nm,0.6s						
SYVR				smax	smax		
	comp=N,509nm,1.6s						
VTMR	Vitim	3.44	350	ePn	Pn	19 36 39.4	+0.3
VTMR				ePg	Pb	19 36 46.8	+0.4
VTMR				eSg	Sg	19 37 31.3	-4.3
TUP	Tupik	3.92	112	⇓iPn	Pn	19 36 46.6	+0.8
TUP				ePg	Pb	19 36 56.0	+1.3
TUP				e		19 36 57.3	
TUP				eSn	Sn	19 37 32.9	+0.9
TUP				eSg	Sg	19 37 47.5	-3.7
TUP				max			
	comp=N,96nm,0.4s						
TUP				Smax			
	comp=N,429nm,1.1s						
TUP	Tupik	3.92	112	⇓iPN	Pn	19 36 46.6	+0.8
TUP				e		19 36 56.1	
TUP				eS	Sn	19 37 32.4	+0.4
TUP				e		19 37 47.0	
TUP				pmax	pmax		
	comp=Z,85nm,0.6s						
TUP				smax	smax		
	comp=N,374nm,0.9s						
CIT	Chita	4.06	182	e	Pb	19 36 53.5	-3.6
CIT				ePg	Pg	19 36 57.4	-5.8
CIT				eSg	Sb	19 37 49.9	+3.5
CIT				Pmax			
	comp=N,62nm,0.3s						
CIT				Smax			
	comp=N,465nm,1.4s						
CIT	Chita	4.06	182	ePN	Pn	19 36 48.2	+0.4
CIT				e		19 36 58.4	
CIT				eS	Sn	19 37 34.8	-0.7
CIT				e		19 37 50.0	
CIT				pmax	pmax		
	comp=Z,87nm,0.9s						
CIT				smax	smax		
	comp=E,466nm,1.7s						
OGRR	Ongureny	4.31	238	ePn	Pn	19 36 52.5	+1.4
OGRR				ePg	Pb	19 37 03.2	+1.9
OGRR				eSg	Sg	19 38 00.0	-3.5
OGRR				Pmax			
	comp=E,56nm,0.8s						
OGRR				Smax			
	comp=E,184nm,1.6s						
OGRR	Ongureny	4.31	238	ePN	Pn	19 36 52.8	+1.7
OGRR				e		19 37 04.1	
OGRR				e		19 37 59.6	
OGRR				pmax	pmax		
	comp=Z,52nm,2.3s						
OGRR				smax	smax		
	comp=N,183nm,2.2s						
YKLR	Yuktali	4.43	80	ePg	Pb	19 37 05.0	+1.6
YKLR				eSg	Sg	19 38 03.3	-4.4
TRG	Tyrgan	5.45	235	ePn	Pn	19 37 08.0	+1.2
TRG				ePg	Pb	19 37 23.3	+2.6
TRG				eSg	Sg	19 38 34.2	-5.9
TRG				Pmax			
	comp=N,12nm,0.6s						
TRG				Smax			
	comp=N,98nm,1.2s						
TRG	Tyrgan	5.45	235	ePN	Pn	19 37 07.2	+0.4
TRG				e		19 37 23.2	
TRG				eS	Sn	19 38 06.8	-2.8

TRG				e		19 38 33.2	
TRG				pmax	pmax		
	comp=Z,20nm,0.9s						
TRG				smax	smax		
	comp=E,86nm,1.1s						
HRMR	Khuramsha	6.00	225	ePn	Pn	19 37 14.3	0.0
HRMR				ePg	Pb	19 37 33.7	+3.7
HRMR				eSg	Sg	19 38 52.0	-5.7
HRMR				Pmax			
	comp=E,37nm,0.4s						
HRMR				Smax			
	comp=E,246nm,0.6s						
KPC	Khapcheranga	6.43	188	ePn	Pn	19 37 20.3	-0.1
KPC				ePg	Pb	19 37 41.1	+3.6
KPC				eSg	Sg	19 39 04.6	-7.2
KPC				Pmax			
	comp=E,9.0nm,0.9s						
KPC				Smax			
	comp=E,253nm,1.6s						
KPC	Khapcheranga	6.43	188	ePN	Pn	19 37 20.0	-0.4
KPC				e		19 37 40.9	
KPC				e		19 39 03.4	
KPC				pmax	pmax		
	comp=Z,13nm,1.0s						
KPC				smax	smax		
	comp=E,252nm,1.6s						
IRK	Irkutsk	6.76	239	ePG	Pb	19 37 48.5	+5.5
IRK				e		19 39 15.4	
IRK				pmax	pmax		
	comp=Z,24nm,0.2s						
IRK				smax	smax		
	comp=E,125nm,1.1s						
TLY	Talaya	7.41	238	Pn	Pn	19 37 35.1	+1.4
	comp=E,0.0nm,0.3s,baz=105,slow=19,SNR=1.6						
TLY				Pg	Pb	19 37 47.9	-6.2
	comp=E,0.0nm,0.3s,baz=52,slow=22,SNR=1.7						
TLY				Lg	Lg	19 39 27.4	
	comp=E,0.0nm,0.3s,baz=144,slow=23,SNR=1.9						
ARS	Arshan	7.86	243	ePn	Pn	19 37 42.3	+2.4
ARS				ePg	Pb	19 38 07.3	+5.5
ARS				e		19 39 11.0	
ARS				eSg	Sg	19 39 49.0	-8.4
ARS				Pmax			
	comp=E,10.0nm,0.6s						
ARS				Smax			
	comp=E,88nm,1.1s						
ZEA	Zeya	8.13	101	ePG	Pg	19 38 18.8	-2.1
MOY	Mondy	8.73	245	ePN	Pn	19 37 53.5	+1.6
MOY				e		19 38 20.9	
MOY				eS	Sn	19 39 29.2	-1.2
MOY				e		19 40 14.5	
MOY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MOY				smax	smax		
	comp=E,78nm,2.1s						
ORL	Orlik	8.88	252	ePN	Pn	19 37 55.8	+1.8
ORL				e		19 38 24.8	
ORL				e		19 40 17.4	
ORL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ORL				smax	smax		
	comp=N,66nm,1.4s						
SONM	Songino Array	9.41	212	Pn	Pn	19 38 02.1	+0.9
	comp=N,0.1nm,0.3s,baz=28,slow=12,SNR=2.6						
SONM				Pg		19 38 37.6	
	comp=N,0.3nm,0.3s,baz=21,slow=15,SNR=4.3						
SONM				Lg	Lg	19 40 40.8	
	comp=N,1.3nm,0.3s,baz=20,slow=23,SNR=20						
YAK	Yakutsk	10.13	47	Lg	Lg	19 40 59.2	
	baz=149,slow=22,SNR=8.0						
KLR	Kul'dur	12.88	115	Pn	Pn	19 38 49.6	+1.0
	comp=N,0.3nm,0.3s,baz=313,slow=12,SNR=9.8						
KLR				Lg	Lg	19 42 28.1	
	comp=N,0.2nm,0.3s,baz=209,slow=19,SNR=4.6						
KURK	Kurchatov	21.45	270	P	P	19 40 35.8	+2.0
MKAR	Makanchi Array	21.52	258	P	P	19 40 35.1	+0.5
	comp=N,0.5nm,0.6s,baz=59,slow=9.7,SNR=2.3						
KURBB	Kurchatov Arra	21.55	270	P	P	19 40 35.8	+1.0
	comp=N,2.0nm,0.6s,baz=64,slow=11,SNR=7.0						
YKA	Yellowknife Ar	55.92	25	P	P	19 45 22.7	-0.5
	comp=N,0.3nm,0.7s,baz=338,slow=5.9,SNR=4.8						
SFJD	Kangerlussuaq	56.69	353	LR	LR	20 08 07.3	
	comp=N,69nm,18.3s,baz=84,slow=34						

WEL 09 19:45:37.7,37°S±7°×17°7E±°,h274km±9km,M3.0/18,
ML3.3/13,MLv3.0/18,Error ellipse: s-maj=0.0km
s-min=0.0km az=75.7,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUZ	Kuaotunu	1.13	260	P	Pn	19 46 16.2	+0.3
HAZ	Te Kaha	1.31	156	P	Pn	19 46 16.3	-0.6
HAZ				S	S	19 46 44.7	-3.4
MXZ	Matakaoa Point	1.39	137	P	Pn	19 46 17.1	-0.3
MXZ				S	S	19 46 46.2	-2.8
RUGZ	Raukumara Rang	1.48	162	P	Pn	19 46 17.3	-0.9
RUGZ				S	S	19 46 46.1	-4.3
WIAZ	Waiheke Island	1.60	261	P	Pn	19 46 19.9	+0.9
WMGZ	Waiomatatini S	1.64	141	P	Pn	19 46 19.1	-0.1
WMGZ				S	S	19 46 49.7	-2.5
MKAZ	Moumakai	1.65	250	P	Pn	19 46 17.3	-2.0
MKRZ	Makatiti	1.66	198	P	Pn	19 46 19.6	+0.2
URZ	Urewera	1.70	180	P	Pn	19 46 19.8	+0.2
URZ				S	S	19 46 50.3	-2.7
TWGZ	Tauwhareparae	1.76	157	P	Pn	19 46 20.7	+0.5
TWGZ				S	S	19 46 52.4	-1.6
MWZ	Matawai	1.81	169	P	Pn	19 46 20.8	+0.2
MWZ				S	S	19 46 52.1	-2.5
RAGZ	Rawiri	1.95	173	P	Pn	19 46 22.4	+0.7
RTZ	Ruatahuna	2.06	183	P	Pn	19 46 22.8	+0.1
RIGZ	Rimuhau	2.21	167	P	Pn	19 46 24.4	+0.4
RIGZ				S	S	19 46 59.0	-1.7
MTHZ	Maungataniwha	2.30	185	P	Pn	19 46 25.5	+0.7
KNZ	Kokohu	2.50	170	P	Pn	19 46 26.8	+0.2
NMHZ	Naumai	2.55	185	P	Pn	19 46 27.9	+0.7
TMVZ	Te Maari	2.79	203	P	Pn	19 46 30.3	+0.8
OTVZ	Oturere	2.84	203	P	Pn	19 46 31.0	+0.8
WNVZ	Wahianoa	3.01	203	P	Pn	19 46 32.4	+0.5
PKVZ	Pokaka	3.06	206	P	Pn	19 46 33.2	+0.9
OUZ	Omahuta	3.15	294	P	Pn	19 46 34.1	+0.9
KAHZ	Kahuranaki	3.24	183	P	Pn	19 46 34.2	+0.1
KAHZ				S	S	19 47 18.1	-1.0
PNHZ	Pukenui	3.43	192	P	Pn	19 46 35.5	-0.7
PNHZ				S	S	19 47 20.3	-2.5
PXZ	Pawanui	3.48	183	P	Pn	19 46 36.1	-0.5
PXZ				S	S	19 47 21.5	-2.1
TSZ	Takapari Road	3.61	194	P	Pn	19 46 37.5	-0.7
TSZ				S	S	19 47 24.4	-2.0
TSZ	Takapari Road	3.61	194	P	S	19 47 25.2	-1.3
ANWZ	Angora Road	3.93	187	P	S	19 47 30.2	-2.5
BFZ	Birch Farm	4.17	189	P	S	19 47 35.0	-2.9
MRZ	Mangatainoka R	4.27	196	P	Pn	19 46 44.3	-1.3
TIWZ	Tintock	4.32	192	P	S	19 47 38.9	-2.1
HOWZ	Holdsworth Sta	4.51	196	P	Pn	19 46 47.3	-1.1
HOWZ	Holdsworth Sta	4.51	196	P	S	19 47 40.5	-4.5
OGWZ	Otaki Gorge	4.52	199	P	Pn	19 46 47.3	-1.2
TMWZ	Te Maipa	4.64	191	P	S	19 47 46.2	-1.6
MTW	Mount Morrison	4.76	195	P	S	19 47 46.1	-4.2
DUWZ	D'Urville Isla	4.92	209	P	Pn	19 46 52.5	-0.7
TRWZ	Traveller	4.96	192	P	S	19 47 51.8	-2.8
PAWZ	Paruwai Farm	4.99	195	P	S	19 47 51.7	-3.6
MSWZ	Moikau Station	5.06	196	P	S	19 47 50.9	-5.9
TCW	Tory Channel	5.14	205	P	Pn	19 46 55.1	-0.8
TUWZ	Tuamarina	5.45	206	P	Pn	19 46 58.5	-1.1
TUWZ	Tuamarina	5.45	206	P	S	19 48 01.8	-3.5
QRZ	Quartz Range	5.57	219	P	Pn	19 46 59.8	-1.1
THZ	Tophouse	6.14	211	P	Pn	19 47 08.0	0.0
KHZ	Kahutara	6.47	204	P	Pn	19 47 11.0	-1.0
DSZ	Denniston Nort	6.62	217	P	Pn	19 47 12.8	-1.1
GVZ	Greta Valley S	7.13	205	P	Pn	19 47 19.1	-1.0
INZ	Inchbonnie	7.55	214	P	Pn	19 47 24.1	-1.3
RPZ	Rata Peaks	8.52	211	P	Pn	19 47 40.6	+3.1
WKZ	Wanaka	10.29	214	P	Pn	19 48 00.8	+1.3
TUZ	Tuapeka	10.94	209	P	P	19 48 11.0	-0.1

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*JMA **09** 20:19:30.2±0.2,24°96N×122°88E,h144km±3km,M2.6*
*TAP **09** 20:19:31.1,24°93N×122°89E,h139km±1km,ML3.0,D*
ISC 09 20:19:30.4±1.8,24°91N±0°07×122°89E±0°03,
h145km±11km,n47,σ0s76/88,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.46	174	P	Pn	20 19 51.2	+0.2
JYNG				S	Sn	20 20 06.9	+0.3
YOJ	Yonaguni jima	0.46	166	P	Pn	20 19 51.2	+0.2
YOJ				eS	Sn	20 20 06.9	+0.3
YOJ	Yonaguni jima	0.46	166	eP	Pn	20 19 51.2	+0.2
	baz=167						
YOJ				eS	Sn	20 20 06.5	-0.1
	baz=167						
IRIF	Iriomote-Funau	0.96	127	P	Pn	20 19 54.5	+0.2
IRIF				S	Sn	20 20 12.7	+0.2
TIPB	Shuangxi	0.97	274	eP	Pn	20 19 54.6	+0.2
	baz=272						
TIPB				eS	Sn	20 20 12.5	-0.2
	baz=272						
TWC	Suao	0.99	253	eP	Pn	20 19 55.2	+0.7
	baz=251						
TWC				S	Sn	20 20 12.3	-0.6
	baz=251						
TWE	Neicheng	1.13	261	eP	Pn	20 19 55.9	+0.2
	baz=259						
ENA	Nanau	1.15	246	eP	Pn	20 19 56.1	0.0
	baz=244						
ENA				eS	Sn	20 20 15.1	-0.4
	baz=244						
HATJ	Hateruma jima	1.19	135	P	Pn	20 19 57.2	+0.8
HATJ				S	Sn	20 20 16.9	+0.6
JKRS	Kuro-shima	1.22	123	P	Pn	20 19 57.3	+0.6
JKRS				S	Sn	20 20 17.1	+0.4
YM10	YM10	1.23	282	eP	Pn	20 19 57.8	+0.9
	baz=280						
YM04	YM04	1.25	281	eP	Pn	20 19 57.2	+0.2
	baz=280						
YM04				eS	Sn	20 20 17.1	-0.3
	baz=280						
JIJ	Ishigaki jima	1.26	115	P	Pn	20 19 57.2	+0.1
JIJ				S	Sn	20 20 16.6	-0.9
NWLT	Wulai	1.27	264	eP	Pn	20 19 56.8	-0.4
	baz=263						
NWLT				eS	Sn	20 20 16.9	-0.7
	baz=263						
NDT	Datong Townshi	1.29	257	eP	Pn	20 19 58.1	+0.7
	baz=255						
NDT				eS	Sn	20 20 18.4	+0.4
	baz=255						
JISG	Ishigakijimahi	1.33	104	P	Pn	20 19 57.8	0.0
JISG				S	Sn	20 20 18.2	-0.5
NACB	Ninganchiao	1.39	238	eP	Pn	20 19 59.2	+0.8
	baz=237						
NACB				eS	Sn	20 20 19.1	-0.7
	baz=237						
YHNB	Yeheng	1.40	260	eP	Pn	20 19 58.8	+0.3
	baz=259						
YHNB				eS	Sn	20 20 19.3	-0.7
	baz=259						
NSK	Sanguang	1.41	261	eP	Pn	20 19 58.5	-0.2
	baz=259						
NSK				eS	Sn	20 20 19.4	-0.9
	baz=259						
TWD	Chiawan	1.44	235	eP	Pn	20 19 59.8	+0.9
	baz=234						
TWD				eS	Sn	20 20 20.3	-0.3
	baz=234						
NNSB	Datong	1.45	251	eP	Pn	20 19 59.5	+0.3
	baz=250						
NNSB				eS	Sn	20 20 19.4	-1.8
	baz=250						
NNS	Nan Shan	1.46	252	eP	Pn	20 19 59.4	+0.2
	baz=250						
NNS				eS	Sn	20 20 20.7	-0.5
	baz=250						
ETLH	Xiulin Townshi	1.46	242	eP	Pn	20 19 59.6	+0.4
	baz=240						
ETLH				eS	Sn	20 20 20.2	-1.0
	baz=240						
FUSS	Fushou	1.64	247	eP	Pn	20 20 02.1	+0.8
	baz=245						
FUSS				eS	Sn	20 20 24.0	-0.9
	baz=245						
WHF	Hehuan Shan	1.66	243	eP	Pn	20 20 01.9	+0.1
	baz=242						
WHF				eS	Sn	20 20 24.4	-1.4
	baz=242						
JTJ	Tarama	1.67	99	P	Pn	20 20 01.6	+0.2
JTJ				S	Sn	20 20 24.7	-0.4
TWT	Tachien	1.69	248	eP	Pn	20 20 02.6	+0.7
	baz=246						
TWT				eS	Sn	20 20 25.8	-0.1
	baz=246						
TDCB	Techi	1.71	248	eP	Pn	20 20 02.6	+0.7
	baz=246						
TDCB				eS	Sn	20 20 25.7	-0.4
	baz=246						
ESL	Shilin	1.72	231	eP	Pn	20 20 02.3	+0.3
	baz=229						
ESL				eS	Sn	20 20 24.5	-1.6
	baz=229						
LIOB	Emei	1.72	262	eP	Pn	20 20 02.9	+0.9
	baz=260						
LIOB				eS	Sn	20 20 26.1	-0.1
	baz=260						
NSTT	Nanjuang	1.74	261	eS	Sn	20 20 25.5	-1.0
	baz=260						
CHGB	Renai	1.78	242	eP	Pn	20 20 03.5	+0.6
	baz=241						
CHGB				eS	Sn	20 20 27.7	0.0
	baz=241						
EGFH	Guangfu	1.82	227	eS	Sn	20 20 26.8	-1.3
	baz=226						
HGSD	Ruisui	1.94	224	eP	Pn	20 20 05.2	+0.6
	baz=223						
HGSD				eS	Sn	20 20 30.4	-0.4
	baz=223						
JIRB	Irabujima	2.08	92	S	Sn	20 20 32.3	-1.2
SMLT	Sun Moon Lake	2.08	241	eP	Pn	20 20 07.3	+1.0
	baz=240						
SMLT				eS	Sn	20 20 33.9	0.0
	baz=240						
SSLB	Suanglung	2.09	238	eP	Pn	20 20 07.1	+0.8
	baz=237						
SSLB				eS	Sn	20 20 34.1	+0.3
	baz=237						
YULB	Yu-li	2.10	224	eP	Pn	20 20 05.6	-0.8
	baz=223						
YULB				eS	Sn	20 20 30.9	-3.1
	baz=223						
TYC	Yuchr	2.11	242	eP	Pn	20 20 07.6	+1.2
	baz=241						
TYC				S	Sn	20 20 34.4	+0.2
	baz=241						
EYUL	Yuli	2.12	223	eP	Pn	20 20 07.9	+1.3
	baz=222						
EYUL				eS	Sn	20 20 33.9	-0.5
	baz=222						
TWF1	Yuli	2.13	223	eP	Pn	20 20 06.9	+0.2
	baz=222						
JMJ2	Miyako jima3	2.22	94	P	Pn	20 20 08.3	+0.5
JMJ2				eS	Sn	20 20 35.8	-0.8
FULB	Fuli	2.24	221	eP	Pn	20 20 07.7	-0.5
	baz=220						
FULB				eS	Sn	20 20 37.0	-0.2
	baz=220						
ALS	Alishan	2.36	234	eP	Pn	20 20 10.3	+0.5
	baz=233						
ALS				eS	Sn	20 20 41.5	+1.4
	baz=233						
CHN5	Tsauling	2.41	238	eP	Pn	20 20 10.8	+0.7
	baz=236						
CHN5				eS	Sn	20 20 41.0	+0.2
	baz=236						
EDH	Donghe	2.41	217	eP	Pn	20 20 10.3	+0.1
	baz=216						
EDH				eS	Sn	20 20 39.9	-0.9
	baz=216						
ELDTW	Lidau	2.42	225	eP	Pn	20 20 11.2	+0.8
	baz=224						
ELDTW				eS	Sn	20 20 40.6	-0.6
	baz=224						

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*NEIC **09** 21:03:33.9±1.4,43°81N±0°05×105°14W±0°05,h0km±2km,*
ML3.4/68,Error ellipse: s-maj=8.9km s-min=6.3km
az=158.0
*IDC **09** 21:03:34.0±1.7,43°88N×105°54W,h0km,mb1 3.7/4,*
mb1mx3.4/37,mbtmp3.5/4,ML3.0/3,Error ellipse:
s-maj=49.0km s-min=9.3km az=148.0
ISC 09 21:03:33.8±1.0,43°79N±0°06×105°15W±0°07,h0km,n94,
σ0s99/94,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.87	67		Pg	21 03 49.6	-0.8
K22A	Casper	1.52	222	Pn	Pn	21 03 57.9	-4.5
K22A				IAML		21 04 24.8	
	comp=E,689nm,0.3s						
PHWY	Pilot Hill	2.50	185		Pn	21 04 15.3	-0.7
RWWY	Rawlins	2.59	217		Pn	21 04 16.1	-1.2
RWWY				IAML		21 04 56.2	
	comp=E,188nm,0.7s						
RWWY				IAML		21 04 56.4	
	comp=E,240nm,0.9s						
N23A	Red Feather La	2.96	192	Pn	Pn	21 04 22.6	+0.3
N23A				IAML		21 05 06.5	
	comp=N,107nm,0.4s						
LAO	LASA Array	2.99	346	Pn	Pn	21 04 21.9	-0.7
RLMT	Red Lodge	3.23	296		Pn	21 04 26.0	0.0
RLMT				IAML		21 05 22.8	
	comp=N,75nm,0.8s						
RLMT				IAML		21 05 23.3	
	comp=N,95nm,0.7s						
BW06	Boulder Array	3.38	254	Pn	Pn	21 04 28.1	0.0
BW06				IAML		21 05 19.2	
	comp=N,54nm,0.3s						
PD31	Pinedale Array	3.38	254	Pn	Pn	21 04 28.1	0.0
PDAR	Pinedale Array	3.38	254	Pn	Pn	21 04 28.0	0.0
	comp=N,10nm,0.3s,baz=79,slow=18,SNR=97						
PDAR				Lg	Lg	21 05 11.6	
	comp=N,18nm,0.3s,baz=70,slow=30,SNR=3.1						
PDAR	Pinedale Array	3.38	254		Pn	21 04 27.8	-0.2
OGNE	Ogallala	3.66	140		Pn	21 04 33.0	+1.2
OGNE				IAML		21 05 38.7	
	comp=N,104nm,0.9s						
OGNE				IAML		21 05 50.7	
	comp=N,102nm,1.0s						
YNE	Yellowstone No	3.69	291		Pn	21 04 31.2	-1.1
YMP	Mirror Lake Pl	3.72	286		Pn	21 04 32.0	-0.7
GCMT	Greycliff	3.79	303		Pn	21 04 33.3	-0.2
LKWY	Lake	3.86	283		Pn	21 04 34.8	+0.1
LKWY				IAML		21 05 39.3	
	comp=N,40nm,0.8s						
LKWY				IAML		21 05 49.6	
	comp=N,40nm,1.2s						
H17A	Grant Village	3.96	281		Pn	21 04 36.5	+0.6
H17A				IAML		21 05 39.3	
	comp=E,33nm,0.4s						
LOHW	Long Hollow	3.96	269		Pn	21 04 37.2	+1.2
ISCO	Idaho Springs	4.00	185	Pn	Pn	21 04 37.9	+1.2
FLWY	Flagg Ranch	4.02	276		Pn	21 04 36.8	-0.1
FLWY				IAML		21 05 45.0	
	comp=E,32nm,1.0s						
FLWY				IAML		21 05 46.8	
	comp=E,51nm,2.0s						
YPP	Pitchstone Pla	4.11	279		Pn	21 04 38.0	-0.1
REDW	Red Top Meadow	4.17	266		Pn	21 04 39.0	+0.2
REDW				IAML		21 05 55.3	
	comp=E,43nm,1.0s						
REDW				IAML		21 06 01.6	
	comp=E,49nm,1.8s						
E28A	Huff	4.20	47		Pn	21 04 41.0	+1.8
YHH	Holmes Hill	4.21	286		Pn	21 04 38.9	-0.7
YMR	Madison River	4.27	284		Pn	21 04 40.4	+0.1
O20A	White River Ci	4.32	213	Pn	Pn	21 04 41.4	+0.5
O20A				IAML		21 05 53.0	
	comp=E,48nm,0.9s						
O20A				IAML		21 05 53.0	
	comp=N,64nm,0.9s						
YHB	Horse Butte	4.45	285		Pn	21 04 42.2	-0.5
YHL	Hebgen Lake	4.46	286		Pn	21 04 42.1	-0.8
AHID	Auburn Hatcher	4.46	259		Pn	21 04 42.7	-0.2
AHID				IAML		21 05 58.1	
	comp=N,44nm,0.8s						
AHID				IAML		21 06 11.5	
	comp=E,35nm,1.1s						
ECR	Eagle Creek	4.59	263		Pn	21 04 45.1	+0.4
RDMU	Red Mountain	4.60	227	Pn	Pn	21 04 44.8	0.0
QLMT	Earthquake Lak	4.63	285		Pn	21 04 45.4	+0.2
DGMT	Dagmar	4.73	8	Pn	Pn	21 04 46.0	-0.3
SMCO	Snowmass	4.81	197		Pn	21 04 48.9	+1.0
SMCO				IAML		21 06 09.9	
	comp=E,29nm,0.9s						
SMCO				IAML		21 06 13.5	
	comp=E,22nm,1.0s						
Q24A	Divide	4.82	180		Pn	21 04 48.4	+0.5
Q24A				IAML		21 06 08.6	
	comp=E,29nm,0.7s						
Q24A				IAML		21 06 15.9	
	comp=N,24nm,0.4s						
BOZ	Bozeman (W)	4.96	294		Pn	21 04 49.0	-0.7
BOZ				IAML		21 06 08.7	
	comp=N,16nm,1.6s						
KSCO	Kaye Shedlock'	5.14	158		Pn	21 04 52.4	+0.3
HWUT	Hardware Ranch	5.21	247		Pn	21 04 52.8	-0.4
HWUT				IAML		21 06 33.4	
	comp=N,33nm,0.9s						
EGMT	Eagleton	5.31	324	Pn	Pn	21 04 54.0	-0.4
DLMT	Dillon	5.55	289		Pn	21 04 57.2	-0.5
HRY	Holter Researc	5.55	304		Pn	21 04 57.7	0.0
LRM	Limekiln Ridge	5.58	294	Pn	Pn	21 04 58.1	-0.2
MCMT	McKenzie Canyo	5.62	283		Pn	21 04 59.8	+1.0
JLU	Jordanelle	5.66	238	Pn	Pn	21 04 59.5	+0.1
BGNE	Belgrade	5.69	112	Pn	Pn	21 05 01.2	+1.7
CTU	Camp Tracy	5.80	240	Pn	Pn	21 05 00.9	-0.3
SPUT	South Promonto	5.94	248		Pn	21 05 03.7	+0.6
PV07	Paradox Valley	5.96	207		Pn	21 05 04.6	+1.1
BCYI	Bear Canyon	5.97	278	Pn	Pn	21 05 05.4	+1.7
PV15	Paradox Valley	6.00	206		Pn	21 05 04.2	+0.1
P17A	Butcher Ranch,	6.01	226		Pn	21 05 01.6	-2.5
SDCO	Great Sand Dun	6.05	183	Pn	Pn	21 05 05.5	+0.7
PV23	Carpenter Ridg	6.08	210	Pn	Pn	21 05 05.9	+0.7
PV04	Paradox Valley	6.09	209		Pn	21 05 06.3	+1.0
PV12	Saucer Basin,	6.13	208	Pn	Pn	21 05 07.9	+2.1
PV14	Lion Creek, Pa	6.15	210		Pn	21 05 04.5	-1.7
PV10	Paradox Valley	6.16	210	Pn	Pn	21 05 08.6	+2.4
PV20	West Nyswonger	6.16	209		Pn	21 05 06.8	+0.6
PV11	David Mesa, Pa	6.17	208		Pn	21 05 06.8	+0.5
S22A	4UR Ranch, Cre	6.17	192		Pn	21 05 07.2	+0.7
SRU	San Rafael Swe	6.18	223	Pn	Pn	21 05 05.8	-0.6
ECSD	EROS Data Cent	6.18	88		Pn	21 05 07.6	+1.3
PV19	Morning Glory	6.20	209		Pn	21 05 07.6	+0.9
PV03	Paradox Valley	6.20	208		Pn	21 05 07.5	+0.7
PV02	Paradox Valley	6.20	207		Pn	21 05 07.8	+1.0
PV17	East Wray Mesa	6.21	209	Pn	Pn	21 05 07.4	+0.4
PV18	Skein Mesa, Pa	6.23	208	Pn	Pn	21 05 08.2	+1.0
PV13	Radium Mtn., P	6.28	208		Pn	21 05 08.5	+0.6
TMUT	Trail Mountain	6.39	227		Pn	21 05 09.2	-0.3
NLU	North Lily Min	6.43	236	Pn	Pn	21 05 09.6	-0.4
PV05	Paradox Valley	6.44	209	Pn	Pn	21 05 07.8	-2.4
BGU	Big Grassy Mou	6.50	247	Pn	Pn	21 05 11.3	+0.5
Q16A	Castle Valley	6.65	225		Pn	21 05 13.0	+0.1
T25A	Trinidad	6.67	175	Pn	Pn	21 05 13.8	+0.6
HLID	Hailey	6.72	271	Pn	Pn	21 05 14.1	+0.2
DUG	Dugway, Tooele	6.75	240	Pn	Pn	21 05 14.1	-0.1
MSO	Missoula	6.90	299	Pn	Pn	21 05 15.8	-0.5
MVCO	Mesa Verde	7.05	202	Pn	Pn	21 05 19.9	+1.4
MSU	Marysvale	7.48	228		Pn	21 05 25.1	+0.7
MVU	Marysvale	7.50	228	Pn	Pn	21 05 25.4	+0.7
JTMT	Jette	7.51	305	Pn	Pn	21 05 25.1	+0.4
MTPU	Mount Pierson	7.83	225		Pn	21 05 29.2	-0.1
AGMN	Agassiz Nation	7.88	52	Pn	Pn	21 05 28.2	-1.4
WALA	Waterton Lakes	8.02	314	Pn	Pn	21 05 30.9	-0.8
ELK	Elko	8.08	251	Pn	Pn	21 05 32.6	0.0
	comp=N,0.6nm,0.3s,baz=64,slow=9.2,SNR=8.4						
ELK	Elko	8.08	251		Pn	21 05 32.7	+0.1
PKCU	Pink Cliffs	8.36	223	Pn	Pn	21 05 36.3	-0.2
PSUT	Pine Spring	8.41	234	Pn	Pn	21 05 38.2	+1.1
F36A	Milaca	8.52	72	Pn	Pn	21 05 37.7	-0.7
ULM	Lac du Bonnet	9.04	41	Pn	Pn	21 05 45.0	-0.6
	comp=N,1.2nm,0.3s,baz=224,slow=11,SNR=15						
CROK	Carrier	9.11	141	Pn	Pn	21 05 46.6	0.0
B35A	Bob, Littlefor	9.16	56	Pn	Pn	21 05 47.2	+0.1
U15A	North Rim	9.16	219	Pn	Pn	21 05 48.2	+0.7
YKA	Yellowknife Ar	19.53	347	P	P	21 08 01.9	-0.7
	comp=N,0.1nm,0.3s,baz=156,slow=11,SNR=3.1						

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*NOU **09** 21:03:54.8,7°17S×128°35E,h184km,mb4.0,Banda Sea*
*IDC **09** 21:04:00.8±2.0,7°65S×128°66E,h146km±28km,mb2.8/1,*
mb1 3.4/6,mb1mx3.1/43,mbtmp3.8/6,Error ellipse:

s-maj=34.3km s-min=20.9km az=97.0

ISC 09 21:03:58.6±1.4**, 7°.72S**±0°.08×**128°.7E**±0°.1**, h151^{km}, n6,** σ**3^{s}.66**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.56	243	P	Pn	21 05 22.3	+2.8
	6.2nm,0.3s,baz=333,slow=1.4,SNR=11						
BATI				S	Sn	21 06 21.8	-0.9
	14nm,0.3s,baz=69,slow=20,SNR=13						
SIJI	Sorong	7.27	21	P	Pn	21 05 43.8	+1.5
	1.1nm,0.3s,baz=209,slow=19,SNR=24						
SIJI				S	Sn	21 07 01.4	-2.2
	0.5nm,0.3s,baz=127,slow=20,SNR=1.0						
FITZ	Fitzroy Crossi	10.74	196	P	Pn	21 06 29.7	+1.3
	1.1nm,0.3s,baz=24,slow=11,SNR=29						
FITZ				S	Sn	21 08 23.6	-3.7
	0.3nm,0.3s,baz=62,slow=20,SNR=0.9						
WRA	Warramunga Arr	13.33	156	P	Pn	21 07 04.7	+2.7
	0.8nm,0.3s,baz=332,slow=13,SNR=19						
WRA				S	Sn	21 09 27.6	-2.0
	1.0nm,0.3s,baz=320,slow=25,SNR=9.3						
ASAR	Alice Springs	16.63	163	P	Pn	21 07 48.0	+5.0
	0.3nm,0.3s,baz=340,slow=9.9,SNR=15						
ASAR				S	S	21 10 44.8	-3.1
	0.1nm,0.3s,baz=323,slow=18,SNR=1.5						
MKAR	Makanchi Array	68.12	328	P	P	21 14 44.4	+2.1
	0.1nm,0.4s,baz=128,slow=7.0,SNR=1.4						

IDC ***09*** *21:10:24.8±2.6, 51°.52N×172°.12E, h0^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.4/76, mbtmp3.7/7, ML2.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/50, Error ellipse: s-maj=65.6km s-min=21.3km az=2.0*

NEIC ***09*** *21:10:29.6±2.3, 51°.6N±0°.2×172°.2E±0°.1, h31^{km}±7^{km}, mb4.2/30, Error ellipse: s-maj=22.5km s-min=9.5km az=169.0*

ISC 09 21:10:29.3±0.9**, 51°.6N**±0°.1×**172°.03E**±0°.06**, h35^{km}, n48,** σ**1^{s}.42**/46**, mb4.2**/21**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.70	48		Pn	21 10 54.9	-1.6
SMY				Sn	Sn	21 11 15.2	-1.7
AMKA	Amchitka	4.55	90	Pn	Pn	21 11 33.8	-1.9
ADK	Adak	7.02	83	Pn	Pn	21 12 07.8	-1.7
PEA0B	Petropavlovsk-	8.90	285	Pn	Pn	21 12 36.5	+1.2
PETK	Petropavlovsk-	8.90	285	Pn	Pn	21 12 36.2	+0.9
	0.5nm,0.3s,baz=94,slow=19,SNR=9.3						
PETK				Sn	Sn	21 14 08.7	-5.5
	0.4nm,0.3s,baz=95,slow=21,SNR=1.0						
SEY	Seymchan	15.46	325	Pn	Pn	21 14 04.0	-0.4
	0.0nm,0.3s,baz=40,slow=11,SNR=2.4						
TTA	Tatalina	20.41	44	P	Pn	21 15 04.0	-1.4
OHAK	Old Harbor	20.79	61	P	P	21 15 06.4	-0.7
KDAK	Kodiak Island	21.18	59	P	P	21 15 11.2	-0.1
	3.4nm,0.3s,baz=297,slow=5.7,SNR=12						
KDAK	Kodiak Island	21.18	59	IAmb	IAmb	21 15 14.9	
	comp=Z,62nm,1.5s						
ERM	Erimo	21.84	255	P	P	21 15 17.3	-1.2
CNPM	China Poot	21.98	55	P	P	21 15 20.1	+0.1
PPLA	Purkeypile	22.08	45	P	P	21 15 22.8	+1.6
PPLA				IAmb	IAmb	21 15 28.2	
	comp=Z,21nm,1.5s						
BRLK	Bradley Lake	22.18	54	P	P	21 15 21.2	-0.9
SKT	Skwentna	22.18	48	P	P	21 15 24.0	+1.9
SKT				IAmb	IAmb	21 15 31.9	
	comp=Z,9.3nm,1.3s						
SUA	Susitna One	22.46	50	P	P	21 15 25.1	-0.1
SUA				IAmb	IAmb	21 15 27.2	
	comp=Z,20nm,1.3s						
KTH	Kantishna Hill	22.80	44	P	P	21 15 30.1	+1.4
KTH				IAmb	IAmb	21 15 32.8	
	comp=Z,6.2nm,1.1s						
TRF	Thorofare Moun	23.05	45	P	P	21 15 31.9	+0.6
GHO	Glory Hole Cre	23.36	49	P	P	21 15 34.4	-0.1
GHO				IAmb	IAmb	21 15 46.3	
	comp=Z,15nm,1.2s						
SML	Sawmill	23.65	49	P	P	21 15 37.5	+0.4
SML				IAmb	IAmb	21 15 42.5	
	comp=Z,10nm,1.2s						
SCM	Sheep Creek Mo	24.12	49	P	P	21 15 41.9	+0.3
WRH	Wood River Hil	24.23	43	P	P	21 15 44.0	+1.6
MDM	Murphy Dome	24.29	41	P	P	21 15 43.9	+0.8
FID	Port Fidalgo	24.44	52	P	P	21 15 43.5	-0.9
FID				IAmb	IAmb	21 15 52.0	
	comp=Z,25nm,1.3s						
KLU	Klutina	24.76	50	P	P	21 15 47.7	+0.3
KLU				IAmb	IAmb	21 15 53.5	
	comp=Z,8.9nm,1.4s						
ILAR	Eielson Array	24.80	42	P	P	21 15 48.4	+0.7
	comp=Z,0.6nm,0.6s,baz=256,slow=7.3,SNR=11						
ILAR	Eielson Array	24.80	42	P	P	21 15 47.3	-0.4
TOLK	Toolik Lake Re	24.98	33	P	P	21 15 51.4	+2.1
N25K	Chitina, Valde	25.40	50	P	P	21 15 53.5	+0.3
N25K				IAmb	IAmb	21 16 08.8	
	comp=Z,8.0nm,1.2s						
PRP	Porcupine Dome	25.52	41	P	P	21 15 55.5	+1.2
GLB	Gilahina Butte	25.77	50	P	P	21 15 57.2	+0.7
GLB				IAmb	IAmb	21 16 05.6	
	comp=Z,14nm,1.3s						
DOT	Dot Lake	25.83	45	P	P	21 15 58.0	+1.0
VRDI	Verde Repeater	25.94	51	P	P	21 15 59.1	+0.9
VRDI				IAmb	IAmb	21 16 14.7	
	comp=Z,16nm,1.4s						
CRQM	Cirque	26.08	52	P	P	21 16 00.7	+1.2
MCARA	McCarthy VSAT	26.15	51	P	P	21 15 59.5	-0.4
MCARA				IAmb	IAmb	21 16 00.0	
	comp=Z,5.5nm,1.0s						
BMAR	Burnt Mountain	26.35	37	P	P	21 16 01.4	-0.3
K27K	Chicken	26.75	45	P	P	21 16 06.9	+1.7
K27K				IAmb	IAmb	21 16 25.8	
	comp=Z,5.0nm,1.3s						
BCAR	Beaver Creek A	26.80	47	P	P	21 16 07.1	+1.3
BARN	Barnard Glacie	26.80	51	P	P	21 16 07.3	+1.3
BARN				IAmb	IAmb	21 16 26.4	
	comp=Z,7.0nm,1.2s						
HYT	Haines Junctio	28.84	52	P	P	21 16 25.3	+1.2
HYT				IAmb	IAmb	21 16 39.2	
	comp=Z,3.8nm,1.2s						
INK	Inuvik	30.62	36	LR	LR	21 29 11.9	
	comp=Z,48nm,18.1s,baz=69,slow=37						
YKA	Yellowknife Ar	39.17	45	P	P	21 17 54.8	+1.5
	comp=Z,0.3nm,0.5s,baz=289,slow=6.7,SNR=5.7						
NVAR	Mina Array Bea	49.15	77	P	P	21 19 13.2	-0.5
	comp=Z,0.1nm,0.3s,baz=297,slow=6.7,SNR=1.8						
MKAR	Makanchi Array	55.25	303	P	P	21 20 00.1	+1.4
	comp=Z,0.3nm,0.5s,baz=60,slow=6.3,SNR=9.0						
KKAR	Karatay Array	63.83	307	P	P	21 20 58.7	+0.9
ABKAR	Akbulak array	64.09	318	P	P	21 21 01.0	+1.6
KBL	Kabul	71.00	302	P	P	21 21 44.3	+0.7
KBL				IAmb	IAmb	21 21 45.0	
	comp=Z,2.2nm,1.2s						
ASAR	Alice Springs	82.08	215	LR	LR	21 59 40.8	
	comp=Z,23nm,18.2s,baz=328,slow=36						

DJA ***09*** *21:19:34.5±0.6, 2°N±6°×12°7E±°, h121^{km}±6^{km}, M4.5/13, mb4.6/7, mB5.0/5, MLv4.5/13, Mw(mB)4.3/5*

NEIC ***09*** *21:19:35.5±0.7, 1°.57N±0°.09×127°.4E±0°.1, h143^{km}±5^{km}, mb4.4/17, Error ellipse: s-maj=16.1km s-min=11.7km az=52.0*

IDC ***09*** *21:19:35.8±2.4, 1°.62N×127°.42E, h148^{km}±23^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.5/50, mbtmp4.3/11, Error ellipse: s-maj=28.0km s-min=12.3km az=77.0*

ISC 09 21:19:36.1±0.5**, 1°.60N**±0°.06×**127°.36E**±0°.07**, h150^{km}, n52,** σ**1^{s}.39**/52**, mb4.3**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.82	180		Pn	21 19 58.0	-1.5
TNTI	Ternate	0.82	180	P	Pn	21 19 58.3	-1.2
SGSI	Sangihe	2.77	319	P	Pn	21 20 15.6	-5.0
KMSI	Cibinong	3.53	253	P	Pn	21 20 30.0	-0.3
SANI	Sanana	3.88	201	P	Pn	21 20 34.1	-0.7
GTOI	Gorontalo	4.46	258	P	Pn	21 20 43.1	+0.8
SWI	Sorong	4.60	122	P	Pn	21 20 43.5	-0.8
SIJI	Sorong	4.61	122	P	Pn	21 20 44.0	-0.4
	3.9nm,0.3s,baz=326,slow=21,SNR=14						
NLAI	Namlea	4.81	183	P	Pn	21 20 49.8	+2.7
	0.2nm2µm25nm,1.0s						
LUWI	Luwuk	5.29	240	Pn	Pn	21 20 51.4	-1.9
LUWI	Luwuk	5.29	240	P	Pn	21 20 54.6	+1.2
	1.6nm2µm65nm,0.5s						
MRSI	Marisa	5.53	258	P	Pn	21 20 56.6	0.0
	0.5nm2µm104nm,0.7s						
SKMP	Bagumbayan, Su	5.64	330	*e*P	Pn	21 20 53.8	-4.2
APSI	Ampana	6.23	246	P	Pn	21 21 06.4	+0.4
	0.4nm995nm55nm,0.8s						
TOLI2	Tolitoli	6.60	266	Pn	Pn	21 21 10.1	-0.7
FAKI	Fak Fak	6.63	133	Pn	Pn	21 21 12.4	+1.1
FAKI	Fak Fak	6.63	133	P	Pn	21 21 12.3	+1.0
	0.2nm48nm,0.8s						
SPSI	Sidrap Palu	9.39	234	P	Pn	21 21 49.5	+1.4
MYLDM	Lahad Datu	9.54	292	Pn	Pn	21 21 52.6	+2.6
KAPI	Kappang	10.05	229	P	Pn	21 21 57.0	+0.2
	2.9nm,0.3s,baz=20,slow=1.2,SNR=7.4						
KAPI				S	Sn	21 23 44.4	-3.7
	4.4nm,0.3s,baz=86,slow=23,SNR=8.8						
KAPI	Kappang	10.05	229	Pn	Pn	21 21 58.7	+1.9
KKM	Kota Kinabalu	11.97	292	Pn	Pn	21 22 19.4	-2.7
MTN	Manton Dam	14.83	165	Pn	Pn	21 22 57.9	-0.6
SBUM	Sibu	15.16	273		P	21 23 05.8	+1.6
FITZ	Fitzroy Crossi	19.65	185	P	P	21 23 52.5	-0.8
FITZ				IAmb	IAmb	21 24 08.3	
	comp=Z,108nm,1.9s						
WB0	Warramunga Arr	22.32	162	P	P	21 24 21.1	-0.5
WB0				IAmb	IAmb	21 24 21.7	
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	22.47	163	P	P	21 24 22.9	-0.1
WRAB				IAmb	IAmb	21 24 23.3	
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	22.48	163	P	P	21 24 22.6	-0.5
	comp=Z,7.9nm,0.6s,baz=344,slow=11,SNR=47						
WRA				PcP	PcP	21 28 11.9	-0.2
	comp=Z,0.8nm,1.0s,baz=5.8,slow=2.3,SNR=2.2						
WRA	Warramunga Arr	22.48	163	IAmb	IAmb	21 24 23.5	
	comp=Z,0.3nm,0.5s						
WB2	Warramunga Arr	22.48	163	P	P	21 24 22.9	-0.2
WB2				IAmb	IAmb	21 24 23.4	
	comp=Z,9.0nm,0.7s						
TPUB	Ta-pu	22.54	344	P	P	21 24 24.4	+0.7
WR0	Warramunga Arr	22.55	162	P	P	21 24 23.5	-0.3
WR0				IAmb	IAmb	21 24 24.1	
	comp=Z,9.5nm,0.7s						
AS31	Alice Springs	25.91	166	P	P	21 24 54.3	-0.1
ASAR	Alice Springs	25.91	166	P	P	21 24 54.0	-0.4
	comp=Z,1.6nm,0.6s,baz=343,slow=7.2,SNR=24						
ASAR				PcP	PcP	21 28 19.3	-0.2
	comp=Z,0.3nm,0.8s,baz=338,slow=2.2,SNR=1.5						
BBOO	Buckleboo	35.20	167	P	P	21 26 15.8	-0.2
KSRS	Korea Array	35.69	1	P	P	21 26 20.1	+0.1
	comp=Z,1.3nm,0.4s,baz=178,slow=9.8,SNR=5.0						
STKA	Stephens Creek	35.93	159	P	P	21 26 22.4	+0.3
	comp=Z,7.0nm,0.4s,baz=334,slow=9.4,SNR=24						
STKA	Stephens Creek	35.93	159	P	P	21 26 22.6	+0.4
USRK	Ussuriysk Ar.	42.62	5	P	P	21 27 15.5	-2.0
	comp=Z,1.7nm,0.8s,baz=203,slow=8.9,SNR=2.3						
SONM	Songino Array	49.51	342	P	P	21 28 11.0	-0.4
	comp=Z,0.3nm,0.6s,baz=156,slow=7.1,SNR=2.4						
PETK	Petropavlovsk-	57.16	21	P	P	21 29 07.0	-0.1
	comp=Z,2.8nm,1.0s,baz=197,slow=1.5,SNR=4.0						
PETK	Petropavlovsk-	57.16	21	P	P	21 29 06.8	-0.3
MLZ	Mavora Lakes	59.06	148	P	P	21 29 19.9	-0.5
MK31	Makanchi Array	59.66	326	P	P	21 29 25.3	+0.7
MK31				IAmb	IAmb	21 30 49.0	
	comp=Z,7.1nm,1.9s						
MKAR	Makanchi Array	59.66	326	P	P	21 29 25.1	+0.5
	comp=Z,0.9nm,0.3s,baz=114,slow=8.3,SNR=25						
MAKZ	Makanchi	59.84	326	P	P	21 29 26.4	+0.5
MAKZ				IAmb	IAmb	21 30 27.3	
	comp=Z,8.5nm,1.9s						
KURK	Kurchatov	63.87	328	P	P	21 29 52.9	+0.3
ABKAR	Akbulak array	74.19	321	P	P	21 30 59.3	+2.9
VNDA	Vanda	81.25	173	P	P	21 31 34.9	0.0
	comp=Z,1.1nm,0.7s,baz=338,slow=5.3,SNR=5.4						
VNDA	Vanda	81.25	173	IAmb	IAmb	21 31 52.5	
	comp=Z,14nm,1.8s						
BCPM	Bancas Point	90.14	30	P	P	21 32 19.9	+0.8
ARCES	ARCESS Array B	92.65	340	P	P	21 32 29.6	-0.9
	comp=Z,6.2nm,1.0s,baz=92,slow=7.2,SNR=2.1						

NEIC ***09*** *21:19:56.8±1.5, 43°.84N±0°.04×105°.24W±0°.02, h0^{km}±1^{km}, ML3.5/68, Error ellipse: s-maj=7.7km s-min=3.2km az=14.0*

IDC ***09*** *21:19:56.2±1.7, 43°.91N×105°.50W, h0^{km}, mb3.9/5, mb1 3.9/10, mb1mx3.6/58, mbtmp3.7/10, ML3.2/4, Error ellipse: s-maj=56.2km s-min=7.8km az=146.0*

ISC 09 21:19:55.9±0.7**, 43°.85N**±0°.07×**105°.24W**±0°.05**, h0^{km}, n91,** σ**1^{s}.13**/90**, mb4.0**/5**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	72	Pg	Pb	21 20 14.2	-0.5
K22A	Casper	1.52	219		Pn	21 20 22.9	-1.6
K22A				IAML		21 20 45.9	
	comp=E,697nm,0.8s						
K22A				IAML		21 20 47.0	
	comp=N,662nm,0.3s						
PHWY	Pilot Hill	2.55	184	Pn	Pn	21 20 38.4	-0.3
RWWY	Rawlins	2.60	215	Pn	Pn	21 20 40.1	+0.7
RWWY				IAML		21 21 18.6	
	comp=N,263nm,0.7s						
LAO	LASA Array	2.93	347		Pn	21 20 44.9	+1.1
LAO				IAML		21 21 37.0	
	comp=N,285nm,0.6s						
N23A	Red Feather La	3.00	190	Pn	Pn	21 20 45.0	+0.1
N23A				IAML		21 21 31.6	
	comp=N,179nm,0.7s						
N23A				IAML		21 21 36.0	
	comp=E,108nm,0.7s						
RLMT	Red Lodge	3.15	295		Pn	21 20 48.1	+1.1
RLMT				IAML		21 21 43.4	
	comp=E,100nm,0.7s						
RLMT				IAML		21 21 44.6	
	comp=E,109nm,0.5s						
BW06	Boulder Array	3.33	253	Pn	Pn	21 20 50.2	+0.7
BW06				IAML		21 21 43.4	
	comp=E,74nm,0.6s						
BW06				IAML		21 21 51.1	
	comp=E,66nm,0.8s						
PD31	Pinedale Array	3.33	253	Pn	Pn	21 20 50.0	+0.5
PDAR	Pinedale Array	3.33	253	Pn	Pn	21 20 50.3	+0.8
	comp=E,10nm,0.3s,baz=68,slow=16,SNR=85						
PDAR				Lg	Lg	21 21 35.4	
	comp=E,19nm,0.3s,baz=76,slow=38,SNR=3.6						
PDAR	Pinedale Array	3.33	253		Pn	21 20 50.0	+0.5
YNE	Yellowstone No	3.61	290		Pn	21 20 53.9	+0.6
YMP	Mirror Lake Pl	3.64	286		Pn	21 20 54.5	+0.7
OGNE	Ogallala	3.75	140	Pn	Pn	21 20 56.9	+1.9
OGNE				IAML		21 22 00.3	
	comp=E,154nm,0.8s						
LKWY	Lake	3.78	283		Pn	21 20 58.0	+2.4
LKWY				IAML		21 21 30.5	
	comp=E,61nm,0.7s						
H17A	Grant Village	3.88	280		Pn	21 20 59.0	+2.0
LOHW	Long Hollow	3.90	268		Pn	21 20 59.4	+2.2
FLWY	Flagg Ranch	3.95	275		Pn	21 20 59.0	+1.0
FLWY				IAML		21 22 11.1	
	comp=E,37nm,0.9s						
YPP	Pitchstone Pla	4.04	278		Pn	21 21 00.1	+0.9
ISCO	Idaho Springs	4.05	184	Pn	Pn	21 21 00.1	+0.7
REDW	Red Top Meadow	4.11	265		Pn	21 21 00.6	+0.5
REDW				IAML		21 22 16.6	
	comp=E,86nm,0.7s						
REDW				IAML		21 22 23.9	
	comp=E,80nm,0.8s						
YHH	Holmes Hill	4.14	285		Pn	21 21 03.0	+2.4
YMR	Madison River	4.20	283	Pn	Pn	21 21 01.5	+0.2
E28A	Huff	4.21	48		Pn	21 21 03.3	+1.9
E28A				IAML		21 22 17.7	
	comp=N,99nm,0.6s						
O20A	White River Ci	4.33	212	Pn	Pn	21 21 03.8	+0.6
O20A				IAML		21 22 12.6	
	comp=E,63nm,0.8s						
O20A				IAML		21 22 14.9	
	comp=N,70nm,0.7s						
YHB	Horse Butte	4.37	284		Pn	21 21 04.9	+1.1
YHL	Hebgen Lake	4.38	285		Pn	21 21 03.6	-0.3
AHID	Auburn Hatcher	4.41	258		Pn	21 21 05.5	+1.2
AHID				IAML		21 22 24.6	
	comp=N,60nm,0.9s						
AHID				IAML		21 22 25.3	
	comp=E,47nm,0.8s						
ECR	Eagle Creek	4.54	262		Pn	21 21 08.3	+2.3
QLMT	Earthquake Lak	4.55	285		Pn	21 21 06.8	+0.6
RDMU	Red Mountain	4.59	226	Pn	Pn	21 21 07.8	+1.1
DGMT	Dagmar	4.68	9	Pn	Pn	21 21 10.4	+2.6
SMCO	Snowmass	4.84	196		Pn	21 21 11.1	+0.7
SMCO				IAML		21 22 34.1	
	comp=E,33nm,0.6s						
SMCO				IAML		21 22 36.4	
	comp=E,26nm,0.8s						
Q24A	Divide	4.88	179		Pn	21 21 10.5	-0.3
Q24A				IAML		21 22 28.6	
	comp=N,22nm,0.7s						
Q24A				IAML		21 22 31.4	
	comp=E,40nm,0.6s						
K31A	O'Neill	4.89	102		Pn	21 21 12.8	+2.1
HWUT	Hardware Ranch	5.17	247		Pn	21 21 15.7	+1.0
HWUT				IAML		21 22 47.5	
	comp=E,38nm,0.6s						
HWUT				IAML		21 22 52.0	
	comp=E,36nm,0.7s						
KSCO	Kaye Shedlock'	5.21	157	Pn	Pn	21 21 14.6	-0.6
EGMT	Eagleton	5.23	325	Pn	Pn	21 21 15.7	+0.3
TCUT	Toone Canyon	5.32	241		Pn	21 21 17.8	+1.0
HRY	Holter Researc	5.46	304		Pn	21 21 19.5	+0.9
DLMT	Dillon	5.47	289		Pn	21 21 20.3	+1.6
LRM	Limekiln Ridge	5.50	294		Pb	21 21 32.5	-0.4
MDND	Maddock	5.61	43	Pn	Pn	21 21 23.4	+2.8
JLU	Jordanelle	5.64	237		Pn	21 21 22.4	+1.2
BGNE	Belgrade	5.77	113		Pn	21 21 22.4	-0.3
CTU	Camp Tracy	5.77	239		Pn	21 21 22.8	-0.1
SPUT	South Promonto	5.90	247		Pn	21 21 25.8	+1.1
HVU	Hansel Valley	5.92	252		Pn	21 21 25.1	+0.2
PV22	Blue Mesa, Par	5.94	208		Pn	21 21 26.6	+1.3
PV07	Paradox Valley	5.98	207		Pn	21 21 27.4	+1.6
P17A	Butcher Ranch,	6.01	225		Pn	21 21 27.2	+1.1
PV15	Paradox Valley	6.02	205	Pn	Pn	21 21 27.1	+0.7
PV10	Paradox Valley	6.17	209		Pn	21 21 30.4	+1.9
PV11	David Mesa, Pa	6.18	208		Pn	21 21 29.6	+1.0
PV19	Morning Glory	6.21	208	Pn	Pn	21 21 28.3	-0.7
PV03	Paradox Valley	6.22	207		Pn	21 21 29.7	+0.7
PV02	Paradox Valley	6.22	206	Pn	Pn	21 21 29.8	+0.6
PV01	Paradox Valley	6.24	205		Pn	21 21 29.8	+0.4
ECSD	EROS Data Cent	6.24	88		Pn	21 21 31.1	+1.9
PV18	Skein Mesa, Pa	6.25	208	Pn	Pn	21 21 28.7	-0.7
NLU	North Lily Min	6.41	235	Pn	Pn	21 21 31.4	-0.4
PV05	Paradox Valley	6.46	208		Pn	21 21 31.6	-0.8
BGU	Big Grassy Mou	6.47	246	Pn	Pn	21 21 32.2	-0.3
CBKS	Cedar Bluff	6.51	139	Pn	Pn	21 21 33.5	+0.6
Q16A	Castle Valley	6.64	224		Pn	21 21 34.8	-0.1
MSO	Missoula	6.82	299	Pn	Pn	21 21 38.7	+1.5
MVCO	Mesa Verde	7.08	202	Pn	Pn	21 21 41.6	+0.7
R32A	Long Quarter,	7.32	136	Pn	Pn	21 21 45.1	+1.1
JTMT	Jette	7.43	305	Pn	Pn	21 21 44.5	-1.1
MSU	Marysvale	7.47	227	Pn	Pn	21 21 46.8	+0.5
MVU	Marysvale	7.49	227		Pn	21 21 47.3	+0.7
TCRU	Three Creeks R	7.54	229		Pn	21 21 46.8	-0.5
MTPU	Mount Pierson	7.83	225	Pn	Pn	21 21 51.6	+0.3
WALA	Waterton Lakes	7.94	314	Pn	Pn	21 21 52.8	+0.2
ELK	Elko	8.04	251	Pn	Pn	21 21 55.2	+1.1
	comp=E,0.5nm,0.3s,baz=81,slow=9.4,SNR=6.4						
PKCU	Pink Cliffs	8.35	222	Pn	Pn	21 21 59.6	+1.1
PSUT	Pine Spring	8.39	234		Pn	21 21 59.3	+0.4
F36A	Milaca	8.56	72	Pn	Pn	21 22 00.6	-0.4
CCUT	Cedar City	8.81	227	Pn	Pn	21 22 05.9	+1.3
KAN14	Manchester OK	8.84	139	Pn	Pn	21 22 06.4	+1.6
I10CA	LAC DU BONNET	8.94	41	*i*		22 16 50.0	
	baz=222,slow=333,SNR=5.9						
KNB	Kanab	8.94	223	Pn	Pn	21 22 06.6	+0.2
ULM	Lac du Bonnet	9.04	42	Pn	Pn	21 22 07.1	-0.5
	comp=E,1.8nm,0.3s,baz=231,slow=12,SNR=19						
ULM				Pg		21 22 34.0	
	comp=E,0.9nm,0.3s,baz=230,slow=17,SNR=2.2						
ULM				Lg	Lg	21 24 36.0	
	comp=E,0.5nm,0.3s,baz=323,slow=20,SNR=1.9						
U15A	North Rim	9.17	218	Pn	Pn	21 22 10.3	+0.7
NVAR	Mina Array Bea	11.24	246	Pn	Pn	21 22 39.1	+1.2
	comp=E,0.2nm,0.3s,baz=50,slow=11,SNR=6.3						
YKA	Yellowknife Ar	19.47	347	P	P	21 24 23.4	-0.5
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=9.0						
ARCES	ARCESS Array B	61.31	18	P	P	21 30 11.9	-0.6
	comp=E,8.4nm,1.2s,baz=323,slow=5.7,SNR=4.2						
FINES	FINESS Array B	67.92	23	P	P	21 30 56.3	+0.4
	comp=E,2.0nm,0.9s,baz=327,slow=7.4,SNR=2.1						
ZALV	Zalesovo Beam	82.20	354	P	P	21 32 17.9	-0.5
	comp=E,0.6nm,0.5s,baz=353,slow=5.8,SNR=2.0						
SONM	Songino Array	84.55	339	P	P	21 32 30.8	0.0
	comp=E,0.2nm,0.6s,baz=15,slow=6.3,SNR=2.1						
MKAR	Makanchi Array	89.50	355	P	P	21 32 54.4	-0.4
	comp=E,0.4nm,0.6s,baz=15,slow=5.0,SNR=6.2						

PRU ***09*** *21:22:03.9±0.0, 51°.55N×16°.09E, h0^{km}*

IDC ***09*** *21:22:04.5±0.9, 51°.50N×16°.07E, h0^{km}, mb1 3.5/6, mb1mx3.1/50, mbtmp3.3/6, ML2.9/6, Error ellipse: s-maj=15.9km s-min=7.7km az=119.0*

VIE ***09*** *21:22:06.1±0.8, 51°.39N×16°.00E, h0^{km}, mb2.5/6, ml2.7/7, Error ellipse: s-maj=7.4km s-min=3.7km az=48.0 77 km WNW of Wroclaw Suspected Mining induced.*

ISC 09 21:22:01.6±0.7**, 51°.65N**±0°.03×**16°.09E**±0°.02**, h0^{km}, n37,** σ**1^{s}.11**/78**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.82	171	*i* Pg	Pg	21 22 17.7	+0.5
KSP				*e*Sg	Sg	21 22 27.4	-0.4
CHVC	Chvalec	1.06	181	*e*PG	Pg	21 22 22.5	+0.6
CHVC				*e*SG	Sg	21 22 35.2	-0.4
	comp=Z,59nm,0.4s						
OSTC	Ostas	1.10	176	*e*PG	Pg	21 22 23.1	+0.5
OSTC				*e*SG	Sg	21 22 36.0	-0.7
UPC	Upice	1.14	183	*e*PG	Pg	21 22 23.7	+0.2
UPC				*e*SG	Sg	21 22 37.6	-0.7
DPC	Dobruska-Polom	1.31	174	*e*PG	Pg	21 22 26.5	-0.1
DPC				*e*SG	Sg	21 22 41.4	-2.1
	comp=Z,61nm,0.6s						
PVCC	Panska Ves	1.48	221	*e*PG	Pg	21 22 30.3	+0.5
PVCC				*e*SG	Sg	21 22 49.2	+0.2
	comp=Z,211nm,0.2s						
BRG	Berggiesshubel	1.56	241	Pn	Pn	21 22 30.6	+0.1
BRG				Pg	Pg	21 22 32.3	+0.9
BRG				Sg	Sg	21 22 52.5	+0.9
BRG				Amp		21 22 52.9	
	comp=Z,110nm,0.3s						
BRG	Berggiesshubel	1.56	241	Pn	Pn	21 22 30.6	+0.1
BRG				Pg	Pg	21 22 32.3	+0.9
BRG				Sg	Sg	21 22 52.5	+0.9
BRG				Amp		21 22 52.9	
	comp=Z,110nm,0.3s						
KRLC	Kraliky	1.64	164	*e*PG	Pn	21 22 31.6	0.0
PRA	Prague	1.90	214	*e*PN	Pn	21 22 35.6	+0.4
PRA				*e*PG	Pb	21 22 37.3	+0.3
PRA				*e*SG	Sb	21 23 00.9	-0.4
PRU	Pruhonice	1.93	211	*e*PN	Pn	21 22 35.8	+0.1
PRU				*e*PG	Pb	21 22 37.9	+0.3
PRU				*e*SG	Sb	21 23 02.2	0.0
	comp=Z,29nm,0.4s						
CLL	Collm	1.96	261	*i* Pn	Pn	21 22 36.5	+0.4
	comp=Z,15nm,0.5s						
CLL				*e*Pg	Pg	21 22 40.0	+0.9
CLL				*i*		21 22 42.8	
CLL				*i* Sg	Sg	21 23 04.7	+0.1
	comp=Z,25nm,0.5s						
MORC	Moravsky Berou	2.09	153	*e*PN	Pn	21 22 37.7	-0.2
MORC				*e*SG	Sb	21 23 06.9	+0.1
OKC	Ostrava-Krasne	2.23	143	*e*SG	Sb	21 23 10.9	-0.1
VRAC	Vranov	2.37	172	Pn	Pn	21 22 42.7	+1.1
	comp=Z,2.6nm,0.3s,baz=353,slow=16,SNR=34						
VRAC				Lg	Lg	21 23 14.1	
	comp=Z,3.7nm,0.3s,baz=85,slow=20,SNR=6.5						
VRAC	Vranov	2.37	172	*e*PN	Pn	21 22 42.4	+0.8
VRAC				*e*SG	Sb	21 23 15.4	+0.7
PBCC	Pribram	2.38	215	*e*PN	Pn	21 22 41.5	-0.3
PBCC				*e*PG	Pb	21 22 46.0	+0.8
PBCC				*e*SG	Sb	21 23 15.9	+0.9
	comp=Z,9.4nm,0.5s						
KRUC	Moravsky	2.60	176	*e*PN	Pn	21 22 45.3	+0.5
KRUC				*e*SG	Sb	21 23 22.1	+0.7
NKC	Novy Kostel	2.71	240	*e*PN	Pn	21 22 47.4	+1.1
NKC				*e*PG	Pg	21 22 53.1	-0.3
NKC				*e*SG	Sg	21 23 28.5	+0.1
	comp=Z,48nm,0.4s						
OJC	Ojcow	2.75	120	*e*Pg	Pg	21 22 55.0	+0.8
OJC				*e*Sg	Sg	21 23 30.9	+1.2
KHC	Kasperske Hory	2.99	214	*e*PN	Pn	21 22 50.5	+0.2
KHC				*e*PG	Pb	21 22 56.6	+0.9

KHC				eSN	Sn	21 23 26.6	-0.2
KHC				eSG	Sg	21 23 36.0	-1.6
	comp=Z,12nm,0.6s						
GERES	GERESS Array B	3.20	210	Pn	Pn	21 22 54.4	+1.2
	comp=Z,1.3nm,0.3s,baz=30,slow=13,SNR=14						
GERES				Pg	Pb	21 23 00.3	+1.1
	comp=Z,3.3nm,0.3s,baz=31,slow=16,SNR=16						
GERES				Lg	Lg	21 23 41.2	
	comp=Z,3.8nm,0.3s,baz=34,slow=26,SNR=7.5						
LANS	Liptovska Anna	3.30	138	ePN	Pn	21 22 55.3	+0.7
LANS				ePG	Pg	21 23 04.7	-0.2
LANS				eSG	Sg	21 23 46.7	-1.0
LANS				eLG	Lg	21 23 52.7	
MODS	Modra-Piesok	3.37	166	ePG	Pg	21 23 05.0	-1.1
MODS				eSG	Sg	21 23 48.5	-1.2
BSD	Bornholm Skovb	3.54	349	i P	Pn	21 22 58.8	+1.1
BSD				eS	Sn	21 23 39.5	-0.8
BSD	Bornholm Skovb	3.54	349	eP	Pn	21 22 58.9	+1.1
BSD				eS	Sn	21 23 39.5	-0.8
VYHS	Vyhne	3.62	150	ePN	Pn	21 22 58.9	0.0
VYHS				ePG	Pg	21 23 12.5	+1.6
VYHS				eSG	Sg	21 23 58.8	+1.0
CONA	Conrad Observa	3.73	182	ePn	Pn	21 23 01.7	+1.3
	comp=Z,1.5nm,0.2s,SNR=5.4						
CONA				Sg	Sg	21 23 59.6	-1.6
	comp=Z,6.2nm,0.2s						
MOA	Molln	3.98	198	i Pn	Pn	21 23 04.6	+0.7
	comp=Z,6.1nm,0.3s,SNR=18						
MOA				Sg	Sg	21 24 07.7	-1.8
	comp=Z,8.4nm,0.4s						
ARSA	Arzberg	4.42	185	ePn	Pn	21 23 11.7	+1.8
	comp=Z,1.8nm,0.3s						
ARSA				Sg	Sg	21 24 23.9	+0.5
	comp=Z,5.8nm,0.5s						
KOLS	Kolonicke sedl	4.80	122	ePN	Pn	21 23 16.0	+0.8
KOLS				ePG	Pg	21 23 36.6	+3.0
KOLS				eSG	Sg	21 24 35.8	0.0
KBA	Koelnbreinsper	4.91	202	ePn	Pn	21 23 17.9	+1.1
	comp=Z,3.1nm,0.3s,SNR=5.4						
SQTA	Sankt Quirin	5.46	218	ePn	Pn	21 23 26.0	+1.8
	comp=Z,1.6nm,0.3s,SNR=5.0						
DAVOX	Davos/Dischmat	6.35	222	Pn	Pn	21 23 38.7	+2.2
	comp=Z,0.1nm,0.3s,baz=47,slow=19,SNR=1.7						
DAVOX				Lg	Lg	21 25 19.6	
	comp=Z,0.2nm,0.3s,baz=76,slow=4.2,SNR=1.7						
AKASG	Malin Array Be	8.31	91	Pn	Pn	21 24 02.9	-0.3
	comp=Z,0.4nm,0.3s,baz=281,slow=12,SNR=4.7						
FINES	FINESS Array B	11.24	25	Pn	Pn	21 24 43.7	+0.4
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=6.6						
FINES				Sn	Sn	21 26 44.8	-4.7
	comp=Z,0.2nm,0.3s,baz=210,slow=22,SNR=5.6						
ARCES	ARCESS Array B	18.49	10	Pn	P	21 26 17.0	-1.8
	baz=192,slow=13,SNR=1.2						

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*ISK **09** 21:25:41.9, 43°.09N×40°.95E, h26^{km}, ML2.7/3*
*TIF **09** 21:25:42.1, 42°.97N×41°.33E, h14^{km}±1^{km}*
*DDA **09** 21:25:43.3, 42°.68N×41°.06E, h7^{km}±2^{km}, ML2.5*
*MOS **09** 21:25:43.7±0.0, 43°.01N×41°.40E, h4^{km}, MPVA3.5*
*NORS **09** 21:25:43.0±0.0, 42°.97N×41°.47E, h4^{km}, MPVA3.5*
ISC 09 21:25:42.9±1.1, **42°.92N**±0°.02×**41°.31E**±0°.02, **h11**^{km}±9^{km}, **n40**, σ**1^{s}.33**/79, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.61	109	P	Pg	21 25 54.8	0.0
CHVG				S	Sg	21 26 03.7	+0.9
VSLR	Vesyoloye	1.07	300	ePg	Pn	21 26 04.5	+0.5
VSLR				eSg	Sn	21 26 20.1	+1.2
RPOR	Krasnaya Polya	1.08	316	ePg	Pn	21 26 04.3	+0.1
RPOR				eSg	Sn	21 26 20.3	+1.1
AHMR	Akhmetovskaya	1.25	351	ePg	Pn	21 26 07.4	+1.0
AHMR				eSg	Sn	21 26 24.0	+0.8
SOC	Sochi	1.33	300	ePg	Pg	21 26 08.7	+0.2
SOC				eSg	Sn	21 26 26.7	+1.5
TKB	Tkibuli	1.37	114	P	Pn	21 26 08.4	+0.4
TKB				S	Sg	21 26 27.4	+0.3
GUZR	Guzeripl'	1.38	322	ePg	Pg	21 26 10.8	+1.4
GUZR				eSg	Sn	21 26 29.8	+3.4
KBZ	Khabaz	1.41	55	ePg	Pn	21 26 08.4	-0.1
KBZ				eSg	Sb	21 26 26.3	-1.0
KIV	Kislovodsk	1.44	44	PN	Pn	21 26 08.5	-0.6
KIV				SN	Sb	21 26 27.3	-1.0
KIV	Kislovodsk	1.44	44	ePg	Pn	21 26 09.0	-0.1
KIV				eSg	Sb	21 26 27.2	-1.1
KIV0	Kislovodsk Arr	1.45	44	i Pg	Pn	21 26 09.3	+0.1
KIV0				eSg	Sb	21 26 27.5	-0.9
BEYR	Belyy Ugol+	1.55	45	ePg	Pb	21 26 11.1	-0.5
BEYR				eSg	Sn	21 26 30.4	-0.2
DBOC	Borcka	1.60	170	i P	Pn	21 26 10.3	-0.9
DBOC				i S	Sn	21 26 30.6	-1.3
DBOC				IAML		21 26 31.0	
	comp=E,130nm,0.2s						
ABS	Abastumani	1.62	136	P	Pn	21 26 12.0	+0.5
ABS				S	Sb	21 26 35.1	+1.8
DIGR	Digorskoe uzhe	1.67	90	ePg	Pg	21 26 14.6	-0.4
DIGR				eSg	Sg	21 26 37.3	+0.6
LZRR	Lazarevskoye	1.73	306	ePg	Pg	21 26 15.7	-0.4
LZRR				eSg	Sg	21 26 40.1	+1.6
PYA1	Pyatigorsk	1.73	48	ePg	Pg	21 26 15.2	-0.9
PYA1				eSg	Sb	21 26 35.7	-0.9
EPOS	Posof	1.77	143	i P	Pb	21 26 15.6	+0.1
EPOS				IAML		21 26 26.0	
	comp=N,38nm,1.0s						
EPOS				IAML		21 26 36.0	
	comp=E,56nm,0.7s						
EPOS				i S	Sn	21 26 37.6	+1.4
KBTC	Kuba-Taba	1.77	59	ePg	Pg	21 26 16.5	-0.5
KBTC				eSg	Sg	21 26 40.0	-0.1
LSNR	Lesken	1.88	78	ePg	Pb	21 26 17.5	+0.2
LSNR				eSg	Sb	21 26 41.2	+0.4
ZEI	Tsey	1.91	93	ePg	Pb	21 26 18.4	+0.4
ZEI				eSg	Sg	21 26 45.2	+0.7
DBAD	Bademkaya	1.93	171	i P	Pn	21 26 15.2	-0.5
DBAD				i S	Sn	21 26 36.8	-3.2
DBAD				IAML		21 26 40.0	
	comp=N,52nm,0.2s						
DBAD				IAML		21 26 49.0	
	comp=E,46nm,0.4s						
KORR	Kora	2.03	84	ePg	Pb	21 26 20.0	+0.1
KORR				eSg	Sb	21 26 46.2	+1.0
STDR	Stavd-Durt	2.07	77	ePg	Pb	21 26 21.0	+0.5
STDR				eSg	Sb	21 26 47.1	+0.9
ALER	Alexandrovskoy	2.18	32	ePg	Pb	21 26 21.7	-0.6
ALER				eSg	Sb	21 26 48.0	-1.3
ARNR	Ardon	2.20	82	ePg	Pb	21 26 22.1	-0.6
ARNR				eSg	Sg	21 26 51.6	-1.9
LACR	Lac	2.20	91	ePg	Pb	21 26 22.3	-0.5
LACR				eSg	Sg	21 26 52.0	-1.7
KTUT	Trabzon	2.25	211	PN	Pn	21 26 18.5	-1.6
KTUT				SN	Sn	21 26 45.8	-2.0
MACK	Trabzon	2.29	211	i P	Pn	21 26 19.4	-1.2
MACK				i S	Sn	21 26 47.6	-1.2
MACK				IAML		21 26 49.0	
	comp=E,43nm,0.3s						
MACK				IAML		21 26 53.0	
	comp=N,38nm,0.3s						
GUDG	Gudauri	2.38	100	P	Pb	21 26 26.4	+0.5
GUDG				S	Sg	21 26 58.1	-1.4
GUDG	Gudauri	2.38	100	ePn	Pb	21 26 25.5	-0.5
GUDG				eSn	Sb	21 26 57.4	+1.9
GOF	Gofitskoye	2.48	30	ePn	Pb	21 26 25.7	-1.7
GOF				eSn	Sb	21 26 56.7	-1.2
SENK	Senkaya-Erzuru	2.49	161	PN	Pn	21 26 25.5	+2.0
SENK				SN	Sn	21 26 57.3	+3.3
KRIK	Erzurum-spir	2.60	186	i P	Pn	21 26 26.0	+0.9
KRIK				i S	Sn	21 26 56.9	+0.1
BAYT	Aydıntepe-Bayb	2.67	199	PN	Pn	21 26 25.8	-0.3
BAYT				SN	Sn	21 26 57.9	-0.6
BAYB	BAYBURT	2.77	197	i P	Pn	21 26 28.0	+0.5
BAYB				i S	Sn	21 27 00.2	-0.9
ESPY	Espiye-Giresun	2.78	225	PN	Pn	21 26 25.4	-2.0
ESPY				SN	Sn	21 26 57.2	-3.7
AKDA	Akdag	2.82	179	i P	Pn	21 26 30.2	+2.2
ALUC	Giresun/Alucra	3.20	217	i P	Pn	21 26 33.1	-0.2
ALUC				i S	Sn	21 27 11.3	-0.2
ALUC				IAML		21 27 19.0	
	comp=N,20nm,0.5s						
ALUC				IAML		21 27 27.0	
	comp=E,15nm,0.5s						
LGD	Lagodekhi	3.82	105	P	Pb	21 26 50.5	+0.2
LGD				S	Sb	21 27 39.9	+3.4

IDC 09 21:32:10.4±2.2, **6°.80S**×**129°.15E**, **h0**^{km}, **mb3.1**/1, **mb1 3.7**/5, **mb1mx3.5**/32, **mbtmp3.6**/5, **ML3.6**/4, **Error ellipse: s-maj=53.6km s-min=29.7km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.39	238	Pn	Pn	21 33 47.4	+1.4
	2.6nm,0.3s,baz=354,slow=16,SNR=1.3						
BATI				Sn	Sn	21 34 50.8	-9.0
	4.3nm,0.3s,baz=159,slow=8.6,SNR=2.1						
FITZ	Fitzroy Crossi	11.74	197	Pn	Pn	21 34 57.3	-2.0
	0.2nm,0.3s,baz=13,slow=12,SNR=9.0						
FITZ				Sn	Sn	21 36 52.7	-19
	0.3nm,0.3s,baz=315,slow=20,SNR=6.0						
WRA	Warramunga Arr	14.01	159	Pn	Pn	21 35 30.1	-0.2
	0.3nm,0.3s,baz=341,slow=13,SNR=12						
WRA				Sn	Sn	21 37 55.9	-11
	0.1nm,0.3s,baz=329,slow=22,SNR=1.4						
ASAR	Alice Springs	17.39	165	P	P	21 36 15.8	-0.2
	0.2nm,0.3s,baz=335,slow=9.1,SNR=12						
ASAR				S	Sn	21 39 15.2	-14
	0.1nm,0.3s,baz=4.0,slow=28,SNR=2.1						
MKAR	Makanchi Array	67.59	327	P	P	21 43 08.8	-0.1
	0.2nm,0.8s,baz=122,slow=5.5,SNR=2.2						

NOU 09 21:38:55.8, 14°.67S×167°.06E, h40^{km}**, MLv4.6, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.79	170	P	Pn	21 39 10.9	+0.5
DVP	Devils Point	3.23	161	P	Pn	21 39 43.9	-0.1
KOUNC	Koumac, New Ca	6.42	204	P	Pn	21 40 27.7	-0.1
YATNC	Mamie plateau,	7.35	181	P	Pn	21 40 39.6	-1.1
DZM	Mont Dzumac	7.38	184	P	Pn	21 40 40.3	-0.9
NOUC	Port Laguerre	7.43	185	P	Pn	21 40 42.6	+0.9
OUENC	Ouen Island, N	7.71	182	P	Pn	21 40 46.2	+0.6

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*KRSC **09** 21:43:37.7±0.8, 54°.11N×159°.79E, h139^{km}±9^{km}, ML4.4*
*MOS **09** 21:43:38.6±0.9, 54°.22N×159°.41E, h148^{km}, mb4.1/12, Error ellipse: s-maj=8.9km s-min=4.0km az=74.4*
*IDC **09** 21:43:39.7±0.6, 54°.36N×159°.21E, h138^{km}±6^{km}, mb3.8/30, mb1 4.0/33, mb1mx3.9/57, mbtmp4.3/33, Error ellipse: s-maj=13.0km s-min=7.0km az=149.0*
*NEIC **09** 21:43:39.5±1.6, 54°.36N±0°.05×159°.3E±0°.1, h134^{km}±5^{km}, mb4.4/157, Error ellipse: s-maj=10.6km s-min=7.9km az=101.0*
ISC 09 21:43:39.3±0.4, **54°.15N**±0°.03×**159°.58E**±0°.03, **h142**^{km}±4^{km}, **n337**, σ**1^{s}.32**/386, **mb4.3**/124, **9C-7D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRX	Arik	0.97	215	PN	Pn	21 44 03.3	+0.1
KRX				S	Sn	21 44 21.4	+0.1
KRX	Arik	0.97	215	eP	Pn	21 44 03.3	+0.1
KRX				eS	Sn	21 44 21.4	+0.1
KRER	Koryakskii	0.98	210	PN	Pn	21 44 03.7	+0.3
KRER	Koryakskii	0.98	210	i P	Pn	21 44 03.7	+0.3
NLC	Nalytchevo	0.99	188	PN	Pn	21 44 02.8	-0.4
NLC				S	Sn	21 44 20.5	-0.8
NLC	Nalytchevo	0.99	188	i P	Pn	21 44 02.8	-0.4
NLC				eS	Sn	21 44 20.5	-0.8
SMAR	Somma	1.00	208	PN	Pn	21 44 03.7	+0.1
SMAR				S	Sn	21 44 21.9	-0.1
SMAR	Somma	1.00	208	eP	Pn	21 44 03.7	+0.1
SMAR				eS	Sn	21 44 21.9	-0.1
AVH	Avacha	1.02	210	PN	Pn	21 44 04.0	+0.4
AVH				S	Sn	21 44 22.4	+0.4
AVH	Avacha	1.02	210	eP	Pn	21 44 04.0	+0.4
AVH				eS	Sn	21 44 22.4	+0.4
KOK	Koryaka	1.03	213	PN	Pn	21 44 04.0	+0.3
KOK	Koryaka	1.03	213	eP	Pn	21 44 04.0	+0.3
UGLR	Uglovaya	1.05	206	PN	Pn	21 44 03.9	0.0
UGLR				S	Sn	21 44 22.2	-0.3
UGLR	Uglovaya	1.05	206	eP	Pn	21 44 03.9	0.0
UGLR				eS	Sn	21 44 22.2	-0.3
KZV	Kizimen	1.05	23	PN	Pn	21 44 03.6	-0.3
KZV				S	Sn	21 44 21.4	-1.3
KZV	Kizimen	1.05	23	i P	Pn	21 44 03.6	-0.3
KZV				eS	Sn	21 44 21.4	-1.3
GNL	Ganaly	1.07	245	PN	Pn	21 44 04.1	0.0
GNL				S	Sn	21 44 22.2	-0.7
GNL	Ganaly	1.07	245	i P	Pn	21 44 04.1	0.0
GNL				eS	Sn	21 44 22.2	-0.7
SPN	Mys Shipunski	1.09	166	PN	Pn	21 44 03.0	-1.1
SPN				S	Sn	21 44 20.4	-2.5
SPN	Mys Shipunski	1.09	166	i P	Pn	21 44 03.0	-1.1
SPN				eS	Sn	21 44 20.4	-2.5
TUMR	Tumrok	1.18	16	PN	Pn	21 44 05.2	+0.1
TUMR				S	Sn	21 44 24.5	-0.3
TUMR	Tumrok	1.18	16	i P	Pn	21 44 05.2	+0.1
TUMR				eS	Sn	21 44 24.5	-0.3
DALK	Dalny	1.23	204	PN	Pn	21 44 05.2	-0.2
DALK				S	Sn	21 44 24.9	-0.3
DALK	Dalny	1.23	204	i P	Pn	21 44 05.2	-0.2
DALK				eS	Sn	21 44 24.9	-0.3
PET	Petropavlovsk	1.26	206	⇑iPN	Pn	21 44 05.6	-0.1
PET				eS	Sn	21 44 25.2	-0.6
PET				pmax	pmax		
	comp=Z,206nm,0.5s						
PET				smax	smax		
	comp=N,914nm,0.6s						
PET				smax	smax		
	comp=E,813nm,0.5s						
PET	Petropavlovsk	1.26	206	eP	Pn	21 44 05.6	-0.1
PET				eS	Sn	21 44 25.0	-0.8
PET	Petropavlovsk	1.26	206	Pn	Pn	21 44 05.5	-0.1
PET				Sn	Sn	21 44 25.6	-0.2
PEA0B	Petropavlovsk-	1.53	228	c iPN	Pn	21 44 08.6	0.0
PEA0B	Petropavlovsk-	1.53	228	Pn	Pn	21 44 08.8	+0.2
PETK	Petropavlovsk-	1.53	228	P	Pn	21 44 08.7	+0.1
	comp=E,93nm,0.3s,baz=70,slow=17,SNR=1660						
PETK				S	Sn	21 44 30.8	-0.2
	comp=E,14nm,0.3s,baz=70,slow=17,SNR=2.1						
PETK				LR	LR	21 44 47.5	
	comp=E,172nm,19.1s,baz=87,slow=44						
PETK	Petropavlovsk-	1.53	228		Pn	21 44 08.5	-0.1
KRMR	Karymshinskiy	1.58	214	PN	Pn	21 44 09.8	+0.7
KRMR				S	Sn	21 44 32.4	+0.5
KRMR	Karymshinskiy	1.58	214	i P	Pn	21 44 09.8	+0.7
KRMR				eS	Sn	21 44 32.4	+0.5
KMNR	Kamenistaya	1.65	13	PN	Pn	21 44 10.3	+0.3
KMNR				S	Sn	21 44 33.8	+0.3
KMNR	Kamenistaya	1.65	13	eP	Pn	21 44 10.3	+0.3
KMNR				eS	Sn	21 44 33.8	+0.3
RUS	Russkaya	1.84	201	PN	Pn	21 44 11.7	-0.3
RUS				S	Sn	21 44 35.8	-1.2
RUS	Russkaya	1.84	201	eP	Pn	21 44 11.7	-0.3
RUS				eS	Sn	21 44 35.8	-1.2
GRL	Gorelyy	1.84	210	PN	Pn	21 44 12.9	+0.7
GRL	Gorelyy	1.84	210	eP	Pn	21 44 12.9	+0.7
ESO	Esso	1.85	344	PN	Pn	21 44 12.5	+0.4
ESO				S	Sn	21 44 37.2	-0.1
ESO	Esso	1.85	344	i P	Pn	21 44 12.5	+0.4
ESO				eS	Sn	21 44 37.2	-0.1
MTVR	Mutnovka	1.87	207	PN	Pn	21 44 13.0	+0.4
MTVR				S	Sn	21 44 38.2	+0.2
MTVR	Mutnovka	1.87	207	eP	Pn	21 44 13.0	+0.4
MTVR				eS	Sn	21 44 38.2	+0.2
APC	Apacha	1.90	231	PN	Pn	21 44 13.5	+0.8
APC				S	Sn	21 44 39.3	+1.1
APC	Apacha	1.90	231	eP	Pn	21 44 13.5	+0.8
APC				eS	Sn	21 44 39.3	+1.1
KOZ	Kozyrevsk	1.92	5	PN	Pn	21 44 12.4	-0.5
KOZ	Kozyrevsk	1.92	5	eP	Pn	21 44 12.4	-0.5
ASAK	Asacha	2.04	210	PN	Pn	21 44 15.2	+0.7
ASAK				S	Sn	21 44 41.6	+0.2
ASAK	Asacha	2.04	210	eP	Pn	21 44 15.2	+0.7
ASAK				eS	Sn	21 44 41.6	+0.2
SRDR	Sredinnyy	2.17	2	PN	Pn	21 44 16.3	+0.3
SRDR	Sredinnyy	2.17	2	eP	Pn	21 44 16.3	+0.3
KLY	Klyuchi	2.25	15	PN	Pn	21 44 17.6	+0.7
KLY				S	Sn	21 44 46.0	+0.2
KLY	Klyuchi	2.25	15	eP	Pn	21 44 17.6	+0.7
KLY				eS	Sn	21 44 46.0	+0.2
KDTR	Khodutka, Kamc	2.52	202	PN	Pn	21 44 19.8	-0.4
KDTR				S	Sn	21 44 49.7	-2.0
KDTR	Khodutka, Kamc	2.52	202	eP	Pn	21 44 19.8	-0.4
KDTR				eS	Sn	21 44 49.7	-2.0
MIPR	Malaya Ipel'ka	2.53	223	PN	Pn	21 44 20.7	+0.3
MIPR	Malaya Ipel'ka	2.53	223	eP	Pn	21 44 20.7	+0.3
BDR	Baidarnaya	2.59	20	PN	Pn	21 44 21.6	+0.4
BDR				S	Sn	21 44 52.6	-0.9
BDR	Baidarnaya	2.59	20	eP	Pn	21 44 21.6	+0.4
BDR				eS	Sn	21 44 52.6	-0.9
SMKR	Semkarok	2.66	23	PN	Pn	21 44 22.3	+0.2
SMKR	Semkarok	2.66	23	eP	Pn	21 44 22.3	+0.2
SRKR	Sorokina	2.67	19	PN	Pn	21 44 22.4	+0.3
SRKR	Sorokina	2.67	19	eP	Pn	21 44 22.4	+0.3
KBG	Krutoberegovo	2.77	39	PN	Pn	21 44 22.9	-0.4
KBG				S	Sn	21 44 54.8	-2.4
KBG	Krutoberegovo	2.77	39	eP	Pn	21 44 22.9	-0.4
KBG				eS	Sn	21 44 54.8	-2.4
KBTR	Krutoberegovo	2.77	41	PN	Pn	21 44 23.1	-0.3
KBTR				S	Sn	21 44 54.7	-2.7
KBTR	Krutoberegovo	2.77	41	eP	Pn	21 44 23.1	-0.3
KBTR				eS	Sn	21 44 54.7	-2.7
PAU	Pauzhetka	3.17	213	PN	Pn	21 44 30.5	+2.0
PAU	Pauzhetka	3.17	213	eP	Pn	21 44 30.5	+2.0
BKI	Bering	3.86	72	PN	Pn	21 44 36.1	-1.3
BKI	Bering	3.86	72	eP	Pn	21 44 36.1	-1.3
BKI				eS	Sn	21 45 17.3	-5.1
SKR	Severo-Kuril’s	4.07	213	ePN	Pn	21 44 26.2	-14
SKR				eS	Sn	21 45 26.9	-0.6
SKR				pmax	pmax		
	comp=Z,17nm,0.4s						
SKR				smax	smax		
	comp=N,54nm,0.3s						
SKR				smax	smax		
	comp=E,81nm,0.3s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
PALN	Palana	4.95	2	PN	Pn	21 44 52.9	+1.1
PALN	Palana	4.95	2	eP	Pn	21 44 52.9	+1.1
OSSR	Ossora	5.46	19	PN	Pn	21 45 00.2	+1.7
OSSR	Ossora	5.46	19	eP	Pn	21 45 00.2	+1.7
MA2	Magadan	7.27	322	PN	Pn	21 45 16.9	-5.8
MA2	Magadan	7.27	322	Pn	Pn	21 45 16.9	-5.9
SMY	Shemya	8.79	93	PN	Pn	21 45 43.6	+0.5
SMY	Shemya	8.79	93	Pn	Pn	21 45 43.6	+0.5
JKA	Kamikawa-asahi	14.94	235		P	21 47 05.1	-0.1
ASAJ	Asahikawa	14.94	235	P	P	21 47 04.8	-0.5
	comp=Z,2.4nm,0.3s,baz=71,slow=4.8,SNR=13						
ATKA	Atka Island	15.81	86	Pn	Pn	21 47 12.9	-1.1
ATKA				IAmb	IAmb	21 47 17.5	
	comp=Z,32nm,1.0s						
ERM	Erimo	16.32	229	P	Pn	21 47 18.5	-1.7
ERM				pmax	pmax		
	comp=Z,37nm,0.6s						
ERM	Erimo	16.32	229	Pn	Pn	21 47 18.5	-1.7
JEW	Eniwo	16.45	234		Pn	21 47 21.4	-0.4
YAK	Yakutsk	17.52	309	P	P	21 47 32.8	-0.8
	comp=Z,0.5nm,0.3s,baz=55,slow=2.4,SNR=11						
YAK	Yakutsk	17.52	309	eP	P	21 47 32.8	-0.8
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK	Yakutsk	17.52	309	P	P	21 47 33.3	-0.2
KLR	Kul'dur	17.88	265	P	Pn	21 47 38.2	-0.7
	comp=E,0.6nm,0.3s,baz=70,slow=9.2,SNR=20						
KLR	Kul'dur	17.88	265	ceP	Pn	21 47 39.0	+0.1
NIKH	Nikolski High	18.71	81	P	Pn	21 47 48.9	+0.2
ZEA	Zeya	18.95	282	eP	P	21 47 49.5	+0.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
UNV	Unalaska Valle	19.83	77	P	P	21 48 00.5	+1.8
AKUT	Akutan	20.18	76	P	Pn	21 48 04.6	-1.2
ANM	Nome	20.39	45	P	P	21 48 06.4	+1.8
ANM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ANM	Nome	20.39	45	P	P	21 48 06.4	+1.8
USA0B	Ussuriysk Arra	20.48	252	P	P	21 48 06.5	+0.8
USA0B				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USA0B	Ussuriysk Arra	20.48	252	P	P	21 48 06.5	+0.8
USRK	Ussuriysk Ar.	20.48	252	P	P	21 48 04.6	-1.1
	comp=Z,0.9nm,0.4s,baz=53,slow=12,SNR=6.9						
USRK	Ussuriysk Ar.	20.48	252	P	P	21 48 05.0	-0.8
USRK	Ussuriysk Ar.	20.48	252	P	P	21 48 05.0	-0.8
JMM	Marumori	20.76	226	P	P	21 48 09.7	+0.8
TIXI	Tiksi	21.99	334	⇑eP	P	21 48 20.6	-0.9
TIXI	Tiksi	21.99	334	P	P	21 48 20.8	-0.8
RDOG	Red Dog Mine	22.36	37	P	P	21 48 26.0	+0.6
RDOG				IAmb	IAmb	21 48 27.8	
	comp=Z,13nm,1.1s						
MAJO	Matsushiro	22.99	229	⇓eP	P	21 48 32.0	+0.4
MAJO				pmax	pmax		
	comp=Z,19nm,0.7s						
MAJO	Matsushiro	22.99	229	P	P	21 48 32.5	+0.9
MAT	Matsushiro	22.99	229	P	P	21 48 32.0	+0.4
MJAR	Matsushiro Arr	22.99	229	P	P	21 48 31.8	+0.2
	comp=Z,4.1nm,0.4s,baz=322,slow=12,SNR=20						
MJAR	Matsushiro Arr	22.99	229	P	P	21 48 32.2	+0.6
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MJAR	Matsushiro Arr	22.99	229	P	P	21 48 32.2	+0.6
CNBA	Chernabura Isl	23.50	72	P	P	21 48 36.1	+0.1
CHGN	Chignik	23.79	68	P	P	21 48 39.4	+0.8
JGF	Kuroka	24.16	229	P	P	21 48 43.9	+1.7
JGF				IAmb	IAmb	21 48 44.3	
	comp=Z,17nm,1.0s						
TTA	Tatalina	24.31	51	P	P	21 48 44.8	+1.4
TTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TTA	Tatalina	24.31	51	P	P	21 48 44.8	+1.4
INU	Inuyama	24.52	229	P	P	21 48 46.8	+1.4
INU				IAmb	IAmb	21 48 49.4	
	comp=Z,9.5nm,1.0s						
HIA	Hailar	24.92	275	deP	P	21 48 48.3	-0.7
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JWT	Wachi	25.30	232	P	P	21 48 52.8	+0.2
JWT				IAmb	IAmb	21 48 59.3	
	comp=Z,17nm,1.1s						
IMAR	Indian Mountai	25.44	44	P	P	21 48 54.2	+0.7
A21K	Barrow	25.53	31	P	P	21 48 55.1	+0.9
A21K				IAmb	IAmb	21 48 57.8	
	comp=Z,7.9nm,0.7s						
RSO	Redoubt South	26.01	57		S	21 53 24.4	+5.4
PPLA	Purkeypile	26.06	51	P	P	21 49 00.7	+1.5
PPLA				IAmb	IAmb	21 49 10.0	
	comp=Z,7.3nm,1.1s						
OHAK	Old Harbor	26.33	64	P	P	21 49 02.1	+0.6
KDAK	Kodiak Island	26.57	63	P	P	21 49 03.7	0.0
	comp=Z,6.4nm,0.7s,baz=315,slow=4.9,SNR=7.8						
KDAK	Kodiak Island	26.57	63	P	P	21 49 04.1	+0.4
KDAK				IAmb	IAmb	21 49 18.0	
	comp=Z,17nm,1.1s						
KTH	Kantishna Hill	26.60	50	P	P	21 49 05.2	+1.2
JHS	Saijyo	26.61	235	P	P	21 49 06.3	+2.0
JHS				IAmb	IAmb	21 49 24.1	
	comp=Z,13nm,1.0s						
SUA	Susitna One	26.86	54	P	P	21 49 07.1	+0.7
SUA				IAmb	IAmb	21 49 15.2	
	comp=Z,8.6nm,1.0s						
TRF	Thorofare Moun	26.89	50	P	P	21 49 07.1	+0.4
CNPM	China Poot	26.91	58	P	P	21 49 07.6	+0.8
CNPM				IAmb	IAmb	21 49 15.4	
	comp=Z,15nm,1.0s						
BRLK	Bradley Lake	27.04	58	P	P	21 49 09.1	+1.1
BRLK				IAmb	IAmb	21 49 10.6	
	comp=Z,9.5nm,1.0s						
I23K	Minto, Yukon-K	27.23	46	P	P	21 49 11.4	+1.9
TOLK	Toolik Lake Re	27.31	38	P	P	21 49 11.6	+1.3
RND	Reindeer	27.54	50	P	P	21 49 12.8	+0.4
RND				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RND	Reindeer	27.54	50	P	P	21 49 12.8	+0.4
GHO	Glory Hole Cre	27.68	53	P	P	21 49 14.4	+0.7
GHO				IAmb	IAmb	21 49 26.1	
	comp=Z,6.6nm,1.1s						
SEW	Seward	27.69	57	P	P	21 49 14.1	+0.4
SEW				IAmb	IAmb	21 49 16.7	
	comp=Z,8.1nm,0.8s						
WRH	Wood River Hil	27.80	47	P	P	21 49 16.1	+1.5
COLA	College	27.88	46	⇓eP	P	21 49 16.6	+1.3

COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CCB	Clear Creek Bu	27.91	47	P	P	21 49 16.3	+0.7
KNK	Knik Glacier	27.95	54	P	P	21 49 17.2	+1.2
KNK				IAmb	IAmb	21 49 19.3	
	comp=Z,4.7nm,0.6s						
SML	Sawmill	27.95	53	P	P	21 49 17.1	+1.0
SML				IAmb	IAmb	21 49 18.6	
	comp=Z,7.0nm,0.8s						
DHY	Denali Highway	28.23	50	P	P	21 49 18.5	-0.2
HDA	Harding Lake	28.30	47	P	P	21 49 19.1	0.0
IL31		28.30	47	P	P	21 49 19.9	+0.9
ILAR	Eielson Array	28.30	47	P	P	21 49 19.6	+0.6
	comp=Z,1.4nm,0.5s,baz=268,slow=9.2,SNR=20						
ILAR				pP	pP	21 49 49.7	+0.5
	comp=Z,1.0nm,0.8s,baz=264,slow=7.5,SNR=4.0						
SCM	Sheep Creek Mo	28.42	53	P	P	21 49 21.2	+0.9
SCM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SCM	Sheep Creek Mo	28.42	53	P	P	21 49 21.2	+0.9
SCM				IAmb	IAmb	21 49 28.1	
	comp=Z,5.8nm,1.1s						
PRP	Porcupine Dome	28.82	45	P	P	21 49 25.3	+1.4
PRP				IAmb	IAmb	21 49 26.4	
	comp=Z,6.5nm,1.0s						
M24K	Tolsona, Glenn	28.92	52	P	P	21 49 25.9	+1.2
M24K				IAmb	IAmb	21 49 26.7	
	comp=Z,8.7nm,1.0s						
FID	Port Fidalgo	29.02	55	P	P	21 49 25.7	+0.2
FID				IAmb	IAmb	21 49 33.9	
	comp=Z,13nm,1.0s						
HIN	Hinchinbrook I	29.07	56	P	P	21 49 27.4	+1.4
PAX	Paxson	29.11	50	P	P	21 49 26.8	+0.4
PAX				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PAX	Paxson	29.11	50	P	P	21 49 26.8	+0.4
BMAR	Burnt Mountain	29.13	41	P	P	21 49 26.0	-0.5
KLU	Klutina	29.14	53	P	P	21 49 27.5	+0.8
JNU	Nakatsue	29.22	236	P	P	21 49 28.1	+0.5
	comp=Z,6.7nm,0.9s,baz=352,slow=8.5,SNR=5.4						
JNU	Nakatsue	29.22	236	P	P	21 49 27.7	+0.2
JNU				IAmb	IAmb	21 49 36.0	
	comp=Z,11nm,1.0s						
EYAK	Cordova Ski Ar	29.41	55	P	P	21 49 29.9	+1.0
EYAK				IAmb	IAmb	21 49 37.5	
	comp=Z,14nm,1.1s						
N25K	Chitina, Valde	29.74	53	P	P	21 49 32.8	+0.8
N25K				IAmb	IAmb	21 49 34.4	
	comp=Z,4.6nm,0.9s						
RAGM	Ragged Mountai	29.96	55	P	P	21 49 34.7	+0.8
GLB	Gilahina Butte	30.14	53	P	P	21 49 36.2	+0.7
VRDI	Verde Repeater	30.36	53	P	P	21 49 38.2	+0.7
VRDI				IAmb	IAmb	21 49 56.8	
	comp=Z,6.1nm,1.2s						
K27K	Chicken	30.46	48	P	P	21 49 39.1	+1.0
EGAK	Eagle	30.74	46	P	P	21 49 40.8	+0.3
EGAK				IAmb	IAmb	21 49 41.0	
	comp=Z,3.2nm,0.8s						
JSU	Suzuyama	30.75	234	P	P	21 49 41.3	+0.3
BCAR	Beaver Creek A	30.75	50	P	P	21 49 41.9	+1.1
TGL	Tana Glacier	30.76	54	P	P	21 49 43.9	+2.9
BALM	Baldy	30.93	54	P	P	21 49 44.5	+2.0
BALM				IAmb	IAmb	21 49 44.6	
	comp=Z,6.3nm,0.9s						
ISLE	Juniper Island	31.03	54	P	P	21 49 44.3	+0.9
ISLE				IAmb	IAmb	21 49 58.3	
	comp=Z,12nm,1.2s						
BARN	Barnard Glacie	31.24	53	P	P	21 49 47.1	+1.8
BARN				IAmb	IAmb	21 49 50.6	
	comp=Z,4.7nm,0.9s						
CTGM	Chitina Glacie	31.42	53	P	P	21 49 47.7	+0.9
CTGM				IAmb	IAmb	21 49 49.5	
	comp=Z,8.0nm,1.1s						
DAWY	Dawson	31.61	47	P	P	21 49 49.5	+1.2
PCA	Pinnacle	32.17	55	P	P	21 49 54.6	+1.3
EPYK	Eagle Plains	32.31	43	P	P	21 49 55.6	+1.2
ULN	Ulaanbaatar	32.98	281⇓	*e*P	P	21 50 00.3	-0.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULN	Ulaanbaatar	32.98	281	P	P	21 49 59.8	-0.8
INK	Inuvik	33.22	39	P	P	21 50 03.3	+1.1
	comp=Z,2.1nm,0.6s,baz=277,slow=7.7,SNR=8.7						
INK	Inuvik	33.22	39	P	P	21 50 03.0	+0.8
INK				IAmb	IAmb	21 50 04.2	
	comp=Z,2.8nm,0.7s						
HYT	Haines Junctio	33.26	53	P	P	21 50 04.8	+2.0
HYT				IAmb	IAmb	21 50 05.5	
	comp=Z,4.6nm,0.6s						
SONM	Songino Array	33.38	281	P	P	21 50 03.4	-0.6
	comp=Z,1.7nm,0.4s,baz=56,slow=8.7,SNR=18						
SONM				PcP	PcP	21 52 42.6	+0.5
	comp=Z,1.0nm,0.7s,baz=66,slow=1.5,SNR=7.1						
SONM				ScP	ScP	21 56 13.3	+0.3
	comp=Z,0.5nm,0.8s,baz=74,slow=2.3,SNR=3.7						
SONM	Songino Array	33.38	281	*e*P	P	21 50 03.8	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	Songino Array	33.38	281	P	P	21 50 03.6	-0.4
HHC	Hu-ho-hao-te	34.37	267	*e*P	P	21 50 13.9	+1.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,79nm,7.3s						
WHY	Whitehorse	34.53	52	P	P	21 50 15.7	+1.9
WHY				IAmb	IAmb	21 50 16.8	
	comp=Z,7.4nm,1.1s						
BESE	Bessie Mountai	35.28	56	P	P	21 50 22.0	+1.8
BESE				IAmb	IAmb	21 50 23.1	
	comp=Z,7.2nm,0.8s						
DLBC	Dease Lake	37.66	54	P	P	21 50 41.5	+1.2
	comp=Z,5.1nm,0.9s,baz=298,slow=10.0,SNR=6.1						
DIB	Dawson Inlet,	38.84	63	P	P	21 50 50.9	+0.8
WHN	Wuhan	39.98	252	⇓P	P	21 51 10.9	+11
EUNU	Eureka	40.99	14	P	P	21 51 08.9	+1.3
ZALV	Zalesovo Beam	41.95	301	P	P	21 51 13.1	-2.6
	comp=Z,1.0nm,0.4s,baz=58,slow=5.6,SNR=5.1						
ZALV	Zalesovo Beam	41.95	301	*e*P	P	21 51 14.4	-1.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LZH	Lanzhou	42.05	268	⇑P	P	21 51 16.9	-0.1
LZH				pP	pP	21 51 47.9	-0.7
LZH				sP	sP	21 52 04.2	-0.4
LZH				PP	PP	21 52 51.1	-5.9
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,5.4s						
GTA	Gaotai	42.20	275	*e*P	P	21 51 17.5	-0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TPUB	Ta-pu	42.38	239	P	P	21 51 20.9	+1.4
YKA	Yellowknife Ar	42.59	43	P	P	21 51 22.0	+1.2
	comp=Z,1.3nm,0.7s,baz=302,slow=7.3,SNR=20						
YKA				PcP	PcP	21 53 11.3	+1.1
	comp=Z,0.2nm,0.4s,baz=316,slow=2.9,SNR=4.1						
DGZ	Jazzator, Alta	42.94	295⇓	*e*P	P	21 51 23.3	-0.6
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ENH	Enshi	42.94	257	P	P	21 51 22.5	-1.5
ENH				IAmb	IAmb	21 51 24.7	
	comp=Z,5.0nm,0.9s						
SPA0	Spitsbergen Ar	46.04	350	P	P	21 51 46.0	-1.9
WMQ	Urumqi	46.34	288	*e*P	P	21 51 51.8	+0.9
WMQ	Urumqi	46.34	288	P	P	21 51 51.1	+0.2
WMQ				pmax	pmax		
	comp=Z,21nm,0.5s						
WMQ	Urumqi	46.34	288	P	P	21 51 51.1	+0.2
KURK	Kurchatov	46.92	301	*d i*P	P	21 51 53.3	-1.9
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURK	Kurchatov	46.92	301	P	P	21 51 53.5	-1.7
KURK				IAmb	IAmb	21 51 54.9	
	comp=Z,6.4nm,0.6s						
MKAR	Makanchi Array	47.43	294	P	P	21 51 57.5	-1.7
	comp=Z,2.7nm,0.6s,baz=59,slow=7.2,SNR=55						
MKAR				PcP	PcP	21 53 27.4	+0.1
	comp=Z,0.1nm,0.3s,baz=49,slow=4.4,SNR=1.2						
MAKZ	Makanchi	47.59	295	P	P	21 51 58.7	-1.7
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	47.59	295	P	P	21 51 58.7	-1.7
MAKZ				IAmb	IAmb	21 51 59.3	
	comp=Z,2.7nm,0.7s						
BRVK	Borovoye	49.52	307⇑	*e*P	P	21 52 13.3	-1.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NEW	Newport	49.64	61	P	P	21 52 17.3	+1.1
	comp=Z,1.3nm,0.5s,baz=5.4,slow=4.7,SNR=3.5						
YBH	Yreka Blue Hor	50.95	70	P	P	21 52 28.6	+2.5
	comp=Z,1.9nm,0.7s,baz=7.0,slow=7.0,SNR=4.4						
K05A	Summer Lake	51.28	68	P	P	21 52 30.9	+2.2
KMRM	Mail Ridge	51.41	72	P	P	21 52 32.8	+3.3
KMRM				IAmb	IAmb	21 52 50.8	
	comp=Z,9.5nm,1.2s						
JTMT	Jette	51.43	59	P	P	21 52 31.6	+1.9
JTMT				IAmb	IAmb	21 52 32.1	
	comp=Z,5.6nm,0.7s						
BMO	Blue Mountains	51.79	64	P	P	21 52 33.3	+1.0
BMO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BMO	Blue Mountains	51.79	64	P	P	21 52 33.3	+1.0
ARCES	ARCESS Array B	52.18	341	P	P	21 52 32.5	-2.3
	comp=Z,6.5nm,1.0s,baz=42,slow=8.8,SNR=5.6						
ARCES				PcP	PcP	21 53 42.8	-1.6
	comp=Z,5.2nm,1.0s,baz=28,slow=4.1,SNR=1.8						
ARU	Arti	52.41	317	P	P	21 52 35.4	-1.2
ARU				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ARU	Arti	52.41	317	P	P	21 52 35.4	-1.2
FCC	Fort Churchill	52.84	39	P	P	21 52 40.1	+0.4
FCC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FCC	Fort Churchill	52.84	39	P	P	21 52 40.1	+0.4
FCC				IAmb	IAmb	21 52 40.5	
	comp=Z,2.8nm,0.9s						
ORV	Oroville	53.11	72	P	P	21 52 43.6	+1.6
ORV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ORV	Oroville	53.11	72	P	P	21 52 43.6	+1.6
KDJ	Kajisay	53.25	293	P	P	21 52 40.6	-2.6
KDJ				pmax	pmax		
	comp=Z,12nm,1.2s						
KDJ	Kajisay	53.25	293	P	P	21 52 40.6	-2.6
BEKR	Beckworth	53.52	71	P	P	21 52 47.1	+1.9
BEKR				IAmb	IAmb	21 52 48.2	
	comp=Z,5.3nm,1.1s						
LRM	Limekiln Ridge	53.65	60	P	P	21 52 47.2	+1.1
LSA	Lhasa	54.07	272	P	P	21 52 49.7	0.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LSA	Lhasa	54.07	272	P	P	21 52 49.7	0.0
LSA				IAmb	IAmb	21 52 50.9	
	comp=Z,4.0nm,0.6s						
HLID	Hailey	54.19	63	P	P	21 52 51.4	+1.4
BCYI	Bear Canyon	54.20	62	P	P	21 52 51.3	+1.1
BOZ	Bozeman (W)	54.23	60	IAmb	IAmb	21 52 52.7	
	comp=Z,3.3nm,0.7s						
AAK	Ala-Archa	54.34	295⇑	*e*P	P	21 52 50.3	-0.8
AAK				*i* *PP	pP	21 53 26.8	+2.7
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
AAK	Ala-Archa	54.34	295	P	P	21 52 50.2	-0.9
AAK				IAmb	IAmb	21 52 50.6	
	comp=Z,4.0nm,1.1s						
KIRV	Kirov	54.36	323⇑	*e*P	P	21 52 50.2	-0.5
PNTR	Pine Nut	54.49	71	P	P	21 52 55.4	+3.1
PNTR				IAmb	IAmb	21 52 56.5	
	comp=Z,3.9nm,0.6s						
YHL	Hebgen Lake	54.97	60	P	P	21 52 57.2	+1.4
WAKR	Walker	54.99	71	P	P	21 52 58.6	+2.7
WAKR				IAmb	IAmb	21 52 59.4	
	comp=Z,5.9nm,1.2s						
YHB	Horse Butte	55.03	60	P	P	21 52 58.0	+1.8
RYN	Ryan	55.41	70	P	P	21 53 01.1	+2.2
RYN				IAmb	IAmb	21 53 01.6	
	comp=Z,1.8nm,0.7s						
YNE	Yellowstone No	55.46	59	P	P	21 53 01.1	+1.9
NVAR	Mina Array Bea	55.67	70	P	P	21 53 03.2	+2.4
	comp=Z,1.1nm,0.5s,baz=305,slow=7.3,SNR=13						
NVAR				pP	pP	21 53 34.8	+1.0
	comp=Z,1.0nm,0.8s,baz=299,slow=7.3,SNR=4.2						
NVAR	Mina Array Bea	55.67	70	P	P	21 53 03.1	+2.3
LHV	Little Huntoon	55.69	71	P	P	21 53 02.9	+2.3
LHV				IAmb	IAmb	21 53 04.2	
	comp=Z,2.6nm,0.9s						
ELK	Elko	55.71	66	IAmb	IAmb	21 53 04.0	
	comp=Z,1.9nm,0.6s						
KSH	Kashi	55.72	292	P	P	21 53 05.2	+4.2
KSH				pP	pP	21 53 38.4	+4.3
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,280nm,5.5s						
FLWY	Flagg Ranch	55.76	61	P	P	21 53 04.0	+2.7
FLWY				IAmb	IAmb	21 53 04.9	
	comp=Z,3.5nm,0.8s						
ARSB	Arslanbob	56.06	295	P	P	21 53 01.9	-1.6
ARSB				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARSB	Arslanbob	56.06	295	P	P	21 53 01.9	-1.6
ARSB				IAmb	IAmb	21 53 03.2	
	comp=Z,3.4nm,1.1s						
KKAR	Karatay Array	56.11	298	P	P	21 53 02.0	-1.6
KKAR	Karatay Array	56.11	298	P	P	21 53 02.0	-1.6
REDW	Red Top Meadow	56.19	61	P	P	21 53 07.3	+2.9
BGU	Big Grassy Mou	56.77	65	P	P	21 53 10.3	+1.8
ABKAR	Akbulak array	56.88	310	P	P	21 53 08.3	-0.5
HWUT	Hardware Ranch	57.06	63	P	P	21 53 12.9	+2.3
BW06	Boulder Array	57.27	61	IAmb	IAmb	21 53 14.8	
	comp=Z,4.3nm,0.7s						
PD31	Pinedale Array	57.27	61	IAmb	IAmb	21 53 14.8	
	comp=Z,3.8nm,0.7s						
PDAR	Pinedale Array	57.27	61	P	P	21 53 14.1	+2.0
	comp=Z,4.5nm,0.6s,baz=333,slow=2.5,SNR=53						
PDAR	Pinedale Array	57.27	61	P	P	21 53 14.2	+2.1
CHTO	Chiang Mai	57.83	257	P	P	21 53 15.4	-0.6
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	Chiang Mai	57.83	257	P	P	21 53 15.4	-0.6
CHTO				IAmb	IAmb	21 53 18.8	
	comp=Z,2.5nm,0.9s						
TAPN	Taplejung	57.83	273	*e*P	P	21 53 15.4	-0.9
	comp=Z,20nm,0.3s						
TPNV	Topopah Spring	57.87	70	P	P	21 53 18.1	+1.9
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TPNV	Topopah Spring	57.87	70	P	P	21 53 18.1	+1.9
TPNV				IAmb	IAmb	21 53 18.8	
	comp=Z,3.5nm,1.1s						
PSUT	Pine Spring	58.04	67	P	P	21 53 19.8	+2.3
CMAR	Chiang Mai Arr	58.11	257	P	P	21 53 18.1	+0.2
	comp=Z,1.0nm,0.5s,baz=23,slow=7.4,SNR=6.5						
PRN	Pahroc Range	58.20	69	IAmb	IAmb	21 53 21.6	
	comp=Z,2.7nm,0.8s						
ULM	Lac du Bonnet	58.32	47	P	P	21 53 18.8	-0.1
	comp=Z,2.6nm,0.4s,baz=322,slow=6.6,SNR=9.2						
ULM	Lac du Bonnet	58.32	47	*e*P	P	21 53 19.9	+0.9
ULM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ULM	Lac du Bonnet	58.32	47	P	P	21 53 19.8	+0.9
ODAN	Odare	58.39	273	*e*P	P	21 53 19.3	-0.7
	comp=Z,11nm,0.4s						
RAMN	Ramite	58.78	274	*e*P	P	21 53 21.6	-1.2
	comp=Z,44nm,0.4s						
TMUT	Trail Mountain	58.91	65	P	P	21 53 25.9	+2.4
KKN	Kakani	58.93	275	*e*P	P	21 53 22.7	-1.1
	comp=Z,16nm,0.4s						
MSU	Marysvale	58.96	66	P	P	21 53 26.4	+2.6
MSU	Marysvale	58.96	66	P	P	21 53 26.4	+2.6
CCUT	Cedar City	59.02	68	P	P	21 53 26.2	+1.9
PKI	Pulchoki	59.02	275	*e*P	P	21 53 23.3	-1.2
	comp=Z,4.3nm,0.4s						
PKIN	Phulchoki	59.02	275	*e*P	P	21 53 23.6	-0.8
	comp=Z,8.0nm,0.5s						
FINES	FINESS Array B	59.02	336	P	P	21 53 22.4	-1.2
	comp=Z,1.2nm,0.5s,baz=36,slow=8.0,SNR=13						
FINES	FINESS Array B	59.02	336	P	P	21 53 22.7	-0.9
FINES	FINESS Array B	59.02	336	P	P	21 53 22.7	-0.9
RSSD	Black Hills	59.07	57	P	P	21 53 25.9	+1.4
RSSD				pmax	pmax		
	comp=Z,11nm,0.7s						
RSSD	Black Hills	59.07	57	P	P	21 53 25.9	+1.4
DMN	Daman	59.17	275	*e*P	P	21 53 25.0	-0.4
	comp=Z,7.1nm,0.4s						
MTPU	Mount Pierson	59.30	67	P	P	21 53 29.0	+2.7
DANN	Dangsing	59.40	277	*e*P	P	21 53 26.2	-0.9
	comp=Z,17nm,0.5s						
PV14	Lion Creek, Pa	60.75	64	P	P	21 53 37.9	+1.8
PV14				IAmb	IAmb	21 53 41.5	
	comp=Z,2.5nm,0.8s						
PV22	Blue Mesa, Par	60.75	64	IAmb	IAmb	21 53 38.8	
	comp=Z,4.4nm,0.6s						
PV04	Paradox Valley	60.79	64	P	P	21 53 37.8	+1.5
PV04				IAmb	IAmb	21 53 39.1	
	comp=Z,5.0nm,0.8s						
PV19	Morning Glory	60.81	64	P	P	21 53 38.0	+1.5
PV16	Nyswonger Mesa	60.85	64	P	P	21 53 39.0	+2.3
PV16				IAmb	IAmb	21 53 39.4	
	comp=Z,4.9nm,0.8s						
PV12	Saucer Basin,	60.90	64	P	P	21 53 39.8	+2.6
PV12				IAmb	IAmb	21 53 41.9	
	comp=Z,4.1nm,0.7s						
PV03	Paradox Valley	60.93	64	P	P	21 53 39.5	+2.2
PV03				IAmb	IAmb	21 53 40.1	
	comp=Z,3.3nm,0.9s						
PV02	Paradox Valley	61.02	64	P	P	21 53 39.7	+1.8
PV02				IAmb	IAmb	21 53 48.9	
	comp=Z,3.0nm,0.8s						
PV15	Paradox Valley	61.06	64	P	P	21 53 39.6	+1.4
NIL	Nilore	61.48	289	P	P	21 53 40.4	-0.4
NIL				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NIL	Nilore	61.48	289	P	P	21 53 40.4	-0.4
MVCO	Mesa Verde	61.89	65	P	P	21 53 44.7	+1.0
EYMN	Ely	61.94	46	P	P	21 53 43.8	+0.2
NC204	NORSAR Array S	62.29	344	P	P	21 53 46.5	+0.6
NC204				IAmb	IAmb	21 54 02.6	
	comp=Z,5.6nm,0.9s						
S22A	4UR Ranch, Cre	62.37	63	P	P	21 53 48.6	+1.5
S22A				IAmb	IAmb	21 53 49.9	
	comp=Z,1.5nm,0.6s						
NOA	NORSAR Array B	62.44	343	P	P	21 53 45.7	-1.1
	comp=Z,0.6nm,0.8s,baz=24,slow=6.8,SNR=1.6						
SPX	San Pedro Mart	62.66	74	P	P	21 53 51.2	+2.1
ECSD	EROS Data Cent	62.91	52	P	P	21 53 50.7	+0.6
SDCO	Great Sand Dun	63.06	62	P	P	21 53 53.7	+2.1
SBUM	Sibu	64.38	235	P	P	21 54 01.8	+1.7
SBUM				IAmb	IAmb	21 54 03.0	
	comp=Z,3.4nm,0.7s						
ANMO	Albuquerque	64.68	65⇑	*e*P	P	21 54 03.5	+1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	Albuquerque	64.68	65	P	P	21 54 03.5	+1.4
GEYT	Alibeck	66.26	302	P	P	21 54 10.4	-1.6
	comp=Z,2.3nm,0.5s,baz=256,slow=6.0,SNR=4.2						
AKASG	Malin Array Be	67.55	328	P	P	21 54 18.4	-1.4
	comp=Z,1.0nm,0.3s,baz=29,slow=6.6,SNR=9.0						
AKBB	Malin Array Si	67.55	328	P	P	21 54 18.5	-1.4
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKBB	Malin Array Si	67.55	328	P	P	21 54 18.5	-1.4
AKBB				IAmb	IAmb	21 54 19.0	
	comp=Z,3.4nm,0.9s						
MNTX	Cornudas Mount	67.74	67	P	P	21 54 23.6	+2.2
KULM	Kulim	67.89	247	P	P	21 54 23.6	+1.1
KULM				IAmb	IAmb	21 54 29.9	
	comp=Z,7.6nm,1.0s						
KBZ	Khabaz	68.56	316	P	P	21 54 25.2	-1.0
	comp=Z,1.0nm,0.4s,baz=45,slow=1.8,SNR=9.3						
KBZ	Khabaz	68.56	316	*e*P	P	21 54 25.4	-0.9
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	69.96	350	P	P	21 54 33.8	-0.9
	comp=Z,0.5nm,0.3s,baz=21,slow=5.2,SNR=7.0						
TXAR	Lajitas Array	70.50	67	P	P	21 54 40.3	+1.7
	comp=Z,2.7nm,0.4s,baz=295,slow=5.2,SNR=24						
TXAR				pP	pP	21 55 13.2	+0.2
	comp=Z,1.0nm,0.5s,baz=310,slow=4.7,SNR=3.5						
CLL	Collm	71.25	339	*e*P	P	21 54 42.0	-0.6
CLL	Collm	71.25	339	*e*P	P	21 54 42.0	-0.6
W41B	Gary Mavity, V	71.73	55	P	P	21 54 45.4	-0.4
BATG	Bathurst New B	71.81	31	P	P	21 54 46.2	+0.2
G62A	West of Eustis	72.21	35	P	P	21 54 49.3	+0.8
G62A				IAmb	IAmb	21 54 50.2	
	comp=Z,9.4nm,0.9s						
J59A	Piesco	72.36	38	P	P	21 54 48.7	-0.7
J59A				IAmb	IAmb	21 54 50.4	
	comp=Z,4.2nm,1.0s						
F64A	Sherman	72.36	33	P	P	21 54 49.6	+0.3
F64A				IAmb	IAmb	21 54 56.7	
	comp=Z,8.1nm,1.0s						
M55A	Ridgway	72.45	42	P	P	21 54 50.5	+0.5
M55A				IAmb	IAmb	21 54 54.1	
	comp=Z,8.2nm,1.1s						
H62A	Milan	72.57	35	P	P	21 54 50.9	+0.3
H62A				IAmb	IAmb	21 54 56.9	
	comp=Z,12nm,1.1s						
WVT	Waverly	73.03	51	P	P	21 54 54.3	+0.8
WVT	Waverly	73.03	51	P	P	21 54 54.3	+0.8
WVT				IAmb	IAmb	21 54 55.2	
	comp=Z,9.1nm,1.1s						
WRA	Warramunga Arr	76.92	204	P	P	21 55 16.6	+0.9
	comp=Z,0.6nm,0.5s,baz=24,slow=6.2,SNR=5.2						
FITZ	Fitzroy Crossi	77.62	213	P	P	21 55 20.1	+0.5
	comp=Z,3.9nm,1.0s,baz=30,slow=8.1,SNR=1.4						
ASAR	Alice Springs	80.60	204	P	P	21 55 37.2	+1.3
	comp=Z,0.8nm,0.4s,baz=16,slow=5.1,SNR=14						
ESDC	Sonseca Array	85.48	347	P	P	21 56 01.4	+0.5
	comp=Z,1.1nm,0.6s,baz=1.2,slow=5.1,SNR=14						
KEST	Kesra	86.86	336	P	P	21 56 06.9	-0.9
	comp=Z,8.5nm,1.1s,baz=300,slow=6.4,SNR=5.9						
PLCA	Paso Flores	144.31	89	PKP	PKPab	22 02 56.4	+0.1
	comp=Z,2.4nm,0.5s,baz=294,slow=4.0,SNR=6.4						

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*IDC **09** 21:46:12.9±2.1, 2°.32N×126°.08E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.4/40, mbtmp3.6/4, Error ellipse: s-maj=123.6km s-min=26.8km az=68.0*

*NEIC **09** 21:46:19.3±0.9, 2°.5N±0°.1×126°.1E±0°.1, h66^{km}±15^{km}, mb4.1/9, Error ellipse: s-maj=22.8km s-min=9.7km az=223.0*

ISC 09 21:46:22.8±1.0,**2°.3N**±0°.1×**126°.1E**±0°.1,**h105^{km},n15, σ2^{s}12**/14,**mb3.7**/6,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.95	141	Pn	Pn	21 46 52.4	-2.6
TOLI2	Tolitoli	5.47	258	Pn	Pn	21 47 39.3	-2.6
MTN	Manton Dam	15.84	162	Pn	Pn	21 49 58.3	-1.5
FITZ	Fitzroy Crossi	20.27	181	P	P	21 50 51.0	+1.0
	4.2nm,0.9s,baz=349,slow=10,SNR=1.8						
FITZ	Fitzroy Crossi	20.27	181	P	P	21 50 51.5	+1.4
FITZ				IAmb	IAmb	21 50 55.7	
	comp=Z,12nm,1.1s						
NACB	Ninganchiao	22.19	349	P	P	21 51 08.2	-2.3
WB0	Warramunga Arr	23.38	160	P	P	21 51 23.7	+1.4
WRA	Warramunga Arr	23.52	160	P	P	21 51 24.9	+1.2
	comp=Z,1.5nm,0.6s,baz=338,slow=11,SNR=11						
WRA	Warramunga Arr	23.52	160	IAmb	IAmb	21 51 31.1	
	comp=Z,0.4nm,1.3s						
WB2	Warramunga Arr	23.53	160	P	P	21 51 25.0	+1.4
WB2				IAmb	IAmb	21 51 32.5	
	comp=Z,6.1nm,1.0s						
WR0	Warramunga Arr	23.61	160	P	P	21 51 25.6	+1.2
WR0				IAmb	IAmb	21 51 33.2	
	comp=Z,5.1nm,1.1s						
KULM	Kulim	25.59	277	P	P	21 51 43.1	+0.6
KULM				IAmb	IAmb	21 51 55.9	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	26.89	164	P	P	21 51 56.6	+2.6
ASAR	Alice Springs	26.89	164	P	P	21 51 56.4	+2.3
	comp=Z,0.3nm,0.5s,baz=344,slow=8.5,SNR=5.6						
MKAR	Makanchi Array	58.39	326	P	P	21 56 09.7	+2.4
	comp=Z,0.1nm,0.4s,baz=134,slow=7.0,SNR=2.6						

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*DDA **09** 21:54:06.8, 37°.44N×36°.19E, h18^{km}, ML3.7*

*ISK **09** 21:54:06.4, 37°.41N×36°.19E, h10^{km}, ML3.4/30*

*NIC **09** 21:54:08.3±0.0, 37°.41N×36°.25E, h14^{km}±12^{km}, Ml3.4/1*

ISC 09 21:54:06.9±0.9,**37°.41N**±0°.02×**36°.20E**±0°.02,**h12^{km}**±7^{km},**n67,σ1^{s}07**/85,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.20	35	*i* P	Pg	21 54 11.5	0.0
ANDN				*i* S	Sg	21 54 14.9	+0.2
ANDN				IAML		21 54 17.0	
	comp=E,13μm,0.9s						
ANDN				IAML		21 54 18.0	
	comp=N,8μm,0.4s						
KOZT	Kozan	0.30	283	PG	Pb	21 54 13.6	-0.7
KOZT				SG	Sg	21 54 17.5	+0.2
CEYT	Ceyhan	0.54	222	PG	Pg	21 54 17.1	-0.4
CEYT				SG	Sb	21 54 25.2	-0.7

KMRS	Kahramanmaras	0.57	80	PG	Pg	21 54 17.9	-0.1
KMRS				SG	Sb	21 54 26.4	-0.4
HCB	Kahramanmara	0.57	97	*i* P	Pg	21 54 18.0	-0.1
SAIM	ADANA	0.57	351	*i* P	Pg	21 54 17.7	-0.4
KAHM	Kahramanmaras,	0.64	80	*i* P	Pg	21 54 19.2	-0.2
KAHM				*i* S	Sg	21 54 27.8	0.0
YURE	YUREGIR	0.74	218	PG	Pg	21 54 20.9	-0.4
KHMN	Narli-Kahraman	0.77	91	PG	Pg	21 54 21.8	0.0
KHMN				SG	Sb	21 54 32.8	+0.3
GAZ	Gaziantep	0.84	106	PG	Pg	21 54 23.2	-0.1
GAZ				SG	Sb	21 54 35.3	+0.5
GAZ	Gaziantep	0.84	106	P	Pb	21 54 23.6	+0.1
GAZ				S	Sn	21 54 35.7	-1.3
GAZ				AML	AML	21 54 39.2	
	comp=N,4.6nm,0.3s						
GAZ				AML	AML	21 54 39.2	
	comp=N,4.6nm,0.3s						
GAZ				AML	AML	21 54 40.7	
	comp=N,5.9nm,0.3s						
GAZ				AML	AML	21 54 40.7	
	comp=N,5.9nm,0.3s						
KARA	Karaisali	0.92	261	PG	Pb	21 54 23.6	-1.3
KUZU	Kuzuini	0.95	132	*i* P	Pn	21 54 25.6	-0.4
KUZU				*i* S	Sn	21 54 38.6	-0.9
KUZU				IAML		21 54 40.0	
	comp=N,2µm,0.6s						
KUZU				IAML		21 54 42.0	
	comp=E,3µm,0.6s						
YAHY	KAYSERI_Yahyal	0.95	316	*i* P	Pb	21 54 24.3	-1.1
CMRD	Camardi-Nigde	0.99	285	PG	Pb	21 54 24.7	-1.4
CMRD				SG	Sn	21 54 39.8	-0.9
KRTD	Karatas-Adana	1.03	218	PG	Pb	21 54 26.4	-0.2
KRTS	Karatas	1.06	218	PG	Pn	21 54 27.1	-0.5
GZT	Gaziantep	1.09	93	*i* P	Pn	21 54 27.8	-0.4
GZT				*i* S	Sn	21 54 43.1	0.0
GZT				IAML		21 54 44.0	
	comp=E,4µm,0.4s						
GZT				IAML		21 54 45.0	
	comp=N,3µm,0.3s						
ELBS	KAHRAMANMARAS_	1.17	39	*i* P	Pg	21 54 29.9	+0.3
ELBS				*i* S	Sn	21 54 44.7	-0.5
ELBS				IAML		21 54 53.0	
	comp=E,986nm,0.6s						
NIDE	Nigde/Merkez-G	1.27	298	*i* P	Pn	21 54 30.0	-0.6
NIDE				*i* S	Sg	21 54 51.5	+3.6
NIDE				IAML		21 54 53.0	
	comp=N,1µm,0.4s						
NIDE				IAML		21 54 54.0	
	comp=E,1µm,0.3s						
NIG	Nigde	1.44	299	PN	Pn	21 54 33.0	0.0
BNN	Bunyan	1.47	349	PN	Pb	21 54 33.5	-0.7
DARE	Darende-Malaty	1.54	41	PN	Pb	21 54 34.7	-0.8
GUNE	Kayseri	1.56	343	*i* P	Pg	21 54 36.6	-0.2
AKCD	Akcadag	1.63	57	*i* P	Pb	21 54 36.9	0.0
AKCD				*i* S	Sb	21 54 57.7	+0.3
AKCD				IAML		21 55 02.0	
	comp=N,2µm,0.3s						
AKCD				IAML		21 55 04.0	
	comp=E,1µm,0.3s						
ATAB	Bozova	1.67	87	*i* P	Pg	21 54 38.3	-0.7
ATAB				*i* S	Sg	21 55 00.1	-0.6
ATAB				IAML		21 55 02.0	
	comp=E,710nm,0.3s						
AVNS	Nevsehir-Avano	1.75	323	*i* P	Pb	21 54 38.7	-0.4
AVNS				*i* S	Sg	21 55 02.3	-1.1
GULA	Gulagac	1.81	302	PN	Pn	21 54 38.4	+0.4
KIZK	Mersin	1.89	241	PN	Pn	21 54 39.5	+0.5
CUALT	Altinyayla-SIV	1.91	13	*i* P	Pb	21 54 40.8	-0.9
MALT	Malatya	1.98	62	PN	Pn	21 54 40.9	+0.6
YESY	Yesilyurt	1.98	282	PN	Pn	21 54 40.9	+0.5
SURC	SANLIURFA_SURC	2.00	105	*i* P	Pg	21 54 45.0	-0.4
SURC				*i* S	Sg	21 55 10.1	-1.2
SURC				IAML		21 55 13.0	
	comp=E,495nm,0.6s						
SURC				IAML		21 55 18.0	
	comp=N,603nm,0.3s						
CUSAR	Sarkisla-SIVAS	2.00	1	*i* P	Pb	21 54 43.9	+0.5
SILI	Silifke-Mersin	2.10	241	PN	Pn	21 54 42.4	+0.5
KEBE	Keben-Mersin	2.21	245	PN	Pn	21 54 44.2	+0.7
SANL	SANLIURFA_Merk	2.24	95	*i* P	Pg	21 54 49.2	-0.7
SULT	Sultanhani-AKS	2.27	291	PN	Pn	21 54 45.1	+0.9
AKSY	AKSARAY - Alti	2.29	303	*i* P	Pn	21 54 45.8	+1.3
KRMN	Karaman	2.35	265	PN	Pn	21 54 45.9	+0.5
TEVE	Tevekalti-Mers	2.41	247	PN	Pn	21 54 46.9	+0.7
AKKU	Akkuyu-Mersin	2.46	240	PN	Pn	21 54 47.6	+0.7
SVSK	Karacayir	2.58	14	PN	Pn	21 54 49.5	+1.1
SERE	Sereflikochisa	2.58	307	PN	Pn	21 54 49.2	+0.6
KEMA	Kemaliye	2.59	44	*i* P	Pn	21 54 49.8	+1.1
CDAG	Cicekdag	2.63	328	*i* P	Pn	21 54 49.0	-0.3
CKRK	Yozgat, Cekere	2.71	349	*i* P	Pn	21 54 49.6	-0.8
ERMK	Ermenek	2.74	255	*i* P	Pb	21 54 53.0	-2.9
CUZAR	Zara_SIVAS	2.76	26	*i* P	Pn	21 54 50.7	-0.4
TEKE	Tekeli-Mersin	2.78	244	PN	Pn	21 54 52.1	+0.9
TOKA	Tokat	2.92	4	*i* P	Pn	21 54 54.7	+1.6
TOKT	Tokat	2.92	5	PN	Pn	21 54 54.2	+1.0
CORM	Corum	3.02	337	PN	Pn	21 54 55.7	+1.0
BRTR	Keskin Array B	3.06	320	PN	Pn	21 54 56.3	+1.1
KONT	Konya--Tatoy	3.09	281	PN	Pn	21 54 56.5	+1.0
RSDY	Resadiye-TOKAT	3.11	16	PN	Pn	21 54 56.9	+1.1
TNCL	Tunceli-Merkez	3.13	56	*i* P	Pb	21 55 02.8	+0.2
LADK	Ladik-KONYA	3.14	286	PN	Pn	21 54 57.2	+1.0
MVOU	Mavrovouni	3.17	222	P	Pn	21 54 57.5	+1.0
AFSR	Afar-Bala (An	3.19	311	PN	Pn	21 54 57.9	+1.0
GAZI	Gazipasa	3.33	251	PN	Pn	21 54 59.8	+1.0
CSS	Mathiatis	3.37	224	P	Pn	21 55 00.9	+1.6
ASGA	Asgata	3.54	223	P	Pn	21 55 03.6	+1.8
SZAC	Souni	3.77	226	P	Pn	21 55 06.5	+1.6
AKMS	Akamas	3.93	234	P	Pn	21 55 10.0	+3.0
NATA	Nata	3.94	229	P	Pn	21 55 09.1	+1.9
MMLI	Mount Malkishu	5.00	188	P	Pn	21 55 23.8	+2.0
MMLI				S	Sn	21 56 22.1	+2.5

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*SOME **09** 22:00:05.3, 41°.73N×70°.30E, h15^{km}*

*KRNET **09** 22:00:05.0±0.1, 41°.76N×70°.26E, h15^{km}, mb2.6*

*ISU **09** 22:00:06, 41°.80N×70°.50E, h5^{km}, Hypocentre not reviewed by the ISC*

*NNC **09** 22:00:07.0±2.2, 41°.88N×70°.31E, h0^{km}, mb2.5, mpv2.7, Error ellipse: s-maj=13.7km s-min=7.3km az=10.0*

ISC 09 22:00:05.6±1.5**, 41°.80N**±0°.04×**70°.15E**±0°.05**, h3**^{km}±11^{km}**, n18, σ1^{s}38**/34**, 16C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSK	Pskem	0.21	52	*i* P		22 00 09.0	
PSK				*i* S		22 00 12.0	
CHMG	Chimgan	0.27	203	*e*P		22 00 12.0	
CHMG				*e*S		22 00 17.0	
IUG	Iuzhnay	0.36	346	⇓*i*P	Pg	22 00 13.9	+1.3
	74nm,0.2s						
IUG				⇓*i*S	Sb	22 00 19.8	-1.1
	233nm,0.2s						
IUG	Iuzhnay	0.36	346	P	Pg	22 00 13.9	+1.3
	74nm,0.2s						
IUG				S	Sb	22 00 19.7	-1.1
	233nm,0.2s						
TRKS	Terek-Say	0.79	110	⇑*i*P	Pg	22 00 19.5	-1.2
	baz=13						
TRKS				⇑*i*S	Sg	22 00 29.8	-1.1
	baz=13						
KK31	Karatay Array	1.33	11	⇑P	Pn	22 00 30.0	-1.0
	0.2nm,0.2s,baz=190,slow=18,SNR=28						
KK31				⇑S	Sb	22 00 46.9	-1.8
	5.6nm,0.4s,baz=190,slow=31,SNR=27						
DZA	Taraz	1.40	38	*e*P	Pn	22 00 30.1	-2.0
	16nm,0.2s						
DZA				*e*S	Sb	22 00 47.6	-3.1
	70nm,0.3s						
DZA	Taraz	1.40	38	P	Pn	22 00 30.8	-1.3
DZA				S	Sb	22 00 48.9	-1.8
BTK	Batken	1.81	164	⇓*i*P	Pn	22 00 37.6	-0.1
	baz=66						
BTK				⇓*i*S	Sn	22 01 01.4	+0.2
	baz=66						
BTK	Batken	1.81	164	*e*P		22 00 38.0	
BTK				*e*S		22 01 01.0	
MNAS	Manas	1.88	68	⇑*e*P	Pn	22 00 38.9	+0.1
	baz=66						
MNAS				⇑*i*S	Sn	22 01 03.4	+0.3
	baz=66						
ARSB	Arslanbob	2.18	102	⇑*e*P	Pn	22 00 43.4	+0.6
	baz=1.0						
ARSB				⇑*i*S	Sn	22 01 11.4	+1.0
	baz=1.0						
MRKS	Merke	2.47	66	*e*P	Pn	22 00 49.1	+2.3
	1.4nm,0.3s						
MRKS				*e*S	Sb	22 01 20.5	-1.1
	13nm,0.5s						
MRKS	Merke	2.47	66	Pg	Pn	22 00 49.1	+2.3
	1.4nm,0.3s						
MRKS				Lg	Lg	22 01 20.5	
	13nm,0.5s						
AML	Almayashu	2.66	82	⇑*e*P	Pn	22 00 50.3	+0.6
	baz=81						
AML				⇑*i*S	Sn	22 01 23.2	+0.5
	baz=81						
EKS2	Erkin-Say	2.83	71	⇑*i*P	Pn	22 00 52.5	+0.7
	baz=70						
EKS2				⇑*i*S	Sn	22 01 27.5	+1.1
	baz=70						
ARLS	Aral	3.12	87	⇑*i*P	Pn	22 00 56.4	+0.6
	baz=87						
ARLS				⇑*i*S	Sn	22 01 34.1	+0.5
	baz=87						
UCH	Uchtor	3.28	81	⇓*i*P	Pn	22 00 59.0	+0.7
	baz=80						
UCH				⇓*i*S	Sn	22 01 37.9	-0.1
	baz=80						
USP	Ospenovka	3.53	64	⇑*i*P	Pn	22 01 02.7	+1.3
	baz=63						
USP				⇑*i*S	Sn	22 01 44.4	+0.7
	baz=63						
DGS	Degeres	4.40	69	*e*P	Pb	22 01 23.7	+0.1
	1.0nm,0.6s						
DGS				*e*S	Sb	22 02 19.7	+2.7
	2.4nm,0.5s						
DGS	Degeres	4.40	69	Pg	Pb	22 01 23.7	+0.1
	1.2nm,0.5s						
DGS				Lg	Lg	22 02 19.7	
	2.5nm,0.8s						

IDC 09 22:05:51.2±4.6**, 11°.22N×125°.66E, h0**^{km}**, mb3.8**/3**, mb1 3.8**/3**, mb1mx3.4**/45**, mbtmp3.8**/3**, Error ellipse: s-maj=429.5km s-min=27.5km az=64.0, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	35.60	167	P	P	22 12 51.0	+0.2
	0.2nm,0.4s,baz=350,slow=7.8,SNR=5.1						
STKA	Stephens Creek	45.49	161	P	P	22 14 12.0	-0.4
	2.9nm,0.8s,baz=311,slow=11,SNR=3.4						
MKAR	Makanchi Array	50.91	323	P	P	22 14 54.2	-0.1
	0.7nm,0.7s,baz=118,slow=8.3,SNR=7.8						

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*IDC **09** 22:07:25.6±0.5, 15°.16S×173°.67W, h0^{km}, mb4.3/16, mb1 4.5/17, mb1mx4.3/48, mbtmp4.4/17, ML5.0/1, MS3.7/18, Ms1 3.7/18, ms1mx3.6/26, Error ellipse: s-maj=27.5km s-min=13.1km az=131.0*

*NEIC **09** 22:07:26.9±2.4, 15°.10S±0°.06×173°.52W±0°.02, h10^{km}±1^{km}, mb4.6/50, Error ellipse: s-maj=11.2km s-min=3.3km az=189.0*

ISC 09 22:07:30.0±0.4**, 15°.17S**±0°.07×**173°.54W**±0°.08**, h30**^{km}**, n126, σ1^{s}31**/106**, mb4.6**/42**, MS3.8**/18**, 6C-5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.12	54	Pn	Pn	22 08 02.1	-1.3
	436nm,0.3s,baz=175,slow=1.1,SNR=311						
AFI				Sn	Sn	22 08 22.2	-6.5
	2µm,0.3s,baz=54,slow=23,SNR=33						
AFI				LR	LR	22 08 44.8	
	comp=Z,937nm,19.5s,baz=248,slow=36						
NIUE	Niue	5.20	139	Pn	Pn	22 08 45.4	-0.4
MSVF	Nonsavu	8.46	251	Pn	Pn	22 09 40.8	+10
	0.4nm,0.3s,baz=103,slow=18,SNR=7.9						
MSVF				LR	LR	22 12 32.0	
	comp=Z,438nm,21.1s,baz=100,slow=37						
MSVF	Nonsavu	8.46	251	Pn	Pn	22 09 30.5	-0.2
FUNA	Funafuti	9.70	312	Pn	Pn	22 09 46.3	-1.3
KNTN	Kanton	12.44	8	Pn	Pn	22 10 23.2	-2.0
RAR	Rarotonga	14.39	117	LR	LR	22 15 03.8	
	comp=Z,85nm,20.4s,baz=309,slow=32						
SANVU	Saraoutou	18.58	267	P	P	22 11 42.0	-2.7
DZM	Mont Dzumac	20.16	247	*e*P	Pn	22 12 08.2	+4.0
	58nm,1.2s						
DZM				*e*LR	LR	22 16 35.8	
	comp=Z,402nm,27.7s						
DZM	Mont Dzumac	20.16	247	P	Pn	22 12 02.3	-1.9
DZM				IAmb	IAmb	22 12 10.9	
	comp=Z,26nm,1.1s						
OUZ	Omahuta	23.07	208	P	P	22 12 30.9	-2.2
PAE	Paea	23.11	99	*e*T	T	22 35 48.5	
	comp=Z,2.8nm,0.2s						
PPT	Papeete	23.11	99	LR	LR	22 20 12.1	
	comp=Z,23nm,18.4s,baz=191,slow=33						
PPT	Papeete	23.11	99	P	P	22 12 30.3	-3.4
PPT2	Papeete2	23.11	99	*e*LR	LR	22 17 53.2	
	comp=Z,136nm,28.2s						
PPT2	Papeete2	23.11	99	*e*T	T	22 35 49.4	
	comp=Z,4.8nm,0.3s						
PPTF	Pamatai, Papee	23.12	99	P	P	22 12 30.3	-3.6
TIAR	Tiarei	23.33	99	*e*T	T	22 36 07.6	
	comp=Z,3.0nm,0.3s						
MXZ	Matakaoa Point	23.45	196	P	P	22 12 36.6	-0.2
MXZ				IAmb	IAmb	22 12 43.9	
	comp=Z,12nm,0.8s						
TBI	Tubuai	24.12	113	*e*T	T	22 37 30.3	
	comp=Z,9.0nm,0.3s						
URZ	Urewera	24.44	198	P	P	22 12 45.4	-0.7
	comp=Z,5.9nm,0.4s,baz=3.1,slow=1.5,SNR=9.8						
URZ	Urewera	24.44	198	P	P	22 12 46.6	+0.5
HIZ	Hauiti	25.41	202	P	P	22 12 52.0	-2.9
HIZ				IAmb	IAmb	22 12 59.3	
	comp=Z,16nm,0.9s						
BKZ	Black Stump Fm	25.46	198	P	P	22 12 56.7	+1.2
BFZ	Birch Farm	26.93	197	P	P	22 13 08.8	+0.1
MSWZ	Moikau Station	27.90	198	P	P	22 13 16.5	-0.9
QRZ	Quartz Range	28.29	203	P	P	22 13 21.6	+0.7
TUWZ	Tuamarina	28.33	200	P	P	22 13 22.4	+1.2
NNZ	Nelson	28.33	201	P	P	22 13 21.4	+0.3
BSWZ	Blackbirch Sta	28.61	200	P	P	22 13 23.7	+0.1
KHZ	Kahutara	29.35	200	P	P	22 13 29.5	-0.7
KHZ				IAmb	IAmb	22 13 33.2	
	comp=Z,19nm,1.2s						
LTZ	Lake Taylor	30.10	201	P	P	22 13 36.3	-0.6
LTZ				IAmb	IAmb	22 13 39.5	
	comp=Z,8.1nm,0.7s						
MQZ	McQueen’s Vall	30.79	200	P	P	22 13 43.3	+0.4
MQZ				IAmb	IAmb	22 14 00.8	
	comp=Z,11nm,1.1s						
RPZ	Rata Peaks	31.35	202	P	P	22 13 47.0	-0.9
	comp=Z,4.9nm,0.7s,baz=299,slow=10,SNR=2.2						
RPZ	Rata Peaks	31.35	202	P	P	22 13 47.7	-0.2
RPZ				IAmb	IAmb	22 13 58.4	
	comp=Z,9.7nm,1.0s						
FOZ	Fox Glacier	31.65	203	P	P	22 13 49.6	-0.9
FOZ				IAmb	IAmb	22 13 49.8	
	comp=Z,9.5nm,1.0s						
LBZ	Lake Benmore	32.24	202	P	P	22 13 55.8	+0.1
LBZ				IAmb	IAmb	22 14 04.2	
	comp=Z,7.4nm,1.0s						
ODZ	Otahua Downs	32.65	201	P	P	22 13 58.9	-0.4
WKZ	Wanaka	33.05	203	P	P	22 14 02.7	-0.2
MLZ	Mavora Lakes	33.85	203	P	P	22 14 08.8	-1.0
MLZ				IAmb	IAmb	22 14 12.1	
	comp=Z,6.7nm,0.7s						
DCZ	Deep Cove	34.31	204	P	P	22 14 13.8	+0.1
DCZ				IAmb	IAmb	22 14 16.0	
	comp=Z,5.5nm,0.5s						
WHZ	Wether Hill Ro	34.35	203	P	P	22 14 15.5	+1.4
ARMA	Armidale	35.35	239	P	P	22 14 22.4	-0.7
ARMA				IAmb	IAmb	22 14 27.3	
	comp=Z,9.3nm,1.1s						
H11N3	WAKE ISLAND Hy	39.64	330	T	T	22 57 06.3	
	baz=149,slow=76,SNR=8.9						
H11N1	WAKE ISLAND Hy	39.65	330	T	T	22 57 09.2	
	baz=149,slow=76,SNR=9.2						
H11N2	WAKE ISLAND Hy	39.66	330	T	T	22 57 09.1	
	baz=149,slow=76,SNR=8.9						
TOO	Toolangi	42.51	230	P	P	22 15 21.3	-1.5
STKA	Stephens Creek	44.04	240	P	P	22 15 33.7	-1.5
	comp=Z,1.9nm,0.4s,baz=96,slow=10,SNR=3.9						
STKA				LR	LR	22 33 02.2	
	comp=Z,58nm,19.8s,baz=37,slow=35						
STKA	Stephens Creek	44.04	240	P	P	22 15 35.6	+0.3
BBOO	Buckleboo	48.81	240	P	P	22 16 11.8	-0.9
WR0	Warramunga Arr	49.58	257	P	P	22 16 18.1	-0.7
WB0	Warramunga Arr	49.73	257	P	P	22 16 19.2	-0.7
WB0				IAmb	IAmb	22 16 37.9	
	comp=Z,7.9nm,1.1s						
WB2	Warramunga Arr	49.76	257	P	P	22 16 19.2	-0.9
WB2				IAmb	IAmb	22 16 38.2	
	comp=Z,4.7nm,0.9s						
WRA	Warramunga Arr	49.77	257	P	P	22 16 18.7	-1.5
	comp=Z,1.4nm,0.3s,baz=97,slow=5.9,SNR=37						
WRA	Warramunga Arr	49.77	257	P	P	22 16 19.4	-0.9
AS31	Alice Springs	50.05	252	P	P	22 16 21.5	-0.9
AS31				IAmb	IAmb	22 16 22.3	
	comp=Z,4.2nm,0.7s						
ASAR	Alice Springs	50.05	252	P	P	22 16 21.3	-1.1
	comp=Z,16nm,0.7s,baz=86,slow=8.2,SNR=140						
ASAR				LR	LR	22 35 38.8	
	comp=Z,99nm,21.4s,baz=98,slow=34						
ASAR	Alice Springs	50.05	252	P	P	22 16 21.1	-1.3
FITZ	Fitzroy Crossi	58.13	258	P	P	22 17 22.1	+0.8
	comp=Z,4.1nm,0.9s,baz=90,slow=9.1,SNR=1.8						
VNDA	Vanda	63.59	186	P	P	22 17 59.0	+1.5
	comp=Z,1.8nm,0.6s,baz=3.5,slow=6.7,SNR=14						
VNDA				LR	LR	22 40 26.2	
	comp=Z,13nm,21.1s,baz=342,slow=31						
VNDA	Vanda	63.59	186	P	P	22 17 59.5	+2.0
VNDA				IAmb	IAmb	22 17 59.8	
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	68.67	320	LR	LR	22 42 49.4	
	comp=Z,62nm,21.9s,baz=155,slow=31						
KMRM	Mail Ridge	71.96	38	P	P	22 18 51.6	+0.7
PEA0B	Petropavlovsk-	72.37	342	P	P	22 18 52.8	-0.1
PETK	Petropavlovsk-	72.37	342	P	P	22 18 53.1	+0.3
	comp=Z,3.9nm,0.7s,baz=79,slow=7.7,SNR=4.3						
PETK				LR	LR	22 43 58.4	
	comp=Z,37nm,21.1s,baz=153,slow=30						
KRMB	Red Mountain	72.67	37	P	P	22 18 56.8	+1.7
KRMB				IAmb	IAmb	22 18 57.8	
	comp=Z,6.5nm,0.9s						
YBH	Yreka Blue Hor	73.50	37	P	P	22 19 01.3	+1.3
	comp=Z,6.1nm,1.0s,baz=212,slow=1.8,SNR=12						
NVAR	Mina Array Bea	74.25	42	P	P	22 19 05.9	+1.3
	comp=Z,3.6nm,0.9s,baz=229,slow=9.7,SNR=7.8						
NVAR				LR	LR	22 43 50.2	
	comp=Z,74nm,21.0s,baz=210,slow=29						
NVAR	Mina Array Bea	74.25	42	P	P	22 19 05.7	+1.0
USRK	Ussuriysk Ar.	77.12	323	LR	LR	22 45 52.8	
	comp=Z,75nm,21.5s,baz=122,slow=30						
ELK	Elko	77.50	41	P	P	22 19 23.6	+0.4
	comp=Z,1.1nm,0.6s,baz=323,slow=4.5,SNR=5.3						
SUA	Susitna One	78.50	11	P	P	22 19 28.4	+0.4
SUA				IAmb	IAmb	22 19 45.9	
	comp=Z,6.7nm,1.1s						
TTA	Tatalina	79.04	8	P	P	22 19 32.1	+1.2
NJ2	Nanjing	79.92	307	*e*P	P	22 19 36.5	+0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TRF	Thorofare Moun	80.42	10	P	P	22 19 38.2	-0.3
TRF				IAmb	IAmb	22 19 38.9	
	comp=Z,6.3nm,1.0s						
TXAR	Lajitas Array	80.59	56	P	P	22 19 41.7	+1.5
	comp=Z,0.5nm,0.6s,baz=227,slow=9.3,SNR=4.2						
TXAR				LR	LR	22 48 00.6	
	comp=Z,49nm,19.8s,baz=0.0,slow=30						
RND	Reindeer	80.64	11	P	P	22 19 40.3	+0.7
RND				IAmb	IAmb	22 19 41.1	
	comp=Z,3.9nm,0.8s						
WRH	Wood River Hil	81.75	11	P	P	22 19 45.4	0.0
WRH				IAmb	IAmb	22 19 48.1	
	comp=Z,7.7nm,1.0s						
HDA	Harding Lake	81.90	11	IAmb	IAmb	22 19 48.2	
	comp=Z,4.5nm,0.9s						
CCB	Clear Creek Bu	81.96	11	IAmb	IAmb	22 19 47.6	
	comp=Z,5.7nm,0.8s						
PDAR	Pinedale Array	82.18	42	P	P	22 19 48.8	+0.3
	comp=Z,0.8nm,0.8s,baz=191,slow=1.5,SNR=4.3						
PDAR				LR	LR	22 51 22.0	
	comp=Z,76nm,18.1s,baz=320,slow=32						
PDAR	Pinedale Array	82.18	42	P	P	22 19 48.9	+0.5
IL31		82.24	11	P	P	22 19 48.1	+0.2
ILAR	Eielson Array	82.24	11	P	P	22 19 48.0	+0.1
	comp=Z,1.1nm,0.6s,baz=229,slow=6.5,SNR=14						
ILAR				LR	LR	22 47 20.4	
	comp=Z,61nm,20.6s,baz=200,slow=29						
IMAR	Indian Mountai	82.26	8	P	P	22 19 49.4	+1.4
POKR	Poker Plat Res	82.45	11	P	P	22 19 49.5	+0.4
PRP	Porcupine Dome	83.17	11	P	P	22 19 53.9	+0.9
PRP				IAmb	IAmb	22 19 54.2	
	comp=Z,3.1nm,0.8s						
DAWY	Dawson	83.23	14	P	P	22 19 54.2	+1.0
DAWY				IAmb	IAmb	22 19 54.6	
	comp=Z,3.3nm,0.9s						
N23A	Red Feather La	83.72	45	P	P	22 19 56.3	-0.2
BELA	Belgrano 2	84.25	172	P	P	22 19 58.8	+0.4
BMAR	Burnt Mountain	85.05	11	P	P	22 20 01.9	-0.5
MAW	Mawson	87.97	199	P	P	22 20 15.7	-1.1
	comp=Z,5.7nm,0.7s,baz=128,slow=10,SNR=7.7						
MAW				LR	LR	22 56 59.3	
	comp=Z,94nm,20.3s,baz=60,slow=34						
MAW	Mawson	87.97	199	IAmb	IAmb	22 20 17.6	
	comp=Z,1.7nm,0.8s						
HHC	Hu-ho-hao-te	88.77	313	*e*P	P	22 20 20.3	-0.9
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,6.8s						
PLCA	Paso Flores	89.77	132	LR	LR	22 51 31.5	
	comp=Z,35nm,20.7s,baz=184,slow=29						
YKA	Yellowknife Ar	89.94	23	P	P	22 20 26.1	+0.2
	comp=Z,0.5nm,0.8s,baz=236,slow=3.9,SNR=8.2						
YKA				LR	LR	22 54 59.9	
	comp=Z,63nm,20.2s,baz=0.0,slow=32						
LZH	Lanzhou	92.98	306	*e*P	P	22 20 42.3	+1.4
LZH				pP	pP	22 20 46.6	-3.2
LZH				sP	sP	22 20 49.7	-3.3
LZH				PP	PP	22 24 29.3	+5.1
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=N,420nm,16.3s						
LZH				LR	LR		
	comp=E,290nm,17.9s						
LZH				LR	LR		
	comp=Z,360nm,18.3s						
ULM	Lac du Bonnet	93.84	39	LR	LR	22 57 41.6	
	comp=Z,85nm,18.7s,baz=318,slow=32						
SONM	Songino Array	94.58	318	P	P	22 20 45.5	-2.5
	comp=Z,0.5nm,0.5s,baz=225,slow=3.0,SNR=4.8						
SONM	Songino Array	94.58	318	IAmb	IAmb	22 20 45.9	
	comp=Z,0.5nm,0.6s						
ARCES	ARCESS Array B	124.36	352	PKP	PKPdf	22 26 25.8	+0.3
	comp=Z,7.5nm,1.1s,baz=28,slow=4.1,SNR=5.1						
FINES	FINESS Array B	131.69	348	PKP	PKPdf	22 26 38.9	-0.7
	comp=Z,2.0nm,0.9s,baz=350,slow=7.1,SNR=3.5						
DPC	Dobruska-Polom	144.01	349	*e*PKP	PKPdf	22 27 04.4	+1.7
TSSL	Sulina	144.23	331	⇓P	PKiKP	22 27 11.2	+4.5
ARCR	ARCALIA	144.86	339	⇑P	PKPdf	22 27 04.9	+0.7
VRI	Vrincioaia	144.98	335	⇓P	PKPab	22 27 03.4	-0.3
VYHS	Vyhne	145.24	346	*e*PKP	PKPdf	22 27 06.0	+1.2
CJR	Cluj-Napoca	145.44	339	⇑P	PKiKP	22 27 08.3	-1.0
MLR	Muntele Rosu	145.60	335	⇑P	PKPab	22 27 07.3	+1.2
KHC	Kasperske Hory	145.63	352	*e*PKP	PKiKP	22 27 08.5	-1.0
KHC				*e*x	x	22 27 20.4	
DRGR		145.68	340	⇑P	PKPab	22 27 06.5	+0.2
BRTR	Keskin Array B	145.89	321	PKPbc	PKPdf	22 27 06.7	+0.3
	comp=Z,3.2nm,0.9s,baz=94,slow=1.7,SNR=9.7						
GERES	GERESS Array B	145.89	351	PKPbc	PKPab	22 27 07.7	+0.6
	comp=Z,0.8nm,0.6s,baz=318,slow=2.6,SNR=1.5						
VOIR		146.00	336	⇓P	PKPab	22 27 08.5	+0.9
RASA	Rasa	146.12	333	⇓P	PKPbc	22 27 07.6	+0.3
ARR	Arges	146.22	337	⇑P	PKPab	22 27 09.1	+0.7
CONA	Conrad Observa	146.42	349	*e*P	PKPab	22 27 10.1	+0.9
	comp=Z,14nm,1.4s						
BZS	Buzias	147.07	340	⇑P	PKPbc	22 27 09.9	-0.2
HERR	Herculane	147.45	339	⇓P	PKPbc	22 27 12.1	+0.9
KBA	Koelnbreinsper	147.67	351	*e*P	PKPbc	22 27 12.7	+0.8
	comp=Z,4.2nm,0.9s						
WTTA	Wattenberg	147.71	353	*e*P	PKPbc	22 27 12.4	+0.3
	comp=Z,7.3nm,0.6s						
SQTA	Sankt Quirin	147.80	354	*e*P	PKPbc	22 27 13.4	+1.2
	comp=Z,5.6nm,1.3s						
DAVA	Damuels	147.85	356	*e*P	PKiKP	22 27 13.7	-0.6
	comp=Z,10.0nm,1.1s						

FETA	Feichten	148.04	354	*e*P	PKiKP	22 27 14.2	-0.5
	comp=Z,7.7nm,1.3s						
ABTA	Abfaltersbach	148.11	352	*e*P	PKPbc	22 27 13.7	+0.7
	comp=Z,4.3nm,0.8s						
ESDC	Sonseca Array	153.93	19	PKPab	PKPab	22 27 40.8	+0.7
	comp=Z,0.8nm,0.9s,baz=336,slow=4.6,SNR=3.2						

IDC 09 22:07:51.3±343.0**, 38°.45N×118°.73W, h0^{km}, Error ellipse: s-maj=158.4km s-min=102.6km az=158.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	0.34	93	*i*		22 09 42.8	
	3.5nm,0.3s,baz=216,slow=10,SNR=54						
I57US	PINON FLAT INF	5.17	158	*i*		22 41 30.0	
	baz=339,slow=319,SNR=2.2						
I56US	NEWPORT INFRAS	9.88	6	*i*		23 09 20.0	
	baz=187,slow=329,SNR=2.4						
I10CA	LAC DU BONNET	19.96	47	*i*		00 12 50.0	
	baz=240,slow=339,SNR=1.5						

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*IDC **09** 22:50:34.3±0.9, 37°.79N×144°.23E, h0^{km}, mb3.8/8, mb1 4.0/14, mb1mx3.7/45, mbtmp3.9/14, ML3.6/5, Error ellipse: s-maj=23.3km s-min=17.9km az=83.0*

*JMA **09** 22:50:38.2±0.2, 37°.92N×144°.04E, h49^{km}, M3.8*

*NIED **09** 22:50:38.2, 37°.92N×144°.04E, h49^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.90; $M_{\theta\theta}$0.36; $M_{\phi\phi}$2.54; $M_{r\theta}$3.19; $M_{\theta\phi}$1.08; $M_{\phi r}$2.88; Fault plane solution: $M_0$5.20000×10^{14} NP1: ϕ_s223.00000°, δ74.00000°, λ-78.00000°. NP2: ϕ_s6.00000°, δ20.00000°, λ-125.00000°.*

*NEIC **09** 22:50:39.1±2.5, 37°.84N±0°.08×144°.2E±0°.1, h35^{km}±8^{km}, mb4.5/8 Error ellipse: s-maj=17.0km s-min=11.0km az=101.0*

ISC 09 22:50:39.5±0.8**, 37°.90N**±0°.06×**144°.06E**±0°.07**, h35^{km}, n54, σ1^{s}91**/61**, mb4.0**/13**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.09	282	P	Pn	22 51 11.4	-0.6
JIKH				S	Sn	22 51 35.5	-1.3
JIO	Ouri	2.21	285	P	Pn	22 51 13.2	-0.4
JIO				*e*S	Sn	22 51 38.8	-0.9
OFUJ	Ofunato	2.22	303	P	Pn	22 51 13.2	-0.6
JKMT	Kesennumamotoy	2.23	295	P	Pn	22 51 13.4	-0.5
JKMT				*e*S	Sn	22 51 39.9	-0.3
JMK	Ichinoseki	2.47	296	P	Pn	22 51 16.8	-0.4
JMM	Marumori	2.59	270		Pn	22 51 18.7	-0.1
JOM	Ohasama	2.68	307	P	Pn	22 51 19.9	-0.2
JFT	Otama	2.98	264	P	Pn	22 51 24.3	0.0
JFT				*e*S	Sn	22 51 58.6	-0.2
JYK	Kaneyama	3.08	290	P	Pn	22 51 26.0	+0.3
JYT	Yasato	3.52	243		Pn	22 51 30.4	-1.2
JTM	Tenmabayashi	3.70	322	Pn	Pn	22 51 34.3	+0.1
ERM	Erimo	4.17	351	Pn	Pn	22 51 39.8	-0.8
JOT	Ohata	4.18	327	*e*S	Sn	22 52 26.0	-2.4
JRY	Ryogami san	4.54	247	P	Pn	22 51 45.1	-0.6
JRY				*e*S	Sn	22 52 34.7	-2.6
JKB	Kayabe	4.61	331	P	Pn	22 51 46.6	-0.1
JCH	Churui	4.74	354	P	Pn	22 51 47.0	-1.4
JCH				*e*S	Sn	22 52 38.6	-3.5
MJAR	Matsushiro Arr	4.86	256	Pn	Pn	22 51 50.7	+0.5
	0.5nm,0.3s,baz=72,slow=9.2,SNR=34						
MJAR	Matsushiro Arr	4.86	256		Pn	22 51 50.9	+0.7
MAJO	Matsushiro	4.87	256		Pn	22 51 51.5	+1.3
MAT	Matsushiro	4.87	256	P	Pn	22 51 51.0	+0.8
MAT				*e*S	Sn	22 52 42.4	-2.9
JEW	Eniwo	5.32	339		Pn	22 51 57.0	+0.6
NEM2	Nemuro 2	5.61	13	P	Pn	22 51 56.8	-3.5
NEM2				*e*S	Sn	22 52 56.6	-6.9
JGF	Kuroka	5.85	249	Pn	Pn	22 52 05.1	+1.3
JHJ2	Mitsune	5.90	217	Pn	Pn	22 52 03.1	-1.2
JHJ	Hachijo jima 2	5.91	217	Pn	Pn	22 52 02.3	-2.2
	6.7nm,0.3s,baz=260,slow=19,SNR=1.9						
JHJ				Sn	Sn	22 53 03.6	-7.4
	18nm,0.3s,baz=241,slow=21,SNR=1.2						
JTKR	Abashiri--Toko	6.07	359	P	Pn	22 52 04.7	-1.9
JTKR				*e*S	Sn	22 53 11.0	-3.8
JHR	Hokuryu	6.10	344	P	Pn	22 52 07.8	+0.7
JKA	Kamikawa-asahi	6.31	350		Pn	22 52 09.7	-0.2
ASAJ	Asahikawa	6.31	350	Pn	Pn	22 52 09.7	-0.2
	5.1nm,0.3s,baz=252,slow=3.8,SNR=13						
JWT	Wachi	7.44	252	Pn	Pn	22 52 24.9	-0.7
USA0B	Ussuriysk Arra	11.07	308	Pn	Pn	22 53 16.7	+1.4
USRK	Ussuriysk Ar.	11.07	308	Pn	Pn	22 53 17.1	+1.9
	baz=110,slow=15,SNR=6.4						
KSRS	Korea Array	12.80	273	Pn	Pn	22 53 40.0	+1.2
	0.2nm,0.3s,baz=85,slow=12,SNR=2.8						
KLR	Kul'dur	14.40	326	Pn	Pn	22 53 59.7	-0.9
	0.1nm,0.3s,baz=131,slow=19,SNR=2.1						
H11N2	WAKE ISLAND Hy	26.86	126	T	T	23 24 15.0	
	baz=318,slow=76,SNR=4.7						
H11N1	WAKE ISLAND Hy	26.87	126	T	T	23 24 17.5	
	baz=318,slow=76,SNR=3.5						
H11N3	WAKE ISLAND Hy	26.88	126	T	T	23 24 19.1	
	baz=318,slow=76,SNR=4.9						
SONM	Songino Array	29.08	302	P	P	22 56 37.4	+0.7
	0.5nm,0.5s,baz=100,slow=9.2,SNR=6.3						
SONM	Songino Array	29.08	302	P	P	22 56 38.9	+2.2
ADK	Adak	30.71	50	P	P	22 56 51.2	+0.3
ZALV	Zalesovo Beam	42.90	312	P	P	22 58 35.7	+1.3
	0.5nm,0.5s,baz=82,slow=8.0,SNR=1.9						
MK31	Makanchi Array	45.45	302	P	P	22 58 56.1	+1.2
MK31				IAmb	IAmb	22 59 04.3	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	45.45	302	P	P	22 58 56.5	+1.5
	comp=Z,1.1nm,0.8s,baz=87,slow=9.8,SNR=12						
MKAR	Makanchi Array	45.45	302	P	P	22 58 55.8	+0.9
MAKZ	Makanchi	45.66	302	P	P	22 58 57.6	+1.0
KURK	Kurchatov	47.06	308	P	P	22 59 09.0	+1.5
KURK				IAmb	IAmb	22 59 17.1	
	comp=Z,2.6nm,0.7s						
ILAR	Eielson Array	47.63	33	P	P	22 59 12.2	+0.5
	comp=Z,0.4nm,0.8s,baz=279,slow=6.3,SNR=2.5						
WB0	Warramunga Arr	58.08	191	P	P	23 00 28.6	-0.7
WB0				IAmb	IAmb	23 00 29.2	
	comp=Z,6.9nm,0.8s						
WR0	Warramunga Arr	58.24	191	P	P	23 00 29.6	-0.8
WR0				IAmb	IAmb	23 00 42.3	
	comp=Z,4.3nm,1.1s						
WB2	Warramunga Arr	58.25	191	P	P	23 00 30.0	-0.5
WB2				IAmb	IAmb	23 00 30.7	
	comp=Z,7.2nm,0.8s						
WRA	Warramunga Arr	58.26	191	P	P	23 00 29.7	-0.8
	comp=Z,4.2nm,0.7s,baz=11,slow=7.3,SNR=21						
ASAR	Alice Springs	61.98	191	P	P	23 00 55.6	-0.4
	comp=Z,1.0nm,0.8s,baz=6.1,slow=7.7,SNR=8.4						
FINES	FINESS Array B	69.02	333	P	P	23 01 42.2	+1.1
	comp=Z,1.3nm,0.9s,baz=26,slow=6.8,SNR=1.5						
NVAR	Mina Array Bea	72.78	55	P	P	23 02 04.5	-0.1
	comp=Z,0.2nm,0.6s,baz=277,slow=7.1,SNR=2.9						

WEL 09 22:51:14.8, 38°S±2°×**17°8E**±°**, h5^{km}**±3^{km}**, M3.5**/29**, ML3.8**/29**, MLv3.5**/29**, Error ellipse: s-maj=0.0km s-min=0.0km az=59.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.23	329	P	Pg	22 51 20.4	+0.9
PUZ				S	Sg	22 51 24.2	+1.7
CNGZ	Carnagh Statio	0.27	217	P	Pb	22 51 23.7	+1.5
CNGZ				S	Sb	22 51 32.8	+5.8
TWGZ	Tauwhareparae	0.35	285	P	Pb	22 51 23.0	-0.6
TWGZ				S	Sb	22 51 29.4	-0.2
WMGZ	Waiomatatini S	0.45	0	P	Pb	22 51 25.4	+0.1
WMGZ				S	Sb	22 51 33.2	+0.9
PKGZ	Pakihiroa	0.47	325	P	Pb	22 51 24.7	-0.8
PKGZ				S	Sb	22 51 33.3	+0.6
TKGZ	Te Karaka	0.47	249	P	Pb	22 51 26.2	+0.5
TKGZ				S	Sb	22 51 35.7	+2.8
RUGZ	Raukumara Rang	0.66	298	P	Pg	22 51 28.0	+0.5
RUGZ				S	Sg	22 51 37.1	+1.1
RIGZ	Rimuhau	0.67	229	P	Pn	22 51 30.4	-0.6
RIGZ				S	Sn	22 51 42.6	+0.7
MWZ	Matawai	0.70	265	P	Pb	22 51 29.4	-0.2
MWZ				S	Sb	22 51 39.5	+0.1
MXZ	Matakaoa Point	0.71	353	P	Pb	22 51 29.9	+0.2
MXZ				S	Sn	22 51 41.5	-1.4
HAZ	Te Kaha	0.71	316	P	Pg	22 51 29.0	+0.4
HAZ				S	Sg	22 51 38.6	+0.7
PRGZ	Paritu Road	0.77	212	P	Pn	22 51 31.7	-0.7
RAGZ	Rawiri	0.81	254	P	Pb	22 51 32.1	+0.6
RAGZ				S	Sn	22 51 45.7	+0.2
KNZ	Kokohu	0.95	217	P	Pb	22 51 33.6	-0.1
KNZ				S	Sn	22 51 50.8	+2.2
MHGZ	Mahia Peninsul	0.96	204	P	Pb	22 51 34.4	+0.4
SNGZ	Shannon Statio	0.98	238	P	Pb	22 51 34.7	+0.3
URZ	Urewera	1.02	270	P	Pb	22 51 35.0	0.0
RTZ	Ruatahuna	1.18	253	P	Pg	22 51 37.4	0.0
WHRZ	Whale Island	1.21	290	P	Pb	22 51 38.1	-0.1
RAHZ	Arahi	1.22	238	P	Pn	22 51 39.5	+0.9
WHHZ	Waihua	1.22	229	P	Pg	22 51 37.7	-0.6
MUGZ	Murupara	1.31	260	P	Pg	22 51 40.4	+0.5
EDRZ	Edgecumbe	1.33	277	P	Pn	22 51 39.9	-0.2
MTHZ	Maungataniwha	1.36	244	P	Pn	22 51 39.8	-0.7
MARZ	Manawahe	1.40	281	P	Pn	22 51 40.4	-0.6
RRRZ	Republican Roa	1.49	267	P	Pn	22 51 42.7	+0.4
TARZ	Mount Tarawera	1.50	271	P	Pn	22 51 42.3	-0.2
NMHZ	Naumai	1.50	236	P	Pn	22 51 42.2	-0.3
OPRZ	Ohinepanea	1.53	286	P	Pn	22 51 41.7	-1.1
MKRZ	Makatiti	1.54	274	P	Pb	22 51 44.1	+0.2
PRRZ	Plateau Road	1.60	261	P	Pg	22 51 45.6	+0.1
OMRZ	Omania	1.62	275	P	Pn	22 51 44.0	-0.1
HLRZ	Highlands Stat	1.62	270	P	Pb	22 51 44.8	-0.5
LIRZ	Lichensteins R	1.62	279	P	Pg	22 51 46.6	+0.7
ALRZ	Allen Road	1.65	259	P	Pg	22 51 47.1	+0.6
MRHZ	Matea Rd	1.66	250	P	Pn	22 51 44.3	-0.4
HRRZ	Handcock Road	1.68	265	P	Pn	22 51 45.4	+0.5
KARZ	Kaharoa	1.73	278	P	Pn	22 51 45.0	-0.5
CKHZ	Cape Kidnapper	1.73	216	P	Pn	22 51 44.2	-1.4
BKZ	Black Stump Fm	1.75	239	P	Pn	22 51 45.2	-0.7
NGRZ	Ngongotaha	1.76	275	P	Pn	22 51 46.4	+0.3
MCHZ	McNeill Hill	1.78	228	P	Pn	22 51 45.5	-0.8
TGRZ	Tauranga	1.78	287	P	Pn	22 51 45.2	-1.1
WPRZ	Whakapapatarin	1.79	261	P	Pg	22 51 50.1	+1.1
KWHZ	Kaweka Forest	1.93	233	P	Pn	22 51 47.1	-1.3
KAHZ	Kahuranaki	1.93	218	P	Pn	22 51 46.8	-1.7
MYRZ	Mayor Island	1.98	299	P	Pg	22 51 54.6	+1.7
KUTZ	Kaahu Road	2.05	263	P	Pn	22 51 50.4	+0.5
KRHZ	Kereru	2.10	229	P	Pn	22 51 49.3	-1.3
RITZ	Rihia Road	2.12	250	P	Pg	22 51 56.7	+1.2
BHHZ	Black Hill Sta	2.20	236	P	Pn	22 51 51.2	-0.9
TMVZ	Te Maari	2.28	247	P	Pn	22 51 52.6	-0.6
ETVZ	East Tongariro	2.28	247	P	Pn	22 51 53.0	-0.2
KRVZ	Karewarewa	2.32	248	P	Pn	22 51 53.1	-0.6
OTVZ	Oturere	2.33	247	P	Pn	22 51 53.4	-0.5
TOZ	Tahuroa Road	2.36	282	P	Pn	22 51 53.3	-0.9
WTVZ	West Tongariro	2.36	248	P	Pg	22 52 00.3	+0.1
MOVZ	Moawhango	2.37	241	P	Pn	22 51 53.9	-0.4
NGZ	Ngauruhoe	2.38	247	P	Pn	22 51 54.4	-0.2
PNHZ	Pukenui	2.38	226	P	Pn	22 51 52.6	-1.9
PRHZ	Porangahau	2.42	214	P	Pn	22 51 52.4	-2.7
WNVZ	Wahianoa	2.44	244	P	Pn	22 51 54.6	-0.8
FWVZ	Far West T-bar	2.44	245	P	Pn	22 51 55.1	-0.4
TSZ	Takapari Road	2.61	226	P	Pn	22 51 55.6	-2.1
KUZ	Kuaotunu	2.63	305	P	Pn	22 51 56.2	-1.6
MKAZ	Moumakai	2.83	293	P	Pn	22 51 59.7	-1.0
BFZ	Birch Farm	2.93	214	P	Pn	22 51 59.6	-2.5
VRZ	Vera Road	2.98	252	P	Pn	22 52 03.2	+0.4
NEZ	North Egmont	3.52	252	P	Pn	22 52 11.1	+0.9
PKE	Pukeiti	3.58	254	P	Pn	22 52 11.8	+0.7
KHEZ	Kahui Hut	3.58	252	P	Pn	22 52 12.3	+1.2
OUZ	Omahuta	4.92	307	P	Pn	22 52 29.5	+0.1
CTZ	Chatham Island	6.63	147	P	Pn	22 52 52.5	-0.3

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*NOU **09** 22:59:06.8, 2°.45N×95°.98E, h0^{km}, mb5.2, Off West Coast of Northern Sumatra*

*BGR **09** 22:59:08.6±0.0, 2°.18N×96°.23E, h33^{km}, mb5.4*

*BJI **09** 22:59:08.9±0.0, 2°.45N×96°.02E, h47^{km}, mB5.0/54, mb5.0/69, Ms4.7/55, Ms7 4.5/54*

*KLM **09** 22:59:09, 2°.55N×95°.84E, h23^{km}, mb5.5*

*DJA **09** 22:59:10.6±1.1, 3°N±2°×9°6E±°, h19^{km}±8^{km}, M5.3/45, mb5.3/45, mB5.7/21, MLv5.5/14, Mw(mB)5.3/21, MwMwp4.9/1, Mwp5.2/1*

*MOS **09** 22:59:10.9±0.9, 2°.70N×96°.06E, h49^{km}, mb5.4/55, MS4.5/4, Error ellipse: s-maj=7.2km s-min=3.8km az=112.5*

*GCMT **09** 22:59:11.9±0.2, 2°.68N±0°.01×95°.99E±0°.01, h37^{km}, MW5.1/115, Moment Tensor Solution. s68,c96; s115,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.43±.17; $M_{\theta\theta}$0.16±.12; $M_{\phi\phi}$3.28±.14; $M_{r\theta}$-1.10±.13; $M_{\theta\phi}$-4.88±.10; $M_{\phi r}$-1.84±.15; Best double couple: $M_0$6.16600×10^{16} NP1: ϕ_s108.00000°, δ56.00000°, λ-147.00000°. NP2: ϕ_s358.00000°, δ64.00000°, λ-39.00000°. Principal axes: T 6.9120, Plg5.0000°, Azm55.0000°; N -1.4860, Plg44.0000°, Azm149.0000°; P -5.4200, Plg46.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 22:59:11.9±2.1, 2°.59N±0°.06×96°.10E±0°.07, h50^{km}±4^{km}, mb5.1/165 Error ellipse: s-maj=10.6km s-min=7.7km az=56.0*

*IDC **09** 22:59:11.9±1.4, 2°.68N×96°.07E, h42^{km}±12^{km}, mb4.7/37, mb1 4.8/40, mb1mx4.6/54, mbtmp4.9/40, ML4.8/3, MS4.3/24, Ms1 4.3/24, ms1mx4.2/32, Error ellipse: s-maj=11.5km s-min=8.1km az=41.0*

ISC 09 22:59:10.9±0.3**, 2°.61N**±0°.03×**96°.04E**±0°.04**, h37^{km}**±1^{km}**, h37^{km}:pP-P, n816, σ1^{s}55**/870**, mb5.2**/243**, MS4.5**/43**, 32C-62D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		1.31	60	P	Pn	22 59 32.3	-0.4
TPTI				S	Sn	22 59 49.4	+0.5
KCSI	Kotacane, Aceh	1.95	62	P	Pn	22 59 42.4	+0.8
KCSI				S	Sn	23 00 04.6	-0.2
GSI	Gunungsitoli	2.00	130		Pn	22 59 43.5	+1.3
GSI				Sn	Sn	23 00 04.9	-1.2
GSI	Gunungsitoli	2.00	130	P	Pn	22 59 44.1	+1.8
GSI				S	Sn	23 00 04.9	-1.2
TSI	Tuntungan	2.67	70	P	Pn	22 59 54.2	+2.8
LHMI	Lhok Sumawe	2.76	19	Pn	Pn	22 59 54.4	+1.8
LHMI	Lhok Sumawe	2.76	19	P	Pn	22 59 53.7	+1.1
RPSI	Rantau Prapat	2.88	88		Pn	22 59 56.0	+1.7
PSI	Prapat	2.89	86	P	Pn	22 59 56.0	+1.5
	54nm,0.3s,baz=357,slow=1.2,SNR=193						
PSI				S	Sn	23 00 28.8	+0.7
	112nm,0.3s,baz=360,slow=7.4,SNR=5.4						
PSI				LR	LR	23 01 20.4	
	comp=Z,7μm,21.2s,baz=270,slow=45						
MNSI	Mandailing Nat	3.97	117	P	Pn	23 00 10.5	+1.3
IPM	Ipoh	5.31	69	Pn	Pn	23 00 29.3	+1.6
IPM	Ipoh	5.31	69	P	Pn	23 00 30.0	+2.2
KULM	Kulim	5.32	60	Pn	Pn	23 00 29.3	+1.5
KULM	Kulim	5.32	60	P	Pn	23 00 30.0	+2.2
BKNI	Bangkinang	5.49	114	Pn	Pn	23 00 31.9	+1.8
BKNI	Bangkinang	5.49	114	P	Pn	23 00 31.9	+1.8
	7.1nm9μm520nm,0.6s						
PDSI	Padang	5.63	128	P	Pn	23 00 34.1	+1.9
	2.2nm7μm215nm,0.5s						
PKDT	Phuket	5.73	23	P	Pn	23 00 34.1	+0.7
	2.6nm9μm443nm,0.6s						
TRTT	Trang	6.34	35	P	Pn	23 00 42.7	+0.8
	1.8nm8μm526nm,0.7s						
SDSI	Sungai Dareh	6.43	123	P	Pn	23 00 43.7	+0.6
	1.3nm10μm152nm,0.5s						
SURT	Suratani	6.88	23	P	Pn	23 00 56.0	+6.7
	4.0nm,1.1s						
MYKOM	Kota Tinggi	7.84	96		Pn	23 01 04.8	+2.2
MYKOM	Kota Tinggi	7.84	96	P	Pn	23 01 05.0	+2.4
KSI	Kapahiang	9.03	133	P	Pn	23 01 20.2	+1.3
	12μm421nm,0.6s						
PBA	Port Blair	9.57	340	Pn	Pn	23 01 26.7	+0.5
MNAI	Manna	9.78	135	Pn	Pn	23 01 29.6	+0.5
MNAI	Manna	9.78	135	P	Pn	23 01 30.9	+1.8
	17μm761nm,0.5s						
LHSI	Lahat	9.84	130	P	Pn	23 01 31.5	+1.6
	5μm358nm,1.2s						
PHET	Kaeng Krachan	10.84	19	P	Pn	23 01 55.0	+11
DGPR	DIGLIPUR	10.95	344	*e*P	Pn	23 01 41.2	-3.9
DGPR				IAmb	IAmb	23 01 43.1	
	comp=Z,14nm,0.4s						
LWLI	Liwa	11.02	133	P	Pn	23 01 47.8	+1.6
	comp=Z,6μmcomp=Z,258nm,0.4s						
KLSI		11.31	130	P	Pn	23 01 50.5	+0.4
	comp=Z,633nmcomp=Z,66nm,0.9s						
PATY	Pattaya	11.31	25	P	Pn	23 01 52.0	+1.9
	comp=Z,57nm,0.5s						
KASI	Kota Agung	11.68	134	P	Pn	23 01 54.3	-0.9
	comp=Z,2μmcomp=Z,154nm,0.5s						
BLSI	Bandar Lampung	12.13	131	P	Pn	23 02 02.3	+0.9
	comp=Z,138nm,0.5s						
SRAK	Srakaew	12.79	27	P	P	23 02 17.1	-3.7
	comp=Z,18μmcomp=Z,1μm,0.6s						
UTHA	Uthaitani	13.30	14	P	P	23 02 22.6	-3.9
	comp=Z,354nmcomp=Z,27nm,0.7s						
DBJI	Dramaga	14.04	130	P	Pn	23 02 30.1	+2.7
	comp=Z,20μmcomp=Z,35nm,1.2s						
KSM	Kuching	14.30	94	Pn	Pn	23 02 32.4	+1.4
KSM	Kuching	14.30	94	P	Pn	23 02 33.0	+2.0
CHAI	Chaiyaphum	14.45	24	P	P	23 02 39.0	-0.3
	comp=Z,56nm,0.9s						
LEM	Lembang	14.88	129	P	Pn	23 02 36.3	-2.6
	comp=Z,2.8nm,0.3s,baz=332,slow=22,SNR=2.8						
LEM				S	Sn	23 05 20.8	-1.8
	comp=Z,1.3nm,0.3s,baz=351,slow=22,SNR=1.3						
LEM				LR	LR	23 09 04.6	
	comp=Z,1μm,21.0s,baz=296,slow=40						
PHIT	Phitsanulok	15.12	16	P	P	23 02 47.0	+0.4
	comp=Z,260nm,0.7s						
SUKH	Sukhothai	15.20	13	P	P	23 02 47.8	+0.3
	comp=Z,80nm,0.8s						
DLV	T Lat	15.43	52		Pn	23 02 45.5	-0.8
CISI	Cisompet, Garu	15.49	131		Pn	23 02 42.8	-4.0
MHMT	Maesarieng	15.59	7	P	P	23 02 53.5	+1.7
	comp=Z,41nm,0.9s						
UBPT	Khong Chiam	15.65	36	P	P	23 02 51.7	-0.9
	comp=Z,78nm,1.1s						
UBPT	Khong Chiam	15.65	36	Pn	Pn	23 02 49.8	+0.8
UTTA	Uttaradit	15.68	16	P	P	23 02 52.3	-0.6
	comp=Z,541nmcomp=Z,60nm,0.8s						
CM05	Chiang Mai Arr	15.96	10	P	P	23 02 56.6	+0.7
	comp=Z,237nmcomp=Z,26nm,0.8s						
CM04	Chiang Mai Arr	15.96	10	P	P	23 02 56.0	0.0
	comp=Z,437nmcomp=Z,44nm,0.7s						
CM13	Chiang Mai Arr	15.97	10	P	P	23 02 56.0	-0.1
	comp=Z,359nmcomp=Z,38nm,0.7s						
PALK	Pallekele	15.97	287	P	P	23 02 54.5	-1.6
	comp=Z,2.9nm,0.3s,baz=197,slow=9.8,SNR=16						
PALK				S	Sn	23 05 35.1	-14
	comp=Z,8.6nm,0.3s,baz=297,slow=20,SNR=18						
PALK				LR	LR	23 08 24.8	
	comp=Z,1μm,20.6s,baz=211,slow=35						
PALK	Pallekele	15.97	287	*de*P	Pn	23 02 54.2	+1.2
PALK				pmax	pmax		
	comp=Z,72nm,0.9s						
PALK	Pallekele	15.97	287	Pn	Pn	23 02 54.0	+1.0
CM01	Chiang Mai Arr	15.98	10	P	P	23 02 56.0	-0.2
	comp=Z,390nmcomp=Z,42nm,0.7s						
CM02	Chiang Mai Arr	15.99	10	P	P	23 02 56.0	-0.3
	comp=Z,279nmcomp=Z,31nm,0.8s						
CM15	Chiang Mai Arr	16.00	10	P	P	23 02 57.1	+0.6
	comp=Z,374nmcomp=Z,41nm,0.6s						
CM09	Chiang Mai Arr	16.00	10	P	P	23 02 56.8	+0.3
	comp=Z,391nmcomp=Z,43nm,0.6s						
CM31	Chiang Mai Arr	16.01	10	P	P	23 02 57.0	+0.5
	comp=Z,8μmcomp=Z,1μm,0.7s						
CM31	Chiang Mai Arr	16.01	10		P	23 02 55.7	-0.8
CMAR	Chiang Mai Arr	16.01	10	P	Pn	23 02 53.9	+0.4
	comp=Z,3.1nm,0.3s,baz=200,slow=12,SNR=86						
CMAR				S	Sn	23 05 51.6	+1.7
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=1.2						
CMAR				LR	LR	23 09 48.4	
	comp=Z,2μm,19.5s,baz=228,slow=40						
CMAR				ScP	ScP	23 11 20.8	-0.4
	baz=236,slow=2.5,SNR=4.7						
CMAR	Chiang Mai Arr	16.01	10		Pn	23 02 53.7	+0.2
CMAR					ScP	23 11 21.0	-0.1
CM36	Chiang Mai Arr	16.10	11	P	P	23 02 56.0	-1.5
XMI	Christmas Isla	16.14	144	P	Pn	23 02 52.3	-2.9
	comp=Z,86nm,0.7s						
SBUM	Sibu	16.16	90	P	Pn	23 02 56.1	+0.6
SBUM	Sibu	16.16	90	P	P	23 02 58.0	-0.3
CM32	Chiang Mai Arr	16.18	10	P	P	23 02 57.0	-1.5
LAMP	Lampang	16.21	12	P	P	23 02 57.9	-0.8
	comp=Z,45nm,0.8s						
CM35	Chiang Mai Arr	16.26	11	P	Pn	23 02 57.0	+0.3
CHTO	Chiang Mai	16.36	10	P	Pn	23 02 58.1	+0.2
CHTO				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	16.36	10	Pn	Pn	23 02 58.1	+0.2
CMMT	Chiang Mai	16.36	10	P	Pn	23 02 58.0	+0.1
	comp=Z,15nm,0.9s						
CM33	Chiang Mai Arr	16.36	10	P	Pn	23 02 58.0	0.0
CM34	Chiang Mai Arr	16.43	10	P	P	23 03 00.0	-1.2
NONG	Nongkai	16.87	24	P	Pn	23 03 04.8	+0.5
	comp=Z,108nm,2.2s						
PAYA	Payao	17.07	12	P	Pn	23 03 07.0	+0.1
	comp=Z,4μmcomp=Z,297nm,0.7s						
MTKI	Muara Teweh, K	19.18	100	P	Pn	23 03 33.3	+0.6
	comp=Z,5μmcomp=Z,54nm,0.7s						
BBKI	Banjar Baru	19.73	108	P	Pn	23 03 45.2	+5.8
SAIH	SAIHA	19.99	352	*e*P	P	23 03 40.4	-0.1
SAIH				IAmb	IAmb	23 03 46.9	
	comp=Z,116nm,0.9s						
SAIH				*e*S	S	23 07 13.6	-10
SLVN	Son La	20.13	22	P	P	23 03 42.1	+0.1
KKM	Kota Kinabalu	20.40	80	P	P	23 03 45.1	0.0
KKM				IAmb	IAmb	23 03 48.5	
	comp=Z,120nm,1.0s						
SPMM	Sapulut	20.49	84	P	Pn	23 03 48.0	-0.3
KBKI	Kotabaru	20.95	106	P	Pn	23 03 58.8	+5.2
JAGI	Jajag, Banyuwa	21.15	122	P	P	23 03 53.3	+0.3
JAGI				IAmb	IAmb	23 04 07.2	
	comp=Z,60nm,0.9s						
QIZ	Qiongzhong	21.19	39	P	P	23 03 53.7	+0.3
QIZ				S	S	23 07 48.3	+1.2
QIZ				sS	sS	23 08 05.5	+5.0
QIZ				LR	LR		
	comp=Z,1μm,13.3s						
QIZ				LR	LR		
	comp=Z,1μm,12.6s						
QIZ				LR	LR		
	comp=Z,2μm,17.3s						
BKB	Balikpapan	21.20	100	P	P	23 03 51.1	-2.5
SGKI	Sangatta, Kali	21.78	98	P	P	23 04 15.4	+16
MYLDM	Lahad Datu	22.55	83	P	P	23 04 08.6	+0.5
MYLDM				IAmb	IAmb	23 04 27.8	
	comp=Z,65nm,0.8s						
HYB	Hyderabad	22.62	312	*i* P	P	23 04 10.0	+1.2
HYB				*e*S	S	23 08 18.0	+3.6
HYB	Hyderabad	22.62	312	*e*P	P	23 04 10.9	+2.1
HYB				IAmb	IAmb	23 04 13.1	
	comp=Z,88nm,1.0s						
HYB				*e*S	S	23 08 17.1	+2.7
SHL	Shillong	23.18	350	P	P	23 04 13.0	-1.7
SHL				pmax	pmax		
	comp=Z,198nm,1.0s						
SHL	Shillong	23.18	350	*e*P	P	23 04 11.8	-2.8
SHL				IAmb	IAmb	23 04 15.9	
	comp=Z,109nm,1.1s						
SHL				*e*S	S	23 08 20.9	-3.1
SHL	Shillong	23.18	350	P	P	23 04 13.0	-1.7
BOK	Bokaro	23.24	336	*e*P	P	23 04 15.1	0.0
BOK				IAmb	IAmb	23 04 18.6	
	comp=Z,370nm,0.9s						
BOK				*e*S	S	23 08 26.6	+1.8
KMI	Kunming	23.30	16	⇓P	P	23 04 17.5	+1.6
KMI				pP	sP	23 04 28.5	-1.9
KMI				sP	pP	23 04 32.3	+6.7
KMI				PP		23 04 50.2	
KMI				S	S	23 08 25.7	-0.4
KMI				sS	Sn	23 08 45.7	-0.2
KMI				SS	SnSn	23 09 16.0	+13
KMI				pmax	pmax		
	comp=Z,37nm,0.8s						
KMI				pmax	pmax		
	comp=Z,120nm,3.5s						
KMI				LR	LR		
	comp=Z,1μm,23.7s						
KMI				LR	LR		
	comp=Z,690nm,21.4s						
KMI				LR	LR		
	comp=Z,2μm,20.8s						
KMI	Kunming	23.30	16	P	P	23 04 15.6	-0.3
KMI				pmax	pmax		
	comp=Z,27nm,0.8s						
KMI	Kunming	23.30	16	P	P	23 04 15.6	-0.3
MOKO	MOKOCHONG	23.63	357	*e*P	P	23 04 16.9	-2.0
MOKO				IAmb	IAmb	23 04 19.2	

	comp=Z,63nm,0.8s						
MOKO				*e*S	**S**	**23 08 28.2**	**-3.0**
GUWA	**GUWAHATI**	**23.82**	**350**	*e*P	**P**	**23 04 20.7**	**+0.1**
MPSI	**Mapaga**	**23.95**	**95**	P	**P**	**23 04 24.0**	**+2.0**
	comp=Z,31nm,0.8s						
TTSI	**Tana Toraja**	**24.42**	**103**	P	P	23 04 42.6	+16
NGP	**Nagpur**	**24.77**	**319**	*e*P	**P**	**23 04 31.0**	**+1.5**
TOLI2	**Tolitoli**	**24.77**	**93**	P	**P**	**23 04 28.5**	**-1.0**
TOLI2				IAmb	IAmb	23 04 45.8	
	comp=Z,38nm,0.8s						
KAPI	**Kappang**	**24.87**	**108**	P	**P**	**23 04 31.2**	**+0.8**
	comp=Z,71nm,0.8s,baz=292,slow=10,SNR=18						
KAPI				LR	LR	23 15 21.2	
	comp=Z,696nm,19.0s,baz=292,slow=39						
KAPI	**Kappang**	**24.87**	**108**	P	**P**	**23 04 30.8**	**+0.4**
KAPI				IAmb	IAmb	23 04 32.8	
	comp=Z,95nm,0.9s						
ZIRO	**ZIRO**	**24.87**	**355**	*e*P	**P**	**23 04 30.3**	**-0.2**
ZIRO				*e*S	**S**	**23 08 46.6**	**-4.7**
BNSI	**Bone**	**25.03**	**106**	P	**P**	**23 04 34.3**	**+2.4**
	comp=Z,1µmcomp=Z,60nm,1.6s						
BKSI	**Bulukumba**	**25.31**	**108**	P	**P**	**23 04 36.3**	**+1.9**
	comp=Z,1µmcomp=Z,100nm,0.8s						
GOA	**Goa**	**25.36**	**302**	*e*P	**P**	**23 04 35.8**	**+1.0**
GOA				IAmb	IAmb	23 04 40.0	
	comp=Z,74nm,1.2s						
ODAN	**Odare**	**25.50**	**342**	*e*P	**P**	**23 04 37.1**	**+0.8**
	comp=Z,273nm,0.7s						
GTK	**Tadong**	**25.59**	**345**	*e*P	**P**	**23 04 37.8**	**+0.9**
GTK				IAmb	IAmb	23 04 39.5	
	comp=Z,114nm,1.1s						
H08S2	**Diego Garcia H**	**25.61**	**246**	T	T	23 31 23.4	
	baz=68,slow=75,SNR=5674						
H08S3	**Diego Garcia H**	**25.61**	**246**	T	T	23 31 23.6	
	baz=68,slow=75,SNR=5738						
H08S1	**Diego Carcia H**	**25.62**	**246**	T	T	23 31 23.3	
	baz=68,slow=75,SNR=6540						
GYA	**Guiyang**	**25.82**	**22**	⇑P	**P**	**23 04 39.5**	**+0.5**
GYA				pP	sP	23 04 51.7	-1.9
GYA				S	**S**	**23 09 04.1**	**-2.1**
GYA				SS	**SnSn**	**23 10 12.5**	**+8.5**
GYA				pmax	pmax		
	comp=Z,32nm,0.7s						
GYA				pmax	pmax		
	comp=Z,130nm,3.8s						
GYA				LR	LR		
	comp=Z,1µm,16.0s						
GYA				LR	LR		
	comp=Z,560nm,12.1s						
GYA				LR	LR		
	comp=Z,1µm,16.8s						
APSI	**Ampana**	**25.84**	**97**	P	P	23 04 47.7	+8.5
RAMN	**Ramite**	**25.84**	**340**	*e*P	**P**	**23 04 40.9**	**+1.5**
	comp=Z,371nm,0.7s						
TAPN	**Taplejung**	**25.87**	**343**	*e*P	**P**	**23 04 40.8**	**+1.2**
	comp=Z,419nm,0.9s						
MRSI	**Marisa**	**25.97**	**94**	P	**P**	**23 04 46.9**	**+6.5**
PKI	**Pulchoki**	**26.83**	**339**	*e*P	**P**	**23 04 49.1**	**+0.7**
	comp=Z,126nm,1.0s						
PKIN	**Phulchoki**	**26.84**	**339**	*e*P	**P**	**23 04 49.1**	**+0.7**
	comp=Z,96nm,0.9s						
POO	**Poona**	**26.89**	**308**	*e*P	**P**	**23 04 50.1**	**+1.4**
POO				IAmb	IAmb	23 04 51.8	
	comp=Z,28nm,0.7s						
GUN	**Gumba**	**26.97**	**340**	*e*P	**P**	**23 04 50.7**	**+1.0**
	comp=Z,330nm,0.7s						
DMN	**Daman**	**26.97**	**338**	*e*P	**P**	**23 04 50.5**	**+0.9**
	comp=Z,134nm,0.9s						
GTOI	**Gorontalo**	**27.03**	**94**	P	P	23 05 02.3	+12
KKN	**Kakani**	**27.07**	**339**	*e*P	**P**	**23 04 51.3**	**+0.9**
	comp=Z,287nm,1.0s						
BHPL	**Bhopal**	**27.31**	**320**	*e*P	**P**	**23 04 54.4**	**+1.9**
BHPL				IAmb	IAmb	23 05 00.6	
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**27.34**	**351**	P	**P**	**23 04 54.2**	**+1.1**
LSA	**Lhasa**	**27.34**	**351**	*i* P	**P**	**23 04 54.0**	**+0.8**
	SNR=102						
LSA	**Lhasa**	**27.34**	**351**	P	**P**	**23 04 53.7**	**+0.6**
LSA				pmax	pmax		
	comp=Z,123nm,0.9s						
LSA	**Lhasa**	**27.34**	**351**	P	**P**	**23 04 53.7**	**+0.6**
DANN	**Dangsing**	**28.16**	**337**	*e*P	**P**	**23 05 01.1**	**+0.9**
	comp=Z,52nm,0.4s						
CD2	**Chengdu**	**29.08**	**14**	P	**P**	**23 05 08.1**	**0.0**
CD2				S	**S**	**23 09 56.0**	**-1.5**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,100nm,5.5s						
CD2				LR	LR		
	comp=Z,990nm,18.1s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,18.6s						
BATI	**Baumata**	**30.30**	**115**	P	**P**	**23 05 18.4**	**-0.7**
	comp=Z,31nm,0.6s,baz=300,slow=20,SNR=4.4						
ENH	**Enshi**	**30.32**	**23**	P	**P**	**23 05 17.8**	**-1.3**
ENH				IAmb	IAmb	23 05 19.8	
	comp=Z,36nm,0.6s						
KNMB	**Chin-men Tao**	**30.62**	**43**	P	**P**	**23 05 20.5**	**-1.3**
KNMB				IAmb	IAmb	23 05 31.4	
	comp=Z,30nm,0.8s						
SOEI	**Soe**	**30.68**	**114**	P	**P**	**23 05 21.2**	**-1.4**
SOEI				IAmb	IAmb	23 05 28.1	
	comp=Z,41nm,0.9s						
DDI	**Dehra Dun**	**32.41**	**330**	*e*P	**P**	**23 05 38.6**	**+1.1**
DDI				IAmb	IAmb	23 05 41.6	
	comp=Z,55nm,0.6s						
SMLA	**Simla**	**33.51**	**330**	*e*P	**P**	**23 05 47.2**	**+0.2**
SMLA				IAmb	IAmb	23 05 48.9	
	comp=Z,79nm,1.0s						
XAN	**Xi'an**	**33.51**	**20**	P	**P**	**23 05 46.4**	**-0.7**
XAN				pP	pP	23 05 58.4	+1.0
XAN				PP	**PP**	**23 06 58.7**	**-4.6**
XAN				S	**S**	**23 11 02.3**	**-4.3**
XAN				pmax	pmax		
	comp=Z,110nm,0.7s						
XAN				pmax	pmax		
	comp=Z,130nm,4.0s						
XAN				LR	LR		
	comp=Z,330nm,20.1s						
XAN				LR	LR		
	comp=Z,880nm,20.1s						
XAN				LR	LR		
	comp=Z,2µm,18.1s						
XAN	**Xi'an**	**33.51**	**20**	P	**P**	**23 05 46.3**	**-0.7**
XAN				pmax	pmax		
	comp=Z,71nm,0.7s						
XAN	**Xi'an**	**33.51**	**20**	P	**P**	**23 05 46.3**	**-0.7**
LZH	**Lanzhou**	**34.09**	**11**	⇑P	**P**	**23 05 52.3**	**+0.1**
LZH				pP	sP	23 06 06.3	-0.6
LZH				sP	pP	23 06 10.9	+8.3
LZH				PP	**PP**	**23 07 08.1**	**-1.8**
LZH				SS	SS	23 13 26.9	-17
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,550nm,15.2s						
LZH				LR	LR		
	comp=Z,580nm,17.9s						
LZH				LR	LR		
	comp=Z,480nm,16.8s						
DHRM	**DHARAMSHALA**	**34.84**	**330**	*e*P	**P**	**23 05 58.9**	**0.0**
DHRM				*e*S	**S**	**23 11 31.5**	**+3.8**
FITZ	**Fitzroy Crossi**	**35.69**	**126**	P	**P**	**23 06 05.9**	**-0.2**
	baz=36,SNR=7.3						
FITZ	**Fitzroy Crossi**	**35.69**	**126**	P	**P**	**23 06 05.7**	**-0.3**
	comp=Z,13nm,0.8s,baz=282,slow=3.6,SNR=14						
FITZ				LR	LR	23 20 26.2	
	comp=Z,193nm,21.5s,baz=310,slow=36						
NJ2	**Nanjing**	**36.31**	**34**	*e*P	**P**	**23 06 12.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
NJ2				LR	LR		
	comp=Z,560nm,20.4s						
NJ2				LR	LR		
	comp=Z,830nm,16.3s						
NJ2				LR	LR		
	comp=Z,600nm,20.0s						
GTA	**Gaotai**	**36.80**	**5**	P	**P**	**23 06 15.1**	**-0.3**
GTA				pP	pP	23 06 27.3	+1.4
GTA				sP	sP	23 06 32.2	+2.1
GTA				PcP	**PcP**	**23 08 38.1**	**+1.0**
GTA				pmax	pmax		
	comp=Z,49nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,9.6s						
GTA				LR	LR		
	comp=Z,330nm,17.9s						
GTA				LR	LR		
	comp=Z,390nm,21.1s						
GTA				LR	LR		
	comp=Z,520nm,21.1s						
MORW	**Morawa**	**36.87**	**150**	P	**P**	**23 06 18.5**	**+2.5**
	baz=37,SNR=5.1						
MORW	**Morawa**	**36.87**	**150**	P	**P**	**23 06 14.0**	**-2.1**
MORW				IAmb	IAmb	23 06 30.5	
	comp=Z,41nm,1.1s						
SSE	**Sheshan**	**36.97**	**37**	P	**P**	**23 06 19.5**	**+2.7**
SSE				S	**S**	**23 12 05.0**	**+5.2**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,92nm,3.6s						
SSE				LR	LR		
	comp=Z,350nm,21.2s						
SSE				LR	LR		
	comp=Z,350nm,18.8s						
NIL	**Nilore**	**37.52**	**328**	P	**P**	**23 06 21.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,96nm,0.8s						
NIL	**Nilore**	**37.52**	**328**	P	**P**	**23 06 21.6**	**+0.1**
TIY	**Taiyuan**	**38.04**	**21**	*e*P	**P**	**23 06 27.0**	**+1.1**
TIY				pmax	pmax		
	comp=Z,29nm,0.5s						
TIY				LR	LR		
	comp=Z,970nm,13.5s						
TIY				LR	LR		
	comp=Z,280nm,11.0s						
TIY				LR	LR		
	comp=Z,1µm,16.5s						
MTN	**Manton Dam**	**38.07**	**115**	P	**P**	**23 06 26.0**	**-0.4**
	baz=38,SNR=7.6						
MTN	**Manton Dam**	**38.07**	**115**	P	**P**	**23 06 25.6**	**-0.8**
MTN				IAmb	IAmb	23 06 39.7	
	comp=Z,25nm,0.9s						
KDU	**Kakadu**	**39.24**	**114**	P	**P**	**23 06 35.6**	**-0.6**
	baz=39,SNR=5.4						
MUN	**Mundaring**	**39.36**	**152**	P	**P**	**23 06 39.6**	**+2.6**
	baz=40,SNR=6.1						
KLBR	**Kellerberrin**	**39.78**	**150**	P	**P**	**23 06 42.7**	**+2.2**
	baz=40,SNR=8.8						
BTO	**Baotou**	**39.88**	**17**	*e*P	**P**	**23 06 40.3**	**-1.1**
KBL	**Kabul**	**40.51**	**325**	P	**P**	**23 06 46.6**	**-0.2**
KBL				pmax	pmax		
	comp=Z,13nm,1.1s						
KBL	**Kabul**	**40.51**	**325**	P	**P**	**23 06 46.6**	**-0.2**
JLN	**Jalan Bani Buh**	**40.52**	**302**	P	**P**	**23 06 48.6**	**+1.9**
	SNR=12						
JLN				P	**P**	**23 06 48.6**	**+1.9**
	SNR=12						
HHC	**Hu-ho-hao-te**	**40.57**	**18**	*e*P	**P**	**23 06 44.6**	**-2.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,7.8s						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**23 06 50.0**	**+2.5**
	baz=41,SNR=5.6						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**23 06 49.1**	**+1.6**
	comp=Z,35nm,0.9s,baz=336,slow=10,SNR=8.7						
NWAO				LR	LR	23 21 56.6	
	comp=Z,364nm,21.4s,baz=342,slow=34						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**23 06 48.9**	**+1.4**
NWAO				IAmb	IAmb	23 07 01.6	
	comp=Z,68nm,1.1s						
NWAO	**Narrogin (SRO)**	**40.63**	**152**	P	**P**	**23 06 48.9**	**+1.4**
NWAO				IAmb	IAmb	23 07 01.5	
	comp=Z,54nm,1.1s						
H01W3	**Cape Leeuwin H**	**40.98**	**157**	T	T	23 50 07.5	
	baz=333,slow=76,SNR=550						
H01W2	**Cape Leeuwin H**	**40.99**	**157**	T	T	23 50 08.6	
	baz=333,slow=76,SNR=686						
H01W1	**Cape Leeuwin H**	**40.99**	**157**	T	T	23 50 08.7	
	baz=333,slow=76,SNR=928						
KSH	**Kashi**	**41.02**	**336**	P	**P**	**23 06 50.3**	**-0.5**
KSH				pP	sP	23 07 04.2	-1.3
KSH				S	**S**	**23 12 59.3**	**-1.6**
KSH				pmax	pmax		
	comp=Z,34nm,0.7s						
KSH				pmax	pmax		
	comp=Z,580nm,4.6s						
KSH				LR	LR		
	comp=Z,980nm,8.2s						
KSH				LR	LR		
	comp=Z,910nm,8.8s						
KSH				LR	LR		
	comp=Z,740nm,10.0s						
WBK	**Wadi Bani Khal**	**41.08**	**302**	P	**P**	**23 06 53.7**	**+2.2**
WBK				P	**P**	**23 06 53.7**	**+2.2**
MHTO	**MHTO**	**41.33**	**299**	P	**P**	**23 06 54.4**	**+1.0**
	SNR=7.7						
MHTO				P	**P**	**23 06 54.4**	**+1.0**
	SNR=7.7						
DQM	**DQM**	**41.34**	**298**	P	**P**	**23 06 54.2**	**+0.7**
DQM				P	**P**	**23 06 54.2**	**+0.7**
BJT	**Baijiatuau**	**41.48**	**24**	P	**P**	**23 06 54.9**	**+0.6**
BJT				pmax	pmax		
	comp=Z,27nm,0.9s						
BJT	**Baijiatuau**	**41.48**	**24**	P	**P**	**23 06 54.9**	**+0.6**
BJT				IAmb	IAmb	23 06 57.7	
	comp=Z,27nm,0.9s						
BJI	**Beijing**	**41.50**	**24**	P	**P**	**23 06 55.8**	**+1.3**
BJI				S	**S**	**23 13 10.5**	**+2.9**
BJI				pmax	pmax		
	comp=Z,29nm,0.7s						
BJI				LR	LR		
	comp=Z,270nm,17.1s						
BJI				LR	LR		
	comp=Z,330nm,21.0s						
BJI				LR	LR		
	comp=Z,220nm,29.4s						
WMQ	**Urumqi**	**41.70**	**351**	*e*P	**P**	**23 06 57.1**	**+0.8**
WMQ				pP	sP	23 07 13.3	+2.4
WMQ				pmax	pmax		
	comp=Z,51nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,2µm,29.3s						
WMQ				LR	LR		
	comp=Z,2µm,21.9s						
WMQ	**Urumqi**	**41.70**	**351**	P	**P**	**23 06 56.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ	**Urumqi**	**41.70**	**351**	P	**P**	**23 06 56.3**	**0.0**
WMQ				IAmb	IAmb	23 06 59.3	
	comp=Z,37nm,1.1s						
JMDO	**Jabal Madar**	**41.72**	**301**	P	**P**	**23 06 58.4**	**+1.7**
JMDO				P	**P**	**23 06 58.4**	**+1.7**
KMBL	**Kambalda**	**41.78**	**146**	P	**P**	**23 06 59.2**	**+2.2**
	baz=42,SNR=9.0						
SMDO	**Samad**	**42.04**	**302**	P	**P**	**23 07 01.2**	**+1.8**
	SNR=8.0						
SMDO				P	**P**	**23 07 01.2**	**+1.8**
	SNR=8.0						
BIDO	**Bidbid**	**42.16**	**303**	P	**P**	**23 07 01.4**	**+1.2**
SHAO	**Shalim**	**42.47**	**294**	P	**P**	**23 07 04.5**	**+1.6**
	SNR=5.2						
SHAO				P	**P**	**23 07 04.5**	**+1.6**
	SNR=5.2						
SOCY	**Socotra**	**42.72**	**285**	P	**P**	**23 07 06.6**	**+1.7**
PRZ	**Przheval'sk**	**42.73**	**341**	P	**P**	**23 07 06.6**	**+1.8**
PRZ				pmax	pmax		
	comp=Z,48nm,1.1s						
PRZ	**Przheval'sk**	**42.73**	**341**	P	**P**	**23 07 06.5**	**+1.8**
PRZ				IAmb	IAmb	23 07 09.4	
	comp=Z,48nm,1.1s						
KDJ	**Kajisay**	**42.83**	**339**	P	**P**	**23 07 06.2**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,65nm,1.1s						
KDJ	**Kajisay**	**42.83**	**339**	P	**P**	**23 07 06.2**	**+0.6**
KDJ				IAmb	IAmb	23 07 07.6	
	comp=Z,65nm,1.1s						
HOQ	**Hoqain**	**42.87**	**302**	P	**P**	**23 07 08.1**	**+2.1**
	SNR=9.4						
SHLS	**Shalkode**	**43.00**	**342**	*e*P	**P**	**23 07 06.1**	**-0.8**
	comp=Z,32nm,0.9s,baz=342						
SHLS	**Shalkode**	**43.00**	**342**	*e*P	**P**	**23 07 06.0**	**-0.8**
SHLS				pmax	pmax		
	comp=Z,32nm,0.9s						
DMTO	**DMTO**	**43.01**	**293**	P	**P**	**23 07 08.8**	**+1.6**
DMTO				P	**P**	**23 07 08.8**	**+1.6**
DL2	**Dalian**	**43.01**	**30**	P	**P**	**23 07 07.7**	**+0.8**
DL2				sP	**sP**	**23 07 25.2**	**+3.6**
DL2				S	**S**	**23 13 30.3**	**+0.4**
DL2				pmax	pmax		
	comp=Z,48nm,0.7s						
DL2				LR	LR		
	comp=Z,550nm,18.5s						
DL2				LR	LR		
	comp=Z,400nm,18.6s						
DL2				LR	LR		
	comp=Z,400nm,16.4s						
SATY	**Saty**	**43.24**	**341**	*e*P	**P**	**23 07 08.9**	**+0.1**
	comp=Z,22nm,0.8s,baz=341						
SATY	**Saty**	**43.24**	**341**	*e*P	**P**	**23 07 08.9**	**+0.1**
SATY				pmax	pmax		
	comp=Z,22nm,0.8s						
ARQ	**Araqi**	**43.44**	**302**	P	**P**	**23 07 12.5**	**+1.8**
	SNR=9.1						
ARQ				P	**P**	**23 07 12.5**	**+1.8**
	SNR=9.1						
KPKS	**Kokpek**	**43.52**	**342**	*e*P	**P**	**23 07 10.8**	**-0.2**
	comp=Z,56nm,1.5s,baz=342						
KPKS	**Kokpek**	**43.52**	**342**	*e*P	**P**	**23 07 10.8**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,56nm,1.5s						
TNSS	**Tian-Shan**	**43.71**	**340**	*e*P	**P**	**23 07 12.9**	**-0.1**
	baz=340						
TNSS	**Tian-Shan**	**43.71**	**340**	*e*P	**P**	**23 07 12.8**	**-0.1**
WB0	**Warramunga Arr**	**43.73**	**122**	P	**P**	**23 07 13.3**	**+0.3**
SOHO	**SOHO**	**43.74**	**303**	P	**P**	**23 07 14.8**	**+1.8**
SOHO				P	**P**	**23 07 14.8**	**+1.8**
WRA	**Warramunga Arr**	**43.76**	**123**	P	**P**	**23 07 13.4**	**+0.2**
	comp=Z,20nm,0.9s,baz=301,slow=9.1,SNR=48						
WRA				LR	LR	23 29 28.5	
	comp=Z,177nm,18.8s,baz=200,slow=42						
WRA	**Warramunga Arr**	**43.76**	**123**	P	**P**	**23 07 12.4**	**-0.8**
WRAB	**Tennant Creek**	**43.76**	**123**	⇑*i*P	**P**	**23 07 13.6**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,51nm,1.7s						
WRAB	**Tennant Creek**	**43.76**	**123**	P	**P**	**23 07 11.9**	**-1.4**
WRAB				IAmb	IAmb	23 07 31.2	
	comp=Z,38nm,1.1s						
WB2	**Warramunga Arr**	**43.77**	**123**	IAmb	IAmb	23 07 14.5	
	comp=Z,55nm,1.1s						
MDOK	**Medeo**	**43.79**	**340**	*e*P	**P**	**23 07 13.5**	**+0.2**
	baz=340						
MDOK	**Medeo**	**43.79**	**340**	*e*P	**P**	**23 07 13.4**	**+0.2**
AAA	**Alma-Ata**	**43.87**	**340**	*e*P	**P**	**23 07 14.5**	**+0.6**
	comp=Z,23nm,0.7s,baz=340						
AAA	**Alma-Ata**	**43.87**	**340**	*e*P	**P**	**23 07 14.5**	**+0.6**
AAA				pmax	pmax		
	comp=Z,23nm,0.7s						
UCH	**Uchtor**	**43.91**	**337**	P	**P**	**23 07 15.9**	**+1.3**
	SNR=23						
WR0	**Warramunga Arr**	**43.94**	**122**	IAmb	IAmb	23 07 15.9	
	comp=Z,36nm,0.9s						
MTBS	**Maitube**	**43.97**	**339**	*e*P	**P**	**23 07 15.0**	**+0.3**
	baz=339						
MTBS	**Maitube**	**43.97**	**339**	*e*P	**P**	**23 07 15.0**	**+0.3**
DOK	**Doka**	**44.00**	**294**	P	**P**	**23 07 16.9**	**+1.7**
	SNR=15						
DOK				P	**P**	**23 07 16.9**	**+1.7**
	SNR=15						
TKM2	**Tokmak 2**	**44.09**	**338**	P	**P**	**23 07 17.0**	**+1.2**
	SNR=11						
KBK	**Karagaybulak**	**44.11**	**338**	P	**P**	**23 07 17.6**	**+1.7**
	SNR=36						
WHFO	**Wadi Hawf**	**44.14**	**293**	P	**P**	**23 07 17.8**	**+1.4**
	SNR=11						
WHFO				P	**P**	**23 07 17.8**	**+1.4**
	SNR=11						
AML	**Almayashu**	**44.16**	**336**	P	**P**	**23 07 18.0**	**+1.4**
	SNR=31						
AAK	**Ala-Archa**	**44.27**	**337**	P	**P**	**23 07 17.5**	**+0.3**
	comp=Z,9.7nm,0.8s,baz=154,slow=6.2,SNR=34						
AAK	**Ala-Archa**	**44.27**	**337**	P	**P**	**23 07 17.9**	**+0.8**
	SNR=19						
AAK	**Ala-Archa**	**44.27**	**337**	*i* P	**P**	**23 07 18.5**	**+1.3**
	SNR=25						
AAK	**Ala-Archa**	**44.27**	**337**	*d i*P	**P**	**23 07 18.2**	**+1.1**
AAK				pmax	pmax		
	comp=Z,65nm,1.3s						
AAK	**Ala-Archa**	**44.27**	**337**	P	**P**	**23 07 18.1**	**+0.9**
TJN	**Taejon**	**44.33**	**37**	*de*P	**P**	**23 07 17.4**	**-0.1**
UOSS	**Minazif**	**44.33**	**304**	P	**P**	**23 07 19.8**	**+2.1**
UOSS	**Minazif**	**44.33**	**304**	P	**P**	**23 07 18.3**	**+0.5**
HATD	**Hatta, Dubai**	**44.35**	**303**	*i* P	**P**	**23 07 19.6**	**+1.7**
	SNR=7.1						
ASHO	**Ashiyiah**	**44.35**	**303**	P	**P**	**23 07 19.6**	**+1.6**
	SNR=9.7						
FRU1	**Bishkek**	**44.36**	**337**	P	**P**	**23 07 19.1**	**+1.3**
FRU1				pmax	pmax		
	comp=Z,17nm,1.1s						
FRU1	**Bishkek**	**44.36**	**337**	P	**P**	**23 07 19.1**	**+1.3**
ALNE	**Al Ain**	**44.37**	**302**	*i* P	**P**	**23 07 20.3**	**+2.2**
	SNR=16						
MDH	**Madha**	**44.40**	**304**	P	**P**	**23 07 19.6**	**+1.3**
CHKK	**Chushkaly**	**44.42**	**340**	*e*P	**P**	**23 07 17.2**	**-0.9**
	baz=340						
CHKK	**Chushkaly**	**44.42**	**340**	*e*P	**P**	**23 07 17.2**	**-0.9**
ABTO	**Aybut**	**44.44**	**292**	P	**P**	**23 07 20.3**	**+1.6**
	SNR=8.9						
ABTO				P	**P**	**23 07 20.3**	**+1.6**
	SNR=8.9						
CHMS	**Chumysh**	**44.48**	**338**	P	**P**	**23 07 19.3**	**+0.6**
	SNR=20						
MSFE	**Esma-Masafi**	**44.54**	**304**	*i* P	**P**	**23 07 21.8**	**+2.4**
	SNR=7.4						
EKS2	**Erkin-Say**	**44.57**	**337**	P	**P**	**23 07 21.1**	**+1.5**
	SNR=18						
HRA	**Herat**	**44.61**	**319**	P	**P**	**23 07 19.5**	**-0.6**
KUU	**Kurty**	**44.67**	**340**	*e*P	**P**	**23 07 19.6**	**-0.7**
	comp=Z,109nm,1.5s,baz=340						
KUU	**Kurty**	**44.67**	**340**	*e*P	**P**	**23 07 19.5**	**-0.7**
KUU				pmax	pmax		
	comp=Z,109nm,1.5s						
FAQ	**Al Faqa, Dubai**	**44.77**	**303**	*i* P	**P**	**23 07 23.0**	**+1.8**
	SNR=10						
USP	**Ospenovka**	**44.80**	**338**	P	**P**	**23 07 22.4**	**+1.1**
	SNR=35						
NAZ	**Nazwa, Dubai**	**44.80**	**303**	P	**P**	**23 07 23.5**	**+1.9**
SHME	**Shamm**	**44.84**	**305**	P	**P**	**23 07 23.5**	**+1.8**
SGDS	**Sogindy**	**44.91**	**338**	*e*P	**P**	**23 07 21.9**	**-0.3**
	comp=Z,20nm,1.4s,baz=338						
SGDS	**Sogindy**	**44.91**	**338**	*e*P	**P**	**23 07 21.8**	**-0.3**
SGDS				pmax	pmax		
	comp=Z,20nm,1.4s						
ASUD	**Al Ashush, Dub**	**44.94**	**303**	*i* P	**P**	**23 07 25.4**	**+2.8**
	SNR=6.6						
TDK	**Taldyqorghan**	**44.99**	**342**	*e*P	**P**	**23 07 22.0**	**-0.8**
	comp=Z,20nm,1.0s,baz=342						
TDK	**Taldyqorghan**	**44.99**	**342**	*e*P	**P**	**23 07 21.9**	**-0.8**
TDK				pmax	pmax		
	comp=Z,20nm,1.0s						
FORT	**Forrest**	**45.09**	**140**	P	**P**	**23 07 26.0**	**+2.3**
	baz=45,SNR=15						
FORT	**Forrest**	**45.09**	**140**	P	**P**	**23 07 23.1**	**-0.5**
AS31	**Alice Springs**	**45.16**	**127**	P	**P**	**23 07 23.7**	**-0.8**
ASAR	**Alice Springs**	**45.16**	**127**	P	**P**	**23 07 24.9**	**+0.4**
	comp=Z,5.1nm,0.6s,baz=301,slow=8.0,SNR=64						
ASAR				PcP	**PcP**	**23 09 03.4**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=305,slow=5.5,SNR=1.9						
ASAR				ScP	**ScP**	**23 12 54.8**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=196,slow=2.6,SNR=3.1						
ASAR	**Alice Springs**	**45.16**	**127**	P	**P**	**23 07 24.1**	**-0.3**
KSAR	**Wonju Array Be**	**45.35**	**36**	P	**P**	**23 07 25.2**	**-0.5**
KSAR	**Wonju Array Be**	**45.35**	**36**	P	**P**	**23 07 25.2**	**-0.5**
KS19	**Wonju Array Si**	**45.38**	**36**	P	**P**	**23 07 25.2**	**-0.7**
KSRS	**Korea Array**	**45.38**	**36**	P	**P**	**23 07 25.1**	**-0.8**
	comp=Z,4.1nm,0.7s,baz=226,slow=9.2,SNR=11						
KSRS				LR	LR	23 28 32.8	
	comp=Z,829nm,18.2s,baz=220,slow=39						
TAS	**Tashkent**	**45.45**	**332**	P	**P**	**23 07 27.6**	**+1.2**
TAS				pmax	pmax		
	comp=Z,152nm,0.9s						
TAS	**Tashkent**	**45.45**	**332**	P	**P**	**23 07 27.6**	**+1.2**
MK31	**Makanchi Array**	**45.61**	**347**	*ce*P	**P**	**23 07 27.7**	**+0.1**
MK31				pmax	pmax		
	comp=Z,33nm,0.6s						
MKAR	**Makanchi Array**	**45.61**	**347**	P	**P**	**23 07 27.9**	**+0.3**
	comp=Z,64nm,0.8s,baz=161,slow=8.0,SNR=434						

MKAR				PcP	**PcP**	**23 09 04.7**	**-0.8**
	comp=Z,6.2nm,0.8s,baz=175,slow=4.6,SNR=1.7						
MKAR				LR	LR	23 29 38.2	
	comp=Z,187nm,21.1s,baz=159,slow=40						
MKAR	**Makanchi Array**	**45.61**	**347**	P	**P**	**23 07 26.6**	**-1.1**
MAKZ	**Makanchi**	**45.70**	**347**	P	**P**	**23 07 28.3**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,42nm,0.7s						
MAKZ	**Makanchi**	**45.70**	**347**	P	**P**	**23 07 28.3**	**0.0**
ZSN	**Zaisan**	**45.71**	**349**	*e*P	**P**	**23 07 28.3**	**-0.1**
	comp=Z,31nm,0.9s,baz=349						
ZSN	**Zaisan**	**45.71**	**349**	*e*P	**P**	**23 07 28.2**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,31nm,0.9s						
IUG	**Iuzhnay**	**45.75**	**333**	*e*P	**P**	**23 07 28.8**	**-0.1**
	comp=Z,62nm,0.8s,baz=333						
IUG	**Iuzhnay**	**45.75**	**333**	*e*P	**P**	**23 07 28.7**	**-0.1**
IUG				pmax	pmax		
	comp=Z,62nm,0.8s						
DZA	**Taraz**	**45.77**	**335**	*e*P	**P**	**23 07 28.6**	**-0.4**
	comp=Z,18nm,0.8s,baz=334						
DZA	**Taraz**	**45.77**	**335**	*e*P	**P**	**23 07 28.5**	**-0.4**
DZA				pmax	pmax		
	comp=Z,18nm,0.8s						
SONM	**Songino Array**	**45.94**	**10**	P	**P**	**23 07 30.3**	**0.0**
	comp=Z,9.6nm,0.5s,baz=190,slow=9.3,SNR=98						
SONM				PcP	**PcP**	**23 09 06.8**	**0.0**
	comp=Z,12nm,0.7s,baz=189,slow=3.6,SNR=9.5						
SONM				ScP	**ScP**	**23 12 56.0**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=213,slow=3.1,SNR=3.8						
SONM				LR	LR	23 29 01.3	
	comp=Z,711nm,19.6s,baz=184,slow=39						
SONM	**Songino Array**	**45.94**	**10**	P	**P**	**23 07 30.0**	**-0.3**
ULN	**Ulaanbaatar**	**46.08**	**10**	*d i*P	**P**	**23 07 31.3**	**-0.1**
ULN				pmax	pmax		
	comp=Z,11nm,0.8s						
ULN	**Ulaanbaatar**	**46.08**	**10**	P	**P**	**23 07 31.8**	**+0.4**
ULN				IAmb	IAmb	23 07 34.0	
	comp=Z,9.7nm,0.6s						
KKAR	**Karatay Array**	**46.29**	**334**	P	**P**	**23 07 33.5**	**+0.5**
KKAR	**Karatay Array**	**46.29**	**334**	P	**P**	**23 07 33.5**	**+0.5**
KKAR	**Karatay Array**	**46.29**	**334**	IAmb	IAmb	23 07 35.1	
	comp=Z,67nm,1.1s						
BTLS	**Baital**	**46.49**	**339**	*e*P	**P**	**23 07 33.6**	**-0.9**
	comp=Z,13nm,1.2s,baz=338						
BTLS	**Baital**	**46.49**	**339**	*e*P	**P**	**23 07 33.6**	**-0.9**
BTLS				pmax	pmax		
	comp=Z,13nm,1.2s						
DGZ	**Jazzator, Alta**	**47.49**	**352**	*de*P	**P**	**23 07 42.9**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,14nm,0.9s						
ZAK	**Zakamensk**	**48.00**	**6**	*e*P	**P**	**23 07 45.6**	**-0.7**
ZAK				*e*		23 09 13.6	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
QIS	**Mount Isa**	**48.50**	**120**	P	**P**	**23 07 51.1**	**+0.5**
	baz=48,SNR=4.3						
CN2	**Changchun**	**48.60**	**28**	*e*P	**P**	**23 07 53.6**	**+2.6**
CN2				*e*S	**S**	**23 14 45.1**	**-5.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
TLY	**Talaya**	**49.32**	**6**	P	**P**	**23 07 56.4**	**+0.1**
	comp=Z,12nm,0.8s,baz=278,slow=6.1,SNR=6.9						
TLY	**Talaya**	**49.32**	**6**	*e*P	**P**	**23 07 58.5**	**+2.2**
TLY				*e*		23 09 50.8	
TLY				*e*S	S	23 15 11.0	+11
TLY				pmax	pmax		
	comp=Z,27nm,0.8s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s						
TLY	**Talaya**	**49.32**	**6**	P	**P**	**23 07 56.5**	**+0.1**
TLY				IAmb	IAmb	23 07 59.7	
	comp=Z,15nm,0.9s						
GEYT	**Alibeck**	**49.40**	**320**	P	**P**	**23 07 58.0**	**+0.8**
	comp=Z,51nm,0.8s,baz=141,slow=9.6,SNR=75						
GEYT	**Alibeck**	**49.40**	**320**	P	**P**	**23 07 58.0**	**+0.8**
SEM	**Semipalatinsk**	**49.48**	**347**	*e*P	**P**	**23 07 56.5**	**-1.3**
	comp=Z,24nm,0.9s,baz=347						
SEM	**Semipalatinsk**	**49.48**	**347**	*e*P	**P**	**23 07 56.5**	**-1.3**
SEM				pmax	pmax		
	comp=Z,25nm,0.9s						
KURBB	**Kurchatov Arra**	**50.09**	**346**	P	**P**	**23 08 02.6**	**+0.4**
	comp=Z,17nm,0.8s,baz=167,slow=6.9,SNR=82						
KURBB				PcP	**PcP**	**23 09 21.9**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=157,slow=3.7,SNR=5.6						
KURBB				S	**S**	**23 15 10.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=155,slow=12,SNR=1.6						
KURK	**Kurchatov**	**50.15**	**346**	*d i*P	**P**	**23 08 02.8**	**+0.2**
KURK				*i* *PP	**sP**	**23 08 17.0**	**-0.5**
KURK				pmax	pmax		
	comp=Z,63nm,1.3s						
KURK	**Kurchatov**	**50.15**	**346**	P	**P**	**23 08 02.4**	**-0.2**
HIA	**Hailar**	**50.70**	**20**	P	**P**	**23 08 06.5**	**-0.4**
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	**Hailar**	**50.70**	**20**	P	**P**	**23 08 06.5**	**-0.4**
HIA				IAmb	IAmb	23 08 21.5	
	comp=Z,18nm,0.9s						
BRZS	**Berezniki**	**51.21**	**341**	*e*P	**P**	**23 08 10.0**	**-0.7**
	comp=Z,11nm,1.0s,baz=341						
BRZS	**Berezniki**	**51.21**	**341**	*e*P	**P**	**23 08 09.9**	**-0.7**
BRZS				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ	**Mudanjiang**	**51.23**	**30**	P	**P**	**23 08 10.3**	**-0.6**
MJAR	**Matsushiro Arr**	**51.46**	**44**	P	**P**	**23 08 13.4**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=253,slow=7.9,SNR=2.2						
MJAR				PcP	**PcP**	**23 09 26.8**	**-0.1**
	comp=Z,3.7nm,1.0s,baz=236,slow=2.6,SNR=4.2						
MJAR				LR	LR	23 32 10.9	
	comp=Z,295nm,19.1s,baz=240,slow=38						
MTSU	**Mount Surprise**	**51.81**	**115**	P	**P**	**23 08 16.6**	**+0.9**
	baz=52,SNR=11						
ZALV	**Zalesovo Beam**	**52.00**	**352**	P	**P**	**23 08 16.7**	**+0.2**
	comp=Z,31nm,0.5s,baz=177,slow=6.5,SNR=184						
ZALV				ScP	**ScP**	**23 13 23.3**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=197,slow=4.5,SNR=1.4						
ZALV				S	**S**	**23 15 36.6**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=157,slow=8.0,SNR=4.2						
ZALV				LR	LR	23 32 40.0	
	comp=Z,217nm,20.9s,baz=149,slow=39						
ZALV	**Zalesovo Beam**	**52.00**	**352**	P	**P**	**23 08 16.8**	**+0.3**
USA0B	**Ussuriysk Arra**	**52.19**	**32**	⇓*e*P	**P**	**23 08 16.8**	**-1.3**
USA0B	**Ussuriysk Arra**	**52.19**	**32**	P	**P**	**23 08 17.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**52.19**	**32**	P	**P**	**23 08 18.5**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=242,slow=6.5,SNR=17						
USRK				LR	LR	23 32 35.7	
	comp=Z,458nm,19.3s,baz=214,slow=38						
QRN	**Al-Qurain**	**52.62**	**305**	*e*P		23 08 22.3	
RDF	**Al-Radifah**	**52.98**	**305**	*e*P		23 08 24.9	
UMR	**Umm Al-Rimmam**	**53.06**	**305**	*e*P		23 08 25.4	
RAYN	**Ar Rayn**	**53.08**	**298**	*i* P	**P**	**23 08 26.2**	**+1.1**
	SNR=23						
RAYN	**Ar Rayn**	**53.08**	**298**	P	**P**	**23 08 26.1**	**+1.0**
RAYN				pmax	pmax		
	comp=Z,29nm,0.9s						
RAYN	**Ar Rayn**	**53.08**	**298**	P	**P**	**23 08 26.1**	**+1.0**
RAYN				IAmb	IAmb	23 08 27.3	
	comp=Z,29nm,0.8s						
MIB	**Mutribah**	**53.46**	**306**	*e*P		23 08 28.5	
RST	**Umm Al-Ruwaisa**	**53.63**	**305**	*e*P		23 08 29.1	
HTT	**Hallett**	**54.03**	**135**	P	**P**	**23 08 33.1**	**+1.2**
	baz=54,SNR=3.2						
CTAO	**Charters Tower**	**54.16**	**117**	P	**P**	**23 08 34.0**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,25nm,0.9s						
CTAO	**Charters Tower**	**54.16**	**117**	P	**P**	**23 08 34.0**	**+1.0**
CTAO				IAmb	IAmb	23 08 34.7	
	comp=Z,25nm,0.9s						
BRVK	**Borovoye**	**54.62**	**341**	*d i*P	**P**	**23 08 35.0**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,43nm,1.0s						
BRVK	**Borovoye**	**54.62**	**341**	P	**P**	**23 08 35.6**	**-0.2**
STKA	**Stephens Creek**	**55.15**	**132**	P	**P**	**23 08 40.7**	**+0.7**
	baz=55,SNR=14						
STKA	**Stephens Creek**	**55.15**	**132**	P	**P**	**23 08 40.2**	**+0.2**
	comp=Z,16nm,0.8s,baz=311,slow=7.3,SNR=19						
STKA	**Stephens Creek**	**55.15**	**132**	⇑*i*P	**P**	**23 08 40.9**	**+0.9**
KLR	**Kul'dur**	**55.54**	**28**	P	**P**	**23 08 42.5**	**0.0**
	comp=Z,9.9nm,0.9s,baz=243,slow=7.1,SNR=21						
KLR	**Kul'dur**	**55.54**	**28**	*de*P	**P**	**23 08 42.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,14nm,1.0s						
ABKAR	**Akbulak array**	**55.74**	**332**	P	**P**	**23 08 44.1**	**+0.2**
ABKAR	**Akbulak array**	**55.74**	**332**	IAmb	IAmb	23 08 45.3	
	comp=Z,91nm,0.9s						
BOD	**Bodaibo**	**56.86**	**11**	*e*P	**P**	**23 08 51.2**	**-0.5**
BOD				pmax	pmax		
	comp=Z,27nm,0.9s						
ZEA	**Zeya**	**57.05**	**22**	*e*P	**P**	**23 08 53.9**	**+0.7**
ZEA				*e**PP	**sP**	**23 09 07.8**	**-0.3**
ZEA				*e*S	**S**	**23 16 47.3**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				smax	smax		
	comp=E,100nm,7.7s						
ZEA				MLR	MLR		
	comp=E,300nm,17.0s						
ZEA				MLR	MLR		
	comp=N,300nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,18.0s						
FURI	**Furi**	**57.36**	**279**	P	**P**	**23 08 59.0**	**+2.6**
AKTO	**Aktyubinsk**	**57.46**	**332**	P	**P**	**23 08 55.9**	**-0.2**
	comp=Z,12nm,0.4s,baz=122,slow=7.7,SNR=77						
AKT	**Akhty**	**58.06**	**319**	*e*P	**P**	**23 09 00.4**	**-0.3**
AKT				*e*		23 09 52.8	
AKT				*e*		23 11 11.0	
AKT				pmax	pmax		
	comp=Z,43nm,1.3s						
RMQ	**Roma**	**58.51**	**123**	P	**P**	**23 09 05.9**	**+1.9**
	baz=58,SNR=9.3						
KMBO	**Kilima Mbogo**	**58.89**	**267**	P	**P**	**23 09 08.3**	**+1.3**
	comp=Z,8.7nm,1.0s,baz=59,slow=8.5,SNR=20						
KMBO				LR	LR	23 31 38.0	
	comp=Z,344nm,19.5s,baz=94,slow=33						
KMBO	**Kilima Mbogo**	**58.89**	**267**	*ce*P	**P**	**23 09 09.1**	**+2.0**
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GNI	**Garni**	**59.49**	**316**	P	**P**	**23 09 11.4**	**+0.7**
GNI	**Garni**	**59.49**	**316**	*d i*P	**P**	**23 09 10.4**	**-0.3**
GNI				pmax	pmax		
	comp=Z,44nm,1.1s						
GNI	**Garni**	**59.49**	**316**	P	**P**	**23 09 10.8**	**+0.1**
GEVA	**Gevas**	**59.93**	**313**	P	**P**	**23 09 13.1**	**-0.7**
GEVA				IAmb	IAmb	23 09 15.0	
	comp=Z,28nm,1.2s						
GROC	**Groznyy**	**60.14**	**320**	*e*P	**P**	**23 09 15.1**	**+0.2**
GROC				*e**PP	**sP**	**23 09 28.5**	**-1.6**
GROC				*e**SP	pP	23 09 34.0	+8.0
GROC				*e*		23 10 00.5	
GROC				*e*		23 11 29.6	
GROC				*e**SS	**sS**	**23 17 48.2**	**+4.8**
GROC				pmax	pmax		
	comp=Z,13nm,0.6s						
TOO	**Toolangi**	**60.75**	**136**	P	**P**	**23 09 21.5**	**+2.3**
	baz=61,SNR=5.0						
SVE	**Sverdlovsk**	**60.97**	**339**	*c i*P	**P**	**23 09 20.2**	**0.0**
SVE				pmax	pmax		
	comp=Z,107nm,1.2s						
ZEI	**Tsey**	**61.19**	**318**	*e*P	**P**	**23 09 21.9**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,17nm,1.0s						
MARD	**Mardin**	**61.24**	**312**	P	**P**	**23 09 23.5**	**+0.8**
ARU	**Arti**	**61.45**	**337**	P	**P**	**23 09 22.9**	**-0.6**
	comp=Z,11nm,0.8s,baz=146,slow=4.8,SNR=41						
ARU	**Arti**	**61.45**	**337**	*c i*P	**P**	**23 09 22.6**	**-0.9**
ARU				*PP	**sP**	**23 09 36.8**	**-1.9**
ARU						23 10 05.0	
ARU				S	**S**	**23 17 40.6**	**-1.4**
ARU				SS	**SS**	**23 21 41.7**	**-1.7**
ARU				pmax	pmax		
	comp=Z,74nm,1.2s						
ARU	**Arti**	**61.45**	**337**	P	**P**	**23 09 22.8**	**-0.7**
NCK	**Nalchik**	**61.70**	**319**	⇑*e*P	**P**	**23 09 25.9**	**+0.4**
NCK				pmax	pmax		
	comp=Z,20nm,1.2s						
KBZ	**Khabaz**	**62.26**	**319**	P	**P**	**23 09 29.2**	**0.0**
	comp=Z,20nm,0.9s,baz=74,slow=4.0,SNR=28						
KBZ	**Khabaz**	**62.26**	**319**	*d i*P	**P**	**23 09 29.0**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,28nm,1.0s						
ARMA	**Armidale**	**62.29**	**126**	P	**P**	**23 09 32.0**	**+2.1**
	baz=62,SNR=5.0						
ARMA	**Armidale**	**62.29**	**126**	P	**P**	**23 09 27.6**	**-2.3**
ARMA				IAmb	IAmb	23 09 32.3	
	comp=Z,25nm,1.1s						
KOPT	**Kop Dagi**	**62.42**	**314**	P	**P**	**23 09 29.6**	**-1.1**
KOPT				IAmb	IAmb	23 09 39.9	
	comp=Z,14nm,1.1s						
KIV	**Kislovodsk**	**62.49**	**319**	*i* P	**P**	**23 09 31.2**	**+0.3**
	SNR=5.5						
KIV	**Kislovodsk**	**62.49**	**319**	*d i*P	**P**	**23 09 30.7**	**-0.2**
KIV				*e**PP	**pP**	**23 09 43.4**	**+1.3**
KIV				*e**SP	**sP**	**23 09 49.8**	**+3.5**
KIV				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV				MLR	MLR		
	comp=Z,115nm,15.0s						
KIV	**Kislovodsk**	**62.49**	**319**	P	**P**	**23 09 30.5**	**-0.4**
GOF	**Gofitskoye**	**62.74**	**320**	⇑*e*P	**P**	**23 09 32.5**	**0.0**
GOF				pmax	pmax		
	comp=Z,34nm,0.9s						
BELG	**Belogornoye**	**63.77**	**329**	P	**P**	**23 09 38.5**	**-0.6**
	comp=Z,70nm,0.8s,baz=338,slow=0.6,SNR=29						
BELG	**Belogornoye**	**63.77**	**329**	*d i*P	**P**	**23 09 37.8**	**-1.2**
BELG				pmax	pmax		
	comp=Z,14nm,1.0s						
GAZ	**Gaziantep**	**63.89**	**310**	P	**P**	**23 09 40.5**	**+0.2**
GAZ				IAmb	IAmb	23 09 42.0	
	comp=Z,23nm,0.9s						
SOC	**Sochi**	**64.31**	**318**	*e*P	**P**	**23 09 41.1**	**-1.7**
SOC				*e*		23 12 02.0	
SOC				*e*PPP	PPP	23 13 33.4	
SOC				*e*S	**S**	**23 18 17.0**	**-1.3**
SOC				*e*SS	**SS**	**23 22 21.8**	**-6.8**
SOC				pmax	pmax		
	comp=Z,74nm,1.1s						
YAK	**Yakutsk**	**64.41**	**17**	P	**P**	**23 09 42.9**	**-0.2**
	comp=Z,30nm,0.5s,baz=20,slow=1.2,SNR=43						
YAK	**Yakutsk**	**64.41**	**17**	*d i*P	**P**	**23 09 42.0**	**-1.1**
YAK				*e**PP	**pP**	**23 09 51.6**	**-2.7**
YAK				*e*S	**S**	**23 18 16.6**	**-2.3**
YAK				*e**SS	sS	23 18 48.1	+10
YAK				*e*SSS	SSS	23 25 14.7	
YAK				pmax	pmax		
	comp=Z,69nm,0.8s						
YAK				pmax	pmax		
	comp=N,32nm,1.2s						
YAK				pmax	pmax		
	comp=E,28nm,1.3s						
YAK				pmax	pmax		
	comp=Z,224nm,6.3s						
YAK				pmax	pmax		
	comp=E,162nm,4.2s						
YAK				pmax	pmax		
	comp=N,179nm,4.8s						
YAK				smax	smax		
	comp=E,173nm,2.5s						
YAK				smax	smax		
	comp=N,162nm,3.3s						
YAK	**Yakutsk**	**64.41**	**17**	P	**P**	**23 09 42.6**	**-0.5**
MBAR	**Mbarara**	**65.36**	**268**	*d i*P	**P**	**23 09 52.2**	**+1.8**
MBAR				pmax	pmax		
	comp=Z,17nm,1.1s						
MBAR	**Mbarara**	**65.36**	**268**	P	**P**	**23 09 51.5**	**+1.0**
MBAR				IAmb	IAmb	23 09 53.7	
	comp=Z,27nm,1.1s						
TOKA	**Tokat**	**65.42**	**314**	P	**P**	**23 09 50.5**	**+0.3**
TOKA				IAmb	IAmb	23 09 51.3	
	comp=Z,21nm,1.0s						
ANN	**Anapa**	**66.29**	**318**	*e*P	**P**	**23 09 53.3**	**-2.3**
ANN				pmax	pmax		
	comp=Z,225nm,1.2s						
CSS	**Mathiatis**	**66.30**	**307**	P	**P**	**23 09 55.0**	**-0.9**
CSS				IAmb	IAmb	23 10 00.1	
	comp=Z,22nm,1.1s						
VRH	**Novokhopyorsk**	**66.32**	**326**	*e*P	**P**	**23 09 54.2**	**-1.4**
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
KIRV	**Kirov**	**66.56**	**335**	*d i*P	**P**	**23 09 56.6**	**-0.4**
BR131	**Keskin Array S**	**67.32**	**312**	IAmb	IAmb	23 10 03.1	
	comp=Z,27nm,1.1s						
BRTR	**Keskin Array B**	**67.32**	**312**	P	**P**	**23 10 01.8**	**-0.7**
	comp=Z,7.6nm,0.9s,baz=137,slow=7.2,SNR=29						
BRTR	**Keskin Array B**	**67.32**	**312**	*ce*P	**P**	**23 10 02.2**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	**Keskin Array B**	**67.32**	**312**	P	**P**	**23 10 00.9**	**-1.5**
VORD	**Divnogorie**	**67.58**	**325**	*e*P	**P**	**23 10 02.3**	**-1.4**
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
ILGA	**Ilgaz**	**67.64**	**314**	P	**P**	**23 10 04.1**	**-0.5**
ILGA				IAmb	IAmb	23 10 05.3	
	comp=Z,24nm,1.0s						
BR231	**Keskin MP Arra**	**67.99**	**312**	P	**P**	**23 10 06.0**	**-0.7**
BR231				IAmb	IAmb	23 10 07.5	
	comp=Z,25nm,1.1s						
LPSR	**Galich'ya Gora**	**68.49**	**327**	*e*P	**P**	**23 10 08.3**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
ISP	**Isparta**	**69.18**	**310**	P	**P**	**23 10 13.7**	**-0.5**
ISP				pmax	pmax		
	comp=Z,34nm,1.1s						
ISP	**Isparta**	**69.18**	**310**	P	**P**	**23 10 13.7**	**-0.5**
ISP				IAmb	IAmb	23 10 15.8	
	comp=Z,34nm,1.1s						
MDUB	**Mudurnu**	**69.32**	**312**	P	**P**	**23 10 14.0**	**-0.9**
LSZ	**Lusaka**	**69.41**	**253**	P	**P**	**23 10 15.8**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LSZ	**Lusaka**	**69.41**	**253**	P	**P**	**23 10 15.8**	**-0.2**
ELL	**Elmali**	**69.42**	**308**	P	**P**	**23 10 14.8**	**-0.9**
ELL				pmax	pmax		
	comp=Z,154nm,1.0s						
ELL	**Elmali**	**69.42**	**308**	P	**P**	**23 10 14.8**	**-0.9**
CASY	**Casey**	**69.51**	**174**	P	**P**	**23 10 13.0**	**-2.4**
CASY				IAmb	IAmb	23 10 31.3	
	comp=Z,23nm,1.1s						
MOS	**Moscow**	**70.54**	**329**	*e*P	**P**	**23 10 19.5**	**-2.5**
MOS				*e*		23 10 31.1	
MOS				pmax	pmax		
	comp=Z,125nm,1.3s						
MA2	**Magadan**	**70.58**	**26**	P	**P**	**23 10 21.3**	**-0.9**
	comp=Z,12nm,0.8s,baz=170,slow=5.0,SNR=4.8						
MA2	**Magadan**	**70.58**	**26**	IAmb	IAmb	23 10 23.2	
	comp=Z,17nm,0.9s						
OBN	**Obninsk**	**70.82**	**328**	⇑P	**P**	**23 10 23.3**	**-0.4**
OBN	**Obninsk**	**70.82**	**328**	*de*P	**P**	**23 10 23.3**	**-0.4**
OBN				*e**PP	**pP**	**23 10 35.7**	**+0.7**
OBN				*e*		23 10 45.0	
OBN				S	**S**	**23 19 42.0**	**+6.0**
OBN				pmax	pmax		
	comp=Z,50nm,1.1s						
OBN				MLR	MLR		
	comp=Z,153nm,11.0s						
OBN	**Obninsk**	**70.82**	**328**	P	**P**	**23 10 22.8**	**-0.9**
MANT	**Manisa**	**70.84**	**310**	P	**P**	**23 10 23.4**	**-1.1**
PETK	**Petropavlovsk-**	**71.22**	**34**	LR	LR	23 42 43.2	
	comp=Z,221nm,20.2s,baz=242,slow=37						
KARP	**Karpathos**	**71.36**	**307**	P	**P**	**23 10 25.9**	**-1.5**
KLMR	**Klimovskoe**	**71.99**	**335**	*e*P	**P**	**23 10 27.1**	**-3.5**
KLMR				*e**PP	**pP**	**23 10 41.2**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,72nm,1.4s						
KLMR	**Klimovskoe**	**71.99**	**335**	*e*P	**P**	**23 10 27.2**	**-3.4**
KLMR				AMP		23 10 31.5	
	comp=Z,72nm,1.4s						
KLMR				*e*pP	**pP**	**23 10 41.2**	**-0.8**
TIXI	**Tiksi**	**72.02**	**10**	*de*P	**P**	**23 10 29.5**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,166nm,1.3s						
TIXI	**Tiksi**	**72.02**	**10**	P	**P**	**23 10 29.7**	**-0.9**
TIXI				IAmb	IAmb	23 10 30.8	
	comp=Z,31nm,1.0s						
MANR	**Mangalia**	**72.04**	**315**	⇓P	**P**	**23 10 31.5**	**+0.2**
TLCR		**72.22**	**317**	⇓P	**P**	**23 10 31.2**	**-1.1**
MFTR	**Murfatlar**	**72.24**	**316**	⇑P	**P**	**23 10 32.9**	**+0.5**
TIRR	**Tirgusor**	**72.31**	**316**	⇑P	**P**	**23 10 33.1**	**+0.2**
TIRR	**Tirgusor**	**72.31**	**316**	P	**P**	**23 10 32.1**	**-0.8**
TIRR	**Tirgusor**	**72.31**	**316**	P	**P**	**23 10 32.1**	**-0.8**
TLBR	**Topalu**	**72.59**	**316**	⇓P	**P**	**23 10 35.0**	**+0.4**
SANVU	**Saraoutou**	**72.59**	**107**	P	**P**	**23 10 33.4**	**-1.7**
SANVU				IAmb	IAmb	23 10 36.9	
	comp=Z,21nm,1.0s						
ICOR	**Ion Corvin**	**72.66**	**316**	⇑P	**P**	**23 10 35.3**	**+0.3**
MILM	**Milestii Mici**	**72.67**	**319**	⇓P	**P**	**23 10 34.4**	**-0.5**
CFR	**Carcaliu**	**72.68**	**317**	⇑P	**P**	**23 10 35.3**	**+0.2**
SANT	**Santorini**	**72.86**	**307**	P	**P**	**23 10 33.4**	**-3.0**
SANT				IAmb	IAmb	23 10 43.1	
	comp=Z,31nm,1.0s						
DZM	**Mont Dzumac**	**72.91**	**114**	*e*S	**S**	**23 20 00.4**	**-1.0**
	comp=Z,102nm,25.3s						
DZM	**Mont Dzumac**	**72.91**	**114**	*e*LR	LR	23 33 00.0	
	comp=Z,326nm,24.3s						
DZM	**Mont Dzumac**	**72.91**	**114**	P	**P**	**23 10 36.2**	**-0.8**
DZM				IAmb	IAmb	23 10 39.0	
	comp=Z,17nm,1.0s						
SEY	**Seymchan**	**72.94**	**23**	P	**P**	**23 10 35.9**	**-0.3**
	comp=Z,8.5nm,0.9s,baz=230,slow=3.8,SNR=10						
VARL	**Varlezi**	**73.05**	**317**	⇓P	**P**	**23 10 37.9**	**+0.6**
IDI	**Anoyia**	**73.14**	**306**	⇑P	**P**	**23 10 37.7**	**-0.4**
IDI	**Anoyia**	**73.14**	**306**	P	**P**	**23 10 37.4**	**-0.7**
IDI				IAmb	IAmb	23 10 39.4	
	comp=Z,33nm,0.9s						
ALN	**Alexandroupoli**	**73.23**	**312**	P	**P**	**23 10 37.5**	**-0.9**
ALN				pmax	pmax		
	comp=Z,32nm,1.1s						
ALN	**Alexandroupoli**	**73.23**	**312**	P	**P**	**23 10 37.5**	**-0.9**
ALN				IAmb	IAmb	23 10 39.5	
	comp=Z,32nm,1.1s						
VASR	**Vaslui**	**73.28**	**318**	⇓P	**P**	**23 10 39.1**	**+0.5**
SORM	**Soroca**	**73.29**	**320**	⇓P	**P**	**23 10 38.3**	**-0.4**
LEHL	**Lehliu**	**73.43**	**316**	⇑P	**P**	**23 10 40.1**	**+0.6**
AKASG	**Malin Array Be**	**73.45**	**322**	P	**P**	**23 10 38.6**	**-0.8**
	comp=Z,11nm,0.5s,baz=90,slow=4.8,SNR=63						
AKASG				PP	**PP**	**23 13 24.6**	**+1.1**
	comp=Z,4.5nm,1.0s,baz=90,slow=7.5,SNR=6.9						
AKASG	**Malin Array Be**	**73.45**	**322**	P	**P**	**23 10 38.1**	**-1.4**
AKBB	**Malin Array Si**	**73.45**	**322**	⇓*e*P	**P**	**23 10 38.4**	**-1.1**
AKBB	**Malin Array Si**	**73.45**	**322**	IAmb	IAmb	23 10 39.7	
	comp=Z,20nm,0.8s						
LBTB	**Lobatse**	**73.48**	**243**	P	**P**	**23 10 40.9**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,21nm,1.0s						
LBTB	**Lobatse**	**73.48**	**243**	P	**P**	**23 10 40.9**	**+0.5**
LBTB				IAmb	IAmb	23 10 43.0	
	comp=Z,21nm,0.9s						
ODBI	**Odobesti**	**73.56**	**317**	⇓P	**P**	**23 10 41.5**	**+1.3**
VRI	**Vrincioaia**	**73.81**	**317**	⇑P	**P**	**23 10 42.3**	**+0.5**
MAW	**Mawson**	**73.82**	**193**	P	**P**	**23 10 42.4**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=90,slow=5.1,SNR=3.2						
MAW				LR	LR	23 39 43.6	
	comp=Z,96nm,18.6s,baz=52,slow=33						
MAW	**Mawson**	**73.82**	**193**	P	**P**	**23 10 42.3**	**+1.0**
NEHR	**Nehoiu**	**74.00**	**317**	⇑P	**P**	**23 10 44.7**	**+1.8**
TESR	**Tescani**	**74.01**	**318**	⇓P	**P**	**23 10 43.2**	**+0.2**
TMCR	**Tamitsa**	**74.19**	**337**	*e*P	**P**	**23 10 43.4**	**-0.1**
TMCR				pmax	pmax		
	comp=Z,28nm,0.8s						
MLR	**Muntele Rosu**	**74.26**	**317**	⇑P	**P**	**23 10 44.9**	**+0.3**
MLR	**Muntele Rosu**	**74.26**	**317**	IAmb	IAmb	23 10 46.2	
	comp=Z,52nm,1.1s						
ZIMR		**74.28**	**315**	⇓P	**P**	**23 10 44.9**	**+0.4**
BIZ	**Bicaz**	**74.47**	**318**	⇓P	**P**	**23 10 46.0**	**+0.4**
COPA	**Copaceanca**	**74.48**	**315**	⇑P	**P**	**23 10 46.1**	**+0.5**
BOSA	**Boshof**	**74.48**	**240**	P	**P**	**23 10 47.1**	**+0.9**
	comp=Z,6.7nm,0.9s,baz=98,slow=5.6,SNR=6.3						
BOSA				LR	LR	23 40 45.6	
	comp=Z,232nm,18.9s,baz=53,slow=34						
BOSA	**Boshof**	**74.48**	**240**	P	**P**	**23 10 45.9**	**-0.3**
VOIR		**74.86**	**316**	⇓P	**P**	**23 10 47.2**	**-0.8**
ARR	**Arges**	**75.14**	**316**	⇓P	**P**	**23 10 49.1**	**-0.5**
BURAR	**Bucovina Array**	**75.21**	**319**	⇑P	**P**	**23 10 51.5**	**+1.5**
BURAR	**Bucovina Array**	**75.21**	**319**	P	**P**	**23 10 49.4**	**-0.6**
BUR08	**Bucovina Ar. S**	**75.23**	**319**	P	**P**	**23 10 50.1**	**0.0**
BUR08				IAmb	IAmb	23 10 51.5	
	comp=Z,14nm,0.9s						
MNK	**Minsk**	**75.32**	**326**	*i* P	**P**	**23 10 49.4**	**-0.9**
	comp=E,4.0nm,1.0s						
MNK				*i* P	**P**	**23 10 49.4**	**-0.9**
	comp=N,12nm,1.0s						
MNK				*i* P	**P**	**23 10 49.4**	**-0.9**
	comp=Z,59nm,1.0s						
MNK				*i* PcP	**PcP**	**23 11 02.5**	**-1.0**
MNK				*i* pP	**sP**	**23 11 06.0**	**+0.1**

MNK				i sP	pP	23 11 12.9	+11
MNK				i PP	PP	23 13 37.9	-1.3
MNK				i PPP	PPP	23 15 24.0	
MNK				i S	S	23 20 26.8	-0.3
MNK				i sS	SKSac	23 20 52.4	-4.6
MNK				i ScS	ScS	23 21 01.9	+1.5
MNK				i SS	SS	23 25 14.8	-2.7
MNK				i SSS	SSS	23 28 37.5	
MNK				i LQ	LQ	23 38 04.5	
MNK				i LR	LR	23 40 10.8	
MNK				i LRM	MLR	23 45 50.8	
	comp=Z,152nm,19.4s						
MNK				i LRM	MLR	23 45 51.1	
	comp=E,12nm,19.4s						
MNK				i LRM	MLR	23 45 53.7	
	comp=N,183nm,19.4s						
VTS	Vitosha	75.61	313	⇑P	P	23 10 52.4	-0.1
PUL	Pulkovo	75.71	332	⇑iP	P	23 10 52.8	+0.4
PUL				pmax	pmax		
	comp=Z,77nm,1.1s						
AGG	Agios Georgios	75.72	310	P	P	23 10 51.3	-1.7
AGG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AGG	Agios Georgios	75.72	310	P	P	23 10 51.3	-1.7
LIT	Litokhoron	75.76	311	P	P	23 10 52.0	-1.2
LIT				pmax	pmax		
	comp=Z,20nm,0.8s						
LIT	Litokhoron	75.76	311	P	P	23 10 52.0	-1.2
LIT				IAmb	IAmb	23 10 53.0	
	comp=Z,20nm,0.8s						
ITM	Ithomi	75.79	308	P	P	23 10 52.0	-1.4
NACGM	Naroch	76.04	326	i P	P	23 10 55.2	+0.7
NACGM				i P	P	23 10 55.2	+0.7
NACGM				i P	P	23 10 55.2	+0.7
NACGM				i Pb	pP	23 10 56.1	-10
	comp=Z,67nm,0.8s						
NACGM				i PcP	sP	23 11 12.5	+2.5
NACGM				i PP	PP	23 13 33.7	-12
NACGM				i PPP	PPP	23 15 22.9	
NACGM				i S	S	23 20 25.7	-9.5
NACGM				i SS	SS	23 25 22.2	-6.3
NACGM				i SSS	SSS	23 28 33.5	
NACGM				i LQ	LQ	23 38 01.6	
NACGM				i LR	LR	23 44 08.9	
IDID	Didziasalis	76.18	327	eP	P	23 10 55.8	+0.6
STIP	Stip	76.23	312	i P	P	23 10 53.6	-2.2
DEV	Deva	76.42	317	⇓P	P	23 10 57.9	+1.1
GZR	Gura Zlata	76.42	316	⇑P	P	23 10 56.3	-0.6
LVV	L'vov	76.45	321	eP	P	23 10 56.8	-0.1
IIGN	Ignalina	76.47	327	eP	P	23 10 57.5	+0.7
ISAL	Salakas	76.58	327	eP	P	23 10 58.2	+0.7
HERR	Herculane	76.59	315	⇓P	P	23 10 57.8	0.0
FNA	Florina	76.70	311	P	P	23 10 56.7	-1.9
FNA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FNA	Florina	76.70	311	P	P	23 10 56.7	-1.9
DRGR		76.72	317	⇓P	P	23 10 59.2	+0.6
VSU	Vasula	77.06	330	eP	P	23 11 00.3	+0.1
VSU	Vasula	77.06	330	⇑eP	P	23 11 00.2	+0.1
VSU				pmax	pmax		
	comp=Z,69nm,1.0s						
MDVR	Moldovita	77.06	315	⇓P	P	23 10 60.0	-0.6
LVZ	Lovozero	77.13	340	⇑eP	P	23 11 00.2	-0.2
LVZ				pmax	pmax		
	comp=Z,31nm,1.1s						
LVZ	Lovozero	77.13	340	P	P	23 11 00.0	-0.4
LVZ				IAmb	IAmb	23 11 00.7	
	comp=Z,35nm,1.0s						
KWP	Kalwaria Pacla	77.26	320	eP	P	23 11 02.4	+0.9
KWP	Kalwaria Pacla	77.26	320	P	P	23 11 01.6	+0.2
KWP				pmax	pmax		
	comp=Z,30nm,0.5s						
KWP	Kalwaria Pacla	77.26	320	P	P	23 11 01.6	+0.2
BZS	Buzias	77.27	316	⇓P	P	23 11 01.5	-0.1
UZH	Uzhgorod	77.33	319	⇑iP	P	23 11 02.1	+0.2
UZH				e		23 11 09.7	
UZH				i		23 11 24.5	
LTVH	Ltavrtes, Hu	77.37	318	⇓eP	P	23 11 02.3	+0.2
KOLS	Kolonicke sedl	77.40	320	eP	P	23 11 03.5	+1.2
KOLS				pmax	pmax		
	comp=Z,44nm,1.1s						
KOLS	Kolonicke sedl	77.40	320	eP	P	23 11 03.5	+1.2
PABE	Paberze	77.76	326	eP	P	23 11 04.8	+0.7
SUW	Suwalki	77.87	325	eP	P	23 11 04.6	-0.1
SUW	Suwalki	77.87	325	eP	P	23 11 04.9	+0.2
SUW	Suwalki	77.87	325	P	P	23 11 03.3	-1.4
SUW				pmax	pmax		
	comp=Z,145nm,1.1s						
SUW	Suwalki	77.87	325	P	P	23 11 03.2	-1.4
CRVS	Cervenica-Dubn	77.92	319	eP	P	23 11 06.2	+1.0
CRVS				pmax	pmax		
	comp=Z,69nm,1.3s						
CRVS	Cervenica-Dubn	77.92	319	eP	P	23 11 06.2	+1.0
SJES	Sjenica	78.08	314	eP	P	23 11 06.2	-0.1
DIVS	Divibare	78.18	314	⇓iP	P	23 11 05.9	-0.9
DIVS	Divibare	78.18	314	P	P	23 11 06.2	-0.6
FIA1	FINESS Array S	78.23	333	P	P	23 11 06.1	-0.4
FIA1				IAmb	IAmb	23 11 07.4	
	comp=Z,21nm,0.8s						
FINES	FINESS Array B	78.23	333	P	P	23 11 06.7	+0.2
	comp=Z,14nm,0.7s,baz=100,slow=5.7,SNR=72						
FINES				LR	LR	23 49 14.5	
	comp=Z,257nm,19.2s,baz=128,slow=38						
FINES	FINESS Array B	78.23	333	ceP	P	23 11 06.6	0.0
FINES				pmax	pmax		
	comp=Z,14nm,0.7s						
FINES	FINESS Array B	78.23	333	P	P	23 11 05.4	-1.1
FRGS	Fruska Gora	78.46	315	eP	P	23 11 08.9	+0.7
KECS	Kecovo	78.49	319	eP	P	23 11 09.2	+0.9
KECS				pmax	pmax		
	comp=Z,11nm,1.3s						
KECS	Kecovo	78.49	319	eP	P	23 11 09.2	+0.9
PDG	Podgorica	78.50	313	⇑P	P	23 11 07.4	-1.0
PDG	Podgorica	78.50	313	⇓iP	P	23 11 07.5	-1.0
PDG	Podgorica	78.50	313	P	P	23 11 07.3	-1.2
PDG				IAmb	IAmb	23 11 08.3	
	comp=Z,19nm,0.9s						
DRME	Dracevica, Mon	78.52	312	eP	P	23 11 07.9	-0.7
BBLS	Lazići	78.57	314	⇓iP	P	23 11 08.8	-0.2
NIE	Niedzica	78.76	320	eP	P	23 11 11.3	+1.4
PSZ	Piszkesteto	78.80	318	⇓P	P	23 11 10.2	+0.1
PSZ	Piszkesteto	78.80	318	⇓eP	P	23 11 10.2	+0.1
PSZ	Piszkesteto	78.80	318	P	P	23 11 09.6	-0.5
PSZ				pmax	pmax		
	comp=Z,30nm,1.0s						
PSZ	Piszkesteto	78.80	318	P	P	23 11 09.6	-0.5
PSZ				IAmb	IAmb	23 11 11.6	
	comp=Z,30nm,1.0s						
SCTE	Santa Cesarea	78.82	310	P	P	23 11 09.2	-1.1
SCTE				IAmb	IAmb	23 11 10.8	
	comp=Z,38nm,0.9s						
BRY	Bratogost	79.08	313	eP	P	23 11 11.1	-0.8
OJC	Ojcow	79.21	321	eP	P	23 11 13.0	+0.8
OJC	Ojcow	79.21	321	P	P	23 11 11.3	-0.9
OJC				pmax	pmax		
	comp=Z,23nm,1.0s						
OJC	Ojcow	79.21	321	P	P	23 11 11.3	-0.9
OJC				IAmb	IAmb	23 11 13.7	
	comp=Z,23nm,1.0s						
LANS	Liptovska Anna	79.26	319	eP	P	23 11 13.4	+0.8
LANS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LANS	Liptovska Anna	79.26	319	eP	P	23 11 13.4	+0.8
BUD	Budapest	79.32	318	⇓eP	P	23 11 13.2	+0.4
MORH	Mrgy, Hungar	79.41	316	⇓eP	P	23 11 13.0	-0.4
MORH	Mrgy, Hungar	79.41	316	⇓iP	P	23 11 13.2	-0.2
VYHS	Vyhne	79.58	319	eP	P	23 11 14.8	+0.5
VYHS				pmax	pmax		
	comp=Z,57nm,2.0s						
VYHS	Vyhne	79.58	319	eP	P	23 11 14.8	+0.5
CSKK	Cskako	79.81	318	⇓eP	P	23 11 15.8	+0.2
SRO	Srobarova	79.84	318	eP	P	23 11 16.5	+0.8
SRO	Srobarova	79.84	318	eP	P	23 11 16.5	+0.8
TIH	Tihany	80.01	317	eP	P	23 11 17.6	+0.9
TIP	Timpagrande	80.05	309	⇓P	P	23 11 17.6	+0.5
TIP	Timpagrande	80.05	309	P	P	23 11 16.3	-0.8
MATE	Matera	80.22	311	⇓P	P	23 11 18.1	+0.2
BLY	Banja Luka	80.26	315	⇓iP	P	23 11 17.8	-0.2
MPLH	Magyarpolny	80.28	317	⇓eP	P	23 11 18.4	+0.3
JAVC	Velka Javorina	80.39	319	eP	P	23 11 19.9	+1.1
EGYH	Egyhazaskeszo	80.45	318	⇓eP	P	23 11 15.6	-3.4
MORC	Moravsky Berou	80.59	320	⇓P	P	23 11 20.0	+0.2
MORC	Moravsky Berou	80.59	320	eP	P	23 11 20.0	+0.2
MORC	Moravsky Berou	80.59	320	P	P	23 11 19.7	-0.1
MORC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MORC	Moravsky Berou	80.59	320	P	P	23 11 19.7	-0.1
MODS	Modra-Piesok	80.59	318	eP	P	23 11 19.6	-0.2
MODS				pmax	pmax		
	comp=Z,60nm,1.6s						
MODS	Modra-Piesok	80.59	318	eP	P	23 11 19.6	-0.2
ZST	Bratislava	80.69	318	eP	P	23 11 20.7	+0.4
ZST				pmax	pmax		
	comp=Z,126nm,1.4s						
ZST	Bratislava	80.69	318	eP	P	23 11 20.7	+0.4
BEHE	Becsehely	80.72	317	⇓eP	P	23 11 23.9	+3.4
BEHE	Becsehely	80.72	317	⇓iP	P	23 11 24.3	+3.8
ARA0	ARCESS Array S	80.83	340	eP	P	23 11 21.3	+0.6
ARCES	ARCESS Array B	80.83	340	P	P	23 11 20.8	+0.2
	comp=Z,3.8nm,0.6s,baz=96,slow=5.9,SNR=28						
ARCES	ARCESS Array B	80.83	340	P	P	23 11 20.0	-0.6
SOP	Sopron	81.00	318	eP	P	23 11 21.9	0.0
RPZ	Rata Peaks	81.01	135	P	P	23 11 21.4	-0.7
RPZ				IAmb	IAmb	23 11 23.3	
	comp=Z,19nm,0.9s						
SGRT	San Giovanni R	81.03	312	IAmb	IAmb	23 11 23.1	
	comp=Z,21nm,1.1s						
KOGS	Kog	81.08	316	i P	P	23 11 22.7	+0.3
VRAC	Vranov	81.15	319	eP	P	23 11 22.8	+0.1
KRUC	Moravsky	81.25	319	eP	P	23 11 23.2	-0.1
DPC	Dobruska-Polom	81.44	320	eP	P	23 11 25.2	+0.9
DPC				e		23 11 38.2	
DPC	Dobruska-Polom	81.44	320	eP	P	23 11 25.2	+0.9
DPC				epP	sP	23 11 38.2	-1.8
KTK1	Kautokeino	81.46	340	eP	P	23 11 24.6	+0.6
CONA	Conrad Observa	81.49	318	i P	P	23 11 24.6	0.0
	comp=Z,12nm,1.1s						
QRZ	Quartz Range	81.50	132	P	P	23 11 24.7	0.0
QRZ				IAmb	IAmb	23 11 26.3	
	comp=Z,33nm,1.0s						
KSP	Ksiaz	81.51	321	eP	P	23 11 25.5	+0.9
OSTC	Ostas	81.53	321	eP	P	23 11 25.8	+1.1
CRES	Cresnjev	81.57	316	eP	P	23 11 25.0	-0.1
CHVC	Chvalec	81.63	321	eP	P	23 11 26.2	+0.9
CHVC				ex	x	23 11 38.4	
ARSA	Arzberg	81.65	317	i P	P	23 11 25.9	+0.4
	comp=Z,27nm,1.4s,SNR=9.1						
BOJS	Bojanci	81.69	315	i P	P	23 11 25.8	+0.2
BOJS				i pP	pP	23 11 38.9	+1.8
HAMF	Hammerfest	81.75	341	eP	P	23 11 25.8	+0.4
PAOL	Paolisi	81.86	311	P	P	23 11 26.0	-0.7
SOKA	Soboth	81.94	317	i P	P	23 11 27.6	+0.5
	comp=Z,33nm,1.2s,SNR=11						
UPP	Uppsala	81.94	330	eP	P	23 11 26.7	+0.1
THZ	Tophouse	81.96	133	P	P	23 11 26.4	-0.8
THZ				IAmb	IAmb	23 11 28.7	
	comp=Z,17nm,1.0s						
MQZ	McQueen's Vall	82.14	135	P	P	23 11 25.9	-2.1
LJU	Ljubljana	82.24	316	i P	P	23 11 29.0	+0.5
LJU				i pP	sP	23 11 42.4	-1.8
LJU	Ljubljana	82.24	316	eP	P	23 11 29.0	+0.5
OBKA	Obir	82.26	316	i P	P	23 11 29.2	+0.4
	comp=Z,17nm,1.2s,SNR=5.6						
CEY	Cerknica	82.28	316	⇓iP	P	23 11 28.4	-0.4
INTR	Introdacqua	82.42	312	IAmb	IAmb	23 11 34.5	
	comp=Z,26nm,1.1s						
PRU	Pruhonice	82.54	320	eP	P	23 11 30.7	+0.7
PRU	Pruhonice	82.54	320	eP	P	23 11 30.7	+0.7
MOA	Molln	82.55	318	i P	P	23 11 29.9	-0.3
	comp=Z,9.1nm,1.1s						
PVCC	Panska Ves	82.57	320	eP	P	23 11 31.0	+0.8
PVCC	Panska Ves	82.57	320	eP	P	23 11 31.0	+0.8
CLTB	Caltabellotta	82.73	307	P	P	23 11 30.4	-1.0
BSD	Bornholm Skovb	82.79	325	i P	P	23 11 31.4	+0.2
BSD	Bornholm Skovb	82.79	325	i P	P	23 11 31.4	+0.2
BSD	Bornholm Skovb	82.79	325	i P	P	23 11 31.4	+0.2
AQU	L'Aquila	82.81	312	⇓iP	P	23 11 31.8	+0.1
PBCC	Pribram	82.87	320	eP	P	23 11 32.4	+0.6
MYKA	Terra Mystica	82.89	316	i P	P	23 11 32.0	0.0
	comp=Z,13nm,1.0s						
CMWZ	Cape Campbell	82.92	132	P	P	23 11 30.9	-1.3
BRG	Berggiesshubel	83.00	321	i P	P	23 11 33.8	+1.4
BRG				Amp		23 11 34.1	
	comp=Z,34nm,1.5s						
BRG				ex	x	23 11 44.8	
BRG				Amp		23 11 47.5	
	comp=Z,23nm,1.5s						
BRG	Berggiesshubel	83.00	321	i P	P	23 11 33.8	+1.4
BRG				e		23 11 44.7	
BRG				pmax	pmax		
	comp=Z,34nm,1.5s						
BRG				pmax	pmax		
	comp=Z,23nm,1.5s						
BRG	Berggiesshubel	83.00	321	i P	P	23 11 33.8	+1.4
BRG				Amp		23 11 34.1	
	comp=Z,34nm,1.5s						
BRG				ex	x	23 11 44.8	
BRG				Amp		23 11 47.5	
	comp=Z,23nm,1.5s						
BRG	Berggiesshubel	83.00	321	eP	P	23 11 32.9	+0.5
	comp=Z,34nm,1.5s,baz=92,slow=5.0						
GEC2	GERESS Array S	83.00	319	IAmb	IAmb	23 11 34.2	
	comp=Z,40nm,1.1s						
GEC2	GERESS Array S	83.00	319	eP	P	23 11 33.1	+0.5
	comp=Z,57nm,1.3s,baz=92,slow=5.0						
GERES	GERESS Array B	83.00	319	P	P	23 11 33.3	+0.7
	comp=Z,17nm,1.0s,baz=103,slow=5.9,SNR=20						
GERES	GERESS Array B	83.00	319	P	P	23 11 32.7	+0.1
NRCA	Norcia	83.05	313	IAmb	IAmb	23 11 34.2	
	comp=Z,28nm,1.1s						
TRO	Tromso	83.09	340	eP	P	23 11 32.7	+0.3
KHC	Kasperske Hory	83.10	319	⇓eP	P	23 11 32.6	-0.4
KHC				pmax	pmax		
	comp=Z,12nm,1.0s						
KHC	Kasperske Hory	83.10	319	eP	P	23 11 31.2	-1.8
KHC	Kasperske Hory	83.10	319	P	P	23 11 32.5	-0.6
KBA	Koelnbreinsper	83.12	317	eP	P	23 11 33.0	-0.3
	comp=Z,13nm,1.2s,SNR=5.7						
ZOU	Zoufplan	83.35	316	IAmb	IAmb	23 11 35.1	
	comp=Z,25nm,1.1s						
FBE	Freiberg	83.37	321	eP	P	23 11 35.0	+0.7
	comp=Z,15nm,1.0s,baz=92,slow=5.0						
MURB	Monte Urbino	83.50	313	P	P	23 11 34.4	-0.9
MURB				IAmb	IAmb	23 11 41.4	
	comp=Z,13nm,1.0s						
STAL	STALIGIAL	83.51	316	P	P	23 11 35.0	-0.2
STAL				IAmb	IAmb	23 11 37.0	
	comp=Z,25nm,1.0s						
WET	Wettzell	83.56	319	eP	P	23 11 35.8	+0.4
	comp=Z,40nm,1.6s,baz=92,slow=5.0						
CLL	Collm	83.62	321	i P	P	23 11 35.7	+0.1
	comp=Z,24nm,1.4s						
CLL				ePcP	PcP	23 11 39.0	-0.7
CLL				esP	sP	23 11 55.0	+3.7
CLL	Collm	83.62	321	i P	P	23 11 35.7	+0.1
CLL				e*SP	sP	23 11 55.0	+3.7
CLL				pmax	pmax		
	comp=Z,24nm,1.4s						
CLL	Collm	83.62	321	P	P	23 11 33.7	-1.8
CLL	Collm	83.62	321	eP	P	23 11 35.7	+0.1
	comp=Z,24nm,1.4s,baz=92,slow=5.0						
ABTA	Abfaltersbach	83.67	317	eP	P	23 11 35.5	-0.6
	comp=Z,14nm,1.1s,SNR=6.6						
N2IH	Innhavet	83.88	338	eP	P	23 11 37.0	+0.5
NKC	Novy Kostel	83.90	320	eP	P	23 11 38.2	+1.1
NKC	Novy Kostel	83.90	320	eP	P	23 11 38.2	+1.1
WERN	Wernitzgruen	83.95	320	eP	P	23 11 37.8	+0.4
	comp=Z,12nm,1.1s,baz=92,slow=5.0						
GUNZ	Gunzen	83.99	320	eP	P	23 11 38.0	+0.4
	comp=Z,14nm,1.2s,baz=92,slow=5.0						
WERD	Werda	84.01	320	eP	P	23 11 37.9	+0.2
	comp=Z,9.8nm,1.2s,baz=92,slow=5.0						
ROTZ	Rotzenmuhle	84.03	320	eP	P	23 11 38.5	+0.7
	comp=Z,35nm,1.4s,baz=92,slow=5.0						
FAUS	Fauske	84.05	337	eP	P	23 11 37.5	+0.1
PLN	Plauen	84.10	320	eP	P	23 11 38.4	+0.3
	comp=Z,64nm,2.1s,baz=92,slow=5.0						
STEI	Steigen	84.14	338	eP	P	23 11 38.2	+0.3
TEOL	Teolo	84.20	315	IAmb	IAmb	23 11 39.4	
	comp=Z,15nm,1.0s						
MOR8	Moi Rana	84.23	336	eP	P	23 11 38.2	-0.2
BKZ	Black Stump Fm	84.24	130	P	P	23 11 37.8	-1.3
BKZ				IAmb	IAmb	23 11 39.7	
	comp=Z,16nm,1.0s						
CTI	Castel Tesino	84.24	316	P	P	23 11 38.4	-0.6
CTI				pmax	pmax		
	comp=Z,29nm,0.9s						
CTI	Castel Tesino	84.24	316	P	P	23 11 38.4	-0.6
CTI				IAmb	IAmb	23 11 40.5	
	comp=Z,29nm,0.9s						
WATA	Walderalm	84.34	317	eP	P	23 11 38.6	-0.9
	comp=Z,23nm,1.3s,SNR=7.2						
NEUB	Neuenburg	84.38	321	eP	P	23 11 39.9	+0.4
	comp=Z,29nm,1.1s,baz=92,slow=5.0						
OSSC	Osservatorio P	84.44	313	P	P	23 11 38.5	-1.5
MOX	Moxa	84.46	320	eP	P	23 11 40.3	+0.4
	comp=Z,45nm,1.7s,baz=92,slow=5.0						
NBB05	Inndyr	84.49	337	eP	P	23 11 40.3	+0.7
FUR	Furstenfeldbru	84.57	318	eP	P	23 11 40.5	0.0
	comp=Z,91nm,1.4s,baz=92,slow=5.0						
SQTA	Sankt Quirin	84.59	317	eP	P	23 11 40.4	-0.4
	comp=Z,12nm,0.5s,SNR=6.1						
URZ	Urewera	84.59	129	P	P	23 11 37.5	-3.3
ZCCA	Zocca	84.66	314	P	P	23 11 41.1	+0.1
ZCCA				IAmb	IAmb	23 11 47.8	
	comp=Z,27nm,1.0s						
MOTA	Moosalm	84.66	317	i P	P	23 11 40.5	-0.7
	comp=Z,33nm,1.3s,SNR=5.7						
GRA1	Grafenberg Arr	84.67	319	P	P	23 11 39.9	-1.1
GRA1				IAmb	IAmb	23 11 42.8	
	comp=Z,23nm,0.9s						
GRF	Grafenberg Arr	84.67	319	P	P	23 11 39.9	-1.1
GRF				pmax	pmax		
	comp=Z,23nm,0.9s						
GRF	Grafenberg Arr	84.67	319	eP	P	23 11 41.7	+0.7
	comp=Z,44nm,1.2s,baz=92,slow=5.0						
CASP	Castiglione de	84.70	313	P	P	23 11 40.1	-1.2
CASP				IAmb	IAmb	23 11 43.0	
	comp=Z,21nm,1.1s						
FLTG	Flechtingen	84.77	322	eP	P	23 11 40.7	-0.7
	comp=Z,38nm,1.8s,baz=92,slow=5.0						
KONS	Konsvik	84.80	336	eP	P	23 11 41.9	+0.7
LOF	Lofoten	84.80	338	eP	P	23 11 41.5	+0.4
RETA	Reutte	84.90	317	eP	P	23 11 42.0	-0.3
	comp=Z,15nm,0.6s						
FETA	Feichten	84.91	317	i P	P	23 11 42.3	-0.1
	comp=Z,18nm,1.3s						
SALO	Salr	85.01	315	P	P	23 11 41.9	-0.9
NC602	NORSAR Array S	85.05	331	eP	P	23 11 42.6	0.0
NSS	Namsos	85.11	334	eP	P	23 11 43.2	+0.4
ASSE	Asse, Remlinge	85.11	322	eP	P	23 11 43.5	+0.5
	comp=Z,23nm,1.0s,baz=92,slow=5.0						
PRMA	PARMA	85.14	315	P	P	23 11 42.5	-0.9
NB2	NORSAR Subarra	85.22	331	P	P	23 11 43.3	-0.2
	comp=Z,1.6nm,0.6s,baz=92,slow=5.3						
NB2	NORSAR Subarra	85.22	331	P	P	23 11 43.3	-0.2
	baz=92,slow=5.3						
NOA	NORSAR Array B	85.22	331	P	P	23 11 43.0	-0.5
	comp=Z,10nm,1.0s,baz=94,slow=5.2,SNR=9.5						
NOA				LR	LR	23 53 48.1	
	comp=Z,66nm,19.4s,baz=95,slow=38						
CLZ	Clausthal	85.28	322	eP	P	23 11 44.4	+0.4
	comp=Z,46nm,1.4s,baz=92,slow=5.0						
SPA0	Spitsbergen Ar	85.35	348	eP	P	23 11 45.6	+1.8
OSL	Oslo	85.41	330	eP	P	23 11 45.5	+1.1
NC204	NORSAR Array S	85.45	331	P	P	23 11 43.8	-1.0
NRDL	Niedersach Rie	85.47	322	eP	P	23 11 45.7	+0.9
	comp=Z,41nm,1.5s,baz=92,slow=5.0						
DAVA	Damuels	85.49	317	eP	P	23 11 45.5	+0.2
	comp=Z,31nm,1.1s,SNR=6.4						
GTTG	Gottingen	85.53	321	eP	P	23 11 45.7	+0.5
	comp=Z,61nm,1.6s,baz=92,slow=5.0						
KEST	Kesra	85.81	305	P	P	23 11 47.9	+0.8
	comp=Z,20nm,1.0s,baz=322,slow=2.6,SNR=9.5						
KEST	Kesra	85.81	305	P	P	23 11 46.2	-0.8
TUE	Stuetta	85.85	316	P	P	23 11 45.2	-2.0
TUE				IAmb	IAmb	23 11 51.3	
	comp=Z,18nm,1.1s						
DOMB	Dombas	86.29	332	eP	P	23 11 49.0	+0.2
TNS	Taunus Mts	86.47	320	eP	P	23 11 50.4	+0.4
	comp=Z,17nm,0.8s,baz=92,slow=5.0						
BFO	Black Forest	86.55	318	P	P	23 11 49.6	-0.8
BFO				pmax	pmax		
	comp=Z,15nm,0.9s						
BFO	Black Forest	86.55	318	P	P	23 11 49.6	-0.8
BFO				IAmb	IAmb	23 11 51.1	
	comp=Z,15nm,0.9s						
BFO	Black Forest	86.55	318	eP	P	23 11 50.0	-0.4
	comp=Z,21nm,1.1s,baz=92,slow=5.0						
SKAR	Skarslia	86.63	330	eP	P	23 11 50.4	-0.2
MOL	Molde	87.01	332	eP	P	23 11 50.8	-1.5
SNART	Snartemo	87.19	328	eP	P	23 11 41.7	-11
BUG	Bochum--Univer	87.21	321	eP	P	23 11 54.1	+0.6
	comp=Z,29nm,1.0s,baz=92,slow=5.0						
SENIN	Lac Senin/Sane	87.26	316	P	P	23 11 53.7	-0.5
SENIN				IAmb	IAmb	23 11 56.5	
	comp=Z,8.7nm,0.8s						
AKN	Aaknes	87.27	332	eP	P	23 11 54.0	+0.4
ECH	Echery	87.33	318	IAmb	IAmb	23 11 55.7	
	comp=Z,13nm,1.1s						
AHRW	Bad Neuenahr-A	87.35	320	eP	P	23 11 55.0	+0.8
	comp=Z,19nm,1.0s,baz=92,slow=5.0						
VNDA	Vanda	87.42	169	LR	LR	23 49 10.0	
	comp=Z,114nm,18.5s,baz=312,slow=34						
BLS5	Blasjo	87.56	329	eP	P	23 11 54.1	-0.9
BTNL	Ternell	87.95	320	dPcP	P	23 11 57.6	+0.5
MEM	Membach	88.03	320	dPcP	PcP	23 11 58.0	-1.2
BCLA	Clavier	88.48	320	dPcP	P	23 11 59.7	+0.1
SSB	Saint Sauveur	89.23	315	P	P	23 12 01.9	-1.4
SSB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SSB	Saint Sauveur	89.23	315	P	P	23 12 01.9	-1.4
SSB				IAmb	IAmb	23 12 18.2	
	comp=Z,6.7nm,1.0s						
TAM	Tamanrasset	89.48	293	IAmb	IAmb	23 12 07.6	
	comp=Z,11nm,1.1s						
ANM	Nome	91.36	25	P	P	23 12 10.8	-1.9
ANM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANM	Nome	91.36	25	P	P	23 12 10.8	-1.9
QSPA	South Pole Qui	92.54	180	P	P	23 12 18.2	-0.1
QSPA				IAmb	IAmb	23 12 32.3	
	comp=Z,5.7nm,0.8s						
AKUT	Akutan	92.71	36	P	P	23 12 16.1	-3.0
A21K	Barrow	93.05	18	P	P	23 12 21.3	+0.9
	baz=287						
A21K	Barrow	93.05	18	P	P	23 12 20.4	0.0
TOA0	Torodi Ar. Sit	93.64	283	IAmb	IAmb	23 12 38.9	
	comp=Z,7.5nm,1.0s						
TORD	Torodi Ar. Bea	93.64	283	P	P	23 12 24.6	+0.2
	comp=Z,6.2nm,1.1s,baz=79,slow=4.2,SNR=13						
TORD				LR	LR	23 54 31.6	
	comp=Z,136nm,18.1s,baz=60,slow=35						
TORD	Torodi Ar. Bea	93.64	283	P	P	23 12 24.8	+0.5
TTA	Tatalina	95.78	26	P	P	23 12 31.8	-1.4
TTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TTA	Tatalina	95.78	26	P	P	23 12 31.8	-1.4
TTA				IAmb	IAmb	23 12 34.4	
	comp=Z,5.6nm,0.9s						
ESDC	Sonseca Array	96.04	310	P	P	23 12 34.8	-0.1
	comp=Z,1.4nm,0.8s,baz=57,slow=4.4,SNR=7.9						
ESDC				LR	LR	23 58 44.0	
	comp=Z,77nm,19.6s,baz=5.0,slow=37						
TOLK	Toolik Lake Re	96.26	20	P	P	23 12 35.7	+0.5
	baz=294						
TOLK	Toolik Lake Re	96.26	20	IAmb	IAmb	23 12 36.6	
	comp=Z,7.6nm,1.1s						
MLY	Manley	97.26	23	P	Pdif	23 12 40.3	+0.4
	baz=292						
BPAW	Bear Paw Mtn.	97.51	24	P	Pdif	23 12 41.0	0.0
BPAW				IAmb	IAmb	23 12 41.6	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	98.86	23	P	P	23 12 45.5	-1.5
	comp=Z,0.5nm,0.7s,baz=298,slow=4.7,SNR=5.9						
ILAR				PP	PP	23 16 43.1	-5.3
	comp=Z,0.5nm,0.8s,baz=312,slow=8.7,SNR=5.2						
ILAR				PKKPbc	PKKPbc	23 29 14.1	-2.7
	comp=Z,0.7nm,0.9s,baz=183,slow=1.8,SNR=6.0						
ILAR				LR	LR	00 02 00.4	
	comp=Z,140nm,19.5s,baz=310,slow=38						
SCRK	Sand Creek	100.35	23	P	Pdif	23 12 53.8	0.0
	baz=298						
INK	Inuvik	101.48	17	P	Pdif	23 12 57.9	-0.6
	comp=Z,1.4nm,0.8s,baz=287,slow=4.5,SNR=3.6						
YKA	Yellowknife Ar	111.04	15	PKiKP	PKiKP	23 17 40.0	-0.2
	comp=Z,0.2nm,0.6s,baz=35,slow=2.3,SNR=3.2						
YKA				PP	PP	23 18 19.4	+1.0
	comp=Z,0.3nm,0.6s,baz=339,slow=7.0,SNR=5.3						
YKA				PKKPbc	PKKPbc	23 28 38.1	-1.5
	comp=Z,0.3nm,0.7s,baz=144,slow=3.9,SNR=6.8						
YKA	Yellowknife Ar	111.04	15	i PKIKP	PKiKP	23 17 40.0	-0.2

TBI	Tubuai	113.48	114	*e*LR	LR	23 51 52.5	
	comp=Z,108nm,24.2s						
PPT2	Papeete2	114.01	108	*e*LR	LR	23 52 03.6	
	comp=Z,108nm,23.8s						
D03D	Eldon	119.47	29	P	PKiKP	23 17 58.3	+1.4
	baz=314						
H04D	Lebanon	121.70	32	P	PKiKP	23 18 01.9	+0.5
	baz=313						
I03D	Drain, OR	121.93	33	P	PKiKP	23 18 02.5	+0.7
	baz=312						
J01E	Myrtle Point	121.97	34	P	PKiKP	23 18 02.7	+0.8
	baz=311						
HAWA	Hanford	121.99	28		PKiKP	23 18 02.5	+0.7
HUMO	Hull Mountain	122.87	34	PKPdf	PKiKP	23 18 03.5	-0.3
J04D	Umpqua Nationa	122.91	33	P	PKiKP	23 18 04.6	+0.5
	baz=313						
J05D	Fort Rock, OR	123.34	32	P	PKiKP	23 18 05.6	+0.8
	baz=314						
L04D	Klamath Falls	123.49	34	P	PKiKP	23 18 05.1	-0.1
	baz=312						
M02C	Callahan	123.73	35	P	PKiKP	23 18 06.0	+0.5
	baz=311						
M04C	Macdoel	124.04	34	P	PKiKP	23 18 06.8	+0.6
	baz=312						
MSO	Missoula	124.15	24	P	PKiKP	23 18 05.9	-0.4
	baz=323						
MSO	Missoula	124.15	24	PKPdf	PKPdf	23 18 04.6	-1.4
EGMT	Eagleton	124.77	21	P	PKiKP	23 18 07.4	-0.1
	baz=328						
EGMT	Eagleton	124.77	21	PKPdf	PKiKP	23 18 07.4	-0.1
MOD	Modoc Plateau	124.79	33	PKPdf	PKiKP	23 18 07.6	-0.1
BOZ	Bozeman (W)	126.09	24	P	PKiKP	23 18 10.3	0.0
	baz=325						
BEKR	Beckworth	126.16	34		PKPdf	23 18 09.6	-0.6
MCMT	McKenzie Canyo	126.20	25	PKPdf	PKiKP	23 18 10.1	-0.5
ULM	Lac du Bonnet	126.36	9	PKP	PKPdf	23 18 09.6	-0.4
	comp=Z,7.1nm,0.8s,baz=11,slow=3.1,SNR=7.1						
HLID	Hailey	126.51	27	P	PKiKP	23 18 11.3	+0.2
	baz=321						
HLID	Hailey	126.51	27	PKPdf	PKiKP	23 18 10.7	-0.5
YHH	Holmes Hill	127.06	24	PKPdf	PKPdf	23 18 10.6	-1.3
PNTR	Pine Nut	127.12	35		PKPdf	23 18 11.6	-0.5
LAO	LASA Array	127.13	19	P	PKiKP	23 18 13.0	+0.8
	baz=332						
LAO	LASA Array	127.13	19	PKPdf	PKiKP	23 18 11.9	-0.3
CMB	Columbia Colle	127.37	36	PKIKP	PKPdf	23 18 12.1	-0.2
CMB	Columbia Colle	127.37	36		PKPdf	23 18 12.1	-0.2
LSQQ	Lebel-sur-Quev	128.19	354	P	PKiKP	23 18 13.8	-0.3
	baz=8.8						
REDW	Red Top Meadow	128.24	25		PKiKP	23 18 14.2	-0.5
ELK	Elko	128.27	30	PKP	PKiKP	23 18 15.3	+0.4
	comp=Z,2.9nm,0.9s,baz=23,slow=1.7,SNR=8.4						
NVAR	Mina Array Bea	128.31	34	PKP	PKiKP	23 18 15.3	+0.3
	comp=Z,3.6nm,0.9s,baz=278,slow=1.7,SNR=23						
EYMN	Ely	129.23	7	P	PKiKP	23 18 16.3	+0.1
	baz=350						
LATQ	La Tuque	129.26	350	P	PKiKP	23 18 16.1	-0.2
	baz=14						
PDAR	Pinedale Array	129.26	24	PKP	PKiKP	23 18 16.1	-0.7
	comp=Z,1.9nm,0.8s,baz=349,slow=1.5,SNR=9.2						
PDAR	Pinedale Array	129.26	24		PKPdf	23 18 14.8	-1.2
GRAC	Grapevine Rang	129.84	35	P	PKiKP	23 18 18.7	+0.9
	baz=314						
R11A	Troy Canyon, C	129.86	32	P	PKiKP	23 18 18.6	+0.6
	baz=317						
DUG	Dugway, Tooele	129.88	29	P	PKiKP	23 18 18.9	+1.0
	baz=321						
MPMC	Manual Prospec	130.41	36	P	PKiKP	23 18 19.5	+0.3
	baz=314						
TPNV	Topopah Spring	130.50	34	P	PKiKP	23 18 19.9	+0.5
	baz=316						
LRMC	Laurel Mtn Rad	130.70	37	P	PKiKP	23 18 20.8	+1.1
	baz=313						
EDW2	Edwards Air Fo	130.91	38	P	PKiKP	23 18 20.6	+0.5
	baz=312						
MSU	Marysvale	131.50	30	PKIKP	PKiKP	23 18 22.3	+0.9
MSU	Marysvale	131.50	30	PKPdf	PKiKP	23 18 22.2	+0.9
CCUT	Cedar City	131.63	31	PKPdf	PKiKP	23 18 21.4	-0.3
RCBR	Riachuelo	131.98	265	*e*P	PKiKP	23 18 24.5	+1.7
O20A	White River Ci	132.00	25	P	PKiKP	23 18 21.6	-0.7
	baz=326						
O20A	White River Ci	132.00	25	PKPdf	PKPdf	23 18 21.1	-0.1
ECSD	EROS Data Cent	132.49	12	P	PKPdf	23 18 21.9	+0.1
	baz=343						
PFO	Pinyon Flats O	132.71	38	PKP	PKiKP	23 18 23.2	-0.7
	comp=Z,0.8nm,0.5s,baz=279,slow=1.9,SNR=4.2						
ALF01	Guarapari-ES	134.23	244	*e*P	PKiKP	23 18 28.2	+1.2
RIB01	Linhares ES	134.30	245	*e*P	PKiKP	23 18 28.5	+1.3
CAM01	Campos-RJ	134.69	242	*e*P	PKiKP	23 18 28.8	+0.9
GDU01	Guandu, BA	134.79	253	*e*P	PKiKP	23 18 29.4	+1.1
BSFB	Barra de Sao F	134.85	246	*e*P	PKiKP	23 18 29.1	+0.8
VAS01	Vassouras-RJ	136.09	240	*e*P	PKiKP	23 18 31.4	+0.6
MAN01	Angra dos Reis	136.33	239	*e*P	PKiKP	23 18 32.3	+1.0
ESAR	Angra dos Reis	136.68	239	*e*P	PKiKP	23 18 32.6	+0.6
ANMO	Albuquerque	137.09	27	PKP	PKiKP	23 18 31.6	-1.2
	comp=Z,3.5nm,0.9s,baz=117,slow=0.5,SNR=5.4						
ANMO	Albuquerque	137.09	27	⇑*i*PKIKP	PKiKP	23 18 32.0	-0.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANMO	Albuquerque	137.09	27	PKPdf	PKiKP	23 18 32.1	-0.7
PET01	Itanhaem-SP	138.55	235	*e*P	PKiKP	23 18 36.1	+0.3
VAO	Valinhos	138.83	237	*e*P	PKiKP	23 18 37.0	+0.5
CNLB	Canela	138.84	226	*e*P	PKiKP	23 18 37.0	+0.6
CPSB	Cacapava Do Su	140.02	223	*e*P	PKiKP	23 18 38.7	+0.1
ROSB	Rosrio	140.21	269	*e*P	PKiKP	23 18 39.5	0.0
MNTX	Cornudas Mount	140.27	29	PKPdf	PKiKP	23 18 37.6	-1.6
WMOK	Wichita Mounta	140.33	19	P	PKPdf	23 18 29.9	-6.8
	baz=336						
U40A	Yellville	140.36	11	P	PKPdf	23 18 30.6	-6.1
	baz=346						
ITAB	Concordia	140.92	228	*e*P	PKiKP	23 18 40.5	-0.1
WVT	Waverly	141.30	5	PKIKP	PKiKP	23 18 39.9	-1.2
WVT	Waverly	141.30	5	P	PKPdf	23 18 32.7	-5.6
	baz=354						
WVT	Waverly	141.30	5	PKPpre	PKPpre	23 18 32.5	
WVT				PKPdf	PKiKP	23 18 39.9	-1.2
TKL	Tuckaleechee C	141.94	360	PKP	PKPdf	23 18 39.0	-0.5
	comp=Z,6.1nm,0.8s,baz=124,slow=2.7,SNR=5.5						
TKL	Tuckaleechee C	141.94	360	PKIKP	PKPdf	23 18 39.0	-0.5
MIAR	Mount Ida	141.96	13	P	PKPdf	23 18 34.7	-4.9
	baz=344						
TXAR	Lajitas Array	143.05	29	PKhKP	PKPpre	23 18 38.3	
	comp=Z,2.3nm,0.9s,baz=350,slow=1.5,SNR=7.4						
TXAR	Lajitas Array	143.05	29	PKIKP	PKPbc	23 18 38.9	+0.3
TXAR	Lajitas Array	143.05	29		PKPbc	23 18 38.9	+0.3
SMTB	Santa Maria do	143.30	259	*e*P	PKiKP	23 18 44.8	-1.0
PEXB	Peixe	143.44	253	*e*P	PKiKP	23 18 44.8	-1.3
JCT	Junction City	143.79	24	P	PKPbc	23 18 41.1	+0.5
	baz=332						
TMAB	Tom-Au,PA,Br	144.17	270	*e*P	PKiKP	23 18 46.3	-1.3
NATX	Nacogdoches	144.34	16	P	PKPdf	23 18 43.3	-0.5
	baz=341						
LRAL	Lakeview Retre	144.44	4	P	PKPbc	23 18 42.6	+0.2
	baz=355						
VBMS	Vicksburg	144.81	10	P	PKPdf	23 18 44.5	-0.1
	baz=348						
CPUP	Villa Florida	145.22	225	PKPbc	PKPdf	23 18 45.3	-0.2
	comp=Z,14nm,1.0s,baz=92,slow=2.8,SNR=19						
255A	Hazlehurst	145.63	358		PKPab	23 18 46.9	+0.4
HKT	Hockley	145.69	18	PKP2	PKPab	23 18 47.1	+0.4
HKT	Hockley	145.69	18		PKPab	23 18 47.1	+0.4
BO02	Sierra Bellavi	145.71	199		PKPab	23 18 47.7	+0.8
BO02				pPKPdf	sPKPab	23 19 01.1	-0.9
PRPB	Parauapebas	145.78	263	*e*P	PKiKP	23 18 49.2	-1.7
833A	Chaparral WMA,	145.86	25	P	PKPab	23 18 47.7	+0.2
	baz=332						
TIGA	Tifton	146.14	359	P	PKPab	23 18 48.7	+0.2
	baz=0.6						
BRAL	Brewton	146.28	5	P	PKPab	23 18 49.3	+0.3
	baz=354						
AQDB	Aquidauana	147.21	235	*e*P	PKPbc	23 18 51.2	-0.1
ZAIG	Zacatecas	148.92	35		PKiKP	23 18 57.6	+0.1
LCO	Las Campanas	150.87	204	PKIKP	PKiKP	23 19 01.3	0.0
LCO	Las Campanas	150.87	204		PKiKP	23 19 01.3	0.0
PTLB	Pontes e Lacer	152.41	241	*e*P	PKPdf	23 18 59.3	+2.0
CMIG	Matias Romero	157.66	28	PKPab	PKPab	23 19 36.4	-0.1
	comp=Z,7.0nm,0.8s,baz=253,slow=2.0,SNR=4.2						
GO01	Chusmiza	157.73	219	PKPab	PKPab	23 19 39.1	+1.6
PB16	IPOC Station P	158.91	221	PKPab	PKPab	23 19 44.7	+2.0
SDV	Santo Domingo	162.49	311	PKPab	PKPab	23 19 58.0	0.0
	comp=Z,4.5nm,0.9s,baz=348,slow=8.2,SNR=4.5						
CZSB	Cruzeiro do Su	167.69	245	*e*P	PKPdf	23 19 16.8	+2.3
OTAV	Otavalo	173.81	297	PKP2	PKPab	23 20 49.7	+1.2
OTAV						00 19 18.6	
OTAV	Otavalo	173.81	297		PKPdf	23 19 18.6	+0.3
OTAV				PKPab	PKPab	23 20 49.7	+1.2

JMA ***09*** *23:02:13.2, 38°.33N×141°.63E, h54^{km}±1^{km}, M3.9*
JMA Felt II J1.
NIED ***09*** *23:02:13.3, 38°.33N×141°.63E, h54^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.80; $M_{\theta\theta}$-7.93; $M_{\phi\phi}$4.13; $M_{r\theta}$1.55; $M_{\theta\phi}$1.31; $M_{\phi r}$4.04; Fault plane solution: $M_0$8.23000×10^{14} NP1:ϕ_s60.00000°, δ66.00000°, λ38.00000°. NP2:ϕ_s312.00000°, δ56.00000°, λ150.00000°.*
NEIC ***09*** *23:02:14.0±2.7, 38°.29N±0°.06×141°.6E±0°.1, h57^{km}±9^{km}, mb4.6/5 Error ellipse: s-maj=14.1km s-min=6.3km az=117.0*
IDC ***09*** *23:02:16.2±2.9, 38°.45N×141°.31E, h94^{km}±25^{km}, mb3.8/2, mb1 3.5/6, mb1mx3.1/66, mbtmp3.8/6, Error ellipse: s-maj=41.1km s-min=24.2km az=98.0*
ISC 09 23:02:12.9±1.1, **38°.32N**±0°.05×**141°.70E**±0°.07, **h51**^{km}±8^{km}, **n51**, σ**1^{s}57**/53, **mb4.5**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.18	269	P	Pn	23 02 21.7	+0.5
JIKH				S	Sn	23 02 27.7	+0.6
JIO	Ouri	0.31	297	P	Pn	23 02 22.5	+0.3
JIO				S	Sn	23 02 28.8	0.0
JKMT	Kesennumamotoy	0.53	341	P	Pn	23 02 24.8	+0.3
JKMT				S	Sn	23 02 32.7	-0.1
JOFO	Osakifurukawao	0.68	295	P	Pn	23 02 26.4	0.0
JOFO				S	Sn	23 02 36.6	+0.4
JMK	Ichinoseki	0.74	330	P	Pn	23 02 27.4	+0.3
JMK				S	Sn	23 02 37.3	-0.2
OFUJ	Ofunato	0.76	358	P	Pn	23 02 27.7	+0.2
JOU	Okura	0.81	274	P	Pn	23 02 28.0	-0.2
JOU				S	Sn	23 02 38.9	-0.4
JMM	Marumori	0.84	238	P	Pn	23 02 28.2	-0.3
JMM				S	Sn	23 02 39.0	-0.9
JMM	Marumori	0.84	238	Pn	Pn	23 02 28.3	-0.3
JMM				Sn	Sn	23 02 38.9	-1.1
JFK	Kawauchi	1.15	215	P	Pn	23 02 32.6	-0.1
JFK				S	Sn	23 02 46.8	-0.6
JOM	Ohasama	1.20	345	P	Pn	23 02 33.5	+0.2
JYK	Kaneyama	1.21	300	P	Pn	23 02 33.3	-0.1
JYS	Shirataka	1.29	266	P	Pn	23 02 34.6	+0.1
JYS				*e*S	Sn	23 02 50.5	-0.2
JFT	Otama	1.34	234	P	Pn	23 02 35.5	+0.3
JFT				*e*S	Sn	23 02 51.4	-0.5
JRG	Rokugo	1.36	323	P	Pn	23 02 35.9	+0.4
JYA	Atsumi	1.58	281	P	Pn	23 02 38.5	0.0
JYT	Yasato	2.40	210	Pn	Pn	23 02 50.4	+0.7
JTM	Tenmabayashi	2.52	349	Pn	Pn	23 02 52.2	+0.9
JSD	Sado	2.72	265	Pn	Pn	23 02 55.2	+1.1
MJAR	Matsushiro Arr	3.29	239	P	Pn	23 03 03.5	+1.5
	0.8nm,0.3s,baz=36,slow=13,SNR=23						
MJAR				S	Sn	23 03 45.7	+5.8
	0.6nm,0.3s,baz=337,slow=25,SNR=2.0						
MJAR	Matsushiro Arr	3.29	239		Pn	23 03 04.8	+2.8
MAJO	Matsushiro	3.29	239	Pn	Pn	23 03 04.1	+2.1
MAT	Matsushiro	3.29	239	P	Pn	23 03 03.1	+1.1
MAT				*e*S	Sn	23 03 41.0	+1.1
ERM	Erimo	3.86	16	Pn	Pn	23 03 11.2	+1.5
JGF	Kuroka	4.41	233		Pn	23 03 20.0	+2.8
JEW	Eniwo	4.52	358	Pn	Pn	23 03 21.0	+2.2
INU	Inuyama	4.78	233	Pn	Pn	23 03 25.8	+3.5
JHJ2	Mitsune	5.41	197	Pn	Pn	23 03 32.2	+1.2
JKA	Kamikawa-asahi	5.83	6		Pn	23 03 38.1	+1.4
ASAJ	Asahikawa	5.84	6	P	Pn	23 03 38.1	+1.3
	2.7nm,0.3s,baz=273,slow=14,SNR=7.2						
JWT	Wachi	5.89	241	Pn	Pn	23 03 40.7	+3.2
JHS	Saijyo	7.65	247	Pn	Pn	23 04 04.9	+3.2
USA0B	Ussuriysk Arra	9.38	312	Pn	Pn	23 04 25.6	+0.3
USRK	Ussuriysk Ar.	9.38	312	P	Pn	23 04 25.8	+0.6
	baz=120,slow=14,SNR=5.5						
KSRS	Korea Array	10.92	270	P	Pn	23 04 44.0	-2.4
	0.1nm,0.3s,baz=85,slow=16,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.64	123	T	T	23 38 16.9	
	baz=316,slow=76,SNR=164						
H11N1	WAKE ISLAND Hy	28.64	123	T	T	23 38 17.6	
	baz=316,slow=76,SNR=189						
H11N3	WAKE ISLAND Hy	28.65	123	T	T	23 38 18.3	
	baz=316,slow=76,SNR=186						
H11S1	WAKE ISLAND Hy	29.39	125	T	T	23 39 21.8	
	baz=318,slow=76,SNR=71						
H11S3	WAKE ISLAND Hy	29.39	125	T	T	23 39 19.0	
	baz=318,slow=76,SNR=71						
H11S2	WAKE ISLAND Hy	29.41	125	T	T	23 39 23.2	
	baz=318,slow=76,SNR=77						
KURK	Kurchatov	45.33	307	P	P	23 10 24.4	-1.2
KURBB	Kurchatov Arra	45.40	307	P	P	23 10 22.6	-3.6
	3.7nm,0.7s,baz=80,slow=8.0,SNR=5.1						
RAGM	Ragged Mountai	49.76	39		pP	23 11 15.7	+2.1
WB0	Warramunga Arr	58.18	188	P	P	23 12 00.4	-1.3
WB0				IAmb	IAmb	23 12 11.8	
	comp=Z,5.3nm,1.1s						
WR0	Warramunga Arr	58.35	188	P	P	23 12 02.2	-0.7
WR0				IAmb	IAmb	23 12 02.4	
	comp=Z,5.3nm,1.0s						
WB2	Warramunga Arr	58.36	188	P	P	23 12 02.3	-0.5
WRA	Warramunga Arr	58.36	188	P	P	23 12 02.1	-0.8
	comp=Z,0.5nm,0.4s,baz=5.1,slow=7.3,SNR=1.9						
YHH	Holmes Hill	74.60	45		pP	23 14 00.1	-1.2
AHID	Auburn Hatcher	75.74	47		pP	23 14 10.2	+2.4
N23A	Red Feather La	79.88	45		pP	23 14 33.0	+2.0

BUC ***09*** *23:22:34.2±0.3, 45°.73N×26°.58E, h86^{km}±2^{km}, ml3.5/34, Error ellipse: s-maj=1.7km s-min=1.5km az=37.0*
SOF ***09*** *23:22:35.3, 45°.73N×26°.58E, h53^{km}, MD3.2*
ISC 09 23:22:34.2±1.2, **45°.73N**±0°.02×**26°.58E**±0°.02, **h89**^{km}±5^{km}, **n95**, σ**0^{s}64**/164, **82C-76D**, **Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.13	22	⇓P	Pn	23 22 46.4	-0.5
PLOR				⇑S	Sn	23 22 55.7	-0.7
PLOR	Plostina	0.13	22	⇓P	Pn	23 22 46.4	-0.5
PLOR				⇑S	Sn	23 22 55.7	-0.7
VRI	Vrincioaia	0.17	37	⇑P	Pn	23 22 46.6	-0.3
VRI				⇑S	Sn	23 22 56.1	-0.4
VRI	Vrincioaia	0.17	37	⇑P	Pn	23 22 46.6	-0.3
VRI				⇑S	Sn	23 22 56.1	-0.4
BISRR	Bisoca	0.21	154	⇓P	Pn	23 22 47.5	+0.3
BISRR				⇓S	Sn	23 22 57.3	+0.6
BISRR	Bisoca	0.21	154	⇓P	Pn	23 22 47.5	+0.3
BISRR				⇓S	Sn	23 22 57.3	+0.6
ODBI	Odobesti	0.33	85	⇑S	Sn	23 22 58.8	+1.1
ODBI	Odobesti	0.33	85	⇑S	Sn	23 22 58.8	+1.1
NEHR	Nehoiu	0.37	213	⇓P	Pn	23 22 48.3	+0.3
NEHR				⇑S	Sn	23 22 58.5	+0.4
NEHR	Nehoiu	0.37	213	⇓P	Pn	23 22 48.3	+0.3
NEHR				⇑S	Sn	23 22 58.5	+0.4
PETR	Petresti	0.45	91	⇑P	Pn	23 22 48.8	+0.4
PETR				⇓S	Sn	23 22 59.6	+0.6
PETR	Petresti	0.45	91	⇑P	Pn	23 22 48.8	+0.4
PETR				⇓S	Sn	23 22 59.6	+0.6
MLR	Muntele Rosu	0.51	242	⇑P	Pn	23 22 49.0	0.0
MLR				⇓S	Sn	23 22 59.3	-0.8
MLR	Muntele Rosu	0.51	242	⇑P	Pn	23 22 49.0	0.0
MLR				⇓S	Sn	23 22 59.3	-0.8
OZUR		0.66	303	⇑P	Pn	23 22 49.6	-0.7
OZUR		0.66	303	⇑P	Pn	23 22 49.6	-0.7
TUDR		0.77	100	⇓P	Pn	23 22 51.0	-0.3
TUDR				⇑S	Sn	23 23 03.4	-0.7
TUDR		0.77	100	⇓P	Pn	23 22 51.0	-0.3
TUDR				⇑S	Sn	23 23 03.4	-0.7
TESR	Tescani	0.78	3	⇑P	Pn	23 22 51.1	-0.3
TESR				⇑S	Sn	23 23 03.0	-1.2
TESR	Tescani	0.78	3	⇑P	Pn	23 22 51.1	-0.3
TESR				⇑S	Sn	23 23 03.0	-1.2
DOPR	Dopca	0.87	286	⇓P	Pn	23 22 52.2	-0.1
DOPR				⇑S	Sn	23 23 05.4	-0.5
DOPR	Dopca	0.87	286	⇓P	Pn	23 22 52.2	-0.1
DOPR				⇑S	Sn	23 23 05.4	-0.5
PGOR	Pogoanele	0.87	161	⇓P	Pn	23 22 52.8	+0.4
PGOR				⇑S	Sn	23 23 06.9	+1.0
PGOR	Pogoanele	0.87	161	⇓P	Pn	23 22 52.8	+0.4
PGOR				⇑S	Sn	23 23 06.9	+1.0
VARL	Varlezi	0.90	79	⇓P	Pn	23 22 53.1	+0.4
VARL				⇓S	Sn	23 23 06.5	0.0
VARL	Varlezi	0.90	79	⇓P	Pn	23 22 53.1	+0.4
VARL				⇓S	Sn	23 23 06.5	0.0
BIR	Birlad	0.90	53	⇓P	Pn	23 22 52.9	+0.2
BIR				⇓S	Sn	23 23 06.3	-0.2
BIR	Birlad	0.90	53	⇓P	Pn	23 22 52.9	+0.2
BIR				⇓S	Sn	23 23 06.3	-0.2
SCHL	Schela	0.91	104	⇑S	Sn	23 23 05.2	-1.4
SCHL	Schela	0.91	104	⇑S	Sn	23 23 05.2	-1.4
PLAR	PLOIESTI	0.91	206	⇓S	Sn	23 23 07.5	+0.8
PLAR	PLOIESTI	0.91	206	⇓S	Sn	23 23 07.5	+0.8
SULR		1.08	193	⇑P	Pn	23 22 55.3	+0.6
SULR				⇑S	Sn	23 23 11.1	+1.0
SULR		1.08	193	⇑P	Pn	23 22 55.3	+0.6
SULR				⇑S	Sn	23 23 11.1	+1.0
VOIR		1.12	255	⇑P	Pn	23 22 55.1	-0.2
VOIR				⇓S	Sn	23 23 10.2	-0.8
VOIR		1.12	255	⇑P	Pn	23 22 55.1	-0.2
VOIR				⇓S	Sn	23 23 10.2	-0.8
GIUM	Giurgiulesti	1.17	102	⇑P	Pn	23 22 56.5	+0.7
GIUM				⇑S	Sn	23 23 12.6	+0.7
GIUM	Giurgiulesti	1.17	102	⇑P	Pn	23 22 56.5	+0.7
GIUM				⇑S	Sn	23 23 12.6	+0.7
GIRR	Girov	1.22	357	⇑P	Pn	23 22 56.6	+0.2
GIRR	Girov	1.22	357	⇑P	Pn	23 22 56.6	+0.2
CFR	Carcaliu	1.23	116	⇑P	Pn	23 22 55.9	-0.5
CFR				⇓S	Sn	23 23 12.2	-1.0
CFR	Carcaliu	1.23	116	⇑P	Pn	23 22 55.9	-0.5
CFR				⇓S	Sn	23 23 12.2	-1.0
VASR	Vaslui	1.24	42	⇑P	Pn	23 22 56.6	0.0
VASR				⇓S	Sn	23 23 13.1	-0.3
VASR	Vaslui	1.24	42	⇑P	Pn	23 22 56.6	0.0
VASR				⇓S	Sn	23 23 13.1	-0.3
AMRR	Amara	1.24	154	⇓P	Pn	23 22 56.9	+0.3
AMRR				⇑S	Sn	23 23 13.8	+0.3
AMRR	Amara	1.24	154	⇓P	Pn	23 22 56.9	+0.3
AMRR				⇑S	Sn	23 23 13.8	+0.3
BIZ	Bicaz	1.25	345	⇑P	Pn	23 22 57.7	+0.9
BIZ				⇓S	Sn	23 23 14.1	+0.4
BIZ	Bicaz	1.25	345	⇑P	Pn	23 22 57.7	+0.9
BIZ				⇓S	Sn	23 23 14.1	+0.4
LEHL	Lehliu	1.27	172	⇑P	Pn	23 22 57.4	+0.4
LEHL				⇑S	Sn	23 23 14.8	+0.6
LEHL	Lehliu	1.27	172	⇑P	Pn	23 22 57.4	+0.4
LEHL				⇑S	Sn	23 23 14.8	+0.6
HARR	Harsova	1.41	137	⇑P	Pn	23 22 58.8	0.0
HARR	Harsova	1.41	137	⇑P	Pn	23 22 58.8	0.0
ARR	Arges	1.42	256	⇓P	Pn	23 22 59.3	+0.4
ARR				⇑S	Sn	23 23 16.9	-0.7
ARR	Arges	1.42	256	⇓P	Pn	23 22 59.3	+0.4
ARR				⇑S	Sn	23 23 16.9	-0.7
BUC1	Bucharest	1.44	196	⇑P	Pn	23 22 59.3	+0.2
BUC1				⇓S	Sn	23 23 17.7	-0.2
BUC1	Bucharest	1.44	196	⇑P	Pn	23 22 59.3	+0.2
BUC1				⇓S	Sn	23 23 17.7	-0.2
TPGR	Topolog	1.56	123	⇑P	Pn	23 23 00.5	-0.3
TPGR				⇓S	Sn	23 23 20.1	-0.7
TPGR	Topolog	1.56	123	⇑P	Pn	23 23 00.5	-0.3
TPGR				⇓S	Sn	23 23 20.1	-0.7
RASA	Rasa	1.57	165	⇓P	Pn	23 23 00.7	0.0
RASA				⇓S	Sn	23 23 20.0	-0.8
RASA	Rasa	1.57	165	⇓P	Pn	23 23 00.7	0.0
RASA				⇓S	Sn	23 23 20.0	-0.8
SGRR	Singureni	1.57	196	⇑S	Sn	23 23 20.2	-0.7
SGRR	Singureni	1.57	196	⇑S	Sn	23 23 20.2	-0.7
TLBR	Topalu	1.58	138	⇓P	Pn	23 23 00.8	0.0
TLBR				⇑S	Sn	23 23 20.3	-0.7
TLBR	Topalu	1.58	138	⇓P	Pn	23 23 00.8	0.0
TLBR				⇑S	Sn	23 23 20.3	-0.7
IAS	Iasi	1.61	25	⇓P	Pn	23 23 01.1	-0.1
IAS				⇓S	Sn	23 23 20.5	-1.2
IAS	Iasi	1.61	25	⇓P	Pn	23 23 01.1	-0.1
IAS				⇓S	Sn	23 23 20.5	-1.2
HUMR	Humele	1.66	224	⇓P	Pn	23 23 01.8	0.0
HUMR				⇑S	Sn	23 23 22.2	-0.7
HUMR	Humele	1.66	224	⇓P	Pn	23 23 01.8	0.0
HUMR				⇑S	Sn	23 23 22.2	-0.7
TLCR		1.66	108	⇓P	Pn	23 23 02.4	+0.5
TLCR				⇑S	Sn	23 23 24.0	+1.0
TLCR		1.66	108	⇓P	Pn	23 23 02.4	+0.5
TLCR				⇑S	Sn	23 23 24.0	+1.0
CVDA	Cernavoda	1.74	143	⇑P	Pn	23 23 02.8	-0.1
CVDA	Cernavoda	1.74	143	⇑P	Pn	23 23 02.8	-0.1
TIRR	Tirgusor	1.82	134	⇓P	Pn	23 23 03.9	0.0
TIRR				⇓S	Sn	23 23 25.0	-1.5
TIRR	Tirgusor	1.82	134	⇓P	Pn	23 23 03.9	0.0
TIRR				⇓S	Sn	23 23 25.0	-1.5
ICOR	Ion Corvin	1.83	151	⇓P	Pn	23 23 04.5	+0.3
ICOR				⇓S	Sn	23 23 26.0	-1.0
ICOR	Ion Corvin	1.83	151	⇓P	Pn	23 23 04.5	+0.3
ICOR				⇓S	Sn	23 23 26.0	-1.0
JURR	Jurilovca	1.89	120	⇓P	Pn	23 23 05.4	+0.5
JURR	Jurilovca	1.89	120	⇓P	Pn	23 23 05.4	+0.5
MILM	Milestii Mici	1.95	52	⇑P	Pn	23 23 05.8	+0.2
MILM	Milestii Mici	1.95	52	⇑P	Pn	23 23 05.8	+0.2
KIS	Kishinev	2.00	50	*e*P	Pn	23 23 07.3	+1.0
KIS				*e*S	Sn	23 23 29.5	-1.3
	33nm,0.3s						
BURAR	Bucovina Array	2.10	334	⇑P	Pn	23 23 09.0	+1.2
BURAR				⇑S	Sn	23 23 34.8	+1.4
BURAR	Bucovina Array	2.10	334	⇑P	Pn	23 23 09.0	+1.2
BURAR				⇑S	Sn	23 23 34.8	+1.4
PSN	Preselentsi	2.35	150	*i* P	Pn	23 23 11.4	+0.5
MANR	Mangalia	2.39	143	⇑P	Pn	23 23 11.6	+0.2
MANR				⇓S	Sn	23 23 39.6	-0.4
MANR	Mangalia	2.39	143	⇑P	Pn	23 23 11.6	+0.2
MANR				⇓S	Sn	23 23 39.6	-0.4
SZH	Strazhica	2.51	191	*i* P	Pn	23 23 12.8	-0.3
PRD	Provadia	2.60	167	*i* P	Pn	23 23 14.9	+0.6
GZR	Gura Zlata	2.69	264	⇑P	Pn	23 23 16.0	+0.4
GZR				⇓S	Sn	23 23 47.1	-0.4
GZR	Gura Zlata	2.69	264	⇑P	Pn	23 23 16.0	+0.4
GZR				⇓S	Sn	23 23 47.1	-0.4
DRGR		2.89	293	⇓P	Pn	23 23 18.1	-0.1
DRGR				⇑S	Sn	23 23 52.5	+0.4
DRGR		2.89	293	⇓P	Pn	23 23 18.1	-0.1
DRGR				⇑S	Sn	23 23 52.5	+0.4
HERR	Herculane	3.06	255	⇓P	Pn	23 23 20.5	0.0
HERR	Herculane	3.06	255	⇓P	Pn	23 23 20.5	0.0
MPEP	Malo Peshtene	3.13	222	*i* P	Pn	23 23 21.1	-0.3

IDC 09 23:33:24.0±2.0, **5°.66S**×**131°.36E**, **h0**^{km}, **mb3.4**/1, **mb1 4.0**/5, **mb1mx3.6**/34, **mbtmp3.8**/5, **ML3.8**/4, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.7**/28, **Error ellipse: s-maj=95.4km s-min=24.6km az=84.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.75	359	Pn	Pn	23 34 36.6	-0.4
	1.8nm,0.3s,baz=152,slow=23,SNR=7.0						
SIJI				Sn	Sn	23 35 23.6	-9.3
	2.4nm,0.3s,baz=142,slow=23,SNR=1.5						
FITZ	Fitzroy Crossi	13.57	204	Pn	Pn	23 36 37.7	-0.2
	0.4nm,0.3s,baz=25,slow=12,SNR=1.7						
FITZ				Sn	Sn	23 39 00.8	-8.8
	0.1nm,0.3s,baz=102,slow=19,SNR=1.3						
WRA	Warramunga Arr	14.49	169	Pn	Pn	23 36 48.8	-1.8
	0.4nm,0.3s,baz=346,slow=14,SNR=14						
WRA				Sn	Sn	23 39 21.9	-10
	0.7nm,0.3s,baz=359,slow=23,SNR=9.2						
ASAR	Alice Springs	18.07	172	P	P	23 37 37.5	+0.3
	0.4nm,0.3s,baz=350,slow=11,SNR=14						
ASAR				S	Sn	23 40 49.1	-10
	0.1nm,0.3s,baz=1.4,slow=28,SNR=2.3						
LEM	Lembang	23.63	266	LR	LR	23 50 46.2	
	comp=Z,101nm,18.5s,baz=200,slow=44						
MKAR	Makanchi Array	67.86	326	P	P	23 44 24.4	+0.1
	0.2nm,0.3s,baz=115,slow=8.2,SNR=7.7						

PRE ***09*** *23:41:35.4±0.9, 26°.44S×27°.52E, h2^{km}, ML3.8*
IDC ***09*** *23:41:36.3±0.6, 26°.38S×27°.39E, h0^{km}, mb4.3/15, mb1 4.4/20, mb1mx4.2/44, mbtmp4.4/20, ML4.4/4, Error ellipse: s-maj=14.8km s-min=11.3km az=99.0*
NEIC ***09*** *23:41:37.1±2.0, 26°.39S±0°.05×27°.54E±0°.10, h5^{km}±1^{km}, mb4.6/24, Error ellipse: s-maj=14.6km s-min=8.3km az=271.0*
ISC 09 23:41:36.2±1.2, **26°.41S**±0°.03×**27°.51E**±0°.03, **h5**^{km}±7^{km}, **n96**, σ**1^{s}82**/108, **mb4.5**/25, **11C-4D**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.53	194	eP	Pg	23 41 45.8	-0.6
PRYS				eS	Sg	23 41 53.0	-0.4
PRYS				AML	AML	23 42 00.3	
	comp=Z,9µm,0.7s						
ERPM	east rand prop	0.66	84	eP	Pg	23 41 47.9	-1.0
ERPM				eS	Sg	23 41 57.0	-0.5
ERPM				AML	AML	23 42 06.1	
	comp=Z,1µm,0.7s						
KSR	Koster	0.78	315	eP	Pg	23 41 50.5	-0.7
KSR				eS	Sg	23 42 02.0	+0.7
KSR				AML	AML	23 42 07.7	
	comp=Z,6µm,0.2s						
LBTB	Lobatse	2.21	308	Pn	Pn	23 42 14.8	+1.1
	comp=Z,174nm,0.3s,baz=132,slow=14,SNR=1023						
LBTB				Lg	Lg	23 42 43.2	
	comp=Z,820nm,0.3s,baz=118,slow=18,SNR=44						
LBTB				Rg	Rg	23 42 53.4	
	comp=Z,491nm,0.3s,baz=55,slow=23,SNR=5.6						
LBTB	Lobatse	2.21	308	eP	Pn	23 42 14.4	+0.6
LBTB				eS	Sn	23 42 42.7	+1.1
LBTB				AML	AML	23 42 45.5	
	comp=Z,2µm,0.4s						
LBTB	Lobatse	2.21	308		Pn	23 42 14.9	+1.2
LBTB				Sn	Sb	23 42 43.7	-0.9
BOSA	Boshof	2.97	222	Pn	Pn	23 42 24.7	+0.5
	comp=Z,22nm,0.3s,baz=45,slow=13,SNR=567						
BOSA				Pg	Pb	23 42 30.7	+1.0
	comp=Z,39nm,0.3s,baz=43,slow=15,SNR=18						
BOSA				Lg	Lg	23 43 07.6	
	comp=Z,156nm,0.3s,baz=324,slow=21,SNR=21						
BOSA	Boshof	2.97	222	eP	Pn	23 42 23.9	-0.2
BOSA				eS	Sn	23 43 00.2	-0.1
BOSA				AML	AML	23 43 08.1	
	comp=Z,493nm,0.3s						
BOSA	Boshof	2.97	222	Pn	Pn	23 42 25.0	+0.8
MOPA	Mopani	4.55	52	eP	Pn	23 42 45.9	0.0
MOPA				eS	Sn	23 43 38.0	-1.2
MOPA				AML	AML	23 44 00.7	
	comp=Z,183nm,0.5s						
MSNA	Messina	4.65	30	eP	Pn	23 42 46.4	-0.8
MSNA				eS	Sn	23 43 39.2	-2.4
MSNA				AML	AML	23 44 02.6	
	comp=Z,169nm,0.4s						
UPI	Upington	5.89	249	eP	Pn	23 43 04.5	+0.2
UPI				eS	Sn	23 44 09.9	-2.4
UPI				AML	AML	23 44 51.0	
	comp=Z,68nm,0.6s						
MATP	Matopo	6.03	9	Pn	Pn	23 43 06.2	+0.1
	comp=Z,13nm,0.3s,baz=190,slow=13,SNR=369						
MATP				Sn	Sn	23 44 12.3	-3.4
	comp=Z,12nm,0.3s,baz=280,slow=20,SNR=8.3						
MATP				Lg	Lg	23 44 42.9	
	comp=Z,57nm,0.3s,baz=134,slow=8.5,SNR=12						
KEIM	Keimoes	6.24	247	eP	Pn	23 43 09.3	+0.2
KEIM				eS	Sn	23 44 17.9	-2.9
KEIM				AML	AML	23 44 55.5	
	comp=Z,230nm,0.8s						
SOE	Somerset East	6.51	195	eP	Pn	23 43 13.0	+0.3
SOE				eS	Sn	23 44 23.7	-3.7
SOE				AML	AML	23 45 03.9	
	comp=Z,74nm,0.5s						
AUGR	Augrabies	6.73	250	eP	Pn	23 43 15.9	+0.1
AUGR				eS	Sn	23 44 29.8	-3.1
AUGR				AML	AML	23 45 12.0	
	comp=Z,136nm,0.4s						
GRAN	Grantham	7.49	217	eP	Pn	23 43 26.6	+0.3
GRAN				eS	Sn	23 44 47.4	-4.3
GRAN				AML	AML	23 45 01.1	
	comp=Z,35nm,0.7s						
KROM	Kromhout	8.10	197	eP	Pn	23 43 34.8	+0.3
KROM				eS	Sn	23 45 01.8	-4.7
KROM				AML	AML	23 45 03.1	
	comp=Z,185nm,0.5s						
SUR	Sutherland	8.34	223	Pn	Pn	23 43 37.9	0.0
	comp=Z,5.1nm,0.3s,baz=57,slow=9.8,SNR=52						
SUR				Sn	Sn	23 45 08.5	-4.1
	comp=Z,5.6nm,0.3s,baz=322,slow=22,SNR=7.1						
SUR				Lg	Lg	23 45 52.1	
	comp=Z,7.5nm,0.3s,baz=131,slow=21,SNR=5.9						
SUR	Sutherland	8.34	223	Pn	Pn	23 43 38.1	+0.2
CVNA	Calvinia	8.46	232	eP	Pn	23 43 39.9	+0.3
CVNA				eS	Sn	23 45 10.7	-4.9
CVNA				AML	AML	23 46 02.4	
	comp=Z,184nm,0.6s						
ELIM	Elim	10.55	217	eP	Pn	23 44 08.3	+0.1
ELIM				eS	Sn	23 46 00.6	-6.2
ELIM				AML	AML	23 47 07.6	
	comp=Z,63nm,0.6s						
LSZ	Lusaka	11.10	3		Pn	23 44 14.1	-1.6
TSUM	Tsumeb	11.62	306	Pn	Pn	23 44 21.7	-1.3
	comp=Z,4.9nm,0.3s,baz=124,slow=9.5,SNR=59						
TSUM				Sn	Sn	23 46 22.2	-11
	comp=Z,0.8nm,0.3s,baz=227,slow=17,SNR=2.1						
TSUM				Lg	Lg	23 47 36.8	
	comp=Z,1.4nm,0.3s,baz=65,slow=14,SNR=6.5						
TSUM	Tsumeb	11.62	306	Pn	Pn	23 44 22.0	-1.0
ZOMB	Zomba	13.19	35	i P	Pn	23 44 43.6	-0.8
ZOMB				S	Sn	23 47 04.2	-7.3
ABPO	Ambohimpanom	19.61	72	P	Pn	23 46 07.2	+0.2
MBAR	Mbarara	25.85	7	P	P	23 47 09.9	+0.9
	comp=Z,1.8nm,0.2s,baz=166,slow=11,SNR=4.2						
DBIC	Dimbokro	45.46	312	P	P	23 49 55.6	-0.9
	comp=Z,2.2nm,0.5s,baz=124,slow=11,SNR=8.5						
DBIC	Dimbokro	45.46	312	P	P	23 49 56.1	-0.4
DBIC				IAmb	IAmb	23 49 56.7	
	comp=Z,4.5nm,0.8s						
TOA0	Torodi Ar. Sit	46.65	324	P	P	23 50 05.9	0.0
TORD	Torodi Ar. Bea	46.65	324	P	P	23 50 05.5	-0.4
	comp=Z,5.2nm,0.7s,baz=137,slow=6.7,SNR=29						
TORD	Torodi Ar. Bea	46.65	324	P	P	23 50 05.5	-0.4
SNAA	Sanae	48.35	192	P	P	23 50 20.1	+1.5
SNAA	Sanae	48.35	192	P	P	23 50 20.1	+1.5
SNAA				IAmb	IAmb	23 50 21.3	
	comp=Z,6.9nm,0.9s						
VNA1	Neumayer--Stat	48.73	195	P	P	23 50 22.4	+1.1
VNA2	Neumayer--Watz	48.73	194	P	P	23 50 22.9	+1.5
	baz=18,slow=6.5						
VNA3	Neumayer Olymp	49.48	195	P	P	23 50 27.8	+0.6
KOWA	Kowa	50.92	319	P	P	23 50 39.0	+0.3
KOWA				IAmb	IAmb	23 50 39.6	
	comp=Z,7.3nm,0.8s						
UOSS	Minazif	58.09	31	P	P	23 51 31.0	+0.3
UOSS				IAmb	IAmb	23 51 32.6	
	comp=Z,5.9nm,1.1s						
QSPA	South Pole Qui	63.78	180	P	P	23 52 10.1	+1.0
	comp=Z,1.5nm,0.5s,baz=247,slow=4.0,SNR=5.7						
QSPA	South Pole Qui	63.78	180	IAmb	IAmb	23 52 10.7	
	comp=Z,5.7nm,1.1s						
BRTR	Keskin Array B	66.04	5	P	P	23 52 25.0	+1.0
	comp=Z,1.4nm,0.9s,baz=184,slow=8.7,SNR=5.7						
FNA	Florina	67.09	355	P	P	23 52 31.2	+0.6
AKH	Akhalkalaki	69.08	13	⇑P	P	23 52 44.6	+1.3
BDFB	Brasilia	70.46	262	P	P	23 52 52.3	0.0
	comp=Z,2.7nm,0.6s,baz=141,slow=8.2,SNR=5.4						
CFR	Carcaliu	71.24	0	⇓P	P	23 52 58.0	+1.9
ARR	Arges	71.48	358	⇑P	P	23 52 59.4	+1.6
VOIR		71.54	358	⇑P	P	23 52 57.9	-0.2
MLR	Muntele Rosu	71.57	359	⇑P	P	23 52 59.4	+1.0
BZS	Buzias	71.88	356	⇑P	P	23 53 02.2	+2.1
PLOR	Plostina	71.92	359	⇓P	P	23 52 54.4	-6.0
VRI	Vrincioaia	71.93	359	⇑P	P	23 53 01.7	+1.3
ESBB	Sonseca Array	72.00	335	P	P	23 53 01.5	+0.5
ESBB				IAmb	IAmb	23 53 02.6	
	comp=Z,6.2nm,0.9s						
ESDC	Sonseca Array	72.00	335	P	P	23 53 01.8	+0.8
	comp=Z,3.7nm,0.7s,baz=154,slow=5.9,SNR=23						
ESDC	Sonseca Array	72.00	335	P	P	23 53 01.9	+0.9
PAB	San Pablo	72.03	335	P	P	23 53 01.5	+0.3
OZUR		72.18	359	⇑P	P	23 53 02.8	+1.0
VNDA	Vanda	72.82	171	P	P	23 53 06.8	+1.4
	comp=Z,1.1nm,0.5s,baz=254,slow=4.1,SNR=7.8						
CJR	Cluj-Napoca	72.86	357	⇑P	P	23 53 03.0	-2.9
DRGR		72.98	357	⇑P	P	23 53 08.7	+2.0
BIZ	Bicaz	73.01	359	⇑P	P	23 53 08.3	+1.5
ARCR	ARCALIA	73.20	358	⇓P	P	23 53 09.6	+1.7
BURAR	Bucovina Array	73.71	358	⇓P	P	23 53 13.8	+2.9
BURAR	Bucovina Array	73.71	358	P	P	23 53 13.6	+2.6
BUR08	Bucovina Ar. S	73.74	358	P	P	23 53 13.6	+2.4
BUR08				IAmb	IAmb	23 53 14.0	
	comp=Z,3.5nm,0.9s						
SORM	Soroca	74.20	1	⇑P	P	23 53 14.3	+0.6
CPUP	Villa Florida	74.48	248	P	P	23 53 16.0	-0.1
	comp=Z,1.0nm,0.7s,baz=106,slow=4.1,SNR=2.9						
GERES	GERESS Array B	75.92	351	P	P	23 53 24.5	+0.7
	comp=Z,1.6nm,0.7s,baz=120,slow=5.3,SNR=3.9						
KHC	Kasperske Hory	76.22	351	P	P	23 53 26.9	+1.5
AKASG	Malin Array Be	76.78	1	P	P	23 53 28.9	+0.5
	comp=Z,3.2nm,0.7s,baz=179,slow=4.9,SNR=11						
KK31	Karatay Array	79.68	31	IAmb	IAmb	23 53 46.9	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	79.68	31	P	P	23 53 46.0	+1.2
KKAR	Karatay Array	79.68	31	IAmb	IAmb	23 53 46.9	
	comp=Z,4.7nm,0.8s						
ABKAR	Akbulak array	80.69	21	P	P	23 53 50.2	+0.2
ABKAR	Akbulak array	80.69	21	IAmb	IAmb	23 53 52.2	
	comp=Z,1.7nm,0.8s						
LSA	Lhasa	82.62	52	P	P	23 54 02.0	+0.7
ARU	Arti	86.62	17	P	P	23 54 21.7	+1.4
ARU				IAmb	IAmb	23 54 22.2	
	comp=Z,4.3nm,0.8s						
FINES	FINESS Array B	87.55	359	P	P	23 54 25.7	+1.0
	comp=Z,2.4nm,0.7s,baz=155,slow=6.3,SNR=7.0						
MAKZ	Makanchi	87.91	34	P	P	23 54 27.7	+0.9
MAKZ				IAmb	IAmb	23 54 28.3	
	comp=Z,2.4nm,0.8s						
NAO01	NORSAR Array S	87.99	352	P	P	23 54 24.5	-2.3
MK31	Makanchi Array	88.06	34	IAmb	IAmb	23 54 28.9	
	comp=Z,1.5nm,0.8s						
MKAR	Makanchi Array	88.06	34	P	P	23 54 28.3	+0.7
	comp=Z,2.5nm,0.8s,baz=231,slow=4.1,SNR=21						
KURBB	Kurchatov Arra	88.95	30	P	P	23 54 32.1	+0.5
	comp=Z,0.9nm,0.7s,baz=233,slow=5.5,SNR=6.8						
WMQ	Urumqi	89.00	39	P	P	23 54 34.5	+2.4
KURK	Kurchatov	89.06	30	P	P	23 54 32.1	0.0
KURK	Kurchatov	89.06	30	IAmb	IAmb	23 54 33.3	
	comp=Z,0.7nm,0.7s						
ASAR	Alice Springs	93.18	118	P	P	23 54 53.1	+0.9
	comp=Z,0.4nm,0.8s,baz=242,slow=3.9,SNR=2.0						
ASAR	Alice Springs	93.18	118	P	P	23 54 53.9	+1.8
YKA	Yellowknife Ar	136.09	336	PKhKP	PKPpre	00 00 52.2	
	comp=Z,0.4nm,0.8s,baz=54,slow=2.8,SNR=4.1						
ILAR	Eielson Array	141.46	356	PKP	PKPdf	00 01 06.1	-1.6
	comp=Z,0.1nm,0.5s,baz=178,slow=33,SNR=1.1						
PDAR	Pinedale Array	141.52	306	PKP	PKPdf	00 01 08.2	-0.6
	comp=Z,0.6nm,0.8s,baz=134,slow=5.2,SNR=4.6						
DLBC	Dease Lake	144.31	340	PKP	PKPdf	00 01 13.2	+0.1
	comp=Z,3.8nm,0.9s,baz=136,slow=3.4,SNR=4.8						
NVAR	Mina Array Bea	148.92	301	PKPbc	PKiKP	00 01 27.4	+0.4
	comp=Z,1.0nm,0.6s,baz=70,slow=4.6,SNR=16						
NVAR	Mina Array Bea	148.92	301		PKiKP	00 01 27.5	+0.5
YBH	Yreka Blue Hor	151.16	310	PKPbc	PKPbc	00 01 31.2	+0.4
	comp=Z,1.2nm,0.7s,baz=49,slow=12,SNR=4.6						

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*IDC **09** 23:44:18.8±0.9, 14°.76N×54°.85E, h0^{km}, mb3.9/16, mb1 4.1/16, mb1mx3.8/57, mbtmp3.9/16, MS3.4/4, Ms1 3.4/4, ms1mx3.0/38, Error ellipse: s-maj=21.0km s-min=20.2km az=6.0*

*NEIC **09** 23:44:18.8±1.6, 14°.55N±0°.06×54°.7E±0°.1, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=21.0km s-min=7.6km az=292.0*

*OMAN **09** 23:44:25.9±1.1, 15°.14N×54°.69E, h16^{km}, ml3.5/5, Error ellipse: s-maj=33.5km s-min=11.9km az=244.0*

ISC 09 23:44:20.6±0.7**, 14°.83N**±0°.08×**54°.69E**±0°.08**, h10**^{km}**, n51, σ1**^{s}.**13**/47**, mb4.0**/21**, MS3.4**/3**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RBK	Rabkut	2.70	350	P	Pn	23 45 03.9	-0.3
	SNR=9.5						
RBK				S	Sn	23 45 35.1	-1.9
SOCY	Socotra	2.71	195		Pn	23 44 55.7	-8.6
SOCY				Sn	Sn	23 45 20.4	-17
ABTO	Aybut	2.85	332	P	Pn	23 45 06.6	+0.3
	SNR=12						
ABTO				S	Sn	23 45 39.0	-1.6
DMTO	DMTO	2.89	5	P	Pn	23 45 07.3	+0.6
	SNR=7.6						
DMTO				S	Sn	23 45 38.6	-2.9
WHFO	Wadi Hawf	3.20	344	P	Pn	23 45 11.5	+0.5
	SNR=9.7						
SHAO	Shalim	3.30	16	P	Pn	23 45 13.0	+0.5
	SNR=5.1						
UOSS	Minazif	10.17	8	Pn	Pn	23 46 48.3	+1.5
ATD	Arta Tunnel	11.99	256	Pn	Pn	23 47 18.7	+7.0
	0.3nm,0.3s,baz=119,slow=15,SNR=2.5						
ATD				LR	LR	23 50 40.8	
	comp=Z,187nm,21.8s,baz=50,slow=32						
ATD	Arta Tunnel	11.99	256		Pn	23 47 08.9	-2.8
RAYN	Ar Rayn	12.25	316		Pn	23 47 15.3	0.0
HRA	Herat	20.64	18	P	P	23 48 59.5	-1.1
HRA				IAmb	IAmb	23 49 10.4	
	comp=Z,4.1nm,1.0s						
GEYT	Alibeck	23.21	7	P	P	23 49 28.1	+0.2
	comp=Z,3.1nm,0.8s,baz=199,slow=14,SNR=4.7						
GEYT				LR	LR	00 00 08.0	
	comp=Z,140nm,20.7s,baz=5.0,slow=41						
GEYT	Alibeck	23.21	7	IAmb	IAmb	23 49 29.9	
	comp=Z,2.8nm,0.8s						
EIL	Elat	23.44	312	LR	LR	23 59 36.1	
	comp=Z,50nm,20.6s,baz=59,slow=39						
KBL	Kabul	23.52	31	P	P	23 49 33.1	+1.9
KBL				IAmb	IAmb	23 49 35.1	
	comp=Z,3.5nm,1.1s						
NIL	Nilore	25.18	39	P	P	23 49 46.4	+0.1
NIL				IAmb	IAmb	23 49 51.1	
	comp=Z,4.6nm,1.0s						
MMAI	Mount Meron Ar	25.20	319	P	P	23 49 48.2	+1.6
	comp=Z,2.8nm,0.7s,baz=100,slow=14,SNR=5.8						
ABKAR	Akbulak array	34.60	6	P	P	23 51 10.4	+0.7
ABKAR	Akbulak array	34.60	6	P	P	23 51 09.7	0.0
ABKAR				IAmb	IAmb	23 51 11.4	
	comp=Z,3.5nm,0.9s						
AB04	Akbulak array	34.61	6	P	P	23 51 09.9	+0.2
AB02	Akbulak array	34.61	6	P	P	23 51 10.2	+0.5
AB09	Akbulak array	34.61	6	P	P	23 51 09.8	+0.1
AB06	Akbulak array	34.61	6	P	P	23 51 10.3	+0.5
AB05	Akbulak array	34.62	6	P	P	23 51 10.5	+0.6
MK31	Makanchi Array	39.32	30	P	P	23 51 50.0	0.0
MKAR	Makanchi Array	39.32	30	P	P	23 51 50.6	+0.7
	comp=Z,0.5nm,0.5s,baz=211,slow=8.8,SNR=11						
MKAR				PcP	PcP	23 53 57.7	-0.9
	comp=Z,0.2nm,0.8s,baz=230,slow=1.5,SNR=2.0						
MKAR				LR	LR	00 08 40.1	
	comp=Z,100nm,18.4s,baz=304,slow=37						
MKAR	Makanchi Array	39.32	30	P	P	23 51 50.0	+0.1
KURBB	Kurchatov Arra	40.58	23	P	P	23 51 59.8	-0.5
	comp=Z,0.6nm,0.8s,baz=224,slow=9.0,SNR=5.0						
BURAR	Bucovina Array	40.81	329	P	P	23 52 03.7	+1.3
BUR08	Bucovina Ar. S	40.84	329	P	P	23 52 04.3	+1.7
AKASG	Malin Array Be	41.28	336	P	P	23 52 06.1	+0.1
	comp=Z,0.4nm,0.6s,baz=137,slow=7.7,SNR=5.5						
KEST	Kesra	45.50	306	P	P	23 52 40.8	+0.3
KEST				IAmb	IAmb	23 52 56.0	
	comp=Z,7.9nm,1.1s						
ZALV	Zalesovo Beam	45.61	25	P	P	23 52 39.7	-1.2
	comp=Z,0.9nm,0.6s,baz=224,slow=8.3,SNR=4.8						
ZALV	Zalesovo Beam	45.61	25	P	P	23 52 40.6	-0.4
GERES	GERESS Array B	47.69	324	P	P	23 52 57.6	+0.2
	comp=Z,0.8nm,0.6s,baz=121,slow=9.3,SNR=3.2						
LBTB	Lobatse	48.71	216	P	P	23 53 06.6	+0.9
	comp=Z,4.5nm,0.7s,baz=46,slow=7.3,SNR=3.6						
LBTB	Lobatse	48.71	216	P	P	23 53 00.8	-4.8
TUE	Stuetta	49.19	319	P	P	23 53 10.7	+1.5
TUE				IAmb	IAmb	23 53 16.8	
	comp=Z,7.4nm,1.0s						
FINES	FINESS Array B	50.88	343	P	P	23 53 22.0	+0.5
	comp=Z,2.2nm,0.7s,baz=142,slow=9.4,SNR=18						
TORD	Torodi Ar. Bea	51.35	275	P	P	23 53 27.3	+1.4
	comp=Z,0.6nm,0.7s,baz=77,slow=6.4,SNR=3.8						
SONM	Songino Array	53.72	41	P	P	23 53 43.9	+0.8
	comp=Z,0.6nm,0.7s,baz=242,slow=8.4,SNR=5.7						
SONM	Songino Array	53.72	41	P	P	23 53 43.5	+0.4
ESDC	Sonseca Array	56.63	308	P	P	23 54 04.7	+0.5
	comp=Z,0.5nm,0.6s,baz=87,slow=6.4,SNR=6.1						
KEV	Kevo	57.56	349	P	P	23 54 09.6	-0.4
ARCES	ARCESS Array B	57.66	348	P	P	23 54 11.0	+0.2
	comp=Z,2.6nm,0.6s,baz=141,slow=7.8,SNR=15						
KSRS	Korea Array	67.92	55	P	P	23 55 18.4	-1.3
	comp=Z,1.3nm,0.6s,baz=258,slow=6.1,SNR=2.7						
H01W3	Cape Leeuwin H	74.97	133	T	T	01 17 36.2	
	baz=301,slow=75,SNR=9.1						
H01W2	Cape Leeuwin H	74.97	133	T	T	01 17 38.7	
	baz=301,slow=75,SNR=8.2						
H01W1	Cape Leeuwin H	74.98	133	T	T	01 17 39.4	
	baz=301,slow=75,SNR=8.4						
WRA	Warramunga Arr	85.57	112	P	P	23 56 57.8	-2.0
	comp=Z,0.6nm,0.8s,baz=299,slow=3.9,SNR=2.2						
ASAR	Alice Springs	86.31	116	P	P	23 57 02.1	-1.3
	comp=Z,1.4nm,0.7s,baz=297,slow=4.9,SNR=9.6						

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*ATH **09** 23:49:28.2, 36°.73N×27°.02E, h216^{km}±8^{km}, ML3.2/3, Error ellipse: s-maj=9.1km s-min=2.1km az=31.0*

*IDC **09** 23:49:38.5±5.5, 36°.81N×26°.92E, h96^{km}±63^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.2/50, mbtmp3.6/7, ML3.9/2, Error ellipse: s-maj=56.3km s-min=19.9km az=158.0*

*DDA **09** 23:49:41.6, 36°.70N×27°.11E, h134^{km}±1^{km}, ML2.4*

*ISK **09** 23:49:41.7, 36°.69N×27°.00E, h133^{km}±1^{km}, ML2.6/21*

*THE **09** 23:49:45.2, 36°.65N×26°.94E, h122^{km}±2^{km}, ML3.0/7, Error ellipse: s-maj=2.9km s-min=1.2km az=51.0*

ISC 09 23:49:41.7±0.8**, 36°.67N**±0°.04×**27°.02E**±0°.03**, h136**^{km}±5^{km}**, n85, σ0**^{s}.**86**/109**, mb3.5**/5**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	Kos Island	0.09	339	P	Pn	23 50 00.3	+0.3
KOSK				S	Sn	23 50 13.8	-0.2
	132nm,0.5s						
KOSK	Kos Island	0.09	339	PG	Pn	23 50 00.1	+0.1
KOSK				SG	Sn	23 50 13.3	-0.7
NISR	Nisiros	0.11	124	P	Pn	23 50 01.8	+1.7
BODT	Bodrum	0.46	31	P	Pn	23 50 01.4	+0.2
BODT				S	Sn	23 50 14.5	-1.6
BODT	Bodrum	0.46	31	PG	Pn	23 50 01.4	+0.2
BODT				SG	Sn	23 50 15.5	-0.6
BDRM	Kayabasi	0.52	41	i P	Pn	23 50 01.2	-0.4
BDRM				i P		23 50 01.6	
BDRM				i S	Sn	23 50 16.0	-0.7
BDRM				i S		23 50 17.0	
BDRM				IAML		23 50 18.0	
	comp=N,78nm,0.3s						
TURN	Turunc	0.99	84	PG	Pn	23 50 05.4	+0.4
TURN				SG	Sn	23 50 22.0	-0.7
TURN	Turunc	0.99	84	i P	Pn	23 50 05.3	+0.4
TURN				i S	Sn	23 50 21.9	-0.8
TURN				IAML		23 50 22.0	
	comp=N,111nm,0.4s						
TURN				IAML		23 50 22.0	
	comp=E,110nm,0.2s						
ARG	Arkhangelos	1.00	117	P	Pn	23 50 05.8	+0.6
ARG				AML	AML	23 50 24.3	
	comp=E,707µm,0.3s						
ARG				AML	AML	23 50 25.0	
	comp=N,445µm,0.2s						
ARG	Arkhangelos	1.00	117	P	Pn	23 50 05.8	+0.6
ARG				S	Sn	23 50 22.5	-0.4
	comp=N,290nm,0.2s						
ARG	Arkhangelos	1.00	117	PG	Pn	23 50 05.8	+0.6
ARG				SG	Sn	23 50 22.8	-0.1
GCAM	G?zelcaml?	1.04	9	PG	Pn	23 50 05.6	+0.1
SMG	Samos	1.04	352	P	Pn	23 50 04.8	-0.7
SMG	Samos	1.04	352	P	Pn	23 50 05.3	-0.3
YER	Yerkesik	1.11	65	P	Pn	23 50 07.1	+0.8
YER				S	Sn	23 50 25.6	+0.6
YER	Yerkesik	1.11	65	PN	Pn	23 50 07.0	+0.8
KARP	Karpathos	1.13	174	P	Pn	23 50 06.5	+0.1
KARP				AML	AML	23 50 28.2	
	comp=N,1890µm,0.2s						
KARP				AML	AML	23 50 28.7	
	comp=E,1028µm,0.1s						
KARP	Karpathos	1.13	174	P	Pn	23 50 06.4	0.0
KARP				S	Sn	23 50 23.3	-1.9
	comp=E,800nm,0.3s						
KARP	Karpathos	1.13	174	PN	Pn	23 50 06.6	+0.1
MULA	Mugla, Merkez-	1.20	60	i P	Pn	23 50 08.0	+0.9
MULA				i S	Sn	23 50 26.1	-0.4
MULA				IAML		23 50 29.0	
	comp=N,34nm,0.5s						
APE	Apeiranthos	1.26	289	P	Pn	23 50 08.0	+0.3
APE	Apeiranthos	1.26	289	P	Pn	23 50 08.3	+0.6
APE	Apeiranthos	1.26	289	PN	Pn	23 50 07.7	0.0
THR8	Santorini-Mono	1.27	258	P	Pn	23 50 08.1	+0.4
SANT	Santorini	1.29	257	P	Pn	23 50 08.3	+0.4
SANT	Santorini	1.29	257	P	Pn	23 50 08.4	+0.4
SANT	Santorini	1.29	257	PN	Pn	23 50 08.4	+0.4
SNT1	Gialos, Santor	1.30	259	P	Pn	23 50 08.2	+0.1
DALY	Dalyan (Mula)	1.32	83	PN	Pn	23 50 09.3	+1.0
DALY	Dalyan (Mula)	1.32	83	i P	Pn	23 50 09.4	+1.2
DALY				i S	Sn	23 50 28.3	-0.1
DALY				IAML		23 50 32.0	
	comp=N,103nm,0.5s						
THR3	Thira Island,	1.33	259	P	Pn	23 50 07.9	-0.4
THR6	Thira Island,	1.34	257	P	Pn	23 50 08.9	+0.4
THR6	Thira Island,	1.34	257	P	Pn	23 50 09.1	+0.6
ZEYE	Izmir, Urla-Ze	1.62	345	i P	Pn	23 50 10.7	-0.8
STIA	Sitia Lasithi	1.65	207	P	Pn	23 50 12.1	+0.2
STIA				S	Sn	23 50 33.8	-1.1
FETY	Fethiye	1.66	91	P	Pn	23 50 12.2	+0.2
FETY	Fethiye	1.66	91	PN	Pn	23 50 12.4	+0.4
FETY	Fethiye	1.66	91	i P	Pn	23 50 12.8	+0.8
FETY				i S	Sn	23 50 34.0	-1.2
FETY				IAML		23 50 37.0	
	comp=N,28nm,0.3s						
ZKR	Zakros	1.68	203	P	Pn	23 50 13.0	+0.7
ZKR	Zakros	1.68	203	P	Pn	23 50 13.0	+0.7
ZKR				S	Sn	23 50 34.6	-1.1
	comp=N,138nm,0.5s						
ZKR	Zakros	1.68	203	PN	Pn	23 50 13.4	+1.1
TAVA	DENIZLI_Tavas	1.71	62	i P	Pn	23 50 11.5	-1.2
TAVA				i S	Sn	23 50 34.0	-2.3
TAVA				IAML		23 50 37.0	
	comp=N,20nm,0.5s						
NPS	Neapolis	1.81	219	P	Pn	23 50 13.7	-0.1
NPS	Neapolis	1.81	219	P	Pn	23 50 13.7	-0.1
CAEL	Denizli, Camel	1.90	76	i P	Pn	23 50 15.7	+0.7
CAEL				i S	Sn	23 50 37.9	-2.5
CAEL				IAML		23 50 46.0	
	comp=N,47nm,0.4s						
HRKL	Herakleio	2.06	229	P	Pn	23 50 17.0	+0.2
HRKL				S	Sn	23 50 42.6	-1.0
	comp=N,248nm,0.5s						
HRKL	Herakleio	2.06	229	PN	Pn	23 50 17.2	+0.4
GOLH	Golhisar	2.11	74	i P	Pn	23 50 15.6	-1.9
AKAS	Kas	2.13	101	PN	Pn	23 50 18.0	+0.3
AKAS	Kas	2.13	101	i P	Pn	23 50 17.6	-0.1
AKAS				i S	Sn	23 50 43.1	-2.2
AKAS				IAML		23 50 50.0	
	comp=N,22nm,0.6s						
AKAS				IAML		23 50 56.0	
	comp=E,17nm,1.2s						
KSL	Kastellorizon	2.13	103	P	Pn	23 50 17.6	0.0
IDI	Anoyia	2.21	232	P	Pn	23 50 18.3	-0.3
IDI				AML	AML	23 50 45.8	
	comp=E,263µm,0.2s						
IDI				AML	AML	23 50 47.0	
	comp=N,180µm,0.1s						
IDI	Anoyia	2.21	232	P	Pn	23 50 18.3	-0.3
IDI				S	Sn	23 50 44.5	-2.4
	comp=N,118nm,0.2s						
IDI	Anoyia	2.21	232	PN	Pn	23 50 18.4	-0.2
KULA	Kula-Manisa	2.26	35	PN	Pn	23 50 19.5	+0.3
ELL	Elmali	2.32	87	PN	Pn	23 50 20.9	+0.8
DKL	Dikili	2.40	358	PN	Pn	23 50 21.2	+0.4
SIVA	Sivas	2.44	228	P	Pn	23 50 22.0	+0.6
USAK	Uak-Merkez	2.58	37	i P	Pn	23 50 24.1	+0.8
KHAL	Karahalli	2.60	48	i P	Pn	23 50 22.7	-0.8
VAM	Vamos	2.61	242	P	Pn	23 50 23.6	0.0
BRDR	BURDUR-Merkez	2.64	66	i P	Pn	23 50 24.3	+0.4
BRDR				i S	Sn	23 50 55.8	-0.6
KORT	Korkueli	2.69	82	PN	Pn	23 50 25.2	+0.5
KORT	Korkueli	2.69	82	i P	Pn	23 50 24.8	0.0
AKUM	Antalya-Kumluc	2.70	96	i P	Pn	23 50 25.0	+0.3
AKUM				i S	Sn	23 50 55.6	-2.2
AKUM				IAML		23 51 03.0	
	comp=E,19nm,0.4s						
AKUM				IAML		23 51 04.0	
	comp=N,11nm,0.5s						
BASM	Basmaki-Afyon	2.72	62	PN	Pn	23 50 24.9	-0.1
IMMV	Iera Moni Meta	2.74	245	P	Pn	23 50 25.9	+0.7
IMMV	Iera Moni Meta	2.74	245	P	Pn	23 50 25.9	+0.7
IMMV				S	Sn	23 50 56.8	-1.9
	comp=N,182nm,0.4s						
IMMV	Iera Moni Meta	2.74	245	PN	Pn	23 50 25.6	+0.4
SIMA	Simav-Kutahya	2.87	32	PN	Pn	23 50 27.3	+0.4
ANTB	Antalya	2.93	84	PN	Pn	23 50 28.3	+0.7
GVDS	Gavdos	3.00	233	PN	Pn	23 50 29.4	+0.9
GVD	Gavdhos	3.00	233	P	Pn	23 50 29.1	+0.5
GVD	Gavdhos	3.00	233	PN	Pn	23 50 29.1	+0.5

KTHA	**Kythira Island**	**3.21**	**264**	P	**Pn**	**23 50 31.8**	**+0.6**
KTHA	**Kythira Island**	**3.21**	**264**	PN	**Pn**	**23 50 31.9**	**+0.6**
VLI	**Veliai**	**3.28**	**272**	P	**Pn**	**23 50 32.6**	**+0.5**
MMAI	**Mount Meron Ar**	**7.80**	**115**	P	**Pn**	**23 51 31.1**	**-1.5**
	comp=N,5.3nm,0.3s,baz=308,slow=12,SNR=84						
EIL	**Elat**	**9.64**	**134**	P	**Pn**	**23 51 56.3**	**-0.8**
	comp=N,0.3nm,0.3s,baz=335,slow=2.6,SNR=7.5						
ESDC	**Sonseca Array**	**24.48**	**287**	P	**P**	**23 54 47.9**	**-0.2**
	comp=N,0.3nm,0.7s,baz=84,slow=7.8,SNR=1.7						
TORD	**Torodi Ar. Bea**	**32.61**	**231**	P	**P**	**23 56 01.3**	**+0.7**
	comp=N,0.3nm,0.3s,baz=34,slow=9.0,SNR=2.5						
KURBB	**Kurchatov Arra**	**39.00**	**52**	P	**P**	**23 56 55.3**	**+0.7**
	baz=272,slow=8.9						
MKAR	**Makanchi Array**	**41.69**	**58**	P	**P**	**23 57 17.6**	**+0.7**
	comp=N,0.7nm,0.4s,baz=267,slow=8.6,SNR=21						
ZALV	**Zalesovo Beam**	**42.87**	**47**	P	**P**	**23 57 26.1**	**-0.2**
	comp=N,0.5nm,0.4s,baz=282,slow=7.2,SNR=2.3						
YKA	**Yellowknife Ar**	**76.47**	**343**	P	**P**	**00 01 16.6**	**+0.5**
	comp=N,0.1nm,0.4s,baz=49,slow=7.5,SNR=4.0						

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*SNET **09** 23:54:41.0±1.1, 14°.48N×89°.17W, h1^{km}±4^{km}, ML3.2*
*GCG **09** 23:54:43.8±0.7, 15°.53N×89°.91W, h0^{km}±56^{km}, MD3.2*
ISC 09 23:54:40.3±1.2**, 14°.55N**±0°.04×**89°.09W**±0°.04**, h10**^{km}±13^{km}**,**
n21, σ**0^{s}.57**/28**, 3C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESQI	**Esquipulas**	**0.24**	**273**	⇑*i*P	**Pg**	**23 54 45.4**	**0.0**
ESQI				IAML		23 54 45.7	
	comp=Z,3μm,0.2s						
ESQI				*e*S	**Sg**	**23 54 49.1**	**+0.4**
MTO3	**Montecristo**	**0.30**	**240**	⇑*i*P	**Pg**	**23 54 46.2**	**-0.2**
MTO3				*e*S	**Sg**	**23 54 50.6**	**0.0**
MTO3				IAML		23 54 51.2	
	comp=Z,4μm,0.2s						
TACO	**Tacachico**	**0.63**	**204**	⇓*i*P	**Pg**	**23 54 52.4**	**-0.1**
TACO				*e*S	**Sg**	**23 55 01.1**	**+0.3**
MRL	**Marmol**	**0.78**	**313**	⇓*e*P	**Pb**	**23 54 55.9**	**-0.3**
MRL				*e*S	**Sg**	**23 55 04.3**	**-1.4**
LBRS	**Las Brisas**	**0.81**	**177**	*e*P	**Pb**	**23 54 56.2**	**-0.3**
BOQS	**Boqueron**	**0.83**	**193**	*e*P	**Pb**	**23 54 56.6**	**-0.3**
SNJE	**San Jose**	**0.84**	**216**	*e*P	**Pg**	**23 54 56.6**	**0.0**
PAVA	**Las Pavas**	**0.84**	**170**	*e*P	**Pg**	**23 54 56.7**	**+0.1**
SBLS	**San Blas**	**0.87**	**216**	*e*P	**Pb**	**23 54 57.2**	**-0.5**
CEVE	**Cerro Verde**	**0.88**	**216**	*e*P	**Pg**	**23 54 57.6**	**+0.2**
CEVE				*e*S	**Sb**	**23 55 09.7**	**-0.2**
LFRS	**El Faro**	**0.92**	**178**	*e*P	**Pg**	**23 54 58.2**	**+0.1**
COEG	**Centro de Oper**	**0.95**	**167**	*e*P	**Pb**	**23 54 58.4**	**-0.5**
COEG				IAML		23 55 21.4	
	comp=Z,980nm,0.3s						
JAYA	**Jayaque - finc**	**0.95**	**201**	*e*P	**Pb**	**23 54 58.5**	**-0.6**
JAYA				IAML		23 55 00.3	
	comp=Z,875nm,0.2s						
COEB	**Comit de Eme**	**1.18**	**152**	*e*P	**Pg**	**23 55 03.4**	**+0.4**
COEB				IAML		23 55 30.1	
	comp=Z,671nm,0.4s						
NBG	**Las Nubes**	**1.22**	**272**	*e*P	**Pg**	**23 55 04.2**	**+0.4**
NBG				*e*S	**Sg**	**23 55 20.6**	**+1.0**
FAGO	**Alcalda de S**	**1.28**	**131**	*e*P	**Pb**	**23 55 04.0**	**-0.5**
PACA	**Pacayal**	**1.31**	**145**	*e*P	**Pg**	**23 55 06.0**	**+0.5**
PCG	**Pacaya**	**1.48**	**264**	*e*P	**Pg**	**23 55 09.2**	**+0.4**
PCG				*e*S	**Sg**	**23 55 29.3**	**+1.4**
JUCU	**Jucuar¡n**	**1.53**	**147**	*e*P	**Pb**	**23 55 08.3**	**-0.4**
LCND	**La Caada**	**1.70**	**136**	⇓*i*P	**Pb**	**23 55 11.2**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.83**	**105**	⇑*i*P	**Pb**	**23 55 14.0**	**+0.1**

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*IDC **09** 23:55:37.1±0.7, 17°.74N×147°.98E, h0^{km}, mb4.3/25, mb1 4.4/26, mb1mx4.3/47, mbtmp4.3/26, ML4.4/1, MS3.7/15, Ms1 3.7/15, ms1mx3.5/35, Error ellipse: s-maj=20.6km s-min=13.7km az=102.0*
*NEIC **09** 23:55:42.6±1.2, 17°.72N±0°.10×147°.9E±0°.1, h35^{km}±7^{km}, mb4.8/70, Error ellipse: s-maj=17.5km s-min=12.0km az=126.0*
ISC 09 23:55:40.3±0.5**, 17°.71N**±0°.06×**147°.97E**±0°.08**, h21**^{km}**, n149,**
σ**0^{s}.78**/141**, mb4.7**/68**, MS3.7**/15**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.07**	**216**	Pn	**Pn**	**23 56 55.9**	**+0.8**
	14nm,0.3s,baz=70,slow=6.7,SNR=6.5						
GUMO				Sn	**Sn**	**23 57 51.2**	**-1.8**
	60nm,0.3s,baz=203,slow=23,SNR=7.5						
H11N1	**WAKE ISLAND Hy**	**18.04**	**81**	P	**Pn**	**23 59 47.7**	**-2.0**
	baz=256,slow=13,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**18.05**	**81**	P	**Pn**	**23 59 48.4**	**-1.3**
	baz=256,slow=13,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**18.06**	**81**	P	**Pn**	**23 59 48.0**	**-1.8**
	baz=256,slow=13,SNR=4.5						
JGF	**Kuroka**	**20.16**	**334**	P	Pn	00 00 14.5	-0.7
JGF				IAmb	IAmb	00 00 29.0	
	comp=Z,57nm,1.0s						
JMN	**Monobe**	**20.35**	**324**	P	**P**	**00 00 15.8**	**+0.4**
JMN				IAmb	IAmb	00 00 16.5	
	comp=Z,46nm,1.1s						
MJAR	**Matsushiro Arr**	**20.65**	**337**	P	**P**	**00 00 18.9**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=168,slow=11,SNR=8.7						
MAT	**Matsushiro**	**20.65**	**337**	P	**P**	**00 00 19.2**	**+0.6**
JWT	**Wachi**	**20.77**	**330**	P	**P**	**00 00 20.0**	**+0.1**
JWT				IAmb	IAmb	00 00 28.8	
	comp=Z,26nm,0.9s						
JHS	**Saijyo**	**21.71**	**325**	P	**P**	**00 00 31.2**	**+1.1**
JHS				IAmb	IAmb	00 00 44.2	
	comp=Z,36nm,1.1s						
JNU	**Nakatsue**	**21.72**	**318**	P	**P**	**00 00 28.9**	**-1.2**
	comp=Z,34nm,1.1s,baz=88,slow=17,SNR=3.5						
JNU				LR	LR	00 07 34.7	
	comp=Z,122nm,20.7s,baz=142,slow=33						
JNU	**Nakatsue**	**21.72**	**318**	P	**P**	**00 00 30.4**	**+0.2**
JNU				IAmb	IAmb	00 00 41.6	
	comp=Z,31nm,1.0s						
JTU	**Tsushima**	**23.56**	**319**	P	**P**	**00 00 48.4**	**-1.0**
JTU				IAmb	IAmb	00 00 52.3	
	comp=Z,52nm,1.1s						
JTM	**Tenmabayashi**	**23.75**	**347**	P	**P**	**00 00 51.7**	**+0.5**
JTM				IAmb	IAmb	00 01 03.0	
	comp=Z,42nm,1.0s						
SIJI	**Sorong**	**24.72**	**223**	P	**P**	**00 00 59.9**	**-0.5**
	comp=Z,12nm,0.5s,baz=7.6,slow=19,SNR=5.7						
NACB	**Ninganchiao**	**25.43**	**289**	P	**P**	**00 01 05.5**	**-1.2**
NACB				IAmb	IAmb	00 01 24.9	
	comp=Z,25nm,1.0s						
YULB	**Yu-li**	**25.58**	**287**	P	**P**	**00 01 07.6**	**-0.5**
JEW	**Eniwo**	**25.66**	**349**	P	**P**	**00 01 08.5**	**-0.1**
FAKI	**Fak Fak**	**25.70**	**219**	P	**P**	**00 01 08.6**	**-0.6**
FAKI				IAmb	IAmb	00 01 14.5	
	comp=Z,39nm,1.1s						
YHNB	**Yeheng**	**25.71**	**290**	P	**P**	**00 01 08.7**	**-0.7**
YHNB				IAmb	IAmb	00 01 11.3	
	comp=Z,36nm,1.0s						
TWG	**Pinlang**	**25.72**	**286**	P	**P**	**00 01 09.1**	**-0.3**
TWG				IAmb	IAmb	00 01 11.1	
	comp=Z,19nm,0.6s						
SSLB	**Suanglung**	**25.95**	**288**	P	**P**	**00 01 10.9**	**-0.6**
SSLB				IAmb	IAmb	00 01 12.8	
	comp=Z,17nm,0.8s						
TPUB	**Ta-pu**	**26.18**	**287**	P	**P**	**00 01 13.3**	**-0.3**
TPUB				IAmb	IAmb	00 01 30.9	
	comp=Z,26nm,1.1s						
KSRS	**Korea Array**	**26.40**	**322**	P	**P**	**00 01 13.8**	**-1.5**
	comp=Z,7.9nm,0.8s,baz=147,slow=9.7,SNR=19						
KSRS				LR	LR	00 11 31.4	
	comp=Z,134nm,18.7s,baz=126,slow=36						
ASAJ	**Asahikawa**	**26.71**	**351**	P	**P**	**00 01 17.6**	**-0.5**
	comp=Z,18nm,1.0s,baz=203,slow=15,SNR=2.7						
USRK	**Ussuriysk Ar.**	**29.64**	**336**	P	**P**	**00 01 45.3**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=130,slow=7.6,SNR=7.7						
USRK	**Ussuriysk Ar.**	**29.64**	**336**	P	**P**	**00 01 45.5**	**+1.2**
COEN	**Coen**	**31.82**	**189**	P	**P**	**00 02 04.1**	**+0.3**
COEN				IAmb	IAmb	00 02 18.8	
	comp=Z,9.8nm,1.0s						
KLR	**Kul'dur**	**34.07**	**341**	P	**P**	**00 02 23.3**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=164,slow=8.6,SNR=9.2						
MTN	**Manton Dam**	**34.61**	**210**	P	**P**	**00 02 27.9**	**-0.2**
MTN				IAmb	IAmb	00 02 28.3	
	comp=Z,21nm,1.1s						
PETK	**Petropavlovsk-**	**36.14**	**10**	LR	LR	00 21 44.0	
	comp=Z,71nm,18.2s,baz=185,slow=43						
SBUM	**Sibu**	**38.21**	**251**	P	**P**	**00 02 57.9**	**-1.0**
HIA	**Hailar**	**38.87**	**330**	P	**P**	**00 03 04.0**	**-0.1**
WB0	**Warramunga Arr**	**39.56**	**200**	P	**P**	**00 03 11.1**	**+1.0**
WB0				IAmb	IAmb	00 03 26.6	
	comp=Z,11nm,1.0s						
WR0	**Warramunga Arr**	**39.69**	**200**	P	**P**	**00 03 12.0**	**+0.8**
WB2	**Warramunga Arr**	**39.73**	**200**	P	**P**	**00 03 12.2**	**+0.6**
WRA	**Warramunga Arr**	**39.74**	**200**	P	**P**	**00 03 11.9**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=27,slow=8.9,SNR=17						
WRA	**Warramunga Arr**	**39.74**	**200**	P	**P**	**00 03 12.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**41.81**	**213**	P	**P**	**00 03 29.0**	**+0.2**
ASAR	**Alice Springs**	**43.36**	**199**	P	**P**	**00 03 41.5**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=20,slow=7.3,SNR=10.0						
ASAR				LR	LR	00 25 22.1	
	comp=Z,46nm,18.2s,baz=337,slow=41						
ASAR	**Alice Springs**	**43.36**	**199**	P	**P**	**00 03 41.2**	**-0.1**
SONM	**Songino Array**	**45.26**	**321**	P	**P**	**00 03 57.1**	**+0.6**
	comp=Z,7.4nm,0.8s,baz=135,slow=8.8,SNR=38						
SONM				LR	LR	00 23 21.8	
	comp=Z,93nm,19.2s,baz=346,slow=37						
SONM	**Songino Array**	**45.26**	**321**	P	**P**	**00 03 57.1**	**+0.6**
SEY	**Seymchan**	**45.28**	**3**	P	**P**	**00 03 56.0**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=17,slow=20,SNR=5.0						
ATKA	**Atka Island**	**45.45**	**32**	P	**P**	**00 03 58.4**	**+0.7**
YAK	**Yakutsk**	**46.10**	**348**	P	**P**	**00 04 01.8**	**-0.9**
	comp=Z,3.0nm,0.3s,baz=208,slow=1.2,SNR=1.1						
CMAR	**Chiang Mai Arr**	**46.49**	**279**	P	**P**	**00 04 07.0**	**+0.5**
	comp=Z,9.6nm,0.9s,baz=69,slow=6.6,SNR=36						
CMAR				LR	LR	00 21 40.2	
	comp=Z,53nm,20.3s,baz=169,slow=34						
PSA00	**Pilbara Seismi**	**47.78**	**216**	P	**P**	**00 04 17.2**	**+0.9**
PSAA1	**Pilbara Seismi**	**47.79**	**216**	P	**P**	**00 04 16.6**	**+0.2**
PSAB1	**Pilbara Seismi**	**47.79**	**216**	P	**P**	**00 04 16.7**	**+0.3**
PSAB1				IAmb	IAmb	00 04 34.5	
	comp=Z,12nm,1.0s						
PSAB3	**Pilbara Seismi**	**47.79**	**216**	P	**P**	**00 04 17.3**	**+0.9**
PSAC3	**Pilbara Seismi**	**47.83**	**216**	P	**P**	**00 04 17.0**	**+0.3**
KULM	**Kulim**	**47.84**	**261**	P	**P**	**00 04 17.2**	**+0.2**
PSAD3	**Pilbara Seismi**	**47.87**	**216**	P	**P**	**00 04 17.4**	**+0.3**
STKA	**Stephens Creek**	**49.68**	**187**	LR	LR	00 27 44.8	
	comp=Z,21nm,18.2s,baz=18,slow=39						
BBOO	**Buckleboo**	**51.51**	**193**	P	**P**	**00 04 44.8**	**+0.2**
FORT	**Forrest**	**51.87**	**202**	P	**P**	**00 04 48.9**	**+1.6**
GSI	**Gunungsitoli**	**52.09**	**257**	P	**P**	**00 04 49.7**	**+0.4**
LSA	**Lhasa**	**52.92**	**294**	P	**P**	**00 04 57.1**	**+1.3**
LSA				IAmb	IAmb	00 04 57.5	
	comp=Z,7.8nm,0.8s						
MORW	**Morawa**	**55.80**	**214**	P	**P**	**00 05 16.3**	**+0.2**
MORW				IAmb	IAmb	00 05 17.6	
	comp=Z,14nm,1.0s						
TAPN	**Taplejung**	**56.03**	**291**	*e*P	**P**	**00 05 18.5**	**+0.3**
	comp=Z,32nm,1.2s						
ODAN	**Odare**	**56.34**	**291**	*e*P	**P**	**00 05 20.5**	**+0.1**
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**56.58**	**311**	P	**P**	**00 05 19.9**	**-1.7**
RAMN	**Ramite**	**57.04**	**291**	*e*P	**P**	**00 05 25.2**	**-0.2**
	comp=Z,6.1nm,0.6s						
GUN	**Gumba**	**57.61**	**292**	*e*P	**P**	**00 05 29.8**	**+0.3**
PKI	**Pulchoki**	**58.05**	**292**	*e*P	**P**	**00 05 32.3**	**-0.3**
	comp=Z,9.4nm,0.6s						
PKIN	**Phulchoki**	**58.06**	**292**	*e*P	**P**	**00 05 32.3**	**-0.3**
	comp=Z,11nm,0.6s						
KKN	**Kakani**	**58.15**	**292**	*e*P	**P**	**00 05 33.1**	**-0.1**
	comp=Z,8.6nm,0.5s						
DMN	**Daman**	**58.31**	**292**	*e*P	**P**	**00 05 34.4**	**0.0**
	comp=Z,12nm,0.6s						
ZSN	**Zaisan**	**59.02**	**315**	*e*P	**P**	**00 05 38.8**	**+0.2**
	comp=Z,32nm,2.2s,baz=315						
TTA	**Tatalina**	**59.17**	**26**	P	**P**	**00 05 40.3**	**+0.9**
DANN	**Dangsing**	**59.44**	**293**	*e*P	**P**	**00 05 42.5**	**+0.2**
	comp=Z,89nm,0.6s						
ZAA0	**Zalesovo Array**	**60.11**	**323**	P	**P**	**00 05 46.1**	**+0.1**
ZAA0				IAmb	IAmb	00 05 47.8	
	comp=Z,8.5nm,0.7s						
ZALV	**Zalesovo Beam**	**60.11**	**323**	P	**P**	**00 05 46.2**	**+0.2**
	comp=Z,7.0nm,0.5s,baz=105,slow=7.5,SNR=35						
ZALV				LR	LR	00 31 27.4	
	comp=Z,88nm,18.2s,baz=12,slow=36						
ZALV	**Zalesovo Beam**	**60.11**	**323**	P	**P**	**00 05 46.0**	**0.0**
MK31	**Makanchi Array**	**60.70**	**314**	P	**P**	**00 05 50.8**	**+0.6**
MKAR	**Makanchi Array**	**60.70**	**314**	P	**P**	**00 05 50.8**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=91,slow=7.2,SNR=58						
MKAR	**Makanchi Array**	**60.70**	**314**	P	**P**	**00 05 50.6**	**+0.4**
MAKZ	**Makanchi**	**60.91**	**314**	P	**P**	**00 05 52.3**	**+0.7**
MAKZ				IAmb	IAmb	00 06 05.3	
	comp=Z,6.5nm,1.1s						
SEM	**Semipalatinsk**	**62.38**	**318**	*e*P	**P**	**00 06 00.1**	**-1.7**
	comp=Z,14nm,0.9s,baz=318						
SHLS	**Shalkode**	**62.51**	**310**	*e*P	**P**	**00 06 00.5**	**-2.2**
	comp=Z,22nm,2.0s,baz=310						
KPKS	**Kokpek**	**63.08**	**310**	*e*P	**P**	**00 06 06.0**	**-0.5**
	baz=310						
SATY	**Saty**	**63.28**	**310**	*e*P	**P**	**00 06 08.1**	**+0.3**
	comp=Z,6.4nm,1.3s,baz=310						
TDK	**Taldyqorghan**	**63.30**	**312**	*e*P	**P**	**00 06 07.1**	**-0.7**
	baz=312						
KURK	**Kurchatov**	**63.44**	**318**	P	**P**	**00 06 09.2**	**+0.7**
ILAR	**Eielson Array**	**63.59**	**26**	P	**P**	**00 06 08.1**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=248,slow=4.6,SNR=3.8						
ILAR				LR	LR	00 30 40.8	
	comp=Z,44nm,21.9s,baz=240,slow=33						
ILAR	**Eielson Array**	**63.59**	**26**	P	**P**	**00 06 08.9**	**-0.3**
RAGM	**Ragged Mountai**	**63.60**	**31**	P	**P**	**00 06 11.0**	**+1.5**
TNSS	**Tian-Shan**	**64.35**	**310**	*e*P	**P**	**00 06 16.0**	**+0.9**
	baz=310						
KUU	**Kurty**	**64.78**	**311**	*e*P	**P**	**00 06 17.2**	**-0.3**
	comp=Z,53nm,1.7s,baz=311						
BOOM	**Boomskoye usch**	**65.10**	**309**	P	**P**	**00 06 20.6**	**+0.8**
BMAR	**Burnt Mountain**	**65.17**	**23**	P	**P**	**00 06 19.9**	**+0.2**
BTLS	**Baital**	**66.40**	**312**	*e*P	**P**	**00 06 27.6**	**-0.3**
	comp=Z,16nm,1.8s,baz=312						
HYT	**Haines Junctio**	**67.16**	**31**	P	**P**	**00 06 33.8**	**+1.2**
HYT				IAmb	IAmb	00 06 46.0	
	comp=Z,7.5nm,1.0s						
BRZS	**Berezniki**	**67.22**	**317**	*e*P	**P**	**00 06 32.0**	**-1.0**
	comp=Z,28nm,2.1s,baz=317						
ARSB	**Arslanbob**	**67.36**	**308**	P	**P**	**00 06 34.4**	**+0.1**
ARSB				IAmb	IAmb	00 06 47.6	
	comp=Z,4.7nm,0.9s						
NIL	**Nilore**	**67.89**	**300**	P	**P**	**00 06 38.8**	**+1.2**
BRVK	**Borovoye**	**68.67**	**321**	P	**P**	**00 06 42.7**	**+0.6**
KK05	**Karatay Array**	**69.04**	**310**	P	**P**	**00 06 44.6**	**0.0**
KK06	**Karatay Array**	**69.04**	**310**	P	**P**	**00 06 44.6**	**-0.1**
KK02	**Karatay Array**	**69.05**	**310**	P	**P**	**00 06 44.5**	**-0.2**
KK31	**Karatay Array**	**69.05**	**310**	P	**P**	**00 06 45.4**	**+0.7**
KKAR	**Karatay Array**	**69.05**	**310**	P	**P**	**00 06 44.9**	**+0.2**
KK04	**Karatay Array**	**69.06**	**310**	P	**P**	**00 06 44.5**	**-0.2**
INK	**Inuvik**	**69.44**	**23**	P	**P**	**00 06 46.5**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=191,slow=5.2,SNR=2.3						
IUG	**Iuzhnay**	**69.49**	**309**	*e*P	**P**	**00 06 47.3**	**-0.2**
	comp=Z,5.1nm,1.9s,baz=309						
PPT	**Papeete**	**70.75**	**116**	LR	LR	00 31 59.5	
	comp=Z,77nm,21.0s,baz=346,slow=31						
KBL	**Kabul**	**71.23**	**301**	P	**P**	**00 06 58.6**	**+0.2**
KBL				IAmb	IAmb	00 07 00.7	
	comp=Z,10nm,1.1s						
C36M	**Paulatuk**	**72.86**	**22**	P	**P**	**00 07 07.7**	**+0.4**
C36M				IAmb	IAmb	00 07 19.1	
	comp=Z,8.4nm,1.1s						
ARU	**Arti**	**75.11**	**325**	P	**P**	**00 07 21.1**	**+0.4**
ARU				IAmb	IAmb	00 07 21.5	
	comp=Z,6.4nm,0.8s						
AB06	**Akbulak array**	**75.51**	**317**	P	**P**	**00 07 22.8**	**-0.3**
AB07	**Akbulak array**	**75.52**	**317**	P	**P**	**00 07 23.1**	**0.0**
AB05	**Akbulak array**	**75.52**	**317**	P	**P**	**00 07 23.0**	**-0.2**
AB02	**Akbulak array**	**75.52**	**317**	P	**P**	**00 07 23.0**	**-0.2**
AB01	**Akbulak array**	**75.53**	**317**	P	**P**	**00 07 23.2**	**0.0**
AB03	**Akbulak array**	**75.53**	**317**	P	**P**	**00 07 22.9**	**-0.3**
AB31	**Akbulak array**	**75.53**	**317**	P	**P**	**00 07 22.6**	**-0.6**
AB31				IAmb	IAmb	00 07 23.9	
	comp=Z,9.8nm,0.7s						
ABKAR	**Akbulak array**	**75.53**	**317**	P	**P**	**00 07 23.6**	**+0.3**
ABKAR	**Akbulak array**	**75.53**	**317**	IAmb	IAmb	00 07 23.9	
	comp=Z,9.8nm,0.7s						
AB04	**Akbulak array**	**75.53**	**317**	P	**P**	**00 07 22.8**	**-0.4**
HRA	**Herat**	**76.77**	**302**	P	**P**	**00 07 30.6**	**-0.3**
HUMO	**Hull Mountain**	**77.57**	**49**	P	**P**	**00 07 35.6**	**+0.6**
YKA	**Yellowknife Ar**	**77.85**	**28**	P	**P**	**00 07 36.3**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=286,slow=5.2,SNR=12						
YKA				LR	LR	00 44 09.0	
	comp=Z,36nm,18.4s,baz=0.0,slow=37						
PINE	**Pine Mountain**	**78.74**	**48**	P	**P**	**00 07 42.1**	**+0.4**
B08A	**Colville Reser**	**78.74**	**43**	P	**P**	**00 07 40.4**	**-0.9**
GEYT	**Alibeck**	**79.22**	**306**	P	**P**	**00 07 44.3**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=98,slow=4.4,SNR=6.2						
NEW	**Newport**	**80.19**	**43**	P	**P**	**00 07 49.5**	**+0.3**
CMB	**Columbia Colle**	**80.57**	**53**	P	**P**	**00 07 52.1**	**+0.5**
NVAR	**Mina Array Bea**	**82.04**	**52**	P	**P**	**00 08 00.9**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=275,slow=5.4,SNR=8.6						
NVAR				LR	LR	00 39 01.3	
	comp=Z,44nm,18.8s,baz=338,slow=32						
NVAR	**Mina Array Bea**	**82.04**	**52**	P	**P**	**00 08 00.6**	**+1.0**
KLMR	**Klimovskoe**	**83.34**	**332**	*e*P	**P**	**00 08 03.1**	**-2.4**
KLMR				AMP		00 08 16.8	
	comp=Z,24nm,1.5s						
ARCES	**ARCESS Array B**	**84.08**	**343**	P	**P**	**00 08 09.1**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=20,slow=3.9,SNR=7.0						
ARCES	**ARCESS Array B**	**84.08**	**343**	P	**P**	**00 08 09.4**	**+0.2**
UOSS	**Minazif**	**84.25**	**294**	P	**P**	**00 08 10.4**	**-0.5**
UOSS				IAmb	IAmb	00 08 23.2	
	comp=Z,10nm,1.1s						
YHL	**Hebgen Lake**	**85.13**	**45**	P	**P**	**00 08 16.6**	**+1.2**
FLWY	**Flagg Ranch**	**85.72**	**45**	P	**P**	**00 08 19.7**	**+1.4**
FLWY				IAmb	IAmb	00 08 31.6	
	comp=Z,6.3nm,0.8s						
RLMT	**Red Lodge**	**86.31**	**44**	P	**P**	**00 08 22.0**	**+0.9**
RLMT				IAmb	IAmb	00 08 34.0	
	comp=Z,5.9nm,1.1s						
PDAR	**Pinedale Array**	**86.97**	**46**	P	**P**	**00 08 24.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=226,slow=4.1,SNR=4.5						
PDAR				LR	LR	00 39 11.9	
	comp=Z,33nm,21.6s,baz=17,slow=30						
SRU	**San Rafael Swe**	**87.59**	**50**	P	**P**	**00 08 28.2**	**+0.7**
RDMU	**Red Mountain**	**87.76**	**48**	P	**P**	**00 08 28.3**	**+0.1**
PIX	**Pinacate**	**87.93**	**58**	IAmb	IAmb	00 08 27.1	
	comp=Z,3.2nm,0.8s						
KBZ	**Khabaz**	**88.36**	**316**	P	**P**	**00 08 30.5**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=123,slow=4.1,SNR=6.2						
FIA1	**FINESS Array S**	**88.67**	**336**	P	**P**	**00 08 30.5**	**-1.4**
FINES	**FINESS Array B**	**88.67**	**336**	P	**P**	**00 08 30.6**	**-1.3**
	comp=Z,2.1nm,0.5s,baz=46,slow=2.9,SNR=15						
FINES	**FINESS Array B**	**88.67**	**336**	P	**P**	**00 08 31.0**	**-0.8**
NOA	**NORSAR Array B**	**94.23**	**340**	LR	LR	01 01 30.2	
	comp=Z,33nm,18.0s,baz=25,slow=42						
BRTR	**Keskin Array B**	**96.34**	**315**	P	**P**	**00 09 08.2**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=94,slow=2.5,SNR=4.3						
MLR	**Muntele Rosu**	**98.08**	**323**	LR	LR	00 54 34.5	
	comp=Z,103nm,18.1s,baz=339,slow=36						
DBIC	**Dimbokro**	**143.84**	**310**	PKP	PKPbc	00 15 12.7	0.0
	comp=Z,2.7nm,0.9s,baz=50,slow=4.1,SNR=2.9						

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*IDC **10** 00:35:06.3±0.9, 17°.78N×148°.01E, h0^{km}, mb4.1/16, mb1 4.3/17, mb1mx4.0/56, mbtmp4.1/17, ML4.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/48, Error ellipse: s-maj=28.0km s-min=17.4km az=92.0*
*NEIC **10** 00:35:11.8±0.8, 17°.7N±0°.1×148°.0E±0°.1, h36^{km}±9^{km}, mb4.5/16, Error ellipse: s-maj=23.9km s-min=4.5km az=126.0*
ISC 10 00:35:11.8±1.0**, 17°.70N**±0°.09×**147°.9E**±0°.2**, h35**^{km}**, n38,**
σ**0^{s}.74**/35**, mb4.3**/19**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.03**	**216**	Pn	**Pn**	**00 36 26.1**	**+1.3**
	11nm,0.3s,baz=33,slow=18,SNR=1.9						
GUMO				Sn	**Sn**	**00 37 21.1**	**-0.6**
	22nm,0.3s,baz=17,slow=21,SNR=4.2						
GUMO	**Guam**	**5.03**	**216**	Sn	**Sn**	**00 37 19.7**	**-2.0**
JGF	**Kuroka**	**20.14**	**334**	P	**P**	**00 39 42.5**	**-0.5**
JGF				IAmb	IAmb	00 39 46.0	
	comp=Z,21nm,0.8s						
MJAR	**Matsushiro Arr**	**20.63**	**337**	P	Pn	00 39 48.2	-2.5
	comp=Z,2.7nm,0.6s,baz=153,slow=11,SNR=4.6						
MJAR	**Matsushiro Arr**	**20.63**	**337**	IAmb	IAmb	00 39 55.0	
	comp=Z,4.3nm,0.9s						
KSRS	**Korea Array**	**26.37**	**322**	P	**P**	**00 40 43.9**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=142,slow=8.7,SNR=7.9						
KSRS				LR	LR	00 50 50.7	
	comp=Z,20nm,18.5s,baz=350,slow=36						
USRK	**Ussuriysk Ar.**	**29.62**	**336**	P	**P**	**00 41 14.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=101,slow=15,SNR=2.4						
WRA	**Warramunga Arr**	**39.71**	**200**	P	**P**	**00 42 41.2**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=26,slow=8.6,SNR=9.8						
WRA	**Warramunga Arr**	**39.71**	**200**	IAmb	IAmb	00 42 42.4	
	comp=Z,0.3nm,1.1s						
ASAR	**Alice Springs**	**43.33**	**199**	P	**P**	**00 43 11.3**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=19,slow=6.6,SNR=5.7						
SONM	**Songino Array**	**45.23**	**321**	P	**P**	**00 43 26.0**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=138,slow=8.5,SNR=20						
SONM	**Songino Array**	**45.23**	**321**	P	**P**	**00 43 25.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**46.43**	**279**	P	**P**	**00 43 36.2**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=70,slow=6.8,SNR=14						
CMAR	**Chiang Mai Arr**	**46.43**	**279**	P	**P**	**00 43 35.7**	**+0.2**
ZAA0	**Zalesovo Array**	**60.08**	**323**	P	**P**	**00 45 15.5**	**+0.1**
ZALV	**Zalesovo Beam**	**60.08**	**323**	P	**P**	**00 45 14.5**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=104,slow=7.0,SNR=15						
ZALV	**Zalesovo Beam**	**60.08**	**323**	P	**P**	**00 45 15.1**	**-0.3**
MK31	**Makanchi Array**	**60.66**	**314**	P	**P**	**00 45 20.0**	**+0.5**
MK31				IAmb	IAmb	00 45 21.6	
	comp=Z,1.5nm,0.6s						
MKAR	**Makanchi Array**	**60.66**	**314**	P	**P**	**00 45 19.9**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=92,slow=7.2,SNR=34						
MKAR	**Makanchi Array**	**60.66**	**314**	P	**P**	**00 45 19.6**	**+0.1**
MAKZ	**Makanchi**	**60.87**	**314**	P	**P**	**00 45 21.3**	**+0.3**
MAKZ				IAmb	IAmb	00 45 23.2	
	comp=Z,2.2nm,0.6s						
KURK	**Kurchatov**	**63.41**	**318**	P	**P**	**00 45 38.0**	**+0.2**
NIL	**Nilore**	**67.84**	**300**	P	**P**	**00 46 06.8**	**-0.1**
BVAR	**Borovoye Array**	**68.57**	**321**	P	**P**	**00 46 10.5**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=39,slow=17,SNR=28						
BRVK	**Borovoye**	**68.63**	**321**	P	**P**	**00 46 12.0**	**+0.7**
BRVK				IAmb	IAmb	00 46 12.7	
	comp=Z,6.8nm,0.9s						
KK31	**Karatay Array**	**69.01**	**310**	P	**P**	**00 46 13.9**	**-0.1**
KKAR	**Karatay Array**	**69.01**	**310**	P	**P**	**00 46 13.8**	**-0.1**
KKAR	**Karatay Array**	**69.01**	**310**	P	**P**	**00 46 12.9**	**-1.0**
KKAR				IAmb	IAmb	00 46 15.2	
	comp=Z,1.6nm,0.7s						
KBL	**Kabul**	**71.18**	**301**	P	**P**	**00 46 27.9**	**+0.2**
ARU	**Arti**	**75.08**	**325**	P	**P**	**00 46 49.7**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=14,slow=2.7,SNR=6.5						
ARU	**Arti**	**75.08**	**325**	IAmb	IAmb	00 46 50.9	
	comp=Z,3.1nm,0.6s						
ABKAR	**Akbulak array**	**75.49**	**317**	P	**P**	**00 46 52.5**	**0.0**
ABKAR				IAmb	IAmb	00 46 53.2	
	comp=Z,5.0nm,0.8s						
ABKAR	**Akbulak array**	**75.49**	**317**	P	**P**	**00 46 52.1**	**-0.4**
AKTO	**Aktyubinsk**	**76.49**	**319**	P	**P**	**00 46 57.4**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=94,slow=8.8,SNR=17						
YKA	**Yellowknife Ar**	**77.88**	**28**	P	**P**	**00 47 05.2**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=287,slow=4.7,SNR=8.6						
NVAR	**Mina Array Bea**	**82.09**	**52**	P	**P**	**00 47 28.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=282,slow=7.4,SNR=3.8						
ARCES	**ARCESS Array B**	**84.07**	**343**	P	**P**	**00 47 40.0**	**+1.4**
	comp=Z,13nm,1.2s,baz=27,slow=3.0,SNR=5.2						
FINES	**FINESS Array B**	**88.65**	**336**	P	**P**	**00 47 59.5**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=35,slow=7.0,SNR=5.1						

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*IDC **10** 00:45:14.3±2.0, 17°.73N×147°.67E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.8/51, mbtmp4.0/10, MS3.6/1, Ms1 3.6/1, ms1mx2.5/50, Error ellipse: s-maj=57.8km s-min=29.0km az=94.0*
*NEIC **10** 00:45:21.4±1.2, 18°.01N±0°.09×147°.5E±0°.2, h35^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=30.6km s-min=6.5km az=118.0*
ISC 10 00:45:22.2±1.1**, 17°.8N**±0°.1×**147°.6E**±0°.2**, h53**^{km}**, n21,**
σ**0^{s}.95**/19**, mb4.0**/13**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.97**	**213**		**Pn**	**00 46 35.3**	**+1.0**
JOW	**Kunigami**	**19.99**	**300**	P	**P**	**00 49 50.9**	**+0.4**
MJAR	**Matsushiro Arr**	**20.42**	**338**	P	**P**	**00 49 53.1**	**-1.9**
KSRS	**Korea Array**	**26.11**	**322**	P	**P**	**00 50 49.5**	**-1.6**
	1.3nm,0.7s,baz=134,slow=7.0,SNR=2.6						
WRA	**Warramunga Arr**	**39.73**	**200**	P	**P**	**00 52 47.8**	**-1.9**
	0.7nm,1.0s,baz=23,slow=8.7,SNR=2.0						
MA2	**Magadan**	**41.76**	**2**	P	**P**	**00 53 06.3**	**+0.3**
	12nm,0.9s,baz=205,slow=3.1,SNR=3.7						
SONM	**Songino Array**	**44.97**	**321**	P	**P**	**00 53 32.5**	**+0.3**
	1.1nm,0.7s,baz=140,slow=8.5,SNR=9.6						
SONM	**Songino Array**	**44.97**	**321**	IAmb	IAmb	00 53 34.5	
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**46.15**	**279**	P	**P**	**00 53 42.3**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=84,slow=6.9,SNR=5.3						
KDAK	**Kodiak Island**	**59.10**	**33**	LR	LR	01 14 29.0	
	comp=Z,50nm,21.9s,baz=54,slow=30						
ZALV	**Zalesovo Beam**	**59.82**	**323**	P	**P**	**00 55 22.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=98,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**60.38**	**314**	P	**P**	**00 55 26.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=95,slow=7.5,SNR=7.1						
MAKZ	**Makanchi**	**60.60**	**314**	P	**P**	**00 55 27.3**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAKZ				IAmb	IAmb	00 55 29.4	
	comp=Z,2.0nm,1.1s						
BVAR	**Borovoye Array**	**68.31**	**321**	P	**P**	**00 56 17.0**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=67,slow=11,SNR=6.9						
BRVK	**Borovoye**	**68.37**	**321**	P	**P**	**00 56 17.7**	**-0.4**
BRVK				IAmb	IAmb	00 56 19.4	
	comp=Z,2.7nm,1.1s						
JIS	**Juneau Island**	**68.72**	**34**	P	**P**	**00 56 20.9**	**+0.7**
KKAR	**Karatay Array**	**68.73**	**310**	P	**P**	**00 56 20.8**	**+0.2**
ABKAR	**Akbulak array**	**75.22**	**317**	P	**P**	**00 56 59.2**	**0.0**
ABKAR	**Akbulak array**	**75.22**	**317**	P	**P**	**00 56 59.0**	**-0.2**
ABKAR				IAmb	IAmb	00 57 02.6	
	comp=Z,1.7nm,0.8s						
AKTO	**Aktyubinsk**	**76.22**	**319**	P	**P**	**00 57 04.6**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=104,slow=9.9,SNR=6.1						
FINES	**FINESS Array B**	**88.44**	**336**	P	**P**	**00 58 09.4**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=40,slow=7.2,SNR=1.6						

IDC 10 00:56:06.7±2.5**, 3°.13N×129°.40E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/35**, mbtmp3.6**/3**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.5**/34**, Error ellipse: s-maj=169.7km s-min=24.6km az=69.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**21.64**	**125**	LR	LR	01 10 39.6	
	comp=Z,54nm,19.5s,baz=68,slow=40						
WRA	**Warramunga Arr**	**23.43**	**168**	P	P	01 01 18.0	+0.2
	1.1nm,0.6s,baz=348,slow=10,SNR=6.0						
KRVT	**Keravat (AS076**	**23.79**	**108**	LR	LR	01 09 48.8	
	comp=Z,30nm,18.9s,baz=134,slow=35						
ASAR	**Alice Springs**	**26.99**	**171**	P	P	01 01 50.0	-0.5
	0.3nm,0.5s,baz=360,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**59.58**	**324**	P	P	01 06 12.5	+0.1
	0.4nm,0.4s,baz=112,slow=8.2,SNR=20						

IDC 10 01:07:27.6±10.0**, 6°.57S×128°.45E, h281^{km}**±126^{km}**, mb2.6**/1**, mb1 3.2**/4**, mb1mx2.8**/40**, mbtmp3.8**/4**, Error ellipse: s-maj=81.0km s-min=43.7km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.78**	**193**	P	Pn	01 10 08.2	+0.4
	0.3nm,0.3s,baz=9.9,slow=9.9,SNR=9.0						
FITZ				S	S	01 12 15.7	-3.5
	0.1nm,0.3s,baz=259,slow=13,SNR=1.7						
WRA	**Warramunga Arr**	**14.47**	**157**	P	P	01 10 40.0	+0.1
	0.5nm,0.3s,baz=339,slow=12,SNR=17						
ASAR	**Alice Springs**	**17.79**	**163**	P	P	01 11 16.6	+0.4
	0.7nm,0.3s,baz=344,slow=12,SNR=65						
MKAR	**Makanchi Array**	**67.03**	**327**	P	P	01 17 50.6	-0.1
	0.1nm,0.5s,baz=124,slow=8.1,SNR=4.2						

IDC 10 01:18:46.4±2.1**, 3°.10N×126°.75E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/38**, mbtmp3.5**/3**, Error ellipse: s-maj=165.6km s-min=27.0km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.08**	**162**	P	P	01 24 03.9	+0.1
	1.4nm,0.6s,baz=342,slow=11,SNR=11						
ASAR	**Alice Springs**	**27.50**	**166**	P	P	01 24 34.9	+0.1
	0.5nm,0.8s,baz=348,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**58.08**	**325**	P	P	01 28 41.3	-0.3
	0.2nm,0.5s,baz=125,slow=8.0,SNR=4.3						

*IDC **10** 01:30:42.7±0.8, 44°.49N×113°.97W, h0^{km}, mb1 3.5/5, mb1mx3.3/54, mbtmp3.2/5, ML3.4/5, Error ellipse: s-maj=12.1km s-min=8.0km az=57.0*
*BUT **10** 01:30:43.1±2.2, 44°.46N±0°.04×114°.11W±0°.06, h10^{km}±7^{km}, ML3.8, ML3.3/96(NEIC), Error ellipse: s-maj=6.7km s-min=4.7km az=49.0*
*NEIC **10** 01:30:43.4±1.8, 44°.48N±0°.05×114°.11W±0°.06, h5^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=6.3km az=161.0*
ISC 10 01:30:42.6±0.9**, 44°.49N**±0°.04×**114°.11W**±0°.03**, h6^{km}, n69, σ1^{s}.39**/71**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCYI	**Bear Canyon**	**0.53**	**110**		**Pg**	**01 30 52.9**	**0.0**
BCYI				Sg	**Sg**	**01 30 59.2**	**-0.7**
HLID	**Hailey**	**0.95**	**194**	Pg	**Pg**	**01 31 00.4**	**-0.5**
HLID				Sg	**Sg**	**01 31 12.8**	**-0.5**
HLID				IAML		01 31 14.8	
	914nm,0.3s						
HLID				IAML		01 31 18.8	
	755nm,0.4s						
MCMT	**McKenzie Canyo**	**0.96**	**69**		**Pg**	**01 31 01.3**	**+0.3**
DLMT	**Dillon**	**1.38**	**50**		**Pg**	**01 31 09.3**	**+0.2**
MFID	**Camas Ranch**	**1.65**	**230**	Pn	**Pn**	**01 31 12.7**	**+0.5**
LRM	**Limekiln Ridge**	**1.77**	**41**		**Pn**	**01 31 14.6**	**+0.5**
QLMT	**Earthquake Lak**	**1.94**	**79**		**Pn**	**01 31 16.8**	**+0.5**
BOZ	**Bozeman (W)**	**2.07**	**57**		**Pn**	**01 31 19.1**	**+1.0**
YHB	**Horse Butte**	**2.09**	**82**		**Pn**	**01 31 20.1**	**+1.7**
YHL	**Hebgen Lake**	**2.12**	**79**		**Pb**	**01 31 21.0**	**-0.6**
YMR	**Madison River**	**2.25**	**84**		**Pn**	**01 31 21.3**	**+0.7**
BMO	**Blue Mountains**	**2.31**	**280**	Pn	**Pn**	**01 31 21.9**	**+0.6**
MSO	**Missoula**	**2.34**	**3**	Pn	**Pn**	**01 31 22.7**	**+0.9**
MSO				IAML		01 31 59.1	
	178nm,0.5s						
YHH	**Holmes Hill**	**2.34**	**82**	Pn	**Pn**	**01 31 23.6**	**+1.6**
YPP	**Pitchstone Pla**	**2.38**	**94**		**Pn**	**01 31 24.3**	**+1.9**
YNM	**Yellowstone No**	**2.44**	**83**		**Pn**	**01 31 23.9**	**+0.6**
ECR	**Eagle Creek**	**2.45**	**125**		**Pn**	**01 31 24.1**	**+0.8**
FLWY	**Flagg Ranch**	**2.48**	**98**		**Pn**	**01 31 25.9**	**+2.2**
FLWY				IAML		01 32 06.3	
	188nm,0.8s						
FLWY				IAML		01 32 07.0	
	108nm,0.9s						
H17A	**Grant Village**	**2.53**	**91**	Pn	**Pn**	**01 31 24.4**	**0.0**
YUF	**Upper Falls**	**2.58**	**84**	Pn	**Pn**	**01 31 26.5**	**+1.4**
REDW	**Red Top Meadow**	**2.61**	**115**		**Pn**	**01 31 26.7**	**+1.2**
REDW				IAML		01 32 05.5	
	122nm,0.5s						
REDW				IAML		01 32 06.2	
	138nm,0.8s						
LKWY	**Lake**	**2.65**	**87**	Pn	**Pn**	**01 31 26.1**	**0.0**
LKWY				IAML		01 32 11.0	
	84nm,1.0s						
F10A	**Beach Ranch, E**	**2.66**	**305**		**Pn**	**01 31 27.6**	**+1.6**
LOHW	**Long Hollow**	**2.67**	**108**		**Pn**	**01 31 27.8**	**+1.4**
LOHW				IAML		01 32 08.3	
	76nm,0.8s						
HRY	**Holter Researc**	**2.73**	**35**		**Pn**	**01 31 27.6**	**+0.4**
AHID	**Auburn Hatcher**	**2.78**	**127**		**Pn**	**01 31 29.7**	**+1.8**
AHID				IAML		01 32 11.3	
	comp=E,111nm,0.5s						
AHID				IAML		01 32 12.9	
	comp=N,143nm,0.5s						
YMP	**Mirror Lake Pl**	**2.83**	**84**	Pn	**Pn**	**01 31 29.9**	**+1.2**
HVU	**Hansel Valley**	**2.88**	**160**		**Pn**	**01 31 30.8**	**+1.6**
YNE	**Yellowstone No**	**2.96**	**79**		**Pn**	**01 31 32.3**	**+1.9**
JTMT	**Jette**	**3.26**	**358**	Pn	**Pn**	**01 31 36.0**	**+1.6**
JTMT				IAML		01 32 30.2	
	comp=N,68nm,0.4s						
JTMT				IAML		01 32 30.7	
	comp=E,89nm,0.5s						
SPUT	**South Promonto**	**3.41**	**158**		**Pn**	**01 31 39.2**	**+2.8**
HWUT	**Hardware Ranch**	**3.43**	**146**	Pn	**Pn**	**01 31 35.9**	**-0.9**
HWUT				IAML		01 32 36.1	
	comp=E,58nm,0.8s						
HWUT				IAML		01 32 36.1	
	comp=E,65nm,0.9s						
E09A	**Wood Farm, Sta**	**3.49**	**307**		**Pn**	**01 31 38.4**	**+1.0**
E09A				IAML		01 32 41.1	
	comp=N,46nm,1.0s						
E09A				IAML		01 32 41.6	
	comp=E,49nm,1.1s						
RLMT	**Red Lodge**	**3.50**	**78**		**Pn**	**01 31 39.3**	**+1.5**
G08A	**Pilot Rock**	**3.54**	**285**	Pn	**Pn**	**01 31 39.5**	**+1.2**
BGU	**Big Grassy Mou**	**3.65**	**167**		**Pn**	**01 31 41.0**	**+1.2**
BW06	**Boulder Array**	**3.72**	**116**	Pn	**Pn**	**01 31 41.4**	**+0.6**
PD31	**Pinedale Array**	**3.73**	**116**	Pn	**Pn**	**01 31 40.8**	**-0.1**
PDAR	**Pinedale Array**	**3.73**	**116**	Pn	**Pn**	**01 31 44.0**	**+3.1**
	comp=E,0.7nm,0.3s,baz=304,slow=10,SNR=43						
PDAR				Lg	Lg	01 32 34.9	
	comp=E,0.5nm,0.3s,baz=302,slow=21,SNR=6.6						
PDAR	**Pinedale Array**	**3.73**	**116**		**Pn**	**01 31 40.2**	**-0.7**
ELK	**Elko**	**3.84**	**193**	Pn	**Pn**	**01 31 44.1**	**+1.7**
	comp=E,1.9nm,0.3s,baz=14,slow=14,SNR=11						
ELK				Lg	Lg	01 32 38.4	
	comp=E,9.1nm,0.3s,baz=136,slow=17,SNR=12						
ELK	**Elko**	**3.84**	**193**	Pn	**Pn**	**01 31 43.8**	**+1.4**
ELK				IAML		01 32 46.3	
	comp=E,35nm,0.7s						
WVOR	**Wild Horse Val**	**3.89**	**240**	Pn	**Pn**	**01 31 44.4**	**+1.4**
WVOR				IAML		01 33 02.2	
	comp=E,28nm,1.5s						
I07A	**Izee**	**3.90**	**266**	Pn	**Pn**	**01 31 44.4**	**+1.3**
TCUT	**Toone Canyon**	**3.91**	**149**	Pn	**Pn**	**01 31 44.4**	**+0.9**
CTU	**Camp Tracy**	**4.18**	**155**	Pn	**Pn**	**01 31 46.9**	**-0.1**
HAWA	**Hanford**	**4.27**	**298**	Pn	**Pn**	**01 31 50.4**	**+2.3**
HAWA				IAML		01 33 06.0	
	comp=E,19nm,1.4s						
NEW	**Newport**	**4.31**	**332**	Pn	**Pn**	**01 31 50.7**	**+1.9**
	comp=E,2.9nm,0.3s,baz=146,slow=14,SNR=33						
NEW				Lg	Lg	01 32 59.3	
	comp=E,6.0nm,0.3s,baz=69,slow=20,SNR=11						
NEW	**Newport**	**4.31**	**332**	Pn	**Pn**	**01 31 49.3**	**+0.6**
NEW				IAML		01 33 13.8	
	comp=E,32nm,0.7s						
C09A	**Chrisman Ranch**	**4.40**	**320**	Pn	**Pn**	**01 31 51.2**	**+1.3**
DUG	**Dugway, Tooele**	**4.40**	**167**	Pn	**Pn**	**01 31 51.5**	**+1.4**
DUG				IAML		01 33 06.5	
	comp=E,35nm,1.2s						
DUG				IAML		01 33 09.0	
	comp=E,38nm,0.8s						
E07A	**Sunnyside**	**4.54**	**299**	Pn	**Pn**	**01 31 51.9**	**+0.1**
E07A				IAML		01 33 19.7	
	comp=E,26nm,1.0s						
E07A				IAML		01 33 26.0	
	comp=N,30nm,1.1s						
EGMT	**Eagleton**	**4.65**	**39**	Pn	**Pn**	**01 31 53.0**	**-0.4**
MPU	**Maple Canyon**	**4.83**	**157**	Pn	**Pn**	**01 31 57.0**	**+0.9**
PINE	**Pine Mountain**	**4.97**	**264**	Pn	**Pn**	**01 31 57.2**	**-0.7**
PINE				IAML		01 32 36.0	
	comp=N,15nm,4.7s						
PINE				IAML		01 33 35.6	
	comp=E,16nm,4.7s						
MOD	**Modoc Plateau**	**5.22**	**242**		**Pn**	**01 32 01.9**	**+0.6**
MOD				IAML		01 33 46.6	
	comp=E,10nm,3.5s						
B08A	**Colville Reser**	**5.29**	**319**	Pn	**Pn**	**01 32 02.4**	**+0.2**
B08A				IAML		01 33 36.9	
	comp=E,21nm,0.8s						
B08A				IAML		01 33 37.4	
	comp=N,21nm,1.1s						
LTY	**Liberty**	**5.35**	**303**		**Pn**	**01 32 03.4**	**+0.3**
LTY				IAML		01 33 32.4	
	comp=N,11nm,4.8s						
LTY				IAML		01 33 54.1	
	comp=E,14nm,1.9s						
LAO	**LASA Array**	**5.95**	**66**	Pn	**Pn**	**01 32 12.7**	**+1.4**
PSUT	**Pine Spring**	**5.96**	**178**	Pn	**Pn**	**01 32 13.3**	**+1.8**
TCRU	**Three Creeks R**	**6.01**	**167**	Pn	**Pn**	**01 32 13.6**	**+1.3**
O20A	**White River Ci**	**6.15**	**133**	Pn	**Pn**	**01 32 12.8**	**-1.4**
R11A	**Troy Canyon, C**	**6.24**	**191**	Pn	**Pn**	**01 32 16.4**	**+1.1**
BEKR	**Beckworth**	**6.55**	**227**	Pn	**Pn**	**01 32 20.8**	**+1.2**
VCNR	**Virginia City**	**6.64**	**220**	Pn	**Pn**	**01 32 22.9**	**+2.0**
PNTR	**Pine Nut**	**6.78**	**219**	Pn	**Pn**	**01 32 23.0**	**+0.2**
TPH	**Tonopah**	**6.83**	**201**	Pn	**Pn**	**01 32 23.5**	**0.0**
NVAR	**Mina Array Bea**	**6.83**	**209**	Pn	**Pn**	**01 32 28.2**	**+4.7**
	comp=E,0.2nm,0.3s,baz=25,slow=12,SNR=4.9						
NVAR				Lg	Lg	01 34 14.9	
	comp=E,0.5nm,0.3s,baz=24,slow=34,SNR=4.6						
YKA	**Yellowknife Ar**	**18.04**	**359**	Pn	**Pn**	**01 34 52.1**	**-1.5**
	comp=E,0.1nm,0.3s,baz=176,slow=12,SNR=5.8						

*SKHL **10** 01:37:02.1±0.5, 48°.02N×145°.72E, h506^{km}±4^{km}, mb4.9/2, msh5.0/5*
*MOS **10** 01:37:02.6±1.1, 48°.06N×145°.30E, h484^{km}, mb4.0/8, Error ellipse: s-maj=13.2km s-min=7.7km az=75.7*
*IDC **10** 01:37:03.5±1.2, 48°.11N×145°.36E, h478^{km}±14^{km}, mb3.3/19, mb1 3.4/27, mb1mx3.3/61, mbtmp4.1/27, Error ellipse: s-maj=12.2km s-min=9.6km az=150.0*
ISC 10 01:37:02.0±0.5**, 47°.88N**±0°.05×**145°.51E**±0°.06**, h471^{km}, n93, σ1^{s}.86**/109**, mb3.9**/34**, 6C-7D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**2.09**	**245**	*i* P	**P**	**01 38 07.2**	**+2.3**
YSS				AMB	AMB	01 38 08.0	
	112nm,0.4s						
YSS				*i* S	**S**	**01 38 57.2**	**+1.2**
YSS				A	A	01 38 58.6	
	48nm,0.4s						
YSS				A	A	01 38 58.6	
	42nm,0.4s						
YSS				A	A	01 39 05.0	
	450nm,3.0s						
YSS				A	A	01 39 05.0	
	380nm,3.0s						
YSS	**Yuzh-Sakhalins**	**2.09**	**245**	*i* P	**P**	**01 38 07.4**	**+2.5**
YSS				AMB	AMB	01 38 08.0	
	200nm,0.9s						
YSS				*i* S	**S**	**01 38 58.0**	**+2.1**
YSS				A	A	01 38 58.6	
	50nm,0.4s						
YSS				A	A	01 38 58.6	
	40nm,0.4s						
YSS				A	A	01 39 05.0	
	450nm,3.0s						
YSS				A	A	01 39 05.0	
	380nm,3.0s						
YSS	**Yuzh-Sakhalins**	**2.09**	**245**α	*i*PN	**P**	**01 38 07.6**	**+2.7**
YSS				*i* S	**S**	**01 38 58.1**	**+2.1**
YSS				pmax	pmax		
	comp=Z,200nm,0.9s						
YSS				smax	smax		
	comp=N,60nm,1.2s						
KHLM	**Kholmsk**	**2.49**	**252**	*i* P	**P**	**01 38 10.0**	**+2.8**
KHLM				AMB	AMB	01 38 10.1	
	comp=N,330nm,0.3s						
UGL	**Uglegorsk**	**2.58**	**299**	*e*P	**P**	**01 38 09.5**	**+1.8**
UGL				AMB	AMB	01 38 10.9	
	comp=N,260nm,0.4s						
UGL				*e*S	**S**	**01 39 02.6**	**+1.3**
UGL				A	A	01 39 07.8	
	comp=N,130nm,0.7s						
UGL				A	A	01 39 07.8	
	comp=N,83nm,0.7s						
UGL	**Uglegorsk**	**2.58**	**299**	*i* P	**P**	**01 38 09.5**	**+1.8**
UGL				AMB	AMB	01 38 10.3	
	comp=N,300nm,0.5s						
KUR	**Kuril'sk**	**3.11**	**148**	*e*P	**P**	**01 38 13.5**	**+2.0**
KUR				AMB	AMB	01 38 15.3	
	comp=N,130nm,0.6s						
KUR				AMB	AMB	01 38 16.7	
	comp=N,1µm,3.0s						
KUR				*e*S	**S**	**01 39 09.6**	**+1.7**
KUR				A	A	01 39 17.0	
	comp=N,3µm,3.0s						
KUR				A	A	01 39 17.0	
	comp=N,3µm,3.0s						
TYV	**Tymovskoe**	**3.52**	**329**	*e*P	**P**	**01 38 15.7**	**+1.4**
TYV				AMB	AMB	01 38 15.9	
	comp=N,400nm,3.0s						
TYV				AMB	AMB	01 38 16.1	
	comp=N,110nm,0.6s						
TYV				*e*S	**S**	**01 39 13.3**	**-0.2**
TYV				A	A	01 39 14.9	
	comp=N,26nm,0.6s						
TYV				A	A	01 39 14.9	
	comp=N,24nm,0.6s						
TYV				A	A	01 39 16.1	
	comp=N,860nm,5.0s						
TYV				A	A	01 39 16.1	
	comp=N,1µm,5.0s						
TYV	**Tymovskoe**	**3.52**	**329**	*e*PN	**P**	**01 38 15.7**	**+1.4**
TYV				*e*S	**S**	**01 39 13.6**	**+0.1**
TYV				pmax	pmax		
	comp=Z,400nm,2.5s						
TYV				pmax	pmax		
	comp=Z,112nm,0.6s						
TYV				smax	smax		
	comp=E,24nm,1.0s						
TYV				smax	smax		
	comp=E,1µm,4.8s						
JWK2	**Keihoku**	**3.58**	**225**	P	**P**	**01 38 17.8**	**+2.8**
YUK	**Yuzh-Kuril'sk**	**3.86**	**176**	*e*P	**P**	**01 38 21.0**	**+3.7**
YUK				*e*S	**S**	**01 39 22.7**	**+4.1**
GRPR	**Tuman**	**3.90**	**177**	*e*S	**S**	**01 39 22.8**	**+3.6**
JRBN	**Rebuntou**	**3.93**	**233**	P	**P**	**01 38 19.7**	**+1.8**
JKA	**Kamikawa-asahi**	**4.28**	**209**	*e*P	**P**	**01 38 23.2**	**+2.3**
ASAJ	**Asahikawa**	**4.28**	**209**	P	**P**	**01 38 23.2**	**+2.2**
	comp=E,1.5nm,0.3s,baz=167,slow=7.1,SNR=5.4						
NMR	**Nemuro--Hokkai**	**4.52**	**178**	*e*P	**P**	**01 38 22.0**	**-1.0**
NMR	**Nemuro--Hokkai**	**4.52**	**178***c*	*i*PN	**P**	**01 38 22.0**	**-1.0**
NEM2	**Nemuro 2**	**4.52**	**178**	P	**P**	**01 38 21.9**	**-1.2**
NEM2				*e*S	**S**	**01 39 24.8**	**-4.3**
JAR	**Ashorobuto**	**4.75**	**196**	P	**P**	**01 38 26.3**	**+1.2**
JAR				*e*S	**S**	**01 39 33.3**	**+0.4**
JHR	**Hokuryu**	**4.91**	**214**	P	**P**	**01 38 28.7**	**+2.0**
JAK	**Akkeshi**	**4.92**	**187**	P	**P**	**01 38 26.3**	**-0.4**
JAK				*e*S	**S**	**01 39 32.3**	**-3.5**
JFR	**Furan**	**5.14**	**205**	P	**P**	**01 38 30.7**	**+1.8**
JCH	**Churui**	**5.48**	**197**	P	**P**	**01 38 32.2**	**+0.1**
JCH				*e*S	**S**	**01 39 41.6**	**-3.9**
JEW	**Eniwo**	**5.80**	**211**	P	**P**	**01 38 37.0**	**+1.8**
OKH	**Okha**	**5.91**	**345**	*e*P	**P**	**01 38 36.8**	**+0.9**
OKH				AMB	AMB	01 38 38.1	
	comp=E,80nm,0.5s						
ERM	**Erimo**	**6.10**	**197**⇑	*e*PN	**P**	**01 38 39.6**	**+1.4**
TEY	**Ternei**	**6.78**	**248**	*e*P	P	01 38 49.7	+4.8
TEY				AMB	AMB	01 38 52.5	
	comp=E,15nm,0.9s						
JKB	**Kayabe**	**6.79**	**210**	P	**P**	**01 38 45.5**	**+0.5**
JKB				*e*S	**S**	**01 40 06.4**	**-3.0**
JOT	**Ohata**	**7.24**	**208**	P	**P**	**01 38 49.7**	**0.0**
JOT				*e*S	**S**	**01 40 13.9**	**-4.1**
PAU	**Pauzhetka**	**8.16**	**60**	*e*P	**P**	**01 38 55.5**	**-3.7**
PAU				AMB	AMB	01 39 00.2	
	comp=E,30nm,0.6s						
KLR	**Kul'dur**	**9.23**	**284**	P	**P**	**01 39 12.5**	**+1.8**
	comp=E,0.7nm,0.3s,baz=76,slow=9.5,SNR=18						
KLR	**Kul'dur**	**9.23**	**284**	*e*P	**P**	**01 39 12.3**	**+1.6**
KLR	**Kul'dur**	**9.23**	**284***d*	*e*PN	**P**	**01 39 12.3**	**+1.6**
PETK	**Petropavlovsk-**	**9.36**	**52**	P	**P**	**01 39 12.8**	**+0.8**
	comp=E,0.2nm,0.3s,baz=223,slow=7.9,SNR=4.2						
EKMR	**Ekimchan**	**9.54**	**308**	*e*P	**P**	**01 39 15.0**	**+1.0**
EKMR				AMB	AMB	01 39 15.5	
	comp=E,8.0nm,0.6s						
EKMR	**Ekimchan**	**9.54**	**308**	*e*P	**P**	**01 39 15.0**	**+1.0**
EKMR				AMB	AMB	01 39 15.5	
	comp=E,8.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**10.10**	**254**⇓	*e*PN	**P**	**01 39 20.7**	**+0.6**
USRK	**Ussuriysk Ar.**	**10.10**	**254**	P	**P**	**01 39 21.1**	**+1.0**
	baz=60,slow=12,SNR=13						
MA2	**Magadan**	**12.12**	**13**	P	**P**	**01 39 41.5**	**-0.1**
	comp=E,0.8nm,0.3s,baz=209,slow=8.8,SNR=5.0						
BMKR	**Bomnak**	**12.45**	**309**	*e*P	**P**	**01 39 44.9**	**-0.3**
BMKR				AMB	AMB	01 39 45.8	
	comp=E,13nm,0.3s						
BMKR	**Bomnak**	**12.45**	**309**	*e*P	**P**	**01 39 45.0**	**-0.3**
BMKR				AMB	AMB	01 39 45.8	
	comp=E,13nm,0.3s						
MJA0	**Matsu Arr-Jizo**	**12.54**	**208**	*e*PN	**P**	**01 39 50.1**	**+3.6**
MJAR	**Matsushiro Arr**	**12.55**	**208**	P	**P**	**01 39 49.6**	**+2.9**
	comp=E,0.2nm,0.3s,baz=19,slow=11,SNR=4.8						
JRY	**Ryogami san**	**12.83**	**205**	P	**P**	**01 39 52.5**	**+2.8**
KROS	**Kirovskiy**	**13.33**	**306**	*e*P	**P**	**01 39 54.0**	**-0.7**
KROS				AMB	AMB	01 39 55.1	
	comp=E,7.0nm,0.4s						
KROS	**Kirovskiy**	**13.33**	**306**	*e*P	**P**	**01 39 54.5**	**-0.2**
KROS				AMB	AMB	01 39 55.1	
	comp=E,7.0nm,0.4s						
JOD2	**Odawara 2**	**13.49**	**203**	P	**P**	**01 39 56.1**	**-0.6**
SEY	**Seymchan**	**15.56**	**12**	P	**P**	**01 40 18.4**	**+0.2**
	comp=E,1.1nm,0.3s,baz=189,slow=11,SNR=6.7						
KSRS	**Korea Array**	**16.57**	**237**	P	**P**	**01 40 31.2**	**+2.0**
	comp=E,0.3nm,0.3s,baz=44,slow=11,SNR=5.9						
YAK	**Yakutsk**	**16.77**	**334**	*e*P	**P**	**01 40 29.0**	**-1.9**
YAK	**Yakutsk**	**16.77**	**334**⇓	*e*P	**P**	**01 40 29.0**	**-1.9**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**17.09**	**284**	*i* P	**P**	**01 40 31.8**	**-2.7**
ULN	**Ulaanbaatar**	**25.62**	**284**	*e*P	**P**	**01 41 51.9**	**-0.7**
ULN	**Ulaanbaatar**	**25.62**	**284***c*	*e*P	**P**	**01 41 51.9**	**-0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**26.06**	**285**	P	**P**	**01 41 56.8**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=81,slow=7.7,SNR=10						
SONM	**Songino Array**	**26.06**	**285**	*e*P	**P**	**01 41 59.5**	**+3.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DGZ	**Jazzator, Alta**	**37.48**	**295**⇑	*e*P	**P**	**01 43 35.0**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**37.70**	**303**	P	**P**	**01 43 34.8**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=71,slow=6.1,SNR=9.3						
ILAR	**Eielson Array**	**38.91**	**39**	P	**P**	**01 43 45.2**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=254,slow=6.0,SNR=12						
MK31	**Makanchi Array**	**41.78**	**293***d*	*i*P	**P**	**01 44 08.2**	**-0.6**
MKAR	**Makanchi Array**	**41.78**	**293**	P	**P**	**01 44 08.4**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=69,slow=7.3,SNR=17						
KURK	**Kurchatov**	**42.37**	**300**	*e*P	**P**	**01 44 12.6**	**-0.8**
KURK	**Kurchatov**	**42.37**	**300***d*	*i*P	**P**	**01 44 12.6**	**-0.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**46.12**	**306**	*e*P	**P**	**01 44 42.4**	**0.0**
BRVK	**Borovoye**	**46.12**	**306**⇓	*e*P	**P**	**01 44 42.4**	**0.0**
BRVK				*i* *PP	**pP**	**01 46 16.0**	**+4.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
CHTO	**Chiang Mai**	**47.51**	**249**	P	**P**	**01 44 49.5**	**-4.0**
CHTO				pmax	pmax		
	comp=Z,31nm,0.8s						
TAPN	**Taplejung**	**48.93**	**267**	*e*P	**P**	**01 45 05.0**	**+0.6**
	comp=Z,3.5nm,0.4s						
GUN	**Gumba**	**49.80**	**269**	*e*P	**P**	**01 45 11.4**	**+0.5**
	comp=Z,12nm,0.5s						
RAMN	**Ramite**	**49.94**	**267**	*e*P	**P**	**01 45 12.4**	**+0.6**
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**50.28**	**269**	*e*P	**P**	**01 45 15.6**	**+1.3**
	comp=Z,12nm,0.5s						
PKI	**Pulchoki**	**50.33**	**269**	*e*P	**P**	**01 45 15.0**	**+0.2**
	comp=Z,9.2nm,0.7s						
PKIN	**Phulchoki**	**50.34**	**269**	*e*P	**P**	**01 45 15.1**	**+0.3**
	comp=Z,5.5nm,0.4s						
ARU	**Arti**	**50.59**	**314**	*e*P	**P**	**01 45 14.7**	**-1.2**
ARU	**Arti**	**50.59**	**314***d*	*i*P	**P**	**01 45 14.7**	**-1.2**
ARU				S	**S**	**01 51 53.4**	**-0.7**
ARU				SS	**SS**	**01 55 33.2**	**-2.0**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DANN	**Dangsing**	**50.94**	**271**	*e*P	**P**	**01 45 20.2**	**+1.0**
	comp=Z,61nm,0.5s						
RES	**Resolute Bay**	**51.35**	**17**	P	**P**	**01 45 19.8**	**-1.2**
	comp=Z,2.4nm,0.6s,baz=309,slow=6.3,SNR=14						
KOLN	**Koldanda**	**51.42**	**270**	*e*P	**P**	**01 45 23.5**	**+0.9**
	comp=Z,20nm,0.6s						
PYUN	**Piuthan**	**51.62**	**271**	*e*P	**P**	**01 45 25.0**	**+1.0**
	comp=Z,22nm,0.4s						
YKA	**Yellowknife Ar**	**53.03**	**35**	P	**P**	**01 45 33.0**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=306,slow=5.9,SNR=12						
ARCES	**ARCESS Array B**	**54.98**	**338**	P	**P**	**01 45 46.1**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=350,slow=6.2,SNR=7.3						
FINES	**FINESS Array B**	**60.69**	**331**	P	**P**	**01 46 24.9**	**-1.2**
	comp=Z,4.2nm,0.5s,baz=41,slow=7.4,SNR=42						
GEYT	**Alibeck**	**61.52**	**296**	P	**P**	**01 46 31.9**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=69,slow=4.8,SNR=3.5						
NB2	**NORSAR Subarra**	**65.34**	**337**	P	**P**	**01 46 55.3**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**65.34**	**337**	P	**P**	**01 46 55.4**	**-0.9**
	comp=Z,2.4nm,0.5s,baz=32,slow=6.6,SNR=13						
KBZ	**Khabaz**	**66.25**	**309**	P	**P**	**01 47 02.5**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=72,slow=5.5,SNR=7.6						
NVAR	**Mina Array Bea**	**66.37**	**58**	P	**P**	**01 47 04.8**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=300,slow=6.1,SNR=13						
AKASG	**Malin Array Be**	**67.59**	**322**	P	**P**	**01 47 09.2**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=39,slow=6.3,SNR=12						
PDAR	**Pinedale Array**	**68.12**	**50**	P	**P**	**01 47 14.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=11,slow=0.8,SNR=13						
WRA	**Warramunga Arr**	**68.25**	**191**	P	**P**	**01 47 16.0**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=9.0,slow=4.3,SNR=6.9						
ASAR	**Alice Springs**	**71.98**	**191**	P	**P**	**01 47 39.2**	**+2.3**
	comp=Z,2.0nm,0.4s,baz=0.4,slow=5.0,SNR=37						
BRTR	**Keskin Array B**	**73.90**	**312**	P	**P**	**01 47 47.6**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=92,slow=3.4,SNR=5.3						
ANMO	**Albuquerque**	**75.49**	**54**	P	**P**	**01 47 59.1**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=6.8,slow=6.7,SNR=3.1						
TXAR	**Lajitas Array**	**81.28**	**56**	P	**P**	**01 48 29.4**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=268,slow=4.2,SNR=4.5						

*IDC **10** 01:40:37.8±13.0, 18°.20S×69°.12W, h0^{km}, mb3.6/2, mb1 3.7/2, mb1mx3.4/26, mbtmp3.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/24, Error ellipse: s-maj=806.4km s-min=85.0km*

az=7.0

GUC ***10*** *01:40:50.0±0.6, 21°.19S×68°.71W, h119km±3km, ML3.6*

ISC 10 01:40:49.4±1.0,**21°.19S**±0°.04×**68°.78W**±0°.09,**h125**km±9km, **n20**,σ**0s.44**/30,**10C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.75	215	⇑iP	Pn	01 41 10.0	+0.1
PB09				iS	Sn	01 41 25.3	-0.1
PB08	IPOC Station P	1.10	341	⇓iP	Pn	01 41 13.6	+0.3
PB08				iS	Sn	01 41 31.3	0.0
PB07	IPOC Station P	1.17	242	⇑iP	Pn	01 41 13.8	+0.1
PB07				iS	Sn	01 41 32.0	-0.3
PB07				IAML		01 41 35.2	
	comp=E,587nm,0.3s						
PB03	IPOC Station P	1.25	226	⇑iP	Pn	01 41 14.6	0.0
PATCX	Punta Patache	1.34	285	⇑iP	Pn	01 41 15.8	+0.3
PATCX				iS	Sn	01 41 35.9	+0.6
PATCX				IAML		01 41 37.3	
	comp=E,1µm,0.4s						
HMBC	Humberstone	1.38	311	⇑iP	Pn	01 41 15.8	-0.2
HMBC				iS	Sn	01 41 36.1	-0.1
HMBC				IAML		01 41 37.1	
	comp=N,999nm,0.6s						
LVC	Limon Verde	1.42	185	⇑iP	Pn	01 41 16.9	+0.1
LVC				iS	Sn	01 41 37.5	-0.1
TA01	Diego Aracena	1.45	295	⇑iP	Pn	01 41 16.7	0.0
TA01				iS	Sn	01 41 37.3	-0.1
GO01	Chusmiza	1.56	345	eP	Pn	01 41 18.3	-0.1
GO01				eS	Sn	01 41 40.5	+0.1
TA02	Huaiquique	1.56	305	⇑iP	Pn	01 41 18.0	+0.1
TA02				iS	Sn	01 41 39.4	-0.2
TA02				IAML		01 41 42.7	
	comp=N,1µm,0.1s						
PB04	IPOC Station P	1.71	228	⇓iP	Pn	01 41 20.2	+0.3
PB04				iS	Sn	01 41 43.1	0.0
PB04				IAML		01 41 47.6	
	comp=N,386nm,0.3s						
PSGC	Pisagua	2.02	321	⇑iP	Pn	01 41 23.0	-0.6
PSGC				iS	Sn	01 41 48.6	-1.1
PB05	IPOC Station P	2.12	218	eP	Pn	01 41 24.6	-0.2
MNMC	Minye Minye	2.18	339	⇑iP	Pn	01 41 26.0	+0.3
MNMC				iS	Sn	01 41 54.2	+0.7
MNMC				IAML		01 41 57.3	
	comp=E,440nm,0.2s						
PB10	IPOC Station P	2.84	215	eP	Pn	01 41 33.7	-0.1
BDFB	Brasilia	20.45	78	P	P	01 45 16.1	-1.1
	comp=E,1.3nm,0.5s,baz=241,slow=10,SNR=3.6						
SJG	San Juan	39.14	4	LR	LR	02 02 07.4	
	comp=E,16nm,18.6s,baz=291,slow=36						
TORD	Torodi Ar. Bea	77.13	70	P	P	01 52 30.0	+0.3
	comp=E,0.4nm,0.4s,baz=253,slow=5.3,SNR=7.9						
NEW	Newport	81.54	330	LR	LR	02 31 42.8	
	comp=E,80nm,18.1s,baz=148,slow=39						
MKAR	Makanchi Array	145.31	36	PKP	PKPbc	02 00 13.2	+0.8
	comp=E,0.4nm,0.8s,baz=310,slow=3.2,SNR=4.3						

IDC 10 01:56:45.4±4.9,**20°.18S**×**66°.31E,h0**km,**mb3.6**/6, **mb1 3.8**/6,**mb1mx3.6**/35,**mbtmp3.6**/6,**Error ellipse: s-maj=143.5km s-min=35.8km az=59.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	49.99	42	P	P	02 05 41.6	-0.1
	0.5nm,0.3s,baz=234,slow=7.7,SNR=1.1						
ASAR	Alice Springs	62.28	107	P	P	02 07 09.4	-0.4
	0.8nm,0.8s,baz=256,slow=5.6,SNR=5.4						
WRA	Warramunga Arr	63.46	103	P	P	02 07 18.0	+0.4
	0.5nm,0.6s,baz=253,slow=6.2,SNR=2.1						
MKAR	Makanchi Array	68.20	12	P	P	02 07 46.5	-1.0
	0.4nm,0.9s,baz=179,slow=6.6,SNR=2.8						
ZALV	Zalesovo Beam	75.53	11	P	P	02 08 32.1	+0.8
	0.6nm,0.6s,baz=198,slow=4.2,SNR=3.7						
SONM	Songino Array	76.66	26	P	P	02 08 38.4	+0.3
	0.2nm,0.5s,baz=206,slow=6.6,SNR=1.8						

UCR ***10*** *01:58:53.4±1.1, 12°.48N×89°.54W, h20km±6km, ML3.8, mb4.3(NEIC)*

SNET ***10*** *01:58:53.2±1.1, 12°.49N×89°.52W, h13km±7km, ML3.8*

NEIC ***10*** *01:59:00.6±1.8, 12°.94N±0°.08×89°.2W±0°.1, h60km±9km, mb4.3/29, Error ellipse: s-maj=18.5km s-min=7.3km az=58.0*

IDC ***10*** *01:59:01.3±3.5, 13°.09N×88°.88W, h66km±33km, mb3.5/9, mb1 3.8/10, mb1mx3.6/35, mbtmp3.8/10, ML3.5/1, Error ellipse: s-maj=49.5km s-min=17.1km az=52.0*

GCG ***10*** *01:59:17.5±0.6, 15°.21N×90°.79W, h13km, MD4.1*

ISC 10 01:58:56.7±0.7,**12°.62N**±0°.07×**89°.46W**±0°.06,**h35**km,**n87**, σ**1s.33**/90,**mb4.2**/20,**4C-2D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	1.03	1	eP	Pn	01 59 14.6	-0.2
JAYA				eS	Sn	01 59 30.0	+1.9
JAYA				IAML		01 59 32.2	
	comp=Z,4µm,0.2s						
JAYA	Jayaque - finc	1.03	1	eP	Pn	01 59 14.6	-0.2
JAYA				eS	Sn	01 59 30.0	+1.9
JAYA				IAML		01 59 32.2	
	comp=Z,4µm,0.2s						
SNET	Serv Nac Est T	1.08	12	eP	Pn	01 59 15.6	0.0
SNET	Serv Nac Est T	1.08	12	eP	Pn	01 59 15.6	0.0
SNET	Serv Nac Est T	1.08	12	Pn	Pn	01 59 15.1	-0.4
BOQS	Boqueron	1.12	9	⇓eP	Pn	01 59 16.5	+0.3
BOQS				eS	Sn	01 59 33.5	+3.1
BOQS	Boqueron	1.12	9	⇓eP	Pn	01 59 16.5	+0.3
BOQS				eS	Sn	01 59 33.5	+3.1
COEG	Centro de Oper	1.14	30	eP	Pn	01 59 15.9	-0.5
COEG	Centro de Oper	1.14	30	eP	Pn	01 59 15.9	-0.5
LFU	La Fuente	1.17	17	eP	Pn	01 59 17.0	+0.3
LFU	La Fuente	1.17	17	eP	Pn	01 59 17.0	+0.3
CEDA	San Andres	1.18	3	eP	Pn	01 59 17.3	+0.5
CEDA	San Andres	1.18	3	eP	Pn	01 59 17.3	+0.5
LBRS	Las Brisas	1.18	20	eP	Pn	01 59 17.1	+0.2
LBRS	Las Brisas	1.18	20	eP	Pn	01 59 17.1	+0.2
PAVA	Las Pavas	1.20	25	eP	Pn	01 59 17.1	-0.1
PAVA	Las Pavas	1.20	25	eP	Pn	01 59 17.1	-0.1
CEVE	Cerro Verde	1.21	352	eP	Pn	01 59 17.1	-0.3
CEVE	Cerro Verde	1.21	352	eP	Pn	01 59 17.1	-0.3
SBLS	San Blas	1.22	353	eP	Pn	01 59 17.1	-0.4
SBLS	San Blas	1.22	353	eP	Pn	01 59 17.1	-0.4
SNJE	San Jose	1.25	353	eP	Pn	01 59 17.9	0.0
SNJE	San Jose	1.25	353	eP	Pn	01 59 17.9	0.0
COEB	Comit de Eme	1.26	46	eP	Pn	01 59 17.7	-0.2
COEB				IAML		01 59 43.4	
	comp=Z,2µm,0.4s						
COEB	Comit de Eme	1.26	46	eP	Pn	01 59 17.7	-0.2
COEB				IAML		01 59 43.4	
	comp=Z,2µm,0.4s						
TECA	Tecapa	1.27	47	eP	Pn	01 59 17.9	-0.3
TECA	Tecapa	1.27	47	eP	Pn	01 59 17.9	-0.3
RTR	El Retiro	1.28	352	eP	Pn	01 59 18.6	+0.3
RTR	El Retiro	1.28	352	eP	Pn	01 59 18.6	+0.3
TACO	Tacachico	1.34	4	⇑eP	Pn	01 59 18.9	-0.2
TACO	Tacachico	1.34	4	⇑eP	Pn	01 59 18.9	-0.2
PACA	Pacayal	1.39	53	eP	Pn	01 59 20.3	+0.5
PACA	Pacayal	1.39	53	eP	Pn	01 59 20.3	+0.5
LCND	La Caada	1.68	66	eP	Pn	01 59 23.0	-0.6
LCND	La Caada	1.68	66	eP	Pn	01 59 23.0	-0.6
FAGO	Alcalda de S	1.69	51	eP	Pn	01 59 24.1	+0.2
FAGO				eS	Sn	01 59 48.3	+3.9
FAGO	Alcalda de S	1.69	51	eP	Pn	01 59 24.1	+0.2
FAGO				eS	Sn	01 59 48.3	+3.9
MTO3	Montecristo	1.77	3	⇑eP	Pn	01 59 25.6	+0.5
MTO3	Montecristo	1.77	3	⇑eP	Pn	01 59 25.6	+0.5
MTO3	Montecristo	1.77	3		Pn	01 59 25.1	0.0
ESQI	Esquipulas	1.93	3		Pn	01 59 26.8	-0.5
PCG	Pacaya	2.08	328	eP	Pn	01 59 34.2	+4.7
NBG	Las Nubes	2.14	336	eP	Pn	01 59 32.0	+1.8
FUG	Fuego 3	2.26	324	eP	Pn	01 59 31.8	0.0
CRIN	San Cristobal	2.35	88		Pn	01 59 33.9	+0.9
MRL	Marmol	2.45	355	eP	Pn	01 59 37.4	+2.8
TGUH	Tegucigalpa,Un	2.56	56	Pn	Pn	01 59 34.9	-1.0
PETF	Flores	4.29	355		Pn	01 59 57.2	-2.3
JTS	Las Juntas de	4.99	117	P	Pn	02 00 10.4	+1.2
	comp=Z,2.1nm,0.3s,baz=169,slow=22,SNR=8.7						
ZAIG	Zacatecas	16.04	311		P	02 02 44.3	+1.1
VBMS	Vicksburg	19.53	357	P	P	02 03 19.8	-1.4
435B	Jarrell	19.57	339	P	P	02 03 21.2	-0.5
JCT	Junction City	20.18	333	P	P	02 03 28.4	-0.1
WHTX	Lake Whitney,	20.63	340	P	P	02 03 32.9	-0.3
TXAR	Lajitas Array	21.23	324	P	P	02 03 41.9	+2.0
	comp=Z,2.7nm,0.7s,baz=136,slow=9.5,SNR=17						
TXAR	Lajitas Array	21.23	324	P	P	02 03 41.7	+1.8
TX31	Lajitas Ar. Si	21.24	324	P	P	02 03 41.6	+1.7
TX31				IAmb	IAmb	02 03 42.3	
	comp=Z,14nm,0.8s						
TX32	Lajitas Array	21.24	324	P	P	02 03 41.5	+1.6
OXF	Oxford	21.79	0	P	P	02 03 45.1	-0.6
ABTX	Abilene, Hawle	21.99	337		P	02 03 47.9	0.0
ABTX				IAmb	IAmb	02 03 49.6	
	comp=Z,8.1nm,0.8s						
MIAR	Mount Ida	22.14	351	P	P	02 03 49.4	-0.1
MIAR				IAmb	IAmb	02 03 52.1	
	comp=Z,9.3nm,0.8s						
IGPR	InterUniversit	23.13	74	P	P	02 03 58.5	-1.5
LCAR	Lake Charles	23.40	357	P	P	02 04 01.4	-1.0
W35A	Tecumseh	23.42	345	P	P	02 04 01.2	-1.5
TKL	Tuckaleechee C	23.50	12	P	P	02 04 01.3	-2.2
	comp=Z,3.7nm,0.8s,baz=190,slow=14,SNR=2.8						
WMOK	Wichita Mounta	23.59	341	P	P	02 04 02.7	-1.7
WMOK				IAmb	IAmb	02 04 03.2	
	comp=Z,6.5nm,0.7s						
FNO	Franklin	23.66	344	P	P	02 04 04.0	-1.0
U40A	Yellville	23.83	353	P	P	02 04 06.2	-0.5
U40A				IAmb	IAmb	02 04 07.8	
	comp=Z,7.5nm,0.9s						
PBMO	Poplar Bluff	24.07	358	P	P	02 04 07.9	-0.9
T42A	Van Buren	24.35	357	IAmb	IAmb	02 04 12.1	
	comp=Z,8.8nm,0.8s						
MSTX	Muleshoe	24.47	332	IAmb	IAmb	02 04 12.9	
	comp=Z,8.5nm,1.1s						
S39A	Bolivar	25.20	353	IAmb	IAmb	02 04 19.9	
	comp=Z,16nm,1.4s						
CCM	Cathedral Cave	25.38	357	P	P	02 04 19.9	-0.8
CCM				IAmb	IAmb	02 04 22.4	
	comp=Z,8.0nm,0.7s						
T25A	Trinidad	27.85	334	P	P	02 04 43.3	0.0
PV23	Carpenter Ridg	31.05	329	P	P	02 05 13.1	+1.3
PV23				IAmb	IAmb	02 05 13.7	
	comp=Z,4.3nm,0.8s						
PDAR	Pinedale Array	34.72	334	P	P	02 05 43.3	-0.4
	comp=Z,0.3nm,0.7s,baz=152,slow=8.1,SNR=2.1						
NVAR	Mina Array Bea	36.30	320	P	P	02 05 59.4	+2.0
	comp=Z,1.1nm,0.7s,baz=137,slow=7.4,SNR=11						
NVAR				PcP	PcP	02 08 23.1	+1.2
	comp=Z,0.6nm,0.7s,baz=133,slow=4.3,SNR=5.9						
NVAR	Mina Array Bea	36.30	320	P	P	02 05 59.0	+1.7
LHV	Little Huntoon	36.32	320	P	P	02 05 59.4	+2.2
LHV				IAmb	IAmb	02 06 00.0	
	comp=Z,3.1nm,0.8s						
MCMT	McKenzie Canyo	37.81	333	P	P	02 06 11.1	+1.0
ULM	Lac du Bonnet	37.89	353	P	P	02 06 07.8	-2.5
	comp=Z,4.2nm,0.7s,baz=165,slow=9.3,SNR=6.9						
SIV	San Ignacio	39.96	135	P	P	02 06 28.4	+0.3
	comp=Z,0.5nm,0.3s,baz=321,slow=12,SNR=6.2						
YKA	Yellowknife Ar	52.95	346	P	P	02 08 08.0	-1.4
	comp=Z,0.9nm,0.7s,baz=142,slow=7.8,SNR=14						
ILAR	Eielson Array	65.08	337	P	P	02 09 31.9	-1.6
	comp=Z,0.5nm,0.9s,baz=131,slow=5.3,SNR=4.8						
TORD	Torodi Ar. Bea	88.28	77	P	P	02 11 43.3	-2.1
	comp=Z,0.6nm,0.9s,baz=296,slow=5.9,SNR=2.4						
LZH	Lanzhou	129.95	346	ePKP	PKiKP	02 18 07.2	+2.9
LZH				pPKP	pPKPdf	02 18 15.6	+1.3
LZH				sPKP		02 18 18.5	
CMAR	Chiang Mai Arr	148.03	345	PKPbc	PKPbc	02 18 39.5	0.0
	comp=Z,0.7nm,0.3s,baz=338,slow=4.5,SNR=4.5						

BGR ***10*** *02:05:39.7±0.0, 6°.52S×68°.64E, h10km, mb5.5, Ms4.8*

IDC ***10*** *02:05:44.3±0.4, 5°.66S×68°.32E, h0km, mb4.9/28, mb1 5.0/29, mb1mx5.0/29, mbtmp4.8/29, ML5.0/1, MS5.1/27, Ms1 5.1/27, ms1mx5.0/36, Error ellipse: s-maj=13.3km s-min=12.5km az=174.0*

BJI ***10*** *02:05:45.0±0.0, 5°.60S×68°.30E, h5km, mB5.5/65, mb5.2/72, Ms5.5/79, Ms7 5.2/75*

MOS ***10*** *02:05:46.5±0.9, 5°.54S×68°.30E, h22km, mb5.6/91, MS5.1/37, Error ellipse: s-maj=7.0km s-min=4.1km az=91.6*

NEIC ***10*** *02:05:46.3±1.4, 5°.66S±0°.09×68°.36E±0°.08, h10km±1km, mb5.5/159, Ms_20 5.5/474, Mwb5.6/41, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=14.6km s-min=13.4km az=195.0*

NEIC ***10*** *02:05:46.3, 5°.64S×68°.34E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.48; $M_{\theta\theta}$-3.44; $M_{\phi\phi}$2.96; $M_{r\theta}$-0.21; $M_{\theta\phi}$-0.64; $M_{\phi r}$-0.44; Fault plane solution: $M_0$3.32000×10^{17} NP1:ϕ_s129.13000°, δ80.91000°, λ176.13000°. NP2:ϕ_s219.75000°, δ86.17000°, λ9.11000°. Principal axes: T 3.0863, Plg9.0000°, Azm85.0000°; N 0.4312, Plg80.0000°, Azm242.0000°; P -3.5175, Plg4.0000°, Azm354.0000°;*

NOU ***10*** *02:05:46.3, 5°.62S×68°.37E, h0km, mb5.4, Chagos Archipelago Region*

NEIC ***10*** *02:05:47, 5°.74S×68°.54E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.47; $M_{\theta\theta}$-2.55; $M_{\phi\phi}$3.02; $M_{r\theta}$1.24; $M_{\theta\phi}$-0.02; $M_{\phi r}$1.31; Fault plane solution: $M_0$3.35000×10^{17} NP1:ϕ_s316.00000°, δ56.00000°, λ-174.00000°. NP2:ϕ_s222.00000°, δ85.00000°, λ-33.00000°. Principal axes: T 3.4832, Plg19.0000°, Azm274.0000°; N -0.2934, Plg56.0000°, Azm35.0000°; P -3.1898, Plg27.0000°, Azm174.0000°;*

NEIC ***10*** *02:05:49, 5°.74S×68°.32E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.65; $M_{\theta\theta}$-3.52; $M_{\phi\phi}$4.17; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.41; Fault plane solution: $M_0$3.91000×10^{17} NP1:ϕ_s314.00000°, δ86.00000°, λ177.00000°. NP2:ϕ_s44.00000°, δ87.00000°, λ4.00000°. Principal axes: T 4.2081, Plg5.0000°, Azm269.0000°; N -0.6835, Plg85.0000°, Azm85.0000°; P -3.5246, Plg0.0000°, Azm179.0000°;*

GCMT ***10*** *02:05:49.3±0.1, 5°.72S±0°.01×68°.34E, h12km, MW5.7/155, Moment Tensor Solution. s123,c215; s155,c346; Duration: 1s.6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.58±.03; $M_{\theta\theta}$-3.49±.03; $M_{\phi\phi}$4.08±.03; $M_{r\theta}$-0.26±.09; $M_{\theta\phi}$-0.12±.03; $M_{\phi r}$0.41±.09; Best double couple: $M_0$3.81600×10^{17} NP1:ϕ_s44.00000°, δ83.00000°, λ0.00000°. NP2:ϕ_s314.00000°, δ90.00000°, λ173.00000°. Principal axes: T 4.1190, Plg5.0000°, Azm269.0000°; N -0.5980, Plg83.0000°, Azm133.0000°; P -3.5130, Plg5.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 02:05:47.0±0.7,**5°.69S**±0°.04×**68°.37E**±0°.04,**h15**km±4km, **n1111**,σ**1s.60**/970,**mb5.4**/305,**MS5.5**/315,**42C-38D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.40	113	P	Pn	02 06 51.3	-2.0
DGAR	Diego Garcia	4.40	113		Pn	02 06 51.3	-2.0
TRD	Trivandrum	16.50	31	eP	P	02 09 42.0	+1.3
TRD				IAmb	IAmb	02 09 42.4	
	comp=Z,189nm,0.7s						
PALK	Pallekele	17.81	44	P	Pn	02 09 54.6	0.0
	comp=Z,4.5nm,0.3s,baz=337,slow=9.9,SNR=25						
PALK				S	Sn	02 13 05.1	-8.0
	comp=Z,0.8nm,0.3s,baz=180,slow=2.0,SNR=3.7						
PALK				LR	LR	02 15 11.3	
	comp=Z,8µm,18.1s,baz=327,slow=32						
PALK	Pallekele	17.81	44	⇓eP	Pn	02 09 52.3	-2.3
PALK				pmax	pmax		
	comp=Z,18nm,1.2s						
PALK	Pallekele	17.81	44		Pn	02 09 53.0	-1.6
GOA	Goa	21.73	14	eP	P	02 10 39.6	+1.6
GOA				IAmb	IAmb	02 10 49.5	
	comp=Z,101nm,1.0s						
MDRS	Chennai	22.06	32	eP	P	02 10 40.1	-1.4
MDRS				IAmb	IAmb	02 10 43.8	
	comp=Z,121nm,1.0s						
SOCY	Socotra	22.81	321	P	P	02 10 52.5	+2.9
SOCY				IAmb	IAmb	02 10 57.5	
	comp=Z,205nm,1.6s						
KAD	Karad	23.57	14	eP	P	02 10 57.6	+0.4
OPO	Ambohidratompo	24.31	236	P	P	02 11 04.4	0.0
	comp=Z,17nm,1.0s,baz=38,slow=7.4,SNR=5.9						
OPO				LR	LR	02 19 01.4	
	comp=Z,2µm,18.7s,baz=178,slow=33						
ABPO	Ambohimpanom	24.49	235	P	P	02 11 06.1	0.0
ABPO				pmax	pmax		
	comp=Z,102nm,1.1s						
ABPO	Ambohimpanom	24.49	235	P	P	02 11 06.1	0.0
ABPO				IAmb	IAmb	02 11 17.6	
	comp=Z,102nm,1.1s						
POO	Poona	24.67	13	eP	P	02 11 08.2	+0.7
POO				IAmb	IAmb	02 11 09.7	
	comp=Z,114nm,0.7s						
HYB	Hyderabad	25.07	23	iP	P	02 11 10.5	-0.6
	comp=Z,100nm,0.8s						
HYB	Hyderabad	25.07	23	eP	P	02 11 10.8	-0.3
HYB				IAmb	IAmb	02 11 12.8	
	comp=Z,83nm,0.7s						
HYB				IVmB_BB		02 11 20.6	
	comp=Z,873nm,1.6s						
SHAO	Shalim	26.71	332	P	P	02 11 26.3	+0.3
	SNR=6.8						
SHAO				P	P	02 11 26.3	+0.3
	SNR=6.8						
SHAO				S	S	02 16 08.4	+7.1
SHAO				S	S	02 16 08.4	+7.1
DMTO	DMTO	26.77	331	P	P	02 11 26.9	+0.4
	SNR=7.1						
DMTO				P	P	02 11 26.9	+0.4
	SNR=7.1						
DMTO				S	S	02 16 05.1	+2.9
DMTO				S	S	02 16 05.1	+2.9
RBK	Rabkut	26.97	329	P	P	02 11 29.0	+0.6
	SNR=9.0						
RBK				P	P	02 11 29.0	+0.6
	SNR=9.0						
RBK				S	S	02 16 09.6	+4.2
RBK				S	S	02 16 09.6	+4.2
ABTO	Aybut	27.32	327	P	P	02 11 32.3	+0.8
	SNR=18						
ABTO				P	P	02 11 32.3	+0.8
	SNR=18						
WHFO	Wadi Hawf	27.54	329	P	P	02 11 33.6	+0.2
	SNR=11						
WHFO				P	P	02 11 33.6	+0.2
	SNR=11						
DQM	DQM	27.60	338	P	P	02 11 34.1	+0.1
DQM				P	P	02 11 34.1	+0.1
DQM				S	S	02 16 20.2	+4.9
DQM				S	S	02 16 20.2	+4.9
DOK	Doka	27.94	330	P	P	02 11 37.3	+0.3
	SNR=14						
DOK				P	P	02 11 37.3	+0.3
	SNR=14						
DOK				P	P	02 11 37.3	+0.3
	SNR=14						
MHTO	MHTO	28.41	339	P	P	02 11 40.9	-0.3
	SNR=9.7						
MHTO				P	P	02 11 40.9	-0.3
	SNR=9.7						
MHTO				S	S	02 16 30.4	+2.4
MHTO				S	S	02 16 30.4	+2.4
NGP	Nagpur	28.66	21	eP	P	02 11 44.4	+1.0
NGP				IVmB_BB		02 11 53.0	
	comp=Z,828nm,2.1s						
BHUJ	Bhuj	28.80	2	eP	P	02 11 47.3	+2.7
BHUJ				IVmB_BB		02 11 50.2	
	comp=Z,462nm,0.3s						
JLN	Jalan Bani Buh	29.03	343	P	P	02 11 46.8	+0.1
	SNR=5.9						
JLN				P	P	02 11 46.8	+0.1
	SNR=5.9						
JLN				S	S	02 16 42.2	+4.5
JLN				S	S	02 16 42.2	+4.5
WBK	Wadi Bani Khal	29.60	342	P	P	02 11 52.5	+0.7
WBK				P	P	02 11 52.5	+0.7
JMDO	Jabal Madar	29.65	341	P	P	02 11 52.5	+0.4
JMDO				P	P	02 11 52.5	+0.4
JMDO				S	S	02 16 54.7	+7.3
JMDO				S	S	02 16 54.7	+7.3
PBA	Port Blair	29.75	55	IAMs_20	IAMs_20	02 21 21.3	
	comp=Z,9µm,20.0s						
GSI	Gunungsitoli	29.98	77	IAMs_20	IAMs_20	02 21 18.5	
	comp=Z,10µm,20.0s						
BHPL	Bhopal	30.09	17	eP	P	02 11 57.5	+1.4
BHPL				IAmb	IAmb	02 12 05.5	
	comp=Z,192nm,1.2s						
BSY	Bisya	30.30	339	P	P	02 11 58.3	+0.3
	SNR=7.6						
BSY				P	P	02 11 58.3	+0.3
	SNR=7.6						
SMDO	Samad	30.31	341	P	P	02 11 58.5	+0.4
	SNR=7.5						
SMDO				P	P	02 11 58.5	+0.4
	SNR=7.5						
SMDO				P	P	02 11 58.5	+0.4
	SNR=7.5						
LHMI	Lhok Sumawe	30.52	70	P	P	02 12 00.4	+0.3
ATD	Arta Tunnel	30.62	304	P	P	02 12 01.2	+0.2
ATD	Arta Tunnel	30.62	304	eP	P	02 11 59.4	-1.6
ATD				eS	S	02 17 03.1	+0.1
BIDO	Bidbid	30.71	341	P	P	02 12 02.4	+0.9
BIDO				S	S	02 17 08.6	+4.5
KCSI	Kotacane, Aceh	30.76	73	P	P	02 12 03.2	+1.0
	comp=Z,116nm,1.1s						
HOQ	Hoqain	31.04	340	P	P	02 12 05.4	+0.9
	SNR=15						
HOQ				P	P	02 12 05.4	+0.9
	SNR=15						
HOQ				S	S	02 17 10.2	+1.0
HOQ				S	S	02 17 10.2	+1.0
ARQ	Araqi	31.09	339	P	P	02 12 05.5	+0.5
	SNR=8.6						
ARQ				P	P	02 12 05.5	+0.5
	SNR=8.6						
KMBO	Kilima Mbogo	31.39	277	P	P	02 12 08.3	+0.3
	comp=Z,14nm,0.9s,baz=61,slow=9.9,SNR=31						
KMBO				LR	LR	02 22 16.1	
	comp=Z,9µm,21.9s,baz=108,slow=32						
SOHO	SOHO	31.82	339	P	P	02 12 11.5	+0.2
MNSI	Mandailing Nat	31.82	79	P	P	02 12 13.4	+1.9
	comp=Z,51µmcomp=Z,984nmcomp=Z,73nm,1.4s						
ALNE	Al Ain	32.03	338	P	P	02 12 14.8	+1.6
TEND	Ethiopian Broa	32.29	303	eP	P	02 12 12.5	-3.2
TEND				eS	S	02 17 35.5	+6.3
ANKE	Ethiopia-Afar	32.33	298	eP	P	02 12 16.0	-0.4
ANKE				eS	S	02 17 34.0	+3.7
PDSI	Padang	32.38	83	P	P	02 12 17.4	+1.0
	comp=Z,1µmcomp=Z,20nm,1.1s						
ASHO	Ashiyiah	32.49	339	P	P	02 12 18.0	+0.7
	SNR=22						
ASHO				P	P	02 12 18.0	+0.7
	SNR=22						
HATD	Hatta, Dubai	32.59	339	iP	P	02 12 18.6	+0.4
	SNR=16						
UOSS	Minazif	32.68	339	iP	P	02 12 18.4	-0.5
	SNR=22						
UOSS	Minazif	32.68	339	P	P	02 12 18.4	-0.5
UOSS				IAmb	IAmb	02 12 21.6	
	comp=Z,60nm,1.1s						
ASUD	Al Ashush, Dub	32.70	338	P	P	02 12 21.3	+2.2
FAQ	Al Faqa, Dubai	32.72	338	iP	P	02 12 20.0	+0.8
	SNR=16						
NAZ	Nazwa, Dubai	32.91	338	P	P	02 12 20.6	-0.3
AAE	Adis Abeba	32.94	296	eP	P	02 11 57.7	-24
AAE				eS	S	02 17 45.8	+6.0
FURI	Furi	32.96	296	P	P	02 12 22.3	+0.4
FURI				IAmb	IAmb	02 12 35.3	
	comp=Z,33nm,0.8s						
FURI	Furi	32.96	296	IAMs_20	IAMs_20	02 24 00.5	
	comp=Z,9µm,20.0s						
FURI	Furi	32.96	296	eP	P	02 12 08.6	-13
FURI				eS	S	02 17 42.9	+2.7
MDH	Madha	32.97	340	P	P	02 12 20.9	-0.5
MSFE	Esma-Masafi	33.07	339	iP	P	02 12 22.7	+0.3
	SNR=15						
BKNI	Bangkinang	33.16	81	P	P	02 12 24.1	+0.8
BKNI	Bangkinang	33.16	81	P	P	02 12 24.3	+1.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,143nm,1.0s						
SDSI	Sungai Dareh	33.33	83	P	P	02 12 25.0	+0.3
	comp=Z,25nm,1.2s						
SDSI				pP	pP	02 12 27.3	-1.1
	comp=Z,25nm,1.2s						
BANOM	Banah	33.54	340	P	P	02 12 26.9	+0.5
	SNR=5.7						
SHME	Shamm	33.71	340	P	P	02 12 26.6	-1.3
BOK	Bokaro	33.93	30	eP	P	02 12 29.0	-0.8
BOK				IAmb	IAmb	02 12 45.5	
	comp=Z,15nm,0.9s						
TRTT	Trang	34.01	67	P	P	02 12 33.0	+2.3

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          comp=Z,37nm,1.6s
KULM  Kulim             34.02  72  P        P        02 12 31.0 +0.2
KULM                               IAmb     IAmb     02 12 33.0
          comp=Z,64nm,0.8s
KULM                               IAMs_20  IAMs_20  02 23 42.4
          comp=Z,8µm,22.0s
KULM  Kulim             34.02  72  P        P        02 12 32.0 +1.2
IPM   Ipoh              34.14  73  P        P        02 12 32.4 +0.6
IPM                                IAmb     IAmb     02 12 34.8
          comp=Z,53nm,1.0s
IPM   Ipoh              34.14  73  P        P        02 12 34.0 +2.2
KSI   Kapahiang         34.16  88  P        P        02 12 31.8 -0.3
RGRI  Rengat            34.31  82  P        P        02 12 32.8 -0.5
          comp=Z,33µmcomp=Z,107nm,0.4s
LHSI  Lahat             35.07  89  P        P        02 12 41.6 +1.7
          comp=Z,127nm,1.1s
KASI  Kota Agung        35.95  92  P        P        02 12 49.0 +1.6
          comp=Z,2µmcomp=Z,165nm,1.0s
PHET  Kaeng Krachan     36.14  59  P        P        02 12 50.6 +1.6
          comp=Z,46nm,0.7s
MYKOM Kota Tinggi       36.20  79  P        P        02 12 49.9 +0.3
KLSI                    36.22  90  P        P        02 12 50.5 +0.8
          comp=Z,641nmcomp=Z,52nm,1.0s
KOLN  Koldanda          36.38  23 eP        P        02 12 51.8 +0.7
          comp=Z,115nm,0.8s
PMBI  Palembang         36.39  87  IAMs_20  IAMs_20  02 24 51.1
          comp=Z,8µm,21.0s
PYUN  Piuthan           36.44  22 eP        P        02 12 52.3 +0.7
          comp=Z,161nm,0.8s
RAYN  Ar Rayn           36.63 323 i P       P        02 12 52.4 -0.8
          SNR=8.8
RAYN  Ar Rayn           36.63 323  P        P        02 12 52.3 -0.8
RAYN                               pmax     pmax
          comp=Z,13nm,1.0s
RAYN  Ar Rayn           36.63 323  P        P        02 12 52.3 -0.9
DMN   Daman             36.85  25 eP        P        02 12 56.0 +0.8
          comp=Z,219nm,0.8s
RAMN  Ramite            36.94  28 eP        P        02 12 57.2 +1.2
          comp=Z,84nm,0.8s
PKI   Pulchoki          36.94  26 eP        P        02 12 56.5 +0.4
          comp=Z,52nm,0.8s
PKIN  Phulchoki         36.94  26 eP        P        02 12 56.4 +0.4
          comp=Z,57nm,0.7s
SAIH  SAIHA             36.94  40 eP        P        02 12 55.9  0.0
SAIH                               IVmBBB            02 13 10.7
          comp=Z,536nm,1.6s
DANN  Dangsing          36.96  23 eP        P        02 12 56.6 +0.5
          comp=Z,147nm,0.8s
DDI   Dehra Dun         36.99  14 eP        P        02 12 55.5 -0.7
DDI                                IAmb     IAmb     02 12 59.5
          comp=Z,27nm,0.5s
GKN   Gorkha            37.00  24 eP        P        02 12 57.1 +0.8
          comp=Z,189nm,0.8s
KKN   Kakani            37.08  25 eP        P        02 12 57.7 +0.6
          comp=Z,163nm,0.8s
CGJI  Cibinong          37.11  93  P        P        02 12 58.7 +1.4
          comp=Z,2µmcomp=Z,252nm,1.0s
XMIS  Christmas Isla    37.19 100  P        P        02 12 59.5 +1.5
XMIS                               IAmb     IAmb     02 13 00.9
          comp=Z,77nm,0.9s
XMIS                               IAMs_20  IAMs_20  02 24 52.0
          comp=Z,7µm,20.0s
PATY  Pattaya           37.21  60  P        P        02 12 59.7 +1.6
          comp=Z,6µmcomp=Z,87nm,1.0s
ODAN  Odare             37.23  29 eP        P        02 12 59.3 +0.8
          comp=Z,80nm,0.9s
UTHA  Uthaitani         37.32  55  P        P        02 13 02.4 +3.3
          comp=Z,437nmcomp=Z,20nm,0.9s
GUN   Gumba             37.44  26 eP        P        02 13 01.2 +0.9
          comp=Z,163nm,0.8s
SMLA  Simla             37.57  12 eP        P        02 13 02.3 +1.4
SMLA                               IAmb     IAmb     02 13 07.5
          comp=Z,98nm,1.2s
MHMT  Maesarieng        37.59  50  P        P        02 13 03.0 +1.7
          comp=Z,1µmcomp=Z,61nm,0.9s
TAPN  Taplejung         37.80  29 eP        P        02 13 03.9 +0.6
          comp=Z,92nm,0.8s
PPBI  Pangkal Pinang    37.83  86  P        P        02 13 03.8 +0.3
          comp=Z,125nm,1.1s
MBAR  Mbarara           37.90 276ceP        P        02 13 04.7 +0.4
MBAR                               pmax     pmax
          comp=Z,7.0nm,0.9s
MBAR                               MLR      MLR
          comp=Z,4µm,17.0s
MBAR  Mbarara           37.90 276  P        P        02 13 04.3  0.0
MBAR  Mbarara           37.90 276  IAMs_20  IAMs_20  02 27 50.9
          comp=Z,5µm,18.0s
DBJI  Dramaga           38.16  93  P        P        02 13 07.1 +0.8
          comp=Z,50nm,1.2s
CBJI  Citeko            38.26  93  P        P        02 13 09.6 +2.5
          comp=Z,190nm,0.8s
DHRM  DHARAMSHALA       38.48  11 eP        P        02 13 10.4 +1.5
DHRM                               IAmb     IAmb     02 13 12.4
          comp=Z,332nm,0.9s
CM13  Chiang Mai Arr    38.48  51  P        P        02 13 10.0 +1.1
          comp=Z,130nmcomp=Z,13nm,1.0s
CM05  Chiang Mai Arr    38.50  51  P        P        02 13 10.2 +1.1
          comp=Z,160nmcomp=Z,17nm,1.0s
CM15  Chiang Mai Arr    38.51  51  P        P        02 13 10.0 +0.9
          comp=Z,372nmcomp=Z,13nm,0.7s
SUKH  Sukhothai         38.52  53  P        P        02 13 10.8 +1.7
          comp=Z,16nm,0.8s
CM02  Chiang Mai Arr    38.52  51  P        P        02 13 10.0 +0.8
          comp=Z,166nmcomp=Z,19nm,1.1s
CM04  Chiang Mai Arr    38.52  51  P        P        02 13 10.4 +1.2
          comp=Z,186nmcomp=Z,20nm,1.4s
CM31  Chiang Mai Arr    38.53  51  P        P        02 13 09.3 +0.1
CMAR  Chiang Mai Arr    38.53  51  P        P        02 13 09.8 +0.5
          comp=Z,7.9nm,0.8s,baz=242,slow=9.2,SNR=35
CMAR                               PcP      PcP      02 15 22.6 +0.4
          comp=Z,7.7nm,0.7s,baz=237,slow=4.3,SNR=14
CMAR                               LR       LR       02 26 40.2
          comp=Z,2µm,21.6s,baz=272,slow=33
CMAR  Chiang Mai Arr    38.53  51  P        P        02 13 08.9 -0.3
CM09  Chiang Mai Arr    38.56  51  P        P        02 13 11.1 +1.5
          comp=Z,186nmcomp=Z,17nm,1.1s
SHL   Shillong          38.57  35  P        P        02 13 08.9 -0.8
SHL                                pmax     pmax
          comp=Z,79nm,1.1s
SHL   Shillong          38.57  35 eP        P        02 13 10.5 +0.8
SHL                                IAmb     IAmb     02 13 11.7
          comp=Z,32nm,0.7s
SHL   Shillong          38.57  35  P        P        02 13 08.9 -0.8
SHL                                IAmb     IAmb     02 13 24.0
          comp=Z,79nm,1.1s
SRAK  Srakaew           38.73  59  P        P        02 13 17.1 +6.1
          comp=Z,4µmcomp=Z,290nm,1.0s
CHTO  Chiang Mai        38.74  50  P        P        02 13 10.6 -0.4
CHTO                               pmax     pmax
          comp=Z,84nm,1.6s
CHTO                               MLR      MLR
          comp=Z,2µm,18.0s
CHTO  Chiang Mai        38.74  50  P        P        02 13 10.6 -0.4
CMMT  Chiang Mai        38.74  50  P        P        02 13 11.8 +0.7
          comp=Z,352nmcomp=Z,16nm,1.2s
GUWA  GUWAHATI          38.94  34 eP        P        02 13 13.1 +0.5
GUWA                               IAmb     IAmb     02 13 18.9
          comp=Z,13nm,0.6s
LAMP  Lampang           39.10  51  P        P        02 13 15.4 +1.4
          comp=Z,18nm,0.8s
CISI  Cisompet, Garu    39.21  95  P        P        02 13 14.3 -0.9
          comp=Z,3µmcomp=Z,99nm,1.3s
UTTA  Uttaradit         39.39  53  P        P        02 13 20.1 +3.6
          comp=Z,15nm,0.8s
NIL   Nilore            39.40   6  P        P        02 13 17.2 +0.8
NIL                                pmax     pmax
          comp=Z,203nm,0.9s
NIL                                MLR      MLR
          comp=Z,3µm,18.0s
NIL   Nilore            39.40   6  P        P        02 13 17.2 +0.8
QRN   Al-Qurain         39.50 331 eP                 02 13 16.2
PAYA  Payao             39.77  50  P        P        02 13 22.4 +2.8
          comp=Z,3µmcomp=Z,179nm,1.0s
RDF   Al-Radifah        39.83 331 eP                 02 13 19.0
KBL   Kabul             40.02   1  P        P        02 13 22.3 +0.6
KBL                                pmax     pmax
          comp=Z,127nm,1.0s
KBL   Kabul             40.02   1  P        P        02 13 22.3 +0.6
KBL                                IAmb     IAmb     02 13 25.8
          comp=Z,127nm,1.0s
UMR   Umm Al-Rimmam     40.27 332 eP                 02 13 22.9
HRA   Herat             40.28 352  P        P        02 13 23.6 -0.3
KPJI  Karang Pucung     40.32  95  P        P        02 13 23.5 -0.8
          comp=Z,62nm,1.0s
LSZ   Lusaka            40.58 253  P        P        02 13 25.8 -0.8
LSZ                                pmax     pmax
          comp=Z,78nm,1.5s
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LSZ   Lusaka            40.58 253  P        P        02 13 25.8 -0.8
LSZ   Lusaka            40.58 253  IAMs_20  IAMs_20  02 27 14.1
          comp=Z,7µm,22.0s
MIB   Mutribah          40.66 331 eP                 02 13 26.2
MOKO  MOKOCHONG         40.69  37 eP        P        02 13 28.5 +1.2
MOKO                               IAmb     IAmb     02 13 38.8
          comp=Z,88nm,0.8s
ZIRO  ZIRO              41.19  35 eP        P        02 13 32.7 +1.2
ZIRO                               IAmb     IAmb     02 13 43.1
          comp=Z,39nm,1.0s
LSA   Lhasa             41.43  31  P        P        02 13 35.2 +1.4
LSA                                S        S        02 19 53.3 +4.3
LSA                                pmax     pmax
          comp=Z,46nm,0.8s
LSA                                LR       LR
          comp=Z,13µm,18.5s
LSA                                LR       LR
          comp=Z,9µm,18.5s
LSA                                LR       LR
          comp=Z,17µm,17.8s
LSA   Lhasa             41.43  31 i P       P        02 13 34.6 +0.8
          SNR=6.4
LSA   Lhasa             41.43  31  P        P        02 13 34.1 +0.3
LSA                                pmax     pmax
          comp=Z,317nm,1.9s
LSA   Lhasa             41.43  31  P        P        02 13 34.1 +0.3
UGM   Wanagama          41.90  95  IAMs_20  IAMs_20  02 28 04.6
          comp=Z,5µm,19.0s
LKP   Lekhapani         42.23  38 eP        P        02 13 40.5 +0.7
KSM   Kuching           42.48  82  P        P        02 13 42.4 +0.3
KSM                                IAmb     IAmb     02 13 44.8
          comp=Z,156nm,1.5s
KSM                                IAMs_20  IAMs_20  02 28 57.0
          comp=Z,5µm,20.0s
KSM   Kuching           42.48  82  P        P        02 13 43.0 +0.9
PWJI  Pagerwojo         43.17  96  P        P        02 13 47.9 +0.3
          comp=Z,81nm,1.0s
DLV   T  Lat            43.57  66  P        P        02 13 51.2 +0.1
DLV                                IAmb     IAmb     02 13 53.2
          comp=Z,90nm,1.1s
SLVN  Son La            44.00  51  P        P        02 13 54.4 +0.1
GEYT  Alibeck           44.44 348  P        P        02 13 57.9 +0.4
          comp=Z,14nm,1.0s,baz=178,slow=8.9,SNR=18
GEYT                               LR       LR       02 31 03.9
          comp=Z,6µm,21.4s,baz=130,slow=34
GEYT  Alibeck           44.44 348  P        P        02 13 57.8 +0.3
GYA0B ALIBECK ARRAY     44.44 348  P        P        02 13 57.7 +0.2
GYA0B                              IAMs_20  IAMs_20  02 30 41.5
          comp=Z,6µm,22.0s
SBUM  Sibu              44.53  81  P        P        02 13 59.4 +0.7
SBUM                               IAMs_20  IAMs_20  02 30 23.2
          comp=Z,5µm,20.0s
LBTB  Lobatse           45.24 240  P        P        02 14 04.2 -0.1
LBTB                               pmax     pmax
          comp=Z,39nm,1.5s
LBTB  Lobatse           45.24 240  P        P        02 14 04.2 -0.1
KMMI  Kalianget         45.32  94  P        P        02 14 03.2 -1.7
          comp=Z,254nm,1.3s
KMI   Kunming           45.33  46 ⇑P        P        02 14 06.2 +1.1
KMI                                sP       pwP      02 14 11.8 -0.6
KMI                                PP       PP       02 15 49.3 -2.0
KMI                                S        S        02 20 49.2 +3.4
KMI                                pmax     pmax
          comp=Z,12nm,1.0s
KMI                                pmax     pmax
          comp=Z,310nm,6.3s
KMI                                LR       LR
          comp=Z,2µm,16.8s
KMI                                LR       LR
          comp=Z,1µm,13.9s
KMI                                LR       LR
          comp=Z,2µm,27.5s
KMI   Kunming           45.33  46  P        P        02 14 05.1  0.0
KMI                                pmax     pmax
          comp=Z,21nm,1.1s
KMI   Kunming           45.33  46  P        P        02 14 05.0  0.0
JAGI  Jajag, Banyuwa    45.49  96  P        P        02 14 05.5 -0.8
JAGI  Jajag, Banyuwa    45.49  96  P        P        02 14 05.0 -1.3
          comp=Z,142nm,0.8s
KSH   Kashi             45.53   8  P        P        02 14 04.0 -2.3
KSH                                sP       sP       02 14 11.6 +0.4
KSH                                S        S        02 20 43.5 -4.5
KSH                                pmax     pmax
          comp=Z,160nm,0.9s
KSH                                pmax     pmax
          comp=Z,1µm,4.7s
KSH                                LR       LR
          comp=Z,8µm,16.3s
KSH                                LR       LR
          comp=Z,8µm,12.5s
KSH                                LR       LR
          comp=Z,5µm,16.4s
ABJI  Asem Bagus        45.58  95  P        P        02 14 07.5 +0.6
          comp=Z,193nm,0.9s
SRBI  Singaraja         46.54  96  P        P        02 14 14.4 -0.2
          comp=Z,213nm,1.0s
MTKI  Muara Teweh, K    46.67  86  P        P        02 14 16.3 +0.7
BOSA  Boshof            46.72 236  P        P        02 14 15.2 -0.7
          comp=Z,14nm,0.8s,baz=69,slow=7.1,SNR=21
BOSA                               LR       LR       02 32 07.3
          comp=Z,3µm,18.7s,baz=75,slow=34
BOSA  Boshof            46.72 236  P        P        02 14 15.1 -0.7
BOSA                               IAmb     IAmb     02 14 32.2
          comp=Z,53nm,1.3s
TAS   Tashkent          46.80   1  P        P        02 14 15.4 -0.7
TAS                                pmax     pmax
          comp=Z,416nm,0.9s
TAS   Tashkent          46.80   1  P        P        02 14 15.4 -0.7
ARSB  Arslanbob         46.98   5  IAmb     IAmb     02 14 21.3
          comp=Z,34nm,0.9s
GIRL  Giralia           47.32 116  IAMs_20  IAMs_20  02 29 31.4
          comp=Z,4µm,21.0s
IUG   Iuzhnay           47.64   2 eP        P        02 14 23.0 +0.3
          comp=Z,125nm,1.0s,baz=1.8
IUG   Iuzhnay           47.64   2 eP        P        02 14 23.0 +0.3
IUG                                pmax     pmax
          comp=Z,125nm,1.0s
QIZ   Qiongzhong        47.66  58  P        P        02 14 22.4 -0.8
QIZ                                PP       PP       02 16 13.5 -1.5
QIZ                                S        S        02 21 20.4 +1.5
QIZ                                LR       LR
          comp=Z,2µm,13.9s
QIZ                                LR       LR
          comp=Z,1µm,14.7s
QIZ                                LR       LR
          comp=Z,2µm,19.2s
AML   Almayashu         47.84   5  P        P        02 14 20.1 -4.6
          SNR=47
UCH   Uchtor            48.02   6  P        P        02 14 27.1 +1.0
          SNR=29
TWSI  Taliwang, Sumb    48.20  97  P        P        02 14 27.6 +0.2
          comp=Z,68nm,1.3s
KDJ   Kajisay           48.27   9  IAMs_20  IAMs_20  02 34 14.8
          comp=Z,4µm,19.0s
EKS2  Erkin-Say         48.38   5  P        P        02 14 29.9 +1.4
          SNR=23
AAK   Ala-Archa         48.42   6  P        P        02 14 29.2 +0.3
          SNR=57
AAK   Ala-Archa         48.42   6 i P       P        02 14 29.8 +0.9
          SNR=76
AAK   Ala-Archa         48.42   6c iP       P        02 14 29.7 +0.8
AAK                                pmax     pmax
          comp=Z,83nm,1.1s
AAK                                MLR      MLR
          comp=Z,5µm,22.0s
AAK   Ala-Archa         48.42   6  P        P        02 14 29.1 +0.3
DZA   Taraz             48.43   3 eP        P        02 14 29.1 +0.2
          comp=Z,25nm,0.8s,baz=3.0
DZA                               eS        S        02 21 29.5 +0.4
          baz=3.0
DZA                               eLR       LR       02 35 32.9
          comp=Z,236nm,11.9s,baz=3.0
DZA   Taraz             48.43   3 eP        P        02 14 29.0 +0.2
DZA                               eS        S        02 21 29.5 +0.4
DZA                                pmax     pmax
          comp=Z,25nm,0.8s
DZA                                MLR      MLR
          comp=Z,236nm,12.0s
BOOM  Boomskoye usch    48.45   7  IAMs_20  IAMs_20  02 34 02.8
          comp=Z,4µm,19.0s
KBK   Karagaybulak      48.49   6  P        P        02 14 30.6 +1.1
          SNR=34
BRLS  Borolday          48.51   1 eP        P        02 14 27.3 -2.2
          comp=Z,77nm,1.1s,baz=1.4
BRLS                              eS        S        02 21 26.8 -3.4
          baz=1.4
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BRLS  Borolday          48.51   1 eP        P        02 14 27.2 -2.2
BRLS                              eS        S        02 21 26.8 -3.4
BRLS                               pmax     pmax
          comp=Z,77nm,1.1s
KK31  Karatay Array     48.61   2  P        P        02 14 30.3 +0.2
KK31                               pmax     pmax
          comp=Z,69nm,1.0s
KK31  Karatay Array     48.61   2  P        P        02 14 30.3 +0.2
KKAR  Karatay Array     48.61   2  P        P        02 14 30.0 -0.1
KKAR  Karatay Array     48.61   2  P        P        02 14 30.0 -0.1
KKAR  Karatay Array     48.61   2  IAmb     IAmb     02 14 33.4
          comp=Z,69nm,0.9s
BKB   Balikpapan        48.62  87  IAMs_20  IAMs_20  02 32 39.6
          comp=Z,6µm,20.0s
CHMS  Chumysh           48.81   6  P        P        02 14 34.8 +3.1
          SNR=10
TKM2  Tokmak 2          48.83   7  P        P        02 14 32.6 +0.6
          SNR=22
TKM2  Tokmak 2          48.83   7 i P       P        02 14 32.5 +0.4
TKM2                               pmax     pmax
          comp=Z,65nm,1.0s
GYA   Guiyang           48.97  47 ⇓P        P        02 14 33.7 +0.4
GYA                                S        S        02 21 35.4 -2.0
GYA                                pmax     pmax
          comp=Z,21nm,1.5s
GYA                                pmax     pmax
          comp=Z,410nm,3.8s
GYA                                LR       LR
          comp=Z,2µm,16.9s
GYA                                LR       LR
          comp=Z,1µm,14.6s
GYA                                LR       LR
          comp=Z,2µm,15.8s
USP   Ospenovka         49.05   6  P        P        02 14 35.3 +1.8
          SNR=18
PLAI  Plampang          49.08  97  P        P        02 14 32.9 -1.4
          comp=Z,73nm,1.4s
TNSS  Tian-Shan         49.12   8 eP        P        02 14 34.1 -0.5
          baz=8.4
TNSS  Tian-Shan         49.12   8 eP        P        02 14 34.0 -0.5
MTBS  Maitube           49.14   8 eP        P        02 14 34.2 -0.1
          baz=7.9
MTBS  Maitube           49.14   8 eP        P        02 14 34.2 -0.1
SGDS  Sogindy           49.24   6 eP        P        02 14 34.9 -0.2
          comp=Z,60nm,1.7s,baz=6.1
SGDS                              eS        S        02 21 40.9 +0.3
          baz=6.1
SGDS  Sogindy           49.24   6 eP        P        02 14 34.9 -0.2
SGDS                              eS        S        02 21 40.9 +0.3
SGDS                               pmax     pmax
          comp=Z,60nm,1.7s
MDOK  Medeo             49.26   8 eP        P        02 14 35.3 -0.1
          baz=8.5
MDOK                              eS        S        02 21 41.3 +0.3
          baz=8.5
MDOK                               LR       LR       02 33 42.3
          comp=Z,1µm,13.6s,baz=8.5
MDOK  Medeo             49.26   8 eP        P        02 14 35.2 -0.1
MDOK                              eS        S        02 21 41.3 +0.3
MDOK                               MLR      MLR
          comp=Z,1µm,14.0s
AAA   Alma-Ata          49.29   8 eP        P        02 14 35.6 +0.2
          comp=Z,34nm,0.9s,baz=8.3
AAA                               eS        S        02 21 41.7 +0.4
          baz=8.3
AAA                                LR       LR       02 33 36.7
          comp=Z,944nm,11.8s,baz=8.3
AAA   Alma-Ata          49.29   8 eP        P        02 14 35.6 +0.2
AAA                               eS        S        02 21 41.6 +0.4
AAA                                pmax     pmax
          comp=Z,34nm,0.9s
AAA                                MLR      MLR
          comp=Z,944nm,12.0s
SATY  Saty              49.37  10 eP        P        02 14 36.5 +0.3
          comp=Z,97nm,1.3s,baz=9.8
SATY                              eS        S        02 21 43.2 +0.6
          baz=9.8
SATY  Saty              49.37  10 eP        P        02 14 36.4 +0.3
SATY                              eS        S        02 21 43.2 +0.6
SATY                               pmax     pmax
          comp=Z,97nm,1.3s
SHLS  Shalkode          49.65  11 eP        P        02 14 39.0 +0.7
          comp=Z,51nm,1.0s,baz=11
SHLS  Shalkode          49.65  11 eP        P        02 14 39.0 +0.7
SHLS                               pmax     pmax
          comp=Z,51nm,1.0s
CD2   Chengdu           49.69  41  P        P        02 14 38.2 -0.5
CD2                                S        S        02 21 48.5 +1.2
CD2                                pmax     pmax
          comp=Z,70nm,0.9s
CD2                                pmax     pmax
          comp=Z,340nm,7.3s
CD2                                LR       LR
          comp=Z,2µm,17.3s
CD2                                LR       LR
          comp=Z,2µm,18.0s
CD2                                LR       LR
          comp=Z,2µm,20.6s
KPKS  Kokpek            49.81  10 eP        P        02 14 39.1 -0.4
          comp=Z,69nm,1.8s,baz=9.9
KPKS                              eS        S        02 21 48.5 -0.2
          baz=9.9
KPKS  Kokpek            49.81  10 eP        P        02 14 39.0 -0.4
KPKS                              eS        S        02 21 48.5 -0.2
KPKS                               pmax     pmax
          comp=Z,69nm,1.8s
KUU   Kurty             49.88   8 eP        P        02 14 39.0 -0.9
          comp=Z,148nm,2.1s,baz=7.6
KUU                               eS        S        02 21 48.5 -0.9
          baz=7.6
KUU   Kurty             49.88   8 eP        P        02 14 38.9 -0.9
KUU                               eS        S        02 21 48.5 -0.9
KUU                                pmax     pmax
          comp=Z,148nm,2.1s
CHKK  Chushkaly         49.93   8 eP        P        02 14 39.2 -1.1
          baz=8.3
CHKK  Chushkaly         49.93   8 eP        P        02 14 39.1 -1.1
MARD  Mardin            49.94 331  P        P        02 14 40.6 +0.1
MARD                               IAmb     IAmb     02 14 44.9
          comp=Z,47nm,1.1s
GNI   Garni             50.54 337  P        P        02 14 44.7 -0.4
GNI   Garni             50.54 337c iP       P        02 14 45.2 +0.1
GNI                                pmax     pmax
          comp=Z,54nm,1.2s
GNI                                MLR      MLR
          comp=Z,1µm,16.0s
GNI   Garni             50.54 337  P        P        02 14 45.2 +0.1
GNI                                IAmb     IAmb     02 14 50.3
          comp=Z,65nm,1.1s
AKT   Akhty             50.60 340 eP        P        02 14 45.3 -0.2
AKT                               e                  02 16 05.7
AKT                               e                  02 16 41.1
AKT                                pmax     pmax
          comp=Z,84nm,1.2s
MORW  Morawa            50.63 123  P        P        02 14 46.7 +0.8
MORW                               IAmb     IAmb     02 14 48.1
          comp=Z,48nm,0.9s
BTLS  Baital            50.76   5 eP        P        02 14 45.9 -0.6
          comp=Z,28nm,1.0s,baz=5.3
BTLS  Baital            50.76   5 eP        P        02 14 45.8 -0.7
BTLS                               pmax     pmax
          comp=Z,27nm,1.0s
KAPI  Kappang           51.15  92  IAMs_20  IAMs_20  02 34 22.1
          comp=Z,5µm,20.0s
H01W3 Cape Leeuwin H    51.18 131  T        T        03 09 49.4
          baz=293,slow=75,SNR=1.1
H01W2 Cape Leeuwin H    51.19 131  T        T        03 09 49.6
          baz=293,slow=75,SNR=64
TSUM  Tsumeb            51.19 250  P        P        02 14 51.1 +0.8
H01W1 Cape Leeuwin H    51.20 131  T        T        03 09 50.5
          baz=293,slow=75,SNR=2.3
MYLDM Lahad Datu        51.20  79  IAMs_20  IAMs_20  02 40 43.0
          comp=Z,4µm,18.0s
TDK   Taldyqorghan      51.26   9 eP        P        02 14 50.3  0.0
          comp=Z,126nm,1.6s,baz=9.2
TDK                               eS        S        02 22 09.1 +0.4
          baz=9.2
TDK                                LR       LR       02 34 27.2
          comp=Z,2µm,17.3s,baz=9.2
TDK   Taldyqorghan      51.26   9 eP        P        02 14 50.2  0.0
TDK                               eS        S        02 22 09.0 +0.4
TDK                                pmax     pmax
          comp=Z,125nm,1.6s
TDK                                MLR      MLR
          comp=Z,2µm,17.0s
TTSI  Tana Toraja       51.35  89  P        P        02 14 51.8 +0.3
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      comp=Z,2µmcomp=Z,52nm,1.3s
BKSI  Bulukumba        51.50  92   P        P        02 14 52.7 +0.1
      comp=Z,82nm,1.1s
BNSI  Bone             51.54  91   P        P        02 14 52.2 -0.7
      comp=Z,70nm,1.6s
GAZ   Gaziantep        51.62 328   P        P        02 14 53.5 +0.3
GAZ                                IAmb     IAmb     02 15 27.4
      comp=Z,60nm,1.3s
SUR   Sutherland       51.63 233   LR       LR       02 33 56.7
      comp=Z,2µm,21.1s,baz=50,slow=33
SUR   Sutherland       51.63 233   IAMs_20  IAMs_20  02 33 46.5
      comp=Z,3µm,20.0s
MAK   Makhachkala      52.00 341  eP        P        02 14 49.6 -6.2
MAK                               e                  02 16 47.7
MAK                               eS        S        02 22 11.1 -7.6
MAK                               eSSS      SSS      02 27 31.7
MAK                                pmax     pmax
      comp=Z,119nm,1.1s
MAK                                MLR      MLR
      comp=Z,924nm,18.0s
MBWA  Marble Bar       52.02 112   IAMs_20  IAMs_20  02 32 40.0
      comp=Z,5µm,21.0s
AKH   Akhalkalaki      52.11 336   P        P        02 14 57.0 +0.1
AKH                                pmax     pmax
      comp=Z,125nm,1.4s
AKH   Akhalkalaki      52.11 336   P        P        02 14 57.0 +0.1
PSAD3 Pilbara Seismi   52.15 113   IAMs_20  IAMs_20  02 32 20.4
      comp=Z,5µm,22.0s
PSAC1 Pilbara Seismi   52.15 113   IAMs_20  IAMs_20  02 32 21.6
      comp=Z,6µm,22.0s
PSAD1 Pilbara Seismi   52.16 113   IAMs_20  IAMs_20  02 32 21.7
      comp=Z,5µm,21.0s
PSAB1 Pilbara Seismi   52.17 113   IAMs_20  IAMs_20  02 32 21.0
      comp=Z,6µm,22.0s
PSAA1 Pilbara Seismi   52.19 113   IAMs_20  IAMs_20  02 37 07.4
      comp=Z,5µm,21.0s
PSAC3 Pilbara Seismi   52.19 113   IAMs_20  IAMs_20  02 32 22.4
      comp=Z,5µm,21.0s
PSA00 Pilbara Seismi   52.19 113   P        P        02 14 58.8 +1.1
PSA00 Pilbara Seismi   52.19 113   IAMs_20  IAMs_20  02 32 23.6
      comp=Z,5µm,21.0s
PSAA3 Pilbara Seismi   52.20 113   IAMs_20  IAMs_20  02 32 22.9
      comp=Z,5µm,21.0s
PSAB2 Pilbara Seismi   52.20 113   IAMs_20  IAMs_20  02 32 21.9
      comp=Z,5µm,21.0s
PSAB3 Pilbara Seismi   52.21 113   IAMs_20  IAMs_20  02 32 23.0
      comp=Z,5µm,20.0s
KOPT  Kop Dagi         52.23 333   IAmb     IAmb     02 15 01.8
      comp=Z,68nm,1.4s
PSAC2 Pilbara Seismi   52.24 113   IAMs_20  IAMs_20  02 32 23.9
      comp=Z,6µm,22.0s
WMQ   Urumqi           52.29  18  eP        P        02 14 59.2 +1.2
WMQ                                pP       pwP      02 15 05.0 -0.8
WMQ                                PcP      PcP      02 16 08.0 -1.2
WMQ                                PP       PP       02 17 03.4 +6.7
WMQ                                S        S        02 22 23.9 +1.1
WMQ                                pmax     pmax
      comp=Z,57nm,1.7s
WMQ                                pmax     pmax
      comp=Z,1µm,3.6s
WMQ                                LR       LR
      comp=Z,5µm,15.5s
WMQ                                LR       LR
      comp=Z,3µm,14.3s
WMQ                                LR       LR
      comp=Z,6µm,21.9s
WMQ   Urumqi           52.29  18   IAMs_20  IAMs_20  02 36 37.0
      comp=Z,4µm,19.0s
PSAD2 Pilbara Seismi   52.31 113   IAMs_20  IAMs_20  02 32 27.7
      comp=Z,5µm,22.0s
TOLI2 Tolitoli         52.77  84   P        P        02 15 01.1 -0.9
TOLI2                              IAmb     IAmb     02 15 03.3
      comp=Z,90nm,1.2s
TOLI2                              IAMs_20  IAMs_20  02 36 38.8
      comp=Z,3µm,20.0s
GROC  Groznyy          52.80 339  eP        P        02 15 01.1 -0.6
GROC                              e                  02 16 11.5
GROC                              e                  02 17 00.1
GROC                              eS        S        02 22 20.5 -9.1
GROC                               pmax     pmax
      comp=Z,14nm,0.7s
EDFI  Ende, Flores     52.95  97   P        P        02 15 01.9 -1.6
      comp=Z,1µmcomp=Z,23nm,1.3s
ZEI   Tsey             53.13 338  eP        P        02 15 03.7 -0.7
ZEI                                pmax     pmax
      comp=Z,21nm,1.4s
ENH   Enshi            53.19  45   P        P        02 15 03.4 -1.5
ENH                                IAmb     IAmb     02 15 31.3
      comp=Z,118nm,1.6s
LZH   Lanzhou          53.23  36  eP        P        02 15 05.0 -0.2
LZH                                pP       sP       02 15 10.4  0.0
LZH                                sP       pwP      02 15 13.7 +0.9
LZH                                S        S        02 22 37.2 +1.1
LZH                                SS       SS       02 26 18.9 +2.8
LZH                                pmax     pmax
      comp=Z,87nm,1.3s
LZH                                pmax     pmax
      comp=Z,340nm,5.4s
LZH                                LR       LR
      comp=Z,1µm,16.3s
LZH                                LR       LR
      comp=Z,1µm,16.8s
LZH                                LR       LR
      comp=Z,1µm,17.2s
APSI  Ampana           53.38  87   P        P        02 15 05.5 -1.0
      comp=Z,56nm,1.2s
GTA   Gaotai           53.46  30   P        P        02 15 06.8  0.0
GTA                                pP       pP       02 15 10.8 +0.3
GTA                                sP       pwP      02 15 14.1 -0.3
GTA                                PcP      PcP      02 16 15.9 +2.1
GTA                                S        S        02 22 42.7 +3.6
GTA                                pmax     pmax
      comp=Z,10.0nm,1.0s
GTA                                pmax     pmax
      comp=Z,450nm,8.4s
GTA                                LR       LR
      comp=Z,1µm,19.9s
GTA                                LR       LR
      comp=Z,1µm,20.3s
GTA                                LR       LR
      comp=Z,2µm,20.7s
MMRI  Maumere          53.49  96   P        P        02 15 06.8 -0.6
MAKZ  Makanchi         53.65  12   P        P        02 15 07.3 -0.7
MAKZ                               pmax     pmax
      comp=Z,52nm,1.0s
MAKZ                               MLR      MLR
      comp=Z,2µm,20.0s
MAKZ  Makanchi         53.65  12   P        P        02 15 07.3 -0.7
MAKZ                               IAmb     IAmb     02 15 09.5
      comp=Z,52nm,1.0s
MK31  Makanchi Array   53.70  12c iP        P        02 15 07.5 -0.8
MK31                               pmax     pmax
      comp=Z,27nm,0.8s
MKAR  Makanchi Array   53.70  12   P        P        02 15 07.6 -0.7
      comp=Z,14nm,0.7s,baz=203,slow=8.0,SNR=124
MKAR                               PcP      PcP      02 16 15.2 +0.8
      comp=Z,8.3nm,0.8s,baz=226,slow=4.9,SNR=5.2
MKAR                               LR       LR       02 37 09.2
      comp=Z,974nm,21.5s,baz=198,slow=35
MKAR  Makanchi Array   53.70  12   P        P        02 15 07.4 -1.0
MRSI  Marisa           53.83  85   P        P        02 15 09.6 -0.3
      comp=Z,40nm,0.9s
NCK   Nalchik          53.85 338⇑eP        P        02 15 09.6 +0.1
NCK                                pmax     pmax
      comp=Z,13nm,0.9s
NCK                                MLR      MLR
      comp=Z,1µm,20.0s
KBZ   Khabaz           54.31 337   P        P        02 15 12.8  0.0
      comp=Z,48nm,1.0s,baz=159,slow=5.9,SNR=43
KBZ   Khabaz           54.31 337deP        P        02 15 13.2 +0.4
KBZ                                pmax     pmax
      comp=Z,64nm,1.0s
KBZ                                MLR      MLR
      comp=Z,705nm,18.0s
LUWI  Luwuk            54.48  87   P        P        02 15 13.5 -1.1
KIV   Kislovodsk       54.59 337   P        P        02 15 13.8 -1.2
KIV   Kislovodsk       54.59 337  eP        P        02 15 14.9  0.0
KIV                               e                  02 16 17.8
KIV                               eS        S        02 22 54.5 +0.4
KIV                               eSS       SS       02 26 38.4 +1.2
KIV                                pmax     pmax
      comp=Z,68nm,1.1s
KIV                                pmax     pmax
      comp=Z,163nm,4.9s
KIV                                MLR      MLR
      comp=Z,2µm,17.0s
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KIV   Kislovodsk       54.59 337   P        P        02 15 14.9  0.0
KIV                                IAmb     IAmb     02 15 19.5
      comp=Z,80nm,1.7s
ZSN   Zaisan           54.88  14  eP        P        02 15 17.2 +0.2
      comp=Z,32nm,1.2s,baz=14
ZSN   Zaisan           54.88  14  eP        P        02 15 17.1 +0.2
ZSN                                pmax     pmax
      comp=Z,32nm,1.2s
BATI  Baumata          54.89  98   P        P        02 15 17.8 +0.2
      comp=Z,61nm,0.9s
XAN   Xi'an            55.04  41   P        P        02 15 17.2 -1.2
XAN                                pP       pP       02 15 21.8 -0.3
XAN                                PcP      PcP      02 16 19.7 -0.2
XAN                                PP       PP       02 17 21.3 -0.5
XAN                                S        S        02 22 58.9 -1.6
XAN                                ScS      ScS      02 25 02.4 -5.2
XAN                                pmax     pmax
      comp=Z,44nm,1.0s
XAN                                pmax     pmax
      comp=Z,330nm,4.5s
XAN                                LR       LR
      comp=Z,2µm,18.1s
XAN                                LR       LR
      comp=Z,500nm,24.0s
XAN                                LR       LR
      comp=Z,2µm,20.6s
XAN   Xi'an            55.04  41   P        P        02 15 17.8 -0.6
XAN                                pmax     pmax
      comp=Z,44nm,1.1s
XAN                                MLR      MLR
      comp=Z,2µm,20.0s
XAN   Xi'an            55.04  41   P        P        02 15 17.8 -0.6
XAN                                IAmb     IAmb     02 15 42.8
      comp=Z,44nm,1.1s
ABKAR Akbulak array    55.21 353   P        P        02 15 18.7 -0.6
ABKAR Akbulak array    55.21 353   P        P        02 15 18.0 -1.2
BR131 Keskin Array S   55.39 328c iP        P        02 15 20.0 -1.0
BR131 Keskin Array S   55.39 328   IAmb     IAmb     02 15 22.5
      comp=Z,76nm,1.3s
BRTR  Keskin Array B   55.39 328   P        P        02 15 20.6 -0.3
      comp=Z,22nm,1.0s,baz=142,slow=8.3,SNR=64
BRTR  Keskin Array B   55.39 328   P        P        02 15 19.9 -1.0
GOF   Gofitskoye       55.39 338⇑eP        P        02 15 20.6  0.0
GOF                                pmax     pmax
      comp=Z,86nm,1.4s
SOC   Sochi            55.47 335  eP        P        02 15 21.1 -0.1
SOC                               e                  02 17 22.8
SOC                               ePPP      PPP      02 18 35.0
SOC                               eS        S        02 23 07.8 +2.0
SOC                                pmax     pmax
      comp=Z,37nm,1.0s
SOC                                MLR      MLR
      comp=Z,781nm,14.0s
SOEI  Soe              55.48  98   P        P        02 15 21.7 -0.3
      comp=Z,3µmcomp=Z,298nm,0.9s
BRZS  Berezniki        55.58   3  eP        P        02 15 21.5 -0.4
      comp=Z,23nm,1.1s,baz=3.4
BRZS  Berezniki        55.58   3  eP        P        02 15 21.5 -0.4
BRZS                               pmax     pmax
      comp=Z,23nm,1.1s
ISP   Isparta          55.80 324   P        P        02 15 23.4 -0.5
ISP                                pmax     pmax
      comp=Z,33nm,0.9s
ISP   Isparta          55.80 324   P        P        02 15 23.4 -0.5
ISP                                IAmb     IAmb     02 15 52.8
      comp=Z,33nm,0.9s
SEM   Semipalatinsk    56.81   9  eP        P        02 15 30.4 -0.6
      comp=Z,44nm,1.2s,baz=9.1
SEM                               eS        S        02 23 24.1 +0.1
      baz=9.1
SEM                                LR       LR       02 37 43.6
      comp=Z,568nm,18.0s,baz=9.1
SEM   Semipalatinsk    56.81   9  eP        P        02 15 30.4 -0.6
SEM                               eS        S        02 23 24.0 +0.1
SEM                                pmax     pmax
      comp=Z,44nm,1.2s
SEM                                MLR      MLR
      comp=Z,568nm,18.0s
WHN   Wuhan            56.85  48 ⇓P        P        02 15 33.7 +2.4
WHN                                S        S        02 23 26.2 +1.6
WHN                                LR       LR
      comp=Z,6µm,19.0s
WHN                                LR       LR
      comp=Z,2µm,14.9s
WHN                                LR       LR
      comp=Z,4µm,17.5s
KURK  Kurchatov        56.88   8c iP        P        02 15 30.7 -0.4
KURK                               pmax     pmax
      comp=Z,101nm,1.7s
KURK                               MLR      MLR
      comp=Z,2µm,18.0s
KURK  Kurchatov        56.88   8   P        P        02 15 30.8 -0.3
KURK                               IAmb     IAmb     02 15 33.0
      comp=Z,49nm,0.9s
FITZ  Fitzroy Crossi   57.16 108   P        P        02 15 34.4 +0.6
FITZ                               IAmb     IAmb     02 15 36.2
      comp=Z,42nm,1.0s
SANI  Sanana           57.58  89   P        P        02 15 35.3 -1.5
      comp=Z,952nmcomp=Z,48nm,1.0s
DGZ   Jazzator, Alta   57.60  15deP        P        02 15 36.8 +0.3
DGZ                                pmax     pmax
      comp=Z,31nm,0.9s
DGZ                                MLR      MLR
      comp=Z,2µm,18.0s
IDI   Anoyia           57.72 318   P        P        02 15 37.2 -0.3
IDI                                IAmb     IAmb     02 15 39.1
      comp=Z,46nm,1.1s
SANT  Santorini        57.99 320   P        P        02 15 38.0 -1.4
SANT                               IAmb     IAmb     02 15 39.9
      comp=Z,52nm,0.8s
BRVK  Borovoye         58.55   1 i P        P        02 15 42.4 -0.5
BRVK                               pmax     pmax
      comp=Z,77nm,1.1s
BRVK  Borovoye         58.55   1   P        P        02 15 42.7 -0.1
TNTI  Ternate          59.25  86   P        P        02 15 48.3 -0.2
TNTI  Ternate          59.25  86   P        P        02 15 47.7 -0.8
      comp=Z,105nm,1.0s
TIY   Taiyuan          59.53  40  eP        P        02 15 50.6 +0.5
TIY                                S        S        02 24 00.6 +1.0
TIY                                pmax     pmax
      comp=Z,17nm,0.5s
TIY                                LR       LR
      comp=Z,930nm,13.0s
TIY                                LR       LR
      comp=Z,1µm,15.7s
TIY                                LR       LR
      comp=Z,1µm,18.2s
BTO   Baotou           59.85  36  eP        P        02 15 50.7 -1.6
BTO                                S        S        02 24 01.4 -2.3
ALN   Alexandroupoli   60.43 324   P        P        02 15 55.7 -0.4
ALN                                pmax     pmax
      comp=Z,36nm,1.1s
ALN   Alexandroupoli   60.43 324   P        P        02 15 55.6 -0.4
ALN                                IAmb     IAmb     02 16 04.5
      comp=Z,36nm,1.1s
BELG  Belogornoye      60.50 346deP        P        02 15 55.4 -0.9
BELG                               pmax     pmax
      comp=Z,22nm,1.0s
BELG                               MLR      MLR
      comp=Z,361nm,21.0s
HHC   Hu-ho-hao-te     60.91  36  eP        P        02 16 00.7 +1.2
HHC                                sP       pwP      02 16 07.5 +0.4
HHC                                S        S        02 24 20.2 +2.9
HHC                                pmax     pmax
      comp=Z,13nm,1.0s
HHC                                pmax     pmax
      comp=Z,370nm,6.6s
HHC                                LR       LR
      comp=Z,900nm,12.8s
HHC                                LR       LR
      comp=Z,1µm,19.4s
HHC                                LR       LR
      comp=Z,1µm,14.9s
NJ2   Nanjing          60.94  49  eP        P        02 15 59.9 +0.1
NJ2                                S        S        02 24 19.0 +1.3
NJ2                                SS       SS       02 28 21.6 +4.2
NJ2                                pmax     pmax
      comp=Z,18nm,0.6s
NJ2                                pmax     pmax
      comp=Z,250nm,3.5s
NJ2                                LR       LR
      comp=Z,2µm,20.8s
NJ2                                LR       LR
      comp=Z,2µm,18.9s
NJ2                                LR       LR
      comp=Z,3µm,17.1s
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ZAA0  Zalesovo Array   61.01  11   IAmb     IAmb     02 16 01.0
      comp=Z,45nm,0.9s
ZALV  Zalesovo Beam    61.01  11   P        P        02 15 59.2 -0.5
      comp=Z,32nm,0.8s,baz=215,slow=6.8,SNR=127
ZALV                               LR       LR       02 41 23.6
      comp=Z,1µm,22.0s,baz=212,slow=35
ZALV  Zalesovo Beam    61.01  11   P        P        02 15 58.7 -1.0
VRH   Novokhopyorsk    61.12 341  eP        P        02 15 58.8 -1.8
VRH                                pmax     pmax
      comp=Z,40nm,0.8s
MFTR  Murfatlar        61.29 328 ⇓P        P        02 16 01.7 -0.1
KAVA  Kavala           61.40 323   P        P        02 16 02.2 -0.5
AGG   Agios Georgios   61.56 320   P        P        02 16 02.6 -1.2
AGG                                pmax     pmax
      comp=Z,29nm,1.0s
AGG   Agios Georgios   61.56 320   P        P        02 16 02.6 -1.2
AGG                                IAmb     IAmb     02 16 21.8
      comp=Z,29nm,1.0s
VORD  Divnogorie       61.73 340  eP        P        02 16 03.4 -1.3
VORD                               pmax     pmax
      comp=Z,20nm,0.4s
MAW   Mawson           61.93 182   P        P        02 16 06.4 +0.6
      comp=Z,6.5nm,0.8s,baz=25,slow=9.5,SNR=4.4
MAW                                LR       LR       02 37 55.0
      comp=Z,2µm,18.4s,baz=1.5,slow=31
MAW   Mawson           61.93 182   P        P        02 16 06.8 +1.1
MAW                                pmax     pmax
      comp=Z,5.0nm,1.2s
MAW   Mawson           61.93 182   P        P        02 16 06.8 +1.1
NVR   Nevrokopi        62.00 323   P        P        02 16 06.0 -0.8
SRS   Serrai           62.02 323   P        P        02 16 06.0 -0.9
LIT   Litokhoron       62.09 321   P        P        02 16 05.9 -1.5
MTN   Manton Dam       62.22 101   IAMs_20  IAMs_20  02 38 27.4
      comp=Z,4µm,21.0s
SSE   Sheshan          62.27  51   P        P        02 16 18.9  +10
SSE                                S        S        02 24 16.4  -18
SSE                                pmax     pmax
      comp=Z,8.0nm,0.5s
SSE                                pmax     pmax
      comp=Z,81nm,4.9s
SSE                                LR       LR
      comp=N,550nm,17.1s
SSE                                LR       LR
      comp=E,580nm,18.6s
ARU   Arti             62.43 354c iP        P        02 16 08.8 -0.5
ARU                                pmax     pmax
      comp=Z,118nm,1.0s
ARU                                MLR      MLR
      comp=Z,547nm,15.0s
ARU   Arti             62.43 354   P        P        02 16 08.7 -0.6
SVE   Sverdlovsk       62.63 355deP        P        02 16 10.3 -0.3
SVE                               eS        S        02 24 40.0 +1.8
SVE                                pmax     pmax
      comp=Z,92nm,1.4s
SVE                                MLR      MLR
      comp=Z,2µm,21.0s
KZN   Kozani           62.66 321   P        P        02 16 09.5 -1.7
SONM  Songino Array    62.91  28   P        P        02 16 13.6 +0.7
      comp=Z,44nm,0.8s,baz=218,slow=6.7,SNR=165
SONM                               LR       LR       02 43 13.4
      comp=Z,4µm,21.5s,baz=224,slow=36
SONM                               PKPPKP   P'P'df   02 45 20.4 +7.5
      comp=Z,0.7nm,0.8s,baz=107,slow=1.5,SNR=4.0
SONM  Songino Array    62.91  28   P        P        02 16 13.0 +0.1
SONM                               pmax     pmax
      comp=Z,71nm,1.0s
SONM  Songino Array    62.91  28   P        P        02 16 13.0 +0.1
SWI   Sorong           62.94  88   P        P        02 16 11.8 -1.7
      comp=Z,2µmcomp=Z,58nm,1.2s
MILM  Milestii Mici    62.99 331 ⇑P        P        02 16 11.9 -1.3
ODBI  Odobesti         63.08 329 ⇑P        P        02 16 13.6 -0.2
IGT   Igoumenitsa      63.12 320   P        P        02 16 12.3 -2.0
VTS   Vitosha          63.15 324 ⇑P        P        02 16 13.9 -0.7
FNA   Florina          63.18 322   IAmb     IAmb     02 16 19.7
      comp=Z,37nm,1.5s
STIP  Stip             63.22 323 i P        P        02 16 13.1 -1.8
LPSR  Galich'ya Gora   63.23 340  eP        P        02 16 13.3 -1.4
LPSR                               pmax     pmax
      comp=Z,50nm,0.9s
BJT   Baijiatuau       63.24  40   P        P        02 16 15.2 +0.2
BJT                                pmax     pmax
      comp=Z,19nm,0.8s
BJT   Baijiatuau       63.24  40   P        P        02 16 15.2 +0.2
ULN   Ulaanbaatar      63.24  28c iP        P        02 16 15.2 +0.1
ULN                                pmax     pmax
      comp=Z,19nm,0.7s
ULN                                MLR      MLR
      comp=Z,3µm,22.0s
ULN   Ulaanbaatar      63.24  28   P        P        02 16 14.8 -0.3
ULN   Ulaanbaatar      63.24  28   IAMs_20  IAMs_20  02 43 12.4
      comp=Z,3µm,21.0s
NEHR  Nehoiu           63.25 328 ⇓P        P        02 16 15.3 +0.3
BJI   Beijing          63.26  40   P        P        02 16 15.7 +0.6
BJI                                S        S        02 24 48.5 +1.9
BJI                                pmax     pmax
      comp=Z,25nm,0.8s
BJI                                LR       LR
      comp=Z,740nm,15.5s
BJI                                LR       LR
      comp=Z,570nm,13.5s
BJI                                LR       LR
      comp=Z,390nm,26.5s
LSK   Leskovik         63.30 321   P        P        02 16 13.5 -2.0
VRI   Vrincioaia       63.31 329 ⇑P        P        02 16 15.6 +0.1
PLOR  Plostina         63.34 329 ⇓P        P        02 16 15.9 +0.2
ZAK   Zakamensk        63.47  24  eP        P        02 16 15.4 -1.1
ZAK                                pmax     pmax
      comp=Z,20nm,1.3s
MLR   Muntele Rosu     63.47 328 ⇑P        P        02 16 16.8 +0.1
MLR   Muntele Rosu     63.47 328   IAmb     IAmb     02 16 19.2
      comp=Z,49nm,1.3s
MOY   Mondy            63.58  22  eP        P        02 16 18.3 +1.1
MOY                                pmax     pmax
      comp=Z,92nm,3.2s
FAKI  Fak Fak          63.73  90   P        P        02 16 19.5 +0.6
FAKI  Fak Fak          63.73  90   P        P        02 16 19.3 +0.5
      comp=Z,98nm,1.1s
TESR  Tescani          63.79 329 ⇓P        P        02 16 17.9 -0.7
SKO   Skopje           63.83 323 i P        P        02 16 17.9 -1.0
VOIR                   63.91 327 ⇑P        P        02 16 18.4 -1.0
OZUR                   63.96 328 ⇓P        P        02 16 18.7 -1.0
SORM  Soroca           64.07 331 ⇑P        P        02 16 18.7 -1.6
DOPR  Dopca            64.08 328 ⇑P        P        02 16 19.9 -0.6
ARR   Arges            64.09 327 ⇑P        P        02 16 19.5 -1.1
PHP   Peshkopia        64.27 322   P        P        02 16 19.8 -2.1
BIZ   Bicaz            64.35 329 ⇓P        P        02 16 21.3 -1.0
TIR   Tirane           64.44 321 ⇑P        P        02 16 23.2 +0.3
LOT   Lotru            64.61 327 ⇑P        P        02 16 22.5 -1.6
TLY   Talaya           64.61  23  eP        P        02 16 24.0 +0.1
TLY                               eS        S        02 25 04.7 +1.5
TLY                                pmax     pmax
      comp=Z,260nm,2.2s
TLY                                MLR      MLR
      comp=Z,4µm,16.0s
TLY   Talaya           64.61  23   P        P        02 16 23.6 -0.3
TLY                                IAmb     IAmb     02 16 34.3
      comp=Z,50nm,1.1s
TLY                                IAMs_20  IAMs_20  02 43 49.4
      comp=Z,2µm,19.0s
GZR   Gura Zlata       65.12 326 ⇑P        P        02 16 27.1 -0.3
BURAR Bucovina Array   65.25 329 ⇑P        P        02 16 27.9 -0.3
BURAR Bucovina Array   65.25 329   P        P        02 16 27.4 -0.8
TIP   Timpagrande      65.28 318   P        P        02 16 27.6 -0.9
TIP                                IAmb     IAmb     02 16 45.6
      comp=Z,48nm,1.6s
BUR08 Bucovina Ar. S   65.28 329   IAmb     IAmb     02 16 38.3
      comp=Z,43nm,1.6s
IRK   Irkutsk          65.30  23  eP        P        02 16 30.5 +2.2
IRK                                pmax     pmax
      comp=Z,449nm,2.2s
DRME  Dracevica, Mon   65.33 322⇑iP        P        02 16 27.7 -1.0
ASAR  Alice Springs    65.34 113   P        P        02 16 29.1 -0.2
      comp=Z,7.2nm,0.8s,baz=278,slow=5.9,SNR=40
ASAR                               LR       LR       02 40 58.5
      comp=Z,2µm,21.9s,baz=279,slow=32
AS31  Alice Springs    65.34 113   P        P        02 16 29.3 +0.1
MDVR  Moldovita        65.34 325 ⇑P        P        02 16 27.5 -1.3
PDG   Podgorica        65.42 322 ⇓P        P        02 16 28.6 -0.7
PDG   Podgorica        65.42 322  eP        P        02 16 28.3 -1.0
SJES  Sjenica          65.46 323⇑iP        P        02 16 28.3 -1.4
WC1   Warramunga Arr   65.50 109   IAMs_20  IAMs_20  02 41 04.1
      comp=Z,3µm,20.0s
WR1   Warramunga Arr   65.50 109   IAMs_20  IAMs_20  02 40 08.2
      comp=Z,3µm,22.0s
WRA   Warramunga Arr   65.50 109   P        P        02 16 29.6 -0.7
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      comp=Z,8.4nm,1.0s,baz=260,slow=1.0,SNR=6.0
WRA                                LR        LR        02 41 04.0
      comp=Z,3µm,21.9s,baz=280,slow=32
WRA   Warramunga Arr   65.50 109   P         P         02 16 30.5 +0.2
WRA                                pmax      pmax
      comp=Z,7.0nm,1.6s
WRA   Warramunga Arr   65.50 109   P         P         02 16 30.5 +0.2
AKASG Malin Array Be   65.50 334   P         P         02 16 28.0  -1.6
      comp=Z,6.6nm,0.6s,baz=131,slow=5.9,SNR=45
AKASG                              LR        LR        02 47 46.1
      comp=Z,825nm,19.2s,baz=130,slow=38
AKASG Malin Array Be   65.50 334   P         P         02 16 27.0  -2.6
AKBB  Malin Array Si   65.50 334⥣eP        P         02 16 28.2  -1.4
AKBB  Malin Array Si   65.50 334   IAmb      IAmb      02 16 30.2
      comp=Z,58nm,1.4s
WB1   Warramunga Ar.   65.51 109   IAMs_20   IAMs_20   02 40 08.3
      comp=Z,4µm,22.0s
CJR   Cluj-Napoca      65.51 328 ⥥P         P         02 16 29.7  -0.2
WRAB  Tennant Creek    65.51 109d iP        P         02 16 30.7 +0.3
WRAB                               pmax      pmax
      comp=Z,82nm,1.7s
WRAB                               MLR       MLR
      comp=Z,2µm,18.0s
WRAB  Tennant Creek    65.51 109   P         P         02 16 30.3  -0.1
WRAB                               IAmb      IAmb      02 17 16.6
      comp=Z,43nm,1.1s
WRAB  Tennant Creek    65.51 109   IAMs_20   IAMs_20   02 40 07.7
      comp=Z,4µm,22.0s
WB3   Warramunga Arr   65.51 109   IAMs_20   IAMs_20   02 40 07.5
      comp=Z,4µm,22.0s
WB4   Warramunga Arr   65.52 109   IAMs_20   IAMs_20   02 41 03.6
      comp=Z,3µm,20.0s
WB6   Warramunga Arr   65.52 109   IAMs_20   IAMs_20   02 40 06.7
      comp=Z,4µm,22.0s
WR2   Warramunga Arr   65.52 109   IAMs_20   IAMs_20   02 38 45.7
      comp=Z,3µm,21.0s
WC2   Warramunga Arr   65.52 109   IAMs_20   IAMs_20   02 40 21.8
      comp=Z,4µm,21.0s
WB9   Warramunga Arr   65.53 109   IAMs_20   IAMs_20   02 42 14.1
      comp=Z,3µm,20.0s
WB0   Warramunga Arr   65.54 109   IAmb      IAmb      02 16 32.0
      comp=Z,27nm,0.9s
WB0                                IAMs_20   IAMs_20   02 40 30.3
      comp=Z,3µm,22.0s
WR3   Warramunga Arr   65.54 109   IAMs_20   IAMs_20   02 40 07.3
      comp=Z,4µm,22.0s
WR4   Warramunga Arr   65.56 109   IAMs_20   IAMs_20   02 39 56.8
      comp=Z,4µm,22.0s
WR6   Warramunga Arr   65.61 109   IAMs_20   IAMs_20   02 40 34.0
      comp=Z,4µm,22.0s
WR7   Warramunga Arr   65.63 109   IAMs_20   IAMs_20   02 41 07.6
      comp=Z,3µm,21.0s
WR8   Warramunga Arr   65.65 109   IAMs_20   IAMs_20   02 40 59.2
      comp=Z,3µm,21.0s
WR9   Warramunga Arr   65.67 109   IAMs_20   IAMs_20   02 40 11.5
      comp=Z,4µm,22.0s
WR0   Warramunga Arr   65.69 109   IAmb      IAmb      02 16 33.0
      comp=Z,33nm,0.9s
WR0                                IAMs_20   IAMs_20   02 41 10.2
      comp=Z,3µm,20.0s
KIRV  Kirov            65.86 349ceP        P         02 16 30.9  -0.8
HCY   Herceg Novi      65.90 322 eP         P         02 16 31.5  -0.9
BZS   Buzias           65.90 326 ⥥P         P         02 16 31.5  -0.8
DIVS  Divibare         65.93 324⥣iP        P         02 16 31.9  -0.8
DIVS  Divibare         65.93 324   IAmb      IAmb      02 16 39.1
      comp=Z,32nm,1.1s
DRGR                   66.03 327 ⥥P         P         02 16 32.6  -0.6
SYO   Syowa Base       66.03 191⥣eP        P         02 16 32.0  -0.7
SYO   Syowa Base       66.03 191⥥eX        P         02 16 34.7 +2.0
UPM   Unac-Piva        66.07 323 eP         P         02 16 32.9  -0.8
MATE  Matera           66.07 319 ⥥P         P         02 16 33.3  -0.1
OBN   Obninsk          66.09 341 ⥥P         P         02 16 32.8  -0.5
OBN   Obninsk          66.09 341 eP         P         02 16 31.8  -1.5
OBN                              i                     02 17 00.9
OBN                              i                     02 19 03.8
OBN                                pmax      pmax
      comp=Z,66nm,1.7s
OBN                                MLR       MLR
      comp=Z,743nm,16.0s
OBN   Obninsk          66.09 341   P         P         02 16 32.8  -0.5
OBN                                IAmb      IAmb      02 16 34.5
      comp=Z,24nm,0.7s
BRY   Bratogost        66.12 322⥣iP        P         02 16 33.4  -0.6
TREB  Trebinje         66.14 322 eP         P         02 16 33.1  -0.8
BBLS  Lazi&#263;i      66.14 323⥣iP        P         02 16 33.4  -0.6
DL2   Dalian           66.24  43   P         P         02 16 35.2 +0.6
DL2                                S         S         02 25 25.7 +2.2
DL2                                pmax      pmax
      comp=Z,58nm,1.4s
DL2                                pmax      pmax
      comp=Z,380nm,6.6s
DL2                                LR        LR
      comp=Z,710nm,14.3s
DL2                                LR        LR
      comp=Z,1µm,14.9s
DL2                                LR        LR
      comp=Z,1µm,16.7s
MOS   Moscow           66.27 342 eP         P         02 16 32.0  -2.5
MOS                              e                     02 17 01.8
MOS                              e                     02 18 55.6
MOS                              ePPP       PPP       02 20 32.2
MOS                              eS         S         02 25 19.0  -4.2
MOS                                pmax      pmax
      comp=Z,171nm,1.7s
MOS                                MLR       MLR
      comp=Z,1µm,19.0s
HAPS  Han Pijesak,BI   66.54 323 eP         P         02 16 37.1 +0.5
STON  Ston             66.62 322   P         P         02 16 36.4  -0.6
STON  Ston             66.62 322 eP         P         02 16 35.6  -1.4
FRGS  Fruska Gora      66.65 325⥣iP        P         02 16 35.9  -1.3
LTVH  Ltavrtes, Hu     66.83 328 eP         P         02 16 41.4 +3.1
AMBH  Ambrzfalva       66.84 326 eP         P         02 16 39.6 +1.3
SGRT  San Giovanni R   67.26 320   P         P         02 16 41.0  -0.2
SGRT                               IAmb      IAmb      02 16 48.5
      comp=Z,24nm,1.0s
LVV   L'vov            67.30 331 eP         P         02 16 39.6  -1.6
UZH   Uzhgorod         67.41 329 eP         P         02 16 41.2  -0.7
UZH                              e                     02 16 46.5
UZH                              e                     02 17 12.4
HVAR  Hvar             67.56 321   P         P         02 16 42.3  -0.6
TAM   Tamanrasset      67.60 297   P         P         02 16 43.2  -0.6
TAM                                pmax      pmax
      comp=Z,50nm,1.9s
TAM                                MLR       MLR
      comp=Z,3µm,19.0s
TAM   Tamanrasset      67.60 297   P         P         02 16 43.2  -0.6
TAM                                IAmb      IAmb      02 17 09.8
      comp=Z,50nm,1.9s
TAM                                IAMs_20   IAMs_20   02 46 11.3
      comp=Z,3µm,19.0s
KOLS  Kolonicke sedl   67.61 329 eP         P         02 16 42.4  -0.8
KOLS                               pmax      pmax
      comp=Z,34nm,1.4s
KOLS  Kolonicke sedl   67.61 329 eP         P         02 16 42.4  -0.8
KWP   Kalwaria Pacla   67.83 330 eP         P         02 16 43.7  -0.9
MORH  Mrgy, Hungar     67.93 325 eP         P         02 16 43.5  -1.7
MORH  Mrgy, Hungar     67.93 325 eP         P         02 16 43.7  -1.5
BLY   Banja Luka       67.96 323 eP         P         02 16 43.3  -2.1
CRVS  Cervenica-Dubn   68.01 329 eP         P         02 16 44.9  -0.8
CRVS                               pmax      pmax
      comp=Z,56nm,1.5s
CRVS  Cervenica-Dubn   68.01 329 eP         P         02 16 44.9  -0.8
KIJV  Kijevo           68.03 322   P         P         02 16 44.8  -1.1
BBOO  Buckleboo        68.20 123   P         P         02 16 47.6 +0.3
BBOO                               IAmb      IAmb      02 16 57.1
      comp=Z,38nm,1.1s
BBOO                               IAMs_20   IAMs_20   02 46 57.5
      comp=Z,2µm,18.0s
PSZ   Piszkesteto      68.23 327 eP         P         02 16 44.9  -2.3
KECS  Kecovo           68.26 328 eP         P         02 16 46.2  -1.1
KECS  Kecovo           68.26 328 eP         P         02 16 46.2  -1.1
INTR  Introdacqua      68.58 319   P         P         02 16 48.5  -1.0
INTR                               IAmb      IAmb      02 17 11.0
      comp=Z,53nm,1.5s
UDBI  Udbina           68.69 322   P         P         02 16 49.3  -0.9
TIH   Tihany           68.75 325 eP         P         02 16 48.1  -2.2
CSKK  Cskako           68.81 326 eP         P         02 16 50.5  -0.2
TOC1  Torodi Ar. Sit   68.81 286   IAMs_20   IAMs_20   02 46 40.9
      comp=Z,3µm,19.0s
TOA0  Torodi Ar. Sit   68.81 286   IAMs_20   IAMs_20   02 47 50.0
      comp=Z,3µm,18.0s
TOA3  Torodi Ar. Sit   68.81 286   IAMs_20   IAMs_20   02 46 41.0
      comp=Z,2µm,19.0s
TORD  Torodi Ar. Bea   68.81 286   P         P         02 16 50.1  -1.2
      comp=Z,8.5nm,1.1s,baz=140,slow=6.4,SNR=11
TORD                               PKiKP     PKiKP     02 23 09.3  -1.3
      comp=Z,0.4nm,0.8s,baz=353,slow=1.6,SNR=4.7
TORD                               LR        LR        02 46 51.3
      comp=Z,2µm,18.2s,baz=100,slow=36
TORD  Torodi Ar. Bea   68.81 286   P         P         02 16 50.7  -0.7
TOB1  Torodi Ar. Sit   68.81 286   IAMs_20   IAMs_20   02 47 33.1
      comp=Z,3µm,18.0s
MNK   Minsk            68.82 336 i P        P         02 16 49.0  -1.5
      comp=E,2.0nm,1.0s
MNK                              i P        P         02 16 49.0  -1.5
      comp=N,8.0nm,1.0s
MNK                              i P        P         02 16 49.0  -1.5
      comp=Z,24nm,1.0s
MNK                              i PcP      PcP       02 17 13.0  -2.1
MNK                              i pP       pwP       02 17 14.2  +16
MNK                              i sP       sP        02 17 25.4  +30
MNK                              i PP       PP        02 19 21.6  -1.1
MNK                              i PPP      PPP       02 21 02.2
MNK                              i S        S         02 25 44.7  -9.2
MNK                              i sS       SKiKP     02 26 28.4  -14
MNK                              i ScS      SKSac     02 26 39.5  -10
MNK                              i SS       SS        02 30 11.8  -7.4
MNK                              i SSS      SSS       02 33 29.2
MNK                              i LQ       LQ        02 40 30.1
MNK                              i LR       LR        02 43 24.9
MNK                              i LRM      MLR       02 49 40.9
      comp=Z,249nm,18.8s
MNK                              i LRM      MLR       02 49 43.7
      comp=E,82nm,18.8s
MNK                              i LRM      MLR       02 49 48.5
      comp=N,251nm,18.8s
MNK   Minsk            68.82 336 eP         P         02 16 51.0 +0.4
TOB4  Torodi Ar. Sit   68.82 286   IAMs_20   IAMs_20   02 47 32.2
      comp=Z,3µm,18.0s
NIE   Niedzica         68.92 329 eP         P         02 16 52.8 +1.3
KEST  Kesra            68.94 312   P         P         02 16 51.1  -0.8
      comp=Z,3.0nm,0.6s,baz=301,slow=5.4,SNR=4.1
KEST                               LR        LR        02 45 58.1
      comp=Z,626nm,19.4s,baz=27,slow=35
SNY   Shenyang         68.97  41 ⥥P         P         02 16 52.3 +0.5
SNY                                S         S         02 25 56.9 +0.8
SNY                                pmax      pmax
      comp=Z,21nm,0.8s
SNY                                pmax      pmax
      comp=Z,280nm,4.4s
SNY                                LR        LR
      comp=Z,720nm,18.1s
SNY                                LR        LR
      comp=Z,1µm,16.1s
SNY                                LR        LR
      comp=Z,1µm,17.6s
SRO   Srobarova        69.03 326 eP         P         02 16 51.3  -0.8
SRO                                pmax      pmax
      comp=Z,97nm,1.8s
SRO   Srobarova        69.03 326 eP         P         02 16 51.2  -0.8
AQU   L'Aquila         69.07 319 eP         P         02 16 51.6  -0.9
MPLH  Magyarpolny      69.10 326 eP         P         02 16 51.3  -1.3
BEHE  Becsehely        69.14 325 eP         P         02 16 52.9   0.0
VYHS  Vyhne            69.15 327 eP         P         02 16 51.7  -1.1
VYHS                               pmax      pmax
      comp=Z,81nm,1.8s
VYHS  Vyhne            69.15 327 eP         P         02 16 51.7  -1.1
CIT   Chita            69.15  28 eP         P         02 16 52.6  -0.2
CIT                              e                     02 17 10.1
CIT                                pmax      pmax
      comp=Z,189nm,1.8s
TJN   Taejon           69.17  48deP        P         02 16 53.4 +0.2
LANS  Liptovska Anna   69.20 328 eP         P         02 16 52.5  -0.7
LANS                               pmax      pmax
      comp=Z,13nm,0.7s
LANS  Liptovska Anna   69.20 328 eP         P         02 16 52.5  -0.7
EGYH  Egyhazaskeszo    69.36 326 eP         P         02 16 48.1  -6.0
NRCA  Norcia           69.49 320   P         P         02 16 54.7  -0.5
NACGM Naroch           69.55 336 i P        P         02 16 55.0  -0.2
NACGM                            i P        P         02 16 55.0  -0.2
NACGM                            i P        P         02 16 55.0  -0.2
NACGM                            i PcP      PcP       02 17 14.0  -4.2
NACGM                            i PP       PP        02 19 36.4 +7.3
NACGM                            i PPP      PPP       02 21 24.4
NACGM                            i S        S         02 26 05.0 +2.5
NACGM                            i SS       SS        02 30 44.9  +14
NACGM                            i SSS      SSS       02 34 07.8
NACGM                            i LQ       LQ        02 42 49.7
NACGM                            i LR       LR        02 46 44.7
GOLS  Golise           69.57 324 eP         P         02 16 54.8  -0.7
CRES  Cresnjev         69.57 323 eP         P         02 16 54.8  -0.7
OJC   Ojcow            69.67 329 eP         P         02 16 54.6  -1.4
IDID  Didziasalis      69.86 336 eP         P         02 16 57.3 +0.3
ZST   Bratislava       69.92 326 eP         P         02 16 56.3  -1.3
ZST                                pmax      pmax
      comp=Z,108nm,1.8s
ZST   Bratislava       69.92 326 eP         P         02 16 56.3  -1.3
SMOL  Smolenice        69.92 327 eP         P         02 16 56.3  -1.3
SMOL  Smolenice        69.92 327 eP         P         02 16 56.3  -1.3
VISS  Visnje           69.92 323 eP         P         02 16 56.9  -0.8
MODS  Modra-Piesok     69.92 326 eP         P         02 16 55.2  -2.4
MODS                               pmax      pmax
      comp=Z,30nm,1.4s
MODS  Modra-Piesok     69.92 326 eP         P         02 16 55.2  -2.4
SOP   Sopron           69.94 326 eP         P         02 16 56.2  -1.5
PDKS  Podkum           69.96 323 eP         P         02 16 57.1  -0.9
JAVC  Velka Javorina   69.99 327 eP         P         02 16 57.7  -0.4
KSAR  Wonju Array Be   69.99  47   P         P         02 16 57.8  -0.4
KSAR  Wonju Array Be   69.99  47   P         P         02 16 57.8  -0.4
KSRS  Korea Array      70.02  47   P         P         02 16 57.7  -0.7
      comp=Z,3.8nm,0.6s,baz=248,slow=7.6,SNR=12
KSRS                               LR        LR        02 49 13.5
      comp=Z,2µm,18.4s,baz=238,slow=37
KLMR  Klimovskoe       70.08 345 eP         P         02 16 55.5  -2.8
KLMR                               S         S         02 26 01.0  -7.5
KLMR                               pmax      pmax
      comp=Z,211nm,1.5s
KLMR                               MLR       MLR
      comp=Z,2µm,20.0s
KLMR  Klimovskoe       70.08 345 eP         P         02 16 55.5  -2.8
KLMR                             eP         P         02 16 55.5  -2.8
KLMR                             eP         P         02 16 55.5  -2.8
KLMR                               AMP                 02 17 01.1
      comp=Z,211nm,1.5s
KLMR                               S         S         02 26 01.0  -7.5
KLMR                               LQ        LQ        02 42 10.6
KLMR                               LQ        LQ        02 42 10.6
KLMR                               LR        LR        02 42 32.9
KLMR                               AMP                 02 47 52.5
      comp=Z,2µm,20.2s
IIGN  Ignalina         70.09 336 eP         P         02 16 58.6 +0.2
CEY   Cerknica         70.14 323 eP         P         02 16 57.2  -1.8
LJU   Ljubljana        70.23 323 i P        P         02 16 58.9  -0.6
LJU   Ljubljana        70.23 323⥣iP        P         02 16 58.7  -0.9
SOKA  Soboth           70.27 324 i P        P         02 16 58.7  -1.2
      comp=Z,8.7nm,0.8s
SKDS  Skadanscina      70.28 323 eP         P         02 16 58.7  -1.2
ARSA  Arzberg          70.29 325 eP         P         02 16 59.2  -0.7
      comp=Z,8.5nm,0.7s,SNR=6.6
ISAL  Salakas          70.29 336 eP         P         02 17 00.1 +0.5
OBKA  Obir             70.46 324 eP         P         02 17 00.3  -0.8
      comp=Z,17nm,1.6s
CONA  Conrad Observa   70.47 326 eP         P         02 17 00.0  -1.0
      comp=Z,16nm,0.7s,SNR=10.0
SUW   Suwalki          70.47 334 eP         P         02 16 59.9  -0.9
SUW   Suwalki          70.47 334 eP         P         02 16 59.6  -1.1
HIA   Hailar           70.58  33c iP        P         02 17 02.3 +0.7
HIA                                pmax      pmax
      comp=Z,17nm,0.9s
HIA                                MLR       MLR
      comp=Z,1µm,19.0s
HIA   Hailar           70.58  33   P         P         02 17 01.8 +0.1
HIA                                IAmb      IAmb      02 17 11.3
      comp=Z,58nm,1.3s
MORC  Moravsky Berou   70.58 328 ⥥P         P         02 17 00.8  -0.8
MORC  Moravsky Berou   70.58 328 eP         P         02 17 00.4  -1.3
MORC  Moravsky Berou   70.58 328   IAmb      IAmb      02 17 05.3
      comp=Z,73nm,2.0s
KRUC  Moravsky         70.80 327 eP         P         02 17 01.6  -1.3
VRAC  Vranov           70.83 327 ⥣P         P         02 17 02.2  -0.9
VRAC  Vranov           70.83 327 eP         P         02 17 01.8  -1.3
MYKA  Terra Mystica    71.06 323 eP         P         02 17 03.6  -1.1
      comp=Z,23nm,1.4s
CN2   Changchun        71.12  40 eP         P         02 17 04.4  -0.6
CN2                              eS         S         02 26 21.5 +0.2
CN2                                pmax      pmax
      comp=Z,20nm,0.6s
CN2                                pmax      pmax
      comp=Z,270nm,4.0s
CN2                                LR        LR
      comp=Z,710nm,17.0s
CN2                                LR        LR
      comp=Z,950nm,17.0s
PABE  Paberze          71.13 335 eP         P         02 17 04.4  -0.4
MOA   Molln            71.33 325 i P        P         02 17 05.4  -0.9
      comp=Z,19nm,0.8s,SNR=5.4
ZOU   Zoufplan         71.42 323   IAmb      IAmb      02 17 31.4
      comp=Z,44nm,1.5s
KBA   Koelnbreinsper   71.47 324 i P        P         02 17 06.8  -0.5
      comp=Z,12nm,0.9s
DPC   Dobruska-Polom   71.56 328 eP         P         02 17 06.2  -1.4
DPC   Dobruska-Polom   71.56 328 eP         P         02 17 06.2  -1.4
TEOL  Teolo            71.62 322   IAmb      IAmb      02 17 10.1
      comp=Z,66nm,1.2s
OSTC  Ostas            71.73 328 eP         P         02 17 07.8  -0.8
ABTA  Abfaltersbach    71.79 323 eP         P         02 17 08.7  -0.5
      comp=Z,23nm,0.7s,SNR=9.6
CHVC  Chvalec          71.83 328 eP         P         02 17 08.4  -0.8
CHVC                             ex         x         02 17 14.1
KSP   Ksiaz            71.85 328 eP         P         02 17 08.9  -0.3
PUL   Pulkovo          71.85 341⥣eP        P         02 17 09.2 +0.2
PUL                                pmax      pmax
      comp=Z,37nm,0.6s
PUL                                MLR       MLR
      comp=Z,992nm,21.0s
VSU   Vasula           72.12 338 eP         P         02 17 10.2  -0.5
VSU   Vasula           72.12 338⥥eP        P         02 17 10.4  -0.3
VSU                                pmax      pmax
      comp=Z,77nm,1.1s
VSU                                MLR       MLR
      comp=Z,930nm,15.0s
GEC2  GERESS Array S   72.17 326 eP         P         02 17 11.6 +0.2
      comp=Z,198nm,3.1s,baz=120,slow=5.8
GERES GERESS Array B   72.17 326   P         P         02 17 08.9  -2.4
      comp=Z,1.1nm,0.5s,baz=135,slow=9.8,SNR=3.3
PRU   Pruhonice        72.31 327 eP         P         02 17 11.0  -1.1
PRU   Pruhonice        72.31 327 eP         P         02 17 11.0  -1.1
PBUR  Paburge          72.34 335 eP         P         02 17 10.9  -1.1
KHC   Kasperske Hory   72.39 326 eP         P         02 17 11.0  -1.6
KHC                              e                     02 17 29.5
KHC   Kasperske Hory   72.39 326 eP         P         02 17 11.0  -1.6
KHC                              ePCP       PcP       02 17 29.5  -1.0
PBCC  Pribram          72.45 326 eP         P         02 17 11.6  -1.3
PVCC  Panska Ves       72.59 327 eP         P         02 17 13.5  -0.2
PVCC  Panska Ves       72.59 327 eP         P         02 17 13.5  -0.2
WATA  Walderalm        72.64 323 eP         P         02 17 12.6  -1.7
      comp=Z,43nm,1.3s,SNR=10
GKP   Gorka Klasztor   72.77 331 eP         P         02 17 14.4  -0.3
GKP   Gorka Klasztor   72.77 331 eP         P         02 17 14.7 +0.1
STKA  Stephens Creek   72.77 121   P         P         02 17 14.7  -0.6
      comp=Z,6.1nm,0.8s,baz=302,slow=6.2,SNR=8.6
STKA                               LR        LR        02 45 42.3
      comp=Z,3µm,20.0s,baz=263,slow=33
STKA  Stephens Creek   72.77 121⥥eP        P         02 17 16.1 +0.9
STKA  Stephens Creek   72.77 121   P         P         02 17 15.8 +0.6
WET   Wettzell         72.79 325 eP         P         02 17 15.1 +0.1
      comp=Z,39nm,1.7s,baz=120,slow=5.8
SQTA  Sankt Quirin     72.80 323 i P        P         02 17 14.0  -1.2
      comp=Z,34nm,0.6s,SNR=16
MOTA  Moosalm          72.92 323 eP         P         02 17 15.0  -1.0
      comp=Z,34nm,0.7s,SNR=13
FETA  Feichten         72.99 323 eP         P         02 17 15.9  -0.4
      comp=Z,22nm,0.7s,SNR=9.6
BRG   Berggiesshubel   73.11 327 i P        P         02 17 16.4  -0.4
BRG                                Amp                 02 17 21.9
      comp=Z,14nm,0.9s
BRG                              ex         x         02 17 37.9
BRG                                Amp                 02 17 39.6
      comp=Z,33nm,1.5s
BRG   Berggiesshubel   73.11 327 i P        P         02 17 16.3  -0.4
BRG                              e                     02 17 37.8
BRG                                pmax      pmax
      comp=Z,14nm,0.9s
BRG                                pmax      pmax
      comp=Z,33nm,1.5s
BRG   Berggiesshubel   73.11 327 i P        P         02 17 16.4  -0.4
BRG                                Amp                 02 17 21.9
      comp=Z,14nm,0.9s
BRG                              ex         x         02 17 37.9
BRG                                Amp                 02 17 39.6
      comp=Z,33nm,1.5s
BRG   Berggiesshubel   73.11 327 eP         P         02 17 16.0  -0.7
      comp=Z,85nm,2.1s,baz=120,slow=5.8
BOD   Bodaibo          73.19  24 eP         P         02 17 16.2  -0.9
BOD                                pmax      pmax
      comp=Z,33nm,1.9s
RETA  Reutte           73.20 323 eP         P         02 17 16.7  -0.8
      comp=Z,24nm,0.7s
FUR   Furstenfeldbru   73.22 324 eP         P         02 17 16.8  -0.7
      comp=Z,78nm,0.7s,baz=120,slow=5.8
TMCR  Tamitsa          73.28 347 eP         P         02 17 16.3  -1.1
TMCR                               pmax      pmax
      comp=Z,130nm,1.4s
MTSE  Matsula          73.38 338 eP         P         02 17 18.6 +0.5
FBE   Freiberg         73.45 327 eP         P         02 17 18.6  -0.1
      comp=Z,104nm,1.8s,baz=120,slow=5.8
ROTZ  Rotzenmuhle      73.49 326 eP         P         02 17 18.0  -1.1
      comp=Z,46nm,1.7s,baz=120,slow=5.8
TUE   Stuetta          73.58 322   IAmb      IAmb      02 17 24.6
      comp=Z,26nm,0.8s
NKC   Novy Kostel      73.59 326 eP         P         02 17 19.9 +0.2
NKC                              e                     02 17 28.0
NKC   Novy Kostel      73.59 326 eP         P         02 17 19.9 +0.2
NKC                              ex         x         02 17 28.0
DAVA  Damuels          73.63 323 eP         P         02 17 19.2  -0.9
      comp=Z,63nm,0.7s,SNR=16
WERN  Wernitzgruen     73.66 326 eP         P         02 17 19.6  -0.5
      comp=Z,112nm,1.5s,baz=120,slow=5.8
TANN  Tannenbergstha   73.68 326 eP         P         02 17 19.1  -1.1
      comp=Z,75nm,1.8s,baz=120,slow=5.8
UBR   Ueberruh         73.68 323 eP         P         02 17 19.9  -0.4
      comp=Z,114nm,1.2s,baz=120,slow=5.8
GUNZ  Gunzen           73.72 326 eP         P         02 17 20.2  -0.3
      comp=Z,112nm,1.8s,baz=120,slow=5.8
CLL   Collm            73.84 327 i P        P         02 17 20.4  -0.7
      comp=Z,40nm,1.2s
CLL                              eS         SKiKP     02 26 51.0 +0.9
CLL                              eSS        SS        02 31 24.0  -13
CLL                              e(SSS)               02 35 30.0
CLL                              eSSSS                02 36 48.0
CLL                                LmV                 02 54 00.0
      comp=Z,700nm,19.4s
CLL   Collm            73.84 327 i P        P         02 17 20.4  -0.7
CLL                              eS         SKiKP     02 26 51.0 +0.9
CLL                                pmax      pmax
      comp=Z,40nm,1.2s
CLL                                MLR       MLR
      comp=Z,700nm,19.4s
CLL   Collm            73.84 327   IAmb      IAmb      02 17 23.6
      comp=Z,47nm,1.3s
CLL   Collm            73.84 327 eP         P         02 17 20.7  -0.4
      comp=Z,40nm,1.2s,baz=120,slow=5.8
PLN   Plauen           73.88 326 eP         P         02 17 20.8  -0.5
      comp=Z,70nm,1.8s,baz=120,slow=5.8
KIC   Kosan Boka       73.95 278 eP         P         02 17 21.1  -1.4
      comp=Z,24nm,0.7s
GRA1  Grafenberg Arr   74.00 325   IAmb      IAmb      02 17 31.7
      comp=Z,51nm,0.8s
GRF   Grafenberg Arr   74.00 325 eP         P         02 17 21.3  -0.8
      comp=Z,90nm,1.2s,baz=120,slow=5.8
GRF                              eL         L         02 47 47.5
      comp=Z,418nm,20.7s
NVL   N'lazarevskaya   74.05 197⥥iP        P         02 17 22.5 +0.5
NVL                              ePPP       PPP       02 21 57.8
NVL                              eS         SKiKP     02 26 50.6 +0.7
NVL                                pmax      pmax
      comp=Z,26nm,0.8s
RUE   Ruedersdorf      74.06 329 eP         P         02 17 22.1  -0.2
      comp=Z,77nm,1.1s,baz=120,slow=5.8
DBIC  Dimbokro         74.11 279   P         P         02 17 22.1  -1.2
      comp=Z,6.7nm,0.6s,baz=66,slow=6.5,SNR=20
DBIC  Dimbokro         74.11 279   P         P         02 17 22.5  -0.9
DBIC                               pmax      pmax
      comp=Z,47nm,1.7s
DBIC  Dimbokro         74.11 279   P         P         02 17 22.4  -0.9
MDJ   Mudanjiang       74.15  41   P         P         02 17 23.2 +0.2
MDJ                                S         S         02 27 00.4 +4.5
MDJ                                pmax      pmax
      comp=Z,42nm,1.0s
MDJ                                pmax      pmax
      comp=Z,500nm,4.8s
MDJ                                LR        LR
      comp=Z,680nm,14.0s
MDJ                                LR        LR
      comp=Z,820nm,17.9s
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MDJ                             LR       LR
      comp=Z,1µm,17.6s
MDJ   Mudanjiang        74.15  41   P        P        02 17 22.2 -0.8
MDJ                             IAmb     IAmb     02 17 25.0
      comp=Z,53nm,0.9s
LIC   Lamto             74.22 278 eP       P        02 17 22.5 -1.5
      comp=Z,22nm,0.6s
MOX   Moxa              74.26 326 eP       P        02 17 23.3 -0.2
      comp=Z,26nm,0.9s,baz=120,slow=5.8
MOX                               eL       L        02 54 39.8
      comp=Z,547nm,18.8s
TIC   Toumodi           74.27 279 eP       P        02 17 22.8 -1.6
FIA1  FINESS Array S    74.50 340  IAmb    IAmb     02 17 26.8
      comp=Z,66nm,1.1s
FINES FINESS Array B    74.50 340  P       P        02 17 23.1 -1.5
      comp=Z,39nm,1.1s,baz=127,slow=5.0,SNR=28
FINES                              LR      LR       02 52 19.2
      comp=Z,1µm,18.8s,baz=137,slow=38
FINES FINESS Array B    74.50 340 i P      P        02 17 24.2 -0.5
FINES                              pmax    pmax
      comp=Z,39nm,1.0s
FINES FINESS Array B    74.50 340  P       P        02 17 23.8 -0.9
KOWA  Kowa              74.51 287  P       P        02 17 24.9 -0.8
BNI   Bardonecchia      74.64 320  IAmb    IAmb     02 17 32.5
      comp=Z,80nm,1.9s
STU   Stuttgart         74.73 324  IAmb    IAmb     02 17 28.2
      comp=Z,47nm,1.1s
STU   Stuttgart         74.73 324 eP       P        02 17 25.5 -0.8
      comp=Z,48nm,1.2s,baz=120,slow=5.8
SENIN Lac Senin/Sane    74.80 321  IAmb    IAmb     02 17 27.5
      comp=Z,33nm,0.6s
BFO   Black Forest      75.04 323  P       P        02 17 27.0 -1.1
BFO                                pmax    pmax
      comp=Z,19nm,1.0s
BFO   Black Forest      75.04 323  P       P        02 17 27.0 -1.1
BFO   Black Forest      75.04 323 eP       P        02 17 27.2 -0.9
      comp=Z,27nm,1.1s,baz=120,slow=5.8
FLTG  Flechtingen       75.31 328 eP       P        02 17 28.9 -0.7
      comp=Z,39nm,1.3s,baz=120,slow=5.8
CLZ   Clausthal         75.53 327 eP       P        02 17 30.6 -0.3
      comp=Z,30nm,1.1s,baz=120,slow=5.8
USA0B Ussuriysk Arra    75.55  42⇓eP       P        02 17 31.3 +0.2
USA0B Ussuriysk Arra    75.55  42  P       P        02 17 30.6 -0.6
USRK  Ussuriysk Ar.     75.55  42  P       P        02 17 30.2 -0.9
      comp=Z,12nm,0.8s,baz=257,slow=4.9,SNR=18
USRK                               LR      LR       02 53 24.7
      comp=Z,745nm,18.3s,baz=230,slow=38
USRK  Ussuriysk Ar.     75.55  42  P       P        02 17 30.5 -0.6
USRK  Ussuriysk Ar.     75.55  42  P       P        02 17 30.5 -0.6
GTTG  Gottingen         75.61 327 eP       P        02 17 31.3  0.0
      comp=Z,50nm,1.3s,baz=120,slow=5.8
ECH   Echery            75.69 323  P       P        02 17 31.3 -0.6
ECH                                pmax    pmax
      comp=Z,51nm,1.5s
ECH   Echery            75.69 323  P       P        02 17 31.3 -0.6
ECH                                IAmb    IAmb     02 17 33.0
      comp=Z,50nm,1.5s
AAL   Aland             75.82 337 eP       P        02 17 32.8 +0.5
TNS   Taunus Mts        75.83 325 eP       P        02 17 32.4 -0.3
      comp=Z,49nm,1.3s,baz=120,slow=5.8
SSB   Saint Sauveur     76.11 319  P       P        02 17 34.2 -0.2
SSB                                pmax    pmax
      comp=Z,45nm,1.3s
SSB   Saint Sauveur     76.11 319  P       P        02 17 34.2 -0.2
SSB                                IAmb    IAmb     02 17 50.4
      comp=Z,45nm,1.3s
KASTN Kahler Asten      76.30 326 eP       P        02 17 35.0 -0.3
      comp=Z,131nm,2.4s,baz=120,slow=5.8
TOO   Toolangi          76.34 127  P       P        02 17 37.4 +1.5
TOO                                pmax    pmax
      comp=Z,73nm,1.4s
TOO   Toolangi          76.34 127  P       P        02 17 37.4 +1.5
TOO                                IAmb    IAmb     02 17 48.0
      comp=Z,73nm,1.4s
TOO                                IAMs_20 IAMs_20  02 46 45.9
      comp=Z,2µm,19.0s
UPP   Uppsala           76.55 336 eP       P        02 17 36.1 -0.3
CTA   Charters Tower    76.70 109  LR      LR       02 49 39.4
      comp=Z,734nm,19.7s,baz=256,slow=34
CTAO  Charters Tower    76.70 109  P       P        02 17 38.6 +0.3
CTAO                               pmax    pmax
      comp=Z,43nm,1.2s
CTAO  Charters Tower    76.70 109  P       P        02 17 38.6 +0.3
CTAO                               IAmb    IAmb     02 18 02.3
      comp=Z,43nm,1.1s
CTAO  Charters Tower    76.70 109  IAMs_20 IAMs_20  02 50 34.0
      comp=Z,3µm,19.0s
WLF   Walferdange       76.91 324 dP       P        02 17 38.8  0.0
ZEA   Zeya              76.92  31 eP       P        02 17 38.7  0.0
ZEA                               eS       S        02 27 28.5 +2.3
ZEA                                pmax    pmax
      comp=N,20nm,0.8s
ZEA                                pmax    pmax
      comp=E,20nm,1.2s
ZEA                                pmax    pmax
      comp=Z,40nm,1.2s
ZEA                                pmax    pmax
      comp=Z,200nm,4.9s
ZEA                                smax    smax
      comp=N,300nm,13.1s
ZEA                                smax    smax
      comp=E,300nm,16.0s
ZEA                                MLR     MLR
      comp=N,700nm,18.0s
ZEA                                MLR     MLR
      comp=E,800nm,18.0s
ZEA                                MLR     MLR
      comp=Z,900nm,19.0s
APA   Apatity           77.18 347⇓iP       P        02 17 38.5 -1.4
APA                                pmax    pmax
      comp=Z,16nm,0.9s
MEM   Membach           77.40 325 dP       P        02 17 43.2 +1.7
KLR   Kul'dur           77.41  37d iP      P        02 17 40.7 -0.9
KLR                                pmax    pmax
      comp=Z,26nm,0.8s
KLR                                MLR     MLR
      comp=Z,926nm,17.0s
MAT   Matsushiro        77.42  51  P       P        02 17 41.6 -0.3
MAT                                S       S        02 27 32.8 +0.4
MJAR  Matsushiro Arr    77.42  51  P       P        02 17 42.1 +0.2
      comp=Z,8.0nm,0.8s,baz=252,slow=6.3,SNR=15
MJAR                               LR      LR       02 53 28.9
      comp=Z,684nm,18.1s,baz=245,slow=37
MJAR  Matsushiro Arr    77.42  51  P       P        02 17 42.1 +0.2
BSTI  Sart Tilman       77.64 325 dP       P        02 17 43.9 +1.0
BMRD  Maredsous         77.99 324 dP       P        02 17 44.5 -0.3
PMG   Port Moresby      78.06  98  LR      LR       02 50 09.7
      comp=Z,1µm,21.9s,baz=228,slow=34
PMG   Port Moresby      78.06  98  IAMs_20 IAMs_20  02 49 45.9
      comp=Z,2µm,20.0s
SNF   Seneffe           78.36 324 dP       P        02 17 46.8  0.0
MUD   Monsted U'grnd    78.41 331 i P      P        02 17 46.0 -0.9
MUD                                pmax    pmax
      comp=Z,27nm,0.8s
MUD   Monsted U'grnd    78.41 331 i P      P        02 17 46.0 -0.9
      comp=Z,27nm,0.8s
MUD   Monsted U'grnd    78.41 331 i P      P        02 17 46.0 -0.9
MUD                                IAmb    IAmb     02 17 48.2
      comp=Z,27nm,0.8s
SNAA  Sanae             78.76 198  P       P        02 17 50.1 +1.3
SNAA  Sanae             78.76 198⇓eP       P        02 17 49.3 +0.5
SNAA                               pmax    pmax
      comp=Z,12nm,1.0s
SNAA                               MLR     MLR
      comp=Z,444nm,17.0s
SNAA  Sanae             78.76 198  P       P        02 17 49.8 +1.0
JYT   Yasato            78.87  52  P       P        02 17 49.1 -0.8
KONO  Kongsberg         79.80 334⇑eP       P        02 17 55.1 +0.6
KONO                               pmax    pmax
      comp=Z,48nm,1.3s
KONO  Kongsberg         79.80 334  P       P        02 17 54.4 -0.1
NB2   NORSAR Subarra    79.83 335  P       P        02 17 54.1 -0.6
      comp=Z,240nm,3.3s,baz=122,slow=5.6
NB2   NORSAR Subarra    79.83 335  P       P        02 17 54.1 -0.6
      baz=122,slow=5.6
NOA   NORSAR Array B    79.83 335  P       P        02 17 53.5 -1.2
      comp=Z,13nm,1.1s,baz=112,slow=5.8,SNR=12
NOA                                LR      LR       02 55 01.7
      comp=Z,768nm,19.7s,baz=115,slow=37
VNA2  Neumayer--Watz    80.01 199  P       P        02 17 57.5 +1.9
      baz=75,slow=5.0
ESDC  Sonseca Array     80.19 312  P       P        02 17 56.7 -0.5
      comp=Z,11nm,0.9s,baz=93,slow=4.2,SNR=66
ESDC  Sonseca Array     80.19 312  P       P        02 17 56.5 -0.6
VNA1  Neumayer--Stat    80.24 199  P       P        02 17 57.6 +0.9
SNART Snartemo          80.25 332 eP       P        02 17 53.0 -4.0
PAB   San Pablo         80.44 312  P       P        02 17 58.4 -0.2
PAB                                pmax    pmax
      comp=Z,37nm,1.3s
PAB   San Pablo         80.44 312  P       P        02 17 58.4 -0.2
ARCES ARCESS Array B    80.55 346  P       P        02 17 57.5 -0.8
      comp=Z,32nm,1.0s,baz=138,slow=5.9,SNR=21
ARCES                              LR      LR       02 54 24.4
      comp=Z,1µm,20.9s,baz=135,slow=36
ARCES ARCESS Array B    80.55 346  P       P        02 17 58.7 +0.3
GRNR  Gornyy            80.79  37⇑iP       P        02 17 59.5 -0.6
GRNR                               pmax    pmax
      comp=Z,20nm,0.8s
GRNR                               MLR     MLR
      comp=N,590nm,17.0s
GRNR                               MLR     MLR
      comp=E,400nm,17.0s
GRNR                               MLR     MLR
      comp=Z,590nm,19.0s
VNA3  Neumayer Olymp    80.80 199  P       P        02 18 01.0 +1.2
SFS   San Fernando      81.08 308  IAMs_20 IAMs_20  02 57 57.9
      comp=Z,1µm,18.0s
ARMA  Armidale          81.34 120  IAmb    IAmb     02 18 14.8
      comp=Z,45nm,1.2s
ARMA                               IAMs_20 IAMs_20  02 49 34.5
      comp=Z,2µm,22.0s
YAK   Yakutsk           82.05  25 eP       P        02 18 06.7 +0.3
YAK                               e                 02 18 18.6
YAK                               eS       S        02 28 11.6 -8.6
YAK                               eSSS     SSS      02 36 58.9
YAK                                pmax    pmax
      comp=Z,35nm,0.9s
YAK                                pmax    pmax
      comp=N,7.0nm,1.1s
YAK                                pmax    pmax
      comp=E,16nm,1.4s
YAK                                smax    smax
      comp=E,176nm,14.3s
YAK                                smax    smax
      comp=N,120nm,11.0s
YAK                                MLR     MLR
      comp=Z,2µm,20.0s
YAK                                MLR     MLR
      comp=E,713nm,16.0s
YAK                                MLR     MLR
      comp=N,1µm,17.0s
YAK   Yakutsk           82.05  25  P       P        02 18 06.6 +0.2
YAK                                IAmb    IAmb     02 18 07.7
      comp=Z,38nm,0.8s
YAK                                IAMs_20 IAMs_20  02 55 05.5
      comp=Z,2µm,20.0s
PMRV  Marv??o           82.69 311 eP       P        02 18 10.9 +0.5
      comp=Z,60nm,1.5s
PBEJ  Beja              82.73 309 eP       P        02 18 10.9 +0.3
      comp=Z,8.8nm,1.9s
PCVE  Castro Verde      82.78 309 eP       P        02 18 11.6 +0.8
      comp=Z,75nm,1.6s
PBRG  Braganca          82.78 313 eP       P        02 18 17.6 +6.8
      comp=Z,60nm,1.6s
MVO   Moncorvo          82.83 313 eP       P        02 18 12.5 +1.3
      comp=Z,70nm,1.7s
PCBR  Castelo Branco    82.85 311 eP       P        02 18 11.8 +0.6
      comp=Z,40nm,1.5s
EVO   Evora             82.96 310 eP       P        02 18 12.6 +0.8
      comp=Z,46nm,1.5s
MESJ  Messejana         82.97 309 eP       P        02 18 12.1 +0.2
MESJ                               AMb     AMB      02 18 12.8
      comp=Z,52nm,2.0s
MESJ  Messejana         82.97 309 eP       P        02 18 12.0 +0.2
MESJ                               pmax    pmax
      comp=Z,52nm,2.0s
MESJ  Messejana         82.97 309 eP       P        02 18 12.4 +0.6
      comp=Z,43nm,1.8s
MTE   Manteigas         83.03 312 eP       P        02 18 12.9 +0.7
      comp=Z,30nm,1.7s
MTE   Manteigas         83.03 312  IAmb    IAmb     02 18 19.8
      comp=Z,56nm,1.6s
PMTG  Montargil         83.24 310 eP       P        02 18 13.8 +0.6
      comp=Z,46nm,1.6s
PNCL  Nicolau / Gran    83.26 309 eP       P        02 18 16.8 +3.5
      comp=Z,53nm,1.6s
PVRL  Vila Real         83.36 313 eP       P        02 18 15.1 +1.2
      comp=Z,44nm,1.6s
PVIS  Viseu             83.37 312 eP       P        02 18 14.8 +0.9
      comp=Z,50nm,1.7s
POLO  Lamas de Olo      83.44 313 eP       P        02 18 15.3 +1.0
      comp=Z,24nm,1.6s
YSS   Yuzh-Sakhalins    83.58  42⇑eP       P        02 18 14.6 -0.1
YSS                                pmax    pmax
      comp=Z,75nm,1.7s
YSS                                MLR     MLR
      comp=Z,618nm,20.0s
YSS   Yuzh-Sakhalins    83.58  42  P       P        02 18 14.6 -0.1
PCAS  Casmilo, Conde    83.67 311 eP       P        02 18 16.4 +1.0
      comp=Z,94nm,1.6s
PCAB  Cabril            83.69 313 eP       P        02 18 16.6 +1.1
      comp=Z,68nm,1.7s
PGAV  Gavieira, Arco    83.93 313 eP       P        02 18 16.0 -0.8
      comp=Z,55nm,1.4s
QSPA  South Pole Qui    84.33 180  P       P        02 18 18.5 +0.1
QSPA  South Pole Qui    84.33 180  IAMs_20 IAMs_20  02 51 29.3
      comp=Z,2µm,19.0s
TYV   Tymovskoe         84.57  38 eP       P        02 18 28.5 +8.8
TYV                                pmax    pmax
      comp=Z,19nm,2.0s
TYV                                pmax    pmax
      comp=Z,400nm,3.5s
VNDA  Vanda             85.23 167  P       P        02 18 23.3 +0.7
      comp=Z,3.1nm,0.7s,baz=288,slow=5.8,SNR=14
VNDA                               LR      LR       02 51 50.4
      comp=Z,957nm,18.6s,baz=264,slow=32
VNDA  Vanda             85.23 167  P       P        02 18 23.4 +0.8
TIXI  Tiksi             86.46  16⇓eP       P        02 18 28.6 -0.1
TIXI  Tiksi             86.46  16  P       P        02 18 28.0 -0.7
BELA  Belgrano 2        87.19 192  P       P        02 18 32.0 -0.2
LHI   Lord Howe Isla    87.65 121  IAMs_20 IAMs_20  02 53 54.5
      comp=Z,2µm,21.0s
KBS   Kingsbay          89.45 351 i P      P        02 18 33.1  -10
KBS                                IAmb    IAmb     02 18 33.8
      comp=Z,115nm,1.1s
MA2   Magadan           91.02  30⇑eP       P        02 18 50.0 -0.5
MA2                                pmax    pmax
      comp=Z,33nm,0.9s
MA2                                MLR     MLR
      comp=Z,631nm,20.0s
MA2   Magadan           91.02  30  P       P        02 18 50.1 -0.5
SEY   Seymchan          92.30  27⇓eP       P        02 18 57.2 +0.8
SACV  Santiago Islan    93.36 285  IAMs_20 IAMs_20  03 00 32.6
      comp=Z,1µm,20.0s
PETK  Petropavlovsk-    94.10  37  P       P        02 19 02.9 -2.1
      comp=Z,2.4nm,0.6s,baz=264,slow=4.3,SNR=2.2
PETK                               LR      LR       03 04 23.1
      comp=Z,902nm,20.4s,baz=266,slow=37
DAG   Danmarks Havn     94.82 347 i P      P        02 19 08.0 +0.3
DAG                                pmax    pmax
      comp=Z,16nm,1.1s
DAG   Danmarks Havn     94.82 347 i P      P        02 19 08.0 +0.3
      comp=Z,16nm,1.1s
DAG   Danmarks Havn     94.82 347 i P      P        02 19 08.0 +0.3
DAG                                IAmb    IAmb     02 19 09.8
      comp=Z,16nm,1.1s
DZM   Mont Dzumac       95.32 113 eSS      SS       02 36 54.0 -0.6
      comp=Z,864nm,30.2s
DZM   Mont Dzumac       95.32 113 eLR      LR       02 50 00.0
      comp=Z,4µm,22.9s
LTZ   Lake Taylor       96.27 134  IAMs_20 IAMs_20  03 01 39.1
      comp=Z,1µm,19.0s
THZ   Tophouse          96.97 133  IAMs_20 IAMs_20  02 59 32.7
      comp=Z,1µm,19.0s
BFZ   Birch Farm        99.69 133  IAMs_20 IAMs_20  03 09 59.6
      comp=Z,1µm,19.0s
URZ   Urewera          101.00 131  IAMs_20 IAMs_20  02 59 55.6
      comp=Z,1µm,19.0s
MXZ   Matakaoa Point   102.11 130  IAMs_20 IAMs_20  02 59 42.9
      comp=Z,1µm,20.0s
RCBR  Riachuelo        103.54 263  IAMs_20 IAMs_20  03 01 04.4
      comp=Z,2µm,20.0s
RDOG  Red Dog Mine     108.98  18  IAMs_20 IAMs_20  03 13 39.9
      comp=Z,2µm,21.0s
ANM   Nome             110.06  22  IAMs_20 IAMs_20  03 12 48.7
      comp=Z,1µm,18.0s
COLD  Coldfoot         113.18  15  P       PKiKP    02 24 24.2 +0.6
      baz=318
COLD  Coldfoot         113.18  15  IAMs_20 IAMs_20  03 14 48.6
      comp=Z,912nm,20.0s
TTA   Tatalina         114.39  21  IAMs_20 IAMs_20  03 16 52.1
      comp=Z,943nm,21.0s
MLY   Manley           114.64  17  P       PKPdf    02 24 27.1 +0.6
      baz=316
FYU   Fort Yukon       114.95  14  IAMs_20 IAMs_20  03 15 43.2
      comp=Z,1µm,22.0s
I23K  Minto, Yukon-K   114.96  17  P       PKPdf    02 24 28.1 +1.0
      baz=318
I23K  Minto, Yukon-K   114.96  17  IAMs_20 IAMs_20  03 16 15.6
      comp=Z,1µm,20.0s
BPAW  Bear Paw Mtn.    115.24  18  IAMs_20 IAMs_20  03 16 53.3
      comp=Z,947nm,21.0s
MDM   Murphy Dome      115.42  16  IAMs_20 IAMs_20  03 18 02.7
      comp=Z,1µm,19.0s
POKR  Poker Plat Res   115.52  16  IAMs_20 IAMs_20  03 17 37.4
      comp=Z,946nm,19.0s
TCOL  CIGO, UAF Yank   115.58  16  IAMs_20 IAMs_20  03 18 07.2
      comp=Z,1µm,19.0s
COLA  College          115.59  16  IAMs_20 IAMs_20  03 18 08.2
      comp=Z,1µm,19.0s
KTH   Kantishna Hill   115.66  18  IAMs_20 IAMs_20  03 16 36.3
      comp=Z,1µm,21.0s
INK   Inuvik           115.77   9  PKP     PKiKP    02 24 27.8 -0.7
      comp=Z,1.4nm,0.6s,baz=11,slow=1.8,SNR=4.0
CCB   Clear Creek Bu   115.77  16  IAMs_20 IAMs_20  03 18 04.2
      comp=Z,1µm,20.0s
WRH   Wood River Hil   115.83  17  IAMs_20 IAMs_20  03 16 29.6
      comp=Z,1µm,21.0s
TRF   Thorofare Moun   115.93  18  IAMs_20 IAMs_20  03 16 08.0
      comp=Z,1µm,21.0s
ILAR  Eielson Array    115.93  16  PKP     PKiKP    02 24 28.0 -1.0
      comp=Z,0.7nm,0.7s,baz=282,slow=3.5,SNR=7.4
ILAR                               PP      PP       02 25 30.4 -2.1
      comp=Z,1.6nm,1.0s,baz=294,slow=5.6,SNR=4.2
ILAR  Eielson Array    115.93  16          PKPdf    02 24 29.2 +0.3
HDA   Harding Lake     116.19  16  IAMs_20 IAMs_20  03 18 33.3
      comp=Z,1µm,18.0s
SKT   Skwentna         116.58  20  IAMs_20 IAMs_20  03 24 13.7
      comp=Z,827nm,18.0s
DHY   Denali Highway   117.09  17  IAMs_20 IAMs_20  03 17 37.1
      comp=Z,902nm,20.0s
EGAK  Eagle            117.39  14          PKiKP    02 24 31.9 +0.2
EGAK                               IAMs_20 IAMs_20  03 20 30.8
      comp=Z,916nm,20.0s
DOT   Dot Lake         117.58  16  IAMs_20 IAMs_20  03 19 19.9
      comp=Z,931nm,20.0s
SML   Sawmill          117.75  19  IAMs_20 IAMs_20  03 18 13.7
      comp=Z,1µm,21.0s
K27K  Chicken          117.79  15  P       PKiKP    02 24 34.2 +1.6
      baz=325
K27K  Chicken          117.79  15  IAMs_20 IAMs_20  03 19 34.0
      comp=Z,921nm,19.0s
RC01  Rabbit Creek A   117.82  20  P       PKiKP    02 24 33.0 +0.3
      baz=316
DAWY  Dawson           118.41  13          PKiKP    02 24 34.6 +0.8
BCAR  Beaver Creek A   118.66  15          PKPdf    02 24 34.2 -0.1
N25K  Chitina, Valde   119.05  17  P       PKiKP    02 24 36.2 +1.0
      baz=322
BALM  Baldy            120.17  17  IAMs_20 IAMs_20  03 19 22.4
      comp=Z,891nm,21.0s
CTGM  Chitina Glacie   120.51  16  IAMs_20 IAMs_20  03 20 24.4
      comp=Z,824nm,20.0s
TABL  Table Mountain   121.00  17  IAMs_20 IAMs_20  03 19 34.3
      comp=Z,903nm,21.0s
YKA   Yellowknife Ar   123.28   2  PKP     PKPdf    02 24 42.0 -1.1
      comp=Z,3.9nm,0.9s,baz=360,slow=2.5,SNR=30
YKA                                PP      PP       02 26 22.0 -0.8
      comp=Z,5.2nm,1.0s,baz=0.1,slow=7.7,SNR=14
YKA                                PKKPbc  PKKPab   02 34 33.8 +0.7
      comp=Z,0.4nm,0.7s,baz=164,slow=4.3,SNR=7.5
PTLB  Pontes e Lacer   123.93 247 eP       PKiKP    02 24 46.8 +0.8
BI03  Tigo             124.40 217  IAMs_20 IAMs_20  03 22 52.6
      comp=Z,729nm,18.0s
FCC   Fort Churchill   125.35 349  IAMs_20 IAMs_20  03 18 17.8
      comp=Z,855nm,22.0s
DLBC  Dease Lake       125.48  12  PKP     PKPdf    02 24 47.7 +0.1
      comp=Z,3.4nm,0.9s,baz=275,slow=3.3,SNR=4.4
SIV   San Ignacio      125.53 246  PKP     PKPdf    02 24 48.1 -0.7
      comp=Z,0.9nm,0.8s,baz=142,slow=9.3,SNR=4.2
VILB  Vilhena          125.66 250 eP       PKiKP    02 24 49.8 +0.3
E61A  Lac Etchemin     126.12 326  P       PKiKP    02 24 49.6  0.0
      baz=54
G63A  Kingsbury        126.38 324  P       PKiKP    02 24 49.9 -0.2
      baz=56
CO01  Juntas del Tor   126.68 226          PKiKP    02 24 51.6 +0.1
D58A  Chemin du LacG   127.03 328  P       PKPdf    02 24 50.6 -0.2
      baz=51
AC05  El Transito      127.45 227          PKiKP    02 24 52.9  0.0
MATQ  Matagami         127.60 333  P       PKiKP    02 24 52.7 +0.4
      baz=44
E58A  La Victoria      127.70 327  P       PKPdf    02 24 52.0 -0.1
      baz=51
LSQQ  Lebel-sur-Quev   127.79 332  P       PKiKP    02 24 52.5 -0.3
      baz=46
D56A  ZEC Mazanza, M   128.05 329  P       PKPdf    02 24 53.0 +0.3
      baz=49
D55A  Sainte-Anne-du   128.44 329  P       PKiKP    02 24 54.1  0.0
      baz=48
G59A  Clarenceville    128.44 326  P       PKiKP    02 24 53.9 -0.2
      baz=52
E56A  St. Veronique    128.52 328  P       PKiKP    02 24 54.0 -0.3
      baz=49
SAML  Samuel           129.57 254  PKIKP   PKiKP    02 24 57.4 +0.1
SAML  Samuel           129.57 254          PKiKP    02 24 57.4 +0.1
SAML  Samuel           129.57 254 eP       PKiKP    02 24 57.5 +0.1
LVC   Limon Verde      129.64 234  PKP     PKPdf    02 24 57.0  0.0
      comp=Z,3.4nm,0.7s,baz=3.5,slow=4.1,SNR=2.7
LVC   Limon Verde      129.64 234  PKIKP   PKPdf    02 24 57.0  0.0
LVC   Limon Verde      129.64 234 eP       PKiKP    02 24 57.4 -0.3
PB14  IPOC Station P   129.82 231  IAMs_20 IAMs_20  03 20 41.2
      comp=Z,824nm,20.0s
FFC   Flin Flon        130.50 353  PKIKP   PKiKP    02 24 58.0  0.0
FFC   Flin Flon        130.50 353          PKiKP    02 24 58.0  0.0
SKI   Saint Kitts      130.86 288  IAMs_20 IAMs_20  03 18 35.0
      comp=Z,1µm,21.0s
L60A  Shokan           130.92 323  P       PKiKP    02 24 59.3 +0.1
      baz=53
PB16  IPOC Station P   132.09 239  PKPdf   PKiKP    02 25 02.8 -0.2
ETMB  Extrema          132.21 251 eP       PKiKP    02 25 02.1 -0.5
O60A  Telford          132.64 322  P       PKiKP    02 25 03.0 +0.3
      baz=53
L56A  Greenwood        132.77 325  P       PKiKP    02 25 03.0 -0.1
      baz=49
M57A  Sunshine Farm,   133.03 324  P       PKiKP    02 25 03.4 -0.1
      baz=50
N58A  Sunbury          133.11 324  P       PKPdf    02 25 02.5  0.0
      baz=51
O59A  Robesonia        133.12 323  P       PKPdf    02 25 02.6 +0.1
      baz=52
TBI   Tubuai           133.12 129 eSS      SS       02 45 12.7 +1.0
      comp=Z,152nm,32.2s
TBI   Tubuai           133.12 129 eLR      LR       03 07 30.8
      comp=Z,804nm,27.8s
N57A  Milroy           133.65 324  P       PKiKP    02 25 04.9 +0.1
      baz=50
ULM   Lac du Bonnet    133.66 346  PKP     PKPdf    02 25 02.8 -0.4
      comp=Z,2.6nm,0.7s,baz=31,slow=2.8,SNR=2.5
ULM   Lac du Bonnet    133.66 346  IAMs_20 IAMs_20  03 27 36.7
      comp=Z,779nm,20.0s
O58A  Lewisberry       133.68 323  P       PKiKP    02 25 05.1 +0.2
      baz=51
SSPA  Standing Stone   133.92 324  P       PKiKP    02 25 05.3  0.0
      baz=50
SJG   San Juan         133.96 290  IAMs_20 IAMs_20  03 19 16.9
      comp=Z,1µm,21.0s
O57A  Amberson         134.05 323  P       PKiKP    02 25 05.2 -0.4
      baz=51
EYMN  Ely              134.52 341  P       PKiKP    02 25 06.2 -0.1
      baz=29
EYMN  Ely              134.52 341  IAMs_20 IAMs_20  03 30 13.6
      comp=Z,1µm,21.0s
P57A  Homestead Farm   134.73 323  P       PKPdf    02 25 06.2 +0.6
      baz=51
Q58A  Fox Den Farm,    134.87 322  P       PKiKP    02 25 07.0 -0.3
      baz=52
CBN   Corbin Frederi   135.13 321  IAMs_20 IAMs_20  03 25 43.9
      comp=Z,946nm,20.0s
T60A  Surry            135.36 319  IAMs_20 IAMs_20  03 23 44.2
      comp=Z,1µm,20.0s
R58B  Mineral          135.59 321  IAMs_20 IAMs_20  03 24 22.2
      comp=Z,1µm,19.0s
MCWV  Mont Chateau     135.70 324  IAMs_20 IAMs_20  03 24 49.6
      comp=Z,878nm,20.0s
R57A  Stanardsville    135.78 322  P       PKPdf    02 25 08.4 +0.7
      baz=51
S58A  Poland Farm, P   135.91 321  IAMs_20 IAMs_20  03 24 36.8
      comp=Z,1µm,20.0s
PPT2  Papeete2         135.96 122 ePP      PP       02 28 04.0  +17
      comp=Z,128nm,27.2s
PPT2  Papeete2         135.96 122 eSS      SS       02 45 50.0 +3.3
      comp=Z,286nm,29.2s
```

PPT2	**Papeete2**	**135.96**	**122**	*e*LR	LR	03 08 47.0	
	comp=Z,1µm,24.5s						
T59A	**Double "B" Far**	**135.99**	**320**	IAMs_20	IAMs_20	03 24 14.2	
	comp=Z,999nm,20.0s						
O53A	**New Philadelph**	**136.08**	**326**	P	**PKPdf**	**02 25 08.8**	**+0.7**
	baz=46						
M50A	**Fremont**	**136.25**	**329**	IAMs_20	IAMs_20	03 27 03.5	
	comp=Z,1µm,21.0s						
G40A	**Rib Lake**	**136.38**	**338**	IAMs_20	IAMs_20	03 33 57.1	
	comp=Z,870nm,19.0s						
S57A	**Dark Hollow, R**	**136.39**	**322**	IAMs_20	IAMs_20	03 24 48.1	
	comp=Z,981nm,21.0s						
V60A	**Jim Taylor Roa**	**136.50**	**318**	IAMs_20	IAMs_20	03 23 02.7	
	comp=Z,727nm,20.0s						
U59A	**Littleton**	**136.51**	**319**	IAMs_20	IAMs_20	03 24 42.7	
	comp=Z,977nm,20.0s						
O52A	**Adamsville**	**136.51**	**326**	IAMs_20	IAMs_20	03 25 55.9	
	comp=Z,1µm,20.0s						
WALA	**Waterton Lakes**	**136.75**	**2**	IAMs_20	IAMs_20	03 35 26.9	
	comp=Z,672nm,20.0s						
D32A	**Dogwood Acres,**	**136.84**	**345**	IAMs_20	IAMs_20	03 36 37.7	
	comp=Z,930nm,19.0s						
F36A	**Milaca**	**137.01**	**341**	IAMs_20	IAMs_20	03 35 30.5	
	comp=Z,880nm,19.0s						
P52A	**Corning**	**137.01**	**326**	P	**PKiKP**	**02 25 11.0**	**-0.7**
	baz=46						
T57A	**Hurt**	**137.05**	**321**	IAMs_20	IAMs_20	03 25 15.7	
	comp=Z,937nm,20.0s						
ACSO	**Alum Creek Sta**	**137.06**	**327**	IAMs_20	IAMs_20	03 26 14.1	
	comp=Z,1µm,21.0s						
V59A	**Middlesex**	**137.15**	**319**	P	**PKiKP**	**02 25 12.1**	**+0.1**
	baz=54						
N49A	**Columbus Grove**	**137.18**	**329**	IAMs_20	IAMs_20	03 30 27.3	
	comp=Z,1µm,20.0s						
Q53A	**Leroy**	**137.20**	**325**	P	**PKiKP**	**02 25 12.1**	**+0.1**
	baz=47						
CNNC	**Cliffs of the**	**137.22**	**318**	IAMs_20	IAMs_20	03 23 43.8	
	comp=Z,668nm,20.0s						
NEW	**Newport**	**137.32**	**5**	PKP	**PKPdf**	**02 25 09.7**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=48,slow=5.2,SNR=3.4						
SPMN	**Marine on St.**	**137.34**	**340**	IAMs_20	IAMs_20	03 31 31.3	
	comp=Z,688nm,20.0s						
U57A	**Blanch**	**137.45**	**320**	P	**PKPdf**	**02 25 10.6**	**-0.1**
	baz=52						
P51A	**Williamsport**	**137.63**	**327**	IAMs_20	IAMs_20	03 26 15.4	
	comp=Z,962nm,21.0s						
BLA	**Blacksburg**	**137.63**	**322**	IAMs_20	IAMs_20	03 24 47.1	
	comp=Z,919nm,21.0s						
V58A	**Windy Hill, Pi**	**137.70**	**320**	IAMs_20	IAMs_20	03 24 09.2	
	comp=Z,692nm,21.0s						
I40A	**Norwalk**	**137.71**	**337**	IAMs_20	IAMs_20	03 33 03.3	
	comp=Z,830nm,19.0s						
S54A	**Dingess, Beckl**	**137.79**	**323**	IAMs_20	IAMs_20	03 26 35.0	
	comp=Z,1µm,21.0s						
EGMT	**Eagleton**	**137.79**	**358**	P	**PKiKP**	**02 25 12.5**	**-0.6**
	baz=2.8						
EGMT	**Eagleton**	**137.79**	**358**	PKPdf	**PKPdf**	**02 25 12.0**	**+0.8**
EGMT				IAMs_20	IAMs_20	03 37 04.6	
	comp=Z,713nm,20.0s						
F33A	**5 Mile Ranch,**	**137.85**	**344**	PKPdf	**PKPdf**	**02 25 12.1**	**+0.9**
F33A				IAMs_20	IAMs_20	03 31 37.5	
	comp=Z,703nm,20.0s						
V57A	**Coltrane Farms**	**138.07**	**320**	P	**PKPdf**	**02 25 11.6**	**-0.3**
	baz=52						
Q51A	**Peebles**	**138.11**	**326**	IAMs_20	IAMs_20	03 26 35.1	
	comp=Z,1µm,21.0s						
U56A	**King**	**138.16**	**321**	IAMs_20	IAMs_20	03 23 35.2	
	comp=Z,962nm,21.0s						
W58A	**Raeford**	**138.24**	**319**	P	**PKPdf**	**02 25 12.8**	**+0.5**
	baz=53						
Y59A	**Loris**	**138.61**	**317**	IAMs_20	IAMs_20	03 26 47.6	
	comp=Z,1µm,20.0s						
W57A	**Gilead**	**138.66**	**319**	IAMs_20	IAMs_20	03 30 07.5	
	comp=Z,696nm,19.0s						
LAO	**LASA Array**	**138.89**	**354**	P	**PKiKP**	**02 25 15.5**	**+0.2**
	baz=8.2						
LAO	**LASA Array**	**138.89**	**354**	PKPdf	**PKiKP**	**02 25 14.5**	**-0.9**
U54A	**Nelsons Funny**	**138.94**	**322**	IAMs_20	IAMs_20	03 26 49.5	
	comp=Z,1µm,20.0s						
MSO	**Missoula**	**138.97**	**2**	P	**PKPdf**	**02 25 14.0**	**+0.6**
	baz=356						
MSO	**Missoula**	**138.97**	**2**	PKPdf	**PKPdf**	**02 25 12.6**	**-0.8**
MSO				IAMs_20	IAMs_20	03 30 33.8	
	comp=Z,908nm,20.0s						
SFIN	**Lafayette**	**139.04**	**331**	IAMs_20	IAMs_20	03 28 12.2	
	comp=Z,1µm,20.0s						
Y58A	**Scranton**	**139.19**	**318**	IAMs_20	IAMs_20	03 23 54.9	
	comp=Z,1µm,22.0s						
SDV	**Santo Domingo**	**139.23**	**277**	IAMs_20	IAMs_20	03 26 05.8	
	comp=Z,993nm,20.0s						
SDV	**Santo Domingo**	**139.23**	**277**	*e*P	**PKPdf**	**02 25 15.9**	**+1.0**
KMSC	**Kings Mountain**	**139.52**	**320**	IAMs_20	IAMs_20	03 25 30.3	
	comp=Z,771nm,20.0s						
Y57A	**Sumter**	**139.61**	**318**	IAMs_20	IAMs_20	03 26 01.9	
	comp=Z,1µm,20.0s						
O44A	**Mansfield**	**139.87**	**332**	IAMs_20	IAMs_20	03 29 57.0	
	comp=Z,896nm,21.0s						
ECSD	**EROS Data Cent**	**139.87**	**343**	IAMs_20	IAMs_20	03 35 29.2	
	comp=Z,918nm,20.0s						
HDIL	**Hopedale**	**139.92**	**333**	IAMs_20	IAMs_20	03 31 01.7	
	comp=Z,760nm,21.0s						
TZTN	**Tazewell**	**139.95**	**324**	P	**PKPdf**	**02 25 15.9**	**+0.5**
	baz=47						
PAULI	**Pauline**	**140.03**	**320**	IAMs_20	IAMs_20	03 26 42.8	
	comp=Z,890nm,20.0s						
G08A	**Pilot Rock**	**140.04**	**8**	PKPdf	**PKPdf**	**02 25 16.1**	**+0.7**
BOZ	**Bozeman (W)**	**140.25**	**0**	P	**PKPdf**	**02 25 16.9**	**+1.1**
	baz=0.0						
BOZ	**Bozeman (W)**	**140.25**	**0**	IAMs_20	IAMs_20	03 39 39.7	
	comp=Z,739nm,20.0s						
T50A	**Nancy**	**140.36**	**326**	IAMs_20	IAMs_20	03 30 39.8	
	comp=Z,996nm,21.0s						
SCIA	**State Center**	**140.39**	**338**	IAMs_20	IAMs_20	03 33 03.2	
	comp=Z,1µm,20.0s						
N41A	**Harden Midland**	**140.48**	**335**	IAMs_20	IAMs_20	03 34 31.8	
	comp=Z,853nm,20.0s						
RLMT	**Red Lodge**	**140.67**	**357**	P	**PKPdf**	**02 25 13.1**	**-3.5**
	baz=3.7						
RLMT	**Red Lodge**	**140.67**	**357**	IAMs_20	IAMs_20	03 41 38.8	
	comp=Z,913nm,19.0s						
Z56A	**Williston**	**140.68**	**318**	IAMs_20	IAMs_20	03 26 21.1	
	comp=Z,1µm,20.0s						
BMO	**Blue Mountains**	**140.68**	**6**	IAMs_20	IAMs_20	03 41 22.2	
	comp=Z,638nm,20.0s						
HODGE	**Hodges**	**140.69**	**320**	IAMs_20	IAMs_20	03 26 26.2	
	comp=Z,957nm,21.0s						
P43A	**Skaggs, Pawnee**	**140.76**	**333**	IAMs_20	IAMs_20	03 32 17.6	
	comp=Z,1µm,21.0s						
I03D	**Drain, OR**	**140.77**	**13**	P	**PKPdf**	**02 25 10.8**	**-5.8**
	baz=341						
OLIL	**Olney**	**140.81**	**330**	IAMs_20	IAMs_20	03 33 17.0	
	comp=Z,1µm,20.0s						
Q44A	**Meyer Farm, Va**	**141.12**	**331**	IAMs_20	IAMs_20	03 29 20.7	
	comp=Z,1µm,21.0s						
RSSD	**Black Hills**	**141.15**	**351**	PKIKP	**PKPdf**	**02 25 12.9**	**-4.7**
RSSD	**Black Hills**	**141.15**	**351**		PKPpre	02 25 12.9	
RSSD	**Black Hills**	**141.15**	**351**	IAMs_20	IAMs_20	03 40 23.5	
	comp=Z,911nm,20.0s						
NNA	**Nana**	**141.20**	**243**	PKP	**PKPdf**	**02 25 19.1**	**+0.9**
	comp=Z,4.9nm,0.3s,baz=253,slow=4.7,SNR=2.1						
CPCT	**Cooper Cave**	**141.28**	**324**	IAMs_20	IAMs_20	03 25 29.3	
	comp=Z,921nm,22.0s						
N38A	**Joes South For**	**141.36**	**337**	IAMs_20	IAMs_20	03 33 59.0	
	comp=Z,989nm,21.0s						
L34A	**Svendsen Farm,**	**141.41**	**342**	IAMs_20	IAMs_20	03 33 54.0	
	comp=Z,995nm,20.0s						
J05D	**Fort Rock, OR**	**141.61**	**11**	P	**PKPdf**	**02 25 14.7**	**-3.6**
	baz=345						
CLTN	**Cedars of Leba**	**141.86**	**326**	IAMs_20	IAMs_20	03 29 14.5	
	comp=Z,885nm,20.0s						
HUMO	**Hull Mountain**	**141.89**	**14**	PKPdf	**PKiKP**	**02 25 20.5**	**-1.1**
W50A	**Signal Mountai**	**141.91**	**324**	IAMs_20	IAMs_20	03 35 09.1	
	comp=Z,932nm,20.0s						
GOGA	**Godfrey**	**141.99**	**320**	P	**PKPdf**	**02 25 19.0**	**-0.1**
	baz=50						
GOGA	**Godfrey**	**141.99**	**320**	IAMs_20	IAMs_20	03 29 22.6	
	comp=Z,875nm,21.0s						
Y52A	**Lilburn**	**142.07**	**321**	IAMs_20	IAMs_20	03 29 37.5	
	comp=Z,939nm,19.0s						
MOOW	**Moose Ponds**	**142.09**	**359**	IAMs_20	IAMs_20	03 42 37.3	
	comp=Z,811nm,19.0s						
N35A	**Tabor**	**142.17**	**340**	IAMs_20	IAMs_20	03 30 41.1	
	comp=Z,995nm,20.0s						
HLID	**Hailey**	**142.21**	**3**	P	**PKPdf**	**02 25 16.4**	**-3.0**
	baz=356						
HLID	**Hailey**	**142.21**	**3**	IAMs_20	IAMs_20	03 39 34.5	
	comp=Z,709nm,19.0s						
LOHW	**Long Hollow**	**142.22**	**359**	IAMs_20	IAMs_20	03 32 10.9	
	comp=Z,737nm,21.0s						
CHIC	**Chingaza**	**142.25**	**270**	*e*P	**PKPdf**	**02 25 16.4**	**-4.2**
V48A	**Smith Brothers**	**142.39**	**326**	IAMs_20	IAMs_20	03 26 28.5	
	comp=Z,739nm,21.0s						
L04D	**Klamath Falls**	**142.41**	**13**	P	**PKPdf**	**02 25 16.8**	**-3.0**
	baz=342						
REDW	**Red Top Meadow**	**142.48**	**359**	IAMs_20	IAMs_20	03 35 39.6	
	comp=Z,832nm,21.0s						
P38A	**Dawn**	**142.48**	**337**	IAMs_20	IAMs_20	03 32 29.7	
	comp=Z,904nm,20.0s						
FPAL	**Fort Paine**	**142.55**	**323**	IAMs_20	IAMs_20	03 29 40.0	
	comp=Z,854nm,22.0s						
SMLC	**San Martn de**	**142.63**	**277**	*e*P	**PKPdf**	**02 25 16.4**	**-4.4**
WVT	**Waverly**	**142.65**	**327**	P	**PKPdf**	**02 25 16.8**	**-3.4**
	baz=41						
YBH	**Yreka Blue Hor**	**142.78**	**14**	PKP	**PKPdf**	**02 25 19.9**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=334,slow=3.2,SNR=5.3						
CCM	**Cathedral Cave**	**142.83**	**333**	P	**PKPdf**	**02 25 16.3**	**-4.2**
	baz=35						
N33A	**J Bar K, Exete**	**142.86**	**342**	IAMs_20	IAMs_20	03 36 09.4	
	comp=Z,1µm,20.0s						
K22A	**Casper**	**142.92**	**354**	IAMs_20	IAMs_20	03 37 07.0	
	comp=Z,597nm,19.0s						
M04C	**Macdoel**	**142.93**	**13**	P	**PKPdf**	**02 25 18.2**	**-2.5**
	baz=343						
BW06	**Boulder Array**	**143.04**	**357**	P	**PKPdf**	**02 25 19.8**	**-1.2**
	baz=3.4						
PDAR	**Pinedale Array**	**143.04**	**357**	PKP	PKPbc	02 25 18.8	+1.1
	comp=Z,1.6nm,0.6s,baz=76,slow=2.2,SNR=18						
PDAR	**Pinedale Array**	**143.04**	**357**		PKPbc	02 25 19.1	+1.4
PTBC	**PUERTO BERRIO,**	**143.04**	**273**	*e*P	PKPab	02 25 17.3	+0.5
M02C	**Callahan**	**143.07**	**14**	P	PKPbc	02 25 19.2	+1.6
	baz=341						
R40A	**Maddies Statio**	**143.09**	**334**	IAMs_20	IAMs_20	03 30 53.7	
	comp=Z,1µm,20.0s						
Z51A	**Franklin**	**143.12**	**322**	IAMs_20	IAMs_20	03 28 47.4	
	comp=Z,1µm,22.0s						
RKT	**Rikitea**	**143.38**	**142**	*e*SS	SS	02 47 19.5	+7.3
	comp=Z,419nm,31.5s						
RKT	**Rikitea**	**143.38**	**142**	*e*LR	LR	03 12 18.1	
	comp=Z,654nm,26.0s						
ZARC	**Zaragoza, Cauc**	**143.44**	**275**	*e*P	PKPab	02 25 17.5	-0.9
X48A	**Hartselle**	**143.45**	**325**	IAMs_20	IAMs_20	03 32 10.2	
	comp=Z,704nm,20.0s						
N02D	**Trinity Center**	**143.50**	**14**	P	**PKPdf**	**02 25 21.3**	**-0.3**
	baz=341						
Y49A	**Blount Mountai**	**143.50**	**323**	IAMs_20	IAMs_20	03 29 51.7	
	comp=Z,866nm,20.0s						
T42A	**Van Buren**	**143.60**	**332**	IAMs_20	IAMs_20	03 29 42.3	
	comp=Z,833nm,20.0s						
HALT	**Halls**	**143.62**	**329**	IAMs_20	IAMs_20	03 30 19.1	
	comp=Z,995nm,20.0s						
ORTC	**Ortega, Tolima**	**143.71**	**269**	*e*P	PKPab	02 25 17.6	-1.9
TOLC	**Tolima**	**143.83**	**270**	*e*P	PKPab	02 25 20.1	-0.2
OGNE	**Ogallala**	**143.86**	**348**	IAMs_20	IAMs_20	03 35 19.2	
	comp=Z,997nm,20.0s						
WDC	**Whiskeytown Da**	**143.91**	**14**	PKIKP	**PKPdf**	**02 25 21.7**	**-0.6**
WDC	**Whiskeytown Da**	**143.91**	**14**	PKPdf	**PKPdf**	**02 25 21.7**	**-0.6**
GNAR	**Gosnell**	**143.92**	**330**	IAMs_20	IAMs_20	03 31 33.1	
	comp=Z,1µm,21.0s						
S39A	**Bolivar**	**144.05**	**335**	IAMs_20	IAMs_20	03 31 21.9	
	comp=Z,1µm,22.0s						
KSU1	**Kansas State U**	**144.07**	**340**	P	**PKPab**	**02 25 20.2**	**+0.1**
	baz=26,SNR=7.3						
W45A	**Hickory Valley**	**144.11**	**328**	IAMs_20	IAMs_20	03 35 22.3	
	comp=Z,729nm,19.0s						
PHWY	**Pilot Hill**	**144.12**	**352**	IAMs_20	IAMs_20	03 36 28.0	
	comp=Z,744nm,21.0s						
MOTC	**Monteria, Cord**	**144.20**	**277**	*e*P	**PKPab**	**02 25 18.7**	**-2.6**
O02D	**Mt. Diablo Mer**	**144.23**	**15**	P	**PKPdf**	**02 25 23.1**	**+0.2**
	baz=341,SNR=6.2						
HWUT	**Hardware Ranch**	**144.24**	**360**	IAMs_20	IAMs_20	03 43 11.7	
	comp=Z,896nm,20.0s						
LPAR	**Lepanto**	**144.35**	**329**	IAMs_20	IAMs_20	03 31 32.4	
	comp=Z,998nm,20.0s						
O03E	**Paynes Creek**	**144.36**	**13**	P	**PKPdf**	**02 25 22.8**	**-0.4**
	baz=342,SNR=10						
LRAL	**Lakeview Retre**	**144.42**	**323**	P	PKPbc	02 25 21.8	0.0
	baz=45						
ATAH	**Atahualpa**	**144.47**	**249**	PKP	**PKPdf**	**02 25 24.0**	**-0.5**
	comp=Z,6.7nm,0.8s,baz=130,slow=8.0,SNR=4.3						
MET	**Memphis--Engin**	**144.53**	**329**	IAMs_20	IAMs_20	03 32 29.3	
	comp=Z,799nm,20.0s						
HBAR	**Harrisburg**	**144.56**	**330**	IAMs_20	IAMs_20	03 33 54.1	
	comp=Z,832nm,22.0s						
CBOC	**Ciudad Bolivar**	**144.57**	**272**	*e*P	**PKPab**	**02 25 22.2**	**-0.7**
N23A	**Red Feather La**	**144.58**	**353**	P	**PKPdf**	**02 25 23.2**	**-0.6**
	baz=9.8						
N23A	**Red Feather La**	**144.58**	**353**	IAMs_20	IAMs_20	03 36 29.0	
	comp=Z,720nm,21.0s						
OXF	**Oxford**	**144.72**	**327**	P	**PKPab**	**02 25 20.5**	**-2.1**
	baz=40						
OXF	**Oxford**	**144.72**	**327**	IAMs_20	IAMs_20	03 31 57.5	
	comp=Z,812nm,20.0s						
TCUT	**Toone Canyon**	**144.73**	**360**		**PKPdf**	**02 25 23.9**	**-0.2**
DBBC	**Dabeiba**	**144.78**	**274**	*e*P	**PKPab**	**02 25 23.2**	**-0.3**
PLMC	**San Jos del P**	**144.80**	**270**	*e*P	**PKPab**	**02 25 20.8**	**-2.8**
YOTC	**Yotoco, Valle**	**144.81**	**269**	*e*P	**PKPab**	**02 25 21.5**	**-2.2**
SOTA	**Rioblanco**	**144.89**	**266**	*e*P	**PKPdf**	**02 25 26.7**	**+1.3**
Z47A	**Carrollton**	**144.94**	**324**	IAMs_20	IAMs_20	03 29 51.7	
	comp=Z,929nm,20.0s						
ELK	**Elko**	**144.95**	**5**	PKP	**PKPab**	**02 25 23.4**	**-0.2**
	comp=Z,23nm,0.9s,baz=338,slow=3.0,SNR=11						
ELK	**Elko**	**144.95**	**5**	IAMs_20	IAMs_20	03 44 29.9	
	comp=Z,832nm,20.0s						
U40A	**Yellville**	**144.96**	**333**	P	**PKPab**	**02 25 22.8**	**-0.6**
	baz=34						
BEKR	**Beckworth**	**145.08**	**12**		**PKPbc**	**02 25 23.7**	**-0.3**
CBKS	**Cedar Bluff**	**145.31**	**344**	P	**PKPbc**	**02 25 24.1**	**-0.5**
	baz=21,SNR=62						
CBKS	**Cedar Bluff**	**145.31**	**344**	IAMs_20	IAMs_20	03 36 42.7	
	comp=Z,787nm,20.0s						
X43A	**Marvell**	**145.49**	**329**	P	**PKPab**	**02 25 25.7**	**+0.4**
	baz=38,SNR=5.9						
BBAC	**Balboa, Cauca**	**145.51**	**265**	*e*P	**PKPdf**	**02 25 24.6**	**-1.5**
GDXM	**Geysers**	**145.52**	**16**		**PKPab**	**02 25 27.1**	**+1.6**
O20A	**White River Ci**	**145.58**	**355**	P	**PKPab**	**02 25 25.8**	**0.0**
	baz=6.0						
ISCO	**Idaho Springs**	**145.62**	**352**	P	**PKPab**	**02 25 26.3**	**+0.2**
	baz=11						
ISCO	**Idaho Springs**	**145.62**	**352**	IAMs_20	IAMs_20	03 38 35.4	
	comp=Z,887nm,19.0s						
DUG	**Dugway, Tooele**	**145.63**	**2**	P	**PKPab**	**02 25 26.2**	**+0.3**
	baz=358						
W41B	**Gary Mavity, V**	**145.65**	**331**	P	**PKPdf**	**02 25 25.5**	**+0.1**
	baz=36,SNR=16						
BRAL	**Brewton**	**145.74**	**321**	P	**PKPab**	**02 25 26.5**	**+0.1**
	baz=47						
AFDM	**Forest Hills D**	**145.83**	**13**		**PKPab**	**02 25 27.0**	**+0.5**
KSCO	**Kaye Shedlock'**	**145.85**	**347**	P	**PKPab**	**02 25 27.1**	**+0.3**
	baz=16,SNR=20						
KAN12	**Harper NE Stat**	**146.17**	**340**	PKPbc	**PKPbc**	**02 25 27.2**	**0.0**
W39A	**Magazine**	**146.34**	**333**	P	**PKPbc**	**02 25 27.9**	**+0.1**
	baz=33,SNR=11						
Q24A	**Divide**	**146.36**	**351**	P	**PKPab**	**02 25 28.6**	**-0.4**
	baz=12,SNR=13						
SMCO	**Snowmass**	**146.40**	**353**	IAMs_20	IAMs_20	03 35 16.1	
	comp=Z,742nm,20.0s						
OTAV	**Otavalo**	**146.44**	**262**	PKP2	**PKPbc**	**02 25 29.6**	**+0.2**
OTAV				MLR	MLR		
	comp=Z,2µm,20.0s						
OTAV	**Otavalo**	**146.44**	**262**		**PKPbc**	**02 25 29.6**	**+0.2**
OTAV	**Otavalo**	**146.44**	**262**	*e*P	**PKPab**	**02 25 29.9**	**-0.3**
OTAV	**Otavalo**	**146.44**	**262**	*e*P	**PKPdf**	**02 25 28.4**	**+0.4**
X40A	**Basin Creek Fa**	**146.48**	**331**	P	**PKPbc**	**02 25 28.7**	**+0.4**
	baz=35,SNR=12						
X40A	**Basin Creek Fa**	**146.48**	**331**	IAMs_20	IAMs_20	03 33 42.8	
	comp=Z,800nm,20.0s						
TUL1	**Leonard**	**146.59**	**336**	P	**PKPbc**	**02 25 28.3**	**-0.2**
	baz=29						
TUL1	**Leonard**	**146.59**	**336**	IAMs_20	IAMs_20	03 33 19.1	
	comp=Z,851nm,19.0s						
MIAR	**Mount Ida**	**146.79**	**332**	P	**PKPbc**	**02 25 29.3**	**+0.2**
	baz=34,SNR=44						
MIAR	**Mount Ida**	**146.79**	**332**	IAMs_20	IAMs_20	03 34 51.7	
	comp=Z,746nm,21.0s						
CMB	**Columbia Colle**	**146.84**	**13**	PKP2	**PKPbc**	**02 25 29.6**	**+0.4**
CMB	**Columbia Colle**	**146.84**	**13**		**PKPbc**	**02 25 29.6**	**+0.4**
NVAR	**Mina Array Bea**	**146.85**	**10**	PKPbc	**PKPbc**	**02 25 29.9**	**+0.3**
	comp=Z,21nm,0.8s,baz=336,slow=2.3,SNR=89						
NVAR	**Mina Array Bea**	**146.85**	**10**		**PKPbc**	**02 25 29.5**	**0.0**
LHV	**Little Huntoon**	**146.99**	**10**	IAMs_20	IAMs_20	03 42 46.2	
	comp=Z,696nm,20.0s						
VBMS	**Vicksburg**	**147.06**	**326**	P	**PKPbc**	**02 25 30.6**	**+0.7**
	baz=41						
346A	**Big Creek Wild**	**147.06**	**324**	IAMs_20	IAMs_20	03 31 19.0	
	comp=Z,956nm,20.0s						
WLAR	**White Oak Lake**	**147.27**	**331**		**PKPbc**	**02 25 30.6**	**+0.2**
R11A	**Troy Canyon, C**	**147.30**	**6**	P	**PKPbc**	**02 25 30.8**	**+0.1**
	baz=353,SNR=12						
PV15	**Paradox Valley**	**147.38**	**355**	IAMs_20	IAMs_20	03 40 14.9	
	comp=Z,716nm,19.0s						
Z41A	**Richland Creek**	**147.46**	**330**	P	**PKPbc**	**02 25 31.6**	**+0.6**
	baz=36,SNR=7.1						
OK025	**Westminster Rd**	**147.48**	**338**	IAMs_20	IAMs_20	03 33 24.4	
	comp=Z,954nm,21.0s						
MDPB	**Devils Postpil**	**147.49**	**11**	IAMs_20	IAMs_20	03 42 46.4	
	comp=Z,632nm,19.0s						
PV03	**Paradox Valley**	**147.49**	**356**	IAMs_20	IAMs_20	03 42 28.9	
	comp=Z,793nm,21.0s						
PV18	**Skein Mesa, Pa**	**147.50**	**356**		**PKPbc**	**02 25 31.7**	**+0.3**
SDCO	**Great Sand Dun**	**147.61**	**351**	P	**PKPbc**	**02 25 31.9**	**+0.1**
	baz=11,SNR=37						
SDCO	**Great Sand Dun**	**147.61**	**351**	IAMs_20	IAMs_20	03 37 35.2	
	comp=Z,805nm,21.0s						
OKCFA	**Oklahoma City**	**147.66**	**338**	IAMs_20	IAMs_20	03 35 47.7	
	comp=Z,618nm,20.0s						
MTPU	**Mount Pierson**	**147.80**	**1**		**PKPbc**	**02 25 31.9**	**-0.5**
S22A	**4UR Ranch, Cre**	**147.80**	**353**	P	**PKPbc**	**02 25 30.9**	**-1.3**
	baz=9.0,SNR=26						
S22A	**4UR Ranch, Cre**	**147.80**	**353**	IAMs_20	IAMs_20	03 42 02.1	
	comp=Z,848nm,18.0s						
T25A	**Trinidad**	**148.01**	**349**	P	**PKPbc**	**02 25 31.5**	**-1.2**
	baz=14,SNR=22						
TAOE	**Nuku Hiva Isla**	**148.10**	**117**	*e*LR	LR	03 14 27.8	
	comp=Z,848nm,25.7s						
GRAC	**Grapevine Rang**	**148.41**	**9**	P	**PKPbc**	**02 25 33.4**	**-0.2**
	baz=349,SNR=13						
MVCO	**Mesa Verde**	**148.50**	**355**	P	**PKPdf**	**02 25 31.7**	**+1.2**
	baz=6.0,SNR=8.0						
MVCO	**Mesa Verde**	**148.50**	**355**	IAMs_20	IAMs_20	03 37 50.7	
	comp=Z,680nm,21.0s						
Z38A	**Mt. Pleasant**	**148.50**	**333**	IAMs_20	IAMs_20	03 35 04.1	
	comp=Z,970nm,20.0s						
TPNV	**Topopah Spring**	**148.61**	**7**	P	**PKPbc**	**02 25 32.8**	**-1.5**
	baz=351						
TPNV	**Topopah Spring**	**148.61**	**7**	IAMs_20	IAMs_20	03 47 24.7	
	comp=Z,598nm,19.0s						
WMOK	**Wichita Mounta**	**148.75**	**339**	PKP2	**PKiKP**	**02 25 35.5**	**-0.5**
WMOK	**Wichita Mounta**	**148.75**	**339**	P	**PKPdf**	**02 25 32.3**	**+1.6**
	baz=25,SNR=27						
WMOK	**Wichita Mounta**	**148.75**	**339**	PKPdf	**PKPdf**	**02 25 30.6**	**-0.1**
WMOK				PKPbc	**PKiKP**	**02 25 35.5**	**-0.5**
WMOK	**Wichita Mounta**	**148.75**	**339**	IAMs_20	IAMs_20	03 36 19.1	
	comp=Z,888nm,20.0s						
CWC	**Cottonwood Cre**	**148.83**	**10**	P	**PKPbc**	**02 25 33.2**	**-1.7**
	baz=348						
FURC	**Furnace Creek,**	**149.00**	**8**	P	**PKPbc**	**02 25 33.9**	**-1.1**
	baz=350						
PAGB	**Antelope Grade**	**149.07**	**14**	IAMs_20	IAMs_20	03 36 38.4	
	comp=Z,597nm,18.0s						
VES	**Vestal, Richgr**	**149.22**	**12**	P	**PKPbc**	**02 25 35.5**	**-0.1**
	baz=346,SNR=6.9						
MPMC	**Manual Prospec**	**149.31**	**9**	P	**PKPbc**	**02 25 34.5**	**-1.5**
	baz=349,SNR=27						
U15A	**North Rim**	**149.41**	**1**	IAMs_20	IAMs_20	03 42 37.7	
	comp=Z,746nm,20.0s						
ISA	**Isabella, Lake**	**149.52**	**11**	P	**PKiKP**	**02 25 37.2**	**-0.3**
	baz=347,SNR=6.4						
SMMC	**Simmler**	**149.53**	**14**	P	**PKiKP**	**02 25 37.3**	**-0.2**
	baz=344,SNR=12						
AMTX	**Amarillo**	**149.53**	**344**	P	**PKPdf**	**02 25 33.3**	**+1.2**
	baz=20						
NATX	**Nacogdoches**	**149.59**	**331**	P	**PKPbc**	**02 25 34.6**	**-2.0**
	baz=35						
NATX	**Nacogdoches**	**149.59**	**331**	IAMs_20	IAMs_20	03 33 23.1	
	comp=Z,842nm,20.0s						
LRMC	**Laurel Mtn Rad**	**149.84**	**10**	P	**PKiKP**	**02 25 38.4**	**+0.1**
	baz=348,SNR=12						
PKM	**Mcpherson Peak**	**149.98**	**14**	P	**PKiKP**	**02 25 39.9**	**+1.2**
	baz=344,SNR=11						
GSC	**Goldstone, Bar**	**150.15**	**9**	P	**PKPbc**	**02 25 36.1**	**-1.9**
	baz=350,SNR=23						
WUAZ	**Wupatki**	**150.32**	**360**	P	**PKPdf**	**02 25 35.4**	**+2.1**
	baz=0.5						
EDW2	**Edwards Air Fo**	**150.37**	**11**	P	**PKPbc**	**02 25 36.3**	**-2.2**
	baz=347,SNR=10						
ANMO	**Albuquerque**	**150.50**	**351**	PKIKP	**PKPdf**	**02 25 36.2**	**+2.5**
ANMO	**Albuquerque**	**150.50**	**351**	P	**PKPdf**	**02 25 35.7**	**+2.0**
	baz=10						
ANMO	**Albuquerque**	**150.50**	**351**	PKPbc	**PKPdf**	**02 25 36.2**	**+2.5**
W18A	**Petrified Fore**	**150.67**	**357**	IAMs_20	IAMs_20	03 39 42.0	
	comp=Z,739nm,20.0s						
WHTX	**Lake Whitney,**	**150.67**	**335**	P	**PKPbc**	**02 25 39.3**	**+0.1**
	baz=30,SNR=11						
WHTX	**Lake Whitney,**	**150.67**	**335**	IAMs_20	IAMs_20	03 43 22.5	
	comp=Z,632nm,21.0s						
HEC	**Hector,Ludlow**	**150.68**	**8**	P	**PKiKP**	**02 25 40.7**	**+0.7**
	baz=350						
MSTX	**Muleshoe**	**150.69**	**345**	P	**PKPbc**	**02 25 38.8**	**-0.6**
	baz=18,SNR=15						
GMRC	**Granite Mounta**	**150.81**	**7**	P	**PKiKP**	**02 25 41.4**	**+1.1**
	baz=352,SNR=13						
SCZ2	**Santa Cruz Isl**	**150.88**	**14**	P	**PKiKP**	**02 25 42.5**	**+2.2**
	baz=344						
ABTX	**Abilene, Hawle**	**150.97**	**339**	P	**PKPdf**	**02 25 36.3**	**+2.0**
	baz=25,SNR=15						
BFSC	**Mount Baldy Ra**	**151.05**	**10**	P	**PKiKP**	**02 25 40.7**	**-0.1**
	baz=348,SNR=7.3						
BBRC	**Big Bear Solar**	**151.15**	**9**	P	**PKiKP**	**02 25 43.2**	**+2.1**
	baz=349						
X18A	**Snowflake**	**151.26**	**357**	IAMs_20	IAMs_20	03 39 51.8	
	comp=Z,560nm,20.0s						
X16A	**Lo Mia Camp, P**	**151.42**	**360**	IAMs_20	IAMs_20	03 40 52.9	
	comp=Z,912nm,21.0s						
Y22D	**IRIS PASSCAL I**	**151.43**	**352**	IAMs_20	IAMs_20	03 40 03.2	
	comp=Z,813nm,19.0s						
PDMCI	**Parker Dam,Lak**	**151.44**	**4**	P	**PKPbc**	**02 25 38.0**	**-2.9**
	baz=355,SNR=10						
IRM	**Iron Mountain**	**151.49**	**6**	P	**PKPbc**	**02 25 38.3**	**-2.8**
	baz=353,SNR=9.4						
BELC	**Belle Mtn. Jos**	**151.54**	**8**	P	**PKPdf**	**02 25 37.6**	**+2.4**
	baz=351						
MURC	**Murrieta**	**151.75**	**10**	P	**PKiKP**	**02 25 43.7**	**+1.6**
	baz=348,SNR=5.1						
435B	**Jarrell**	**151.77**	**334**	P	**PKiKP**	**02 25 42.9**	**+0.6**
	baz=31						
PFO	**Pinyon Flats O**	**151.86**	**9**	P	**PKiKP**	**02 25 44.1**	**+1.5**
	baz=350,SNR=10						
TPFO	**Pinon Flats**	**151.87**	**9**	P	**PKiKP**	**02 25 44.1**	**+1.5**
	baz=350,SNR=11						
BC3	**Big Chuckawall**	**151.95**	**7**	P	**PKiKP**	**02 25 44.1**	**+1.4**
	baz=352,SNR=10.0						
ESPN	**Las Esperanzas**	**152.26**	**285**		**PKPbc**	**02 25 43.3**	**-0.1**
HDC	**Heredia**	**152.42**	**281**	IAMs_20	IAMs_20	03 35 14.8	
	comp=Z,893nm,20.0s						
MONP2	**Monument Peak**	**152.57**	**9**	P	**PKiKP**	**02 25 46.1**	**+1.9**
	baz=350,SNR=5.5						
SWSC	**Sam W. Stewart**	**152.61**	**8**	P	**PKiKP**	**02 25 45.8**	**+1.9**
	baz=351						
GLA	**Glamis**	**152.62**	**6**	P	**PKiKP**	**02 25 44.6**	**+0.6**
	baz=353,SNR=7.6						
IKP	**In-Ko-Pah, Jac**	**152.86**	**8**	P	**PKiKP**	**02 25 46.0**	**+1.4**
	baz=350						
TKX	**Tecate**	**152.86**	**9**	IAMs_20	IAMs_20	03 43 56.5	
	comp=Z,671nm,21.0s						
JCT	**Junction City**	**152.95**	**337**	P	**PKPdf**	**02 25 39.3**	**+2.0**
	baz=26						
UABX	**UABC, Campus M**	**152.96**	**7**	IAMs_20	IAMs_20	03 50 00.1	
	comp=Z,564nm,18.0s						
121A	**Cookes Peak, D**	**153.06**	**353**	P	**PKiKP**	**02 25 45.4**	**+0.3**
	baz=8.4,SNR=17						
ACON	**Acoyapa**	**153.14**	**285**		**PKiKP**	**02 25 45.6**	**+0.2**
JTS	**Las Juntas de**	**153.20**	**282**	IAMs_20	IAMs_20	03 31 26.5	
	comp=Z,864nm,22.0s						
MNTX	**Cornudas Mount**	**153.48**	**348**	P	**PKPdf**	**02 25 40.2**	**+2.2**
	baz=14,SNR=32						
MNTX	**Cornudas Mount**	**153.48**	**348**	PKPbc	**PKPdf**	**02 25 41.1**	**+3.0**
MNTX				IAMs_20	IAMs_20	03 37 34.6	
	comp=Z,860nm,22.0s						
TUC	**Tucson**	**153.51**	**358**	PKIKP	**PKiKP**	**02 25 46.9**	**+1.0**
TUC						02 25 58.3	
TUC	**Tucson**	**153.51**	**358**	P	**PKPdf**	**02 25 40.7**	**+2.6**
	baz=1.9						
TUC	**Tucson**	**153.51**	**358**	PKPdf	**PKPdf**	**02 25 37.3**	**-0.8**
TUC				PKPbc	**PKiKP**	**02 25 46.9**	**+1.0**
TUC				PKPab	**PKPab**	**02 25 58.3**	**+0.4**
ESJX	**Sierra Juarez**	**153.51**	**8**		**PKiKP**	**02 25 46.5**	**+0.5**
214A	**Organ Pipe Nat**	**153.85**	**2**	P	**PKPdf**	**02 25 40.6**	**+2.0**
	baz=357						
319A	**Douglas**	**154.36**	**355**	IAMs_20	IAMs_20	03 44 38.7	
	comp=Z,684nm,18.0s						
SPX	**San Pedro Mart**	**154.53**	**8**	IAMs_20	IAMs_20	03 43 07.4	
	comp=Z,598nm,20.0s						

833A	Chaparral WMA,	154.68	334	P	PKiKP	02 25 48.8	+0.5
	baz=29						
TX31	Lajitas Ar. Si	155.31	343		PKPdf	02 25 40.6	-0.2
TX31				PKPbc	pPKPbc	02 25 50.5	-3.0
TX31				PKPab	PKPab	02 26 05.2	-0.5
TXAR	Lajitas Array	155.31	343	PKP	PKPdf	02 25 41.3	+0.5
	comp=Z,1.4nm,0.9s,baz=132,slow=1.9,SNR=6.7						
TXAR				PKPbc	pPKPbc	02 25 49.9	-3.6
	comp=Z,2.7nm,0.6s,baz=74,slow=2.7,SNR=14						
TXAR				PKPab	PKPab	02 26 06.0	+0.3
	comp=Z,16nm,0.9s,baz=46,slow=3.6,SNR=22						
TXAR	Lajitas Array	155.31	343		PKPdf	02 25 42.5	+1.8
TXAR					sPKPdf	02 25 48.7	+2.9
PETF	Flores	155.96	299		PKPdf	02 25 42.9	+1.1
PETF				IAMs_20	IAMs_20	03 25 21.8	
	comp=Z,813nm,20.0s						
HSIG		156.79	358	IAMs_20	IAMs_20	03 44 26.2	
	comp=Z,650nm,19.0s						
HPIG		158.12	346	IAMs_20	IAMs_20	03 46 26.8	
	comp=Z,871nm,21.0s						
SRIG	Santa Rosalia	158.49	1	PKPdf	PKPdf	02 25 43.9	-0.8
SRIG					PKPab	02 26 20.2	+1.0

IDC 10 02:17:55.4±3.0**,10°.17S**×**120°.28E,h0^{km},mb3.1**/1**, mb1 3.5**/3**,mb1mx3.3**/28**,mbtmp3.3**/3**,ML3.2**/2**,Error ellipse: s-maj=238.3km s-min=31.7km az=50.0,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.68	127	Pn	Pn	02 21 48.8	-1.9
	0.1nm,0.3s,baz=298,slow=14,SNR=1.7						
ASAR	Alice Springs	18.68	138	P	Pn	02 22 16.1	+0.6
	0.1nm,0.3s,baz=316,slow=11,SNR=8.2						
MKAR	Makanchi Array	66.07	332	P	P	02 28 44.2	0.0
	0.1nm,0.6s,baz=133,slow=8.0,SNR=1.6						

IDC 10 02:44:26.9±2.1**,1°.71N**×**126°.39E,h0^{km},mb3.5**/4**, mb1 3.7**/4**,mb1mx3.3**/37**,mbtmp3.5**/4**,MS4.1**/1**,Ms1 4.1**/1**, ms1mx3.3**/28**,Error ellipse: s-maj=183.3km s-min=27.4km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	20.57	245	LR	LR	02 56 54.1	
	comp=Z,469nm,19.5s,baz=216,slow=36						
WRA	Warramunga Arr	22.89	160	P	P	02 49 30.4	-1.9
	1.2nm,0.8s,baz=340,slow=11,SNR=6.2						
ASAR	Alice Springs	26.26	164	P	P	02 50 04.1	0.0
	0.2nm,0.4s,baz=348,slow=12,SNR=2.0						
STKA	Stephens Creek	36.39	158	P	P	02 51 34.9	+1.8
	1.5nm,0.7s,baz=349,slow=10,SNR=3.0						
MKAR	Makanchi Array	59.02	326	P	P	02 54 28.4	-0.2
	0.1nm,0.4s,baz=127,slow=7.4,SNR=2.4						

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*IDC **10** 03:05:51.3±0.7, 3°.25S×76°.93W, h0^{km}, mb3.9/12, mb1 4.2/14, mb1mx4.1/32, mbtmp4.0/14, ML4.1/2, Error ellipse: s-maj=26.4km s-min=14.5km az=65.0*

*VAO **10** 03:05:55.3±0.4, 3°.47S×76°.78W, h10^{km}, mb4.5*

*IGQ **10** 03:05:57±0.5, 3°S±3°×7°7W±°, h10^{km}*

*NEIC **10** 03:05:59.2±1.8, 3°.36S±0°.07×76°.79W±0°.07, h72^{km}±8^{km}, mb4.4/27, Error ellipse: s-maj=10.4km s-min=9.3km az=46.0*

ISC 10 03:05:51.7±0.4**,3°.54S**±0°.03×**77°.18W**±0°.04**,h10^{km},n149,** σ**1^{s}81**/151**,mb4.4**/17**,Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOJ1	Universidad t	1.26	249	P	Sb	03 06 31.0	-1.2
BOSC	San Juan Bosco	1.37	286	P	Pg	03 06 18.0	-0.1
ACUE	Ecuador-Cuenca	1.89	289	P	Pb	03 06 27.0	+0.6
PUYO	Puyo, Santa Ro	2.20	337	P	Pn	03 06 29.0	+0.5
PUYO				S	Sn	03 06 55.0	-0.8
APUY	Puyo	2.22	338	P	Pn	03 06 29.0	+0.3
GONZ	Gonzanam	2.32	253	P	Pg	03 06 35.0	-1.2
COHC	Cochancay	2.33	297	P	Pb	03 06 34.0	+0.1
COHC				S	Sb	03 07 01.0	-1.8
PAT1	Patacocha	2.38	328	P	Pn	03 06 32.0	+0.8
ARRY	Arrayan	2.39	328	P	Pn	03 06 32.0	+0.7
BMAS	Trigal station	2.40	327	P	Pn	03 06 33.0	+1.5
BMAS				S	Sn	03 07 00.0	-1.2
ARIO	Riobamba	2.41	321	P	Pn	03 06 33.0	+1.4
BULB	Ulba Tungurahu	2.42	329	P	Pn	03 06 32.0	+0.2
BULB				S	Sn	03 06 59.0	-2.7
RETU	Refugio	2.43	329	P	Pn	03 06 32.0	0.0
RUN5	Runtun	2.45	329	P	Pn	03 06 32.0	-0.1
POND	Pondoa	2.46	329	P	Pn	03 06 33.0	+0.8
POND				S	Sn	03 07 01.0	-1.5
IGUA	Igualata	2.50	324	P	Pg	03 06 40.0	+0.2
ARDO	Archidona, Ten	2.60	346	P	Pn	03 06 34.0	0.0
MILO	Milagro-Astudi	2.68	298	P	Pb	03 06 39.0	-0.9
PIS1	Pisayambo	2.74	334	P	Pn	03 06 37.0	+0.7
AMIL	Milagro (Trans	2.79	300	P	Pn	03 06 38.0	+1.6
ARNL	Arenillas	2.88	270	P	Pb	03 06 41.0	-2.3
MCRA	Macar, Loja	2.89	253	P	Pb	03 06 42.0	-1.5
VCES	Cotopaxi	2.98	336	P	Pn	03 06 42.0	+2.4
ISPG	Isla Puna-Puer	3.04	281	P	Pb	03 06 44.0	-2.0
TAMB	Tambo	3.06	337	P	Pn	03 06 42.0	+1.3
BTAM	Cotopaxi Volca	3.09	337	P	Pn	03 06 42.0	+0.8
BREF	Cotopaxi Volca	3.12	336	P	Pn	03 06 43.0	+1.5
VC1	Cotopaxi 1	3.13	337	P	Pn	03 06 43.0	+1.4
BNAS	Cotopaxi Volca	3.13	335	P	Pn	03 06 44.0	+2.4
CAMI	Rancho Maria	3.14	335	P	Pn	03 06 44.0	+2.3
AGUAY	Guayaquil	3.14	298	P	Pn	03 06 42.0	+0.7
ANTM	Antisana-La Mi	3.16	341	P	Pb	03 06 51.0	+2.7
ANTS	Antisana-Sarah	3.18	342	P	Pn	03 06 43.0	+0.6
PAST	Pastocalle	3.18	333	P	Pg	03 06 53.0	+0.2
ANTG	Antisana-Guama	3.20	340	P	Pn	03 06 43.0	+0.4
PITA	Cotopaxi Volc	3.21	337	P	Pn	03 06 44.0	+1.3
ANTI	Antisana	3.22	342	P	Pn	03 06 44.0	+1.1
MORR	Playas El Morr	3.28	286	P	Pb	03 06 47.0	-3.1
LAV4	Lava4-Reventad	3.45	352	P	Pn	03 06 46.0	+0.2
GGPT	Toaza - Volcan	3.59	336	P	Pn	03 06 50.0	+2.1
TERV	Terraza Guagua	3.63	337	P	Pg	03 07 01.0	-0.4
PINO	Pino	3.65	337	P	Pb	03 06 54.0	-2.7
ANGU	Angureal	3.66	347	P	Pn	03 06 52.0	+3.1
YANA	Yana	3.67	338	P	Pn	03 06 49.0	0.0
ATAH	Atahualpa	3.77	199	Pn	Pb	03 06 57.4	-1.4
	14nm,0.3s,baz=9.1,slow=5.6,SNR=89						
ATAH				Sn	Sb	03 07 41.8	-2.9
	21nm,0.3s,baz=145,slow=19,SNR=12						
OTAV	Otavalo	3.96	341		Pn	03 06 56.9	+3.9
OTAV	Otavalo	3.96	341	*e*P	Pn	03 06 57.2	+4.2
OTAV	Otavalo	3.96	341	P	Pn	03 06 56.0	+3.0
OTAV	Otavalo	3.96	341	*e*P	Pn	03 06 56.8	+3.8
YAHU	Yahuarcocha	3.98	347	P	Pn	03 06 55.0	+1.7
CUSE	Cuicocha Este	4.01	342	P	Pn	03 06 56.0	+2.4
URCU	Urcuqui	4.09	345	P	Pn	03 06 59.0	+4.2
PPLP	Puerto Lpez	4.10	299	P	Pn	03 06 55.0	+0.4
PUAC	Puerto Asis, P	4.11	9	*e*P	Pn	03 06 55.9	+1.3
FLFR	Flavio Alfaro	4.13	320	P	Pn	03 06 57.0	+2.0
BV15	Puerto Quito-O	4.20	331	P	Pn	03 07 00.0	+4.1
PTLC	Puerto Leguiza	4.38	33	*e*P	Pn	03 06 55.9	-2.6
CHMA	Chilma	4.46	349	P	Pn	03 07 02.0	+2.3
CAB1	Cabo Pasado-Ma	4.51	314	P	Pn	03 07 01.0	+0.8
CABP	Cabo Pasado	4.51	314	P	Pn	03 07 01.0	+0.8
BBAC	Balboa, Cauca	5.52	359	*e*P	Pn	03 07 16.4	+2.1
SOTA	Rioblanco	5.66	6	*e*P	Pn	03 07 19.2	+2.8
PCON	Cinco Dias	5.88	8	*e*P	Pn	03 07 20.8	+1.3
GARC	Garzon, Huila	5.93	17	*e*P	Pn	03 07 20.4	+0.5
CZSB	Cruzeiro do Su	6.09	133	*e*P	Pn	03 07 23.3	+1.4
BETC	Betania	6.42	16	*e*P	Pn	03 07 28.1	+1.7
MARP	Paez Belalcaza	6.46	11	*e*P	Pn	03 07 28.7	+1.6
MACC	Macarena, Meta	6.55	31	*e*P	Pn	03 07 29.5	+1.3
YOTC	Yotoco, Valle	7.52	6	*e*P	Pn	03 07 44.5	+2.9
ORTC	Ortega, Tolima	7.64	15	*e*P	Pn	03 07 44.2	+0.9
ANIL	Santa Ana	8.17	13	*e*P	Pn	03 08 02.7	+12
TOLC	Tolima	8.28	13	*e*P	Pn	03 07 56.9	+4.6
VILC	Villavicencio,	8.36	25	*e*P	Pn	03 07 55.5	+2.3
NNA	Nana	8.40	178	Pn	Pn	03 07 57.2	+3.5
	3.0nm,0.3s,baz=344,slow=10,SNR=5.0						
NNA				Sn	Sn	03 09 26.7	-2.0
	3.5nm,0.3s,baz=116,slow=21,SNR=5.8						
NNA	Nana	8.40	178	Pn	Pn	03 07 57.7	+4.0
PLMC	San Jos del P	8.43	6	*e*P	Pn	03 07 57.8	+3.7
RREF	El Recreo	8.58	12	*e*P	Pn	03 08 04.4	+7.7
ROSC	El Rosal	8.80	19	Pn	Pn	03 08 00.5	+1.0
	4.3nm,0.3s,baz=72,slow=11,SNR=3.8						
ROSC	El Rosal	8.80	19	Pn	Pn	03 08 00.1	+0.7
CHIC	Chingaza	8.81	23	*e*P	Pn	03 08 01.6	+2.0
NORC	Norcasia	9.33	14	*e*P	Pn	03 08 09.2	+2.7
CBOC	Ciudad Bolivar	9.41	7	*e*P	Pn	03 08 11.1	+3.5
SPBC	San Pablo de B	9.64	19	*e*P	Pn	03 08 12.2	+1.4
RUSC	La Rusia	10.22	24	*e*P	Pn	03 08 20.4	+1.3
PTBC	PUERTO BERRIO,	10.37	15	*e*P	Pn	03 08 22.2	+1.5
ETMB	Extrema	12.54	120	*e*P	Pn	03 08 48.4	-2.0
SMLC	San Martn de	12.64	14	*e*P	Pn	03 08 51.1	-0.6
SDV	Santo Domingo	13.96	28	Pn	Pn	03 09 09.5	-0.4
	1.0nm,0.3s,baz=244,slow=10,SNR=17						
SDV	Santo Domingo	13.96	28		Pn	03 09 10.4	+0.4
SDV	Santo Domingo	13.96	28	*e*P	Pn	03 09 09.9	0.0
SDV	Santo Domingo	13.96	28	*e*P	Pn	03 09 09.5	-0.4
SAML	Samuel	14.91	112		Pn	03 09 20.7	-2.1
MACA	Manacapuru-AM	16.47	89	*e*P	Pn	03 09 42.1	-1.0
PB16	IPOC Station P	16.51	154		P	03 09 46.8	0.0
MNMC	Minye Minye	17.18	155		P	03 09 54.6	+0.7
MNMC				IAmb	IAmb	03 09 57.8	
	comp=Z,23nm,1.0s						
GO01	Chusmiza	17.83	155	P	P	03 10 04.0	+2.7
PB08	IPOC Station P	18.26	155	P	P	03 10 09.2	+3.2
VILB	Vilhena	19.21	120	*e*P	P	03 10 16.9	+0.8
PB09	IPOC Station P	19.72	158	P	Pn	03 10 25.0	+1.8
PB09				IAmb	IAmb	03 10 26.5	
	comp=Z,18nm,0.8s						
SIV	San Ignacio	20.10	129	P	P	03 10 26.5	+0.7
	comp=Z,2.6nm,0.5s,baz=297,slow=12,SNR=17						
LVC	Limon Verde	20.58	158	P	Pn	03 10 35.1	+1.5
	comp=Z,9.0nm,1.0s,baz=306,slow=11,SNR=4.7						
LVC	Limon Verde	20.58	158	P	Pn	03 10 35.0	+1.4
LVC				IAmb	IAmb	03 10 42.5	
	comp=Z,24nm,1.2s						
LVC	Limon Verde	20.58	158	*e*P	Pn	03 10 34.6	+1.0
PTLB	Pontes e Lacer	21.34	125	*e*P	P	03 10 40.2	+0.9
ITTB	Itaituba	21.41	93	*e*P	P	03 10 38.4	-1.6
NPGB	Novo Progresso	22.00	100	*e*P	P	03 10 47.0	+0.6
MALB	Monte Alegre	22.95	86	*e*P	P	03 10 56.8	+0.4
IGPR	InterUniversit	23.99	27	P	P	03 11 03.1	-3.6
MCPB	Macapa, AP	25.30	83	*e*P	P	03 11 20.2	+1.4
PP1B	Ponte de Pedra	25.95	124	*e*P	P	03 11 26.2	+1.6
MDP	Montagnes des	25.97	71	P	P	03 11 23.7	-1.1
	comp=Z,24nm,1.0s,baz=239,slow=4.1,SNR=4.4						
AQDB	Aquidauana	26.85	131	*e*P	P	03 11 34.0	+1.2
SNDB	Serra Nova Dou	26.96	110	*e*P	P	03 11 34.0	+0.2
PRPB	Parauapebas	27.39	97	*e*P	P	03 11 37.1	-0.6
ARAG	Araguaiana, MT	27.73	118	*e*P	P	03 11 40.9	+0.2
CPUP	Villa Florida	29.59	142	P	P	03 11 58.2	+1.1
	comp=Z,1.7nm,0.6s,baz=9.0,slow=20,SNR=4.1						
CPUP	Villa Florida	29.59	142	*e*P	P	03 11 58.3	+1.2
IPMB	Ipameri, GO	31.79	119	*e*P	P	03 12 16.8	+0.1
ITQB	Itaqui	32.48	145	*e*P	P	03 12 24.7	+2.1
SDBA	SAO DESIDERIO	33.12	107	*e*P	P	03 12 28.2	-0.3
ITAB	Concordia	33.59	137	*e*P	P	03 12 32.8	+0.5
JANB	Januaria	34.33	112	*e*P	P	03 12 38.8	-0.2
BSCB	Bom Sucesso	35.98	122	*e*P	P	03 12 54.2	+1.0
PLCA	Paso Flores	37.51	172	P	P	03 13 08.9	+3.0
	comp=Z,1.4nm,0.6s,baz=247,slow=12,SNR=3.3						
NATX	Nacogdoches	38.84	336	P	P	03 13 16.6	-0.6
V48A	Smith Brothers	40.10	348	P	P	03 13 26.9	-0.7
TXAR	Lajitas Array	41.40	324	P	P	03 13 39.5	+0.9
	comp=Z,0.5nm,0.7s,baz=155,slow=7.5,SNR=6.9						
S44A	Carbondale	42.53	346	P	P	03 13 46.5	-1.0
WMOK	Wichita Mounta	43.16	334	P	P	03 13 53.0	+0.3
GC02	Grant County #	44.57	336	P	P	03 14 03.6	-0.5
U32A	Winter Ranch,	44.64	335	P	P	03 14 05.1	+0.5
KAN08	Anthony NE Sta	44.94	336	P	P	03 14 07.6	+0.6
ANMO	Albuquerque	47.14	327	P	P	03 14 25.5	+0.9
ANMO				IAmb	IAmb	03 14 39.2	
	comp=Z,4.0nm,0.9s						
TUC	Tucson	47.83	321	P	P	03 14 31.0	+1.1
TUC				IAmb	IAmb	03 15 25.6	
	comp=Z,11nm,1.9s						
WUAZ	Wupatki	50.35	323	P	P	03 14 50.7	+1.4
WUAZ				IAmb	IAmb	03 15 04.2	
	comp=Z,6.4nm,1.1s						
W13A	Hualapai Mount	51.61	321	P	P	03 15 00.2	+1.4
PDAR	Pinedale Array	54.60	331	P	P	03 15 20.7	-0.1
	comp=Z,0.4nm,0.7s,baz=120,slow=8.8,SNR=4.7						
ULM	Lac du Bonnet	55.95	346	P	P	03 15 28.7	-1.3
	comp=Z,2.8nm,0.6s,baz=167,slow=8.1,SNR=6.3						
NVAR	Mina Array Bea	56.46	322	P	P	03 15 35.6	+1.4
	comp=Z,0.9nm,0.7s,baz=122,slow=7.5,SNR=8.8						
MFID	Camas Ranch	58.26	328	P	P	03 15 47.5	+0.8
MFID				IAmb	IAmb	03 15 49.1	
	comp=Z,3.9nm,0.9s						
ORV	Oroville	59.12	321	P	P	03 15 53.7	+1.0
ORV				IAmb	IAmb	03 16 07.6	
	comp=Z,3.5nm,1.0s						
PMSA	Palmer Station	61.84	174	P	P	03 16 11.3	+0.6
NEW	Newport	62.24	331	P	P	03 16 13.6	-0.2
NEW				IAmb	IAmb	03 16 15.1	
	comp=Z,2.6nm,0.8s						
ASCN	Ascension	62.61	97	P	P	03 16 13.9	-2.9
YKA	Yellowknife Ar	71.72	343	P	P	03 17 13.1	-0.7
	comp=Z,0.7nm,0.5s,baz=135,slow=7.1,SNR=18						
ESDC	Sonseca Array	79.43	49	P	P	03 17 58.7	+0.1
	comp=Z,0.5nm,0.8s,baz=267,slow=5.1,SNR=3.8						
TOA0	Torodi Ar. Sit	79.99	76	P	P	03 17 58.9	-3.1
TOA0				IAmb	IAmb	03 20 55.8	
	comp=Z,14nm,1.9s						
TORD	Torodi Ar. Bea	79.99	76	P	P	03 18 01.6	-0.5
	comp=Z,0.3nm,0.5s,baz=273,slow=5.5,SNR=4.3						
TORD	Torodi Ar. Bea	79.99	76	P	P	03 17 59.5	-2.5

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*IDC **10** 03:10:47.6±1.7, 9°.98S×124°.43E, h0^{km}, mb3.6/2, mb1 3.5/5, mb1mx3.4/39, mbtmp3.3/5, ML2.9/3, Error ellipse: s-maj=28.6km s-min=12.2km az=175.0*

ISC 10 03:10:50.2±1.3**,10°.3S**±0°.1×**124°.4E**±0°.1**,h19^{km},n6,** σ**2^{s}67**/9**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.70	273	Pg	Pg	03 11 03.4	-0.6
	24nm,0.3s,baz=98,slow=1.1,SNR=3.5						
BATI				Lg	Lg	03 11 13.6	
	42nm,0.3s,baz=243,slow=22,SNR=8.1						
FITZ	Fitzroy Crossi	7.90	171	Pn	Pn	03 12 45.9	+1.8
	0.2nm,0.3s,baz=357,slow=10,SNR=13						
FITZ				Sn	Sn	03 14 11.3	-1.8
	1.1nm,0.3s,baz=163,slow=17,SNR=15						
WRA	Warramunga Arr	13.61	136	Pn	Pn	03 14 04.0	+1.7
	0.1nm,0.3s,baz=306,slow=13,SNR=1.0						
WRA				Sn	Sn	03 16 29.0	-4.2
	0.3nm,0.3s,baz=306,slow=24,SNR=7.1						
ASAR	Alice Springs	16.15	147	Pn	Pn	03 14 36.8	+0.5
	0.0nm,0.3s,baz=320,slow=12,SNR=1.4						
ASAR				Sn	Sn	03 17 33.3	-1.7
	0.1nm,0.3s,baz=309,slow=22,SNR=4.5						
STKA	Stephens Creek	26.78	146	P	P	03 16 32.4	+3.3
	1.8nm,0.7s,baz=326,slow=6.5,SNR=3.6						
MKAR	Makanchi Array	68.07	330	P	P	03 21 47.3	-1.3
	0.1nm,0.4s,baz=131,slow=8.2,SNR=1.5						

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*IDC **10** 03:11:09.5±5.8, 5°.81S×146°.19E, h146^{km}±64^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.2/35, mbtmp3.8/5, MS3.8/1, Ms1 3.8/1, ms1mx2.9/29, Error ellipse: s-maj=78.3km s-min=30.0km az=133.0*

ISC 10 03:11:09.9±1.2**,5°.8S**±0°.1×**146°.2E**±0°.3**,h150^{km},n7,** σ**1^{s}15**/6**,mb3.3**/3**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.69	164	P	Pn	03 12 06.2	+0.1
	3.3nm,0.3s,baz=350,slow=6.1,SNR=2.5						
WRA	Warramunga Arr	18.12	218	P	P	03 15 09.2	-1.5
	0.1nm,0.3s,baz=40,slow=13,SNR=5.9						
ASAR	Alice Springs	21.29	212	P	P	03 15 45.9	+1.1
	1.0nm,0.8s,baz=38,slow=12,SNR=7.2						
AFI	Afiamalu	42.17	104	LR	LR	03 32 46.2	
	comp=Z,120nm,19.9s,baz=282,slow=31						
MKAR	Makanchi Array	76.83	321	P	P	03 22 45.8	+0.5
	0.4nm,0.7s,baz=100,slow=7.9,SNR=4.5						
ILAR	Eielson Array	85.67	23	P	P	03 23 30.9	-0.5
	1.7nm,0.6s,baz=253,slow=4.9,SNR=22						
TORD	Torodi Ar. Bea	144.23	284	PKP	PKPdf	03 30 29.3	+0.2
	0.9nm,0.8s,baz=68,slow=4.0,SNR=5.2						

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*BJI **10** 03:14:32.0±0.0, 15°.70S×172°.94W, h24^{km}, mB5.5/13, mb5.1/20, Ms4.9/3, Ms7 4.7/3*

*NEIC **10** 03:14:34.9±1.8, 15°.87S±0°.06×172°.99W±0°.10, h37^{km}±4^{km}, mb5.1/227, Error ellipse: s-maj=13.8km s-min=8.6km az=90.0*

*MOS **10** 03:14:34.0±1.3, 15°.90S×172°.99W, h36^{km}, mb5.3/24, Error ellipse: s-maj=11.9km s-min=8.5km az=55.6*

*IDC **10** 03:14:38.1±0.6, 15°.85S×173°.08W, h63^{km}±5^{km}, mb4.5/22, mb1 4.7/22, mb1mx4.5/43, mbtmp4.8/22, MS4.1/22, Ms1 4.1/22, ms1mx4.0/37, Error ellipse: s-maj=16.6km s-min=10.8km az=139.0*

*NOU **10** 03:14:39.9, 15°.43S×172°.75W, h122^{km}, mb5.3, Samoa Islands Region*

*GCMT **10** 03:14:40.9±0.2, 15°.89S±0°.02×172°.60W±0°.01, h71^{km}±3^{km}, MW5.1/107, Moment Tensor Solution. s37,c45; s107,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.03±.22; $M_{\theta\theta}$1.96±.22; $M_{\phi\phi}$-0.92±.22; $M_{r\theta}$-1.08±.12; $M_{\theta\phi}$-2.66±.15; $M_{\phi r}$4.07±.10; Best double couple: $M_0$5.26200×10^{16} NP1:ϕ_s260.00000°, δ35.00000°, λ-168.00000°. NP2:ϕ_s161.00000°, δ83.00000°, λ-55.00000°. Principal axes: T 5.2830, Plg29.0000°, Azm223.0000°; N -0.0420, Plg34.0000°, Azm336.0000°; P -5.2400, Plg41.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **10** 03:14:41.1±0.0, 15°.84S×172°.20W, h68^{km}*

ISC 10 03:14:35.8±0.4**,15°.90S**±0°.04×**172°.91W**±0°.05**,h44^{km}**±3^{km}**, n571,**σ**1^{s}37**/481**,mb5.1**/132**,MS4.2**/23**,17C-18D,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.27	29	P	Pn	03 15 09.9	-1.0
	2µm,0.3s,baz=196,slow=1.9,SNR=1043						
AFI				S	Sn	03 15 32.9	-4.7
	2µm,0.3s,baz=47,slow=22,SNR=7.5						
AFI				LR	LR	03 15 54.2	
	comp=Z,3µm,21.1s,baz=274,slow=33						
AFI	Afiamalu	2.27	29	P	Pn	03 15 10.1	-0.8
NIUE	Niue	4.25	138	Pn	Pn	03 15 38.1	+0.1
MSVF	Nonsavu	8.84	257	P	Pn	03 16 47.3	+6.1
	5.1nm,0.3s,baz=98,slow=11,SNR=145						
MSVF				LR	LR	03 19 25.3	
	comp=Z,1µm,18.5s,baz=94,slow=33						
MSVF	Nonsavu	8.84	257	P	Pn	03 16 48.5	+7.3
KNTN	Kanton	13.10	5		Pn	03 17 38.9	-0.5
KNTN	Kanton	13.10	5	P	Pn	03 17 35.7	-3.7
RAR	Rarotonga	13.53	115	P	Pn	03 17 44.4	-0.8
	14nm,0.3s,baz=271,slow=8.0,SNR=8.0						
RAR				S	Sn	03 20 08.0	-6.2
	21nm,0.3s,baz=35,slow=7.7,SNR=5.5						
RAR				LR	LR	03 21 45.0	
	comp=Z,331nm,21.3s,baz=280,slow=31						
RAR	Rarotonga	13.53	115	P	Pn	03 17 44.5	-0.7
RAR	Rarotonga	13.53	115		Pn	03 17 44.5	-0.7
RAR	Rarotonga	13.53	115	P	Pn	03 17 48.1	+2.9
RAO	Raoul Island	14.06	198	S	Sn	03 20 20.1	-7.0
	192nm,0.3s,baz=240,slow=22,SNR=6.0						
RAO	Raoul Island	14.06	198	P	Pn	03 17 51.9	-0.5
RAO	Raoul Island	14.06	198	Pn	Pn	03 17 51.9	-0.5
RAO	Raoul Island	14.06	198	P	P	03 18 00.7	+1.5
GLKZ	Green Lake	14.07	198	P	Pn	03 17 48.5	-4.0
GLKZ				S	Sn	03 20 17.0	-10
MARNC	Mare, Loyalty	18.88	250	P	Pn	03 18 54.9	+1.4
MARNC	Mare, Loyalty	18.88	250	P	Pn	03 18 55.3	+1.8
SANVU	Saraoutou	19.15	269	P	Pn	03 18 57.5	+0.6
SANVU				IAmb	IAmb	03 19 00.7	
	comp=Z,155nm,1.5s						
LIFNC	LIFOU	19.45	253	P	Pn	03 19 02.9	+2.6
PINNC	Pines Island,	19.70	247	P	Pn	03 19 03.0	-0.3
YATNC	Mamie plateau,	20.05	249	P	Pn	03 19 08.0	+0.6
OUENC	Ouen Island, N	20.18	248	P	P	03 19 07.2	+0.4
OUENC	Ouen Island, N	20.18	248	P	Pn	03 19 09.1	+0.1
DZM	Mont Dzumac	20.45	249	P	P	03 19 07.5	-2.4
	comp=Z,25nm,0.9s,baz=288,slow=21,SNR=9.2						
DZM				LR	LR	03 26 19.8	
	comp=Z,437nm,22.0s,baz=106,slow=34						
DZM	Mont Dzumac	20.45	249	*e*P	P	03 19 08.2	-1.7
	comp=Z,536nm,1.1s						
DZM				*e*LR	LR	03 24 00.2	
	comp=Z,3µm,28.9s						
DZM	Mont Dzumac	20.45	249	P	P	03 19 10.4	+0.5
DZM	Mont Dzumac	20.45	249	P	P	03 19 08.4	-1.5
DZM	Mont Dzumac	20.45	249	P	P	03 19 10.1	+0.2
NOUC	Port Laguerre	20.59	249	P	P	03 19 12.1	+0.9
NOUC	Port Laguerre	20.59	249	P	Pn	03 19 12.8	-1.0
PAE	Paea	22.41	98	*e*P	P	03 19 31.5	+0.7
	comp=Z,20nm,1.2s						
PAE	Paea	22.41	98	*e*T	T	03 42 19.8	
	comp=Z,6.4nm,0.3s						
PPT	Papeete	22.41	98	P	P	03 19 32.0	+1.1
	comp=Z,54nm,0.8s,baz=49,slow=18,SNR=5.8						
PPT				LR	LR	03 25 35.8	
	comp=Z,782nm,21.4s,baz=264,slow=29						
PPT	Papeete	22.41	98	P	P	03 19 32.0	+1.1
PPT2	Papeete2	22.41	98	*e*P	P	03 19 31.7	+0.8
	comp=Z,82nm,1.2s						
PPT2				*e*LQ	LQ	03 23 55.7	
	comp=Z,2µm,27.8s						
PPT2				*e*LR	LR	03 24 38.0	
	comp=Z,2µm,29.2s,baz=267						
PPT2	Papeete2	22.41	98	*e*T	T	03 42 33.0	
	comp=Z,14nm,0.4s						
TIAR	Tiarei	22.63	98	*e*P	P	03 19 33.7	+0.5
	comp=Z,15nm,0.9s						
TIAR	Tiarei	22.63	98	*e*T	T	03 42 49.9	
	comp=Z,5.4nm,0.3s						
OUZ	Omahuta	22.72	210	P	P	03 19 35.2	+1.2
TVO	Taravao	22.72	98	*e*P	P	03 19 34.6	+0.3
	comp=Z,51nm,1.2s						
TVO	Taravao	22.72	98	*e*T	T	03 42 57.6	
	comp=Z,6.0nm,0.4s						
MXZ	Matakaoa Point	22.93	198	P	P	03 19 35.9	-0.3
WMGZ	Waiomatatini S	23.14	198	P	P	03 19 42.2	+4.0
WMGZ				S	S	03 23 45.6	-0.9
HAZ	Te Kaha	23.27	199	P	P	03 19 40.2	+0.7
HAZ				S	S	03 23 47.4	-1.2
TBI	Tubuai	23.28	112	*e*LR	LR	03 25 11.4	
	comp=Z,2µm,28.5s						
TBI	Tubuai	23.28	112	*e*T	T	03 43 52.5	
	comp=Z,40nm,0.4s						
PKGZ	Pakihiroa	23.30	198	P	P	03 19 42.2	+2.3
MYRZ	Mayor Island	23.36	202	P	P	03 19 43.4	+2.9
PUZ	Puketiti	23.41	198	P	P	03 19 41.7	+0.7
PUZ				S	S	03 23 49.5	-1.6
RUGZ	Raukumara Rang	23.49	199	P	P	03 19 43.2	+1.4
RUGZ				S	S	03 23 53.5	+0.9
TWGZ	Tauwhareparae	23.59	198	P	P	03 19 44.9	+2.2
TWGZ				S	S	03 23 53.5	-0.5
WHRZ	Whale Island	23.62	200	P	P	03 19 47.0	+4.1
OPRZ	Ohinepanea	23.75	201	P	P	03 19 47.2	+3.1
TGRZ	Tauranga	23.75	202	P	P	03 19 47.3	+3.2
CNGZ	Carnagh Statio	23.81	197	P	P	03 19 47.9	+3.2
MEH	Mehetia	23.85	98	*e*P	P	03 19 45.7	+0.4
	comp=Z,48nm,1.1s						
MEH	Mehetia	23.85	98	*e*T	T	03 44 36.5	
	comp=Z,12nm,0.3s						
TKGZ	Te Karaka	23.88	198	P	P	03 19 47.7	+2.4
MWZ	Matawai	23.88	199	P	P	03 19 47.2	+1.9
MWZ				S	S	03 23 58.9	+0.3
EDRZ	Edgecumbe	23.93	200	P	P	03 19 48.2	+2.4
URZ	Urewera	23.94	200	P	P	03 19 46.7	+0.8
	comp=Z,318nm,0.6s,baz=30,slow=3.0,SNR=155						
URZ	Urewera	23.94	200	P	P	03 19 45.5	-0.4
URZ				S	S	03 24 00.9	+1.5
KMRZ	Kaimai	23.97	202	P	P	03 19 49.6	+3.4
KARZ	Kaharoa	24.02	201	P	P	03 19 50.2	+3.6
MKRZ	Makatiti	24.05	201	P	P	03 19 46.7	-0.3
OMRZ	Omania	24.05	201	P	P	03 19 50.7	+3.7
RAGZ	Rawiri	24.06	199	P	P	03 19 48.2	+1.1
NGRZ	Ngongotaha	24.11	201	P	P	03 19 50.5	+3.0
TARZ	Mount Tarawera	24.12	201	P	P	03 19 49.9	+2.3
RIGZ	Rimuhau	24.15	198	P	P	03 19 50.7	+2.9
UTU	Utuhina	24.18	201	P	P	03 19 52.5	+4.4
HLRZ	Highlands Stat	24.19	201	P	P	03 19 51.7	+3.5
RRRZ	Republican Roa	24.21	201	P	P	03 19 51.9	+3.5
MUGZ	Murupara	24.25	200	P	P	03 19 49.9	+1.1
PRGZ	Paritu Road	24.31	198	P	P	03 19 52.6	+3.3
HRRZ	Handcock Road	24.34	201	P	P	03 19 53.4	+3.8
SNGZ	Shannon Statio	24.35	199	P	P	03 19 53.6	+4.0
VAH	Vaihoa	24.36	92	*e*P	P	03 19 50.4	+0.4
	comp=Z,73nm,1.1s						
VAH	Vaihoa	24.36	92	*e*T	T	03 45 14.7	
	comp=Z,21nm,0.3s						

ALRZ	Allen Road	24.47	201	P	P	03 19 53.2	+2.5
MHGZ	Mahia Peninsul	24.52	197	P	P	03 19 54.7	+3.5
MRHZ	Matea Rd	24.69	200	P	P	03 19 56.2	+3.4
HNR	Honiara	27.23	280	LR	LR	03 29 32.9	
	comp=Z,1µm,21.8s,baz=120,slow=33						
KHZ	Kahutara	28.87	201	P	P	03 20 30.8	+0.5
RPZ	Rata Peaks	30.90	203	P	P	03 20 48.5	+0.3
	comp=Z,13nm,0.5s,baz=335,slow=1.3,SNR=20						
TAOE	Nuku Hiva Isla	32.73	82	*e*T	T	03 55 41.0	
	comp=Z,79nm,0.2s						
ARMA	Armidale	35.49	240	P	P	03 21 27.4	-1.1
RKT	Rikitea	36.40	107	*e*LR	LR	03 31 04.1	
	comp=Z,1µm,29.5s						
H11S2	WAKE ISLAND Hy	39.63	329	T	T	04 02 58.3	
	baz=146,slow=76,SNR=58						
H11S3	WAKE ISLAND Hy	39.65	329	T	T	04 02 52.8	
	baz=146,slow=76,SNR=96						
H11S1	WAKE ISLAND Hy	39.65	329	T	T	04 02 56.1	
	baz=146,slow=76,SNR=96						
HON	Honolulu	39.78	22	P	P	03 22 01.9	-2.8
HON				pmax	pmax		
	comp=Z,52nm,0.8s						
HON	Honolulu	39.78	22	P	P	03 22 01.9	-2.8
KIP	Kipapa	39.87	22	⇑*e*P	P	03 22 06.1	+0.7
KIP				pmax	pmax		
	comp=Z,28nm,0.8s						
H11N3	WAKE ISLAND Hy	40.58	330	T	T	04 05 03.7	
	baz=149,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	40.58	330	T	T	04 04 59.6	
	baz=149,slow=76,SNR=17						
H11N2	WAKE ISLAND Hy	40.60	330	T	T	04 05 03.9	
	baz=149,slow=76,SNR=14						
COEN	Coen	42.42	267	P	P	03 22 25.8	-0.9
TOO	Toolangi	42.51	231	P	P	03 22 26.0	-1.1
TOO				pmax	pmax		
	comp=Z,52nm,1.1s						
TOO	Toolangi	42.51	231	P	P	03 22 26.0	-1.1
TOO				IAmb	IAmb	03 22 26.9	
	comp=Z,52nm,1.1s						
STKA	Stephens Creek	44.19	241	P	P	03 22 39.4	-1.4
	comp=Z,53nm,1.0s,baz=80,slow=8.5,SNR=38						
STKA				LR	LR	03 40 17.6	
	comp=Z,198nm,18.4s,baz=47,slow=35						
STKA	Stephens Creek	44.19	241	P	P	03 22 39.6	-1.2
STKA				pmax	pmax		
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	44.19	241	P	P	03 22 39.5	-1.2
BBOO	Buckleboo	48.97	240	P	P	03 23 16.5	-1.6
WB0	Warramunga Arr	50.15	257	P	P	03 23 25.4	-1.9
WB0				IAmb	IAmb	03 23 26.2	
	comp=Z,37nm,1.2s						
WB2	Warramunga Arr	50.18	257	P	P	03 23 25.8	-1.7
WRAB	Tennant Creek	50.18	257	*de*P	P	03 23 25.6	-2.0
WRAB				pmax	pmax		
	comp=Z,31nm,1.2s						
WRA	Warramunga Arr	50.19	257	P	P	03 23 25.8	-1.9
	comp=Z,21nm,1.1s,baz=95,slow=6.8,SNR=52						
WRA				LR	LR	03 43 23.6	
	comp=Z,177nm,21.4s,baz=125,slow=34						
WRA	Warramunga Arr	50.19	257	P	P	03 23 24.6	-3.0
AS31	Alice Springs	50.40	252	P	P	03 23 27.2	-2.1
ASAR	Alice Springs	50.40	252	P	P	03 23 27.1	-2.2
	comp=Z,40nm,0.7s,baz=88,slow=8.3,SNR=299						
ASAR				LR	LR	03 43 15.2	
	comp=Z,563nm,20.7s,baz=86,slow=34						
ASAR	Alice Springs	50.40	252	P	P	03 23 26.3	-2.9
GUMO	Guam	51.00	303	LR	LR	03 42 12.7	
	comp=Z,48nm,18.8s,baz=100,slow=32						
FORT	Forrest	55.61	243	P	P	03 24 05.0	-2.4
KNRA	Kununurra	55.96	262	P	P	03 24 07.1	-3.0
SIJI	Sorong	57.00	280	P	P	03 24 16.7	-1.0
	comp=Z,5.8nm,0.5s,baz=55,slow=14,SNR=3.8						
SWI	Sorong	57.01	280	P	P	03 24 18.7	+1.0
	comp=Z,104nm,0.8s						
FITZ	Fitzroy Crossi	58.57	258	P	P	03 24 27.4	-1.1
	comp=Z,4.7nm,0.6s,baz=53,slow=6.4,SNR=7.8						
JCJ	Chichijima	61.04	314	LR	LR	03 44 49.4	
	comp=Z,143nm,21.4s,baz=87,slow=30						
VNDA	Vanda	62.93	186	P	P	03 24 59.0	+1.8
	comp=Z,3.0nm,1.0s,baz=356,slow=6.8,SNR=7.5						
VNDA	Vanda	62.93	186	P	P	03 24 59.0	+1.8
VNDA	Vanda	62.93	186	P	P	03 24 57.2	0.0
MORW	Morawa	66.09	245	P	P	03 25 17.5	-1.3
MJAR	Matsushiro Arr	69.62	320	P	P	03 25 40.2	-0.6
	comp=Z,3.2nm,1.0s,baz=162,slow=7.6,SNR=4.5						
MJAR				LR	LR	03 50 42.9	
	comp=Z,76nm,21.1s,baz=135,slow=31						
SCZ2	Santa Cruz Isl	70.95	45	P	P	03 25 50.6	+1.7
	baz=235						
SCI2	San Clemente I	71.12	46	P	P	03 25 50.4	+0.5
	baz=236						
SBC	Santa Barbara	71.15	44	P	P	03 25 51.5	+1.4
	baz=234						
PKM	Mcpherson Peak	71.34	44	P	P	03 25 52.7	+1.2
	baz=234,SNR=6.3						
SAO	San Andreas Ge	71.39	42	P	P	03 25 52.3	+0.8
SAO				pmax	pmax		
	comp=Z,26nm,1.1s						
SAO	San Andreas Ge	71.39	42	P	P	03 25 52.3	+0.8
SAO				IAmb	IAmb	03 25 54.0	
	comp=Z,26nm,1.1s						
SMMC	Simmler	71.47	43	P	P	03 25 53.8	+1.7
	baz=234,SNR=5.7						
HOPS	Hopland Field	71.77	39	P	P	03 25 54.5	+0.8
HOPS				IAmb	IAmb	03 25 56.3	
	comp=Z,41nm,1.2s						
DECC	Green Verdugo	71.98	45	P	P	03 25 55.7	+0.6
	baz=236						
109C	Camp Elliot, M	72.07	47	P	P	03 25 56.6	+1.0
	baz=237						
CBX	Cerro Bola	72.07	48	P	P	03 25 55.9	0.0
ARVC	Arvin	72.14	44	P	P	03 25 56.9	+0.8
	baz=235						
MWC	Mount Wilson	72.15	45	IAmb	IAmb	03 25 58.2	
	comp=Z,32nm,1.4s						
KMRM	Mail Ridge	72.17	38	P	P	03 25 57.2	+1.0
VES	Vestal, Richgr	72.38	43	P	P	03 25 58.3	+0.8
	baz=235,SNR=16						
MURC	Murrieta	72.40	46	P	P	03 25 58.4	+0.7
	baz=236,SNR=5.2						
ESJX	Sierra Juarez	72.42	48	P	P	03 25 58.1	+0.1
BFSC	Mount Baldy Ra	72.44	46	P	P	03 25 58.3	+0.3
	baz=236,SNR=5.4						
MONP2	Monument Peak	72.56	47	P	P	03 25 59.6	+0.8
	baz=237,SNR=9.4						
EDW2	Edwards Air Fo	72.57	45	P	P	03 25 59.4	+0.8
	baz=236,SNR=18						
KHMM	Horse Mountain	72.58	37	IAmb	IAmb	03 26 23.1	
	comp=Z,26nm,1.1s						
IKP	In-Ko-Pah, Jac	72.65	48	P	P	03 26 00.1	+0.9
	baz=238,SNR=9.0						
O02D	Mt. Diablo Mer	72.68	38	P	P	03 26 01.0	+1.7
	baz=231,SNR=14						
ISA	Isabella, Lake	72.69	44	P	P	03 26 00.3	+1.0
	baz=235,SNR=18						
ISA	Isabella, Lake	72.69	44	IAmb	IAmb	03 26 01.7	
	comp=Z,34nm,1.3s						
CMB	Columbia Colle	72.83	41	P	P	03 26 00.8	+0.6
CMB				pmax	pmax		
	comp=Z,17nm,1.0s						
CMB	Columbia Colle	72.83	41	P	P	03 26 00.8	+0.6
CMB				IAmb	IAmb	03 26 02.2	
	comp=Z,17nm,0.9s						
SRIG	Santa Rosalia	72.84	54	P	P	03 26 00.8	+0.5
SRIG				IAmb	IAmb	03 26 02.2	
	comp=Z,35nm,1.3s						
PFO	Pinyon Flats O	72.92	47	⇓*e*P	P	03 26 01.4	+0.5
PFO				pmax	pmax		
	comp=Z,27nm,1.3s						
PFO	Pinyon Flats O	72.92	47	P	P	03 26 01.6	+0.7
	baz=237,SNR=9.6						
PFO	Pinyon Flats O	72.92	47	P	P	03 26 01.5	+0.7
BBRC	Big Bear Solar	72.96	46	P	P	03 26 02.1	+0.9
	baz=236						
AFDM	Forest Hills D	73.02	40	P	P	03 26 01.7	+0.5
AFDM				IAmb	IAmb	03 26 03.1	
	comp=Z,17nm,1.0s						
SWSC	Sam W. Stewart	73.03	48	P	P	03 26 02.3	+1.0
	baz=238						
WDC	Whiskeytown Da	73.08	38	P	P	03 26 02.1	+0.6
WDC				pmax	pmax		
	comp=Z,38nm,1.4s						
WDC	Whiskeytown Da	73.08	38	P	P	03 26 02.1	+0.6
WDC				IAmb	IAmb	03 26 04.0	
	comp=Z,38nm,1.4s						
LRMC	Laurel Mtn Rad	73.11	44	P	P	03 26 02.4	+0.4
	baz=236,SNR=9.7						
N02D	Trinity Center	73.24	37	P	P	03 26 04.1	+1.5
	baz=230,SNR=11						
O03E	Paynes Creek	73.34	38	P	P	03 26 03.8	+0.6
	baz=231,SNR=12						
CWC	Cottonwood Cre	73.39	43	P	P	03 26 04.5	+0.9
	baz=235						
M02C	Callahan	73.42	37	P	P	03 26 05.2	+1.6
	baz=230,SNR=7.2						
MDPB	Devils Postpil	73.43	42	IAmb	IAmb	03 26 06.0	
	comp=Z,19nm,1.1s						
BELC	Belle Mtn. Jos	73.45	47	P	P	03 26 04.6	+0.6
	baz=237,SNR=13						
L02E	Cave Junction	73.48	36	P	P	03 26 04.9	+1.0
	baz=230						
MPMC	Manual Prospec	73.57	44	P	P	03 26 05.7	+1.0
	baz=236,SNR=33						
MLAC	Mammoth, Mammo	73.58	42	P	P	03 26 06.2	+1.4
	baz=234						
GSC	Goldstone, Bar	73.61	45	P	P	03 26 05.6	+0.7
	baz=236,SNR=14						
GSC	Goldstone, Bar	73.61	45	IAmb	IAmb	03 26 06.8	
	comp=Z,35nm,1.4s						
TIN	Tinemaha, Big	73.64	43	P	P	03 26 06.0	+1.0
	baz=235,SNR=7.4						
BC3	Big Chuckawall	73.65	47	P	P	03 26 06.2	+1.0
	baz=238,SNR=10						
HEC	Hector,Ludlow	73.67	46	P	P	03 26 05.8	+0.5
	baz=237,SNR=14						
YBH	Yreka Blue Hor	73.72	37	IAmb	IAmb	03 26 08.0	
	comp=Z,33nm,1.1s						
GLA	Glamis	73.78	48	P	P	03 26 06.5	+0.6
GLA				pmax	pmax		
	comp=Z,22nm,1.2s						
GLA	Glamis	73.78	48	P	P	03 26 07.3	+1.5
	baz=238						
GLA	Glamis	73.78	48	P	P	03 26 06.5	+0.6
GLA				IAmb	IAmb	03 26 08.2	
	comp=Z,22nm,1.1s						
K02D	Willamette Mer	73.80	36	P	P	03 26 07.0	+1.2
	baz=229,SNR=10						
J01E	Myrtle Point	73.95	35	P	P	03 26 08.1	+1.6
	baz=229,SNR=6.6						
BEKR	Beckworth	73.95	39	IAmb	IAmb	03 26 08.9	
	comp=Z,19nm,1.0s						
PNTR	Pine Nut	73.96	40	IAmb	IAmb	03 26 09.2	
	comp=Z,28nm,0.9s						
VCNR	Virginia City	74.05	40	IAmb	IAmb	03 26 09.7	
	comp=Z,15nm,0.9s						
GMRC	Granite Mounta	74.11	46	P	P	03 26 08.4	+0.5
	baz=237,SNR=8.6						
IRM	Iron Mountain	74.14	47	P	P	03 26 08.8	+0.9
	baz=238,SNR=12						
HUMO	Hull Mountain	74.14	36	IAmb	IAmb	03 26 10.5	
	comp=Z,37nm,1.2s						
LHV	Little Huntoon	74.16	42	IAmb	IAmb	03 26 10.4	
	comp=Z,27nm,1.2s						
GRAC	Grapevine Rang	74.18	43	P	P	03 26 09.5	+1.3
	baz=236,SNR=17						
FURC	Furnace Creek,	74.22	44	P	P	03 26 09.2	+0.9
	baz=236,SNR=9.9						
M04C	Macdoel	74.25	37	P	P	03 26 09.5	+1.0
	baz=231,SNR=6.2						
L04D	Klamath Falls	74.26	37	P	P	03 26 09.9	+1.3
	baz=231,SNR=10						
SHOC	Shoshone, Teco	74.30	45	P	P	03 26 09.2	+0.4
	baz=237						
NVAR	Mina Array Bea	74.39	42	P	P	03 26 10.4	+0.8
	comp=Z,12nm,0.8s,baz=227,slow=9.8,SNR=111						
NVAR	Mina Array Bea	74.39	42	P	P	03 26 09.3	-0.2
PAHR	Pah Rah Range	74.46	40	IAmb	IAmb	03 26 12.0	
	comp=Z,25nm,1.2s						
NV11	Mina Array Sit	74.49	42	IAmb	IAmb	03 26 12.2	
	comp=Z,42nm,1.2s						
I02D	Swisshome	74.62	34	P	P	03 26 11.7	+1.3
	baz=229						
I03D	Drain, OR	74.62	35	P	P	03 26 11.9	+1.5
	baz=229,SNR=11						
214A	Organ Pipe Nat	74.68	50	P	P	03 26 12.2	+1.0
	baz=240,SNR=8.5						
214A	Organ Pipe Nat	74.68	50	IAmb	IAmb	03 26 13.4	
	comp=Z,59nm,1.9s						
NEE2	Needles Airpor	74.83	47	P	P	03 26 12.8	+0.9
	baz=238						
K04D	Chiloquin, OR	74.83	37	P	P	03 26 12.7	+0.8
	baz=231						
TPNV	Topopah Spring	74.89	44	P	P	03 26 13.3	+0.9
	baz=236,SNR=15						
PDMCI	Parker Dam,Lak	74.92	47	P	P	03 26 13.2	+0.9
	baz=238,SNR=11						
J04D	Umpqua Nationa	75.02	36	P	P	03 26 14.5	+1.4
	baz=230,SNR=24						
I04A	Tendick Farm,	75.20	35	P	P	03 26 14.7	+0.8
	baz=230,SNR=11						
MOD	Modoc Plateau	75.23	38	P	P	03 26 14.7	+0.5
MOD				IAmb	IAmb	03 26 16.3	
	comp=Z,34nm,1.1s						
KDAK	Kodiak Island	75.32	11	P	P	03 26 14.3	+0.2
	comp=Z,14nm,0.9s,baz=272,slow=10,SNR=5.1						
SHPR	Sheep Range	75.38	45	IAmb	IAmb	03 26 17.6	
	comp=Z,27nm,1.2s						
H04D	Lebanon	75.49	35	P	P	03 26 16.8	+1.3
	baz=230,SNR=12						
J05D	Fort Rock, OR	75.54	36	P	P	03 26 17.4	+1.4
	baz=231,SNR=35						
G03D	McMinnville, O	75.66	34	P	P	03 26 17.5	+1.1
	baz=229						
PRN	Pahroc Range	75.94	44	IAmb	IAmb	03 26 21.0	
	comp=Z,30nm,1.2s						
R11A	Troy Canyon, C	76.11	43	P	P	03 26 20.2	+0.9
	baz=236,SNR=8.3						
I05D	Terrebonne, OR	76.15	35	P	P	03 26 20.4	+1.1
	baz=231,SNR=11						
TUC	Tucson	76.35	50	P	P	03 26 21.0	+0.3
TUC				pmax	pmax		
	comp=Z,45nm,1.7s						
TUC	Tucson	76.35	50	P	P	03 26 21.8	+1.0
	baz=241						
TUC	Tucson	76.35	50	P	P	03 26 21.0	+0.3
TUC				IAmb	IAmb	03 26 23.3	
	comp=Z,45nm,1.7s						
F04D	Rainier, OR	76.36	33	P	P	03 26 21.8	+1.5
	baz=229						
WVOR	Wild Horse Val	76.54	38	IAmb	IAmb	03 26 23.7	
	comp=Z,34nm,1.2s						
G05D	Wamic, OR	76.73	35	P	P	03 26 23.4	+0.8
	baz=231,SNR=7.4						
NLWA	Neilton Lookou	76.78	32	IAmb	IAmb	03 26 25.1	
	comp=Z,19nm,1.1s						
KSRS	Korea Array	76.84	315	P	P	03 26 23.1	-0.1
	comp=Z,1.9nm,0.8s,baz=119,slow=7.3,SNR=4.5						
KSRS				LR	LR	03 52 30.6	
	comp=Z,71nm,21.5s,baz=130,slow=30						
X16A	Lo Mia Camp, P	76.90	48	IAmb	IAmb	03 26 26.4	
	comp=Z,16nm,1.0s						
E04D	Cinebar	76.90	33	P	P	03 26 24.8	+1.4
	baz=230,SNR=10						
I07A	Izee	77.02	36	IAmb	IAmb	03 26 26.6	
	comp=Z,23nm,1.0s						
319A	Douglas	77.03	52	IAmb	IAmb	03 26 27.0	
	comp=Z,28nm,1.1s						
F05D	White Salmon	77.06	34	P	P	03 26 25.4	+1.0
	baz=230,SNR=5.7						
CCUT	Cedar City	77.16	45	P	P	03 26 26.2	+0.8
D04E	Lakebay	77.20	32	P	P	03 26 26.7	+1.7
	baz=229						
D03D	Eldon	77.27	32	P	P	03 26 26.5	+1.1
	baz=229,SNR=7.1						
WUAZ	Wupatki	77.49	47	P	P	03 26 28.4	+1.2
	baz=240,SNR=8.4						
WUAZ	Wupatki	77.49	47	IAmb	IAmb	03 26 29.7	
	comp=Z,26nm,1.4s						
PGC	Sidney	77.83	31	IAmb	IAmb	03 26 29.9	
	comp=Z,18nm,0.8s						
HPIG		77.91	57	P	P	03 26 29.5	-0.2
HPIG				IAmb	IAmb	03 26 48.0	
	comp=Z,20nm,1.2s						
G08A	Pilot Rock	78.07	36	IAmb	IAmb	03 26 32.1	
	comp=Z,31nm,1.1s						
LEM	Lembang	78.07	266	LR	LR	04 03 02.1	
	comp=Z,123nm,18.9s,baz=197,slow=37						
A04D	Lummi Island	78.24	31	P	P	03 26 32.2	+1.4
	baz=229,SNR=6.7						
B05A	Bryant	78.25	32	P	P	03 26 31.7	+0.8
	baz=230,SNR=11						
E07A	Sunnyside	78.35	34	IAmb	IAmb	03 26 33.6	
	comp=Z,30nm,1.0s						
HAWA	Hanford	78.42	35	IAmb	IAmb	03 26 33.9	
	comp=Z,25nm,1.1s						
W18A	Petrified Fore	78.47	48	P	P	03 26 33.5	+0.9
	baz=241						
C06D	Leavenworth	78.65	33	P	P	03 26 33.5	+0.3
	baz=231						
121A	Cookes Peak, D	78.69	51	P	P	03 26 35.2	+1.3
	baz=243,SNR=7.9						
ZAIG	Zacatecas	78.82	62	P	P	03 26 35.6	+0.7
DUG	Dugway, Tooele	78.91	43	P	P	03 26 35.6	+0.7
	baz=238,SNR=13						
DUG	Dugway, Tooele	78.91	43	IAmb	IAmb	03 26 36.8	
	comp=Z,21nm,1.2s						
RC01	Rabbit Creek A	78.94	11	P	P	03 26 34.1	-0.3
	baz=203						
E09A	Wood Farm, Sta	79.26	35	IAmb	IAmb	03 26 37.4	
	comp=Z,19nm,1.0s						
F10A	Beach Ranch, E	79.45	36	IAmb	IAmb	03 26 39.0	
	comp=Z,27nm,0.9s						
SKT	Skwentna	79.45	10	IAmb	IAmb	03 27 09.2	
	comp=Z,37nm,1.7s						
PMR	Palmer	79.52	11	IAmb	IAmb	03 26 60.0	
	comp=Z,42nm,1.5s						
TTA	Tatalina	79.69	8	IAmb	IAmb	03 26 40.5	
	comp=Z,23nm,1.2s						
HLID	Hailey	79.72	39	P	P	03 26 40.2	+0.8
	baz=236,SNR=29						
HLID	Hailey	79.72	39	IAmb	IAmb	03 26 41.5	
	comp=Z,26nm,1.2s						
GHO	Glory Hole Cre	79.72	11	IAmb	IAmb	03 26 39.3	
	comp=Z,15nm,0.6s						
SPUT	South Promonto	79.73	42	P	P	03 26 39.6	+0.2
B08A	Colville Reser	79.74	33	IAmb	IAmb	03 26 40.2	
	comp=Z,21nm,1.1s						
Y22D	IRIS PASSCAL I	80.03	50	P	P	03 26 43.1	+1.9
	baz=243						
CUT	Chulitna	80.06	10	P	P	03 26 40.2	-0.2
	baz=202,SNR=5.5						
SCM	Sheep Creek Mo	80.09	12	P	P	03 26 40.3	-0.5
SCM				pmax	pmax		
	comp=Z,18nm,0.6s						
SCM	Sheep Creek Mo	80.09	12	P	P	03 26 40.2	-0.5
SCM				IAmb	IAmb	03 26 41.3	
	comp=Z,18nm,0.6s						
TGL	Tana Glacier	80.12	14	IAmb	IAmb	03 26 41.7	
	comp=Z,26nm,1.0s						
MNTX	Cornudas Mount	80.15	53	P	P	03 26 42.4	+0.7
	baz=244,SNR=21						
MNTX	Cornudas Mount	80.15	53	IAmb	IAmb	03 26 59.8	
	comp=Z,20nm,1.1s						
PV05	Paradox Valley	80.34	46	IAmb	IAmb	03 27 01.4	
	comp=Z,20nm,1.0s						
MVCO	Mesa Verde	80.34	47	P	P	03 26 43.2	+0.3
	baz=242						
MVCO	Mesa Verde	80.34	47	IAmb	IAmb	03 27 04.6	
	comp=Z,25nm,1.4s						
VRDI	Verde Repeater	80.39	14	IAmb	IAmb	03 26 43.7	
	comp=Z,36nm,1.4s						
N25K	Chitina, Valde	80.46	13	P	P	03 26 43.0	+0.2
	baz=208,SNR=8.3						
N25K	Chitina, Valde	80.46	13	P	P	03 26 42.4	-0.4
BALM	Baldy	80.48	15	IAmb	IAmb	03 26 44.0	
	comp=Z,28nm,1.3s						
GLB	Gilahina Butte	80.49	14	IAmb	IAmb	03 26 44.0	
	comp=Z,50nm,1.8s						
TX32	Lajitas Array	80.50	56	IAmb	IAmb	03 27 06.6	
	comp=Z,30nm,1.3s						
TXAR	Lajitas Array	80.50	56	P	P	03 26 44.6	+0.9
	comp=Z,5.9nm,0.9s,baz=217,slow=6.0,SNR=39						
TXAR				pP	pwP	03 27 01.2	+1.2
	comp=Z,14nm,1.0s,baz=230,slow=5.9,SNR=15						
TXAR	Lajitas Array	80.50	56	P	P	03 26 44.2	+0.4
M24K	Tolsona, Glenn	80.57	12	P	P	03 26 43.9	+0.6
	baz=206,SNR=5.3						
PV23	Carpenter Ridg	80.58	46	IAmb	IAmb	03 27 09.1	
	comp=Z,27nm,0.9s						
MCARA	McCarthy VSAT	80.62	14	IAmb	IAmb	03 27 12.0	
	comp=Z,26nm,1.2s						
CTGM	Chitina Glacie	80.67	15	IAmb	IAmb	03 26 45.2	
	comp=Z,19nm,1.0s						
BARN	Barnard Glacie	80.67	15	IAmb	IAmb	03 26 45.3	
	comp=Z,30nm,1.2s						
ANMO	Albuquerque	80.77	50	*d i*P	P	03 26 45.8	+0.6
ANMO				pmax	pmax		
	comp=Z,13nm,1.1s						
ANMO	Albuquerque	80.77	50	P	P	03 26 46.1	+0.9
	baz=243						
ANMO	Albuquerque	80.77	50	P	P	03 26 45.2	0.0
ANMO				IAmb	IAmb	03 26 48.7	
	comp=Z,23nm,1.2s						
NJ2	Nanjing	80.84	307	*e*P	P	03 26 46.2	+0.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NEW	Newport	80.86	34	P	P	03 26 45.1	-0.1
	baz=234,SNR=6.8						
KLR	Kul'dur	81.19	327	LR	LR	03 58 26.2	
	comp=Z,29nm,20.3s,baz=176,slow=32						
RND	Reindeer	81.24	11	IAmb	IAmb	03 26 48.0	
	comp=Z,24nm,0.9s						
MCK	McKinley	81.53	11	P	P	03 26 48.2	-0.2
	baz=203,SNR=21						
HYT	Haines Junctio	81.56	17	IAmb	IAmb	03 26 50.5	
	comp=Z,22nm,1.1s						
S22A	4UR Ranch, Cre	81.77	47	P	P	03 26 51.8	+1.2
	baz=243,SNR=30						
S22A	4UR Ranch, Cre	81.77	47	IAmb	IAmb	03 26 53.0	
	comp=Z,27nm,1.1s						
CN2	Changchun	81.77	320	*e*P	P	03 27 00.9	+11
MSO	Missoula	81.81	36	P	P	03 26 50.1	-0.1
	baz=236,SNR=14						
MSO	Missoula	81.81	36	P	P	03 26 50.2	-0.1
MSO				IAmb	IAmb	03 26 51.5	
	comp=Z,28nm,1.4s						
O20A	White River Ci	81.91	44	P	P	03 26 51.9	+0.8
	baz=241						
O20A	White River Ci	81.91	44	IAmb	IAmb	03 27 16.0	
	comp=Z,40nm,1.6s						
L26K	Log Cabin Wild	81.99	13	P	P	03 26 51.1	+0.3
	baz=209,SNR=8.6						
DLBC	Dease Lake	82.00	21	IAmb	IAmb	03 27 16.7	
	comp=Z,28nm,1.6s						
LOHW	Long Hollow	82.09	40	IAmb	IAmb	03 26 54.0	
	comp=Z,31nm,1.6s						
NEA2	Nenana	82.30	10	P	P	03 26 52.5	+0.2
	baz=203						
YPP	Pitchstone Pla	82.30	40	P	P	03 26 54.1	+0.8
RIDG	Independent Ri	82.31	12	IAmb	IAmb	03 27 14.4	
	comp=Z,24nm,1.1s						
BW06	Boulder Array	82.33	42	P	P	03 26 53.5	+0.1
	baz=240,SNR=16						
PDAR	Pinedale Array	82.33	42	P	P	03 26 53.4	+0.1
	comp=Z,7.1nm,0.8s,baz=216,slow=3.2,SNR=68						
PDAR				pP	sP	03 27 12.7	+3.0
	comp=Z,6.0nm,0.8s,baz=211,slow=3.3,SNR=7.4						
PDAR				LR	LR	03 59 02.7	
	comp=Z,232nm,19.4s,baz=190,slow=32						
PDAR	Pinedale Array	82.33	42	P	P	03 26 52.4	-0.9
BCAR	Beaver Creek A	82.38	14	P	P	03 26 51.4	-1.4
DOT	Dot Lake	82.39	13	P	P	03 26 52.4	-0.4
DOT				IAmb	IAmb	03 26 54.0	
	comp=Z,19nm,0.9s						
MLY	Manley	82.44	9	P	P	03 26 52.6	-0.5
	baz=202,SNR=24						
BOZ	Bozeman (W)	82.49	38	P	P	03 26 54.4	+0.4
	baz=238,SNR=14						
BOZ	Bozeman (W)	82.49	38	IAmb	IAmb	03 26 56.0	
	comp=Z,43nm,1.6s						
HDA	Harding Lake	82.51	11	P	P	03 26 53.3	-0.1
	baz=205,SNR=18						
HDA	Harding Lake	82.51	11	IAmb	IAmb	03 26 54.2	
	comp=Z,21nm,0.8s						
H17A	Grant Village	82.51	40	P	P	03 26 56.3	+2.1
	baz=239,SNR=9.7						
H17A	Grant Village	82.51	40	IAmb	IAmb	03 26 57.2	
	comp=Z,41nm,1.6s						
SCRK	Sand Creek	82.70	12	P	P	03 26 54.7	+0.1
	baz=208,SNR=12						
SDCO	Great Sand Dun	82.70	48	P	P	03 26 55.9	+0.4
	baz=244,SNR=15						
I23K	Minto, Yukon-K	82.77	10	P	P	03 26 54.6	-0.1
	baz=203,SNR=11						
I23K	Minto, Yukon-K	82.77	10	IAmb	IAmb	03 26 55.5	
	comp=Z,17nm,1.0s						
TCOL	CIGO, UAF Yank	82.77	10	P	P	03 26 54.7	-0.1
	baz=204,SNR=9.4						
COLA	College	82.77	11	*d i*P	P	03 26 54.1	-0.6
COLA				pmax	pmax		
	comp=Z,33nm,0.9s						
COLA	College	82.77	11	P	P	03 26 54.6	-0.1

IL31		82.85	11	IAmb	IAmb	03 27 17.5	
	comp=Z,35nm,1.6s						
ILAR	Eielson Array	82.85	11	P	P	03 26 54.7	-0.5
	comp=Z,6.7nm,0.7s,baz=229,slow=6.2,SNR=126						
ILAR	Eielson Array	82.85	11	P	P	03 26 53.6	-1.6
IMAR	Indian Mountai	82.91	8	P	P	03 26 54.9	-0.6
POKR	Poker Plat Res	83.06	11	P	P	03 26 56.1	-0.2
	baz=205,SNR=16						
MSTX	Muleshoe	83.10	52	P	P	03 26 57.5	+0.1
	baz=246,SNR=13						
SEY	Seymchan	83.12	345	P	P	03 26 56.3	-0.3
	comp=Z,2.1nm,0.5s,baz=105,slow=7.0,SNR=5.2						
SEY	Seymchan	83.12	345	⇑*e*P	P	03 26 56.2	-0.4
K27K	Chicken	83.15	13	P	P	03 26 57.5	+0.7
	baz=210						
K27K	Chicken	83.15	13	IAmb	IAmb	03 27 19.6	
	comp=Z,20nm,1.3s						
T25A	Trinidad	83.22	48	P	P	03 26 58.4	+0.4
	baz=244,SNR=5.8						
BELA	Belgrano 2	83.44	172	P	P	03 26 58.1	-0.2
Q24A	Divide	83.49	47	P	P	03 27 00.4	+0.8
	baz=244,SNR=6.2						
PMSA	Palmer Station	83.53	156	LR	LR	04 00 22.5	
	comp=Z,82nm,18.1s,baz=274,slow=33						
ISCO	Idaho Springs	83.54	46	P	P	03 27 00.5	+0.8
	baz=243,SNR=7.8						
833A	Chaparral WMA,	83.56	58	P	P	03 27 00.6	+0.9
	baz=248						
RLMT	Red Lodge	83.68	40	P	P	03 27 00.9	+0.7
	baz=240,SNR=16						
RLMT	Red Lodge	83.68	40	IAmb	IAmb	03 27 02.2	
	comp=Z,22nm,1.1s						
N23A	Red Feather La	83.81	45	P	P	03 27 02.0	+0.9
	baz=243,SNR=9.7						
N23A	Red Feather La	83.81	45	IAmb	IAmb	03 27 02.9	
	comp=Z,21nm,1.0s						
EGAK	Eagle	84.00	13	IAmb	IAmb	03 27 02.5	
	comp=Z,18nm,1.0s						
JCT	Junction City	84.04	56	P	P	03 27 02.4	+0.2
JCT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JCT	Junction City	84.04	56	P	P	03 27 02.3	+0.2
	baz=248						
JCT	Junction City	84.04	56	P	P	03 27 02.4	+0.2
K22A	Casper	84.23	43	P	P	03 27 03.9	+0.9
	baz=242,SNR=5.9						
K22A	Casper	84.23	43	IAmb	IAmb	03 27 05.1	
	comp=Z,24nm,1.2s						
AMTX	Amarillo	84.29	51	P	P	03 27 03.6	+0.2
	baz=246						
PHWY	Pilot Hill	84.33	44	IAmb	IAmb	03 27 28.1	
	comp=Z,16nm,1.2s						
COLD	Coldfoot	84.57	9	P	P	03 27 04.8	+0.9
	baz=202,SNR=14						
COLD	Coldfoot	84.57	9	IAmb	IAmb	03 27 26.9	
	comp=Z,16nm,1.0s						
EGMT	Eagleton	84.85	37	P	P	03 27 06.3	+0.4
	baz=240						
EGMT	Eagleton	84.85	37	IAmb	IAmb	03 27 23.6	
	comp=Z,17nm,1.2s						
ABTX	Abilene, Hawle	84.97	54	P	P	03 27 07.3	+0.4
	baz=248,SNR=13						
KSCO	Kaye Shedlock'	85.29	47	P	P	03 27 08.7	+0.4
	baz=245						
BMAR	Burnt Mountain	85.66	11	P	P	03 27 07.8	-1.6
435B	Jarrell	85.92	57	P	P	03 27 12.4	+0.8
	baz=249						
TOLK	Toolik Lake Re	85.97	8	P	P	03 27 11.5	+0.6
	baz=202,SNR=8.9						
TOLK	Toolik Lake Re	85.97	8	IAmb	IAmb	03 27 34.4	
	comp=Z,21nm,1.4s						
ZEA	Zeya	86.09	329	*e*P	P	03 27 29.1	+17
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LAO	LASA Array	86.30	39	P	P	03 27 14.1	+1.0
	baz=242						
WMOK	Wichita Mounta	86.43	53	P	P	03 27 13.9	-0.1
	baz=248						
WHTX	Lake Whitney,	86.46	55	P	P	03 27 14.7	+0.6
	baz=249						
RSSD	Black Hills	86.51	42	P	P	03 27 13.9	-0.5
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RSSD	Black Hills	86.51	42	P	P	03 27 14.1	-0.3
	baz=244						
RSSD	Black Hills	86.51	42	P	P	03 27 13.9	-0.5
MAW	Mawson	87.47	198	P	P	03 27 19.5	+1.1
	comp=Z,13nm,1.1s,baz=76,slow=3.0,SNR=4.9						
MAW				LR	LR	04 07 11.4	
	comp=Z,84nm,18.6s,baz=74,slow=36						
A21K	Barrow	87.72	5	P	P	03 27 19.3	0.0
	baz=196						
HIA	Hailar	87.88	323	⇑*e*P	P	03 27 21.5	+0.8
HIA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NATX	Nacogdoches	88.61	57	P	P	03 27 25.9	+1.4
	baz=250						
NATX	Nacogdoches	88.61	57	P	P	03 27 25.2	+0.7
INK	Inuvik	88.64	14	P	P	03 27 23.3	-0.5
	comp=Z,5.1nm,0.9s,baz=196,slow=4.8,SNR=16						
INK				pP	sP	03 27 41.0	+0.3
	comp=Z,4.5nm,0.9s,baz=173,slow=5.4,SNR=7.1						
INK	Inuvik	88.64	14	IAmb	IAmb	03 27 24.7	
	comp=Z,12nm,1.1s						
PLCA	Paso Flores	88.83	132	LR	LR	03 59 01.7	
	comp=Z,127nm,21.9s,baz=308,slow=30						
T35A	Sooner Cattle	88.94	51	IAmb	IAmb	03 27 56.5	
	comp=Z,12nm,1.1s						
HHC	Hu-ho-hao-te	89.71	313	*e*P	P	03 27 29.1	-0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,94nm,6.6s						
YKA	Yellowknife Ar	90.37	23	P	P	03 27 31.5	-0.5
	comp=Z,3.8nm,0.9s,baz=230,slow=4.1,SNR=42						
YKA				pP	sP	03 27 49.2	+0.2
	comp=Z,3.6nm,0.8s,baz=234,slow=4.1,SNR=12						
YKA				LR	LR	04 03 09.5	
	comp=Z,153nm,19.9s,baz=0.0,slow=32						
BO02	Sierra Bellavi	90.67	126	P	P	03 27 34.5	+0.1
JTS	Las Juntas de	90.84	80	P	P	03 27 36.4	+1.0
JTS				pmax	pmax		
	comp=Z,67nm,1.4s						
JTS	Las Juntas de	90.84	80	P	P	03 27 36.4	+1.0
ECSD	EROS Data Cent	91.28	45	P	P	03 27 35.5	-1.2
	baz=249						
ECSD	EROS Data Cent	91.28	45	IAmb	IAmb	03 27 39.1	
	comp=Z,17nm,1.5s						
PEL	Peldehue	91.31	125	P	P	03 27 37.0	-0.3
PEL				pmax	pmax		
	comp=Z,25nm,1.0s						
PEL	Peldehue	91.31	125	P	P	03 27 37.0	-0.3
VA03	San Esteban	91.54	125	P	P	03 27 40.2	+1.8
W41B	Gary Mavity, V	91.62	54	P	P	03 27 38.7	+0.3
	baz=252						
C36M	Paulatuk	91.72	16	P	P	03 27 38.5	+0.5
	baz=226,SNR=5.9						
C36M	Paulatuk	91.72	16	IAmb	IAmb	03 27 39.0	
	comp=Z,13nm,1.1s						
FCAR	Ozark Folk Cen	91.94	53	IAmb	IAmb	03 27 41.7	
	comp=Z,16nm,1.4s						
VNA3	Neumayer Olymp	92.31	175	P	P	03 27 42.4	+1.3
SNAA	Sanae	92.38	177	P	P	03 27 41.8	+0.4
SNAA	Sanae	92.38	177	⇑*e*P	P	03 27 41.9	+0.4
SNAA				pmax	pmax		
	comp=Z,12nm,1.4s						
SNAA	Sanae	92.38	177	P	P	03 27 42.0	+0.5
SNAA				IAmb	IAmb	03 28 02.8	
	comp=Z,8.4nm,1.1s						
LCO	Las Campanas	92.69	121	P	P	03 27 44.9	+0.9
LCO				pmax	pmax		
	comp=Z,17nm,1.0s						
LCO	Las Campanas	92.69	121	P	P	03 27 44.9	+0.9
VNA2	Neumayer--Watz	92.81	175	P	P	03 27 44.5	+1.1
VNA1	Neumayer--Stat	93.01	175	P	P	03 27 45.2	+0.9
T42A	Van Buren	93.08	52	IAmb	IAmb	03 27 45.5	
	comp=Z,12nm,1.1s						
AC05	El Transito	93.10	121	P	P	03 27 46.2	+0.4
CM31	Chiang Mai Arr	93.22	288	P	P	03 27 45.6	-0.7
CMAR	Chiang Mai Arr	93.22	288	P	P	03 27 46.4	+0.2
	comp=Z,2.3nm,0.8s,baz=100,slow=2.6,SNR=11						
CMAR				pP	sP	03 28 04.8	+1.3
	comp=Z,1.5nm,0.6s,baz=113,slow=2.4,SNR=2.7						
CMAR				LR	LR	04 10 51.3	
	comp=Z,70nm,18.2s,baz=183,slow=36						
CCM	Cathedral Cave	93.27	51	P	P	03 27 45.1	-1.0
	baz=252						
LZH	Lanzhou	93.90	306	*e*P	P	03 27 49.8	+0.6
LZH				pP	pP	03 28 01.9	+0.1
LZH				PP	PP	03 31 35.5	-0.1
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
LZH				LR	LR		
	comp=Z,150nm,17.3s						
LZH				LR	LR		
	comp=Z,170nm,17.2s						
LZH				LR	LR		
	comp=Z,240nm,19.7s						
ULM	Lac du Bonnet	94.03	39	P	P	03 27 48.6	-0.6
	comp=Z,6.0nm,1.1s,baz=307,slow=7.8,SNR=4.3						
ULM				LR	LR	04 04 15.3	
	comp=Z,243nm,20.7s,baz=258,slow=32						
SPMN	Marine on St.	94.35	44	P	P	03 27 51.0	+0.2
	baz=252						
JFWS	Jewell Farm	95.42	47	P	P	03 27 55.3	-0.6
	baz=254						
SONM	Songino Array	95.53	318	P	P	03 27 55.5	-0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	Songino Array	95.53	318	P	P	03 27 55.5	-0.9
MKAR	Makanchi Array	111.51	314	PKiKP	PKiKP	03 33 05.0	-0.4
	comp=Z,0.2nm,0.6s,baz=76,slow=1.8,SNR=3.5						
MKAR				PKKPbc	PKKPab	03 44 10.1	+1.3
	comp=Z,0.6nm,0.8s,baz=261,slow=4.8,SNR=5.5						
KURK	Kurchatov	113.83	319	⇑*i*PKIKP	PKiKP	03 33 12.1	+2.4
BRVK	Borovoye	118.62	322	*ce*PKIKP	PKPdf	03 33 19.2	+0.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ARU	Arti	124.01	328	*i* PKIKP	PKPdf	03 33 28.8	-0.3
ARU						03 35 12.9	
ARU						03 40 37.6	
ARU				SS	SS	03 52 00.4	+0.4
ARCES	ARCESS Array B	125.17	352	PKP	PKPdf	03 33 30.6	-0.4
	comp=Z,0.9nm,0.5s,baz=278,slow=0.9,SNR=5.8						
KIRV	Kirov	127.20	334	*ce*PKIKP	PKPdf	03 33 35.6	+0.5
KLMR	Klimovskoe	129.42	340	*e*PKIKP	PKPdf	03 33 37.3	-2.0
KLMR				pmax	pmax		
	comp=Z,23nm,1.4s						
KLMR	Klimovskoe	129.42	340	*e*PKPdf	PKPdf	03 33 37.4	-1.9
KLMR				AMP		03 33 40.4	
	comp=Z,23nm,1.4s						
FINES	FINESS Array B	132.53	348	PKP	PKPdf	03 33 45.5	+0.3
	comp=Z,1.7nm,0.7s,baz=346,slow=3.9,SNR=7.4						
OBN	Obninsk	134.76	337	*i* PKIKP	PKPdf	03 33 49.2	-0.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	Kislovodsk	138.89	320	*e*PKIKP	PKiKP	03 33 59.8	-0.1
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	140.98	338	PKIKP	PKPdf	03 34 00.3	-0.8
AKASG	Malin Array Be	140.98	338		PKPdf	03 34 00.3	-0.8
MARD	Mardin	143.39	312	PKPdf	PKPdf	03 34 05.1	-1.0
CLL	Collm	144.37	354	*i* PKPdf	PKPab	03 34 04.9	-0.3
	comp=Z,11nm,1.0s						
CLL				*e*pPKPdf	PKiKP	03 34 15.0	+4.3
CLL	Collm	144.37	354	PKIKP	PKPab	03 34 05.6	+0.4
CLL	Collm	144.37	354	PKPdf	PKPab	03 34 05.6	+0.4
CHVC	Chvalec	144.65	350	*e*PKP	PKPab	03 34 06.7	+0.3
CHVC				*e*x	x	03 34 18.0	
OSTC	Ostas	144.66	350	*e*PKP	PKPbc	03 34 07.3	+0.8
BRG	Berggiesshubel	144.68	352	*e*PKP	PKPdf	03 34 08.8	+1.1
BRG				Amp		03 34 12.9	
	comp=Z,6.9nm,1.2s						
BRG				*e*x	x	03 34 30.0	
BRG				Amp		03 34 33.3	
	comp=Z,7.0nm,1.0s						
BRG	Berggiesshubel	144.68	352	*e*PKIKP	PKPdf	03 34 08.7	+1.1
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG	Berggiesshubel	144.68	352	*e*PKP	PKPdf	03 34 08.8	+1.1
BRG				Amp		03 34 12.9	
	comp=Z,6.9nm,1.2s						
BRG				*e*x	x	03 34 30.0	
BRG				Amp		03 34 33.3	
	comp=Z,7.0nm,1.0s						
UPC	Upice	144.74	350	*e*PKIKP	PKPab	03 34 07.1	+0.4
UPC	Upice	144.74	350	*e*PKP	PKPab	03 34 07.1	+0.4
KOLS	Kolonicke sedl	144.79	343	*e*PKIKP	PKPbc	03 34 07.4	+0.4
KOLS	Kolonicke sedl	144.79	343	*e*PKP	PKPbc	03 34 07.4	+0.4
KOLS				*e*		03 34 27.1	
DPC	Dobruska-Polom	144.84	350	*e*PKIKP	PKPbc	03 34 07.6	+0.4
DPC	Dobruska-Polom	144.84	350	*e*PKP	PKPbc	03 34 07.6	+0.4
PVCC	Panska Ves	144.94	352	*e*PKIKP	PKPab	03 34 06.1	-1.3
PVCC	Panska Ves	144.94	352	*e*PKP	PKPab	03 34 06.1	-1.3
BURAR	Bucovina Array	145.01	338	⇓P	PKPbc	03 34 08.2	+0.3
BURAR	Bucovina Array	145.01	338	⇓PKIKP	PKPbc	03 34 08.2	+0.3
BURAR	Bucovina Array	145.01	338		PKPbc	03 34 07.9	0.0
ATD	Arta Tunnel	145.02	267	PKPdf	PKPdf	03 34 09.9	+0.5
CRVS	Cervenica-Dubn	145.05	343	*e*PKIKP	PKPbc	03 34 08.2	+0.4
CRVS	Cervenica-Dubn	145.05	343	*e*PKP	PKPbc	03 34 08.2	+0.4
CRVS				*e*		03 34 28.4	
UZH	Uzhgorod	145.06	342	⇓*e*PKIKP	PKPab	03 34 08.4	+0.5
MOX	Moxa	145.16	355	*e*PKPbc	PKPbc	03 34 08.3	+0.2
	baz=5.9,slow=3.0						
MORC	Moravsky Berou	145.16	348	*e*PKP	PKPbc	03 34 08.4	+0.2
MORC				*e*		03 34 27.6	
PLN	Plauen	145.26	354	*e*PKPbc	PKPbc	03 34 08.8	+0.3
	baz=5.9,slow=3.0						
WERD	Werda	145.29	354	*e*PKPbc	PKPbc	03 34 09.0	+0.4
	baz=5.9,slow=3.0						
TANN	Tannenbergstha	145.30	354	*e*PKPbc	PKPbc	03 34 09.1	+0.5
	baz=5.9,slow=3.0						
LANS	Liptovska Anna	145.33	346	*e*PKIKP	PKPab	03 34 10.0	+1.1
LANS	Liptovska Anna	145.33	346	*e*PKP	PKPab	03 34 10.0	+1.1
GUNZ	Gunzen	145.37	354	*e*PKPbc	PKPab	03 34 09.4	+0.4
	baz=5.9,slow=3.0						
MEM	Membach	145.37	1	*d*PKP	PKPbc	03 34 08.8	0.0
BSTI	Sart Tilman	145.39	2	*d*PKP	PKPbc	03 34 08.9	+0.1
BTNL	Ternell	145.40	1	*d*PKP	PKPbc	03 34 07.8	-1.1
BTNL				*d*sPKP		03 34 28.7	
WERN	Wernitzgruen	145.44	354	*e*PKPbc	PKPab	03 34 09.7	+0.4
	baz=5.9,slow=3.0						
PRU	Pruhonice	145.47	352	*e*PKIKP	PKPdf	03 34 09.3	+0.2
PRU				*e*		03 34 16.2	
PRU	Pruhonice	145.47	352	*e*PKP	PKPdf	03 34 09.3	+0.2
PRU				*e*x	x	03 34 16.2	
PRU				*e*x	x	03 34 28.0	
NKC	Novy Kostel	145.49	354	*e*PKIKP	PKPdf	03 34 09.4	+0.3
NKC	Novy Kostel	145.49	354	*e*PKP	PKPdf	03 34 09.4	+0.3
BCLA	Clavier	145.54	2	*d*PKP	PKPdf	03 34 09.4	+0.2
BMRD	Maredsous	145.64	3	*d*PKP	PKPdf	03 34 09.6	+0.2
KECS	Kecovo	145.70	344	*e*	PKiKP	03 34 28.1	+15
KMBO	Kilima Mbogo	145.73	243	PKPbc	PKPab	03 34 12.0	+0.3
	comp=Z,4.4nm,0.9s,baz=36,slow=3.6,SNR=8.1						
TNS	Taunus Mts	145.75	358	*e*PKPbc	PKPbc	03 34 10.6	+0.6
	baz=5.9,slow=3.0						
VRAC	Vranov	145.79	349	⇑P	PKPdf	03 34 10.1	+0.4
VRAC	Vranov	145.79	349	*e*PKP	PKPdf	03 34 10.3	+0.6
VRAC				*e*		03 34 29.2	
VRAC	Vranov	145.79	349	⇑PKP2	PKPdf	03 34 10.1	+0.4
DOU	Dourbes	145.84	3	*d*PKP	PKPdf	03 34 10.0	+0.3
PBCC	Pribram	145.84	352	*e*PKP	PKPbc	03 34 10.5	+0.2
PBCC				*e*x	x	03 34 18.7	
GAZ	Gaziantep	145.96	314	PKPbc	PKPab	03 34 12.0	+0.3
ROTZ	Rotzenmuhle	145.97	354	*e*PKPbc	PKPab	03 34 11.5	+0.3
	baz=5.9,slow=3.0						
JAVC	Velka Javorina	146.01	347	*e*PKP	PKPab	03 34 12.1	+0.6
JAVC				*e*		03 34 31.3	
KRUC	Moravsky	146.07	349	*e*PKP	PKPdf	03 34 10.7	+0.6
KRUC				*e*		03 34 30.1	
VYHS	Vyhne	146.10	346	*e*PKP2	PKPbc	03 34 11.8	+0.7
VYHS	Vyhne	146.10	346	*e*PKP	PKPbc	03 34 11.8	+0.7
VYHS				*e*		03 34 30.5	
GRF	Grafenberg Arr	146.13	355	*e*PKPbc	PKPab	03 34 12.2	+0.4
	baz=5.9,slow=3.0						
GRF				*e*pPKPbc	sPKPab	03 34 31.6	+2.4
LTVH	Ltavrtes, Hu	146.29	342	*e*P	PKPab	03 34 12.8	+0.3
WLF	Walferdange	146.32	1	*d*PKP	PKPbc	03 34 12.2	+0.5
WLF				*d*sPKP		03 34 30.8	
PSZ	Piszkesteto	146.37	344	*e*P	PKPbc	03 34 12.8	+0.7
SMOL	Smolenice	146.39	348	*e*PKP2	PKPbc	03 34 12.8	+0.8
SMOL	Smolenice	146.39	348	*e*PKP	PKPbc	03 34 12.8	+0.8
SMOL				*e*		03 34 31.5	
KHC	Kasperske Hory	146.44	352	*e*PKP2	PKPbc	03 34 12.2	0.0
KHC	Kasperske Hory	146.44	352	*e*PKP	PKPbc	03 34 12.2	0.0
KHC				*e*x	x	03 34 30.9	
WET	Wettzell	146.51	353	*e*PKPbc	PKPbc	03 34 13.3	+0.9
	baz=5.9,slow=3.0						
MLR	Muntele Rosu	146.52	336	⇑P	PKPbc	03 34 13.0	+0.4
MLR	Muntele Rosu	146.52	336	⇑PKP2	PKPbc	03 34 13.0	+0.4
MODS	Modra-Piesok	146.55	348	*e*PKP2	PKPbc	03 34 12.6	+0.1
MODS	Modra-Piesok	146.55	348	*e*PKP	PKPbc	03 34 12.6	+0.1
MODS				*e*		03 34 31.1	
DRGR		146.57	340	⇓P	PKPbc	03 34 12.7	0.0
DRGR		146.57	340	⇓PKP2	PKPbc	03 34 12.7	0.0
GEC2	GERESS Array S	146.70	352	*e*PKPbc	PKPbc	03 34 13.5	+0.5
	baz=5.9,slow=3.0						
GEC2B	GERESS ARRAY $146.70		352	PKPbc	PKPdf	03 34 12.1	+0.7
GERES	GERESS Array B	146.70	352	PKPbc	PKPbc	03 34 13.1	0.0
	comp=Z,2.8nm,0.7s,baz=54,slow=3.4,SNR=4.7						
GERES	GERESS Array B	146.70	352	PKP2	PKPdf	03 34 12.5	+1.1
GERES	GERESS Array B	146.70	352		PKPdf	03 34 12.5	+1.1
ZST	Bratislava	146.76	348	*e*PKP2	PKPab	03 34 14.3	0.0
ZST	Bratislava	146.76	348	*e*PKP	PKPab	03 34 14.3	0.0
ZST				*e*		03 34 32.8	
BRTR	Keskin Array B	146.84	321	PKPbc	PKPbc	03 34 14.8	+1.0
	comp=Z,7.3nm,0.8s,baz=113,slow=2.6,SNR=37						
BRTR	Keskin Array B	146.84	321		PKPbc	03 34 14.4	+0.6
VOIR		146.91	337	⇑P	PKPbc	03 34 14.7	+1.0
VOIR		146.91	337	⇑PKP2	PKPbc	03 34 14.7	+1.0
BUD	Budapest	147.00	345	*e*P	PKPbc	03 34 13.6	-0.2
ARR	Arges	147.13	337	⇑P	PKPab	03 34 15.7	-0.3
STU	Stuttgart	147.18	357	*e*PKPbc	PKPbc	03 34 15.0	+0.8
	baz=5.9,slow=3.0						
CONA	Conrad Observa	147.25	349	*e*P	PKPbc	03 34 15.2	+0.6
	comp=Z,29nm,1.6s,SNR=7.0						
CSKK	Cskako	147.29	346	*e*P	PKPdf	03 34 13.2	+0.9
SOP	Sopron	147.36	348	*e*P	PKPbc	03 34 16.0	+1.2
EGYH	Egyhazaskeszo	147.45	347	*e*P	PKPdf	03 34 11.2	-1.3
MOA	Molln	147.60	351	*e*P	PKPbc	03 34 15.7	+0.3
	comp=Z,17nm,1.3s						
MPLH	Magyarpolny	147.64	347	*e*P	PKPbc	03 34 15.2	-0.4
BFO	Black Forest	147.65	358	PKP2	PKPbc	03 34 16.0	+0.4
BFO	Black Forest	147.65	358		PKPbc	03 34 16.0	+0.4
BFO	Black Forest	147.65	358	*e*PKPbc	PKPbc	03 34 16.2	+0.6
	baz=5.9,slow=3.0						
TIH	Tihany	147.81	346	*e*P	PKPdf	03 34 14.0	+0.9
BZS	Buzias	147.96	341	⇑P	PKPbc	03 34 16.8	+0.3
BZS	Buzias	147.96	341	⇑PKP2	PKPbc	03 34 16.8	+0.3
ARSA	Arzberg	147.97	349	*e*P	PKPbc	03 34 16.7	+0.2
	comp=Z,13nm,1.3s,SNR=5.1						
UBR	Ueberruh	148.22	356	*e*PKPbc	PKPbc	03 34 17.7	+0.5
	baz=5.9,slow=3.0						
MORH	Mrgy, Hungar	148.27	345	*e*P	PKPbc	03 34 17.6	+0.3
RETA	Reutte	148.36	355	*i* P	PKPbc	03 34 17.6	0.0
	comp=Z,16nm,1.3s						
FURI	Furi	148.40	261		PKPdf	03 34 16.4	+0.9
WATA	Walderalm	148.44	354	*i* P	PKPbc	03 34 17.7	-0.2
	comp=Z,12nm,1.2s						
MOTA	Moosalm	148.47	355	*e*P	PKPbc	03 34 17.9	-0.1
	comp=Z,20nm,1.0s						
KBA	Koelnbreinsper	148.48	352	*e*P	PKPbc	03 34 17.8	-0.3
	comp=Z,6.0nm,0.7s						
SQTA	Sankt Quirin	148.59	355	*e*P	PKPbc	03 34 18.3	0.0
	comp=Z,12nm,1.1s						
SOKA	Soboth	148.61	349	*e*P	PKPbc	03 34 17.8	-0.5
	comp=Z,12nm,1.0s,SNR=6.1						
DAVA	Damuels	148.62	356	*e*P	PKPbc	03 34 18.7	+0.3
	comp=Z,20nm,1.1s						
PERS	Pernice	148.64	349	*e*PKPbc	PKPbc	03 34 17.7	-0.6
PERS				*e*		03 34 39.0	
FETA	Feichten	148.83	355	*e*P	PKPbc	03 34 19.0	+0.1
	comp=Z,17nm,1.2s						
OBKA	Obir	148.86	350	*e*P	PKPbc	03 34 18.0	-0.9
	comp=Z,14nm,1.7s						
MYKA	Terra Mystica	148.88	351	*e*P	PKPbc	03 34 18.3	-0.6
	comp=Z,9.1nm,0.9s						
ABTA	Abfaltersbach	148.92	353	*e*P	PKPbc	03 34 18.7	-0.4
	comp=Z,13nm,0.8s,SNR=7.0						
LEGS	Legarje	149.26	349	*i* PKPbc	PKPbc	03 34 19.6	-0.3
LEGS				*i* PKPab	PKPab	03 34 23.7	-0.6
LEGS				*e*		03 34 40.8	
LJU	Ljubljana	149.31	350	*e*PKPbc	PKPbc	03 34 19.8	-0.2
LJU				*i* PKPab	PKPab	03 34 23.9	-0.6
TUE	Stuetta	149.47	357		PKPbc	03 34 21.1	+0.5
SALO	Salr	150.24	355		PKPbc	03 34 22.0	-0.2
SSB	Saint Sauveur	150.64	4	PKIKP	PKPbc	03 34 23.4	+0.2
SSB	Saint Sauveur	150.64	4		PKPbc	03 34 23.4	+0.2
PGAV	Gavieira, Arco	150.85	24	*e*PKPdf	PKPbc	03 34 24.1	+0.2
PGAV	Gavieira, Arco	150.85	24	*e*PKPab	PKPab	03 34 42.8	+12
PCAB	Cabril	151.17	24	*e*PKPdf	PKPbc	03 34 25.0	+0.4
PCAB	Cabril	151.17	24	*e*PKPab	PKPab	03 34 43.7	+11
POLO	Lamas de Olo	151.55	24	*e*PKPdf	PKPbc	03 34 25.9	+0.3
POLO	Lamas de Olo	151.55	24	*e*PKPab	PKPab	03 34 44.1	+10
PBRG	Braganca	151.57	22	*e*PKPab	PKPab	03 34 44.3	+10
PDG	Podgorica	151.57	341	⇑P	PKPdf	03 34 17.6	-1.6
PVRL	Vila Real	151.66	24	*e*PKPdf	PKPbc	03 34 26.0	+0.2
PVRL	Vila Real	151.66	24	*e*PKPab	PKPab	03 34 45.1	+11
MVO	Moncorvo	152.02	23	*e*PKPdf	PKPbc	03 34 27.0	+0.4
MVO	Moncorvo	152.02	23	*e*PKPab	PKPab	03 34 45.2	+9.2
PCAS	Casmilo, Conde	152.37	26	*e*PKPab	PKPab	03 34 46.3	+8.9
MTE	Manteigas	152.47	25	*e*PKPab	PKPab	03 34 46.5	+8.6
NRCA	Norcia	152.67	350		PKPbc	03 34 27.3	-0.7
NRCA					PKPab	03 34 39.5	+0.9
PCBR	Castelo Branco	152.98	25	*e*PKPab	PKPab	03 34 36.0	-3.9
PMTG	Montargil	153.30	27	*e*PKPab	PKPab	03 34 41.4	+0.1
PMRV	Marv??o	153.36	26	*e*PKPdf	PKPbc	03 34 29.7	+0.1
PMRV	Marv??o	153.36	26	*e*PKPab	PKPab	03 34 49.2	+7.6
EVO	Evora	153.84	28	*e*PKPab	PKPab	03 34 44.0	+0.4
ESDC	Sonseca Array	154.43	20	PKPbc	PKPbc	03 34 31.2	-0.7
	comp=Z,0.4nm,0.6s,baz=323,slow=2.1,SNR=5.2						
ESDC				PKPab	pPKPbc	03 34 45.2	+0.6
	comp=Z,1.4nm,0.7s,baz=325,slow=3.2,SNR=7.2						
ESDC				pPKPab	sPKPab	03 35 03.6	+0.4
	comp=Z,1.7nm,0.8s,baz=321,slow=3.3,SNR=4.5						
ESDC	Sonseca Array	154.43	20		PKPbc	03 34 31.0	-0.9
DBIC	Dimbokro	165.13	127	PKPab	PKPab	03 35 33.7	+0.4
	comp=Z,7.1nm,0.9s,baz=206,slow=7.7,SNR=6.5						
DBIC	Dimbokro	165.13	127	PKP2	PKPab	03 35 34.2	+0.8
DBIC						04 34 36.1	
DBIC	Dimbokro	165.13	127	PKPdf	PKPdf	03 34 36.1	-0.3
DBIC					PKPab	03 35 34.1	+0.8
KOWA	Kowa	169.19	96		PKPdf	03 34 38.7	-0.5
KOWA				PKPab	PKPab	03 35 51.8	+0.3
TORD	Torodi Ar. Bea	174.10	117	PKP	PKPdf	03 34 40.3	-1.3
	comp=Z,3.2nm,0.9s,baz=330,slow=1.4,SNR=16						
TORD				PKPab	PKPab	03 36 12.8	-0.4
	comp=Z,4.8nm,1.0s,baz=260,slow=4.1,SNR=12						
TORD				PP	PP	03 40 03.8	-1.5
	comp=Z,1.1nm,1.1s,baz=227,slow=5.9,SNR=3.9						
TORD	Torodi Ar. Bea	174.10	117		PKPdf	03 34 39.8	-1.8
TORD				PKPab	PKPab	03 36 12.5	-0.6

IDC 10 03:25:11.0±7.6, 19.62S×178.89W, h532km±54km, mb2.6/2, mb1 2.9/3, mb1mx2.7/34, mbtmp3.5/3, Error ellipse: s-maj=236.0km s-min=63.4km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.45	302	P	P	03 26 27.8	0.0
	4.2nm,0.3s,baz=122,slow=12,SNR=19						
WRA	Warramunga Arr	43.90	261	P	P	03 32 30.4	-0.4
	0.2nm,0.3s,baz=96,slow=6.8,SNR=5.7						
ASAR	Alice Springs	43.91	256	P	P	03 32 30.8	-0.1
	0.6nm,0.6s,baz=95,slow=8.3,SNR=10						
ASAR				PcP	PcP	03 34 05.4	+0.1
	0.3nm,0.9s,baz=111,slow=3.8,SNR=4.7						
AKASG	Malin Array Be	141.84	331	PKP	PKPdf	03 43 40.2	-1.8
	0.7nm,0.5s,baz=41,slow=4.2,SNR=8.1						

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*SOME **10** 03:52:00.5, 44.88N×79.20E, h15km*

NNC 10 03:52:00.1±0.3, 44.89N×79.20E, h0km, mb2.9, mpv3.2, 6C-5D, Error ellipse: s-maj=2.6km s-min=2.3km az=98.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.41	15	*e*P	Pg	03 52 08.2	+0.2
	41nm,0.1s						
KAPS				*e*S	Sg	03 52 13.8	+0.4
	120nm,0.1s						
KAPS	Kapalarasan	0.41	15	P	Pg	03 52 08.3	+0.2
	41nm,0.1s						
KAPS				S	Sg	03 52 13.8	+0.4
	120nm,0.1s						
TDK	Taldyqorghan	0.58	282	*e*P	Pg	03 52 11.7	+0.5
	33nm,0.1s						

TDK	89nm,0.4s			*e*S	Sg	03 52 19.6	+1.0
TDK	**Taldyqorghan** 33nm,0.1s	**0.58**	**282**	P	Pg	03 52 11.7	+0.5
TDK	89nm,0.4s			S	Sg	03 52 19.6	+1.0
DJR	**Jarkent** 8.9nm,0.2s	**0.69**	**143**	*e*P	Pg	03 52 13.4	+0.1
DJR	36nm,0.2s			*e*S	Sg	03 52 22.5	+0.2
DJR	**Jarkent** 8.9nm,0.2s	**0.69**	**143**	P	Pg	03 52 13.4	+0.1
DJR	36nm,0.2s			S	Sg	03 52 22.5	+0.2
ARXS	**Arharly** 16nm,0.2s	**1.19**	**236**	*e*P	Pg	03 52 22.7	-0.2
ARXS	53nm,0.3s			*e*S	Sg	03 52 38.8	+0.5
ARXS	**Arharly** 16nm,0.2s	**1.19**	**236**	P	Pg	03 52 22.7	-0.2
ARXS	53nm,0.3s			S	Sg	03 52 38.8	+0.5
KPKS	**Kokpek** 21nm,0.1s	**1.47**	**195**	*e*P	Pb	03 52 28.5	+0.2
KPKS	37nm,0.3s			*e*S	Sn	03 52 48.6	+0.8
PDGK	**Podgornoye** 5.4nm,0.1s	**1.57**	**172**	P	Pn	03 52 29.0	-0.3
PDGK	20nm,0.3s			S	Sn	03 52 49.5	-0.9
PDGK	**Podgornoye** 2.7nm,0.3s	**1.57**	**172**	⇑Pg	Pn	03 52 28.9	-0.4
PDGK	4.8nm,0.3s			⇑Lg	Lg	03 52 51.0	
KURS	**Kuram** 7.9nm,0.2s	**1.58**	**208**	*e*P	Pn	03 52 29.7	+0.3
KURS	9.8nm,0.3s			*e*S	Sn	03 52 50.5	-0.1
KURS	**Kuram** 7.9nm,0.2s	**1.58**	**208**	P	Pn	03 52 29.7	+0.3
KURS	9.8nm,0.3s			S	Sn	03 52 50.5	-0.1
KTMS	**Ketmen** 7.3nm,0.1s	**1.66**	**150**	*e*P	Pn	03 52 30.2	-0.4
KTMS	17nm,0.2s			*e*S	Sn	03 52 51.4	-1.2
KTMS	**Ketmen** 7.3nm,0.1s	**1.66**	**150**	P	Pn	03 52 30.2	-0.4
KTMS	17nm,0.2s			S	Sn	03 52 51.4	-1.2
SHLS	**Shalkode** 16nm,0.1s	**1.74**	**174**	*e*P	Pg	03 52 33.5	+0.1
SHLS	25nm,0.4s			*e*S	Sg	03 52 56.8	+1.0
SHLS	**Shalkode** 16nm,0.1s	**1.74**	**174**	P	Pg	03 52 33.5	+0.1
SHLS	25nm,0.4s			S	Sg	03 52 56.8	+1.0
UZB	**Uzynbulak** 5.9nm,0.2s	**1.74**	**184**	*e*P	Pb	03 52 32.4	-0.6
UZB	18nm,0.1s			*e*S	Sb	03 52 55.2	-0.2
UZB	**Uzynbulak** 5.9nm,0.2s	**1.74**	**184**	P	Pb	03 52 32.4	-0.6
UZB	18nm,0.1s			S	Sb	03 52 55.3	-0.2
CHKK	**Chushkaly** 2.1nm,0.1s	**1.89**	**238**	*e*P	Pb	03 52 35.1	-0.4
CHKK	43nm,0.3s			*e*S	Sb	03 52 59.5	-0.2
CHKK	**Chushkaly** 2.1nm,0.1s	**1.89**	**238**	P	Pb	03 52 35.1	-0.4
CHKK	43nm,0.3s			S	Sb	03 52 59.5	-0.2
SATY	**Saty** 7.5nm,0.1s	**1.91**	**198**	*e*P	Pb	03 52 35.9	0.0
SATY	40nm,0.1s			*e*S	Sg	03 53 01.0	-0.5
SATY	**Saty** 7.5nm,0.1s	**1.91**	**198**	Pg	Pb	03 52 35.9	0.0
SATY	40nm,0.1s			Lg	Lg	03 53 01.0	
KOTS	**Kotyrbulak** 8.1nm,0.2s	**2.23**	**223**	*e*P	Pb	03 52 41.7	+0.3
KOTS	15nm,0.4s			*e*S	Sg	03 53 11.0	-0.9
KOTS	**Kotyrbulak** 8.1nm,0.2s	**2.23**	**223**	Pg	Pb	03 52 41.7	+0.3
KOTS	15nm,0.4s			Lg	Lg	03 53 11.0	
KUU	**Kurty** 1.1nm,0.1s	**2.28**	**245**	*e*P	Pb	03 52 41.9	-0.2
KUU	20nm,0.3s			*e*S	Sb	03 53 11.1	+0.3
KUU	**Kurty** 1.1nm,0.1s	**2.28**	**245**	Pg	Pb	03 52 41.9	-0.2
KUU	20nm,0.3s			Lg	Lg	03 53 11.1	
MDOK	**Medeo** 5.2nm,0.4s	**2.32**	**223**	*e*P	Pb	03 52 42.6	-0.2
MDOK	15nm,0.6s			*e*S	Sb	03 53 12.8	+0.7
MDOK	**Medeo** 2.9nm,0.5s	**2.32**	**223**	⇓Pg	Pb	03 52 43.6	+0.7
MDOK	10nm,0.5s			Lg	Lg	03 53 12.9	
MDOK	**Medeo** 5.2nm,0.4s	**2.32**	**223**	Pg	Pb	03 52 42.6	-0.2
MDOK	15nm,0.6s			Lg	Lg	03 53 12.8	
TNSS	**Tian-Shan** 1.6nm,0.1s	**2.46**	**222**	*e*P	Pb	03 52 45.3	-0.1
TNSS	8.1nm,0.6s			*e*S	Sb	03 53 17.1	+0.6
TNSS	**Tian-Shan** 1.6nm,0.1s	**2.46**	**222**	Pg	Pb	03 52 45.3	-0.1
TNSS	8.1nm,0.6s			Lg	Lg	03 53 17.1	
IZV	**Izvestkoviy** 1.9nm,0.2s	**2.63**	**226**	*e*P	Pb	03 52 48.0	-0.1
IZV	12nm,0.6s			*e*S	Sb	03 53 21.8	+0.8
IZV	**Izvestkoviy** 1.9nm,0.2s	**2.63**	**226**	Pg	Pb	03 52 48.0	-0.1
IZV	12nm,0.6s			Lg	Lg	03 53 21.8	
MTBS	**Maitube** 2.4nm,0.1s	**2.66**	**230**	*e*P	Pb	03 52 48.8	+0.2
MTBS	24nm,0.3s			*e*S	Sb	03 53 23.1	+1.3
MTBS	**Maitube** 2.4nm,0.1s	**2.66**	**230**	Pg	Pb	03 52 48.8	+0.2
MTBS	24nm,0.3s			Lg	Lg	03 53 23.2	
MAKZ	**Makanchi** 0.2nm,0.2s	**2.73**	**44**	⇓Pg	Pg	03 52 51.3	-1.1
MAKZ	1.2nm,0.3s			⇓Lg	Lg	03 53 22.2	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=242,slow=13,SNR=30	**2.88**	**47**	⇑Pn	Pn	03 52 47.0	-0.3
MK31	0.2nm,0.2s,baz=222,slow=16,SNR=13			⇑Pg	Pb	03 52 53.3	+1.0
MK31	0.4nm,0.2s,baz=228,slow=29,SNR=5.2			⇓Lg	Lg	03 53 28.8	
DGS	**Degeres** 1.8nm,0.4s	**2.97**	**238**	*e*P	Pb	03 52 53.8	-0.1
DGS	7.5nm,0.4s			*e*S	Sb	03 53 31.8	+1.0
DGS	**Degeres** 1.8nm,0.4s	**2.97**	**238**	Pg	Pb	03 52 53.8	-0.1
DGS	7.5nm,0.4s			Lg	Lg	03 53 31.8	
KST	**Kastek** 2.8nm,0.3s	**2.98**	**233**	*e*P	Pb	03 52 55.2	+1.2
KST	5.9nm,0.9s			*e*S	Sg	03 53 34.5	-1.2
KST	**Kastek** 2.8nm,0.3s	**2.98**	**233**	Pg	Pb	03 52 55.2	+1.2
KST	5.9nm,0.9s			Lg	Lg	03 53 34.5	
TKM2	**Tokmak 2** 0.6nm,0.5s	**3.26**	**234**	⇓Pg	Pb	03 52 59.8	+0.8
TKM2	1.3nm,0.3s			⇑Lg	Lg	03 53 41.6	
KURK	**Kurchatov** 1.8nm,0.7s	**5.85**	**356**	⇑Lg	Lg	03 55 03.4	

KRNET 10 03:52:49.6±0.1**,43°.57N**×**77°.67E,h18**^{km}**,mb2.1,8C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ANVS	**Anan'yevo** baz=80	**0.79**	**180**	⇑*i*P	Pb	03 53 04.7	-0.2
ANVS	baz=80			⇑*i*S	Sg	03 53 15.5	0.0
PRZ	**Przheval'sk** baz=53	**1.21**	**154**	⇑*i*P	Pn	03 53 11.9	+0.1
PRZ	baz=53			⇑*i*S	Sn	03 53 28.1	+0.3
KDJ	**Kajisay** baz=94	**1.48**	**194**	⇓*e*P	Pb	03 53 16.9	+0.1
KDJ	baz=94			⇓*i*S	Sg	03 53 36.8	-0.8
TKM2	**Tokmak 2** baz=48	**1.65**	**248**	⇑*i*P	Pb	03 53 19.8	+0.2
TKM2	baz=48			⇑*i*S	Sg	03 53 42.2	-0.6
BOOM	**Boomskoye usch** baz=30	**1.67**	**230**	⇓*i*P	Pb	03 53 19.9	0.0
BOOM	baz=30			⇓*e*S	Sg	03 53 42.5	-0.9
ULHL	**Ulahol** baz=19	**1.69**	**219**	⇑*i*P	Pb	03 53 20.5	+0.2
ULHL	baz=19			⇑*i*S	Sg	03 53 43.3	-0.8

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*TUL **10** 04:26:07.5±0.9, 35°.81N±0°.04×97°.42W±0°.05, h7^{km}±7^{km}, ML3.0, mb_Lg2.9/63(NEIC), Error ellipse: s-maj=6.2km s-min=5.6km az=130.0*

*NEIC **10** 04:26:07.6±1.1, 35°.83N±0°.03×97°.43W±0°.04, h7^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=2.4km az=58.0*

*ANF **10** 04:26:10.8±1.6, 35°.81N×97°.40W, h29^{km}±17^{km}, ML3.7/9, Error ellipse: s-maj=9.7km s-min=4.2km az=167.0*

ISC 10 04:26:07.5±1.2**,35°.82N**±0°.03×**97°.43W**±0°.03**,h4**^{km}±11^{km}**, n77,**σ**0^{s}.68**/71**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK025	**Westminster Rd**	**0.25**	**162**		**Pg**	**04 26 12.6**	**+0.2**
OKCFA	**Oklahoma City**	**0.41**	**182**		**Pg**	**04 26 15.4**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.42**	**181**		**Pg**	**04 26 15.6**	**+0.1**
OK031	**S. Brethren Rd**	**0.50**	**75**		**Pg**	**04 26 17.2**	**+0.1**
OK031				Sg	**Sg**	**04 26 23.6**	**0.0**
OK030	**Cody Creek RV**	**0.54**	**79**		**Pg**	**04 26 17.9**	**+0.1**
OK030				Sg	**Sg**	**04 26 24.7**	**-0.1**
FNO	**Franklin**	**0.57**	**177**		**Pg**	**04 26 18.3**	**0.0**
QUOK	**Quay**	**0.68**	**59**		**Pg**	**04 26 20.6**	**+0.1**
QUOK				Sg	**Sg**	**04 26 29.7**	**+0.2**
W35A	**Tecumseh**	**0.81**	**146**		**Pg**	**04 26 22.3**	**-0.7**
CROK	**Carrier**	**0.81**	**327**		**Pg**	**04 26 23.2**	**+0.1**
CROK				Sg	**Sg**	**04 26 34.4**	**+0.8**
GC02	**Grant County #**	**1.08**	**342**		**Pg**	**04 26 27.8**	**-0.5**
KAN13	**South Haven SW**	**1.19**	**358**		**Pg**	**04 26 29.8**	**-0.5**
KAN14	**Manchester OK**	**1.21**	**339**		**Pb**	**04 26 30.1**	**-0.9**
T35A	**Sooner Cattle**	**1.32**	**34**	Pn	**Pn**	**04 26 31.9**	**-0.8**
T35B	**Sooner Cattle** baz=214	**1.32**	**34**	P		04 26 31.8	
T35B	baz=214			S		04 26 49.6	
TUL1	**Leonard** baz=266	**1.34**	**86**	P	**Pn**	**04 26 31.4**	**-1.5**
TUL1	baz=266			S	**Sb**	**04 26 49.4**	**-1.1**
TUL1	**Leonard**	**1.34**	**86**	Pn	**Pn**	**04 26 31.5**	**-1.4**
TUL1	comp=Z,76nm,0.8s			IAmb_Lg		04 26 50.0	
TUL1	**Leonard** baz=266	**1.34**	**86**	P		04 26 31.4	
TUL1	baz=266			S		04 26 49.5	
U32A	**Winter Ranch,**	**1.39**	**294**		**Pn**	**04 26 33.0**	**-0.6**
U32A	**Winter Ranch,** baz=113	**1.39**	**294**	P		04 26 32.9	
U32A	baz=113			S		04 26 52.5	
KAN10	**Anthony SW Sta**	**1.40**	**338**		**Pn**	**04 26 33.6**	**-0.2**
KAN08	**Anthony NE Sta**	**1.47**	**343**		**Pn**	**04 26 34.7**	**-0.1**
KS21	**Milan North St** comp=Z,84nm,0.8s	**1.47**	**353**	IAmb_Lg		04 26 57.7	
KAN12	**Harper NE Stat**	**1.54**	**343**		**Pn**	**04 26 35.7**	**-0.1**
WMOK	**Wichita Mounta** baz=46	**1.55**	**226**	P	**Pn**	**04 26 35.6**	**-0.2**
WMOK	baz=46			S	**Sn**	**04 26 56.0**	**-0.4**
WMOK	**Wichita Mounta**	**1.55**	**226**		**Pn**	**04 26 35.4**	**-0.4**
WMOK	**Wichita Mounta** baz=46,SNR=118	**1.55**	**226**	P		04 26 35.5	
WMOK	baz=46			S		04 26 55.9	
X37A	**Clayton**	**2.09**	**126**		**Pn**	**04 26 43.5**	**+0.2**
X37A	comp=Z,52nm,0.8s			IAmb_Lg		04 27 15.8	
X37A	**Clayton** baz=307	**2.09**	**126**	P		04 26 43.3	
X37A	baz=307			S		04 27 10.7	
Z35A	**Perchaven, San**	**2.49**	**177**	Pn	**Pn**	**04 26 48.6**	**-0.2**
Z35A	**Perchaven, San** baz=357,SNR=21	**2.49**	**177**	P		04 26 49.2	
U38A	**Gravette**	**2.54**	**75**		**Pn**	**04 26 50.0**	**+0.5**
U38A	**Gravette** baz=257,SNR=17	**2.54**	**75**	P		04 26 50.6	
R32A	**Long Quarter,**	**2.79**	**339**	Pn	**Pn**	**04 26 53.6**	**+0.7**
HHAR	**Hobbs**	**2.87**	**80**		**Pn**	**04 26 54.0**	**0.0**
W39A	**Magazine**	**3.04**	**101**		**Pn**	**04 26 55.9**	**-0.5**
W39A	comp=Z,28nm,0.8s			IAmb_Lg		04 27 46.0	
W39A	**Magazine** baz=283,SNR=5.7	**3.04**	**101**	P		04 26 56.7	
W39A	baz=283			S		04 27 34.0	
Z38A	**Mt. Pleasant**	**3.26**	**141**	Pn	**Pn**	**04 26 59.7**	**+0.4**
Z38A					Lg	04 27 52.6	
KSU1	**Kansas State U** baz=191	**3.34**	**11**	Pb	**Pb**	**04 27 09.1**	**+1.9**
KSU1	**Kansas State U**	**3.34**	**11**	Pn	**Pn**	**04 27 00.7**	**+0.3**
KSU1	comp=Z,44nm,1.1s			IAmb_Lg		04 27 59.3	
MIAR	**Mount Ida** baz=293	**3.41**	**111**	P	**Pn**	**04 27 02.3**	**+0.9**
MIAR	baz=293			S	**Sn**	**04 27 43.0**	**+0.8**
MIAR	**Mount Ida**	**3.41**	**111**	Pn	**Pn**	**04 27 01.7**	**+0.3**
MIAR	**Mount Ida** baz=293,SNR=25	**3.41**	**111**	P		04 27 01.8	
MIAR	baz=293			S		04 27 42.9	
CBKS	**Cedar Bluff** baz=148	**3.50**	**329**	P	**Pn**	**04 27 04.0**	**+1.2**
CBKS	baz=148			Sb	**Sg**	**04 27 58.0**	**-2.0**
CBKS	**Cedar Bluff**	**3.50**	**329**	Pn	**Pn**	**04 27 03.1**	**+0.3**
CBKS	comp=Z,46nm,0.8s			IAmb_Lg		04 28 04.3	
CBKS	**Cedar Bluff** baz=148,SNR=11	**3.50**	**329**	P		04 27 03.6	
AMTX	**Amarillo** baz=74	**3.60**	**256**	P	**Pn**	**04 27 05.7**	**+1.7**
AMTX	**Amarillo**	**3.60**	**256**		**Pn**	**04 27 04.4**	**+0.3**
AMTX	comp=Z,25nm,1.0s			IAmb_Lg		04 28 03.3	
AMTX	**Amarillo** baz=74,SNR=6.6	**3.60**	**256**	P		04 27 05.5	
ABTX	**Abilene, Hawle**	**3.68**	**210**	Pn	**Pn**	**04 27 05.5**	**+0.3**
ABTX	**Abilene, Hawle** baz=29	**3.68**	**210**	P		04 27 05.6	
U40A	**Yellville** baz=263	**3.75**	**81**	P	**Pn**	**04 27 07.2**	**+1.1**
U40A	**Yellville**	**3.75**	**81**	Pn	**Pn**	**04 27 06.4**	**+0.3**
U40A	**Yellville** baz=263,SNR=8.4	**3.75**	**81**	P		04 27 07.0	
U40A	baz=263,SNR=8.4			P		04 27 07.0	
S39A	**Bolivar**	**3.79**	**59**		**Pn**	**04 27 07.2**	**+0.5**
S39A	comp=Z,26nm,0.7s			IAmb_Lg		04 28 13.2	
S39A	**Bolivar** baz=241,SNR=14	**3.79**	**59**	P		04 27 07.1	
X40A	**Basin Creek Fa** baz=291	**4.00**	**108**	P	**Pn**	**04 27 10.1**	**+0.6**
X40A	**Basin Creek Fa**	**4.00**	**108**		**Pn**	**04 27 09.1**	**-0.4**
X40A	comp=Z,22nm,0.8s			IAmb_Lg		04 28 20.1	
WLAR	**White Oak Lake**	**4.15**	**120**	Pn	**Pn**	**04 27 11.0**	**-0.6**
WLAR	comp=Z,19nm,0.8s			IAmb_Lg		04 28 20.3	
WHAR	**Wooly Hollow**	**4.23**	**96**	Pn	**Pn**	**04 27 12.8**	**+0.2**
WHAR	comp=Z,22nm,0.8s			IAmb_Lg		04 28 23.0	
W41B	**Gary Mavity, V** baz=280	**4.28**	**97**	P	**Pn**	**04 27 13.8**	**+0.4**
W41B	**Gary Mavity, V**	**4.28**	**97**		**Pn**	**04 27 13.6**	**+0.2**
W41B	comp=Z,30nm,1.0s			IAmb_Lg		04 28 25.6	
W41B	**Gary Mavity, V** baz=280,SNR=18	**4.28**	**97**	P		04 27 13.7	
FCAR	**Ozark Folk Cen**	**4.31**	**88**	Pn	**Pn**	**04 27 13.2**	**-0.6**
MGMO	**Mountain Grove**	**4.37**	**71**	Pn	**Pn**	**04 27 15.6**	**+1.0**
MGMO	comp=Z,24nm,0.9s			IAmb_Lg		04 28 24.4	
Z41A	**Richland Creek** comp=Z,19nm,1.0s	**4.60**	**122**	IAmb_Lg		04 28 33.7	
MSTX	**Muleshoe**	**4.76**	**249**	Pn	**Pn**	**04 27 19.9**	**-0.2**
R40A	**Maddies Statio**	**4.81**	**58**	Pn	**Pn**	**04 27 20.4**	**-0.2**
R40A	comp=Z,15nm,0.7s			IAmb_Lg		04 28 51.6	
P38A	**Dawn**	**4.89**	**38**	Pn	**Pn**	**04 27 21.7**	**-0.1**
P38A					LR	04 28 37.8	
N33A	**J Bar K, Exete** comp=Z,22nm,0.8s	**4.91**	**360**	IAmb_Lg		04 28 47.3	
435B	**Jarrell** comp=Z,21nm,0.8s	**5.03**	**181**	IAmb_Lg		04 29 01.6	
LCAR	**Lake Charles**	**5.10**	**85**	Pn	**Pn**	**04 27 23.8**	**-0.9**
KSCO	**Kaye Shedlock’** comp=Z,14nm,0.7s	**5.22**	**309**	IAmb_Lg		04 29 03.1	
N35A	**Tabor**	**5.22**	**15**	Pn	**Pn**	**04 27 26.1**	**-0.3**
N35A					LR	04 28 55.1	
T42A	**Van Buren**	**5.25**	**75**	Pn	**Pn**	**04 27 27.0**	**+0.3**
CCM	**Cathedral Cave**	**5.43**	**64**	Pn	**Pn**	**04 27 29.2**	**0.0**
CCM					LR	04 28 55.0	
BGNE	**Belgrade** comp=Z,18nm,0.7s	**5.61**	**354**	IAmb_Lg		04 29 14.4	
P40A	**Paris**	**5.65**	**47**	Pn	**Pn**	**04 27 33.2**	**+1.0**
P40A	comp=Z,27nm,0.8s			IAmb_Lg		04 29 11.9	
JCT	**Junction City**	**5.69**	**201**	Pn	**Pn**	**04 27 33.0**	**+0.3**
PBMO	**Poplar Bluff** comp=Z,19nm,0.7s	**5.74**	**78**	IAmb_Lg		04 29 08.3	
T25A	**Trinidad**	**5.77**	**285**	Pn	**Pn**	**04 27 34.2**	**+0.1**
T25A					LR	04 29 08.1	
T25A	comp=Z,14nm,0.9s			IAmb_Lg		04 29 11.7	
FVM	**French Village**	**6.01**	**67**	Pn	**Pn**	**04 27 37.6**	**+0.4**
L34A	**Svendsen Farm,**	**6.19**	**7**	Pn	**Pn**	**04 27 39.8**	**+0.1**
L34A					LR	04 29 25.5	
L34A	comp=Z,23nm,0.7s			IAmb_Lg		04 29 41.1	
OGNE	**Ogallala**	**6.26**	**326**	Pn	**Pn**	**04 27 41.3**	**+0.7**
OGNE					LR	04 29 29.4	
OGNE	comp=Z,24nm,0.9s			IAmb_Lg		04 29 30.3	
SDCO	**Great Sand Dun**	**6.75**	**289**		**Pn**	**04 27 47.9**	**+0.3**
SDCO	**Great Sand Dun** baz=104,SNR=6.6	**6.75**	**289**	P		04 27 48.2	
S44A	**Carbondale** comp=Z,18nm,1.0s	**6.83**	**72**	IAmb_Lg		04 29 40.2	
SIUC	**Southern Illin** comp=Z,22nm,0.9s	**6.86**	**72**	IAmb_Lg		04 29 52.2	
K31A	**O'Neill** comp=Z,20nm,0.8s	**6.87**	**352**	IAmb_Lg		04 29 47.2	
Q24A	**Divide**	**6.90**	**299**	Pn	**Pn**	**04 27 49.4**	**-0.2**
SCIA	**State Center** comp=Z,21nm,0.7s	**6.91**	**27**	IAmb_Lg		04 29 48.5	
N23A	**Red Feather La** comp=Z,16nm,1.1s	**8.38**	**310**	IAmb_Lg		04 30 46.8	
I37A	**Lemond, Waseca** comp=Z,13nm,1.0s	**8.75**	**19**	IAmb_Lg		04 31 05.4	
K22A	**Casper** comp=Z,8.3nm,1.0s	**9.80**	**317**	IAmb_Lg		04 31 32.9	

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*IDC **10** 04:31:45.5±0.7, 10°.19S×161°.17E, h0^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.2/34, mbtmp4.2/14, ML4.1/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=19.6km s-min=16.0km az=79.0*

*NEIC **10** 04:31:49.6±1.1, 10°.2S±0°.1×161°.2E±0°.1, h29^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=19.3km s-min=9.5km az=221.0*

ISC 10 04:31:50.6±0.6**,10°.22S**±0°.08×**161°.15E**±0°.10**,h35**^{km}**,n43,** σ**0^{s}.64**/39**,mb4.4**/20**,MS3.2**/3**,1C,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	**Honiara** 211nm,0.3s,baz=151,slow=4.4,SNR=30	**1.42**	**303**	Pn	**Pn**	**04 32 13.2**	**-0.7**
HNR	977nm,0.3s,baz=327,slow=24,SNR=11			Sn	**Sn**	**04 32 33.3**	**+2.0**
HNR	**Honiara**	**1.42**	**303**		**Pn**	**04 32 13.4**	**-0.5**
SANVU	**Saraoutou**	**7.87**	**132**		Pn	04 33 41.2	-1.4
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=1.9,slow=11,SNR=7.8	**12.83**	**157**	Pn	**Pn**	**04 34 50.9**	**+0.2**
CTA	**Charters Tower** 0.8nm,0.3s,baz=64,slow=12,SNR=14	**17.39**	**234**	P	**Pn**	**04 35 51.7**	**+1.0**
EIDS	**Eidsvold**	**17.84**	**211**	P	**Pn**	**04 35 55.9**	**-0.3**
EIDS	comp=Z,23nm,0.9s			IAmb	IAmb	04 36 00.7	
ARMA	**Armidale**	**21.97**	**202**	P	**P**	**04 36 41.9**	**+0.2**
ARMA	comp=Z,16nm,1.1s			IAmb	IAmb	04 36 43.5	
WB0	**Warramunga Arr**	**27.50**	**247**	P	**P**	**04 37 33.5**	**-0.5**
WB0	comp=Z,21nm,1.4s			IAmb	IAmb	04 37 35.2	
WRA	**Warramunga Arr** comp=Z,3.4nm,1.0s,baz=76,slow=9.4,SNR=6.4	**27.59**	**246**	P	**P**	**04 37 34.3**	**-0.5**
STKA	**Stephens Creek** comp=Z,2.5nm,0.5s,baz=55,slow=12,SNR=8.6	**28.14**	**217**	P	**P**	**04 37 39.9**	**+0.3**
STKA	comp=Z,176nm,19.0s,baz=28,slow=36			LR	LR	04 48 40.6	
STKA	**Stephens Creek** comp=Z,3.5nm,1.4s	**28.14**	**217**	IAmb	IAmb	04 37 40.8	
ASAR	**Alice Springs** comp=Z,2.5nm,0.8s,baz=66,slow=9.7,SNR=16	**29.22**	**239**	P	**P**	**04 37 48.8**	**-0.5**
SAUI	**Saumlaki**	**29.55**	**272**	P	**P**	**04 37 51.3**	**-1.0**
RPZ	**Rata Peaks** comp=Z,9.9nm,0.9s,baz=40,slow=4.2,SNR=5.0	**34.46**	**167**	P	**P**	**04 38 34.9**	**-0.2**
RPZ	**Rata Peaks** comp=Z,8.1nm,1.1s	**34.46**	**167**	IAmb	IAmb	04 38 58.5	
MJAR	**Matsushiro Arr** comp=Z,18nm,18.1s,baz=305,slow=42	**51.28**	**336**	LR	LR	05 07 21.7	
KSRS	**Korea Array** comp=Z,19nm,19.5s,baz=5.0,slow=34	**56.73**	**329**	LR	LR	05 04 22.4	
KSAR	**Wonju Array Be**	**56.74**	**329**	P	**P**	**04 41 30.5**	**-0.5**
USRK	**Ussuriysk Ar.** comp=Z,2.4nm,0.8s,baz=189,slow=9.0,SNR=4.5	**60.28**	**336**	P	**P**	**04 41 55.1**	**-0.4**
ENH	**Enshi**	**63.91**	**311**	P	**P**	**04 42 19.8**	**-0.5**
KLR	**Kul'dur** comp=Z,0.6nm,0.4s,baz=134,slow=0.9,SNR=3.6	**64.59**	**339**	P	**P**	**04 42 24.2**	**-0.1**
XAN	**Xi'an**	**66.27**	**314**	P	**P**	**04 42 35.1**	**-0.5**
XAN				pP	pP	04 42 40.9	-4.7
XAN	comp=Z,15nm,0.7s			pmax	pmax		
XAN	**Xi'an**	**66.27**	**314**	P	**P**	**04 42 35.1**	**-0.5**
KMI	**Kunming**	**66.86**	**303**	⇑P	**P**	**04 42 40.4**	**+0.7**
KMI	comp=Z,8.0nm,1.4s			pmax	pmax		
VNDA	**Vanda** comp=Z,1.3nm,0.9s,baz=322,slow=6.8,SNR=2.4	**67.29**	**180**	P	**P**	**04 42 41.8**	**+0.5**
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.6s,baz=112,slow=5.7,SNR=4.7	**67.65**	**295**	P	**P**	**04 42 45.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**67.65**	**295**	P	**P**	**04 42 44.5**	**-0.2**
HIA	**Hailar**	**69.48**	**332**	P	**P**	**04 42 55.4**	**-0.1**
HIA	comp=Z,4.7nm,0.8s			IAmb	IAmb	04 42 58.1	
ULN	**Ulaanbaatar**	**75.03**	**326**	P	**P**	**04 43 28.9**	**+0.1**
SONM	**Songino Array** comp=Z,7.8nm,0.7s,baz=138,slow=5.8,SNR=31	**75.37**	**325**	P	**P**	**04 43 31.4**	**+0.7**
SONM	**Songino Array**	**75.37**	**325**	P	**P**	**04 43 31.2**	**+0.4**
QSPA	**South Pole Qui**	**79.78**	**180**	P	**P**	**04 43 55.2**	**+0.1**
QSPA	comp=Z,4.9nm,1.1s			IAmb	IAmb	04 43 55.7	
IMAR	**Indian Mountai**	**82.90**	**17**	P	**P**	**04 44 11.8**	**+0.4**
TCOL	**CIGO, UAF Yank**	**83.96**	**19**	P	**P**	**04 44 17.1**	**+0.3**
TCOL	comp=Z,4.3nm,0.8s			IAmb	IAmb	04 44 20.4	
ILAR	**Eielson Array**	**84.22**	**20**	P	**P**	**04 44 18.2**	**+0.1**

	comp=Z,0.9nm,0.7s,baz=238,slow=5.0,SNR=7.3						
ILAR	Eielson Array	84.22	20	P	P	04 44 18.1	-0.1
NVAR	Mina Array Bea	88.98	51	P	P	04 44 43.4	+1.1
	comp=Z,0.9nm,0.7s,baz=239,slow=7.2,SNR=8.0						
NVAR	Mina Array Bea	88.98	51	P	P	04 44 42.3	0.0
MK31	Makanchi Array	89.85	318	P	P	04 44 45.5	-0.5
MKAR	Makanchi Array	89.85	318	P	P	04 44 45.5	-0.4
	comp=Z,1.9nm,0.9s,baz=98,slow=5.8,SNR=11						
MKAR	Makanchi Array	89.85	318	P	P	04 44 45.3	-0.7
PRN	Pahroc Range	91.26	52	P	P	04 44 53.9	+1.0
YKA	Yellowknife Ar	96.33	28	P	P	04 45 14.9	-0.4
	comp=Z,0.2nm,0.6s,baz=253,slow=4.1,SNR=5.5						

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*ATH **10** 04:32:08.8, 38.°17N×27.°06E, h29^{km}±1^{km}, ML3.9/24, Error ellipse: s-maj=1.7km s-min=0.7km az=198.0*

*ISK **10** 04:32:08.3, 38.°21N×27.°05E, h14^{km}, ML4.3/34*

*DDA **10** 04:32:08.8, 38.°20N×27.°07E, h8^{km}±2^{km}, MW4.3*

*IDC **10** 04:32:08.1±0.9, 38.°06N×27.°16E, h0^{km}, mb3.7/8, mb1 3.8/15, mb1mx3.7/48, mbtmp3.7/15, ML3.9/7, MS3.5/6, Ms1 3.5/6, ms1mx3.0/51, Error ellipse: s-maj=17.0km s-min=15.7km az=116.0*

*NEIC **10** 04:32:09.2±2.0, 38.°17N±0.°04×27.°05E±0.°05, h6^{km}±6^{km}, mb4.0/6, ML4.3(THE), ML4.3(ISK), Error ellipse: s-maj=7.2km s-min=4.0km az=128.0*

*THE **10** 04:32:10.3, 38.°18N×27.°04E, h12^{km}±1^{km}, ML4.1/10, Error ellipse: s-maj=1.7km s-min=0.6km az=236.0*

ISC 10 04:32:09.5±0.6, **38.°20N**±0.°01×**27.°06E**±0.°02, **h12**^{km}±4^{km}, **n279**, σ1^{s}**19**/336, **mb3.8**/12, **MS3.5**/5, **26C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.20	223	⇑iP	Pg	04 32 13.6	-0.3
DGB				IAML		04 32 17.0	
	comp=E,48μm,0.4s						
DGB				iS	Sg	04 32 17.0	+0.2
DGB				IAML		04 32 18.0	
	comp=N,20μm,0.4s						
URLA	Izmir	0.40	293	PG	Pg	04 32 16.6	-0.8
URLA	Izmir	0.40	293	⇓iP	Pg	04 32 17.0	-0.3
URLA				iS	Sb	04 32 23.9	-0.6
ZEYE	Izmir, Urla-Ze	0.44	275	⇓iP	Pg	04 32 17.6	-0.5
ZEYE				iS	Sg	04 32 24.3	+0.4
ZEYE				IAML		04 32 25.0	
	comp=E,8μm,0.3s						
ZEYE				IAML		04 32 26.0	
	comp=N,16μm,0.2s						
GCAM	G?zelcaml?	0.52	165	PG	Pg	04 32 19.3	-0.3
GCAM				SG	Sg	04 32 26.5	0.0
GCAM	G?zelcaml?	0.52	165	⇑iP	Pg	04 32 19.3	-0.3
GCAM				iS	Sg	04 32 26.6	0.0
GCAM				IAML		04 32 27.0	
	comp=N,19μm,0.4s						
GCAM				IAML		04 32 27.0	
	comp=E,23μm,0.4s						
SMG	Samos	0.52	200	P	Pg	04 32 19.4	-0.3
SMG				S	Sg	04 32 26.7	+0.1
SMG				AML	AML	04 32 31.5	
	comp=N,51244μm,0.5s						
SMG				AML	AML	04 32 31.8	
	comp=E,58709μm,0.3s						
SMG	Samos	0.52	200	P	Pg	04 32 19.4	-0.3
SMG				S	Sg	04 32 27.2	+0.5
	comp=E,27μm,0.4s						
FOCM	Foa	0.57	333	PG	Pg	04 32 19.9	-0.7
FOCM				SG	Sg	04 32 27.9	-0.2
FOCM	Foa	0.57	333	Pg	Pg	04 32 20.0	-0.6
CESE	eme	0.61	282	PG	Pg	04 32 20.7	-0.6
CESE	eme	0.61	282	Pg	Pg	04 32 20.6	-0.8
DDIM	Aydin, Didim	0.76	169	⇑iP	Pg	04 32 23.7	-0.4
DDIM				iS	Sb	04 32 35.2	+0.3
DDIM				IAML		04 32 38.0	
	comp=N,27μm,1.0s						
DDIM				IAML		04 32 38.0	
	comp=E,18μm,0.8s						
ZEDA	zmir-Bergama	0.76	1	⇑iP	Pg	04 32 23.5	-0.7
ZEDA				iS	Sg	04 32 33.5	-0.7
ZEDA				IAML		04 32 39.0	
	comp=E,8μm,0.3s						
DIDI	Didim-Aydin	0.84	170	PG	Pg	04 32 25.4	-0.2
DIDI	Didim-Aydin	0.84	170	Pg	Pg	04 32 25.5	-0.2
GOMA	Golmarmara-Man	0.84	53	PG	Pg	04 32 24.9	-0.8
GOMA	Golmarmara-Man	0.84	53	Pg	Pg	04 32 25.0	-0.7
AYDN	Tasoluk	0.85	130	⇓iP	Pg	04 32 25.4	-0.3
AYDN				iS	Sg	04 32 35.2	-1.6
AYDN				IAML		04 32 40.0	
	comp=N,15μm,0.7s						
AYDN				IAML		04 32 40.0	
	comp=Z,24nm,0.8s						
DKL	Dikili	0.88	352	PG	Pg	04 32 25.6	-0.8
AKHS	Akhisar	0.90	41	⇑iP	Pg	04 32 25.3	-1.5
AKHS				iS	Sg	04 32 38.5	0.0
AKHS				IAML		04 32 40.0	
	comp=N,2.2nm,0.5s						
AKHS				IAML		04 32 41.0	
	comp=E,4μm,0.5s						
AYVA	Ayvalik	1.14	345	⇑iP	Pb	04 32 30.0	-1.1
AYVA				iS	Sb	04 32 45.4	-0.5
AYVA				IAML		04 32 48.0	
	comp=N,6μm,0.4s						
AYVA				IAML		04 32 53.0	
	comp=E,5μm,0.5s						
BODT	Bodrum	1.16	170	P	Pb	04 32 30.5	-0.9
BODT				S	Sb	04 32 45.5	-0.9
BODT	Bodrum	1.16	170	PN	Pb	04 32 30.8	-0.6
BODT	Bodrum	1.16	170	Pn	Pb	04 32 30.9	-0.5
BDRM	Kayabasi	1.18	165	⇑iP	Pb	04 32 30.8	-0.9
BDRM				iP	Pn	04 32 31.2	-0.6
BDRM				iS	Sn	04 32 48.3	+0.5
BDRM				IAML		04 32 50.0	
	comp=N,4μm,0.7s						
BDRM				IAML		04 32 52.0	
	comp=E,3μm,0.5s						
PRK	Paraskevi	1.21	330	P	Pg	04 32 32.8	+0.1
PRK				S	Sg	04 32 48.8	+0.4
PRK				AML	AML	04 32 51.9	
	comp=N,63910μm,0.8s						
PRK				AML	AML	04 32 52.2	
	comp=E,45361μm,0.5s						
PRK	Paraskevi	1.21	330	P	Pg	04 32 33.0	+0.3
PRK				S	Sg	04 32 49.0	+0.6
	comp=E,25μm,0.9s						
MANT	Manisa	1.21	76	⇓iP	Pn	04 32 31.8	-0.7
MANT				iS	Sb	04 32 46.1	-2.2
MANT				IAML		04 32 49.0	
	comp=E,6μm,0.4s						
MANT				IAML		04 32 50.0	
	comp=N,7μm,0.5s						
MANT	Manisa	1.21	76		Pn	04 32 32.1	-0.4
PSRA	Psara	1.22	287	P	Pn	04 32 32.1	-0.3
PSRA				S	Sb	04 32 48.5	+0.2
PSRA				AML	AML	04 32 51.1	
	comp=E,16223μm,0.4s						
PSRA				AML	AML	04 32 53.2	
	comp=N,19727μm,0.2s						
STEP	BALIKESIR_Sava	1.28	24	⇑iP	Pn	04 32 32.2	-1.0
STEP				iS	Sb	04 32 49.8	-0.2
STEP				IAML		04 32 54.0	
	comp=E,8μm,0.4s						
STEP				IAML		04 32 55.0	
	comp=N,7μm,0.6s						
BUHA	Balikesir, Bur	1.30	1	⇑iP	Pn	04 32 32.8	-0.7
BUHA				iS	Sg	04 32 51.5	+0.3
BUHA				IAML		04 32 53.0	
	comp=N,8μm,0.7s						
BUHA				IAML		04 32 54.0	
	comp=E,12μm,0.4s						
KULA	Kula-Manisa	1.30	76	P	Pn	04 32 32.9	-0.6
KULA				S	Sb	04 32 50.3	-0.2
KULA	Kula-Manisa	1.30	76	PN	Pn	04 32 32.8	-0.7
KULA	Kula-Manisa	1.30	76	Pn	Pn	04 32 32.9	-0.6
MULA	Mugla, Merkez-	1.38	133	⇓iP	Pn	04 32 34.2	-0.4
MULA				iS	Sg	04 32 54.2	+0.4
SIGR	SIGRI	1.38	317	P	Pn	04 32 34.4	-0.1
SIGR				S	Sn	04 32 52.4	-0.3
SIGR				AML	AML	04 32 57.2	
	comp=N,22983μm,0.6s						
SIGR				AML	AML	04 32 57.6	
	comp=E,17135μm,0.4s						
SIGR	SIGRI	1.38	317	P	Pn	04 32 34.0	-0.5
SIGR				S	Sn	04 32 51.7	-1.0
	comp=E,10μm,0.5s						
SIGR	SIGRI	1.38	317	PN	Pn	04 32 33.8	-0.7
YER	Yerkesik	1.44	137	P	Pn	04 32 35.3	-0.2
YER				S	Sn	04 32 53.8	-0.6
YER	Yerkesik	1.44	137	PN	Pn	04 32 34.9	-0.6
KOSK	Kos Island	1.45	183	P	Pn	04 32 34.9	-0.6
KOSK				S	Sn	04 32 54.2	-0.3
	comp=E,6μm,0.4s						
KOSK	Kos Island	1.45	183	PN	Pn	04 32 34.8	-0.7
KOCA	Canakkale, Ayv	1.48	331	iP	Pn	04 32 35.7	-0.3
KOCA				iS	Sn	04 32 54.7	-0.7
KOCA				IAML		04 32 59.0	
	comp=E,6μm,0.6s						
DATC	Datca-Mugla	1.52	161	PN	Pn	04 32 35.5	-1.0
DEMI	Demirci	1.54	57	iP	Pn	04 32 36.2	-0.7
DEMI				iS	Sn	04 32 57.4	+0.4
DEMI				IAML		04 33 00.0	
	comp=E,3μm,0.4s						
BALB	Balikesir	1.57	24	PN	Pn	04 32 36.3	-0.9
BAYC	CANAKKALE_Bayr	1.59	346	⇑iP	Pn	04 32 37.9	+0.4
BAYC				iS	Sn	04 32 57.8	-0.1
NISR	Nisiros	1.59	178	P	Pn	04 32 37.0	-0.4
NISR	Nisiros	1.59	178	P	Pn	04 32 37.4	0.0
BALY	Balya	1.60	16	⇑iP	Pn	04 32 36.7	-0.9
BALY				iS	Sn	04 32 57.6	-0.6
BALY				IAML		04 33 02.0	
	comp=N,4μm,0.4s						
USAK	Uak-Merkez	1.62	71	⇓iP	Pn	04 32 37.7	-0.2
USAK				iS	Sn	04 32 57.4	-1.4
USAK				IAML		04 33 04.0	
	comp=N,1μm,0.6s						
TNSA	Tinos	1.64	247	P	Pn	04 32 37.3	-0.9
TNSA				AML	AML	04 32 57.9	
	comp=N,6482μm,0.3s						
TNSA				AML	AML	04 32 59.7	
	comp=E,4396μm,0.3s						
TAVA	DENIZLI_Tavas	1.64	116	iP	Pn	04 32 38.1	-0.2
TAVA				iS	Sg	04 33 05.3	+3.0
APE	Apeiranthos	1.66	227	P	Pn	04 32 37.3	-1.2
APE				AML	AML	04 33 02.4	
	comp=E,3518μm,0.5s						
APE				AML	AML	04 33 05.3	
	comp=N,3903μm,0.6s						
APE	Apeiranthos	1.66	227	P	Pn	04 32 37.3	-1.2
APE	Apeiranthos	1.66	227	PN	Pn	04 32 37.4	-1.1
TURN	Turunc	1.71	146	PN	Pn	04 32 38.7	-0.4
TURN	Turunc	1.71	146	iP	Pn	04 32 38.7	-0.4
TURN				iS	Sg	04 33 06.7	+2.3
EZN	Ezine	1.72	341	P	Pn	04 32 38.7	-0.5
EZN				S	Sn	04 33 00.7	-0.4
	comp=N,3μm,0.5s						
EZN	Ezine	1.72	341	PN	Pn	04 32 38.7	-0.5
MRSB	Marmaris-Mugla	1.74	148	PN	Pn	04 32 39.2	-0.3
SIMA	Simav-Kutahya	1.74	59	PN	Pn	04 32 39.1	-0.6
BOZC	Bozcaada	1.81	335	PN	Pn	04 32 40.1	-0.4
BOZC	Bozcaada	1.81	335	iP	Pn	04 32 40.4	-0.2
BOZC				iS	Sn	04 33 03.2	-0.3
DST	Dursunbey	1.85	41	PN	Pn	04 32 40.6	-0.6
DALY	Dalyan (Mula)	1.88	137	iP	Pn	04 32 41.5	+0.2
DALY				iS	Sg	04 33 11.1	+1.3
SHAP	Saphane-Kutahy	1.88	64	PN	Pn	04 32 41.1	-0.5
KHAL	Karahalli	1.92	84	iP	Pn	04 32 42.0	-0.1
KHAL				iS	Sb	04 33 08.4	-0.1
KHL	Karahalli	1.94	86	PN	Pn	04 32 41.9	-0.5
ECEA	Canakkale, Ece	1.96	340	iP	Pn	04 32 42.9	+0.3
ECEA				iS	Sn	04 33 08.3	+1.1
GEDZ	Gediz	2.02	65	PN	Pn	04 32 43.2	-0.3
KARY	Karystos	2.08	266	P	Pn	04 32 44.0	-0.2
KARY				AML	AML	04 33 18.4	
	comp=E,1102μm,0.6s						
KARY				AML	AML	04 33 22.4	
	comp=N,2148μm,0.9s						
KARY	Karystos	2.08	266	P	Pn	04 32 43.8	-0.3
GDZ	Gediz	2.09	64	iP	Pb	04 32 47.9	+0.4
GDZ				iS	Sg	04 33 15.4	-1.4
CAEL	Denizli, Camel	2.09	120	iP	Pn	04 32 45.3	+0.8
CAEL				iS	Sg	04 33 18.1	+1.3
EFSA	Agios Efstrati	2.10	310	P	Pn	04 32 44.4	0.0
ARG	Arkhangelos	2.16	156	P	Pn	04 32 44.5	-0.8
ARG				AML	AML	04 33 26.2	
	comp=E,6549μm,0.7s						
ARG				AML	AML	04 33 27.2	
	comp=N,6415μm,1.3s						
ARG	Arkhangelos	2.16	156	P	Pn	04 32 45.3	0.0
ARG				S	Sn	04 33 11.9	-0.1
	comp=N,3μm,1.0s						
ARG	Arkhangelos	2.16	156	PN	Pn	04 32 45.3	0.0
GOKA	anakkale-Gk	2.18	336	iP	Pn	04 32 45.8	+0.3
GOKA				iS	Sn	04 33 12.1	-0.3
LPK	Lapseki	2.18	354	PN	Pn	04 32 45.0	-0.6
GADA	Gvkgeada	2.18	336	P	Pn	04 32 45.8	+0.2
GADA				S	Sn	04 33 11.5	-1.0
	comp=N,2μm,0.6s						
GADA	Gvkgeada	2.18	336	PN	Pn	04 32 45.4	-0.2
THR8	Santorini-Mono	2.19	216	P	Pn	04 32 44.5	-1.2
KRBG	Karabiga-Canak	2.19	5	PN	Pn	04 32 44.9	-0.9
THR7	Fira-Santorini	2.20	217	P	Pn	04 32 46.1	+0.2
GOLH	Golhisar	2.21	115	iP	Pn	04 32 47.0	+1.0
GOLH				iS	Sg	04 33 24.6	+4.3
SNT1	Gialos, Santor	2.21	217	P	Pn	04 32 46.1	+0.2
SNT1	Gialos, Santor	2.21	217	P	Pn	04 32 45.6	-0.3
EDC	Edincik	2.23	16	PN	Pn	04 32 45.2	-1.1
SANT	Santorini	2.23	215	P	Pn	04 32 45.3	-1.0
SANT				AML	AML	04 33 25.0	
	comp=N,2020μm,0.6s						
SANT				AML	AML	04 33 25.3	
	comp=E,5926μm,1.1s						
SANT	Santorini	2.23	215	P	Pn	04 32 45.2	-1.1
SANT				S	Sn	04 33 13.3	-0.5
	comp=E,2μm,0.8s						
SANT	Santorini	2.23	215	PN	Pn	04 32 45.1	-1.2
SANT	Santorini	2.23	215		Pn	04 32 45.2	-1.1
SAP3	Santorini-Thir	2.23	218	P	Pn	04 32 45.6	-0.7
SAP3	Santorini-Thir	2.23	218	P	Pn	04 32 45.9	-0.4
LIA	Limnos Island	2.23	320	P	Pn	04 32 46.5	+0.2
LIA				AML	AML	04 33 22.7	
	comp=N,2642μm,0.4s						
LIA				AML	AML	04 33 23.0	
	comp=E,3580μm,0.7s						
LIA	Limnos Island	2.23	320	P	Pn	04 32 46.5	+0.2
GELI	Tayfur-Gelibol	2.24	348	PN	Pn	04 32 45.6	-0.8
FETY	Fethiye	2.25	134	P	Pn	04 32 47.6	+1.1
FETY	Fethiye	2.25	134	PN	Pn	04 32 46.7	+0.2
FETY	Fethiye	2.25	134	iP	Pn	04 32 47.4	+0.9
FETY				iS	Sn	04 33 15.5	+1.3
THR6	Thira Island,	2.27	216	P	Pn	04 32 46.0	-0.8
ORLT	Orhaneli	2.33	37	PN	Pn	04 32 47.2	-0.5
KYMI	Kymi, Euboea I	2.36	281	P	Pn	04 32 48.1	0.0
KYMI				AML	AML	04 33 31.1	
	comp=N,1353μm,1.1s						
KYMI				AML	AML	04 33 32.8	
	comp=E,980μm,0.9s						
KYMI	Kymi, Euboea I	2.36	281	P	Pn	04 32 48.5	+0.4
BRDR	BURDUR-Merkez	2.43	101	iP	Pn	04 32 49.5	+0.4
MRMT	Marmara Adasi	2.43	10	PN	Pn	04 32 48.4	-0.7
DION	Dionisos Attik	2.47	268	P	Pn	04 32 49.7	+0.1
DION				AML	AML	04 33 34.8	
	comp=N,4121μm,0.8s						
DION				AML	AML	04 33 43.0	
	comp=E,4100μm,0.6s						
DION	Dionisos Attik	2.47	268	P	Pn	04 32 49.4	-0.2
EREA	Eretria	2.47	276	P	Pn	04 32 49.8	+0.2
EREA				AML	AML	04 33 33.8	
	comp=E,1042μm,0.4s						
EREA				AML	AML	04 33 34.9	
	comp=N,1647μm,0.5s						
EREA	Eretria	2.47	276	P	Pn	04 32 49.7	+0.2
RKY	Sarkoy-Tekirda	2.48	2	PN	Pn	04 32 49.2	-0.6
ERIK	Erikli-Kesan	2.50	350	PN	Pn	04 32 49.8	-0.2
PTL	Penteli	2.52	267	P	Pn	04 32 50.4	+0.1
PTL				AML	AML	04 33 34.1	
	comp=N,674μm,1.2s						
PTL				AML	AML	04 33 34.4	
	comp=E,1226μm,0.6s						
PTL	Penteli	2.52	267	P	Pn	04 32 50.4	+0.1
MHLA	Plaka, Milos I	2.55	236	P	Pn	04 32 50.2	-0.5
MHLA				AML	AML	04 33 36.6	
	comp=N,4741μm,1.0s						
MHLA				AML	AML	04 33 47.8	
	comp=E,4164μm,0.8s						
SMTH	Samothraki Isl	2.56	333	P	Pn	04 32 50.9	+0.1
SMTH				AML	AML	04 33 37.0	
	comp=E,1402μm,0.6s						
SMTH				AML	AML	04 33 41.1	
	comp=N,1721μm,0.7s						
SMTH	Samothraki Isl	2.56	333	P	Pn	04 32 50.6	-0.2
SMTH				S	Sn	04 33 23.0	+1.2
	comp=N,782nm,0.6s						
ANDZ	Kutahya, Merke	2.57	59	iP	Pb	04 32 57.3	+1.7
ANDZ				iS	Sb	04 33 29.8	+2.5
ANDZ				IAML		04 33 37.0	
	comp=N,446nm,0.4s						
ANDZ				IAML		04 33 37.0	
	comp=E,633nm,0.6s						
CAVK	Edirne/Enez-Ca	2.58	345	iP	Pn	04 32 51.4	+0.4
MDNY	Mudanya-Bursa	2.58	33	PN	Pn	04 32 50.4	-0.7
MAR4	Marsite Statio	2.59	4	PN	Pn	04 32 50.5	-0.8
ATHU	Athens Univers	2.59	266	P	Pn	04 32 51.3	0.0
MHLO	Agia Marina, M	2.60	235	P	Pn	04 32 50.6	-0.8
MHLO				AML	AML	04 33 39.0	
	comp=N,6180μm,0.5s						
MHLO				AML	AML	04 33 40.6	
	comp=E,10089μm,0.6s						
MHLO	Agia Marina, M	2.60	235	P	Pn	04 32 50.5	-0.8
VLY	Voula,Athens	2.60	263	P	Pn	04 32 51.4	0.0
ENEZ	Enez	2.62	345	P	Pn	04 32 52.0	+0.3
ENEZ				S	Sn	04 33 24.1	+0.6
	comp=E,3μm,0.6s						
ENEZ	Enez	2.62	345	PN	Pn	04 32 51.4	-0.3
KESN	Edirne-Kesan	2.63	354	iP	Pn	04 32 51.8	-0.4
ATH	Athens Observa	2.65	266	P	Pn	04 32 52.1	+0.2
ATH				AML	AML	04 33 39.8	
	comp=E,1361μm,0.6s						
ATH				AML	AML	04 33 50.0	
	comp=N,1820μm,0.6s						
KARP	Karpathos	2.65	178	P	Pn	04 32 51.7	-0.5
KARP	Karpathos	2.65	178	P	Pn	04 32 51.9	-0.2
KARP	Karpathos	2.65	178	Pn	Pn	04 32 51.6	-0.5
ELL	Elmali	2.69	122		Pn	04 32 53.6	+0.9
ISP	Isparta	2.76	97	P	Pn	04 32 53.9	+0.2
ISP	Isparta	2.76	97	Pn	Pn	04 32 53.8	+0.2
ALN	Alexandroupoli	2.80	344	P	Pn	04 32 54.1	0.0
ALN				AML	AML	04 33 41.4	
	comp=E,1211μm,0.4s						
ALN				AML	AML	04 33 48.5	
	comp=N,1673μm,0.6s						
ALN	Alexandroupoli	2.80	344	P	Pn	04 32 54.0	-0.1
ALN	Alexandroupoli	2.80	344	PN	Pn	04 32 54.0	-0.1
ALN	Alexandroupoli	2.80	344	Pn	Pn	04 32 54.4	+0.3
AKAS	Kas	2.83	133	Pn	Pn	04 32 55.5	+0.9
KORT	Korkueli	2.88	114	iP	Pn	04 32 56.4	+1.1
BUCA	Burdur, Bucak-	2.91	106	iP	Pn	04 32 56.9	+1.2
BILE	Bilecik/Merkez	2.94	47	iP	Pg	04 33 04.9	-0.8
VIL2	Platees	2.99	271	P	Pn	04 32 56.7	0.0
VIL2				AML	AML	04 33 49.2	
	comp=N,1298μm,0.5s						
VIL2				AML	AML	04 34 00.6	
	comp=E,2099μm,1.0s						
THAS	Thassos island	3.01	324	P	Pn	04 32 56.7	-0.2
THAS				AML	AML	04 33 48.8	
	comp=E,901μm,0.6s						
THAS				AML	AML	04 33 50.0	
	comp=N,892μm,0.4s						
THAS	Thassos island	3.01	324	P	Pn	04 32 56.7	-0.2
SMIA	Simia	3.09	284	P	Pn	04 32 58.7	+0.5
BORA	Eskisehir	3.13	57	iP	Pb	04 33 07.2	+2.2
PAIG	Paliouri	3.14	304	P	Pn	04 32 58.8	0.0
ZKR	Zakros	3.16	193	P	Pn	04 32 59.0	0.0
ZKR				AML	AML	04 33 58.9	
	comp=N,470μm,0.7s						
ZKR				AML	AML	04 34 00.6	
	comp=E,938μm,0.6s						
NPS	Neapolis	3.16	202	P	Pn	04 32 58.5	-0.6
RDO	Rodhopi	3.16	339	P	Pn	04 32 59.4	+0.3
RDO	Rodhopi	3.16	339	P	Pn	04 32 59.2	+0.1
EPID	Epidavros	3.17	261	P	Pn	04 32 59.7	+0.4
NEO	Neokhori	3.19	291	P	Pn	04 32 59.7	+0.1
OUR	Ouranopolis	3.20	313	P	Pn	04 32 59.6	+0.1
KRND	KRANIDI	3.20	256	P	Pn	04 33 00.2	+0.6
KRND				AML	AML	04 34 01.1	
	comp=N,962μm,0.9s						
KRND				AML	AML	04 34 09.1	
	comp=E,964μm,1.0s						
ATAL	Atalanti	3.21	280	P	Pn	04 33 00.1	+0.4
LKR	Lokris	3.22	279	P	Pn	04 33 00.1	+0.3
XOR	Xorichti	3.24	292	P	Pn	04 32 60.0	-0.1
YVAC	Isparta, Yalva	3.29	88	iP	Pn	04 33 02.6	+1.6
IDI	Anoyia	3.39	212	Pn	Pn	04 33 00.0	-2.3
	comp=E,5.3nm,0.3s,baz=43,slow=14,SNR=30						
IDI				Sn	Sn	04 33 42.1	-0.4
	comp=E,18nm,0.3s,baz=175,slow=12,SNR=5.9						
IDI	Anoyia	3.39	212	P	Pn	04 33 01.8	-0.4
IDI	Anoyia	3.39	212	Pn	Pn	04 33 01.9	-0.4
KAVA	Kavala	3.41	326	P	Pn	04 33 02.4	-0.1
VOL2	Volos	3.41	291	P	Pn	04 33 04.1	+1.6
VIZE	Kirklareli, Vi	3.42	10	iP	Pn	04 33 02.3	-0.4
AXAR	Agios Charalam	3.50	281	P	Pn	04 33 04.4	+0.7
PLG	Polygyros	3.54	309	P	Pn	04 33 04.4	0.0
DSF	Desfina	3.57	275	P	Pn	04 33 05.3	+0.6
KIRK	Kırklareli	3.57	0	iP	Pn	04 33 02.2	-2.6
VLI	Veliai	3.60	247	P	Pn	04 33 04.4	-0.7
VAM	Vamos	3.61	220	P	Pn	04 33 04.6	-0.7
VAM				AML	AML	04 34 08.4	
	comp=N,1073μm,0.6s						
VAM				AML	AML	04 34 13.3	
	comp=E,1397μm,0.8s						
EDRB	Edirne	3.65	356	P	Pn	04 33 05.0	-0.7
SIVA	Sivas	3.66	210	P	Pn	04 33 05.8	-0.1
ARMN	Kirklareli, Me	3.67	4	iP	Pn	04 33 05.5	-0.5
IMMV	Iera Moni Meta	3.69	223	P	Pn	04 33 06.1	-0.2
KTHA	Kythira Island	3.73	240	P	Pn	04 33 06.2	-0.7
AGG	Agios Georgios	3.79	284	P	Pn	04 33 08.5	+0.7
AGG	Agios Georgios	3.79	284	Pn	Pn	04 33 08.8	+1.0
ANKY	Antikythira Is	3.80	233	P	Pn	04 33 07.8	-0.1
TRIP	Tripoli	3.85	261	P	Pn	04 33 09.7	+1.1
KALE	Kalithea	3.87	274	P	Pn	04 33 09.6	+0.7
KLV	Kalavryta, Ach	3.87	269	P	Pn	04 33 09.7	+0.7
SOH	Sokhos	3.88	314	P	Pn	04 33 09.5	+0.6
SOH	Sokhos	3.88	314	P	Pn	04 33 09.8	+0.8
HORT	Hortiatis	3.89	309	P	Pn	04 33 09.9	+0.7
TRIZ	Trizonia	3.93	274	P	Pn	04 33 10.4	+0.8
SERG	Sergoula	3.94	275	P	Pn	04 33 10.9	+1.1
MAKR	Makrakomi, Fth	3.94	283	P	Pn	04 33 11.2	+1.4
SRS	Serrai	3.95	318	P	Pn	04 33 10.2	+0.3
SRS	Serrai	3.95	318	P	Pn	04 33 10.3	+0.3
KDHN	Kadinhani	3.99	84	iP	Pn	04 33 08.5	-2.0
NVR	Nevrokopi	3.99	323	P	Pn	04 33 10.9	+0.4
LIT	Litokhoron	4.03	299	P	Pn	04 33 11.7	+0.7
LIT	Litokhoron	4.03	299	Pn	Pn	04 33 11.5	+0.5
ANX	Ano Chora	4.05	277	P	Pn	04 33 12.4	+1.0
EFP	Efpalio	4.06	275	P	Pn	04 33 12.7	+1.3
THL	Klokotos Trika	4.16	291	P	Pn	04 33 13.7	+0.9
EVR	Evrytania	4.18	281	P	Pn	04 33 14.4	+1.3
KONT	Konya--Tatoy	4.19	92	iP	Pn	04 33 14.9	+1.6
ITM	Ithomi	4.20	257	P	Pn	04 33 14.7	+1.4
ITM	Ithomi	4.20	257		Pn	04 33 14.7	+1.4
DRO	Drossia	4.23	268	P	Pn	04 33 14.7	+0.9
AMT	Artemida-Makis	4.29	263	P	Pn	04 33 15.7	+1.1
RLS	Riolos of Patr	4.41	270	P	Pn	04 33 17.5	+1.3
PYL	PYLOS	4.42	254	P	Pn	04 33 18.2	+1.8
PDO	Prodromos	4.63	277	P	Pn	04 33 21.5	+2.3
BR231	Keskin MP Arra	4.74	68		Pn	04 33 22.8	+1.9
KPRO	Kipourio	4.76	293	P	Pn	04 33 22.3	+1.2
FNA	Florina	5.09	302		Pn	04 33 25.6	-0.1
FSK	Fiskardo	5.11	275	P	Pn	04 33 27.2	+1.3
STIP	Stip	5.12	314	iPn	Pn	04 33 25.9	-0.1
VTS	Vitosha	5.29	328	⇓P	Pn	04 33 29.8	+1.4
BR131	Keskin Array S	5.35	71		Pn	04 33 30.2	+0.9
BRTR	Keskin Array B	5.35	71	Pn	Pn	04 33 30.5	+1.2
	comp=E,1.2nm,0.3s,baz=240,slow=14,SNR=36						
BRTR	Keskin Array B	5.35	71		Pn	04 33 30.3	+1.1
SKO	Skopje	5.72	313	iPn	Pn	04 33 36.0	+1.7
ILGA	Ilgaz	5.87	59	Pn	Pn	04 33 38.4	+1.9
ICOR	Ion Corvin	5.93	5	⇑P	Pn	04 33 39.0	+1.9
CSS	Mathiatis	5.99	121		Pn	04 33 38.4	+0.4
TIR	Tirane	6.37	302		Pn	04 33 44.4	+1.2
CFR	Carcaliu	7.01	6	⇓P	Pn	04 33 55.3	+3.3
TLCR		7.10	10	⇑P	Pn	04 33 55.9	+2.8
PDG	Podgorica	7.30	308	⇓P	Pn	04 33 56.8	+0.8
MLR	Muntele Rosu	7.33	354	Pn	Pn	04 33 59.1	+2.6
	comp=E,1.0nm,0.3s,baz=163,slow=9.5,SNR=6.5						
MLR				LR	LR	04 37 19.9	
	comp=E,431nm,19.2s,baz=61,slow=42						
MLR	Muntele Rosu	7.33	354		Pn	04 33 58.1	+1.6
VOIR		7.38	349	⇑P	Pn	04 33 57.5	+0.4
ARR	Arges	7.38	347	⇓P	Pn	04 33 57.2	+0.1

LOT	Lotru	7.64	342	⇑P	Pn	04 34 00.6	-0.1
PLOR	Plostina	7.65	358	⇑P	Pn	04 34 01.8	+1.1
VRI	Vrincioaia	7.66	358	⇑P	Pn	04 34 02.0	+1.1
MDVR	Moldovita	7.70	330	⇑P	Pn	04 34 02.1	+0.7
DOPR	Dopca	7.86	351	⇑P	Pn	04 34 04.4	+0.9
GZR	Gura Zlata	7.86	337	⇑P	Pn	04 34 03.6	-0.1
TIP	Timpagrande	8.12	280	⇓P	Pn	04 34 07.7	+0.5
MDB	Medias	8.18	347	⇑P	Pn	04 34 10.0	+2.0
TESR	Tescani	8.31	358	⇑P	Pn	04 34 11.2	+1.4
MATE	Matera	8.38	290	⇑P	Pn	04 34 11.8	+1.1
BZS	Buzias	8.44	333	⇑P	Pn	04 34 12.7	+1.1
MMAI	Mount Meron Ar	8.54	125	Pn	Pn	04 34 11.4	-1.6
	comp=E,10nm,0.3s,baz=306,slow=12,SNR=143						
MMAI				Sn	Sn	04 35 45.7	-3.7
	comp=E,7.8nm,0.3s,baz=310,slow=27,SNR=18						
BIZ	Bicaz	8.76	356	⇑P	Pn	04 34 16.8	+0.8
DRGR		9.16	341	⇑P	Pn	04 34 22.5	+1.0
BURAR	Bucovina Array	9.50	352		Pn	04 34 29.0	+2.8
BUR08	Bucovina Ar. S	9.53	352	Pn	Pn	04 34 28.1	+1.5
MORH	Mrgy, Hungar	10.14	325	*e*PN	Pn	04 34 35.6	+0.7
EIL	Elat	10.74	140	Pn	Pn	04 34 42.1	-0.9
	comp=E,0.7nm,0.3s,baz=310,slow=2.7,SNR=9.7						
EIL				Sn	Sn	04 36 35.6	-7.7
	comp=E,1.4nm,0.3s,baz=283,slow=4.7,SNR=8.4						
KOLS	Kolonicke sedl	11.27	344	*e*	Pn	04 35 05.9	+16
MPLH	Magyarpolny	11.37	325	*e*PN	Pn	04 34 55.3	+3.7
KWP	Kalwaria Pacla	11.84	346	Pn	Pn	04 35 00.2	+2.0
AKASG	Malin Array Be	12.59	6	Pn	Pn	04 35 12.0	+3.7
	comp=E,0.4nm,0.3s,baz=192,slow=12,SNR=4.5						
GEC2	GERESS Array S	14.37	322	Pn	Pn	04 35 32.5	-0.2
GERES	GERESS Array B	14.37	322	Pn	P	04 35 38.0	-1.7
	comp=E,0.3nm,0.3s,baz=128,slow=14,SNR=1.6						
NACGM	Naroch	16.71	359	*i* P	Pn	04 36 01.8	-1.4
NACGM				*i* P	Pn	04 36 01.8	-1.4
NACGM				*i* P	Pn	04 36 01.8	-1.4
NACGM				*i* Pb	pP	04 36 07.6	-1.3
	comp=Z,7.0nm,1.1s						
NACGM				*i* PP	sP	04 36 11.5	+1.0
NACGM				*i* S	Sn	04 39 07.8	-0.8
NACGM				*i* SS	SnSn	04 39 25.8	+4.0
NACGM				*i* LQ	LQ	04 40 55.6	
NACGM				*i* LR	LR	04 42 44.3	
BFO	Black Forest	16.94	313	Pn	Pn	04 36 06.5	+0.2
BFO				IAmb	IAmb	04 36 52.0	
	comp=Z,41nm,2.0s						
FINES	FINESS Array B	23.27	359	P	P	04 37 17.8	+1.2
	comp=Z,2.6nm,0.8s,baz=197,slow=12,SNR=5.9						
FINES				LR	LR	04 48 03.2	
	comp=Z,166nm,19.4s,baz=266,slow=41						
TAM	Tamanrasset	24.00	236	P	P	04 37 23.2	-1.2
TAM				IAmb	IAmb	04 37 29.4	
	comp=Z,3.6nm,1.1s						
ESDC	Sonseca Array	24.12	283	P	P	04 37 25.9	+0.8
	comp=Z,1.0nm,0.8s,baz=77,slow=10.0,SNR=6.0						
NOA	NORSAR Array B	24.92	342	P	P	04 37 32.5	+0.2
	comp=Z,1.1nm,0.7s,baz=148,slow=13,SNR=3.5						
NOA				LR	LR	04 48 24.7	
	comp=Z,97nm,21.0s,baz=350,slow=39						
AKTO	Aktyubinsk	25.10	51	P	P	04 37 34.1	+0.2
	comp=Z,1.7nm,0.8s,baz=245,slow=8.4,SNR=5.2						
ABKAR	Akbulak array	26.00	54	P	P	04 37 43.2	+1.1
ARU	Arti	27.71	39	LR	LR	04 50 23.6	
	comp=Z,144nm,18.5s,baz=303,slow=39						
LVZ	Lovozero	30.05	6	P	P	04 38 17.2	-0.9
ATD	Arta Tunnel	30.08	148	LR	LR	04 50 49.7	
	comp=Z,28nm,19.4s,baz=60,slow=38						
TORD	Torodi Ar. Bea	33.63	229	P	P	04 38 50.5	+0.5
	comp=Z,3.3nm,0.6s,baz=34,slow=9.4,SNR=21						
TORD	Torodi Ar. Bea	33.63	229	P	P	04 38 50.8	+0.8
PMOZ	Porto Moniz, M	36.16	275	P	P	04 39 11.6	-0.3
MK31	Makanchi Array	40.87	60	P	P	04 39 52.5	+1.2
MK31				IAmb	IAmb	04 40 55.7	
	comp=Z,6.5nm,1.9s						
MKAR	Makanchi Array	40.87	60	P	P	04 39 52.1	+0.9
	comp=Z,0.6nm,0.7s,baz=285,slow=6.4,SNR=8.1						
ZALV	Zalesovo Beam	41.82	49	P	P	04 39 58.7	-0.2
	comp=Z,0.4nm,0.4s,baz=247,slow=11,SNR=2.5						
WMQ	Urumqi	45.20	63	*e*P	P	04 40 28.4	+2.0
LZH	Lanzhou	59.53	66	*e*P	P	04 42 15.6	+2.6
LZH				pP	sP	04 42 19.8	+1.5
LZH				sP	pP	04 42 22.3	+5.5
LZH				PP	PP	04 44 17.5	-6.7
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,66nm,4.9s						
HHC	Hu-ho-hao-te	62.71	58	*e*P	P	04 42 35.6	+1.2
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
YKA	Yellowknife Ar	75.02	343	P	P	04 43 52.5	+2.1
	comp=Z,0.3nm,0.5s,baz=38,slow=5.0,SNR=5.5						
KSRS	Korea Array	75.24	54	LR	LR	05 20 38.8	
	comp=Z,34nm,18.4s,baz=310,slow=39						

IDC 10 04:46:37.6±1.7**, 17°.59S**×**167°.47E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/5**, mb1mx3.7**/28**, mbtmp3.8**/5**, ML5.1**/1**, MS3.3**/6**, Ms1 3.3**/6**, ms1mx3.1**/26**, Error ellipse: s-maj=34.3km s-min=31.1km az=130.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.56	192	Pn	Pn	04 47 47.7	-0.4
	2.5nm,0.3s,baz=324,slow=12,SNR=25						
DZM				Sn	Sn	04 48 40.5	-1.4
	7.3nm,0.3s,baz=139,slow=19,SNR=8.5						
DZM				LR	LR	04 49 31.0	
	comp=Z,239nm,18.2s,baz=71,slow=38						
MSVF	Nonsavu	10.09	92	Pn	Pn	04 49 05.3	+1.3
	0.6nm,0.3s,baz=206,slow=8.9,SNR=4.2						
MSVF				LR	LR	04 52 02.0	
	comp=Z,379nm,18.0s,baz=57,slow=32						
HNR	Honiara	10.92	317	LR	LR	04 53 30.0	
	comp=Z,104nm,18.7s,baz=92,slow=38						
STKA	Stephens Creek	27.38	234	LR	LR	05 03 16.5	
	comp=Z,87nm,18.7s,baz=25,slow=36						
RAR	Rarotonga	31.08	102	LR	LR	05 04 20.6	
	comp=Z,18nm,19.6s,baz=228,slow=34						
WRA	Warramunga Arr	31.43	260	P	P	04 53 02.0	+1.0
	0.5nm,0.7s,baz=79,slow=6.1,SNR=1.9						
ASAR	Alice Springs	31.94	253	P	P	04 53 05.6	+0.2
	0.4nm,0.5s,baz=82,slow=8.4,SNR=11						
ASAR				LR	LR	05 05 47.7	
	comp=Z,101nm,18.6s,baz=112,slow=36						
SONM	Songino Array	84.90	324	P	P	04 59 13.6	-1.0
	0.9nm,0.9s,baz=132,slow=4.2,SNR=4.9						

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*PRE **10** 05:00:25.4±1.1, 28°.07S×26°.94E, h2^{km}, ML3.0*

*IDC **10** 05:00:30.2±1.4, 27°.85S×26°.65E, h0^{km}, mb3.8/4, mb1 3.8/8, mb1mx3.6/35, mbtmp3.8/8, ML2.8/4, Error ellipse: s-maj=25.0km s-min=11.7km az=114.0*

*NEIC **10** 05:00:31.2±0.9, 27°.86S±0°.04×26°.56E±0°.09, h5^{km}±1^{km}, mb4.4/4, Error ellipse: s-maj=13.6km s-min=7.6km az=266.0*

ISC 10 05:00:26.5±1.6**, 28°.04S**±0°.04×**26°.93E**±0°.05**, h1**^{km}±11^{km}**, n31, σ1**^{s}**.68**/44**, mb4.2**/5**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	1.18	19	*e*P	Pb	05 00 49.0	-0.7
PRYS				*e*S	Sb	05 01 04.7	-0.7
PRYS				AML	AML	05 01 09.9	
	comp=Z,820nm,0.3s						
BOSA	Boshof	1.58	249	Pg	Pg	05 00 57.5	+0.7
	comp=Z,26nm,0.3s,baz=78,slow=14,SNR=324						
BOSA				Lg	Lg	05 01 16.2	
	comp=Z,6.7nm,0.3s,baz=136,slow=21,SNR=4.3						
BOSA	Boshof	1.58	249	*e*P	Pn	05 00 54.9	-0.8
BOSA				*e*S	Sg	05 01 16.4	-1.0
BOSA				AML	AML	05 01 19.5	
	comp=Z,75nm,0.3s						
BOSA	Boshof	1.58	249	Pn	Pg	05 00 57.5	+0.7
BOSA				Sn	Sn	05 01 15.8	-1.1
WDLM	Western Deep L	1.67	15	*e*P	Pb	05 00 57.0	-1.1
WDLM				*e*S	Sb	05 01 18.9	-0.8
WDLM				AML	AML	05 01 22.2	
	comp=Z,313nm,0.2s						
KLOF	Kloof	1.79	20	*e*P	Pn	05 00 58.5	-0.1
KLOF				*e*S	Sn	05 01 21.8	-0.3
KLOF				AML	AML	05 01 27.3	
	comp=Z,535nm,0.2s						
ERPM	east rand prop	2.06	35	*e*P	Pb	05 01 03.6	-1.1
ERPM				*e*S	Sb	05 01 30.0	-0.8
ERPM				AML	AML	05 01 45.5	
	comp=Z,88nm,0.4s						
KSR	Koster	2.18	359	*e*P	Pn	05 01 04.5	+0.4
KSR				*e*S	Sn	05 01 31.5	-0.3
KSR				AML	AML	05 01 35.7	
	comp=Z,786nm,0.2s						
HVD	Gariep Dam	2.84	206	*e*P	Pn	05 01 12.5	-0.6
HVD				*e*S	Sn	05 01 45.8	-2.3
HVD				AML	AML	05 01 58.6	
	comp=Z,58nm,0.4s						
LBTB	Lobatse	3.24	338	Pn	Pn	05 01 20.3	+1.7
	comp=Z,4.2nm,0.3s,baz=169,slow=12,SNR=60						
LBTB				Lg	Lg	05 02 04.0	
	comp=Z,8.3nm,0.3s,baz=252,slow=22,SNR=16						
LBTB	Lobatse	3.24	338	*e*P	Pn	05 01 18.9	+0.4
LBTB				*e*S	Sn	05 01 57.5	-0.4
LBTB				AML	AML	05 02 12.9	
	comp=Z,104nm,0.3s						
LBTB	Lobatse	3.24	338		Pn	05 01 20.3	+1.7
LBTB				Sn	Sn	05 01 54.8	-3.1
POGA	Pongola	4.29	82	*e*P	Pn	05 01 32.5	-0.3
POGA				*e*S	Sn	05 02 21.2	-2.3
POGA				AML	AML	05 02 48.8	
	comp=Z,23nm,0.4s						
UPI	Upington	5.02	265	*e*P	Pn	05 01 42.5	-0.6
UPI				*e*S	Sn	05 02 38.5	-3.2
UPI				AML	AML	05 03 01.7	
	comp=Z,12nm,0.5s						
GRAN	Grantham	5.92	223	*e*P	Pn	05 01 54.9	-0.3
GRAN				*e*S	Sn	05 03 00.6	-3.1
GRAN				AML	AML	05 03 34.9	
	comp=Z,26nm,0.5s						
MOPA	Mopani	6.04	43	*e*P	Pn	05 01 55.9	-1.0
MOPA				*e*S	Sn	05 03 03.2	-3.6
MOPA				AML	AML	05 03 46.8	
	comp=Z,14nm,0.7s						
SUR	Sutherland	6.84	229	Pn	Pn	05 02 10.4	+2.4
	comp=Z,0.7nm,0.3s,baz=36,slow=8.5,SNR=19						
SUR				Sn	Sn	05 03 25.4	-1.2
	comp=Z,1.6nm,0.3s,baz=347,slow=16,SNR=2.2						
SUR				Lg	Lg	05 04 04.7	
	comp=Z,3.3nm,0.3s,baz=164,slow=23,SNR=6.1						
SUR	Sutherland	6.84	229	Pn	Pn	05 02 10.7	+2.7
MATP	Matopo	7.72	11	Pn	Pn	05 02 20.8	+0.7
	comp=Z,0.5nm,0.3s,baz=187,slow=12,SNR=16						
MATP				Sn	Sn	05 03 44.7	-3.5
	comp=Z,0.9nm,0.3s,baz=149,slow=1.9,SNR=7.7						
MATP				Lg	Lg	05 04 27.8	
	comp=Z,1.1nm,0.3s,baz=291,slow=22,SNR=7.9						
TSUM	Tsumeb	12.28	314	Pn	Pn	05 03 21.4	-1.2
	comp=Z,0.4nm,0.3s,baz=150,slow=11,SNR=13						
TSUM	Tsumeb	12.28	314	Pn	Pn	05 03 22.5	-0.1
MAW	Mawson	45.07	161	P	P	05 08 50.8	+7.2
DBIC	Dimbokro	46.19	314	P	P	05 08 54.3	+1.3
	comp=Z,1.2nm,0.8s,baz=130,slow=7.9,SNR=1.5						
DBIC	Dimbokro	46.19	314	P	P	05 08 54.0	+1.0
DBIC				IAmb	IAmb	05 09 22.0	
	comp=Z,11nm,1.4s						
SNAA	Sanae	46.66	192	P	P	05 08 59.7	+3.5
	comp=Z,1.2nm,0.8s,baz=45,slow=4.3,SNR=3.7						
SNAA	Sanae	46.66	192	P	P	05 09 00.2	+4.0
SNAA				IAmb	IAmb	05 09 01.1	
	comp=Z,2.5nm,1.0s						
TOA0	Torodi Ar. Sit	47.69	326	P	P	05 09 06.1	+1.3
TOA0				IAmb	IAmb	05 09 17.4	
	comp=Z,3.5nm,1.3s						
TORD	Torodi Ar. Bea	47.69	326	P	P	05 09 06.5	+1.8
	comp=Z,1.0nm,0.5s,baz=131,slow=5.8,SNR=7.4						
TORD	Torodi Ar. Bea	47.69	326	P	P	05 09 06.3	+1.5
ESDC	Sonseca Array	73.26	336	P	P	05 12 01.4	+2.2
	comp=Z,0.2nm,0.8s,baz=158,slow=6.5,SNR=4.9						
NVAR	Mina Array Bea	149.29	299	PKPbc	PKPab	05 20 21.8	-0.1
	comp=Z,0.3nm,0.7s,baz=108,slow=2.9,SNR=4.2						

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*IDC **10** 05:17:26.8±0.6, 10°.39N×62°.63W, h0^{km}, mb4.0/15, mb1 4.2/17, mb1mx4.1/34, mbtmp4.1/17, ML3.7/2, MS3.7/2, Ms1 3.6/2, ms1mx2.8/44, Error ellipse: s-maj=15.7km s-min=12.2km az=167.0*

*FUNV **10** 05:17:30.2, 10°.34N×62°.48W, h18^{km}, MW4.0*

*CAR **10** 05:17:30.2±2.8, 10°.36N±0°.07×62°.47W±0°.06, h20^{km}±5^{km}, Mwr4.0, mb4.3/14(NEIC), Md4.4(TRN), Error ellipse: s-maj=10.9km s-min=6.6km az=147.0*

*TRN **10** 05:17:31.7, 10°.16N×62°.29W, h95^{km}, MD4.4*

*NEIC **10** 05:17:32.5±1.6, 10°.31N±0°.07×62°.57W±0°.06, h44^{km}±9^{km}, Error ellipse: s-maj=11.9km s-min=6.1km az=143.0*

ISC 10 05:17:32.2±0.7**, 10°.32N**±0°.04×**62°.59W**±0°.04**, h38**^{km}±1^{km}**, n116, σ1**^{s}**.35**/127**, mb4.3**/22**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.73	299	*e*P	Pn	05 17 43.7	-2.3
CRUV				*e*S	Sn	05 17 54.8	-1.1
TPP	Pointe-a-Pierr	1.12	90	*e*P	Pn	05 17 50.7	-0.6
TRN	Trinidad (W)	1.21	74	*e*P	Pn	05 17 50.8	-1.8
TRN	Trinidad (W)	1.21	74	*e*P	Pn	05 17 50.3	-2.3
TRN				*e*S	Sn	05 18 05.0	-2.8
ORIV	Oritupano	1.48	213	*e*P	Pn	05 17 57.9	+1.5
ORIV				*e*S	Sn	05 18 19.0	+4.6
ORIV	Oritupano	1.48	213	*e*P	Pn	05 17 56.9	+0.6
ORIV				*e*S	Sn	05 18 16.7	+2.2
TBH	Brigand Hill	1.51	84	*e*P	Pn	05 17 55.3	-1.4
PLCV	Puerto La Cruz	1.98	266		Pn	05 18 01.8	-1.3
TPR	Prospect	1.98	64	*e*P	Pn	05 18 01.4	-1.7
PCRV	Puerto La Cruz	2.02	266	Pn	Pn	05 18 01.8	-1.9
	24nm,0.3s,baz=80,slow=4.6,SNR=94						
PCRV				Lg	Lg	05 18 30.9	
	44nm,0.3s,baz=232,slow=22,SNR=7.1						
PCRV	Puerto La Cruz	2.02	266	*e*P	Pn	05 18 03.1	-0.7
PCRV				*e*S	Sn	05 18 28.4	+0.6
GRGR	Grenville	2.02	27	*e*P	Pn	05 18 04.0	+0.2
GRGR				*e*S	Sn	05 18 29.7	+1.9
GRGR	Grenville	2.02	27		Pn	05 18 03.1	-0.6
GRGR	Grenville	2.02	27	*e*P	Pn	05 18 02.5	-1.3
RIOV	Rio Grande	2.36	161	*e*P	Pn	05 18 07.1	-1.4
RIOV				*e*S	Sn	05 18 35.1	-1.1
GCMP	Grenada, Carri	2.44	28	*e*P	Pn	05 18 09.8	+0.3
GCMP				*e*S	Sn	05 18 38.7	+0.8
SVOC	Richmond Hill,	3.12	25	*e*P	Pn	05 18 19.5	+0.7
SVB	Belmont	3.21	24	*e*P	Pn	05 18 21.3	+1.1
SVB	Belmont	3.21	24		Pn	05 18 20.6	+0.5
BIRV	Birongo	3.62	273	*e*P	Pn	05 18 26.8	+1.0
BIRV				*e*S	Sn	05 19 07.4	+0.1
MCLT	Moule a Chique	3.73	25	*e*P	Pn	05 18 27.5	+0.2
MCLT	Moule a Chique	3.73	25		Pn	05 18 27.3	0.0
SLB	Belfond	3.80	23	*e*P	Pn	05 18 28.4	+0.1
MERV	Las Mercedes	3.81	254	*e*P	Pn	05 18 28.7	+0.4
MERV				*e*S	Sn	05 19 11.2	-0.7
SLBI	Saint Lucia, B	4.00	23	*e*P	Pn	05 18 31.5	+0.5
SLBI				*e*S	Sn	05 19 16.2	-0.5
BBGH	Gun Hill	4.08	46	*e*P	Pn	05 18 31.6	-0.5
BBGH	Gun Hill	4.08	46	Pn	Pn	05 18 30.7	-1.4
BBSP	Saint Philip	4.13	48	*e*P	Pn	05 18 32.5	-0.3
FUNV	FUNVISIS	4.16	272	*e*P	Pn	05 18 33.3	+0.1
BIM	Bigot	4.43	19	*e*P	Pn	05 18 37.8	+0.9
BIM	Bigot	4.43	19	*e*S	Sn	05 19 26.5	-0.7
MPOM	Morne Pois Mar	4.43	22	*e*P	Pn	05 18 37.8	+0.8
MPOM	Morne Pois Mar	4.43	22	*e*S	Sn	05 19 26.2	-1.1
FDF	Fort de France	4.61	18	*e*P	Pn	05 18 40.3	+1.0
FDF	Fort de France	4.61	18	*e*S	Sn	05 19 30.9	-0.7
FDF	Fort de France	4.61	18	Pn	Pn	05 18 39.9	+0.6
MDN	Morne-Daniel	5.10	13	*e*P	Pn	05 18 46.7	+0.6
TURV	Turiamo	5.17	272	*e*P	Pn	05 18 46.5	-0.5
TURV				*e*S	Sn	05 19 42.3	-3.2
DSLB	Salisbury	5.21	12	*e*P	Pn	05 18 48.7	+1.0
BAUV	El Baul	5.55	256	*e*	Pn	05 18 52.7	+0.4
BAUV	El Baul	5.55	256	*e*P	Pn	05 18 55.6	+3.4
BAUV	El Baul	5.55	256	*e*S	Sn	05 19 56.8	+1.9
BAUV	El Baul	5.55	256	*e*P	Pn	05 18 51.5	-0.8
MAPV	Macapo	5.80	266	*e*P	Pn	05 18 55.3	-0.5
JACV	Jacura	6.18	278	*e*P	Pn	05 18 59.9	-1.1
SKI	Saint Kitts	6.97	359	Pn	Pn	05 19 12.2	+0.4
SEUS	St. Eustatius	7.14	357	Pn	Pn	05 19 15.4	+1.3
TORV	Torococo	7.56	265	*e*P	Pn	05 19 20.4	+0.3
CDVI	St. Croix	7.68	344		Pn	05 19 21.8	+0.3
SDV	Santo Domingo	8.06	260	Pn	Pn	05 19 25.6	-1.4
	4.8nm,0.3s,baz=32,slow=5.9,SNR=25						
SDV				Sn	Sn	05 20 54.5	-2.5
	3.3nm,0.3s,baz=24,slow=16,SNR=3.4						
SDV	Santo Domingo	8.06	260		Pn	05 19 26.8	-0.1
SDV	Santo Domingo	8.06	260	*e*P	Pn	05 19 26.4	-0.6
MTP	Monte Pirata	8.25	340	Pn	Pn	05 19 30.4	+1.1
CUPR	Culebra, Puert	8.36	342	Pn	Pn	05 19 31.3	+0.5
HUMP	Col San Antoni	8.39	338	Pn	Pn	05 19 30.9	-0.4
CBYP	Canovanas	8.51	339	Pn	Pn	05 19 34.7	+1.7
OBIP	Obispado Ponce	8.61	334	Pn	Pn	05 19 35.9	+1.7
AOPR	Arecibo Observ	8.94	334	Pn	Pn	05 19 39.8	+0.9
MPR	Mayaguez	9.00	331	Pn	Pn	05 19 38.8	-0.8
TAMC	Tame, Arauca	9.89	248	*e*P	Pn	05 19 51.2	-0.7
PAMC	Pamplona, Colo	10.42	254	*e*P	Pn	05 19 58.5	-1.1
DR12	Loma Pena Alta	10.68	323	Pn	Pn	05 20 03.9	+1.1
OCAC	Ocana	10.79	260	*e*P	Pn	05 20 04.1	-0.2
MDP	Montagnes des	11.14	117	Pn	Pn	05 20 09.4	+0.5
	1.1nm,0.3s,baz=301,slow=14,SNR=12						
MDP				Sn	Sn	05 22 02.9	-9.3
	2.6nm,0.3s,baz=45,slow=18,SNR=10						
RUSC	La Rusia	11.28	248	*e*P	Pn	05 20 09.8	-1.5
SMLC	San Martn de	11.42	263	*e*P	Pn	05 20 10.6	-2.3
SDDR	Presa de Saban	12.04	317	Pn	Pn	05 20 20.1	-1.2
SPBC	San Pablo de B	12.28	249	*e*P	Pn	05 20 22.3	-2.3
PTBC	PUERTO BERRIO,	12.32	253	*e*P	Pn	05 20 21.8	-3.4
ZARC	Zaragoza, Cauc	12.44	258	*e*P	Pn	05 20 24.8	-2.1
VILC	Villavicencio,	12.62	242	*e*P	Pn	05 20 28.2	-1.2
ROSC	El Rosal	12.84	246	LR	LR	05 26 37.8	
	comp=Z,592nm,18.3s,baz=30,slow=43						
NORC	Norcasia	13.05	250	*e*P	Pn	05 20 31.9	-3.2
HELC	Santa Helena	13.45	253	*e*P	Pn	05 20 43.5	+2.6
RREF	El Recreo	13.74	248	*e*P	Pn	05 20 43.7	-1.4
TOLC	Tolima	13.85	247	*e*P	Pn	05 20 48.9	+2.6
CBOC	Ciudad Bolivar	14.01	253	*e*P	Pn	05 20 47.5	-0.9
PLMC	San Jos del P	14.60	249	*e*P	Pn	05 20 57.4	+1.1
GARC	Garzon, Huila	15.15	239	*e*P	Pn	05 21 03.3	-0.6
OTAV	Otavalo	18.69	239	P	Pn	05 21 48.7	+0.2
OTAV	Otavalo	18.69	239	*e*P	Pn	05 21 49.7	+1.3
SAML	Samuel	19.15	182	P	P	05 21 51.8	-0.6
ATAH	Atahualpa	23.42	223	P	P	05 22 38.0	-0.5
	13nm,0.8s,baz=51,slow=5.2,SNR=10						
SIV	San Ignacio	26.19	177	P	P	05 23 04.2	+0.8
	7.0nm,0.9s,baz=15,slow=9.0,SNR=21						
NNA	Nana	26.30	213	P	P	05 23 04.2	-0.3
	13nm,0.8s,baz=346,slow=8.2,SNR=4.1						
BDFB	Brasilia	29.56	151	LR	LR	05 35 02.0	
	comp=Z,69nm,18.4s,baz=298,slow=36						
FCAR	Ozark Folk Cen	36.96	318	P	P	05 24 38.2	+0.3
FCAR				IAmb	IAmb	05 24 41.2	
	comp=Z,3.2nm,0.5s						
AC02	Maricunga	37.48	190	P	P	05 24 42.4	-0.4
S39A	Bolivar	38.80	320	P	P	05 24 53.7	+0.3
AC05	El Transito	39.63	191	P	P	05 25 00.1	-0.4
AC05				IAmb	IAmb	05 25 00.6	
	comp=Z,11nm,0.9s						
JCT	Junction City	39.97	306	P	P	05 25 03.6	+0.3
JCT				IAmb	IAmb	05 25 06.6	
	comp=Z,3.5nm,0.7s						
CO01	Juntas del Tor	40.71	190	P	P	05 25 08.3	-1.2
CO01				IAmb	IAmb	05 25 10.4	
	comp=Z,3.6nm,0.8s						
TXAR	Lajitas Array	42.74	302	P	P	05 25 26.3	+0.2
	comp=Z,0.4nm,0.5s,baz=116,slow=8.1,SNR=8.1						
TXAR	Lajitas Array	42.74	302	P	P	05 25 26.8	+0.7
TX31	Lajitas Ar. Si	42.74	302	P	P	05 25 26.8	+0.6
TX31				IAmb	IAmb	05 25 50.1	
	comp=Z,7.9nm,1.3s						
ULM	Lac du Bonnet	48.35	332	P	P	05 26 08.8	-1.3
	comp=Z,2.3nm,0.5s,baz=132,slow=7.9,SNR=7.2						
ULM	Lac du Bonnet	48.35	332	P	P	05 26 08.8	-1.3
PLCA	Paso Flores	51.33	188	P	P	05 26 31.7	-1.1
	comp=Z,4.5nm,1.0s,baz=9.3,slow=11,SNR=6.4						
PLCA	Paso Flores	51.33	188	P	P	05 26 32.6	-0.3
PLCA				IAmb	IAmb	05 26 34.0	
	comp=Z,5.1nm,0.9s						
BW06	Boulder Array	52.05	317	P	P	05 26 38.3	-0.3
PDAR	Pinedale Array	52.05	317	P	P	05 26 38.0	-0.5
	comp=Z,0.7nm,0.6s,baz=117,slow=8.3,SNR=8.1						
PDAR	Pinedale Array	52.05	317	P	P	05 26 38.4	-0.2
YHL	Hebgen Lake	53.98	319	P	P	05 26 54.0	+1.2
YHL				IAmb	IAmb	05 26 56.6	
	comp=Z,2.6nm,0.8s						
NVAR	Mina Array Bea	56.94	309	P	P	05 27 14.0	-0.1
	comp=Z,0.3nm,0.6s,baz=103,slow=7.7,SNR=3.6						
NVAR	Mina Array Bea	56.94	309	P	P	05 27 14.5	+0.4
KOWA	Kowa	57.23	79	P	P	05 27 18.6	+2.3
	comp=Z,1.3nm,0.7s,baz=309,slow=12,SNR=2.6						
ESDC	Sonseca Array	59.43	50	P	P	05 27 32.8	+1.5
	comp=Z,0.4nm,0.8s,baz=283,slow=7.2,SNR=2.6						
TORD	Torodi Ar. Bea	62.86	80	P	P	05 27 55.7	+0.8
	comp=Z,0.4nm,0.7s,baz=291,slow=7.5,SNR=2.4						
YKA	Yellowknife Ar	63.97	336	P	P	05 27 59.9	-1.5
	comp=Z,0.6nm,0.6s,baz=109,slow=8.5,SNR=9.6						
NB2	NORSAR Subarra	73.20	29	P	P	05 29 00.0	+0.9
	comp=Z,22nm,1.2s,baz=262,slow=6.2						
NB2	NORSAR Subarra	73.20	29	P	P	05 29 00.0	+0.9
	baz=262,slow=6.2						
NOA	NORSAR Array B	73.20	29	P	P	05 28 59.9	+0.8
	comp=Z,1.3nm,0.9s,baz=263,slow=6.3,SNR=3.5						
ILAR	Eielson Array	78.30	334	P	P	05 29 26.6	-1.5
	comp=Z,0.5nm,0.5s,baz=100,slow=4.8,SNR=14						
ILAR	Eielson Array	78.30	334	P	P	05 29 27.6	-0.5
MDM	Murphy Dome	78.88	334	P	P	05 29 30.6	-0.8
MDM				IAmb	IAmb	05 29 33.8	
	comp=Z,3.8nm,0.8s						
FINES	FINESS Array B	80.38	29	P	P	05 29 39.9	+0.4
	comp=Z,2.8nm,1.0s,baz=268,slow=5.7,SNR=5.5						

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*NEIC **10** 05:28:53.3±1.4, 18°.43N±0°.04×145°.7E±0°.2, h163^{km}±11^{km}, mb4.1/10, ML4.3/4, Error ellipse: s-maj=31.0km s-min=5.3km az=92.0*

*IDC **10** 05:28:54.2±2.7, 18°.46N×145°.62E, h177^{km}±25^{km}, mb3.3/9, mb1 3.5/10, mb1mx3.3/46, mbtmp3.8/10, MS2.9/1, Ms1 2.9/1, ms1mx2.3/20, Error ellipse: s-maj=34.8km s-min=17.0km az=105.0*

ISC 10 05:28:51.9±0.7**, 18°.51N**±0°.07×**145°.8E**±0°.2**, h150**^{km}**, n25, σ1**^{s}**.14**/25**, mb3.8**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.97	190	P	Pn	05 30 05.9	+0.8
	7.5nm,0.3s,baz=174,slow=18,SNR=1.7						
GUMO				S	Sn	05 31 05.2	+3.1
	16nm,0.3s,baz=175,slow=22,SNR=1.7						
GUMO	Guam	4.97	190		Pn	05 30 04.4	-0.6
GUMO				IAML		05 31 17.6	
	280nm,1.7s						
JOW	Kunigami	18.14	300	P	P	05 32 53.5	+0.7
JOW				IAmb	IAmb	05 32 53.9	
	comp=Z,3.0nm,0.5s						
JGF	Kuroka	18.59	338	P	P	05 32 58.4	+0.9
JGF				IAmb	IAmb	05 33 11.4	
	comp=Z,36nm,1.4s						
KRVT	Keravat (AS076	23.50	164	LR	LR	05 43 57.8	
	comp=Z,29nm,18.0s,baz=228,slow=38						
WB0	Warramunga Arr	39.65	197	P	P	05 36 08.6	-0.7
WR0	Warramunga Arr	39.79	197	P	P	05 36 09.2	-1.3
WR0				IAmb	IAmb	05 36 11.3	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	39.83	197	P	P	05 36 09.7	-1.1
	comp=Z,0.7nm,0.2s,baz=14,slow=8.3,SNR=22						
WRA	Warramunga Arr	39.83	197	P	P	05 36 10.3	-0.5
FITZ	Fitzroy Crossi	41.42	210	P	P	05 36 23.5	-0.3
AS31	Alice Springs	43.49	196	P	P	05 36 39.4	-1.2
ASAR	Alice Springs	43.50	196	P	P	05 36 39.5	-1.1
	comp=Z,0.2nm,0.3s,baz=21,slow=7.1,SNR=8.6						
ASAR	Alice Springs	43.50	196	P	P	05 36 40.7	+0.2
DZM	Mont Dzumac	45.12	152	P	P	05 36 53.3	-0.2
	comp=Z,2.1nm,0.5s,baz=143,slow=20,SNR=1.0						
STKA	Stephens Creek	50.26	185	P	P	05 37 30.9	-2.0
	comp=Z,0.9nm,0.3s,baz=270,slow=3.0,SNR=3.1						
MKAR	Makanchi Array	58.65	314	P	P	05 38 32.6	-0.8
	comp=Z,0.2nm,0.5s,baz=88,slow=9.8,SNR=2.2						
PPLA	Purkeypile	61.03	28	P	P	05 38 51.2	+1.6
SKT	Skwentna	61.06	29	P	P	05 38 50.0	+0.4
SKT				IAmb	IAmb	05 38 54.9	
	comp=Z,2.8nm,1.1s						
TRF	Thorofare Moun	62.01	27	P	P	05 38 56.9	+0.7
TRF				IAmb	IAmb	05 39 19.7	
	comp=Z,4.4nm,1.3s						
ILAR	Eielson Array	63.78	26	P	P	05 39 07.2	-0.4
	comp=Z,0.2nm,0.6s,baz=251,slow=5.9,SNR=4.3						
BMAR	Burnt Mountain	65.25	23	P	P	05 39 17.9	+0.7
YKA	Yellowknife Ar	78.11	28	P	P	05 40 33.9	-0.2
	comp=Z,0.2nm,0.6s,baz=289,slow=4.5,SNR=3.8						
PINE	Pine Mountain	79.72	47	P	P	05 40 44.4	+0.9
PINE				IAmb	IAmb	05 40 45.3	

	comp=Z,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	**P**	**05 41 02.6**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=271,slow=5.6,SNR=9.4						
PDAR	**Pinedale Array**	**87.90**	**45**	P	**P**	**05 41 24.9**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=280,slow=5.4,SNR=5.0						

*KRSC **10** 05:31:41.7±1.5, 52°.59N×160°.07E, h48^{km}±15^{km}, ML4.2*
*IDC **10** 05:31:46.7±3.4, 52°.54N×159°.64E, h79^{km}±17^{km}, mb3.5/9, mb1 3.7/9, mb1mx3.4/51, mbtmp3.8/9, Error ellipse: s-maj=55.5km s-min=21.4km az=1.0*
ISC 10 05:31:43.7±1.2**, 52°.63N**±0°.05×**159°.97E**±0°.05**, h44**^{km}±10^{km}**, n48,** σ1^{s}**.79**/56**, mb3.8**/9**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.47**	**4**	*e*P	**Pn**	**05 31 53.9**	**-0.3**
SPN				*e*S	**Sn**	**05 32 00.9**	**-0.8**
NLC	**Nalytchevo**	**0.66**	**325**	*e*P	**Pn**	**05 31 56.7**	**0.0**
NLC				*e*S	**Sn**	**05 32 06.6**	**+0.6**
DALK	**Dalny**	**0.84**	**299**	*e*P	**Pn**	**05 31 59.0**	**-0.1**
DALK				*e*S	**Sn**	**05 32 09.7**	**-0.6**
PET	**Petropavlovsk**	**0.89**	**297**	*e*P	**Pn**	**05 31 59.6**	**-0.2**
PET				*e*S	**Sn**	**05 32 11.4**	**-0.1**
UGLR	**Uglovaya**	**0.90**	**310**	*e*P	**Pn**	**05 32 00.5**	**+0.4**
RUS	**Russkaya**	**0.91**	**258**	*e*P	**Pn**	**05 31 59.9**	**-0.2**
RUS				*e*S	**Sn**	**05 32 12.6**	**+0.6**
SMAR	**Somma**	**0.95**	**312**	*e*P	**Pn**	**05 32 00.7**	**-0.1**
AVH	**Avacha**	**0.98**	**311**	*e*P	**Pn**	**05 32 01.7**	**+0.6**
KRER	**Koryakskii**	**1.00**	**313**	*e*P	**Pn**	**05 32 02.1**	**+0.6**
KOK	**Koryaka**	**1.04**	**310**	*e*P	**Pn**	**05 32 02.5**	**+0.5**
KRX	**Arik**	**1.08**	**313**	*e*P	**Pn**	**05 32 02.8**	**+0.3**
MTVR	**Mutnovka**	**1.10**	**263**	*e*P	**Pn**	**05 32 03.0**	**+0.2**
MTVR				*e*S	**Sn**	**05 32 17.7**	**+0.8**
GRL	**Gorelyy**	**1.16**	**267**	*e*P	**Pn**	**05 32 04.4**	**+0.8**
GRL				*e*S	**Sn**	**05 32 19.9**	**+1.6**
ASAK	**Asacha**	**1.29**	**260**	*e*P	**Pn**	**05 32 06.2**	**+0.9**
ASAK				*e*S	**Sn**	**05 32 22.8**	**+1.4**
KDTR	**Khodutka, Kamc**	**1.43**	**236**	*e*P	**Pn**	**05 32 07.9**	**+0.8**
KDTR				*e*S	**Sn**	**05 32 26.2**	**+1.6**
KII	**Karymskiy**	**1.44**	**348**	*e*P	**Pn**	**05 32 08.0**	**+0.6**
PETK	**Petropavlovsk-**	**1.46**	**290**	P	**Pn**	**05 32 07.4**	**-0.2**
	145nm,0.3s,baz=101,slow=18,SNR=459						
PETK				S	**Sn**	**05 32 26.9**	**+1.4**
	46nm,0.3s,baz=249,slow=18,SNR=15						
GNL	**Ganaly**	**1.62**	**312**	*e*P	**Pn**	**05 32 11.2**	**+1.3**
APC	**Apacha**	**1.73**	**281**	*e*P	**Pn**	**05 32 12.8**	**+1.5**
MIPR	**Malaya Ipel'ka**	**2.00**	**261**	*e*P	**Pn**	**05 32 17.8**	**+2.9**
PAU	**Pauzhetka**	**2.27**	**240**	*e*P	**Pn**	**05 32 20.7**	**+2.0**
KZV	**Kizimen**	**2.50**	**4**	*e*P	**Pn**	**05 32 23.6**	**+1.7**
KZV				*e*S	**Sn**	**05 32 52.7**	**+1.5**
TUMR	**Tumrok**	**2.66**	**2**	*e*P	**Pn**	**05 32 26.3**	**+2.2**
TUMR				*e*S	**Sn**	**05 32 59.3**	**+4.1**
SKR	**Severo-Kuril’s**	**3.09**	**232**	*e*P	**Pn**	**05 32 32.1**	**+2.2**
SKR				*e*S	**Sn**	**05 33 06.8**	**+1.2**
KMNR	**Kamenistaya**	**3.14**	**3**	*e*P	**Pn**	**05 32 34.1**	**+3.5**
ESO	**Esso**	**3.38**	**348**	*e*P	**Pn**	**05 32 36.5**	**+2.5**
SRDR	**Sredinnyy**	**3.70**	**358**	*e*P	**Pn**	**05 32 40.3**	**+2.0**
KBTR	**Krutoberegovo**	**3.95**	**24**	*e*P	**Pn**	**05 32 44.0**	**+2.3**
KBG	**Krutoberegovo**	**3.97**	**23**	*e*P	**Pn**	**05 32 45.0**	**+3.1**
BDR	**Baidarnaya**	**4.01**	**10**	*e*P	**Pn**	**05 32 46.7**	**+4.1**
SRKR	**Sorokina**	**4.09**	**9**	*e*P	**Pn**	**05 32 47.7**	**+4.0**
BKI	**Bering**	**4.38**	**52**	*e*P	**Pn**	**05 32 47.7**	**0.0**
BKI				*e*S	**Sn**	**05 33 33.7**	**-3.7**
ILAR	**Eielson Array**	**29.20**	**45**	P	**P**	**05 37 41.6**	**+1.1**
	0.3nm,0.7s,baz=266,slow=7.8,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**33.28**	**168**	T	T	06 14 11.2	
	baz=352,slow=76,SNR=188						
H11N3	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	06 14 08.8	
	baz=352,slow=76,SNR=111						
H11N1	**WAKE ISLAND Hy**	**33.29**	**168**	T	T	06 14 09.6	
	baz=352,slow=76,SNR=146						
SONM	**Songino Array**	**33.94**	**284**	P	**P**	**05 38 21.4**	**-1.1**
	0.4nm,0.4s,baz=45,slow=10.0,SNR=2.4						
H11S1	**WAKE ISLAND Hy**	**34.46**	**169**	T	T	06 15 29.8	
	baz=352,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**34.47**	**169**	T	T	06 15 30.3	
	baz=352,slow=76,SNR=37						
H11S2	**WAKE ISLAND Hy**	**34.48**	**169**	T	T	06 15 36.7	
	baz=352,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**42.97**	**303**	P	**P**	**05 39 35.7**	**-2.3**
	0.4nm,0.4s,baz=46,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**48.29**	**296**	P	**P**	**05 40 18.1**	**-2.1**
	1.1nm,0.4s,baz=55,slow=6.5,SNR=33						
FINES	**FINESS Array B**	**60.52**	**337**	P	**P**	**05 41 48.1**	**-0.6**
	2.1nm,0.8s,baz=50,slow=3.7,SNR=6.5						
NB2	**NORSAR Subarra**	**63.97**	**344**	P	**P**	**05 42 11.5**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=23,slow=6.9						
NOA	**NORSAR Array B**	**63.97**	**344**	P	**P**	**05 42 10.4**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=23,slow=6.0,SNR=7.7						
AKASG	**Malin Array Be**	**68.97**	**329**	P	**P**	**05 42 42.3**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=28,slow=6.9,SNR=5.3						
TXAR	**Lajitas Array**	**70.89**	**67**	P	**P**	**05 42 57.9**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=295,slow=4.7,SNR=5.8						
GERES	**GERESS Array B**	**74.91**	**338**	P	**P**	**05 43 19.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=35,slow=4.9,SNR=5.0						

*IDC **10** 05:34:38.2±4.1, 0°.32N×12°.70W, h0^{km}, mb4.1/1, mb1 4.1/4, mb1mx3.5/53, mbtmp4.2/4, ML4.0/3, MS3.5/8, Ms1 3.4/8, ms1mx3.2/36, Error ellipse: s-maj=132.4km s-min=28.0km az=146.0*
ISC 10 05:34:38.2±2.6**, 0°.6N**±0°.3×**13°.4W**±0°.2**, h10**^{km}**, n17,** σ**3^{s}.53**/10**, MS3.4**/5**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.43**	**187**	T	T	05 43 02.4	
	baz=87,slow=74,SNR=70						
H10N3	**ASCENSION HYDR**	**8.44**	**187**	T	T	05 43 01.4	
	baz=7.2,slow=74,SNR=49						
H10N1	**ASCENSION HYDR**	**8.44**	**187**	T	T	05 43 02.4	
	SNR=98						
H10S3	**ASCENSION HYDR**	**9.55**	**188**	T	T	05 44 27.8	
	baz=24,slow=74,SNR=9.5						
H10S2	**ASCENSION HYDR**	**9.56**	**187**	T	T	05 44 29.4	
	baz=196,slow=74,SNR=4.4						
LIC	**Lamto**	**10.06**	**56**	*e*PKP1	**Pn**	**05 37 05.4**	**+2.5**
	24nm,0.7s						
TIC	**Toumodi**	**10.30**	**54**	*e*PKP1	**Pn**	**05 37 06.7**	**+0.5**
KIC	**Kosan Boka**	**10.37**	**56**	*e*PKP1	**Pn**	**05 37 06.3**	**-0.9**
	24nm,0.8s						
DBIC	**Dimbokro**	**10.45**	**54**	Pn	**Pn**	**05 37 05.7**	**-2.5**
	0.8nm,0.3s,baz=247,slow=11,SNR=25						
DBIC				Sn	**Sn**	**05 39 10.4**	**+4.9**
	1.7nm,0.3s,baz=270,slow=5.9,SNR=5.1						
DBIC				LR	LR	05 40 28.8	
	comp=Z,256nm,21.7s,baz=195,slow=35						
KOWA	**Kowa**	**16.65**	**33**	Pn	**Pn**	**05 38 30.7**	**-1.2**
	0.8nm,0.3s,baz=206,slow=14,SNR=31						
KOWA				Sn	**Sn**	**05 41 38.9**	**+1.9**
	0.5nm,0.3s,baz=30,slow=23,SNR=2.4						
KOWA				LR	LR	05 44 30.6	
	comp=Z,136nm,20.9s,baz=197,slow=36						
TORD	**Torodi Ar. Bea**	**19.48**	**50**	P	**P**	**05 39 03.3**	**-2.2**
	0.5nm,0.3s,baz=226,slow=11,SNR=18						
TORD				S	**Sn**	**05 42 39.5**	**-6.1**
	0.1nm,0.3s,baz=226,slow=23,SNR=3.5						
TORD				LR	LR	05 46 17.1	
	comp=Z,180nm,19.1s,baz=220,slow=36						
KEST	**Kesra**	**40.87**	**29**	LR	LR	05 58 02.4	
	comp=Z,55nm,21.5s,baz=236,slow=34						
BOSA	**Boshof**	**47.02**	**131**	LR	LR	05 59 34.5	
	comp=Z,33nm,19.5s,baz=135,slow=32						
CPUP	**Villa Florida**	**50.07**	**234**	LR	LR	06 02 16.0	
	comp=Z,34nm,20.2s,baz=74,slow=33						
EIL	**Elat**	**54.32**	**53**	LR	LR	06 08 53.7	
	comp=Z,78nm,18.2s,baz=237,slow=38						
PLCA	**Paso Flores**	**66.07**	**224**	LR	LR	06 12 00.4	
	comp=Z,32nm,18.1s,baz=152,slow=34						
FINES	**FINESS Array B**	**67.68**	**19**	P	**P**	**05 45 36.8**	**+1.4**
	1.3nm,0.8s,baz=235,slow=12,SNR=3.5						

WEL 10 06:13:35.1, 40°.1S±0°.9×**17°7E**±°**, h25**^{km}±1^{km}**, M3.1**/49**, ML3.5**/17**, MLv3.1**/49**, Error ellipse: s-maj=0.0km s-min=0.0km az=90.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.10**	**306**	P	Pb	06 13 40.1	+0.3
PXZ				S	Sb	06 13 43.9	+1.0
KAHZ	**Kahuranaki**	**0.30**	**347**	P	Pb	06 13 42.8	+0.5
KAHZ				S	Sn	06 13 48.8	-1.0
PRHZ	**Porangahau**	**0.31**	**235**	P	Pn	06 13 43.5	-0.6
PRHZ				S	Sn	06 13 49.6	-0.2
WPHZ	**Waipukurau**	**0.41**	**274**	P	Pb	06 13 44.2	+0.4
WPHZ				S	Sn	06 13 51.0	-1.2
CKHZ	**Cape Kidnapper**	**0.44**	**11**	P	Pb	06 13 45.0	+0.6
CKHZ				S	Sn	06 13 53.0	0.0
ANWZ	**Angora Road**	**0.53**	**226**	P	Pn	06 13 46.8	-0.3
ANWZ				S	Sn	06 13 56.6	+1.4
PNHZ	**Pukenui**	**0.62**	**286**	P	Pb	06 13 47.3	-0.1
PNHZ				S	Sb	06 13 56.3	+0.7
KRHZ	**Kereru**	**0.64**	**314**	P	Pb	06 13 47.5	-0.2
KRHZ				S	Sb	06 13 56.7	+0.4
DVHZ	**Dannevirke**	**0.65**	**251**	P	Pb	06 13 48.3	+0.4
DVHZ				S	Sn	06 13 58.0	-0.2
MCHZ	**McNeill Hill**	**0.68**	**342**	P	Pb	06 13 48.6	+0.2
MCHZ				S	Sn	06 13 59.6	+0.7
TSZ	**Takapari Road**	**0.77**	**272**	P	Pb	06 13 49.7	-0.2
TSZ				S	Sb	06 14 00.3	+0.2
KWHZ	**Kaweka Forest**	**0.79**	**328**	P	Pb	06 13 49.8	-0.4
KWHZ				S	Sn	06 14 02.0	+0.3
BFZ	**Birch Farm**	**0.81**	**223**	P	Pb	06 13 50.5	0.0
ARHZ	**Aropaoanui**	**0.83**	**1**	P	Pb	06 13 50.6	-0.2
PRWZ	**Pori Road**	**0.89**	**238**	P	Pn	06 13 52.2	+0.1
PRWZ				S	Sn	06 14 06.3	+2.1
BHHZ	**Black Hill Sta**	**0.92**	**310**	P	Pb	06 13 51.7	-0.8
BHHZ				S	Sb	06 14 03.9	-0.4
POWZ	**Post Office Ro**	**0.97**	**252**	P	Pb	06 13 53.5	+0.3
BKZ	**Black Stump Fm**	**0.99**	**338**	P	Pn	06 13 52.9	-0.6
BKZ				S	Sn	06 14 08.4	+1.6
NMHZ	**Naumai**	**1.00**	**353**	P	Pn	06 13 53.3	-0.4
CPWZ	**Castlepoint**	**1.00**	**215**	P	Pn	06 13 53.5	-0.1
WHHZ	**Waihua**	**1.03**	**12**	P	Pn	06 13 53.4	-0.6
TIWZ	**Tintock**	**1.07**	**230**	P	Pn	06 13 54.7	+0.1
TIWZ				S	Sn	06 14 08.8	+0.1
MOVZ	**Moawhango**	**1.16**	**306**	P	Pn	06 13 55.7	-0.1
MOVZ				S	Sn	06 14 10.5	-0.4
RAHZ	**Arahi**	**1.18**	**4**	P	Pn	06 13 55.5	-0.5
MHGZ	**Mahia Peninsul**	**1.19**	**38**	P	Pn	06 13 55.7	-0.4
KNZ	**Kokohu**	**1.20**	**27**	P	Pn	06 13 55.1	-1.2
MRZ	**Mangatainoka R**	**1.20**	**241**	P	Pn	06 13 55.9	-0.5
MRZ				S	Sn	06 14 11.6	-0.3
MTHZ	**Maungataniwha**	**1.24**	**355**	P	Pn	06 13 56.3	-0.6
WNVZ	**Wahianoa**	**1.30**	**305**	P	Pn	06 13 58.2	+0.4
TMWZ	**Te Maipa**	**1.30**	**219**	P	Pn	06 13 57.2	-0.6
TUVZ	**Tukino**	**1.30**	**309**	P	Pb	06 13 59.1	+0.1
MRHZ	**Matea Rd**	**1.33**	**341**	P	Pn	06 13 57.9	-0.2
WHVZ	**Whangaehu Hut**	**1.34**	**307**	P	Pn	06 13 58.8	+0.4
WHVZ				S	Sb	06 14 16.6	+0.2
SNGZ	**Shannon Statio**	**1.34**	**13**	P	Pn	06 13 58.1	-0.1
TRVZ	**Turoa**	**1.35**	**305**	P	Pn	06 13 59.0	+0.4
TRVZ				S	Sb	06 14 16.8	0.0
DRZ	**Dome Shelter**	**1.36**	**306**	P	Pb	06 14 02.1	+2.1
ETVZ	**East Tongariro**	**1.36**	**314**	P	Pb	06 13 59.9	-0.1
PRGZ	**Paritu Road**	**1.36**	**32**	P	Pn	06 13 57.5	-1.1
OTVZ	**Oturere**	**1.37**	**312**	P	Pn	06 13 59.3	+0.6
HOWZ	**Holdsworth Sta**	**1.37**	**234**	P	Pn	06 13 57.8	-0.8
FWVZ	**Far West T-bar**	**1.38**	**307**	P	Pn	06 13 59.3	+0.4
NGZ	**Ngauruhoe**	**1.40**	**310**	P	Pn	06 13 59.7	+0.6
RITZ	**Rihia Road**	**1.41**	**322**	P	Pb	06 14 00.8	+0.1
KRVZ	**Karewarewa**	**1.43**	**314**	P	Pb	06 14 00.4	-0.8
WTVZ	**West Tongariro**	**1.44**	**312**	P	Pb	06 14 00.7	-0.7
RTZ	**Ruatahuna**	**1.47**	**0**	P	Pn	06 13 59.5	-0.6
PKVZ	**Pokaka**	**1.48**	**302**	P	Pb	06 14 03.2	+1.1
KATZ	**Kakaramea**	**1.49**	**318**	P	Pb	06 14 02.4	+0.3
RIGZ	**Rimuhau**	**1.51**	**24**	P	Pn	06 13 59.4	-1.2
RATZ	**Rangitukua**	**1.53**	**322**	P	Pb	06 14 03.6	+0.7
MTW	**Mount Morrison**	**1.54**	**226**	P	Pn	06 13 59.8	-1.2
OGWZ	**Otaki Gorge**	**1.55**	**242**	P	Pn	06 14 01.0	-0.2
TWVZ	**Taurewa**	**1.56**	**310**	P	Pb	06 14 03.1	-0.3
WAZ	**Wanganui**	**1.56**	**282**	P	Pb	06 14 04.5	+1.2
MUGZ	**Murupara**	**1.62**	**355**	P	Pn	06 14 01.5	-0.5
RAGZ	**Rawiri**	**1.63**	**12**	P	Pn	06 14 01.2	-1.1
PRRZ	**Plateau Road**	**1.65**	**344**	P	Pn	06 14 02.3	-0.2
KIW	**Kapiti Island**	**1.75**	**243**	P	Pn	06 14 03.4	-0.5
CAW	**Cannon Point**	**1.77**	**234**	P	Pn	06 14 03.1	-1.0
RRRZ	**Republican Roa**	**1.79**	**348**	P	Pn	06 14 04.5	+0.1
TKGZ	**Te Karaka**	**1.79**	**23**	P	Pn	06 14 03.0	-1.3
MWZ	**Matawai**	**1.81**	**14**	P	Pn	06 14 03.2	-1.5
URZ	**Urewera**	**1.83**	**4**	P	Pn	06 14 03.9	-1.1
MSWZ	**Moikau Station**	**1.86**	**224**	P	Pn	06 14 04.1	-1.3
TARZ	**Mount Tarawera**	**1.89**	**349**	P	Pn	06 14 05.6	-0.2
VRZ	**Vera Road**	**1.96**	**299**	P	Pb	06 14 13.6	+3.4
PLWZ	**Palliser**	**1.97**	**221**	P	Pn	06 14 05.0	-1.9
RUGZ	**Raukumara Rang**	**2.19**	**15**	P	Pn	06 14 08.7	-1.4
PUZ	**Puketiti**	**2.25**	**27**	P	Pn	06 14 08.7	-2.1
TCW	**Tory Channel**	**2.33**	**240**	P	Pn	06 14 11.2	-0.6
NEZ	**North Egmont**	**2.36**	**289**	P	Pb	06 14 19.9	+2.9
HAZ	**Te Kaha**	**2.42**	**16**	P	Pn	06 14 11.6	-1.4
WMGZ	**Waiomatatini S**	**2.53**	**27**	P	Pn	06 14 12.7	-1.9
QRZ	**Quartz Range**	**3.46**	**256**	P	Pn	06 14 28.1	+0.7
CTZ	**Chatham Island**	**6.01**	**129**	P	Pn	06 15 02.6	+0.2

*TUL **10** 06:14:03.3±1.2, 36°.27N±0°.01×97°.25W±0°.01, h5^{km}±7^{km}, ML3.0, mb_Lg3.2/95(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=203.0*
*ANF **10** 06:14:03.6±0.8, 36°.25N×97°.20W, h0^{km}, ML3.8/7, Error ellipse: s-maj=9.1km s-min=2.6km az=161.0*
*NEIC **10** 06:14:03.5±1.0, 36°.27N±0°.01×97°.25W±0°.01, h1^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.5km az=202.0*
ISC 10 06:14:03.3±1.0**, 36°.30N**±0°.02×**97°.24W**±0°.02**, h6**^{km}±10^{km}**, n81,** σ**1^{s}.16**/57**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	**Quay**	**0.44**	**106**		**Pg**	**06 14 12.3**	**+0.4**
QUOK				Sg	**Sg**	**06 14 18.5**	**+0.8**
OK031	**S. Brethren Rd**	**0.47**	**137**		**Pg**	**06 14 12.6**	**+0.2**
OK031				Sg	**Sg**	**06 14 18.9**	**+0.4**
OK030	**Cody Creek RV**	**0.52**	**135**		**Pg**	**06 14 13.6**	**+0.2**
OK030				Sg	**Sg**	**06 14 20.5**	**+0.4**
CROK	**Carrier**	**0.64**	**289**	Pg	**Pg**	**06 14 15.6**	**-0.1**
CROK				Sg	**Sg**	**06 14 24.4**	**+0.4**
OK025	**Westminster Rd**	**0.72**	**187**		**Pg**	**06 14 16.7**	**-0.4**
KAN13	**South Haven SW**	**0.74**	**345**		**Pg**	**06 14 17.9**	**+0.3**
KAN13				Sg	**Sb**	**06 14 28.4**	**-0.7**
GC02	**Grant County #**	**0.75**	**318**		**Pg**	**06 14 18.0**	**+0.3**
T35A	**Sooner Cattle**	**0.85**	**43**	Pg	**Pb**	**06 14 20.2**	**-0.3**
T35A				Sg	**Sb**	**06 14 31.6**	**-0.5**
T35B	**Sooner Cattle**	**0.85**	**43**	P		06 14 20.1	
	baz=223,SNR=97						
T35B				S		06 14 31.7	
	baz=223						
KAN14	**Manchester OK**	**0.88**	**319**		**Pg**	**06 14 20.4**	**+0.1**
KAN14				Sg	**Sg**	**06 14 32.1**	**+0.3**
OKCFA	**Oklahoma City**	**0.90**	**191**	Pg	**Pg**	**06 14 19.8**	**-0.8**
OKCFA				Sg	**Sg**	**06 14 31.8**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.90**	**191**		**Pg**	**06 14 20.0**	**-0.7**
FNO	**Franklin**	**1.04**	**187**		**Pg**	**06 14 22.4**	**-1.0**
FNO				Sg	**Sg**	**06 14 36.5**	**-0.5**
KAN10	**Anthony SW Sta**	**1.08**	**320**		**Pg**	**06 14 24.0**	**0.0**
KAN10				Sg	**Sg**	**06 14 38.2**	**+0.2**
KAN08	**Anthony NE Sta**	**1.10**	**328**		**Pb**	**06 14 24.4**	**-0.4**
KAN08				Sg	**Sb**	**06 14 39.3**	**-0.1**
KAN12	**Harper NE Stat**	**1.17**	**329**		**Pb**	**06 14 25.6**	**-0.4**
KAN12				Sg	**Sg**	**06 14 41.5**	**+0.4**
W35A	**Tecumseh**	**1.18**	**165**		**Pb**	**06 14 24.3**	**-1.7**
W35A				Sg	**Sb**	**06 14 40.6**	**-0.9**
TUL1	**Leonard**	**1.23**	**108**	P	**Pn**	**06 14 26.0**	**-1.0**
	baz=287						
TUL1				S	**Sn**	**06 14 42.8**	**-1.2**
	baz=287						
TUL1	**Leonard**	**1.23**	**108**		**Pn**	**06 14 26.0**	**-1.0**
TUL1				Sg	**Sn**	**06 14 42.8**	**-1.2**
TUL1	**Leonard**	**1.23**	**108**	P		06 14 26.0	
	baz=287,SNR=121						
TUL1				S		06 14 42.7	
	baz=287						
U32A	**Winter Ranch,**	**1.43**	**274**		**Pn**	**06 14 29.3**	**-0.5**
U32A	**Winter Ranch,**	**1.43**	**274**	P		06 14 29.2	
	baz=94						
U32A				S		06 14 49.0	
	baz=94						
WMOK	**Wichita Mounta**	**2.00**	**220**	P	**Pn**	**06 14 38.1**	**+0.5**
	baz=39						
WMOK				S	**Sb**	**06 15 05.0**	**-0.3**
	baz=39						
WMOK	**Wichita Mounta**	**2.00**	**220**	Pn	**Pn**	**06 14 38.5**	**+0.8**
WMOK	**Wichita Mounta**	**2.00**	**220**	P		06 14 38.1	
	baz=39						
WMOK				S		06 15 05.0	
	baz=39						
X37A	**Clayton**	**2.28**	**138**	Pn	**Pb**	**06 14 43.1**	**-1.8**
X37A				IAmb_Lg		06 15 19.2	
	comp=Z,111nm,0.8s						
X37A	**Clayton**	**2.28**	**138**	P		06 14 42.2	
	baz=318						
X37A				S		06 15 11.1	
	baz=318						
U38A	**Gravette**	**2.30**	**86**		**Pb**	**06 14 43.5**	**-1.7**
U38A	**Gravette**	**2.30**	**86**	P		06 14 43.5	
	baz=267,SNR=60						
R32A	**Long Quarter,**	**2.43**	**331**		**Pb**	**06 14 45.9**	**-1.5**
R32A				IAmb_Lg		06 15 25.6	
	comp=Z,65nm,1.0s						
R32A	**Long Quarter,**	**2.43**	**331**	S		06 15 15.2	
	baz=151						
HHAR	**Hobbs**	**2.66**	**89**		**Pn**	**06 14 47.5**	**+0.8**
HHAR	**Hobbs**	**2.66**	**89**	P		06 14 48.1	
	baz=271						
KSU1	**Kansas State U**	**2.84**	**10**	Pn	**Pb**	**06 14 51.7**	**-2.8**
KSU1	**Kansas State U**	**2.84**	**10**	P		06 14 51.0	
	baz=190						
Z35A	**Perchaven, San**	**2.96**	**180**	Pn	**Pn**	**06 14 52.9**	**+2.1**
Z35A	**Perchaven, San**	**2.96**	**180**	P		06 14 51.5	
	baz=0.1						
Z35A				S		06 15 26.9	
	baz=0.1						
W39A	**Magazine**	**3.01**	**110**		**Pn**	**06 14 53.6**	**+2.1**
W39A				IAmb_Lg		06 15 45.8	
	comp=Z,95nm,1.1s						
W39A	**Magazine**	**3.01**	**110**	P		06 14 52.7	
	baz=292						
CBKS	**Cedar Bluff**	**3.21**	**322**	P		06 14 54.7	
	baz=141						
S39A	**Bolivar**	**3.43**	**65**		**Pn**	**06 14 58.6**	**+1.4**
S39A				IAmb_Lg		06 16 00.9	
	comp=Z,46nm,0.8s						
S39A	**Bolivar**	**3.43**	**65**	P		06 14 58.7	
	baz=247,SNR=35						
MIAR	**Mount Ida**	**3.46**	**119**	P	**Pn**	**06 14 58.8**	**+1.1**
	baz=301						
MIAR				S	**Sn**	**06 15 40.5**	**+1.5**
	baz=301						
MIAR	**Mount Ida**	**3.46**	**119**	Pn	**Pn**	**06 14 58.5**	**+0.8**
MIAR				IAmb_Lg		06 15 54.5	
	comp=Z,44nm,0.8s						
MIAR	**Mount Ida**	**3.46**	**119**	P		06 14 58.7	
	baz=301,SNR=19						
U40A	**Yellville**	**3.54**	**88**	Pb	**Pb**	**06 15 06.3**	**-0.1**
	baz=270						
U40A	**Yellville**	**3.54**	**88**	Pn	**Pn**	**06 14 60.0**	**+1.2**
U40A	**Yellville**	**3.54**	**88**	P		06 15 00.0	
	baz=270,SNR=14						
U40A				P		06 15 00.0	
	baz=270,SNR=14						
X40A	**Basin Creek Fa**	**4.02**	**115**	P	**Pn**	**06 15 07.1**	**+1.7**
	baz=298						
X40A	**Basin Creek Fa**	**4.02**	**115**		**Pn**	**06 15 06.6**	**+1.1**
X40A				IAmb_Lg		06 16 15.5	
	comp=Z,50nm,0.8s						
X40A	**Basin Creek Fa**	**4.02**	**115**	P		06 15 06.6	
	baz=298,SNR=9.3						
X40A				P		06 15 06.6	
	baz=298,SNR=9.3						
MGMO	**Mountain Grove**	**4.08**	**76**		**Pn**	**06 15 07.7**	**+1.4**
WHAR	**Wooly Hollow**	**4.14**	**103**	IAmb_Lg		06 16 17.3	
	comp=Z,74nm,1.0s						
ABTX	**Abilene, Hawle**	**4.17**	**209**	Pb	**Pb**	**06 15 17.2**	**+0.1**
	baz=28						
ABTX				Sb	**Sb**	**06 16 11.5**	**+3.8**
	baz=28						
ABTX	**Abilene, Hawle**	**4.17**	**209**	IAmb_Lg		06 16 17.3	
	comp=Z,40nm,1.0s						
W41B	**Gary Mavity, V**	**4.21**	**104**	IAmb_Lg		06 16 18.5	
	comp=Z,50nm,0.8s						
W41B	**Gary Mavity, V**	**4.21**	**104**	P		06 15 09.2	
	baz=287,SNR=8.2						
UALR	**University of**	**4.27**	**109**	IAmb_Lg		06 16 29.0	
	comp=Z,45nm,0.9s						
WLAR	**White Oak Lake**	**4.27**	**126**	IAmb_Lg		06 16 24.4	
	comp=Z,42nm,0.8s						
WHTX	**Lake Whitney,**	**4.30**	**183**	P	**Pn**	**06 15 10.4**	**+1.2**
	baz=2.3						
WHTX	**Lake Whitney,**	**4.30**	**183**		**Pn**	**06 15 09.6**	**+0.4**
P38A	**Dawn**	**4.43**	**40**	IAmb_Lg		06 16 33.6	
	comp=Z,45nm,0.8s						
R40A	**Maddies Statio**	**4.43**	**62**	IAmb_Lg		06 16 24.2	
	comp=Z,52nm,0.7s						
R40A	**Maddies Statio**	**4.43**	**62**	P		06 15 12.6	
	baz=244,SNR=8.9						
Z41A	**Richland Creek**	**4.74**	**128**	IAmb_Lg		06 16 41.6	
	comp=Z,32nm,0.8s						
LCAR	**Lake Charles**	**4.92**	**91**	IAmb_Lg		06 16 39.9	
	comp=Z,31nm,0.8s						
T42A	**Van Buren**	**4.99**	**80**	IAmb_Lg		06 16 39.9	
	comp=Z,52nm,1.0s						
NATX	**Nacogdoches**	**5.00**	**154**	IAmb_Lg		06 16 54.7	
	comp=Z,34nm,0.9s						
KSCO	**Kaye Shedlock’**	**5.07**	**304**	IAmb_Lg		06 16 50.7	
	comp=Z,33nm,0.9s						
CCAR	**Cane Creek**	**5.07**	**116**	IAmb_Lg		06 16 56.1	
	comp=Z,52nm,1.1s						
CCM	**Cathedral Cave**	**5.10**	**68**	IAmb_Lg		06 16 56.5	
	comp=Z,53nm,0.9s						
P40A	**Paris**	**5.22**	**50**	IAmb_Lg		06 16 55.3	
	comp=Z,52nm,0.8s						
N38A	**Joes South For**	**5.48**	**34**	IAmb_Lg		06 17 10.7	
	comp=Z,47nm,0.8s						
X43A	**Marvell**	**5.48**	**107**	IAmb_Lg		06 16 57.2	
	comp=Z,28nm,0.9s						
PBMO	**Poplar Bluff**	**5.50**	**83**	IAmb_Lg		06 16 54.2	
	comp=Z,33nm,0.7s						
435B	**Jarrell**	**5.51**	**183**	IAmb_Lg		06 17 01.5	
	comp=Z,38nm,1.0s						
FVM	**French Village**	**5.69**	**71**	IAmb_Lg		06 17 06.0	
	comp=Z,46nm,0.8s						
L34A	**Svendsen Farm,**	**5.70**	**6**	IAmb_Lg		06 17 18.8	
	comp=Z,52nm,0.8s						
T25A	**Trinidad**	**5.83**	**280**	IAmb_Lg		06 17 12.6	
	comp=Z,25nm,0.9s						
PEBM	**Pemiscott Bayo**	**5.96**	**90**	IAmb_Lg		06 17 22.7	
	comp=Z,51nm,0.7s						
OGNE	**Ogallala**	**5.97**	**322**	IAmb_Lg		06 17 23.7	
	comp=Z,29nm,0.8s						
143A	**Socs Landing,**	**6.00**	**125**	IAmb_Lg		06 17 26.8	
	comp=Z,23nm,0.9s						
SLM	**Saint Louis**	**6.04**	**65**	IAmb_Lg		06 17 12.8	
	comp=Z,30nm,0.9s						
PARMO	**Parma**	**6.04**	**84**	IAmb_Lg		06 17 28.5	
	comp=Z,39nm,0.8s						
S44A	**Carbondale**	**6.54**	**75**	IAmb_Lg		06 17 44.8	
	comp=Z,39nm,0.8s						
SIUC	**Southern Illin**	**6.57**	**75**	IAmb_Lg		06 17 41.3	
	comp=Z,39nm,0.8s						
W45A	**Hickory Valley**	**6.64**	**97**	IAmb_Lg		06 17 39.9	
	comp=Z,29nm,0.7s						
Y45A	**Yeager Farm, C**	**6.76**	**109**	IAmb_Lg		06 17 50.0	
	comp=Z,39nm,1.1s						
T45A	**Paducah**	**6.94**	**81**	IAmb_Lg		06 17 55.1	
	comp=Z,36nm,0.8s						
L40A	**Anamosa**	**7.41**	**37**	IAmb_Lg		06 18 01.4	
	comp=Z,30nm,0.7s						
WVT	**Waverly**	**7.61**	**88**	IAmb_Lg		06 18 10.2	
	comp=Z,12nm,0.9s						
PHWY	**Pilot Hill**	**8.13**	**310**	IAmb_Lg		06 18 30.5	
	comp=Z,16nm,0.9s						
N23A	**Red Feather La**	**8.22**	**307**	IAmb_Lg		06 18 35.2	
	comp=Z,23nm,1.1s						
Y22D	**IRIS PASSCAL I**	**8.23**	**257**	IAmb_Lg		06 18 34.2	
	comp=Z,25nm,1.0s						
V48A	**Smith Brothers**	**8.46**	**91**	IAmb_Lg		06 18 45.1	
	comp=Z,14nm,1.1s						
P46A	**Rosedale**	**8.59**	**64**	IAmb_Lg		06 18 36.9	
	comp=Z,29nm,0.7s						
WCI	**Wyandotte Cave**	**8.93**	**74**	IAmb_Lg		06 18 48.1	
	comp=Z,21nm,0.9s						
RSSD	**Black Hills**	**9.38**	**328**	IAmb_Lg		06 19 18.4	
	comp=Z,8.3nm,0.8s						
W50A	**Signal Mountai**	**9.75**	**93**	IAmb_Lg		06 19 22.7	
	comp=Z,18nm,0.8s						

*UPA **10** 06:17:53.3±2.4, 8°.34N×77°.11W, h17^{km}±6^{km}, MW5.0*
*RSNC **10** 06:17:54.3±1.0, 8°.36N×77°.17W, h40^{km}±10^{km}, ML4.2, Mw4.2, Fault plane solution: NP1:ϕ_s155.00000°,*

δ28.00000°,λ111.00000°.

*IDC **10** 06:17:54.4±2.4, 8°.56N×77°.01W, h38^{km}±21^{km}, mb3.9/14, mb1 4.2/19, mb1mx4.0/35, mbtmp4.2/19, ML3.6/5, MS3.5/13, Ms1 3.5/13, ms1mx3.3/32, Error ellipse: s-maj=18.8km s-min=12.4km az=40.0*

*NEIC **10** 06:17:55.4±2.3, 8°.46N±0°.07×77°.13W±0°.06, h40^{km}±8^{km}, mb4.4/20, Error ellipse: s-maj=10.3km s-min=7.8km az=216.0*

ISC 10 06:17:54.3±0.5**, 8°.41N**±0°.03×**77°.09W**±0°.03**, h38**^{km}±1^{km}**, n148, σ1^{s}.71**/179**, mb4.3**/25**, MS3.4**/9**, 7C-4D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPC	**Capurgana**	**0.34**	**312**	⇑*i*P	**Pn**	**06 18 02.1**	**-0.7**
CAPC				*e*S	**Sn**	**06 18 09.1**	**-0.4**
CAPC				*i*		06 18 10.8	
	comp=Z,36µm,0.2s						
CAP2	**Capurgana**	**0.36**	**313**	*e*P	**Pn**	**06 18 02.2**	**-0.8**
CAP2				*e*S	**Sn**	**06 18 09.1**	**-0.6**
UPD2	**Meteti**	**0.92**	**279**	*e*P	**Pn**	**06 18 09.3**	**-1.5**
UPD2				*e*S	**Sn**	**06 18 22.2**	**-0.7**
UPD2	**Meteti**	**0.92**	**279**	⇑*i*P	**Pn**	**06 18 09.3**	**-1.5**
UPD2				*e*S	**Sn**	**06 18 21.6**	**-1.2**
PTAC	**Punta Ardita,**	**1.44**	**210**	⇓*i*P	**Pn**	**06 18 15.6**	**-2.3**
PTAC				*e*S	**Sn**	**06 18 32.4**	**-3.1**
PTAC				*i*		06 18 36.6	
	comp=Z,5µm,0.4s						
MOTC	**Monteria, Cord**	**1.46**	**75**	⇓*i*P	**Pn**	**06 18 18.8**	**+0.6**
MOTC				*e*S	**Sn**	**06 18 38.3**	**+2.2**
MOTC				*i*		06 18 41.1	
	comp=Z,1µm,0.5s						
MONA	**Monteria**	**1.46**	**76**	*e*P	**Pn**	**06 18 18.9**	**+0.6**
MONA				*e*S	**Sn**	**06 18 38.3**	**+2.1**
DBBC	**Dabeiba**	**1.63**	**148**	⇑*i*P	**Pn**	**06 18 20.2**	**-0.5**
DBBC				*e*S	**Sn**	**06 18 40.3**	**-0.2**
UREC	**San Jos de Ur**	**1.68**	**113**	⇑*e*P	**Pn**	**06 18 21.1**	**-0.1**
UREC				*e*S	**Sn**	**06 18 41.9**	**+0.4**
UREC				*i*		06 18 44.0	
	comp=Z,2µm,0.3s						
CNTA3	**Canitas, Panam**	**1.95**	**295**	*e*P	**Pn**	**06 18 24.0**	**-1.0**
CNTA3				*e*S	**Sn**	**06 18 49.2**	**+1.0**
SOLC	**Bahia Solano**	**2.19**	**188**	⇓*e*P	**Pn**	**06 18 27.4**	**-0.8**
SOLC				*e*S	**Sn**	**06 18 52.6**	**-1.4**
SOLC				*i*		06 19 09.5	
	comp=Z,711nm,0.6s						
ZARC	**Zaragoza, Cauc**	**2.39**	**112**	⇑*i*P	**Pn**	**06 18 31.2**	**+0.2**
ZARC				*e*S	**Sn**	**06 19 00.8**	**+1.7**
ZARC				*i*		06 19 01.1	
	comp=Z,3µm,0.4s						
SJCC	**San Jacinto, C**	**2.40**	**52**	*e*P	**Pn**	**06 18 31.7**	**+0.5**
SJCC				*e*S	**Sn**	**06 19 01.1**	**+1.7**
SJCC	**San Jacinto, C**	**2.40**	**52**	⇓*i*P	**Pn**	**06 18 31.5**	**+0.3**
SJCC				*e*S	**Sn**	**06 19 00.9**	**+1.4**
TABO3	**Taboga, Panama**	**2.46**	**279**	*e*P	**Pn**	**06 18 32.0**	**+0.1**
TABO3				*e*S	**Sn**	**06 19 01.7**	**+0.9**
FLAM	**Flamenco Islan**	**2.47**	**282**	*e*P	**Pn**	**06 18 32.7**	**+0.6**
FLAM				*e*S	**Sn**	**06 19 01.4**	**+0.4**
UPA	**Univ. de Panam**	**2.48**	**284**	*e*P	**Pn**	**06 18 32.8**	**+0.6**
UPA				*e*S	**Sn**	**06 19 02.2**	**+1.0**
MIRA3	**Miramar, Colon**	**2.50**	**298**	*e*P	**Pn**	**06 18 33.8**	**+1.3**
ARRA3	**Arraijan, Pana**	**2.59**	**283**	*e*P	**Pn**	**06 18 32.9**	**-0.9**
ARRA3				*e*S	**Sn**	**06 19 05.8**	**+1.7**
GAMB1	**Gamboa**	**2.68**	**286**	*e*P	**Pn**	**06 18 34.9**	**-0.1**
GAMB1				*e*S	**Sn**	**06 19 07.5**	**+1.2**
CHOR3	**La Chorrera**	**2.69**	**281**	*e*P	**Pn**	**06 18 34.4**	**-0.7**
CHOR3				*e*S	**Sn**	**06 19 06.2**	**-0.2**
HELC	**Santa Helena**	**2.69**	**145**	*e*P	**Pn**	**06 18 35.5**	**0.0**
HELC				*e*S	**Sn**	**06 19 08.5**	**+1.5**
HELC	**Santa Helena**	**2.69**	**145**	⇑*i*P	**Pn**	**06 18 35.4**	**-0.1**
HELC				*e*S	**Sn**	**06 19 07.5**	**+0.5**
HELC				*i*		06 19 26.4	
	comp=Z,430nm,0.7s						
CBOC	**Ciudad Bolivar**	**2.74**	**157**	*e*P	**Pn**	**06 18 37.1**	**+1.1**
ZANG	**Zanguenga, Cho**	**2.80**	**281**	*e*P	**Pn**	**06 18 35.8**	**-0.8**
ZANG				*e*S	**Sn**	**06 19 13.2**	**+4.1**
BCIP	**Isla Barro Col**	**2.82**	**286**	*e*P	**Pn**	**06 18 36.1**	**-0.7**
BCIP				*e*S	**Sn**	**06 19 12.3**	**+2.8**
BCIP	**Isla Barro Col**	**2.82**	**286**	Pn	**Pn**	**06 18 36.2**	**-0.6**
BCIP				Sn	**Sn**	**06 19 10.5**	**+0.9**
BCIP	**Isla Barro Col**	**2.82**	**286**	*e*P	**Pn**	**06 18 35.6**	**-1.2**
SPIL	**Cristobal, Col**	**2.93**	**287**	*e*P	**Pn**	**06 18 38.6**	**+0.2**
SPIL				*e*S	Sn	06 19 22.8	+10
VTON	**El Valle, Cocl**	**2.99**	**274**	*e*P	**Pn**	**06 18 38.6**	**-0.8**
VTON				*e*S	**Sn**	**06 19 18.0**	**+3.9**
SMLC	**San Martn de**	**3.01**	**82**	*e*P	**Pn**	**06 18 40.2**	**+0.7**
ARGC	**Ariguani, Magd**	**3.16**	**63**	*e*P	**Pn**	**06 18 42.2**	**+0.6**
PNME	**Penonome**	**3.20**	**272**	*e*P	**Pn**	**06 18 41.0**	**-1.1**
PNME				*e*S	**Sn**	**06 19 18.0**	**-1.0**
AZU	**Azuero**	**3.21**	**259**	*e*P	**Pn**	**06 18 42.1**	**-0.1**
AZU				*e*S	**Sn**	**06 19 16.4**	**-2.8**
PLMC	**San Jos del P**	**3.57**	**167**	*e*P	**Pn**	**06 18 46.0**	**-1.3**
NORC	**Norcasia**	**3.58**	**142**	*e*P	**Pn**	**06 18 48.2**	**+0.8**
BRRC	**Barranca, Sant**	**3.59**	**111**	*e*P	**Pn**	**06 18 48.5**	**+1.0**
OCAC	**Ocana**	**3.74**	**92**	*e*P	**Pn**	**06 18 50.6**	**+0.9**
CACAO	**El Cacao, Vera**	**3.88**	**254**	*e*P	**Pn**	**06 18 52.0**	**+0.5**
CACAO				*e*S	**Sn**	**06 19 35.4**	**-0.3**
PONU3	**Ponuga, Veragu**	**3.88**	**263**	*e*P	Pn	06 19 02.5	+11
PONU3				*e*S	Sn	06 19 46.8	+11
RREF	**El Recreo**	**3.89**	**153**	*e*P	**Pn**	**06 18 55.4**	**+3.2**
MARI3	**Mariato, Verag**	**3.93**	**259**	*e*S	**Sn**	**06 19 43.4**	**+6.3**
SMRC	**Santa Marta, M**	**3.94**	**46**	*e*P	**Pn**	**06 18 53.4**	**+1.1**
MESA3	**La Mesa, Verag**	**4.06**	**267**	*e*P	**Pn**	**06 18 54.2**	**+0.3**
MESA3				*e*S	Sn	06 19 50.1	+10
SPBC	**San Pablo de B**	**4.06**	**132**	*e*P	**Pn**	**06 18 53.6**	**-0.5**
CNAZ3	**Canazas, Verag**	**4.07**	**270**	*e*P	**Pn**	**06 18 53.9**	**-0.2**
CNAZ3				*e*S	**Sn**	**06 19 48.6**	**+8.0**
GMAL	**Guarumal, Vera**	**4.15**	**261**	*e*P	**Pn**	**06 18 55.7**	**+0.5**
GMAL				*e*S	**Sn**	**06 19 41.0**	**-1.4**
TOLC	**Tolima**	**4.18**	**155**	*e*P	**Pn**	**06 18 59.1**	**+3.1**
ANIL	**Santa Ana**	**4.24**	**157**	*e*P	**Pn**	**06 18 59.9**	**+3.3**
CVALL	**Valledupar, Ce**	**4.32**	**61**	*e*P	**Pn**	**06 18 58.1**	**+0.6**
YOTC	**Yotoco, Valle**	**4.46**	**170**	*e*P	**Pn**	**06 18 58.7**	**-0.8**
PAMC	**Pamplona, Colo**	**4.48**	**103**	*e*P	**Pn**	**06 19 01.3**	**+1.2**
ROSC	**El Rosal**	**4.49**	**142**	Pn	**Pn**	**06 19 02.5**	**+2.3**
	comp=Z,7.3nm,0.3s,baz=302,slow=7.5,SNR=17						
ROSC				Sn	**Sn**	**06 19 55.3**	**+3.9**
	comp=Z,22nm,0.3s,baz=9.3,slow=23,SNR=9.3						
ROSC				LR	LR	06 20 57.8	
	comp=Z,522nm,21.4s,baz=288,slow=40						
ROSC	**El Rosal**	**4.49**	**142**		**Pn**	**06 19 02.5**	**+2.3**
ROSC				Sn	**Sn**	**06 19 55.7**	**+4.3**
ROSC	**El Rosal**	**4.49**	**142**	*e*P	**Pn**	**06 19 02.3**	**+2.1**
RUSC	**La Rusia**	**4.70**	**122**	*e*P	**Pn**	**06 19 03.4**	**+0.3**
ORTC	**Ortega, Tolima**	**4.83**	**158**	*e*P	**Pn**	**06 19 09.3**	**+4.8**
CHIC	**Chingaza**	**5.02**	**138**	*e*P	**Pn**	**06 19 08.6**	**+1.1**
BCO2	**Palmira**	**5.38**	**274**	*i* P	**Pn**	**06 19 13.6**	**+1.2**
BCO2				*e*S	**Sn**	**06 20 14.7**	**+1.5**
VILC	**Villavicencio,**	**5.44**	**141**	*e*P	**Pn**	**06 19 15.5**	**+2.5**
BRU2	**Volcan**	**5.55**	**274**	*e*P	**Pn**	**06 19 15.0**	**+0.5**
BRU2				*e*S	**Sn**	**06 20 18.4**	**+1.2**
TAMC	**Tame, Arauca**	**5.61**	**110**	*e*P	**Pn**	**06 19 16.1**	**+0.8**
DRK0	**Durika**	**6.14**	**278**	*e*P	**Pn**	**06 19 22.3**	**-0.4**
DRK0				*e*S	**Sn**	**06 20 30.9**	**-0.9**
PIRO	**Carate, Puerto**	**6.18**	**270**	*e*P	**Pn**	**06 19 24.2**	**+1.2**
SOTA	**Rioblanco**	**6.25**	**176**	*e*P	**Pn**	**06 19 28.4**	**+3.9**
BBAC	**Balboa, Cauca**	**6.34**	**181**	*e*P	**Pn**	**06 19 26.3**	**+0.7**
SDV	**Santo Domingo**	**6.41**	**85**	Pn	**Pn**	**06 19 25.9**	**-0.5**
	comp=Z,26nm,0.3s,baz=274,slow=8.4,SNR=153						
SDV				Sn	**Sn**	**06 20 36.0**	**-2.3**
	comp=Z,35nm,0.3s,baz=113,slow=20,SNR=19						
SDV	**Santo Domingo**	**6.41**	**85**	Pn	**Pn**	**06 19 27.4**	**+0.9**
SDV	**Santo Domingo**	**6.41**	**85**	*e*P	**Pn**	**06 19 27.3**	**+0.9**
PTGC	**Puerto Gaitan,**	**6.46**	**130**	*e*P	**Pn**	**06 19 25.9**	**-1.0**
HDC	**Heredia**	**7.11**	**283**	*e*P	**Pn**	**06 19 36.0**	**+0.1**
HDC	**Heredia**	**7.11**	**283**		**Pn**	**06 19 36.1**	**+0.1**
JTS	**Las Juntas de**	**7.98**	**284**	Pn	**Pn**	**06 19 48.5**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=319,slow=21,SNR=12						
JTS				LR	LR	06 23 01.5	
	comp=Z,499nm,19.3s,baz=177,slow=38						
JTS	**Las Juntas de**	**7.98**	**284**	*e*P	**Pn**	**06 19 48.6**	**+0.8**
JTS	**Las Juntas de**	**7.98**	**284**	Pn	**Pn**	**06 19 48.1**	**+0.2**
ESPN	**Las Esperanzas**	**8.03**	**299**		**Pn**	**06 19 48.0**	**-0.5**
OTAV	**Otavalo**	**8.23**	**190**	Pn	**Pn**	**06 19 52.4**	**+0.7**
OTAV	**Otavalo**	**8.23**	**190**	*e*P	**Pn**	**06 19 52.2**	**+0.6**
ACON	**Acoyapa**	**8.71**	**295**		**Pn**	**06 19 58.1**	**+0.3**
YHJ	**Yallahs**	**9.45**	**3**	*i* P	**Pn**	**06 20 11.4**	**+3.4**
HOJ	**Hope**	**9.55**	**2**	*i* P	**Pn**	**06 20 10.9**	**+1.6**
STH	**Stony Hill**	**9.62**	**2**	*i* P	**Pn**	**06 20 11.9**	**+1.6**
MTDJ	**Mount Denham**	**9.77**	**358**	Pn	**Pn**	**06 20 13.4**	**+1.0**
BBJ	**Bamboo Saint A**	**9.92**	**359**	⇑*i*P	**Pn**	**06 20 16.5**	**+2.0**
CRIN	**San Cristobal**	**10.68**	**294**	Pn	**Pn**	**06 20 25.6**	**+0.7**
LGNH	**Logne**	**10.95**	**23**		**Pn**	**06 20 29.0**	**+0.5**
TGUH	**Tegucigalpa,Un**	**11.45**	**300**	Pn	**Pn**	**06 20 34.8**	**-0.8**
GTBY	**Guantanamo Bay**	**11.61**	**9**	Pn	**Pn**	**06 20 38.7**	**+1.1**
SDDR	**Presa de Saban**	**11.93**	**28**	Pn	**Pn**	**06 20 43.9**	**+2.0**
PCRV	**Puerto La Cruz**	**12.42**	**81**	Pn	**Pn**	**06 20 46.2**	**-2.5**
	comp=Z,3.1nm,0.3s,baz=241,slow=8.9,SNR=14						
PCRV				Sn	**Sn**	**06 23 03.6**	**-2.3**
	comp=Z,1.9nm,0.3s,baz=324,slow=21,SNR=6.2						
DR12	**Loma Pena Alta**	**12.75**	**35**	Pn	**Pn**	**06 20 51.8**	**-1.4**
AOPR	**Arecibo Observ**	**14.09**	**44**	Pn	**Pn**	**06 21 08.2**	**-3.3**
SJG	**San Juan**	**14.36**	**47**	Pn	**Pn**	**06 21 11.2**	**-3.9**
	comp=Z,7.9nm,0.3s,baz=221,slow=12,SNR=25						
SJG				LR	LR	06 27 44.0	
	comp=Z,92nm,19.4s,baz=224,slow=42						
ATAH	**Atahualpa**	**15.49**	**185**	Pn	**P**	**06 21 33.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=334,slow=5.1,SNR=5.1						
CMIG	**Matias Romero**	**19.37**	**298**	LR	LR	06 30 31.1	
	comp=Z,88nm,18.2s,baz=100,slow=39						
NNA	**Nana**	**20.26**	**179**	LR	LR	06 30 39.3	
	comp=Z,82nm,21.1s,baz=359,slow=38						
SAML	**Samuel**	**22.12**	**141**	P	**P**	**06 22 46.7**	**0.0**
SAML				IAmb	IAmb	06 22 58.3	
	comp=Z,17nm,1.4s						
MDP	**Montagnes des**	**24.50**	**96**	LR	LR	06 33 39.0	
	comp=Z,191nm,18.5s,baz=267,slow=39						
PB16	**IPOC Station P**	**27.61**	**164**	P	**P**	**06 23 39.2**	**+0.3**
PB16				IAmb	IAmb	06 24 02.4	
	comp=Z,8.0nm,1.1s						
TKL	**Tuckaleechee C**	**27.80**	**348**	LR	LR	06 35 55.9	
	comp=Z,56nm,18.7s,baz=156,slow=39						
GO01	**Chusmiza**	**28.96**	**164**	P	**P**	**06 23 52.6**	**+1.7**
GO01				IAmb	IAmb	06 24 15.0	
	comp=Z,6.3nm,0.9s						
SIV	**San Ignacio**	**28.97**	**147**	P	**P**	**06 23 50.1**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=336,slow=10.0,SNR=9.3						
SIV				LR	LR	06 36 22.8	
	comp=Z,62nm,18.5s,baz=34,slow=38						
TXAR	**Lajitas Array**	**32.49**	**313**	P	**P**	**06 24 20.9**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=130,slow=12,SNR=5.3						
TXAR				LR	LR	06 39 21.8	
	comp=Z,27nm,19.4s,baz=0.0,slow=40						
AC02	**Maricunga**	**35.87**	**168**	P	**P**	**06 24 52.5**	**+1.2**
BDFB	**Brasilia**	**37.42**	**130**	P	**P**	**06 25 04.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=321,slow=14,SNR=3.1						
BDFB				LR	LR	06 41 23.2	
	comp=Z,148nm,19.3s,baz=107,slow=38						
AC05	**El Transito**	**37.60**	**170**	P	**P**	**06 25 07.1**	**+1.5**
ANMO	**Albuquerque**	**37.70**	**319**	P	**P**	**06 25 06.4**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=142,slow=8.8,SNR=13						
ANMO	**Albuquerque**	**37.70**	**319**	P	**P**	**06 25 07.7**	**+1.1**
ANMO				IAmb	IAmb	06 25 10.2	
	comp=Z,3.6nm,0.9s						
CPUP	**Villa Florida**	**39.51**	**152**	LR	LR	06 42 05.7	
	comp=Z,51nm,19.5s,baz=352,slow=37						
PV12	**Saucer Basin,**	**41.26**	**321**	P	**P**	**06 25 37.9**	**+1.7**
PV12				IAmb	IAmb	06 25 40.0	
	comp=Z,7.3nm,0.8s						
SPX	**San Pedro Mart**	**42.24**	**308**	P	**P**	**06 25 46.8**	**+2.4**
MTPU	**Mount Pierson**	**43.25**	**319**	P	**P**	**06 25 54.7**	**+2.1**
PDAR	**Pinedale Array**	**44.52**	**326**	P	**P**	**06 26 02.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=125,slow=7.6,SNR=7.4						
PDAR	**Pinedale Array**	**44.52**	**326**	P	**P**	**06 26 02.5**	**0.0**
ULM	**Lac du Bonnet**	**44.55**	**343**	LR	LR	06 44 13.8	
	comp=Z,68nm,20.7s,baz=221,slow=36						
DUG	**Dugway, Tooele**	**44.88**	**321**	P	**P**	**06 26 06.7**	**+1.3**
REDW	**Red Top Meadow**	**45.63**	**325**	P	**P**	**06 26 12.7**	**+1.4**
REDW				IAmb	IAmb	06 26 26.7	
	comp=Z,9.4nm,1.4s						
LOHW	**Long Hollow**	**45.65**	**326**	P	**P**	**06 26 12.2**	**+0.7**
LOHW				IAmb	IAmb	06 26 32.8	
	comp=Z,9.4nm,1.5s						
MOOW	**Moose Ponds**	**45.82**	**326**	P	**P**	**06 26 13.3**	**+0.5**
LC01	**Cunco**	**47.31**	**174**	P	**P**	**06 26 27.3**	**+3.1**
LC01				IAmb	IAmb	06 26 37.1	
	comp=Z,7.8nm,1.1s						
BOZ	**Bozeman (W)**	**47.50**	**327**	P	**P**	**06 26 25.8**	**-0.1**
NVAR	**Mina Array Bea**	**47.59**	**316**	P	**P**	**06 26 26.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=119,slow=7.2,SNR=9.9						
NVAR	**Mina Array Bea**	**47.59**	**316**	P	**P**	**06 26 26.9**	**+0.1**
LRM	**Limekiln Ridge**	**48.08**	**327**	P	**P**	**06 26 30.8**	**+0.3**
PNTR	**Pine Nut**	**48.79**	**316**	P	**P**	**06 26 37.1**	**+1.1**
PNTR				IAmb	IAmb	06 27 03.8	
	comp=Z,2.6nm,0.8s						
PLCA	**Paso Flores**	**49.26**	**173**	P	**P**	**06 26 41.6**	**+2.3**
	comp=Z,3.0nm,1.0s,baz=20,slow=6.3,SNR=3.6						
WVOR	**Wild Horse Val**	**49.77**	**320**	P	**P**	**06 26 44.3**	**+1.0**
MOD	**Modoc Plateau**	**50.58**	**319**	P	**P**	**06 26 49.0**	**-0.6**
MOD				IAmb	IAmb	06 27 05.0	
	comp=Z,3.8nm,1.5s						
YKA	**Yellowknife Ar**	**60.46**	**341**	P	**P**	**06 27 58.5**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=130,slow=8.2,SNR=21						
BCAR	**Beaver Creek A**	**71.22**	**334**	P	**P**	**06 29 09.9**	**+0.6**
TIC	**Toumodi**	**71.39**	**86**	*e*P	**P**	**06 29 11.3**	**+0.1**
LIC	**Lamto**	**71.43**	**86**	*e*P	**P**	**06 29 11.6**	**+0.2**
	comp=Z,27nm,1.2s						
DBIC	**Dimbokro**	**71.54**	**86**	P	**P**	**06 29 12.5**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=257,slow=4.6,SNR=5.4						
DBIC	**Dimbokro**	**71.54**	**86**	P	**P**	**06 29 12.2**	**+0.1**
KIC	**Kosan Boka**	**71.69**	**86**	*e*P	**P**	**06 29 13.4**	**+0.4**
	comp=Z,14nm,1.0s						
ESDC	**Sonseca Array**	**71.70**	**51**	P	**P**	**06 29 12.6**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=270,slow=6.6,SNR=16						
ESDC	**Sonseca Array**	**71.70**	**51**	P	**P**	**06 29 13.1**	**+0.4**
ILAR	**Eielson Array**	**73.88**	**335**	P	**P**	**06 29 24.2**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=115,slow=4.6,SNR=24						
ILAR	**Eielson Array**	**73.88**	**335**	P	**P**	**06 29 24.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**77.28**	**78**	P	**P**	**06 29 44.1**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=276,slow=4.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**77.28**	**78**	P	**P**	**06 29 45.6**	**+0.2**
HFS	**Hagfors**	**83.17**	**30**	LR	LR	06 59 22.6	
	comp=Z,69nm,20.7s,baz=294,slow=30						
GERES	**GERESS Array B**	**84.26**	**42**	P	**P**	**06 30 21.9**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=272,slow=9.7,SNR=2.5						
ARCES	**ARCESS Array B**	**86.56**	**20**	P	**P**	**06 30 32.6**	**-0.5**
	comp=Z,5.6nm,0.9s,baz=259,slow=2.5,SNR=5.6						
LZH	**Lanzhou**	**135.74**	**359**	*e*PKP	**PKPdf**	**06 37 07.4**	**-4.2**
LZH				pPKP	PKiKP	06 37 16.1	+2.9
LZH				sPKP		06 37 20.9	
ASAR	**Alice Springs**	**146.68**	**239**	PKPbc	**PKPdf**	**06 37 31.1**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=119,slow=3.8,SNR=12						
WRA	**Warramunga Arr**	**147.50**	**246**	PKPbc	**PKPbc**	**06 37 35.2**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=295,slow=0.9,SNR=5.9						
CMAR	**Chiang Mai Arr**	**153.02**	**8**	PKPbc	**PKPbc**	**06 37 48.5**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=316,slow=2.5,SNR=1.7						
CMAR				PKPab	**PKPab**	**06 37 59.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=323,slow=4.9,SNR=6.3						

IDC 10 06:24:54.6±3.1**, 6°.67S**×**129°.65E, h134**^{km}±42^{km}**, mb2.9**/1**, mb1 3.2**/5**, mb1mx3.1**/29**, mbtmp3.6**/5**, Error ellipse: s-maj=67.9km s-min=22.4km az=89.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.98**	**16**	P	Pn	06 26 20.9	-0.1
	baz=185,slow=21,SNR=1.3						
SIJI				S	Sn	06 27 18.4	-10
	1.9nm,0.3s,baz=244,slow=22,SNR=1.6						
FITZ	**Fitzroy Crossi**	**12.01**	**199**	P	Pn	06 27 42.2	+0.7
	0.1nm,0.3s,baz=27,slow=11,SNR=1.3						
FITZ				S	Sn	06 29 50.3	-3.8
	0.1nm,0.3s,baz=256,slow=19,SNR=1.1						
WRA	**Warramunga Arr**	**13.96**	**161**	P	Pn	06 28 05.8	-0.9
	0.4nm,0.3s,baz=339,slow=13,SNR=13						
WRA				S	Sn	06 30 31.7	-9.3
	0.3nm,0.3s,baz=339,slow=26,SNR=6.1						
ASAR	**Alice Springs**	**17.39**	**167**	P	P	06 28 48.6	+0.3
	0.1nm,0.3s,baz=343,slow=11,SNR=6.3						
MKAR	**Makanchi Array**	**67.76**	**327**	P	P	06 35 37.7	0.0
	0.2nm,0.5s,baz=116,slow=5.6,SNR=3.1						

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*UPA **10** 06:33:49.9±2.1, 8°.94N×84°.08W, h2^{km}±8^{km}, MW4.6*

*UCR **10** 06:33:50.8±8.2, 8°.87N×84°.07W, h10^{km}, MW4.3*

ISC 10 06:33:49.1±1.3**, 8°.85N**±0°.04×**84°.08W**±0°.03**, h5**^{km}±10^{km}**, n51, σ0^{s}.92**/76**, 1C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	**Dominical**	**0.45**	**28**	*i* P	**Pb**	**06 33 58.7**	**-0.9**
EDDO				*e*P	**Pb**	**06 33 58.7**	**-0.9**
EDDO				*e*S	**Sb**	**06 34 05.9**	**-0.8**
RIOS	**Rincon, Osa**	**0.58**	**105**	*e*P	**Pb**	**06 34 01.7**	**-0.1**
EDPN	**Palmar Norte**	**0.62**	**80**	*e*P	**Pb**	**06 34 02.0**	**-0.5**
EDPN				*e*S	**Sb**	**06 34 11.1**	**-0.5**
EDLM	**Las Mercedes**	**0.64**	**49**	*i* P	**Pb**	**06 34 02.0**	**-1.0**
EDLM				*e*P	**Pb**	**06 34 02.0**	**-1.0**
EDLM				*e*S	**Sb**	**06 34 11.7**	**-0.5**
PEZE	**Perez Zeledon,**	**0.66**	**37**	*e*P	**Pb**	**06 34 02.1**	**-1.1**
PEZE				*e*S	**Sb**	**06 34 12.7**	**0.0**
PTJ1	**Puerto Jimnez**	**0.83**	**112**	*e*P	**Pn**	**06 34 07.4**	**-0.1**
PTJ1				*e*S	**Sn**	**06 34 20.7**	**+0.6**
PTJ1	**Puerto Jimnez**	**0.83**	**112**	*e*P	**Pn**	**06 34 07.2**	**-0.3**
PTJ1				*e*S	**Sn**	**06 34 20.5**	**+0.4**
EDBA	**Buenos Aires**	**0.85**	**69**	*e*P	**Pg**	**06 34 05.3**	**-0.3**
PIRO	**Carate, Puerto**	**0.86**	**121**	*e*P	**Pn**	**06 34 07.6**	**-0.3**
PIRO				*e*S	**Sn**	**06 34 20.3**	**-0.5**
PIRO	**Carate, Puerto**	**0.86**	**121**	*e*P	**Pn**	**06 34 07.3**	**-0.6**
LCR2	**La Lucha 2**	**0.89**	**5**	*e*P	**Pb**	**06 34 06.5**	**-0.7**
LCR2				*e*S	**Sb**	**06 34 19.2**	**-0.2**
DRK0	**Durika**	**0.92**	**64**	*e*P	**Pb**	**06 34 06.8**	**-0.9**
DRK0				*e*S	**Sb**	**06 34 19.5**	**-0.8**
DRK0	**Durika**	**0.92**	**64**	*e*P	**Pb**	**06 34 06.7**	**-0.9**
RIMA	**Rio Macho**	**0.93**	**13**	*e*P	**Pg**	**06 34 06.6**	**-0.5**
POTG	**Potrero Grande**	**0.97**	**78**	*e*P	**Pb**	**06 34 08.4**	**0.0**
JACO	**JACO, Garabito**	**0.99**	**325**	*e*P	**Pb**	**06 34 08.8**	**+0.1**
JACO				*e*S	**Sb**	**06 34 22.8**	**+0.7**
SJS	**Escuela Geolog**	**1.08**	**1**	*e*P	**Pb**	**06 34 09.9**	**-0.5**
EDSV	**San Vito**	**1.09**	**92**	*e*P	**Pn**	**06 34 10.6**	**-0.6**
HDC	**Heredia**	**1.14**	**358**	*e*P	**Pn**	**06 34 11.3**	**-0.6**
HDC				*e*S	**Sg**	**06 34 25.7**	**-0.2**
HDC	**Heredia**	**1.14**	**358**	*e*P	**Pb**	**06 34 11.2**	**-0.3**
CVTR	**Volcan Turrial**	**1.20**	**15**	*e*P	**Pb**	**06 34 12.2**	**-0.5**
MLIR3	**Monte Lirio, C**	**1.24**	**93**	*e*P	**Pn**	**06 34 14.0**	**+0.7**
MLIR3				*e*S	**Sn**	**06 34 32.6**	**+2.1**
LAFE	**Finca La Fe, P**	**1.25**	**319**	*e*P	**Pg**	**06 34 12.8**	**-0.4**
SRA1	**San Ramn**	**1.29**	**342**	*e*P	**Pg**	**06 34 13.4**	**-0.5**
BRU2	**Volcan**	**1.37**	**92**	*e*P	**Pg**	**06 34 15.2**	**-0.4**
BRU2				*e*S	**Sn**	**06 34 34.3**	**+0.5**
BRU2	**Volcan**	**1.37**	**92**	*e*P	**Pn**	**06 34 14.4**	**-0.7**
BC3P	**Paso Ancho**	**1.45**	**91**	*e*P	**Pg**	**06 34 16.6**	**-0.5**
BC3P				*e*S	**Sn**	**06 34 37.5**	**+1.7**
BCO2	**Palmira**	**1.54**	**95**	*e*P	**Pg**	**06 34 17.9**	**-0.8**
BCO2				*e*S	**Sg**	**06 34 38.4**	**-0.3**
PTAR3	**Potrerillos Ar**	**1.57**	**96**	*e*P	**Pb**	**06 34 18.4**	**-0.4**
PTAR3				*e*S	**Sg**	**06 34 39.3**	**-0.5**
BAGA3	**Bagala, Chiriq**	**1.58**	**104**	⇑*i*P	**Pg**	**06 34 19.0**	**-0.5**
BAGA3				*e*S	**Sg**	**06 34 41.1**	**+1.0**
RGM0	**Gandoca**	**1.63**	**63**	*e*P	**Pg**	**06 34 21.6**	**+1.2**
RGM0				*e*S	**Sg**	**06 34 44.3**	**+2.7**
JTS	**Las Juntas de**	**1.67**	**329**	*e*P	**Pn**	**06 34 18.8**	**-0.2**
JTS				*e*S	**Sn**	**06 34 40.6**	**-0.2**
JTS	**Las Juntas de**	**1.67**	**329**	*e*P	**Pn**	**06 34 18.5**	**-0.6**
CASO	**Castillo**	**1.70**	**338**	*i* P	**Pb**	**06 34 20.1**	**-0.8**
CASO				*i* S	**Sg**	**06 34 45.4**	**+1.5**
LOCO3	**Loma Colorada,**	**1.70**	**105**	*e*P	**Pb**	**06 34 20.5**	**-0.4**
LOCO3				*e*S	**Sg**	**06 34 47.2**	**+3.3**
PEDE3	**Pedregal, Chir**	**1.70**	**106**	*e*P	Pg	06 34 30.2	+8.4
PEDE3				*e*S	Sg	06 34 54.3	+10
FORC	**Fortuna**	**1.71**	**340**	*i* P	**Pb**	**06 34 20.1**	**-0.9**
FORC				*i* S	**Sg**	**06 34 44.7**	**+0.7**
ARE1	**Arenal 1**	**1.72**	**339**	*e*P	**Pb**	**06 34 20.6**	**-0.6**
CEDE	**Laguna Cedeo**	**1.74**	**339**	*i* P	**Pb**	**06 34 21.5**	**-0.1**
GUAL3	**Gualaca, Chiri**	**1.79**	**100**	*e*P	**Pb**	**06 34 21.9**	**-0.6**
GUAL3				*e*S	**Sg**	**06 34 46.3**	**-0.4**
DUNO	**Dulce Nombre,**	**1.85**	**311**	*e*P	**Pb**	**06 34 23.1**	**-0.4**
COVE	**Coope Vega, Sa**	**1.88**	**350**	*e*P	**Pn**	**06 34 22.1**	**+0.1**
PLVR	**Palo Verde**	**1.94**	**320**	*e*P	**Pb**	**06 34 25.0**	**-0.2**
PTEN	**Parque Tenorio**	**2.06**	**334**	*i* P	**Pb**	**06 34 25.6**	**-1.4**
HORNC	**Hornillas**	**2.14**	**330**	*i* P	**Pb**	**06 34 27.5**	**-1.0**
GUAB	**Guayabo de Bag**	**2.16**	**329**	*i* P	**Pb**	**06 34 28.2**	**-0.7**
LIM1	**Limonal**	**2.17**	**328**	*i* P	**Pb**	**06 34 28.3**	**-0.6**
REME3	**Remedios, Chir**	**2.31**	**105**	*e*P	**Pb**	**06 34 29.5**	**-1.8**
REME3				*e*S	**Sg**	**06 35 04.5**	**+1.1**
LAPC	**Finca la Perla**	**2.32**	**325**	*i* P	**Pn**	**06 34 29.3**	**+1.2**
GB1A	**Borinquen Arri**	**2.35**	**326**	*i* P	**Pb**	**06 34 31.7**	**-0.3**
GBS3	**Finca Las Img**	**2.35**	**325**	*i* P	**Pb**	**06 34 31.0**	**-1.0**

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*DDA **10** 06:43:12.6, 35°.34N×27°.65E, h6^{km}±2^{km}, ML3.2*

*IDC **10** 06:43:15.1±1.2, 35°.24N×27°.81E, h0^{km}, mb3.5/4, mb1 3.5/9, mb1mx3.3/59, mbtmp3.4/9, ML3.3/5, MS2.4/1, Ms1 2.4/1, ms1mx2.1/50, Error ellipse: s-maj=24.2km s-min=16.5km az=3.0*

*NIC **10** 06:43:16.2±0.0, 35°.49N×27°.74E, h10^{km}±1^{km}, Ml3.8/3*

*ISK **10** 06:43:16.0, 35°.51N×27°.73E, h2^{km}, ML3.3/18*

*ATH **10** 06:43:17.7, 35°.63N×27°.67E, h23^{km}±10^{km}, ML3.1/4, Error ellipse: s-maj=10.5km s-min=1.5km az=164.0*

*THE **10** 06:43:17.9, 35°.59N×27°.67E, h0^{km}±2^{km}, ML3.0/4, Error ellipse: s-maj=4.2km s-min=1.3km az=148.0*

ISC 10 06:43:16.5±1.1**, 35°.49N**±0°.03×**27°.76E**±0°.02**, h9**^{km}±8^{km}**, n87, σ1^{s}.04**/117**, mb3.6**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.49**	**277**	P	**Pg**	**06 43 25.8**	**-0.1**
KARP				S	**Sg**	**06 43 32.9**	**+0.5**
KARP				AML	AML	06 43 34.6	
	comp=N,4667µm,0.2s						
KARP				AML	AML	06 43 35.8	
	comp=E,5724µm,0.4s						
KARP	**Karpathos**	**0.49**	**277**	P	**Pg**	**06 43 25.8**	**-0.1**
KARP				S	**Sg**	**06 43 32.8**	**+0.5**
	comp=E,3µm,0.3s						
KARP	**Karpathos**	**0.49**	**277**	PG	**Pg**	**06 43 25.9**	**-0.1**
KARP				SG	**Sb**	**06 43 33.8**	**-0.7**
KARP	**Karpathos**	**0.49**	**277**	P	**Pg**	**06 43 25.8**	**-0.1**
KARP				S	**Sg**	**06 43 32.9**	**+0.5**
KARP				AML	AML	06 43 33.9	
	comp=E,4.4nm,0.3s						
KARP				AML	AML	06 43 33.9	
	comp=E,4.4nm,0.3s						
KARP				AML	AML	06 43 35.4	
	comp=E,5.7nm,0.4s						
KARP				AML	AML	06 43 35.4	
	comp=E,5.7nm,0.4s						
ARG	**Arkhangelos**	**0.78**	**23**	P	**Pg**	**06 43 31.3**	**-0.3**
ARG				S	**Sg**	**06 43 40.6**	**-1.1**
ARG				AML	AML	06 43 47.0	
	comp=N,1737µm,0.5s						
ARG				AML	AML	06 43 48.7	
	comp=E,2779µm,0.3s						
ARG	**Arkhangelos**	**0.78**	**23**	P	**Pg**	**06 43 31.2**	**-0.3**
ARG				S	**Sg**	**06 43 41.7**	**-0.1**
	comp=E,1µm,0.4s						
ARG	**Arkhangelos**	**0.78**	**23**	PG	**Pg**	**06 43 31.8**	**+0.2**
ARG				SG	**Sb**	**06 43 42.8**	**-0.2**
ARG	**Arkhangelos**	**0.78**	**23**	P	**Pg**	**06 43 31.3**	**-0.3**
ARG				S	**Sb**	**06 43 42.7**	**-0.2**
NISR	**Nisiros**	**1.23**	**336**	P	**Pb**	**06 43 38.5**	**-1.3**
DATC	**Datca-Mugla**	**1.27**	**357**	PN	**Pg**	**06 43 41.3**	**+0.5**
MRSB	**Marmaris-Mugla**	**1.27**	**16**	PN	**Pg**	**06 43 40.9**	**0.0**
ZKR	**Zakros**	**1.31**	**254**	P	**Pn**	**06 43 40.9**	**-0.1**
ZKR				AML	AML	06 44 08.2	
	comp=E,2926µm,0.6s						
ZKR				AML	AML	06 44 08.7	
	comp=N,1048µm,0.7s						
ZKR	**Zakros**	**1.31**	**254**	P	**Pn**	**06 43 41.0**	**0.0**
ZKR				S	**Sg**	**06 43 59.6**	**+0.9**
	comp=N,1µm,0.6s						
ZKR	**Zakros**	**1.31**	**254**	PN	**Pn**	**06 43 41.4**	**+0.4**
TURN	**Turunc**	**1.34**	**17**	PN	**Pg**	**06 43 42.1**	**-0.1**
TURN	**Turunc**	**1.34**	**17**	*i* P	**Pn**	**06 43 40.9**	**-0.5**
TURN				*i* S	**Sb**	**06 43 57.3**	**-1.7**
TURN				IAML		06 44 06.0	
	comp=E,850nm,1.0s						
STIA	**Sitia Lasithi**	**1.39**	**258**	P	**Pn**	**06 43 42.2**	**+0.1**
STIA				S	**Sg**	**06 44 01.9**	**+0.7**
KOSK	**Kos Island**	**1.40**	**334**	PN	**Pb**	**06 43 42.9**	**0.0**
DALY	**Dalyan (Mula)**	**1.51**	**29**	PN	**Pb**	**06 43 44.7**	**+0.1**
FETY	**Fethiye**	**1.57**	**43**	P	**Pb**	**06 43 46.1**	**+0.4**
FETY				S	**Sb**	**06 44 06.2**	**+0.6**
FETY	**Fethiye**	**1.57**	**43**	PN	**Pb**	**06 43 46.1**	**+0.4**
BDRM	**Kayabasi**	**1.59**	**351**	*i* P	**Pn**	**06 43 43.6**	**-1.3**
BDRM				*i* P	**Pb**	**06 43 45.3**	**-0.8**
BDRM				*i* S	**Sn**	**06 44 04.6**	**-0.9**
BDRM				IAML		06 44 10.0	
	comp=N,276nm,0.4s						
BDRM				IAML		06 44 10.0	
	comp=E,256nm,0.5s						
BDRM				IAML		06 44 10.0	
	comp=E,202nm,0.4s						
BODT	**Bodrum**	**1.61**	**347**	P	**Pn**	**06 43 44.9**	**-0.2**
BODT				S	**Sb**	**06 44 06.6**	**-0.1**

BODT	Bodrum	1.61	347	PN	Pn	06 43 45.3	+0.2
KSL	Kastellorizon	1.62	66	P	Pn	06 43 46.2	+0.9
KSL	Kastellorizon	1.62	66	P	Pb	06 43 46.5	-0.1
KSL				S	Sg	06 44 10.1	+1.4
KSL	Kastellorizon	1.62	66	P	Pn	06 43 45.2	-0.1
AKAS	Kas	1.67	63	PN	Pb	06 43 47.5	-0.1
AKAS	Kas	1.67	63	iP	Pn	06 43 46.9	+0.8
YER	Yerkesik	1.69	14	P	Pb	06 43 47.7	-0.1
YER				S	Sg	06 44 10.3	-0.6
YER	Yerkesik	1.69	14	PN	Pb	06 43 47.5	-0.3
NPS	Neapolis	1.77	263	P	Pb	06 43 48.8	-0.2
NPS				AML	AML	06 44 15.7	
	comp=N,1153µm,0.5s						
NPS				AML	AML	06 44 20.4	
	comp=E,902µm,0.3s						
NPS	Neapolis	1.77	263	P	Pn	06 43 48.3	+1.1
NPS				S	Sn	06 44 10.7	+0.9
	comp=E,455nm,0.6s						
MLSB	Milas	1.80	1	PN	Pb	06 43 49.1	-0.5
MULA	Mugla, Merkez-	1.82	14	iP	Pg	06 43 52.2	+0.9
MULA				iS	Sg	06 44 14.6	-0.3
DDIM	Aydin, Didim	2.00	348	iP	Pb	06 43 52.0	-1.1
SANT	Santorini	2.06	296	P	Pn	06 43 51.8	+0.5
SANT	Santorini	2.06	296	PN	Pn	06 43 52.6	+1.3
SANT	Santorini	2.06	296	iP	Pn	06 43 50.3	-1.0
CAEL	Denizli, Camel	2.06	37	iP	Pb	06 43 53.8	-0.4
THR8	Santorini-Mono	2.06	297	P	Pn	06 43 51.5	+0.2
THR8	Santorini-Mono	2.06	297	P	Pn	06 43 51.6	+0.4
THR6	Thira Island,	2.10	295	P	Pn	06 43 52.5	+0.7
THR6	Thira Island,	2.10	295	P	Pn	06 43 52.4	+0.6
THR3	Thira Island,	2.12	296	P	Pn	06 43 52.3	+0.3
THR3	Thira Island,	2.12	296	P	Pn	06 43 52.4	+0.3
ELL	Elmali	2.15	54	PN	Pn	06 43 54.3	+1.7
HRKL	Herakleio	2.17	266	PN	Pn	06 43 54.4	+1.6
TAVA	DENIZLI_Tavas	2.18	25	iP	Pg	06 43 58.0	-0.3
TAVA				iS	Sg	06 44 26.1	-0.4
GCAM	G?zelcaml?	2.24	349	PN	Pb	06 43 55.7	-1.4
GCAM	G?zelcaml?	2.24	349	iP	Pb	06 43 55.9	-1.3
AKUM	Antalya-Kumluc	2.26	68	iP	Pn	06 43 54.8	+0.9
GOLH	Golhisar	2.27	39	iP	Pb	06 43 57.2	-0.5
GOLH				iS	Sn	06 44 23.7	+1.3
GOLH				IAML		06 44 44.0	
	comp=N,128nm,1.0s						
IDI	Anoyia	2.35	266	Pn	Pn	06 43 55.0	-0.3
	comp=N,4.5nm,0.3s,baz=72,slow=16,SNR=30						
IDI				Sn	Sb	06 44 28.0	-0.1
	comp=N,8.6nm,0.3s,baz=283,slow=11,SNR=4.1						
IDI				LR	LR	06 45 08.2	
	comp=N,76nm,21.1s,baz=70,slow=47						
IDI	Anoyia	2.35	266	P	Pb	06 43 57.7	-1.3
IDI	Anoyia	2.35	266	PN	Pn	06 43 56.6	+1.3
APE	Apeiranthos	2.39	312	P	Pn	06 43 56.0	+0.1
APE	Apeiranthos	2.39	312	PN	Pn	06 43 56.7	+0.9
APE	Apeiranthos	2.39	312	iP	Pn	06 43 55.8	-0.1
APE				iS	Sn	06 44 23.4	-1.9
APE	Apeiranthos	2.39	312	P	Pn	06 43 55.5	-0.3
SIVA	Sivas	2.46	260	P	Pb	06 44 00.2	-0.6
KORT	Korkueli	2.58	54	iP	Pn	06 44 00.2	+1.6
KORT				iS	Sb	06 44 34.5	-0.4
KORT				IAML		06 44 38.0	
	comp=E,93nm,0.6s						
DGB	zmir	2.65	345	iP	Pn	06 43 59.8	+0.4
URLA	Izmir	3.01	342	iP	Pn	06 44 05.8	+1.5
MANT	Manisa	3.06	12	iP	Pn	06 44 06.6	+1.3
GVD	Gavdhos	3.08	259	PN	Pn	06 44 06.9	+1.7
IMMV	Iera Moni Meta	3.08	270	P	Pb	06 44 09.8	-1.6
IMMV	Iera Moni Meta	3.08	270	PN	Pn	06 44 06.8	+1.5
KHAL	Karahalli	3.19	25	iP	Pn	06 44 07.8	+0.8
KZIL	AFYON_Kizioren	3.36	34	iP	Pb	06 44 16.8	+0.6
KEPZ	Antalya-Kepez	3.42	65	iP	Pn	06 44 11.2	+1.2
OSC1	CSNet OBS 1	3.52	123	P	Pn	06 44 11.5	+0.1
OSC1				S	Sn	06 44 54.3	+1.1
GAZI	Gazipasa	3.78	77	iP	Pn	06 44 15.1	+0.1
GAZI				iS	Sn	06 44 56.7	-2.8
GAZI				IAML		06 45 00.0	
	comp=N,32nm,0.8s						
GAZI				IAML		06 45 05.0	
	comp=E,37nm,0.6s						
AKMS	Akamas	3.78	96	P	Pn	06 44 14.9	0.0
AKMS				S	Sn	06 45 00.5	+1.0
AKMS				AML	AML	06 45 02.0	
	comp=E,0.5nm,1.6s						
AKMS				AML	AML	06 45 02.0	
	comp=E,0.5nm,1.6s						
AKMS				AML	AML	06 45 03.7	
	comp=E,0.4nm,0.3s						
AKMS				AML	AML	06 45 03.7	
	comp=E,0.4nm,0.3s						
DOGA	KONYA_Doganhis	4.08	49	iP	Pn	06 44 22.0	+2.7
SZAC	Souni	4.27	98	P	Pn	06 44 21.8	+0.2
SZAC				S	Sn	06 45 12.9	+1.3
SZAC				AML	AML	06 45 15.3	
	comp=E,0.3nm,0.8s						
SZAC				AML	AML	06 45 15.3	
	comp=E,0.3nm,0.8s						
SZAC				AML	AML	06 45 15.7	
	comp=E,0.4nm,0.5s						
SZAC				AML	AML	06 45 15.7	
	comp=E,0.4nm,0.5s						
BAYC	CANAKKALE_Bayr	4.35	348	iP	Pn	06 44 24.3	+1.6
OSC2	CSNet OBS 4	4.45	122	S	Sn	06 45 16.7	+0.7
ASGA	Asgata	4.56	97	P	Pn	06 44 25.6	0.0
BRTR	Keskin Array B	6.30	46	Pn	Pn	06 44 51.5	+1.9
	comp=E,0.1nm,0.3s,baz=219,slow=17,SNR=2.7						
MMAI	Mount Meron Ar	6.80	109	Pn	Pn	06 44 55.3	-1.2
	comp=E,1.8nm,0.3s,baz=321,slow=12,SNR=8.4						
MMAI				Sn	Sn	06 46 12.5	-1.5
	comp=E,1.6nm,0.3s,baz=268,slow=34,SNR=1.7						
EIL	Elat	8.40	132	Pn	Pn	06 45 17.3	-1.1
	comp=E,0.3nm,0.3s,baz=342,slow=16,SNR=1.1						
EIL				Sn	Sn	06 46 50.1	-3.2
	comp=E,0.8nm,0.3s,baz=172,slow=22,SNR=4.5						
AKASG	Malin Array Be	15.24	4	Pn	P	06 46 55.4	-1.3
	comp=E,0.2nm,0.3s,baz=192,slow=11,SNR=2.0						
ESDC	Sonseca Array	25.41	289	P	P	06 48 45.3	+1.0
	comp=E,0.7nm,0.8s,baz=83,slow=9.1,SNR=4.1						
FINES	FINESS Array B	25.99	358	P	P	06 48 52.9	+3.6
	comp=E,2.1nm,0.9s,baz=153,slow=12,SNR=2.2						
TORD	Torodi Ar. Bea	32.36	233	P	P	06 49 44.9	-1.5
	comp=E,0.9nm,0.6s,baz=29,slow=9.9,SNR=2.9						
MKAR	Makanchi Array	41.82	57	P	P	06 51 06.1	-0.4
	comp=E,0.2nm,0.5s,baz=279,slow=7.7,SNR=2.3						

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*IDC **10** 06:50:56.2±0.4, 40°.10N×77°.23E, h0^{km}, mb4.6/36, mb1 4.7/42, mb1mx4.5/66, mbtmp4.6/42, ML3.9/6, MS4.4/37, Ms1 4.4/37, ms1mx4.3/44, Error ellipse: s-maj=10.1km s-min=8.6km az=40.0*

*BJI **10** 06:50:58.5±0.0, 40°.15N×77°.30E, h10^{km}, mB5.1/40, mb4.8/47, ML5.4/9, Ms5.0/54, Ms7 4.7/55*

*SOME **10** 06:50:58.6, 40°.22N×77°.13E, h10^{km}, MS5.1*

*MOS **10** 06:51:00.2±1.0, 40°.15N×77°.26E, h41^{km}, mb5.2/46, MS4.9/19, Error ellipse: s-maj=5.7km s-min=4.4km az=109.4*

*KRNET **10** 06:51:00.0±0.1, 40°.15N×77°.21E, mb5.5*

*NNC **10** 06:51:01.0±0.8, 40°.28N×77°.22E, h0^{km}, mb5.8, mpv5.5, Error ellipse: s-maj=6.1km s-min=5.0km az=161.0*

*GCMT **10** 06:51:01.6±0.2, 40°.19N±0°.02×77°.21E±0°.02, h15^{km}, MW5.1/112, Moment Tensor Solution. s42,c48; s112,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.44±.07; M$_{\theta\theta}$-2.00±.07; M$_{\phi\phi}$-0.44±.06; M$_{r\theta}$4.47±.24; M$_{\theta\phi}$-1.09±.05; M$_{\phi r}$0.45±.27; Best double couple: M$_0$5.14100×10^{16} NP1:φ$_s$227.00000°, δ17.00000°, λ57.00000°. NP2:φ$_s$81.00000°, δ76.00000°, λ99.00000°. Principal axes: T 5.2180, Plg58.0000°, Azm4.0000°; N -0.1570, Plg9.0000°, Azm259.0000°; P -5.0640, Plg30.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 06:51:02.6±1.6, 40°.11N±0°.06×77°.26E±0°.08, h48^{km}±7^{km}, mb5.1/101, Ms_20 4.8/79 Error ellipse: s-maj=9.3km s-min=8.1km az=123.0*

*BGR **10** 06:51:11.5±0.0, 40°.65N×76°.00E, h33^{km}, mb4.9*

ISC 10 06:50:57.2±0.7, **40°.15N**±0°.02×**77°.12E**±0°.02, **h7**^{km}±4^{km}, **n647**, σ1^s.94/668, **mb5.0**/158, **MS4.8**/108, **76C-34D, Fault plane solution: NP1:**φ$_s$280.65338°, δ85.65620°, λ-112.50633°. **NP2:**φ$_s$180.29421°, δ22.90027°, λ-11.22386°. **Principal axes:** T Plg36.7138°, Azm30.3871°; N Plg22.4382°, Azm282.4509°; P Plg44.8241°, Azm168.2196°; **Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	1.08	235	Pg	Pn	06 51 28.4	+9.4
KSH				Sg	Sn	06 51 51.8	+17
KDJ	Kajisay	1.98	1		Pg	06 51 34.4	-0.8
KDJ				Sn	Sb	06 51 57.6	-1.1
ULHL	Ulahol	2.20	343	⇓iP	Pg	06 51 38.6	-0.7
	baz=41						
ULHL				⇓iS	Sg	06 52 07.4	-0.4
	baz=41						
ULHL	Ulahol	2.20	343	P	Pg	06 51 39.1	-0.2
	SNR=827						
BOOM	Boomskoye usch	2.50	340	⇑eP	Pb	06 51 43.5	+0.9
	baz=38						
BOOM				⇑iS	Sg	06 52 15.3	-2.3
	baz=38						
BOOM	Boomskoye usch	2.50	340	PN	Pg	06 51 43.7	-1.5
BOOM	Boomskoye usch	2.50	340	Pn	Pg	06 51 43.7	-1.5
PRZ	Przheval'sk	2.53	22	⇑iP	Pb	06 51 43.2	+0.2
	baz=20						
PRZ				⇑iS	Sb	06 52 14.5	+0.1
	baz=20						
PRZ	Przheval'sk	2.53	22	PN	Pb	06 51 42.9	-0.1
PRZ	Przheval'sk	2.53	22	Pn	Pb	06 51 42.9	-0.1
ANVS	Anan'yevo	2.67	9	⇑iP	Pb	06 51 45.1	-0.3
	baz=7.0						
ANVS				⇑iS	Sb	06 52 18.4	0.0
	baz=7.0						
ARLS	Aral	2.72	310	⇓eP	Pb	06 51 46.8	+0.5
	baz=9.0						
ARLS				⇓iS	Sb	06 52 21.0	+1.1
	baz=9.0						
SFK	Sufi-Kurgan	2.77	268	⇓iP	Pb	06 51 47.8	+0.5
	baz=69						
SFK				⇓iS	Sb	06 52 22.6	+1.0
	baz=69						
UCH	Uchtor	2.86	317	⇑iP	Pb	06 51 48.8	-0.1
	baz=16						
UCH				⇑iS	Sb	06 52 24.5	+0.3
	baz=16						
UCH	Uchtor	2.86	317	P	Pb	06 51 48.7	-0.1
	SNR=141						
TNSS	Tian-Shan	2.89	358	eP	Pg	06 51 51.1	-1.5
	3µm,0.5s						
TNSS				eS	Sg	06 52 29.3	-0.7
	6µm,0.7s						
TNSS	Tian-Shan	2.89	358	Pg	Pg	06 51 51.1	-1.5
	3µm,0.5s						
TNSS				Lg	Lg	06 52 29.3	
	6µm,0.7s						
TNSS	Tian-Shan	2.89	358	ePN	Pg	06 51 51.1	-1.5
TNSS				eS	Sg	06 52 29.3	-0.7
IZV	Izvestkoviy	2.91	353	eP	Pg	06 51 51.6	-1.4
	963nm,0.8s						
IZV				eS	Sg	06 52 29.9	-0.7
	3µm,0.7s						
IZV	Izvestkoviy	2.91	353	Pg	Pg	06 51 51.6	-1.4
	963nm,0.8s						
IZV				Lg	Lg	06 52 29.9	
	3µm,0.7s						
IZV	Izvestkoviy	2.91	353	ePN	Pg	06 51 51.6	-1.4
IZV				eS	Sg	06 52 30.0	-0.7
KBK	Karagaybulak	2.99	328	⇑eP	Pb	06 51 50.6	-0.3
	baz=27						
KBK				⇑iS	Sb	06 52 27.1	-0.6
	baz=27						
KBK	Karagaybulak	2.99	328	P	Pb	06 51 50.8	-0.2
	SNR=90						
TKM2	Tokmak 2	3.00	338	⇑eP	Pb	06 51 50.5	-0.6
	baz=37						
TKM2				⇑iS	Sb	06 52 26.8	-1.1
	baz=37						
TKM2	Tokmak 2	3.00	338	P	Pb	06 51 50.5	-0.6
	SNR=310						
TKM2	Tokmak 2	3.00	338	⇑Pn	Pb	06 51 50.5	-0.6
	759nm,0.6s						
TKM2				⇑Lg	Lg	06 52 32.8	
	3µm,0.6s						
MDOK	Medeo	3.01	359	eP	Pg	06 51 53.8	-1.2
	3µm,0.9s						
MDOK				eS	Sg	06 52 33.7	-0.3
	21µm,0.9s						
MDOK	Medeo	3.01	359	⇓Pg	Pb	06 51 52.1	+0.8
	6µm,1.2s						
MDOK				⇑Lg	Lg	06 52 33.3	
	20µm,1.2s						
MDOK	Medeo	3.01	359	Pg	Pg	06 51 53.7	-1.2
	3µm,0.9s						
MDOK				Lg	Lg	06 52 33.7	
	21µm,0.9s						
MDOK	Medeo	3.01	359	ePN	Pg	06 51 53.8	-1.2
MDOK				eS	Sg	06 52 33.7	-0.3
KST	Kastek	3.02	344	eP	Pg	06 51 54.1	-1.0
	2µm,0.4s						
KST				eS	Sg	06 52 34.4	+0.2
	6µm,0.7s						
KST	Kastek	3.02	344	Pg	Pg	06 51 54.1	-1.0
	2µm,0.4s						
KST				Lg	Lg	06 52 34.4	
	6µm,0.7s						
KST	Kastek	3.02	344	ePN	Pg	06 51 54.1	-1.0
KST				eS	Sg	06 52 34.4	+0.2
MTBS	Maitube	3.02	350	eP	Pg	06 51 54.2	-1.0
	1µm,0.8s						
MTBS				eS	Sg	06 52 34.4	+0.1
	2µm,0.7s						
MTBS	Maitube	3.02	350	Pg	Pg	06 51 54.2	-1.0
	1µm,0.8s						
MTBS				Lg	Lg	06 52 34.4	
	2µm,0.7s						
MTBS	Maitube	3.02	350	ePN	Pg	06 51 54.2	-1.0
MTBS				eS	Sg	06 52 34.4	+0.1
AAA	Alma-Ata	3.06	357	eP	Pg	06 51 55.1	-0.8
	3µm,0.7s						
AAA				eS	Sg	06 52 35.9	+0.3
	15µm,0.9s						
AAA	Alma-Ata	3.06	357	Pg	Pg	06 51 55.1	-0.8
	3µm,0.7s						
AAA				Lg	Lg	06 52 35.9	
	15µm,0.9s						
AAA	Alma-Ata	3.06	357	ePN	Pg	06 51 55.0	-0.8
SATY	Saty	3.06	18	eP	Pg	06 51 53.9	-2.1
SATY				eS	Sg	06 52 34.0	-1.7
SATY	Saty	3.06	18	Pg	Pg	06 51 53.8	-2.1
	5µm,0.9s						
SATY				Lg	Lg	06 52 34.0	
	15µm,0.9s						
SATY	Saty	3.06	18	ePN	Pg	06 51 53.9	-2.1
SATY				eS	Sg	06 52 34.0	-1.7
KNDC	Almaty	3.07	358	⇓Pn	Pb	06 51 50.9	-1.3
	9µm,1.2s						
KNDC				⇓Lg	Lg	06 52 35.7	
	87µm,1.1s						
KOTS	Kotyrbulak	3.08	360	eP	Pg	06 51 55.1	-1.2
	8µm,0.5s						
KOTS				eS	Sg	06 52 36.1	-0.1
	27µm,0.8s						
KOTS	Kotyrbulak	3.08	360	Pg	Pg	06 51 55.1	-1.2
	8µm,0.5s						
KOTS				Lg	Lg	06 52 36.1	
	27µm,0.8s						
KOTS	Kotyrbulak	3.08	360	ePN	Pg	06 51 55.1	-1.2
AAK	Ala-Archa	3.17	322	Pn	Pb	06 51 52.4	-1.7
	62nm,0.3s,baz=114,slow=7.6,SNR=836						
AAK				Lg	Lg	06 52 40.5	
	177nm,0.3s,baz=240,slow=21,SNR=10						
AAK	Ala-Archa	3.17	322	⇓eP	Pb	06 51 52.9	-1.2
	baz=21						
AAK				⇓iS	Sb	06 52 31.4	-1.6
	baz=21						
AAK	Ala-Archa	3.17	322	P	Pb	06 51 53.2	-0.8
	SNR=664						
AAK	Ala-Archa	3.17	322	⇑Pn	Pb	06 51 52.8	-1.2
	943nm,0.6s						
AAK				⇓Lg	Lg	06 52 38.7	
	4µm,0.8s						
AAK	Ala-Archa	3.17	322	Pn	Pb	06 51 53.1	-1.0
ZHN	Zhinishke	3.17	18	eP	Pg	06 51 56.2	-1.9
	456nm,0.7s						
ZHN				eS	Sg	06 52 37.6	-1.6
	10µm,0.8s						
ZHN	Zhinishke	3.17	18	Pg	Pg	06 51 56.2	-1.9
	456nm,0.7s						
ZHN				Lg	Lg	06 52 37.6	
	10µm,0.8s						
ZHN	Zhinishke	3.17	18	ePN	Pg	06 51 56.2	-1.9
FRU1	Bishkek	3.25	326	⇑eP	Pb	06 51 54.2	-1.1
	baz=25						
FRU1				⇑iS	Sb	06 52 33.1	-2.0
	baz=25						
FRU1	Bishkek	3.25	326	PN	Pb	06 51 54.7	-0.6
FRU1	Bishkek	3.25	326		Pb	06 51 54.7	-0.6
DGS	Degeres	3.25	342	eP	Pg	06 51 58.9	-0.6
	3µm,0.6s						
DGS				eS	Sg	06 52 42.1	+0.5
	5µm,0.9s						
DGS	Degeres	3.25	342	Pg	Pg	06 51 58.9	-0.6
	3µm,0.6s						
DGS				Lg	Lg	06 52 42.1	
	5µm,0.9s						
DGS	Degeres	3.25	342	ePN	Pg	06 51 58.9	-0.6
AML	Almayashu	3.25	309	⇑eP	Pb	06 51 54.6	-1.0
	baz=8.0						
AML				⇑eS	Sb	06 52 34.1	-1.5
	baz=8.0						
AML	Almayashu	3.25	309	P	Pb	06 51 54.5	-1.0
	SNR=1057						
UZB	Uzynbulak	3.32	25	eP	Pg	06 51 58.6	-2.2
	4µm,1.1s						
UZB				eS	Sg	06 52 42.1	-1.7
	6µm,0.6s						
UZB	Uzynbulak	3.32	25	Pg	Pg	06 51 58.6	-2.2
	4µm,1.1s						
UZB				Lg	Lg	06 52 42.1	
	6µm,0.6s						
UZB	Uzynbulak	3.32	25	ePN	Pg	06 51 58.6	-2.2
OHH	Osh	3.33	278	⇓iP	Pb	06 51 55.3	-1.4
	baz=78						
OHH				⇓iS	Sb	06 52 36.0	-1.5
	baz=78						
ARSB	Arslanbob	3.35	292	⇑eP	Pb	06 51 55.7	-1.4
	baz=91						
ARSB				⇑eS	Sb	06 52 36.7	-1.5
	baz=91						
ARSB	Arslanbob	3.35	292	PN	Pb	06 51 54.7	-2.4
ARSB	Arslanbob	3.35	292		Pb	06 51 54.7	-2.4
CHMS	Chumysh	3.35	329	⇑iP	Pb	06 51 55.3	-1.8
	baz=28						
CHMS				⇑iS	Sb	06 52 35.7	-2.4
	baz=28						
CHMS	Chumysh	3.35	329	P	Pb	06 51 55.5	-1.6
	SNR=126						
KURS	Kuram	3.43	13	eP	Pg	06 52 01.0	-1.9
	2µm,1.2s						
KURS				eS	Sg	06 52 46.2	-1.1
	6µm,1.0s						
KURS	Kuram	3.43	13	Pg	Pg	06 52 01.0	-1.9
	2µm,1.2s						
KURS				Lg	Lg	06 52 46.2	
	6µm,1.0s						
KURS	Kuram	3.43	13	ePN	Pg	06 52 01.0	-1.9
SHLS	Shalkode	3.48	30	eP	Pg	06 52 04.8	+0.9
	3µm,0.9s						
SHLS				eS	Sg	06 52 52.6	+3.6
	23µm,0.8s						
SHLS	Shalkode	3.48	30	Pg	Pg	06 52 04.8	+0.9
	3µm,0.9s						
SHLS				Lg	Lg	06 52 52.7	
	23µm,0.8s						
SHLS	Shalkode	3.48	30	ePN	Pg	06 52 04.8	+0.9
KPKS	Kokpek	3.52	19	eP	Pg	06 52 01.9	-2.7
	2µm,0.7s						
KPKS				eS	Sg	06 52 47.4	-2.8
	13µm,0.5s						
KPKS	Kokpek	3.52	19	ePN	Pg	06 52 01.9	-2.7
EKS2	Erkin-Say	3.55	316	⇑iP	Pb	06 51 58.6	-1.9
	baz=15						
EKS2				⇑eS	Sb	06 52 40.7	-3.1
	baz=15						
EKS2	Erkin-Say	3.55	316	P	Pb	06 51 58.8	-1.7
	SNR=661						
KTBS	Karatobe	3.58	355	eP	Pg	06 52 03.4	-2.3
	1µm,0.5s						
KTBS				eS	Sg	06 52 50.1	-1.9
	9µm,0.6s						
KTBS	Karatobe	3.58	355	Pg	Pg	06 52 03.4	-2.3
	1µm,0.5s						
KTBS				Lg	Lg	06 52 50.1	
	9µm,0.6s						
KTBS	Karatobe	3.58	355	ePN	Pg	06 52 03.4	-2.3
PDGK	Podgornoye	3.64	28	Pg	Pb	06 52 04.0	+2.0
	1µm,0.8s						
PDGK				Lg	Lg	06 52 51.2	
	8µm,0.8s						
PDGK	Podgornoye	3.64	28	⇑Pn	Pn	06 51 57.1	+3.0
	127nm,0.5s						
PDGK				⇑Pg	Pb	06 52 03.5	+1.5
	3µm,0.9s						
PDGK				⇓Lg	Lg	06 52 51.8	
	11µm,0.8s						
USP	Ospenovka	3.68	329	⇑iP	Pb	06 51 59.3	-3.3
	baz=28						
USP				⇑iS	Sb	06 52 43.6	-3.9
	baz=28						
USP	Ospenovka	3.68	329	P	Pb	06 51 59.5	-3.1
	SNR=111						
CHKK	Chushkaly	3.70	359	eP	Pg	06 52 05.4	-2.8
	1µm,0.6s						
CHKK				eS	Sg	06 52 53.7	-2.4
	11µm,0.9s						
CHKK	Chushkaly	3.70	359	Pg	Pg	06 52 05.4	-2.8
	1µm,0.6s						
CHKK				Lg	Lg	06 52 53.7	
	11µm,0.9s						
CHKK	Chushkaly	3.70	359	ePN	Pg	06 52 05.4	-2.8
KRBS	Karabastau	3.70	344	eP	Pg	06 52 06.3	-1.9
	1µm,0.9s						
KRBS				eS	Sg	06 52 55.6	-0.5
	3µm,1.0s						
KRBS	Karabastau	3.70	344	Pg	Pg	06 52 06.3	-1.9
	1µm,0.9s						
KRBS				Lg	Lg	06 52 55.7	
	3µm,1.0s						
KRBS	Karabastau	3.70	344	ePN	Pg	06 52 06.3	-1.9
KUU	Kurty	3.79	351	eP	Pg	06 52 07.4	-2.3
	873nm,0.9s						
KUU				eS	Sg	06 52 57.1	-1.7
	4µm,0.8s						
KUU	Kurty	3.79	351	Pg	Pg	06 52 07.4	-2.3
	873nm,0.9s						
KUU				Lg	Lg	06 52 57.1	
	4µm,0.8s						
KUU	Kurty	3.79	351	ePN	Pg	06 52 07.4	-2.3
SGDS	Sogindy	3.79	331	Pg	Pg	06 52 07.9	-1.8
	813nm,0.6s						
SGDS				Lg	Lg	06 52 58.2	
	2µm,0.6s						
MRKS	Merke	3.91	313	eP	Pg	06 52 10.8	-1.3
	340nm,0.6s						
MRKS				eS	Sg	06 53 02.6	-0.1
	685nm,0.8s						
MRKS	Merke	3.91	313	Pg	Pg	06 52 10.8	-1.3
	340nm,0.6s						
MRKS				Lg	Lg	06 53 02.6	
	685nm,0.8s						
MRKS	Merke	3.91	313	ePN	Pg	06 52 10.8	-1.3
MNBS	Baschi	4.04	13	eP	Pg	06 52 12.3	-2.4
	1µm,0.6s						
MNBS				eS	Sg	06 53 04.7	-2.3
	4µm,0.3s						
MNBS	Baschi	4.04	13	ePN	Pg	06 52 12.3	-2.4
KTMS	Ketmen	4.09	35	eP	Pg	06 52 12.3	-3.2
	404nm,0.3s						
KTMS				eS	Sg	06 53 05.4	-3.1
	3µm,0.8s						
KTMS	Ketmen	4.09	35	Pg	Pg	06 52 12.3	-3.2
	404nm,0.3s						
KTMS				Lg	Lg	06 53 05.4	
	3µm,0.8s						
KTMS	Ketmen	4.09	35	ePN	Pg	06 52 12.3	-3.2
ARXS	Arharly	4.10	7	eP	Pg	06 52 13.1	-2.6
	1µm,0.8s						
ARXS				eS	Sg	06 53 06.5	-2.3
	6µm,1.1s						
ARXS	Arharly	4.10	7	Pg	Pg	06 52 13.1	-2.6
	1µm,0.8s						
ARXS				Lg	Lg	06 53 06.5	
	6µm,1.1s						
ARXS	Arharly	4.10	7	ePN	Pg	06 52 13.1	-2.6
DRK	Karamyk	4.15	262		Pn	06 52 05.5	+4.3

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MNAS  Manas              4.18 305⇑eP    Pb     06 52 07.0 -4.3
      baz=5.0
MNAS                         ⇑eS    Sn     06 52 55.8 +4.9
      baz=5.0
DJR   Jarkent            4.63  25 eP    Pg     06 52 22.1 -3.7
      826nm,0.8s
DJR                           eS    Sg     06 53 22.0 -3.8
      3µm,0.9s
DJR   Jarkent            4.63  25  Pg   Pg     06 52 22.2 -3.7
      826nm,0.8s
DJR                            Lg   Lg     06 53 22.0
      3µm,0.9s
TDK   Taldyqorghan       4.94  11 eP    Pb     06 52 27.4 +3.2
      3µm,1.0s
TDK                           eS    Sg     06 53 31.4 -4.6
      10µm,1.0s
TDK   Taldyqorghan       4.94  11  Pg   Pb     06 52 27.4 +3.2
      3µm,1.0s
TDK                            Lg   Lg     06 53 31.4
      10µm,1.0s
DZA   Taraz              5.13 304 eP    Pg     06 52 33.3 -2.2
      180nm,0.5s
DZA                           eS    Sg     06 53 41.9 -0.2
      3µm,1.3s
DZA   Taraz              5.13 304  Pg   Pg     06 52 33.3 -2.2
      180nm,0.5s
DZA                            Lg   Lg     06 53 41.9
      3µm,1.3s
BTLS  Baital             5.39 336 eP    Pg     06 52 37.4 -3.0
      332nm,1.1s
BTLS                          eS    Sg     06 53 48.5 -1.7
      155nm,0.8s
BTLS  Baital             5.39 336  Pg   Pg     06 52 37.4 -3.0
      332nm,1.1s
BTLS                           Lg   Lg     06 53 48.5
      155nm,0.8s
KAPS  Kapalarasan        5.39  17 eP    Pg     06 52 36.3 -4.2
      644nm,1.0s
KAPS                          eS    Sg     06 53 46.4 -4.0
      2µm,0.8s
IUG   Iuzhnay            5.71 293 eP    Pg     06 52 45.4 -1.2
      349nm,0.4s
IUG                           eS    Sg     06 54 02.2 +1.7
      2µm,1.8s
KK31  Karatay Array      5.76 303  Pn   Pn     06 52 26.6 +3.4
      17nm,0.5s,baz=119,slow=11,SNR=190
KK31                         ⇓Pg    Pb     06 52 45.6 +7.5
      139nm,0.7s,baz=131,slow=16,SNR=9.1
KK31                         ⇑Lg    Lg     06 53 59.9
      222nm,0.7s,baz=118,slow=26,SNR=5.6
KK31  Karatay Array      5.76 303  PN   Pn     06 52 26.5 +3.3
KK31  Karatay Array      5.76 303  Pn   Pn     06 52 26.5 +3.3
KKAR  Karatay Array      5.76 303  PN   Pn     06 52 26.6 +3.4
KKAR  Karatay Array      5.76 303  Pn   Pn     06 52 26.6 +3.4
KKAR  Karatay Array      5.76 303  Pn   Pn     06 52 27.2 +4.0
NIL   Nilore             7.18 207  P    Pn     06 52 46.3 +3.5
NIL   Nilore             7.18 207  Pn   Pn     06 52 46.2 +3.5
MAKZ  Makanchi           7.54  26 ⇓Pn   Pn     06 52 49.8 +2.3
      84nm,0.8s
MAKZ                         ⇑Pg    Pg     06 53 24.0 +2.5
      311nm,1.1s
MAKZ                         ⇓Lg    Lg     06 54 51.3
      2µm,1.4s
MAKZ  Makanchi           7.54  26  P    Pn     06 52 48.8 +1.3
MAKZ  Makanchi           7.54  26  Pn   Pn     06 52 48.8 +1.3
CEP   Cherat             7.56 215  P    Pn     06 52 50.6 +2.6
JMU   Jammu              7.63 194 eP    Pg     06 53 31.0 +7.7
JMU                           eS    Sg     06 55 01.0 -1.1
MK31  Makanchi Array     7.63  28  Pn   Pn     06 52 50.0 +1.1
      14nm,0.5s,baz=205,slow=11,SNR=272
MK31                         ⇑Pg    Pg     06 53 17.9 -5.4
      73nm,0.7s,baz=205,slow=14,SNR=6.8
MK31                         ⇑Lg    Lg     06 54 53.5
      457nm,0.8s
MK31  Makanchi Array     7.63  28ceP    Pn     06 52 50.5 +1.6
MK31  Makanchi Array     7.63  28  Pn   Pn     06 52 50.2 +1.3
MKAR  Makanchi Array     7.63  28  Pn   Pn     06 52 50.4 +1.5
      4.6nm,0.3s,baz=196,slow=14,SNR=74
MKAR                           Sn   Sn     06 54 18.1 +2.4
      19nm,0.3s,baz=199,slow=18,SNR=6.1
MKAR                           Lg   Lg     06 54 58.6
      40nm,0.3s,baz=212,slow=26,SNR=5.9
MKAR  Makanchi Array     7.63  28       Pn     06 52 50.5 +1.6
DHRM  DHARAMSHALA        7.91 185 eP    Pn     06 52 54.3 +1.4
DHRM                          eS    Sn     06 54 16.0 -6.7
DHRM                           IAML        06 54 28.9
      comp=N,529nm,0.7s
DHRM                           IAML        06 54 29.1
      comp=E,806nm,0.8s
THW   Thamme Wali        8.52 212  P    Pn     06 53 02.5 +1.4
KBL   Kabul              8.52 231  P    Pn     06 53 03.4 +2.1
KBL   Kabul              8.52 231  Pn   Pn     06 53 03.4 +2.1
WMQ   Urumqi             8.69  62 eP    Pn     06 53 04.7 +1.3
WMQ                            S    Sn     06 54 40.7 -1.0
WMQ                            sS   Sg     06 54 51.9  -44
WMQ                            smax smax
      comp=E,1µm,1.9s
WMQ                            smax smax
      comp=E,1µm,1.1s
WMQ   Urumqi             8.69  62  P    Pn     06 53 05.0 +1.6
WMQ   Urumqi             8.69  62  Pn   Pn     06 53 05.0 +1.6
BHK   Bhakra             8.73 184 eP    Pn     06 53 08.0 +4.0
BHK                           eS    Sg     06 55 24.0  -13
SMLA  Simla              9.00 180 eP    Pn     06 53 08.0 +0.4
SMLA                           IAmb IAmb   06 53 16.6
      comp=Z,90nm,0.7s
DDI   Dehra Dun          9.83 175 eP    Pn     06 53 18.6 -0.5
DDI                            IAmb IAmb   06 53 29.3
      comp=Z,232nm,0.5s
DDI                           eS    Sn     06 55 03.5 -6.3
DDI                            IAML        06 55 10.5
      comp=E,230nm,0.4s
DDI                            IAML        06 55 11.1
      comp=N,312nm,0.4s
KURBB Kurchatov Arra    10.52   5  Pn   Pn     06 53 29.1 +0.7
      comp=N,0.5nm,0.3s,baz=194,slow=12,SNR=47
KURBB                          Sn   Sn     06 55 21.4 -5.1
      comp=N,0.8nm,0.3s,baz=189,slow=17,SNR=5.4
KURBB                          Lg   Lg     06 56 28.1
      comp=N,2.0nm,0.3s,baz=193,slow=30,SNR=14
KURBB Kurchatov Arra    10.52   5 ⇑Pn   Pn     06 53 29.1 +0.7
      comp=N,49nm,0.7s
KURBB                         ⇑Lg   Lg     06 56 28.3
      comp=N,2µm,1.4s
KURK  Kurchatov         10.62   5 ⇑Pn   Pn     06 53 29.6 -0.1
      comp=N,90nm,1.1s
KURK                          ⇑Lg   Lg     06 56 29.0
      comp=N,3µm,1.5s
KURK  Kurchatov         10.62   5ceP    Pn     06 53 29.1 -0.6
KURK                           pmax pmax
      comp=Z,61nm,1.0s
KURK  Kurchatov         10.62   5  Pn   Pn     06 53 30.8 +1.1
NDI   New Delhi         11.44 180 eP    Pn     06 53 40.0 -1.0
NDI                           eS    Sn     06 55 46.0 -3.1
DGZ   Jazzator, Alta    12.02  34 i P   Pn     06 53 49.9 +0.9
PYUN  Piuthan           12.96 156 eP    Pn     06 53 59.5 -2.6
      comp=Z,318nm,0.6s
DANN  Dangsing          12.98 153 eP    Pn     06 53 59.1 -3.3
      comp=Z,126nm,0.5s
HRA   Herat             13.16 249  Pn   Pn     06 54 05.1 +0.3
KOLN  Koldanda          13.46 155 eP    Pn     06 54 05.5 -3.4
      comp=Z,116nm,0.7s
GKN   Gorkha            13.62 151 eP    Pn     06 54 07.4 -3.6
      comp=Z,99nm,0.6s
BVAR  Borovoye Array    13.68 343  Pn   Pn     06 54 07.6 -3.9
      comp=Z,0.3nm,0.3s,baz=227,slow=26,SNR=7.7
BVAR                           Lg   Lg     06 58 12.0
      comp=Z,3.3nm,0.3s,baz=182,slow=24,SNR=4.5
BRVK  Borovoye          13.73 342ceP    Pn     06 54 13.3 +1.1
BRVK                           pmax pmax
      comp=Z,77nm,1.3s
BRVK  Borovoye          13.73 342  Pn   Pn     06 54 13.5 +1.2
KKN   Kakani            14.06 149 eP    Pn     06 54 13.6 -3.4
      comp=Z,120nm,0.6s
DMN   Daman             14.15 150 eP    Pn     06 54 15.5 -2.8
      comp=Z,86nm,0.5s
GUN   Gumba             14.19 147 eP    Pn     06 54 14.8 -4.2
      comp=Z,238nm,0.8s
PKIN  Phulchoki         14.29 149 eP    Pn     06 54 15.9 -4.4
      comp=Z,259nm,0.7s
PKI   Pulchoki          14.30 149 eP    Pn     06 54 16.1 -4.4
      comp=Z,306nm,0.8s
ZAA0  Zalesovo Array    14.76  18       Pn     06 54 25.4 -0.8
ZALV  Zalesovo Beam     14.76  18  Pn   Pn     06 54 25.4 -0.8
      comp=Z,1.1nm,0.3s,baz=200,slow=11,SNR=35
ZALV                           Lg   Lg     06 58 46.3
      comp=Z,1.1nm,0.3s,baz=215,slow=25,SNR=4.0
ZALV                           LR   LR     07 00 35.8
      comp=Z,2µm,21.2s,baz=210,slow=39
ZALV  Zalesovo Beam     14.76  18  P    Pn     06 54 25.0 -1.3
ZALV  Zalesovo Beam     14.76  18       Pn     06 54 25.0 -1.3
GEYT  Alibeck           14.93 268  Pn   Pn     06 54 29.9 +1.2
      comp=Z,0.6nm,0.3s,baz=93,slow=15,SNR=3.6
GEYT                           LR   LR     07 01 08.6
      comp=Z,532nm,18.4s,baz=115,slow=41
GEYT  Alibeck           14.93 268       Pn     06 54 29.8 +1.1
GYA0B ALIBECK ARRAY     14.93 268       P      06 54 32.4 -2.1
AB31  Akbulak array     15.20 312  P    Pn     06 54 33.3 +1.1
      comp=Z,38nm,0.8s,baz=118,slow=12,SNR=166
ABKAR Akbulak array     15.20 312       Pn     06 54 32.8 +0.6
ABKAR                          IAmb IAmb   06 54 53.0
      comp=Z,143nm,1.4s
RAMN  Ramite            15.34 146 eP    Pn     06 54 29.0 -5.5
      comp=Z,627nm,0.9s
TAPN  Taplejung         15.49 142 eP    Pn     06 54 32.1 -4.4
      comp=Z,345nm,1.1s
LSA   Lhasa             15.51 128  P    Pn     06 54 36.6 -0.3
LSA                            S    Sn     06 57 36.2 +7.0
LSA                            LR   LR
      comp=Z,6µm,10.7s
LSA                            LR   LR
      comp=Z,3µm,12.8s
LSA                            LR   LR
      comp=Z,8µm,12.1s
LSA   Lhasa             15.51 128  P    Pn     06 54 36.6 -0.3
LSA                            pmax pmax
      comp=Z,44nm,1.0s
LSA   Lhasa             15.51 128       Pn     06 54 36.6 -0.3
ODAN  Odare             15.77 144 eP    Pn     06 54 36.1 -3.9
      comp=Z,220nm,0.8s
BHPL  Bhopal            16.86 179 eP    Pn     06 54 48.3 -5.5
BHPL                           IAmb IAmb   06 54 54.7
      comp=Z,35nm,0.8s
BHPL                          eS    Sn     06 57 37.5  -24
AKTO  Aktyubinsk        16.87 314  Pn   P      06 54 54.9 -1.0
      comp=Z,0.6nm,0.3s,baz=120,slow=13,SNR=31
AKTO                           LR   LR     07 01 55.2
      comp=Z,5µm,19.1s,baz=128,slow=39
AKTO  Aktyubinsk        16.87 314 ⇑P    P      06 54 55.2 -0.7
      comp=Z,140nm,1.4s
GTA   Gaotai            17.46  85  P    Pn     06 54 58.4 -3.0
GTA                            pP   sP     06 55 07.8 +1.8
GTA                            sP   pP     06 55 12.2 +7.3
GTA                            S    Sn     06 58 13.7 -2.3
GTA                            sS   S      06 58 19.7 -4.7
GTA                            SS   SnSn   06 58 37.2 +8.0
GTA                            pmax pmax
      comp=Z,10.0nm,1.0s
GTA                            pmax pmax
      comp=Z,180nm,10.0s
GTA                            LR   LR
      comp=Z,2µm,13.1s
GTA                            LR   LR
      comp=Z,2µm,9.6s
GTA                            LR   LR
      comp=Z,2µm,11.9s
BOK   Bokaro            17.91 153 eP    Pn     06 55 01.2 -5.7
BOK                            IAmb IAmb   06 55 08.0
      comp=Z,65nm,0.7s
BOK                           eS    Sn     06 58 11.5  -15
GUWA  GUWAHATI          18.47 134 eP    P      06 55 10.6 -3.1
GUWA                           IAmb IAmb   06 55 22.1
      comp=Z,193nm,1.3s
NGP   Nagpur            19.01 174 eP    P      06 55 14.5 -5.1
SHL   Shillong          19.07 135  P    P      06 55 18.1 -2.4
SHL                            pmax pmax
      comp=Z,85nm,1.0s
SHL   Shillong          19.07 135⇑eP    P      06 55 16.6 -3.9
SHL                            IAmb IAmb   06 55 28.4
      comp=Z,66nm,1.0s
SHL   Shillong          19.07 135  P    P      06 55 18.1 -2.4
SVE   Sverdlovsk        19.86 333 eP    Pn     06 55 30.1 -0.1
SVE                           eS    Sn     06 59 16.7 +3.3
SVE                            pmax pmax
      comp=Z,82nm,1.4s
SVE                            MLR  MLR
      comp=Z,4µm,12.0s
MOKO  MOKOCHONG         20.00 128 eP    P      06 55 30.0 -0.6
MOKO                           IAmb IAmb   06 55 40.3
      comp=Z,173nm,1.1s
LKP   Lekhapani         20.10 124 eP    P      06 55 30.8 -0.7
LKP                            IAmb IAmb   06 55 32.9
      comp=Z,151nm,0.5s
MOY   Mondy             20.12  47 eP    P      06 55 32.3 +0.6
MOY                            pmax pmax
      comp=Z,71nm,3.5s
SILR  SILCHAR           20.20 135 eP    P      06 55 32.0 -0.6
KOHI  KOHIMA            20.21 130 eP    P      06 55 32.5 -0.3
KOHI                           IAmb IAmb   06 55 43.9
      comp=Z,256nm,0.8s
ARU   Arti              20.33 329  P    Pn     06 55 35.8  0.0
      comp=Z,20nm,0.6s,baz=139,slow=6.5,SNR=40
ARU                            LR   LR     07 03 49.6
      comp=Z,2µm,18.8s,baz=133,slow=38
ARU   Arti              20.33 329d iP   Pn     06 55 35.1 -0.7
ARU                                        06 55 53.2
ARU                            S    Sn     06 59 23.4 -1.4
ARU                            SS   SnSn   06 59 42.8 +3.6
ARU                            pmax pmax
      comp=Z,109nm,1.8s
ARU                            MLR  MLR
      comp=Z,2µm,14.0s
ARU   Arti              20.33 329  P    Pn     06 55 34.7 -1.1
ARU                            IAmb IAmb   06 55 40.8
      comp=Z,71nm,0.7s
BELO  BELONIA           20.75 140 eP    P      06 55 38.3 -0.3
IMP   Imphal            20.80 132 eP    P      06 55 38.9 -0.3
IMP                            IAmb IAmb   06 55 48.9
      comp=Z,110nm,0.8s
ZAK   Zakamensk         20.96  52 eP    P      06 55 40.3 -0.6
ZAK                            pmax pmax
      comp=Z,59nm,1.1s
LZH   Lanzhou           21.39  92 ⇓P    P      06 55 46.0 +0.4
LZH                            pP   sP     06 55 56.0 +7.0
LZH                            S    S      06 59 43.0 -0.3
LZH                            sS   pS     06 59 50.4 +0.5
LZH                            pmax pmax
      comp=Z,52nm,1.1s
LZH                            pmax pmax
      comp=Z,340nm,5.4s
LZH                            LR   LR
      comp=Z,2µm,13.6s
LZH                            LR   LR
      comp=Z,1µm,15.2s
LZH                            LR   LR
      comp=Z,1µm,16.3s
TLY   Talaya            21.63  49  P    P      06 55 48.5 +0.5
      comp=Z,5.1nm,0.7s,baz=282,slow=12,SNR=4.6
TLY   Talaya            21.63  49 i P   P      06 55 50.9 +2.9
TLY                            pmax pmax
      comp=Z,16nm,1.1s
TLY   Talaya            21.63  49  P    P      06 55 50.8 +2.9
POO   Poona             21.73 188 eP    P      06 55 48.6 -0.6
POO                            IAmb IAmb   06 56 03.0
      comp=Z,60nm,1.0s
POO                           ex    Sn     07 00 05.0 +6.1
SAIH  SAIHA             22.16 138 eP    P      06 55 53.1 -0.8
SAIH                           IAmb IAmb   06 56 04.7
      comp=Z,222nm,1.0s
IRK   Irkutsk           22.20  48 eP    P      06 55 52.6 -1.5
IRK                            pmax pmax
      comp=Z,129nm,3.4s
MAK   Makhachkala       22.28 287 eP    P      06 55 56.1 +1.1
MAK                           eS    S      07 00 02.4 +2.1
MAK                            pmax pmax
      comp=Z,58nm,0.7s
MAK                            MLR  MLR
      comp=Z,3µm,14.0s
SONM  Songino Array     22.33  60  P    P      06 55 56.1 +0.5
      comp=Z,19nm,0.9s,baz=257,slow=10,SNR=56
SONM                           LR   LR     07 06 02.9
      comp=Z,474nm,19.1s,baz=264,slow=41
SONM  Songino Array     22.33  60  P    P      06 55 56.4 +0.8
HYB   Hyderabad         22.69 176 i P   P      06 55 58.0 -1.4
      comp=Z,100nm,1.0s
HYB                           eS    S      07 00 15.0 +6.9
HYB   Hyderabad         22.69 176 eP    P      06 55 58.1 -1.4
HYB                            IAmb IAmb   06 56 08.6
      comp=Z,56nm,0.8s
ULN   Ulaanbaatar       22.77  60ceP    P      06 55 59.9 -0.4
ULN                            pmax pmax
      comp=Z,18nm,0.8s
ULN   Ulaanbaatar       22.77  60  P    P      06 56 00.3  0.0
ULN                            IAmb IAmb   06 56 20.5
      comp=Z,59nm,1.1s
KAD   Karad             22.90 187 eP    P      06 56 02.0 +0.3
WSAR  Wadi Sarin        22.98 228  P    P      06 56 03.9 +1.4
      comp=Z,3.9nm,0.7s,baz=37,slow=7.1,SNR=2.4
WSAR                           LR   LR     07 07 33.9
      comp=Z,592nm,18.8s,baz=74,slow=43
CD2   Chengdu           23.49 105  P    P      06 56 08.4 +0.7
CD2                            S    S      07 00 23.9 +2.1
CD2                            pmax pmax
      comp=Z,80nm,1.3s
CD2                            pmax pmax
      comp=Z,330nm,5.9s
CD2                            LR   LR
      comp=Z,2µm,9.4s
CD2                            LR   LR
      comp=Z,1µm,10.4s
CD2                            LR   LR
      comp=Z,2µm,9.3s
GROC  Groznyy           23.52 288 eP    P      06 56 07.3 -0.5
GROC                          e            06 56 38.8
GROC                          eS    S      07 00 20.3 -1.7
GROC                           pmax pmax
      comp=Z,12nm,0.5s
BELG  Belogornoye       23.60 311  P    P      06 56 09.8 +1.3
      comp=Z,34nm,0.7s,baz=85,slow=1.1,SNR=16
BELG  Belogornoye       23.60 311⇓eP    P      06 56 09.2 +0.7
BELG                           pmax pmax
      comp=Z,5.0nm,0.6s
GNI   Garni             24.68 281  LR   LR     07 07 47.9
      comp=Z,489nm,18.5s,baz=64,slow=41
GNI   Garni             24.68 281 i P   P      06 56 23.4 +4.5
GNI                            pmax pmax
      comp=Z,13nm,1.0s
GNI   Garni             24.68 281  P    P      06 56 19.3 +0.4
GNI                            IAmb IAmb   06 56 41.2
      comp=Z,73nm,1.4s
ZEI   Tsey              24.94 287 eP    P      06 56 25.8 +4.5
ZEI                            pmax pmax
      comp=Z,12nm,1.1s
BTO   Baotou            25.00  78 eP    P      06 56 21.0 -0.7
BTO                            S    S      07 00 48.6 +2.7
NCK   Nalchik           25.11 289 i P   P      06 56 23.6 +1.0
NCK                            pmax pmax
      comp=Z,12nm,1.0s
AKH   Akhalkalaki       25.40 284  P    P      06 56 27.8 +2.3
AKH                            pmax pmax
      comp=Z,160nm,1.4s
AKH   Akhalkalaki       25.40 284  P    P      06 56 27.8 +2.3
GOF   Gofitskoye        25.43 292⇑eP    P      06 56 27.6 +2.1
GOF                            pmax pmax
      comp=Z,34nm,1.0s
KIRV  Kirov             25.50 326  P    P      06 56 27.8 +1.8
      comp=Z,91nm,0.6s,baz=101,slow=2.0,SNR=40
KIRV                           LR   LR     07 07 25.3
      comp=Z,999nm,21.9s,baz=123,slow=39
KIRV  Kirov             25.50 326ceP    P      06 56 27.4 +1.5
KBZ   Khabaz            25.59 289  LR   LR     07 08 42.8
      comp=Z,1µm,18.4s,baz=92,slow=42
KBZ   Khabaz            25.59 289 i P   P      06 56 32.4 +5.5
KVAR  Kislovodsk Arr    25.73 290  LR   LR     07 07 28.9
      comp=Z,1µm,20.5s,baz=212,slow=38
KIV   Kislovodsk        25.73 290 eP    P      06 56 28.2 -0.2
KIV                           e            06 57 06.9
KIV                           eS    S      07 00 55.1 -2.5
KIV                            pmax pmax
      comp=Z,31nm,1.0s
KIV                            MLR  MLR
      comp=Z,2µm,15.0s
KIV   Kislovodsk        25.73 290  P    P      06 56 27.5 -0.8
XAN   Xi'an             26.00  93  P    P      06 56 32.6 +1.7
XAN                            PcP  PcP    06 59 57.0 -2.0
XAN                            S    S      07 01 05.4 +3.5
XAN                            SS   SnSn   07 02 03.8 +5.2
XAN                            pmax pmax
      comp=Z,17nm,1.0s
XAN                            LR   LR
      comp=Z,2µm,18.8s
HHC   Hu-ho-hao-te      26.11  77 eP    P      06 56 32.7 +0.9
HHC                            pP   sP     06 56 42.0 +6.7
HHC                            S    S      07 01 07.9 +4.3
HHC                            pmax pmax
      comp=Z,13nm,0.9s
HHC                            pmax pmax
      comp=Z,170nm,6.6s
HHC                            LR   LR
      comp=Z,1µm,12.3s
HHC                            LR   LR
      comp=Z,2µm,10.2s
HHC                            LR   LR
      comp=Z,2µm,10.3s
KMI   Kunming           26.15 117 ⇑P    P      06 56 31.7 -0.7
KMI                            pP   sP     06 56 36.5 +0.6
KMI                            sP   pP     06 56 39.4 +4.5
KMI                            S    S      07 01 05.6 +1.0
KMI                            sS   sS     07 01 13.6 +4.9
KMI                            pmax pmax
      comp=Z,38nm,1.0s
KMI                            pmax pmax
      comp=Z,150nm,3.5s
KMI                            LR   LR
      comp=Z,640nm,12.1s
KMI                            LR   LR
      comp=Z,780nm,12.8s
KMI                            LR   LR
      comp=Z,1µm,13.1s
VRH   Novokhopyorsk     26.83 306 eP    P      06 56 38.8 +0.7
VRH                            pmax pmax
      comp=Z,6.0nm,0.5s
VRH                            MLR  MLR
      comp=Z,3µm,11.0s
TIY   Taiyuan           27.48  84 eP    P      06 56 51.9 +7.8
TIY                            S    S      07 01 41.4  +16
TIY                            pmax pmax
      comp=Z,11nm,0.6s
TIY                            LR   LR
      comp=N,400nm,7.6s
TIY                            LR   LR
      comp=E,660nm,10.9s
TIY                            LR   LR
      comp=Z,760nm,17.4s
SOC   Sochi             27.91 289 eP    P      06 56 48.1 +0.3
SOC                           ePPP  PPP    06 57 43.7
SOC                           eS    S      07 01 29.5 -2.2
SOC                           eSS   SnSn   07 02 45.7 +0.9
SOC                           eSSS  SSS    07 03 06.5
SOC                            MLR  MLR
      comp=Z,910nm,12.0s
GYA   Guiyang           28.07 110 ⇓P    P      06 56 50.9 +1.3
GYA                            PP   PP     06 57 40.9  -12
GYA                            S    S      07 01 38.0 +3.3
GYA                            pmax pmax
      comp=Z,25nm,1.6s
GYA                            pmax pmax
      comp=Z,230nm,4.0s
GYA                            LR   LR
      comp=Z,610nm,10.1s
GYA                            LR   LR
      comp=Z,640nm,12.3s
GYA                            LR   LR
      comp=Z,850nm,11.3s
VORD  Divnogorie        28.31 305 eP    P      06 56 51.9 +0.6
MHMT  Maesarieng        28.32 135  P    P      06 57 02.3  +11
CM33  Chiang Mai Arr    28.37 132  P    P      06 56 53.0 +0.8
CHTO  Chiang Mai        28.37 132  P    P      06 56 50.5 -1.7
CHTO                           pmax pmax
      comp=Z,19nm,1.3s
CHTO  Chiang Mai        28.37 132  P    P      06 56 50.5 -1.7
CMMT  Chiang Mai        28.38 132  P    P      06 56 55.2 +2.9
      comp=Z,6.9nm,0.9s
CM32  Chiang Mai Arr    28.45 133  P    P      06 57 05.0  +12
CM34  Chiang Mai Arr    28.46 132  P    P      06 57 03.0  +10
VORR  Voronezh          28.46 307 eP    P      06 56 53.0 +0.3
VORR                           pmax pmax
      comp=Z,250nm,1.2s
PAYA  Payao             28.48 130  P    P      06 56 57.3 +4.2
      comp=Z,7µmcomp=Z,569nm,0.9s
CM35  Chiang Mai Arr    28.60 132  P    P      06 56 54.0 -0.2
CM15  Chiang Mai Arr    28.65 133  P    P      06 56 59.5 +4.9
      comp=Z,13nm,1.0s
CMAR  Chiang Mai Arr    28.66 133  P    P      06 56 55.8 +1.1
      comp=Z,2.9nm,0.6s,baz=316,slow=10.0,SNR=12
CMAR                           LR   LR     07 08 17.8
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	comp=Z,160nm,21.0s,baz=352,slow=36						
CMAR	**Chiang Mai Arr**	**28.66**	**133**	*ce*P	**P**	**06 56 59.0**	**+4.3**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.66**	**133**	P	**P**	**06 56 52.8**	**-1.9**
CM13	**Chiang Mai Arr**	**28.67**	**133**	P	**P**	**06 56 59.0**	**+4.3**
	comp=Z,14nm,0.9s						
CM02	**Chiang Mai Arr**	**28.68**	**133**	P	**P**	**06 56 59.0**	**+4.1**
	comp=Z,180nmcomp=Z,22nm,0.9s						
CM01	**Chiang Mai Arr**	**28.70**	**133**	P	P	06 57 01.1	+6.0
	comp=Z,211nmcomp=Z,26nm,0.9s						
CM09	**Chiang Mai Arr**	**28.70**	**133**	P	P	06 57 04.1	+9.1
	comp=Z,158nmcomp=Z,18nm,0.9s						
CM05	**Chiang Mai Arr**	**28.70**	**133**	P	P	06 57 00.5	+5.4
	comp=Z,127nmcomp=Z,14nm,1.0s						
CM04	**Chiang Mai Arr**	**28.72**	**133**	P	P	06 57 01.0	+5.7
	comp=Z,198nmcomp=Z,24nm,0.9s						
LPSR	**Galich'ya Gora**	**28.79**	**308**	*e*P	**P**	**06 56 56.0**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,3µm,16.0s						
LAMP	**Lampang**	**29.00**	**131**	P	P	06 57 02.9	+5.2
	comp=Z,27nm,1.1s						
ANN	**Anapa**	**29.43**	**292**	*e*P	P	06 56 51.6	-10
BOD	**Bodaibo**	**29.47**	**41**	*e*P	**P**	**06 57 00.9**	**-0.7**
BOD				pmax	pmax		
	comp=Z,27nm,1.9s						
SLVN	**Son La**	**29.52**	**121**	P	**P**	**06 57 01.6**	**-0.8**
SUKH	**Sukhothai**	**29.83**	**133**	P	P	06 57 11.0	+6.0
	comp=Z,11nm,0.9s						
UTTA	**Uttaradit**	**30.14**	**131**	P	P	06 57 12.7	+4.9
	comp=Z,16nm,0.8s						
MOS	**Moscow**	**30.21**	**314**	*e*P	**P**	**06 57 08.5**	**+0.4**
MOS				pmax	pmax		
	comp=Z,66nm,1.4s						
MOS				MLR	MLR		
	comp=Z,2µm,10.0s						
OBN	**Obninsk**	**30.65**	**313**	P	**P**	**06 57 13.3**	**+1.4**
	comp=Z,5.6nm,0.5s,baz=78,slow=8.3,SNR=6.6						
OBN	**Obninsk**	**30.65**	**313**	*i* P	**P**	**06 57 13.5**	**+1.5**
OBN				*i*		06 57 26.0	
OBN				*i*		06 58 13.6	
OBN				*i*		07 00 12.4	
OBN				pmax	pmax		
	comp=Z,34nm,1.4s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
OBN	**Obninsk**	**30.65**	**313**	P	**P**	**06 57 11.8**	**-0.2**
OBN				IAmb	IAmb	06 57 18.4	
	comp=Z,89nm,1.4s						
OBN	**Obninsk**	**30.65**	**313**	IAMs_20	IAMs_20	07 10 01.1	
	comp=Z,2µm,20.0s						
KLMR	**Klimovskoe**	**30.98**	**325**	*e*P	**P**	**06 57 13.9**	**-1.0**
KLMR				*e*		07 00 11.6	
KLMR				pmax	pmax		
	comp=Z,93nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,3µm,12.0s						
KLMR	**Klimovskoe**	**30.98**	**325**	*e*P	**P**	**06 57 13.9**	**-1.0**
KLMR				AMP		06 57 18.3	
	comp=Z,93nm,1.3s						
KLMR				*e*PcP	**PcP**	**07 00 11.7**	**+1.0**
KLMR				LQ	LQ	07 07 03.0	
KLMR				LQ	LQ	07 07 03.0	
KLMR				LR	LR	07 08 58.1	
KLMR				AMP		07 09 52.9	
	comp=Z,3µm,11.6s						
GAZ	**Gaziantep**	**31.12**	**278**	P	**P**	**06 57 19.0**	**+2.5**
HIA	**Hailar**	**31.27**	**59**	IAMs_20	IAMs_20	07 10 43.4	
	comp=Z,1µm,20.0s						
UTHA	**Uthaitani**	**31.29**	**135**	P	P	06 57 24.8	+6.8
	comp=Z,27nm,1.1s						
RAYN	**Ar Rayn**	**31.35**	**248**	P	**P**	**06 57 20.1**	**+1.5**
RAYN				pmax	pmax		
	comp=Z,13nm,1.0s						
RAYN	**Ar Rayn**	**31.35**	**248**	P	**P**	**06 57 20.1**	**+1.5**
PBA	**Port Blair**	**31.56**	**150**	IAMs_20	IAMs_20	07 11 31.6	
	comp=Z,1µm,19.0s						
CHAI	**Chaiyaphum**	**32.43**	**131**	P	P	06 57 33.8	+5.7
	comp=Z,29nm,1.2s						
PALK	**Pallekele**	**32.89**	**173**	P	**P**	**06 57 32.4**	**+0.3**
	comp=Z,5.7nm,0.7s,baz=81,slow=9.4,SNR=1.9						
PALK	**Pallekele**	**32.89**	**173**	P	**P**	**06 57 30.3**	**-1.8**
PALK				pmax	pmax		
	comp=Z,15nm,1.1s						
PALK				MLR	MLR		
	comp=Z,2µm,20.0s						
PALK	**Pallekele**	**32.89**	**173**	P	**P**	**06 57 30.3**	**-1.8**
PALK	**Pallekele**	**32.89**	**173**	IAMs_20	IAMs_20	07 11 25.8	
	comp=Z,2µm,20.0s						
TMCR	**Tamitsa**	**33.07**	**330**	*e*P	**P**	**06 57 34.1**	**+1.0**
TMCR				pmax	pmax		
	comp=Z,172nm,1.5s						
BR131	**Keskin Array S**	**33.09**	**284**	P	**P**	**06 57 35.2**	**+1.3**
BR131				pmax	pmax		
	comp=Z,12nm,1.0s						
BR131	**Keskin Array S**	**33.09**	**284**	P	**P**	**06 57 35.1**	**+1.3**
BRTR	**Keskin Array B**	**33.09**	**284**	P	**P**	**06 57 35.6**	**+1.8**
	comp=Z,3.9nm,0.7s,baz=90,slow=8.6,SNR=14						
BRTR				LR	LR	07 13 32.4	
	comp=Z,138nm,18.3s,baz=77,slow=41						
BRTR	**Keskin Array B**	**33.09**	**284**	P	**P**	**06 57 34.4**	**+0.6**
SRAK	**Srakaew**	**33.98**	**133**	P	P	06 57 50.6	+9.0
	comp=Z,182nm,0.8s						
NJ2	**Nanjing**	**34.42**	**90**	*e*P	**P**	**06 57 43.9**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	**Malin Array Be**	**34.66**	**304**	P	**P**	**06 57 48.8**	**+1.6**
	comp=Z,2.8nm,0.6s,baz=120,slow=8.8,SNR=12						
AKASG				PcP	**PcP**	**07 00 20.1**	**-1.0**
	comp=Z,3.8nm,0.6s,baz=74,slow=3.6,SNR=5.0						
AKASG				LR	LR	07 13 32.0	
	comp=Z,2µm,18.6s,baz=75,slow=39						
AKBB	**Malin Array Si**	**34.66**	**304**	*ce*P	**P**	**06 57 47.3**	**+0.1**
AKBB	**Malin Array Si**	**34.66**	**304**	P	**P**	**06 57 48.5**	**+1.3**
AKBB				IAMs_20	IAMs_20	07 13 19.5	
	comp=Z,2µm,18.0s						
SNY	**Shenyang**	**34.78**	**72**	⇑P	**P**	**06 57 52.0**	**+3.7**
SNY				pmax	pmax		
	comp=Z,17nm,1.9s						
SNY				pmax	pmax		
	comp=Z,180nm,5.9s						
SNY				LR	LR		
	comp=Z,1µm,17.5s						
SNY				LR	LR		
	comp=Z,840nm,12.5s						
SNY				LR	LR		
	comp=Z,1µm,15.1s						
UBPT	**Khong Chiam**	**35.00**	**127**	P	P	06 57 58.0	+7.6
QIZ	**Qiongzhong**	**35.10**	**117**	P	**P**	**06 57 50.0**	**-1.3**
QIZ				pP	**sP**	**06 58 00.5**	**+5.7**
QIZ				S	**S**	**07 03 21.3**	**-3.0**
QIZ				LR	LR		
	comp=Z,670nm,10.2s						
QIZ				LR	LR		
	comp=Z,730nm,10.0s						
MNK	**Minsk**	**35.55**	**311**	*i* P	**P**	**06 57 56.1**	**+1.3**
	comp=E,8.0nm,1.7s						
MNK				*i* P	**P**	**06 57 56.1**	**+1.3**
	comp=N,11nm,0.9s						
MNK				*i* P	**P**	**06 57 56.1**	**+1.3**
	comp=Z,26nm,1.3s						
MNK				*i* PP	**PP**	**06 59 17.6**	**+2.3**
MNK				*i* PPP	PPP	06 59 32.3	
MNK				*i* S	**S**	**07 03 29.9**	**-0.6**
MNK				*i* SS	**SS**	**07 06 00.1**	**-4.7**
MNK				*i* SSS	SSS	07 06 17.2	
MNK				*i* LQ	LQ	07 09 30.9	
MNK				*i* LR	LR	07 12 09.3	
MNK				*i* LRM	MLR	07 12 55.3	
	comp=N,589nm,18.7s						
MNK				*i* LRM	MLR	07 13 11.9	
	comp=E,136nm,14.5s						
MNK				*i* LRM	MLR	07 13 18.3	
	comp=Z,1µm,17.2s						
CN2	**Changchun**	**35.72**	**68**	*e*P	**P**	**06 57 56.6**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,240nm,6.0s						
CN2				LR	LR		
	comp=Z,850nm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,12.0s						
TIRR	**Tirgusor**	**35.85**	**293**	IAMs_20	IAMs_20	07 15 02.2	
	comp=Z,3µm,20.0s						
ZEA	**Zeya**	**36.05**	**51**	*e*P	**P**	**06 58 00.2**	**+1.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=E,800nm,12.0s						
ZEA				MLR	MLR		
	comp=N,400nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,13.0s						
LVZ	**Lovozero**	**36.05**	**334**	*ce*P	**P**	**06 57 59.6**	**+0.6**
LVZ				pmax	pmax		
	comp=Z,76nm,1.3s						
LVZ	**Lovozero**	**36.05**	**334**	P	**P**	**06 58 00.5**	**+1.5**
NACGM	**Naroch**	**36.21**	**311**	*i* P	**P**	**06 57 58.3**	**-2.1**
NACGM				*i* P	**P**	**06 57 58.3**	**-2.1**
NACGM				*i* P	**P**	**06 57 58.3**	**-2.1**
NACGM				*i* PP	**PnPn**	**06 59 14.6**	**-7.1**
NACGM				*i* PPP	PPP	06 59 41.5	
NACGM				*i* PcP	PcP	07 00 12.9	-13
NACGM				*i* S	**S**	**07 03 43.1**	**+2.4**
NACGM				*i* SS	**SS**	**07 06 13.0**	**-5.1**
NACGM				*i* SSS	SSS	07 06 48.1	
NACGM				*i* LQ	LQ	07 10 40.7	
NACGM				*i* LR	LR	07 13 06.2	
IDID	**Didziasalis**	**36.26**	**312**	*e*P	**P**	**06 58 03.5**	**+2.8**
IIGN	**Ignalina**	**36.55**	**312**	*e*P	**P**	**06 58 05.9**	**+2.6**
VSU	**Vasula**	**36.55**	**317**	*e*P	**P**	**06 58 04.7**	**+1.4**
VSU	**Vasula**	**36.55**	**317**	*i* P	**P**	**06 58 03.2**	**-0.1**
VSU				pmax	pmax		
	comp=Z,30nm,0.8s						
ISAL	**Salakas**	**36.62**	**312**	*e*P	**P**	**06 58 06.3**	**+2.4**
VRI	**Vrincioaia**	**36.78**	**296**	⇑P	**P**	**06 58 08.0**	**+2.5**
PLOR	**Plostina**	**36.84**	**296**	⇓P	**P**	**06 58 08.5**	**+2.6**
BIZ	**Bicaz**	**37.04**	**298**	⇓P	**P**	**06 58 08.8**	**+1.2**
NEHR	**Nehoiu**	**37.16**	**295**	⇑P	**P**	**06 58 11.9**	**+3.2**
FIA1	**FINESS Array S**	**37.36**	**322**	P	**P**	**06 58 12.0**	**+1.9**
FIA1				IAmb	IAmb	06 58 18.1	
	comp=Z,36nm,1.1s						
FINES	**FINESS Array B**	**37.36**	**322**	P	**P**	**06 58 11.7**	**+1.5**
	comp=Z,12nm,0.5s,baz=107,slow=8.9,SNR=118						
FINES				LR	LR	07 14 34.2	
	comp=Z,1µm,19.0s,baz=102,slow=38						
MLR	**Muntele Rosu**	**37.39**	**296**	⇑P	**P**	**06 58 13.9**	**+3.2**
MLR	**Muntele Rosu**	**37.39**	**296**	P	**P**	**06 58 12.9**	**+2.2**
MLR				pmax	pmax		
	comp=Z,21nm,1.0s						
MLR	**Muntele Rosu**	**37.39**	**296**	P	**P**	**06 58 12.9**	**+2.2**
MLR				IAmb	IAmb	06 58 30.9	
	comp=Z,21nm,1.0s						
BURAR	**Bucovina Array**	**37.54**	**299**	⇑P	**P**	**06 58 13.8**	**+1.8**
BURAR	**Bucovina Array**	**37.54**	**299**	P	**P**	**06 58 13.2**	**+1.2**
BUR08	**Bucovina Ar. S**	**37.55**	**299**	P	**P**	**06 58 13.0**	**+1.0**
DOPR	**Dopca**	**37.69**	**296**	⇑P	**P**	**06 58 15.1**	**+2.0**
PABE	**Paberze**	**37.84**	**312**	*e*P	**P**	**06 58 16.1**	**+1.8**
LVV	**L'vov**	**38.05**	**303**	*e*P	P	06 58 21.2	+5.1
LVV				MLR	MLR		
	comp=E,1µm,13.0s						
LVV				MLR	MLR		
	comp=N,900nm,14.0s						
LVV				MLR	MLR		
	comp=Z,2µm,14.0s						
MTSE	**Matsula**	**38.10**	**317**	*e*P	**P**	**06 58 15.4**	**-1.0**
YAK	**Yakutsk**	**38.18**	**37**	P	**P**	**06 58 16.8**	**-0.2**
	comp=Z,5.1nm,0.3s,baz=239,slow=2.2,SNR=7.3						
YAK	**Yakutsk**	**38.18**	**37**	*ce*P	**P**	**06 58 16.4**	**-0.7**
YAK				pmax	pmax		
	comp=Z,44nm,1.3s						
YAK	**Yakutsk**	**38.18**	**37**	P	**P**	**06 58 15.7**	**-1.4**
YAK				IAmb	IAmb	06 58 17.6	
	comp=Z,52nm,1.3s						
YAK				IAMs_20	IAMs_20	07 14 21.8	
	comp=Z,2µm,18.0s						
INCN	**Inchon**	**38.28**	**78**	P	**P**	**06 58 17.8**	**-0.4**
INCN				pmax	pmax		
	comp=Z,23nm,0.9s						
INCN				MLR	MLR		
	comp=Z,400nm,18.0s						
INCN	**Inchon**	**38.28**	**78**	P	**P**	**06 58 17.8**	**-0.4**
INCN				IAmb	IAmb	06 58 28.1	
	comp=Z,23nm,0.9s						
SUW	**Suwalki**	**38.30**	**310**	*e*P	**P**	**06 58 18.8**	**+0.7**
ARR	**Arges**	**38.32**	**296**	⇓P	**P**	**06 58 20.4**	**+1.9**
MDJ	**Mudanjiang**	**38.47**	**66**	IAMs_20	IAMs_20	07 15 58.6	
	comp=Z,729nm,19.0s						
LOT	**Lotru**	**38.90**	**296**	⇑P	**P**	**06 58 26.4**	**+2.9**
KWP	**Kalwaria Pacla**	**38.92**	**303**	P	**P**	**06 58 25.4**	**+1.9**
KWP				pmax	pmax		
	comp=Z,40nm,1.0s						
KWP	**Kalwaria Pacla**	**38.92**	**303**	P	**P**	**06 58 25.4**	**+1.9**
KWP				IAmb	IAmb	06 58 36.4	
	comp=Z,40nm,1.0s						
KLR	**Kul'dur**	**39.12**	**58**	P	**P**	**06 58 25.6**	**+0.4**
	comp=Z,10nm,0.5s,baz=279,slow=7.8,SNR=61						
KLR	**Kul'dur**	**39.12**	**58**	*ce*P	**P**	**06 58 25.4**	**+0.3**
KLR				pmax	pmax		
	comp=Z,13nm,0.6s						
KSRS	**Korea Array**	**39.25**	**77**	P	**P**	**06 58 26.5**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=282,slow=8.3,SNR=11						
KSRS				LR	LR	07 16 39.9	
	comp=Z,404nm,18.8s,baz=290,slow=39						
KOLS	**Kolonicke sedl**	**39.30**	**302**	*e*P	**P**	**06 58 28.2**	**+1.6**
KOLS	**Kolonicke sedl**	**39.30**	**302**	*e*P	**P**	**06 58 28.2**	**+1.6**
UZH	**Uzhgorod**	**39.33**	**301**	*e*P	P	06 58 31.8	+4.9
UZH				*e*		06 58 47.3	
DRGR		**39.36**	**298**	⇑P	**P**	**06 58 28.8**	**+1.6**
ARA0	**ARCESS Array S**	**39.77**	**334**	*e*P	**P**	**06 58 32.2**	**+1.9**
ARCES	**ARCESS Array B**	**39.77**	**334**	P	**P**	**06 58 31.9**	**+1.5**
	comp=Z,11nm,0.7s,baz=105,slow=9.4,SNR=37						
ARCES				LR	LR	07 15 33.6	
	comp=Z,2µm,18.8s,baz=110,slow=37						
ARCES	**ARCESS Array B**	**39.77**	**334**	P	**P**	**06 58 31.5**	**+1.2**
ARCES				pmax	pmax		
	comp=Z,26nm,1.0s						
ARCES	**ARCESS Array B**	**39.77**	**334**	P	**P**	**06 58 31.5**	**+1.2**
USA0B	**Ussuriysk Arra**	**40.23**	**66**	*i* P	**P**	**06 58 35.3**	**+0.8**
USRK	**Ussuriysk Ar.**	**40.23**	**66**	P	**P**	**06 58 34.4**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=287,slow=6.5,SNR=7.0						
USRK				LR	LR	07 16 43.7	
	comp=Z,777nm,18.1s,baz=271,slow=38						
USRK	**Ussuriysk Ar.**	**40.23**	**66**	P	**P**	**06 58 33.9**	**-0.6**
USRK	**Ussuriysk Ar.**	**40.23**	**66**	P	**P**	**06 58 33.9**	**-0.6**
BZS	**Buzias**	**40.34**	**297**	⇑P	**P**	**06 58 37.1**	**+1.7**
KTK1	**Kautokeino**	**40.37**	**333**	*e*P	**P**	**06 58 36.9**	**+1.6**
NACB	**Ninganchiao**	**40.45**	**99**	IAMs_20	IAMs_20	07 17 40.9	
	comp=Z,580nm,18.0s						
MDVR	**Moldovita**	**40.46**	**295**	⇑P	**P**	**06 58 38.3**	**+1.8**
NIE	**Niedzica**	**40.51**	**303**	*e*P	**P**	**06 58 38.9**	**+2.2**
TIXI	**Tiksi**	**40.58**	**22**	*ce*P	**P**	**06 58 37.0**	**0.0**
TIXI	**Tiksi**	**40.58**	**22**	P	**P**	**06 58 36.4**	**-0.6**
OJC	**Ojcow**	**40.70**	**304**	*e*P	**P**	**06 58 39.0**	**+0.7**
OJC	**Ojcow**	**40.70**	**304**	P	**P**	**06 58 38.5**	**+0.2**
OJC				pmax	pmax		
	comp=Z,39nm,1.5s						
OJC	**Ojcow**	**40.70**	**304**	P	**P**	**06 58 38.5**	**+0.2**
HAMF	**Hammerfest**	**40.73**	**336**	*e*P	**P**	**06 58 39.3**	**+1.1**
PSZ	**Piszkesteto**	**41.03**	**301**	⇓P	**P**	**06 58 42.6**	**+1.5**
PSZ	**Piszkesteto**	**41.03**	**301**	*e*P	**P**	**06 58 42.9**	**+1.8**
UPP	**Uppsala**	**41.34**	**319**	*e*P	**P**	**06 58 42.7**	**-0.6**
VYHS	**Vyhne**	**41.62**	**302**	*e*P	**P**	**06 58 47.5**	**+1.7**
VYHS	**Vyhne**	**41.62**	**302**	*e*P	**P**	**06 58 47.5**	**+1.7**
DIVS	**Divibare**	**41.83**	**295**	P	**P**	**06 58 49.2**	**+1.5**
GKP	**Gorka Klasztor**	**41.88**	**309**	*e*P	**P**	**06 58 49.4**	**+1.5**
PSI	**Prapat**	**42.10**	**146**	P	**P**	**06 58 50.2**	**0.0**
	comp=Z,3.2nm,0.3s,baz=360,slow=6.7,SNR=3.6						
MORC	**Moravsky Berou**	**42.21**	**304**	⇓P	**P**	**06 58 52.7**	**+2.0**
MORC	**Moravsky Berou**	**42.21**	**304**	*e*P	**P**	**06 58 52.4**	**+1.7**
CSKK	**Cskako**	**42.22**	**300**	*e*P	P	06 58 56.5	+5.7
MORH	**Mrgy, Hungar**	**42.23**	**298**	*e*P	**P**	**06 58 52.0**	**+1.2**
JAVC	**Velka Javorina**	**42.30**	**302**	*e*P	P	06 58 58.0	+6.5
KRLC	**Kraliky**	**42.64**	**304**	AMS	AMS	07 17 40.0	
	comp=Z,2µm,12.7s						
MODS	**Modra-Piesok**	**42.66**	**302**	*e*P	P	06 58 59.6	+5.3
MODS	**Modra-Piesok**	**42.66**	**302**	*e*P	P	06 58 59.6	+5.3
MPLH	**Magyarpolny**	**42.75**	**300**	*e*P	**P**	**06 58 57.1**	**+2.1**
KSP	**Ksiaz**	**42.81**	**305**	*e*P	**P**	**06 58 56.5**	**+0.9**
DPC	**Dobruska-Polom**	**42.88**	**305**	*e*P	**P**	**06 58 57.8**	**+1.6**
DPC				MLR	MLR		
	comp=Z,3µm,16.3s						
DPC	**Dobruska-Polom**	**42.88**	**305**	*e*P	**P**	**06 58 57.8**	**+1.6**
DPC				AMS	AMS	07 17 50.0	
	comp=Z,3µm,16.3s						
OSTC	**Ostas**	**42.91**	**305**	AMS	AMS	07 18 00.0	
	comp=Z,3µm,13.8s						
FAUS	**Fauske**	**42.93**	**330**	*e*P	**P**	**06 58 57.4**	**+1.2**
CHVC	**Chvalec**	**43.01**	**305**	*e*P	**P**	**06 58 58.7**	**+1.5**
CHVC				AMS	AMS	07 17 50.0	
	comp=Z,3µm,14.9s						
UPC	**Upice**	**43.05**	**305**	*e*P	**P**	**06 58 59.2**	**+1.7**
UPC				MLR	MLR		
	comp=Z,4µm,13.5s						
UPC	**Upice**	**43.05**	**305**	*e*P	**P**	**06 58 59.2**	**+1.7**
UPC				*e*x	x	06 59 02.7	
UPC				AMS	AMS	07 17 50.0	
	comp=Z,4µm,13.5s						
KRUC	**Moravsky**	**43.09**	**303**	*e*P	**P**	**06 58 59.7**	**+1.9**
MOR8	**Moi Rana**	**43.13**	**328**	*e*P	**P**	**06 58 58.6**	**+0.7**
HFS	**Hagfors**	**43.31**	**319**	P	**P**	**06 59 00.5**	**+1.1**
	comp=Z,4.5nm,0.5s,baz=111,slow=8.3,SNR=16						
LOF	**Lofoten**	**43.67**	**331**	*e*P	**P**	**06 59 03.5**	**+1.2**
CONA	**Conrad Observa**	**43.68**	**301**	*e*P	**P**	**06 59 04.1**	**+1.4**
	comp=Z,19nm,1.0s						
PVCC	**Panska Ves**	**43.95**	**305**	AMS	AMS	07 18 20.0	
	comp=Z,3µm,12.6s						
ARSA	**Arzberg**	**44.06**	**300**	*e*P	**P**	**06 59 06.1**	**+0.4**
	comp=Z,10.0nm,1.2s						
PRU	**Pruhonice**	**44.08**	**305**	*e*P	**P**	**06 59 07.5**	**+1.8**
PRU				MLR	MLR		
	comp=Z,3µm,13.9s						
PRU	**Pruhonice**	**44.08**	**305**	*e*P	**P**	**06 59 07.5**	**+1.8**
PRU				AMS	AMS	07 18 30.0	
	comp=Z,3µm,13.9s						
PRA	**Prague**	**44.13**	**305**	AMS	AMS	07 18 40.0	
	comp=Z,2µm,16.3s						
MNSI	**Mandailing Nat**	**44.18**	**147**	P	**P**	**06 59 07.4**	**+0.5**
	comp=Z,24nm,1.0s						
NC405	**NORSAR Array S**	**44.24**	**321**	P	**P**	**06 59 07.7**	**+0.7**
BRG	**Berggiesshubel**	**44.27**	**306**	*e*P	**P**	**06 59 08.6**	**+1.3**
BRG				Amp		06 59 10.3	
	comp=Z,7.5nm,1.2s						
BRG				*i* x	x	06 59 12.9	
BRG				Amp		06 59 14.4	
	comp=Z,20nm,1.4s						
BRG				*e*x	x	07 00 57.0	
BRG				Amp		07 00 58.5	
	comp=Z,14nm,1.2s						
BRG				Amp		07 19 02.0	
	comp=E,2.6nm,17.3s						
BRG				Amp		07 19 04.0	
	comp=N,0.9nm,17.3s						
BRG				Amp		07 19 06.0	
	comp=Z,4.1nm,19.1s						
BRG	**Berggiesshubel**	**44.27**	**306**	*e*P	**P**	**06 59 08.5**	**+1.3**
BRG				*e*		07 00 56.9	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,20nm,1.5s						
BRG				pmax	pmax		
	comp=Z,14nm,1.2s						
BRG				MLR	MLR		
	comp=E,3µm,17.3s						
BRG				MLR	MLR		
	comp=N,900nm,17.3s						
BRG				MLR	MLR		
	comp=Z,4µm,19.1s						
BRG	**Berggiesshubel**	**44.27**	**306**	*e*P	**P**	**06 59 08.6**	**+1.3**
BRG				Amp		06 59 10.3	
	comp=Z,7.5nm,1.2s						
BRG				*i* x	x	06 59 12.9	
BRG				Amp		06 59 14.4	
	comp=Z,20nm,1.4s						
BRG				*e*x	x	07 00 57.0	
BRG				Amp		07 00 58.5	
	comp=Z,14nm,1.2s						
BRG				Amp		07 19 02.0	
	comp=E,2.6nm,17.3s						
BRG				Amp		07 19 04.0	
	comp=N,0.9nm,17.3s						
BRG				Amp		07 19 06.0	
	comp=Z,4.1nm,19.1s						
BRG	**Berggiesshubel**	**44.27**	**306**	*e*P	**P**	**06 59 08.6**	**+1.3**
	comp=Z,20nm,1.4s,baz=76,slow=7.9						
NC602	**NORSAR Array S**	**44.35**	**320**	*e*P	**P**	**06 59 08.5**	**+0.8**
NC303	**NORSAR Array S**	**44.41**	**321**	P	**P**	**06 59 09.0**	**+0.8**
NB2	**NORSAR Subarra**	**44.49**	**321**	P	**P**	**06 59 09.4**	**+0.4**
	comp=Z,8.2nm,0.6s,baz=88,slow=7.9						
NB2	**NORSAR Subarra**	**44.49**	**321**	P	**P**	**06 59 09.4**	**+0.4**
	baz=88,slow=7.9						
NOA	**NORSAR Array B**	**44.49**	**321**	P	**P**	**06 59 09.7**	**+0.7**
	comp=Z,3.7nm,0.5s,baz=88,slow=7.9,SNR=23						
NOA				LR	LR	07 18 34.1	
	comp=Z,1µm,20.3s,baz=95,slow=37						
SOKA	**Soboth**	**44.53**	**300**	*e*P	**P**	**06 59 10.8**	**+1.3**
	comp=Z,22nm,1.2s						
FBE	**Freiberg**	**44.62**	**306**	*e*P	**P**	**06 59 11.8**	**+1.7**
	comp=Z,14nm,0.9s,baz=76,slow=7.9						
CLL	**Collm**	**44.76**	**307**	*i* P	**P**	**06 59 11.9**	**+0.7**
	comp=Z,8.0nm,0.8s						
CLL				*i*		06 59 15.7	
	comp=Z,21nm,1.3s						
CLL				*e*(S)	**S**	**07 05 54.0**	**+5.7**
CLL	**Collm**	**44.76**	**307**	*i* P	**P**	**06 59 11.9**	**+0.7**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLL	**Collm**	**44.76**	**307**	P	**P**	**06 59 11.0**	**-0.2**
CLL	**Collm**	**44.76**	**307**	*e*P	**P**	**06 59 12.2**	**+1.0**
	comp=Z,21nm,1.3s,baz=76,slow=7.9						
GEC2	**GERESS Array S**	**44.87**	**303**	P	**P**	**06 59 13.4**	**+1.2**
GEC2				IAmb	IAmb	06 59 18.7	
	comp=Z,29nm,1.3s						
GEC2	**GERESS Array S**	**44.87**	**303**	*e*P	**P**	**06 59 13.9**	**+1.7**
	comp=Z,33nm,1.3s,baz=76,slow=7.9						
GERES	**GERESS Array B**	**44.87**	**303**	P	**P**	**06 59 13.3**	**+1.2**
	comp=Z,5.7nm,0.7s,baz=58,slow=10.0,SNR=11						
GERES				LR	LR	07 20 45.9	
	comp=Z,871nm,20.3s,baz=92,slow=40						
GERES	**GERESS Array B**	**44.87**	**303**	P	**P**	**06 59 13.6**	**+1.4**
KHC	**Kasperske Hory**	**44.88**	**304**	*ce*P	**P**	**06 59 12.8**	**+0.6**
KHC				pmax	pmax		
	comp=Z,41nm,1.7s						
KHC	**Kasperske Hory**	**44.88**	**304**	*e*P	**P**	**06 59 13.7**	**+1.5**
KHC				*e*PP	**PP**	**07 01 02.0**	**+5.2**
KHC				AMS	AMS	07 19 20.0	
	comp=Z,2µm,12.0s						
KHC	**Kasperske Hory**	**44.88**	**304**	P	**P**	**06 59 13.5**	**+1.3**
OBKA	**Obir**	**44.90**	**300**	*e*P	**P**	**06 59 14.6**	**+2.1**
	comp=Z,13nm,1.0s						
SPA0	**Spitsbergen Ar**	**45.12**	**345**	*e*P	**P**	**06 59 16.4**	**+2.7**
WET	**Wettzell**	**45.32**	**304**	*e*P	**P**	**06 59 17.3**	**+1.5**
	comp=Z,17nm,1.2s,baz=76,slow=7.9						
NKC	**Novy Kostel**	**45.34**	**305**	AMS	AMS	07 19 30.0	
	comp=Z,4µm,16.2s						
GUNZ	**Gunzen**	**45.38**	**306**	*e*P	**P**	**06 59 17.6**	**+1.4**
	comp=Z,14nm,1.3s,baz=76,slow=7.9						
KONO	**Kongsberg**	**45.40**	**319**	*e*P	**P**	**06 59 17.8**	**+1.6**
DOMB	**Dombas**	**45.45**	**322**	*e*P	**P**	**06 59 17.8**	**+1.2**
FLTG	**Flechtingen**	**45.63**	**308**	*e*P	**P**	**06 59 18.8**	**+0.8**
	comp=Z,25nm,1.3s,baz=76,slow=7.9						
TRI	**Trieste**	**45.65**	**299**	P	**P**	**06 59 18.9**	**+0.6**
TRI				pmax	pmax		
	comp=Z,19nm,0.8s						
TRI	**Trieste**	**45.65**	**299**	P	**P**	**06 59 18.9**	**+0.6**
TRI				IAmb	IAmb	06 59 24.8	
	comp=Z,19nm,0.8s						
MOX	**Moxa**	**45.76**	**306**	*e*P	**P**	**06 59 20.4**	**+1.2**
	comp=Z,22nm,1.5s,baz=76,slow=7.9						
SKAR	**Skarslia**	**45.94**	**320**	*e*P	**P**	**06 59 22.1**	**+1.6**
PDSI	**Padang**	**46.09**	**147**	P	**P**	**06 59 19.3**	**-2.8**
	comp=Z,22nm,1.1s						
MOL	**Molde**	**46.12**	**323**	*e*P	**P**	**06 59 23.5**	**+1.7**
KBS	**Kingsbay**	**46.18**	**346**	*ce*P	**P**	**06 59 24.5**	**+2.4**
KBS				pmax	pmax		
	comp=Z,140nm,2.5s						
KBS	**Kingsbay**	**46.18**	**346**	*e*P	**P**	**06 59 23.8**	**+1.7**
GRF	**Grafenberg Arr**	**46.24**	**305**	*e*P	**P**	**06 59 24.9**	**+1.9**
	comp=Z,28nm,1.1s,baz=76,slow=7.9						
NRDL	**Niedersach Rie**	**46.27**	**309**	*e*P	**P**	**06 59 24.8**	**+1.8**
	comp=Z,54nm,1.6s,baz=76,slow=7.9						
SDSI	**Sungai Dareh**	**46.52**	**145**	P	**P**	**06 59 23.4**	**-2.1**
WATA	**Walderalm**	**46.63**	**302**	*e*P	**P**	**06 59 28.1**	**+1.9**
	comp=Z,16nm,1.5s						
YSS	**Yuzh-Sakhalins**	**46.81**	**59**	*e*P	**P**	**06 59 23.8**	**-3.6**
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
SQTA	**Sankt Quirin**	**46.91**	**302**	*e*P	**P**	**06 59 29.5**	**+1.1**
	comp=Z,8.1nm,1.1s						
MOTA	**Moosalm**	**46.94**	**302**	*e*P	**P**	**06 59 28.9**	**+0.2**

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           comp=Z,16nm,1.5s
CTI   Castel Tesino     46.96 300  IAMs_20 IAMs_20 07 20 59.9
           comp=Z,826nm,18.0s
RETA  Reutte            47.12 302 eP       P       06 59 30.4 +0.4
           comp=Z,13nm,0.8s
TEOL  Teolo             47.15 299  P       P       06 59 30.0 -0.1
TEOL                               IAmb    IAmb    06 59 47.8
           comp=Z,20nm,0.9s
MAT   Matsushiro        47.22  74  P       P       06 59 30.2 -0.6
MAJO  Matsushiro        47.22  74  P       P       06 59 30.1 -0.8
MAJO                               pmax    pmax
           comp=Z,23nm,0.9s
MAJO  Matsushiro        47.22  74  P       P       06 59 30.1 -0.8
MAJO                               IAmb    IAmb    06 59 38.2
           comp=Z,23nm,0.9s
MJAR  Matsushiro Arr    47.23  74  P       P       06 59 29.6 -1.3
           comp=Z,9.9nm,0.8s,baz=293,slow=9.1,SNR=18
MJAR                               LR      LR      07 22 06.6
           comp=Z,151nm,18.6s,baz=290,slow=40
FETA  Feichten          47.28 301 eP       P       06 59 32.3 +1.0
           comp=Z,12nm,1.2s
UBR   Ueberruh          47.49 302 eP       P       06 59 33.9 +1.0
           comp=Z,38nm,1.2s,baz=76,slow=7.9
DAVA  Damuels           47.75 302 eP       P       06 59 36.5 +1.5
           comp=Z,36nm,1.3s
MA2   Magadan           48.50  41ceP       P       06 59 38.7 -1.7
MA2                                pmax    pmax
           comp=Z,45nm,1.7s
SEY   Seymchan          48.68  36  P       P       06 59 41.7  0.0
           comp=Z,3.8nm,0.6s,baz=271,slow=11,SNR=6.4
SEY   Seymchan          48.68  36 i P      P       06 59 41.2 -0.5
JYT   Yasato            48.81  73  P       P       06 59 42.1 -1.0
KEST  Kesra             52.46 288  LR      LR      07 27 09.1
           comp=Z,276nm,19.9s,baz=141,slow=41
DAG   Danmarks Havn     52.61 343 i P      P       07 00 11.8 +0.6
DAG                                pmax    pmax
           comp=Z,22nm,0.8s
DAG   Danmarks Havn     52.61 343 i P      P       07 00 11.8 +0.6
           comp=Z,22nm,0.8s
DAG   Danmarks Havn     52.61 343 i P      P       07 00 11.8 +0.6
DAG                                IAmb    IAmb    07 00 13.2
           comp=Z,22nm,0.8s
EKA   Eskdalemuir Ar    53.05 315  P       P       07 00 14.6 -0.1
           comp=Z,6.2nm,0.8s,baz=75,slow=10.0,SNR=5.3
DBG   Daneborg          53.75 340 i P      P       07 00 20.7 +1.1
PETK  Petropavlovsk-    53.98  47  P       P       07 00 20.5 -1.1
           comp=Z,3.4nm,1.0s,baz=255,slow=10,SNR=1.5
PETK                               LR      LR      07 24 25.0
           comp=Z,178nm,20.9s,baz=300,slow=37
LEM   Lembang           54.55 142  LR      LR      07 28 03.7
           comp=Z,348nm,18.4s,baz=240,slow=41
BBKI  Banjar Baru       55.48 132  P       P       07 00 33.3 +0.4
           comp=Z,50nm,1.1s
TTSI  Tana Toraja       58.09 127  P       P       07 00 50.4 -1.0
           comp=Z,25nm,1.0s
SUMG  Summit            59.15 342  P       P       07 00 59.2 +0.6
SUMG                               pmax    pmax
           comp=Z,29nm,1.4s
SUMG  Summit            59.15 342  P       P       07 00 59.2 +0.6
SUMG                               IAmb    IAmb    07 01 06.4
           comp=Z,29nm,1.4s
SUMG  Summit            59.15 342 i P      P       07 00 59.3 +0.6
SUMG  Summit            59.15 342 i P      P       07 00 59.3 +0.6
KAPI  Kappang           59.60 129  LR      LR      07 31 08.7
           comp=Z,270nm,19.1s,baz=316,slow=40
EUNU  Eureka            59.69 357  P       P       07 01 02.3 +0.5
EUNU                               IAmb    IAmb    07 01 10.7
           comp=Z,14nm,0.9s
ES10  SONSECA Array     59.96 298  IAMs_20 IAMs_20 07 19 02.0
           comp=Z,783nm,22.0s
ESDC  Sonseca Array     59.99 298  P       P       07 01 04.2 -0.3
           comp=Z,1.3nm,0.7s,baz=54,slow=7.0,SNR=19
ESDC                               LR      LR      07 31 56.6
           comp=Z,464nm,20.4s,baz=10.0,slow=41
TULEG Thule             61.60 351  P       P       07 01 14.2 -0.6
TULEG                              IAmb    IAmb    07 01 20.2
           comp=Z,30nm,1.3s
TULEG Thule             61.60 351 i P      P       07 01 13.8 -1.0
TULEG                              IAmb    IAmb    07 01 15.8
           comp=Z,9.8nm,0.9s
ICESG Greenland Ices    61.61 339 i P      P       07 01 16.2 +0.8
ICESG                              IAmb    IAmb    07 01 17.9
           comp=Z,12nm,0.7s
A21K  Barrow            62.49  17  P       P       07 01 21.0 +0.2
           baz=316,SNR=16
A21K  Barrow            62.49  17  P       P       07 01 20.6 -0.2
A21K                               IAMs_20 IAMs_20 07 32 23.7
           comp=Z,649nm,18.0s
RDOG  Red Dog Mine      63.18  21  IAMs_20 IAMs_20 07 31 40.8
           comp=Z,687nm,20.0s
ANM   Nome              64.76  25  P       P       07 01 36.7 +0.7
ANM                                pmax    pmax
           comp=Z,30nm,1.0s
ANM   Nome              64.76  25  P       P       07 01 36.7 +0.7
ANM                                IAmb    IAmb    07 01 42.3
           comp=Z,30nm,1.0s
ANM                                IAMs_20 IAMs_20 07 28 51.6
           comp=Z,351nm,22.0s
RES   Resolute Bay      65.33 358  P       P       07 01 39.1 -0.3
           comp=Z,2.8nm,0.6s,baz=24,slow=8.9,SNR=27
FAKI  Fak Fak           66.10 116  IAMs_20 IAMs_20 07 24 57.1
           comp=Z,1µm,20.0s
TOLK  Toolik Lake Re    66.11  17  P       P       07 01 44.9 +0.2
           baz=322,SNR=39
TOLK  Toolik Lake Re    66.11  17  P       P       07 01 45.0 +0.3
COLD  Coldfoot          67.09  18  P       P       07 01 51.1 +0.3
           baz=322,SNR=30
COLD  Coldfoot          67.09  18  P       P       07 01 50.8 -0.1
COLD                               IAMs_20 IAMs_20 07 34 46.2
           comp=Z,803nm,19.0s
IMAR  Indian Mountai    67.17  20  P       P       07 01 51.4 -0.1
BMAR  Burnt Mountain    68.19  16  P       P       07 01 56.9 -1.0
MLY   Manley            68.70  20  P       P       07 02 01.3 +0.1
           baz=322,SNR=18
FYU   Fort Yukon        68.77  17  P       P       07 02 02.0 +0.6
TTA   Tatalina          68.86  23  P       P       07 02 02.3 +0.1
TTA                                pmax    pmax
           comp=Z,24nm,1.2s
TTA   Tatalina          68.86  23  P       P       07 02 02.3 +0.1
TTA                                IAmb    IAmb    07 02 08.0
           comp=Z,24nm,1.2s
I23K  Minto, Yukon-K    68.96  19  P       P       07 02 03.1 +0.5
           baz=323,SNR=18
I23K  Minto, Yukon-K    68.96  19  P       P       07 02 02.3 -0.4
I23K                               IAmb    IAmb    07 02 10.4
           comp=Z,32nm,1.2s
BPAW  Bear Paw Mtn.     69.38  20  P       P       07 02 04.4 -0.9
BPAW                               IAmb    IAmb    07 02 10.8
           comp=Z,33nm,1.1s
MDM   Murphy Dome       69.40  19  P       P       07 02 05.0 -0.5
MDM                                IAmb    IAmb    07 02 12.9
           comp=Z,28nm,1.3s
MDM                                IAMs_20 IAMs_20 07 36 37.1
           comp=Z,1µm,19.0s
INK   Inuvik            69.45  12  P       P       07 02 05.8 +0.2
           comp=Z,19nm,0.9s,baz=350,slow=7.0,SNR=45
POKR  Poker Plat Res    69.46  18  P       P       07 02 06.2 +0.4
           baz=325,SNR=11
POKR  Poker Plat Res    69.46  18  P       P       07 02 05.4 -0.4
POKR                               IAmb    IAmb    07 02 11.4
           comp=Z,34nm,1.1s
POKR                               IAMs_20 IAMs_20 07 36 39.9
           comp=Z,691nm,20.0s
NEA2  Nenana            69.48  19  P       P       07 02 05.9  0.0
           baz=324,SNR=18
TCOL  CIGO, UAF Yank    69.56  19  P       P       07 02 06.5 +0.1
           baz=325
TCOL  CIGO, UAF Yank    69.56  19  P       P       07 02 06.2 -0.1
TCOL                               IAmb    IAmb    07 02 13.7
           comp=Z,37nm,1.1s
COLA  College           69.56  19 i P      P       07 02 06.4 +0.1
COLA                               pmax    pmax
           comp=Z,17nm,1.3s
COLA  College           69.56  19  P       P       07 02 06.0 -0.4
COLA                               IAmb    IAmb    07 02 13.7
           comp=Z,40nm,1.1s
PRP   Porcupine Dome    69.58  18  P       P       07 02 06.8 +0.1
C36M  Paulatuk          69.70   8  P       P       07 02 06.5 -0.6
           baz=343
C36M  Paulatuk          69.70   8  P       P       07 02 06.5 -0.6
CCB   Clear Creek Bu    69.76  19  P       P       07 02 07.7 +0.1
CCB                                IAmb    IAmb    07 02 12.3
           comp=Z,23nm,1.3s
KTH   Kantishna Hill    69.83  21  P       P       07 02 07.5 -0.7
ILAR  Eielson Array     69.88  18  P       P       07 02 07.7 -0.7
           comp=Z,4.8nm,0.8s,baz=318,slow=4.8,SNR=43
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ILAR                               LR      LR      07 37 03.0
           comp=Z,617nm,18.6s,baz=326,slow=40
ILAR  Eielson Array     69.88  18  P       P       07 02 07.8 -0.6
PPLA  Purkeypile        70.00  22  P       P       07 02 10.1 +0.7
HDA   Harding Lake      70.17  19  P       P       07 02 09.4 -0.7
           baz=325
HDA   Harding Lake      70.17  19  IAMs_20 IAMs_20 07 36 59.5
           comp=Z,1µm,19.0s
MCK   McKinley          70.22  20  P       P       07 02 10.2 -0.3
           baz=324
TOA2  Torodi Ar. Sit    70.54 271  IAMs_20 IAMs_20 07 29 02.3
           comp=Z,243nm,19.0s
TOA0  Torodi Ar. Sit    70.54 271  P       P       07 02 13.2  0.0
TORD  Torodi Ar. Bea    70.54 271  P       P       07 02 12.9 -0.3
           comp=Z,6.6nm,0.6s,baz=44,slow=5.5,SNR=8.5
TORD                               LR      LR      07 37 39.3
           comp=Z,60nm,19.7s,baz=335,slow=40
TORD  Torodi Ar. Bea    70.54 271  P       P       07 02 12.8 -0.4
SKT   Skwentna          70.92  22  P       P       07 02 14.2 -0.5
CUT   Chulitna          70.93  21  P       P       07 02 14.1 -0.7
           baz=323
EGAK  Eagle             71.19  16  P       P       07 02 15.7 -0.6
EGAK                               IAmb    IAmb    07 02 21.5
           comp=Z,21nm,1.2s
RIDG  Independent Ri    71.24  18  P       P       07 02 15.6 -1.2
SCRK  Sand Creek        71.24  18  P       P       07 02 16.7 -0.1
           baz=328,SNR=22
DOT   Dot Lake          71.50  18  P       P       07 02 17.6 -0.7
K27K  Chicken           71.64  17  P       P       07 02 19.4 +0.4
           baz=329
K27K  Chicken           71.64  17  P       P       07 02 18.9 -0.2
K27K                               IAmb    IAmb    07 02 24.6
           comp=Z,23nm,1.0s
K27K                               IAMs_20 IAMs_20 07 35 55.6
           comp=Z,682nm,19.0s
PAX   Paxson            71.73  19  P       P       07 02 19.0 -0.8
PAX                                pmax    pmax
           comp=Z,46nm,1.2s
PAX   Paxson            71.73  19  P       P       07 02 19.0 -0.8
PAX                                IAmb    IAmb    07 02 25.1
           comp=Z,46nm,1.2s
RSO   Redoubt South     71.76  24  P       P       07 02 20.7 +0.6
GHO   Glory Hole Cre    71.82  21  P       P       07 02 19.7 -0.6
PMR   Palmer            71.91  21  P       P       07 02 19.6 -1.1
PMR                                pmax    pmax
           comp=Z,30nm,1.0s
PMR   Palmer            71.91  21  P       P       07 02 19.6 -1.1
PMR                                IAmb    IAmb    07 02 26.3
           comp=Z,30nm,1.0s
SML   Sawmill           71.95  21  P       P       07 02 20.5 -0.6
RC01  Rabbit Creek A    72.15  22  P       P       07 02 21.8 -0.4
           baz=324,SNR=16
DAWY  Dawson            72.19  16  P       P       07 02 21.5 -0.9
DAWY                               IAmb    IAmb    07 02 27.3
           comp=Z,17nm,1.0s
SCM   Sheep Creek Mo    72.20  20  P       P       07 02 21.8 -0.8
SCM                                pmax    pmax
           comp=Z,46nm,1.0s
SCM   Sheep Creek Mo    72.20  20  P       P       07 02 21.8 -0.8
L26K  Log Cabin Wild    72.20  18  P       P       07 02 22.5 -0.1
           baz=328
KNK   Knik Glacier      72.24  21  P       P       07 02 22.7 -0.1
KNK                                IAMs_20 IAMs_20 07 37 36.3
           comp=Z,626nm,20.0s
M24K  Tolsona, Glenn    72.28  20  P       P       07 02 23.5 +0.5
           baz=326,SNR=15
M24K  Tolsona, Glenn    72.28  20  P       P       07 02 22.9 -0.1
BCAR  Beaver Creek A    72.53  17  P       P       07 02 25.0 +0.4
O22K  Cooper Landing    72.64  22  P       P       07 02 24.6 -0.5
           baz=324
KLU   Klutina           72.86  20  P       P       07 02 26.4 -0.1
KLU                                IAmb    IAmb    07 02 33.9
           comp=Z,36nm,1.2s
GLI   Glacier Island    73.06  21  P       P       07 02 26.9 -0.8
GLI                                IAmb    IAmb    07 02 32.4
           comp=Z,33nm,1.0s
N25K  Chitina, Valde    73.11  19  P       P       07 02 28.1 +0.2
           baz=328,SNR=16
N25K  Chitina, Valde    73.11  19  P       P       07 02 27.4 -0.6
N25K                               IAmb    IAmb    07 02 36.0
           comp=Z,49nm,1.2s
PSAC1 Pilbara Seismi    73.13 139  IAMs_20 IAMs_20 07 29 35.9
           comp=Z,548nm,20.0s
PSAD2 Pilbara Seismi    73.28 139  IAMs_20 IAMs_20 07 37 48.9
           comp=Z,849nm,19.0s
FID   Port Fidalgo      73.33  21  P       P       07 02 28.6 -0.6
KNRA  Kununurra         73.40 128  IAMs_20 IAMs_20 07 31 11.8
           comp=Z,270nm,19.0s
GLB   Gilahina Butte    73.44  19  P       P       07 02 30.1 +0.1
GLB                                IAmb    IAmb    07 02 35.3
           comp=Z,22nm,1.3s
MCARA McCarthy VSAT     73.69  19  P       P       07 02 30.6 -0.7
MCARA                              IAmb    IAmb    07 02 36.8
           comp=Z,20nm,1.1s
VRDI  Verde Repeater    73.72  19  P       P       07 02 31.5 -0.3
VRDI                               IAmb    IAmb    07 02 37.0
           comp=Z,30nm,1.1s
KOWA  Kowa              74.08 276  P       P       07 02 33.9 -0.5
OHAK  Old Harbor        74.15  26  P       P       07 02 34.4 +0.3
BALM  Baldy             74.16  19  P       P       07 02 34.0 -0.2
BALM                               IAmb    IAmb    07 02 39.2
           comp=Z,38nm,1.3s
TGL   Tana Glacier      74.28  19  P       P       07 02 34.8 -0.2
BARN  Barnard Glacie    74.31  18  P       P       07 02 35.1 -0.1
BARN                               IAmb    IAmb    07 02 40.6
           comp=Z,36nm,1.3s
HYT   Haines Junctio    75.48  17  P       P       07 02 41.9  0.0
HYT                                IAmb    IAmb    07 02 47.4
           comp=Z,27nm,1.0s
YKA   Yellowknife Ar    77.27   6  P       P       07 02 51.5 -0.3
           comp=Z,8.5nm,0.5s,baz=358,slow=5.1,SNR=234
YKA                                LR      LR      07 41 02.3
           comp=Z,306nm,18.1s,baz=0.0,slow=39
DLBC  Dease Lake        79.20  14  P       P       07 03 02.6 -0.1
           comp=Z,12nm,1.1s,baz=335,slow=6.1,SNR=7.1
DLBC  Dease Lake        79.20  14  P       P       07 03 03.3 +0.6
DBIC  Dimbokro          79.60 270  P       P       07 03 05.5  0.0
           comp=Z,8.2nm,0.8s,baz=30,slow=8.3,SNR=5.6
DBIC                               LR      LR      07 44 15.4
           comp=Z,95nm,18.6s,baz=35,slow=40
WB6   Warramunga Arr    80.01 126  IAMs_20 IAMs_20 07 27 19.9
           comp=Z,332nm,18.0s
WB4   Warramunga Arr    80.04 127  IAMs_20 IAMs_20 07 31 21.8
           comp=Z,360nm,21.0s
WB3   Warramunga Arr    80.06 127  IAMs_20 IAMs_20 07 26 36.1
           comp=Z,285nm,18.0s
WRA   Warramunga Arr    80.06 127  P       P       07 03 06.6 -1.2
           comp=Z,12nm,1.1s,baz=325,slow=4.8,SNR=12
WRA                                LR      LR      07 46 09.0
           comp=Z,49nm,18.6s,baz=215,slow=41
WRA   Warramunga Arr    80.06 127  P       P       07 03 07.0 -0.8
WRAB  Tennant Creek     80.06 127ceP       P       07 03 09.8 +2.0
WRAB                               pmax    pmax
           comp=Z,50nm,2.5s
WR3   Warramunga Arr    80.09 127  IAMs_20 IAMs_20 07 41 08.4
           comp=Z,465nm,22.0s
FCC   Fort Churchill    81.18 355  P       P       07 03 12.4 -0.8
FCC                                pmax    pmax
           comp=Z,12nm,1.2s
FCC                                MLR     MLR
           comp=Z,700nm,20.0s
FCC   Fort Churchill    81.18 355  P       P       07 03 12.4 -0.8
FCC                                IAMs_20 IAMs_20 07 41 58.4
           comp=Z,745nm,20.0s
AS31  Alice Springs     82.61 129  P       P       07 03 19.1 -2.1
ASAR  Alice Springs     82.61 129  P       P       07 03 20.2 -1.0
           comp=Z,11nm,1.1s,baz=314,slow=5.1,SNR=43
ASAR                               LR      LR      07 44 34.8
           comp=Z,58nm,18.2s,baz=310,slow=39
ASAR  Alice Springs     82.61 129  P       P       07 03 20.5 -0.8
BOSA  Boshof            83.67 224  LR      LR      07 40 55.3
           comp=Z,130nm,20.3s,baz=36,slow=36
BBB   Bella Bella       85.46  15  LR      LR      07 45 52.6
           comp=Z,124nm,18.8s,baz=320,slow=39
FFC   Flin Flon         85.50 359  P       P       07 03 34.8 -0.8
FFC                                pmax    pmax
           comp=Z,20nm,1.0s
FFC   Flin Flon         85.50 359  P       P       07 03 34.8 -0.8
FFC                                IAmb    IAmb    07 03 40.4
           comp=Z,20nm,0.9s
ULM   Lac du Bonnet     89.77 356  P       P       07 03 55.2 -1.0
           comp=Z,13nm,1.1s,baz=34,slow=8.2,SNR=6.3
ULM                                LR      LR      07 47 42.4
           comp=Z,530nm,18.5s,baz=356,slow=38
ULM   Lac du Bonnet     89.77 356  P       P       07 03 54.9 -1.3
ULM                                pmax    pmax
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           comp=Z,29nm,1.3s
ULM   Lac du Bonnet     89.77 356  P       P       07 03 54.9 -1.3
B05A  Bryant            90.33  13  P       P       07 03 59.0 +0.2
           baz=345
E55A  Montcerf-Lytto    90.51 342  P       P       07 03 59.7  0.0
           baz=20
WALA  Waterton Lakes    90.64   7  P       P       07 03 59.1 -1.4
WALA                               IAmb    IAmb    07 04 05.0
           comp=Z,10nm,1.2s
B08A  Colville Reser    90.67  11  P       P       07 04 00.2 -0.4
B08A                               IAmb    IAmb    07 04 05.7
           comp=Z,18nm,1.3s
D03D  Eldon             90.87  14  P       P       07 04 00.9 -0.5
           baz=345
NEW   Newport           91.07   9  P       P       07 04 01.6 -0.8
           comp=Z,2.2nm,0.6s,baz=2.7,slow=3.2,SNR=8.1
NEW                                LR      LR      07 51 07.7
           comp=Z,183nm,18.7s,baz=342,slow=40
NEW   Newport           91.07   9  P       P       07 04 00.6 -1.8
NEW                                pmax    pmax
           comp=Z,7.0nm,1.0s
NEW   Newport           91.07   9  P       P       07 04 02.4  0.0
           baz=349
NEW   Newport           91.07   9  P       P       07 04 00.6 -1.8
NEW                                IAmb    IAmb    07 04 07.4
           comp=Z,6.7nm,0.9s
C09A  Chrisman Ranch    91.37  10  P       P       07 04 03.4 -0.4
C09A                               IAmb    IAmb    07 04 08.9
           comp=Z,10nm,1.0s
EGMT  Eagleton          92.00   5  P       P       07 04 06.5 -0.3
           baz=355
EGMT  Eagleton          92.00   5  P       P       07 04 05.2 -1.6
EGMT                               IAmb    IAmb    07 04 07.5
           comp=Z,13nm,1.2s
E09A  Wood Farm, Sta    92.65  10  P       P       07 04 08.4 -1.3
E09A                               IAmb    IAmb    07 04 14.1
           comp=Z,7.0nm,1.0s
MSO   Missoula          92.84   8  P       P       07 04 09.5 -1.3
           baz=351
HRY   Holter Researc    93.15   6  P       P       07 04 10.8 -1.4
STKA  Stephens Creek    93.24 130  LR      LR      07 52 27.9
           comp=Z,85nm,18.1s,baz=299,slow=40
MEDO  Medina            94.18 342  IAMs_20 IAMs_20 07 38 04.1
           comp=Z,439nm,19.0s
BOZ   Bozeman (W)       94.28   6  P       P       07 04 13.1 -4.3
           baz=353
YPP   Pitchstone Pla    95.66   6  P       P       07 04 23.2 -0.8
PDAR  Pinedale Array    97.25   5  LR      LR      07 53 28.6
           comp=Z,186nm,19.1s,baz=4.0,slow=39
PV16  Nyswonger Mesa   101.72   5  IAMs_20 IAMs_20 07 55 50.7
           comp=Z,495nm,18.0s
PV11  David Mesa, Pa   101.74   5  IAMs_20 IAMs_20 07 40 11.5
           comp=Z,633nm,22.0s
PV03  Paradox Valley   101.78   5  IAMs_20 IAMs_20 07 56 12.7
           comp=Z,555nm,22.0s
OXF   Oxford           104.67 349  IAMs_20 IAMs_20 07 57 44.2
           comp=Z,541nm,20.0s
SPX   San Pedro Mart   108.22  11  IAMs_20 IAMs_20 07 56 29.7
           comp=Z,308nm,20.0s
PCRV  Puerto La Cruz   118.68 316  PKP     PKPdf   07 09 45.3 -1.4
           comp=Z,11nm,0.9s,baz=9.8,slow=5.9,SNR=3.6
BKZ   Black Stump Fm   120.07 118  IAMs_20 IAMs_20 07 46 28.0
           comp=Z,196nm,19.0s
RIB01 Linhares ES      123.06 272 eP       PKiKP   07 09 56.3 +1.3
SNAA  Sanae            124.54 202  IAMs_20 IAMs_20 08 03 27.9
           comp=Z,116nm,18.0s
VNDA  Vanda            127.70 164  PKP     PKPdf   07 10 01.2 -0.8
           comp=Z,1.2nm,0.9s,baz=162,slow=3.2,SNR=2.0
SAML  Samuel           132.99 300  IAMs_20 IAMs_20 08 17 26.8
           comp=Z,174nm,21.0s
CPUP  Villa Florida    139.91 276  PKP     PKPdf   07 10 26.6 +0.3
           comp=Z,1.7nm,0.9s,baz=270,slow=3.2,SNR=2.9
NNA   Nana             143.75 313  PKP     PKPdf   07 10 34.9 +1.3
           comp=Z,3.4nm,0.4s,baz=336,slow=1.1,SNR=3.8
TCA   Tanti            147.90 274 eP       PKPdf   07 10 40.5 +0.1
ACLC  CERRO LA CRUZ    148.80 279 eP       PKPbc   07 10 46.2 +0.4
VCA   Vinchina         149.40 281 eP       PKiKP   07 10 48.1 -0.3
AVFE  Valle Fertil     149.78 277 eP       PKPbc   07 10 48.2 +0.1
AGUA  GUANDACOL        150.00 280 eP       PKPbc   07 10 49.2 +0.5
ACCO  Cerro Coronel    150.97 279 eP       PKPbc   07 10 50.3 -0.9
AROD  Rodeo            151.07 280 eP       PKiKP   07 10 52.2 +0.1
RTCV  Cerro Valdivia   151.15 276 eP       PKPbc   07 10 51.3  0.0
ASAL  Salagasta        151.69 275 eP       PKPbc   07 10 50.9 -1.6
AAGR  Agrelo           151.89 274 eP       PKPbc   07 10 51.2 -1.9
AUSP  Uspallata        151.96 276 eP       PKPbc   07 10 53.9 +0.4
PLCA  Paso Flores      155.45 258  PKPab   PKPab   07 11 15.8 -1.3
           comp=Z,2.5nm,1.1s,baz=265,slow=4.7,SNR=3.2
PLCA  Paso Flores      155.45 258 eP       PKPdf   07 10 55.5 +4.1
LC01  Cunco            156.10 263  IAMs_20 IAMs_20 08 13 38.5
           comp=Z,278nm,19.0s
LL01  San Ignacio de   157.04 254  IAMs_20 IAMs_20 08 17 27.2
           comp=Z,174nm,18.0s
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*UCR **10** 06:56:06.5±16.0, 8.°76N×84.°21W, h5^{km}, MW5.2, mb4.9(NEIC)*

*IDC **10** 06:56:08.2±0.7, 9.°06N×83.°88W, h0^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.3/35, mbtmp4.2/19, ML2.7/2, MS3.7/8, Ms1 3.7/8, ms1mx3.3/31, Error ellipse: s-maj=28.2km s-min=9.8km az=45.0*

*NEIC **10** 06:56:09.4±2.4, 9.°02N±0.°08×83.°94W±0.°08, h9^{km}±4^{km}, Error ellipse: s-maj=14.6km s-min=7.4km az=223.0*

*INET **10** 06:56:10.7, 8.°64N×83.°76W, h30^{km}, MW4.7*

*NEIC **10** 06:56:14.7, 9.°09N×83.°90W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.16; $M_{\theta\theta}$-4.87; $M_{\phi\phi}$-0.30; $M_{r\theta}$5.08; $M_{\theta\phi}$0.85; $M_{\phi r}$-2.22; Fault plane solution: $M_0$7.53000×10^{15} NP1:ϕ_s109.87000°, δ68.86000°, λ96.75000°. NP2:ϕ_s271.68000°, δ22.14000°, λ73.08000°. Principal axes: T 7.6669, Plg65.0000°, Azm31.0000°; N -0.2895, Plg6.0000°, Azm287.0000°; P -7.3774, Plg24.0000°, Azm195.0000°;*

ISC 10 06:56:13.1±0.6, **9.°01N**±0.°04×**83.°94W**±0.°04, **h34**^{km}±2^{km}, **n219**, **σ1.§29**/221, **mb4.6**/50, **MS3.5**/6, **Costa Rica**

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Code  Station Name       Δ°  AZ°    Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
EDDO  Dominical         0.25  17 eP       Pn       06 56 17.4 -2.7
EDDO                             eS       Sn       06 56 23.6 -0.2
EDLM  Las Mercedes      0.44  52 eP       Pb       06 56 20.7 -2.2
PEZE  Perez Zeledon,    0.45  35 eP       Pb       06 56 20.9 -2.3
EDPN  Palmar Norte      0.48  96 eP       Pb       06 56 20.9 -2.6
EDPN                             eS       Sb       06 56 30.0 -0.5
RIOS  Rincon, Osa       0.52 126 eP       Pb       06 56 20.9 -3.2
RIOS                             eS       Sb       06 56 30.1 -1.5
EDBA  Buenos Aires      0.68  77 eP       Pn       06 56 24.0 -2.3
EDBA                             eS       Sn       06 56 36.1 +0.4
LCR2  La Lucha 2        0.73 355 eP       Pn       06 56 25.2 -2.1
LCR2                             eS       Sn       06 56 38.1 +0.7
DRK0  Durika            0.73  70 eP       Pn       06 56 25.4 -1.8
RIMA  Rio Macho         0.76   6 eP       Pn       06 56 25.7 -2.0
PTJ1  Puerto Jimnez     0.79 127 eP       Pn       06 56 25.8 -2.1
PTJ1                             eS       Sn       06 56 38.8 +0.4
POTG  Potrero Grande    0.81  87 eP       Pn       06 56 26.7 -1.5
PIRO  Carate, Puerto    0.85 135 eP       Pn       06 56 26.1 -2.5
SJS   Escuela Geolog    0.93 353 eP       Pn       06 56 28.9 -1.1
JACO  JACO, Garabito    0.96 313 eP       Pn       06 56 27.4 -2.8
EDSV  San Vito          0.97 101 eP       Pn       06 56 29.3 -1.2
HDC   Heredia           1.00 350 eP       Pn       06 56 30.1 -0.9
HDC   Heredia           1.00 350          Pn       06 56 30.2 -0.8
HDC                                       Sb       06 56 45.2 +0.1
CVTR  Volcan Turrial    1.02  10 eP       Pn       06 56 30.9 -0.6
SRA1  San Ramn          1.19 334 eP       Pn       06 56 32.2 -1.4
LAFE  Finca La Fe, P    1.24 310 eP       Pn       06 56 31.5 -2.6
BRU2  Volcan            1.25 100 eP       Pn       06 56 33.8 -0.6
RGM0  Gandoca           1.44  66 eP       Pn       06 56 38.3 +1.5
FORC  Fortuna           1.62 334 i P      Pn       06 56 39.0 -0.3
CASO  Castillo          1.62 331 i P      Pn       06 56 38.9 -0.4
JTS   Las Juntas de     1.62 322  Pg      Pn       06 56 37.6 -1.7
      390nm,0.3s,baz=125,slow=9.7,SNR=76
JTS                               Lg      Lg       06 57 00.2
      337nm,0.3s,baz=220,slow=22,SNR=11
JTS                               LR      LR       06 57 06.6
      comp=Z,982nm,21.0s,baz=182,slow=36
ARE1  Arenal 1          1.63 332 eP       Pn       06 56 39.6  0.0
CEDE  Laguna Cedeo      1.65 333 i P      Pn       06 56 39.7 -0.1
COVE  Coope Vega, Sa    1.76 345 eP       Pn       06 56 41.4 +0.2
DUNO  Dulce Nombre,     1.86 305 eP       Pn       06 56 41.7 -1.0
ACAL  Aguas Claras      1.94 326 i P      Pn       06 56 44.5 +0.6
COLC  Colonia           2.06 323 i P      Pn       06 56 44.6 -0.9
HORNC Hornillas         2.09 324 i P      Pn       06 56 45.9 +0.1
GUAB  Guayabo de Bag    2.11 323 i P      Pn       06 56 47.1 +0.9
LIM1  Limonal           2.12 323 i P      Pn       06 56 46.6 +0.4
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BUEV	Buena Vista	2.29	321	*i* P	Pn	06 56 49.7	+1.1
ACON	Acoyapa	3.18	338		Pn	06 57 01.3	+0.5
ESPN	Las Esperanzas	3.19	354		Pn	06 57 01.2	+0.3
BCIP	Isla Barro Col	4.06	87	Pn	Pn	06 57 14.3	+1.4
BCIP	Isla Barro Col	4.06	87	*e*P	Pn	06 57 14.3	+1.4
CRIN	San Cristobal	4.77	320		Pn	06 57 23.7	+0.9
PRVC	Isla de Provid	5.02	30	*e*P	Pn	06 57 28.1	+2.0
TGUH	Tegucigalpa,Un	5.99	327	Pn	Pn	06 57 40.9	+1.4
SNET	Serv Nac Est T	6.97	312	Pn	Pn	06 57 55.4	+2.5
SOLC	Bahia Solano	7.04	113	*e*P	Pn	06 57 53.1	-0.8
MTO3	Montecristo	7.54	316		Pn	06 58 00.7	-0.2
ESQI	Esquipulas	7.64	317	Pn	Pn	06 57 59.8	-2.4
DBBC	Dabeiba	7.91	104	*e*P	Pn	06 58 06.9	+1.0
MOTC	Monteria, Cord	8.18	91	*e*P	Pn	06 58 11.1	+1.6
UREC	San Jos de Ur	8.41	98	*e*P	Pn	06 58 14.5	+1.7
CBOC	Ciudad Bolivar	8.46	111	*e*P	Pn	06 58 14.6	+1.0
PLMC	San Jos del P	8.62	118	*e*P	Pn	06 58 15.5	-0.2
SJCC	San Jacinto, C	8.69	83	*e*P	Pn	06 58 18.7	+2.1
HELC	Santa Helena	8.80	108	*e*P	Pn	06 58 19.4	+1.1
YOTC	Yotoco, Valle	9.05	123	*e*P	Pn	06 58 22.9	+1.3
ZARC	Zaragoza, Cauc	9.12	99	*e*P	Pn	06 58 23.4	+1.1
RREF	El Recreo	9.46	115	*e*P	Pn	06 58 31.9	+4.2
BBAC	Balboa, Cauca	9.62	136	*e*P	Pn	06 58 31.6	+2.1
TOLC	Tolima	9.62	117	*e*P	Pn	06 58 33.1	+3.5
PTBC	PUERTO BERRIO,	9.71	104	*e*P	Pn	06 58 32.4	+1.8
PETF	Flores	9.75	324		Pn	06 58 31.1	0.0
SMLC	San Martn de	9.75	90	*e*P	Pn	06 58 33.7	+2.6
SMRC	Santa Marta, M	9.80	77	*e*P	Pn	06 58 33.0	+1.2
ORTC	Ortega, Tolima	10.01	120	*e*P	Pn	06 58 39.6	+4.8
PCON	Cinco Dias	10.02	131	*e*P	Pn	06 58 41.7	+6.4
MARP	Paez Belalcaza	10.03	127	*e*P	Pn	06 58 37.8	+2.6
BRRC	Barranca, Sant	10.30	100	*e*P	Pn	06 58 43.3	+4.6
SPBC	San Pablo de B	10.34	108	*e*P	Pn	06 58 42.5	+3.3
ROSC	El Rosal	10.41	113	Pn	Pn	06 58 39.1	-1.3
	1.1nm,0.3s,baz=30,slow=20,SNR=1.8						
ROSC				LR	LR	07 02 06.4	
	comp=Z,313nm,20.1s,baz=302,slow=35						
ROSC	El Rosal	10.41	113	Pn	Pn	06 58 39.5	-1.0
OCAC	Ocana	10.53	93	*e*P	Pn	06 58 43.3	+1.4
CCIG	Comitan	10.78	313		Pn	06 58 45.4	+0.1
CHIC	Chingaza	11.03	113	*e*P	Pn	06 58 50.8	+1.8
RUSC	La Rusia	11.20	105	*e*P	Pn	06 58 58.1	+6.6
VILC	Villavicencio,	11.28	115	*e*P	Pn	06 58 59.4	+7.3
MACC	Macarena, Meta	12.14	124	*e*P	Pn	06 59 07.8	+3.9
SDV	Santo Domingo	13.15	89	Pn	Pn	06 59 17.5	-0.3
	0.5nm,0.3s,baz=267,slow=6.7,SNR=12						
SDV	Santo Domingo	13.15	89	Pn	Pn	06 59 19.1	+1.4
SDV	Santo Domingo	13.15	89	*e*P	Pn	06 59 19.6	+1.8
CMIG	Matias Romero	13.34	308	Pn	Pn	06 59 22.2	+1.9
	1.1nm,0.3s,baz=135,slow=8.8,SNR=11						
BANI	BANI	16.15	53	Pn	Pn	06 59 57.7	-0.1
TLIG	Tlapa	16.57	302		P	07 00 04.7	-0.7
TLIG				IAmb	IAmb	07 00 18.3	
	comp=Z,34nm,0.9s						
ATAH	Atahualpa	16.96	161	Pn	P	07 00 12.3	+2.3
	comp=Z,0.2nm,0.3s,baz=324,slow=6.5,SNR=7.1						
ATAH				LR	LR	07 06 04.2	
	comp=Z,604nm,18.2s,baz=340,slow=35						
PCRV	Puerto La Cruz	19.07	85	P	Pn	07 00 36.5	+2.6
	comp=Z,0.3nm,0.3s,baz=234,slow=16,SNR=1.3						
PLCV	Puerto La Cruz	19.12	85	P	Pn	07 00 36.5	+2.0
SJG	San Juan	19.50	61	P	Pn	07 00 39.0	-0.1
GCPR	Guaynabo City	19.64	60	P	P	07 00 38.3	-0.9
CBYP	Canovanas	19.82	60	P	P	07 00 40.7	-0.4
CBYP				IAmb	IAmb	07 01 05.4	
	comp=Z,39nm,1.2s						
CZSB	Cruzeiro do Su	20.05	146	*e*P	Pn	07 00 46.2	+0.7
ZAIG	Zacatecas	22.50	310	P	P	07 01 09.7	-0.6
344A	Westbrook Farm	23.21	345	P	P	07 01 17.4	+0.2
342A	Flagon Creek P	23.58	342	P	P	07 01 21.1	+0.2
342A				IAmb	IAmb	07 01 37.6	
	comp=Z,34nm,1.2s						
VBMS	Vicksburg	23.89	346	P	P	07 01 24.1	+0.4
146A	Union	23.98	349	P	P	07 01 24.7	+0.1
LRAL	Lakeview Retre	24.08	354	P	P	07 01 26.1	+0.6
LRAL				IAmb	IAmb	07 01 27.1	
	comp=Z,20nm,0.8s						
Z47A	Carrollton	24.37	352	P	P	07 01 27.2	-0.9
Z47A				IAmb	IAmb	07 01 29.3	
	comp=Z,22nm,0.8s						
Y52A	Lilburn	24.74	360	P	P	07 01 31.6	+0.1
Y52A				IAmb	IAmb	07 01 33.6	
	comp=Z,19nm,1.0s						
435B	Jarrell	25.13	331	P	P	07 01 35.0	-0.1
435B				IAmb	IAmb	07 01 43.0	
	comp=Z,21nm,0.9s						
HODGE	Hodges	25.15	3	P	P	07 01 36.1	+0.8
HODGE				IAmb	IAmb	07 01 44.0	
	comp=Z,11nm,0.8s						
Y45A	Yeager Farm, C	25.27	349	P	P	07 01 35.4	-0.9
JSC	Jenkinsville	25.27	5	P	P	07 01 34.9	-1.5
JSC				IAmb	IAmb	07 01 41.0	
	comp=Z,19nm,1.4s						
ETMB	Extrema	25.71	136	*e*P	P	07 01 40.3	-0.2
W52A	Murphy	25.96	0	P	P	07 01 41.8	-0.8
W52A				IAmb	IAmb	07 01 44.3	
	comp=Z,14nm,0.9s						
WLAR	White Oak Lake	25.97	342	P	P	07 01 42.6	-0.1
WLAR				IAmb	IAmb	07 01 55.0	
	comp=Z,22nm,1.0s						
MACA	Manacapuru-AM	26.15	117	*e*P	P	07 01 44.8	+0.3
W45A	Hickory Valley	26.47	350	P	P	07 01 45.8	-1.4
TKL	Tuckaleechee C	26.53	0	LR	LR	07 12 19.3	
	comp=Z,152nm,18.2s,baz=119,slow=37						
V48A	Smith Brothers	26.74	355	P	P	07 01 48.7	-1.0
WHAR	Wooly Hollow	27.25	345	P	P	07 01 52.2	-2.0
WHAR				IAmb	IAmb	07 01 54.3	
	comp=Z,9.7nm,0.9s						
SAML	Samuel	27.31	130	P	P	07 01 54.0	-0.9
TXAR	Lajitas Array	27.41	320	P	P	07 01 57.6	+1.8
	comp=Z,0.6nm,0.7s,baz=141,slow=12,SNR=5.3						
TXAR				PcP	PcP	07 05 16.3	+2.0
	comp=Z,0.4nm,0.6s,baz=160,slow=4.0,SNR=3.9						
LCAR	Lake Charles	27.73	347	P	P	07 01 58.2	-0.3
LCAR				IAmb	IAmb	07 01 58.5	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	27.78	346	P	P	07 01 57.2	-1.8
T42A	Van Buren	28.64	348	P	P	07 02 04.6	-2.0
T42A				IAmb	IAmb	07 02 05.8	
	comp=Z,6.7nm,0.7s						
MGMO	Mountain Grove	29.02	346	P	P	07 02 08.7	-1.3
MGMO				IAmb	IAmb	07 02 10.2	
	comp=Z,9.1nm,0.9s						
WCI	Wyandotte Cave	29.17	356	P	P	07 02 10.8	-0.5
WCI				IAmb	IAmb	07 02 11.8	
	comp=Z,14nm,0.9s						
LPIG	La Paz	29.31	304	LR	LR	07 12 26.8	
	comp=Z,83nm,20.0s,baz=102,slow=33						
CCM	Cathedral Cave	29.66	348	P	P	07 02 14.4	-1.2
CCM				IAmb	IAmb	07 02 15.0	
	comp=Z,13nm,0.8s						
Q51A	Peebles	29.89	1	P	P	07 02 16.5	-1.2
P53A	Whipple	30.43	4	P	P	07 02 22.4	-0.1
PB16	IPOC Station P	30.68	152	P	P	07 02 25.2	-0.3
PB16				IAmb	IAmb	07 02 33.6	
	comp=Z,9.4nm,0.9s						
ITTB	Itaituba	31.10	114	*e*P	P	07 02 29.4	+0.7
ACSO	Alum Creek Sta	31.11	1	P	P	07 02 29.2	+0.8
MDP	Montagnes des	31.30	95	P	P	07 02 30.7	+0.2
	comp=Z,55nm,1.2s,baz=168,slow=6.8,SNR=2.4						
MALB	Monte Alegre	31.48	109	*e*P	P	07 02 33.4	+1.4
VILB	Vilhena	32.13	132	*e*P	P	07 02 37.9	+0.2
319A	Douglas	32.41	317	P	P	07 02 40.7	+0.5
319A				IAmb	IAmb	07 02 57.6	
	comp=Z,5.2nm,0.8s						
NPGB	Novo Progresso	32.65	118	*e*P	P	07 02 41.9	-0.4
N38A	Joes South For	32.71	347	P	P	07 02 41.5	-1.0
MCPB	Macapa, AP	33.09	105	*e*P	P	07 02 47.2	+1.0
N35A	Tabor	33.38	344	P	P	07 02 45.7	-2.7
L40A	Anamosa	33.54	350	P	P	07 02 48.7	-1.1
W18A	Petrified Fore	35.09	322	P	P	07 03 04.4	+0.8
W18A				IAmb	IAmb	07 03 07.6	
	comp=Z,17nm,1.4s						
X16A	Lo Mia Camp, P	35.72	319	P	P	07 03 09.5	+0.6
K31A	O'Neill	35.92	341	P	P	07 03 08.9	-1.5
SFX	San Felipe	36.17	312	P	P	07 03 13.5	+0.9
SFX				IAmb	IAmb	07 03 15.3	
	comp=Z,10nm,1.5s						
ECSD	EROS Data Cent	36.31	344	P	P	07 03 11.5	-2.2
ECSD				IAmb	IAmb	07 03 13.1	
	comp=Z,9.7nm,1.1s						
GO02	Mina Guanaco	36.73	158	P	P	07 03 17.7	0.0
GO02				IAmb	IAmb	07 03 26.4	
	comp=Z,12nm,0.8s						
PRPB	Parauapebas	37.21	113	*e*P	P	07 03 21.7	0.0
GLA	Glamis	37.21	315	P	P	07 03 21.6	+0.1
GLA				IAmb	IAmb	07 03 24.4	
	comp=Z,8.9nm,0.9s						
F36A	Milaca	37.63	349	P	P	07 03 23.1	-1.7
F36A				IAmb	IAmb	07 03 23.4	
	comp=Z,9.7nm,0.7s						
W13A	Hualapai Mount	37.73	318	P	P	07 03 25.0	-1.1
CBX	Cerro Bola	38.15	312	P	P	07 03 28.4	-1.1
SRU	San Rafael Swe	38.28	326	P	P	07 03 29.8	-0.8
AC02	Maricunga	38.42	158	P	P	07 03 33.2	+1.0
AC02				IAmb	IAmb	07 03 39.7	
	comp=Z,17nm,1.0s						
SNDB	Serra Nova Dou	38.57	122	*e*P	P	07 03 32.9	-0.3
AC05	El Transito	39.87	161	P	P	07 03 44.8	+0.9
AC05				IAmb	IAmb	07 03 50.7	
	comp=Z,16nm,0.9s						
ARAG	Araguaiana, MT	40.20	127	*e*P	P	07 03 45.8	-0.9
SMTB	Santa Maria do	40.32	115	*e*P	P	07 03 48.0	+0.2
TPNV	Topopah Spring	40.36	319	P	P	07 03 48.9	+0.9
AQDB	Aquidauana	40.37	137	*e*P	P	07 03 47.6	-0.4
PDAR	Pinedale Array	40.43	331	P	P	07 03 47.5	-1.1
	comp=Z,0.3nm,0.6s,baz=123,slow=11,SNR=5.4						
PDAR				LR	LR	07 22 10.3	
	comp=Z,31nm,18.6s,baz=133,slow=39						
PDAR	Pinedale Array	40.43	331	P	P	07 03 48.1	-0.5
ISA	Isabella, Lake	41.15	315	P	P	07 03 54.6	+0.1
ROSB	Rosrio	41.41	105	*e*P	P	07 03 57.0	+0.2
REDW	Red Top Meadow	41.51	330	P	P	07 03 57.2	-0.3
ULM	Lac du Bonnet	42.29	349	P	P	07 04 04.8	+1.3
	comp=Z,2.8nm,0.6s,baz=151,slow=6.3,SNR=3.6						
ULM	Lac du Bonnet	42.29	349	P	P	07 04 01.7	-1.7
ULM				IAmb	IAmb	07 04 02.1	
	comp=Z,11nm,0.8s						
PAGB	Antelope Grade	42.43	314	P	P	07 04 04.1	-0.8
PAGB				IAmb	IAmb	07 04 07.6	
	comp=Z,9.6nm,1.0s						
NV11	Mina Array Sit	42.45	319	P	P	07 04 04.9	-0.3
NVAR	Mina Array Bea	42.55	319	P	P	07 04 07.1	+1.1
	comp=Z,2.4nm,0.9s,baz=129,slow=7.3,SNR=16						
NVAR				PcP	PcP	07 05 59.2	+1.0
	comp=Z,1.1nm,0.7s,baz=135,slow=5.0,SNR=5.3						
NVAR				LR	LR	07 24 27.3	
	comp=Z,57nm,18.3s,baz=178,slow=40						
LHV	Little Huntoon	42.58	319	P	P	07 04 07.3	+1.4
MDPB	Devils Postpil	42.62	318	P	P	07 04 07.2	+0.5
BDFB	Brasilia	43.20	124	P	P	07 04 11.0	-0.4
	comp=Z,4.7nm,0.9s,baz=342,slow=7.3,SNR=4.3						
BDFB				LR	LR	07 24 46.4	
	comp=Z,134nm,18.2s,baz=316,slow=40						
BDFB	Brasilia	43.20	124	P	P	07 04 10.7	-0.7
BDFB				IAmb	IAmb	07 04 24.8	
	comp=Z,15nm,1.4s						
CPUP	Villa Florida	43.62	144	P	P	07 04 14.2	-0.3
	comp=Z,2.1nm,0.8s,baz=290,slow=5.2,SNR=4.2						
CPUP				LR	LR	07 25 20.4	
	comp=Z,105nm,18.2s,baz=357,slow=40						
CPUP	Villa Florida	43.62	144	P	P	07 04 14.2	-0.3
CPUP				IAmb	IAmb	07 04 29.0	
	comp=Z,13nm,1.5s						
CPUP	Villa Florida	43.62	144	*e*P	P	07 04 14.0	-0.5
TRCB	Terra Rica	44.03	136	*e*P	P	07 04 18.5	+0.5
SDBA	SAO DESIDERIO	44.24	118	*e*P	P	07 04 19.4	-0.4
IPMB	Ipameri, GO	44.32	127	*e*P	P	07 04 19.6	-0.7
ORV	Oroville	45.25	318	P	P	07 04 28.0	+0.6
BB19B	Bebedouro	45.87	131	*e*P	P	07 04 31.9	-0.7
JANB	Januaria	45.98	121	*e*P	P	07 04 33.1	-0.5
ITQB	Itaqui	46.59	147	*e*P	P	07 04 38.2	+0.2
YBH	Yreka Blue Hor	47.19	320	P	P	07 04 41.6	-1.1
	comp=Z,1.4nm,0.8s,baz=125,slow=8.2,SNR=5.3						
ITAB	Concordia	47.42	140	*e*P	P	07 04 44.1	-0.5
VAO	Valinhos	48.19	132	*e*P	P	07 04 50.2	-0.5
CPSB	Cacapava Do Su	48.93	144	*e*P	P	07 04 55.9	-0.3
PARB	Paraibuna	49.38	131	*e*P	P	07 04 59.4	-0.4
BSFB	Barra de Sao F	50.71	123	*e*P	P	07 05 10.3	+0.4
PLCA	Paso Flores	51.01	167	P	P	07 05 12.3	+0.3
	comp=Z,6.7nm,0.8s,baz=339,slow=8.7,SNR=19						
PLCA	Paso Flores	51.01	167	*e*P	P	07 05 12.5	+0.6
RIB01	Linhares ES	51.31	124	*e*P	P	07 05 14.5	+0.1
CAM01	Campos-RJ	51.57	127	*e*P	P	07 05 17.3	+0.9
YKA	Yellowknife Ar	57.84	344	P	P	07 06 00.2	-0.9
	comp=Z,2.3nm,0.8s,baz=133,slow=7.7,SNR=13						
YKA				PcP	PcP	07 06 54.1	+0.7
	comp=Z,0.6nm,0.6s,baz=142,slow=4.7,SNR=3.8						
BCPM	Bancas Point	65.51	333	P	P	07 06 54.0	+1.1
RES	Resolute Bay	65.94	357	P	P	07 06 54.6	-0.8
	comp=Z,5.1nm,0.9s,baz=187,slow=9.3,SNR=10						
ICESG	Greenland Ices	66.48	16	*i* P	P	07 06 58.4	-1.0
ICESG				IAmb	IAmb	07 06 58.7	
	comp=Z,24nm,1.1s						
INK	Inuvik	67.51	342	P	P	07 07 04.6	-0.9
	comp=Z,3.3nm,1.0s,baz=147,slow=2.8,SNR=3.9						
BCAR	Beaver Creek A	67.80	335	P	P	07 07 07.4	-0.1
TULEG	Thule	68.00	4	P	P	07 07 07.4	-1.0
TULEG	Thule	68.00	4	*i* P	P	07 07 06.9	-1.6
TULEG				IAmb	IAmb	07 07 08.3	
	comp=Z,12nm,1.0s						
SUMG	Summit	69.08	13	P	P	07 07 15.1	-0.8
SUMG	Summit	69.08	13	*i* P	P	07 07 14.7	-1.1
	comp=Z,50nm,1.0s						
SUMG	Summit	69.08	13	*i* P	P	07 07 14.7	-1.1
SUMG				IAmb	IAmb	07 07 16.4	
	comp=Z,50nm,1.0s						
ILAR	Eielson Array	70.54	336	P	P	07 07 24.2	-0.2
	comp=Z,1.8nm,1.0s,baz=122,slow=4.6,SNR=12						
ILAR	Eielson Array	70.54	336	P	P	07 07 24.1	-0.3
RND	Reindeer	70.89	334	P	P	07 07 27.0	+0.3
DAG	Danmarks Havn	75.73	12	*i* P	P	07 07 53.7	-1.2
	comp=Z,9.2nm,1.0s						
DAG	Danmarks Havn	75.73	12	*i* P	P	07 07 53.7	-1.2
DAG				IAmb	IAmb	07 07 54.8	
	comp=Z,9.2nm,1.0s						
ESDC	Sonseca Array	76.61	51	P	P	07 08 00.7	0.0
	comp=Z,4.3nm,1.0s,baz=285,slow=6.0,SNR=16						
ESDC	Sonseca Array	76.61	51	P	P	07 08 00.9	+0.2
DBIC	Dimbokro	78.24	85	P	P	07 08 11.0	+0.8
	comp=Z,4.6nm,0.9s,baz=310,slow=7.4,SNR=4.3						
TOA0	Torodi Ar. Sit	83.78	78	P	P	07 08 40.1	+0.4
TOA0				IAmb	IAmb	07 08 45.2	
	comp=Z,3.7nm,0.9s						
TORD	Torodi Ar. Bea	83.78	78	P	P	07 08 39.5	-0.3
	comp=Z,1.8nm,0.7s,baz=298,slow=3.1,SNR=4.8						
TORD	Torodi Ar. Bea	83.78	78	P	P	07 08 39.7	0.0
NB2	NORSAR Subarra	84.68	29	P	P	07 08 43.8	+0.4
	comp=Z,3.5nm,1.0s,baz=277,slow=5.1						
NOA	NORSAR Array B	84.68	29	P	P	07 08 43.5	0.0
	comp=Z,2.1nm,0.8s,baz=281,slow=5.2,SNR=4.9						
CLL	Collm	87.36	39	*e*P	P	07 08 57.0	+0.2
CLL				*e*pP	sP	07 09 14.0	+2.7
BELA	Belgrano 2	90.91	171	P	P	07 09 12.8	-0.1
FINES	FINESS Array B	91.49	27	P	P	07 09 15.8	-0.2
	comp=Z,3.0nm,1.0s,baz=294,slow=1.4,SNR=2.0						
SNAA	Sanae	95.69	162	P	P	07 09 34.4	-0.8
SNAA				IAmb	IAmb	07 10 01.6	
	comp=Z,3.9nm,1.0s						
LZH	Lanzhou	134.55	351	*e*PKP	PKPdf	07 15 28.9	+0.1
LZH				pPKP	pPKPdf	07 15 37.2	-2.6
LZH				sPKP		07 15 41.7	
ASAR	Alice Springs	141.02	243	PKhKP	PKPpre	07 15 34.2	
	comp=Z,0.4nm,0.6s,baz=121,slow=2.8,SNR=5.4						
ASAR				PKP	PKPdf	07 15 40.1	-0.7
	comp=Z,1.8nm,1.0s,baz=125,slow=2.6,SNR=8.0						
WRA	Warramunga Arr	141.47	249	PKhKP	PKPpre	07 15 36.5	
	comp=Z,2.0nm,1.0s,baz=103,slow=2.4,SNR=5.4						
MTN	Manton Dam	145.37	260	PKPdf	PKPab	07 15 49.3	+0.6
SHL	Shillong	145.39	7	PKPdf	PKPbc	07 15 47.5	-1.0
KMI	Kunming	145.46	349	PKPdf	PKPab	07 15 49.2	+0.2
CMAR	Chiang Mai Arr	152.56	354	PKPbc	PKPbc	07 16 06.2	-0.9
	comp=Z,0.8nm,0.3s,baz=329,slow=3.3,SNR=7.0						

IDC ***10*** *07:03:11.1±3.3, 23°.19N×141°.86E, h59^{km}±31^{km}, mb3.6/11, mb1 3.9/14, mb1mx3.7/39, mbtmp4.0/14, ML3.6/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/51, Error ellipse: s-maj=32.0km s-min=16.4km az=87.0*

NEIC ***10*** *07:03:11.1±1.1, 23°.27N±0°.07×142°.4E±0°.4, h69^{km}±12^{km}, mb4.6/9, Error ellipse: s-maj=49.2km s-min=6.9km az=80.0*

JMA ***10*** *07:03:17.1, 23°.75N×142°.20E, h162^{km}±3^{km}, M5.1*

ISC 10 07:03:10.6±0.7**, 23°.28N**±0°.06×**142°.0E**±0°.2**, h50**^{km}**, n44,** σ**1**^{s}**81**/42**, mb4.0**/14**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	3.35	4	P	Pn	07 04 03.8	+3.4
CBIJ	Chichi jima	3.81	3	P	Pn	07 04 09.7	+3.0
CBIJ				S	Sn	07 04 49.8	-0.5
JCJ	Chichijima	3.81	3	P	Pn	07 04 09.4	+2.7
	138nm,0.3s,baz=238,slow=4.2,SNR=29						
JCJ				S	Sn	07 04 50.5	+0.3
	278nm,0.3s,baz=152,slow=23,SNR=25						
JCJ	Chichijima	3.81	3		Pn	07 04 08.7	+1.9
JCJ				Sn	Sn	07 04 51.2	+1.0
JHJ	Hachijo jima 2	9.99	349	LR	LR	07 08 59.3	
	comp=Z,373nm,21.6s,baz=92,slow=35						
GUMO	Guam	10.03	163	Pn	Pn	07 05 31.6	-0.5
JOD2	Odawara 2	12.20	349	P	Pn	07 06 01.1	-0.6
JGF	Kuroka	12.91	343		Pn	07 06 12.6	+1.2
JRY	Ryogami san	12.97	349	P	Pn	07 06 11.6	-0.6
JRY				S	Sn	07 08 28.5	-6.4
JWT	Wachi	13.25	336	Pn	Pn	07 06 18.3	+2.3
MJAR	Matsushiro Arr	13.61	347	P	Pn	07 06 20.1	-0.8
	0.2nm,0.3s,baz=160,slow=11,SNR=7.3						
MJAR	Matsushiro Arr	13.61	347		Pn	07 06 22.6	+1.7
MAT	Matsushiro	13.61	347	P	Pn	07 06 20.7	-0.2
MAT				*e*S	Sn	07 08 47.7	-2.9
JHS	Saijyo	13.99	329	Pn	Pn	07 06 29.0	+2.9
JMM	Marumori	14.57	356	Pn	Pn	07 06 32.2	-1.6
JTM	Tenmabayashi	17.47	358	P	Pn	07 07 10.9	+0.3
KSRS	Korea Array	18.57	323	P	Pn	07 07 25.2	+1.2
	0.2nm,0.3s,baz=133,slow=12,SNR=9.2						
JEW	Eniwo	19.51	359	P	P	07 07 32.9	-0.7
ASAJ	Asahikawa	20.79	1	P	P	07 07 49.1	+1.6
	16nm,1.0s,baz=186,slow=19,SNR=2.2						
USRK	Ussuriysk Ar.	22.42	341	P	P	07 08 03.7	-1.2
	2.1nm,0.7s,baz=146,slow=10,SNR=4.4						
H11N1	WAKE ISLAND Hy	23.47	94	T	T	07 32 15.8	
	baz=282,slow=75,SNR=8.4						
H11N2	WAKE ISLAND Hy	23.47	94	T	T	07 32 14.3	
	baz=282,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	23.49	94	T	T	07 32 14.3	
	baz=282,slow=75,SNR=10						
H11S3	WAKE ISLAND Hy	23.59	97	T	T	07 31 49.6	
	baz=284,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	23.59	97	T	T	07 32 04.6	
	baz=284,slow=75,SNR=1.9						
H11S2	WAKE ISLAND Hy	23.61	97	T	T	07 31 58.4	
	baz=284,slow=75,SNR=3.0						
KLR	Kul'dur	27.12	345	P	P	07 08 48.0	-0.8
	1.2nm,0.6s,baz=143,slow=12,SNR=5.4						
WB0	Warramunga Arr	43.41	190	P	P	07 11 07.7	-0.9
WB0				IAmb	IAmb	07 11 22.8	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	43.59	190	P	P	07 11 08.4	-1.7
	comp=Z,1.3nm,0.4s,baz=9.8,slow=8.4,SNR=22						
WRA	Warramunga Arr	43.59	190	P	P	07 11 08.7	-1.4
ASAR	Alice Springs	47.31	190	P	P	07 11 38.0	-1.4
	comp=Z,0.4nm,0.5s,baz=16,slow=12,SNR=9.8						
ZALV	Zalesovo Beam	52.27	321	P	P	07 12 16.3	-0.5
	comp=Z,0.6nm,0.6s,baz=118,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	52.79	312	P	P	07 12 21.4	+0.5
	comp=Z,0.8nm,0.6s,baz=86,slow=9.2,SNR=15						
MKAR	Makanchi Array	52.79	312		P	07 12 21.6	+0.7
MAKZ	Makanchi	53.01	312	P	P	07 12 23.4	+1.0
KURK	Kurchatov	55.55	316	P	P	07 12 40.7	-0.1
KURK				IAmb	IAmb	07 12 42.0	
	comp=Z,4.1nm,1.0s						
BRVK	Borovoye	60.80	319	P	P	07 13 17.6	+0.2
BRVK				IAmb	IAmb	07 13 18.2	
	comp=Z,4.1nm,0.7s						
ILAR	Eielson Array	61.17	28	P	P	07 13 20.2	+0.5
	comp=Z,0.4nm,0.7s,baz=263,slow=5.5,SNR=4.7						
KK31	Karatay Array	61.19	308	P	P	07 13 21.5	+1.3
KK31				IAmb	IAmb	07 13 22.1	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	61.19	308	P	P	07 13 21.3	+1.0
ABKAR	Akbulak array	67.62	315	P	P	07 14 02.1	0.0
KBZ	Khabaz	80.45	313	P	P	07 15 17.0	-0.2
	comp=Z,4.5nm,0.9s,baz=81,slow=3.8,SNR=6.2						
FINES	FINESS Array B	81.27	334	P	P	07 15 19.1	-2.0
	comp=Z,2.6nm,1.0s,baz=84,slow=5.7,SNR=2.1						
NVAR	Mina Array Bea	83.05	51	P	P	07 15 32.0	+0.7
	comp=Z,0.3nm,0.6s,baz=282,slow=4.1,SNR=4.0						

MDD ***10*** *07:04:43.6±1.7, 36°.82N×12°.42W, h0^{km}, mb3.8/2, Error ellipse: s-maj=15.7km s-min=12.7km az=34.0, PRXIMO*

INMG ***10*** *07:04:45.3±1.2, 36°.64N×12°.76W, h10^{km}, ML2.2, Error ellipse: s-maj=7.4km s-min=6.0km az=86.0*

ISC 10 07:04:42.6±3.6**, 36°.9N**±0°.1×**12°.4W**±0°.2**, h10**^{km}**, n50,** σ**1**^{s}**43**/90**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.91	84	P	Pn	07 05 29.4	+0.5
	1.5nm,0.1s,SNR=7.9						
PFVI				S	Sn	07 06 03.4	-0.5
	12nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.91	84	*e*Pn	Pn	07 05 29.6	+0.7
PFVI				*e*Sn	Sn	07 06 03.4	-0.5
PFVI				A	A	07 06 04.4	
	12nm,0.7s						
PTEO	Sao Teotonio	3.04	76	P	Pn	07 05 31.8	+1.0
PTEO				S	Sn	07 06 06.9	-0.3
	4.6nm,0.5s						
PTEO	Sao Teotonio	3.04	76	*e*Pn	Pn	07 05 31.8	+1.0
PTEO				*e*Sn	Sn	07 06 06.9	-0.3
PTEO				A	A	07 06 09.1	
	9.1nm,0.5s						
MORF	Marmelete	3.06	81	P	Pn	07 05 31.6	+0.5
MORF				S	Sn	07 06 06.4	-1.4
	4.8nm,0.3s						
MORF	Marmelete	3.06	81	*e*Pn	Pn	07 05 31.6	+0.5
MORF				*e*Sn	Sn	07 06 06.4	-1.4
MORF				A	A	07 06 13.6	
	4.8nm,0.3s						
PMAFR	Mafra	3.24	49	P	Pn	07 05 35.0	+1.4
	2.3nm,0.1s,SNR=7.9						
PMAFR				S	Sn	07 06 13.7	+1.4
	7.5nm,0.2s,SNR=7.9						
PMAFR	Mafra	3.24	49	*e*Pn	Pn	07 05 35.0	+1.4
PMAFR				*e*Sn	Sn	07 06 13.4	+1.1
PMAFR				A	A	07 06 21.8	
	11nm,0.7s						
PNCL	Nicolau / Gran	3.35	67	P	Pn	07 05 37.0	+2.0
PNCL				S	Sn	07 06 14.9	+0.2
	2.9nm,0.2s						
PNCL	Nicolau / Gran	3.35	67	*e*Pn	Pn	07 05 37.0	+2.0
PNCL				*e*Sn	Sn	07 06 14.9	+0.2
PNCL				A	A	07 06 18.8	
	2.9nm,0.2s						
MESJ	Messejana	3.50	73	P	Pn	07 05 38.6	+1.6
MESJ				S	Sn	07 06 17.4	-1.1
	3.3nm,0.6s						
MESJ	Messejana	3.50	73	*e*Pn	Pn	07 05 38.6	+1.6
MESJ				*e*Sn	Sn	07 06 17.4	-1.1
MESJ				A	A	07 06 19.8	
	3.3nm,0.6s						
PCVE	Castro Verde	3.59	77	P	Pn	07 05 39.9	+1.5
PCVE				S	Sn	07 06 19.5	-1.3
	3.0nm,0.5s						
PCVE	Castro Verde	3.59	77	*e*Pn	Pn	07 05 39.9	+1.5
PCVE				*e*Sn	Sn	07 06 19.5	-1.3
PCVE				A	A	07 06 35.0	
	3.0nm,0.5s						
PBDV	Barranco-do-Ve	3.63	83	P	Pn	07 05 39.8	+0.9
PBDV				S	Sn	07 06 21.2	-0.5
PBDV	Barranco-do-Ve	3.63	83	*e*Pn	Pn	07 05 39.8	+0.9
PBDV				*e*Sn	Sn	07 06 21.2	-0.5
PVAQ	Vaqueiros	3.81	81	P	Pn	07 05 42.8	+1.4
PVAQ				S	Sn	07 06 25.1	-1.1
	3.9nm,0.8s						
PVAQ	Vaqueiros	3.81	81	*e*Pn	Pn	07 05 42.8	+1.4
PVAQ				*e*Sn	Sn	07 06 25.1	-1.1
PVAQ				A	A	07 06 28.4	
	3.9nm,0.8s						
PBEJ	Beja	3.82	71	S	Sn	07 06 25.0	-1.4
	1.2nm,0.2s						
PBEJ	Beja	3.82	71	*e*Sn	Sn	07 06 25.0	-1.4
PBEJ				A	A	07 06 27.4	
	2.5nm,0.2s						
EVO	Evora	3.88	64	P	Pn	07 05 42.6	+0.3
EVO				S	Sn	07 06 27.5	-0.4
	3.2nm,0.1s						
EVO	Evora	3.88	64	*e*Pn	Pn	07 05 42.6	+0.3
EVO				*e*Sn	Sn	07 06 27.5	-0.4

EVO				A	A	07 06 31.5	
	3.2nm,0.1s						
PSBE	**So Bento**	3.89	46	*e*Pn	Pn	07 05 44.9	+2.4
PSBE				*e*Sn	Sn	07 06 29.7	+1.4
PMTG	**Montargil**	3.98	55	P	Pn	07 05 44.6	+0.9
PMTG				S	Sn	07 06 30.6	+0.1
	2.1nm,0.5s						
PMTG	**Montargil**	3.98	55	*e*Pn	Pn	07 05 44.6	+0.9
PMTG				*e*Sn	Sn	07 06 30.6	+0.1
PMTG				A	A	07 06 32.5	
	2.1nm,0.5s						
EGRO	**El Granado**	4.01	79	P	Pn	07 05 44.7	+0.5
	0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	07 06 29.9	-1.2
	1.2nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	4.32	61	*e*Pn	Pn	07 05 49.5	+1.1
PESTR				*e*Sn	Sn	07 06 37.5	-1.3
PESTR				A	A	07 06 39.3	
	2.8nm,0.9s						
PCAS	**Casmilo, Conde**	4.43	43	P	Pn	07 05 51.3	+1.5
PCAS				S	Sn	07 06 42.0	+0.6
PCAS	**Casmilo, Conde**	4.43	43	*e*Pn	Pn	07 05 51.3	+1.5
PCAS				*e*Sn	Sn	07 06 42.0	+0.6
EMIN	**Mina Concepcio**	4.68	77	P	Pn	07 05 54.3	+0.9
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	07 06 45.6	-2.2
	0.6nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	4.72	56	P	Pn	07 05 54.8	+0.9
PMRV				S	Sn	07 06 48.0	-0.7
	2.7nm,0.7s						
PMRV	**Marv??o**	4.72	56	*e*Pn	Pn	07 05 54.8	+0.9
PMRV				*e*Sn	Sn	07 06 48.0	-0.7
PMRV				A	A	07 06 48.3	
	2.7nm,0.7s						
PCBR	**Castelo Branco**	4.89	51	P	Pn	07 05 57.6	+1.4
PCBR	**Castelo Branco**	4.89	51	*e*Pn	Pn	07 05 57.6	+1.4
PVIS	**Viseu**	5.22	41	S	Sn	07 07 00.1	-1.0
PVIS	**Viseu**	5.22	41	*e*Sn	Sn	07 07 00.1	-1.0
ESPR	**Espera**	5.28	88	S	Sn	07 07 01.2	-1.3
	0.9nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	5.71	76	P	Pn	07 06 08.4	+0.9
	0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	07 07 11.1	-2.1
	0.3nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	5.76	37	P	Pn	07 06 08.8	+0.6
POLO				S	Sn	07 07 12.5	-1.9
POLO	**Lamas de Olo**	5.76	37	*e*Pn	Pn	07 06 08.8	+0.6
POLO				*e*Sn	Sn	07 07 12.5	-1.9
EPLA	**Plasencia**	5.92	56	P	Pn	07 06 11.1	+0.8
	0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	07 07 17.7	-0.5
	0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	6.00	43	P	Pn	07 06 12.4	+0.8
	0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	07 07 18.7	-1.7
	0.3nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	6.00	43	*e*Pn	Pn	07 06 12.8	+1.2
MVO				*e*Sn	Sn	07 07 18.4	-2.0
MVO				A	A	07 07 23.9	
	1.8nm,0.5s						
PGAV	**Gavieira, Arco**	6.02	31	P	Pn	07 06 14.4	+2.6
PGAV				S	Sn	07 07 18.3	-2.4
	1.9nm,0.8s						
PGAV	**Gavieira, Arco**	6.02	31	*e*Pn	Pn	07 06 14.4	+2.6
PGAV				*e*Sn	Sn	07 07 18.3	-2.4
PGAV				A	A	07 07 40.5	
	1.9nm,0.8s						
ELOB	**Lobios**	6.02	33	P	Pn	07 06 12.9	+1.0
	0.1nm,0.1s,SNR=7.9						
ELOB				S	Sn	07 07 19.2	-1.7
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	6.38	76	P	Pn	07 06 17.6	+0.9
	0.1nm,0.1s,SNR=4.0						
EADA				S	Sn	07 07 28.1	-1.5
	0.3nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	6.62	23	S	Sn	07 07 29.7	-5.7
	1.0nm,0.1s,SNR=7.9						
ECAL	**Calabor**	6.71	39	P	Pn	07 06 22.2	+0.9
	0.2nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	6.79	28	P	Pn	07 06 22.9	+0.6
	0.3nm,0.1s,SNR=4.0						

SOME ***10*** *07:08:34.7, 40°.20N×77°.20E, h5*^{km}

NNC ***10*** *07:08:35.8±0.6, 40°.22N×77°.23E, h0*^{km}*, mb3.6, mpv3.3, Error ellipse: s-maj=3.9km s-min=2.8km az=175.0*

KRNET ***10*** *07:08:38.7±0.1, 40°.37N×77°.31E, mb3.0*

ISC 10 07:08:34.6±1.7, **40°.23N**±0°.06×**77°.16E**±0°.03, **h0**^{km}±16^{km}, **n61**, σ**1^{s}.64**/93, **27C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	1.90	0	⇑*e*P	Pg	07 09 11.3	+0.3
	baz=57						
KDJ				⇑*i*S	Sb	07 09 35.1	+0.6
	baz=57						
ULHL	**Ulahol**	2.13	341	⇑*e*P	Pg	07 09 15.7	+0.3
	baz=37						
ULHL				⇑*i*S	Sb	07 09 42.8	+1.6
	baz=37						
BOOM	**Boomskoye usch**	2.44	338	⇑*i*P	Pb	07 09 20.5	+1.1
	baz=35						
BOOM				⇑*i*S	Sb	07 09 50.9	+0.9
	baz=35						
PRZ	**Przheval'sk**	2.44	22	⇑*i*P	Pb	07 09 19.4	0.0
	baz=21						
PRZ				⇑*i*S	Sb	07 09 48.6	-1.4
	baz=21						
ANVS	**Anan'yevo**	2.58	8	⇑*i*P	Pb	07 09 21.5	-0.3
	baz=6.0						
ANVS				⇑*i*S	Sb	07 09 52.7	-1.4
	baz=6.0						
ARLS	**Aral**	2.69	308	⇑*i*P	Pb	07 09 24.7	+0.9
	baz=4.0						
ARLS				⇑*i*S	Sb	07 09 58.2	+0.8
	baz=4.0						
SFK	**Sufi-Kurgan**	2.81	267	⇑*i*P	Pg	07 09 28.5	0.0
	baz=64						
SFK				⇑*i*S	Sg	07 10 04.7	-0.3
	baz=64						
IZV	**Izvestkoviy**	2.83	352	*e*P	Pg	07 09 28.1	-0.8
	7.8nm,0.4s						
IZV				*e*S	Sg	07 10 06.9	+1.3
	30nm,0.5s						
IZV	**Izvestkoviy**	2.83	352	Pg	Pg	07 09 28.1	-0.8
	7.8nm,0.4s						
IZV				Lg	Lg	07 10 06.9	
	30nm,0.5s						
MDOK	**Medeo**	2.93	358	*e*P	Pb	07 09 29.6	+1.8
	4.7nm,0.5s						
MDOK				*e*S	Sg	07 10 09.2	+0.4
	47nm,0.6s						
MDOK	**Medeo**	2.93	358	Pg	Pg	07 09 30.2	-0.6
	2.0nm,0.4s						
MDOK				Lg	Lg	07 10 10.2	
	68nm,0.6s						
MDOK	**Medeo**	2.93	358	Pg	Pb	07 09 29.6	+1.8
	4.7nm,0.5s						
MDOK				Lg	Lg	07 10 09.2	
	47nm,0.6s						
TKM2	**Tokmak 2**	2.93	337	⇓*i*P	Pb	07 09 27.0	-0.9
	baz=34						
TKM2				⇓*i*S	Sb	07 10 02.5	-1.8
	baz=34						
TKM2	**Tokmak 2**	2.93	337	⇓Pg	Pb	07 09 29.0	+1.2
	4.4nm,0.6s						
TKM2				⇓Lg	Lg	07 10 10.8	
	24nm,0.6s						
KBK	**Karagaybulak**	2.94	326	⇑*e*P	Pb	07 09 27.9	-0.1
	baz=23						
KBK				⇑*i*S	Sb	07 10 03.6	-0.9
	baz=23						
MTBS	**Maitube**	2.95	350	*e*P	Pg	07 09 30.5	-0.7
	4.1nm,0.2s						
MTBS				*e*S	Sg	07 10 10.9	+1.6
	11nm,0.3s						
MTBS	**Maitube**	2.95	350	Pg	Pg	07 09 30.5	-0.7
	4.1nm,0.2s						
MTBS				Lg	Lg	07 10 10.9	
	11nm,0.3s						
KST	**Kastek**	2.95	343	*e*P	Pg	07 09 30.8	-0.4
	8.5nm,0.4s						
KST				*e*S	Sg	07 10 11.2	+1.9
	26nm,0.7s						
KST	**Kastek**	2.95	343	Pg	Pg	07 09 30.8	-0.4
	8.5nm,0.4s						
KST				Lg	Lg	07 10 11.2	
	26nm,0.7s						
SATY	**Saty**	2.98	18	*e*P	Pb	07 09 30.3	+1.7
	7.8nm,0.4s						
SATY				*e*S	Sg	07 10 10.4	+0.2
	23nm,0.5s						
SATY	**Saty**	2.98	18	Pg	Pb	07 09 30.3	+1.7
	7.8nm,0.4s						
SATY				Lg	Lg	07 10 10.4	
	23nm,0.5s						
KOTS	**Kotyrbulak**	3.00	359	*e*P	Pg	07 09 31.5	-0.6
	18nm,0.5s						
KOTS				*e*S	Sg	07 10 12.7	+1.7
	230nm,0.5s						
KOTS	**Kotyrbulak**	3.00	359	Pg	Pg	07 09 31.5	-0.6
	18nm,0.5s						
KOTS				Lg	Lg	07 10 12.7	
	230nm,0.5s						
ZHN	**Zhinishke**	3.09	18	*e*P	Pb	07 09 31.9	+1.4
	85nm,0.5s						
ZHN				*e*S	Sg	07 10 13.3	-0.5
	3.9nm,0.3s						
ZHN	**Zhinishke**	3.09	18	Pg	Pb	07 09 31.9	+1.4
	85nm,0.5s						
ZHN				Lg	Lg	07 10 13.3	
	3.9nm,0.3s						
AAK	**Ala-Archa**	3.13	321	⇓*i*P	Pb	07 09 30.8	-0.4
	baz=18						
AAK				⇓*i*S	Sb	07 10 08.6	-1.4
	baz=18						
AAK	**Ala-Archa**	3.13	321	⇑Pg	Pb	07 09 33.1	+1.9
	3.8nm,0.5s						
AAK				⇑Lg	Lg	07 10 17.0	
	21nm,0.7s						
DGS	**Degeres**	3.18	341	*e*P	Pg	07 09 34.9	-0.8
	6.4nm,0.7s						
DGS				*e*S	Sg	07 10 18.2	+1.4
	26nm,0.6s						
DGS	**Degeres**	3.18	341	Pg	Pg	07 09 34.8	-0.8
	6.4nm,0.7s						
DGS				Lg	Lg	07 10 18.2	
	26nm,0.6s						
UZB	**Uzynbulak**	3.23	25	*e*P	Pg	07 09 35.1	-1.5
	5.6nm,0.9s						
UZB				*e*S	Sg	07 10 18.7	+0.3
	7.2nm,0.6s						
UZB	**Uzynbulak**	3.23	25	Pg	Pg	07 09 35.1	-1.5
	5.6nm,0.9s						
UZB				Lg	Lg	07 10 18.7	
	7.2nm,0.6s						
AML	**Almayashu**	3.23	307	⇑*i*P	Pb	07 09 32.5	-0.6
	baz=4.0						
AML				⇑*i*S	Sb	07 10 12.6	-0.5
	baz=4.0						
CHMS	**Chumysh**	3.30	328	⇑*i*P	Pb	07 09 32.4	-1.7
	baz=25						
CHMS				⇑*e*S	Sb	07 10 12.0	-2.8
	baz=25						
KURS	**Kuram**	3.34	13	*e*P	Pb	07 09 36.2	+1.5
	8.0nm,0.7s						
KURS				*e*S	Sg	07 10 20.9	-1.1
	19nm,1.0s						
KURS	**Kuram**	3.34	13	Pg	Pb	07 09 36.2	+1.5
	8.0nm,0.7s						
KURS				Lg	Lg	07 10 20.9	
	19nm,1.0s						
SHLS	**Shalkode**	3.39	30	*e*P	Pg	07 09 40.5	+0.8
	6.2nm,0.5s						
SHLS				*e*S	Sg	07 10 28.2	+4.6
	17nm,0.5s						
SHLS	**Shalkode**	3.39	30	Pg	Pg	07 09 40.5	+0.8
	6.2nm,0.5s						
SHLS				Lg	Lg	07 10 28.2	
	17nm,0.5s						
KPKS	**Kokpek**	3.43	19	*e*P	Pb	07 09 37.7	+1.5
	6.3nm,0.6s						
KPKS				*e*S	Sg	07 10 23.5	-1.3
	23nm,0.5s						
KTBS	**Karatobe**	3.50	354	*e*P	Pb	07 09 39.5	+2.1
	3.6nm,0.4s						
KTBS				*e*S	Sg	07 10 26.4	-0.6
	15nm,0.8s						
KTBS	**Karatobe**	3.50	354	Pg	Pb	07 09 39.5	+2.1
	3.6nm,0.4s						
KTBS				Lg	Lg	07 10 26.4	
	15nm,0.8s						
EKS2	**Erkin-Say**	3.52	315	⇑*i*P	Pb	07 09 36.4	-1.4
	baz=12						
EKS2				⇑*i*S	Sb	07 10 18.3	-2.7
	baz=12						
PDGK	**Podgornoye**	3.55	29	Pg	Pb	07 09 40.4	+2.0
	2.0nm,0.6s						
PDGK				Lg	Lg	07 10 27.9	
	6.6nm,0.8s						
PDGK	**Podgornoye**	3.55	29	⇑Pg	Pb	07 09 40.2	+1.8
	8.5nm,1.1s						
PDGK				⇑Lg	Lg	07 10 28.1	
	14nm,0.8s						
CHKK	**Chushkaly**	3.62	358	*e*P	Pg	07 09 42.4	-1.7
	3.5nm,0.4s						
CHKK				*e*S	Sg	07 10 31.6	+0.6
	22nm,0.5s						
CHKK	**Chushkaly**	3.62	358	Pg	Pg	07 09 42.4	-1.7
	3.5nm,0.4s						
CHKK				Lg	Lg	07 10 31.6	
	22nm,0.5s						
KRBS	**Karabastau**	3.64	343	*e*P	Pg	07 09 43.4	-0.9
	2.5nm,0.7s						
KRBS				*e*S	Sg	07 10 33.1	+1.7
	6.8nm,0.3s						
KRBS	**Karabastau**	3.64	343	Pg	Pg	07 09 43.4	-0.9
	2.5nm,0.7s						
KRBS				Lg	Lg	07 10 33.1	
	6.8nm,0.3s						
KUU	**Kurty**	3.71	351	*e*P	Pb	07 09 43.3	+2.2
	2.3nm,0.6s						
KUU				*e*S	Sg	07 10 33.0	-0.8
	18nm,0.8s						
KUU	**Kurty**	3.71	351	Pg	Pb	07 09 43.3	+2.2
	2.3nm,0.6s						
KUU				Lg	Lg	07 10 33.0	
	18nm,0.8s						
MRKS	**Merke**	3.88	312	*e*P	Pb	07 09 47.0	+3.0
	2.5nm,0.5s						
MRKS				*e*S	Sg	07 10 39.3	+0.1
	4.8nm,0.8s						
MRKS	**Merke**	3.88	312	Pg	Pb	07 09 46.9	+3.0
	2.5nm,0.5s						
MRKS				Lg	Lg	07 10 39.3	
	4.8nm,0.8s						
KTMS	**Ketmen**	4.00	36	*e*P	Pg	07 09 48.8	-2.5
	1.6nm,0.3s						
KTMS				*e*S	Sg	07 10 42.2	-0.9
	7.6nm,0.7s						
KTMS	**Ketmen**	4.00	36	Pg	Pg	07 09 48.8	-2.5
	1.6nm,0.3s						
KTMS				Lg	Lg	07 10 42.2	
	7.6nm,0.7s						
ARXS	**Arharly**	4.01	7	*e*P	Pb	07 09 48.6	+2.5
	6.2nm,0.8s						
ARXS				*e*S	Sg	07 10 41.6	-1.8
	13nm,0.7s						
ARXS	**Arharly**	4.01	7	Pg	Pb	07 09 48.6	+2.5
	6.2nm,0.8s						
ARXS				Lg	Lg	07 10 41.6	
	13nm,0.7s						
DJR	**Jarkent**	4.54	25	*e*P	Pb	07 09 58.5	+3.3
	4.2nm,0.8s						
DJR				*e*S	Sg	07 10 58.6	-1.8
	3.6nm,0.4s						
DJR	**Jarkent**	4.54	25	Pg	Pb	07 09 58.5	+3.3
	4.2nm,0.8s						
DJR				Lg	Lg	07 10 58.6	
	3.6nm,0.4s						
KAPS	**Kapalarasan**	5.30	17	*e*P	Pg	07 10 13.5	-2.7
	2.7nm,1.1s						
KAPS				*e*S	Sg	07 11 25.0	0.0
	2.1nm,0.6s						
KAPS	**Kapalarasan**	5.30	17	Pg	Pg	07 10 13.5	-2.7
	2.7nm,1.1s						
KAPS				Lg	Lg	07 11 25.0	
	2.1nm,0.6s						
KK31	**Karatay Array**	5.75	302	⇑Lg	Lg	07 11 38.1	
	0.5nm,0.4s,baz=124,slow=26,SNR=3.8						
NJ2	**Nanjing**	34.39	90	*e*P	P	07 15 27.6	+4.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						

IDC ***10*** *07:32:13.8±3.6, 53°.57N×90°.77E, h0*^{km}*, mb1 2.9/3, mb1mx2.8/64, mbtmp2.9/3, ML2.4/3, Error ellipse: s-maj=34.1km s-min=25.3km az=32.0*

NNC ***10*** *07:32:16.1±9.8, 52°.99N×90°.88E, h0*^{km}*, mb3.4, mpv3.1, Error ellipse: s-maj=114.6km s-min=66.3km az=1.0, Suspected Mining explosion.*

ISC 10 07:32:16.3±4.2, **53°.6N**±0°.2×**90°.6E**±0°.2, **h0**^{km}, **n8**, σ**1^{s}.89**/9, **3C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	3.44	279	*i*		07 58 08.4	
	baz=87,slow=325,SNR=14						
ZALV	**Zalesovo Beam**	3.44	279	Pn	Pn	07 33 11.2	+0.1
	0.6nm,0.3s,baz=99,slow=14,SNR=6.4						
ZALV				Lg	Lg	07 34 05.8	
	0.6nm,0.3s,baz=91,slow=27,SNR=5.3						
KURK	**Kurchatov**	7.89	254	⇓Pn	Pn	07 34 12.6	+0.4
	0.4nm,0.5s						
KURK				⇓Sn	Sn	07 35 45.6	+3.4
	1.2nm,0.4s						
KURK				⇓Lg	Lg	07 36 29.6	
	6.2nm,1.1s						
KURBB	**Kurchatov Arra**	7.99	253	Pn	Pn	07 34 13.0	-0.5
	0.1nm,0.3s,baz=66,slow=16,SNR=5.3						
KURBB				Sn	Sn	07 35 42.5	-1.9
	0.0nm,0.3s,baz=68,slow=25,SNR=3.4						
KURBB				Lg	Lg	07 36 30.8	
	0.0nm,0.3s,baz=69,slow=27,SNR=3.1						
KURBB	**Kurchatov Arra**	7.99	253	⇑Pn	Pn	07 34 13.0	-0.5
	1.5nm,0.7s						
KURBB				⇓Sn	Sn	07 35 43.0	-1.4
	6.9nm,0.8s						
KURBB				⇑Lg	Lg	07 36 30.4	
	14nm,1.2s						
MK31	**Makanchi Array**	8.61	221	Pn	Pn	07 34 23.5	+1.4
	0.3nm,0.6s,baz=71,slow=50,SNR=4.4						
MK31				⇑Lg	Lg	07 36 46.8	
	2.4nm,1.0s,baz=42,slow=27,SNR=4.1						
MKAR	**Makanchi Array**	8.61	221	Pn	Pn	07 34 20.8	-1.3
	0.1nm,0.3s,baz=33,slow=13,SNR=5.8						
MKAR				Lg	Lg	07 36 48.5	
	0.0nm,0.3s,baz=33,slow=24,SNR=3.5						
SONM	**Songino Array**	11.54	113	Lg	Lg	07 38 16.0	
	baz=312,slow=22,SNR=4.4						

IDC ***10*** *07:35:42.3±5.7, 23°.75S×179°.50W, h604*^{km}*±105*^{km}*, mb3.3/4, mb1 3.4/6, mb1mx3.0/42, mbtmp4.4/6, Error ellipse: s-maj=186.3km s-min=44.2km az=70.0*

NEIC ***10*** *07:35:47.6±1.8, 23°.9S±0°.2×179°.4E±0°.2, h555*^{km}*±8*^{km}*, mb4.2/16, Error ellipse: s-maj=27.0km s-min=18.4km az=206.0*

ISC 10 07:35:46.7±1.1, **23°.9S**±0°.1×**179°.4E**±0°.2, **h537**^{km}, **n25**, σ**1^{s}.02**/25, **mb4.2**/12, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	5.84	156	P	P	07 37 25.4	+2.4
MSVF	**Nonsavu**	6.28	348	P	P	07 37 27.4	-0.1
	2.9nm,0.3s,baz=200,slow=8.0,SNR=11						
OUZ	**Omahuta**	12.33	203	P	P	07 38 29.2	+0.8
URZ	**Urewera**	14.42	187	P	P	07 38 47.7	-2.5
	0.5nm,0.3s,baz=338,slow=4.5,SNR=5.1						
ARMA	**Armidale**	25.47	249	P	P	07 40 33.4	+0.9
ARMA				IAmb	IAmb	07 40 51.9	
	comp=Z,16nm,1.4s						
EIDS	**Eidsvold**	25.73	261	P	P	07 40 35.3	+0.6
EIDS				IAmb	IAmb	07 40 36.0	
	comp=Z,19nm,1.5s						
CTA	**Charters Tower**	30.90	271	P	P	07 41 20.4	+0.7
	comp=Z,9.6nm,0.4s,baz=93,slow=11,SNR=25						
CTAO	**Charters Tower**	30.90	271	P	P	07 41 20.2	+0.5
TOO	**Toolangi**	31.95	237	P	P	07 41 29.0	+0.5
TOO				IAmb	IAmb	07 41 30.3	
	comp=Z,8.8nm,1.2s						
STKA	**Stephens Creek**	34.18	248	P	P	07 41 47.5	0.0
	comp=Z,1.2nm,0.4s,baz=80,slow=11,SNR=3.8						
STKA	**Stephens Creek**	34.18	248	P	P	07 41 47.8	+0.3
COEN	**Coen**	35.55	280	P	P	07 42 00.1	+1.1
BBOO	**Buckleboo**	38.90	247	P	P	07 42 25.8	-0.6
AS31	**Alice Springs**	41.46	261	P	P	07 42 46.3	-0.6
ASAR	**Alice Springs**	41.46	261	P	P	07 42 46.5	-0.4
	comp=Z,2.0nm,0.6s,baz=96,slow=7.4,SNR=25						
ASAR	**Alice Springs**	41.46	261	P	P	07 42 46.3	-0.6
WR0	**Warramunga Arr**	41.64	266	P	P	07 42 47.5	-0.9
WR0				IAmb	IAmb	07 43 08.9	
	comp=Z,6.1nm,1.1s						
WB2	**Warramunga Arr**	41.82	266	P	P	07 42 48.6	-1.1
WB2				IAmb	IAmb	07 42 56.9	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	41.83	266	P	P	07 42 49.0	-0.9
	comp=Z,3.3nm,0.6s,baz=103,slow=8.2,SNR=19						
FORT	**Forrest**	45.76	250	P	P	07 43 19.3	-0.9
FITZ	**Fitzroy Crossi**	50.25	266	P	P	07 43 53.9	0.0
FITZ				IAmb	IAmb	07 44 08.0	
	comp=Z,21nm,1.5s						
QSPA	**South Pole Qui**	66.16	180	P	P	07 45 41.2	+0.4
QSPA				IAmb	IAmb	07 45 43.1	
	comp=Z,4.7nm,1.2s						
BELA	**Belgrano 2**	76.49	173	P	P	07 46 40.2	-0.7
MAW	**Mawson**	77.53	201	P	P	07 46 46.8	+0.1
MAW				IAmb	IAmb	07 47 00.6	
	comp=Z,5.9nm,1.4s						
SNAA	**Sanae**	84.66	179	P	P	07 47 22.2	-1.2

IDC ***10*** *07:41:31.0±1.1, 11°.98N×45°.85E, h0*^{km}*, mb3.9/7, mb1 4.1/9, mb1mx3.6/58, mbtmp3.9/9, ML3.7/2, MS3.4/7, Ms1 3.5/7, ms1mx3.1/35, Error ellipse: s-maj=36.6km s-min=19.2km az=170.0*

ISC 10 07:41:32.7±1.0, **12°.0N**±0°.2×**45°.83E**±0°.10, **h13**^{km}, **n14**, σ**1^{s}.33**/10, **mb3.8**/7, **MS3.5**/5, **Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	2.96	261	Pn	Pn	07 42 17.6	-1.9
	18nm,0.3s,baz=42,slow=9.4,SNR=30						
ATD				Sn	Sn	07 42 55.2	+0.2
	24nm,0.3s,baz=257,slow=23,SNR=9.5						
ATD				LR	LR	07 43 14.3	
	comp=Z,126nm,18.6s,baz=19,slow=35						
WSAR	**Wadi Sarin**	16.53	46	Pn	Pn	07 45 22.5	-2.0
	0.2nm,0.3s,baz=236,slow=8.5,SNR=2.7						
MBAR	**Mbarara**	19.53	231	LR	LR	07 53 17.5	
	comp=Z,105nm,18.9s,baz=214,slow=36						
GNI	**Garni**	28.06	358	LR	LR	08 00 01.5	
	comp=Z,94nm,20.0s,baz=18,slow=40						
GEYT	**Alibeck**	28.07	21	LR	LR	08 00 31.6	
	comp=Z,111nm,18.5s,baz=35,slow=41						
BRTR	**Keskin Array B**	29.66	341	LR	LR	08 00 02.5	
	comp=Z,106nm,18.9s,baz=148,slow=38						
TORD	**Torodi Ar. Bea**	43.06	276	P	P	07 49 33.7	+0.9
	1.4nm,1.0s,baz=90,slow=7.2,SNR=4.3						
BOSA	**Boshof**	45.01	206	LR	LR	08 07 47.3	
	comp=Z,74nm,18.0s,baz=4.5,slow=35						
GERES	**GERESS Array B**	45.38	330	P	P	07 49 52.2	+1.2
	0.6nm,0.6s,baz=119,slow=7.3,SNR=1.4						
MKAR	**Makanchi Array**	46.31	34	P	P	07 49 58.2	-0.1
	0.8nm,0.8s,baz=216,slow=6.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	51.50	76	P	P	07 50 38.1	-0.4
	0.9nm,0.3s,baz=268,slow=8.8,SNR=7.4						
CMAR				LR	LR	08 12 22.3	
	comp=Z,44nm,18.1s,baz=235,slow=36						
ZALV	**Zalesovo Beam**	51.97	28	P	P	07 50 42.0	+0.6
	0.4nm,0.3s,baz=227,slow=7.6,SNR=3.7						
WRA	**Warramunga Arr**	92.64	110	P	P	07 54 45.1	+0.2
	1.6nm,0.8s,baz=294,slow=3.6,SNR=6.9						
ASAR	**Alice Springs**	92.99	113	P	P	07 54 48.0	+1.4
	0.5nm,0.7s,baz=275,slow=4.3,SNR=4.9						

IDC ***10*** *08:06:23.2±2.8, 4°.62N×82°.68W, h0*^{km}*, mb3.6/3, mb1 4.1/6, mb1mx3.8/28, mbtmp3.9/6, ML2.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=68.7km s-min=28.6km az=23.0*

ISC 10 08:06:23.6±1.9, **4°.2N**±0°.1×**82°.8W**±0°.2, **h35**^{km}, **n39**, σ**1^{s}.33**/29, **mb3.6**/3, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAPC	**Malpelo**	1.23	98	*e*P	Pn	08 06 38.5	-5.8
MALC	**Bahia Malaga**	5.48	92	*e*P	Pn	08 07 41.5	-1.3
BCIP	**Isla Barro Col**	5.78	31	*e*P	Pn	08 07 46.0	-0.8

UPA	Univ. de Panam	5.78	34	eP	Pn	08 07 46.2	-0.8
BBAC	Balboa, Cauca	5.97	111	eP	Pn	08 07 47.2	-2.5
JTS	Las Juntas de	6.43	341	Pn	Pn	08 07 54.7	-1.1
	9.2nm,0.3s,baz=127,slow=10,SNR=68						
JTS				Sn	Sn	08 09 06.1	-1.9
	1.7nm,0.3s,baz=336,slow=20,SNR=3.0						
UPD2	Meteti	6.46	48	eP	Pn	08 07 56.4	+0.2
YOTC	Yotoco, Valle	6.47	92	eP	Pn	08 07 54.4	-2.1
SOTA	Rioblanco	6.53	108	eP	Pn	08 07 58.1	+0.4
PLMC	San Jos del P	6.56	83	eP	Pn	08 07 55.4	-2.4
PCON	Cinco Dias	6.68	106	eP	Pn	08 07 59.2	-0.6
MARP	Paez Belalcaza	6.99	101	eP	Pn	08 08 04.2	+0.5
CBOC	Ciudad Bolivar	6.99	76	eP	Pn	08 08 01.4	-2.3
ANIL	Santa Ana	7.41	87	eP	Pn	08 08 09.3	-0.3
RREF	El Recreo	7.49	84	eP	Pn	08 08 10.8	-0.2
TOLC	Tolima	7.50	87	eP	Pn	08 08 10.2	-0.6
HELC	Santa Helena	7.54	74	eP	Pn	08 08 10.2	-1.2
ORTC	Ortega, Tolima	7.57	92	eP	Pn	08 08 11.4	-0.1
NORC	Norcasia	8.05	80	eP	Pn	08 08 18.2	+0.1
MOTC	Monteria, Cord	8.45	57	eP	Pn	08 08 25.1	+1.4
ROSC	El Rosal	8.51	85	Pn	Pn	08 08 26.5	+1.8
	5.5nm,0.3s,baz=73,slow=5.3,SNR=8.1						
ROSC	El Rosal	8.51	85	eP	Pn	08 08 26.2	+1.5
ZARC	Zaragoza, Cauc	8.58	67	eP	Pn	08 08 26.7	+1.3
PTBC	PUERTO BERRIO,	8.66	74	eP	Pn	08 08 27.3	+0.9
SPBC	San Pablo de B	8.84	80	eP	Pn	08 08 28.8	-0.3
CHIC	Chingaza	9.08	87	eP	Pn	08 08 33.0	+0.4
VILC	Villavicencio,	9.11	90	eP	Pn	08 08 33.6	+0.8
SDV	Santo Domingo	12.98	68	Pn	Pn	08 09 25.6	-0.3
	0.2nm,0.3s,baz=309,slow=6.5,SNR=3.9						
MDP	Montagnes des	30.10	87	LR	LR	08 24 44.9	
	comp=Z,55nm,18.5s,baz=360,slow=37						
H06E1	SOCORRO T-PHAS	31.05	300	T	T	08 45 23.6	
	SNR=7.0						
H03N2	Juan Fernandez	37.60	175	T	T	08 53 41.6	
	baz=354,slow=76,SNR=7.1						
H03N1	Juan Fernandez	37.60	175	T	T	08 53 39.9	
	baz=354,slow=76,SNR=9.7						
H03N3	Juan Fernandez	37.61	175	T	T	08 53 41.9	
	baz=354,slow=76,SNR=5.3						
NVAR	Mina Array Bea	46.94	321	P	P	08 14 55.2	+3.9
	0.5nm,0.7s,baz=134,slow=6.4,SNR=9.6						
YKA	Yellowknife Ar	62.76	344	P	P	08 16 46.8	+1.8
	0.7nm,0.7s,baz=141,slow=7.0,SNR=12						
ILAR	Eielson Array	75.38	337	P	P	08 18 06.0	+2.6
	0.3nm,0.7s,baz=135,slow=2.9,SNR=4.5						
H11N3	WAKE ISLAND Hy	107.53	292	T	T	10 21 04.2	
	baz=79,slow=75,SNR=4.4						
H11N2	WAKE ISLAND Hy	107.54	292	T	T	10 21 05.2	
	baz=79,slow=75,SNR=4.2						
H11N1	WAKE ISLAND Hy	107.54	292	T	T	10 21 05.8	
	baz=79,slow=75,SNR=3.9						

IDC 10 08:24:45.5±1.1**, 2°.27S×139°.93E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/28**, mbtmp3.7**/4**, ML3.5**/1**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.2**/27**, Error ellipse: s-maj=26.1km s-min=10.8km az=19.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.81	108	Pg	Pg	08 25 01.6	+0.6
	36nm,0.3s,baz=242,slow=12,SNR=17						
JAY				Lg	Lg	08 25 12.3	
	48nm,0.3s,baz=122,slow=19,SNR=8.0						
JAY				LR	LR	08 25 18.6	
	comp=Z,121nm,18.1s,baz=355,slow=41						
KRVT	Keravat (AS076	12.24	100	LR	LR	08 31 23.4	
	comp=Z,20nm,19.7s,baz=318,slow=32						
WRA	Warramunga Arr	18.40	197	P	P	08 29 02.2	0.0
	0.2nm,0.3s,baz=19,slow=12,SNR=5.5						
ASAR	Alice Springs	22.06	195	P	P	08 29 41.2	-0.9
	1.3nm,0.8s,baz=21,slow=9.5,SNR=8.9						
MKAR	Makanchi Array	70.19	322	P	P	08 36 01.5	+1.2
	1.0nm,0.7s,baz=116,slow=7.4,SNR=10						
ILAR	Eielson Array	84.93	24	P	P	08 37 20.5	-1.8
	0.4nm,0.8s,baz=234,slow=5.5,SNR=3.6						

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*GCG **10** 08:39:36.4±0.4, 13°.57N×91°.55W, h0^{km}±12^{km}, MD3.9*

*NEIC **10** 08:39:37.4±1.4, 13°.54N±0°.07×91°.69W±0°.08, h39^{km}±15^{km}, mb4.1/4, Error ellipse: s-maj=12.2km s-min=8.0km az=57.0*

*IDC **10** 08:39:38.6±4.7, 13°.87N×91°.42W, h35^{km}±38^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.6/36, mbtmp3.7/7, ML3.8/3, MS3.4/5, Ms1 3.5/5, ms1mx3.0/28, Error ellipse: s-maj=57.6km s-min=25.6km az=35.0*

ISC 10 08:39:36.0±1.1**, 13°.52N**±0°.08×**91°.73W**±0°.06**, h28^{km}, n34, σ1^{s}.17**/33**, mb3.8**/5**, MS3.2**/5**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.00	2		Pb	08 39 54.6	-0.2
RTAL				Sn	Sb	08 40 06.4	-1.1
FUG	Fuego 3	1.27	43	eP	Pn	08 39 58.1	+0.1
PCG	Pacaya	1.40	51	eP	Pn	08 40 00.1	+0.2
NBG	Las Nubes	1.71	52	eP	Pn	08 40 05.6	+1.3
NBG				eS	Sb	08 40 28.4	+0.1
HUEH	Huehuetenango	1.80	7		Pn	08 40 06.3	+0.8
HUEH				Sn	Sn	08 40 27.1	-0.4
SNET	Serv Nac Est T	2.44	86		Pn	08 40 13.9	-0.2
MTO3	Montecristo	2.46	69		Pn	08 40 14.9	+0.3
MRL	Marmol	2.52	52	eP	Pn	08 40 17.1	+1.7
ESQI	Esquipulas	2.54	66		Pn	08 40 15.9	+0.4
CCIG	Comitan	2.77	352		Pn	08 40 21.3	+2.5
PETF	Flores	3.83	28		Pn	08 40 35.0	+1.9
TGUH	Tegucigalpa,Un	4.37	82	Pn	Pn	08 40 41.0	+0.3
CMIG	Matias Romero	4.67	320	Pn	Pn	08 40 45.1	+0.3
	2.9nm,0.3s,baz=146,slow=15,SNR=34						
CMIG				Sn	Sn	08 41 37.2	-0.9
	4.7nm,0.3s,baz=50,slow=11,SNR=5.2						
JTS	Las Juntas de	7.37	115	Pn	Pn	08 41 22.5	+0.6
	0.7nm,0.3s,baz=29,slow=19,SNR=3.8						
JTS	Las Juntas de	7.37	115		Pn	08 41 22.2	+0.3
TEIG	Tepich	7.44	26	Pn	Pn	08 41 23.6	+0.7
TLIG	Tlapa	7.71	302	Pn	Pn	08 41 28.3	+1.7
H06E1	SOCORRO T-PHAS	19.16	288	T	T	09 03 33.3	
	SNR=4.8						
TXAR	Lajitas Array	19.24	327	P	Pn	08 44 00.2	+0.8
	0.2nm,0.3s,baz=159,slow=14,SNR=7.9						
TXAR	Lajitas Array	19.24	327	P	P	08 43 58.5	+0.2
TX31	Lajitas Ar. Si	19.24	327	P	P	08 43 58.2	-0.1
TX31				IAmb	IAmb	08 44 22.9	
	comp=Z,15nm,1.1s						
TX32	Lajitas Array	19.24	327		P	08 43 57.5	-0.8
TKL	Tuckaleechee C	23.18	17	P	P	08 44 38.8	-1.7
	comp=Z,4.1nm,0.9s,baz=189,slow=9.6,SNR=5.5						
TKL				LR	LR	08 54 14.4	
	comp=Z,114nm,18.4s,baz=188,slow=38						
TKL	Tuckaleechee C	23.18	17	P	P	08 44 39.7	-0.8
V53A	Saluda	23.47	18	P	P	08 44 43.8	+0.4
V53A				IAmb	IAmb	08 44 46.3	
	comp=Z,6.8nm,1.1s						
ATAH	Atahualpa	24.43	146	LR	LR	08 53 05.0	
	comp=Z,54nm,20.8s,baz=170,slow=33						
SJG	San Juan	25.02	76	LR	LR	08 55 24.8	
	comp=Z,62nm,18.0s,baz=282,slow=38						
NNA	Nana	29.33	149	LR	LR	08 55 17.3	
	comp=Z,43nm,21.1s,baz=72,slow=32						
NVAR	Mina Array Bea	34.20	321	P	P	08 46 22.4	+2.9
	comp=Z,0.7nm,0.7s,baz=135,slow=9.0,SNR=9.1						
NVAR	Mina Array Bea	34.20	321	P	P	08 46 20.5	+1.0
YKA	Yellowknife Ar	51.55	347	P	P	08 48 37.9	-1.4
	comp=Z,0.7nm,0.9s,baz=137,slow=8.3,SNR=5.9						
ILAR	Eielson Array	63.38	337	P	P	08 50 01.0	-1.6
	comp=Z,0.7nm,0.8s,baz=155,slow=5.6,SNR=6.1						
ARCES	ARCESS Array B	86.51	18	LR	LR	09 30 22.3	
	comp=Z,80nm,18.2s,baz=220,slow=35						
CMAR	Chiang Mai Arr	146.53	341	PKPbc	PKPbc	08 59 16.4	+0.7
	comp=Z,0.8nm,0.3s,baz=342,slow=3.8,SNR=4.0						

MAN 10 09:01:20.4, 6°.40N×125°.38E, h84^{km}, mb4.0, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.45	132	eP	Pn	09 01 35.5	+1.3
DDMP				eS	Sn	09 01 47.8	+3.4
SKMP	Bagumbayan, Su	0.84	278	eP	Pn	09 01 39.7	+1.8
SKMP				eS	Sn	09 01 52.6	+1.7
MATI	Mati	1.03	58	eP	Pn	09 01 40.5	+0.4
MATI				eS	Sn	09 01 56.0	+1.2

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*PRU **10** 09:31:26.2±0.0, 51°.41N×16°.19E, h0^{km}*

*IDC **10** 09:31:26.4±1.1, 51°.39N×16°.20E, h0^{km}, mb1 3.8/2, mb1mx3.0/47, mbtmp3.8/2, ML2.5/4, Error ellipse: s-maj=21.6km s-min=10.1km az=110.0*

ISC 10 09:31:24.4±0.9**, 51°.50N**±0°.04×**16°.26E**±0°.04**, h0^{km}, n21, σ0^{s}.99**/39**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.66	178	ePg	Pg	09 31 37.1	+0.2
KSP				eSg	Sg	09 31 44.9	-0.6
CHVC	Chvalec	0.92	188	ePG	Pg	09 31 42.1	+0.1
CHVC				eSG	Sg	09 31 53.5	-0.4
	comp=Z,31nm,0.3s						
OSTC	Ostas	0.94	182	ePG	Pg	09 31 42.6	+0.2
OSTC				eSG	Sg	09 31 54.4	-0.3
	comp=Z,25nm,0.4s						
UPC	Upice	1.00	189	ePG	Pg	09 31 43.5	-0.1
UPC				eSG	Sg	09 31 55.6	-1.0
	comp=Z,75nm,0.4s						
DPC	Dobruska-Polom	1.15	178	ePG	Pg	09 31 46.0	-0.4
DPC				eSG	Sg	09 32 00.3	-1.0
	comp=Z,24nm,0.3s						
PVCC	Panska Ves	1.45	228	ePG	Pn	09 31 52.1	+0.3
PVCC				eSG	Sg	09 32 10.5	-0.3
	comp=Z,130nm,0.2s						
KRLC	Kraliky	1.46	167	ePG	Pn	09 31 52.1	0.0
KRLC				eSG	Sg	09 32 10.5	-0.8
	comp=Z,18nm,0.4s						
BRG	Berggiesshubel	1.59	248	Pg	Pn	09 31 54.6	+0.9
BRG				Sg	Sn	09 32 15.0	0.0
BRG				Amp		09 32 16.0	
	comp=Z,30nm,0.5s						
BRG	Berggiesshubel	1.59	248	Pg	Pn	09 31 54.6	+0.9
BRG				Sg	Sn	09 32 15.0	0.0
BRG				Amp		09 32 16.0	
	comp=Z,30nm,0.5s						
PRU	Pruhonice	1.87	217	ePG	Pn	09 31 58.4	+0.8
PRU				eSG	Sn	09 32 22.6	+0.8
	comp=Z,26nm,0.6s						
MORC	Moravsky Berou	1.91	154	ePN	Pn	09 31 57.7	-0.5
MORC				eSG	Sb	09 32 24.1	-0.3
CLL	Collm	2.05	266	i Pg	Pb	09 32 03.0	+0.5
CLL				i Sg	Sb	09 32 29.6	+1.1
	comp=Z,10.0nm,0.4s						
VRAC	Vranov	2.20	174	Pn	Pn	09 32 03.1	+0.9
	comp=Z,1.1nm,0.3s,baz=333,slow=18,SNR=7.1						
VRAC				Lg	Lg	09 32 31.1	
	comp=Z,2.9nm,0.3s,baz=70,slow=20,SNR=11						
VRAC	Vranov	2.20	174	ePN	Pn	09 32 02.7	+0.5
VRAC				eSG	Sb	09 32 33.1	+0.2
KRUC	Moravsky	2.44	178	ePN	Pn	09 32 06.6	+1.1
KRUC				eSG	Sb	09 32 40.4	+0.7
OJC	Ojcow	2.58	118	ePg	Pg	09 32 15.5	+1.7
OJC				eSg	Sg	09 32 49.9	+2.7
KHC	Kasperske Hory	2.93	217	ePN	Pn	09 32 12.6	+0.4
KHC				ePG	Pb	09 32 18.1	+0.6
KHC				eSG	Sb	09 32 54.9	+1.1
	comp=Z,7.1nm,0.5s						
LANS	Liptovska Anna	3.12	138	eSG	Sg	09 33 02.5	-2.1
GERES	GERESS Array B	3.12	213	Pn	Pn	09 32 15.4	+0.4
	comp=Z,0.4nm,0.3s,baz=34,slow=13,SNR=3.4						
GERES				Pg	Pb	09 32 21.6	+0.8
	comp=Z,2.1nm,0.3s,baz=28,slow=16,SNR=20						
GERES				Lg	Lg	09 33 00.6	
	comp=Z,3.5nm,0.3s,baz=30,slow=27,SNR=12						
FINES	FINESS Array B	11.33	25	Pn	Pn	09 34 06.3	-1.1
	comp=Z,0.1nm,0.3s,baz=210,slow=11,SNR=4.5						
ARCES	ARCESS Array B	18.62	10	Pn	P	09 35 40.6	-2.5
	baz=196,slow=13,SNR=4.4						

IDC 10 09:59:15.3±526.0**, 30°.36N×77°.26W, h0^{km}, Error ellipse: s-maj=265.6km s-min=182.6km az=36.0, Off east coast of United States**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I51GB	BERMUDA INFRAS	10.92	76	i		11 03 00.0	
	baz=267,slow=314,SNR=0.9						
I10CA	LAC DU BONNET	24.32	330	i		12 31 45.0	
	baz=138,slow=348,SNR=6.6						
I56US	NEWPORT INFRAS	35.17	312	i		13 31 30.0	
	baz=114,slow=326,SNR=2.6						

UCR 10 10:13:08.1±0.7**, 8°.91N×84°.02W, h67^{km}**±71^{km}**, MD3.6, Off coast of Costa Rica**

IDC 10 10:28:08.8±3.8**, 22°.39S×175°.06W, h0^{km}, mb3.6**/3**, mb1 4.0**/3**, mb1mx3.6**/39**, mbtmp3.6**/3**, Error ellipse: s-maj=373.7km s-min=35.4km az=161.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.78	258	P	P	10 36 40.4	0.0
	0.3nm,0.5s,baz=100,slow=7.0,SNR=8.1						
WRA	Warramunga Arr	47.07	263	P	P	10 36 42.5	-0.2
	0.4nm,0.4s,baz=101,slow=8.6,SNR=11						
TXAR	Lajitas Array	85.80	56	P	P	10 40 50.5	0.0
	0.5nm,1.0s,baz=216,slow=4.5,SNR=3.6						

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*REN **10** 10:30:38.6±2.1, 41°.89N±0°.03×119°.63W±0°.06, h9^{km}±6^{km}, ML3.1/7, ML3.0/24(SEA), ML2.8/76(NEIC), Error ellipse: s-maj=6.8km s-min=4.6km az=93.0*

*SEA **10** 10:30:39.2±2.6, 41°.84N±0°.03×119°.61W±0°.05, h0^{km}±6^{km}, Error ellipse: s-maj=6.4km s-min=1.8km az=59.0*

*ANF **10** 10:30:39.2±0.6, 41°.81N×119°.62W, h10^{km}, ML3.0/15, Error ellipse: s-maj=5.8km s-min=4.4km az=126.0*

*NEIC **10** 10:30:39.3±2.4, 41°.87N±0°.03×119°.64W±0°.03, h10^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=1.7km az=217.0*

ISC 10 10:30:38.7±1.2**, 41°.89N**±0°.02×**119°.64W**±0°.02**, h2^{km}**±12^{km}**, n70, σ1^{s}.25**/80**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.49	272		Pg	10 30 48.6	+0.4
MOD					Sg	10 30 55.8	+1.2
MOD	Modoc Plateau	0.49	272	IAML		10 30 56.1	
	comp=N,2μm,0.6s						
MOD				IAML		10 30 56.2	
	comp=E,2μm,0.6s						
LKVW	Lakeview	0.63	302		Pg	10 30 51.0	+0.1
WVOR	Wild Horse Val	0.92	54		Sg	10 31 09.2	+0.8
WVOR	Wild Horse Val	0.92	54	Pg	Pg	10 30 56.1	-0.3
WVOR	Wild Horse Val	0.92	54	IAML		10 31 09.4	
	comp=E,259nm,0.8s						
WVOR				IAML		10 31 12.4	
	comp=E,414nm,0.6s						
K05A	Summer Lake	1.25	312		Pn	10 31 02.4	-1.0
K05A					Sn	10 31 20.2	-0.8
K05A	Summer Lake	1.25	312	IAML		10 31 23.5	
	comp=N,209nm,1.3s						
K05A				IAML		10 31 24.9	
	comp=E,192nm,1.0s						
LASM	Arnica Sink	1.48	259		Pn	10 31 05.5	-1.1
LASM					Sg	10 31 26.8	+0.7
LTIM	Timbered Crate	1.56	243		Pn	10 31 06.7	-0.9
M04C	Macdoel	1.65	267	P	Pn	10 31 07.7	-1.1
	baz=86,SNR=385						
M04C				S	Sg	10 31 32.0	+0.5
	baz=86						
M04C	Macdoel	1.65	267		Pn	10 31 07.7	-1.1
K04D	Chiloquin, OR	1.73	296	P	Pn	10 31 10.4	+0.4
	baz=114,SNR=15						
K04D				S	Sg	10 31 34.7	+0.4
	baz=114						
K04D	Chiloquin, OR	1.73	296		Pb	10 31 10.6	-0.8
J05D	Fort Rock, OR	1.82	320	P	Pb	10 31 12.2	-0.7
	baz=139,SNR=191						
J05D				S	Sg	10 31 37.4	0.0
	baz=139						
J05D	Fort Rock, OR	1.82	320		Pb	10 31 12.4	-0.5
LHEM	Herd Peak	1.94	263		Pb	10 31 14.2	-0.9
L04D	Klamath Falls	2.01	280	P	Pn	10 31 12.5	-1.4
	baz=99,SNR=16						
L04D				S	Sb	10 31 41.9	+0.3
	baz=99						
L04D	Klamath Falls	2.01	280		Pn	10 31 12.6	-1.2
BEKR	Beckworth	2.09	195		Pb	10 31 16.5	-1.0
BEKR				IAML		10 31 45.9	
	comp=N,57nm,0.3s						
BEKR				IAML		10 31 46.1	
	comp=E,93nm,0.2s						
PINE	Pine Mountain	2.13	334		Pb	10 31 17.7	-0.5
PINE				IAML		10 31 56.1	
	comp=N,87nm,0.6s						
PAHR	Pah Rah Range	2.19	175		Pb	10 31 18.7	-0.5
PAHR				IAML		10 31 49.1	
	comp=E,46nm,0.8s						
PAHR				IAML		10 31 50.0	
	comp=N,55nm,0.2s						
I07A	Izee	2.19	3		Pb	10 31 18.9	-0.3
I07A				IAML		10 31 49.7	
	comp=N,69nm,0.8s						
I07A				IAML		10 31 58.8	
	comp=E,76nm,1.5s						
J04D	Umpqua Nationa	2.27	307	P	Pb	10 31 19.6	-0.9
	baz=126						
O03E	Paynes Creek	2.28	226	P	Pn	10 31 16.8	-0.7
	baz=45,SNR=38						
YBH	Yreka Blue Hor	2.30	267		Pn	10 31 16.4	-1.3
YBH				IAML		10 31 52.8	
	comp=N,54nm,0.6s						
N02D	Trinity Center	2.48	249	P	Pn	10 31 20.0	-0.2
	baz=67,SNR=6.4						
N02D				Sb	Sb	10 31 56.5	+1.4
	baz=67						
WDC	Whiskeytown Da	2.55	240		Pn	10 31 20.1	-1.0
WDC				IAML		10 32 01.0	
	comp=N,35nm,0.7s						
HUMO	Hull Mountain	2.56	287		Pn	10 31 19.9	-1.4
VCNR	Virginia City	2.59	180		Pn	10 31 20.9	-1.0
ORV	Oroville	2.73	212		Pn	10 31 23.7	+0.2
I05D	Terrebonne, OR	2.75	334	Pb	Pb	10 31 28.3	-0.3
	baz=152						
I05D				Sb	Sg	10 32 05.7	-1.2
	baz=152						
I04A	Tendick Farm,	2.79	314	Pb	Pb	10 31 29.1	-0.2
	baz=132,SNR=19						
PNTR	Pine Nut	2.80	179		Pn	10 31 22.5	-2.3
RUBR	Rubicon Trail	2.86	188		Pn	10 31 23.5	-2.1
RUBR				IAML		10 32 12.3	
	comp=E,36nm,0.8s						
RUBR				IAML		10 32 15.2	
	comp=N,36nm,1.1s						
O02D	Mt. Diablo Mer	2.93	235	Pb	Pb	10 31 30.7	-1.1
	baz=53,SNR=9.9						
O02D				Sb	Sb	10 32 10.2	+2.2
	baz=53						
L02E	Cave Junction	2.96	277	P	Pn	10 31 27.2	+0.4
	baz=94,SNR=10.0						
L02E				Sb	Sb	10 32 10.3	+1.4
	baz=94						
K02D	Willamette Mer	3.09	286	P	Pn	10 31 29.3	+0.6
	baz=104,SNR=63						
K02D				Sb	Sg	10 32 15.7	-2.3
	baz=104						
AFDM	Forest Hills D	3.11	199		Pn	10 31 28.8	0.0
MFID	Camas Ranch	3.20	60	Pn	Pn	10 31 29.4	-0.8
KHMM	Horse Mountain	3.24	253		Pn	10 31 29.1	-1.6
KHMM				IAML		10 32 28.4	
	comp=E,27nm,4.8s						
KHMM				IAML		10 32 31.1	
	comp=N,37nm,2.0s						
I03D	Drain, OR	3.27	305	Pb	Pb	10 31 39.5	+2.0
	baz=122						
H04A	Detroit Lake	3.35	327		Pn	10 31 32.0	-0.2
RYN	Ryan	3.37	165		Pb	10 31 38.5	-0.8
RYN				IAML		10 32 28.6	
	comp=N,23nm,0.4s						
RYN				IAML		10 32 29.7	
	comp=E,31nm,1.2s						
WAKR	Walker	3.38	177		Pn	10 31 31.8	-1.0
WAKR				IAML		10 32 38.8	
	comp=N,16nm,1.1s						
WAKR				IAML		10 32 38.9	
	comp=E,16nm,1.1s						
J01E	Myrtle Point	3.42	293	Pb	Pb	10 31 41.5	+1.6
	baz=110						
BMO	Blue Mountains	3.42	29		Pb	10 31 39.3	-0.7
BMO				IAML		10 32 29.6	
	comp=E,12nm,0.3s						
G08A	Pilot Rock	3.44	8		Pn	10 31 33.0	-0.4
H04D	Lebanon	3.47	320	Pb	Pb	10 31 41.9	+1.0
	baz=138						
ELK	Elko	3.51	108	Pn	Pn	10 31 34.5	0.0
G05D	Wamic, OR	3.57	341	Sb	Sg	10 32 30.4	-2.8
	baz=160						
NVAR	Mina Array Bea	3.60	163		Pb	10 31 43.2	-0.1
NV11	Mina Array Sit	3.64	161		Pn	10 31 35.9	-0.3
NV11				IAML		10 32 38.6	
	comp=E,18nm,2.2s						
NV11				IAML		10 32 48.4	
	comp=N,12nm,2.4s						
LHV	Little Huntoon	3.74	166		Pn	10 31 37.5	+0.1
I02D	Swisshome	3.80	307	Pb	Pb	10 31 48.6	+2.2
	baz=124						
CMB	Columbia Colle	3.89	189	Pg	Pb	10 31 47.4	-0.7
CMB				IAML		10 32 42.1	
	comp=E,11nm,0.8s						
CMB				IAML		10 32 44.4	
	comp=N,8.4nm,1.1s						
HLID	Hailey	4.20	65	P	Pn	10 31 44.1	+0.2
	baz=248						
HLID				Sb	Sb	10 32 47.6	+2.9
	baz=248						
HLID	Hailey	4.20	65		Pn	10 31 44.2	+0.2
HLID				IAML		10 32 58.5	
	comp=N,14nm,0.9s						
TPH	Tonopah	4.24	153		Pn	10 31 43.4	-1.1
OMMB	Old Mammoth Mi	4.30	173		Pn	10 31 42.8	-2.6
OMMB				IAML		10 33 26.1	
	comp=N,8.8nm,4.8s						
F10A	Beach Ranch, E	4.44	22		Pb	10 31 57.9	+0.5
F10A				IAML		10 33 00.5	
	comp=E,11nm,4.3s						
F10A				IAML		10 33 05.9	
	comp=N,12nm,4.7s						
R11A	Troy Canyon, C	4.71	137		Pn	10 31 51.6	+0.7
R11A				IAML		10 33 12.6	
	comp=N,6.2nm,1.8s						
R11A				IAML		10 33 18.8	
	comp=E,6.0nm,5.0s						
BGU	Big Grassy Mou	5.07	99		Pn	10 31 56.8	+0.9
HVU	Hansel Valley	5.13	89		Pn	10 31 55.2	-1.5
BCYI	Bear Canyon	5.17	60		Pn	10 31 55.0	-2.3
DUG	Dugway, Tooele	5.43	106	Pg	Pg	10 32 23.0	+0.2
	baz=290						
PSUT	Pine Spring	5.55	125		Pn	10 32 03.7	+1.1
PRN	Pahroc Range	5.71	140		Pn	10 32 04.2	-0.4
MCMT	McKenzie Canyo	5.76	57	Pn	Pn	10 32 01.9	-3.5
MSO	Missoula	6.41	38	P	Pn	10 32 15.8	+1.6
	baz=222						

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*IDC **10** 10:33:00.2±0.9, 30°.88N×142°.20E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.7/56, mbtmp3.8/11, ML3.4/2, MS3.2/2, Ms1 3.3/2, ms1mx2.6/33, Error ellipse: s-maj=33.0km s-min=17.3km az=74.0*

*NEIC **10** 10:33:01.0±1.4, 30°.9N±0°.1×142°.3E±0°.2, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=28.3km s-min=18.6km az=74.0*

*JMA **10** 10:33:03.8±0.4, 31°.41N×142°.30E, h0^{km}, M4.2*

*NIED **10** 10:33:03.8, 31°.41N×142°.30E, h0^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.10; $M_{\theta\theta}$0.63; $M_{\phi\phi}$-3.73; $M_{r\theta}$-1.94; $M_{\theta\phi}$-0.09; $M_{\phi r}$3.01; Fault plane solution: $M_0$4.98000×10^{14} NP1: ϕ_s338.00000°, δ69.00000°, λ70.00000°. NP2: ϕ_s204.00000°, δ29.00000°, λ133.00000°.*

ISC 10 10:33:05.4±0.8**, 31°.03N**±0°.09×**142°.3E**±0°.1**, h37^{km}, n39, σ1^{s}.06**/42**, mb4.1**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	3.78	343	P	Pn	10 33 59.8	-0.8
BSO3	Boso 3	4.05	339	P	Pn	10 34 03.9	-0.6
JOD2	Odawara 2	5.01	328	P	Pn	10 34 18.4	+0.4
JOD2				eS	Sn	10 35 14.2	-0.4
JHU	Hanno	5.43	333	P	Pn	10 34 23.8	+0.1
JHU				eS	Sn	10 35 23.7	-1.3
JYT	Yasato	5.47	342	Pn	Pn	10 34 25.2	+0.9
JRY	Ryogami san	5.73	331	P	Pn	10 34 27.8	0.0

JHO	**Hitachi**	**5.75**	**346**	P	**Pn**	**10 34 27.7**	**-0.4**
JHO				*e*S	**Sn**	**10 35 29.1**	**-3.7**
JAG	**Ashikaga**	**5.88**	**337**	P	**Pn**	**10 34 29.3**	**-0.6**
MJAR	**Matsushiro Arr**	**6.47**	**329**	Pn	**Pn**	**10 34 38.5**	**+0.5**
	0.7nm,0.3s,baz=160,slow=12,SNR=37						
MJAR				Sn	**Sn**	**10 35 51.5**	**+1.0**
	0.2nm,0.3s,baz=189,slow=25,SNR=4.3						
MJAR	**Matsushiro Arr**	**6.47**	**329**	Pn	**Pn**	**10 34 38.1**	**+0.1**
MAJO	**Matsushiro**	**6.47**	**329**		**Pn**	**10 34 38.8**	**+0.8**
MAT	**Matsushiro**	**6.47**	**329**	P	**Pn**	**10 34 38.7**	**+0.7**
MAT				*e*S	**Sn**	**10 35 50.1**	**-0.5**
JMM	**Marumori**	**6.93**	**350**	Pn	**Pn**	**10 34 45.1**	**+0.7**
KLR	**Kul'dur**	**19.85**	**339**	P	**P**	**10 37 34.0**	**+1.0**
	0.1nm,0.3s,baz=162,slow=6.5,SNR=5.7						
SONM	**Songino Array**	**32.06**	**312**	P	**P**	**10 39 30.0**	**+1.3**
	0.8nm,0.7s,baz=110,slow=7.7,SNR=4.1						
SONM	**Songino Array**	**32.06**	**312**	P	**P**	**10 39 29.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**41.07**	**263**	LR	LR	10 59 40.3	
	comp=Z,19nm,18.2s,baz=310,slow=39						
ZALV	**Zalesovo Beam**	**46.65**	**317**	P	**P**	**10 41 30.7**	**+0.7**
	0.3nm,0.4s,baz=79,slow=10,SNR=2.4						
ZALV	**Zalesovo Beam**	**46.65**	**317**	P	**P**	**10 41 30.2**	**+0.3**
MK31	**Makanchi Array**	**48.12**	**307**	P	**P**	**10 41 41.4**	**-0.2**
MK31				IAmb	IAmb	10 41 42.4	
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array**	**48.12**	**307**	P	**P**	**10 41 41.9**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=91,slow=9.7,SNR=16						
MKAR	**Makanchi Array**	**48.12**	**307**	P	**P**	**10 41 40.4**	**-1.2**
KURK	**Kurchatov**	**50.36**	**312**	P	**P**	**10 41 58.8**	**+0.2**
KURK				IAmb	IAmb	10 42 11.1	
	comp=Z,2.8nm,0.9s						
KURBB	**Kurchatov Arra**	**50.42**	**312**	P	**P**	**10 41 59.0**	**0.0**
	comp=Z,1.0nm,0.6s,baz=90,slow=7.6,SNR=9.2						
WB0	**Warramunga Arr**	**51.07**	**190**	P	**P**	**10 42 02.6**	**-1.6**
KDAK	**Kodiak Island**	**51.20**	**39**	P	**P**	**10 42 06.7**	**+2.0**
	comp=Z,5.2nm,1.0s,baz=308,slow=12,SNR=4.0						
KDAK	**Kodiak Island**	**51.20**	**39**	P	**P**	**10 42 05.3**	**+0.6**
WR0	**Warramunga Arr**	**51.24**	**189**	P	**P**	**10 42 03.6**	**-1.8**
WR0				IAmb	IAmb	10 42 05.1	
	comp=Z,8.8nm,1.2s						
WRA	**Warramunga Arr**	**51.25**	**190**	P	**P**	**10 42 04.4**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=5.0,slow=7.4,SNR=19						
IMAR	**Indian Mountai**	**51.52**	**28**	P	**P**	**10 42 06.0**	**-1.1**
AS31	**Alice Springs**	**54.98**	**189**	P	**P**	**10 42 32.4**	**-0.5**
ASAR	**Alice Springs**	**54.98**	**189**	P	**P**	**10 42 32.2**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=358,slow=4.7,SNR=12						
ASAR	**Alice Springs**	**54.98**	**189**	P	**P**	**10 42 31.4**	**-1.5**
KKAR	**Karatay Array**	**56.92**	**304**	P	**P**	**10 42 46.5**	**-0.3**
ABKAR	**Akbulak array**	**62.46**	**313**	P	**P**	**10 43 24.2**	**-0.6**
ABKAR				IAmb	IAmb	10 43 25.1	
	comp=Z,2.0nm,1.0s						
ABKAR	**Akbulak array**	**62.46**	**313**	P	**P**	**10 43 24.3**	**-0.4**
FINES	**FINESS Array B**	**74.48**	**333**	P	**P**	**10 44 40.2**	**+0.6**
	comp=Z,2.1nm,1.0s,baz=61,slow=6.5,SNR=3.7						
PDAR	**Pinedale Array**	**81.36**	**45**	LR	LR	11 23 30.8	
	comp=Z,18nm,18.8s,baz=33,slow=37						
TXAR	**Lajitas Array**	**93.17**	**53**	P	**P**	**10 46 17.1**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=248,slow=2.4,SNR=2.8						

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*NNC **10** 10:48:45.4±3.5, 48°.56N×77°.92E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=38.4km s-min=7.7km az=67.0, Suspected Mining explosion.*

*IDC **10** 10:48:47.2±1.1, 48°.68N×77°.46E, h0^{km}, mb1 3.1/4, mb1mx3.0/45, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=15.2km s-min=8.7km az=104.0*

ISC 10 10:48:47.7±1.5, 48°.67N±0°.06×77°.47E±0°.10, h0^{km}, n9, σ0^{s}.67/11, 6C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.07**	**19**	Pn	**Pn**	**10 49 23.8**	**+0.1**
	1.7nm,0.3s,baz=201,slow=16,SNR=102						
KURBB				Lg	Lg	10 49 51.7	
	1.3nm,0.3s,baz=197,slow=28,SNR=13						
KURBB				Rg	Rg	10 50 05.1	
	2.1nm,0.5s,baz=206,slow=40,SNR=6.9						
KURBB	**Kurchatov Arra**	**2.07**	**19**	⇑Pg	**Pn**	**10 49 24.3**	**+0.6**
	12nm,0.4s						
KURBB				⇑Lg	Lg	10 49 52.1	
	36nm,0.6s						
KURK	**Kurchatov**	**2.18**	**20**	⇑Pg	**Pn**	**10 49 25.8**	**+0.6**
	7.2nm,0.4s						
KURK				⇑Lg	Lg	10 49 54.0	
	14nm,0.5s						
MAKZ	**Makanchi**	**3.57**	**120**	⇑Pg	**Pn**	**10 49 44.3**	**0.0**
	1.3nm,0.5s						
MAKZ				⇑Lg	Lg	10 50 28.9	
	2.6nm,0.4s						
MK31	**Makanchi Array**	**3.76**	**118**	Pg	**Pn**	**10 49 46.9**	**-0.1**
	0.8nm,0.3s,baz=300,slow=10,SNR=56						
MK31				⇓Lg	Lg	10 50 38.4	
	1.8nm,0.3s,baz=310,slow=27,SNR=15						
MKAR	**Makanchi Array**	**3.76**	**118**	Pn	**Pn**	**10 49 47.0**	**+0.1**
	0.6nm,0.3s,baz=302,slow=12,SNR=30						
MKAR				Sn	**Sn**	**10 50 32.6**	**+0.7**
	0.6nm,0.3s,baz=305,slow=16,SNR=5.7						
AAK	**Ala-Archa**	**6.38**	**200**	Pn	**Pn**	**10 50 24.2**	**+1.1**
	0.6nm,0.3s,baz=46,slow=7.3,SNR=7.3						
AAK				Sn	**Sn**	**10 51 35.9**	**-0.9**
	0.2nm,0.3s,baz=151,slow=19,SNR=2.3						
AAK				Lg	Lg	10 52 10.2	
	0.2nm,0.3s,baz=53,slow=20,SNR=3.2						
I46RU	**ZALESOVO INFRA**	**7.01**	**38**	*i*		11 27 31.1	
	baz=224,slow=328,SNR=2.7						
ZALV	**Zalesovo Beam**	**7.01**	**38**	Pn	**Pn**	**10 50 31.4**	**-0.1**
	0.4nm,0.3s,baz=230,slow=15,SNR=4.0						
ZALV				Sn	**Sn**	**10 51 51.1**	**-0.7**
	0.4nm,0.3s,baz=228,slow=24,SNR=5.1						

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*IDC **10** 10:56:49.2±1.0, 35°.47N×139°.33E, h119^{km}±8^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.1/36, mbtmp3.7/6, Error ellipse: s-maj=34.8km s-min=7.0km az=69.0*

*JMA **10** 10:56:49.6±0.1, 35°.50N×139°.33E, h112^{km}±1^{km}, M3.0*

ISC 10 10:56:49.0±0.9, 35°.50N±0°.05×139°.36E±0°.08, h116^{km}±6^{km}, n18, σ0^{s}.49/30, mb3.6/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSGW	**Sagamiharawaka**	**0.16**	**309**	P	**Pn**	**10 57 05.2**	**+0.1**
JSGW				S	**Sn**	**10 57 16.9**	**-0.3**
JOD2	**Odawara 2**	**0.32**	**223**	P	**Pn**	**10 57 05.5**	**-0.2**
JOD2				S	**Sn**	**10 57 18.0**	**-0.2**
JFNN	**Fujinakano**	**0.63**	**241**	P	**Pn**	**10 57 07.7**	**+0.3**
JRY	**Ryogami san**	**0.63**	**324**	P	**Pn**	**10 57 08.2**	**+0.7**
JRY				S	**Sn**	**10 57 22.0**	**+0.5**
JYN	**Shimob**	**0.66**	**270**	P	**Pn**	**10 57 07.8**	**0.0**
JYN				*e*S	**Sn**	**10 57 22.4**	**+0.5**
JIM2	**Oshima 3**	**0.79**	**176**	P	**Pn**	**10 57 08.7**	**-0.1**
JIM2				*e*S	**Sn**	**10 57 22.6**	**-1.0**
JIZS	**Izushimoda**	**0.88**	**207**	P	**Pn**	**10 57 09.6**	**+0.1**
JIZS				S	**Sn**	**10 57 25.4**	**+0.4**
JAG	**Ashikaga**	**0.92**	**5**	P	**Pn**	**10 57 10.6**	**+0.6**
JAG				S	**Sn**	**10 57 25.9**	**0.0**
SHZ3	**Shizuoka 3**	**1.03**	**245**	P	**Pn**	**10 57 11.5**	**+0.4**
SHZ3				S	**Sn**	**10 57 28.3**	**+0.4**
MJAR	**Matsushiro Arr**	**1.39**	**318**	P	**Pn**	**10 57 15.2**	**+0.3**
	1.7nm,0.3s,baz=163,slow=10,SNR=174						
MJAR				S	**Sn**	**10 57 34.9**	**+0.1**
	2.1nm,0.3s,baz=21,slow=17,SNR=15						
MAT	**Matsushiro**	**1.40**	**318**	P	**Pn**	**10 57 15.0**	**0.0**
MAT				S	**Sn**	**10 57 34.5**	**-0.2**
MAT	**Matsushiro**	**1.40**	**318**	P	**Pn**	**10 57 15.2**	**+0.2**
MAT				*e*S	**Sn**	**10 57 34.6**	**-0.2**
JHJ	**Hachijo jima 2**	**2.40**	**171**	P	**Pn**	**10 57 28.4**	**+1.0**
	25nm,0.3s,baz=127,slow=22,SNR=9.6						
JHJ				S	**Sn**	**10 57 57.0**	**+0.1**
	28nm,0.3s,baz=90,slow=20,SNR=3.3						
MKAR	**Makanchi Array**	**43.54**	**303**	P	**P**	**11 04 41.1**	**+0.1**
	0.4nm,0.8s,baz=86,slow=9.6,SNR=3.7						
WRA	**Warramunga Arr**	**55.34**	**186**	P	**P**	**11 06 10.1**	**-0.7**
	0.8nm,0.5s,baz=1.3,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**59.07**	**186**	P	**P**	**11 06 37.5**	**+0.6**
	0.2nm,0.3s,baz=17,slow=11,SNR=4.8						
FINES	**FINESS Array B**	**69.39**	**332**	P	**P**	**11 07 42.9**	**-0.9**
	3.9nm,1.1s,baz=36,slow=3.5,SNR=4.4						
PDAR	**Pinedale Array**	**79.92**	**44**	P	**P**	**11 08 45.6**	**+0.3**
	0.2nm,0.5s,baz=312,slow=6.8,SNR=2.4						

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*IDC **10** 11:20:04.7±0.7, 8°.90S×159°.83E, h123^{km}±8^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.2/42, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/23, Error ellipse: s-maj=31.9km s-min=19.9km az=104.0*

ISC 10 11:20:03.6±0.8, 8°.8S±0°.1×159°.3E±0°.1, h100^{km}, n10, σ2^{s}.94/10, mb3.7/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.96**	**135**	P	**Pn**	**11 20 23.7**	**+0.1**
	62nm,0.3s,baz=237,slow=3.4,SNR=20						
HNR				S	**Sn**	**11 20 38.7**	**0.0**
	473nm,0.3s,baz=192,slow=22,SNR=12						
GUMO	**Guam**	**26.39**	**327**	LR	LR	11 36 57.9	
	comp=Z,33nm,18.5s,baz=117,slow=38						
WRA	**Warramunga Arr**	**26.54**	**243**	P	**P**	**11 25 34.6**	**+2.3**
	0.4nm,0.4s,baz=70,slow=9.4,SNR=2.2						
H11S3	**WAKE ISLAND Hy**	**28.04**	**15**	T	T	11 54 50.2	
	baz=194,slow=76,SNR=50						
H11S2	**WAKE ISLAND Hy**	**28.05**	**15**	T	T	11 54 46.3	
	baz=194,slow=76,SNR=64						
H11S1	**WAKE ISLAND Hy**	**28.06**	**15**	T	T	11 54 48.6	
	baz=194,slow=76,SNR=40						
ASAR	**Alice Springs**	**28.44**	**236**	P	**P**	**11 25 51.5**	**+2.2**
	0.3nm,0.6s,baz=64,slow=9.9,SNR=4.4						
ASAR				pP	**sP**	**11 26 18.1**	**-4.6**
	0.5nm,0.8s,baz=56,slow=9.4,SNR=2.5						
SONM	**Songino Array**	**73.12**	**326**	P	**P**	**11 31 25.0**	**+1.7**
	0.9nm,0.6s,baz=132,slow=4.5,SNR=5.6						
SONM				pP	**sP**	**11 31 55.6**	**-3.3**
	0.6nm,0.7s,baz=128,slow=5.8,SNR=3.4						
ILAR	**Eielson Array**	**83.49**	**20**	P	**P**	**11 32 17.6**	**-2.4**
	0.2nm,0.6s,baz=252,slow=6.1,SNR=5.1						
ILAR				pP	**pP**	**11 32 48.7**	**+3.1**
	1.2nm,1.3s,baz=260,slow=4.7,SNR=1.5						
MKAR	**Makanchi Array**	**87.52**	**318**	P	**P**	**11 32 41.3**	**+0.9**
	0.7nm,0.6s,baz=100,slow=5.9,SNR=8.5						

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*JMA **10** 11:20:43.1±0.4, 43°.55N×147°.53E, h5^{km}, M3.8*

*MOS **10** 11:20:45.5±1.1, 43°.65N×147°.54E, h52^{km}, mb4.2/1, Error ellipse: s-maj=16.7km s-min=13.5km az=32.3*

*SKHL **10** 11:20:47.0±0.2, 43°.67N×147°.46E, h62^{km}±6^{km}, mb4.6/3*

*IDC **10** 11:20:49.4±1.9, 45°.16N×147°.03E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/44, mbtmp3.8/8, ML3.0/1, Error ellipse: s-maj=53.3km s-min=21.5km az=163.0*

ISC 10 11:20:42.7±1.9, 43°.62N±0°.06×147°.46E±0°.07, h15^{km}±11^{km}, n37, σ1^{s}.50/42, mb3.7/8, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.23**	**290**	*i* P	**Pg**	**11 21 07.0**	**+0.6**
YUK				AMB	AMB	11 21 08.0	
	630nm,0.3s						
YUK				*i* S	**Sn**	**11 21 22.0**	**+0.3**
YUK				A	A	11 21 23.0	
	2μm,0.4s						
YUK				A	A	11 21 23.0	
	2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.23**	**290**	*d* *i*PN	**Pg**	**11 21 07.1**	**+0.6**
YUK				*i* S	**Sg**	**11 21 22.9**	**+0.5**
YUK				pmax	pmax		
	comp=N,134μm,0.2s						
YUK				pmax	pmax		
	comp=E,264μm,0.2s						
YUK				pmax	pmax		
	comp=Z,829μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
YUK				smax	smax		
	comp=E,3μm,0.4s						
NEM2	**Nemuro 2**	**1.27**	**259**	P	**Pg**	**11 21 07.8**	**+0.5**
NEM2				*e*S	**Sg**	**11 21 25.0**	**+1.2**
GRPR	**Tuman**	**1.28**	**288**	*i* P	**Pg**	**11 21 07.9**	**+0.6**
GRPR				AMB	AMB	11 21 08.0	
	comp=E,160nm,0.4s						
GRPR				*i* S	**Sg**	**11 21 23.5**	**-0.5**
GRPR				A	A	11 21 29.1	
	comp=E,2μm,0.4s						
GRPR				A	A	11 21 29.1	
	comp=E,590nm,0.4s						
GRPR	**Tuman**	**1.28**	**288**	*d* *i*PN	**Pg**	**11 21 07.8**	**+0.5**
GRPR				*i* S	**Sg**	**11 21 24.1**	**+0.1**
GRPR				pmax	pmax		
	comp=N,38nm,0.3s						
GRPR				pmax	pmax		
	comp=E,50nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,310nm,0.3s						
GRPR				smax	smax		
	comp=E,593μm,0.3s						
GRPR				smax	smax		
	comp=N,1537μm,0.4s						
NMR	**Nemuro--Hokkai**	**1.28**	**259**	*e*P	**Pg**	**11 21 07.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**1.28**	**259**	*e*PN	**Pg**	**11 21 07.8**	**+0.4**
NMR				*e*S	**Sg**	**11 21 29.0**	**+4.8**
KUR	**Kuril'sk**	**1.64**	**10**	*i* P	**Pn**	**11 21 11.6**	**+0.5**
KUR				AMB	AMB	11 21 13.0	
	comp=N,140nm,0.5s						
KUR				*e*S	**Sn**	**11 21 30.0**	**-1.9**
KUR				A	A	11 21 35.0	
	comp=N,160nm,0.6s						
KUR				A	A	11 21 35.0	
	comp=N,340nm,0.6s						
KUR	**Kuril'sk**	**1.64**	**10**	*e*PN	**Pn**	**11 21 11.9**	**+0.8**
KUR				*i* S	**Sn**	**11 21 31.1**	**-0.8**
KUR				pmax	pmax		
	comp=Z,110nm,0.4s						
KUR				pmax	pmax		
	comp=E,67nm,0.2s						
KUR				pmax	pmax		
	comp=N,41nm,0.4s						
KUR				smax	smax		
	comp=N,231nm,0.5s						
KUR				smax	smax		
	comp=E,114nm,0.2s						
RUSJ	**Misakicho**	**1.67**	**288**	*e*PN	**Pg**	**11 21 15.0**	**+0.2**
RUSJ				*e*S	**Sg**	**11 21 36.6**	**0.0**
JRA	**Rausu**	**1.72**	**282**	P	**Pg**	**11 21 14.8**	**-1.0**
JKHN	**Kushirohamanak**	**1.76**	**253**	P	**Pg**	**11 21 15.4**	**-1.1**
JKHN				*e*S	**Sg**	**11 21 39.1**	**-0.2**
JNSB	**Nemuroshibetsu**	**1.79**	**276**	P	**Pg**	**11 21 16.1**	**-0.9**
JNK	**Nakash**	**1.99**	**270**	P	**Pb**	**11 21 17.9**	**-0.8**
JAK	**Akkeshi**	**2.11**	**254**	P	**Pb**	**11 21 20.1**	**-0.6**
JTKR	**Abashiri--Toko**	**2.59**	**279**	P	**Pb**	**11 21 27.7**	**-1.2**
JAR	**Ashorobuto**	**2.71**	**264**	P	**Pb**	**11 21 29.1**	**-1.7**
JAR				*e*S	**Sb**	**11 22 03.5**	**-0.3**
JCH	**Churui**	**3.16**	**253**	P	**Pb**	**11 21 35.9**	**-2.7**
JKA	**Kamikawa-asahi**	**3.55**	**280**	*e*P	**Pb**	**11 21 42.5**	**-2.7**
ASAJ	**Asahikawa**	**3.55**	**280**	Pn	**Pb**	**11 21 42.5**	**-2.8**
	comp=E,1.1nm,0.3s,baz=127,slow=14,SNR=7.3						
JNBK	**Urakawa-nobuka**	**3.70**	**250**	P	**Pb**	**11 21 43.9**	**-4.0**
SONM	**Songino Array**	**28.73**	**293**	P	**P**	**11 26 41.1**	**+1.6**
	comp=E,0.3nm,0.3s,baz=85,slow=8.7,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**28.85**	**139**	T	T	11 57 16.9	
	baz=330,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**28.87**	**140**	T	T	11 57 18.0	
	baz=330,slow=75,SNR=104						
H11N3	**WAKE ISLAND Hy**	**28.87**	**139**	T	T	11 57 18.3	
	baz=330,slow=75,SNR=140						
H11S1	**WAKE ISLAND Hy**	**29.82**	**141**	T	T	11 58 29.9	
	baz=331,slow=76,SNR=235						
H11S3	**WAKE ISLAND Hy**	**29.83**	**141**	T	T	11 58 27.7	
	baz=331,slow=76,SNR=139						
H11S2	**WAKE ISLAND Hy**	**29.84**	**141**	T	T	11 58 30.7	
	baz=331,slow=76,SNR=127						
ILAR	**Eielson Array**	**41.46**	**36**	P	**P**	**11 28 28.3**	**-0.3**
	comp=E,0.7nm,0.7s,baz=283,slow=9.5,SNR=9.9						
MKAR	**Makanchi Array**	**44.84**	**298**	P	**P**	**11 28 57.1**	**+0.9**
	comp=E,0.4nm,0.7s,baz=83,slow=10,SNR=5.9						
INK	**Inuvik**	**46.40**	**30**	P	**P**	**11 29 08.7**	**+0.5**
	comp=E,1.7nm,0.7s,baz=283,slow=6.6,SNR=6.5						
YKA	**Yellowknife Ar**	**55.79**	**34**	P	**P**	**11 30 18.8**	**+0.1**
	comp=E,0.3nm,0.6s,baz=302,slow=6.3,SNR=6.7						
FINES	**FINESS Array B**	**65.09**	**333**	P	**P**	**11 31 21.3**	**-0.9**
	comp=E,2.7nm,1.0s,baz=29,slow=9.1,SNR=9.0						
NOA	**NORSAR Array B**	**69.81**	**339**	P	**P**	**11 31 52.0**	**-0.2**
	comp=E,0.9nm,0.7s,baz=36,slow=6.0,SNR=2.1						
NOA	**NORSAR Array B**	**69.81**	**339**	P	**P**	**11 31 52.0**	**-0.2**
AKASG	**Malin Array Be**	**71.82**	**324**	P	**P**	**11 32 04.4**	**-0.1**
	comp=E,0.4nm,0.3s,baz=40,slow=5.9,SNR=4.5						
PLCA	**Paso Flores**	**151.84**	**97**	PKPbc	**PKPab**	**11 40 47.0**	**+1.1**
	comp=E,1.7nm,1.0s,baz=0.0,slow=3.0,SNR=3.3						

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*MAN **10** 11:23:52.0, 4°.87N×125°.87E, h2^{km}, mb4.7, ML3.6, MS3.5*

*IDC **10** 11:24:05.0±9.9, 4°.82N×125°.96E, h212^{km}±101^{km}, mb3.4/9, mb1 3.5/9, mb1mx3.2/44, mbtmp3.9/9, Error ellipse: s-maj=41.5km s-min=17.8km az=86.0*

ISC 10 11:23:53.7±0.8, 4°.81N±0°.09×126°.1E±0°.2, h100^{km}, n14, σ2^{s}.79/18, mb3.9/9, 2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.33**	**345**	*e*P	**Pn**	**11 24 15.3**	**-2.7**
DDMP				*e*S	**Sn**	**11 24 33.8**	**-2.5**
SKMP	**Bagumbayan, Su**	**2.27**	**319**	*e*P	**Pn**	**11 24 28.8**	**-1.0**
SKMP				*e*S	**Sn**	**11 24 55.8**	**-1.6**
KCP	**Kidapawan**	**2.38**	**336**	⇓*e*P	**Pn**	**11 24 30.8**	**-0.7**
KCP				*i* S	**Sn**	**11 25 03.3**	**+3.0**
BUKP	**Musuan**	**3.21**	**342**	*e*P	**Pn**	**11 24 41.0**	**-1.3**
BUKP				*e*S	**Sn**	**11 25 25.8**	**+6.1**
CGP	**Cagayan de Oro**	**3.87**	**340**	⇓*e*P	Pn	11 24 59.9	+8.8
CGP				*e*S	**Sn**	**11 25 41.4**	**+5.8**
FITZ	**Fitzroy Crossi**	**22.77**	**181**	P	**P**	**11 28 48.7**	**+0.9**
	2.9nm,0.3s,baz=15,slow=7.6,SNR=23						
WRA	**Warramunga Arr**	**25.91**	**162**	P	**P**	**11 29 19.2**	**+2.5**
	1.1nm,0.3s,baz=338,slow=10,SNR=18						
ASAR	**Alice Springs**	**29.32**	**165**	P	**P**	**11 29 47.8**	**+0.6**
	0.4nm,0.5s,baz=339,slow=7.1,SNR=12						
STKA	**Stephens Creek**	**39.37**	**159**	P	**P**	**11 31 14.9**	**+1.3**
	1.1nm,0.4s,baz=349,slow=12,SNR=3.7						
USRK	**Ussuriysk Ar.**	**39.58**	**7**	P	**P**	**11 31 14.8**	**-0.4**
	0.9nm,0.6s,baz=185,slow=8.5,SNR=4.6						
PETK	**Petropavlovsk-**	**54.70**	**23**	P	**P**	**11 33 12.4**	**-0.1**
	3.2nm,0.8s,baz=193,slow=5.8,SNR=7.5						
MKAR	**Makanchi Array**	**56.29**	**325**	P	**P**	**11 33 24.2**	**+0.2**
	0.1nm,0.4s,baz=124,slow=6.7,SNR=4.3						
ILAR	**Eielson Array**	**84.43**	**25**	P	**P**	**11 36 13.6**	**-1.3**
	0.2nm,0.6s,baz=254,slow=6.5,SNR=3.5						
ARCES	**ARCESS Array B**	**89.21**	**340**	P	**P**	**11 36 35.4**	**-2.6**
	3.9nm,1.0s,baz=67,slow=5.3,SNR=2.5						

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*IDC **10** 11:29:32.3±2.9, 17°.71N×121°.55E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.3/46, mbtmp3.5/3, ML4.9/1, Error ellipse: s-maj=59.6km s-min=32.9km az=45.0*

*MAN **10** 11:29:35.2, 17°.17N×119°.45E, h21^{km}, mb4.8, ML3.7, MS3.7*

ISC 10 11:29:34.8±3.5, 17°.10N±0°.05×119°.6E±0°.1, h7^{km}±24^{km}, n17, σ2^{s}.35/29, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.77**	**157**	*e*P	**Pb**	**11 29 51.7**	**+1.1**
BOLP				*e*S	**Sb**	**11 30 00.1**	**-1.2**
BCP	**Baguio City**	**1.18**	**125**	⇑*i*P	**Pn**	**11 29 56.4**	**-1.5**
BCP				*i* S	Sb	11 30 01.9	-11
ABRA	**Dolores**	**1.20**	**62**	*e*P	**Pn**	**11 29 57.7**	**-0.3**
ABRA				*e*S	**Sn**	**11 30 15.3**	**+0.8**
SMPP	**San Manuel, Pa**	**1.40**	**132**	*e*P	**Pn**	**11 29 58.6**	**-2.2**
SMPP				*e*S	**Sn**	**11 30 13.0**	**-6.5**
APYP	**Conner**	**1.74**	**64**	*e*P	**Pn**	**11 30 06.2**	**+0.6**
APYP				*e*S	**Sb**	**11 30 29.7**	**+0.4**
CAUP	**Cauayan**	**2.13**	**94**	*e*P	**Pn**	**11 30 12.9**	**+2.0**
CAUP				*e*S	**Sb**	**11 30 40.6**	**+0.1**
CVP	**Callao Caves**	**2.20**	**74**	⇓*i*P	**Pn**	**11 30 13.4**	**+1.5**
CVP				*i* S	**Sn**	**11 30 41.3**	**+1.8**
BALP	**Baler**	**2.32**	**125**	*e*P	**Pn**	**11 30 15.9**	**+2.3**
BALP				*e*S	**Sn**	**11 30 43.6**	**+1.2**
SGCP	**Mt. Cagua**	**2.59**	**64**	*e*P	**Pn**	**11 30 18.2**	**+0.9**
SGCP				*e*S	**Sn**	**11 30 49.5**	**+0.4**
QVP	**Quezon City--P**	**2.80**	**151**	*e*P	**Pn**	**11 30 21.1**	**+1.0**
QVP				*e*S	**Sb**	**11 30 58.6**	**-1.3**
MACP	**Maragondon, Ca**	**3.01**	**159**	*e*P	**Pn**	**11 30 24.8**	**+1.7**
MACP				*e*S	**Sn**	**11 31 02.5**	**+3.1**
TGY	**Tagaytay City**	**3.24**	**156**	Pn	**Pb**	**11 30 31.1**	**-1.7**
	99nm,0.3s,baz=297,slow=0.7,SNR=7.4						
TGY				Sn	**Sb**	**11 31 13.4**	**+0.9**
	104nm,0.3s,baz=132,slow=19,SNR=3.1						
POLP	**Polilio Island**	**3.25**	**136**	*e*P	**Pn**	**11 30 29.4**	**+3.1**
POLP				*e*S	**Sn**	**11 31 07.2**	**+1.9**
LQP	**Lukban**	**3.50**	**148**	⇑*e*P	**Pn**	**11 30 33.5**	**+3.5**
LQP				*e*S	**Sn**	**11 31 15.8**	**+4.0**
CMAR	**Chiang Mai Arr**	**19.72**	**277**	P	Pn	11 34 23.0	+16
	0.6nm,0.3s,baz=77,slow=8.6,SNR=4.2						
WRA	**Warramunga Arr**	**39.55**	**158**	P	**P**	**11 37 04.5**	**-2.3**
	0.3nm,0.5s,baz=323,slow=12,SNR=1.7						
ASAR	**Alice Springs**	**42.85**	**161**	P	**P**	**11 37 32.3**	**-1.7**
	0.8nm,0.8s,baz=340,slow=6.9,SNR=8.3						

IDC 10 11:53:41.2±3.8, 30°.25S×177°.59W, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.7/31, mbtmp3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=294.6km s-min=39.1km az=167.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**16.19**	**211**	LR	LR	12 03 51.5	
	comp=Z,48nm,18.3s,baz=2.0,slow=38						
ASAR	**Alice Springs**	**43.47**	**267**	P	P	12 01 45.9	-0.6
	0.3nm,0.4s,baz=102,slow=7.6,SNR=6.3						
WRA	**Warramunga Arr**	**44.44**	**272**	P	P	12 01 54.6	+0.3
	0.7nm,0.3s,baz=111,slow=8.1,SNR=7.8						
TXAR	**Lajitas Array**	**92.01**	**57**	P	P	12 06 52.2	-0.1
	0.2nm,0.7s,baz=201,slow=4.7,SNR=2.3						

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*IDC **10** 12:05:53.7±1.3, 35°.84N×21°.72E, h0^{km}, mb3.8/7, mb1 3.8/10, mb1mx3.5/50, mbtmp3.8/10, ML3.7/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/52, Error ellipse: s-maj=27.1km s-min=19.2km az=34.0*

*THE **10** 12:05:57.4, 35°.74N×21°.68E, h6^{km}±3^{km}, ML3.3/5, Error ellipse: s-maj=3.9km s-min=1.1km az=297.0*

*ISK **10** 12:06:00.5, 35°.94N×22°.01E, h97^{km}±2^{km}, ML3.8/7*

ISC 10 12:05:55.4±1.9, 35°.73N±0°.06×21°.64E±0°.05, h15^{km}±12^{km}, n94, σ1^{s}.72/103, mb3.9/7, 7C-4D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**1.17**	**4**	P	**Pb**	**12 06 17.9**	**+0.6**
PYL				S	**Sn**	**12 06 35.8**	**+2.9**
	910nm,0.4s						
KTHR	**Kythira**	**1.23**	**64**	P	**Pn**	**12 06 19.9**	**+1.8**
KTHR				S	**Sn**	**12 06 36.6**	**+2.2**
	2μm,0.3s						
KTHA	**Kythira Island**	**1.27**	**65**	P	**Pn**	**12 06 20.7**	**+2.1**
KTHA				S	**Sn**	**12 06 38.2**	**+2.7**
	1μm,0.5s						
KTHA	**Kythira Island**	**1.27**	**65**	PG	**Pn**	**12 06 20.5**	**+1.9**
ANKY	**Antikythira Is**	**1.36**	**84**	P	**Pb**	**12 06 22.0**	**+1.4**
ANKY				S	**Sn**	**12 06 40.2**	**+2.6**
	1μm,0.7s						
VLI	**Veliai**	**1.44**	**46**	P	**Pg**	**12 06 23.2**	**+0.1**
ITM	**Ithomi**	**1.47**	**9**	P	**Pn**	**12 06 22.3**	**+1.0**
ITM	**Ithomi**	**1.47**	**9**	PN	**Pg**	**12 06 24.2**	**+0.6**
VLX	**Vlachokerasia**	**1.74**	**20**	P	**Pb**	**12 06 27.6**	**+0.4**
AMT	**Artemida-Makis**	**1.80**	**2**	P	**Pb**	**12 06 28.7**	**+0.6**
IMMV	**Iera Moni Meta**	**1.93**	**97**	P	**Pn**	**12 06 29.3**	**+1.6**
IMMV				S	**Sn**	**12 06 53.4**	**+1.7**
	708nm,0.7s						
IMMV	**Iera Moni Meta**	**1.93**	**97**	PN	**Pn**	**12 06 29.5**	**+1.8**
IMMV				SN	**Sn**	**12 06 51.1**	**-0.6**
KRND	**KRANIDI**	**2.05**	**36**	P	**Pn**	**12 06 30.7**	**+1.3**
GVD	**Gavdhos**	**2.19**	**113**	PN	**Pn**	**12 06 34.2**	**+2.9**
GVDS	**Gavdos**	**2.19**	**113**	PN	**Pn**	**12 06 34.5**	**+3.2**
GVDS				SN	**Sn**	**12 06 58.8**	**+0.6**
DRO	**Drossia**	**2.22**	**2**	P	**Pn**	**12 06 34.3**	**+2.6**
KALE	**Kalithea**	**2.69**	**8**	P	**Pn**	**12 06 41.0**	**+2.8**
IDI	**Anoyia**	**2.69**	**98**	Pn	**Pn**	**12 06 39.4**	**+1.2**
	2.8nm,0.3s,baz=282,slow=22,SNR=8.2						
IDI				Sn	**Sn**	**12 07 11.3**	**+0.7**
	31nm,0.3s,baz=282,slow=23,SNR=5.8						
IDI				LR	LR	12 07 58.2	
	comp=Z,61nm,19.4s,baz=86,slow=47						
IDI	**Anoyia**	**2.69**	**98**	PN	**Pn**	**12 06 39.7**	**+1.5**
SERG	**Sergoula**	**2.70**	**7**	P	**Pb**	**12 06 42.0**	**-1.4**
DMLN	**Damoulianata-K**	**2.70**	**338**	P	**Pn**	**12 06 39.5**	**+1.2**
VLY	**Voula,Athens**	**2.74**	**39**	P	**Pn**	**12 06 40.1**	**+1.3**
HRKL	**Herakleio**	**2.86**	**97**	PN	**Pn**	**12 06 41.8**	**+1.4**
PDO	**Prodromos**	**2.89**	**353**	P	**Pn**	**12 06 43.3**	**+2.5**
EVGI	**Lefkada island**	**2.99**	**345**	P	**Pn**	**12 06 44.2**	**+1.9**
AXAR	**Agios Charalam**	**3.14**	**15**	P	**Pn**	**12 06 48.3**	**+4.0**
LKD2	**Lefkada island**	**3.15**	**346**	P	**Pn**	**12 06 46.8**	**+2.3**
ATAL	**Atalanti**	**3.16**	**20**	P	**Pn**	**12 06 45.9**	**+1.3**
SANT	**Santorini**	**3.16**	**77**	⇑P	**Pn**	**12 06 45.2**	**+0.5**
SANT				⇑S	**Sn**	**12 07 21.4**	**-0.8**
SANT	**Santorini**	**3.16**	**77**	PN	**Pn**	**12 06 44.9**	**+0.2**

EVR	Evrytania	3.18	2	P	Pn	12 06 48.8	+3.8
TSLK	Tsoukalades, L	3.19	346	P	Pn	12 06 47.5	+2.5
MAKR	Makrakomi, Fth	3.30	7	P	Pn	12 06 50.2	+3.6
AGG	Agios Georgios	3.33	9	P	Pn	12 06 49.2	+2.2
AGG	Agios Georgios	3.33	9	PN	Pn	12 06 48.8	+1.8
APE	Apeiranthos	3.41	66	⇓P	Pn	12 06 48.5	+0.4
APE				⇑S	Sn	12 07 25.8	-2.6
APE	Apeiranthos	3.41	66	PN	Pn	12 06 47.9	-0.2
ZKR	Zakros	3.79	98	PN	Pn	12 06 54.1	+0.8
KARP	Karpathos	4.50	91	PN	Pn	12 07 03.9	+0.8
URLA	Izmir	4.76	55	PN	Pn	12 07 06.4	-0.2
OUR	Ouranopolis	4.96	21	PN	Pn	12 07 09.5	+0.2
HORT	Hortiatis	5.00	13	PN	Pn	12 07 10.7	+0.8
FNA	Florina	5.05	358	PN	Pn	12 07 12.0	+1.4
TIP	Timpagrande	5.19	313	⇓P	Pn	12 07 13.0	+0.5
GRG	Griva	5.25	6	PN	Pn	12 07 14.2	+0.8
ARG	Arkhangelos	5.29	83	PN	Pn	12 07 14.1	+0.3
OHR	Ohrid	5.41	353	*i* Pn	Pn	12 07 17.0	+1.4
OHR	Ohrid	5.41	353	*i* Pn	Pn	12 07 17.1	+1.4
DALY	Dalyan (Mula)	5.77	77	PN	Pn	12 07 20.1	-0.4
STIP	Stip	5.97	4	*i* Pn	Pn	12 07 25.1	+1.9
STIP	Stip	5.97	4	*i* Pn	Pn	12 07 25.2	+1.9
SKO	Skopje	6.24	359	*i* Pn	Pn	12 07 27.5	+0.6
SKO	Skopje	6.24	359	*i* Pn	Pn	12 07 27.5	+0.6
MATE	Matera	6.26	323	⇓P	Pn	12 07 27.2	0.0
DRME	Dracevica, Mon	6.72	344	*e*Pn	Pn	12 07 31.4	-2.2
PDG	Podgorica	6.94	345	⇑P	Pn	12 07 36.1	-0.4
PDG	Podgorica	6.94	345	*e*Pn	Pn	12 07 34.2	-2.3
VTS	Vitosha	6.99	10	⇓P	Pn	12 07 37.9	+0.6
HCY	Herceg Novi	7.14	341	*e*Pn	Pn	12 07 37.4	-1.9
TREB	Trebinje	7.43	341	*e*Pn	Pn	12 07 41.1	-2.1
BRY	Bratogost	7.55	342	*e*Pn	Pn	12 07 43.3	-1.8
SJES	Sjenica	7.63	351	*e*Pn	Pn	12 07 43.2	-2.9
UPM	Unac-Piva	7.75	345	*e*Pn	Pn	12 07 47.4	-0.5
STON	Ston	7.76	338	*e*Pn	Pn	12 07 45.6	-2.0
STON				Sn	Sn	12 09 03.8	-11
STON	Ston	7.76	338	*e*Pn	Pn	12 07 45.8	-1.9
BBLS	Lazići	8.30	349	*e*Pn	Pn	12 07 54.0	-1.3
MAKA	Makarska	8.35	336	*e*Pn	Pn	12 07 55.2	-0.6
MAKA				Sn	Sn	12 09 19.1	-11
HVAR	Hvar	8.45	333	*e*Pn	Pn	12 07 55.2	-2.0
HVAR				Sn	Sn	12 09 21.9	-10
DIVS	Divibare	8.45	352	*e*Pn	Pn	12 07 55.9	-1.5
HAPS	Han Pijesak,BI	8.60	347	*e*Pn	Pn	12 07 56.3	-3.1
ZIRJ	Zirje	9.16	332	*e*Pn	Pn	12 08 05.4	-1.5
ZIRJ				Sn	Sn	12 09 38.2	-12
HERR	Herculane	9.16	3	⇑P	Pn	12 08 05.9	-1.1
KIJV	Kijevo	9.19	336	*e*Pn	Pn	12 08 06.7	-0.7
KIJV				Sn	Sn	12 09 40.1	-10
MORI	Morici	9.31	333	*e*Pn	Pn	12 08 08.3	-0.8
MORI				Sn	Sn	12 09 43.6	-10
FRGS	Fruska Gora	9.52	352	*e*Pn	Pn	12 08 09.5	-2.4
DUGI	Dugi Otok	9.67	331	*e*Pn	Pn	12 08 13.1	-0.9
DUGI				Sn	Sn	12 09 51.3	-11
GZR	Gura Zlata	9.69	5	⇑P	Pn	12 08 14.1	-0.3
UDBI	Udbina	9.87	335	*e*Pn	Pn	12 08 16.3	-0.5
UDBI				Sn	Sn	12 09 56.0	-11
BZS	Buzias	9.88	360	⇑P	Pn	12 08 15.7	-1.1
NVLJ	Novalja	10.22	332	*e*Pn	Pn	12 08 19.8	-1.8
NVLJ				Sn	Sn	12 10 05.0	-11
MORH	Mrgy, Hungar	10.71	349	*e*Pn	Pn	12 08 26.3	-1.9
CRES	Cresnjev	11.12	337	*e*Pn	Pn	12 08 31.3	-2.5
CEY	Cerknica	11.39	334	*e*Pn	Pn	12 08 35.9	-1.6
EIL	Elat	12.73	115	Pn	Pn	12 08 54.0	-1.9
	0.2nm,0.3s,baz=313,slow=3.7,SNR=6.7						
GERES	GERESS Array B	14.35	338	Pn	Pn	12 09 17.3	-0.7
	0.3nm,0.3s,baz=171,slow=13,SNR=1.7						
AKASG	Malin Array Be	15.94	18	Pn	Pn	12 09 39.7	+0.7
	1.4nm,0.3s,baz=214,slow=11,SNR=7.4						
HFS	Hagfors	24.95	351	P	P	12 11 17.1	-0.8
	1.2nm,0.4s,baz=144,slow=12,SNR=5.8						
FINES	FINESS Array B	25.89	5	P	P	12 11 25.7	-0.7
	2.9nm,0.9s,baz=177,slow=10,SNR=7.7						
EKA	Eskdalemuir Ar	25.95	327	P	P	12 11 27.9	+0.9
	0.9nm,0.4s,baz=124,slow=8.7,SNR=5.1						
TORD	Torodi Ar. Bea	28.78	224	P	P	12 11 54.3	+1.6
	0.3nm,0.5s,baz=33,slow=10,SNR=1.3						
ARCES	ARCESS Array B	33.93	2	P	P	12 12 36.7	-0.8
	1.5nm,0.7s,baz=192,slow=8.3,SNR=6.9						
MKAR	Makanchi Array	45.86	57	P	P	12 14 16.3	-0.7
	0.6nm,0.3s,baz=265,slow=7.9,SNR=20						
ZALV	Zalesovo Beam	46.69	46	P	P	12 14 23.2	-0.1
	0.4nm,0.3s,baz=257,slow=7.2,SNR=2.2						
JCJ	Chichijima	96.04	51	LR	LR	13 06 23.3	
	comp=Z,158nm,19.6s,baz=305,slow=38						

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*JMA **10** 12:21:44.5, 38°.74N×141°.96E, h54^{km}±1^{km}, M3.8*
JMA Felt II J1.
*NIED **10** 12:21:44.6, 38°.74N×141°.96E, h54^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.17; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-5.23; $M_{r\theta}$-1.64; $M_{\theta\phi}$0.98; $M_{\phi r}$0.53; Fault plane solution: $M_0$5.56000×10^{14} NP1: ϕ_s335.00000°, δ51.00000°, λ70.00000°. NP2: ϕ_s185.00000°, δ43.00000°, λ113.00000°.*
*IDC **10** 12:21:45.6±2.5, 38°.75N×141°.91E, h66^{km}±23^{km}, mb3.4/9, mb1 3.6/12, mb1mx3.4/33, mbtmp3.7/12, MS2.5/1, Ms1 2.5/1, ms1mx2.3/27 Error ellipse: s-maj=24.1km s-min=13.9km az=109.0*
ISC 10 12:21:44.6±1.1**, 38°.75N**±0°.05×**142°.00E**±0°.09**, h52**^{km}±8^{km}**, n31,** σ1^{s}.**10**/34**, mb3.8**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.41	279	P	Pn	12 21 54.8	-0.2
JKMT				S	Sn	12 22 02.0	-0.5
OFUJ	Ofunato	0.42	323	P	Pn	12 21 55.1	0.0
OFUJ				*e*S	Sn	12 22 02.7	+0.1
JIO	Ouri	0.59	241	P	Pn	12 21 56.7	-0.2
JIO				*e*S	Sn	12 22 05.1	-0.8
JIKH	Ishinomakikobu	0.60	224	P	Pn	12 21 56.9	-0.2
JIKH				S	Sn	12 22 05.5	-0.7
JMK	Ichinoseki	0.64	289	P	Pn	12 21 57.5	-0.1
JMK				*e*S	Sn	12 22 06.7	-0.4
JOM	Ohasama	0.91	323	P	Pn	12 22 01.1	-0.1
JOM				S	Sn	12 22 13.2	-0.1
JOU	Okura	1.11	251	P	Pn	12 22 03.5	-0.4
JRG	Rokugo	1.25	302	P	Pn	12 22 05.3	-0.3
JMM	Marumori	1.29	228	P	Pn	12 22 05.6	-0.6
JYK	Kaneyama	1.29	278	P	Pn	12 22 06.0	-0.3
JYK				*e*S	Sn	12 22 22.1	-0.4
JYS	Shirataka	1.60	252	P	Pn	12 22 10.5	0.0
MAT	Matsushiro	3.73	235	P	Pn	12 22 41.0	+1.4
MAT				*e*S	Sn	12 23 24.7	+2.5
MJAR	Matsushiro Arr	3.73	235	P	Pn	12 22 41.3	+1.8
	0.8nm,0.3s,baz=38,slow=12,SNR=55						
MJAR				LR	LR	12 24 26.7	
	comp=Z,61nm,19.6s,baz=85,slow=44						
ASAJ	Asahikawa	5.39	5	P	Pn	12 23 03.1	+0.8
	1.0nm,0.3s,baz=201,slow=15,SNR=1.4						
ASAJ				S	Sn	12 24 03.4	+0.5
	0.4nm,0.3s,baz=281,slow=18,SNR=1.8						
USRK	Ussuriysk Ar.	9.28	309	P	Pn	12 23 56.1	+0.5
	baz=116,slow=14,SNR=6.1						
KSRS	Korea Array	11.17	268	P	Pn	12 24 25.1	+3.7
	0.4nm,0.3s,baz=77,slow=14,SNR=7.5						
SONM	Songino Array	27.26	301	P	P	12 27 23.2	-0.6
	0.2nm,0.3s,baz=113,slow=11,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.68	124	T	T	12 58 00.8	
	baz=317,slow=75,SNR=265						
H11N1	WAKE ISLAND Hy	28.68	124	T	T	12 57 59.8	
	baz=317,slow=75,SNR=362						
H11N3	WAKE ISLAND Hy	28.69	124	T	T	12 58 00.3	
	baz=317,slow=75,SNR=307						
H11S1	WAKE ISLAND Hy	29.45	126	T	T	12 58 52.2	
	baz=318,slow=76,SNR=70						
H11S3	WAKE ISLAND Hy	29.45	126	T	T	12 58 52.5	
	baz=318,slow=76,SNR=99						
H11S2	WAKE ISLAND Hy	29.46	126	T	T	12 58 53.7	
	baz=318,slow=76,SNR=44						
ZALV	Zalesovo Beam	41.12	311	P	P	12 29 22.3	-0.9
	0.8nm,0.4s,baz=89,slow=8.6,SNR=5.9						
MKAR	Makanchi Array	43.62	301	P	P	12 29 43.0	-0.7
	0.4nm,0.5s,baz=82,slow=9.8,SNR=6.8						
ILAR	Eielson Array	47.81	33	P	P	12 30 16.8	+0.4
	0.4nm,0.6s,baz=269,slow=6.3,SNR=7.9						
INK	Inuvik	52.66	28	P	P	12 30 54.6	+1.6
	0.6nm,0.7s,baz=270,slow=1.0,SNR=1.8						
WRA	Warramunga Arr	58.82	188	P	P	12 31 36.5	-1.1
	0.8nm,0.4s,baz=6.1,slow=7.2,SNR=13						
ASAR	Alice Springs	62.54	188	P	P	12 32 02.0	-0.9
	0.3nm,0.4s,baz=9.9,slow=5.4,SNR=7.1						
FINES	FINESS Array B	67.52	332	P	P	12 32 33.8	-1.0
	2.1nm,0.9s,baz=343,slow=9.1,SNR=1.7						
PDAR	Pinedale Array	76.14	46	P	P	12 33 26.9	-0.3
	0.3nm,0.6s,baz=325,slow=1.8,SNR=3.9						

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*NOU **10** 12:38:24.2, 36°.59S×177°.90E, h269^{km}, MLv3.7, Off E. Coast of N. Island, N.Z.*
WEL 10 12:38:28.6, 37°S±5°×**17°7E**±°**, h237**^{km}±5^{km}**, M3.4**/82**, MLv3.4**/82**, Error ellipse: s-maj=0.0km s-min=0.0km az=8.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	1.16	158	P	Pn	12 39 02.5	-0.8
HAZ				S	S	12 39 31.3	+0.8
MXZ	Matakaoa Point	1.23	137	P	Pn	12 39 03.1	-0.6
MXZ				S	S	12 39 29.6	-1.6
KUZ	Kuaotunu	1.23	266	P	Pn	12 39 03.6	-0.1
RUGZ	Raukumara Rang	1.33	165	P	Pn	12 39 03.6	-1.0
RUGZ				S	S	12 39 30.0	-2.9
PKGZ	Pakihiroa	1.38	152	P	Pn	12 39 05.0	+0.1
MARZ	Manawahe	1.38	199	P	Pn	12 39 06.5	+1.7
WMGZ	Waiomatatini S	1.47	141	P	Pn	12 39 05.2	-0.3
WMGZ				S	S	12 39 32.8	-1.6
GRZ	Great Barrier	1.50	286	P	Pn	12 39 05.4	-0.3
URZ	Urewera	1.58	184	P	Pn	12 39 06.2	-0.1
URZ				S	S	12 39 34.2	-1.8
TWGZ	Tauwhareparae	1.61	159	P	Pn	12 39 07.2	+0.6
TWGZ				S	S	12 39 35.2	-1.3
PUZ	Puketiti	1.61	150	P	Pn	12 39 06.5	-0.1
PUZ				S	S	12 39 33.6	-2.9
MWZ	Matawai	1.67	172	P	Pn	12 39 07.3	+0.2
MWZ				S	S	12 39 35.7	-1.7
WIAZ	Waiheke Island	1.70	265	P	Pn	12 39 08.0	+0.7
RRRZ	Republican Roa	1.76	199	P	Pn	12 39 09.6	+1.8
RAGZ	Rawiri	1.82	176	P	Pn	12 39 09.0	+0.5
TKGZ	Te Karaka	1.82	165	P	Pn	12 39 08.6	+0.2
TKGZ				S	S	12 39 37.7	-2.0
MUGZ	Murupara	1.84	192	P	Pn	12 39 08.9	+0.3
MUGZ				S	S	12 39 37.8	-2.1
ETAZ	East Tamaki Re	1.88	261	P	Pn	12 39 10.2	+1.3
MBAZ	Motutapu North	1.89	266	P	Pn	12 39 09.9	+0.9
RTZ	Ruatahuna	1.95	186	P	Pn	12 39 09.7	+0.1
RTZ				S	S	12 39 40.1	-1.8
CNGZ	Carnagh Statio	1.96	157	P	Pn	12 39 10.2	+0.6
ALRZ	Allen Road	2.02	201	P	Pn	12 39 11.6	+1.5
RIGZ	Rimuhau	2.07	169	P	Pn	12 39 11.0	+0.4
RIGZ				S	S	12 39 42.8	-0.9
SNGZ	Shannon Statio	2.10	178	P	Pn	12 39 11.4	+0.4
SNGZ				S	S	12 39 42.4	-2.0
AWAZ	Awhitu Peninsu	2.12	259	P	Pn	12 39 12.3	+1.1
TLZ	Tolley Road	2.14	219	P	Pn	12 39 14.1	+2.7
RVAZ	Riverhead Bore	2.14	267	P	Pn	12 39 11.5	+0.1
MTHZ	Maungataniwha	2.20	188	P	Pn	12 39 11.5	-0.4
MTHZ				S	S	12 39 44.9	-1.1
RAHZ	Arahi	2.24	183	P	Pn	12 39 12.6	+0.3
RAHZ				S	S	12 39 45.7	-1.1
MRHZ	Matea Rd	2.25	197	P	Pn	12 39 13.1	+0.6
PRGZ	Paritu Road	2.30	167	P	Pn	12 39 13.1	+0.2
PRGZ				S	S	12 39 43.0	-4.8
KNZ	Kokohu	2.37	172	P	Pn	12 39 13.5	0.0
WHHZ	Waihua	2.40	180	P	Pn	12 39 14.4	+0.6
NMHZ	Naumai	2.44	188	P	Pn	12 39 15.3	+0.9
WCZ	Waipu Caves	2.46	287	P	Pn	12 39 14.9	+0.4
MHGZ	Mahia Peninsul	2.53	168	P	Pn	12 39 15.7	+0.5
BKZ	Black Stump Fm	2.56	193	P	Pn	12 39 15.6	+0.1
HIZ	Hauiti	2.64	225	P	Pn	12 39 19.1	+2.7
ETVZ	East Tongariro	2.74	206	P	Pn	12 39 18.4	+0.9
WTVZ	West Tongariro	2.77	208	P	Pn	12 39 19.1	+1.2
OTVZ	Oturere	2.78	206	P	Pn	12 39 18.8	+0.8
TWVZ	Taurewa	2.79	210	P	Pn	12 39 19.3	+1.3
MCHZ	McNeill Hill	2.80	189	P	Pn	12 39 18.6	+0.6
NGZ	Ngauruhoe	2.81	207	P	Pn	12 39 19.6	+1.2
TUVZ	Tukino	2.88	205	P	Pn	12 39 19.7	+0.6
WNVZ	Wahianoa	2.95	206	P	Pn	12 39 20.3	+0.4
BHHZ	Black Hill Sta	2.96	198	P	Pn	12 39 19.8	-0.1
MOVZ	Moawhango	2.97	203	P	Pn	12 39 20.0	0.0
PKVZ	Pokaka	3.01	209	P	Pn	12 39 20.1	-0.4
KRHZ	Kereru	3.04	193	P	Pn	12 39 20.8	0.0
MTVZ	Mangateitei	3.05	207	P	Pn	12 39 21.8	+1.0
KAHZ	Kahuranaki	3.13	185	P	Pn	12 39 22.1	+0.4
VRZ	Vera Road	3.14	218	P	Pn	12 39 24.3	+2.5
PNHZ	Pukenui	3.33	194	P	Pn	12 39 23.7	-0.4
PXZ	Pawanui	3.36	185	P	Pn	12 39 24.0	-0.4
WPHZ	Waipukurau	3.44	190	P	Pn	12 39 24.9	-0.3
TSZ	Takapari Road	3.52	196	P	Pn	12 39 25.7	-0.5
WAZ	Wanganui	3.55	209	P	Pn	12 39 27.1	+0.6
NEZ	North Egmont	3.59	223	P	Pn	12 39 30.4	+3.3
PRHZ	Porangahau	3.62	187	P	Pn	12 39 26.9	-0.4
DVHZ	Dannevirke	3.71	193	P	Pn	12 39 27.4	-1.0
ANWZ	Angora Road	3.83	189	P	Pn	12 39 29.5	-0.2
PRWZ	Pori Road	4.00	194	P	Pn	12 39 31.6	-0.2
BFZ	Birch Farm	4.08	191	P	Pn	12 39 31.7	-1.0
MRZ	Mangatainoka R	4.19	198	P	Pn	12 39 32.7	-1.3
HOWZ	Holdsworth Sta	4.43	197	P	Pn	12 39 35.4	-1.5
OGWZ	Otaki Gorge	4.44	201	P	Pn	12 39 35.8	-1.3
KIW	Kapiti Island	4.56	203	P	Pn	12 39 37.4	-1.1
MTW	Mount Morrison	4.68	196	P	Pn	12 39 38.5	-1.4
CAW	Cannon Point	4.74	200	P	Pn	12 39 39.1	-1.7
MSWZ	Moikau Station	4.98	198	P	Pn	12 39 42.0	-1.7
BHW	Baring Head	5.07	201	P	Pn	12 39 43.2	-1.6
TCW	Tory Channel	5.08	206	P	Pn	12 39 43.7	-1.3
PLWZ	Palliser	5.13	197	P	Pn	12 39 44.2	-1.3
NNZ	Nelson	5.44	212	P	Pn	12 39 48.3	-1.1
QRZ	Quartz Range	5.54	220	P	Pn	12 39 50.0	-0.8
THZ	Tophouse	6.09	212	P	Pn	12 39 56.9	-0.8
KHZ	Kahutara	6.41	205	P	Pn	12 40 00.2	-1.3
DSZ	Denniston Nort	6.59	218	P	Pn	12 40 02.1	-1.9
GVZ	Greta Valley S	7.07	206	P	Pn	12 40 09.0	-1.0
LTZ	Lake Taylor	7.20	211	P	Pn	12 40 10.7	-0.9
OKCZ	Okains Bay	7.73	203	P	Pn	12 40 17.7	-0.6
MQZ	McQueen's Vall	7.85	205	P	Pn	12 40 17.3	-2.5
ARCZ	Arundel	8.61	211	P	Pn	12 40 27.7	-1.9
FOZ	Fox Glacier	8.90	217	P	Pn	12 40 31.5	-1.7
ODZ	Otahua Downs	9.74	209	P	Pn	12 40 43.3	-0.6
JCZ	Jackson Bay	9.81	219	P	Pn	12 40 43.2	-1.7

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*IDC **10** 12:49:24.3±2.6, 6°.45S×130°.11E, h153^{km}±36^{km}, mb3.5/1, mb1 3.2/5, mb1mx2.9/49, mbtmp3.6/5, MS3.6/1, Ms1 3.8/1, ms1mx2.7/20, Error ellipse: s-maj=70.7km s-min=20.1km az=88.0*
ISC 10 12:49:21.9±1.1**, 6°.73S**±0°.07×**130°.2E**±0°.2**, h146**^{km}**, n6,** σ**2**^{s}.**93**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.93	11	P	Pn	12 50 46.7	-1.0
	0.4nm,0.3s,baz=201,slow=23,SNR=7.0						
SIJI				S	Sn	12 51 43.8	-11
	1.0nm,0.3s,baz=253,slow=20,SNR=1.5						
FITZ	Fitzroy Crossi	12.13	201	P	P	12 52 15.4	-1.1
	0.1nm,0.3s,baz=29,slow=13,SNR=9.9						
FITZ				S	Sn	12 54 23.9	-0.3
	0.6nm,0.3s,baz=244,slow=16,SNR=7.6						
WRA	Warramunga Arr	13.74	163	P	P	12 52 35.8	+1.3
	0.3nm,0.3s,baz=348,slow=12,SNR=13						
WRA				S	Sn	12 54 59.0	-4.1
	0.2nm,0.3s,baz=351,slow=18,SNR=2.7						
ASAR	Alice Springs	17.22	168	P	Pn	12 53 18.4	+4.6
	0.1nm,0.3s,baz=338,slow=8.3,SNR=7.2						
ASAR				S	S	12 56 24.1	-1.0
	0.1nm,0.3s,baz=355,slow=27,SNR=2.5						
CMAR	Chiang Mai Arr	39.69	310	LR	LR	13 14 19.7	
	comp=Z,80nm,18.1s,baz=182,slow=38						
MKAR	Makanchi Array	68.09	327	P	P	13 00 05.9	-0.1
	0.5nm,0.4s,baz=117,slow=8.1,SNR=11						

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*DJA **10** 13:06:19.4±0.4, 11°N±4°×9°1E±°, h248^{km}±9^{km}, M4.7/7, mB5.0/4, mb4.5/7, MLv5.0/1, Mw(mB)4.3/4*
*NEIC **10** 13:06:35.6±1.3, 10°.94N±0°.09×93°.5E±0°.1, h124^{km}±8^{km}, mb4.6/22, Error ellipse: s-maj=16.8km s-min=11.1km az=53.0*
*IDC **10** 13:06:36.7±1.4, 10°.95N×93°.65E, h132^{km}±11^{km}, mb4.0/16, mb1 4.2/19, mb1mx3.9/44, mbtmp4.4/19, MS3.3/2, Ms1 3.3/2, ms1mx2.8/33, Error ellipse: s-maj=13.2km s-min=10.0km az=61.0*
*NDI **10** 13:06:44.8±4.3, 11°.78N×93°.45E, h151^{km}±19^{km}, mb5.3, ML4.2, mb4.6(NEIC)*
ISC 10 13:06:35.7±0.4**, 11°.00N**±0°.05×**93°.56E**±0°.05**, h123**^{km}**, n152,** σ**1**^{s}.**23**/150**, mb4.5**/36**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.03	309	*e*P	Pn	13 06 58.5	+0.2
PBA				IAmb	IAmb	13 07 00.1	
	comp=Z,5μm,0.3s						
PBA	Port Blair	1.03	309	Pn	Pn	13 06 58.5	+0.2
DGPR	DIGLIPUR	2.25	344	*e*P	Pn	13 07 11.9	-0.5
DGPR				*e*S	Sn	13 07 39.6	-1.0
DGPR				IAML		13 07 44.1	
	comp=E,3μm,0.3s						
DGPR				IAML		13 07 44.6	
	comp=N,2μm,0.3s						
MLSI	Meulaboh, Aceh	7.26	157	P	Pn	13 08 17.2	-2.1
	comp=N,88nm,0.5s						
UTHA	Uthaitani	7.31	51	P	Pn	13 08 21.2	+1.4
	comp=N,374nmcomp=N,37nm,0.7s						
PATY	Pattaya	7.40	74	P	Pn	13 08 23.0	+1.9
	comp=N,43nm,0.4s						
MHMT	Maesarieng	8.29	30	P	Pn	13 08 34.7	+1.5
	comp=N,906nmcomp=N,46nm,0.7s						
KCSI	Kotacane, Aceh	8.53	150	P	Pn	13 08 36.3	-0.1
	comp=N,27nm,0.5s						
SUKH	Sukhothai	8.73	42	P	Pn	13 08 40.6	+1.6
	comp=N,39nm,1.0s						
SRAK	Srakaew	8.81	69	P	Pn	13 08 49.7	+10
TSI	Tuntungan	8.95	146	P	Pn	13 08 44.4	+2.3
	comp=N,127nm,0.9s						
SNSI	Sinabang, Aceh	8.97	162	P	Pn	13 08 36.9	-5.4
	comp=N,66nm,1.1s						
CM13	Chiang Mai Arr	9.01	34	P	Pn	13 08 44.2	+1.4
	comp=N,200nmcomp=N,21nm,0.9s						
CM05	Chiang Mai Arr	9.02	35	P	Pn	13 08 44.2	+1.3
	comp=N,207nmcomp=N,27nm,1.0s						
KULM	Kulim	9.03	128	Pn	Pn	13 08 43.5	+0.4
CM04	Chiang Mai Arr	9.03	35	P	Pn	13 08 44.0	+0.8
	comp=N,257nmcomp=N,34nm,1.0s						
CM01	Chiang Mai Arr	9.04	35	P	Pn	13 08 44.6	+1.4
	comp=N,269nmcomp=N,28nm,0.8s						
CM02	Chiang Mai Arr	9.04	35	P	Pn	13 08 44.0	+0.7
	comp=N,211nmcomp=N,29nm,0.9s						
CM15	Chiang Mai Arr	9.04	34	P	Pn	13 08 44.6	+1.3
	comp=N,17nm,0.8s						
CM31	Chiang Mai Arr	9.06	34	P	Pn	13 08 45.0	+1.4
	comp=N,7μmcomp=N,696nm,1.0s						
CM31	Chiang Mai Arr	9.06	34	Pn	Pn	13 08 44.8	+1.2
CMAR	Chiang Mai Arr	9.06	34	P	Pn	13 08 44.6	+1.1
	comp=N,1.1nm,0.3s,baz=224,slow=14,SNR=94						
CMAR				S	Sn	13 10 22.1	-1.7
	comp=N,0.2nm,0.3s,baz=221,slow=18,SNR=2.5						
CMAR	Chiang Mai Arr	9.06	34		Pn	13 08 44.1	+0.5
PHIT	Phitsanulok	9.06	46	P	Pn	13 08 51.8	+8.2
	comp=N,70nm,0.9s						
CM09	Chiang Mai Arr	9.07	35	P	Pn	13 08 45.0	+1.3
	comp=N,265nmcomp=N,31nm,0.8s						
CM32	Chiang Mai Arr	9.17	33	P	Pn	13 08 46.0	+1.0
CM36	Chiang Mai Arr	9.19	35	P	Pn	13 08 46.0	+0.7
CHTO	Chiang Mai	9.35	33	Pn	Pn	13 08 48.2	+0.7
CM33	Chiang Mai Arr	9.35	33	P	Pn	13 08 48.0	+0.5
CM35	Chiang Mai Arr	9.35	35	P	Pn	13 08 48.0	+0.5
LAMP	Lampang	9.51	37	P	Pn	13 08 51.3	+1.7
	comp=N,39nm,0.7s						
CHAI	Chaiyaphum	9.54	58	P	Pn	13 08 53.5	+3.5
	comp=N,31nm,0.9s						
PSI	Prapat	9.73	146	P	Pn	13 08 52.8	+0.1
	comp=N,1.5nm,0.3s,baz=360,slow=13,SNR=15						
IPM	Ipoh	9.83	131		Pn	13 08 52.5	-1.5
PAYA	Payao	10.30	35	P	Pn	13 09 02.9	+2.6
	comp=N,6μmcomp=N,591nm,0.8s						
GSI	Gunungsitoli	10.43	157	P	Pn	13 08 57.1	-4.9
	comp=N,5μmcomp=N,15nm,0.8s						
SAIH	SAIHA	11.44	357	*e*P	Pn	13 09 13.3	-2.2
SAIH				IAmb	IAmb	13 09 16.1	
	comp=Z,101nm,0.4s						
NONG	Nongkai	11.64	52	P	P	13 09 28.3	+1.9
VIS	Vishakhapatnam	11.95	305	*e*P	Pn	13 09 22.5	+0.3
VIS				IAmb	IAmb	13 09 25.1	
	comp=Z,0.7nm,0.3s						
PALK	Pallekele	13.22	255	P	Pn	13 09 39.1	+0.2
	comp=Z,0.5nm,0.3s,baz=178,slow=15,SNR=4.1						
PALK				S	Sn	13 11 52.7	-12
	comp=Z,3.5nm,0.3s,baz=90,slow=20,SNR=8.9						
SHL	Shillong	14.57	354	*e*P	Pn	13 09 56.8	+0.6
SHL				*e*P	P	13 09 57.1	-2.3
SHL				IAmb	IAmb	13 09 59.5	
	comp=Z,123nm,0.6s						
SHL				IAmb	IAmb	13 09 59.5	
	comp=Z,128nm,0.8s						
SHL				*e*S	Sn	13 12 26.2	-11
KOHI	KOHIMA	14.65	2	*e*P	Pn	13 09 55.4	-1.8
KOHI				IAmb	IAmb	13 10 00.9	
	comp=Z,345nm,0.6s						
BOK	Bokaro	14.67	331	IAmb	IAmb	13 10 03.1	
	comp=Z,130nm,0.3s						
BOK				IAmb	IAmb	13 10 03.1	
	comp=Z,119nm,0.4s						
BOK				*e*S	Sn	13 12 29.9	-10
GUWA	GUWAHATI	15.21	354	⇑*e*P	Pn	13 10 02.9	-1.2
GUWA				IAmb	IAmb	13 10 06.3	
	comp=Z,73nm,0.6s						
MOKO	MOKOCHONG	15.27	3	*e*P	Pn	13 10 02.9	-2.0
MOKO				IAmb	IAmb	13 10 04.0	
	comp=Z,105nm,0.8s						
HYB	Hyderabad	15.88	295	*i* P	P	13 10 17.0	+3.3
HYB				*e*		13 12 56.0	
HYB				*e*S	Sn	13 13 10.0	+1.2
LKP	Lekhapani	16.39	7	*e*P	Pn	13 10 16.9	-1.8
LKP				IAmb	IAmb	13 10 19.9	
	comp=Z,74nm,0.3s						
ZIRO	ZIRO	16.44	1	*e*P	Pn	13 10 17.2	-2.3
ODAN	Odare	16.81	341	*e*P	P	13 10 25.7	+1.5
	comp=Z,40nm,0.3s						
RAMN	Ramite	17.17	339	*e*P	Pn	13 10 30.5	+2.1
	comp=Z,100nm,0.7s						
TAPN	Taplejung	17.17	342	*e*P	Pn	13 10 29.6	+1.2
	comp=Z,75nm,0.5s						
PKI	Pulchoki	18.18	336	*e*P	Pn	13 10 40.9	+0.3
	comp=Z,39nm,0.5s						
PKIN	Phulchoki	18.19	336	*e*P	Pn	13 10 40.8	+0.2
	comp=Z,38nm,0.5s						
GUN	Gumba	18.30	338	*e*P	Pn	13 10 42.2	+0.1
	comp=Z,78nm,0.4s						
DMN	Daman	18.33	336	*e*P	Pn	13 10 42.8	+0.5
	comp=Z,29nm,0.5s						
KKN	Kakani	18.42	336	*e*P	Pn	13 10 43.2	-0.2
	comp=Z,44nm,0.4s						
LSA	Lhasa	18.74	353	P	P	13 10 43.9	-1.6
GKN	Gorkha	18.87	335	*e*P	Pn	13 10 48.3	-0.3
	comp=Z,172nm,0.3s						
KOLN	Koldanda	19.12	332	*e*P	Pn	13 10 51.3	-0.3
	comp=Z,112nm,0.7s						
DANN	Dangsing	19.55	333	*e*P	Pn	13 10 55.9	-0.8
	comp=Z,340nm,0.6s						
BHPL	Bhopal	19.62	310	*e*P	P	13 10 55.1	+0.4
BHPL				IAmb	IAmb	13 10 58.2	
	comp=Z,13nm,0.7s						
BHPL				*e*S	S	13 14 25.6	-4.0
PYUN	Piuthan	19.69	331	*e*P	Pn	13 10 57.4	-0.8
	comp=Z,107nm,0.5s						
SBUM	Sibu	20.37	113	P	P	13 11 03.5	+0.6
POO	Poona	20.46	294	*e*S	S	13 14 45.0	-1.3
ENH	Enshi	24.23	35	P	P	13 11 40.4	-0.8
ENH				IAmb	IAmb	13 11 43.4	
	comp=Z,15nm,0.7s						
SMLA	Simla	25.14	325	*e*P	P	13 11 50.2	+0.8
SMLA				IAmb	IAmb	13 11 52.2	
	comp=Z,23nm,0.4s						
MYLDM	Lahad Datu	25.35	101	P	P	13 11 53.2	+1.6
DHRM	DHARAMSHALA	26.46	326	*e*P	P	13 12 02.3	+0.6
DHRM				IAmb	IAmb	13 12 04.5	
	comp=Z,27nm,0.4s						
H08S3	Diego Garcia H	27.97	229	T	T	13 39 08.7	
	baz=50,slow=75,SNR=185						
H08S2	Diego Garcia H	27.97	229	T	T	13 39 10.7	
	baz=50,slow=75,SNR=223						
H08S1	Diego Carcia H	27.99	229	T	T	13 39 09.8	
	baz=50,slow=75,SNR=175						
NIL	Nilore	29.23	324	P	P	13 12 25.7	-0.3
NIL				IAmb	IAmb	13 12 27.8	
	comp=Z,18nm,0.9s						
KDJ	Kajisay	34.16	338	P	P	13 13 10.6	+1.3

KDJ				IAmb	IAmb	13 13 11.5	
	comp=Z,12nm,0.9s						
SHLS	Shalkode	34.30	342	*e*P	P	13 13 10.2	-0.2
	comp=Z,8.1nm,1.1s,baz=342						
SATY	Saty	34.55	340	*e*P	P	13 13 13.3	+0.7
	comp=Z,3.9nm,0.7s,baz=340						
ULHL	Ulahol	34.61	337	P	P	13 13 13.9	+0.6
	SNR=5.3						
KPKS	Kokpek	34.83	341	*e*P	P	13 13 15.4	+0.5
	comp=Z,9.6nm,1.0s,baz=341						
TNSS	Tian-Shan	35.04	339	*e*P	P	13 13 17.5	+0.4
	baz=339						
MDOK	Medeo	35.11	339	*e*P	P	13 13 18.2	+0.8
	baz=339						
AAA	Alma-Ata	35.20	339	*e*P	P	13 13 19.3	+1.2
	baz=339						
TKM2	Tokmak 2	35.44	337	P	P	13 13 21.2	+0.9
	SNR=7.2						
KBK	Karagaybulak	35.47	336	P	P	13 13 22.5	+2.0
	SNR=6.9						
AML	Almayashu	35.55	334	P	P	13 13 22.9	+1.4
	SNR=14						
AAK	Ala-Archa	35.63	336	P	P	13 13 23.3	+1.4
	SNR=8.7						
CHKK	Chushkaly	35.74	339	*e*P	P	13 13 22.1	-0.5
	baz=340						
CHMS	Chumysh	35.83	336	P	P	13 13 24.6	+1.2
	SNR=6.4						
EKS2	Erkin-Say	35.95	335	P	P	13 13 26.1	+1.5
	SNR=7.6						
KUU	Kurty	36.00	339	*e*P	P	13 13 24.4	-0.5
	comp=Z,5.8nm,1.3s,baz=339						
USP	Ospenovka	36.16	336	P	P	13 13 27.3	+1.0
	SNR=9.2						
SGDS	Sogindy	36.26	336	*e*P	P	13 13 27.5	+0.3
	baz=337						
TDK	Taldyqorghan	36.29	342	*e*P	P	13 13 26.7	-0.7
	baz=342						
MK31	Makanchi Array	36.93	347	P	P	13 13 33.1	+0.4
MKAR	Makanchi Array	36.93	347	P	P	13 13 33.0	+0.3
	comp=Z,5.6nm,0.7s,baz=165,slow=8.7,SNR=63						
MKAR				ScP	ScP	13 19 26.1	-1.2
	comp=Z,0.4nm,0.7s,baz=115,slow=5.8,SNR=3.9						
MKAR	Makanchi Array	36.93	347	P	P	13 13 33.0	+0.3
MAKZ	Makanchi	37.01	347	P	P	13 13 33.6	+0.2
MAKZ				IAmb	IAmb	13 13 34.0	
	comp=Z,5.6nm,0.6s						
ZSN	Zaisan	37.06	350	*e*P	P	13 13 34.5	+0.7
	comp=Z,4.5nm,0.6s,baz=350						
DZA	Taraz	37.20	333	*e*P	P	13 13 35.5	+0.5
	baz=333						
IUG	Iuzhnay	37.23	331	*e*P	P	13 13 36.2	+0.8
	comp=Z,7.4nm,1.0s,baz=331						
KKAR	Karatay Array	37.74	332	P	P	13 13 40.2	+0.6
BTLS	Baital	37.83	337	*e*P	P	13 13 40.4	+0.1
	comp=Z,2.5nm,1.2s,baz=337						
SONM	Songino Array	38.27	14	P	P	13 13 44.4	+0.3
	comp=Z,2.4nm,0.4s,baz=201,slow=7.7,SNR=18						
SONM				ScP	ScP	13 19 31.8	-0.6
	comp=Z,2.0nm,0.8s,baz=189,slow=3.8,SNR=8.5						
SONM	Songino Array	38.27	14	P	P	13 13 44.7	+0.5
SIJI	Sorong	39.30	105	P	P	13 13 52.4	-0.6
	comp=Z,9.2nm,0.5s,baz=127,slow=22,SNR=3.7						
KSRS	Korea Array	40.55	44	P	P	13 14 02.8	-0.3
	comp=Z,2.0nm,0.4s,baz=240,slow=8.5,SNR=16						
KSRS				LR	LR	13 34 19.3	
	comp=Z,39nm,18.9s,baz=326,slow=41						
KURK	Kurchatov	41.46	346	P	P	13 14 10.6	+0.3
GEYT	Alibeck	41.53	316	P	P	13 14 13.6	+2.5
	comp=Z,30nm,0.6s,baz=138,slow=9.6,SNR=38						
GEYT				LR	LR	13 32 09.5	
	comp=Z,36nm,19.9s,baz=50,slow=37						
GEYT	Alibeck	41.53	316	P	P	13 14 13.5	+2.4
BRZS	Berezniki	42.52	340	*e*P	P	13 14 19.1	+0.2
	comp=Z,3.2nm,0.8s,baz=340						
FITZ	Fitzroy Crossi	42.88	132	P	P	13 14 23.1	+0.8
	baz=43,SNR=4.8						
ZAA0	Zalesovo Array	43.40	352	P	P	13 14 26.6	+0.7
ZALV	Zalesovo Beam	43.40	352	P	P	13 14 26.7	+0.8
	comp=Z,27nm,0.3s,baz=164,slow=9.1,SNR=179						
ZALV	Zalesovo Beam	43.40	352	P	P	13 14 26.5	+0.6
MTN	Manton Dam	44.19	121	P	P	13 14 30.4	-2.4
	baz=44,SNR=4.4						
MEEK	Meekatharra	44.64	147	P	P	13 14 35.6	-0.6
	baz=45,SNR=7.1						
KDU	Kakadu	45.24	120	P	P	13 14 40.0	-1.1
	baz=45,SNR=3.8						
BRVK	Borovoye	45.93	341	P	P	13 14 45.9	-0.1
BRVK				IAmb	IAmb	13 14 46.8	
	comp=Z,6.6nm,0.7s						
USRK	Ussuriysk Ar.	46.77	38	P	P	13 14 52.5	-0.3
	comp=Z,0.9nm,0.7s,baz=243,slow=7.7,SNR=3.1						
ABKAR	Akbulak array	47.24	330	P	P	13 14 56.9	+0.6
ABKAR	Akbulak array	47.24	330	P	P	13 14 56.7	+0.4
ABKAR				IAmb	IAmb	13 14 57.9	
	comp=Z,12nm,1.1s						
MJAR	Matsushiro Arr	47.55	50	P	P	13 14 59.8	+0.8
	comp=Z,1.2nm,0.7s,baz=225,slow=6.8,SNR=3.1						
MUN	Mundaring	47.92	154	P	P	13 15 01.1	-0.7
	baz=48,SNR=5.5						
WB0	Warramunga Arr	50.52	127	P	P	13 15 20.9	-0.9
WB0				IAmb	IAmb	13 15 22.8	
	comp=Z,7.3nm,0.6s						
WRA	Warramunga Arr	50.57	127	P	P	13 15 21.2	-0.9
	comp=Z,7.6nm,0.6s,baz=302,slow=10,SNR=65						
WB2	Warramunga Arr	50.58	127	P	P	13 15 21.5	-0.7
WR0	Warramunga Arr	50.74	127	P	P	13 15 22.3	-1.1
AS31	Alice Springs	52.38	131	P	P	13 15 35.0	-0.6
ASAR	Alice Springs	52.38	131	P	P	13 15 34.6	-1.0
	comp=Z,3.6nm,0.5s,baz=304,slow=6.8,SNR=50						
ASAR				PcP	PcP	13 16 44.6	-0.4
	comp=Z,0.8nm,0.7s,baz=316,slow=5.2,SNR=4.4						
ASAR				ScP	ScP	13 20 28.7	-2.2
	comp=Z,0.2nm,0.7s,baz=316,slow=5.0,SNR=4.8						
ASAR	Alice Springs	52.38	131	P	P	13 15 35.4	-0.2
KBZ	Khabaz	54.42	316	P	P	13 15 50.5	+0.3
	comp=Z,1.9nm,0.7s,baz=35,slow=0.6,SNR=3.4						
QIS	Mount Isa	55.08	125	P	P	13 15 55.2	-0.1
	baz=55,SNR=4.0						
BBOO	Buckleboo	59.51	139	P	P	13 16 26.9	+0.6
	baz=60,SNR=6.5						
BRTR	Keskin Array B	59.98	310	P	P	13 16 28.9	-0.8
	comp=Z,1.4nm,0.6s,baz=124,slow=5.9,SNR=7.5						
BRTR	Keskin Array B	59.98	310	P	P	13 16 28.4	-1.2
RABL	Rabaul	60.24	101		pwP	13 17 05.1	+0.8
HTT	Hallett	61.78	138	P	P	13 16 43.6	+2.0
	baz=62,SNR=5.8						
STKA	Stephens Creek	62.68	135	P	P	13 16 46.1	-1.5
	comp=Z,1.9nm,0.5s,baz=321,slow=6.2,SNR=7.3						
STKA	Stephens Creek	62.68	135	P	P	13 16 46.3	-1.3
PATS	Pohnpei	64.01	88	P	P	13 16 55.0	-1.7
	baz=64,SNR=3.2						
TIXI	Tiksi	64.30	12	P	P	13 16 56.3	-1.3
TIXI				IAmb	IAmb	13 16 57.9	
	comp=Z,6.6nm,1.1s						
FINES	FINESS Array B	69.70	332	P	P	13 17 31.7	-0.2
	comp=Z,2.1nm,0.6s,baz=104,slow=6.4,SNR=19						
FINES	FINESS Array B	69.70	332	P	P	13 17 31.5	-0.5
ARCES	ARCESS Array B	72.15	340	P	P	13 17 47.3	+0.7
	comp=Z,1.0nm,0.4s,baz=99,slow=7.1,SNR=25						
BOSA	Boshof	76.77	237	P	P	13 18 14.7	+0.5
	comp=Z,4.4nm,0.6s,baz=82,slow=4.3,SNR=14						
EUNU	Eureka	89.08	360	P	P	13 19 17.4	+0.7
EUNU				IAmb	IAmb	13 19 18.2	
	comp=Z,7.3nm,0.7s						
ILAR	Eielson Array	92.08	22	PKKPbc	PKKPbc	13 36 46.2	-2.8
	comp=Z,0.2nm,0.5s,baz=176,slow=0.6,SNR=4.1						
VNDA	Vanda	96.09	168	P	P	13 19 48.3	-0.5
	comp=Z,0.7nm,0.4s,baz=319,slow=7.9,SNR=7.7						
PDAR	Pinedale Array	122.46	20	PKP	PKPdf	13 25 16.3	-0.9
	comp=Z,0.2nm,0.4s,baz=40,slow=4.1,SNR=4.7						
NVAR	Mina Array Bea	122.52	29	PKP	PKiKP	13 25 18.6	+1.0
	comp=Z,0.5nm,0.6s,baz=314,slow=2.5,SNR=5.7						
ANMO	Albuquerque	130.53	22	SKPbc	SKPbc	13 28 44.8	-0.4
	comp=Z,5.0nm,0.9s,baz=336,slow=1.6,SNR=17						
TXAR	Lajitas Array	136.59	22	PKP	PKiKP	13 25 45.2	-0.7
	comp=Z,0.2nm,0.5s,baz=228,slow=1.6,SNR=5.3						
TXAR				SKP	SKPbc	13 29 05.3	-0.2
	comp=Z,2.1nm,0.8s,baz=255,slow=2.0,SNR=15						
PLCA	Paso Flores	147.23	203	PKPbc	PKPbc	13 26 05.8	+0.7
	comp=Z,4.0nm,0.7s,baz=172,slow=1.4,SNR=15						
CPUP	Villa Florida	148.59	237	PKPbc	PKPbc	13 26 08.7	-0.4
	comp=Z,2.0nm,0.7s,baz=139,slow=7.5,SNR=4.6						

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*IDC **10** 13:16:06.0±5.5, 6°.70S×153°.93E, h51^{km}±43^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.5/30, mbtmp3.7/8, ML3.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/22, Error ellipse: s-maj=42.2km s-min=18.5km az=106.0*

ISC 10 13:16:05.3±1.1**, 6°.7S**±0°.1×**154°.0E**±0°.2**, h48**^{km}**, n10, σ0ˢ97**/10**, mb3.5**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.09	321	P	Pn	13 16 51.5	-0.1
	15nm,0.3s,baz=127,slow=1.1,SNR=11						
KRVT				S	Sn	13 17 27.5	+0.1
	39nm,0.3s,baz=335,slow=21,SNR=4.5						
HNR	Honiara	6.49	115	LR	LR	13 20 28.8	
	comp=Z,96nm,18.6s,baz=209,slow=40						
WRA	Warramunga Arr	23.16	234	P	P	13 21 08.4	+0.5
	1.4nm,0.8s,baz=56,slow=10,SNR=5.6						
ASAR	Alice Springs	25.62	227	P	P	13 21 31.0	+0.5
	0.8nm,0.8s,baz=57,slow=9.5,SNR=8.6						
FITZ	Fitzroy Crossi	29.85	245	P	P	13 22 08.0	-0.5
	3.9nm,1.0s,baz=42,slow=12,SNR=2.7						
SONM	Songino Array	68.57	328	P	P	13 27 02.7	-0.5
	0.3nm,0.6s,baz=130,slow=6.0,SNR=2.4						
MKAR	Makanchi Array	82.54	319	P	P	13 28 23.4	+0.2
	0.4nm,0.7s,baz=120,slow=5.7,SNR=4.5						
ILAR	Eielson Array	83.49	22	P	P	13 28 29.5	+1.8
	0.4nm,0.9s,baz=255,slow=6.3,SNR=3.6						
NVAR	Mina Array Bea	92.34	52	P	P	13 29 09.7	-1.5
	0.7nm,1.0s,baz=276,slow=2.4,SNR=3.6						
TORD	Torodi Ar. Bea	151.99	285	PKPbc	PKiKP	13 35 56.8	+0.2
	0.5nm,0.7s,baz=74,slow=1.7,SNR=2.1						

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*ANF **10** 13:27:24.1±0.5, 36°.27N×97°.58W, h0^{km}, ML3.8/7, Error ellipse: s-maj=5.9km s-min=3.1km az=174.0*
*TUL **10** 13:27:25±1.1, 36°.23N±0°.01×97°.57W±0°.02, h5^{km}±2^{km}, ML3.2, mb_Lg3.1/85(NEIC), Error ellipse: s-maj=3.0km s-min=3.0km az=39.0*
*NEIC **10** 13:27:25.1±1.0, 36°.228N±0°.006×97°.59W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.4km s-min=0.5km az=70.0*

ISC 10 13:27:25.3±1.2**, 36°.22N**±0°.03×**97°.59W**±0°.03**, h4**^{km}±12^{km}**, n76, σ0ˢ71**/46**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.43	312	Pg	Pg	13 27 33.6	+0.1
CROK				Sg	Sg	13 27 39.9	+0.8
OK031	S. Brethren Rd	0.66	114		Pg	13 27 37.8	-0.2
OK031				Sg	Sg	13 27 47.0	+0.3
GC02	Grant County #	0.67	341		Pg	13 27 37.8	-0.3
OK025	Westminster Rd	0.67	162		Pg	13 27 38.3	+0.1
OK025				IAmb_Lg		13 27 47.1	
	comp=Z,177nm,0.9s						
OK030	Cody Creek RV	0.71	114		Pg	13 27 39.0	0.0
OK030				Sg	Sg	13 27 48.6	+0.3
QUOK	Quay	0.71	94		Pg	13 27 38.8	-0.3
KAN14	Manchester OK	0.79	338		Pg	13 27 40.2	-0.4
KAN13	South Haven SW	0.80	6		Pg	13 27 40.3	-0.3
OKCFA	Oklahoma City	0.81	172		Pg	13 27 40.8	0.0
OKCFA				IAmb_Lg		13 27 51.7	
	comp=Z,181nm,0.9s						
OKCSW	OKLAHOMA CITY	0.82	171		Pg	13 27 41.0	-0.1
FNO	Franklin	0.97	171		Pg	13 27 43.7	-0.3
KAN10	Anthony SW Sta	0.99	336		Pg	13 27 43.6	-0.7
KAN08	Anthony NE Sta	1.05	343		Pg	13 27 44.9	-0.6
T35A	Sooner Cattle	1.11	51	Pg	Pg	13 27 45.8	-0.9
T35B	Sooner Cattle	1.11	51	P		13 27 45.8	
	baz=231						
KAN12	Harper NE Stat	1.12	343		Pg	13 27 46.1	-0.7
U32A	Winter Ranch,	1.15	278		Pg	13 27 46.6	-0.8
U32A	Winter Ranch,	1.15	278	P		13 27 46.7	
	baz=97						
U32A				S		13 28 03.1	
	baz=97						
W35A	Tecumseh	1.21	151		Pg	13 27 47.5	-1.1
TUL1	Leonard	1.49	101	P	Pn	13 27 52.0	-1.0
	baz=283						
TUL1				S	Sb	13 28 12.2	-0.6
	baz=283						
TUL1	Leonard	1.49	101	Pn	Pn	13 27 51.9	-1.0
TUL1	Leonard	1.49	101	P		13 27 51.9	
	baz=283						
TUL1				S		13 28 12.2	
	baz=283						
WMOK	Wichita Mounta	1.77	214	P	Pn	13 27 56.8	0.0
	baz=33						
WMOK				S	Sb	13 28 21.0	0.0
	baz=33						
WMOK	Wichita Mounta	1.77	214		Pn	13 27 56.7	0.0
WMOK	Wichita Mounta	1.77	214	P		13 27 56.8	
	baz=33						
WMOK				S		13 28 21.1	
	baz=33						
R32A	Long Quarter,	2.37	338		Pn	13 28 05.8	+0.7
X37A	Clayton	2.44	131	Pn	Pn	13 28 06.3	+0.4
X37A	Clayton	2.44	131	P		13 28 06.4	
	baz=313						
U38A	Gravette	2.60	84		Pn	13 28 08.6	+0.5
Z35A	Perchaven, San	2.90	174		Pn	13 28 10.6	-1.6
Z35A	Perchaven, San	2.90	174	P		13 28 12.8	
	baz=355						
HHAR	Hobbs	2.95	88		Pn	13 28 11.4	-1.6
KSU1	Kansas State U	2.98	15		Pn	13 28 11.8	-1.5
KSU1	Kansas State U	2.98	15	P		13 28 13.8	
	baz=195						
CBKS	Cedar Bluff	3.10	327	Pg	Pb	13 28 22.3	+1.2
	baz=146						
AMTX	Amarillo	3.59	249	Pb	Pb	13 28 28.9	-0.5
	baz=67						
Z38A	Mt. Pleasant	3.65	143	IAmb_Lg		13 29 30.4	
	comp=Z,57nm,0.7s						
MIAR	Mount Ida	3.68	116	P	Pn	13 28 23.8	+0.8
	baz=298						
MIAR				S	Sn	13 29 07.5	+0.6
	baz=298						
MIAR	Mount Ida	3.68	116	Pn	Pn	13 28 23.6	+0.6
MIAR				IAmb_Lg		13 29 27.5	
	comp=Z,38nm,0.7s						
MIAR	Mount Ida	3.68	116	P		13 28 23.3	
	baz=298						
S39A	Bolivar	3.72	65	Pn	Pn	13 28 23.7	+0.1
U40A	Yellville	3.83	87		Pn	13 28 24.3	-0.8
ABTX	Abilene, Hawle	3.97	206	IAmb_Lg		13 29 34.9	
	comp=Z,30nm,0.7s						
WHTX	Lake Whitney,	4.22	178	P	Pn	13 28 31.1	+0.7
	baz=359						
WHTX	Lake Whitney,	4.22	178		Pn	13 28 30.4	-0.1
X40A	Basin Creek Fa	4.25	113	IAmb_Lg		13 29 43.4	
	comp=Z,38nm,0.8s						
MGMO	Mountain Grove	4.38	76	IAmb_Lg		13 29 46.2	
	comp=Z,27nm,0.8s						
WHAR	Wooly Hollow	4.41	101	IAmb_Lg		13 29 55.9	
	comp=Z,30nm,0.8s						
WLAR	White Oak Lake	4.46	123	IAmb_Lg		13 29 57.9	
	comp=Z,41nm,0.8s						
W41B	Gary Mavity, V	4.47	102	P	Pn	13 28 34.1	+0.3
	baz=285						
W41B	Gary Mavity, V	4.47	102		Pn	13 28 34.2	+0.3
W41B				IAmb_Lg		13 29 49.3	
	comp=Z,28nm,0.8s						
N33A	J Bar K, Exete	4.51	1	IAmb_Lg		13 29 58.2	
	comp=Z,25nm,0.7s						
UALR	University of	4.52	107	IAmb_Lg		13 29 58.5	
	comp=Z,55nm,0.8s						
P38A	Dawn	4.67	42	IAmb_Lg		13 30 02.7	
	comp=Z,27nm,0.8s						
R40A	Maddies Statio	4.72	62		Pn	13 28 36.6	-0.7
R40A				IAmb_Lg		13 29 51.5	
	comp=Z,25nm,0.8s						
KSCO	Kaye Shedlock’	4.87	306	IAmb_Lg		13 30 13.4	
	comp=Z,32nm,0.8s						
Z41A	Richland Creek	4.93	125	IAmb_Lg		13 30 14.7	
	comp=Z,36nm,0.9s						
BGNE	Belgrade	5.20	355	IAmb_Lg		13 30 22.4	
	comp=Z,35nm,0.7s						
CCM	Cathedral Cave	5.39	68		Pn	13 28 46.2	-0.3
P40A	Paris	5.49	51	IAmb_Lg		13 30 22.8	
	comp=Z,41nm,0.7s						
T25A	Trinidad	5.56	282	IAmb_Lg		13 30 33.2	
	comp=Z,30nm,1.0s						
PBMO	Poplar Bluff	5.79	82	IAmb_Lg		13 30 32.8	
	comp=Z,40nm,0.7s						
LPAR	Lepanto	5.95	94	IAmb_Lg		13 30 50.6	
	comp=Z,39nm,0.7s						
FVM	French Village	5.99	71	IAmb_Lg		13 30 35.1	
	comp=Z,24nm,0.8s						
143A	Socs Landing,	6.20	123	IAmb_Lg		13 30 49.6	
	comp=Z,19nm,0.8s						
PARMO	Parma	6.33	84	IAmb_Lg		13 30 54.1	
	comp=Z,34nm,0.7s						
K31A	O'Neill	6.46	352	IAmb_Lg		13 31 04.2	
	comp=Z,31nm,0.8s						
Q24A	Divide	6.60	297	IAmb_Lg		13 30 55.1	
	comp=Z,19nm,0.8s						
S44A	Carbondale	6.83	75	IAmb_Lg		13 31 01.1	
	comp=Z,28nm,0.7s						
SIUC	Southern Illin	6.87	75	IAmb_Lg		13 30 59.0	
	comp=Z,32nm,0.9s						
OXF	Oxford	6.90	102	IAmb_Lg		13 31 07.4	
	comp=Z,27nm,0.8s						
N41A	Harden Midland	6.93	48	IAmb_Lg		13 31 09.8	
	comp=Z,26nm,0.7s						
P43A	Skaggs, Pawnee	7.23	59	IAmb_Lg		13 31 20.4	
	comp=Z,32nm,0.7s						
L40A	Anamosa	7.65	38	IAmb_Lg		13 31 27.3	
	comp=Z,29nm,1.1s						
PLAL	Pickwick Lake	7.85	96	IAmb_Lg		13 31 36.3	
	comp=Z,16nm,1.1s						
MNTX	Cornudas Mount	7.89	237	Pn	Pn	13 29 20.4	-0.4
PHWY	Pilot Hill	7.97	312	IAmb_Lg		13 31 50.4	
	comp=Z,18nm,1.0s						
N23A	Red Feather La	8.04	308	IAmb_Lg		13 31 46.9	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	8.76	38	IAmb_Lg		13 32 09.8	
	comp=Z,19nm,0.7s						
P46A	Rosedale	8.88	64	IAmb_Lg		13 32 08.6	
	comp=Z,20nm,0.8s						
CLTN	Cedars of Leba	9.11	87	IAmb_Lg		13 32 16.0	
	comp=Z,12nm,1.3s						
PV11	David Mesa, Pa	9.23	286	IAmb_Lg		13 32 26.5	
	comp=Z,11nm,1.1s						
K22A	Casper	9.43	316	IAmb_Lg		13 32 35.7	
	comp=Z,13nm,1.0s						
F33A	5 Mile Ranch,	9.66	5	IAmb_Lg		13 32 48.4	
	comp=Z,9.6nm,1.0s						

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*SJA **10** 13:51:53.8±0.6, 34°.28S×73°.31W, h10^{km}, ML4.4, MW4.1*
*IDC **10** 13:51:59.7±0.8, 34°.23S×72°.40W, h0^{km}, mb4.2/7, mb1 4.3/8, mb1mx4.1/28, mbtmp4.1/8, ML4.1/1, MS3.7/8, Ms1 3.6/8, ms1mx3.5/20, Error ellipse: s-maj=33.8km s-min=18.8km az=90.0*
*NEIC **10** 13:52:00.8±1.6, 34°.30S±0°.05×72°.9W±0°.1, h25^{km}±6^{km}, Error ellipse: s-maj=12.3km s-min=7.5km az=97.0*
*GUC **10** 13:52:00.3±0.7, 34°.31S×72°.89W, h29^{km}±3^{km}, ML4.2*

ISC 10 13:51:59.2±1.8**, 34°.33S**±0°.04×**72°.89W**±0°.06**, h7**^{km}±11^{km}**, n78, σ1ˢ79**/85**, mb4.3**/7**, MS3.7**/5**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	0.79	102	*e*P	Pg	13 52 13.9	-0.4
BO03				*i* S	Sg	13 52 24.7	+0.2
BO03				IAML		13 52 26.0	
	comp=N,35µm,0.3s						
VA05	Santo Domingo	1.26	58	*e*P	Pn	13 52 21.8	-1.4
VA05				*i* S	Sb	13 52 37.2	-2.4
VA05				IAML		13 52 44.0	
	comp=N,10µm,0.4s						
MT09	Talagante	1.68	71	*e*P	Pn	13 52 27.1	-1.9
MT09				*i* S	Sn	13 52 47.9	-2.9
MT09				IAML		13 52 56.0	
	comp=N,3µm,0.3s						
BO02	Sierra Bellavi	1.80	105	*e*P	Pn	13 52 30.2	-0.5
BO02				*i* S	Sn	13 52 52.9	-0.9
BO02	Sierra Bellavi	1.80	105		Pn	13 52 29.9	-0.8
MT02	Curacav	1.81	54	*i* S	Sn	13 52 52.3	-1.7
MT02	Curacav	1.81	54		Pn	13 52 29.5	-1.3
MT05	Renca	2.02	63	⇓*e*P	Pn	13 52 33.2	-0.5
MT05				*i* S	Sn	13 52 57.0	-2.3
MT05				IAML		13 53 08.9	
	comp=E,3µm,0.2s						
MT05	Renca	2.02	63		Pn	13 52 33.7	-0.1
ROC1	El Roble	2.07	50		Pn	13 52 34.3	-0.3
ROC1	El Roble	2.07	50	*e*P	Pn	13 52 34.1	-0.4
ROC1				*e*S	Sb	13 53 04.5	+1.3
ROCH	El Roble	2.08	50	*e*P	Pn	13 52 34.0	-0.6
MT03	Universidad Ad	2.15	68	*e*P	Pn	13 52 34.9	-0.7
MT03				*i* S	Sn	13 53 01.6	-0.9
PEL	Peldehue	2.19	58	*e*P	Pn	13 52 35.7	-0.3
PEL				*i* S	Sn	13 53 02.0	-1.3
PEL	Peldehue	2.19	58		Pn	13 52 35.2	-0.8
PEL	Peldehue	2.19	58	*e*P	Pn	13 52 36.3	+0.3
PEL				*e*S	Sb	13 53 08.2	+1.8
LMEL	Las Melosas	2.28	78	*e*P	Pn	13 52 36.5	-0.9
LMEL				*e*S	Sn	13 53 04.6	-1.2
LMEL				IAML		13 53 14.0	
	comp=N,2µm,0.3s						
VA03	San Esteban	2.50	52		Pn	13 52 40.3	-0.1
BI03	Tigo	2.51	182	*e*P	Pn	13 52 39.7	-0.6
BI03	Tigo	2.51	182		Pn	13 52 40.4	+0.1
COIS	El Sosneado	2.82	107	*e*P	Pn	13 52 42.2	-2.5
COIS				*e*S	Sb	13 53 25.3	+0.6
PUMA	Malargue	3.06	113	*e*P	Pn	13 52 51.2	+3.3
PUMA				*e*S	Sb	13 53 31.3	-0.1
LAMA	Las Malvinas	3.09	102	*e*P	Pn	13 52 51.0	+2.6
EDS3	Malargue	3.20	118	*e*P	Pb	13 52 55.8	-0.7
EDS3				*e*S	Sg	13 53 43.4	+1.3
CO02	Combarbal	3.50	28		Pn	13 52 53.9	-0.2
AUSP	Uspallata	3.61	55	*e*P	Pn	13 52 58.0	+2.2
ARCO	CERRO ARCO	3.62	67	*e*P	Pb	13 53 01.3	-2.4
ARCO				IAML		13 53 58.2	
	comp=Z,402nm,1.2s						
RFA	San Rafael	3.68	98	*e*P	Pn	13 52 58.3	+1.8
RFA				IAML		13 53 56.2	
	comp=Z,483nm,1.5s						
ASAL	Salagasta	3.81	64	*e*P	Pn	13 53 02.3	+4.0
ASAL				*e*S	Sg	13 54 06.8	+5.2
ASAL				IAML		13 54 08.5	
	comp=Z,183nm,0.8s						
RTLS	Leoncito	3.94	51	*e*P	Pn	13 53 02.2	+1.9
RTLS				IAML		13 54 12.8	
	comp=Z,426nm,0.9s						
CO03	El Pedregal	3.95	29	Pn	Pn	13 53 00.3	0.0
RTCV	Cerro Valdivia	4.41	57	*e*P	Pn	13 53 08.8	+2.3
RTCV				IAML		13 54 32.0	
	comp=Z,234nm,1.7s						
ZON	Zonda	4.50	53		Pn	13 53 06.8	-1.0
ZON	Zonda	4.50	53	*e*P	Pn	13 53 10.7	+2.9
ZON				IAML		13 54 36.9	
	comp=Z,168nm,1.0s						
GO04	Tololo Observa	4.51	24	Pn	Pn	13 53 07.6	-0.5
GO04	Tololo Observa	4.51	24	*e*P	Pn	13 53 07.6	-0.5
GO04				*e*S	Sn	13 53 59.7	-1.3
LC01	Cunco	4.63	170	Pn	Pn	13 53 09.6	+0.1
RTLL	Cerro Villicun	4.78	52	*e*P	Pn	13 53 13.1	+1.5
RTLL				IAML		13 54 40.8	
	comp=Z,206nm,1.2s						
ACCO	Cerro Coronel	4.94	42	*e*P	Pn	13 53 15.8	+1.7
ACCO				*e*S	Sn	13 54 15.6	+3.9
ACCO				IAML		13 54 48.6	
	comp=Z,224nm,1.2s						
CO01	Juntas del Tor	4.95	29		Pn	13 53 14.4	+0.3
H03S1	Juan Fernandez	5.01	274	T	T	13 58 26.6	
	baz=94,slow=74,SNR=512						
H03S3	Juan Fernandez	5.02	274	T	T	13 58 28.2	
	baz=94,slow=74,SNR=387						
H03S2	Juan Fernandez	5.03	274	T	T	13 58 25.5	
	baz=94,slow=74,SNR=693						
AROD	Rodeo	5.06	36	*e*P	Pn	13 53 17.2	+1.4
AROD				*e*S	Sn	13 54 18.6	+3.9
H03N1	Juan Fernandez	5.09	278	T	T	13 58 40.4	
	baz=96,slow=74						
H03N3	Juan Fernandez	5.09	278	T	T	13 58 38.4	
	baz=96,slow=74,SNR=6.2						
H03N2	Juan Fernandez	5.10	278	T	T	13 58 39.3	
	baz=96,slow=74						
LCO	Las Campanas	5.62	20	Pn	Pn	13 53 23.0	-0.5
AC05	El Transito	5.92	23		Pn	13 53 27.1	-0.3
AC04	Llanos de Chal	6.30	15	Pn	Pn	13 53 30.9	-1.7
PLCA	Paso Flores	6.65	164	Pn	Pn	13 53 38.5	+1.1
	comp=Z,0.8nm,0.3s,baz=350,slow=11,SNR=14						
PLCA				LR	LR	13 56 13.4	
	comp=Z,255nm,20.0s,baz=347,slow=38						
VCA	Vinchina	6.87	37	*e*P	Pn	13 53 39.5	-0.9
VCA				IAML		13 55 55.5	
	comp=Z,141nm,1.2s						
ACLC	CERRO LA CRUZ	7.03	48	*e*P	Pn	13 53 41.9	-0.8
ACLC				IAML		13 55 48.6	

	comp=Z,112nm,0.9s						
GO03	**Copiap**	7.09	19	Pn	Pn	13 53 42.4	-1.1
AC02	**Maricunga**	8.15	24		Pn	13 53 57.5	-0.8
AC01	**Pan de Azucar**	8.40	14	Pn	Pn	13 53 58.5	-2.8
LVC	**Limon Verde**	12.19	18	LR	LR	14 00 17.2	
	comp=Z,433nm,18.7s,baz=224,slow=42						
MNMC	**Minye Minye**	15.42	12		Pn	13 55 34.7	-2.8
MNMC				IAmb	IAmb	13 55 47.3	
	comp=Z,14nm,0.9s						
CPUP	**Villa Florida**	15.61	63	LR	LR	14 02 01.3	
	comp=Z,193nm,20.5s,baz=241,slow=40						
PB16	**IPOC Station P**	16.22	12	P	P	13 55 50.7	-0.6
EFI	**East Falkland**	20.38	153	P	P	13 56 34.2	-2.1
SIV	**San Ignacio**	21.13	33	P	P	13 56 44.6	-0.1
	comp=Z,8.9nm,0.9s,baz=226,slow=9.9,SNR=20						
SIV				LR	LR	14 06 35.6	
	comp=Z,291nm,18.2s,baz=184,slow=42						
NNA	**Nana**	22.54	350	LR	LR	14 04 01.6	
	comp=Z,149nm,19.5s,baz=186,slow=32						
BDFB	**Brasilia**	29.11	56	P	P	13 57 57.3	-3.4
	comp=Z,2.6nm,0.5s,baz=237,slow=10,SNR=4.7						
BDFB	**Brasilia**	29.11	56	P	P	13 58 00.1	-0.7
BDFB				IAmb	IAmb	13 58 09.4	
	comp=Z,15nm,1.4s						
SNAA	**Sanae**	51.54	158	P	P	14 01 07.0	+1.6
	comp=Z,5.9nm,0.9s,baz=287,slow=6.5,SNR=12						
SNAA	**Sanae**	51.54	158	P	P	14 01 05.4	0.0
SNAA				IAmb	IAmb	14 01 07.7	
	comp=Z,8.8nm,1.1s						
QSPA	**South Pole Qui**	55.90	180	P	P	14 01 39.7	+2.3
	comp=Z,2.7nm,0.9s,baz=277,slow=1.5,SNR=16						
QSPA	**South Pole Qui**	55.90	180	P	P	14 01 39.0	+1.5
QSPA				IAmb	IAmb	14 01 40.6	
	comp=Z,8.8nm,1.4s						
PPT	**Papeete**	69.50	262	LR	LR	14 27 16.5	
	comp=Z,34nm,18.5s,baz=27,slow=30						
TXAR	**Lajitas Array**	69.69	332	P	P	14 03 12.2	+2.6
	comp=Z,2.4nm,1.1s,baz=134,slow=7.2,SNR=8.8						
TXAR				LR	LR	14 29 13.8	
	comp=Z,49nm,18.8s,baz=0.0,slow=32						
CLNB	**Carlsbad**	72.38	333	P	P	14 03 22.9	-3.0
MAW	**Mawson**	73.06	164	LR	LR	14 36 53.2	
	comp=Z,79nm,18.0s,baz=238,slow=37						
NVAR	**Mina Array Bea**	83.76	326	P	P	14 04 31.4	+2.3
	comp=Z,0.5nm,0.9s,baz=136,slow=6.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	84.99	71	P	P	14 04 35.9	+0.3
	comp=Z,1.7nm,0.9s,baz=232,slow=4.9,SNR=3.9						
ZALV	**Zalesovo Beam**	154.88	32	PKPbc	PKiKP	14 12 01.9	+1.1
	comp=Z,1.7nm,0.8s,baz=298,slow=3.2,SNR=6.7						
ZALV				PKPab	PKPab	14 12 15.2	-0.9
	comp=Z,1.9nm,0.8s,baz=316,slow=4.1,SNR=5.5						
MKAR	**Makanchi Array**	157.52	49	PKPab	PKPab	14 12 28.1	+0.5
	comp=Z,1.0nm,0.8s,baz=290,slow=4.5,SNR=4.8						
SONM	**Songino Array**	166.50	2	PKPab	PKPab	14 13 06.9	-0.1
	comp=Z,0.3nm,0.6s,baz=340,slow=5.4,SNR=4.2						

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*IDC **10** 13:52:01.4±2.0,22°.90N×122°.15E,h0^{km},mb3.7/4,mb1 3.7/4,mb1mx3.3/44,mbtmp3.7/4,MS2.8/1,Ms1 2.8/1,ms1mx2.5/30,Error ellipse: s-maj=161.6km s-min=24.2km az=66.0*

*JMA **10** 13:52:04.0±0.1,22°.74N×121°.62E,h25^{km}±4^{km},M3.4*

*TAP **10** 13:52:05.5,22°.78N×121°.55E,h18^{km},ML3.7,B*

ISC 10 13:52:04.2±1.0,**22°.84N**±0°.02×**121°.60E**±0°.02,**h11**^{km}±7^{km},**n126**,σ**1^{s}.05**/171,**mb3.5**/4,**6C-16D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	**Ludao**	0.21	217	⇑*i*P	Pg	13 52 09.9	+1.2
	baz=213						
LDUT				S	Sg	13 52 12.6	+1.0
	baz=213						
EDH	**Donghe**	0.31	296	⇓*i*P	Pb	13 52 12.0	+0.3
	baz=310						
EDH				S	Sb	13 52 16.5	-0.2
	baz=310						
CHKT	**Chengkung**	0.34	320	⇓*i*P	Pb	13 52 13.0	+0.7
	baz=337						
CHKT				*i* S	Sb	13 52 18.0	+0.3
	baz=337						
TTN	**Taitung**	0.43	259	⇓P	Pb	13 52 13.4	-0.4
	baz=265						
TTN				*e*S	Sb	13 52 19.3	-1.0
	baz=265						
LONT	**Longtian**	0.44	279	*e*P	Pb	13 52 13.6	-0.5
	baz=281						
FULB	**Fuli**	0.46	321	P	Pb	13 52 14.7	+0.3
	baz=330						
FULB				S	Sb	13 52 21.3	+0.1
	baz=330						
TWGBT	**Beinan**	0.48	268	⇓P	Pb	13 52 14.0	-0.7
	baz=274						
TWGBT				S	Sb	13 52 20.9	-0.9
	baz=274						
TWG	**Pinlang**	0.49	268	*e*P	Pg	13 52 14.1	+0.2
	baz=274						
TWG				S	Sb	13 52 21.3	-0.8
	baz=274						
EYUL	**Yuli**	0.57	333	*e*P	Pn	13 52 17.4	-0.9
	baz=349						
TWF1	**Yuli**	0.58	331	⇓P	Pb	13 52 17.1	+0.6
	baz=348						
TWF1				*e*S	Sb	13 52 25.7	+0.9
	baz=348						
YULB	**Yu-li**	0.62	333	⇓P	Pb	13 52 17.7	+0.6
	baz=348						
YULB				*e*S	Sb	13 52 26.6	+0.8
	baz=348						
ELDTW	**Lidau**	0.64	303	⇓*i*P	Pb	13 52 17.1	-0.4
	baz=310						
ELDTW				S	Sb	13 52 25.1	-1.5
	baz=310						
ECL	**Taimali**	0.65	248	⇓*i*P	Pg	13 52 16.3	-0.5
	baz=251						
ECL				S	Sg	13 52 23.7	-1.6
	baz=251						
HGSD	**Ruisui**	0.67	346	⇑*e*P	Pb	13 52 18.2	+0.3
	baz=1.0						
EHY	**Hungye**	0.71	339	P	Pb	13 52 19.3	+0.6
	baz=352						
LAY	**Lan-yu**	0.80	184	*e*P	Pg	13 52 18.4	-1.2
	baz=179						
TAW	**Tawu**	0.81	234	*e*P	Pg	13 52 18.7	-1.2
	baz=234						
EAST	**Anshuo**	0.83	237	⇓*i*P	Pg	13 52 19.3	-1.1
	baz=249						
EGFH	**Guangfu**	0.84	349	*e*P	Pn	13 52 21.6	-0.4
	baz=1.0						
STYT	**Tauyuan**	0.84	293	P	Pb	13 52 20.4	-0.5
	baz=305						
TSMG	**Majia**	0.90	262	*e*P	Pg	13 52 20.9	-0.6
	baz=256						
SLGT	**Liugui**	0.90	280	*e*P	Pg	13 52 21.0	-0.5
	baz=284						
SSD	**Sandimen**	0.90	264	⇓P	Pg	13 52 20.7	-1.0
	baz=267						
MASBT	**Mashibuluo**	0.93	256	⇓P	Pg	13 52 21.1	-1.0
	baz=250						
SGST	**Jiashian**	0.97	285	P	Pb	13 52 22.5	-0.5
	baz=291						
SGST				*e*S	Sb	13 52 35.2	-0.7
	baz=291						
ESL	**Shilin**	0.98	351	*e*P	Pb	13 52 23.1	-0.2
	baz=5.0						
ALS	**Alishan**	0.99	312	P	Pn	13 52 23.9	-0.4
	baz=317						
ALS				*e*S	Sb	13 52 37.3	+0.5
	baz=317						
WTP	**Ta-pu**	1.00	294	⇓P	Pb	13 52 23.7	+0.2
	baz=304						
WTP				*e*S	Sn	13 52 38.1	-0.2
	baz=304						
TPUB	**Ta-pu**	1.01	297	⇓P	Pb	13 52 23.9	+0.2
	baz=307						
TPUB				S	Sn	13 52 38.1	-0.4
	baz=307						
SSPT	**Xinbi**	1.02	250	⇓P	Pg	13 52 23.3	-0.6
	baz=245						
SCZT	**Fangliau**	1.02	243	⇓*e*P	Pg	13 52 22.4	-1.5
	baz=244						
SCST	**Cishan**	1.02	273	*e*P	Pb	13 52 24.3	+0.3
	baz=279						
SGLT	**Jiouru**	1.03	264	*e*P	Pb	13 52 24.7	+0.6
	baz=266						
CHN1	**Nanshi**	1.05	289	⇑P	Pn	13 52 25.1	+0.3
	baz=299						
CHN1				*e*S	Sb	13 52 38.7	+0.6
	baz=299						
SNST	**Tainan City**	1.09	291	*e*P	Pn	13 52 25.4	0.0
	baz=294						
SNST				*e*S	Sn	13 52 41.2	+0.8
	baz=294						
TWM1	**Shoushan**	1.09	269	*e*P	Pn	13 52 26.0	+0.5
	baz=272						
TWM1				*e*S	Sn	13 52 41.3	+0.8
	baz=272						
WHYT	**Xinyi Township**	1.10	321	*e*P	Pn	13 52 26.2	+0.6
	baz=336						
TWK	**Hsinying**	1.11	293	*e*P	Pn	13 52 25.9	+0.1
	baz=296						
TWK				*e*S	Sn	13 52 41.3	+0.1
	baz=296						
SSLB	**Suanglung**	1.12	328	*e*P	Pn	13 52 25.9	+0.1
	baz=342						
HWA	**Hwalien**	1.13	0	*e*P	Pn	13 52 26.5	+0.5
	baz=15						
CHN5	**Tsauling**	1.14	312	P	Pn	13 52 26.9	+0.7
	baz=315						
CHN5				*e*S	Sn	13 52 42.9	+1.1
	baz=315						
TSEB	**Hengchuen, Pin**	1.14	215	*e*P	Pg	13 52 26.0	-0.2
	baz=216						
HEN	**Hengchun**	1.15	224	*e*P	Pg	13 52 24.3	-2.2
	baz=223						
TWKBT	**Hengchun**	1.16	219	*e*P	Pg	13 52 24.3	-2.2
	baz=219						
TWK1	**Hengchun**	1.16	220	*e*P	Pg	13 52 24.7	-1.8
	baz=219						
CHN3	**Shinhua**	1.17	282	*e*P	Pn	13 52 27.7	+1.3
	baz=285						
CHN3				*e*S	Sn	13 52 44.8	+2.4
	baz=285						
SNJT	**Kaohsiung City**	1.17	266	*e*P	Pn	13 52 28.2	+1.7
	baz=268						
SMLT	**Sun Moon Lake**	1.22	328	*e*P	Pn	13 52 27.9	+0.5
	baz=341						
SMLT				*e*S	Sn	13 52 44.5	+0.6
	baz=341						
WLCH	**Liuqiu**	1.23	247	*e*P	Pn	13 52 29.5	+2.1
	baz=231						
TWD	**Chiawan**	1.23	360	*e*P	Pg	13 52 26.7	-1.3
	baz=14						
TWP	**Hsiaoliuchiu**	1.25	247	*e*P	Pg	13 52 28.2	0.0
	baz=231						
TYC	**Yuchr**	1.26	327	⇓P	Pn	13 52 29.2	+1.5
	baz=341						
TYC				S	Sn	13 52 45.9	+1.2
	baz=341						
WJS	**Zhushan**	1.27	321	*e*P	Pn	13 52 29.7	+1.9
	baz=340						
WJS				*e*S	Sn	13 52 46.5	+1.6
	baz=340						
CHY	**Chiayi**	1.27	301	*e*P	Pn	13 52 29.2	+1.4
	baz=305						
CHY				*e*S	Sn	13 52 46.9	+2.0
	baz=305						
WGK	**Gukeng**	1.28	312	*e*P	Pn	13 52 29.4	+1.5
	baz=315						
CHGB	**Renai**	1.28	342	⇑P	Pn	13 52 28.5	+0.3
	baz=357						
WDLH	**Douliu**	1.29	311	*e*P	Pn	13 52 29.9	+1.7
	baz=314						
WPL	**Puli Township**	1.31	333	*e*P	Pn	13 52 29.5	+1.1
	baz=349						
ICHU	**Yijhu**	1.33	293	*e*P	Pn	13 52 29.8	+1.2
	baz=296						
NACB	**Ninganchiao**	1.33	360	⇑P	Pg	13 52 28.1	-1.6
	baz=12						
NACB				*e*S	Sg	13 52 45.0	-2.1
	baz=12						
WNT	**Mingjian**	1.34	321	P	Pn	13 52 30.6	+1.8
	baz=324						
WNT				*e*S	Sn	13 52 48.2	+1.6
	baz=324						
WHF	**Hehuan Shan**	1.34	347	*e*P	Pb	13 52 29.1	-0.4
	baz=349						
SCLT	**Jiali**	1.34	285	*e*P	Pn	13 52 30.5	+1.6
	baz=288						
SCLT				*e*S	Sn	13 52 47.5	+0.9
	baz=288						
WLGB	**Puzi**	1.36	298	⇑*e*P	Pg	13 52 29.2	-1.2
	baz=301						
WLGB				*e*S	Sn	13 52 47.4	+0.3
	baz=301						
WNT1	**Nantou City**	1.36	322	*e*P	Pn	13 52 30.4	+1.3
	baz=325						
ETLH	**Xiulin Townshi**	1.37	355	*e*P	Pg	13 52 29.3	-1.2
	baz=11						
CHN8	**Yiju**	1.38	292	P	Pb	13 52 30.5	+0.5
	baz=295						
CHN8				S	Sn	13 52 48.8	+1.3
	baz=295						
WTK	**Tuku**	1.40	307	*e*P	Pb	13 52 30.6	+0.2
	baz=310						
FUSS	**Fushou**	1.44	347	*e*P	Pb	13 52 31.2	0.0
TWT	**Tachien**	1.46	344	*e*P	Pb	13 52 31.6	+0.1
	baz=346						
TDCB	**Techi**	1.47	344	*e*P	Pb	13 52 31.6	0.0
	baz=346						
WSF	**Szhu**	1.50	302	*e*P	Pg	13 52 32.3	-0.8
	baz=305						
RLNB	**Erlin**	1.55	313	*e*P	Pg	13 52 33.2	-0.8
	baz=315						
WHP	**Taichung City**	1.55	337	*e*P	Pg	13 52 34.6	+0.5
	baz=350						
TCU	**Taichung**	1.56	327	*e*P	Pg	13 52 35.2	+1.1
	baz=330						
WCHH	**Zhanghua**	1.56	322	*e*P	Pg	13 52 34.0	-0.2
	baz=324						
NNSB	**Datong**	1.59	353	*e*P	Pb	13 52 33.2	-0.6
	baz=8.0						
NNS	**Nan Shan**	1.61	352	*e*P	Pn	13 52 33.1	+0.5
	baz=7.0						
ENAH	**Nanao**	1.61	7	*e*P	Pn	13 52 32.8	+0.1
	baz=17						
WDJ	**Dajia District**	1.74	330	*e*P	Pg	13 52 37.3	-0.4
	baz=332						
WDJ				*e*S	Sg	13 53 01.0	+0.7
	baz=332						
NSY	**Sanyi**	1.75	334	*e*P	Pg	13 52 37.0	-0.8
	baz=337						
NSY				*e*S	Sg	13 53 00.7	+0.1
	baz=337						
NDT	**Datong Townshi**	1.76	357	*e*P	Pb	13 52 35.9	-0.6
	baz=359						
TWC	**Suao**	1.78	7	*e*P	Pn	13 52 35.4	+0.5
	baz=19						
TWC				*e*S	Sn	13 52 56.8	-0.6
	baz=19						
YHNB	**Yeheng**	1.83	353	*e*P	Pb	13 52 37.2	-0.6
	baz=7.0						
WDGT	**Dungji**	1.84	284	*e*P	Pn	13 52 35.3	-0.4
	baz=285						
NSK	**Sanguang**	1.84	353	*e*P	Pb	13 52 37.0	-0.9
	baz=7.0						
NMLH	**Miaoli**	1.85	336	*e*P	Pg	13 52 38.2	-1.5
	baz=339						
NMLH				*e*S	Sg	13 53 02.1	-1.6
	baz=339						
NSTT	**Nanjuang**	1.87	343	*e*P	Pg	13 52 39.3	-0.8
	baz=345						
TWE	**Neicheng**	1.87	2	*e*P	Pb	13 52 37.5	-1.0
	baz=4.0						
LIOB	**Emei**	1.88	343	*e*P	Pg	13 52 38.8	-1.5
	baz=345						
NWLT	**Wulai**	1.93	357	*e*P	Pn	13 52 38.3	+1.2
	baz=10.0						
PHUB	**P'eng-hu**	1.99	290	*e*P	Pn	13 52 37.9	+0.1
	baz=292						
NTC	**Toucheng**	2.02	6	*e*P	Pn	13 52 39.3	+1.1
	baz=354						
PNG	**Penghu**	2.02	291	*e*P	Pn	13 52 38.4	+0.2
	baz=293						
JYNG	**Yonagunijimaku**	2.02	37	P	Pn	13 52 39.4	+1.2
JYNG				*e*S	Sn	13 53 04.8	+1.3
VCHM	**Qimei**	2.04	281	*e*P	Pn	13 52 38.5	+0.1
	baz=283						
VCHM				*e*S	Sn	13 53 02.0	-1.9
	baz=283						
YOJ	**Yonaguni jima**	2.07	38	P	Pb	13 52 41.0	-0.7
YOJ				*e*S	Sb	13 53 06.9	-0.5
YOJ	**Yonaguni jima**	2.07	38	*e*P	Pn	13 52 39.4	+0.5
	baz=49						
YOJ				*e*S	Sn	13 53 06.0	+1.5
	baz=49						
TATO	**Taipei**	2.13	357	*e*P	Pb	13 52 41.8	-1.0
	baz=9.0						
TIPB	**Shuangxi**	2.13	5	*e*P	Pb	13 52 41.6	-1.3
	baz=356						
YM10	**YM10**	2.31	359	*e*P	Pn	13 52 43.6	+1.4
	baz=1.0						
HATJ	**Hateruma jima**	2.36	59	P	Pn	13 52 43.8	+1.0
HATJ				S	Sn	13 53 12.1	+0.4
IRIF	**Iriomote-Funau**	2.45	52	P	Pn	13 52 45.3	+1.1
IRIF				*e*S	Sn	13 53 15.3	+1.2
JKRS	**Kuro-shima**	2.61	57	P	Pn	13 52 47.5	+1.2
JKRS				*e*S	Sn	13 53 18.7	+0.7
JIJ	**Ishigaki jima**	2.78	56	P	Pn	13 52 49.9	+1.3
VWUC	**VWUC**	2.91	318	*e*P	Pn	13 52 50.9	+0.5
	baz=318						
JISG	**Ishigakijimahi**	3.03	54	P	Pn	13 52 53.0	+0.9
JISG				S	Sn	13 53 28.3	-0.1
PTTC	**Pingtan**	3.13	328	*e*P	Pn	13 52 55.2	+1.7
	baz=330						
PTTC				*e*S	Sn	13 53 30.2	-0.7
	baz=330						
PTMZ	**Houxiangcun**	3.16	314	*e*P	Pn	13 52 55.0	+1.1
	baz=315						
KNM	**Kinmen**	3.31	299	*e*P	Pn	13 52 57.9	+2.0
	baz=299						
JTJ	**Tarama**	3.36	57	P	Pn	13 52 58.0	+1.4
JTJ				S	Sn	13 53 37.7	+1.3
KNMB	**Chin-men Tao**	3.36	299	*e*P	Pn	13 52 56.6	-0.1
	baz=301						
MATB	**Ma-tsu**	3.63	336	*e*P	Pn	13 53 01.4	+1.1
	baz=336						
JIRB	**Irabujima**	3.82	58	P	Pn	13 53 04.2	+1.2
JMJ2	**Miyako jima3**	3.90	60	P	Pn	13 53 05.6	+1.5
JMJ2				*e*S	Sn	13 53 51.8	+1.9
AXDP	**Jialang**	3.91	302	*e*P	Pn	13 53 04.4	+0.3
	baz=304						
JMJ	**Miyako jima 2**	3.91	59	*e*P	Pn	13 53 05.3	+1.1
	baz=59						
JMJ				*e*S	Sn	13 53 51.6	+1.5
	baz=59						
JIKM	**Ikemajima**	3.93	57	P	Pn	13 53 06.0	+1.6
MHZQ	**Yeshan**	4.00	325	*e*P	Pn	13 53 06.2	+0.7
	baz=325						
LYJJ	**Jianjiangzhen**	4.06	336	*e*P	Pn	13 53 07.3	+1.1
	baz=338						
XPSS	**Dashiqiu**	4.27	343	*e*P	Pn	13 53 10.2	+1.1
	baz=345						
KSRS	**Korea Array**	15.55	19	LR	LR	14 02 21.2	
	comp=Z,34nm,20.3s,baz=238,slow=40						
SONM	**Songino Array**	27.75	338	P	P	13 57 53.3	+0.4
	0.4nm,0.7s,baz=156,slow=7.9,SNR=2.7						
MKAR	**Makanchi Array**	39.57	317	P	P	13 59 37.0	+1.6
	1.2nm,0.8s,baz=112,slow=9.3,SNR=12						
ZALV	**Zalesovo Beam**	41.58	328	P	P	13 59 52.1	+0.2
	3.4nm,0.6s,baz=111,slow=7.5,SNR=18						
ASAR	**Alice Springs**	47.75	165	P	P	14 00 39.7	-1.7
	0.2nm,0.8s,baz=342,slow=7.2,SNR=3.0						

IDC 10 13:58:41.4±10.0,**17°.69S**×**13°.48W**,**h0**^{km},**mb4.1**/3,**mb1 4.1**/3,**mb1mx3.7**/40,**mbtmp4.1**/3,**MS3.5**/7,**Ms1 3.5**/7,**ms1mx3.3**/23,**Error ellipse: s-maj=429.7km s-min=30.2km az=136.0,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	25.66	20	P	P	14 04 13.2	0.0
	2.3nm,0.6s,baz=174,slow=10,SNR=2.7						
DBIC				LR	LR	14 11 30.3	
	comp=Z,94nm,20.5s,baz=199,slow=30						
TORD	**Torodi Ar. Bea**	34.11	27	P	P	14 05 28.0	-0.1
	5.7nm,1.1s,baz=213,slow=7.8,SNR=7.7						
TORD				LR	LR	14 16 39.2	
	comp=Z,121nm,20.1s,baz=0.0,slow=32						
BOSA	**Boshof**	37.09	114	LR	LR	14 18 56.9	
	comp=Z,26nm,21.4s,baz=232,slow=33						
CPUP	**Villa Florida**	41.39	250	P	P	14 06 29.6	-0.1
	2.1nm,0.8s,baz=80,slow=6.1,SNR=3.0						
CPUP				LR	LR	14 21 03.5	
	comp=Z,52nm,18.4s,baz=52,slow=32						
PLCA	**Paso Flores**	53.84	232	LR	LR	14 28 29.7	
	comp=Z,50nm,19.7s,baz=147,slow=33						
ROSC	**El Rosal**	64.06	285	LR	LR	14 37 43.3	
	comp=Z,73nm,18.1s,baz=342,slow=37						
GEYT	**Alibeck**	86.95	49	LR	LR	14 48 24.1	
	comp=Z,31nm,19.7s,baz=305,slow=34						

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*IDC **10** 13:59:60.0±0.6,35°.34N×26°.10E,h0^{km},mb4.3/20,mb1 4.3/27,mb1mx4.2/47,mbtmp4.2/27,ML4.0/6,MS3.5/5,Ms1 3.5/5,ms1mx2.9/44,Error ellipse: s-maj=14.8km s-min=9.8km az=166.0*

*ISK **10** 14:00:01.2,35°.33N×26°.19E,h6^{km},ML4.2/21*

*ATH **10** 14:00:01.8,35°.31N×26°.20E,h13^{km}±2^{km},ML4.2/12,Error ellipse: s-maj=2.9km s-min=0.8km az=152.0*

*NEIC **10** 14:00:01.5±2.5,35°.24N±0°.09×26°.15E±0°.07,h8^{km}±6^{km},Error ellipse: s-maj=13.5km s-min=7.7km az=181.0*

*NIC **10** 14:00:01.7±0.0,35°.08N×26°.36E,h0^{km}±3^{km},Ml4.6/3*

*THE **10** 14:00:02.2,35°.30N×26°.19E,h4^{km}±1^{km},ML4.2/13,Error ellipse: s-maj=1.4km s-min=0.4km az=170.0*

*MED_RC **10** 14:00:02.0±0.7,35°.16N×26°.14E,h20^{km}±1^{km},MW4.3/11,Moment Tensor Solution.Mantle waves: s11,c13; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.07±.52; $M_{\theta\theta}$-0.42±.29; $M_{\phi\phi}$3.49±.40; $M_{r\theta}$-1.12±.43; $M_{\theta\phi}$1.15±.27; $M_{\phi r}$-0.33±.48; Best double couple: $M_0$3.67000×10^{15} NP1:ϕ_s176.00000°,δ43.00000°,λ-119.00000°. NP2:ϕ_s34.00000°,δ53.00000°,λ-65.00000°. Principal axes: T 3.8600, Plg5.0000°, Azm106.0000°; N -0.3800, Plg20.0000°, Azm198.0000°; P -3.4800, Plg70.0000°, Azm2.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*HLW **10** 14:00:04.8,35°.11N×26°.42E,h14^{km}±7^{km},Md4.5*

*DDA **10** 14:00:06.0,35°.47N×26°.03E,h35^{km}±425^{km},MW4.4*

ISC 10 14:00:01.8±0.6,**35°.30N**±0°.02×**26°.18E**±0°.02,**h13**^{km}±3^{km},**n279**,σ**1^{s}.80**/342,**mb4.5**/42,**MS3.2**/3,**10C-10D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	**Sitia Lasithi**	0.12	217	P	Pg	14 00 05.0	0.0
STIA				S	Sg	14 00 07.3	0.0
ZKR	**Zakros**	0.18	170	P	Pg	14 00 05.8	-0.2
ZKR				S	Sg	14 00 08.8	-0.1
ZKR				AML	AML	14 00 09.4	
ZKR				AML	AML	14 00 09.4	
ZKR	**Zakros**	0.18	170	P	Pg	14 00 05.8	-0.2
ZKR				S	Sg	14 00 09.0	+0.1
	152µm,0.3s						
ZKR	**Zakros**	0.18	170	PG	Pg	14 00 05.9	-0.2
ZKR				SG	Sg	14 00 09.2	+0.3
NPS	**Neapolis**	0.47	266	P	Pg	14 00 11.6	+0.6
NPS				S	Sg	14 00 17.8	+0.5
NPS				AML	AML	14 00 19.1	
	comp=E,46004µm,0.4s						
NPS				AML	AML	14 00 23.4	
	comp=N,48290µm,0.5s						
NPS	**Neapolis**	0.47	266	P	Pg	14 00 11.7	+0.6
NPS				S	Sb	14 00 18.6	-0.2
	comp=N,27µm,0.5s						
KARP	**Karpathos**	0.84	72	P	Pg	14 00 17.5	-0.5
KARP				S	Sg	14 00 28.8	-0.3
KARP				AML	AML	14 00 32.4	
	comp=E,37024µm,0.5s						
KARP				AML	AML	14 00 33.6	
	comp=N,48549µm,0.5s						
KARP	**Karpathos**	0.84	72	P	Pg	14 00 17.6	-0.5
KARP				S	Sb	14 00 30.5	+0.9
	comp=N,21µm,0.6s						
KARP	**Karpathos**	0.84	72	PG	Pg	14 00 17.6	-0.5
KARP	**Karpathos**	0.84	72		Pg	14 00 17.6	-0.5
KARP	**Karpathos**	0.84	72	P	Pg	14 00 17.5	-0.5
KARP				S	Sb	14 00 30.2	+0.6
KARP				AML	AML	14 00 33.2	
	comp=N,48nm,0.5s						
KARP				AML	AML	14 00 33.2	
	comp=N,48nm,0.5s						
KARP				AML	AML	14 00 40.8	
	comp=N,40nm,0.5s						
KARP				AML	AML	14 00 40.8	
	comp=N,40nm,0.5s						
HRKL	**Herakleio**	0.88	271	P	Pb	14 00 19.2	+0.2
HRKL	**Herakleio**	0.88	271	PG	Pg	14 00 18.9	0.0
IACM	**Heraklion**	0.91	271	P	Pg	14 00 19.5	+0.2

IACM				S	Sb	14 00 32.5	+1.0
IACM	**Heraklion**	0.91	271	P	Pg	14 00 19.4	0.0
IDI	**Anoyia**	1.05	270	Pn	Pg	14 00 21.8	-0.4
	comp=N,163nm,0.3s,baz=90,slow=14,SNR=207						
IDI				Sn	Sg	14 00 35.1	-0.9
	comp=N,507nm,0.3s,baz=324,slow=19,SNR=17						
IDI	**Anoyia**	1.05	270	P	Pg	14 00 21.6	-0.6
IDI				S	Sg	14 00 36.1	+0.1
IDI				AML	AML	14 00 40.2	
	comp=E,15153µm,0.6s						
IDI				AML	AML	14 00 41.9	
	comp=N,13956µm,0.7s						
IDI	**Anoyia**	1.05	270	P	Pg	14 00 21.6	-0.6
IDI	**Anoyia**	1.05	270	⇑P	Pg	14 00 21.6	-0.6
IDI				⇓S	Sg	14 00 30.0	-5.9
IDI	**Anoyia**	1.05	270		Pg	14 00 21.5	-0.7
SIVA	**Sivas**	1.16	256	P	Pg	14 00 23.6	-0.5
SIVA				S	Sb	14 00 39.2	+0.6
SIVA				AML	AML	14 00 42.3	
	comp=E,58669µm,0.6s						
SIVA				AML	AML	14 00 42.6	
	comp=N,35303µm,0.7s						
SIVA	**Sivas**	1.16	256	P	Pg	14 00 23.9	-0.2
SIVA				S	Sg	14 00 39.1	-0.1
	comp=N,24µm,0.6s						
TMBK	**Timbaki Herakl**	1.18	259	P	Pb	14 00 24.5	+0.4
SANT	**Santorini**	1.22	332	P	Pb	14 00 24.3	-0.6
SANT				S	Sb	14 00 40.1	-0.4
SANT				AML	AML	14 00 43.7	
	comp=E,31780µm,0.4s						
SANT				AML	AML	14 00 45.3	
	comp=N,11648µm,0.5s						
SANT	**Santorini**	1.22	332	P	Pb	14 00 24.1	-0.8
SANT				S	Sn	14 00 41.9	+0.8
	comp=N,11µm,0.5s						
SANT	**Santorini**	1.22	332	PN	Pb	14 00 24.2	-0.7
SANT	**Santorini**	1.22	332	*i* P	Pb	14 00 24.1	-0.8
SANT				*i* S	Sb	14 00 34.2	-6.4
SANT	**Santorini**	1.22	332		Pb	14 00 24.0	-0.9
THR6	**Thira Island,**	1.23	329	P	Pn	14 00 24.8	0.0
THR6	**Thira Island,**	1.23	329	P	Pn	14 00 24.5	-0.3
THR8	**Santorini-Mono**	1.25	333	P	Pn	14 00 24.6	-0.4
THR8	**Santorini-Mono**	1.25	333	P	Pn	14 00 24.5	-0.4
THR9	**Santorini-Faro**	1.25	328	P	Pn	14 00 25.0	-0.1
THR9	**Santorini-Faro**	1.25	328	P	Pn	14 00 24.8	-0.3
SNT1	**Gialos, Santor**	1.27	332	P	Pn	14 00 25.1	-0.2
SNT1	**Gialos, Santor**	1.27	332	P	Pn	14 00 25.0	-0.4
SNT1				S	Sb	14 00 42.6	+0.6
	comp=N,11µm,0.7s						
SFIR	**Foira Santorin**	1.28	332	P	Pn	14 00 25.4	-0.1
THR3	**Thira Island,**	1.28	331	P	Pn	14 00 25.3	-0.1
THR3	**Thira Island,**	1.28	331	P	Pn	14 00 25.2	-0.2
THR7	**Fira-Santorini**	1.28	332	P	Pn	14 00 25.5	+0.1
THR7	**Fira-Santorini**	1.28	332	P	Pn	14 00 25.3	-0.2
THR5	**Thira Island,**	1.30	329	P	Pn	14 00 25.7	-0.2
THR5	**Thira Island,**	1.30	329	P	Pn	14 00 25.7	-0.2
SAP3	**Santorini-Thir**	1.32	329	P	Pn	14 00 25.8	-0.3
CMBO	**Columbo, Santo**	1.33	332	P	Pn	14 00 26.1	-0.1
CMBO	**Columbo, Santo**	1.33	332	P	Pn	14 00 26.0	-0.1
CMBO				S	Sb	14 00 44.3	+0.7
	comp=N,22µm,0.6s						
SAP4	**Santorini-Oia**	1.34	331	P	Pn	14 00 26.6	+0.2
SAP4				S	Sg	14 00 45.6	+0.4
	comp=N,15µm,0.7s						
PRNS	**Prines Rethymn**	1.37	273	P	Pg	14 00 28.1	-0.1
PRNS				S	Sg	14 00 46.5	+0.4
NISR	**Nisiros**	1.52	30	P	Pn	14 00 28.7	-0.1
NISR				S	Sn	14 00 48.7	+0.2
NISR	**Nisiros**	1.52	30	P	Pn	14 00 28.9	+0.1
NISR				S	Sb	14 00 49.5	+0.4
	comp=N,8µm,0.7s						
KOSK	**Kos Island**	1.59	24	P	Pn	14 00 30.3	+0.6
KOSK				S	Sn	14 00 50.7	+0.6
	comp=N,6µm,0.7s						
KOSK	**Kos Island**	1.59	24	PN	Pn	14 00 30.4	+0.7
VAM	**Vamos**	1.62	274	P	Pn	14 00 31.2	+1.0
VAM				S	Sb	14 00 52.6	+0.6
VAM				AML	AML	14 00 54.9	
	comp=N,12156µm,0.6s						
VAM				AML	AML	14 00 59.8	
	comp=E,10853µm,0.5s						
VAM	**Vamos**	1.62	274	P	Pn	14 00 30.4	+0.2
VAM				S	Sn	14 00 52.0	+1.0
	comp=E,5µm,0.5s						
GVDS	**Gavdos**	1.77	256	PN	Pb	14 00 34.1	-0.1
GVD	**Gavdhos**	1.78	256	P	Pb	14 00 35.2	+0.9
GVD				S	Sn	14 00 56.4	+1.6
GVD				AML	AML	14 01 10.2	
	comp=N,7842µm,0.7s						
GVD				AML	AML	14 01 12.9	
	comp=E,8791µm,0.8s						
GVD	**Gavdhos**	1.78	256	PN	Pn	14 00 33.7	+1.4
IMMV	**Iera Moni Meta**	1.80	276	P	Pn	14 00 33.7	+1.0
IMMV				S	Sb	14 00 58.0	+0.7
IMMV				AML	AML	14 01 06.6	
	comp=E,10470µm,0.5s						
IMMV				AML	AML	14 01 08.3	
	comp=N,7955µm,0.4s						
IMMV	**Iera Moni Meta**	1.80	276	P	Pn	14 00 33.0	+0.3
ARG	**Arkhangelos**	1.83	59	P	Pn	14 00 33.8	+0.7
ARG				S	Sn	14 00 57.1	+1.0
ARG				AML	AML	14 01 04.7	
	comp=E,8036µm,0.3s						
ARG				AML	AML	14 01 09.7	
	comp=N,7748µm,0.5s						
ARG	**Arkhangelos**	1.83	59	P	Pn	14 00 33.4	+0.4
ARG				S	Sn	14 00 56.7	+0.6
	comp=N,3µm,0.6s						
ARG	**Arkhangelos**	1.83	59	PN	Pn	14 00 33.8	+0.7
ARG	**Arkhangelos**	1.83	59	P	Pn	14 00 33.7	+0.7
ARG				S	Sg	14 00 59.7	-0.9
APE	**Apeiranthos**	1.84	344	P	Pn	14 00 33.0	-0.3
APE	**Apeiranthos**	1.84	344	P	Pn	14 00 33.0	-0.3
APE				S	Sn	14 00 57.0	+0.5
	comp=N,2µm,0.4s						
APE	**Apeiranthos**	1.84	344	⇓P	Pn	14 00 33.3	0.0
APE				⇑S	Sn	14 00 53.2	-3.3
APE	**Apeiranthos**	1.84	344	PN	Pn	14 00 33.0	-0.3
APE	**Apeiranthos**	1.84	344	*i* P	Pn	14 00 33.1	-0.3
APE				*i* S	Sn	14 00 44.1	-12
DATC	**Datca-Mugla**	1.89	39	PN	Pn	14 00 34.6	+0.8
BODT	**Bodrum**	1.98	27	P	Pn	14 00 35.6	+0.4
BODT				S	Sn	14 01 00.5	+0.5
BODT	**Bodrum**	1.98	27	PN	Pn	14 00 35.7	+0.5
MHLO	**Agia Marina, M**	2.00	314	P	Pn	14 00 36.4	+1.0
MHLO				S	Sb	14 01 03.6	+0.6
MHLO				AML	AML	14 01 07.1	
	comp=E,17605µm,0.7s						
MHLO				AML	AML	14 01 08.6	
	comp=N,17810µm,0.5s						
MHLO	**Agia Marina, M**	2.00	314	P	Pn	14 00 36.0	+0.6
MHLA	**Plaka, Milos I**	2.03	316	P	Pn	14 00 36.9	+1.1
MHLA				S	Sb	14 01 04.5	+0.7
MHLA				AML	AML	14 01 14.7	
	comp=E,6741µm,0.7s						
MHLA				AML	AML	14 01 16.0	
	comp=N,9013µm,1.2s						
BDRM	**Kayabasi**	2.04	30	*i* P	Pn	14 00 37.3	+1.3
BDRM				*i* S	Sn	14 00 58.0	-3.3
MRSB	**Marmaris-Mugla**	2.16	49	PN	Pn	14 00 38.5	+0.8
TURN	**Turunc**	2.23	48	PN	Pn	14 00 38.9	+0.4
TURN	**Turunc**	2.23	48	*i* P	Pn	14 00 38.6	+0.1
TURN				*i* S	Sn	14 00 59.8	-6.2
DDIM	**Aydin, Didim**	2.32	21	*i* P	Pb	14 00 44.6	+1.1
DDIM				*i* S	Sn	14 01 06.1	-2.1
MLSB	**Milas**	2.37	32	PN	Pn	14 00 41.5	+0.9
ANKY	**Antikythira Is**	2.41	284	P	Pb	14 00 44.7	-0.4
ANKY	**Antikythira Is**	2.41	284	P	Pn	14 00 41.5	+0.4
SMG	**Samos**	2.46	12	P	Pn	14 00 41.5	-0.3
YER	**Yerkesik**	2.50	42	P	Pn	14 00 43.0	+0.7
YER	**Yerkesik**	2.50	42	PN	Pn	14 00 43.2	+0.9
DALY	**Dalyan (Mula)**	2.51	52	PN	Pn	14 00 43.5	+1.1
GCAM	**G?zelcaml?**	2.54	19	PN	Pn	14 00 44.1	+1.3
GCAM	**G?zelcaml?**	2.54	19	*i* P	Pb	14 00 48.9	+1.6
GCAM				*i* S	Sn	14 01 14.2	+0.5
MULA	**Mugla, Merkez-**	2.61	41	*i* P	Pn	14 00 45.8	+1.9
MULA				*i* S	Sn	14 01 13.3	-2.2
FETY	**Fethiye**	2.71	60	P	Pn	14 00 46.4	+1.3
FETY	**Fethiye**	2.71	60	PN	Pn	14 00 46.5	+1.3
KTHA	**Kythira Island**	2.71	292	P	Pn	14 00 45.1	-0.1
DGB	**zmir**	2.81	11	*i* P	Pn	14 00 46.3	-0.2
DGB				*i* S	Sn	14 01 16.8	-3.4
KSL	**Kastellorizon**	2.90	72	P	Pn	14 00 50.1	+2.4
KSL	**Kastellorizon**	2.90	72	S	Sb	14 01 26.2	-2.5
AKAS	**Kas**	2.94	70	PN	Pn	14 00 49.8	+1.4
AKAS	**Kas**	2.94	70	*i* P	Pn	14 00 50.8	+2.4
AKAS				*i* S	Sn	14 01 13.0	-11
AKAS	**Kas**	2.94	70	Pn	Pn	14 00 48.2	-0.2
VLI	**Veliai**	2.99	299	P	Pn	14 00 49.1	+0.1
URLA	**Izmir**	3.08	6	PN	Pn	14 00 49.9	-0.3
URLA	**Izmir**	3.08	6	*i* P	Pn	14 00 49.8	-0.4
URLA				*i* S	Sn	14 01 25.7	-1.2
TAVA	**DENIZLI_Tavas**	3.09	45	*i* P	Pn	14 00 52.8	+2.3
TAVA				*i* S	Sn	14 01 22.0	-5.3
CAEL	**Denizli, Camel**	3.12	53	*i* P	Pn	14 00 53.7	+2.7
CAEL				*i* S	Sn	14 01 27.9	-0.4
KRND	**KRANIDI**	3.21	311	P	Pn	14 00 52.8	+0.8
ATHU	**Athens Univers**	3.29	325	P	Pn	14 00 54.0	+0.9
DION	**Dionisos Attik**	3.31	328	P	Pn	14 00 54.4	+1.0
ATH	**Athens Observa**	3.32	324	P	Pn	14 00 54.7	+1.1
GOLH	**Golhisar**	3.35	54	*i* P	Pn	14 00 56.4	+2.3
GOLH				*i* S	Sn	14 01 27.8	-6.0
ELL	**Elmali**	3.35	63	PN	Pn	14 00 55.6	+1.5
ELL	**Elmali**	3.35	63	Pn	Pn	14 00 56.5	+2.5
ELL	**Elmali**	3.35	63	P	Pn	14 00 56.3	+2.2
EPID	**Epidavros**	3.38	314	P	Pn	14 00 55.6	+1.2
AKUM	**Antalya-Kumluc**	3.54	72	*i* P	Pn	14 00 58.7	+2.3
EREA	**Eretria**	3.60	331	P	Pn	14 00 58.6	+1.2
VLX	**Vlachokerasia**	3.70	305	P	Pn	14 00 59.9	+1.0
MANT	**Manisa**	3.71	30	*i* P	Pn	14 01 01.2	+2.1
MANT	**Manisa**	3.71	30	Pn	Pn	14 01 01.6	+2.4
ZEDA	**zmir-Bergama**	3.73	11	*i* P	Pn	14 00 59.1	-0.1
ZEDA				*i* S	Sn	14 01 35.4	-7.6
KULA	**Kula-Manisa**	3.78	31	PN	Pn	14 01 01.9	+2.0
KORT	**Korkueli**	3.78	62	PN	Pn	14 01 01.7	+1.7
KORT	**Korkueli**	3.78	62	*i* P	Pn	14 01 03.0	+3.0
DKL	**Dikili**	3.81	9	PN	Pn	14 01 01.9	+1.6
SLUM	**Salum**	3.88	192	P	Pn	14 01 01.7	+0.4
	baz=196						
SIGR	**SIGRI**	3.92	356	PN	Pn	14 01 01.7	0.0
ITM	**Ithomi**	3.92	300	PN	Pn	14 01 04.1	+2.3
ITM	**Ithomi**	3.92	300	Pn	Pn	14 01 03.6	+1.9
ANTB	**Antalya**	3.96	65	PN	Pn	14 01 04.3	+2.0
KHAL	**Karahalli**	4.06	40	*i* P	Pn	14 01 05.7	+1.9
USAK	**Uak-Merkez**	4.10	33	*i* P	Pn	14 01 06.9	+2.7
KOCA	**Canakkale, Ayv**	4.20	360	*i* P	Pn	14 01 05.4	-0.2
ATAL	**Atalanti**	4.23	324	P	Pn	14 01 07.4	+1.4
KLV	**Kalavryta, Ach**	4.24	311	P	Pn	14 01 07.6	+1.3
ISP	**Isparta**	4.31	53	PN	Pn	14 01 09.2	+2.0
ISP	**Isparta**	4.31	53	Pn	Pn	14 01 08.4	+1.2
SIMA	**Simav-Kutahya**	4.39	30	PN	Pn	14 01 10.4	+2.1
BAYC	**CANAKKALE_Bayr**	4.45	4	*i* P	Pn	14 01 09.6	+0.6
AXAR	**Agios Charalam**	4.46	322	P	Pn	14 01 11.0	+1.7
DRO	**Drossia**	4.46	308	P	Pn	14 01 11.8	+2.5
OSC1	**CSNet OBS 1**	4.58	112	P	Pn	14 01 09.9	-0.9
EFP	**Efpalio**	4.64	314	P	Pn	14 01 13.4	+1.8
ANX	**Ano Chora**	4.74	315	P	Pn	14 01 15.1	+2.0
SHUT	**Suhut-Afyon**	4.78	46	PN	Pn	14 01 15.5	+1.8
AGG	**Agios Georgios**	4.82	322	PN	Pn	14 01 16.4	+2.2
AGG	**Agios Georgios**	4.82	322	Pn	Pn	14 01 16.6	+2.4
AKMS	**Akamas**	5.05	91	P	Pn	14 01 17.1	-0.2
AKMS				AML	AML	14 02 17.6	
	comp=N,2.8nm,0.9s						
AKMS				AML	AML	14 02 20.0	
	comp=N,2.5nm,0.9s						
NATA	**Nata**	5.27	94	P	Pn	14 01 20.4	0.0
NATA				AML	AML	14 02 22.1	
	comp=N,3.3nm,0.8s						
NATA				AML	AML	14 02 23.7	
	comp=N,3.7nm,0.8s						
OSC2	**CSNet OBS 4**	5.51	112	P	Pn	14 01 23.0	-0.7
SZAC	**Souni**	5.53	94	P	Pn	14 01 23.9	0.0
LIT	**Litokhoron**	5.62	330	Pn	Pn	14 01 26.6	+1.5
ASGA	**Asgata**	5.82	93	P	Pn	14 01 27.8	-0.1
CSS	**Mathiatis**	5.87	91		Pn	14 01 28.1	-0.5
CSS	**Mathiatis**	5.87	91	P	Pn	14 01 29.1	+0.5
SWA2		6.07	186	P	Pn	14 01 31.6	+0.3
	baz=189						
FNA	**Florina**	6.66	327		Pn	14 01 41.1	+1.6
BR231	**Keskin MP Arra**	6.93	47		Pn	14 01 45.5	+2.3
STIP	**Stip**	7.11	335	*i* Pn	Pn	14 01 47.6	+2.0
OHR	**Ohrid**	7.18	325	*i* Pn	Pn	14 01 49.5	+2.8
HSAF	**As Saff**	7.26	140	P	Pn	14 01 47.5	-0.1
	baz=140						
GLL	**Jalalah**	7.37	139	P	Pn	14 01 48.4	-0.9
	baz=139						
BRTR	**Keskin Array B**	7.39	51	Pn	Pn	14 01 51.2	+1.6
	comp=N,0.6nm,0.3s,baz=236,slow=16,SNR=19						
BRTR				Sn	Sn	14 03 14.3	+0.8
	comp=N,0.2nm,0.3s,baz=218,slow=19,SNR=2.7						
BR131	**Keskin Array S**	7.39	51	Pn	Pn	14 01 50.4	+0.8
SKO	**Skopje**	7.62	332	*i* Pn	Pn	14 01 55.4	+2.8
SCTE	**Santa Cesarea**	7.75	310	Pn	Pn	14 01 54.4	+0.1
MMAI	**Mount Meron Ar**	7.98	104	Pn	Pn	14 01 56.1	-1.5
	comp=N,4.8nm,0.3s,baz=310,slow=12,SNR=12						
MMAI				Sn	Sn	14 03 24.5	-3.3
	comp=N,10nm,0.3s,baz=315,slow=26,SNR=10.0						
HFRF	**Wahat Farafira**	8.33	167	P	Pn	14 02 02.2	-0.1
	baz=167						
HFRF				S	Sn	14 03 28.0	-8.3
	baz=167						
TIP	**Timpagrande**	8.45	300	⇑P	Pn	14 02 04.4	+0.4
TIP				⇓S	Sn	14 03 33.9	-5.5
TIP	**Timpagrande**	8.45	300	Pn	Pn	14 02 03.9	-0.2
PDG	**Podgorica**	8.93	325	⇑P	Pn	14 02 09.8	-0.8
GRB	**Gharib**	8.98	139	P	Pn	14 02 11.1	-0.2
	baz=139						
MATE	**Matera**	9.19	308	⇓P	Pn	14 02 13.8	-0.2
EIL	**Elat**	9.29	125	Pn	Pn	14 02 14.5	-1.1
	comp=N,1.4nm,0.3s,baz=336,slow=3.4,SNR=24						
EIL				Sn	Sn	14 03 52.5	-7.5
	comp=N,3.8nm,0.3s,baz=90,slow=20,SNR=5.6						
TIRR	**Tirgusor**	9.31	10	⇓P	Pn	14 02 20.0	+4.2
HBST	**Basata**	9.44	128	P	Pn	14 02 17.6	0.0
	baz=127						
VAE	**Valguarnera**	9.73	286	Sn	Sn	14 04 09.3	-1.6
	comp=N,2.2nm,0.3s,baz=198,slow=20,SNR=3.2						
STON	**Ston**	10.03	321	*e*Pn	Pn	14 02 23.9	-1.7
STON				Sn	Sn	14 04 07.2	-11
MDVR	**Moldovita**	10.07	342	⇑P	Pn	14 02 26.4	+0.2
ARR	**Arges**	10.13	354	⇓P	Pn	14 02 29.9	+2.9
VOIR		10.16	355	⇑P	Pn	14 02 30.2	+2.7
MLR	**Muntele Rosu**	10.18	359	Pn	Pn	14 02 26.5	-1.3
	comp=N,0.2nm,0.3s,baz=260,slow=18,SNR=1.9						
MLR	**Muntele Rosu**	10.18	359	⇓P	Pn	14 02 30.3	+2.5
LOT	**Lotru**	10.30	350	⇑P	Pn	14 02 30.2	+0.7
SGRT	**San Giovanni R**	10.41	311		Pn	14 02 30.3	-0.6
GZR	**Gura Zlata**	10.41	347	⇓P	Pn	14 02 31.8	+0.9
VRI	**Vrincioaia**	10.57	2	⇓P	Pn	14 02 35.5	+2.5
MAKA	**Makarska**	10.67	321	*e*Pn	Pn	14 02 31.8	-2.6
MAKA				Sn	Sn	14 04 22.5	-11
BZS	**Buzias**	10.88	343	⇓P	Pn	14 02 38.4	+1.2
HVAR	**Hvar**	10.89	319	*e*Pn	Pn	14 02 36.5	-1.0
KIJV	**Kijevo**	11.50	322	*e*Pn	Pn	14 02 44.1	-1.6
KIJV				Sn	Sn	14 04 43.5	-10
BIZ	**Bicaz**	11.63	360	⇑P	Pn	14 02 50.8	+3.3
ZIRJ	**Zirje**	11.65	319	*e*Pn	Pn	14 02 45.5	-2.2
ZIRJ				Sn	Sn	14 04 48.6	-9.0
INTR	**Introdacqua**	11.70	309	Pn	Pn	14 02 47.6	-1.0
MORI	**Morici**	11.76	320	*e*Pn	Pn	14 02 47.4	-1.9
DRGR		11.78	348	⇑P	Pn	14 02 50.7	+1.1
DUGI	**Dugi Otok**	12.19	319	*e*Pn	Pn	14 02 54.4	-0.8
DUGI				Sn	Sn	14 05 02.2	-8.8
MORH	**Mrgy, Hungar**	12.30	335	*e*PN	Pn	14 02 57.9	+1.2
NRCA	**Norcia**	12.63	310	Pn	Pn	14 03 01.8	+0.5
MPLH	**Magyarpolny**	13.51	334	*e*PN	Pn	14 03 16.2	+2.9
KOLS	**Kolonicke sedl**	13.93	349	*e*PN	P	14 03 30.0	+3.0
CRVS	**Cervenica-Dubn**	14.03	347	*e*PN	P	14 03 29.8	+1.6
KBZ	**Khabaz**	15.39	52	Pn	P	14 03 45.4	+2.2
	comp=N,0.3nm,0.3s,baz=245,slow=9.6,SNR=15						
GNI	**Garni**	15.46	66	Pn	P	14 03 45.0	+0.7
	comp=N,0.9nm,0.3s,baz=261,slow=19,SNR=3.6						
AKASG	**Malin Array Be**	15.55	7	Pn	P	14 03 44.9	-0.2
	comp=N,2.9nm,0.3s,baz=202,slow=11,SNR=15						
AKASG	**Malin Array Be**	15.55	7	P	P	14 03 43.5	-1.5
AKBB	**Malin Array Si**	15.55	7		Pn	14 03 43.5	+2.7
VRAC	**Vranov**	15.67	336	Pn	Pn	14 03 43.9	+1.6
	comp=N,0.5nm,0.3s,baz=131,slow=11,SNR=2.5						
VRAC				LR	LR	14 10 53.3	
	comp=N,240nm,18.6s,baz=62,slow=42						
GERES	**GERESS Array B**	16.37	330	Pn	Pn	14 03 51.0	-0.4
	comp=N,0.3nm,0.3s,baz=126,slow=9.0,SNR=4.2						
KHC	**Kasperske Hory**	16.65	330	*e*P	Pn	14 03 55.0	+0.1
KHC				*e*pP	sP	14 04 01.3	-1.1
DPC	**Dobruska-Polom**	16.67	338	*e*P	P	14 03 57.1	-0.4
DAVOX	**Davos/Dischmat**	16.78	318	Pn	P	14 03 59.8	+0.9
	comp=N,0.4nm,0.3s,baz=136,slow=14,SNR=3.9						
DAVOX				LR	LR	14 13 10.9	
	comp=N,78nm,22.0s,baz=294,slow=47						
SENIN	**Lac Senin/Sane**	18.02	314	P	Pn	14 04 12.3	+0.2
SENIN				IAmb	IAmb	14 04 19.4	
	comp=Z,17nm,0.8s						
CLL	**Collm**	18.61	333	*e*P	P	14 04 15.0	-3.8
MNK	**Minsk**	19.24	3	*i* P	P	14 04 26.2	+0.5
	comp=E,3.0nm,1.3s						
MNK				*i* P	P	14 04 26.2	+0.5
	comp=N,41nm,1.4s						
MNK				*i* P	P	14 04 26.2	+0.5
	comp=Z,15nm,0.8s						
MNK				*i* PP	PnPn	14 04 41.4	+1.8
MNK				*i* S	S	14 08 08.4	+5.2
MNK				*i* SS	SnSn	14 08 26.2	+10
MNK				*i* LQ	LQ	14 10 23.4	
MNK				*i* LR	LR	14 11 53.6	
MNK				*i* LRM	MLR	14 12 33.3	
	comp=N,173nm,16.6s						
MNK				*i* LRM	MLR	14 12 39.6	
	comp=E,27nm,17.4s						
MNK				*i* LRM	MLR	14 12 44.8	
	comp=Z,113nm,14.1s						
NACGM	**Naroch**	19.61	1	*i* P	Pn	14 04 31.3	+0.1
NACGM				*i* P	Pn	14 04 31.3	+0.1
NACGM				*i* P	Pn	14 04 31.3	+0.1
NACGM				*i* Pb	pP	14 04 32.7	-0.6
	comp=Z,14nm,1.3s						
NACGM				*i* PP	sP	14 04 49.7	+15
NACGM				*i* S	S	14 08 06.7	-4.0
NACGM				*i* SS	SnSn	14 08 22.7	-2.6
NACGM				*i* LQ	LQ	14 10 50.2	
NACGM				*i* LR	LR	14 11 43.8	
NACGM				*i* Sb		14 13 30.8	
	comp=Z,410nm,24.9s						
IDID	**Didziasalis**	20.02	1	*e*P	P	14 04 35.1	+0.8
IIGN	**Ignalina**	20.05	0	*e*P	P	14 04 36.0	+1.3
IIGN				IAmb	IAmb	14 04 38.1	
	comp=Z,6.7nm,0.6s						
PABE	**Paberze**	20.27	356	*e*P	P	14 04 38.1	+1.2
ISAL	**Salakas**	20.27	360	*e*P	P	14 04 36.6	-0.4
ISAL				IAmb	IAmb	14 04 38.8	
	comp=Z,7.0nm,0.5s						
VSU	**Vasula**	23.18	1	*e*P	P	14 05 09.3	+1.3
ESDC	**Sonseca Array**	24.25	289	P	P	14 05 18.7	0.0
	comp=Z,2.6nm,0.6s,baz=80,slow=9.2,SNR=26						
MDT	**Midelt**	25.58	273	P	P	14 05 30.0	-0.8
	comp=Z,6.2nm,0.9s,baz=85,slow=9.3,SNR=15						
MDT				LR	LR	14 16 18.8	
	comp=Z,72nm,20.5s,baz=94,slow=38						
GEYT	**Alibeck**	25.70	75	P	P	14 05 32.5	+0.6
	comp=Z,6.5nm,0.6s,baz=280,slow=8.9,SNR=11						
HFS	**Hagfors**	26.14	346	P	P	14 05 34.5	-1.0
	comp=Z,3.0nm,0.8s,baz=150,slow=12,SNR=1.6						
HFS				LR	LR	14 16 11.5	
	comp=Z,223nm,18.2s,baz=297,slow=37						
FINES	**FINESS Array B**	26.16	360	P	P	14 05 34.9	-0.8
	comp=Z,1.0nm,0.5s,baz=169,slow=11,SNR=8.7						
PBRG	**Braganca**	26.44	294	*e*P	P	14 05 39.4	+0.9
MVO	**Moncorvo**	26.63	293	*e*P	P	14 05 39.2	-1.0
PMRV	**Marv??o**	26.91	289	*e*P	P	14 05 43.0	+0.3
KLMR	**Klimovskoe**	26.97	14	*e*P	P	14 05 48.8	+5.8
KLMR				AMP		14 06 01.2	
	comp=Z,13nm,1.2s						
POLO	**Lamas de Olo**	27.21	293	*e*P	P	14 05 43.5	-2.0
PVAQ	**Vaqueiros**	27.30	284	*e*P	P	14 05 46.2	0.0
NOA	**NORSAR Array B**	27.49	344	LR	LR	14 19 02.7	
	comp=Z,66nm,19.9s,baz=255,slow=42						
PBDV	**Barranco-do-Ve**	27.49	284	*e*P	P	14 05 48.6	+0.7
AKTO	**Aktyubinsk**	27.55	47	P	P	14 05 48.5	+0.2
	comp=Z,3.4nm,0.8s,baz=246,slow=10,SNR=7.5						
ABKAR	**Akbulak array**	28.34	50	P	P	14 05 56.2	+0.8
ABKAR	**Akbulak array**	28.34	50	P	P	14 05 56.6	+1.2
EKA	**Eskdalemuir Ar**	28.41	324	P	P	14 05 54.8	-1.2
	comp=Z,2.6nm,0.5s,baz=128,slow=10,SNR=9.8						
TOA0	**Torodi Ar. Sit**	31.22	231	P	P	14 06 21.7	+0.5
TORD	**Torodi Ar. Bea**	31.22	231	P	P	14 06 21.8	+0.6
	comp=Z,7.9nm,0.8s,baz=38,slow=9.4,SNR=19						
ARCES	**ARCESS Array B**	34.29	360	P	P	14 06 47.0	-0.5
	comp=Z,2.8nm,0.8s,baz=195,slow=9.8,SNR=1.9						
KK31	**Karatay Array**	34.90	63	P	P	14 06 54.1	+1.0
KK31				IAmb	IAmb	14 07 00.8	
	comp=Z,4.0nm,0.7s						
KKAR	**Karatay Array**	34.90	63	P	P	14 06 54.7	+1.6
KKAR				IAmb	IAmb	14 07 00.8	
	comp=Z,4.0nm,0.7s						
KKAR	**Karatay Array**	34.90	63	P	P	14 06 55.0	+2.0
BRVK	**Borovoye**	35.59	46	P	P	14 07 00.0	+1.1
BRVK				IAmb	IAmb	14 07 17.7	
	comp=Z,3.8nm,0.9s						
AAK	**Ala-Archa**	37.85	64	P	P	14 07 20.8	+2.3
DBIC	**Dimbokro**	40.31	232	P	P	14 07 38.5	-0.6
	comp=Z,3.2nm,0.6s,baz=23,slow=8.4,SNR=6.4						
DBIC	**Dimbokro**	40.31	232	P	P	14 07 38.5	-0.6
TIC	**Toumodi**	40.43	233	*e*P	P	14 07 39.9	-0.3
KURK	**Kurchatov**	40.45	51	P	P	14 07 39.2	-0.7
KURK				IAmb	IAmb	14 07 44.3	
	comp=Z,8.2nm,0.8s						
KIC	**Kosan Boka**	40.47	232	*e*P	P	14 07 40.2	-0.2
	comp=Z,26nm,0.9s						
LIC	**Lamto**	40.76	232	*e*P	P	14 07 41.6	-1.2
	comp=Z,32nm,0.8s						
MAKZ	**Makanchi**	42.79	57	P	P	14 07 60.0	+0.8
MK31	**Makanchi Array**	43.00	57	P	P	14 08 02.0	+1.1
MK31				IAmb	IAmb	14 08 06.4	
	comp=Z,5.2nm,0.7s						
MKAR	**Makanchi Array**	43.00	57	P	P	14 08 02.3	+1.4
	comp=Z,6.8nm,0.6s,baz=266,slow=8.1,SNR=78						
ZAA0	**Zalesovo Array**	44.31	46	P	P	14 08 11.4	+0.1
ZAA0				IAmb	IAmb	14 08 20.7	
	comp=Z,3.9nm,0.5s						
ZALV	**Zalesovo Beam**	44.31	46	P	P	14 08 11.2	0.0
	comp=Z,3.0nm,0.4s,baz=265,slow=9.4,SNR=19						
ZALV	**Zalesovo Beam**	44.31	46	P	P	14 08 11.4	+0.1
PYUN	**Piuthan**	48.31	82	*e*P	P	14 08 44.4	+1.0
	comp=Z,19nm,0.7s						
DANN	**Dangsing**	48.83	81	*e*P	P	14 08 48.7	+1.2
	comp=Z,60nm,0.8s						
KOLN	**Koldanda**	48.94	82	*e*P	P	14 08 48.5	+0.3
	comp=Z,10nm,0.7s						
GKN	**Gorkha**	49.68	81	*e*P	P	14 08 54.8	+1.0
	comp=Z,9.0nm,0.5s						
DMN	**Daman**	50.22	81	*e*P	P	14 08 58.5	+0.4
	comp=Z,25nm,0.8s						
PKIN	**Phulchoki**	50.47	81	*e*P	P	14 09 00.6	+0.7
	comp=Z,21nm,0.9s						
PKI	**Pulchoki**	50.48	81	*e*P	P	14 09 00.4	+0.3
	comp=Z,17nm,0.8s						
GUN	**Gumba**	50.72	81	*e*P	P	14 09 02.8	+0.8
	comp=Z,30nm,0.9s						
RAMN	**Ramite**	51.70	82	*e*P	P	14 09 09.0	-0.2
	comp=Z,8.2nm,0.6s						
ODAN	**Odare**	52.38	81	*e*P	P	14 09 14.4	+0.2
	comp=Z,5.8nm,0.6s						
TAPN	**Taplejung**	52.43	81	*e*P	P	14 09 14.8	+0.1
	comp=Z,21nm,1.0s						
GTA	**Gaotai**	57.16	62	*e*P	P	14 09 49.8	+1.2
GTA				pP	sP	14 09 54.1	0.0
GTA				sP	pP	14 09 57.4	+4.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	58.75	51	P	P	14 10 01.0	+1.3
	comp=Z,1.4nm,0.6s,baz=284,slow=7.8,SNR=9.6						
BOSA	**Boshof**	63.58	181	P	P	14 10 32.6	+0.3
	comp=Z,2.1nm,0.7s,baz=343,slow=10,SNR=4.5						
KMI	**Kunming**	65.47	76	⇑P	P	14 10 46.5	+1.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	65.73	84	P	P	14 10 46.9	+0.2
	comp=Z,3.0nm,0.8s,baz=298,slow=8.1,SNR=14						
INK	**Inuvik**	75.59	352	P	P	14 11 46.1	+0.1
	comp=Z,0.5nm,0.5s,baz=28,slow=3.2,SNR=3.8						
USRK	**Ussuriysk Ar.**	76.15	45	P	P	14 11 49.6	0.0
	comp=Z,2.3nm,0.6s,baz=288,slow=4.5,SNR=10						
USRK	**Ussuriysk Ar.**	76.15	45	P	P	14 11 48.9	-0.6
KSRS	**Korea Array**	77.53	53	P	P	14 11 58.0	+0.5
	comp=Z,1.7nm,0.7s,baz=309,slow=4.8,SNR=9.9						
YKA	**Yellowknife Ar**	77.57	343	P	P	14 11 53.9	-3.3
	comp=Z,0.2nm,0.3s,baz=42,slow=5.9,SNR=8.5						
ILAR	**Eielson Array**	80.11	357	P	P	14 12 10.7	-0.5
	comp=Z,0.6nm,0.7s,baz=347,slow=3.3,SNR=4.0						
MJAR	**Matsushiro Arr**	84.61	49	P	P	14 12 36.4	+1.1
	comp=Z,1.0nm,0.7s,baz=287,slow=7.0,SNR=4.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAR	Alice Springs	117.25	101	PKP	PKPdf	14 18 46.7	-0.6
	comp=Z,0.2nm,0.6s,baz=308,slow=1.4,SNR=6.7						

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*IDC **10** 14:07:45.1±1.3, 17°.62N×148°.14E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/34, mbtmp3.6/7, Error ellipse: s-maj=40.1km s-min=23.3km az=91.0*

ISC 10 14:07:48.4±1.4, **17°.6N**±0°.2×**148°.1E**±0°.3, **h21**^{km}, **n7, σ0^s.72**/7, **mb3.8**/7, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.68	201	P	P	14 15 18.5	-0.7
	0.7nm,0.9s,baz=26,slow=8.8,SNR=1.8						
ASAR	Alice Springs	43.30	199	P	P	14 15 49.6	+0.7
	0.4nm,0.8s,baz=26,slow=6.1,SNR=3.1						
SONM	Songino Array	45.44	321	P	P	14 16 06.3	+0.4
	1.1nm,0.7s,baz=138,slow=9.3,SNR=7.1						
CMAR	Chiang Mai Arr	46.65	279	P	P	14 16 15.6	-0.2
	1.0nm,0.8s,baz=71,slow=6.2,SNR=5.4						
ZALV	Zalesovo Beam	60.28	323	P	P	14 17 54.4	-0.8
	0.9nm,0.6s,baz=113,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	60.88	314	P	P	14 17 60.0	+0.5
	0.4nm,0.5s,baz=99,slow=7.4,SNR=7.4						
YKA	Yellowknife Ar	77.88	28	P	P	14 19 44.3	0.0
	0.2nm,0.7s,baz=278,slow=4.3,SNR=3.0						

IDC 10 14:23:54.1±2.8, **6°.79S×129°.63E, h132**^{km}±38^{km}, **mb3.9**/1, **mb1 3.4**/5, **mb1mx3.2**/29, **mbtmp3.8**/5, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.2**/38, **Error ellipse: s-maj=69.3km s-min=20.7km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.11	16	P	Pn	14 25 22.5	+0.3
	1.7nm,0.3s,baz=143,slow=23,SNR=26						
SIJI				S	Sn	14 26 24.6	-6.3
	0.8nm,0.3s,baz=229,slow=19,SNR=2.7						
FITZ	Fitzroy Crossi	11.89	199	P	Pn	14 26 39.4	-0.2
	0.3nm,0.3s,baz=28,slow=11,SNR=16						
FITZ				S	Sn	14 28 45.1	-5.7
	0.2nm,0.3s,baz=41,slow=20,SNR=2.9						
WRA	Warramunga Arr	13.85	161	P	Pn	14 27 03.1	-1.9
	0.1nm,0.3s,baz=345,slow=12,SNR=4.0						
WRA				S	Sn	14 29 27.6	-10
	0.2nm,0.3s,baz=332,slow=23,SNR=4.1						
DAV	Davao City (W)	14.35	344	LR	LR	14 32 54.7	
	comp=Z,26nm,20.9s,baz=293,slow=38						
ASAR	Alice Springs	17.27	167	P	Pn	14 27 48.6	+1.2
	0.2nm,0.3s,baz=347,slow=10,SNR=29						
ASAR				S	S	14 30 53.9	-6.3
	0.1nm,0.3s,baz=321,slow=15,SNR=4.5						
MKAR	Makanchi Array	67.85	327	P	P	14 34 38.1	-0.1
	1.1nm,0.4s,baz=115,slow=7.9,SNR=6.9						

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*IASPEI **10** 14:30:10.9±0.8, 43°.07N±0°.02×74°.76E±0°.02, h18^{km}±4^{km}, Error ellipse: s-maj=3.2km s-min=2.5km az=153.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*KRNET **10** 14:30:10.8±0.1, 43°.07N×74°.75E, h21^{km}, mb3.7*

*NNC **10** 14:30:10.7±0.3, 43°.08N×74°.78E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=2.4km s-min=1.2km az=146.0*

*KNET **10** 14:30:10.0±0.4, 43°.06N×74°.77E, h20^{km}±2^{km}, ml2.5, Error ellipse: s-maj=2.9km s-min=1.9km az=174.0*

*SOME **10** 14:30:11.1, 43°.12N×74°.75E, h15^{km}*

ISC 10 14:30:11.2±0.8, **43°.06N**±0°.02×**74°.76E**±0°.01, **h18**^{km}±4^{km}, **n84, σ1^s.14**/162, **37C-28D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.07	186	⇑iP	Pg	14 30 14.5	-0.1
	baz=81						
CHMS				⇑iS	Sg	14 30 16.9	+0.1
	baz=81						
CHMS	Chumysh	0.07	186	⇑P	Pg	14 30 14.3	-0.3
	1µm,0.1s,SNR=1943						
CHMS				⇓S	Sg	14 30 16.7	-0.2
	5µm,0.2s						
USP	Ospenovka	0.28	317	⇓iP	Pg	14 30 17.0	-0.4
	baz=17						
USP				⇓iS	Sg	14 30 21.0	-0.7
	baz=17						
USP	Ospenovka	0.28	317	⇑P	Pg	14 30 17.0	-0.4
	365nm,0.1s,SNR=179						
USP				⇑S	Sg	14 30 21.0	-0.7
	2µm,0.1s						
SGDS	Sogindy	0.40	346	P	Pg	14 30 19.1	-0.4
	159nm,0.1s						
SGDS				S	Sg	14 30 24.7	-0.4
	638nm,0.2s						
KBK	Karagaybulak	0.43	161	⇑iP	Pg	14 30 19.8	-0.2
	baz=61						
KBK				⇑iS	Sb	14 30 26.2	-0.4
	baz=61						
KBK	Karagaybulak	0.43	161	P	Pb	14 30 20.0	-0.4
	276nm,0.1s,SNR=1440						
KBK				⇑S	Sb	14 30 26.8	+0.3
	852nm,0.3s						
AAK	Ala-Archa	0.47	205	⇑iP	Pg	14 30 20.4	-0.3
	baz=4.0						
AAK				⇑iS	Sg	14 30 27.1	0.0
	baz=4.0						
AAK	Ala-Archa	0.47	205	P	Pg	14 30 20.6	-0.1
	104nm,0.1s,SNR=366						
AAK				⇓S	Sb	14 30 27.2	-0.4
	298nm,0.1s						
AAK	Ala-Archa	0.47	205	⇓P	Pg	14 30 20.4	-0.3
	19nm,0.2s						
AAK				S	Sb	14 30 27.2	-0.4
	281nm,0.4s						
TKM2	Tokmak 2	0.63	103	⇓iP	Pg	14 30 22.8	-0.9
	baz=3.0						
TKM2				⇓iS	Sg	14 30 31.7	-0.5
	baz=3.0						
TKM2	Tokmak 2	0.63	103	⇓P	Pg	14 30 22.8	-0.9
	61nm,0.1s,SNR=960						
TKM2				⇑S	Sg	14 30 31.6	-0.6
	493nm,0.1s						
TKM2	Tokmak 2	0.63	103	⇑P	Pg	14 30 22.5	-1.2
	24nm,0.3s						
TKM2				⇑S	Sg	14 30 31.6	-0.6
	120nm,0.3s						
DGS	Degeres	0.76	76	eP	Pb	14 30 25.6	-0.4
	baz=77						
DGS				eS	Sb	14 30 36.0	-0.1
	baz=77						
DGS	Degeres	0.76	76	eP	Pb	14 30 25.6	-0.4
	34nm,0.1s						
DGS				eS	Sb	14 30 35.9	-0.1
	206nm,0.2s						
DGS	Degeres	0.76	76	P	Pb	14 30 25.6	-0.4
	34nm,0.1s						
DGS				S	Sb	14 30 35.9	-0.1
	206nm,0.2s						
EKS2	Erkin-Say	0.83	241	⇑iP	Pb	14 30 26.7	-0.4
	baz=41						
EKS2				⇑iS	Sg	14 30 38.2	-0.1
	baz=41						
EKS2	Erkin-Say	0.83	241	P	Pb	14 30 26.8	-0.3
	33nm,0.1s,SNR=243						
EKS2				⇑S	Sg	14 30 38.4	+0.1
	51nm,0.1s						
UCH	Uchtor	0.85	192	⇑iP	Pb	14 30 27.2	-0.6
	baz=92						
UCH				⇑iS	Sb	14 30 39.0	-0.1
	baz=92						
UCH	Uchtor	0.85	192	⇓P	Pb	14 30 27.4	-0.4
	44nm,0.1s,SNR=59						
UCH				⇑S	Sb	14 30 38.9	-0.1
	95nm,0.1s						
KST	Kastek	0.88	91	eP	Pb	14 30 27.6	-0.5
	baz=91						
KST				eS	Sb	14 30 39.0	-0.6
	baz=91						
KST	Kastek	0.88	91	eP	Pb	14 30 27.6	-0.5
	71nm,0.2s						
KST				eS	Sb	14 30 39.0	-0.6
	91nm,0.3s						
KST	Kastek	0.88	91	P	Pb	14 30 27.5	-0.5
	71nm,0.2s						
KST				S	Sb	14 30 39.0	-0.6
	91nm,0.3s						
KRBS	Karabastau	0.92	46	eP	Pb	14 30 28.3	-0.4
	baz=47						
KRBS				eS	Sg	14 30 40.4	-0.8
	baz=47						
KRBS	Karabastau	0.92	46	eP	Pb	14 30 28.3	-0.4
	9.0nm,0.1s						
KRBS				eS	Sg	14 30 40.4	-0.8
	183nm,0.2s						
KRBS	Karabastau	0.92	46	P	Pb	14 30 28.3	-0.4
	9.0nm,0.1s						
KRBS				S	Sg	14 30 40.4	-0.8
	183nm,0.2s						
BOOM	Boomskoye usch	1.04	123	⇓iP	Pb	14 30 30.4	-0.4
	baz=23						
BOOM				⇓iS	Sg	14 30 44.5	-0.6
	baz=23						
MRKS	Merke	1.17	255	eP	Pn	14 30 32.4	-0.4
	baz=54						
MRKS				eS	Sb	14 30 47.9	+0.1
	baz=54						
MRKS	Merke	1.17	255	eP	Pn	14 30 32.4	-0.4
	29nm,0.1s						
MRKS				eS	Sb	14 30 47.9	+0.1
	69nm,0.2s						
MRKS	Merke	1.17	255	P	Pn	14 30 32.4	-0.4
	29nm,0.1s						
MRKS				S	Sb	14 30 47.9	+0.1
	69nm,0.2s						
AML	Almayashu	1.22	221	⇑iP	Pn	14 30 33.6	-0.1
	baz=20						
AML				⇑iS	Sn	14 30 50.2	+0.2
	baz=20						
AML	Almayashu	1.22	221	⇓P	Pb	14 30 33.9	-0.1
	36nm,0.3s,SNR=56						
AML				⇓S	Sn	14 30 49.8	-0.1
	66nm,0.4s						
MTBS	Maitube	1.22	86	eP	Pb	14 30 33.7	-0.2
	baz=87						
MTBS				eS	Sn	14 30 49.8	+0.1
	baz=87						
MTBS	Maitube	1.22	86	eP	Pb	14 30 33.6	-0.2
	14nm,0.1s						
MTBS				eS	Sn	14 30 49.8	+0.1
	47nm,0.2s						
MTBS	Maitube	1.22	86	P	Pb	14 30 33.6	-0.2
	14nm,0.1s						
MTBS				S	Sn	14 30 49.8	+0.1
	47nm,0.2s						
ARLS	Aral	1.24	195	⇑iP	Pn	14 30 33.8	0.0
	baz=95						
ARLS				⇑iS	Sn	14 30 50.4	+0.2
	baz=95						
IZV	Izvestkoviy	1.36	91	eP	Pb	14 30 36.0	-0.2
	baz=91						
IZV				eS	Sg	14 30 54.1	-1.1
	baz=91						
IZV	Izvestkoviy	1.36	91	eP	Pb	14 30 36.0	-0.2
	29nm,0.2s						
IZV				eS	Sg	14 30 54.1	-1.1
	139nm,0.2s						
IZV	Izvestkoviy	1.36	91	P	Pb	14 30 36.0	-0.2
	29nm,0.2s						
IZV				S	Sg	14 30 54.1	-1.1
	139nm,0.2s						
ULHL	Ulahol	1.36	126	⇑iP	Pb	14 30 35.8	-0.5
	baz=26						
ULHL				⇑iS	Sg	14 30 54.3	-1.1
	baz=26						
ULHL	Ulahol	1.36	126	⇓P	Pb	14 30 36.0	-0.3
	20nm,0.1s,SNR=185						
ULHL				⇑S	Sg	14 30 54.7	-0.7
	65nm,0.2s						
KUU	Kurty	1.42	54	eP	Pb	14 30 37.0	-0.1
	baz=54						
KUU				eS	Sg	14 30 55.7	-1.3
	baz=54						
KUU	Kurty	1.42	54	eP	Pb	14 30 37.0	-0.1
	17nm,0.2s						
KUU				eS	Sg	14 30 55.7	-1.3
	122nm,0.3s						
KUU	Kurty	1.42	54	P	Pb	14 30 37.0	-0.1
	17nm,0.2s						
KUU				S	Sg	14 30 55.7	-1.3
	122nm,0.3s						
KTBS	Karatobe	1.54	64	eP	Pb	14 30 39.0	-0.3
	baz=65						
KTBS				eS	Sb	14 30 59.1	+0.5
	baz=65						
KTBS	Karatobe	1.54	64	eP	Pb	14 30 39.0	-0.3
	16nm,0.1s						
KTBS				eS	Sb	14 30 59.1	+0.5
	77nm,0.4s						
KTBS	Karatobe	1.54	64	P	Pb	14 30 39.0	-0.3
	16nm,0.1s						
KTBS				S	Sb	14 30 59.1	+0.5
	77nm,0.4s						
AAA	Alma-Ata	1.58	84	eP	Pg	14 30 40.8	-0.8
	19nm,0.1s						
AAA				eS	Sg	14 31 02.0	-0.3
	114nm,0.2s						
AAA	Alma-Ata	1.58	84	P	Pg	14 30 40.8	-0.8
	19nm,0.1s						
AAA				S	Sg	14 31 02.0	-0.3
	114nm,0.2s						
TNSS	Tian-Shan	1.60	90	eP	Pb	14 30 40.3	-0.2
	baz=90						
TNSS				eS	Sg	14 31 01.5	-1.6
	baz=90						
TNSS	Tian-Shan	1.60	90	eP	Pb	14 30 40.3	-0.2
	15nm,0.3s						
TNSS				eS	Sg	14 31 01.4	-1.6
	100nm,0.4s						
TNSS	Tian-Shan	1.60	90	P	Pb	14 30 40.3	-0.2
	15nm,0.3s						
TNSS				S	Sg	14 31 01.4	-1.6
	100nm,0.4s						
KNDC	Almaty	1.62	84	⇓P	Pg	14 30 41.2	-1.2
	60nm,0.6s						
KNDC				⇑S	Sg	14 31 02.9	-0.7
	119nm,0.5s						
MDOK	Medeo	1.68	86	eP	Pb	14 30 41.9	+0.2
	baz=86						
MDOK				eS	Sg	14 31 03.8	-1.5
	baz=86						
MDOK	Medeo	1.68	86	eP	Pb	14 30 41.9	+0.2
	10nm,0.3s						
MDOK				eS	Sg	14 31 03.8	-1.5
	80nm,0.3s						
MDOK	Medeo	1.68	86	⇓P	Pb	14 30 41.1	-0.5
	22nm,0.3s						
MDOK				⇑S	Sg	14 31 03.6	-1.7
	61nm,0.9s						
MDOK	Medeo	1.68	86	Pg	Pb	14 30 41.9	+0.2
	10nm,0.3s						
MDOK				Lg	Lg	14 31 03.8	
	80nm,0.3s						
KOTS	Kotyrbulak	1.73	84	eP	Pb	14 30 42.8	+0.3
	baz=84						
KOTS				eS	Sg	14 31 05.5	-1.5
	baz=84						
KOTS	Kotyrbulak	1.73	84	eP	Pb	14 30 42.8	+0.3
	20nm,0.3s						
KOTS				eS	Sg	14 31 05.4	-1.5
	234nm,0.5s						
KOTS	Kotyrbulak	1.73	84	P	Pb	14 30 42.8	+0.3
	20nm,0.3s						
KOTS				S	Sg	14 31 05.4	-1.5
	234nm,0.5s						
MNAS	Manas	1.76	252	⇓iP	Pb	14 30 42.2	-0.8
	baz=51						
MNAS				⇓iS	Sb	14 31 05.2	+0.4
	baz=51						
CHKK	Chushkaly	1.81	63	eP	Pb	14 30 43.3	-0.4
	baz=64						
CHKK				eS	Sb	14 31 06.9	+0.9
	baz=64						
CHKK	Chushkaly	1.81	63	eP	Pb	14 30 43.3	-0.4
	5.1nm,0.2s						
CHKK				eS	Sb	14 31 06.9	+0.9
	102nm,0.2s						
CHKK	Chushkaly	1.81	63	P	Pb	14 30 43.3	-0.4
	5.1nm,0.2s						
CHKK				S	Sb	14 31 06.9	+0.9
	102nm,0.2s						
KDJ	Kajisay	2.02	117	⇓iP	Pb	14 30 46.1	-1.3
	baz=17						
KDJ				⇓iS	Sb	14 31 11.4	-0.8
	baz=17						
BTLS	Baital	2.04	346	eP	Pb	14 30 47.6	-0.2
	21nm,0.3s						
BTLS				eS	Sb	14 31 13.9	+1.0
	123nm,0.3s						
BTLS	Baital	2.04	346	Pg	Pb	14 30 47.6	-0.2
	21nm,0.3s						
BTLS				Lg	Lg	14 31 13.9	
	123nm,0.3s						
ANVS	Anan'yevo	2.15	96	⇓iP	Pb	14 30 47.8	-2.0
	baz=97						
ANVS				⇓iS	Sb	14 31 15.1	-1.1
	baz=97						
ARSB	Arslanbob	2.18	218	⇓iP	Pb	14 30 48.6	-1.6
	baz=18						
ARSB				⇓iS	Sn	14 31 15.1	+1.7
	baz=18						
ARXS	Arharly	2.51	62	eP	Pb	14 30 55.9	+0.2
	10nm,0.2s						
ARXS				eS	Sb	14 31 27.8	+1.6
	41nm,0.4s						
ARXS	Arharly	2.51	62	Pg	Pb	14 30 55.9	+0.2
	10nm,0.2s						
ARXS				Lg	Lg	14 31 27.8	
	41nm,0.4s						
KURS	Kuram	2.53	79	eP	Pb	14 30 56.3	+0.3
	11nm,0.2s						
KURS				eS	Sb	14 31 28.8	+1.9
	23nm,0.3s						
SATY	Saty	2.67	89	eP	Pb	14 30 58.2	-0.4
	26nm,0.3s						
SATY				eS	Sb	14 31 31.7	+0.6
	60nm,0.1s						
PRZ	Przheval'sk	2.74	101	⇑iP	Pn	14 30 56.6	+2.1
	baz=1.0						
PRZ				⇑iS	Sn	14 31 29.2	+1.9
	baz=1.0						
KPKS	Kokpek	2.89	81	eP	Pb	14 31 03.2	+0.9
	27nm,0.2s						
KPKS				eS	Sg	14 31 40.7	-3.5
	49nm,0.2s						
TRKS	Terek-Say	3.09	242	⇑iP	Pn	14 31 00.7	+1.4
	baz=40						
TRKS				⇑iS	Sn	14 31 37.6	+1.8
	baz=40						
KK31	Karatay Array	3.11	272	⇓Pg	Pg	14 31 09.4	-1.4
	0.9nm,0.2s,baz=90,slow=18,SNR=30						
KK31				⇑Lg	Lg	14 31 45.8	
	4.7nm,0.3s,baz=91,slow=31,SNR=16						
SFK	Sufi-Kurgan	3.19	198	⇑iP	Pn	14 31 02.7	+2.0
	baz=98						
SFK				⇑iS	Sn	14 31 40.0	+1.6
	baz=98						
SHLS	Shalkode	3.44	87	eP	Pg	14 31 18.9	+1.7
	3.6nm,0.2s						
SHLS				eS	Sg	14 32 07.3	+5.5
	31nm,0.2s						
PDGK	Podgornoye	3.47	84	⇓Pg	Pb	14 31 12.8	+0.6
	8.1nm,0.7s						
PDGK				⇑Lg	Lg	14 31 56.1	
	8.7nm,0.7s						
DJR	Jarkent	3.86	69	eP	Pb	14 31 21.0	+2.2
	7.0nm,0.2s						
DJR				eS	Sg	14 32 10.9	-4.2
	4.7nm,0.3s						
KAPS	Kapalarasan	3.98	55	eP	Pb	14 31 22.6	+1.7
	1.0nm,0.3s						
KAPS				eS	Sg	14 32 13.5	-5.6
	10nm,0.4s						
KAPS	Kapalarasan	3.98	55	Pg	Pb	14 31 22.6	+1.7
	1.0nm,0.3s						
KAPS				Lg	Lg	14 32 13.5	
	10nm,0.4s						
MK31	Makanchi Array	6.52	52	⇑Pn	Pn	14 31 46.9	+0.7
	0.6nm,0.3s,baz=233,slow=13,SNR=38						
MK31				⇓Sn	Sn	14 32 58.5	-1.6
	0.2nm,0.2s						
MK31				⇓Lg	Lg	14 33 30.9	
	3.5nm,0.7s						

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*PRU **10** 14:37:25.9±0.0, 51°.45N×16°.12E, h0^{km}*

*IDC **10** 14:37:25.8±1.4, 51°.43N×16°.19E, h0^{km}, mb1 3.5/3, mb1mx3.2/32, mbtmp3.3/3, ML2.4/3, Error ellipse: s-maj=47.6km s-min=11.0km az=117.0*

*VIE **10** 14:37:26.4±1.1, 51°.38N×16°.09E, h0^{km}, mb2.2/2, ml2.6/4, Error ellipse: s-maj=13.7km s-min=6.9km az=53.0   72 km WNW of Wroclaw Suspected Mining induced.*

ISC 10 14:37:24.1±0.8, **51°.50N**±0°.04×**16°.14E**±0°.03, **h0**^{km}, **n29, σ1^s.02**/51, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	172	i Pg	Pg	14 37 37.7	+0.8
KSP				eSg	Sg	14 37 46.2	+0.7
CHVC	Chvalec	0.92	183	ePG	Pb	14 37 42.5	-0.4
CHVC				eSG	Sg	14 37 54.0	+0.5
	comp=Z,25nm,0.3s						
OSTC	Ostas	0.95	177	ePG	Pb	14 37 43.1	-0.3
OSTC				eSG	Sg	14 37 54.6	+0.1
	comp=Z,26nm,0.4s						
UPC	Upice	1.00	185	ePG	Pb	14 37 43.8	-0.5
UPC				eSG	Sg	14 37 56.3	+0.1
DPC	Dobruska-Polom	1.16	174	ePG	Pg	14 37 46.5	+0.2
DPC				eSG	Sg	14 38 01.0	-0.3
	comp=Z,25nm,0.5s						
PVCC	Panska Ves	1.39	226	ePG	Pb	14 37 50.9	0.0
PVCC				eSG	Sg	14 38 08.7	-0.1
	comp=Z,86nm,0.3s						
KRLC	Kraliky	1.49	164	ePG	Pb	14 37 52.8	+0.2
KRLC				eSG	Sg	14 38 11.3	-0.5
	comp=Z,32nm,0.5s						
BRG	Berggiesshubel	1.52	246	Pg	Pg	14 37 53.4	+0.2
BRG				Sg	Sn	14 38 13.5	+0.5
BRG				Amp		14 38 14.2	
	comp=Z,27nm,0.5s						
BRG	Berggiesshubel	1.52	246	Pg	Pg	14 37 53.4	+0.2
BRG				Sg	Sn	14 38 13.5	+0.5
BRG				Amp		14 38 14.2	
	comp=Z,27nm,0.5s						
PRU	Pruhonice	1.83	214	ePG	Pb	14 37 58.2	-0.1
PRU				eSG	Sg	14 38 22.5	-0.2
	comp=Z,17nm,0.5s						
MORC	Moravsky Berou	1.94	152	ePN	Pn	14 37 58.5	+0.1
MORC				eSG	Sb	14 38 25.5	+0.3
CLL	Collm	1.98	266	eSg	Sg	14 38 28.0	+0.5
CLL	Collm	1.98	266	ePn	Pn	14 37 59.0	+0.2
CLL	Collm	1.98	266	ePg	Pb	14 38 01.0	+0.1
CLL	Collm	1.98	266	e	Pg	14 38 05.0	+3.1
OKC	Ostrava-Krasne	2.10	142	eSG	Sb	14 38 30.2	+0.6
	comp=Z,32nm,0.7s						
VRAC	Vranov	2.22	172	ePN	Pn	14 38 03.0	+0.9
VRAC				eSG	Sb	14 38 34.0	+1.0
KRUC	Moravsky	2.45	176	ePN	Pn	14 38 06.4	+1.1
KRUC				eSG	Sg	14 38 41.5	-1.2
OJC	Ojcow	2.65	118	ePg	Pg	14 38 16.5	+1.6
OJC				eSg	Sg	14 38 51.3	+2.2
NKC	Novy Kostel	2.66	243	ePG	Pg	14 38 15.2	+0.1
NKC				eSG	Sg	14 38 50.6	+1.0
	comp=Z,17nm,0.4s						
KHC	Kasperske Hory	2.89	216	ePN	Pn	14 38 11.6	+0.3
KHC				ePG	Pb	14 38 17.2	+0.7
KHC				eSN	Sn	14 38 45.6	-1.2
KHC				eSG	Sg	14 38 56.5	-0.3
	comp=Z,8.2nm,0.4s						
GERES	GERESS Array B	3.09	211	Pn	Pn	14 38 15.1	+1.0
	comp=Z,0.4nm,0.3s,baz=26,slow=11,SNR=2.0						
GERES				Pg	Pb	14 38 21.1	+1.2
	comp=Z,1.8nm,0.3s,baz=31,slow=17,SNR=12						
GERES				Lg	Lg	14 39 03.1	
	comp=Z,2.0nm,0.3s,baz=33,slow=29,SNR=4.1						
LANS	Liptovska Anna	3.18	137	ePG	Pg	14 38 26.2	+1.3
LANS				eSG	Sg	14 39 05.6	-0.5
MODS	Modra-Piesok	3.22	166	ePG	Pg	14 38 26.9	+1.2
MODS				e		14 39 07.8	
CONA	Conrad Observa	3.58	183	i Pn	Pn	14 38 21.5	+0.6
	comp=Z,0.4nm,0.1s						
CONA				eSg	Sg	14 39 18.4	-0.8
	comp=Z,1.8nm,0.1s						
MOA	Molln	3.85	199	eSg	Sg	14 39 27.4	-0.4
	comp=Z,1.0nm,0.1s						
ARSA	Arzberg	4.28	186	ePn	Pn	14 38 31.1	+0.7
	comp=Z,1.0nm,0.2s						
ARSA				Sg	Sg	14 39 39.7	-1.7
	comp=Z,3.8nm,0.5s						
FINES	FINESS Array B	11.36	25	Pn	Pn	14 40 05.9	-1.5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,0.1nm,0.3s,baz=229,slow=12,SNR=3.9						
ARCES	ARCESS Array B	18.63	10	Pn	P	14 41 39.8	-3.0
	baz=197,slow=12,SNR=3.2						

NOU ***10*** *14:42:31.5, 4°.95S×147°.33E, h186^{km}, mb4.0, Bismarck Sea*

IDC ***10*** *14:42:37.8±1.9, 5°.47S×147°.14E, h204^{km}±15^{km}, mb3.6/4, mb1 3.8/8, mb1mx3.4/31, mbtmp4.2/8, MS3.8/1, Ms1 3.8/1, ms1mx2.6/25, Error ellipse: s-maj=29.2km s-min=18.5km az=80.0*

NEIC ***10*** *14:42:38.2±0.7, 5°.55S±0°.08×147°.2E±0°.1, h201^{km}±18^{km}, mb4.3/11, Error ellipse: s-maj=18.0km s-min=9.5km az=118.0*

ISC 10 14:42:37.4±0.8**, 5°.51S**±0°.08×**147°.14E**±0°.09**, h195**^{km}**, n28,** σ**0ˢ.73**/29**, mb4.1**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.45	4	Pn	Pn	14 43 34.0	+1.8
PMG	Port Moresby	3.88	180	P	Pn	14 43 38.0	+0.5
	27nm,0.3s,baz=334,slow=6.3,SNR=121						
PMG				S	Sn	14 44 23.5	-1.2
	13nm,0.3s,baz=212,slow=21,SNR=11						
PMG	Port Moresby	3.88	180	P	Pn	14 43 38.0	+0.5
RABL	Rabaul	5.17	76	Pn	Pn	14 43 54.6	+0.6
JAY	Jayapura	7.07	295	P	Pn	14 44 18.4	-0.3
	2.2nm,0.3s,baz=155,slow=4.6,SNR=26						
COEN	Coen	9.26	205	Pn	Pn	14 44 48.3	+1.1
HNR	Honiara	13.29	108	P	P	14 45 41.7	0.0
CTA	Charters Tower	14.52	183	P	P	14 45 56.4	+1.0
	0.4nm,0.3s,baz=6.3,slow=14,SNR=6.6						
CTAO	Charters Tower	14.52	183	P	P	14 45 56.4	+1.0
MTN	Manton Dam	17.39	244	P	P	14 46 27.4	+0.4
WB0	Warramunga Arr	18.84	220	P	P	14 46 43.1	+0.3
WR0	Warramunga Arr	18.88	219	P	P	14 46 43.6	+0.3
WR0				IAmb	IAmb	14 46 44.9	
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	18.98	220	P	P	14 46 45.0	+0.6
WRAB				IAmb	IAmb	14 46 48.8	
	comp=Z,10nm,0.9s						
WB2	Warramunga Arr	18.99	220	P	P	14 46 44.7	+0.3
WRA	Warramunga Arr	19.00	220	P	P	14 46 44.9	+0.3
	comp=Z,2.0nm,0.3s,baz=40,slow=11,SNR=49						
WRA	Warramunga Arr	19.00	220	P	P	14 46 43.3	-1.2
EIDS	Eidsvold	20.11	170	P	P	14 46 57.0	+0.6
EIDS				IAmb	IAmb	14 46 57.6	
	comp=Z,10nm,1.1s						
SANVU	Saraoutou	22.04	118	P	P	14 47 16.8	+0.1
SANVU				IAmb	IAmb	14 47 19.5	
	comp=Z,13nm,1.1s						
AS31	Alice Springs	22.10	214	P	P	14 47 17.5	+0.4
AS31				IAmb	IAmb	14 47 27.1	
	comp=Z,4.0nm,0.3s						
ASAR	Alice Springs	22.10	214	P	P	14 47 17.5	+0.3
	comp=Z,2.3nm,0.3s,baz=50,slow=7.7,SNR=74						
ASAR				S	S	14 51 06.4	-0.2
	comp=Z,0.4nm,0.9s,baz=36,slow=22,SNR=3.7						
ASAR	Alice Springs	22.10	214	P	P	14 47 17.1	-0.1
FITZ	Fitzroy Crossi	24.44	237	P	P	14 47 38.8	+0.3
	comp=Z,4.8nm,0.4s,baz=46,slow=13,SNR=40						
ARMA	Armidale	25.14	171	P	P	14 47 43.9	-0.9
ARMA				IAmb	IAmb	14 47 47.7	
	comp=Z,4.0nm,0.8s						
STKA	Stephens Creek	26.75	191	P	P	14 47 58.4	-0.6
	comp=Z,3.0nm,0.9s,baz=358,slow=12,SNR=3.7						
STKA	Stephens Creek	26.75	191	P	P	14 47 58.7	-0.3
MSVF	Nonsavu	32.56	115	LR	LR	14 59 02.4	
	comp=Z,177nm,21.1s,baz=19,slow=30						
VNDA	Vanda	72.39	177	P	P	14 53 41.1	-0.6
	comp=Z,0.6nm,0.6s,baz=326,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	77.21	320	P	P	14 54 09.0	-0.9
	comp=Z,0.1nm,0.3s,baz=94,slow=6.8,SNR=1.3						

GUC ***10*** *14:44:23.5±0.7, 34°.31S×72°.86W, h30^{km}±3^{km}, ML3.9*

SJA ***10*** *14:44:25.8±0.6, 34°.11S×72°.45W, h12^{km}±4^{km}, ML3.7, MW4.0*

ISC 10 14:44:21.9±2.3**, 34°.27S**±0°.06×**72°.84W**±0°.09**, h6**^{km}±13^{km}**, n30,** σ**1ˢ.68**/43**, 4C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	Pichilemu	0.76	108	*e*P	Pg	14 44 37.0	+0.5
BO03				*i* S	Sg	14 44 46.9	+0.5
BO03				IAML		14 44 48.2	
	comp=E,18μm,0.3s						
VA05	Santo Domingo	1.19	60	*e*P	Pb	14 44 44.5	-0.3
VA05				*i* S	Sb	14 44 59.8	-0.6
VA05				IAML		14 45 04.9	
	comp=N,3μm,0.4s						
MT09	Talagante	1.61	73	⇑*i*P	Pn	14 44 50.1	-0.9
MT09				IAML		14 45 19.4	
	comp=N,1μm,0.3s						
MT02	Curacav	1.74	55	⇑*i*P	Pn	14 44 52.1	-0.5
MT02				IAML		14 45 29.5	
	comp=N,645nm,0.7s						
BO02	Sierra Bellavi	1.78	108	*e*P	Pn	14 44 52.8	-0.4
BO02				*i* S	Sn	14 45 15.8	-0.5
MT05	Renca	1.95	64	*e*P	Pn	14 44 56.0	+0.3
MT05				*i* S	Sn	14 45 20.6	+0.1
MT05				IAML		14 45 27.6	
	comp=E,936nm,0.4s						
ROC1	El Roble	1.99	50	*e*P	Pn	14 44 56.6	+0.2
ROC1				*e*S	Sn	14 45 20.0	-1.8
ROCH	El Roble	2.00	50	⇑*i*P	Pn	14 44 56.4	0.0
MT03	Universidad Ad	2.08	69	*e*P	Pn	14 44 57.5	0.0
PEL	Peldehue	2.12	59	*e*P	Pn	14 44 58.4	+0.5
PEL				*i* S	Sn	14 45 24.5	0.0
PEL	Peldehue	2.12	59	*e*P	Pn	14 44 59.4	+1.5
PEL				*e*S	Sn	14 45 22.3	-2.2
LMEL	Las Melosas	2.23	80	*e*P	Pn	14 44 59.7	+0.2
LMEL				*i* S	Sn	14 45 27.4	-0.1
LMEL				IAML		14 45 37.1	
	comp=N,1μm,0.8s						
VA03	San Esteban	2.43	53	*e*P	Pn	14 45 02.8	+0.6
VA03				*i* S	Sn	14 45 32.4	+0.1
BI03	Tigo	2.58	183	*e*P	Pn	14 45 03.4	-0.7
PUMA	Malargue	3.04	115	*e*P	Pn	14 45 13.7	+3.1
LAMA	Las Malvinas	3.07	104	*e*P	Pn	14 45 13.0	+2.0
CO02	Combarbal	3.42	27	*e*P	Pn	14 45 16.8	+0.9
CO02				*i* S	Sn	14 45 56.5	-0.4
AUSP	Uspallata	3.54	56	*e*P	Pn	14 45 20.3	+2.7
AAGR	Agrelo	3.55	72	*e*P	Pb	14 45 22.3	-2.8
AAGR				IAML		14 46 22.6	
	comp=Z,87nm,1.8s						
ARCO	CERRO ARCO	3.56	68	*e*P	Pb	14 45 24.6	-0.8
ARCO				IAML		14 46 22.6	
	comp=Z,162nm,0.8s						
RFA	San Rafael	3.65	99	*e*P	Pn	14 45 20.6	+1.7
RFA				IAML		14 46 18.4	
	comp=Z,184nm,1.5s						
ASAL	Salagasta	3.74	65	*e*P	Pb	14 45 25.4	-3.0
ASAL				IAML		14 46 26.5	
	comp=Z,94nm,0.8s						
CO03	El Pedregal	3.87	29	*e*P	Pn	14 45 23.1	+1.1
CO03				*i* S	Sn	14 46 07.7	-0.2
ZON	Zonda	4.43	53	*e*P	Pn	14 45 34.2	+4.5
ZON				IAML		14 46 57.4	
	comp=Z,56nm,1.1s						
GO04	Tololo Observa	4.43	24	⇑*i*P	Pn	14 45 30.5	+0.6
GO04				*i* S	Sn	14 46 21.1	-0.8
GO04	Tololo Observa	4.43	24	*e*P	Pn	14 45 30.5	+0.6
GO04				*e*S	Sn	14 46 21.3	-0.7
ACCO	Cerro Coronel	4.86	42	*e*P	Pn	14 45 38.4	+2.6
ACCO				*e*S	Sn	14 46 38.1	+5.4
ACCO				IAML		14 47 11.4	
	comp=Z,82nm,1.0s						
AROD	Rodeo	4.98	36	*e*P	Pn	14 45 40.4	+2.8
VCA	Vinchina	6.78	37	*e*P	Pn	14 46 04.8	+2.7
VCA				IAML		14 47 53.2	
	comp=Z,69nm,0.8s						
ACLC	CERRO LA CRUZ	6.95	48	*e*P	Pn	14 46 04.9	+0.4
ACLC				IAML		14 47 50.4	
	comp=Z,36nm,1.2s						

IDC ***10*** *14:52:52.6±3.2, 8°.97S×106°.29E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.5/40, mbtmp3.6/5, Error ellipse: s-maj=158.2km s-min=25.6km az=48.0*

DJA ***10*** *14:53:06.5±0.5, 8°S±4°×10°8E±°, h30^{km}±6^{km}, M3.9/12, MLv3.9/12*

ISC 10 14:53:06.6±1.0**, 8°.26S**±0°.08×**108°.05E**±0°.05**, h35**^{km}**, n19,** σ**1ˢ.49**/18**, mb3.4**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.62	40	P	Pn	14 53 19.5	+0.6
CMJI				S	Sn	14 53 28.6	+1.0
CISI	Cisompet, Garu	0.74	342	P	Pn	14 53 20.6	0.0
CISI				S	Sn	14 53 30.9	+0.2
KPJI	Karang Pucung	1.27	44	P	Pn	14 53 27.9	0.0
KPJI				S	Sn	14 53 41.2	-2.6
LEM	Lembang	1.49	343	P	Pn	14 53 31.2	+0.1
DBJI	Dramaga	2.13	323	P	Pn	14 53 40.2	+0.4
UGM	Wanagama	2.48	82	P	Pn	14 53 44.5	0.0
SMRI	Semarang	2.66	63	P	Pn	14 53 46.5	-0.5
CGJI	Cibinong	2.85	305	P	Pn	14 53 49.3	-0.4
PWJI	Pagerwojo	3.73	87	P	Pn	14 54 01.7	0.0
KASI	Kota Agung	4.45	307	P	Pn	14 54 11.2	-0.5
KLSI		4.84	317	P	Pn	14 54 17.1	0.0
FITZ	Fitzroy Crossi	19.70	122	P	Pn	14 57 38.1	+3.3
	1.6nm,0.8s,baz=289,slow=8.3,SNR=6.9						
WRA	Warramunga Arr	27.97	117	P	P	14 58 57.0	+2.8
	0.4nm,0.6s,baz=288,slow=11,SNR=4.5						
ASAR	Alice Springs	29.12	125	P	P	14 59 02.9	-1.6
	0.3nm,0.8s,baz=300,slow=8.8,SNR=3.3						
H08S2	Diego Garcia H	35.21	268	T	T	15 37 12.1	
	baz=93,slow=76,SNR=43						
H08S3	Diego Garcia H	35.22	268	T	T	15 37 03.6	
	baz=93,slow=76,SNR=31						
H08S1	Diego Carcia H	35.23	268	T	T	15 37 13.5	
	baz=93,slow=76,SNR=30						
STKA	Stephens Creek	39.03	132	P	P	15 00 28.4	-1.7
	4.1nm,1.1s,baz=315,slow=9.1,SNR=5.9						
MKAR	Makanchi Array	59.42	340	P	P	15 02 57.6	-8.1
	0.2nm,0.5s,baz=152,slow=8.0,SNR=5.2						

IDC ***10*** *14:57:41.1±6.5, 37°.93N×135°.47E, h349^{km}±119^{km}, mb1 2.7/4, mb1mx2.4/46, mbtmp3.4/4, Error ellipse: s-maj=59.9km s-min=23.5km az=155.0*

JMA ***10*** *14:57:41.4±0.6, 37°.61N×135°.56E, h361^{km}±5^{km}, M3.2*

ISC 10 14:57:39.5±1.5**, 37°.77N**±0°.10×**135°.5E**±0°.1**, h366**^{km}**, n15,** σ**1ˢ.82**/19**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSZ	Suzu	1.50	102	P	Pn	14 58 30.6	+1.3
JNG	Nsakai	2.48	123	P	Pn	14 58 36.7	+0.8
MAT	Matsushiro	2.48	119	P	Pn	14 58 36.7	+0.9
MJAR	Matsushiro Arr	2.48	119	P	Pn	14 58 37.6	+1.7
	0.1nm,0.3s,baz=303,slow=9.3,SNR=7.6						
JWT	Wachi	2.48	182	P	Pn	14 58 36.0	0.0
JAG	Ashikaga	3.42	112	P	Pn	14 58 44.9	+0.9
JAG				*e*S	S	14 59 33.4	-2.5
JIE	Ise	3.51	164	P	Pn	14 58 45.7	+0.9
JFT	Otama	3.84	92	P	Pn	14 58 49.9	+2.0
JMM	Marumori	4.18	87	P	Pn	14 58 53.1	+1.8
JFK	Kawauchi	4.28	94	P	Pn	14 58 53.5	+1.2
JFK				*e*S	S	14 59 49.0	-2.2
JRG	Rokugo	4.33	66	P	Pn	14 58 55.5	+2.8
JMK	Ichinoseki	4.64	74	P	Pn	14 58 58.0	+2.1
JMK				*e*S	S	14 59 57.9	+0.1
KSRS	Korea Array	6.04	269	P	Pn	14 59 10.8	-0.5
	0.1nm,0.3s,baz=87,slow=11,SNR=5.9						
USRK	Ussuriysk Ar.	6.95	339	P	Pn	14 59 22.5	+0.9
	baz=149,slow=11,SNR=8.6						
ASAJ	Asahikawa	8.30	38	P	Pn	14 59 38.0	+0.8
	0.5nm,0.3s,baz=230,slow=12,SNR=8.4						
ASAJ				S	S	15 01 10.2	-3.4
	0.3nm,0.3s,baz=342,slow=20,SNR=1.9						

SJA ***10*** *14:57:58.9±0.6, 24°.27S×66°.96W, h205^{km}±4^{km}, ML4.5, MW4.4*

NEIC ***10*** *14:57:58.8±2.3, 24°.27S±0°.07×66°.82W±0°.09, h172^{km}±6^{km}, Error ellipse: s-maj=12.5km s-min=9.7km az=85.0*

IDC ***10*** *14:57:60.0±0.9, 24°.20S×66°.78W, h175^{km}±7^{km}, mb4.0/12, mb1 4.2/18, mb1mx4.1/31, mbtmp4.6/18, MS3.1/2, Ms1 3.0/2, ms1mx2.7/24, Error ellipse: s-maj=15.3km s-min=10.1km az=43.0*

VAO ***10*** *14:58:00.4±0.3, 24°.16S×66°.99W, h201^{km}±5^{km}, mb4.4*

ISC 10 14:57:59.9±0.6**, 24°.27S**±0°.04×**67°.00W**±0°.03**, h181**^{km}±5^{km}**, n184,** σ**1ˢ.39**/182**, mb4.6**/44**, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.44	109	*e*P	Pn	14 58 33.3	+1.8
SLA				*e*S	Sn	14 58 58.1	+2.2
AZAP	Zapla	1.77	89	*e*P	Pn	14 58 36.0	+1.2
AZAP				*e*S	Sn	14 59 03.5	+1.7
HJA	Humahuaca	1.80	54	*e*P	Pn	14 58 36.8	+1.5
HJA				*e*S	Sn	14 59 04.6	+1.9
FSA	Cafayete	2.06	154	*e*P	Pn	14 58 39.1	+1.3
FSA				*e*S	Sn	14 59 08.9	+1.6
ASTB	Santa Barbara	2.35	83	*e*P	Pn	14 58 41.9	+0.9
ASTB				*e*S	Sn	14 59 13.7	+0.8
LVC	Limon Verde	2.41	313	P	Pn	14 58 43.5	+1.6
	267nm,0.3s,baz=126,slow=7.6,SNR=1734						
LVC				S	Sn	14 59 16.2	+1.6
	356nm,0.3s,baz=310,slow=18,SNR=51						
LVC				LR	LR	14 59 33.6	
	comp=Z,436nm,18.6s,baz=171,slow=37						
LVC	Limon Verde	2.41	313	*e*P	Pn	14 58 43.5	+1.6
LVC				*e*S	Sn	14 59 16.2	+1.6
LVC				IAML		14 59 17.3	
	comp=Z,796nm,0.6s						
LVC	Limon Verde	2.41	313	*e*P	Pn	14 58 43.3	+1.4
LVC				*e*S	Sn	14 59 15.8	+1.2
YJA	Yavi	2.49	34	*e*P	Pn	14 58 44.4	+1.4
YJA				*e*S	Sn	14 59 18.1	+1.6
GO02	Mina Guanaco	2.52	249		Pn	14 58 44.7	+1.6
AHML	Horco Molle	2.92	149	*e*P	Pn	14 58 49.2	+1.5
AHML				*e*S	Sn	14 59 26.2	+1.1
PB14	IPOC Station P	3.12	263		Pn	14 58 51.1	+0.8
PB14	IPOC Station P	3.12	263	*e*P	Pn	14 58 51.2	+0.8
PB14				*e*S	Sn	14 59 29.2	-0.4
PB14				IAML		14 59 32.8	
	comp=Z,778nm,0.4s						
AC02	Maricunga	3.20	216		Pn	14 58 53.5	+2.0
PB09	IPOC Station P	3.21	320		Pn	14 58 53.0	+1.7
PB09	IPOC Station P	3.21	320	*e*P	Pn	14 58 52.8	+1.5
PB09				*e*S	Sn	14 59 32.3	+0.8
PB09				IAML		14 59 37.0	
	comp=Z,1μm,1.3s						
PB05	IPOC Station P	3.26	295	*e*P	Pn	14 58 52.6	+0.8
PB05				*e*S	Sn	14 59 31.3	-1.1
PB05				IAML		14 59 38.7	
	comp=Z,1μm,0.4s						
PB10	IPOC Station P	3.34	282		Pn	14 58 53.9	+1.2
PB10	IPOC Station P	3.34	282	*e*P	Pn	14 58 53.9	+1.2
PB10				*e*S	Sn	14 59 33.1	-0.8
PB10				IAML		14 59 38.2	
	comp=Z,1μm,0.3s						
PB03	IPOC Station P	3.36	311	*e*P	Pn	14 58 54.0	+0.8
PB03				*e*S	Sn	14 59 33.7	-1.0
PB03				IAML		14 59 35.1	
	comp=Z,2μm,0.2s						
PB04	IPOC Station P	3.48	303		Pn	14 58 55.2	+0.6
PB04	IPOC Station P	3.48	303	*e*P	Pn	14 58 55.6	+1.0
PB04				*e*S	Sn	14 59 36.4	-0.9
PB04				IAML		14 59 40.7	
	comp=Z,2μm,0.2s						
PB07	IPOC Station P	3.67	313		Pn	14 58 57.4	+0.3
AC01	Pan de Azucar	3.76	239	Pn	Pn	14 58 57.9	0.0
CYA	Choya	4.29	166	*e*P	Pn	14 59 06.0	+1.2
CYA				*e*S	Sn	14 59 56.4	+0.7
GO03	Copiap	4.41	221	Pn	Pn	14 59 06.2	-0.1
GO03	Copiap	4.41	221	*e*P	Pn	14 59 06.5	+0.2
GO03				*e*S	Sn	14 59 57.2	-1.2
PATCX	Punta Patache	4.50	319		Pn	14 59 07.8	+0.3
PB08	IPOC Station P	4.56	334		Pn	14 59 09.5	+0.9
VCA	Vinchina	4.58	193	*e*P	Pn	14 59 11.2	+2.6
VCA				*e*S	Sn	15 00 06.4	+3.9
TA01	Diego Aracena	4.71	321	Pn	Pn	14 59 09.6	-0.6
GO01	Chusmiza	5.01	336		Pn	14 59 14.8	+0.3
ACLC	CERRO LA CRUZ	5.14	180	*e*P	Pn	14 59 16.3	+0.6
ACLC				*e*S	Sn	15 00 15.6	+0.1
AC04	Llanos de Chal	5.36	222	Pn	Pn	14 59 18.0	-0.6
AC05	El Transito	5.41	212		Pn	14 59 19.1	-0.3
PSGCX	Pisagua	5.48	327	Pn	Pn	14 59 18.1	-2.0
MNMC	Minye Minye	5.65	334		Pn	14 59 21.3	-1.3
LCO	Las Campanas	5.77	214	Pn	Pn	14 59 23.1	-1.0
APLL	PUNTA DE LOS L	6.12	176	*e*P	Pn	14 59 28.2	-0.3
APLL				IAML		15 00 38.9	
	comp=Z,101nm,0.8s						
ACDV	Cuesta del Vie	6.18	197	*e*P	Pn	14 59 30.4	+1.1
AROD	Rodeo	6.28	200	*e*P	Pn	14 59 32.1	+1.3
AROD				*e*S	Sn	15 00 42.2	-0.2
CO01	Juntas del Tor	6.32	205		Pn	14 59 31.7	+0.5
PB16	IPOC Station P	6.35	338	Pn	Pn	14 59 31.4	-0.6
ACCO	Cerro Coronel	6.56	196	*e*P	Pn	14 59 35.0	+0.5
ACCO				*e*S	Sn	15 00 49.3	+0.2
ACCO				IAML		15 00 50.4	
	comp=Z,43nm,1.7s						
GO04	Tololo Observa	6.79	209	Pn	Pn	14 59 35.8	-1.6
RTLL	Cerro Villicun	7.16	190	*e*P	Pn	14 59 41.8	-0.2
RTLL				*e*S	Sn	15 01 00.0	-2.9
RTLL				IAML		15 01 04.0	
	comp=Z,42nm,0.3s						
CO03	El Pedregal	7.32	206	Pn	Pn	14 59 42.8	-1.5
TCA	Tanti	7.36	164	*e*P	Pn	14 59 44.1	-0.7
TCA				*e*S	Sn	15 01 04.3	-3.5
TCA				*e*S		15 01 06.4	
ZON	Zonda	7.40	191	Pn	Pn	14 59 44.0	-1.3
ZON	Zonda	7.40	191	*e*P	Pn	14 59 45.2	-0.1
ZON				*e*S	Sn	15 01 06.0	-2.8
RTCV	Cerro Valdivia	7.69	190	*e*S	Sn	15 01 12.5	-3.0
CO02	Combarbal	7.77	206		Pn	14 59 48.0	-2.1
RTLS	Leoncito	7.77	195	*e*P	Pn	14 59 50.9	+0.5
CPUP	Villa Florida	8.99	105	P	Pn	15 00 05.2	-0.9
	comp=Z,0.6nm,0.3s,baz=288,slow=12,SNR=29						
CPUP	Villa Florida	8.99	105	Pn	Pn	15 00 04.4	-1.7
VA03	San Esteban	9.02	199		Pn	15 00 05.8	-0.8
ROC1	El Roble	9.37	201		Pn	15 00 09.6	-1.7
PEL	Peldehue	9.42	199	Pn	Pn	15 00 12.4	+0.6
MT02	Curacav	9.67	201		Pn	15 00 12.1	-2.9
SIV	San Ignacio	9.94	35	P	Pn	15 00 16.7	-2.0
	comp=Z,7.4nm,0.3s,baz=224,slow=12,SNR=129						
SIV				S	Sn	15 01 55.1	-14
	baz=240,slow=17,SNR=2.0						
ITQB	Itaqui	10.70	122	*e*P	Pn	15 00 29.7	+1.1
BO02	Sierra Bellavi	10.99	197	Pn	Pn	15 00 31.2	-1.1
AQDB	Aquidauana	11.11	72	*e*P	Pn	15 00 31.8	-2.1
PTLB	Pontes e Lacer	11.47	42	*e*P	Pn	15 00 36.7	-1.9
VILB	Vilhena	12.96	31	*e*P	Pn	15 00 57.5	-0.1
TRCB	Terra Rica	13.26	87	*e*P	P	15 01 01.8	-3.0
CPSB	Cacapava Do Su	13.51	120	*e*P	Pn	15 01 03.4	-1.0
PTGB	Pitanga	13.61	95	*e*P	P	15 01 07.5	-1.2
ITAB	Concordia	13.72	106	*e*P	P	15 01 09.1	-0.7
PLTB	Pedras Altas	13.98	125	*e*P	Pn	15 01 09.0	-1.3
ETMB	Extrema	14.39	3	*e*P	Pn	15 01 13.0	-2.5
PCMB	Pacaembu	14.74	83	*e*P	P	15 01 20.3	-0.8
LC01	Cunco	15.16	195	P	Pn	15 01 25.2	+0.4
LC01				IAmb	IAmb	15 01 33.6	
	comp=Z,21nm,1.0s						
CNLB	Canela	15.27	113	*e*P	P	15 01 25.4	-1.6
NNA	Nana	15.37	321	P	P	15 01 29.2	+1.0
	comp=Z,2.4nm,0.3s,baz=157,slow=16,SNR=3.1						
SAML	Samuel	15.66	14		Pn	15 01 29.3	-1.7
SAML				IAmb	IAmb	15 01 31.4	
	comp=Z,13nm,0.7s						
SAML	Samuel	15.66	14	*e*P	Pn	15 01 29.4	-1.7
ITRB	Iturama	16.09	77	*e*P	Pn	15 01 33.9	-2.4
ARAG	Araguaiana, MT	16.61	62	*e*P	Pn	15 01 40.7	-1.9
PLCA	Paso Flores	16.69	189	P	P	15 01 43.4	+0.8
	comp=Z,0.8nm,0.3s,baz=10,slow=13,SNR=31						
PLCA				LR	LR	15 09 10.1	
	comp=Z,47nm,21.4s,baz=338,slow=40						
PLCA	Paso Flores	16.69	189	P	P	15 01 43.1	+0.5
PLCA				IAmb	IAmb	15 01 51.6	
	comp=Z,18nm,0.7s						
PLCA	Paso Flores	16.69	189	*e*P	P	15 01 43.1	+0.5
BB19B	Bebedouro	17.34	83	*e*P	Pn	15 01 49.1	-2.2
PET01	Itanhaem-SP	17.98	94	*e*P	Pn	15 01 56.6	-2.2
VAO	Valinhos	18.40	90	*e*P	P	15 02 00.9	-0.6
IPMB	Ipameri, GO	18.60	74	*e*P	P	15 02 02.9	-0.7
LL01	San Ignacio de	18.61	193	P	P	15 02 04.2	+0.7
SNDB	Serra Nova Dou	19.27	53	*e*P	P	15 02 09.4	-1.5
PARB	Paraibuna	19.58	92	*e*P	P	15 02 12.3	-2.0
BDFB	Brasilia	19.78	68	P	P	15 02 16.1	-0.4
	comp=Z,1.7nm,0.3s,baz=240,slow=9.9,SNR=17						
BDFB	Brasilia	19.78	68	P	P	15 02 15.6	-0.9
BDFB				IAmb	IAmb	15 02 16.6	
	comp=Z,20nm,0.9s						
ATAH	Atahualpa	20.24	325	P	P	15 02 23.9	+2.2
	comp=Z,6.8nm,0.8s,baz=156,slow=8.8,SNR=6.1						
NPGB	Novo Progresso	20.44	35	*e*P	P	15 02 20.3	-3.1
BSCB	Bom Sucesso	20.77	85	*e*P	P	15 02 25.5	-1.4
PEXB	Peixe	21.46	59	*e*P	P	15 02 32.5	-1.8
ITTB	Itaituba	22.57	31	*e*P	P	15 02 42.9	-2.1
DUB01	Friburgo-RJ	22.74	89	*e*P	P	15 02 45.8	-0.9
JANB	Januaria	23.22	71	*e*P	P	15 02 48.8	-2.2
SDBA	SAO DESIDERIO	24.02	65	*e*P	P	15 02 56.8	-1.5
SMTB	Santa Maria do	24.05	54	*e*P	P	15 02 57.3	-1.3
ALF01	Guarapari-ES	24.54	87	*e*P	P	15 03 01.7	-1.3
RIB01	Linhares ES	25.17	84	*e*P	P	15 03 07.3	-1.4
GDU01	Guandu, BA	27.92	73	*e*P	P	15 03 31.2	-2.1
PMSA	Palmer Station	40.55	178	P	P	15 05 22.3	+1.2
	comp=Z,8.4nm,0.7s,baz=28,slow=5.3,SNR=5.0						
BELA	Belgrano 2	55.78	172	P	P	15 07 18.2	+0.7
VNA3	Neumayer Olymp	56.90	161	P	P	15 07 26.4	+0.9
VNA1	Neumayer--Stat	57.10	160	P	P	15 07 28.2	+1.4
VNA2	Neumayer--Watz	57.47	160	P	P	15 07 30.5	+1.1
	baz=284,slow=8.3						
SNAA	Sanae	59.10	161	P	P	15 07 41.6	+0.7
SNAA	Sanae	59.10	161	P	P	15 07 41.0	+0.2
SNAA				IAmb	IAmb	15 07 42.5	
	comp=Z,14nm,0.8s						
833A	Chaparral WMA,	60.89	327	P	P	15 07 54.5	+1.1
X51A	Calhoun	60.92	343	P	P	15 07 53.6	0.0
X48A	Hartselle	61.42	341	P	P	15 07 56.7	-0.2
W50A	Signal Mountai	61.64	343	P	P	15 07 58.0	-0.4
CPCT	Cooper Cave	61.67	344	IAmb	IAmb	15 07 59.1	
	comp=Z,11nm,0.8s						
SWET	Sewanee	61.82	342	P	P	15 07 59.4	-0.3
U54A	Nelsons Funny	62.06	347	P	P	15 08 01.1	-0.1
OXF	Oxford	62.21	339	P	P	15 08 01.6	-0.5
V48A	Smith Brothers	62.56	342	P	P	15 08 04.3	-0.2
CLTN	Cedars of Leba	62.75	342	P	P	15 08 05.6	-0.1
CLTN				IAmb	IAmb	15 08 06.2	
	comp=Z,12nm,0.7s						
WVT	Waverly	63.21	341	P	P	15 08 07.8	-1.0
TXAR	Lajitas Array	63.89	325	P	P	15 08 14.8	+1.2
	comp=Z,2.9nm,0.7s,baz=150,slow=8.6,SNR=32						
TXAR	Lajitas Array	63.89	325	P	P	15 08 14.2	+0.7
ABTX	Abilene, Hawle	64.58	330	IAmb	IAmb	15 08 18.9	
	comp=Z,9.0nm,1.0s						
WCI	Wyandotte Cave	64.75	343	P	P	15 08 17.8	-1.0
FVM	French Village	65.72	340	P	P	15 08 24.2	-0.8
QSPA	South Pole Qui	65.94	180	P	P	15 08 27.7	+1.4
QSPA				IAmb	IAmb	15 08 28.1	
	comp=Z,14nm,0.7s						
CCM	Cathedral Cave	66.04	339	P	P	15 08 27.2	+0.1
MNTX	Cornudas Mount	66.66	325	IAmb	IAmb	15 08 32.4	
	comp=Z,9.7nm,0.9s						
P40A	Paris	67.64	339	IAmb	IAmb	15 08 37.9	
	comp=Z,17nm,0.8s						
HSIG		67.77	319	P	P	15 08 39.9	+1.7
HSIG				IAmb	IAmb	15 08 41.1	
	comp=Z,14nm,1.0s						
DBIC	Dimbokro	67.89	71	P	P	15 08 38.0	-1.3
	comp=Z,2.8nm,0.9s,baz=204,slow=9.1,SNR=3.2						
121A	Cookes Peak, D	68.59	324	IAmb	IAmb	15 08 46.6	
	comp=Z,14nm,0.8s						
ANMO	Albuquerque	69.77	326	P	P	15 08 52.1	+1.4
ANMO				IAmb	IAmb	15 08 53.3	
	comp=Z,11nm,0.9s						
T25A	Trinidad	70.51	329	IAmb	IAmb	15 08 57.3	
	comp=Z,7.6nm,0.8s						
214A	Organ Pipe Nat	71.00	320	IAmb	IAmb	15 09 00.7	
	comp=Z,6.3nm,0.8s						
SDCO	Great Sand Dun	71.51	329	IAmb	IAmb	15 09 04.0	
	comp=Z,7.8nm,0.9s						
X16A	Lo Mia Camp, P	72.02	323	IAmb	IAmb	15 09 07.3	
	comp=Z,9.0nm,1.0s						
MVCO	Mesa Verde	72.56	326	IAmb	IAmb	15 09 10.2	
	comp=Z,7.2nm,0.8s						
WUAZ	Wupatki	72.79	323	IAmb	IAmb	15 09 12.0	
	comp=Z,13nm,0.8s						
BAR	Barrett	73.83	318	P	P	15 09 15.5	+0.8
BAR				IAmb	IAmb	15 09 17.6	
	comp=Z,11nm,0.9s						
U15A	North Rim	73.97	323	IAmb	IAmb	15 09 19.1	
	comp=Z,11nm,0.9s						
PFO	Pinyon Flats O	74.34	319	P	P	15 09 19.9	+2.1

VNDA	Vanda	74.44	190	P	P	15 09 19.9	+2.4
	comp=Z,1.6nm,0.9s,baz=113,slow=4.0,SNR=4.7						
VNDA	Vanda	74.44	190	P	P	15 09 19.2	+1.6
O20A	White River Ci	74.71	328	IAmb	IAmb	15 09 22.6	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	76.04	333	P	P	15 09 28.5	+1.1
B35A	Bob, Littlefor	76.16	342	IAmb	IAmb	15 09 28.6	
	comp=Z,16nm,0.7s						
TPNV	Topopah Spring	76.55	321	IAmb	IAmb	15 09 33.7	
	comp=Z,12nm,1.1s						
TOA0	Torodi Ar. Sit	76.66	69	P	P	15 09 30.2	-1.1
TORD	Torodi Ar. Bea	76.66	69	P	P	15 09 30.4	-0.9
	comp=Z,1.9nm,0.6s,baz=258,slow=5.4,SNR=20						
TORD	Torodi Ar. Bea	76.66	69	P	P	15 09 30.2	-1.0
DUG	Dugway, Tooele	77.02	326	IAmb	IAmb	15 09 35.9	
	comp=Z,7.7nm,1.1s						
PDAR	Pinedale Array	77.38	329	P	P	15 09 36.0	+1.1
	comp=Z,1.8nm,0.7s,baz=134,slow=7.8,SNR=17						
PDAR	Pinedale Array	77.38	329	P	P	15 09 35.3	+0.4
REDW	Red Top Meadow	78.44	329	IAmb	IAmb	15 09 43.3	
	comp=Z,6.0nm,0.8s						
ULM	Lac du Bonnet	78.48	342	P	P	15 09 40.8	+0.3
	comp=Z,7.2nm,0.6s,baz=158,slow=6.7,SNR=20						
ULM	Lac du Bonnet	78.48	342	IAmb	IAmb	15 09 41.0	
	comp=Z,10nm,0.8s						
LOHW	Long Hollow	78.52	329	IAmb	IAmb	15 09 43.6	
	comp=Z,6.3nm,0.7s						
NVAR	Mina Array Bea	78.75	321	P	P	15 09 44.4	+1.8
	comp=Z,2.1nm,0.7s,baz=149,slow=6.1,SNR=17						
NVAR	Mina Array Bea	78.75	321	P	P	15 09 43.7	+1.2
FLWY	Flagg Ranch	78.92	330	IAmb	IAmb	15 09 46.3	
	comp=Z,9.1nm,0.9s						
RLMT	Red Lodge	79.08	331	IAmb	IAmb	15 09 46.1	
	comp=Z,6.4nm,0.7s						
PNTR	Pine Nut	79.94	321	IAmb	IAmb	15 09 52.0	
	comp=Z,12nm,0.8s						
PAHR	Pah Rah Range	80.23	322	IAmb	IAmb	15 09 53.4	
	comp=Z,16nm,0.9s						
HLID	Hailey	80.31	327	IAmb	IAmb	15 09 53.9	
	comp=Z,12nm,0.8s						
BOSA	Boshof	80.61	117	P	P	15 09 51.9	-1.0
	comp=Z,5.6nm,0.9s,baz=294,slow=6.0,SNR=6.2						
BOSA	Boshof	80.61	117	P	P	15 09 52.1	-0.8
MAW	Mawson	81.18	163	P	P	15 09 55.6	+0.7
	comp=Z,15nm,0.8s,baz=190,slow=5.0,SNR=16						
MAW	Mawson	81.18	163	P	P	15 09 56.1	+1.3
K05A	Summer Lake	83.11	323	IAmb	IAmb	15 10 08.2	
	comp=Z,14nm,0.8s						
F10A	Beach Ranch, E	83.44	327	IAmb	IAmb	15 10 13.2	
	comp=Z,5.1nm,0.7s						
PINE	Pine Mountain	83.85	324	IAmb	IAmb	15 10 12.0	
	comp=Z,10nm,0.8s						
C09A	Chrisman Ranch	85.23	328	IAmb	IAmb	15 10 17.8	
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	94.37	340	P	P	15 10 59.0	+0.6
	comp=Z,2.3nm,0.5s,baz=128,slow=5.4,SNR=52						
ASAR	Alice Springs	128.22	205	PKP	PKPdf	15 16 46.0	+0.6
	comp=Z,0.7nm,0.6s,baz=133,slow=1.7,SNR=8.3						
ASAR	Alice Springs	128.22	205		PKPdf	15 16 46.1	+0.7
WRA	Warramunga Arr	131.39	207	PKP	PKPdf	15 16 52.1	+0.6
	comp=Z,0.6nm,0.4s,baz=156,slow=1.8,SNR=9.7						
PETK	Petropavlovsk-	135.82	323	PKP	PKPdf	15 16 58.4	-0.3
	comp=Z,1.6nm,0.8s,baz=67,slow=4.8,SNR=6.6						
ZALV	Zalesovo Beam	143.63	28	PKP	PKPbc	15 17 11.0	+0.3
	comp=Z,5.0nm,0.5s,baz=301,slow=3.9,SNR=28						
ZALV				SKPbc	SKPbc	15 20 35.1	+0.8
	comp=Z,1.8nm,0.6s,baz=316,slow=4.1,SNR=8.3						
MKAR	Makanchi Array	146.73	40	PKPbc	PKPdf	15 17 19.4	+1.0
	comp=Z,5.0nm,0.5s,baz=332,slow=1.9,SNR=88						
MKAR				SKPbc	SKPbc	15 20 42.8	+1.1
	comp=Z,0.5nm,0.6s,baz=314,slow=2.0,SNR=4.4						
MKAR	Makanchi Array	146.73	40		PKPdf	15 17 19.2	+0.8
SONM	Songino Array	155.90	11	PKPab	PKPab	15 18 00.8	+0.7
	comp=Z,1.2nm,0.7s,baz=330,slow=4.8,SNR=6.8						
CMAR	Chiang Mai Arr	165.69	111	PKPab	PKPab	15 18 43.6	0.0
	comp=Z,1.0nm,0.8s,baz=264,slow=5.0,SNR=8.1						

IDC ***10*** *15:05:11.2±1.8, 17°.02S×174°.85W, h242km±16km, mb3.4/10, mb1 3.7/12, mb1mx3.5/39, mbtmp4.1/12, Error ellipse: s-maj=26.0km s-min=11.9km az=139.0*

NOU ***10*** *15:05:59.5, 14°.02S×172°.17W, h110km, MLv2.6, Samoa Islands*

ISC 10 15:05:12.4±0.6**, 16°.8S**±0°.1×**174°.8W**±0°.1**, h256**km**, n26, σ1ˢ72**/33**, mb3.5**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.11	46	P	Pn	15 06 17.1	-0.8
	17nm,0.3s,baz=36,slow=2.8,SNR=27						
AFI				S	S	15 07 05.8	-4.2
	63nm,0.3s,baz=153,slow=22,SNR=15						
AFI	Afiamalu	4.11	46	P	Pn	15 06 17.1	-0.8
MSVF	Nonsavu	6.88	261	P	Pn	15 06 51.0	-0.9
	0.5nm,0.3s,baz=100,slow=12,SNR=8.2						
MXZ	Matakaoa Point	21.54	195	P	P	15 09 41.0	-0.6
WMGZ	Waiomatatini S	21.76	195	P	P	15 09 43.3	-0.3
WMGZ				S	S	15 13 25.7	-0.2
HAZ	Te Kaha	21.86	196	P	P	15 09 42.8	-1.7
HAZ				S	S	15 13 29.6	+2.1
PKGZ	Pakihiroa	21.91	195	P	P	15 09 46.2	+1.2
RUGZ	Raukumara Rang	22.08	196	P	P	15 09 46.8	0.0
RUGZ				S	S	15 13 27.2	-4.1
TWGZ	Tauwhareparae	22.20	195	P	P	15 09 48.6	+0.8
TWGZ				S	S	15 13 36.1	+2.9
OPRZ	Ohinepanea	22.29	198	P	P	15 09 50.3	+1.8
MWZ	Matawai	22.47	196	P	P	15 09 49.8	-0.4
MWZ				S	S	15 13 35.8	-1.7
TKGZ	Te Karaka	22.49	195	P	P	15 09 49.9	-0.3
URZ	Urewera	22.51	197	P	P	15 09 48.2	-2.3
	19nm,0.6s,baz=323,slow=2.5,SNR=20						
URZ	Urewera	22.51	197	P	P	15 09 48.4	-2.1
STKA	Stephens Creek	42.16	241	P	P	15 12 39.8	-0.6
	6.0nm,1.1s,baz=69,slow=13,SNR=10						
WRA	Warramunga Arr	48.22	258	P	P	15 13 26.8	-1.1
	0.4nm,0.4s,baz=95,slow=7.0,SNR=9.2						
ASAR	Alice Springs	48.40	253	P	P	15 13 28.2	-1.1
	4.6nm,0.5s,baz=88,slow=8.4,SNR=120						
ASAR				PcP	PcP	15 14 51.6	+0.1
	0.5nm,0.5s,baz=111,slow=3.6,SNR=5.8						
PETK	Petropavlovsk-	73.57	343	P	P	15 16 18.6	+1.2
	1.8nm,0.8s,baz=113,slow=9.4,SNR=7.0						
NVAR	Mina Array Bea	76.28	42	P	P	15 16 35.2	+1.8
	0.4nm,0.7s,baz=228,slow=9.6,SNR=5.5						
TXAR	Lajitas Array	82.52	56	P	P	15 17 09.1	+2.0
	0.6nm,0.9s,baz=243,slow=8.2,SNR=4.5						
ANMO	Albuquerque	82.74	50	P	P	15 17 10.1	+1.9
	0.9nm,0.7s,baz=236,slow=3.6,SNR=3.8						
ILAR	Eielson Array	84.09	12	P	P	15 17 15.4	+1.3
	0.4nm,0.5s,baz=221,slow=6.0,SNR=10						
PDAR	Pinedale Array	84.22	42	P	P	15 17 15.4	-0.2
	0.5nm,0.7s,baz=211,slow=2.6,SNR=5.5						
MKAR	Makanchi Array	110.84	314	PKiKP	PKiKP	15 23 14.6	-0.4
	0.2nm,0.5s,baz=163,slow=2.1,SNR=4.7						
ARCES	ARCESS Array B	125.81	351	PKP	PKiKP	15 23 44.2	+0.7
	4.5nm,0.9s,baz=35,slow=3.3,SNR=1.9						
BRTR	Keskin Array B	146.35	318	PKPbc	PKPdf	15 24 22.4	+0.4
	1.3nm,0.7s,baz=77,slow=6.2,SNR=3.7						

NEIC ***10*** *15:15:57.4±1.4, 41°.83N±0°.06×126°.0W±0°.1, h10km±8km, ML2.9/38, ML3.1/15(NCEDC), Error ellipse: s-maj=11.2km s-min=8.9km az=75.0*

NCEDC ***10*** *15:15:59.5±1.6, 41°.83N±0°.06×126°.1W±0°.2, h23km±9km, Error ellipse: s-maj=16.4km s-min=9.0km az=87.0*

ANF ***10*** *15:15:59.2±1.1, 41°.93N×125°.69W, h0km, ML3.1/16, Error ellipse: s-maj=10.7km s-min=5.3km az=81.0*

IDC ***10*** *15:16:03.2±4.2, 41°.82N×125°.42W, h0km, mb2.6/2, mb1 3.2/5, mb1mx3.1/32, mbtmp2.9/5, ML3.0/3, MS1.9/1, Ms1 1.9/1, ms1mx1.9/13, Error ellipse: s-maj=57.2km s-min=27.9km az=62.0*

ISC 10 15:15:59.3±1.7**, 41°.88N**±0°.04×**126°.0W**±0°.1**, h10**km**, n53, σ1ˢ94**/64**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.34	75	Pn	Pn	15 16 21.8	-2.4
KBO				IAML		15 17 10.7	
	comp=E,117nm,2.0s						
KEBM	Edson Butte	1.56	50	Pn	Pn	15 16 25.1	-2.2
KEBM				IAML		15 16 46.2	
	comp=N,162nm,1.1s						
KEBM				IAML		15 16 47.2	
	comp=E,102nm,0.5s						
KRMB	Red Mountain	1.58	102		Pn	15 16 25.1	-2.4
L02E	Cave Junction	1.79	80	P	Pn	15 16 28.1	-2.1
	baz=265,SNR=347						
JCC	Jacoby Creek,	1.81	125	Pn	Pn	15 16 27.6	-2.9
JCC				IAML		15 16 49.5	
	comp=E,94nm,0.7s						
K02D	Willamette Mer	1.89	64	P	Pn	15 16 29.5	-2.2
	baz=250,SNR=87						
K02D				S	Sn	15 16 54.1	-1.6
	baz=250						
KHMM	Horse Mountain	1.96	120		Pn	15 16 30.3	-2.5
KHMM				IAML		15 16 54.7	
	comp=N,104nm,0.6s						
KHMM				IAML		15 16 57.1	
	comp=E,110nm,0.6s						
J01E	Myrtle Point	1.98	49	P	Pn	15 16 30.6	-2.2
	baz=236,SNR=38						
J01E				S	Sn	15 16 54.3	-3.3
	baz=236						
KOMM	Orleans Mounta	1.98	107		Pn	15 16 31.0	-2.0
KCRM	Chalk Rock	2.18	131		Pn	15 16 33.1	-2.6
HUMO	Hull Mountain	2.35	71		Pn	15 16 36.3	-1.7
KMRM	Mail Ridge	2.38	133		Pn	15 16 36.4	-2.0
KMRM				IAML		15 17 09.2	
	comp=N,96nm,0.5s						
M02C	Callahan	2.39	101	P	Pn	15 16 37.1	-1.4
	baz=283,SNR=18						
M02C				S	Sn	15 17 05.4	-2.5
	baz=283						
YBH	Yreka Blue Hor	2.44	92	Pn	Pn	15 16 38.5	-0.8
	comp=N,12nm,0.3s,baz=284,slow=15,SNR=126						
YBH				Sn	Sn	15 17 10.1	+0.9
	comp=N,1.4nm,0.3s,baz=137,slow=19,SNR=1.1						
YBH				LR	LR	15 17 32.5	
	comp=N,30nm,19.4s,baz=334,slow=44						
YBH	Yreka Blue Hor	2.44	92		Pn	15 16 38.6	-0.6
YBH	Yreka Blue Hor	2.44	92		Pn	15 16 38.4	-0.9
YBH				IAML		15 16 52.7	
	comp=E,12nm,0.5s						
YBH				IAML		15 16 52.8	
	comp=N,14nm,0.9s						
N02D	Trinity Center	2.62	109	P	Pn	15 16 39.8	-1.8
	baz=290,SNR=46						
N02D				S	Sn	15 17 10.7	-2.9
	baz=290						
I03D	Drain, OR	2.65	46	P	Pn	15 16 39.9	-2.1
	baz=232,SNR=45						
I03D				S	Sn	15 17 11.5	-2.7
	baz=232						
KBSM	Bell Springs	2.66	137		Pn	15 16 40.1	-2.2
I02D	Swisshome	2.71	34	P	Pn	15 16 41.5	-1.4
	baz=221,SNR=32						
I02D				S	Sn	15 17 13.0	-2.8
	baz=221						
L04D	Klamath Falls	2.75	82	P	Pn	15 16 42.9	-0.7
	baz=266,SNR=842						
LHEM	Herd Peak	2.82	94		Pn	15 16 44.3	-0.3
KCPM	Cahto Peak	2.84	140		Pn	15 16 42.1	-2.7
LGBM	Gray Butte	2.88	99		Pn	15 16 45.4	-0.1
WDC	Whiskeytown Da	2.89	116		Pn	15 16 43.9	-1.5
WDC	Whiskeytown Da	2.89	116	IAML		15 17 21.3	
	comp=N,28nm,0.8s						
O02D	Mt. Diablo Mer	2.95	124	P	Pn	15 16 44.5	-1.8
	baz=304,SNR=23						
O02D				S	Sn	15 17 19.5	-2.2
	baz=304						
M04C	Macdoel	3.09	90	P	Pn	15 16 47.8	-0.4
	baz=274,SNR=34						
J04D	Umpqua Nationa	3.16	63	P	Pn	15 16 48.9	-0.4
	baz=249,SNR=12						
K04D	Chiloquin, OR	3.22	75	P	Pn	15 16 48.9	-1.1
	baz=260,SNR=16						
I04A	Tendick Farm,	3.24	53	P	Pn	15 16 50.4	+0.2
	baz=238						
I04A				S	Sn	15 17 28.6	-0.4
	baz=238						
COR	Corvallis	3.33	35	Pn	Pn	15 16 50.9	-0.5
O03E	Paynes Creek	3.52	115	P	Pn	15 16 53.0	-1.2
	baz=297,SNR=35						
O03E				S	Sn	15 17 34.0	-2.0
	baz=297						
H04D	Lebanon	3.54	41	P	Pn	15 16 53.9	-0.4
	baz=227						
H04D				S	Sn	15 17 35.2	-1.1
	baz=227						
J05D	Fort Rock, OR	3.77	67	P	Pn	15 16 56.7	-0.9
	baz=252,SNR=16						
K05A	Summer Lake	3.86	76		Pn	15 16 57.7	-1.1
K05A				IAML		15 17 28.6	
	comp=E,14nm,4.8s						
K05A				IAML		15 18 25.8	
	comp=N,26nm,5.0s						
G03D	McMinnville, O	3.87	30	S	Sn	15 17 40.7	-3.5
	baz=215						
H04A	Detroit Lake	3.93	43		Pn	15 16 58.8	-1.0
PINE	Pine Mountain	4.16	61		Pn	15 17 02.4	-0.7
PINE				IAML		15 18 14.3	
	comp=N,13nm,4.5s						
PINE				IAML		15 18 37.1	
	comp=E,15nm,5.0s						
MOD	Modoc Plateau	4.23	88	Pn	Pn	15 17 02.4	-1.5
MOD				IAML		15 19 21.5	
	comp=N,11nm,4.5s						
MOD				IAML		15 19 32.9	
	comp=E,8.5nm,4.8s						
BEKR	Beckworth	4.70	113		Pn	15 17 09.7	-0.8
BEKR				IAML		15 18 12.5	
	comp=E,8.0nm,0.8s						
BEKR				IAML		15 18 13.2	
	comp=N,5.6nm,0.6s						
AFDM	Forest Hills D	4.81	126	Pn	Pn	15 17 10.1	-1.7
AFDM				IAML		15 18 08.6	
	comp=E,11nm,0.5s						
AFDM				IAML		15 18 08.9	
	comp=N,8.5nm,0.3s						
RUBR	Rubicon Trail	5.26	121	Pn	Pn	15 17 18.1	0.0
E04D	Cinebar	5.28	26	S	Sn	15 18 16.8	-2.2
	baz=212						
WVOR	Wild Horse Val	5.48	82		Pn	15 17 19.2	-1.9
PNTR	Pine Nut	5.60	118		Pn	15 17 22.4	-0.4
LON	Longmire	5.71	30		Pn	15 17 23.0	-1.2
D04E	Lakebay	5.77	22	S	Sn	15 18 31.1	0.0
	baz=207						
NVAR	Mina Array Bea	6.81	118	Pn	Pn	15 17 39.3	-0.1
	comp=N,0.2nm,0.3s,baz=295,slow=14,SNR=6.1						
NVAR				Sn	Sn	15 18 58.6	+1.5
	comp=N,0.2nm,0.3s,baz=302,slow=22,SNR=7.0						
B05A	Bryant	6.95	22	S	Sn	15 18 56.8	-3.2
	baz=207						
ELK	Elko	8.16	94	Pn	Pn	15 17 59.7	+1.7
	comp=N,0.1nm,0.3s,baz=284,slow=17,SNR=7.3						
YKA	Yellowknife Ar	21.72	14	P	P	15 20 54.9	+4.5
	comp=N,0.5nm,0.9s,baz=204,slow=12,SNR=4.3						
TXAR	Lajitas Array	21.96	118	P	P	15 20 56.2	+2.9
	comp=N,0.1nm,0.6s,baz=313,slow=11,SNR=2.5						

IDC ***10*** *16:02:38.0±3.9, 17°.44N×122°.62E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/68, mbtmp3.5/4, Error ellipse: s-maj=350.5km s-min=22.7km az=63.0*

MAN ***10*** *16:02:42.8, 17°.44N×122°.43E, h63km, mb4.7, ML3.6, MS3.6*

ISC 10 16:02:44.6±1.3**, 17°.45N**±0°.04×**122°.44E**±0°.09**, h52**km±13km**, n14, σ1ˢ94**/24**, mb3.3**/4**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	Callao Caves	0.65	293	⇑iP	Pn	16 02 56.3	-1.4
CVP				iS	Sn	16 03 05.3	-2.0
CAUP	Cauayan	0.78	230	eP	Pn	16 02 59.0	-0.4
CAUP				eS	Sn	16 03 15.8	+5.6
SGCP	Mt. Cagua	0.88	334	eP	Pn	16 03 00.7	-0.1
SGCP				eS	Sn	16 03 13.3	+0.7
APYP	Conner	1.22	290	eP	Pn	16 03 04.7	-0.6
APYP				eS	Sn	16 03 20.4	-0.3
ABRA	Dolores	1.66	277	eP	Pn	16 03 11.0	-0.4
ABRA				eS	Sn	16 03 31.5	-0.1
BALP	Baler	1.89	206	eP	Pn	16 03 14.4	0.0
BALP				eS	Sn	16 03 36.8	-0.3
SMPP	San Manuel, Pa	2.12	233	eP	Pn	16 03 15.8	-1.9
SMPP				eS	Sn	16 03 40.0	-2.9
POLP	Polilio Island	2.75	190	eP	Pn	16 03 26.6	+0.4
POLP				eS	Sn	16 03 56.9	-1.2
JCNP	Jose Panganiba	3.15	176	eP	Pn	16 03 30.7	-1.0
JCNP				eS	Sn	16 04 04.4	-3.7
LQP	Lukban	3.43	195	⇓eP	Pn	16 03 38.0	+2.3
LQP				eS	Sn	16 04 16.0	+0.8
WRA	Warramunga Arr	38.95	162	P	P	16 10 05.0	-0.8
	2.2nm,0.8s,baz=343,slow=9.7,SNR=6.7						
ASAR	Alice Springs	42.37	164	P	P	16 10 34.0	+0.1
	0.3nm,0.5s,baz=344,slow=7.5,SNR=8.5						
MKAR	Makanchi Array	44.13	320	P	P	16 10 49.2	+1.3
	0.1nm,0.5s,baz=103,slow=9.5,SNR=5.0						
KURBB	Kurchatov Arra	48.11	324	P	P	16 11 20.0	+0.9
	0.2nm,0.5s,baz=117,slow=9.5,SNR=2.1						

GUC ***10*** *16:05:09.9±0.5, 53°.06S×73°.96W, h14km±67km, ML4.7*

IDC ***10*** *16:05:12.3±0.7, 53°.23S×73°.80W, h0km, mb4.3/11, mb1 4.4/13, mb1mx4.3/28, mbtmp4.3/13, ML3.9/2, MS3.8/9, Ms1 3.7/9, ms1mx3.6/20, Error ellipse: s-maj=20.2km s-min=14.9km az=74.0*

NEIC ***10*** *16:05:15.3±2.0, 53°.17S±0°.07×73°.3W±0°.2, h14km±5km, mb4.4/14, Error ellipse: s-maj=20.2km s-min=9.3km az=71.0*

ISC 10 16:05:14.4±0.6**, 53°.18S**±0°.06×**73°.34W**±0°.08**, h10**km**, n53, σ1ˢ58**/40**, mb4.4**/16**, MS3.9**/10**, 2C, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO09	Cerro Castillo	2.01	18	⇑iP	Pn	16 05 43.8	-4.5
GO09				iS	Sn	16 06 09.3	-4.2
GO09				IAML		16 06 13.7	
	comp=E,6μm,0.3s						
GO09	Cerro Castillo	2.01	18		Pn	16 05 46.8	-1.5
MG02	Cerro Sombrero	2.52	83	⇑iP	Pn	16 05 55.4	0.0
MG02				eS	Sb	16 06 30.6	0.0
MG02				IAML		16 06 45.2	
	comp=N,3μm,0.7s						
USHA	Ushuaia	3.33	122	Pn	Pn	16 06 06.7	+0.1
	comp=N,70nm,0.3s,baz=154,slow=0.1,SNR=240						
USHA				Pg	Pg	16 06 16.2	-2.0
	comp=N,143nm,0.3s,baz=281,slow=15,SNR=13						
USHA				Lg	Lg	16 07 03.0	
	comp=N,96nm,0.3s,baz=202,slow=19,SNR=9.2						
MG01	Puerto William	3.79	120		Pn	16 06 12.4	-0.5
GO08	Villa O'Higgin	4.75	6	eP	Pn	16 06 20.5	-5.5
EFI	East Falkland	9.45	87		Pn	16 07 28.5	-2.0
PMSA	Palmer Station	12.56	161	Pn	Pn	16 08 17.1	+4.2
	comp=N,1.8nm,0.3s,baz=309,slow=6.2,SNR=9.3						
PMSA				LR	LR	16 12 05.0	
	comp=N,217nm,18.5s,baz=305,slow=33						
PMSA	Palmer Station	12.56	161		Pn	16 08 17.8	+4.9
PLCA	Paso Flores	12.59	10	Pn	Pn	16 08 13.6	0.0
	comp=N,0.1nm,0.3s,baz=185,slow=11,SNR=6.5						
PLCA				LR	LR	16 13 33.1	
	comp=N,227nm,18.6s,baz=182,slow=39						
PLCA	Paso Flores	12.59	10		Pn	16 08 16.1	+2.5
CO03	El Pedregal	22.41	6	P	P	16 10 13.2	+0.2
CO03				IAmb	IAmb	16 10 22.3	
	comp=Z,13nm,0.8s						
GO04	Tololo Observa	23.06	6	P	P	16 10 21.8	+1.6
GO04				IAmb	IAmb	16 10 32.2	
	comp=Z,12nm,0.8s						
CO01	Juntas del Tor	23.30	7	P	P	16 10 23.5	+0.9
CO01				IAmb	IAmb	16 10 34.1	
	comp=Z,13nm,1.1s						
LCO	Las Campanas	24.22	6	P	P	16 10 31.2	-0.2
LCO				IAmb	IAmb	16 10 48.0	
	comp=Z,9.5nm,0.9s						
CPUP	Villa Florida	29.36	30	P	P	16 11 17.9	+0.5
	comp=Z,3.1nm,0.8s,baz=192,slow=7.9,SNR=7.4						
CPUP				LR	LR	16 24 01.0	
	comp=Z,201nm,18.3s,baz=202,slow=38						
CPUP	Villa Florida	29.36	30	P	P	16 11 18.3	+0.9
CPUP				IAmb	IAmb	16 11 35.6	
	comp=Z,7.6nm,1.1s						
PB07	IPOC Station P	31.51	6	P	P	16 11 37.3	+0.7
GO01	Chusmiza	33.60	7	P	P	16 11 53.6	-1.7
MNMC	Minye Minye	34.10	6	P	P	16 11 59.4	0.0
MNMC				IAmb	IAmb	16 12 07.7	
	comp=Z,5.7nm,0.8s						
SNAA	Sanae	34.80	148	P	P	16 12 04.1	-0.7
	comp=Z,2.1nm,0.7s,baz=288,slow=7.1,SNR=9.4						
SNAA	Sanae	34.80	148	P	P	16 12 03.2	-1.6
PB16	IPOC Station P	34.90	6	P	P	16 12 07.5	+0.8
PB16				IAmb	IAmb	16 12 09.6	
	comp=Z,5.7nm,0.8s						
QSPA	South Pole Qui	37.06	180	P	P	16 12 23.3	-1.0
	comp=Z,5.7nm,0.7s,baz=146,slow=2.2,SNR=58						
QSPA	South Pole Qui	37.06	180	P	P	16 12 24.6	+0.3
SIV	San Ignacio	38.34	19	P	P	16 12 34.2	-1.2
	comp=Z,6.7nm,0.8s,baz=203,slow=4.8,SNR=15						
BDFB	Brasilia	42.42	38	P	P	16 13 10.9	+1.6
	comp=Z,3.2nm,0.5s,baz=166,slow=5.0,SNR=5.1						
BDFB				LR	LR	16 31 56.5	
	comp=Z,399nm,19.3s,baz=166,slow=38						
BDFB	Brasilia	42.42	38	IAmb	IAmb	16 13 21.9	
	comp=Z,11nm,1.3s						
SAML	Samuel	44.86	14	P	P	16 13 29.5	+0.7
VNDA	Vanda	45.20	195	P	P	16 13 29.4	-1.4
	comp=Z,1.5nm,0.8s,baz=140,slow=11,SNR=3.8						
VNDA				LR	LR	16 28 53.6	
	comp=Z,93nm,20.9s,baz=146,slow=32						
VNDA	Vanda	45.20	195	P	P	16 13 31.1	+0.2
MAW	Mawson	55.17	161	LR	LR	16 38 00.3	
	comp=Z,76nm,18.4s,baz=250,slow=36						
TBI	Tubuai	63.42	266	eLR	LR	16 34 48.5	
	comp=Z,139nm,26.2s						
PPT2	Papeete2	67.89	270	eLR	LR	16 36 50.3	
	comp=Z,128nm,25.0s						
URZ	Urewera	70.50	232	LR	LR	16 40 29.2	
	comp=Z,46nm,19.9s,baz=211,slow=30						
BOSA	Boshof	72.46	114	P	P	16 16 43.8	+2.6
	comp=Z,1.8nm,0.7s,baz=173,slow=8.4,SNR=3.4						
BOSA				LR	LR	16 46 42.4	
	comp=Z,76nm,18.6s,baz=215,slow=34						
DBIC	Dimbokro	82.69	69	P	P	16 17 40.5	+2.3
	comp=Z,1.7nm,0.5s,baz=200,slow=5.5,SNR=3.1						
DBIC				LR	LR	16 48 07.3	
	comp=Z,25nm,19.7s,baz=164,slow=31						
TXAR	Lajitas Array	86.31	334	P	P	16 17 54.9	-1.3
	comp=Z,0.4nm,0.7s,baz=142,slow=6.3,SNR=4.6						
DZM	Mont Dzumac	89.01	233	eLR	LR	16 46 48.5	
	comp=Z,73nm,22.4s						
TORD	Torodi Ar. Bea	91.66	70	P	P	16 18 24.0	+2.2
	comp=Z,2.4nm,0.8s,baz=234,slow=2.8,SNR=7.6						
ASAR	Alice Springs	99.90	205	P	Pdif	16 18 56.5	-2.9
	comp=Z,0.4nm,0.7s,baz=161,slow=5.9,SNR=2.3						
H11S2	WAKE ISLAND Hy	122.48	257	T	T	18 37 48.9	
	baz=142,slow=76,SNR=3967						
H11S3	WAKE ISLAND Hy	122.49	257	T	T	18 37 49.3	
	baz=142,slow=76,SNR=3071						
H11S1	WAKE ISLAND Hy	122.50	257	T	T	18 37 49.9	
	baz=142,slow=76,SNR=2432						
H11N3	WAKE ISLAND Hy	123.31	258	T	T	18 38 46.7	
	baz=143,slow=75,SNR=158						
H11N1	WAKE ISLAND Hy	123.32	258	T	T	18 38 48.2	
	baz=143,slow=75,SNR=151						
H11N2	WAKE ISLAND Hy	123.33	258	T	T	18 38 48.0	
	baz=143,slow=75,SNR=173						
ILAR	Eielson Array	130.43	327	PKP	PKPdf	16 24 22.5	-1.1
	comp=Z,0.5nm,0.9s,baz=199,slow=1.2,SNR=3.4						
CMAR	Chiang Mai Arr	144.83	167	PKP	PKPab	16 24 48.9	-1.6
	comp=Z,0.6nm,0.8s,baz=173,slow=2.5,SNR=4.3						
AKTO	Aktyubinsk	150.25	75	PKPbc	PKiKP	16 25 06.0	+0.5
	comp=Z,3.4nm,1.1s,baz=212,slow=3.4,SNR=4.7						
MJAR	Matsushiro Arr	152.44	246	PKPbc	PKPbc	16 25 07.9	-2.3
	comp=Z,2.2nm,1.1s,baz=178,slow=3.8,SNR=2.2						
ARU	Arti	152.54	64	PKPbc	PKiKP	16 25 10.7	+0.8
	comp=Z,0.8nm,0.3s,baz=223,slow=2.3,SNR=9.8						
MKAR	Makanchi Array	163.12	102	PKPab	PKPab	16 26 07.8	+1.4
	comp=Z,0.4nm,0.5s,baz=195,slow=0.9,SNR=11						

IDC ***10*** *16:08:43.1±1.3, 17°.96S×178°.56W, h563km±15km, mb3.5/16, mb1 3.7/18, mb1mx3.5/38, mbtmp4.3/18, Error ellipse: s-maj=21.9km s-min=12.0km az=150.0*

ISC 10 16:08:43.8±0.7**, 18°.0S**±0°.2×**178°.5W**±0°.1**, h579**km**, n29, σ1ˢ05**/27**, mb3.8**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.29	274	P	P	16 10 01.7	-1.5
	5.1nm,0.3s,baz=106,slow=4.4,SNR=43						
AFI	Afiamalu	7.65	59	P	P	16 10 37.6	-1.6
	1.9nm,0.3s,baz=66,slow=5.7,SNR=4.9						
URZ	Urewera	20.54	190	P	P	16 12 41.9	-1.3
	6.2nm,0.8s,baz=48,slow=23,SNR=2.1						
MOO	Moorlands	37.96	223	P	P	16 15 05.3	-7.7

	baz=44,SNR=3.6						
STKA	Stephens Creek	38.50	241	P	P	16 15 18.8	+1.2
	baz=45,SNR=12						
STKA	Stephens Creek	38.50	241	P	P	16 15 18.0	+0.4
	3.6nm,0.5s,baz=94,slow=9.3,SNR=15						
HTT	Hallett	41.02	240	P	P	16 15 38.8	+1.1
	baz=48,SNR=8.4						
JAY	Jayapura	42.85	286	P	P	16 15 52.1	-0.3
	18nm,0.9s,baz=155,slow=6.5,SNR=4.7						
BBOO	Buckleboo	43.28	241	P	P	16 15 56.1	+0.7
	baz=50,SNR=23						
WRA	Warramunga Arr	44.52	260	P	P	16 16 04.5	-0.7
	1.2nm,0.4s,baz=92,slow=6.8,SNR=26						
ASAR	Alice Springs	44.68	254	P	P	16 16 06.4	0.0
	18nm,0.5s,baz=89,slow=7.7,SNR=565						
KDU	Kakadu	47.47	269	P	P	16 16 27.2	-0.3
	baz=54,SNR=5.1						
SIJI	Sorong	52.17	283	P	P	16 17 02.1	+0.1
	11nm,0.6s,baz=170,slow=2.7,SNR=6.4						
FITZ	Fitzroy Crossi	52.92	261	P	P	16 17 07.5	+0.3
	baz=60,SNR=4.6						
MEEK	Meekatharra	58.31	249	P	P	16 17 44.2	-0.3
	baz=65,SNR=3.4						
MJAR	Matsushiro Arr	67.93	323	P	P	16 18 44.7	-1.0
	1.3nm,0.6s,baz=159,slow=6.0,SNR=9.1						
PETK	Petropavlovsk-	73.75	345	P	P	16 19 19.2	-0.3
	5.9nm,0.8s,baz=127,slow=8.0,SNR=7.4						
USRK	Ussuriysk Ar.	76.65	326	P	P	16 19 36.9	+1.1
	0.7nm,0.7s,baz=112,slow=4.1,SNR=4.5						
NVAR	Mina Array Bea	79.56	44	P	P	16 19 53.1	+1.3
	1.1nm,0.7s,baz=222,slow=8.5,SNR=14						
ILAR	Eielson Array	86.01	13	P	P	16 20 22.1	-1.1
	0.8nm,0.4s,baz=221,slow=5.0,SNR=5.5						
TXAR	Lajitas Array	86.13	58	P	P	16 20 27.1	+2.4
	1.3nm,0.6s,baz=217,slow=5.7,SNR=18						
PDAR	Pinedale Array	87.49	43	P	P	16 20 31.6	+0.7
	1.1nm,0.6s,baz=220,slow=3.1,SNR=14						
CMAR	Chiang Mai Arr	88.83	290	P	P	16 20 39.4	+1.9
	0.7nm,0.8s,baz=130,slow=2.8,SNR=6.7						
INK	Inuvik	92.01	15	P	P	16 20 50.4	-0.5
	1.5nm,0.7s,baz=106,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	94.46	25	P	P	16 21 01.8	-0.5
	0.3nm,0.6s,baz=225,slow=3.9,SNR=3.7						
ARCES	ARCESS Array B	126.40	350	PKP	PKPdf	16 26 40.2	-0.7
	3.4nm,0.9s,baz=54,slow=3.1,SNR=6.2						
FINES	FINESS Array B	133.26	344	PKP	PKPdf	16 26 53.9	-0.2
	1.8nm,0.9s,baz=64,slow=4.4,SNR=3.7						
BRTR	Keskin Array B	144.79	315	PKP	PKPbc	16 27 16.6	+0.2
	1.6nm,0.6s,baz=102,slow=2.9,SNR=17						
GERES	GERESS Array B	147.69	345	PKPbc	PKPbc	16 27 24.3	+0.3
	3.2nm,0.5s,baz=38,slow=2.4,SNR=6.1						

IDC 10 16:10:04.2±17.0, 18˚.85S×178˚.98W, h521^{km}±51^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.0/34, mbtmp4.2/5, Error ellipse: s-maj=338.3km s-min=95.9km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.03	291	P	P	16 11 17.1	-0.1
	1.4nm,0.3s,baz=178,slow=7.5,SNR=3.8						
CTA	Charters Tower	32.77	262	P	P	16 15 54.7	+0.5
	11nm,1.0s,baz=103,slow=9.9,SNR=5.9						
STKA	Stephens Creek	37.71	242	P	P	16 16 34.8	-0.3
	2.2nm,0.4s,baz=86,slow=10,SNR=9.2						
WRA	Warramunga Arr	43.94	261	P	P	16 17 24.5	-0.5
	1.2nm,0.5s,baz=93,slow=8.4,SNR=14						
ASAR	Alice Springs	44.02	255	P	P	16 17 25.6	0.0
	3.5nm,0.5s,baz=89,slow=8.6,SNR=16						

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*REY **10** 16:12:56.2, 64˚.61N×17˚.40W, h1^{km}*

*IDC **10** 16:12:58.9±1.2, 64˚.47N×17˚.70W, h0^{km}, mb3.7/5, mb1 4.1/6, mb1mx3.5/45, mbtmp3.7/6, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/39, Error ellipse: s-maj=34.8km s-min=15.2km az=23.0*

*NEIC **10** 16:12:59±2.7, 64˚.33N±0˚.05×17˚.6W±0˚.2, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=14.8km s-min=4.2km az=57.0*

ISC 10 16:12:57.4±0.6, 64˚.59N±0˚.02×17˚.34W±0˚.03, h10^{km}, n61, σ2^{s}.04/67, mb4.0/7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.20	357	P	Pg	16 13 00.5	-1.1
	baz=4.8						
IDYN				S	Sg	16 13 04.1	-0.5
	baz=4.8						
IHAM	Hamarinn	0.24	242	P	Pg	16 13 01.2	-1.2
	baz=235						
IKVE	Kverkfjoll	0.30	73	P	Pb	16 13 03.3	-1.7
	baz=77						
IKVE				S	Sb	16 13 08.0	-2.0
	baz=77						
THOR	Thorvaldshraun	0.44	39	P	Pb	16 13 05.3	-2.1
	baz=43						
THOR				S	Sb	16 13 12.0	-2.1
	baz=43						
IKRE	Kreppuhraun	0.45	65	P	Pb	16 13 05.4	-2.1
	baz=68						
IKRE				S	Sb	16 13 12.6	-1.7
	baz=68						
ISKR	Skrokkalda	0.45	266	P	Pg	16 13 04.7	-1.5
	baz=264						
IJOK	Jokulheimar	0.47	234	P	Pg	16 13 05.4	-1.3
	baz=231						
IJOK				S	Sb	16 13 12.7	-2.2
	baz=231						
IASK	Askja	0.55	32	P	Pb	16 13 06.8	-2.3
	baz=36						
IASK				S	Sb	16 13 14.7	-2.4
	baz=36						
IKSK	Karasker	0.57	139	P	Pb	16 13 07.3	-2.2
	baz=138						
IKSK				S	Sb	16 13 16.5	-1.3
	baz=138						
IIEY	Innrieyrar	0.61	215	P	Pb	16 13 08.0	-2.1
	baz=212						
IIEY				S	Sb	16 13 16.7	-2.0
	baz=212						
IKAL	Kalfafell	0.67	193	P	Pb	16 13 09.1	-1.9
	baz=191						
IKAL				S	Sb	16 13 19.5	-0.9
	baz=191						
IVSH	V-Sauoahnukur	0.72	72	P	Pb	16 13 10.1	-2.0
	baz=74						
ISVA	Svartarkot	0.75	3	P	Pg	16 13 10.1	-1.8
	baz=4.8						
ISVA				S	Sb	16 13 21.3	-1.4
	baz=4.8						
IFAG	Fagurholsmyri	0.78	157	P	Pb	16 13 11.5	-1.5
	baz=156						
IFAG				S	Sn	16 13 23.3	-2.8
	baz=156						
IADA	Aoalbol	0.87	60	P	Pb	16 13 12.4	-2.2
	baz=61						
IHVE	Hveravellir	1.00	287	P	Pg	16 13 13.6	-3.0
	baz=287						
IMEL	Melhnausar	1.02	16	P	Pg	16 13 14.9	-2.2
	baz=18						
ISNB	Snabyli	1.03	214	P	Pg	16 13 15.4	-1.8
	baz=212						
ISNB				S	Sn	16 13 30.1	-2.2
	baz=212						
IREN	Reynihlio	1.07	10	P	Pg	16 13 15.7	-2.3
	baz=11						
IKVO	Krokottuvotn	1.14	10	P	Pb	16 13 16.8	-2.5
	baz=11						
IRJU	Rjupnafell	1.14	211	P	Pn	16 13 17.6	-1.8
	baz=210						
IGRS	Grimsstaoir	1.17	26	P	Pb	16 13 17.5	-2.2
	baz=27						
IFED	Fedgar	1.17	242	P	Pb	16 13 17.6	-2.1
	baz=241						
IMJO	Mjoaskard	1.22	238	P	Pn	16 13 18.6	-1.9
	baz=237						
IHVO	Lagu-Hvolar	1.26	212	P	Pn	16 13 19.2	-1.8
	baz=211						
IGYG	Gygjarholskot	1.29	257	P	Pn	16 13 18.9	-2.5
	baz=256						
ISKI	Skildingahlsh	1.29	6	P	Pn	16 13 19.1	-2.4
	baz=6.9						
IHAU	Haukadalur	1.31	243	P	Pb	16 13 20.1	-1.9
	baz=241						
IGRA	Granastaoir	1.33	356	P	Pn	16 13 19.7	-2.3
	baz=357						
IALF	Alftagrof	1.37	217	P	Pb	16 13 21.1	-2.0
	baz=216						
IDIM	Dimmadalss	1.39	7	P	Pn	16 13 20.6	-2.2
	baz=8.1						
IESK	Eystri-Skogar	1.42	222	P	Pb	16 13 21.8	-2.1
	baz=220						
IHLA	Hella	1.43	342	P	Pn	16 13 20.9	-2.4
	baz=343						
ISAU	Saurbar	1.47	247	P	Pn	16 13 22.4	-1.6
	baz=246						
IHED	Heoinshofoi	1.49	0	P	Pn	16 13 21.9	-2.4
	baz=1.5						
BORG	Borgarnes	1.72	277	Pg	Pn	16 13 26.0	-1.4
	17nm,0.3s,baz=101,slow=8.2,SNR=24						
BORG				Lg	Lg	16 13 50.4	
	2.8nm,0.3s,baz=63,slow=23,SNR=6.1						
BORG	Borgarnes	1.72	277		Pb	16 13 26.6	-2.5
SCO	Scoresbysund	6.17	345		Pn	16 14 31.5	+3.1
SCO	Scoresbysund	6.17	345	*i* P	Pn	16 14 31.0	+2.6
SCO	Scoresbysund	6.17	345	*i* P	Pn	16 14 31.0	+2.6
ANGG	Ammassalik, Gr	8.62	286	Pn	Pn	16 15 03.1	+1.2
EKA	Eskdalemuir Ar	11.66	136	Pn	Pn	16 15 45.5	+1.9
	baz=325,slow=14,SNR=3.5						
NAO01	NORSAR Array S	13.41	93	Pn	Pn	16 16 07.5	0.0
SFJD	Kangerlussuaq	13.76	295	Pn	Pn	16 16 12.8	+0.6
KBS	Kingsbay	16.69	19	Pn	P	16 16 56.5	+3.3
SPA0	Spitsbergen Ar	16.91	23	Pn	P	16 16 57.2	+1.5
FIA1	FINESS Array S	19.65	79	P	Pn	16 17 26.4	-0.9
FIA1				IAmb	IAmb	16 17 40.4	
	comp=Z,19nm,1.2s						
SSB	Saint Sauveur	22.85	137	P	P	16 18 01.4	+0.9
SSB				IAmb	IAmb	16 18 15.6	
	comp=Z,8.9nm,1.2s						
SALO	Salr	24.45	128	P	P	16 18 15.1	-1.0
ESDC	Sonseca Array	26.16	156	P	P	16 18 34.8	+3.2
	comp=Z,0.7nm,0.8s,baz=342,slow=11,SNR=2.8						
SADO	Sadowa	38.89	270	LR	LR	16 33 42.7	
	comp=Z,59nm,19.1s,baz=136,slow=32						
YKA	Yellowknife Ar	39.31	313	P	P	16 20 28.2	+2.2
	comp=Z,0.9nm,1.0s,baz=36,slow=9.4,SNR=6.6						
TIXI	Tiksi	42.08	15	P	P	16 20 53.1	+4.4
ILAR	Eielson Array	45.78	333	P	P	16 21 22.4	+3.9
	comp=Z,1.8nm,1.1s,baz=22,slow=5.9,SNR=8.5						
ILAR	Eielson Array	45.78	333	P	P	16 21 21.8	+3.3
IMAR	Indian Mountai	45.95	337	P	P	16 21 23.8	+4.0
BW06	Boulder Array	53.27	293	P	P	16 22 17.5	+1.3
BW06				IAmb	IAmb	16 22 20.3	
	comp=Z,5.1nm,1.2s						
PD31	Pinedale Array	53.27	293	P	P	16 22 17.7	+1.5
PD31				IAmb	IAmb	16 22 20.3	
	comp=Z,4.2nm,1.2s						
PDAR	Pinedale Array	53.27	293	P	P	16 22 18.4	+2.3
	comp=Z,1.6nm,0.9s,baz=49,slow=5.1,SNR=8.6						
PDAR	Pinedale Array	53.27	293	P	P	16 22 17.6	+1.5
TXAR	Lajitas Array	62.37	280	P	P	16 23 22.4	+2.4
	comp=Z,0.7nm,0.9s,baz=34,slow=3.2,SNR=4.8						

IDC 10 16:14:08.3±1.1, 6˚.42S×154˚.65E, h64^{km}±11^{km}, mb3.6/2, mb1 4.0/4, mb1mx3.4/34, mbtmp4.0/4, MS3.3/2, Ms1 3.3/2, ms1mx2.7/24, Error ellipse: s-maj=12.3km s-min=6.0km az=126.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	3.34	309	P	Pn	16 14 58.1	0.0
	15nm,0.3s,baz=146,slow=3.6,SNR=30						
KRVT				S	Sn	16 15 37.3	+0.6
	27nm,0.3s,baz=109,slow=23,SNR=7.7						
PMG	Port Moresby	7.99	248	P	Pn	16 16 03.0	+1.3
	0.9nm,0.3s,baz=176,slow=20,SNR=2.1						
PMG				S	Sn	16 17 31.5	+0.8
	3.1nm,0.3s,baz=77,slow=6.7,SNR=8.4						
PMG				LR	LR	16 18 27.1	
	comp=Z,62nm,19.1s,baz=292,slow=32						
WRA	Warramunga Arr	23.87	234	P	P	16 19 16.2	+0.2
	3.8nm,0.8s,baz=58,slow=9.7,SNR=11						
ASAR	Alice Springs	26.30	227	P	P	16 19 37.4	-0.7
	0.7nm,0.6s,baz=57,slow=9.2,SNR=7.5						
RAR	Rarotonga	46.45	113	LR	LR	16 40 00.4	
	comp=Z,95nm,19.8s,baz=127,slow=33						
TORD	Torodi Ar. Bea	152.54	286	PKPbc	PKiKP	16 33 59.1	+0.4
	0.4nm,0.6s,baz=82,slow=3.1,SNR=2.2						

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*SNET **10** 16:29:31.2±1.4, 13˚.29N×90˚.19W, h24^{km}±8^{km}, ML4.2*

*UCR **10** 16:29:31.2±1.5, 13˚.30N×90˚.21W, h24^{km}±6^{km}, ML4.2, mb4.4(NEIC)*

*NEIC **10** 16:29:33.2±2.0, 13˚.36N±0˚.08×90˚.12W±0˚.06, h55^{km}±15^{km}, Error ellipse: s-maj=12.3km s-min=8.3km az=199.0*

*IDC **10** 16:29:34.5±2.6, 13˚.63N×89˚.80W, h66^{km}±25^{km}, mb3.4/7, mb1 3.8/9, mb1mx3.6/39, mbtmp3.8/9, MS3.0/6, Ms1 3.0/6, ms1mx2.8/25, Error ellipse: s-maj=43.2km s-min=17.6km az=49.0*

*GCG **10** 16:29:38.4±0.3, 13˚.79N×90˚.55W, h31^{km}±999^{km}, MD4.0*

ISC 10 16:29:32.0±1.4, 13˚.32N±0˚.08×90˚.18W±0˚.05, h50^{km}±12^{km}, n85, σ1^{s}.14/95, mb4.1/9, MS3.0/4, 7D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.74	47	⇓*i*P	Pn	16 29 46.4	-0.1
CEVE				*e*S	Sn	16 29 57.4	+0.3
CEVE				IAML		16 29 59.3	
	comp=Z,16μm,0.3s						
CEVE	Cerro Verde	0.74	47	⇓*i*P	Pn	16 29 46.4	-0.1
CEVE				*e*S	Sn	16 29 57.4	+0.3
CEVE				IAML		16 29 59.3	
	comp=Z,16μm,0.3s						
SBLS	San Blas	0.75	46	*e*P	Pn	16 29 46.2	-0.4
SBLS	San Blas	0.75	46	*e*P	Pn	16 29 46.2	-0.4
RTR	El Retiro	0.78	42	*e*P	Pn	16 29 46.8	-0.1
RTR	El Retiro	0.78	42	*e*P	Pn	16 29 46.8	-0.1
SNJE	San Jose	0.78	46	*e*P	Pn	16 29 46.9	-0.1
SNJE	San Jose	0.78	46	*e*P	Pn	16 29 46.9	-0.1
JAYA	Jayaque - finc	0.79	65	⇓*i*P	Pn	16 29 46.7	-0.4
JAYA				*e*S	Sn	16 29 57.5	-0.5
JAYA				IAML		16 30 00.3	
	comp=Z,10μm,0.2s						
JAYA	Jayaque - finc	0.79	65	⇓*i*P	Pn	16 29 46.7	-0.4
JAYA				*e*S	Sn	16 29 57.5	-0.5
JAYA				IAML		16 30 00.3	
	comp=Z,10μm,0.2s						
CEDA	San Andres	0.91	58	*e*P	Pn	16 29 48.4	-0.1
CEDA				*e*S	Sn	16 30 01.3	+0.7
CEDA				IAML		16 30 11.0	
	comp=Z,9μm,0.3s						
CEDA	San Andres	0.91	58	*e*P	Pn	16 29 48.4	-0.1
CEDA				*e*S	Sn	16 30 01.3	+0.7
CEDA				IAML		16 30 11.0	
	comp=Z,9μm,0.3s						
BOQS	Boqueron	0.97	65	*e*P	Pn	16 29 49.6	+0.1
BOQS				*e*S	Sn	16 30 03.9	+1.5
BOQS	Boqueron	0.97	65	*e*P	Pn	16 29 49.6	+0.1
BOQS				*e*S	Sn	16 30 03.9	+1.5
SNET	Serv Nac Est T	1.00	68	*e*P	Pn	16 29 49.5	-0.2
SNET				IAML		16 29 52.6	
	comp=Z,5μm,0.3s						
SNET				*e*S	Sn	16 30 03.4	+0.7
SNET	Serv Nac Est T	1.00	68	*e*P	Pn	16 29 49.5	-0.2
SNET				IAML		16 29 52.6	
	comp=Z,5μm,0.3s						
SNET				*e*S	Sn	16 30 03.4	+0.7
SNET	Serv Nac Est T	1.00	68	Pn	Pn	16 29 49.5	-0.2
UEES	Universidad Ev	1.00	67	*e*P	Pn	16 29 49.7	-0.1
UEES	Universidad Ev	1.00	67	*e*P	Pn	16 29 49.7	-0.1
TACO	Tacachico	1.03	51	*e*P	Pn	16 29 50.4	+0.2
TACO	Tacachico	1.03	51	*e*P	Pn	16 29 50.4	+0.2
LFU	La Fuente	1.12	67	*e*P	Pn	16 29 52.6	+1.1
LFU				*e*S	Sn	16 30 09.8	+3.9
LFU	La Fuente	1.12	67	*e*P	Pn	16 29 52.6	+1.1
LFU				*e*S	Sn	16 30 09.8	+3.9
LFRS	El Faro	1.13	74	*e*P	Pn	16 29 51.5	0.0
LFRS	El Faro	1.13	74	*e*P	Pn	16 29 51.5	0.0
PCG	Pacaya	1.14	339	*e*P	Pn	16 29 51.1	-0.8
LBRS	Las Brisas	1.19	69	*e*P	Pn	16 29 52.8	+0.5
LBRS	Las Brisas	1.19	69	*e*P	Pn	16 29 52.8	+0.5
NBG	Las Nubes	1.27	353	⇓*e*P	Pn	16 29 54.6	+1.0
PAVA	Las Pavas	1.27	72	*e*P	Pn	16 29 54.3	+0.8
PAVA				IAML		16 30 17.6	
	comp=Z,4μm,0.4s						
PAVA	Las Pavas	1.27	72	*e*P	Pn	16 29 54.3	+0.8
PAVA				IAML		16 30 17.6	
	comp=Z,4μm,0.4s						
FUG	Fuego 3	1.29	330	*e*P	Pn	16 29 52.6	-1.2
COEG	Centro de Oper	1.30	77	*e*P	Pn	16 29 54.0	+0.1
COEG				IAML		16 30 17.2	
	comp=Z,3μm,0.4s						
COEG	Centro de Oper	1.30	77	*e*P	Pn	16 29 54.0	+0.1
COEG				IAML		16 30 17.2	
	comp=Z,3μm,0.4s						
MTO3	Montecristo	1.34	37	⇓*i*P	Pn	16 29 54.9	+0.4
MTO3	Montecristo	1.34	37	⇓*i*P	Pn	16 29 54.9	+0.4
MTO3	Montecristo	1.34	37		Pn	16 29 54.9	+0.4
ESQI	Esquipulas	1.48	33	*e*P	Pn	16 29 57.0	+0.7
ESQI	Esquipulas	1.48	33		Pn	16 29 57.0	+0.7
COEB	Comit de Eme	1.62	83	*e*P	Pn	16 29 58.7	+0.5
COEB				IAML		16 30 28.1	
	comp=Z,3μm,0.4s						
COEB	Comit de Eme	1.62	83	*e*P	Pn	16 29 58.7	+0.5
COEB				IAML		16 30 28.1	
	comp=Z,3μm,0.4s						
TECA	Tecapa	1.65	84	*e*P	Pn	16 29 58.9	+0.2
TECA	Tecapa	1.65	84	*e*P	Pn	16 29 58.9	+0.2
MRL	Marmol	1.82	15	*e*P	Pn	16 30 04.4	+3.4
LCY	Lacayo	1.84	87	*e*P	Pn	16 30 02.2	+0.9
LCY	Lacayo	1.84	87	*e*P	Pn	16 30 02.2	+0.9
JUCU	Jucuar¡n	1.89	92	*e*P	Pn	16 30 01.6	-0.2
JUCU				IAML		16 30 33.6	
	comp=Z,2μm,0.3s						
JUCU	Jucuar¡n	1.89	92	*e*P	Pn	16 30 01.6	-0.2
JUCU				IAML		16 30 33.6	
	comp=Z,2μm,0.3s						
RTAL	Retalhuleu	1.90	309		Pn	16 30 02.1	+0.2
FAGO	Alcalda de S	2.06	79	*e*P	Pn	16 30 03.6	-0.4
FAGO	Alcalda de S	2.06	79	*e*P	Pn	16 30 03.6	-0.4
LCND	La Caada	2.23	90	*e*P	Pn	16 30 07.0	+0.4
LCND	La Caada	2.23	90	*e*P	Pn	16 30 07.0	+0.4
TGUH	Tegucigalpa,Un	2.92	75		Pn	16 30 16.1	0.0
CRIN	San Cristobal	3.12	101		Pn	16 30 19.8	+1.1
CCIG	Comitan	3.50	328		Pn	16 30 24.9	+0.9
ESPN	Las Esperanzas	5.85	100		Pn	16 30 55.1	-1.0
CMIG	Matias Romero	5.89	310	P	Pn	16 30 59.2	+2.6
	comp=Z,2.8nm,0.3s,baz=111,slow=9.3,SNR=25						
CMIG				S	Sn	16 32 04.2	+1.3
	comp=Z,3.3nm,0.3s,baz=99,slow=12,SNR=4.2						
CMIG				LR	LR	16 33 43.9	
	comp=Z,131nm,20.3s,baz=143,slow=42						
JTS	Las Juntas de	5.94	120	P	Pn	16 30 58.1	+0.7
	comp=Z,3.6nm,0.3s,baz=174,slow=23,SNR=6.0						
JTS				LR	LR	16 32 37.6	
	comp=Z,19nm,20.6s,baz=152,slow=32						
JTS	Las Juntas de	5.94	120		Pn	16 30 58.3	+0.9
TEIG	Tepich	7.11	15		Pn	16 31 14.6	+1.2
WHTX	Lake Whitney,	19.75	341	P	P	16 33 56.5	-1.2
WHTX				IAmb	IAmb	16 33 58.3	
	comp=Z,10nm,0.6s						
TXAR	Lajitas Array	20.26	324	P	Pn	16 34 05.5	-0.2
	comp=Z,1.1nm,0.6s,baz=146,slow=11,SNR=14						
TXAR	Lajitas Array	20.26	324	P	P	16 34 04.6	+1.1
TX31	Lajitas Ar. Si	20.26	324	P	P	16 34 05.0	+1.5
TX32	Lajitas Array	20.26	324	P	P	16 34 04.3	+0.9
LPIG	La Paz	21.84	302	LR	LR	16 43 29.5	
	comp=Z,56nm,21.6s,baz=23,slow=38						
FNO	Franklin	22.80	345	P	P	16 34 28.5	-2.0
TKL	Tuckaleechee C	22.98	13	P	P	16 34 30.7	-1.7
	comp=Z,1.6nm,0.4s,baz=179,slow=8.0,SNR=4.7						
TKL	Tuckaleechee C	22.98	13	P	P	16 34 30.1	-2.3
TKL				IAmb	IAmb	16 34 53.0	
	comp=Z,18nm,1.2s						
ATAH	Atahualpa	23.45	149	LR	LR	16 42 16.0	
	comp=Z,67nm,21.2s,baz=47,slow=32						
121A	Cookes Peak, D	25.00	323	P	P	16 34 51.2	-0.3
121A				IAmb	IAmb	16 34 55.1	
	comp=Z,4.1nm,0.8s						
WCI	Wyandotte Cave	25.05	7	P	P	16 34 51.6	0.0
WCI				IAmb	IAmb	16 34 53.6	
	comp=Z,15nm,1.1s						
ANMO	Albuquerque	26.08	328	LR	LR	16 46 53.3	
	comp=Z,32nm,18.3s,baz=44,slow=40						
NNA	Nana	28.41	152	LR	LR	16 44 56.9	
	comp=Z,58nm,19.8s,baz=320,slow=32						
PDAR	Pinedale Array	33.79	334	P	P	16 36 09.4	-0.1
	comp=Z,0.2nm,0.6s,baz=125,slow=9.2,SNR=2.0						
PDAR				PcP	PcP	16 38 47.5	-0.4
	comp=Z,0.2nm,0.5s,baz=128,slow=3.9,SNR=3.7						
NV11	Mina Array Sit	35.23	320	P	P	16 36 23.4	+1.6
NV11				IAmb	IAmb	16 36 24.3	
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	35.31	320	P	P	16 36 24.6	+1.9
	comp=Z,3.8nm,0.7s,baz=133,slow=8.0,SNR=51						
NVAR				PcP	PcP	16 38 52.9	+0.5
	comp=Z,0.7nm,0.7s,baz=137,slow=2.5,SNR=5.5						
NVAR	Mina Array Bea	35.31	320	P	P	16 36 24.2	+1.6
LHV	Little Huntoon	35.33	320	P	P	16 36 24.9	+2.4
ULM	Lac du Bonnet	37.12	354	P	P	16 36 35.0	-2.7
	comp=Z,2.5nm,0.7s,baz=164,slow=9.1,SNR=5.4						
BEKR	Beckworth	37.46	320	P	P	16 36 41.6	+0.7
SIV	San Ignacio	40.95	134	P	P	16 37 10.3	+0.3
	comp=Z,0.8nm,0.5s,baz=319,slow=11,SNR=4.1						
ILAR	Eielson Array	64.16	337	P	P	16 40 00.2	-0.9
	comp=Z,0.1nm,0.5s,baz=129,slow=5.6,SNR=7.0						
CMAR	Chiang Mai Arr	147.17	344	PKPbc	PKPdf	16 49 09.9	+1.5
	comp=Z,1.1nm,0.6s,baz=343,slow=3.2,SNR=8.5						

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*IDC **10** 16:30:00.8±0.8, 48˚.44N×157˚.55E, h0^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.7/43, mbtmp3.7/12, ML2.9/3, MS2.0/1, Ms1 2.0/1, ms1mx1.9/41, Error ellipse: s-maj=26.1km s-min=17.6km az=143.0*

*MOS **10** 16:30:01.9±0.8, 48˚.46N×157˚.63E, h22^{km}, mb4.0/1, Error ellipse: s-maj=19.9km s-min=4.7km az=86.6*

*KRSC **10** 16:30:03.9±1.2, 48˚.78N×157˚.93E, h16^{km}±32^{km}, ML4.3*

*SKHL **10** 16:30:04.5±0.3, 48˚.50N×157˚.64E, h36^{km}±3^{km}, mb4.6/3*

ISC 10 16:30:03.6±0.8, 48˚.56N±0˚.07×157˚.58E±0˚.08, h16^{km}, n61, σ1^{s}.16/77, mb3.7/9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.33	337	*e*P	Pn	16 30 41.4	+0.2
SKR				AMB	AMB	16 30 43.9	
	90nm,0.5s						
SKR				*e*S	Sn	16 31 09.3	-0.2
SKR				A	A	16 31 13.0	
	400nm,0.5s						
SKR				A	A	16 31 13.0	
	500nm,0.5s						
SKR	Severo-Kuril's	2.33	337	*e*PN	Pn	16 30 41.4	+0.2
SKR				*e*S	Sn	16 31 09.3	-0.2
SKR				pmax	pmax		
	comp=Z,118nm,0.5s						
SKR				smax	smax		
	comp=E,609nm,0.6s						
SKR				smax	smax		
	comp=N,618nm,0.5s						
SKR	Severo-Kuril's	2.33	337	*e*P	Pn	16 30 41.4	+0.2
SKR				*e*S	Sn	16 31 09.2	-0.2
PAU	Pauzhetka	2.96	351	*e*P	Pn	16 30 50.6	+0.7
PAU				AMB	AMB	16 30 56.5	
	comp=N,52nm,0.5s						
PAU				*e*S	Sn	16 31 25.0	+0.1
PAU				A	A	16 31 25.9	
	comp=N,470nm,0.6s						
PAU				A	A	16 31 25.9	
	comp=N,390nm,0.6s						
PAU	Pauzhetka	2.96	351	PN	Pn	16 30 50.5	+0.7
PAU				S	Sn	16 31 25.2	+0.3
PAU	Pauzhetka	2.96	351	*e*P	Pn	16 30 50.5	+0.7
PAU				*e*S	Sn	16 31 25.2	+0.3
KDTR	Khodutka, Kamc	3.27	5	PN	Pn	16 30 54.2	+0.1
KDTR	Khodutka, Kamc	3.27	5	*e*P	Pn	16 30 54.2	+0.1
KDTR				*e*S	Sn	16 31 30.6	-2.1
ASAK	Asacha	3.84	3	PN	Pn	16 31 02.3	+0.3
ASAK	Asacha	3.84	3	*e*P	Pn	16 31 02.3	+0.3
ASAK				*e*S	Sn	16 31 45.6	-1.2
RUS	Russkaya	3.93	8	*e*P	Pn	16 31 03.0	-0.1
RUS	Russkaya	3.93	8	PN	Pn	16 31 03.0	-0.1
RUS	Russkaya	3.93	8	*e*P	Pn	16 31 03.0	-0.1
RUS				*e*S	Sn	16 31 47.0	-1.9
MTVR	Mutnovka	3.95	5	PN	Pn	16 31 04.2	+0.6
MTVR	Mutnovka	3.95	5	*e*P	Pn	16 31 04.2	+0.6
MTVR				*e*S	Sn	16 31 48.7	-1.0
GRL	Gorelyy	4.01	4	PN	Pn	16 31 05.1	+0.6
GRL	Gorelyy	4.01	4	*e*P	Pn	16 31 05.1	+0.6
GRL				*e*S	Sn	16 31 49.9	-1.3
APC	Apacha	4.38	357	PN	Pn	16 31 10.6	+1.2

APC	Apacha	4.38	357	*e*P	Pn	16 31 10.6	+1.2
PET	Petropavlovsk	4.53	8	*e*P	Pn	16 31 12.1	+0.7
PET				*e*S	Sn	16 32 02.5	-1.1
PET				A	A	16 32 05.0	
	comp=N,60nm,0.4s						
PET				A	A	16 32 05.0	
	comp=N,90nm,0.4s						
PET	Petropavlovsk	4.53	8	*e*PN	Pn	16 31 11.6	+0.2
PET	Petropavlovsk	4.53	8	*e*P	Pn	16 31 11.7	+0.3
PET				*e*S	Sn	16 32 02.7	-0.9
DALK	Dalny	4.54	9	PN	Pn	16 31 11.8	+0.2
DALK	Dalny	4.54	9	*e*P	Pn	16 31 11.8	+0.2
DALK				*e*S	Sn	16 32 01.3	-2.7
PETK	Petropavlovsk-	4.56	1	Pn	Pn	16 31 12.9	+1.1
	comp=N,1.8nm,0.3s,baz=155,slow=17,SNR=105						
PETK				LR	LR	16 32 31.1	
	comp=N,17nm,20.3s,baz=200,slow=32						
UGLR	Uglovaya	4.73	9	PN	Pn	16 31 16.0	+1.8
UGLR	Uglovaya	4.73	9	*e*P	Pn	16 31 16.0	+1.8
AVH	Avacha	4.77	8	*e*P	Pn	16 31 16.0	+1.2
AVH	Avacha	4.77	8	PN	Pn	16 31 16.0	+1.2
AVH	Avacha	4.77	8	*e*P	Pn	16 31 16.0	+1.2
SMAR	Somma	4.78	9	PN	Pn	16 31 16.4	+1.4
SMAR	Somma	4.78	9	*e*P	Pn	16 31 16.4	+1.4
KOK	Koryaka	4.79	8	*e*P	Pn	16 31 16.4	+1.3
KOK	Koryaka	4.79	8	PN	Pn	16 31 16.4	+1.3
KOK	Koryaka	4.79	8	*e*P	Pn	16 31 16.4	+1.3
SPN	Mys Shipunski	4.81	18	*e*P	Pn	16 31 15.6	+0.4
SPN	Mys Shipunski	4.81	18	PN	Pn	16 31 15.6	+0.4
SPN	Mys Shipunski	4.81	18	*e*P	Pn	16 31 15.6	+0.4
KRER	Koryakskii	4.81	8	PN	Pn	16 31 16.9	+1.4
KRER	Koryakskii	4.81	8	*e*P	Pn	16 31 16.9	+1.4
KRER				*e*S	Sn	16 32 10.5	-0.5
KRX	Arik	4.86	8	PN	Pn	16 31 17.3	+1.2
KRX	Arik	4.86	8	*e*P	Pn	16 31 17.3	+1.2
GNL	Ganaly	5.15	2	PN	Pn	16 31 21.4	+1.3
GNL	Ganaly	5.15	2	*e*P	Pn	16 31 21.4	+1.3
KZV	Kizimen	6.78	13	PN	Pn	16 31 44.4	+2.0
KZV	Kizimen	6.78	13	*e*P	Pn	16 31 44.4	+2.0
TUMR	Tumrok	6.92	12	PN	Pn	16 31 47.2	+2.8
TUMR	Tumrok	6.92	12	*e*P	Pn	16 31 47.2	+2.8
KUR	Kuril'sk	7.43	247	*e*P	Pn	16 31 52.8	+1.5
KUR				AMB	AMB	16 32 02.8	
	comp=N,120nm,1.0s						
KUR				*e*S	Sn	16 33 13.6	-1.6
KUR				A	A	16 33 23.2	
	comp=N,130nm,0.7s						
KUR				A	A	16 33 23.2	
	comp=N,110nm,0.7s						
KLR	Kul'dur	16.98	282	Pn	Pn	16 34 01.8	+1.6
	comp=N,0.2nm,0.3s,baz=88,slow=10,SNR=4.9						
USRK	Ussuriysk Ar.	18.15	266	P	Pn	16 34 14.4	-0.4
	baz=68,slow=14,SNR=2.2						
ILAR	Eielson Array	33.24	40	P	P	16 36 39.2	-0.3
	comp=N,0.1nm,0.5s,baz=251,slow=6.1,SNR=6.1						
YKA	Yellowknife Ar	47.65	39	P	P	16 38 38.2	-0.3
	comp=N,0.6nm,0.9s,baz=303,slow=6.9,SNR=6.3						
MKAR	Makanchi Array	48.78	298	P	P	16 38 47.0	-0.5
	comp=N,0.7nm,0.8s,baz=66,slow=8.1,SNR=5.3						
CMAR	Chiang Mai Arr	55.71	259	P	P	16 39 39.1	-0.1
	comp=N,0.5nm,0.8s,baz=30,slow=7.3,SNR=3.8						
NVAR	Mina Array Bea	58.93	66	P	P	16 40 03.2	+1.1
	comp=N,0.2nm,0.5s,baz=298,slow=5.8,SNR=3.8						
PDAR	Pinedale Array	61.24	57	P	P	16 40 18.9	+1.0
	comp=N,0.7nm,0.7s,baz=318,slow=6.0,SNR=5.6						
FINES	FINESS Array B	63.65	336	P	P	16 40 33.3	0.0
	comp=N,4.5nm,1.1s,baz=32,slow=11,SNR=5.3						
WRA	Warramunga Arr	71.28	203	P	P	16 41 20.2	-1.8
	comp=N,0.7nm,0.7s,baz=14,slow=5.9,SNR=2.6						
ASAR	Alice Springs	74.95	202	P	P	16 41 42.9	-0.9
	comp=N,0.6nm,0.7s,baz=14,slow=5.8,SNR=9.5						
PLCA	Paso Flores	145.37	95	PKPbc	PKPbc	16 49 39.7	-0.4
	comp=N,3.7nm,1.1s,baz=1.4,slow=8.9,SNR=3.0						

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*NEIC **10** 16:36:26.3±1.5, 37°.17N±0°.03×97°.94W±0°.04, h5^{km}±1^{km}, mb_Lg3.2/89, Error ellipse: s-maj=6.1km s-min=4.2km az=29.0*

*ANF **10** 16:36:26.5±1.2, 37°.19N×97°.93W, h4^{km}±8^{km}, ML4.0/7, Error ellipse: s-maj=7.9km s-min=3.0km az=47.0*

ISC 10 16:36:26.3±1.1, **37°.19N**±0°.03×**97°.88W**±0°.03, **h4**^{km}±10^{km}, **n71**, σ**0^{s}.66**/41, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN08	Anthony NE Sta	0.08	297		Pg	16 36 28.2	+0.2
KAN12	Harper NE Stat	0.14	319		Pg	16 36 29.2	0.0
KAN10	Anthony SW Sta	0.18	249		Pg	16 36 30.1	+0.1
KS21	Milan North St	0.20	60		Pg	16 36 30.4	+0.2
KAN14	Manchester OK	0.24	196		Pg	16 36 31.2	+0.2
GC02	Grant County #	0.34	177		Pg	16 36 33.0	+0.2
GC02				Sg	Sg	16 36 37.9	+0.7
KAN13	South Haven SW	0.37	119		Pg	16 36 33.5	+0.2
CROK	Carrier	0.69	187		Pg	16 36 38.4	-1.1
T35A	Sooner Cattle	1.13	104	Pn	Pg	16 36 47.2	-0.7
T35B	Sooner Cattle	1.13	104	P		16 36 47.3	
	baz=285,SNR=189						
T35B				S		16 37 02.3	
	baz=285						
U32A	Winter Ranch,	1.21	228		Pg	16 36 48.5	-1.0
U32A	Winter Ranch,	1.21	228	P		16 36 48.5	
	baz=47						
U32A				S		16 37 05.2	
	baz=47						
QUOK	Quay	1.39	137		Pn	16 36 51.9	-0.4
R32A	Long Quarter,	1.40	332		Pn	16 36 51.7	-0.9
R32A	Long Quarter,	1.40	332	P		16 36 51.6	
	baz=152,SNR=44						
R32A				S		16 37 10.3	
	baz=152						
OK031	S. Brethren Rd	1.49	146		Pn	16 36 53.4	-0.4
OK030	Cody Creek RV	1.54	145		Pn	16 36 54.1	-0.3
OK025	Westminster Rd	1.66	165		Pn	16 36 56.4	+0.2
OKCSW	OKLAHOMA CITY	1.81	169	Pn	Pn	16 36 58.4	+0.1
FNO	Franklin	1.97	169		Pn	16 37 00.4	0.0
TUL1	Leonard	2.11	127	P	Pn	16 37 03.3	+1.0
	baz=307						
TUL1				S	Sb	16 37 31.8	+0.2
	baz=307						
TUL1	Leonard	2.11	127		Pn	16 37 03.2	+0.9
TUL1				Sn	Sn	16 37 29.8	+0.9
TUL1	Leonard	2.11	127	P		16 37 02.7	
	baz=308,SNR=18						
TUL1				S		16 37 30.2	
	baz=308						
KSU1	Kansas State U	2.16	27	P	Pn	16 37 03.2	+0.3
	baz=208						
KSU1				S	Sb	16 37 32.4	-0.5
	baz=208						
KSU1	Kansas State U	2.16	27		Pn	16 37 03.2	+0.3
KSU1				IAmb_Lg		16 37 38.8	
	comp=Z,103nm,0.8s						
KSU1	Kansas State U	2.16	27	P		16 37 03.1	
	baz=208,SNR=16						
KSU1				S		16 37 31.9	
	baz=208						
CBKS	Cedar Bluff	2.19	318	P	Pn	16 37 03.6	+0.1
	baz=138						
CBKS				S	Sn	16 37 31.7	+0.7
	baz=138						
CBKS	Cedar Bluff	2.19	318		Pn	16 37 03.5	+0.1
CBKS	Cedar Bluff	2.19	318	P		16 37 03.4	
	baz=138,SNR=26						
CBKS				S		16 37 31.7	
	baz=138						
W35A	Tecumseh	2.19	158		Pn	16 37 03.3	-0.1
WMOK	Wichita Mounta	2.55	197	P		16 37 08.5	
	baz=16,SNR=15						
U38A	Gravette	2.90	104	IAmb_Lg		16 38 05.1	
	comp=Z,48nm,0.9s						
U38A	Gravette	2.90	104	P		16 37 13.4	
	baz=286						
X37A	Clayton	3.30	141		Pn	16 37 19.0	+0.4
X37A				IAmb_Lg		16 38 16.6	
	comp=Z,85nm,0.9s						
X37A	Clayton	3.30	141	P		16 37 18.9	
	baz=323						
X37A				S		16 37 58.7	
	baz=323						
N33B	J Bar K, Exete	3.56	5	S		16 38 03.4	
	baz=186						
S39A	Bolivar	3.66	81		Pn	16 37 23.5	-0.2
S39A	Bolivar	3.66	81	P		16 37 23.4	
	baz=264,SNR=24						
AMTX	Amarillo	3.84	234	IAmb_Lg		16 38 34.1	
	comp=Z,56nm,0.7s						
W39A	Magazine	3.86	120	Pb	Pb	16 37 35.7	+0.7
	baz=302						
W39A				Sb	Sg	16 38 27.8	-2.5
	baz=302						
U40A	Yellville	4.12	100	P	Pn	16 37 30.2	+0.2
	baz=283						
U40A	Yellville	4.12	100	P		16 37 30.0	
	baz=283,SNR=18						
U40A				P		16 37 30.0	
	baz=283,SNR=18						
KSCO	Kaye Shedlock'	4.16	297	IAmb_Lg		16 38 45.8	
	comp=Z,40nm,0.8s						
P38A	Dawn	4.19	53		Pn	16 37 30.8	-0.2
P38A				IAmb_Lg		16 38 37.7	
	comp=Z,38nm,0.7s						
MIAR	Mount Ida	4.38	126	P	Pn	16 37 34.2	+0.7
	baz=308						
MIAR				S	Sn	16 38 24.8	-0.2
	baz=308						
MGMO	Mountain Grove	4.48	89		Pn	16 37 35.1	+0.2
MGMO				IAmb_Lg		16 38 50.4	
	comp=Z,50nm,0.8s						
Z38A	Mt. Pleasant	4.58	148	IAmb_Lg		16 39 01.3	
	comp=Z,30nm,0.9s						
R40A	Maddies Statio	4.58	74		Pn	16 37 36.3	0.0
FCAR	Ozark Folk Cen	4.81	104	IAmb_Lg		16 39 00.3	
	comp=Z,32nm,1.0s						
WHAR	Wooly Hollow	4.90	111	IAmb_Lg		16 39 11.4	
	comp=Z,35nm,0.9s						
X40A	Basin Creek Fa	4.91	122	P	Pn	16 37 41.4	+0.6
	baz=305						
X40A	Basin Creek Fa	4.91	122		Pn	16 37 40.6	-0.1
X40A				IAmb_Lg		16 39 09.2	
	comp=Z,31nm,0.8s						
OGNE	Ogallala	4.95	321	IAmb_Lg		16 39 17.1	
	comp=Z,29nm,0.9s						
W41B	Gary Mavity, V	4.98	112	IAmb_Lg		16 39 05.1	
	comp=Z,37nm,0.8s						
N38A	Joes South For	5.10	44	IAmb_Lg		16 39 10.1	
	comp=Z,50nm,0.8s						
P40A	Paris	5.14	61	IAmb_Lg		16 39 08.0	
	comp=Z,45nm,1.1s						
T25A	Trinidad	5.22	271	IAmb_Lg		16 39 12.5	
	comp=Z,43nm,0.9s						
CCM	Cathedral Cave	5.34	79	IAmb_Lg		16 39 22.3	
	comp=Z,28nm,0.8s						
T42A	Van Buren	5.43	90	IAmb_Lg		16 39 22.9	
	comp=Z,29nm,0.9s						
K31A	O'Neill	5.47	353	IAmb_Lg		16 39 30.3	
	comp=Z,44nm,0.7s						
Z41A	Richland Creek	5.71	132	IAmb_Lg		16 39 41.3	
	comp=Z,29nm,0.9s						
SCIA	State Center	5.93	36	IAmb_Lg		16 39 42.3	
	comp=Z,44nm,0.7s						
Q24A	Divide	6.00	289	IAmb_Lg		16 39 41.7	
	comp=Z,25nm,0.8s						
SLM	Saint Louis	6.21	74	IAmb_Lg		16 39 45.3	
	comp=Z,21nm,0.8s						
X43A	Marvell	6.28	113	IAmb_Lg		16 40 00.8	
	comp=Z,35nm,0.9s						
435B	Jarrell	6.39	178	IAmb_Lg		16 40 04.9	
	comp=Z,22nm,0.8s						
JCT	Junction City	6.88	194	IAmb_Lg		16 40 10.6	
	comp=Z,20nm,0.8s						
S44A	Carbondale	6.88	83	IAmb_Lg		16 40 08.7	
	comp=Z,31nm,0.8s						
SIUC	Southern Illin	6.91	83	IAmb_Lg		16 40 07.5	
	comp=Z,32nm,0.8s						
P43A	Skaggs, Pawnee	7.00	67	IAmb_Lg		16 40 13.5	
	comp=Z,27nm,0.8s						
L40A	Anamosa	7.08	44	IAmb_Lg		16 40 10.4	
	comp=Z,26nm,0.7s						
Q44A	Meyer Farm, Va	7.20	74	IAmb_Lg		16 40 19.4	
	comp=Z,35nm,0.9s						
W45A	Hickory Valley	7.32	103	IAmb_Lg		16 40 19.3	
	comp=Z,32nm,0.8s						
OXF	Oxford	7.38	109	IAmb_Lg		16 40 27.0	
	comp=Z,25nm,0.8s						
Y45A	Yeager Farm, C	7.56	114	IAmb_Lg		16 40 31.7	
	comp=Z,31nm,0.8s						
OLIL	Olney	7.88	76	IAmb_Lg		16 40 56.2	
	comp=Z,23nm,1.0s						
O44A	Mansfield	7.94	65	IAmb_Lg		16 40 48.8	
	comp=Z,22nm,1.0s						
JFWS	Jewell Farm	8.18	43	IAmb_Lg		16 40 45.2	
	comp=Z,21nm,0.8s						
K22A	Casper	8.59	312	IAmb_Lg		16 41 03.5	
	comp=Z,24nm,1.2s						
I40A	Norwalk	8.68	37	IAmb_Lg		16 41 02.2	
	comp=Z,13nm,0.9s						
P46A	Rosedale	8.72	71	IAmb_Lg		16 40 60.0	
	comp=Z,26nm,1.0s						
BLO	Bloomington	9.16	74	IAmb_Lg		16 41 31.1	
	comp=Z,23nm,1.1s						
WCI	Wyandotte Cave	9.24	80	IAmb_Lg		16 41 27.8	
	comp=Z,20nm,1.0s						

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*NEIC **10** 16:59:12.6±1.6, 47°.75N±0°.02×124°.75W±0°.07, h23^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=1.5km az=70.0*

*SEA **10** 16:59:13.7±1.6, 47°.80N±0°.03×124°.73W±0°.06, h23^{km}±7^{km}, ML3.1/69, ML3.0/22(NEIC), Error ellipse: s-maj=6.3km s-min=3.2km az=59.0*

*PNSN **10** 16:59:13.7, 47°.80N×124°.73W, h23^{km}, MD3.2, Fault plane solution: NP1:ϕ_s115.00000°, δ40.00000°, λ-90.00000°.*

*PGC **10** 16:59:13.7, 47°.80N×124°.73W, h23^{km}, ML2.7/29, ML3.1, 123km Wsw of Victoria, Bc Near Coast Of Washington*

ISC 10 16:59:13.3±1.1, **47°.77N**±0°.02×**124°.66W**±0°.03, **h19**^{km}±2^{km}, **n118**, σ**0^{s}.76**/153, **Near coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
C03A	Quillayute Air	0.19	20		Pb	16 59 17.9	+0.4
C03A					Sg	16 59 22.4	+0.8
OTR	Olympics--Tyee	0.38	34		Pg	16 59 21.5	+0.2
P403	Sandy Floe Qua	0.46	50		Pg	16 59 22.4	-0.3
P403					Sb	16 59 30.2	+0.9
OBC	Olympics--Boni	0.47	56	P	Pg	16 59 22.8	-0.3
OBC	Olympics--Boni	0.47	56		Pg	16 59 22.8	-0.3
OCP	Olym-Cheeka Pk	0.53	3	P	Pg	16 59 24.9	+0.9
OCP				S	Sn	16 59 33.7	-0.6
OCP	Olym-Cheeka Pk	0.53	3		Pg	16 59 24.9	+0.9
OLQ	Olympics--Lake	0.63	113		Pg	16 59 26.1	+0.3
OLQ					Sg	16 59 35.2	+1.0
NLWA	Neilton Lookou	0.66	125		Pg	16 59 26.8	+0.4
NLWA					Sn	16 59 36.9	-0.5
STW	Striped Peak	0.77	60	P	Pb	16 59 28.1	+0.1
STW				S	Sb	16 59 38.4	+0.3
STW	Striped Peak	0.77	60		Pb	16 59 28.0	-0.1
STW					Sn	16 59 40.1	0.0
B04A	Port Angeles	0.83	69		Pb	16 59 29.0	-0.2
B04A	Port Angeles	0.83	69		Pb	16 59 29.0	-0.2
B04A					Sn	16 59 41.6	-0.1
WISH	Wishkah	0.89	137	P	Pb	16 59 30.2	+0.2
WISH				S	Sn	16 59 44.4	+1.3
WISH	Wishkah	0.89	137		Pb	16 59 30.3	+0.2
SOKB	Sooke	0.91	46	P	Pb	16 59 29.5	-1.0
SOKB				S	Sb	16 59 42.4	+0.2
B017	Montesano	1.08	135		Pb	16 59 32.9	-0.3
D03D	Eldon	1.09	102		Pb	16 59 32.9	-0.6
HDW	Hoodsport	1.09	96	P	Pb	16 59 32.9	-0.7
HDW	Hoodsport	1.09	96		Pb	16 59 33.1	-0.5
VGZ	Gonzales	1.10	54	P	Pn	16 59 32.5	-1.3
VGZ				S	Sb	16 59 47.8	0.0
VGZ	Gonzales	1.10	54		Pn	16 59 32.4	-1.3
VGZ					Sb	16 59 47.9	+0.1
B926	Mesachie Lake	1.11	18	P	Pn	16 59 32.7	-1.2
B926				S	Sb	16 59 47.9	-0.1
B926	Mesachie Lake	1.11	18		Pn	16 59 32.6	-1.2
B926					Sb	16 59 48.0	0.0
BFSB	Bamfield	1.11	344	P	Pn	16 59 32.8	-1.0
BFSB				S	Sb	16 59 48.0	0.0
SQM	Sequim	1.13	74		Pn	16 59 33.9	-0.2
C04A	Brinnon	1.14	92		Pb	16 59 34.5	+0.1
BLN	Blyn Mountain	1.16	77	P	Pn	16 59 34.3	-0.3
BLN	Blyn Mountain	1.16	77		Pn	16 59 34.3	-0.3
B013	Quilcene	1.18	87		Pn	16 59 34.4	-0.3
B013	Quilcene	1.18	87		Pn	16 59 34.5	-0.3
B009	North Saanich	1.20	42	P	Pn	16 59 33.8	-1.2
B009				S	Sb	16 59 50.2	-0.2
PA12	PA12 Sannich	1.20	42	P	Pn	16 59 33.9	-1.1
PA12				S	Sb	16 59 50.1	-0.3
B010	North Saanich	1.20	42	P	Pn	16 59 33.9	-1.1
B010				S	Sb	16 59 50.3	-0.2
PGC	Sidney	1.20	42	P	Pn	16 59 33.9	-1.1
PGC				S	Sb	16 59 50.2	-0.3
PGC	Sidney	1.20	42		Pn	16 59 33.9	-1.1
PGC	Sidney	1.20	42	IAML		16 59 51.1	
	comp=N,284nm,0.5s						
B011	North Saanich	1.20	42	P	Pn	16 59 33.9	-1.1
B011				S	Sb	16 59 50.4	-0.1
B011	North Saanich	1.20	42		Pn	16 59 33.9	-1.1
PA01	PA01 North	1.20	42	P	Pn	16 59 34.0	-1.0
PA01				S	Sb	16 59 50.6	0.0
MGB	Mount Grey	1.23	359	P	Pn	16 59 34.6	-1.0
MGB				S	Sb	16 59 50.8	-0.9
MGB	Mount Grey	1.23	359		Pn	16 59 34.6	-1.0
GNW	Green Mountain	1.26	99	P	Pn	16 59 35.2	-0.6
GNW	Green Mountain	1.26	99		Pn	16 59 35.3	-0.5
GMW	Gold Mountain	1.29	99		Pn	16 59 35.7	-0.5
B012	Ucluelet	1.30	333	P	Pn	16 59 35.2	-1.2
B012				S	Sn	16 59 51.8	-1.4
CPW	Capitol Peak	1.31	127	P	Pn	16 59 35.8	-0.7
CPW				S	Sn	16 59 52.0	-1.5
B019	Raymond	1.31	148		Pn	16 59 36.2	-0.3
OZB	Mount Ozzard	1.32	335	P	Pn	16 59 35.6	-1.1
OZB				S	Sn	16 59 52.1	-1.6
OZB	Mount Ozzard	1.32	335		Pn	16 59 35.7	-1.1
OZB					Sn	16 59 52.2	-1.5
GOBB	Galiano Island	1.41	33	P	Pn	16 59 37.4	-0.5
GOBB				S	Sn	16 59 55.2	-0.8
SNB	Saturna Island	1.42	44	P	Pn	16 59 37.5	-0.5
SNB				S	Sn	16 59 56.1	-0.1
E03A	Lebam	1.43	148	P	Pn	16 59 37.6	-0.6
E03A	Lebam	1.43	148		Pn	16 59 37.4	-0.9
E03A				IAML		16 59 56.9	
	comp=E,243nm,0.6s						
E03A				IAML		17 00 10.5	
	comp=N,153nm,0.7s						
B927	Port Alberni	1.46	356	P	Pn	16 59 37.9	-0.6
B927				S	Sn	16 59 57.1	0.0
B927	Port Alberni	1.46	356		Pn	16 59 37.8	-0.7
MCW	Mount Constitu	1.53	53	P	Pn	16 59 39.1	-0.5
MCW	Mount Constitu	1.53	53		Pn	16 59 39.1	-0.5
NLLB	Nanaimo Lost L	1.53	17	P	Pn	16 59 39.0	-0.5
NLLB				S	Sn	16 59 58.6	-0.3
NLLB	Nanaimo Lost L	1.53	17		Pn	16 59 39.0	-0.5
GHNB	Nanoose	1.57	10	P	Pn	16 59 39.6	-0.5
GHNB				S	Sn	16 59 59.7	0.0
A04D	Lummi Island	1.62	53		Pn	16 59 41.6	+0.9
TOFB	Tofino	1.62	330	P	Pn	16 59 39.8	-1.0
B05A	Bryant	1.79	73		Pn	16 59 43.1	0.0
BTB	Buttle Lake	1.79	342	P	Pn	16 59 42.6	-0.8
CMW	Cultus Mountai	1.83	68	P	Pn	16 59 44.3	+0.5
BIB	Bowen Island	1.87	28	P	Pn	16 59 43.9	-0.4
BIB				S	Sn	17 00 07.0	-0.3
JCW	Jim Creek	1.88	76	P	Pn	16 59 44.6	0.0
JCW	Jim Creek	1.88	76		Pn	16 59 44.5	0.0
D05A	Enumclaw	1.90	107		Pn	16 59 45.7	+1.0
D05A				IAML		17 00 23.1	
	comp=N,90nm,1.5s						
D05A				IAML		17 00 31.5	
	comp=E,99nm,1.2s						
SHB	Sechelt	1.90	16	P	Pn	16 59 44.6	-0.2
SHB				S	Sn	17 00 08.2	-0.1
SHB	Sechelt	1.90	16		Pn	16 59 44.6	-0.2
TXB	Texada	1.94	4	P	Pn	16 59 45.0	-0.2
TXB				S	Sn	17 00 09.0	0.0
C05A	Tolt Reservoir	2.01	91		Pn	16 59 47.2	+1.0
HNBB	Haney	2.06	42	P	Pn	16 59 46.7	-0.1
MBW	Mount Baker	2.11	60	P	Pn	16 59 48.1	+0.4
MBW	Mount Baker	2.11	60		Pn	16 59 48.4	+0.7
A05A	Maple Falls	2.11	53	P	Pn	16 59 47.8	+0.2
WPB	Watts Point	2.12	26	P	Pn	16 59 47.6	-0.1
WPB				S	Sn	17 00 13.6	0.0
LON	Longmire	2.19	117	P	Pn	16 59 48.8	+0.1
LON				S	Sn	17 00 14.3	-1.1
LON	Longmire	2.19	117		Pn	16 59 48.9	+0.1
FMW	Mount Fremont	2.20	111	P	Pn	16 59 49.2	+0.2
RCM	Mount Rainier-	2.20	114		Pn	16 59 49.0	-0.1
GDR	Gold River	2.21	336	P	Pn	16 59 49.0	+0.1
RPW	Rockport	2.22	71	P	Pn	16 59 49.2	+0.1
RPW	Rockport	2.22	71		Pn	16 59 49.4	+0.3
PANH	Panhandle Gap,	2.25	113		Pn	16 59 48.7	-1.0
B06A	Marblemount	2.26	69	P	Pn	16 59 49.7	+0.2
B06A	Marblemount	2.26	69	Pn	Pn	16 59 49.8	+0.2
B06A				IAML		17 00 29.9	
	comp=N,89nm,0.7s						
B06A				IAML		17 00 32.9	
	comp=E,86nm,1.0s						
LVP	Lakeview Peak	2.30	137		Pn	16 59 51.1	+0.8
CBB	Campbell River	2.31	349	P	Pn	16 59 50.8	+0.4
GPW	Glacier Peak	2.40	80	P	Pn	16 59 52.3	+0.6
GPW	Glacier Peak	2.40	80		Pn	16 59 52.5	+0.8
WRW	Wenatchee Ridg	2.55	87		Pn	16 59 54.5	+0.7
WSLR	Whistler	2.62	25	P	Pn	16 59 55.2	+0.5
WSLR	Whistler	2.62	25		Pn	16 59 55.5	+0.8
HOPB	Hope	2.69	52	P	Pn	16 59 55.5	-0.1
WOSB	Woss	2.71	333	P	Pn	16 59 56.1	+0.3
LTY	Liberty	2.75	99	P	Pn	16 59 57.5	+1.0
LTY	Liberty	2.75	99		Pn	16 59 57.1	+0.7
LTY				IAML		17 00 50.1	
	comp=E,46nm,1.9s						
LTY				IAML		17 00 52.8	
	comp=N,49nm,1.6s						
NCRB	Newcastle Ridg	2.79	341	P	Pn	16 59 57.9	+0.8
FHRB	Fair Harbour	2.80	326	P	Pn	16 59 57.4	+0.4
NLW	Nelson Butte	2.92	82		Pn	17 00 00.8	+1.9
ETW	Entiat	2.93	92		Pn	17 00 00.0	+1.0
MAYB	Maynard	3.11	329	P	Pn	17 00 02.9	+1.4
CBSW	Chelan Butte S	3.12	88		Pn	17 00 01.9	+0.4
TLCB	Telegraph Cove	3.12	334	P	Pn	17 00 02.6	+1.2
LLLB	Lillooet	3.38	32	P	Pn	17 00 05.5	+0.5
PHC	Port Hardy	3.46	329	P	Pn	17 00 08.0	+2.0
H04A	Detroit Lake	3.53	150		Pn	17 00 07.8	+0.7
H04A				IAML		17 00 51.2	
	comp=E,21nm,0.5s						
BLTW	Bickleton	3.59	119		Pb	17 00 14.1	-2.1
B08A	Colville Reser	3.62	79	P	Pn	17 00 09.1	+0.7
B08A	Colville Reser	3.62	79		Pn	17 00 07.7	-0.7
PNT	Penticton	3.69	63	P	Pn	17 00 09.8	+0.4
C09A	Chrisman Ranch	4.31	87	P	Pn	17 00 17.4	-0.4
C09A	Chrisman Ranch	4.31	87	Pn	Pn	17 00 17.2	-0.5
C09A				IAML		17 02 06.3	
	comp=E,20nm,0.4s						
BBB	Bella Bella	4.95	335	P	Pn	17 00 28.2	+1.7
NEW	Newport	5.08	82	Pn	Pn	17 00 28.3	-0.2
NEW				IAML		17 01 24.8	
	comp=E,10nm,4.8s						

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*BJI **10** 17:03:06.0±0.0, 28°.70N×51°.90E, h10^{km}, mB5.1/43, mb4.9/58, Ms4.8/37, Ms7 4.4/35*

*IDC **10** 17:03:06.1±0.4, 28°.79N×51°.87E, h0^{km}, mb4.8/38, mb1 4.8/46, mb1mx4.7/59, mbtmp4.7/46, ML4.1/6, MS3.9/29, Ms1 4.0/29, ms1mx3.8/54, Error ellipse: s-maj=11.6km s-min=9.8km az=4.0*

*MOS **10** 17:03:06.9±1.1, 28°.77N×51°.88E, h14^{km}, mb5.1/35, Error ellipse: s-maj=4.6km s-min=3.4km az=100.7*

*TEH **10** 17:03:06.5, 28°.75N×51°.84E, h9^{km}, ML5.0*

*NEIC **10** 17:03:07.6±1.7, 28°.72N±0°.06×51°.82E±0°.07, h9^{km}±3^{km}, mb5.0/167, mb_Lg5.0(TEH), Error ellipse: s-maj=8.6km s-min=8.2km az=79.0*

*GCMT **10** 17:03:08.6±0.4, 28°.64N±0°.03×51°.85E±0°.02, h22^{km}±2^{km}, MW4.8/71, Moment Tensor Solution. s10,c11; s71,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.53±.15; M$_{\theta\theta}$1.54±.10; M$_{\phi\phi}$-2.07±.12; M$_{r\theta}$-0.45±.18; M$_{\theta\phi}$0.39±.09; M$_{\phi r}$0.73±.18; Best double couple: M$_0$2.02000×10^{16} NP1:ϕ_s219.00000°, δ65.00000°, λ177.00000°. NP2: ϕ_s311.00000°, δ87.00000°, λ25.00000°. Principal axes: T 1.7160, Plg20.0000°, Azm178.0000°; N 0.6060, Plg65.0000°, Azm317.0000°; P -2.3240, Plg15.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DSN **10** 17:03:10.8±3.2, 28°.51N×51°.93E, h10^{km}, ML5.2/8 Error ellipse: s-maj=41.9km s-min=10.9km az=1.0*

*OMAN **10** 17:03:11.7±0.3, 28°.25N×51°.76E, h10^{km}, mb6.2/16, ml4.8/3, ms3.7/2, Error ellipse: s-maj=16.1km s-min=8.6km*

az=227.0

*BGR **10** 17:03:35.8±0.0, 30°.37N×48°.78E, h10km, mb5.3*

ISC 10 17:03:07.9±0.6, **28°.69N**±0°.03×**51°.83E**±0°.03, **h10**km±3km, **n716**, σ1s.**32**/735, **mb5.0**/229, **MS4.1**/30, **38C-48D**, **Fault plane solution: NP1:**φs312.73782°, δ76.23859°, λ48.76718°. **NP2:**φs207.55278°, δ43.07587°, λ159.61643°. **Principal axes:** T Plg43.2130°, Azm182.9841°; N Plg39.8067°, Azm324.5146°; P Plg20.3834°, Azm72.5529°; **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	0.50	290	*e*Pg	Pg	17 03 16.5	-1.2
KAZ1	Kazerun	0.94	350	*e*Pg	Pg	17 03 23.2	-2.9
KAZ1				*e*		17 03 50.1	
	comp=Z,99nm,0.6s						
QIR1	Qir	1.09	101	*e*Pg	Pg	17 03 27.8	-1.0
QIR1				*e*		17 03 57.0	
	comp=Z,99nm,0.5s						
SHI	Shiraz	1.12	32	*e*Pg	Pg	17 03 27.0	-2.4
SHI				*e*Sg	Sg	17 03 43.0	-0.9
SHI				*e*		17 03 49.5	
	comp=Z,99nm,0.6s						
JHRM	Jahrom	1.54	97	*e*Pg	Pb	17 03 36.5	-0.1
JHRM				*e*		17 04 14.8	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	1.79	139	*e*Pn	Pb	17 03 40.6	-0.2
LMD1				*e*		17 04 26.4	
	comp=Z,99nm,0.9s						
KLNJ	Kolanjah	2.32	355	*e*Pn	Pn	17 03 46.6	+0.2
ABEH	Behbahan	2.35	324	*e*Pn	Pn	17 03 47.0	+0.5
LAR1	LAR	2.46	114	*e*Pn	Pn	17 03 49.5	+1.3
LAR1				*e*		17 04 48.8	
	comp=Z,99nm,0.8s						
IRAM	Ramesheh	3.14	9	*e*Pn	Pn	17 03 57.7	+0.1
QRN	Al-Qurain	3.44	272	*e*P		17 04 01.5	
ISAD	Sadrabad	3.59	26	*e*Pn	Pn	17 04 03.9	+0.1
IMEH	Mehriz	3.61	41	Pn	Pn	17 04 05.3	+1.2
IMEH	Mehriz	3.61	41	*e*Pn	Pn	17 04 05.3	+1.2
KBD	Kabd	3.66	279	*e*P		17 04 04.6	
AMIS	Naft Sefid	3.69	324	*e*Pn	Pn	17 04 05.0	0.0
UMR	Umm Al-Rimmam	3.70	284	*e*P		17 04 06.0	
SHK1	Shahrekord	3.71	348	*e*Pn	Pn	17 04 05.1	-0.4
RDF	Al-Radifah	3.77	275	*e*P		17 04 06.8	
GENO	Geno	4.04	108	*e*Pn	Pn	17 04 10.4	+0.4
IPIR	Pirpir	4.06	349	Pn	Pn	17 04 09.6	-0.7
IPIR	Pirpir	4.06	349	*e*Pn	Pn	17 04 09.6	-0.7
MIB	Mutribah	4.08	287	*e*P		17 04 11.1	
MIB				IAML		17 05 15.4	
	comp=Z,3μm,0.7s						
NASN	Na'in	4.18	11	*e*Pn	Pn	17 04 11.3	-0.7
ICHK	Chekchek	4.18	31	Pn	Pn	17 04 12.6	+0.7
ICHK	Chekchek	4.18	31	*e*Pn	Pn	17 04 12.7	+0.8
IZEF	Zefreh	4.21	6	Pn	Pn	17 04 11.9	-0.5
IZEF	Zefreh	4.21	6	*e*Pn	Pn	17 04 11.9	-0.5
SHGR	Shooshtar-Gavs	4.29	323	*e*Pn	Pn	17 04 12.5	-0.8
IBAF	Bafgh	4.33	47	Pn	Pn	17 04 13.6	-0.4
IBAF	Bafgh	4.33	47	*e*Pn	Pn	17 04 13.6	-0.4
KHGB	Koh Gabri	4.38	66	*e*Pn	Pn	17 04 15.2	+0.5
NGRK	Negar Kerman	4.39	76	*e*Pn	Pn	17 04 15.1	+0.2
NGRK				*e*		17 05 41.1	
	comp=Z,99nm,0.8s						
YZKH	Yazd	4.39	32	*e*Pn	Pn	17 04 14.5	-0.1
KRBR	Kerman	4.49	72	*e*Pn	Pn	17 04 16.8	+0.6
TVBK	TV Kerman	4.49	72	*e*Pn	Pn	17 04 16.8	+0.5
TVBK				*e*		17 04 40.4	
	comp=Z,99nm,0.6s						
IKLH	Kolahrood	4.62	357	*e*Pn	Pn	17 04 17.9	0.0
SHME	Shamm	4.65	124	*i* P	Pn	17 04 18.7	+0.5
	SNR=12						
SHME				S	Sn	17 05 10.0	-2.1
BANOM	Banah	4.84	124	P	Pn	17 04 21.5	+0.7
	SNR=69						
BANOM				S	Sn	17 05 16.4	-0.4
NAZ	Nazwa, Dubai	5.03	136	*i* P	Pn	17 04 25.0	+1.6
	SNR=52						
QAM	Ghamsar	5.06	356	*e*Pn	Pn	17 04 24.0	0.0
MSFE	Esma-Masafi	5.09	130	*i* P	Pn	17 04 25.0	+0.7
	SNR=20						
ASUD	Al Ashush, Dub	5.12	142	*i* P	Pn	17 04 26.5	+1.9
	SNR=122						
CHMN	Cheshme madani	5.12	75	*e*Pn	Pn	17 04 25.8	+0.9
FAQ	Al Faqa, Dubai	5.17	139	*i* P	Pn	17 04 26.4	+1.1
	SNR=14						
MDH	Madha	5.22	129	P	Pn	17 04 27.2	+1.1
	SNR=13						
MDH				S	Sn	17 05 25.6	-0.8
KHNJ	Kahnooj	5.23	97	*e*Pn	Pn	17 04 26.5	+0.3
KRSH	Karshahi	5.27	3	*e*Pn	Pn	17 04 26.4	-0.4
KHMZ	Khomeyn	5.28	343	*e*Pn	Pn	17 04 26.4	-0.6
UOSS	Minazif	5.40	133	*i* P	Pn	17 04 28.9	+0.3
	SNR=13						
UOSS	Minazif	5.40	133	Pn	Pn	17 04 28.8	+0.3
UOSS				Sn	Sn	17 05 27.5	-3.2
UOSS	Minazif	5.40	133	*e*Pn	Pn	17 04 29.2	+0.7
HATD	Hatta, Dubai	5.44	134	*i* P	Pn	17 04 30.4	+1.4
	SNR=21						
ASHO	Ashiyiah	5.50	136	P	Pn	17 04 30.7	+0.9
	SNR=43						
ASHO				S	Sn	17 05 31.7	-1.5
IKMR	Kamar-syah	5.65	329	*e*Pn	Pn	17 04 31.2	-0.6
GHVR	GHOM	5.79	356	*e*Pn	Pn	17 04 33.2	-0.7
ALNE	Al Ain	5.80	142	*i* P	Pn	17 04 35.3	+1.3
	SNR=42						
KBAM	BAM	5.82	84	*e*Pn	Pn	17 04 35.2	+0.9
KBAM				*e*		17 05 49.6	
	comp=Z,99nm,0.6s						
IKFM	Kafar-mosalman	5.91	326	Pn	Pn	17 04 34.5	-0.9
IKFM	Kafar-mosalman	5.91	326	*e*Pn	Pn	17 04 34.5	-0.9
TPRV	Parvadeh(Tabas	6.00	43	*e*Pn	Pn	17 04 37.6	+0.7
ASAO	Ashtian	6.04	346	*e*Pn	Pn	17 04 36.8	-0.6
IQOM	Qom	6.17	354	*e*Pn	Pn	17 04 38.7	-0.5
SOHO	SOHO	6.19	136	P	Pn	17 04 40.1	+0.8
SOHO				S	Sn	17 05 49.6	-0.7
IVRN	Varamin	6.28	359	*e*Pn	Pn	17 04 39.6	-1.1
TNSJ	Nastanj	6.65	37	*e*Pn	Pn	17 04 45.7	-0.1
UMZA	Um Al Zommool	6.67	153	*e*Pn	Pn	17 04 46.8	+0.9
TKDS	Koohdasht(Taba	6.68	41	*e*Pn	Pn	17 04 46.6	+0.5
TABS	Tabas	6.70	41	*e*Pn	Pn	17 04 46.6	+0.2
IHSB	Hasanabad	6.74	356	*e*Pn	Pn	17 04 45.8	-1.2
ARQ	Araqi	6.80	141	P	Pn	17 04 48.3	+0.5
	SNR=57						
ARQ				S	Sn	17 06 04.3	-1.0
IRAZ	Razeghan	6.88	347	*e*Pn	Pn	17 04 49.2	+0.2
IALM	Almabolaq	6.89	334	*e*Pn	Pn	17 04 48.5	-0.7
KCHF	Cheshme Sefid,	6.91	325	*e*Pn	Pn	17 04 49.0	-0.3
KER	Kermanshah	6.95	326	*e*Pn	Pn	17 04 49.8	-0.1
IMHD	Mahdasht	7.04	352	*e*Pn	Pn	17 04 49.8	-1.3
HOQ	Hoqain	7.08	135	P	Pn	17 04 52.0	+0.4
	SNR=40						
HOQ				S	Sn	17 06 11.8	-0.3
HSRG	Sareghieh	7.19	336	*e*Pn	Pn	17 04 52.7	-0.7
IVIS	Veis	7.20	325	*e*Pn	Pn	17 04 52.9	-0.4
IKOO	Kooshah	7.21	57	*e*Pn	Pn	17 04 54.3	+0.7
QABG	Abgarm-Qazvin	7.25	345	*e*Pn	Pn	17 04 52.4	-1.7
ITEG	Tejag	7.28	53	*e*Pn	Pn	17 04 54.7	+0.3
ILIN	Lien	7.46	328	*e*Pn	Pn	17 04 57.0	0.0
IPRN	Peran	7.54	3	*e*Pn	Pn	17 04 58.0	0.0
NHDN	Nehbandan	7.61	67	*e*Pn	Pn	17 04 58.8	-0.2
BSY	Bisya	7.65	140	P	Pn	17 04 60.0	+0.6
	SNR=109						
BSY				S	Sn	17 06 22.5	-3.6
BIDO	Bidbid	7.65	131	P	Pn	17 05 00.1	+0.7
BIDO				P	Pn	17 05 00.1	+0.7
BIDO				S	Sn	17 06 24.6	-1.5
BIDO				S	Sn	17 06 24.6	-1.5
RAYN	Ar Rayn	7.67	229	*i* P	Pn	17 04 58.9	-0.9
	SNR=62						
RAYN	Ar Rayn	7.67	229	P	Pn	17 04 59.0	-0.7
RAYN	Ar Rayn	7.67	229	Pn	Pn	17 04 59.0	-0.7
QALM	Alamut, Qazvin	7.78	353	*e*Pn	Pn	17 05 00.0	-1.4
SMDO	Samad	7.92	134	P	Pn	17 05 03.7	+0.5
	SNR=20						
SMDO				P	Pn	17 05 03.7	+0.5
	SNR=20						
SMDO				S	Sn	17 06 29.2	-3.8
SMDO				S	Sn	17 06 29.2	-3.8
WSAR	Wadi Sarin	8.18	130	Pn	Pn	17 05 06.3	-0.3
	comp=Z,6.0nm,0.3s,baz=318,slow=7.9,SNR=46						
WSAR				Sn	Sn	17 06 36.0	-3.1
	comp=Z,6.1nm,0.3s,baz=160,slow=19,SNR=7.6						
WSAR				LR	LR	17 08 33.5	
	comp=Z,1μm,20.3s,baz=338,slow=40						
WBK	Wadi Bani Khal	8.84	132	P	Pn	17 05 15.1	-0.6
	SNR=20						
WBK				S	Sn	17 06 51.7	-3.7
IMND	Minoodasht	9.05	18	*e*Pn	Pn	17 05 18.7	+0.1
SBZV	Sabzevar	9.09	31	*e*Pn	Pn	17 05 20.0	+0.7
JLN	Jalan Bani Buh	9.45	132	P	Pn	17 05 22.8	-1.2
	SNR=21						
MHTO	MHTO	9.48	143	P	Pn	17 05 25.0	+0.5
	SNR=104						
MAHB	Mahabad	9.56	329	*e*Pn	Pn	17 05 25.9	+0.2
ISRB	Sarab	9.75	340	*e*Pn	Pn	17 05 29.3	+0.9
IPAY	Payeh	9.81	36	*e*Pn	Pn	17 05 29.7	+0.5
ISFR	Sfrayin	9.81	30	*e*Pn	Pn	17 05 30.8	+1.5
DQM	DQM	10.16	148	P	Pn	17 05 33.2	-0.6
	SNR=13						
JRKH	Jarkhoshk	10.18	43	*e*Pn	Pn	17 05 34.9	+0.8
DOK	Doka	10.25	168	P	Pn	17 05 34.2	-0.9
	SNR=18						
IKRD	Kardeh	10.33	37	*e*Pn	Pn	17 05 37.0	+7.6
IMYA	Miami	10.33	40	*e*Pn	Pn	17 05 37.3	+1.0
IHRS	Heris	10.40	339	Pn	Pn	17 05 35.9	-1.3
IHRS	Heris	10.40	339	*e*Pn	Pn	17 05 36.0	-1.3
HRA	Herat	10.54	55		Pn	17 05 39.8	+0.7
GEYT	Alibeck	10.60	28	Pn	Pn	17 05 39.1	-0.7
	comp=Z,1.0nm,0.3s,baz=202,slow=11,SNR=14						
GEYT				LR	LR	17 09 47.1	
	comp=Z,103nm,19.8s,baz=75,slow=38						
GEYT	Alibeck	10.60	28		Pn	17 05 39.9	0.0
GYA0B	ALIBECK ARRAY	10.60	28		Pn	17 05 40.4	+0.5
ITBZ	Tabriz	10.63	335	*e*Pn	Pn	17 05 41.7	+1.3
WHFO	Wadi Hawf	10.87	170	P	Pn	17 05 42.1	-1.5
	SNR=34						
SHAO	Shalim	11.18	161	P	Pn	17 05 47.7	-0.1
	SNR=11						
IMRD	Marand	11.22	335	*e*Pn	Pn	17 05 48.8	+0.4
DMTO	DMTO	11.29	165	P	Pn	17 05 49.0	-0.4
	SNR=15						
RBK	Rabkut	11.35	168	P	Pn	17 05 48.3	-1.9
	SNR=36						
ABTO	Aybut	11.37	173	P	Pn	17 05 49.0	-1.4
	SNR=39						
GEVA	Gevas	12.06	325		Pn	17 05 57.9	-2.1
MARD	Mardin	12.64	316		Pn	17 06 04.9	-2.9
GNI	Garni	12.83	335	Pn	Pn	17 06 12.5	+2.0
	comp=Z,0.4nm,0.3s,baz=233,slow=3.8,SNR=6.3						
GNI				LR	LR	17 11 48.3	
	comp=Z,334nm,19.1s,baz=151,slow=41						
GNI	Garni	12.83	335	*i* P	Pn	17 06 10.1	-0.4
GNI	Garni	12.83	335		Pn	17 06 09.5	-1.0
KOPT	Kop Dagi	14.66	323	Pn	Pn	17 06 34.4	-1.1
MAK	Makhachkala	14.66	347	*e*P	Pn	17 06 28.2	-7.1
MAK				pmax	pmax		
	comp=Z,199nm,1.0s						
MAK				MLR	MLR		
	comp=Z,121nm,8.0s						
MMAI	Mount Meron Ar	14.75	291	Pn	Pn	17 06 34.4	-2.3
	comp=Z,1.9nm,0.3s,baz=103,slow=17,SNR=15						
MMAI				LR	LR	17 13 28.2	
	comp=Z,323nm,21.8s,baz=125,slow=42						
EIL	Elat	14.78	278	Pn	Pn	17 06 37.0	-0.1
	comp=Z,0.3nm,0.3s,baz=68,slow=8.8,SNR=7.5						
EIL				LR	LR	17 13 22.1	
	comp=Z,818nm,18.7s,baz=97,slow=42						
GAZ	Gaziantep	14.89	308		Pn	17 06 36.8	-1.7
GROC	Groznyy	15.28	343	*e*P	Pn	17 06 43.0	-0.5
GROC				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZEI	Tsey	15.46	338	*e*P	Pn	17 06 43.5	-2.6
ZEI				pmax	pmax		
	comp=Z,86nm,1.3s						
MQOL	MQOL	15.62	243	*i* P		17 06 53.6	
MQOL				*i*		17 06 59.2	
	baz=326,slow=6.9						
MQOL				*i* S		17 09 51.4	
KBL	Kabul	15.77	64	P	Pn	17 06 51.2	+0.9
KBL				pmax	pmax		
	comp=Z,29nm,1.1s						
KBL	Kabul	15.77	64		Pn	17 06 51.2	+0.9
NCK	Nalchik	16.19	338	⇓*i*P	Pn	17 06 55.8	+0.4
NCK				pmax	pmax		
	comp=Z,66nm,1.2s						
SOCY	Socotra	16.55	173		Pn	17 06 56.1	-4.1
KBZ	Khabaz	16.63	337	Pn	Pn	17 07 00.1	-0.8
	comp=Z,0.4nm,0.3s,baz=161,slow=5.0,SNR=9.5						
KBZ				LR	LR	17 14 29.2	
	comp=Z,352nm,21.3s,baz=156,slow=41						
KBZ	Khabaz	16.63	337	*i* P	Pn	17 07 00.4	-0.6
KBZ				pmax	pmax		
	comp=Z,41nm,1.1s						
KIV	Kislovodsk	16.90	337	*e*P	Pn	17 07 04.0	-0.5
KIV				pmax	pmax		
	comp=Z,182nm,1.1s						
KIV				MLR	MLR		
	comp=Z,418nm,13.0s						
KIV	Kislovodsk	16.90	337	P	Pn	17 07 04.4	-0.1
CSS	Mathiatis	16.91	296	Pn	Pn	17 07 03.4	-1.3
CSS				IAmb	IAmb	17 07 15.9	
	comp=Z,80nm,0.7s						
TOKA	Tokat	17.14	317	P	P	17 07 09.5	+0.3
THW	Thamme Wali	17.59	72	P	Pn	17 07 11.6	-1.6
SOC	Sochi	17.76	330	*e*P	Pn	17 07 13.4	-1.8
SOC				*e*		17 10 30.2	
SOC				MLR	MLR		
	comp=Z,298nm,16.0s						
GOF	Gofitskoye	17.76	339	⇑*e*P	Pn	17 07 14.8	-0.4
GOF				pmax	pmax		
	comp=Z,97nm,1.4s						
CEP	Cherat	17.90	68	P	Pn	17 07 16.2	-0.9
BR131	Keskin Array S	18.61	311	⇑*e*P	P	17 07 25.4	-0.1
BR131	Keskin Array S	18.61	311	P	P	17 07 24.4	-1.0
BRTR	Keskin Array B	18.61	311	P	P	17 07 25.1	-0.4
	comp=Z,1.3nm,0.3s,baz=130,slow=13,SNR=52						
BRTR				LR	LR	17 15 23.2	
	comp=Z,210nm,20.9s,baz=132,slow=40						
BRTR	Keskin Array B	18.61	311	P	P	17 07 24.9	-0.6
NIL	Nilore	18.97	70	P	P	17 07 28.5	-0.9
NIL				pmax	pmax		
	comp=Z,61nm,1.0s						
NIL	Nilore	18.97	70	P	P	17 07 28.5	-0.9
TAS	Tashkent	19.02	44	P	P	17 07 29.7	-0.2
TAS				pmax	pmax		
	comp=Z,73nm,0.9s						
TAS	Tashkent	19.02	44	P	P	17 07 29.7	-0.2
TAS				IAmb	IAmb	17 07 38.1	
	comp=Z,73nm,0.9s						
ATD	Arta Tunnel	19.03	208	P	Pn	17 07 31.8	+0.9
	baz=357,slow=14,SNR=2.9						
ATD	Arta Tunnel	19.03	208	P	Pn	17 07 30.9	0.0
BR231	Keskin MP Arra	19.24	310	P	P	17 07 31.8	-0.6
ILGA	Ilgaz	19.27	315	P	P	17 07 32.9	+0.1
DRK	Karamyk	19.69	52	P	P	17 07 37.0	-0.5
ANN	Anapa	19.74	328	*e*P	Pn	17 07 44.3	+5.2
ANN				pmax	pmax		
	comp=Z,130nm,0.9s						
IUG	Iuzhnay	19.95	43	*e*P	P	17 07 40.1	0.0
	baz=43						
IUG	Iuzhnay	19.95	43	*e*P	P	17 07 40.1	0.0
ISP	Isparta	19.98	303	P	Pn	17 07 43.1	+0.9
ISP				pmax	pmax		
	comp=Z,28nm,0.7s						
ISP	Isparta	19.98	303	P	Pn	17 07 43.1	+0.9
ELL	Elmali	20.09	299	P	P	17 07 40.9	-0.8
ELL	Elmali	20.09	299	P	P	17 07 40.9	-0.8
AKAS	Kas	20.18	298	P	P	17 07 41.6	-1.1
MDUB	Mudurnu	20.60	310	P	P	17 07 46.5	-0.7
KK31	Karatay Array	20.81	41	P	P	17 07 48.3	-1.0
KK31				pmax	pmax		
	comp=Z,30nm,0.8s						
KK31	Karatay Array	20.81	41	P	P	17 07 48.3	-1.0
KKAR	Karatay Array	20.81	41	P	P	17 07 48.5	-0.9
KKAR				pmax	pmax		
	comp=Z,30nm,0.8s						
KKAR	Karatay Array	20.81	41	P	P	17 07 48.5	-0.9
DZA	Taraz	21.16	43	*e*P	P	17 07 52.9	-0.4
	comp=Z,17nm,1.0s,baz=43						
DZA	Taraz	21.16	43	*e*P	P	17 07 52.8	-0.4
DZA				pmax	pmax		
	comp=Z,17nm,1.0s						
ARSB	Arslanbob	21.36	48	P	P	17 07 55.2	-0.2
ARSB				pmax	pmax		
	comp=Z,61nm,0.8s						
ARSB	Arslanbob	21.36	48	P	P	17 07 55.2	-0.2
ARSB				IAmb	IAmb	17 08 01.0	
	comp=Z,60nm,0.8s						
ABKAR	Akbulak array	21.45	15	P	P	17 07 55.2	-1.0
SIM	Simferopol'	21.48	324	*e*P	P	17 07 57.4	+0.9
SIM						17 08 21.4	
SIM				S	S	17 11 50.1	-4.5
SIM				pmax	pmax		
	comp=Z,34nm,0.5s						
MANT	Manisa	21.66	303	P	P	17 07 58.4	-0.4
KARP	Karpathos	21.95	294	P	P	17 08 01.9	+0.1
AKTO	Aktyubinsk	22.21	10	P	P	17 08 03.6	-0.8
	comp=Z,19nm,0.8s,baz=209,slow=12,SNR=26						
AKTO				LR	LR	17 17 50.2	
	comp=Z,419nm,20.3s,baz=180,slow=40						
AML	Almayashu	22.22	47	P	P	17 08 04.7	-0.2
	SNR=38						
EKS2	Erkin-Say	22.54	46	P	P	17 08 08.3	+0.2
	SNR=14						
KSH	Kashi	22.65	55	P	P	17 08 04.7	-4.6
KSH				pP	pP	17 08 07.8	-4.6
KSH				S	S	17 12 02.8	-15
KSH				sS	pS	17 12 10.8	-10
KSH				pmax	pmax		
	comp=Z,39nm,0.7s						
KSH				pmax	pmax		
	comp=Z,410nm,5.3s						
KSH				LR	LR		
	comp=Z,1μm,9.2s						
KSH				LR	LR		
	comp=Z,990nm,10.2s						
KSH				LR	LR		
	comp=Z,1μm,12.9s						
UCH	Uchtor	22.80	48	P	P	17 08 11.0	-0.1
	SNR=15						
AAK	Ala-Archa	22.98	47	P	P	17 08 14.5	+1.7
	SNR=20						
AAK	Ala-Archa	22.98	47	P	P	17 08 12.6	-0.2
AAK				pmax	pmax		
	comp=Z,26nm,0.9s						
AAK	Ala-Archa	22.98	47	P	P	17 08 12.6	-0.2
FRU1	Bishkek	23.16	46	P	P	17 08 14.5	0.0
FRU1				pmax	pmax		
	comp=Z,39nm,1.1s						
FRU1	Bishkek	23.16	46	P	P	17 08 14.5	0.0
FRU1				IAmb	IAmb	17 08 30.6	
	comp=Z,38nm,1.1s						
KBK	Karagaybulak	23.29	47	P	P	17 08 17.5	+1.6
	SNR=17						
USP	Ospenovka	23.31	45	P	P	17 08 15.7	-0.3
	SNR=5.6						
CHMS	Chumysh	23.33	46	P	P	17 08 15.5	-0.7
	SNR=5.6						
SANT	Santorini	23.47	296	P	P	17 08 16.9	-0.7
APE	Apeiranthos	23.56	298	⇓P	P	17 08 18.4	-0.1
IDI	Anoyia	23.74	293	P	P	17 08 20.3	0.0
	comp=Z,28nm,0.7s,baz=88,slow=9.4,SNR=13						
IDI	Anoyia	23.74	293	⇑P	P	17 08 21.2	+0.9
IDI	Anoyia	23.74	293	P	P	17 08 20.6	+0.3
VRH	Novokhopyorsk	23.74	344	*e*P	P	17 08 19.0	-1.0
VRH				*e*S	S	17 12 30.6	-4.5
VRH				pmax	pmax		
	comp=Z,190nm,1.2s						
VRH				smax	smax		
	comp=N,880nm,4.9s						
BELG	Belogornoye	23.88	354	LR	LR	17 20 26.3	
	comp=N,213nm,20.7s,baz=157,slow=44						
BELG	Belogornoye	23.88	354	*d i*P	P	17 08 22.1	+0.7
BELG				pmax	pmax		
	comp=Z,23nm,1.1s						
BTLS	Baital	24.01	41	*i* P	P	17 08 21.5	-1.3
	comp=Z,9.8nm,1.0s,baz=41						
BTLS	Baital	24.01	41	*i* P	P	17 08 21.4	-1.3
BTLS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD	Divnogorie	24.17	340	*e*P	P	17 08 23.6	-0.5
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
MFTR	Murfatlar	24.24	316	⇓P	P	17 08 27.3	+2.4
JURR	Jurilovca	24.29	318	⇓P	P	17 08 25.9	+0.7
ALN	Alexandroupoli	24.33	307	P	P	17 08 25.5	-0.2
ALN				pmax	pmax		
	comp=Z,30nm,0.8s						
ALN	Alexandroupoli	24.33	307	P	P	17 08 25.5	-0.2
ALN				IAmb	IAmb	17 08 29.4	
	comp=Z,30nm,0.8s						
TIRR	Tirgusor	24.40	316	⇑P	P	17 08 26.3	+0.1
TIRR	Tirgusor	24.40	316	P	P	17 08 26.4	+0.1
TIRR				pmax	pmax		
	comp=Z,87nm,1.1s						
TIRR	Tirgusor	24.40	316	P	P	17 08 26.4	+0.1
MTBS	Maitube	24.47	47	*e*P	P	17 08 26.2	-0.9
	baz=47						
MTBS	Maitube	24.47	47	*e*P	P	17 08 26.1	-0.9
KDJ	Kajisay	24.52	50	P	P	17 08 28.2	+0.5
KDJ				pmax	pmax		
	comp=Z,20nm,1.0s						
KDJ	Kajisay	24.52	50	P	P	17 08 28.2	+0.5
TLCR		24.56	318	⇓P	P	17 08 29.6	+1.9
TPGR	Topolog	24.61	317	⇑P	P	17 08 28.1	-0.1
TLBR	Topalu	24.67	316	⇑P	P	17 08 30.3	+1.6
TNSS	Tian-Shan	24.76	48	*e*P	P	17 08 30.4	+0.3
	baz=48						
TNSS	Tian-Shan	24.76	48	*e*P	P	17 08 30.4	+0.3
KUU	Kurty	24.78	46	*e*P	P	17 08 29.8	-0.1
	comp=Z,19nm,0.8s,baz=46						
KUU	Kurty	24.78	46	*e*P	P	17 08 29.7	-0.1
KUU				pmax	pmax		
	comp=Z,19nm,0.8s						
AAA	Alma-Ata	24.82	48	*e*P	P	17 08 30.0	-0.2
	baz=48						
AAA	Alma-Ata	24.82	48	*e*P	P	17 08 30.0	-0.2
VORR	Voronezh	24.82	341	*e*P	P	17 08 29.0	-1.1
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
MDOK	Medeo	24.88	48	*e*P	P	17 08 30.6	-0.3
	baz=48						
MDOK	Medeo	24.88	48	*e*P	P	17 08 30.6	-0.3
CFR	Carcaliu	24.95	318	⇓P	P	17 08 31.8	+0.5
CHKK	Chushkaly	25.17	46	*e*P	P	17 08 32.9	-0.4
	baz=46						
CHKK	Chushkaly	25.17	46	*e*P	P	17 08 32.8	-0.5
SCHL	Schela	25.31	318	⇓P	P	17 08 34.9	+0.3
LEHL	Lehliu	25.38	315	⇓P	P	17 08 37.7	+2.5
PRZ	Przheval'sk	25.49	50	P	P	17 08 37.3	+0.8
PRZ	Przheval'sk	25.49	50	P	P	17 08 37.3	+0.8
VARL	Varlezi	25.52	319	⇓P	P	17 08 38.6	+2.1
MILM	Milestii Mici	25.57	322	⇓P	P	17 08 36.9	0.0
SATY	Saty	25.73	49	*e*P	P	17 08 38.2	-0.4
	baz=49						
SATY	Saty	25.73	49	*e*P	P	17 08 38.2	-0.4
LPSR	Galich'ya Gora	25.73	342	*e*P	P	17 08 38.1	-0.2
LPSR				*e*S	S	17 13 07.3	+0.3
LPSR				pmax	pmax		
	comp=Z,90nm,0.9s						
LPSR				smax	smax		
	comp=N,1μm,3.9s						
PETR	Petresti	25.79	318	⇓P	P	17 08 40.2	+1.4
BIR	Birlad	25.86	319	⇓P	P	17 08 41.8	+2.3
ODBI	Odobesti	25.91	318	⇓P	P	17 08 39.9	-0.1
VASR	Vaslui	25.98	320	⇓P	P	17 08 40.9	+0.3
KPKS	Kokpek	26.09	48	*e*P	P	17 08 41.6	-0.3
	comp=N,25nm,0.7s,baz=48						
KPKS	Kokpek	26.09	48	*e*P	P	17 08 41.5	-0.3
KPKS				pmax	pmax		
	comp=Z,25nm,0.7s						
VRI	Vrincioaia	26.16	318	⇓P	P	17 08 43.0	+0.7
NEHR	Nehoiu	26.19	317	⇓P	P	17 08 44.0	+1.4
PLOR	Plostina	26.20	318	⇑P	P	17 08 44.2	+1.5
COPA	Copaceanca	26.23	313	⇓P	P	17 08 45.4	+2.5
ITM	Ithomi	26.41	296	P	P	17 08 45.7	+1.1
IAS	Iasi	26.42	321	⇑P	P	17 08 46.6	+2.0
MLR	Muntele Rosu	26.43	316	P	P	17 08 45.8	+0.9
	comp=Z,36nm,0.8s,baz=17,slow=6.2,SNR=31						
MLR				LR	LR	17 21 14.4	
	comp=Z,487nm,18.5s,baz=115,slow=41						
MLR	Muntele Rosu	26.43	316	P	P	17 08 46.8	+1.9
MLR				IAmb	IAmb	17 08 50.9	
	comp=Z,44nm,0.9s						
AGG	Agios Georgios	26.47	301	P	P	17 08 46.9	+1.7
AGG				pmax	pmax		
	comp=Z,21nm,1.0s						
AGG	Agios Georgios	26.47	301	P	P	17 08 46.9	+1.7
SHLS	Shalkode	26.48	50	*e*P	P	17 08 47.0	+1.7
	comp=Z,7.3nm,0.7s,baz=50						
SHLS	Shalkode	26.48	50	*e*P	P	17 08 47.0	+1.7
SHLS				pmax	pmax		
	comp=Z,7.0nm,0.7s						

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BRZS  Berezniki         26.52  31 eP    P      17 08 45.4 -0.1
      baz=31
BRZS  Berezniki         26.52  31 eP    P      17 08 45.3 -0.2
TESR  Tescani           26.55 319 ⇑P    P      17 08 46.0 +0.1
HUMR  Humele            26.56 314 ⇑P    P      17 08 47.9 +1.9
PDGK  Podgornoye        26.56  49 i P   P      17 08 46.3 +0.2
PDGK                                pmax  pmax
      comp=Z,16nm,0.8s
TDK   Taldyqorghan      26.61  45 eP    P      17 08 45.7 -0.7
      comp=Z,28nm,0.7s,baz=45
TDK   Taldyqorghan      26.61  45 eP    P      17 08 45.6 -0.7
TDK                                 pmax  pmax
      comp=Z,28nm,0.7s
LIT   Litokhoron        26.64 303  P    P      17 08 47.7 +1.0
LIT                                 pmax  pmax
      comp=Z,14nm,1.0s
LIT   Litokhoron        26.64 303  P    P      17 08 47.7 +1.0
OZUR                    26.84 317 ⇓P    P      17 08 48.9 +0.5
VOIR                    26.95 316 ⇓P    P      17 08 50.4 +0.9
HYB   Hyderabad         26.96 109 i P   P      17 08 51.0 +1.2
DOPR  Dopca             27.01 317 ⇓P    P      17 08 52.0 +2.1
BIZ   Bicaz             27.10 319 ⇑P    P      17 08 51.6 +0.9
ARR   Arges             27.18 315 ⇓P    P      17 08 53.3 +1.8
PRAR  RASCA             27.27 320 ⇓P    P      17 08 53.9 +1.6
STIP  Stip              27.33 306 i P   P      17 08 52.0 -0.9
FNA   Florina           27.64 304  P    P      17 08 57.8 +2.0
FNA                                 pmax  pmax
      comp=Z,23nm,0.9s
FNA   Florina           27.64 304  P    P      17 08 57.8 +2.0
FNA                                 IAmb  IAmb 17 09 02.4
      comp=Z,23nm,0.9s
MDB   Medias            27.70 316 ⇓P    P      17 08 58.7 +2.5
AKASG Malin Array Be    27.83 328  P    P      17 08 55.5 -1.6
      comp=Z,20nm,0.8s,baz=132,slow=8.4,SNR=47
AKASG Malin Array Be    27.83 328  P    P      17 08 56.5 -0.7
AKASG                               pmax  pmax
      comp=Z,7.0nm,0.9s
AKASG Malin Array Be    27.83 328  P    P      17 08 56.5 -0.7
AKBB  Malin Array Si    27.83 328ceP    P      17 08 56.0 -1.2
AKBB  Malin Array Si    27.83 328  P    P      17 08 56.8 -0.4
AKBB                                IAmb  IAmb 17 08 59.3
      comp=Z,42nm,1.1s
BRVK  Borovoye          27.89  24 i P   P      17 08 57.2 -0.5
BRVK                                pmax  pmax
      comp=Z,5.0nm,0.7s
BRVK  Borovoye          27.89  24  P    P      17 08 56.7 -1.1
BVAR  Borovoye Array    27.90  24  P    P      17 08 55.2 -2.6
      comp=Z,3.1nm,0.7s,baz=100,slow=30,SNR=16
BVAR                                PcP   PcP  17 12 13.6 +0.4
      comp=Z,1.6nm,0.5s,baz=198,slow=9.3,SNR=8.1
SKO   Skopje            27.95 306 i P   P      17 09 00.6 +2.2
BURAR Bucovina Array    27.98 320 ⇓P    P      17 09 01.6 +2.9
BURAR Bucovina Array    27.98 320  P    P      17 08 58.3 -0.4
BUR08 Bucovina Ar. S    28.00 320  P    P      17 08 58.7 -0.3
BUR08                               IAmb  IAmb 17 09 09.2
      comp=Z,24nm,1.2s
ARU   Arti              28.13   8  P    P      17 09 01.0 +1.2
      comp=Z,0.6nm,0.4s,baz=203,slow=6.8,SNR=5.3
ARU                                 LR    LR   17 21 27.8
      comp=Z,374nm,21.4s,baz=182,slow=39
ARU   Arti              28.13   8  P    P      17 08 59.8  0.0
ARU                                            17 09 46.8
ARU                                 S     S    17 13 48.7 +3.9
ARU                                 SS    SnSn 17 15 02.7 +2.4
ARU   Arti              28.13   8  P    P      17 09 00.6 +0.8
ARU                                 IAmb  IAmb 17 09 19.2
      comp=Z,42nm,1.7s
ARCR  ARCALIA           28.20 318 ⇓P    P      17 09 01.3 +0.7
CJR   Cluj-Napoca       28.46 317 ⇓P    P      17 09 04.4 +1.5
OBN   Obninsk           28.61 342  P    P      17 09 04.0 -0.1
      comp=Z,2.9nm,0.4s,baz=175,slow=16,SNR=3.6
OBN                                 LR    LR   17 21 44.1
      comp=Z,69nm,18.6s,baz=159,slow=39
OBN   Obninsk           28.61 342d iP   P      17 09 04.5 +0.4
OBN                               i            17 12 11.6
OBN                                 pmax  pmax
      comp=Z,18nm,1.0s
OBN   Obninsk           28.61 342  P    P      17 09 03.9 -0.2
OBN                                 IAmb  IAmb 17 09 06.0
      comp=Z,25nm,1.0s
MDVR  Moldovita         28.78 312 ⇓P    P      17 09 06.1 +0.2
SVE   Sverdlovsk        28.80  10 eP    P      17 09 05.7 -0.1
MOS   Moscow            28.89 343 eP    P      17 09 07.1 +0.6
MOS                               e            17 10 04.7
MOS                                 pmax  pmax
      comp=Z,35nm,0.8s
TIR   Tirane            28.90 304  P    P      17 09 09.0 +2.2
TIR                                 pmax  pmax
      comp=Z,32nm,1.1s
TIR   Tirane            28.90 304  P    P      17 09 09.0 +2.2
TIR                                 IAmb  IAmb 17 09 25.3
      comp=Z,32nm,1.1s
BMR   Baia Mare         29.00 319 ⇓P    P      17 09 09.9 +2.3
BZS   Buzias            29.18 314 ⇑P    P      17 09 09.7 +0.4
DMN   Daman             29.31  84 eP    P      17 09 10.7 -0.2
      comp=Z,58nm,0.9s
KKN   Kakani            29.43  84 eP    P      17 09 11.7 -0.3
      comp=Z,50nm,0.6s
PKIN  Phulchoki         29.57  84 eP    P      17 09 12.9 -0.4
      comp=Z,61nm,0.9s
PKI   Pulchoki          29.58  84 eP    P      17 09 12.9 -0.5
      comp=Z,59nm,1.0s
SCTE  Santa Cesarea     29.62 301  P    P      17 09 13.5 +0.2
SCTE                                IAmb  IAmb 17 09 16.9
      comp=Z,53nm,1.5s
PDG   Podgorica         29.64 306  P    P      17 09 14.1 +0.7
PDG                                 IAmb  IAmb 17 09 15.8
      comp=Z,30nm,1.5s
MAKZ  Makanchi          29.66  44  P    P      17 09 12.9 -0.7
MAKZ                                pmax  pmax
      comp=Z,17nm,1.0s
MAKZ  Makanchi          29.66  44  P    P      17 09 12.9 -0.7
MAKZ                                IAmb  IAmb 17 09 20.7
      comp=Z,17nm,1.0s
DIVS  Divibare          29.66 310  P    P      17 09 13.5 -0.2
KURBB Kurchatov Arra    29.75  35  P    P      17 09 12.5 -1.8
      comp=Z,6.7nm,0.9s,baz=235,slow=9.0,SNR=31
KURBB                               ScP   ScP  17 15 59.0 -1.0
      comp=Z,2.3nm,0.9s,baz=224,slow=4.2,SNR=5.6
MK31  Makanchi Array    29.84  44 i P   P      17 09 14.1 -1.1
MK31                                pmax  pmax
      comp=Z,14nm,0.9s
MK31  Makanchi Array    29.84  44  P    P      17 09 14.3 -0.9
MKAR  Makanchi Array    29.84  44  P    P      17 09 12.9 -2.3
      comp=Z,2.2nm,0.9s,baz=162,slow=31,SNR=30
MKAR                                PcP   PcP  17 12 19.5 +1.2
      comp=Z,2.6nm,0.6s,baz=236,slow=3.5,SNR=5.7
MKAR                                ScP   ScP  17 15 58.1 -2.3
      comp=Z,1.6nm,1.0s,baz=265,slow=4.5,SNR=3.8
MKAR                                LR    LR   17 23 03.3
      comp=Z,372nm,19.4s,baz=246,slow=40
MKAR  Makanchi Array    29.84  44  P    P      17 09 14.7 -0.5
KURK  Kurchatov         29.86  35  P    P      17 09 12.5 -2.7
KURK                                           17 15 59.1
KURK  Kurchatov         29.86  35  P    P      17 09 14.6 -0.7
KURK                                IAmb  IAmb 17 09 19.4
      comp=Z,26nm,1.6s
KIRV  Kirov             29.93 357  P    P      17 09 14.8 -0.9
      comp=Z,12nm,0.5s,baz=296,slow=3.6,SNR=5.0
KIRV  Kirov             29.93 357ceP    P      17 09 14.6 -1.1
GUN   Gumba             29.93  83 eP    P      17 09 16.5 -0.1
      comp=Z,45nm,0.6s
UZH   Uzhgorod          30.18 319 eP    P      17 09 20.0 +1.9
UZH                               i            17 09 26.0
KOLS  Kolonicke sedl    30.34 320 eP    P      17 09 21.7 +2.1
KOLS                                pmax  pmax
      comp=Z,28nm,1.1s
KOLS  Kolonicke sedl    30.34 320 eP    P      17 09 21.7 +2.1
KWP   Kalwaria Pacla    30.47 321  P    P      17 09 22.1 +1.4
KWP                                 pmax  pmax
      comp=Z,30nm,0.8s
KWP   Kalwaria Pacla    30.47 321  P    P      17 09 22.1 +1.4
KWP                                 IAmb  IAmb 17 09 23.6
      comp=Z,30nm,0.8s
RAMN  Ramite            30.73  85 eP    P      17 09 22.7 -0.9
      comp=Z,24nm,0.5s
TIP   Timpagrande       30.75 299  P    P      17 09 24.7 +1.3
TIP                                 IAmb  IAmb 17 09 46.2
      comp=Z,24nm,1.2s
CRVS  Cervenica-Dubn    30.79 319 eP    P      17 09 25.9 +2.3
CRVS                                pmax  pmax
      comp=Z,41nm,1.0s
CRVS  Cervenica-Dubn    30.79 319 eP    P      17 09 25.9 +2.3
PSZ   Piszkesteto       31.25 317  P    P      17 09 27.2 -0.5
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PSZ                                 pmax  pmax
      comp=Z,12nm,1.0s
PSZ   Piszkesteto       31.25 317  P    P      17 09 27.2 -0.5
MORH  Mrgy, Hungar      31.32 313 eP    P      17 09 28.8 +0.6
ODAN  Odare             31.44  85 eP    P      17 09 28.9 -0.9
      comp=Z,20nm,0.9s
TAPN  Taplejung         31.63  84 eP    P      17 09 30.4 -1.1
      comp=Z,7.6nm,0.4s
ZSN   Zaisan            31.71  45 eP    P      17 09 30.7 -1.0
      baz=45
ZSN   Zaisan            31.71  45 eP    P      17 09 30.7 -1.0
NACGM Naroch            31.83 332 i P   P      17 09 33.5 +0.9
NACGM                             i P   P      17 09 33.5 +0.9
NACGM                             i P   P      17 09 33.5 +0.9
NACGM                             i Pb  pP     17 09 36.2 +0.2
      comp=Z,15nm,0.7s
NACGM                             i PP  PnPn   17 10 37.3 +0.4
NACGM                             i PPP PPP    17 11 03.5
NACGM                             i SS  SS     17 16 31.5  -28
NACGM                             i SSS SSS    17 16 46.6
NACGM                             i LQ  LQ     17 19 24.8
NACGM                             i LR  LR     17 20 56.5
SGRT  San Giovanni R    32.00 304  P    P      17 09 34.8 +0.4
SGRT                                IAmb  IAmb 17 10 33.2
      comp=Z,31nm,1.6s
CSKK  Cskako            32.02 315 eP    P      17 09 36.5 +2.1
LANS  Liptovska Anna    32.06 319 eP    P      17 09 35.5 +0.7
LANS                                pmax  pmax
      comp=Z,31nm,0.8s
LANS  Liptovska Anna    32.06 319 eP    P      17 09 35.5 +0.7
SRO2  Moca              32.09 316 eP    P      17 09 36.5 +1.5
SRO2  Moca              32.09 316 eP    P      17 09 36.5 +1.5
VYHS  Vyhne             32.14 317 eP    P      17 09 37.5 +2.1
VYHS                                pmax  pmax
      comp=Z,12nm,1.0s
VYHS  Vyhne             32.14 317 eP    P      17 09 37.5 +2.1
SRO   Srobarova         32.16 316 eP    P      17 09 38.6 +3.0
SRO   Srobarova         32.16 316 eP    P      17 09 38.6 +3.0
WMQ   Urumqi            32.34  52 eP    P      17 09 37.4 +0.1
WMQ                                 sP    sP   17 09 48.7 +6.7
WMQ                                 pmax  pmax
      comp=Z,24nm,0.7s
WMQ                                 pmax  pmax
      comp=Z,450nm,7.1s
WMQ                                 LR    LR
      comp=Z,1μm,7.1s
WMQ                                 LR    LR
      comp=Z,640nm,9.1s
WMQ                                 LR    LR
      comp=Z,3μm,24.5s
WMQ   Urumqi            32.34  52  P    P      17 09 36.8 -0.5
WMQ                                 pmax  pmax
      comp=Z,11nm,0.6s
WMQ   Urumqi            32.34  52  P    P      17 09 36.8 -0.5
WMQ                                 IAmb  IAmb 17 09 53.7
      comp=Z,11nm,0.6s
IIGN  Ignalina          32.38 333 eP    P      17 09 37.4 +0.1
OJC   Ojcow             32.38 320  P    P      17 09 37.6  0.0
OJC                                 pmax  pmax
      comp=Z,39nm,0.9s
OJC   Ojcow             32.38 320  P    P      17 09 37.6  0.0
MPLH  Magyarpolny       32.39 314 eP    P      17 09 38.9 +1.2
ISAL  Salakas           32.57 333 eP    P      17 09 38.8 -0.3
EGYH  Egyhazaskeszo     32.62 314 eP    P      17 09 37.3 -2.3
PAOL  Paolisi           32.72 302  P    P      17 09 41.0 +0.3
PAOL                                IAmb  IAmb 17 09 44.9
      comp=Z,35nm,1.3s
KMBO  Kilima Mbogo      32.78 208  P    P      17 09 42.6 +1.0
      comp=Z,2.3nm,0.8s,baz=30,slow=11,SNR=4.8
KMBO  Kilima Mbogo      32.78 208 i P   P      17 09 44.0 +2.4
KMBO                                pmax  pmax
      comp=Z,1.0nm,0.8s
SUW   Suwalki           32.80 329 eP    P      17 09 41.2 +0.2
SUW   Suwalki           32.80 329  P    P      17 09 40.1 -1.0
SUW                                 pmax  pmax
      comp=Z,57nm,0.9s
SUW   Suwalki           32.80 329  P    P      17 09 40.0 -1.0
JAVC  Velka Javorina    32.99 317 eP    P      17 09 45.8 +2.8
SMOL  Smolenice         32.99 316 eP    P      17 09 45.3 +2.4
SMOL                                pmax  pmax
      comp=Z,10.0nm,1.1s
SMOL  Smolenice         32.99 316 eP    P      17 09 45.3 +2.4
MODS  Modra-Piesok      33.03 316 eP    P      17 09 44.0 +0.8
MODS                                pmax  pmax
      comp=Z,36nm,1.7s
MODS  Modra-Piesok      33.03 316 eP    P      17 09 44.0 +0.8
ZST   Bratislava        33.06 316 eP    P      17 09 44.8 +1.3
ZST                                 pmax  pmax
      comp=Z,40nm,0.8s
ZST   Bratislava        33.06 316 eP    P      17 09 44.8 +1.3
OKC   Ostrava-Krasne    33.14 319 eP    P      17 09 46.0 +1.8
OKC   Ostrava-Krasne    33.14 319 eP    P      17 09 46.0 +1.8
SOP   Sopron            33.20 315 eP    P      17 09 46.5 +1.8
KLMR  Klimovskoe        33.21 349 eP    P      17 09 41.7 -2.9
KLMR                                pmax  pmax
      comp=Z,63nm,0.9s
KLMR  Klimovskoe        33.21 349 eP    P      17 09 41.7 -2.9
KLMR                                AMP        17 09 46.1
      comp=Z,63nm,0.9s
INTR  Introdacqua       33.39 304  P    P      17 09 46.7 +0.2
INTR                                IAmb  IAmb 17 09 50.5
      comp=Z,20nm,1.0s
LEGS  Legarje           33.40 311 eP    P      17 09 48.5 +2.0
PABE  Paberze           33.42 331 eP    P      17 09 46.8 +0.4
MORC  Moravsky Berou    33.46 319 ⇑P    P      17 09 47.1 +0.1
MORC  Moravsky Berou    33.46 319 eP    P      17 09 48.6 +1.5
MORC  Moravsky Berou    33.46 319  P    P      17 09 46.6 -0.5
MORC                                pmax  pmax
      comp=Z,27nm,0.8s
MORC  Moravsky Berou    33.46 319  P    P      17 09 46.6 -0.5
MORC                                IAmb  IAmb 17 09 49.6
      comp=Z,27nm,0.8s
ARSA  Arzberg           33.70 313 eP    P      17 09 49.7 +0.6
      comp=Z,11nm,0.9s,SNR=7.3
CONA  Conrad Observa    33.73 315 eP    P      17 09 49.6 +0.2
      comp=Z,18nm,1.3s
VRAC  Vranov            33.82 317  P    P      17 09 50.1  0.0
      comp=Z,16nm,0.8s,baz=114,slow=8.7,SNR=19
VRAC  Vranov            33.82 317 ⇓P    P      17 09 52.1 +2.0
VRAC  Vranov            33.82 317 eP    P      17 09 51.9 +1.8
SOKA  Soboth            33.82 312 eP    P      17 09 50.7 +0.4
      comp=Z,8.2nm,1.1s
AQU   L'Aquila          33.83 304  P    P      17 09 50.9 +0.6
AQU                                 pmax  pmax
      comp=Z,16nm,0.9s
AQU   L'Aquila          33.83 304  P    P      17 09 50.9 +0.6
AQU                                 IAmb  IAmb 17 10 10.3
      comp=Z,16nm,0.9s
KRUC  Moravsky          33.84 317 eP    P      17 09 51.9 +1.6
LJU   Ljubljana         33.96 311 eP    P      17 09 51.9 +0.5
KRLC  Kraliky           34.04 319 eP    P      17 09 53.7 +1.7
KRLC  Kraliky           34.04 319 eP    P      17 09 53.7 +1.7
OBKA  Obir              34.09 312 eP    P      17 09 53.3 +0.7
      comp=Z,14nm,1.3s
NRCA  Norcia            34.13 305  P    P      17 09 52.8 -0.1
NRCA                                IAmb  IAmb 17 09 58.8
      comp=Z,21nm,0.9s
DGZ   Jazzator, Alta    34.20  42⇑iP    P      17 09 53.4 -0.2
DGZ                                 pmax  pmax
      comp=Z,3.0nm,0.3s
LSA   Lhasa             34.23  79  P    P      17 09 54.8 +0.4
LSA                                 pmax  pmax
      comp=Z,27nm,0.9s
LSA   Lhasa             34.23  79  P    P      17 09 54.0 -0.4
LSA                                 pmax  pmax
      comp=Z,6.0nm,0.7s
LSA   Lhasa             34.23  79  P    P      17 09 54.0 -0.4
TRI   Trieste           34.37 310  P    P      17 09 55.1 +0.2
TRI                                 pmax  pmax
      comp=Z,17nm,1.2s
TRI   Trieste           34.37 310  P    P      17 09 55.0 +0.2
TRI                                 IAmb  IAmb 17 09 57.1
      comp=Z,17nm,1.2s
DPC   Dobruska-Polom    34.42 319 eP    P      17 09 55.1 -0.3
DPC   Dobruska-Polom    34.42 319 eP    P      17 09 55.1 -0.3
VSU   Vasula            34.46 337 eP    P      17 09 54.6 -0.9
VSU   Vasula            34.46 337 i P   P      17 09 54.5 -1.0
OSTC  Ostas             34.57 319 eP    P      17 09 57.8 +1.2
PALK  Pallekele         34.58 122  P    P      17 09 58.6 +1.5
PALK                                pmax  pmax
      comp=Z,18nm,1.1s
PALK  Pallekele         34.58 122  P    P      17 09 58.6 +1.5
PALK                                IAmb  IAmb 17 10 33.0
      comp=Z,18nm,1.1s
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MURB  Monte Urbino      34.64 305  P    P      17 09 58.5 +1.1
UPC   Upice             34.67 319 eP    P      17 09 58.1 +0.6
UPC   Upice             34.67 319 eP    P      17 09 58.1 +0.6
CHVC  Chvalec           34.68 319 eP    P      17 09 57.7 +0.1
CHVC                              ex    x      17 09 59.2
MOA   Molln             34.71 314 eP    P      17 09 57.4 -0.4
      comp=Z,24nm,0.8s,SNR=7.1
ZAA0  Zalesovo Array    34.83  34  P    P      17 09 57.4 -1.3
ZAA0                                IAmb  IAmb 17 10 03.2
      comp=Z,13nm,0.8s
ZALV  Zalesovo Beam     34.83  34  P    P      17 09 57.8 -0.9
      comp=Z,6.7nm,0.4s,baz=247,slow=9.3,SNR=37
ZALV                                PcP   PcP  17 12 31.5 -0.2
      comp=Z,1.2nm,0.4s,baz=248,slow=5.3,SNR=2.3
ZALV                                ScP   ScP  17 16 15.8 -1.5
      comp=Z,2.2nm,0.8s,baz=226,slow=5.6,SNR=5.2
ZALV                                LR    LR   17 25 20.2
      comp=Z,227nm,19.5s,baz=230,slow=38
ZALV  Zalesovo Beam     34.83  34  P    P      17 09 57.5 -1.2
ZALV                                           17 12 31.5
ZALV  Zalesovo Beam     34.83  34  P    P      17 09 57.5 -1.2
ZALV  Zalesovo Beam     34.83  34       ScP    17 16 14.8 -2.5
LATE  Laterza           35.03 304  P    P      17 10 02.0 +1.3
LATE                                IAmb  IAmb 17 10 04.3
      comp=Z,23nm,1.2s
KBA   Koelnbreinsper    35.05 312 eP    P      17 10 00.7 -0.2
      comp=Z,25nm,0.8s,SNR=8.6
ZOU   Zoufplan          35.14 311  P    P      17 10 03.3 +1.5
PRU   Pruhonice         35.32 317 eP    P      17 10 04.5 +1.5
PRU   Pruhonice         35.32 317 eP    P      17 10 04.5 +1.5
GEC2  GERESS Array S    35.40 315  P    P      17 10 04.2 +0.3
GEC2  GERESS Array S    35.40 315 eP    P      17 10 05.0 +1.1
      baz=110,slow=8.7
GEC2B GERESS ARRAY S35.40 315      P    P      17 10 03.1 -0.8
GERES GERESS Array B    35.40 315  P    P      17 10 03.1 -0.8
      comp=Z,4.7nm,0.7s,baz=108,slow=8.7,SNR=7.2
GERES                               LR    LR   17 26 27.1
      comp=Z,296nm,18.1s,baz=146,slow=40
MBAR  Mbarara           35.45 218ceP    P      17 10 05.8 +1.1
MBAR                                pmax  pmax
      comp=Z,9.0nm,1.0s
MBAR  Mbarara           35.45 218  P    P      17 10 05.3 +0.6
ABTA  Abfaltersbach     35.50 311 eP    P      17 10 05.0 +0.3
      comp=Z,18nm,0.8s,SNR=22
PBCC  Pribram           35.53 317 eP    P      17 10 05.0 +0.1
KHC   Kasperske Hory    35.58 316ceP    P      17 10 04.9 -0.5
KHC                                 pmax  pmax
      comp=Z,41nm,0.8s
KHC   Kasperske Hory    35.58 316 eP    P      17 10 04.2 -1.2
KHC   Kasperske Hory    35.58 316  P    P      17 10 05.1 -0.3
KHC                                 IAmb  IAmb 17 10 07.7
      comp=Z,16nm,0.8s
OSSC  Osservatorio P    35.60 306  P    P      17 10 05.8 +0.2
OSSC                                IAmb  IAmb 17 10 25.8
      comp=Z,35nm,1.5s
MTSE  Matsula           35.69 335 eP    P      17 10 07.7 +1.6
TEOL  Teolo             35.70 309  P    P      17 10 05.5 -0.9
TEOL                                IAmb  IAmb 17 11 05.0
      comp=Z,14nm,0.8s
CASP  Castiglione de    35.75 304  P    P      17 10 06.4 -0.4
CASP                                IAmb  IAmb 17 10 08.4
      comp=Z,30nm,1.3s
CTI   Castel Tesino     35.88 310  P    P      17 10 07.3 -0.8
CTI   Castel Tesino     35.88 310  P    P      17 10 07.3 -0.8
CTI                                 IAmb  IAmb 17 10 10.6
      comp=Z,22nm,0.8s
ZCCA  Zocca             35.96 307  P    P      17 10 10.5 +1.8
ZCCA                                IAmb  IAmb 17 10 19.6
      comp=Z,35nm,0.9s
BRG   Berggiesshubel    36.02 319 eP    P      17 10 10.2 +1.2
BRG                                 Amp        17 10 11.3
      comp=Z,16nm,0.8s
BRG   Berggiesshubel    36.02 319 eP    P      17 10 10.2 +1.2
BRG                                 pmax  pmax
      comp=Z,16nm,0.8s
BRG   Berggiesshubel    36.02 319 eP    P      17 10 10.2 +1.2
BRG                                 Amp        17 10 11.3
      comp=Z,16nm,0.8s
BRG   Berggiesshubel    36.02 319 eP    P      17 10 10.3 +1.2
      comp=Z,16nm,0.8s,baz=110,slow=8.7
WATA  Walderalm         36.28 312 eP    P      17 10 10.4 -1.1
      comp=Z,25nm,0.7s,SNR=9.4
VLC   Villacollemand    36.33 306  P    P      17 10 12.0 +0.1
VLC                                 IAmb  IAmb 17 10 29.1
      comp=Z,28nm,1.1s
KEST  Kesra             36.41 292  P    P      17 10 12.7  0.0
      comp=Z,9.0nm,0.8s,baz=335,slow=3.5,SNR=4.6
KEST  Kesra             36.41 292  P    P      17 10 13.1 +0.4
KEST                                IAmb  IAmb 17 10 21.1
      comp=Z,18nm,1.1s
VSL   Villasalto        36.47 299  P    P      17 10 14.0 +0.9
SQTA  Sankt Quirin      36.48 312 eP    P      17 10 12.3 -0.9
      comp=Z,46nm,0.8s,SNR=11
PRMA  PARMA             36.51 307  P    P      17 10 13.3  0.0
SALO  Salr              36.54 309  P    P      17 10 12.9 -0.7
TMCR  Tamitsa           36.56 350 eP    P      17 10 14.3 +0.8
TMCR                                pmax  pmax
      comp=Z,17nm,0.6s
MOTA  Moosalm           36.59 312 eP    P      17 10 13.5 -0.7
      comp=Z,34nm,0.8s,SNR=6.6
ROTZ  Rotzenmuhle       36.64 316 eP    P      17 10 16.1 +1.6
      comp=Z,17nm,0.8s,baz=110,slow=8.7
FUR   Furstenfeldbru    36.71 313 eP    P      17 10 16.3 +1.3
      comp=Z,67nm,0.8s,baz=110,slow=8.7
CLL   Collm             36.73 319 eP    P      17 10 15.0 -0.1
      comp=Z,35nm,1.1s
CLL   Collm             36.73 319 eP    P      17 10 15.0 -0.1
CLL                                 pmax  pmax
      comp=Z,35nm,1.1s
CLL   Collm             36.73 319  P    P      17 10 14.1 -1.0
CLL                                 IAmb  IAmb 17 10 18.6
      comp=Z,32nm,1.0s
FETA  Feichten          36.75 311 eP    P      17 10 14.3 -1.3
      comp=Z,27nm,0.9s,SNR=7.7
RETA  Reutte            36.85 312 eP    P      17 10 14.9 -1.4
      comp=Z,13nm,0.7s
FIA1  FINESS Array S    36.96 340  P    P      17 10 15.4 -1.5
FINES FINESS Array B    36.96 340  P    P      17 10 15.5 -1.4
      comp=Z,18nm,0.7s,baz=144,slow=8.2,SNR=63
FINES FINESS Array B    36.96 340  P    P      17 10 15.6 -1.2
GRA1  Grafenberg Arr    37.22 316  P    P      17 10 19.3  0.0
GRA1                                IAmb  IAmb 17 10 21.7
      comp=Z,31nm,0.8s
GRF   Grafenberg Arr    37.22 316  P    P      17 10 19.3  0.0
GRF                                 pmax  pmax
      comp=Z,31nm,0.8s
GRF   Grafenberg Arr    37.22 316 eP    P      17 10 20.8 +1.4
      comp=Z,35nm,0.8s,baz=110,slow=8.7
DAVOX Davos/Dischmat    37.25 311  P    P      17 10 18.1 -1.8
      comp=Z,22nm,0.9s,baz=120,slow=7.4,SNR=25
UBR   Ueberruh          37.33 312 eP    P      17 10 21.4 +1.0
      comp=Z,36nm,1.0s,baz=110,slow=8.7
DAVA  Damuels           37.38 311 eP    P      17 10 19.9 -1.0
      comp=Z,78nm,0.8s,SNR=17
TUE   Stuetta           37.54 310  P    P      17 10 21.5 -0.8
FLTG  Flechtingen       38.14 320 eP    P      17 10 28.8 +1.7
      comp=Z,33nm,0.9s,baz=110,slow=8.7
CLZ   Clausthal         38.46 319 eP    P      17 10 31.8 +2.0
      comp=Z,54nm,0.8s,baz=110,slow=8.7
BFO   Black Forest      38.65 313  P    P      17 10 31.7 +0.2
BFO                                 pmax  pmax
      comp=Z,55nm,2.0s
BFO   Black Forest      38.65 313  P    P      17 10 31.7 +0.2
BFO                                 IAmb  IAmb 17 11 44.7
      comp=Z,54nm,2.0s
UPP   Uppsala           38.83 333 eP    P      17 10 31.6 -1.1
NRDL  Niedersach Rie    38.84 320 eP    P      17 10 35.5 +2.7
      comp=Z,79nm,0.9s,baz=110,slow=8.7
SENIN Lac Senin/Sane    38.90 309  P    P      17 10 33.0 -0.8
BNI   Bardonecchia      39.10 307  P    P      17 10 33.7 -1.7
BNI                                 pmax  pmax
      comp=Z,19nm,0.8s
BNI   Bardonecchia      39.10 307  P    P      17 10 33.7 -1.7
ECH   Echery            39.38 312  P    P      17 10 37.3 -0.3
ECH                                 pmax  pmax
      comp=Z,15nm,0.8s
ECH   Echery            39.38 312  P    P      17 10 37.3 -0.3
KASTN Kahler Asten      39.40 317 eP    P      17 10 39.8 +2.1
      comp=Z,33nm,1.1s,baz=110,slow=8.7
IBBN  Ibbenburen        40.13 318 eP    P      17 10 46.2 +2.5
      comp=Z,46nm,0.9s,baz=110,slow=8.7
WLF   Walferdange       40.37 314 dP    P      17 10 46.6 +0.9
WLF   Walferdange       40.37 314  P    P      17 10 46.0 +0.3
WLF                                 pmax  pmax
      comp=Z,21nm,0.9s
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WLF   Walferdange       40.37 314   P      P        17 10 46.0 +0.3
WLF                                 IAmb   IAmb     17 10 48.1
      comp=Z,21nm,0.9s
WLF   Walferdange       40.37 314  eP      P        17 10 47.6 +1.9
      comp=Z,31nm,1.1s,baz=110,slow=8.7
APA   Apatity           40.45 349⇑iP      P        17 10 45.7 -0.5
APA                                 pmax   pmax
      comp=Z,21nm,0.9s
APA                                 MLR    MLR
      comp=Z,3µm,22.0s
LVZ   Lovozero          40.56 350 i P      P        17 10 47.0 -0.1
LVZ   Lovozero          40.56 350   P      P        17 10 46.6 -0.5
HFS   Hagfors           40.59 332   P      P        17 10 46.4 -1.0
      comp=Z,30nm,0.6s,baz=131,slow=8.3,SNR=58
SSB   Saint Sauveur     40.63 307   P      P        17 10 46.5 -1.5
SSB                                 pmax   pmax
      comp=Z,55nm,1.8s
SSB   Saint Sauveur     40.63 307   P      P        17 10 46.5 -1.5
SSB                                 IAmb   IAmb     17 10 57.0
      comp=Z,55nm,1.8s
GTA   Gaotai            40.75  62 ⇓P      P        17 10 49.8 +0.6
GTA                                 pP     sP       17 10 54.0 +0.1
GTA                                 sP     pP       17 10 57.0 +4.4
GTA                                 pmax   pmax
      comp=Z,53nm,0.9s
GTA                                 pmax   pmax
      comp=Z,130nm,6.0s
GTA                                 LR     LR
      comp=Z,260nm,15.1s
GTA                                 LR     LR
      comp=Z,230nm,14.3s
GTA                                 LR     LR
      comp=Z,290nm,16.7s
BCLA  Clavier           41.08 315  dP      P        17 10 53.9 +2.3
OSL   Oslo              41.76 330  eP      P        17 10 56.2 -0.7
NC602 NORSAR Array S    41.82 332   P      P        17 10 56.6 -0.8
NC602 NORSAR Array S    41.82 332  eP      P        17 10 56.3 -1.2
NC605 NORSAR Array S    41.90 332   P      P        17 10 58.7 +0.6
TAM   Tamanrasset       41.92 273   P      P        17 10 58.9 -0.1
TAM                                 pmax   pmax
      comp=Z,12nm,0.9s
TAM   Tamanrasset       41.92 273   P      P        17 10 58.9 -0.1
NC405 NORSAR Array S    41.95 332   P      P        17 10 57.3 -1.3
NB201 NORSAR Array S    42.09 332   P      P        17 10 59.8 +0.1
NB2   NORSAR Subarra    42.11 332   P      P        17 10 57.6 -2.4
      comp=Z,9.6nm,0.9s,baz=121,slow=8.6
NB2   NORSAR Subarra    42.11 332   P      P        17 10 57.6 -2.4
      baz=121,slow=8.6
NOA   NORSAR Array B    42.11 332   P      P        17 10 58.5 -1.5
      comp=Z,17nm,0.9s,baz=121,slow=8.2,SNR=21
NOA                                 LR     LR       17 31 33.0
      comp=Z,226nm,18.4s,baz=140,slow=41
KONO  Kongsberg         42.12 329   P      P        17 10 58.5 -1.4
KONO                                pmax   pmax
      comp=Z,282nm,2.0s
KONO  Kongsberg         42.12 329   P      P        17 10 58.5 -1.4
KONO  Kongsberg         42.12 329  eP      P        17 10 59.3 -0.6
NC303 NORSAR Array S    42.15 332   P      P        17 11 00.9 +0.7
NAO01 NORSAR Array S    42.15 331   P      P        17 10 59.5 -0.7
NBO00 NORSAR Array S    42.29 332   P      P        17 11 01.1 -0.3
NC204 NORSAR Array S    42.42 332   P      P        17 11 02.0 -0.5
MOY   Mondy             42.99  44  eP      P        17 11 07.9 +0.6
MOY                                 pmax   pmax
      comp=Z,23nm,1.7s
SKAR  Skarslia          43.17 330  eP      P        17 11 08.1 -0.4
MHMT  Maesarieng        43.34  94   P      P        17 11 11.5 +1.1
      comp=Z,41nm,0.9s
KEV   Kevo              43.51 348   P      P        17 11 12.0 +0.9
KEV                                 pmax   pmax
      comp=Z,156nm,2.0s
KEV   Kevo              43.51 348   P      P        17 11 11.9 +0.9
DOMB  Dombas            43.51 332  eP      P        17 11 11.7 +0.4
ODD1  Odda              43.58 329  eP      P        17 11 13.2 +1.4
ARCES ARCESS Array B    43.61 347   P      P        17 11 11.7 -0.3
      comp=Z,10nm,1.0s,baz=150,slow=6.0,SNR=16
ARCES                               LR     LR       17 31 51.6
      comp=Z,236nm,19.6s,baz=255,slow=40
ARCES ARCESS Array B    43.61 347   P      P        17 11 13.1 +1.2
KTK1  Kautokeino        43.66 346  eP      P        17 11 11.7 -0.6
NSS   Namsos            43.76 336  eP      P        17 11 12.9 -0.3
CM32  Chiang Mai Arr    43.96  92   P      P        17 11 16.0 +0.6
CHTO  Chiang Mai        43.99  92   P      P        17 11 15.3 -0.4
CHTO                                pmax   pmax
      comp=Z,19nm,0.9s
CHTO  Chiang Mai        43.99  92   P      P        17 11 15.3 -0.4
CHTO                                IAmb   IAmb     17 11 19.5
      comp=Z,19nm,0.9s
CM33  Chiang Mai Arr    43.99  92   P      P        17 11 16.0 +0.3
LZH   Lanzhou           44.10  67 ⇑P      P        17 11 16.9 +0.3
LZH                                 pP     pP       17 11 20.0  0.0
LZH                                 sP     sP       17 11 22.4 +1.1
LZH                                 pmax   pmax
      comp=Z,25nm,1.3s
LZH                                 pmax   pmax
      comp=Z,90nm,4.9s
LZH                                 LR     LR
      comp=Z,420nm,13.0s
LZH                                 LR     LR
      comp=Z,380nm,14.1s
LZH                                 LR     LR
      comp=Z,400nm,14.6s
CM13  Chiang Mai Arr    44.10  93   P      P        17 11 18.4 +1.8
      comp=Z,90nmcomp=Z,7.7nm,0.8s
CM15  Chiang Mai Arr    44.11  93   P      P        17 11 17.0 +0.4
      comp=Z,6.6nm,0.9s
CM31  Chiang Mai Arr    44.12  93   P      P        17 11 18.1 +1.4
      comp=Z,8µmcomp=Z,245nm,0.8s
CM31  Chiang Mai Arr    44.12  93   P      P        17 11 16.5 -0.2
CMAR  Chiang Mai Arr    44.12  93   P      P        17 11 16.8  0.0
      comp=Z,5.6nm,0.9s,baz=285,slow=9.1,SNR=29
CMAR                                PcP    PcP      17 13 02.3 +0.5
      comp=Z,1.1nm,0.5s,baz=285,slow=5.4,SNR=4.5
CMAR                                LR     LR       17 34 26.1
      comp=Z,129nm,18.6s,baz=358,slow=43
CMAR  Chiang Mai Arr    44.12  93   P      P        17 11 16.5 -0.2
CM02  Chiang Mai Arr    44.13  93   P      P        17 11 18.2 +1.4
      comp=Z,8.7nm,0.8s
CM05  Chiang Mai Arr    44.14  93   P      P        17 11 18.0 +1.1
      comp=Z,72nmcomp=Z,8.2nm,0.8s
CM01  Chiang Mai Arr    44.15  93   P      P        17 11 18.0 +1.1
      comp=Z,99nmcomp=Z,13nm,0.9s
CM34  Chiang Mai Arr    44.15  92   P      P        17 11 17.0  0.0
ZAK   Zakamensk         44.15  46  eP      P        17 11 15.6 -1.1
ZAK                                e                17 13 02.2
ZAK                                 pmax   pmax
      comp=Z,6.0nm,1.0s
ZAK                                 pmax   pmax
      comp=Z,4.0nm,1.2s
CM09  Chiang Mai Arr    44.17  93   P      P        17 11 18.4 +1.3
      comp=Z,85nmcomp=Z,13nm,0.9s
CM04  Chiang Mai Arr    44.17  93   P      P        17 11 18.0 +0.9
      comp=Z,108nmcomp=Z,13nm,0.8s
CM35  Chiang Mai Arr    44.22  92   P      P        17 11 17.0 -0.5
CM36  Chiang Mai Arr    44.23  92   P      P        17 11 18.0 +0.4
HYA   Hoyanger          44.32 330  eP      P        17 11 17.9 +0.2
MOL   Molde             44.39 332  eP      P        17 11 19.9 +1.6
AKN   Aaknes            44.43 332  eP      P        17 11 20.2 +1.5
FAUS  Fauske            44.48 341  eP      P        17 11 18.7 -0.2
KONS  Konsvik           44.56 339  eP      P        17 11 20.0 +0.5
PAYA  Payao             44.60  91   P      P        17 11 21.2 +0.6
      comp=Z,3µmcomp=Z,322nm,0.9s
TLY   Talaya            44.61  44   P      P        17 11 21.1 +0.9
TLY                                 pmax   pmax
      comp=Z,7.0nm,0.8s
TLY   Talaya            44.61  44   P      P        17 11 21.1 +0.9
LAMP  Lampang           44.70  92   P      P        17 11 26.0 +4.7
      comp=Z,17nm,0.9s
STEI  Steigen           44.86 341  eP      P        17 11 21.7 -0.2
HAMF  Hammerfest        44.88 347  eP      P        17 11 21.4 -0.6
FOO   Floro             45.00 330  eP      P        17 11 23.1  0.0
SUKH  Sukhothai         45.10  94   P      P        17 11 26.0 +1.5
      comp=Z,34nm,0.9s
TRO   Tromso            45.12 344  eP      P        17 11 24.5 +0.6
KMI   Kunming           45.26  82 ⇑P      P        17 11 25.5 -0.5
KMI                                 pP     sP       17 11 31.2 +0.4
KMI                                 sP     pP       17 11 33.7 +4.2
KMI                                 pmax   pmax
      comp=Z,12nm,1.1s
KMI                                 pmax   pmax
      comp=Z,110nm,3.7s
KMI                                 LR     LR
      comp=Z,220nm,15.1s
KMI                                 LR     LR
      comp=Z,190nm,18.8s
KMI                                 LR     LR
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      comp=Z,240nm,21.8s
KMI   Kunming           45.26  82   P      P        17 11 25.5 -0.5
KMI                                 pmax   pmax
      comp=Z,18nm,1.1s
KMI   Kunming           45.26  82   P      P        17 11 25.5 -0.5
KMI                                 IAmb   IAmb     17 11 32.1
      comp=Z,18nm,1.1s
LOF   Lofoten           45.48 341  eP      P        17 11 27.8 +0.9
NANT  Nan               45.53  91   P      P        17 11 35.7 +7.8
UTHA  Uthaitani         45.72  96   P      P        17 11 31.2 +1.8
      comp=Z,27nm,1.0s
UTTA  Uttaradit         45.81  93   P      P        17 11 31.2 +1.1
      comp=Z,250nmcomp=Z,29nm,0.9s
SONM  Songino Array     45.88  50   P      P        17 11 29.7 -0.8
      comp=Z,7.2nm,1.0s,baz=265,slow=8.3,SNR=25
SONM                                PcP    PcP      17 13 08.3 +0.7
      comp=Z,0.6nm,0.5s,baz=244,slow=3.9,SNR=5.0
SONM                                LR     LR       17 33 44.2
      comp=Z,77nm,18.4s,baz=269,slow=40
SONM  Songino Array     45.88  50   P      P        17 11 30.0 -0.5
PHIT  Phitsanulok       45.91  94   P      P        17 11 34.0 +3.1
      comp=Z,82nm,1.0s
ULN   Ulaanbaatar       46.32  50ceP      P        17 11 33.1 -0.9
ULN                                 pmax   pmax
      comp=Z,13nm,1.0s
ULN   Ulaanbaatar       46.32  50   P      P        17 11 33.3 -0.7
ULN                                        pP       17 11 33.5 -4.0
ULN                                 IAmb   IAmb     17 11 36.9
      comp=Z,10nm,0.9s
ESDC  Sonseca Array     46.77 299   P      P        17 11 37.0 -0.5
      comp=Z,1.5nm,0.4s,baz=71,slow=7.6,SNR=17
ESDC                                LR     LR       17 35 33.7
      comp=Z,107nm,18.6s,baz=300,slow=42
ESDC  Sonseca Array     46.77 299   P      P        17 11 36.7 -0.9
PHET  Kaeng Krachan     47.04  99   P      P        17 11 42.0 +2.2
      comp=Z,2µmcomp=Z,68nm,0.9s
PAB   San Pablo         47.08 299   P      P        17 11 39.9 -0.1
PAB                                 pmax   pmax
      comp=Z,5.0nm,0.7s
PAB   San Pablo         47.08 299   P      P        17 11 39.9 -0.1
EKR9  Eskdalemuir Ar    47.11 320   P      P        17 11 39.4 -0.4
ABPO  Ambohimpanom      47.64 186   P      P        17 11 45.1 +0.6
ABPO                                pmax   pmax
      comp=Z,24nm,0.9s
ABPO  Ambohimpanom      47.64 186   P      P        17 11 45.1 +0.6
CHAI  Chaiyaphum        47.80  94   P      P        17 11 47.8 +2.1
      comp=Z,20nm,1.0s
NONG  Nongkai           47.96  91   P      P        17 11 47.6 +0.6
      comp=Z,54nm,0.9s
GYA   Guiyang           48.29  79 ⇓P      P        17 11 49.1 -0.5
GYA                                 pmax   pmax
      comp=Z,7.0nm,1.0s
GYA                                 pmax   pmax
      comp=Z,71nm,3.8s
XAN   Xi'an             48.51  69   P      P        17 11 49.7 -1.4
XAN                                 pP     pP       17 11 54.2 -0.4
XAN                                 PP     PP       17 13 43.7 -0.1
XAN                                 S      S        17 18 54.5 +2.1
XAN                                 pmax   pmax
      comp=Z,14nm,0.8s
XAN                                 pmax   pmax
      comp=Z,180nm,5.1s
XAN                                 LR     LR
      comp=Z,400nm,19.8s
XAN                                 LR     LR
      comp=Z,180nm,12.8s
XAN                                 LR     LR
      comp=Z,400nm,19.0s
BTO   Baotou            48.53  60  eP      P        17 11 48.5 -2.7
DSB   Dublin            48.71 317   P      P        17 11 52.3  0.0
PBRG  Braganca          48.73 302  eP      P        17 11 52.1 -0.6
      comp=Z,30nm,1.7s
TOA0  Torodi Ar. Sit    48.97 262   P      P        17 11 54.0 -0.8
TORD  Torodi Ar. Bea    48.97 262   P      P        17 11 54.2 -0.6
      comp=Z,23nm,0.8s,baz=55,slow=7.8,SNR=107
TORD                                LR     LR       17 32 43.3
      comp=Z,204nm,21.5s,baz=30,slow=36
TORD  Torodi Ar. Bea    48.97 262   P      P        17 11 53.5 -1.2
MVO   Moncorvo          48.99 301  eP      P        17 11 57.0 +2.3
      comp=Z,35nm,1.7s
LSZ   Lusaka            49.33 211   P      P        17 11 57.9 +0.3
LSZ                                 pmax   pmax
      comp=Z,11nm,1.1s
LSZ   Lusaka            49.33 211   P      P        17 11 57.9 +0.3
PCBR  Castelo Branco    49.46 299  eP      P        17 11 58.8 +0.6
      comp=Z,26nm,1.4s
HHC   Hu-ho-hao-te      49.67  59  eP      P        17 12 01.4 +1.4
HHC                                 pmax   pmax
      comp=Z,22nm,1.0s
HHC                                 pmax   pmax
      comp=Z,150nm,6.6s
PVIS  Viseu             49.68 301  eP      P        17 12 00.5 +0.5
      comp=Z,32nm,1.6s
ENH   Enshi             49.74  73   P      P        17 11 59.5 -1.1
ENH                                 IAmb   IAmb     17 12 08.3
      comp=Z,12nm,0.7s
PGAV  Gavieira, Arco    49.85 302  eP      P        17 12 03.0 +1.7
COI   Coimbra           50.13 300   P      P        17 12 03.8 +0.5
COI                                 pmax   pmax
      comp=Z,37nm,1.3s
COI   Coimbra           50.13 300   P      P        17 12 03.8 +0.5
COI                                 IAmb   IAmb     17 12 05.9
      comp=Z,37nm,1.3s
PCAS  Casmilo, Conde    50.21 300  eP      P        17 12 05.1 +1.1
      comp=Z,44nm,1.7s
BOD   Bodaibo           51.47  37  eP      P        17 12 12.4 -0.7
BOD                                 pmax   pmax
      comp=Z,21nm,1.4s
SPA2  Spitsbergen Ar    52.05 351   P      P        17 12 16.7 -0.5
SPA0  Spitsbergen Ar    52.05 351   P      P        17 12 17.1 -0.2
IPM   Ipoh              52.45 108   P      P        17 12 20.8 -0.3
IPM                                 IAmb   IAmb     17 12 27.6
      comp=Z,12nm,0.8s
KBS   Kingsbay          53.21 351  eP      P        17 12 26.1 +0.3
KOWA  Kowa              53.38 267   P      P        17 12 26.9 -1.1
WHN   Wuhan             53.75  72 ⇑P      P        17 12 32.1 +1.6
SDSI  Sungai Dareh      55.83 113   P      P        17 12 45.0 -0.7
      comp=Z,10.0nm,0.5s
NJ2   Nanjing           57.08  69  eP      P        17 12 53.5 -0.9
NJ2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
DBIC  Dimbokro          57.70 259   P      P        17 12 58.6 -0.4
      comp=Z,27nm,0.8s,baz=43,slow=8.2,SNR=44
DBIC                                LR     LR       17 40 06.7
      comp=Z,196nm,19.4s,baz=39,slow=38
DBIC  Dimbokro          57.70 259   P      P        17 12 58.1 -0.9
KIC   Kosan Boka        57.75 259  eP      P        17 12 58.9 -0.5
      comp=Z,34nm,0.8s
DAG   Danmarks Havn     57.83 345 i P      P        17 12 58.2 -0.8
DAG   Danmarks Havn     57.83 345 i P      P        17 12 58.2 -0.8
DAG   Danmarks Havn     57.83 345 i P      P        17 12 58.3 -0.8
TIC   Toumodi           57.85 259  eP      P        17 12 59.5 -0.6
TSUM  Tsumeb            57.98 219   P      P        17 13 01.0  0.0
LIC   Lamto             58.07 259  eP      P        17 13 01.0 -0.6
      comp=Z,91nm,0.9s
ZEA   Zeya              58.96  42  eP      P        17 13 09.4 +2.1
ZEA                                 pmax   pmax
      comp=Z,10.0nm,0.9s
TIXI  Tiksi             58.97  21ceP      P        17 13 07.0  0.0
TIXI  Tiksi             58.97  21   P      P        17 13 06.5 -0.5
TIXI                                PcP    PcP      17 13 57.0 +1.0
TIXI                                IAmb   IAmb     17 13 57.9
      comp=Z,6.0nm,0.6s
LBTB  Lobatse           59.06 208   P      P        17 13 08.6 +0.3
LBTB                                pmax   pmax
      comp=Z,14nm,0.8s
LBTB  Lobatse           59.06 208   P      P        17 13 08.6 +0.3
LBTB                                IAmb   IAmb     17 13 12.2
      comp=Z,14nm,0.8s
CN2   Changchun         59.41  54  eP      P        17 13 12.0 +1.4
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CN2                                 pmax   pmax
      comp=Z,130nm,4.0s
CN2                                 LR     LR
      comp=Z,670nm,11.0s
CN2                                 LR     LR
      comp=Z,710nm,11.0s
CN2                                 LR     LR
      comp=Z,380nm,14.0s
YAK   Yakutsk           59.44  32   P      P        17 13 08.7 -1.8
      comp=Z,7.5nm,0.6s,baz=85,slow=1.3,SNR=8.1
YAK   Yakutsk           59.44  32  eP      P        17 13 08.8 -1.6
YAK                                e*PP    pP       17 13 11.1 -2.9
YAK                                e                17 13 58.3
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YAK                                eS      S        17 21 13.2 -6.1
YAK                                e*SS    sS       17 21 31.3 +6.2
YAK                                e                17 23 00.1
YAK                                 pmax   pmax
      comp=Z,4.0nm,0.7s
YAK                                 pmax   pmax
      comp=Z,147nm,4.9s
YAK                                 pmax   pmax
      comp=N,126nm,3.9s
YAK                                 pmax   pmax
      comp=E,84nm,3.5s
YAK                                 smax   smax
      comp=E,117nm,3.2s
YAK                                 smax   smax
      comp=N,120nm,3.3s
YAK   Yakutsk           59.44  32   P      P        17 13 09.0 -1.5
YAK                                 IAmb   IAmb     17 13 11.9
      comp=Z,15nm,0.7s
YAK                                        PcP      17 13 59.1 +1.0
INCN  Inchon            61.79  61   P      P        17 13 28.0 +1.0
INCN                                pmax   pmax
      comp=Z,142nm,2.0s
INCN  Inchon            61.79  61   P      P        17 13 28.0 +1.0
BOSA  Boshof            62.40 206   P      P        17 13 30.5 -0.6
      comp=Z,5.2nm,0.6s,baz=20,slow=5.7,SNR=14
BOSA                                LR     LR       17 40 26.7
      comp=Z,209nm,19.3s,baz=11,slow=36
BOSA  Boshof            62.40 206   P      P        17 13 31.1  0.0
BOSA                                pmax   pmax
      comp=Z,8.0nm,0.8s
BOSA  Boshof            62.40 206   P      P        17 13 31.1  0.0
BOSA                                IAmb   IAmb     17 13 32.2
      comp=Z,7.8nm,0.8s
KLR   Kul'dur           62.51  47   P      P        17 13 30.0 -1.6
      comp=Z,3.6nm,0.8s,baz=279,slow=7.4,SNR=6.8
TJN   Taejon            62.66  62ceP      P        17 13 33.7 +0.9
KS19  Wonju Array Si    62.73  60   P      P        17 13 32.7 -0.6
KSRS  Korea Array       62.79  60   P      P        17 13 32.5 -1.1
      comp=Z,10nm,0.5s,baz=280,slow=6.5,SNR=63
KSRS                                LR     LR       17 43 39.1
      comp=Z,177nm,18.3s,baz=296,slow=39
SUMG  Summit            62.99 340   P      P        17 13 34.8 -0.1
SUMG                                pmax   pmax
      comp=Z,17nm,1.0s
SUMG  Summit            62.99 340   P      P        17 13 34.8 -0.1
SUMG                                IAmb   IAmb     17 13 38.4
      comp=Z,17nm,1.0s
SUMG  Summit            62.99 340 i P      P        17 13 37.2 +2.4
      comp=Z,38nm,1.0s
SUMG  Summit            62.99 340 i P      P        17 13 37.2 +2.4
SUMG                                IAmb   IAmb     17 13 38.1
      comp=Z,38nm,1.0s
USRK  Ussuriysk Ar.     63.90  52   P      P        17 13 40.5 -0.4
      comp=Z,2.1nm,0.6s,baz=269,slow=7.4,SNR=8.1
USRK                                LR     LR       17 41 58.8
      comp=Z,228nm,18.7s,baz=275,slow=36
ICESG Greenland Ices    64.05 336 i P      P        17 13 43.5 +1.7
ICESG                               IAmb   IAmb     17 13 44.8
      comp=Z,17nm,1.0s
TULEG Thule             68.94 348   P      P        17 14 12.4 -0.1
TULEG                               IAmb   IAmb     17 14 15.2
      comp=Z,9.6nm,0.9s
EUNU  Eureka            69.12 353   P      P        17 14 14.8 +1.0
EUNU                                IAmb   IAmb     17 14 16.5
      comp=Z,8.3nm,0.9s
YSS   Yuzh-Sakhalins    70.23  47  eP      P        17 14 24.9 +3.9
YSS                                 pmax   pmax
      comp=Z,30nm,0.9s
MPSI  Mapaga            70.67 101   P      P        17 14 24.3 +0.1
MJAR  Matsushiro Arr    70.86  58   P      P        17 14 25.4 +0.2
      comp=Z,0.6nm,0.6s,baz=321,slow=15,SNR=4.4
MJAR                                LR     LR       17 48 34.2
      comp=Z,71nm,19.4s,baz=170,slow=38
PETK  Petropavlovsk-    76.33  37   LR     LR       17 51 24.7
      comp=Z,157nm,18.9s,baz=299,slow=38
A21K  Barrow            78.27   9   P      P        17 15 09.9 +2.5
      baz=335
SIJI  Sorong            81.15  96   P      P        17 15 24.8 +0.7
      comp=Z,9.2nm,0.7s,baz=95,slow=16,SNR=4.2
TOLK  Toolik Lake Re    81.67   8   P      P        17 15 28.7 +2.6
      baz=341
TOLK  Toolik Lake Re    81.67   8   P      P        17 15 27.6 +1.5
TOLK                                IAmb   IAmb     17 15 29.4
      comp=Z,17nm,1.0s
C36M  Paulatuk          82.20 359   P      P        17 15 29.7 +1.1
      baz=3.6
C36M  Paulatuk          82.20 359   IAmb   IAmb     17 15 30.7
      comp=Z,12nm,0.8s
ANM   Nome              82.61  15   P      P        17 15 31.3 +0.3
ANM                                 pmax   pmax
      comp=Z,14nm,1.0s
ANM   Nome              82.61  15   P      P        17 15 31.3 +0.3
ANM                                 IAmb   IAmb     17 15 34.2
      comp=Z,14nm,1.0s
COLD  Coldfoot          82.94   8   P      P        17 15 34.8 +2.2
      baz=341
COLD  Coldfoot          82.94   8   IAmb   IAmb     17 15 35.8
      comp=Z,7.6nm,1.0s
INK   Inuvik            83.21   2   P      P        17 15 35.0 +1.1
      comp=Z,5.5nm,0.9s,baz=10,slow=8.3,SNR=21
INK   Inuvik            83.21   2   P      P        17 15 33.7 -0.2
INK                                 pmax   pmax
      comp=Z,6.0nm,0.9s
INK   Inuvik            83.21   2   P      P        17 15 33.7 -0.2
BMAR  Burnt Mountain    83.38   6   P      P        17 15 34.8 -0.1
IMAR  Indian Mountai    83.60  10   P      P        17 15 35.4 -0.6
FYU   Fort Yukon        84.15   7   IAmb   IAmb     17 15 47.5
      comp=Z,27nm,1.6s
MLY   Manley            84.94   9   P      P        17 15 45.3 +2.4
      baz=340
I23K  Minto, Yukon-K    85.03   9   P      P        17 15 45.4 +2.2
      baz=341
I23K  Minto, Yukon-K    85.03   9   IAmb   IAmb     17 15 46.5
      comp=Z,15nm,1.2s
POKR  Poker Plat Res    85.30   8   P      P        17 15 47.2 +2.5
      baz=343
POKR  Poker Plat Res    85.30   8   IAmb   IAmb     17 15 47.9
      comp=Z,15nm,1.0s
TCOL  CIGO, UAF Yank    85.48   8   P      P        17 15 47.1 +1.6
      baz=343
TCOL  CIGO, UAF Yank    85.48   8   IAmb   IAmb     17 15 48.1
      comp=Z,12nm,1.1s
COLA  College           85.48   8   P      P        17 15 47.0 +1.5
COLA                                pmax   pmax
      comp=Z,12nm,1.1s
COLA  College           85.48   8   P      P        17 15 47.0 +1.5
COLA                                IAmb   IAmb     17 15 48.2
      comp=Z,12nm,1.1s
NEA2  Nenana            85.59   9   P      P        17 15 46.9 +0.7
      baz=342
ILAR  Eielson Array     85.70   8   P      P        17 15 45.9 -0.8
      comp=Z,3.8nm,0.7s,baz=336,slow=3.7,SNR=47
ILAR                                PP     PP       17 19 09.4 +4.5
      comp=Z,0.7nm,1.0s,baz=351,slow=5.4,SNR=4.3
ILAR  Eielson Array     85.70   8   P      P        17 15 46.5 -0.2
WRH   Wood River Hil    85.84   9   IAmb   IAmb     17 15 49.3
      comp=Z,11nm,1.3s
BWN   Browne            85.94   9   IAmb   IAmb     17 15 58.6
      comp=Z,20nm,1.1s
TTA   Tatalina          86.03  12   P      P        17 15 48.7 +0.3
TTA                                 pmax   pmax
      comp=Z,9.0nm,1.1s
TTA   Tatalina          86.03  12   P      P        17 15 48.7 +0.3
TTA                                 IAmb   IAmb     17 15 51.5
      comp=Z,8.8nm,1.1s
HDA   Harding Lake      86.04   8   P      P        17 15 49.4 +1.0
      baz=344
HDA   Harding Lake      86.04   8   IAmb   IAmb     17 15 49.9
      comp=Z,6.4nm,0.8s
EGAK  Eagle             86.29   6   IAmb   IAmb     17 15 52.5
      comp=Z,18nm,0.9s
KTH   Kantishna Hill    86.31  10   IAmb   IAmb     17 15 52.8
      comp=Z,12nm,0.9s
MCK   McKinley          86.43   9   P      P        17 15 52.2 +1.8
      baz=342
TRF   Thorofare Moun    86.51  10   IAmb   IAmb     17 15 54.0
      comp=Z,11nm,0.9s
RND   Reindeer          86.75   9   P      P        17 15 52.6 +0.6
RND                                 pmax   pmax
      comp=Z,20nm,1.2s
RND   Reindeer          86.75   9   P      P        17 15 52.6 +0.6
RND                                 IAmb   IAmb     17 15 53.7
      comp=Z,20nm,1.2s
SCRK  Sand Creek        86.80   7   P      P        17 15 54.7 +2.5
      baz=346
K27K  Chicken           86.94   6   P      P        17 15 54.7 +1.9
      baz=348
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DOT	Dot Lake	87.11	7	IAmb	IAmb	17 15 56.6	
	comp=Z,10nm,0.8s						
DAWY	Dawson	87.13	5	IAmb	IAmb	17 15 56.7	
	comp=Z,16nm,1.1s						
SKT	Skwentna	87.70	11	IAmb	IAmb	17 15 59.4	
	comp=Z,8.5nm,0.8s						
L26K	Log Cabin Wild	87.80	7	P	P	17 15 58.9	+1.9
	baz=347						
MENT	Mentasta	87.84	7	P	P	17 15 57.6	+0.4
MENT				IAmb	IAmb	17 16 00.4	
	comp=Z,6.3nm,0.9s						
BCAR	Beaver Creek A	87.91	6	P	P	17 15 58.7	+1.2
GHO	Glory Hole Cre	88.30	10	IAmb	IAmb	17 16 06.5	
	comp=Z,9.1nm,1.0s						
SUA	Susitna One	88.31	11	IAmb	IAmb	17 16 02.0	
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	88.48	354	P	P	17 16 00.4	+0.2
	comp=Z,7.1nm,0.8s,baz=10,slow=5.2,SNR=79						
YKA				LR	LR	18 02 23.6	
	comp=Z,48nm,19.3s,baz=0.0,slow=40						
E58A	La Victoria	90.30	325	P	P	17 16 10.9	+1.9
	baz=46						
HYT	Haines Junctio	90.48	5	IAmb	IAmb	17 16 13.2	
	comp=Z,6.9nm,0.8s						
D56A	ZEC Mazanza, M	90.55	327	P	P	17 16 12.0	+1.8
	baz=45						
KDAK	Kodiak Island	91.44	13	P	P	17 16 14.8	+0.8
	comp=Z,7.2nm,0.8s,baz=308,slow=3.4,SNR=7.1						
WRA	Warramunga Arr	93.10	111	P	P	17 16 22.9	+0.4
	comp=Z,2.4nm,1.1s,baz=314,slow=4.0,SNR=9.1						
WRA	Warramunga Arr	93.10	111	IAmb	IAmb	17 16 23.2	
	comp=Z,0.5nm,1.5s						
DLBC	Dease Lake	93.19	1	P	P	17 16 23.1	+0.9
	comp=Z,3.0nm,0.9s,baz=306,slow=7.2,SNR=4.6						
DLBC	Dease Lake	93.19	1	IAmb	IAmb	17 17 29.0	
	comp=Z,17nm,1.5s						
FFC	Flin Flon	93.91	345	P	P	17 16 26.4	+0.8
FFC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FFC	Flin Flon	93.91	345	P	P	17 16 26.4	+0.8
FFC				IAmb	IAmb	17 16 27.8	
	comp=Z,3.7nm,0.7s						
ASAR	Alice Springs	94.56	114	P	P	17 16 27.9	-1.1
	comp=Z,2.3nm,0.6s,baz=304,slow=4.3,SNR=41						
ASAR	Alice Springs	94.56	114	P	P	17 16 28.0	-1.1
BBB	Bella Bella	99.47	360	LR	LR	18 07 44.6	
	comp=Z,40nm,18.6s,baz=5.5,slow=39						
NVAR	Mina Array Bea	112.59	352	PKiKP	PKiKP	17 21 45.1	+0.1
	comp=Z,0.4nm,0.5s,baz=20,slow=1.6,SNR=6.2						
TXAR	Lajitas Array	117.73	336	PKP	PKPdf	17 21 54.0	-1.0
	comp=Z,0.3nm,0.6s,baz=168,slow=2.3,SNR=3.9						
TXAR				PP	PP	17 23 04.5	-2.1
	comp=Z,0.4nm,1.0s,baz=76,slow=5.3,SNR=3.8						
TXAR	Lajitas Array	117.73	336	PKIKP	PKPdf	17 21 54.0	-1.0
QSPA	South Pole Qui	118.53	180		PKPdf	17 21 54.2	-0.9
PLCA	Paso Flores	131.92	240	PKP	PKiKP	17 22 22.6	+0.1
	comp=Z,3.3nm,1.0s,baz=28,slow=0.8,SNR=3.5						

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*IDC **10** 17:24:47.4±0.5, 30°.51N×142°.17E, h0^{km}, mb4.1/23, mb1 4.3/28, mb1mx4.2/45, mbtmp4.1/28, ML3.3/5, MS3.4/3, Ms1 3.4/3, ms1mx2.8/50 Error ellipse: s-maj=16.6km s-min=12.5km az=94.0*

*NIED **10** 17:24:48.1, 30°.49N×142°.48E, h86^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.40; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-4.96; $M_{r\theta}$7.24; $M_{\theta\phi}$-4.43; $M_{\phi r}$0.86; Fault plane solution: $M_0$9.69000×10^{14} NP1:ϕ_s65.00000°, δ74.00000°, λ124.00000°. NP2:ϕ_s178.00000°, δ37.00000°, λ28.00000°.*

*JMA **10** 17:24:48.0±0.4, 30°.49N×142°.48E, h86^{km}, M4.0*

*NEIC **10** 17:24:50.2±1.2, 30°.47N±0°.06×142°.1E±0°.1, h19^{km}±4^{km}, mb4.8/46, Error ellipse: s-maj=12.8km s-min=8.0km az=84.0*

ISC 10 17:24:48.3±4.0**, 30°.49N**±0°.04×**142°.17E**±0°.08**, h8**^{km}±24^{km}**, n115, σ1^{s}34**/122**, mb4.5**/39**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.29	323	*e*S	Sn	17 26 20.9	+1.4
JHJ2	Mitsune	3.29	323	Pn	Pn	17 25 40.0	-0.2
CBIJ	Chichi jima	3.38	180	*e*S	Sn	17 26 19.2	-2.6
JCJ	Chichijima	3.38	180	Pn	Pn	17 25 42.6	+1.1
	8.7nm,0.3s,baz=288,slow=20,SNR=1.6						
JCJ				Sn	Sn	17 26 21.1	-0.7
	40nm,0.3s,baz=272,slow=23,SNR=7.6						
JCJ	Chichijima	3.38	180		Pn	17 25 41.8	+0.3
BSO1	Boso 1	4.27	347	P	Pn	17 25 52.2	-0.9
BSO3	Boso 3	4.52	342	P	Pn	17 25 57.4	+0.6
BSO4	Boso 4	4.74	342	P	Pn	17 26 00.4	+0.4
JSG	Sagara	5.35	322	Pn	Pn	17 26 06.7	-1.8
JOD2	Odawara 2	5.42	332	P	Pn	17 26 09.1	-0.3
JOD2				*e*S	Sn	17 27 10.9	-1.1
JHU	Hanno	5.87	336	P	Pn	17 26 16.2	+0.6
JYT	Yasato	5.95	344	P	Pn	17 26 16.8	+0.1
JYT	Yasato	5.95	344	Pn	Pn	17 26 16.1	-0.6
JRY	Ryogami san	6.15	334	P	Pn	17 26 20.0	+0.5
JRY				*e*S	Sn	17 27 26.4	-3.7
JHO	Hitachi	6.25	348	P	Pn	17 26 18.7	-2.1
JHO				*e*S	Sn	17 27 24.9	-7.5
INU	Inuyama	6.50	320	Pn	Pn	17 26 24.9	+0.7
JGF	Kuroka	6.50	323	Pn	Pn	17 26 25.9	+1.6
MJAR	Matsushiro Arr	6.88	332	Pn	Pn	17 26 29.7	+0.2
	0.7nm,0.3s,baz=159,slow=11,SNR=108						
MJAR	Matsushiro Arr	6.88	332		Pn	17 26 29.5	0.0
MAJO	Matsushiro	6.88	332	Pn	Pn	17 26 30.1	+0.6
MAT	Matsushiro	6.88	332	P	Pn	17 26 29.8	+0.3
MAT				*e*S	Sn	17 27 43.0	-5.0
JWT	Wachi	7.43	312	Pn	Pn	17 26 38.6	+1.6
JMM	Marumori	7.44	352		Pn	17 26 34.8	-2.4
JSD	Sado	8.19	338	Pn	Pn	17 26 46.6	-0.8
JMK	Ichinoseki	8.47	355	P	Pn	17 26 49.1	-2.3
JMK				*e*S	Sn	17 28 17.0	-10
JTM	Tenmabayashi	10.31	355	Pn	Pn	17 27 14.4	-2.1
JMZ	Minamidaito 2	10.72	247	Pn	Pn	17 27 19.4	-2.8
JTU	Tsushima	11.50	294	Pn	Pn	17 27 34.6	+1.8
ERM	Erimo	11.53	4	Pn	Pn	17 27 30.2	-2.9
JEW	Eniwo	12.34	358	Pn	Pn	17 27 45.8	+1.6
ASAJ	Asahikawa	13.60	1	Pn	Pn	17 27 59.8	-1.8
	0.5nm,0.3s,baz=211,slow=21,SNR=7.0						
KSRS	Korea Array	13.70	304	Pn	Pn	17 28 03.5	+0.7
	0.1nm,0.3s,baz=112,slow=12,SNR=2.4						
KSRS				LR	LR	17 33 30.1	
	comp=Z,54nm,18.4s,baz=130,slow=38						
USRK	Ussuriysk Ar.	15.88	332	Pn	Pn	17 28 33.0	+0.9
	baz=168,slow=16,SNR=2.6						
MDJ	Mudanjiang	17.24	328	P	P	17 28 50.8	-0.1
TATO	Taipei	19.10	258	P	P	17 29 12.3	+0.7
YHNB	Yeheng	19.31	258	P	P	17 29 14.0	+0.1
YHNB				IAmb	IAmb	17 29 22.7	
	comp=Z,54nm,1.2s						
NACB	Ninganchiao	19.32	256	P	P	17 29 13.2	-0.8
NACB				IAmb	IAmb	17 29 15.7	
	comp=Z,41nm,1.3s						
YULB	Yu-li	19.89	254	P	P	17 29 20.3	+0.1
YULB				IAmb	IAmb	17 29 29.6	
	comp=Z,84nm,1.7s						
SSLB	Suanglung	20.01	256	P	P	17 29 21.9	+0.3
SSLB				IAmb	IAmb	17 29 24.3	
	comp=Z,42nm,1.0s						
KLR	Kul'dur	20.32	340	P	P	17 29 24.5	-0.2
	comp=Z,2.8nm,0.6s,baz=158,slow=7.2,SNR=11						
TPUB	Ta-pu	20.48	255	P	P	17 29 27.0	+0.3
TPUB				IAmb	IAmb	17 29 37.1	
	comp=Z,74nm,1.4s						
PETK	Petropavlovsk-	25.28	22	P	P	17 30 16.6	+1.6
ULN	Ulaanbaatar	31.93	313	P	P	17 31 15.2	+0.6
ULN				IAmb	IAmb	17 31 17.0	
	comp=Z,5.6nm,0.8s						
SONM	Songino Array	32.33	313	P	P	17 31 18.9	+0.8
	comp=Z,1.3nm,0.6s,baz=107,slow=11,SNR=8.1						
SONM	Songino Array	32.33	313	P	P	17 31 18.2	+0.1
SONM				PcP	PcP	17 34 06.0	+0.1
SEY	Seymchan	33.12	9	P	P	17 31 24.8	+0.3
	comp=Z,2.6nm,1.1s,baz=90,slow=20,SNR=1.8						
CHTO	Chiang Mai	40.74	264	P	P	17 32 28.9	-1.1
CM31	Chiang Mai Arr	40.89	263	P	P	17 32 30.1	-1.1
CMAR	Chiang Mai Arr	40.89	263	P	P	17 32 30.6	-0.7
	comp=Z,0.9nm,0.7s,baz=62,slow=6.1,SNR=12						
CMAR				PcP	PcP	17 34 33.6	+1.7
	comp=Z,0.6nm,0.8s,baz=92,slow=1.2,SNR=5.8						
CMAR				LR	LR	17 50 59.3	
	comp=Z,59nm,18.0s,baz=170,slow=38						
CMAR	Chiang Mai Arr	40.89	263		PcP	17 34 33.4	+1.4
MTN	Manton Dam	44.38	195	P	P	17 32 59.3	-0.1
ZALV	Zalesovo Beam	46.96	317	P	P	17 33 20.0	+0.5
	comp=Z,0.5nm,0.4s,baz=112,slow=6.6,SNR=3.9						
ZALV				PcP	PcP	17 34 51.8	0.0
	comp=Z,2.8nm,0.7s,baz=101,slow=2.8,SNR=10						
ZALV	Zalesovo Beam	46.96	317		PcP	17 34 51.1	-0.8
MK31	Makanchi Array	48.36	307	P	P	17 33 30.7	+0.2
MKAR	Makanchi Array	48.36	307	P	P	17 33 30.8	+0.3
	comp=Z,1.8nm,0.6s,baz=91,slow=9.5,SNR=32						
MKAR	Makanchi Array	48.36	307	P	P	17 33 30.3	-0.2
MAKZ	Makanchi	48.57	307	P	P	17 33 32.4	+0.2
MAKZ				IAmb	IAmb	17 33 33.6	
	comp=Z,11nm,1.6s						
UGM	Wanagama	48.78	224	P	P	17 33 34.3	+0.2
WB0	Warramunga Arr	50.53	189	P	P	17 33 47.1	-0.1
WB0				IAmb	IAmb	17 33 49.3	
	comp=Z,7.9nm,0.6s						
KURK	Kurchatov	50.64	313	P	P	17 33 47.4	-0.4
WR0	Warramunga Arr	50.70	189	P	P	17 33 48.5	+0.1
WR0				IAmb	IAmb	17 34 24.8	
	comp=Z,27nm,1.6s						
WRAB	Tennant Creek	50.70	190	P	P	17 33 47.1	-1.4
WB2	Warramunga Arr	50.70	190	P	P	17 33 48.4	-0.1
WB2				IAmb	IAmb	17 33 49.5	
	comp=Z,7.8nm,0.8s						
WRA	Warramunga Arr	50.71	190	P	P	17 33 48.3	-0.3
	comp=Z,4.6nm,0.6s,baz=7.9,slow=7.7,SNR=34						
WRA	Warramunga Arr	50.71	190	P	P	17 33 48.2	-0.3
WRA				PcP	PcP	17 35 06.2	+0.3
FITZ	Fitzroy Crossi	50.86	200	P	P	17 33 49.8	+0.1
	comp=Z,4.0nm,0.7s,baz=18,slow=8.0,SNR=6.2						
FITZ	Fitzroy Crossi	50.86	200	P	P	17 33 50.0	+0.2
FITZ				PcP	PcP	17 35 09.0	+2.6
KDAK	Kodiak Island	51.69	38	P	P	17 33 56.0	+0.4
	comp=Z,4.0nm,0.8s,baz=253,slow=7.2,SNR=4.3						
KDAK	Kodiak Island	51.69	38	IAmb	IAmb	17 34 17.9	
	comp=Z,40nm,1.7s						
PPLA	Purkeypile	52.27	32	P	P	17 34 00.5	+0.4
PPLA				IAmb	IAmb	17 34 12.9	
	comp=Z,19nm,1.6s						
CNPM	China Poot	52.47	36	P	P	17 34 03.0	+1.6
CNPM				IAmb	IAmb	17 34 22.4	
	comp=Z,29nm,1.4s						
RND	Reindeer	53.83	31	P	P	17 34 11.7	+0.3
RND				IAmb	IAmb	17 34 54.4	
	comp=Z,13nm,1.8s						
AS31	Alice Springs	54.43	189	P	P	17 34 16.8	+0.6
ASAR	Alice Springs	54.43	189	P	P	17 34 16.2	0.0
	comp=Z,2.4nm,0.7s,baz=12,slow=7.6,SNR=30						
ILAR	Eielson Array	54.77	30	P	P	17 34 18.1	-0.1
	comp=Z,1.7nm,1.0s,baz=263,slow=6.0,SNR=10						
KLU	Klutina	55.14	34	P	P	17 34 22.2	+1.2
KLU				IAmb	IAmb	17 34 51.8	
	comp=Z,9.1nm,1.4s						
BRVK	Borovoye	55.63	316	P	P	17 34 25.3	+0.8
ARSB	Arslanbob	55.73	302	P	P	17 34 27.3	+1.6
BMAR	Burnt Mountain	55.82	27	P	P	17 34 25.2	-0.6
PSAD1	Pilbara Seismi	55.93	205	P	P	17 34 27.3	+0.3
PSAB1	Pilbara Seismi	56.04	205	P	P	17 34 28.0	+0.2
PSAD3	Pilbara Seismi	56.12	205	P	P	17 34 28.3	-0.1
BCAR	Beaver Creek A	57.02	32	P	P	17 34 34.6	+0.1
DRK	Karamyk	57.03	300	P	P	17 34 35.2	0.0
DRK				IAmb	IAmb	17 34 37.1	
	comp=Z,5.2nm,0.6s						
KK06	Karatay Array	57.12	304	P	P	17 34 35.1	-0.3
KK31	Karatay Array	57.13	304	P	P	17 34 35.3	-0.2
KK31				IAmb	IAmb	17 34 36.7	
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	57.13	304	P	P	17 34 35.7	+0.2
KKAR	Karatay Array	57.13	304	P	P	17 34 35.8	+0.2
KKAR				IAmb	IAmb	17 34 36.7	
	comp=Z,4.4nm,0.8s						
NIL	Nilore	57.49	293	P	P	17 34 38.5	+0.3
NIL				IAmb	IAmb	17 34 39.4	
	comp=Z,8.6nm,0.8s						
INK	Inuvik	59.97	25	P	P	17 34 55.8	+1.1
	comp=Z,0.8nm,0.7s,baz=296,slow=5.4,SNR=3.2						
ARU	Arti	61.76	321	P	P	17 35 06.9	-0.3
ARU				IAmb	IAmb	17 35 08.2	
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	62.03	181	P	P	17 35 10.4	+1.3
	comp=Z,2.5nm,0.9s,baz=330,slow=4.5,SNR=4.0						
STKA	Stephens Creek	62.03	181	P	P	17 35 09.6	+0.4
FORT	Forrest	62.39	194	P	P	17 35 12.0	+0.4
AB07	Akbulak array	62.74	313	P	P	17 35 14.0	+0.1
ABKAR	Akbulak array	62.74	313	P	P	17 35 13.7	-0.2
ABKAR	Akbulak array	62.74	313	P	P	17 35 14.0	+0.1
DLBC	Dease Lake	63.46	36	LR	LR	18 01 02.7	
	comp=Z,48nm,21.9s,baz=326,slow=34						
HRA	Herat	65.87	297	P	P	17 35 35.4	+0.4
HRA				IAmb	IAmb	17 35 36.6	
	comp=Z,21nm,1.6s						
EUNU	Eureka	66.55	8	P	P	17 35 38.5	+0.1
EUNU				IAmb	IAmb	17 36 05.8	
	comp=Z,11nm,1.6s						
SPA0	Spitsbergen Ar	67.05	350	P	P	17 35 42.6	+1.1
SPA3	Spitsbergen Ar	67.05	350	P	P	17 35 42.1	+0.6
GEYT	Alibeck	67.68	302	P	P	17 35 47.0	+0.8
	comp=Z,2.8nm,0.8s,baz=66,slow=12,SNR=3.6						
GEYT	Alibeck	67.68	302	IAmb	IAmb	17 35 49.5	
	comp=Z,2.2nm,0.8s						
YKA	Yellowknife Ar	69.18	29	P	P	17 35 54.0	-1.1
	comp=Z,0.7nm,0.7s,baz=292,slow=5.8,SNR=8.0						
FINES	FINESS Array B	74.91	333	P	P	17 36 28.4	-1.0
	comp=Z,2.8nm,0.8s,baz=97,slow=2.9,SNR=11						
KBZ	Khabaz	75.70	312	P	P	17 36 36.3	+2.0
	comp=Z,5.1nm,0.9s,baz=89,slow=5.4,SNR=9.8						
NVAR	Mina Array Bea	78.45	52	P	P	17 36 51.2	+1.0
	comp=Z,1.0nm,0.6s,baz=290,slow=5.9,SNR=12						
AKASG	Malin Array Be	79.88	323	P	P	17 36 56.8	-0.6
	comp=Z,0.7nm,0.5s,baz=48,slow=6.0,SNR=5.5						
NOA	NORSAR Array B	80.46	338	P	P	17 37 00.4	-0.1
	comp=Z,1.7nm,0.9s,baz=45,slow=5.0,SNR=1.9						
PDAR	Pinedale Array	81.82	45	P	P	17 37 08.8	+0.4
	comp=Z,0.7nm,0.7s,baz=302,slow=3.3,SNR=4.3						
BRTR	Keskin Array B	83.69	313	P	P	17 37 18.1	+0.1
	comp=Z,1.9nm,0.8s,baz=115,slow=4.3,SNR=7.4						
RAYN	Ar Rayn	83.78	293	P	P	17 37 19.2	+0.6
RAYN				IAmb	IAmb	17 37 21.2	
	comp=Z,6.0nm,0.7s						
TXAR	Lajitas Array	93.58	53	P	P	17 38 06.8	+1.3
	comp=Z,0.9nm,0.7s,baz=307,slow=2.1,SNR=8.5						
SIV	San Ignacio	154.30	61	PKPab	PKPab	17 45 03.3	-0.5
	comp=Z,2.0nm,1.0s,baz=302,slow=5.9,SNR=5.4						

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*IDC **10** 17:36:29.0±1.5, 4°.41S×139°.34E, h0^{km}, mb3.3/1, mb1 3.9/6, mb1mx3.6/28, mbtmp3.7/6, ML3.9/5, MS2.0/1, Ms1 2.0/1, ms1mx1.9/23, Error ellipse: s-maj=38.7km s-min=15.1km az=124.0*

*DJA **10** 17:36:31.7±0.7, 4°S±6°×13°8E±°, h11^{km}±6^{km}, M4.3/7, mb4.3/5, mB5.1/1, MLv4.3/7, Mw(mB)4.4/1*

*NEIC **10** 17:36:34.7±2.5, 4°.6S±0°.1×139°.17E±0°.09, h54^{km}±12^{km}, mb4.5/12, Error ellipse: s-maj=16.2km s-min=11.2km az=207.0*

*NOU **10** 17:37:05.0, 7°.56S×138°.48E, h1^{km}, mb4.1, Near South Coast of Irian Jaya*

ISC 10 17:36:33.6±0.7**, 4°.52S**±0°.07×**139°.23E**±0°.06**, h44**^{km}**, n30, σ1^{s}32**/29**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	2.13	26	P	Pn	17 37 06.2	-0.5
GENI				S	Sn	17 37 32.7	+0.8
JAY	Jayapura	2.47	37	Pn	Pn	17 37 10.7	-0.8
	37nm,0.3s,baz=206,slow=7.8,SNR=75						
JAY				LR	LR	17 37 37.7	
	comp=Z,29nm,20.1s,baz=211,slow=30						
JAY				Lg	Lg	17 37 41.6	
	28nm,0.3s,baz=291,slow=4.1,SNR=8.5						
JAY	Jayapura	2.47	37	P	Pn	17 37 11.1	-0.4
MMPI	Merauke	4.09	164	P	Pn	17 37 48.4	+15
	2.0nm168nm,0.6s						
BAKI	Biak	4.54	317	P	Pn	17 37 39.1	-0.8
FAKI	Fak Fak	7.14	283	Pn	Pn	17 38 17.1	+1.5
FAKI				Sn	Sn	17 39 36.6	+1.1
FAKI	Fak Fak	7.14	283	P	Pn	17 38 04.9	-11
	0.2nm36nm,1.5s						
SAUI	Saumlaki	8.60	246	Pn	Pn	17 38 35.6	+0.1
SIJI	Sorong	8.74	294	Pn	Pn	17 38 38.8	+1.3
	0.9nm,0.3s,baz=36,slow=23,SNR=4.0						
PMG	Port Moresby	9.25	122	Pn	Pn	17 38 45.3	+0.9
COEN	Coen	10.16	158	Pn	Pn	17 38 58.2	+1.4
MSAI	Masohi	10.34	276	P	Pn	17 38 48.6	-11
MTN	Manton Dam	11.51	224	Pn	Pn	17 39 15.3	-0.1
SOEI	Soe	15.73	250	Pn	Pn	17 40 10.1	-2.3
SOEI				IAmb	IAmb	17 40 19.8	
	comp=Z,120nm,1.6s						
WB0	Warramunga Arr	15.87	197	Pn	Pn	17 40 12.2	-2.0
WB0				IAmb	IAmb	17 40 31.8	
	comp=Z,32nm,1.8s						
WR0	Warramunga Arr	16.02	196	Pn	Pn	17 40 13.9	-2.0
WB2	Warramunga Arr	16.05	197	Pn	Pn	17 40 14.5	-1.9
WB2				IAmb	IAmb	17 40 21.3	
	comp=Z,44nm,1.7s						
WRA	Warramunga Arr	16.06	197	Pn	P	17 40 19.9	+0.6
	comp=Z,0.6nm,0.3s,baz=22,slow=12,SNR=23						
WRA	Warramunga Arr	16.06	197		Pn	17 40 14.8	-1.6
MMRI	Maumere	17.37	255		Pn	17 40 32.2	-0.7
MMRI				IAmb	IAmb	17 40 38.5	
	comp=Z,79nm,0.9s						
GUMO	Guam	18.84	17	P	Pn	17 40 50.5	-0.3
FITZ	Fitzroy Crossi	18.95	224	P	Pn	17 40 52.9	+0.8
	comp=Z,0.2nm,0.3s,baz=41,slow=7.5,SNR=8.4						
FITZ	Fitzroy Crossi	18.95	224	Pn	P	17 40 51.5	+0.4
FITZ				IAmb	IAmb	17 41 09.5	
	comp=Z,40nm,1.7s						
TOLI2	Tolitoli	19.26	286	P	P	17 40 54.5	-0.1
TOLI2				IAmb	IAmb	17 41 18.5	
	comp=Z,12nm,1.1s						
KAPI	Kappang	19.42	268	P	P	17 40 53.0	-3.4
KAPI				IAmb	IAmb	17 41 09.8	
	comp=Z,77nm,1.6s						
AS31	Alice Springs	19.72	195	P	P	17 41 00.1	+0.5
ASAR	Alice Springs	19.72	195	P	Pn	17 41 01.6	+0.2
	comp=Z,0.2nm,0.3s,baz=22,slow=8.7,SNR=20						
ASAR	Alice Springs	19.72	195	P	P	17 40 58.5	-1.1
QRZ	Quartz Range	46.90	145	P	P	17 45 00.4	+0.6
MKAR	Makanchi Array	71.53	323	P	P	17 47 50.9	+0.9
	comp=Z,0.2nm,0.5s,baz=123,slow=6.1,SNR=2.3						

IDC 10 17:43:56.1±1.7**, 2°.12N**×**126°.98E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/35**, mbtmp3.3**/3**, Error ellipse: s-maj=176.4km s-min=12.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.09	162	P	P	17 49 03.0	-0.6
	0.3nm,0.4s,baz=340,slow=11,SNR=6.2						
ASAR	Alice Springs	26.51	166	P	P	17 49 37.2	+1.7
	0.2nm,0.5s,baz=344,slow=11,SNR=2.0						
MKAR	Makanchi Array	59.01	326	P	P	17 53 57.7	-0.1
	0.2nm,0.4s,baz=125,slow=7.6,SNR=6.3						

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*IDC **10** 17:48:47.5±1.2, 2°.69N×126°.72E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/36, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=52.7km s-min=20.1km az=71.0*

*NEIC **10** 17:48:51.3±2.7, 2°.2N±0°.1×126°.07E±0°.08, h19^{km}±7^{km}, mb4.5/10, Error ellipse: s-maj=16.8km s-min=10.0km az=211.0*

ISC 10 17:48:53.0±0.8**, 2°.6N**±0°.1×**126°.6E**±0°.2**, h35**^{km}**, n21, σ0^{s}96**/20**, mb4.3**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.95	158	Pn	Pn	17 49 22.8	-0.8
SIJI	Sorong	5.77	126	Pn	Pn	17 50 15.8	-0.3
	1.6nm,0.3s,baz=230,slow=22,SNR=7.0						
FAKI	Fak Fak	7.84	134		Pn	17 50 46.2	+1.6
SAUI	Saumlaki	11.49	156	Pn	Pn	17 51 30.3	-4.4
MTN	Manton Dam	15.97	164		Pn	17 52 35.5	+0.4
MTN				IAmb	IAmb	17 53 15.7	
	comp=Z,59nm,1.5s						
YULB	Yu-li	21.31	346	P	P	17 53 37.6	+0.7
YULB				IAmb	IAmb	17 54 00.6	
	comp=Z,42nm,1.3s						
TPUB	Ta-pu	21.39	345	P	P	17 53 36.0	-1.8
SSLB	Suanglung	21.78	346	P	P	17 53 42.5	+0.7
WB0	Warramunga Arr	23.49	161	P	P	17 53 59.4	-0.4
WB0				IAmb	IAmb	17 54 32.5	
	comp=Z,23nm,1.4s						
WRA	Warramunga Arr	23.64	162	P	P	17 54 00.6	-0.6
	comp=Z,1.1nm,0.6s,baz=342,slow=10,SNR=12						
WB2	Warramunga Arr	23.64	162	P	P	17 54 01.0	-0.2
WB2				IAmb	IAmb	17 54 39.1	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	23.72	161	P	P	17 54 01.5	-0.4
WR0				IAmb	IAmb	17 54 40.0	
	comp=Z,23nm,1.4s						
AS31	Alice Springs	27.04	165	P	P	17 54 30.8	-1.4
ASAR	Alice Springs	27.04	165	P	P	17 54 32.2	0.0
	comp=Z,0.4nm,0.5s,baz=351,slow=7.8,SNR=12						
STKA	Stephens Creek	37.11	159	P	P	17 56 00.3	+0.1
	comp=Z,1.7nm,0.6s,baz=344,slow=9.2,SNR=3.7						
STKA	Stephens Creek	37.11	159	P	P	17 56 00.6	+0.4
PETK	Petropavlovsk-	56.52	22	P	P	17 58 30.3	-1.3
	comp=Z,3.2nm,1.0s,baz=181,slow=6.8,SNR=4.1						
MKAR	Makanchi Array	58.43	326	P	P	17 58 45.4	+0.1
	comp=Z,0.2nm,0.4s,baz=120,slow=8.4,SNR=5.7						
AB06	Akbulak array	72.95	321	P	P	18 00 20.1	+1.2
AB07	Akbulak array	72.95	321	P	P	18 00 19.5	+0.6
ABKAR	Akbulak array	72.96	321	P	P	18 00 20.2	+1.3

DJA 10 17:49:36.8±0.3**, 0°S**±3°×**12°2E**±°**, h10**^{km}**, M3.0**/8**, MLv3.0**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.59	212	P	Pg	17 49 48.0	-0.2
APSI				S	Sb	17 49 57.3	-0.3
MRSI	Marisa	0.88	359	P	Pg	17 49 53.7	-0.1
LUWI	Luwuk	1.03	128		Pn	17 49 57.2	0.0
LUWI	Luwuk	1.03	128	P	Pn	17 49 57.1	-0.2
GTOI	Gorontalo	1.48	45	P	Pn	17 50 02.8	-0.7
TOLI2	Tolitoli	1.92	322		Pb	17 50 10.8	-1.1
MPSI	Mapaga	2.19	290	P	Pn	17 50 13.1	-0.2
KMSI	Cibinong	2.25	64	P	Pn	17 50 13.7	-0.3
TTSI	Tana Toraja	3.38	219	P	Pn	17 50 29.9	+0.2
SPSI	Sidrap Palu	4.15	212	P	Pn	17 50 40.7	+0.4

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*VAO **10** 17:55:00.6±0.3, 21°.46S×68°.55W, h92^{km}, mb5.6*

*NEIC **10** 17:55:01.6, 21°.64S×68°.54W, h118^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.95; $M_{\theta\theta}$0.83; $M_{\phi\phi}$0.12; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.66; $M_{\phi r}$-0.99; Fault plane solution: $M_0$1.50000×10^{17} NP1:ϕ_s329.86000°, δ67.62000°, λ-61.38000°. NP2:ϕ_s94.77000°, δ35.74000°, λ-139.31000°. Principal axes: T 1.4386, Plg18.0000°, Azm39.0000°; N 0.1165, Plg26.0000°, Azm138.0000°; P -1.5550, Plg57.0000°, Azm279.0000°;*

*MOS **10** 17:55:02.0±1.1, 21°.32S×68°.42W, h99^{km}, mb5.6/6 Error ellipse: s-maj=12.0km s-min=7.0km az=106.3*

*SJA **10** 17:55:02.1±0.6, 21°.63S×68°.70W, h120^{km}±3^{km}, ML5.1, MW5.1*

*NEIC **10** 17:55:02.6±2.3, 21°.63S±0°.04×68°.53W±0°.06, h109^{km}±3^{km}, mb5.6/504, Mwb5.5/17, Mwr5.4/38, Mww5.5, ML5.3(GUC), Error ellipse: s-maj=8.7km s-min=6.1km az=98.0*

*NEIC **10** 17:55:03, 21°.63S×68°.66W, h107^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.45; $M_{\theta\theta}$1.29; $M_{\phi\phi}$0.15; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.87; $M_{\phi r}$-1.39; Fault plane solution: $M_0$2.14000×10^{17} NP1:ϕ_s327.76000°, δ65.48000°, λ-59.93000°. NP2:ϕ_s93.40000°, δ38.05000°, λ-137.69000°. Principal axes: T 1.9757, Plg15.0000°, Azm36.0000°; N 0.2997, Plg27.0000°, Azm134.0000°; P -2.2754, Plg58.0000°, Azm280.0000°;*

*IDC **10** 17:55:03.7±0.3, 21°.65S×68°.57W, h112^{km}±2^{km}, mb4.9/28, mb1 5.0/32, mb1mx4.9/35, mbtmp5.2/32, MS4.3/10, Ms1 4.2/10, ms1mx3.9/23 Error ellipse: s-maj=10.2km s-min=6.5km az=95.0*

*GUC **10** 17:55:03.8±0.6, 21°.63S×68°.66W, h111^{km}±4^{km}, ML5.3, MW5.2*

*NEIC **10** 17:55:04, 21°.51S×68°.54W, h100^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.60; $M_{\theta\theta}$1.02; $M_{\phi\phi}$0.58; $M_{r\theta}$0.12; $M_{\theta\phi}$-0.90; $M_{\phi r}$-1.06; Fault plane solution: $M_0$1.98000×10^{17} NP1:ϕ_s109.00000°, δ36.00000°, λ-124.00000°. NP2:ϕ_s329.00000°, δ61.00000°, λ-67.00000°. Principal axes: T 1.8991, Plg13.0000°, Azm43.0000°; N 0.1535, Plg20.0000°,* *Azm138.0000°; P -2.0526, Plg66.0000°, Azm282.0000°;*

*BJI **10** 17:55:06.0±0.0, 21°.60S×68°.60W, h123km, mB5.5/16*

*GCMT **10** 17:55:06.6±0.1, 21°.57S±0°.01×68°.69W±0°.01, h132km, MW5.4/142, Moment Tensor Solution. s134,c211; s142,c238; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.39±.02; $M_{\theta\theta}$0.70±.03; $M_{\phi\phi}$0.69±.03; $M_{r\theta}$0.12±.02; $M_{\theta\phi}$-0.85±.03; $M_{\phi r}$-0.92±.02; Best double couple: $M_0$1.74000×10^{17} NP1:ϕ_s117.00000°, δ35.00000°, λ-122.00000°. NP2:ϕ_s334.00000°, δ61.00000°, λ-70.00000°. Principal axes: T 1.7280, Plg14.0000°, Azm49.0000°; N 0.0250, Plg18.0000°, Azm144.0000°; P -1.7520, Plg67.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 17:55:02.9±0.2**, 21°.58S**±0°.03×**68°.60W**±0°.03**, h109**km±1km**, h110**km**:pP-P, n1060, σ1s.36**/1043**, mb5.6**/281**, 26C-8D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.63	250	⇑iP	Pn	17 55 21.4	+0.6
PB09				eS	Sn	17 55 34.6	+0.3
PB09				IAML		17 55 36.3	
	comp=N,150µm,0.5s						
PB09	IPOC Station P	0.63	250		Pn	17 55 20.3	-0.6
PB09				Sn	Sn	17 55 33.3	-1.0
PB09	IPOC Station P	0.63	250	eP	Pn	17 55 21.2	+0.4
PB09				eS	Sn	17 55 35.2	+0.9
PB09				IAML		17 55 37.2	
	comp=Z,127µm,0.5s						
LVC	Limon Verde	1.06	195	P	Pn	17 55 25.5	+0.4
	comp=Z,19µm,0.3s,baz=18,slow=8.4						
LVC				S	Sn	17 55 41.5	-0.3
	comp=Z,15µm,0.3s,baz=200,slow=18,SNR=37						
LVC				LR	LR	17 55 59.2	
	comp=Z,24µm,18.5s,baz=171,slow=55						
LVC	Limon Verde	1.06	195	⇑iP	Pn	17 55 25.4	+0.4
LVC				i S	Sn	17 55 42.0	+0.2
LVC	Limon Verde	1.06	195	Pn	Pn	17 55 25.1	0.0
LVC				Sn	Sn	17 55 41.9	+0.1
LVC	Limon Verde	1.06	195	eP	Pn	17 55 25.5	+0.4
LVC				eS	Sn	17 55 42.1	+0.2
LVC				IAML		17 55 44.6	
	comp=Z,25µm,0.6s						
PB03	IPOC Station P	1.16	246	⇑iP	Pn	17 55 25.9	-0.1
PB03				i S	Sn	17 55 42.9	-0.5
PB03				IAML		17 55 43.9	
	comp=E,83µm,0.5s						
PB03	IPOC Station P	1.16	246	eP	Pn	17 55 26.0	-0.1
PB03				eS	Sn	17 55 43.2	-0.2
PB03				IAML		17 55 46.4	
	comp=Z,54µm,0.3s						
PB07	IPOC Station P	1.20	263	⇑iP	Pn	17 55 26.4	0.0
PB07				i S	Sn	17 55 43.9	-0.3
PB07	IPOC Station P	1.20	263		Pn	17 55 25.5	-0.9
PB07				Sn	Sn	17 55 43.8	-0.3
PB07	IPOC Station P	1.20	263	eP	Pn	17 55 26.2	-0.2
PB07				eS	Sn	17 55 44.1	-0.1
PB07				IAML		17 55 47.0	
	comp=Z,127µm,0.5s						
PB02	IPOC Station P	1.23	282	⇑iP	Pn	17 55 26.6	-0.1
PB02				i S	Sn	17 55 44.2	-0.5
PB02				IAML		17 55 48.6	
	comp=N,82µm,0.4s						
PB02	IPOC Station P	1.23	282	eP	Pn	17 55 26.7	-0.1
PB02				eS	Sn	17 55 44.8	+0.1
PB02				IAML		17 55 49.4	
	comp=Z,79µm,0.5s						
PB08	IPOC Station P	1.52	340	⇑iP	Pn	17 55 31.8	+1.4
PB08				eS	Sn	17 55 52.9	+1.6
PB08				IAML		17 55 55.0	
	comp=E,37µm,0.4s						
PB08	IPOC Station P	1.52	340		Pn	17 55 31.2	+0.8
PB08				Sn	Sn	17 55 52.6	+1.4
PB08	IPOC Station P	1.52	340	eP	Pn	17 55 31.9	+1.4
PB08				eS	Sn	17 55 53.0	+1.8
PB08				IAML		17 55 56.3	
	comp=Z,19µm,0.4s						
PB04	IPOC Station P	1.62	242	⇑iP	Pn	17 55 30.9	-0.4
PB04				eS	Sn	17 55 51.6	-1.3
PB04				IAML		17 55 58.4	
	comp=E,46µm,0.6s						
PB04	IPOC Station P	1.62	242	Pn	Pn	17 55 30.6	-0.7
PB04				Sn	Sn	17 55 52.0	-0.8
PB04	IPOC Station P	1.62	242	eP	Pn	17 55 30.9	-0.4
PB04				eS	Sn	17 55 52.6	-0.2
PB04				IAML		17 56 01.9	
	comp=Z,31µm,0.4s						
PATCX	Punta Patache	1.63	297	⇑iP	Pn	17 55 31.6	+0.2
PATCX				i S	Sn	17 55 52.6	-0.4
PATCX				IAML		17 55 58.8	
	comp=E,42µm,0.5s						
PATCX	Punta Patache	1.63	297		Pn	17 55 31.1	-0.3
PATCX	Punta Patache	1.63	297	eP	Pn	17 55 31.6	+0.2
PATCX				eS	Sn	17 55 53.2	+0.2
PATCX				IAML		17 55 55.7	
	comp=Z,37µm,0.6s						
HMBC	Humberstone	1.77	317	⇓iP	Pn	17 55 33.1	0.0
HMBC				i S	Sn	17 55 56.2	+0.1
HMBC				IAML		17 56 01.4	
	comp=N,33µm,0.6s						
TA01	Diego Aracena	1.79	304	⇑iP	Pn	17 55 33.1	-0.1
TA01				i S	Sn	17 55 55.5	-0.8
TA01				IAML		17 55 58.8	
	comp=N,31µm,0.4s						
TA01	Diego Aracena	1.79	304	Pn	Pn	17 55 33.1	-0.1
TA02	Huaiquique	1.94	312	eP	Pn	17 55 34.8	-0.2
GO01	Chusmiza	1.98	344	⇑iP	Pn	17 55 37.2	+1.0
GO01				eS	Sn	17 56 02.9	+1.4
GO01				IAML		17 56 06.6	
	comp=N,30µm,0.1s						
GO01	Chusmiza	1.98	344		Pn	17 55 37.0	+0.8
PSGC	Pisagua	2.44	324	⇓iP	Pn	17 55 40.7	-0.9
PSGC				IAML		17 56 15.7	
	comp=E,10µm,0.4s						
PSGCX	Pisagua	2.44	324	Pn	Pn	17 55 40.6	-1.1
PSGCX	Pisagua	2.44	324	eP	Pn	17 55 40.8	-0.8
PSGCX				IAML		17 56 17.6	
	comp=Z,8µm,0.8s						
MNMC	Minye Minye	2.61	339	⇑iP	Pn	17 55 44.5	+0.4
MNMC	Minye Minye	2.61	339		Pn	17 55 44.5	+0.4
MNMCX	Minye Minye	2.61	339	eP	Pn	17 55 44.6	+0.5
MNMCX				eS	Sn	17 56 14.4	-1.3
MNMCX				IAML		17 56 19.4	
	comp=Z,13µm,0.6s						
PB10	IPOC Station P	2.63	223	⇑iP	Pn	17 55 42.4	-1.6
PB10				IAML		17 56 24.2	
	comp=N,10µm,0.3s						
PB10	IPOC Station P	2.63	223	Pn	Pn	17 55 42.2	-1.9
PB10	IPOC Station P	2.63	223	eP	Pn	17 55 42.6	-1.5
PB10				eS	Sn	17 56 13.6	-2.1
PB10				IAML		17 56 39.4	
	comp=Z,8µm,1.0s						
YJA	Yavi	2.93	102	eP	Pn	17 55 50.8	+2.4
YJA				eS	Sn	17 56 30.2	+6.9
YJA				IAML		17 56 46.0	
	comp=Z,817nm,1.6s						
PB16	IPOC Station P	3.34	345	⇑iP	Pn	17 55 54.8	+0.7
PB16				IAML		17 57 09.7	
	comp=N,3µm,0.5s						
PB16	IPOC Station P	3.34	345	Pn	Pn	17 55 54.7	+0.7
PB16	IPOC Station P	3.34	345	eP	Pn	17 55 54.8	+0.7
PB16				eS	Sn	17 56 32.2	-1.2
PB16				IAML		17 56 39.4	
	comp=Z,4µm,1.2s						
HJA	Humahuaca	3.37	119	eP	Pn	17 55 56.5	+2.3
HJA				IAML		17 56 44.7	
	comp=Z,572nm,0.9s						
PB14	IPOC Station P	3.45	208	Pn	Pn	17 55 53.0	-2.2
PB14	IPOC Station P	3.45	208	eP	Pn	17 55 55.1	-0.1
PB14				IAML		17 56 45.7	
	comp=Z,18µm,0.8s						
AP01	Chacalluta	3.59	333	eP	Pn	17 55 56.0	-0.8
AP01	Chacalluta	3.59	333		Pn	17 55 56.0	-0.8
GO02	Mina Guanaco	3.68	194	⇑iP	Pn	17 55 57.1	-1.1
GO02	Mina Guanaco	3.68	194	Pn	Pn	17 55 57.1	-1.1
AZAP	Zapla	4.19	130	eP	Pn	17 56 06.4	+1.4
AZAP				IAML		17 57 10.1	
	comp=Z,833nm,1.0s						
ASTB	Santa Barbara	4.50	122	eP	Pn	17 56 09.9	+0.8
ASTB				IAML		17 57 09.1	
	comp=Z,59nm,1.1s						
AC01	Pan de Azucar	4.90	202	Pn	Pn	17 56 10.9	-3.5
FSA	Cafayete	5.11	152	eP	Pn	17 56 18.6	+1.2
AC02	Maricunga	5.25	185		Pn	17 56 17.6	-1.9
AHML	Horco Molle	5.98	151	eP	Pn	17 56 29.8	+0.8
AHML				eP		17 56 30.2	
AHML				IAML		17 57 51.5	
	comp=Z,182nm,1.8s						
GO03	Copiap	6.16	194		Pn	17 56 27.9	-3.7
GO03	Copiap	6.16	194	eP	Pn	17 56 28.6	-3.0
AC04	Llanos de Chal	6.96	198	Pn	Pn	17 56 36.9	-5.4
VCA	Vinchina	7.13	177	eP	Pn	17 56 44.0	-0.8
VCA				eS	Sn	17 57 47.6	-17
VCA				IAML		17 57 59.5	
	comp=Z,855nm,0.9s						
CYA	Choya	7.29	160	eP	Pn	17 56 46.0	-0.7
CYA				IAML		17 58 14.7	
	comp=Z,144nm,1.0s						
AC05	El Transito	7.38	191		Pn	17 56 44.3	-3.8
LCO	Las Campanas	7.63	194	P	Pn	17 56 46.5	-5.2
LCO	Las Campanas	7.63	194	Pn	Pn	17 56 46.5	-5.2
ACLC	CERRO LA CRUZ	7.95	170	eP	Pn	17 56 54.0	-1.8
CO01	Juntas del Tor	8.46	189		Pn	17 56 59.7	-3.2
AROD	Rodeo	8.58	185	eP	Pn	17 57 01.8	-2.8
GO04	Tololo Observa	8.78	193	Pn	Pn	17 57 01.5	-5.7
SIV	San Ignacio	9.04	53	P	Pn	17 57 08.1	-2.6
	comp=Z,42nm,0.3s,baz=247,slow=11,SNR=1664						
SIV				LR	LR	18 01 37.5	
	comp=Z,3µm,19.3s,baz=245,slow=44						
CO03	El Pedregal	9.40	191		Pn	17 57 09.8	-5.7
CO02	Combarbal	9.82	192		Pn	17 57 14.8	-6.3
ZON	Zonda	9.92	180	P	Pn	17 57 18.3	-4.2
ZON	Zonda	9.92	180		Pn	17 57 18.3	-4.2
PTLB	Pontes e Lacer	10.86	57	eP	Pn	17 57 31.2	-4.0
VA03	San Esteban	11.27	188		Pn	17 57 35.0	-5.7
CPUP	Villa Florida	11.34	117	P	Pn	17 57 39.7	-1.9
	comp=Z,0.9nm,0.3s,baz=298,slow=12,SNR=49						
CPUP				LR	LR	18 02 51.4	
	comp=Z,2µm,18.7s,baz=292,slow=42						
CPUP	Villa Florida	11.34	117	Pn	Pn	17 57 38.7	-2.9
CPUP	Villa Florida	11.34	117	eP	Pn	17 57 38.8	-2.8
ROC1	El Roble	11.55	190		Pn	17 57 37.8	-6.8
PEL	Peldehue	11.66	189	P	Pn	17 57 40.3	-5.6
PEL	Peldehue	11.66	189		Pn	17 57 40.3	-5.6
VILB	Vilhena	11.75	44	eP	Pn	17 57 44.2	-3.0
MT02	Curacav	11.85	190		Pn	17 57 41.2	-7.1
MT05	Renca	11.91	189	Pn	Pn	17 57 42.9	-6.3
ETMB	Extrema	11.92	11	eP	Pn	17 57 45.8	-3.6
NNA	Nana	12.38	319	P	Pn	17 57 57.3	+1.9
	comp=Z,2.7nm,0.3s,baz=168,slow=11,SNR=6.6						
NNA	Nana	12.38	319	ceP	Pn	17 57 55.3	-0.2
NNA				pmax	pmax		
	comp=Z,91nm,1.7s						
NNA	Nana	12.38	319		Pn	17 57 51.8	-3.7
BO02	Sierra Bellavi	13.30	188		Pn	17 58 00.7	-6.7
ITQB	Itaqui	13.47	129	eP	Pn	17 58 08.5	-1.1
PP1B	Ponte de Pedra	13.53	75	eP	Pn	17 58 06.4	-4.1
SAML	Samuel	13.60	23	P	Pn	17 58 07.7	-3.7
SAML	Samuel	13.60	23	Pn	Pn	17 58 07.7	-3.7
SAML	Samuel	13.60	23	eP	Pn	17 58 08.0	-3.5
CZSB	Cruzeiro do Su	14.33	343	eP	Pn	17 58 15.7	-5.1
TRCB	Terra Rica	14.84	98	eP	Pn	17 58 25.3	-2.1
H03N1	Juan Fernandez	14.93	216	P	Pn	17 58 27.6	-0.4
	baz=110,slow=15,SNR=22						
H03N1				T	T	18 11 48.8	
	baz=41,slow=72,SNR=55						
H03N2	Juan Fernandez	14.94	216	P	Pn	17 58 27.5	-0.6
	baz=110,slow=15,SNR=23						
H03N2				T	T	18 11 23.5	
	baz=41,slow=72,SNR=38						
H03N3	Juan Fernandez	14.94	216	P	Pn	17 58 27.2	-1.0
	baz=110,slow=15,SNR=32						
H03N3				T	T	18 11 22.4	
	baz=41,slow=72,SNR=37						
VA04	Juan Fernndez	15.04	215	Pn	Pn	17 58 27.3	-2.3
VA04				IAmb	IAmb	17 58 32.5	
	comp=Z,388nm,0.9s						
H03S3	Juan Fernandez	15.22	215	P	Pn	17 58 30.5	-1.2
	baz=36,slow=21,SNR=14						
H03S1	Juan Fernandez	15.23	215	P	Pn	17 58 29.8	-2.0
	baz=36,slow=21,SNR=14						
H03S2	Juan Fernandez	15.23	215	P	Pn	17 58 30.7	-1.2
	baz=36,slow=21,SNR=15						
PTGB	Pitanga	15.53	105	eP	Pn	17 58 34.7	-1.3
BI03	Tigo	15.69	193	P	Pn	17 58 34.4	-3.4
BI03				IAmb	IAmb	17 58 36.9	
	comp=Z,839nm,1.5s						
ITAB	Concordia	16.02	114	eP	Pn	17 58 40.9	-1.1
PCMB	Pacaembu	16.13	93	eP	Pn	17 58 41.9	-1.5
CPSB	Cacapava Do Su	16.20	126	eP	Pn	17 58 42.5	-1.7
PLTB	Pedras Altas	16.79	130	eP	Pn	17 58 49.4	-2.0
ARAG	Araguaiana, MT	16.95	73	eP	Pn	17 58 51.3	-2.2
ITRB	Iturama	17.18	87	eP	P	17 58 54.8	-1.4
ATAH	Atahualpa	17.20	325	P	Pn	17 58 58.5	+1.6
	comp=Z,1.5nm,0.3s,baz=150,slow=8.0,SNR=26						
TRQA	Tornquist	17.38	162	P	P	17 58 55.4	-2.9
TRQA	Tornquist	17.38	162		P	17 58 55.4	-2.9
LC01	Cunco	17.48	189		P	17 58 56.6	-2.8
LC01				IAmb	IAmb	17 59 22.6	
	comp=Z,292nm,0.9s						
CNLB	Canela	17.77	119	eP	P	17 59 02.1	-0.5
BB19B	Bebedouro	18.71	92	eP	P	17 59 12.4	-0.7
SNDB	Serra Nova Dou	19.11	63	eP	P	17 59 16.1	-1.3
PLCA	Paso Flores	19.16	185	P	P	17 59 18.2	+0.4
	comp=Z,1.6nm,0.3s,baz=9.0,slow=13,SNR=53						
PLCA				PcP	PcP	18 03 38.8	+1.6
	comp=Z,0.3nm,0.3s,baz=333,slow=1.1,SNR=3.9						
PLCA	Paso Flores	19.16	185	P	P	17 59 15.7	-2.1
PLCA	Paso Flores	19.16	185	eP	P	17 59 17.8	0.0
NPGB	Novo Progresso	19.30	43	eP	P	17 59 16.6	-3.0
IPMB	Ipameri, GO	19.52	83	eP	P	17 59 20.1	-1.8
SPB	Sao Paulo	19.65	100	P	P	17 59 21.2	-2.0
SPB	Sao Paulo	19.65	100	eP	P	17 59 22.2	-1.0
PET01	Itanhaem-SP	19.83	102	eP	P	17 59 24.1	-1.0
MACA	Manacapuru-AM	19.87	24	eP	P	17 59 23.7	-1.9
VAO	Valinhos	20.07	98	eP	P	17 59 25.8	-2.1
BDFB	Brasilia	20.38	77	P	P	17 59 29.8	-1.5
	comp=Z,90nm,0.9s,baz=258,slow=12,SNR=80						
BDFB	Brasilia	20.38	77	P	P	17 59 29.1	-2.1
BDFB				IAmb	IAmb	17 59 31.4	
	comp=Z,227nm,1.1s						
LL01	San Ignacio de	20.98	188	P	P	17 59 36.7	-0.6
LL01				IAmb	IAmb	18 00 05.0	
	comp=Z,388nm,0.8s						
ITTB	Itaituba	21.19	38	eP	P	17 59 37.4	-2.4
PARB	Paraibuna	21.31	99	eP	P	17 59 39.3	-1.8
PEXB	Peixe	21.57	67	eP	P	17 59 41.8	-2.2
GO07	Milladeo Hill,	21.88	190	P	P	17 59 46.5	-0.4
BSCB	Bom Sucesso	22.21	93	eP	P	17 59 48.7	-2.0
ESAR	Angra dos Reis	22.40	98	eP	P	17 59 51.2	-1.3
PTLC	Puerto Leguiza	22.45	344	eP	P	17 59 52.6	-0.5
MAN01	Angra dos Reis	22.84	98	eP	P	17 59 55.2	-1.8
VAS01	Vassouras-RJ	23.35	96	eP	P	18 00 00.6	-1.2
OTAV	Otavalo	23.72	335	P	P	18 00 04.4	-1.3
OTAV				pmax	pmax		
	comp=Z,577nm,1.9s						
OTAV	Otavalo	23.72	335	P	P	18 00 04.4	-1.3
OTAV				IAmb	IAmb	18 00 49.5	
	comp=Z,577nm,1.9s						
OTAV	Otavalo	23.72	335	eP	P	18 00 16.6	+11
OTAV				eP	P	18 00 17.6	+12
PRPB	Parauapebas	23.77	53	eP	P	18 00 03.5	-2.1
SMTB	Santa Maria do	23.86	61	eP	P	18 00 04.8	-1.6
JANB	Januaria	23.94	78	eP	P	18 00 04.8	-2.4
MALB	Monte Alegre	24.08	37	eP	P	18 00 06.8	-1.5
MACC	Macarena, Meta	24.14	347	eP	P	18 00 12.8	+3.9
DUB01	Friburgo-RJ	24.35	96	eP	P	18 00 10.4	-0.4
SDBA	SAO DESIDERIO	24.40	72	eP	P	18 00 09.4	-2.0
GARC	Garzon, Huila	24.57	343	eP	P	18 00 12.8	-0.3
SOTA	Rioblanco	24.84	341	eP	P	18 00 18.5	+2.7
BBAC	Balboa, Cauca	24.94	339	eP	P	18 00 23.3	+6.9
BETC	Betania	25.03	344	eP	P	18 00 19.5	+2.5
CAM01	Campos-RJ	25.03	96	eP	P	18 00 15.4	-1.5
SJMB	Sao Joao De Ma	25.89	89	eP	P	18 00 23.4	-1.4
ALF01	Guarapari-ES	26.02	93	eP	P	18 00 24.2	-1.7
VILC	Villavicencio,	26.02	348	eP	P	18 00 28.1	+2.0
ORTC	Ortega, Tolima	26.16	345	eP	P	18 00 28.1	+0.9
RIB01	Linhares ES	26.52	90	eP	P	18 00 28.4	-2.1
YOTC	Yotoco, Valle	26.52	342	eP	P	18 00 29.1	-1.5
CHIC	Chingaza	26.53	348	eP	P	18 00 32.9	+1.9
MCPB	Macapa, AP	26.56	40	eP	P	18 00 29.0	-1.9
MALC	Bahia Malaga	26.84	340	eP	P	18 00 43.5	+10
ROSC	El Rosal	26.85	347	P	P	18 00 32.7	-1.2
ROSC				pmax	pmax		
	comp=Z,55nm,0.9s						
ROSC	El Rosal	26.85	347	P	P	18 00 32.7	-1.2
RREF	El Recreo	27.14	345	eP	P	18 00 46.3	+10
PLMC	San Jos del P	27.38	343	eP	P	18 00 37.7	-0.5
TMAB	Tom-Au,PA,Br	27.62	49	eP	P	18 00 39.7	-0.7
NORC	Norcasia	27.67	346	eP	P	18 00 40.6	-0.2
TAMC	Tame, Arauca	28.02	353	eP	P	18 00 43.5	-0.4
CBOC	Ciudad Bolivar	28.23	344	eP	P	18 00 47.3	+1.4
BARC	Barichara	28.36	350	eP	P	18 00 45.4	-1.8
HELC	Santa Helena	28.43	345	eP	P	18 00 45.4	-2.5
PTBC	PUERTO BERRIO,	28.53	348	eP	P	18 00 47.3	-1.1
GDU01	Guandu, BA	28.71	79	eP	P	18 00 47.4	-2.7
PAMC	Pamplona, Colo	29.02	352	eP	P	18 00 56.9	+3.6
ZARC	Zaragoza, Cauc	29.54	347	eP	P	18 00 58.8	+1.5
PAYG	Puerto Ayora	29.65	312	P	P	18 00 57.4	-1.0
GO09	Cerro Castillo	29.77	185	P	P	18 00 59.3	+0.2
GO09				IAmb	IAmb	18 01 39.6	
	comp=Z,316nm,1.8s						
ROSB	Rosrio	30.19	55	eP	P	18 01 02.0	-1.2
SDV	Santo Domingo	30.35	356	P	P	18 01 03.2	-1.5
SDV				pP	pP	18 01 32.2	+2.1
SDV	Santo Domingo	30.35	356	eP	P	18 01 03.9	-0.8
SMLC	San Martn de	30.67	349	eP	P	18 01 06.5	-0.8
EFI	East Falkland	31.14	167	P	P	18 01 10.5	-0.5
EFI				pmax	pmax		
	comp=Z,93nm,0.9s						
EFI	East Falkland	31.14	167	P	P	18 01 10.5	-0.5
EFI				pP	pP	18 01 38.1	+2.0
EFI				IAmb	IAmb	18 01 40.2	
	comp=Z,93nm,0.9s						
GRGR	Grenville	34.19	12	P	P	18 01 36.2	-1.9
HDC	Heredia	34.89	333	P	P	18 01 42.2	-2.1
RCBR	Riachuelo	35.31	68	P	P	18 01 45.5	-2.3
RCBR					pP	18 02 13.8	+0.2
RCBR	Riachuelo	35.31	68	eP	P	18 01 45.1	-2.6
SVB	Belmont	35.38	12	P	P	18 01 46.5	-1.8
JTS	Las Juntas de	35.51	332	P	P	18 01 50.8	+1.4
	comp=Z,9.4nm,0.7s,baz=265,slow=12,SNR=5.6						
JTS	Las Juntas de	35.51	332	P	P	18 01 48.5	-1.0
JTS				pP	pP	18 02 15.9	+0.8
JTS				IAmb	IAmb	18 02 21.5	
	comp=Z,88nm,1.5s						
BBGH	Gun Hill	35.63	15	P	P	18 01 49.2	-1.2
MCLT	Moule a Chique	35.87	13	P	P	18 01 50.7	-1.7
FDF	Fort de France	36.83	12	P	P	18 01 59.4	-1.2
FDF				pmax	pmax		
	comp=Z,256nm,1.3s						
FDF	Fort de France	36.83	12	P	P	18 01 59.4	-1.2
SKI	Saint Kitts	39.10	9	P	P	18 02 17.2	-2.5
SKI				pmax	pmax		
	comp=Z,108nm,1.0s						
SKI	Saint Kitts	39.10	9	P	P	18 02 17.2	-2.5
SKI				IAmb	IAmb	18 02 18.2	
	comp=Z,108nm,1.0s						
CDVI	St. Croix	39.27	6	P	P	18 02 19.8	-1.2
CDVI				IAmb	IAmb	18 02 28.6	
	comp=Z,100nm,1.1s						
ICMP	Isla Caja de M	39.28	3	P	P	18 02 20.9	-0.3
ICMP				IAmb	IAmb	18 02 27.0	
	comp=Z,129nm,0.9s						
ICMP				pP	pP	18 02 48.3	+1.0
MLPR	Magueyes Islan	39.34	2	P	P	18 02 19.7	-1.9
MLPR					pP	18 02 47.6	-0.2
MLPR				IAmb	IAmb	18 02 52.3	
	comp=Z,103nm,0.9s						
CRPR	Cabo Rojo, PR	39.37	2	P	P	18 02 20.3	-1.6
CRPR				IAmb	IAmb	18 02 26.3	
	comp=Z,117nm,0.9s						
CRPR				pP	pP	18 02 46.6	-1.5
IGPR	InterUniversit	39.38	4	P	P	18 02 21.6	-0.4
OBIP	Obispado Ponce	39.43	3	P	P	18 02 20.1	-2.3
OBIP				IAmb	IAmb	18 02 27.5	
	comp=Z,158nm,1.1s						
OBIP				pP	pP	18 02 48.9	+0.3
SJG	San Juan	39.52	4	P	P	18 02 20.9	-2.3
SJG				*PP	pP	18 02 48.2	-1.2
SJG				pmax	pmax		
	comp=Z,119nm,0.8s						
SJG	San Juan	39.52	4	P	P	18 02 20.9	-2.3
SJG				IAmb	IAmb	18 02 26.2	
	comp=Z,119nm,0.8s						
SJG				pP	pP	18 02 48.2	-1.2
MTP	Monte Pirata	39.55	5	P	P	18 02 20.4	-3.0
MTP				pP	pP	18 02 46.3	-3.3
MTP				PP	PP	18 03 57.1	+0.6
HUMP	Col San Antoni	39.57	4	P	P	18 02 20.7	-2.8
HUMP				IAmb	IAmb	18 02 23.9	
	comp=Z,96nm,1.4s						
MPR	Mayaguez	39.58	2	P	P	18 02 21.6	-2.0
MPR					pP	18 02 48.4	-1.5
MPR				IAmb	IAmb	18 02 54.5	
	comp=Z,108nm,0.8s						
CBYP	Canovanas	39.70	4	P	P	18 02 22.3	-2.4
CBYP				pP	pP	18 02 48.1	-2.8
CBYP				IAmb	IAmb	18 02 55.4	
	comp=Z,79nm,0.9s						
GCPR	Guaynabo City	39.72	4	P	P	18 02 22.1	-2.7
GCPR				IAmb	IAmb	18 02 53.4	
	comp=Z,59nm,0.7s						
AOPR	Arecibo Observ	39.73	3	P	P	18 02 22.3	-2.6
AOPR				IAmb	IAmb	18 02 31.8	
	comp=Z,111nm,1.1s						
AOPR					pP	18 02 50.4	-0.7
AOPR					PP	18 03 58.4	0.0
JAKH	Jacmel	39.76	354	P	P	18 02 23.3	-1.8
JAKH				IAmb	IAmb	18 02 31.2	
	comp=Z,128nm,1.4s						
BANI	BANI	39.77	357	P	P	18 02 23.9	-1.4
BANI				PP	PP	18 03 59.7	+0.7
SDD	Santo Domingo	39.82	358	P	P	18 02 24.3	-1.3
SDD				IAmb	IAmb	18 02 35.8	
	comp=Z,107nm,0.8s						
SDD				PP	PP	18 03 59.1	-0.3
EMPR	Esperanza - Ma	39.87	3	P	P	18 02 26.0	0.0
EMPR				IAmb	IAmb	18 02 37.0	
	comp=Z,138nm,0.8s						
TGUH	Tegucigalpa,Un	39.88	331	P	P	18 02 26.7	+0.4
DR12	Loma Pena Alta	40.13	359	P	P	18 02 26.3	-1.9
SDDR	Presa de Saban	40.40	356	P	P	18 02 30.2	-0.3
SDDR				IAmb	IAmb	18 03 37.8	
	comp=Z,143nm,2.0s						
SDDR				PP	PP	18 04 05.5	-0.3
SC01	Santiago de lo	40.81	357	P	P	18 02 33.3	-0.5
SC01				IAmb	IAmb	18 03 16.0	
	comp=Z,242nm,1.4s						
SC01				PP	PP	18 04 11.4	+1.2
MTO3	Montecristo	41.15	329	P	P	18 02 33.8	-3.2
MTO3				IAmb	IAmb	18 02 39.6	
	comp=Z,87nm,1.2s						
ESQI	Esquipulas	41.28	329	P	P	18 02 39.0	+1.2
PMSA	Palmer Station	43.28	177	P	P	18 02 53.8	+0.4
PMSA					pP	18 03 18.8	-0.7
PMSA				IAmb	IAmb	18 03 23.7	
	comp=Z,70nm,0.9s						
PMSA	Palmer Station	43.28	177	eP	P	18 02 54.8	+1.4
PETF	Flores	43.57	330	P	P	18 02 57.0	+0.8
PETF				IAmb	IAmb	18 02 58.8	
	comp=Z,136nm,1.4s						
CCIG	Comitan	44.14	327	P	P	18 03 00.8	-0.3
TEIG	Tepich	45.79	334	P	P	18 03 13.1	-0.7
TEIG				IAmb	IAmb	18 03 55.2	
	comp=Z,184nm,1.6s						
CMIG	Matias Romero	46.27	324	P	P	18 03 17.7	+0.1
	comp=Z,44nm,1.1s,baz=135,slow=6.6,SNR=17						
TLIG	Tlapa	48.74	321	P	P	18 03 37.6	+0.7
TLIG				IAmb	IAmb	18 03 40.2	
	comp=Z,158nm,1.4s						
060A	Indiantown	49.66	346	P	P	18 03 44.6	+1.1
DWPF	Disney Wildern	50.94	345	P	P	18 03 53.9	+0.7
	baz=165						
DWPF	Disney Wildern	50.94	345	P	P	18 03 53.6	+0.4
MOIG	Morelia	51.94	320	P	P	18 04 02.7	+1.6
656A	Willston	52.41	345	P	P	18 04 04.8	+0.7
TIGA	Tifton	54.65	344	P	P	18 04 20.5	+0.1
	baz=163						
TIGA	Tifton	54.65	344	P	P	18 04 19.9	-0.5
TIGA				IAmb	IAmb	18 04 21.7	
	comp=Z,88nm,1.2s						
255A	Hazlehurst	54.84	346	P	P	18 04 21.9	0.0
255A				IAmb	IAmb	18 04 23.4	
	comp=Z,122nm,1.3s						
255A				pP	pP	18 04 49.0	-0.3

352A	Blakely	55.03	343	P	P	18 04 22.6	-0.6
352A					pP	18 04 49.2	-1.6
ZAIG	Zacatecas	55.13	321	P	P	18 04 25.3	+0.8
158A	Hollywood	55.14	348	P	P	18 04 25.1	+1.2
	baz=167						
157A	Early Branch	55.24	347	P	P	18 04 25.6	+0.9
	baz=166						
RGRS	Roger Stewart	55.30	348	P	P	18 04 25.6	+0.5
RGRS					pP	18 04 52.9	+0.1
BRAL	Brewton	55.36	341	P	P	18 04 26.1	+0.5
	baz=159						
BRAL	Brewton	55.36	341	P	P	18 04 23.7	-1.9
BRAL					pP	18 04 53.5	+0.2
NHSC	New Hope	55.49	348	P	P	18 04 27.8	+1.3
	baz=167,SNR=6.8						
NHSC	New Hope	55.49	348	P	P	18 04 27.5	+1.0
NHSC				pP	pP	18 04 54.8	+0.6
Z58A	St. Stephen	55.65	349	P	P	18 04 27.6	0.0
	baz=168,SNR=9.0						
Z57A	Bowman	55.78	348	P	P	18 04 29.2	+0.6
	baz=166,SNR=8.4						
Z56A	Williston	55.94	347	P	P	18 04 30.2	+0.5
	baz=166						
Z56A	Williston	55.94	347	P	P	18 04 29.8	+0.1
Y60A	Bolivia	56.03	350	P	P	18 04 30.6	+0.2
	baz=169						
152A	Waverly Hall	56.10	344	IAmb	IAmb	18 04 31.7	
	comp=Z,68nm,1.1s						
Y59A	Loris	56.12	350	P	P	18 04 31.3	+0.3
Y59A				IAmb	IAmb	18 05 29.6	
	comp=Z,52nm,0.9s						
Y58A	Scranton	56.18	349	P	P	18 04 32.3	+0.9
	baz=168						
Y57A	Sumter	56.42	348	P	P	18 04 34.0	+0.9
	baz=167						
Y57A	Sumter	56.42	348	IAmb	IAmb	18 04 34.8	
	comp=Z,53nm,0.7s						
GOGA	Godfrey	56.50	345	P	P	18 04 32.9	-0.7
GOGA				pmax	pmax		
	comp=Z,38nm,1.2s						
GOGA	Godfrey	56.50	345	P	P	18 04 33.2	-0.5
	baz=164,SNR=9.3						
GOGA	Godfrey	56.50	345	P	P	18 04 32.9	-0.7
X60A	Albert Glenn T	56.56	351	P	P	18 04 34.6	+0.6
	baz=170						
X59A	McDuffie Farm,	56.65	350	P	P	18 04 35.1	+0.5
	baz=169						
X58A	Rowland	56.75	349	P	P	18 04 35.8	+0.4
	baz=168						
X58A	Rowland	56.75	349	IAmb	IAmb	18 05 05.6	
	comp=Z,40nm,0.8s						
X57A	Johnson Farm,	56.80	349	P	P	18 04 36.4	+0.7
	baz=167						
344A	Westbrook Farm	56.84	337	P	P	18 04 36.2	+0.1
344A				IAmb	IAmb	18 04 37.7	
	comp=Z,102nm,1.1s						
344A				pP	pP	18 05 03.6	-0.4
W60A	Pink Hill	56.98	351	P	P	18 04 38.0	+0.9
	baz=170						
X56A	White Oak	57.01	348	P	P	18 04 37.8	+0.6
	baz=166,SNR=11						
HODGE	Hodges	57.01	347	P	P	18 04 37.2	-0.1
HODGE					pP	18 05 04.8	-0.4
W61A	Ground Anchor	57.01	352	P	P	18 04 38.5	+1.3
	baz=171						
BIRD	Birdtown, Kers	57.04	348	IAmb	IAmb	18 04 39.2	
	comp=Z,100nm,1.1s						
Y52A	Lilburn	57.07	345	IAmb	IAmb	18 04 38.7	
	comp=Z,47nm,1.1s						
LRAL	Lakeview Retre	57.08	342	P	P	18 04 37.3	-0.5
	baz=160,SNR=18						
LRAL	Lakeview Retre	57.08	342	IAmb	IAmb	18 04 38.6	
	comp=Z,54nm,1.1s						
441A	DeRidder	57.14	335	P	P	18 04 39.3	+1.0
SACV	Santiago Islan	57.16	54	P	P	18 04 37.3	-1.5
SACV				IAmb	IAmb	18 04 38.6	
	comp=Z,75nm,1.1s						
W58A	Raeford	57.19	350	P	P	18 04 39.2	+0.7
	baz=168,SNR=11						
342A	Flagon Creek P	57.36	336	P	P	18 04 40.5	+0.8
342A					pP	18 05 07.6	+0.2
W57A	Gilead	57.45	349	P	P	18 04 40.9	+0.5
	baz=168,SNR=10.0						
PAULI	Pauline	57.48	347	IAmb	IAmb	18 04 42.3	
	comp=Z,102nm,1.4s						
W56A	Indian Trail	57.54	348	P	P	18 04 41.4	+0.4
	baz=167,SNR=11						
HKT	Hockley	57.55	332*d*	*i*P	P	18 04 41.9	+0.9
HKT				pmax	pmax		
	comp=Z,110nm,1.5s						
HKT	Hockley	57.55	332	P	P	18 04 41.1	+0.1
HKT				IAmb	IAmb	18 04 43.4	
	comp=Z,130nm,1.4s						
HKT				pP	pP	18 05 10.1	+1.3
Z47A	Carrollton	57.56	341	IAmb	IAmb	18 04 41.9	
	comp=Z,91nm,1.1s						
KMSC	Kings Mountain	57.69	348	P	P	18 04 42.7	+0.6
	baz=166,SNR=14						
KMSC	Kings Mountain	57.69	348	IAmb	IAmb	18 04 43.8	
	comp=Z,83nm,1.2s						
V59A	Middlesex	57.76	351	P	P	18 04 42.9	+0.4
	baz=170,SNR=6.9						
833A	Chaparral WMA,	57.84	328	P	P	18 04 44.1	+0.8
	baz=146,SNR=20						
833A	Chaparral WMA,	57.84	328	P	P	18 04 43.2	0.0
833A				pP	pP	18 05 10.8	-0.2
V58A	Windy Hill, Pi	57.93	350	P	P	18 04 43.7	+0.1
	baz=169,SNR=6.4						
U61A	Possum Corner	58.08	353	P	P	18 04 45.0	+0.4
FPAL	Fort Paine	58.11	343	IAmb	IAmb	18 04 45.8	
	comp=Z,74nm,1.2s						
V57A	Coltrane Farms	58.13	349	P	P	18 04 45.2	+0.1
	baz=168,SNR=8.2						
V56A	Mocksville	58.18	349	P	P	18 04 46.2	+0.7
	baz=167,SNR=27						
W52A	Murphy	58.21	345	IAmb	IAmb	18 04 47.0	
	comp=Z,85nm,1.1s						
U59A	Littleton	58.27	351	P	P	18 04 46.4	+0.3
	baz=170						
U59A	Littleton	58.27	351	IAmb	IAmb	18 04 47.6	
	comp=Z,62nm,1.4s						
U60A	Pendleton	58.30	352	P	P	18 04 46.5	+0.2
	baz=171						
U58A	Oxford	58.43	351	P	P	18 04 47.3	+0.2
	baz=169,SNR=5.2						
V53A	Saluda	58.51	346	IAmb	IAmb	18 04 49.2	
	comp=Z,91nm,1.3s						
U57A	Blanch	58.59	350	P	P	18 04 48.8	+0.6
	baz=168,SNR=10						
NATX	Nacogdoches	58.62	334	P	P	18 04 49.7	+1.1
	baz=152,SNR=7.1						
W50A	Signal Mountai	58.66	344	P	P	18 04 48.1	-0.7
W50A				pP	pP	18 05 16.1	-0.6
U56A	King	58.68	349	P	P	18 04 50.0	+1.0
	baz=167,SNR=11						
U56A	King	58.68	349	P	P	18 04 49.7	+0.7
TKL	Tuckaleechee C	58.72	346	P	P	18 04 49.1	-0.1
	comp=Z,69nm,1.0s,baz=159,slow=8.8,SNR=34						
T59A	Double "B" Far	58.85	352	P	P	18 04 50.1	+0.1
	baz=170,SNR=8.2						
T59A	Double "B" Far	58.85	352	P	P	18 04 50.4	+0.4
T59A					pP	18 05 17.6	-0.5
T58A	Grand View Acr	58.96	351	P	P	18 04 51.3	+0.5
	baz=169,SNR=10.0						
V51A	Loudon	58.99	345	IAmb	IAmb	18 04 52.1	
	comp=Z,68nm,1.1s						
435B	Jarrell	59.04	331	P	P	18 04 52.2	+0.7
	baz=148,SNR=5.6						
435B	Jarrell	59.04	331	IAmb	IAmb	18 04 53.1	
	comp=Z,53nm,0.9s						
U54A	Nelsons Funny	59.12	348	P	P	18 04 52.6	+0.5
	baz=166,SNR=23						
T57A	Hurt	59.13	350	P	P	18 04 52.6	+0.6
	baz=169,SNR=14						
T57A	Hurt	59.13	350	P	P	18 04 52.1	+0.1
T57A				IAmb	IAmb	18 04 53.8	
	comp=Z,78nm,1.2s						
OXF	Oxford	59.19	340	P	P	18 04 51.8	-0.7
	baz=158,SNR=28						
Z41A	Richland Creek	59.22	336	P	P	18 04 53.4	+0.7
	baz=154,SNR=7.7						
T56A	Rocky Mt	59.29	349	P	P	18 04 54.2	+1.1
	baz=168,SNR=18						
CCAR	Cane Creek	59.44	338	P	P	18 04 54.5	+0.3
CCAR				pP	pP	18 05 22.7	+0.5
SHEL	Horse Pasture	59.45	96	P	P	18 04 54.2	-0.6
SHEL				pmax	pmax		
	comp=Z,66nm,0.8s						
SHEL	Horse Pasture	59.45	96	P	P	18 04 54.2	-0.6
SHEL				IAmb	IAmb	18 04 59.0	
	comp=Z,66nm,0.8s						
TZTN	Tazewell	59.51	346	P	P	18 04 54.5	-0.2
	baz=164,SNR=14						
BLA	Blacksburg	59.53	349	P	P	18 04 55.8	+0.9
	baz=167,SNR=9.8						
S58A	Poland Farm, P	59.55	351	P	P	18 04 54.8	0.0
	baz=170						
V48A	Smith Brothers	59.57	343	P	P	18 04 54.6	-0.4
JSRW	J. Sargeant Re	59.60	351	P	P	18 04 56.4	+1.2
X43A	Marvell	59.68	339	P	P	18 04 56.3	+0.5
	baz=156,SNR=15						
W45A	Hickory Valley	59.72	341	P	P	18 04 55.4	-0.7
W45A				pP	pP	18 05 22.3	-1.8
W45A				sP	sP	18 05 33.4	-3.2
W45A				PcP	PcP	18 05 42.1	+0.2
JCT	Junction City	59.82	329	P	P	18 04 57.4	+0.4
	baz=146,SNR=36						
S57A	Dark Hollow, R	59.83	351	P	P	18 04 57.5	+0.8
	baz=169,SNR=10						
S57A	Dark Hollow, R	59.83	351	P	P	18 04 56.9	+0.1
S57A				IAmb	IAmb	18 04 58.7	
	comp=Z,68nm,1.1s						
S57A				pP	pP	18 05 25.4	+0.5
S56A	Natural Bridge	59.84	350	P	P	18 04 57.9	+1.0
	baz=168,SNR=8.9						
R58B	Mineral	59.87	352	P	P	18 04 57.7	+0.6
	baz=170,SNR=7.3						
R58B	Mineral	59.87	352	IAmb	IAmb	18 04 58.9	
	comp=Z,56nm,1.2s						
VNA3	Neumayer Olymp	59.91	161	P	P	18 04 57.9	+0.9
VNA3	Neumayer Olymp	59.91	161	PKiKP	PKiKP	18 11 57.9	-2.9
VNA3	Neumayer Olymp	59.91	161	PP	PP	18 07 11.9	+1.8
VNA3	Neumayer Olymp	59.91	161	PcP	PcP	18 05 42.1	-0.1
VNA3				S	S	18 13 22.4	+22
VNA3	Neumayer Olymp	59.91	161	pP	pP	18 05 25.9	+1.3
VNA3	Neumayer Olymp	59.91	161	sP	sP	18 05 38.3	+1.3
R59A	King George, V	60.00	352	P	P	18 04 58.8	+0.9
	baz=171						
WHTX	Lake Whitney,	60.01	332	P	P	18 04 58.6	+0.5
	baz=149,SNR=28						
U49A	Red Boiling Sp	60.02	344	IAmb	IAmb	18 04 58.9	
	comp=Z,117nm,1.4s						
VNA1	Neumayer--Stat	60.11	160	P	P	18 04 59.5	+1.2
VNA1	Neumayer--Stat	60.11	160	pP	pP	18 05 27.1	+0.8
VNA1	Neumayer--Stat	60.11	160	sP	sP	18 05 42.4	+3.6
WVT	Waverly	60.21	342	P	P	18 04 58.8	-0.7
	baz=160						
WVT	Waverly	60.21	342	P	P	18 04 58.0	-1.4
WVT				pP	pP	18 05 26.0	-1.5
R58A	Rapidan	60.22	351	P	P	18 05 00.2	+0.8
	baz=170,SNR=7.8						
S54A	Dingess, Beckl	60.27	348	P	P	18 05 00.3	+0.5
	baz=166,SNR=23						
T50A	Nancy	60.27	345	IAmb	IAmb	18 05 00.6	
	comp=Z,87nm,1.1s						
R57A	Stanardsville	60.29	351	P	P	18 05 00.7	+0.8
	baz=170,SNR=7.9						
X40A	Basin Creek Fa	60.34	337	P	P	18 05 00.4	+0.1
	baz=154,SNR=5.8						
SLBS	Sierra La Lagu	60.36	316	P	P	18 05 02.6	+1.8
VNA2	Neumayer--Watz	60.48	161	P	P	18 05 01.5	+0.6
	baz=271,slow=7.5						
VNA2	Neumayer--Watz	60.48	161	PcP	PcP	18 05 49.1	+4.6
VNA2	Neumayer--Watz	60.48	161	pP	pP	18 05 30.0	+1.4
VNA2	Neumayer--Watz	60.48	161	sP	sP	18 05 43.1	+2.0
R55A	Marlinton	60.52	350	P	P	18 05 02.9	+1.3
	baz=168,SNR=17						
R56A	Bull Pasture M	60.53	350	P	P	18 05 03.0	+1.3
	baz=169,SNR=12						
S51A	Beattyville	60.57	346	IAmb	IAmb	18 05 02.8	
	comp=Z,72nm,1.2s						
R54A	Victor	60.58	349	P	P	18 05 02.6	+0.7
	baz=167,SNR=23						
MIAR	Mount Ida	60.66	336	P	P	18 05 02.7	+0.2
	baz=153,SNR=61						
MIAR	Mount Ida	60.66	336	P	P	18 05 02.1	-0.5
MIAR				pP	pP	18 05 30.9	+0.3
MIAR				PcP	sP	18 05 43.3	+0.2
W41B	Gary Mavity, V	60.74	338	P	P	18 05 02.9	-0.2
	baz=155,SNR=27						
W41B	Gary Mavity, V	60.74	338	IAmb	IAmb	18 05 04.2	
	comp=Z,87nm,1.1s						
Q58A	Fox Den Farm,	60.80	352	P	P	18 05 04.1	+0.7
	baz=170						
TXAR	Lajitas Array	60.86	325	P	P	18 05 04.7	+0.5
	comp=Z,11nm,0.6s,baz=150,slow=8.9,SNR=96						
TXAR	Lajitas Array	60.86	325	P	P	18 05 04.6	+0.4
TX31	Lajitas Ar. Si	60.86	325	IAmb	IAmb	18 05 05.4	
	comp=Z,61nm,0.8s						
WHAR	Wooly Hollow	60.86	338	P	P	18 05 03.3	-0.6
WHAR				IAmb	IAmb	18 05 04.8	
	comp=Z,79nm,1.0s						
WHAR				pP	pP	18 05 31.6	-0.4
LPIG	La Paz	60.89	316	P	P	18 05 04.9	+0.6
	comp=Z,43nm,0.3s,baz=187,slow=3.1,SNR=13						
R53A	Hurricane	60.90	348	IAmb	IAmb	18 05 05.5	
	comp=Z,81nm,1.1s						
RKT	Rikitea	60.91	255	*e*S	S	18 13 15.1	+0.8
	comp=Z,724nm,25.5s						
RKT	Rikitea	60.91	255	*e*LR	LR	18 23 21.2	
	comp=Z,889nm,36.5s						
Q57A	Strasburg	61.00	351	P	P	18 05 06.0	+1.3
	baz=170,SNR=15						
Q56A	Snyder Ridge,	61.12	351	P	P	18 05 06.8	+1.3
	baz=169,SNR=16						
Q56A	Snyder Ridge,	61.12	351	IAmb	IAmb	18 05 07.9	
	comp=Z,97nm,1.1s						
LCAR	Lake Charles	61.18	339	IAmb	IAmb	18 05 06.7	
	comp=Z,81nm,1.1s						
P58A	Pank, Wackersv	61.30	352	P	P	18 05 07.4	+0.7
	baz=171,SNR=5.5						
P59A	Jarrettsville	61.31	353	P	P	18 05 08.0	+1.1
	baz=172,SNR=10						
W39A	Magazine	61.32	337	P	P	18 05 07.7	+0.8
	baz=153,SNR=44						
Q53A	Leroy	61.33	349	P	P	18 05 07.3	+0.3
	baz=166,SNR=17						
FCAR	Ozark Folk Cen	61.35	338	IAmb	IAmb	18 05 07.8	
	comp=Z,75nm,1.1s						
R50A	Paris	61.35	346	P	P	18 05 06.3	-0.8
R50A				IAmb	IAmb	18 05 08.1	
	comp=Z,100nm,1.3s						
P57A	Homestead Farm	61.38	352	P	P	18 05 08.6	+1.3
	baz=170,SNR=11						
P57A	Homestead Farm	61.38	352	IAmb	IAmb	18 05 09.6	
	comp=Z,51nm,1.1s						
P60A	Greenville	61.43	354	P	P	18 05 08.0	+0.5
	baz=173						
P56A	Dayton Farm, R	61.52	351	P	P	18 05 09.3	+1.1
	baz=169,SNR=9.5						
ABTX	Abilene, Hawle	61.53	330	P	P	18 05 08.8	+0.3
	baz=147,SNR=43						
WUPA	West Chester U	61.54	354	P	P	18 05 07.1	-1.2
R49A	Shelbyville	61.56	345	IAmb	IAmb	18 05 09.1	
	comp=Z,58nm,1.1s						
Q52A	Bidwell	61.57	348	IAmb	IAmb	18 05 09.7	
	comp=Z,78nm,1.2s						
PBMO	Poplar Bluff	61.60	340	P	P	18 05 08.1	-0.7
WCI	Wyandotte Cave	61.77	344	P	P	18 05 09.4	-0.5
	baz=161						
WCI	Wyandotte Cave	61.77	344	P	P	18 05 08.8	-1.1
WCI				pP	pP	18 05 36.7	-1.4
MCWV	Mont Chateau	61.82	350	P	P	18 05 11.3	+1.0
	baz=168,SNR=17						
MCWV	Mont Chateau	61.82	350	IAmb	IAmb	18 05 12.2	
	comp=Z,55nm,1.0s						
Q51A	Peebles	61.85	347	IAmb	IAmb	18 05 11.4	
	comp=Z,56nm,1.0s						
O58A	Lewisberry	61.88	353	P	P	18 05 11.8	+1.2
	baz=171,SNR=6.0						
PAGS	Pennsylvania G	61.95	353	IAmb	IAmb	18 05 48.9	
	comp=Z,80nm,1.7s						
O59A	Robesonia	61.98	353	P	P	18 05 11.5	+0.2
	baz=172						
MBO	M'Bour	62.01	59	P	P	18 05 10.9	-1.1
MBO				IAmb	IAmb	18 05 12.5	
	comp=Z,59nm,0.9s						
U40A	Yellville	62.02	338	P	P	18 05 11.6	-0.1
	baz=154,SNR=43						
U40A	Yellville	62.02	338	IAmb	IAmb	18 05 12.6	
	comp=Z,116nm,1.1s						
O57A	Amberson	62.05	352	P	P	18 05 12.9	+1.1
	baz=171,SNR=8.1						
SNAA	Sanae	62.11	161	P	P	18 05 12.5	+0.6
SNAA	Sanae	62.11	161	pP	pP	18 05 40.4	+0.5
SNAA	Sanae	62.11	161	sP	sP	18 05 54.1	+1.8
SNAA	Sanae	62.11	161	P	P	18 05 12.0	+0.1
SNAA				*PP	pP	18 05 39.5	-0.3
SNAA						18 05 51.8	
SNAA				pmax	pmax		
	comp=Z,84nm,0.9s						
SNAA	Sanae	62.11	161	P	P	18 05 11.9	+0.1
SNAA				IAmb	IAmb	18 05 13.7	
	comp=Z,84nm,0.9s						
SNAA				pP	pP	18 05 39.5	-0.3
SNAA				PcP	sP	18 05 51.8	-0.5
P52A	Corning	62.20	348	P	P	18 05 12.7	-0.1
	baz=166,SNR=14						
P52A	Corning	62.20	348	IAmb	IAmb	18 05 13.8	
	comp=Z,140nm,1.3s						
O56A	Blue Knob Stat	62.23	351	P	P	18 05 14.1	+1.0
	baz=170,SNR=11						
O56A	Blue Knob Stat	62.23	351	IAmb	IAmb	18 05 15.1	
	comp=Z,59nm,1.1s						
P51A	Williamsport	62.23	347	IAmb	IAmb	18 05 13.8	
	comp=Z,106nm,1.4s						
N61A	South Mountain	62.24	355	P	P	18 05 14.3	+1.3
	baz=174						
HHAR	Hobbs	62.34	337	IAmb	IAmb	18 05 15.0	
	comp=Z,106nm,1.0s						
O54A	Avella	62.42	350	IAmb	IAmb	18 05 18.6	
	comp=Z,39nm,0.7s						
SSPA	Standing Stone	62.50	352	P	P	18 05 15.3	+0.6
	baz=170						
SSPA	Standing Stone	62.50	352	P	P	18 05 14.8	0.0
N59A	State Game Lan	62.54	354	P	P	18 05 15.9	+0.9
	baz=173						
N58A	Sunbury	62.56	353	P	P	18 05 15.9	+0.7
	baz=172,SNR=7.3						
N57A	Milroy	62.58	352	P	P	18 05 16.0	+0.7
	baz=171,SNR=8.2						
ODNJ	Ogdensburg	62.59	355	IAmb	IAmb	18 05 52.1	
	comp=Z,133nm,1.9s						
O52A	Adamsville	62.61	349	IAmb	IAmb	18 05 16.6	
	comp=Z,129nm,1.4s						
O53A	New Philadelph	62.63	349	P	P	18 05 15.7	+0.1
	baz=167,SNR=9.8						
O53A	New Philadelph	62.63	349	IAmb	IAmb	18 05 16.9	
	comp=Z,81nm,1.1s						
P49A	Miami Univ. Ec	62.64	346	P	P	18 05 14.9	-0.8
	baz=163,SNR=18						
P49A	Miami Univ. Ec	62.64	346	IAmb	IAmb	18 05 16.1	
	comp=Z,125nm,1.2s						
TUL1	Leonard	62.71	335	P	P	18 05 16.5	+0.2
	baz=152,SNR=18						
TUL1	Leonard	62.71	335	IAmb	IAmb	18 05 17.6	
	comp=Z,107nm,1.1s						
OLIL	Olney	62.72	343	IAmb	IAmb	18 05 16.4	
	comp=Z,74nm,1.1s						
P48A	Milroy	62.73	345	P	P	18 05 14.8	-1.5
P48A				IAmb	IAmb	18 05 16.4	
	comp=Z,78nm,1.2s						
P48A					pP	18 05 42.8	-1.7
N56A	West Decatur	62.83	352	P	P	18 05 17.5	+0.6
	baz=170,SNR=7.6						
WMOK	Wichita Mounta	62.92	332	P	P	18 05 17.3	-0.4
	baz=148,SNR=12						
ACSO	Alum Creek Sta	62.94	348	P	P	18 05 17.5	-0.2
	baz=165,SNR=19						
ACSO	Alum Creek Sta	62.94	348	IAmb	IAmb	18 05 18.6	
	comp=Z,130nm,1.1s						
CCM	Cathedral Cave	63.02	340	P	P	18 05 17.5	-0.8
CCM				*PP	pP	18 05 46.3	-0.2
CCM				pmax	pmax		
	comp=Z,133nm,1.0s						
CCM	Cathedral Cave	63.02	340	P	P	18 05 18.1	-0.2
	baz=156						
CCM	Cathedral Cave	63.02	340	P	P	18 05 17.5	-0.8
CCM				pP	pP	18 05 46.3	-0.2
OK025	Westminster Rd	63.04	334	IAmb	IAmb	18 05 19.2	
	comp=Z,109nm,1.0s						
M58A	Price’s Panora	63.06	353	P	P	18 05 19.5	+1.0
	baz=172,SNR=8.7						
M57A	Sunshine Farm,	63.10	353	P	P	18 05 19.4	+0.7
	baz=171,SNR=6.2						
M57A	Sunshine Farm,	63.10	353	IAmb	IAmb	18 05 49.7	
	comp=Z,104nm,1.6s						
N53A	Lisbon	63.10	350	P	P	18 05 18.1	-0.7
N53A				IAmb	IAmb	18 05 20.4	
	comp=Z,86nm,1.2s						
N54A	Moraine State	63.12	350	P	P	18 05 19.7	+0.8
	baz=168,SNR=16						
N54A	Moraine State	63.12	350	IAmb	IAmb	18 05 20.8	
	comp=Z,102nm,1.1s						
M59A	Waymart	63.12	354	P	P	18 05 19.8	+0.9
	baz=173,SNR=5.9						
Q44A	Meyer Farm, Va	63.14	342	IAmb	IAmb	18 05 19.2	
	comp=Z,127nm,1.0s						
KSPA	Keystone Colle	63.17	354	IAmb	IAmb	18 05 21.0	
	comp=Z,83nm,1.5s						
O49A	Covington	63.18	347	IAmb	IAmb	18 05 19.9	
	comp=Z,114nm,1.1s						
BRYW	Bryant College	63.24	358	P	P	18 05 20.3	+0.6
BRYW					pP	18 05 48.4	+0.4
BRYW				IAmb	IAmb	18 05 49.4	
	comp=Z,69nm,0.9s						
SLM	Saint Louis	63.25	341	IAmb	IAmb	18 05 20.4	
	comp=Z,96nm,1.2s						
P46A	Rosedale	63.32	344	IAmb	IAmb	18 05 20.3	
	comp=Z,114nm,1.2s						
M56A	Emporium	63.37	352	P	P	18 05 21.9	+1.3
	baz=170,SNR=9.3						
M56A	Emporium	63.37	352	IAmb	IAmb	18 05 23.1	
	comp=Z,98nm,1.2s						
M55A	Ridgway	63.44	351	IAmb	IAmb	18 05 22.7	
	comp=Z,80nm,1.1s						
L60A	Shokan	63.46	355	P	P	18 05 22.1	+1.0
	baz=174						
N51A	Ashland	63.49	348	IAmb	IAmb	18 05 22.1	
	comp=Z,79nm,1.2s						
M54A	Oil Creek Stat	63.60	351	P	P	18 05 22.6	+0.5
	baz=169,SNR=16						
M54A	Oil Creek Stat	63.60	351	IAmb	IAmb	18 05 23.6	
	comp=Z,117nm,1.0s						
MNTX	Cornudas Mount	63.63	325	P	P	18 05 22.5	0.0
	baz=142,SNR=63						
MNTX	Cornudas Mount	63.63	325	P	P	18 05 21.8	-0.7
MNTX				IAmb	IAmb	18 05 23.7	
	comp=Z,77nm,1.1s						
L58A	Harry Jones Me	63.66	354	P	P	18 05 23.6	+1.2
	baz=173,SNR=9.3						
M53A	WI Miller and	63.69	350	P	P	18 05 22.8	+0.1
	baz=168,SNR=7.8						
M53A	WI Miller and	63.69	350	IAmb	IAmb	18 05 52.9	
	comp=Z,69nm,0.9s						
L57A	Andrews Acres	63.72	353	P	P	18 05 23.5	+0.7
	baz=172						
L59A	Walton	63.73	355	P	P	18 05 23.4	+0.5
	baz=173,SNR=7.3						
L59A	Walton	63.73	355	IAmb	IAmb	18 05 53.1	
	comp=Z,72nm,1.1s						
ALLY	Alegheny Colle	63.81	350	IAmb	IAmb	18 05 24.8	
	comp=Z,125nm,1.0s						
BINY	Binghamton	63.83	354	P	P	18 05 24.6	+1.0
	baz=172,SNR=11						
BINY	Binghamton	63.83	354	IAmb	IAmb	18 05 25.5	
	comp=Z,78nm,1.1s						
N49A	Columbus Grove	63.85	347	IAmb	IAmb	18 05 53.4	
	comp=Z,102nm,0.9s						
T35A	Sooner Cattle	63.87	335	P	P	18 05 23.6	-0.3
T35A				IAmb	IAmb	18 05 25.4	
	comp=Z,107nm,1.1s						
T35A				pP	pP	18 05 52.6	+0.3
M52A	Chesterland	63.91	349	IAmb	IAmb	18 05 25.2	
	comp=Z,76nm,1.1s						
L56A	Greenwood	63.94	353	P	P	18 05 24.8	+0.5
	baz=171,SNR=6.5						
L56A	Greenwood	63.94	353	IAmb	IAmb	18 05 25.9	
	comp=Z,66nm,1.1s						
SFIN	Lafayette	64.01	344	P	P	18 05 23.4	-1.2
	baz=161,SNR=12						
SFIN	Lafayette	64.01	344	IAmb	IAmb	18 05 24.6	
	comp=Z,127nm,1.3s						
MSTX	Muleshoe	64.11	329	P	P	18 05 26.0	+0.3
	baz=145,SNR=51						
MSTX	Muleshoe	64.11	329	P	P	18 05 25.7	-0.1
MSTX					pP	18 05 53.9	0.0
N47A	Urbana	64.14	346	IAmb	IAmb	18 05 25.9	
	comp=Z,126nm,1.2s						

TRY	Troy	64.16	356	IAmb	IAmb	18 05 55.9	
	comp=Z,58nm,0.9s						
ERPA	Erie	64.25	351	P	P	18 05 26.6	+0.3
	baz=168,SNR=6.4						
K59A	Cooperstown	64.30	355	P	P	18 05 27.5	+0.9
	baz=174,SNR=7.5						
WVNY	West Valley, N	64.33	352	IAmb	IAmb	18 05 28.6	
	comp=Z,99nm,1.1s						
AMTX	Amarillo	64.35	330	P	P	18 05 27.1	-0.1
	baz=146						
AMTX	Amarillo	64.35	330	IAmb	IAmb	18 05 27.7	
	comp=Z,74nm,1.3s						
K58A	Earlville	64.35	354	P	P	18 05 27.7	+0.7
	baz=173,SNR=6.4						
K58A	Earlville	64.35	354	IAmb	IAmb	18 05 57.0	
	comp=Z,55nm,0.8s						
SRIG	Santa Rosalia	64.38	317	IAmb	IAmb	18 05 30.6	
	comp=Z,98nm,1.3s						
K57A	Scipio Center	64.41	354	P	P	18 05 27.4	+0.1
	baz=172						
U32A	Winter Ranch,	64.41	333	IAmb	IAmb	18 05 28.9	
	comp=Z,110nm,1.1s						
K56A	Middlesex	64.46	353	P	P	18 05 27.9	+0.2
	baz=171						
P40A	Paris	64.63	340	IAmb	IAmb	18 05 29.6	
	comp=Z,130nm,1.1s						
HDIL	Hopedale	64.75	343	P	P	18 05 28.9	-0.7
	baz=159,SNR=7.2						
HDIL	Hopedale	64.75	343	IAmb	IAmb	18 05 58.7	
	comp=Z,86nm,1.0s						
HSIG		64.79	319	P	P	18 05 30.7	+0.7
HSIG				IAmb	IAmb	18 05 33.0	
	comp=Z,117nm,1.3s						
HSIG					pP	18 05 59.7	+1.6
L48A	N Adams	64.88	347	IAmb	IAmb	18 05 59.3	
	comp=Z,45nm,0.8s						
J59A	Piesco	64.95	355	P	P	18 05 31.9	+1.0
	baz=174,SNR=7.7						
J59A	Piesco	64.95	355	IAmb	IAmb	18 05 46.3	
	comp=Z,52nm,0.7s						
P38A	Dawn	65.19	339	IAmb	IAmb	18 05 32.9	
	comp=Z,57nm,0.8s						
M44A	Midewin, Midew	65.20	344	IAmb	IAmb	18 05 33.3	
	comp=Z,100nm,1.6s						
I58A	Old Forge	65.21	355	P	P	18 05 33.2	+0.6
	baz=174						
I59A	Olmsteadville	65.24	356	P	P	18 05 33.3	+0.7
	baz=175						
I60A	Shoreham	65.25	356	P	P	18 05 33.6	+1.0
	baz=175						
I61A	Oroboro, Fairl	65.28	357	P	P	18 05 34.0	+1.1
	baz=176						
K50A	Casco	65.33	349	IAmb	IAmb	18 05 33.6	
	comp=Z,108nm,1.1s						
N41A	Harden Midland	65.34	342	IAmb	IAmb	18 05 33.7	
	comp=Z,154nm,1.3s						
I57A	Carthage	65.52	354	P	P	18 05 34.7	+0.3
	baz=173						
319A	Douglas	65.53	322	P	P	18 05 36.0	+1.1
319A				IAmb	IAmb	18 05 37.8	
	comp=Z,133nm,1.1s						
121A	Cookes Peak, D	65.56	324	P	P	18 05 37.0	+1.8
	baz=140,SNR=51						
121A	Cookes Peak, D	65.56	324	IAmb	IAmb	18 05 38.4	
	comp=Z,162nm,1.4s						
KSU1	Kansas State U	65.82	336	P	P	18 05 36.4	-0.1
	baz=152,SNR=11						
KSU1	Kansas State U	65.82	336	IAmb	IAmb	18 05 37.4	
	comp=Z,83nm,1.1s						
H58A	Gabriels	65.88	356	P	P	18 05 37.2	+0.5
	baz=174,SNR=5.1						
EMMW	East Machias	65.98	1	P	P	18 05 38.2	+0.8
EMMW				IAmb	IAmb	18 05 49.1	
	comp=Z,179nm,1.8s						
R32A	Long Quarter,	66.04	334	P	P	18 05 38.1	+0.1
R32A					pP	18 06 06.4	-0.1
I51A	Listowel	66.06	350	P	P	18 05 37.2	-0.7
	baz=167						
H59A	Cadyville	66.07	356	P	P	18 05 38.3	+0.3
	baz=175						
LONY	Lake Ozonia	66.11	355	P	P	18 05 38.9	+0.7
	baz=174						
N38A	Joes South For	66.15	340	IAmb	IAmb	18 05 39.4	
	comp=Z,64nm,0.8s						
J47A	Sunmer	66.20	347	IAmb	IAmb	18 05 39.4	
	comp=Z,78nm,1.1s						
G60A	Masonville	66.44	357	P	P	18 05 40.8	+0.4
	baz=176						
H53A	Bobcaygeon	66.46	352	P	P	18 05 40.3	-0.2
	baz=170						
G62A	West of Eustis	66.50	359	P	P	18 05 42.6	+1.9
	baz=178,SNR=6.0						
G62A	West of Eustis	66.50	359	IAmb	IAmb	18 05 43.1	
	comp=Z,116nm,1.4s						
K43A	Burlington	66.51	344	IAmb	IAmb	18 05 41.3	
	comp=Z,124nm,1.1s						
G58A	Ormstown	66.60	356	P	P	18 05 42.2	+0.9
	baz=175						
G61A	St-Isidore-de-	66.60	358	P	P	18 05 42.3	+1.0
	baz=177						
G57A	Newington	66.62	355	P	P	18 05 42.3	+0.8
	baz=174						
NVL	N'lazarevskaya	66.65	159	⇓iP	P	18 05 41.4	0.0
NVL				e*PP	PcP	18 06 12.2	+2.4
NVL				eS	S	18 14 24.7	+0.7
NVL				pmax	pmax		
	comp=Z,109nm,1.0s						
L40A	Anamosa	66.69	342	IAmb	IAmb	18 05 42.7	
	comp=Z,96nm,1.0s						
ANMO	Albuquerque	66.72	327	P	P	18 05 43.1	+0.5
	comp=Z,32nm,0.9s,baz=141,slow=8.0,SNR=88						
ANMO	Albuquerque	66.72	327	ceP	P	18 05 43.8	+1.2
ANMO				pmax	pmax		
	comp=Z,40nm,0.9s						
ANMO	Albuquerque	66.72	327	P	P	18 05 44.0	+1.3
	baz=142						
ANMO	Albuquerque	66.72	327	P	P	18 05 43.7	+1.1
SADO	Sadowa	66.73	352	P	P	18 05 42.2	+0.1
	comp=Z,20nm,0.8s,baz=217,slow=5.4,SNR=6.3						
CBKS	Cedar Bluff	66.79	334	P	P	18 05 43.6	+0.8
	baz=149,SNR=21						
N35A	Tabor	67.02	338	IAmb	IAmb	18 05 45.0	
	comp=Z,130nm,1.1s						
TUC	Tucson	67.08	322	P	P	18 05 45.8	+1.0
TUC				pmax	pmax		
	comp=Z,148nm,1.5s						
TUC	Tucson	67.08	322	P	P	18 05 46.3	+1.5
	baz=138						
TUC	Tucson	67.08	322	P	P	18 05 45.8	+1.0
TUC				IAmb	IAmb	18 05 47.9	
	comp=Z,148nm,1.5s						
F64A	Sherman	67.12	0	P	P	18 05 45.2	+0.6
	baz=180						
SCIA	State Center	67.15	340	P	P	18 05 44.9	-0.1
	baz=155						
SCIA	State Center	67.15	340	IAmb	IAmb	18 05 45.9	
	comp=Z,117nm,1.1s						
LMN	Caledonia Moun	67.20	3	P	P	18 05 43.9	-1.2
JFWS	Jewell Farm	67.21	343	P	P	18 05 45.1	-0.1
	baz=158,SNR=14						
JFWS	Jewell Farm	67.21	343	IAmb	IAmb	18 05 46.1	
	comp=Z,77nm,0.9s						
G54A	Lake Saint Pet	67.22	353	P	P	18 05 44.8	-0.4
	baz=170						
F60A	Warwick	67.30	357	P	P	18 05 46.1	+0.4
	baz=177						
T25A	Trinidad	67.46	330	P	P	18 05 48.5	+1.3
	baz=144,SNR=24						
T25A	Trinidad	67.46	330	IAmb	IAmb	18 05 49.8	
	comp=Z,102nm,1.4s						
E60A	Ste Agathe de	67.68	358	P	P	18 05 48.7	+0.6
	baz=177						
K38A	Parkersburg	67.69	341	IAmb	IAmb	18 05 49.1	
	comp=Z,128nm,1.4s						
E61A	Lac Etchemin	67.71	359	P	P	18 05 49.8	+1.4
	baz=178						
ALGO	Algonquin Park	67.76	353	P	P	18 05 48.7	+0.1
	baz=171,SNR=5.3						
E58A	La Victoria	67.77	357	P	P	18 05 48.9	+0.3
	baz=175,SNR=6.5						
I42A	Draeger Farm,	67.77	344	IAmb	IAmb	18 05 49.7	
	comp=Z,169nm,1.5s						
214A	Organ Pipe Nat	68.01	320	P	P	18 05 52.5	+1.9
	baz=136,SNR=52						
214A	Organ Pipe Nat	68.01	320	IAmb	IAmb	18 05 54.0	
	comp=Z,151nm,1.3s						
E55A	Montcerf-Lytto	68.05	354	P	P	18 05 51.1	+0.6
	baz=173						

E56A	St. Veronique	68.05	355	P	P	18 05 50.8	+0.3
	baz=174						
LIC	Lamto	68.14	74	eP	P	18 05 51.0	-0.7
	comp=Z,89nm,0.9s						
KSCO	Kaye Shedlock’	68.18	332	P	P	18 05 52.9	+1.3
	baz=146,SNR=12						
KSCO	Kaye Shedlock’	68.18	332	IAmb	IAmb	18 05 53.9	
	comp=Z,171nm,1.3s						
D60A	Saint Jean D’O	68.21	358	P	P	18 05 52.3	+1.0
	baz=178						
X18A	Snowflake	68.25	324	IAmb	IAmb	18 05 55.5	
	comp=Z,135nm,1.6s						
L34A	Svendsen Farm,	68.25	338	IAmb	IAmb	18 05 52.8	
	comp=Z,122nm,0.9s						
D63A	Stockholm	68.30	0	P	P	18 05 52.3	+0.3
	baz=181						
TIC	Toumodi	68.33	73	eP	P	18 05 52.2	-0.8
D62A	Allapoint, All	68.34	360	P	P	18 05 53.0	+0.8
	baz=180						
D62A	Allapoint, All	68.34	360	IAmb	IAmb	18 06 07.0	
	comp=Z,58nm,0.7s						
BGNE	Belgrade	68.40	336	P	P	18 05 53.4	+0.6
	baz=151,SNR=19						
KIC	Kosan Boka	68.45	74	eP	P	18 05 53.1	-0.6
	comp=Z,176nm,0.9s						
SDCO	Great Sand Dun	68.46	329	P	P	18 05 55.0	+1.4
	baz=143,SNR=103						
SDCO	Great Sand Dun	68.46	329	IAmb	IAmb	18 05 56.3	
	comp=Z,144nm,1.3s						
D58A	Chemin du LacG	68.47	357	P	P	18 05 53.6	+0.5
	baz=176,SNR=14						
D61A	St Aubert, Com	68.48	359	P	P	18 05 54.0	+0.9
	baz=178						
DBIC	Dimbokro	68.49	73	P	P	18 05 53.5	-0.5
	comp=Z,98nm,0.9s,baz=220,slow=6.4,SNR=79						
DBIC				LR	LR	18 36 52.7	
	comp=Z,193nm,18.2s,baz=221,slow=37						
DBIC	Dimbokro	68.49	73	P	P	18 05 53.2	-0.7
DBIC				*PP	pP	18 06 21.6	-1.0
DBIC				pmax	pmax		
	comp=Z,86nm,0.9s						
DBIC	Dimbokro	68.49	73	P	P	18 05 53.2	-0.7
DBIC				IAmb	IAmb	18 05 56.0	
	comp=Z,86nm,0.8s						
DBIC				pP	pP	18 06 21.6	-1.0
D56A	ZEC Mazanza, M	68.53	355	P	P	18 05 53.9	+0.4
	baz=174,SNR=9.0						
D55A	Sainte-Anne-du	68.56	355	P	P	18 05 54.1	+0.4
	baz=173						
W18A	Petrified Fore	68.58	325	P	P	18 05 56.0	+1.7
	baz=139,SNR=31						
W18A	Petrified Fore	68.58	325	IAmb	IAmb	18 05 57.3	
	comp=Z,171nm,1.3s						
SFX	San Felipe	68.60	318	IAmb	IAmb	18 05 57.3	
	comp=Z,93nm,1.2s						
QSPA	South Pole Qui	68.61	180	P	P	18 05 55.1	+1.1
QSPA				IAmb	IAmb	18 05 56.6	
	comp=Z,120nm,1.1s						
QSPA				pP	pP	18 06 23.3	+1.0
X16A	Lo Mia Camp, P	69.00	323	IAmb	IAmb	18 06 00.2	
	comp=Z,85nm,1.2s						
S22A	4UR Ranch, Cre	69.11	328	P	P	18 05 58.9	+1.3
	baz=142,SNR=23						
I37A	Lemond, Waseca	69.12	341	IAmb	IAmb	18 05 58.1	
	comp=Z,70nm,1.0s						
Q24A	Divide	69.28	330	P	P	18 06 00.0	+1.4
	baz=144,SNR=38						
Q24A	Divide	69.28	330	IAmb	IAmb	18 06 01.1	
	comp=Z,116nm,1.1s						
MVCO	Mesa Verde	69.52	327	P	P	18 06 01.6	+1.5
	baz=141,SNR=70						
MVCO	Mesa Verde	69.52	327	IAmb	IAmb	18 06 02.9	
	comp=Z,202nm,1.4s						
OGNE	Ogallala	69.53	334	P	P	18 06 01.0	+1.0
	baz=147,SNR=7.6						
K31A	O'Neill	69.68	337	IAmb	IAmb	18 06 31.5	
	comp=Z,169nm,1.1s						
TAOE	Nuku Hiva Isla	69.69	268	P	P	18 05 58.8	-2.7
WUAZ	Wupatki	69.77	324	P	P	18 06 03.7	+2.2
	baz=138,SNR=87						
WUAZ	Wupatki	69.77	324	IAmb	IAmb	18 06 05.0	
	comp=Z,164nm,1.1s						
CPBX	Cerro Prieto	69.83	319	IAmb	IAmb	18 06 04.7	
	comp=Z,193nm,1.2s						
ECSD	EROS Data Cent	69.90	339	P	P	18 06 01.9	-0.1
	baz=152,SNR=22						
ESJX	Sierra Juarez	69.95	318	IAmb	IAmb	18 06 05.4	
	comp=Z,103nm,1.6s						
GLA	Glamis	69.98	320	P	P	18 06 04.8	+2.0
	baz=135,SNR=10						
GLA	Glamis	69.98	320	IAmb	IAmb	18 06 06.1	
	comp=Z,156nm,1.6s						
SPMN	Marine on St.	70.05	342	P	P	18 06 02.6	-0.3
	baz=156,SNR=9.1						
ISCO	Idaho Springs	70.16	330	P	P	18 06 05.3	+1.3
	baz=144,SNR=42						
ISCO	Idaho Springs	70.16	330	IAmb	IAmb	18 06 06.6	
	comp=Z,140nm,1.6s						
PV01	Paradox Valley	70.27	327	IAmb	IAmb	18 06 07.7	
	comp=Z,111nm,1.3s						
PV15	Paradox Valley	70.38	328	IAmb	IAmb	18 06 08.5	
	comp=Z,150nm,1.2s						
PV02	Paradox Valley	70.41	327	IAmb	IAmb	18 06 08.5	
	comp=Z,120nm,1.4s						
PV13	Radium Mtn., P	70.41	327	IAmb	IAmb	18 06 08.3	
	comp=Z,135nm,1.4s						
RMX	La Rumorosa	70.44	319	IAmb	IAmb	18 06 08.8	
	comp=Z,131nm,1.4s						
PDMCI	Parker Dam,Lak	70.46	321	P	P	18 06 07.2	+1.6
	baz=135,SNR=10						
IKP	In-Ko-Pah, Jac	70.49	319	P	P	18 06 08.1	+2.2
	baz=134,SNR=37						
PV05	Paradox Valley	70.49	327	IAmb	IAmb	18 06 08.6	
	comp=Z,100nm,1.3s						
SWSC	Sam W. Stewart	70.50	319	P	P	18 06 07.9	+2.0
	baz=134,SNR=10						
PV11	David Mesa, Pa	70.55	327	IAmb	IAmb	18 06 09.2	
	comp=Z,114nm,1.4s						
PV17	East Wray Mesa	70.58	327	IAmb	IAmb	18 06 09.2	
	comp=Z,122nm,1.6s						
PV16	Nyswonger Mesa	70.58	327	IAmb	IAmb	18 06 09.3	
	comp=Z,104nm,1.5s						
MACI	Morro de la Ar	70.60	48	P	P	18 06 05.4	-1.4
PV04	Paradox Valley	70.64	327	IAmb	IAmb	18 06 09.8	
	comp=Z,184nm,2.0s						
D41A	Chassel	70.66	346	IAmb	IAmb	18 06 07.9	
	comp=Z,218nm,1.4s						
PV14	Lion Creek, Pa	70.68	327	IAmb	IAmb	18 06 09.8	
	comp=Z,103nm,1.4s						
PV22	Blue Mesa, Par	70.69	328	IAmb	IAmb	18 06 10.0	
	comp=Z,134nm,1.4s						
LSQQ	Lebel-sur-Quev	70.72	354	P	P	18 06 07.0	+0.2
	baz=172						
TKX	Tecate	70.74	318	IAmb	IAmb	18 06 09.7	
	comp=Z,148nm,1.4s						
BC3	Big Chuckawall	70.78	320	P	P	18 06 09.5	+1.8
	baz=134,SNR=62						
MONP2	Monument Peak	70.84	319	P	P	18 06 10.1	+1.8
	baz=133,SNR=31						
BAR	Barrett	70.85	318	IAmb	IAmb	18 06 11.2	
	comp=Z,127nm,1.4s						
ROSA	Rosais	70.92	32	P	P	18 06 08.6	+0.3
ROSA				IAmb	IAmb	18 07 22.1	
	comp=Z,77nm,0.9s						
U15A	North Rim	70.94	324	IAmb	IAmb	18 06 12.5	
	comp=Z,155nm,1.2s						
IRM	Iron Mountain	70.95	320	P	P	18 06 10.6	+2.0
	baz=135,SNR=48						
N23A	Red Feather La	71.19	331	P	P	18 06 11.3	+1.1
	baz=144,SNR=20						
109C	Camp Elliot, M	71.26	318	P	P	18 06 12.5	+2.0
	baz=133						
BELC	Belle Mtn. Jos	71.35	320	P	P	18 06 13.2	+2.0
	baz=134,SNR=38						
TPFO	Pinon Flats	71.35	319	P	P	18 06 13.1	+1.9
	baz=134,SNR=36						
PFO	Pinyon Flats O	71.36	319	P	P	18 06 12.7	+1.5
	comp=Z,29nm,1.1s,baz=135,slow=6.0,SNR=45						
PFO	Pinyon Flats O	71.36	319	d iP	P	18 06 13.3	+2.1
PFO				pmax	pmax		
	comp=Z,72nm,1.3s						
PFO	Pinyon Flats O	71.36	319	P	P	18 06 13.0	+1.8
	baz=134,SNR=40						
PFO	Pinyon Flats O	71.36	319	P	P	18 06 12.3	+1.1
PFO				IAmb	IAmb	18 06 14.6	
	comp=Z,108nm,1.4s						
MATQ	Matagami	71.47	354	P	P	18 06 11.0	-0.3
	baz=171,SNR=12						

O20A	White River Ci	71.66	329	P	P	18 06 14.6	+1.6
	baz=142,SNR=39						
O20A	White River Ci	71.66	329	IAmb	IAmb	18 06 15.7	
	comp=Z,110nm,1.1s						
GMRC	Granite Mounta	71.69	321	P	P	18 06 15.2	+2.0
	baz=134,SNR=70						
MURC	Murrieta	71.80	319	P	P	18 06 15.7	+1.9
	baz=133,SNR=14						
HEC	Hector,Ludlow	72.12	320	P	P	18 06 18.0	+2.3
	baz=134,SNR=51						
EYMN	Ely	72.20	344	P	P	18 06 15.4	-0.4
	baz=158,SNR=7.3						
SCI2	San Clemente I	72.22	318	P	P	18 06 18.1	+1.8
	baz=132						
P17A	Butcher Ranch,	72.38	327	P	P	18 06 18.4	+1.1
P17A				PcP	PcP	18 06 35.4	+0.8
P17A				pP	pP	18 06 44.5	-1.5
RWWY	Rawlins	72.40	331	P	P	18 06 18.2	+0.8
RWWY				PcP	PcP	18 06 35.4	+0.7
RWWY				pP	pP	18 06 46.9	+0.8
BFSC	Mount Baldy Ra	72.51	319	P	P	18 06 19.8	+1.7
	baz=133,SNR=24						
RRX	Edison Barstow	72.55	320	P	P	18 06 20.7	+2.5
	baz=133						
GSC	Goldstone, Bar	72.72	320	P	P	18 06 21.4	+2.1
	baz=134,SNR=44						
GSC	Goldstone, Bar	72.72	320	IAmb	IAmb	18 06 22.8	
	comp=Z,147nm,1.5s						
MWC	Mount Wilson	72.75	319	IAmb	IAmb	18 06 22.8	
	comp=Z,186nm,1.6s						
KOWA	Kowa	72.79	66	P	P	18 06 19.2	-0.8
KOWA				pP	pP	18 06 47.5	-1.3
PASC	Pasadena Art C	72.79	319	IAmb	IAmb	18 06 22.9	
	comp=Z,144nm,1.4s						
SHOC	Shoshone, Teco	72.82	321	P	P	18 06 21.8	+2.0
	baz=134,SNR=5.6						
K22A	Casper	72.86	332	P	P	18 06 21.2	+1.2
	baz=143,SNR=16						
K22A	Casper	72.86	332	IAmb	IAmb	18 06 22.5	
	comp=Z,217nm,2.0s						
DECC	Green Verdugo	72.94	319	P	P	18 06 22.8	+2.3
	baz=132,SNR=5.6						
RSSD	Black Hills	73.00	334	P	P	18 06 21.8	+0.9
	baz=146						
RSSD	Black Hills	73.00	334	P	P	18 06 21.8	+0.9
RSSD				pP	pP	18 06 50.6	+0.8
EDW2	Edwards Air Fo	73.15	319	P	P	18 06 23.1	+1.3
	baz=133,SNR=26						
PRN	Pahroc Range	73.18	323	IAmb	IAmb	18 06 25.7	
	comp=Z,95nm,1.2s						
LRMC	Laurel Mtn Rad	73.37	320	P	P	18 06 24.9	+1.8
	baz=133,SNR=31						
OSI	Osito Audit: C	73.42	319	P	P	18 06 24.5	+1.2
	baz=132,SNR=5.2						
TPNV	Topopah Spring	73.53	322	P	P	18 06 26.4	+2.3
	baz=134,SNR=63						
TPNV	Topopah Spring	73.53	322	IAmb	IAmb	18 06 27.8	
	comp=Z,105nm,1.2s						
FURC	Furnace Creek,	73.56	321	P	P	18 06 26.3	+2.3
	baz=134,SNR=28						
SCZ2	Santa Cruz Isl	73.58	318	P	P	18 06 26.3	+2.0
	baz=131,SNR=6.4						
MPMC	Manual Prospec	73.64	320	P	P	18 06 26.4	+1.6
	baz=133,SNR=34						
AGMN	Agassiz Nation	73.73	341	P	P	18 06 24.7	-0.1
	baz=154,SNR=8.8						
AGMN	Agassiz Nation	73.73	341	P	P	18 06 24.0	-0.8
AGMN					PcP	18 06 39.0	-0.9
AGMN				pP	pP	18 06 53.2	-0.5
TBI	Tubuai	73.74	251	eS	S	18 15 47.9	-0.1
	comp=Z,163nm,25.8s						
TBI	Tubuai	73.74	251	eLR	LR	18 29 12.4	
	comp=Z,314nm,36.8s						
E28A	Huff	73.79	338	IAmb	IAmb	18 06 27.3	
	comp=Z,186nm,1.4s						
ISA	Isabella, Lake	73.97	320	P	P	18 06 28.6	+2.0
	baz=132,SNR=52						
ISA	Isabella, Lake	73.97	320	IAmb	IAmb	18 06 29.9	
	comp=Z,91nm,1.2s						
DUG	Dugway, Tooele	73.98	326	P	P	18 06 28.5	+1.9
	baz=138,SNR=52						
DUG	Dugway, Tooele	73.98	326	IAmb	IAmb	18 06 29.8	
	comp=Z,116nm,1.4s						
MEH	Mehetia	74.12	257	eP	P	18 06 30.0	+2.2
	comp=Z,31nm,1.2s						
R11A	Troy Canyon, C	74.14	323	P	P	18 06 29.9	+2.2
	baz=135,SNR=74						
GRAC	Grapevine Rang	74.21	321	P	P	18 06 29.9	+2.0
	baz=134,SNR=9.7						
CWC	Cottonwood Cre	74.25	320	P	P	18 06 30.3	+1.9
	baz=133						
PKM	Mcpherson Peak	74.27	318	P	P	18 06 30.6	+2.1
	baz=131,SNR=45						
BW06	Boulder Array	74.33	330	P	P	18 06 29.4	+0.7
	baz=141,SNR=23						
PDAR	Pinedale Array	74.33	330	P	P	18 06 29.4	+0.7
	comp=Z,4.8nm,0.5s,baz=131,slow=7.6,SNR=52						
MDND	Maddock	74.51	339	P	P	18 06 30.2	+0.9
	baz=150,SNR=19						
VAH	Vaihoa	74.54	259	eP	P	18 06 32.5	+2.2
	comp=Z,139nm,1.1s						
SMMC	Simmler	74.66	318	P	P	18 06 32.8	+2.2
	baz=131,SNR=9.3						
TIN	Tinemaha, Big	74.76	321	P	P	18 06 33.3	+2.1
	baz=133,SNR=23						
AHID	Auburn Hatcher	75.05	329	P	P	18 06 34.4	+1.5
AHID				IAmb	IAmb	18 06 35.2	
	comp=Z,129nm,1.1s						
PAGB	Antelope Grade	75.09	319	IAmb	IAmb	18 06 36.3	
	comp=Z,120nm,1.3s						
TVO	Taravao	75.22	256	eP	P	18 06 36.6	+2.4
	comp=Z,49nm,1.4s						
TIAR	Tiarei	75.37	257	eP	P	18 06 37.1	+2.0
	comp=Z,14nm,1.0s						
REDW	Red Top Meadow	75.39	330	IAmb	IAmb	18 06 37.5	
	comp=Z,176nm,1.6s						
ULM	Lac du Bonnet	75.48	342	P	P	18 06 34.6	-0.3
	comp=Z,16nm,0.7s,baz=159,slow=6.0,SNR=35						
ULM				LR	LR	18 45 01.6	
	comp=Z,98nm,18.3s,baz=142,slow=40						
MLAC	Mammoth, Mammo	75.50	321	P	P	18 06 37.5	+1.9
	baz=133,SNR=16						
PAE	Paea	75.55	257	eP	P	18 06 38.3	+2.2
	comp=Z,36nm,1.1s						
PPTF	Pamatai, Papee	75.56	257	P	P	18 06 38.0	+1.8
PPTF				IAmb	IAmb	18 06 40.5	
	comp=Z,208nm,1.3s						
PPT2	Papeete2	75.57	257	eP	P	18 06 38.6	+2.3
	comp=Z,130nm,1.3s						
PPT2				eS	S	18 16 08.2	-0.6
	comp=Z,263nm,27.8s						
PPT2	Papeete2	75.57	257	eLR	LR	18 29 58.0	
	comp=Z,871nm,39.5s						
PPT	Papeete	75.58	257	P	P	18 06 37.7	+1.5
	comp=Z,71nm,1.0s,baz=92,slow=6.0,SNR=7.2						
OMMB	Old Mammoth Mi	75.59	321	P	P	18 06 36.8	+0.6
OMMB				IAmb	IAmb	18 06 39.1	
	comp=Z,90nm,1.2s						
ELK	Elko	75.65	325	P	P	18 06 37.8	+1.4
	comp=Z,22nm,1.0s,baz=140,slow=4.0,SNR=57						
NVAR	Mina Array Bea	75.73	322	P	P	18 06 38.5	+1.6
	comp=Z,20nm,0.9s,baz=151,slow=6.6,SNR=112						
NVAR				pP	pP	18 07 06.7	+0.8
	comp=Z,8.9nm,0.9s,baz=152,slow=6.2,SNR=4.5						
NVAR	Mina Array Bea	75.73	322	P	P	18 06 37.8	+0.9
NVAR				pP	pP	18 07 07.4	+1.5
PMPB	Monarch Peak	75.75	319	IAmb	IAmb	18 06 40.2	
	comp=Z,132nm,1.3s						
FLWY	Flagg Ranch	75.87	330	IAmb	IAmb	18 06 40.6	
	comp=Z,130nm,1.1s						
LAO	LASA Array	75.98	334	P	P	18 06 38.8	+0.9
	baz=144,SNR=23						
LAO	LASA Array	75.98	334	IAmb	IAmb	18 06 40.2	
	comp=Z,84nm,1.1s						
RLMT	Red Lodge	76.02	332	P	P	18 06 39.7	+1.4
	baz=142,SNR=45						
H17A	Grant Village	76.05	330	P	P	18 06 40.7	+2.1
	baz=140,SNR=19						
YUF	Upper Falls	76.27	331	P	P	18 06 40.2	+0.4
WAKR	Walker	76.44	321	IAmb	IAmb	18 06 44.5	
	comp=Z,117nm,1.5s						
DGMT	Dagmar	76.66	337	P	P	18 06 42.9	+1.3
	baz=146						
QLMT	Earthquake Lak	76.78	330	P	P	18 06 44.2	+1.6
QLMT					pP	18 07 12.8	+0.9
VNDA	Vanda	76.82	190	P	P	18 06 43.8	+1.6
	comp=Z,16nm,0.9s,baz=134,slow=4.5,SNR=40						

VNDA				pP	**pP**	**18 07 12.8**	**+1.6**
	comp=Z,11nm,0.9s,baz=131,slow=5.0,SNR=4.9						
VNDA				LR	LR	18 40 44.0	
	comp=Z,76nm,18.1s,baz=144,slow=36						
VNDA	**Vanda**	**76.82**	**190**	P	**P**	**18 06 43.7**	**+1.6**
PNTR	**Pine Nut**	**76.93**	**322**	IAmb	IAmb	18 06 47.0	
	comp=Z,120nm,1.3s						
TOA0	**Torodi Ar. Sit**	**77.12**	**70**	P	**P**	**18 06 43.9**	**-1.0**
TOA0				pP	**pP**	**18 07 13.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**77.12**	**70**	P	**P**	**18 06 45.0**	**+0.1**
	comp=Z,39nm,0.8s,baz=253,slow=4.7,SNR=77						
TORD				pP	**pP**	**18 07 13.3**	**-0.7**
	comp=Z,126nm,0.9s,baz=257,slow=5.1,SNR=13						
TORD				S	**S**	**18 16 22.1**	**-3.4**
	comp=Z,2.2nm,1.0s,baz=264,slow=13,SNR=9.5						
TORD				LR	LR	18 41 46.5	
	comp=Z,205nm,18.1s,baz=230,slow=36						
TORD	**Torodi Ar. Bea**	**77.12**	**70**	P	**P**	**18 06 43.6**	**-1.3**
TORD				pP	**pP**	**18 07 13.0**	**-1.0**
TORD					**S**	**18 16 22.4**	**-3.1**
PAHR	**Pah Rah Range**	**77.22**	**322**	IAmb	IAmb	18 06 48.4	
	comp=Z,135nm,1.0s						
HLID	**Hailey**	**77.27**	**328**	P	**P**	**18 06 47.4**	**+2.0**
	baz=137,SNR=127						
HLID	**Hailey**	**77.27**	**328**	IAmb	IAmb	18 06 48.6	
	comp=Z,91nm,1.0s						
BOZ	**Bozeman (W)**	**77.45**	**331**	P	**P**	**18 06 47.4**	**+1.1**
	baz=140,SNR=36						
MFID	**Camas Ranch**	**77.87**	**327**	IAmb	IAmb	18 06 51.9	
	comp=Z,118nm,1.3s						
SUR	**Sutherland**	**78.29**	**120**	P	**P**	**18 06 51.5**	**+0.1**
SUR				pP	**pP**	**18 07 21.0**	**+0.1**
ORV	**Oroville**	**78.34**	**321**	IAmb	IAmb	18 06 54.3	
	comp=Z,196nm,1.3s						
EGMT	**Eagleton**	**78.50**	**333**	P	**P**	**18 06 52.7**	**+0.7**
	baz=142,SNR=23						
O03E	**Paynes Creek**	**79.00**	**321**	P	**P**	**18 06 55.3**	**+0.4**
	baz=131,SNR=34						
MOD	**Modoc Plateau**	**79.21**	**323**	IAmb	IAmb	18 06 58.9	
	comp=Z,106nm,1.2s						
MSO	**Missoula**	**79.44**	**330**	P	**P**	**18 06 58.7**	**+1.6**
	baz=138,SNR=18						
O02D	**Mt. Diablo Mer**	**79.50**	**321**	P	**P**	**18 06 58.4**	**+0.8**
	baz=130,SNR=14						
WDC	**Whiskeytown Da**	**79.61**	**321**	P	**P**	**18 06 57.5**	**-0.6**
WDC				pmax	pmax		
	comp=Z,33nm,0.9s						
WDC	**Whiskeytown Da**	**79.61**	**321**	P	**P**	**18 06 57.5**	**-0.6**
BMO	**Blue Mountains**	**79.64**	**327**	P	**P**	**18 06 59.0**	**+0.8**
BMO				IAmb	IAmb	18 07 00.9	
	comp=Z,81nm,1.1s						
BMO				pP	**pP**	**18 07 27.9**	**+0.5**
KCPM	**Cahto Peak**	**79.66**	**320**	IAmb	IAmb	18 07 01.9	
	comp=Z,160nm,1.4s						
TSUM	**Tsumeb**	**79.74**	**107**	P	**P**	**18 06 59.2**	**-0.3**
TSUM				pP	**pP**	**18 07 28.1**	**-0.8**
N02D	**Trinity Center**	**79.96**	**321**	P	**P**	**18 07 00.4**	**+0.3**
	baz=130,SNR=20						
M04C	**Macdoel**	**79.99**	**323**	P	**P**	**18 07 01.6**	**+1.4**
	baz=131,SNR=39						
KMRM	**Mail Ridge**	**80.07**	**320**	IAmb	IAmb	18 07 03.9	
	comp=Z,152nm,1.2s						
I07A	**Izee**	**80.24**	**325**	IAmb	IAmb	18 07 04.6	
	comp=Z,91nm,1.3s						
M02C	**Callahan**	**80.31**	**322**	P	**P**	**18 07 02.7**	**+0.8**
	baz=130,SNR=10						
YBH	**Yreka Blue Hor**	**80.45**	**322**	P	**P**	**18 07 02.9**	**+0.2**
	comp=Z,17nm,0.9s,baz=95,slow=3.5,SNR=32						
K04D	**Chiloquin, OR**	**80.49**	**323**	P	**P**	**18 07 03.9**	**+1.0**
	baz=131						
L04D	**Klamath Falls**	**80.53**	**323**	P	**P**	**18 07 04.1**	**+0.9**
	baz=131,SNR=20						
J05D	**Fort Rock, OR**	**80.64**	**324**	P	**P**	**18 07 05.3**	**+1.5**
	baz=132,SNR=44						
G08A	**Pilot Rock**	**80.79**	**327**	IAmb	IAmb	18 07 07.2	
	comp=Z,162nm,2.0s						
PINE	**Pine Mountain**	**80.82**	**324**	IAmb	IAmb	18 07 07.9	
	comp=Z,172nm,1.2s						
KRMB	**Red Mountain**	**81.01**	**321**	IAmb	IAmb	18 07 08.6	
	comp=Z,96nm,1.2s						
J04D	**Umpqua Nationa**	**81.09**	**324**	P	**P**	**18 07 07.7**	**+1.5**
	baz=131,SNR=9.3						
PFVI	**Vila Bisbo**	**81.11**	**44**	P	**P**	**18 07 07.8**	**+1.6**
PFVI				IAmb	IAmb	18 07 57.9	
	comp=Z,191nm,1.8s						
FFC	**Flin Flon**	**81.20**	**341**	P	**P**	**18 07 06.4**	**+0.2**
FFC				*PP	**pP**	**18 07 35.4**	**-0.3**
FFC				pmax	pmax		
	comp=Z,37nm,1.2s						
FFC	**Flin Flon**	**81.20**	**341**	P	**P**	**18 07 06.4**	**+0.2**
FFC				pP	**pP**	**18 07 35.4**	**-0.3**
E09A	**Wood Farm, Sta**	**81.22**	**328**	IAmb	IAmb	18 07 08.9	
	comp=Z,132nm,1.8s						
L02E	**Cave Junction**	**81.23**	**322**	P	**P**	**18 07 08.3**	**+1.6**
	baz=130,SNR=11						
MORF	**Marmelete**	**81.32**	**44**	*e*pP	**pP**	**18 07 39.3**	**+2.6**
MORF				A	A	18 07 40.9	
	comp=Z,63nm,1.3s						
I05D	**Terrebonne, OR**	**81.39**	**325**	P	**P**	**18 07 09.6**	**+2.0**
	baz=132,SNR=25						
PTEO	**Sao Teotonio**	**81.41**	**44**	*e*P	**P**	**18 07 10.2**	**+2.4**
PTEO				*e*pP	**pP**	**18 07 40.2**	**+3.1**
K02D	**Willamette Mer**	**81.61**	**322**	P	**P**	**18 07 10.3**	**+1.5**
	baz=130,SNR=18						
I04A	**Tendick Farm,**	**81.62**	**324**	P	**P**	**18 07 09.5**	**+0.7**
	baz=131,SNR=10						
PBDV	**Barranco-do-Ve**	**81.76**	**45**	*e*P	**P**	**18 07 11.0**	**+1.4**
	comp=Z,40nm,2.1s						
PBDV				*e*pP	**pP**	**18 07 41.0**	**+2.0**
PNCL	**Nicolau / Gran**	**81.87**	**44**	*e*P	**P**	**18 07 10.4**	**+0.3**
	comp=Z,45nm,1.6s						
PNCL				*e*pP	**pP**	**18 07 41.2**	**+1.7**
PCVE	**Castro Verde**	**81.91**	**44**	*e*P	**P**	**18 07 11.6**	**+1.2**
	comp=Z,54nm,1.9s						
PCVE				*e*pP	**pP**	**18 07 41.6**	**+1.8**
MESJ	**Messejana**	**81.91**	**44**	*e*P	**P**	**18 07 11.4**	**+1.0**
MESJ				AMb	AMB	18 07 32.9	
	comp=Z,26nm,1.8s						
MESJ	**Messejana**	**81.91**	**44**	*e*P	**P**	**18 07 11.4**	**+1.0**
MESJ				pmax	pmax		
	comp=Z,27nm,1.8s						
MESJ	**Messejana**	**81.91**	**44**	*e*P	**P**	**18 07 11.4**	**+1.0**
MESJ				*e*pP	**pP**	**18 07 39.9**	**+0.1**
NEW	**Newport**	**81.96**	**330**	P	**P**	**18 07 10.8**	**+0.3**
	comp=Z,14nm,1.1s,baz=137,slow=5.2,SNR=15						
NEW	**Newport**	**81.96**	**330**	P	**P**	**18 07 10.7**	**+0.3**
	baz=135,SNR=13						
G05D	**Wamic, OR**	**81.98**	**325**	P	**P**	**18 07 12.5**	**+1.9**
	baz=132,SNR=15						
PVAQ	**Vaqueiros**	**81.99**	**45**	*e*P	**P**	**18 07 11.7**	**+0.9**
	comp=Z,48nm,1.9s						
PVAQ	**Vaqueiros**	**81.99**	**45**	P	**P**	**18 07 12.0**	**+1.2**
J01E	**Myrtle Point**	**82.06**	**323**	P	**P**	**18 07 12.6**	**+1.6**
	baz=130,SNR=7.4						
I03D	**Drain, OR**	**82.08**	**323**	P	**P**	**18 07 12.4**	**+1.3**
	baz=130,SNR=6.3						
KEBM	**Edson Butte**	**82.11**	**322**	IAmb	IAmb	18 07 14.3	
	comp=Z,107nm,1.1s						
E07A	**Sunnyside**	**82.11**	**327**	IAmb	IAmb	18 07 14.3	
	comp=Z,167nm,1.8s						
C09A	**Chrisman Ranch**	**82.19**	**329**	IAmb	IAmb	18 07 14.0	
	comp=Z,98nm,0.8s						
H04D	**Lebanon**	**82.27**	**324**	P	**P**	**18 07 12.9**	**+0.8**
	baz=131						
F05D	**White Salmon**	**82.48**	**326**	P	**P**	**18 07 14.7**	**+1.5**
	baz=132,SNR=5.7						
I02D	**Swisshome**	**82.61**	**323**	P	**P**	**18 07 15.6**	**+1.7**
	baz=130						
PMTG	**Montargil**	**82.61**	**43**	*e*P	**P**	**18 07 14.8**	**+0.8**
	comp=Z,33nm,1.4s						
PMTG				*e*pP	**pP**	**18 07 45.3**	**+1.9**
COR	**Corvallis**	**82.62**	**324**	P	**P**	**18 07 13.3**	**-0.6**
COR				pmax	pmax		
	comp=Z,124nm,1.1s						
COR	**Corvallis**	**82.62**	**324**	P	**P**	**18 07 13.3**	**-0.6**
COR				IAmb	IAmb	18 07 16.4	
	comp=Z,124nm,1.1s						
LTY	**Liberty**	**83.00**	**327**	IAmb	IAmb	18 07 18.2	
	comp=Z,99nm,1.4s						
G03D	**McMinnville, O**	**83.00**	**324**	P	**P**	**18 07 17.4**	**+1.5**
	baz=130						
B08A	**Colville Reser**	**83.08**	**329**	IAmb	IAmb	18 07 18.1	
	comp=Z,142nm,1.9s						
BOSA	**Boshof**	**83.16**	**118**	P	**P**	**18 07 17.3**	**-0.1**
	comp=Z,28nm,0.9s,baz=242,slow=4.0,SNR=37						
BOSA				pP	**pP**	**18 07 47.3**	**+0.3**
	comp=Z,36nm,1.0s,baz=277,slow=5.3,SNR=3.7						
BOSA				LR	LR	18 41 48.1	
	comp=Z,213nm,19.2s,baz=230,slow=34						
BOSA	**Boshof**	**83.16**	**118**	P	**P**	**18 07 17.1**	**-0.3**
BOSA					**pP**	**18 07 47.0**	**0.0**
COI	**Coimbra**	**83.16**	**42**	P	**P**	**18 07 16.9**	**+0.1**
COI				pmax	pmax		
	comp=Z,41nm,1.2s						
COI	**Coimbra**	**83.16**	**42**	P	**P**	**18 07 16.9**	**+0.1**
PMRV	**Marv??o**	**83.35**	**43**	*e*P	**P**	**18 07 17.9**	**0.0**
PMRV				*e*pP	**pP**	**18 07 48.1**	**+0.8**
RAR	**Rarotonga**	**83.46**	**250**	LR	LR	18 34 27.0	
	comp=Z,135nm,21.9s,baz=96,slow=28						
PCBR	**Castelo Branco**	**83.53**	**43**	*e*P	**P**	**18 07 18.9**	**+0.2**
PCBR				*e*pP	**pP**	**18 07 50.0**	**+1.6**
D05A	**Enumclaw**	**83.62**	**327**	IAmb	IAmb	18 07 21.0	
	comp=Z,89nm,1.0s						
MTE	**Manteigas**	**83.81**	**42**	*e*P	**P**	**18 07 20.7**	**+0.5**
	comp=Z,46nm,1.8s						
MTE				*e*pP	**pP**	**18 07 50.8**	**+0.9**
MTE	**Manteigas**	**83.81**	**42**	P	**P**	**18 07 20.2**	**0.0**
MTE					**pP**	**18 07 50.3**	**+0.3**
D04E	**Lakebay**	**84.02**	**326**	P	**P**	**18 07 22.8**	**+1.8**
	baz=131						
MAW	**Mawson**	**84.17**	**163**	P	**P**	**18 07 22.5**	**+1.0**
	comp=Z,39nm,0.8s,baz=223,slow=6.1,SNR=35						
MAW				LR	LR	18 47 16.8	
	comp=Z,75nm,18.6s,baz=234,slow=37						
MAW	**Mawson**	**84.17**	**163**	P	**P**	**18 07 21.6**	**+0.1**
POLO	**Lamas de Olo**	**84.22**	**41**	*e*P	**P**	**18 07 22.9**	**+0.6**
	comp=Z,22nm,1.6s						
POLO				*e*pP	**pP**	**18 07 50.2**	**-1.8**
B06A	**Marblemount**	**84.25**	**328**	IAmb	IAmb	18 07 23.0	
	comp=Z,51nm,0.7s						
B05A	**Bryant**	**84.38**	**327**	P	**P**	**18 07 23.2**	**+0.4**
	baz=131,SNR=25						
D03D	**Eldon**	**84.41**	**326**	P	**P**	**18 07 24.0**	**+1.0**
	baz=131,SNR=10						
MVO	**Moncorvo**	**84.57**	**42**	*e*P	**P**	**18 07 25.3**	**+1.2**
	comp=Z,42nm,1.8s						
MVO				*e*pP	**pP**	**18 07 54.8**	**+1.0**
TAM	**Tamanrasset**	**84.60**	**63**	P	**P**	**18 07 23.7**	**-1.0**
TAM					**pP**	**18 07 54.9**	**+0.6**
TAM				IAmb	IAmb	18 07 57.5	
	comp=Z,68nm,1.1s						
LBTB	**Lobatse**	**84.72**	**115**	P	**P**	**18 07 25.4**	**0.0**
LBTB				pmax	pmax		
	comp=Z,34nm,0.8s						
LBTB	**Lobatse**	**84.72**	**115**	P	**P**	**18 07 25.4**	**0.0**
A04D	**Lummi Island**	**84.99**	**327**	P	**P**	**18 07 26.9**	**+1.1**
	baz=131,SNR=7.2						
FRB	**Frobisher Bay**	**85.05**	**0**	P	**P**	**18 07 25.6**	**-0.2**
	comp=Z,18nm,1.0s,baz=183,slow=5.5,SNR=18						
PBRG	**Braganca**	**85.11**	**41**	*e*P	**P**	**18 07 27.3**	**+0.6**
PBRG				*e*pP	**pP**	**18 07 57.4**	**+0.9**
PAB	**San Pablo**	**85.37**	**44**	P	**P**	**18 07 28.9**	**+0.7**
PAB					**pP**	**18 07 56.1**	**-1.9**
ESDC	**Sonseca Array**	**85.69**	**44**	P	**P**	**18 07 29.3**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=252,slow=4.5,SNR=21						
ESDC				pP	**pP**	**18 08 00.3**	**+0.7**
	comp=Z,22nm,1.0s,baz=242,slow=5.2,SNR=14						
ESDC	**Sonseca Array**	**85.69**	**44**	P	**P**	**18 07 30.3**	**+0.6**
ESDC				pP	**pP**	**18 07 59.6**	**+0.1**
ESBB	**Sonseca Array**	**85.70**	**44**	P	**P**	**18 07 29.8**	**+0.1**
ESBB				pP	**pP**	**18 07 60.0**	**+0.4**
BBB	**Bella Bella**	**89.85**	**328**	P	**P**	**18 07 48.8**	**-0.4**
	comp=Z,13nm,0.9s,baz=189,slow=4.3,SNR=3.7						
LSZ	**Lusaka**	**90.60**	**107**	P	**P**	**18 07 55.0**	**+1.2**
LSZ				pP	**pP**	**18 08 24.4**	**+0.8**
LSZ				IAmb	IAmb	18 08 27.0	
	comp=Z,48nm,1.6s						
YKA	**Yellowknife Ar**	**91.36**	**340**	P	**P**	**18 07 56.3**	**+0.4**
	comp=Z,34nm,0.7s,baz=131,slow=5.2,SNR=438						
YKA				PKKPbc	**PKKPbc**	**18 25 19.9**	**0.0**
	comp=Z,0.2nm,0.7s,baz=317,slow=4.3,SNR=3.5						
YKA				LR	LR	18 53 41.7	
	comp=Z,128nm,18.7s,baz=0.0,slow=38						
CASY	**Casey**	**92.41**	**180**	P	**P**	**18 08 02.4**	**+1.5**
ICESG	**Greenland Ices**	**92.81**	**10**	*i* P	**P**	**18 08 03.4**	**+0.5**
ICESG				IAmb	IAmb	18 08 06.0	
	comp=Z,25nm,0.9s						
KEST	**Kesra**	**93.13**	**53**	P	**P**	**18 08 03.9**	**-1.0**
	comp=Z,11nm,1.1s,baz=256,slow=14,SNR=3.6						
BKZ	**Black Stump Fm**	**94.28**	**225**	P	**P**	**18 08 13.4**	**+3.1**
BKZ				pP	**pP**	**18 08 43.3**	**+3.3**
WRAK	**Wrangell Islan**	**94.32**	**330**	IAmb	IAmb	18 08 11.2	
	comp=Z,23nm,0.9s						
DLBC	**Dease Lake**	**94.41**	**332**	P	**P**	**18 08 11.3**	**+1.1**
	comp=Z,15nm,1.0s,baz=127,slow=4.4,SNR=18						
DLBC	**Dease Lake**	**94.41**	**332**	IAmb	IAmb	18 08 12.3	
	comp=Z,21nm,1.1s						
THZ	**Tophouse**	**95.13**	**221**	P	**P**	**18 08 15.7**	**+1.6**
SUMG	**Summit**	**96.10**	**9**	*i* P	**P**	**18 08 17.6**	**-0.4**
SUMG				pmax	pmax		
	comp=Z,17nm,0.9s						
SUMG	**Summit**	**96.10**	**9**	P	**P**	**18 08 19.8**	**+1.8**
SUMG				IAmb	IAmb	18 08 39.7	
	comp=Z,23nm,1.2s						
SUMG	**Summit**	**96.10**	**9**	*i* P	**P**	**18 08 17.6**	**-0.4**
	comp=Z,17nm,0.9s						
SUMG	**Summit**	**96.10**	**9**	*i* P	**P**	**18 08 17.6**	**-0.4**
SUMG				IAmb	IAmb	18 08 27.4	
	comp=Z,17nm,0.9s						
RES	**Resolute Bay**	**97.52**	**353**	P	**P**	**18 08 23.6**	**-0.3**
	comp=Z,3.0nm,1.0s,baz=174,slow=8.3,SNR=7.9						
RES	**Resolute Bay**	**97.52**	**353**	IAmb	IAmb	18 08 55.9	
	comp=Z,38nm,2.0s						
MBAR	**Mbarara**	**98.47**	**94**	*i* P	P	18 08 24.8	-5.0
MBAR				pmax	pmax		
	comp=Z,15nm,0.8s						
TEOL	**Teolo**	**98.54**	**45**	P	**P**	**18 08 28.9**	**-0.3**
TEOL				IAmb	IAmb	18 09 00.9	
	comp=Z,26nm,0.9s						
FETA	**Feichten**	**98.56**	**43**	*e*P	Pdif	18 08 29.7	+0.3
	comp=Z,9.5nm,1.8s						
FETA				*e*P	pP	18 08 59.6	+0.3
	comp=Z,9.3nm,1.3s						
MOTA	**Moosalm**	**98.92**	**43**	*e*P	pP	18 09 01.4	+0.5
	comp=Z,9.5nm,1.2s						
SQTA	**Sankt Quirin**	**98.94**	**43**	*e*P	Pdif	18 08 32.0	+1.0
	comp=Z,9.1nm,0.8s						
SQTA				*e*P	pP	18 09 01.8	+0.8
	comp=Z,18nm,1.0s						
WATA	**Walderalm**	**99.22**	**43**	P	**Pdif**	**18 08 29.7**	**-2.6**
	comp=Z,7.3nm,1.1s						
WATA				*e*P	**pP**	**18 09 03.0**	**+0.7**
	comp=Z,9.4nm,1.0s						
ABTA	**Abfaltersbach**	**99.60**	**44**	*e*P	**Pdif**	**18 08 36.0**	**+2.0**
	comp=Z,7.1nm,1.5s						
ABTA				*e*P	**pP**	**18 09 04.5**	**+0.6**
	comp=Z,15nm,1.4s						
KBA	**Koelnbreinsper**	**100.25**	**43**	*e*P	pP	18 09 07.2	+0.2
	comp=Z,10nm,1.4s						
MYKA	**Terra Mystica**	**100.28**	**44**	*e*P	pP	18 09 07.9	+0.9
	comp=Z,9.3nm,0.9s						
OBKA	**Obir**	**100.83**	**44**	*e*P	**Pdif**	**18 08 41.6**	**+2.2**
	comp=Z,6.1nm,0.9s						
OBKA				*e*P	**pPdif**	**18 09 09.2**	**-0.1**
	comp=Z,5.4nm,1.0s						
INK	**Inuvik**	**101.12**	**340**	P	**Pdif**	**18 08 39.8**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=94,slow=6.7,SNR=7.4						
CLL	**Collm**	**101.50**	**39**	*e*P	**Pdif**	**18 08 50.0**	**+7.8**
ILAR	**Eielson Array**	**104.44**	**334**	Pdiff	**Pdif**	**18 08 54.6**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=131,slow=3.9,SNR=4.6						
ILAR				PP	**PKiKP**	**18 13 11.2**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=97,slow=6.1,SNR=5.0						
ILAR				PKKPbc	**PKKPbc**	**18 24 40.9**	**-2.5**
	comp=Z,0.6nm,0.9s,baz=298,slow=4.4,SNR=4.7						
ILAR	**Eielson Array**	**104.44**	**334**		**PKiKP**	**18 13 13.3**	**+2.7**
FINES	**FINESS Array B**	**110.93**	**31**	PKKPbc	PKKPbc	18 24 21.3	-1.4
	comp=Z,1.9nm,1.0s,baz=0.0,slow=4.9,SNR=4.7						
DZM	**Mont Dzumac**	**110.97**	**235**	*e*PS	PS	18 23 38.1	+1.8
	comp=Z,172nm,27.9s						
DZM	**Mont Dzumac**	**110.97**	**235**	*e*LR	LR	18 46 28.4	
	comp=Z,276nm,35.7s						
AKASG	**Malin Array Be**	**111.28**	**43**	PKiKP	**PKiKP**	**18 13 23.3**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=261,slow=2.6,SNR=9.7						
AKASG				PP	**PP**	**18 14 01.5**	**-4.0**
	comp=Z,2.1nm,0.8s,baz=260,slow=6.9,SNR=7.2						
AKASG				PKKPbc	**PKKPbc**	**18 24 20.9**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=65,slow=3.9,SNR=11						
AKBB	**Malin Array Si**	**111.28**	**43** *c*	*i*PKIKP	**PKiKP**	**18 13 24.7**	**+1.0**
BRTR	**Keskin Array B**	**112.64**	**55**	PKiKP	**PKiKP**	**18 13 26.9**	**0.0**
	comp=Z,2.1nm,0.8s,baz=174,slow=2.7,SNR=8.0						
BRTR				pPKiKP	**pPKiKP**	**18 14 01.2**	**+3.0**
	comp=Z,1.2nm,0.7s,baz=245,slow=2.0,SNR=3.1						
BRTR				PP	**PP**	**18 14 14.6**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=249,slow=5.2,SNR=4.7						
OBN	**Obninsk**	**116.06**	**38**	*i* PKIKP	**PKPdf**	**18 13 32.4**	**-0.3**
OBN				*i*		18 14 34.9	
OBN				pmax	pmax		
	comp=Z,13nm,1.0s						
ANN	**Anapa**	**116.10**	**50**	*e*P	**Pdif**	**18 09 43.8**	**-3.4**
ANN				pmax	pmax		
	comp=Z,323nm,1.4s						
KLMR	**Klimovskoe**	**117.43**	**32**	*e*PKIKP	**PKPdf**	**18 13 33.4**	**-1.8**
KLMR				*e*		18 24 24.9	
KLMR				pmax	pmax		
	comp=Z,23nm,1.3s						
KLMR	**Klimovskoe**	**117.43**	**32**	*e*PKPdf	**PKPdf**	**18 13 33.4**	**-1.8**
KLMR				AMP		18 13 37.3	
	comp=Z,23nm,1.3s						
KLMR				*e*PKKP	**PKKPdf**	**18 24 24.9**	**-3.0**
LPSR	**Galich'ya Gora**	**117.44**	**41**	*e*PKIKP	**PKPdf**	**18 13 34.7**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
SOC	**Sochi**	**117.64**	**51**	*i* PKIKP	**PKiKP**	**18 13 38.4**	**+2.2**
SOC				*e*		18 14 57.6	
SOC				*e*PPP	PPP	18 17 20.0	
SOC				*e*PS	**PKKPdf**	**18 24 31.1**	**+3.9**
SOC				MLR	MLR		
	comp=Z,322nm,19.0s						
VORD	**Divnogorie**	**117.66**	**43**	*e*PKIKP	**PKPdf**	**18 13 35.2**	**-0.7**
VORD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VRH	**Novokhopyorsk**	**119.19**	**43**	*e*PKIKP	**PKPdf**	**18 13 37.9**	**-1.0**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
STKA	**Stephens Creek**	**119.48**	**209**	PKP	**PKiKP**	**18 13 40.8**	**+0.5**
	comp=Z,8.4nm,0.9s,baz=46,slow=3.2,SNR=8.6						
STKA	**Stephens Creek**	**119.48**	**209**		**PKiKP**	**18 13 40.5**	**+0.3**
KIV	**Kislovodsk**	**119.80**	**51**	*e*PKIKP	**PKPdf**	**18 13 40.1**	**-0.3**
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV	**Kislovodsk**	**119.80**	**51**		**PKPdf**	**18 13 39.4**	**-1.1**
KBZ	**Khabaz**	**119.95**	**51**	PKP	**PKiKP**	**18 13 41.0**	**+0.3**
	comp=Z,12nm,0.9s,baz=124,slow=1.2,SNR=16						
KBZ	**Khabaz**	**119.95**	**51** *c*	*i*PKIKP	**PKiKP**	**18 13 41.9**	**+1.3**
ZEI	**Tsey**	**120.65**	**52**	*i* PKIKP	**PKiKP**	**18 13 42.4**	**0.0**
ZEI				pmax	pmax		
	comp=Z,11nm,1.1s						
KIRV	**Kirov**	**122.72**	**33** *c*	*i*PKIKP	**PKiKP**	**18 13 45.6**	**0.0**
MAK	**Makhachkala**	**123.30**	**52**	*e*P	**Pdif**	**18 10 18.7**	**-0.6**
MAK				*i*		18 13 45.6	
MAK				*e*		18 14 15.4	
MAK				*e*		18 15 28.4	
MAK				*e*PPP	PPP	18 18 05.2	
MAK				*e*SS	SS	18 32 09.1	+2.2
MAK				*e*SSS	SSS	18 36 44.5	
MAK				pmax	pmax		
	comp=Z,233nm,1.0s						
ARU	**Arti**	**128.06**	**34**	*i* PKIKP	**PKiKP**	**18 13 57.2**	**+0.9**
ARU						18 16 03.4	
ARU						18 20 51.8	
ARU	**Arti**	**128.06**	**34**		**PKiKP**	**18 13 56.3**	**0.0**
ARU					**pPKPdf**	**18 14 26.5**	**-0.4**
TIXI	**Tiksi**	**128.91**	**353**⇓	*i*PKIKP	**PKPdf**	**18 13 56.8**	**-0.1**
TIXI	**Tiksi**	**128.91**	**353**		**PKPdf**	**18 13 56.4**	**-0.5**
SVE	**Sverdlovsk**	**128.99**	**33**	*e*PKIKP	**PKiKP**	**18 13 58.1**	**-0.1**
ASAR	**Alice Springs**	**129.97**	**207**	PKP	**PKPdf**	**18 14 00.8**	**+0.3**
	comp=Z,32nm,0.9s,baz=148,slow=2.2,SNR=97						
ASAR				pPKP	**pPKPdf**	**18 14 32.4**	**+0.9**
	comp=Z,12nm,0.8s,baz=132,slow=1.5,SNR=6.6						
ASAR	**Alice Springs**	**129.97**	**207**		**PKPdf**	**18 14 00.1**	**-0.5**
ASAR				pPKPdf	**pPKPdf**	**18 14 31.2**	**-0.3**
AS31	**Alice Springs**	**129.97**	**207**		**PKPdf**	**18 14 00.3**	**-0.2**
AS31					**pPKPdf**	**18 14 31.5**	**-0.1**
SEY	**Seymchan**	**130.29**	**337**	PKP	**PKiKP**	**18 14 00.6**	**-0.1**
	comp=Z,21nm,0.9s,baz=105,slow=3.1,SNR=25						
SEY				pPKP	**pPKPdf**	**18 14 31.7**	**+0.8**
	comp=Z,10nm,0.8s,baz=144,slow=0.8,SNR=5.9						
ABKAR	**Akbulak array**	**131.02**	**43**		pPKPdf	18 14 32.7	-0.1
ABKAR	**Akbulak array**	**131.02**	**43**		**PKiKP**	**18 14 02.1**	**-0.4**
WSAR	**Wadi Sarin**	**131.41**	**78**	PKP	**PKPdf**	**18 14 03.1**	**-0.1**
	comp=Z,8.6nm,0.9s,baz=274,slow=6.6,SNR=3.7						
GEYT	**Alibeck**	**131.60**	**58**	PKP	**PKiKP**	**18 14 04.0**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=298,slow=3.9,SNR=6.7						
PETK	**Petropavlovsk-**	**132.80**	**324**	PKP	**PKiKP**	**18 14 05.9**	**-0.1**
	comp=Z,8.4nm,0.8s,baz=74,slow=3.2,SNR=14						
WRA	**Warramunga Arr**	**133.03**	**210**	PKP	**PKiKP**	**18 14 07.0**	**-0.6**
	comp=Z,23nm,0.9s,baz=160,slow=1.7,SNR=40						
WRA				pPKP	**pPKPdf**	**18 14 38.5**	**+1.2**
	comp=Z,6.7nm,0.8s,baz=155,slow=1.8,SNR=4.0						
WRAB	**Tennant Creek**	**133.03**	**210** *c*	*i*PKIKP	**PKPdf**	**18 14 06.6**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,96nm,1.7s						
WRAB	**Tennant Creek**	**133.03**	**210**		**PKPdf**	**18 14 06.5**	**+0.2**
PMG	**Port Moresby**	**133.30**	**232** *c*	*i*PKIKP	**PKiKP**	**18 14 09.4**	**+1.2**
PMG				pmax	pmax		
	comp=Z,63nm,1.7s						
BRVK	**Borovoye**	**135.63**	**35** *c*	*i*PKIKP	**PKiKP**	**18 14 11.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,18nm,1.7s						
BRVK	**Borovoye**	**135.63**	**35**		**PKPdf**	**18 14 10.3**	**+0.2**
PSA00	**Pilbara Seismi**	**136.32**	**191**	PKPpre	PKPpre	18 14 04.5	
PSA00					**PKPdf**	**18 14 11.7**	**-0.8**
PSA00	**Pilbara Seismi**	**136.32**	**191**		**PKPdf**	**18 14 12.4**	**-0.1**
YAK	**Yakutsk**	**137.66**	**347**	*e*PKHKP	PKPpre	18 14 04.0	
YAK				*e*		18 14 14.3	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK	**Yakutsk**	**137.66**	**347**		PKPpre	18 14 04.3	
YAK					**PKPdf**	**18 14 13.6**	**0.0**
FITZ	**Fitzroy Crossi**	**138.17**	**201**	PKhKP	PKPpre	18 14 05.7	
	comp=Z,3.8nm,0.8s,baz=182,slow=3.4,SNR=5.2						
FITZ				PKP	**PKPdf**	**18 14 16.9**	**+1.0**
	comp=Z,26nm,1.0s,baz=196,slow=4.1,SNR=13						
IUG	**Iuzhnay**	**139.82**	**50**	*e*PKP	**PKPdf**	**18 14 18.9**	**+0.6**
	baz=49						
IUG	**Iuzhnay**	**139.82**	**50**	*e*PKIKP	**PKPdf**	**18 14 18.9**	**+0.6**
KK31	**Karatay Array**	**139.85**	**48**	PKIKP	**PKPdf**	**18 14 18.5**	**+0.2**
KK31	**Karatay Array**	**139.85**	**48**		**PKPdf**	**18 14 18.5**	**+0.2**
KKAR	**Karatay Array**	**139.85**	**48**	PKIKP	**PKPdf**	**18 14 18.9**	**+0.6**
KKAR	**Karatay Array**	**139.85**	**48**		**PKPdf**	**18 14 18.9**	**+0.6**
DZA	**Taraz**	**140.49**	**48**	*e*PKP	**PKPdf**	**18 14 20.5**	**+1.0**
	baz=48						
DZA	**Taraz**	**140.49**	**48**	*e*PKIKP	**PKPdf**	**18 14 20.5**	**+1.0**
KURK	**Kurchatov**	**141.24**	**33**	PKIKP	**PKPdf**	**18 14 21.5**	**+1.0**
KURK	**Kurchatov**	**141.24**	**33**		**PKPdf**	**18 14 21.5**	**+1.0**
KURBB	**Kurchatov Arra**	**141.25**	**34**	PKhKP	PKPpre	18 14 15.8	
	comp=Z,1.9nm,0.8s,baz=296,slow=2.8,SNR=16						
KURBB				PKP	**PKPdf**	**18 14 21.5**	**+1.0**
	comp=Z,7.0nm,0.9s,baz=303,slow=2.7,SNR=25						
BTLS	**Baital**	**141.49**	**44**	*e*PKP	**PKPdf**	**18 14 22.1**	**+1.0**
	baz=44						
BTLS	**Baital**	**141.49**	**44**	*e*PKIKP	**PKPdf**	**18 14 22.1**	**+1.0**
ZAA0	**Zalesovo Array**	**141.91**	**25**		PKPpre	18 14 16.1	
ZALV	**Zalesovo Beam**	**141.91**	**25**	PKhKP	PKPpre	18 14 16.5	
	comp=Z,9.8nm,1.0s,baz=299,slow=3.8,SNR=25						
ZALV				PKP	**PKPdf**	**18 14 21.5**	**-0.1**
	comp=Z,19nm,0.8s,baz=309,slow=2.7,SNR=18						
ZALV	**Zalesovo Beam**	**141.91**	**25**	PKHKP	PKPpre	18 14 16.1	
ZALV						18 14 22.1	
ZALV						18 14 53.5	
ZALV	**Zalesovo Beam**	**141.91**	**25**		PKPpre	18 14 16.1	
ZALV				PKPdf	**PKPdf**	**18 14 22.1**	**+0.5**
ZALV				pPKPdf	pPKPdf	18 14 53.5	+0.6
SGDS	**Sogindy**	**142.53**	**46**	*e*PKP	**PKPdf**	**18 14 24.0**	**+0.8**
	baz=46						
SGDS	**Sogindy**	**142.53**	**46**	*e*PKIKP	**PKPdf**	**18 14 24.0**	**+0.8**
JAY	**Jayapura**	**142.64**	**234**	PKP	**PKPdf**	**18 14 25.7**	**+1.5**
	comp=Z,47nm,1.1s,baz=234,slow=9.4,SNR=3.6						
AAK	**Ala-Archa**	**142.75**	**47**	PKIKP	**PKPdf**	**18 14 22.8**	**-0.9**
AAK	**Ala-Archa**	**142.75**	**47**		**PKPdf**	**18 14 22.8**	**-0.9**
GENI	**Genyem**	**142.99**	**233**	PKP	**PKPdf**	**18 14 20.7**	**-4.1**
TKM2	**Tokmak 2**	**143.39**	**46**	P	**PKPdf**	**18 14 25.1**	**+0.2**
	SNR=5.3						
BOD	**Bodaibo**	**143.76**	**358**	*e*PKIKP	PKPbc	18 14 22.3	-0.3
BOD				pmax	pmax		
	comp=Z,47nm,1.4s						
MTBS	**Maitube**	**143.85**	**45**	*e*PKP	**PKPdf**	**18 14 26.2**	**+0.7**
	baz=45						
MTBS	**Maitube**	**143.85**	**45**	*e*PKIKP	**PKPdf**	**18 14 26.2**	**+0.7**
ULHL	**Ulahol**	**144.10**	**47**	P	**PKPdf**	**18 14 26.1**	**-0.1**
	SNR=5.7						
AAA	**Alma-Ata**	**144.14**	**45**	*e*PKP	**PKPdf**	**18 14 27.1**	**+1.0**
	baz=45						
AAA	**Alma-Ata**	**144.14**	**45**	*e*PKIKP	**PKPdf**	**18 14 27.0**	**+1.0**
NIL	**Nilore**	**144.32**	**62**		**PKPab**	**18 14 24.5**	**-0.3**
NIL				pPKPdf	**pPKPdf**	**18 14 55.4**	**-2.5**
TRD	**Trivandrum**	**144.39**	**106**	*e*P	**PKPdf**	**18 14 29.0**	**+1.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRD				ex	x	18 37 23.8	
SAUI	Saumlaki	144.72	216	PKP	PKPab	18 14 26.4	-0.3
GRNR	Gornyy	144.89	332	⇓iPKIKP	PKPdf	18 14 27.9	+0.9
GRNR				pmax	pmax		
	comp=E,6.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,60nm,1.1s						
KSH	Kashi	144.93	51	PKP	PKPdf	18 14 27.7	+0.1
KSH				PP	PP	18 17 48.0	+1.5
KSH				AMB	AMB		
	comp=Z,490nm,5.6s						
MAKZ	Makanchi	145.35	36	PKIKP	PKPbc	18 14 28.0	0.0
MAKZ						18 14 59.1	
MAKZ	Makanchi	145.35	36		PKPbc	18 14 28.0	0.0
MAKZ				pPKPdf	pPKPdf	18 14 59.1	0.0
MK31	Makanchi Array	145.53	36	PKIKP	PKPbc	18 14 28.6	0.0
MK31						18 14 59.9	
MK31	Makanchi Array	145.53	36		PKPbc	18 14 28.6	0.0
MK31				pPKPdf	pPKPdf	18 14 59.9	+0.4
MKAR	Makanchi Array	145.53	36	PKPbc	PKPab	18 14 29.1	+0.2
	comp=Z,25nm,0.9s,baz=312,slow=3.5,SNR=156						
MKAR				pPKPbc	pPKPdf	18 15 00.0	+0.5
	comp=Z,96nm,0.9s,baz=304,slow=2.6,SNR=20						
MKAR				PKKP	PKKPdf	18 23 29.3	-4.2
	comp=Z,0.6nm,0.7s,baz=320,slow=3.0,SNR=5.3						
MKAR	Makanchi Array	145.53	36		PKPbc	18 14 28.4	-0.1
MKAR				pPKPdf	pPKPdf	18 14 60.0	+0.5
ZEA	Zeya	145.70	343	i PKP2	PKPab	18 14 29.6	+0.4
ZEA				pmax	pmax		
	comp=Z,80nm,1.3s						
ASAJ	Asahikawa	145.80	318	PKPbc	PKPab	18 14 30.6	+0.6
	comp=Z,35nm,0.9s,baz=307,slow=11,SNR=5.2						
SHLS	Shalkode	145.82	44	ePKP	PKPab	18 14 30.0	-0.2
	baz=43						
SHLS	Shalkode	145.82	44	ePKP2	PKPab	18 14 30.0	-0.2
BATI	Baumata	146.19	202	PKPbc	PKPab	18 14 33.1	+0.9
	comp=Z,87nm,0.8s,baz=200,slow=6.8,SNR=8.7						
BATI	Baumata	146.19	202	PKP	PKiKP	18 14 34.1	-0.5
SOEI	Soe	146.39	203	PKP	PKPab	18 14 34.0	+0.9
ERM	Erimo	146.47	315c	iPKP2	PKiKP	18 14 34.0	-0.3
ERM				pmax	pmax		
	comp=Z,210nm,1.3s						
ERM	Erimo	146.47	315	PKPab	PKPab	18 14 33.1	+0.5
ZSN	Zaisan	146.49	33	ePKP	PKPdf	18 14 30.6	+0.7
	baz=33						
ZSN	Zaisan	146.49	33	ePKP2	PKPdf	18 14 30.5	+0.7
BAKI	Biak	146.90	230	PKP	PKiKP	18 14 35.6	-0.5
DHRM	DHARAMSHALA	147.09	64	eP	PKPdf	18 14 32.6	+1.1
DHRM				IAmb	IAmb	18 14 36.4	
	comp=Z,35nm,0.9s						
GUMO	Guam	147.17	262	PKPbc	PKPbc	18 14 34.5	+0.3
	comp=Z,391nm,1.0s,baz=184,slow=9.7,SNR=6.5						
GUMO	Guam	147.17	262	PKIKP	PKPbc	18 14 33.7	-0.5
GUMO	Guam	147.17	262		PKPbc	18 14 33.7	-0.5
WSI	Waingapu	147.74	197	PKP	PKPab	18 14 40.0	+1.8
SMLA	Simla	148.00	66	eP	PKPdf	18 14 32.8	0.0
SMLA				IAmb	IAmb	18 14 36.8	
	comp=Z,35nm,1.1s						
KLR	Kul'dur	148.02	335	PKP	PKPdf	18 14 31.6	-0.6
	comp=Z,22nm,0.9s,baz=54,slow=2.7,SNR=30						
KLR				PKPbc	PKPbc	18 14 35.6	+0.1
	comp=Z,22nm,0.9s,baz=39,slow=3.8,SNR=26						
MMRI	Maumere	148.14	201	PKP	PKiKP	18 14 38.3	-0.3
EDFI	Ende, Flores	148.21	200	PKP	PKPdf	18 14 34.6	+0.8
FAKI	Fak Fak	148.23	222	PKP	PKPdf	18 14 34.7	+1.0
HYB	Hyderabad	148.80	92	i PKP	PKPdf	18 14 35.0	+0.5
HYB				epPKP	pPKPdf	18 15 07.0	+1.0
HYB				e		18 15 35.0	
HYB	Hyderabad	148.80	92	eP	PKPdf	18 14 35.7	+1.2
DDI	Dehra Dun	148.88	67	eP	PKPdf	18 14 36.2	+1.9
DDI				IAmb	IAmb	18 14 37.3	
	comp=Z,62nm,0.9s						
MOY	Mondy	148.90	13	ePKIKP	PKPdf	18 14 35.4	+1.6
MOY				e		18 15 08.2	
MOY				pmax	pmax		
	comp=Z,175nm,2.2s						
IRK	Irkutsk	148.90	8	ePKIKP	PKPdf	18 14 35.0	+1.4
IRK				e		18 15 09.8	
IRK				pmax	pmax		
	comp=Z,128nm,1.4s						
PLAI	Plampang	149.14	192	PKP	PKPbc	18 14 38.4	-1.0
TLY	Talaya	149.36	9	PKPbc	PKPbc	18 14 39.2	+0.3
	comp=Z,9.6nm,0.7s,baz=40,slow=4.0,SNR=6.7						
TLY	Talaya	149.36	9c	iPKP2	PKiKP	18 14 40.7	+0.7
TLY				pmax	pmax		
	comp=Z,53nm,1.7s						
TLY	Talaya	149.36	9		PKPdf	18 14 33.7	-0.7
TWSI	Taliwang, Sumb	149.39	191	PKP	PKiKP	18 14 40.8	-0.4
CIT	Chita	149.57	357	ePKHKP	PKPpre	18 14 36.4	
CIT				pmax	pmax		
	comp=Z,203nm,1.7s						
MSAI	Masohi	149.86	217	PKP	PKPdf	18 14 38.0	+1.7
JAGI	Jajag, Banyuwa	150.01	185	PKP	PKPdf	18 14 33.2	-3.4
SRBI	Singaraja	150.28	188	PKP	PKiKP	18 14 43.4	+0.4
WMQ	Urumqi	150.37	36	PKPbc	PKPdf	18 14 36.6	+0.3
WMQ				PP	PP	18 18 19.1	+1.4
WMQ				AMB	AMB		
	comp=Z,330nm,7.1s						
WMQ				LR	LR		
	comp=Z,1µm,28.8s						
WMQ				LR	LR		
	comp=Z,3µm,29.1s						
WMQ				LR	LR		
	comp=Z,3µm,28.9s						
SIJI	Sorong	150.42	224	PKP	PKPdf	18 14 37.3	+0.1
	comp=Z,11nm,0.9s,baz=212,slow=22,SNR=2.6						
SIJI				PKPbc	PKiKP	18 14 43.4	0.0
	comp=Z,152nm,0.8s,baz=92,slow=0.9,SNR=29						
SWI	Sorong	150.43	224	PKP	PKiKP	18 14 43.5	+0.2
ZAK	Zakamensk	150.56	11	ePKIKP	PKPdf	18 14 37.7	+1.2
ZAK				e		18 15 12.3	
ZAK				pmax	pmax		
	comp=Z,29nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.5s						
PWJI	Pagerwojo	150.58	181	PKP	PKPdf	18 14 36.8	-0.6
CMJI	Cimerak	150.67	174	PKP	PKiKP	18 14 44.4	+0.6
CISI	Cisompet, Garu	150.83	173		PKPbc	18 14 43.8	+0.2
CISI					pPKPbc	18 15 12.7	-2.0
CISI	Cisompet, Garu	150.83	173	PKP	PKiKP	18 14 44.2	0.0
NLAI	Namlea	150.93	214	PKP	PKiKP	18 14 44.6	+0.2
JYT	Yasato	151.01	307		PKiKP	18 14 43.6	-0.2
JYT					PKPab	18 14 51.8	+0.6
BSSI	Bau Bau, Buton	151.04	199	PKP	PKiKP	18 14 45.5	+0.9
KPJI	Karang Pucung	151.16	175	PKP	PKiKP	18 14 45.8	+1.0
CGJI	Cibinong	151.43	168	PKP	PKiKP	18 14 46.4	+1.0
LEM	Lembang	151.52	172	PKP	PKPdf	18 14 39.1	0.0
	comp=Z,46nm,0.9s,baz=125,slow=6.0,SNR=8.3						
LEM				PKPbc	PKiKP	18 14 46.5	+0.7
	comp=Z,180nm,0.8s,baz=63,slow=2.6,SNR=29						
DBJI	Dramaga	151.67	170	PKP	PKPdf	18 14 39.4	+0.3
USRK	Ussuriysk Ar.	151.73	328	PKP	PKPdf	18 14 39.1	+0.8
	comp=Z,5.4nm,0.9s,baz=331,slow=1.4,SNR=7.8						
USRK				PKPbc	PKiKP	18 14 45.3	+0.3
	comp=Z,32nm,0.9s,baz=13,slow=1.2,SNR=35						
USRK				pPKPbc	pPKPbc	18 15 16.2	+0.6
	comp=Z,14nm,0.7s,baz=82,slow=1.3,SNR=6.4						
USRK	Ussuriysk Ar.	151.73	328		PKPdf	18 14 38.5	+0.3
USRK				PKPbc	PKiKP	18 14 45.1	0.0
USRK					pPKPbc	18 15 15.1	-0.6
KASI	Kota Agung	152.22	165	PKP	PKiKP	18 14 48.4	+1.4
KAPI	Kappang	152.33	198	PKPbc	PKiKP	18 14 47.6	+0.4
	comp=Z,76nm,0.9s,baz=76,slow=9.9,SNR=17						
KAPI	Kappang	152.33	198	PKIKP	PKPbc	18 14 47.0	0.0
KAPI						18 14 58.6	
KAPI	Kappang	152.33	198		PKPbc	18 14 47.0	0.0
KAPI				PKPab	PKPab	18 14 58.6	+1.5
MJAR	Matsushiro Arr	152.35	308	PKPbc	PKiKP	18 14 46.7	+0.1
	comp=Z,27nm,0.9s,baz=82,slow=1.8,SNR=40						
MJAR				pPKPbc	pPKPbc	18 15 17.8	+0.4
	comp=Z,14nm,0.9s,baz=118,slow=1.1,SNR=4.2						
MJAR	Matsushiro Arr	152.35	308	PKIKP	PKPbc	18 14 46.5	+0.1
MJAR						18 14 56.6	
MJAR	Matsushiro Arr	152.35	308		PKPbc	18 14 46.5	+0.1
MJAR				PKPab	PKPab	18 14 56.6	-0.2
MJAR					pPKPbc	18 15 16.8	-0.5
MAJO	Matsushiro	152.35	308	PKIKP	PKPbc	18 14 46.4	0.0
MAJO						18 14 57.1	
MAJO	Matsushiro	152.35	308		PKPbc	18 14 46.4	0.0
MAJO				PKPab	PKPab	18 14 57.1	+0.3
MAT	Matsushiro	152.35	308	PKP	PKiKP	18 14 46.6	0.0
SANI	Sanana	152.52	213	PKP	PKiKP	18 14 48.4	+0.8
BLSI	Bandar Lampung	152.54	167	PKP	PKPdf	18 14 41.4	+1.0
SPSI	Sidrap Palu	153.32	199	PKP	PKiKP	18 14 50.8	+1.5
SONM	Songino Array	153.50	8	PKP	PKPdf	18 14 42.2	+1.2
	comp=Z,12nm,0.9s,baz=313,slow=0.3,SNR=60						
SONM				PKPbc	PKiKP	18 14 49.7	+0.9
	comp=Z,9.2nm,0.8s,baz=345,slow=1.2,SNR=15						
SONM				pPKP	pPKPdf	18 15 10.0	-2.1
	comp=Z,8.5nm,0.6s,baz=278,slow=1.2,SNR=5.7						
SONM				pPKPbc	pPKPbc	18 15 18.9	-1.0
	comp=Z,5.2nm,0.6s,baz=328,slow=2.4,SNR=2.8						
SONM	Songino Array	153.50	8		PKPdf	18 14 41.2	+0.3
SONM				PKPbc	PKiKP	18 14 49.7	+0.9
ULN	Ulaanbaatar	153.55	7	PKIKP	PKiKP	18 14 49.1	+0.2
ULN	Ulaanbaatar	153.55	7		PKPdf	18 14 42.0	+0.9
ULN				PKPbc	PKiKP	18 14 49.1	+0.2
ULN				PKPab	PKPab	18 15 02.6	+1.0
DANN	Dangsing	154.09	69	eP	PKPdf	18 14 43.3	+0.7
	comp=Z,68nm,1.0s						
LUWI	Luwuk	154.91	208	PKP	PKiKP	18 14 56.3	+3.7
JWT	Wachi	154.94	308		PKPdf	18 14 42.1	-1.1
CN2	Changchun	154.96	335	eP	PKPab	18 15 06.9	-0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
DMN	Daman	155.38	71	eP	PKPdf	18 14 44.8	+0.4
KKN	Kakani	155.51	70	eP	PKPdf	18 14 44.5	0.0
	comp=Z,23nm,1.0s						
PKIN	Phulchoki	155.64	71	eP	PKPdf	18 14 44.2	-0.5
	comp=Z,82nm,1.7s						
PKI	Pulchoki	155.65	71	eP	PKPdf	18 14 44.0	-0.8
	comp=Z,70nm,1.7s						
GUN	Gumba	156.01	70	eP	PKPdf	18 14 45.4	+0.1
	comp=Z,108nm,1.6s						
RAMN	Ramite	156.79	72	eP	PKPdf	18 14 46.7	+0.5
	comp=Z,136nm,1.6s						
MPSI	Mapaga	157.31	203	PKP	PKPdf	18 14 49.3	+2.3
ODAN	Odare	157.50	72	eP	PKPdf	18 14 47.3	+0.2
	comp=Z,56nm,1.1s						
TOLI2	Tolitoli	157.69	205	PKPdf	PKPdf	18 14 45.5	-1.9
TOLI2					PKPab	18 15 19.8	-0.2
TAPN	Taplejung	157.71	70	eP	PKPdf	18 14 47.6	+0.2
	comp=Z,65nm,1.5s						
PSI	Prapat	157.74	145	PKP	PKPdf	18 14 46.3	-1.3
	comp=Z,9.0nm,1.0s,baz=181,slow=2.8,SNR=7.9						
PSI				PKPab	PKPab	18 15 19.9	-0.5
	comp=Z,19nm,0.9s,baz=180,slow=4.5,SNR=12						
KSRS	Korea Array	158.68	321	PKP	PKPdf	18 14 47.4	-0.5
	comp=Z,12nm,0.9s,baz=43,slow=1.0,SNR=29						
KSRS				pPKP	pPKPdf	18 15 19.2	+0.1
	comp=Z,6.7nm,0.9s,baz=99,slow=0.8,SNR=5.6						
KSRS				pPKPab	pPKPab	18 15 54.5	+0.6
	comp=Z,5.0nm,0.9s,baz=50,slow=4.2,SNR=3.2						
KSAR	Wonju Array Be	158.71	322		PKPdf	18 14 48.4	+0.4
KSAR					pPKPab	18 15 53.4	-0.6
PBA	Port Blair	159.60	116	eP	PKPdf	18 14 53.3	+3.7
GTA	Gaotai	159.66	27	PKP	PKPdf	18 14 50.3	+1.1
KSM	Kuching	159.98	177		PKPdf	18 14 49.2	-1.0
KSM				PKPab	PKPab	18 15 29.6	-0.3
KSM					pPKPab	18 16 01.8	+2.0
LSA	Lhasa	160.06	62	PKP	PKPdf	18 14 51.6	+1.2
IPM	Ipoh	160.24	148		PKPdf	18 14 48.9	-1.5
KULM	Kulim	160.74	146		PKPdf	18 14 50.1	-0.8
HHC	Hu-ho-hao-te	160.79	360	ePKP	PKPdf	18 14 52.2	+1.8
BTO	Baotou	161.00	3	ePKP	PKPdf	18 14 50.7	+0.1
BJI	Beijing	161.16	349	PKP	PKPdf	18 14 52.0	+1.4
SAIH	SAIHA	162.91	84	eP	PKPdf	18 14 54.8	+1.7
SAIH				IAmb	IAmb	18 14 56.3	
	comp=Z,103nm,1.3s						
ZIRO	ZIRO	162.98	66	eP	PKPdf	18 14 52.9	-0.2
KOHI	KOHIMA	163.64	72	eP	PKPdf	18 14 55.0	+1.3
KOHI				IAmb	IAmb	18 14 56.5	
	comp=Z,51nm,1.3s						
MOKO	MOKOCHONG	163.87	70	eP	PKPdf	18 14 55.2	+1.3
MOKO				IAmb	IAmb	18 14 56.7	
	comp=Z,30nm,0.8s						
LZH	Lanzhou	164.12	23	⇑PKP	PKPdf	18 14 56.1	+2.2
LZH				LR	LR		
	comp=Z,150nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,19.1s						
LZH				LR	LR		
	comp=Z,200nm,21.2s						
XAN	Xi'an	167.40	9	PKP	PKPdf	18 14 57.4	+0.9
NJ2	Nanjing	167.63	329	ePKP	PKPdf	18 14 56.5	-0.1
CM32	Chiang Mai Arr	167.86	102	P	PKPdf	18 14 58.0	+0.9
CMAR	Chiang Mai Arr	167.89	103	PKP	PKPdf	18 14 57.9	+0.7
	comp=Z,8.9nm,1.0s,baz=272,slow=1.7,SNR=51						
CMAR				pPKP	pPKPdf	18 15 29.3	+0.8
	comp=Z,3.9nm,0.9s,baz=272,slow=1.8,SNR=3.6						
CMAR				PKPab	PKPab	18 16 04.9	0.0
	comp=Z,1.7nm,0.9s,baz=252,slow=5.3,SNR=4.5						
CMAR				pPKPab	pPKPab	18 16 35.8	+0.9
	comp=Z,5.3nm,0.9s,baz=255,slow=5.4,SNR=5.0						
CMAR				PP	PP	18 19 57.5	+3.4
	comp=Z,1.5nm,0.9s,baz=269,slow=5.8,SNR=5.2						
CMAR	Chiang Mai Arr	167.89	103	pPKPab	pPKPab	18 16 35.0	+0.1
CMAR	Chiang Mai Arr	167.89	103	pPKPdf	pPKPdf	18 15 29.1	+0.6
CHTO	Chiang Mai	167.99	101		PKPdf	18 14 57.8	+0.6
CHTO					pPKPdf	18 15 26.1	-2.5
CHTO					PKPab	18 16 04.7	-0.6
CHTO					pPKPab	18 16 35.2	-0.2
CM33	Chiang Mai Arr	167.99	101	P	PKPdf	18 14 57.0	-0.2
CMMT	Chiang Mai	167.99	101	P	PKPdf	18 14 58.0	+0.8
CM36	Chiang Mai Arr	168.04	103	P	PKPdf	18 14 57.0	-0.3
CM35	Chiang Mai Arr	168.14	102	P	PKPdf	18 14 57.0	-0.3
SUKH	Sukhothai	168.18	108	P	PKPdf	18 14 59.0	+1.6
CM34	Chiang Mai Arr	168.19	101	P	PKPdf	18 14 58.0	+0.6
CD2	Chengdu	168.46	35	PKP	PKPdf	18 14 56.4	-0.9
CD2				pPKP	pPKPdf	18 15 29.3	+0.5
PHIT	Phitsanulok	168.76	111	P	PKPdf	18 15 00.3	+2.5
PAYA	Payao	168.97	100	P	PKPdf	18 14 58.0	+0.1
UTTA	Uttaradit	169.10	109	P	PKPdf	18 14 59.1	+1.2
WHN	Wuhan	170.69	344	⇑PKP	PKPdf	18 14 59.8	+1.3
WHN				pPKP	pPKPdf	18 15 31.5	+1.7
KMI	Kunming	171.30	64	PKP	PKPdf	18 14 59.7	+0.4
SLVN	Son La	173.02	91		PKPdf	18 15 00.5	+0.5
GYA	Guiyang	173.50	41	⇓PKP	PKPdf	18 15 00.6	+0.5

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*IDC **10** 18:18:08.7±1.4, 30°.31S×178°.19W, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.7/35, mbtmp3.8/4, Error ellipse: s-maj=36.5km s-min=24.9km az=113.0*

*NEIC **10** 18:18:16.5±0.9, 30°.00S±0°.10×178°.1W±0°.2, h73^{km}±12^{km}, mb4.6/6, Error ellipse: s-maj=27.3km s-min=13.9km az=98.0*

ISC 10 18:18:13.8±1.2**, 30°.17S**±0°.08×**178°.1W**±0°.2**, h50**^{km}**, n15,** σ**2^{s}92**/16**, mb4.1**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.92	8	Pn	Pn	18 18 30.6	0.0
	29nm,0.3s,baz=86,slow=22,SNR=1.3						
RAO				Sn	Sn	18 18 44.1	+1.3
	315nm,0.3s,baz=149,slow=19,SNR=8.9						
RAO	Raoul Island	0.92	8	Sn	Sn	18 18 44.2	+1.4
MXZ	Matakaoa Point	7.96	201	Pn	Pn	18 20 11.6	+4.6
OUZ	Omahuta	8.64	232	Pn	Pn	18 20 20.4	+4.2
URZ	Urewera	9.00	205	Pn	Pn	18 20 20.1	-1.0
URZ					Sn	18 21 53.3	-7.7
TOO	Toolangi	31.00	246	P	P	18 24 26.3	-0.4
TOO				IAmb	IAmb	18 24 59.9	
	comp=Z,27nm,1.6s						
STKA	Stephens Creek	34.47	257	P	P	18 24 57.1	+0.1
	comp=Z,1.4nm,0.5s,baz=113,slow=15,SNR=3.6						
ASAR	Alice Springs	43.06	267	P	P	18 26 09.2	+0.1
	comp=Z,0.5nm,0.8s,baz=105,slow=7.4,SNR=7.4						
WR0	Warramunga Arr	43.85	272	P	P	18 26 15.5	+0.1
WR0				IAmb	IAmb	18 26 53.1	
	comp=Z,12nm,1.2s						
WB2	Warramunga Arr	44.02	272	P	P	18 26 17.0	+0.3
WB2				IAmb	IAmb	18 26 54.8	
	comp=Z,20nm,1.6s						
WRA	Warramunga Arr	44.03	272	P	P	18 26 16.8	-0.1
	comp=Z,0.8nm,0.6s,baz=111,slow=8.1,SNR=6.5						
WB0	Warramunga Arr	44.05	272	P	P	18 26 17.1	+0.1
QSPA	South Pole Qui	59.94	180	P	P	18 28 17.2	+2.5
	comp=Z,0.7nm,0.7s,baz=341,slow=0.8,SNR=7.5						
QSPA	South Pole Qui	59.94	180	IAmb	IAmb	18 28 23.6	
	comp=Z,3.9nm,1.4s						
FINES	FINESS Array B	144.91	340	PKPbc	PKPab	18 37 43.3	-0.6
	comp=Z,0.9nm,0.7s,baz=45,slow=4.1,SNR=6.3						

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*BGR **10** 18:23:31.9±0.0, 64°.89N×20°.29W, h10^{km}, mb4.6*

*REY **10** 18:23:39.2, 64°.67N×17°.47W, h8^{km}*

*IDC **10** 18:23:39.6±0.5, 64°.62N×17°.66W, h0^{km}, mb3.9/19, mb1 4.1/22, mb1mx3.9/52, mbtmp4.0/22, ML3.4/3, MS3.6/6, Ms1 3.7/6, ms1mx3.2/48, Error ellipse: s-maj=16.7km s-min=8.9km az=17.0*

*NEIC **10** 18:23:41.1±1.2, 64°.56N±0°.07×17°.4W±0°.1, h8^{km}±3^{km}, mb4.7/86, Error ellipse: s-maj=10.5km s-min=8.0km az=158.0*

ISC 10 18:23:40.1±0.6**, 64°.67N**±0°.02×**17°.52W**±0°.02**, h1**^{km}±4^{km}**, n182,** σ**1^{s}74**/204**, mb4.6**/62**, MS3.7**/5**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.14	28	P	Pg	18 23 42.0	-0.8
	baz=20						
IHAM	Hamarinn	0.23	215	P	Pg	18 23 44.6	+0.1
	baz=219						
IKVE	Kverkfjoll	0.36	88	P	Pg	18 23 45.7	-1.4
	baz=89						
ISKR	Skrokkalda	0.39	254	P	Pg	18 23 46.4	-1.1
	baz=255						
THOR	Thorvaldshraun	0.45	53	P	Pg	18 23 47.1	-1.6
	baz=52						
THOR				S	Sg	18 23 54.2	-0.2
	baz=52						
IJOK	Jokulheimar	0.47	221	P	Pg	18 23 47.8	-1.3
	baz=223						
IASK	Askja	0.54	44	P	Pg	18 23 48.5	-1.8
	baz=42						
IASK				S	Sg	18 23 55.7	-1.6
	baz=42						
IMKO	Mokollar	0.59	58	P	Pg	18 23 49.4	-2.0
	baz=57						
IIEY	Innrieyrar	0.63	205	P	Pg	18 23 50.2	-1.9
	baz=207						
IIEY				S	Sg	18 23 59.7	-0.7
	baz=207						
ISVA	Svartarkot	0.68	9	P	Pg	18 23 51.1	-2.0
	baz=7.6						
ISVA				S	Sg	18 24 00.3	-1.6
	baz=7.6						
IKSK	Karasker	0.68	138	P	Pg	18 23 50.6	-2.5
	baz=140						
IKSK				S	Sg	18 23 59.8	-2.2
	baz=140						
IKAL	Kalfafell	0.73	186	P	Pg	18 23 51.8	-2.2
	baz=188						
IKAL				S	Sg	18 24 01.6	-1.8
	baz=188						
IVSH	V-Sauoahnukur	0.78	79	P	Pg	18 23 52.4	-2.6
	baz=79						
IVSH				S	Sg	18 24 02.0	-3.1
	baz=79						
IFAG	Fagurholsmyri	0.88	154	P	Pg	18 23 54.6	-2.4
	baz=156						
IFAG				S	Sg	18 24 05.4	-3.0
	baz=156						
IHVE	Hveravellir	0.90	284	P	Pg	18 23 54.6	-2.7
	baz=283						
IADA	Aoalbol	0.90	66	P	Pg	18 23 54.3	-3.0
	baz=66						
IADA				S	Sg	18 24 04.9	-4.1
	baz=66						
IMEL	Melhnausar	0.97	22	P	Pg	18 23 55.9	-2.9
	baz=20						
IREN	Reynihlio	1.02	14	P	Pg	18 23 56.6	-2.9
	baz=13						
ISNB	Snabyli	1.06	208	P	Pg	18 23 57.7	-2.5
	baz=209						
ISNB				S	Sg	18 24 11.1	-2.9
	baz=209						
IKVO	Krokottuvotn	1.08	14	P	Pg	18 23 57.7	-3.1
	baz=13						
IGRS	Grimsstaoir	1.14	31	P	Pg	18 23 58.6	-3.3
	baz=30						
IFED	Fedgar	1.15	237	P	Pg	18 23 59.6	-2.4
	baz=237						
IRJU	Rjupnafell	1.17	206	P	Pg	18 23 59.7	-2.8
	baz=207						
IRJU				S	Sg	18 24 14.6	-3.0
	baz=207						
IMJO	Mjoaskard	1.20	233	P	Pg	18 24 00.5	-2.4
	baz=233						
ISKI	Skildingahlsh	1.22	10	P	Pg	18 24 00.1	-3.4
	baz=8.5						
IGYG	Gygjarholskot	1.23	253	P	Pg	18 24 00.3	-3.3
	baz=253						
IGHA	Grjothals	1.23	17	P	Pg	18 24 00.0	-3.7
	baz=16						
IGRA	Granastaoir	1.25	359	P	Pg	18 24 00.6	-3.5
	baz=358						
IHAU	Haukadalur	1.28	238	P	Pg	18 24 01.2	-3.3
	baz=238						
IDIM	Dimmadalss	1.32	10	P	Pg	18 24 01.6	-3.7
	baz=9.6						
IHLA	Hella	1.33	344	P	Pg	18 24 02.0	-3.5
	baz=344						
IHED	Heoinshofoi	1.42	3	P	Pn	18 24 03.2	-3.8
	baz=2.6						
IESK	Eystri-Skogar	1.43	217	P	Pn	18 24 04.2	-2.9
	baz=218						
ISAU	Saurbar	1.43	243	P	Pn	18 24 03.4	-3.8
	baz=243						
IBRE	Brettingsstaoi	1.47	354	P	Pn	18 24 04.1	-3.5
	baz=353						
IGIL	Gilhagi	1.50	19	P	Pn	18 24 04.3	-3.7
	baz=18						
ISIG	Siglufjorour	1.58	339	P	Pn	18 24 05.7	-3.5
	baz=338						
BORG	Borgarnes	1.64	274	Pg	Pn	18 24 07.5	-2.4
	95nm,0.3s,baz=104,slow=8.5,SNR=74						
BORG				Lg	Lg	18 24 30.1	
	36nm,0.3s,baz=344,slow=23,SNR=17						
BORG				LR	LR	18 24 44.1	
	comp=Z,580nm,20.1s,baz=102,slow=41						
BORG	Borgarnes	1.64	274	Pn	Pn	18 24 06.9	-3.0
ISOL	Solvholt	1.67	245	P	Pn	18 24 07.6	-2.7
	baz=245						
SCO	Scoresbysund	6.08	346	Pn	Pn	18 25 10.7	-0.2
SCO	Scoresbysund	6.08	346	e	Pn	18 25 03.8	-7.1
	baz=159,slow=9.3						
SCO				i P	Pn	18 25 10.0	-0.9
SCO				i S	Sn	18 26 22.7	+1.7
SCO				IAML		18 26 33.0	
	comp=Z,3.2nm,0.4s						
SUMG	Summit	10.94	325	i P	Pn	18 26 25.0	+7.2
SUMG	Summit	10.94	325	i P	Pn	18 26 25.0	+7.2
EKA	Eskdalemuir Ar	11.77	136	Pn	Pn	18 26 28.6	-0.2
	baz=324,slow=13,SNR=7.5						
DAG	Danmarks Havn	12.17	359	i P	Pn	18 26 37.3	+3.1
DAG	Danmarks Havn	12.17	359	i P	Pn	18 26 37.4	+3.1
NRS	Narsarsuaq	13.13	267	Pn	Pn	18 26 45.0	-2.4
NOA	NORSAR Array B	13.54	92	LR	LR	18 31 27.2	
	comp=Z,147nm,19.8s,baz=260,slow=34						
HFS	Hagfors	15.05	93	Pn	Pn	18 27 14.1	+0.5
	comp=Z,0.1nm,0.3s,baz=270,slow=10,SNR=1.6						
FINES	FINESS Array B	19.71	79	P	Pn	18 28 12.2	+0.3
	comp=Z,0.1nm,0.3s,baz=280,slow=8.2,SNR=2.1						
TULEG	Thule	19.84	327	P	P	18 28 12.0	+0.2
CLL	Collm	20.71	116	eP	P	18 28 22.0	+0.5
	comp=Z,84nm,2.0s						
CLL	Collm	20.71	116	P	P	18 28 20.7	-0.8
CLL				IAmb	IAmb	18 28 25.1	
	comp=Z,50nm,1.6s						
GRF	Grafenberg Arr	21.34	121	eP	P	18 28 30.7	+2.4
	comp=Z,43nm,1.7s,baz=323,slow=10						
BRG	Berggiesshubel	21.42	115	eP	P	18 28 30.5	+1.4
BRG				Amp		18 28 32.8	
	comp=Z,48nm,1.9s						
BRG	Berggiesshubel	21.42	115	eP	P	18 28 30.5	+1.4
BRG				Amp		18 28 32.8	
	comp=Z,48nm,1.9s						
KHC	Kasperske Hory	22.68	118	eP	P	18 28 43.1	+0.4
KHC				epP	sP	18 28 47.1	+3.2
DPC	Dobruska-Polom	22.77	113	eP	P	18 28 44.3	+0.7
GERES	GERESS Array B	22.96	119	P	P	18 28 47.1	+1.4
	comp=Z,1.4nm,0.5s,baz=344,slow=10,SNR=2.4						
DAVOX	Davos/Dischmat	23.33	127	P	P	18 28 49.9	+0.4
	comp=Z,2.4nm,0.8s,baz=321,slow=7.4,SNR=4.3						
EUNU	Eureka	23.66	336	P	P	18 28 52.6	+0.1
EUNU				IAmb	IAmb	18 29 17.2	
	comp=Z,36nm,1.6s						
VRAC	Vranov	23.70	114	P	P	18 28 53.1	+0.1
	comp=Z,2.1nm,0.6s,baz=335,slow=13,SNR=3.1						
MORC	Moravsky Berou	23.71	112	P	P	18 28 52.2	-1.0
MORC				IAmb	IAmb	18 29 05.9	
	comp=Z,60nm,1.9s						

NACGM	Naroch	23.83	93	i P	P	18 28 55.2	+1.0
NACGM				i P	P	18 28 55.2	+1.0
NACGM				i P	P	18 28 55.2	+1.0
NACGM				i Pb	sP	18 28 56.0	+0.9
	comp=Z,24nm,1.6s						
NACGM				i PP	PnPn	18 29 23.0	+1.5
NACGM				i PPP	PPP	18 29 30.9	
NACGM				i S	S	18 33 07.0	-3.5
NACGM				i SS	Sn	18 33 28.8	-3.3
NACGM				i SSS	SSS	18 34 00.8	
NACGM				i LQ	LQ	18 36 30.5	
NACGM				i LR	LR	18 37 46.8	
OJC	Ojcow	24.27	109	P	P	18 28 57.0	-1.4
OJC				IAmb	IAmb	18 29 10.5	
	comp=Z,33nm,2.0s						
SALO	Salr	24.56	127	P	P	18 29 00.4	-0.7
CTI	Castel Tesino	24.57	125	P	P	18 29 00.9	-0.4
LANS	Liptovska Anna	24.97	111	eP	P	18 29 08.0	+3.2
COI	Coimbra	25.07	163	P	P	18 29 04.2	-1.5
VYHS	Vyhne	25.24	112	eP	P	18 29 10.1	+2.9
TRI	Trieste	25.62	123	P	P	18 29 09.6	-1.1
VLC	Villacollemand	25.80	129	P	P	18 29 09.6	-2.7
ESDC	Sonseca Array	26.26	156	P	P	18 29 16.6	+0.1
	comp=Z,1.8nm,0.8s,baz=348,slow=9.2,SNR=12						
ESDC				LR	LR	18 38 32.1	
	comp=Z,154nm,20.3s,baz=250,slow=34						
ESDC	Sonseca Array	26.26	156	P	P	18 29 15.4	-1.1
KOLS	Kolonicke sedl	26.28	108	eP	P	18 29 20.0	+3.3
RES	Resolute Bay	26.46	324	LR	LR	18 40 08.5	
	comp=Z,73nm,19.8s,baz=50,slow=37						
OSSC	Osservatorio P	26.65	129	P	P	18 29 20.0	0.0
AKASG	Malin Array Be	27.85	98	P	P	18 29 30.3	-0.4
	comp=Z,1.1nm,0.8s,baz=325,slow=9.8,SNR=3.1						
PDG	Podgorica	30.46	119	P	P	18 29 52.2	-1.7
KEST	Kesra	33.16	138	P	P	18 30 17.0	-0.9
	comp=Z,5.7nm,1.1s,baz=213,slow=14,SNR=3.5						
BRTR	Keskin Array B	38.49	105	P	P	18 31 03.5	0.0
	comp=Z,0.9nm,0.7s,baz=342,slow=14,SNR=2.4						
YKA	Yellowknife Ar	39.20	313	P	P	18 31 09.2	+0.1
	comp=Z,2.6nm,1.1s,baz=36,slow=9.0,SNR=14						
YKA				PcP	PcP	18 33 18.1	0.0
	comp=Z,0.9nm,1.1s,baz=41,slow=3.9,SNR=5.5						
A21K	Barrow	41.42	341	P	P	18 31 28.0	+0.6
A21K				IAmb	IAmb	18 31 30.4	
	comp=Z,26nm,1.2s						
ALLY	Alegheny Colle	41.76	268	P	P	18 31 30.9	+0.4
ABKAR	Akbulak array	42.00	73	P	P	18 31 32.1	-0.2
ABKAR				PP	PP	18 33 10.8	+1.7
ABKAR	Akbulak array	42.00	73	P	P	18 31 31.9	-0.5
ABKAR				IAmb	IAmb	18 31 37.4	
	comp=Z,10nm,1.6s						
TIXI	Tiksi	42.03	15	P	P	18 31 33.3	+1.0
TOLK	Toolik Lake Re	42.74	336	P	P	18 31 39.2	+1.0
TOLK				IAmb	IAmb	18 31 40.9	
	comp=Z,15nm,1.1s						
AGMN	Agassiz Nation	43.11	287	P	P	18 31 41.8	+0.4
AGMN				IAmb	IAmb	18 31 48.5	
	comp=Z,30nm,1.8s						
BRVK	Borovoye	43.14	62	P	P	18 31 41.2	-0.4
BRVK				IAmb	IAmb	18 31 47.6	
	comp=Z,17nm,1.8s						
N51A	Ashland	43.32	269	P	P	18 31 43.0	-0.1
FYU	Fort Yukon	43.77	333	P	P	18 31 48.4	+2.0
N49A	Columbus Grove	44.09	271	P	P	18 31 49.8	+0.4
COLD	Coldfoot	44.11	336	P	P	18 31 50.2	+1.0
DAWY	Dawson	44.69	328	P	P	18 31 54.6	+0.6
DAWY				IAmb	IAmb	18 32 01.3	
	comp=Z,8.9nm,1.4s						
IL31		45.68	332	P	P	18 32 02.9	+1.2
IL31				IAmb	IAmb	18 32 05.8	
	comp=Z,12nm,1.5s						
ILAR	Eielson Array	45.68	332	P	P	18 32 02.0	+0.3
	comp=Z,3.0nm,1.1s,baz=25,slow=6.2,SNR=18						
ILAR				PcP	PcP	18 33 39.2	-0.3
	comp=Z,1.1nm,0.9s,baz=358,slow=2.5,SNR=6.8						
ILAR	Eielson Array	45.68	332	P	P	18 32 02.8	+1.1
ILAR					PcP	18 33 39.0	-0.6
MDM	Murphy Dome	45.78	333	P	P	18 32 03.7	+1.2
MDM				IAmb	IAmb	18 32 05.7	
	comp=Z,11nm,1.2s						
COLA	College	45.78	333	P	P	18 32 03.4	+1.0
COLA				IAmb	IAmb	18 32 06.4	
	comp=Z,15nm,1.3s						
TCOL	CIGO, UAF Yank	45.78	333	P	P	18 32 03.4	+0.9
TCOL				IAmb	IAmb	18 32 06.5	
	comp=Z,14nm,1.3s						
SFIN	Lafayette	45.80	273	P	P	18 32 02.6	-0.3
I23K	Minto, Yukon-K	45.82	334	P	P	18 32 04.2	+1.4
I23K				IAmb	IAmb	18 32 07.3	
	comp=Z,8.7nm,1.2s						
P48A	Milroy	45.84	271	P	P	18 32 03.6	+0.3
CCB	Clear Creek Bu	45.97	333	P	P	18 32 04.8	+0.8
CCB				IAmb	IAmb	18 32 12.9	
	comp=Z,8.1nm,1.6s						
PAX	Paxson	46.99	330	P	P	18 32 13.3	+1.1
BPAW	Bear Paw Mtn.	47.08	334	P	P	18 32 13.8	+1.1
BPAW				IAmb	IAmb	18 32 16.5	
	comp=Z,11nm,1.5s						
ZAA0	Zalesovo Array	47.64	51	P	P	18 32 18.3	+1.1
ZAA0				PcP	PcP	18 33 46.0	-0.6
ZALV	Zalesovo Beam	47.64	51	P	P	18 32 17.7	+0.5
	comp=Z,1.1nm,0.7s,baz=350,slow=7.5,SNR=6.2						
ZALV	Zalesovo Beam	47.64	51	P	P	18 32 17.2	0.0
ZALV				PcP	PcP	18 33 46.0	-0.6
KMSC	Kings Mountain	47.71	264	P	P	18 32 18.5	+0.5
KMSC				IAmb	IAmb	18 32 20.0	
	comp=Z,8.4nm,0.9s						
KURK	Kurchatov	48.12	58	P	P	18 32 20.2	-0.7
KURK				IAmb	IAmb	18 32 23.9	
	comp=Z,7.4nm,1.1s						
KURBB	Kurchatov Arra	48.16	58	P	P	18 32 21.3	0.0
	comp=Z,3.7nm,0.9s,baz=323,slow=7.5,SNR=22						
LAO	LASA Array	48.59	293	P	P	18 32 26.1	+1.4
LAO				IAmb	IAmb	18 32 27.8	
	comp=Z,13nm,1.2s						
EGMT	Eagleton	48.87	297	P	P	18 32 27.4	+0.6
HRY	Holter Researc	50.74	298	P	P	18 32 42.0	+0.8
RLMT	Red Lodge	51.08	295	P	P	18 32 44.6	+0.7
YAK	Yakutsk	51.27	19	P	P	18 32 44.0	-0.8
	comp=Z,1.7nm,0.4s,baz=302,slow=22,SNR=12						
KK31	Karatay Array	51.28	70	P	P	18 32 45.1	-0.1
KKAR	Karatay Array	51.28	70	P	P	18 32 45.5	+0.3
KKAR	Karatay Array	51.28	70	P	P	18 32 45.2	0.0
KKAR				IAmb	IAmb	18 32 47.2	
	comp=Z,7.9nm,1.4s						
YNE	Yellowstone No	51.46	295	P	P	18 32 47.1	+0.3
BOZ	Bozeman (W)	51.60	297	P	P	18 32 48.1	+0.4
BOZ				IAmb	IAmb	18 32 50.0	
	comp=Z,7.0nm,1.1s						
YMP	Mirror Lake Pl	51.74	295	P	P	18 32 50.0	+1.0
YHB	Horse Butte	52.14	296	P	P	18 32 52.3	+0.5
H17A	Grant Village	52.20	295	P	P	18 32 53.7	+1.4
H17A				IAmb	IAmb	18 32 57.5	
	comp=Z,8.2nm,1.2s						
MAKZ	Makanchi	52.60	59	P	P	18 32 54.7	-0.3
MCMT	McKenzie Canyo	52.71	297	P	P	18 32 57.0	+0.9
MK31	Makanchi Array	52.73	58	P	P	18 32 55.5	-0.4
MKAR	Makanchi Array	52.73	58	P	P	18 32 56.1	+0.1
	comp=Z,1.7nm,0.9s,baz=337,slow=6.4,SNR=13						
MKAR	Makanchi Array	52.73	58	P	P	18 32 55.5	-0.4
TORD	Torodi Ar. Bea	53.15	156	P	P	18 32 57.6	-1.6
	comp=Z,1.2nm,0.9s,baz=340,slow=8.5,SNR=5.5						
TORD	Torodi Ar. Bea	53.15	156	P	P	18 32 58.0	-1.3
BW06	Boulder Array	53.17	293	P	P	18 32 59.0	-0.4
BW06				IAmb	IAmb	18 33 00.2	
	comp=Z,7.2nm,1.1s						
PD31	Pinedale Array	53.17	293	P	P	18 32 58.6	-0.8
PDAR	Pinedale Array	53.17	293	P	P	18 32 58.4	-1.1
	comp=Z,2.6nm,0.9s,baz=54,slow=7.5,SNR=16						
PDAR				LR	LR	18 53 58.1	
	comp=Z,95nm,18.7s,baz=108,slow=34						
PDAR	Pinedale Array	53.17	293	P	P	18 32 58.6	-0.8
REDW	Red Top Meadow	53.17	295	P	P	18 33 00.3	+0.8
REDW				IAmb	IAmb	18 33 35.4	
	comp=Z,9.2nm,1.6s						
KAN10	Anthony SW Sta	53.22	280	P	P	18 33 00.0	+0.4
AAK	Ala-Archa	53.27	67	P	P	18 33 00.3	+0.2
AAK				IAmb	IAmb	18 33 02.3	
	comp=Z,15nm,1.7s						
N23A	Red Feather La	53.30	289	P	P	18 33 00.6	+0.1
N23A				IAmb	IAmb	18 33 02.3	
	comp=Z,14nm,1.2s						
TCUT	Toone Canyon	55.30	294	P	P	18 33 15.4	+0.3
KSH	Kashi	56.51	68	P	P	18 33 26.3	+2.7
KSH				pP	sP	18 33 29.1	+4.6
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH				pmax	pmax		
	comp=Z,580nm,7.2s						
NLU	North Lily Min	56.55	293	P	P	18 33 24.8	+0.8
PV14	Lion Creek, Pa	56.69	290	P	P	18 33 25.1	+0.1
PV14				IAmb	IAmb	18 33 26.1	
	comp=Z,5.6nm,1.0s						
PV11	David Mesa, Pa	56.69	290	P	P	18 33 24.7	-0.2
PV16	Nyswonger Mesa	56.70	290	P	P	18 33 24.8	-0.2
PV16				IAmb	IAmb	18 33 27.3	
	comp=Z,8.3nm,1.3s						
PV01	Paradox Valley	56.71	289	P	P	18 33 24.9	-0.3
PV03	Paradox Valley	56.72	290	P	P	18 33 25.2	0.0
PV03				IAmb	IAmb	18 33 26.5	
	comp=Z,7.0nm,1.1s						
PV17	East Wray Mesa	56.74	290	P	P	18 33 25.8	+0.4
PV17				IAmb	IAmb	18 33 49.2	
	comp=Z,9.2nm,1.5s						
PV13	Radium Mtn., P	56.79	290	P	P	18 33 26.1	+0.4
PV13				IAmb	IAmb	18 33 27.0	
	comp=Z,11nm,1.1s						
PV05	Paradox Valley	56.97	290	P	P	18 33 26.5	-0.5
PV05				IAmb	IAmb	18 33 29.8	
	comp=Z,7.5nm,1.0s						
WMQ	Urumqi	57.24	56	eP	P	18 33 31.7	+3.1
MSU	Marysvale	57.83	293	P	P	18 33 34.2	+1.1
MTPU	Mount Pierson	58.24	292	P	P	18 33 35.8	-0.3
DBIC	Dimbokro	58.59	165	P	P	18 33 37.5	-0.8
	comp=Z,2.2nm,0.9s,baz=330,slow=9.6,SNR=3.4						
PKCU	Pink Cliffs	58.81	292	P	P	18 33 40.6	+0.6
SZCU	Shurtz Canyon	58.98	293	P	P	18 33 42.0	+0.9
R11A	Troy Canyon, C	59.31	295	P	P	18 33 44.2	+0.8
R11A				IAmb	IAmb	18 33 45.2	
	comp=Z,7.8nm,1.4s						
PAHR	Pah Rah Range	59.59	299	P	P	18 33 46.2	+1.0
JCT	Junction City	59.64	277	P	P	18 33 45.8	+0.3
U15A	North Rim	59.68	291	P	P	18 33 45.9	-0.1
WUAZ	Wupatki	60.10	290	P	P	18 33 49.2	+0.5
WUAZ				IAmb	IAmb	18 33 50.3	
	comp=Z,10nm,1.2s						
WUAZ				PcP	PcP	18 34 38.3	+3.7
NVAR	Mina Array Bea	60.29	297	P	P	18 33 50.0	-0.2
	comp=Z,1.0nm,1.0s,baz=40,slow=3.2,SNR=4.7						
NIL	Nilore	60.46	73	P	P	18 33 51.1	+0.1
SHPR	Sheep Range	60.75	294	P	P	18 33 54.0	+0.8
SHPR				IAmb	IAmb	18 33 59.2	
	comp=Z,16nm,1.8s						
MNTX	Cornudas Mount	60.94	283	P	P	18 33 54.2	-0.2
X16A	Lo Mia Camp, P	61.08	290	P	P	18 33 55.9	+0.4
X16A				PcP	PcP	18 34 42.8	+4.2
OMMB	Old Mammoth Mi	61.27	297	P	P	18 33 57.0	+0.1
MDPB	Devils Postpil	61.29	298	P	P	18 33 57.3	+0.3
MDPB				IAmb	IAmb	18 34 00.5	
	comp=Z,9.4nm,1.6s						
TXAR	Lajitas Array	62.27	280	P	P	18 34 03.1	-0.4
	comp=Z,1.4nm,1.0s,baz=43,slow=5.7,SNR=6.7						
TXAR				LR	LR	18 59 53.7	
	comp=Z,52nm,19.1s,baz=0.0,slow=35						
TUC	Tucson	62.65	288	P	P	18 34 07.1	+1.2
TUC				IAmb	IAmb	18 34 16.2	
	comp=Z,8.8nm,1.4s						
319A	Douglas	62.85	286	P	P	18 34 08.4	+1.1
319A				IAmb	IAmb	18 34 09.3	
	comp=Z,5.2nm,0.9s						
PFO	Pinyon Flats O	63.79	293	LR	LR	19 01 23.3	
	comp=Z,68nm,18.1s,baz=4.5,slow=36						
GTA	Gaotai	65.30	49	eP	P	18 34 23.8	+0.4
GTA				pP	sP	18 34 28.2	+3.8
GTA				sP	pP	18 34 31.6	+7.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
HHC	Hu-ho-hao-te	67.52	40	eP	P	18 34 39.2	+1.7
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
LZH	Lanzhou	69.63	48	eP	P	18 34 51.7	+0.8
LZH				pP	sP	18 34 56.3	+4.4
LZH				sP	pP	18 34 59.6	+8.0
LZH				PP	PP	18 37 26.0	+1.9
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,61nm,4.9s						
NJ2	Nanjing	77.74	37	eP	P	18 35 38.9	+0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	Chiang Mai Arr	84.14	59	P	P	18 36 11.9	-0.7
	comp=Z,0.9nm,0.9s,baz=321,slow=7.1,SNR=7.3						
ASAR	Alice Springs	134.97	38	PKP	PKPdf	18 42 59.7	-0.7
	comp=Z,0.8nm,1.0s,baz=4.3,slow=3.7,SNR=3.9						
STKA	Stephens Creek	144.72	32	PKP	PKPab	18 43 16.1	-0.5
	comp=Z,3.5nm,0.9s,baz=212,slow=5.4,SNR=3.5						

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*IDC **10** 18:36:19.2±4.1, 44°.58N×105°.59W, h0^{km}, mb1 2.2/1, mb1mx2.2/36, mbtmp1.8/1, ML2.8/1, Error ellipse: s-maj=56.0km s-min=29.7km az=149.0*

*NEIC **10** 18:36:19±2.2, 44°.62N±0°.05×105°.60W±0°.06, h0^{km}±2^{km}, ML2.8/30, Error ellipse: s-maj=10.5km s-min=4.6km az=37.0*

ISC 10 18:36:18.7±1.2**, 44°.62N**±0°.06×**105°.60W**±0°.06**, h0^{km}, n21, σ1^{s}.03**/20**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.23	113		Pb	18 36 43.0	+0.1
K22A	Casper	2.08	199	Pn	Pb	18 36 56.5	-0.9
K22A				IAML		18 37 28.2	
	comp=E,71nm,0.5s						
LAO	LASA Array	2.11	348	Pn	Pn	18 36 55.5	+0.1
LAO				IAML		18 37 34.2	
	comp=E,73nm,0.7s						
LAO				IAML		18 37 41.7	
	comp=E,56nm,0.7s						
RLMT	Red Lodge	2.66	282	Pn	Pb	18 37 07.2	-0.1
RLMT				IAML		18 37 43.1	
	comp=E,30nm,0.2s						
RWWY	Rawlins	3.16	202	Pn	Pn	18 37 10.9	+1.0
RWWY				IAML		18 37 51.4	
	comp=E,21nm,4.6s						
RWWY				IAML		18 37 55.6	
	comp=E,20nm,3.4s						
PD31	Pinedale Array	3.42	239		Pn	18 37 12.9	-0.5
PDAR	Pinedale Array	3.42	239	Pn	Pn	18 37 16.3	+2.8
	comp=E,0.1nm,0.3s,baz=57,slow=18,SNR=3.1						
PDAR				Pg	Pg	18 37 24.5	+0.3
	comp=E,0.7nm,0.3s,baz=63,slow=18,SNR=16						
PDAR				Lg	Lg	18 38 04.3	
	comp=E,1.7nm,0.3s,baz=61,slow=32,SNR=4.5						
PDAR	Pinedale Array	3.42	239		Pn	18 37 14.7	+1.2
BW06	Boulder Array	3.42	239		Pn	18 37 13.0	-0.5
FLWY	Flagg Ranch	3.70	263	Pn	Pn	18 37 16.1	-1.2
FLWY				IAML		18 37 42.9	
	comp=E,18nm,4.8s						
FLWY				IAML		18 38 56.3	
	comp=E,17nm,4.6s						
N23A	Red Feather La	3.73	184		Pn	18 37 17.8	-0.1
N23A				IAML		18 38 34.0	
	comp=E,19nm,3.6s						
LOHW	Long Hollow	3.74	256	Pn	Pn	18 37 18.1	+0.2
LOHW				IAML		18 38 36.1	
	comp=E,14nm,4.8s						
LOHW				IAML		18 38 36.4	
	comp=E,12nm,4.8s						
YHH	Holmes Hill	3.75	274	Pn	Pn	18 37 18.2	+0.1
YHH				IAML		18 38 21.8	
	comp=E,11nm,4.6s						
MOOW	Moose Ponds	3.80	259	Pn	Pn	18 37 20.3	+1.6
MOOW				IAML		18 39 08.4	
	comp=E,11nm,4.8s						
YHL	Hebgen Lake	3.99	275		Pn	18 37 22.5	+1.1
YHL				IAML		18 38 43.8	
	comp=E,13nm,3.0s						
REDW	Red Top Meadow	3.99	253	Pn	Pn	18 37 21.5	+0.1
REDW				IAML		18 38 32.9	
	comp=E,13nm,4.3s						
REDW				IAML		18 38 35.8	
	comp=E,10nm,2.3s						
AHID	Auburn Hatcher	4.40	247		Pn	18 37 26.8	-0.1
HRY	Holter Researc	4.84	298		Pn	18 37 32.2	-0.8
O20A	White River Ci	4.89	204	Pn	Pn	18 37 33.0	-0.7
I10CA	LAC DU BONNET	8.56	46	i		19 26 00.0	
	baz=229,slow=348,SNR=1.6						
I56US	NEWPORT INFRAS	8.75	299	i		19 28 50.0	
	baz=111,slow=332,SNR=1.4						

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*IDC **10** 18:39:58.7±3.4, 44°.18N×105°.38W, h0^{km}, mb1 3.3/1, mb1mx3.0/37, mbtmp2.9/1, ML3.6/1, Error ellipse: s-maj=69.8km s-min=24.6km az=157.0*

*NEIC **10** 18:40:04.5±2.4, 43°.96N±0°.05×105°.38W±0°.05, h0^{km}±2^{km}, ML2.9/54, Error ellipse: s-maj=9.3km s-min=6.1km az=351.0*

ISC 10 18:40:03.9±1.0**, 43°.94N**±0°.05×**105°.36W**±0°.05**, h0^{km}, n40, σ1^{s}.10**/40**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	79		Pg	18 40 21.7	-0.8
RSSD				Sg	Sb	18 40 37.5	+0.4
K22A	Casper	1.54	214		Pn	18 40 32.5	-0.3
K22A				IAML		18 40 56.0	
	comp=E,129nm,0.6s						
K22A				IAML		18 40 57.5	
	comp=N,183nm,0.3s						
RWWY	Rawlins	2.63	212	Pn	Pn	18 40 49.1	+1.3
RWWY				IAML		18 41 28.0	
	comp=N,44nm,0.8s						
RWWY				IAML		18 41 29.5	
	comp=N,38nm,0.7s						
PHWY	Pilot Hill	2.64	182		Pn	18 40 47.0	-0.9
LAO	LASA Array	2.82	348		Pn	18 40 50.6	+0.4
LAO				IAML		18 41 39.5	
	comp=N,74nm,1.0s						
RLMT	Red Lodge	3.04	294		Pn	18 40 52.8	-0.6
RLMT				IAML		18 41 51.5	
	comp=N,30nm,0.8s						
RLMT				IAML		18 41 52.2	
	comp=N,30nm,2.7s						
N23A	Red Feather La	3.07	188		Pn	18 40 55.7	+1.7
N23A				IAML		18 41 43.1	
	comp=N,38nm,2.9s						
BW06	Boulder Array	3.28	251		Pn	18 40 57.3	+0.5
PD31	Pinedale Array	3.28	251		Pn	18 40 57.1	+0.4
PDAR	Pinedale Array	3.28	251	Pn	Pn	18 40 56.9	+0.2
	comp=N,0.8nm,0.3s,baz=65,slow=16,SNR=10.0						
PDAR				Pg	Pb	18 41 01.6	-1.5
	comp=N,3.0nm,0.3s,baz=69,slow=18,SNR=28						
PDAR				Lg	Lg	18 41 43.5	
	comp=N,5.1nm,0.3s,baz=69,slow=29,SNR=12						
PDAR	Pinedale Array	3.28	251		Pn	18 40 57.5	+0.8
YNE	Yellowstone No	3.50	289		Pn	18 40 58.8	-1.0
YMP	Mirror Lake Pl	3.54	285		Pn	18 41 00.9	+0.6
YMP				IAML		18 41 55.1	
	comp=N,30nm,0.6s						
YMP				IAML		18 41 59.3	
	comp=E,30nm,0.7s						
LKWY	Lake	3.68	282		Pb	18 41 11.4	+1.5
LKWY				IAML		18 42 07.4	
	comp=E,23nm,2.0s						
LKWY				IAML		18 43 23.8	
	comp=E,19nm,4.7s						
H17A	Grant Village	3.78	279		Pn	18 41 04.7	+1.0
H17A				IAML		18 42 19.4	
	comp=E,16nm,4.5s						
LOHW	Long Hollow	3.81	267		Pn	18 41 04.7	+0.6
LOHW				IAML		18 42 35.7	
	comp=E,17nm,4.9s						
LOHW				IAML		18 42 40.9	
	comp=E,14nm,5.0s						
FLWY	Flagg Ranch	3.86	274		Pn	18 41 05.6	+1.0
OGNE	Ogallala	3.87	139		Pn	18 41 05.9	+1.1
MOOW	Moose Ponds	3.90	269		Pn	18 41 05.4	+0.1
YPP	Pitchstone Pla	3.94	277		Pn	18 41 08.1	+2.2
YPP				IAML		18 42 39.5	
	comp=E,17nm,3.4s						
YPP				IAML		18 43 04.7	
	comp=N,14nm,4.5s						
REDW	Red Top Meadow	4.03	264		Pn	18 41 07.9	+0.9
YHH	Holmes Hill	4.03	284		Pn	18 41 08.2	+1.1
YHH				IAML		18 42 22.0	
	comp=E,14nm,4.7s						
ISCO	Idaho Springs	4.14	183		Pn	18 41 10.4	+1.7
ISCO				IAML		18 42 19.1	
	comp=E,12nm,0.8s						
ISCO				IAML		18 43 17.3	
	comp=E,11nm,4.8s						
YHL	Hebgen Lake	4.27	284		Pn	18 41 09.8	-0.6
YHL				IAML		18 42 32.3	
	comp=N,18nm,0.8s						
YHL				IAML		18 42 36.1	
	comp=E,20nm,3.7s						
AHID	Auburn Hatcher	4.35	256		Pn	18 41 12.9	+1.5
AHID				IAML		18 42 25.4	
	comp=N,21nm,3.6s						
AHID				IAML		18 42 38.9	
	comp=E,22nm,4.3s						
RDMU	Red Mountain	4.59	224		Pn	18 41 14.7	-0.1
RDMU				IAML		18 42 34.1	
	comp=E,16nm,0.9s						
RDMU				IAML		18 43 06.9	
	comp=N,12nm,2.2s						
DGMT	Dagmar	4.60	10		Pn	18 41 15.1	+0.4
BOZ	Bozeman (W)	4.76	293		Pn	18 41 15.7	-1.4
BOZ				IAML		18 41 54.9	
	comp=N,9.5nm,4.5s						
BOZ				IAML		18 42 31.0	
	comp=N,14nm,2.8s						
EGMT	Eagleton	5.11	325		Pn	18 41 20.1	-1.5
HWUT	Hardware Ranch	5.13	245	Pn	Pn	18 41 21.6	-0.5
HRY	Holter Researc	5.34	304	Pn	Pn	18 41 23.9	-1.0
SPUT	South Promonto	5.86	246		Pn	18 41 30.6	-1.5
HVU	Hansel Valley	5.86	251	Pn	Pn	18 41 31.9	-0.3
PV04	Paradox Valley	6.15	207	Pn	Pn	18 41 36.0	-0.2
SDCO	Great Sand Dun	6.19	181	Pn	Pn	18 41 38.4	+1.6
PV14	Lion Creek, Pa	6.21	208	Pn	Pn	18 41 35.0	-2.0
PV03	Paradox Valley	6.26	206	Pn	Pn	18 41 38.1	+0.4
ECSD	EROS Data Cent	6.33	89	Pn	Pn	18 41 38.4	0.0
I10CA	LAC DU BONNET	8.93	42	i		19 31 10.0	
	baz=227,slow=349,SNR=3.6						
I56US	NEWPORT INFRAS	9.25	302	i		19 34 10.0	
	baz=113,slow=330,SNR=3.3						

IDC 10 18:46:00.4±7.0**, 5°.44S**×**155°.40E, h0^{km}, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.4**/34**, mbtmp3.6**/3**, Error ellipse: s-maj=218.6km s-min=23.3km az=110.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.05	233	P	P	18 51 27.2	+0.6
	0.6nm,0.5s,baz=57,slow=9.5,SNR=4.5						
ASAR	Alice Springs	27.51	227	P	P	18 51 47.9	-0.9
	0.4nm,0.8s,baz=57,slow=9.9,SNR=2.5						
MKAR	Makanchi Array	82.52	318	P	P	18 58 25.2	0.0
	0.5nm,0.8s,baz=116,slow=5.5,SNR=5.5						

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*IDC **10** 19:06:52.9±0.7, 17°.71N×148°.00E, h0^{km}, mb4.4/20, mb1 4.5/21, mb1mx4.3/50, mbtmp4.4/21, ML4.6/1, MS3.3/5, Ms1 3.3/5, ms1mx3.1/38, Error ellipse: s-maj=21.8km s-min=13.1km az=90.0*

*NEIC **10** 19:06:54.0±1.1, 17°.67N±0°.09×148°.0E±0°.1, h10^{km}±1^{km}, mb4.9/55, Error ellipse: s-maj=18.1km s-min=12.9km az=121.0*

ISC 10 19:06:55.5±0.5**, 17°.66N**±0°.06×**148°.08E**±0°.09**, h21^{km}, n115, σ0^{s}.85**/111**, mb4.8**/58**, MS3.0**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.09	218	Pn	Pn	19 08 11.8	+1.3
	22nm,0.3s,baz=137,slow=12,SNR=4.3						
GUMO				Sn	Sn	19 09 10.5	+1.7
	43nm,0.3s,baz=165,slow=20,SNR=4.3						
GUMO	Guam	5.09	218		Pn	19 08 09.4	-1.2
PATS	Pohnpei	14.68	136	Pn	Pn	19 10 19.2	-2.8
INU	Inuyama	20.18	333		P	19 11 28.1	-0.5
INU				IAmb	IAmb	19 11 32.7	
	comp=Z,39nm,1.0s						
JGF	Kuroka	20.25	334		Pn	19 11 29.9	-1.6
JGF				IAmb	IAmb	19 11 33.1	
	comp=Z,40nm,0.9s						
MJAR	Matsushiro Arr	20.73	337	P	P	19 11 34.7	0.0
	comp=Z,2.4nm,0.4s,baz=169,slow=10,SNR=21						

MJAR	Matsushiro Arr	20.73	337	P	P	19 11 33.5	-1.2
MAJO	Matsushiro	20.73	337		Pn	19 11 34.8	-2.3
MAT	Matsushiro	20.73	337	P	P	19 11 34.8	+0.1
MAT				eS	Sn	19 15 43.9	+13
JAY	Jayapura	21.32	201	LR	LR	19 19 42.3	
	comp=Z,36nm,19.6s,baz=17,slow=36						
JNU	Nakatsue	21.82	318	P	P	19 11 45.0	-1.5
	comp=Z,30nm,1.1s,baz=66,slow=9.7,SNR=5.2						
JNU	Nakatsue	21.82	318	P	P	19 11 45.3	-1.2
JNU				IAmb	IAmb	19 11 59.0	
	comp=Z,52nm,1.2s						
KRVT	Keravat (AS076	22.17	170	LR	LR	19 19 24.6	
	comp=Z,48nm,19.6s,baz=356,slow=34						
FAKI	Fak Fak	25.73	219	P	P	19 12 24.0	-0.7
YHNB	Yeheng	25.83	290	P	P	19 12 24.8	-0.8
YHNB				IAmb	IAmb	19 12 27.4	
	comp=Z,37nm,0.9s						
SSLB	Suanglung	26.06	288	P	P	19 12 26.9	-0.8
KSRS	Korea Array	26.50	322	P	P	19 12 31.4	0.0
	comp=Z,7.3nm,0.8s,baz=145,slow=9.3,SNR=20						
KSRS				LR	LR	19 22 56.7	
	comp=Z,140nm,18.6s,baz=10.0,slow=36						
KSAR	Wonju Array Be	26.52	322	P	P	19 12 29.9	-1.6
KS19	Wonju Array Si	26.57	322	P	P	19 12 30.4	-1.6
PMG	Port Moresby	26.91	182	P	P	19 12 36.8	+1.5
	comp=Z,19nm,1.0s,baz=203,slow=3.3,SNR=3.7						
PMG				LR	LR	19 21 33.7	
	comp=Z,52nm,21.8s,baz=85,slow=33						
PMG	Port Moresby	26.91	182	P	P	19 12 35.1	-0.1
PMG				IAmb	IAmb	19 12 50.7	
	comp=Z,35nm,1.2s						
HNR	Honiara	29.36	156	LR	LR	19 25 32.4	
	comp=Z,119nm,18.1s,baz=356,slow=38						
USA0B	Ussuriysk Arra	29.73	336	P	P	19 13 00.4	+0.3
USRK	Ussuriysk Ar.	29.73	336	P	P	19 13 00.8	+0.6
	comp=Z,4.6nm,0.9s,baz=149,slow=7.9,SNR=5.6						
USRK	Ussuriysk Ar.	29.73	336	P	P	19 12 60.0	-0.2
COEN	Coen	31.79	189	P	P	19 13 19.4	+0.8
COEN				IAmb	IAmb	19 13 26.5	
	comp=Z,22nm,1.4s						
KKM	Kota Kinabalu	33.19	254	P	P	19 13 30.1	-0.9
MTN	Manton Dam	34.62	210	P	P	19 13 43.5	+0.2
BJT	Baijiatuau	35.44	316	P	P	19 13 49.1	-1.1
HIA	Hailar	38.96	330	P	P	19 14 19.7	-0.3
HIA				IAmb	IAmb	19 14 21.3	
	comp=Z,12nm,0.7s						
WB0	Warramunga Arr	39.55	200	P	P	19 14 25.8	+0.6
WB0				IAmb	IAmb	19 14 26.3	
	comp=Z,26nm,1.4s						
WRA	Warramunga Arr	39.73	200	P	P	19 14 27.0	+0.3
	comp=Z,3.9nm,0.9s,baz=24,slow=8.9,SNR=17						
WRA	Warramunga Arr	39.73	200	P	P	19 14 26.5	-0.2
KSM	Kuching	40.43	251	P	P	19 14 31.7	-1.0
KSM				IAmb	IAmb	19 14 39.2	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	41.83	213	P	P	19 14 44.5	+0.4
FITZ				IAmb	IAmb	19 15 02.6	
	comp=Z,18nm,1.2s						
AS31	Alice Springs	43.34	199	P	P	19 14 57.3	+1.0
ASAR	Alice Springs	43.34	199	P	P	19 14 56.8	+0.5
	comp=Z,1.0nm,0.6s,baz=22,slow=7.8,SNR=15						
ULN	Ulaanbaatar	44.98	321	P	P	19 15 09.6	+0.2
ULN				IAmb	IAmb	19 15 11.1	
	comp=Z,24nm,1.4s						
UTTA	Uttaradit	45.17	278	P	P	19 15 11.8	+0.7
	comp=Z,250nmcomp=Z,22nm,0.9s						
SONM	Songino Array	45.36	321	P	P	19 15 12.6	+0.2
	comp=Z,11nm,0.9s,baz=137,slow=8.6,SNR=37						
SONM	Songino Array	45.36	321	P	P	19 15 12.3	-0.1
SUKH	Sukhothai	46.08	277	P	P	19 15 21.8	+3.5
	comp=Z,17nm,0.9s						
YAK	Yakutsk	46.17	348	P	P	19 15 18.3	0.0
YAK				IAmb	IAmb	19 15 30.9	
	comp=Z,9.3nm,0.8s						
CM34	Chiang Mai Arr	46.36	279	P	P	19 15 21.0	+0.5
CM35	Chiang Mai Arr	46.38	279	P	P	19 15 21.0	+0.3
CM33	Chiang Mai Arr	46.56	279	P	P	19 15 22.0	-0.1
CHTO	Chiang Mai	46.56	279	P	P	19 15 21.2	-0.9
CM09	Chiang Mai Arr	46.56	279	P	P	19 15 23.1	+1.0
	comp=Z,84nmcomp=Z,10.0nm,1.2s						
CM04	Chiang Mai Arr	46.58	279	P	P	19 15 23.1	+0.9
	comp=Z,127nmcomp=Z,17nm,1.1s						
CM01	Chiang Mai Arr	46.59	279	P	P	19 15 23.4	+1.0
	comp=Z,121nmcomp=Z,13nm,1.0s						
CM02	Chiang Mai Arr	46.60	279	P	P	19 15 23.2	+0.8
	comp=Z,111nmcomp=Z,14nm,1.0s						
CM31	Chiang Mai Arr	46.60	279	P	P	19 15 23.2	+0.8
	comp=Z,222nm,1.2s						
CM31	Chiang Mai Arr	46.60	279	P	P	19 15 22.1	-0.3
CM31				IAmb	IAmb	19 15 24.2	
	comp=Z,15nm,1.1s						
CMAR	Chiang Mai Arr	46.60	279	P	P	19 15 22.8	+0.3
	comp=Z,10nm,0.9s,baz=70,slow=6.4,SNR=50						
CM05	Chiang Mai Arr	46.61	279	P	P	19 15 23.1	+0.6
	comp=Z,92nmcomp=Z,12nm,1.1s						
CM15	Chiang Mai Arr	46.62	279	P	P	19 15 23.0	+0.4
	comp=Z,99nmcomp=Z,12nm,1.0s						
CM13	Chiang Mai Arr	46.64	279	P	P	19 15 23.5	+0.8
	comp=Z,96nmcomp=Z,13nm,1.0s						
MHMT	Maesarieng	47.59	279	P	P	19 15 31.2	+1.1
IPM	Ipoh	47.85	260	P	P	19 15 32.0	-0.2
IPM				IAmb	IAmb	19 15 35.6	
	comp=Z,20nm,1.5s						
ARMA	Armidale	47.92	176	P	P	19 15 33.1	+0.6
ARMA				IAmb	IAmb	19 15 46.4	
	comp=Z,23nm,1.4s						
KULM	Kulim	47.94	261	P	P	19 15 32.8	-0.1
KULM				IAmb	IAmb	19 15 46.5	
	comp=Z,18nm,1.2s						
STKA	Stephens Creek	49.65	187	P	P	19 15 47.0	+1.4
	comp=Z,1.2nm,0.5s,baz=1.6,slow=7.2,SNR=3.1						
STKA	Stephens Creek	49.65	187	P	P	19 15 45.7	+0.1
BBOO	Buckleboo	51.49	193	P	P	19 15 59.7	+0.2
GSI	Gunungsitoli	52.18	258	P	P	19 16 04.4	-0.7
SHL	Shillong	52.51	289	P	P	19 16 07.1	-0.6
LSA	Lhasa	53.03	294	P	P	19 16 11.7	-0.1
LSA				IAmb	IAmb	19 16 13.8	
	comp=Z,7.5nm,0.9s						
MORW	Morawa	55.82	214	P	P	19 16 31.6	+0.2
TAPN	Taplejung	56.14	291	eP	P	19 16 33.3	-0.9
	comp=Z,26nm,1.0s						
ODAN	Odare	56.46	291	eP	P	19 16 35.7	-0.7
	comp=Z,8.0nm,0.6s						
WMQ	Urumqi	56.69	311	P	P	19 16 38.3	+0.7
WMQ				IAmb	IAmb	19 16 53.1	
	comp=Z,21nm,1.3s						
RAMN	Ramite	57.16	291	eP	P	19 16 40.9	-0.5
	comp=Z,25nm,1.2s						
GUN	Gumba	57.73	292	eP	P	19 16 45.3	-0.2
	comp=Z,37nm,1.0s						
PKI	Pulchoki	58.17	292	eP	P	19 16 47.9	-0.7
	comp=Z,21nm,1.0s						
PKIN	Phulchoki	58.18	292	eP	P	19 16 48.1	-0.5
	comp=Z,24nm,1.1s						
KKN	Kakani	58.26	292	eP	P	19 16 49.0	-0.1
	comp=Z,26nm,1.0s						
NWAO	Narrogin (SRO)	58.31	210	P	P	19 16 49.0	+0.1
DMN	Daman	58.43	292	eP	P	19 16 50.2	-0.1
	comp=Z,18nm,0.8s						
DANN	Dangsing	59.56	293	eP	P	19 16 57.9	-0.3
	comp=Z,66nm,0.6s						
ZAA0	Zalesovo Array	60.21	323	P	P	19 17 01.9	0.0
ZAA0				IAmb	IAmb	19 17 03.0	
	comp=Z,13nm,0.8s						
ZALV	Zalesovo Beam	60.21	323	P	P	19 17 02.0	+0.2
	comp=Z,8.6nm,0.7s,baz=103,slow=6.9,SNR=46						
ZALV	Zalesovo Beam	60.21	323	P	P	19 17 01.9	0.0
BRLK	Bradley Lake	60.41	31	P	P	19 17 03.3	+0.1
BRLK				IAmb	IAmb	19 17 16.0	
	comp=Z,16nm,1.3s						
MK31	Makanchi Array	60.80	314	P	P	19 17 05.9	-0.2
MKAR	Makanchi Array	60.80	314	P	P	19 17 07.0	+0.8
	comp=Z,2.6nm,0.7s,baz=95,slow=8.2,SNR=28						
MKAR	Makanchi Array	60.80	314		P	19 17 06.2	+0.1
MAKZ	Makanchi	61.02	314		P	19 17 07.5	-0.1
MAKZ				IAmb	IAmb	19 17 09.6	
	comp=Z,7.2nm,0.9s						
IMAR	Indian Mountai	61.26	23	P	P	19 17 09.7	+0.9
BMAR	Burnt Mountain	65.17	23	P	P	19 17 35.0	+0.3
HYB	Hyderabad	65.91	282	iP	P	19 17 40.0	-0.4
NIL	Nilore	68.01	300	P	P	19 17 54.0	+0.5
BRVK	Borovoye	68.77	321	P	P	19 17 58.3	+0.5
KK31	Karatay Array	69.16	310	P	P	19 17 59.9	-0.7
KKAR	Karatay Array	69.16	310	P	P	19 17 59.8	-0.7
KKAR	Karatay Array	69.16	310	P	P	19 17 59.9	-0.7
INK	Inuvik	69.44	23	P	P	19 18 02.4	+0.7
	comp=Z,1.8nm,0.9s,baz=240,slow=2.9,SNR=6.0						
INK	Inuvik	69.44	23	P	P	19 18 02.3	+0.6
INK				IAmb	IAmb	19 18 14.9	
	comp=Z,6.0nm,1.1s						
KBL	Kabul	71.34	301	P	P	19 18 13.7	-0.6
KBL				IAmb	IAmb	19 18 17.2	
	comp=Z,7.4nm,0.9s						
ARU	Arti	75.21	325	P	P	19 18 36.8	+0.4
ARU				IAmb	IAmb	19 18 39.1	
	comp=Z,9.9nm,1.0s						
ABKAR	Akbulak array	75.63	317	P	P	19 18 39.1	+0.2
ABKAR				IAmb	IAmb	19 18 40.1	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	75.63	317	P	P	19 18 38.8	-0.2
AKTO	Aktyubinsk	76.63	319	P	P	19 18 44.3	-0.4
	comp=Z,3.4nm,0.5s,baz=98,slow=7.9,SNR=14						
HRA	Herat	76.89	302	P	P	19 18 46.4	-0.3
YKA	Yellowknife Ar	77.84	28	P	P	19 18 52.2	+1.0
	comp=Z,1.2nm,0.7s,baz=290,slow=5.3,SNR=18						
GEYT	Alibeck	79.33	306	P	P	19 19 00.5	+0.5
	comp=Z,3.6nm,0.8s,baz=223,slow=7.2,SNR=5.7						
GEYT	Alibeck	79.33	306	P	P	19 18 59.9	-0.1
GYA0B	ALIBECK ARRAY	79.33	306	P	P	19 18 59.0	-0.9
GYA0B				IAmb	IAmb	19 19 01.6	
	comp=Z,7.4nm,1.0s						
NVAR	Mina Array Bea	81.99	52	P	P	19 19 15.8	+1.3
	comp=Z,1.0nm,0.6s,baz=273,slow=5.5,SNR=12						
NVAR	Mina Array Bea	81.99	52	P	P	19 19 15.2	+0.8
KLMR	Klimovskoe	83.43	332	eP	P	19 19 19.5	-1.6
KLMR				AMP		19 19 28.7	
	comp=Z,21nm,1.5s						
ARCES	ARCESS Array B	84.16	343	P	P	19 19 25.9	+1.1
	comp=Z,3.8nm,0.7s,baz=68,slow=7.3,SNR=13						
ARCES	ARCESS Array B	84.16	343	P	P	19 19 25.5	+0.8
KBZ	Khabaz	88.47	316	P	P	19 19 46.5	+0.2
	comp=Z,3.1nm,0.9s,baz=193,slow=8.7,SNR=4.2						
FIA1	FINESS Array S	88.76	336	P	P	19 19 46.4	-1.0
FINES	FINESS Array B	88.76	336	P	P	19 19 46.2	-1.2
	comp=Z,1.9nm,0.6s,baz=62,slow=4.1,SNR=11						

IDC ***10*** *19:11:04.2±0.8, 17°.66N×148°.01E, h0^{km}, mb4.2/16, mb1 4.4/17, mb1mx4.1/51, mbtmp4.2/17, ML4.3/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/38, Error ellipse: s-maj=24.4km s-min=15.3km az=105.0*

NEIC ***10*** *19:11:05.3±0.7, 17°.64N±0°.10×148°.1E±0°.1, h10^{km}±1^{km}, mb4.7/35, Error ellipse: s-maj=19.8km s-min=15.2km az=124.0*

ISC 10 19:11:07.1±0.5**, 17°.61N**±0°.07×**148°.06E**±0°.09**, h21**^{km}**, n83, σ0^{s}.66**/79**, mb4.6**/37**, MS3.9**/3**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.05	218	Pn	Pn	19 12 21.4	-0.2
	12nm,0.3s,baz=73,slow=17,SNR=1.6						
GUMO				Sn	Sn	19 13 19.6	+0.3
	18nm,0.3s,baz=2.3,slow=23,SNR=1.8						
GUMO				LR	LR	19 14 29.8	
	comp=Z,165nm,19.5s,baz=146,slow=41						
GUMO	Guam	5.05	218		Pn	19 12 21.3	-0.3
PATS	Pohnpei	14.66	136	Pn	Pn	19 14 32.0	-1.3
INU	Inuyama	20.21	333	P	P	19 15 39.9	-0.7
INU				IAmb	IAmb	19 15 43.6	
	comp=Z,26nm,1.0s						
JGF	Kuroka	20.28	334		P	19 15 40.0	-1.5
JGF				IAmb	IAmb	19 15 44.3	
	comp=Z,40nm,1.1s						
MJAR	Matsushiro Arr	20.77	337	P	P	19 15 46.7	0.0
	comp=Z,1.7nm,0.7s,baz=167,slow=9.7,SNR=2.8						
MJAR	Matsushiro Arr	20.77	337	P	Pn	19 15 47.0	-2.1
MAJO	Matsushiro	20.77	337	P	P	19 15 46.5	-0.2
SIJI	Sorong	24.72	224	P	P	19 16 26.4	-0.8
	comp=Z,8.0nm,0.5s,baz=16,slow=14,SNR=6.7						
YULB	Yu-li	25.70	287	P	P	19 16 35.4	-0.6
YULB				IAmb	IAmb	19 16 42.2	
	comp=Z,33nm,1.4s						
SSLB	Suanglung	26.06	288	P	P	19 16 38.2	-1.1
SSLB				IAmb	IAmb	19 16 52.1	
	comp=Z,28nm,1.4s						
KSRS	Korea Array	26.53	322	P	P	19 16 43.0	-0.3
	comp=Z,4.1nm,0.7s,baz=151,slow=8.3,SNR=14						
KS19	Wonju Array Si	26.60	322	P	P	19 16 42.8	-1.1
KS19				IAmb	IAmb	19 16 44.4	
	comp=Z,15nm,0.9s						
WB0	Warramunga Arr	39.50	200	P	P	19 18 36.3	-0.1
WB0				IAmb	IAmb	19 18 53.4	
	comp=Z,22nm,1.4s						
WRA	Warramunga Arr	39.68	200	P	P	19 18 38.8	+0.9
	comp=Z,1.6nm,0.6s,baz=23,slow=9.0,SNR=9.0						
KSM	Kuching	40.40	251	P	P	19 18 43.3	-0.8
KSM				IAmb	IAmb	19 18 50.9	
	comp=Z,16nm,1.2s						
UBPT	Khong Chiam	40.85	273	P	P	19 18 48.0	+0.2
FITZ	Fitzroy Crossi	41.78	213	P	P	19 18 55.6	+0.3
AS31	Alice Springs	43.29	199	P	P	19 19 08.9	+1.3
ASAR	Alice Springs	43.30	199	P	P	19 19 08.4	+0.8
	comp=Z,0.6nm,0.7s,baz=21,slow=8.3,SNR=5.7						
CHAI	Chaiyaphum	44.07	275	P	P	19 19 14.1	+0.1
ULN	Ulaanbaatar	45.01	321	P	P	19 19 21.2	-0.1
SONM	Songino Array	45.39	321	P	P	19 19 24.3	0.0
	comp=Z,4.0nm,0.7s,baz=138,slow=8.6,SNR=20						
SONM	Songino Array	45.39	321	P	P	19 19 24.1	-0.2
YAK	Yakutsk	46.22	348	P	P	19 19 30.1	-0.2
YAK				IAmb	IAmb	19 19 38.4	
	comp=Z,5.2nm,0.6s						
CM34	Chiang Mai Arr	46.35	279	P	P	19 19 32.0	-0.1
CM35	Chiang Mai Arr	46.37	279	P	P	19 19 32.0	-0.2
CM33	Chiang Mai Arr	46.55	279	P	P	19 19 33.0	-0.7
CM09	Chiang Mai Arr	46.55	279	P	P	19 19 34.5	+0.8
CHTO	Chiang Mai	46.55	279	P	P	19 19 33.3	-0.4
CHTO				IAmb	IAmb	19 19 33.5	
	comp=Z,9.7nm,1.4s						
CM04	Chiang Mai Arr	46.57	279	P	P	19 19 34.5	+0.7
CM01	Chiang Mai Arr	46.59	279	P	P	19 19 35.0	+1.1
CM02	Chiang Mai Arr	46.59	279	P	P	19 19 35.0	+1.0
CM31	Chiang Mai Arr	46.60	279	P	P	19 19 34.7	+0.7
CM31	Chiang Mai Arr	46.60	279	P	P	19 19 33.9	-0.1
CM31				IAmb	IAmb	19 19 35.0	
	comp=Z,7.6nm,0.9s						
CMAR	Chiang Mai Arr	46.60	279	P	P	19 19 34.2	+0.2
	comp=Z,6.1nm,0.9s,baz=70,slow=6.7,SNR=31						
CMAR	Chiang Mai Arr	46.60	279	P	P	19 19 34.1	+0.1
CM05	Chiang Mai Arr	46.60	279	P	P	19 19 34.0	-0.1
CM15	Chiang Mai Arr	46.61	279	P	P	19 19 34.7	+0.5
CM13	Chiang Mai Arr	46.63	279	P	P	19 19 34.9	+0.6
MHMT	Maesarieng	47.59	279	P	P	19 19 55.2	+13
PSA00	Pilbara Seismi	47.76	216	P	P	19 19 43.3	+0.4
IPM	Ipoh	47.83	260	P	P	19 19 43.3	-0.4
KULM	Kulim	47.91	261	P	P	19 19 44.9	+0.6
PSI	Prapat	50.37	259	LR	LR	19 38 27.7	
	comp=Z,355nm,21.7s,baz=269,slow=33						
BBOO	Buckleboo	51.44	193	P	P	19 20 11.3	+0.5
BBOO				IAmb	IAmb	19 20 13.0	
	comp=Z,10.0nm,0.8s						
GSI	Gunungsitoli	52.16	258	P	P	19 20 16.5	-0.1
LSA	Lhasa	53.04	294	P	P	19 20 23.8	+0.3
MORW	Morawa	55.77	214	P	P	19 20 43.0	+0.3
MORW				IAmb	IAmb	19 20 44.2	
	comp=Z,8.9nm,0.9s						
TAPN	Taplejung	56.15	291	eP	P	19 20 46.0	+0.1
	comp=Z,16nm,1.0s						
ODAN	Odare	56.46	291	eP	P	19 20 47.6	-0.5
	comp=Z,7.1nm,0.5s						
WMQ	Urumqi	56.71	311	P	P	19 20 50.2	+0.8
WMQ				IAmb	IAmb	19 20 52.6	
	comp=Z,15nm,1.3s						
GUN	Gumba	57.73	292	eP	P	19 20 56.8	-0.4
	comp=Z,13nm,0.9s						
PKI	Pulchoki	58.17	292	eP	P	19 20 59.4	-0.8
	comp=Z,8.1nm,0.8s						
PKIN	Phulchoki	58.18	292	eP	P	19 20 59.4	-0.8
	comp=Z,8.1nm,0.7s						
KKN	Kakani	58.27	292	eP	P	19 21 00.0	-0.8
	comp=Z,13nm,0.9s						
DANN	Dangsing	59.56	293	eP	P	19 21 09.5	-0.4
	comp=Z,48nm,0.6s						
ZAA0	Zalesovo Array	60.24	323	P	P	19 21 13.2	-0.4
ZALV	Zalesovo Beam	60.24	323	P	P	19 21 13.4	-0.3
	comp=Z,6.5nm,0.8s,baz=102,slow=6.2,SNR=24						
MK31	Makanchi Array	60.83	314	P	P	19 21 17.7	-0.2
MKAR	Makanchi Array	60.83	314	P	P	19 21 18.2	+0.3
	comp=Z,2.1nm,0.6s,baz=94,slow=8.2,SNR=18						
MKAR	Makanchi Array	60.83	314	P	P	19 21 17.8	-0.1
MAKZ	Makanchi	61.04	314	P	P	19 21 19.6	+0.2
MAKZ				IAmb	IAmb	19 21 20.9	
	comp=Z,4.5nm,0.9s						
KURK	Kurchatov	63.57	318	P	P	19 21 36.0	-0.2
ILAR	Eielson Array	63.63	26	P	P	19 21 36.0	-0.4
	comp=Z,0.8nm,1.0s,baz=268,slow=5.5,SNR=5.1						
NIL	Nilore	68.02	300	P	P	19 22 05.5	+0.3
BRVK	Borovoye	68.80	321	P	P	19 22 10.1	+0.4
KK31	Karatay Array	69.18	310	P	P	19 22 12.0	-0.3
KKAR	Karatay Array	69.18	310	P	P	19 22 12.1	-0.2
INK	Inuvik	69.49	23	LR	LR	19 47 18.7	
	comp=Z,71nm,21.9s,baz=92,slow=31						
DLBC	Dease Lake	70.95	33	LR	LR	19 52 28.2	
	comp=Z,64nm,19.6s,baz=216,slow=35						
KBL	Kabul	71.35	301	P	P	19 22 25.8	-0.2
KBL				IAmb	IAmb	19 22 27.6	
	comp=Z,4.1nm,0.8s						
ARU	Arti	75.24	325	P	P	19 22 48.3	+0.1
ARU				IAmb	IAmb	19 22 49.3	
	comp=Z,15nm,1.4s						
ABKAR	Akbulak array	75.66	317	P	P	19 22 50.6	-0.1
ABKAR	Akbulak array	75.66	317	P	P	19 22 50.7	-0.1
ABKAR				IAmb	IAmb	19 22 51.5	
	comp=Z,8.4nm,0.8s						
AKTO	Aktyubinsk	76.66	319	P	P	19 22 55.7	-0.8
	comp=Z,2.4nm,0.6s,baz=87,slow=7.0,SNR=10						
YKA	Yellowknife Ar	77.89	28	P	P	19 23 03.0	-0.1
	comp=Z,0.5nm,0.5s,baz=283,slow=4.8,SNR=10						
EUNU	Eureka	78.47	8	P	P	19 23 06.8	+0.6
NVAR	Mina Array Bea	82.03	52	P	P	19 23 28.0	+1.7
	comp=Z,0.6nm,0.7s,baz=265,slow=6.1,SNR=6.0						
NVAR	Mina Array Bea	82.03	52	P	P	19 23 25.7	-0.6
ARCES	ARCESS Array B	84.20	343	P	P	19 23 38.0	+1.4
	comp=Z,2.8nm,0.9s,baz=31,slow=5.0,SNR=6.2						
KBZ	Khabaz	88.49	316	P	P	19 23 59.9	+1.8
	comp=Z,2.7nm,0.8s,baz=118,slow=3.4,SNR=3.5						
FINES	FINESS Array B	88.80	336	P	P	19 23 58.1	-1.1
	comp=Z,1.5nm,0.7s,baz=31,slow=4.4,SNR=3.8						

IDC ***10*** *19:11:11.5±0.8, 35°.44N×25°.47E, h58^{km}±10^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.2/43, mbtmp3.6/7, MS1.8/1, Ms1 1.8/1, ms1mx1.7/34, Error ellipse: s-maj=27.1km s-min=13.5km az=4.0*

ATH ***10*** *19:11:11.2, 35°.62N×25°.31E, h73^{km}±4^{km}, ML3.2/12, Error ellipse: s-maj=4.3km s-min=1.5km az=164.0*

HLW ***10*** *19:11:12.6, 35°.44N×25°.62E, h15^{km}±12^{km}, Md4.8*

ISK ***10*** *19:11:12.8, 35°.65N×25°.29E, h65^{km}, ML3.1/17*

THE ***10*** *19:11:14.5, 35°.64N×25°.30E, h61^{km}±1^{km}, ML3.3/24, Error ellipse: s-maj=1.9km s-min=0.5km az=181.0*

DDA ***10*** *19:11:19.0, 35°.95N×25°.50E, h35^{km}±379^{km}, ML2.7*

ISC 10 19:11:12.4±0.8**, 35°.59N**±0°.03×**25°.34E**±0°.03**, h70**^{km}±6^{km}**, n121, σ1^{s}.72**/174**, mb3.6**/4**, 1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRKL	Herakleio	0.34	215	P	Pn	19 11 25.0	+1.1
HRKL				S	Sn	19 11 32.8	+0.6
	3μm,0.4s						
HRKL	Herakleio	0.34	215	PG	Pn	19 11 24.9	+1.1
HRKL				SG	Sn	19 11 32.6	+0.4
IACM	Heraklion	0.36	218	P	Pn	19 11 24.9	+1.0
IACM				S	Sn	19 11 33.3	+0.8
IACM	Heraklion	0.36	218	⇓P	Pn	19 11 25.0	+1.0
IACM				S	Sn	19 11 33.1	+0.6
	8μm,0.3s						
NPS	Neapolis	0.40	146	P	Pn	19 11 25.3	+1.0
NPS				S	Sn	19 11 33.8	+0.8
NPS				AML	AML	19 11 34.8	
	comp=N,8383μm,0.2s						
NPS				AML	AML	19 11 35.8	
	comp=E,8398μm,0.3s						
NPS	Neapolis	0.40	146	P	Pn	19 11 25.3	+1.0
NPS				S	Sn	19 11 34.0	+1.0
	comp=E,4μm,0.2s						
IDI	Anoyia	0.48	231	P	Pn	19 11 25.8	+0.7
	comp=E,34nm,0.3s,baz=276,slow=10,SNR=710						
IDI				S	Sn	19 11 34.2	-0.3
	comp=E,136nm,0.3s,baz=262,slow=18,SNR=26						
IDI	Anoyia	0.48	231	P	Pn	19 11 25.7	+0.7
IDI				S	Sn	19 11 34.1	-0.3
IDI				AML	AML	19 11 36.1	
	comp=E,3315μm,0.2s						
IDI				AML	AML	19 11 36.2	
	comp=N,2293μm,0.2s						
IDI	Anoyia	0.48	231	P	Pn	19 11 25.8	+0.7
IDI				S	Sn	19 11 34.3	-0.1
	comp=N,1μm,0.2s						
IDI	Anoyia	0.48	231	PG	Pn	19 11 25.7	+0.7
IDI				SG	Sn	19 11 34.1	-0.3
TMBK	Timbaki Herakl	0.70	222	P	Pn	19 11 29.0	+1.7
TMBK				S	Sn	19 11 40.2	+1.9
	comp=N,545nm,0.4s						
SIVA	Sivas	0.72	217	P	Pn	19 11 29.1	+1.6
SIVA				S	Sn	19 11 40.1	+1.4
SIVA				AML	AML	19 11 45.1	
	comp=N,2517μm,0.4s						
SIVA				AML	AML	19 11 45.2	
	comp=E,3789μm,0.5s						
SIVA	Sivas	0.72	217	P	Pn	19 11 29.2	+1.6
SIVA				S	Sn	19 11 40.7	+2.0
	comp=E,2μm,0.4s						
PRNS	Prines Rethymn	0.72	252	P	Pn	19 11 28.9	+1.4
PRNS				S	Sn	19 11 39.9	+1.2
STIA	Sitia Lasithi	0.72	122	P	Pn	19 11 29.4	+1.9
STIA				S	Sn	19 11 41.1	+2.4
THR6	Thira Island,	0.76	3	P	Pn	19 11 28.9	+0.9
THR6	Thira Island,	0.76	3	P	Pn	19 11 28.8	+0.9
THR9	Santorini-Faro	0.76	1	P	Pn	19 11 29.1	+1.1
THR9	Santorini-Faro	0.76	1	P	Pn	19 11 29.1	+1.1
SANT	Santorini	0.78	7	P	Pn	19 11 28.8	+0.5
SANT	Santorini	0.78	7	P	Pn	19 11 28.8	+0.5
SANT				S	Sn	19 11 40.1	+0.1
	comp=E,2μm,0.3s						
SANT	Santorini	0.78	7	PG	Pn	19 11 28.6	+0.3
SANT				SG	Sn	19 11 39.7	-0.3
THR3	Thira Island,	0.81	3	P	Pn	19 11 29.4	+0.8
THR3	Thira Island,	0.81	3	P	Pn	19 11 29.2	+0.6
THR8	Santorini-Mono	0.82	8	P	Pn	19 11 29.3	+0.6
THR8	Santorini-Mono	0.82	8	P	Pn	19 11 29.2	+0.6
THR5	Thira Island,	0.82	0	P	Pn	19 11 29.6	+0.9
THR5	Thira Island,	0.82	0	P	Pn	19 11 29.4	+0.7
SNT1	Gialos, Santor	0.82	5	P	Pn	19 11 29.5	+0.8
SNT1				S	Sn	19 11 40.6	-0.1
SNT1	Gialos, Santor	0.82	5	P	Pn	19 11 29.2	+0.5
SNT1				S	Sn	19 11 40.6	-0.1
	comp=E,1μm,0.5s						
SFIR	Foira Santorin	0.83	5	P	Pn	19 11 29.7	+0.9
SFIR				S	Sn	19 11 42.0	+1.0
	comp=E,4μm,0.3s						
THR7	Fira-Santorini	0.83	5	P	Pn	19 11 29.7	+0.9
THR7	Fira-Santorini	0.83	5	P	Pn	19 11 29.7	+0.9
SAP3	Santorini-Thir	0.84	0	P	Pn	19 11 29.8	+0.9
SAP3	Santorini-Thir	0.84	0	P	Pn	19 11 29.8	+0.9
SAP3				S	Sn	19 11 41.7	+0.6
	comp=E,5μm,0.2s						
ZKR	Zakros	0.86	124	P	Pn	19 11 31.4	+2.2
ZKR				S	Sn	19 11 44.1	+2.5
ZKR				AML	AML	19 11 45.2	
	comp=E,1259μm,0.3s						
ZKR				AML	AML	19 11 51.5	
	comp=N,905μm,0.4s						
ZKR	Zakros	0.86	124	P	Pn	19 11 31.4	+2.2
ZKR				S	Sn	19 11 44.3	+2.7
	comp=N,545nm,0.3s						
ZKR	Zakros	0.86	124	PG	Pn	19 11 31.4	+2.2
CMBO	Columbo, Santo	0.88	3	P	Pn	19 11 30.3	+0.9
CMBO				S	Sn	19 11 42.7	+0.8
CMBO				AML	AML	19 11 43.8	
	comp=E,6435μm,0.5s						
CMBO				AML	AML	19 11 44.3	
	comp=N,7926μm,0.6s						
CMBO	Columbo, Santo	0.88	3	P	Pn	19 11 30.3	+0.9
CMBO				S	Sn	19 11 42.4	+0.5
	comp=N,3μm,0.6s						
SAP4	Santorini-Oia	0.88	2	P	Pn	19 11 30.6	+1.3
VAM	Vamos	0.95	259	P	Pn	19 11 31.0	+0.7
VAM				AML	AML	19 11 45.1	
	comp=N,1962μm,0.2s						
VAM				AML	AML	19 11 50.8	
	comp=E,1053μm,0.2s						
VAM	Vamos	0.95	259	P	Pn	19 11 31.1	+0.8
VAM				S	Sn	19 11 43.2	-0.4

	comp=E,762nm,0.2s						
IMMV	Iera Moni Meta	1.12	264	P	Pn	19 11 33.6	+1.3
IMMV				S	Sn	19 11 48.1	+0.8
IMMV				AML	AML	19 11 54.9	
	comp=N,1556µm,0.4s						
IMMV				AML	AML	19 11 55.5	
	comp=E,1409µm,0.5s						
IMMV	Iera Moni Meta	1.12	264	P	Pn	19 11 33.8	+1.4
IMMV				S	Sn	19 11 47.6	+0.3
	comp=E,750nm,0.4s						
IMMV	Iera Moni Meta	1.12	264	PN	Pn	19 11 33.0	+0.6
IMMV				SN	Sn	19 11 47.6	+0.3
GVDS	Gavdos	1.27	234	PN	Pn	19 11 35.6	+1.3
GVD	Gavdhos	1.27	234	P	Pn	19 11 35.9	+1.6
GVD				AML	AML	19 12 02.6	
	comp=N,1104µm,0.6s						
GVD				AML	AML	19 12 05.1	
	comp=E,793µm,0.4s						
GVD	Gavdhos	1.27	234	PN	Pn	19 11 35.6	+1.2
MHLO	Agia Marina, M	1.33	325	P	Pn	19 11 36.2	+1.1
MHLO				AML	AML	19 11 55.9	
	comp=E,5986µm,0.4s						
MHLO				AML	AML	19 11 56.2	
	comp=N,4405µm,0.8s						
MHLO	Agia Marina, M	1.33	325	P	Pn	19 11 36.2	+1.1
MHLO				S	Sn	19 11 53.1	+0.9
	comp=N,3µm,0.3s						
MHLA	Plaka, Milos I	1.37	327	P	Pn	19 11 37.3	+1.6
APE	Apeiranthos	1.48	6	P	Pn	19 11 37.6	+0.5
APE				AML	AML	19 11 57.8	
	comp=E,744µm,0.3s						
APE				AML	AML	19 11 58.0	
	comp=N,553µm,0.2s						
APE	Apeiranthos	1.48	6	P	Pn	19 11 37.8	+0.7
APE				S	Sn	19 11 56.3	+0.6
	comp=N,328nm,0.2s						
APE	Apeiranthos	1.48	6	PN	Pn	19 11 37.9	+0.8
KARP	Karpathos	1.48	91	P	Pn	19 11 38.6	+1.5
KARP				AML	AML	19 12 02.1	
	comp=N,951µm,0.2s						
KARP				AML	AML	19 12 04.4	
	comp=E,1101µm,0.2s						
KARP	Karpathos	1.48	91	P	Pn	19 11 38.9	+1.8
KARP				S	Sn	19 11 57.8	+2.0
	comp=E,522nm,0.2s						
KARP	Karpathos	1.48	91	PN	Pn	19 11 38.8	+1.7
ANKY	Antikythira Is	1.68	280	P	Pn	19 11 40.1	+0.4
KOSK	Kos Island	1.76	48	P	Pn	19 11 42.0	+1.2
KOSK				S	Sn	19 12 02.7	+0.5
	comp=E,192nm,0.3s						
KOSK	Kos Island	1.76	48	PN	Pn	19 11 41.9	+1.2
NISR	Nisiros	1.77	54	P	Pn	19 11 42.1	+1.3
KTHA	Kythira Island	1.97	290	P	Pn	19 11 44.4	+0.8
KTHA	Kythira Island	1.97	290	P	Pn	19 11 44.4	+0.8
KTHA				S	Sn	19 12 07.6	+0.3
	comp=E,642nm,0.3s						
KTHA	Kythira Island	1.97	290	PN	Pn	19 11 44.3	+0.8
KTHR	Kythira	2.01	290	P	Pn	19 11 45.1	+0.9
KTHR				S	Sn	19 12 08.2	-0.2
	comp=E,545nm,0.3s						
BODT	Bodrum	2.16	47	P	Pn	19 11 47.4	+1.2
BODT				S	Sn	19 12 13.2	+1.2
BODT	Bodrum	2.16	47	PN	Pn	19 11 47.6	+1.4
BDRM	Kayabasi	2.24	49	*i* P	Pn	19 11 48.7	+1.4
BDRM				*i* S	Sn	19 12 12.1	-1.9
VLI	Veliai	2.25	301	P	Pn	19 11 48.1	+0.8
VLI				S	Sn	19 12 13.0	-1.1
	comp=E,455nm,0.4s						
ARG	Arkhangelos	2.34	74	P	Pn	19 11 50.8	+2.1
ARG				AML	AML	19 12 21.2	
	comp=E,644µm,0.3s						
ARG				AML	AML	19 12 22.8	
	comp=N,448µm,0.2s						
ARG	Arkhangelos	2.34	74	P	Pn	19 11 50.7	+2.1
ARG				S	Sn	19 12 18.7	+2.3
	comp=N,278nm,0.3s						
ARG	Arkhangelos	2.34	74	PN	Pn	19 11 50.7	+2.1
DDIM	Aydin, Didim	2.41	39	*i* P	Pn	19 11 49.9	+0.4
DDIM				IAML		19 12 50.0	
	comp=N,64nm,1.4s						
DDIM				IAML		19 12 52.0	
	comp=E,84nm,1.3s						
KRND	KRANIDI	2.51	316	P	Pn	19 11 52.6	+1.7
KRND				S	Sn	19 12 21.2	+0.7
	comp=E,292nm,0.3s						
GCAM	G?zelcaml?	2.59	35	PN	Pn	19 11 53.6	+1.6
GCAM	G?zelcaml?	2.59	35	*i* P	Pn	19 11 53.9	+1.9
GCAM				*i* S	Sn	19 12 21.2	-1.2
TURN	Turunc	2.63	62	PN	Pn	19 11 54.7	+2.2
TURN	Turunc	2.63	62	*i* P	Pn	19 11 54.7	+2.2
TURN				*i* S	Sn	19 12 22.4	-0.8
TURN				IAML		19 12 30.0	
	comp=N,38nm,0.5s						
EPID	Epidavros	2.70	319	P	Pn	19 11 55.0	+1.5
EPID				S	Sn	19 12 25.9	+0.9
PTL	Penteli	2.72	335	P	Pn	19 11 55.4	+1.6
DION	Dionisos Attik	2.73	336	P	Pn	19 11 55.7	+1.8
DION				S	Sn	19 12 26.2	+0.5
	comp=N,390nm,0.6s						
DGB	zmir	2.75	26	*i* P	Pn	19 11 55.6	+1.6
DGB				*i* S	Sn	19 12 22.5	-3.7
ZEYE	Izmir, Urla-Ze	2.80	19	*i* P	Pn	19 11 55.6	+0.8
ZEYE				*i* S	Sn	19 12 24.4	-3.0
ZEYE				IAML		19 12 27.0	
	comp=E,35nm,0.3s						
ZEYE				IAML		19 12 29.0	
	comp=N,43nm,0.8s						
YER	Yerkesik	2.83	56	PN	Pn	19 11 57.3	+2.0
URLA	Izmir	2.94	20	PN	Pn	19 11 57.9	+1.2
URLA	Izmir	2.94	20	*i* P	Pn	19 11 56.7	-0.1
URLA				IAML		19 12 28.0	
	comp=E,23nm,1.7s						
URLA				IAML		19 13 00.0	
	comp=N,24nm,1.5s						
DALY	Dalyan (Mula)	2.94	65	PN	Pn	19 11 58.9	+2.2
DALY	Dalyan (Mula)	2.94	65	*i* P	Pn	19 12 00.2	+3.5
DALY				IAML		19 12 30.0	
	comp=E,32nm,3.1s						
DALY				*i* S	Sn	19 12 31.5	+0.6
DALY				IAML		19 12 41.0	
	comp=N,29nm,0.8s						
VLX	Vlachokerasia	2.97	307	P	Pn	19 11 59.0	+1.7
EREA	Eretria	3.04	339	P	Pn	19 12 00.0	+1.9
ITM	Ithomi	3.18	301	PN	Pn	19 12 01.4	+1.4
FETY	Fethiye	3.20	70	PN	Pn	19 12 02.7	+2.4
TAVA	DENIZLI_Tavas	3.43	56	*i* P	Pn	19 12 06.2	+2.8
AKAS	Kas	3.52	78	PN	Pn	19 12 07.2	+2.5
AKAS	Kas	3.52	78	*i* P	Pn	19 12 06.8	+2.0
AKAS				*i* S	Sn	19 12 43.4	-1.9
CAEL	Denizli, Camel	3.55	63	*i* P	Pn	19 12 08.3	+3.1
CAEL				*i* S	Sn	19 12 43.6	-2.5
CAEL				IAML		19 13 06.0	
	comp=N,59nm,1.9s						
CAEL				IAML		19 13 18.0	
	comp=E,24nm,0.7s						
GOLH	Golhisar	3.78	63	*i* P	Pn	19 12 10.6	+2.4
GOLH				*i* S	Sn	19 12 53.3	+1.8
GOLH				IAML		19 13 05.0	
	comp=N,19nm,1.0s						
GOLH				IAML		19 13 34.0	
	comp=E,20nm,1.8s						
ELL	Elmali	3.87	71	PN	Pn	19 12 12.3	+2.8
SLUM	Salum	4.09	182	P	Pn	19 12 13.0	+0.5
	baz=186						
AKUM	Antalya-Kumluc	4.12	78	*i* P	Pn	19 12 15.5	+2.7
AKUM				*i* S	Sn	19 12 58.5	-1.3
AKUM				IAML		19 13 06.0	
	comp=E,13nm,0.6s						
AKUM				IAML		19 13 56.0	
	comp=N,16nm,1.8s						
AGG	Agios Georgios	4.18	326	PN	Pn	19 12 15.5	+1.8
USAK	Uak-Merkez	4.28	42	*i* P	Pn	19 12 17.4	+2.4
KORT	Korkueli	4.28	69	PN	Pn	19 12 18.1	+2.9
KORT	Korkueli	4.28	69	*i* P	Pn	19 12 17.2	+2.1
KORT				*i* S	Sn	19 13 00.7	-3.2
KORT				IAML		19 14 13.0	
	comp=E,12nm,2.3s						
KHAL	Karahalli	4.33	49	*i* P	Pn	19 12 18.6	+2.8
SWA2		6.33	179	P	Pn	19 12 43.3	+0.2
	baz=182						
BRTR	Keskin Array B	7.76	55	P	Pn	19 13 05.3	+2.6
	comp=E,0.1nm,0.3s,baz=235,slow=15,SNR=9.3						
HSAF	As Saff	7.93	137	P	Pn	19 13 04.4	-0.6
	baz=137						
GLL	Jalalah	8.05	136	P	Pn	19 13 05.8	-0.8
	baz=137						
MMAI	Mount Meron Ar	8.71	104	P	Pn	19 13 13.8	-1.8
	comp=E,0.7nm,0.3s,baz=305,slow=13,SNR=6.0						
MMAI				S	Sn	19 14 47.0	-5.3
	comp=E,2.3nm,0.3s,baz=326,slow=21,SNR=6.5						
HFRF	Wahat Farafira	8.79	162	P	Pn	19 13 16.6	-0.2
	baz=163						
HFRF				S	Sn	19 14 47.3	-7.0
	baz=163						
EIL	Elat	10.02	123	P	Pn	19 13 31.9	-1.7
	comp=E,0.4nm,0.3s,baz=249,slow=2.8,SNR=9.3						
EIL				S	Sn	19 15 16.9	-7.4
	comp=E,0.5nm,0.3s,baz=7.1,slow=16,SNR=2.1						
HBST	Basata	10.17	126	P	Pn	19 13 35.1	-0.4
	baz=126						
ASF	Jabal al Asfar	10.19	106	LR	LR	19 18 20.7	
	comp=E,5.1nm,19.7s,baz=247,slow=43						
DUGI	Dugi Otok	11.52	320	Sg	Sn	19 16 11.2	+10
AKASG	Malin Array Be	15.36	9	P	P	19 14 47.2	-0.8
	comp=E,1.4nm,0.3s,baz=200,slow=11,SNR=9.5						
ESDC	Sonseca Array	23.51	289	P	P	19 16 16.8	+0.6
	comp=E,0.2nm,0.4s,baz=82,slow=9.5,SNR=4.6						
TORD	Torodi Ar. Bea	30.88	230	P	P	19 17 22.7	+0.4
	comp=E,0.9nm,0.3s,baz=31,slow=8.6,SNR=9.5						
MKAR	Makanchi Array	43.41	57	P	P	19 19 08.7	+0.7
	comp=E,0.3nm,0.7s,baz=284,slow=7.6,SNR=1.7						
ZALV	Zalesovo Beam	44.60	46	P	P	19 19 16.8	-0.6
	comp=E,0.7nm,0.3s,baz=275,slow=8.8,SNR=4.0						

DNK ***10*** *19:27:18.0±1.8, 70°.93N×14°.44W, h15^{km}±121^{km}, ML2.2*
IDC ***10*** *19:27:21.7±0.9, 69°.74N×15°.58W, h0^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.5/61, mbtmp3.7/11, ML3.3/3, MS3.4/3, Ms1 3.5/3, ms1mx3.1/37, Error ellipse: s-maj=26.3km s-min=17.1km az=15.0*
NEIC ***10*** *19:27:22.6±1.4, 69°.73N±0°.08×15°.7W±0°.2, h10^{km}±2^{km}, mb4.3/3, Error ellipse: s-maj=15.0km s-min=13.3km az=122.0*
ISC 10 19:27:22.7±0.6**, 69°.77N**±0°.08×**15°.66W**±0°.08**, h10**^{km}**, n30, σ0^s.93**/27**, mb3.9**/11**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.27	291		Pn	19 27 59.8	-0.4
SCO	Scoresbysund	2.27	291	*i* P	Pn	19 27 58.5	-1.6
SCO	Scoresbysund	2.27	291	*i* P	Pn	19 27 58.6	-1.6
JMIC	Jan Mayen	2.71	60	LR	LR	19 29 03.6	
	comp=Z,538nm,19.2s,baz=118,slow=38						
BORG	Borgarnes	5.50	206	Pn	Pn	19 28 44.7	+0.2
	1.9nm,0.3s,baz=342,slow=4.5,SNR=6.9						
BORG	Borgarnes	5.50	206		Pn	19 28 43.7	-0.8
SUMG	Summit	7.86	301	Pn	Pn	19 29 16.0	-1.3
KBS	Kingsbay	11.64	26	Pn	Pn	19 30 07.9	-0.6
SPITS	Spitsbergen Ar	11.99	32	Pn	Pn	19 30 14.5	+1.2
	baz=231,slow=13,SNR=15						
SFJD	Kangerlussuaq	13.06	275	LR	LR	19 35 05.2	
	comp=Z,331nm,19.4s,baz=34,slow=35						
NOA	NORSAR Array B	14.06	115	LR	LR	19 35 07.0	
	comp=Z,114nm,19.3s,baz=320,slow=33						
FIA1	FINESS Array S	18.75	96	P	P	19 31 39.9	-1.4
FINES	FINESS Array B	18.75	96	P	P	19 31 40.8	-0.5
	0.1nm,0.3s,baz=335,slow=8.4,SNR=5.6						
FINES	FINESS Array B	18.75	96	P	P	19 31 39.9	-1.4
GERES	GERESS Array B	25.29	131	P	P	19 32 50.2	+1.2
	2.3nm,0.8s,baz=352,slow=8.1,SNR=4.5						
GERES	GERESS Array B	25.29	131	P	P	19 32 48.5	-0.6
AKASG	Malin Array Be	28.32	109	P	P	19 33 15.1	-1.1
	0.9nm,0.7s,baz=331,slow=9.5,SNR=3.0						
BURAR	Bucovina Array	29.73	117	P	P	19 33 29.2	+0.3
MURB	Monte Urbino	30.20	137	P	P	19 33 33.0	+0.1
MURB				IAmb	IAmb	19 33 48.4	
	comp=Z,23nm,1.5s						
YKA	Yellowknife Ar	36.37	309	P	P	19 34 27.6	+1.3
	comp=Z,0.6nm,0.8s,baz=36,slow=8.1,SNR=8.2						
BMAR	Burnt Mountain	38.70	331	P	P	19 34 46.1	0.0
ILAR	Eielson Array	41.51	331	P	P	19 35 09.7	+0.3
	comp=Z,0.2nm,0.6s,baz=26,slow=6.5,SNR=1.8						
KURK	Kurchatov	44.99	64	P	P	19 35 38.6	+0.9
KURK				IAmb	IAmb	19 35 40.2	
	comp=Z,3.9nm,1.1s						
KURBB	Kurchatov Arra	45.05	64	P	P	19 35 38.0	-0.1
	comp=Z,1.2nm,0.8s,baz=330,slow=7.5,SNR=6.7						
MK31	Makanchi Array	49.60	63	P	P	19 36 13.8	+0.2
MK31				IAmb	IAmb	19 36 15.8	
	comp=Z,3.4nm,1.2s						
MKAR	Makanchi Array	49.60	63	P	P	19 36 14.3	+0.7
	comp=Z,1.2nm,0.9s,baz=15,slow=5.0,SNR=6.3						
MKAR	Makanchi Array	49.60	63	P	P	19 36 14.2	+0.5
PDAR	Pinedale Array	51.91	291	P	P	19 36 31.6	+0.2
	comp=Z,0.3nm,0.6s,baz=30,slow=5.1,SNR=4.9						
PDAR	Pinedale Array	51.91	291	P	P	19 36 31.7	+0.4
TXAR	Lajitas Array	62.13	279	P	P	19 37 44.1	+0.5
	comp=Z,0.2nm,0.7s,baz=93,slow=2.5,SNR=3.5						

IDC ***10*** *19:29:40.3±1.6, 37°.45N×69°.48E, h0^{km}, mb3.8/10, mb1 3.8/17, mb1mx3.6/61, mbtmp3.7/17, ML3.3/7, Error ellipse: s-maj=28.5km s-min=14.2km az=151.0*
NNC ***10*** *19:29:47.1±4.0, 38°.12N×69°.20E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=39.8km s-min=29.7km az=168.0*
ISC 10 19:29:42.2±0.9**, 37°.63N**±0°.09×**69°.46E**±0°.07**, h10**^{km}**, n24, σ2^s.02**/27**, mb4.0**/10**, 3C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.52	8	⇓Pn	Pn	19 31 05.2	+0.6
	0.7nm,0.3s,baz=200,slow=16,SNR=38						
KK31				⇑Pg	Pb	19 31 21.1	+2.3
	3.0nm,0.4s,baz=194,slow=15,SNR=6.4						
KK31				⇓Lg	Lg	19 32 29.4	
	28nm,0.6s,baz=192,slow=28,SNR=8.9						
AAK	Ala-Archa	6.31	36	Pn	Pn	19 31 18.9	+3.3
	1.2nm,0.3s,baz=218,slow=4.4,SNR=18						
AAK				Lg	Lg	19 32 57.5	
	1.8nm,0.3s,baz=8.7,slow=21,SNR=2.2						
AAK	Ala-Archa	6.31	36	⇑Pn	Pn	19 31 19.2	+3.7
	4.7nm,0.6s						
AAK				⇑Pg	Pg	19 31 39.4	-3.7
	5.8nm,0.5s						
AAK				⇓Lg	Lg	19 32 56.4	
	19nm,0.6s						
TKM2	Tokmak 2	7.06	40	⇓Pn	Pn	19 31 27.8	+1.9
	1.5nm,0.4s						
TKM2				⇓Lg	Lg	19 33 18.9	
	6.9nm,0.8s						
GEYT	Alibeck	8.99	275	Pn	Pn	19 31 52.9	+0.8
	0.4nm,0.3s,baz=118,slow=17,SNR=5.6						
GEYT				Sn	Sn	19 33 32.0	-1.4
	1.7nm,0.3s,baz=15,slow=14,SNR=7.2						
MK31	Makanchi Array	13.19	42	⇓P	Pn	19 32 50.5	+1.0
	1.5nm,0.8s,baz=229,slow=11,SNR=13						
MKAR	Makanchi Array	13.19	42	Pn	Pn	19 32 49.3	-0.2
	0.1nm,0.3s,baz=233,slow=12,SNR=12						
AB31	Akbulak array	13.50	332	P	Pn	19 32 50.3	-3.5
	0.9nm,0.3s,baz=163,slow=12,SNR=87						
KURBB	Kurchatov Arra	14.51	24	Pn	Pn	19 33 05.5	-2.0
	0.0nm,0.3s,baz=217,slow=12,SNR=2.3						
KURBB				Lg	Lg	19 37 24.7	
	0.0nm,0.3s,baz=217,slow=29,SNR=5.1						
AKTO	Aktyubinsk	15.19	331	Pn	Pn	19 33 16.3	-0.4
	0.4nm,0.3s,baz=135,slow=14,SNR=15						
BVAR	Borovoye Array	15.41	2	Pn	Pn	19 33 18.1	-1.5
	0.2nm,0.3s,baz=305,slow=49,SNR=3.0						
ZALV	Zalesovo Beam	19.45	28	P	Pn	19 34 09.7	-0.2
	0.4nm,0.3s,baz=218,slow=11,SNR=6.7						
ARU	Arti	20.17	342	P	P	19 34 16.6	-0.1
	0.5nm,0.3s,baz=133,slow=6.2,SNR=7.0						
KBZ	Khabaz	21.00	295	P	P	19 34 26.1	+0.5
	2.9nm,1.0s,baz=348,slow=19,SNR=2.3						
KVAR	Kislovodsk Arr	21.17	296	P	P	19 34 26.9	-0.8
	3.1nm,0.8s,baz=87,slow=17,SNR=1.4						
BELG	Belogornoye	21.24	321	P	P	19 34 27.8	-0.3
	7.6nm,0.9s,baz=158,slow=4.1,SNR=2.8						
AKASG	Malin Array Be	31.28	308	P	P	19 36 02.3	+0.2
	0.3nm,0.5s,baz=82,slow=7.6,SNR=4.6						
PHIT	Phitsanulok	33.97	118	P	P	19 36 22.7	-3.2
	4µm475nm,0.9s						
SRDT	SRDT	35.08	123	P	P	19 36 38.6	+3.0
	35nm,1.2s						
ATD	Arta Tunnel	35.27	229	P	P	19 36 36.4	-1.0
	2.7nm,0.4s,baz=263,slow=22,SNR=1.4						
FINES	FINESS Array B	35.86	326	P	P	19 36 42.0	+0.2
	5.7nm,1.1s,baz=128,slow=9.0,SNR=1.9						
ARCES	ARCESS Array B	39.63	337	P	P	19 37 14.7	+1.1
	2.3nm,0.8s,baz=112,slow=8.9,SNR=11						
ILAR	Eielson Array	74.02	15	P	P	19 41 17.6	-0.2
	0.3nm,0.7s,baz=308,slow=4.3,SNR=4.3						
YKA	Yellowknife Ar	80.16	2	P	P	19 41 54.4	+2.1
	0.5nm,0.7s,baz=353,slow=6.2,SNR=7.4						

BGR ***10*** *19:31:40.1±0.0, 11°.47N×124°.60E, h80^{km}, mb5.7*
MAN ***10*** *19:31:59.9, 14°.74N×119°.91E, h48^{km}, MS5.9*
MAN Intensity V - SAN ANTONIO.
NEIC ***10*** *19:32:00.3±1.5, 14°.77N±0°.06×120°.25E±0°.07, h59^{km}±1^{km}, mb5.6/235, Mwb5.8/27, Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=12.3km s-min=10.4km az=286.0*
MOS ***10*** *19:32:02.1±0.8, 14°.83N×120°.27E, h87^{km}, mb5.6/43, MS5.1/17, Error ellipse: s-maj=6.0km s-min=3.5km az=113.1*
NEIC ***10*** *19:32:02.1, 14°.77N×120°.28E, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.77; $M_{\theta\theta}$1.72; $M_{\phi\phi}$2.04; $M_{r\theta}$-4.03; $M_{\theta\phi}$3.20; $M_{\phi r}$1.00; Fault plane solution: $M_0$6.17000×10^{17} NP1:ϕ_s196.03000°, δ40.37000°, λ-142.58000°. NP2:ϕ_s75.79000°, δ66.82000°, λ-55.97000°. Principal axes: T 5.6441, Plg15.0000°, Azm142.0000°; N 0.9503, Plg31.0000°, Azm241.0000°; P -6.5943, Plg55.0000°, Azm29.0000°;*
BJI ***10*** *19:32:02.7±0.0, 14°.99N×120°.25E, h80^{km}, mB5.6/70, mb5.4/85, Ms5.5/97, Ms7 5.2/88*
GCMT ***10*** *19:32:02.3±0.1, 14°.85N×120°.02E, h67^{km}, MW5.9/164, Moment Tensor Solution. s154,c321; s164,c497; Duration: 2^s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.65±.05; $M_{\theta\theta}$2.39±.05; $M_{\phi\phi}$0.25±.05; $M_{r\theta}$-3.86±.04; $M_{\theta\phi}$5.85±.04; $M_{\phi r}$2.01±.05; Best double couple: $M_0$7.71500×10^{17} NP1:ϕ_s192.00000°, δ55.00000°, λ-158.00000°. NP2:ϕ_s89.00000°, δ72.00000°, λ-37.00000°. Principal axes: T 7.5860, Plg11.0000°, Azm144.0000°; N 0.2560, Plg49.0000°, Azm246.0000°; P -7.8430, Plg39.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NOU ***10*** *19:32:03.1, 14°.74N×120°.23E, h84^{km}, ML5.5, Luzon, Philippines*
DJA ***10*** *19:32:03.3±0.3, 15°N±2°×12°0E±°, h76^{km}±3^{km}, M5.6/105, mB6.0/88, mb5.7/105, MLv6.0/1, Mw(mB)5.6/88, MwMwp5.5/49, Mwp5.7/49*
KLM ***10*** *19:32:03, 14°.80N×120°.34E, h88^{km}, mb5.8*
NEIC ***10*** *19:32:03, 14°.88N×120°.07E, h68^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.55; $M_{\theta\theta}$2.48; $M_{\phi\phi}$0.07; $M_{r\theta}$-3.89; $M_{\theta\phi}$6.08; $M_{\phi r}$2.05; Fault plane solution: $M_0$7.91000×10^{17} NP1:ϕ_s192.00000°, δ56.00000°, λ-159.00000°. NP2:ϕ_s90.00000°, δ73.00000°, λ-36.00000°. Principal axes: T 7.7944, Plg11.0000°, Azm144.0000°; N 0.2338, Plg51.0000°, Azm247.0000°; P -8.0283, Plg37.0000°, Azm46.0000°;*
IDC ***10*** *19:32:04.2±0.4, 14°.84N×120°.30E, h91^{km}±3^{km}, mb5.3/51, mb1 5.3/53, mb1mx5.2/57, mbtmp5.6/53, MS4.9/28, Ms1 4.9/28, ms1mx4.9/31 Error ellipse: s-maj=8.8km s-min=5.9km az=65.0*
NEIC ***10*** *19:32:05, 14°.77N×120°.07E, h70^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.14; $M_{\theta\theta}$1.81; $M_{\phi\phi}$1.33; $M_{r\theta}$-5.87; $M_{\theta\phi}$3.54; $M_{\phi r}$1.61; Fault plane solution: $M_0$7.55000×10^{17} NP1:ϕ_s198.00000°, δ34.00000°, λ-154.00000°. NP2:ϕ_s87.00000°, δ76.00000°, λ-58.00000°. Principal axes: T 6.6381, Plg25.0000°, Azm153.0000°; N 1.5712, Plg30.0000°, Azm259.0000°; P -8.2093, Plg49.0000°, Azm31.0000°;*
ISC 10 19:32:02.6±0.3**, 14°.75N**±0°.02×**120°.16E**±0°.03**, h78**^{km}±2^{km}**, h79**^{km}**:pP-P, n1363, σ1^s.44**/1519**, mb5.6**/333**, 41C-70D, Fault plane solution: NP1:**ϕ_s54.87789°, δ72.64124°, λ-40.36924°. **NP2:**ϕ_s159.11041°, δ51.81437°, λ-157.69238°. **Principal axes:** T Plg13.0719°, Azm111.3003°; N Plg46.6510°, Azm215.5396°; P Plg40.3992°, Azm9.9034°; **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	0.72	132	*e*P	Pn	19 32 16.9	-1.5
MACP				*e*S	Sn	19 32 30.0	-0.1
QVP	Quezon City--P	0.82	98	*e*P	Pn	19 32 20.4	+0.8
TGY	Tagaytay City	0.99	130	P	Pn	19 32 22.5	+1.0
	30µm,0.3s,baz=294,slow=2.7,SNR=789						
TGY				S	Sn	19 32 39.0	+3.4
	20µm,0.3s,baz=292,slow=22,SNR=12						
TGY	Tagaytay City	0.99	130	*e*P	Pn	19 32 22.6	+1.0
TGY				*i* S	Sn	19 32 40.1	+4.6
LUBP	Lubang	1.01	175	*e*P	Pn	19 32 20.3	-1.4
LUBP				*e*S	Sn	19 32 36.1	+0.1
PGP	Puerto Galera	1.45	148	⇑*e*P	Pn	19 32 27.4	0.0
PGP				*i* S	Sn	19 32 47.1	+1.1
LQP	Lukban	1.48	115	⇑*i*P	Pn	19 32 28.5	+0.8
LQP				*i* S	Sn	19 32 47.1	+0.4
SMPP	San Manuel, Pa	1.48	20	*e*P	Pn	19 32 27.0	-0.8
SMPP				*e*S	Sn	19 32 46.1	-0.5
BOLP	Bolinao	1.64	352	*e*P	Pn	19 32 27.8	-2.0
BOLP				*e*S	Sn	19 32 48.9	-1.5
BALP	Baler	1.69	54	*e*P	Pn	19 32 30.7	+0.3
BALP				*e*S	Sn	19 32 53.0	+1.7
BCP	Baguio City	1.72	14	⇑*i*P	Pn	19 32 30.9	-0.1
BCP				*i* S	Sn	19 32 44.1	-8.3
POLP	Polilio Island	1.72	90	*e*P	Pn	19 32 32.2	+1.4
BOAC	Boac	2.07	128	*e*P	Pn	19 32 36.9	+1.4
BOAC				*e*S	Sn	19 33 06.0	+5.4
GQP	Guinayangan	2.37	110	⇑*e*P	Pn	19 32 41.1	+1.7
GQP				*e*S	Sn	19 33 24.0	+16
JCNP	Jose Panganiba	2.50	100	*e*P	Pn	19 32 42.2	+1.0
CAUP	Cauayan	2.71	36	*e*P	Pn	19 32 45.1	+1.1
BUSP	Coron	2.73	179	*e*P	Pn	19 32 42.4	-1.9
BUSP				*e*S	Sn	19 33 13.4	-2.9
ABRA	Dolores	2.94	10	*e*P	Pn	19 32 46.4	-0.7
ABRA				*e*S	Sn	19 33 22.1	+0.8
OTRP	Odiongan	2.98	142	*e*P	Pn	19 32 48.1	+0.4
OTRP				*e*S	Sn	19 33 28.3	+5.8
SIPP	Brgy, Tapao	3.17	5	⇑*i*P	Pn	19 32 52.4	+2.0
SIPP				*i* S	Sn	19 33 46.6	+19
CVP	Callao Caves	3.35	28	⇓*i*P	Pn	19 32 52.5	-0.1
CVP				*i* S	Sn	19 33 40.5	+9.2
SCSP	San Jose Seism	3.43	108	*e*P	Pn	19 32 54.4	+0.5
ENPP	El Nido	3.59	192	*e*P	Pn	19 32 53.5	-2.5
ENPP				*e*S	Sn	19 33 33.5	-3.8
SGCP	Mt. Cagua	3.92	27	*e*P	Pn	19 33 00.3	-0.2
CUYO	Cuyo Island	3.96	168	*e*P	Pn	19 32 59.5	-1.6
CUYO				*e*S	Sn	19 33 44.2	-2.1
PVCP	Virac	4.04	106	*e*P	Pn	19 33 03.3	+1.2
JAP	San Jose, Anti	4.34	156	⇓*e*P	Pn	19 33 06.7	+0.5
JAP				*e*S	Sn	19 33 56.0	+0.4
GUIM	Jordan	4.73	150	*e*P	Pn	19 33 12.6	+1.0
CNP	Catarman	4.91	116	*e*P	Pn	19 33 17.4	+3.5
CNP				*e*S	Sn	19 34 19.5	+10
CNOP	Candoni, Negro	5.45	153	*e*P	Pn	19 33 21.2	-0.2
LLP	Lapu-Lapu	5.76	139	⇓*e*P	Pn	19 33 29.3	+3.7
LLP				*e*S	Sn	19 34 51.1	+21
BBP	Basco	5.92	17	*e*P	Pn	19 33 25.1	-2.7
BBP				*e*S	Sn	19 34 35.7	+1.5
BATP	Bataraza	6.35	202	*e*P	Pn	19 33 31.0	-2.7
BATP				*e*S	Sn	19 34 38.9	-5.8
MSLP	Maasin	6.48	134	*e*P	Pn	19 33 38.9	+3.4
MSLP				*e*S	Sn	19 35 13.7	+26
PAGZ	Pagadian	7.55	155	*e*P	Pn	19 33 51.0	+1.0
PAGZ				*e*S	Sn	19 35 15.2	+1.1
GLSP	General Luna,	7.63	130	*e*P	Pn	19 33 53.5	+2.3
GLSP				*e*S	Pn	19 33 54.5	+3.3
CGP	Cagayan de Oro	7.67	144	⇓*i*P	Pn	19 33 54.3	+2.6
BUTP	Butuan	7.84	136	*e*P	Pn	19 33 58.3	+4.2
ZCP	Zamboanga City	7.99	166	⇓*e*P	Pn	19 33 57.4	+1.3
ZCP				*e*S	Sn	19 35 23.1	-1.8
TWG	Pinlang	8.08	6		Pn	19 33 56.1	-1.2
BUKP	Musuan	8.34	144	*e*P	Pn	19 34 04.7	+3.8
TPUB	Ta-pu	8.52	3	Pn	Pn	19 34 03.9	+0.6
YULB	Yu-li	8.67	7	Pn	Pn	19 34 05.0	-0.3
SSLB	Suanglung	9.03	5	Pn	Pn	19 34 10.7	+0.4
KCP	Kidapawan	9.08	147	⇑*i*P	Pn	19 34 14.7	+3.6
SKMP	Bagumbayan, Su	9.24	152	*e*P	Pn	19 34 13.9	+0.7
DAV	Davao City (W)	9.30	145	P	Pn	19 34 19.4	+5.5
	30nm,0.3s,baz=34,slow=4.6,SNR=19						

DAV				LR	LR	19 38 23.1	
	comp=Z,28µm,20.7s,baz=294,slow=41						
KKM	Kota Kinabalu	9.48	205	Pn	Pn	19 34 15.7	-0.8
NACB	Ninganchiao	9.48	8		Pn	19 34 15.5	-0.8
MYLDM	Lahad Datu	9.64	190	Pn	Pn	19 34 20.7	+2.1
MCO	Taipa Grande	9.65	320	P	Pn	19 34 16.0	-2.7
MATI	Mati	9.79	142	*e*P	Pn	19 34 24.6	+3.9
KNMB	Chin-men Tao	9.81	350	Pn	Pn	19 34 19.1	-1.8
YHNB	Yeheng	9.94	6	Pn	Pn	19 34 23.0	+0.3
YOJ	Yonaguni jima	10.03	15	P	Pn	19 34 22.8	-1.1
YOJ	Yonaguni jima	10.03	15	Pn	Pn	19 34 22.8	-1.1
DDMP	Don Marcelino,	10.17	147	*e*P	Pn	19 34 29.4	+3.5
QZH	Quanzhou	10.25	352	P	Pn	19 34 25.8	-1.1
QZH				sP		19 34 47.4	
QZH				S	Sn	19 36 19.8	-0.3
QZH				LR	LR		
	comp=N,8µm,17.0s						
QZH				LR	LR		
	comp=E,6µm,17.6s						
QZH				LR	LR		
	comp=Z,13µm,18.3s						
TATO	Taipei	10.25	7	Pn	Pn	19 34 26.6	-0.3
GZH	Guangzhou	10.51	323	P	Pn	19 34 31.4	+1.0
GZH				S	Sn	19 36 30.9	+4.5
GZH				LR	LR		
	comp=N,9µm,10.8s						
GZH				LR	LR		
	comp=E,6µm,9.6s						
SPMM	Sapulut	10.62	200	P	Pn	19 34 34.0	+2.0
QIZ	Qiongzhong	10.76	295	P	Pn	19 34 30.6	-3.2
QIZ				S	Sn	19 36 35.1	+2.6
QIZ				pmax	pmax		
	comp=Z,330nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,3µm,3.9s						
QIZ				LR	LR		
	comp=N,21µm,13.7s						
QIZ				LR	LR		
	comp=E,10µm,13.7s						
QIZ				LR	LR		
	comp=Z,16µm,14.9s						
QIZ	Qiongzhong	10.76	295	Pn	Pn	19 34 31.8	-2.0
DLV	T Lat	11.70	258	Pn	Pn	19 34 46.5	-0.4
TOLI2	Tolitoli	13.56	177	Pn	Pn	19 35 12.7	+0.9
UBPT	Khong Chiam	14.20	274	P	P	19 35 24.5	-0.7
	65nm,1.1s						
UBPT	Khong Chiam	14.20	274		Pn	19 35 20.7	+0.5
MRSI	Marisa	14.29	173	P	P	19 35 23.7	-2.4
	14µm16µm1µm,0.8s						
GTOI	Gorontalo	14.30	168	P	Pn	19 35 21.6	+0.2
	10µm348nm,0.8s						
MPSI	Mapaga	14.32	181	P	P	19 35 25.0	-1.5
	10µm6µm223nm,2.0s						
SBUM	Sibu	14.52	213		Pn	19 35 25.2	+1.0
SBUM	Sibu	14.52	213	P	Pn	19 35 26.0	+1.8
KMSI	Cibinong	14.58	165	P	P	19 35 28.7	-0.6
	653nm11µm1µm,0.8s						
JMZ	Minamidaito 2	15.12	42		Pn	19 35 31.3	-0.6
JMZ				IAmb	IAmb	19 35 43.0	
	comp=Z,269nm,0.8s						
TNTI	Ternate	15.60	152		Pn	19 35 36.2	-1.9
TNTI	Ternate	15.60	152	P	P	19 35 39.6	-1.2
	comp=Z,8µmcomp=Z,3µmcomp=Z,232nm,0.8s						
APSI	Ampana	15.62	174	P	P	19 35 41.5	+0.5
	comp=Z,9µmcomp=Z,8µmcomp=Z,624nm,0.9s						
LUWI	Luwuk	15.90	170	P	P	19 35 43.0	-1.0
LUWI	Luwuk	15.90	170	P	P	19 35 45.8	+1.8
	comp=Z,19µmcomp=Z,25µmcomp=Z,2µm,0.7s						
BKB	Balikpapan	16.23	192	P	Pn	19 35 46.8	+0.8
BKB				IAmb	IAmb	19 35 50.8	
	comp=Z,1µm,1.5s						
BKB	Balikpapan	16.23	192	P	Pn	19 35 44.3	-1.7
	comp=Z,15µmcomp=Z,11µmcomp=Z,415nm,0.9s						
SSE	Sheshan	16.30	3	P	Pn	19 35 47.4	+0.6
SSE				S	Sn	19 38 48.4	+1.3
SSE				pmax	pmax		
	comp=Z,29nm,0.9s						
SSE				pmax	pmax		
	comp=Z,1µm,9.0s						
SSE				LR	LR		
	comp=Z,4µm,20.8s						
SSE				LR	LR		
	comp=Z,2µm,19.4s						
KSM	Kuching	16.39	217	P	P	19 35 51.3	+1.9
KSM				IAmb	IAmb	19 35 55.4	
	comp=Z,535nm,0.7s						
KSM	Kuching	16.39	217	P	P	19 35 52.0	+2.5
MTKI	Muara Teweh, K	16.43	199	P	P	19 35 51.2	+1.2
	comp=Z,5µmcomp=Z,3µmcomp=Z,137nm,0.8s						
WHN	Wuhan	16.61	342	⇑P	Pn	19 35 49.8	-0.8
WHN				pP	pP	19 36 01.6	-5.5
WHN				sP	sP	19 36 12.2	-4.8
WHN				pmax	pmax		
	comp=Z,25nm,0.8s						
WHN				pmax	pmax		
	comp=Z,3µm,4.9s						
WHN				LR	LR		
	comp=Z,12µm,12.9s						
WHN				LR	LR		
	comp=Z,4µm,9.4s						
WHN				LR	LR		
	comp=Z,18µm,16.3s						
NONG	Nongkai	16.66	284	P	P	19 35 53.7	+1.3
	comp=Z,224nm,1.9s						
SLVN	Son La	16.78	295	P	P	19 35 54.0	+0.1
STKI	Sintang	16.93	211	P	P	19 35 57.9	+2.5
	comp=Z,58nm,0.6s						
GYA	Guiyang	17.17	315	⇑P	P	19 35 58.4	+0.2
GYA				pP	pP	19 36 11.1	-2.0
GYA				PP	pwP	19 36 17.8	+1.8
GYA				S	S	19 39 11.8	-1.1
GYA				pmax	pmax		
	comp=Z,31nm,1.6s						
GYA				pmax	pmax		
	comp=Z,3µm,6.3s						
GYA				LR	LR		
	comp=Z,5µm,12.7s						
GYA				LR	LR		
	comp=Z,6µm,15.4s						
GYA				LR	LR		
	comp=Z,8µm,15.5s						
NJ2	Nanjing	17.27	356	*e*P	P	19 35 58.9	-0.2
NJ2				pP	pP	19 36 11.6	-3.3
NJ2				sP	sP	19 36 22.4	-2.6
NJ2				S	Sn	19 39 08.5	-1.9
NJ2				sS	S	19 39 24.7	+10
NJ2				pmax	pmax		
	comp=Z,250nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,5µm,6.2s						
NJ2				LR	LR		
	comp=Z,8µm,19.9s						
NJ2				LR	LR		
	comp=Z,6µm,16.9s						
NJ2				LR	LR		
	comp=Z,11µm,19.8s						
CHAI	Chaiyaphum	17.57	276	P	Pn	19 36 03.9	+1.4
	comp=Z,2µmcomp=Z,135nm,0.8s						
SANI	Sanana	17.66	160	P	P	19 36 01.4	-2.1
	comp=Z,10µmcomp=Z,7µmcomp=Z,756nm,0.7s						
TTSI	Tana Toraja	17.68	181	P	Pn	19 36 06.2	+2.4
	comp=Z,11µmcomp=Z,6µmcomp=Z,390nm,0.9s						
ENH	Enshi	18.31	329	P	P	19 36 11.0	+0.4
ENH				IAmb	IAmb	19 36 24.9	
	comp=Z,215nm,0.8s						
KBKI	Kotabaru	18.36	193	P	Pn	19 36 14.2	+2.1
	comp=Z,3µmcomp=Z,364nm,0.8s						
SPSI	Sidrap Palu	18.59	181	P	Pn	19 36 16.2	+1.3
	comp=Z,11µmcomp=Z,7µmcomp=Z,395nm,0.8s						
PATY	Pattaya	18.82	267	P	Pn	19 36 20.3	+2.7
	comp=Z,2µmcomp=Z,93nm,0.7s						
BBKI	Banjar Baru	18.84	197	P	Pn	19 36 19.1	+1.2
	comp=Z,7µmcomp=Z,6µmcomp=Z,483nm,1.1s						
SWI	Sorong	19.00	144	P	Pn	19 36 21.1	+1.3
	comp=Z,12µmcomp=Z,6µmcomp=Z,146nm,0.7s						
SIJI	Sorong	19.01	144	P	Pn	19 36 19.3	-0.6
	comp=Z,19nm,0.3s,baz=340,slow=13,SNR=55						
SIJI				LR	LR	19 44 03.1	
	comp=Z,6µm,21.2s,baz=322,slow=38						
BNSI	Bone	19.02	180	P	Pn	19 36 22.1	+2.1
	comp=Z,10µmcomp=Z,9µmcomp=Z,602nm,0.7s						
UTTA	Uttaradit	19.06	282	P	Pn	19 36 20.3	-0.2
	comp=Z,582nmcomp=Z,60nm,0.7s						
NANT	Nan	19.06	285	P	Pn	19 36 21.6	+1.1
	comp=Z,16µmcomp=Z,845nm,0.5s						
NLAI	Namlea	19.14	158	P	Pn	19 36 23.1	+1.7
	comp=Z,5µmcomp=Z,282nm,0.6s						
JSU	Suzuyama	19.16	28	P	P	19 36 18.9	-1.0
PBKI	Pangkalan Bun	19.27	207	P	Pn	19 36 23.3	+0.4
	comp=Z,11µmcomp=Z,942nm,1.1s						
KMI	Kunming	19.34	305	⇑P	Pn	19 36 24.8	+0.9
KMI				pP	pwP	19 36 40.4	+0.2
KMI				sP	sP	19 36 51.3	+4.5
KMI				S	S	19 39 57.5	+0.3
KMI				PcP	PcP	19 40 42.8	+1.2
KMI				ScP	ScP	19 44 12.2	+1.5
KMI				ScS	ScS	19 47 55.3	+2.3
KMI				pmax	pmax		
	comp=Z,55nm,2.0s						
KMI				pmax	pmax		
	comp=Z,2µm,4.2s						
KMI				LR	LR		
	comp=Z,5µm,14.9s						
KMI				LR	LR		
	comp=Z,8µm,16.6s						
KMI				LR	LR		
	comp=Z,7µm,17.2s						
KMI	Kunming	19.34	305	P	Pn	19 36 23.9	0.0
KMI				pmax	pmax		
	comp=Z,62nm,0.8s						
KMI	Kunming	19.34	305	P	Pn	19 36 23.9	0.0
KAPI	Kappang	19.64	181	P	Pn	19 36 26.8	-0.4
	comp=Z,30nm,0.3s,baz=346,slow=6.6,SNR=107						
KAPI	Kappang	19.64	181	P	P	19 36 25.6	+0.4
SUKH	Sukhothai	19.91	281	P	Pn	19 36 30.5	0.0
	comp=Z,87nm,0.8s						
PAYA	Payao	19.93	286	P	Pn	19 36 30.3	-0.5
	comp=Z,7µmcomp=Z,1µm,0.8s						
BKSI	Bulukumba	19.94	180	P	Pn	19 36 30.3	-0.4
	comp=Z,10µmcomp=Z,5µmcomp=Z,725nm,0.8s						
MSAI	Masohi	19.96	154	P	Pn	19 36 31.5	+0.4
	comp=Z,1µmcomp=Z,144nm,0.7s						
UTHA	Uthaitani	20.02	275	P	Pn	19 36 31.4	-0.2
	comp=Z,853nmcomp=Z,91nm,1.0s						
PHET	Kaeng Krachan	20.02	267	P	Pn	19 36 32.1	+0.3
	comp=Z,1µmcomp=Z,127nm,0.8s						
LAMP	Lampang	20.02	284	P	Pn	19 36 31.5	-0.3
	comp=Z,1µmcomp=Z,145nm,0.7s						
CM35	Chiang Mai Arr	20.49	284	P	P	19 36 35.0	+0.5
CM34	Chiang Mai Arr	20.52	284	P	P	19 36 36.0	+1.2
CM36	Chiang Mai Arr	20.53	283	P	P	19 36 36.0	+1.2
CM09	Chiang Mai Arr	20.62	283	P	Pn	19 36 37.8	-1.0
	comp=Z,1µmcomp=Z,167nm,0.9s						
MYKOM	Kota Tinggi	20.62	233	P	P	19 36 36.9	+1.1
MYKOM				IAmb	IAmb	19 36 58.6	
	comp=Z,322nm,1.3s						
MYKOM	Kota Tinggi	20.62	233	P	Pn	19 36 39.0	+0.2
CM04	Chiang Mai Arr	20.62	283	P	P	19 36 37.0	+1.1
	comp=Z,2µmcomp=Z,249nm,0.9s						
CM01	Chiang Mai Arr	20.64	283	P	Pn	19 36 38.1	-1.0
	comp=Z,2µmcomp=Z,216nm,1.0s						
CM05	Chiang Mai Arr	20.66	283	P	Pn	19 36 38.0	-1.3
	comp=Z,1µmcomp=Z,170nm,0.9s						
CM02	Chiang Mai Arr	20.66	283	P	Pn	19 36 38.0	-1.3
	comp=Z,1µmcomp=Z,175nm,0.9s						
CM31	Chiang Mai Arr	20.66	283	P	Pn	19 36 38.0	-1.3
	comp=Z,26µmcomp=Z,3µm,0.8s						
CM31	Chiang Mai Arr	20.66	283	P	Pn	19 36 37.9	-1.4
CMAR	Chiang Mai Arr	20.66	283	P	Pn	19 36 38.5	-0.8
	comp=Z,99nm,0.8s,baz=91,slow=9.2,SNR=628						
CMAR				PcP	PcP	19 40 45.5	+1.7
	comp=Z,26nm,0.6s,baz=106,slow=0.4,SNR=49						
CMAR				ScP	ScP	19 44 14.2	+0.6
	comp=Z,5.6nm,0.9s,baz=58,slow=1.0,SNR=9.0						
CMAR				LR	LR	19 44 58.3	
	comp=Z,4µm,18.2s,baz=138,slow=37						
CMAR				PKiKP	PKiKP	19 48 31.6	-0.5
	comp=Z,0.7nm,0.5s,baz=261,slow=1.6,SNR=8.6						
CMAR	Chiang Mai Arr	20.66	283	P	P	19 36 37.4	+1.1
CMAR					ScP	19 44 16.2	+2.6
CM15	Chiang Mai Arr	20.68	283	P	Pn	19 36 38.1	-1.4
	comp=Z,1µmcomp=Z,152nm,1.1s						
CM13	Chiang Mai Arr	20.69	283	P	Pn	19 36 38.4	-1.3
	comp=Z,1µmcomp=Z,167nm,1.0s						
CM33	Chiang Mai Arr	20.71	284	P	P	19 36 37.0	+0.2
CHTO	Chiang Mai	20.71	284	P	P	19 36 37.4	+0.6
CHTO				pmax	pmax		
	comp=Z,48nm,0.9s						
CHTO	Chiang Mai	20.71	284	P	P	19 36 37.4	+0.6
JNU	Nakatsue	20.73	26	P	P	19 36 36.2	-0.7
	comp=Z,226nm,0.8s,baz=232,slow=3.3,SNR=36						
JNU				PcP	PcP	19 40 44.8	+1.1
	comp=Z,10nm,0.7s,baz=81,slow=3.1,SNR=5.9						
JNU	Nakatsue	20.73	26	P	P	19 36 35.6	-1.3
JNU				IAmb	IAmb	19 36 41.6	
	comp=Z,225nm,0.8s						
BSSI	Bau Bau, Buton	20.75	179	P	Pn	19 36 39.4	-1.0
	comp=Z,6µmcomp=Z,6µmcomp=Z,402nm,1.2s						
CM32	Chiang Mai Arr	20.78	284	P	P	19 36 39.0	+1.5
TRTT	Trang	21.20	253	P	P	19 36 48.0	+5.9
	comp=Z,4µmcomp=Z,130nm,2.0s						
FAKI	Fak Fak	21.25	145	P	P	19 36 41.9	-0.6
FAKI	Fak Fak	21.25	145	P	P	19 36 45.2	+2.7
	comp=Z,10µmcomp=Z,4µmcomp=Z,175nm,0.9s						
TPI	Tanjungpandan	21.35	216	P	P	19 36 46.0	+2.4
	comp=Z,11µmcomp=Z,4µmcomp=Z,244nm,1.5s						
KULM	Kulim	21.37	246	P	P	19 36 45.4	+1.6
KULM				IAmb	IAmb	19 37 23.5	
	comp=Z,303nm,1.5s						
JTU	Tsushima	21.39	21	P	P	19 36 42.9	-0.9
JTU				IAmb	IAmb	19 36 46.8	
	comp=Z,270nm,0.8s						
IPM	Ipoh	21.43	243	P	P	19 36 45.8	+1.3
TIA	Tai'an	21.55	353	P	P	19 36 45.6	0.0
TIA				S	S	19 40 37.6	-2.6
TIA				LR	LR		
	comp=Z,3µm,19.0s						
TIA				LR	LR		
	comp=Z,3µm,20.8s						
MHMT	Maesarieng	21.59	282	P	P	19 36 47.9	+1.7
	comp=Z,2µmcomp=Z,156nm,0.8s						
SURT	Suratani	21.68	257	P	P	19 36 56.7	+10
XAN	Xi'an	21.74	334	P	P	19 36 47.7	0.0
XAN				pP	pP	19 37 03.1	-0.2
XAN				PP	sP	19 37 13.6	+0.8
XAN				S	S	19 40 39.6	-4.3
XAN				pmax	pmax		
	comp=Z,170nm,0.7s						
XAN				pmax	pmax		
	comp=Z,2µm,6.3s						
XAN				LR	LR		
	comp=Z,12µm,16.7s						
XAN				LR	LR		
	comp=Z,9µm,13.7s						
XAN				LR	LR		
	comp=Z,8µm,25.5s						
PPBI	Pangkal Pinang	21.80	221	P	P	19 36 52.0	+3.6
	comp=Z,9µmcomp=Z,4µmcomp=Z,159nm,1.1s						
CD2	Chengdu	22.03	320	P	P	19 36 52.0	+1.1
CD2				pP	pwP	19 37 08.3	-0.6
CD2				S	S	19 40 46.6	-2.9
CD2				pmax	pmax		
	comp=Z,260nm,0.8s						
CD2				pmax	pmax		
	comp=Z,2µm,4.9s						
CD2				LR	LR		
	comp=Z,13µm,13.5s						
CD2				LR	LR		
	comp=Z,11µm,14.7s						
CD2				LR	LR		
	comp=Z,13µm,13.3s						
BAKI	Biak	22.36	134	P	P	19 36 56.8	+2.4
	comp=Z,9µmcomp=Z,330nm,1.0s						
TJN	Taejon	22.48	15	*di*P	P	19 36 53.4	-2.2
KMMI	Kalianget	22.51	196	P	P	19 36 59.4	+3.4
	comp=Z,13µmcomp=Z,12µmcomp=Z,351nm,1.1s						
JMN	Monobe	22.62	31	P	P	19 36 56.9	-0.2
GRJI	Gresik	22.83	200	P	P	19 37 02.1	+2.7
	comp=Z,3µmcomp=Z,488nm,0.7s						
JMBI	JAMBI	23.07	226	P	P	19 37 05.5	+3.7
	comp=Z,9µmcomp=Z,616nm,0.9s						
ABJI	Asem Bagus	23.15	195	P	P	19 37 05.3	+2.8
	comp=Z,14µmcomp=Z,12µmcomp=Z,356nm,0.8s						
SRBI	Singaraja	23.21	193	P	P	19 37 05.3	+2.2
	comp=Z,11µmcomp=Z,13µmcomp=Z,791nm,0.7s						
PMBI	Palembang	23.25	222	P	P	19 37 04.9	+1.4
PMBI				IAmb	IAmb	19 37 26.2	
	comp=Z,482nm,1.1s						
JHS	Saijyo	23.30	28	P	P	19 37 02.6	-1.2
JHS				IAmb	IAmb	19 37 04.9	
	comp=Z,284nm,0.7s						
MMRI	Maumere	23.32	175	P	P	19 37 04.6	+0.5
MMRI	Maumere	23.32	175	P	P	19 37 06.4	+2.3
	comp=Z,8µmcomp=Z,6µmcomp=Z,370nm,0.7s						
INCN	Inchon	23.37	13	P	P	19 37 02.9	-1.5
INCN				pmax	pmax		
	comp=Z,135nm,0.9s						
INCN	Inchon	23.37	13	P	P	19 37 02.9	-1.5
INCN				IAmb	IAmb	19 37 07.7	
	comp=Z,134nm,0.9s						
EDFI	Ende, Flores	23.39	176	P	P	19 37 05.9	+1.0
	comp=Z,10µmcomp=Z,794nm,0.6s						
PLAI	Plampang	23.54	186	P	P	19 37 07.7	+1.6
	comp=Z,12µmcomp=Z,22µmcomp=Z,2µm,0.9s						
TWSI	Taliwang, Sumb	23.56	188	P	P	19 37 07.8	+1.5
	comp=Z,5µmcomp=Z,7µmcomp=Z,589nm,0.8s						
KSAR	Wonju Array Be	23.62	15	P	P	19 37 05.1	-1.6
KSAR	Wonju Array Be	23.62	15	P	P	19 37 05.1	-1.6
KSAR				PcP	PcP	19 40 49.3	-0.1
KSRS	Korea Array	23.65	16	P	P	19 37 05.2	-1.6
	comp=Z,79nm,0.8s,baz=198,slow=10.0,SNR=94						
KSRS				PcP	PcP	19 40 49.6	+0.2
	comp=Z,5.3nm,0.8s,baz=166,slow=2.5,SNR=6.2						
KS19	Wonju Array Si	23.68	15	P	P	19 37 05.3	-1.8
SMRI	Semarang	23.70	205	P	P	19 37 09.4	+1.8
SMRI				IAmb	IAmb	19 37 11.1	
	comp=Z,247nm,0.8s						
SMRI	Semarang	23.70	205	P	P	19 37 10.8	+3.2
	comp=Z,10µmcomp=Z,332nm,0.9s						
BKNI	Bangkinang	23.72	235	P	P	19 37 08.2	+0.4
BKNI				IAmb	IAmb	19 37 29.8	
	comp=Z,291nm,1.0s						
BKNI	Bangkinang	23.72	235	P	P	19 37 09.7	+1.9
	comp=Z,9µmcomp=Z,8µmcomp=Z,304nm,1.3s						
DNP	Denpasar	23.78	192	P	P	19 37 11.2	+2.9
	comp=Z,25µmcomp=Z,2µm,0.8s						
JAGI	Jajag, Banyuwa	23.82	195	P	P	19 37 09.5	+0.9
JAGI	Jajag, Banyuwa	23.82	195	P	P	19 37 11.2	+2.5
	comp=Z,10µmcomp=Z,10µmcomp=Z,565nm,0.9s						
TIY	Taiyuan	23.88	345	*e*P	P	19 37 08.8	-0.3
TIY				pP	pP	19 37 25.6	-1.1
TIY				S	S	19 41 20.0	+0.3
TIY				pmax	pmax		
	comp=Z,340nm,0.8s						
TIY				pmax	pmax		
	comp=Z,2µm,7.9s						
TIY				LR	LR		
	comp=Z,3µm,10.4s						
TIY				LR	LR		
	comp=Z,3µm,14.6s						
TIY				LR	LR		
	comp=Z,4µm,15.9s						
JCJ	Chichijima	23.91	56	P	P	19 37 08.4	-1.0
	comp=Z,114nm,0.5s,baz=280,slow=21,SNR=4.2						
JCJ				LR	LR	19 45 09.1	
	comp=Z,3µm,20.8s,baz=245,slow=33						
JCJ	Chichijima	23.91	56	P	P	19 37 07.7	-1.7
JCJ				IAmb	IAmb	19 37 20.7	
	comp=Z,190nm,0.8s						
GUMO	Guam	23.98	90	LR	LR	19 47 29.2	
	comp=Z,2µm,18.4s,baz=265,slow=39						
TSI	Tuntungan	24.04	244	P	P	19 37 12.3	+1.6
	comp=Z,10µmcomp=Z,12µmcomp=Z,471nm,0.8s						
PSI	Prapat	24.08	242	P	P	19 37 13.2	+2.1
	comp=Z,13nm,0.7s,baz=0.3,slow=3.7,SNR=15						
PSI				PcP	PcP	19 40 51.6	+0.7
	comp=Z,33nm,0.7s,baz=360,slow=18,SNR=12						
PWJI	Pagerwojo	24.09	201	P	P	19 37 12.6	+1.6
	comp=Z,7µmcomp=Z,678nm,0.8s						
DL2	Dalian	24.10	3	P	P	19 37 09.6	-1.3
DL2				pP	pP	19 37 28.7	-0.3
DL2				S	S	19 41 21.7	-1.3
DL2				sS	sS	19 41 44.1	-10
DL2				pmax	pmax		
	comp=Z,170nm,0.7s						
DL2				pmax	pmax		
	comp=Z,2µm,4.8s						
DL2				LR	LR		
	comp=Z,2µm,14.6s						
DL2				LR	LR		
	comp=Z,5µm,14.8s						
DL2				LR	LR		
	comp=Z,6µm,25.7s						
SDSI	Sungai Dareh	24.21	232	P	P	19 37 13.0	+0.8
	comp=Z,3µmcomp=Z,55nm,0.9s						
WSI	Waingapu	24.26	180	P	P	19 37 12.9	+0.4
	comp=Z,11µmcomp=Z,635nm,0.6s						
UGM	Wanagama	24.46	204	P	P	19 37 15.7	+1.3
UGM				IAmb	IAmb	19 37 30.4	
	comp=Z,446nm,1.1s						
KPJI	Karang Pucung	24.60	208	P	P	19 37 18.3	+2.6
	comp=Z,6µmcomp=Z,310nm,1.6s						
JWT	Wachi	24.61	31	P	P	19 37 15.3	-0.3
JWT				IAmb	IAmb	19 37 17.9	
	comp=Z,195nm,0.7s						
MNSI	Mandailing Nat	24.61	238	P	P	19 37 17.5	+1.6
	comp=Z,12µmcomp=Z,6µmcomp=Z,237nm,0.7s						
KLSI		24.64	220	P	P	19 37 18.0	+2.0
	comp=Z,3µmcomp=Z,197nm,0.8s						
SOEI	Soe	24.68	170	P	P	19 37 16.3	-0.2
SOEI	Soe	24.68	170	P	P	19 37 16.6	+0.1
	comp=Z,7µmcomp=Z,6µmcomp=Z,549nm,0.8s						
LHMI	Lhok Sumawe	24.71	250	P	P	19 37 17.4	+0.6
LHMI				IAmb	IAmb	19 37 56.8	
	comp=Z,136nm,0.9s						
KCSI	Kotacane, Aceh	24.73	245	P	P	19 37 18.5	+1.6
	comp=Z,2µmcomp=Z,94nm,0.8s						
LHSI	Lahat	24.75	223	P	P	19 37 19.7	+2.7
	comp=Z,8µmcomp=Z,344nm,2.2s						
LEM	Lembang	24.78	211	P	P	19 37 20.0	+2.5
	comp=Z,137nm,0.7s,baz=309,slow=9.5,SNR=17						
BLSI	Bandar Lampung	24.86	218	P	P	19 37 21.0	+2.9
	comp=Z,8µmcomp=Z,5µmcomp=Z,171nm,1.0s						
PDSI	Padang	24.94	233	P	P	19 37 21.4	+2.5
	comp=Z,3µmcomp=Z,87nm,1.3s						
DBJI	Dramaga	24.99	213	P	P	19 37 22.2	+2.9
	comp=Z,4µmcomp=Z,91nm,1.0s						
BATI	Baumata	25.03	172	P	P	19 37 19.6	0.0
	comp=Z,756nm,0.6s,baz=358,slow=1.1,SNR=80						
BATI	Baumata	25.03	172	P	P	19 37 19.9	+0.3
	comp=Z,3µmcomp=Z,6µmcomp=Z,519nm,0.6s						
MASI	Maura Aman, Be	25.12	226	P	P	19 37 29.5	+9.0
KSI	Kapahiang	25.24	225	P	P	19 37 24.5	+2.9
	comp=Z,7µmcomp=Z,439nm,0.7s						
LWLI	Liwa	25.31	220	P	P	19 37 24.3	+2.0
	comp=Z,4µmcomp=Z,351nm,0.7s						
CISI	Cisompet, Garu	25.31	210	P	P	19 37 22.9	+0.6
CISI				IAmb	IAmb	19 37 58.8	
	comp=Z,234nm,0.9s						
CISI	Cisompet, Garu	25.31	210	P	P	19 37 23.5	+1.2
	comp=Z,8µmcomp=Z,4µmcomp=Z,263nm,1.3s						
BJT	Baijiatuau	25.42	353	P	P	19 37 22.3	-0.6
BJT				pmax	pmax		
	comp=Z,88nm,0.7s						
BJT	Baijiatuau	25.42	353	P	P	19 37 22.3	-0.6
BJT				IAmb	IAmb	19 37 28.3	
	comp=Z,88nm,0.7s						
BJI	Beijing	25.44	353	P	P	19 37 22.8	-0.3
BJI				pP	pP	19 37 44.0	+2.6
BJI				PcP	PcP	19 40 54.2	+0.9
BJI				S	S	19 41 43.5	-0.9
BJI				ScP	ScP	19 44 26.7	+0.9
BJI				ScS	ScS	19 48 15.9	+1.2
BJI				pmax	pmax		
	comp=Z,41nm,0.8s						
BJI				LR	LR		
	comp=Z,3µm,24.3s						
BJI				LR	LR		
	comp=Z,3µm,17.5s						
BJI				LR	LR		
	comp=Z,4µm,22.6s						
INU	Inuyama	25.50	33	P	P	19 37 22.8	-0.9
INU				IAmb	IAmb	19 37 26.2	
	comp=Z,230nm,0.8s						
MNAI	Manna	25.52	223	P	P	19 37 25.4	+1.3
JHJ	Hachijo jima 2	25.54	41	P	P	19 37 23.3	-0.7
	comp=Z,269nm,0.7s,baz=220,slow=13,SNR=5.2						
JHJ				LR	LR	19 45 58.1	
	comp=Z,2µm,19.3s,baz=285,slow=33						
JHJ2	Mitsune	25.55	41	P	P	19 37 23.2	-1.0
CGJI	Cibinong	25.62	215	P	P	19 37 26.6	+1.7
	comp=Z,4µmcomp=Z,257nm,0.7s						
JSG	Sagara	25.64	36	P	P	19 37 23.1	-1.9
LZH	Lanzhou	25.79	328	⇓P	P	19 37 27.0	+0.5
LZH				pP	pP	19 37 47.0	+2.7
LZH				PP	PnPn	19 38 11.0	+3.3
LZH				S	S	19 41 44.1	-6.2
LZH				sS	sS	19 42 19.4	-2.1

LZH				SS	SnSn	19 42 55.7	+1.9
LZH				pmax	pmax		
	comp=Z,110nm,1.2s						
LZH				pmax	pmax		
	comp=Z,2µm,5.6s						
LZH				LR	LR		
	comp=Z,11µm,14.6s						
LZH				LR	LR		
	comp=Z,11µm,15.2s						
LZH				LR	LR		
	comp=Z,5µm,16.3s						
LKP	Lekhapani	25.86	303	eP	P	19 37 26.1	-1.0
LKP				IAmb	IAmb	19 37 35.8	
	comp=Z,52nm,0.8s						
JGF	Kuroka	25.87	34	P	P	19 37 25.9	-1.3
JGF				IAmb	IAmb	19 37 47.5	
	comp=Z,134nm,0.8s						
JGF					PcP	19 40 54.8	+0.3
GSI	Gunungsitoli	26.00	241	P	P	19 37 27.7	-0.8
GSI				IAmb	IAmb	19 37 49.3	
	comp=Z,94nm,0.7s						
GSI	Gunungsitoli	26.00	241	P	P	19 37 29.5	+1.0
	comp=Z,6µmcomp=Z,134nm,0.8s						
GENI	Genyem	26.26	129	P	P	19 37 31.7	+0.9
	comp=Z,7µmcomp=Z,5µmcomp=Z,206nm,1.3s						
DGPR	DIGLIPUR	26.47	270	eP	P	19 37 34.7	+2.1
MOKO	MOKOCHONG	26.58	300	eP	P	19 37 33.2	-0.6
MOKO				IAmb	IAmb	19 37 55.9	
	comp=Z,70nm,0.9s						
JAY	Jayapura	26.61	128	P	P	19 37 34.2	+0.2
	comp=Z,16nm,0.9s,baz=86,slow=9.6,SNR=2.6						
JAY				LR	LR	19 48 08.0	
	comp=Z,4µm,20.6s,baz=328,slow=36						
KOHI	KOHIMA	26.72	298	eP	P	19 37 33.3	-1.7
KOHI				IAmb	IAmb	19 37 44.1	
	comp=Z,46nm,0.6s						
SAIH	SAIHA	26.85	291	eP	P	19 37 35.7	-0.5
SAIH				IAmb	IAmb	19 37 43.7	
	comp=Z,40nm,0.7s						
MAJO	Matsushiro	27.03	33	i P	P	19 37 35.6	-2.0
MAJO	Matsushiro	27.03	33	P	P	19 37 35.1	-2.4
MAJO					PcP	19 40 57.8	+0.6
MAT	Matsushiro	27.03	33	P	P	19 37 34.9	-2.7
MAT				S	S	19 42 07.6	-2.1
MJAR	Matsushiro Arr	27.03	33	P	P	19 37 35.3	-2.3
	comp=Z,28nm,0.7s,baz=209,slow=8.6,SNR=43						
MJAR				PcP	PcP	19 40 57.7	+0.5
	comp=Z,12nm,0.7s,baz=178,slow=2.4,SNR=13						
MJAR				LR	LR	19 49 22.2	
	comp=Z,2µm,19.3s,baz=210,slow=39						
MJAR	Matsushiro Arr	27.03	33	P	P	19 37 34.9	-2.6
MJAR					PcP	19 40 57.3	+0.2
MJB9	Matsu-Tunnel	27.03	33	P	P	19 37 34.6	-3.0
MJB9				IAmb	IAmb	19 38 33.3	
	comp=Z,320nm,1.0s						
HHC	Hu-ho-hao-te	27.07	346	eP	P	19 37 37.3	-0.6
HHC				pP	pP	19 37 55.2	-1.0
HHC				S	S	19 42 10.0	-0.3
HHC				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC				pmax	pmax		
	comp=Z,910nm,6.6s						
HHC				LR	LR		
	comp=Z,5µm,17.1s						
HHC				LR	LR		
	comp=Z,5µm,16.1s						
HHC				LR	LR		
	comp=Z,5µm,15.2s						
SNY	Shenyang	27.15	6	⇓P	P	19 37 37.5	-1.0
SNY				S	S	19 42 08.4	-2.9
SNY				pmax	pmax		
	comp=Z,290nm,0.8s						
SNY				LR	LR		
	comp=Z,3µm,15.7s						
SNY				LR	LR		
	comp=Z,5µm,17.6s						
SNY				LR	LR		
	comp=Z,5µm,30.9s						
BTO	Baotou	27.24	343	eP	P	19 37 36.3	-3.2
ZIRO	ZIRO	27.57	302	eP	P	19 37 41.9	-0.8
ZIRO				IAmb	IAmb	19 37 52.0	
	comp=Z,41nm,0.8s						
JYT	Yasato	27.90	36	P	P	19 37 43.4	-1.9
TEZP	TEZPUR	28.13	299	eP	P	19 37 46.4	-1.1
TEZP				IAmb	IAmb	19 37 55.9	
	comp=Z,71nm,0.9s						
JSD	Sado	28.20	31	P	P	19 37 47.0	-0.8
JSD				IAmb	IAmb	19 38 29.3	
	comp=Z,401nm,1.7s						
SHL	Shillong	28.59	297	eP	P	19 37 51.1	-0.6
SHL				IAmb	IAmb	19 37 55.9	
	comp=Z,107nm,0.6s						
XMIS	Christmas Isla	28.90	211	P	P	19 37 55.0	+0.6
XMIS				IAmb	IAmb	19 37 59.5	
	comp=Z,88nm,0.9s						
GUWA	GUWAHATI	28.93	298	eP	P	19 37 56.7	+2.1
CN2	Changchun	29.31	8	eP	P	19 37 55.8	-1.9
CN2				eS	S	19 42 41.5	-3.8
CN2				pmax	pmax		
	comp=Z,40nm,0.6s						
CN2				pmax	pmax		
	comp=Z,880nm,6.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
CN2				LR	LR		
	comp=Z,5µm,21.0s						
JMM	Marumori	29.40	35	P	P	19 37 56.0	-2.5
JMM				IAmb	IAmb	19 38 00.1	
	comp=Z,57nm,0.6s						
MTN	Manton Dam	29.48	158	P	P	19 37 58.5	-1.1
GTA	Gaotai	30.38	328	⇓P	P	19 38 07.6	+0.2
GTA				pP	pP	19 38 25.0	-0.4
GTA				sP	sP	19 38 34.6	+0.1
GTA				PcP	PcP	19 41 06.3	+0.7
GTA				S	S	19 43 01.8	-0.7
GTA				sS	sS	19 43 29.7	-4.2
GTA				ScP	ScP	19 44 42.0	+0.7
GTA				SS	SnSn	19 44 46.5	+1.1
GTA				ScS	ScS	19 48 36.7	-0.7
GTA				pmax	pmax		
	comp=Z,15nm,0.8s						
GTA				pmax	pmax		
	comp=Z,550nm,9.2s						
GTA				LR	LR		
	comp=Z,4µm,17.5s						
GTA				LR	LR		
	comp=Z,6µm,19.1s						
GTA				LR	LR		
	comp=Z,8µm,18.7s						
LSA	Lhasa	30.59	304	P	P	19 38 10.9	+1.1
LSA				S	S	19 43 08.8	+2.1
LSA				pmax	pmax		
	comp=Z,54nm,1.0s						
LSA				LR	LR		
	comp=Z,8µm,17.8s						
LSA				LR	LR		
	comp=Z,8µm,15.7s						
LSA				LR	LR		
	comp=Z,12µm,16.4s						
LSA	Lhasa	30.59	304	P	P	19 38 10.6	+0.7
LSA	Lhasa	30.59	304	P	P	19 38 10.5	+0.7
LSA				pmax	pmax		
	comp=Z,27nm,0.7s						
LSA	Lhasa	30.59	304	P	P	19 38 10.5	+0.7
MDJ	Mudanjiang	30.83	13	P	P	19 38 11.0	-0.2
MDJ				S	S	19 43 08.3	-0.8
MDJ				pmax	pmax		
	comp=Z,79nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.5s						
MDJ				LR	LR		
	comp=Z,2µm,21.2s						
MDJ				LR	LR		
	comp=Z,7µm,22.5s						
MDJ				LR	LR		
	comp=Z,4µm,22.4s						
MDJ	Mudanjiang	30.83	13	P	P	19 38 10.7	-0.4
USA0B	Ussuriysk Arra	31.04	17	d iP	P	19 38 13.0	0.0
USA0B	Ussuriysk Arra	31.04	17	P	P	19 38 13.5	+0.5
USRK	Ussuriysk Ar.	31.04	17	P	P	19 38 12.7	-0.2
	comp=Z,508nm,0.8s,baz=205,slow=8.1,SNR=439						
USRK				PcP	PcP	19 41 06.5	-0.6
	comp=Z,9.4nm,0.7s,baz=223,slow=2.4,SNR=5.0						
USRK				LR	LR	19 50 09.3	
	comp=Z,2µm,21.0s,baz=186,slow=35						
USRK	Ussuriysk Ar.	31.04	17	P	P	19 38 12.9	-0.1
USRK	Ussuriysk Ar.	31.04	17	P	P	19 38 12.9	-0.1
USRK					PcP	19 41 06.3	-0.8
KNRA	Kununurra	31.40	164	P	P	19 38 15.5	-0.9
KNRA				IAmb	IAmb	19 38 17.4	
	comp=Z,69nm,0.6s						
JTM	Tenmabayashi	31.70	31	P	P	19 38 17.4	-1.4
JTM				IAmb	IAmb	19 39 03.1	
	comp=Z,118nm,1.1s						
GTK	Tadong	31.90	298	eP	P	19 38 21.5	+0.5
GTK				IAmb	IAmb	19 38 26.2	
	comp=Z,76nm,1.0s						
TAPN	Taplejung	32.67	298	eP	P	19 38 27.8	-0.1
	comp=Z,63nm,0.7s						
ODAN	Odare	32.82	297	eP	P	19 38 29.2	+0.1
	comp=Z,127nm,0.8s						
FITZ	Fitzroy Crossi	33.08	170	P	P	19 38 30.3	-0.8
TEY	Ternei	33.25	21	⇑iP	P	19 38 32.1	-0.2
TEY				e		19 39 52.8	
TEY				pmax	pmax		
	comp=Z,250nm,0.6s						
TEY				pmax	pmax		
	comp=N,100nm,0.5s						
TEY				pmax	pmax		
	comp=Z,400nm,3.9s						
TEY				pmax	pmax		
	comp=N,300nm,6.8s						
TEY				pmax	pmax		
	comp=Z,300nm,5.9s						
JEW	Eniwo	33.45	29	P	P	19 38 33.4	-0.6
BOK	Bokaro	33.51	291	eP	P	19 38 35.6	+0.7
BOK				IAmb	IAmb	19 38 39.2	
	comp=Z,28nm,0.6s						
RAMN	Ramite	33.52	297	eP	P	19 38 35.6	+0.3
	comp=Z,68nm,0.5s						
ERM	Erimo	33.66	32	P	P	19 38 36.3	+0.4
ERM				pmax	pmax		
	comp=Z,69nm,0.9s						
ERM	Erimo	33.66	32	P	P	19 38 36.3	+0.4
ERM				IAmb	IAmb	19 38 51.9	
	comp=Z,69nm,0.8s						
GUN	Gumba	34.39	298	eP	P	19 38 42.9	0.0
	comp=Z,181nm,0.5s						
HIA	Hailar	34.43	360	P	P	19 38 41.6	-1.0
HIA				pmax	pmax		
	comp=Z,42nm,0.8s						
HIA	Hailar	34.43	360	P	P	19 38 41.6	-1.0
HIA				IAmb	IAmb	19 38 45.8	
	comp=Z,42nm,0.8s						
PKI	Pulchoki	34.71	297	eP	P	19 38 44.9	-0.7
	comp=Z,62nm,0.7s						
PKIN	Phulchoki	34.72	297	eP	P	19 38 45.1	-0.5
	comp=Z,66nm,0.6s						
ULN	Ulaanbaatar	34.77	344	d iP	P	19 38 45.4	-0.3
ULN				pmax	pmax		
	comp=Z,76nm,0.7s						
ULN				MLR	MLR		
	comp=Z,6µm,24.0s						
ULN	Ulaanbaatar	34.77	344	P	P	19 38 45.4	-0.3
ULN				IAmb	IAmb	19 38 49.6	
	comp=Z,75nm,0.7s						
KKN	Kakani	34.87	298	eP	P	19 38 46.4	-0.5
	comp=Z,83nm,0.8s						
SONM	Songino Array	34.91	344	P	P	19 38 46.9	0.0
	comp=Z,124nm,0.7s,baz=162,slow=10,SNR=407						
SONM				PcP	PcP	19 41 18.2	+0.1
	comp=Z,16nm,0.5s,baz=164,slow=3.6,SNR=13						
SONM				ScP	ScP	19 44 56.3	-0.4
	comp=Z,3.4nm,0.8s,baz=172,slow=4.6,SNR=5.2						
SONM				LR	LR	19 54 02.6	
	comp=Z,3µm,18.1s,baz=158,slow=38						
SONM	Songino Array	34.91	344	P	P	19 38 46.3	-0.6
SONM					PcP	19 41 18.0	0.0
SONM					ScP	19 44 56.9	+0.2
ASAJ	Asahikawa	34.96	29	P	P	19 38 46.7	-0.5
	comp=Z,350nm,0.7s,baz=237,slow=12,SNR=82						
ASAJ	Asahikawa	34.96	29	P	P	19 38 47.2	0.0
ASAJ				pmax	pmax		
	comp=Z,332nm,0.7s						
JKA	Kamikawa-asahi	34.96	29	P	P	19 38 47.2	0.0
DMN	Daman	34.98	297	eP	P	19 38 47.1	-0.8
	comp=Z,60nm,0.8s						
KLR	Kul'dur	35.68	13	P	P	19 38 53.2	0.0
	comp=Z,557nm,0.7s,baz=209,slow=7.1,SNR=1357						
KLR	Kul'dur	35.68	13	d iP	P	19 38 53.1	-0.2
KLR				pmax	pmax		
	comp=Z,546nm,0.8s						
PMG	Port Moresby	35.95	130	i P	P	19 38 55.1	-0.8
PMG	Port Moresby	35.95	130	P	P	19 38 54.8	-1.2
PMG				IAmb	IAmb	19 38 58.7	
	comp=Z,70nm,0.8s						
PMG	Port Moresby	35.95	130	P	P	19 38 55.7	-0.2
PSA00	Pilbara Seismi	36.09	180	P	P	19 38 57.0	-0.1
PSA00	Pilbara Seismi	36.09	180	P	P	19 38 56.6	-0.5
PSA00				IAmb	IAmb	19 38 59.4	
	comp=Z,85nm,0.8s						
DANN	Dangsing	36.31	298	eP	P	19 38 59.0	-0.3
	comp=Z,187nm,0.6s						
COEN	Coen	36.49	140	P	P	19 38 59.5	-1.1
COEN				IAmb	IAmb	19 39 01.5	
	comp=Z,66nm,0.8s						
RABL	Rabaul	36.88	118	P	P	19 39 01.3	-2.7
WB0	Warramunga Arr	37.04	157	P	P	19 39 03.1	-2.1
WRAB	Tennant Creek	37.18	158	⇑iP	P	19 39 04.0	-2.4
WRAB				pmax	pmax		
	comp=Z,474nm,0.8s						
WRA	Warramunga Arr	37.18	158	P	P	19 39 05.0	-1.3
	comp=Z,378nm,0.7s,baz=337,slow=9.5,SNR=535						
WRA				S	S	19 44 41.2	-6.4
	comp=Z,25nm,1.1s,baz=332,slow=17,SNR=8.6						
WRA				LR	LR	19 58 01.8	
	comp=Z,648nm,20.6s,baz=340,slow=42						
WRA	Warramunga Arr	37.18	158	P	P	19 39 04.0	-2.3
WB2	Warramunga Arr	37.19	158	P	P	19 39 04.2	-2.2
YSS	Yuzh-Sakhalins	37.24	26	d iP	P	19 39 06.0	-0.5
YSS				pmax	pmax		
	comp=Z,266nm,0.7s						
YSS	Yuzh-Sakhalins	37.24	26	P	P	19 39 05.8	-0.8
CIT	Chita	37.56	353	eP	P	19 39 09.4	+0.1
CIT				e		19 39 31.2	
CIT				pmax	pmax		
	comp=Z,259nm,0.8s						
GIRL	Giralia	37.61	189	P	P	19 39 10.3	+0.4
ZAK	Zakamensk	38.09	342	eP	P	19 39 13.3	-0.6
ZAK				e		19 41 27.7	
ZAK				pmax	pmax		
	comp=Z,42nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,19nm,0.8s						
PATS	Pohnpei	38.24	98	P	P	19 39 14.1	-1.3
GRNR	Gornyy	38.26	17	⇓iP	P	19 39 15.5	+0.3
GRNR				e		19 40 41.5	
GRNR				eS	S	19 45 08.1	+4.7
GRNR				pmax	pmax		
	comp=E,120nm,0.6s						
GRNR				pmax	pmax		
	comp=N,120nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,320nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,1µm,16.0s						
GRNR				MLR	MLR		
	comp=N,850nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,18.0s						
KUR	Kuril'sk	38.35	32	eP	P	19 39 16.4	+0.5
KUR				e		19 40 44.6	
KUR				S	S	19 45 07.1	+2.3
KUR				e		19 49 20.8	
KUR				MLR	MLR		
	comp=Z,2µm,15.0s						
KUR				MLR	MLR		
	comp=N,2µm,14.0s						
UGL	Uglegorsk	38.67	23	eP	P	19 39 19.0	+0.5
UGL				eS	S	19 45 10.3	+0.9
UGL				pmax	pmax		
	comp=Z,230nm,0.8s						
MDRS	Chennai	38.75	273	eP	P	19 39 21.5	+1.8
MDRS				IAmb	IAmb	19 39 26.1	
	comp=Z,50nm,0.8s						
TLY	Talaya	39.16	344	P	P	19 39 22.3	-0.3
	comp=Z,92nm,0.7s,baz=191,slow=4.1,SNR=25						
TLY				PcP	PcP	19 41 31.6	+0.9
	comp=Z,20nm,0.7s,baz=287,slow=0.4,SNR=3.6						
TLY				LR	LR	19 58 26.9	
	comp=Z,2µm,19.0s,baz=146,slow=40						
TLY	Talaya	39.16	344	eP	P	19 39 21.4	-1.3
TLY				e		19 40 53.9	
TLY				eS	S	19 45 16.4	-0.4
TLY				pmax	pmax		
	comp=Z,211nm,0.6s						
TLY				MLR	MLR		
	comp=Z,4µm,15.0s						
TLY	Talaya	39.16	344	P	P	19 39 22.0	-0.7
TLY				IAmb	IAmb	19 39 27.1	
	comp=Z,104nm,0.7s						
ZEA	Zeya	39.30	7	eP	P	19 39 23.7	-0.1
ZEA				e		19 41 03.7	
ZEA				eS	S	19 45 18.5	-0.4
ZEA				pmax	pmax		
	comp=N,70nm,0.7s						
ZEA				pmax	pmax		
	comp=E,60nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,230nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,700nm,6.4s						
ZEA				smax	smax		
	comp=E,700nm,9.2s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
PALK	Pallekele	39.39	263	P	P	19 39 27.4	+2.3
	comp=Z,9.6nm,0.8s,baz=156,slow=9.4,SNR=3.9						
PALK	Pallekele	39.39	263	P	P	19 39 25.6	+0.5
IRK	Irkutsk	39.50	345	⇓iP	P	19 39 25.0	-0.5
IRK				e		19 45 26.4	
IRK				e		19 49 25.7	
IRK				pmax	pmax		
	comp=Z,150nm,1.1s						
NGP	Nagpur	39.54	285	eP	P	19 39 26.5	+0.2
MOY	Mondy	39.91	341	eP	P	19 39 29.3	+0.2
MOY				pmax	pmax		
	comp=Z,133nm,1.4s						
HYB	Hyderabad	40.02	280	i P	P	19 39 31.0	+0.7
HYB				e		19 39 53.0	
HYB				e		19 40 07.0	
HYB	Hyderabad	40.02	280	eP	P	19 39 31.5	+1.2
HYB				IAmb	IAmb	19 39 35.5	
	comp=Z,60nm,0.8s						
WMQ	Urumqi	40.06	323	P	P	19 39 31.7	+1.3
WMQ				pP	pP	19 39 47.9	-0.9
WMQ				PP	PnPn	19 41 06.2	-1.8
WMQ				PcP	PcP	19 41 34.0	+0.2
WMQ				S	S	19 45 31.2	+0.5
WMQ				pmax	pmax		
	comp=Z,110nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.3s						
WMQ				LR	LR		
	comp=Z,13µm,15.5s						
WMQ				LR	LR		
	comp=Z,6µm,16.7s						
WMQ				LR	LR		
	comp=Z,10µm,23.9s						
WMQ	Urumqi	40.06	323	P	P	19 39 32.0	+1.6
WMQ				pmax	pmax		
	comp=Z,63nm,0.7s						
WMQ	Urumqi	40.06	323	P	P	19 39 32.0	+1.6
WMQ				IAmb	IAmb	19 39 35.7	
	comp=Z,63nm,0.7s						
TYV	Tymovskoe	40.35	22	eP	P	19 39 33.0	+0.5
TYV				eS	S	19 45 39.2	+4.6
TYV				pmax	pmax		
	comp=Z,26nm,0.6s						
TYV				smax	smax		
	comp=E,17nm,1.3s						
AS31	Alice Springs	40.47	160	P	P	19 39 32.4	-1.5
AS31				IAmb	IAmb	19 39 34.8	
	comp=Z,91nm,0.6s						
ASAR	Alice Springs	40.47	160	P	P	19 39 33.1	-0.8
	comp=Z,237nm,0.7s,baz=336,slow=6.8,SNR=867						
ASAR				S	S	19 45 33.0	-4.0
	comp=Z,20nm,1.0s,baz=348,slow=21,SNR=16						
ASAR	Alice Springs	40.47	160	P	P	19 39 32.8	-1.1
BHPL	Bhopal	41.16	288	eP	P	19 39 40.1	+0.5
	comp=Z,1µm,0.7s						
BHPL				IAmb	IAmb	19 39 44.1	
	comp=Z,110nm,0.8s						
NKL	Nikolayevsk	41.61	19	eP	P	19 39 38.9	-3.9
NKL				e		19 41 36.6	
NKL				eS	S	19 45 56.3	+3.1
NKL				pmax	pmax		
	comp=N,11nm,0.7s						
NKL				pmax	pmax		
	comp=E,53nm,0.9s						
NKL				pmax	pmax		
	comp=Z,186nm,0.9s						
NKL				pmax	pmax		
	comp=Z,99nm,4.9s						
NKL				MLR	MLR		
	comp=E,3µm,19.0s						
NKL				MLR	MLR		
	comp=N,293nm,18.0s						
NKL				MLR	MLR		
	comp=Z,3µm,22.0s						
SMLA	Simla	42.53	300	eP	P	19 39 50.7	0.0
SMLA				IAmb	IAmb	19 39 55.1	
	comp=Z,118nm,0.8s						
CTAO	Charters Tower	43.09	143	P	P	19 39 55.0	-0.2
CTAO				pmax	pmax		
	comp=Z,67nm,0.8s						
CTAO	Charters Tower	43.09	143	P	P	19 39 55.0	-0.2
CTAO				IAmb	IAmb	19 39 57.6	
	comp=Z,67nm,0.8s						
BOD	Bodaibo	43.24	355	eP	P	19 39 55.3	-0.7
DHRM	DHARAMSHALA	43.50	301	eP	P	19 39 58.6	-0.2
DHRM				IAmb	IAmb	19 40 02.5	
	comp=Z,174nm,0.8s						
MORW	Morawa	43.74	185	P	P	19 39 59.7	-0.6
MORW				IAmb	IAmb	19 40 02.2	
	comp=Z,56nm,0.6s						
ZSN	Zaisan	43.81	325	i P	P	19 40 00.7	-0.1
	comp=Z,9.8nm,0.7s,baz=325						
ZSN				eS	S	19 46 27.8	+2.1
	baz=325						
ZSN	Zaisan	43.81	325	i P	P	19 40 00.6	-0.1
ZSN				eS	S	19 46 27.8	+2.1
ZSN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DGZ	Jazzator, Alta	43.88	330	d iP	P	19 40 02.3	+0.8
DGZ				pmax	pmax		
	comp=Z,51nm,0.8s						
POO	Poona	44.44	282	eP	P	19 40 09.2	+3.0
SHLS	Shalkode	44.84	317	i P	P	19 40 07.7	-1.5
	comp=Z,83nm,0.6s,baz=317						
SHLS				eS	S	19 46 40.4	-0.6
	baz=317						
SHLS	Shalkode	44.84	317	i P	P	19 40 07.6	-1.6
SHLS				eS	S	19 46 40.4	-0.6
SHLS				pmax	pmax		
	comp=Z,83nm,0.6s						
MK31	Makanchi Array	44.89	323	P	P	19 40 10.2	+0.8
MK31				pmax	pmax		
	comp=Z,42nm,0.8s						
MK31	Makanchi Array	44.89	323	P	P	19 40 10.2	+0.8
MKAR	Makanchi Array	44.89	323	P	P	19 40 10.1	+0.7
	comp=Z,44nm,0.7s,baz=129,slow=9.3,SNR=214						
MKAR				PcP	PcP	19 41 50.7	+0.9
	comp=Z,24nm,0.7s,baz=141,slow=2.4,SNR=6.7						
MKAR				LR	LR	19 59 52.0	
	comp=Z,2µm,18.6s,baz=120,slow=37						
MKAR				PKP2ab		20 12 43.8	
	comp=Z,0.6nm,1.0s,baz=113,slow=2.8,SNR=3.7						
MKAR	Makanchi Array	44.89	323	P	P	19 40 09.9	+0.5
PDGK	Podgornoye	44.90	318	i P	P	19 40 10.4	+0.7
PDGK				pmax	pmax		
	comp=Z,110nm,0.7s						
MAKZ	Makanchi	45.08	323	P	P	19 40 11.4	+0.5
MAKZ				pmax	pmax		
	comp=Z,37nm,0.6s						
MAKZ	Makanchi	45.08	323	P	P	19 40 11.4	+0.5
MAKZ				IAmb	IAmb	19 40 14.3	
	comp=Z,37nm,0.6s						
KPKS	Kokpek	45.48	317	i P	P	19 40 14.5	+0.3
	comp=Z,54nm,0.6s,baz=317						
KPKS	Kokpek	45.48	317	i P	P	19 40 14.5	+0.3
KPKS				pmax	pmax		

	comp=Z,54nm,0.6s						
SATY	**Saty**	45.49	317	eP	P	19 40 14.9	+0.6
	comp=Z,39nm,0.8s,baz=316						
SATY	**Saty**	45.49	317	eP	P	19 40 14.9	+0.6
SATY				pmax	pmax		
	comp=Z,39nm,0.8s						
KSH	**Kashi**	45.82	311	P	P	19 40 19.7	+2.7
KSH				pP	pP	19 40 36.9	+1.4
KSH				S	S	19 47 00.1	+4.8
KSH				sS	sS	19 47 32.7	+4.7
KSH				pmax	pmax		
	comp=Z,94nm,0.7s						
KSH				pmax	pmax		
	comp=Z,1µm,4.8s						
KSH				LR	LR		
	comp=Z,4µm,10.9s						
KSH				LR	LR		
	comp=Z,2µm,11.2s						
KSH				LR	LR		
	comp=Z,3µm,16.6s						
FORT	**Forrest**	45.89	171	P	P	19 40 16.7	-0.7
KDJ	**Kajisay**	45.93	315	P	P	19 40 18.9	+1.0
KDJ	**Kajisay**	45.93	315	P	P	19 40 18.9	+1.0
SKR	**Severo-Kuril's**	46.10	31	eP	P	19 40 16.7	-2.1
SKR				eS	S	19 47 02.6	+3.9
SKR				pmax	pmax		
	comp=Z,84nm,0.9s						
SKR				pmax	pmax		
	comp=Z,700nm,5.9s						
SKR				MLR	MLR		
	comp=Z,1µm,15.0s						
HNR	**Honiara**	46.18	119	P	P	19 40 20.4	+0.4
HNR				pmax	pmax		
	comp=Z,325nm,1.4s						
HNR	**Honiara**	46.18	119	P	P	19 40 20.4	+0.4
NIL	**Nilore**	46.31	303	P	P	19 40 21.1	+0.3
NIL				pmax	pmax		
	comp=Z,228nm,0.7s						
NIL	**Nilore**	46.31	303	P	P	19 40 21.1	+0.3
TDK	**Taldyqorghan**	46.35	319	eP	P	19 40 21.6	+0.6
	comp=Z,81nm,0.6s,baz=319						
TDK				LR	LR	20 00 01.9	
	comp=Z,2µm,16.2s,baz=319						
TDK	**Taldyqorghan**	46.35	319	eP	P	19 40 21.5	+0.6
TDK				pmax	pmax		
	comp=Z,81nm,0.6s						
TDK				MLR	MLR		
	comp=Z,2µm,16.0s						
MDOK	**Medeo**	46.44	316	eP	P	19 40 22.6	+0.7
	baz=316						
MDOK				eS	S	19 47 07.4	+3.2
	baz=316						
MDOK				LR	LR	19 59 07.3	
	comp=Z,1µm,14.5s,baz=316						
MDOK	**Medeo**	46.44	316	eP	P	19 40 22.5	+0.7
MDOK				eS	S	19 47 07.3	+3.2
MDOK				MLR	MLR		
	comp=Z,1µm,15.0s						
TNSS	**Tian-Shan**	46.45	316	eP	P	19 40 23.2	+0.9
	baz=316						
TNSS	**Tian-Shan**	46.45	316	eP	P	19 40 23.2	+0.9
AAA	**Alma-Ata**	46.54	316	eP	P	19 40 23.5	+0.9
	comp=Z,36nm,0.6s,baz=316						
AAA				eS	S	19 47 08.8	+3.2
	baz=316						
AAA				LR	LR	19 59 58.6	
	comp=Z,861nm,13.9s,baz=316						
AAA	**Alma-Ata**	46.54	316	eP	P	19 40 23.4	+0.9
AAA				eS	S	19 47 08.7	+3.2
AAA				pmax	pmax		
	comp=Z,36nm,0.6s						
AAA				MLR	MLR		
	comp=Z,861nm,14.0s						
ULHL	**Ulahol**	46.62	315	P	P	19 40 24.7	+1.4
	SNR=19						
CHKK	**Chushkaly**	46.76	317	eP	P	19 40 24.0	-0.3
	baz=317						
CHKK	**Chushkaly**	46.76	317	eP	P	19 40 23.9	-0.3
MTBS	**Maitube**	46.84	316	eP	P	19 40 26.0	+1.1
	baz=316						
MTBS	**Maitube**	46.84	316	eP	P	19 40 26.0	+1.1
KUU	**Kurty**	47.20	317	eP	P	19 40 28.2	+0.5
	comp=Z,186nm,0.7s,baz=317						
KUU				eS	S	19 47 18.1	+3.3
	baz=317						
KUU	**Kurty**	47.20	317	eP	P	19 40 28.1	+0.5
KUU				eS	S	19 47 18.0	+3.3
KUU				pmax	pmax		
	comp=Z,186nm,0.7s						
TKM2	**Tokmak 2**	47.32	315	P	P	19 40 29.8	+1.0
	SNR=125						
TKM2	**Tokmak 2**	47.32	315	i P	P	19 40 29.6	+0.8
TKM2				pmax	pmax		
	comp=Z,47nm,0.7s						
NWAO	**Narrogin (SRO)**	47.48	183	P	P	19 40 30.2	+0.4
NWAO				pmax	pmax		
	comp=Z,68nm,0.7s						
NWAO	**Narrogin (SRO)**	47.48	183	P	P	19 40 30.2	+0.4
NWAO				IAmb	IAmb	19 40 31.7	
	comp=Z,68nm,0.7s						
KBK	**Karagaybulak**	47.66	315	P	P	19 40 33.1	+1.7
	SNR=13						
YAK	**Yakutsk**	47.71	6	P	P	19 40 30.5	-0.7
	comp=Z,169nm,0.7s,baz=177,slow=0.7,SNR=227						
YAK	**Yakutsk**	47.71	6d	iP	P	19 40 30.4	-0.7
YAK				e		19 42 00.0	
YAK				e		19 42 25.7	
YAK				eS	S	19 47 19.8	-1.5
YAK				pmax	pmax		
	comp=N,36nm,0.8s						
YAK				pmax	pmax		
	comp=E,16nm,0.8s						
YAK				pmax	pmax		
	comp=Z,270nm,0.9s						
YAK				pmax	pmax		
	comp=Z,39nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,0.8s						
YAK				pmax	pmax		
	comp=E,13nm,1.0s						
YAK				smax	smax		
	comp=N,73nm,1.8s						
YAK				smax	smax		
	comp=E,103nm,1.9s						
YAK				MLR	MLR		
	comp=Z,2µm,25.0s						
YAK				MLR	MLR		
	comp=N,963nm,21.0s						
YAK				MLR	MLR		
	comp=E,1µm,14.0s						
YAK	**Yakutsk**	47.71	6	P	P	19 40 30.4	-0.7
UCH	**Uchtor**	47.80	314	P	P	19 40 34.7	+1.9
	SNR=133						
ZAA0	**Zalesovo Array**	47.90	333	P	P	19 40 32.5	-0.2
ZAA0				IAmb	IAmb	19 40 34.8	
	comp=Z,108nm,0.8s						
ZALV	**Zalesovo Beam**	47.90	333	P	P	19 40 32.4	-0.4
	comp=Z,68nm,0.4s,baz=126,slow=6.6,SNR=315						
ZALV				PcP	PcP	19 41 59.5	-0.7
	comp=Z,20nm,0.6s,baz=114,slow=4.4,SNR=5.2						
CHMS	**Chumysh**	47.92	315	P	P	19 40 34.3	+1.1
	SNR=51						
FRU1	**Bishkek**	47.93	315	P	P	19 40 34.5	+1.1
FRU1				pmax	pmax		
	comp=Z,64nm,0.8s						
FRU1	**Bishkek**	47.93	315	P	P	19 40 34.5	+1.1
FRU1				IAmb	IAmb	19 40 40.9	
	comp=Z,64nm,0.8s						
AAK	**Ala-Archa**	47.96	315	P	P	19 40 35.2	+1.5
	SNR=36						
AAK	**Ala-Archa**	47.96	315	i P	P	19 40 35.0	+1.2
	SNR=69						
AAK	**Ala-Archa**	47.96	315	P	P	19 40 35.0	+1.2
AAK				pmax	pmax		
	comp=Z,36nm,0.7s						
AAK	**Ala-Archa**	47.96	315	P	P	19 40 35.0	+1.2
AAK				IAmb	IAmb	19 40 44.9	
	comp=Z,36nm,0.7s						
SGDS	**Sogindy**	48.17	316	eP	P	19 40 35.2	-0.1
	baz=316						
SGDS				eS	S	19 47 31.2	+2.6
	baz=316						
SGDS	**Sogindy**	48.17	316	eP	P	19 40 35.1	-0.1
SGDS				eS	S	19 47 31.2	+2.6
USP	**Ospenovka**	48.19	315	P	P	19 40 36.2	+0.9
	SNR=78						
BHUJ	**Bhuj**	48.30	288⇑	eP	P	19 40 39.2	+2.8
BHUJ				IAmb	IAmb	19 40 41.0	
	comp=Z,53nm,0.8s						
AML	**Almayashu**	48.34	314	P	P	19 40 38.4	+1.5
	SNR=8.2						
PEA0B	**Petropavlovsk-**	48.37	29	P	P	19 40 36.0	-0.5
PEA0B				pmax	pmax		
	comp=Z,75nm,0.8s						
PEA0B	**Petropavlovsk-**	48.37	29	P	P	19 40 36.0	-0.5
PEA0B				IAmb	IAmb	19 40 37.7	
	comp=Z,75nm,0.8s						
PETK	**Petropavlovsk-**	48.37	29	P	P	19 40 35.8	-0.7
	comp=Z,92nm,0.8s,baz=217,slow=3.7,SNR=123						
PETK				LR	LR	20 03 24.9	
	comp=Z,1µm,19.5s,baz=236,slow=39						
PETK	**Petropavlovsk-**	48.37	29	P	P	19 40 35.9	-0.6
PETK	**Petropavlovsk-**	48.37	29	P	P	19 40 35.9	-0.6
EKS2	**Erkin-Say**	48.47	314	P	P	19 40 39.0	+1.4
	SNR=7.7						
ARSB	**Arslanbob**	48.57	313	P	P	19 40 39.1	+0.7
ARSB				pmax	pmax		
	comp=Z,82nm,0.7s						
ARSB	**Arslanbob**	48.57	313	P	P	19 40 39.1	+0.7
ARSB				IAmb	IAmb	19 40 45.9	
	comp=Z,82nm,0.7s						
PET	**Petropavlovsk**	48.78	30κ	iP	P	19 40 38.6	-0.9
PET				e*PP	pP	19 40 58.0	-1.2
PET				e		19 42 33.7	
PET				eS	S	19 47 34.4	-2.2
PET				e*SS	sS	19 48 08.7	-0.8
PET				eSS	SS	19 50 57.2	-11
PET				pmax	pmax		
	comp=Z,1µm,12.5s						
PET				pmax	pmax		
	comp=Z,1µm,11.6s						
PET				pmax	pmax		
	comp=Z,122nm,1.2s						
PET	**Petropavlovsk**	48.78	30	P	P	19 40 39.0	-0.6
PET				IAmb	IAmb	19 40 41.7	
	comp=Z,85nm,0.9s						
DRK	**Karamyk**	48.88	310	P	P	19 40 42.1	+1.1
DRK				IAmb	IAmb	19 40 49.5	
	comp=Z,33nm,0.6s						
KURBB	**Kurchatov Arra**	49.04	326	P	P	19 40 42.0	+0.4
	comp=Z,108nm,0.7s,baz=118,slow=8.4,SNR=329						
KURK	**Kurchatov**	49.04	326d	iP	P	19 40 42.4	+0.8
KURK				pmax	pmax		
	comp=Z,292nm,0.7s						
KURK	**Kurchatov**	49.04	326	P	P	19 40 42.0	+0.4
BTLS	**Baital**	49.17	318	eP	P	19 40 42.7	0.0
	comp=Z,26nm,0.7s,baz=317						
BTLS	**Baital**	49.17	318	eP	P	19 40 42.7	0.0
BTLS				pmax	pmax		
	comp=Z,26nm,0.7s						
BBOO	**Buckleboo**	49.67	162	P	P	19 40 44.6	-2.0
BBOO				IAmb	IAmb	19 40 47.9	
	comp=Z,75nm,0.7s						
BTK	**Batken**	49.77	310	P	P	19 40 48.1	+0.6
BTK	**Batken**	49.77	310	P	P	19 40 48.1	+0.6
KBL	**Kabul**	49.90	303	P	P	19 40 49.4	+0.6
KBL				pmax	pmax		
	comp=Z,74nm,0.9s						
KBL	**Kabul**	49.90	303	P	P	19 40 49.4	+0.6
KBL				IAmb	IAmb	19 40 56.0	
	comp=Z,74nm,0.8s						
EIDS	**Eidsvold**	49.98	143	P	P	19 40 47.7	-1.4
MA2	**Magadan**	50.09	20d	iP	P	19 40 48.8	-0.7
MA2				pmax	pmax		
	comp=Z,141nm,0.7s						
MA2	**Magadan**	50.09	20	P	P	19 40 49.0	-0.5
DZA	**Taraz**	50.24	314	eP	P	19 40 51.5	+0.5
	comp=Z,28nm,0.8s,baz=314						
DZA				eS	S	19 48 00.6	+3.0
	baz=314						
DZA	**Taraz**	50.24	314	eP	P	19 40 51.4	+0.5
DZA				eS	S	19 48 00.5	+3.0
DZA				pmax	pmax		
	comp=Z,28nm,0.8s						
STKA	**Stephens Creek**	50.71	156	P	P	19 40 53.8	-0.7
	comp=Z,31nm,0.6s,baz=336,slow=8.2,SNR=48						
STKA	**Stephens Creek**	50.71	156	P	P	19 40 53.2	-1.3
STKA				pmax	pmax		
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	50.71	156	P	P	19 40 53.2	-1.3
KK31	**Karatay Array**	50.88	314	P	P	19 40 56.0	+0.3
KK31	**Karatay Array**	50.88	314	P	P	19 40 56.0	+0.3
KK31				IAmb	IAmb	19 41 03.2	
	comp=Z,59nm,0.7s						
KKAR	**Karatay Array**	50.88	314	P	P	19 40 56.0	+0.3
KKAR				pmax	pmax		
	comp=Z,59nm,0.7s						
KKAR	**Karatay Array**	50.88	314	P	P	19 40 56.0	+0.3
KKAR				IAmb	IAmb	19 41 03.2	
	comp=Z,59nm,0.7s						
KKAR	**Karatay Array**	50.88	314	P	P	19 40 55.9	+0.3
IUG	**Iuzhnay**	50.93	313	eP	P	19 40 56.7	+0.5
	comp=Z,35nm,0.7s,baz=312						
IUG				eS	S	19 48 10.3	+3.0
	baz=312						
IUG	**Iuzhnay**	50.93	313	eP	P	19 40 56.7	+0.5
IUG				eS	S	19 48 10.2	+3.0
IUG				pmax	pmax		
	comp=Z,35nm,0.7s						
TAS	**Tashkent**	51.23	311	P	P	19 40 59.4	+1.1
TAS				pmax	pmax		
	comp=Z,78nm,0.8s						
TAS	**Tashkent**	51.23	311	P	P	19 40 59.4	+1.1
TAS				IAmb	IAmb	19 41 29.2	
	comp=Z,78nm,0.8s						
BRLS	**Borolday**	51.33	314	eP	P	19 40 59.5	+0.3
	comp=Z,16nm,0.6s,baz=313						
BRLS				eS	S	19 48 15.8	+3.2
	baz=313						
BRLS	**Borolday**	51.33	314	eP	P	19 40 59.4	+0.3
BRLS				eS	S	19 48 15.7	+3.2
BRLS				pmax	pmax		
	comp=Z,16nm,0.6s						
BRZS	**Berezniki**	52.03	323	eP	P	19 41 04.7	+0.5
	comp=Z,54nm,0.7s,baz=323						
BRZS	**Berezniki**	52.03	323	eP	P	19 41 04.7	+0.5
BRZS				pmax	pmax		
	comp=Z,54nm,0.7s						
SEY	**Seymchan**	53.18	18	P	P	19 41 12.0	-0.4
	comp=Z,80nm,0.7s,baz=215,slow=5.4,SNR=278						
SEY	**Seymchan**	53.18	18d	iP	P	19 41 12.7	+0.3
ARMA	**Armidale**	54.17	146	P	P	19 41 20.6	+0.4
BVAR	**Borovoye Array**	54.62	326	P	P	19 41 23.4	+0.2
	comp=Z,36nm,0.6s,baz=79,slow=9.2,SNR=278						
BRVK	**Borovoye**	54.69	326	P	P	19 41 23.9	+0.2
BRVK				pmax	pmax		
	comp=Z,121nm,0.7s						
BRVK	**Borovoye**	54.69	326	P	P	19 41 23.9	+0.2
SANVU	**Saraoutou**	55.33	121	P	P	19 41 28.4	-0.3
SANVU				IAmb	IAmb	19 42 02.2	
	comp=Z,34nm,0.8s						
HRA	**Herat**	55.45	302	P	P	19 41 29.8	+0.1
TIXI	**Tiksi**	57.12	3d	iP	P	19 41 39.5	-1.2
TIXI	**Tiksi**	57.12	3	P	P	19 41 39.4	-1.2
TOO	**Toolangi**	57.23	156	P	P	19 41 41.9	0.0
TOO				pmax	pmax		
	comp=Z,32nm,0.7s						
TOO	**Toolangi**	57.23	156	P	P	19 41 41.9	0.0
TOO				IAmb	IAmb	19 41 43.7	
	comp=Z,32nm,0.7s						
JLN	**Jalan Bani Buh**	57.79	287	P	P	19 41 46.8	+0.6
JLN				S	S	19 49 36.9	-2.9
WBK	**Wadi Bani Khal**	58.16	288	P	P	19 41 46.2	-2.7
DZM	**Mont Dzumac**	58.28	128	eP	P	19 41 48.8	-0.9
	comp=Z,66nm,1.1s						
DZM				eS	S	19 49 44.7	-1.6
	comp=Z,2µm,26.8s						
DZM				eLQ	LQ	19 56 30.4	
	comp=Z,4µm,40.0s						
DZM				eLR	LR	19 59 00.7	
	comp=Z,4µm,32.1s						
DZM	**Mont Dzumac**	58.28	128	P	P	19 41 48.6	-1.1
DZM	**Mont Dzumac**	58.28	128	P	P	19 41 49.4	-0.3
WSAR	**Wadi Sarin**	58.44	288	P	P	19 41 51.0	+0.2
	comp=Z,23nm,0.8s,baz=122,slow=5.2,SNR=12						
ASHT	**Ashkhabad**	58.90	306	P	P	19 41 55.1	+1.4
ASHT				pmax	pmax		
	comp=Z,155nm,0.6s						
ASHT	**Ashkhabad**	58.90	306	P	P	19 41 55.1	+1.4
JMDO	**Jabal Madar**	58.98	287	P	P	19 41 54.0	-0.6
SMDO	**Samad**	58.98	288	P	P	19 41 53.8	-0.8
GEYT	**Alibeck**	59.11	306	P	P	19 41 56.1	+1.0
	comp=Z,67nm,0.8s,baz=134,slow=6.4,SNR=81						
GEYT				LR	LR	20 09 29.4	
	comp=Z,2µm,21.0s,baz=70,slow=38						
GEYT	**Alibeck**	59.11	306	P	P	19 41 56.2	+1.0
GYA0B	**ALIBECK ARRAY**	59.11	306	P	P	19 41 56.3	+1.1
MHTO	**MHTO**	59.22	286	P	P	19 41 55.1	-1.0
	SNR=9.2						
MHTO				S	S	19 50 18.2	+20
ABKAR	**Akbulak array**	59.61	319	P	P	19 41 58.6	+0.3
ABKAR	**Akbulak array**	59.61	319	P	P	19 41 58.8	+0.3
ABKAR				IAmb	IAmb	19 41 59.8	
	comp=Z,69nm,0.7s						
HOQ	**Hoqain**	59.63	289	P	P	19 41 59.7	+0.7
DQM	**DQM**	59.72	285	P	P	19 41 59.1	-0.5
	SNR=5.2						
DQM				S	S	19 50 27.5	+23
BSY	**Bisya**	59.79	288	P	P	19 41 59.5	-0.6
SOHO	**SOHO**	60.30	290	P	P	19 42 04.1	+0.5
SOHO				S	S	19 50 09.2	-3.1
ARQ	**Araqi**	60.37	289	P	P	19 42 03.9	-0.1
	SNR=5.2						
BANOM	**Banah**	60.41	292	P	P	19 42 05.4	+1.1
SHME	**Shamm**	60.55	292	P	P	19 42 05.7	+0.5
UOSS	**Minazif**	60.55	291	P	P	19 42 05.3	+0.1
UOSS	**Minazif**	60.55	291	P	P	19 42 05.5	+0.2
MSFE	**Esma-Masafi**	60.57	291	P	P	19 42 07.1	+1.7
HATD	**Hatta, Dubai**	60.62	290	P	P	19 42 06.5	+0.7
ASHO	**Ashiyiah**	60.70	290	P	P	19 42 06.1	-0.3
ALNE	**Al Ain**	61.02	290	P	P	19 42 08.6	+0.1
AKTO	**Aktyubinsk**	61.09	320	P	P	19 42 08.9	+0.5
	comp=Z,52nm,0.6s,baz=96,slow=8.7,SNR=109						
SVE	**Sverdlovsk**	61.25	327c	iP	P	19 42 09.8	+0.4
SVE				eS	S	19 50 23.4	+0.1
SVE				pmax	pmax		
	comp=Z,222nm,0.8s						
SVE				MLR	MLR		
	comp=Z,2µm,19.0s						
ASUD	**Al Ashush, Dub**	61.36	290	i P	P	19 42 10.8	+0.1
	SNR=6.6						
SHAO	**Shalim**	61.73	283	P	P	19 42 13.7	+0.3
ADK	**Adak**	62.01	39	P	P	19 42 13.7	-0.9
ADK				pmax	pmax		
	comp=Z,81nm,1.1s						
ADK	**Adak**	62.01	39	P	P	19 42 13.7	-0.9
ADK				IAmb	IAmb	19 43 01.6	
	comp=Z,81nm,1.1s						
ARU	**Arti**	62.23	326	P	P	19 42 15.8	-0.2
	comp=Z,47nm,0.7s,baz=110,slow=4.1,SNR=222						
ARU	**Arti**	62.23	326d	iP	P	19 42 15.7	-0.3
ARU				*PP	pP	19 42 33.4	-2.6
ARU						19 42 54.8	
ARU				S	S	19 50 39.5	+3.8
ARU				SS	SS	19 54 45.2	+5.3
ARU				pmax	pmax		
	comp=Z,109nm,0.7s						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s						
ARU	**Arti**	62.23	326	P	P	19 42 15.3	-0.7
DMTO	**DMTO**	62.41	282	P	P	19 42 17.7	-0.2
DOK	**Doka**	63.07	284	P	P	19 42 21.9	-0.4
	SNR=12						
RBK	**Rabkut**	63.15	282	P	P	19 42 22.9	0.0
	SNR=5.8						
WHFO	**Wadi Hawf**	63.50	283	P	P	19 42 24.6	-0.5
	SNR=7.8						
ATKA	**Atka Island**	63.58	39	P	P	19 42 24.0	-1.0
ABTO	**Aybut**	64.02	282	P	P	19 42 28.7	+0.1
	SNR=6.4						
SOCY	**Socotra**	64.20	277	P	P	19 42 28.6	-1.3
SOCY				IAmb	IAmb	19 42 33.3	
	comp=Z,60nm,0.8s						
SPIA	**Saint Paul Isl**	66.68	34	P	P	19 42 44.9	-0.1
AKT	**Akhty**	67.28	309	eP	P	19 42 49.8	+0.5
AKT				e		19 43 16.9	
AKT				e		19 45 17.0	
AKT				pmax	pmax		
	comp=Z,54nm,0.7s						
MAK	**Makhachkala**	67.45	311	eP	P	19 42 45.7	-4.5
MAK				e*PP	pP	19 43 06.5	-3.5
MAK				e*SP	PcP	19 43 15.2	-1.9
MAK				ePPP	PPP	19 46 53.4	
MAK				eS	S	19 51 34.4	-5.9
MAK				e*SS	sS	19 52 14.0	+0.3
MAK				eSS	SS	19 56 02.1	+0.5
MAK				pmax	pmax		
	comp=Z,296nm,1.2s						
MAK				MLR	MLR		
	comp=Z,643nm,17.0s						
KIRV	**Kirov**	67.51	328	P	P	19 42 50.0	-0.1
	comp=Z,265nm,0.6s,baz=102,slow=0.8,SNR=108						
KIRV	**Kirov**	67.51	328d	iP	P	19 42 50.2	0.0
UMR	**Umm Al-Rimmam**	67.77	296	eP		19 42 52.2	
BELG	**Belogornoye**	67.80	321	P	P	19 42 51.8	-0.4
	comp=Z,118nm,0.8s,baz=214,slow=0.2,SNR=64						
BELG	**Belogornoye**	67.80	321d	iP	P	19 42 52.0	-0.2
BELG				pmax	pmax		
	comp=Z,23nm,0.8s						
KBD	**Kabd**	67.82	296	eP		19 42 52.6	
RDF	**Al-Radifah**	67.97	296	eP		19 42 53.4	
MIB	**Mutribah**	68.07	296	eP		19 42 54.1	
UNV	**Unalaska Valle**	68.40	38	P	P	19 42 54.9	-1.0
GROC	**Groznyy**	68.70	311	eP	P	19 42 58.3	+0.3
GROC				e		19 43 23.8	
GROC				pmax	pmax		
	comp=Z,61nm,0.7s						
AKUT	**Akutan**	68.85	37	P	P	19 42 57.7	-1.0
AKUT				IAmb	IAmb	19 43 14.5	
	comp=Z,88nm,0.9s						
GNI	**Garni**	69.57	308	P	P	19 43 04.0	+0.3
	comp=Z,13nm,0.7s,baz=154,slow=8.3,SNR=16						
GNI	**Garni**	69.57	308	P	P	19 43 06.3	+2.6
GNI	**Garni**	69.57	308d	iP	P	19 43 05.0	+1.3
GNI				pmax	pmax		
	comp=Z,51nm,0.8s						
GNI	**Garni**	69.57	308	P	P	19 43 05.4	+1.7
GNI				IAmb	IAmb	19 43 13.9	
	comp=Z,63nm,0.8s						
ZEI	**Tsey**	70.10	310	eP	P	19 43 06.4	-0.5
ZEI				pmax	pmax		
	comp=Z,62nm,0.7s						
ANM	**Nome**	70.12	26	P	P	19 43 07.2	+0.8
ANM				pmax	pmax		
	comp=Z,29nm,0.7s						
ANM	**Nome**	70.12	26	P	P	19 43 07.2	+0.8
NCK	**Nalchik**	70.30	311⇓	iP	P	19 43 08.1	+0.2
NCK				pmax	pmax		
	comp=Z,36nm,0.7s						
RAYN	**Ar Rayn**	70.41	290	i P	P	19 43 09.9	+0.9
	SNR=6.5						
RAYN	**Ar Rayn**	70.41	290	P	P	19 43 08.8	-0.2
RAYN				pmax	pmax		
	comp=Z,51nm,0.9s						
RAYN	**Ar Rayn**	70.41	290	P	P	19 43 08.8	-0.2
RAYN				IAmb	IAmb	19 43 45.5	
	comp=Z,51nm,0.9s						
GOF	**Gofitskoye**	70.65	313⇑	eP	P	19 43 10.8	+0.8
GOF				pmax	pmax		
	comp=Z,45nm,0.7s						
KBZ	**Khabaz**	70.80	312	P	P	19 43 11.4	+0.5
	comp=Z,50nm,0.9s,baz=111,slow=5.3,SNR=59						
KBZ				LR	LR	20 17 18.0	
	comp=Z,878nm,19.4s,baz=76,slow=38						
KBZ	**Khabaz**	70.80	312d	iP	P	19 43 11.5	+0.6
KBZ				pmax	pmax		
	comp=Z,43nm,0.8s						
KVAR	**Kislovodsk Arr**	70.94	312	P	P	19 43 12.7	+0.8
	comp=Z,56nm,0.7s,baz=264,slow=23,SNR=25						
KIV	**Kislovodsk**	70.95	312	i P	P	19 43 13.0	+1.1
	SNR=13						
KIV	**Kislovodsk**	70.95	312	eP	P	19 43 12.0	+0.1
KIV				eS	S	19 52 24.1	+2.4
KIV				eSS	SS	19 56 59.3	+3.6
KIV				pmax	pmax		
	comp=Z,580nm,1.0s						
KIV				pmax	pmax		
	comp=Z,599nm,4.0s						
KIV				MLR	MLR		
	comp=Z,3µm,18.0s						
KIV	**Kislovodsk**	70.95	312	P	P	19 43 12.4	+0.5
GEVA	**Gevas**	70.97	306	P	P	19 43 12.7	+0.4
GEVA				IAmb	IAmb	19 43 18.0	
	comp=Z,54nm,0.8s						
VRH	**Novokhopyorsk**	71.42	319	eP	P	19 43 14.1	-0.4

VRH				pmax	pmax		
	comp=Z,250nm,0.7s						
RDOG	Red Dog Mine	71.54	23	P	P	19 43 15.1	+0.2
RDOG				IAmb	IAmb	19 43 16.9	
	comp=Z,62nm,0.7s						
KLMR	Klimovskoe	72.69	330	*e*P	P	19 43 18.9	-3.0
KLMR				*e*S	S	19 52 39.5	-1.3
KLMR				pmax	pmax		
	comp=Z,92nm,0.6s						
KLMR	Klimovskoe	72.69	330	*e*P	P	19 43 18.9	-3.0
KLMR				AMP		19 43 23.3	
	comp=Z,92nm,0.6s						
KLMR				*e*PP	PP	19 45 57.0	-7.2
KLMR				*e*S	S	19 52 39.5	-1.3
KLMR				*e*S	S	19 52 39.5	-1.3
KLMR				LQ	LQ	20 08 29.4	
KLMR				LQ	LQ	20 08 29.4	
KLMR				LR	LR	20 13 28.6	
MARD	Mardin	72.86	305	P	P	19 43 23.9	+0.3
MARD				IAmb	IAmb	19 43 24.9	
	comp=Z,42nm,0.8s						
VORD	Divnogorie	72.96	319	*e*P	P	19 43 22.8	-0.9
VORD				pmax	pmax		
	comp=Z,60nm,0.7s						
CHGN	Chignik	73.12	35	P	P	19 43 23.7	-0.8
LPSR	Galich'ya Gora	73.12	321	*e*P	P	19 43 24.4	-0.2
LPSR				pmax	pmax		
	comp=Z,220nm,0.7s						
TMCR	Tamitsa	73.42	333	*e*P	P	19 43 25.2	-0.9
TMCR				*e*S	SKiKP	19 52 50.3	+0.8
TMCR				pmax	pmax		
	comp=Z,183nm,0.8s						
QRZ	Quartz Range	73.53	141	P	P	19 43 26.6	-0.4
QRZ				IAmb	IAmb	19 43 29.2	
	comp=Z,49nm,0.8s						
FOZ	Fox Glacier	73.62	145	P	P	19 43 27.2	-0.4
HIZ	Hauiti	73.63	138	P	P	19 43 27.9	+0.2
HIZ				IAmb	IAmb	19 43 31.7	
	comp=Z,75nm,0.9s						
MOS	Moscow	73.76	324	*e*P	P	19 43 26.3	-2.0
MOS				*e*		19 43 43.1	
MOS				pmax	pmax		
	comp=Z,148nm,0.7s						
MOS				MLR	MLR		
	comp=Z,2µm,21.0s						
MOS				MLR	MLR		
	comp=E,2µm,19.0s						
A21K	Barrow	73.97	19	P	P	19 43 29.6	+0.4
	baz=268,SNR=56						
A21K	Barrow	73.97	19	P	P	19 43 29.4	+0.2
THZ	Tophouse	74.31	142	P	P	19 43 30.6	-1.1
LBZ	Lake Benmore	74.37	145	P	P	19 43 31.4	-0.5
OBN	Obninsk	74.39	324	P	P	19 43 31.6	-0.4
	comp=E,11nm,0.4s,baz=52,slow=5.0,SNR=19						
OBN	Obninsk	74.39	324	d *i*P	P	19 43 31.4	-0.5
OBN				*i*		19 43 41.7	
OBN				*i* S	SKiKP	19 52 52.5	+1.2
OBN				pmax	pmax		
	comp=Z,62nm,0.9s						
OBN				MLR	MLR		
	comp=Z,2µm,20.0s						
OBN	Obninsk	74.39	324	P	P	19 43 31.6	-0.4
OBN				IAmb	IAmb	19 43 32.1	
	comp=Z,68nm,0.8s						
RPZ	Rata Peaks	74.43	144	P	P	19 43 31.6	-0.7
LTZ	Lake Taylor	74.56	143	P	P	19 43 31.6	-1.5
ANN	Anapa	74.65	313	*e*P	P	19 43 32.3	-1.3
ANN				*e**PP	PcP	19 43 49.0	+1.4
ANN				*e*S	S	19 53 09.9	+6.5
ANN				pmax	pmax		
	comp=Z,324nm,1.2s						
TUWZ	Tuamarina	74.74	141	P	P	19 43 33.3	-0.8
LVZ	Lovozero	74.77	337	P	P	19 43 33.6	-0.4
LVZ				pmax	pmax		
	comp=Z,55nm,1.1s						
LVZ	Lovozero	74.77	337	P	P	19 43 33.6	-0.4
LVZ				IAmb	IAmb	19 45 41.0	
	comp=Z,54nm,1.1s						
URZ	Urewera	74.96	137	P	P	19 43 34.2	-1.3
ATD	Arta Tunnel	75.02	278	P	P	19 43 36.8	+0.4
ATD	Arta Tunnel	75.02	278	*e*P	P	19 43 27.6	-8.9
ATD				*e*S	S	19 53 12.7	+3.9
BKZ	Black Stump Fm	75.06	138	P	P	19 43 35.2	-0.9
BKZ				IAmb	IAmb	19 43 37.8	
	comp=Z,70nm,0.5s						
IMAR	Indian Mountai	75.06	25	P	P	19 43 35.7	0.0
APA	Apatity	75.25	337	⇓*i*P	P	19 43 35.7	-1.0
APA				pmax	pmax		
	comp=Z,48nm,0.5s						
APA				MLR	MLR		
	comp=Z,4µm,19.0s						
MXZ	Matakaoa Point	75.39	136	P	P	19 43 36.7	-1.2
MSWZ	Moikau Station	75.53	140	P	P	19 43 37.7	-1.0
GAZ	Gaziantep	75.70	305	P	P	19 43 40.9	+0.9
BFZ	Birch Farm	75.74	139	P	P	19 43 38.6	-1.3
BFZ				IAmb	IAmb	19 44 57.0	
	comp=Z,184nm,1.5s						
TOKA	Tokat	75.85	308	P	P	19 43 41.2	+0.4
RSO	Redoubt South	75.87	31	P	P	19 43 40.5	-0.1
PPLA	Purkeypile	75.94	28	P	P	19 43 40.9	0.0
PPLA				IAmb	IAmb	19 43 43.1	
	comp=Z,87nm,0.6s						
KDAK	Kodiak Island	76.21	33	P	P	19 43 41.7	-0.6
	comp=Z,137nm,0.7s,baz=287,slow=3.7,SNR=106						
KDAK	Kodiak Island	76.21	33	P	P	19 43 42.1	-0.2
KDAK				pmax	pmax		
	comp=Z,127nm,0.6s						
KDAK	Kodiak Island	76.21	33	P	P	19 43 42.1	-0.2
BPAW	Bear Paw Mtn.	76.36	27	P	P	19 43 43.4	+0.2
MLY	Manley	76.38	26	P	P	19 43 43.6	+0.4
	baz=275,SNR=215						
COLD	Coldfoot	76.39	24	P	P	19 43 43.6	+0.4
	baz=275,SNR=106						
TOLK	Toolik Lake Re	76.48	22	P	P	19 43 44.1	+0.3
	baz=276,SNR=164						
HOM	Homer	76.50	31	P	P	19 43 44.0	0.0
	baz=276						
CAPN	Captain Cook N	76.63	30	P	P	19 43 44.8	+0.2
	baz=276,SNR=12						
TEND	Ethiopian Broa	76.73	279	*e*P	P	19 43 45.8	-0.3
TEND				*e*S	S	19 53 20.6	-6.9
TRF	Thorofare Moun	76.74	27	P	P	19 43 45.4	-0.1
TRF				IAmb	IAmb	19 43 48.7	
	comp=Z,79nm,0.7s						
CUT	Chulitna	76.87	29	P	P	19 43 45.6	-0.3
	baz=276						
I23K	Minto, Yukon-K	76.95	26	P	P	19 43 46.7	+0.3
	baz=277,SNR=62						
I23K	Minto, Yukon-K	76.95	26	P	P	19 43 46.5	+0.2
I23K				IAmb	IAmb	19 43 50.6	
	comp=Z,64nm,0.7s						
SIM	Simferopol'	76.97	313	d *i*P	P	19 43 45.9	-1.0
SIM				pmax	pmax		
	comp=Z,178nm,0.7s						
NEA2	Nenana	77.14	26	P	P	19 43 47.2	-0.3
	baz=277,SNR=96						
RC01	Rabbit Creek A	77.28	30	P	P	19 43 47.4	-1.0
	baz=277,SNR=38						
MCK	McKinley	77.31	27	P	P	19 43 47.9	-0.6
	baz=277,SNR=146						
O22K	Cooper Landing	77.36	30	P	P	19 43 47.8	-1.0
	baz=277,SNR=18						
KEV	Kevo	77.38	339	P	P	19 43 48.2	-0.5
KEV				pmax	pmax		
	comp=Z,130nm,1.5s						
KEV	Kevo	77.38	339	P	P	19 43 48.2	-0.5
KEV				IAmb	IAmb	19 43 52.6	
	comp=Z,130nm,1.5s						
PMR	Palmer	77.50	29	P	P	19 43 48.4	-1.1
PMR				pmax	pmax		
	comp=Z,101nm,0.8s						
PMR	Palmer	77.50	29	P	P	19 43 48.4	-1.1
PMR				IAmb	IAmb	19 43 50.0	
	comp=Z,101nm,0.8s						
SEW	Seward	77.55	31	P	P	19 43 48.9	-0.9
TCOL	CIGO, UAF Yank	77.62	26	P	P	19 43 49.4	-0.7
	baz=278,SNR=21						
TCOL	CIGO, UAF Yank	77.62	26	P	P	19 43 49.5	-0.7
TCOL				IAmb	IAmb	19 43 52.5	
	comp=Z,55nm,0.7s						
COLA	College	77.62	26	P	P	19 43 49.4	-0.7
COLA				pmax	pmax		
	comp=Z,55nm,0.7s						
COLA	College	77.62	26	P	P	19 43 49.4	-0.7
COLA				IAmb	IAmb	19 43 52.5	
	comp=Z,55nm,0.7s						
POKR	Poker Plat Res	77.76	26	P	P	19 43 50.2	-0.8
	baz=278,SNR=37						
MMAI	Mount Meron Ar	77.80	301	P	P	19 43 53.1	+1.3
	comp=Z,14nm,0.7s,baz=75,slow=9.8,SNR=9.6						
MMAI				pP	pwP	19 44 16.1	+1.3
	comp=Z,9.3nm,0.7s,baz=73,slow=12,SNR=3.5						
KNK	Knik Glacier	77.85	29	P	P	19 43 51.0	-0.5
SML	Sawmill	77.85	29	P	P	19 43 51.3	-0.2
SML				IAmb	IAmb	19 43 56.1	
	comp=Z,98nm,0.8s						
ARA0	ARCESS Array S	77.93	339	P	P	19 43 51.6	-0.2
ARA0				IAmb	IAmb	19 43 55.7	
	comp=Z,83nm,0.8s						
ARA0	ARCESS Array S	77.93	339	*e*P	P	19 43 51.9	+0.1
ARCES	ARCESS Array B	77.93	339	P	P	19 43 51.9	0.0
	comp=Z,59nm,0.6s,baz=79,slow=7.1,SNR=192						
ARCES				pP	pP	19 44 16.4	+3.7
	comp=Z,22nm,0.6s,baz=72,slow=7.8,SNR=3.4						
ARCES				LR	LR	20 22 16.3	
	comp=Z,1µm,19.7s,baz=65,slow=39						
ARCES	ARCESS Array B	77.93	339	P	P	19 43 51.6	-0.2
IL31		78.04	26	P	P	19 43 51.1	-1.3
ILAR	Eielson Array	78.04	26	P	P	19 43 50.7	-1.8
	comp=Z,17nm,0.6s,baz=268,slow=3.8,SNR=143						
ILAR				PP	PP	19 46 55.3	+5.9
	comp=Z,4.9nm,0.8s,baz=286,slow=8.0,SNR=5.5						
ILAR				PKKPbc	PKKPbc	20 02 51.0	-3.1
	comp=Z,0.4nm,0.6s,baz=144,slow=1.9,SNR=4.6						
HDA	Harding Lake	78.08	26	P	P	19 43 51.3	-1.4
	baz=279,SNR=66						
BR131	Keskin Array S	78.10	308	P	P	19 43 53.0	-0.5
BR131				pmax	pmax		
	comp=Z,19nm,0.8s						
BR131	Keskin Array S	78.10	308	P	P	19 43 53.0	-0.5
BRTR	Keskin Array B	78.10	308	P	P	19 43 53.2	-0.3
	comp=Z,8.7nm,0.8s,baz=117,slow=4.2,SNR=32						
BRTR				pP	pP	19 44 18.0	+4.0
	comp=Z,8.1nm,0.8s,baz=117,slow=7.5,SNR=4.0						
BRTR				LR	LR	20 23 20.1	
	comp=Z,326nm,20.4s,baz=71,slow=39						
BRTR	Keskin Array B	78.10	308	P	P	19 43 52.9	-0.6
SCM	Sheep Creek Mo	78.31	29	P	P	19 43 54.0	-0.2
SCM				pmax	pmax		
	comp=Z,111nm,0.8s						
SCM	Sheep Creek Mo	78.31	29	P	P	19 43 54.0	-0.2
HAMF	Hammerfest	78.34	340	*e*P	P	19 43 54.1	+0.1
ANKE	Ethiopia-Afar	78.43	277	*e*P	P	19 43 19.7	-36
ANKE				*e*S	SKiKP	19 53 04.2	+5.0
SPA0	Spitsbergen Ar	78.47	348	P	P	19 43 54.8	+0.2
SPA0	Spitsbergen Ar	78.47	348	*e*P	P	19 43 54.8	+0.2
BMAR	Burnt Mountain	78.52	23	P	P	19 43 53.8	-1.3
BR231	Keskin MP Arra	78.73	308	P	P	19 43 56.8	-0.2
EIL	Elat	78.76	298	P	P	19 43 57.6	+0.5
	comp=Z,48nm,0.9s,baz=332,slow=1.0,SNR=16						
M24K	Tolsona, Glenn	78.81	29	P	P	19 43 57.2	+0.3
	baz=280,SNR=47						
KTK1	Kautokeino	78.82	339	*e*P	P	19 43 56.4	-0.3
FID	Port Fidalgo	78.90	30	P	P	19 43 56.7	-0.7
FID				IAmb	IAmb	19 44 05.7	
	comp=Z,54nm,0.9s						
PAX	Paxson	78.97	28	P	P	19 43 57.4	-0.4
PAX				pmax	pmax		
	comp=Z,42nm,0.7s						
PAX	Paxson	78.97	28	P	P	19 43 57.4	-0.4
PAX				IAmb	IAmb	19 43 59.4	
	comp=Z,42nm,0.7s						
HSPB	Hornsund (broa	78.99	347	*e*P	P	19 43 58.1	+0.6
HSPB	Hornsund (broa	78.99	347	*e*P	P	19 43 57.6	+0.2
KBS	Kingsbay	79.07	349	P	P	19 43 58.3	+0.4
KBS				pmax	pmax		
	comp=Z,73nm,0.7s						
KBS	Kingsbay	79.07	349	P	P	19 43 58.3	+0.4
KBS				IAmb	IAmb	19 43 59.6	
	comp=Z,74nm,0.7s						
KBS	Kingsbay	79.07	349	*e*P	P	19 43 58.1	+0.2
KBS	Kingsbay	79.07	349	*i* P	P	19 43 58.1	+0.2
KBS				IAmb	IAmb	19 43 59.4	
	comp=Z,168nm,0.7s						
RIDG	Independent Ri	79.10	27	P	P	19 43 57.9	-0.5
FIA1	FINESS Array S	79.12	331	P	P	19 43 58.2	-0.2
FIA1				IAmb	IAmb	19 43 59.2	
	comp=Z,90nm,0.6s						
FINES	FINESS Array B	79.12	331	P	P	19 43 58.0	-0.5
	comp=Z,78nm,0.5s,baz=54,slow=5.9,SNR=562						
FINES				PKiKP	PKiKP	19 49 31.4	0.0
	comp=Z,3.2nm,0.7s,baz=120,slow=3.5,SNR=2.4						
FINES				LR	LR	20 22 12.3	
	comp=Z,2µm,19.8s,baz=78,slow=38						
FINES	FINESS Array B	79.12	331	P	P	19 43 58.2	-0.3
OPO	Ambohidratompo	79.13	247	LR	LR	20 13 58.7	
	comp=Z,183nm,19.4s,baz=186,slow=32						
CSS	Mathiatis	79.15	303	P	P	19 43 59.5	+0.2
CSS				IAmb	IAmb	19 44 34.1	
	comp=Z,80nm,0.9s						
ABPO	Ambohimpanom	79.24	247	P	P	19 44 00.0	-0.1
ABPO				pmax	pmax		
	comp=Z,19nm,1.1s						
ABPO	Ambohimpanom	79.24	247	P	P	19 44 00.0	-0.1
AKASG	Malin Array Be	79.33	320	P	P	19 43 59.1	-0.7
	comp=Z,21nm,0.7s,baz=69,slow=4.4,SNR=179						
AKASG				PKiKP	PKiKP	19 49 31.9	-0.1
	comp=Z,0.8nm,0.4s,baz=66,slow=1.9,SNR=4.7						
AKASG				LR	LR	20 22 04.3	
	comp=Z,909nm,20.7s,baz=70,slow=38						
AKASG	Malin Array Be	79.33	320	P	P	19 43 59.4	-0.4
AKASG				pmax	pmax		
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	79.33	320	P	P	19 43 59.4	-0.4
AKBB	Malin Array Si	79.33	320	P	P	19 43 59.2	-0.6
AKBB				pmax	pmax		
	comp=Z,38nm,0.7s						
AKBB	Malin Array Si	79.33	320	P	P	19 43 59.2	-0.6
AKBB				IAmb	IAmb	19 44 02.5	
	comp=Z,38nm,0.7s						
VSU	Vasula	79.35	328	*e*P	P	19 43 60.0	+0.2
SCRK	Sand Creek	79.43	27	P	P	19 43 59.7	-0.6
	baz=282,SNR=54						
MNK	Minsk	79.45	324	*i* P	P	19 44 00.6	+0.2
	comp=E,12nm,0.9s						
MNK				*i* P	P	19 44 00.6	+0.2
	comp=N,37nm,1.2s						
MNK				*i* P	P	19 44 00.6	+0.2
	comp=Z,93nm,0.8s						
MNK				*i* pP	pP	19 44 17.3	-3.8
MNK				*i* PP	PP	19 47 00.7	-0.6
MNK				*i* PPP	PPP	19 48 49.5	
MNK				*i* S	S	19 53 56.8	+1.5
MNK				*i* SS	SS	19 59 05.3	+1.5
MNK				*i* SSS	SSS	20 02 31.1	
MNK				*i* LQ	LQ	20 14 00.7	
MNK				*i* LR	LR	20 18 50.7	
MNK				*i* LRM	MLR	20 19 47.4	
	comp=N,907nm,23.2s						
MNK				*i* LRM	MLR	20 20 10.6	
	comp=E,251nm,20.6s						
MNK				*i* LRM	MLR	20 20 10.6	
	comp=Z,1µm,20.2s						
MNK	Minsk	79.45	324	*e*P	P	19 44 00.0	-0.4
FURI	Furi	79.61	277	*e*P	P	19 43 56.3	-6.1
FURI				*e*S	S	19 53 59.7	+0.7
N25K	Chitina, Valde	79.64	29	P	P	19 44 01.5	+0.1
	baz=282,SNR=24						
MENT	Mentasta	79.76	28	P	P	19 44 02.0	0.0
MENT				IAmb	IAmb	19 44 07.0	
	comp=Z,45nm,0.6s						
MDUB	Mudurnu	79.81	309	P	P	19 44 03.0	+0.2
L26K	Log Cabin Wild	79.91	27	P	P	19 44 03.1	+0.3
	baz=282,SNR=55						
IDID	Didziasalis	79.95	325	*e*P	P	19 44 03.3	+0.2
NACGM	Naroch	80.01	324	*i* P	P	19 44 03.9	+0.5
NACGM				*i* P	P	19 44 03.9	+0.5
NACGM				*i* P	P	19 44 03.9	+0.5
NACGM				*i* PP	PP	19 47 05.4	-0.5
NACGM				*i* PPP	PPP	19 48 55.9	
NACGM				*i* S	S	19 53 59.6	-1.5
NACGM				*i* SS	SS	19 59 14.7	+2.7
NACGM				*i* SSS	SSS	20 02 41.2	
NACGM				*i* LQ	LQ	20 14 22.6	
NACGM				*i* LR	LR	20 19 10.4	
AIN	Ainahou	80.05	73	P	P	19 44 05.1	+0.6
KAIM	Kayak Island	80.07	31	P	P	19 44 04.2	+0.6
TRO	Tromso	80.16	340	*e*P	P	19 44 03.8	-0.2
HLP	Hilina Pali	80.20	73	P	P	19 44 05.5	+0.2
HLP				IAmb	IAmb	19 44 08.9	
	comp=Z,87nm,0.7s						
IIGN	Ignalina	80.23	325	*e*P	P	19 44 04.7	+0.1
K27K	Chicken	80.24	26	P	P	19 44 05.2	+0.7
	baz=283						
ISAL	Salakas	80.24	325	*e*P	P	19 44 05.0	+0.4
VRDI	Verde Repeater	80.25	29	P	P	19 44 04.8	-0.1
MILM	Milestii Mici	80.30	316	⇑P	P	19 44 04.4	-0.7
SORM	Soroca	80.37	317	⇓P	P	19 44 05.0	-0.5
EGAK	Eagle	80.45	25	P	P	19 44 05.5	-0.1
EGAK				IAmb	IAmb	19 44 06.7	
	comp=Z,88nm,0.7s						
BCAR	Beaver Creek A	80.59	27	P	P	19 44 06.8	+0.4
TLCR		80.63	314	⇑P	P	19 44 07.3	+0.4
MTSE	Matsula	80.80	328	*e*P	P	19 44 05.7	-1.8
ISP	Isparta	80.84	307	P	P	19 44 07.5	-0.9
ISP				pmax	pmax		
	comp=Z,36nm,0.8s						
ISP	Isparta	80.84	307	P	P	19 44 07.5	-0.9
ISLE	Juniper Island	80.93	30	P	P	19 44 08.3	-0.1
ISLE				IAmb	IAmb	19 44 12.2	
	comp=Z,167nm,1.8s						
TPGR	Topolog	80.97	314	⇑P	P	19 44 09.2	+0.3
VASR	Vaslui	81.04	316	⇓P	P	19 44 09.3	+0.2
TIRR	Tirgusor	81.06	314	⇑P	P	19 44 09.2	-0.1
TIRR	Tirgusor	81.06	314	P	P	19 44 08.9	-0.3
TIRR				pmax	pmax		
	comp=Z,66nm,1.1s						
TIRR	Tirgusor	81.06	314	P	P	19 44 08.9	-0.3
TIRR				IAmb	IAmb	19 44 41.2	
	comp=Z,66nm,1.1s						
CFR	Carcaliu	81.11	314	⇑P	P	19 44 09.8	+0.3
CASY	Casey	81.11	184		P	19 44 09.0	+0.1
CASY				IAmb	IAmb	19 44 33.0	
	comp=Z,90nm,1.8s						
VARL	Varlezi	81.16	315	⇑P	P	19 44 10.4	+0.7
BIR	Birlad	81.23	315	⇑P	P	19 44 11.0	+0.9
TLBR	Topalu	81.30	314	⇑P	P	19 44 10.8	+0.3
HARR	Harsova	81.35	314	⇓P	P	19 44 11.1	+0.3
DAWY	Dawson	81.37	26	P	P	19 44 10.7	+0.1
DAWY				IAmb	IAmb	19 44 14.6	
	comp=Z,45nm,0.8s						
PABE	Paberze	81.45	325	*e*P	P	19 44 11.1	0.0
ELL	Elmali	81.53	306	P	P	19 44 12.1	0.0
ELL				pmax	pmax		
	comp=Z,114nm,0.7s						
ELL	Elmali	81.53	306	P	P	19 44 12.1	0.0
ICOR	Ion Corvin	81.56	313	⇑P	P	19 44 12.8	+0.8
PETR	Petresti	81.61	315	⇓P	P	19 44 13.5	+1.4
N2IH	Innhavet	81.69	338	*e*P	P	19 44 11.6	-0.5
ODBI	Odobesti	81.73	315	⇓P	P	19 44 13.9	+1.1
TESR	Tescani	81.84	316	⇓P	P	19 44 13.3	-0.1
AKAS	Kas	81.88	305		P	19 44 12.9	-1.0
VRI	Vrincioaia	81.93	315	⇓P	P	19 44 14.5	+0.7
PRAR	RASCA	81.93	317	⇑P	P	19 44 14.0	+0.1
STEI	Steigen	81.95	338	*e*P	P	19 44 13.1	-0.4
PGOR	Pogoanele	81.96	314	⇓P	P	19 44 14.5	+0.5
PLOR	Plostina	81.98	315	⇑P	P	19 44 14.1	-0.1
N2ST	Straumen	82.01	338	*e*P	P	19 44 13.4	-0.4
BIZ	Bicaz	82.11	316	⇓P	P	19 44 15.1	+0.3
N2TV	T¥rnvik	82.11	338	*e*P	P	19 44 14.1	-0.3
FAUS	Fauske	82.12	338	*e*P	P	19 44 13.9	-0.5
LEHL	Lehliu	82.17	314	⇑P	P	19 44 16.0	+0.9
N2VI	Vinje	82.19	339	*e*P	P	19 44 14.1	-0.6
MANT	Manisa	82.21	308	P	P	19 44 15.5	-0.3
MANT				IAmb	IAmb	19 44 16.0	
	comp=Z,50nm,1.0s						
SUW	Suwalki	82.25	324	*e*P	P	19 44 15.2	-0.1
SUW	Suwalki	82.25	324	*e*P	P	19 44 15.2	-0.1
SUW	Suwalki	82.25	324	P	P	19 44 15.0	-0.3
SUW				pmax	pmax		
	comp=Z,114nm,0.8s						
SUW	Suwalki	82.25	324	P	P	19 44 15.0	-0.3
INK	Inuvik	82.31	21	P	P	19 44 14.9	-0.4
	comp=Z,65nm,0.7s,baz=296,slow=5.2,SNR=225						
INK				PKiKP	PKiKP	19 49 36.1	-0.1
	comp=Z,3.0nm,0.7s,baz=5.6,slow=5.5,SNR=4.4						
INK	Inuvik	82.31	21	P	P	19 44 15.0	-0.4
INK	Inuvik	82.31	21	P	P	19 44 15.0	-0.4
INK				IAmb	IAmb	19 44 17.4	
	comp=Z,63nm,0.7s						
NEHR	Nehoiu	82.32	315	⇓P	P	19 44 16.8	+0.9
LOF	Lofoten	82.48	339	*e*P	P	19 44 15.7	-0.5
OZUR		82.52	316	⇓P	P	19 44 17.2	+0.3
SULR		82.52	314	⇑P	P	19 44 18.0	+1.1
BURAR	Bucovina Array	82.54	317	P	P	19 44 17.2	+0.1
BUR08	Bucovina Ar. S	82.55	317	P	P	19 44 17.3	+0.1
BUR08				IAmb	IAmb	19 44 18.4	
	comp=Z,44nm,0.6s						
MLR	Muntele Rosu	82.55	315	⇑P	P	19 44 17.9	+0.6
MLR	Muntele Rosu	82.55	315	P	P	19 44 17.2	-0.1
MLR				pmax	pmax		
	comp=Z,42nm,0.7s						
MLR	Muntele Rosu	82.55	315	P	P	19 44 17.2	-0.1
MLR				IAmb	IAmb	19 44 47.0	
	comp=Z,42nm,0.7s						
NBB05	Inndyr	82.69	338	*e*P	P	19 44 16.9	-0.4
N2SV	S¸rv¥gen	82.76	339	*e*P	P	19 44 16.9	-0.8
LVV	L'vov	82.78	320	*e*P	P	19 44 18.0	-0.2
DOPR	Dopca	82.81	316	⇑P	P	19 44 19.1	+0.6
NBB30	Finnes	82.83	338	*e*P	P	19 44 17.7	-0.3
MOR8	Moi Rana	82.84	337	*e*P	P	19 44 16.7	-1.5
N2VA	Vr¸y	82.95	338	*e*P	P	19 44 18.1	-0.6
HYT	Haines Junctio	83.15	29	P	P	19 44 20.3	+0.2
VOIR		83.17	315	⇑P	P	19 44 20.3	-0.1
N2RO	R¸st	83.21	338	*e*P	P	19 44 19.7	-0.4
MTUR	Matau	83.21	315	⇑P	P	19 44 20.3	-0.3
KONS	Konsvik	83.22	337	*e*P	P	19 44 19.5	-0.6
ARCR	ARCALIA	83.24	317	⇓P	P	19 44 21.5	+0.9
STFAR	Stefanesti-Arg	83.37	315	⇑P	P	19 44 21.8	+0.4
ZIMR		83.38	313	⇓P	P	19 44 22.1	+0.7
KMBO	Kilima Mbogo	83.43	267	P	P	19 44 24.2	+1.7
	comp=Z,7.6nm,0.9s,baz=67,slow=5.7,SNR=11						
ARR	Arges	83.47	315	⇓P	P	19 44 22.1	+0.1
UPP	Uppsala	83.55	330	*e*P	P	19 44 21.5	-0.4
ALN	Alexandroupoli	83.55	310	P	P	19 44 22.1	-0.3
ALN				pmax	pmax		
	comp=Z,20nm,0.9s						
ALN	Alexandroupoli	83.55	310	P	P	19 44 22.1	-0.3
KWP	Kalwaria Pacla	83.65	320	*e*P	P	19 44 23.4	+0.7
KWP	Kalwaria Pacla	83.65	320	P	P	19 44 22.9	+0.2
KWP				pmax	pmax		
	comp=Z,140nm,1.2s						
KWP	Kalwaria Pacla	83.65	320	P	P	19 44 22.9	+0.2
KWP				IAmb	IAmb	19 44 51.2	
	comp=Z,140nm,1.2s						
CJR	Cluj-Napoca	83.83	317	⇓P	P	19 44 24.8	+1.1
KARP	Karpathos	83.97	305	P	P	19 44 24.7	0.0
KARP				IAmb	IAmb	19 44 28.5	
	comp=Z,105nm,0.9s						
VLAD	Vladila	83.97	314	⇓P	P	19 44 24.6	+0.2
KOLS	Kolonicke sedl	84.11	319	*e*P	P	19 44 24.9	-0.2
KOLS				pmax	pmax		
	comp=Z,14nm,0.8s						
KOLS	Kolonicke sedl	84.11	319	*e*P	P	19 44 24.9	-0.2
UZH	Uzhgorod	84.18	319	⇑*e*P	P	19 44 25.5	+0.1
UZH				*e*		19 44 52.0	
BEL	Belsk	84.23	322	*e*P	P	19 44 26.0	+0.5
EUNU	Eureka	84.34	4	P	P	19 44 25.5	-0.2
EUNU				IAmb	IAmb	19 44 28.4	
	comp=Z,48nm,0.8s						
DRGR		84.40	317	⇓P	P	19 44 26.8	+0.2
NSS	Namsos	84.41	336	*e*P	P	19 44 25.3	-0.9
WHY	Whitehorse	84.43	29	P	P	19 44 27.0	+0.4
DEV	Deva	84.51	316	⇑P	P	19 44 28.2	+1.0
SRE	Strehaia	84.63	315	⇑P	P	19 44 28.2	+0.4
CRVS	Cervenica-Dubn	84.64	319	*e*P	P	19 44 28.5	+0.8
CRVS				pmax	pmax		
	comp=Z,110nm,1.2s						
CRVS	Cervenica-Dubn	84.64	319	*e*P	P	19 44 28.5	+0.8
BAIL	Bailesti	84.70	314	⇑P	P	19 44 29.0	+0.9
GZR	Gura Zlata	84.73	315	⇑P	P	19 44 28.2	-0.2
LTVH	Ltavrtes, Hu	84.77	318	*e*P	P	19 44 40.6	+12
C36M	Paulatuk	84.99	19	P	P	19 44 28.4	-0.6
	baz=299						
HERR	Herculane	85.11	315	⇑P	P	19 44 30.0	-0.2
VTS	Vitosha	85.15	313	⇑P	P	19 44 31.1	+0.5
NIE	Niedzica	85.22	320	*e*P	P	19 44 32.0	+1.3
OJC	Ojcow	85.30	321	*e*P	P	19 44 31.3	+0.3
OJC	Ojcow	85.30	321	P	P	19 44 31.0	0.0
OJC				pmax	pmax		
	comp=Z,56nm,0.7s						
OJC	Ojcow	85.30	321	P	P	19 44 31.0	0.0

OJC				IAmb	IAmb	19 44 31.8	
	comp=Z,56nm,0.7s						
KECS	Kecovo	85.38	319	eP	P	19 44 31.6	+0.2
KECS				pmax	pmax		
	comp=Z,23nm,0.6s						
KECS	Kecovo	85.38	319	eP	P	19 44 31.6	+0.2
BZS	Buzias	85.45	316	⇓P	P	19 44 31.4	-0.5
DAG	Danmarks Havn	85.50	351	⇓iP	P	19 44 30.3	-1.2
DAG				pmax	pmax		
	comp=Z,190nm,0.6s						
DAG	Danmarks Havn	85.50	351	⇓iP	P	19 44 30.3	-1.2
	comp=Z,192nm,0.6s						
DAG	Danmarks Havn	85.50	351	⇓iP	P	19 44 30.3	-1.2
DAG				IAmb	IAmb	19 44 31.6	
	comp=Z,193nm,0.6s						
TBLU	Trondheim	85.61	335	eP	P	19 44 31.6	-0.7
MDVR	Moldovita	85.62	315	⇑P	P	19 44 33.0	+0.2
LANS	Liptovska Anna	85.82	320	eP	P	19 44 34.9	+1.2
LANS				pmax	pmax		
	comp=Z,12nm,0.7s						
LANS	Liptovska Anna	85.82	320	eP	P	19 44 34.9	+1.2
AMBH	Ambrzfalva	85.84	317	eP	P	19 44 33.6	-0.1
NC405	NORSAR Array S	85.84	332	P	P	19 44 32.7	-0.8
PSZ	Piszkesteto	85.92	318	eP	P	19 44 34.5	+0.3
PSZ	Piszkesteto	85.92	318	P	P	19 44 34.0	-0.2
PSZ				pmax	pmax		
	comp=Z,33nm,1.0s						
PSZ	Piszkesteto	85.92	318	P	P	19 44 34.0	-0.2
PSZ				IAmb	IAmb	19 45 02.7	
	comp=Z,33nm,1.0s						
NB2	NORSAR Subarra	86.10	333	P	P	19 44 33.7	-1.1
	comp=Z,119nm,0.8s,baz=69,slow=4.8						
NB2	NORSAR Subarra	86.10	333	P	P	19 44 33.7	-1.1
	baz=69,slow=4.8						
NOA	NORSAR Array B	86.10	333	P	P	19 44 33.8	-1.1
	comp=Z,96nm,0.7s,baz=67,slow=4.9,SNR=265						
NOA				PP	PP	19 47 52.1	-3.4
	comp=Z,2.9nm,0.7s,baz=74,slow=9.0,SNR=3.9						
NOA				LR	LR	20 25 36.8	
	comp=Z,911nm,18.4s,baz=75,slow=37						
STIP	Stip	86.16	312	iP	P	19 44 33.2	-2.2
NAO01	NORSAR Array S	86.32	332	eP	P	19 44 34.8	-1.0
VYHS	Vyhne	86.42	319	eP	P	19 44 37.0	+0.4
VYHS				pmax	pmax		
	comp=Z,76nm,2.0s						
VYHS	Vyhne	86.42	319	eP	P	19 44 37.0	+0.4
OKC	Ostrava-Krasne	86.43	321	eP	P	19 44 37.1	+0.5
OKC	Ostrava-Krasne	86.43	321	eP	P	19 44 37.1	+0.5
SKO	Skopje	86.61	312	iP	P	19 44 36.5	-1.1
BUD	Budapest	86.61	318	eP	P	19 44 36.6	-1.0
DOMB	Dombas	86.62	334	eP	P	19 44 37.2	-0.1
OSL	Oslo	86.77	332	eP	P	19 44 37.8	-0.2
FRGS	Fruska Gora	86.81	316	⇓iP	P	19 44 37.5	-1.1
MORC	Moravsky Berou	86.82	321	⇓P	P	19 44 38.9	+0.3
MORC	Moravsky Berou	86.82	321	eP	P	19 44 38.6	0.0
MORC				e		19 45 02.2	
MORC	Moravsky Berou	86.82	321	P	P	19 44 38.7	+0.2
MORC				pmax	pmax		
	comp=Z,30nm,1.1s						
MORC	Moravsky Berou	86.82	321	P	P	19 44 38.7	+0.2
MORC				IAmb	IAmb	19 45 07.3	
	comp=Z,30nm,1.1s						
SRO2	Moca	86.93	319	eP	P	19 44 39.0	0.0
SRO2	Moca	86.93	319	eP	P	19 44 39.0	0.0
FNA	Florina	87.00	311	P	P	19 44 38.0	-1.7
FNA				pmax	pmax		
	comp=Z,19nm,0.8s						
FNA	Florina	87.00	311	P	P	19 44 38.0	-1.7
DIVS	Divibare	87.00	315	eP	P	19 44 39.0	-0.6
DIVS	Divibare	87.00	315	P	P	19 44 38.7	-0.9
MOL	Molde	87.03	335	eP	P	19 44 39.1	-0.1
JAVC	Velka Javorina	87.03	320	eP	P	19 44 41.0	+1.3
JAVC				e		19 45 05.5	
CSKK	Cskako	87.14	318	eP	P	19 44 40.5	+0.3
WRAK	Wrangell Islan	87.21	32	P	P	19 44 39.7	-0.5
WRAK				IAmb	IAmb	19 44 43.8	
	comp=Z,20nm,0.8s						
KSP	Ksiaz	87.22	322	eP	P	19 44 40.9	+0.4
MORH	Mrgy, Hungar	87.26	317	eP	P	19 44 40.3	-0.3
MORH	Mrgy, Hungar	87.26	317	⇓iP	P	19 44 39.7	-1.0
SJES	Sjenica	87.27	314	eP	P	19 44 41.0	0.0
DPC	Dobruska-Polom	87.37	321	eP	P	19 44 41.4	+0.2
DPC				e		19 45 09.3	
DPC	Dobruska-Polom	87.37	321	eP	P	19 44 41.4	+0.2
DPC				ex	x	19 45 09.3	
KONO	Kongsberg	87.40	332	P	P	19 44 40.2	-0.9
KONO				pmax	pmax		
	comp=Z,225nm,1.8s						
KONO	Kongsberg	87.40	332	P	P	19 44 40.2	-0.9
CHVC	Chvalec	87.45	322	eP	P	19 44 41.2	-0.4
BBLS	Lazići	87.48	315	eP	P	19 44 40.3	-1.6
TIH	Tihany	87.53	318	eP	P	19 44 41.0	-1.0
SKAR	Skarslia	87.54	333	eP	P	19 44 41.3	-0.5
VRAC	Vranov	87.56	320	⇑P	P	19 44 42.9	+0.8
VRAC	Vranov	87.56	320	eP	P	19 44 42.2	+0.1
VRAC				e		19 45 05.8	
DLBC	Dease Lake	87.56	30	P	P	19 44 41.9	-0.1
	comp=Z,7.6nm,0.8s,baz=281,slow=6.5,SNR=15						
DLBC	Dease Lake	87.56	30	P	P	19 44 42.4	+0.4
ITM	Ithomi	87.62	308	P	P	19 44 41.3	-1.4
ITM				IAmb	IAmb	19 45 35.1	
	comp=Z,34nm,0.9s						
MPLH	Magyarpolny	87.67	318	eP	P	19 44 42.7	0.0
DBG	Daneborg	87.68	350	iP	P	19 44 40.8	-1.4
DBG				IAmb	IAmb	19 44 45.1	
	comp=Z,52nm,0.7s						
HAPS	Han Pijesak,BI	87.72	315	eP	P	19 44 42.0	-1.1
EGYH	Egyhazaskeszo	87.72	318	eP	P	19 44 40.6	-2.3
KRUC	Moravsky	87.76	320	eP	P	19 44 43.1	+0.1
KRUC				e		19 45 06.9	
PDG	Podgorica	88.02	313	⇓P	P	19 44 43.8	-0.6
PDG	Podgorica	88.02	313	⇓iP	P	19 44 43.2	-1.2
PDG	Podgorica	88.02	313	P	P	19 44 43.8	-0.6
PDG				IAmb	IAmb	19 45 10.9	
	comp=Z,29nm,0.8s						
UPM	Unac-Piva	88.03	314	eP	P	19 44 43.9	-0.8
RES	Resolute Bay	88.09	9	P	P	19 44 43.8	-0.3
	comp=Z,65nm,0.8s,baz=287,slow=7.3,SNR=80						
RES				PP	PP	19 48 13.0	+1.9
	comp=Z,7.3nm,0.8s,baz=143,slow=19,SNR=24						
RES				PKiKP	PKiKP	19 49 45.6	+0.1
	comp=Z,4.9nm,0.7s,baz=5.6,slow=1.3,SNR=4.2						
RES	Resolute Bay	88.09	9	P	P	19 44 43.8	-0.3
RUE	Ruedersdorf	88.10	324	eP	P	19 44 44.8	+0.3
	comp=Z,56nm,1.0s,baz=65,slow=4.5						
DRME	Dracevica, Mon	88.15	313	⇓iP	P	19 44 44.1	-0.9
HYA	Hoyanger	88.24	334	eP	P	19 44 43.8	-1.3
PVCC	Panska Ves	88.35	322	AMS	AMS	20 26 20.0	
	comp=Z,2µm,17.9s						
DIB	Dawson Inlet,	88.37	35	P	P	19 44 45.5	-0.3
BRY	Bratogost	88.38	314	eP	P	19 44 45.4	-0.9
CONA	Conrad Observa	88.48	319	eP	P	19 44 46.8	+0.2
	comp=Z,13nm,1.7s						
HCY	Herceg Novi	88.55	314	eP	P	19 44 45.3	-1.6
PRU	Pruhonice	88.57	322	eP	P	19 44 46.1	-0.7
PRU	Pruhonice	88.57	322	eP	P	19 44 46.1	-0.7
TREB	Trebinje	88.57	314	eP	P	19 44 46.4	-0.6
BRG	Berggiesshubel	88.60	323	iP	P	19 44 46.9	-0.1
BRG				Amp		19 44 50.0	
	comp=Z,14nm,0.8s						
BRG				ex	x	19 45 10.3	
BRG				Amp		19 45 12.3	
	comp=Z,23nm,1.3s						
BRG	Berggiesshubel	88.60	323	iP	P	19 44 46.8	-0.1
BRG				e		19 45 10.2	
BRG				pmax	pmax		
	comp=Z,14nm,0.8s						
BRG				pmax	pmax		
	comp=Z,23nm,1.3s						
BRG	Berggiesshubel	88.60	323	iP	P	19 44 46.9	-0.1
BRG				Amp		19 44 50.0	
	comp=Z,14nm,0.8s						
BRG				ex	x	19 45 10.3	
BRG				Amp		19 45 12.3	
	comp=Z,23nm,1.3s						
BRG	Berggiesshubel	88.60	323	eP	P	19 44 47.0	+0.1
	comp=Z,23nm,1.0s,baz=65,slow=4.5						
ODD1	Odda	88.64	332	eP	P	19 44 46.7	-0.3
BLY	Banja Luka	88.70	316	eP	P	19 44 47.0	-0.6
KALN	Kalnik	88.72	317	P	P	19 44 46.9	-0.8
TULEG	Thule	88.74	2	P	P	19 44 46.6	-0.5
TULEG				IAmb	IAmb	19 44 51.0	
	comp=Z,35nm,0.7s						
TULEG	Thule	88.74	2	iP	P	19 44 46.5	-0.6
TULEG				IAmb	IAmb	19 44 50.8	
	comp=Z,34nm,0.7s						
FBE	Freiberg	88.93	323	eP	P	19 44 48.9	+0.4
	comp=Z,31nm,1.0s,baz=65,slow=4.5						
ARSA	Arzberg	88.94	319	eP	P	19 44 48.8	+0.1
	comp=Z,6.7nm,0.7s,SNR=7.9						
BLS5	Blasjo	88.94	332	eP	P	19 44 48.3	-0.1
STON	Ston	88.97	314	eP	P	19 44 47.5	-1.3
CLL	Collm	88.98	323	eP	P	19 44 48.0	-0.8
	comp=Z,21nm,1.0s						
CLL				esP	pP	19 45 13.0	+2.9
CLL				ePP	PP	19 48 18.0	-1.0
CLL				esPP		19 48 40.0	
CLL				eS	S	19 55 27.0	-3.6
CLL				esS	pS	19 56 01.0	+4.1
CLL				eSP	SP	19 56 37.0	+2.6
CLL				ePPS	PPS	19 57 12.0	
CLL				eSS	SS	20 01 30.0	+5.7
CLL				eSSS	SSS	20 05 12.0	
CLL				eSSSS		20 08 06.0	
CLL				LmH		20 27 00.0	
	comp=N,900nm,18.8s						
CLL				LmH		20 27 00.0	
	comp=E,2µm,19.7s						
CLL	Collm	88.98	323	eP	P	19 44 48.0	-0.8
CLL				eS	S	19 55 27.0	-3.6
CLL				pmax	pmax		
	comp=Z,21nm,1.0s						
CLL	Collm	88.98	323	eP	P	19 44 48.4	-0.4
	comp=Z,21nm,1.0s,baz=65,slow=4.5						
PBCC	Pribram	89.01	321	eP	P	19 44 48.8	-0.1
MAKA	Makarska	89.30	315	P	P	19 44 48.8	-1.7
PERS	Pernice	89.41	318	eP	P	19 44 50.2	-0.8
SOKA	Soboth	89.45	318	eP	P	19 44 51.1	-0.1
	comp=Z,8.8nm,0.8s						
KHC	Kasperske Hory	89.47	321	eP	P	19 44 51.0	-0.1
KHC				e		19 45 17.7	
KHC				MLR	MLR		
	comp=Z,2µm,21.4s						
KHC	Kasperske Hory	89.47	321	eP	P	19 44 51.0	-0.1
KHC				ex	x	19 45 17.7	
KHC				AMS	AMS	20 26 30.0	
	comp=Z,2µm,21.4s						
KHC	Kasperske Hory	89.47	321	P	P	19 44 51.0	-0.1
KHC				IAmb	IAmb	19 44 51.8	
	comp=Z,61nm,1.9s						
CRES	Cresnjev	89.48	317	⇓iP	P	19 44 50.6	-0.6
KIJV	Kijevo	89.48	315	P	P	19 44 50.0	-1.2
GEC2	GERESS Array S	89.50	321	P	P	19 44 51.1	-0.2
GEC2	GERESS Array S	89.50	321	eP	P	19 44 51.1	-0.2
	baz=65,slow=4.5						
GERES	GERESS Array B	89.50	321	P	P	19 44 51.1	-0.2
	comp=Z,9.6nm,0.7s,baz=70,slow=4.4,SNR=11						
GERES				pP	pP	19 45 15.3	+2.6
	comp=Z,7.9nm,0.7s,baz=52,slow=5.2,SNR=5.4						
GERES				LR	LR	20 27 50.2	
	comp=Z,742nm,18.0s,baz=64,slow=37						
GERES	GERESS Array B	89.50	321	P	P	19 44 51.2	-0.1
MOA	Molln	89.52	320	eP	P	19 44 52.0	+0.6
	comp=Z,25nm,0.7s,SNR=11						
MBAR	Mbarara	89.59	269	P	P	19 44 52.2	-0.4
MBAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MBAR	Mbarara	89.59	269	P	P	19 44 52.2	-0.4
TANN	Tannenbergstha	89.64	322	eP	P	19 44 51.8	-0.1
	comp=Z,15nm,1.2s,baz=65,slow=4.5						
PDKS	Podkum	89.70	318	iP	P	19 44 51.8	-0.5
NKC	Novy Kostel	89.72	322	AMS	AMS	20 26 50.0	
	comp=Z,2µm,17.2s						
UDBI	Udbina	89.73	316	P	P	19 44 51.5	-1.0
NEUB	Neuenburg	89.73	323	eP	P	19 44 52.3	0.0
	comp=Z,38nm,0.9s,baz=65,slow=4.5						
GUNZ	Gunzen	89.74	322	eP	P	19 44 52.5	+0.2
	comp=Z,20nm,0.8s,baz=65,slow=4.5						
WERN	Wernitzgruen	89.75	322	eP	P	19 44 52.4	0.0
	comp=Z,34nm,1.7s,baz=65,slow=4.5						
PLN	Plauen	89.80	323	eP	P	19 44 52.5	-0.1
	comp=Z,23nm,1.4s,baz=65,slow=4.5						
OBKA	Obir	89.83	318	eP	P	19 44 51.9	-1.1
	comp=Z,8.0nm,0.7s						
WET	Wettzell	89.89	321	eP	P	19 44 53.1	0.0
	comp=Z,48nm,1.7s,baz=65,slow=4.5						
ASSE	Asse, Remlinge	89.99	324	eP	P	19 44 53.3	0.0
	comp=Z,100nm,1.9s,baz=65,slow=4.5						
LJU	Ljubljana	90.01	318	eP	P	19 44 53.0	-0.7
GBRS	Gornja Briga	90.01	317	eP	P	19 44 53.5	-0.3
ROTZ	Rotzenmuhle	90.05	322	eP	P	19 44 54.2	+0.4
	comp=Z,17nm,1.0s,baz=65,slow=4.5						
MOX	Moxa	90.05	323	eP	P	19 44 53.7	-0.1
	baz=65,slow=4.5						
CEY	Cerknica	90.18	318	⇓iP	P	19 44 53.7	-0.9
MYKA	Terra Mystica	90.36	319	eP	P	19 44 54.9	-0.5
	comp=Z,7.7nm,0.7s						
KBA	Koelnbreinsper	90.38	319	eP	P	19 44 54.3	-1.3
	comp=Z,12nm,0.7s						
DUGI	Dugi Otok	90.40	316	P	P	19 44 48.8	-6.8
GRF	Grafenberg Arr	90.67	322	eP	P	19 44 57.0	+0.3
	comp=Z,21nm,0.9s,baz=65,slow=4.5						
GRF				epP	pP	19 45 21.7	+3.7
ZOU	Zoufplan	90.82	319	P	P	19 44 56.6	-1.1
ABTA	Abfaltersbach	91.04	319	eP	P	19 44 57.6	-0.9
	comp=Z,9.4nm,0.7s,SNR=11						
SCO	Scoresbysund	91.06	348	P	P	19 44 58.0	0.0
SCO				pmax	pmax		
	comp=Z,176nm,2.0s						
SCO	Scoresbysund	91.06	348	P	P	19 44 58.0	0.0
SCO	Scoresbysund	91.06	348	iP	P	19 44 58.0	0.0
	comp=Z,24nm,0.8s						
SCO	Scoresbysund	91.06	348	iP	P	19 44 58.0	0.0
SCO				IAmb	IAmb	19 44 58.8	
	comp=Z,24nm,0.8s						
STAL	STALIGIAL	91.10	319	P	P	19 44 57.8	-1.0
WATA	Walderalm	91.39	320	eP	P	19 44 59.9	-0.4
	comp=Z,19nm,0.7s,SNR=10						
SQTA	Sankt Quirin	91.67	320	eP	P	19 45 00.8	-0.7
	comp=Z,25nm,0.8s,SNR=11						
MOTA	Moosalm	91.69	320	eP	P	19 45 00.9	-0.8
	comp=Z,18nm,0.8s,SNR=19						
SUMG	Summit	91.73	354	⇓iP	P	19 45 01.2	-0.4
SUMG				pmax	pmax		
	comp=Z,120nm,0.7s						
SUMG	Summit	91.73	354	P	P	19 45 01.4	-0.2
SUMG	Summit	91.73	354	⇓iP	P	19 45 01.2	-0.4
	comp=Z,120nm,0.7s						
SUMG	Summit	91.73	354	⇓iP	P	19 45 01.2	-0.4
SUMG				IAmb	IAmb	19 45 02.6	
	comp=Z,120nm,0.7s						
RETA	Reutte	91.84	320	eP	P	19 45 02.1	-0.2
	comp=Z,8.1nm,0.7s						
CTI	Castel Tesino	91.86	319	P	P	19 45 01.7	-0.7
CTI				pmax	pmax		
	comp=Z,13nm,0.8s						
CTI	Castel Tesino	91.86	319	P	P	19 45 01.7	-0.7
CTI				IAmb	IAmb	19 45 35.9	
	comp=Z,12nm,0.8s						
INTR	Introdacqua	91.90	314	P	P	19 45 02.1	-0.6
INTR				IAmb	IAmb	19 45 40.8	
	comp=Z,14nm,0.8s						
MAW	Mawson	91.91	199	P	P	19 45 02.7	+1.0
	comp=Z,8.4nm,1.0s,baz=126,slow=2.2,SNR=8.9						
MAW				LR	LR	20 25 44.1	
	comp=Z,290nm,18.2s,baz=52,slow=35						
MAW	Mawson	91.91	199	P	P	19 45 02.8	+1.0
MAW				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MAW	Mawson	91.91	199	P	P	19 45 02.8	+1.0
YKA	Yellowknife Ar	92.01	22	P	P	19 45 02.5	-0.1
	comp=Z,23nm,0.8s,baz=314,slow=3.8,SNR=263						
YKA				pP	pP	19 45 25.5	+1.4
	comp=Z,13nm,0.9s,baz=314,slow=4.7,SNR=4.0						
YKA				PKiKP	PKiKP	19 49 52.5	+0.1
	comp=Z,1.3nm,0.6s,baz=354,slow=0.9,SNR=10						
YKA				PKKPbc	PKKPdf	20 02 17.7	+0.4
	comp=Z,0.5nm,0.5s,baz=121,slow=3.6,SNR=9.5						
YKA				LR	LR	20 26 23.8	
	comp=Z,351nm,21.7s,baz=0.0,slow=36						
FETA	Feichten	92.05	320	eP	P	19 45 03.4	0.0
	comp=Z,20nm,0.9s,SNR=5.3						
TNS	Taunus Mts	92.07	323	eP	P	19 45 02.8	-0.5
	comp=Z,84nm,1.8s,baz=65,slow=4.5						
TEOL	Teolo	92.12	318	P	P	19 45 03.4	-0.1
TEOL				IAmb	IAmb	19 45 34.0	
	comp=Z,49nm,1.1s						
NRCA	Norcia	92.14	315	P	P	19 45 03.4	-0.3
NRCA				IAmb	IAmb	19 45 32.2	
	comp=Z,23nm,1.1s						
UBR	Ueberruh	92.16	321	eP	P	19 45 03.6	-0.1
	comp=Z,27nm,1.0s,baz=65,slow=4.5						
BUG	Bochum--Univer	92.19	325	eP	P	19 45 03.3	-0.4
	comp=Z,84nm,1.8s,baz=65,slow=4.5						
MURB	Monte Urbino	92.37	316	P	P	19 45 05.0	+0.2
MURB				IAmb	IAmb	19 45 35.4	
	comp=Z,33nm,0.9s						
DAVA	Damuels	92.47	320	eP	P	19 45 05.3	0.0
	comp=Z,8.8nm,0.7s						
UPNV	Upernavik	92.64	359	iP	P	19 45 04.9	-0.4
UPNV				IAmb	IAmb	19 45 08.7	
	comp=Z,55nm,0.8s						
TUE	Stuetta	93.14	320	P	P	19 45 08.5	0.0
TUE				IAmb	IAmb	19 45 43.3	
	comp=Z,20nm,0.9s						
MEM	Membach	93.29	324	dPcP	P	19 45 08.7	-0.1
MEM				dpP	pP	19 45 28.6	-1.5
MEM				dsP	pP	19 45 28.6	-1.5
WLF	Walferdange	93.64	324	dPcP	P	19 45 09.7	-0.7
WLF	Walferdange	93.64	324	eP	P	19 45 09.5	-0.9
	comp=Z,698nm,3.6s,baz=65,slow=4.5						
ECH	Echery	93.72	322	P	P	19 45 10.4	-0.5
ECH				pmax	pmax		
	comp=Z,39nm,1.7s						
ECH	Echery	93.72	322	P	P	19 45 10.4	-0.5
ECH				IAmb	IAmb	19 47 13.2	
	comp=Z,39nm,1.7s						
NUUG	Nuugaatsiaq	93.81	358	iP	P	19 45 10.2	-0.5
NUUG				IAmb	IAmb	19 45 11.2	
	comp=Z,31nm,0.8s						
DOU	Dourbes	94.33	324	dPcP	P	19 45 13.2	-0.3
DOU				dpP	pP	19 45 30.7	-4.2
SENIN	Lac Senin/Sane	94.47	320	P	P	19 45 14.2	-0.3
PPT	Papeete	94.59	107	LR	LR	20 20 07.2	
	comp=Z,692nm,21.9s,baz=273,slow=30						
PPT2	Papeete2	94.60	107	eS	S	19 56 15.3	-7.2
	comp=Z,2µm,26.8s						
PPT2	Papeete2	94.60	107	eLQ	LQ	20 11 45.4	
	comp=Z,4µm,33.0s						
PPT2				eLR	LR	20 15 50.0	
	comp=Z,2µm,25.0s,baz=289						
VNDA	Vanda	95.15	172	P	P	19 45 17.4	+0.9
	comp=Z,2.0nm,0.8s,baz=342,slow=5.7,SNR=9.2						
VNDA				PP	PP	19 49 06.2	-1.2
	comp=Z,3.0nm,0.8s,baz=292,slow=3.3,SNR=5.5						
VNDA				PKKPbc	PKKPdf	20 02 11.3	-2.5
	comp=Z,3.2nm,0.7s,baz=189,slow=0.4,SNR=17						
VNDA				LR	LR	20 26 52.0	
	comp=Z,311nm,21.8s,baz=326,slow=34						
VNDA	Vanda	95.15	172	P	P	19 45 17.1	+0.5
ICESG	Greenland Ices	95.16	353	iP	P	19 45 16.8	-0.6
ICESG				IAmb	IAmb	19 45 18.4	
	comp=Z,23nm,0.8s						
BNI	Bardonecchia	95.44	319	P	P	19 45 17.9	-1.1
BNI				pmax	pmax		
	comp=Z,11nm,0.8s						
BNI	Bardonecchia	95.44	319	P	P	19 45 17.9	-1.1
A04D	Lummi Island	95.89	36	P	P	19 45 21.2	+0.6
	baz=300						
ILULI	Ilulissat	96.03	357	iP	P	19 45 20.1	-0.8
ILULI				pmax	pmax		
	comp=Z,41nm,0.8s						
ILULI	Ilulissat	96.03	357	iP	P	19 45 20.1	-0.8
	comp=Z,40nm,0.8s						
ILULI	Ilulissat	96.03	357	iP	P	19 45 20.1	-0.8
ILULI				IAmb	IAmb	19 45 21.7	
	comp=Z,40nm,0.8s						
TBI	Tubuai	96.06	112	eS	S	19 56 29.2	-5.5
	comp=Z,1µm,27.2s						
TBI	Tubuai	96.06	112	eLR	LR	20 16 30.5	
	comp=Z,3µm,27.2s,baz=296						
D03D	Eldon	96.26	37	P	P	19 45 23.2	+0.8
	baz=300						
B05A	Bryant	96.47	37	P	P	19 45 23.3	0.0
	baz=300						
KEST	Kesra	97.62	310	LR	LR	20 35 56.4	
	comp=Z,365nm,19.6s,baz=312,slow=39						
B08A	Colville Reser	98.00	35	P	Pdif	19 45 30.6	+0.2
B08A				IAmb	IAmb	19 45 33.5	
	comp=Z,11nm,0.8s						
SFJD	Kangerlussuaq	98.21	356	P	P	19 45 30.3	-0.5
SFJD				pmax	pmax		
	comp=Z,64nm,0.8s						
SFJD	Kangerlussuaq	98.21	356	P	P	19 45 30.3	-0.5
SFJD	Kangerlussuaq	98.21	356	iP	P	19 45 30.0	-0.8
	comp=Z,4.6nm,0.8s						
SFJD	Kangerlussuaq	98.21	356	iP	P	19 45 30.0	-0.8
SFJD				IAmb	IAmb	19 45 31.2	
	comp=Z,4.6nm,0.8s						
I04A	Tendick Farm,	98.53	41	Pdiff	Pdif	19 45 33.1	+0.3
	baz=300						
J04D	Umpqua Nationa	98.99	41	Pdiff	Pdif	19 45 35.8	+0.7
	baz=300						
NEW	Newport	99.28	35	P	Pdif	19 45 35.8	-0.2
NEW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NEW	Newport	99.28	35	Pdiff	Pdif	19 45 36.4	+0.3
	baz=304						
NEW	Newport	99.28	35		Pdif	19 45 35.8	-0.2
L04D	Klamath Falls	99.38	42	Pdiff	Pdif	19 45 37.3	+0.5
	baz=300						
M02C	Callahan	99.42	43	Pdiff	Pdif	19 45 37.5	+0.6
	baz=299						
PINE	Pine Mountain	99.45	40		Pdif	19 45 37.6	+0.5
J05D	Fort Rock, OR	99.52	41	Pdiff	Pdif	19 45 38.0	+0.6
	baz=301						
M04C	Macdoel	99.89	42	Pdiff	Pdif	19 45 39.5	+0.5
	baz=300						
O02D	Mt. Diablo Mer	100.05	44	Pdiff	Pdif	19 45 40.1	+0.3
	baz=299						
BOSA	Boshof	101.14	243	PKiKP	PKiKP	19 50 10.4	+0.9
	comp=Z,1.5nm,0.6s,baz=86,slow=3.4,SNR=3.6						
ORV	Oroville	101.22	44	P	Pdif	19 45 43.9	-0.9
ORV	Oroville	101.22	44	Pdif	Pdif	19 45 43.9	-0.9
TAOE	Nuku Hiva Isla	101.51	96	eLR	LR	20 18 44.1	
	comp=Z,947nm,23.5s						
HLID	Hailey	103.53	38	Pdiff	Pdif	19 45 55.5	+0.2
	baz=306						
NVAR	Mina Array Bea	103.94	44	Pdiff	Pdif	19 45 57.8	+0.5
	comp=Z,2.4nm,0.6s,baz=283,slow=5.1,SNR=26						
NVAR				PKiKP	PP	19 50 14.7	-0.1
	comp=Z,2.0nm,0.7s,baz=246,slow=2.6,SNR=8.2						
NVAR				PKKPbc	PKKPbc	20 01 47.5	-0.2
	comp=Z,1.6nm,0.7s,baz=138,slow=3.8,SNR=15						
NVAR	Mina Array Bea	103.94	44		Pdif	19 45 57.5	+0.3
QSPA	South Pole Qui	104.58	180	PKKPbc	PKKPbc	20 01 44.7	-2.7
	comp=Z,1.8nm,0.7s,baz=322,slow=1.2,SNR=6.9						
ESDC	Sonseca Array	104.96	319	PKiKP	PKiKP	19 50 15.6	-0.5
	comp=Z,0.7nm,0.6s,baz=17,slow=1.5,SNR=9.8						
RLMT	Red Lodge	105.48	34	PKiKP	PKiKP	19 50 18.3	+1.1
	baz=310						
MPMC	Manual Prospec	105.74	45	PKiKP	PKiKP	19 50 18.8	+0.9
	baz=302						
R11A	Troy Canyon, C	105.78	42	PKiKP	PKiKP	19 50 19.3	+1.4
	baz=304						
LAO	LASA Array	106.02	31	PKiKP	PKiKP	19 50 18.6	+0.7
	baz=313						
POLO	Lamas de Olo	106.34	322	ePKiKP	PKiKP	19 50 19.4	+0.7
DUG	Dugway, Tooele	106.48	40	PKiKP	PKiKP	19 50 19.3	+0.3
	baz=306						
MTE	Manteigas	106.78	321	ePKiKP	PKiKP	19 50 19.8	+0.3
BW06	Boulder Array	106.83	36	PKiKP	PKiKP	19 50 18.9	-0.8
	baz=310						
PDAR	Pinedale Array	106.83	36	Pdiff	Pdif	19 46 11.4	+1.4
	comp=Z,0.5nm,0.8s,baz=257,slow=0.4,SNR=4.5						
PDAR				PKiKP	PKiKP	19 50 19.6	-0.1
	comp=Z,2.7nm,0.7s,baz=55,slow=0.6,SNR=12						
PDAR				PKKPbc	PKKPbc	20 01 37.9	-1.3
	comp=Z,1.4nm,0.7s,baz=124,slow=5.2,SNR=13						
PCBR	Castelo Branco	107.07	320	ePKiKP	PKiKP	19 50 20.6	+0.7
PMRV	Marv??o	107.26	320	ePKiKP	PKiKP	19 50 20.4	0.0
PCAS	Casmilo, Conde	107.57	321	ePKiKP	PKiKP	19 50 21.3	+0.4
GMRC	Granite Mounta	107.68	46	PKiKP	PKiKP	19 50 23.4	+2.0
	baz=303						
BELC	Belle Mtn. Jos	107.87	46	PKiKP	PKiKP	19 50 23.6	+1.8
	baz=302						
ULM	Lac du Bonnet	107.96	23	PKiKP	PKiKP	19 50 19.5	-1.8
	comp=Z,4.2nm,0.6s,baz=336,slow=1.0,SNR=7.5						
PMTG	Montargil	107.99	320	ePKiKP	PKiKP	19 50 21.6	-0.1
PSBE	So Bento	108.08	321	ePKiKP	PKiKP	19 50 22.6	+0.7
EVO	Evora	108.18	320	ePKiKP	PKiKP	19 50 22.6	+0.5
MDND	Maddock	108.30	27	PKiKP	PKiKP	19 50 21.9	-0.1
	baz=319						
PBEJ	Beja	108.39	319	ePKiKP	PKiKP	19 50 23.5	+1.0

BC3	Big Chuckawall	108.43	47	PKiKP	PKiKP	19 50 24.6	+1.8
	baz=303						
K22A	Casper	108.60	34	PKiKP	PKiKP	19 50 22.5	-0.5
	baz=312						
PVAQ	Vaqueiros	108.67	318	*e*PKiKP	PKiKP	19 50 24.1	+1.1
MESJ	Messejana	108.73	319	*e*PKiKP	PKiKP	19 50 23.9	+0.8
PCVE	Castro Verde	108.74	319	*e*PKiKP	PKiKP	19 50 23.8	+0.7
PNCL	Nicolau / Gran	108.76	319	*e*PKiKP	PKiKP	19 50 24.0	+0.9
RSSD	Black Hills	108.91	32	PKiKP	PKiKP	19 50 23.1	-0.5
	baz=314						
RKT	Rikitea	109.10	110	*e*LR	LR	20 22 34.8	
	comp=Z,2µm,31.0s						
O20A	White River Ci	109.27	37	PKiKP	PKiKP	19 50 25.1	+0.8
	baz=310						
WUAZ	Wupatki	110.16	43	PKiKP	PKiKP	19 50 27.5	+1.4
	baz=306						
MVCO	Mesa Verde	110.97	40	PKiKP	PKiKP	19 50 28.8	+1.1
	baz=309						
ISCO	Idaho Springs	111.02	36	PKiKP	PKiKP	19 50 29.3	+1.5
	baz=312						
W18A	Petrified Fore	111.47	42	PKiKP	PKiKP	19 50 30.1	+1.5
	baz=307						
EYMN	Ely	111.50	22	PKiKP	PKiKP	19 50 28.0	-0.1
	baz=327						
S22A	4UR Ranch, Cre	111.65	39	PKiKP	PKiKP	19 50 30.0	+1.0
	baz=310						
TUC	Tucson	112.44	45	PKiKP	PKiKP	19 50 33.3	+2.9
	baz=306						
SDCO	Great Sand Dun	112.45	38	PKiKP	PKiKP	19 50 31.1	+0.6
	baz=312						
ECSD	EROS Data Cent	112.80	28	PKiKP	PKiKP	19 50 30.5	-0.2
	baz=321						
TORD	Torodi Ar. Bea	113.08	291	PKiKP	PKiKP	19 50 31.0	-0.9
	comp=Z,8.9nm,0.7s,baz=264,slow=4.5,SNR=3.5						
TORD				PP	PP	19 51 19.4	-2.6
	comp=Z,5.1nm,0.9s,baz=56,slow=5.4,SNR=4.3						
SPMN	Marine on St.	113.25	25	PKiKP	PKiKP	19 50 31.9	+0.4
	baz=325						
T25A	Trinidad	113.50	38	PKiKP	PKiKP	19 50 33.1	+0.6
	baz=312						
ANMO	Albuquerque	113.68	41	PKiKP	PKiKP	19 50 33.6	+0.8
	baz=310						
BGNE	Belgrade	113.85	31	PKiKP	PKiKP	19 50 32.5	-0.3
	baz=319						
MATQ	Matagami	113.88	13	PKiKP	PKiKP	19 50 31.7	-0.8
	baz=341						
SNAA	Sanae	113.99	197	PKKPbc	PKKPbc	20 01 12.1	-4.5
	comp=Z,3.0nm,0.7s,baz=203,slow=0.6,SNR=12						
121A	Cookes Peak, D	114.33	44	P	PKPdf	19 50 35.2	+1.1
	baz=308						
CBKS	Cedar Bluff	114.96	34	P	PKiKP	19 50 34.2	-0.8
	baz=317						
E46A	Sault Ste Mari	115.30	18		PKiKP	19 50 35.0	-0.3
SCIA	State Center	115.77	27	P	PKPdf	19 50 36.6	+0.2
	baz=324						
I42A	Draeger Farm,	115.89	23		PKiKP	19 50 35.7	-0.9
JFWS	Jewell Farm	116.19	24	PKIKP	PKiKP	19 50 36.5	-0.7
JFWS	Jewell Farm	116.19	24	P	PKiKP	19 50 36.5	-0.7
	baz=327						
JFWS	Jewell Farm	116.19	24		PKiKP	19 50 36.5	-0.7
KSU1	Kansas State U	116.37	31	P	PKPdf	19 50 37.2	-0.4
	baz=320						
MNTX	Cornudas Mount	116.44	43	P	PKiKP	19 50 38.5	+0.5
	baz=310						
MNTX	Cornudas Mount	116.44	43	PKPdf	PKiKP	19 50 38.5	+0.5
L40A	Anamosa	116.50	26		PKPdf	19 50 36.9	-0.9
MSTX	Muleshoe	116.62	39	P	PKiKP	19 50 38.5	+0.1
	baz=313						
MSTX	Muleshoe	116.62	39	PKPdf	PKPdf	19 50 38.0	-0.5
AMTX	Amarillo	116.65	38	P	PKiKP	19 50 39.1	+0.7
	baz=314						
PMPS	Porto Santo	116.87	320	*e*PKiKP	PKiKP	19 50 40.1	+1.3
D55A	Sainte-Anne-du	116.94	12	P	PKPdf	19 50 37.9	-0.6
	baz=343						
D56A	ZEC Mazanza, M	117.05	11	P	PKPdf	19 50 38.3	-0.4
	baz=344						
L42A	Oliver, Polo	117.19	25	PKPdf	PKPdf	19 50 38.2	-0.9
D58A	Chemin du LacG	117.34	10	P	PKPdf	19 50 38.3	-1.0
	baz=346						
E55A	Montcerf-Lytto	117.36	13	P	PKPdf	19 50 38.8	-0.5
	baz=342						
ALGO	Algonquin Park	117.38	14	P	PKPdf	19 50 38.5	-0.9
	baz=340						
P38A	Dawn	117.45	29	PKPdf	PKPdf	19 50 39.4	-0.3
PMAR	Madeira	117.46	320	*e*PKiKP	PKiKP	19 50 41.4	+1.2
E56A	St. Veronique	117.48	12	P	PKPdf	19 50 39.0	-0.6
	baz=343						
KOWA	Kowa	117.61	295	PKPdf	PKPdf	19 50 40.5	-0.1
G54A	Lake Saint Pet	117.90	14	P	PKPdf	19 50 39.9	-0.5
	baz=340						
E58A	La Victoria	117.97	10	P	PKPdf	19 50 39.5	-1.0
	baz=345						
T35A	Sooner Cattle	118.08	33	PKPdf	PKPdf	19 50 40.8	-0.2
P40A	Paris	118.21	28		PKPdf	19 50 40.6	-0.5
E61A	Lac Etchemin	118.36	8	P	PKPdf	19 50 41.1	-0.2
	baz=348						
WMOK	Wichita Mounta	118.44	36	PKIKP	PKPdf	19 50 41.3	-0.5
WMOK	Wichita Mounta	118.44	36	P	PKPdf	19 50 41.7	-0.1
	baz=316						
WMOK	Wichita Mounta	118.44	36	PKPdf	PKPdf	19 50 41.3	-0.5
H53A	Bobcaygeon	118.55	15	P	PKPdf	19 50 41.4	-0.3
	baz=339						
HDIL	Hopedale	118.56	25	P	PKPdf	19 50 41.3	-0.5
	baz=327						
HDIL	Hopedale	118.56	25	PKPdf	PKPdf	19 50 41.3	-0.5
F60A	Warwick	118.59	10	P	PKPdf	19 50 41.3	-0.4
	baz=347						
I51A	Listowel	118.60	17	P	PKPdf	19 50 41.8	0.0
	baz=336						
E63A	Oxbow	118.63	7	P	PKPdf	19 50 41.2	-0.6
	baz=350						
F61A	St Evariste	118.73	9	P	PKPdf	19 50 41.8	-0.2
	baz=348						
G57A	Newington	118.87	12	P	PKPdf	19 50 42.1	-0.2
	baz=343						
G58A	Ormstown	119.01	11	P	PKPdf	19 50 41.6	-0.9
	baz=344						
S39A	Bolivar	119.09	30	PKPdf	PKPdf	19 50 42.3	-0.6
TX32	Lajitas Array	119.09	44	PKPdf	PKiKP	19 50 43.5	+0.2
TXAR	Lajitas Array	119.09	44	PKP	PKPdf	19 50 43.0	-0.3
	comp=Z,15nm,0.7s,baz=208,slow=1.4,SNR=59						
TXAR				PKKPbc	PKKPab	20 01 02.2	+1.2
	comp=Z,0.6nm,0.6s,baz=127,slow=8.0,SNR=5.5						
F64A	Sherman	119.19	7	P	PKPdf	19 50 42.5	-0.4
	baz=350						
TUL1	Leonard	119.22	33	P	PKPdf	19 50 42.9	-0.3
	baz=319						
TUL1	Leonard	119.22	33	PKPdf	PKPdf	19 50 43.0	-0.2
P43A	Skaggs, Pawnee	119.23	26	PKPdf	PKPdf	19 50 42.8	-0.3
G60A	Masonville	119.37	10	P	PKPdf	19 50 43.2	0.0
	baz=346						
ABTX	Abilene, Hawle	119.44	38	P	PKiKP	19 50 44.2	+0.3
	baz=315						
ABTX	Abilene, Hawle	119.44	38	PKPdf	PKiKP	19 50 44.0	+0.2
U38A	Gravette	119.54	32		PKPdf	19 50 43.2	-0.7
H59A	Cadyville	119.56	11	P	PKPdf	19 50 43.6	0.0
	baz=344						
SFIN	Lafayette	119.59	24	P	PKPdf	19 50 43.5	-0.3
	baz=329						
PKME	Peaks-Kenny Pk	119.66	8	P	PKPdf	19 50 43.6	-0.2
	baz=349						
H58A	Gabriels	119.69	12	P	PKPdf	19 50 43.3	-0.6
	baz=344						
G64A	Maxfield	119.74	7	P	PKPdf	19 50 43.6	-0.3
	baz=350						
G63A	Kingsbury	119.77	8	P	PKPdf	19 50 43.7	-0.3
	baz=349						
CCM	Cathedral Cave	119.78	28	PKIKP	PKPdf	19 50 43.5	-0.7
CCM	Cathedral Cave	119.78	28	P	PKPdf	19 50 43.7	-0.5
	baz=324						
CCM	Cathedral Cave	119.78	28	PKPdf	PKPdf	19 50 43.5	-0.7
H60A	Morristown	119.83	11	P	PKPdf	19 50 44.1	-0.1
	baz=346						
I57A	Carthage	119.84	13	P	PKPdf	19 50 43.6	-0.6
	baz=342						
HHAR	Hobbs	119.89	32		PKPdf	19 50 43.8	-0.7
G65A	Princeton	119.93	6	P	PKPdf	19 50 44.1	-0.1
	baz=351						
H61A	Lyndonville	119.99	10	P	PKiKP	19 50 44.8	+0.3
	baz=346						
MGMO	Mountain Grove	120.02	30		PKPdf	19 50 44.5	-0.2
Q44A	Meyer Farm, Va	120.06	26	PKPdf	PKPdf	19 50 44.4	-0.3
H63A	New Sharon	120.16	8	P	PKPdf	19 50 44.3	-0.5
	baz=348						
FVM	French Village	120.20	28	PKIKP	PKPdf	19 50 44.4	-0.7
FVM	French Village	120.20	28		PKPdf	19 50 44.4	-0.7
I58A	Old Forge	120.22	13	P	PKPdf	19 50 44.2	-0.7
	baz=343						
LBNH	Lisbon	120.27	10	P	PKiKP	19 50 45.5	+0.4
	baz=346						
I59A	Olmsteadville	120.35	12	P	PKPdf	19 50 44.9	-0.3
	baz=344						
H65A	Eastbrook	120.35	7	P	PKPdf	19 50 44.8	-0.3
	baz=350						
H66A	Whiting	120.37	6	P	PKPdf	19 50 44.7	-0.4
	baz=352						
U40A	Yellville	120.37	31	P	PKPdf	19 50 44.7	-0.7
	baz=322						
I60A	Shoreham	120.41	11	P	PKPdf	19 50 45.0	-0.2
	baz=345						
J58A	Remsen	120.47	13	P	PKPdf	19 50 45.1	-0.4
	baz=342,SNR=7.0						
I61A	Oroboro, Fairl	120.52	10	P	PKiKP	19 50 45.9	+0.3
	baz=346						
J59A	Piesco	120.54	12	P	PKPdf	19 50 45.5	-0.1
	baz=343,SNR=7.9						
J59A	Piesco	120.54	12	PKPdf	PKPdf	19 50 45.2	-0.4
OLIL	Olney	120.59	25		PKPdf	19 50 45.6	-0.2
K56A	Middlesex	120.62	15	P	PKPdf	19 50 45.0	-0.7
	baz=340						
I63A	Otisfield	120.67	9	P	PKiKP	19 50 45.8	0.0
	baz=348						
K57A	Scipio Center	120.79	14	P	PKPdf	19 50 45.6	-0.5
	baz=341						
W39A	Magazine	120.81	32	P	PKPdf	19 50 46.0	-0.3
	baz=321						
JCT	Junction City	120.83	40	P	PKiKP	19 50 46.8	+0.2
	baz=314,SNR=37						
BLO	Bloomington	120.85	24	PKIKP	PKPdf	19 50 45.8	-0.5
BLO	Bloomington	120.85	24		PKPdf	19 50 45.8	-0.5
M53A	WI Miller and	120.87	18	P	PKPdf	19 50 45.6	-0.7
	baz=336						
M53A	WI Miller and	120.87	18		PKPdf	19 50 45.5	-0.7
K58A	Earlville	120.96	14	P	PKPdf	19 50 46.3	-0.1
	baz=342						
SIUC	Southern Illin	120.97	27		PKPdf	19 50 45.8	-0.7
L56A	Greenwood	121.09	15	P	PKPdf	19 50 45.6	-1.1
	baz=340,SNR=6.5						
FCAR	Ozark Folk Cen	121.10	30		PKPdf	19 50 46.0	-0.9
M54A	Oil Creek Stat	121.10	17	P	PKPdf	19 50 46.2	-0.5
	baz=337,SNR=9.2						
K59A	Cooperstown	121.12	13	P	PKPdf	19 50 46.3	-0.4
	baz=343						
WHTX	Lake Whitney,	121.19	37	P	PKiKP	19 50 47.5	+0.2
	baz=316,SNR=9.3						
WHTX	Lake Whitney,	121.19	37		PKPdf	19 50 47.0	-0.1
ACSO	Alum Creek Sta	121.22	21	P	PKPdf	19 50 46.8	-0.2
	baz=334,SNR=22						
ACSO	Alum Creek Sta	121.22	21		PKPdf	19 50 46.4	-0.5
P49A	Miami Univ. Ec	121.23	22	P	PKPdf	19 50 46.4	-0.6
	baz=332						
J62A	Henniker	121.28	10	P	PKiKP	19 50 47.3	+0.2
	baz=346						
J63A	Strafford	121.35	10	P	PKPdf	19 50 46.6	-0.5
	baz=347						
L57A	Andrews Acres	121.40	15	P	PKPdf	19 50 46.5	-0.8
	baz=341						
BINY	Binghamton	121.42	14	P	PKPdf	19 50 47.3	0.0
	baz=342,SNR=12						
BINY	Binghamton	121.42	14	PKPdf	PKPdf	19 50 47.0	-0.3
USIN	University of	121.42	26		PKPdf	19 50 46.9	-0.5
MIAR	Mount Ida	121.42	32	PKIKP	PKPdf	19 50 47.5	+0.1
MIAR	Mount Ida	121.42	32	P	PKPdf	19 50 47.6	+0.1
	baz=321						
MIAR	Mount Ida	121.42	32	PKPdf	PKPdf	19 50 47.5	+0.1
LCAR	Lake Charles	121.42	30		PKPdf	19 50 46.8	-0.6
DBIC	Dimbokro	121.49	287	PKP	PKPdf	19 50 48.0	-0.1
	comp=Z,33nm,0.6s,baz=63,slow=2.3,SNR=83						
DBIC	Dimbokro	121.49	287	PKPdf	PKPdf	19 50 48.0	-0.1
KIC	Kosan Boka	121.49	287	*e*PKIKP	PKiKP	19 50 48.3	0.0
	comp=Z,129nm,0.7s						
N54A	Moraine State	121.51	18	P	PKPdf	19 50 47.0	-0.5
	baz=337						
M56A	Emporium	121.54	16	P	PKPdf	19 50 47.1	-0.5
	baz=339,SNR=12						
K61A	Williamstown	121.55	12	P	PKPdf	19 50 47.5	-0.1
	baz=345						
L58A	Harry Jones Me	121.60	14	P	PKiKP	19 50 47.8	0.0
	baz=342,SNR=6.5						
W41B	Gary Mavity, V	121.61	31	P	PKPdf	19 50 47.2	-0.6
	baz=322						
L59A	Walton	121.64	13	P	PKiKP	19 50 47.8	-0.1
	baz=343						
TIC	Toumodi	121.65	287	*e*PKIKP	PKPdf	19 50 48.5	0.0
K62A	Royalston	121.75	11	P	PKPdf	19 50 47.7	-0.1
	baz=346						
WCI	Wyandotte Cave	121.76	24	PKIKP	PKPdf	19 50 47.8	-0.2
WCI	Wyandotte Cave	121.76	24	P	PKPdf	19 50 47.9	-0.2
	baz=330						
WCI	Wyandotte Cave	121.76	24	PKPdf	PKPdf	19 50 47.8	-0.2
O53A	New Philadelph	121.79	19	P	PKPdf	19 50 47.2	-0.8
	baz=336						
LIC	Lamto	121.81	287	*e*PKIKP	PKPdf	19 50 48.8	+0.1
	comp=Z,187nm,0.7s						
K63A	Dunstable	121.85	10	P	PKPdf	19 50 47.6	-0.5
	baz=347						
X40A	Basin Creek Fa	121.85	32	P	PKiKP	19 50 48.7	+0.3
	baz=322,SNR=7.6						
L61B	Northampton	121.88	11	P	PKPdf	19 50 47.5	-0.6
	baz=345						
L61A	Hillsdale 1, H	121.95	12	P	PKPdf	19 50 48.3	0.0
	baz=344						
M57A	Sunshine Farm,	121.95	15	P	PKiKP	19 50 48.4	-0.1
	baz=340,SNR=8.1						
435B	Jarrell	121.98	38	P	PKiKP	19 50 49.0	+0.2
	baz=316,SNR=5.1						
L60A	Shokan	122.01	13	P	PKiKP	19 50 48.5	-0.1
	baz=344						
HRV	Adam Dziewonsk	122.02	10	P	PKPdf	19 50 48.4	0.0
	baz=346						
N56A	West Decatur	122.04	16	P	PKPdf	19 50 48.3	-0.3
	baz=339,SNR=7.2						
P52A	Corning	122.05	20	P	PKPdf	19 50 48.1	-0.5
	baz=334,SNR=29						
KSPA	Keystone Colle	122.08	14		PKPdf	19 50 48.0	-0.5
M58A	Price’s Panora	122.09	15	P	PKPdf	19 50 48.1	-0.5
	baz=341,SNR=5.7						
R49A	Shelbyville	122.14	23		PKPdf	19 50 48.5	-0.3
M59A	Waymart	122.17	14	P	PKPdf	19 50 48.8	0.0
	baz=342,SNR=9.5						
N57A	Milroy	122.39	16	P	PKPdf	19 50 49.0	-0.2
	baz=340,SNR=8.4						
SSPA	Standing Stone	122.41	16	P	PKPdf	19 50 49.1	-0.2
	baz=339						
SSPA	Standing Stone	122.41	16		PKPdf	19 50 49.0	-0.2
KSCT	Kent School, K	122.42	12		PKPdf	19 50 48.5	-0.6
N58A	Sunbury	122.53	15	P	PKPdf	19 50 49.1	-0.3
	baz=340,SNR=12						
N58A	Sunbury	122.53	15	PKPdf	PKPdf	19 50 48.8	-0.6
M60A	Port Jervis	122.56	13	P	PKPdf	19 50 49.4	-0.1
	baz=343,SNR=5.2						
833A	Chaparral WMA,	122.56	42	P	PKiKP	19 50 50.9	+0.8
	baz=313,SNR=10						
O56A	Blue Knob Stat	122.56	17	P	PKPdf	19 50 49.5	-0.1
	baz=338,SNR=6.6						
L63A	North Scituate	122.64	10	P	PKPdf	19 50 49.4	-0.2
	baz=346						
N59A	State Game Lan	122.68	14	P	PKPdf	19 50 49.6	-0.1
	baz=342,SNR=11						
MCWV	Mont Chateau	122.75	18	P	PKPdf	19 50 49.6	-0.3
	baz=337,SNR=6.1						
M61A	Granite Spring	122.76	12	P	PKPdf	19 50 49.7	-0.1
	baz=344,SNR=7.9						
X43A	Marvell	122.81	30	P	PKiKP	19 50 50.4	+0.1
	baz=324						
Z41A	Richland Creek	122.83	33	P	PKiKP	19 50 50.5	+0.1
	baz=321						
O57A	Amberson	122.88	16	P	PKPdf	19 50 49.7	-0.4
	baz=339,SNR=6.7						
N60A	Cedar Hill Far	122.89	14	P	PKPdf	19 50 49.9	-0.2
	baz=342,SNR=10						
WVT	Waverly	122.90	27	P	PKPdf	19 50 50.2	0.0
	baz=327						
Q53A	Leroy	122.95	20	P	PKPdf	19 50 50.1	-0.2
	baz=335,SNR=9.2						
NATX	Nacogdoches	122.96	35	P	PKiKP	19 50 51.0	+0.3
	baz=319,SNR=9.1						
PAL	Palisades	123.02	13	P	PKiKP	19 50 50.6	+0.1
	baz=344,SNR=6.5						
O58A	Lewisberry	123.15	16	P	PKPdf	19 50 50.1	-0.5
	baz=340,SNR=7.8						
O59A	Robesonia	123.16	15	P	PKPdf	19 50 50.2	-0.5
	baz=341,SNR=6.3						
N61A	South Mountain	123.18	13	P	PKiKP	19 50 51.1	+0.2
	baz=343						
P56A	Dayton Farm, R	123.19	18	P	PKPdf	19 50 50.8	0.0
	baz=338,SNR=16						
O60A	Telford	123.34	14	P	PKPdf	19 50 50.9	-0.1
	baz=342,SNR=6.8						
P57A	Homestead Farm	123.45	17	P	PKPdf	19 50 51.0	-0.2
	baz=339,SNR=5.7						
OXF	Oxford	123.52	29	P	PKPdf	19 50 51.3	-0.2
	baz=325,SNR=18						
Q56A	Snyder Ridge,	123.52	18	P	PKPdf	19 50 51.3	-0.1
	baz=337,SNR=8.6						
HKT	Hockley	123.62	38	PKIKP	PKiKP	19 50 52.9	+0.9
HKT	Hockley	123.62	38	PKPdf	PKiKP	19 50 52.9	+0.9
P58A	Pank, Wackersv	123.64	16	P	PKPdf	19 50 51.6	0.0
	baz=340,SNR=6.4						
R54A	Victor	123.74	20	P	PKPdf	19 50 51.4	-0.5
	baz=335,SNR=12						
O61A	Allentown	123.75	14	P	PKPdf	19 50 51.7	-0.1
	baz=343						
Q57A	Strasburg	123.75	17	P	PKPdf	19 50 51.7	-0.1
	baz=338,SNR=5.2						
P59A	Jarrettsville	123.75	15	P	PKPdf	19 50 51.4	-0.4
	baz=340						
P60A	Greenville	123.77	15	P	PKPdf	19 50 51.7	-0.1
	baz=342,SNR=5.8						
R55A	Marlinton	123.93	19	P	PKPdf	19 50 52.1	-0.2
	baz=336,SNR=12						
S54A	Dingess, Beckl	123.97	20	P	PKPdf	19 50 52.3	-0.1
	baz=335,SNR=23						
R56A	Bull Pasture M	124.04	19	P	PKPdf	19 50 52.5	0.0
	baz=337,SNR=14						
Q58A	Fox Den Farm,	124.05	17	P	PKPdf	19 50 52.5	+0.1
	baz=339,SNR=14						
TZTN	Tazewell	124.29	23	P	PKPdf	19 50 52.7	-0.3
	baz=332,SNR=10						
R57A	Stanardsville	124.40	18	P	PKiKP	19 50 53.4	0.0
	baz=338,SNR=16						
Q60A	Greensboro	124.48	15	P	PKiKP	19 50 53.6	+0.1
	baz=341						
R58A	Rapidan	124.55	17	P	PKPdf	19 50 53.5	+0.1
	baz=338,SNR=7.7						
S56A	Natural Bridge	124.66	19	P	PKPdf	19 50 53.5	-0.1
	baz=337,SNR=5.7						
S57A	Dark Hollow, R	124.77	18	P	PKPdf	19 50 53.7	-0.1
	baz=337,SNR=7.4						
BLA	Blacksburg	124.81	20	P	PKPdf	19 50 53.6	-0.4
	baz=336,SNR=7.3						
CBN	Corbin Frederi	124.82	17	P	PKiKP	19 50 54.3	+0.1
	baz=339						
VBMS	Vicksburg	124.83	32	P	PKiKP	19 50 54.3	-0.1
	baz=323						
CPCT	Cooper Cave	124.87	25		PKPdf	19 50 54.1	0.0
R59A	King George, V	124.90	17	P	PKiKP	19 50 54.4	+0.1
	baz=339						
R58B	Mineral	124.90	17	P	PKPdf	19 50 54.0	-0.1
	baz=338,SNR=16						
U54A	Nelsons Funny	124.95	22	P	PKPdf	19 50 54.1	-0.2
	baz=334						
R60A	Leonardtown, M	124.98	16	P	PKiKP	19 50 54.6	0.0
	baz=340						
T56A	Rocky Mt	125.10	20	P	PKPdf	19 50 54.4	-0.2
	baz=336,SNR=14						
S58A	Poland Farm, P	125.18	18	P	PKiKP	19 50 54.8	-0.2
	baz=338,SNR=9.2						
S59A	Mechanicsville	125.26	17	P	PKiKP	19 50 55.1	0.0
	baz=339,SNR=9.6						
T57A	Hurt	125.38	19	P	PKPdf	19 50 55.0	0.0
	baz=337,SNR=8.5						
S60A	Water View	125.49	16	P	PKiKP	19 50 55.8	+0.3
	baz=340						
U56A	King	125.60	20	P	PKPdf	19 50 55.6	+0.2
	baz=335,SNR=5.7						
S61A	Accomac	125.77	15	P	PKiKP	19 50 56.5	+0.3
	baz=341						
LRAL	Lakeview Retre	125.86	28	P	PKPdf	19 50 56.1	0.0
	baz=327						
U57A	Blanch	125.87	19	P	PKPdf	19 50 56.0	+0.1
	baz=336,SNR=7.8						
BG3	Lake Jocassee	125.89	23		PKiKP	19 50 56.3	-0.2
T59A	Double "B" Far	125.92	18	P	PKiKP	19 50 56.3	-0.2
	baz=339,SNR=15						
T60A	Surry	125.99	17	P	PKiKP	19 50 56.8	+0.2
	baz=340						
V56A	Mocksville	126.05	21	P	PKPdf	19 50 56.2	-0.1
	baz=335,SNR=14						
U58A	Oxford	126.15	19	P	PKPdf	19 50 56.5	0.0
	baz=337						
V57A	Coltrane Farms	126.22	20	P	PKPdf	19 50 56.6	-0.1
	baz=336,SNR=12						
KMSC	Kings Mountain	126.36	22	P	PKPdf	19 50 56.9	0.0
	baz=334,SNR=14						
U59A	Littleton	126.42	18	P	PKPdf	19 50 57.1	+0.1
	baz=338						
U60A	Pendleton	126.50	17	P	PKPdf	19 50 57.3	+0.2
	baz=339						
V58A	Windy Hill, Pi	126.53	20	P	PKPdf	19 50 57.1	-0.2
	baz=337						
W56A	Indian Trail	126.63	21	P	PKPdf	19 50 57.2	-0.3
	baz=335						
W57A	Gilead	126.82	21	P	PKPdf	19 50 57.9	+0.1
	baz=335,SNR=6.3						
V59A	Middlesex	126.83	19	P	PKPdf	19 50 57.5	-0.3
	baz=338						
X56A	White Oak	127.05	22	P	PKPdf	19 50 58.5	+0.2
	baz=334,SNR=8.3						
GOGA	Godfrey	127.07	25	P	PKPdf	19 50 58.4	0.0
	baz=331,SNR=6.7						
V60A	Jim Taylor Roa	127.12	18	P	PKPdf	19 50 58.4	+0.1
	baz=339						
W58A	Raeford	127.19	20	P	PKPdf	19 50 58.4	-0.1
	baz=336						
V61A	Roper	127.30	17	P	PKiKP	19 50 59.5	+0.3
	baz=339						
BRAL	Brewton	127.39	30	P	PKiKP	19 50 59.8	+0.3
	baz=326,SNR=9.3						
X57A	Johnson Farm,	127.41	21	P	PKPdf	19 50 59.1	+0.2
	baz=335						
Y56A	Pelion	127.58	23	P	PKiKP	19 51 00.2	+0.3
	baz=333						
X58A	Rowland	127.58	20	P	PKPdf	19 50 59.5	+0.2
	baz=336						
W60A	Pink Hill	127.65	19	P	PKiKP	19 50 59.8	-0.2
	baz=338						
Y57A	Sumter	127.71	22	P	PKiKP	19 50 59.9	-0.2
	baz=335						
X59A	McDuffie Farm,	127.81	20	P	PKPdf	19 50 59.8	+0.1
	baz=337						
Z56A	Williston	127.97	23	P	PKiKP	19 51 00.9	+0.3
	baz=333,SNR=6.9						
X60A	Albert Glenn T	128.01	19	P	PKiKP	19 51 00.7	0.0
	baz=338						
Z57A	Bowman	128.24	22	P	PKiKP	19 51 01.4	+0.2
	baz=334						
Y59A	Loris	128.25	20	P	PKPdf	19 51 00.7	+0.1
	baz=336						
Y60A	Bolivia	128.46	20	P	PKPdf	19 51 01.1	+0.1
	baz=337						
Z58A	St. Stephen	128.53	21	P	PKiKP	19 51 01.6	-0.2
	baz=335						
TIGA	Tifton	128.73	26	P	PKiKP	19 51 02.8	+0.5
	baz=330						
DWPF	Disney Wildern	132.54	26	P	PKiKP	19 51 09.6	-0.4
	baz=331						
SDDR	Presa de Saban	144.64	19	PKPdf	PKPab	19 51 29.7	-0.2
JTS	Las Juntas de	144.81	46	PKIKP	PKPab	19 51 29.6	-1.1
JTS	Las Juntas de	144.81	46	PKPdf	PKPab	19 51 29.6	-1.1
JTS	Las Juntas de	144.81	46	*e*P	PKPab	19 51 29.4	-1.3
PRVC	Isla de Provid	144.86	38	*e*P	PKPab	19 51 30.4	-0.4
BANI	BANI	145.48	18		PKPbc	19 51 32.9	+0.1
AOPR	Arecibo Observ	146.42	12		PKPdf	19 51 34.4	+0.1
GCPR	Guaynabo City	146.58	11		PKPdf	19 51 34.8	+0.3
SJG	San Juan	146.76	11	PKP2	PKPdf	19 51 35.1	+0.3
SJG	San Juan	146.76	11		PKPdf	19 51 35.1	+0.3
BCIP	Isla Barro Col	149.06	41	PKP2	PKPbc	19 51 42.3	-0.6
BCIP	Isla Barro Col	149.06	41		PKPbc	19 51 42.2	-0.6
BCIP	Isla Barro Col	149.06	41	*e*P	PKPbc	19 51 41.2	-1.6
AZU	Azuero	149.80	43	*e*P	PKPbc	19 51 43.5	-1.2
SMRC	Santa Marta, M	150.57	30	*e*P	PKPbc	19 51 44.5	-2.1
SJCC	San Jacinto, C	151.18	33	*e*P	PKiKP	19 51 50.2	+1.7
CRJC	Cerrejon, Guaj	151.32	28	*e*P	PKiKP	19 51 48.7	-0.2
CVALL	Valledupar, Ce	151.60	29	*e*P	PKiKP	19 51 50.2	+0.9
MOTC	Monteria, Cord	151.85	35	*e*P	PKPbc	19 51 48.2	-1.3
PLCA	Paso Flores	152.47	162	PKPbc	PKiKP	19 51 50.4	-0.1
	comp=Z,6.1nm,0.7s,baz=222,slow=1.7,SNR=22						
PLCA	Paso Flores	152.47	162	PKIKP	PKPbc	19 51 50.1	-0.1
PLCA	Paso Flores	152.47	162		PKPbc	19 51 50.1	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMLC	San Martn de	152.68	32	*e*P	PKiKP	19 51 52.1	+0.5
DBBC	Dabeiba	152.96	38	*e*P	PKiKP	19 51 54.0	+1.7
OCAC	Ocana	153.54	31	*e*P	PKPbc	19 51 53.0	-0.5
CBOC	Ciudad Bolivar	153.99	39	*e*P	PKPbc	19 51 53.3	-1.2
SDV	Santo Domingo	154.20	25	PKPdf	PKPdf	19 51 47.4	+0.7
SDV				PKPbc	PKiKP	19 51 55.0	+0.1
SDV	Santo Domingo	154.20	25	*e*P	PKPdf	19 51 49.6	+2.9
SDV	Santo Domingo	154.20	25	*e*P	PKPdf	19 51 47.1	+0.4
BRRC	Barranca, Sant	154.30	33	*e*P	PKPbc	19 51 53.3	-1.6
PTBC	PUERTO BERRIO,	154.36	35	*e*P	PKPbc	19 51 54.5	-0.5
PLMC	San Jos del P	154.56	41	*e*P	PKPbc	19 51 53.5	-2.1
RCBR	Riachuelo	154.86	288	*e*P	PKPdf	19 51 48.6	+1.2
BARC	Barichara	155.01	33	*e*P	PKPdf	19 51 58.5	+11
SPBC	San Pablo de B	155.31	36	*e*P	PKPdf	19 51 57.9	+10
RUSC	La Rusia	155.65	34	*e*P	PKPdf	19 51 55.3	+6.2
ROSC	El Rosal	155.82	37	PKP	PKPdf	19 51 50.1	+0.9
	comp=Z,12nm,0.5s,baz=173,slow=20,SNR=5.8						
ROSC	El Rosal	155.82	37		PKPdf	19 51 49.5	+0.3
ROSC	El Rosal	155.82	37	*e*P	PKPdf	19 51 50.9	+1.6
NBPA	Parau_RN	155.94	289	*e*P	PKPdf	19 51 49.2	+0.4
BBAC	Balboa, Cauca	156.03	47	*e*P	PKPdf	19 51 51.8	+2.5
CBOG1	Bogota, SGC	156.12	37	*e*P	PKPdf	19 51 49.5	0.0
OTAV	Otavalo	156.32	53	PKIKP	PKPdf	19 51 49.9	0.0
OTAV	Otavalo	156.32	53	PKPdf	PKPdf	19 51 49.9	0.0
OTAV	Otavalo	156.32	53	*e*P	PKPdf	19 51 50.7	+0.7
CHIC	Chingaza	156.33	37	*e*P	PKPdf	19 51 49.5	-0.4
VILC	Villavicencio,	156.77	37	*e*P	PKPdf	19 51 51.2	+1.1
GDU01	Guandu, BA	160.33	270	*e*P	PKPdf	19 51 54.6	+0.5
ROSB	Rosrio	160.54	306	*e*P	PKPdf	19 51 54.3	-0.1
ALF01	Guarapari-ES	160.88	249	*e*P	PKPdf	19 51 56.3	+1.7
SJMB	Sao Joao De Ma	161.71	255	*e*P	PKPdf	19 51 56.1	+0.6
DUB01	Friburgo-RJ	161.90	244	*e*P	PKPdf	19 51 57.5	+1.8
PLTB	Pedras Altas	162.13	198	*e*P	PKPdf	19 51 57.2	+1.6
VAS01	Vassouras-RJ	162.75	242	*e*P	PKPdf	19 51 58.6	+2.2
MAN01	Angra dos Reis	162.95	239	*e*P	PKPdf	19 51 58.6	+1.9
TMAB	Tom-Au,PA,Br	163.10	316	*e*P	PKPdf	19 51 58.1	+1.0
CPSB	Cacapava Do Su	163.34	200	*e*P	PKPdf	19 51 57.4	+0.6
MCPB	Macapa, AP	163.77	331	*e*P	PKPdf	19 51 58.5	+0.8
BSCB	Bom Sucesso	164.38	244	*e*P	PKPdf	19 52 00.3	+2.1
ITQB	Itaqui	164.85	191	*e*P	PKPdf	19 52 00.2	+2.0
JANB	Januaria	164.99	267	*e*P	PKPdf	19 51 58.9	+0.1
SDBA	SAO DESIDERIO	165.30	277	*e*P	PKPdf	19 51 59.0	0.0
VAO	Valinhos	165.32	234	*e*P	PKPdf	19 52 00.8	+1.9
CZSB	Cruzeiro do Su	165.59	62	*e*P	PKPdf	19 51 60.0	+0.7
ITAB	Concordia	165.65	209	*e*P	PKPdf	19 52 00.9	+2.0
MALB	Monte Alegre	166.06	336	*e*P	PKPdf	19 52 01.4	+1.7
SMTB	Santa Maria do	166.66	295	*e*P	PKPdf	19 52 00.6	+0.5
PRPB	Parauapebas	166.98	310	*e*P	PKPdf	19 52 00.2	-0.2
BB19B	Bebedouro	167.54	238	*e*P	PKPdf	19 52 02.6	+2.0
PTGB	Pitanga	167.68	215	*e*P	PKPdf	19 52 00.6	-0.1
CPUP	Villa Florida	168.24	191	PKP	PKPdf	19 52 00.7	-0.2
	comp=Z,1.1nm,0.5s,baz=302,slow=2.9,SNR=4.0						
CPUP				PKPab	PKPab	19 53 11.2	+1.9
	comp=Z,4.5nm,0.8s,baz=150,slow=3.3,SNR=5.1						
CPUP	Villa Florida	168.24	191	*e*P	PKPdf	19 52 02.3	+1.4
LVC	Limon Verde	168.38	134	*e*P	PKPdf	19 52 02.3	+0.7
IPMB	Ipameri, GO	168.39	252	*e*P	PKPdf	19 52 00.8	-0.5
MACA	Manacapuru-AM	168.46	4	*e*P	PKPdf	19 52 01.5	+0.1
PEXB	Peixe	168.47	282	*e*P	PKPdf	19 52 01.5	+0.1
ITTB	Itaituba	168.92	338	*e*P	PKPdf	19 52 02.0	+0.3
PCMB	Pacaembu	169.37	229	*e*P	PKPdf	19 52 01.9	+0.2
TRCB	Terra Rica	169.48	219	*e*P	PKPdf	19 52 01.8	0.0
ITRB	Iturama	169.69	240	*e*P	PKPdf	19 52 03.4	+1.3
SNDB	Serra Nova Dou	171.24	287	*e*P	PKPdf	19 52 03.0	0.0
ETMB	Extrema	172.07	53	*e*P	PKPdf	19 52 02.4	-0.9
SAML	Samuel	173.37	30	PKP2	PKPab	19 53 30.8	-1.6
SAML						20 52 04.2	
SAML	Samuel	173.37	30	PKPdf	PKPdf	19 52 04.2	+0.2
SAML				PKPab	PKPab	19 53 30.8	-1.6
SAML	Samuel	173.37	30	*e*P	PKPdf	19 52 03.3	-0.6
VILB	Vilhena	178.18	11	*e*P	PKPdf	19 52 06.1	+1.0

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*IDC **10** 19:33:16.4±2.7, 7°.89N×72°.74W, h0^{km}, mb3.2/2, mb1 3.7/3, mb1mx3.4/27, mbtmp3.4/3, ML2.8/1 Error ellipse: s-maj=80.5km s-min=9.7km az=98.0*

*RSNC **10** 19:33:32.0±0.9, 6°.82N×73°.16W, h146^{km}±4^{km}, ML3.1, Mw3.6*

ISC 10 19:33:29.7±1.0, 6°.83N±0°.03×73°.12W±0°.04, h160^{km}±6^{km}, n31, σ1^{s}.41/60, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	194	*e*P	Pn	19 33 51.9	+0.2
BARC				*e*S	Sn	19 34 06.7	-1.7
BARC				*i*		19 34 07.2	
	comp=Z,642nm,0.4s						
BRRC	Barranca, Sant	0.65	295	*e*P	Pn	19 33 53.6	+0.6
BRRC				*e*S	Sn	19 34 10.0	-0.7
BRRC				*i*		19 34 14.3	
	comp=Z,312nm,0.3s						
PAMC	Pamplona, Colo	0.65	40	*e*P	Pn	19 33 54.5	+0.9
PAMC				*e*S	Sn	19 34 11.4	-0.5
PAMC				*i*		19 34 13.8	
	comp=Z,362nm,0.4s						
RUSC	La Rusia	0.94	178	*e*P	Pn	19 33 55.7	+0.1
RUSC				*e*S	Sn	19 34 14.7	-0.6
RUSC				*i*		19 34 16.1	
	comp=Z,107nm,0.2s						
PTBC	PUERTO BERRIO,	1.36	258	*e*P	Pn	19 33 58.4	-0.3
PTBC				*e*S	Sn	19 34 19.6	-1.3
PTBC				*i*		19 34 25.2	
	comp=Z,114nm,0.7s						
TAMC	Tame, Arauca	1.38	107⇓	*e*P	Pn	19 34 00.1	+1.2
TAMC				*i*		19 34 20.9	
	comp=Z,55nm,0.3s						
TAMC				*e*S	Sn	19 34 21.3	+0.1
OCAC	Ocana	1.41	352	*e*P	Pn	19 33 59.3	0.0
OCAC				*e*S	Sn	19 34 22.6	+0.4
OCAC				*i*		19 34 26.4	
	comp=Z,154nm,0.2s						
SPBC	San Pablo de B	1.51	219	*e*P	Pn	19 34 00.8	+0.5
SPBC				*e*S	Sn	19 34 22.7	-1.0
SPBC				*i*		19 34 27.1	
	comp=Z,320nm,0.4s						
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	19 34 04.4	+0.7
ZARC				*e*S	Sn	19 34 29.5	-0.4
ZARC				*i*		19 34 36.5	
	comp=Z,140nm,0.3s						
NORC	Norcasia	2.15	234	*e*P	Pn	19 34 08.1	+0.9
NORC				*e*S	Sn	19 34 35.4	-0.8
NORC				*i*		19 34 40.1	
	comp=Z,101nm,0.2s						
SMLC	San Martn de	2.17	334	*e*P	Pn	19 34 08.0	+0.5
SMLC				*e*S	Sn	19 34 36.0	-0.6
SMLC				*i*		19 34 40.6	
	comp=Z,156nm,0.2s						
CHIC	Chingaza	2.27	196	*e*P	Pn	19 34 09.8	+0.8
CHIC				*e*S	Sn	19 34 38.9	-0.5
CHIC				*i*		19 34 42.5	
	comp=Z,82nm,0.4s						
ROSC	El Rosal	2.31	211	Pn	Pn	19 34 11.3	+1.8
	comp=Z,17nm,0.3s,baz=310,slow=21,SNR=12						
ROSC				Sn	Sn	19 34 38.7	-1.5
	comp=Z,58nm,0.3s,baz=128,slow=16,SNR=20						
ROSC	El Rosal	2.31	211	*e*P	Pn	19 34 11.3	+1.8
ROSC				*e*S	Sn	19 34 40.8	+0.7
ROSC				*i*		19 34 45.0	
	comp=Z,201nm,0.3s						
HELC	Santa Helena	2.48	255	*e*P	Pn	19 34 12.3	+0.9
HELC				*e*S	Sn	19 34 43.2	-0.3
HELC				*i*		19 34 55.3	
	comp=Z,24nm,0.2s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	19 34 12.1	0.0
UREC				*e*S	Sn	19 34 43.1	-1.8
UREC				*i*		19 34 55.4	
	comp=Z,79nm,0.1s						
VILC	Villavicencio,	2.76	192	*e*P	Pn	19 34 15.7	+1.0
VILC				*e*S	Sn	19 34 48.6	-0.9
VILC				*i*		19 34 59.1	
	comp=Z,128nm,0.4s						
PTGC	Puerto Gaitan,	2.79	159	*e*P	Pn	19 34 14.7	-0.3
PTGC				*e*S	Sn	19 34 48.2	-1.9
PTGC				*i*		19 34 50.7	
	comp=Z,47nm,0.5s						
RREF	El Recreo	2.93	229	*e*P	Pn	19 34 18.8	+1.6
RREF				*e*S	Sn	19 34 56.5	+2.6
DBBC	Dabeiba	3.07	274	*e*P	Pn	19 34 18.8	+0.3
DBBC				*e*S	Sn	19 34 52.7	-3.5
DBBC				*i*		19 35 04.2	
	comp=Z,124nm,0.6s						
TOLC	Tolima	3.13	225	*e*P	Pn	19 34 21.1	+1.7
TOLC				*e*S	Sn	19 34 58.6	+0.7
TOLC				*i*		19 35 05.2	
	comp=Z,151nm,0.7s						
MOTC	Monteria, Cord	3.18	308	*e*P	Pn	19 34 18.9	-0.8
MOTC				*e*S	Sn	19 34 56.9	-1.6
MOTC				*i*		19 35 14.5	
	comp=Z,24nm,0.5s						
SDV	Santo Domingo	3.20	50	*e*P	Pn	19 34 21.0	+0.8
SDV				*e*S	Sn	19 34 58.5	-0.8
SDV				*i*		19 35 00.7	
	comp=Z,23nm,0.5s						
ARGC	Ariguani, Magd	3.21	340	*e*P	Pn	19 34 21.9	+1.8
ARGC				*e*S	Sn	19 35 00.7	+1.5
ARGC				*i*		19 35 10.1	
	comp=Z,37nm,0.5s						
ANIL	Santa Ana	3.25	224	*e*P	Pn	19 34 21.6	+0.7
ANIL				*e*S	Sn	19 35 03.2	+2.6
ANIL				*i*		19 35 06.0	
	comp=Z,24nm,0.3s						
ORTC	Ortega, Tolima	3.59	216	*e*P	Pn	19 34 26.1	+1.1
ORTC				*e*S	Sn	19 35 08.4	+0.3
ORTC				*i*		19 35 14.7	
	comp=Z,44nm,0.4s						
SJCC	San Jacinto, C	3.66	326	*e*P	Pn	19 34 25.8	-0.1
SJCC				*e*S	Sn	19 35 06.6	-3.1
SJCC				*i*		19 35 14.0	
	comp=Z,33nm,0.3s						
PLMC	San Jos del P	3.68	239	*e*P	Pn	19 34 26.6	+0.4
PLMC				*e*S	Sn	19 35 10.5	+0.3
PLMC				*i*		19 35 19.4	
	comp=Z,20nm,0.3s						
MACC	Macarena, Meta	4.71	189	*e*P	Pn	19 34 38.2	-1.4
MACC				*e*S	Sn	19 35 29.3	-4.9
MACC				*i*		19 35 35.5	
	comp=Z,15nm,0.5s						
TXAR	Lajitas Array	36.45	312	P	P	19 40 20.0	+0.5
	comp=Z,0.1nm,0.4s,baz=123,slow=10.0,SNR=2.0						
YKA	Yellowknife Ar	63.25	340	P	P	19 43 40.9	0.0
	comp=Z,0.2nm,0.6s,baz=137,slow=7.3,SNR=4.5						

ASRS 10 19:54:42.2±0.3, 53°N±2°×9°8E±°, h10^{km}, MLh3.3/9, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	Todzha	1.34	257	Pg	Pn	19 55 06.8	-0.2
TDJR				Sg	Sb	19 55 24.6	-0.1
MOY	Mondy	2.00	121	Pg	Pb	19 55 17.5	-1.2
MOY				Sg	Sb	19 55 42.6	-1.1
KNGR	Kungurtug, Tuv	2.17	192	Pg	Pb	19 55 20.2	-1.3
KNGR				Sg	Sb	19 55 48.9	+0.4
KZLR	Kyzyl	2.54	248	Pg	Pb	19 55 28.1	+0.3
KZLR				Sg	Sg	19 56 01.8	-1.9
ARDR	Aradan	2.93	269	Pg	Pb	19 55 35.5	+1.0
ARDR				Sg	Sb	19 56 12.6	+2.2
ERNS	Erzin	3.13	219	Pg	Pb	19 55 37.9	0.0
ERNS				Sg	Sb	19 56 17.3	+1.3
KTRR	Kuturchin	3.26	315	Pg	Pb	19 55 41.3	+1.3
KTRR				Sg	Sg	19 56 25.1	-1.6
BLRR	Bol'shaya Rech	3.53	277	Pg	Pb	19 55 45.7	+0.9
BLRR				Sg	Sb	19 56 31.4	+3.7
CERR	Cheremushki	4.14	275	Pg	Pb	19 55 57.3	+2.1
CERR				Sg	Sg	19 56 51.2	-3.8
DJOS	Djoyskaya Sosn	4.15	274	Pg	Pb	19 55 57.0	+1.7
DJOS				Sg	Sg	19 56 52.8	-2.6
DJO	Djoy, Khakassi	4.26	274	Pg	Pg	19 56 00.8	-3.0
DJO				Sg	Sg	19 56 54.6	-4.4
VEH	Verkhnyaya Baz	4.81	279	Sg	Sg	19 57 11.8	-4.8
SHRR	Shira	5.12	293	Sg	Sb	19 57 19.8	+6.4
TEL	Teeli	5.26	254	Pg	Pb	19 56 18.3	+4.1
TEL				Sg	Sg	19 57 29.4	-1.6
LUZB	Luzhba, Kemero	5.69	283	Pg	Pg	19 56 26.8	-4.3
LUZB				Sg	Sg	19 57 38.7	-6.0
TASR	Tashtagol	6.29	274	Sg	Sg	19 58 03.1	-0.9
CUR	Chagan-Uzun	6.72	251	Sg	Sg	19 58 17.5	-0.2
ULGR	Ulagan, Altay	6.73	256	Pg	Pg	19 56 46.4	-4.5
ULGR				Sg	Sg	19 58 15.4	-2.6
ARTR	Artybash	6.79	267	Pg	Pg	19 56 47.0	-5.0
ARTR				Sg	Sg	19 58 17.9	-2.0
CHBI	Chibit, Altay	7.12	254	Pg	Pg	19 56 52.8	-5.5
CHBI				Sg	Sg	19 58 29.8	-0.6
ELT	Eltsovka	7.26	279	Pg	Pg	19 56 57.9	-3.2
ELT				Sg	Sg	19 58 35.0	0.0
DGZ	Jazzator, Alta	7.43	250	Sg	Sg	19 58 39.1	-1.4

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*MAN **10** 20:00:03.5, 14°.76N×119°.98E, h29^{km}, mb4.2, ML3.0, MS2.7*

ISC 10 20:00:02.7±1.3, 14°.72N±0°.04×119°.92E±0°.09, h68^{km}±16^{km}, n10, σ0^{s}.74/14, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	0.90	121	*e*P	Pn	20 00 19.3	-0.5
MACP				*e*S	Sn	20 00 31.8	-0.7
LUBP	Lubang	1.03	162	*e*P	Pn	20 00 22.6	+1.1
LUBP				*e*S	Sn	20 00 36.7	+1.2
PGP	Puerto Galera	1.57	140⇑	*e*P	Pn	20 00 29.7	+1.0
PGP				*e*S	Sn	20 00 48.3	+0.1
SMPP	San Manuel, Pa	1.60	27	*e*P	Pn	20 00 28.6	-0.4
SMPP				*e*S	Sn	20 00 48.3	-0.5
BOLP	Bolinao	1.65	360	*e*P	Pn	20 00 29.9	+0.3
BOLP				*e*S	Sn	20 00 50.5	+0.6
BALP	Baler	1.89	57	*e*P	Pn	20 00 33.9	+1.1
BALP				*e*S	Sn	20 00 55.7	-0.1
POLP	Polilio Island	1.95	90	*e*P	Pn	20 00 34.4	+0.7
POLP				*e*S	Sn	20 00 58.4	+1.1
BUSP	Coron	2.72	174	*e*P	Pn	20 00 44.5	+0.4
BUSP				*e*S	Sn	20 01 15.2	-0.7
WRA	Warramunga Arr	37.25	157	P	P	20 07 05.9	-2.2
	0.4nm,0.4s,baz=336,slow=9.6,SNR=4.9						
ASAR	Alice Springs	40.53	160	P	P	20 07 35.1	-0.4
	0.3nm,0.3s,baz=336,slow=7.7,SNR=10						

IDC 10 20:01:23.6±36.0, 18°.75N×146°.11E, h351^{km}±158^{km}, mb2.8/4, mb1 2.9/5, mb1mx2.7/43, mbtmp3.6/5, Error ellipse: s-maj=459.0km s-min=52.3km az=124.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	19.04	340	P	P	20 05 21.2	-0.2
	0.0nm,0.3s,baz=165,slow=9.9,SNR=4.9						
SONM	Songino Array	43.35	321	P	P	20 08 52.3	-0.2
	0.4nm,0.6s,baz=125,slow=8.1,SNR=1.6						
CMAR	Chiang Mai Arr	44.59	278	P	P	20 09 02.3	-0.2
	0.4nm,0.5s,baz=68,slow=6.0,SNR=4.8						
ZALV	Zalesovo Beam	58.21	322	P	P	20 10 41.5	-0.5
	0.7nm,0.6s,baz=109,slow=8.0,SNR=3.9						
MKAR	Makanchi Array	58.71	314	P	P	20 10 45.8	+0.3
	0.3nm,0.7s,baz=85,slow=7.4,SNR=4.5						

IDC 10 20:08:07.4±2.3, 2°.32N×124°.65E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/33, mbtmp3.3/3, MS4.0/1, Ms1 4.0/1, ms1mx3.4/8, Error ellipse: s-maj=272.8km s-min=28.2km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.08	157	P	P	20 13 25.4	+0.6
	0.2nm,0.4s,baz=336,slow=10.0,SNR=1.1						
ASAR	Alice Springs	27.35	161	P	P	20 13 54.0	-0.4
	0.2nm,0.3s,baz=338,slow=7.0,SNR=4.6						
SONM	Songino Array	48.01	344	LR	LR	20 40 54.8	
	comp=Z,154nm,18.1s,baz=360,slow=41						
MKAR	Makanchi Array	57.56	327	P	P	20 17 58.8	-0.1
	0.3nm,0.7s,baz=107,slow=9.2,SNR=4.0						

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*MAN **10** 20:11:56.8, 4°.96N×126°.53E, h9^{km}, mb5.0, ML3.9, MS4.0*

*IDC **10** 20:12:01.2±2.0, 6°.25N×127°.32E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/27, mbtmp3.5/3, Error ellipse: s-maj=66.5km s-min=21.4km az=50.0*

ISC 10 20:12:05.2±1.3, 5°.52N±0°.07×126°.35E±0°.09, h10^{km}, n11, σ1^{s}.44/16, mb3.4/3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.86	313	*e*P	Pg	20 12 21.9	+0.1
MATI	Mati	1.42	356	*e*P	Pn	20 12 29.7	-1.4
MATI				*e*S	Sg	20 12 51.0	-0.1
DAV	Davao City (W)	1.72	334	Pn	Pn	20 12 35.2	0.0
	30nm,0.3s,baz=108,slow=5.7,SNR=5.7						
DAV				Sn	Sg	20 13 02.6	+2.0
	40nm,0.3s,baz=301,slow=19,SNR=6.6						
KCP	Kidapawan	1.94	320⇑	*e*P	Pn	20 12 37.9	-0.4
KCP				*i* S	Sg	20 13 08.7	+1.1
SKMP	Bagumbayan, Su	2.05	299	*e*P	Pn	20 12 38.7	-1.1
SKMP				*e*S	Sn	20 13 05.4	-0.1
BUKP	Musuan	2.67	332	*e*P	Pn	20 12 48.5	+0.1
CGP	Cagayan de Oro	3.35	331⇓	*e*P	Pn	20 12 59.1	+1.5
BUTP	Butuan	3.51	348	*e*P	Pn	20 13 00.9	+1.2
BUTP				*e*S	Sb	20 13 49.9	-0.1
WRA	Warramunga Arr	26.49	163	P	P	20 17 44.9	+2.0
	0.7nm,0.8s,baz=341,slow=10,SNR=2.0						
ASAR	Alice Springs	29.93	166	P	P	20 18 15.1	+1.5
	0.5nm,1.0s,baz=347,slow=7.6,SNR=1.6						
MKAR	Makanchi Array	55.88	325	P	P	20 21 40.2	-3.0
	0.4nm,0.6s,baz=128,slow=8.1,SNR=5.3						

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*NEIC **10** 20:46:51.1±2.3, 30°.50S±0°.08×178°.9W±0°.1, h225^{km}±5^{km}, mb4.5/39, Error ellipse: s-maj=15.2km s-min=11.7km az=75.0*

*IDC **10** 20:46:51.6±0.6, 30°.39S×178°.98W, h228^{km}±5^{km}, mb3.9/14, mb1 4.1/16, mb1mx4.0/23, mbtmp4.5/16, Error ellipse: s-maj=14.3km s-min=12.2km az=126.0*

ISC 10 20:46:48.3±0.4, 30°.87S±0°.04×178°.91W±0°.07, h200^{km}, n160, σ2^{s}.06/179, mb4.5/34, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.81	29	P	Pn	20 47 26.9	+2.0
GLKZ				S	Sn	20 47 54.4	+1.0
RAO	Raoul Island	1.82	28	P	Pn	20 47 27.3	+2.2
	857nm,0.3s,baz=258,slow=8.4,SNR=65						
RAO				S	Sn	20 47 55.7	+2.1
	2µm,0.3s,baz=90,slow=23,SNR=25						
RAO	Raoul Island	1.82	28		Pn	20 47 27.1	+2.0
RAO					Sn	20 47 55.3	+1.6
RIZ	Raoul Island	1.82	28	P	Pn	20 47 27.4	+2.3
RIZ				S	Sn	20 47 55.8	+2.2
MXZ	Matakaoa Point	7.07	198	Pn	Pn	20 48 29.8	+0.5
MXZ	Matakaoa Point	7.07	198	P	Pn	20 48 30.3	+1.0
MXZ				S	Sn	20 49 49.4	-0.2
GRZ	Great Barrier	7.14	220	P	Pn	20 48 36.6	+6.3
WMGZ	Waiomatatini S	7.28	197	P	Pn	20 48 32.8	+0.7
WMGZ				S	Sn	20 49 52.9	-1.8
KUZ	Kuaotunu	7.37	216	P	Pn	20 48 39.1	+5.8
HAZ	Te Kaha	7.40	201	P	Pn	20 48 34.8	+1.2
HAZ				S	Sn	20 49 57.1	-0.3
PKGZ	Pakihiroa	7.43	199	P	Pn	20 48 34.2	0.0
PKGZ				S	Sn	20 49 52.4	-6.0
PUZ	Puketiti	7.56	197	P	Pn	20 48 35.5	-0.3
PUZ				S	Sn	20 50 01.6	+0.3
WCZ	Waipu Caves	7.58	226	P	Pn	20 48 42.8	+6.8
RUGZ	Raukumara Rang	7.62	201	P	Pn	20 48 37.0	+0.3
RUGZ				S	Sn	20 50 01.8	-1.1
OUZ	Omahuta	7.64	233	P	Pn	20 48 43.5	+6.6
TWGZ	Tauwhareparae	7.73	199	P	Pn	20 48 38.7	+0.7
TWGZ				S	Sn	20 50 07.9	+2.5
WHRZ	Whale Island	7.76	205	P	Pn	20 48 44.7	+6.4
OPRZ	Ohinepanea	7.91	207	P	Pn	20 48 41.5	+1.2
TGRZ	Tauranga	7.92	209	P	Pn	20 48 45.3	+4.8
CNGZ	Carnagh Statio	7.96	197	P	Pn	20 48 40.9	0.0
CNGZ				S	Sn	20 50 06.5	-4.2
MARZ	Manawahe	7.98	206	P	Pn	20 48 43.5	+2.2
MARZ				S	Sn	20 50 15.5	+4.3
MWZ	Matawai	8.01	201	P	Pn	20 48 41.2	-0.4
MWZ				S	Sn	20 50 11.6	-0.3
TKGZ	Te Karaka	8.01	199	P	Pn	20 48 41.2	-0.4
TKGZ				S	Sn	20 50 12.7	+0.8
EDRZ	Edgecumbe	8.07	205	P	Pn	20 48 47.3	+4.9
URZ	Urewera	8.07	203	P	Pn	20 48 43.2	+0.8
	4.1nm,0.3s,baz=271,slow=4.7,SNR=36						
URZ				S	Sn	20 50 13.2	-0.1
	42nm,0.3s,baz=309,slow=22,SNR=20						
URZ	Urewera	8.07	203	Pn	Pn	20 48 42.4	0.0
URZ	Urewera	8.07	203	P	Pn	20 48 42.1	-0.3
URZ				S	Sn	20 50 12.9	-0.4
RAGZ	Rawiri	8.19	201	P	Pn	20 48 44.0	-0.1
RAGZ				S	Sn	20 50 17.1	+0.8
TOZ	Tahuroa Road	8.26	212	P	Pn	20 48 49.1	+4.3
TARZ	Mount Tarawera	8.27	206	P	Pn	20 48 48.3	+3.3
RIGZ	Rimuhau	8.29	198	P	Pn	20 48 44.3	-0.9
RIGZ				S	Sn	20 50 18.1	-0.4
MUGZ	Murupara	8.38	204	P	Pn	20 48 46.2	-0.3
RTZ	Ruatahuna	8.44	202	P	Pn	20 48 47.0	-0.3
PRGZ	Paritu Road	8.46	197	P	Pn	20 48 47.0	-0.4
PRGZ				S	Sn	20 50 19.1	-3.4
SNGZ	Shannon Statio	8.48	200	P	Pn	20 48 47.2	-0.5
SNGZ				S	Sn	20 50 22.5	-0.5
KNZ	Kokohu	8.61	198	P	Pn	20 48 47.7	-1.7
MHGZ	Mahia Peninsul	8.67	197	P	Pn	20 48 49.1	-1.1
RAHZ	Arahi	8.68	201	P	Pn	20 48 49.6	-0.7
RAHZ				S	Sn	20 50 27.1	-0.6
MTHZ	Maungataniwha	8.70	202	P	Pn	20 48 50.2	-0.4
NMHZ	Naumai	8.93	202	P	Pn	20 48 53.5	-0.2
HIZ	Hauiti	9.19	212	P	Pn	20 49 00.1	+3.1
OTVZ	Oturere	9.39	207	P	Pn	20 48 58.5	-1.3
WHVZ	Whangaehu Hut	9.53	207	P	Pn	20 49 03.3	+1.7
PKVZ	Pokaka	9.63	208	P	Pn	20 49 05.6	+2.9
VRZ	Vera Road	9.74	210	P	Pn	20 49 06.5	+2.5
PXZ	Pawanui	9.77	199	P	Pn	20 49 02.2	-2.2
WPHZ	Waipukurau	9.93	201	P	Pn	20 49 05.2	-1.3
PRHZ	Porangahau	10.05	200	P	Pn	20 49 05.9	-2.3
TSZ	Takapari Road	10.08	203	P	Pn	20 49 05.5	-3.0
LREZ	Lake Rotokare	10.17	211	P	Pn	20 49 10.6	+1.0
WAZ	Wanganui	10.17	208	P	Pn	20 49 11.1	+1.4
KHEZ	Kahui Hut	10.21	213	P	P	20 49 14.3	-3.7
DVHZ	Dannevirke	10.23	202	P	Pn	20 49 08.0	-2.4
POWZ	Post Office Ro	10.44	203	P	Pn	20 49 13.5	+0.4
PRWZ	Pori Road	10.52	202	P	Pn	20 49 13.3	-0.9
BFZ	Birch Farm	10.55	201	P	Pn	20 49 11.3	-3.3
MRZ	Mangatainoka R	10.75	203	P	Pn	20 49 13.3	-3.8
TIWZ	Tintock	10.75	202	P	Pn	20 49 16.7	-0.5
HOWZ	Holdsworth Sta	10.98	203	P	Pn	20 49 16.1	-4.0
OGWZ	Otaki Gorge	11.03	204	P	Pn	20 49 17.2	-3.5
TMWZ	Te Maipa	11.05	201	P	Pn	20 49 18.1	-2.9
MSVF	Nonsavu	13.36	347	P	Pn	20 49 48.1	-2.4
	6.8nm,0.3s,baz=195,slow=5.5,SNR=23						
MSVF	Nonsavu	13.36	347		Pn	20 49 49.9	-0.7
NIUE	Niue	14.28	37	Pn	Pn	20 49 59.5	-2.2
RPZ	Rata Peaks	15.09	209	P	Pn	20 50 10.6	-0.9
	1.8nm,0.3s,baz=146,slow=21,SNR=2.6						
RPZ				S	S	20 52 48.6	-10
	6.3nm,0.3s,baz=286,slow=24,SNR=12						
RPZ	Rata Peaks	15.09	209		Pn	20 50 10.0	-1.5
RPZ				IAmb	IAmb	20 50 20.6	
	comp=Z,16nm,1.0s						
DZM	Mont Dzumac	15.76	300	P	Pn	20 50 21.7	+1.8
	comp=Z,0.7nm,0.3s,baz=116,slow=19,SNR=6.8						
DZM	Mont Dzumac	15.76	300		Pn	20 50 21.8	+2.0
DZM				IAmb	IAmb	20 50 30.5	
	comp=Z,16nm,0.9s						
AFI	Afiamalu	18.11	23	P	P	20 50 42.9	-2.6
	comp=Z,8.7nm,0.3s,baz=348,slow=3.6,SNR=14						
AFI				S	S	20 53 51.1	-12
	comp=Z,3.9nm,0.3s,baz=67,slow=16,SNR=4.6						
AFI	Afiamalu	18.11	23	P	P	20 50 42.4	-3.2
LHI	Lord Howe Isla	18.86	262	P	P	20 50 53.4	0.0
SANVU	Saraoutou	19.93	317	P	P	20 51 06.3	+1.3
SANVU				IAmb	IAmb	20 51 16.8	
	comp=Z,12nm,0.7s						
ARMA	Armidale	25.32	263	P	P	20 51 60.0	+3.1
ARMA				IAmb	IAmb	20 52 12.7	
	comp=Z,12nm,1.1s						
EIDS	Eidsvold	26.98	274	P	P	20 52 12.4	+0.7
EIDS				IAmb	IAmb	20 52 14.8	
	comp=Z,8.4nm,0.8s						
HNR	Honiara	29.02	313	P	P	20 52 27.1	-2.7
	comp=Z,27nm,0.3s,baz=343,slow=23,SNR=2.1						
TOO	Toolangi	30.06	247	P	P	20 52 40.1	+1.3
TOO				IAmb	IAmb	20 52 45.5	
	comp=Z,9.9nm,1.1s						
CTAO	Charters Tower	33.10	281	P	P	20 53 06.5	+1.0
STKA	Stephens Creek	33.61	258	P	P	20 53 12.4	+2.5
	comp=Z,6.8nm,0.4s,baz=101,slow=11,SNR=36						
STKA	Stephens Creek	33.61	258	P	P	20 53 11.9	+2.0
BBOO	Buckleboo	38.09	255	P	P	20 53 48.5	+0.6

BBOO				IAmb	IAmb	20 54 02.3	
	comp=Z,9.6nm,0.9s						
COEN	Coen	38.65	287	P	P	20 53 53.1	+0.4
COEN				IAmb	IAmb	20 54 05.9	
	comp=Z,8.7nm,1.1s						
AS31	Alice Springs	42.30	268	P	P	20 54 22.1	-0.5
ASAR	Alice Springs	42.30	268	P	P	20 54 22.2	-0.4
	comp=Z,2.1nm,0.3s,baz=104,slow=8.0,SNR=39						
ASAR				ScP	ScP	20 59 40.0	-4.0
	comp=Z,0.8nm,0.9s,baz=106,slow=4.4,SNR=4.3						
ASAR	Alice Springs	42.30	268	P	P	20 54 22.0	-0.6
WB2	Warramunga Arr	43.32	273	P	P	20 54 30.4	-0.4
WRAB	Tennant Creek	43.33	273	P	P	20 54 30.4	-0.4
WRAB				IAmb	IAmb	20 54 32.9	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	43.33	273	P	P	20 54 30.1	-0.8
	comp=Z,5.4nm,0.3s,baz=111,slow=8.1,SNR=117						
WRA	Warramunga Arr	43.33	273	P	P	20 54 30.1	-0.8
VNDA	Vanda	47.56	186	P	P	20 55 07.2	+4.1
	comp=Z,1.4nm,0.8s,baz=353,slow=6.7,SNR=3.5						
VNDA	Vanda	47.56	186	P	P	20 55 06.8	+3.6
MTN	Manton Dam	49.28	280	P	P	20 55 16.9	-0.3
MTN				IAmb	IAmb	20 55 20.0	
	comp=Z,33nm,1.1s						
FITZ	Fitzroy Crossi	51.58	271	P	P	20 55 33.8	-0.5
CASY	Casey	54.36	208	P	P	20 55 55.0	+1.1
CASY				IAmb	IAmb	20 55 56.6	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	59.25	180	P	P	20 56 32.6	+4.1
	comp=Z,19nm,0.7s,baz=264,slow=0.6,SNR=86						
QSPA	South Pole Qui	59.25	180	P	P	20 56 32.0	+3.5
UGM	Wanagama	69.31	273	P	P	20 57 34.5	0.0
BELA	Belgrano 2	69.43	172	P	P	20 57 36.5	+2.3
MAW	Mawson	71.60	201	P	P	20 57 49.5	+2.2
KSM	Kuching	74.34	281	P	P	20 58 03.8	-0.5
KSM				IAmb	IAmb	20 58 13.2	
	comp=Z,13nm,1.1s						
SNAA	Sanae	77.71	179	P	P	20 58 24.8	+2.3
SNAA	Sanae	77.71	179	P	P	20 58 24.6	+2.0
VNA3	Neumayer Olymp	77.89	176	P	P	20 58 26.0	+2.5
MJAR	Matsushiro Arr	78.18	326	P	P	20 58 23.8	-1.7
	comp=Z,4.0nm,0.8s,baz=155,slow=7.4,SNR=8.3						
MJAR	Matsushiro Arr	78.18	326	P	P	20 58 24.1	-1.4
MAJO	Matsushiro	78.18	326	P	P	20 58 24.8	-0.7
VNA2	Neumayer--Watz	78.32	177	P	P	20 58 28.4	+2.6
	baz=188,slow=4.4						
JSU	Suzuyama	78.44	318	P	P	20 58 25.6	-1.4
VNA1	Neumayer--Stat	78.55	177	P	P	20 58 29.2	+2.2
JWT	Wachi	78.58	323	P	P	20 58 26.2	-1.5
JWT				IAmb	IAmb	20 58 30.1	
	comp=Z,16nm,1.0s						
H03S2	Juan Fernandez	80.86	124	T	T	22 28 14.7	
	baz=242,slow=74,SNR=5.7						
H03S1	Juan Fernandez	80.87	124	T	T	22 28 14.0	
	baz=242,slow=74,SNR=5.1						
H03S3	Juan Fernandez	80.88	124	T	T	22 28 17.0	
	baz=242,slow=74,SNR=4.7						
PLCA	Paso Flores	82.76	133	P	P	20 58 52.2	+2.2
	comp=Z,1.2nm,0.7s,baz=221,slow=6.8,SNR=4.0						
PLCA	Paso Flores	82.76	133	P	P	20 58 52.0	+1.9
KSRS	Korea Array	84.20	320	P	P	20 58 55.8	-1.3
	comp=Z,3.3nm,0.8s,baz=149,slow=5.6,SNR=9.1						
KSAR	Wonju Array Be	84.21	320	P	P	20 58 57.0	-0.2
KULM	Kulim	84.52	279	P	P	20 58 58.2	-1.1
KULM				IAmb	IAmb	20 58 59.2	
	comp=Z,9.6nm,0.9s						
GSI	Gunungsitoli	85.09	274	P	P	20 59 02.1	0.0
NJ2	Nanjing	85.95	311	*e*P	P	20 59 07.1	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PEA0B	Petropavlovsk-	86.07	346	P	P	20 59 05.8	-0.1
PETK	Petropavlovsk-	86.07	346	P	P	20 59 05.2	-0.8
	comp=Z,5.5nm,0.7s,baz=127,slow=8.3,SNR=11						
PETK	Petropavlovsk-	86.07	346	P	P	20 59 05.8	-0.2
USRK	Ussuriysk Ar.	87.12	327	P	P	20 59 10.8	-0.5
	comp=Z,2.7nm,0.7s,baz=104,slow=5.9,SNR=6.5						
USRK	Ussuriysk Ar.	87.12	327	P	P	20 59 10.9	-0.3
ISA	Isabella, Lake	87.18	45	P	P	20 59 12.3	+0.4
ISA				IAmb	IAmb	20 59 13.6	
	comp=Z,5.9nm,0.8s						
CMB	Columbia Colle	87.63	42	P	P	20 59 14.1	+0.1
GLA	Glamis	87.79	49	P	P	20 59 14.9	+0.1
GLA				IAmb	IAmb	20 59 17.4	
	comp=Z,13nm,1.1s						
NVAR	Mina Array Bea	89.11	43	P	P	20 59 20.8	-0.3
	comp=Z,2.6nm,0.9s,baz=223,slow=8.1,SNR=14						
NVAR	Mina Array Bea	89.11	43	P	P	20 59 21.0	-0.1
CN2	Changchun	90.04	323	*e*P	P	20 59 24.7	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.5s						
K05A	Summer Lake	90.54	39	P	P	20 59 28.1	+0.5
K05A				IAmb	IAmb	20 59 28.6	
	comp=Z,3.6nm,0.9s						
PINE	Pine Mountain	91.25	38	P	P	20 59 31.2	+0.3
PINE				IAmb	IAmb	20 59 32.4	
	comp=Z,6.4nm,0.8s						
CMAR	Chiang Mai Arr	92.81	290	P	P	20 59 39.0	+0.5
	comp=Z,0.5nm,0.7s,baz=155,slow=3.6,SNR=4.4						
TXAR	Lajitas Array	93.30	58	P	P	20 59 41.3	+0.7
	comp=Z,0.1nm,0.5s,baz=203,slow=6.1,SNR=3.6						
HHC	Hu-ho-hao-te	95.99	314	*e*P	P	20 59 53.3	+0.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
PDAR	Pinedale Array	97.01	44	P	P	20 59 58.0	+0.6
	comp=Z,0.1nm,0.5s,baz=161,slow=5.7,SNR=1.9						
LZH	Lanzhou	98.37	307	*e*P	Pdif	21 00 05.1	+1.5
LZH				pP	pwP	21 00 56.4	+1.1
LZH				sP	sP	21 01 18.0	+5.0
LZH				PP	PP	21 04 10.9	+4.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,57nm,4.9s						
MKAR	Makanchi Array	117.47	310	PKP	PKPdf	21 05 07.8	-2.1
	comp=Z,0.5nm,0.5s,baz=64,slow=0.2,SNR=10.0						
MKAR	Makanchi Array	117.47	310		PKPdf	21 05 07.9	-2.0
KURK	Kurchatov	120.80	314	PKPdf	PKPdf	21 05 14.5	-1.6
KURBB	Kurchatov Arra	120.84	314	PKP	PKPdf	21 05 14.3	-1.9
	comp=Z,1.1nm,0.6s,baz=119,slow=1.7,SNR=12						
BVAR	Borovoye Array	126.19	316	PKP	PKPdf	21 05 25.2	-1.3
	comp=Z,0.4nm,0.5s,baz=167,slow=4.3,SNR=6.2						
SPITS	Spitsbergen Ar	132.11	356	PKP	PKPdf	21 05 36.3	-0.8
	comp=Z,1.7nm,0.6s,baz=126,slow=2.0,SNR=4.1						
ARU	Arti	132.95	320	PKP	PKPdf	21 05 37.6	-1.6
	comp=Z,0.3nm,0.4s,baz=98,slow=3.3,SNR=3.8						
ARU				SKPbc	SKPbc	21 08 42.5	-5.4
	comp=Z,0.4nm,0.4s,baz=117,slow=2.3,SNR=3.6						
ARU	Arti	132.95	320		PKPdf	21 05 38.7	-0.5
ARCES	ARCESS Array B	138.87	347	PKhKP	PKPpre	21 05 43.2	
	comp=Z,0.8nm,0.4s,baz=9.3,slow=1.0,SNR=5.9						
ARCES				PKP	PKPdf	21 05 49.7	-0.1
	comp=Z,2.6nm,0.6s,baz=88,slow=1.8,SNR=6.5						
KBZ	Khabaz	144.71	303	PKP	PKPab	21 06 00.1	-0.3
	comp=Z,3.5nm,0.6s,baz=189,slow=6.1,SNR=11						
OBN	Obninsk	145.10	324	PKP	PKPbc	21 05 60.0	-1.2
	comp=Z,3.5nm,0.5s,baz=148,slow=7.0,SNR=6.3						
FINES	FINESS Array B	145.31	339	PKP	PKPdf	21 05 59.7	-1.7
	comp=Z,20nm,0.5s,baz=49,slow=3.8,SNR=88						
NB2	NORSAR Subarra	149.08	350	PKP	PKPbc	21 06 10.4	-1.8
	comp=Z,2.7nm,0.5s,baz=16,slow=4.3						
NOA	NORSAR Array B	149.08	350	PKPbc	PKPdf	21 06 09.3	+1.5
	comp=Z,3.8nm,0.6s,baz=15,slow=4.2,SNR=13						
HFS	Hagfors	149.53	348	PKPbc	PKPdf	21 06 09.6	+1.1
	comp=Z,8.2nm,0.6s,baz=67,slow=3.9,SNR=18						
AKASG	Malin Array Be	151.18	322	PKPbc	PKPbc	21 06 16.0	-1.4
	comp=Z,3.7nm,0.6s,baz=48,slow=2.7,SNR=20						
AKASG				PKPab	PKPab	21 06 24.1	-1.9
	comp=Z,3.3nm,0.6s,baz=50,slow=4.7,SNR=12						
BRTR	Keskin Array B	152.12	297	PKPbc	PKPbc	21 06 18.7	-1.4
	comp=Z,0.6nm,0.4s,baz=131,slow=4.4,SNR=11						
BRTR				PKPab	PKPab	21 06 29.2	-1.3
	comp=Z,1.8nm,0.7s,baz=120,slow=4.0,SNR=8.0						
DPC	Dobruska-Polom	157.44	334	*e*PKPAB	PKPab	21 06 52.5	-0.3
CLL	Collm	157.75	340	*e*PKPab	PKPab	21 06 53.0	-0.9
KHC	Kasperske Hory	159.45	336	*e*PKPAB	PKPab	21 07 00.9	-0.6
TORD	Torodi Ar. Bea	162.36	182	PKPab	PKPab	21 07 16.3	+1.5
	comp=Z,0.8nm,0.3s,baz=170,slow=3.3,SNR=11						
TORD	Torodi Ar. Bea	162.36	182	PKPdf	PKPdf	21 06 26.6	-0.1
TORD					PKPab	21 07 15.7	+0.8
DAVOX	Davos/Dischmat	162.71	339	PKPab	PKPab	21 07 14.7	-1.3
	comp=Z,2.6nm,0.6s,baz=231,slow=5.0,SNR=7.3						

WEL 10 21:07:18.6,36°S±13°×17°9E±2°1,h285^{km}±15^{km},M3.6/29, mB4.5/1,MLv3.6/29,Mw(mB)3.7/1,Error ellipse: s-maj=0.0km s-min=0.0km az=93.3,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	2.35	199	P	Pn	21 08 06.7	-0.3
HAZ				S	S	21 08 42.2	-3.3
PKGZ	Pakihiroa	2.41	192	P	Pn	21 08 07.8	+0.1
PKGZ				S	S	21 08 40.9	-5.9
RUGZ	Raukumara Rang	2.58	199	P	Pn	21 08 09.1	-0.1
TWGZ	Tauwhareparae	2.71	193	P	Pn	21 08 11.7	+1.3
TWGZ				S	S	21 08 50.5	-1.3
OPRZ	Ohinepanea	2.90	217	P	Pn	21 08 12.7	+0.4
MARZ	Manawahe	2.96	213	P	Pn	21 08 14.9	+2.1
MWZ	Matawai	2.96	199	P	Pn	21 08 14.1	+1.2
MWZ				S	S	21 08 54.9	-1.4
CNGZ	Carnagh Statio	2.98	188	P	Pn	21 08 14.4	+1.4
TKGZ	Te Karaka	2.99	193	P	Pn	21 08 14.2	+1.0
TKGZ				S	S	21 08 55.3	-1.3
URZ	Urewera	3.02	205	P	Pn	21 08 13.8	+0.4
URZ				S	S	21 08 55.3	-1.8
RAGZ	Rawiri	3.14	199	P	Pn	21 08 16.6	+1.8
RIGZ	Rimuhau	3.26	193	P	Pn	21 08 16.9	+0.9
MUGZ	Murupara	3.34	208	P	Pn	21 08 18.1	+1.3
RTZ	Ruatahuna	3.38	204	P	Pn	21 08 18.4	+1.1
SNGZ	Shannon Statio	3.43	199	P	Pn	21 08 19.2	+1.5
SNGZ				S	S	21 09 04.2	-0.8
PRGZ	Paritu Road	3.45	191	P	Pn	21 08 19.6	+1.6
KNZ	Kokohu	3.59	193	P	Pn	21 08 20.1	+0.8
MTHZ	Maungataniwha	3.65	204	P	Pn	21 08 22.0	+1.9
MHGZ	Mahia Peninsul	3.68	190	P	Pn	21 08 21.9	+1.5
WHHZ	Waihua	3.74	198	P	Pn	21 08 22.7	+1.6
WHHZ				S	S	21 09 11.2	+0.2
MRHZ	Matea Rd	3.78	209	P	Pn	21 08 23.4	+1.8
TLZ	Tolley Road	3.79	222	P	Pn	21 08 24.4	+2.7
NMHZ	Naumai	3.88	203	P	Pn	21 08 24.6	+1.9
ARHZ	Aropaoanui	3.98	200	P	Pn	21 08 25.7	+2.0
BKZ	Black Stump Fm	4.04	206	P	Pn	21 08 23.2	-1.3
MCHZ	McNeill Hill	4.23	202	P	Pn	21 08 29.2	+2.6
KWHZ	Kaweka Forest	4.30	205	P	Pn	21 08 28.8	+1.4
CKHZ	Cape Kidnapper	4.33	197	P	Pn	21 08 29.5	+1.9
ETVZ	East Tongariro	4.33	213	P	Pn	21 08 29.5	+1.7
OTVZ	Oturere	4.37	213	P	Pn	21 08 29.8	+1.4
BHHZ	Black Hill Sta	4.49	207	P	Pn	21 08 31.0	+1.4
KAHZ	Kahuranaki	4.50	199	P	Pn	21 08 31.4	+1.6
KRHZ	Kereru	4.51	204	P	Pn	21 08 30.6	+0.8
MOVZ	Moawhango	4.54	211	P	Pn	21 08 31.6	+1.4
PXZ	Pawanui	4.73	198	P	Pn	21 08 33.3	+1.0
PNHZ	Pukenui	4.82	204	P	Pn	21 08 34.0	+0.7
PRHZ	Porangahau	5.01	199	P	Pn	21 08 37.0	+1.4
TSZ	Takapari Road	5.03	205	P	Pn	21 08 36.5	+0.7
BFZ	Birch Farm	5.50	200	P	Pn	21 08 40.7	-0.8
MRZ	Mangatainoka R	5.70	205	P	Pn	21 08 44.3	+0.5
HOWZ	Holdsworth Sta	5.93	204	P	Pn	21 08 47.0	+0.5
OGWZ	Otaki Gorge	5.98	207	P	Pn	21 08 47.6	+0.5
TMWZ	Te Maipa	6.00	201	P	Pn	21 08 49.1	+1.7
MTW	Mount Morrison	6.17	203	P	Pn	21 08 49.9	+0.4
TRWZ	Traveller	6.33	201	P	Pn	21 08 52.2	+0.8
PLWZ	Palliser	6.62	203	P	Pn	21 08 55.3	+0.3

IDC ***10*** *21:08:00.6±6.6,19°.45S×70°.06W,h0^{km},mb3.8/2, mb1 4.0/2,mb1mx3.5/17,mbtmp3.8/2,Error ellipse: s-maj=293.2km s-min=69.4km az=21.0*

GUC ***10*** *21:08:01.8±0.7,20°.32S×70°.68W,h29^{km}±3^{km},ML3.6*

NEIC ***10*** *21:08:02.2±2.5,20°.36S±0°.04×70°.74W±0°.05,h35^{km}±7^{km}, Error ellipse: s-maj=6.6km s-min=5.5km az=86.0*

ISC 10 21:07:59.3±1.5**,20°.33S**±0°.03×**70°.80W**±0°.06**,h14**^{km}±9^{km}**, n37,**σ**0^{s}.73**/47**,mb4.1**/4**,3C-8D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.62	112	⇓*i*P	Pg	21 08 12.0	+0.5
TA01	Diego Aracena	0.62	112		Pg	21 08 12.0	+0.5
TA02	Huaiquique	0.63	85	⇓*i*P	Pg	21 08 11.9	+0.3
TA02				*i* S	Sg	21 08 19.3	-0.6
TA02				IAML		21 08 22.8	
	comp=N,7µm,0.2s						
PATCX	Punta Patache	0.78	129	⇓*i*P	Pg	21 08 14.9	+0.4
PATCX				*i* S	Sg	21 08 24.5	-0.2
PATCX				IAML		21 08 27.3	
	comp=E,4µm,0.5s						
PATCX	Punta Patache	0.78	129		Pg	21 08 14.8	+0.4
PATCX				Sn	Sg	21 08 24.3	-0.4
HMBC	Humberstone	0.85	87	⇓*i*P	Pb	21 08 15.6	-0.4
HMBC				IAML		21 08 29.0	
	comp=N,4µm,0.2s						
PSGC	Pisagua	0.96	41	⇓*i*P	Pb	21 08 17.6	-0.2
PSGCX	Pisagua	0.96	41	Pn	Pb	21 08 17.7	-0.1
PB02	IPOC Station P	1.30	140	⇓*i*P	Pn	21 08 23.4	+0.4
PB02				*e*S	Sb	21 08 39.7	-0.4
PB08	IPOC Station P	1.55	83	⇓*i*P	Pn	21 08 27.1	+0.2
PB08	IPOC Station P	1.55	83		Pn	21 08 27.1	+0.2
PB08				Sn	Sn	21 08 46.5	-0.6
PB07	IPOC Station P	1.63	149	*e*P	Pn	21 08 28.3	+0.5
PB07				*e*S	Sb	21 08 49.9	+0.2
PB07				IAML		21 09 06.4	
	comp=E,1µm,0.6s						
PB07	IPOC Station P	1.63	149		Pn	21 08 28.1	+0.3
MNMC	Minye Minye	1.64	44	⇑*e*P	Pn	21 08 28.4	+0.4
MNMC				*e*S	Sb	21 08 49.9	-0.4
MNMC	Minye Minye	1.64	44	Pn	Pn	21 08 28.5	+0.5
GO01	Chusmiza	1.64	67	*e*P	Pn	21 08 28.5	+0.3
GO01				*e*S	Sn	21 08 49.2	-0.1
GO01				IAML		21 08 53.2	
	comp=N,3µm,0.2s						
GO01	Chusmiza	1.64	67	Pn	Pn	21 08 28.5	+0.3
AP01	Chacalluta	1.99	13	⇑*i*P	Pb	21 08 35.2	-0.2
AP01				*i* S	Sb	21 09 00.1	+0.1
AP01	Chacalluta	1.99	13		Pb	21 08 35.0	-0.3
PB09	IPOC Station P	2.06	135	⇑*i*P	Pb	21 08 35.6	-1.0
PB09				IAML		21 09 08.0	
	comp=N,1µm,0.6s						
PB09	IPOC Station P	2.06	135		Pn	21 08 35.4	+1.7
PB04	IPOC Station P	2.08	163		Pn	21 08 34.3	+0.3
PB16	IPOC Station P	2.33	32	⇓*i*P	Pb	21 08 40.3	-1.0
PB16				*i* S	Sb	21 09 10.1	-0.1
PB16				IAML		21 09 11.7	
	comp=N,534nm,0.3s						
PB16	IPOC Station P	2.33	32		Pb	21 08 40.0	-1.3
LVC	Limon Verde	2.87	143		Pn	21 08 47.0	+2.0
PB10	IPOC Station P	3.18	176	Pn	Pn	21 08 48.5	-0.3
PB14	IPOC Station P	4.29	175		Pn	21 09 03.8	-0.7
GO02	Mina Guanaco	4.94	167	Pn	Pn	21 09 13.9	+0.6
AC01	Pan de Azucar	5.79	178	Pn	Pn	21 09 24.6	-0.3
AC02	Maricunga	6.66	167	Pn	Pn	21 09 36.7	-0.4
PLCA	Paso Flores	20.34	179		P	21 12 36.4	+1.2
PLCA				IAmb	IAmb	21 12 40.9	
	comp=Z,3.3nm,1.1s						
QSPA	South Pole Qui	69.86	180	P	P	21 19 09.9	+0.5
QSPA				IAmb	IAmb	21 19 21.3	
	comp=Z,2.5nm,1.1s						
TOA0	Torodi Ar. Sit	78.64	71	P	P	21 20 00.3	-1.0
TOA0				IAmb	IAmb	21 20 00.7	
	comp=Z,2.3nm,0.9s						
TORD	Torodi Ar. Bea	78.64	71	P	P	21 19 59.8	-1.5
	comp=Z,0.8nm,0.5s,baz=243,slow=6.2,SNR=3.4						
TORD	Torodi Ar. Bea	78.64	71	P	P	21 20 00.1	-1.2
YKA	Yellowknife Ar	89.51	341	P	P	21 20 56.4	+0.8
	comp=Z,0.2nm,0.7s,baz=123,slow=5.1,SNR=4.6						
MKAR	Makanchi Array	145.68	33	PKP	PKPab	21 27 38.4	+0.4
	comp=Z,1.2nm,0.7s,baz=328,slow=3.1,SNR=12						

IDC 10 21:09:06.2±2.4**,1°.41N**×**127°.28E,h0**^{km}**,mb3.2**/3**, mb1 3.4**/3**,mb1mx3.2**/30**,mbtmp3.2**/3**,Error ellipse: s-maj=185.9km s-min=28.4km az=66.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.32	162	P	P	21 14 05.8	+0.2
	0.4nm,0.4s,baz=341,slow=12,SNR=6.1						
ASAR	Alice Springs	25.75	166	P	P	21 14 38.6	-0.1
	0.3nm,0.3s,baz=344,slow=12,SNR=8.7						
MKAR	Makanchi Array	59.77	326	P	P	21 19 13.0	-0.1
	0.1nm,0.3s,baz=122,slow=6.9,SNR=1.5						

IDC ***10*** *21:12:08.7±7.4,36°.89N×141°.64E,h73^{km}±56^{km},mb3.2/3, mb1 3.2/5,mb1mx3.0/38,mbtmp3.5/5,ML2.6/2,Error ellipse: s-maj=74.6km s-min=57.7km az=169.0*

JMA ***10*** *21:12:09.1,37°.50N×141°.16E,h25^{km}±1^{km},M3.7*

JMA Felt I J1.

ISC 10 21:12:07.0±2.0**,37°.46N**±0°.05×**141°.31E**±0°.08**,h9**^{km}±10^{km}**, n17,**σ**1^{s}.36**/29**,mb3.5**/3**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.36	255	P	Pb	21 12 15.5	0.0
JFK				S	Sg	21 12 19.8	+1.0
JMST	Minamisoumatoc	0.43	308	P	Pg	21 12 16.1	+0.8
JMST				S	Sg	21 12 21.2	+0.2
ONAJ	Iwakimizuishiy	0.54	229	P	Pb	21 12 18.8	+0.1
ONAJ				S	Sb	21 12 25.7	-0.9
JMM	Marumori	0.58	315	P	Pg	21 12 18.4	+0.2
JMM				S	Sg	21 12 25.2	-0.5
JFFD	Fukushimafurud	0.70	239	P	Pb	21 12 21.1	-0.3
JFFD				*e*S	Sg	21 12 29.7	0.0
JFT	Otama	0.78	275	P	Pg	21 12 21.9	0.0
JFT				*e*S	Sg	21 12 31.1	-1.0
JIO	Ouri	0.99	2	P	Pb	21 12 26.5	+0.2
JIO				*e*S	Sg	21 12 39.0	0.0
JHO	Hitachi	1.03	215	P	Pb	21 12 26.3	-0.7
JOU	Okura	1.04	331	P	Pg	21 12 26.7	-0.2
JOU				S	Sg	21 12 39.8	-0.7
JYS	Shirataka	1.24	308	P	Pg	21 12 30.0	-0.9
JYS				S	Sg	21 12 45.1	-1.9
JFY	Yanaizu	1.28	268	P	Pn	21 12 30.3	-0.7
JFY				S	Sg	21 12 45.8	-2.3
MJAR	Matsushiro Arr	2.65	251	P	Pn	21 12 50.7	+0.9
	0.4nm,0.3s,baz=88,slow=16,SNR=21						
MJAR				S	Sn	21 13 23.4	+1.4
	0.5nm,0.3s,baz=77,slow=17,SNR=5.4						
MAT	Matsushiro	2.65	251	P	Pn	21 12 50.6	+0.8
MAT				*e*S	Sn	21 13 22.9	+0.8
KSRS	Korea Array	10.64	274	P	Pn	21 14 43.6	+4.1
	0.1nm,0.3s,baz=92,slow=16,SNR=3.8						
ZALV	Zalesovo Beam	41.57	312	P	P	21 19 51.8	-2.9
	0.5nm,0.5s,baz=70,slow=15,SNR=2.5						
MKAR	Makanchi Array	43.82	302	P	P	21 20 11.9	-1.2
	0.5nm,0.8s,baz=86,slow=11,SNR=5.8						
KURBB	Kurchatov Arra	45.68	308	P	P	21 20 27.0	-0.8
	0.7nm,0.6s,baz=82,slow=7.5,SNR=4.7						

MAN ***10*** *21:17:44.5,6°.13N×126°.11E,h42^{km},mb4.5,ML3.3,MS3.2*

IDC ***10*** *21:17:45.4±1.6,6°.03N×125°.88E,h78^{km}±13^{km},mb3.3/6, mb1 3.5/6,mb1mx3.3/41,mbtmp3.5/6,MS2.9/1,Ms1 2.9/1, ms1mx2.5/21,Error ellipse: s-maj=43.1km s-min=19.5km az=71.0*

ISC 10 21:17:43.8±1.1**,6°.05N**±0°.08×**126°.13E**±0°.08**,h64**^{km}±9^{km}**, n13,**σ**1^{s}.00**/18**,mb3.2**/6**,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.42	277	*e*P	Pn	21 17 55.7	+0.4
DDMP				*e*S	Sn	21 18 03.8	0.0
MATI	Mati	0.90	8	*e*P	Pn	21 18 00.4	-0.4
MATI				*e*S	Sn	21 18 12.3	-1.0
DAV	Davao City (W)	1.15	332	P	Pn	21 18 04.6	+0.6
	99nm,0.3s,baz=152,slow=1.1,SNR=10						
DAV				S	Sn	21 18 20.3	+1.3
	157nm,0.3s,baz=105,slow=20,SNR=9.8						
KCP	Kidapawan	1.40	313	⇑*i*P	Pn	21 18 08.0	+0.6
KCP				*i* S	Sn	21 18 24.2	-1.0
SKMP	Bagumbayan, Su	1.64	287	*e*P	Pn	21 18 10.3	-0.2
SKMP				*e*S	Sn	21 18 31.0	+0.2
CGP	Cagayan de Oro	2.78	329	⇓*e*P	Pn	21 18 26.7	+0.7
CGP				*e*S	Sn	21 18 59.9	+1.5
WRA	Warramunga Arr	27.07	163	P	P	21 23 22.1	+1.6
	0.7nm,1.0s,baz=345,slow=10,SNR=2.5						
CMAR	Chiang Mai Arr	29.23	297	P	P	21 23 38.1	-1.7
	0.2nm,0.6s,baz=108,slow=12,SNR=1.6						
ASAR	Alice Springs	30.50	166	P	P	21 23 51.2	+0.2
	0.4nm,0.8s,baz=351,slow=7.3,SNR=4.4						
KSRS	Korea Array	31.30	3	LR	LR	21 37 45.4	
	comp=Z,21nm,20.0s,baz=245,slow=38						
MKAR	Makanchi Array	55.32	325	P	P	21 27 10.2	-0.8
	0.1nm,0.4s,baz=118,slow=6.4,SNR=5.5						
ILAR	Eielson Array	83.28	26	P	P	21 30 03.7	+0.4
	0.5nm,0.6s,baz=248,slow=5.3,SNR=12						
YKA	Yellowknife Ar	97.64	24	P	P	21 31 11.9	+0.7
	0.4nm,0.8s,baz=307,slow=5.1,SNR=3.1						

IDC ***10*** *21:28:46.1±1.5,12°.84N×87°.14W,h106^{km}±17^{km},mb3.8/11, mb1 4.1/14,mb1mx3.8/41,mbtmp4.2/14,Error ellipse: s-maj=27.1km s-min=12.2km az=52.0*

NEIC ***10*** *21:28:47.0±1.7,12°.63N±0°.07×87°.41W±0°.07,h111^{km}±6^{km}, mb4.4/55,Error ellipse: s-maj=12.4km s-min=7.7km az=221.0*

INET ***10*** *21:28:47.3,12°.67N×87°.44W,h103^{km},ML4.0,MW4.2*

SNET ***10*** *21:28:47.4±0.8,12°.62N×87°.51W,h100^{km}±7^{km},ML4.5*

UCR ***10*** *21:28:48.1±4.3,12°.44N×87°.54W,h29^{km}±24^{km},ML4.3, MW3.4,mb4.4(NEIC)*

ISC 10 21:28:46.7±0.6**,12°.65N**±0°.05×**87°.44W**±0°.04**,h109**^{km}±5^{km}**, n251,**σ**0^{s}.92**/275**,mb4.4**/30**,6D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	0.38	83		Pn	21 29 02.6	-0.3
CRIN				Sn	Sn	21 29 15.5	+0.5
LCND	La Caada	0.79	326	⇓*i*P	Pn	21 29 05.6	-0.2
LCND				*e*S	Sn	21 29 19.8	-0.4
LCND				IAML		21 29 22.6	
	comp=Z,5µm,0.3s						
LCND	La Caada	0.79	326	⇓*i*P	Pn	21 29 05.6	-0.2
LCND				*e*S	Sn	21 29 19.8	-0.4
LCND				IAML		21 29 22.6	
	comp=Z,5µm,0.3s						
JUCU	Jucuar¡n	0.99	307	*e*P	Pn	21 29 07.5	-0.4
JUCU				*e*S	Sn	21 29 23.3	-0.5
JUCU				IAML		21 29 25.4	
	comp=Z,14µm,0.2s						
JUCU	Jucuar¡n	0.99	307	*e*P	Pn	21 29 07.5	-0.4
JUCU				*e*S	Sn	21 29 23.3	-0.5
JUCU				IAML		21 29 25.4	
	comp=Z,14µm,0.2s						
VSM	San Miguel	1.12	313	*e*P	Pn	21 29 09.4	0.0
VSM				*e*S	Sn	21 29 27.9	+1.3
VSM	San Miguel	1.12	313	*e*P	Pn	21 29 09.4	0.0
VSM				*e*S	Sn	21 29 27.9	+1.3
LCY	Lacayo	1.14	313	*e*P	Pn	21 29 09.6	+0.1
LCY				*e*S	Sn	21 29 27.1	+0.5
LCY	Lacayo	1.14	313	*e*P	Pn	21 29 09.6	+0.1
LCY				*e*S	Sn	21 29 27.1	+0.5
PACA	Pacayal	1.19	313	*e*P	Pn	21 29 10.5	+0.5
PACA				*e*S	Sn	21 29 27.8	+0.2
PACA	Pacayal	1.19	313	*e*P	Pn	21 29 10.5	+0.5
PACA				*e*S	Sn	21 29 27.8	+0.2
FAGO	Alcalda de S	1.23	328	⇓*e*P	Pn	21 29 10.3	0.0
FAGO	Alcalda de S	1.23	328	⇓*e*P	Pn	21 29 10.3	0.0
TECA	Tecapa	1.33	309	*e*P	Pn	21 29 11.8	+0.1
TECA				*e*S	Sn	21 29 31.4	+0.8
TECA	Tecapa	1.33	309	*e*P	Pn	21 29 11.8	+0.1
TECA				*e*S	Sn	21 29 31.4	+0.8
COEB	Comit de Eme	1.36	308	*e*P	Pn	21 29 11.8	-0.1
COEB	Comit de Eme	1.36	308	*e*P	Pn	21 29 11.8	-0.1
TGUH	Tegucigalpa,Un	1.41	6	*e*P	Pn	21 29 13.1	+0.6
TGUH	Tegucigalpa,Un	1.41	6	*e*P	Pn	21 29 13.1	+0.6
TGUH	Tegucigalpa,Un	1.41	6		Pn	21 29 13.1	+0.6
TGUH				Sn	Sn	21 29 32.8	+0.7
COEG	Centro de Oper	1.70	305	*e*P	Pn	21 29 16.1	+0.1
COEG	Centro de Oper	1.70	305	*e*P	Pn	21 29 16.1	+0.1
PAVA	Las Pavas	1.80	306	*e*P	Pn	21 29 17.4	+0.1
PAVA	Las Pavas	1.80	306	*e*P	Pn	21 29 17.4	+0.1
LFRS	El Faro	1.85	302	*e*P	Pn	21 29 17.9	0.0
LFRS				*e*S	Sn	21 29 41.8	0.0
LFRS	El Faro	1.85	302	*e*P	Pn	21 29 17.9	0.0
LFRS				*e*S	Sn	21 29 41.8	0.0
LBRS	Las Brisas	1.90	305	*e*P	Pn	21 29 18.3	-0.2
LBRS				*e*S	Sn	21 29 43.5	+0.8
LBRS	Las Brisas	1.90	305	*e*P	Pn	21 29 18.3	-0.2
LBRS				*e*S	Sn	21 29 43.5	+0.8
SNET	Serv Nac Est T	2.03	301	*e*P	Pn	21 29 20.7	+0.6
SNET				*e*S	Sn	21 29 45.6	0.0
SNET				IAML		21 29 48.8	
	comp=Z,2µm,0.2s						

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SNET   Serv Nac Est T     2.03 301 eP     Pn     21 29 20.7 +0.6
SNET                               eS     Sn     21 29 45.6  0.0
SNET                                IAML         21 29 48.8
       comp=Z,2µm,0.2s
SNET   Serv Nac Est T     2.03 301        Pn     21 29 19.8 -0.3
BOQS   Boqueron           2.09 301 eP     Pn     21 29 21.9 +0.8
BOQS                               eS     Sn     21 29 48.1 +0.7
BOQS   Boqueron           2.09 301 eP     Pn     21 29 21.9 +0.8
BOQS                               eS     Sn     21 29 48.1 +0.7
JAYA   Jayaque - finc     2.20 297 eP     Pn     21 29 22.7 +0.3
JAYA                               eS     Sn     21 29 49.1 -0.6
JAYA                                IAML         21 29 50.2
       comp=Z,3µm,0.2s
JAYA   Jayaque - finc     2.20 297 eP     Pn     21 29 22.7 +0.3
JAYA                               eS     Sn     21 29 49.1 -0.6
JAYA                                IAML         21 29 50.2
       comp=Z,3µm,0.2s
TACO   Tacachico          2.28 305⇓eP     Pn     21 29 23.7 +0.4
TACO   Tacachico          2.28 305⇓eP     Pn     21 29 23.7 +0.4
ACON   Acoyapa            2.31 107        Pn     21 29 23.7  0.0
CEVE   Cerro Verde        2.43 299 eP     Pn     21 29 25.9 +0.5
CEVE                                IAML         21 29 59.9
       comp=Z,2µm,0.3s
CEVE   Cerro Verde        2.43 299 eP     Pn     21 29 25.9 +0.5
CEVE                                IAML         21 29 59.9
       comp=Z,2µm,0.3s
SBLS   San Blas           2.43 299 eP     Pn     21 29 26.1 +0.6
SBLS   San Blas           2.43 299 eP     Pn     21 29 26.1 +0.6
SNJE   San Jose           2.43 300 eP     Pn     21 29 26.1 +0.7
SNJE   San Jose           2.43 300 eP     Pn     21 29 26.1 +0.7
RTR    El Retiro          2.48 300 eP     Pn     21 29 27.2 +1.1
RTR    El Retiro          2.48 300 eP     Pn     21 29 27.2 +1.1
MTO3   Montecristo        2.55 313 eP     Pn     21 29 27.6 +0.6
MTO3   Montecristo        2.55 313 eP     Pn     21 29 27.6 +0.6
MTO3   Montecristo        2.55 313        Pn     21 29 27.7 +0.6
ESQI   Esquipulas         2.65 316        Pn     21 29 29.4 +1.2
GBS3   Finca Las Img      2.69 134 i P    Pn     21 29 28.8 +0.2
GB1A   Borinquen Arri     2.70 132 i P    Pn     21 29 29.2 +0.3
LAPC   Finca la Perla     2.71 133 i P    Pn     21 29 29.0  0.0
GPS2   Hotel Rincn d      2.78 133 i P    Pn     21 29 30.4 +0.6
GUAB   Guayabo de Bag     2.90 132 i P    Pn     21 29 31.6 +0.2
GUAB                               i S    Sn     21 30 06.1 +0.2
CUI    Cuipilapa          2.98 131 i P    Pn     21 29 33.0 +0.5
PTEN   Parque Tenorio     3.08 128 i P    Pn     21 29 33.9 +0.1
ACAL   Aguas Claras       3.09 130 i P    Pn     21 29 34.2 +0.2
ESPN   Las Esperanzas     3.10  98        Pn     21 29 34.5 +0.5
JTS    Las Juntas de      3.38 134  P     Pn     21 29 37.7 -0.1
       comp=Z,41nm,0.3s,baz=13,slow=13,SNR=50
JTS                                 S     Sn     21 30 14.9 -2.4
       comp=Z,28nm,0.3s,baz=348,slow=21,SNR=10
JTS    Las Juntas de      3.38 134 eP     Pn     21 29 40.0 +2.2
JTS    Las Juntas de      3.38 134        Pn     21 29 38.2 +0.4
ARE1   Arenal 1           3.44 129 eP     Pn     21 29 40.0 +1.4
LAFE   Finca La Fe, P     3.76 139 eP     Pn     21 29 43.3 +0.4
JACO   JACO, Garabito     4.03 137 eP     Pn     21 29 47.4 +1.0
HDC    Heredia            4.19 129        Pn     21 29 49.4 +0.7
LCR2   La Lucha 2         4.44 130 eP     Pn     21 29 52.9 +0.7
RIMA   Rio Macho          4.53 129 eP     Pn     21 29 54.1 +0.7
RTAL   Retalhuleu         4.54 295  Pn    Pn     21 29 54.0 +0.6
HUEH   Huehuetenango      4.75 304  Pn    Pn     21 29 58.3 +1.9
PETF   Flores             4.85 331        Pn     21 29 59.1 +1.6
EDDO   Dominical          4.87 134 eP     Pn     21 30 00.4 +2.7
PEZE   Perez Zeledon,     4.92 131 eP     Pn     21 30 00.3 +1.8
DRK0   Durika             5.32 129 eP     Pn     21 30 05.9 +1.9
EDBA   Buenos Aires       5.36 130 eP     Pn     21 30 06.1 +1.6
EDPN   Palmar Norte       5.36 133 eP     Pn     21 30 06.7 +2.3
RIOS   Rincon, Osa        5.50 135 eP     Pn     21 30 07.7 +1.4
PIRO   Carate, Puerto     5.84 136 eP     Pn     21 30 12.2 +1.3
BRU2   Volcan             6.04 129 eP     Pn     21 30 14.3 +0.5
CCOL   Caracol de Cor     6.09 133 eP     Pn     21 30 16.6 +2.4
TEIG   Tepich             7.58 354  Pn    Pn     21 30 35.9 +1.5
CMIG   Matias Romero      8.44 302  P     Pn     21 30 47.4 +1.2
       comp=Z,1.1nm,0.3s,baz=140,slow=8.4,SNR=61
CMIG                                S     Sn     21 32 18.2 -1.7
       comp=Z,1.4nm,0.3s,baz=271,slow=21,SNR=6.7
DBBC   Dabeiba           12.39 116 eP     Pn     21 31 40.6 +1.0
MALC   Bahia Malaga      13.17 130 eP     P      21 31 56.2 +0.7
SMLC   San Martn de      13.68 105 eP     P      21 32 02.2 +1.0
RREF   El Recreo         14.21 122 eP     Pn     21 32 05.2 +1.6
TOLC   Tolima            14.41 123 eP     P      21 32 09.6  0.0
OCAC   Ocana             14.56 106 eP     Pn     21 32 06.2 -1.4
BBAC   Balboa, Cauca     14.61 135 eP     Pn     21 32 08.6 +0.2
ORTC   Ortega, Tolima    14.86 125 eP     Pn     21 32 12.4 +1.0
ROSC   El Rosal          15.10 120  Pn    Pn     21 32 15.4 +0.6
ROSC                                IAmb  IAmb   21 32 26.1
       comp=Z,26nm,1.1s
OTAV   Otavalo           15.22 143        P      21 32 18.5 -0.2
CHIC   Chingaza          15.71 119 eP     P      21 32 24.6 +0.4
SDV    Santo Domingo     16.93 101  P     Pn     21 32 34.9 -2.3
       comp=Z,0.6nm,0.3s,baz=284,slow=12,SNR=5.1
TIGA   Tifton            19.03  10  P     Pn     21 33 02.5 +0.4
       baz=192
833A   Chaparral WMA,    19.17 326  P     P      21 33 02.4 +0.7
       baz=142
833A   Chaparral WMA,    19.17 326  P     P      21 33 02.4 +0.7
833A                                IAmb  IAmb   21 33 03.7
       comp=Z,39nm,1.1s
152A   Waverly Hall      20.08   7  P     P      21 33 13.3 +1.8
154A   Montrose          20.26  11  P     P      21 33 14.9 +1.4
LRAL   Lakeview Retre    20.29   1  P     Pn     21 33 16.9 +0.1
       baz=181
Z51A   Franklin          20.67   5  P     P      21 33 19.5 +1.6
Z51A                                IAmb  IAmb   21 33 22.3
       comp=Z,25nm,1.0s
GOGA   Godfrey           20.98   9  P     P      21 33 23.4 +2.3
       baz=191,SNR=6.3
GOGA   Godfrey           20.98   9  P     P      21 33 23.0 +1.8
GOGA                                IAmb  IAmb   21 33 25.0
       comp=Z,22nm,0.8s
WHTX   Lake Whitney,     21.34 336  P     P      21 33 25.6 +0.6
       baz=152,SNR=8.8
WHTX   Lake Whitney,     21.34 336  P     P      21 33 25.7 +0.7
WHTX                                IAmb  IAmb   21 33 27.9
       comp=Z,20nm,0.8s
Y52A   Lilburn           21.34   8  P     P      21 33 26.0 +1.0
Z58A   St. Stephen       21.73  17  P     P      21 33 31.2 +2.0
       baz=200
OXF    Oxford            21.84 356  P     P      21 33 30.8 +0.5
       baz=175
HODGE  Hodges            21.99  12  P     P      21 33 33.5 +1.6
HODGE                               IAmb  IAmb   21 33 34.4
       comp=Z,17nm,0.9s
JSC    Jenkinsville      22.25  14  P     P      21 33 35.6 +0.9
TXAR   Lajitas Array     22.43 320  P     P      21 33 36.9 +0.2
       comp=Z,4.6nm,0.7s,baz=147,slow=8.1,SNR=48
TXAR   Lajitas Array     22.43 320  P     P      21 33 36.7  0.0
TX31   Lajitas Ar. Si    22.43 320  P     P      21 33 36.6  0.0
TX31                                IAmb  IAmb   21 33 39.0
       comp=Z,15nm,0.7s
TX32   Lajitas Array     22.43 320  P     P      21 33 37.0 +0.3
MIAR   Mount Ida         22.50 347  P     P      21 33 38.0 +0.8
       baz=164,SNR=5.7
MIAR   Mount Ida         22.50 347  P     P      21 33 36.9 -0.3
MIAR                                IAmb  IAmb   21 33 38.8
       comp=Z,14nm,0.9s
SWET   Sewanee           22.51   3  P     P      21 33 37.8 +0.5
X56A   White Oak         22.51  14  P     P      21 33 38.5 +1.2
       baz=196
W50A   Signal Mountai    22.53   5  P     P      21 33 38.0 +0.5
W50A                                IAmb  IAmb   21 33 39.5
       comp=Z,15nm,0.8s
BIRD   Birdtown, Kers    22.79  15  P     P      21 33 40.9 +0.7
BIRD                                IAmb  IAmb   21 33 41.6
       comp=Z,16nm,0.7s
ABTX   Abilene, Hawle    22.81 333  P     P      21 33 40.7 +0.3
       baz=148
WHAR   Wooly Hollow      22.96 350  P     P      21 33 41.4 -0.3
WHAR                                IAmb  IAmb   21 33 43.5
       comp=Z,20nm,1.4s
TKL    Tuckaleechee C    23.14   8  P     P      21 33 41.0 -2.4
       comp=Z,21nm,1.0s,baz=179,slow=11,SNR=6.7
TKL    Tuckaleechee C    23.14   8  P     P      21 33 43.9 +0.4
TKL                                 IAmb  IAmb   21 33 46.6
       comp=Z,28nm,1.2s
W56A   Indian Trail      23.23  14  P     P      21 33 44.9 +0.6
       baz=197
V53A   Saluda            23.30  10  P     P      21 33 45.6 +0.6
V53A                                IAmb  IAmb   21 33 53.2
       comp=Z,15nm,1.1s
CLTN   Cedars of Leba    23.36   2  P     P      21 33 46.0 +0.6
CLTN                                IAmb  IAmb   21 33 47.0
       comp=Z,12nm,0.7s
WVT    Waverly           23.38 359  P     P      21 33 46.0 +0.3
       baz=179
W57A   Gilead            23.39  16  P     P      21 33 46.2 +0.4
       baz=198
X60A   Albert Glenn T    23.46  20  P     P      21 33 46.7 +0.3
       baz=204
W58A   Raeford           23.48  17  P     P      21 33 46.9 +0.4
       baz=200
FCAR   Ozark Folk Cen    23.52 350  P     P      21 33 46.0 -1.0
U49A   Red Boiling Sp    23.81   3  IAmb  IAmb   21 33 51.5
       comp=Z,11nm,0.8s
V56A   Mocksville        23.89  14  P     P      21 33 51.2 +0.9
       baz=197
SLBS   Sierra La Lagu    24.00 300  P     P      21 33 53.7 +2.2
SLBS                                IAmb  IAmb   21 33 55.2
       comp=Z,12nm,1.1s
TZTN   Tazewell          24.05   8  P     P      21 33 52.3 +0.6
       baz=189
U40A   Yellville         24.10 349  P     P      21 33 51.8 -0.4
       baz=167
U40A   Yellville         24.10 349  IAmb  IAmb   21 33 52.4
       comp=Z,10nm,0.6s
V57A   Coltrane Farms    24.15  15  P     P      21 33 53.1 +0.5
       baz=198
V58A   Windy Hill, Pi    24.24  17  P     P      21 33 53.9 +0.6
       baz=200,SNR=9.2
WMOK   Wichita Mounta    24.28 337  P     P      21 33 53.5 -0.3
       baz=152,SNR=6.2
WMOK   Wichita Mounta    24.28 337  P     P      21 33 53.5 -0.3
U54A   Nelsons Funny     24.30  11  P     P      21 33 54.8 +0.8
       baz=193
TUL1   Leonard           24.35 343  P     P      21 33 53.9 -0.6
       baz=160,SNR=8.1
V59A   Middlesex         24.46  18  P     P      21 33 55.9 +0.4
       baz=202
U57A   Blanch            24.77  16  P     P      21 33 58.8 +0.5
       baz=199
V60A   Jim Taylor Roa    24.78  20  P     P      21 33 59.1 +0.9
       baz=204
U58A   Oxford            24.96  17  P     P      21 34 00.1 +0.2
       baz=201
MNTX   Cornudas Mount    25.14 322  P     P      21 34 01.7  0.0
       baz=135,SNR=6.6
MNTX   Cornudas Mount    25.14 322  P     P      21 34 01.8 +0.1
BLA    Blacksburg        25.25  13  P     P      21 34 03.5 +0.9
       baz=196
T57A   Hurt              25.33  15  P     P      21 34 03.6 +0.2
       baz=199
MSTX   Muleshoe          25.40 329  P     P      21 34 04.0 -0.1
       baz=143,SNR=5.7
U60A   Pendleton         25.46  20  P     P      21 34 04.7 +0.2
       baz=204
CCM    Cathedral Cave    25.53 353  P     P      21 34 04.1 -0.9
       baz=171
R55A   Marlinton         26.34  13  P     P      21 34 13.0 +0.5
       baz=196
Q53A   Leroy             26.62  10  P     P      21 34 15.1 +0.1
       baz=193
R57A   Stanardsville     26.75  16  P     P      21 34 16.8 +0.7
       baz=200
P52A   Corning           27.28   9  P     P      21 34 21.0 +0.1
       baz=191
KSU1   Kansas State U    27.57 344  P     P      21 34 22.9 -0.6
       baz=160
P56A   Dayton Farm, R    27.81  14  P     P      21 34 26.4 +0.9
       baz=198
P57A   Homestead Farm    28.00  16  P     P      21 34 28.4 +1.2
       baz=200
O53A   New Philadelph    28.03  10  P     P      21 34 27.8 +0.2
       baz=193
P58A   Pank, Wackersv    28.20  17  P     P      21 34 29.4 +0.4
       baz=201
CBKS   Cedar Bluff       28.25 339  P     P      21 34 29.3 -0.2
       baz=154
P59A   Jarrettsville     28.56  18  P     P      21 34 33.2 +1.0
       baz=203
O57A   Amberson          28.78  16  P     P      21 34 34.6 +0.4
       baz=200
O58A   Lewisberry        28.89  17  P     P      21 34 35.9 +0.8
       baz=202
N54A   Moraine State     28.95  12  P     P      21 34 35.5 -0.2
       baz=195
P60A   Greenville        28.99  19  P     P      21 34 36.5 +0.5
       baz=204
SSPA   Standing Stone    29.11  15  P     P      21 34 37.4 +0.3
       baz=199
N56A   West Decatur      29.28  14  P     P      21 34 38.9 +0.3
       baz=198
O59A   Robesonia         29.28  18  P     P      21 34 39.4 +0.8
       baz=203
M53A   WI Miller and     29.28  10  P     P      21 34 38.8 +0.2
       baz=194
N57A   Milroy            29.31  15  P     P      21 34 38.7 -0.1
       baz=200
M54A   Oil Creek Stat    29.54  12  P     P      21 34 40.9  0.0
       baz=196
SDCO   Great Sand Dun    29.75 330  P     P      21 34 44.3 +1.2
       baz=143,SNR=5.1
SDCO   Great Sand Dun    29.75 330  P     P      21 34 44.1 +1.0
N59A   State Game Lan    29.96  18  P     P      21 34 45.6 +1.0
       baz=203
M57A   Sunshine Farm,    29.97  16  P     P      21 34 45.2 +0.5
       baz=200
BGNE   Belgrade          30.14 344  P     P      21 34 46.0 -0.3
       baz=159
214A   Organ Pipe Nat    30.20 314  P     P      21 34 47.8 +0.9
       baz=124
S22A   4UR Ranch, Cre    30.40 329  P     P      21 34 50.4 +1.4
       baz=140
M59A   Waymart           30.63  18  P     P      21 34 51.3 +0.7
       baz=203
M60A   Port Jervis       30.69  19  P     P      21 34 51.5 +0.5
       baz=205
X16A   Lo Mia Camp, P    30.73 319  P     P      21 34 52.9 +1.1
L58A   Harry Jones Me    30.98  17  P     P      21 34 54.0 +0.4
       baz=202
BINY   Binghamton        31.08  17  P     P      21 34 54.9 +0.4
       baz=202
L59A   Walton            31.34  18  P     P      21 34 56.8  0.0
       baz=204
PV11   David Mesa, Pa    31.88 327  IAmb  IAmb   21 35 04.2
       comp=Z,6.7nm,0.6s
ECSD   EROS Data Cent    31.97 347  P     P      21 35 01.1 -1.1
       baz=163
BRYW   Bryant College    32.28  23  P     P      21 35 05.1 +0.1
SPMN   Marine on St.     32.78 353  P     P      21 35 07.8 -1.6
       baz=170
SADO   Sadowa            32.78  11  P     P      21 35 08.1 -1.3
       comp=Z,7.9nm,0.9s,baz=206,slow=9.2,SNR=3.5
SADO   Sadowa            32.78  11  P     P      21 35 08.3 -1.0
O20A   White River Ci    32.94 330  P     P      21 35 12.2 +1.1
       baz=141
RSSD   Black Hills       34.45 339  P     P      21 35 24.6 +0.5
       baz=151
RSSD   Black Hills       34.45 339  P     P      21 35 24.4 +0.4
RSSD                                IAmb  IAmb   21 35 26.1
       comp=Z,4.4nm,0.6s
PSUT   Pine Spring       34.86 322  P     P      21 35 28.9 +1.2
TPNV   Topopah Spring    35.38 318  P     P      21 35 33.5 +1.4
       baz=126
PB16   IPOC Station P    35.51 150  P     P      21 35 33.1 -0.7
PB16                                IAmb  IAmb   21 35 51.9
       comp=Z,9.0nm,1.5s
G62A   West of Eustis    35.51  21  P     P      21 35 33.0 +0.1
       baz=209
BW06   Boulder Array     35.60 332  P     P      21 35 33.5 -0.6
       baz=141
BW06   Boulder Array     35.60 332  P     P      21 35 34.0  0.0
PDAR   Pinedale Array    35.60 332  P     P      21 35 34.0 -0.1
       comp=Z,2.1nm,0.6s,baz=127,slow=10.0,SNR=29
PDAR   Pinedale Array    35.60 332  P     P      21 35 33.9 -0.1
MPMC   Manual Prospec    35.70 316  P     P      21 35 36.1 +1.2
       baz=123
MNMC   Minye Minye       36.15 151  P     P      21 35 39.4 +0.5
MNMC                                IAmb  IAmb   21 35 44.5
       comp=Z,4.6nm,1.0s
AGMN   Agassiz Nation    36.22 350  P     P      21 35 37.4 -1.6
       baz=166
AHID   Auburn Hatcher    36.34 330  P     P      21 35 41.0 +0.7
AHID                                IAmb  IAmb   21 35 41.2
       comp=Z,7.2nm,1.1s
D58A   Chemin du LacG    36.45  17  P     P      21 35 40.5 -0.4
       baz=204
MDND   Maddock           36.53 346  P     P      21 35 40.9 -0.7
       baz=160,SNR=8.9
MOOW   Moose Ponds       36.91 331  P     P      21 35 45.3 +0.2
RLMT   Red Lodge         37.33 334  P     P      21 35 48.7  0.0
       baz=143
NVAR   Mina Array Bea    37.56 319  P     P      21 35 52.0 +1.2
       comp=Z,1.1nm,0.6s,baz=132,slow=8.1,SNR=11
NVAR                                PcP   PcP    21 38 06.4 -0.1
       comp=Z,0.8nm,0.7s,baz=148,slow=4.3,SNR=6.2
NVAR   Mina Array Bea    37.56 319  P     P      21 35 51.7 +1.0
LHV    Little Huntoon    37.59 318  P     P      21 35 52.1 +1.4
LHV                                 IAmb  IAmb   21 35 55.9
       comp=Z,7.6nm,1.5s
YHL    Hebgen Lake       37.96 332  P     P      21 35 55.5 +1.4
ULM    Lac du Bonnet     38.12 351  P     P      21 35 52.7 -2.3
       comp=Z,4.2nm,0.5s,baz=164,slow=8.6,SNR=16
ULM    Lac du Bonnet     38.12 351  P     P      21 35 53.0 -2.0
ULM                                 IAmb  IAmb   21 35 54.4
       comp=Z,7.3nm,0.9s
DGMT   Dagmar            38.34 342  P     P      21 35 56.8  0.0
       baz=153
DGMT   Dagmar            38.34 342  P     P      21 35 57.1 +0.3
HLID   Hailey            38.58 328  P     P      21 35 59.5 +0.4
       baz=135
SIV    San Ignacio       38.60 137  PcP   PcP    21 38 09.1 -0.8
       comp=Z,0.8nm,0.6s,baz=345,slow=2.6,SNR=3.6
MCMT   McKenzie Canyo    38.72 331  P     P      21 36 01.3 +1.0
BOZ    Bozeman (W)       38.73 333  P     P      21 36 00.9 +0.5
       baz=140
MSO    Missoula          40.72 332  P     P      21 36 16.6 -0.2
       baz=138
E07A   Sunnyside         43.44 327  P     P      21 36 38.7 -0.1
E07A                                IAmb  IAmb   21 36 39.7
       comp=Z,6.6nm,0.9s
FFC    Flin Flon         43.51 348  P     P      21 36 38.5 -0.6
SPB    Sao Paulo         53.18 133  P     P      21 37 52.7 -1.1
YKA    Yellowknife Ar    53.42 345  P     P      21 37 53.6 -1.4
       comp=Z,1.4nm,0.6s,baz=138,slow=8.2,SNR=38
PLCA   Paso Flores       55.37 164  P     P      21 38 10.5 +1.1
       comp=Z,3.2nm,1.1s,baz=271,slow=3.7,SNR=2.9
PLCA   Paso Flores       55.37 164  P     P      21 38 09.9 +0.5
INK    Inuvik            63.02 343  P     P      21 38 60.0 -1.7
       comp=Z,0.7nm,0.7s,baz=112,slow=5.1,SNR=4.8
INK    Inuvik            63.02 343  P     P      21 39 00.4 -1.2
INK                                 IAmb  IAmb   21 39 13.2
       comp=Z,5.7nm,1.5s
BCAR   Beaver Creek A    63.08 335  P     P      21 39 01.7 -0.6
ILAR   Eielson Array     65.84 336  P     P      21 39 18.4 -1.8
       comp=Z,0.9nm,0.7s,baz=148,slow=4.4,SNR=18
ILAR   Eielson Array     65.84 336  P     P      21 39 19.1 -1.1
BMAR   Burnt Mountain    66.10 339  P     P      21 39 19.9 -1.9
I23K   Minto, Yukon-K    66.96 336  P     P      21 39 26.0 -1.3
       baz=111
MLY    Manley            67.47 336  P     P      21 39 29.0 -1.6
       baz=109
ESDC   Sonseca Array     77.06  52  P     P      21 40 26.8 -1.3
       comp=Z,0.4nm,0.7s,baz=289,slow=5.0,SNR=6.0
ESDC   Sonseca Array     77.06  52  P     P      21 40 27.4 -0.8
LZH    Lanzhou          130.37 348 ePKP   PKPdf  21 47 45.3 +0.3
LZH                                 pPKP  pPKPdf 21 48 13.0 -1.9
LZH                                 sPKP         21 48 22.4
STKA   Stephens Creek   131.21 239  PKP   PKPdf  21 47 46.7 +0.3
       comp=Z,1.9nm,0.5s,baz=352,slow=2.4,SNR=4.2
STKA   Stephens Creek   131.21 239        PKPdf  21 47 46.9 +0.5
WRA    Warramunga Arr   139.34 254  PKhKP PKPpre 21 47 54.2
       comp=Z,0.2nm,0.4s,baz=99,slow=6.0,SNR=1.9
WRA                                 PKP   PKPdf  21 48 02.2 +0.2
       comp=Z,2.1nm,0.5s,baz=90,slow=2.2,SNR=18
ASAR   Alice Springs    139.35 248  PKhKP PKPpre 21 47 54.0
       comp=Z,0.3nm,0.7s,baz=106,slow=3.8,SNR=4.6
ASAR                                PKP   PKPdf  21 48 02.2 +0.3
       comp=Z,1.1nm,0.5s,baz=99,slow=2.0,SNR=14
ASAR   Alice Springs    139.35 248  PKPdf PKPdf  21 48 02.0  0.0
CMAR   Chiang Mai Arr   148.45 348  PKPbc PKPdf  21 48 19.6 +1.7
       comp=Z,0.6nm,0.3s,baz=349,slow=3.7,SNR=11
CMAR   Chiang Mai Arr   148.45 348        PKPdf  21 48 20.3 +2.4
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*NEIC **10** 21:55:17.2±1.7, 52.°8N±0.°1×168.°53W±0.°08, h72^{km}±10^{km}, Error ellipse: s-maj=22.1km s-min=4.9km az=166.0*

AEIC 10 21:55:18±2.5**, 52.°9N**±0.°1×**168.°6W**±0.°1**, h60**^{km}±8^{km}**, ML3.0, mb3.4**/13(NEIC)**, Error ellipse: s-maj=17.6km s-min=8.8km az=146.0, Fox Islands**

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Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s     ISC
NIKH   Nikolski High      0.18 294        Pn     21 55 27.5 +0.1
OKSP   Okmok Steeple      0.40  27        Pn     21 55 29.6 +0.6
OKSO   Okmok South        0.53  29        Pn     21 55 31.1 +0.8
OKWE   Okmok W'ng Wal     0.61  20        Pn     21 55 32.4 +1.2
OKFG   Magazine Ridge     0.65  38        Pn     21 55 33.0 +1.4
MAPS   Pakushin South     1.34  47        Pn     21 55 40.8 +0.3
MGOD   Makushin Gods      1.36  48        Pn     21 55 41.4 +0.5
MREP   Makushin Rep't     1.43  50        Pn     21 55 42.3 +0.5
MSW    Makushin Switc     1.48  46        Pn     21 55 42.9 +0.5
MNAT   Makushin Natee     1.51  48        Pn     21 55 43.3 +0.6
UNV    Unalaska Valle     1.56  52        Pn     21 55 44.2 +0.7
AKRB   Akutan Reef Bi     1.94  50        Pn     21 55 49.9 +1.2
AKBBA  Akutan Broad B     1.99  52        Pn     21 55 50.8 +1.5
AKGG   Akutan Green G     2.02  49        Pn     21 55 50.9 +1.2
AKUT   Akutan             2.09  52 Pn     Pn     21 55 49.9 -0.6
WECS   Westdahl Cape      2.79  53        Pn     21 56 01.5 +1.2
SSBA   Shishaldin         3.24  53        Pn     21 56 07.2 +0.8
SPIA   Saint Paul Isl     4.39 348        Pn     21 56 23.8 +1.8
SDPT   Sand Point         5.36  60 Pn     Pn     21 56 36.0 +0.7
CHGN   Chignik            6.82  56        Pn     21 56 56.7 +1.5
OHAK   Old Harbor         9.78  58 Pn     Pn     21 57 33.5 -2.2
KDAK   Kodiak Island     10.33  55 Pn     Pn     21 57 40.8 -2.4
SEW    Seward            12.76  48 Pn     Pn     21 58 14.5 -1.8
SUA    Susitna One       12.89  41 Pn     Pn     21 58 18.3 +0.1
GHO    Glory Hole Cre    13.79  42 Pn     Pn     21 58 29.8 -0.6
WRH    Wood River Hil    15.65  34 Pn     Pn     21 58 54.3 -0.1
I23K   Minto, Yukon-K    15.67  31 Pn     Pn     21 58 54.8 +0.1
GLB    Gilahina Butte    15.83  48 Pn     Pn     21 58 55.4 -1.5
GLB                                IAmb   IAmb   21 59 06.4
       comp=Z,2.9nm,1.0s
MDM    Murphy Dome       15.91  33 Pn     Pn     21 58 57.0 -0.8
TGL    Tana Glacier      16.05  51 Pn     Pn     21 58 59.5 -0.2
MCARA  McCarthy VSAT     16.17  48 Pn     Pn     21 59 00.4 -0.6
ISLE   Juniper Island    16.24  51 Pn     Pn     21 59 01.0 -1.1
BALM   Baldy             16.36  50 Pn     Pn     21 59 02.4 -1.2
BALM                               IAmb   IAmb   21 59 07.0
       comp=Z,5.9nm,1.2s
RIDG   Independent Ri    16.41  39 Pn     Pn     21 59 03.9 -0.2
RIDG                               IAmb   IAmb   21 59 05.5
       comp=Z,1.7nm,0.8s
BARN   Barnard Glacie    16.69  50 Pn     Pn     21 59 07.0 -0.7
BARN                               IAmb   IAmb   21 59 15.7
       comp=Z,2.7nm,0.9s
CTGM   Chitina Glacie    16.81  51        Pn     21 59 09.3 +0.1
CTGM                               IAmb   IAmb   21 59 21.6
       comp=Z,2.7nm,1.1s
BMAR   Burnt Mountain    18.63  29 P      P      21 59 28.1 -2.3
DAWY   Dawson            18.72  42 P      P      21 59 29.4 -2.0
WHY    Whitehorse        19.84  54 P      P      21 59 44.7 +1.0
WHY                                IAmb   IAmb   21 59 52.3
       comp=Z,3.1nm,1.0s
INK    Inuvik            22.64  34        P      22 00 10.6 -2.9
INK                                IAmb   IAmb   22 00 11.0
       comp=Z,1.1nm,0.8s
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*SOME **10** 21:56:19.1, 41.°88N×79.°47E, h10^{km}*

*KRNET **10** 21:56:19.5±0.1, 41.°80N×79.°46E, h15^{km}, mb3.6*

*NNC **10** 21:56:20.4±1.1, 41.°90N×79.°49E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=7.8km s-min=4.6km az=153.0*

ISC 10 21:56:19.3±1.5**, 41.°81N**±0.°06×**79.°49E**±0.°04**, h10**^{km}**, n70, σ1.§49**/117**, 25C-12D, Kyrgyzstan-Xinjiang border region**

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Code   Station Name        Δ°   AZ°   Phase ID        Time      Res
                                   Op     ISC     h  m  s     ISC
PRZ    Przheval'sk        1.06 310⇓iP     Pg     21 56 39.0 -0.7
       baz=12
PRZ                                ⇓iS    Sb     21 56 53.4 -0.4
       baz=12
SHLS   Shalkode           1.35 359 eP     Pg     21 56 44.4 -0.9
       44nm,0.2s
SHLS                               eS     Sg     21 57 02.5 -0.3
       188nm,0.2s
SHLS   Shalkode           1.35 359  P     Pg     21 56 44.4 -0.9
       44nm,0.2s
SHLS                                S     Sg     21 57 02.5 -0.3
       188nm,0.2s
UZB    Uzynbulak          1.38 346 eP     Pn     21 56 44.2 -0.7
UZB                                eS     Sb     21 57 02.1 -1.0
       60nm,0.3s
UZB    Uzynbulak          1.38 346  P     Pn     21 56 44.2 -0.7
UZB                                 S     Sb     21 57 02.1 -1.0
       60nm,0.3s
SATY   Saty               1.49 328 eP     Pb     21 56 46.4 -0.7
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	12nm,0.2s						
SATY				*e*S	**Sb**	**21 57 05.8**	**-0.3**
	187nm,0.2s						
SATY	**Saty**	**1.49**	**328**	P	**Pb**	**21 56 46.4**	**-0.7**
	12nm,0.2s						
SATY				S	**Sb**	**21 57 05.8**	**-0.3**
	187nm,0.2s						
PDGK	**Podgornoye**	**1.52**	**360**	P	**Pb**	**21 56 46.4**	**-1.3**
	14nm,0.2s						
PDGK				S	**Sn**	**21 57 05.9**	**-0.8**
	101nm,0.2s						
PDGK	**Podgornoye**	**1.52**	**360**	⇓P	**Pb**	**21 56 46.4**	**-1.3**
	8.3nm,0.3s						
PDGK				⇓S	**Sb**	**21 57 06.3**	**-0.8**
	49nm,0.3s						
ZHN	**Zhinishke**	**1.57**	**330**	*e*P	**Pb**	**21 56 47.7**	**-0.8**
	21nm,0.1s						
ZHN				*e*S	**Sb**	**21 57 08.2**	**-0.3**
	49nm,0.1s						
ZHN	**Zhinishke**	**1.57**	**330**	P	**Pb**	**21 56 47.7**	**-0.8**
	21nm,0.1s						
ZHN				S	**Sb**	**21 57 08.2**	**-0.3**
	49nm,0.1s						
ANVS	**Anan'yevo**	**1.67**	**306**	⇑*i*P	**Pb**	**21 56 50.0**	**-0.3**
	baz=7.0						
ANVS				⇑*i*S	**Sg**	**21 57 12.3**	**-0.7**
	baz=7.0						
KDJ	**Kajisay**	**1.75**	**281**	⇑*i*P	**Pb**	**21 56 51.1**	**-0.6**
	baz=82						
KDJ				⇑*i*S	**Sb**	**21 57 14.0**	**+0.2**
	baz=82						
KTMS	**Ketmen**	**1.76**	**21**	*e*P	**Pb**	**21 56 50.4**	**-1.3**
	30nm,0.1s						
KTMS				*e*S	**Sb**	**21 57 13.0**	**-0.9**
	65nm,0.4s						
KTMS	**Ketmen**	**1.76**	**21**	P	**Pb**	**21 56 50.4**	**-1.3**
	30nm,0.1s						
KTMS				S	**Sb**	**21 57 13.0**	**-0.9**
	65nm,0.4s						
KPKS	**Kokpek**	**1.76**	**340**	*e*P	**Pb**	**21 56 51.6**	**-0.2**
	111nm,0.2s						
KPKS				*e*S	**Sg**	**21 57 14.7**	**-1.2**
	460nm,0.2s						
KURS	**Kuram**	**1.94**	**330**	*e*P	**Pg**	**21 56 55.1**	**-1.5**
	27nm,0.2s						
KURS				*e*S	**Sg**	**21 57 20.9**	**-0.8**
	83nm,0.3s						
KURS	**Kuram**	**1.94**	**330**	P	**Pg**	**21 56 55.1**	**-1.5**
	27nm,0.2s						
KURS				S	**Sg**	**21 57 20.9**	**-0.8**
	83nm,0.3s						
TNSS	**Tian-Shan**	**2.25**	**304**	*e*P	**Pb**	**21 57 00.0**	**-0.2**
	116nm,0.3s						
TNSS				*e*S	**Sb**	**21 57 29.4**	**+1.0**
	103nm,0.1s						
TNSS	**Tian-Shan**	**2.25**	**304**	Pg	**Pb**	**21 57 00.0**	**-0.2**
	116nm,0.3s						
TNSS				Lg	Lg	21 57 29.4	
	103nm,0.1s						
MDOK	**Medeo**	**2.26**	**308**	*e*P	**Pb**	**21 56 59.9**	**-0.4**
	127nm,0.3s						
MDOK				*e*S	**Sb**	**21 57 29.4**	**+1.1**
	277nm,0.2s						
MDOK	**Medeo**	**2.26**	**308**	Pn	**Pb**	**21 56 59.9**	**-0.4**
	87nm,0.5s						
MDOK				⇑Sn	**Sg**	**21 57 30.4**	**-1.6**
	94nm,0.6s						
MDOK	**Medeo**	**2.26**	**308**	Pg	**Pb**	**21 56 59.9**	**-0.4**
	127nm,0.3s						
MDOK				Lg	Lg	21 57 29.4	
	277nm,0.2s						
KOTS	**Kotyrbulak**	**2.26**	**310**	*e*P	**Pb**	**21 57 00.4**	**0.0**
	250nm,0.1s						
KOTS				*e*S	**Sg**	**21 57 30.1**	**-2.0**
	155nm,0.2s						
KOTS	**Kotyrbulak**	**2.26**	**310**	Pg	**Pb**	**21 57 00.4**	**0.0**
	250nm,0.1s						
KOTS				Lg	Lg	21 57 30.1	
	155nm,0.2s						
KNDC	**Almaty**	**2.34**	**308**	⇓Pn	**Pb**	**21 57 01.8**	**+0.1**
	61nm,0.4s						
KNDC				⇑Sn	**Sg**	**21 57 33.4**	**-1.1**
	157nm,0.5s						
AAA	**Alma-Ata**	**2.36**	**307**	*e*P	**Pb**	**21 57 02.5**	**+0.4**
	82nm,0.2s						
AAA				*e*S	**Sg**	**21 57 33.8**	**-1.5**
	13nm,0.2s						
AAA	**Alma-Ata**	**2.36**	**307**	Pg	**Pb**	**21 57 02.5**	**+0.4**
	82nm,0.2s						
AAA				Lg	Lg	21 57 33.8	
	13nm,0.2s						
IZV	**Izvestkoviy**	**2.46**	**301**	*e*P	**Pb**	**21 57 03.1**	**-0.7**
	86nm,0.3s						
IZV				*e*S	**Sb**	**21 57 34.5**	**+0.4**
	237nm,0.3s						
IZV	**Izvestkoviy**	**2.46**	**301**	Pg	**Pb**	**21 57 03.1**	**-0.7**
	86nm,0.3s						
IZV				Lg	Lg	21 57 34.5	
	237nm,0.3s						
ULHL	**Ulahol**	**2.46**	**281**	⇑*i*P	**Pb**	**21 57 01.6**	**-2.2**
	baz=82						
ULHL				⇑*i*S	**Sn**	**21 57 31.7**	**+1.8**
	baz=82						
DJR	**Jarkent**	**2.53**	**5**	*e*P	**Pb**	**21 57 03.7**	**-1.2**
	14nm,0.2s						
DJR				*e*S	**Sb**	**21 57 36.0**	**-0.2**
	82nm,0.3s						
DJR	**Jarkent**	**2.53**	**5**	Pg	**Pb**	**21 57 03.7**	**-1.2**
	14nm,0.2s						
DJR				Lg	Lg	21 57 36.0	
	82nm,0.3s						
MTBS	**Maitube**	**2.62**	**301**	⇓*i*P	**Pb**	**21 57 06.1**	**-0.3**
	44nm,0.3s						
MTBS				*e*S	**Sb**	**21 57 40.2**	**+1.4**
	115nm,0.3s						
MTBS	**Maitube**	**2.62**	**301**	Pg	**Pb**	**21 57 06.1**	**-0.3**
	44nm,0.3s						
MTBS				Lg	Lg	21 57 40.2	
	115nm,0.3s						
ARXS	**Arharly**	**2.70**	**334**	*e*P	**Pb**	**21 57 07.8**	**+0.1**
	32nm,0.1s						
ARXS				*e*S	**Sg**	**21 57 43.0**	**-2.9**
	94nm,0.2s						
ARXS	**Arharly**	**2.70**	**334**	Pg	**Pb**	**21 57 07.8**	**+0.1**
	32nm,0.1s						
ARXS				Lg	Lg	21 57 43.0	
	94nm,0.2s						
BOOM	**Boomskoye usch**	**2.73**	**286**	⇑*i*P	**Pn**	**21 57 04.9**	**+1.5**
	baz=86						
BOOM				⇑*i*S	**Sn**	**21 57 38.7**	**+2.2**
	baz=86						
CHKK	**Chushkaly**	**2.75**	**319**	⇑*i*P	**Pb**	**21 57 09.2**	**+0.6**
	44nm,0.3s						
CHKK				⇓*i*S	**Sg**	**21 57 45.7**	**-2.0**
	350nm,0.5s						
CHKK	**Chushkaly**	**2.75**	**319**	Pg	**Pb**	**21 57 09.2**	**+0.6**
	44nm,0.3s						
CHKK				Lg	Lg	21 57 45.7	
	350nm,0.5s						
KTBS	**Karatobe**	**2.81**	**314**	*e*P	**Pb**	**21 57 09.4**	**-0.2**
	58nm,0.3s						
KTBS				*e*S	**Sb**	**21 57 45.7**	**+1.6**
	431nm,0.2s						
KTBS	**Karatobe**	**2.81**	**314**	Pg	**Pb**	**21 57 09.4**	**-0.2**
	58nm,0.3s						
KTBS				Lg	Lg	21 57 45.7	
	431nm,0.2s						
KST	**Kastek**	**2.89**	**296**	*e*P	**Pb**	**21 57 10.4**	**-0.7**
	43nm,0.5s						
KST				*e*S	**Sb**	**21 57 47.3**	**+0.8**
	124nm,0.7s						
KST	**Kastek**	**2.89**	**296**	Pg	**Pb**	**21 57 10.4**	**-0.7**
	43nm,0.5s						
KST				Lg	Lg	21 57 47.3	
	124nm,0.7s						
TKM2	**Tokmak 2**	**3.09**	**292**	*i* P	**Pn**	**21 57 10.4**	**+2.0**
	baz=93						
TKM2				*i* S	**Sn**	**21 57 47.4**	**+1.9**
	baz=93						
TKM2	**Tokmak 2**	**3.09**	**292**	⇓Pg	**Pb**	**21 57 13.9**	**-0.7**
	6.3nm,0.4s						
TKM2				⇑Lg	Lg	21 57 56.7	
	31nm,0.5s						
DGS	**Degeres**	**3.10**	**299**	*e*P	**Pb**	**21 57 15.2**	**+0.5**
	32nm,0.4s						
DGS				*e*S	**Sg**	**21 57 55.6**	**-3.3**
	54nm,0.3s						
DGS	**Degeres**	**3.10**	**299**	Pg	**Pb**	**21 57 15.1**	**+0.5**
	32nm,0.4s						
DGS				Lg	Lg	21 57 55.6	
	54nm,0.3s						
KUU	**Kurty**	**3.12**	**313**	*e*P	**Pb**	**21 57 15.1**	**+0.3**
	9.0nm,0.1s						
KUU				*e*S	**Sb**	**21 57 55.5**	**+2.5**
	128nm,0.3s						
KUU	**Kurty**	**3.12**	**313**	Pg	**Pb**	**21 57 15.1**	**+0.3**
	9.0nm,0.1s						
KUU				Lg	Lg	21 57 55.5	
	128nm,0.3s						
TDK	**Taldyqorghan**	**3.29**	**346**	*e*P	**Pb**	**21 57 18.0**	**+0.3**
	32nm,0.4s						
TDK				*e*S	**Sb**	**21 58 00.5**	**+2.6**
	148nm,0.2s						
TDK	**Taldyqorghan**	**3.29**	**346**	Pg	**Pb**	**21 57 18.0**	**+0.3**
	32nm,0.4s						
TDK				Lg	Lg	21 58 00.5	
	148nm,0.2s						
KRBS	**Karabastau**	**3.38**	**305**	*e*P	**Pb**	**21 57 19.7**	**+0.2**
	16nm,0.3s						
KRBS				*e*S	**Sb**	**21 58 03.2**	**+2.5**
	157nm,0.2s						
KRBS	**Karabastau**	**3.38**	**305**	Pg	**Pb**	**21 57 19.7**	**+0.2**
	16nm,0.3s						
KRBS				Lg	Lg	21 58 03.2	
	157nm,0.2s						
KAPS	**Kapalarasan**	**3.48**	**358**	*e*P	**Pb**	**21 57 21.1**	**+0.1**
	5.0nm,0.1s						
KAPS				*e*S	**Sb**	**21 58 05.6**	**+2.3**
	24nm,0.3s						
KAPS	**Kapalarasan**	**3.48**	**358**	Pg	**Pb**	**21 57 21.1**	**+0.1**
	5.0nm,0.1s						
KAPS				Lg	Lg	21 58 05.6	
	24nm,0.3s						
UCH	**Uchtor**	**3.73**	**278**	⇓*e*P	**Pn**	**21 57 19.3**	**+1.9**
	baz=78						
UCH				⇓*i*S	**Sn**	**21 58 02.7**	**+1.0**
	baz=78						
AAK	**Ala-Archa**	**3.80**	**284**	⇑*i*P	**Pn**	**21 57 20.1**	**+2.0**
	baz=84						
AAK				⇑*i*S	**Sn**	**21 58 04.1**	**+1.1**
	baz=84						
AAK	**Ala-Archa**	**3.80**	**284**	⇑Pg	**Pg**	**21 57 30.8**	**-1.4**
	5.4nm,0.3s						
AAK				⇑Lg	Lg	21 58 18.8	
	9.7nm,0.5s						
ARLS	**Aral**	**3.86**	**273**	⇑*i*P	**Pn**	**21 57 20.7**	**+1.8**
	baz=73						
ARLS				⇑*i*S	**Sn**	**21 58 05.2**	**+0.8**
	baz=73						
SGDS	**Sogindy**	**3.94**	**296**	Pg	**Pb**	**21 57 29.4**	**+0.4**
	20nm,0.3s						
SGDS				Lg	Lg	21 58 20.5	
	13nm,0.2s						
EKS2	**Erkin-Say**	**4.33**	**283**	⇑*i*P	**Pn**	**21 57 27.3**	**+2.0**
	baz=83						
EKS2				⇑*i*S	**Sn**	**21 58 16.9**	**+1.0**
	baz=83						
AML	**Almayashu**	**4.33**	**276**	⇑*i*P	**Pn**	**21 57 27.4**	**+1.8**
	baz=76						
AML				⇑*i*S	**Sn**	**21 58 17.2**	**+0.8**
	baz=76						
MRKS	**Merke**	**4.74**	**283**	*e*P	**Pg**	**21 57 46.6**	**-3.5**
	14nm,0.4s						
MRKS				⇑*i*S	**Sg**	**21 58 49.7**	**-1.9**
	7.6nm,0.3s						
MRKS	**Merke**	**4.74**	**283**	Pg	**Pg**	**21 57 46.6**	**-3.5**
	14nm,0.4s						
MRKS				Lg	Lg	21 58 49.7	
	7.6nm,0.3s						
BTLS	**Baital**	**5.12**	**311**	*e*P	**Pb**	**21 57 51.7**	**+2.8**
	2.5nm,0.2s						
BTLS				*e*S	**Sg**	**21 58 58.1**	**-5.4**
	10.0nm,0.5s						
BTLS	**Baital**	**5.12**	**311**	Pg	**Pb**	**21 57 51.7**	**+2.8**
	2.5nm,0.2s						
BTLS				Lg	Lg	21 58 58.1	
	10.0nm,0.5s						
MAKZ	**Makanchi**	**5.31**	**19**	⇑Pn	**Pn**	**21 57 41.8**	**+3.2**
	0.4nm,0.2s						
MAKZ				⇑Sn	**Sn**	**21 58 43.2**	**+3.4**
	1.4nm,0.4s						
MK31	**Makanchi Array**	**5.37**	**21**	Pn	**Pn**	**21 57 41.4**	**+1.8**
	0.7nm,0.3s,baz=202,slow=13,SNR=44						
MK31				Sn	**Sn**	**21 58 44.2**	**+2.7**
	4.3nm,0.9s,baz=212,slow=24,SNR=4.1						
KK31	**Karatay Array**	**6.77**	**284**	⇓Pg	Pg	21 58 23.4	-5.5
	0.8nm,0.4s,baz=96,slow=15,SNR=12						
KK31				⇓Lg	Lg	21 59 55.1	
	1.1nm,0.4s,baz=107,slow=25,SNR=4.3						

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*NOU **10** 22:11:18.3, 40°.89S×172°.80E, h216^{km}, MLv3.6, Off W. Coast of S. Island, N.Z.*

WEL 10 22:11:20.9, 41°S±2°×**17°3E**±°**, h197**^{km}±4^{km}**, M3.8**/97**, MLv3.8**/97**, Error ellipse: s-maj=0.0km s-min=0.0km az=74.6, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.35**	**295**	P	Pn	22 11 47.2	+0.1
QRZ				S	Sn	22 12 05.9	-1.5
NNZ	**Nelson**	**0.41**	**127**	P	Pn	22 11 47.8	+0.5
NNZ				S	Sn	22 12 07.1	-0.7
DUWZ	**D’Urville Isla**	**0.76**	**78**	P	Pn	22 11 49.4	+0.5
DUWZ				S	Sn	22 12 10.2	-0.3
THZ	**Tophouse**	**0.79**	**182**	P	Pn	22 11 49.5	+0.4
THZ				S	Sn	22 12 10.5	-0.7
TUWZ	**Tuamarina**	**0.88**	**122**	P	Pn	22 11 50.2	+0.7
TUWZ				S	Sn	22 12 10.9	-0.9
BSWZ	**Blackbirch Sta**	**1.02**	**137**	P	Pn	22 11 51.2	+0.7
BSWZ				S	Sn	22 12 13.2	-0.3
TCW	**Tory Channel**	**1.03**	**104**	P	Pn	22 11 51.2	+0.7
TCW				S	Sn	22 12 12.7	-0.8
DSZ	**Denniston Nort**	**1.16**	**228**	P	Pn	22 11 51.1	-0.4
DSZ				S	Sn	22 12 12.7	-2.7
WEL	**Wellington**	**1.41**	**103**	P	Pn	22 11 53.9	+0.4
KIW	**Kapiti Island**	**1.49**	**86**	P	Pn	22 11 54.7	+0.4
KIW				S	Sn	22 12 19.0	-1.2
KHZ	**Kahutara**	**1.51**	**163**	P	Pn	22 11 54.4	0.0
KHZ				S	Sn	22 12 19.0	-1.6
BHW	**Baring Head**	**1.52**	**107**	P	Pn	22 11 54.7	+0.2
BHW				S	Sn	22 12 19.0	-1.6
CAW	**Cannon Point**	**1.61**	**96**	P	Pn	22 11 55.7	+0.3
CAW				S	Sn	22 12 20.8	-1.3
OGWZ	**Otaki Gorge**	**1.69**	**86**	P	Pn	22 11 56.7	+0.5
OGWZ				S	Sn	22 12 22.6	-0.8
MSWZ	**Moikau Station**	**1.80**	**105**	P	Pn	22 11 57.3	+0.2
MSWZ				S	Sn	22 12 23.3	-2.0
NBEZ	**Newall Road No**	**1.84**	**23**	P	Pn	22 11 57.7	0.0
NBEZ				S	Sn	22 12 26.3	+0.2
PLWZ	**Palliser**	**1.84**	**110**	P	Pn	22 11 57.8	+0.2
KHEZ	**Kahui Hut**	**1.86**	**26**	P	Pn	22 11 57.8	-0.2
KHEZ				S	Sn	22 12 26.2	-0.4
LREZ	**Lake Rotokare**	**1.88**	**37**	P	Pn	22 11 58.0	+0.1
LREZ				S	Sn	22 12 26.9	+0.2
LTZ	**Lake Taylor**	**1.88**	**195**	P	Pn	22 11 57.7	-0.3
LTZ				S	Sn	22 12 23.7	-3.3
NEZ	**North Egmont**	**1.91**	**28**	P	Pn	22 11 58.0	-0.4
PAWZ	**Paruwai Farm**	**1.92**	**103**	P	Pn	22 11 58.5	+0.1
PAWZ				S	Sn	22 12 25.9	-1.7
MTW	**Mount Morrison**	**1.94**	**96**	P	Pn	22 11 58.9	+0.3
PKE	**Pukeiti**	**1.95**	**25**	P	Pn	22 11 58.6	-0.1
PKE				S	Sn	22 12 27.3	-0.8
HOWZ	**Holdsworth Sta**	**1.95**	**89**	P	Pn	22 11 59.0	+0.3
HOWZ				S	Sn	22 12 26.8	-1.3
OHWZ	**Ohakea**	**1.96**	**68**	P	Pn	22 11 59.4	+0.7
OHWZ				S	Sn	22 12 28.2	+0.1
WAZ	**Wanganui**	**1.98**	**53**	P	Pn	22 11 59.6	+0.6
WAZ				S	Sn	22 12 29.5	+0.9
GVZ	**Greta Valley S**	**2.00**	**178**	P	Pn	22 11 58.7	-0.4
MRZ	**Mangatainoka R**	**2.02**	**82**	P	Pn	22 11 59.5	+0.1
DREZ	**Durham Road**	**2.02**	**29**	P	Pn	22 11 59.4	-0.1
DREZ				S	Sn	22 12 29.1	-0.3
TRWZ	**Traveller**	**2.11**	**103**	P	Pn	22 12 00.9	+0.5
AMCZ	**Amberley**	**2.21**	**186**	P	Pn	22 12 00.9	-0.5
POWZ	**Post Office Ro**	**2.22**	**76**	P	Pn	22 12 01.7	+0.2
TMWZ	**Te Maipa**	**2.23**	**94**	P	Pn	22 12 02.1	+0.4
TIWZ	**Tintock**	**2.24**	**86**	P	Pn	22 12 02.1	+0.3
VRZ	**Vera Road**	**2.31**	**38**	P	Pn	22 12 01.8	-0.8
PRWZ	**Pori Road**	**2.34**	**81**	P	Pn	22 12 03.4	+0.6
OXZ	**Oxford**	**2.45**	**196**	P	Pn	22 12 03.0	-1.0
CPWZ	**Castlepoint**	**2.47**	**90**	P	Pn	22 12 05.1	+0.9
TSZ	**Takapari Road**	**2.47**	**69**	P	Pn	22 12 04.4	0.0
PKVZ	**Pokaka**	**2.49**	**48**	P	Pn	22 12 04.2	-0.4
MTVZ	**Mangateitei**	**2.50**	**52**	P	Pn	22 12 04.4	-0.3
BFZ	**Birch Farm**	**2.52**	**85**	P	Pn	22 12 05.2	+0.3
DVHZ	**Dannevirke**	**2.54**	**76**	P	Pn	22 12 05.1	0.0
TRVZ	**Turoa**	**2.60**	**51**	P	Pn	22 12 05.6	-0.4
WNVZ	**Wahianoa**	**2.61**	**52**	P	Pn	22 12 05.5	-0.6
FWVZ	**Far West T-bar**	**2.63**	**50**	P	Pn	22 12 06.0	-0.4
WHVZ	**Whangaehu Hut**	**2.64**	**51**	P	Pn	22 12 06.1	-0.3
MOVZ	**Moawhango**	**2.66**	**55**	P	Pn	22 12 05.7	-0.8
WVZ	**Waitaha Valley**	**2.67**	**217**	P	Pn	22 12 05.2	-1.2
TUVZ	**Tukino**	**2.69**	**52**	P	Pn	22 12 06.4	-0.5
TWVZ	**Taurewa**	**2.69**	**46**	P	Pn	22 12 06.0	-1.0
PNHZ	**Pukenui**	**2.70**	**68**	P	Pn	22 12 06.8	-0.1
NGZ	**Ngauruhoe**	**2.71**	**50**	P	Pn	22 12 06.4	-0.9
ANWZ	**Angora Road**	**2.73**	**80**	P	Pn	22 12 07.6	+0.4
MQZ	**McQueen’s Vall**	**2.74**	**184**	P	Pn	22 12 05.6	-1.7
WTVZ	**West Tongariro**	**2.75**	**48**	P	Pn	22 12 06.8	-0.8
OKCZ	**Okains Bay**	**2.75**	**178**	P	Pn	22 12 06.4	-1.1
OTVZ	**Oturere**	**2.76**	**50**	P	Pn	22 12 07.1	-0.7
KRVZ	**Karewarewa**	**2.79**	**49**	P	Pn	22 12 07.3	-0.8
ETVZ	**East Tongariro**	**2.80**	**50**	P	Pn	22 12 07.7	-0.6
BHHZ	**Black Hill Sta**	**2.81**	**59**	P	Pn	22 12 07.6	-0.7
WPHZ	**Waipukurau**	**2.81**	**72**	P	Pn	22 12 08.4	+0.2
RACZ	**Rakaia**	**2.82**	**192**	P	Pn	22 12 07.2	-1.0
HIZ	**Hauiti**	**2.86**	**32**	P	Pn	22 12 07.7	-1.1
PRHZ	**Porangahau**	**2.90**	**77**	P	Pn	22 12 09.6	+0.5
AKCZ	**Akaroa Harbour**	**2.90**	**180**	P	Pn	22 12 07.8	-1.3
KATZ	**Kakaramea**	**2.91**	**48**	P	Pn	22 12 08.8	-0.7
KRHZ	**Kereru**	**2.94**	**64**	P	Pn	22 12 09.4	-0.3
GCSZ	**Gaunt Creek Bo**	**3.05**	**219**	P	Pn	22 12 09.3	-1.5
KWHZ	**Kaweka Forest**	**3.08**	**61**	P	Pn	22 12 11.6	+0.2
RPZ	**Rata Peaks**	**3.08**	**206**	P	Pn	22 12 10.2	-1.1
WACZ	**Wakanui South**	**3.08**	**195**	P	Pn	22 12 10.3	-1.0
WATZ	**Wairara**	**3.12**	**44**	P	Pn	22 12 11.3	-0.5
PXZ	**Pawanui**	**3.13**	**74**	P	Pn	22 12 12.1	+0.2
KAHZ	**Kahuranaki**	**3.23**	**70**	P	Pn	22 12 13.6	+0.5
ARCZ	**Arundel**	**3.25**	**203**	P	Pn	22 12 12.0	-1.3
MCHZ	**McNeill Hill**	**3.25**	**63**	P	Pn	22 12 13.4	0.0
BKZ	**Black Stump Fm**	**3.27**	**58**	P	Pn	22 12 12.6	-1.0
TLZ	**Tolley Road**	**3.31**	**38**	P	Pn	22 12 13.0	-1.2
MRHZ	**Matea Rd**	**3.42**	**53**	P	Pn	22 12 14.1	-1.4
CKHZ	**Cape Kidnapper**	**3.42**	**69**	P	Pn	22 12 15.9	+0.5
FOZ	**Fox Glacier**	**3.46**	**221**	P	Pn	22 12 13.7	-2.1
NMHZ	**Naumai**	**3.51**	**59**	P	Pn	22 12 16.6	0.0
ALRZ	**Allen Road**	**3.56**	**49**	P	Pn	22 12 15.8	-1.3
MTHZ	**Maungataniwha**	**3.67**	**56**	P	Pn	22 12 17.4	-1.1
TMZ	**Timaru**	**3.70**	**202**	P	Pn	22 12 17.6	-1.2
RAHZ	**Arahi**	**3.79**	**59**	P	Pn	22 12 19.7	-0.3
WHHZ	**Waihua**	**3.80**	**62**	P	Pn	22 12 19.9	-0.1
MUGZ	**Murupara**	**3.86**	**51**	P	Pn	22 12 20.7	-0.2
KMRZ	**Kaimai**	**3.89**	**38**	P	Pn	22 12 22.5	+1.2
RTZ	**Ruatahuna**	**3.90**	**54**	P	Pn	22 12 19.8	-1.6
LBZ	**Lake Benmore**	**3.97**	**210**	P	Pn	22 12 20.4	-1.8
KNZ	**Kokohu**	**4.12**	**63**	P	Pn	22 12 23.4	-0.7
URZ	**Urewera**	**4.21**	**51**	P	Pn	22 12 23.0	-2.2
MHGZ	**Mahia Peninsul**	**4.22**	**66**	P	Pn	22 12 25.4	+0.1
RAGZ	**Rawiri**	**4.24**	**56**	P	Pn	22 12 25.3	-0.4
PRGZ	**Paritu Road**	**4.31**	**63**	P	Pn	22 12 25.8	-0.7
RIGZ	**Rimuhau**	**4.34**	**60**	P	Pn	22 12 26.0	-0.9
JCZ	**Jackson Bay**	**4.37**	**223**	P	Pn	22 12 25.2	-2.0
ODZ	**Otahua Downs**	**4.41**	**202**	P	Pn	22 12 26.3	-1.3
MWZ	**Matawai**	**4.41**	**55**	P	Pn	22 12 26.1	-1.7
TKGZ	**Te Karaka**	**4.55**	**58**	P	Pn	22 12 28.4	-1.0
RUGZ	**Raukumara Rang**	**4.74**	**52**	P	Pn	22 12 29.5	-2.5
CNGZ	**Carnagh Statio**	**4.76**	**60**	P	Pn	22 12 31.8	-0.3
TWGZ	**Tauwhareparae**	**4.79**	**56**	P	Pn	22 12 32.1	-0.4
WKZ	**Wanaka**	**4.81**	**216**	P	Pn	22 12 29.9	-2.9
HAZ	**Te Kaha**	**4.94**	**51**	P	Pn	22 12 31.9	-2.5
EAZ	**Earnscleugh**	**5.02**	**211**	P	Pn	22 12 32.6	-2.9
PUZ	**Puketiti**	**5.03**	**57**	P	Pn	22 12 33.6	-2.0
PKGZ	**Pakihiroa**	**5.03**	**54**	P	Pn	22 12 33.8	-1.8
MSZ	**Milford Sound**	**5.23**	**223**	P	Pn	22 12 35.9	-2.1
WMGZ	**Waiomatatini S**	**5.28**	**55**	P	Pn	22 12 36.9	-1.9
MXZ	**Matakaoa Point**	**5.38**	**52**	P	Pn	22 12 38.2	-1.8
MLZ	**Mavora Lakes**	**5.63**	**217**	P	Pn	22 12 41.0	-2.3
WHZ	**Wether Hill Ro**	**6.12**	**215**	P	Pn	22 12 46.8	-2.8
SYZ	**Scrubby Hill**	**6.21**	**205**	P	Pn	22 12 49.0	-1.7
APZ	**The Paps**	**6.87**	**210**	P	Pn	22 12 56.6	-2.6
PYZ	**Puysegur Point**	**6.90**	**219**	P	Pn	22 12 57.6	-2.2

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*NEIC **10** 22:17:49.9±2.6, 43°.45N±0°.05×105°.21W±0°.07, h0^{km}±2^{km}, ML2.6/22, Error ellipse: s-maj=10.2km s-min=6.4km az=320.0*

*IDC **10** 22:17:49.5±3.8, 43°.54N×105°.28W, h0^{km}, mb1 2.6/1, mb1mx2.6/52, mbtmp2.2/1, ML3.0/1, Error ellipse: s-maj=63.1km s-min=26.1km az=168.0*

ISC 10 22:17:48.6±1.3**, 43°.40N**±0°.05×**105°.22W**±0°.06**, h0**^{km}**, n16, **σ1§**26**/15**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.12**	**50**		**Pn**	**22 18 13.3**	**+1.6**
K22A	**Casper**	**1.22**	**232**		**Pn**	**22 18 15.1**	**+2.1**
K22A				IAML		22 18 39.6	
	comp=E,90nm,0.9s						
PHWY	**Pilot Hill**	**2.11**	**185**	Pn	**Pb**	**22 18 27.6**	**-0.3**
PHWY				IAML		22 19 02.9	
	comp=E,36nm,0.9s						
RWWY	**Rawlins**	**2.26**	**221**	Pn	**Pb**	**22 18 29.9**	**-0.5**
N23A	**Red Feather La**	**2.56**	**192**		**Pn**	**22 18 32.4**	**+0.8**
N23A				IAML		22 19 28.5	
	comp=E,25nm,0.7s						
N23A				IAML		22 19 30.9	
	comp=N,37nm,1.8s						
PD31	**Pinedale Array**	**3.24**	**260**	Pn	**Pn**	**22 18 42.7**	**+1.8**
PDAR	**Pinedale Array**	**3.24**	**260**	Pn	**Pb**	**22 18 45.9**	**-1.3**
	comp=N,0.2nm,0.3s,baz=81,slow=14,SNR=4.1						
PDAR				Pg	**Pg**	**22 18 50.5**	**-0.2**
	comp=N,0.5nm,0.3s,baz=74,slow=18,SNR=12						
PDAR				Lg	Lg	22 19 29.9	
	comp=N,1.8nm,0.3s,baz=79,slow=30,SNR=17						
PDAR	**Pinedale Array**	**3.24**	**260**		**Pn**	**22 18 41.7**	**+0.8**
LAO	**LASA Array**	**3.36**	**348**	Pn	**Pn**	**22 18 42.0**	**-0.5**
RLMT	**Red Lodge**	**3.38**	**302**		**Pn**	**22 18 43.7**	**+0.9**
RLMT				IAML		22 19 43.4	
	comp=N,15nm,0.8s						
RLMT				IAML		22 19 44.1	
	comp=N,18nm,0.7s						
ISCO	**Idaho Springs**	**3.61**	**185**		**Pn**	**22 18 45.1**	**-1.0**
ISCO				IAML		22 19 57.9	
	comp=N,12nm,4.6s						
ISCO				IAML		22 20 16.8	
	comp=N,9.9nm,4.3s						
YNE	**Yellowstone No**	**3.80**	**297**	Pn	**Pn**	**22 18 48.8**	**+0.2**
YMP	**Mirror Lake Pl**	**3.80**	**292**	Pn	**Pn**	**22 18 50.7**	**+2.0**
YPP	**Pitchstone Pla**	**4.13**	**284**	Pn	**Pn**	**22 18 53.4**	**+0.2**
I10CA	**LAC DU BONNET**	**9.27**	**40**	*i*		23 10 50.0	
	baz=224,slow=345,SNR=7.7						
I56US	**NEWPORT INFRAS**	**9.62**	**304**	*i*		23 13 40.0	
	baz=116,slow=333,SNR=1.3						

IDC 10 22:20:30.1±2.4**, 6°.82S×129°.44E, h0**^{km}**, mb3.2**/1**, mb1 3.5**/3**, mb1mx3.3**/44**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=148.1km s-min=33.7km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.88**	**160**	Pn	Pn	22 23 48.5	+0.1
	0.1nm,0.3s,baz=343,slow=14,SNR=6.9						
WRA				Sn	Sn	22 26 09.4	-14
	0.2nm,0.3s,baz=342,slow=25,SNR=5.5						
ASAR	**Alice Springs**	**17.29**	**166**	P	Pn	22 24 33.0	-0.1
	0.1nm,0.3s,baz=342,slow=8.8,SNR=5.7						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	22 31 29.8	0.0
	0.1nm,0.5s,baz=111,slow=7.9,SNR=1.2						

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*IDC **10** 22:22:22.8±1.0, 35°.49N×26°.51E, h0^{km}, mb3.7/5, mb1 3.7/10, mb1mx3.5/62, mbtmp3.6/10, ML3.4/5, Error ellipse: s-maj=29.2km s-min=13.3km az=164.0*

*ISK **10** 22:22:25.4, 35°.62N×26°.45E, h18^{km}, ML3.3/23*

*ATH **10** 22:22:25.0, 35°.56N×26°.51E, h52^{km}±6^{km}, ML3.4/10, Error ellipse: s-maj=7.0km s-min=1.6km az=151.0*

*THE **10** 22:22:27.4, 35°.55N×26°.51E, h22^{km}±1^{km}, ML3.4/13, Error ellipse: s-maj=2.0km s-min=0.4km az=156.0*

*DDA **10** 22:22:28.8, 35°.84N×26°.79E, h17^{km}±2^{km}, ML2.8*

ISC 10 22:22:25.6±1.4**, 35°.54N**±0°.03×**26°.52E**±0°.02**, h20**^{km}±7^{km}**,**

n116,σ1.°05/150,mb3.7/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.48	227	P	Pn	22 22 37.0	-0.4
STIA				S	Sn	22 22 44.6	-0.6
ZKR	Zakros	0.49	211	P	Pn	22 22 36.9	-0.5
ZKR				AML	AML	22 22 44.7	
	comp=E,8238µm,0.4s						
ZKR				S	Sn	22 22 45.0	-0.4
ZKR				AML	AML	22 22 46.4	
	comp=N,4706µm,0.3s						
ZKR	Zakros	0.49	211	P	Pn	22 22 37.1	-0.3
ZKR				S	Sn	22 22 44.7	-0.7
	comp=N,3µm,0.3s						
ZKR	Zakros	0.49	211	PG	Pn	22 22 36.9	-0.5
ZKR				SG	Sn	22 22 44.4	-1.0
KARP	Karpathos	0.52	89	P	Pn	22 22 37.9	0.0
KARP				S	Sn	22 22 45.6	-0.6
KARP				AML	AML	22 22 46.5	
	comp=N,13617µm,0.3s						
KARP				AML	AML	22 22 46.7	
	comp=E,24059µm,0.5s						
KARP	Karpathos	0.52	89	P	Pn	22 22 37.9	0.0
KARP				S	Sn	22 22 45.6	-0.6
	comp=E,9µm,0.4s						
KARP	Karpathos	0.52	89	PG	Pn	22 22 37.9	0.0
KARP				SG	Sn	22 22 45.7	-0.6
NPS	Neapolis	0.79	250	P	Pn	22 22 41.7	+0.1
NPS				S	Sn	22 22 53.0	+0.1
NPS				AML	AML	22 22 54.7	
	comp=N,8801µm,0.1s						
NPS				AML	AML	22 22 55.3	
	comp=E,6699µm,0.2s						
NPS	Neapolis	0.79	250	P	Pn	22 22 41.7	+0.1
NPS				S	Sn	22 22 52.6	-0.3
	comp=E,4µm,0.1s						
HRKL	Herakleio	1.18	259	P	Pn	22 22 47.0	+0.1
HRKL				S	Sn	22 23 02.7	+0.3
	comp=E,3µm,0.6s						
HRKL	Herakleio	1.18	259	PN	Pb	22 22 47.2	-0.1
NISR	Nisiros	1.18	24	P	Pb	22 22 47.0	-0.2
NISR	Nisiros	1.18	24	P	Pb	22 22 47.1	-0.2
NISR				S	Sb	22 23 01.9	-0.2
	comp=E,2µm,0.6s						
SANT	Santorini	1.20	314	P	Pb	22 22 47.3	-0.3
SANT	Santorini	1.20	314	P	Pb	22 22 47.3	-0.3
SANT				S	Sn	22 23 02.3	-0.7
	comp=E,775nm,0.3s						
SANT	Santorini	1.20	314	PN	Pn	22 22 46.4	-0.8
IACM	Heraklion	1.21	259	P	Pg	22 22 48.4	-0.6
THR8	Santorini-Mono	1.21	316	P	Pb	22 22 47.6	-0.3
THR8	Santorini-Mono	1.21	316	P	Pb	22 22 47.5	-0.3
THR6	Thira Island,	1.23	312	P	Pb	22 22 48.0	-0.1
THR6	Thira Island,	1.23	312	P	Pb	22 22 47.6	-0.4
SNT1	Gialos, Santor	1.25	315	P	Pb	22 22 48.0	-0.4
SNT1				S	Sn	22 23 03.7	-0.4
	comp=E,852nm,0.6s						
THR9	Santorini-Faro	1.25	311	P	Pb	22 22 48.2	-0.3
THR9	Santorini-Faro	1.25	311	P	Pb	22 22 48.2	-0.3
SFIR	Foira Santorin	1.25	315	P	Pb	22 22 48.5	0.0
THR7	Fira-Santorini	1.25	315	P	Pb	22 22 48.4	-0.1
THR7	Fira-Santorini	1.25	315	P	Pb	22 22 48.2	-0.3
THR3	Thira Island,	1.26	314	P	Pb	22 22 48.2	-0.3
THR3	Thira Island,	1.26	314	P	Pb	22 22 48.3	-0.3
KOSK	Kos Island	1.27	17	P	Pb	22 22 48.5	-0.3
KOSK	Kos Island	1.27	17	PN	Pb	22 22 48.7	-0.1
THR5	Thira Island,	1.29	313	P	Pn	22 22 48.2	-0.3
THR5	Thira Island,	1.29	313	P	Pb	22 22 48.8	-0.4
CMBO	Columbo, Santo	1.30	316	P	Pb	22 22 48.9	-0.3
CMBO	Columbo, Santo	1.30	316	P	Pb	22 22 49.0	-0.3
CMBO				S	Sn	22 23 05.4	0.0
	comp=E,2µm,0.4s						
SAP3	Santorini-Thir	1.31	314	P	Pb	22 22 49.3	-0.2
IDI	Anoyia	1.35	260	Pn	Pn	22 22 49.3	-0.1
	comp=E,21nm,0.3s,baz=82,slow=5.5,SNR=116						
IDI				Sn	Sg	22 23 09.7	+0.2
	comp=E,155nm,0.3s,baz=345,slow=16,SNR=32						
IDI				LR	LR	22 23 29.1	
	comp=E,101nm,20.5s,baz=67,slow=49						
IDI	Anoyia	1.35	260	P	Pn	22 22 49.4	-0.1
IDI				S	Sb	22 23 07.7	+0.5
IDI				AML	AML	22 23 10.3	
	comp=N,2410µm,0.3s						
IDI				AML	AML	22 23 12.8	
	comp=E,2792µm,0.3s						
IDI	Anoyia	1.35	260	P	Pn	22 22 49.2	-0.1
IDI				S	Sb	22 23 07.2	0.0
	comp=E,1µm,0.3s						
IDI	Anoyia	1.35	260	PN	Pn	22 22 49.3	-0.1
ARG	Arkhangelos	1.47	62	P	Pb	22 22 52.1	-0.1
ARG				AML	AML	22 23 19.3	
	comp=N,1024µm,0.3s						
ARG				AML	AML	22 23 24.6	
	comp=E,1481µm,0.4s						
ARG	Arkhangelos	1.47	62	P	Pb	22 22 52.1	-0.1
ARG				S	Sb	22 23 10.1	-0.4
	comp=E,600nm,0.3s						
ARG	Arkhangelos	1.47	62	PN	Pb	22 22 52.1	-0.1
SIVA	Sivas	1.49	250	P	Pb	22 22 52.7	+0.1
SIVA				S	Sb	22 23 12.2	+1.1
SIVA				AML	AML	22 23 18.2	
	comp=N,3204µm,0.4s						
SIVA				AML	AML	22 23 22.6	
	comp=E,3371µm,0.4s						
DATC	Datca-Mugla	1.53	37	PN	Pn	22 22 52.1	+0.3
BODT	Bodrum	1.65	23	P	Pn	22 22 53.7	+0.2
BODT	Bodrum	1.65	23	PN	Pn	22 22 53.5	0.0
BDRM	Kayabasi	1.70	26	*i* P	Pn	22 22 54.1	0.0
BDRM				*i* S	Sn	22 23 12.3	-2.9
APE	Apeiranthos	1.73	333	P	Pn	22 22 54.8	+0.3
APE				AML	AML	22 23 15.9	
	comp=N,1333µm,0.2s						
APE				AML	AML	22 23 16.8	
	comp=E,864µm,0.2s						
APE	Apeiranthos	1.73	333	P	Pn	22 22 54.8	+0.3
APE				S	Sn	22 23 15.2	-0.8
	comp=E,550nm,0.2s						
APE	Apeiranthos	1.73	333	PN	Pn	22 22 54.2	-0.3
MRSB	Marmaris-Mugla	1.80	49	PN	Pb	22 22 56.6	-1.2
TURN	Turunc	1.86	48	PN	Pn	22 22 56.9	+0.6
TURN	Turunc	1.86	48	*i* P	Pn	22 22 56.8	+0.4
TURN				*i* S	Sn	22 23 17.4	-1.9
TURN				IAML		22 23 30.0	
	comp=N,127nm,0.6s						
TURN				IAML		22 23 32.0	
	comp=E,104nm,0.4s						
VAM	Vamos	1.90	267	P	Pn	22 22 57.6	+0.8
VAM				AML	AML	22 23 29.5	
	comp=E,1593µm,0.4s						
VAM				AML	AML	22 23 29.8	
	comp=N,1540µm,0.2s						
VAM	Vamos	1.90	267	P	Pn	22 22 56.6	-0.2
VAM				S	Sn	22 23 21.1	+0.9
	comp=N,800nm,0.4s						
DDIM	Aydin, Didim	2.00	17	*i* P	Pn	22 22 58.9	+0.6
MLSB	Milas	2.03	30	PN	Pn	22 22 59.4	+0.8
MHLO	Agia Marina, M	2.07	304	P	Pb	22 23 00.4	-2.0
MHLO	Agia Marina, M	2.07	304	P	Pn	22 23 00.2	+1.1
MHLO				S	Sn	22 23 24.1	-0.2
IMMV	Iera Moni Meta	2.07	269	P	Pn	22 22 59.4	+0.2
IMMV				AML	AML	22 23 34.0	
	comp=N,1031µm,0.4s						
IMMV				AML	AML	22 23 35.0	
	comp=E,710µm,0.4s						
IMMV	Iera Moni Meta	2.07	269	P	Pn	22 22 59.3	+0.1
IMMV				S	Sn	22 23 23.7	-0.8
	comp=E,462nm,0.4s						
IMMV	Iera Moni Meta	2.07	269	PN	Pn	22 22 59.6	+0.4
MHLA	Plaka, Milos I	2.08	306	P	Pn	22 23 00.6	+1.3
GVDS	Gavdos	2.11	252	PN	Pn	22 23 00.6	+0.9
GVD	Gavdhos	2.11	251	P	Pb	22 23 03.4	+0.3
GVD				AML	AML	22 23 42.4	
	comp=E,777µm,0.4s						
GVD				AML	AML	22 23 48.5	
	comp=N,855µm,0.3s						
GVD	Gavdhos	2.11	251	PN	Pn	22 23 00.2	+0.5
YER	Yerkesik	2.14	41	P	Pn	22 23 01.5	+1.3
YER	Yerkesik	2.14	41	PN	Pn	22 23 01.1	+0.9
DALY	Dalyan (Mula)	2.15	53	PN	Pn	22 23 01.5	+1.3
DALY	Dalyan (Mula)	2.15	53	*i* P	Pn	22 23 01.5	+1.3
DALY				*i* S	Sn	22 23 26.1	-0.2
DALY				IAML		22 23 43.0	
	comp=E,132nm,0.6s						
DALY				IAML		22 23 44.0	
	comp=N,114nm,0.4s						
SMG	Samos	2.18	7	P	Pn	22 23 01.0	+0.2
SMG	Samos	2.18	7	P	Pn	22 23 01.0	+0.2
GCAM	G?zelcaml?	2.23	15	PN	Pn	22 23 01.9	+0.5
GCAM	G?zelcaml?	2.23	15	*i* P	Pn	22 23 02.3	+0.9
GCAM				*i* S	Sn	22 23 26.1	-2.3
GCAM				IAML		22 23 29.0	
	comp=E,57nm,0.2s						
MULA	Mugla, Merkez-	2.25	40	*i* P	Pn	22 23 03.2	+1.4
MULA				*i* S	Sn	22 23 27.5	-1.5
MULA				IAML		22 23 35.0	
	comp=E,84nm,0.5s						
FETY	Fethiye	2.35	61	P	Pn	22 23 04.4	+1.4
FETY	Fethiye	2.35	61	PN	Pn	22 23 04.5	+1.4
FETY	Fethiye	2.35	61	*i* P	Pn	22 23 04.4	+1.4
FETY				*i* S	Sb	22 23 37.0	+1.2
DGB	zmir	2.53	6	*i* P	Pn	22 23 05.7	+0.2
KSL	Kastellorizon	2.56	75	P	Pn	22 23 07.7	+1.7
AKAS	Kas	2.60	74	PN	Pn	22 23 08.4	+1.8
AKAS	Kas	2.60	74	*i* P	Pn	22 23 08.3	+1.8
TAVA	DENIZLI_Tavas	2.73	44	*i* P	Pn	22 23 10.5	+2.2
TAVA				*i* S	Sn	22 23 41.2	+0.5
TAVA				IAML		22 23 45.0	
	comp=E,58nm,0.3s						
TAVA				IAML		22 23 48.0	
	comp=N,32nm,0.3s						
CAEL	Denizli, Camel	2.76	54	*i* P	Pn	22 23 11.4	+2.6
CAEL				*i* S	Sn	22 23 40.1	-1.6
CAEL				IAML		22 23 52.0	
	comp=E,137nm,0.6s						
CAEL				IAML		22 24 02.0	
	comp=N,94nm,0.8s						
URLA	Izmir	2.82	1	PN	Pn	22 23 09.6	+0.1
KTHA	Kythira Island	2.90	285	PN	Pn	22 23 10.8	+0.2
KTHR	Kythira	2.94	285	P	Pn	22 23 11.9	+0.7
GOLH	Golhisar	2.98	54	*i* P	Pn	22 23 14.5	+2.7
GOLH				*i* S	Sn	22 23 47.9	+0.8
GOLH				IAML		22 24 04.0	
	comp=N,90nm,0.9s						
GOLH				IAML		22 24 08.0	
	comp=E,54nm,0.5s						
ELL	Elmali	3.00	65	PN	Pn	22 23 14.0	+1.9
VLI	Veliai	3.13	293	P	Pn	22 23 14.5	+0.7
AKUM	Antalya-Kumluc	3.20	75	*i* P	Pn	22 23 16.7	+2.0
AKUM				IAML		22 23 57.0	
	comp=E,42nm,0.4s						
KRND	KRANIDI	3.28	305	P	Pn	22 23 17.4	+1.5
MANT	Manisa	3.37	28	*i* P	Pn	22 23 19.3	+2.0
MANT				*i* S	Sn	22 23 56.1	-0.7
KORT	Korkueli	3.42	64	PN	Pn	22 23 19.7	+1.8
KORT	Korkueli	3.42	64	*i* P	Pn	22 23 20.2	+2.2
KULA	Kula-Manisa	3.43	29	PN	Pn	22 23 19.3	+1.3
EPID	Epidavros	3.43	308	P	Pn	22 23 19.4	+1.4
DKL	Dikili	3.54	5	PN	Pn	22 23 19.9	+0.5
EREA	Eretria	3.55	325	P	Pn	22 23 21.2	+1.7
BRDR	BURDUR-Merkez	3.57	52	*i* P	Pn	22 23 22.0	+2.1
ANTB	Antalya	3.61	67	PN	Pn	22 23 22.3	+2.0
KHAL	Karahalli	3.70	39	*i* P	Pn	22 23 22.9	+1.3
BASM	Basmaki-Afyon	3.70	49	PN	Pn	22 23 23.2	+1.5
SIGR	SIGRI	3.71	352	PN	Pn	22 23 21.9	+0.2
ITM	Ithomi	4.05	295	PN	Pn	22 23 26.9	+0.4
BRTR	Keskin Array B	7.03	51	Pn	Pn	22 24 08.6	+1.2
	comp=E,0.3nm,0.3s,baz=217,slow=15,SNR=16						
MMAI	Mount Meron Ar	7.77	106	Pn	Pn	22 24 17.0	-0.6
	comp=E,1.3nm,0.3s,baz=310,slow=12,SNR=9.5						
MMAI				Sn	Sn	22 25 40.4	-4.6
	comp=E,0.8nm,0.3s,baz=306,slow=11,SNR=1.4						
EIL	Elat	9.21	127	Pn	Pn	22 24 36.8	-0.4
	comp=E,0.3nm,0.3s,baz=342,slow=16,SNR=2.2						
KBZ	Khabaz	15.02	52	Pn	P	22 26 01.2	-0.7
	comp=E,0.1nm,0.3s,baz=224,slow=9.4,SNR=5.6						
AKASG	Malin Array Be	15.28	7	Pn	Pn	22 26 01.2	+1.1
	comp=E,0.3nm,0.3s,baz=196,slow=11,SNR=3.4						
ESDC	Sonseca Array	24.44	289	P	P	22 27 42.3	-0.7
	comp=E,0.5nm,0.4s,baz=85,slow=9.6,SNR=16						
TORD	Torodi Ar. Bea	31.59	231	P	P	22 28 46.9	-0.1
	comp=E,0.7nm,0.6s,baz=127,slow=24,SNR=2.7						
AAK	Ala-Archa	37.49	64	P	P	22 29 39.4	+1.4
	comp=E,0.5nm,0.5s,baz=258,slow=11,SNR=3.9						
MKAR	Makanchi Array	42.64	57	P	P	22 30 21.1	+0.5
	comp=E,1.0nm,0.4s,baz=270,slow=8.5,SNR=36						
ZALV	Zalesovo Beam	43.94	46	P	P	22 30 30.3	-0.6
	comp=E,0.7nm,0.4s,baz=272,slow=8.1,SNR=3.3						

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*KRSC **10** 22:25:51.9±2.3, 55.°27N×166.°82E, h44^{km}±15^{km}, ML5.0*

*IDC **10** 22:25:53.3±0.6, 55.°39N×166.°69E, h0^{km}, mb3.9/26, mb1 4.1/29, mb1mx4.0/62, mbtmp4.0/29, ML3.6/3, MS3.9/31, Ms1 4.0/31, ms1mx3.8/49, Error ellipse: s-maj=19.3km s-min=10.0km az=160.0*

*NEIC **10** 22:25:56.9±1.4, 55.°3N±0.°1×166.°6E±0.°1, h27^{km}±5^{km}, mb4.4/50, Error ellipse: s-maj=15.6km s-min=10.0km az=180.0*

*MOS **10** 22:25:56.4±1.3, 55.°36N×166.°59E, h41^{km}, mb4.4/8, Error ellipse: s-maj=6.1km s-min=5.5km az=47.3*

ISC 10 22:25:55.6±0.4**, 55.°29N**±0.°05×**166.°66E**±0.°04**, h20**^{km}**, n225, σ1.°42**/253**, mb4.4**/64**, MS4.0**/31**, 7C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.40	258	PN	Pb	22 26 03.4	-0.5
BKI				S	Sb	22 26 10.1	+0.5
BKI	Bering	0.40	258	*e*P	Pb	22 26 03.4	-0.5
BKI				*e*S	Sb	22 26 10.1	+0.5
KBTR	Krutoberegovo	2.36	295	PN	Pn	22 26 31.3	-1.8
KBTR				S	Sn	22 27 00.2	-1.2
KBTR	Krutoberegovo	2.36	295	*e*P	Pn	22 26 31.3	-1.8
KBTR				*e*S	Sn	22 27 00.2	-1.2
KBG	Krutoberegovo	2.43	295	PN	Pn	22 26 32.4	-1.7
KBG				S	Sn	22 27 02.9	-0.3
KBG	Krutoberegovo	2.43	295	*e*P	Pn	22 26 32.4	-1.7
KBG				*e*S	Sn	22 27 02.9	-0.3
SMKR	Semkarok	3.19	296	PN	Pn	22 26 44.9	+0.2
SMKR				S	Sn	22 27 22.9	+0.8
SMKR	Semkarok	3.19	296	*e*P	Pn	22 26 44.9	+0.2
SMKR				*e*S	Sn	22 27 22.9	+0.8
BDR	Baidarnaya	3.32	295	PN	Pn	22 26 46.8	+0.4
BDR				S	Sn	22 27 28.1	+2.8
BDR	Baidarnaya	3.32	295	*e*P	Pn	22 26 46.8	+0.4
BDR				*e*S	Sn	22 27 28.1	+2.8
SRKR	Sorokina	3.37	296	PN	Pn	22 26 47.2	+0.1
SRKR	Sorokina	3.37	296	*e*P	Pn	22 26 47.2	+0.1
KLY	Klyuchi	3.54	289	PN	Pn	22 26 48.2	-1.1
KLY				S	Sn	22 27 29.7	-0.9
KLY	Klyuchi	3.54	289	*e*P	Pn	22 26 48.2	-1.1
KLY				*e*S	Sn	22 27 29.7	-0.9
KRSR	Krestovskiy	3.56	288	*e*S	Sn	22 27 32.9	+1.6
KIRR	Kirishev	3.64	283	PN	Pn	22 26 53.6	+2.7
KIRR	Kirishev	3.64	283	*e*P	Pn	22 26 53.6	+2.7
KZV	Kizimen	3.65	270	PN	Pn	22 26 51.6	+0.6
KZV				S	Sn	22 27 33.7	+0.2
KZV	Kizimen	3.65	270	*e*P	Pn	22 26 51.6	+0.6
KZV				*e*S	Sn	22 27 33.7	+0.2
KMNR	Kamenistaya	3.68	280	PN	Pn	22 26 53.0	+1.7
KMNR				S	Sn	22 27 37.2	+3.1
KMNR	Kamenistaya	3.68	280	*e*P	Pn	22 26 53.0	+1.7
KMNR				*e*S	Sn	22 27 37.2	+3.1
TUMR	Tumrok	3.72	273	PN	Pn	22 26 53.0	+1.0
TUMR				S	Sn	22 27 37.9	+2.7
TUMR	Tumrok	3.72	273	*e*P	Pn	22 26 53.0	+1.0
TUMR				*e*S	Sn	22 27 37.9	+2.7
KOZ	Kozyrevsk	3.92	284	PN	Pn	22 26 56.3	+1.8
KOZ				S	Sn	22 27 43.9	+4.0
KOZ	Kozyrevsk	3.92	284	*e*P	Pn	22 26 56.3	+1.8
KOZ				*e*S	Sn	22 27 43.9	+4.0
SRDR	Sredinnyy	4.05	288	PN	Pn	22 26 57.1	+0.7
SRDR	Sredinnyy	4.05	288	*e*P	Pn	22 26 57.1	+0.7
KII	Karymskiy	4.37	256	PN	Pn	22 27 02.0	+1.2
KII				S	Sn	22 27 52.5	+1.4
KII	Karymskiy	4.37	256	*e*P	Pn	22 27 02.0	+1.2
KII				*e*S	Sn	22 27 52.5	+1.4
OSSR	Ossora	4.43	335	PN	Pn	22 26 59.6	-1.9
OSSR	Ossora	4.43	335	*e*P	Pn	22 26 59.6	-1.9
SPN	Mys Shipunski	4.47	243	PN	Pn	22 27 01.7	-0.4
SPN	Mys Shipunski	4.47	243	*e*P	Pn	22 27 01.7	-0.4
SPN				*e*S	Sn	22 27 51.7	-1.8
ESO	Esso	4.56	281	PN	Pn	22 27 05.2	+1.9
ESO	Esso	4.56	281	*e*P	Pn	22 27 05.2	+1.9
NLC	Nalytchevo	4.78	247	*e*S	Sn	22 28 00.2	-1.0
SMAR	Somma	5.03	249	PN	Pn	22 27 11.4	+1.4
SMAR				S	Sn	22 28 08.7	+1.1
SMAR	Somma	5.03	249	*e*P	Pn	22 27 11.4	+1.4
SMAR				*e*S	Sn	22 28 08.7	+1.1
KRER	Koryakskii	5.04	250	PN	Pn	22 27 11.5	+1.4
KRER				S	Sn	22 28 09.2	+1.4
KRER	Koryakskii	5.04	250	*e*P	Pn	22 27 11.5	+1.4
KRER				*e*S	Sn	22 28 09.2	+1.4
UGLR	Uglovaya	5.04	249	PN	Pn	22 27 12.0	+1.9
UGLR	Uglovaya	5.04	249	*e*P	Pn	22 27 12.0	+1.9
AVH	Avacha	5.06	250	PN	Pn	22 27 11.6	+1.3
AVH	Avacha	5.06	250	*e*P	Pn	22 27 11.6	+1.3
KRX	Arik	5.07	251	PN	Pn	22 27 11.6	+1.1
KRX				S	Sn	22 28 08.9	+0.5
KRX	Arik	5.07	251	*e*P	Pn	22 27 11.6	+1.1
KRX				*e*S	Sn	22 28 08.9	+0.5
SMY	Shemya	5.08	117	PN	Pn	22 27 09.8	-0.7
SMY	Shemya	5.08	117	Pn	Pn	22 27 09.8	-0.7
KOK	Koryaka	5.11	250	PN	Pn	22 27 12.2	+1.3
KOK				S	Sn	22 28 10.4	+1.1
KOK	Koryaka	5.11	250	*e*P	Pn	22 27 12.2	+1.3
KOK				*e*S	Sn	22 28 10.4	+1.1
DALK	Dalny	5.16	247	PN	Pn	22 27 12.1	+0.5
DALK	Dalny	5.16	247	*e*P	Pn	22 27 12.1	+0.5
DALK				*e*S	Sn	22 28 09.2	-1.3
TILK	Tilichiki	5.18	357	PN	Pn	22 27 10.9	-0.9
TILK	Tilichiki	5.18	357	*e*P	Pn	22 27 10.9	-0.9
PET	Petropavlovsk	5.22	248	*e*PN	Pn	22 27 12.7	+0.3
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	Petropavlovsk	5.22	248	*e*P	Pn	22 27 14.4	+2.0
PET				*e*S	Sn	22 28 12.9	+1.0
PET	Petropavlovsk	5.22	248	Pn	Pn	22 27 12.9	+0.5
PALN	Palana	5.27	319	PN	Pn	22 27 11.7	-1.3
PALN	Palana	5.27	319	*e*P	Pn	22 27 11.7	-1.3
GNL	Ganaly	5.32	256	PN	Pn	22 27 15.7	+1.8
GNL	Ganaly	5.32	256	*e*P	Pn	22 27 15.7	+1.8
RUS	Russkaya	5.60	243	*e*S	Sn	22 28 19.3	-2.0
PEA0B	Petropavlovsk-	5.69	251	*i* PN	Pn	22 27 19.6	+0.7
PEA0B	Petropavlovsk-	5.69	251		Pn	22 27 20.2	+1.3
PETK	Petropavlovsk-	5.69	251	Pn	Pn	22 27 19.3	+0.4
	comp=Z,9.4nm,0.3s,baz=70,slow=17,SNR=105						
PETK				Sn	Sn	22 28 27.6	+4.0
	comp=Z,7.1nm,0.3s,baz=40,slow=7.7,SNR=7.3						
PETK				LR	LR	22 29 46.0	
	comp=Z,1µm,19.9s,baz=36,slow=40						
PETK	Petropavlovsk-	5.69	251		Pn	22 27 19.5	+0.6
MTVR	Mutnovka	5.74	244	PN	Pn	22 27 20.4	+0.7
MTVR	Mutnovka	5.74	244	*e*P	Pn	22 27 20.4	+0.7
MTVR				*e*S	Sn	22 28 25.1	0.0
GRL	Gorelyy	5.76	245	PN	Pn	22 27 21.3	+1.3
GRL	Gorelyy	5.76	245	*e*P	Pn	22 27 21.3	+1.3
ASAK	Asacha	5.94	244	PN	Pn	22 27 23.7	+1.3
ASAK	Asacha	5.94	244	*e*P	Pn	22 27 23.7	+1.3
ASAK				*e*S	Sn	22 28 30.4	+0.5
APC	Apacha	6.07	251	PN	Pn	22 27 25.9	+1.9
APC	Apacha	6.07	251	*e*P	Pn	22 27 25.9	+1.9
APC				*e*S	Sn	22 28 33.3	+0.5
KDTR	Khodutka, Kamc	6.18	239	*e*S	Sn	22 28 32.2	-3.5
KMSK	Kamenskaya	7.21	358	PN	Pn	22 27 38.9	-0.7
KMSK	Kamenskaya	7.21	358	*e*P	Pn	22 27 38.9	-0.7
SKR	Severo-Kuril’s	7.85	238	*e*PN	Pn	22 27 50.4	+1.9
SKR				pmax	pmax		
	comp=Z,78nm,1.1s						
SKR				MLR	MLR		
	comp=Z,700nm,13.0s						
SKR	Severo-Kuril’s	7.85	238	*e*S	Sn	22 29 14.6	-2.1
SEY	Seymchan	10.59	322	Pn	Pn	22 28 26.0	+0.1
	comp=Z,0.1nm,0.3s,baz=107,slow=18,SNR=1.3						
SEY				LR	LR	22 32 28.1	
	comp=Z,771nm,19.2s,baz=146,slow=38						
SEY	Seymchan	10.59	322	PN	Pn	22 28 26.0	+0.1
UNV	Unalaska Valle	15.60	84	Pn	Pn	22 29 36.1	+2.0
ANM	Nome	16.67	45	P	P	22 29 50.2	+0.3
ANM				pmax	pmax		
	comp=Z,28nm,1.4s						
ANM	Nome	16.67	45	P	P	22 29 50.2	+0.3
ANM				IAmb	IAmb	22 30 02.5	
	comp=Z,28nm,1.4s						
YSS	Yuzh-Sakhalins	17.10	251	*e*P	P	22 29 55.6	+0.9
YSS				*e*S	Sn	22 32 55.5	-7.0
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS				MLR	MLR		
	comp=N,700nm,17.0s						
JKA	Kamikawa-asahi	19.05	244	P	P	22 30 17.2	+1.0
ASAJ	Asahikawa	19.05	244	P	Pn	22 30 18.0	+0.8
	comp=N,0.8nm,0.3s,baz=354,slow=9.5,SNR=4.9						
ASAJ				LR	LR	22 37 09.3	
	comp=N,385nm,19.6s,baz=54,slow=35						
ASAJ	Asahikawa	19.05	244	P	P	22 30 17.3	+1.0
ASAJ				pmax	pmax		
	comp=Z,43nm,1.1s						
YAK	Yakutsk	20.15	305	P	P	22 30 27.8	-0.3
	comp=Z,14nm,0.8s,baz=102,slow=2.8,SNR=14						
YAK				LR	LR	22 38 24.6	
	comp=Z,312nm,18.9s,baz=94,slow=37						
YAK	Yakutsk	20.15	305	*ce*P	P	22 30 27.3	-0.8
YAK				pmax	pmax		
	comp=Z,27nm,0.8s						
YAK	Yakutsk	20.15	305	P	P	22 30 27.2	-0.9
ERM	Erimo	20.30	239	P	P	22 30 30.8	+0.9
ERM				pmax	pmax		
	comp=Z,94nm,1.3s						
ERM	Erimo	20.30	239	P	P	22 30 30.8	+0.9
TTA	Tatalina	20.37	53	P	P	22 30 31.8	+1.1
TTA				pmax	pmax		
	comp=Z,11nm,1.2s						
TTA	Tatalina	20.37	53	P	P	22 30 31.8	+1.1
IMAR	Indian Mountai	21.75	45	P	P	22 30 46.7	+1.3
KLR	Kul'dur	22.04	269	P	P	22 30 49.2	+0.6
	comp=Z,1.1nm,0.6s,baz=88,slow=13,SNR=3.5						
KLR				LR	LR	22 40 09.5	
	comp=Z,307nm,19.1s,baz=68,slow=39						
KLR	Kul'dur	22.04	269	*ce*P	P	22 30 48.9	+0.3
KLR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OHAK	Old Harbor	22.12	68	P	P	22 30 50.6	+1.3
OHAK				IAmb	IAmb	22 31 01.5	
	comp=Z,15nm,1.0s						
PPLA	Purkeypile	22.12	53	P	P	22 30 50.6	+1.0
PPLA				IAmb	IAmb	22 31 01.2	
	comp=Z,27nm,1.3s						
KDAK	Kodiak Island	22.38	67	P	P	22 30 51.7	-0.5
	comp=Z,3.2nm,0.6s,baz=285,slow=7.4,SNR=6.0						
KDAK	Kodiak Island	22.38	67	P	P	22 30 51.4	-0.7
KDAK				pmax	pmax		
	comp=Z,21nm,1.3s						
KDAK	Kodiak Island	22.38	67	P	P	22 30 51.4	-0.7
KDAK				IAmb	IAmb	22 30 56.9	
	comp=Z,21nm,1.3s						
SKT	Skwentna	22.43	56	P	P	22 30 54.2	+1.4
A21K	Barrow	22.45	30	P	P	22 30 53.0	+0.1
A21K				IAmb	IAmb	22 31 03.2	
	comp=Z,15nm,1.2s						
BPAW	Bear Paw Mtn.	22.70	50	P	P	22 30 56.2	+0.6
BPAW				IAmb	IAmb	22 31 07.3	
	comp=Z,23nm,1.4s						
CNPM	China Poot	22.78	62	P	P	22 30 56.4	-0.1
CNPM				IAmb	IAmb	22 31 09.6	
	comp=Z,25nm,1.4s						
SUA	Susitna One	22.83	57	P	P	22 30 57.3	+0.2
TIXI	Tiksi	22.90	330	*ce*P	P	22 30 57.0	-0.6
TIXI	Tiksi	22.90	330	P	P	22 30 56.9	-0.6
COLD	Coldfoot	23.36	42	P	P	22 31 02.5	+0.1
I23K	Minto, Yukon-K	23.46	47	P	P	22 31 03.6	+0.3
I23K				IAmb	IAmb	22 31 13.4	
	comp=Z,10nm,1.1s						
TOLK	Toolik Lake Re	23.86	39	P	P	22 31 08.0	+0.7
TOLK				IAmb	IAmb	22 31 22.8	
	comp=Z,27nm,1.5s						
WRH	Wood River Hil	23.98	49	P	P	22 31 08.4	+0.2
WRH				IAmb	IAmb	22 31 19.3	
	comp=Z,16nm,1.1s						
COLA	College	24.09	48	*i* P	P	22 31 09.7	+0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CCB	Clear Creek Bu	24.10	49	P	P	22 31 09.1	-0.4
CCB				IAmb	IAmb	22 31 20.3	
	comp=Z,20nm,1.4s						
HDA	Harding Lake	24.47	49	P	P	22 31 12.5	-0.3

IL31		24.50	49	P	P	22 31 13.0	0.0
IL31				IAmb	IAmb	22 31 16.1	
	comp=Z,9.1nm,1.0s						
ILAR	Eielson Array	24.50	49	P	P	22 31 12.7	-0.4
	comp=Z,6.1nm,1.0s,baz=255,slow=8.3,SNR=22						
ILAR				LR	LR	22 41 38.6	
	comp=Z,225nm,18.9s,baz=278,slow=39						
ILAR	Eielson Array	24.50	49	P	P	22 31 13.2	+0.1
USRK	Ussuriysk Ar.	24.73	258	P	P	22 31 18.1	+2.7
	comp=Z,3.2nm,1.0s,baz=50,slow=10,SNR=4.3						
USRK				LR	LR	22 41 01.1	
	comp=Z,315nm,21.2s,baz=52,slow=37						
USRK	Ussuriysk Ar.	24.73	258	P	P	22 31 15.8	+0.5
USRK	Ussuriysk Ar.	24.73	258	P	P	22 31 15.8	+0.5
PRP	Porcupine Dome	25.09	47	P	P	22 31 19.2	+0.7
PRP				IAmb	IAmb	22 31 29.7	
	comp=Z,17nm,1.3s						
FYU	Fort Yukon	25.24	44	P	P	22 31 20.2	+0.5
K27K	Chicken	26.62	50	P	P	22 31 32.1	-0.1
K27K				IAmb	IAmb	22 31 43.7	
	comp=Z,15nm,1.4s						
BCAR	Beaver Creek A	26.85	52	P	P	22 31 34.0	-0.4
EGAK	Eagle	26.95	48	P	P	22 31 34.2	-1.0
MAJO	Matsushiro	26.96	238	P	P	22 31 35.1	-0.5
MAJO				pmax	pmax		
	comp=Z,23nm,1.0s						
MAJO	Matsushiro	26.96	238	P	P	22 31 35.1	-0.5
MAT	Matsushiro	26.96	238	P	P	22 31 37.7	+2.1
MAT				*e*S	S	22 36 04.2	-7.4
MJAR	Matsushiro Arr	26.96	238	P	P	22 31 38.1	+2.5
	comp=Z,4.8nm,0.9s,baz=35,slow=8.6,SNR=11						
MJAR				LR	LR	22 43 06.5	
	comp=Z,108nm,19.6s,baz=40,slow=38						
MJAR	Matsushiro Arr	26.96	238	P	P	22 31 36.8	+1.2
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MJAR	Matsushiro Arr	26.96	238	P	P	22 31 36.8	+1.2
JGF	Kuroka	28.13	238	P	P	22 31 46.7	+0.6
HYT	Haines Junctio	29.26	56	P	P	22 31 56.5	+0.5
HYT				IAmb	IAmb	22 32 05.4	
	comp=Z,4.8nm,0.8s						
INK	Inuvik	29.73	40	P	P	22 32 00.2	+0.2
	comp=Z,1.6nm,0.7s,baz=272,slow=14,SNR=3.5						
KSRS	Korea Array	31.59	252	P	P	22 32 19.6	+3.0
	comp=Z,2.1nm,0.9s,baz=36,slow=9.5,SNR=3.3						
KSRS				LR	LR	22 44 28.1	
	comp=Z,176nm,19.1s,baz=46,slow=35						
DLBC	Dease Lake	33.62	58	P	P	22 32 35.2	+1.0
	comp=Z,2.6nm,0.7s,baz=305,slow=9.4,SNR=6.8						
DLBC				LR	LR	22 46 55.1	
	comp=Z,155nm,20.5s,baz=303,slow=38						
DLBC	Dease Lake	33.62	58	P	P	22 32 35.3	+1.0
DLBC				IAmb	IAmb	22 32 53.2	
	comp=Z,4.7nm,1.0s						
H11N2	WAKE ISLAND Hy	35.50	180	T	T	23 10 56.7	
	baz=359,slow=76,SNR=528						
H11N3	WAKE ISLAND Hy	35.51	180	T	T	23 10 42.3	
	baz=359,slow=76,SNR=463						
H11N1	WAKE ISLAND Hy	35.52	180	T	T	23 10 43.4	
	baz=359,slow=76,SNR=502						
TLY	Talaya	36.54	291	P	P	22 33 00.0	+0.6
TLY				pmax	pmax		
	comp=Z,12nm,1.4s						
TLY	Talaya	36.54	291	P	P	22 32 60.0	+0.6
TLY				IAmb	IAmb	22 33 01.8	
	comp=Z,12nm,1.4s						
ULN	Ulaanbaatar	36.74	284	*i* P	P	22 33 01.4	0.0
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	36.74	284	P	P	22 33 01.1	-0.3
ULN				IAmb	IAmb	22 33 11.3	
	comp=Z,8.2nm,1.4s						
SONM	Songino Array	37.13	284	P	P	22 33 05.0	+0.4
	comp=Z,1.8nm,0.8s,baz=59,slow=8.2,SNR=7.0						
SONM				LR	LR	22 49 37.6	
	comp=Z,299nm,18.3s,baz=120,slow=38						
SONM	Songino Array	37.13	284	P	P	22 33 04.7	+0.1
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	37.13	284	P	P	22 33 04.7	+0.1
BBB	Bella Bella	37.45	67	LR	LR	22 47 42.4	
	comp=Z,171nm,18.6s,baz=311,slow=35						
MOY	Mondy	37.95	293	*e*P	P	22 33 13.6	+2.1
HHC	Hu-ho-hao-te	38.49	272	*e*P	P	22 33 17.1	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
HHC				LR	LR		
	comp=N,530nm,13.3s						
HHC				LR	LR		
	comp=E,580nm,15.2s						
HHC				LR	LR		
	comp=Z,340nm,15.7s						
EUNU	Eureka	38.85	15	P	P	22 33 19.7	+0.9
YKA	Yellowknife Ar	38.89	46	P	P	22 33 19.4	+0.3
	comp=Z,1.2nm,0.8s,baz=298,slow=7.5,SNR=12						
RES	Resolute Bay	39.79	24	P	P	22 33 27.5	+1.0
	comp=Z,0.5nm,0.6s,baz=294,slow=12,SNR=2.4						
ZALV	Zalesovo Beam	44.80	304	P	P	22 34 09.4	+1.9
	comp=Z,0.4nm,0.4s,baz=96,slow=4.3,SNR=2.4						
ZALV				LR	LR	22 54 25.1	
	comp=Z,48nm,19.1s,baz=306,slow=38						
SPA0	Spitsbergen Ar	45.56	352	P	P	22 34 12.9	-0.4
DGZ	Jazzator, Alta	46.11	298	*i* P	P	22 34 17.8	-0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA	Gaotai	46.14	279	*e*P	P	22 34 19.2	+0.7
GTA				pP	pP	22 34 23.4	-1.3
GTA				sP	sP	22 34 26.5	-0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,210nm,6.4s						
GTA				LR	LR		
	comp=N,390nm,16.3s						
GTA				LR	LR		
	comp=E,440nm,17.1s						
GTA				LR	LR		
	comp=Z,380nm,16.3s						
LZH	Lanzhou	46.15	273	*e*P	P	22 34 18.7	0.0
LZH				pP	sP	22 34 27.4	+0.1
LZH				sP	pP	22 34 30.0	+5.1
LZH				PP	PP	22 36 08.2	+1.3
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,65nm,4.9s						
LZH				LR	LR		
	comp=N,580nm,16.3s						
LZH				LR	LR		
	comp=E,470nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,16.3s						
K05A	Summer Lake	47.03	74	P	P	22 34 26.1	+0.6
JTMT	Jette	47.27	64	P	P	22 34 27.9	+0.6
JTMT				IAmb	IAmb	22 34 37.0	
	comp=Z,3.5nm,1.0s						
KURK	Kurchatov	49.79	304	*ce*P	P	22 34 44.6	-1.8
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	49.79	304	P	P	22 34 45.9	-0.5
WMQ	Urumqi	49.82	292	*e*P	P	22 34 48.7	+1.9
MK31	Makanchi Array	50.61	298	*ce*P	P	22 34 50.8	-1.9
MK31	Makanchi Array	50.61	298	P	P	22 34 51.9	-0.9
MKAR	Makanchi Array	50.61	298	P	P	22 34 52.0	-0.8
	comp=Z,0.8nm,0.5s,baz=55,slow=6.1,SNR=23						
MKAR				LR	LR	22 58 13.9	
	comp=Z,120nm,19.1s,baz=27,slow=38						
MKAR	Makanchi Array	50.61	298	P	P	22 34 51.9	-0.8
MKAR	Makanchi Array	50.61	298	P	P	22 34 51.9	-0.8
WAKR	Walker	50.73	77	P	P	22 34 55.1	+1.2
WAKR				IAmb	IAmb	22 35 09.7	
	comp=Z,8.4nm,1.5s						
MAKZ	Makanchi	50.76	298	P	P	22 34 53.0	-0.9
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	50.76	298	P	P	22 34 53.0	-0.9
NVAR	Mina Array Bea	51.41	76	P	P	22 34 59.8	+0.7
	comp=Z,0.8nm,0.7s,baz=294,slow=8.0,SNR=4.6						
NVAR				LR	LR	22 55 06.7	
	comp=Z,131nm,18.7s,baz=333,slow=34						
BRVK	Borovoye	52.00	310	*ce*P	P	22 35 02.1	-0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	52.00	310	P	P	22 35 03.7	+0.7
BRVK				IAmb	IAmb	22 35 16.2	
	comp=Z,6.6nm,1.1s						
ARCES	ARCESS Array B	52.33	344	LR	LR	22 59 31.5	
	comp=Z,159nm,18.1s,baz=245,slow=39						
PDAR	Pinedale Array	53.09	66	P	P	22 35 12.0	+0.4
	comp=Z,0.7nm,0.9s,baz=290,slow=4.4,SNR=4.1						
PDAR				LR	LR	22 57 39.1	
	comp=Z,85nm,18.9s,baz=350,slow=36						
PDAR	Pinedale Array	53.09	66	P	P	22 35 11.8	+0.2
FRB	Frobisher Bay	53.88	27	P	P	22 35 15.7	-1.0
	comp=Z,2.3nm,0.5s,baz=319,slow=8.0,SNR=8.5						
ARU	Arti	54.32	319	*d i*P	P	22 35 17.7	-2.3
ARU				S	S	22 42 55.6	-0.8
ARU				SS	SS	22 46 38.6	+0.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ULM	Lac du Bonnet	54.47	51	LR	LR	23 00 01.0	
	comp=Z,104nm,18.1s,baz=311,slow=38						
KMI	Kunming	54.95	264	⇑P	P	22 35 24.1	-1.2
KMI				pP	sP	22 35 36.6	+2.7
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
AAK	Ala-Archa	57.48	299	P	P	22 35 43.2	+0.1
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AAK	Ala-Archa	57.48	299	P	P	22 35 43.2	+0.1
AAK				IAmb	IAmb	22 35 52.1	
	comp=Z,6.6nm,1.2s						
KSH	Kashi	59.03	296	P	P	22 35 57.5	+3.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,780nm,5.9s						
KKAR	Karatay Array	59.09	302	P	P	22 35 53.3	-0.9
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	Karatay Array	59.09	302	P	P	22 35 53.3	-0.9
KKAR	Karatay Array	59.09	302	P	P	22 35 53.4	-0.9
KKAR				IAmb	IAmb	22 36 08.0	
	comp=Z,4.2nm,0.9s						
ABKAR	Akbulak array	59.21	313	P	P	22 35 54.7	-0.1
ABKAR	Akbulak array	59.21	313	P	P	22 35 55.2	+0.4
FINES	FINESS Array B	59.54	339	P	P	22 35 56.8	-0.1
	comp=Z,4.2nm,0.9s,baz=12,slow=7.3,SNR=2.3						
FINES				LR	LR	23 04 50.7	
	comp=Z,116nm,18.4s,baz=5.5,slow=39						
ANMO	Albuquerque	60.45	71	P	P	22 36 04.4	+0.6
	comp=Z,0.6nm,0.6s,baz=0.9,slow=5.4,SNR=4.1						
CMAR	Chiang Mai Arr	62.35	263	P	P	22 36 16.9	+0.3
	comp=Z,0.6nm,0.3s,baz=17,slow=7.7,SNR=6.6						
CMAR				LR	LR	23 05 47.6	
	comp=Z,153nm,18.6s,baz=116,slow=38						
CMAR	Chiang Mai Arr	62.35	263	*i* P	P	22 36 16.8	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	62.35	263	P	P	22 36 17.1	+0.5
NOA	NORSAR Array B	62.40	347	LR	LR	23 05 09.0	
	comp=Z,68nm,18.1s,baz=355,slow=38						
GUN	Gumba	62.41	280	*e*P	P	22 36 17.0	-0.4
	comp=Z,10nm,0.7s						
RAMN	Ramite	62.75	279	*e*P	P	22 36 19.2	-0.3
	comp=Z,16nm,0.5s						
KKN	Kakani	62.84	280	*e*P	P	22 36 20.4	+0.3
	comp=Z,6.0nm,0.6s						
HFS	Hagfors	62.93	345	P	P	22 36 19.6	-0.3
	comp=Z,7.5nm,1.0s,baz=143,slow=7.9,SNR=2.0						
PKI	Pulchoki	62.94	280	*e*P	P	22 36 20.7	-0.2
	comp=Z,8.4nm,0.8s						
PKIN	Phulchoki	62.94	280	*e*P	P	22 36 20.1	-0.7
	comp=Z,4.7nm,0.5s						
DANN	Dangsing	63.27	282	*e*P	P	22 36 23.5	+0.5
	comp=Z,12nm,0.7s						
HNR	Honiara	64.72	187	LR	LR	22 58 27.8	
	comp=Z,138nm,21.1s,baz=22,slow=30						
NIL	Nilore	64.91	293	P	P	22 36 33.5	+0.1
NIL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NIL	Nilore	64.91	293	P	P	22 36 33.5	+0.1
TX31	Lajitas Ar. Si	66.26	73	P	P	22 36 42.7	+0.5
TXAR	Lajitas Array	66.26	73	P	P	22 36 43.0	+0.8
	comp=Z,1.3nm,0.7s,baz=303,slow=4.7,SNR=15						
KBL	Kabul	66.40	297	P	P	22 36 42.0	-1.2
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	Kabul	66.40	297	P	P	22 36 42.0	-1.2
AKASG	Malin Array Be	68.59	332	P	P	22 36 56.7	+0.2
	comp=Z,0.6nm,0.5s,baz=28,slow=7.0,SNR=4.3						
AKASG				LR	LR	23 09 35.2	
	comp=Z,134nm,18.0s,baz=290,slow=38						
GEYT	Alibeck	69.01	307	LR	LR	23 10 35.4	
	comp=Z,227nm,18.4s,baz=95,slow=39						
KBZ	Khabaz	70.46	320	LR	LR	23 12 48.3	
	comp=Z,98nm,18.2s,baz=20,slow=40						
CLL	Collm	71.53	343	*e*P	P	22 37 13.0	-1.6
CLL				*e*pP	pwP	22 37 24.0	+0.1
CLL	Collm	71.53	343	*e*P	P	22 37 13.0	-1.6
CLL				*e*		22 37 24.0	
MSVF	Nonsavu	73.37	169	LR	LR	23 08 13.7	
	comp=Z,44nm,18.2s,baz=318,slow=35						
GERES	GERESS Array B	73.79	342	LR	LR	23 13 22.2	
	comp=Z,211nm,18.0s,baz=288,slow=39						
BRTR	Keskin Array B	77.22	325	LR	LR	23 16 36.8	
	comp=Z,29nm,18.7s,baz=2.0,slow=39						
WRA	Warramunga Arr	79.82	211	P	P	22 38 03.1	+0.9
	comp=Z,0.8nm,0.9s,baz=25,slow=6.1,SNR=2.5						
PPT	Papeete	81.49	138	LR	LR	23 09 00.2	
	comp=Z,68nm,19.8s,baz=357,slow=32						
ASAR	Alice Springs	83.47	210	P	P	22 38 21.9	+0.4
	comp=Z,0.7nm,0.8s,baz=14,slow=5.7,SNR=6.2						
ESDC	Sonseca Array	85.07	353	P	P	22 38 29.5	-0.2
	comp=Z,0.8nm,1.0s,baz=355,slow=6.4,SNR=2.4						
ESDC				LR	LR	23 15 47.1	
	comp=Z,84nm,19.1s,baz=305,slow=35						
RAO	Raoul Island	85.23	167	LR	LR	23 11 49.6	
	comp=Z,153nm,19.0s,baz=45,slow=32						

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*IDC **10** 22:28:34.1±0.9, 44°.58N×113°.92W, h0^{km}, mb1 3.3/5,*
mb1mx3.2/49, mbtmp3.0/5, ML3.2/5, Error ellipse:
s-maj=14.8km s-min=8.4km az=55.0
*BUT **10** 22:28:35.6±2.3, 44°.45N±0°.05×114°.13W±0°.05, h13^{km}±7^{km},*
ML3.6, ML3.2/84(NEIC), Error ellipse: s-maj=7.4km
s-min=5.4km az=192.0
*NEIC **10** 22:28:36.4±1.5, 44°.50N±0°.05×114°.17W±0°.06, h9^{km}±7^{km},*
Error ellipse: s-maj=7.2km s-min=5.8km az=177.0
ISC 10 22:28:34.8±0.9**, 44°.50N**±0°.03×**114°.18W**±0°.03**, h6^{km}, n53,**
σ**1^{s}.42**/53**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	Bear Canyon	0.58	108		Pg	22 28 45.9	-0.1
HLID	Hailey	0.95	191	Pg	Pg	22 28 52.7	-0.3
HLID				Sg	Sg	22 29 05.3	-0.1
HLID				IAML		22 29 10.2	
	860nm,0.4s						
HLID				IAML		22 29 10.6	
	871nm,0.3s						
MCMT	McKenzie Canyo	1.00	70	Pg	Pg	22 28 54.0	0.0
DLMT	Dillon	1.42	52		Pg	22 29 01.8	-0.2
DLMT				IAML		22 29 23.8	
	539nm,0.6s						
MFID	Camas Ranch	1.61	228	Pn	Pn	22 29 04.8	+0.9
QLMT	Earthquake Lak	1.99	79		Pb	22 29 10.9	-0.6
BOZ	Bozeman (W)	2.11	58		Pn	22 29 11.8	+1.0
BOZ				IAML		22 29 43.3	
	205nm,0.4s						
YHB	Horse Butte	2.14	82		Pb	22 29 13.0	-1.1
YHB				IAML		22 29 43.1	
	comp=E,186nm,0.7s						
YHB				IAML		22 29 44.2	
	comp=N,193nm,0.7s						
YHL	Hebgen Lake	2.16	80		Pn	22 29 13.1	+1.5
BMO	Blue Mountains	2.26	280	Pn	Pn	22 29 13.9	+1.1
BMO				IAML		22 29 50.3	
	comp=N,116nm,0.4s						
BMO				IAML		22 29 51.1	
	comp=N,102nm,0.4s						
MSO	Missoula	2.34	4	Pn	Pn	22 29 14.7	+0.8
MSO				IAML		22 29 53.2	
	comp=N,151nm,0.5s						
MSO				IAML		22 29 54.8	
	comp=N,130nm,0.5s						
YHH	Holmes Hill	2.39	82	Pn	Pn	22 29 16.1	+1.3
YPP	Pitchstone Pla	2.43	94		Pn	22 29 17.0	+1.7
YPP				IAML		22 29 50.1	
	comp=N,86nm,0.8s						
YPP				IAML		22 29 52.0	
	comp=E,84nm,0.6s						
YNM	Yellowstone No	2.49	84		Pn	22 29 17.0	+0.9
YNM				IAML		22 29 54.6	
	comp=N,119nm,0.4s						
YNM				IAML		22 29 54.8	
	comp=E,149nm,0.6s						
ECR	Eagle Creek	2.49	124		Pn	22 29 17.8	+1.7
FLWY	Flagg Ranch	2.53	98		Pn	22 29 18.2	+1.6
FLWY				IAML		22 29 57.7	
	comp=E,98nm,0.7s						
FLWY				IAML		22 30 00.2	
	comp=E,91nm,1.0s						
H17A	Grant Village	2.58	91		Pn	22 29 19.1	+1.8
MOOW	Moose Ponds	2.58	106		Pn	22 29 18.9	+1.5
F10A	Beach Ranch, E	2.61	305		Pn	22 29 19.8	+2.1
REDW	Red Top Meadow	2.66	114		Pn	22 29 20.0	+1.7
REDW				IAML		22 29 58.0	
	comp=E,88nm,0.6s						
REDW				IAML		22 30 05.9	
	comp=E,68nm,0.8s						
LKWY	Lake	2.70	87		Pn	22 29 21.0	+2.0
LOHW	Long Hollow	2.72	108		Pn	22 29 21.8	+2.5
HRY	Holter Researc	2.76	36	Pn	Pn	22 29 19.9	+0.2
AHID	Auburn Hatcher	2.83	127		Pn	22 29 23.0	+2.4
AHID				IAML		22 30 10.6	
	comp=N,87nm,0.6s						
YMP	Mirror Lake Pl	2.88	84		Pn	22 29 23.0	+1.5
HVU	Hansel Valley	2.90	159		Pn	22 29 23.5	+1.8
YNE	Yellowstone No	3.01	79		Pn	22 29 24.3	+1.0
YNE				IAML		22 30 12.9	
	comp=N,85nm,0.6s						
YNE				IAML		22 30 18.7	
	comp=E,55nm,0.7s						
JTMT	Jette	3.25	359		Pn	22 29 27.5	+1.0
JTMT				IAML		22 30 24.4	
	comp=N,82nm,0.6s						
JTMT				IAML		22 30 34.3	
	comp=E,71nm,0.8s						
SPUT	South Promonto	3.43	158		Pn	22 29 29.8	+0.8
E09A	Wood Farm, Sta	3.44	307		Pn	22 29 31.1	+2.1
E09A				IAML		22 30 32.0	
	comp=N,56nm,1.0s						
E09A				IAML		22 30 32.2	
	comp=E,48nm,1.1s						
G08A	Pilot Rock	3.49	285		Pn	22 29 31.0	+1.3
G08A				IAML		22 30 26.5	
	comp=E,31nm,0.7s						
BW06	Boulder Array	3.77	116		Pn	22 29 32.9	-0.8
PDAR	Pinedale Array	3.77	116	Pn	Pn	22 29 36.0	+2.4
	comp=E,0.2nm,0.3s,baz=306,slow=13,SNR=8.4						
PDAR				Lg	Lg	22 30 27.4	
	comp=E,0.3nm,0.3s,baz=304,slow=34,SNR=3.4						
PDAR	Pinedale Array	3.77	116		Pn	22 29 34.9	+1.2
ELK	Elko	3.83	192	Pn	Pn	22 29 36.1	+1.6
	comp=E,0.7nm,0.3s,baz=348,slow=13,SNR=7.5						
ELK				Lg	Lg	22 30 31.2	
	comp=E,5.0nm,0.3s,baz=130,slow=14,SNR=11						
ELK	Elko	3.83	192	Pn	Pn	22 29 35.1	+0.5
WVOR	Wild Horse Val	3.85	239	Pn	Pn	22 29 36.0	+1.3
WVOR				IAML		22 30 47.9	
	comp=E,27nm,1.0s						
WVOR				IAML		22 30 52.6	
	comp=E,28nm,0.8s						
I07A	Izee	3.85	266	Pn	Pn	22 29 36.6	+2.0
I07A				IAML		22 30 52.1	
	comp=E,23nm,1.0s						
E08A	Dider Farm, El	3.97	302	Pn	Pn	22 29 37.8	+1.6
E08A				IAML		22 30 47.0	
	comp=N,26nm,0.8s						
E08A				IAML		22 30 52.0	
	comp=E,24nm,0.7s						
HAWA	Hanford	4.22	299		Pn	22 29 41.3	+1.7
NEW	Newport	4.28	333	Pn	Pn	22 29 41.2	+0.6
	comp=E,2.2nm,0.3s,baz=146,slow=13,SNR=23						
NEW				Lg	Lg	22 30 51.2	
	comp=E,13nm,0.3s,baz=103,slow=19,SNR=12						
NEW	Newport	4.28	333	Pn	Pn	22 29 42.2	+1.7
NEW				IAML		22 30 56.8	
	comp=E,34nm,0.9s						
DUG	Dugway, Tooele	4.42	166	Pn	Pn	22 29 42.6	+0.1
DUG				IAML		22 30 53.4	
	comp=E,20nm,1.1s						
DUG				IAML		22 31 04.9	
	comp=E,21nm,1.1s						
E07A	Sunnyside	4.49	299		Pn	22 29 45.0	+1.6
WALA	Waterton Lakes	4.57	2	Pn	Pn	22 29 46.3	+1.8
WALA				IAML		22 31 09.3	
	comp=N,21nm,0.8s						
EGMT	Eagleton	4.67	39	Pn	Pn	22 29 46.5	+0.6
MOD	Modoc Plateau	5.18	242	Pn	Pn	22 29 53.2	+0.3
MOD				IAML		22 30 54.7	
	comp=N,10nm,4.9s						
MOD				IAML		22 31 32.5	
	comp=E,9.6nm,2.2s						
K05A	Summer Lake	5.19	252	Pn	Pn	22 29 53.8	+0.6
K05A				IAML		22 32 14.2	
	comp=N,15nm,3.9s						
K05A				IAML		22 33 10.3	
	comp=E,20nm,4.9s						
B08A	Colville Reser	5.25	319	Pn	Pn	22 29 54.9	+1.0
LTY	Liberty	5.31	304		Pn	22 29 55.7	+1.1
LTY				IAML		22 31 44.2	
	comp=E,12nm,0.7s						
LTY				IAML		22 31 56.4	
	comp=N,13nm,5.0s						
NVAR	Mina Array Bea	6.81	208	Pn	Pn	22 30 20.8	+5.4
	comp=N,0.2nm,0.3s,baz=26,slow=13,SNR=4.3						
NVAR	Mina Array Bea	6.81	208		Pn	22 30 16.6	+1.2
YKA	Yellowknife Ar	18.03	359	P	Pn	22 32 43.9	-1.9
	comp=N,0.1nm,0.3s,baz=173,slow=12,SNR=4.4						

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*ISK **10** 22:37:03.7, 41°.65N×23°.92E, h12^{km}, ML2.8/16*
*SOF **10** 22:37:03.6, 41°.69N×23°.89E, h15^{km}, MD2.6*
*ATH **10** 22:37:04.6, 41°.66N×23°.89E, h11^{km}±3^{km}, ML2.5/12, Error*
ellipse: s-maj=4.7km s-min=1.4km az=165.0
*SKO **10** 22:37:05.3, 41°.69N×23°.86E, h0^{km}*
*BEO **10** 22:37:05.5±0.3, 41°.67N×23°.89E, h0^{km}, ML2.5/8*
*THE **10** 22:37:05.3, 41°.61N×23°.91E, h10^{km}, ML2.4/11, Error*
ellipse: s-maj=1.2km s-min=0.6km az=170.0
*DDA **10** 22:37:09.8, 41°.13N×24°.12E, h12^{km}±2^{km}, ML2.6*
ISC 10 22:37:04.7±0.9**, 41°.65N**±0°.02×**23°.89E**±0°.02**, h14**^{km}±7^{km}**,**
n89, σ**1^{s}.27**/127**, 5C-7D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMB	Musomiste	0.13	243	*i* Pg	Pg	22 37 08.1	-0.1
NVR	Nevrokopi	0.30	183	P	Pg	22 37 10.8	-0.1
NVR				S	Sg	22 37 15.8	+0.6
NVR				AML	AML	22 37 16.2	
	comp=N,2943µm,0.3s						
NVR				AML	AML	22 37 16.3	
	comp=E,2973µm,0.3s						
NVR	Nevrokopi	0.30	183	P	Pg	22 37 10.5	-0.4
NVR				S	Sg	22 37 14.9	-0.2
	comp=E,1µm,0.3s						
SRS	Serrai	0.58	203	P	Pg	22 37 15.9	-0.1
SRS				S	Sg	22 37 24.1	+0.5
SRS				AML	AML	22 37 25.9	
	comp=E,927µm,0.3s						
SRS				AML	AML	22 37 27.0	
	comp=N,1016µm,0.5s						
SRS	Serrai	0.58	203	P	Pg	22 37 15.8	-0.1
SRS				S	Sg	22 37 24.0	+0.4
	comp=N,490nm,0.4s						
SRS	Serrai	0.58	203	*e*Pg	Pg	22 37 15.7	-0.3
SRS				*e*Sg	Sg	22 37 24.1	+0.5
SRS	Serrai	0.58	203	⇑*i*Pg	Pg	22 37 15.9	-0.1
RZN	Rozhen	0.62	86	*i* Pg	Pg	22 37 16.7	-0.2
KKB	Krupnik	0.64	290	*i* Pg	Pg	22 37 15.8	-1.3
PLD	Plovdiv	0.76	53	*e*Pg	Pg	22 37 19.0	-0.5
PLD				*e*Sg	Sg	22 37 29.1	-0.3
PLD	Plovdiv	0.76	53	PG	Pg	22 37 18.8	-0.6
PLD				SG	Sg	22 37 29.1	-0.3
PLD	Plovdiv	0.76	53	Pg	Pg	22 37 19.0	-0.5
PLD	Plovdiv	0.76	53	*i* Pg	Pg	22 37 18.9	-0.5
KAVA	Kavala	0.81	144	P	Pg	22 37 19.2	-1.1
KAVA				S	Sg	22 37 31.1	+0.3
KAVA				AML	AML	22 37 34.9	
	comp=E,622µm,0.2s						
KAVA				AML	AML	22 37 36.7	
	comp=N,1048µm,0.2s						

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KAVA  Kavala             0.81 144   P      Pg     22 37 19.2 -1.1
KAVA                                S      Sg     22 37 31.2 +0.3
      comp=N,298nm,0.3s
SOH   Sokhos             0.92 206   P      Pg     22 37 22.1 -0.3
SOH                                 S      Sg     22 37 34.7 +0.2
SOH                                 AML    AML    22 37 38.2
      comp=N,844µm,0.4s
SOH                                 AML    AML    22 37 38.5
      comp=E,658µm,0.5s
SOH   Sokhos             0.92 206   P      Pg     22 37 22.1 -0.3
SOH                                 S      Sg     22 37 34.7 +0.2
      comp=E,302nm,0.4s
SOH   Sokhos             0.92 206 ⇓i Pg    Pg     22 37 22.1 -0.3
PGB   Panagyurishte      0.92  13  i Pg    Pg     22 37 20.6 -1.9
VTS   Vitosha            1.08 334  ⇑P      Pb     22 37 23.6 -1.7
VTS   Vitosha            1.08 334   P      Pb     22 37 23.6 -1.7
VTS   Vitosha            1.08 334  i Pg    Pb     22 37 23.6 -1.7
SOF   Sofiya             1.11 339   Pg     Pb     22 37 25.1 -0.6
KDZ   Kurdzhali          1.15  90   PG     Pb     22 37 24.4 -1.9
KDZ   Kurdzhali          1.15  90   P      Pb     22 37 24.2 -2.1
HORT  Hortiatis          1.21 210   P      Pn     22 37 27.2 -0.1
HORT                                AML    AML    22 37 47.2
      comp=N,334µm,0.5s
HORT                                AML    AML    22 37 47.9
      comp=E,247µm,0.5s
HORT  Hortiatis          1.21 210   P      Pn     22 37 27.1 -0.1
HORT                                S      Sb     22 37 43.9 +1.0
      comp=E,148nm,0.5s
HORT  Hortiatis          1.21 210   PN     Pn     22 37 26.9 -0.3
THAS  Thassos island     1.22 149   P      Pn     22 37 27.2 -0.1
THAS                                AML    AML    22 37 46.5
      comp=E,485µm,0.3s
THAS                                AML    AML    22 37 47.5
      comp=N,517µm,0.4s
THAS  Thassos island     1.22 149   P      Pn     22 37 26.9 -0.4
THAS                                S      Sb     22 37 43.5 +0.4
      comp=N,250nm,0.3s
THE   Thessaloniki       1.23 215   P      Pn     22 37 27.6 +0.1
THE                                 S      Sb     22 37 43.9 +0.4
THE                                 AML    AML    22 37 45.2
      comp=E,354µm,0.6s
THE                                 AML    AML    22 37 45.4
      comp=N,352µm,0.4s
THE   Thessaloniki       1.23 215   P      Pn     22 37 27.6 +0.1
THE                                 S      Sb     22 37 44.7 +1.2
      comp=N,138nm,0.4s
THE   Thessaloniki       1.23 215  i Pg    Pn     22 37 27.8 +0.3
THE                                i Sg    Sb     22 37 44.5 +1.0
STIP  Stip               1.27 273  i Pg    Pn     22 37 24.2 -3.8
STIP                               i Sg    Sb     22 37 38.9 -5.8
DIM   Dimitrovgrad       1.29  72   P      Pn     22 37 29.0 +0.7
GRG   Griva              1.32 239   P      Pn     22 37 28.3 -0.4
GRG                                 S      Sg     22 37 47.7 +0.6
      comp=N,95nm,0.6s
GRG   Griva              1.32 239   PN     Pn     22 37 29.0 +0.3
GRG   Griva              1.32 239  i Pg    Pn     22 37 29.4 +0.7
GRG                                i Sg    Sg     22 37 47.8 +0.7
OUR   Ouranopolis        1.32 177   P      Pn     22 37 28.6 -0.1
OUR                                 AML    AML    22 37 48.9
      comp=N,2324µm,0.3s
OUR                                 AML    AML    22 37 49.2
      comp=E,1167µm,0.4s
OUR   Ouranopolis        1.32 177   P      Pn     22 37 28.4 -0.2
OUR                                 S      Sb     22 37 46.1 +0.2
OUR   Ouranopolis        1.32 177   PN     Pn     22 37 28.5 -0.1
OUR                                 SN     Sb     22 37 46.4 +0.5
PLG   Polygyros          1.32 195   P      Pn     22 37 29.2 +0.5
PLG                                 AML    AML    22 37 50.4
      comp=N,461µm,0.3s
PLG                                 AML    AML    22 37 51.2
      comp=E,475µm,0.6s
PLG   Polygyros          1.32 195   P      Pn     22 37 29.3 +0.6
PLG                                 S      Sb     22 37 46.9 +0.9
      comp=E,232nm,0.5s
RDO   Rodhopi            1.34 112   P      Pn     22 37 29.0  0.0
RDO                                 AML    AML    22 37 50.6
      comp=N,914µm,0.2s
RDO                                 AML    AML    22 37 51.5
      comp=E,495µm,0.1s
RDO   Rodhopi            1.34 112   P      Pn     22 37 28.9  0.0
RDO                                 S      Sb     22 37 47.2 +0.6
      comp=E,358nm,0.2s
RDO   Rodhopi            1.34 112   PN     Pn     22 37 28.8 -0.2
RDO                                 SN     Sb     22 37 47.0 +0.4
BOSS  Bosilegrad         1.34 309  ePg     Pn     22 37 29.9 +0.8
BOSS                               eSg     Sg     22 37 48.4 +0.4
MPEP  Malo Peshtene      1.71 356  i Pg    Pn     22 37 35.7 +1.6
SMTH  Samothraki Isl     1.71 133   P      Pn     22 37 35.4 +1.3
PAIG  Paliouri           1.73 185   P      Pn     22 37 34.2 -0.1
PAIG                                AML    AML    22 38 01.6
      comp=E,141µm,0.5s
PAIG                                AML    AML    22 38 03.3
      comp=N,125µm,0.6s
PAIG  Paliouri           1.73 185   P      Pn     22 37 34.0 -0.3
PAIG                                S      Sn     22 37 56.6 +0.4
      comp=N,68nm,0.5s
ALN   Alexandroupoli     1.79 114   P      Pb     22 37 37.3  0.0
ALN                                 AML    AML    22 38 04.8
      comp=N,84µm,0.7s
ALN                                 AML    AML    22 38 07.8
      comp=E,100µm,0.3s
ALN   Alexandroupoli     1.79 114   PN     Pn     22 37 35.3 +0.1
ZAPS  Zavoj              1.87 331  ePn     Pn     22 37 37.4 +1.1
ZAPS                               eSg     Sg     22 38 04.1 -0.6
LIT   Litokhoron         1.88 215   P      Pn     22 37 37.0 +0.7
ENEZ  Enez               1.94 117   PN     Pn     22 37 37.3 +0.1
CAVK  Edirne/Enez-Ca     1.97 118  i P     Pb     22 37 41.3 +1.0
CAVK                               i S     Sn     22 38 02.6 +0.4
CAVK                                IAML          22 38 11.0
      comp=E,74nm,1.0s
CAVK                                IAML          22 38 11.0
      comp=N,44nm,0.8s
FNA   Florina            2.08 246   PN     Pn     22 37 39.8 +0.6
GADA  Gvkgeada           2.11 133   PN     Pn     22 37 39.7 +0.1
GOKA  anakkale-Gk        2.12 133  i P     Pn     22 37 39.9 +0.2
GOKA                               i S     Sn     22 38 04.5 -1.2
GOKA                                IAML          22 38 17.0
      comp=E,94nm,0.8s
EDRB  Edirne             2.15  84   PN     Pn     22 37 39.7 -0.4
ERIK  Erikli-Kesan       2.21 115   PN     Pn     22 37 40.6 -0.4
KESN  Edirne-Kesan       2.26 110  i P     Pg     22 37 48.2 +0.1
KESN                               i S     Sb     22 38 13.0 -0.5
KESN                                IAML          22 38 19.0
      comp=E,64nm,0.2s
KESN                                IAML          22 38 20.0
      comp=N,62nm,0.4s
GELI  Tayfur-Gelibol     2.32 122   PN     Pn     22 37 42.6 +0.1
BAIL  Bailesti           2.40 351  ⇓S      Sb     22 38 18.3 +1.1
KIRK  Kırklareli         2.41  86  i P     Pb     22 37 46.9 -0.9
KIRK                               i S     Sn     22 38 11.9 -1.1
ZAGS  Zajecar            2.48 331  ePn     Pn     22 37 47.4 +2.7
ZAGS                               eSg     Sb     22 38 22.2 +2.8
LPK   Lapseki            2.52 119   PN     Pn     22 37 45.6 +0.4
ARMN  Kirklareli, Me     2.66  84  i P     Pb     22 37 52.3 +0.2
RKY   Sarkoy-Tekirda     2.67 110   PN     Pn     22 37 47.1 -0.2
COPA  Copaceanca         2.67  21  ⇓P      Pb     22 37 52.2  0.0
COPA                               ⇑S      Sg     22 38 30.6 +0.2
MAR4  Marsite Statio     2.72 107   PN     Pn     22 37 48.3 +0.3
PUNG  Punghina           2.72 345  ⇓P      Pn     22 37 48.5 +0.6
PUNG                               ⇓S      Sb     22 38 26.2 -0.1
BAYC  CANAKKALE_Bayr     2.78 132  i P     Pn     22 37 50.9 +2.1
BAYC                               i S     Sn     22 38 22.1 -0.1
KRBG  Karabiga-Canak     2.87 115   PN     Pn     22 37 50.6 +0.6
CRLT  Corlu              2.94  99   PN     Pn     22 37 51.5 +0.5
VIZE  Kirklareli, Vi     2.97  90  i P     Pn     22 37 53.5 +2.1
VIZE                               i S     Sn     22 38 25.1 -1.7
MRMT  Marmara Adasi      2.99 109   PN     Pn     22 37 51.8  0.0
BUHA  Balikesir, Bur     3.24 130  i P     Pn     22 37 56.8 +1.6
BUHA                               i S     Sn     22 38 32.3 -1.3
BUHA                                IAML          22 38 46.0
      comp=E,13nm,1.8s
EDC   Edincik            3.28 112   PN     Pn     22 37 55.8 +0.1
SJES  Sjenica            3.31 300  ePn     Pn     22 37 58.9 +2.7
IVAS  Ivanjica           3.36 306  ePn     Pn     22 37 59.7 +2.9
CTKS  Kestanelik-??a     3.50  95   PN     Pn     22 37 58.9 +0.3
MDVR  Moldovita          3.51 334  ⇑P      Pn     22 37 56.8 -2.0
MDVR                               ⇑S      Sn     22 38 41.4 +1.2
TRUS  Trudelj            3.62 316  ePn     Pn     22 38 03.7 +3.3
DIVS  Divibare           3.76 312  ePn     Pn     22 38 04.8 +2.4
GZR   Gura Zlata         3.83 348  ⇓P      Pn     22 38 04.1 +0.9
VOIR                     3.88  12  ⇓P      Pn     22 38 07.9 +4.0
BBLS  Lazi&#263;i        3.97 305  ePn     Pn     22 38 08.7 +3.4
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IDC ***10*** *22:52:37.9±1.7, 21°.09S×178°.54W, h536km±17km, mb3.3/9, mb1 3.5/12, mb1mx3.3/29, mbtmp4.2/12, Error ellipse: s-maj=29.4km s-min=13.8km az=152.0*

NEIC ***10*** *22:52:38.5±0.9, 21°.1S±0°.2×178°.5W±0°.1, h544km±9km, mb4.1/20, Error ellipse: s-maj=24.0km s-min=16.2km az=147.0*

ISC 10 22:52:39.4±0.7**, 21°.1S**±0°.1×**178°.7W**±0°.1**, h550**km**, n61,** σ0^{s}**88**/57**, mb4.0**/19**, 5C-7D, Fiji Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID        Time     Res
                                    Op     ISC      h  m  s   ISC
MSVF  Nonsavu            4.57 316   P      P        22 54 05.2 -0.7
      1.5nm,0.3s,baz=137,slow=14,SNR=15
MSVF  Nonsavu            4.57 316   P      P        22 54 05.8 -0.2
NIUE  Niue               8.44  78   P      P        22 54 39.7 -1.9
AFI   Afiamalu           9.69  44   P      P        22 54 49.9 -4.5
      3.3nm,0.3s,baz=255,slow=5.9,SNR=5.4
AFI                                 S      S        22 56 36.0 -9.2
      3.6nm,0.3s,baz=200,slow=23,SNR=8.3
AFI   Afiamalu           9.69  44   P      P        22 54 49.4 -5.1
DZM   Mont Dzumac       13.90 263   P      P        22 55 37.7  0.0
OUZ   Omahuta           15.64 204   P      P        22 55 55.7 +0.5
URZ   Urewera           17.50 191   P      P        22 56 11.6 -0.9
      0.8nm,0.3s,baz=267,slow=3.0,SNR=6.2
URZ   Urewera           17.50 191   P      P        22 56 10.8 -1.7
CTA   Charters Tower    32.83 265   P      P        22 58 28.6 +0.3
      3.2nm,0.4s,baz=93,slow=10,SNR=5.9
CTAO  Charters Tower    32.83 265   P      P        22 58 28.5 +0.3
CTAO                                IAmb   IAmb     22 58 41.3
      comp=Z,5.5nm,1.1s
TOO   Toolangi          35.06 234   P      P        22 58 47.4 +0.6
BBOO  Buckleboo         41.74 244   P      P        22 59 40.8 -0.1
BBOO                                IAmb   IAmb     22 59 50.6
      comp=Z,7.8nm,1.0s
JAY   Jayapura          43.66 290   P      P        22 59 55.6 -0.5
      comp=Z,12nm,0.7s,baz=171,slow=4.8,SNR=5.1
WR0   Warramunga Arr    43.73 263   P      P        22 59 56.7  0.0
WR0                                 IAmb   IAmb     23 00 16.4
      comp=Z,3.8nm,1.1s
AS31  Alice Springs     43.79 257   P      P        22 59 57.1  0.0
ASAR  Alice Springs     43.79 257   P      P        22 59 57.1  0.0
      comp=Z,3.0nm,0.7s,baz=96,slow=7.9,SNR=36
ASAR                                PcP    PcP      23 01 32.0 +0.4
      comp=Z,0.8nm,0.6s,baz=103,slow=3.8,SNR=9.7
WB0   Warramunga Arr    43.90 263   P      P        22 59 57.3 -0.7
WB0                                 IAmb   IAmb     22 59 58.3
      comp=Z,3.9nm,0.8s
WRA   Warramunga Arr    43.92 263   P      P        22 59 57.6 -0.5
      comp=Z,1.3nm,0.5s,baz=97,slow=7.9,SNR=22
WRA   Warramunga Arr    43.92 263   P      P        22 59 57.8 -0.3
FITZ  Fitzroy Crossi    52.35 263   P      P        23 01 02.1 +1.2
      comp=Z,0.9nm,0.4s,baz=59,slow=5.9,SNR=1.3
FITZ  Fitzroy Crossi    52.35 263   P      P        23 01 01.6 +0.7
NWAO  Narrogin (SRO)    57.56 244   P      P        23 01 36.7 -0.4
NWAO                                IAmb   IAmb     23 01 55.0
      comp=Z,16nm,1.1s
NVAR  Mina Array Bea    81.87  44   P      P        23 04 01.9  0.0
      comp=Z,0.7nm,0.6s,baz=229,slow=7.9,SNR=7.3
NVAR  Mina Array Bea    81.87  44   P      P        23 04 01.4 -0.4
K05A  Summer Lake       82.80  39   P      P        23 04 07.2 +0.8
U15A  North Rim         84.81  48   P      P        23 04 17.4 +0.8
SUA   Susitna One       85.27  13   P      P        23 04 17.5 -0.6
SUA                                 IAmb   IAmb     23 04 29.5
      comp=Z,2.6nm,1.1s
SCM   Sheep Creek Mo    86.35  14   P      P        23 04 22.7 -0.5
SCM                                 IAmb   IAmb     23 04 25.2
      comp=Z,4.2nm,0.9s
N25K  Chitina, Valde    86.81  16   P      P        23 04 25.3 -0.1
N25K                                IAmb   IAmb     23 04 38.1
      comp=Z,2.2nm,1.0s
GLB   Gilahina Butte    86.87  16   P      P        23 04 25.2 -0.4
GLB                                 IAmb   IAmb     23 04 42.3
      comp=Z,4.9nm,1.2s
TRF   Thorofare Moun    87.15  12   P      P        23 04 26.1 -0.8
TRF                                 IAmb   IAmb     23 04 27.0
      comp=Z,4.1nm,0.9s
RND   Reindeer          87.41  13   P      P        23 04 27.8 -0.2
TXAR  Lajitas Array     87.89  58   P      P        23 04 31.6 +0.4
      comp=Z,0.4nm,0.8s,baz=179,slow=5.0,SNR=4.3
HDA   Harding Lake      88.69  13   P      P        23 04 33.0 -0.9
HDA                                 IAmb   IAmb     23 04 34.0
      comp=Z,2.4nm,0.8s
IMAR  Indian Mountai    88.84  10   P      P        23 04 34.2 -0.4
ILAR  Eielson Array     89.02  13   P      P        23 04 34.5 -0.9
      comp=Z,0.5nm,0.5s,baz=224,slow=5.6,SNR=9.0
PDAR  Pinedale Array    89.81  43   P      P        23 04 39.1 -0.8
      comp=Z,0.6nm,0.6s,baz=217,slow=3.2,SNR=5.7
PDAR  Pinedale Array    89.81  43   P      P        23 04 40.0  0.0
ZALV  Zalesovo Beam    110.57 321   PKiKP  PKiKP    23 10 07.8 -1.5
      comp=Z,0.4nm,0.3s,baz=162,slow=0.9,SNR=3.7
MKAR  Makanchi Array   111.16 313   PKiKP  PKiKP    23 10 09.6 -1.2
      comp=Z,0.2nm,0.4s,baz=146,slow=1.3,SNR=4.8
ARCES ARCESS Array B   129.39 349   PKP    PKPdf    23 10 43.7 -1.3
      comp=Z,3.6nm,1.1s,baz=345,slow=4.1,SNR=5.5
ARCES ARCESS Array B   129.39 349          PKPdf    23 10 44.5 -0.5
FINES FINESS Array B   136.16 343   PKP    PKPdf    23 10 59.5 +1.6
      comp=Z,2.5nm,0.8s,baz=111,slow=1.9,SNR=5.3
FINES FINESS Array B   136.16 343          PKPdf    23 10 57.6 -0.3
AKASG Malin Array Be   143.23 330   PKP    PKPab    23 11 08.3 -0.7
      comp=Z,3.3nm,0.4s,baz=43,slow=4.3,SNR=37
AKASG Malin Array Be   143.23 330          PKPab    23 11 08.2 -0.8
BR131 Keskin Array S   146.78 311          PKPdf    23 11 20.3 +2.6
BRTR  Keskin Array B   146.78 311   PKPbc  PKPdf    23 11 20.2 +2.6
      comp=Z,1.2nm,0.5s,baz=142,slow=4.8,SNR=12
BURAR Bucovina Array   147.27 330  ⇓P      PKPbc    23 11 23.0 +1.6
BIZ   Bicaz            147.31 328  ⇓P      PKPbc    23 11 22.4 +0.9
NEHR  Nehoiu           148.24 326  ⇑P      PKPbc    23 11 23.9  0.0
DOPR  Dopca            148.34 327  ⇑P      PKPbc    23 11 25.1 +1.0
CJR   Cluj-Napoca      148.68 330  ⇑P      PKPbc    23 11 25.6 +0.6
VOIR                   148.88 327  ⇓P      PKPbc    23 11 26.1 +0.5
ARR   Arges            149.14 327  ⇑P      PKPbc    23 11 27.3 +1.2
HUMR  Humele           149.53 326  ⇓P      PKPbc    23 11 26.7 -0.3
GZR   Gura Zlata       150.04 329  ⇓P      PKPbc    23 11 28.1 -0.1
BZS   Buzias           150.42 330  ⇓P      PKPbc    23 11 29.1 +0.1
HERR  Herculane        150.59 329  ⇑P      PKPbc    23 11 29.4  0.0
MDVR  Moldovita        151.00 329  ⇓P      PKPbc    23 11 30.2 -0.2
```

ANF ***10*** *23:29:01.7±0.1, 33°.47N×116°.44W, h14km±1km, ML2.8/26, Error ellipse: s-maj=1.4km s-min=1.1km az=76.0*

PAS ***10*** *23:29:02.8±1.3, 33°.478N±0°.008×116°.438W±0°.010, h15km±1km, ML3.0/140, ML2.7/36(NEIC), Error ellipse: s-maj=1.4km s-min=0.9km az=222.0*

NEIC ***10*** *23:29:02.1±0.7, 33°.48N±0°.02×116°.45W±0°.02, h20km±2km, Error ellipse: s-maj=2.3km s-min=2.1km az=48.0*

ISC 10 23:29:02.1±0.8**, 33°.45N**±0°.01×**116°.44W**±0°.01**, h15**km±6km**, n115,** σ0^{s}**79**/166**, Southern California**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time     Res
                                    Op     ISC      h  m  s   ISC
FRD   Ford Ranch, An     0.14 289          Pb       23 29 08.9 +2.4
FRD   Ford Ranch, An     0.14 289          Pb       23 29 08.8 +2.3
XPFO  Pion Flat          0.16 356          Pg       23 29 06.1 -0.3
PFO   Pinyon Flats O     0.16 355   P      Pg       23 29 05.9 -0.5
      baz=173,SNR=939
PFO                                 S      Pb       23 29 08.5 +1.6
      baz=173
PFO   Pinyon Flats O     0.16 355          Pg       23 29 06.1 -0.3
PFO                                 IAML            23 29 08.7
      2µm,0.2s
PFO   Pinyon Flats O     0.16 355          Pb       23 29 08.6 +1.6
SNDA  J Saunders Pla     0.18 306          Pb       23 29 09.9 +2.7
BORC  Borrego Spring     0.18 174          Pb       23 29 07.3 +0.2
BZNA  Buzz No.'s Pla     0.19 283          Sg       23 29 10.2 +0.3
DNR   Dunn Ranch,Anz     0.20 307          Sg       23 29 10.4 +0.3
PMD   Palm Desert        0.21  15          Pb       23 29 09.4 +1.8
CRY   Cary Ranch         0.27 295          Sg       23 29 12.2  0.0
GVDA  Garner Valley      0.29 319          Pg       23 29 08.2 -0.2
GVDA                                       Sg       23 29 12.2 -0.5
SLH   Sleepy Hollow      0.30 148          Pb       23 29 09.4 +0.3
SLH                                        Sb       23 29 14.1 +0.2
MATG  Mataguay Scout     0.30 215          Pb       23 29 09.4 +0.1
MATG                                       Sb       23 29 13.8 -0.3
PLM   Palomar            0.36 255          Pb       23 29 10.2 -0.1
PLM                                        Sb       23 29 15.7 -0.2
SALN  Salton City        0.42 114          Pb       23 29 11.4 +0.2
CTCC  Cactus City        0.43  61          Pg       23 29 11.1 +0.3
CTCC                                       Sg       23 29 17.0 +0.4
POB   Polly Butte        0.47 301          Pg       23 29 11.4 -0.1
POB                                        Sg       23 29 17.6 -0.2
EW2   E Wide Canyon      0.49   3          Pg       23 29 11.6 -0.3
EW2                                        Sg       23 29 18.1 -0.5
DEVC  Devers             0.50 347          Pg       23 29 11.8 -0.2
DEVC                                       Sg       23 29 18.2 -0.6
BACC  Bachelor Mtn.      0.53 288          Pg       23 29 12.4 -0.1
BACC                                       Sg       23 29 19.3 -0.3
CTW   Cottonwood Mou     0.53  64          Pg       23 29 12.7 +0.1
CTW                                        Sg       23 29 19.7  0.0
HMTC  Hemet              0.54 299          Pg       23 29 12.5 -0.3
HMTC                                       Sg       23 29 19.4 -0.5
MONP2 Monument Peak      0.56 178   P      Pb       23 29 13.8 +0.2
      baz=359,SNR=105
MONP2                               S      Sb       23 29 21.8 +0.3
      baz=359
MONP2 Monument Peak      0.56 178          Pb       23 29 13.8 +0.2
MONP2                                      Sb       23 29 21.6 +0.2
HWB   Hans Werner Br     0.60 226          Pg       23 29 14.3 +0.3
HWB                                        Sg       23 29 22.3 +0.3
DPP   Dos Picos Cty      0.61 223          Pg       23 29 14.5 +0.3
DPP                                        Sg       23 29 22.7 +0.3
ERRC  Elmore Ranch       0.61 122          Pb       23 29 15.0 +0.6
BLAC  Blackrock camp     0.62   4          Pg       23 29 13.8 -0.5
BLAC                                       Sg       23 29 22.0 -0.7
MURC  Murrieta           0.65 284   P      Pg       23 29 14.6 -0.3
      baz=101,SNR=95
MURC                                S      Sg       23 29 23.6 +0.1
      baz=101
MURC  Murrieta           0.65 284          Pg       23 29 14.6 -0.3
MURC                                       Sb       23 29 23.8 -0.1
BBSC  Beaumont Base      0.65 317          Pg       23 29 14.7 -0.2
BBSC                                       Sg       23 29 23.4 -0.3
BELC  Belle Mtn. Jos     0.66  34   P      Pg       23 29 14.6 -0.5
      baz=215,SNR=70
BELC                                S      Sg       23 29 23.5 -0.5
      baz=215
BELC  Belle Mtn. Jos     0.66  34          Pg       23 29 14.7 -0.5
BELC                                       Sg       23 29 23.1 -0.9
FRK   Frink              0.67  94          Pg       23 29 15.1 -0.2
HAY   Hayfield           0.68  68          Pg       23 29 16.0 +0.5
HAY                                        Sb       23 29 25.4 +0.4
CRR   Carrizo Plain      0.69 145          Pg       23 29 15.8 +0.3
CRR                                        Sb       23 29 25.6 +0.6
SUP   Superstition M     0.71 133          Sb       23 29 26.7 +0.9
GORC  Green Oak Ranc     0.72 246          Pg       23 29 16.0 -0.2
GORC                                       Sg       23 29 25.5 -0.2
TPC   Twentynine Pal     0.73  26          Pg       23 29 15.6 -0.8
SWSC  Sam W. Stewart     0.73 133   P      Pb       23 29 16.2 -0.3
      baz=315,SNR=42
SWSC                                S      Sb       23 29 26.7 +0.3
      baz=315
SWSC  Sam W. Stewart     0.73 133          Pb       23 29 16.3 -0.3
SWSC                                       Sb       23 29 26.6 +0.3
PEC   Perris             0.75 307          Pb       23 29 16.1 -0.7
PEC                                        Sg       23 29 25.6 -1.0
109C  Camp Elliot, M     0.79 225   P      Pb       23 29 17.3 -0.1
      baz=44,SNR=18
109C                                S      Sb       23 29 27.7 -0.2
      baz=44
109C  Camp Elliot, M     0.79 225   Pg     Pb       23 29 17.4 -0.1
CPE   Camp Elliot        0.79 225          Pb       23 29 17.4 -0.1
CPE                                        Sb       23 29 27.7 -0.2
BAR   Barrett            0.79 194          Sb       23 29 28.1 +0.1
BAR   Barrett            0.79 194          Pb       23 29 17.6  0.0
BAR   Barrett            0.79 194   IAML            23 29 28.7
      comp=E,2µm,0.1s
BAR                                 IAML            23 29 28.9
      comp=N,1µm,0.1s
CFT   Crafton Hills      0.81 317          Pb       23 29 17.5 -0.4
SDRC  San Diego Road     0.82 211          Pb       23 29 17.9 -0.2
SDRC                                       Sb       23 29 28.9 -0.1
WEMD  Westmorland, C     0.83 119          Pb       23 29 18.1 -0.1
IKP   In-Ko-Pah, Jac     0.84 161   P      Pb       23 29 18.5 +0.1
      baz=342,SNR=44
IKP                                 S      Sg       23 29 30.3 +0.7
      baz=342
IKP   In-Ko-Pah, Jac     0.84 161          Pb       23 29 18.5 +0.1
IKP                                        Sg       23 29 30.2 +0.6
COK2  Cook Ranch 2       0.84 135          Pb       23 29 18.5 +0.1
ELS   Elsinore Mount     0.85 284          Pb       23 29 17.8 -0.7
ELS                                        Sb       23 29 28.9 -0.8
GTM   Goat Mountain      0.85   5          Pb       23 29 17.7 -0.9
GTM                                        Sb       23 29 28.8 -0.9
SME   Santa Rosa Min     0.85 296          Pb       23 29 17.9 -0.7
BC3   Big Chuckawall     0.85  76   P      Pb       23 29 17.9 -0.7
      baz=258,SNR=166
BC3                                 S      Sb       23 29 29.5 -0.3
      baz=258
BC3   Big Chuckawall     0.85  76          Pb       23 29 17.9 -0.7
BC3                                        Sb       23 29 29.4 -0.5
SVD   Seven Oaks Dam     0.85 320          Pb       23 29 18.3 -0.4
SVD                                        Sb       23 29 29.3 -0.7
TKX   Tecate             0.89 189          Sb       23 29 30.0 -0.9
RMX   La Rumorosa        0.90 160          Pn       23 29 20.4 +0.2
RMX                                        Sn       23 29 33.5 +0.5
BBRC  Big Bear Solar     0.91 334   P      Pb       23 29 19.1 -0.6
      baz=153,SNR=14
BBRC                                S      Sb       23 29 30.9 -0.7
      baz=153
BBRC  Big Bear Solar     0.91 334          Pb       23 29 19.1 -0.6
BBRC                                       Sb       23 29 31.4 -0.1
RSBC  Riverside Bore     0.91 306          Pb       23 29 18.8 -0.7
RSBC                                       Sb       23 29 30.0 -1.4
WESC  Westside Schoo     0.91 139          Pb       23 29 19.4 -0.2
YUH   Yuha Desert        0.91 151          Pb       23 29 19.1 -0.5
BTL   Butler Peak        0.93 330          Pb       23 29 19.4 -0.8
OLP   Otay Lakes Par     0.93 206          Pb       23 29 19.9  0.0
OLP                                        Sb       23 29 32.1  0.0
RVR   Riverside          0.95 305          Pb       23 29 19.7 -0.6
SGL   Mount Signal       1.00 143          Pb       23 29 20.2 -0.8
SGL                                        Sb       23 29 34.4 +0.4
MLSC  Mira Loma          1.09 301          Pb       23 29 22.2 -0.4
MLSC                                       Sb       23 29 35.5 -1.1
CBX   Cerro Bola         1.15 189          Pn       23 29 23.7 +0.1
CBX   Cerro Bola         1.15 189   IAML            23 29 41.0
      comp=N,116nm,0.2s
CBX                                 IAML            23 29 41.7
      comp=E,185nm,0.4s
SS2   San Sevaine        1.16 311          Pn       23 29 23.3 -0.5
COA   Coachella          1.25 117          Pn       23 29 23.6 -1.4
BFSC  Mount Baldy Ra     1.28 308   P      Pn       23 29 25.5 -0.1
      baz=127,SNR=17
BFSC                                S      Sb       23 29 41.2 -1.1
      baz=127
SSK   Sunset Peak        1.29 306          Pn       23 29 25.9 +0.1
IRM   Iron Mountain      1.29  56   P      Pn       23 29 25.7 +0.1
      baz=238,SNR=51
IRM                                 S      Sb       23 29 42.8 +0.3
      baz=238
IRM   Iron Mountain      1.29  56          Pn       23 29 24.4 -1.2
PSRC  Puddingstone R     1.31 300          Pb       23 29 26.1 -0.3
RUN   Ruthven            1.32 111          Pn       23 29 24.5 -1.4
HEC   Hector,Ludlow      1.38   4   P      Pn       23 29 27.1 +0.3
      baz=184,SNR=89
GLA   Glamis             1.41 106   P      Pn       23 29 25.8 -1.4
      baz=288,SNR=8.7
GLA   Glamis             1.41 106          Pn       23 29 25.8 -1.4
DANC  Danby, Needles     1.48  36          Pb       23 29 30.0 +0.8
GMRC  Granite Mounta     1.48  26   P      Pn       23 29 27.2 -1.1
      baz=206,SNR=22
RRX   Edison Barstow     1.50 342   Pg     Pb       23 29 30.2 +0.6
      baz=162,SNR=14
RRX                                 Sb     Sb       23 29 49.0 +0.6
      baz=162
ESJX  Sierra Juarez      1.50 164          Pn       23 29 27.5 -1.0
ESJX                                IAML            23 29 51.7
      comp=N,135nm,0.1s
MWC   Mount Wilson       1.55 300          Pn       23 29 29.8 +0.4
MWC                                 IAML            23 29 53.9
      comp=N,170nm,0.7s
JNH   Juniper Hills      1.60 309          Pn       23 29 29.7 -0.3
PASC  Pasadena Art C     1.62 297          Pn       23 29 30.8 +0.7
PASC                                IAML            23 29 52.2
      comp=E,87nm,0.4s
PASC                                IAML            23 29 53.3
      comp=N,91nm,0.8s
BLYC  Blythe             1.63  79          Pn       23 29 29.2 -1.0
DECC  Green Verdugo      1.77 298   Sb     Sb       23 29 56.4 +0.2
      baz=116
SCI2  San Clemente I     1.83 256   P      Pn       23 29 33.2 +0.3
      baz=74
SCI2                                S      Sb       23 29 56.7 -1.1
      baz=74
GSC   Goldstone, Bar     1.87 351   P      Pn       23 29 33.2 -0.5
      baz=170,SNR=25
GSC   Goldstone, Bar     1.87 351   Pn     Pn       23 29 33.2 -0.5
```

GSC				IAML		23 30 11.8	
	comp=E,46nm,0.8s						
EDW2	**Edwards Air Fo**	1.92	318	Pb	Pb	23 29 36.4	-0.5
	baz=137,SNR=25						
EDW2				Sb	Sb	23 30 01.6	+0.9
	baz=137						
NEE2	**Needles Airpor**	2.00	48	Pg	Pb	23 29 39.1	+0.8
	baz=230						
NEE2				Sb	Sb	23 30 04.5	+1.5
	baz=230						
OSI	**Osito Audit: C**	2.22	302	Sb	Sb	23 30 10.4	+1.0
	baz=120						
SHOC	**Shoshone, Teco**	2.45	3	Pg	Pb	23 29 47.6	+1.8
	baz=183						
SHOC				Sb	Sg	23 30 19.0	-1.9
	baz=183						
SPX	**San Pedro Mart**	2.54	161		Pn	23 29 43.7	+0.6
SPX				IAML		23 30 23.7	
	comp=E,25nm,0.6s						
ARVC	**Arvin**	2.59	311	Sb	Sb	23 30 21.3	+1.4
	baz=129						
W13A	**Hualapai Mount**	2.68	51		Pn	23 29 46.0	+1.1
W13A				IAML		23 30 28.9	
	comp=N,26nm,1.0s						
MPMC	**Manual Prospec**	2.74	342	P	Pn	23 29 45.4	-0.3
	baz=161,SNR=14						
MPMC				Sb	Sg	23 30 27.4	-2.9
	baz=161						
ISA	**Isabella, Lake**	2.77	323	Sb	Sb	23 30 27.0	+1.8
	baz=142						
SHPR	**Sheep Range**	3.23	19		Pn	23 29 53.8	+1.5
TPNV	**Topopah Spring**	3.50	3	P	Pn	23 29 56.4	+0.4
	baz=183,SNR=5.8						
TPNV	**Topopah Spring**	3.50	3	Pn	Pn	23 29 56.5	+0.5
PRN	**Pahroc Range**	4.11	16		Pn	23 30 05.1	+0.7
PRN				IAML		23 30 41.6	
	comp=N,11nm,4.8s						
PRN				IAML		23 31 25.4	
	comp=E,15nm,1.0s						
X16A	**Lo Mia Camp, P**	4.27	76	Pn	Pn	23 30 06.8	+0.2
X16A				IAML		23 31 07.5	
	comp=E,6.7nm,4.5s						
X16A				IAML		23 31 23.5	
	comp=N,5.7nm,4.3s						
LCMT	**Little Creek M**	4.42	35	Pn	Pn	23 30 09.2	+0.6
U15A	**North Rim**	4.52	48	Pn	Pn	23 30 11.8	+1.6
U15A				IAML		23 31 34.0	
	comp=N,12nm,4.5s						
U15A				IAML		23 32 11.0	
	comp=E,8.5nm,4.8s						

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*ISK **10** 23:31:55.1, 34°.81N×24°.85E, h29km, ML2.7/6*
*ATH **10** 23:31:56.8, 34°.85N×24°.81E, h29km±3km, ML2.4/4, Error ellipse: s-maj=5.4km s-min=2.1km az=354.0*
*THE **10** 23:31:56.3, 34°.76N×24°.86E, h18km±1km, ML2.3/8, Error ellipse: s-maj=1.7km s-min=0.8km az=341.0*
ISC 10 23:31:56.3±1.2, **34°.81N**±0°.06×**24°.85E**±0°.03, **h29**km±7km, **n27, σ0ˢ68**/38, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	0.21	352	P	Pb	23 32 02.2	-0.3
SIVA				S	Sb	23 32 07.1	+0.4
SIVA				AML	AML	23 32 07.1	
	comp=E,5187µm,0.2s						
SIVA				AML	AML	23 32 07.5	
	comp=N,3495µm,0.5s						
SIVA	**Sivas**	0.21	352	P	Pb	23 32 02.2	-0.3
SIVA				S	Sb	23 32 07.0	+0.4
	comp=N,2µm,0.4s						
TMBK	**Timbaki Herakl**	0.27	346	P	Pb	23 32 02.9	-0.3
TMBK				S	Sn	23 32 08.8	-0.7
	comp=N,925nm,0.3s						
IDI	**Anoyia**	0.47	4	P	Pb	23 32 05.7	-0.7
IDI				AML	AML	23 32 14.6	
	comp=E,760µm,0.3s						
IDI				AML	AML	23 32 15.4	
	comp=N,683µm,0.4s						
IDI	**Anoyia**	0.47	4	P	Pb	23 32 05.7	-0.7
IDI				S	Sb	23 32 13.9	+0.7
	comp=N,362nm,0.3s						
IDI	**Anoyia**	0.47	4	PG	Pb	23 32 05.7	-0.7
IDI				SG	Sb	23 32 13.6	+0.4
HRKL	**Herakleio**	0.54	23	P	Pb	23 32 07.7	+0.3
HRKL				S	Sn	23 32 16.3	+0.1
	comp=N,555nm,0.6s						
HRKL	**Herakleio**	0.54	23	PG	Pb	23 32 07.3	-0.1
GVDS	**Gavdos**	0.62	273	P	Pb	23 32 08.7	0.0
GVDS				S	Sn	23 32 18.9	+0.6
	comp=N,240nm,0.9s						
GVDS	**Gavdos**	0.62	273	PG	Pb	23 32 08.5	-0.2
GVD	**Gavdhos**	0.62	273	P	Pb	23 32 08.5	-0.3
GVD				AML	AML	23 32 27.2	
	comp=E,831µm,0.4s						
GVD				AML	AML	23 32 27.9	
	comp=N,738µm,0.4s						
GVD	**Gavdhos**	0.62	273	P	Pb	23 32 08.4	-0.3
GVD				S	Sn	23 32 18.2	-0.1
	comp=N,320nm,0.4s						
GVD	**Gavdhos**	0.62	273	PG	Pb	23 32 08.3	-0.5
NPS	**Neapolis**	0.77	54	P	Pn	23 32 11.7	+0.3
NPS	**Neapolis**	0.77	54	P	Pn	23 32 11.4	+0.1
NPS				S	Sn	23 32 22.9	+0.9
	comp=N,148nm,0.6s						
VAM	**Vamos**	0.79	318	P	Pn	23 32 10.7	-0.9
VAM				AML	AML	23 32 26.2	
	comp=E,394µm,0.3s						
VAM				AML	AML	23 32 27.9	
	comp=N,461µm,0.4s						
VAM	**Vamos**	0.79	318	P	Pn	23 32 11.0	-0.6
VAM				S	Sn	23 32 23.6	+1.1
	comp=N,210nm,0.3s						
IMMV	**Iera Moni Meta**	0.96	313	P	Pb	23 32 14.3	-0.1
IMMV	**Iera Moni Meta**	0.96	313	P	Pb	23 32 14.2	-0.2
IMMV				S	Sb	23 32 28.6	+1.9
IMMV	**Iera Moni Meta**	0.96	313	PG	Pn	23 32 13.2	-0.7
ZKR	**Zakros**	1.17	75	P	Pb	23 32 18.6	+0.8
ZKR	**Zakros**	1.17	75	PN	Pn	23 32 15.9	-0.8
SANT	**Santorini**	1.63	18	PN	Pn	23 32 22.6	-0.6
KARP	**Karpathos**	2.03	68	P	Pb	23 32 31.4	-1.2
KARP	**Karpathos**	2.03	68	PN	Pn	23 32 27.9	-0.8
KTHA	**Kythira Island**	2.05	315	PN	Pn	23 32 28.6	-0.3
APE	**Apeiranthos**	2.32	14	PN	Pn	23 32 32.0	-0.6

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*LDG **10** 23:50:00.8±0.2, 36°.30N×12°.77E, h10km, Ml3.3/8, Error ellipse: s-maj=5.7km s-min=2.8km az=15.0*
*IDC **10** 23:50:02.2±0.9, 36°.36N×12°.79E, h0km, mb3.9/10, mb1 3.9/16, mb1mx3.7/56, mbtmp3.8/16, ML3.5/6, MS3.2/8, Ms1 3.2/8, ms1mx3.0/51, Error ellipse: s-maj=23.8km s-min=14.5km az=140.0*
*ROM **10** 23:50:02.4±0.2, 36°.405N±0°.009×12°.76E±0°.02, h20km±2km, ML3.9/1, Error ellipse: s-maj=1.5km s-min=1.1km az=116.0*
ISC 10 23:50:03.9±2.0, **36°.44N**±0°.04×**12°.72E**±0°.04, **h18**km±13km, **n89, σ2ˢ34**/96, **mb3.9**/10, **MS3.3**/3, **2C, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPDG	**Lampedusa Capo**	0.92	185	P	Pb	23 50 19.1	-2.2
LPDG				S	Sb	23 50 31.4	-1.8
FAVR	**Favara**	1.12	42	P	Pb	23 50 23.9	-0.9
FAVR				AML	AML		
	comp=E,6115µm,0.7s						
FAVR				AML	AML		
	comp=N,4960µm,0.6s						
FAVR				AML	AML		
	comp=E,6120µm,0.7s						
FAVR				AML	AML		
	comp=N,7950µm,0.7s						
CLTB	**Caltabellotta**	1.21	19	P	Pn	23 50 24.0	-2.0
CLTB				AML	AML		
	comp=E,8895µm,1.4s						
CLTB				AML	AML		
	comp=N,17450µm,0.5s						
CLTA	**Licata**	1.23	54	P	Pn	23 50 24.9	-1.3
CLTA				AML	AML		
	comp=N,7680µm,0.8s						
CLTA				AML	AML		
	comp=E,4000µm,1.3s						
CAVT	**Castelvetrano**	1.24	1	P	Pn	23 50 24.9	-1.5
MMGO	**Monte Magaggia**	1.24	9	P	Pn	23 50 24.9	-1.5
MFNL	**Monte Finestre**	1.36	7	P	Pn	23 50 27.6	-0.5
MCT	**Mte Cammarata**	1.40	31	P	Pn	23 50 28.1	-0.6
MCT				AML	AML		
	comp=E,2515µm,1.1s						
MCT				AML	AML		
	comp=N,3220µm,1.5s						
MCT				AML	AML		
	comp=E,3105µm,1.0s						
MCT				AML	AML		
	comp=N,3400µm,1.6s						
CORL	**Corleone**	1.53	18	P	Pn	23 50 29.1	-1.2
CORL				AML	AML		
	comp=N,2550µm,0.9s						
CORL				AML	AML		
	comp=E,2795µm,0.7s						
CORL				AML	AML		
	comp=N,2570µm,0.8s						
RAFF	**Raffo Rosso**	1.53	59	P	Pn	23 50 28.8	-1.6
RAFF				S	Sn	23 50 49.6	-0.3
RAFF				AML	AML		
	comp=E,3585µm,0.5s						
RAFF				AML	AML		
	comp=N,3080µm,1.0s						
RESU	**Resuttano**	1.61	41	P	Pn	23 50 31.6	+0.1
VAE	**Valguarnera**	1.71	52	Pn	Pn	23 50 33.0	+0.2
	comp=N,19nm,0.3s,baz=2.4,slow=3.1,SNR=41						
VAE				Sn	Sg	23 50 58.9	-0.1
	comp=N,44nm,0.3s,baz=323,slow=19,SNR=11						
HMDC	**Modica**	1.74	72	P	Pn	23 50 30.8	-2.4
HMDC				S	Sn	23 50 52.4	-2.6
HMDC				AML	AML		
	comp=E,1315µm,0.4s						
HMDC				AML	AML		
	comp=N,1650µm,1.6s						
HMDC				AML	AML		
	comp=E,1760µm,0.8s						
HMDC				AML	AML		
	comp=N,1830µm,0.8s						
SOLUN	**Solunto**	1.77	21	P	Pn	23 50 32.7	-1.0
SOLUN				AML	AML		
	comp=E,563µm,0.9s						
SOLUN				AML	AML		
	comp=N,433µm,0.9s						
SOLUN				AML	AML		
	comp=N,500µm,1.0s						
SOLUN				AML	AML		
	comp=E,626µm,1.4s						
PETRA	**Petralia Sopra**	1.78	38	P	Pn	23 50 34.0	0.0
PETRA				AML	AML		
	comp=E,1635µm,0.8s						
PETRA				AML	AML		
	comp=N,2225µm,0.8s						
MPG	**Monte Pellegri**	1.79	16	P	Pn	23 50 33.2	-0.9
MPG				AML	AML		
	comp=N,665µm,0.9s						
MPG				AML	AML		
	comp=E,764µm,0.8s						
GIB	**Gibilmanna**	1.87	34	P	Pn	23 50 34.5	-0.6
GIB				AML	AML		
	comp=E,2080µm,0.9s						
GIB				AML	AML		
	comp=N,2335µm,1.1s						
MEU	**Monte Lauro**	1.89	69	P	Pn	23 50 32.6	-2.8
MEU				AML	AML		
	comp=N,5205µm,0.4s						
MEU				AML	AML		
	comp=E,3330µm,1.0s						
HPAC	**Pachino**	1.94	82	P	Pn	23 50 32.8	-3.2
HPAC				S	Sn	23 50 57.8	-2.2
HPAC				AML	AML		
	comp=E,3520µm,1.2s						
HPAC				AML	AML		
	comp=N,4415µm,0.9s						
GALF	**Gagliano Caste**	1.95	49	P	Pn	23 50 36.2	0.0
GALF				AML	AML		
	comp=N,2385µm,0.6s						
GALF				AML	AML		
	comp=E,1755µm,0.7s						
HLNI	**Lentini**	1.95	62	P	Pn	23 50 34.1	-2.0
HLNI				S	Sn	23 50 58.8	-1.3
HLNI				AML	AML		
	comp=E,1880µm,0.9s						
HLNI				AML	AML		
	comp=N,2450µm,0.8s						
HAVL	**Avola**	2.00	74	P	Pn	23 50 34.3	-2.6
HAVL				S	Sn	23 50 59.8	-1.7
HAVL				AML	AML		
	comp=N,2070µm,1.3s						
HAVL				AML	AML		
	comp=E,2170µm,0.8s						
HCRL	**Carlentini**	2.04	65	P	Pn	23 50 35.4	-1.9
HCRL				S	Sn	23 51 00.7	-1.6
HCRL				AML	AML		
	comp=E,2325µm,1.0s						
HCRL				AML	AML		
	comp=N,1805µm,0.7s						
HAGA	**Augusta**	2.13	66	P	Pn	23 50 36.6	-2.0
HAGA				S	Sn	23 51 02.9	-1.6
HAGA				AML	AML		
	comp=E,2445µm,1.0s						
HAGA				AML	AML		
	comp=N,2575µm,0.7s						
AGST	**Augusta-Monte**	2.17	67	P	Pn	23 50 37.2	-1.9
AGST				AML	AML		
	comp=E,2965µm,0.8s						
AGST				AML	AML		
	comp=N,3135µm,1.6s						
MNO	**Monte Soro**	2.17	46	⇑P	Pn	23 50 39.5	+0.1
MNO				AML	AML		
	comp=E,2035µm,0.9s						
MNO				AML	AML		
	comp=N,2345µm,0.8s						
MSFR	**San Fratello**	2.18	43	⇑P	Pn	23 50 39.4	0.0
MSFR				AML	AML		
	comp=N,836µm,1.4s						
MSFR				AML	AML		
	comp=E,844µm,1.6s						
ESLN	**Serra La Nave**	2.19	55	P	Pn	23 50 39.2	-0.5
ESLN				AML	AML		
	comp=E,3565µm,0.8s						
ESLN				AML	AML		
	comp=N,2815µm,0.6s						
EPZF	**Pizzo Felice**	2.20	50	AML	AML		
	comp=E,1910µm,0.5s						
EPZF				AML	AML		
	comp=N,2325µm,0.6s						
EMSG	**Monte Spagnolo**	2.25	52	AML	AML		
	comp=N,2220µm,0.7s						
EMSG				AML	AML		
	comp=E,2520µm,1.3s						
MUCR	**Ucria**	2.35	46	P	Pn	23 50 41.5	-0.2
MUCR				AML	AML		
	comp=E,1220µm,1.0s						
MUCR				AML	AML		
	comp=N,1167µm,1.6s						
IACL	**Alicudi**	2.46	31	P	Pn	23 50 41.8	-1.4
IACL				AML	AML		
	comp=N,888µm,0.5s						
IACL				AML	AML		
	comp=E,899µm,0.7s						
NOV	**Novara**	2.50	50	P	Pn	23 50 43.2	-0.5
NOV				AML	AML		
	comp=E,1285µm,0.8s						
NOV				AML	AML		
	comp=N,802µm,0.8s						
IFIL	**Filicudi I Eol**	2.58	34	P	Pn	23 50 43.6	-1.1
IFIL				AML	AML		
	comp=E,4035µm,0.5s						
IFIL				AML	AML		
	comp=N,1040µm,0.8s						
VPL	**Vulcano Piano**	2.65	42	P	Pn	23 50 45.2	-0.5
VPL				AML	AML		
	comp=E,2500µm,1.6s						
VPL				AML	AML		
	comp=N,3205µm,0.7s						
LLI	**Lipari**	2.67	41	P	Pn	23 50 45.4	-0.7
LLI				AML	AML		
	comp=N,8155µm,0.8s						
LLI				AML	AML		
	comp=E,5925µm,0.6s						
MPNC	**Port Mandanici**	2.70	50	P	Pn	23 50 46.1	-0.3
MPNC				AML	AML		
	comp=N,1260µm,0.7s						
MPNC				AML	AML		
	comp=E,1140µm,0.6s						
KEST	**Kesra**	2.82	257	Pn	Pn	23 50 47.5	-0.8
	comp=E,13nm,0.3s,baz=349,slow=4.0,SNR=177						
KEST				Sn	Sn	23 51 21.2	-0.6
	comp=E,6.8nm,0.3s,baz=180,slow=21,SNR=5.9						
KEST				LR	LR	23 51 37.2	
	comp=E,165nm,20.3s,baz=4.0,slow=33						
MPAZ	**Palizzi**	3.03	59	P	Pn	23 50 50.2	-0.8
MPAZ				AML	AML		
	comp=N,354µm,0.6s						
MPAZ				AML	AML		
	comp=E,274µm,0.9s						
MSCL	**Scilla**	3.03	53	P	Pn	23 50 50.8	-0.3
MSCL				AML	AML		
	comp=E,624µm,1.1s						
MSCL				AML	AML		
	comp=N,722µm,0.8s						
JOPP	**Joppolo**	3.32	48	P	Pn	23 50 53.9	-1.1
JOPP				AML	AML		
	comp=E,126µm,0.7s						
JOPP				AML	AML		
	comp=N,124µm,0.8s						
PLAC	**Placanica**	3.58	55	P	Pn	23 50 58.1	-0.4
PLAC				AML	AML		
	comp=N,173µm,0.7s						
PLAC				AML	AML		
	comp=E,148µm,0.9s						
VSL	**Villasalto**	4.04	320	P	Pn	23 51 04.3	-0.5
VSL				AML	AML		
	comp=N,105µm,1.3s						
VSL				AML	AML		
	comp=E,74µm,1.3s						
TIP	**Timpagrande**	4.21	48	P	Pn	23 51 06.9	-0.3
TIP				AML	AML		
	comp=N,70µm,1.6s						
TIP				AML	AML		
	comp=E,70µm,1.1s						
CUC	**Castrocucco**	4.30	34	P	Pn	23 51 08.1	-0.5
CUC				AML	AML		
	comp=N,118µm,0.5s						
CUC				AML	AML		
	comp=E,136µm,0.8s						
PIPA	**Pietrapaola**	4.44	46	P	Pn	23 51 10.8	+0.4
PIPA				AML	AML		
	comp=E,93µm,1.1s						
PIPA				AML	AML		
	comp=N,89µm,1.4s						
PGF	**Pioggiola**	6.75	336	*e*P	Pn	23 51 44.1	+2.0
PGF				*e*Sn	Sn	23 52 52.7	-5.9
	comp=N,24nm,0.6s						
LMR	**La Mourre**	8.38	327	*e*Pn	Pn	23 52 02.2	-2.2
LMR	**La Mourre**	8.38	327	*e*P	Pn	23 52 06.8	+2.4
LMR				*e*Sn	Sn	23 53 32.1	-6.4
	comp=N,0.7nm,0.4s						
SBF	**Sospel**	8.45	333	*e*Pn	Pn	23 52 03.1	-2.3
SBF	**Sospel**	8.45	333	*e*P	Pn	23 52 08.3	+2.9
SBF				*e*Sn	Sn	23 53 33.6	-6.7
	comp=N,2.1nm,0.4s						
FRF	**La Foret Royal**	8.50	329	*e*Pn	Pn	23 52 03.7	-2.4
FRF	**La Foret Royal**	8.50	329	*e*P	Pn	23 52 09.4	+3.3
FRF				*e*Sn	Sn	23 53 35.0	-6.6
	comp=N,1.0nm,0.4s						
SMRF	**Simiane la Rot**	9.30	326	*e*P	Pn	23 52 20.4	+3.3
MBDF	**Montbardon**	9.43	333	*e*P	Pn	23 52 22.1	+3.1
MBDF				*e*Sn	Sn	23 53 57.0	-7.7
	comp=N,3.2nm,0.6s						
ORIF	**Oris-en-Rattie**	9.93	331	*e*P	Pn	23 52 28.6	+2.8
IDI	**Anoyia**	9.94	93	Pn	Pn	23 52 25.2	-0.7
	comp=N,0.2nm,0.3s,baz=290,slow=15,SNR=1.9						
IDI				Sn	Sn	23 54 07.1	-10
	comp=N,0.2nm,0.3s,baz=252,slow=20,SNR=2.2						
IDI				LR	LR	23 56 07.2	
	comp=N,72nm,19.2s,baz=293,slow=37						
LPG	**La Plagne**	10.11	335	*e*Pn	Pn	23 52 25.6	-2.8
LPG	**La Plagne**	10.11	335	*e*P	Pn	23 52 31.5	+3.1
LPL	**La Plagne**	10.13	335	*e*Pn	Pn	23 52 25.9	-2.8
LASF	**Ste Croix**	10.20	321	*e*Pn	Pn	23 52 26.9	-2.5
LASF	**Ste Croix**	10.20	321	*e*P	Pn	23 52 32.6	+3.2
LASF				*e*Sn	Sn	23 54 15.7	-7.6
	comp=N,0.3nm,0.2s						
ABTA	**Abfaltersbach**	10.30	359	*e*Pn	Pn	23 52 35.5	+4.6
	comp=N,1.8nm,0.5s						
VIVF	**Saint-Julien-l**	10.39	326	*e*Pn	Pn	23 52 29.7	-2.3
VIVF	**Saint-Julien-l**	10.39	326	*e*P	Pn	23 52 35.2	+3.2
DAVOX	**Davos/Dischmat**	10.55	349	Pn	Pn	23 52 40.5	+6.2
	comp=N,1.1nm,0.3s,baz=171,slow=15,SNR=15						
DAVOX				LR	LR	23 56 32.2	
	comp=N,238nm,19.0s,baz=259,slow=37						
FETA	**Feichten**	10.68	353	*e*Pn	Pn	23 52 41.3	+5.2
	comp=N,5.9nm,0.9s						
SQTA	**Sankt Quirin**	10.83	355	*e*Pn	Pn	23 52 43.7	+5.6
	comp=N,2.9nm,0.6s						
MOTA	**Moosalm**	10.96	354	*e*Pn	Pn	23 52 46.1	+6.1
	comp=N,3.5nm,0.7s						
CABF	**La Chapelle**	11.31	336	*e*P	Pn	23 52 47.8	+3.2
ETSF	**Etsaut**	12.09	306	*e*Pn	Pn	23 52 55.3	0.0
CDF	**Champ du Feu**	12.62	343	*e*P	Pn	23 53 05.2	+2.7
CDF				*e*Sn	Sn	23 55 18.0	-4.6
	comp=N,0.5nm,0.3s						
SAVF	**Savonnieres en**	13.39	338	*e*P	Pn	23 53 15.3	+2.4
ESDC	**Sonseca Array**	13.54	289	Pn	Pn	23 53 16.1	+1.0
	comp=N,0.1nm,0.3s,baz=88,slow=13,SNR=9.2						
MDT	**Midelt**	14.72	261	Pn	Pn	23 53 30.2	-1.0
	comp=N,0.2nm,0.3s,baz=92,slow=13,SNR=10						
MDT				LR	LR	00 00 52.7	
	comp=N,95nm,18.1s,baz=54,slow=44						
BRTR	**Keskin Array B**	16.79	72	Pn	P	23 53 59.4	-1.0
	comp=N,0.0nm,0.3s,baz=256,slow=16,SNR=2.9						
AKASG	**Malin Array Be**	18.55	35	P	Pn	23 54 20.2	+0.5
	comp=N,0.3nm,0.3s,baz=222,slow=10,SNR=3.1						
EIL	**Elat**	19.80	104	LR	LR	00 02 57.4	
	comp=N,32nm,18.6s,baz=293,slow=39						
EKA	**Eskdalemuir Ar**	21.80	335	P	P	23 54 56.4	+1.7
	comp=N,1.6nm,0.6s,baz=151,slow=10,SNR=2.6						
HFS	**Hagfors**	23.72	1	P	P	23 55 18.2	+3.5
	comp=N,7.2nm,1.0s,baz=187,slow=10,SNR=2.0						
TORD	**Torodi Ar. Bea**	25.22	206	P	P	23 55 29.4	+0.6
	comp=N,0.8nm,0.7s,baz=14,slow=11,SNR=6.7						
TORD				LR	LR	00 06 09.1	
	comp=N,40nm,18.3s,baz=5.0,slow=38						
FINES	**FINESS Array B**	26.41	14	P	P	23 55 40.9	+1.7
	comp=N,6.3nm,0.9s,baz=186,slow=12,SNR=4.4						
KOWA	**Kowa**	26.48	219	P	P	23 55 42.0	+1.7
	comp=N,2.4nm,0.9s,baz=339,slow=4.9,SNR=5.0						
KOWA				LR	LR	00 07 53.9	
	comp=N,73nm,18.1s,baz=12,slow=40						
ARCES	**ARCESS Array B**	33.88	8	P	P	23 56 45.2	0.0
	comp=N,3.6nm,0.8s,baz=183,slow=9.2,SNR=5.9						
BORG	**Borgarnes**	34.83	335	LR	LR	00 09 57.9	
	comp=N,221nm,20.4s,baz=129,slow=34						
ZALV	**Zalesovo Beam**	51.43	46	P	P	23 59 08.4	+0.8
	comp=N,0.5nm,0.4s,baz=282,slow=7.4,SNR=4.4						
MKAR	**Makanchi Array**	51.46	55	P	P	23 59 08.9	+0.9
	comp=N,1.1nm,0.7s,baz=285,slow=7.6,SNR=12						
SONM	**Songino Array**	66.28	47	P	P	00 00 52.4	+1.2
	comp=N,1.7nm,1.0s,baz=265,slow=8.1,SNR=6.2						
YKA	**Yellowknife Ar**	72.74	337	P	P	00 01 34.1	+3.5
	comp=N,0.2nm,0.5s,baz=53,slow=6.7,SNR=4.4						

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*SJA **10** 23:51:16.1±0.7, 31°.18S×68°.41W, h105km±2km, ML4.1, MW4.1*
*NEIC **10** 23:51:16.3±1.8, 31°.15S±0°.06×68°.3W±0°.1, h104km±6km, Error ellipse: s-maj=14.3km s-min=8.3km az=89.0*
*IDC **10** 23:51:16.1±0.7, 31°.19S×68°.43W, h98km±5km, mb3.8/8, mb1 4.0/11, mb1mx3.7/36, mbtmp4.1/11, MS2.9/2, Ms1 2.9/2, ms1mx2.7/25, Error ellipse: s-maj=20.4km s-min=17.0km az=70.0*
ISC 10 23:51:16.0±0.5, **31°.18S**±0°.04×**68°.38W**±0°.04, **h103**km±4km, **n102, σ1ˢ45**/121, **mb4.2**/14, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	0.17	209	*e*P	Pn	23 51 31.6	+1.0
RTLL				*e*S	Sn	23 51 42.6	+1.2
RTLL				IAML		23 51 43.5	
	comp=Z,4µm,0.3s						
ZON	**Zonda**	0.45	215		Pn	23 51 32.8	+1.0
ZON				Sn	Sn	23 51 44.7	+1.0
ZON	**Zonda**	0.45	215	*e*P	Pn	23 51 32.8	+1.0
ZON				*e*S	Sn	23 51 44.7	+1.0
RTCV	**Cerro Valdivia**	0.70	191	*e*P	Pn	23 51 34.7	+1.0
RTCV				*e*S	Sn	23 51 48.3	+1.2
ACCO	**Cerro Coronel**	0.83	315	*e*P	Pn	23 51 36.8	+1.5
ACCO				*e*S	Sn	23 51 51.8	+2.0
AVFE	**Valle Fertil**	0.94	57	*e*P	Pn	23 51 38.0	+1.8
AVFE				*e*S	Sn	23 51 53.6	+2.3

AVFE				IAML		23 51 54.2	
	comp=Z,5µm,0.5s						
RTLS	Leoncito	1.00	231	eP	Pn	23 51 38.5	+1.5
RTLS				eS	Sn	23 51 54.8	+2.1
RTLS				IAML		23 51 57.0	
	comp=Z,2µm,0.5s						
ACDV	Cuesta del Vie	1.19	327	eP	Pn	23 51 40.5	+1.6
ACDV				eS	Sn	23 51 58.7	+2.5
AUSP	Uspallata	1.35	219	eP	Pn	23 51 42.5	+1.5
AUSP				eS	Sn	23 52 01.5	+1.7
AROD	Rodeo	1.38	316	eP	Pn	23 51 43.0	+1.7
AROD				eS	Sn	23 52 02.1	+1.7
ASAL	Salagasta	1.46	195	eP	Pn	23 51 43.4	+1.4
ASAL				eS	Sn	23 52 03.8	+2.0
ASAL				IAML		23 52 05.2	
	comp=Z,1µm,0.8s						
ARCO	CERRO ARCO	1.73	196	eP	Pn	23 51 46.8	+1.4
ARCO				eS	Sn	23 52 09.7	+2.0
ARCO				IAML		23 52 11.0	
	comp=Z,1µm,0.2s						
APLL	PUNTA DE LOS L	1.77	64	eP	Pn	23 51 47.8	+1.9
CO01	Juntas del Tor	1.90	308		Pn	23 51 50.1	+2.4
AAGR	Agrelo	1.94	191	eP	Pn	23 51 49.4	+1.4
AAGR				eS	Sn	23 52 13.7	+1.2
AAGR				IAML		23 52 15.7	
	comp=Z,963nm,0.6s						
CO03	El Pedregal	2.01	279	Pn	Pn	23 51 50.9	+1.9
ACLC	CERRO LA CRUZ	2.13	36	eP	Pn	23 51 52.3	+1.7
ACLC				IAML		23 52 21.3	
	comp=Z,2µm,0.9s						
CO02	Combarbal	2.25	269		Pn	23 51 53.2	+1.2
GO04	Tololo Observa	2.31	295		Pn	23 51 54.3	+1.3
GO04	Tololo Observa	2.31	295	eP	Pn	23 51 54.4	+1.3
VA03	San Esteban	2.43	229		Pn	23 51 56.0	+1.6
VCA	Vinchina	2.44	4	eP	Pn	23 51 56.6	+2.1
VCA				IAML		23 52 33.6	
	comp=Z,950nm,0.5s						
MRA	San Martin	2.58	119	eP	Pn	23 51 57.9	+1.6
MRA				IAML		23 52 32.9	
	comp=Z,847nm,0.4s						
AANI	Anillaco	2.67	28	eP	Pn	23 51 58.9	+1.3
AANI				IAML		23 52 34.8	
	comp=Z,817nm,0.6s						
PEL	Peldehue	2.77	224		Pn	23 52 00.1	+1.3
PEL	Peldehue	2.77	224	eP	Pn	23 51 60.0	+1.1
AC05	El Transito	2.85	324		Pn	23 52 02.2	+2.2
ROC1	El Roble	2.87	231		Pn	23 52 00.6	+0.3
ROC1	El Roble	2.87	231	eP	Pn	23 52 00.9	+0.6
LCO	Las Campanas	2.95	316		Pn	23 52 02.7	+1.3
MT05	Renca	2.98	222	Pn	Pn	23 52 03.1	+1.5
MT02	Curacav	3.13	228		Pn	23 52 03.8	+0.3
TCA	Tanti	3.24	94	eP	Pn	23 52 06.4	+1.3
TCA				IAML		23 53 01.2	
	comp=Z,417nm,0.6s						
CYA	Choya	3.52	40	eP	Pn	23 52 09.5	+0.6
CYA				IAML		23 53 16.4	
	comp=Z,229nm,0.5s						
RFA	San Rafael	3.59	181	eP	Pn	23 52 09.8	+0.1
RFA				IAML		23 52 53.8	
	comp=Z,378nm,0.4s						
AC04	Llanos de Chal	3.78	321		Pn	23 52 12.8	+0.5
LAMA	Las Malvinas	3.81	190	eP	Pn	23 52 13.2	+0.4
GO03	Copiap	3.92	335		Pn	23 52 15.3	+1.1
GO03	Copiap	3.92	335	eP	Pn	23 52 15.2	+1.0
BO02	Sierra Bellavi	4.13	209		Pn	23 52 17.7	+0.6
AC02	Maricunga	4.37	351		Pn	23 52 22.5	+1.7
EDS3	Malargue	4.66	190	eP	Pn	23 52 24.8	+0.5
AHML	Horco Molle	5.12	32	eP	Pn	23 52 30.2	-0.3
AHML				IAML		23 54 03.7	
	comp=Z,76nm,0.8s						
AC01	Pan de Azucar	5.38	338	Pn	Pn	23 52 33.8	-0.1
FSA	Cafayete	5.47	23	eP	Pn	23 52 36.7	+1.4
GO02	Mina Guanaco	6.08	350	Pn	Pn	23 52 44.0	+0.3
PB14	IPOC Station P	6.77	344	Pn	Pn	23 52 52.2	-0.9
PB14	IPOC Station P	6.77	344	eP	Pn	23 52 52.1	-0.9
PB14				IAML		23 54 22.3	
	comp=Z,59nm,1.0s						
BI03	Tigo	6.84	213		Pn	23 52 50.0	-3.7
SLA	San Lorenzo	6.91	22	eP	Pn	23 52 55.9	+1.0
SLA				IAML		23 55 18.6	
	comp=Z,32nm,0.7s						
AZAP	Zapla	7.52	24	eP	Pn	23 53 03.2	-0.1
AZAP				IAML		23 55 25.1	
	comp=Z,70nm,0.8s						
PB10	IPOC Station P	7.87	345	Pn	Pn	23 53 05.5	-2.3
PB10	IPOC Station P	7.87	345	eP	Pn	23 53 05.8	-2.0
PB10				IAML		23 54 51.1	
	comp=Z,35nm,0.9s						
LC01	Cunco	8.22	199	Pn	Pn	23 53 10.2	-2.3
LVC	Limon Verde	8.54	357	P	Pn	23 53 16.3	-0.9
	comp=Z,7.8nm,0.3s,baz=158,slow=12,SNR=46						
LVC				S	Sn	23 54 48.5	-3.7
	comp=Z,1.4nm,0.3s,baz=207,slow=18,SNR=1.3						
LVC	Limon Verde	8.54	357	Pn	Pn	23 53 16.6	-0.7
PB04	IPOC Station P	8.95	349	Pn	Pn	23 53 20.1	-2.4
PB09	IPOC Station P	9.37	355		Pn	23 53 27.1	-1.2
PB07	IPOC Station P	9.51	351		Pn	23 53 27.1	-3.1
PLCA	Paso Flores	9.70	190	P	Pn	23 53 31.4	-1.1
	comp=Z,0.3nm,0.3s,baz=11,slow=6.8,SNR=10						
PLCA	Paso Flores	9.70	190		Pn	23 53 31.2	-1.3
CPUP	Villa Florida	10.83	66	P	Pn	23 53 48.1	+0.1
	comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=3.3						
CPUP				S	Sn	23 55 49.3	+2.2
	comp=Z,0.5nm,0.3s,baz=257,slow=17,SNR=1.7						
CPUP				LR	LR	23 57 48.7	
	comp=Z,33nm,19.5s,baz=41,slow=36						
CPUP	Villa Florida	10.83	66		Pn	23 53 46.8	-1.2
PB08	IPOC Station P	11.01	356	Pn	Pn	23 53 47.6	-3.2
GO01	Chusmiza	11.48	356		Pn	23 53 54.4	-2.8
MNMC	Minye Minye	12.04	354	Pn	Pn	23 54 01.8	-2.8
PB16	IPOC Station P	12.83	355		Pn	23 54 13.5	-1.6
SIV	San Ignacio	16.52	25	P	Pn	23 54 59.9	-1.8
	comp=Z,0.4nm,0.3s,baz=231,slow=13,SNR=10.0						
NNA	Nana	20.64	336	LR	LR	00 02 21.6	
	comp=Z,53nm,19.0s,baz=135,slow=32						
EFI	East Falkland	21.85	163	P	P	23 55 59.2	-0.8
SAML	Samuel	22.64	13	P	P	23 56 08.6	+0.1
BELA	Belgrano 2	49.15	171	P	P	23 59 53.1	+0.3
SNAA	Sanae	53.06	159	P	P	00 00 23.2	+0.9
	comp=Z,1.4nm,0.5s,baz=46,slow=1.2,SNR=16						
SNAA	Sanae	53.06	159	P	P	00 00 22.4	+0.1
SNAA				IAmb	IAmb	00 00 29.8	
	comp=Z,2.5nm,0.8s						
TEIG	Tepich	54.56	337	P	P	00 00 33.9	+0.2
W57A	Gilead	66.88	350	P	P	00 01 57.4	+0.5
W57A				IAmb	IAmb	00 02 09.4	
	comp=Z,8.0nm,1.1s						
V58A	Windy Hill, Pi	67.38	351	P	P	00 02 00.4	+0.3
V53A	Saluda	67.86	347	P	P	00 02 03.6	+0.4
V53A				IAmb	IAmb	00 02 16.2	
	comp=Z,3.5nm,1.1s						
CPCT	Cooper Cave	67.99	346	P	P	00 02 03.9	0.0
TKL	Tuckaleechee C	68.04	347	P	P	00 02 04.2	-0.1
	comp=Z,2.6nm,0.6s,baz=176,slow=11,SNR=4.3						
TKL	Tuckaleechee C	68.04	347	P	P	00 02 04.2	-0.1
TKL				IAmb	IAmb	00 02 06.8	
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	68.91	327	P	P	00 02 11.4	+1.4
	comp=Z,0.8nm,0.6s,baz=152,slow=8.4,SNR=15						
TXAR	Lajitas Array	68.91	327	P	P	00 02 11.0	+1.0
TX31	Lajitas Ar. Si	68.91	327	P	P	00 02 11.0	+1.1
TX31				IAmb	IAmb	00 02 23.3	
	comp=Z,5.1nm,1.1s						
JSRW	J. Sargeant Re	69.09	352	P	P	00 02 12.0	+1.3
WVT	Waverly	69.40	343	P	P	00 02 12.7	+0.1
WVT				IAmb	IAmb	00 02 13.5	
	comp=Z,5.2nm,0.6s						
MNTX	Cornudas Mount	71.69	327	P	P	00 02 27.1	+0.3
MNTX				IAmb	IAmb	00 02 27.8	
	comp=Z,4.3nm,1.1s						
KOWA	Kowa	76.64	64	P	P	00 02 56.7	+0.9
	comp=Z,1.4nm,0.5s,baz=228,slow=5.1,SNR=9.4						
KOWA	Kowa	76.64	64	P	P	00 02 56.1	+0.3
TOA0	Torodi Ar. Sit	80.32	68	P	P	00 03 16.6	+0.5
TOA0				IAmb	IAmb	00 03 17.7	
	comp=Z,2.7nm,0.7s						
TORD	Torodi Ar. Bea	80.32	68	P	P	00 03 17.0	+0.9
	comp=Z,2.1nm,0.6s,baz=279,slow=6.5,SNR=14						
TORD				pP	pP	00 03 43.4	+0.4
	comp=Z,2.1nm,0.7s,baz=261,slow=4.4,SNR=7.7						
TORD	Torodi Ar. Bea	80.32	68	P	P	00 03 17.0	+0.9
PDAR	Pinedale Array	82.73	331	P	P	00 03 28.8	+0.3
	comp=Z,1.0nm,0.8s,baz=128,slow=5.7,SNR=7.5						
PDAR	Pinedale Array	82.73	331	P	P	00 03 28.5	0.0
NVAR	Mina Array Bea	83.42	323	P	P	00 03 33.7	+1.6
	comp=Z,0.7nm,0.8s,baz=158,slow=5.4,SNR=6.0						
ULM	Lac du Bonnet	84.66	343	P	P	00 03 37.8	0.0
	comp=Z,1.3nm,0.5s,baz=86,slow=16,SNR=4.7						
ULM	Lac du Bonnet	84.66	343	P	P	00 03 37.5	-0.3
ULM				IAmb	IAmb	00 03 49.3	
	comp=Z,5.6nm,1.1s						
YKA	Yellowknife Ar	100.42	340	P	Pdif	00 04 51.5	+0.8
	comp=Z,0.1nm,0.4s,baz=134,slow=5.5,SNR=2.2						
WRA	Warramunga Arr	124.69	206	PKP	PKPdf	00 10 03.1	-1.0
	comp=Z,0.4nm,0.5s,baz=167,slow=1.6,SNR=7.5						
WRA				pPKP	pPKPdf	00 10 32.7	+0.1
	comp=Z,0.3nm,0.6s,baz=151,slow=1.5,SNR=1.7						
ZALV	Zalesovo Beam	150.19	32	PKPbc	PKiKP	00 10 55.2	0.0
	comp=Z,4.0nm,0.7s,baz=296,slow=3.2,SNR=20						
ZALV				pPKPbc	pPKPbc	00 11 20.5	-2.2
	comp=Z,0.8nm,0.6s,baz=349,slow=4.4,SNR=2.7						
MKAR	Makanchi Array	152.58	47	PKPbc	PKiKP	00 11 00.7	+0.2
	comp=Z,1.4nm,0.7s,baz=306,slow=2.3,SNR=14						
MKAR				PKPab	PKPab	00 11 11.9	+0.8
	comp=Z,1.3nm,0.6s,baz=292,slow=4.1,SNR=10						
MKAR				pPKPbc	pPKPbc	00 11 27.3	-1.3
	comp=Z,0.7nm,0.7s,baz=267,slow=2.4,SNR=2.8						
MKAR	Makanchi Array	152.58	47		PKPbc	00 11 00.2	0.0

IDC 11 00:00:20.1±1.9**,0°.19S×123°.80E,h0^{km},mb3.2**/3**,**
mb1 3.5/3**,mb1mx3.3**/33**,mbtmp3.3**/3**,MS3.4**/1**,Ms1 3.4**/1**,**
ms1mx2.6/20**,Error ellipse: s-maj=247.8km**
s-min=27.1km az=62.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	17.44	247	LR	LR	00 11 25.6	
	comp=Z,109nm,19.1s,baz=210,slow=38						
WRA	Warramunga Arr	22.18	153	P	P	00 05 19.8	+1.8
	0.7nm,1.0s,baz=330,slow=10,SNR=1.9						
ASAR	Alice Springs	25.31	158	P	P	00 05 47.4	-1.3
	0.8nm,1.1s,baz=338,slow=7.5,SNR=5.1						
MKAR	Makanchi Array	59.20	328	P	P	00 10 23.1	+0.1
	0.1nm,0.3s,baz=122,slow=8.2,SNR=5.0						

*IDC **11** 00:14:03.9±1.7, 15°.21S×177°.41W, h368^{km}±27^{km}, mb3.1/4,*
mb1 3.4/6, mb1mx3.1/29, mbtmp3.9/6, Error ellipse:
s-maj=103.7km s-min=17.6km az=154.0
ISC 11 00:14:02.8±0.9**,14°.8S**±0°.3×**177°.6W**±0°.2**,h350^{km},n8,**
σ1^s**79**/9**,mb3.5**/4**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.12	235	P	Pn	00 15 26.6	+2.8
	3.6nm,0.3s,baz=79,slow=10,SNR=21						
MSVF				S	S	00 16 26.8	-2.6
	baz=112,slow=22,SNR=1.1						
AFI	Afiamalu	5.69	82	P	Pn	00 15 29.4	-0.8
	2.3nm,0.3s,baz=79,slow=8.2,SNR=4.3						
WRA	Warramunga Arr	46.06	256	P	P	00 21 52.2	-1.2
	0.3nm,0.5s,baz=93,slow=8.4,SNR=7.8						
ASAR	Alice Springs	46.47	251	P	P	00 21 55.6	-0.9
	2.9nm,0.5s,baz=85,slow=8.5,SNR=73						
ILAR	Eielson Array	82.70	13	P	P	00 25 46.9	-0.7
	0.8nm,0.9s,baz=224,slow=5.4,SNR=5.4						
TXAR	Lajitas Array	83.66	58	P	P	00 25 54.3	+0.9
	0.5nm,0.9s,baz=235,slow=8.7,SNR=3.7						
GERES	GERESS Array B	144.81	347	PKPbc	PKPdf	00 32 58.5	-0.1
	0.6nm,0.5s,baz=5.5,slow=3.1,SNR=2.0						
MMAI	Mount Meron Ar	145.03	307	PKPbc	PKPbc	00 33 00.6	+1.0
	1.6nm,0.5s,baz=60,slow=4.9,SNR=5.7						

*IDC **11** 00:24:02.2±4.5, 36°.33N×70°.96E, h167^{km}±38^{km}, mb3.1/8,*
mb1 3.2/12, mb1mx3.0/48, mbtmp3.6/12, Error ellipse:
s-maj=33.7km s-min=22.4km az=36.0
*NNC **11** 00:24:07.0±12.0, 37°.08N×70°.35E, h0^{km}, mb3.8, mpv3.4,*
Error ellipse: s-maj=102.1km s-min=95.1km az=20.0
ISC 11 00:24:06.6±1.0**,36°.6N**±0°.1×**70°.9E**±0°.1**,h200^{km},n20,**
σ1^s**63**/23**,mb3.3**/7**,5C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.90	20	P	Pn	00 25 33.1	+0.3
	SNR=52						
UCH	Uchtor	6.24	25	P	Pn	00 25 37.3	0.0
	SNR=7.8						
EKS2	Erkin-Say	6.41	19	P	Pn	00 25 40.3	+1.0
	SNR=11						
KK31	Karatay Array	6.47	357	⇑P	Pn	00 25 39.8	-0.1
	0.5nm,0.3s,baz=181,slow=13						
KK31				⇑Pg		00 25 49.4	
	0.8nm,0.3s,baz=178,slow=13						
KK31				⇑S	Sn	00 26 48.8	-5.2
	5.9nm,0.6s,baz=188,slow=22						
AAK	Ala-Archa	6.60	24	P	Pn	00 25 42.3	+0.6
	1.7nm,0.3s,baz=175,slow=4.3,SNR=28						
AAK				S	Sn	00 26 55.4	-1.8
	1.0nm,0.3s,baz=184,slow=22,SNR=21						
AAK	Ala-Archa	6.60	24	P	Pn	00 25 42.4	+0.6
	SNR=6.0						
AAK	Ala-Archa	6.60	24	⇓P	Pn	00 25 42.2	+0.5
	1.2nm,0.3s						
AAK				⇑S	Sn	00 26 56.2	-1.0
	11nm,0.9s						
TKM2	Tokmak 2	7.24	28	P	Pn	00 25 50.5	+0.4
	SNR=6.8						
TKM2	Tokmak 2	7.24	28	⇑P	Pn	00 25 50.3	+0.2
	5.0nm,0.6s						
MKAR	Makanchi Array	13.22	36	P	Pn	00 27 07.2	+0.4
	0.1nm,0.3s,baz=208,slow=12,SNR=6.0						
BVAR	Borovoye Array	16.40	359	P	Pn	00 27 46.8	+1.3
	0.2nm,0.3s,baz=190,slow=13,SNR=4.4						
AKTO	Aktyubinsk	16.64	330	P	P	00 27 49.0	+1.7
	0.3nm,0.3s,baz=139,slow=9.0,SNR=5.5						
ZALV	Zalesovo Beam	19.82	25	P	P	00 28 23.0	+1.1
	0.4nm,0.4s,baz=216,slow=12,SNR=2.9						
FINES	FINESS Array B	37.34	326	P	P	00 31 00.8	+1.4
	6.0nm,1.1s,baz=93,slow=9.7,SNR=1.8						
ARCES	ARCESS Array B	41.00	338	P	P	00 31 30.6	+1.0
	3.2nm,0.8s,baz=114,slow=9.0,SNR=5.4						
TORD	Torodi Ar. Bea	65.66	269	P	P	00 34 27.9	-1.8
	0.2nm,0.6s,baz=56,slow=5.4,SNR=1.2						
ILAR	Eielson Array	74.67	16	P	P	00 35 24.3	+0.6
	0.2nm,0.8s,baz=339,slow=2.3,SNR=2.0						
YKA	Yellowknife Ar	81.12	3	P	P	00 36 00.2	+1.1
	0.2nm,0.3s,baz=0.3,slow=5.3,SNR=5.6						
WRA	Warramunga Arr	82.11	122	P	P	00 36 03.4	-1.6
	0.3nm,0.7s,baz=304,slow=7.1,SNR=1.3						
ASAR	Alice Springs	84.38	125	P	P	00 36 14.8	-1.8
	0.4nm,0.6s,baz=316,slow=5.3,SNR=6.7						

*HEL **11** 00:32:46.0±0.0, 67°.82N×20°.20E, h0^{km}, ML2.7(UPP),*
Explosion
UPP 11 00:32:45.4±0.0**,67°.82N×20°.19E,h0^{km},ML2.7,**
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	22	P	Pg	00 32 48.3	+0.2
KUA				S	Sg	00 32 50.5	+0.6
KUA	Kurravaara	0.14	22	i P	Pg	00 32 48.3	+0.2
KUA				i S	Sg	00 32 50.5	+0.6
RATU	Laukkuluspa	0.23	270	P	Pg	00 32 50.0	+0.2
RATU				S	Sg	00 32 53.2	+0.5
RATU	Laukkuluspa	0.23	270	i P	Pg	00 32 50.0	+0.2
RATU				i S	Sg	00 32 53.2	+0.5
KOVU	Salmi	0.40	358	P	Pg	00 32 53.1	0.0
KOVU				S	Sg	00 32 58.6	+0.3
KOVU	Salmi	0.40	358	i P	Pg	00 32 53.1	0.0
KOVU				i S	Sg	00 32 58.6	+0.3
NIKU	Nikkaluokta	0.44	276	P	Pg	00 32 53.9	+0.1
NIKU	Nikkaluokta	0.44	276	i P	Pg	00 32 53.9	+0.1
LANU	Lannavaara	0.71	71	P	Pg	00 32 59.0	0.0
LANU	Lannavaara	0.71	71	eP	Pg	00 32 58.7	-0.4
DUNU	Dundret	0.72	168	P	Pg	00 32 58.8	-0.4
DUNU	Dundret	0.72	168	i P	Pg	00 32 58.8	-0.4
MASU	Masugnsbyn	0.78	117	P	Pg	00 33 00.2	-0.2
MASU	Masugnsbyn	0.78	117	i P	Pg	00 33 00.2	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 33 00.2	-0.2
SALU	Saltoluokta	0.79	236	i P	Pg	00 33 00.2	-0.2
KIF	Kilpisjarvi	1.21	10	eP	Pn	00 33 09.4	0.0
KIF	Kilpisjarvi	1.21	10	eP	Pg	00 33 08.6	+0.1
PAJU	Pajala	1.38	124	P	Pg	00 33 10.6	-1.3
PAJU	Pajala	1.38	124	eP	Pg	00 33 10.6	-1.3
ERTU	Ertsjaerv	1.49	148	eP	Pn	00 33 12.2	-1.2
KTK1	Kautokeino	1.64	42	eP	Pn	00 33 15.4	0.0
HARU	Harads	1.69	169	P	Pn	00 33 16.1	-0.1
HARU	Harads	1.69	169	eP	Pn	00 33 16.1	-0.1
TOF	Tornio	2.39	135	ePB	Pn	00 33 27.0	+1.3
SGF	Sodankyl	2.45	96	ePB	Pn	00 33 27.9	+1.3
RNF	Rovaniemi	2.57	116	ePB	Pb	00 33 30.5	-1.8

UPP 11 00:32:46.4±0.1**,67°.83N×20°.19E,h0^{km},ML2.6,**
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	23	P	Pg	00 32 49.2	+0.2
KUA				S	Sg	00 32 51.3	+0.5
RATU	Laukkuluspa	0.23	269	P	Pg	00 32 50.9	+0.2
KOVU	Salmi	0.40	358	P	Pg	00 32 54.0	0.0
NIKU	Nikkaluokta	0.44	276	P	Pg	00 32 54.9	+0.1
MASU	Masugnsbyn	0.79	118	P	Pg	00 33 01.1	-0.3

*DJA **11** 00:50:41.2±0.5, 5°S±2°×10°2E±°, h15^{km}±6^{km}, M3.5/9,*
MLv3.5/9
*IDC **11** 00:50:49.7±4.5, 1°.04S×106°.18E, h0^{km}, mb3.7/4,*
mb1 3.9/4, mb1mx3.5/43, mbtmp3.7/4, MS3.4/3, Ms1 3.4/3,
ms1mx2.9/43, Error ellipse: s-maj=285.5km s-min=22.5km
az=55.0
ISC 11 00:50:35.4±1.6**,4°.71S**±0°.09×**102°.0E**±0°.1**,h10^{km},n13,**
σ1^s**24**/13**,mb3.8**/4**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	0.99	70	P	Pn	00 50 55.7	+0.3
KSI	Kapahiang	1.19	28	P	Pn	00 51 00.2	+2.0
KSI				S	Sn	00 51 12.9	-1.6
LHSI	Lahat	1.73	60	P	Pb	00 51 07.6	+0.3
LHSI				S	Sn	00 51 26.8	-0.9
LWLI	Liwa	2.05	99	P	Pb	00 51 12.4	-0.4
MDSI	Maura Dua	2.15	84	P	Pb	00 51 13.7	-0.9
MDSI				S	Sn	00 51 38.2	0.0
KASI	Kota Agung	2.59	108	P	Pb	00 51 21.1	-0.9
KLSI		2.69	90	P	Pn	00 51 20.7	+1.8
LEM	Lembang	5.95	111	LR	LR	00 55 01.7	
	comp=Z,258nm,18.5s,baz=306,slow=42						
WRA	Warramunga Arr	34.91	119	P	P	00 57 28.4	+0.8
	0.7nm,1.0s,baz=306,slow=8.6,SNR=2.3						
ASAR	Alice Springs	36.05	125	P	P	00 57 45.4	+8.0
	0.4nm,0.3s,baz=304,slow=8.0,SNR=16						
ASAR				LR	LR	01 11 47.0	
	comp=Z,45nm,18.7s,baz=312,slow=36						
MKAR	Makanchi Array	54.17	343	P	P	01 00 00.4	-0.6
	0.7nm,0.7s,baz=145,slow=8.0,SNR=8.7						
TLY	Talaya	56.18	1	LR	LR	01 23 40.1	
	comp=Z,50nm,18.2s,baz=344,slow=38						
ZALV	Zalesovo Beam	60.20	348	P	P	01 00 42.1	-1.4
	0.8nm,0.4s,baz=167,slow=5.9,SNR=6.6						

*ISN **11** 01:11:32.9±1.6, 37°.41N×42°.37E, h0^{km}±999^{km}, ML3.4*
*TEH **11** 01:11:35.9, 37°.26N×42°.51E, h11^{km}, ML3.8*
*ISK **11** 01:11:35.2, 37°.24N×42°.48E, h5^{km}, ML3.8/23*
*DDA **11** 01:11:36.2, 37°.29N×42°.49E, h16^{km}±2^{km}, MW3.8*
ISC 11 01:11:36.3±1.2**,37°.26N**±0°.03×**42°.49E**±0°.02**,h4^{km}**±9^{km}**,**
n98,σ0^s**80**/127**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRN	Sırnak	0.24	345	i P	Pg	01 11 41.1	0.0
SIRN				i S	Sg	01 11 45.2	+0.9
SIRN	Sırnak	0.24	345	ePg	Pg	01 11 41.1	0.0
SIRT	Sirnak	0.24	350	PG	Pg	01 11 40.9	-0.2
SIRT				SG	Sg	01 11 45.3	+1.0
SIRT	Sirnak	0.24	350	ePg	Pg	01 11 40.9	-0.2
PERV	Siirt/Pervari-	0.68	3	i P	Pg	01 11 49.4	-0.1
PERV				i S	Sg	01 11 57.1	-1.3
SRTM	Siirt_Merkez	0.86	328	i P	Pg	01 11 53.2	+0.3
SRTM				i S	Sg	01 12 03.6	-0.3
SRTM	Siirt_Merkez	0.86	328	ePg	Pg	01 11 53.1	+0.3
MIDY	Mardin/Midyat-	0.88	280	i P	Pg	01 11 53.3	0.0
MIDY				i S	Sg	01 12 05.4	+0.6
CUKT	Cukurca	0.89	91	PG	Pg	01 11 52.9	-0.5
CUKT				SG	Sg	01 12 05.8	+0.9
CUKT	Cukurca	0.89	91	i P	Pg	01 11 52.4	-1.0
CUKT				i S	Sb	01 12 06.8	+0.1
CUKT	Cukurca	0.89	91	ePg	Pg	01 11 53.3	-0.1
HAKT	HAKKARI	1.01	73	i P	Pg	01 11 55.0	-0.8
HAKT				i S	Sg	01 12 08.7	-0.1
HAKT	HAKKARI	1.01	73	ePg	Pg	01 11 54.9	-0.8
AKDM	Akdamar-Van	1.13	20	PN	Pg	01 11 57.5	-0.6
AKDM				SN	Sb	01 12 14.1	+0.3
AKDM	Akdamar-Van	1.13	20	ePg	Pg	01 11 57.8	-0.3
GEVA	Gevas	1.14	23	i P	Pg	01 11 58.0	-0.3
GEVA				i S	Sg	01 12 12.8	-0.2
GEVA	Gevas	1.14	23	ePg	Pg	01 11 57.9	-0.3
BTMN	Batman	1.16	303	i P	Pg	01 11 58.5	0.0
BTMN				i S	Sn	01 12 15.1	-0.6
BTMN	Batman	1.16	303	ePg	Pg	01 11 58.5	0.0
BLIS	Bitlis-Merkez	1.19	346	i P	Pg	01 11 59.1	-0.1
BLIS				i S	Sn	01 12 17.0	+0.3
BLIS	Bitlis-Merkez	1.19	346	ePg	Pg	01 11 59.0	-0.1
GURO	Guroymak-BITLI	1.34	344	PN	Pn	01 12 01.9	-0.1
GURO	Guroymak-BITLI	1.34	344	ePg	Pn	01 12 02.1	+0.1
SVAN	Silvan-Diyarba	1.36	311	PN	Pn	01 12 01.9	-0.2
SVAN				SN	Sn	01 12 20.4	-0.2
SVAN	Silvan-Diyarba	1.36	311	i P	Pn	01 12 02.0	-0.2
SVAN				i S	Sn	01 12 21.1	+0.5
SVAN	Silvan-Diyarba	1.36	311	ePg	Pn	01 12 02.1	0.0
MARD	Mardin	1.37	273	i P	Pn	01 12 02.0	-0.3
MARD				i S	Sb	01 12 19.8	-0.7
BASK	Baskale_VAN	1.44	56	i P	Pn	01 12 02.9	-0.5
BASK	Baskale_VAN	1.44	56	ePn	Pn	01 12 02.9	-0.5
TVAN	Van	1.46	29	i P	Pg	01 12 05.2	+0.9
TVAN				i S	Sg	01 12 23.8	+0.6
TVAN	Van	1.46	29	ePn	Pg	01 12 05.1	+0.9
YOVA	Hakkari_Yksek	1.47	77	i P	Pn	01 12 03.1	-0.8
YOVA				i S	Sn	01 12 23.8	+0.3
YOVA	Hakkari_Yksek	1.47	77	ePn	Pn	01 12 03.0	-0.8
VANB	Van	1.51	28	PN	Pn	01 12 03.8	-0.5
VANB	Van	1.51	28	ePn	Pn	01 12 03.5	-0.8
MAZI	Mazidag	1.64	278	PN	Pn	01 12 05.6	-0.5
MAZI	Mazidag	1.64	278	ePn	Pn	01 12 06.0	-0.1
MUSM	Mu-Merkez	1.65	332	i P	Pn	01 12 06.5	+0.2
MUSM				i S	Sb	01 12 28.5	-0.2
MUSM	Mu-Merkez	1.65	332	ePn	Pn	01 12 06.5	+0.2
OZAP	Van, Ozalp-Mer	1.83	40	i P	Pb	01 12 10.8	+0.3
OZAP				i S	Sg	01 12 34.7	-0.6
ERCV	ERCIS-VAN	1.88	21	PN	Pn	01 12 08.9	-0.5
MLAZ	Malazgirt-MUS	1.88	1	PN	Pn	01 12 09.6	+0.2
VMUR	Van-Muradiye	1.92	26	i P	Pb	01 12 11.9	-0.2
VMUR				i S	Sg	01 12 39.1	+0.9
DYBB	Diyarbakir	1.99	291	PN	Pn	01 12 10.1	-0.8
DIYA	Diyarbakir	2.00	290	i P	Pn	01 12 11.2	+0.2
HANI	Diyarbakir_Han	2.02	305	i P	Pn	01 12 10.6	-0.6
HANI				i S	Sn	01 12 36.8	-0.2
SLHN	Bingol, Solhan	2.05	326	i P	Pn	01 12 12.5	+0.8
SLHN				i S	Sn	01 12 38.6	+0.7
CLDR	Caldiran	2.19	30	PN	Pn	01 12 13.5	-0.2
CLDR	Caldiran	2.19	30	i P	Pn	01 12 12.9	-0.8
CLDR				i S	Sg	01 12 46.4	-0.3
CLDR	Caldiran	2.19	30	ePn	Pn	01 12 14.5	+0.8
BNGB	Bingl	2.24	321	PN	Pn	01 12 14.0	-0.4
BINT	Bingol	2.26	316	ePn	Pn	01 12 15.2	+0.6
KARO	Karliova-Bingo	2.34	331	PN	Pn	01 12 15.3	-0.5
AGRB	Hanur-Agry	2.34	9	PN	Pn	01 12 15.3	-0.5
DYDN	Diyadin	2.46	22	i P	Pn	01 12 18.9	+1.4
KOVA	Elazig, Kovanc	2.56	305	i P	Pn	01 12 18.6	-0.1
KOVA				i S	Sb	01 12 56.3	+1.5
EATA	Eleskirt	2.60	360	i P	Pn	01 12 21.6	+2.2
EATA				i S	Sg	01 12 59.6	-0.2
KOTA	Agri, Merkez-K	2.60	12	i P	Pn	01 12 20.5	+1.2
MAHB	Mahabad	2.62	100	ePn	Pn	01 12 20.1	+0.6
MAHB				e		01 13 08.3	
	comp=Z,99nm,0.6s						
KOPR	Koprukoy-ERZUR	2.77	350	PN	Pn	01 12 22.0	+0.3
SANL	SANLIURFA_Merk	2.80	269	i P	Pn	01 12 21.7	-0.2
SANL				i S	Sb	01 13 03.7	+2.1
HOMI	Horasan	2.82	351	i P	Pb	01 12 27.5	+0.1
IGDI	IGDIR	2.88	25	i P	Pn	01 12 24.8	+1.6
IMRD	Marand	2.92	59	ePn	Pn	01 12 25.0	+1.2
IMRD				e		01 12 39.6	
	comp=Z,99nm,0.5s						

TNCL	Tunceli-Merkez	2.97	309	*i* P	Pn	01 12 24.3	-0.1
TASB	TASBURUN-IGDIR	3.04	26	PN	Pn	01 12 25.7	+0.4
ITBZ	Tabriz	3.05	70	*e*Pn	Pn	01 12 25.0	-0.6
SURC	SANLIURFA_SURC	3.13	264	*i* P	Pn	01 12 26.2	-0.3
KOPT	Kop Dagi	3.17	331	*i* P	Pg	01 12 36.2	-0.8
EUZM	Uzumlu	3.28	319	*i* P	Pb	01 12 34.4	-0.8
SENK	Senkaya-Erzuru	3.30	358	PN	Pn	01 12 29.2	+0.3
KRIK	Erzurum-spir	3.31	339	*i* P	Pb	01 12 33.6	-2.1
GNI	Garni	3.38	31	PN	Pn	01 12 30.7	+0.7
MALT	Malatya	3.39	289	PN	Pn	01 12 29.9	-0.2
KARS	Kars	3.39	8	PN	Pn	01 12 30.5	+0.3
BAYT	Aydıntepe-Bayb	3.63	330	PN	Pn	01 12 33.6	+0.2
IHRS	Heris	3.75	72	*e*Pn	Pn	01 12 36.9	+1.6
AKCD	Akcadag	3.77	287	*i* P	Pn	01 12 35.2	-0.1
IDHR	Dehrash	4.06	128	*e*Pn	Pn	01 12 40.2	+0.7
IDHR	comp=Z,99nm,1.0s			*e*		01 13 56.9	
ISRB	Sarab	4.15	81	*e*Pn	Pn	01 12 41.4	+0.7
ISRB	comp=Z,99nm,0.8s			*e*		01 12 59.8	
DARE	Darende-Malaty	4.17	290	PN	Pn	01 12 41.1	+0.2
GAZ	Gaziantep	4.22	270	PN	Pn	01 12 40.5	-1.0
BHD	Baghdad	4.27	158	*e*Pn	Pn	01 12 44.0	+1.9
BHD				*e*Sn	Sn	01 13 32.5	+0.1
BHD	comp=E,96nm,0.8s			AML	AML	01 13 46.6	
ILIN	Lien	4.31	122	*e*Pn	Pn	01 12 41.6	-1.3
ILIN	comp=Z,99nm,0.8s			*e*		01 14 05.6	
IGHG	Ghaleghazi	4.42	130	*e*Pn	Pn	01 12 45.2	+0.8
IGHG	comp=Z,99nm,0.8s			*e*		01 14 26.2	
KMRS	Kahramanmaras	4.46	275	PN	Pn	01 12 43.4	-1.4
IVIS	Veis	4.47	126	*e*Pn	Pn	01 12 45.5	+0.6
IVIS	comp=Z,99nm,0.9s			*e*		01 14 25.1	
KER	Kermanshah	4.74	126	*e*Pn	Pn	01 12 48.5	-0.2
KCHF	Cheshme Sefid,	4.75	128	*e*Pn	Pn	01 12 48.8	-0.1
KCHF	comp=Z,99nm,0.4s			*e*		01 13 14.3	
IBDR	Badra	5.01	145	*e*Pn	Pn	01 12 53.0	+0.8
IBDR				*e*Sn	Sn	01 13 51.0	+0.4
IBDR	comp=N,24nm,0.5s			AML	AML	01 14 01.0	
IBDR	comp=E,27nm,0.6s			AML	AML	01 14 05.7	
IKFM	Kafar-mosalman	5.75	129	*e*Pn	Pn	01 13 02.2	-0.2
QABG	Abgarm-Qazvin	5.92	103	*e*Pn	Pn	01 13 04.9	-0.1
IKMR	Kamar-syah	6.09	126	*e*Pn	Pn	01 13 09.3	+2.2
IRAZ	Razeghan	6.28	105	*e*Pn	Pn	01 13 10.7	+0.7
QALM	Alamut, Qazvin	6.59	95	*e*Pn	Pn	01 13 13.8	-0.4
NSR	Nassriya	6.93	153	*e*Pn	Pn	01 13 21.0	+2.4
NSR				*e*Sn	Sn	01 14 36.0	-1.9
NSR	comp=E,95nm,0.2s			AML	AML	01 14 51.6	
IPIR	Pirpir	8.27	121	*e*Pn	Pn	01 13 36.4	-0.9
SHK1	Shahrekord	8.47	123	*e*Pn	Pn	01 13 41.1	+1.0

MOS ***11*** *01:18:42.7±0.0, 42°.13N×47°.69E, h16km, MPVA3.5*
DRS ***11*** *01:18:42.9±0.0, 42°.16N×47°.83E, h13km, ML2.6/9*
ISC 11 01:18:43.2±1.3**, 42°.15N**±0°.03×**47°.77E**±0°.06**, h17**km±6km**,**
n17, σ1ˢ00/33**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URKR	Urkarakh	0.10	281	*e*Pg	Pg	01 18 46.8	-0.1
URKR				*e*Sg	Sg	01 18 49.1	-0.2
SGKR	Sergokala	0.32	345	*e*Pg	Pb	01 18 50.1	-0.5
SGKR				*e*Sg	Sb	01 18 54.9	-0.7
GNBR	Gunib	0.65	292	*e*Pg	Pb	01 18 56.3	+0.2
GNBR				*e*Sg	Sn	01 19 06.0	-1.6
AKT	Akhty	0.67	183	*i* Pg	Pn	01 18 57.1	-0.9
AKT				*e*Sg	Sb	01 19 06.4	+0.9
ARKR	Arakani	0.73	309	*e*Pg	Pb	01 18 57.6	0.0
ARKR				*e*Sg	Sn	01 19 09.3	-0.5
KRNR	Karanay	0.93	317	*e*Pg	Pn	01 19 02.2	+0.5
KRNR				*e*Sg	Sn	01 19 14.6	-0.2
DBC	Dubki	1.11	322	*i* Pg	Pg	01 19 04.9	+0.2
DBC				*e*Sg	Sn	01 19 20.2	+1.0
LGD	Lagodekhi	1.18	255	P	Pb	01 19 05.1	-0.1
LGD				S	Sn	01 19 20.4	-0.3
LGD	Lagodekhi	1.18	255	*e*Pg	Pb	01 19 05.1	-0.1
LGD				*e*Sg	Sg	01 19 20.9	-0.5
DLMR	Dylym	1.25	318	*e*Pg	Pg	01 19 07.5	+0.2
DLMR				*e*Sg	Sg	01 19 24.8	+1.2
BTLR	Botlikh	1.26	295	*e*Pg	Pg	01 19 07.2	-0.2
BTLR				*e*Sg	Sg	01 19 23.5	-0.4
DDFL	Dedoflistskaro	1.42	241	P	Pg	01 19 12.0	+1.5
DDFL				S	Sg	01 19 38.5	+9.4
DVE	Vedeno	1.46	304	*e*Pg	Pg	01 19 11.5	+0.2
DVE				*e*Sg	Sg	01 19 30.1	-0.3
GROC	Groznyy	1.80	307	*e*Pg	Pg	01 19 17.1	-0.7
GROC				*e*Sg	Sg	01 19 41.9	+0.8
KMGR	Komgaron	2.33	294	*e*Pn	Pb	01 19 25.2	+0.4
KMGR				*e*Sn	Sb	01 19 52.9	-0.4
GUDG	Gudauri	2.46	279	*e*Pn	Pg	01 19 29.2	-1.2
GUDG				*e*Sn	Sb	01 19 58.7	+1.4
DMNI	Dmanisi	2.80	254	P	Pn	01 19 29.3	+1.9
DMNI				S	Sb	01 20 03.8	-3.1

KRSC ***11*** *01:29:29.4±1.5, 55°.40N×166°.75E, h29km±11km, ML3.6*
IDC ***11*** *01:29:30.0±1.9, 55°.55N×166°.46E, h0km, mb3.2/3,*
mb1 3.6/4, mb1mx3.2/40, mbtmp3.3/4, ML2.7/1, Error
ellipse: s-maj=79.5km s-min=23.8km az=161.0
ISC 11 01:29:32.8±1.2**, 55°.43N**±0°.09×**166°.63E**±0°.08**, h20**km**, n22,**
σ1ˢ43/24**, mb3.3**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.44	239	*e*P	Pb	01 29 39.9	-1.8
BKI				*e*S	Sb	01 29 46.4	-1.4
KBTR	Krutoberegovo	2.28	291	*e*P	Pn	01 30 07.6	-1.7
KBTR				*e*S	Sn	01 30 36.4	-0.4
SMKR	Semkarok	3.12	294	P	Pn	01 30 20.9	+0.1
BDR	Baidarnaya	3.25	293	P	Pn	01 30 22.8	+0.2
KZV	Kizimen	3.64	268	*e*P	Pn	01 30 28.2	+0.2
KZV				*e*S	Sn	01 31 11.9	+1.6
KMNR	Kamenistaya	3.64	278	P	Pn	01 30 31.0	+3.0
TUMR	Tumrok	3.70	270	P	Pn	01 30 30.7	+1.8
TUMR				S	Sn	01 31 15.2	+3.3
TILK	Tilichiki	5.04	357	P	Pn	01 30 47.5	+0.5
SMAR	Somma	5.07	248	P	Pn	01 30 48.5	+0.8
KRER	Koryakskii	5.07	248	P	Pn	01 30 49.0	+1.2
AVH	Avacha	5.10	248	P	Pn	01 30 49.1	+1.1
KRX	Arik	5.10	249	P	Pn	01 30 48.7	+0.6
KOK	Koryaka	5.14	249	P	Pn	01 30 49.5	+0.9
PETK	Petropavlovsk- 1.2nm,0.3s,baz=74,slow=16,SNR=26	5.72	250	Pn	Pn	01 30 55.7	-0.8
PETK	0.6nm,0.3s,baz=56,slow=12,SNR=1.5			Sn	Sn	01 32 02.3	+0.7
MTVR	Mutnovka	5.79	243	P	Pn	01 30 57.7	+0.1
ASAK	Asacha	5.99	243	P	Pn	01 31 01.4	+1.1
ILAR	Eielson Array 1.0nm,1.0s,baz=256,slow=7.6,SNR=5.2	24.42	49	P	P	01 34 49.7	+0.2
H11N2	WAKE ISLAND Hy baz=0.7,slow=76,SNR=65	35.64	180	T	T	02 13 43.2	
H11N3	WAKE ISLAND Hy baz=0.7,slow=76,SNR=62	35.66	180	T	T	02 13 40.6	
H11N1	WAKE ISLAND Hy baz=0.7,slow=76,SNR=61	35.66	180	T	T	02 13 40.3	
MKAR	Makanchi Array 0.1nm,0.4s,baz=53,slow=6.5,SNR=2.1	50.53	298	P	P	01 38 28.6	-0.7
TXAR	Lajitas Array 0.1nm,0.4s,baz=321,slow=7.0,SNR=2.0	66.23	73	P	P	01 40 20.2	+0.9

KRSC 11 01:29:58.1±1.7**, 55°.22N**×**166°.49E, h36**km±7km**, ML3.9,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.30	266	*e*P	Pn	01 30 06.0	-0.1
BKI				*e*S	Sn	01 30 12.3	-0.4
KBTR	Krutoberegovo	2.30	297	S	Sn	01 31 02.9	+2.5
KZV	Kizimen	3.56	271	P	Pn	01 30 53.7	+2.9
TUMR	Tumrok	3.63	274	P	Pn	01 30 56.8	+5.0
TUMR				S	Sn	01 31 39.5	+6.1
SPN	Mys Shipunski	4.36	243	S	Sn	01 31 54.9	+3.8
SMAR	Somma	4.92	250	P	Pn	01 31 14.2	+4.7
MTVR	Mutnovka	5.63	244	P	Pn	01 31 24.0	+4.7
MTVR				S	Sn	01 32 27.1	+4.4

JMA ***11*** *01:38:50.1±0.1, 23°.47N×121°.54E, h45km±2km, M2.8*
TAP ***11*** *01:38:51.2, 23°.49N×121°.54E, h43km, ML2.9, C*
ISC 11 01:38:51.6±0.9**, 23°.47N**±0°.02×**121°.60E**±0°.02**, h33**km±3km**,**
n78, σ1ˢ02/147**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	Ruisui baz=286	0.17	276	P	Pb	01 38 58.8	+0.9
HGSD	baz=286			S	Sb	01 39 04.5	+2.4
EGFH	Guangfu baz=319	0.25	320	*i* P	Pn	01 38 58.9	-0.1
EGFH	baz=319			S	Sn	01 39 04.2	+0.9
EHY	Hungye baz=274	0.26	277	*i* P	Pn	01 38 57.9	-1.1
EHY	baz=274			*i* S	Sn	01 39 03.7	+0.1
EYUL	Yuli baz=247	0.29	244	P	Pb	01 38 59.6	+0.4
EYUL	baz=247			S	Sn	01 39 05.2	+0.7
YULB	Yu-li baz=256	0.29	254	P	Pb	01 38 58.8	-0.5
YULB	baz=256			S	Sn	01 39 04.6	+0.1
TWF1	Yuli baz=249	0.31	247	*i* P	Pb	01 38 59.0	-0.4
TWF1	baz=249			*i* S	Sn	01 39 04.8	-0.1
ESL	Shilin baz=336	0.37	335	*i* P	Pb	01 38 59.7	-0.7
ESL	baz=336			*i* S	Sb	01 39 05.7	-0.6
FULB	Fuli baz=230	0.40	226	*i* P	Pb	01 39 00.8	+0.1
FULB	baz=230			*i* S	Sn	01 39 08.7	+1.3
CHKT	Chengkung baz=198	0.43	210	*i* P	Pb	01 39 01.0	-0.2
CHKT	baz=198			*i* S	Sb	01 39 08.6	+0.9
HWA	Hwalien baz=15	0.50	0	P	Pb	01 39 02.6	+0.4
HWA	baz=15			S	Sb	01 39 10.9	+1.4
EDH	Donghe baz=215	0.57	209	*i* P	Pn	01 39 02.4	-1.1
EDH	baz=215			*i* S	Sb	01 39 11.4	+0.1
TWD	Chiawan baz=354	0.60	359	*i* P	Pn	01 39 02.8	-1.1
TWD	baz=354			*i* S	Sb	01 39 11.3	-1.0
ELDTW	Lidau baz=236	0.61	242	*i* P	Pn	01 39 02.4	-1.7
ELDTW	baz=236			*i* S	Sb	01 39 10.5	-2.1
SSLB	Suanglung baz=294	0.67	298	P	Pn	01 39 03.9	-1.0
SSLB	baz=294			S	Sn	01 39 12.8	-1.5
NACB	Ninganchiao baz=353	0.70	359	P	Pn	01 39 03.5	-1.7
NACB	baz=353			S	Sn	01 39 12.7	-2.1
CHGB	Renai baz=335	0.70	326	P	Pn	01 39 04.7	-0.8
CHGB	baz=335			S	Sn	01 39 13.4	-1.9
LONT	Longtian baz=214	0.71	218	P	Pn	01 39 03.7	-1.7
LONT	baz=214			*e*S	Sn	01 39 13.5	-1.7
ALS	Alishan baz=278	0.73	273	*i* P	Pn	01 39 05.5	-0.5
ALS	baz=278			*i* S	Sn	01 39 15.5	-0.7
WHF	Hehuan Shan baz=346	0.74	335	*i* P	Pn	01 39 04.9	-1.2
WHF	baz=346			*i* S	Sn	01 39 14.6	-1.9
ETLH	Xiulin Townshi baz=354	0.74	351	P	Pn	01 39 04.2	-1.7
ETLH	baz=354			S	Sn	01 39 13.5	-2.5
SMLT	Sun Moon Lake baz=304	0.76	302	*i* P	Pn	01 39 05.7	-0.6
SMLT	baz=304			*i* S	Sn	01 39 15.8	-0.8
WPL	Puli Township baz=318	0.80	312	P	Pn	01 39 06.0	-0.6
LDUT	Ludao baz=179	0.81	189	*i* P	Pn	01 39 05.2	-1.5
LDUT	baz=179			*i* S	Sn	01 39 17.2	-0.3
TWGBT	Beinan baz=214	0.81	217	P	Pn	01 39 05.0	-1.8
TWGBT	baz=214			S	Sn	01 39 15.3	-2.4
FUSS	Fushou baz=344	0.84	337	*i* P	Pn	01 39 06.9	-0.5
FUSS	baz=344			*i* S	Sn	01 39 17.1	-1.6
STYT	Tauyuan baz=242	0.84	248	*i* P	Pn	01 39 06.7	-0.5
STYT	baz=242			*i* S	Sn	01 39 18.0	-0.4
CHN5	Tsauling baz=277	0.86	278	*i* P	Pn	01 39 07.2	-0.3
CHN5	baz=277			*i* S	Sn	01 39 19.1	+0.1
WJS	Zhushan baz=293	0.88	293	S	Sn	01 39 19.4	+0.2
TDCB	Techi baz=338	0.88	332	P	Pn	01 39 07.3	-0.5
TDCB	baz=338			S	Sn	01 39 18.0	-1.5
TPUB	Ta-pu baz=258	0.91	259	P	Pn	01 39 08.0	-0.1
TPUB	baz=258			S	Sn	01 39 20.5	+0.3
WNT	Mingjian baz=284	0.93	296	P	Pn	01 39 08.6	+0.1
WNT	baz=284			S	Sn	01 39 21.1	+0.4
WTP	Ta-pu baz=262	0.94	256	*i* P	Pn	01 39 08.4	-0.2
WTP	baz=262			*i* S	Sn	01 39 21.2	+0.3
WNT1	Nantou City baz=286	0.95	297	*e*P	Pn	01 39 08.8	+0.1
WNT1	baz=286			S	Sn	01 39 22.0	+0.9
ENA	Nanau baz=358	0.96	8	*i* P	Pn	01 39 08.1	-0.7
ENA	baz=358			*i* S	Sn	01 39 20.4	-0.9
NNSB	Datong baz=357	0.97	348	P	Pn	01 39 08.2	-0.9
NNSB	baz=357			S	Sn	01 39 19.8	-2.0
NNSH	Datong baz=355	0.97	348	P	Pn	01 39 08.4	-0.7
NNSH	baz=355			S	Sn	01 39 20.3	-1.6
NNS	Nan Shan baz=357	0.98	348	*i* P	Pn	01 39 08.5	-0.8
NNS	baz=357			*i* S	Sn	01 39 20.2	-1.9
ENAH	Nanao baz=22	0.99	11	*e*P	Pn	01 39 08.9	-0.3
ENAH	baz=22			*e*S	Sn	01 39 23.2	+1.2
WDLH	Douliu baz=282	1.00	283	*e*P	Pn	01 39 09.5	+0.1
WDLH	baz=282			S	Sn	01 39 23.4	+1.1
WHP	Taichung City baz=326	1.00	323	*i* P	Pn	01 39 09.8	+0.3
WHP	baz=326			*i* S	Sn	01 39 22.4	-0.1
SLGT	Liugui baz=240	1.00	242	P	Pn	01 39 09.8	+0.4
SLGT	baz=240			S	Sn	01 39 22.5	+0.1
WWF	Wufeng baz=305	1.00	304	S	Sn	01 39 23.6	+1.1
SGST	Jiashian baz=238	1.02	248	S	Sn	01 39 23.1	+0.3
CHN1	Nanshi baz=252	1.03	254	*i* P	Pn	01 39 09.4	-0.4
CHN1	baz=252			*i* S	Sn	01 39 23.6	+0.5
TWK	Hsinying baz=257	1.05	259	*i* P	Pn	01 39 09.8	-0.2
TWK	baz=257			*i* S	Sn	01 39 23.9	+0.3
SNST	Tainan City baz=255	1.05	256	P	Pn	01 39 10.7	+0.6
SNST	baz=255			*i* S	Sn	01 39 24.5	+1.0
ECL	Taimali baz=207	1.06	215	*i* P	Pn	01 39 08.0	-2.2
ECL	baz=207			*i* S	Sn	01 39 20.9	-2.8
TCU	Taichung baz=309	1.08	308	P	Pn	01 39 11.3	+0.9
TCU	baz=309			S	Sn	01 39 25.2	+0.8
NDT	Datong Townshi baz=357	1.13	356	*i* P	Pn	01 39 10.7	-0.4
NDT	baz=357			S	Sn	01 39 24.6	-0.9
WCHH	Zhanghua baz=302	1.13	302	P	Pn	01 39 11.5	+0.3
WCHH	baz=302			S	Sn	01 39 27.0	+1.4
WTK	Tuku baz=280	1.14	281	*e*S	Sn	01 39 25.6	0.0
SSD	Sandimen baz=230	1.15	231	*i* P	Pn	01 39 11.1	-0.3
SSD	baz=230			*i* S	Sn	01 39 26.5	+0.4
TWC	Suao baz=20	1.15	11	P	Pn	01 39 11.4	0.0
TWC	baz=20			*e*S	Sn	01 39 27.3	+1.2
TWQ1	Liyutan baz=320	1.16	319	*i* P	Pn	01 39 11.9	+0.4
TWQ1	baz=320			*i* S	Sn	01 39 27.5	+1.3
ENTT	Nioudou baz=359	1.16	358	*e*P	Pn	01 39 10.3	-1.3
ENTT	baz=359			*e*S	Sn	01 39 25.6	-0.8
TSMG	Majia baz=229	1.17	229	*i* P	Pn	01 39 11.9	+0.2
TSMG	baz=229			*i* S	Sn	01 39 27.0	+0.5
YHNB	Yeheng baz=350	1.21	350	P	Pn	01 39 11.9	-0.4
YHNB	baz=350			S	Sn	01 39 26.7	-0.9
NSY	Sanyi baz=321	1.21	321	P	Pn	01 39 12.5	+0.2
NSY	baz=321			S	Sn	01 39 29.4	+1.7
NSK	Sanguang baz=350	1.22	349	*i* P	Pn	01 39 12.1	-0.3
NSK	baz=350			*i* S	Sn	01 39 26.3	-1.5
WDJ	Dajia District baz=327	1.24	315	P	Pn	01 39 13.1	+0.4
WDJ	baz=327			*i* S	Sn	01 39 29.4	+1.2
MASBT	Mashibuluo baz=226	1.24	226	P	Pn	01 39 11.9	-0.7
MASBT	baz=226			S	Sn	01 39 29.0	+0.8
TWE	Neicheng baz=4.0	1.24	3	P	Pn	01 39 12.5	-0.2
TWM1	Shoushan baz=239	1.27	239	*e*P	Pn	01 39 13.7	+0.7
NSTT	Nanjuang baz=335	1.28	335	P	Pn	01 39 13.1	-0.1
NSTT	baz=335			S	Sn	01 39 29.6	+0.4
LIOB	Emei baz=336	1.28	335	*i* P	Pn	01 39 13.7	+0.4
LIOB	baz=336			S	Sn	01 39 30.4	+1.0
NMLH	Miaoli baz=325	1.29	325	*e*P	Pn	01 39 13.5	+0.1
NMLH	baz=325			S	Sn	01 39 30.3	+0.7
NWLT	Wulai baz=356	1.30	356	*i* P	Pn	01 39 13.1	-0.4
NWLT	baz=356			*i* S	Sn	01 39 29.0	-0.8
SSPT	Xinbi baz=225	1.37	224	P	Pn	01 39 15.4	+0.9
SSPT	baz=225			*e*S	Sn	01 39 33.7	+2.2
NTC	Toucheng baz=360	1.39	8	*e*P	Pn	01 39 15.2	+0.5
SCZT	Fangliau baz=231	1.42	220	P	Pn	01 39 15.1	-0.1
SCZT	baz=231			S	Sn	01 39 34.0	+1.2
SLIU	Shizi baz=204	1.46	211	P	Pn	01 39 15.5	-0.2
SLIU	baz=204			S	Sn	01 39 33.4	-0.2
TIPB	Shuangxi baz=358	1.50	8	*i* P	Pn	01 39 16.5	+0.2
TIPB	baz=358			S	Sn	01 39 34.2	-0.6
YOJ	Yonaguni jima	1.62	52	P	Pn	01 39 18.1	+0.2
YOJ				S	Sn	01 39 38.1	+0.5
HATJ	Hateruma jima	2.10	74	P	Pn	01 39 24.6	+0.1
IRIF	Iriomote-Funau	2.13	66	P	Pn	01 39 25.6	+0.8
IRIF				S	Sn	01 39 51.5	+1.4
JKRS	Kuro-shima	2.33	70	P	Pn	01 39 28.5	+0.9
JKRS				*e*S	Sn	01 39 56.4	+1.3
JIJ	Ishigaki jima	2.49	69	P	Pn	01 39 29.7	-0.1
JIJ				S	Sn	01 39 59.2	+0.2
JISG	Ishigakijimahi	2.71	65	P	Pn	01 39 32.6	-0.3
JISG				*e*S	Sn	01 40 05.1	+0.5

IDC 11 01:48:15.5±51.0**, 16°.49S**×**174°.02W, h0**km**, mb4.0**/3**,**
mb1 4.2/3**, mb1mx3.7**/34**, mbtmp4.0**/3**, Error ellipse:**
s-maj=979.2km s-min=196.1km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 1.4nm,0.5s,baz=97,slow=9.1,SNR=3.0	42.99	241	P	P	01 56 17.3	+0.6
WRA	Warramunga Arr 0.7nm,0.9s,baz=95,slow=8.5,SNR=7.5	49.03	258	P	P	01 57 04.3	-0.3
ASAR	Alice Springs 3.8nm,0.6s,baz=89,slow=8.0,SNR=73	49.22	253	P	P	01 57 05.7	-0.4

IDC ***11*** *02:03:39.5±2.2, 11°.06S×166°.25E, h0km, mb3.6/3,*
mb1 3.9/4, mb1mx3.6/27, mbtmp3.8/4, ML4.6/1, MS3.0/1,
Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=81.2km
s-min=34.5km az=149.0
ISC 11 02:03:46.1±1.2**, 10°.8S**±0°.1×**166°.1E**±0°.1**, h35**km**, n12,**
σ1ˢ85/8**, mb3.7**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara 13nm,0.3s,baz=136,slow=4.5,SNR=5.2	6.18	282	Pn	Pn	02 05 16.1	+1.1
HNR	4.1nm,0.3s,baz=110,slow=6.5,SNR=1.7			Sn	Sn	02 06 24.4	-0.2
HNR	comp=Z,112nm,18.7s,baz=120,slow=39			LR	LR	02 07 47.8	
DZM	Mont Dzumac 0.5nm,0.3s,baz=357,slow=18,SNR=12	11.20	178	Pn	Pn	02 06 26.6	+2.6
DZM	0.2nm,0.3s,baz=247,slow=21,SNR=1.1			Sn	Sn	02 08 25.6	-2.5
H11S2	WAKE ISLAND Hy baz=181,slow=76,SNR=27	29.12	1	T	T	02 40 10.5	
H11S3	WAKE ISLAND Hy baz=181,slow=76,SNR=13	29.12	1	T	T	02 40 10.7	
H11S1	WAKE ISLAND Hy baz=181,slow=76,SNR=22	29.14	1	T	T	02 40 12.0	
H11N1	WAKE ISLAND Hy	30.34	2	T	T	02 41 47.4	

	baz=182,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	30.35	2	T	T	02 41 47.5	
	baz=182,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	30.36	2	T	T	02 41 42.5	
	baz=182,slow=76,SNR=16						
ASAR	Alice Springs	33.19	243	P	P	02 10 18.7	-1.1
	0.2nm,0.5s,baz=66,slow=10,SNR=4.2						
ILAR	Eielson Array	83.19	18	P	P	02 16 08.6	+0.2
	0.3nm,0.5s,baz=236,slow=5.4,SNR=11						
MKAR	Makanchi Array	93.57	317	P	P	02 16 57.7	-1.0
	0.3nm,0.7s,baz=85,slow=5.7,SNR=3.7						
ESDC	Sonseca Array	149.92	345	PKPbc	PKPbc	02 23 32.4	-0.8
	0.2nm,0.6s,baz=359,slow=1.8,SNR=1.9						

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*IDC **11** 02:06:58.2±1.7, 6.°06S×147.°64E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.5/29, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=53.7km s-min=24.9km az=112.0*

ISC 11 02:07:07.9±1.4, **6.°2S**±0.°1×**147.°6E**±0.°3, **h77**^{km}, **n6**, σ**1.^{s}25**/7, **mb3.3**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.17	187	Pn	Pn	02 07 54.2	-1.4
	4.1nm,0.3s,baz=14,slow=12,SNR=8.9						
PMG				Sn	Sn	02 08 34.1	+1.7
	5.1nm,0.3s,baz=12,slow=23,SNR=2.0						
WRA	Warramunga Arr	18.72	222	P	P	02 11 19.9	-0.7
	0.2nm,0.3s,baz=50,slow=11,SNR=2.8						
ASAR	Alice Springs	21.74	216	P	P	02 11 53.4	+0.2
	0.5nm,0.4s,baz=52,slow=8.7,SNR=14						
FITZ	Fitzroy Crossi	24.41	239	P	P	02 12 20.1	+0.6
	3.9nm,0.8s,baz=66,slow=7.9,SNR=6.6						
ILAR	Eielson Array	85.48	23	P	P	02 19 37.5	+0.5
	0.3nm,0.9s,baz=244,slow=5.9,SNR=2.2						
TORD	Torodi Ar. Bea	145.68	284	PKPbc	PKPdf	02 26 38.4	-0.2
	0.3nm,0.5s,baz=68,slow=4.4,SNR=4.9						

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*NEIC **11** 02:12:33.6±0.8, 14.°36S±0.°08×166.°8E±0.°1, h54^{km}±9^{km}, mb4.2/5, Error ellipse: s-maj=15.7km s-min=10.7km az=62.0*

*IDC **11** 02:12:33.5±3.6, 14.°34S×166.°76E, h50^{km}±31^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.7/34, mbtmp4.1/8, ML4.1/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/24, Error ellipse: s-maj=30.7km s-min=19.0km az=72.0*

ISC 11 02:12:34.2±1.3, **14.°37S**±0.°10×**166.°8E**±0.°1, **h67**^{km}, **n14**, σ**0.^{s}99**/14, **mb4.0**/7, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.14	161	Pn	Pn	02 12 53.0	-1.3
SANVU				Sn	Sn	02 13 08.2	-1.0
DZM	Mont Dzumac	7.67	183	P	Pn	02 14 23.4	+0.1
	0.7nm,0.3s,baz=83,slow=19,SNR=1.7						
DZM				S	Sn	02 15 48.7	-0.1
	0.9nm,0.3s,baz=168,slow=20,SNR=1.5						
HNR	Honiara	8.32	305	P	Pn	02 14 31.2	-0.9
	12nm,0.3s,baz=157,slow=7.7,SNR=1.8						
HNR				S	Sn	02 16 03.6	-1.0
	7.0nm,0.3s,baz=158,slow=5.2,SNR=1.8						
PMG	Port Moresby	19.85	282	LR	LR	02 22 50.4	
	comp=Z,66nm,20.2s,baz=270,slow=31						
CTA	Charters Tower	20.43	251	P	P	02 17 06.1	-0.1
	10nm,1.2s,baz=81,slow=13,SNR=3.7						
STKA	Stephens Creek	28.89	229	P	P	02 18 28.6	+1.8
	1.8nm,0.4s,baz=33,slow=8.3,SNR=8.6						
STKA				LR	LR	02 30 09.6	
	comp=Z,66nm,18.1s,baz=24,slow=37						
WRAB	Tennant Creek	31.47	255	P	P	02 18 48.7	-1.1
WRAB				IAmb	IAmb	02 18 59.5	
	comp=Z,8.8nm,0.5s						
WRA	Warramunga Arr	31.48	255	P	P	02 18 49.9	0.0
	comp=Z,1.5nm,0.7s,baz=85,slow=9.5,SNR=11						
WRA	Warramunga Arr	31.48	255	IAmb	IAmb	02 18 50.5	
	comp=Z,0.2nm,0.7s						
AS31	Alice Springs	32.39	248	P	P	02 18 58.1	+0.3
AS31				IAmb	IAmb	02 19 01.0	
	comp=Z,1.2nm,1.2s						
ASAR	Alice Springs	32.39	248	P	P	02 18 58.2	+0.4
	comp=Z,1.4nm,0.5s,baz=74,slow=9.3,SNR=36						
ASAR				LR	LR	02 31 11.0	
	comp=Z,54nm,19.9s,baz=347,slow=34						
FITZ	Fitzroy Crossi	39.65	259	P	P	02 20 00.3	+0.5
	comp=Z,2.3nm,0.7s,baz=76,slow=8.3,SNR=2.1						
ILAR	Eielson Array	86.32	18	P	P	02 25 09.6	+1.2
	comp=Z,0.3nm,0.7s,baz=222,slow=5.6,SNR=7.0						
NVAR	Mina Array Bea	87.37	49	LR	LR	02 59 18.7	
	comp=Z,59nm,18.6s,baz=11,slow=32						

WEL 11 02:42:31.8±1.0, **32°S**±23°×**18°0W**±4°6, **h417**^{km}±29^{km}, **M3.8**/20, **mB4.3**/12, **MLv4.5**/20, **Mw(mB)3.4**/12, **Error ellipse: s-maj=0.1km s-min=0.0km az=114.5, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.87	197	P	P	02 44 04.1	+0.9
MXZ				S	S	02 45 15.9	-2.5
WMGZ	Waiomatatini S	6.09	195	P	P	02 44 05.8	+0.1
WMGZ				S	S	02 45 25.6	+3.0
HAZ	Te Kaha	6.19	200	P	P	02 44 05.2	-1.4
HAZ				S	S	02 45 24.4	-0.2
PKGZ	Pakihiroa	6.24	197	P	P	02 44 08.5	+1.2
PKGZ				S	S	02 45 27.6	+2.0
PUZ	Puketiti	6.37	195	P	P	02 44 09.3	+0.7
PUZ				S	S	02 45 27.7	-0.4
RUGZ	Raukumara Rang	6.42	200	P	P	02 44 08.9	-0.3
MWZ	Matawai	6.80	199	P	P	02 44 13.6	-0.3
MWZ				S	S	02 45 37.1	+0.3
TKGZ	Te Karaka	6.81	197	P	P	02 44 13.0	-1.0
URZ	Urewera	6.86	202	P	P	02 44 12.4	-2.1
URZ				S	S	02 45 38.2	+0.3
RAGZ	Rawiri	6.99	200	P	P	02 44 16.8	+0.9
RIGZ	Rimuhau	7.09	197	P	P	02 44 17.3	+0.3
MUGZ	Murupara	7.17	203	P	P	02 44 17.8	-0.1
MUGZ				S	S	02 45 44.8	+0.6
RTZ	Ruatahuna	7.23	202	P	P	02 44 17.2	-1.4
KNZ	Kokohu	7.41	197	P	P	02 44 20.5	0.0
KNZ				S	S	02 45 45.4	-3.6
RAHZ	Arahi	7.47	200	P	P	02 44 20.7	-0.5
RAHZ				S	S	02 45 52.7	+2.4
MTHZ	Maungataniwha	7.49	202	P	P	02 44 21.4	0.0
WHHZ	Waihua	7.58	199	P	P	02 44 23.3	+1.0
WHHZ				S	S	02 45 54.2	+1.8
NMHZ	Naumai	7.72	201	P	P	02 44 24.4	+0.4
BKZ	Black Stump Fm	7.88	203	P	P	02 44 25.7	0.0
MCHZ	McNeill Hill	8.07	201	P	P	02 44 28.9	+1.3
ETVZ	East Tongariro	8.14	207	P	P	02 44 29.0	+0.5
BHHZ	Black Hill Sta	8.32	204	P	P	02 44 29.7	-0.8
KAHZ	Kahuranaki	8.35	199	P	P	02 44 30.9	+0.2
KRHZ	Kereru	8.36	202	P	P	02 44 29.7	-1.1
PXZ	Pawanui	8.57	199	P	P	02 44 33.3	+0.2
PNHZ	Pukenui	8.66	202	P	P	02 44 33.3	-0.9

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*IDC **11** 02:57:16.5±0.9, 5.°45S×151.°44E, h70^{km}±9^{km}, mb3.9/10, mb1 4.2/11, mb1mx3.9/35, mbtmp4.2/11, MS3.3/3, Ms1 3.3/3, ms1mx2.8/38, Error ellipse: s-maj=21.7km s-min=9.0km az=124.0*

*NEIC **11** 02:57:16.1±1.4, 5.°47S±0.°08×151.°6E±0.°1, h68^{km}±7^{km}, mb4.3/12, Error ellipse: s-maj=21.2km s-min=9.4km az=113.0*

ISC 11 02:57:15.1±0.6, **5.°51S**±0.°08×**151.°6E**±0.°1, **h57**^{km}, **n40**, σ**1.^{s}04**/38, **mb4.1**/12, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.27	20	P	Pn	02 57 37.6	+0.9
	613nm,0.3s,baz=170,slow=1.5,SNR=107						
KRVT				S	Sn	02 57 55.2	+2.4
	1μm,0.3s,baz=153,slow=22,SNR=36						
RABL	Rabaul	1.43	24	Pn	Pn	02 57 39.0	+0.2
PMG	Port Moresby	5.85	228	P	Pn	02 58 39.6	+0.2
	3.5nm,0.3s,baz=37,slow=8.8,SNR=12						
PMG				S	Sn	02 59 45.7	+0.5
	19nm,0.3s,baz=129,slow=19,SNR=16						
PMG	Port Moresby	5.85	228		Pn	02 58 40.3	+0.9
HNR	Honiara	9.16	116	LR	LR	03 03 18.9	
	comp=Z,52nm,18.7s,baz=286,slow=39						
CTA	Charters Tower	15.39	199	P	P	03 00 53.9	+1.4
	0.2nm,0.3s,baz=20,slow=12,SNR=2.0						
SANVU	Saraoutou	18.24	124	P	P	03 01 22.3	-1.7
SANVU				IAmb	IAmb	03 01 40.4	
	comp=Z,31nm,1.4s						
QIS	Mount Isa	18.95	217	P	Pn	03 01 33.2	+0.2
	baz=19,SNR=3.5						
KDU	Kakadu	20.16	248	P	P	03 01 45.2	+0.2
	baz=20,SNR=6.4						
MTN	Manton Dam	21.45	249	P	P	03 02 01.1	+2.2
	baz=22,SNR=5.2						
DZM	Mont Dzumac	21.86	140	P	P	03 02 04.6	+1.3
	comp=Z,5.0nm,0.6s,baz=318,slow=19,SNR=5.7						
DZM	Mont Dzumac	21.86	140	IAmb	IAmb	03 02 08.1	
	comp=Z,27nm,1.4s						
WB0	Warramunga Arr	21.93	228	P	P	03 02 05.3	+1.4
WR0	Warramunga Arr	21.93	228	P	P	03 02 04.8	+0.8
WRAB	Tennant Creek	22.06	228	P	P	03 02 06.2	+0.8
WRA	Warramunga Arr	22.07	228	P	P	03 02 04.4	-1.1
	comp=Z,21nm,0.5s,baz=52,slow=9.8,SNR=123						
WRA	Warramunga Arr	22.07	228	P	P	03 02 06.2	+0.7
AS31	Alice Springs	24.82	222	P	P	03 02 32.4	+0.2
AS31				IAmb	IAmb	03 02 34.5	
	comp=Z,4.6nm,0.6s						
ASAR	Alice Springs	24.82	222	P	P	03 02 32.2	0.0
	comp=Z,12nm,0.7s,baz=56,slow=9.0,SNR=117						
ASAR				PcP	PcP	03 06 07.9	+0.4
	comp=Z,0.4nm,0.8s,baz=29,slow=2.1,SNR=2.0						
STKA	Stephens Creek	27.85	198	LR	LR	03 13 09.7	
	comp=Z,47nm,19.1s,baz=20,slow=34						
FITZ	Fitzroy Crossi	28.26	242	P	P	03 03 02.7	-0.5
	baz=28,SNR=7.4						
FITZ	Fitzroy Crossi	28.26	242	P	P	03 03 02.6	-0.5
	comp=Z,8.2nm,0.5s,baz=57,slow=7.3,SNR=30						
FITZ	Fitzroy Crossi	28.26	242	P	P	03 03 02.7	-0.5
MEEK	Meekatharra	37.81	233	P	P	03 04 26.0	-0.4
	baz=38,SNR=14						
SONM	Songino Array	66.28	329	P	P	03 07 58.0	+0.4
	comp=Z,0.9nm,0.5s,baz=138,slow=4.7,SNR=5.5						
SONM	Songino Array	66.28	329	IAmb	IAmb	03 07 59.6	
	comp=Z,0.9nm,0.7s						
VNDA	Vanda	72.17	178	P	P	03 08 34.1	+0.7
	comp=Z,1.8nm,0.8s,baz=334,slow=6.3,SNR=7.6						
MK31	Makanchi Array	80.06	319	P	P	03 09 18.5	-0.3
MKAR	Makanchi Array	80.06	319	P	P	03 09 17.8	-1.1
	comp=Z,1.1nm,0.9s,baz=97,slow=6.7,SNR=6.6						
MAKZ	Makanchi	80.27	319	P	P	03 09 19.4	-0.6
ZALV	Zalesovo Beam	81.07	327	P	P	03 09 22.3	-1.7
	comp=Z,0.6nm,0.5s,baz=104,slow=6.3,SNR=4.5						
KDJ	Kajisay	82.22	314	P	P	03 09 29.8	-0.8
KDJ				IAmb	IAmb	03 09 31.0	
	comp=Z,4.0nm,0.9s						
ILAR	Eielson Array	83.27	22	P	P	03 09 33.7	-1.6
	comp=Z,0.5nm,0.8s,baz=241,slow=4.5,SNR=4.8						
NVAR	Mina Array Bea	93.47	52	P	P	03 10 26.0	+0.8
	comp=Z,0.5nm,0.7s,baz=259,slow=4.3,SNR=7.0						
PFO	Pinyon Flats O	94.64	57	LR	LR	03 50 37.9	
	comp=Z,59nm,18.0s,baz=358,slow=34						
GERES	GERESS Array B	124.01	328	PKP	PKPdf	03 16 06.4	-0.9
	comp=Z,0.4nm,0.3s,baz=64,slow=2.3,SNR=1.8						
TOA0	Torodi Ar. Sit	149.36	286	PKPbc	PKPbc	03 16 58.0	-0.7
TORD	Torodi Ar. Bea	149.36	286	PKPbc	PKPbc	03 16 57.5	-1.3
	comp=Z,3.1nm,0.6s,baz=108,slow=3.5,SNR=12						
TORD	Torodi Ar. Bea	149.36	286		PKPbc	03 16 58.3	-0.5
BDFB	Brasilia	151.39	138	PKPbc	PKiKP	03 17 03.8	-0.5
	comp=Z,2.9nm,0.6s,baz=135,slow=5.7,SNR=8.8						

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*IDC **11** 03:07:28.4±6.2, 16.°68N×93.°66W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.5/34, mbtmp3.4/3, ML3.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/33, Error ellipse: s-maj=124.1km s-min=21.1km az=3.0*

*NEIC **11** 03:07:30.0±2.5, 15.°78N±0.°04×94.°60W±0.°03, h31^{km}±9^{km}, mb4.1/11, Md4.2/14(MEX), Error ellipse: s-maj=6.1km s-min=4.5km az=198.0*

*MEX **11** 03:07:31.7±0.5, 15.°78N×94.°59W, h12^{km}±5^{km}, MD4.1*

ISC 11 03:07:30.6±1.2, **15.°78N**±0.°07×**94.°58W**±0.°03, **h35**^{km}±6^{km}, **n33**, σ**0.^{s}90**/40, **mb3.6**/3, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.31	93	*e*P	Pn	03 07 52.1	-0.2
PCIG				*e*S	Sn	03 08 08.2	-0.4
PCIG		1.31	93		Pn	03 07 52.1	-0.2
PCIG					Sn	03 08 08.2	-0.4
CMIG	Matias Romero	1.34	347	Pg	Pn	03 07 52.5	-0.3
	20nm,0.3s,baz=179,slow=14,SNR=351						
CMIG				Lg	Lg	03 08 08.6	
	115nm,0.3s,baz=11,slow=18,SNR=15						
CMIG				LR	LR	03 08 37.0	
	comp=Z,201nm,20.4s,baz=166,slow=55						
CMIG	Matias Romero	1.34	347	*i* P	Pn	03 07 52.5	-0.3
CMIG				*e*S	Sn	03 08 08.3	-1.1
HUIG	Huatulco	1.48	270	*e*P	Pn	03 07 54.5	-0.1
HUIG				*e*S	Sn	03 08 11.8	-0.9
HUIG	Huatulco	1.48	270		Pn	03 07 54.5	-0.1
HUIG					Sn	03 08 11.8	-0.9
TGIG		1.72	54	*e*P	Pn	03 07 57.9	-0.1
TGIG				*e*S	Sn	03 08 19.2	+0.5
TGIG		1.72	54		Pn	03 07 57.9	-0.1
CCIG	Comitan	2.40	78		Pn	03 08 09.0	+1.5
VHO	Vista Hermosa	2.44	302	*i* P	Pn	03 08 08.3	+0.3
VHO				*i* S	Sn	03 08 36.7	-0.1
HUEH	Huehuetenango	3.00	98	Pn	Pn	03 08 17.2	+1.4
TOIG	Toxpalan	3.32	314	*i* P	Pn	03 08 20.8	+0.7
TOIG				*i* S	Sn	03 08 59.7	+1.3
TLIG	Tlapa	4.22	295		Pn	03 08 32.8	+0.4
PETF	Flores	4.66	75		Pn	03 08 39.6	+1.1
ESQI	Esquipulas	5.20	103	Pn	Pn	03 08 46.0	+0.1
SNET	Serv Nac Est T	5.57	111	Pn	Pn	03 08 51.9	+0.9
MOIG	Morelia	7.40	303	Pn	Pn	03 09 16.4	0.0
435B	Jarrell	15.19	350	Pn	Pn	03 11 02.4	-0.1
435B				IAmb	IAmb	03 11 07.0	
	comp=Z,18nm,0.8s						
TXAR	Lajitas Array	15.88	330	Pn	Pn	03 11 13.0	+1.4
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=5.1						
NATX	Nacogdoches	15.91	360	Pn	Pn	03 11 11.3	-0.6
NATX				IAmb	IAmb	03 11 22.9	
	comp=Z,11nm,0.8s						
237A	Washetta, Mont	16.19	356	Pn	Pn	03 11 14.5	-1.0
237A				IAmb	IAmb	03 11 48.5	
	comp=Z,11nm,0.7s						
ABTX	Abilene, Hawle	17.39	346		Pn	03 11 30.4	-0.1
ABTX				IAmb	IAmb	03 11 33.9	
	comp=Z,22nm,1.4s						
GDL2	Guadalupe Moun	18.62	333	P	P	03 11 44.1	-1.0
MSTX	Muleshoe	19.57	339	P	P	03 11 55.1	-0.4
MSTX				IAmb	IAmb	03 11 58.9	
	comp=Z,12nm,1.1s						
AMTX	Amarillo	20.07	343	P	P	03 12 02.0	+1.0
TUL1	Leonard	20.08	357	P	P	03 12 01.9	+0.8
TUL1				IAmb	IAmb	03 12 04.9	
	comp=Z,27nm,1.7s						
121A	Cookes Peak, D	20.55	327	P	P	03 12 07.0	+0.7
KAN10	Anthony SW Sta	21.49	352	P	P	03 12 15.5	-0.7
TUC	Tucson	22.09	321	P	P	03 12 24.4	+1.6
WUAZ	Wupatki	24.74	326	P	P	03 12 50.4	+1.4
WUAZ				IAmb	IAmb	03 12 53.2	
	comp=Z,3.6nm,1.1s						
PFO	Pinyon Flats O	26.56	316	LR	LR	03 24 44.6	
	comp=Z,99nm,20.6s,baz=49,slow=39						
NVAR	Mina Array Bea	30.74	322	P	P	03 13 44.0	+1.3
	comp=Z,1.1nm,1.0s,baz=130,slow=8.4,SNR=7.3						
YKA	Yellowknife Ar	48.76	348	P	P	03 16 09.6	-2.0
	comp=Z,0.6nm,1.0s,baz=146,slow=7.2,SNR=4.8						

IDC 11 03:21:52.9±10.0, **17.°66N**×**146.°41E**, **h0**^{km}, **mb3.6**/4, **mb1 3.7**/4, **mb1mx3.4**/49, **mbtmp3.6**/4, **Error ellipse: s-maj=396.9km s-min=33.1km az=81.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.20	198	P	P	03 29 22.8	-0.2
	0.5nm,0.9s,baz=18,slow=8.3,SNR=1.6						
SONM	Songino Array	44.38	322	P	P	03 30 05.4	+0.1
	0.4nm,0.4s,baz=133,slow=7.0,SNR=4.0						
ZALV	Zalesovo Beam	59.25	323	P	P	03 31 55.5	-0.6
	0.5nm,0.4s,baz=98,slow=7.4,SNR=3.8						
MKAR	Makanchi Array	59.67	314	P	P	03 31 59.5	+0.4
	0.6nm,0.9s,baz=100,slow=6.7,SNR=4.2						

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*IDC **11** 03:26:37.4±4.2, 5.°52S×149.°14E, h170^{km}±43^{km}, mb3.0/4, mb1 3.2/5, mb1mx3.0/31, mbtmp3.5/5, Error ellipse: s-maj=91.2km s-min=29.9km az=133.0*

ISC 11 03:26:36.8±1.6, **5.°4S**±0.°2×**149.°0E**±0.°5, **h163**^{km}, **n6**, σ**0.^{s}46**/7, **mb3.3**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.40	204	P	Pn	03 27 42.2	-0.4
	3.4nm,0.3s,baz=47,slow=6.1,SNR=6.1						
PMG				S	Sn	03 28 34.6	+0.6
	3.0nm,0.3s,baz=120,slow=20,SNR=3.0						
WRA	Warramunga Arr	20.31	223	P	P	03 30 59.9	-0.5
	0.4nm,0.4s,baz=51,slow=11,SNR=2.5						
ASAR	Alice Springs	23.28	217	P	P	03 31 30.1	+0.1
	0.3nm,0.5s,baz=50,slow=9.2,SNR=5.2						
FITZ	Fitzroy Crossi	26.07	239	P	P	03 31 55.6	+0.2
	0.9nm,0.5s,baz=77,slow=7.6,SNR=7.4						
ILAR	Eielson Array	84.14	23	P	P	03 38 49.3	+0.1
	0.3nm,0.6s,baz=243,slow=5.3,SNR=4.9						
TORD	Torodi Ar. Bea	146.83	286	PKPbc	PKPbc	03 46 01.2	+0.3
	0.2nm,0.3s,baz=86,slow=2.9,SNR=1.8						

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*SOME **11** 03:56:40.4, 40.°22N×76.°97E, h10^{km}*

*NNC **11** 03:56:41.6±4.4, 40.°46N×78.°43E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=47.9km s-min=29.6km az=69.0*

*KRNET **11** 03:56:43.2±0.1, 40.°34N×77.°38E, mb2.5*

ISC 11 03:56:46.4±1.8, **40.°42N**±0.°07×**77.°24E**±0.°06, **h10**^{km}, **n28**, σ**0.^{s}99**/49, **16C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.71	358	⇓*i*P	Pn	03 57 15.9	-0.6
	baz=56						
KDJ				⇓*i*S	Sb	03 57 39.7	-0.1
	baz=56						
ULHL	Ulahol	1.98	338	⇓*i*P	Pn	03 57 19.9	-0.3
	baz=36						
ULHL				⇓*i*S	Sb	03 57 47.0	-0.4
	baz=36						
BOOM	Boomskoye usch	2.29	335	⇑*i*P	Pn	03 57 24.5	0.0
	baz=34						
BOOM				⇑*i*S	Sn	03 57 54.8	+2.0
	baz=34						
TNSS	Tian-Shan	2.63	355	*e*P	Pb	03 57 32.8	-1.1
	1.3nm,0.3s						
TNSS				*e*S	Sg	03 58 11.4	+0.5
	3.7nm,0.6s						
TNSS	Tian-Shan	2.63	355	Pg	Pb	03 57 32.8	-1.1
	1.3nm,0.3s						
TNSS				Lg	Lg	03 58 11.4	
	3.7nm,0.6s						
ARLS	Aral	2.64	304	⇓*i*P	Pn	03 57 29.5	+0.3
	baz=4.0						
ARLS				⇓*i*S	Sn	03 58 03.1	+1.8
	baz=4.0						
UCH	Uchtor	2.74	312	⇓*e*P	Pn	03 57 31.0	+0.1
	baz=12						
UCH				⇓*i*S	Sn	03 58 06.1	+1.9
	baz=12						
MDOK	Medeo	2.75	357	*e*P	Pb	03 57 34.9	-0.8
	1.7nm,0.3s						
MDOK				*e*S	Sg	03 58 15.1	+0.4
	19nm,0.6s						
MDOK	Medeo	2.75	357	Pg	Pb	03 57 34.9	-0.8
	1.7nm,0.3s						
MDOK				Lg	Lg	03 58 15.1	
	19nm,0.6s						
SATY	Saty	2.78	18	*e*P	Pb	03 57 35.6	-0.7
	1.0nm,0.2s						
SATY				*e*S	Sg	03 58 16.1	+0.4
	1.7nm,0.2s						
TKM2	Tokmak 2	2.79	334	⇑*i*P	Pn	03 57 31.5	+0.2
	baz=33						
TKM2				⇑*i*S	Sn	03 58 06.8	+1.6
	baz=33						
TKM2	Tokmak 2	2.79	334	⇓Pn	Pb	03 57 35.3	-1.2
	0.7nm,0.3s						
TKM2				⇓Sn	Sg	03 58 14.9	-1.1
	4.5nm,0.8s						
KST	Kastek	2.79	340	*e*P	Pb	03 57 35.9	-0.6
	1.3nm,0.1s						
KST				*e*S	Sg	03 58 16.5	+0.3
	4.3nm,0.3s						
KST	Kastek	2.79	340	Pg	Pb	03 57 35.9	-0.6
	1.3nm,0.1s						
KST				Lg	Lg	03 58 16.5	
	4.3nm,0.3s						
KOTS	Kotyrbulak	2.82	358	*e*P	Pb	03 57 36.1	-0.8
	4.1nm,0.3s						
KOTS				*e*S	Sg	03 58 16.9	0.0
	37nm,0.7s						
KOTS	Kotyrbulak	2.82	358	Pg	Pb	03 57 36.1	-0.8
	4.1nm,0.3s						
KOTS				Lg	Lg	03 58 16.9	
	37nm,0.7s						
KBK	Karagaybulak	2.83	323	⇑*i*P	Pn	03 57 31.9	+0.1
	baz=23						
KBK				⇑*i*S	Sn	03 58 07.6	+1.6
	baz=23						
SFK	Sufi-Kurgan	2.89	263	⇑*i*P	Pn	03 57 32.6	-0.2
	baz=65						
SFK				⇑*i*S	Sn	03 58 08.5	+0.8
	baz=65						
DGS	Degeres	3.03	339	*e*P	Pb	03 57 39.6	-0.9
	1.2nm,0.4s						
DGS				*e*S	Sg	03 58 23.1	-0.6
	5.0nm,0.7s						
DGS	Degeres	3.03	339	Pg	Pb	03 57 39.5	-1.0
	1.2nm,0.4s						
DGS				Lg	Lg	03 58 23.3	
	5.0nm,0.7s						
AAK	Ala-Archa	3.03	318	⇑*i*P	Pn	03 57 34.7	+0.1
	baz=18						
AAK				⇑*i*S	Sn	03 58 12.7	+1.7
	baz=18						
AML	Almayashu	3.18	304	⇑*i*P	Pn	03 57 36.4	-0.4
	baz=4.0						
AML				⇑*i*S	Sn	03 58 15.9	+0.9
	baz=4.0						
CHMS	Chumysh	3.18	325	⇑*i*P	Pn	03 57 36.7	+0.1
	baz=24						
CHMS				⇑*i*S	Sn	03 58 15.9	+1.3
	baz=24						
KPKS	Kokpek	3.23	19	*e*P	Pb	03 57 43.4	-0.6
	0.9nm,0.2s						
KPKS				*e*S	Sg	03 58 29.6	-0.6
	4.4nm,0.7s						
KTBS	Karatobe	3.32	353	*e*P	Pb	03 57 44.2	-1.2
	1.8nm,0.8s						
KTBS				*e*S	Sg	03 58 30.7	-2.3
	6.1nm,0.8s						
KTBS	Karatobe	3.32	353	Pg	Pb	03 57 44.2	-1.2
	1.8nm,0.8s						
KTBS				Lg	Lg	03 58 30.7	
	6.1nm,0.8s						
PDGK	Podgornoye	3.36	29	Pg	Pb	03 57 46.2	0.0
	1.0nm,0.7s						
PDGK				Lg	Lg	03 58 34.4	
	1.0nm,0.6s						
USP	Ospenovka	3.51	325	⇑*i*P	Pn	03 57 41.3	+0.2
	baz=25						
USP				⇑*i*S	Sn	03 58 24.0	+1.3
	baz=25						

IDC 11 04:07:54.9±6.7, **6.°43S**×**147.°69E**, **h141**^{km}±70^{km}, **mb2.5**/1, **mb1 2.9**/3, **mb1mx2.7**/39, **mbtmp3.2**/3, **Error ellipse: s-maj=140.2km s-min=56.5km az=122.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.00	190	P	Pn	04 08 42.0	+0.1
	3.3nm,0.3s,baz=15,slow=11,SNR=7.7						
PMG				S	Sn	04 09 19.0	+0.7
	4.8nm,0.3s,baz=167,slow=22,SNR=3.1						
WRA	Warramunga Arr	18.67	223	P	P	04 12 01.7	-0.5
	0.1nm,0.3s,baz=42,slow=11,SNR=2.2						
ASAR	Alice Springs	21.66	216	P	P	04 12 34.1	-0.3
	0.3nm,0.6s,baz=50,slow=8.5,SNR=2.7						
TORD	Torodi Ar. Bea	145.86	284	PKPbc	PKPdf	04 27 18.3	+0.4
	0.2nm,0.3s,baz=57,slow=2.9,SNR=1.3						

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*ISK **11** 04:08:38.6, 35.°47N×30.°50E, h25^{km}, ML3.0/29*

*DDA **11** 04:08:39.5, 35.°61N×30.°68E, h21^{km}±2^{km}, ML2.5*

*NIC **11** 04:08:40.9±0.0, 35.°41N×30.°38E, h32^{km}±23^{km}, Ml3.2/3*

ISC 11 04:08:39.7±1.3, **35.°47N**±0.°03×**30.°51E**±0.°03, **h21**^{km}±4^{km},

n63,$\sigma 1^{s}.00$/74, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.86	351	*i* P	Pb	04 08 54.8	-1.0
AKUM				*i* S	Sb	04 09 05.3	-1.6
AKUM				IAML		04 09 10.0	
	comp=N,180nm,0.6s						
AKUM				IAML		04 09 17.0	
	comp=E,145nm,0.9s						
KSL	Kastellorizon	1.01	312	P	Pn	04 08 58.4	-0.2
AKAS	Kas	1.06	316	PG	Pb	04 09 00.6	+1.3
AKAS	Kas	1.06	316	*i* P	Pn	04 08 59.3	-0.1
AKAS				*i* S	Sn	04 09 15.2	+1.6
AKAS				IAML		04 09 36.0	
	comp=N,83nm,0.9s						
ELL	Elmali	1.36	339	PN	Pn	04 09 02.8	-0.8
ELL	Elmali	1.36	339	P	Pb	04 09 04.7	+0.1
ANTB	Antalya	1.43	5	PN	Pn	04 09 03.8	-0.6
KORT	Korkueli	1.53	355	PN	Pn	04 09 05.2	-0.7
KORT	Korkueli	1.53	355	*i* P	Pb	04 09 08.6	+1.2
KORT				*i* S	Sb	04 09 30.1	+3.7
KORT				IAML		04 09 44.0	
	comp=N,51nm,0.9s						
KORT				IAML		04 09 49.0	
	comp=E,62nm,0.9s						
AKMS	Akamas	1.56	106	P	Pb	04 09 07.4	-0.5
AKMS				S	Sb	04 09 28.6	+1.5
AKMS				AML	AML	04 09 30.6	
	comp=E,0.9nm,0.6s						
AKMS				AML	AML	04 09 30.6	
	comp=E,0.9nm,0.6s						
AKMS				AML	AML	04 09 31.7	
	comp=E,0.9nm,0.6s						
AKMS				AML	AML	04 09 31.7	
	comp=E,0.9nm,0.6s						
FETY	Fethiye	1.64	316	PN	Pn	04 09 06.6	-0.7
GAZI	Gazipasa	1.65	62	PN	Pn	04 09 06.5	-1.0
GAZI				SN	Sn	04 09 27.6	-0.5
GAZI	Gazipasa	1.65	62	*i* P	Pn	04 09 06.5	-1.0
GAZI				*i* S	Sn	04 09 27.1	-1.0
GAZI				IAML		04 09 35.0	
	comp=E,97nm,0.7s						
GAZI				IAML		04 09 37.0	
	comp=N,124nm,0.7s						
KEPZ	Antalya-Kepez	1.68	32	*i* P	Pn	04 09 07.4	-0.4
KEPZ				*i* S	Sn	04 09 27.6	-1.2
NATA	Nata	1.82	112	P	Pn	04 09 10.8	+0.9
BUCA	Burdur, Bucak-	1.85	1	*i* P	Pb	04 09 14.7	+1.8
BUCA				IAML		04 09 54.0	
	comp=N,54nm,0.8s						
CAEL	Denizli, Camel	1.91	330	*i* P	Pb	04 09 19.0	+5.1
CAEL				IAML		04 10 04.0	
	comp=E,68nm,1.6s						
CAEL				IAML		04 10 11.0	
	comp=N,153nm,1.6s						
GOLH	Golhisar	1.92	337	*i* P	Pb	04 09 13.5	-0.5
GOLH				IAML		04 09 57.0	
	comp=N,45nm,0.7s						
GOLH				IAML		04 10 00.0	
	comp=E,70nm,1.9s						
LEF	Lefka	1.98	100	PN	Pn	04 09 11.1	-0.8
BCK	Bucak	1.98	2	PN	Pn	04 09 11.7	-0.4
DALY	Dalyan (Mula)	2.01	312	PN	Pn	04 09 12.3	-0.1
DALY	Dalyan (Mula)	2.01	312	*i* P	Pb	04 09 14.6	-0.9
AKDN	Akdeniz- Kıbrı	2.02	94	PN	Pn	04 09 12.1	-0.3
OSC1	CSNet OBS 1	2.07	162	S	Sn	04 09 38.1	-0.2
SZAC	Souni	2.07	110	P	Pn	04 09 14.8	+1.6
SZAC				AML	AML	04 09 39.3	
	comp=E,0.4nm,0.6s						
SZAC				AML	AML	04 09 39.3	
	comp=E,0.4nm,0.6s						
SZAC				S	Sb	04 09 40.5	-1.4
SZAC				AML	AML	04 09 45.6	
	comp=E,0.4nm,0.5s						
SZAC				AML	AML	04 09 45.6	
	comp=E,0.4nm,0.5s						
ARG	Arkhangelos	2.07	292	PN	Pn	04 09 13.3	+0.1
TEKE	Tekeli-Mersin	2.22	72	PN	Pn	04 09 15.2	-0.1
BRDR	BURDUR-Merkez	2.25	351	*i* P	Pb	04 09 18.3	-1.4
BRDR				IAML		04 09 46.0	
	comp=E,22nm,0.9s						
TURN	Turunc	2.25	306	PN	Pn	04 09 15.4	-0.2
ERMK	Ermenek	2.27	58	*i* P	Pn	04 09 16.4	+0.3
ERMK				*i* S	Sn	04 09 43.1	-0.6
ERMK				IAML		04 09 50.0	
	comp=E,45nm,0.4s						
ERMK				IAML		04 10 01.0	
	comp=N,74nm,0.6s						
ISP	Isparta	2.34	0	PN	Pn	04 09 16.8	-0.3
ASGA	Asgata	2.35	106	P	Pn	04 09 18.3	+1.3
ASGA				S	Sb	04 09 47.7	-2.1
ASGA				AML	AML	04 09 49.0	
	comp=N,0.3nm,0.7s						
ASGA				AML	AML	04 09 49.0	
	comp=N,0.3nm,0.7s						
CSS	Mathiatis	2.37	102	PN	Pn	04 09 17.1	-0.2
CSS	Mathiatis	2.37	102	P	Pn	04 09 19.1	+1.8
TAVA	DENIZLI_Tavas	2.37	328	*i* P	Pn	04 09 17.7	+0.3
YER	Yerkesik	2.45	313	PN	Pn	04 09 18.3	-0.1
BASM	Basmaki-Afyon	2.47	352	PN	Pn	04 09 19.1	+0.3
BAGO	Egridir - ISPA	2.52	5	*i* P	Pn	04 09 20.6	+1.1
AKKU	Akkuyu-Mersin	2.56	74	PN	Pn	04 09 19.9	-0.1
GULN	MERSIN_Gulnar	2.57	73	*i* P	Pn	04 09 20.6	+0.6
GULN				*i* S	Sn	04 09 50.2	-0.4
GULN				IAML		04 10 03.0	
	comp=N,27nm,0.4s						
GULN				IAML		04 10 05.0	
	comp=E,40nm,0.9s						
TEVE	Tevekalti-Mers	2.57	67	PN	Pn	04 09 20.2	+0.1
MVOU	Mavrovouni	2.60	99	P	Pn	04 09 21.8	+1.4
KKBE	Karaman, Kazim	2.62	48	*i* P	Pn	04 09 22.1	+1.2
KKBE				*i* S	Sn	04 09 52.4	+0.2
KKBE				IAML		04 10 08.0	
	comp=E,46nm,0.5s						
KKBE				IAML		04 10 10.0	
	comp=N,41nm,0.7s						
IKL	Isikli	2.69	73	PN	Pn	04 09 21.6	-0.1
KARP	Karpathos	2.73	273	PN	Pn	04 09 22.2	-0.2
KARP	Karpathos	2.73	273	S	Sn	04 09 52.6	-2.2
KEBE	Keben-Mersin	2.77	69	PN	Pn	04 09 23.0	0.0
DOGA	KONYA_Doganhis	2.79	19	*i* P	Pn	04 09 23.3	0.0
DOGA				IAML		04 10 10.0	
	comp=N,28nm,0.5s						
DOGA				IAML		04 10 11.0	
	comp=E,18nm,0.8s						
KZIL	AFYON_Kizioren	2.79	354	*i* P	Pn	04 09 23.9	+0.7
OSC2	CSNet OBS 4	2.80	148	S	Sn	04 09 57.3	+0.9
YVAC	Isparta, Yalva	2.85	12	*i* P	Pn	04 09 25.0	+0.9
KHAL	Karahalli	3.00	345	*i* P	Pn	04 09 27.6	+1.5
KHAL				IAML		04 10 04.0	
	comp=N,12nm,1.0s						
BODT	Bodrum	3.03	302	PN	Pn	04 09 26.7	+0.2
SHUT	Suhut-Afyon	3.08	1	PN	Pn	04 09 26.9	-0.2
LADK	Ladik-KONYA	3.10	28	PN	Pn	04 09 27.5	0.0
KULA	Kula-Manisa	3.38	335	PN	Pn	04 09 31.1	-0.2
ALIN	Konya, Altinte	3.40	33	*i* P	Pn	04 09 31.5	-0.1
GCAM	G?zelcaml?	3.45	311	PN	Pn	04 09 32.3	+0.2
ZKR	Zakros	3.53	265	PN	Pn	04 09 33.3	0.0
CIFT	Cifteler, Eski	3.91	6	PN	Pn	04 09 38.7	+0.2
SVRH	Sivrihisar-ESK	4.05	11	PN	Pn	04 09 40.7	+0.2
SANT	Santorini	4.20	284	PN	Pn	04 09 42.4	-0.1
APE	Apeiranthos	4.33	293	PN	Pn	04 09 44.6	+0.3

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*IDC **11** 04:09:02.7±1.1, 6°.95S×126°.99E, h395^{km}±14^{km}, mb3.0/3, mb1 3.1/7, mb1mx2.8/48, mbtmp3.9/7, Error ellipse: s-maj=19.9km s-min=12.6km az=89.0*

*NOU **11** 04:09:05.3, 7°.18S×126°.93E, h393^{km}, mb4.0, Banda Sea*

ISC 11 04:09:03.0±0.9, **6°.96S**±0°.08×**127°.0E**±0°.1, **h407**^{km}**, n8, $\sigma 1^{s}.69$**/12, **mb3.3**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.63	226	P	P	04 10 22.4	+0.8
	96nm,0.3s,baz=76,slow=1.8,SNR=50						
BATI				S	S	04 11 22.8	-2.9
	35nm,0.3s,baz=9.2,slow=6.9,SNR=11						
SIJI	Sorong	7.38	35	P	P	04 10 51.4	-0.2
	2.2nm,0.3s,baz=221,slow=20,SNR=2.3						
SIJI				S	S	04 12 18.1	-1.5
	1.2nm,0.3s,baz=195,slow=20,SNR=1.4						
FITZ	Fitzroy Crossi	11.15	187	P	P	04 11 33.6	+0.4
	0.9nm,0.3s,baz=23,slow=10,SNR=20						
WRA	Warramunga Arr	14.72	152	P	P	04 12 13.1	+0.7
	0.3nm,0.3s,baz=333,slow=11,SNR=12						
WRA				S	S	04 14 45.9	-3.1
	0.2nm,0.3s,baz=326,slow=20,SNR=5.1						
ASAR	Alice Springs	17.87	159	P	P	04 12 46.8	+0.8
	1.0nm,0.3s,baz=330,slow=8.1,SNR=35						
ASAR				S	S	04 15 51.3	+0.9
	0.1nm,0.3s,baz=334,slow=21,SNR=4.2						
STKA	Stephens Creek	28.27	153	P	P	04 14 22.6	+1.5
	1.1nm,0.4s,baz=331,slow=9.0,SNR=5.4						
MKAR	Makanchi Array	66.61	328	P	P	04 19 11.3	0.0
	0.2nm,0.5s,baz=142,slow=7.3,SNR=1.8						
KURBB	Kurchatov Arra	70.97	330	P	P	04 19 38.5	+0.8
	0.5nm,0.6s,baz=141,slow=5.5,SNR=3.2						

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*NNC **11** 04:15:13.5±21.0, 37°.27N×70°.41E, h0^{km}, mb4.0, mpv3.8, Error ellipse: s-maj=179.5km s-min=141.6km az=156.0*

*IDC **11** 04:15:14.5±4.9, 37°.07N×70°.57E, h75^{km}±37^{km}, mb3.0/2, mb1 3.2/8, mb1mx2.9/54, mbtmp3.4/8, ML3.3/6, Error ellipse: s-maj=56.3km s-min=18.8km az=156.0*

ISC 11 04:15:14.1±1.5, **37°.1N**±0°.1×**70°.54E**±0°.08, **h64**^{km}**, n14, $\sigma 2^{s}.12$**/20, **5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.04	360	⇓P	Pn	04 16 44.0	+3.2
	2.0nm,0.3s,baz=173,slow=12,SNR=141						
KK31				⇑S	Sn	04 17 49.6	+1.2
	24nm,0.6s						
MRKS	Merke	6.04	19	Pg	Pn	04 16 43.4	+2.5
	12nm,0.3s						
MRKS				Lg	Lg	04 17 48.7	
	12nm,0.3s						
AAK	Ala-Archa	6.35	27	P	Pn	04 16 47.1	+2.0
	1.3nm,0.3s,baz=171,slow=6.8,SNR=13						
AAK				S	Sn	04 17 56.9	+0.6
	0.6nm,0.3s,baz=349,slow=22,SNR=5.6						
AAK	Ala-Archa	6.35	27	⇑P	Pn	04 16 47.4	+2.2
	1.8nm,0.3s						
AAK				⇑S	Sn	04 17 57.4	+1.1
	5.1nm,0.7s						
TKM2	Tokmak 2	7.02	32	⇓P	Pn	04 16 55.6	+1.1
	1.9nm,0.5s						
TKM2				⇑S	Sn	04 18 15.5	+2.6
	2.6nm,0.6s						
SGDS	Sogindy	7.11	25	Pg	Pn	04 16 57.0	+1.5
	3.2nm,0.4s						
SGDS				Lg	Lg	04 18 12.1	
	3.6nm,0.4s						
GEYT	Alibeck	9.91	279	P	Pn	04 17 34.6	+0.8
	0.9nm,0.3s,baz=120,slow=10,SNR=9.2						
GEYT				S	Sn	04 19 24.1	+0.7
	1.4nm,0.3s,baz=92,slow=18,SNR=5.3						
MKAR	Makanchi Array	13.07	38	P	Pn	04 18 15.7	-1.1
	0.0nm,0.3s,baz=227,slow=14,SNR=1.9						
AB31	Akbulak array	14.41	331	P	Pn	04 18 35.5	+0.9
	0.3nm,0.5s,baz=165,slow=11,SNR=13						
AB31				⇑S	Sn	04 21 07.9	-5.1
	0.3nm,0.3s,baz=165,slow=22						
BVAR	Borovoye Array	15.96	360	P	Pn	04 18 53.2	-1.3
	0.1nm,0.3s,baz=256,slow=30,SNR=2.0						
AKTO	Aktyubinsk	16.11	330	P	Pn	04 18 55.2	-1.2
	0.1nm,0.3s,baz=153,slow=9.0,SNR=2.3						
ZALV	Zalesovo Beam	19.57	26	P	P	04 19 35.1	-1.5
	0.4nm,0.3s,baz=209,slow=11,SNR=7.2						
SONM	Songino Array	28.33	56	P	P	04 21 00.1	-1.8
	0.2nm,0.4s,baz=271,slow=9.8,SNR=2.3						
YKA	Yellowknife Ar	80.70	2	P	P	04 27 20.1	+0.3
	0.1nm,0.6s,baz=2.6,slow=4.9,SNR=2.4						

IDC 11 04:17:04.3±25.0, **5°.48N**×**123°.36E, h394**^{km}±331^{km}, **mb2.8**/6, **mb1 2.8**/6, **mb1mx2.6**/52, **mbtmp3.6**/6, **Error ellipse: s-maj=178.4km s-min=36.8km az=75.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.48	157	P	P	04 22 16.1	-0.3
	0.2nm,0.6s,baz=333,slow=10,SNR=1.9						
ASAR	Alice Springs	30.75	161	P	P	04 22 45.3	+0.2
	0.2nm,0.5s,baz=344,slow=6.2,SNR=4.1						
SONM	Songino Array	44.63	344	P	P	04 24 39.2	-0.4
	0.2nm,0.4s,baz=164,slow=6.3,SNR=2.4						
MKAR	Makanchi Array	54.23	326	P	P	04 25 51.5	+0.5
	0.5nm,0.3s,baz=123,slow=7.5,SNR=21						
KURBB	Kurchatov Arra	58.48	328	P	P	04 26 20.1	-0.5
	0.7nm,0.5s,baz=128,slow=7.3,SNR=10						
BVAR	Borovoye Array	64.04	328	P	P	04 26 57.2	-0.2
	0.2nm,0.3s,baz=119,slow=8.4,SNR=2.2						

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*IDC **11** 04:48:30.4±3.8, 6°.08S×146°.71E, h49^{km}±36^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.5/41, mbtmp3.9/9, ML3.9/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/28, Error ellipse: s-maj=30.1km s-min=26.3km az=75.0*

*NEIC **11** 04:48:32.2±2.0, 6°.17S±0°.08×146°.7E±0°.1, h63^{km}±9^{km}, mb4.2/7, Error ellipse: s-maj=16.9km s-min=12.1km az=92.0*

ISC 11 04:48:31.0±0.7, **6°.18S**±0°.07×**146°.57E**±0°.09, **h52**^{km}**, n27, $\sigma 1^{s}.70$**/26, **mb3.9**/9, **MS3.0**/5, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.26	170	P	Pn	04 49 21.0	+1.4
	8.6nm,0.3s,baz=28,slow=9.0,SNR=11						
PMG				S	Sn	04 49 59.1	+1.9
	22nm,0.3s,baz=150,slow=22,SNR=11						
PMG				LR	LR	04 51 04.5	
	comp=Z,732nm,19.4s,baz=336,slow=46						
PMG	Port Moresby	3.26	170		Pn	04 49 20.2	+0.5
RABL	Rabaul	5.91	71	Pn	Pn	04 49 56.7	+0.7
JAY	Jayapura	6.89	302	LR	LR	04 53 16.9	
	comp=Z,274nm,19.6s,baz=182,slow=41						
COEN	Coen	8.42	203		Pn	04 50 32.4	+1.9
HNR	Honiara	13.64	105	Pn	Pn	04 51 40.8	-1.0
CTA	Charters Tower	13.83	181	P	P	04 51 48.7	-2.5
	0.1nm,0.3s,baz=1.9,slow=8.1,SNR=1.7						
WRA	Warramunga Arr	18.13	220	P	P	04 52 39.2	+0.2
	0.4nm,0.3s,baz=44,slow=11,SNR=20						
WRA				S	Sn	04 55 55.0	-5.7
	0.1nm,0.3s,baz=46,slow=23,SNR=1.5						
AS31	Alice Springs	21.23	214	P	P	04 53 14.1	+1.4
ASAR	Alice Springs	21.23	214	P	P	04 53 13.4	+0.6
	1.0nm,0.7s,baz=53,slow=8.8,SNR=15						
ASAR				S	S	04 57 07.6	+1.5
	0.5nm,0.9s,baz=33,slow=22,SNR=2.4						
ASAR				LR	LR	05 02 25.3	
	comp=Z,103nm,18.7s,baz=21,slow=39						
FITZ	Fitzroy Crossi	23.61	238	P	P	04 53 38.0	+0.6
	10nm,0.7s,baz=58,slow=12,SNR=17						
FITZ				LR	LR	05 04 00.4	
	comp=Z,43nm,20.9s,baz=32,slow=39						
FITZ	Fitzroy Crossi	23.61	238	P	P	04 53 38.8	+1.3
FITZ				IAmb	IAmb	04 53 40.3	
	comp=Z,12nm,0.9s						
DZM	Mont Dzumac	24.86	131	LR	LR	05 03 08.7	
	comp=Z,51nm,19.6s,baz=140,slow=35						
STKA	Stephens Creek	25.99	190	P	P	04 54 00.2	+1.2
	comp=Z,1.6nm,0.6s,baz=342,slow=6.2,SNR=3.5						
STKA				LR	LR	05 04 43.3	
	comp=Z,79nm,19.2s,baz=25,slow=37						
STKA	Stephens Creek	25.99	190	IAmb	IAmb	04 54 09.3	
	comp=Z,0.6nm,0.9s						
KSRS	Korea Array	46.77	340	LR	LR	05 13 06.2	
	comp=Z,20nm,21.9s,baz=210,slow=32						
CM31	Chiang Mai Arr	52.96	299	P	P	04 57 43.0	+0.3
CMAR	Chiang Mai Arr	52.96	299	P	P	04 57 44.1	+1.4
	comp=Z,0.7nm,0.3s,baz=120,slow=5.5,SNR=5.7						
VNDA	Vanda	71.76	177	P	P	04 59 47.3	-0.1
	comp=Z,0.5nm,0.7s,baz=332,slow=6.7,SNR=3.7						
MKAR	Makanchi Array	77.36	321	P	P	05 00 19.9	-0.5
	comp=Z,0.3nm,0.7s,baz=93,slow=8.0,SNR=3.8						
MAKZ	Makanchi	77.57	321	P	P	05 00 20.5	-1.1
MAKZ				IAmb	IAmb	05 00 21.2	
	comp=Z,3.2nm,1.3s						
ZAA0	Zalesovo Array	78.94	328	P	P	05 00 29.2	+0.3
ZAA0				IAmb	IAmb	05 00 29.9	
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	85.81	23	P	P	05 01 02.8	-1.8
	comp=Z,0.6nm,0.7s,baz=251,slow=5.1,SNR=16						
TOA0	Torodi Ar. Sit	144.72	284	PKPdf	PKPdf	05 08 02.9	-0.2
TORD	Torodi Ar. Bea	144.72	284	PKP	PKPdf	05 08 03.2	+0.2
	comp=Z,4.7nm,0.7s,baz=69,slow=3.5,SNR=18						
TORD	Torodi Ar. Bea	144.72	284		PKPdf	05 08 02.8	-0.3
DBIC	Dimbokro	151.61	273	PKPbc	PKiKP	05 08 21.8	+0.8
	comp=Z,4.0nm,0.8s,baz=107,slow=4.3,SNR=5.4						

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*TEH **11** 05:03:48.9, 32°.66N×47°.72E, h8^{km}, ML3.5*

*ISN **11** 05:03:49.1±1.2, 32°.69N×47°.75E, h15^{km}±6^{km}, ML3.3*

ISC 11 05:03:50.2±0.9, **32°.64N**±0°.04×**47°.70E**±0°.04, **h10**^{km}**, n45, $\sigma 0^{s}.95$**/49, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.89	8	*e*Pg	Pg	05 04 05.9	-1.4
IKMR	Kamar-syah	1.04	33	*e*Sg	Sg	05 04 23.9	+0.1
IKMR				*e*Pg	Pg	05 04 08.1	-2.1
SHGR	Shooshtar-Gavs	1.07	120	*e*Pn	Pg	05 04 10.5	-0.3
AHWZ	Ahwaz	1.54	148	*e*Pg	Pn	05 04 18.6	+0.9
IBDR	Badra	1.56	288	*e*Pg	Pn	05 04 18.0	-0.1
IBDR				*e*Sg	Sn	05 04 39.0	+0.6
IBDR				AML	AML	05 04 46.0	
	comp=E,222nm,0.8s						
IBDR				AML	AML	05 04 48.8	
	comp=N,253nm,0.4s						
AMIS	Naft Sefid	1.66	126	*e*Pg	Pn	05 04 19.9	+0.5
AMIS				*e*		05 04 52.9	
	comp=Z,99nm,0.4s						
KCHF	Cheshme Sefid,	1.72	341	*e*Pn	Pn	05 04 21.1	+0.7
KCHF				*e*		05 04 50.4	
	comp=Z,99nm,0.3s						
KER	Kermanshah	1.80	345	*e*Pn	Pb	05 04 23.1	-0.3
IBZA	Bozab	1.82	4	*e*Pg	Pb	05 04 23.7	-0.2
IBZA				*e*		05 04 52.3	
	comp=Z,99nm,0.4s						
IGHG	Ghaleghazi	1.93	331	*e*Pn	Pn	05 04 24.3	+0.9
IGHG				*e*		05 05 00.7	
	comp=Z,99nm,0.8s						
IVIS	Veis	2.01	339	*e*Pn	Pn	05 04 24.8	+0.5
IVIS				*e*		05 04 59.6	
	comp=Z,99nm,0.8s						
NSR	Nassriya	2.10	220	*e*Pn	Pn	05 04 26.0	+0.5
NSR				*e*Sn	Sn	05 04 52.0	+0.3
NSR				AML	AML	05 05 05.6	
	comp=E,571nm,0.4s						
KHMZ	Khomeyn	2.18	59	*e*Pn	Pn	05 04 28.1	+1.3
IDHR	Dehrash	2.33	332	*e*Pn	Pn	05 04 29.2	+0.4
IDHR				*e*		05 04 34.3	
	comp=Z,99nm,0.3s						
ILIN	Lien	2.35	345	*e*Pn	Pn	05 04 30.5	+1.3
ILIN				*e*		05 04 35.2	
	comp=Z,99nm,0.3s						
SNGE	Sanandaj	2.46	353	*e*Pn	Pn	05 04 30.6	0.0
HSRG	Sareghieh	2.63	10	*e*Pn	Pn	05 04 34.6	+1.5
HSRG				*e*		05 05 14.7	
	comp=Z,99nm,1.0s						
IPIR	Pirpir	2.69	88	*e*Pn	Pn	05 04 35.1	+1.2
IPIR				*e*		05 05 21.1	
	comp=Z,99nm,0.4s						
SHK1	Shahrekord	2.71	96	*e*Pn	Pn	05 04 34.6	+0.6
SHK1				*e*		05 04 35.0	
	comp=Z,99nm,0.2s						
ASAO	Ashtian	2.71	45	*e*Pn	Pn	05 04 34.9	+0.8
MIB	Mutribah	2.85	186	*e*P		05 04 37.2	
BHD	Baghdad	2.86	283	*e*Pn	Pn	05 04 36.0	+0.1
BHD				*e*Sn	Sn	05 05 12.0	+1.6
BHD				AML	AML	05 05 29.5	
	comp=E,388nm,0.5s						
UMR	Umm Al-Rimmam	3.08	180	*e*P		05 04 39.9	
RST	Umm Al-Ruwaisa	3.19	191	*e*P		05 04 41.4	
IRAZ	Razeghan	3.32	33	*e*Pn	Pn	05 04 43.8	+1.4
QAM	Ghamsar	3.32	69	*e*Pn	Pn	05 04 43.8	+1.3
IKLH	Kolahrood	3.33	77	*e*Pn	Pn	05 04 43.6	+1.0
IKLH				*e*		05 04 47.1	
	comp=Z,99nm,0.1s						
QABG	Abgarm-Qazvin	3.43	26	*e*Pn	Pn	05 04 43.3	-0.7
GHVR	GHOM	3.51	58	*e*Pn	Pn	05 04 45.6	+0.6
IQOM	Qom	3.56	51	*e*Pn	Pn	05 04 46.3	+0.5
IGAR	Gharneh	3.67	93	*e*Pn	Pn	05 04 47.4	+0.1
IGAR				*e*		05 04 49.0	
	comp=Z,99nm,0.2s						
KLNJ	Kolanjah	3.69	115	*e*Pn	Pn	05 04 47.4	-0.3
KLNJ				*e*		05 06 02.8	
	comp=Z,99nm,0.4s						
RDF	Al-Radifah	3.71	182	*e*P		05 04 48.8	
QRN	Al-Qurain	3.89	177	*e*P		05 04 51.2	
IMHD	Mahdasht	3.90	38	*e*Pn	Pn	05 04 50.2	-0.2
IZEF	Zefreh	3.91	85	*e*Pn	Pn	05 04 51.1	+0.6
IZEF				*e*		05 04 52.6	
	comp=Z,99nm,0.2s						
IRAM	Ramesheh	4.05	101	*e*Pn	Pn	05 04 51.7	-0.8
IVRN	Varamin	4.09	54	*e*Pn	Pn	05 04 53.6	+0.7
NASN	Na'in	4.30	87	*e*Pn	Pn	05 04 56.7	+0.6
MAHB	Mahabad	4.43	339	*e*Pn	Pn	05 04 58.4	+0.8
QALM	Alamut, Qazvin	4.49	32	*e*Pn	Pn	05 05 00.4	+1.8
DAMV	Damavand	4.62	49	*e*Pn	Pn	05 05 01.1	+0.7
IDMV	Damavand	4.63	50	*e*Pn	Pn	05 05 01.1	+0.6
ANAR	Anarak	5.10	82	*e*Pn	Pn	05 05 07.0	+0.2
IFIR	Firoozkooh	5.14	53	*e*Pn	Pn	05 05 08.2	+0.6
ILAS	Lasjerd	5.15	57	*e*Pn	Pn	05 05 08.7	+1.1
ISHM	Shahmirzad	5.60	54	*e*Pn	Pn	05 05 15.5	+1.6
ICHK	Chekchek	5.68	92	*e*Pn	Pn	05 05 15.0	+0.1
IHRS	Heris	5.69	355	*e*Pn	Pn	05 05 16.7	+1.7
IANJ	Anjilo	5.87	60	*e*Pn	Pn	05 05 18.5	+0.9

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*UPP **11** 05:19:28.8±3.3, 67°.57N×33°.75E, h0^{km}, ML1.7, Suspected explosion*

*KOLA **11** 05:19:29.0, 67°.66N×33°.78E, h0^{km}, ML2.2, Khibiny, mines Kirovsk, Yukspor*

*HEL **11** 05:19:29.5±0.1, 67°.71N×33°.64E, h0^{km}, ML2.1, Explosion*

*NAO **11** 05:19:29.5±1.0, 67°.69N×33°.67E, ML3.0*

*IDC **11** 05:19:30.3±1.0, 67°.73N×33°.62E, h0^{km}, mb3.1/1, mb1 3.6/8, mb1mx3.3/57, mbtmp3.6/8, ML2.5/5, MS3.6/1, Ms1 3.6/1, ms1mx2.7/28, Error ellipse: s-maj=12.1km s-min=8.3km az=65.0*

ISC 11 05:19:27.1±0.7, **67°.61N**±0°.03×**33°.87E**±0°.04, **h0**^{km}**, n44, $\sigma 1^{s}.77$**/70, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	Apatity	0.18	258	P	Pg	05 19 32.2	+1.6
APA				S	Sg	05 19 34.4	+1.4
APZ9	Apatity	0.18	258	Pg	Pg	05 19 32.2	+1.6
APZ9				Lg	Lg	05 19 34.6	
APZ9				Rg	Rg	05 19 35.5	
APZ9	Apatity	0.18	258	Pg	Pg	05 19 32.2	+1.6
APZ9				Sg	Sg	05 19 34.6	+1.7
APZ9				Rg	Rg	05 19 35.5	
APA0	Apatity Array	0.34	270	Pg	Pg	05 19 34.7	+1.2
	baz=86,slow=16						
APA0				Lg	Lg	05 19 38.9	
APA0				Rg	Rg	05 19 40.4	
APA0	Apatity Array	0.34	270	Pg	Pg	05 19 34.7	+1.2
	baz=86,slow=16						
APA0				Sg	Sg	05 19 38.9	+1.0
APA0				Rg	Rg	05 19 40.4	
APA0	Apatity Array	0.34	270	P	Pg	05 19 34.6	+1.0
APA0				S	Sg	05 19 38.6	+0.7
LVZ	Lovozero	0.42	45	*e*P	Pb	05 19 37.1	-0.3
LVZ				*e*S	Sb	05 19 43.1	-1.2
VRF	Varrio	1.63	277	*e*P	Pn	05 19 57.2	+0.1
VRF				*e*S	Sn	05 20 17.0	-1.8
VRF				MSG		05 20 21.2	
	comp=Z,25nm,0.2s						
KU6	Riekki	2.24	227	*e*P	Pb	05 20 07.8	-0.5
KU6				*e*SB	Sb	05 20 37.6	+1.1
KU6				MSG		05 20 44.0	
	comp=Z,7.1nm,0.2s						
MSF	Maaselka	2.56	231	*e*P	Pb	05 20 12.9	-1.0
MSF				*e*SG	Sb	05 20 47.9	+2.0
SGF	Sodankyl	2.83	270	*e*P	Pn	05 20 14.1	+0.6
RNF	Rovaniemi	3.23	256	*e*P	Pn	05 20 19.9	+0.9
ARA0	ARCESS Array S	3.63	306	Pn	Pn	05 20 25.6	+1.1
	baz=122,slow=16						
ARA0				Pg	Pb	05 20 33.5	+1.4
	baz=122,slow=16						
ARA0				Sn	Sn	05 21 06.5	-1.4
	baz=119,slow=28						
ARA0				Lg	Lg	05 21 18.0	
	baz=118,slow=37						
ARA0	ARCESS Array S	3.63	306	Pn	Pn	05 20 25.6	+1.1
	baz=122,slow=16						
ARA0				Pg	Pb	05 20 33.5	+1.4
	baz=122,slow=16						

ARA0				Sn	Sn	05 21 06.5	-1.4
	baz=119,slow=28						
ARA0				Sg	Sb	05 21 18.0	+1.4
	baz=118,slow=37						
ARA0	ARCESS Array S	3.63	306	*e*P	Pn	05 20 25.2	+0.7
ARA0				*e*S	Sn	05 21 06.0	-2.0
ARCES	ARCESS Array B	3.63	306	Pn	Pn	05 20 25.6	+1.1
	baz=116,slow=14,SNR=433						
ARCES				Pg	Pb	05 20 33.0	+1.0
	baz=108,slow=14,SNR=7.0						
ARCES				Sn	Sn	05 21 06.2	-1.7
	baz=117,slow=26,SNR=18						
ARCES				Lg	Lg	05 21 18.2	
	baz=113,slow=32,SNR=13						
KTK1	Kautokeino	4.19	295	Pn	Pn	05 20 32.7	+0.5
KTK1				Pg	Pb	05 20 42.7	+1.1
KTK1				Sn	Sn	05 21 18.5	-3.3
KTK1				Lg	Lg	05 21 33.3	
KTK1	Kautokeino	4.19	295	*e*P	Pn	05 20 33.2	+1.0
KTK1				*e*S	Sn	05 21 18.1	-3.8
KTK1				IAML		05 21 43.6	
	comp=Z,28nm,0.5s						
PAJU	Pajala	4.21	267	P	Pn	05 20 32.9	+0.4
PAJU				S	Sn	05 21 21.9	-0.3
LANU	Lannavaara	4.53	281	P	Pn	05 20 36.6	-0.2
ERTU	Ertsjaerv	4.69	262	P	Pn	05 20 39.4	+0.4
KIF	Kilpisjarvi	5.05	292	Pn	Pn	05 20 44.2	+0.3
KIF				Pg	Pb	05 20 53.3	-2.9
KIF				Sn	Sn	05 21 40.1	-2.7
KIF				Lg	Lg	05 21 59.7	
KIF	Kilpisjarvi	5.05	292	Pn	Pn	05 20 44.2	+0.3
KIF				Sn	Sn	05 21 40.1	-2.7
KUA	Kurravaara	5.15	280	P	Pn	05 20 45.6	+0.3
KOVU	Salmi	5.21	283	P	Pn	05 20 46.6	+0.4
RATU	Laukkuluspa	5.44	279	P	Pn	05 20 49.3	0.0
NIKU	Nikkaluokta	5.65	279	P	Pn	05 20 52.9	+0.7
FIA0	FINESS Array S	7.04	212	Pn	Pn	05 21 12.1	+0.8
	baz=17,slow=16						
FIA0				Sn	Sn	05 22 30.2	-1.6
	baz=21,slow=22						
FIA0				Lg	Lg	05 23 03.7	
	baz=22,slow=28						
FIA0	FINESS Array S	7.04	212	Pn	Pn	05 21 12.1	+0.8
	baz=17,slow=16						
FIA0				Sn	Sn	05 22 30.2	-1.6
	baz=21,slow=22						
FINES	FINESS Array B	7.04	212	Pn	Pn	05 21 12.3	+1.1
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=6.9						
FINES				Sn	Sn	05 22 30.1	-1.6
	comp=Z,0.3nm,0.3s,baz=16,slow=16,SNR=1.9						
FINES				Lg	Lg	05 23 02.8	
	comp=Z,1.1nm,0.3s,baz=31,slow=27,SNR=7.5						
HFS	Hagfors	11.57	239	Pn	Pn	05 22 12.3	-1.0
	comp=Z,0.1nm,0.3s,baz=46,slow=12,SNR=2.4						
HFS				Sn	Sn	05 24 17.2	-5.9
	comp=Z,0.1nm,0.3s,baz=21,slow=25,SNR=1.8						
HFS				Lg	Lg	05 25 24.4	
	comp=Z,0.1nm,0.3s,baz=60,slow=23,SNR=2.8						
HFS	Hagfors	11.57	239	Pn	Pn	05 22 12.0	-1.3
	baz=42,slow=11						
HFS	Hagfors	11.57	239	Pn	Pn	05 22 12.0	-1.3
	baz=42,slow=11						
SPA0	Spitsbergen Ar	11.71	342	Pn	Pn	05 22 13.3	-1.8
	baz=146,slow=18						
SPA0	Spitsbergen Ar	11.71	342	Pn	Pn	05 22 13.3	-1.8
	baz=146,slow=18						
SPITS	Spitsbergen Ar	11.71	342	Pn	Pn	05 22 12.3	-2.9
	baz=156,slow=14,SNR=8.4						
NOA	NORSAR Array B	11.77	247	Pn	Pn	05 22 14.4	-1.6
	comp=Z,0.0nm,0.3s,baz=54,slow=9.9,SNR=1.6						
NOA				Lg	Lg	05 25 37.2	
	comp=Z,0.0nm,0.3s,baz=107,slow=9.3,SNR=3.1						
NRA0	NORESS Array S	11.86	245	Pn	Pn	05 22 15.4	-1.9
	baz=63,slow=8.6						
NRA0	NORESS Array S	11.86	245	Pn	Pn	05 22 15.4	-1.9
	baz=63,slow=8.6						
ARU	Arti	15.96	122	Pn	Pn	05 23 11.9	-0.9
	comp=Z,0.0nm,0.3s,baz=333,slow=15,SNR=4.1						
AKASG	Malin Array Be	17.11	190	Pn	Pn	05 23 24.4	-3.1
	comp=Z,0.4nm,0.3s,baz=7.2,slow=13,SNR=4.9						
AKTO	Aktyubinsk	20.98	133	P	P	05 24 13.4	+1.9
	comp=Z,0.9nm,0.5s,baz=322,slow=9.8,SNR=4.2						
MKAR	Makanchi Array	32.24	106	P	P	05 26 01.1	+4.4
	comp=Z,0.1nm,0.5s,baz=337,slow=6.9,SNR=1.7						
GEYT	Alibeck	32.68	143	LR	LR	05 42 24.6	
	comp=Z,98nm,18.4s,baz=355,slow=42						

REY ***11*** *05:27:34.0, 64°.65N×17°.38W, h18^{km}*

IDC ***11*** *05:27:34.0±0.6, 64°.45N×17°.36W, h0^{km}, mb3.8/21, mb1 4.0/25, mb1mx3.9/48, mbtmp3.8/25, ML2.8/3, MS3.7/11, Ms1 3.7/11, ms1mx3.4/40, Error ellipse: s-maj=19.6km s-min=8.4km az=16.0*

NEIC ***11*** *05:27:37.2±1.2, 64°.7N±0°.1×17°.4W±0°.2, h7^{km}±5^{km}, mb4.5/57, Error ellipse: s-maj=18.8km s-min=11.2km az=186.0*

ISC 11 05:27:35.9±0.3**, 64°.57N**±0°.03×**17°.30W**±0°.02**, h10**^{km}**, n176,** σ**1s.99**/166**, mb4.4**/52**, MS3.8**/7**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.24	248	P	Pg	05 27 39.4	-1.6
	baz=228						
IHAM				S	Sg	05 27 44.3	0.0
	baz=228						
IKVE	Kverkfjoll	0.29	68	P	Pg	05 27 40.4	-1.5
	baz=85						
IKVE				S	Sg	05 27 45.1	-0.7
	baz=85						
THOR	Thorvaldshraun	0.45	36	P	Pg	05 27 41.7	-3.1
	baz=47						
THOR				S	Sg	05 27 47.8	-3.0
	baz=47						
ISKR	Skrokkalda	0.47	269	P	Pg	05 27 42.2	-2.8
	baz=258						
ISKR				S	Sg	05 27 48.8	-2.5
	baz=258						
IJOK	Jokulheimar	0.47	238	P	Pg	05 27 43.1	-2.1
	baz=228						
IJOK				S	Sg	05 27 50.5	-1.0
	baz=228						
IKSK	Karasker	0.55	138	P	Pg	05 27 44.9	-1.7
	baz=141						
IKSK				S	Sb	05 27 53.9	-1.7
	baz=141						
IMKO	Mokollar	0.58	45	P	Pg	05 27 44.1	-3.1
	baz=53						
IMKO				S	Sg	05 27 51.8	-3.1
	baz=53						
IIEY	Innrieyrar	0.60	217	P	Pg	05 27 45.6	-1.8
	baz=210						
IIEY				S	Sb	05 27 54.5	-2.5
	baz=210						
IKAL	Kalfafell	0.65	195	P	Pg	05 27 46.9	-1.5
	baz=191						
IKAL				S	Sb	05 27 57.1	-1.3
	baz=191						
IVSH	V-Sauoahnukur	0.72	70	P	Pg	05 27 46.9	-2.9
	baz=77						
IVSH				S	Sg	05 27 57.0	-2.2
	baz=77						
IFAG	Fagurholsmyri	0.75	158	P	Pg	05 27 49.0	-1.5
	baz=158						
IFAG				S	Sn	05 28 01.5	-2.5
	baz=158						
ISVA	Svartarkot	0.77	2	P	Pg	05 27 46.1	-4.7
	baz=4.4						
ISVA				S	Sg	05 27 55.8	-5.0
	baz=4.4						
IADA	Aoalbol	0.87	58	P	Pg	05 27 48.9	-3.7
	baz=64						
IADA				S	Sg	05 28 00.2	-3.7
	baz=64						
ISNB	Snabyli	1.02	215	P	Pg	05 27 53.1	-2.4
	baz=211						
ISNB				S	Sb	05 28 07.5	-1.5
	baz=211						
IMEL	Melhnausar	1.04	15	P	Pb	05 27 51.0	-5.0
	baz=18						
IMEL				S	Sg	05 28 04.0	-5.4
	baz=18						
IREN	Reynihlio	1.09	9	P	Pb	05 27 51.9	-5.1
	baz=11						
IRJU	Rjupnafell	1.13	213	P	Pg	05 27 55.3	-2.3
	baz=209						
IRJU				S	Sg	05 28 10.2	-2.1
	baz=209						
IKVO	Krokottuvotn	1.16	9	P	Pn	05 27 52.8	-5.4
	baz=11						
IFED	Fedgar	1.18	243	P	Pb	05 27 55.2	-3.1
	baz=239						
IGRS	Grimsstaoir	1.18	24	P	Pn	05 27 53.5	-5.0
	baz=28						
IMJO	Mjoaskard	1.22	239	P	Pb	05 27 56.1	-3.0
	baz=235						
IHVO	Lagu-Hvolar	1.25	214	P	Pb	05 27 56.9	-2.6
	baz=210						
IGYG	Gygjarholskot	1.30	258	P	Pn	05 27 56.1	-3.9
	baz=254						
IGHA	Grjothals	1.31	12	P	Pn	05 27 54.9	-5.3
	baz=14						
IHAU	Haukadalur	1.31	244	P	Pn	05 27 57.3	-3.0
	baz=240						
ISKI	Skildingahlsh	1.31	5	P	Pn	05 27 54.9	-5.4
	baz=6.8						
IGRA	Granastaoir	1.36	355	P	Pn	05 27 56.0	-4.9
	baz=356						
IALF	Alftagrof	1.36	218	P	Pn	05 27 58.9	-2.1
	baz=215						
IDIM	Dimmadalss	1.41	6	P	Pn	05 27 56.7	-4.8
	baz=8.0						
IESK	Eystri-Skogar	1.41	223	P	Pn	05 27 59.4	-2.2
	baz=220						
IHLA	Hella	1.45	342	P	Pn	05 27 57.4	-4.8
	baz=342						
IMID	Miomork	1.46	232	P	Pn	05 27 59.8	-2.4
	baz=229						
ISAU	Saurbar	1.48	248	P	Pn	05 27 59.2	-3.3
	baz=245						
IHED	Heoinshofoi	1.52	360	P	Pn	05 27 58.4	-4.7
	baz=1.2						
IGIL	Gilhagi	1.56	14	P	Pn	05 27 59.0	-4.7
	baz=16						
IBRE	Brettingsstaoi	1.58	351	P	Pn	05 27 59.3	-4.7
	baz=352						
BORG	Borgarnes	1.74	278	Pg	Pn	05 28 03.6	-2.5
	26nm,0.3s,baz=90,slow=9.2,SNR=64						
BORG				Lg	Lg	05 28 28.2	
	30nm,0.3s,baz=24,slow=22,SNR=12						
BORG	Borgarnes	1.74	278	Pn	Pn	05 28 02.8	-3.4
BORG				Sn	Sn	05 28 29.2	+0.8
SCO	Scoresbysund	6.20	345	Pn	Pn	05 29 06.2	-1.1
SCO	Scoresbysund	6.20	345	*e*	Pn	05 29 01.3	-6.1
	baz=160,slow=10						
SCO				*i* P	Pn	05 29 06.0	-1.3
SCO				*i* S	Sn	05 30 18.6	+0.4
SCO				IAML		05 30 32.3	
	comp=Z,2.4nm,0.5s						
EKA	Eskdalemuir Ar	11.63	136	Pn	Pn	05 30 20.1	-1.6
	baz=325,slow=13,SNR=12						
ESK	Eskdalemuir	11.63	136		Pn	05 30 22.2	+0.4
DAG	Danmarks Havn	12.27	359	*i* P	Pn	05 30 33.0	+2.6
DAG	Danmarks Havn	12.27	359	*i* P	Pn	05 30 33.0	+2.6
NC204	NORSAR Array S	13.14	92	Pn	Pn	05 30 41.0	-1.4
NBO00	NORSAR Array S	13.26	93	Pn	Pn	05 30 42.2	-1.8
NOA	NORSAR Array B	13.45	92	Pn	Pn	05 30 44.5	-2.1
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=4.5						
SFJD	Kangerlussuaq	13.78	295	LR	LR	05 34 53.9	
	comp=Z,283nm,18.7s,baz=114,slow=32						
HFS	Hagfors	14.96	93	Pn	Pn	05 31 03.3	-3.8
	comp=Z,0.2nm,0.3s,baz=291,slow=12,SNR=2.9						
SPITS	Spitsbergen Ar	16.92	23	LR	LR	05 36 04.3	
	comp=Z,113nm,19.3s,baz=235,slow=30						
ARCES	ARCESS Array B	17.11	54	LR	LR	05 37 06.9	
	comp=Z,206nm,18.7s,baz=250,slow=33						
FIA1	FINESS Array S	19.64	79	P	Pn	05 32 06.2	+0.5
FIA1				IAmb	IAmb	05 32 34.1	
	comp=Z,56nm,1.4s						
FINES	FINESS Array B	19.64	79	P	P	05 32 03.6	-0.7
	comp=Z,0.1nm,0.3s,baz=302,slow=11,SNR=4.2						
FINES				LR	LR	05 39 02.2	
	comp=Z,204nm,21.2s,baz=356,slow=35						
FINES	FINESS Array B	19.64	79	P	Pn	05 32 06.3	+0.6
TULEG	Thule	19.98	328	P	P	05 32 07.0	-0.9
CLL	Collm	20.59	116	*i* P	Pn	05 32 16.2	-0.7
	comp=Z,20nm,1.5s						
NKC	Novy Kostel	21.23	118	*e*P	P	05 32 28.7	+7.0
BRG	Berggiesshubel	21.30	115	*e*P	P	05 32 23.0	+0.7
BRG				Amp		05 32 25.9	
	comp=Z,38nm,2.0s						
BRG	Berggiesshubel	21.30	115	*e*P	P	05 32 23.0	+0.7
BRG				Amp		05 32 25.9	
	comp=Z,38nm,2.0s						
FRB	Frobisher Bay	21.86	291	P	P	05 32 27.6	-0.6
	comp=Z,3.6nm,0.9s,baz=50,slow=7.8,SNR=3.8						
PRU	Pruhonice	22.23	116	*e*P	P	05 32 51.7	+19
CHVC	Chvalec	22.35	113	*e*P	P	05 32 24.7	-9.0
KHC	Kasperske Hory	22.55	118	*e*P	P	05 32 37.4	+1.5
KHC				*e*x	x	05 32 56.1	
DPC	Dobruska-Polom	22.64	113	*e*P	P	05 32 38.6	+1.7
DPC				*e*x	x	05 32 48.2	
GEC2	GERESS Array S	22.84	119	P	P	05 32 41.9	+3.0
GERES	GERESS Array B	22.84	119	P	P	05 32 36.7	-2.3
	comp=Z,0.5nm,0.6s,baz=330,slow=9.1,SNR=1.6						
GERES	GERESS Array B	22.84	119	P	P	05 32 41.5	+2.5
MOTA	Moosalm	23.14	125	*e*Pn	P	05 33 05.2	+23
	comp=Z,13nm,1.5s						
DAVOX	Davos/Dischmat	23.19	127	P	P	05 32 41.0	-1.7
	comp=Z,0.4nm,0.4s,baz=320,slow=18,SNR=2.0						
SQTA	Sankt Quirin	23.28	125	*e*Pn	P	05 33 10.4	+27
	comp=Z,8.1nm,1.6s						
FETA	Feichten	23.28	126	*e*P	P	05 32 53.4	+10
	comp=Z,6.2nm,1.3s						
WATA	Walderalm	23.31	124	P	P	05 32 52.5	+8.6
	comp=Z,8.0nm,1.6s						
VRAC	Vranov	23.58	114	P	P	05 32 45.1	-1.2
	comp=Z,1.1nm,0.6s,baz=322,slow=11,SNR=3.4						
VRAC				LR	LR	05 41 24.2	
	comp=Z,197nm,20.3s,baz=310,slow=35						
VRAC	Vranov	23.58	114	*e*P	P	05 32 47.5	+1.1
MORC	Moravsky Berou	23.58	112	*e*P	P	05 32 47.1	+0.6
KRUC	Moravsky	23.70	115	*e*P	P	05 32 48.2	+0.7
CONA	Conrad Observa	24.41	117	*e*P	P	05 33 03.0	+8.7
	comp=Z,3.3nm,0.9s						
CTI	Castel Tesino	24.44	125	P	P	05 32 58.1	+3.5
CTI				IAmb	IAmb	05 33 24.7	
	comp=Z,12nm,1.3s						
SMOL	Smolenice	24.55	114	*e*P	P	05 32 59.9	+4.5
ARSA	Arzberg	24.84	118	*e*P	P	05 33 08.5	+10
	comp=Z,4.2nm,1.4s						
LANS	Liptovska Anna	24.85	111	*e*P	P	05 33 03.6	+5.4
VYHS	Vyhne	25.12	112	*e*P	P	05 33 09.3	+8.7
VYHS	Vyhne	25.12	112	*e*PN	P	05 33 17.6	+17
KLMR	Klimovskoe	25.55	72	*e*P	P	05 33 01.9	-2.5
KLMR				AMP		05 33 08.3	
	comp=Z,28nm,1.5s						
ESDC	Sonseca Array	26.13	156	P	P	05 33 08.8	-1.1
	comp=Z,0.9nm,0.8s,baz=353,slow=9.8,SNR=5.7						
KOLS	Kolonicke sedl	26.16	108	*e*	P	05 33 20.0	+10
RES	Resolute Bay	26.59	325	P	P	05 33 14.8	+1.1
	comp=Z,2.3nm,1.0s,baz=106,slow=6.0,SNR=4.4						
RES				LR	LR	05 44 30.0	
	comp=Z,112nm,20.6s,baz=95,slow=38						
AKASG	Malin Array Be	27.75	98	P	P	05 33 24.5	+0.3
	comp=Z,0.2nm,0.3s,baz=321,slow=9.9,SNR=1.9						
BR131	Keskin Array S	38.37	105	P	P	05 34 59.8	+2.7
BR131				IAmb	IAmb	05 35 15.5	
	comp=Z,11nm,1.2s						
BRTR	Keskin Array B	38.37	105	P	P	05 34 57.8	+0.7
	comp=Z,1.6nm,0.8s,baz=328,slow=6.9,SNR=6.2						
BRTR	Keskin Array B	38.37	105	P	P	05 34 59.8	+2.7
KBZ	Khabaz	39.03	93	P	P	05 35 02.4	+0.2
	comp=Z,1.8nm,0.8s,baz=261,slow=19,SNR=2.5						
KBZ				LR	LR	05 53 31.9	
	comp=Z,153nm,20.1s,baz=324,slow=40						
YKA	Yellowknife Ar	39.34	313	P	P	05 35 04.3	-0.4
	comp=Z,2.3nm,1.0s,baz=38,slow=8.5,SNR=12						
YKA				PcP	PcP	05 37 12.7	-0.1
	comp=Z,0.7nm,1.0s,baz=38,slow=3.8,SNR=6.8						
AKTO	Aktyubinsk	40.23	73	P	P	05 35 11.9	-0.4
	comp=Z,0.9nm,0.6s,baz=309,slow=12,SNR=2.7						
ABKAR	Akbulak array	41.94	73	P	P	05 35 27.0	+0.7
TIXI	Tiksi	42.10	15	P	P	05 35 28.8	+1.5
TIXI				IAmb	IAmb	05 35 31.7	
	comp=Z,11nm,1.1s						
BMAR	Burnt Mountain	43.02	333	P	P	05 35 34.3	-0.6
COLD	Coldfoot	44.24	336	P	P	05 35 46.0	+1.2
EGAK	Eagle	44.61	330	P	P	05 35 48.5	+0.8
EGAK				IAmb	IAmb	05 35 49.5	
	comp=Z,7.8nm,1.2s						
DAWY	Dawson	44.83	328	P	P	05 35 51.2	+1.7
DAWY				IAmb	IAmb	05 35 53.0	
	comp=Z,6.9nm,1.1s						
IL31		45.81	333	P	P	05 35 58.0	+0.9
IL31				IAmb	IAmb	05 36 02.4	
	comp=Z,10nm,1.4s						
ILAR	Eielson Array	45.81	333	P	P	05 35 58.0	+0.8
	comp=Z,3.9nm,1.0s,baz=26,slow=5.8,SNR=16						
ILAR				PcP	PcP	05 37 34.9	+0.6
	comp=Z,1.6nm,0.9s,baz=352,slow=2.6,SNR=8.4						
ILAR				LR	LR	05 57 42.8	
	comp=Z,54nm,18.2s,baz=62,slow=39						
ILAR	Eielson Array	45.81	333	P	P	05 35 57.8	+0.5
COLA	College	45.91	333	P	P	05 35 59.4	+1.4
IMAR	Indian Mountai	45.98	337	P	P	05 35 59.7	+1.1
DOT	Dot Lake	46.22	330	P	P	05 36 02.1	+1.6
BCAR	Beaver Creek A	46.23	329	P	P	05 36 01.3	+0.6
WCI	Wyandotte Cave	47.33	271	P	P	05 36 09.9	+0.4
ZAA0	Zalesovo Array	47.63	51	P	P	05 36 12.4	+0.8
ZAA0				IAmb	IAmb	05 36 14.3	
	comp=Z,6.9nm,1.5s						
ZALV	Zalesovo Beam	47.63	51	P	P	05 36 11.7	+0.2
	comp=Z,0.4nm,0.4s,baz=329,slow=11,SNR=2.2						
KURK	Kurchatov	48.09	58	P	P	05 36 15.6	+0.4
KURBB	Kurchatov Arra	48.13	58	P	P	05 36 15.1	-0.5
	comp=Z,2.9nm,0.8s,baz=321,slow=7.3,SNR=13						
EGMT	Eagleton	48.99	297	P	P	05 36 23.8	+1.5
HRY	Holter Researc	50.87	298	P	P	05 36 37.6	+0.9
RLMT	Red Lodge	51.20	295	P	P	05 36 40.2	+1.0
RLMT				IAmb	IAmb	05 36 43.8	
	comp=Z,7.2nm,1.2s						
KK31	Karatay Array	51.23	70	P	P	05 36 40.9	+1.6
KK31				IAmb	IAmb	05 36 41.0	
	comp=Z,7.3nm,1.5s						
KKAR	Karatay Array	51.23	70	P	P	05 36 40.0	+0.8
YNE	Yellowstone No	51.59	295	P	P	05 36 44.2	+2.0
BOZ	Bozeman (W)	51.73	297	P	P	05 36 44.5	+1.4
BOZ				IAmb	IAmb	05 36 46.6	
	comp=Z,9.8nm,1.1s						
YMP	Mirror Lake Pl	51.87	295	P	P	05 36 46.2	+1.8
MAKZ	Makanchi	52.58	59	P	P	05 36 49.8	+0.6
MK31	Makanchi Array	52.70	58	P	P	05 36 50.7	+0.5
MKAR	Makanchi Array	52.70	58	P	P	05 36 49.9	-0.3
	comp=Z,1.1nm,0.8s,baz=325,slow=6.1,SNR=11						
MKAR	Makanchi Array	52.70	58	P	P	05 36 50.5	+0.3
MCMT	McKenzie Canyo	52.84	297	P	P	05 36 52.5	+1.0
TORD	Torodi Ar. Bea	53.02	157	P	P	05 36 51.6	-1.2
	comp=Z,1.3nm,0.8s,baz=339,slow=8.3,SNR=4.5						
AAK	Ala-Archa	53.22	67	P	P	05 36 55.7	+1.5
BW06	Boulder Array	53.29	293	P	P	05 36 55.2	+0.3
BW06				IAmb	IAmb	05 36 58.6	
	comp=Z,9.0nm,1.2s						
PD31	Pinedale Array	53.29	293	P	P	05 36 55.1	+0.3
PD31				IAmb	IAmb	05 36 58.6	
	comp=Z,8.2nm,1.2s						
PDAR	Pinedale Array	53.29	293	P	P	05 36 54.6	-0.2
	comp=Z,3.2nm,0.8s,baz=57,slow=6.0,SNR=28						
PDAR				LR	LR	05 57 25.2	
	comp=Z,115nm,18.3s,baz=31,slow=34						
REDW	Red Top Meadow	53.30	295	P	P	05 36 55.7	+0.8
REDW				IAmb	IAmb	05 36 59.2	
	comp=Z,6.7nm,1.2s						
BMO	Blue Mountains	54.50	301	P	P	05 37 03.0	-0.5
HLID	Hailey	54.51	298	P	P	05 37 04.9	+1.3
HWUT	Hardware Ranch	55.07	294	P	P	05 37 08.9	+1.1
HWUT				IAmb	IAmb	05 37 10.9	
	comp=Z,7.3nm,1.1s						
HRA	Herat	55.12	82	P	P	05 37 09.4	+1.1
HRA				IAmb	IAmb	05 37 17.3	
	comp=Z,8.2nm,1.5s						
SMCO	Snowmass	55.29	289	P	P	05 37 10.6	+0.9
TCUT	Toone Canyon	55.42	294	P	P	05 37 11.4	+1.1
ETX02	Prairie Street	56.19	274	P	P	05 37 18.1	+2.4
MPU	Maple Canyon	56.45	293	P	P	05 37 18.8	+1.1
KSH	Kashi	56.46	68	P	P	05 37 20.8	+3.1
KSH				pmax	pmax		
	comp=Z,47nm,1.7s						
KSH				pmax	pmax		
	comp=Z,670nm,6.3s						
P17A	Butcher Ranch,	56.56	292	P	P	05 37 19.5	+1.0
PV23	Carpenter Ridg	56.74	290	P	P	05 37 20.6	+0.8
DUG	Dugway, Tooele	56.76	294	P	P	05 37 20.8	+0.9
DUG				IAmb	IAmb	05 37 23.2	
	comp=Z,5.7nm,1.2s						
PV12	Saucer Basin,	56.77	290	P	P	05 37 21.8	+1.8
SRU	San Rafael Swe	56.78	292	P	P	05 37 20.9	+0.9
PV14	Lion Creek, Pa	56.81	290	P	P	05 37 20.9	+0.6
PV14				IAmb	IAmb	05 37 22.6	
	comp=Z,5.6nm,0.9s						
PV11	David Mesa, Pa	56.81	290	P	P	05 37 21.3	+1.0
PV11				IAmb	IAmb	05 37 23.4	
	comp=Z,4.2nm,0.7s						
PV05	Paradox Valley	57.09	290	P	P	05 37 22.8	+0.5
WMQ	Urumqi	57.22	56	*e*P	P	05 37 26.3	+3.4
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,7.1s						
MSU	Marysvale	57.96	293	P	P	05 37 28.5	+0.1
TCRU	Three Creeks R	57.98	293	P	P	05 37 30.1	+1.5
MTPU	Mount Pierson	58.36	292	P	P	05 37 33.7	+2.3
SZCU	Shurtz Canyon	59.11	293	P	P	05 37 38.2	+1.8
CCUT	Cedar City	59.26	293	P	P	05 37 40.1	+2.7
KNB	Kanab	59.50	292	P	P	05 37 41.1	+2.0
SONM	Songino Array	59.66	41	P	P	05 37 40.1	+0.1
	comp=Z,0.3nm,0.3s,baz=337,slow=5.2,SNR=3.4						
SONM	Songino Array	59.66	41	P	P	05 37 40.4	+0.4
LCMT	Little Creek M	59.68	293	P	P	05 37 41.7	+1.5
JCT	Junction City	59.74	278	P	P	05 37 41.9	+1.3
ULN	Ulaanbaatar	59.81	40	P	P	05 37 42.1	+1.1
ULN				IAmb	IAmb	05 37 44.2	
	comp=Z,3.6nm,1.2s						
WUAZ	Wupatki	60.22	290	P	P	05 37 45.2	+1.2
WUAZ				IAmb	IAmb	05 37 46.8	
	comp=Z,5.3nm,1.0s						
NVAR	Mina Array Bea	60.42	298	P	P	05 37 46.1	+0.7
	comp=Z,0.8nm,0.9s,baz=60,slow=4.3,SNR=4.6						
NVAR				LR	LR	06 03 32.3	
	comp=Z,106nm,19.8s,baz=11,slow=36						
NVAR	Mina Array Bea	60.42	298	P	P	05 37 46.7	+1.2
TX31	Lajitas Ar. Si	62.38	280	P	P	05 38 00.1	+1.4
TX32	Lajitas Array	62.38	280	P	P	05 38 00.1	+1.4
TXAR	Lajitas Array	62.38	280	P	P	05 37 59.0	+0.3
	comp=Z,1.0nm,0.9s,baz=57,slow=4.6,SNR=9.9						
TXAR	Lajitas Array	62.38	280	P	P	05 37 58.8	+0.1
TUC	Tucson	62.77	288	P	P	05 38 02.4	+1.2
GTA	Gaotai	65.30	49	*e*P	P	05 38 19.8	+2.0
GTA				pP	sP	05 38 23.8	+0.9
GTA				sP	pP	05 38 27.0	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HSIG		65.72	286	P	P	05 38 22.1	+1.7
HSIG				IAmb	IAmb	05 38 23.2	
	comp=Z,4.6nm,1.0s						
HHC	Hu-ho-hao-te	67.53	40	*e*P	P	05 38 35.7	+3.7
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
LZH	Lanzhou	69.63	48	*e*P	P	05 38 43.8	-1.5
LZH				pP	pP	05 38 47.8	-1.3
LZH				sP	sP	05 38 50.3	-0.2
LZH				PP	PP	05 41 22.6	+4.0
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,66nm,5.4s						
KSRS	Korea Array	74.69	28	LR	LR	06 17 17.4	
	comp=Z,66nm,18.2s,baz=282,slow=40						
NJ2	Nanjing	77.76	37	*e*P	P	05 39 33.4	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	84.11	59	P	P	05 40 07.0	+0.1
	comp=Z,1.8nm,0.3s,baz=323,slow=5.7,SNR=8.2						
ASAR	Alice Springs	134.99	39	PKP	PKPdf	05 46 55.1	+0.3
	comp=Z,0.6nm,0.9s,baz=358,slow=4.6,SNR=3.5						

GCG ***11*** *05:30:35.7±0.4, 14°.03N×91°.80W, h27^{km}±4^{km}, MD3.8*

SNET ***11*** *05:30:36.7±1.0, 14°.15N×91°.75W, h39^{km}±45^{km}, ML3.6*

UCR ***11*** *05:30:36.7±1.0, 14°.14N×91°.75W, h37^{km}±63^{km}, ML3.5*

ISC 11 05:30:34.0±3.8**, 14°.1N**±0°.1×**91°.9W**±0°.2**, h27**^{km}±17^{km}**, n25,** σ**0s.71**/33**, 1C-1D, Guatemala**

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

RTAL	Retalhuleu	0.51	25	*e*P	Pn	05 30 45.7	+0.2
RTAL				*e*S	Sn	05 30 52.8	-0.6
RTAL				IAML		05 30 56.1	
	comp=Z,3μm,0.2s						
FUG	Fuego 3	1.11	69⇓	*e*P	Pn	05 30 54.6	+0.7
PCG	Pacaya	1.31	75⇑	*e*P	Pb	05 30 57.7	-0.4
PCG				*e*S	Sb	05 31 14.8	+0.2
NBG	Las Nubes	1.61	71	*e*P	Pb	05 31 03.1	-0.1
RTR	El Retiro	2.21	94	*e*P	Pn	05 31 10.0	+1.0
RTR	El Retiro	2.21	94	*e*P	Pn	05 31 10.0	+1.0
CEVE	Cerro Verde	2.23	96	*e*P	Pn	05 31 10.2	+0.7
CEVE				*e*S	Sn	05 31 36.1	-0.2
CEVE				IAML		05 31 44.5	
	comp=Z,723nm,0.2s						
CEVE	Cerro Verde	2.23	96	*e*P	Pn	05 31 10.2	+0.7
CEVE				*e*S	Sn	05 31 36.1	-0.2
CEVE				IAML		05 31 44.5	
	comp=Z,723nm,0.2s						
SBLS	San Blas	2.23	95	*e*P	Pn	05 31 10.1	+0.7
SBLS				*e*S	Sn	05 31 36.9	+0.6
SBLS	San Blas	2.23	95	*e*P	Pn	05 31 10.1	+0.7
SBLS				*e*S	Sn	05 31 36.9	+0.6
SNJE	San Jose	2.25	95	*e*P	Pn	05 31 09.8	+0.2
SNJE	San Jose	2.25	95	*e*P	Pn	05 31 09.8	+0.2
UNIC	Universidad Ca	2.30	92	*e*P	Pn	05 31 10.6	+0.4
UNIC	Universidad Ca	2.30	92	*e*P	Pn	05 31 10.6	+0.4
MRL	Marmol	2.39	65	*e*P	Pn	05 31 12.7	+1.2
JAYA	Jayaque - finc	2.43	99	*e*P	Pn	05 31 11.8	-0.2
JAYA				*e*S	Sn	05 31 39.4	-1.5
JAYA				IAML		05 31 45.0	
	comp=Z,428nm,0.2s						
JAYA	Jayaque - finc	2.43	99	*e*P	Pn	05 31 11.8	-0.2
JAYA				*e*S	Sn	05 31 39.4	-1.5
JAYA				IAML		05 31 45.0	
	comp=Z,428nm,0.2s						
TACO	Tacachico	2.49	92	*e*P	Pn	05 31 12.4	-0.3
TACO	Tacachico	2.49	92	*e*P	Pn	05 31 12.4	-0.3
MTO3	Montecristo	2.50	82	*e*P	Pn	05 31 13.1	0.0
MTO3	Montecristo	2.50	82	*e*P	Pn	05 31 13.1	0.0
PMON	Piamonte	2.55	97	*e*P	Pn	05 31 14.5	+0.8
PMON	Piamonte	2.55	97	*e*P	Pn	05 31 14.5	+0.8
COEG	Centro de Oper	2.98	98	*e*P	Pn	05 31 20.2	+0.6
COEG				IAML		05 32 07.8	
	comp=Z,122nm,0.3s						
COEG	Centro de Oper	2.98	98	*e*P	Pn	05 31 20.2	+0.6
COEG				IAML		05 32 07.8	
	comp=Z,122nm,0.3s						

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*RSNC **11** 05:45:19.3±1.0, 6°.82N×73°.16W, h147^{km}±4^{km}, ML3.1, Mw3.4*

*IDC **11** 05:45:19.8±4.5, 6°.72N×73°.24W, h170^{km}±36^{km}, mb2.7/2, mb1 3.2/3, mb1mx2.9/22, mbtmp3.3/3, Error ellipse: s-maj=86.9km s-min=42.3km az=87.0*

ISC 11 05:45:18.1±0.9, **6°.84N**±0°.03×**73°.14W**±0°.04, **h153**^{km}±6^{km}, **n34**, σ**0^{s}.98**/57, **5C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	189⇑	*i*P	Pn	05 45 39.2	+0.1
BARC				*e*S	Sn	05 45 54.1	-1.1
BARC				*i*		05 45 55.7	
	comp=Z,207nm,0.2s						
BRRC	Barranca, Sant	0.63	296⇑	*i*P	Pn	05 45 41.0	+0.6
BRRC				*e*S	Sn	05 45 57.9	+0.4
BRRC				*i*		05 45 58.8	
	comp=Z,187nm,0.1s						
PAMC	Pamplona, Colo	0.67	41⇑	*e*P	Pn	05 45 41.9	+0.7
PAMC				*e*S	Sn	05 45 59.2	+0.2
PAMC				*i*		05 45 59.8	
	comp=Z,186nm,0.2s						
RUSC	La Rusia	0.94	176⇑	*e*P	Pn	05 45 43.2	0.0
RUSC				*e*S	Sn	05 46 01.9	-0.5
RUSC				*i*		05 46 03.1	
	comp=Z,78nm,0.3s						
PTBC	PUERTO BERRIO,	1.34	257	*e*P	Pn	05 45 45.8	-0.4
PTBC				*e*S	Sn	05 46 07.1	-0.7
PTBC				*i*		05 46 12.1	
	comp=N,450nm,0.5s						
TAMC	Tame, Arauca	1.40	106⇑	*i*P	Pn	05 45 47.6	+0.8
TAMC				*e*S	Sn	05 46 09.4	+0.5
TAMC				*i*		05 46 09.7	
	comp=Z,106nm,0.6s						
OCAC	Ocana	1.41	353	*e*P	Pn	05 45 47.4	+0.3
OCAC				*e*S	Sn	05 46 08.8	-0.5
OCAC				*i*		05 46 12.3	
	comp=Z,110nm,0.3s						
SPBC	San Pablo de B	1.50	218	*e*P	Pn	05 45 48.1	+0.2
SPBC				*e*S	Sn	05 46 10.5	-0.3
SPBC				*i*		05 46 17.7	
	comp=Z,158nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	291	*e*P	Pn	05 45 51.6	+0.2
ZARC				*e*S	Sn	05 46 17.1	+0.1
ZARC				*i*		05 46 22.9	
	comp=Z,205nm,0.6s						
NORC	Norcasia	2.13	234	*e*P	Pn	05 45 55.4	+0.4
NORC				*e*S	Sn	05 46 23.3	-0.1
NORC				*i*		05 46 30.4	
	comp=Z,89nm,0.3s						
SMLC	San Martn de	2.16	335	*e*P	Pn	05 45 55.5	+0.3
SMLC				*e*S	Sn	05 46 23.6	-0.4
SMLC				*i*		05 46 28.6	
	comp=Z,106nm,0.4s						
CHIC	Chingaza	2.27	195	*e*P	Pn	05 45 57.4	+0.4
CHIC				*e*S	Sn	05 46 26.4	-0.5
CHIC				*i*		05 46 34.0	
	comp=Z,44nm,0.5s						
ROSC	El Rosal	2.30	211	P	Pn	05 45 59.1	+1.7
	comp=Z,15nm,0.3s,baz=64,slow=22,SNR=72						
ROSC				S	Sn	05 46 28.4	+0.8
	comp=Z,35nm,0.3s,baz=108,slow=19,SNR=16						
HELC	Santa Helena	2.46	255	*e*P	Pn	05 45 59.4	+0.2
HELC				*e*S	Sn	05 46 30.5	-0.3
HELC				*i*		05 46 37.5	
	comp=Z,79nm,0.3s						
UREC	San Jos de Ur	2.54	291	*e*P	Pn	05 45 59.1	-0.8
UREC				*e*S	Sn	05 46 30.4	-1.7
UREC				*i*		05 46 42.1	
	comp=Z,98nm,0.3s						
VILC	Villavicencio,	2.76	191	*e*P	Pn	05 46 02.8	+0.1
VILC				*e*S	Sn	05 46 37.9	+0.7
PTGC	Puerto Gaitan,	2.80	159	*e*P	Pn	05 46 02.5	-0.6
PTGC				*e*S	Sn	05 46 36.0	-2.0
PTGC				*i*		05 46 38.5	
	comp=Z,55nm,0.3s						
RREF	El Recreo	2.92	229	*e*P	Pn	05 46 06.8	+1.6
RREF				*e*S	Sn	05 46 40.6	-0.8
RREF				*i*		05 46 56.7	
	comp=Z,44nm,0.3s						
CBOC	Ciudad Bolivar	3.01	251	*e*P	Pn	05 46 07.0	+1.1
CBOC				*e*S	Sn	05 46 43.0	+0.2
CBOC				*i*		05 46 52.6	
	comp=Z,21nm,0.3s						
DBBC	Dabeiba	3.05	274⇓	*e*P	Pn	05 46 06.8	+0.5
DBBC				*e*S	Sn	05 46 42.9	-0.7
DBBC				*i*		05 46 51.5	
	comp=Z,124nm,0.4s						
TOLC	Tolima	3.11	224	*e*P	Pn	05 46 08.3	+1.0
TOLC				*e*S	Sn	05 46 42.8	-2.6
MOTC	Monteria, Cord	3.16	308	*e*P	Pn	05 46 06.5	-1.1
MOTC				*e*S	Sn	05 46 44.4	-1.5
MOTC				*i*		05 47 01.1	
	comp=Z,19nm,0.2s						
ARGC	Ariguani, Magd	3.20	340	*e*P	Pn	05 46 09.5	+1.4
ANIL	Santa Ana	3.24	224	*e*P	Pn	05 46 11.0	+2.1
ORTC	Ortega, Tolima	3.58	216	*e*P	Pn	05 46 13.7	+0.6
ORTC				*e*S	Sn	05 46 57.3	+1.5
ORTC				*i*		05 47 01.6	
	comp=Z,38nm,0.4s						
PLMC	San Jos del P	3.67	239	*e*P	Pn	05 46 15.0	+0.9
YOTC	Yotoco, Valle	4.26	229	*e*P	Pn	05 46 22.2	+0.2
SMRC	Santa Marta, M	4.43	346	*e*P	Pn	05 46 24.9	+0.8
MACC	Macarena, Meta	4.71	189	*e*P	Pn	05 46 26.8	-1.0
MALC	Bahia Malaga	5.03	236	*e*P	Pn	05 46 33.7	+1.8
GARC	Garzon, Huila	5.18	207	*e*P	Pn	05 46 33.7	-0.5
TXAR	Lajitas Array	36.44	312	P	P	05 52 08.9	+0.6
	comp=Z,0.2nm,0.7s,baz=123,slow=9.8,SNR=1.6						
YKA	Yellowknife Ar	63.24	340	P	P	05 55 30.0	+0.1
	comp=Z,0.3nm,0.6s,baz=130,slow=7.9,SNR=6.5						
WRA	Warramunga Arr	150.32	241	PKPbc	PKPbc	06 04 51.2	-1.0
	comp=Z,0.2nm,0.4s,baz=105,slow=2.6,SNR=1.4						

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*UPP **11** 05:46:34.8±2.2, 56°.03N×20°.86E, h0^{km}, ML2.3, Suspected explosion*

*HEL **11** 05:46:34.5±0.3, 56°.05N×20°.95E, h0^{km}, ML1.9, ML2.3(UPP), Explosion*

*IDC **11** 05:46:37.1±3.5, 56°.30N×20°.96E, h0^{km}, mb1 3.4/3, mb1mx3.1/27, mbtmp3.3/3, ML2.5/3, Error ellipse: s-maj=35.3km s-min=16.3km az=166.0*

ISC 11 05:46:33.5±1.0, **56°.02N**±0°.04×**20°.86E**±0°.03, **h0**^{km}, **n52**, σ**1^{s}.89**/66, **Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBUR	Paburge	0.60	89	*e*P	Pg	05 46 45.6	+0.6
SLIT	Slitere, Latvi	1.79	25	*e*P	Pn	05 47 04.7	-1.0
SLIT	Slitere, Latvi	1.79	25	*e*P	Pn	05 47 04.6	-1.0
PABE	Paberze	1.83	105	*e*P	Pn	05 47 07.4	+1.2
PABE				IAML		05 47 34.2	
	comp=Z,28nm,0.2s						
GOTU	Gotland	2.09	324	P	Pb	05 47 11.0	-1.2
GOTU				S	Sn	05 47 37.4	+1.0
GOTU	Gotland	2.09	324	*e*P	Pn	05 47 10.8	+1.1
GOTU				*e*PB	Pb	05 47 11.3	-0.9
GOTU				*e*SG	Sb	05 47 39.4	+0.7
SUW	Suwalki	2.42	145	*e*P	Pb	05 47 17.8	0.0
VSTU	Vaestervik	2.89	306	P	Pn	05 47 22.9	+2.2
VSTU	Vaestervik	2.89	306	*e*P	Pn	05 47 22.9	+2.2
ISAL	Salakas	3.01	96	*e*P	Pn	05 47 24.8	+2.5
IZAR	Zarasai	3.05	93	*e*P	Pn	05 47 25.8	+2.9
IIGN	Ignalina	3.11	100	*e*P	Pn	05 47 26.2	+2.5
IIGN				IAML		05 48 10.5	
	comp=Z,4.0nm,0.2s						
MTSE	Matsula	3.14	29	*e*P	Pn	05 47 24.7	+0.6
MTSE	Matsula	3.14	29	*e*P	Pn	05 47 24.6	+0.5
MTSE				*e*SG	Sb	05 48 09.5	+0.6
VIKU	Vikbolandet	3.36	319	P	Pn	05 47 28.1	+1.0
VIKU	Vikbolandet	3.36	319	*e*P	Pn	05 47 28.1	+1.0
NYNU	Nynaeshamn	3.36	334	P	Pn	05 47 28.1	+1.0
NYNU	Nynaeshamn	3.36	334	*e*P	Pn	05 47 28.1	+1.0
VXJU	Vaexsjoe	3.40	288	P	Pn	05 47 28.8	+1.0
VXJU	Vaexsjoe	3.40	288	*e*P	Pn	05 47 28.8	+1.0
IDID	Didziasalis	3.41	100	*e*P	Pn	05 47 27.4	-0.4
EKSU	Eksjoe	3.43	299	P	Pn	05 47 29.4	+1.3
EKSU	Eksjoe	3.43	299	*e*P	Pn	05 47 29.4	+1.3
BSD	Bornholm Skovb	3.49	257	*e*P	Pn	05 47 28.6	-0.4
BSD	Bornholm Skovb	3.49	257	*e*P	Pn	05 47 28.7	-0.3
BSD	Bornholm Skovb	3.49	257	*i* P	Pn	05 47 28.7	-0.3
BSD	Bornholm Skovb	3.49	257	*e*	Pn	05 47 28.4	-0.5
	baz=78,slow=11						
BSD				*i* P	Pn	05 47 28.8	-0.3
BSD				IAML		05 48 29.2	
	comp=Z,3.4nm,0.3s						
NRTU	Norrtaelje	3.85	343	P	Pn	05 47 35.0	+1.1
NRTU	Norrtaelje	3.85	343	*e*P	Pn	05 47 34.6	+0.7
NRTU				*e*S	Sn	05 48 20.8	+0.9
ESKU	Eskilstuna	4.01	325	P	Pn	05 47 37.2	+1.1
ESKU	Eskilstuna	4.01	325	*e*P	Pn	05 47 37.2	+1.1
VSU	Vasula	4.02	50	*e*P	Pn	05 47 37.3	+1.1
VSU				*e*S	Sn	05 48 16.0	-8.0
VSU				IAML		05 48 40.4	
	comp=Z,55nm,0.1s						
VSU	Vasula	4.02	50	*e*P	Pn	05 47 37.4	+1.1
VSU				*e*SG	Sb	05 48 35.7	+1.5
GNOU	Gnosjoe	4.12	291	P	Pn	05 47 38.1	+0.5
GNOU	Gnosjoe	4.12	291	*e*P	Pn	05 47 38.1	+0.5
AAL	Aland	4.19	354	*e*P	Pn	05 47 38.9	+0.3
AAL	Aland	4.19	354	P	Pn	05 47 38.9	+0.3
AAL	Aland	4.19	354	*e*P	Pn	05 47 38.7	+0.1
UPP	Uppsala	4.21	337	*e*P	Pn	05 47 40.4	+1.5
UPP	Uppsala	4.21	337	P	Pn	05 47 40.4	+1.5
UPP	Uppsala	4.21	337	*e*P	Pn	05 47 40.4	+1.5
FIBU	Brunna	4.32	336	P	Pn	05 47 41.2	+0.9
FIBU	Brunna	4.32	336	*e*P	Pn	05 47 41.2	+0.9
BACU	Backbrunna	4.33	334	P	Pn	05 47 41.4	+1.0
BACU	Backbrunna	4.33	334	*e*P	Pn	05 47 41.4	+1.0
ARBE	Arbavere	4.39	37	*e*P	Pn	05 47 42.2	+1.0
ARBE				*e*SG	Sb	05 48 47.0	+2.2
MEF	Metsahovi	4.61	23	*e*P	Pn	05 47 45.2	+0.9
MEF				*e*S	Sn	05 48 38.2	-0.2
MEF				*e*SG	Sb	05 48 53.7	+2.7
MEF				MSG		05 48 55.6	
	comp=Z,1.8nm,0.1s						
NUR	Nurmijrvi	4.93	22	*e*P	Pn	05 47 49.8	+1.2
RAF	Rauma	5.04	5	*e*P	Pn	05 47 50.5	+0.3
RAF				*e*S	Sn	05 48 47.5	-1.5
RAF				*e*SG	Sb	05 49 08.1	+4.6
RAF				MSG		05 49 09.4	
	comp=Z,1.4nm,0.1s						
FINES	FINESS Array B	6.08	24	Pn	Pn	05 48 04.1	-0.4
	comp=Z,0.6nm,0.3s,baz=211,slow=12,SNR=29						
FINES				Sn	Sn	05 49 10.9	-3.7
	comp=Z,0.2nm,0.3s,baz=209,slow=22,SNR=1.7						
FINES				Lg	Lg	05 49 37.8	
	comp=Z,0.2nm,0.3s,baz=198,slow=22,SNR=1.8						
NOA	NORSAR Array B	7.12	319	Pn	Pn	05 48 17.4	-1.4
	comp=Z,0.0nm,0.3s,baz=134,slow=12,SNR=6.2						
NOA				Sn	Sn	05 49 34.6	-5.8
	comp=Z,0.0nm,0.3s,baz=242,slow=19,SNR=1.3						
NOA				Lg	Lg	05 50 08.8	
	comp=Z,0.0nm,0.3s,baz=162,slow=14,SNR=1.6						
ARCES	ARCESS Array B	13.72	7	Pn	Pn	05 49 44.3	-4.7
	baz=189,slow=16,SNR=8.8						

IDC 11 05:59:25.7±0.9, **56°.95S**×**150°.76W**, **h0**^{km}, **mb4.0**/4, **mb1 4.3**/4, **mb1mx3.9**/27, **mbtmp4.0**/4, **MS3.4**/2, **Ms1 3.4**/2, **ms1mx3.0**/21, **Error ellipse: s-maj=114.8km s-min=23.7km az=9.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	26.21	201	LR	LR	06 12 47.1	
	comp=Z,68nm,21.8s,baz=92,slow=31						
TBI	Tubuai	33.58	2	*e*LR	LR	06 14 48.0	
	comp=Z,80nm,30.2s						
TBI	Tubuai	33.58	2	*e*T	T	06 41 11.6	
	10nm,0.3s						
TVO	Taravao	39.12	2	*e*T	T	06 48 07.3	
	1.0nm,0.4s						
PAE	Paea	39.23	2	*e*T	T	06 48 15.2	
	0.9nm,0.4s						
PPT2	Papeete2	39.30	2	*e*LR	LR	06 17 25.6	
	comp=Z,119nm,28.2s						
PPT	Papeete	39.33	2	LR	LR	06 18 02.8	
	comp=Z,76nm,19.6s,baz=199,slow=28						
VAH	Vaihoa	41.70	5	*e*T	T	06 51 20.2	
	20nm,0.2s						
PLCA	Paso Flores	52.08	108	P	P	06 08 37.1	-0.1
	3.1nm,1.0s,baz=231,slow=7.6,SNR=3.6						
H03S2	Juan Fernandez	52.71	96	T	T	07 05 40.8	
	baz=219,slow=74,SNR=22						
H03S1	Juan Fernandez	52.72	96	T	T	07 05 42.2	
	baz=219,slow=74,SNR=22						
H03S3	Juan Fernandez	52.73	96	T	T	07 05 41.3	
	baz=219,slow=74,SNR=20						
H03N3	Juan Fernandez	53.00	96	T	T	07 06 02.0	
	baz=222,slow=72,SNR=51						
H03N2	Juan Fernandez	53.01	96	T	T	07 05 59.1	
	baz=222,slow=72,SNR=59						
H03N1	Juan Fernandez	53.02	96	T	T	07 06 01.5	
	baz=222,slow=72,SNR=58						
ASAR	Alice Springs	62.54	268	P	P	06 09 51.1	-0.2
	1.5nm,0.7s,baz=140,slow=6.4,SNR=15						
H01W1	Cape Leeuwin H	64.12	246	T	T	07 20 03.0	
	baz=142,slow=76,SNR=12						
H01W2	Cape Leeuwin H	64.13	245	T	T	07 20 04.3	
	baz=142,slow=76,SNR=9.9						
H01W3	Cape Leeuwin H	64.14	246	T	T	07 20 09.0	
	baz=142,slow=76,SNR=11						
WRA	Warramunga Arr	65.30	271	P	P	06 10 09.4	0.0
	0.5nm,0.8s,baz=128,slow=7.7,SNR=2.6						
CPUP	Villa Florida	70.15	108	P	P	06 10 39.7	-0.2
	2.0nm,0.8s,baz=216,slow=7.8,SNR=6.2						
H10N3	ASCENSION HYDR	106.19	134	T	T	08 13 16.4	
	baz=203,slow=75,SNR=7.6						
H10N1	ASCENSION HYDR	106.19	135	T	T	08 13 20.6	
	baz=203,slow=75,SNR=7.8						
H10N2	ASCENSION HYDR	106.21	135	T	T	08 13 23.8	
	baz=203,slow=75,SNR=7.3						
ILAR	Eielson Array	121.43	2	PKP	PKPdf	06 18 19.1	-0.2
	1.0nm,0.8s,baz=218,slow=2.1,SNR=11						
MKAR	Makanchi Array	146.52	275	PKPbc	PKPbc	06 19 07.8	-0.2
	3.8nm,0.8s,baz=118,slow=4.7,SNR=39						
ZALV	Zalesovo Beam	149.07	288	PKPbc	PKPbc	06 19 13.4	-1.1
	1.1nm,0.6s,baz=119,slow=3.9,SNR=8.8						
ESDC	Sonseca Array	152.35	114	PKPbc	PKiKP	06 19 23.1	0.0
	0.5nm,0.7s,baz=222,slow=1.7,SNR=3.0						

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*JMA **11** 06:34:01.1±0.2, 22°.37N×121°.92E, h33^{km}, M3.1*

*TAP **11** 06:34:02.1, 22°.35N×121°.83E, h19^{km}, ML3.0, D*

ISC 11 06:33:59.2±1.3, **22°.31N**±0°.03×**121°.89E**±0°.03, **h15**^{km}±9^{km}, **n68**, σ**0^{s}.92**/116, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu	0.42	229	*i* P	Pn	06 34 09.8	-0.9
	baz=219						
LAY				*i* S	Sb	06 34 15.5	+1.0
	baz=219						
LDUT	Ludao	0.53	313	*i* P	Pn	06 34 11.4	-0.8
	baz=321						
LDUT				*i* S	Sb	06 34 18.4	+0.8
	baz=321						
TTN	Taitung	0.81	303	*e*P	Pn	06 34 17.6	+1.4
	baz=313						
EDH	Donghe	0.85	321	*i* P	Pb	06 34 16.3	+0.6
	baz=321						
EDH				*i* S	Sg	06 34 26.2	-0.8
	baz=321						
TWGBT	Beinan	0.90	304	P	Pn	06 34 18.0	+0.6
	baz=313						
TWGBT				S	Sn	06 34 29.2	-0.9
	baz=313						
TWG	Pinlang	0.91	304	*i* P	Pn	06 34 17.8	+0.3
	baz=313						
TWG				*i* S	Sb	06 34 28.5	-0.1
	baz=313						
ECL	Taimali	0.91	288	*i* P	Pn	06 34 17.8	+0.4
	baz=274						
ECL				*i* S	Sn	06 34 30.1	-0.3
	baz=274						
LONT	Longtian	0.92	310	*i* P	Pn	06 34 18.6	+1.0
	baz=320						
LONT				*e*S	Sg	06 34 28.7	-0.4
	baz=320						
CHKT	Chengkung	0.92	328	P	Pn	06 34 17.6	0.0
	baz=329						
CHKT				*i* S	Sb	06 34 27.9	-1.0
	baz=329						
TAW	Tawu	0.92	273	S	Sn	06 34 29.6	-1.0
	baz=269						
EAST	Anshuo	0.97	274	*i* P	Pn	06 34 18.8	+0.4
	baz=271						
EAST				S	Sn	06 34 30.6	-1.2
	baz=271						
SLIU	Shizi	1.01	265	*i* P	Pn	06 34 19.4	+0.5
	baz=261						
SLIU				S	Sg	06 34 31.2	-1.0
	baz=261						
FULB	Fuli	1.04	328	*i* P	Pn	06 34 19.5	+0.2
	baz=328						
FULB				S	Sb	06 34 31.6	-0.8
	baz=328						
TWKBT	Hengchun	1.06	250	*e*S	Sb	06 34 31.8	-1.3
	baz=256						
TWK1	Hengchun	1.07	250	P	Pn	06 34 20.5	+0.8
	baz=256						
TWK1				S	Sg	06 34 33.1	-0.8
	baz=256						
HEN	Hengchun	1.11	254	*i* S	Sn	06 34 35.0	-0.3
	baz=250						
EYUL	Yuli	1.16	333	*e*P	Pg	06 34 21.4	-0.2
	baz=333						
EYUL				S	Sb	06 34 35.2	-0.5
	baz=333						
TWF1	Yuli	1.17	332	*i* P	Pn	06 34 20.6	-0.5
	baz=333						
TWF1				*e*S	Sb	06 34 35.8	-0.3
	baz=333						
SCZT	Fangliau	1.18	273	*i* P	Pg	06 34 22.3	+0.3
	baz=270						
SCZT				*e*S	Sn	06 34 37.2	+0.3
	baz=270						
ELDTW	Lidau	1.19	317	*i* P	Pn	06 34 21.4	0.0
	baz=326						
ELDTW				*i* S	Sb	06 34 35.5	-1.2
	baz=326						
MASBT	Mashibuluo	1.20	285	P	Pg	06 34 22.3	-0.1
	baz=282						
YULB	Yu-li	1.20	333	P	Pn	06 34 21.7	+0.2
	baz=333						
YULB				S	Sb	06 34 36.6	-0.6
	baz=333						
TSMG	Majia	1.22	289	*i* P	Pg	06 34 22.8	+0.1
	baz=287						
TSMG				S	Sb	06 34 36.9	-0.6
	baz=287						
SSD	Sandimen	1.24	291	*e*P	Pg	06 34 23.1	-0.1
	baz=288						
HGSD	Ruisui	1.25	340	P	Pn	06 34 21.7	-0.4
	baz=341						
HGSD				S	Sb	06 34 36.2	-2.2
	baz=341						
EHY	Hungye	1.30	336	*i* P	Pb	06 34 23.5	+0.1
	baz=337						
EHY				*i* S	Sb	06 34 38.7	-1.1
	baz=337						
SLGT	Liugui	1.33	301	*i* P	Pg	06 34 24.8	-0.1
	baz=306						
SLGT				*e*S	Sg	06 34 41.3	-1.0
	baz=306						
STYT	Tauyuan	1.34	309	*e*S	Sn	06 34 41.6	+0.4
	baz=315						
WLCH	Liuqiu	1.40	272	*e*P	Pg	06 34 26.9	+0.7
	baz=269						
SCST	Cishan	1.41	294	*e*P	Pg	06 34 25.8	-0.6
	baz=292						
SCST				*e*S	Sg	06 34 45.5	+0.7
	baz=292						
EGFH	Guangfu	1.41	343	P	Pn	06 34 24.4	0.0
	baz=352						
EGFH				S	Sn	06 34 41.4	-1.4
	baz=352						
WTP	Ta-pu	1.50	308	*i* P	Pg	06 34 28.3	+0.2
	baz=307						
WTP				*i* S	Sg	06 34 48.0	+0.3
	baz=307						
TPUB	Ta-pu	1.52	310	P	Pg	06 34 28.4	-0.2
	baz=320						
TPUB				S	Sg	06 34 48.0	-0.4
	baz=320						
CHN1	Nanshi	1.53	305	*i* P	Pg	06 34 28.8	+0.2
	baz=317						
CHN1				S	Sg	06 34 49.9	+1.4
	baz=317						
ESL	Shilin	1.55	344	S	Sn	06 34 44.2	-2.0
	baz=352						
ALS	Alishan	1.56	320	*i* P	Pg	06 34 28.9	-0.4
	baz=326						
ALS				*e*S	Sn	06 34 47.1	+0.4
	baz=326						
SNST	Tainan City	1.57	305	*e*P	Pg	06 34 29.0	-0.4
	baz=303						
SNST				*e*S	Sg	06 34 51.7	+1.9
	baz=303						
CHN4	Tsaushan	1.58	311	*i* P	Pg	06 34 29.7	0.0
	baz=321						
CHN4				S	Sg	06 34 49.7	-0.5
	baz=321						
TWK	Hsinying	1.60	307	*i* P	Pg	06 34 29.8	-0.3
	baz=304						
TWK				S	Sg	06 34 51.8	+0.8
	baz=304						
CHN5	Tsauling	1.70	319	*i* P	Pg	06 34 31.4	-0.5
	baz=298						
CHN5				S	Sg	06 34 53.9	-0.1
	baz=298						
SSLB	Suanglung	1.70	330	P	Pb	06 34 30.1	-0.1
	baz=339						
TWD	Chiawan	1.78	351	*e*S	Sn	06 34 50.8	-1.0
	baz=4.0						
SMLT	Sun Moon Lake	1.81	330	P	Pb	06 34 32.1	0.0
	baz=338						
TYC	Yuchr	1.85	329	*i* P	Pb	06 34 33.5	+0.8
	baz=338						
TYC				*i* S	Sb	06 34 56.2	+0.6
	baz=338						
WDLH	Douliu	1.85	318	S	Sg	06 34 58.8	0.0
	baz=298						
CHGB	Renai	1.86	339	P	Pn	06 34 32.1	+1.4
	baz=349						

CHGB				S	Sn	06 34 53.7	-0.4
	baz=349						
NACB	Ninganchiao	1.87	352	P	Pn	06 34 29.8	-0.9
	baz=4.0						
NACB				S	Sn	06 34 52.2	-1.9
	baz=4.0						
WHF	Hehuan Shan	1.91	343	*i* P	Pn	06 34 32.3	+0.7
	baz=343						
WHF				*i* S	Sn	06 34 54.9	-0.8
	baz=343						
WNT	Mingjian	1.91	325	*i* S	Sg	06 34 59.9	-0.9
	baz=323						
ETLH	Xiulin Townshi	1.92	349	P	Pn	06 34 31.8	+0.3
	baz=349						
ETLH				*e*S	Sn	06 34 54.9	-0.5
	baz=349						
FUSS	Fushou	2.01	343	*i* P	Pn	06 34 34.0	+1.1
	baz=343						
FUSS				S	Sn	06 34 58.1	+0.2
	baz=343						
TWT	Tachien	2.04	341	S	Sn	06 34 58.2	-0.3
	baz=341						
TDCB	Techi	2.04	341	P	Pn	06 34 34.9	+1.6
	baz=341						
TDCB				S	Sn	06 34 59.4	+0.8
	baz=341						
ENA	Nanau	2.11	356	*e*S	Sn	06 34 58.5	-1.4
	baz=7.0						
WHP	Taichung City	2.14	336	P	Pb	06 34 37.7	0.0
	baz=344						
WHP				*e*S	Sn	06 35 02.7	+1.9
	baz=344						
YOJ	Yonaguni jima	2.37	26	P	Pn	06 34 39.0	+1.4
YHNB	Yeheng	2.39	349	P	Pn	06 34 39.4	+1.5
	baz=1.0						
YHNB				S	Sn	06 35 08.3	+1.3
	baz=1.0						
NSK	Sanguang	2.40	348	P	Pn	06 34 39.9	+1.8
	baz=1.0						
NSK				S	Sn	06 35 08.0	+0.7
	baz=1.0						
HATJ	Hateruma jima	2.47	45	P	Pn	06 34 40.2	+1.2
HATJ				*e*S	Sn	06 35 08.0	-0.9
NWLT	Wulai	2.48	352	*e*P	Pn	06 34 40.5	+1.4
	baz=351						
NWLT				S	Sn	06 35 10.5	+1.4
	baz=351						
IRIF	Iriomote-Funau	2.63	40	P	Pn	06 34 42.6	+1.5
IRIF				S	Sn	06 35 12.3	-0.5
TIPB	Shuangxi	2.65	359	P	Pn	06 34 43.5	+2.1
	baz=358						
TIPB				*e*S	Sn	06 35 13.6	+0.3
	baz=358						
JKRS	Kuro-shima	2.73	45	P	Pn	06 34 44.1	+1.5
JKRS				S	Sn	06 35 14.9	-0.4
JIJ	Ishigaki jima	2.91	45	P	Pn	06 34 45.8	+0.8
JIJ				*e*S	Sn	06 35 18.3	-1.4
JISG	Ishigakijimahi	3.17	44	P	Pn	06 34 48.9	+0.3
JISG				*e*S	Sn	06 35 25.0	-1.2
JTJ	Tarama	3.47	48	S	Sn	06 35 32.2	-1.3
JIRB	Irabujima	3.92	50	S	Sn	06 35 44.5	0.0
JMJ2	Miyako jima3	3.97	52	*e*S	Sn	06 35 45.9	-0.1

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*IDC **11** 06:39:32.0±0.9, 13°.16N×143°.18E, h0^{km}, mb3.6/6, mb1 3.9/6, mb1mx3.6/39, mbtmp3.6/6, Error ellipse: s-maj=29.9km s-min=20.0km az=136.0*

ISC 11 06:39:37.2±0.9**, 13°.1N**±0°.2×**143°.2E**±0°.1**, h35^{km}, n8, σ1^s.09**/9**, mb3.5**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.68	73	Pn	Pn	06 40 02.3	-1.9
	52nm,0.3s,baz=181,slow=5.3,SNR=12						
GUMO				Sn	Sn	06 40 25.7	+1.3
	48nm,0.3s,baz=162,slow=20,SNR=8.2						
WRA	Warramunga Arr	33.98	195	P	P	06 46 18.0	+0.2
	1.0nm,0.6s,baz=19,slow=9.7,SNR=5.8						
ASAR	Alice Springs	37.67	194	P	P	06 46 49.6	+0.2
	0.4nm,0.5s,baz=20,slow=11,SNR=5.5						
ILAR	Eielson Array	69.69	25	P	P	06 50 44.1	+1.0
	0.1nm,0.5s,baz=195,slow=6.5,SNR=1.4						
GEYT	Alibeck	78.24	306	P	P	06 51 33.0	-0.8
	1.5nm,0.4s,baz=41,slow=5.5,SNR=2.7						
YKA	Yellowknife Ar	84.02	27	P	P	06 52 04.3	+0.5
	0.1nm,0.4s,baz=290,slow=3.8,SNR=5.1						
NVAR	Mina Array Bea	88.47	51	P	P	06 52 27.0	+0.4
	0.1nm,0.4s,baz=323,slow=0.5,SNR=2.5						
FINES	FINESS Array B	90.91	335	P	P	06 52 37.0	-0.2
	7.9nm,1.1s,baz=72,slow=4.5,SNR=5.6						

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*IDC **11** 06:40:53.5±1.5, 5°.80S×150°.45E, h52^{km}±26^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.4/34, mbtmp3.8/5, ML1.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.5/24, Error ellipse: s-maj=98.8km s-min=9.6km az=134.0*

ISC 11 06:40:52.7±1.3**, 5°.4S**±0°.3×**150°.2E**±0°.3**, h50^{km}, n7, σ0^s.92**/8**, mb3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	2.17	59	P	Pn	06 41 25.6	-0.9
	45nm,0.3s,baz=207,slow=2.3,SNR=10						
KRVT				S	Sn	06 41 53.6	+1.4
	65nm,0.3s,baz=184,slow=19,SNR=7.0						
KRVT				LR	LR	06 42 34.6	
	comp=Z,142nm,18.5s,baz=165,slow=47						
PMG	Port Moresby	4.94	217	P	Pn	06 42 05.0	+0.6
	1.4nm,0.3s,baz=27,slow=11,SNR=2.5						
PMG				S	Sn	06 42 59.6	-0.8
	5.2nm,0.3s,baz=20,slow=19,SNR=5.6						
HNR	Honiara	10.49	113	LR	LR	06 46 30.4	
	comp=Z,47nm,19.1s,baz=302,slow=33						
WRA	Warramunga Arr	21.09	225	P	P	06 45 33.5	+0.3
	1.0nm,0.4s,baz=52,slow=10,SNR=11						
ASAR	Alice Springs	23.95	219	P	P	06 46 02.0	-0.5
	0.8nm,0.6s,baz=56,slow=8.4,SNR=16						
FITZ	Fitzroy Crossi	27.05	240	P	P	06 46 31.1	+0.5
	3.2nm,1.0s,baz=69,slow=11,SNR=1.7						
TORD	Torodi Ar. Bea	147.97	286	PKPbc	PKiKP	07 00 35.2	-0.3
	0.5nm,0.5s,baz=55,slow=2.2,SNR=2.4						

IDC 11 06:43:53.2±1.3**, 13°.37N**×**145°.61E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/43**, mbtmp3.5**/4**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/27**, Error ellipse: s-maj=28.6km s-min=22.6km az=64.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.76	287	Pn	Pn	06 44 11.7	+0.5
	587nm,0.3s,baz=160,slow=12,SNR=121						
GUMO				Sn	Sg	06 44 18.7	+1.1
	2µm,0.3s,baz=347,slow=18,SNR=32						
H11S3	WAKE ISLAND Hy	20.89	73	T	T	07 11 26.1	
	baz=259,slow=75,SNR=8.1						
H11S1	WAKE ISLAND Hy	20.90	73	T	T	07 11 26.5	
	baz=259,slow=75,SNR=8.4						
H11S2	WAKE ISLAND Hy	20.91	73	T	T	07 11 24.9	
	baz=259,slow=75,SNR=6.8						
H11N1	WAKE ISLAND Hy	21.34	70	T	T	07 11 42.8	
	baz=257,slow=75,SNR=28						
H11N2	WAKE ISLAND Hy	21.35	70	T	T	07 11 41.5	
	baz=257,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	21.36	70	T	T	07 11 45.6	
	baz=257,slow=75,SNR=21						
MJAR	Matsushiro Arr	24.02	345	LR	LR	06 56 43.9	
	comp=Z,41nm,21.8s,baz=330,slow=32						
WRA	Warramunga Arr	34.91	199	P	P	06 50 46.1	-0.7
	0.5nm,0.7s,baz=22,slow=10.0,SNR=6.2						
ASAR	Alice Springs	38.55	197	P	P	06 51 18.2	+0.4
	0.4nm,0.5s,baz=21,slow=12,SNR=12						
MKAR	Makanchi Array	62.15	316	P	P	06 54 15.0	-1.4
	0.2nm,0.4s,baz=88,slow=8.3,SNR=5.1						
ILAR	Eielson Array	68.46	25	P	P	06 54 57.7	+0.7
	0.3nm,0.6s,baz=250,slow=6.3,SNR=4.5						

IDC 11 06:47:54.1±2.1**, 0°.03N**×**125°.81E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/33**, mbtmp3.3**/3**, Error ellipse: s-maj=221.8km s-min=27.2km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.53	158	P	P	06 52 44.7	-0.4
	0.7nm,0.7s,baz=336,slow=11,SNR=2.4						
ASAR	Alice Springs	24.83	162	P	P	06 53 18.7	+0.4
	0.4nm,1.0s,baz=345,slow=10,SNR=1.7						
MKAR	Makanchi Array	60.10	327	P	P	06 58 03.2	-0.1
	0.3nm,0.6s,baz=122,slow=8.0,SNR=7.1						

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*NNC **11** 07:18:45.4±0.8, 50°.01N×78°.16E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=8.9km s-min=3.5km az=97.0, Suspected Mining explosion.*

*IDC **11** 07:18:47.2±1.0, 50°.08N×78°.72E, h0^{km}, mb1 2.8/2, mb1mx2.8/40, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=13.8km s-min=6.1km az=65.0*

ISC 11 07:18:42.0±1.4**, 50°.00N**±0°.04×**77°.9E**±0°.1**, h0^{km}, n21, σ1^s.09**/33**, 5C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.69	32	P	Pn	07 18 58.0	-1.0
KUR07				S	Sb	07 19 06.6	-0.3
KUR06	Kurchatov Arra	0.71	32	P	Pn	07 18 58.3	-0.9
KUR06				S	Sb	07 19 07.4	0.0
KUR17	Kurchatov Arra	0.71	28	P	Pn	07 18 59.1	-0.2
KUR17				S	Sb	07 19 08.7	+1.0
KUR16	Kurchatov Arra	0.72	30	P	Pn	07 18 59.0	-0.4
KUR16				S	Sb	07 19 08.1	+0.3
KURBB	Kurchatov Arra	0.73	31	Pg	Pb	07 18 56.9	-0.6
	1.8nm,0.3s,baz=165,slow=18,SNR=204						
KURBB				Lg	Lg	07 19 07.8	
	1.9nm,0.3s,baz=164,slow=31,SNR=12						
KURBB	Kurchatov Arra	0.73	31	⇑P	Pn	07 18 58.5	-1.0
	18nm,0.3s						
KURBB				⇓S	Sb	07 19 07.7	-0.3
	35nm,0.4s						
KUR15	Kurchatov Arra	0.73	33	P	Pn	07 18 58.4	-1.2
KUR15				S	Sb	07 19 07.7	-0.6
KUR14	Kurchatov Arra	0.74	34	P	Pb	07 18 58.3	+0.6
KUR14				S	Sg	07 19 06.7	+0.9
KUR05	Kurchatov Arra	0.74	31	P	Pn	07 18 58.9	-0.8
KUR05				S	Sb	07 19 07.9	-0.7
KUR04	Kurchatov Arra	0.76	30	P	Pn	07 18 59.4	-0.7
KUR04				S	Sb	07 19 09.2	+0.1
KURK	Kurchatov	0.83	31	⇑P	Pn	07 18 59.9	-1.1
	4.9nm,0.3s						
KURK				⇑S	Sg	07 19 10.1	+1.3
	6.2nm,0.4s						
SEM	Semipalatinsk	1.54	74	P	Pb	07 19 11.4	0.0
	14nm,0.1s						
SEM				S	Sn	07 19 31.9	+0.2
	41nm,0.2s						
MAKZ	Makanchi	4.18	138	⇓Pn	Pn	07 19 41.8	-5.2
	1.0nm,0.5s						
MAKZ				⇓Lg	Lg	07 20 47.8	
	3.5nm,0.7s						
MK31	Makanchi Array	4.33	136	⇑Pn	Pn	07 19 50.3	+1.3
	0.3nm,0.4s,baz=324,slow=10,SNR=22						
MK31				Pg	Pb	07 19 58.0	-0.8
	0.3nm,0.2s,baz=327,slow=14,SNR=23						
MK31				⇑Lg	Lg	07 20 50.1	
	4.3nm,0.5s						
MKAR	Makanchi Array	4.33	136	Pn	Pn	07 19 50.4	+1.4
	0.4nm,0.3s,baz=330,slow=11,SNR=25						
MKAR				Pg	Pb	07 19 58.0	-0.8
	1.1nm,0.3s,baz=326,slow=14,SNR=21						
MKAR				Sn	Sn	07 20 40.9	+0.8
	0.5nm,0.3s,baz=318,slow=44,SNR=4.8						
MKAR				Lg	Lg	07 20 56.2	
	1.0nm,0.3s,baz=327,slow=26,SNR=8.0						
KAPS	Kapalarasan	4.82	168	Pg	Pg	07 20 11.6	-2.7
	0.7nm,0.3s						
KAPS				Lg	Lg	07 21 14.6	
	4.3nm,0.6s						
ZSN	Zaisan	5.25	117	Pg	Pb	07 20 14.1	-0.5
	3.3nm,0.3s						
ZSN				Lg	Lg	07 21 19.9	
	3.7nm,0.4s						
ARXS	Arharly	5.79	181	Pg	Pg	07 20 31.2	-1.8
	3.6nm,0.7s						
ARXS				Lg	Lg	07 21 48.0	
	3.2nm,0.4s						
I46RU	ZALESOVO INFRA	5.80	44	*i*		07 49 30.0	
	baz=228,slow=337,SNR=5.9						
ZALV	Zalesovo Beam	5.80	44	Pn	Pn	07 20 11.0	+1.8
	0.6nm,0.3s,baz=229,slow=14,SNR=7.2						
KTBS	Karatobe	6.35	188	Pg	Pg	07 20 45.6	+2.0
	1.1nm,0.3s						

IDC 11 07:22:23.8±4.5**, 21°.29N**×**121°.89E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/41**, mbtmp3.4**/3**, Error ellipse: s-maj=334.5km s-min=28.8km az=61.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	40.89	318	P	P	07 30 07.6	-0.2
	0.3nm,0.7s,baz=115,slow=8.8,SNR=4.1						
WRA	Warramunga Arr	42.75	163	P	P	07 30 22.6	-0.6
	0.2nm,0.4s,baz=343,slow=8.8,SNR=1.9						
ASAR	Alice Springs	46.19	165	P	P	07 30 50.9	+0.2
	0.2nm,0.3s,baz=346,slow=7.3,SNR=9.2						

IDC 11 08:03:51.1±1.2**, 1°.64N**×**127°.28E, h0^{km}, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.4**/48**, mbtmp3.5**/5**, ML3.2**/1**, Error ellipse: s-maj=72.6km s-min=20.8km az=63.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.71	122	Pn	Pn	08 05 04.1	+0.6
	1.1nm,0.3s,baz=323,slow=20,SNR=2.2						
SIJI				Sn	Sn	08 05 50.8	-8.0
	0.5nm,0.3s,baz=157,slow=23,SNR=1.8						
WRA	Warramunga Arr	22.54	162	P	P	08 08 52.9	0.0
	0.3nm,0.5s,baz=341,slow=11,SNR=1.8						
ASAR	Alice Springs	25.97	166	P	P	08 09 25.4	-0.3
	0.3nm,0.7s,baz=348,slow=8.9,SNR=4.5						
SONM	Songino Array	49.44	342	P	P	08 12 42.2	-0.9
	0.5nm,0.6s,baz=155,slow=8.9,SNR=4.2						
MKAR	Makanchi Array	59.57	326	P	P	08 13 57.2	+0.5
	0.6nm,0.4s,baz=113,slow=8.1,SNR=20						

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*TIR **11** 08:17:55.4, 40°.82N×20°.59E, h1^{km}±1^{km}, Md3.4, Ml4.0*

*ATH **11** 08:17:56.8, 40°.83N×20°.65E, h26^{km}±11^{km}, ML3.0/6, Error ellipse: s-maj=11.1km s-min=1.4km az=32.0*

*SKO **11** 08:17:56.5, 40°.82N×20°.65E, h20^{km}*

*PDG **11** 08:17:57.2±0.3, 40°.84N×20°.62E, h7^{km}, ML3.2/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*THE **11** 08:17:57.2, 40°.81N×20°.66E, h2^{km}±1^{km}, ML2.9/16, Error ellipse: s-maj=1.7km s-min=0.6km az=249.0*

*BEO **11** 08:17:59.3±1.1, 40°.87N×20°.67E, h13^{km}±5^{km}, ML2.8/8*

ISC 11 08:17:56.9±0.9**, 40°.81N**±0°.01×**20°.62E**±0°.02**, h13^{km}**±7^{km}**, n111, σ0^s.99**/171**, 12C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.23	146	P	Pg	08 18 01.5	-0.3
KBN				S	Sg	08 18 05.1	0.0
	9µm,0.4s						
KBN	Korca	0.23	146	P	Pg	08 18 01.5	-0.3
	baz=142						
KBN				S	Sg	08 18 05.5	+0.4
	baz=142						
KBN				AMP			
	comp=N,35nm,0.4s,baz=142						
OHR	Ohrid	0.33	24	⇓*i*Pg	Pg	08 18 03.4	-0.2
OHR				*i* Sg	Sb	08 18 09.6	-0.2
OHR				*e*Lg	Lg	08 18 09.8	
	comp=N,366nm,0.5s						
OHR				*e*Lg	Lg	08 18 10.2	
	comp=E,2µm,0.5s						
NEST	Nestorio	0.51	141	P	Pg	08 18 06.3	-0.7
NEST				S	Sg	08 18 13.7	-0.1
NEST				AML	AML	08 18 16.2	
	comp=E,3694µm,0.3s						
NEST				AML	AML	08 18 19.6	
	comp=N,3488µm,0.4s						
NEST	Nestorio	0.51	141	P	Pg	08 18 06.3	-0.7
NEST				S	Sg	08 18 14.0	+0.2
	comp=N,1µm,0.4s						
FNA	Florina	0.57	93	P	Pg	08 18 07.6	-0.4
FNA				S	Sb	08 18 16.5	-0.4
FNA				AML	AML	08 18 18.7	
	comp=N,8808µm,0.6s						
FNA				AML	AML	08 18 19.8	
	comp=E,10058µm,0.3s						
FNA	Florina	0.57	93	P	Pg	08 18 07.7	-0.4
FNA				S	Sb	08 18 16.7	-0.2
	comp=E,5µm,0.4s						
FNA	Florina	0.57	93	P	Pg	08 18 07.7	-0.4
	baz=93						
FNA				S	Sb	08 18 17.8	+0.9
	baz=93						
FNA	Florina	0.57	93	⇑*i*Pg	Pg	08 18 07.8	-0.4
FNA				*i* Sg	Sb	08 18 17.6	+0.7
LSK	Leskovik	0.66	182	P	Pg	08 18 09.1	-0.7
LSK				S	Sg	08 18 18.4	-0.1
	comp=E,1µm,0.7s						
LSK	Leskovik	0.66	182	P	Pg	08 18 09.1	-0.7
	baz=179						
LSK				S	Sg	08 18 19.7	+1.3
	baz=179						
PENT	Pentalofos	0.73	147	P	Pg	08 18 10.2	-0.8
PENT				S	Sg	08 18 21.3	+0.6
PENT				AML	AML	08 18 25.9	
	comp=E,1599µm,0.4s						
PENT				AML	AML	08 18 27.2	
	comp=N,1751µm,0.4s						
PENT	Pentalofos	0.73	147	P	Pg	08 18 10.4	-0.6
PENT				S	Sg	08 18 21.3	+0.6
	comp=N,832nm,0.4s						
TIR	Tirane	0.79	313	P	Pg	08 18 11.7	-0.3
TIR				S	Sg	08 18 22.6	+0.2
TIR				AML	AML	08 18 27.8	
	comp=E,1577µm,0.2s						
TIR				AML	AML	08 18 29.7	
	comp=N,1543µm,0.3s						
TIR	Tirane	0.79	313	P	Pg	08 18 12.2	+0.2
TIR				S	Sn	08 18 24.7	-0.6
	comp=N,315nm,0.2s						
TIR	Tirane	0.79	313	⇓P	Pb	08 18 12.8	+0.4
TIR				⇓S	Sn	08 18 24.9	-0.4
TIR	Tirane	0.79	313	*e*Pg	Pg	08 18 12.3	+0.2
TIR				*e*Sg	Sn	08 18 25.3	0.0
TIR	Tirane	0.79	313	P	Pg	08 18 11.4	-0.7
	baz=315						
TIR				S	Sb	08 18 23.4	+0.5
	baz=315						
TIR				AMP			
	comp=N,9µm,0.1s,baz=315						
TIR	Tirane	0.79	313	*i* Pg	Pg	08 18 12.4	+0.3
PHP	Peshkopia	0.88	351	P	Pg	08 18 12.9	-1.1
PHP				S	Sn	08 18 27.2	-0.6
PHP	Peshkopia	0.88	351	P	Pg	08 18 12.7	-1.3
	baz=353						
PHP				S	Sn	08 18 27.2	-0.6
	baz=353						
KZN	Kozani	1.01	120	P	Pb	08 18 15.4	-0.8
KZN				S	Sb	08 18 29.0	-0.5
KZN				AML	AML	08 18 34.3	
	comp=N,1672µm,0.5s						
KZN				AML	AML	08 18 36.2	
	comp=E,1335µm,0.5s						
KZN	Kozani	1.01	120	P	Pb	08 18 15.3	-0.9
KZN				S	Sg	08 18 30.0	+0.5
	comp=E,775nm,0.4s						
KPRO	Kipourio	1.02	146	P	Pb	08 18 15.7	-0.8
KPRO				AML	AML	08 18 33.7	
	comp=E,1258µm,0.4s						
KPRO				AML	AML	08 18 37.9	
	comp=N,1244µm,0.7s						
KPRO	Kipourio	1.02	146	P	Pb	08 18 15.7	-0.8
KPRO				S	Sn	08 18 31.4	+0.1
	comp=N,640nm,0.5s						
SRN	Sarande	1.04	207	P	Pb	08 18 16.6	-0.2
SRN				S	Sn	08 18 32.5	+0.8
	comp=N,438nm,0.5s						
SRN	Sarande	1.04	207	P	Pb	08 18 16.6	-0.2
	baz=207						
SRN				S	Sn	08 18 32.4	+0.8
	baz=207						
JAN	Janina	1.17	171	P	Pn	08 18 17.7	-1.3
JAN	Janina	1.17	171	P	Pn	08 18 18.8	-0.1
JAN				S	Sn	08 18 35.4	+0.7
	comp=N,565nm,0.4s						
KEK	Kerkira	1.27	210	P	Pn	08 18 20.5	+0.2
KEK	Kerkira	1.27	210	P	Pb	08 18 21.4	+0.8
KEK				S	Sg	08 18 40.7	+3.0
	comp=N,592nm,0.7s						
IGT	Igoumenitsa	1.30	190	P	Pn	08 18 20.8	+0.1
IGT	Igoumenitsa	1.30	190	P	Pn	08 18 21.1	+0.4
IGT				S	Sg	08 18 41.1	+2.4
	comp=N,355nm,0.7s						
IGT	Igoumenitsa	1.30	190	*i* Pn	Pn	08 18 21.4	+0.7
SKO	Skopje	1.31	28	*e*Pg	Pg	08 18 22.1	0.0
SKO				*e*Sg	Sg	08 18 39.4	+0.2
SKO	Skopje	1.31	28	*i* Pg	Pb	08 18 21.1	-0.2
SKO				*i* Sg	Sg	08 18 40.4	+1.2
GRG	Griva	1.36	83	P	Pn	08 18 21.3	-0.2
GRG				S	Sg	08 18 40.9	+0.3
	comp=N,415nm,0.6s						
GRG	Griva	1.36	83	*i* Pn	Pn	08 18 21.3	-0.2
STIP	Stip	1.47	53	*i* Pn	Pg	08 18 26.4	+1.3
ULC	Ulcinj	1.55	318	⇑*i*Pg	Pb	08 18 25.7	+0.3
ULC				*i* Sg	Sg	08 18 48.4	+1.6
LIT	Litokhoron	1.59	116	P	Pn	08 18 25.2	+0.5
LIT	Litokhoron	1.59	116	P	Pn	08 18 25.2	+0.5
LIT				S	Sg	08 18 47.9	-0.2
	comp=N,232nm,0.3s						
LIT	Litokhoron	1.59	116	*i* Pn	Pn	08 18 25.3	+0.5
BCI	Bajram Curri	1.61	345	P	Pb	08 18 26.8	+0.3
	baz=346						
BCI				S	Sg	08 18 50.6	+1.9
	baz=346						
THL	Klokotos Trika	1.64	139	P	Pn	08 18 26.3	+0.9
THL	Klokotos Trika	1.64	139	P	Pn	08 18 26.3	+0.9
THL				S	Sb	08 18 48.3	+0.8
	comp=N,148nm,0.6s						
DRME	Dracevica, Mon	1.75	322	*e*Pn	Pb	08 18 28.4	-0.4
DRME	Dracevica, Mon	1.75	322	⇑*i*Pn	Pb	08 18 28.6	-0.2
DRME				*i* Sn	Sg	08 18 53.2	+0.1
GJIK	Gjilan	1.76	20	*i* Pn	Pb	08 18 28.2	-0.8
SCTE	Santa Cesarea	1.80	247	P	Pn	08 18 27.7	+0.1
PVY	Plav	1.85	345	*e*Pn	Pb	08 18 30.0	-0.6
PVY				*i* Sn	Sg	08 18 55.6	-0.8
PDG	Podgorica	1.92	328	⇑P	Pn	08 18 30.5	+1.3
PDG				⇓S	Sb	08 18 55.8	+0.4
PDG	Podgorica	1.92	328	*e*Pn	Pn	08 18 30.3	+1.1
PDG	Podgorica	1.92	328	*i* Pn	Pb	08 18 31.5	-0.1
TTG	Podgorica	1.92	328	⇑*i*Pn	Pb	08 18 30.9	-0.7
TTG				*i* Sn	Sg	08 18 57.3	-1.1
BUM	Brajici-Budva	1.98	319	*e*Pn	Pb	08 18 31.8	-0.9
BUM				*i* Sn	Sb	08 18 58.8	+1.5
TSLK	Tsoukalades, L	1.98	179	P	Pb	08 18 32.9	0.0
LKD2	Lefkada island	2.02	179	P	Pb	08 18 32.7	-0.8
SOH	Sokhos	2.07	89	P	Pn	08 18 32.7	+1.2
SOH	Sokhos	2.07	89	*i* Pn	Pn	08 18 32.6	+1.2
BEY	Berane	2.13	345	*i* Pn	Pb	08 18 35.9	+0.5
IVA	Berane	2.13	345	⇑*i*Pn	Pn	08 18 33.8	+1.6
IVA				*i* Sn	Sb	08 19 02.3	+0.6
CEME	Cevo	2.15	324	⇓*i*Pn	Pn	08 18 34.3	+1.8
CEME				*i* Sn	Sb	08 19 03.1	+0.7
BOSS	Bosilegrad	2.18	39	*e*Pn	Pn	08 18 33.8	+0.9
BOSS				*e*Sg	Sg	08 19 06.9	-0.1
PLG	Polygyros	2.19	101	P	Pn	08 18 34.0	+1.0
KOME	Kolasin	2.20	338	*e*Pn	Pn	08 18 34.9	+1.7
KOME				*i* Sn	Sb	08 19 04.1	+0.4
AGG	Agios Georgios	2.22	143	P	Pn	08 18 34.1	+0.8
AGG	Agios Georgios	2.22	143	P	Pn	08 18 34.2	+0.8
AGG				S	Sb	08 19 03.0	-1.2
	comp=N,100nm,0.7s						
HCY	Herceg Novi	2.29	316	*e*Pn	Pn	08 18 35.0	+0.7
HCY	Herceg Novi	2.29	316	*e*Pn	Pn	08 18 36.1	+1.8
HCY				*i* Sn	Sb	08 19 06.3	+0.2
NKME	Niksic	2.32	328	⇑*i*Pn	Pn	08 18 36.6	+1.8
NKME				*i* Sn	Sb	08 19 07.1	0.0
NKY	Niksic	2.34	329	⇑*i*Pn	Pn	08 18 36.9	+1.7
NKY				*i* Sn	Sb	08 19 07.6	-0.3
SJES	Sjenica	2.50	349	*e*Pn	Pb	08 18 40.3	-1.3
SJES				*e*Sg	Sg	08 19 15.9	-1.2
SJES	Sjenica	2.50	349	*e*Pn	Pb	08 18 40.3	-1.3
TREB	Trebinje	2.55	319	*e*Pn	Pn	08 18 38.9	+0.9
BRY	Bratogost	2.60	324	*e*Pn	Pn	08 18 40.8	+2.0
BRY	Bratogost	2.60	324	*e*Pn	Pn	08 18 40.6	+1.8
BRY				*i* Sn	Sb	08 19 14.1	-1.4
VTS	Vitosha	2.66	46	⇓P	Pn	08 18 40.6	+1.0
VTS				⇓S	Sn	08 19 13.3	+1.6

PLE	**Pljevlja**	**2.68**	**340**	ePn	**Pn**	**08 18 41.5**	**+1.7**
PLE				i Sn	**Sb**	**08 19 15.7**	**-1.9**
NOCI	**Noci**	**2.70**	**271**	P	**Pn**	**08 18 39.5**	**-0.5**
UPM	**Unac-Piva**	**2.71**	**332**	ePn	**Pn**	**08 18 42.8**	**+2.5**
UPM	**Unac-Piva**	**2.71**	**332**	⇓iPn	**Pn**	**08 18 42.0**	**+1.7**
UPM				i Sn	**Sb**	**08 19 16.6**	**-2.0**
IVAS	**Ivanjica**	**2.79**	**353**	ePn	**Pn**	**08 18 43.8**	**+2.6**
ZAPS	**Zavoj**	**2.88**	**31**	ePn	**Pn**	**08 18 43.5**	**+1.0**
MATE	**Matera**	**2.98**	**268**	⇑P	**Pn**	**08 18 43.6**	**-0.3**
MATE				⇓S	**Sn**	**08 19 18.6**	**-0.8**
STON	**Ston**	**3.00**	**314**	ePn	**Pn**	**08 18 44.5**	**+0.5**
STON				Sn	**Sn**	**08 19 19.3**	**-0.6**
STON	**Ston**	**3.00**	**314**	ePn	**Pn**	**08 18 44.3**	**+0.2**
GRUS	**Gruza**	**3.08**	**1**	ePn	**Pn**	**08 18 46.7**	**+1.6**
BBLS	**Lazići**	**3.18**	**344**	ePn	**Pn**	**08 18 48.5**	**+1.8**
BBLS	**Lazići**	**3.18**	**344**	ePn	**Pn**	**08 18 47.7**	**+1.0**
ZAGS	**Zajecar**	**3.23**	**21**	ePn	**Pn**	**08 18 47.9**	**+0.7**
DIVS	**Divibare**	**3.32**	**352**	ePn	**Pn**	**08 18 49.6**	**+1.0**
DIVS	**Divibare**	**3.32**	**352**	ePn	**Pn**	**08 18 50.0**	**+1.4**
TIP	**Timpagrande**	**3.39**	**242**	⇓P	**Pn**	**08 18 48.6**	**-0.9**
TRUS	**Trudelj**	**3.41**	**357**	ePn	**Pn**	**08 18 51.5**	**+1.7**
HAPS	**Han Pijesak,BI**	**3.50**	**340**	ePn	**Pn**	**08 18 51.4**	**+0.3**
CUC	**Castrocucco**	**3.76**	**259**	P	**Pn**	**08 18 55.0**	**+0.4**
HVAR	**Hvar**	**3.91**	**309**	ePn	**Pn**	**08 18 56.6**	**0.0**
HVAR				Sn	**Sn**	**08 19 41.8**	**-0.5**
MDVR	**Moldovita**	**4.05**	**11**	⇑P	**Pn**	**08 18 59.6**	**+1.1**
HERR	**Herculane**	**4.28**	**17**	⇑P	**Pn**	**08 19 02.4**	**+0.7**
FRGS	**Fruska Gora**	**4.38**	**352**	ePn	**Pn**	**08 19 00.5**	**-2.6**
KIJV	**Kijevo**	**4.46**	**317**	ePn	**Pn**	**08 19 04.8**	**+0.5**
KIJV				Sn	**Sn**	**08 19 55.2**	**-0.8**
ZIRJ	**Zirje**	**4.66**	**309**	ePn	**Pn**	**08 19 06.9**	**-0.1**
ZIRJ				Sn	**Sn**	**08 20 00.4**	**-0.4**
MORI	**Morici**	**4.75**	**312**	ePn	**Pn**	**08 19 08.7**	**+0.5**
MORI				Sn	**Sn**	**08 20 03.3**	**+0.2**
GZR	**Gura Zlata**	**4.84**	**18**	⇓P	**Pn**	**08 19 10.7**	**+1.2**
BZS	**Buzias**	**4.86**	**8**	⇑P	**Pn**	**08 19 09.6**	**0.0**
MORH	**Mrgy, Hungar**	**5.59**	**346**	ePn	**Pn**	**08 19 20.5**	**+0.8**
NVLJ	**Novalja**	**5.66**	**313**	ePn	**Pn**	**08 19 21.2**	**+0.6**
NVLJ				Sn	**Sn**	**08 20 24.4**	**-1.0**
KALN	**Kalnik**	**6.12**	**332**	ePn	**Pn**	**08 19 27.7**	**+0.7**
CRES	**Cresnjev**	**6.27**	**325**	ePn	**Pn**	**08 19 28.6**	**-0.4**
CEY	**Cerknica**	**6.69**	**320**	ePn	**Pn**	**08 19 33.6**	**-1.1**

IDC 11 08:24:22.7±2.6**, 6°.43S×129°.85E, h126**^{km}±37^{km}**, mb3.1**/1**,**
mb1 3.2/4**, mb1mx3.1**/28**, mbtmp3.6**/4**, Error ellipse:**
s-maj=65.4km s-min=16.5km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.71**	**14**	P	Pn	08 25 47.2	+1.9
	1.5nm,0.3s,baz=246,slow=23,SNR=23						
SIJI				S	Sn	08 26 48.9	-0.8
	2.9nm,0.3s,baz=253,slow=23,SNR=13						
FITZ	**Fitzroy Crossi**	**12.30**	**199**	P	Pn	08 27 14.1	+0.4
	baz=25,slow=12						
FITZ				S	Sn	08 29 23.2	-6.0
	0.2nm,0.3s,baz=3.8,slow=19,SNR=1.2						
WRA	**Warramunga Arr**	**14.12**	**162**	P	Pn	08 27 35.2	-2.0
	0.5nm,0.3s,baz=339,slow=12,SNR=27						
WRA				S	Sn	08 30 03.3	-10
	0.6nm,0.3s,baz=333,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**17.57**	**168**	P	P	08 28 19.4	+0.4
	0.3nm,0.3s,baz=346,slow=9.9,SNR=32						
ASAR				S	S	08 31 29.7	-5.8
	0.1nm,0.3s,baz=352,slow=25,SNR=6.8						
MKAR	**Makanchi Array**	**67.67**	**327**	P	P	08 35 06.3	0.0
	0.3nm,0.6s,baz=119,slow=7.0,SNR=5.1						

IDC ***11*** *08:29:07.5±1.5, 2°.86S×129°.64E, h0^{km}, mb3.9/2,*
mb1 4.3/4, mb1mx3.8/29, mbtmp4.1/4, ML4.0/2, MS3.2/2,
Ms1 3.2/2, ms1mx2.7/43, Error ellipse: s-maj=45.7km
s-min=24.6km az=84.0

DJA ***11*** *08:29:11.6±0.3, 3°S±4°×13°0E±°, h10^{km}, M4.1/9, mb4.7/1,*
mB5.2/1, MLv3.8/9, Mw(mB)4.6/1

ISC 11 08:29:08.1±0.8**, 2°.63S**±0°.05×**130°.01E**±0°.04**, h10**^{km}**, n16,**
σ**1**^{s}**.15**/19**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.29**	**237**	P	**Pb**	**08 29 31.9**	**-0.6**
MSAI				S	**Sn**	**08 29 49.0**	**-0.5**
MSAI	**Masohi**	**1.29**	**237**	P	**Pb**	**08 29 31.8**	**-0.7**
MSAI				S	**Sg**	**08 29 51.0**	**+1.3**
BNDI	**Bandanaira**	**1.88**	**183**	P	**Pg**	**08 29 45.0**	**+0.9**
BNDI	**Bandanaira**	**1.88**	**183**	P	**Pb**	**08 29 42.2**	**-0.3**
SIJI	**Sorong**	**2.16**	**36**	Pn	**Pg**	**08 29 49.8**	**+0.3**
	75nm,0.3s,baz=258,slow=19,SNR=112						
SIJI				Sn	**Sg**	**08 30 18.4**	**+0.9**
	20nm,0.3s,baz=234,slow=17,SNR=11						
SIJI				LR	LR	08 31 04.2	
	comp=Z,290nm,21.6s,baz=350,slow=46						
SWI	**Sorong**	**2.16**	**35**	P	**Pg**	**08 29 49.9**	**+0.4**
FAKI	**Fak Fak**	**2.25**	**97**	P	**Pg**	**08 29 52.1**	**+0.8**
FAKI	**Fak Fak**	**2.25**	**97**	P	**Pg**	**08 29 51.0**	**-0.3**
FAKI				S	**Sg**	**08 30 21.3**	**+0.7**
NLAI	**Namlea**	**2.97**	**258**	P	**Pn**	**08 29 56.0**	**+0.8**
SANI	**Sanana**	**4.06**	**278**	P	**Pn**	**08 30 08.2**	**-2.1**
APSI	**Ampana**	**8.53**	**281**	P	**Pn**	**08 31 10.5**	**-1.2**
WRA	**Warramunga Arr**	**17.72**	**167**	P	**Pn**	**08 33 12.8**	**-2.3**
	0.4nm,0.3s,baz=345,slow=12,SNR=12						
STKI	**Sintang**	**18.72**	**278**	P	**Pn**	**08 33 28.9**	**+1.5**
ASAR	**Alice Springs**	**21.25**	**170**	P	**P**	**08 33 54.5**	**-0.1**
	6.3nm,0.6s,baz=352,slow=11,SNR=37						
LEM	**Lembang**	**22.70**	**259**	LR	LR	08 43 26.5	
	comp=Z,117nm,20.4s,baz=212,slow=38						
MKAR	**Makanchi Array**	**64.62**	**326**	P	**P**	**08 39 47.0**	**+1.1**
	0.3nm,0.4s,baz=117,slow=7.7,SNR=8.2						

MOS ***11*** *08:39:24.2±1.0, 3°.55S×154°.34E, h50^{km}, mb5.3/43, Error*
ellipse: s-maj=8.9km s-min=6.2km az=105.9

DJA ***11*** *08:39:25.6±0.5, 4°S±3°×15°4E±°, h50^{km}±4^{km}, M5.3/45,*
mB5.7/13, mb5.3/45, MLv5.4/2, Mw(mB)5.2/13

GCMT ***11*** *08:39:25.5±0.2, 3°.52S±0°.01×154°.34E±0°.01, h20^{km},*
MW5.0/102, Moment Tensor Solution. s48,c56;
s102,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}1.93±.15; $M_{\theta\theta}$-0.48±.11; $M_{\phi\phi}$-1.45±.12; $M_{r\theta}$-1.74±.24;
$M_{\theta\phi}$3.57±.09; $M_{\phi r}$-1.03±.20; Best double couple:
$M_0$4.45000×10^{16} NP1:ϕ_s176.00000°, δ60.00000°,
λ152.00000°. NP2:ϕ_s282.00000°, δ66.00000°, λ33.00000°.
Principal axes: T 4.3080, Plg40.0000°, Azm141.0000°;
N 0.2800, Plg50.0000°, Azm314.0000°; P -4.5920,
Plg4.0000°, Azm48.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

NOU ***11*** *08:39:25.1, 3°.28S×154°.24E, h57^{km}, mb5.4, North of*
Solomon Islands

IDC ***11*** *08:39:25.3±1.4, 3°.56S×154°.25E, h48^{km}±13^{km}, mb4.5/28,*
mb1 4.6/31, mb1mx4.5/39, mbtmp4.7/31, ML2.0/1, MS4.1/22,
Ms1 4.1/22, ms1mx4.1/30, Error ellipse: s-maj=10.6km
s-min=9.1km az=99.0

NEIC ***11*** *08:39:26.5±1.6, 3°.58S±0°.09×154°.30E±0°.07, h57^{km}±3^{km},*
mb5.1/86, Error ellipse: s-maj=13.6km s-min=10.0km
az=196.0

ISC 11 08:39:24.1±0.3**, 3°.56S**±0°.04×**154°.36E**±0°.04**, h35**^{km}**, n427,**
σ**1**^{s}**.49**/419**, mb5.1**/123**, MS4.2**/29**, 16C-14D, North of**
Solomon Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.28**	**254**	P	**Pn**	**08 39 59.7**	**+0.4**
KRVT	**Keravat (AS076**	**2.44**	**252**	P	**Pn**	**08 40 01.1**	**-0.5**
	384nm,0.3s,baz=157,slow=0.2,SNR=130						
KRVT				LR	LR	08 40 29.5	
	comp=Z,3μm,18.4s,baz=140,slow=27						
KRVT				S	**Sn**	**08 40 30.6**	**+0.4**
	364nm,0.3s,baz=350,slow=22,SNR=6.7						
HNR	**Honiara**	**8.05**	**137**	P	**Pn**	**08 41 20.1**	**+1.4**
	59nm,0.3s,baz=269,slow=2.6,SNR=26						
HNR				S	**Sn**	**08 42 53.2**	**+4.6**
	29nm,0.3s,baz=38,slow=23,SNR=1.7						
HNR				LR	LR	08 44 45.7	
	comp=Z,3μm,19.7s,baz=284,slow=39						
HNR	**Honiara**	**8.05**	**137**	P	**Pn**	**08 41 21.8**	**+3.1**
PMG	**Port Moresby**	**9.21**	**231**	P	**Pn**	**08 41 34.1**	**-0.5**
	0.9nm,0.3s,baz=59,slow=0.6,SNR=2.4						
PMG				S	**Sn**	**08 43 18.3**	**+1.1**
	2.8nm,0.3s,baz=102,slow=15,SNR=4.4						
PMG	**Port Moresby**	**9.21**	**231**	⇑eP	**Pn**	**08 41 38.8**	**+4.2**
PMG	**Port Moresby**	**9.21**	**231**	Pn	**Pn**	**08 41 36.8**	**+2.1**
PMG	**Port Moresby**	**9.21**	**231**	P	**Pn**	**08 41 37.9**	**+3.3**
JAY	**Jayapura**	**13.68**	**274**	P	**Pn**	**08 42 36.0**	**+0.2**
	42nm,1.0s						
GENI	**Genyem**	**14.20**	**273**	P	**Pn**	**08 42 45.1**	**+2.2**
SMPI	**Sarmi**	**15.71**	**275**	P	**P**	**08 43 05.1**	**-1.5**
	7μm776nm,1.2s						
CTA	**Charters Tower**	**18.23**	**205**	P	**Pn**	**08 43 36.2**	**+1.7**
	0.8nm,0.3s,baz=32,slow=12,SNR=23						
CTAO	**Charters Tower**	**18.23**	**205**	P	**Pn**	**08 43 37.5**	**+2.9**
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
CTAO	**Charters Tower**	**18.23**	**205**		**Pn**	**08 43 37.5**	**+2.9**
GUMO	**Guam**	**19.47**	**331**	P	**Pn**	**08 43 52.5**	**+3.0**
	comp=Z,5.2nm,0.3s,baz=127,slow=9.4,SNR=2.3						
GUMO				LR	LR	08 50 52.1	
	comp=Z,96nm,18.1s,baz=146,slow=35						
NOUC	**Port Laguerre**	**21.77**	**149**	P	**P**	**08 44 13.8**	**+0.8**
DZM	**Mont Dzumac**	**21.82**	**149**	P	**P**	**08 44 14.7**	**+1.1**
	comp=Z,59nm,0.9s,baz=324,slow=8.7,SNR=22						
DZM				LR	LR	08 51 54.4	
	comp=Z,827nm,19.5s,baz=335,slow=34						
DZM	**Mont Dzumac**	**21.82**	**149**	eP	**P**	**08 44 14.2**	**+0.6**
	comp=Z,131nm,0.9s						
DZM				eLQ	LQ	08 48 40.3	
	comp=Z,2μm,28.6s						
DZM				eLR	LR	08 49 33.7	
	comp=Z,1μm,26.4s						
DZM	**Mont Dzumac**	**21.82**	**149**	P	**P**	**08 44 14.8**	**+1.2**
EIDS	**Eidsvold**	**21.91**	**188**	P	**P**	**08 44 12.6**	**-1.9**
	baz=22,SNR=6.5						
YATNC	**Mamie plateau,**	**22.05**	**148**	P	**P**	**08 44 19.4**	**+3.5**
FAKI	**Fak Fak**	**22.09**	**271**	P	**P**	**08 44 15.5**	**-1.0**
FAKI	**Fak Fak**	**22.09**	**271**	P	**P**	**08 44 15.9**	**-0.6**
	comp=Z,110nm,0.8s						
QIS	**Mount Isa**	**22.18**	**219**	P	**P**	**08 44 17.7**	**+0.3**
	baz=22,SNR=24						
OUENC	**Ouen Island, N**	**22.31**	**148**	P	**P**	**08 44 19.8**	**+1.0**
SIJI	**Sorong**	**23.23**	**276**	P	**P**	**08 44 28.5**	**0.0**
	comp=Z,28nm,0.6s,baz=66,slow=8.3,SNR=9.5						
SIJI				LR	LR	08 52 17.2	
	comp=Z,1μm,21.8s,baz=58,slow=33						
SWI	**Sorong**	**23.24**	**276**	P	**P**	**08 44 29.0**	**+0.5**
	comp=Z,107nm,0.8s						
RMQ	**Roma**	**23.42**	**193**	P	**P**	**08 44 30.7**	**+0.5**
	baz=23,SNR=24						
KDU	**Kakadu**	**23.47**	**246**	P	**P**	**08 44 28.9**	**-1.8**
	baz=24,SNR=19						
MTN	**Manton Dam**	**24.75**	**247**	P	**P**	**08 44 41.9**	**-0.7**
	baz=25,SNR=14						
QLP	**Quilpie**	**24.86**	**202**	P	**P**	**08 44 43.7**	**+0.2**
	baz=25,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**25.06**	**29**	T	T	09 10 29.1	
	baz=210,slow=76,SNR=4145						
H11S2	**WAKE ISLAND Hy**	**25.06**	**29**	T	T	09 10 25.0	
	baz=210,slow=76,SNR=1327						
H11S1	**WAKE ISLAND Hy**	**25.07**	**29**	T	T	09 10 27.0	
	baz=210,slow=76,SNR=1230						
WB0	**Warramunga Arr**	**25.28**	**229**	P	**P**	**08 44 47.9**	**+0.4**
WR0	**Warramunga Arr**	**25.29**	**228**	P	**P**	**08 44 47.8**	**+0.3**
WRAB	**Tennant Creek**	**25.41**	**229**	deP	**P**	**08 44 48.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,112nm,1.0s						
WRAB	**Tennant Creek**	**25.41**	**229**	P	**P**	**08 44 49.3**	**+0.6**
WB2	**Warramunga Arr**	**25.42**	**229**	P	**P**	**08 44 48.8**	**+0.1**
WRA	**Warramunga Arr**	**25.43**	**229**	P	**P**	**08 44 48.4**	**-0.4**
	comp=Z,32nm,0.5s,baz=50,slow=9.8,SNR=164						
WRA				PcP	**PcP**	**08 48 20.8**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=45,slow=2.3,SNR=3.3						
WRA				S	**S**	**08 49 12.1**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=41,slow=15,SNR=2.5						
WRA				LR	LR	08 56 01.8	
	comp=Z,412nm,19.2s,baz=45,slow=39						
WRA	**Warramunga Arr**	**25.43**	**229**	P	**P**	**08 44 48.0**	**-0.8**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**25.43**	**229**	P	**P**	**08 44 48.0**	**-0.8**
ARMA	**Armidale**	**26.84**	**185**	P	**P**	**08 45 02.1**	**+0.6**
	baz=27,SNR=15						
MSVF	**Nonsavu**	**27.16**	**123**	P	**P**	**08 45 04.8**	**+0.3**
	comp=Z,28nm,0.8s,baz=257,slow=7.6,SNR=13						
MSVF				LR	LR	08 54 56.7	
	comp=Z,887nm,18.6s,baz=309,slow=34						
MSVF	**Nonsavu**	**27.16**	**123**	⇑eP	**P**	**08 45 04.9**	**+0.3**
MSVF				pmax	pmax		
	comp=Z,52nm,1.0s						
MSVF	**Nonsavu**	**27.16**	**123**	P	**P**	**08 45 05.1**	**+0.6**
MSVF				IAmb	IAmb	08 45 07.4	
	comp=Z,44nm,1.0s						
MSVF	**Nonsavu**	**27.16**	**123**	P	**P**	**08 45 06.7**	**+2.2**
AS31	**Alice Springs**	**28.11**	**223**	P	**P**	**08 45 12.3**	**-0.6**
ASAR	**Alice Springs**	**28.11**	**223**	P	**P**	**08 45 12.2**	**-0.7**
	comp=Z,14nm,0.6s,baz=52,slow=8.5,SNR=71						
ASAR				S	**S**	**08 49 53.8**	**-2.2**
	comp=Z,10nm,0.9s,baz=46,slow=14,SNR=8.6						
ASAR				LR	LR	08 55 21.4	
	comp=Z,270nm,21.5s,baz=314,slow=34						
ASAR	**Alice Springs**	**28.11**	**223**	P	**P**	**08 45 11.1**	**-1.9**
ASAR	**Alice Springs**	**28.11**	**223**	P	**P**	**08 45 11.1**	**-1.9**
SANI	**Sanana**	**28.38**	**272**	P	**P**	**08 45 14.1**	**-1.3**
	comp=Z,47nm,0.9s						
MGCD	**Mangrove Creek**	**29.65**	**186**	P	**P**	**08 45 27.4**	**+0.9**
	baz=30,SNR=7.0						
STKA	**Stephens Creek**	**30.62**	**202**	P	**P**	**08 45 34.5**	**-0.6**
	baz=31,SNR=16						
STKA	**Stephens Creek**	**30.62**	**202**	P	**P**	**08 45 34.1**	**-0.9**
	comp=Z,15nm,0.8s,baz=16,slow=8.6,SNR=25						
STKA				LR	LR	08 58 10.5	
	comp=Z,163nm,18.4s,baz=9.2,slow=37						
STKA	**Stephens Creek**	**30.62**	**202**	c iP	**P**	**08 45 34.3**	**-0.8**
STKA	**Stephens Creek**	**30.62**	**202**	P	**P**	**08 45 34.8**	**-0.3**
BATI	**Baumata**	**31.16**	**256**	LR	LR	09 00 12.1	
	comp=Z,902nm,20.7s,baz=97,slow=40						
FITZ	**Fitzroy Crossi**	**31.61**	**241**	P	**P**	**08 45 42.9**	**-1.1**
	baz=32,SNR=21						
FITZ	**Fitzroy Crossi**	**31.61**	**241**	P	**P**	**08 45 42.5**	**-1.5**
	comp=Z,9.9nm,0.6s,baz=53,slow=9.3,SNR=20						
FITZ				LR	LR	09 00 03.0	
	comp=Z,366nm,18.6s,baz=40,slow=39						
CNB	**Canberra Magne**	**31.93**	**188**	P	**P**	**08 45 46.4**	**-0.3**
	baz=32,SNR=5.4						
CAN	**Canberra**	**31.99**	**188**	P	**P**	**08 45 47.5**	**+0.3**
CAN				pmax	pmax		
	comp=Z,49nm,1.0s						
CAN	**Canberra**	**31.99**	**188**	P	**P**	**08 45 47.5**	**+0.3**
APSI	**Ampana**	**32.79**	**274**	P	**P**	**08 45 55.3**	**+0.9**
	comp=Z,43nm,0.9s						
EDFI	**Ende, Flores**	**32.87**	**259**	P	**P**	**08 45 53.7**	**-1.6**
	comp=Z,30nm,1.0s						
HTT	**Hallett**	**33.03**	**204**	P	**P**	**08 45 56.1**	**-0.2**
	baz=33,SNR=32						
BBOO	**Buckleboo**	**33.77**	**208**	P	**P**	**08 46 01.8**	**-0.9**
	baz=34,SNR=9.1						
BNSI	**Bone**	**34.18**	**267**	P	**P**	**08 46 06.7**	**+0.2**
	comp=Z,34nm,0.9s						
TTSI	**Tana Toraja**	**34.49**	**270**	P	**P**	**08 46 08.9**	**-0.3**
	comp=Z,32nm,0.9s						
SPSI	**Sidrap Palu**	**34.52**	**268**	P	**P**	**08 46 08.2**	**-1.2**
	comp=Z,1μmcomp=Z,34nm,0.8s						
KAPI	**Kappang**	**34.54**	**266**	P	**P**	**08 46 07.9**	**-1.8**
	comp=Z,8.4nm,0.6s,baz=62,slow=8.2,SNR=2.1						
MPSI	**Mapaga**	**34.66**	**276**	P	**P**	**08 46 09.5**	**-1.2**
	comp=Z,47nm,0.7s						
AFI	**Afiamalu**	**34.96**	**109**	P	**P**	**08 46 12.9**	**-0.4**
	comp=Z,30nm,0.9s,baz=283,slow=14,SNR=3.9						
AFI	**Afiamalu**	**34.96**	**109**	P	**P**	**08 46 13.3**	**0.0**
AFI				pmax	pmax		
	comp=Z,41nm,1.1s						
AFI	**Afiamalu**	**34.96**	**109**	P	**P**	**08 46 13.3**	**0.0**
FORT	**Forrest**	**36.73**	**220**	P	**P**	**08 46 27.6**	**-0.6**
	baz=37,SNR=16						
BBKI	**Banjar Baru**	**39.44**	**269**	P	**P**	**08 46 49.2**	**-2.2**
URZ	**Urewera**	**40.30**	**152**	P	**P**	**08 46 58.8**	**+0.7**
	comp=Z,64nm,0.8s,baz=342,slow=5.0,SNR=39						
URZ				LR	LR	09 01 29.4	
	comp=Z,446nm,22.0s,baz=30,slow=33						
QRZ	**Quartz Range**	**40.55**	**159**	P	**P**	**08 47 02.6**	**+2.5**
DUWZ	**D'Urville Isla**	**41.05**	**157**	P	**P**	**08 47 06.5**	**+2.2**
DSZ	**Denniston Nort**	**41.11**	**160**	P	**P**	**08 47 08.9**	**+4.1**
MEEK	**Meekatharra**	**41.19**	**233**	P	**P**	**08 47 04.5**	**-1.2**
	baz=41,SNR=42						
NNZ	**Nelson**	**41.20**	**158**	P	**P**	**08 47 02.1**	**-3.4**
KMBL	**Kambalda**	**41.22**	**224**	P	**P**	**08 47 05.1**	**-0.8**
	baz=41,SNR=12						
THZ	**Tophouse**	**41.51**	**159**	P	P	08 46 56.9	-11
TUWZ	**Tuamarina**	**41.60**	**158**	P	P	08 46 54.9	-14
CAW	**Cannon Point**	**41.76**	**156**	P	**P**	**08 47 11.6**	**+1.5**
SNZO	**South Karori**	**41.79**	**157**	P	**P**	**08 47 11.5**	**+1.2**
BHW	**Baring Head**	**41.94**	**157**	P	**P**	**08 47 12.7**	**+1.1**
MSWZ	**Moikau Station**	**42.10**	**156**	P	**P**	**08 47 14.3**	**+1.5**
PAWZ	**Paruwai Farm**	**42.14**	**156**	P	**P**	**08 47 15.1**	**+1.9**
PLWZ	**Palliser**	**42.23**	**157**	P	**P**	**08 47 15.1**	**+1.1**
SBUM	**Sibu**	**42.54**	**277**	P	P	08 47 24.0	+7.1
MJAR	**Matsushiro Arr**	**42.65**	**341**	P	**P**	**08 47 16.4**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=98,slow=10.0,SNR=2.6						
MJAR				PcP	**PcP**	**08 49 08.7**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=159,slow=2.5,SNR=2.9						
MJAR				LR	LR	09 05 43.4	
	comp=Z,113nm,18.1s,baz=220,slow=37						
MJAR	**Matsushiro Arr**	**42.65**	**341**	P	**P**	**08 47 17.1**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MJAR	**Matsushiro Arr**	**42.65**	**341**	P	**P**	**08 47 17.1**	**-0.3**
MAT	**Matsushiro**	**42.65**	**341**	P	**P**	**08 47 16.6**	**-0.8**
JNU	**Nakatsue**	**42.72**	**330**	P	**P**	**08 47 15.5**	**-2.6**
	comp=Z,20nm,1.2s,baz=141,slow=11,SNR=2.2						
GIRL	**Giralia**	**43.23**	**240**	P	**P**	**08 47 23.2**	**+0.9**
	baz=43,SNR=4.0						
OKCZ	**Okains Bay**	**43.29**	**160**	P	**P**	**08 47 18.0**	**-4.5**
KLBR	**Kellerberrin**	**44.28**	**227**	P	**P**	**08 47 29.6**	**-1.1**
	baz=44,SNR=15						
KSM	**Kuching**	**44.31**	**276**	P	P	08 47 37.0	+5.8
MORW	**Morawa**	**44.33**	**231**	P	**P**	**08 47 29.5**	**-1.6**
	baz=44,SNR=5.6						
BLDU	**Ballidu**	**44.56**	**229**	P	**P**	**08 47 31.6**	**-1.3**
	baz=45,SNR=6.4						
NWAO	**Narrogin (SRO)**	**45.36**	**226**	P	**P**	**08 47 38.2**	**-1.0**
	comp=Z,7.7nm,0.9s,baz=150,slow=7.0,SNR=2.0						
NWAO	**Narrogin (SRO)**	**45.36**	**226**	P	**P**	**08 47 38.8**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,18nm,1.0s						
NWAO	**Narrogin (SRO)**	**45.36**	**226**	P	**P**	**08 47 38.8**	**-0.4**
NWAO				IAmb	IAmb	08 48 07.1	
	comp=Z,18nm,1.0s						
KPJI	**Karang Pucung**	**45.36**	**263**	P	**P**	**08 47 38.1**	**-1.4**
	comp=Z,68nm,1.3s						
MUN	**Mundaring**	**45.61**	**227**	P	**P**	**08 47 40.5**	**-0.7**
	baz=46,SNR=4.0						
CISI	**Cisompet, Garu**	**46.48**	**263**	P	**P**	**08 47 48.6**	**+0.2**
	comp=Z,3μmcomp=Z,244nm,0.9s						
TJN	**Taejon**	**47.06**	**330**	⇑eP	**P**	**08 47 56.3**	**+3.8**
KSRS	**Korea Array**	**47.63**	**331**	P	**P**	**08 47 56.3**	**-0.6**
	comp=Z,14nm,0.8s,baz=147,slow=7.8,SNR=26						
KSRS				LR	LR	09 04 57.5	
	comp=Z,246nm,22.0s,baz=136,slow=32						
KSAR	**Wonju Array Be**	**47.64**	**331**	P	**P**	**08 47 57.7**	**+0.7**
KSAR	**Wonju Array Be**	**47.64**	**331**	P	**P**	**08 47 57.7**	**+0.7**
KS19	**Wonju Array Si**	**47.70**	**331**	P	**P**	**08 47 58.0**	**+0.6**
KS19				IAmb	IAmb	08 48 05.2	
	comp=Z,26nm,0.9s						
INCN	**Inchon**	**48.28**	**330**	P	**P**	**08 48 03.9**	**+1.9**
INCN				pmax	pmax		
	comp=Z,120nm,1.2s						
INCN	**Inchon**	**48.28**	**330**	P	**P**	**08 48 03.9**	**+1.9**
CGJI	**Cibinong**	**48.55**	**264**	P	**P**	**08 48 03.6**	**-0.9**
	comp=Z,93nm,0.9s						
NJ2	**Nanjing**	**48.90**	**319**	eP	**P**	**08 48 09.2**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,370nm,17.5s						
NJ2				LR	LR		
	comp=Z,500nm,17.1s						
NJ2				LR	LR		
	comp=Z,410nm,14.9s						
MDSI	**Maura Dua**	**50.06**	**267**	P	**P**	**08 48 15.6**	**-0.4**
	comp=Z,19nm,1.1s						
WHN	**Wuhan**	**51.07**	**315**	⇑P	P	08 48 35.1	+12
YSS	**Yuzh-Sakhalins**	**51.33**	**350**	⇑eP	**P**	**08 48 24.9**	**-0.1**
YSS				pmax	pmax		
	comp=Z,40nm,1.7s						
USA0B	**Ussuriysk Arra**	**51.61**	**340**	⇓eP	**P**	**08 48 28.0**	**+0.9**
USA0B	**Ussuriysk Arra**	**51.61**	**340**	P	**P**	**08 48 28.1**	**+1.0**
USA0B				IAmb	IAmb	08 48 43.0	
	comp=Z,23nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.61**	**340**	P	**P**	**08 48 26.6**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=134,slow=4.2,SNR=4.7						
USRK	**Ussuriysk Ar.**	**51.61**	**340**	P	**P**	**08 48 26.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**51.61**	**340**	P	**P**	**08 48 26.8**	**-0.3**
SDSI	**Sungai Dareh**	**52.95**	**272**	P	**P**	**08 48 36.4**	**-1.2**
	comp=Z,40nm,0.8s						
CN2	**Changchun**	**53.84**	**334**	eP	**P**	**08 48 46.6**	**+3.0**
IPM	**Ipoh**	**53.88**	**278**	P	P	08 48 51.0	+6.5
PDSI	**Padang**	**53.91**	**271**	P	**P**	**08 48 42.6**	**-2.2**
	comp=Z,2μmcomp=Z,35nm,0.7s						
KHLU	**Kahalu`u**	**54.02**	**63**	P	**P**	**08 48 45.7**	**+0.2**
SKR	**Severo-Kuril's**	**54.05**	**1**	eP	**P**	**08 48 45.0**	**0.0**
SKR				pmax	pmax		
	comp=Z,200nm,4.3s						
SKR				MLR	MLR		
	comp=Z,200nm,18.0s						
KULM	**Kulim**	**54.37**	**279**	P	P	08 48 54.0	+6.0
ENH	**Enshi**	**54.48**	**311**	P	**P**	**08 48 48.5**	**-0.1**
GYA	**Guiyang**	**54.91**	**306**	⇑P	P	08 48 57.9	+6.0
GYA				S	**S**	**08 56 32.1**	**+0.6**
GYA				pmax	pmax		
	comp=Z,18nm,0.8s						
GYA				pmax	pmax		
	comp=Z,180nm,3.5s						
GYA				LR	LR		
	comp=Z,280nm,20.0s						
MNSI	**Mandailing Nat**	**54.92**	**273**	P	**P**	**08 48 51.0**	**-1.0**
TYV	**Tymovskoe**	**55.14**	**351**	eP	P	08 49 00.7	+7.8
TYV				pmax	pmax		
	comp=Z,18nm,0.7s						
TYV				pmax	pmax		
	comp=Z,600nm,5.9s						
BJI	**Beijing**	**55.75**	**325**	P	P	08 49 02.4	+4.9
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	**Kul'dur**	**56.12**	**342**	⇓iP	**P**	**08 49 00.0**	**0.0**
KLR				pmax	pmax		
	comp=Z,24nm,0.9s						
PEA0B	**Petropavlovsk-**	**56.53**	**2**	⇓eP	**P**	**08 49 03.4**	**+0.5**
PETK	**Petropavlovsk-**	**56.53**	**2**	P	**P**	**08 49 03.2**	**+0.4**
	comp=Z,15nm,0.8s,baz=160,slow=4.5,SNR=16						
PETK				LR	LR	09 09 20.5	
	comp=Z,163nm,20.9s,baz=172,slow=32						
PETK	**Petropavlovsk-**	**56.53**	**2**	P	**P**	**08 49 03.5**	**+0.6**
PETK	**Petropavlovsk-**	**56.53**	**2**	P	**P**	**08 49 03.5**	**+0.6**
PPT	**Papeete**	**56.63**	**109**	LR	LR	09 10 07.7	
	comp=Z,148nm,19.3s,baz=274,slow=32						
PPT2	**Papeete2**	**56.63**	**109**	eS	**S**	**08 56 46.2**	**-8.4**
	comp=Z,102nm,27.0s						
PPT2				eLQ	LQ	09 03 17.3	
	comp=Z,267nm,27.0s						
PPT2				eLR	LR	09 05 43.3	
	comp=Z,330nm,25.8s						
XAN	**Xi'an**	**56.83**	**315**	P	**P**	**08 49 09.5**	**+4.1**
XAN				pP	sP	08 49 25.2	+6.1
XAN				sP	pwP	08 49 32.1	+14
XAN				pmax	pmax		
	comp=Z,17nm,0.7s						
XAN				pmax	pmax		
	comp=Z,73nm,3.5s						
XAN				LR	LR		
	comp=Z,360nm,17.9s						
XAN				LR	LR		
	comp=Z,360nm,22.8s						
XAN				LR	LR		
	comp=Z,410nm,23.0s						
GSI	**Gunungsitoli**	**56.96**	**274**	P	**P**	**08 49 07.4**	**+0.7**
	comp=Z,47nm,0.9s						
KMI	**Kunming**	**57.61**	**303**	⇓eP	**P**	**08 49 12.8**	**+1.5**
KMI				pP	pwP	08 49 32.9	+7.4
KMI				sP	sP	08 49 40.6	+16
KMI				S	**S**	**08 57 04.3**	**-3.3**
KMI				sS	sS	08 57 38.6	+15
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,99nm,4.2s						
KMI				LR	LR		
	comp=Z,170nm,4.8s						
KMI				LR	LR		
	comp=Z,180nm,5.0s						
KMI				LR	LR		
	comp=Z,290nm,19.3s						
TBI	**Tubuai**	**57.66**	**115**	eS	**S**	**08 57 00.4**	**-7.5**
	comp=Z,68nm,30.2s						

TBI				*e*LR	LR	09 06 17.7	
	comp=Z,158nm,29.5s						
CMAR	**Chiang Mai Arr**	**58.78**	**294**	P	**P**	**08 49 19.7**	**+0.3**
	comp=Z,3.0nm,0.4s,baz=56,slow=6.8,SNR=2.7						
CMAR				LR	LR	09 14 15.0	
	comp=Z,98nm,19.2s,baz=188,slow=36						
CMAR	**Chiang Mai Arr**	**58.78**	**294**	P	**P**	**08 49 20.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**58.78**	**294**	P	**P**	**08 49 20.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**58.98**	**323**	*e*P	**P**	**08 49 20.6**	**+0.1**
HHC				pP	sP	08 49 34.0	-0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
CD2	**Chengdu**	**59.14**	**309**	P	**P**	**08 49 21.6**	**-0.1**
CD2				pmax	pmax		
	comp=Z,80nm,0.8s						
BTO	**Baotou**	**59.77**	**322**	*e*P	P	08 49 32.0	+6.1
ZEA	**Zeya**	**61.44**	**342**	*e*P	**P**	**08 49 37.6**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	**Lanzhou**	**61.45**	**315**	⇓P	**P**	**08 49 40.8**	**+3.2**
LZH				pP	sP	08 50 00.1	+8.8
LZH				PP	PP	08 52 02.6	+9.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,60nm,4.9s						
LZH				LR	LR		
	comp=Z,100nm,16.2s						
LZH				LR	LR		
	comp=Z,130nm,17.9s						
LZH				LR	LR		
	comp=Z,170nm,18.4s						
MA2	**Magadan**	**63.01**	**358**	⇓*e*P	**P**	**08 49 46.1**	**-1.2**
MA2				pmax	pmax		
	comp=Z,19nm,0.8s						
MA2	**Magadan**	**63.01**	**358**	P	**P**	**08 49 46.4**	**-0.9**
TAOE	**Nuku Hiva Isla**	**65.25**	**98**	*e*LR	LR	09 09 35.8	
	comp=Z,238nm,22.9s						
TAOE	**Nuku Hiva Isla**	**65.25**	**98**	*e*T	T	10 00 37.0	
	comp=Z,31nm,0.3s						
ULN	**Ulaanbaatar**	**65.79**	**327**	⇑*i*P	**P**	**08 50 06.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,20nm,1.0s						
ULN	**Ulaanbaatar**	**65.79**	**327**	P	**P**	**08 50 06.3**	**+0.3**
ULN				IAmb	IAmb	08 50 15.1	
	comp=Z,27nm,1.1s						
GTA	**Gaotai**	**65.83**	**316**	⇑P	**P**	**08 50 06.9**	**+0.6**
GTA				pP	sP	08 50 26.6	+6.5
GTA				sP	PcP	08 50 35.3	-1.9
GTA				S	**S**	**08 58 46.4**	**-4.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,6.9s						
GTA				LR	LR		
	comp=Z,260nm,17.5s						
GTA				LR	LR		
	comp=Z,250nm,20.0s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
SONM	**Songino Array**	**66.13**	**327**	P	**P**	**08 50 07.8**	**-0.3**
	comp=Z,6.5nm,0.9s,baz=144,slow=4.7,SNR=17						
SONM				LR	LR	09 20 05.4	
	comp=Z,154nm,18.2s,baz=108,slow=37						
SONM	**Songino Array**	**66.13**	**327**	P	**P**	**08 50 08.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,18nm,0.8s						
SONM	**Songino Array**	**66.13**	**327**	P	**P**	**08 50 08.3**	**+0.2**
SEY	**Seymchan**	**66.33**	**359**	⇑*e*P	**P**	**08 50 08.6**	**-0.3**
YAK	**Yakutsk**	**68.09**	**348**	⇑*e*P	**P**	**08 50 20.7**	**+0.6**
YAK				pmax	pmax		
	comp=Z,31nm,1.7s						
YAK	**Yakutsk**	**68.09**	**348**	P	**P**	**08 50 20.7**	**+0.6**
LSA	**Lhasa**	**68.84**	**304**	P	**P**	**08 50 26.0**	**0.0**
LSA				pmax	pmax		
	comp=Z,18nm,0.6s						
LSA	**Lhasa**	**68.84**	**304**	P	**P**	**08 50 27.2**	**+1.2**
LSA				pmax	pmax		
	comp=Z,25nm,0.9s						
LSA	**Lhasa**	**68.84**	**304**	P	**P**	**08 50 27.2**	**+1.2**
LSA				IAmb	IAmb	08 50 36.2	
	comp=Z,24nm,0.9s						
BOD	**Bodaibo**	**69.21**	**338**	*e*P	**P**	**08 50 26.9**	**-0.2**
BOD				pmax	pmax		
	comp=Z,20nm,1.5s						
ZAK	**Zakamensk**	**69.27**	**328**	*e*P	**P**	**08 50 27.5**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s						
CASY	**Casey**	**69.65**	**197**	P	**P**	**08 50 29.2**	**-0.5**
TLY	**Talaya**	**69.81**	**329**	⇑*e*P	**P**	**08 50 30.6**	**-0.4**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TAPN	**Taplejung**	**71.11**	**300**	*e*P	**P**	**08 50 40.1**	**+0.2**
	comp=Z,103nm,1.0s						
MOY	**Mondy**	**71.18**	**328**	*e*P	**P**	**08 50 39.2**	**-0.3**
MOY				pmax	pmax		
	comp=Z,41nm,1.8s						
ODAN	**Odare**	**71.27**	**300**	*e*P	**P**	**08 50 41.8**	**+1.1**
	comp=Z,112nm,1.2s						
GUN	**Gumba**	**72.83**	**300**	*e*P	**P**	**08 50 50.2**	**0.0**
	comp=Z,157nm,1.2s						
PKI	**Pulchoki**	**73.15**	**300**	*e*P	**P**	**08 50 52.8**	**+0.7**
	comp=Z,23nm,0.7s						
PKIN	**Phulchoki**	**73.17**	**300**	*e*P	**P**	**08 50 52.9**	**+0.8**
	comp=Z,14nm,0.6s						
GKN	**Gorkha**	**73.92**	**300**	*e*P	**P**	**08 50 56.9**	**+0.5**
	comp=Z,176nm,1.4s						
VNDA	**Vanda**	**74.01**	**178**	P	**P**	**08 50 55.7**	**0.0**
	comp=Z,4.3nm,0.9s,baz=316,slow=5.4,SNR=16						
VNDA				LR	LR	09 17 31.0	
	comp=Z,91nm,20.5s,baz=328,slow=31						
VNDA	**Vanda**	**74.01**	**178**	P	**P**	**08 50 55.9**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VNDA	**Vanda**	**74.01**	**178**	P	**P**	**08 50 55.9**	**+0.1**
DANN	**Dangsing**	**74.75**	**300**	*e*P	**P**	**08 51 01.5**	**+0.1**
	comp=Z,26nm,0.7s						
KOLN	**Koldanda**	**74.76**	**300**	*e*P	**P**	**08 51 01.5**	**+0.1**
	comp=Z,166nm,1.6s						
WMQ	**Urumqi**	**75.90**	**317**	*e*P	**P**	**08 51 08.6**	**+1.2**
WMQ				pP	sP	08 51 28.1	+6.9
WMQ				sP	pwP	08 51 35.7	+15
WMQ				pmax	pmax		
	comp=Z,27nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,430nm,6.5s						
TTA	**Tatalina**	**76.06**	**21**	P	**P**	**08 51 08.9**	**+1.0**
TTA				pmax	pmax		
	comp=Z,13nm,0.8s						
TTA	**Tatalina**	**76.06**	**21**	P	**P**	**08 51 08.8**	**+1.0**
TTA				IAmb	IAmb	08 51 17.8	
	comp=Z,13nm,0.8s						
CAPN	**Captain Cook N**	**76.65**	**24**	P	**P**	**08 51 12.6**	**+1.5**
	baz=237						
TIXI	**Tiksi**	**76.89**	**352**	*d i*P	**P**	**08 51 12.0**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,23nm,0.8s						
TIXI	**Tiksi**	**76.89**	**352**	P	**P**	**08 51 11.8**	**-0.5**
TIXI				IAmb	IAmb	08 51 21.2	
	comp=Z,15nm,0.7s						
O22K	**Cooper Landing**	**77.09**	**25**	P	**P**	**08 51 14.2**	**+0.5**
	baz=238						
RC01	**Rabbit Creek A**	**77.41**	**24**	P	**P**	**08 51 15.5**	**+0.1**
	baz=238						
PPLA	**Purkeypile**	**77.44**	**22**	P	**P**	**08 51 14.8**	**-1.0**
PPLA				IAmb	IAmb	08 51 25.0	
	comp=Z,33nm,1.4s						
CUT	**Chulitna**	**77.91**	**23**	P	**P**	**08 51 18.0**	**-0.2**
	baz=237						
PMR	**Palmer**	**77.92**	**24**	P	**P**	**08 51 18.5**	**+0.2**
PMR				pmax	pmax		
	comp=Z,17nm,0.8s						
PMR	**Palmer**	**77.92**	**24**	P	**P**	**08 51 18.5**	**+0.2**
PMR				IAmb	IAmb	08 51 36.4	
	comp=Z,17nm,0.8s						
DGZ	**Jazzator, Alta**	**78.05**	**322**	⇓*i*P	**P**	**08 51 19.6**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,35nm,1.4s						
IMAR	**Indian Mountai**	**78.71**	**19**	P	**P**	**08 51 22.9**	**+0.4**
ZSN	**Zaisan**	**78.93**	**320**	*e*P	**P**	**08 51 23.3**	**-0.9**
	baz=320						
ZSN	**Zaisan**	**78.93**	**320**	*e*P	**P**	**08 51 23.3**	**-0.9**
MCK	**McKinley**	**79.13**	**22**	P	**P**	**08 51 24.4**	**-0.6**
	baz=238,SNR=11						
MLY	**Manley**	**79.18**	**21**	P	**P**	**08 51 25.6**	**+0.3**
	baz=236,SNR=13						
M24K	**Tolsona, Glenn**	**79.40**	**24**	P	**P**	**08 51 27.6**	**+1.1**
	baz=241						
NEA2	**Nenana**	**79.54**	**21**	P	**P**	**08 51 26.7**	**-0.5**
	baz=238,SNR=9.4						
I23K	**Minto, Yukon-K**	**79.73**	**21**	P	**P**	**08 51 28.1**	**0.0**
	baz=238						
N25K	**Chitina, Valde**	**79.82**	**25**	P	**P**	**08 51 29.3**	**+0.5**
	baz=242						
PAX	**Paxson**	**80.10**	**24**	P	**P**	**08 51 31.0**	**+0.7**
PAX				pmax	pmax		
	comp=Z,12nm,1.1s						
PAX	**Paxson**	**80.10**	**24**	P	**P**	**08 51 31.0**	**+0.7**
TCOL	**CIGO, UAF Yank**	**80.13**	**22**	P	**P**	**08 51 29.8**	**-0.5**
	baz=239,SNR=10						
COLA	**College**	**80.13**	**22**	⇑*i*P	**P**	**08 51 29.2**	**-1.1**
COLA				pmax	pmax		
	comp=Z,25nm,1.0s						
COLA	**College**	**80.13**	**22**	P	**P**	**08 51 29.6**	**-0.7**
COLA				IAmb	IAmb	08 51 39.3	
	comp=Z,23nm,0.8s						
HDA	**Harding Lake**	**80.23**	**22**	P	**P**	**08 51 30.0**	**-0.8**
	baz=240,SNR=5.5						
POKR	**Poker Plat Res**	**80.41**	**21**	P	**P**	**08 51 31.2**	**-0.7**
	baz=239						
MK31	**Makanchi Array**	**80.43**	**318**	⇓*e*P	**P**	**08 51 32.3**	**-0.1**
MK31	**Makanchi Array**	**80.43**	**318**	P	**P**	**08 51 31.6**	**-0.7**
MK31				IAmb	IAmb	08 51 41.6	
	comp=Z,24nm,1.5s						
MKAR	**Makanchi Array**	**80.43**	**318**	P	**P**	**08 51 31.6**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=100,slow=6.8,SNR=24						
MKAR	**Makanchi Array**	**80.43**	**318**	*i* P	**P**	**08 51 32.5**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**80.43**	**318**	P	**P**	**08 51 31.1**	**-1.3**
IL31		**80.44**	**22**	P	**P**	**08 51 31.1**	**-0.8**
ILAR	**Eielson Array**	**80.44**	**22**	P	**P**	**08 51 30.6**	**-1.4**
	comp=Z,6.8nm,0.8s,baz=247,slow=5.6,SNR=60						
ILAR				LR	LR	09 23 13.6	
	comp=Z,171nm,19.1s,baz=260,slow=33						
ILAR	**Eielson Array**	**80.44**	**22**	P	**P**	**08 51 31.1**	**-0.9**
ILAR	**Eielson Array**	**80.44**	**22**	P	**P**	**08 51 31.1**	**-0.9**
IL18	**Eielson Array**	**80.47**	**22**	P	**P**	**08 51 31.1**	**-1.0**
COLD	**Coldfoot**	**80.58**	**19**	P	**P**	**08 51 33.6**	**+0.9**
	baz=236						
COLD	**Coldfoot**	**80.58**	**19**	P	**P**	**08 51 33.1**	**+0.4**
COLD				IAmb	IAmb	08 51 43.1	
	comp=Z,18nm,1.0s						
MAKZ	**Makanchi**	**80.64**	**318**	P	**P**	**08 51 33.4**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
MAKZ	**Makanchi**	**80.64**	**318**	P	**P**	**08 51 33.4**	**-0.1**
MAKZ				IAmb	IAmb	08 51 43.5	
	comp=Z,12nm,0.8s						
MENT	**Mentasta**	**80.79**	**24**	P	**P**	**08 51 34.2**	**+0.3**
DOT	**Dot Lake**	**80.98**	**23**	P	**P**	**08 51 34.8**	**-0.2**
DOT				IAmb	IAmb	08 51 45.0	
	comp=Z,25nm,0.9s						
L26K	**Log Cabin Wild**	**80.98**	**24**	P	**P**	**08 51 35.4**	**+0.5**
	baz=244,SNR=8.6						
ZAA0	**Zalesovo Array**	**81.00**	**326**	P	**P**	**08 51 33.9**	**-1.3**
ZALV	**Zalesovo Beam**	**81.00**	**326**	P	**P**	**08 51 33.4**	**-1.8**
	comp=Z,2.0nm,0.6s,baz=118,slow=7.0,SNR=9.2						
ZALV	**Zalesovo Beam**	**81.00**	**326**	P	**P**	**08 51 34.1**	**-1.1**
ZALV	**Zalesovo Beam**	**81.00**	**326**	P	**P**	**08 51 34.1**	**-1.1**
SCRK	**Sand Creek**	**81.16**	**23**	P	**P**	**08 51 36.4**	**+0.3**
	baz=243,SNR=14						
A21K	**Barrow**	**81.23**	**14**	P	**P**	**08 51 36.5**	**+0.5**
	baz=230						
SHLS	**Shalkode**	**81.47**	**314**	*e*P	**P**	**08 51 35.8**	**-2.4**
	baz=314						
SHLS	**Shalkode**	**81.47**	**314**	*e*P	**P**	**08 51 35.7**	**-2.4**
TOLK	**Toolik Lake Re**	**81.56**	**18**	P	**P**	**08 51 38.9**	**+0.9**
	baz=237						
BCAR	**Beaver Creek A**	**81.64**	**24**	P	**P**	**08 51 38.8**	**+0.3**
K27K	**Chicken**	**81.94**	**23**	P	**P**	**08 51 40.9**	**+0.9**
	baz=244						
KPKS	**Kokpek**	**82.10**	**315**	*e*P	**P**	**08 51 40.1**	**-1.3**
	baz=314						
KPKS	**Kokpek**	**82.10**	**315**	*e*P	**P**	**08 51 40.1**	**-1.3**
SATY	**Saty**	**82.21**	**314**	*e*P	**P**	**08 51 41.1**	**-0.9**
	baz=314						
SATY	**Saty**	**82.21**	**314**	*e*P	**P**	**08 51 41.1**	**-0.9**
BMAR	**Burnt Mountain**	**82.56**	**20**	P	**P**	**08 51 42.5**	**-0.8**
EGAK	**Eagle**	**82.62**	**23**	P	**P**	**08 51 44.3**	**+0.8**
EGAK				IAmb	IAmb	08 51 54.0	
	comp=Z,20nm,0.8s						
TDK	**Taldyqorghan**	**82.62**	**316**	*e*P	**P**	**08 51 43.0**	**-1.0**
	baz=316						
TDK	**Taldyqorghan**	**82.62**	**316**	*e*P	**P**	**08 51 43.0**	**-1.0**
HYT	**Haines Junctio**	**82.63**	**27**	P	**P**	**08 51 44.9**	**+1.1**
DAWY	**Dawson**	**83.03**	**24**	P	**P**	**08 51 46.5**	**+0.7**
DAWY				IAmb	IAmb	08 51 56.0	
	comp=Z,16nm,0.9s						
BESE	**Bessie Mountai**	**83.14**	**30**	P	**P**	**08 51 46.6**	**+0.2**
MDOK	**Medeo**	**83.20**	**314**	*e*P	**P**	**08 51 46.9**	**-0.3**
	baz=314						
MDOK	**Medeo**	**83.20**	**314**	*e*P	**P**	**08 51 46.9**	**-0.3**
TNSS	**Tian-Shan**	**83.25**	**314**	*e*P	**P**	**08 51 48.2**	**+0.4**
	baz=314						
TNSS	**Tian-Shan**	**83.25**	**314**	*e*P	**P**	**08 51 48.2**	**+0.4**
AAA	**Alma-Ata**	**83.31**	**314**	*e*P	**P**	**08 51 46.3**	**-1.4**
	baz=314						
AAA	**Alma-Ata**	**83.31**	**314**	*e*P	**P**	**08 51 46.3**	**-1.4**
KSH	**Kashi**	**83.32**	**310**	P	P	08 51 55.6	+7.7
KSH				pmax	pmax		
	comp=Z,33nm,1.2s						
KSH				pmax	pmax		
	comp=Z,560nm,5.9s						
KURK	**Kurchatov**	**83.76**	**322**	⇓*i*P	**P**	**08 51 49.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	**83.76**	**322**	P	**P**	**08 51 49.3**	**-0.3**
KURK				IAmb	IAmb	08 51 58.7	
	comp=Z,24nm,1.2s						
WHY	**Whitehorse**	**83.78**	**28**	P	**P**	**08 51 50.5**	**+0.8**
KUU	**Kurty**	**83.85**	**315**	*e*P	**P**	**08 51 48.9**	**-1.4**
	comp=Z,15nm,1.1s,baz=315						
KUU	**Kurty**	**83.85**	**315**	*e*P	**P**	**08 51 48.9**	**-1.4**
KUU				pmax	pmax		
	comp=Z,15nm,1.1s						
NIL	**Nilore**	**84.57**	**304**	P	**P**	**08 51 53.3**	**-1.0**
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**84.57**	**304**	P	**P**	**08 51 53.3**	**-1.0**
NIL				IAmb	IAmb	08 52 04.4	
	comp=Z,17nm,0.9s						
UCH	**Uchtor**	**84.87**	**313**	P	**P**	**08 51 57.2**	**+1.0**
	SNR=9.6						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**08 51 57.0**	**+0.8**
	SNR=7.1						
AAK	**Ala-Archa**	**84.95**	**313**	⇓*e*P	**P**	**08 51 56.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,24nm,0.8s						
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**08 51 56.1**	**0.0**
AAK				IAmb	IAmb	08 52 05.9	
	comp=Z,16nm,0.7s						
SGDS	**Sogindy**	**84.99**	**314**	*e*P	**P**	**08 51 55.4**	**-0.9**
	comp=Z,4.9nm,1.0s,baz=314						
SGDS	**Sogindy**	**84.99**	**314**	*e*P	**P**	**08 51 55.3**	**-0.9**
SGDS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
USP	**Ospenovka**	**85.05**	**314**	P	**P**	**08 51 56.9**	**+0.3**
	SNR=10						
AML	**Almayashu**	**85.46**	**313**	P	**P**	**08 52 00.0**	**+1.0**
	SNR=28						
EKS2	**Erkin-Say**	**85.48**	**313**	P	**P**	**08 51 59.7**	**+1.0**
	SNR=12						
DLBC	**Dease Lake**	**85.53**	**31**	P	**P**	**08 51 58.5**	**-0.1**
DLBC				IAmb	IAmb	08 52 09.7	
	comp=Z,20nm,1.1s						
BTLS	**Baital**	**85.67**	**316**	*e*P	**P**	**08 51 58.3**	**-1.2**
	comp=Z,7.3nm,1.2s,baz=316						
BTLS	**Baital**	**85.67**	**316**	*e*P	**P**	**08 51 58.2**	**-1.2**
BTLS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
QSPA	**South Pole Qui**	**86.39**	**180**	P	**P**	**08 52 02.2**	**-0.6**
	comp=Z,9.7nm,0.9s,baz=343,slow=2.9,SNR=30						
QSPA	**South Pole Qui**	**86.39**	**180**	P	**P**	**08 52 02.6**	**-0.2**
QSPA				IAmb	IAmb	08 52 03.6	
	comp=Z,12nm,0.9s						
INK	**Inuvik**	**86.75**	**21**	P	**P**	**08 52 04.5**	**+0.3**
INK				pmax	pmax		
	comp=Z,21nm,0.8s						
INK	**Inuvik**	**86.75**	**21**	P	**P**	**08 52 04.5**	**+0.3**
O02D	**Mt. Diablo Mer**	**86.82**	**50**	P	**P**	**08 52 06.6**	**+1.2**
	baz=263						
N02D	**Trinity Center**	**86.98**	**49**	P	**P**	**08 52 09.1**	**+3.0**
	baz=263						
DZA	**Taraz**	**87.30**	**313**	*e*P	**P**	**08 52 06.4**	**-1.1**
	baz=313						
DZA	**Taraz**	**87.30**	**313**	*e*P	**P**	**08 52 06.4**	**-1.1**
MAW	**Mawson**	**87.30**	**203**	P	**P**	**08 52 06.1**	**-0.9**
	comp=Z,4.1nm,0.8s,baz=105,slow=10,SNR=4.3						
MAW				LR	LR	09 28 30.6	
	comp=Z,83nm,19.8s,baz=60,slow=34						
MAW	**Mawson**	**87.30**	**203**	P	**P**	**08 52 06.1**	**-0.9**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAW	**Mawson**	**87.30**	**203**	P	**P**	**08 52 06.0**	**-0.9**
BRZS	**Berezniki**	**87.36**	**320**	*e*P	**P**	**08 52 06.8**	**-0.9**
	baz=320						
BRZS	**Berezniki**	**87.36**	**320**	*e*P	**P**	**08 52 06.7**	**-0.9**
PGC	**Sidney**	**87.49**	**41**	P	**P**	**08 52 08.3**	**0.0**
E04D	**Cinebar**	**87.80**	**43**	P	**P**	**08 52 11.5**	**+1.7**
	baz=262						
K04D	**Chiloquin, OR**	**87.89**	**47**	P	**P**	**08 52 11.3**	**+0.7**
	baz=263						
KK31	**Karatay Array**	**87.92**	**313**	P	**P**	**08 52 10.3**	**-0.2**
KK31				pmax	pmax		
	comp=Z,13nm,0.9s						
KK31	**Karatay Array**	**87.92**	**313**	P	**P**	**08 52 10.3**	**-0.2**
KK31				IAmb	IAmb	08 52 19.4	
	comp=Z,13nm,0.9s						
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**08 52 10.7**	**+0.2**
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**08 52 10.7**	**+0.2**
A04D	**Lummi Island**	**87.99**	**41**	P	**P**	**08 52 12.0**	**+1.3**
	baz=262						
KBL	**Kabul**	**88.14**	**305**	P	**P**	**08 52 11.1**	**-0.9**
KBL				pmax	pmax		
	comp=Z,13nm,1.3s						
KBL	**Kabul**	**88.14**	**305**	P	**P**	**08 52 11.1**	**-0.9**
KBL				IAmb	IAmb	08 52 23.2	
	comp=Z,13nm,1.2s						
IUG	**Iuzhnay**	**88.16**	**312**	*e*P	**P**	**08 52 10.4**	**-1.5**
	baz=312						
IUG	**Iuzhnay**	**88.16**	**312**	*e*P	**P**	**08 52 10.3**	**-1.5**
B05A	**Bryant**	**88.33**	**42**	P	**P**	**08 52 13.1**	**+0.8**
	baz=263						
J05D	**Fort Rock, OR**	**88.34**	**47**	P	**P**	**08 52 13.8**	**+1.1**
	baz=264						
I05D	**Terrebonne, OR**	**88.39**	**46**	P	**P**	**08 52 13.7**	**+0.9**
	baz=264						
PINE	**Pine Mountain**	**88.61**	**46**	P	**P**	**08 52 13.6**	**-0.5**
PINE				IAmb	IAmb	08 52 21.9	
	comp=Z,7.4nm,1.0s						
BRVK	**Borovoye**	**89.26**	**323**	⇑*e*P	**P**	**08 52 15.3**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,21nm,1.5s						
BRVK	**Borovoye**	**89.26**	**323**	P	**P**	**08 52 15.6**	**-0.9**
BRVK				IAmb	IAmb	08 52 27.0	
	comp=Z,11nm,1.0s						
MDPB	**Devils Postpil**	**89.43**	**52**	P	**P**	**08 52 16.9**	**-1.1**
I07A	**Izee**	**89.67**	**46**	P	**P**	**08 52 19.4**	**+0.5**
MWC	**Mount Wilson**	**89.98**	**56**	P	**P**	**08 52 19.6**	**-1.0**
MWC				pmax	pmax		
	comp=Z,18nm,1.3s						
MWC	**Mount Wilson**	**89.98**	**56**	P	**P**	**08 52 19.6**	**-1.0**
EDW2	**Edwards Air Fo**	**90.08**	**55**	P	**P**	**08 52 21.3**	**+0.4**
	baz=266						
NVAR	**Mina Array Bea**	**90.10**	**52**	P	**P**	**08 52 21.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=257,slow=6.4,SNR=13						
NVAR	**Mina Array Bea**	**90.10**	**52**	P	**P**	**08 52 19.0**	**-2.1**
CWC	**Cottonwood Cre**	**90.13**	**54**	P	**P**	**08 52 22.1**	**+0.8**
	baz=266						
WVOR	**Wild Horse Val**	**90.16**	**48**	P	**P**	**08 52 21.5**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WVOR	**Wild Horse Val**	**90.16**	**48**	P	**P**	**08 52 21.5**	**+0.3**
G08A	**Pilot Rock**	**90.17**	**45**	P	**P**	**08 52 21.2**	**0.0**
E08A	**Dider Farm, El**	**90.20**	**44**	P	**P**	**08 52 21.1**	**0.0**
E08A				IAmb	IAmb	08 52 32.2	
	comp=Z,7.8nm,1.3s						
NV11	**Mina Array Sit**	**90.22**	**52**	P	**P**	**08 52 21.5**	**-0.1**
BFSC	**Mount Baldy Ra**	**90.31**	**56**	P	**P**	**08 52 22.8**	**+0.7**
	baz=266						
C36M	**Paulatuk**	**90.33**	**21**	P	**P**	**08 52 20.6**	**-0.6**
	baz=261						
LRMC	**Laurel Mtn Rad**	**90.38**	**55**	P	**P**	**08 52 24.3**	**+1.9**
	baz=266						
MPMC	**Manual Prospec**	**90.58**	**54**	P	**P**	**08 52 24.8**	**+1.4**
	baz=266,SNR=5.1						
E09A	**Wood Farm, Sta**	**90.83**	**44**	P	**P**	**08 52 24.4**	**+0.3**
E09A				IAmb	IAmb	08 52 34.5	
	comp=Z,8.6nm,1.0s						
BAR	**Barrett**	**91.03**	**57**	P	**P**	**08 52 25.2**	**-0.2**
BAR				IAmb	IAmb	08 52 28.1	
	comp=Z,9.3nm,1.2s						
GSC	**Goldstone, Bar**	**91.08**	**55**	P	**P**	**08 52 27.0**	**+1.4**
	baz=266						
FURC	**Furnace Creek,**	**91.11**	**54**	P	**P**	**08 52 27.2**	**+1.6**
	baz=266,SNR=5.9						
MONP2	**Monument Peak**	**91.25**	**57**	P	**P**	**08 52 28.2**	**+1.6**
	baz=267,SNR=6.9						
PFO	**Pinyon Flats O**	**91.27**	**57**	⇓*e*P	**P**	**08 52 25.7**	**-0.9**
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PFO	**Pinyon Flats O**	**91.27**	**57**	P	**P**	**08 52 28.1**	**+1.5**
	baz=267						
BMO	**Blue Mountains**	**91.30**	**45**	P	**P**	**08 52 25.8**	**-0.7**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BMO	**Blue Mountains**	**91.30**	**45**	P	**P**	**08 52 25.8**	**-0.7**
BMO				IAmb	IAmb	08 52 36.6	
	comp=Z,6.8nm,1.1s						
F10A	**Beach Ranch, E**	**91.43**	**44**	P	**P**	**08 52 27.2**	**+0.2**
F10A				IAmb	IAmb	08 52 34.6	
	comp=Z,5.5nm,0.9s						
HEC	**Hector,Ludlow**	**91.44**	**55**	P	**P**	**08 52 28.9**	**+1.6**
	baz=267						
IKP	**In-Ko-Pah, Jac**	**91.50**	**58**	P	**P**	**08 52 29.3**	**+1.6**
	baz=267						
RMX	**La Rumorosa**	**91.53**	**58**	P	**P**	**08 52 28.1**	**+0.2**
RMX				IAmb	IAmb	08 52 31.0	
	comp=Z,10nm,1.3s						
SHOC	**Shoshone, Teco**	**91.55**	**54**	P	**P**	**08 52 28.8**	**+1.1**
	baz=267,SNR=7.0						
ESJX	**Sierra Juarez**	**91.60**	**58**	P	**P**	**08 52 29.9**	**+1.6**
ESJX				IAmb	IAmb	08 52 39.2	
	comp=Z,4.9nm,1.0s						
TPNV	**Topopah Spring**	**91.63**	**53**	P	**P**	**08 52 28.7**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,13nm,1.5s						
TPNV	**Topopah Spring**	**91.63**	**53**	P	**P**	**08 52 29.4**	**+1.1**
	baz=267,SNR=6.1						
TPNV	**Topopah Spring**	**91.63**	**53**	P	**P**	**08 52 28.7**	**+0.5**
TPNV				IAmb	IAmb	08 52 36.4	
	comp=Z,13nm,1.4s						
NEW	**Newport**	**91.64**	**42**	P	**P**	**08 52 27.6**	**-0.2**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NEW	**Newport**	**91.64**	**42**	P	**P**	**08 52 27.7**	**-0.1**
	baz=267						
NEW	**Newport**	**91.64**	**42**	P	**P**	**08 52 27.6**	**-0.2**
BELC	**Belle Mtn. Jos**	**91.67**	**56**	P	**P**	**08 52 29.8**	**+1.3**
	baz=267						
SWSC	**Sam W. Stewart**	**91.78**	**57**	P	**P**	**08 52 30.6**	**+1.9**
	baz=267						
SPX	**San Pedro Mart**	**91.96**	**59**	P	**P**	**08 52 29.5**	**-0.7**
SPX				IAmb	IAmb	08 52 33.8	
	comp=Z,6.8nm,1.2s						
GMRC	**Granite Mounta**	**91.99**	**55**	P	**P**	**08 52 31.3**	**+1.3**
	baz=267,SNR=5.3						
BC3	**Big Chuckawall**	**92.11**	**57**	P	**P**	**08 52 32.1**	**+1.7**
	baz=267,SNR=7.8						
R11A	**Troy Canyon, C**	**92.23**	**52**	P	**P**	**08 52 32.4**	**+1.4**
	baz=267						
MFID	**Camas Ranch**	**92.28**	**47**	P	**P**	**08 52 31.0**	**-0.1**
MFID				IAmb	IAmb	08 52 38.5	
	comp=Z,7.6nm,1.4s						
IRM	**Iron Mountain**	**92.39**	**56**	P	**P**	**08 52 32.7**	**+1.1**
	baz=267,SNR=6.6						
SFX	**San Felipe**	**92.49**	**59**	P	**P**	**08 52 31.6**	**-0.5**
SFX				IAmb	IAmb	08 52 35.5	
	comp=Z,12nm,1.1s						
GLA	**Glamis**	**92.60**	**57**	P	**P**	**08 52 32.2**	**-0.5**
GLA				pmax	pmax		
	comp=Z,15nm,1.1s						
GLA	**Glamis**	**92.60**	**57**	P	**P**	**08 52 33.7**	**+1.1**
	baz=268						
GLA	**Glamis**	**92.60**	**57**	P	**P**	**08 52 32.2**	**-0.5**

NEE2	**Needles Airpor**	**92.85**	**56**	P	**P**	**08 52 35.1**	**+1.4**
	baz=268						
PDMCI	**Parker Dam,Lak**	**93.22**	**56**	P	**P**	**08 52 36.7**	**+1.3**
	baz=268						
HLID	**Hailey**	**93.32**	**47**	P	**P**	**08 52 36.6**	**+0.7**
	baz=268						
HLID	**Hailey**	**93.32**	**47**	P	**P**	**08 52 36.6**	**+0.7**
YKA	**Yellowknife Ar**	**93.61**	**28**	P	**P**	**08 52 36.7**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=267,slow=4.1,SNR=54						
YKA				LR	LR	09 30 13.0	
	comp=Z,224nm,20.5s,baz=0.0,slow=32						
WALA	**Waterton Lakes**	**93.80**	**41**	P	**P**	**08 52 38.3**	**+0.4**
CCUT	**Cedar City**	**93.95**	**53**	P	**P**	**08 52 38.4**	**-0.7**
LCMT	**Little Creek M**	**94.04**	**53**	P	**P**	**08 52 38.5**	**-0.8**
SZCU	**Shurtz Canyon**	**94.17**	**53**	P	**P**	**08 52 40.5**	**+0.5**
KNB	**Kanab**	**94.37**	**53**	P	**P**	**08 52 41.6**	**+0.7**
KNB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KNB	**Kanab**	**94.37**	**53**	P	**P**	**08 52 41.6**	**+0.7**
SYO	**Syowa Base**	**95.34**	**199**	⇑*e*P	**P**	**08 52 43.3**	**-1.1**
WUAZ	**Wupatki**	**95.52**	**55**	P	**P**	**08 52 47.2**	**+1.0**
	baz=270						
WUAZ	**Wupatki**	**95.52**	**55**	P	**P**	**08 52 46.7**	**+0.5**
WUAZ				IAmb	IAmb	08 52 58.1	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**95.56**	**319**	P	**P**	**08 52 43.9**	**-1.9**
TMUT	**Trail Mountain**	**95.67**	**51**	P	**P**	**08 52 44.6**	**-2.3**
HSIG		**95.81**	**61**	P	**P**	**08 52 48.0**	**+0.6**
HSIG				IAmb	IAmb	08 52 51.0	
	comp=Z,6.2nm,1.1s						
TUC	**Tucson**	**95.99**	**58**	P	**P**	**08 52 49.9**	**+1.6**
	baz=270						
ARU	**Arti**	**96.16**	**326**	*d i*P	**P**	**08 52 50.6**	**+2.3**
ARU				*PP	sP	08 53 10.8	+8.5
ARU						08 56 47.7	
ARU				S	**SKSac**	**09 03 20.2**	**-1.9**
ARU				SP	**SP**	**09 05 26.3**	**+2.4**
ARU				SS	**SS**	**09 10 46.3**	**+9.3**
ARU				pmax	pmax		
	comp=Z,12nm,1.7s						
W18A	**Petrified Fore**	**96.86**	**55**	P	**P**	**08 52 54.2**	**+1.8**
	baz=270						
PDAR	**Pinedale Array**	**96.87**	**48**	P	**P**	**08 52 51.3**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=298,slow=1.9,SNR=2.7						
GEYT	**Alibeck**	**97.10**	**308**	P	**P**	**08 52 53.0**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=35,slow=3.5,SNR=2.1						
FINES	**FINESS Array B**	**110.56**	**336**	PKKPbc	PKKPbc	09 08 52.1	-2.5
	comp=Z,3.0nm,0.9s,baz=226,slow=3.6,SNR=4.7						
AKASG	**Malin Array Be**	**114.39**	**325**	PKiKP	PKPdf	08 57 59.5	-0.8
	comp=Z,1.7nm,0.6s,baz=63,slow=2.0,SNR=7.1						
AKASG	**Malin Array Be**	**114.39**	**325**	*i* PKIKP	PKPdf	08 58 00.0	-0.3
AKASG	**Malin Array Be**	**114.39**	**325**		PKPdf	08 58 00.0	-0.3
HFS	**Hagfors**	**116.09**	**339**	PKP	**PKiKP**	**08 58 02.9**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=134,slow=8.5,SNR=1.5						
BURAR	**Bucovina Array**	**118.15**	**323**		**PKiKP**	**08 58 09.6**	**+1.7**
PLCA	**Paso Flores**	**119.81**	**142**	PKP	**PKPdf**	**08 58 11.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=205,slow=4.1,SNR=8.4						
LOT	**Lotru**	**120.06**	**322**	⇑P	**Pdif**	**08 54 42.9**	**+7.7**
LANS	**Liptovska Anna**	**120.60**	**327**	pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	**Vyhne**	**121.32**	**327**	pmax	pmax		
	comp=Z,49nm,2.3s						
DPC	**Dobruska-Polom**	**121.52**	**330**	*e*PKIKP	**PKPdf**	**08 58 13.7**	**-0.5**
DPC	**Dobruska-Polom**	**121.52**	**330**	*e*PKPDF	**PKPdf**	**08 58 13.7**	**-0.5**
DPC				*e*x	x	08 58 22.7	
CLL	**Collm**	**122.50**	**332**	*e*PKPdf	**PKPdf**	**08 58 16.0**	**+0.1**
CLL	**Collm**	**122.50**	**332**	*e*PKIKP	**PKPdf**	**08 58 16.0**	**+0.1**
CONA	**Conrad Observa**	**123.26**	**328**	P	**PKiKP**	**08 58 18.4**	**+0.5**
	comp=Z,7.3nm,1.4s						
KHC	**Kasperske Hory**	**123.67**	**330**	*e*PKIKP	**PKiKP**	**08 58 18.8**	**+0.2**
KHC	**Kasperske Hory**	**123.67**	**330**	*e*PKPDF	**PKiKP**	**08 58 18.8**	**+0.2**
KHC				*e*x	x	08 58 27.0	
GERES	**GERESS Array B**	**123.80**	**330**	PKP	**PKiKP**	**08 58 19.0**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=172,slow=0.9,SNR=11						
GERES				PKKPbc	**PKKPbc**	**09 08 07.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=213,slow=4.7,SNR=3.7						
GERES	**GERESS Array B**	**123.80**	**330**	PKIKP	**PKPdf**	**08 58 18.3**	**-0.4**
GERES	**GERESS Array B**	**123.80**	**330**		**PKPdf**	**08 58 18.3**	**-0.4**
ABTA	**Abfaltersbach**	**125.77**	**328**	*e*P	**PKPdf**	**08 58 21.8**	**-0.7**
	comp=Z,4.5nm,0.7s						
WATA	**Walderalm**	**125.86**	**329**	*e*P	**PKPdf**	**08 58 22.9**	**+0.2**
	comp=Z,4.6nm,0.6s						
LCO	**Las Campanas**	**126.00**	**130**	PKIKP	**PKiKP**	**08 58 24.3**	**+0.2**
LCO	**Las Campanas**	**126.00**	**130**		**PKiKP**	**08 58 24.3**	**+0.2**
MOTA	**Moosalm**	**126.09**	**330**	*e*P	**PKPdf**	**08 58 23.0**	**-0.2**
	comp=Z,9.7nm,0.9s						
SQTA	**Sankt Quirin**	**126.13**	**330**	*e*P	**PKPdf**	**08 58 22.8**	**-0.4**
	comp=Z,4.8nm,0.8s						
FETA	**Feichten**	**126.50**	**330**	*e*P	**PKPdf**	**08 58 24.1**	**+0.1**
	comp=Z,12nm,1.3s						
DAVOX	**Davos/Dischmat**	**127.09**	**330**	PKP	**PKPdf**	**08 58 25.4**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=108,slow=4.4,SNR=6.9						
SDV	**Santo Domingo**	**134.99**	**81**		**PKPdf**	**08 58 41.1**	**+0.1**
CPUP	**Villa Florida**	**137.30**	**136**	PKP	**PKPdf**	**08 58 43.9**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=318,slow=4.4,SNR=6.7						
CPUP	**Villa Florida**	**137.30**	**136**	PKIKP	**PKPdf**	**08 58 41.1**	**-3.6**
CPUP	**Villa Florida**	**137.30**	**136**		**PKPdf**	**08 58 41.1**	**-3.6**
ESDC	**Sonseca Array**	**139.03**	**334**	PKP	**PKPdf**	**08 58 48.6**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=22,slow=2.9,SNR=4.4						
SIV	**San Ignacio**	**139.93**	**120**	PKhKP	PKPpre	08 58 41.8	
	comp=Z,1.6nm,0.8s,baz=261,slow=2.3,SNR=4.8						
SIV				PKP	**PKPdf**	**08 58 48.1**	**-1.8**
	comp=Z,4.2nm,1.0s,baz=228,slow=2.7,SNR=10						
MDT	**Midelt**	**144.86**	**328**	PKP	**PKPab**	**08 58 57.1**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=29,slow=4.6,SNR=11						
BDFB	**Brasilia**	**150.77**	**131**	PKP	**PKPdf**	**08 59 06.3**	**-2.2**
	comp=Z,6.6nm,1.0s,baz=162,slow=5.7,SNR=7.7						
BDFB				PKPbc	**PKPbc**	**08 59 14.2**	**+0.2**
	comp=Z,18nm,0.9s,baz=162,slow=2.6,SNR=17						
BDFB	**Brasilia**	**150.77**	**131**	P	**PKPdf**	**08 59 06.1**	**-2.4**
TOA0	**Torodi Ar. Sit**	**151.36**	**291**		**PKPbc**	**08 59 14.8**	**-0.5**
TOA0				PKPab	**PKPab**	**08 59 22.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**151.36**	**291**	PKPbc	**PKPbc**	**08 59 13.9**	**-1.4**
	comp=Z,6.1nm,0.9s,baz=37,slow=2.7,SNR=13						
TORD	**Torodi Ar. Bea**	**151.36**	**291**		**PKPbc**	**08 59 14.7**	**-0.6**
TORD				PKPab	**PKPab**	**08 59 22.4**	**-1.1**

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*GCMT **11** 08:41:58.0±0.4,22°.39S±0°.06×12°.42W±0°.05,h23^{km}±1^{km}, MW4.9/76,Moment Tensor Solution. s17,c17; s76,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.24; $M_{\theta\theta}$1.28±.21; $M_{\phi\phi}$1.33±.14; $M_{r\theta}$-0.12±.28; $M_{\theta\phi}$0.11±.13; $M_{\phi r}$-1.68±.16; Best double couple: $M_0$2.60900×10^{16} NP1:ϕ_s199.00000°,δ25.00000°,λ-82.00000°. NP2: ϕ_s10.00000°,δ65.00000°,λ-94.00000°. Principal axes: T 1.9800, Plg20.0000°, Azm103.0000°; N 1.2500, Plg3.0000°, Azm12.0000°; P -3.2390, Plg70.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 11 08:42:00.2±3.5**,21°.39S×13°.54W,h0**^{km}**,mb4.1**/4**,** **mb1 4.2**/4**,mb1mx3.8**/37**,mbtmp4.1**/4**,MS3.9**/10**,** **Ms1 3.9**/10**,ms1mx3.6**/37 **Error ellipse: s-maj=134.5km s-min=26.0km az=148.0,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N1	**ASCENSION HYDR**	**13.49**	**356**	T	T	09 00 16.2	
	baz=180						
H10N3	**ASCENSION HYDR**	**13.50**	**356**	T	T	09 00 13.1	
	baz=180						
H10N2	**ASCENSION HYDR**	**13.51**	**356**	T	T	09 00 14.9	
	baz=180						
DBIC	**Dimbokro**	**29.16**	**18**	LR	LR	08 57 08.2	
	comp=Z,154nm,19.8s,baz=175,slow=31						
BDFB	**Brasilia**	**33.14**	**274**	P	P	08 48 38.5	-0.1
	2.9nm,1.0s,baz=140,slow=7.9,SNR=4.2						
BDFB				LR	LR	08 59 47.1	
	comp=Z,198nm,21.3s,baz=112,slow=32						
BOSA	**Boshof**	**35.77**	**110**	LR	LR	09 00 06.6	
	comp=Z,156nm,21.6s,baz=268,slow=30						
TORD	**Torodi Ar. Bea**	**37.44**	**25**	P	P	08 49 15.4	-0.1
	6.1nm,0.9s,baz=196,slow=8.6,SNR=13						
CPUP	**Villa Florida**	**40.20**	**254**	P	P	08 49 38.6	-0.1
	0.5nm,0.4s,baz=92,slow=10,SNR=3.4						
CPUP				LR	LR	09 03 45.0	
	comp=Z,238nm,19.6s,baz=88,slow=32						
SIV	**San Ignacio**	**45.21**	**268**	LR	LR	09 07 49.0	
	comp=Z,277nm,19.4s,baz=89,slow=34						
MDP	**Montagnes des**	**46.50**	**300**	LR	LR	09 07 59.6	
	comp=Z,132nm,19.1s,baz=132,slow=34						
SNAA	**Sanae**	**50.68**	**176**	LR	LR	09 09 16.2	
	comp=Z,44nm,19.1s,baz=352,slow=32						
PLCA	**Paso Flores**	**51.59**	**234**	LR	LR	09 11 08.7	
	comp=Z,124nm,19.2s,baz=104,slow=34						
PMSA	**Palmer Station**	**54.44**	**204**	LR	LR	09 09 05.2	
	comp=Z,124nm,19.6s,baz=6.5,slow=30						
BRTR	**Keskin Array B**	**75.06**	**36**	P	P	08 53 44.1	0.0
	1.8nm,1.0s,baz=216,slow=7.1,SNR=4.9						
WSAR	**Wadi Sarin**	**83.10**	**62**	LR	LR	09 29 08.5	
	comp=Z,77nm,20.3s,baz=282,slow=34						

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*ISK **11** 08:42:59.7,38°.72N×42°.55E,h5^{km},ML3.5/19*

*DDA **11** 08:43:00.3,38°.74N×42°.52E,h7^{km}±3^{km},ML3.1*

*NSSP **11** 08:43:01.4,38°.73N×42°.57E,h7^{km},Ms3.0*

ISC 11 08:43:00.6±1.1**,38°.75N**±0°.02×**42°.57E**±0°.02**,h3**^{km}±10^{km}**,** **n43,**σ**0^{s}.72**/60**,2C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLAZ	**Malazgirt-MUS**	**0.39**	**358**	PG	**Pb**	**08 43 09.3**	**-1.0**
MLAZ				SG	**Sb**	**08 43 16.2**	**-0.6**
GURO	**Guroymak-BITLI**	**0.46**	**245**	PG	**Pg**	**08 43 09.5**	**0.0**
BLIS	**Bitlis-Merkez**	**0.48**	**227**	*i* P	**Pg**	**08 43 09.8**	**-0.1**
BLIS				*i* S	**Sg**	**08 43 16.7**	**+0.5**
BLIS				IAML		08 43 17.0	
	comp=E,6µm,0.3s						
BLIS				IAML		08 43 18.0	
	comp=N,5µm,0.3s						
AKDM	**Akdamar-Van**	**0.53**	**142**	PG	**Pg**	**08 43 10.8**	**0.0**
GEVA	**Gevas**	**0.58**	**138**	*i* P	**Pg**	**08 43 11.9**	**+0.2**
GEVA				*i* S	**Sb**	**08 43 21.2**	**-1.1**
GEVA				IAML		08 43 22.0	
	comp=N,2µm,0.2s						
GEVA				IAML		08 43 22.0	
	comp=E,2µm,0.3s						
VANB	**Van**	**0.66**	**103**	PG	**Pb**	**08 43 14.6**	**-0.2**
TVAN	**Van**	**0.69**	**108**	*i* P	**Pb**	**08 43 14.8**	**-0.6**
TVAN				IAML		08 43 26.0	
	comp=E,1µm,0.4s						
TVAN				IAML		08 43 27.0	
	comp=N,678nm,0.4s						
PERV	**Siirt/Pervari-**	**0.80**	**181**	*i* P	**Pg**	**08 43 15.5**	**-0.5**
VMUR	**Van-Muradiye**	**0.82**	**73**	*i* P	**Pb**	**08 43 17.4**	**-0.2**
VMUR				*i* S	**Sb**	**08 43 28.4**	**-0.7**
VMUR				IAML		08 43 31.0	
	comp=E,838nm,0.4s						
VMUR				IAML		08 43 33.0	
	comp=N,406nm,0.2s						
MUSM	**Mu-Merkez**	**0.82**	**269**	*i* P	**Pg**	**08 43 15.5**	**-0.9**
MUSM				*i* S	**Sg**	**08 43 26.7**	**-0.4**
MUSM				IAML		08 43 28.0	
	comp=E,608nm,0.4s						
MUSM				IAML		08 43 29.0	
	comp=N,360nm,0.4s						
AGRB	**Hanur-Agry**	**0.89**	**22**	PG	**Pg**	**08 43 18.0**	**+0.3**
SRTM	**Siirt_Merkez**	**0.91**	**214**	*i* P	**Pb**	**08 43 18.2**	**-0.8**
SRTM				*i* S	**Sb**	**08 43 31.9**	**+0.3**
SRTM				IAML		08 43 33.0	
	comp=E,1µm,0.5s						
SRTM				IAML		08 43 35.0	
	comp=N,325nm,0.2s						
EATA	**Eleskirt**	**1.11**	**357**	*i* P	**Pg**	**08 43 21.9**	**-0.1**
EATA				*i* S	**Sn**	**08 43 38.9**	**-0.5**
EATA				IAML		08 43 41.0	
	comp=N,405nm,0.6s						
EATA				IAML		08 43 41.0	
	comp=E,447nm,0.4s						
OZAP	**Van, Ozalp-Mer**	**1.12**	**94**	*i* P	**Pn**	**08 43 23.0**	**-0.4**
CLDR	**Caldiran**	**1.12**	**69**	PN	**Pb**	**08 43 22.6**	**-0.2**
CLDR	**Caldiran**	**1.12**	**69**	*i* P	**Pb**	**08 43 22.7**	**-0.1**
CLDR				IAML		08 43 42.0	
	comp=N,227nm,0.6s						
CLDR				IAML		08 43 42.0	
	comp=E,185nm,0.4s						
KOTA	**Agri, Merkez-K**	**1.16**	**25**	*i* P	**Pg**	**08 43 22.8**	**-0.1**
KOTA				IAML		08 43 43.0	
	comp=E,211nm,0.4s						
SLHN	**Bingol, Solhan**	**1.22**	**280**	*i* P	**Pg**	**08 43 23.1**	**-0.9**
SLHN				IAML		08 43 41.0	
	comp=N,427nm,0.3s						
SLHN				IAML		08 43 41.0	
	comp=E,534nm,0.4s						
SVAN	**Silvan-Diyarba**	**1.23**	**241**	PN	**Pn**	**08 43 24.2**	**-0.4**
SVAN				SN	**Sn**	**08 43 41.3**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.23**	**241**	*i* P	**Pn**	**08 43 24.3**	**-0.4**
SVAN				*i* S	**Sn**	**08 43 41.1**	**-0.7**
SVAN				IAML		08 43 42.0	
	comp=N,238nm,0.6s						
SIRT	**Sirnak**	**1.25**	**185**	PN	**Pg**	**08 43 24.2**	**-0.3**
SIRT				SN	**Sn**	**08 43 42.1**	**-0.2**
SIRN	**Sırnak**	**1.26**	**186**	*i* P	**Pg**	**08 43 24.4**	**-0.3**
SIRN				IAML		08 43 44.0	
	comp=E,608nm,0.5s						
SIRN				*i* S	**Sn**	**08 43 44.4**	**+1.9**
SIRN				IAML		08 43 46.0	
	comp=N,820nm,0.4s						
KARO	**Karliova-Bingo**	**1.31**	**296**	PN	**Pg**	**08 43 25.5**	**-0.2**
BTMN	**Batman**	**1.33**	**230**	*i* P	**Pb**	**08 43 26.5**	**+0.3**
BTMN				*i* S	**Sn**	**08 43 45.2**	**+0.9**
BTMN				IAML		08 43 46.0	
	comp=E,1µm,0.3s						
BTMN				IAML		08 43 47.0	
	comp=N,2µm,0.6s						
KOPR	**Koprukoy-ERZUR**	**1.36**	**336**	PN	**Pg**	**08 43 26.9**	**+0.2**
MIDY	**Mardin/Midyat-**	**1.63**	**215**	*i* P	**Pb**	**08 43 30.9**	**-0.3**
MIDY				*i* S	**Sg**	**08 43 53.2**	**+0.4**
MIDY				IAML		08 43 54.0	
	comp=N,200nm,0.3s						
MIDY				IAML		08 43 55.0	
	comp=E,112nm,0.2s						
VNNZ	**Vanand**	**1.67**	**35**	*i* P	**Pg**	**08 43 32.8**	**+0.3**
VNNZ				*i* S	**Sg**	**08 43 55.3**	**+1.1**
CUKT	**Cukurca**	**1.71**	**151**	PN	**Pb**	**08 43 31.9**	**-0.8**
HANI	**Diyarbakir_Han**	**1.73**	**260**	*i* P	**Pb**	**08 43 32.2**	**-0.8**
HANI				*i* S	**Sg**	**08 43 56.7**	**+0.5**
HANI				IAML		08 43 59.0	
	comp=E,372nm,0.6s						
HANI				IAML		08 44 02.0	
	comp=N,288nm,0.4s						
TASB	**TASBURUN-IGDIR**	**1.79**	**46**	PN	**Pb**	**08 43 33.3**	**-0.7**
SENK	**Senkaya-Erzuru**	**1.82**	**355**	PN	**Pb**	**08 43 34.3**	**-0.3**
METS	**Metsamor**	**1.83**	**39**	*i* P	**Pg**	**08 43 36.1**	**+0.5**
KARS	**Kars**	**1.92**	**12**	PN	**Pb**	**08 43 35.3**	**-1.0**
MARD	**Mardin**	**2.01**	**225**	*i* P	**Pn**	**08 43 35.8**	**+0.3**
MARD				*i* S	**Sb**	**08 44 03.2**	**-0.1**
MARD				IAML		08 44 05.0	
	comp=E,134nm,0.2s						
MARD				IAML		08 44 06.0	
	comp=N,693nm,0.6s						
NRKZ	**NAREK**	**2.05**	**52**	*i* P	**Pg**	**08 43 39.3**	**-0.6**
DYBB	**Diyarbakir**	**2.07**	**248**	PN	**Pn**	**08 43 36.9**	**+0.7**
MAZI	**Mazidag**	**2.11**	**233**	PN	**Pn**	**08 43 37.5**	**+0.7**
GNI	**Garni**	**2.19**	**50**	⇑*i*P	**Pg**	**08 43 42.3**	**-0.3**
GNI				⇑*i*S	**Sg**	**08 44 12.1**	**+1.1**
GNI	**Garni**	**2.19**	**50**	PN	**Pb**	**08 43 39.5**	**-1.4**
KAPZ	**Kaputan**	**2.28**	**46**	*i* P	**Pg**	**08 43 43.6**	**-0.6**
BAYT	**Aydıntepe-Bayb**	**2.49**	**312**	PN	**Pn**	**08 43 43.3**	**+1.1**
MALT	**Malatya**	**3.27**	**264**	PN	**Pn**	**08 43 53.9**	**+1.1**
DARE	**Darende-Malaty**	**3.98**	**269**	PN	**Pn**	**08 44 04.6**	**+2.0**

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*BJI **11** 08:47:57.8±0.0,52°.90N×34°.90W,h10^{km},mB5.3/18, mb4.8/36,Ms4.9/6,Ms7 4.6/6*

*GCMT **11** 08:47:58.8±0.2,52°.89N±0°.02×34°.86W±0°.02,h12^{km}, MW4.9/116,Moment Tensor Solution. s39,c44; s116,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.42±.07; $M_{\theta\theta}$0.01±.09; $M_{\phi\phi}$2.41±.06; $M_{r\theta}$1.08±.27; $M_{\theta\phi}$-0.65±.07; $M_{\phi r}$0.54±.25; Best double couple: $M_0$2.76100×10^{16} NP1:ϕ_s325.00000°,δ46.00000°, λ-123.00000°. NP2:ϕ_s187.00000°,δ52.00000°, λ-61.00000°. Principal axes: T 2.5900, Plg3.0000°, Azm257.0000°; N 0.3440, Plg23.0000°, Azm349.0000°; P -2.9330, Plg67.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **11** 08:47:58.1±0.5,52°.76N×34°.89W,h0^{km},mb4.3/28, mb1 4.4/30,mb1mx4.3/46,mbtmp4.3/30,ML4.0/2,MS4.2/33, Ms1 4.2/33,ms1mx4.1/44 Error ellipse: s-maj=14.2km s-min=10.7km az=0.0*

*NEIC **11** 08:47:59.8±1.2,52°.78N±0°.07×34°.8W±0°.1,h10^{km}±1^{km}, mb4.7/145,Error ellipse: s-maj=16.7km s-min=3.9km az=131.0*

*OTT **11** 08:48:03.5±2.0,52°.65N×35°.19W,h18^{km},ML4.8/2, Atlantic Ocean. 1341km northeast from Bonavista, Nl*

ISC 11 08:48:00.2±0.3**,52°.74N**±0°.07×**34°.86W**±0°.05**,h14**^{km}**,n334,** σ**0^{s}.90**/320**,mb4.7**/102**,MS4.2**/33**,6C-2D,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJNN	**Saint John's**	**12.52**	**253**	PN	**Pn**	**08 50 56.4**	**-1.3**
SJNN				SN	Sn	08 53 03.1	-14
SJNN				Trac		08 53 13.9	
	comp=Z,14nm,0.5s						
DRLN	**Deer Lake**	**14.66**	**265**	PN	**Pn**	**08 51 24.6**	**-2.4**
DRLN				SN	Sn	08 53 54.9	-14
DRLN				Trac		08 54 04.5	
	comp=Z,23nm,0.7s						
SFJD	**Kangerlussuaq**	**16.26**	**338**	Pn	**Pn**	**08 51 49.1**	**+1.3**
	0.3nm,0.3s,baz=153,slow=12,SNR=7.2						
SFJD				LR	LR	08 56 47.2	
	comp=Z,909nm,19.6s,baz=138,slow=33						
SFJD	**Kangerlussuaq**	**16.26**	**338**		**Pn**	**08 51 49.2**	**+1.4**
SFJD				IAmb	IAmb	08 51 58.2	
	comp=Z,85nm,1.2s						
SFJD	**Kangerlussuaq**	**16.26**	**338**	*i* P	**P**	**08 51 50.9**	**+0.2**
SFJD	**Kangerlussuaq**	**16.26**	**338**	*i* P	**P**	**08 51 51.0**	**+0.2**
NATG	**Natashquan Que**	**17.52**	**273**	PN	**Pn**	**08 52 03.2**	**-0.6**
NATG				SN	Sn	08 55 05.7	-13
ESK	**Eskdalemuir**	**18.69**	**69**	P	**P**	**08 52 17.2**	**-0.5**
ESK				IAmb	IAmb	08 52 39.6	
	comp=Z,71nm,1.5s						
EKA	**Eskdalemuir Ar**	**18.71**	**69**	P	**Pn**	**08 52 18.7**	**+0.4**
	baz=276,slow=11,SNR=4.4						
GBN	**Guysborough**	**18.86**	**258**	PN	**Pn**	**08 52 20.8**	**+0.5**
GBN				SN	Sn	08 55 36.1	-15
GBN				Trac		08 55 43.2	
	comp=Z,0.0nm,0.0s						
SUMG	**Summit**	**19.97**	**357**	*i* P	**P**	**08 52 32.0**	**-0.1**
	comp=Z,113nm,1.4s						
SUMG	**Summit**	**19.97**	**357**	*i* P	**P**	**08 52 32.0**	**-0.1**
SUMG				IAmb	IAmb	08 52 37.0	
	comp=Z,114nm,1.4s						
NUUG	**Nuugaatsiaq**	**20.54**	**343**	*i* P	**P**	**08 52 38.3**	**+0.6**
FRB	**Frobisher Bay**	**20.60**	**315**	P	**P**	**08 52 38.6**	**+0.2**
	comp=Z,25nm,1.2s,baz=101,slow=12,SNR=15						
FRB				LR	LR	08 58 36.0	
	comp=Z,928nm,19.3s,baz=116,slow=31						
JMIC	**Jan Mayen**	**21.78**	**23**	LR	LR	08 59 02.9	
	comp=Z,570nm,20.8s,baz=244,slow=30						
D63A	**Stockholm**	**22.03**	**268**	P	**P**	**08 52 53.3**	**-0.8**
	baz=62						
PQI	**Presque Isle**	**22.15**	**267**	P	**P**	**08 52 54.0**	**-1.2**
PQI				IAmb	IAmb	08 52 59.9	
	comp=Z,61nm,1.3s						
E64A	**Bridgewater**	**22.15**	**267**	P	**P**	**08 52 53.9**	**-1.4**
	baz=61						
GGN	**Saint George**	**22.21**	**263**	P	**P**	**08 52 56.3**	**+0.4**
GGN				IAmb	IAmb	08 52 57.7	
	comp=Z,59nm,1.4s						
DBG	**Daneborg**	**22.47**	**10**	*i* P	**P**	**08 52 58.9**	**+0.4**
DBG				IAmb	IAmb	08 53 00.5	
	comp=Z,27nm,1.2s						
E63A	**Oxbow**	**22.51**	**267**	P	**P**	**08 52 57.6**	**-1.6**
	baz=61						
D62A	**Allapoint, All**	**22.59**	**269**	P	**P**	**08 52 59.3**	**-0.7**
	baz=63						
G65A	**Princeton**	**22.60**	**264**	P	**P**	**08 52 58.2**	**-1.9**
	baz=59						
H66A	**Whiting**	**22.67**	**263**	P	**P**	**08 52 59.6**	**-1.2**
	baz=58						
ESBB	**Sonseca Array**	**24.84**	**109**	P	**P**	**08 53 22.5**	**+0.6**
ESDC	**Sonseca Array**	**24.84**	**109**	P	**P**	**08 53 22.0**	**+0.1**
	comp=Z,2.1nm,1.0s,baz=316,slow=9.1,SNR=8.2						
ESDC				LR	LR	09 01 20.8	
	comp=Z,870nm,18.3s,baz=305,slow=32						
ESDC	**Sonseca Array**	**24.84**	**109**	P	**P**	**08 53 22.8**	**+0.9**
DAG	**Danmarks Havn**	**24.90**	**9**	*i* P	**P**	**08 53 22.0**	**-0.1**
DAG	**Danmarks Havn**	**24.90**	**9**	*i* P	**P**	**08 53 22.0**	**-0.1**
G60A	**Masonville**	**25.55**	**268**	P	**P**	**08 53 30.5**	**+2.2**
	baz=59						
NOA	**NORSAR Array B**	**26.00**	**53**	P	**P**	**08 53 32.4**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=288,slow=9.2,SNR=3.6						
NOA				LR	LR	09 02 53.9	
	comp=Z,382nm,18.8s,baz=270,slow=34						
HFS	**Hagfors**	**27.28**	**55**	LR	LR	09 03 15.0	
	comp=Z,608nm,18.6s,baz=282,slow=34						
CLL	**Collm**	**29.06**	**73**	*i* P	**P**	**08 54 00.0**	**+0.3**
	comp=Z,18nm,1.2s						
CLL	**Collm**	**29.06**	**73**	P	**P**	**08 54 00.0**	**+0.3**
CLL				IAmb	IAmb	08 54 02.4	
	comp=Z,11nm,0.9s						
DAVOX	**Davos/Dischmat**	**29.13**	**84**	LR	LR	09 05 33.0	
	comp=Z,311nm,19.5s,baz=264,slow=36						
MDT	**Midelt**	**29.49**	**120**	LR	LR	09 03 20.1	
	comp=Z,157nm,20.4s,baz=343,slow=31						
BRG	**Berggiesshubel**	**29.78**	**74**	*e*P	**P**	**08 54 06.5**	**+0.5**
BRG				Amp		08 54 13.6	
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**29.78**	**74**	*e*P	**P**	**08 54 06.5**	**+0.5**
BRG				Amp		08 54 13.6	
	comp=Z,12nm,1.2s						
SADO	**Sadowa**	**29.86**	**273**	LR	LR	09 05 00.3	
	comp=Z,719nm,20.6s,baz=78,slow=34						
N59A	**State Game Lan**	**29.98**	**263**	P	**P**	**08 54 08.7**	**+0.7**
	baz=53						
O60A	**Telford**	**30.12**	**262**	P	**P**	**08 54 10.9**	**+1.7**
	baz=52						
KHC	**Kasperske Hory**	**30.28**	**77**	*e*P	**P**	**08 54 11.1**	**+0.5**
GERES	**GERESS Array B**	**30.48**	**78**	P	**P**	**08 54 12.7**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=314,slow=10,SNR=6.0						
GERES				LR	LR	09 04 30.1	
	comp=Z,443nm,20.9s,baz=300,slow=32						
GERES	**GERESS Array B**	**30.48**	**78**	P	**P**	**08 54 11.9**	**-0.5**
N58A	**Sunbury**	**30.60**	**264**	P	**P**	**08 54 13.2**	**-0.2**
	baz=53						
P59A	**Jarrettsville**	**31.18**	**262**	P	**P**	**08 54 20.2**	**+1.6**
	baz=51						
DPC	**Dobruska-Polom**	**31.38**	**73**	*e*P	**P**	**08 54 21.0**	**+0.8**
SDMD	**Soldier's Deli**	**31.55**	**262**	P	**P**	**08 54 22.8**	**+1.0**
ARCES	**ARCESS Array B**	**31.90**	**35**	P	**P**	**08 54 24.1**	**-0.5**
	comp=Z,7.3nm,0.9s,baz=264,slow=8.0,SNR=9.8						
ARCES	**ARCESS Array B**	**31.90**	**35**	P	**P**	**08 54 24.0**	**-0.7**
RES	**Resolute Bay**	**32.21**	**334**	P	**P**	**08 54 26.9**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=100,slow=9.0,SNR=8.1						
RES	**Resolute Bay**	**32.21**	**334**	P	**P**	**08 54 26.9**	**-0.4**
RES				IAmb	IAmb	08 54 29.3	
	comp=Z,9.9nm,1.1s						
MORC	**Moravsky Berou**	**32.33**	**74**	⇑P	**P**	**08 54 29.6**	**+0.9**
MORC	**Moravsky Berou**	**32.33**	**74**	*e*P	**P**	**08 54 28.8**	**+0.2**
FCC	**Fort Churchill**	**32.89**	**304**	P	**P**	**08 54 33.3**	**0.0**
FINES	**FINESS Array B**	**33.05**	**50**	P	**P**	**08 54 34.5**	**-0.2**
	comp=Z,7.2nm,0.8s,baz=298,slow=8.2,SNR=8.2						
FINES				LR	LR	09 06 06.0	
	comp=Z,660nm,21.8s,baz=347,slow=33						
FINES	**FINESS Array B**	**33.05**	**50**	P	**P**	**08 54 32.9**	**-1.8**
VYHS	**Vyhne**	**33.67**	**75**	*e*P	**P**	**08 54 41.1**	**+0.8**
VYHS	**Vyhne**	**33.67**	**75**	*e*P	**P**	**08 54 41.1**	**+0.8**
LANS	**Liptovska Anna**	**33.73**	**74**	*e*P	**P**	**08 54 42.6**	**+1.7**
LANS	**Liptovska Anna**	**33.73**	**74**	*e*P	**P**	**08 54 42.6**	**+1.7**
ACSO	**Alum Creek Sta**	**34.77**	**269**	P	**P**	**08 54 50.5**	**+0.6**
ACSO				IAmb	IAmb	08 55 01.7	
	comp=Z,12nm,0.9s						
U57A	**Blanch**	**34.98**	**260**	P	**P**	**08 54 53.1**	**+1.3**
	baz=48						
CRVS	**Cervenica-Dubn**	**35.01**	**73**	*e*P	**P**	**08 54 53.0**	**+1.1**
CRVS				*e*		08 54 59.7	
KEST	**Kesra**	**35.29**	**101**	P	**P**	**08 54 55.0**	**+0.5**
	comp=Z,6.9nm,0.9s,baz=298,slow=8.1,SNR=4.9						
KEST				LR	LR	09 08 49.9	
	comp=Z,255nm,18.5s,baz=282,slow=35						
KEST	**Kesra**	**35.29**	**101**	IAmb	IAmb	08 54 56.2	
	comp=Z,15nm,1.1s						
KOLS	**Kolonicke sedl**	**35.47**	**73**	*e*P	**P**	**08 54 55.6**	**-0.3**
KOLS				*e*		08 55 01.9	
BZS	**Buzias**	**36.75**	**78**	⇓P	**P**	**08 55 07.1**	**+0.3**
DRGR		**36.79**	**76**	⇑P	**P**	**08 55 08.6**	**+1.4**
ULM	**Lac du Bonnet**	**37.07**	**291**	P	**P**	**08 55 09.3**	**-0.2**
	comp=Z,4.7nm,1.0s,baz=66,slow=3.4,SNR=4.9						
ULM				LR	LR	09 08 55.7	
	comp=Z,409nm,19.1s,baz=74,slow=34						
ULM	**Lac du Bonnet**	**37.07**	**291**	P	**P**	**08 55 09.2**	**-0.4**
BUR08	**Bucovina Ar. S**	**37.81**	**73**	P	**P**	**08 55 16.4**	**+0.5**
BUR08				IAmb	IAmb	08 55 24.4	
	comp=Z,17nm,1.4s						
BURAR	**Bucovina Array**	**37.83**	**73**	⇑P	**P**	**08 55 17.5**	**+1.4**
BURAR	**Bucovina Array**	**37.83**	**73**	P	**P**	**08 55 16.5**	**+0.4**
FFC	**Flin Flon**	**38.39**	**301**	P	**P**	**08 55 21.1**	**+0.5**
AKASG	**Malin Array Be**	**38.58**	**67**	P	**P**	**08 55 21.9**	**-0.3**

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      comp=Z,5.0nm,0.9s,baz=302,slow=8.1,SNR=13
AKASG                              LR    LR    09 11 08.0
      comp=Z,399nm,18.4s,baz=305,slow=36
AKASG Malin Array Be    38.58  67  P     P     08 55 22.2  0.0
AKBB  Malin Array Si    38.58  67  P     P     08 55 21.4 -0.9
AKBB                               IAmb  IAmb  08 55 23.0
      comp=Z,21nm,1.2s
BIZ   Bicaz             38.70  73 ⇑P     P     08 55 24.8 +1.5
KLMR  Klimovskoe        39.43  48 eP     P     08 55 24.8 -4.4
KLMR                               AMP         08 55 31.2
      comp=Z,58nm,1.4s
ECSD  EROS Data Cent    40.93 283  P     P     08 55 41.8 -0.2
      baz=55
YKA   Yellowknife Ar    41.11 316  P     P     08 55 42.5 -0.6
      comp=Z,3.3nm,1.1s,baz=59,slow=9.1,SNR=16
YKA                                PcP   PcP   08 57 41.1 -1.1
      comp=Z,0.6nm,0.9s,baz=57,slow=4.1,SNR=5.4
YKA                                LR    LR    09 10 45.9
      comp=Z,313nm,18.3s,baz=0.0,slow=33
CCM   Cathedral Cave    41.14 272  P     P     08 55 44.9 +1.2
      baz=50
GCPR  Guaynabo City     42.11 227  P     P     08 55 51.8 +0.1
GCPR                               IAmb  IAmb  08 56 02.6
      comp=Z,27nm,1.1s
LPAR  Lepanto           42.17 269  P     P     08 55 52.4 +0.4
LPAR                               IAmb  IAmb  08 56 17.1
      comp=Z,16nm,1.1s
OXF   Oxford            42.36 267  P     P     08 55 54.0 +0.4
OXF                                IAmb  IAmb  08 56 04.8
      comp=Z,17nm,1.0s
LCAR  Lake Charles      42.38 270  P     P     08 55 54.2 +0.5
U40A  Yellville         43.22 272  P     P     08 56 01.7 +1.1
      baz=49
WHAR  Wooly Hollow      43.58 270  P     P     08 56 04.4 +0.9
WHAR                               IAmb  IAmb  08 56 05.0
      comp=Z,14nm,1.2s
W41B  Gary Mavity, V    43.64 270  P     P     08 56 04.5 +0.5
      baz=48
SDD   Santo Domingo     43.76 232  P     P     08 56 06.2 +1.1
HHAR  Hobbs             43.93 272  P     P     08 56 07.3 +0.9
X40A  Basin Creek Fa    44.45 270  P     P     08 56 11.1 +0.5
      baz=47
W39A  Magazine          44.55 271  P     P     08 56 12.7 +1.3
      baz=48
VBMS  Vicksburg         44.60 265  P     P     08 56 12.3 +0.5
LAO   LASA Array        44.80 292  P     P     08 56 15.5 +2.3
      baz=55,SNR=8.9
LAO   LASA Array        44.80 292  P     P     08 56 14.0 +0.8
MIAR  Mount Ida         44.87 270  P     P     08 56 15.2 +1.3
      baz=47
MIAR  Mount Ida         44.87 270  P     P     08 56 14.2 +0.3
MIAR                               IAmb  IAmb  08 56 25.9
      comp=Z,20nm,1.4s
RSSD  Black Hills       45.05 288  P     P     08 56 15.6  0.0
MANT  Manisa            45.12  82  P     P     08 56 14.9 -1.2
Z41A  Richland Creek    45.27 268  P     P     08 56 18.5 +1.5
      baz=46
INK   Inuvik            45.34 329  P     P     08 56 17.0 -0.1
KAN08 Anthony NE Sta    45.75 276  P     P     08 56 22.0 +1.1
EGMT  Eagleton          45.99 296  P     P     08 56 23.8 +1.1
      baz=55,SNR=6.0
EGMT  Eagleton          45.99 296  P     P     08 56 23.3 +0.6
OK025 Westminster Rd    46.46 274  P     P     08 56 27.4 +1.0
BR131 Keskin Array S    47.37  77  P     P     08 56 33.0 -0.7
BRTR  Keskin Array B    47.37  77  P     P     08 56 34.2 +0.5
      comp=Z,3.9nm,0.9s,baz=303,slow=5.7,SNR=10
BRTR                               LR    LR    09 17 59.3
      comp=Z,204nm,18.4s,baz=312,slow=38
BRTR  Keskin Array B    47.37  77  P     P     08 56 33.6 -0.1
K22A  Casper            47.39 288  P     P     08 56 34.8 +0.9
      baz=52,SNR=5.1
RLMT  Red Lodge         47.44 292  P     P     08 56 35.5 +1.2
      baz=52,SNR=8.5
RLMT  Red Lodge         47.44 292  P     P     08 56 34.5 +0.3
RLMT                               IAmb  IAmb  08 56 49.7
      comp=Z,15nm,1.4s
WALA  Waterton Lakes    47.63 299  P     P     08 56 35.4 -0.2
WMOK  Wichita Mounta    47.90 274  P     P     08 56 39.0 +1.3
      baz=47
HRY   Holter Researc    47.90 295  P     P     08 56 38.4 +0.7
YNE   Yellowstone No    47.92 293  P     P     08 56 37.6 -0.4
N23A  Red Feather La    48.15 286  P     P     08 56 41.1 +1.2
      baz=50,SNR=6.2
RWWY  Rawlins           48.38 287  P     P     08 56 41.8 +0.1
RWWY                               IAmb  IAmb  08 57 07.1
      comp=Z,8.3nm,0.9s
BOZ   Bozeman (W)       48.47 294  P     P     08 56 43.1 +1.0
      baz=52
BOZ   Bozeman (W)       48.47 294  P     P     08 56 42.4 +0.2
BOZ                                IAmb  IAmb  08 56 44.3
      comp=Z,10nm,1.3s
ISCO  Idaho Springs     48.66 284  P     P     08 56 45.0 +1.1
      baz=50
ISCO  Idaho Springs     48.66 284  P     P     08 56 43.5 -0.3
YMR   Madison River     48.67 293  P     P     08 56 43.9 +0.1
YPP   Pitchstone Pla    48.83 292  P     P     08 56 45.8 +0.7
MSO   Missoula          48.98 297  P     P     08 56 47.1 +1.0
      baz=52
PD31  Pinedale Array    49.06 290  P     P     08 56 46.0 -0.8
PDAR  Pinedale Array    49.06 290  P     P     08 56 46.0 -0.8
      comp=Z,2.4nm,1.0s,baz=64,slow=8.4,SNR=12
PDAR                               LR    LR    09 16 02.4
      comp=Z,314nm,20.9s,baz=24,slow=34
PDAR  Pinedale Array    49.06 290  P     P     08 56 46.3 -0.6
BW06  Boulder Array     49.06 290  P     P     08 56 46.9  0.0
      baz=51,SNR=6.0
BW06  Boulder Array     49.06 290  P     P     08 56 45.9 -1.0
TOA0  Torodi Ar. Sit    49.06 130  P     P     08 56 46.7 -0.1
TOA0                               IAmb  IAmb  08 56 47.8
      comp=Z,9.7nm,1.1s
TORD  Torodi Ar. Bea    49.06 130  P     P     08 56 46.3 -0.5
      comp=Z,4.5nm,1.1s,baz=332,slow=8.4,SNR=10.0
TORD                               LR    LR    09 15 42.2
      comp=Z,235nm,18.2s,baz=330,slow=34
TORD  Torodi Ar. Bea    49.06 130  P     P     08 56 45.8 -1.0
MOOW  Moose Ponds       49.12 292  P     P     08 56 46.4 -0.8
LOHW  Long Hollow       49.12 291  P     P     08 56 47.8 +0.5
DLMT  Dillon            49.15 294  P     P     08 56 47.5 +0.1
DLMT                               IAmb  IAmb  08 56 57.2
      comp=Z,9.9nm,1.4s
BMAR  Burnt Mountain    49.22 331  P     P     08 56 45.9 -1.6
REDW  Red Top Meadow    49.42 291  P     P     08 56 49.2 -0.4
REDW                               IAmb  IAmb  08 57 04.0
      comp=Z,10nm,1.4s
HKT   Hockley           49.43 268  P     P     08 56 48.1 -1.3
HKT                                IAmb  IAmb  08 56 50.9
      comp=Z,11nm,1.2s
AMTX  Amarillo          49.55 277  P     P     08 56 51.4 +0.9
AMTX                               IAmb  IAmb  08 56 52.9
      comp=Z,6.9nm,0.8s
A21K  Barrow            49.57 339  P     P     08 56 50.2 +0.1
      baz=43
T25A  Trinidad          49.68 281  P     P     08 56 53.1 +1.4
      baz=48
DAWY  Dawson            49.76 326  P     P     08 56 52.0 +0.3
DAWY                               IAmb  IAmb  08 57 00.4
      comp=Z,9.6nm,1.4s
TOLK  Toolik Lake Re    49.79 334  P     P     08 56 51.5 -0.4
      baz=46,SNR=7.0
NEW   Newport           49.81 300  P     P     08 56 51.8 -0.4
      baz=52
NEW   Newport           49.81 300  P     P     08 56 52.0 -0.2
NEW                                IAmb  IAmb  08 56 53.9
      comp=Z,10nm,1.3s
EGAK  Eagle             49.89 327  P     P     08 56 52.0 -0.6
EGAK                               IAmb  IAmb  08 56 54.5
      comp=Z,16nm,1.4s
SDCO  Great Sand Dun    49.93 282  P     P     08 56 54.7 +1.1
      baz=48
SDCO  Great Sand Dun    49.93 282  P     P     08 56 54.2 +0.6
AHID  Auburn Hatcher    49.94 291  P     P     08 56 53.7 +0.2
AHID                               IAmb  IAmb  08 57 13.8
      comp=Z,10nm,1.3s
KBZ   Khabaz            50.18  67  P     P     08 56 56.0 +0.9
      comp=Z,7.6nm,1.2s,baz=305,slow=6.7,SNR=4.7
KBZ                                LR    LR    09 17 20.7
      comp=Z,316nm,21.3s,baz=317,slow=35
ARU   Arti              50.21  46  P     P     08 56 55.6 +0.5
K27K  Chicken           50.68 327  P     P     08 56 59.1 +0.5
      baz=49
C09A  Chrisman Ranch    50.70 300  P     P     08 56 58.3 -0.7
MSTX  Muleshoe          50.84 277  P     P     08 57 01.2 +0.9
      baz=46
HWUT  Hardware Ranch    50.95 290  P     P     08 57 01.2  0.0
HWUT                               IAmb  IAmb  08 57 02.8
      comp=Z,16nm,1.3s
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COLD  Coldfoot          50.95 333  P     P     08 57 00.3 -0.3
      baz=45
COLD  Coldfoot          50.95 333  P     P     08 57 00.2 -0.3
TCUT  Toone Canyon      51.17 289  P     P     08 57 03.4 +0.5
HYT   Haines Junctio    51.18 322  P     P     08 57 03.1 +0.6
BCAR  Beaver Creek A    51.23 326  P     P     08 57 03.2 +0.4
HLID  Hailey            51.29 294  P     P     08 57 05.8 +2.1
      baz=50
HLID  Hailey            51.29 294  P     P     08 57 03.9 +0.2
HLID                               IAmb  IAmb  08 57 06.3
      comp=Z,11nm,1.4s
F10A  Beach Ranch, E    51.30 298  P     P     08 57 03.7 +0.1
PV07  Paradox Valley    51.33 285  P     P     08 57 04.9 +0.8
PV07                               IAmb  IAmb  08 57 17.9
      comp=Z,9.3nm,1.2s
SCRK  Sand Creek        51.34 328  P     P     08 57 04.3 +0.5
      baz=47,SNR=8.8
PV22  Blue Mesa, Par    51.35 285  P     P     08 57 04.4 +0.2
PV22                               IAmb  IAmb  08 57 19.2
      comp=Z,16nm,1.5s
JCT   Junction City     51.46 271  P     P     08 57 03.3 -1.7
PV01  Paradox Valley    51.49 285  P     P     08 57 05.1 -0.1
PV12  Saucer Basin,     51.50 285  P     P     08 57 05.4  0.0
PV04  Paradox Valley    51.51 285  P     P     08 57 05.8 +0.5
JLU   Jordanelle        51.53 289  P     P     08 57 05.7 +0.1
PV23  Carpenter Ridg    51.53 285  P     P     08 57 06.2 +0.5
PV23                               IAmb  IAmb  08 57 26.5
      comp=Z,14nm,1.2s
PV02  Paradox Valley    51.54 285  P     P     08 57 06.6 +0.9
PV02                               IAmb  IAmb  08 57 09.1
      comp=Z,12nm,1.3s
PV11  David Mesa, Pa    51.55 285  P     P     08 57 05.0 -0.8
PV03  Paradox Valley    51.57 285  P     P     08 57 06.3 +0.4
PV03                               IAmb  IAmb  08 57 09.2
      comp=Z,16nm,1.3s
PV16  Nyswonger Mesa    51.57 285  P     P     08 57 07.2 +1.3
PV16                               IAmb  IAmb  08 57 09.2
      comp=Z,14nm,1.2s
PV20  West Nyswonger    51.58 285  P     P     08 57 06.2 +0.3
PV20                               IAmb  IAmb  08 57 09.2
      comp=Z,15nm,1.2s
DOT   Dot Lake          51.59 327  P     P     08 57 06.2 +0.7
DOT                                IAmb  IAmb  08 57 08.0
      comp=Z,13nm,1.4s
PV14  Lion Creek, Pa    51.59 285  P     P     08 57 06.9 +0.8
PV14                               IAmb  IAmb  08 57 09.4
      comp=Z,15nm,1.3s
PV18  Skein Mesa, Pa    51.61 285  P     P     08 57 06.3 +0.2
PV18                               IAmb  IAmb  08 57 09.4
      comp=Z,18nm,1.3s
PV19  Morning Glory     51.61 285  P     P     08 57 06.1 -0.1
PV19                               IAmb  IAmb  08 57 08.0
      comp=Z,12nm,1.2s
PV13  Radium Mtn., P    51.62 285  P     P     08 57 06.6 +0.4
PV13                               IAmb  IAmb  08 57 19.3
      comp=Z,10nm,1.3s
PV17  East Wray Mesa    51.62 285  P     P     08 57 06.8 +0.6
PV17                               IAmb  IAmb  08 57 09.5
      comp=Z,14nm,1.1s
POKR  Poker Plat Res    51.64 330  P     P     08 57 06.3 +0.5
      baz=46,SNR=6.1
SPUT  South Promonto    51.65 290  P     P     08 57 06.5 +0.2
IL31                    51.71 330  P     P     08 57 06.3 +0.1
IL31                               IAmb  IAmb  08 57 08.7
      comp=Z,18nm,1.3s
ILAR  Eielson Array     51.71 330  P     P     08 57 06.2 -0.1
      comp=Z,2.9nm,1.0s,baz=42,slow=5.4,SNR=18
ILAR                               PcP   PcP   08 58 18.8 -0.7
      comp=Z,1.4nm,0.8s,baz=16,slow=1.8,SNR=7.1
ILAR  Eielson Array     51.71 330  P     P     08 57 06.5 +0.2
PV05  Paradox Valley    51.84 285  P     P     08 57 07.3 -0.5
COLA  College           51.94 330  P     P     08 57 08.8 +0.8
COLA                               IAmb  IAmb  08 57 09.3
      comp=Z,17nm,1.4s
MENT  Mentasta          51.97 327  P     P     08 57 08.7 +0.4
MENT                               IAmb  IAmb  08 57 10.9
      comp=Z,10nm,1.3s
HDA   Harding Lake      51.99 329  P     P     08 57 08.7 +0.3
      baz=46
BMO   Blue Mountains    52.05 297  P     P     08 57 09.0 -0.3
MVCO  Mesa Verde        52.06 284  P     P     08 57 11.5 +1.9
      baz=48
MVCO  Mesa Verde        52.06 284  P     P     08 57 10.8 +1.2
MVCO                               IAmb  IAmb  08 57 29.5
      comp=Z,12nm,1.4s
DBIC  Dimbokro          52.08 141  P     P     08 57 09.7 +0.1
      comp=Z,2.4nm,0.6s,baz=336,slow=12,SNR=1.8
DBIC                               LR    LR    09 17 33.9
      comp=Z,162nm,18.4s,baz=326,slow=34
MFID  Camas Ranch       52.17 294  P     P     08 57 10.4 +0.2
MFID                               IAmb  IAmb  08 57 12.5
      comp=Z,11nm,1.4s
I23K  Minto, Yukon-K    52.19 331  P     P     08 57 10.0 +0.1
      baz=44,SNR=10
LTY   Liberty           52.30 301  P     P     08 57 11.2 +0.2
NLU   North Lily Min    52.32 289  P     P     08 57 10.8 -0.7
ANMO  Albuquerque       52.38 280  P     P     08 57 13.6 +1.7
      baz=47
ANMO  Albuquerque       52.38 280  P     P     08 57 13.0 +1.0
NEA2  Nenana            52.51 330  P     P     08 57 12.6 +0.4
      baz=44,SNR=5.5
PAX   Paxson            52.52 327  P     P     08 57 13.1 +0.6
DUG   Dugway, Tooele    52.59 289  P     P     08 57 14.8 +1.4
      baz=48,SNR=6.9
DUG   Dugway, Tooele    52.59 289  P     P     08 57 14.1 +0.8
DUG                                IAmb  IAmb  08 57 16.4
      comp=Z,18nm,1.4s
G08A  Pilot Rock        52.67 298  P     P     08 57 12.8 -1.0
MLY   Manley            52.68 331  P     P     08 57 13.2 -0.4
      baz=43
IMAR  Indian Mountai    52.83 333  P     P     08 57 14.5 -0.1
MCK   McKinley          53.09 329  P     P     08 57 16.2 -0.3
      baz=44,SNR=7.5
MSU   Marysvale         53.34 287  P     P     08 57 18.1 -1.0
GNI   Garni             53.56  70  LR    LR    09 19 56.4
      comp=Z,330nm,21.5s,baz=324,slow=36
ELK   Elko              53.60 291  P     P     08 57 22.1 +1.2
MTPU  Mount Pierson     53.66 287  P     P     08 57 21.6 +0.1
NLWA  Neilton Lookou    53.87 303  P     P     08 57 22.3 -0.2
E03A  Lebam             54.27 302  P     P     08 57 25.9 +0.6
WVOR  Wild Horse Val    54.37 295  P     P     08 57 27.0 +0.6
WVOR                               IAmb  IAmb  08 57 29.0
      comp=Z,11nm,1.2s
CUT   Chulitna          54.47 329  P     P     08 57 26.0 -0.6
      baz=42
SZCU  Shurtz Canyon     54.49 287  P     P     08 57 28.2 +0.8
TXAR  Lajitas Array     54.63 273  P     P     08 57 28.4  0.0
      comp=Z,0.8nm,0.9s,baz=76,slow=7.9,SNR=5.2
TXAR                               LR    LR    09 20 12.5
      comp=Z,192nm,18.1s,baz=0.0,slow=35
TXAR  Lajitas Array     54.63 273  P     P     08 57 27.9 -0.5
CCUT  Cedar City        54.68 287  P     P     08 57 29.8 +0.9
PPLA  Purkeypile        54.70 330  P     P     08 57 28.3 -0.1
PMR   Palmer            54.71 328  P     P     08 57 29.2 +0.8
PINE  Pine Mountain     54.72 298  P     P     08 57 29.2 +0.3
PINE                               IAmb  IAmb  08 57 32.1
      comp=Z,9.2nm,1.1s
KNB   Kanab             54.73 287  P     P     08 57 29.0 -0.1
WUAZ  Wupatki           54.91 284  P     P     08 57 32.0 +1.6
      baz=46
WUAZ  Wupatki           54.91 284  P     P     08 57 30.8 +0.3
WUAZ                               IAmb  IAmb  08 57 34.1
      comp=Z,12nm,1.4s
J05D  Fort Rock, OR     55.22 297  P     P     08 57 33.2 +0.7
      baz=48,SNR=5.7
RC01  Rabbit Creek A    55.28 328  P     P     08 57 32.9 +0.4
      baz=42
TIXI  Tiksi             55.38   6  P     P     08 57 33.4 +0.4
K05A  Summer Lake       55.41 297  P     P     08 57 34.4 +0.4
K05A                               IAmb  IAmb  08 57 37.2
      comp=Z,15nm,1.2s
ABKAR Akbulak array     55.50  52  P     P     08 57 34.3 +0.1
TTA   Tatalina          55.80 332  P     P     08 57 36.1 -0.2
TTA                                IAmb  IAmb  08 57 38.0
      comp=Z,16nm,1.4s
TPNV  Topopah Spring    56.76 289  P     P     08 57 44.7 +1.0
      baz=46
TPNV  Topopah Spring    56.76 289  P     P     08 57 43.6 -0.1
TUC   Tucson            56.80 281  P     P     08 57 45.5 +1.6
      baz=45
TUC   Tucson            56.80 281  P     P     08 57 45.2 +1.3
NV11  Mina Array Sit    56.83 291  P     P     08 57 44.5 +0.4
NVAR  Mina Array Bea    56.91 291  P     P     08 57 45.0 +0.2
      comp=Z,0.8nm,0.9s,baz=52,slow=5.8,SNR=6.8
NVAR                               LR    LR    09 21 13.8
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      comp=Z,246nm,18.5s,baz=10.0,slow=35
GRAC  Grapevine Rang    57.37 290  P     P     08 57 49.0 +1.1
      baz=46
PDMCI Parker Dam,Lak    57.38 285  P     P     08 57 49.3 +1.4
      baz=45
FURC  Furnace Creek,    57.45 289  P     P     08 57 48.5 +0.2
      baz=45
BRVK  Borovoye          57.51  44  P     P     08 57 49.4 +0.9
ROSC  El Rosal          57.70 229  P     P     08 57 52.6 +1.9
      comp=Z,20nm,0.6s,baz=116,slow=6.2,SNR=9.6
ROSC  El Rosal          57.70 229  P     P     08 57 52.2 +1.4
GMRC  Granite Mounta    57.94 287  P     P     08 57 53.5 +1.6
      baz=45
MPMC  Manual Prospec    58.10 289  P     P     08 57 54.6 +1.4
      baz=45
CWC   Cottonwood Cre    58.17 290  P     P     08 57 53.6  0.0
      baz=45
GSC   Goldstone, Bar    58.24 288  P     P     08 57 55.4 +1.4
      baz=45
214A  Organ Pipe Nat    58.26 282  P     P     08 57 55.7 +1.6
      baz=44
RCBR  Riachuelo         58.35 181  LR    LR    09 16 26.0
      comp=Z,51nm,19.9s,baz=344,slow=29
BC3   Big Chuckawall    58.61 285  P     P     08 57 58.0 +1.4
      baz=44,SNR=8.4
LRMC  Laurel Mtn Rad    58.62 288  P     P     08 57 57.9 +1.2
      baz=45
GLA   Glamis            58.67 285  P     P     08 57 57.9 +0.9
BELC  Belle Mtn. Jos    58.69 286  P     P     08 57 58.5 +1.3
      baz=44,SNR=6.2
ISA   Isabella, Lake    58.94 289  P     P     08 58 00.5 +1.6
      baz=45
ISA   Isabella, Lake    58.94 289  P     P     08 57 59.9 +1.0
ISA                                IAmb  IAmb  08 58 02.6
      comp=Z,8.0nm,1.2s
VES   Vestal, Richgr    59.17 290  P     P     08 58 02.0 +1.7
      baz=45
EDW2  Edwards Air Fo    59.22 288  P     P     08 58 02.3 +1.5
      baz=44
HSIG                    59.26 278  P     P     08 58 01.6 +0.6
BFSC  Mount Baldy Ra    59.48 287  P     P     08 58 03.9 +1.1
      baz=44
MURC  Murrieta          59.67 287  P     P     08 58 05.6 +1.7
      baz=44
MONP2 Monument Peak     59.72 285  P     P     08 58 06.2 +1.7
      baz=44
BAR   Barrett           60.02 285  P     P     08 58 07.5 +1.2
BAR                                IAmb  IAmb  08 58 09.2
      comp=Z,11nm,1.2s
BRZS  Berezniki         60.79  45 eP     P     08 58 10.5 -0.8
      comp=Z,6.0nm,1.5s,baz=45
SRIG  Santa Rosalia     61.27 278  P     P     08 58 14.0 -0.9
SRIG                               IAmb  IAmb  08 58 40.6
      comp=Z,4.4nm,0.8s
ZAA0  Zalesovo Array    62.46  35  P     P     08 58 22.0 -0.5
ZALV  Zalesovo Beam     62.46  35  P     P     08 58 21.8 -0.6
      comp=Z,1.7nm,0.8s,baz=318,slow=8.0,SNR=4.9
ZALV  Zalesovo Beam     62.46  35  P     P     08 58 21.0 -1.4
GEYT  Alibeck           62.55  63  P     P     08 58 24.4 +1.1
      comp=Z,8.1nm,0.9s,baz=275,slow=8.8,SNR=10
GEYT  Alibeck           62.55  63  P     P     08 58 23.6 +0.2
GYA0B ALIBECK ARRAY     62.55  63  P     P     08 58 23.3  0.0
KURK  Kurchatov         62.69  41  P     P     08 58 23.9 -0.2
KURK                               IAmb  IAmb  08 58 24.8
      comp=Z,7.2nm,0.9s
YAK   Yakutsk           64.92   8  P     P     08 58 38.1 -0.4
KK31  Karatay Array     65.01  51  P     P     08 58 39.6 +0.1
KKAR  Karatay Array     65.01  51  P     P     08 58 39.6 +0.2
BTLS  Baital            65.15  48 eP     P     08 58 40.0 -0.3
      comp=Z,4.5nm,1.7s,baz=48
IUG   Iuzhnay           65.51  52 eP     P     08 58 42.5 -0.3
      comp=Z,3.8nm,0.8s,baz=52
DZA   Taraz             65.56  51 eP     P     08 58 42.8 -0.3
      baz=51
SAML  Samuel            66.04 211  P     P     08 58 45.8 -0.5
SAML                               IAmb  IAmb  08 58 54.5
      comp=Z,5.4nm,0.8s
SGDS  Sogindy           66.65  48 eP     P     08 58 49.5 -0.7
      comp=Z,1.8nm,0.9s,baz=48
KUU   Kurty             67.07  47 eP     P     08 58 52.2 -0.5
      comp=Z,15nm,1.4s,baz=47
TDK   Taldyqorghan      67.10  45 eP     P     08 58 52.8 -0.1
      baz=45
MAKZ  Makanchi          67.14  42  P     P     08 58 53.3 +0.2
AAK   Ala-Archa         67.22  49  P     P     08 58 54.8 +0.9
MK31  Makanchi Array    67.28  42  P     P     08 58 54.1 +0.1
MK31                               IAmb  IAmb  08 58 55.4
      comp=Z,7.9nm,1.2s
MKAR  Makanchi Array    67.28  42  P     P     08 58 54.1 +0.1
      comp=Z,4.8nm,0.9s,baz=335,slow=5.4,SNR=24
CHKK  Chushkaly         67.39  47 eP     P     08 58 54.9 +0.2
      baz=47
MTBS  Maitube           67.72  47 eP     P     08 58 58.2 +1.3
      baz=48
ZSN   Zaisan            67.76  40 eP     P     08 58 56.4 -0.7
      baz=40
AAA   Alma-Ata          67.87  47 eP     P     08 58 58.6 +0.7
      baz=47
MDOK  Medeo             67.97  47 eP     P     08 58 58.8 +0.2
      baz=47
TNSS  Tian-Shan         68.02  47 eP     P     08 59 00.6 +1.4
      baz=47
KPKS  Kokpek            68.44  46 eP     P     08 59 01.3 -0.2
      comp=Z,8.6nm,1.1s,baz=46
SATY  Saty              68.65  46 eP     P     08 59 02.4 -0.4
      comp=Z,6.1nm,1.2s,baz=46
SHLS  Shalkode          69.03  46 eP     P     08 59 06.7 +1.5
      comp=Z,7.7nm,1.0s,baz=45
BDFB  Brasilia          69.04 194  LR    LR    09 23 58.4
      comp=Z,130nm,19.5s,baz=26,slow=31
TLY   Talaya            70.26  26  P     P     08 59 12.7 +0.2
KSH   Kashi             70.37  50  P     P     08 59 16.2 +2.7
KSH                                S     S     09 08 24.7 -0.8
KSH                                pmax  pmax
      comp=Z,53nm,1.3s
KBL   Kabul             70.88  58  P     P     08 59 17.5 +0.7
KBL                                IAmb  IAmb  08 59 17.8
      comp=Z,4.6nm,0.9s
WMQ   Urumqi            71.88  40 eP     P     08 59 24.1 +1.6
WMQ                                pP    sP    08 59 28.6 +1.5
WMQ                                sP    pwP   08 59 30.9  0.0
WMQ                                pmax  pmax
      comp=Z,16nm,1.3s
WMQ                                pmax  pmax
      comp=Z,180nm,6.7s
SIV   San Ignacio       72.10 207  P     P     08 59 24.4 +0.5
      comp=Z,2.3nm,0.7s,baz=35,slow=5.8,SNR=6.2
ATD   Arta Tunnel       73.47  93  LR    LR    09 33 18.6
      comp=Z,73nm,19.2s,baz=32,slow=37
NIL   Nilore            73.73  56  P     P     08 59 32.9 -0.7
NIL                                IAmb  IAmb  08 59 34.9
      comp=Z,13nm,1.2s
PETK  Petropavlovsk-    74.00 352  LR    LR    09 33 11.9
      comp=Z,218nm,18.2s,baz=14,slow=37
SONM  Songino Array     74.50  26  P     P     08 59 38.4 +0.4
      comp=Z,8.0nm,0.9s,baz=328,slow=6.0,SNR=20
SONM  Songino Array     74.50  26  P     P     08 59 38.1 +0.1
ULN   Ulaanbaatar       74.65  26  P     P     08 59 39.3 +0.5
HIA   Hailar            76.11  17  P     P     08 59 46.9 -0.1
HIA                                IAmb  IAmb  08 59 48.1
      comp=Z,5.4nm,0.8s
PB16  IPOC Station P    76.89 214  P     P     08 59 52.2 -0.1
KMBO  Kilima Mbogo      80.14 105  LR    LR    09 36 06.5
      comp=Z,88nm,18.4s,baz=60,slow=36
GTA   Gaotai            80.16  34 ⇑P     P     09 00 10.0 +0.1
GTA                                pP    sP    09 00 14.4 -0.2
GTA                                sP    PcP   09 00 17.2 +0.1
GTA                                pmax  pmax
      comp=Z,5.0nm,1.2s
GTA                                pmax  pmax
      comp=Z,210nm,6.5s
GTA                                LR    LR
      comp=Z,220nm,16.7s
GTA                                LR    LR
      comp=Z,200nm,17.8s
GTA                                LR    LR
      comp=Z,260nm,19.6s
LVC   Limon Verde       80.67 212  P     P     09 00 12.5 -0.3
      comp=Z,4.8nm,0.8s,baz=352,slow=6.9,SNR=4.7
LVC   Limon Verde       80.67 212  IAmb  IAmb  09 00 15.8
      comp=Z,15nm,1.2s
CPUP  Villa Florida     81.14 200  P     P     09 00 13.8 -1.0
      comp=Z,0.3nm,0.4s,baz=6.2,slow=3.6,SNR=4.1
CPUP                               LR    LR    09 32 08.6
      comp=Z,64nm,18.6s,baz=341,slow=33
HHC   Hu-ho-hao-te      82.36  25 eP     P     09 00 21.4 -0.1
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
USRK	**Ussuriysk Ar.**	82.78	9	P	P	09 00 23.5	+0.1
	comp=Z,0.7nm,0.6s,baz=337,slow=3.3,SNR=3.3						
LZH	**Lanzhou**	84.52	32	⇑P	P	09 00 31.8	-0.9
LZH				pP	pP	09 00 36.0	-0.2
LZH				sP	sP	09 00 38.0	+0.5
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,67nm,5.2s						
XAN	**Xi'an**	87.99	29	P	P	09 00 49.6	-0.1
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,210nm,4.9s						
MJAR	**Matsushiro Arr**	90.88	6	LR	LR	09 43 14.9	
	comp=Z,52nm,19.2s,baz=285,slow=36						
NJ2	**Nanjing**	92.50	22	eP	P	09 01 09.1	-1.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI	**Kunming**	94.12	38	⇓eP	P	09 01 18.2	-0.4
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BOSA	**Boshof**	96.42	130	LR	LR	09 47 05.1	
	comp=Z,69nm,18.1s,baz=18,slow=37						
PLCA	**Paso Flores**	98.09	207	LR	LR	09 45 50.7	
	comp=Z,76nm,19.4s,baz=7.0,slow=35						
CMAR	**Chiang Mai Arr**	98.61	44	LR	LR	09 49 02.5	
	comp=Z,106nm,18.3s,baz=316,slow=37						
SNAA	**Sanae**	126.16	168	PKP	PKPdf	09 07 00.5	0.0
	comp=Z,1.4nm,0.7s,baz=289,slow=5.0,SNR=4.7						
DZM	**Mont Dzumac**	145.29	324	PKPbc	PKPab	09 07 37.2	-0.1
	comp=Z,13nm,0.9s,baz=97,slow=8.1,SNR=3.6						
WRA	**Warramunga Arr**	146.21	18	PKPbc	PKPdf	09 07 39.2	+0.3
	comp=Z,9.1nm,1.0s,baz=343,slow=3.3,SNR=28						
WRA	**Warramunga Arr**	146.21	18		PKPdf	09 07 39.4	+0.4
ASAR	**Alice Springs**	149.73	21	PKPbc	PKPbc	09 07 48.4	-1.0
	comp=Z,4.3nm,0.8s,baz=353,slow=2.4,SNR=31						
ASAR	**Alice Springs**	149.73	21	PKPdf	PKPdf	09 07 44.4	-0.3

IDC 11 08:53:22.4±2.1, 10°.74S×120°.05E, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.5/32, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=61.8km s-min=27.6km az=47.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	3.59	82	Pn	Pn	08 54 19.2	-0.1
	7.5nm,0.3s,baz=258,slow=20,SNR=4.1						
BATI				Sn	Sn	08 54 58.6	-4.0
	4.3nm,0.3s,baz=299,slow=13,SNR=1.4						
FITZ	**Fitzroy Crossi**	9.10	144	Pn	Pn	08 55 35.2	+0.2
	0.4nm,0.3s,baz=323,slow=8.9,SNR=6.2						
FITZ				Sn	Sn	08 57 10.6	-7.7
	0.5nm,0.3s,baz=180,slow=20,SNR=8.2						
WRA	**Warramunga Arr**	16.53	125	Pn	Pn	08 57 14.1	-1.7
	0.1nm,0.3s,baz=295,slow=15,SNR=2.0						
WRA				Sn	Sn	09 00 06.7	-13
	0.1nm,0.3s,baz=304,slow=24,SNR=1.0						
ASAR	**Alice Springs**	18.43	136	P	P	08 57 40.3	+0.8
	0.1nm,0.3s,baz=314,slow=13,SNR=11						
ASAR				S	Sn	09 00 54.1	-12
	0.0nm,0.3s,baz=305,slow=21,SNR=2.0						
MKAR	**Makanchi Array**	66.47	333	P	P	09 04 13.6	-0.1
	0.2nm,0.5s,baz=135,slow=5.4,SNR=2.2						

DJA 11 09:01:19.8±1.1, 0°S±4°×12°3E±°, h108km±9km, M3.0/5, MLv3.0/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	0.79	358	P	Pn	09 01 40.4	+1.6
GTOI				S	Sn	09 01 56.5	+3.4
LUWI	**Luwuk**	0.92	197	P	Pn	09 01 40.1	+0.1
LUWI				S	Sn	09 01 56.2	+1.0
MRSI	**Marisa**	1.27	300	P	Pn	09 01 43.8	0.0
MRSI				S	Sn	09 02 02.7	+0.8
APSI	**Ampana**	1.58	242	P	Pn	09 01 48.2	+0.8
APSI				S	Sn	09 02 09.1	+0.6

IDC 11 09:17:54.8±1.0, 28°.72N×51°.74E, h0km, mb3.9/16, mb1 3.9/20, mb1mx3.8/49, mbtmp3.9/20, ML3.6/4, Error ellipse: s-maj=22.5km s-min=16.5km az=178.0
TEH 11 09:17:55.9, 28°.78N×51°.78E, h8km, ML4.0
OMAN 11 09:18:04.0±0.3, 28°.12N×51°.94E, h12km, mb5.2/11, ml3.5/2, ms2.8/3, Error ellipse: s-maj=7.1km s-min=5.3km az=17.0
ISC 11 09:17:56.9±0.5, 28°.69N±0°.05×51°.75E±0°.04, h15km, n67, σ1ˢ83/79, mb3.9/18, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	0.43	293	ePg	Pg	09 18 04.9	-0.7
KAZ1	**Kazerun**	0.93	354	ePg	Pb	09 18 12.0	-2.8
KAZ1				e		09 18 39.6	
	comp=Z,99nm,0.6s						
SHI	**Shiraz**	1.16	35	ePg	Pb	09 18 17.1	-1.6
QIR1	**Qir**	1.16	101	ePg	Pb	09 18 18.0	-0.6
QIR1				e		09 18 45.5	
	comp=Z,99nm,0.6s						
GHIR	**Ghir-Karzin**	1.16	110	ePg	Pg	09 18 19.0	-0.3
JHRM	**Jahrom**	1.62	96	ePg	Pb	09 18 26.3	-0.2
JHRM				e		09 18 54.8	
	comp=Z,99nm,0.5s						
LMD1	**Lamerd**	1.84	137	ePn	Pb	09 18 31.0	+0.8
LMD1				e		09 19 15.3	
	comp=Z,99nm,0.7s						
ABEH	**Behbahan**	2.30	326	ePn	Pn	09 18 35.6	+1.3
KLNJ	**Kolanjah**	2.31	357	ePn	Pn	09 18 35.4	+0.7
IRAM	**Ramesheh**	3.15	10	ePn	Pn	09 18 46.6	+0.4
KBD	**Kabd**	3.59	279	eP		09 18 54.1	
UMR	**Umm Al-Rimmam**	3.63	285	eP		09 18 54.6	
AMIS	**Naft Sefid**	3.65	325	ePn	Pn	09 18 53.7	+0.9
IMEH	**Mehriz**	3.66	42	ePn	Pn	09 18 54.9	+1.7
MIB	**Mutribah**	4.01	287	eP		09 19 00.3	
IPIR	**Pirpir**	4.04	350	ePn	Pn	09 18 59.0	+0.5
GENO	**Geno**	4.12	107	ePn	Pn	09 19 03.6	+4.2
NASN	**Na'in**	4.19	12	ePn	Pn	09 19 01.4	+0.8
IZEF	**Zefreh**	4.22	7	ePn	Pn	09 19 01.4	+0.5
RST	**Umm Al-Ruwaisa**	4.24	282	eP		09 19 03.2	
IBAF	**Bafgh**	4.39	48	ePn	Pn	09 19 04.2	+1.1
YZKH	**Yazd**	4.42	33	ePn	Pn	09 19 04.7	+1.1
KHGB	**Koh Gabri**	4.45	67	e		09 19 26.8	
	comp=Z,99nm,0.3s						
KHGB				ePn	Pn	09 19 05.0	+1.0
KRBR	**Kerman**	4.56	72	ePn	Pn	09 19 07.1	+1.5
ANAR	**Anarak**	4.79	20	ePn	Pn	09 19 09.4	+0.7
BANOM	**Banah**	4.90	123	P	Pn	09 19 10.5	+0.4
BANOM				S	Sn	09 20 04.8	-1.8
ASHO	**Ashiyiah**	5.55	135	P	Pn	09 19 19.7	+0.7
	SNR=8.4						
ASHO				S	Sn	09 20 21.4	-1.2
IKFM	**Kafar-mosalman**	5.86	326	ePn	Pn	09 19 24.2	+1.0
KBAM	**BAM**	5.89	84	ePn	Pn	09 19 25.2	+1.5
KBAM				e		09 19 26.8	
	comp=Z,99nm,0.7s						
ASAO	**Ashtian**	6.02	346	ePn	Pn	09 19 26.2	+0.6
SOHO	**SOHO**	6.25	136	P	Pn	09 19 28.9	+0.4
SOHO				S	Sn	09 20 38.0	-1.7
IVRN	**Varamin**	6.28	360	ePn	Pn	09 19 28.9	-0.2
TABS	**Tabas**	6.75	42	ePn	Pn	09 19 37.0	+1.5
ARQ	**Araqi**	6.85	140	P	Pn	09 19 37.3	+0.4
	SNR=8.5						
ARQ				S	Sn	09 20 51.2	-3.3
HOQ	**Hoqain**	7.13	134	P	Pn	09 19 41.2	+0.4
HOQ				S	Sn	09 20 58.1	-3.4
IGHG	**Ghaleghazi**	7.15	323	ePn	Pn	09 19 42.3	+1.2
HSRG	**Sareghieh**	7.16	337	ePn	Pn	09 19 41.9	+0.5
IDHR	**Dehrash**	7.53	324	ePn	Pn	09 19 46.5	+0.2
BSY	**Bisya**	7.70	139	P	Pn	09 19 49.1	+0.6
	SNR=12						
BSY				S	Sn	09 21 10.9	-4.5
QALM	**Alamut, Qazvin**	7.77	353	ePn	Pn	09 19 49.7	0.0
SMDO	**Samad**	7.98	133	P	Pn	09 19 52.7	+0.3
WSAR	**Wadi Sarin**	8.23	130	Pn	Pn	09 19 54.1	-1.8
	comp=Z,0.7nm,0.3s,baz=330,slow=10.0,SNR=5.5						
WSAR				Sn	Sn	09 21 23.1	-5.6
	comp=Z,0.6nm,0.3s,baz=145,slow=16,SNR=1.8						
JMDO	**Jabal Madar**	8.52	136	P	Pn	09 19 59.3	-0.5
JMDO				P	Pn	09 19 59.3	-0.5
WBK	**Wadi Bani Khal**	8.89	131	P	Pn	09 20 03.8	-1.1
MHTO	**MHTO**	9.53	142	P	Pn	09 20 13.9	+0.4
	SNR=13						
MHTO				S	Sn	09 21 54.5	-5.9
DQM	**DQM**	10.20	148	P	Pn	09 20 22.4	-0.3
DQM				S	Sn	09 22 09.9	-7.0
WHFO	**Wadi Hawf**	10.88	170	P	Pn	09 20 31.9	-0.4
WHFO				P	Pn	09 20 31.9	-0.4
DMTO	**DMTO**	11.31	164	P	Pn	09 20 38.6	+0.5
	SNR=5.1						
ABTO	**Aybut**	11.38	172	P	Pn	09 20 39.4	+0.4
ABTO				P	Pn	09 20 39.4	+0.4
MMAI	**Mount Meron Ar**	14.69	291	Pn	Pn	09 21 25.1	+0.9
	comp=Z,0.8nm,0.3s,baz=108,slow=14,SNR=2.3						
KBZ	**Khabaz**	16.60	337	Pn	Pn	09 21 49.0	0.0
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=2.5						
BRTR	**Keskin Array B**	18.55	311	P	Pn	09 22 13.8	+0.5
	comp=Z,0.2nm,0.3s,baz=136,slow=13,SNR=10						
AKTO	**Aktyubinsk**	22.23	11	P	P	09 22 52.6	-0.2
	comp=Z,2.4nm,0.8s,baz=197,slow=11,SNR=5.5						
IDI	**Anoyia**	23.67	293	P	P	09 23 08.2	+0.3
	comp=Z,4.1nm,0.8s,baz=239,slow=12,SNR=1.6						
MLR	**Muntele Rosu**	26.38	316	P	P	09 23 35.4	+2.7
	comp=Z,1.2nm,0.7s,baz=288,slow=20,SNR=1.4						
AKASG	**Malin Array Be**	27.79	328	P	P	09 23 44.5	-0.6
	comp=Z,0.6nm,0.5s,baz=133,slow=7.2,SNR=2.2						
BVAR	**Borovoye Array**	27.93	24	P	P	09 23 46.0	-0.3
	comp=Z,0.4nm,0.5s,baz=189,slow=8.3,SNR=2.5						
KURBB	**Kurchatov Arra**	29.80	35	P	P	09 24 02.9	-0.1
	comp=Z,0.8nm,0.9s,baz=237,slow=9.0,SNR=5.1						
MKAR	**Makanchi Array**	29.89	44	P	P	09 24 04.1	+0.1
	comp=Z,0.2nm,0.4s,baz=247,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	34.87	34	P	P	09 24 49.3	+2.0
	comp=Z,0.6nm,0.3s,baz=251,slow=8.5,SNR=3.8						
FINES	**FINESS Array B**	36.93	340	P	P	09 25 04.5	-0.5
	comp=Z,5.1nm,0.9s,baz=143,slow=12,SNR=9.5						
HFS	**Hagfors**	40.56	332	P	P	09 25 35.0	-0.4
	comp=Z,2.7nm,0.4s,baz=131,slow=8.3,SNR=15						
GTA	**Gaotai**	40.81	62	eP	P	09 25 41.7	+3.8
GTA				pP	sP	09 25 46.6	+1.8
GTA				sP	pP	09 25 48.8	+5.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NB2	**NORSAR Subarra**	42.08	332	P	P	09 25 46.9	-1.0
	comp=Z,1.0nm,0.4s,baz=118,slow=9.3						
NOA	**NORSAR Array B**	42.08	332	P	P	09 25 47.0	-0.9
	comp=Z,0.6nm,0.4s,baz=123,slow=8.4,SNR=3.0						
SONM	**Songino Array**	45.93	50	P	P	09 26 18.4	-0.8
	comp=Z,0.2nm,0.4s,baz=264,slow=11,SNR=1.8						
TORD	**Torodi Ar. Bea**	48.90	262	P	P	09 26 43.0	+0.6
	comp=Z,1.9nm,0.7s,baz=50,slow=7.9,SNR=7.6						
DBIC	**Dimbokro**	57.63	259	P	P	09 27 46.4	-0.3
	comp=Z,3.1nm,0.8s,baz=72,slow=6.4,SNR=2.0						
KSRS	**Korea Array**	62.85	60	P	P	09 28 22.9	+0.7
	comp=Z,1.5nm,0.9s,baz=288,slow=6.2,SNR=2.6						
YKA	**Yellowknife Ar**	88.47	354	P	P	09 30 48.3	0.0
	comp=Z,0.3nm,0.7s,baz=17,slow=5.1,SNR=4.9						
ASAR	**Alice Springs**	94.63	114	P	P	09 31 18.6	+1.0
	comp=Z,0.4nm,0.7s,baz=303,slow=4.7,SNR=5.7						

IDC 11 09:25:41.0±3.0, 10°.74S×120°.13E, h0km, mb3.6/3, mb1 3.5/5, mb1mx3.4/28, mbtmp3.4/5, ML2.7/2, Error ellipse: s-maj=181.2km s-min=28.7km az=52.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	16.47	125	Pn	Pn	09 29 32.0	-1.5
	0.0nm,0.3s,baz=298,slow=13,SNR=1.9						
ASAR	**Alice Springs**	18.38	136	P	P	09 29 58.1	+0.6
	0.1nm,0.3s,baz=310,slow=12,SNR=6.7						
SONM	**Songino Array**	59.58	349	P	P	09 35 46.2	-0.3
	0.7nm,0.6s,baz=165,slow=9.0,SNR=5.4						
MKAR	**Makanchi Array**	66.50	333	P	P	09 36 31.7	-0.8
	0.2nm,0.7s,baz=151,slow=6.3,SNR=1.8						
ZALV	**Zalesovo Beam**	71.05	339	P	P	09 37 01.9	+1.2
	0.3nm,0.3s,baz=151,slow=9.2,SNR=1.8						

IDC 11 09:42:47.2±2.6, 4°.77N×127°.34E, h100km±26km, mb3.5/7, mb1 3.6/8, mb1mx3.3/38, mbtmp3.8/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/31, Error ellipse: s-maj=54.0km s-min=13.7km az=71.0
ISC 11 09:42:48.1±0.9, 4°.8N±0°.2×127°.4E±0°.3, h108km, n10, σ0ˢ77/9, mb3.9/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	2.87	322	P	Pn	09 43 33.1	+0.7
	61nm,0.3s,baz=56,slow=7.3,SNR=2.3						
DAV				S	Sn	09 44 05.6	-0.8
	22nm,0.3s,baz=296,slow=22,SNR=6.0						
SIJI	**Sorong**	6.85	145	LR	LR	09 46 39.9	
	comp=Z,111nm,21.9s,baz=18,slow=34						
KAPI	**Kappang**	12.36	218	LR	LR	09 50 52.1	
	comp=Z,80nm,19.6s,baz=356,slow=39						
WRA	**Warramunga Arr**	25.52	165	P	P	09 48 05.7	-1.1
	0.8nm,0.3s,baz=343,slow=10,SNR=10						
ASAR	**Alice Springs**	29.00	168	P	P	09 48 37.3	-0.6
	0.6nm,0.6s,baz=350,slow=7.3,SNR=12						
STKA	**Stephens Creek**	38.91	161	P	P	09 50 04.1	+0.8
	0.7nm,0.3s,baz=333,slow=14,SNR=1.8						
SONM	**Songino Array**	46.50	341	P	P	09 51 04.7	0.0
	0.2nm,0.3s,baz=156,slow=7.6,SNR=2.1						
PETK	**Petropavlovsk-**	54.21	22	P	P	09 52 02.4	-0.1
	1.2nm,0.5s,baz=223,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	57.05	325	P	P	09 52 23.2	+0.3
	0.6nm,0.4s,baz=117,slow=7.9,SNR=12						
ZALV	**Zalesovo Beam**	59.93	332	P	P	09 52 42.4	-0.3
	0.3nm,0.3s,baz=121,slow=6.9,SNR=2.2						

IDC 11 10:01:35.5±9.9, 15°.69N×93°.67W, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.4/49, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=194.5km s-min=115.6km az=19.0
MEX 11 10:01:46.5±0.6, 15°.78N×94°.60W, h16km±999km, MD4.1
ISC 11 10:01:41.1±1.1, 15°.79N±0°.08×94°.60W±0°.05, h10km, n7, σ1ˢ22/10, mb3.5/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	1.32	348	i P	Pb	10 02 06.6	+0.5
CMIG				i S	Sb	10 02 22.3	-0.8
PCIG		1.33	93	eP	Pb	10 02 06.6	+0.5
PCIG				eS	Sb	10 02 22.7	-0.6
HUIG	**Huatulco**	1.45	269	i P	Pb	10 02 08.7	+0.4
HUIG				eS	Sn	10 02 25.6	-0.9
TXAR	**Lajitas Array**	15.86	330	Pn	P	10 05 28.4	+0.1
	0.0nm,0.3s,baz=143,slow=12,SNR=5.5						
ANMO	**Albuquerque**	21.84	333	P	P	10 06 35.7	+1.6
	0.5nm,0.5s,baz=130,slow=11,SNR=2.9						
NVAR	**Mina Array Bea**	30.72	322	P	P	10 07 57.9	+1.3
	0.6nm,0.8s,baz=130,slow=9.3,SNR=4.4						
YKA	**Yellowknife Ar**	48.74	348	P	P	10 10 23.8	-1.9
	0.4nm,0.9s,baz=147,slow=8.1,SNR=3.7						

IDC 11 10:10:09.8±2.7, 2°.47N×126°.75E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/48, mbtmp3.4/3, Error ellipse: s-maj=234.7km s-min=28.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	23.49	162	P	P	10 15 22.4	+0.9
	0.8nm,0.6s,baz=341,slow=10.0,SNR=4.9						
ASAR	**Alice Springs**	26.90	165	P	P	10 15 52.0	-0.9
	0.3nm,0.5s,baz=340,slow=8.8,SNR=8.1						
MKAR	**Makanchi Array**	58.60	326	P	P	10 20 08.8	+0.2
	0.2nm,0.5s,baz=122,slow=8.5,SNR=2.6						

IPEC 11 10:11:20.6±0.2, 51°.49N×16°.31E, h0km, ML2.6/3, Error ellipse: s-maj=1.6km s-min=1.0km az=41.0
IDC 11 10:11:22.6±0.8, 51°.39N×16°.20E, h0km, mb1 3.6/7, mb1mx3.2/54, mbtmp3.5/7, ML2.6/7, Error ellipse: s-maj=14.6km s-min=7.1km az=114.0
PRU 11 10:11:22.4±0.0, 51°.42N×16°.17E, h0km
BGR 11 10:11:22.7±0.3, 51°.41N×16°.19E, h1km, ML3.0/23, Error ellipse: s-maj=3.3km s-min=2.2km az=18.0
VIE 11 10:11:24.8±0.9, 51°.25N×15°.88E, h0km, mb2.2/3, ml3.0/6, Error ellipse: s-maj=8.9km s-min=4.9km az=0.0 75 km NE of Liberec Suspected Mining induced.
ISC 11 10:11:20.2±0.7, 51°.50N±0°.03×16°.26E±0°.02, h0km, n65, σ1ˢ15/132, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.66	178	ePg	Pg	10 11 33.2	+0.4
KSP				i Sg	Sg	10 11 41.4	+0.1
KSP	**Ksiaz**	0.66	178	ePg	Pg	10 11 33.4	+0.5
KSP				eSg	Sg	10 11 41.5	+0.1
CHVC	**Chvalec**	0.92	188	ePG	Pg	10 11 38.3	+0.4
CHVC				eSG	Sg	10 11 49.0	-0.8
	comp=Z,135nm,0.7s						
OSTC	**Ostas**	0.94	182	ePG	Pg	10 11 38.8	+0.5
OSTC				eSG	Sg	10 11 50.3	-0.2
	comp=Z,102nm,0.7s						
UPC	**Upice**	1.00	189	ePG	Pg	10 11 39.5	0.0
UPC				eSG	Sg	10 11 52.2	-0.3
	comp=Z,306nm,0.7s						
DPC	**Dobruska-Polom**	1.15	178	ePG	Pg	10 11 42.2	-0.1
DPC				eSG	Sg	10 11 56.9	-0.3
	comp=Z,167nm,1.0s						
DPC	**Dobruska-Polom**	1.15	178	ePg	Pg	10 11 42.4	+0.1
DPC				eSg	Sg	10 11 56.9	-0.3
PVCC	**Panska Ves**	1.44	228	ePG	Pn	10 11 47.6	0.0
PVCC				eSG	Sg	10 12 06.6	0.0
	comp=Z,296nm,0.6s						
PVCC	**Panska Ves**	1.44	228	ePg	Pg	10 11 48.3	+0.4
PVCC				eSg	Sn	10 12 07.4	+0.1
KRLC	**Kraliky**	1.46	167	ePG	Pn	10 11 48.0	0.0
KRLC				eSG	Sg	10 12 06.6	-0.6
	comp=Z,72nm,0.5s						
BRG	**Berggiesshubel**	1.59	248	Pg	Pn	10 11 50.1	+0.5
BRG				Sg	Sn	10 12 11.0	+0.2
BRG				Amp		10 12 11.4	
	comp=Z,91nm,0.4s						
BRG	**Berggiesshubel**	1.59	248	Pg	Pn	10 11 50.1	+0.5
BRG				Sg	Sn	10 12 11.0	+0.2
BRG				Amp		10 12 11.4	
	comp=Z,91nm,0.4s						
BRG	**Berggiesshubel**	1.59	248	ePn	Pn	10 11 49.3	-0.3
BRG				ePg	Pb	10 11 50.6	+0.2
BRG				eSg	Sn	10 12 10.9	+0.1
RUE	**Ruedersdorf**	1.82	304	ePn	Pn	10 11 52.6	-0.1
RUE				eSg	Sg	10 12 20.4	+1.8
PRA	**Prague**	1.84	220	ePG	Pb	10 11 54.6	-0.1
PRA				eSG	Sb	10 12 18.7	+0.4
	comp=Z,28nm,0.7s						
PRU	**Pruhonice**	1.86	216	ePG	Pn	10 11 54.2	+0.8
PRU				eSG	Sn	10 12 18.1	+0.5
	comp=Z,77nm,0.5s						
PRU	**Pruhonice**	1.86	216	ePn	Pn	10 11 53.7	+0.3
PRU				eSg	Sb	10 12 19.1	+0.1
MORC	**Moravsky Berou**	1.91	154	ePN	Pn	10 11 53.8	-0.3
MORC				eSG	Sn	10 12 19.5	+0.7
MORC	**Moravsky Berou**	1.91	154	ePn	Pn	10 11 53.8	-0.3
	baz=336						
MORC				eSg	Sn	10 12 19.5	+0.7
	comp=Z,49nm,0.4s,baz=336						
MORC	**Moravsky Berou**	1.91	154	ePn	Pn	10 11 54.2	+0.1
MORC				ePg	Pg	10 11 57.3	+0.5
MORC				eSg	Sb	10 12 20.5	+0.2
FBE	**Freiberg**	1.92	254	ePn	Pb	10 11 56.0	0.0
FBE				eSg	Sb	10 12 20.9	+0.4
CLL	**Collm**	2.05	266	ePg	Pb	10 11 59.0	+0.7
CLL				eSg	Sg	10 12 26.0	0.0
	comp=Z,27nm,0.7s						
CLL	**Collm**	2.05	266	ePn	Pn	10 11 56.6	+0.7
CLL				ePg	Pg	10 11 59.8	+0.3
CLL				eSg	Sg	10 12 26.5	+0.5
OKC	**Ostrava-Krasne**	2.05	143	eSG	Sg	10 12 25.4	-0.7
	comp=Z,130nm,1.1s						
OKC	**Ostrava-Krasne**	2.05	143	eSg	Sb	10 12 24.8	+0.4
VRAC	**Vranov**	2.20	174	Pn	Pn	10 11 58.5	+0.4
	comp=Z,1.4nm,0.3s,baz=341,slow=14,SNR=14						
VRAC				Lg	Lg	10 12 29.3	
	comp=Z,3.2nm,0.3s,baz=81,slow=22,SNR=14						
VRAC	**Vranov**	2.20	174	ePN	Pn	10 11 58.8	+0.7
VRAC				eSG	Sb	10 12 28.8	0.0
VRAC	**Vranov**	2.20	174	ePn	Pn	10 11 58.8	+0.7
	baz=355						
VRAC				eSg	Sb	10 12 28.8	0.0
	comp=Z,20nm,0.2s,baz=355						
VRAC	**Vranov**	2.20	174	ePn	Pn	10 11 59.7	+1.6
VRAC				ePg	Pg	10 12 02.9	+0.4
VRAC				eSg	Sg	10 12 30.1	-0.9
PBCC	**Pribram**	2.32	219	ePG	Pb	10 12 02.9	0.0
PBCC				eSG	Sb	10 12 32.5	+0.4
KRUC	**Moravsky**	2.44	178	ePN	Pn	10 12 01.9	+0.6
KRUC				eSG	Sb	10 12 36.3	+0.6
KRUC	**Moravsky**	2.44	178	ePn	Pn	10 12 01.8	+0.5
	baz=359						
KRUC				eSg	Sb	10 12 36.2	+0.6
	comp=Z,32nm,0.5s,baz=359						
KRUC	**Moravsky**	2.44	178	ePn	Pn	10 12 02.5	+1.2
KRUC				eSg	Sg	10 12 37.6	-1.0
OJC	**Ojcow**	2.58	118	ePg	Pg	10 12 10.6	+0.8
OJC				eSg	Sg	10 12 44.6	+1.4
OJC	**Ojcow**	2.58	118	ePn	Pn	10 12 04.5	+1.2
OJC				ePg	Pg	10 12 11.9	+2.2
OJC				eSn	Sn	10 12 33.4	-2.0
OJC				eSg	Sg	10 12 44.9	+1.7
TANN	**Tannenbergstha**	2.63	247	ePn	Pn	10 12 04.4	+0.3
TANN				ePg	Pg	10 12 11.7	+1.0
TANN				eSg	Sb	10 12 43.5	+2.3
WERD	**Werda**	2.71	249	ePn	Pn	10 12 05.9	+0.8
WERD				ePg	Pg	10 12 12.0	-0.2
WERD				eSg	Sg	10 12 47.3	0.0
NKC	**Novy Kostel**	2.73	244	ePN	Pn	10 12 06.1	+0.8
NKC				ePG	Pb	10 12 10.4	+0.5
NKC				eSG	Sg	10 12 47.4	-0.4
	comp=Z,66nm,0.5s						
GUNZ	**Gunzen**	2.73	247	eSg	Sg	10 12 47.2	-0.8
WERN	**Wernitzgruen**	2.74	245	ePn	Pn	10 12 06.2	+0.7
WERN				ePg	Pg	10 12 13.3	+0.5
WERN				eSg	Sg	10 12 47.5	-0.8
PLN	**Plauen**	2.78	250	ePg	Pg	10 12 13.9	+0.3
PLN				eSg	Sg	10 12 48.4	-1.2
KHC	**Kasperske Hory**	2.93	217	ePN	Pn	10 12 08.6	+0.5
KHC				ePG	Pb	10 12 13.8	+0.5
KHC				eSG	Sb	10 12 51.7	+2.1
	comp=Z,29nm,0.7s						
KHC	**Kasperske Hory**	2.93	217	ePn	Pn	10 12 08.4	+0.3
KHC				ePg	Pb	10 12 14.4	+1.0
KHC				eSg	Sb	10 12 51.1	+1.5
MOX	**Moxa**	3.05	256	eSg	Sg	10 12 59.1	+0.9
SMOL	**Smolenice**	3.08	165	eSG	Sg	10 12 58.6	-0.6
SMOL				eLG	Lg	10 13 03.1	
ROTZ	**Rotzenmuhle**	3.11	238	ePn	Pn	10 12 11.2	+0.7
ROTZ				eSg	Sb	10 12 57.5	+2.7
GEC2	**GERESS Array S**	3.12	213	ePn	Pn	10 12 12.1	+1.3
GEC2				ePg	Pb	10 12 18.3	+1.6
GEC2				eSg	Sb	10 12 58.0	+2.6
GERES	**GERESS Array B**	3.12	213	Pn	Pn	10 12 11.7	+0.8
	comp=Z,0.3nm,0.3s,baz=18,slow=17,SNR=4.7						
GERES				Pg	Pb	10 12 18.1	+1.4
	comp=Z,3.0nm,0.3s,baz=27,slow=18,SNR=42						
GERES				Sn	Sn	10 12 47.5	-1.4
	comp=Z,1.5nm,0.3s,baz=42,slow=18,SNR=6.7						
GERES				Lg	Lg	10 12 57.6	
	comp=Z,6.2nm,0.3s,baz=33,slow=30,SNR=15						
LANS	**Liptovska Anna**	3.12	138	eSG	Sg	10 12 58.7	-1.9
LANS				eLG	Lg	10 13 11.8	
MODS	**Modra-Piesok**	3.20	168	ePG	Pg	10 12 22.0	+0.5
MODS				eSG	Sg	10 13 02.8	-0.1
MODS	**Modra-Piesok**	3.20	168	eSG	Sg	10 13 03.1	+0.2
MODS				eLG	Lg	10 13 08.2	
WET	**Wettzell**	3.20	224	ePn	Pn	10 12 12.3	+0.4
WET				eSg	Sb	10 12 59.9	+2.4
ZST	**Bratislava**	3.35	170	eSG	Sg	10 13 05.9	-2.0
VYHS	**Vyhne**	3.44	150	ePN	Pn	10 12 16.5	+1.5
VYHS				ePG	Pg	10 12 28.0	+1.9
VYHS				eSG	Sb	10 13 05.7	+1.4
CONA	**Conrad Observa**	3.58	184	ePn	Pn	10 12 17.9	+0.7
	comp=Z,0.2nm,0.1s						
CONA				Pg	Pg	10 12 27.1	-1.9
	comp=Z,1.2nm,0.2s						
CONA				Sg	Sg	10 13 15.2	-0.2
	comp=Z,36nm,0.7s						
BSD	**Bornholm Skovb**	3.71	348	e	Pn	10 12 17.8	-0.9
	baz=153,slow=12						
BSD				i P	Pb	10 12 19.0	-7.6

BSD				i		10 12 24.4	
BSD				i S	Sn	10 13 01.3	-1.8
BSD				IAML		10 13 05.4	
	comp=Z,2.2nm,0.4s						
MOA	Molln	3.88	200	ePn	Pn	10 12 21.2	+0.1
	comp=Z,1.2nm,0.2s						
MOA				Sg	Sg	10 13 23.8	-0.9
	comp=Z,29nm,0.6s						
ARSA	Arzberg	4.28	187	Pg	Pg	10 12 44.2	+2.0
	comp=Z,1.3nm,0.4s						
ARSA				Sg	Sg	10 13 35.3	-2.4
	comp=Z,19nm,0.8s						
KOLS	Kolonicke sedl	4.64	121	ePG	Pg	10 12 52.6	+3.5
KOLS				eSG	Sg	10 13 50.0	+0.8
KBA	Koelnbreinsper	4.82	204	Sg	Sg	10 13 55.9	+0.9
	comp=Z,21nm,0.6s						
DAVOX	Davos/Dischmat	6.31	224	Pn	Pn	10 12 55.1	+0.4
	comp=Z,0.1nm,0.3s,baz=188,slow=16,SNR=1.9						
DAVOX				Lg	Lg	10 14 40.7	
	comp=Z,0.5nm,0.3s,baz=198,slow=20,SNR=2.8						
AKASG	Malin Array Be	8.20	91	Pn	Pn	10 13 20.1	-0.3
	comp=Z,0.8nm,0.3s,baz=278,slow=12,SNR=4.4						
HFS	Hagfors	8.77	352	Pn	Pn	10 13 29.8	+1.6
	comp=Z,0.1nm,0.3s,baz=172,slow=23,SNR=1.9						
HFS				Lg	Lg	10 16 06.7	
	comp=Z,0.1nm,0.3s,baz=188,slow=32,SNR=2.0						
FINES	FINESS Array B	11.33	25	Pn	Pn	10 14 02.2	-1.0
	comp=Z,0.1nm,0.3s,baz=194,slow=16,SNR=4.3						
FINES				Sn	Sn	10 16 05.5	-4.9
	comp=Z,0.1nm,0.3s,baz=213,slow=20,SNR=1.9						
ARCES	ARCESS Array B	18.62	10	Pn	P	10 15 36.1	-2.8
	baz=198,slow=12,SNR=5.1						

MAN 11 10:12:24.6, 14°.79N×120°.00E, h28^{km}, mb4.0, ML2.8, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	0.87	127	eP	Pn	10 12 40.7	-0.4
MACP				eS	Sn	10 12 53.5	+0.7
LUBP	Lubang	1.08	167	eP	Pn	10 12 43.2	-0.7
LUBP				eS	Sb	10 12 58.6	+0.2
PGP	Puerto Galera	1.58	144⇑	eP	Pn	10 12 50.5	-0.3
BALP	Baler	1.79	58	eP	Pn	10 12 53.9	+0.2
BALP				eS	Sn	10 13 15.7	+0.1

NOU 11 10:16:17.9, 7°.86S×129°.90E, h266^{km}, mb3.6, Banda Sea, Banda Sea

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NEIC **11** *10:28:22.0±1.5, 35°.84N±0°.02×97°.39W±0°.04, h7^{km}±9^{km}, Error ellipse: s-maj=4.9km s-min=3.0km az=73.0*

TUL **11** *10:28:21.9±1.9, 35°.81N±0°.03×97°.41W±0°.05, h7^{km}±7^{km}, ML3.6, mb3.8/2(NEIC), mb_Lg3.4/59(NEIC), Mwr3.4/10(NEIC), Error ellipse: s-maj=5.8km s-min=2.5km az=61.0*

ANF **11** *10:28:22.5±0.3, 35°.79N×97°.37W, h8^{km}, ML4.8/17, Error ellipse: s-maj=3.4km s-min=2.5km az=163.0*

IDC **11** *10:28:22.9±0.9, 35°.93N×97°.69W, h0^{km}, mb3.4/3, mb1 3.9/7, mb1mx3.6/45, mbtmp3.6/7, ML3.0/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=13.6km s-min=10.4km az=141.0*

NEIC **11** *10:28:22.1, 35°.83N×97°.42W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.36; $M_{\theta\theta}$0.92; $M_{\phi\phi}$-0.56; $M_{r\theta}$-0.97; $M_{\theta\phi}$1.26; $M_{\phi r}$0.50; Fault plane solution: $M_0$1.85000×10^{14} NP1:ϕ_s199.11000°, δ53.68000°, λ-167.52000°. NP2:ϕ_s101.64000°, δ79.98000°, λ-36.97000°. Principal axes: T 1.8268, Plg17.0000°, Azm155.0000°; N 0.0527, Plg52.0000°, Azm269.0000°; P -1.8795, Plg33.0000°, Azm54.0000°;*

ISC 11 10:28:22.6±0.5, 35°.84N±0°.02×97°.40W±0°.02, h10^{km}, n117, σ1^s.76/137, mb3.4/3, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.25	139		Pg	10 28 26.8	-0.9
OK009	Oakdale Elemen	0.26	185		Pg	10 28 26.7	-1.2
OK009				Sg	Sg	10 28 30.3	-1.2
OK025	Westminster Rd	0.27	170		Pg	10 28 27.0	-1.0
OK025				Sg	Sg	10 28 30.7	-0.9
OK001	Jones High Sch	0.29	163	Pg	Pg	10 28 27.6	-0.9
OK001				Sg	Sg	10 28 31.8	-0.7
OKCFA	Oklahoma City	0.43	186	Pg	Pg	10 28 29.8	-1.2
OKCFA				Sg	Sg	10 28 35.5	-1.1
OKCSW	OKLAHOMA CITY	0.44	185	Pg	Pg	10 28 30.0	-1.2
OK031	S. Brethren Rd	0.46	76		Pg	10 28 31.6	-0.1
OK031				Sg	Sg	10 28 38.4	+0.6
OK030	Cody Creek RV	0.50	80		Pg	10 28 32.2	-0.2
OK030				IAmb_Lg		10 28 38.4	
	comp=Z,568nm,0.9s						
OK030				Sg	Sg	10 28 39.4	+0.3
FNO	Franklin	0.59	180	Pg	Pg	10 28 32.6	-1.3
QUOK	Quay	0.65	59	Pg	Pg	10 28 34.9	-0.2
QUOK				IAmb_Lg		10 28 43.6	
	comp=Z,457nm,0.8s						
W35A	Tecumseh	0.81	148	Pg	Pg	10 28 36.6	-1.6
CROK	Carrier	0.81	324	Pg	Pg	10 28 37.8	-0.5
GC02	Grant County #	1.07	340	Pg	Pb	10 28 42.5	-0.7
KAN13	South Haven SW	1.17	357		Pb	10 28 44.1	-0.8
KAN13				Sg	Sb	10 29 00.3	+0.2
KAN13				IAmb_Lg		10 29 01.9	
	comp=Z,291nm,0.7s						
KAN14	Manchester OK	1.20	338		Pn	10 28 45.0	-0.5
KAN14				Sg	Sb	10 29 01.4	+0.3
T35B	Sooner Cattle	1.29	33	P		10 28 46.2	
	baz=213,SNR=535						
T35B				S		10 29 04.1	
	baz=213						
TUL1	Leonard	1.30	87	P	Pn	10 28 45.6	-1.3
	baz=266,SNR=323						
TUL1				S	Sb	10 29 03.7	-0.2
	baz=266						
TUL1	Leonard	1.30	87	P		10 28 45.5	
	baz=266,SNR=734						
TUL1				S		10 29 03.7	
	baz=266						
KAN10	Anthony SW Sta	1.40	336		Pn	10 28 48.1	0.0
U32A	Winter Ranch,	1.41	293	P		10 28 47.8	
	baz=114						
U32A				S		10 29 07.3	
	baz=114						
KAN08	Anthony NE Sta	1.46	342		Pn	10 28 49.0	0.0
KAN08				IAmb_Lg		10 29 09.5	
	comp=Z,258nm,1.0s						
KAN12	Harper NE Stat	1.53	342		Pn	10 28 50.4	+0.4
WMOK	Wichita Mounta	1.58	226	P	Pn	10 28 49.9	-0.8
	baz=46,SNR=511						
WMOK				S	Sn	10 29 10.6	-0.7
	baz=46						
WMOK	Wichita Mounta	1.58	226	Pn	Pn	10 28 50.3	-0.4
WMOK				IAmb_Lg		10 29 12.5	
	comp=Z,266nm,0.7s						
WMOK	Wichita Mounta	1.58	226	P		10 28 50.0	
	baz=46,SNR=943						
WMOK				S		10 29 10.2	
	baz=46						
X37A	Clayton	2.08	126	P		10 28 57.5	
	baz=307						
X37A				S		10 29 24.9	
	baz=307						
U38A	Gravette	2.51	75	P		10 29 04.1	
	baz=256,SNR=204						
Z35A	Perchaven, San	2.51	177	P		10 29 03.4	
	baz=357,SNR=22						
Z35A				S		10 29 35.1	
	baz=357						
R32A	Long Quarter,	2.78	338	P		10 29 07.6	
	baz=158,SNR=55						
R32A				Sb		10 29 49.2	
	baz=158						
HHAR	Hobbs	2.83	80		Pn	10 29 08.6	+0.7
HHAR				IAmb_Lg		10 29 52.4	
	comp=Z,188nm,0.7s						
W39A	Magazine	3.02	101	P	Pn	10 29 10.7	+0.3
	baz=283,SNR=13						
W39A	Magazine	3.02	101	P		10 29 10.7	
	baz=283,SNR=16						
W39A				S		10 29 47.0	
	baz=283						
Z38A	Mt. Pleasant	3.26	142	P		10 29 13.3	
	baz=323						
KSU1	Kansas State U	3.31	11	Pn	Pn	10 29 15.1	+0.7
	baz=191						
KSU1				Pb	Pb	10 29 23.0	+1.6
	baz=191						
KSU1				Sb	Sg	10 30 06.2	-2.7
	baz=191						
KSU1	Kansas State U	3.31	11		Pn	10 29 15.6	+1.2
KSU1	Kansas State U	3.31	11	P		10 29 15.2	
	baz=191						
KSU1				S		10 29 55.8	
	baz=191						
MIAR	Mount Ida	3.38	111	P	Pn	10 29 16.4	+0.9
	baz=293,SNR=20						
MIAR				S	Sn	10 29 56.7	+1.0
	baz=293						
MIAR	Mount Ida	3.38	111	Pn	Pn	10 29 16.5	+1.0
MIAR	Mount Ida	3.38	111	P		10 29 16.0	
	baz=293,SNR=82						
CBKS	Cedar Bluff	3.50	328	Pn	Pn	10 29 18.0	+0.9
	baz=148						
CBKS				Pb	Pb	10 29 26.2	+1.4
	baz=148,SNR=89						
CBKS				Sb	Sg	10 30 12.5	-2.6
	baz=148						
CBKS	Cedar Bluff	3.50	328	Pn	Pn	10 29 18.4	+1.2
AMTX	Amarillo	3.63	256	P	Pn	10 29 20.4	+1.4
	baz=74						
AMTX	Amarillo	3.63	256	Pn	Pn	10 29 20.7	+1.7
AMTX				IAmb_Lg		10 30 24.3	
	comp=Z,136nm,0.8s						
ABTX	Abilene, Hawle	3.71	211	P	Pn	10 29 20.1	+0.1
	baz=30,SNR=39						
ABTX				Sb	Sb	10 30 14.2	+0.9
	baz=30						
ABTX	Abilene, Hawle	3.71	211	P		10 29 19.4	
	baz=30,SNR=12						
U40A	Yellville	3.71	81	Pn	Pn	10 29 20.2	+0.2
	baz=263,SNR=13						
U40A				Pb	Pb	10 29 28.5	+0.2
	baz=263						
U40A	Yellville	3.71	81	P		10 29 20.1	
	baz=263,SNR=32						
U40A				P		10 29 20.1	
	baz=263,SNR=32						
S39A	Bolivar	3.75	59	P		10 29 20.9	
	baz=241,SNR=31						
WHTX	Lake Whitney,	3.84	181	Pn	Pn	10 29 21.3	-0.5
	baz=0.6,SNR=16						
WHTX				Pb	Pb	10 29 28.8	-1.7
	baz=0.6						
WHTX				Sb	Sb	10 30 18.7	+1.6
	baz=0.6						
WHTX	Lake Whitney,	3.84	181	P		10 29 20.9	
	baz=0.6,SNR=5.1						
X40A	Basin Creek Fa	3.97	109	P	Pn	10 29 24.2	+0.6
	baz=291,SNR=7.3						
X40A				Sb	Sg	10 30 25.9	-4.3
	baz=291						
X40A	Basin Creek Fa	3.97	109	P		10 29 23.9	
	baz=291,SNR=28						
X40A				P		10 29 23.9	
	baz=291,SNR=28						
WLAR	White Oak Lake	4.13	120		Pn	10 29 25.5	-0.2
WLAR				IAmb_Lg		10 30 39.6	
	comp=Z,143nm,0.8s						
WHAR	Wooly Hollow	4.20	96		Pn	10 29 27.0	+0.4
W41B	Gary Mavity, V	4.25	98	Pn	Pn	10 29 27.5	+0.1
	baz=280,SNR=7.6						
W41B				Pb	Pb	10 29 36.9	-0.6
	baz=280						
W41B				S	Sn	10 30 18.0	+1.0
	baz=280						
W41B	Gary Mavity, V	4.25	98	P		10 29 27.5	
	baz=280,SNR=36						
FCAR	Ozark Folk Cen	4.28	88		Pn	10 29 27.4	-0.4
Z41A	Richland Creek	4.58	123	P	Pn	10 29 31.4	-0.5
	baz=305						
Z41A				S	Sn	10 30 24.5	-0.8
	baz=305						
NATX	Nacogdoches	4.67	150		Pn	10 29 33.8	+0.8
R40A	Maddies Statio	4.77	58	P		10 29 34.7	
	baz=240,SNR=28						
MSTX	Muleshoe	4.80	249	Pn	Pn	10 29 36.4	+1.4
	baz=66						
MSTX				Pb	Pb	10 29 46.9	+0.1
	baz=66						
MSTX				Sb	Sb	10 30 49.6	+5.0
	baz=66						
P38A	Dawn	4.86	38	P		10 29 36.1	
	baz=220,SNR=10						
435B	Jarrell	5.05	182	P	Pn	10 29 38.0	-0.4
	baz=1.6						
435B				Sb	Sb	10 30 55.5	+3.7
	baz=1.6						
LCAR	Lake Charles	5.07	86		Pn	10 29 37.8	-0.8
N35A	Tabor	5.20	15	P		10 29 40.2	
	baz=196,SNR=19						
KSCO	Kaye Shedlock’	5.23	309	P	Pn	10 29 42.1	+1.1
	baz=126						
KSCO				Sb	Sg	10 31 05.2	-5.2
	baz=126						
CCM	Cathedral Cave	5.40	64	P	Pn	10 29 43.0	-0.1
	baz=247						
CCM	Cathedral Cave	5.40	64	Pn	Pn	10 29 43.4	+0.3
CCM				IAmb_Lg		10 31 16.7	
	comp=Z,100nm,0.9s						
HBAR	Harrisburg	5.49	91	Pn	Pn	10 29 43.3	-1.1
X43A	Marvell	5.50	102	Sb	Sg	10 31 12.1	-6.9
	baz=285						
BGNE	Belgrade	5.59	354	P	Pn	10 29 45.9	+0.1
	baz=174						
JCT	Junction City	5.72	201	P	Pn	10 29 46.8	-0.8
	baz=20						
JCT				Sb	Sb	10 31 15.9	+4.8
	baz=20						
JCT	Junction City	5.72	201	Pn	Pn	10 29 47.0	-0.6
JCT	Junction City	5.72	201	P		10 29 46.8	
	baz=20,SNR=16						
T25A	Trinidad	5.80	285	P	Pn	10 29 49.4	+0.5
	baz=101						
T25A				Sn	Sn	10 30 56.7	+1.2
	baz=101						
T25A				Sb	Sg	10 31 22.4	-6.3
	baz=101						
LNXT	Lenox	6.41	85	Pn	Pn	10 29 59.2	+2.1
OXF	Oxford	6.67	99	P	Pn	10 29 59.9	-0.7
	baz=284						
OXF				S	Sn	10 31 17.1	+0.4
	baz=284						
OXF	Oxford	6.67	99	Pn	Pn	10 30 00.3	-0.3
VBMS	Vicksburg	6.76	120	Pn	Pn	10 29 58.9	-2.9
VBMS				IAmb_Lg		10 32 13.0	
	comp=Z,64nm,1.2s						
SDCO	Great Sand Dun	6.78	289	P	Pn	10 30 03.3	+1.0
	baz=104,SNR=22						
SDCO	Great Sand Dun	6.78	289		Pn	10 30 02.0	-0.3
GDL2	Guadalupe Moun	6.83	240		Pn	10 30 03.1	+0.2
SCIA	State Center	6.88	27	P	Pn	10 30 03.4	0.0
	baz=210						
SCIA				S	Sn	10 31 22.6	+0.9
	baz=210						
SCIA	State Center	6.88	27		Pn	10 30 02.9	-0.5
SCIA	State Center	6.88	27	P		10 30 03.6	
	baz=210,SNR=7.7						
Q24A	Divide	6.91	299	P	Pn	10 30 05.0	+0.7
	baz=115						
ANMO	Albuquerque	7.46	266	Pn	Pn	10 30 10.5	-1.0
	comp=Z,0.1nm,0.3s,baz=111,slow=17,SNR=1.4						
ANMO				Pg	Pb	10 30 34.1	+1.9
	comp=Z,0.6nm,0.3s,baz=95,slow=11,SNR=7.9						
ANMO				Lg	Lg	10 32 13.0	
	comp=Z,2.1nm,0.3s,baz=156,slow=20,SNR=2.9						
ANMO				LR	LR	10 33 11.3	
	comp=Z,50nm,20.8s,baz=74,slow=40						
ANMO	Albuquerque	7.46	266		Pn	10 30 11.4	-0.2
ISCO	Idaho Springs	7.61	304	P	Pn	10 30 14.5	+0.7
	baz=119,SNR=8.5						
ISCO	Idaho Springs	7.61	304	Pn	Pn	10 30 13.9	+0.1
ISCO				IAmb_Lg		10 32 34.0	
	comp=Z,47nm,1.0s						
PLAL	Pickwick Lake	7.66	94		Pn	10 30 13.0	-1.2
833A	Chaparral WMA,	7.69	193	P	Pn	10 30 14.7	+0.1
	baz=12						
WVT	Waverly	7.76	85	Pn	Pn	10 30 18.6	+3.0
WVT				IAmb_Lg		10 32 24.9	
	comp=Z,47nm,1.0s						
BNM	Barren Site	7.76	260	Pn	Pn	10 30 16.2	+0.3
MNTX	Cornudas Mount	7.83	240	P	Pn	10 30 16.5	0.0
	baz=56,SNR=8.8						
MNTX	Cornudas Mount	7.83	240	Pn	Pn	10 30 17.1	+0.5
MNTX				IAmb_Lg		10 32 45.4	
	comp=Z,38nm,0.9s						
MNTX	Cornudas Mount	7.83	240	P		10 30 15.8	
	baz=56,SNR=18						
ECSD	EROS Data Cent	7.90	4	P	Pn	10 30 16.2	-1.3
	baz=185,SNR=16						
ECSD	EROS Data Cent	7.90	4	Pn	Pn	10 30 16.1	-1.5
ECSD				IAmb_Lg		10 32 40.5	
	comp=Z,42nm,0.8s						
SMCO	Snowmass	8.31	296		Pn	10 30 24.4	+0.9
PHWY	Pilot Hill	8.34	313		Pn	10 30 23.2	-0.5
PHWY				IAmb_Lg		10 32 56.8	
	comp=Z,37nm,0.8s						
TX31	Lajitas Ar. Si	8.37	221		Pn	10 30 22.7	-1.4
TX32	Lajitas Array	8.37	221		Pn	10 30 22.5	-1.6
TXAR	Lajitas Array	8.37	221	Pn	Pn	10 30 22.4	-1.7
	comp=Z,0.4nm,0.3s,baz=40,slow=11,SNR=28						
TXAR				Pg	Pb	10 30 53.2	+5.5
	comp=Z,2.7nm,0.3s,baz=49,slow=16,SNR=22						
TXAR				Lg	Lg	10 32 41.0	
	comp=Z,3.0nm,0.3s,baz=47,slow=28,SNR=7.0						
N23A	Red Feather La	8.39	309	P	Pn	10 30 26.0	+1.5
	baz=124,SNR=14						
JFWS	Jewell Farm	8.97	36	P	Pn	10 30 32.2	+0.1
	baz=220						
JFWS				S	Sn	10 32 09.3	-3.9
	baz=220						
JFWS	Jewell Farm	8.97	36		Pn	10 30 31.9	-0.3
LRAL	Lakeview Retre	9.03	105	Pn	Pn	10 30 32.0	-1.0
LRAL				IAmb_Lg		10 33 28.5	
	comp=Z,24nm,0.9s						
PV01	Paradox Valley	9.23	288	IAmb_Lg		10 33 30.9	
	comp=Z,29nm,1.2s						
PV13	Radium Mtn., P	9.43	288	IAmb_Lg		10 33 38.4	
	comp=Z,23nm,1.0s						
PV12	Saucer Basin,	9.44	289	IAmb_Lg		10 33 40.4	
	comp=Z,40nm,1.2s						
PV11	David Mesa, Pa	9.49	288	IAmb_Lg		10 33 39.5	
	comp=Z,34nm,1.1s						
PV18	Skein Mesa, Pa	9.51	288	IAmb_Lg		10 33 48.4	
	comp=Z,24nm,1.1s						
PV16	Nyswonger Mesa	9.53	288	IAmb_Lg		10 33 32.1	
	comp=Z,32nm,1.1s						
PV04	Paradox Valley	9.54	289	IAmb_Lg		10 33 32.6	
	comp=Z,26nm,0.9s						
PV17	East Wray Mesa	9.56	288	IAmb_Lg		10 33 37.6	
	comp=Z,23nm,1.2s						
PV19	Morning Glory	9.58	288	IAmb_Lg		10 33 35.4	
	comp=Z,25nm,1.1s						
RWWY	Rawlins	9.63	310	IAmb_Lg		10 33 33.8	
	comp=Z,36nm,1.0s						
PV23	Carpenter Ridg	9.63	289	IAmb_Lg		10 33 49.8	
	comp=Z,24nm,0.9s						
RSSD	Black Hills	9.71	330	P	Pn	10 30 45.0	+2.5
	baz=146						
RSSD	Black Hills	9.71	330	IAmb_Lg		10 33 39.6	
	comp=Z,24nm,0.8s						
FPAL	Fort Paine	9.73	94	IAmb_Lg		10 33 36.9	
	comp=Z,35nm,0.7s						
K22A	Casper	9.81	317	P	Pn	10 30 44.9	+1.0
	baz=131						
SPMN	Marine on St.	10.00	19	P	Pn	10 30 45.9	-0.3
	baz=202						
TKL	Tuckaleechee C	11.07	87	Pn	Pn	10 31 04.4	+3.4
	comp=Z,0.1nm,0.3s,baz=257,slow=14,SNR=1.9						
TKL				Sn	Sn	10 33 09.9	+5.0
	comp=Z,0.3nm,0.3s,baz=306,slow=2.1,SNR=3.6						
TKL				Lg	Lg	10 34 08.4	
	comp=Z,2.1nm,0.3s,baz=0.5,slow=18,SNR=7.2						
BW06	Boulder Array	11.68	310	P	Pn	10 31 10.2	+0.7
	baz=122						
BW06	Boulder Array	11.68	310		Pn	10 31 09.7	+0.2
PD31	Pinedale Array	11.68	310	Pn	Pn	10 31 11.6	+2.2
PDAR	Pinedale Array	11.68	310	Pn	Pn	10 31 09.0	-0.4
	comp=Z,0.4nm,0.3s,baz=118,slow=9.3,SNR=12						
PDAR				Lg	Lg	10 34 26.8	
	comp=Z,0.4nm,0.3s,baz=92,slow=19,SNR=1.6						
PDAR	Pinedale Array	11.68	310		Pn	10 31 09.3	-0.1
AGMN	Agassiz Nation	12.50	5	Pn	Pn	10 31 17.8	-2.6
EYMN	Ely	12.86	18	P	Pn	10 31 22.8	-2.6
	baz=202						
EYMN	Ely	12.86	18	Pn	Pn	10 31 22.5	-2.9
RLMT	Red Lodge	12.93	319	Pn	Pn	10 31 25.4	-1.1
ULM	Lac du Bonnet	14.44	4	Pn	Pn	10 31 41.5	-5.5
	comp=Z,0.5nm,0.3s,baz=179,slow=10,SNR=7.1						
ULM				Sn	Sn	10 34 13.4	-14
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=1.8						
ULM				Lg	Lg	10 35 51.1	
	comp=Z,0.7nm,0.3s,baz=106,slow=22,SNR=8.4						
EGMT	Eagleton	15.23	327		Pn	10 31 57.1	-0.6
EGMT				IAmb	IAmb	10 32 22.8	
	comp=Z,9.7nm,1.2s						
FFC	Flin Flon	19.15	352	P	P	10 32 44.3	-1.5
FFC				IAmb	IAmb	10 33 04.7	
	comp=Z,5.0nm,1.2s						
YBH	Yreka Blue Hor	20.55	294	LR	LR	10 41 00.5	
	comp=Z,56nm,18.1s,baz=29,slow=37						
YKA	Yellowknife Ar	28.75	343	P	P	10 34 21.1	+1.1
	comp=Z,0.2nm,0.7s,baz=144,slow=8.7,SNR=4.4						
ILAR	Eielson Array	41.16	330	P	P	10 36 07.6	+0.9
	comp=Z,0.5nm,0.7s,baz=113,slow=7.1,SNR=6.7						
AKASG	Malin Array Be	81.85	31	P	P	10 40 45.2	+3.4
	comp=Z,0.1nm,0.2s,baz=317,slow=3.9,SNR=1.8						

IDC **11** *10:42:50.5±0.8, 22°.29S×170°.49E, h0^{km}, mb4.3/11, mb1 4.5/13, mb1mx4.3/29, mbtmp4.4/13, ML4.6/2, MS4.0/14, Ms1 4.0/14, ms1mx3.9/22, Error ellipse: s-maj=25.6km s-min=20.2km az=154.0*

NEIC **11** *10:42:53.6±1.5, 22°.4S±0°.1×170°.12E±0°.09, h10^{km}±1^{km}, mb4.3/13, Error ellipse: s-maj=27.1km s-min=5.1km az=149.0*

BGR **11** *10:42:53.3±0.0, 22°.54S×172°.24E, h33^{km}*

GCMT **11** *10:43:00.0±0.3, 22°.40S±0°.02×170°.34E±0°.03, h33^{km}±1^{km}, MW4.9/51, Moment Tensor Solution. s38,c46; s51,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.71±.20; $M_{\theta\theta}$-2.41±.13; $M_{\phi\phi}$-0.29±.12; $M_{r\theta}$0.05±.16; $M_{\theta\phi}$0.98±.07; $M_{\phi r}$-1.00±.17; Best double couple: $M_0$2.92700×10^{16} NP1:ϕ_s275.00000°, δ43.00000°, λ65.00000°. NP2: ϕ_s128.00000°, δ52.00000°, λ112.00000°. Principal axes: T 3.0230, Plg72.0000°, Azm99.0000°; N -0.1880, Plg17.0000°, Azm294.0000°; P -2.8310, Plg5.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

NOU **11** *10:43:07.2, 22°.20S×169°.36E, h0^{km}, MLv4.3, Southeast of Loyalty Islands*

ISC 11 10:42:56.1±0.5, 22°.4S±0°.1×170°.38E±0°.07, h33^{km}, n103, σ1^s.03/91, mb4.4/17, MS4.1/13, 7C-4D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.37	292	P	Pn	10 43 32.8	+0.2
PINNC	Pines Island,	2.73	265	P	Pn	10 43 39.0	+1.4
YATNC	Mamie plateau,	3.25	275	P	Pn	10 43 46.4	+1.6
OUENC	Ouen Island, N	3.28	269	P	Pn	10 43 46.5	+1.3
DZM	Mont Dzumac	3.67	274	Pn	Pn	10 43 51.7	+1.2
	63nm,0.3s,baz=86,slow=7.7,SNR=488						
DZM				Sn	Sn	10 44 33.5	+0.8
	44nm,0.3s,baz=321,slow=20,SNR=7.4						
DZM	Mont Dzumac	3.67	274	ePn	Pn	10 43 51.8	+1.2
	165nm,0.3s						
DZM				eSn	Sn	10 44 33.9	+1.2
	181nm,0.3s						
DZM				eLR	LR	10 44 44.4	
	comp=Z,2μm,23.2s						
DZM	Mont Dzumac	3.67	274	P	Pn	10 43 52.0	+1.4
NOUC	Port Laguerre	3.79	274	P	Pn	10 43 53.5	+1.3
DVP	Devils Point	5.08	336	P	Pb	10 44 17.7	-6.6
KOUNC	Koumac, New Ca	5.97	287	P	Pn	10 44 24.3	+2.1
MSVF	Nonsavu	8.56	59	Pn	Pn	10 45 02.0	+4.1
	1.1nm,0.3s,baz=230,slow=9.6,SNR=21						
MSVF				LR	LR	10 47 25.0	
	comp=Z,798nm,21.6s,baz=254,slow=33						
MSVF	Nonsavu	8.56	59		Pn	10 45 00.7	+2.8
RAO	Raoul Island	12.55	125	LR	LR	10 49 45.2	
	comp=Z,632nm,18.7s,baz=306,slow=33						
URZ	Urewera	16.84	161	LR	LR	10 52 16.1	

	comp=Z,732nm,18.1s,baz=32,slow=34						
AFI	Afiamalu	18.92	67	P	P	10 47 12.8	-1.6
	1.1nm,0.3s,baz=307,slow=22,SNR=4.6						
RPZ	Rata Peaks	21.27	179	LR	LR	10 55 04.4	
	comp=Z,435nm,18.8s,baz=43,slow=34						
STKA	Stephens Creek	27.24	244	LR	LR	10 58 54.8	
	comp=Z,189nm,19.0s,baz=56,slow=35						
STKA	Stephens Creek	27.24	244	P	P	10 48 35.6	-1.7
WR0	Warramunga Arr	33.46	267	P	P	10 49 31.5	-0.9
WR0				IAmb	IAmb	10 49 33.5	
	comp=Z,4.1nm,1.1s						
AS31	Alice Springs	33.54	261	P	P	10 49 32.5	-0.6
AS31				IAmb	IAmb	10 49 49.1	
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	33.54	261	P	P	10 49 33.5	+0.4
	comp=Z,1.6nm,0.7s,baz=85,slow=9.3,SNR=12						
ASAR				PcP	PcP	10 52 12.9	-0.5
	comp=Z,1.0nm,0.9s,baz=106,slow=3.4,SNR=4.8						
ASAR				LR	LR	11 03 26.8	
	comp=Z,228nm,18.9s,baz=94,slow=37						
ASAR	Alice Springs	33.54	261	P	P	10 49 32.0	-1.1
WB0	Warramunga Arr	33.64	268	P	P	10 49 32.6	-1.3
WB0				IAmb	IAmb	10 49 33.3	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	33.64	267	P	P	10 49 33.1	-0.9
WB2				IAmb	IAmb	10 49 39.8	
	comp=Z,6.0nm,1.1s						
WRA	Warramunga Arr	33.65	267	P	P	10 49 33.8	-0.3
	comp=Z,1.5nm,0.9s,baz=97,slow=9.5,SNR=5.9						
WRA				PcP	PcP	10 52 13.8	+0.1
	comp=Z,1.2nm,1.0s,baz=133,slow=1.5,SNR=4.8						
WRA	Warramunga Arr	33.65	267	P	P	10 49 33.1	-0.9
TBI	Tubuai	36.93	99	eLR	LR	10 59 59.0	
	comp=Z,177nm,25.8s						
PPT2	Papeete2	37.85	90	eLR	LR	11 00 23.5	
	comp=Z,146nm,24.8s						
PPT	Papeete	37.86	90	LR	LR	11 04 34.7	
	comp=Z,155nm,18.8s,baz=254,slow=34						
FITZ	Fitzroy Crossi	42.08	267	P	P	10 50 43.8	-1.5
	comp=Z,8.0nm,1.1s,baz=104,slow=5.8,SNR=4.5						
VNDA	Vanda	55.34	182	LR	LR	11 13 03.3	
	comp=Z,165nm,19.2s,baz=348,slow=33						
VNDA	Vanda	55.34	182	P	P	10 52 27.5	+1.3
VNDA				IAmb	IAmb	10 52 39.2	
	comp=Z,2.8nm,1.2s						
MJAR	Matsushiro Arr	66.02	332	P	P	10 53 38.1	-1.4
	comp=Z,5.3nm,1.0s,baz=167,slow=7.7,SNR=7.7						
MJAR	Matsushiro Arr	66.02	332	P	P	10 53 39.3	-0.2
MJAR				IAmb	IAmb	10 53 45.2	
	comp=Z,3.3nm,1.0s						
MAJO	Matsushiro	66.03	332	P	P	10 53 39.8	+0.3
QSPA	South Pole Qui	67.68	180	P	P	10 53 50.2	+0.3
	comp=Z,4.8nm,1.0s,baz=7.7,slow=3.4,SNR=10						
QSPA	South Pole Qui	67.68	180	P	P	10 53 50.6	+0.7
KSRS	Korea Array	71.70	326	P	P	10 54 14.7	-0.1
	comp=Z,3.6nm,0.9s,baz=142,slow=6.1,SNR=6.0						
USRK	Ussuriysk Ar.	75.01	332	P	P	10 54 34.0	-0.1
	comp=Z,2.6nm,0.8s,baz=153,slow=13,SNR=3.4						
MAW	Mawson	75.93	202	LR	LR	11 24 21.4	
	comp=Z,80nm,18.1s,baz=80,slow=33						
PETK	Petropavlovsk-	75.98	352	P	P	10 54 39.2	-0.3
	comp=Z,4.8nm,1.1s,baz=143,slow=5.2,SNR=4.1						
PETK				LR	LR	11 24 05.6	
	comp=Z,95nm,18.9s,baz=139,slow=33						
CM31	Chiang Mai Arr	80.77	294	P	P	10 55 05.6	-1.2
CMAR	Chiang Mai Arr	80.77	294	P	P	10 55 09.3	+2.5
	comp=Z,4.3nm,0.9s,baz=136,slow=4.3,SNR=25						
CMAR	Chiang Mai Arr	80.77	294	P	P	10 55 07.1	+0.3
CHTO	Chiang Mai	80.93	295	P	P	10 55 08.4	+0.8
PMSA	Palmer Station	83.60	159	LR	LR	11 26 11.5	
	comp=Z,83nm,18.3s,baz=233,slow=31						
SNAA	Sanae	86.07	182	P	P	10 55 32.7	-0.5
VNA3	Neumayer Olymp	86.62	180	P	P	10 55 35.1	-0.8
VNA2	Neumayer--Watz	86.93	181	P	P	10 55 37.1	-0.3
	baz=170,slow=4.5						
VNA1	Neumayer--Stat	87.21	180	P	P	10 55 38.2	-0.5
NVAR	Mina Array Bea	90.09	48	P	P	10 55 51.8	-1.3
	comp=Z,0.8nm,0.8s,baz=233,slow=8.9,SNR=6.3						
NVAR				LR	LR	11 27 51.6	
	comp=Z,123nm,20.4s,baz=234,slow=30						
SONM	Songino Array	90.37	323	P	P	10 55 54.2	+0.2
	comp=Z,4.7nm,0.9s,baz=142,slow=6.9,SNR=27						
SONM	Songino Array	90.37	323	P	P	10 55 53.8	-0.3
ILAR	Eielson Array	92.91	17	P	P	10 56 02.8	-2.5
	comp=Z,0.5nm,1.0s,baz=235,slow=5.1,SNR=4.3						
TXAR	Lajitas Array	97.33	61	LR	LR	11 31 22.6	
	comp=Z,89nm,21.2s,baz=0.0,slow=30						
PDAR	Pinedale Array	97.96	47	LR	LR	11 33 14.3	
	comp=Z,76nm,20.2s,baz=346,slow=31						
ARCES	ARCESS Array B	128.37	345	PKP	PKPdf	11 01 57.1	-1.5
	comp=Z,1.6nm,0.8s,baz=36,slow=10,SNR=7.2						
AKASG	Malin Array Be	138.65	323	PKP	PKPdf	11 02 18.8	+0.4
	comp=Z,0.7nm,0.6s,baz=39,slow=2.0,SNR=4.5						
ARR	Arges	143.89	318	⇑P	PKPdf	11 02 27.2	-0.9
HUMR	Humele	144.06	316	⇑P	PKPbc	11 02 26.6	+0.2
DRGR		144.34	321	⇓P	PKPbc	11 02 27.8	+0.5
LOT	Lotru	144.39	318	⇓P	PKPbc	11 02 27.8	+0.3
RUE	Ruedersdorf	145.00	335	ePKPbc	PKPab	11 02 28.9	-0.1
	baz=36,slow=2.7						
GZR	Gura Zlata	145.02	319	⇓P	PKPdf	11 02 29.7	-0.4
BSEG	Bad Segeberg	145.07	339	ePKPbc	PKPbc	11 02 28.8	-0.4
	baz=36,slow=2.7						
PSZ	Piszkesteto	145.29	324	⇑P	PKPdf	11 02 31.1	+0.6
PSZ	Piszkesteto	145.29	324		PKPdf	11 02 30.5	+0.1
MORC	Moravsky Berou	145.31	329	⇓P	PKPdf	11 02 30.5	+0.1
MORC	Moravsky Berou	145.31	329	ePKP	PKPbc	11 02 29.9	-0.3
OSTC	Ostas	145.39	331	ePKP	PKPab	11 02 30.3	-0.3
CHVC	Chvalec	145.44	331	ePKP	PKPab	11 02 30.5	-0.3
DPC	Dobruska-Polom	145.49	330	ePKP	PKPab	11 02 30.8	-0.2
UPC	Upice	145.52	331	ePKP	PKPab	11 02 30.7	-0.4
BZS	Buzias	145.61	320	⇑P	PKPab	11 02 31.7	+0.2
JAVC	Velka Javorina	145.85	327	ePKP	PKPab	11 02 33.1	+0.7
MDVR	Moldovita	145.98	319	⇑P	PKPab	11 02 33.0	0.0
VTS	Vitosha	146.04	314	⇑P	PKPab	11 02 34.0	+0.5
FLTG	Flechtingen	146.08	337	ePKPbc	PKPbc	11 02 31.8	-0.6
	baz=36,slow=2.7						
VRAC	Vranov	146.08	329	⇑P	PKPab	11 02 33.4	+0.2
VRAC	Vranov	146.08	329	ePKP	PKPbc	11 02 32.5	-0.1
PVCC	Panska Ves	146.14	332	ePKP	PKPbc	11 02 32.6	-0.1
BRG	Berggiesshubel	146.15	333	ePKPbc	PKPbc	11 02 32.4	-0.3
	baz=36,slow=2.7						
CLL	Collm	146.21	334	ePKPbc	PKPab	11 02 33.0	-0.6
CLL				i PKiKP	PKiKP	11 02 37.7	+1.6
CLL	Collm	146.21	334	ePKPbc	PKPbc	11 02 32.4	-0.5
	baz=36,slow=2.7						
KRUC	Moravsky	146.34	329	ePKP	PKPbc	11 02 33.0	-0.4
FBE	Freiberg	146.36	334	ePKPbc	PKPbc	11 02 33.5	+0.1
	baz=36,slow=2.7						
PRU	Pruhonice	146.55	331	ePKP	PKPbc	11 02 33.6	-0.3
TREC	Trest	146.61	330	ePKP	PKPdf	11 02 20.7	-12
CLZ	Clausthal	146.79	337	ePKPbc	PKPbc	11 02 34.3	-0.3
	baz=36,slow=2.7						
PBCC	Pribram	147.01	331	ePKP	PKPbc	11 02 35.4	+0.1
TANN	Tannenbergstha	147.12	334	ePKPbc	PKPbc	11 02 35.4	-0.2
	baz=36,slow=2.7						
GTTG	Gottingen	147.17	337	ePKPbc	PKPbc	11 02 35.6	-0.1
	baz=36,slow=2.7						
PLN	Plauen	147.19	334	ePKPbc	PKPbc	11 02 35.4	-0.4
	baz=36,slow=2.7						
NKC	Novy Kostel	147.26	334	ePKP	PKPbc	11 02 35.9	-0.1
KHC	Kasperske Hory	147.60	331	ePKP	PKPbc	11 02 36.4	-0.6
GEC2	GERESS Array S	147.75	331		PKPbc	11 02 37.1	-0.4
GEC2	GERESS Array S	147.75	331	ePKPbc	PKPbc	11 02 37.0	-0.5
	baz=36,slow=2.7						
GERES	GERESS Array B	147.75	331	PKPbc	PKPbc	11 02 37.0	-0.5
	comp=Z,5.5nm,0.9s,baz=45,slow=4.0,SNR=10.0						
GERES	GERESS Array B	147.75	331		PKPdf	11 02 35.4	+0.8
KASTN	Kahler Asten	148.00	338	ePKPbc	PKPbc	11 02 37.4	-0.6
	baz=36,slow=2.7						
GRF	Grafenberg Arr	148.18	334	ePKPbc	PKPbc	11 02 37.7	-0.8
	baz=36,slow=2.7						
UBR	Ueberruh	150.21	333	ePKPbc	PKPbc	11 02 42.7	-1.0
	baz=36,slow=2.7						
TORD	Torodi Ar. Bea	165.85	231	PKP	PKPdf	11 02 58.5	+0.1
	comp=Z,2.2nm,1.0s,baz=323,slow=0.8,SNR=6.5						

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*ISK **11** 10:46:17.7, 39°.30N×26°.10E, h7^{km}, ML2.5/13*
*THE **11** 10:46:18.9, 39°.31N×26°.07E, h5^{km}±1^{km}, ML2.5/4, Error ellipse: s-maj=1.6km s-min=0.5km az=159.0*
*DDA **11** 10:46:18.4, 39°.28N×26°.11E, h7^{km}±3^{km}, ML1.9*
*ATH **11** 10:46:19.2, 39°.28N×26°.08E, h10^{km}±4^{km}, ML2.7/2, Error ellipse: s-maj=4.5km s-min=1.4km az=165.0*
ISC 11 10:46:18.9±0.9, **39°.30N**±0°.02×**26°.09E**±0°.02, **h11**^{km}±6^{km}, **n34**, σ**0^s.58**/53, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.15	110	P	Pg	10 46 22.5	+0.1
PRK				S	Sg	10 46 24.9	+0.1
PRK				AML	AML	10 46 25.2	
	comp=N,13056µm,0.2s						
PRK				AML	AML	10 46 25.2	
	comp=E,12856µm,0.2s						
PRK	Paraskevi	0.15	110	P	Pg	10 46 22.5	+0.1
PRK				S	Sg	10 46 24.8	+0.1
	comp=E,6µm,0.2s						
SIGR	SIGRI	0.20	244	P	Pg	10 46 22.8	-0.3
SIGR				S	Sg	10 46 25.7	-0.3
SIGR				AML	AML	10 46 26.2	
	comp=N,3598µm,0.3s						
SIGR				AML	AML	10 46 26.3	
	comp=E,5255µm,0.2s						
SIGR	SIGRI	0.20	244	P	Pg	10 46 22.8	-0.3
SIGR				S	Sg	10 46 25.8	-0.2
	comp=E,2µm,0.2s						
SIGR	SIGRI	0.20	244	PG	Pg	10 46 22.6	-0.5
SIGR				SG	Sg	10 46 25.8	-0.2
KOCA	Canakkale, Ayv	0.21	11	i P	Pg	10 46 22.9	-0.4
KOCA				i S	Sg	10 46 26.7	+0.5
KOCA				IAML		10 46 27.0	
	comp=N,364nm,0.4s						
KOCA				IAML		10 46 28.0	
	comp=E,331nm,0.3s						
AYVA	Ayvalik	0.47	89	i P	Pg	10 46 27.3	-0.8
AYVA				i S	Sg	10 46 33.8	-0.5
AYVA				IAML		10 46 40.0	
	comp=N,119nm,0.4s						
AYVA				IAML		10 46 40.0	
	comp=E,65nm,0.3s						
EZN	Ezine	0.56	19	P	Pg	10 46 29.1	-0.7
EZN				S	Sg	10 46 37.4	+0.3
	comp=E,402nm,0.4s						
EZN	Ezine	0.56	19	PG	Pg	10 46 29.0	-0.7
EZN				SG	Sg	10 46 37.1	0.0
BAYC	CANAKKALE_Bayr	0.57	39	i P	Pg	10 46 30.0	0.0
BAYC				i S	Sg	10 46 38.1	+0.6
BAYC				IAML		10 46 42.0	
	comp=E,159nm,0.2s						
BAYC				IAML		10 46 43.0	
	comp=N,77nm,0.5s						
DKL	Dikili	0.68	109	PG	Pg	10 46 30.9	-1.1
BUHA	Balikesir, Bur	0.79	75	i P	Pg	10 46 34.1	-0.1
BUHA				i S	Sg	10 46 44.1	-0.5
BUHA				IAML		10 46 48.0	
	comp=E,66nm,0.3s						
BUHA				IAML		10 46 49.0	
	comp=N,52nm,0.2s						
ZEDA	zmir-Bergama	0.84	113	i P	Pg	10 46 34.4	-0.7
ZEDA				i S	Sg	10 46 46.1	+0.1
ZEDA				IAML		10 46 48.0	
	comp=N,48nm,0.3s						
ZEDA				IAML		10 46 48.0	
	comp=E,47nm,0.3s						
PSRA	Psara	0.86	208	P	Pg	10 46 35.4	-0.1
GOKA	anakkale-Gk	0.90	351	i P	Pg	10 46 35.7	-0.6
GOKA				i S	Sb	10 46 48.7	+0.1
GOKA				IAML		10 46 50.0	
	comp=E,181nm,0.2s						
GADA	Gvkgeada	0.90	351	P	Pg	10 46 35.5	-0.8
GADA				S	Sb	10 46 49.2	+0.5
GADA	Gvkgeada	0.90	351	PG	Pg	10 46 35.5	-0.8
LIA	Limnos Island	0.92	311	P	Pb	10 46 37.0	+0.2
LIA				S	Sb	10 46 49.6	+0.5
LIA	Limnos Island	0.92	311	P	Pg	10 46 36.2	-0.4
LIA				S	Sg	10 46 49.3	+0.7
	comp=E,395nm,0.4s						
URLA	Izmir	1.02	157	PG	Pg	10 46 37.6	-0.9
URLA	Izmir	1.02	157	i P	Pg	10 46 37.9	-0.6
URLA				i S	Sg	10 46 51.8	0.0
URLA				IAML		10 46 52.0	
	comp=N,31nm,0.3s						
URLA				IAML		10 46 55.0	
	comp=E,20nm,0.2s						
GELI	Tayfur-Gelibol	1.14	15	PN	Pg	10 46 39.9	-0.9
LPK	Lapseki	1.19	26	PN	Pg	10 46 40.5	-1.3
SMTH	Samothraki Isl	1.25	340	P	Pn	10 46 41.9	-0.4
SMTH	Samothraki Isl	1.25	340	P	Pn	10 46 41.8	-0.6
SMTH				S	Sb	10 46 59.2	+0.6
STEP	BALIKESIR_Sava	1.27	86	i P	Pn	10 46 42.8	+0.1
STEP				i S	Sn	10 47 01.4	+1.6
STEP				IAML		10 47 06.0	
	comp=N,54nm,0.4s						
ERIK	Erikli-Kesan	1.41	13	PN	Pn	10 46 44.2	-0.3
BALB	Balikesir	1.43	76	PN	Pn	10 46 44.2	-0.6
KRBG	Karabiga-Canak	1.44	40	PN	Pn	10 46 44.5	-0.4
ALN	Alexandroupoli	1.60	359	PN	Pn	10 46 46.9	-0.2
RKY	Sarkoy-Tekirda	1.62	31	PN	Pn	10 46 47.2	-0.3
MRMT	Marmara Adasi	1.74	41	PN	Pn	10 46 48.9	-0.4
MAR4	Marsite Statio	1.75	32	PN	Pn	10 46 49.3	-0.1
MAR9	Marsite Statio	1.81	43	PN	Pn	10 46 49.9	-0.2

WEL 11 10:57:04.4±0.7, **33°S**±13°×**18°0E**±2°7, **h396**^{km}±17^{km}, **M3.8**/25, **mB4.3**/10, **MLv4.3**/25, **Mw(mB)3.4**/10, **Error ellipse: s-maj=0.0km s-min=0.0km az=114.2, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.34	30	P	Pn	10 58 18.3	-1.4
WMGZ	Waiomatatini S	4.87	191	P	Pn	10 58 26.0	+1.3
WMGZ				S	S	10 59 30.2	+0.3
PKGZ	Pakihiroa	4.99	194	P	Pn	10 58 27.2	+1.1
PKGZ				S	S	10 59 31.6	-0.9
PUZ	Puketiti	5.14	192	P	Pn	10 58 27.8	+0.3
PUZ				S	S	10 59 35.1	-0.1
TWGZ	Tauwhareparae	5.29	194	P	Pn	10 58 30.3	+1.1
TWGZ				S	S	10 59 39.8	+1.6
OPRZ	Ohinepanea	5.39	206	P	Pn	10 58 32.0	+1.8
MWZ	Matawai	5.54	197	P	Pn	10 58 31.7	-0.1
MWZ				S	S	10 59 43.4	+0.3
CNGZ	Carnagh Statio	5.55	191	P	Pn	10 58 31.7	-0.1
TKGZ	Te Karaka	5.57	194	P	Pn	10 58 31.5	-0.6
TKGZ				S	S	10 59 43.5	0.0
URZ	Urewera	5.58	200	P	Pn	10 58 31.1	-1.1
URZ				S	S	10 59 43.1	-0.7
RAGZ	Rawiri	5.72	197	P	Pn	10 58 33.9	+0.1
RIGZ	Rimuhau	5.85	194	P	Pn	10 58 34.8	-0.4
RIGZ				S	S	10 59 48.5	-0.6
MUGZ	Murupara	5.89	202	P	Pn	10 58 35.9	+0.3
MUGZ				S	S	10 59 49.2	-0.7
RTZ	Ruatahuna	5.95	200	P	Pn	10 58 36.3	0.0
SNGZ	Shannon Statio	6.01	197	P	Pn	10 58 37.8	+0.9
SNGZ				S	S	10 59 54.9	+2.5
KNZ	Kokohu	6.17	194	P	Pn	10 58 38.7	+0.1
KNZ				S	S	10 59 55.2	-0.2
MTHZ	Maungataniwha	6.21	200	P	Pn	10 58 39.8	+0.6
MTHZ				S	S	10 59 57.1	+0.7
WHHZ	Waihua	6.32	197	P	Pn	10 58 40.1	-0.2
MRHZ	Matea Rd	6.33	203	P	Pn	10 58 40.3	-0.1
ARHZ	Aropaoanui	6.55	198	P	P	10 58 43.3	-0.2
BKZ	Black Stump Fm	6.61	201	P	Pn	10 58 43.1	-0.4
BKZ				S	S	11 00 03.9	-0.5
MCHZ	McNeill Hill	6.80	199	P	Pn	10 58 45.6	0.0
OTVZ	Oturere	6.88	206	P	Pn	10 58 46.9	+0.2
BHHZ	Black Hill Sta	7.04	203	P	Pn	10 58 47.5	-0.8
BHHZ				S	S	11 00 12.4	-0.9
WNVZ	Wahianoa	7.05	206	P	Pn	10 58 48.5	-0.2
KRHZ	Kereru	7.08	200	P	Pn	10 58 48.1	-0.7
KRHZ				S	S	11 00 13.8	-0.3
KAHZ	Kahuranaki	7.09	197	P	Pn	10 58 48.7	-0.2
KAHZ				S	S	11 00 15.2	+0.9
MTVZ	Mangateitei	7.15	206	P	Pn	10 58 49.5	-0.1
VRZ	Vera Road	7.22	211	P	P	10 58 51.7	+0.8
PXZ	Pawanui	7.31	197	P	Pn	10 58 51.2	-0.1
PNHZ	Pukenui	7.38	201	P	Pn	10 58 51.6	-0.6
TSZ	Takapari Road	7.59	201	P	Pn	10 58 53.3	-1.2
PRHZ	Porangahau	7.59	197	P	Pn	10 58 54.7	+0.2
MRZ	Mangatainoka R	8.26	202	P	Pn	10 59 00.5	-1.6
OGWZ	Otaki Gorge	8.53	203	P	Pn	10 59 03.5	-1.8
CAW	Cannon Point	8.82	203	P	Pn	10 59 06.9	-1.7

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*IDC **11** 11:16:31.9±1.1, 31°.32S×71°.50W, h0^{km}, mb3.9/5, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=36.7km s-min=21.2km az=99.0*
*SJA **11** 11:16:33.0±0.7, 31°.45S×72°.17W, h46^{km}±9^{km}, ML4.0, MW4.1*
*GUC **11** 11:16:35.5±0.7, 31°.49S×71°.72W, h28^{km}±2^{km}, ML4.0*
ISC 11 11:16:33.7±1.8, **31°.44S**±0°.03×**71°.77W**±0°.05, **h15**^{km}±11^{km}, **n62**, σ**2^s.10**/80, **mb4.1**/5, **5C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	1.10	57	⇓iP	Pb	11 16 54.9	+0.4
CO03				i S	Sg	11 17 09.6	+0.2
CO03				IAML		11 17 14.0	
	comp=E,3µm,0.2s						
GO04	Tololo Observa	1.51	34	⇑iP	Pn	11 17 02.1	+1.6
GO04				i S	Sb	11 17 21.8	+1.0
GO04				IAML		11 17 27.0	
	comp=N,8µm,0.5s						
GO04	Tololo Observa	1.51	34	eP	Pb	11 17 02.4	+0.7
GO04				eS	Sg	11 17 22.9	+0.3
ROCH	El Roble	1.66	157	⇑iP	Pn	11 17 03.4	+0.8
ROCH				i S	Sn	11 17 23.7	0.0
ROCH				IAML		11 17 28.7	
	comp=N,3µm,0.4s						
ROC1	El Roble	1.66	158	eP	Pn	11 17 03.8	+1.3
ROC1				eS	Sn	11 17 24.0	+0.3
VA03	San Esteban	1.68	142	eP	Pn	11 17 03.6	+1.0
VA03				i S	Sn	11 17 24.5	+0.6
VA03				IAML		11 17 26.4	
	comp=N,5µm,0.5s						
MT02	Curacav	1.89	164	⇓iP	Pn	11 17 06.3	+0.7
MT02				IAML		11 17 34.5	
	comp=E,790nm,0.5s						
PEL	Peldehue	1.93	152	⇑eP	Pn	11 17 07.6	+1.5
PEL				i S	Sn	11 17 31.3	+1.2
PEL				IAML		11 17 35.8	
	comp=E,1µm,0.4s						
PEL	Peldehue	1.93	152	eP	Pn	11 17 07.6	+1.5
PEL				eS	Sb	11 17 33.3	+0.7
CO01	Juntas del Tor	2.05	45	⇑iP	Pb	11 17 10.5	-0.3
CO01				i S	Sb	11 17 36.5	+0.3
CO01				IAML		11 17 38.8	
	comp=N,790nm,0.4s						
MT05	Renca	2.13	156	eP	Pn	11 17 10.5	+1.6
MT05				i S	Sn	11 17 36.8	+1.6
MT05				IAML		11 17 40.3	
	comp=E,2µm,0.3s						
RTLS	Leoncito	2.14	100	eP	Pb	11 17 12.3	0.0
RTLS				eS	Sn	11 17 24.2	-11
RTLS				IAML		11 17 48.2	
	comp=Z,389nm,0.7s						
AUSP	Uspallata	2.17	112	eP	Pb	11 17 12.7	-0.3
AUSP				eS	Sb	11 17 40.8	+1.0
MT03	Universidad Ad	2.31	153	⇑eP	Pn	11 17 12.8	+1.5
MT03				i S	Sn	11 17 41.2	+1.7
MT03				IAML		11 17 50.5	
	comp=N,2µm,0.7s						
AROD	Rodeo	2.35	58	eP	Pb	11 17 16.4	+0.5
AROD				eS	Sg	11 17 47.5	-1.7
MT09	Talagante	2.42	164	eP	Pn	11 17 14.8	+1.8
MT09				i S	Sn	11 17 44.1	+1.7
MT09				IAML		11 17 52.0	
	comp=N,852nm,0.3s						
ACCO	Cerro Coronel	2.47	71	eP	Pb	11 17 18.2	+0.2
ACCO				eS	Sg	11 17 52.1	-1.1
ACCO				IAML		11 17 57.7	
	comp=Z,574nm,0.4s						
ACDV	Cuesta del Vie	2.60	62	eP	Pb	11 17 21.7	+1.4
ACDV				eS	Sg	11 17 55.6	-1.9
ACDV				IAML		11 18 00.2	
	comp=Z,249nm,0.7s						
ZON	Zonda	2.64	93	eP	Pb	11 17 20.1	-0.7
ZON				eS	Sb	11 17 55.5	+2.4
ZON				IAML		11 18 10.4	
	comp=Z,317nm,0.7s						
LMEL	Las Melosas	2.74	152	eP	Pn	11 17 19.5	+2.2
LMEL				i S	Sn	11 17 52.1	+1.8
LMEL				IAML		11 18 02.5	
	comp=N,640nm,0.2s						
ASAL	Salagasta	2.74	115	eP	Pb	11 17 22.0	-0.5
ASAL				eS	Sg	11 18 00.5	-1.4
ASAL				IAML		11 18 09.1	
	comp=Z,384nm,0.6s						
ARCO	CERRO ARCO	2.78	121	eP	Pb	11 17 22.7	-0.6
ARCO				eS	Sg	11 18 07.2	+4.1
ARCO				IAML		11 18 10.7	
	comp=Z,257nm,0.4s						
RTCV	Cerro Valdivia	2.78	100	eP	Pb	11 17 21.8	-1.5
RTCV				IAML		11 18 11.9	
	comp=Z,240nm,0.5s						
RTLL	Cerro Villicun	2.82	89	eP	Pn	11 17 21.8	+3.4
RTLL				eP	Pb	11 17 22.6	-1.2
RTLL				eS	Sb	11 17 59.7	+1.5
RTLL				IAML		11 18 10.8	
	comp=Z,429nm,0.7s						
AC05	El Transito	2.90	27	eP	Pn	11 17 21.9	+2.4
AC05				i S	Sn	11 17 57.8	+3.6
AC05				IAML		11 18 10.3	
	comp=N,615nm,0.2s						
AAGR	Agrelo	2.98	124	eP	Pb	11 17 25.6	-1.0
AAGR				eS	Sg	11 18 08.2	-1.3
AAGR				IAML		11 18 12.1	
	comp=Z,314nm,0.5s						
AC04	Llanos de Chal	3.28	11	IAML		11 18 22.2	
	comp=E,266nm,0.4s						
GO03	Copiap	4.06	20	eP	Pn	11 17 37.9	+2.5
GO03				eS	Sb	11 18 35.8	+1.9
COIS	El Sosneado	4.08	154	eP	Pn	11 17 34.5	-1.2
VCA	Vinchina	4.10	50	eP	Pn	11 17 41.0	+5.0
VCA				IAML		11 18 42.3	
	comp=Z,301nm,0.6s						
RFA	San Rafael	4.32	141	eP	Pn	11 17 42.0	+2.9
RFA				IAML		11 18 52.4	
	comp=Z,81nm,1.5s						
ACLC	CERRO LA CRUZ	4.62	65	eP	Pn	11 17 46.1	+2.9
ACLC				eS	Sn	11 18 41.2	+4.5
ACLC				IAML		11 18 46.9	
	comp=Z,307nm,0.4s						
APLL	PUNTA DE LOS L	4.62	78	eP	Pn	11 17 41.9	-1.3
APLL				IAML		11 18 47.2	
	comp=Z,180nm,1.0s						
CYA	Choya	5.98	62	eP	Pn	11 18 03.9	+2.2
CYA				eS	Sn	11 19 11.2	+1.2
CYA				IAML		11 19 19.1	
	comp=Z,80nm,1.1s						
TCA	Tanti	6.13	91	eP	Pn	11 18 06.8	+2.9
TCA				eS	Sn	11 19 19.0	+5.1
TCA				IAML		11 19 20.7	
	comp=Z,82nm,1.1s						
H03N1	Juan Fernandez	6.36	250	Pn	Pn	11 18 08.4	+1.7
	baz=119,slow=18,SNR=16						
H03N1				T	T	11 24 44.4	
	baz=78,slow=72,SNR=2116						
H03N3	Juan Fernandez	6.38	250	Pn	Pn	11 18 08.5	+1.5
	baz=119,slow=18,SNR=16						
H03N3				T	T	11 24 46.0	
	baz=78,slow=72,SNR=2268						
H03N2	Juan Fernandez	6.38	250	Pn	Pn	11 18 08.1	+1.1
	baz=119,slow=18,SNR=11						
H03N2				T	T	11 24 49.7	
	baz=78,slow=72,SNR=1916						
CANA	Caviahue	6.46	175	eP	Pn	11 18 12.5	+4.0
H03S3	Juan Fernandez	6.48	247	T	T	11 25 11.0	
	baz=74						
H03S1	Juan Fernandez	6.48	246	T	T	11 25 09.5	
	baz=74						
H03S2	Juan Fernandez	6.49	247	T	T	11 25 12.9	
	baz=74						
AHML	Horco Molle	7.29	52	eP	Pn	11 18 23.3	+3.5
AHML				IAML		11 20 16.6	
	comp=Z,22nm,0.8s						
FSA	Cafayete	7.35	45	eP	Pn	11 18 23.9	+3.2
LVC	Limon Verde	9.16	17	Pn	Pn	11 18 41.4	-4.3
	comp=Z,0.2nm,0.3s,baz=184,slow=16,SNR=1.0						
LVC				Sn	Sn	11 20 27.3	-1.4
	comp=Z,0.4nm,0.3s,baz=198,slow=14,SNR=1.7						
LVC				Lg	Lg	11 21 17.6	
	comp=Z,2.5nm,0.3s,baz=146,slow=21,SNR=5.9						
LVC				LR	LR	11 22 18.1	
	comp=Z,94nm,21.7s,baz=208,slow=39						
PLCA	Paso Flores	9.32	174	Pn	Pn	11 18 49.3	+1.6
	comp=Z,0.2nm,0.3s,baz=329,slow=11,SNR=7.9						
CPUP	Villa Florida	13.63	72	Pn	Pn	11 19 43.2	-3.3

	comp=Z,0.2nm,0.3s,baz=180,slow=3.0,SNR=2.0						
CPUP				Sn	Sn	11 22 10.5	-7.3
	comp=Z,0.2nm,0.3s,baz=243,slow=18,SNR=1.9						
SIV	San Ignacio	18.21	35	P	Pn	11 20 43.2	-3.0
	comp=Z,0.2nm,0.3s,baz=207,slow=14,SNR=2.6						
BDFB	Brasilia	26.77	59	P	P	11 22 12.1	-1.2
	comp=Z,3.9nm,0.9s,baz=196,slow=11,SNR=3.9						
SNAA	Sanae	53.87	159	P	P	11 25 56.1	+0.2
	comp=Z,0.9nm,0.8s,baz=310,slow=3.9,SNR=4.3						
TXAR	Lajitas Array	67.63	330	P	P	11 27 31.1	+1.0
	comp=Z,0.3nm,0.8s,baz=150,slow=11,SNR=2.9						
DBIC	Dimbokro	74.15	72	P	P	11 28 08.7	-1.4
	comp=Z,1.5nm,0.8s,baz=217,slow=11,SNR=1.2						
TORD	Torodi Ar. Bea	83.12	70	P	P	11 28 59.2	-0.2
	comp=Z,0.7nm,0.5s,baz=268,slow=4.9,SNR=6.1						
H11S2	WAKE ISLAND Hy	126.00	271	T	T	13 54 19.9	
	baz=116,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	126.01	271	T	T	13 54 22.2	
	baz=116,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	126.02	271	T	T	13 54 21.2	
	baz=116,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	126.35	272	T	T	13 54 53.7	
	baz=109,slow=74						
H11N1	WAKE ISLAND Hy	126.36	272	T	T	13 54 53.7	
	baz=109						
H11N2	WAKE ISLAND Hy	126.37	272	T	T	13 54 57.9	
	baz=109,slow=74						
AAK	Ala-Archa	151.02	58	PKPbc	PKPbc	11 36 26.3	+0.1
	comp=Z,0.4nm,0.3s,baz=263,slow=8.1,SNR=2.2						
ZALV	Zalesovo Beam	151.92	30	PKPbc	PKPbc	11 36 27.8	+0.1
	comp=Z,5.4nm,0.5s,baz=305,slow=3.2,SNR=29						
MKAR	Makanchi Array	154.85	45	PKPbc	PKPbc	11 36 34.0	-0.4
	comp=Z,0.3nm,0.6s,baz=311,slow=2.0,SNR=4.5						

IDC 11 11:28:30.2±2.2, 4°.55N×126°.69E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/55, mbtmp3.5/4, Error ellipse: s-maj=199.8km s-min=23.8km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.48	163	P	P	11 33 59.9	-0.3
	0.7nm,1.0s,baz=342,slow=10,SNR=3.1						
ASAR	Alice Springs	28.92	166	P	P	11 34 31.4	+0.3
	1.2nm,1.2s,baz=353,slow=8.2,SNR=5.6						
MKAR	Makanchi Array	56.86	325	P	P	11 38 18.1	+1.3
	0.2nm,0.6s,baz=117,slow=7.8,SNR=4.1						
KURBB	Kurchatov Arra	61.03	327	P	P	11 38 44.4	-1.3
	0.4nm,0.6s,baz=127,slow=6.6,SNR=4.6						

ASRS 11 11:34:20.3±0.3, 52°N±1°×9°6E±°, h5km, MLh3.1/10, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TDJR	Todzha	0.62	21	Pg	Pb	11 34 34.0	+0.3
TDJR				Sg	Sb	11 34 41.8	-0.9
KZLR	Kyzyl	0.81	262	Pg	Pn	11 34 39.7	+1.3
KZLR				Sg	Sn	11 34 53.6	+2.9
ERNS	Erzin	1.60	194	Pg	Pg	11 34 52.6	+1.6
ERNS				Sg	Sg	11 35 13.9	+2.2
ARDR	Aradan	1.61	299	Pg	Pg	11 34 54.7	+3.6
ARDR				Sg	Sg	11 35 17.2	+5.1
KNGR	Kungurtug, Tuv	1.65	137	Pg	Pn	11 34 50.3	+0.2
KNGR				Sg	Sg	11 35 13.1	-0.3
BLRR	Bol’shaya Rech	2.37	302	Pg	Pg	11 35 07.8	+2.2
BLRR				Sg	Sg	11 35 40.5	+4.3
DJOS	Djoyskaya Sosn	2.84	292	Pg	Pg	11 35 14.9	+0.3
DJOS				Sg	Sg	11 35 54.6	+3.3
CERR	Cheremushki	2.85	293	Pg	Pg	11 35 14.1	-0.7
CERR				Sg	Sg	11 35 52.9	+1.3
DJO	Djoy, Khakassi	2.94	291	Pg	Pg	11 35 18.9	+2.3
DJO				Sg	Sg	11 35 57.7	+3.2
ORY	Orie	3.21	354	Sg	Sb	11 35 59.6	+2.4
KTRR	Kuturchin	3.25	344	Pg	Pg	11 35 21.5	-1.1
KTRR				Sg	Sg	11 36 05.7	+1.0
TBTR	Tabat	3.27	292	Pg	Pg	11 35 23.9	+1.0
TBTR				Sg	Sg	11 36 08.0	+2.8
TEL	Teeli	3.56	259	Pg	Pg	11 35 28.5	+0.1
TEL				Sg	Sg	11 36 16.6	+2.1
VEH	Verkhnyaya Baz	3.61	296	Sg	Sg	11 36 19.9	+3.9
SHRR	Shira	4.29	311	Sg	Sg	11 36 40.9	+2.9
LUZB	Luzhba, Kemero	4.55	297	Sg	Sg	11 36 50.7	+4.6
TASR	Tashtagol	4.92	284	Pg	Pg	11 35 55.9	+1.5
TASR				Sg	Sg	11 37 00.9	+2.9
CUR	Chagan-Uzun	4.98	253	Pg	Pg	11 35 54.9	-0.7
CUR				Sg	Sg	11 37 02.2	+2.1
ULGR	Ulagan, Altay	5.03	259	Pg	Pg	11 35 58.5	+1.9
ULGR				Sg	Sg	11 37 07.8	+6.0
ARTR	Artybash	5.25	273	Pg	Pg	11 35 60.0	-0.8
ARTR				Sg	Sg	11 37 12.3	+3.6
CHBI	Chibit, Altay	5.41	257	Pg	Pg	11 36 03.0	-0.8
CHBI				Sg	Sg	11 37 16.7	+2.9
DGZ	Jazzator, Alta	5.68	251	Sg	Sg	11 37 27.6	+5.0
ELT	Eltsovka	5.97	288	Sg	Sg	11 37 34.4	+2.4
UKR	Ust'-Kan	6.92	267	Sg	Sg	11 38 09.2	+6.9

IDC 11 11:39:49.5±5.1, 36°.03N×71°.29E, h108km±31km, mb3.4/7, mb1 3.5/13, mb1mx3.2/56, mbtmp3.8/13, Error ellipse: s-maj=59.6km s-min=23.4km az=153.0

NNC 11 11:39:55.9±4.4, 37°.03N×70°.78E, h0km, mb4.3, mpv4.3, Error ellipse: s-maj=36.7km s-min=25.4km az=164.0

ISC 11 11:39:52.5±1.4, 36°.5N±0°.1×71°.01E±0°.09, h100km, n29, σ1s.83/33, mb3.8/6, 8C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.02	19	P	Pn	11 41 21.0	+1.7
	SNR=88						
UCH	Uchtor	6.35	24	P	Pn	11 41 26.0	+2.1
	SNR=16						
DZA	Taraz	6.41	2	Pg	Pn	11 41 27.1	+2.8
	110nm,0.1s						
DZA				Lg	Lg	11 42 36.6	
	66nm,0.1s						
MRKS	Merke	6.49	15	Pg	Pn	11 41 27.6	+2.1
	10nm,0.2s						
EKS2	Erkin-Say	6.54	18	P	Pn	11 41 28.0	+1.9
	SNR=13						
KK31	Karatay Array	6.63	357	⇓P	Pn	11 41 29.1	+1.8
	11nm,0.4s,baz=179,slow=13,SNR=105						
KK31				⇑S	Sn	11 42 39.8	-1.5
	6.5nm,0.4s,baz=182,slow=20						
AAK	Ala-Archa	6.71	23	P	Pn	11 41 30.4	+1.8
	4.2nm,0.3s,baz=160,slow=6.0,SNR=31						
AAK				S	Sn	11 42 42.4	-1.2
	0.8nm,0.3s,baz=338,slow=21,SNR=2.0						
AAK	Ala-Archa	6.71	23	P	Pn	11 41 30.6	+2.0
	SNR=18						
AAK	Ala-Archa	6.71	23	⇑P	Pn	11 41 30.3	+1.8
	3.7nm,0.3s						
AAK				⇑S	Sn	11 42 43.4	-0.2
	14nm,0.6s						
CHMS	Chumysh	7.12	23	P	Pn	11 41 36.6	+2.7
	SNR=10						
USP	Ospenovka	7.29	20	P	Pn	11 41 37.9	+1.6
	SNR=12						
TKM2	Tokmak 2	7.34	27	P	Pn	11 41 42.2	+5.1
	SNR=8.7						
TKM2	Tokmak 2	7.34	27	⇑P	Pn	11 41 38.6	+1.5
	4.5nm,0.5s						
TKM2				⇑S	Sn	11 42 57.8	-1.1
	6.5nm,0.8s						
KTBS	Karatobe	8.43	29	Pg	Pn	11 42 08.9	+17
	1.6nm,0.6s						
KTBS				Lg	Lg	11 43 47.9	
	5.3nm,0.8s						
GEYT	Alibeck	10.39	282	P	Pn	11 42 20.0	+1.5
	0.9nm,0.3s,baz=110,slow=8.4,SNR=10						
GEYT				S	Sn	11 44 12.8	-0.1
	0.9nm,0.3s,baz=84,slow=18,SNR=2.6						
MKAR	Makanchi Array	13.30	36	P	Pn	11 42 56.8	-0.5
	0.1nm,0.3s,baz=225,slow=14,SNR=2.5						
AB31	Akbulak array	15.11	331	P	Pn	11 43 21.4	+1.0
	0.7nm,0.3s,baz=141,slow=12,SNR=42						
AB31				⇑S	Sn	11 46 02.4	-4.6
	1.3nm,0.6s						
KURBB	Kurchatov Arra	15.14	19	P	Pn	11 43 21.1	+0.3
	0.1nm,0.3s,baz=206,slow=10,SNR=2.9						
BVAR	Borovoye Array	16.55	359	P	P	11 43 39.4	+0.2
	0.3nm,0.3s,baz=147,slow=8.6,SNR=8.6						
BRVK	Borovoye	16.59	358	⇑P	P	11 43 41.2	+1.7
	14nm,2.4s						
AKTO	Aktyubinsk	16.81	330	P	P	11 43 44.1	+2.1
	0.4nm,0.3s,baz=134,slow=9.2,SNR=15						
AKTO	Aktyubinsk	16.81	330	⇑P	P	11 43 44.2	+2.2
	4.2nm,0.7s						
ZALV	Zalesovo Beam	19.93	24	P	P	11 44 15.8	-0.3
	1.2nm,0.5s,baz=238,slow=8.5,SNR=6.4						
AKASG	Malin Array Be	32.97	309	P	P	11 46 17.7	+0.3
	0.7nm,0.5s,baz=83,slow=6.5,SNR=3.4						
FINES	FINESS Array B	37.51	326	P	P	11 46 56.3	+0.1
	9.6nm,1.2s,baz=104,slow=16,SNR=1.3						
ARCES	ARCESS Array B	41.17	338	P	P	11 47 26.8	+0.2
	1.2nm,0.8s,baz=88,slow=3.8,SNR=4.6						
NOA	NORSAR Array B	44.41	323	P	P	11 47 52.5	-0.4
	1.3nm,1.0s,baz=97,slow=7.7,SNR=1.8						
TORD	Torodi Ar. Bea	65.73	269	P	P	11 50 23.9	-2.9
	0.3nm,0.4s,baz=52,slow=6.3,SNR=2.2						
YKA	Yellowknife Ar	81.27	3	P	P	11 51 55.8	-1.3
	0.1nm,0.4s,baz=4.5,slow=5.0,SNR=7.2						

IDC 11 12:41:27.0±1.4, 15°.25S×178°.65W, h432km±14km, mb3.6/16, mb1 3.8/18, mb1mx3.6/39, mbtmp4.4/18, Error ellipse: s-maj=16.5km s-min=13.9km az=148.0

ISC 11 12:41:24.1±0.5, 15°.1S±0°.1×178°.60W±0°.08, h400km, n28, σ1s.79/31, mb3.9/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.17	230	P	Pn	12 42 40.8	+2.9
	34nm,0.3s,baz=280,slow=22,SNR=207						
MSVF				S	S	12 43 43.1	+5.3
	baz=345,slow=18,SNR=1.5						
AFI	Afiamalu	6.70	81	P	Pn	12 43 04.7	0.0
	46nm,0.3s,baz=74,slow=0.5,SNR=150						
AFI				S	S	12 44 29.1	+2.4
	baz=28,slow=23,SNR=0.5						
DZM	Mont Dzumac	15.79	242	P	P	12 44 47.2	+1.8
	3.0nm,0.3s,baz=46,slow=19,SNR=31						
URZ	Urewera	23.41	189	P	P	12 45 56.9	-2.5
	14nm,0.7s,baz=263,slow=1.5,SNR=7.9						
CTA	Charters Tower	33.84	256	P	P	12 47 30.9	-0.3
	14nm,0.9s,baz=95,slow=9.9,SNR=9.8						
PMG	Port Moresby	33.91	276	P	P	12 47 32.9	+1.1
	20nm,0.8s,baz=315,slow=10.0,SNR=3.2						
STKA	Stephens Creek	39.90	238	P	P	12 48 20.7	-0.8
	4.6nm,0.7s,baz=49,slow=7.7,SNR=10						
JAY	Jayapura	42.02	283	P	P	12 48 39.3	+0.5
	17nm,1.0s,baz=173,slow=16,SNR=4.2						
WRA	Warramunga Arr	45.04	257	P	P	12 49 01.0	-1.4
	1.2nm,0.3s,baz=72,slow=6.1,SNR=53						
ASAR	Alice Springs	45.45	252	P	P	12 49 04.8	-0.8
	65nm,0.5s,baz=84,slow=8.6,SNR=2310						
ASAR				S	S	12 55 12.7	-4.0
	0.7nm,0.8s,baz=79,slow=11,SNR=5.3						
FITZ	Fitzroy Crossi	53.37	258	P	P	12 50 04.1	-0.6
	3.5nm,0.7s,baz=154,slow=4.2,SNR=6.1						
VNDA	Vanda	63.24	185	P	P	12 51 09.5	-1.6
	0.7nm,0.7s,baz=8.5,slow=8.4,SNR=2.3						
QSPA	South Pole Qui	74.97	180	P	P	12 52 22.4	-0.3
	17nm,0.6s,baz=349,slow=0.5,SNR=202						
NVAR	Mina Array Bea	77.52	44	P	P	12 52 37.5	+0.1
	0.5nm,0.7s,baz=224,slow=8.8,SNR=6.2						
ILAR	Eielson Array	83.18	13	P	P	12 53 06.2	-0.1
	0.8nm,0.9s,baz=236,slow=6.4,SNR=7.3						
TXAR	Lajitas Array	84.64	58	P	P	12 53 16.2	+1.7
	1.0nm,0.8s,baz=228,slow=6.2,SNR=15						
PDAR	Pinedale Array	85.43	44	P	P	12 53 18.6	+0.4
	0.5nm,0.5s,baz=198,slow=2.2,SNR=7.0						
MAW	Mawson	86.45	200	P	P	12 53 22.3	-0.2
	4.2nm,0.5s,baz=135,slow=3.9,SNR=12						
YKA	Yellowknife Ar	91.84	25	P	P	12 53 46.2	-1.4
	0.1nm,0.6s,baz=257,slow=4.4,SNR=2.4						
SNAA	Sanae	93.42	179	P	P	12 53 53.8	-1.1
SNAA	Sanae	93.42	179	P	P	12 53 53.5	-1.4
	2.5nm,0.7s,baz=219,slow=5.5,SNR=11						
VNA3	Neumayer Olymp	93.57	176	P	P	12 53 55.1	-0.4
VNA2	Neumayer--Watz	94.00	177	P	P	12 53 56.5	-1.0
	baz=188,slow=2.5						
VNA1	Neumayer--Stat	94.23	177	P	P	12 53 57.9	-0.6
BRTR	Keskin Array B	142.62	317	PKP	PKPdf	13 00 09.0	-1.9
	1.1nm,0.9s,baz=56,slow=3.6,SNR=2.9						
MMAI	Mount Meron Ar	144.39	306	PKP	PKPdf	13 00 14.5	+0.4
	2.9nm,0.6s,baz=54,slow=8.5,SNR=3.8						
GERES	GERESS Array B	144.84	346	PKP	PKPdf	13 00 14.6	+0.2
	0.6nm,0.5s,baz=355,slow=6.1,SNR=2.8						
DAVOX	Davos/Dischmat	147.60	349	PKPbc	PKPbc	13 00 22.9	+0.4
	1.6nm,0.6s,baz=191,slow=7.3,SNR=4.0						

IDC 11 12:51:00.8±0.8, 61°.57S×54°.74W, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/30, mbtmp3.9/9, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/23, Error ellipse: s-maj=32.0km s-min=20.9km az=85.0

ISC 11 12:51:02.4±0.7, 61°.6S±0°.1×55°.0W±0°.1, h10km, n18, σ1s.53/15, mb4.1/9, South Shetland Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMSA	Palmer Station	5.19	228	Pn	Pn	12 52 23.1	+3.0
	4.4nm,0.3s,baz=73,slow=8.1,SNR=10						
PMSA				Sn	Sb	12 53 33.1	-2.4
	1.9nm,0.3s,baz=165,slow=20,SNR=1.2						
SNAA	Sanae	22.20	139	P	P	12 55 57.4	-1.0
	2.2nm,0.9s,baz=222,slow=16,SNR=4.4						
SNAA				LR	LR	13 04 26.1	
	comp=Z,92nm,18.1s,baz=7.5,slow=36						
PLCA	Paso Flores	22.93	328	P	P	12 56 07.6	+1.2
	1.3nm,0.9s,baz=11,slow=9.1,SNR=3.3						
QSPA	South Pole Qui	28.64	180	P	P	12 56 59.1	+0.2
	3.1nm,0.8s,baz=148,slow=2.9,SNR=12						
SIV	San Ignacio	45.74	352	P	P	12 59 22.0	-1.7
	0.4nm,0.6s,baz=194,slow=12,SNR=1.7						
BOSA	Boshof	60.69	96	P	P	13 01 15.3	+1.5
	3.1nm,1.1s,baz=185,slow=12,SNR=3.7						
H10N3	ASCENSION HYDR	61.36	47	T	T	14 08 20.6	
	baz=201,slow=75,SNR=7.4						
H10N1	ASCENSION HYDR	61.36	47	T	T	14 08 16.4	
	baz=201,slow=75,SNR=6.0						
H10N2	ASCENSION HYDR	61.38	47	T	T	14 08 21.9	
	baz=201,slow=75,SNR=6.7						
KOWA	Kowa	85.81	49	P	P	13 03 42.6	+0.8
	1.1nm,0.5s,baz=250,slow=2.2,SNR=1.9						
TORD	Torodi Ar. Bea	86.72	55	P	P	13 03 46.6	+0.3
	0.7nm,0.7s,baz=254,slow=5.4,SNR=2.9						
ASAR	Alice Springs	94.74	188	P	P	13 04 23.4	-0.5
	0.5nm,0.6s,baz=167,slow=4.5,SNR=12						
WRA	Warramunga Arr	98.41	189	P	P	13 04 39.6	-1.0
	0.4nm,0.8s,baz=177,slow=4.3,SNR=2.2						
YKA	Yellowknife Ar	131.72	328	PKP	PKPdf	13 10 12.7	-1.2
	0.1nm,0.5s,baz=136,slow=2.9,SNR=4.5						
ARCES	ARCESS Array B	142.60	35	PKhKP	PKPpre	13 10 27.6	
	3.9nm,1.1s,baz=238,slow=2.3,SNR=4.2						
ILAR	Eielson Array	143.15	314	PKhKP	PKPpre	13 10 30.5	
	0.4nm,0.8s,baz=153,slow=1.6,SNR=5.3						
MKAR	Makanchi Array	151.59	102	PKPbc	PKPbc	13 10 54.5	-1.2
	0.6nm,0.7s,baz=259,slow=1.2,SNR=6.6						
MKAR				PKPab	PKPab	13 11 03.8	-0.6
	0.9nm,0.7s,baz=248,slow=5.1,SNR=7.7						
ZALV	Zalesovo Beam	157.57	92	PKP	PKPdf	13 10 57.9	+0.4
	1.2nm,0.4s,baz=326,slow=3.8,SNR=6.9						

IDC 11 12:55:06.5±1.2, 36°.95N×23°.79E, h117km±18km, mb3.5/10, mb1 3.5/14, mb1mx3.3/58, mbtmp3.8/14, Error ellipse: s-maj=16.8km s-min=16.3km az=58.0

ATH 11 12:55:06.7, 37°.05N×23°.65E, h108km±2km, ML3.4/43, Error ellipse: s-maj=2.0km s-min=0.8km az=220.0

PDG 11 12:55:07.0±0.2, 37°.24N×22°.94E, h13km±9km, ML4.3/12, Error ellipse: s-maj=11.4km s-min=2.8km az=90.0

THE 11 12:55:08.5, 37°.05N×23°.67E, h93km±1km, ML3.5/29, Error ellipse: s-maj=1.4km s-min=0.4km az=289.0

ISC 11 12:55:06.4±0.6, 37°.07N±0°.03×23°.67E±0°.03, h116km±5km, n214, σ1s.87/273, mb3.7/11, 5C-3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YDRA	Hydra	0.33	330	P	Pn	12 55 22.7	-0.2
YDRA				S	Sn	12 55 33.7	-1.7
YDRA				AML	AML	12 55 34.5	
	comp=N,5539µm,0.2s						
YDRA				AML	AML	12 55 35.7	
	comp=E,9099µm,0.3s						
KRND	KRANIDI	0.52	308	P	Pn	12 55 23.9	-0.1
KRND				S	Sn	12 55 36.1	-1.2
KRND				AML	AML	12 55 36.5	
	comp=N,3876µm,0.5s						
KRND				AML	AML	12 55 37.8	
	comp=E,2489µm,0.3s						
KRND	KRANIDI	0.52	308	P	Pn	12 55 23.9	-0.1
KRND				S	Sn	12 55 36.0	-1.2
	comp=E,2µm,0.4s						
MNVA	Monemvasia	0.63	234	P	Pn	12 55 24.7	0.0
MNVA				AML	AML	12 55 37.8	
	comp=E,2651µm,0.2s						
MNVA				AML	AML	12 55 37.8	
	comp=N,3110µm,0.2s						
VLI	Veliai	0.68	240	P	Pn	12 55 25.1	-0.1
VLI				S	Sn	12 55 37.4	-1.9
VLI				AML	AML	12 55 37.6	
	comp=N,6652µm,0.4s						
VLI				AML	AML	12 55 37.9	
	comp=E,5619µm,0.5s						
VLI	Veliai	0.68	240	P	Pn	12 55 25.1	-0.1
VLI				S	Sn	12 55 37.4	-1.9
	comp=E,3µm,0.5s						
MHLA	Plaka, Milos I	0.68	118	P	Pn	12 55 25.7	+0.5
MHLO	Agia Marina, M	0.70	122	P	Pn	12 55 25.6	+0.3
MHLO	Agia Marina, M	0.70	122	P	Pn	12 55 25.6	+0.3
MHLO				S	Sn	12 55 38.2	-1.3
	comp=E,3µm,0.4s						
EPID	Epidavros	0.70	322	P	Pn	12 55 25.7	+0.3
EPID	Epidavros	0.70	322	P	Pn	12 55 25.6	+0.3
EPID				S	Sn	12 55 38.6	-1.1
	comp=E,4µm,0.3s						
VLY	Voula,Athens	0.79	7	P	Pn	12 55 26.0	-0.1
VLY				S	Sn	12 55 39.3	-1.7
	comp=E,962nm,0.4s						
ATHU	Athens Univers	0.91	6	P	Pn	12 55 27.6	+0.4
ATHU	Athens Univers	0.91	6	P	Pn	12 55 27.6	+0.4
ATHU				S	Sn	12 55 41.6	-1.2
ATH	Athens Observa	0.91	2	P	Pn	12 55 27.7	+0.6
ATH				S	Sn	12 55 42.0	-0.8
ATH				AML	AML	12 55 42.6	
	comp=E,2854µm,0.4s						
ATH				AML	AML	12 55 42.8	
	comp=N,3803µm,0.5s						
ATH	Athens Observa	0.91	2	P	Pn	12 55 27.8	+0.6
ATH				S	Sn	12 55 41.7	-1.1
	comp=N,2µm,0.5s						
KTHA	Kythira Island	0.94	211	P	Pn	12 55 27.7	+0.2
KTHA				AML	AML	12 55 42.3	
	comp=N,16971µm,0.3s						
KTHA				AML	AML	12 55 43.0	
	comp=E,12140µm,0.2s						
KTHA	Kythira Island	0.94	211	P	Pn	12 55 27.8	+0.2
KTHA				S	Sn	12 55 42.0	-1.5
KTHR	Kythira	0.96	214	P	Pn	12 55 28.2	+0.5
KTHR				S	Sn	12 55 42.4	-1.4
	comp=E,2µm,0.3s						
PTL	Penteli	0.99	9	P	Pn	12 55 28.6	+0.6
PTL				AML	AML	12 55 43.8	
	comp=N,335µm,0.7s						
PTL				AML	AML	12 55 44.0	
	comp=E,927µm,0.7s						
PTL	Penteli	0.99	9	P	Pn	12 55 28.6	+0.6
PTL				S	Sn	12 55 43.3	-1.1
DION	Dionisos Attik	1.03	12	P	Pn	12 55 29.1	+0.7
DION				AML	AML	12 55 44.8	
	comp=E,2593µm,0.5s						
DION				AML	AML	12 55 45.4	
	comp=N,2864µm,0.9s						
DION	Dionisos Attik	1.03	12	P	Pn	12 55 29.1	+0.7
DION				S	Sn	12 55 44.5	-0.6
VLX	Vlachokerasia	1.07	287	P	Pn	12 55 29.5	+0.7
VLX				AML	AML	12 55 46.5	
	comp=E,2621µm,0.4s						
VLX				AML	AML	12 55 47.2	
	comp=N,2778µm,0.4s						
VLX	Vlachokerasia	1.07	287	P	Pn	12 55 29.6	+0.7
VLX				S	Sn	12 55 44.7	-1.2
	comp=N,1µm,0.4s						
LOUT	Loutraki	1.07	329	P	Pn	12 55 29.5	+0.7
LOUT				S	Sn	12 55 45.0	-0.8
LOUT	Loutraki	1.07	329	P	Pn	12 55 29.5	+0.7
LOUT				S	Sn	12 55 45.1	-0.7
	comp=N,2µm,0.8s						
VILL	Villia	1.13	346	P	Pn	12 55 30.1	+0.6
VILL				S	Sn	12 55 46.2	-0.8
	comp=N,1µm,0.6s						
KARY	Karystos	1.14	32	P	Pn	12 55 30.2	+0.7
KARY	Karystos	1.14	32	P	Pn	12 55 30.2	+0.7
VIL2	Platees	1.19	345	P	Pn	12 55 30.1	0.0
VIL2				S	Sn	12 55 46.0	-2.0
VIL2				AML	AML	12 55 47.1	
	comp=N,1535µm,0.7s						
VIL2				AML	AML	12 55 50.0	
	comp=E,2552µm,0.5s						
TRIP	Tripoli	1.21	293	P	Pn	12 55 31.1	+0.8
TRIP				AML	AML	12 55 49.1	
	comp=E,2386µm,0.4s						
TRIP				AML	AML	12 55 49.4	
	comp=N,1452µm,0.4s						
ANKY	Antikythira Is	1.23	194	P	Pn	12 55 30.8	+0.2
ANKY				AML	AML	12 55 47.9	
	comp=N,3691µm,0.4s						
ANKY				AML	AML	12 55 48.4	
	comp=E,4265µm,0.5s						
ANKY	Antikythira Is	1.23	194	P	Pn	12 55 30.7	+0.2
ANKY				S	Sn	12 55 47.5	-1.2
	comp=E,2µm,0.5s						
THAL	Thalero	1.26	321	P	Pn	12 55 31.5	+0.7
THAL				AML	AML	12 55 54.3	
	comp=E,5468µm,0.3s						
THAL				AML	AML	12 55 56.6	
	comp=N,4571µm,0.4s						
THAL	Thalero	1.26	321	P	Pn	12 55 31.5	+0.7
THAL				S	Sn	12 55 48.8	-0.5
	comp=N,3µm,0.5s						
EREA	Eretria	1.37	9	P	Pn	12 55 33.2	+1.1
EREA				AML	AML	12 55 52.2	
	comp=N,1842µm,0.5s						
EREA				AML	AML	12 55 53.5	
	comp=E,620µm,0.3s						
EREA	Eretria	1.37	9	P	Pn	12 55 33.2	+1.1
EREA				S	Sn	12 55 51.5	-0.1
ITM	Ithomi	1.40	275	P	Pn	12 55 33.8	+1.4
ITM				AML	AML	12 55 54.5	
	comp=E,1474µm,0.3s						
ITM				AML	AML	12 55 55.1	
	comp=N,1575µm,0.3s						
ITM	Ithomi	1.40	275	P	Pn	12 55 33.8	+1.4
ITM				S	Sn	12 55 52.1	0.0
	comp=N,772nm,0.3s						
SAP3	Santorini-Thir	1.49	114	P	Pn	12 55 34.5	+1.1
SAP3	Santorini-Thir	1.49	114	P	Pn	12 55 34.5	+1.1
APE	Apeiranthos	1.49	89	P	Pn	12 55 34.4	+0.9
APE				AML	AML	12 55 53.9	
	comp=N,1051µm,0.7s						
APE				AML	AML	12 55 54.1	
	comp=E,1214µm,0.6s						
APE	Apeiranthos	1.49	89	P	Pn	12 55 34.4	+0.9
APE				S	Sn	12 55 53.6	-0.4
SAP4	Santorini-Oia	1.49	113	P	Pn	12 55 34.5	+1.1
THR5	Thira Island,	1.50	115	P	Pn	12 55 34.5	+1.0
THR5	Thira Island,	1.50	115	P	Pn	12 55 34.5	+1.0
CMBO	Columbo, Santo	1.52	112	P	Pn	12 55 34.9	+1.2
CMBO	Columbo, Santo	1.52	112	P	Pn	12 55 34.9	+1.2
THR9	Santorini-Faro	1.53	117	P	Pn	12 55 35.1	+1.2
THR3	Thira Island,	1.54	115	P	Pn	12 55 35.0	+1.1
THR3	Thira Island,	1.54	115	P	Pn	12 55 35.1	+1.1
KLV	Kalavryta, Ach	1.55	309	P	Pn	12 55 34.9	+0.7
KLV				AML	AML	12 55 57.6	
	comp=E,798µm,0.2s						
KLV				AML	AML	12 55 59.3	
	comp=N,767µm,0.5s						
KLV	Kalavryta, Ach	1.55	309	P	Pn	12 55 34.9	+0.7
KLV				S	Sn	12 55 55.1	-0.3
	comp=N,392nm,0.4s						
PYL	PYLOS	1.55	264	P	Pn	12 55 34.6	+0.5
PYL				AML	AML	12 55 56.4	
	comp=E,1639µm,0.4s						
PYL				AML	AML	12 55 57.0	
	comp=N,1424µm,0.2s						
PYL	PYLOS	1.55	264	P	Pn	12 55 34.6	+0.5
PYL				S	Sn	12 55 55.5	+0.2
	comp=N,770nm,0.3s						
THR7	Fira-Santorini	1.55	114	P	Pn	12 55 35.5	+1.3
SNT1	Gialos, Santor	1.56	114	P	Pn	12 55 35.3	+1.1

SNT1	**Gialos, Santor**	**1.56**	**114**	P	**Pn**	**12 55 35.3**	**+1.1**
THR6	**Thira Island,**	**1.56**	**116**	P	**Pn**	**12 55 34.7**	**+0.5**
THR6	**Thira Island,**	**1.56**	**116**	P	**Pn**	**12 55 35.2**	**+1.0**
THR8	**Santorini-Mono**	**1.60**	**114**	P	**Pn**	**12 55 35.6**	**+0.9**
THR8	**Santorini-Mono**	**1.60**	**114**	P	**Pn**	**12 55 35.7**	**+1.0**
SANT	**Santorini**	**1.60**	**115**	P	**Pn**	**12 55 35.8**	**+1.0**
SANT	**Santorini**	**1.60**	**115**	P	**Pn**	**12 55 35.7**	**+1.0**
KYMI	**Kymi, Euboea I**	**1.60**	**12**	P	**Pn**	**12 55 35.8**	**+1.0**
KYMI				AML	AML	12 55 57.2	
	comp=N,770µm,0.6s						
KYMI				AML	AML	12 55 57.4	
	comp=E,661µm,0.4s						
KYMI	**Kymi, Euboea I**	**1.60**	**12**	P	**Pn**	**12 55 35.8**	**+1.0**
KYMI				S	**Sn**	**12 55 56.1**	**-0.3**
	comp=E,358nm,0.5s						
DSF	**Desfina**	**1.62**	**326**	P	**Pn**	**12 55 35.7**	**+0.7**
IMMV	**Iera Moni Meta**	**1.62**	**171**	P	**Pn**	**12 55 35.4**	**+0.3**
IMMV				AML	AML	12 55 56.7	
	comp=E,2859µm,0.3s						
IMMV				AML	AML	12 56 00.7	
	comp=N,3197µm,0.3s						
IMMV	**Iera Moni Meta**	**1.62**	**171**	P	**Pn**	**12 55 35.3**	**+0.3**
IMMV				S	**Sn**	**12 55 55.4**	**-1.4**
	comp=N,2µm,0.3s						
AMT	**Artemida-Makis**	**1.63**	**287**	P	**Pn**	**12 55 36.8**	**+1.6**
AMT				AML	AML	12 56 04.5	
	comp=N,1840µm,0.3s						
AMT				AML	AML	12 56 04.9	
	comp=E,1340µm,0.5s						
AMT	**Artemida-Makis**	**1.63**	**287**	P	**Pn**	**12 55 36.8**	**+1.6**
AMT				S	**Sn**	**12 55 58.1**	**+1.1**
	comp=E,820nm,0.4s						
LKR	**Lokris**	**1.67**	**342**	P	**Pn**	**12 55 36.7**	**+1.1**
LKR				AML	AML	12 55 58.7	
	comp=N,919µm,0.4s						
LKR				AML	AML	12 55 58.8	
	comp=E,715µm,0.3s						
LKR	**Lokris**	**1.67**	**342**	P	**Pn**	**12 55 36.6**	**+1.1**
DLFA	**Delphi**	**1.69**	**327**	P	**Pn**	**12 55 36.6**	**+0.7**
ATAL	**Atalanti**	**1.70**	**343**	P	**Pn**	**12 55 37.0**	**+1.0**
ATAL				AML	AML	12 55 59.4	
	comp=N,663µm,0.7s						
ATAL				AML	AML	12 55 59.5	
	comp=E,616µm,1.0s						
ATAL	**Atalanti**	**1.70**	**343**	P	**Pn**	**12 55 37.0**	**+1.0**
ATAL				S	**Sn**	**12 55 58.7**	**+0.1**
	comp=E,322nm,0.8s						
VAM	**Vamos**	**1.71**	**165**	P	**Pn**	**12 55 36.1**	**0.0**
VAM				AML	AML	12 55 59.1	
	comp=N,2246µm,0.1s						
VAM				AML	AML	12 55 59.7	
	comp=E,2103µm,0.2s						
VAM	**Vamos**	**1.71**	**165**	P	**Pn**	**12 55 36.0**	**-0.1**
VAM				S	**Sn**	**12 55 57.9**	**-0.8**
	comp=E,1µm,0.1s						
ALIK	**Aliki, Aigiali**	**1.72**	**314**	P	**Pn**	**12 55 37.3**	**+1.2**
DRO	**Drossia**	**1.79**	**300**	P	**Pn**	**12 55 38.6**	**+1.5**
DRO				AML	AML	12 56 07.5	
	comp=E,579µm,0.4s						
DRO				AML	AML	12 56 10.5	
	comp=N,1242µm,0.3s						
DRO	**Drossia**	**1.79**	**300**	P	**Pn**	**12 55 38.5**	**+1.5**
KALE	**Kalithea**	**1.79**	**318**	P	**Pn**	**12 55 37.9**	**+0.8**
KALE				AML	AML	12 56 03.0	
	comp=N,1048µm,0.3s						
KALE				AML	AML	12 56 05.6	
	comp=E,978µm,0.2s						
KALE	**Kalithea**	**1.79**	**318**	P	**Pn**	**12 55 37.9**	**+0.8**
TRIZ	**Trizonia**	**1.81**	**316**	P	**Pn**	**12 55 38.3**	**+1.0**
TRIZ	**Trizonia**	**1.81**	**316**	P	**Pn**	**12 55 38.3**	**+1.0**
PRNS	**Prines Rethymn**	**1.82**	**158**	P	**Pn**	**12 55 37.5**	**0.0**
PRNS				S	**Sn**	**12 56 00.1**	**-1.1**
SMIA	**Simia**	**1.85**	**349**	P	**Pn**	**12 55 38.9**	**+1.2**
SERG	**Sergoula**	**1.86**	**317**	P	**Pn**	**12 55 38.4**	**+0.5**
SERG				AML	AML	12 56 07.1	
	comp=N,1189µm,0.4s						
SERG				AML	AML	12 56 08.4	
	comp=E,940µm,0.2s						
SERG	**Sergoula**	**1.86**	**317**	P	**Pn**	**12 55 38.6**	**+0.7**
AXAR	**Agios Charalam**	**1.88**	**335**	P	**Pn**	**12 55 39.3**	**+1.2**
AXAR				S	**Sn**	**12 56 04.1**	**+1.7**
RLS	**Riolos of Patr**	**2.01**	**300**	P	**Pn**	**12 55 41.5**	**+1.7**
RLS				AML	AML	12 56 10.8	
	comp=E,411µm,0.7s						
RLS				AML	AML	12 56 13.5	
	comp=N,480µm,0.3s						
RLS	**Riolos of Patr**	**2.01**	**300**	P	**Pn**	**12 55 41.9**	**+2.2**
IDI	**Anoyia**	**2.03**	**150**	P	**Pn**	**12 55 39.6**	**-0.4**
	comp=N,26nm,0.3s,baz=299,slow=3.6,SNR=242						
IDI				S	**Sn**	**12 56 02.9**	**-3.0**
	comp=N,141nm,0.3s,baz=295,slow=15,SNR=8.4						
IDI	**Anoyia**	**2.03**	**150**	P	**Pn**	**12 55 39.7**	**-0.4**
IDI				AML	AML	12 56 04.9	
	comp=N,1934µm,0.3s						
IDI				AML	AML	12 56 05.7	
	comp=E,1480µm,0.4s						
ANX	**Ano Chora**	**2.06**	**318**	P	**Pn**	**12 55 41.5**	**+1.0**
ANX				AML	AML	12 56 12.6	
	comp=N,1143µm,0.7s						
ANX				AML	AML	12 56 13.4	
	comp=E,1394µm,0.4s						
ANX	**Ano Chora**	**2.06**	**318**	P	**Pn**	**12 55 41.5**	**+1.0**
ANX				S	**Sn**	**12 56 08.2**	**+1.6**
	comp=E,640nm,0.5s						
IACM	**Heraklion**	**2.09**	**147**	P	**Pn**	**12 55 41.1**	**+0.4**
PSRA	**Psara**	**2.10**	**45**	P	**Pn**	**12 55 41.7**	**+0.8**
AGG	**Agios Georgios**	**2.22**	**332**	P	**Pn**	**12 55 43.9**	**+1.5**
AGG				AML	AML	12 56 14.6	
	comp=E,479µm,0.4s						
AGG				AML	AML	12 56 15.6	
	comp=N,430µm,0.6s						
AGG	**Agios Georgios**	**2.22**	**332**	P	**Pn**	**12 55 43.7**	**+1.2**
AGG				S	**Sn**	**12 56 10.7**	**+0.6**
	comp=N,225nm,0.5s						
SIVA	**Sivas**	**2.24**	**155**	P	**Pn**	**12 55 43.4**	**+0.7**
SIVA				AML	AML	12 56 17.8	
	comp=N,1319µm,0.6s						
SIVA				AML	AML	12 56 18.0	
	comp=E,1722µm,0.4s						
SIVA	**Sivas**	**2.24**	**155**	P	**Pn**	**12 55 44.0**	**+1.3**
SIVA				S	**Sn**	**12 56 10.5**	**0.0**
	comp=E,772nm,0.5s						
GVD	**Gavdhos**	**2.25**	**171**	P	**Pn**	**12 55 43.4**	**+0.6**
GVD				AML	AML	12 56 14.3	
	comp=E,1872µm,0.3s						
GVD				AML	AML	12 56 19.7	
	comp=N,1864µm,0.3s						
GVD	**Gavdhos**	**2.25**	**171**	P	**Pn**	**12 55 43.4**	**+0.6**
GVD				S	**Sn**	**12 56 11.7**	**+1.1**
	comp=N,918nm,0.3s						
NEO	**Neokhori**	**2.27**	**351**	P	**Pn**	**12 55 44.4**	**+1.4**
NEO				AML	AML	12 56 13.1	
	comp=N,451µm,0.5s						
NEO				AML	AML	12 56 13.7	
	comp=E,360µm,0.8s						
NEO	**Neokhori**	**2.27**	**351**	P	**Pn**	**12 55 44.4**	**+1.4**
MAKR	**Makrakomi, Fth**	**2.29**	**329**	P	**Pn**	**12 55 45.4**	**+2.0**
MAKR	**Makrakomi, Fth**	**2.29**	**329**	P	**Pn**	**12 55 45.3**	**+2.0**
MAKR				S	**Sn**	**12 56 14.0**	**+2.3**
	comp=E,400nm,0.4s						
XOR	**Xorichti**	**2.33**	**351**	P	**Pn**	**12 55 45.1**	**+1.3**
XOR				AML	AML	12 56 15.4	
	comp=E,172µm,0.5s						
XOR				AML	AML	12 56 15.5	
	comp=N,522µm,1.0s						
XOR	**Xorichti**	**2.33**	**351**	P	**Pn**	**12 55 45.2**	**+1.3**
EVR	**Evrytania**	**2.36**	**322**	P	**Pn**	**12 55 46.1**	**+1.8**
VOL2	**Volos**	**2.37**	**346**	P	**Pn**	**12 55 47.5**	**+3.2**
NPS	**Neapolis**	**2.39**	**138**	P	**Pn**	**12 55 44.7**	**+0.1**
NPS				AML	AML	12 56 14.8	
	comp=E,955µm,0.2s						
NPS				AML	AML	12 56 15.8	
	comp=N,592µm,0.3s						
NPS	**Neapolis**	**2.39**	**138**	P	**Pn**	**12 55 44.6**	**0.0**
NPS				S	**Sn**	**12 56 13.3**	**-0.6**
	comp=N,390nm,0.2s						
PDO	**Prodromos**	**2.49**	**309**	P	**Pn**	**12 55 47.8**	**+1.9**
PDO				AML	AML	12 56 27.8	
	comp=E,771µm,0.3s						
PDO				AML	AML	12 56 29.7	
	comp=N,894µm,0.5s						
PDO	**Prodromos**	**2.49**	**309**	P	**Pn**	**12 55 47.8**	**+1.9**
PDO				S	**Sn**	**12 56 17.6**	**+1.3**
	comp=N,605nm,0.4s						
VLMS	**Volimes, Zakyn**	**2.52**	**290**	P	**Pn**	**12 55 46.5**	**+0.2**
SMG	**Samos**	**2.60**	**75**	P	**Pn**	**12 55 48.8**	**+1.4**
VLS	**Valsamata**	**2.69**	**295**	P	**Pn**	**12 55 49.0**	**+0.5**
VLS				AML	AML	12 56 21.4	
	comp=N,669µm,0.2s						
VLS				AML	AML	12 56 24.3	
	comp=E,392µm,0.2s						
VLS	**Valsamata**	**2.69**	**295**	P	**Pn**	**12 55 48.9**	**+0.5**
SIGR	**SIGRI**	**2.75**	**38**	P	**Pn**	**12 55 50.3**	**+1.1**
ARGA	**Argostoli. Kep**	**2.77**	**295**	P	**Pn**	**12 55 50.1**	**+0.7**
KEF5	**Kardakata, Kep**	**2.81**	**296**	P	**Pn**	**12 55 50.8**	**+0.7**
THL	**Klokotos Trika**	**2.81**	**333**	P	**Pn**	**12 55 51.4**	**+1.4**
THL				AML	AML	12 56 25.4	
	comp=N,143µm,0.3s						
THL				AML	AML	12 56 31.1	
	comp=E,111µm,0.4s						
THL	**Klokotos Trika**	**2.81**	**333**	P	**Pn**	**12 55 51.5**	**+1.4**
THL				S	**Sn**	**12 56 24.6**	**+0.9**
FSK	**Fiskardo**	**2.83**	**300**	P	**Pn**	**12 55 51.2**	**+0.9**
FSK	**Fiskardo**	**2.83**	**300**	P	**Pn**	**12 55 50.8**	**+0.5**
KEF4	**Livadi, Kephal**	**2.84**	**296**	P	**Pn**	**12 55 50.9**	**+0.5**
ZKR	**Zakros**	**2.84**	**133**	P	**Pn**	**12 55 51.4**	**+1.0**
ZKR	**Zakros**	**2.84**	**133**	P	**Pn**	**12 55 51.2**	**+0.8**
EVGI	**Lefkada island**	**2.85**	**304**	P	**Pn**	**12 55 51.9**	**+1.3**
EVGI	**Lefkada island**	**2.85**	**304**	P	**Pn**	**12 55 51.5**	**+1.0**
PAIG	**Paliouri**	**2.86**	**0**	P	**Pn**	**12 55 51.8**	**+1.1**
DMLN	**Damoulianata-K**	**2.87**	**295**	P	**Pn**	**12 55 51.3**	**+0.5**
DMLN	**Damoulianata-K**	**2.87**	**295**	P	**Pn**	**12 55 51.3**	**+0.5**
NYDR	**Nydri-Lefkada**	**2.87**	**306**	P	**Pn**	**12 55 52.1**	**+1.3**
NYDR	**Nydri-Lefkada**	**2.87**	**306**	P	**Pn**	**12 55 52.1**	**+1.3**
KEF3	**Kipouria, Keph**	**2.87**	**294**	P	**Pn**	**12 55 51.0**	**+0.2**
KEF3	**Kipouria, Keph**	**2.87**	**294**	P	**Pn**	**12 55 50.9**	**+0.1**
LKD2	**Lefkada island**	**2.94**	**307**	P	**Pn**	**12 55 52.8**	**+1.1**
LKD2	**Lefkada island**	**2.94**	**307**	P	**Pn**	**12 55 52.8**	**+1.1**
TSLK	**Tsoukalades, L**	**2.96**	**307**	P	**Pn**	**12 55 53.7**	**+1.8**
TSLK	**Tsoukalades, L**	**2.96**	**307**	P	**Pn**	**12 55 53.8**	**+1.8**
LIA	**Limnos Island**	**3.07**	**22**	P	**Pn**	**12 55 54.6**	**+1.2**
LIT	**Litokhoron**	**3.17**	**343**	P	**Pn**	**12 55 56.0**	**+1.2**
LIT	**Litokhoron**	**3.17**	**343**	P	**Pn**	**12 55 56.0**	**+1.2**
KARP	**Karpathos**	**3.20**	**117**	P	**Pn**	**12 55 56.4**	**+1.1**
KARP	**Karpathos**	**3.20**	**117**	P	**Pn**	**12 55 56.2**	**+0.9**
PLG	**Polygyros**	**3.31**	**357**	P	**Pn**	**12 55 57.9**	**+1.2**
KPRO	**Kipourio**	**3.41**	**329**	P	**Pn**	**12 55 59.4**	**+1.4**
KPRO	**Kipourio**	**3.41**	**329**	P	**Pn**	**12 55 59.5**	**+1.5**
JAN	**Janina**	**3.41**	**320**	P	**Pn**	**12 55 59.8**	**+1.8**
JAN				AML	AML	12 56 40.3	
	comp=E,364µm,0.6s						
JAN				AML	AML	12 56 40.9	
	comp=N,409µm,0.2s						
JAN	**Janina**	**3.41**	**320**	P	**Pn**	**12 55 59.7**	**+1.8**
HORT	**Hortiatis**	**3.56**	**353**	P	**Pn**	**12 56 01.8**	**+1.8**
KZN	**Kozani**	**3.56**	**336**	P	**Pn**	**12 56 01.3**	**+1.2**
KZN				AML	AML	12 56 43.4	
	comp=E,384µm,0.4s						
KZN				AML	AML	12 56 44.4	
	comp=N,230µm,0.3s						
IGT	**Igoumenitsa**	**3.60**	**314**	P	**Pn**	**12 56 01.2**	**+0.7**
IGT				AML	AML	12 56 42.1	
	comp=E,171µm,0.2s						
IGT				AML	AML	12 56 42.2	
	comp=N,258µm,0.2s						
IGT	**Igoumenitsa**	**3.60**	**314**	P	**Pn**	**12 56 00.9**	**+0.4**
IGT				S	**Sn**	**12 56 39.9**	**-2.4**
	comp=N,82nm,0.4s						
KASA	**Kassiopi**	**3.97**	**314**	P	**Pn**	**12 56 06.3**	**+0.9**
KAVA	**Kavala**	**3.98**	**9**	P	**Pn**	**12 56 07.1**	**+1.5**
SRN	**Sarande**	**4.02**	**315**	P	**Pn**	**12 56 06.6**	**+0.5**
KEK	**Kerkira**	**4.03**	**312**	P	**Pn**	**12 56 06.8**	**+0.5**
KEK				AML	AML	12 56 51.8	
	comp=E,636µm,0.3s						
KEK				AML	AML	12 56 52.3	
	comp=N,659µm,0.4s						
KEK	**Kerkira**	**4.03**	**312**	P	**Pn**	**12 56 06.7**	**+0.5**
KEK				S	**Sn**	**12 56 49.8**	**-2.8**
	comp=N,250nm,0.3s						
FNA	**Florina**	**4.12**	**335**	P	**Pn**	**12 56 08.3**	**+0.8**
FNA	**Florina**	**4.12**	**335**	P	**Pn**	**12 56 08.2**	**+0.7**
KSL	**Kastellorizon**	**4.85**	**99**	P	**Pn**	**12 56 19.0**	**+1.8**
ULC	**Ulcinj**	**5.97**	**326**	⇓*i*Pn	**Pn**	**12 56 30.8**	**-1.5**
ULC				*i* Sn	**Sn**	**12 57 33.6**	**-5.8**
DRME	**Dracevica, Mon**	**6.17**	**327**	*e*Pn	**Pn**	**12 56 34.1**	**-1.0**
DRME	**Dracevica, Mon**	**6.17**	**327**	*e*Pn	**Pn**	**12 56 33.6**	**-1.5**
DRME				*i* Sn	**Sn**	**12 57 38.6**	**-5.7**
PVY	**Plav**	**6.22**	**334**	*e*Pn	**Pn**	**12 56 34.8**	**-1.0**
PVY				*i* Sn	**Sn**	**12 57 40.9**	**-4.6**
PDG	**Podgorica**	**6.34**	**329**	*e*Pn	**Pn**	**12 56 36.2**	**-1.2**
TTG	**Podgorica**	**6.34**	**329**	*e*Pn	**Pn**	**12 56 36.1**	**-1.3**
TTG				*i* Sn	**Sn**	**12 57 43.0**	**-5.4**
BUM	**Brajici-Budva**	**6.39**	**326**	⇓*i*Pn	**Pn**	**12 56 36.4**	**-1.7**
BUM				*i* Sn	**Sn**	**12 57 43.6**	**-6.2**
IVA	**Berane**	**6.48**	**335**	⇑*i*Pn	**Pn**	**12 56 38.6**	**-0.8**
IVA				*i* Sn	**Sn**	**12 57 47.3**	**-4.6**
CEME	**Cevo**	**6.58**	**328**	⇑*i*Pn	**Pn**	**12 56 39.1**	**-1.6**
CEME				*i* Sn	**Sn**	**12 57 48.4**	**-5.9**
KOME	**Kolasin**	**6.60**	**332**	⇑*i*Pn	**Pn**	**12 56 39.9**	**-1.0**
KOME				*i* Sn	**Sn**	**12 57 49.6**	**-5.2**
HCY	**Herceg Novi**	**6.69**	**325**	*e*Pn	**Pn**	**12 56 39.6**	**-2.5**
HCY	**Herceg Novi**	**6.69**	**325**	*e*Pn	**Pn**	**12 56 40.3**	**-1.8**
HCY				*i* Sn	**Sn**	**12 57 50.4**	**-6.4**
NKME	**Niksic**	**6.75**	**329**	⇑*i*Pn	**Pn**	**12 56 41.5**	**-1.4**
NKME				*i* Sn	**Sn**	**12 57 52.5**	**-5.8**
TREB	**Trebinje**	**6.97**	**326**	*e*Pn	**Pn**	**12 56 43.4**	**-2.4**
BRY	**Bratogost**	**7.03**	**328**	*e*Pn	**Pn**	**12 56 44.8**	**-2.1**
BRY	**Bratogost**	**7.03**	**328**	⇑*i*Pn	**Pn**	**12 56 45.2**	**-1.7**
BRY				*i* Sn	**Sn**	**12 57 59.0**	**-6.4**
PLE	**Pljevlja**	**7.06**	**334**	⇓*i*Pn	**Pn**	**12 56 46.3**	**-0.9**
PLE				*i* Sn	**Sn**	**12 58 00.8**	**-5.2**
UPM	**Unac-Piva**	**7.13**	**331**	*e*Pn	**Pn**	**12 56 46.9**	**-1.3**
UPM				*i* Sn	**Sn**	**12 58 01.9**	**-5.9**
STON	**Ston**	**7.39**	**324**	*e*Pn	**Pn**	**12 56 48.5**	**-3.0**
STON	**Ston**	**7.39**	**324**	*e*Pn	**Pn**	**12 56 48.1**	**-3.4**
VAE	**Valguarnera**	**7.39**	**276**	P	**Pn**	**12 56 54.0**	**+2.4**
	comp=N,0.9nm,0.3s,baz=282,slow=19,SNR=1.2						
VAE				S	**Sn**	**12 58 09.6**	**-4.4**
	comp=N,4.0nm,0.3s,baz=34,slow=1.5,SNR=6.2						
BBLS	**Lazići**	**7.53**	**336**	*e*Pn	**Pn**	**12 56 51.5**	**-2.0**
DIVS	**Divibare**	**7.56**	**339**	*e*Pn	**Pn**	**12 56 52.3**	**-1.6**
HAPS	**Han Pijesak,BI**	**7.88**	**334**	*e*Pn	**Pn**	**12 56 54.7**	**-3.5**
HVAR	**Hvar**	**8.23**	**320**	*e*Pn	**Pn**	**12 57 00.3**	**-2.7**
BRTR	**Keskin Array B**	**8.27**	**68**	P	**Pn**	**12 57 07.8**	**+4.2**
	comp=N,0.1nm,0.3s,baz=268,slow=14,SNR=2.5						
MLR	**Muntele Rosu**	**8.59**	**11**	P	Pn	12 57 13.0	+5.1
	comp=N,0.6nm,0.3s,baz=217,slow=17,SNR=5.9						
ZIRJ	**Zirje**	**8.99**	**320**	*e*Pn	**Pn**	**12 57 10.6**	**-2.5**
UDBI	**Udbina**	**9.56**	**324**	*e*Pn	**Pn**	**12 57 19.6**	**-1.4**
NVLJ	**Novalja**	**10.02**	**321**	*e*Pn	**Pn**	**12 57 24.6**	**-2.5**
MMAI	**Mount Meron Ar**	**10.43**	**109**	P	**Pn**	**12 57 30.4**	**-2.4**
	comp=N,2.0nm,0.3s,baz=313,slow=12,SNR=6.3						
MMAI				S	**Sn**	**12 59 19.9**	**-7.9**
	comp=N,1.9nm,0.3s,baz=300,slow=23,SNR=2.1						
CRES	**Cresnjev**	**10.70**	**327**	*e*Pn	**Pn**	**12 57 33.3**	**-3.0**
CEY	**Cerknica**	**11.10**	**324**	*e*Pn	**Pn**	**12 57 38.6**	**-3.0**
EIL	**Elat**	**11.97**	**125**	P	**Pn**	**12 57 50.6**	**-2.6**
	comp=N,0.5nm,0.3s,baz=299,slow=2.3,SNR=10						
EIL				S	Sn	12 59 54.1	-11
	comp=N,1.3nm,0.3s,baz=242,slow=7.0,SNR=6.2						
GERES	**GERESS Array B**	**13.84**	**331**	P	**P**	**12 58 23.3**	**+1.2**
	comp=N,0.3nm,0.3s,baz=152,slow=12,SNR=4.7						
DAVOX	**Davos/Dischmat**	**14.11**	**318**	P	**Pn**	**12 58 22.4**	**+1.3**
	comp=N,0.2nm,0.3s,baz=259,slow=10,SNR=2.0						
AKASG	**Malin Array Be**	**14.20**	**15**	P	**P**	**12 58 26.6**	**+0.7**
	comp=N,0.8nm,0.3s,baz=210,slow=9.8,SNR=4.0						
ESDC	**Sonseca Array**	**21.79**	**285**	P	**P**	**12 59 50.4**	**+1.3**
	comp=N,1.3nm,0.6s,baz=84,slow=9.9,SNR=15						
HFS	**Hagfors**	**23.96**	**348**	P	**P**	**13 00 11.1**	**+1.4**
	comp=N,1.7nm,0.4s,baz=151,slow=10,SNR=8.1						
FINES	**FINESS Array B**	**24.45**	**3**	P	**P**	**13 00 13.9**	**-0.2**
	comp=N,4.5nm,0.9s,baz=163,slow=14,SNR=5.0						
NOA	**NORSAR Array B**	**25.26**	**346**	P	**P**	**13 00 22.9**	**+1.4**
	comp=N,0.7nm,0.8s,baz=152,slow=8.6,SNR=1.5						
EKA	**Eskdalemuir Ar**	**25.79**	**324**	P	**P**	**13 00 28.3**	**+2.0**
	comp=N,1.9nm,0.5s,baz=123,slow=10,SNR=8.7						
TORD	**Torodi Ar. Bea**	**30.88**	**225**	P	**P**	**13 01 11.6**	**-0.4**
	comp=N,1.3nm,0.8s,baz=34,slow=9.7,SNR=5.1						
ARCES	**ARCESS Array B**	**32.54**	**1**	P	**P**	**13 01 26.9**	**+0.9**
	comp=N,4.3nm,1.2s,baz=168,slow=9.1,SNR=1.7						
DBIC	**Dimbokro**	**39.88**	**228**	P	**P**	**13 02 29.0**	**0.0**
	comp=N,1.0nm,0.3s,baz=0.0,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	**43.76**	**58**	P	**P**	**13 03 01.3**	**+1.0**
	comp=N,0.1nm,0.3s,baz=287,slow=7.0,SNR=2.4						
YKA	**Yellowknife Ar**	**75.27**	**341**	P	**P**	**13 06 36.9**	**+0.7**
	comp=N,0.1nm,0.5s,baz=44,slow=5.5,SNR=5.9						
PDAR	**Pinedale Array**	**89.85**	**328**	P	**P**	**13 07 55.9**	**+3.4**
	comp=N,0.3nm,0.8s,baz=60,slow=4.3,SNR=2.1						

IEPN ***11*** *12:56:11.0, 81°.31N×1°.74W, h10^{km}*
DNK ***11*** *12:56:12.2±2.3, 81°.06N×2°.48W, h18^{km}±97^{km}, ML2.0*
BER ***11*** *12:56:13.5±2.1, 81°.02N×2°.48W, h10^{km}, ML2.1, ML2.8(DNK), Confirmed Earthquake*
ISC 11 12:55:58.0±1.7, **80°.7N**±0°.1×**6°.29W**±0°.07, **h10**^{km}, **n13**, σ**1^{s}39**/19, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**3.69**	**110**	*e*P	**Pb**	**12 57 02.7**	**-0.5**
KBS				*e*S	**Sn**	**12 57 39.4**	**+1.0**
KBS				IAML		12 57 41.2	
	comp=Z,11nm,0.3s						
KBS	**Kingsbay**	**3.69**	**110**	*e*P	**Pb**	**12 57 02.4**	**-0.8**
KBS				*e*S	**Sn**	**12 57 39.7**	**+1.3**
KBS	**Kingsbay**	**3.69**	**110**	*i* P	**Pb**	**12 57 02.4**	**-0.8**
KBS				*i*		12 57 03.2	
KBS				*i* S	**Sn**	**12 57 39.8**	**+1.4**
KBS				IAML		12 57 41.5	
	comp=Z,16nm,0.3s						
DAG	**Danmarks Havn**	**4.64**	**218**	*e*	**Pg**	**12 57 27.0**	**+0.3**
	baz=34,slow=14						
DAG				*i* P	Pb	12 57 29.0	+10
DAG				*i* S	**Sg**	**12 58 25.3**	**-1.4**
DAG				IAML		12 58 29.0	
	comp=Z,5.2nm,0.3s						
DAG	**Danmarks Havn**	**4.64**	**218**	*e*	**Pg**	**12 57 27.0**	**+0.3**
	baz=34,slow=14						
DAG				*i* P	Pb	12 57 29.0	+10
DAG				*i* S	**Sg**	**12 58 25.3**	**-1.4**
DAG				IAML		12 58 29.0	
	comp=Z,5.2nm,0.3s						
SPA0	**Spitsbergen Ar**	**4.85**	**110**	*e*P	Pb	12 57 18.9	-4.0
SPA0				*e*S	**Sn**	**12 58 06.9**	**-0.2**
SPA0	**Spitsbergen Ar**	**4.85**	**110**	*e*P	Pb	12 57 18.8	-4.0
SPA0				*e*S	**Sn**	**12 58 08.1**	**+1.1**
HSPB	**Hornsund (broa**	**5.60**	**120**	*e*P	Pb	12 57 31.6	-4.0
HSPB	**Hornsund (broa**	**5.60**	**120**	*e*P	Pn	12 57 29.2	+8.1
HSPB				*e*S	**Sn**	**12 58 28.6**	**+3.3**
DBG	**Daneborg**	**7.09**	**212**	*i* P	**Pb**	**12 58 02.3**	**+1.3**
DBG				*i* S	**Sb**	**12 59 23.9**	**-1.6**
DBG				IAML		12 59 36.1	
	comp=Z,3.3nm,0.4s						
DBG	**Daneborg**	**7.09**	**212**	*i* P	**Pb**	**12 58 02.3**	**+1.3**
DBG				*i* S	**Sb**	**12 59 23.9**	**-1.6**
DBG				IAML		12 59 36.1	
	comp=Z,3.3nm,0.4s						
ZFI2	**Zemlya Franca-**	**8.40**	**63**	*e*P	**Pn**	**12 57 59.1**	**-0.5**
ZFI2				*e*S	Sn	12 59 16.5	-18
ZFI2				*i* AML	AML	12 59 16.5	
	comp=Z,2.1nm,1.3s						
ZFI	**Zemlya Franca-**	**8.40**	**63**	*e*P	**Pn**	**12 57 59.7**	**+0.1**
ZFI				*e*S	Sn	12 59 20.2	-14

NEIC ***11*** *13:01:04.7±1.7, 21°.6S±0°.1×176°.3W±0°.1, h139^{km}±7^{km}, mb4.1/13, Error ellipse: s-maj=22.1km s-min=16.0km az=139.0*
IDC ***11*** *13:01:11.2±3.2, 21°.59S×176°.39W, h194^{km}±28^{km}, mb3.6/15, mb1 3.8/16, mb1mx3.6/39, mbtmp4.1/16, MS3.3/1, Ms1 3.3/1, ms1mx2.5/25, Error ellipse: s-maj=22.4km s-min=13.5km az=136.0*
ISC 11 13:01:03.9±0.4, **21°.88S**±0°.06×**175°.99W**±0°.07, **h137**^{km}, **n81**, σ**3^{s}06**/80, **mb4.0**/20, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.96**	**305**	P	**Pn**	**13 02 45.1**	**+1.6**
	1.0nm,0.3s,baz=148,slow=12,SNR=9.3						
MSVF	**Nonsavu**	**6.96**	**305**		**Pn**	**13 02 44.4**	**+0.9**
RAO	**Raoul Island**	**7.55**	**193**	S	**Sn**	**13 04 20.5**	**+5.1**
	84nm,0.3s,baz=71,slow=20,SNR=3.9						
RAO	**Raoul Island**	**7.55**	**193**	Pn	Pn	13 02 56.0	+4.8
GLKZ	**Green Lake**	**7.56**	**193**	P	**Pn**	**13 02 54.8**	**+3.5**
GLKZ				S	**Sn**	**13 04 19.3**	**+3.7**
AFI	**Afiamalu**	**8.88**	**28**	Pn	Pn	13 03 00.8	-8.6
AFI	**Afiamalu**	**8.88**	**28**	P	Pn	13 03 00.9	-8.4
RAR	**Rarotonga**	**15.11**	**90**	P	**P**	**13 04 35.4**	**+3.1**
	1.1nm,0.3s,baz=293,slow=7.7,SNR=3.0						
RAR				S	**Sn**	**13 07 13.7**	**-4.2**
	1.2nm,0.3s,baz=93,slow=17,SNR=1.7						
RAR	**Rarotonga**	**15.11**	**90**	Pn	**P**	**13 04 31.8**	**-0.5**
OUZ	**Omahuta**	**16.12**	**212**	P	**P**	**13 04 46.5**	**+3.1**
GRZ	**Great Barrier**	**16.14**	**206**	P	**P**	**13 04 47.1**	**+3.5**
DZM	**Mont Dzumac**	**16.30**	**266**	P	**P**	**13 04 48.6**	**+3.1**
	0.5nm,0.3s,baz=105,slow=14,SNR=5.7						
WCZ	**Waipu Caves**	**16.35**	**209**	P	**P**	**13 04 50.2**	**+4.3**
MXZ	**Matakaoa Point**	**16.39**	**196**	P	**P**	**13 04 48.7**	**+2.4**
KUZ	**Kuaotunu**	**16.47**	**204**	P	**P**	**13 04 51.2**	**+4.0**
HAZ	**Te Kaha**	**16.71**	**197**	P	**Pn**	**13 04 50.2**	**+0.2**
PUZ	**Puketiti**	**16.88**	**196**	P	**P**	**13 04 51.7**	**-0.1**
URZ	**Urewera**	**17.37**	**198**	P	**P**	**13 04 57.3**	**+0.2**
	9.9nm,0.3s,baz=332,slow=2.3,SNR=55						
URZ				S	**S**	**13 08 01.1**	**-10**
	0.5nm,0.3s,baz=270,slow=20,SNR=1.8						
URZ	**Urewera**	**17.37**	**198**	P	**P**	**13 04 57.4**	**+0.2**
TOZ	**Tahuroa Road**	**17.42**	**203**	P	**Pn**	**13 05 01.5**	**+3.0**
WPHZ	**Waipukurau**	**19.24**	**198**	P	**Pn**	**13 05 20.3**	**+0.3**
WPHZ				S	**S**	**13 08 39.4**	**-8.8**
MRZ	**Mangatainoka R**	**20.04**	**199**	P	**P**	**13 05 26.0**	**-0.2**
MRZ				S	S	13 08 49.9	-14
HOWZ	**Holdsworth Sta**	**20.28**	**199**	P	**P**	**13 05 28.9**	**+0.2**
HOWZ				S	**S**	**13 08 58.8**	**-10**
OGWZ	**Otaki Gorge**	**20.31**	**200**	P	**P**	**13 05 28.6**	**-0.5**
OGWZ				S	**S**	**13 09 00.8**	**-8.5**
MTW	**Mount Morrison**	**20.52**	**199**	P	**P**	**13 05 31.7**	**+0.4**
MTW				S	S	13 09 00.4	-13
MSWZ	**Moikau Station**	**20.84**	**199**	P	**P**	**13 05 33.6**	**-1.1**
MSWZ				S	**S**	**13 09 12.9**	**-6.6**
SNZO	**South Karori**	**20.91**	**200**	P	**P**	**13 05 36.3**	**+0.9**
TCW	**Tory Channel**	**20.95**	**201**	P	**P**	**13 05 34.6**	**-1.3**
TCW				S	**S**	**13 09 12.9**	**-8.9**
PLWZ	**Palliser**	**20.97**	**199**	P	**P**	**13 05 37.6**	**+1.4**
QRZ	**Quartz Range**	**21.25**	**205**	P	**P**	**13 05 39.6**	**+0.5**
TUWZ	**Tuamarina**	**21.26**	**201**	P	**P**	**13 05 37.7**	**-1.5**
NNZ	**Nelson**	**21.27**	**203**	P	**P**	**13 05 37.9**	**-1.4**
THZ	**Tophouse**	**21.92**	**203**	P	**P**	**13 05 45.3**	**-1.0**
DSZ	**Denniston Nort**	**22.31**	**205**	P	**P**	**13 05 50.7**	**+0.5**
RPZ	**Rata Peaks**	**24.29**	**203**	P	**P**	**13 06 11.5**	**+3.0**
	13nm,0.7s,baz=16,slow=2.5,SNR=9.1						
CTA	**Charters Tower**	**35.24**	**266**	P	**P**	**13 07 45.1**	**-0.3**
	1.1nm,0.4s,baz=90,slow=12,SNR=1.3						
CTAO	**Charters Tower**	**35.24**	**266**	P	**P**	**13 07 44.7**	**-0.8**
KRVT	**Keravat (AS076**	**35.58**	**295**	LR	LR	13 21 56.7	
	comp=Z,40nm,18.0s,baz=68,slow=36						
STKA	**Stephens Creek**	**38.91**	**246**	P	**P**	**13 08 16.3**	**0.0**
	1.5nm,0.5s,baz=108,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**38.91**	**246**	P	**P**	**13 08 16.0**	**-0.3**
AS31	**Alice Springs**	**46.04**	**258**	P	**P**	**13 09 12.6**	**-1.6**
ASAR	**Alice Springs**	**46.04**	**258**	P	**P**	**13 09 13.2**	**-1.0**
	2.6nm,0.6s,baz=84,slow=8.9,SNR=42						
ASAR				PcP	**PcP**	**13 10 48.2**	**-0.3**
	0.7nm,0.6s,baz=116,slow=3.7,SNR=5.7						
ASAR	**Alice Springs**	**46.04**	**258**	P	**P**	**13 09 12.4**	**-1.8**
WR0	**Warramunga Arr**	**46.09**	**263**	P	**P**	**13 09 13.4**	**-1.2**
WR0				IAmb	IAmb	13 09 28.3	
	comp=Z,7.4nm,1.2s						
WB0	**Warramunga Arr**	**46.26**	**263**	P	**P**	**13 09 14.1**	**-1.8**
WB0				IAmb	IAmb	13 09 20.5	
	comp=Z,4.5nm,0.9s						
WB2	**Warramunga Arr**	**46.27**	**263**	P	**P**	**13 09 14.1**	**-1.8**
WB2				IAmb	IAmb	13 09 33.3	
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	**46.27**	**263**	P	**P**	**13 09 14.4**	**-1.6**
WRAB				IAmb	IAmb	13 09 16.1	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**46.28**	**263**	P	**P**	**13 09 14.8**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=96,slow=7.9,SNR=24						
WRA				PcP	**PcP**	**13 10 49.0**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=95,slow=3.2,SNR=1.7						
WRA	**Warramunga Arr**	**46.28**	**263**	P	**P**	**13 09 14.3**	**-1.7**
QSPA	**South Pole Qui**	**68.20**	**180**	P	**P**	**13 11 52.8**	**+3.4**
QSPA				IAmb	IAmb	13 12 08.2	
	comp=Z,2.5nm,0.8s						
ADK	**Adak**	**73.44**	**360**	P	**P**	**13 12 19.6**	**-1.3**
PETK	**Petropavlovsk-**	**78.09**	**344**	P	**P**	**13 12 45.9**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=123,slow=8.5,SNR=11						
PETK	**Petropavlovsk-**	**78.09**	**344**	P	**P**	**13 12 46.2**	**-1.1**
YBH	**Yreka Blue Hor**	**80.21**	**38**	P	**P**	**13 13 00.8**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=155,slow=2.1,SNR=9.3						
NVAR	**Mina Array Bea**	**80.76**	**42**	P	**P**	**13 13 03.7**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=218,slow=7.0,SNR=5.5						

NVAR	Mina Array Bea	80.76	42	P	P	13 13 02.4	0.0
H03S2	Juan Fernandez	83.67	124	T	T	14 45 59.2	
	baz=247,slow=75,SNR=24						
H03S1	Juan Fernandez	83.69	124	T	T	14 45 48.9	
	baz=247,slow=75,SNR=27						
H03S3	Juan Fernandez	83.69	124	T	T	14 45 54.6	
	baz=247,slow=75,SNR=25						
H03N2	Juan Fernandez	83.81	123	T	T	14 46 21.1	
	baz=258,slow=71,SNR=18						
H03N3	Juan Fernandez	83.82	123	T	T	14 45 57.3	
	baz=258,slow=71,SNR=9.8						
H03N1	Juan Fernandez	83.83	123	T	T	14 46 03.6	
	baz=258,slow=71,SNR=9.9						
ELK	Elko	84.03	42	P	P	13 13 20.2	+0.8
	comp=Z,0.4nm,0.4s,baz=9.0,slow=5.7,SNR=4.3						
ELK	Elko	84.03	42	IAmb	IAmb	13 13 21.6	
	comp=Z,1.5nm,0.9s						
TXAR	Lajitas Array	86.23	56	P	P	13 13 31.9	+1.5
	comp=Z,1.0nm,0.8s,baz=212,slow=8.2,SNR=13						
TXAR	Lajitas Array	86.23	56	P	P	13 13 31.4	+1.0
PLCA	Paso Flores	86.97	133	P	P	13 13 37.0	+3.1
	comp=Z,0.8nm,0.5s,baz=249,slow=9.3,SNR=6.3						
SEY	Seymchan	88.14	346	P	P	13 13 37.8	-0.9
	comp=Z,1.9nm,0.6s,baz=120,slow=7.8,SNR=8.5						
PDAR	Pinedale Array	88.69	42	P	P	13 13 42.8	+0.7
	comp=Z,0.2nm,0.5s,baz=299,slow=1.5,SNR=3.7						
ILAR	Eielson Array	89.25	12	P	P	13 13 42.9	-1.0
	comp=Z,0.5nm,0.5s,baz=212,slow=5.5,SNR=22						
ILAR	Eielson Array	89.25	12	P	P	13 13 42.6	-1.3
YKA	Yellowknife Ar	96.98	24	P	P	13 14 19.4	0.0
	comp=Z,0.4nm,0.8s,baz=232,slow=3.7,SNR=8.0						
MKAR	Makanchi Array	113.50	313	PKiKP	PKiKP	13 19 23.8	-2.0
	comp=Z,0.2nm,0.4s,baz=242,slow=2.6,SNR=5.3						
ARCES	ARCESS Array B	130.60	350	PKP	PKPdf	13 19 56.7	-1.1
	comp=Z,1.7nm,0.9s,baz=58,slow=2.2,SNR=5.3						
FINES	FINESS Array B	137.60	344	PKP	PKPdf	13 20 11.1	0.0
	comp=Z,4.2nm,1.0s,baz=98,slow=2.1,SNR=4.0						
AKASG	Malin Array Be	145.11	332	PKP	PKPbc	13 20 23.4	-1.2
	comp=Z,2.9nm,0.5s,baz=42,slow=4.2,SNR=35						
AKASG	Malin Array Be	145.11	332		PKPbc	13 20 23.0	-1.6
BRTR	Keskin Array B	149.15	312	PKPbc	PKPbc	13 20 35.9	-0.7
	comp=Z,1.8nm,0.6s,baz=134,slow=5.3,SNR=8.5						
CLL	Collm	149.80	349	*i* PKPbc	PKPbc	13 20 37.4	-0.1
GERES	GERESS Array B	152.00	346	PKPbc	PKPbc	13 20 42.5	-0.4
	comp=Z,0.5nm,0.5s,baz=31,slow=2.3,SNR=4.5						
ESDC	Sonseca Array	161.00	19	PKPab	PKPab	13 21 31.6	0.0
	comp=Z,1.1nm,1.0s,baz=331,slow=5.8,SNR=5.0						

IDC 11 13:21:39.4±9.3**, 30°.29S×179°.31W, h406^{km}**±98^{km}**, mb2.9**/2**, mb1 3.1**/3**, mb1mx2.9**/21**, mbtmp3.8**/3**, Error ellipse: s-maj=91.3km s-min=50.4km az=19.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.49	199	P	P	13 23 40.3	+0.4
	0.7nm,0.3s,baz=312,slow=5.6,SNR=20						
URZ				S	S	13 25 18.1	-0.5
	1.7nm,0.3s,baz=38,slow=20,SNR=14						
ASAR	Alice Springs	41.98	267	P	P	13 28 52.8	-0.3
	0.3nm,0.5s,baz=104,slow=6.8,SNR=14						
WRA	Warramunga Arr	42.96	273	P	P	13 29 00.9	0.0
	1.1nm,0.5s,baz=110,slow=7.6,SNR=13						
FINES	FINESS Array B	144.64	339	PKP	PKPbc	13 40 27.2	-0.4
	2.3nm,0.8s,baz=60,slow=3.7,SNR=4.5						

NNC 11 13:29:41.0±15.0**, 36°.60N×70°.78E, h194^{km}**±288^{km}**, mb2.8, mpv3.6, 1C-2D, Error ellipse: s-maj=163.0km s-min=85.0km az=11.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.50	358	⇓P	Pn	13 31 13.2	-1.4
	2.1nm,0.3s,baz=173,slow=13,SNR=74						
KK31				⇑S	Sn	13 32 28.3	-0.5
	6.1nm,0.6s,baz=175,slow=21						
AAK	Ala-Archa	6.68	24	⇓P	Pn	13 31 18.0	+0.9
	1.4nm,0.4s						
AAK				S	Sn	13 32 35.0	+1.8
	8.6nm,0.8s						
AB31	Akbulak array	14.91	331	P	Pn	13 33 02.5	+0.3
	1.8nm,0.5s,baz=163,slow=12,SNR=114						

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*MAN **11** 13:57:50.0, 4°.84N×126°.99E, h1^{km}, mb5.0, ML4.0, MS4.0*

*NEIC **11** 13:57:54.2±1.1, 4°.98N±0°.08×127°.4E±0°.1, h111^{km}±7^{km}, mb4.2/16, Error ellipse: s-maj=19.2km s-min=10.3km az=70.0*

*IDC **11** 13:57:54.6±2.3, 4°.97N×127°.39E, h110^{km}±22^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/32, mbtmp4.0/11, MS3.2/1, Ms1 3.2/1, ms1mx2.5/38, Error ellipse: s-maj=43.7km s-min=11.4km az=72.0*

ISC 11 13:57:42.6±0.6**, 5°.03N**±0°.05**×127°.42E**±0°.07**, h10^{km}, n43, σ1^{s}.22**/46**, mb4.2**/18**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	2.01	302	*e*P	Pg	13 58 20.8	-0.3
DDMP				*e*S	Sg	13 58 46.5	-0.7
MATI	Mati	2.23	329	*e*P	Pg	13 58 26.1	+0.8
DAV	Davao City (W)	2.73	318	P	Pg	13 58 37.6	+2.6
	54nm,0.3s,baz=255,slow=4.2,SNR=6.2						
DAV				S	Sg	13 59 10.8	+0.3
	34nm,0.3s,baz=258,slow=21,SNR=9.6						
KCP	Kidapawan	3.04	310	⇑*e*P	Pb	13 58 38.6	+1.7
KCP				*i* S	Sn	13 59 08.2	+0.9
SKMP	Bagumbayan, Su	3.22	297	*e*P	Pb	13 58 38.4	-1.6
SKMP				*e*S	Sb	13 59 18.2	-1.1
BUKP	Musuan	3.67	320	*e*P	Pb	13 58 48.0	+0.3
BUKP				*e*S	Sb	13 59 30.6	-1.8
TNTI	Ternate	4.23	181	Pn	Pb	13 58 56.9	-0.4
BUTP	Butuan	4.30	336	*e*P	Pb	13 58 58.2	-0.1
CGP	Cagayan de Oro	4.35	322	⇑*e*P	Pb	13 58 59.6	+0.4
CGP				*e*S	Sb	13 59 47.9	-3.8
TOLI2	Tolitoli	7.69	240	Pn	Pn	13 59 40.9	+6.1
FITZ	Fitzroy Crossi	23.05	184	P	P	14 02 50.2	+1.9
	2.5nm,1.0s,baz=339,slow=8.6,SNR=1.6						
CISI	Cisompet, Garu	23.21	238	P	P	14 02 51.2	+1.1
WB0	Warramunga Arr	25.58	165	P	P	14 03 11.9	-0.2
WB0				IAmb	IAmb	14 03 15.9	
	comp=Z,17nm,1.4s						
WRAB	Tennant Creek	25.73	165	P	P	14 03 13.6	+0.1
WRAB				IAmb	IAmb	14 03 18.0	
	comp=Z,6.1nm,0.9s						
WRA	Warramunga Arr	25.73	165	P	P	14 03 14.0	+0.5
	comp=Z,1.8nm,0.7s,baz=344,slow=10,SNR=16						
WB2	Warramunga Arr	25.74	165	P	P	14 03 13.9	+0.4
WB2				IAmb	IAmb	14 03 21.1	
	comp=Z,15nm,1.5s						
WR0	Warramunga Arr	25.80	164	P	P	14 03 14.5	+0.4
WR0				IAmb	IAmb	14 03 16.8	
	comp=Z,8.5nm,1.2s						
AS31	Alice Springs	29.21	168	P	P	14 03 45.1	+0.3
ASAR	Alice Springs	29.22	168	P	P	14 03 45.7	+0.9
	comp=Z,0.4nm,0.6s,baz=352,slow=7.4,SNR=13						
ASAR				PcP	PcP	14 06 50.9	-1.2
	comp=Z,0.2nm,0.5s,baz=350,slow=2.4,SNR=5.2						
ASAR	Alice Springs	29.22	168	P	P	14 03 45.2	+0.4
MJAR	Matsushiro Arr	32.89	16	LR	LR	14 20 13.3	
	comp=Z,33nm,18.0s,baz=330,slow=41						
NWAO	Narrogin (SRO)	38.97	194	P	P	14 05 09.9	+0.8
STKA	Stephens Creek	39.11	161	P	P	14 05 10.9	+0.6
	comp=Z,3.9nm,0.5s,baz=338,slow=9.0,SNR=16						
STKA	Stephens Creek	39.11	161	IAmb	IAmb	14 05 12.9	
	comp=Z,1.3nm,0.9s						
ULN	Ulaanbaatar	46.11	341	P	P	14 06 08.5	+1.3
ULN				IAmb	IAmb	14 06 10.1	
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	46.30	340	P	P	14 06 09.8	+1.1
	comp=Z,0.4nm,0.5s,baz=156,slow=8.1,SNR=4.6						
SONM	Songino Array	46.30	340	IAmb	IAmb	14 06 11.7	
	comp=Z,0.5nm,0.8s						
PETK	Petropavlovsk-	53.97	22	P	P	14 07 08.1	+1.4
	comp=Z,2.2nm,0.8s,baz=219,slow=3.6,SNR=4.0						
PETK	Petropavlovsk-	53.97	22	P	P	14 07 07.0	+0.3
MK31	Makanchi Array	56.89	324	P	P	14 07 27.8	-0.1
MKAR	Makanchi Array	56.89	324	P	P	14 07 28.6	+0.8
	comp=Z,1.4nm,0.5s,baz=117,slow=6.7,SNR=23						
MKAR	Makanchi Array	56.89	324	P	P	14 07 27.7	-0.2
ZALV	Zalesovo Beam	59.75	332	P	P	14 07 47.6	-0.1
	comp=Z,0.6nm,0.4s,baz=130,slow=7.1,SNR=5.3						
ZALV	Zalesovo Beam	59.75	332	P	P	14 07 46.9	-0.7
KURK	Kurchatov	61.03	327	P	P	14 07 56.9	+0.4
KK31	Karatay Array	62.76	316	P	P	14 08 08.3	0.0
KK31				IAmb	IAmb	14 08 09.9	
	comp=Z,1.9nm,0.7s						
KKAR	Karatay Array	62.76	316	P	P	14 08 08.2	-0.1
BRVK	Borovoye	66.69	326	P	P	14 08 33.7	0.0
BRVK				IAmb	IAmb	14 08 34.7	
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	71.59	320	P	P	14 09 03.6	-0.6
RAR	Rarotonga	75.91	113	P	P	14 09 26.6	-3.5
TTA	Tatalina	79.44	27	P	P	14 09 49.5	+0.4
TTA				IAmb	IAmb	14 10 12.0	
	comp=Z,5.1nm,1.4s						
ILAR	Eielson Array	83.64	25	P	P	14 10 10.4	-0.8
	comp=Z,0.3nm,0.6s,baz=260,slow=5.1,SNR=6.5						
ARCES	ARCESS Array B	89.47	340	P	P	14 10 38.5	-1.2
	comp=Z,1.2nm,0.8s,baz=82,slow=6.5,SNR=4.9						

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*IDC **11** 14:09:52.7±1.5, 17°.77N×148°.12E, h0^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.6/41, mbtmp3.6/9, ML4.2/1, Error ellipse: s-maj=44.6km s-min=21.6km az=93.0*

*NEIC **11** 14:09:57.9±0.8, 17°.8N±0°.1×148°.1E±0°.1, h35^{km}±6^{km}, mb4.5/6, Error ellipse: s-maj=21.5km s-min=12.3km az=140.0*

ISC 11 14:09:58.3±1.3**, 17°.7N**±0°.1**×147°.9E**±0°.2**, h35^{km}, n18, σ0^{s}.94**/17**, mb3.6**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.02	216	Pn	Pn	14 11 12.5	+1.3
	8.2nm,0.3s,baz=200,slow=19,SNR=1.0						
GUMO				Sn	Sn	14 12 05.5	-2.5
	10nm,0.3s,baz=168,slow=15,SNR=2.8						
GUMO	Guam	5.02	216		Pn	14 11 11.9	+0.7
MJAR	Matsushiro Arr	20.63	337	P	Pn	14 14 34.9	-2.4
	0.8nm,0.5s,baz=165,slow=9.4,SNR=1.6						
WR0	Warramunga Arr	39.65	200	P	P	14 17 27.4	+0.4
WR0				IAmb	IAmb	14 17 52.1	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	39.70	200	P	P	14 17 28.2	+0.7
WRA	Warramunga Arr	39.70	200	P	P	14 17 28.0	+0.5
	comp=Z,0.8nm,1.0s,baz=24,slow=8.6,SNR=2.2						
ASAR	Alice Springs	43.32	199	P	P	14 17 57.8	+0.7
	comp=Z,0.4nm,0.8s,baz=20,slow=6.8,SNR=2.0						
SONM	Songino Array	45.23	321	P	P	14 18 12.6	+0.3
	comp=Z,0.6nm,0.8s,baz=143,slow=8.4,SNR=6.0						
SONM	Songino Array	45.23	321	IAmb	IAmb	14 18 14.6	
	comp=Z,0.8nm,0.9s						
CMAR	Chiang Mai Arr	46.43	279	P	P	14 18 22.8	+0.8
	comp=Z,0.9nm,0.8s,baz=71,slow=5.6,SNR=4.5						
ZAA0	Zalesovo Array	60.08	323	P	P	14 20 01.6	-0.2
ZALV	Zalesovo Beam	60.08	323	P	P	14 20 01.5	-0.3
	comp=Z,0.8nm,0.5s,baz=104,slow=8.6,SNR=5.0						
ZALV	Zalesovo Beam	60.08	323	P	P	14 20 01.4	-0.4
MKAR	Makanchi Array	60.66	314	P	P	14 20 06.2	+0.2
	comp=Z,0.2nm,0.4s,baz=100,slow=7.0,SNR=5.2						
MKAR	Makanchi Array	60.66	314	P	P	14 20 05.5	-0.5
KURK	Kurchatov	63.41	318	P	P	14 20 24.1	-0.2
KURK				IAmb	IAmb	14 20 25.3	
	comp=Z,6.0nm,1.2s						
ABKAR	Akbulak array	75.49	317	P	P	14 21 38.6	-0.4
YKA	Yellowknife Ar	77.89	28	P	P	14 21 51.2	-1.0
	comp=Z,0.2nm,0.8s,baz=278,slow=4.9,SNR=2.7						

JMA 11 14:16:14.0±0.4**, 31°.23N×142°.35E, h8^{km}, M3.8, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.52	300	P	Pn	14 16 56.3	+1.0
JHO	Hitachi	5.57	345	P	Pn	14 17 38.6	+1.5
JHO				*e*S	Sn	14 18 43.4	+2.1
JRY	Ryogami san	5.57	330	P	Pn	14 17 39.6	+2.3
JAG	Ashikaga	5.71	336	P	Pn	14 17 40.8	+1.6
JAG				*e*S	Sn	14 18 47.2	+2.3
MAT	Matsushiro	6.32	328	P	Pg	14 18 26.9	+12
MAT				S	Sn	14 18 31.1	-29

IDC 11 14:53:24.9±16.0**, 20°.42S×65°.79E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/33**, mbtmp3.6**/5**, Error ellipse: s-maj=544.2km s-min=35.1km az=57.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	14.25	28	T	T	15 10 49.7	
	baz=204,slow=76,SNR=28						
H08S2	Diego Garcia H	14.26	28	T	T	15 10 46.3	
	baz=204,slow=76,SNR=23						
H08S3	Diego Garcia H	14.27	28	T	T	15 10 48.7	
	baz=204,slow=76,SNR=23						
ASAR	Alice Springs	62.67	107	P	P	15 03 52.0	0.0
	0.5nm,0.7s,baz=268,slow=5.4,SNR=7.0						
WRA	Warramunga Arr	63.87	103	P	P	15 03 60.0	0.0
	0.3nm,0.6s,baz=257,slow=5.8,SNR=1.8						
MKAR	Makanchi Array	68.54	12	P	P	15 04 29.7	+0.5
	0.3nm,0.8s,baz=185,slow=7.2,SNR=3.9						
ZALV	Zalesovo Beam	75.86	11	P	P	15 05 12.6	-0.2
	0.7nm,0.6s,baz=191,slow=6.9,SNR=4.1						
SONM	Songino Array	77.09	27	P	P	15 05 20.0	-0.2
	0.2nm,0.4s,baz=211,slow=2.5,SNR=2.1						

IDC 11 15:15:13.7±18.0**, 19°.65N×145°.80E, h0^{km}, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.4**/44**, mbtmp3.5**/3**, Error ellipse: s-maj=538.9km s-min=151.5km az=64.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	62.75	26	P	P	15 25 40.5	0.0
	0.2nm,0.5s,baz=250,slow=5.9,SNR=6.9						
YKA	Yellowknife Ar	77.10	28	P	P	15 27 08.4	-0.3
	0.2nm,0.5s,baz=281,slow=7.2,SNR=6.1						
NVAR	Mina Array Bea	82.48	52	P	P	15 27 39.0	+0.4
	0.1nm,0.5s,baz=264,slow=6.3,SNR=4.4						

IDC 11 15:15:36.6±7.6**, 6°.35S×146°.83E, h81^{km}**±72^{km}**, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.1**/31**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=69.0km s-min=53.9km az=125.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.06	174	P	Pn	15 16 22.6	-0.2
	2.0nm,0.3s,baz=6.3,slow=9.2,SNR=11						
PMG				S	Sn	15 16 59.1	+0.7
	3.6nm,0.3s,baz=186,slow=18,SNR=1.8						
WRA	Warramunga Arr	18.16	221	P	P	15 19 42.5	-0.3
	0.1nm,0.3s,baz=46,slow=11,SNR=4.5						
ASAR	Alice Springs	21.24	214	P	P	15 20 16.5	+0.3
	0.3nm,0.4s,baz=51,slow=8.8,SNR=17						
FITZ	Fitzroy Crossi	23.74	239	P	P	15 20 41.3	-0.4
	4.7nm,0.8s,baz=62,slow=11,SNR=7.8						
TORD	Torodi Ar. Bea	145.01	284	PKPbc	PKPbc	15 35 04.6	-0.6
	1.3nm,0.7s,baz=84,slow=3.1,SNR=4.6						

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*IDC **11** 15:17:43.1±1.0, 20°.07S×66°.43E, h0^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.8/40, mbtmp3.9/9, MS3.6/6, Ms1 3.7/6, ms1mx3.3/38, Error ellipse: s-maj=34.5km s-min=21.7km az=67.0*

*NEIC **11** 15:17:44.1±1.6, 20°.11S±0°.05×66°.5E±0°.2, h10^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=27.2km s-min=8.2km az=271.0*

ISC 11 15:17:45.5±0.7**, 20°.1S**±0°.1**×66°.6E**±0°.2**, h16^{km}, n41, σ1^{s}.10**/33**, mb4.3**/15**, MS3.7**/6**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.66	26	T	T	15 35 06.6	
	baz=204,slow=76,SNR=91						
H08S2	Diego Garcia H	13.67	26	T	T	15 35 30.9	
	baz=204,slow=76,SNR=24						
H08S3	Diego Garcia H	13.69	26	T	T	15 35 08.2	
	baz=204,slow=76,SNR=64						
SOCY	Socotra	34.42	338	P	P	15 24 36.2	+3.7
BOSA	Boshof	38.42	249	LR	LR	15 38 12.0	
	comp=Z,78nm,18.5s,baz=148,slow=32						
PMBI	Palembang	40.99	70	P	P	15 25 27.6	-0.4
MAW	Mawson	47.52	182	P	P	15 26 20.3	+0.7
	4.0nm,0.7s,baz=340,slow=7.9,SNR=6.7						
MAW	Mawson	47.52	182	IAmb	IAmb	15 26 22.1	
	comp=Z,1.2nm,0.9s						
RAYN	Ar Rayn	48.01	334	P	P	15 26 23.2	-0.8
RAYN				IAmb	IAmb	15 26 42.8	
	comp=Z,4.6nm,1.3s						
CMAR	Chiang Mai Arr	49.78	42	P	P	15 26 38.6	+0.9
	comp=Z,0.6nm,0.7s,baz=247,slow=8.4,SNR=6.4						
CMAR				LR	LR	15 45 28.8	
	comp=Z,78nm,18.9s,baz=240,slow=33						
CMAR	Chiang Mai Arr	49.78	42	P	P	15 26 38.0	+0.3
CHTO	Chiang Mai	50.05	41	P	P	15 26 39.1	-0.6
CHTO				IAmb	IAmb	15 26 57.3	
	comp=Z,6.1nm,1.5s						
FITZ	Fitzroy Crossi	55.59	99	LR	LR	15 48 23.1	
	comp=Z,25nm,19.6s,baz=281,slow=33						
ASAR	Alice Springs	62.05	107	P	P	15 28 06.7	+0.9
	comp=Z,1.6nm,0.8s,baz=263,slow=6.3,SNR=16						
ASAR				LR	LR	15 52 08.2	
	comp=Z,64nm,19.4s,baz=294,slow=33						
ASAR	Alice Springs	62.05	107	P	P	15 28 06.2	+0.5
AS31	Alice Springs	62.06	107	P	P	15 28 06.1	+0.3
AAK	Ala-Archa	62.88	7	P	P	15 28 10.7	-0.2
AAK				IAmb	IAmb	15 28 12.1	
	comp=Z,3.2nm,1.1s						
KKAR	Karatay Array	63.02	3	P	P	15 28 11.3	-0.3
WRA	Warramunga Arr	63.22	103	P	P	15 28 14.6	+1.0
	comp=Z,2.2nm,0.9s,baz=259,slow=5.6,SNR=9.1						
WRA	Warramunga Arr	63.22	103	P	P	15 28 14.6	+1.0
WB2	Warramunga Arr	63.23	103	P	P	15 28 14.6	+1.0
WR0	Warramunga Arr	63.40	103	P	P	15 28 15.7	+1.0
BRTR	Keskin Array B	67.02	333	P	P	15 28 37.3	-0.5
	comp=Z,0.8nm,0.7s,baz=148,slow=7.2,SNR=4.9						
BRTR	Keskin Array B	67.02	333	P	P	15 28 37.8	0.0
STKA	Stephens Creek	67.27	117	LR	LR	15 53 15.1	
	comp=Z,51nm,20.9s,baz=210,slow=32						
MK31	Makanchi Array	68.11	12	P	P	15 28 43.4	-1.0
MKAR	Makanchi Array	68.11	12	P	P	15 28 44.3	-0.2
	comp=Z,0.8nm,0.8s,baz=184,slow=5.6,SNR=7.4						
MKAR	Makanchi Array	68.11	12	P	P	15 28 43.4	-1.1
ABKAR	Akbulak array	69.32	355	P	P	15 28 50.4	-1.5
QSPA	South Pole Qui	69.98	180	P	P	15 28 55.3	-0.8
QSPA				IAmb	IAmb	15 29 24.4	
	comp=Z,4.5nm,1.3s						
KURK	Kurchatov	71.33	8	P	P	15 29 02.2	-1.9
KURK				IAmb	IAmb	15 29 14.3	
	comp=Z,5.9nm,1.4s						
BRVK	Borovoye	72.95	2	P	P	15 29 12.9	-0.9
BRVK				IAmb	IAmb	15 29 13.2	
	comp=Z,5.2nm,1.4s						
CTAO	Charters Tower	74.03	106	P	P	15 29 20.8	-0.3
DBIC	Dimbokro	75.06	283	LR	LR	16 00 32.2	
	comp=Z,63nm,18.2s,baz=4.5,slow=34						
ZALV	Zalesovo Beam	75.43	11	P	P	15 29 28.2	-0.1
	comp=Z,1.6nm,0.7s,baz=208,slow=5.0,SNR=8.0						
ZALV	Zalesovo Beam	75.43	11	P	P	15 29 27.8	-0.5
SONM	Songino Array	76.50	26	P	P	15 29 35.4	+0.7
	comp=Z,0.7nm,0.8s,baz=207,slow=5.7,SNR=6.2						
SONM	Songino Array	76.50	26	P	P	15 29 34.7	0.0
AKASG	Malin Array Be	77.82	337	P	P	15 29 41.3	-0.6
	comp=Z,0.2nm,0.3s,baz=129,slow=5.3,SNR=4.1						
AKASG	Malin Array Be	77.82	337	P	P	15 29 40.0	-1.8
TXAR	Lajitas Array	167.26	318	PKP	PKPdf	15 37 51.5	+0.2
	comp=Z,0.2nm,0.8s,baz=300,slow=0.7,SNR=2.1						

IDC 11 15:34:56.3±999.0**, 18°.45N×53°.96E, h0^{km}, Error ellipse: s-maj=1407.0km s-min=225.0km az=58.0, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I19DJ	I19DJ	12.51	238	*i*		16 47 10.0	
	baz=54,slow=314,SNR=3.1						
I32KE	NAIROBI INFRAS	25.82	223	*i*		18 14 40.0	
	baz=43,slow=315,SNR=3.4						
I17CI	DIMBOKRO INFRA	58.36	266	*i*		21 32 30.0	
	baz=74,slow=313,SNR=1.9						

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*IDC **11** 15:41:37.8±2.1, 9°.50S×123°.72E, h105^{km}±26^{km}, mb3.4/2, mb1 3.3/5, mb1mx3.1/29, mbtmp3.6/5, MS3.7/1, Ms1 3.7/1, ms1mx2.7/23, Error ellipse: s-maj=105.1km s-min=27.0km az=56.0*

ISC 11 15:41:36.8±1.3**, 9°.5S**±0°.1**×124°.2E**±0°.1**, h100^{km}, n7, σ2^{s}.06**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.88	216	P	Pn	15 41 56.0	0.0
	56nm,0.3s,baz=357,slow=5.7,SNR=49						
BATI				S	Sn	15 42 10.5	+0.1
	210nm,0.3s,baz=207,slow=18,SNR=17						
FITZ	Fitzroy Crossi	8.67	171	P	Pn	15 43 40.8	+1.3
	0.4nm,0.3s,baz=357,slow=11,SNR=16						
FITZ				S	Sn	15 45 13.5	-2.1
	2.5nm,0.3s,baz=131,slow=9.6,SNR=22						
WRA	Warramunga Arr	14.29	138	P	P	15 44 58.6	-0.2
	0.2nm,0.3s,baz=312,slow=14,SNR=1.8						
WRA				S	Sn	15 47 31.9	-0.2
	0.2nm,0.3s,baz=314,slow=28,SNR=3.0						
ASAR	Alice Springs	16.88	148	P	P	15 45 31.8	+4.3
	0.1nm,0.3s,baz=326,slow=12,SNR=10						
ASAR				S	Sn	15 48 32.6	-2.1
	0.1nm,0.3s,baz=314,slow=21,SNR=6.8						
CTA	Charters Tower	23.77	119	LR	LR	15 57 47.9	
	comp=Z,187nm,20.4s,baz=321,slow=40						
MKAR	Makanchi Array	67.32	330	P	P	15 52 20.3	-0.8
	0.5nm,0.6s,baz=135,slow=7.1,SNR=6.8						
ZALV	Zalesovo Beam	71.42	337	P	P	15 52 45.3	-0.7
	0.3nm,0.3s,baz=134,slow=6.2,SNR=1.9						

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*IDC **11** 15:47:13.4±2.6, 23°.96N×102°.29E, h0^{km}, mb3.4/2, mb1 3.5/3, mb1mx3.2/39, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=62.3km s-min=26.7km az=105.0*

ISC 11 15:47:11.0±1.7**, 23°.4N**±0°.1**×101°.9E**±0°.3**, h10^{km}, n16, σ1^{s}.41**/17**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAMP	Lampang	5.31	204	P	Pb	15 48 44.0	+0.1
CMMT	Chiang Mai	5.34	211	P	Pg	15 48 51.0	-2.4
CM32	Chiang Mai Arr	5.52	211	P	Pb	15 48 50.0	+2.4
CM36	Chiang Mai Arr	5.53	209	P	Pb	15 48 47.0	-0.7
CM09	Chiang Mai Arr	5.64	209	P	Pb	15 48 50.5	+0.9
CM31	Chiang Mai Arr	5.65	210	P	Pb	15 48 50.5	+0.7
CMAR	Chiang Mai Arr	5.65	210	Pn	Pb	15 48 48.8	-1.0
	0.7nm,0.3s,baz=24,slow=17,SNR=22						
CMAR				Sn	Sb	15 49 59.3	+1.7
	0.6nm,0.3s,baz=28,slow=28,SNR=8.4						
CM15	Chiang Mai Arr	5.66	210	P	Pb	15 48 51.8	+1.8
CM02	Chiang Mai Arr	5.67	209	P	Pb	15 48 51.0	+0.9
CM01	Chiang Mai Arr	5.67	209	P	Pb	15 48 50.0	-0.2
CM04	Chiang Mai Arr	5.68	209	P	Pb	15 48 50.0	-0.4
CM05	Chiang Mai Arr	5.70	209	P	Pb	15 48 51.2	+0.6
CM13	Chiang Mai Arr	5.70	210	P	Pb	15 48 52.2	+1.6
UTTA	Uttaradit	5.78	193	P	Pb	15 48 53.5	+1.5
SONM	Songino Array	24.63	7	P	P	15 52 30.9	-0.8
	0.5nm,0.6s,baz=187,slow=11,SNR=1.4						
MKAR	Makanchi Array	28.14	331	P	P	15 53 04.2	+0.9
	0.6nm,0.7s,baz=142,slow=8.9,SNR=6.7						

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*RSNC **11** 15:48:57.6±1.3, 5°.41N×77°.43W, h4^{km}±9^{km}, ML2.5*

*IDC **11** 15:49:06.2±6.5, 5°.83N×77°.46W, h71^{km}±65^{km}, mb3.0/1, mb1 3.6/3, mb1mx3.1/29, mbtmp3.7/3, ML2.5/2, Error ellipse: s-maj=52.2km s-min=31.9km az=86.0*

ISC 11 15:48:57.8±1.8**, 5°.35N**±0°.06**×77°.50W**±0°.07**, h17^{km}**±10^{km}**, n17, σ1^{s}.47**/27**, 1C-1D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	0.41	160	⇓*e*P	Pg	15 49 05.7	-0.5
PIZC				*e*S	Sg	15 49 12.5	+0.7
PLMC	San Jos del P	1.29	110	⇑*e*P	Pn	15 49 18.9	-2.2
PLMC				*e*S	Sb	15 49 36.1	-1.9
MALC	Bahia Malaga	1.34	173	*e*P	Pn	15 49 20.6	-1.0
MALC				*e*S	Sb	15 49 40.0	+0.8
MALC				*i*		15 50 06.1	
	comp=Z,87nm,0.6s						
CBOC	Ciudad Bolivar	1.57	71	*e*P	Pn	15 49 23.7	-1.4
CBOC				*e*S	Sn	15 49 42.5	-2.5
CBOC				*i*		15 49 50.8	
	comp=Z,72nm,0.3s						
HELC	Santa Helena	2.13	67	*e*P	Pn	15 49 33.1	+0.1

HELC				eS	Sn	15 49 58.4	-0.8
HELC				i		15 50 06.4	
	comp=Z,32nm,0.6s						
RREF	El Recreo	2.19	102	eP	Pn	15 49 34.1	+0.1
RREF				eS	Sb	15 50 04.8	+0.3
RREF				i		15 50 12.5	
	comp=Z,30nm,0.3s						
ANIL	Santa Ana	2.26	112	eP	Pn	15 49 34.2	-0.4
ANIL				i		15 50 16.9	
	comp=Z,12nm,0.4s						
NORC	Norcasia	2.63	85	eP	Pn	15 49 40.6	+1.1
NORC				eS	Sn	15 50 13.1	+2.0
ORTC	Ortega, Tolima	2.67	122	eP	Pn	15 49 40.5	+0.5
ORTC				eS	Sn	15 50 12.8	+0.9
ORTC				i		15 50 29.8	
	comp=Z,29nm,0.1s						
MARP	Paez Belalcaza	2.93	148	eP	Pn	15 49 44.9	+1.1
ROSC	El Rosal	3.21	99	P	Pb	15 49 54.0	-0.6
	comp=Z,7.7nm,0.3s,baz=311,slow=9.9,SNR=7.5						
ROSC				S	Sb	15 50 35.6	+2.0
	comp=Z,2.6nm,0.3s,baz=136,slow=19,SNR=2.1						
PTBC	PUERTO BERRIO,	3.25	69	eP	Pn	15 49 49.9	+1.8
BBAC	Balboa, Cauca	3.32	176	eP	Pn	15 49 48.1	-1.0
BBAC				i		15 50 33.2	
	comp=Z,9.4nm,0.5s						
GARC	Garzon, Huila	3.73	147	eP	Pn	15 49 55.7	+0.9
GARC				i		15 50 41.8	
	comp=Z,14nm,0.2s						
SDV	Santo Domingo	7.67	62	P	Pn	15 50 51.7	+2.7
	comp=Z,1.0nm,0.3s,baz=245,slow=13,SNR=9.5						
SDV				S	Sn	15 52 13.3	-2.3
	comp=Z,0.2nm,0.3s,baz=250,slow=20,SNR=1.6						
YKA	Yellowknife Ar	63.21	342	P	P	15 59 25.4	+0.5
	comp=Z,0.2nm,0.6s,baz=132,slow=7.5,SNR=5.1						
ASAR	Alice Springs	144.70	236	PKPbc	PKPab	16 08 33.2	-0.2
	comp=Z,0.5nm,0.8s,baz=117,slow=4.0,SNR=5.0						

IDC ***11*** *15:58:13.3±2.3, 51°.41N×179°.30E, h0^{km}, mb3.5/6, mb1 3.9/7, mb1mx3.6/52, mbtmp3.6/7, ML4.1/1, Error ellipse: s-maj=55.3km s-min=32.2km az=1.0*
AEIC ***11*** *15:58:24±1.8, 51°.6N±0°.1×179°.47E±0°.05, h75^{km}±4^{km}, ML3.4, mb4.1/33(NEIC), Error ellipse: s-maj=18.8km s-min=4.6km az=180.0*
NEIC ***11*** *15:58:24.2±1.2, 51°.6N±0°.1×179°.44E±0°.07, h82^{km}±5^{km}, Error ellipse: s-maj=19.1km s-min=6.2km az=183.0*
ISC 11 15:58:23.8±0.8**, 51°.62N**±0°.09×**179°.43E**±0°.04**, h81**^{km}±5^{km}**, n73, σ0^{s}75**/74**, mb4.0**/19**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.25	198		Pn	15 58 36.1	+0.1
AMKA					Sn	15 58 45.2	+0.3
CESW	Semis' Southwe	0.29	16		Pn	15 58 36.2	0.0
CERAA	Semis' Rag'd T	0.33	29		Pn	15 58 36.5	+0.1
CERB	Semis' Cerberu	0.34	22		Sn	15 58 46.1	+0.3
CETU	Semis' Tuman	0.35	7		Pn	15 58 36.9	+0.3
CEAP	Semis' Anvil P	0.40	13		Pn	15 58 37.1	+0.2
CEAP					Sn	15 58 46.7	+0.2
LSPA	Little Sitkin	0.63	303		Pn	15 58 39.5	+0.6
LSPA					Sn	15 58 50.3	+0.2
LSSA	Little Sitkin	0.66	301		Pn	15 58 39.7	+0.6
LSNW	Little Sitkin	0.67	302		Pn	15 58 39.6	+0.4
GALAA	Gareloi Lava P	1.13	82		Pn	15 58 45.2	+0.8
TASE	Tanaga Southea	1.59	81		Pn	15 58 51.0	+0.6
TAFP	Tanaga Falls P	1.63	79		Pn	15 58 51.3	+0.4
TAFP					Sn	15 59 10.9	-0.5
KIMD	Kanaga Island	2.08	85		Pn	15 58 57.4	+0.7
KICM	Kanaga Island	2.12	81		Pn	15 58 58.3	+1.0
KICM					Sn	15 59 23.1	+0.3
KIKV	Kanaga Island	2.13	82		Pn	15 58 58.3	+0.9
KIRH	Kanaga Island	2.18	81		Pn	15 58 58.6	+0.6
ADK	Adak	2.43	82		Pn	15 59 01.9	+0.5
ADAG	Mount Adagdak	2.49	80		Pn	15 59 02.5	+0.3
GSTD	Great Sitkin T	2.78	79		Pn	15 59 06.7	+0.5
GSMY	Great Sitkin M	2.83	80		Pn	15 59 07.3	+0.4
GSTR	Great Sitkin T	2.84	79		Pn	15 59 07.5	+0.5
SMY	Shemya	3.46	291		Pn	15 59 16.6	+1.2
ATKA	Atka Island	3.99	79		Pn	15 59 22.9	+0.4
OHAK	Old Harbor	16.77	60	Pn	Pn	16 02 10.8	-2.5
KDAK	Kodiak Island	17.23	58	P	Pn	16 02 17.5	-1.4
	0.7nm,0.3s,baz=285,slow=8.9,SNR=12						
KDAK	Kodiak Island	17.23	58	IAmb	IAmb	16 02 42.8	
	comp=Z,14nm,1.1s						
TTA	Tatalina	17.32	40		Pn	16 02 19.5	-0.6
SEW	Seward	19.26	52	P	P	16 02 42.1	+0.6
IMAR	Indian Mountai	19.77	33	P	P	16 02 47.2	+0.2
COLD	Coldfoot	21.63	32	P	P	16 03 07.7	+0.8
IL31		21.76	40	P	P	16 03 08.1	-0.2
ILAR	Eielson Array	21.76	40	P	P	16 03 08.1	-0.2
	comp=Z,0.4nm,0.5s,baz=237,slow=8.2,SNR=18						
PAX	Paxson	21.79	45	P	P	16 03 09.5	+0.7
MENT	Mentasta	22.56	46	P	P	16 03 17.5	+0.5
DOT	Dot Lake	22.59	44	P	P	16 03 16.2	-1.0
DOT				IAmb	IAmb	16 03 37.9	
	comp=Z,9.6nm,1.4s						
BMAR	Burnt Mountain	23.65	34	P	P	16 03 27.0	-0.5
EGAK	Eagle	24.10	42	P	P	16 03 32.1	+0.7
EGAK				IAmb	IAmb	16 03 33.8	
	comp=Z,5.8nm,0.7s						
DAWY	Dawson	24.70	44	P	P	16 03 35.8	-1.1
DAWY				IAmb	IAmb	16 03 40.6	
	comp=Z,3.5nm,0.7s						
HYT	Haines Junctio	25.21	52	P	P	16 03 40.6	-1.1
HYT				IAmb	IAmb	16 03 52.1	
	comp=Z,6.3nm,1.3s						
INK	Inuvik	27.90	36	P	P	16 04 07.0	+1.4
	comp=Z,0.6nm,0.5s,baz=233,slow=5.1,SNR=4.6						
YAK	Yakutsk	28.43	311		S	16 08 50.4	-0.8
MJB9	Matsu-Tunnel	32.74	259	P	P	16 04 48.4	-0.3
MAJO	Matsushiro	32.74	259	P	P	16 04 48.1	-0.5
H11N2	WAKE ISLAND Hy	33.31	202	T	T	16 40 22.2	
	baz=16						
H11N3	WAKE ISLAND Hy	33.32	202	T	T	16 40 23.4	
	baz=16						
H11N1	WAKE ISLAND Hy	33.33	202	T	T	16 40 22.2	
	baz=16						
YKA	Yellowknife Ar	35.87	46	P	P	16 05 15.5	+0.1
	comp=Z,0.5nm,0.5s,baz=279,slow=6.2,SNR=9.9						
EUNU	Eureka	40.35	16	P	P	16 05 53.6	+0.8
K05A	Summer Lake	40.49	78	P	P	16 05 55.8	+1.1
K05A				IAmb	IAmb	16 06 17.7	
	comp=Z,5.3nm,1.4s						
WALA	Waterton Lakes	41.29	66	P	P	16 06 01.0	0.0
MOD	Modoc Plateau	41.32	79	P	P	16 06 01.4	-0.1
MOD				IAmb	IAmb	16 06 04.8	
	comp=Z,1.8nm,0.7s						
MCMT	McKenzie Canyo	44.15	71	P	P	16 06 23.6	-0.8
YHL	Hebgen Lake	45.12	70	P	P	16 06 32.0	-0.1
YHH	Holmes Hill	45.35	70	P	P	16 06 33.9	0.0
FCC	Fort Churchill	46.59	46	P	P	16 06 42.7	-0.4
FCC				IAmb	IAmb	16 06 43.5	
	comp=Z,4.1nm,1.4s						
DUG	Dugway, Tooele	46.89	76	P	P	16 06 47.4	+1.5
DUG				IAmb	IAmb	16 06 55.1	
	comp=Z,3.6nm,1.4s						
LAO	LASA Array	46.93	65	P	P	16 06 46.3	+0.2
LAO				IAmb	IAmb	16 06 51.7	
	comp=Z,4.3nm,1.1s						
PSUT	Pine Spring	47.28	79	P	P	16 06 50.4	+1.3
BW06	Boulder Array	47.29	71	P	P	16 06 49.4	+0.4
BW06				IAmb	IAmb	16 06 49.8	
	comp=Z,3.6nm,1.4s						
PD31	Pinedale Array	47.29	71	P	P	16 06 49.4	+0.3
PDAR	Pinedale Array	47.29	71	P	P	16 06 49.2	+0.2
	comp=Z,0.4nm,0.5s,baz=338,slow=2.9,SNR=10						
PDAR	Pinedale Array	47.29	71	P	P	16 06 49.0	-0.1
CCUT	Cedar City	48.21	79	P	P	16 06 57.1	+0.9
MSU	Marysvale	48.32	78	P	P	16 06 57.7	+0.6
PV03	Paradox Valley	50.51	76	P	P	16 07 14.3	+0.5
PV03				IAmb	IAmb	16 07 30.7	
	comp=Z,4.3nm,1.5s						
MKAR	Makanchi Array	59.01	307	P	P	16 08 14.8	0.0
	comp=Z,0.1nm,0.4s,baz=46,slow=6.5,SNR=1.9						
TX31	Lajitas Ar. Si	59.71	80	P	P	16 08 20.8	+0.9
TX31				IAmb	IAmb	16 08 22.7	
	comp=Z,1.7nm,0.8s						
TX32	Lajitas Array	59.71	80	P	P	16 08 20.8	+0.9
TX32				IAmb	IAmb	16 08 36.4	
	comp=Z,3.3nm,1.5s						
TXAR	Lajitas Array	59.71	80	P	P	16 08 20.7	+0.8
	comp=Z,0.3nm,0.4s,baz=300,slow=5.8,SNR=10.0						
CCM	Cathedral Cave	60.94	65	P	P	16 08 27.1	-1.0
FCAR	Ozark Folk Cen	61.96	67	P	P	16 08 34.9	-0.1
MIAR	Mount Ida	62.08	69	P	P	16 08 36.7	+1.0
CMAR	Chiang Mai Arr	69.89	274	P	P	16 09 24.9	-1.2

MAN ***11*** *16:07:20.9, 11°.67N×126°.14E, h18^{km}, mb5.5, ML4.5, MS4.8*
IDC ***11*** *16:07:20.1±0.4, 11°.50N×126°.07E, h0^{km}, mb4.5/35, mb1 4.6/36, mb1mx4.5/59, mbtmp4.5/36, ML3.8/1, MS3.8/17, Ms1 3.8/17, ms1mx3.6/53, Error ellipse: s-maj=16.8km s-min=9.5km az=87.0*
NEIC ***11*** *16:07:24.9±1.2, 11°.49N±0°.09×126°.0E±0°.1, h35^{km}±1^{km}, mb4.8/55, Error ellipse: s-maj=22.7km s-min=16.0km az=90.0*
BJI ***11*** *16:07:24.0±0.0, 11°.60N×126°.08E, h37^{km}, mB5.0/46, mb4.6/66, Ms4.6/43, Ms7 4.4/44*
DJA ***11*** *16:07:26.9±0.9, 12°N±4°×12°6E±°, h54^{km}±7^{km}, M4.8/30, mB5.4/5, mb4.8/30, Mw(mB)4.8/5, MwMwp5.9/1, Mwp6.0/1*
ISC 11 16:07:24.3±0.7**, 11°.56N**±0°.03×**126°.10E**±0°.04**, h28**^{km}±4^{km}**, n230, σ1^{s}65**/251**, mb4.7**/96**, MS4.0**/25**, 6C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.65	274	eP	Pb	16 07 34.0	-3.1
BESP				eS	Sb	16 07 42.9	-3.0
OCLP	Ormoc	1.54	251	eP	Pn	16 07 48.8	-1.2
OCLP				eS	Sn	16 08 09.2	+0.1
CNP	Catarman	1.69	304	eP	Pn	16 07 51.3	-0.7
CNP				eS	Sb	16 08 15.9	+0.1
GLSP	General Luna,	1.76	179	eP	Pn	16 07 51.3	-1.6
GLSP				eS	Sb	16 08 31.3	+14
MSLP	Maasin	1.86	221	eP	Pn	16 07 54.4	0.0
MSLP				eS	Sb	16 08 19.6	-1.0
LLP	Lapu-Lapu	2.43	240	⇓eP	Pn	16 08 02.1	0.0
LLP				i S	Sb	16 08 35.5	-1.4
BUTP	Butuan	2.61	190	eP	Pn	16 08 05.2	+0.5
BUTP				eS	Sb	16 08 43.1	+0.9
PVCP	Virac	2.78	317	eP	Pn	16 08 04.1	-2.9
PVCP				eS	Sb	16 08 47.6	+0.7
SCSP	San Jose Seism	3.27	310	eP	Pn	16 08 15.8	+2.1
CGP	Cagayan de Oro	3.38	204	⇓eP	Pn	16 08 16.0	+0.8
CGP				eS	Sb	16 08 59.2	-5.0
GUIM	Jordan	3.57	255	eP	Pn	16 08 16.1	-1.7
GUIM				eS	Sb	16 09 05.1	-4.5
BUKP	Musuan	3.79	196	eP	Pn	16 08 21.0	+0.1
BUKP				eS	Sb	16 09 14.7	-1.6
CNOP	Candoni, Negro	3.81	244	eP	Pn	16 08 20.8	-0.3
CNOP				eS	Sn	16 09 07.5	+2.5
JAP	San Jose, Anti	4.15	259	⇑eP	Pn	16 08 28.8	+3.0
JAP				eS	Sb	16 09 22.9	-3.5
JCNP	Jose Panganiba	4.29	310	eP	Pn	16 08 25.5	-2.2
JCNP				eS	Sb	16 09 27.3	-3.0
DAV	Davao City (W)	4.49	187	Pn	Pn	16 08 36.0	+5.5
	37nm,0.3s,baz=89,slow=6.6,SNR=3.6						
DAV				Sn	Sn	16 09 19.8	-1.9
	28nm,0.3s,baz=68,slow=5.8,SNR=3.8						
DAV				LR	LR	16 10 30.6	
	comp=Z,2µm,20.0s,baz=31,slow=43						
PAGZ	Pagadian	4.55	216	eP	Pn	16 08 30.2	-1.2
PAGZ				eS	Sn	16 09 28.5	+5.1
BOAC	Boac	4.56	295	eP	Pn	16 08 31.3	-0.2
MATI	Mati	4.58	178	eP	Pb	16 08 38.3	-5.8
MATI				eS	Sb	16 09 38.5	-0.4
KCP	Kidapawan	4.63	192	⇓eP	Pn	16 08 37.4	+4.9
LQP	Lukban	5.12	300	⇑eP	Pn	16 08 40.5	+1.1
POLP	Polilio Island	5.13	308	eP	Pn	16 08 38.4	-0.9
POLP				eS	Sn	16 09 38.1	+0.5
TGY	Tagaytay City	5.63	297	Pn	Pn	16 08 49.7	+3.4
	31nm,0.3s,baz=146,slow=8.3,SNR=8.7						
BUSP	Coron	5.79	275	eP	Pn	16 08 49.8	+1.4
MACP	Maragondon, Ca	5.89	298	eP	Pn	16 08 54.5	+4.7
BALP	Baler	6.05	314	eP	Pn	16 08 49.1	-2.9
BALP				eS	Sn	16 09 56.3	-4.0
CAUP	Cauayan	6.77	323	eP	Pn	16 09 00.8	-1.1
CAUP				eS	Sn	16 10 16.5	-1.5
SMPP	San Manuel, Pa	6.97	312	eP	Pn	16 09 03.0	-1.6
SMPP				eS	Sn	16 10 20.3	-2.6
APYP	Conner	7.83	324	eP	Pn	16 09 15.6	-0.9
APYP				eS	Sn	16 10 42.2	-2.0
ABRA	Dolores	7.99	320	eP	Pn	16 09 21.2	+2.6
ABRA				eS	Sn	16 10 56.9	+8.8
GTOI	Gorontalo	11.27	196	P	Pn	16 10 03.6	0.0
	27nm,1.0s						
MPSI	Mapaga	12.73	209	P	P	16 10 38.6	+4.2
APSI	Ampana	13.15	200	P	Pn	16 10 32.3	+3.0
	497nm26nm,1.2s						
SANI	Sanana	13.52	180	P	Pn	16 10 31.9	-2.4
	30nm,0.9s						
TTSI	Tana Toraja	15.79	204	P	P	16 11 07.4	-1.1
	837nm45nm,0.9s						
SPSI	Sidrap Palu	16.66	203	P	P	16 11 18.8	+0.8
	27nm,0.8s						
MTKI	Muara Teweh, K	16.68	223	P	P	16 11 25.4	+7.1
BNSI	Bone	16.94	201	P	Pn	16 11 19.8	+0.4
	54nm,1.4s						
QIZ	Qiongzhong	17.34	297	P	Pn	16 11 23.9	-0.6
QIZ				S	Sn	16 14 35.7	-1.0
QIZ				pmax	pmax		
	comp=Z,69nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,470nm,3.2s						
QIZ				LR	LR		
	comp=E,830nm,7.3s						
QIZ				LR	LR		
	comp=Z,690nm,12.9s						
KAPI	Kappang	17.63	201	P	Pn	16 11 26.8	-1.3
	0.3nm,0.3s,baz=21,slow=14,SNR=2.2						
KBKI	Kotabaru	17.76	214	P	P	16 11 31.9	+1.6
	24nm,1.2s						
GUMO	Guam	18.43	82	LR	LR	16 17 30.7	
	comp=Z,326nm,20.1s,baz=289,slow=33						
JAY	Jayapura	20.16	133	P	P	16 11 56.6	-0.1
	24nm,1.1s,baz=238,slow=9.5,SNR=2.1						
UBPT	Khong Chiam	20.40	283	P	Pn	16 12 04.2	+2.7
	29nm,2.7s						
EDFI	Ende, Flores	20.64	192	P	Pn	16 12 04.1	-0.3
	19nm,1.3s						
SOEI	Soe	21.25	185	P	P	16 12 10.3	+1.8
	71nm,1.1s						
NJ2	Nanjing	21.46	343	eP	P	16 12 11.4	+0.9
NJ2				pP	sP	16 12 20.6	+0.8
NJ2				sP	pwP	16 12 24.5	+0.7
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				LR	LR		
	comp=N,460nm,17.5s						
NJ2				LR	LR		
	comp=E,490nm,17.1s						
NJ2				LR	LR		
	comp=Z,360nm,17.1s						
JCJ	Chichijima	21.62	42	LR	LR	16 19 43.4	
	comp=Z,220nm,19.5s,baz=200,slow=34						
BATI	Baumata	21.76	186	P	P	16 12 13.0	-0.8
	74nm,0.7s,baz=358,slow=2.0,SNR=13						
BATI	Baumata	21.76	186	P	P	16 12 13.1	-0.8
	62nm,1.1s						
WHN	Wuhan	21.81	332	⇑P	P	16 12 15.8	+1.5
WHN				pP	sP	16 12 25.5	+2.1
WHN				S	S	16 16 13.1	-1.0
WHN				pmax	pmax		
	comp=Z,150nm,1.8s						
WHN				LR	LR		
	comp=N,2µm,15.6s						
WHN				LR	LR		
	comp=E,2µm,16.6s						
WHN				LR	LR		
	comp=Z,2µm,13.3s						
JNU	Nakatsue	21.91	11	LR	LR	16 20 03.6	
	comp=Z,128nm,20.2s,baz=207,slow=35						
TWSI	Taliwang, Sumb	22.15	205	P	P	16 12 18.6	+0.6
	28nm,1.1s						
NONG	Nongkai	23.10	289	P	P	16 12 32.1	+4.0
	42nm,2.2s						
GYA	Guiyang	23.56	312	⇓P	P	16 12 33.6	+0.9
GYA				PcP	PcP	16 16 18.3	+0.6
GYA				S	S	16 16 29.9	-15
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GYA				LR	LR		
	comp=Z,860nm,15.1s						
SRAK	Srakaew	23.58	279	P	P	16 12 37.8	+4.9
	123nm,0.8s						
NGJI	Ngawi	23.78	218	P	P	16 12 36.5	+1.8
	64nm,1.1s						
CHAI	Chaiyaphum	23.81	283	P	P	16 12 36.6	+1.5
	26nm,0.9s						
UTTA	Uttaradit	25.45	287	P	P	16 12 51.4	+1.4
	18nm,1.0s						
KSAR	Wonju Array Be	25.82	3	P	P	16 12 53.5	+0.3
KSRS	Korea Array	25.84	3	P	P	16 12 54.1	+0.8
	16nm,1.0s,baz=181,slow=11,SNR=24						
KSRS				LR	LR	16 25 20.9	
	comp=Z,127nm,18.1s,baz=208,slow=42						
KS19	Wonju Array Si	25.88	3	P	P	16 12 53.6	-0.2
KS19				IAmb	IAmb	16 13 03.6	
	comp=Z,58nm,1.4s						
KMI	Kunming	25.90	305	⇓eP	P	16 12 54.7	+0.4
KMI				pP	sP	16 13 04.6	+1.0
KMI				sP	pwP	16 13 08.2	+1.6
KMI				S	S	16 17 21.1	-1.8
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,92nm,4.9s						
KMI				LR	LR		
	comp=Z,470nm,15.4s						
KMI				LR	LR		
	comp=Z,370nm,13.2s						
KMI				LR	LR		
	comp=Z,410nm,16.8s						
LEM	Lembang	25.91	226	P	P	16 12 55.7	+1.2
	comp=Z,11nm,0.7s,baz=39,slow=18,SNR=2.5						
UTHA	Uthaitani	26.20	282	P	P	16 13 05.3	+8.4
SUKH	Sukhothai	26.27	286	P	P	16 12 58.0	+0.5
	comp=Z,50nm,1.0s						
DBJI	Dramaga	26.35	228	P	P	16 13 15.0	+17
PAYA	Payao	26.42	290	P	P	16 12 59.0	+0.2
	comp=Z,3µmcomp=Z,391nm,0.9s						
LAMP	Lampang	26.46	288	P	P	16 13 04.2	+5.0
	comp=Z,20nm,0.8s						
CM36	Chiang Mai Arr	26.96	288	P	P	16 13 03.0	-0.7
CM01	Chiang Mai Arr	27.07	288	P	P	16 13 05.2	+0.6
	comp=Z,116nmcomp=Z,13nm,1.0s						
CM31	Chiang Mai Arr	27.09	288	P	P	16 13 03.6	-1.3
CM31				IAmb	IAmb	16 13 13.5	
	comp=Z,25nm,1.1s						
CMAR	Chiang Mai Arr	27.09	288	P	P	16 13 04.5	-0.4
	comp=Z,8.8nm,0.8s,baz=102,slow=7.4,SNR=29						
CMAR				LR	LR	16 23 48.9	
	comp=Z,124nm,18.2s,baz=167,slow=36						
CMAR	Chiang Mai Arr	27.09	288	P	P	16 13 04.0	-0.9
CMMT	Chiang Mai	27.15	289	P	P	16 13 06.0	+0.6
	comp=Z,5.1nm,1.0s						
CHTO	Chiang Mai	27.16	289	P	P	16 13 04.7	-0.8
CGJI	Cibinong	27.16	229	P	P	16 13 05.5	0.0
	comp=Z,45nm,0.8s						
MJAR	Matsushiro Arr	27.17	22	P	P	16 13 04.8	-0.6
	comp=Z,2.3nm,0.8s,baz=196,slow=11,SNR=4.6						
MJAR				LR	LR	16 22 24.3	
	comp=Z,204nm,19.9s,baz=200,slow=33						
MJB9	Matsu-Tunnel	27.17	22	P	P	16 13 05.1	-0.3
CM32	Chiang Mai Arr	27.21	288	P	P	16 13 06.0	0.0
XAN	Xi'an	27.33	328	P	P	16 13 06.4	-0.5
XAN				pP	pP	16 13 15.6	+2.1
XAN				sP	pwP	16 13 19.8	-1.2
XAN				PP	PnPn	16 13 57.6	+6.1
XAN				S	S	16 17 49.0	+4.0
XAN				sS	sS	16 18 04.2	+7.7
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,7.6s						
XAN				LR	LR		
	comp=Z,660nm,14.9s						
XAN				LR	LR		
	comp=Z,610nm,13.6s						
XAN				LR	LR		
	comp=Z,1µm,13.8s						
MHMT	Maesarieng	27.98	287	P	P	16 13 14.3	+1.4
CD2	Chengdu	28.26	316	P	P	16 13 14.2	-1.1
CD2				S	S	16 17 59.1	-0.7
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				LR	LR		
	comp=Z,1µm,15.8s						
CD2				LR	LR		
	comp=Z,1µm,15.8s						
CD2				LR	LR		
	comp=Z,2µm,16.5s						
PSI	Prapat	28.30	254	P	P	16 13 16.1	+0.2
	comp=Z,5.3nm,0.8s,baz=1.2,slow=3.8,SNR=5.4						
PSI				LR	LR	16 26 18.2	
	comp=Z,329nm,18.2s,baz=276,slow=40						
RPSI	Rantau Prapat	28.34	254	P	P	16 13 16.1	+0.1
MNSI	Mandailing Nat	28.41	250	P	P	16 13 15.5	-1.2
	comp=Z,16µmcomp=Z,8.6nm,0.8s						
KCSI	Kotacane, Aceh	29.17	256	P	P	16 13 23.2	-0.3
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	29.47	181	P	P	16 13 25.4	-0.6
	comp=Z,6.2nm,0.8s,baz=356,slow=8.3,SNR=12						
BJI	Beijing	29.70	345	P	P	16 13 28.2	+0.4
BJI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
LZH	Lanzhou	31.64	324	⇑P	P	16 13 46.4	+1.1
LZH				pP	sP	16 13 55.5	+0.7
LZH				sP	pwP	16 14 01.4	+2.0
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
LZH				pmax	pmax		
	comp=Z,64nm,4.3s						
LZH				LR	LR		
	comp=Z,830nm,14.1s						
LZH				LR	LR		
	comp=Z,520nm,13.0s						
LZH				LR	LR		
	comp=Z,680nm,15.7s						
HHC	Hu-ho-hao-te	31.86	339	eP	P	16 13 48.5	+1.4
HHC				S	S	16 18 54.2	-2.0
HHC				SS	SnSn	16 20 47.9	+2.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,400nm,13.1s						
HHC				LR	LR		
	comp=Z,400nm,13.8s						
HHC				LR	LR		
	comp=Z,350nm,15.1s						
CN2	Changchun	32.13	359	eP	P	16 13 52.0	+2.7
WB0	Warramunga Arr	32.18	165	P	P	16 13 48.1	-1.8
WRA	Warramunga Arr	32.34	165	P	P	16 13 50.0	-1.4
	comp=Z,0.8nm,0.4s,baz=343,slow=9.0,SNR=17						
WRA				PcP	PcP	16 16 38.5	-0.5
	comp=Z,2.5nm,0.8s,baz=349,slow=3.0,SNR=7.2						
WRA	Warramunga Arr	32.34	165	P	P	16 13 49.7	-1.6
WB2	Warramunga Arr	32.34	165	P	P	16 13 49.7	-1.7
WR0	Warramunga Arr	32.40	165	P	P	16 13 50.3	-1.6
USRK	Ussuriysk Ar.	32.92	8	P	P	16 13 56.9	+0.8
	comp=Z,7.6nm,0.9s,baz=189,slow=7.3,SNR=10.0						
USRK				LR	LR	16 25 45.5	
	comp=Z,104nm,21.5s,baz=168,slow=34						
USRK	Ussuriysk Ar.	32.92	8	P	P	16 13 56.8	+0.6
AS31	Alice Springs	35.83	168	P	P	16 14 20.9	-0.7
ASAR	Alice Springs	35.83	168	P	P	16 14 21.0	-0.7
	comp=Z,1.2nm,0.3s,baz=353,slow=7.0,SNR=95						
ASAR				PcP	PcP	16 16 48.9	0.0
	comp=Z,3.5nm,0.9s,baz=341,slow=3.0,SNR=8.1						
ASAR				ScP	ScP	16 20 34.6	+1.3
	comp=Z,1.2nm,0.8s,baz=357,slow=4.1,SNR=6.2						
ASAR				LR	LR	16 31 40.6	
	comp=Z,89nm,18.7s,baz=328,slow=41						
ASAR	Alice Springs	35.83	168	P	P	16 14 20.6	-1.0
GTA	Gaotai	36.24	325	⇑P	P	16 14 26.0	+0.9
GTA				pP	sP	16 14 35.3	+0.6
GTA				sP	pwP	16 14 39.7	+0.3
GTA				PcP	PcP	16 16 50.9	+0.8
GTA				S	S	16 20 03.7	-0.2
GTA				SS	SnSn	16 22 29.9	-1.7
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,100nm,7.5s						
GTA				LR	LR		
	comp=Z,290nm,16.7s						
GTA				LR	LR		
	comp=Z,410nm,15.6s						

GTA				LR	LR		
	comp=Z,390nm,15.6s						
LSA	**Lhasa**	**37.15**	**304**	P	**P**	**16 14 34.0**	**+0.5**
LSA				pmax	pmax		
	comp=Z,22nm,0.9s						
KLR	**Kul'dur**	**37.85**	**6**	P	**P**	**16 14 39.1**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=205,slow=7.5,SNR=5.6						
TAPN	**Taplejung**	**39.27**	**299**	*e*P	**P**	**16 14 50.5**	**-0.6**
	comp=Z,27nm,0.9s						
ODAN	**Odare**	**39.41**	**298**	*e*P	**P**	**16 14 51.2**	**-1.1**
	comp=Z,33nm,0.7s						
ULN	**Ulaanbaatar**	**39.56**	**340**	P	**P**	**16 14 53.5**	**+0.4**
ULN				IAmb	IAmb	16 15 04.0	
	comp=Z,21nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**39.74**	**75**	T	T	16 58 18.8	
	baz=275,slow=74,SNR=22						
H11S1	**WAKE ISLAND Hy**	**39.75**	**75**	T	T	16 58 15.0	
	baz=275,slow=74,SNR=12						
H11S2	**WAKE ISLAND Hy**	**39.75**	**75**	T	T	16 58 25.5	
	baz=275,slow=74,SNR=11						
SONM	**Songino Array**	**39.76**	**339**	P	**P**	**16 14 55.1**	**+0.4**
	comp=Z,7.5nm,1.0s,baz=156,slow=9.3,SNR=29						
SONM	**Songino Array**	**39.76**	**339**	P	**P**	**16 14 54.8**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**40.03**	**73**	T	T	16 58 25.8	
	baz=265,slow=74,SNR=29						
H11N2	**WAKE ISLAND Hy**	**40.04**	**73**	T	T	16 58 27.3	
	baz=265,slow=74,SNR=16						
H11N3	**WAKE ISLAND Hy**	**40.05**	**73**	T	T	16 58 26.3	
	baz=265,slow=74,SNR=31						
RAMN	**Ramite**	**40.12**	**298**	*e*P	**P**	**16 14 57.1**	**-1.0**
GUN	**Gumba**	**40.98**	**299**	*e*P	**P**	**16 15 05.1**	**-0.3**
	comp=Z,68nm,0.9s						
PKI	**Pulchoki**	**41.30**	**299**	*e*P	**P**	**16 15 07.0**	**-1.0**
	comp=Z,15nm,0.7s						
PKIN	**Phulchoki**	**41.31**	**299**	*e*P	**P**	**16 15 07.0**	**-1.0**
	comp=Z,14nm,0.6s						
KKN	**Kakani**	**41.46**	**299**	*e*P	**P**	**16 15 08.7**	**-0.5**
	comp=Z,23nm,1.0s						
DMN	**Daman**	**41.57**	**299**	*e*P	**P**	**16 15 08.9**	**-1.2**
	comp=Z,25nm,1.0s						
DANN	**Dangsing**	**42.90**	**299**	*e*P	**P**	**16 15 19.8**	**-1.2**
	comp=Z,37nm,0.8s						
TLY	**Talaya**	**43.97**	**340**	P	**P**	**16 15 30.0**	**+1.0**
	comp=Z,8.8nm,0.9s,baz=171,slow=4.0,SNR=8.4						
TLY	**Talaya**	**43.97**	**340**	P	**P**	**16 15 29.6**	**+0.6**
TLY				IAmb	IAmb	16 15 30.9	
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**45.03**	**191**	P	**P**	**16 15 36.9**	**-0.7**
STKA	**Stephens Creek**	**45.67**	**161**	P	**P**	**16 15 42.6**	**0.0**
	comp=Z,20nm,0.9s,baz=340,slow=8.9,SNR=24						
STKA				LR	LR	16 39 45.2	
	comp=Z,55nm,18.3s,baz=21,slow=43						
STKA	**Stephens Creek**	**45.67**	**161**	P	**P**	**16 15 42.5**	**-0.2**
WMQ	**Urumqi**	**46.11**	**321**	P	**P**	**16 15 47.0**	**+0.8**
WMQ				pP	sP	16 15 55.5	-0.4
WMQ				sP	pwP	16 16 02.5	+2.0
WMQ				pmax	pmax		
	comp=Z,25nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,58nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,14.1s						
WMQ				LR	LR		
	comp=Z,800nm,13.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.7s						
PETK	**Petropavlovsk-**	**48.55**	**25**	P	**P**	**16 16 06.1**	**+1.2**
	comp=Z,8.2nm,0.9s,baz=209,slow=4.4,SNR=13						
PETK				LR	LR	16 34 57.8	
	comp=Z,91nm,21.1s,baz=234,slow=34						
PETK	**Petropavlovsk-**	**48.55**	**25**	P	**P**	**16 16 06.4**	**+1.5**
ZSN	**Zaisan**	**49.73**	**324**	*e*P	**P**	**16 16 13.9**	**-0.2**
	comp=Z,5.0nm,1.3s,baz=324						
YAK	**Yakutsk**	**50.46**	**2**	P	**P**	**16 16 19.7**	**+0.4**
	comp=Z,6.8nm,0.7s,baz=178,slow=3.6,SNR=15						
YAK	**Yakutsk**	**50.46**	**2**	P	**P**	**16 16 19.3**	**0.0**
MK31	**Makanchi Array**	**50.91**	**322**	P	**P**	**16 16 23.0**	**0.0**
MK31				IAmb	IAmb	16 16 33.3	
	comp=Z,21nm,1.1s						
MKAR	**Makanchi Array**	**50.91**	**322**	P	**P**	**16 16 23.4**	**+0.4**
	comp=Z,6.1nm,0.5s,baz=115,slow=6.6,SNR=70						
MKAR				LR	LR	16 37 16.8	
	comp=Z,124nm,18.0s,baz=344,slow=35						
MKAR	**Makanchi Array**	**50.91**	**322**	P	**P**	**16 16 22.9**	**-0.1**
SHLS	**Shalkode**	**51.09**	**317**	*e*P	**P**	**16 16 22.1**	**-2.5**
	comp=Z,7.1nm,0.7s,baz=317						
MAKZ	**Makanchi**	**51.10**	**322**	P	**P**	**16 16 24.7**	**+0.2**
MA2	**Magadan**	**51.35**	**16**	P	**P**	**16 16 27.1**	**+1.0**
	comp=Z,7.7nm,0.8s,baz=181,slow=9.4,SNR=4.8						
MA2	**Magadan**	**51.35**	**16**	P	**P**	**16 16 26.9**	**+0.9**
MA2				IAmb	IAmb	16 16 28.1	
	comp=Z,16nm,1.0s						
KPKS	**Kokpek**	**51.74**	**317**	*e*P	**P**	**16 16 28.9**	**-0.5**
	baz=317						
SATY	**Saty**	**51.77**	**316**	*e*P	**P**	**16 16 29.3**	**-0.3**
	comp=Z,5.8nm,0.9s,baz=316						
KSH	**Kashi**	**52.26**	**311**	P	**P**	**16 16 36.6**	**+3.3**
KSH				pmax	pmax		
	comp=Z,16nm,1.2s						
TDK	**Taldyqorghan**	**52.54**	**319**	*e*P	**P**	**16 16 35.1**	**-0.1**
	comp=Z,22nm,1.0s,baz=319						
MDOK	**Medeo**	**52.73**	**316**	*e*P	**P**	**16 16 36.4**	**-0.4**
	baz=316						
TNSS	**Tian-Shan**	**52.75**	**316**	*e*P	**P**	**16 16 37.4**	**+0.2**
	baz=316						
AAA	**Alma-Ata**	**52.83**	**316**	*e*P	**P**	**16 16 38.6**	**+1.1**
	baz=316						
NIL	**Nilore**	**52.88**	**304**	P	**P**	**16 16 36.4**	**-1.6**
NIL				IAmb	IAmb	16 16 59.9	
	comp=Z,13nm,0.8s						
CHKK	**Chushkaly**	**53.02**	**317**	*e*P	**P**	**16 16 37.5**	**-1.3**
	baz=317						
ZAA0	**Zalesovo Array**	**53.42**	**331**	P	**P**	**16 16 41.1**	**-0.4**
ZALV	**Zalesovo Beam**	**53.42**	**331**	P	**P**	**16 16 41.6**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=111,slow=6.5,SNR=9.0						
ZALV	**Zalesovo Beam**	**53.42**	**331**	P	**P**	**16 16 40.8**	**-0.7**
KUU	**Kurty**	**53.47**	**317**	*e*P	**P**	**16 16 41.9**	**-0.3**
	comp=Z,25nm,1.1s,baz=317						
TKM2	**Tokmak 2**	**53.63**	**315**	P	**P**	**16 16 44.1**	**+0.5**
	SNR=5.8						
SEM	**Semipalatinsk**	**53.86**	**325**	*e*P	**P**	**16 16 44.0**	**-1.0**
	baz=325						
KBK	**Karagaybulak**	**53.99**	**315**	P	**P**	**16 16 47.6**	**+1.4**
	SNR=6.8						
UCH	**Uchtor**	**54.16**	**314**	P	**P**	**16 16 49.4**	**+1.7**
	SNR=12						
CHMS	**Chumysh**	**54.24**	**315**	P	**P**	**16 16 48.6**	**+0.8**
	SNR=7.2						
AAK	**Ala-Archa**	**54.30**	**315**	P	**P**	**16 16 50.0**	**+1.6**
	SNR=7.2						
AAK	**Ala-Archa**	**54.30**	**315**	P	**P**	**16 16 47.7**	**-0.8**
USP	**Ospenovka**	**54.51**	**315**	P	**P**	**16 16 50.1**	**+0.3**
	SNR=8.4						
SEY	**Seymchan**	**54.62**	**14**	P	**P**	**16 16 51.5**	**+1.4**
	comp=Z,2.3nm,0.3s,baz=232,slow=5.9,SNR=9.1						
AML	**Almayashu**	**54.71**	**314**	P	**P**	**16 16 53.0**	**+1.4**
	SNR=9.0						
EKS2	**Erkin-Say**	**54.81**	**314**	P	**P**	**16 16 52.9**	**+0.8**
	SNR=7.5						
KURK	**Kurchatov**	**54.92**	**325**	P	**P**	**16 16 52.4**	**-0.1**
BTLS	**Baital**	**55.41**	**317**	*e*P	**P**	**16 16 55.4**	**-0.8**
	comp=Z,4.8nm,1.2s,baz=317						
KBL	**Kabul**	**56.48**	**304**	P	**P**	**16 17 03.2**	**-1.0**
KBL				IAmb	IAmb	16 17 18.6	
	comp=Z,5.6nm,0.8s						
KK31	**Karatay Array**	**57.24**	**314**	P	**P**	**16 17 07.7**	**-1.6**
KK31				IAmb	IAmb	16 17 22.9	
	comp=Z,8.6nm,0.9s						
IUG	**Iuzhnay**	**57.32**	**313**	*e*P	**P**	**16 17 09.3**	**-0.7**
	baz=313						
BRZS	**Berezniki**	**58.06**	**322**	*e*P	**P**	**16 17 14.2**	**-0.7**
	comp=Z,6.0nm,1.2s,baz=322						
TIXI	**Tiksi**	**60.08**	**1**	P	**P**	**16 17 28.1**	**-0.4**
TIXI				IAmb	IAmb	16 17 38.5	
	comp=Z,16nm,1.2s						
BRVK	**Borovoye**	**60.59**	**325**	P	**P**	**16 17 31.3**	**-1.0**
GEYT	**Alibeck**	**65.65**	**306**	P	**P**	**16 18 06.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=160,slow=4.6,SNR=2.4						
GEYT				LR	LR	16 50 48.6	
	comp=Z,108nm,18.5s,baz=100,slow=40						
GEYT	**Alibeck**	**65.65**	**306**	P	**P**	**16 18 06.0**	**-0.3**
ABKAR	**Akbulak array**	**65.80**	**319**	P	**P**	**16 18 05.3**	**-1.7**
ARU	**Arti**	**68.07**	**326**	P	**P**	**16 18 20.4**	**-0.8**
SDPT	**Sand Point**	**71.15**	**35**	P	**P**	**16 18 39.4**	**-0.9**
CHGN	**Chignik**	**72.41**	**34**	P	**P**	**16 18 48.0**	**+0.2**
TTA	**Tatalina**	**74.27**	**28**	P	**P**	**16 18 59.2**	**+0.4**
TTA				IAmb	IAmb	16 19 01.0	
	comp=Z,11nm,1.4s						
OHAK	**Old Harbor**	**75.29**	**34**	P	**P**	**16 19 04.0**	**-0.6**
RSO	**Redoubt South**	**75.66**	**30**	P	**P**	**16 19 07.0**	**-0.1**
KDAK	**Kodiak Island**	**75.68**	**33**	P	**P**	**16 19 08.3**	**+1.5**
	comp=Z,10nm,1.0s,baz=252,slow=9.6,SNR=2.7						
KDAK	**Kodiak Island**	**75.68**	**33**	P	**P**	**16 19 08.1**	**+1.3**
PPLA	**Purkeypile**	**76.02**	**28**	P	**P**	**16 19 09.8**	**+0.9**
PPLA				IAmb	IAmb	16 19 24.1	
	comp=Z,20nm,1.4s						
RAYN	**Ar Rayn**	**76.94**	**292**	P	**P**	**16 19 13.4**	**-1.4**
RAYN				IAmb	IAmb	16 19 32.3	
	comp=Z,11nm,1.0s						
COLD	**Coldfoot**	**76.98**	**23**	P	**P**	**16 19 14.4**	**+0.3**
COLD				IAmb	IAmb	16 19 16.9	
	comp=Z,14nm,1.3s						
KBZ	**Khabaz**	**77.22**	**312**	P	**P**	**16 19 16.0**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=129,slow=6.5,SNR=5.1						
SEW	**Seward**	**77.31**	**31**	P	**P**	**16 19 16.1**	**0.0**
KVAR	**Kislovodsk Arr**	**77.35**	**313**	P	**P**	**16 19 16.9**	**0.0**
	comp=Z,5.2nm,0.9s,baz=22,slow=5.4,SNR=2.1						
KIV	**Kislovodsk**	**77.36**	**313**	P	**P**	**16 19 14.8**	**-2.0**
PMR	**Palmer**	**77.44**	**29**	P	**P**	**16 19 16.3**	**-0.5**
PMR				IAmb	IAmb	16 19 34.8	
	comp=Z,22nm,1.5s						
KLMR	**Klimovskoe**	**78.33**	**330**	*e*P	**P**	**16 19 19.9**	**-1.9**
KLMR				AMP		16 19 32.0	
	comp=Z,47nm,1.3s						
IL31		**78.36**	**26**	P	**P**	**16 19 20.1**	**-1.7**
ILAR	**Eielson Array**	**78.36**	**26**	P	**P**	**16 19 21.7**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=240,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**78.36**	**26**	P	**P**	**16 19 20.1**	**-1.8**
CASY	**Casey**	**78.47**	**186**	P	**P**	**16 19 21.5**	**-0.7**
CASY				IAmb	IAmb	16 19 32.9	
	comp=Z,10nm,1.1s						
DOT	**Dot Lake**	**79.67**	**27**	P	**P**	**16 19 29.2**	**+0.1**
DOT				IAmb	IAmb	16 19 30.6	
	comp=Z,10nm,1.2s						
EGAK	**Eagle**	**80.81**	**26**	P	**P**	**16 19 35.6**	**+0.5**
DAWY	**Dawson**	**81.67**	**26**	P	**P**	**16 19 40.3**	**+0.5**
DAWY				IAmb	IAmb	16 19 42.2	
	comp=Z,12nm,1.2s						
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**16 19 46.7**	**+0.4**
	comp=Z,14nm,1.0s,baz=66,slow=5.9,SNR=10						
ARCES	**ARCESS Array B**	**82.94**	**340**	P	**P**	**16 19 46.4**	**+0.1**
HYT	**Haines Junctio**	**83.11**	**29**	P	**P**	**16 19 47.7**	**+0.2**
HYT				IAmb	IAmb	16 19 51.1	
	comp=Z,12nm,1.3s						
INK	**Inuvik**	**83.16**	**22**	P	**P**	**16 19 48.0**	**+0.7**
	comp=Z,5.6nm,1.2s,baz=253,slow=9.5,SNR=5.8						
INK	**Inuvik**	**83.16**	**22**	P	**P**	**16 19 47.6**	**+0.2**
INK				IAmb	IAmb	16 19 59.0	
	comp=Z,17nm,1.4s						
WHY	**Whitehorse**	**84.40**	**29**	P	**P**	**16 19 54.5**	**+0.4**
SKAG	**Skagway**	**84.46**	**30**	P	**P**	**16 19 54.2**	**0.0**
BRTR	**Keskin Array B**	**84.59**	**309**	P	**P**	**16 19 56.1**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=140,slow=5.2,SNR=4.5						
FINES	**FINESS Array B**	**84.69**	**332**	P	**P**	**16 19 55.5**	**+0.2**
	comp=Z,12nm,0.9s,baz=74,slow=5.2,SNR=28						
BESE	**Bessie Mountai**	**84.91**	**31**	P	**P**	**16 19 56.5**	**-0.1**
AKASG	**Malin Array Be**	**85.47**	**321**	P	**P**	**16 19 58.8**	**-0.7**
	comp=Z,7.8nm,1.0s,baz=62,slow=4.9,SNR=19						
EUNU	**Eureka**	**87.00**	**5**	P	**P**	**16 20 06.7**	**+0.1**
EUNU				IAmb	IAmb	16 20 07.9	
	comp=Z,14nm,1.3s						
PPT	**Papeete**	**88.12**	**108**	LR	LR	16 53 21.2	
	comp=Z,27nm,20.1s,baz=266,slow=31						
BURAR	**Bucovina Array**	**88.77**	**318**	P	**P**	**16 20 15.1**	**-0.7**
BUR08	**Bucovina Ar. S**	**88.78**	**318**	P	**P**	**16 20 14.9**	**-0.9**
BUR08				IAmb	IAmb	16 20 25.1	
	comp=Z,3.1nm,0.8s						
RES	**Resolute Bay**	**90.27**	**10**	P	**P**	**16 20 22.1**	**+0.1**
	comp=Z,3.8nm,1.1s,baz=310,slow=5.8,SNR=11						
RES	**Resolute Bay**	**90.27**	**10**	P	**P**	**16 20 22.3**	**+0.3**
RES				IAmb	IAmb	16 20 33.5	
	comp=Z,4.6nm,0.9s						
KOLS	**Kolonicke sedl**	**90.27**	**320**	*e*P	**P**	**16 20 22.0**	**-0.6**
CRVS	**Cervenica-Dubn**	**90.79**	**320**	*e*P	**P**	**16 20 25.2**	**+0.2**
VNDA	**Vanda**	**91.22**	**173**	P	**P**	**16 20 26.3**	**0.0**
	comp=Z,2.8nm,1.0s,baz=288,slow=6.0,SNR=7.3						
VNDA	**Vanda**	**91.22**	**173**	P	**P**	**16 20 26.0**	**-0.3**
VNDA				IAmb	IAmb	16 20 48.0	
	comp=Z,11nm,1.5s						
NOA	**NORSAR Array B**	**91.54**	**334**	P	**P**	**16 20 28.7**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=65,slow=4.9,SNR=2.1						
JMIC	**Jan Mayen**	**92.15**	**346**	LR	LR	17 09 04.1	
	comp=Z,159nm,20.6s,baz=102,slow=40						
YKA	**Yellowknife Ar**	**92.66**	**24**	P	**P**	**16 20 33.9**	**+0.6**
	comp=Z,2.6nm,1.0s,baz=303,slow=4.7,SNR=22						
YKA				PP	**PP**	**16 24 11.3**	**-3.4**
	comp=Z,0.5nm,1.0s,baz=303,slow=5.7,SNR=3.6						
VRAC	**Vranov**	**93.65**	**322**	LR	LR	17 03 49.5	
	comp=Z,47nm,18.2s,baz=346,slow=36						
CLL	**Collm**	**94.95**	**325**	*e*P	**P**	**16 20 44.0**	**-0.1**
TXAR	**Lajitas Array**	**117.11**	**48**	PKP	**PKiKP**	**16 26 07.5**	**0.0**
	comp=Z,0.2nm,0.6s,baz=225,slow=1.1,SNR=1.9						
SCP	**State College**	**123.39**	**22**	⇑*e*P	**PKiKP**	**16 26 20.7**	**+1.3**
PLCA	**Paso Flores**	**147.44**	**156**	PKPbc	**PKPab**	**16 27 07.0**	**-0.9**
	comp=Z,4.1nm,0.8s,baz=198,slow=4.2,SNR=7.4						
PLCA	**Paso Flores**	**147.44**	**156**		**PKPbc**	**16 27 05.9**	**-0.1**

IDC ***11*** *16:25:45.7±1.1, 11°.49N×126°.02E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/37, mbtmp3.6/6, Error ellipse: s-maj=45.7km s-min=20.6km az=64.0*

NEIC ***11*** *16:25:51.1±0.9, 11°.4N±0°.1×125°.9E±0°.2, h33^{km}±4^{km}, mb4.3/9, Error ellipse: s-maj=32.2km s-min=14.3km az=75.0*

ISC 11 16:25:49.5±2.0**, 11°.49N**±0°.05×**125°.99E**±0°.08**, h23**^{km}±14^{km}**, n27, σ2^{s}20**/32**, mb3.8**/9**, 1C-1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.55**	**282**	*e*P	**Pb**	**16 26 00.0**	**-0.4**
BESP				*e*S	**Sn**	**16 26 12.6**	**+2.2**
OCLP	**Ormoc**	**1.42**	**252**	*e*P	**Pb**	**16 26 15.1**	**-0.2**
OCLP				*e*S	**Sb**	**16 26 34.9**	**+1.9**
CNP	**Catarman**	**1.65**	**308**	*e*P	**Pn**	**16 26 16.9**	**-0.1**
CNP				*e*S	**Sb**	**16 26 38.9**	**-0.5**
GLSP	**General Luna,**	**1.70**	**175**	*e*P	**Pn**	**16 26 17.7**	**-0.1**
GLSP				*e*S	**Sb**	**16 26 48.3**	**+7.3**
MSLP	**Maasin**	**1.74**	**220**	*e*P	**Pb**	**16 26 20.6**	**-0.2**
MSLP				*e*S	**Sb**	**16 26 46.6**	**+4.3**
LLP	**Lapu-Lapu**	**2.30**	**240**	⇑*e*P	**Pb**	**16 26 28.9**	**-1.4**
LLP				*e*S	**Sb**	**16 26 56.7**	**-1.7**
BUTP	**Butuan**	**2.53**	**188**	*e*P	**Pn**	**16 26 28.9**	**-0.2**
BUTP				*e*S	Sb	16 27 16.9	+12
CGP	**Cagayan de Oro**	**3.27**	**203**	⇓*e*P	**Pb**	**16 26 44.3**	**-2.6**
CGP				*e*S	**Sb**	**16 27 21.8**	**-4.5**
GUIM	**Jordan**	**3.44**	**256**	*e*P	**Pn**	**16 26 44.4**	**+2.6**
QIZ	**Qiongzhong**	**17.28**	**298**	Pn	**Pn**	**16 29 48.0**	**-1.4**
QIZ				IAmb	IAmb	16 29 50.2	
	comp=Z,59nm,1.4s						
MMRI	**Maumere**	**20.34**	**191**	P	**P**	**16 30 22.9**	**-1.4**
CMAR	**Chiang Mai Arr**	**27.01**	**288**	P	**P**	**16 31 29.3**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=106,slow=7.8,SNR=5.5						
WRAB	**Tennant Creek**	**32.29**	**165**	P	**P**	**16 32 15.8**	**-1.0**
WRA	**Warramunga Arr**	**32.30**	**165**	P	**P**	**16 32 15.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=344,slow=9.1,SNR=1.1						
WRA	**Warramunga Arr**	**32.30**	**165**	IAmb	IAmb	16 32 17.4	
	comp=Z,0.2nm,1.4s						
AS31	**Alice Springs**	**35.79**	**168**	P	**P**	**16 32 46.5**	**-0.6**
ASAR	**Alice Springs**	**35.79**	**168**	P	**P**	**16 32 46.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=351,slow=7.7,SNR=13						
STKA	**Stephens Creek**	**45.64**	**161**	P	**P**	**16 34 08.6**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=333,slow=9.1,SNR=3.2						
STKA	**Stephens Creek**	**45.64**	**161**	IAmb	IAmb	16 34 12.2	
	comp=Z,1.9nm,1.2s						
MK31	**Makanchi Array**	**50.90**	**322**	P	**P**	**16 34 49.3**	**+0.5**
MK31				IAmb	IAmb	16 34 59.3	
	comp=Z,1.9nm,1.0s						
MKAR	**Makanchi Array**	**50.90**	**322**	P	**P**	**16 34 49.5**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=119,slow=7.9,SNR=9.5						
KURK	**Kurchatov**	**54.91**	**325**	P	**P**	**16 35 19.9**	**+1.6**
KURK				IAmb	IAmb	16 35 29.8	
	comp=Z,3.4nm,1.1s						
BRVK	**Borovoye**	**60.58**	**325**	P	**P**	**16 36 00.1**	**+1.9**
BRVK				IAmb	IAmb	16 36 19.3	
	comp=Z,2.5nm,1.1s						
ABKAR	**Akbulak array**	**65.78**	**319**	P	**P**	**16 36 32.8**	**+0.1**
IMAR	**Indian Mountai**	**75.62**	**25**	P	**P**	**16 37 32.9**	**+0.5**
ILAR	**Eielson Array**	**78.47**	**26**	P	**P**	**16 37 47.9**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=242,slow=5.6,SNR=4.4						
BMAR	**Burnt Mountain**	**79.26**	**23**	P	**P**	**16 37 53.8**	**+1.1**

IDC ***11*** *16:34:54.1±2.7, 8°.72N×82°.68W, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/37, mbtmp3.9/8, ML3.9/1, MS3.0/3, Ms1 3.1/3, ms1mx2.7/33, Error ellipse: s-maj=90.4km s-min=27.5km az=28.0*

UPA ***11*** *16:34:54.7±1.1, 8°.34N×82°.92W, h11^{km}±3^{km}, MW4.4*

UCR ***11*** *16:34:54.6±1.9, 8°.33N×82°.97W, h5^{km}, MW4.7, mb4.5(NEIC)*

NEIC ***11*** *16:34:55.5±1.1, 8°.3N±0°.2×83°.02W±0°.10, h23^{km}±8^{km}, mb4.5/18, Error ellipse: s-maj=27.0km s-min=4.2km az=209.0*

ISC 11 16:34:53.9±1.1**, 8°.30N**±0°.03×**82°.95W**±0°.02**, h12**^{km}±7^{km}**, n91, σ1^{s}15**/115**, mb4.4**/16**, 4C-11D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.28**	**16**	⇓*i*P	**Pg**	**16 34 60.0**	**+0.2**
CDITO				*e*S	**Sb**	**16 35 04.5**	**-1.1**
CDITO	**Canoas**	**0.28**	**16**	*e*P	**Pg**	**16 34 60.0**	**+0.2**
CDITO				*e*S	**Sb**	**16 35 06.2**	**+0.6**
PIRO	**Carate, Puerto**	**0.40**	**285**	⇑*e*P	**Pg**	**16 35 01.6**	**-0.2**
PIRO				*e*S	**Sb**	**16 35 10.0**	**+1.1**
PIRO	**Carate, Puerto**	**0.40**	**285**	⇑*e*P	**Pg**	**16 35 01.6**	**-0.2**
PIRO				*e*S	**Sb**	**16 35 09.1**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.42**	**304**	*e*P	**Pg**	**16 35 03.0**	**+0.8**
PTJ1				*e*S	**Sb**	**16 35 10.3**	**+0.8**
PTJ1	**Puerto Jimnez**	**0.42**	**304**	*e*P	**Pg**	**16 35 03.1**	**+0.9**
BAGA3	**Bagala, Chiriq**	**0.45**	**69**	⇓*i*P	**Pb**	**16 35 03.7**	**-0.1**
BAGA3				*e*S	**Sb**	**16 35 10.1**	**-0.3**
MLIR3	**Monte Lirio, C**	**0.50**	**14**	*e*P	**Pb**	**16 35 04.4**	**-0.3**
EDSV	**San Vito**	**0.51**	**358**	⇓*i*P	**Pg**	**16 35 04.2**	**+0.2**
EDSV				*e*S	**Sb**	**16 35 12.9**	**+0.5**
PEDE3	**Pedregal, Chir**	**0.53**	**81**	⇓*i*P	Pn	16 35 15.0	+7.7
PEDE3				*e*S	**Sn**	**16 35 23.1**	**+6.9**
LOCO3	**Loma Colorada,**	**0.54**	**79**	*e*P	**Pg**	**16 35 04.8**	**+0.3**
BRU2	**Volcan**	**0.55**	**28**	⇓*i*P	**Pg**	**16 35 05.1**	**+0.4**
BRU2				*e*S	**Sb**	**16 35 14.0**	**+0.4**
BCO2	**Palmira**	**0.59**	**45**	⇓*i*P	**Pg**	**16 35 05.8**	**+0.3**
BCO2				*e*S	**Sb**	**16 35 15.2**	**+0.6**
PTAR3	**Potrerillos Ar**	**0.59**	**49**	⇓*i*P	**Pg**	**16 35 05.9**	**+0.3**
PTAR3				*e*S	**Sb**	**16 35 15.4**	**+0.7**
BC3P	**Paso Ancho**	**0.61**	**33**	⇓*i*P	**Pg**	**16 35 06.0**	**+0.1**
BC3P				*e*S	**Sn**	**16 35 16.6**	**-1.9**
GUAL3	**Gualaca, Chiri**	**0.68**	**71**	⇓*i*P	**Pg**	**16 35 07.1**	**-0.1**
GUAL3				*e*S	**Sb**	**16 35 16.7**	**-0.5**
RIOS	**Rincon, Osa**	**0.68**	**305**	⇑*i*P	**Pg**	**16 35 06.2**	**-1.1**
RIOS				*e*S	**Sb**	**16 35 17.6**	**+0.4**
POTG	**Potrero Grande**	**0.76**	**347**	⇓*i*P	**Pg**	**16 35 08.3**	**-0.5**
EDBA	**Buenos Aires**	**0.91**	**339**	*e*P	**Pb**	**16 35 10.7**	**-1.1**
DRK0	**Durika**	**1.00**	**343**	*e*P	**Pb**	**16 35 11.9**	**-1.5**
DRK0				*e*S	**Sg**	**16 35 26.8**	**+0.5**
DRK0	**Durika**	**1.00**	**343**	*e*P	**Pb**	**16 35 11.8**	**-1.5**
CHGR2	**Aguacate**	**1.02**	**52**	*e*P	**Pb**	**16 35 12.4**	**-1.1**
CHGR2				*e*S	**Sg**	**16 35 26.6**	**-0.2**
REME3	**Remedios, Chir**	**1.11**	**94**	*e*P	**Pb**	**16 35 13.8**	**-1.3**
REME3				*e*S	**Sb**	**16 35 29.6**	**+0.2**
EDLM	**Las Mercedes**	**1.16**	**327**	*e*P	**Pb**	**16 35 14.5**	**-1.4**
NANC3	**Nancito, Chiri**	**1.21**	**93**	*e*P	**Pn**	**16 35 15.1**	**-1.5**
NANC3				*e*S	**Sb**	**16 35 31.4**	**-1.0**
PEZE	**Perez Zeledon,**	**1.29**	**326**	⇓*e*P	**Pn**	**16 35 16.4**	**-1.5**
EDDO	**Dominical**	**1.31**	**316**	*e*P	**Pn**	**16 35 17.4**	**-0.6**
EDDO				*e*S	**Sg**	**16 35 36.2**	**+0.1**
RGM0	**Gandoca**	**1.32**	**15**	*e*P	**Pg**	**16 35 19.1**	**-0.3**
RGM0				*e*S	**Sb**	**16 35 33.5**	**-2.1**
RGM0	**Gandoca**	**1.32**	**15**	*e*P	**Pb**	**16 35 18.8**	**0.0**
PVID3	**Puerto Vidal,**	**1.35**	**101**	*e*P	**Pn**	**16 35 18.2**	**-0.4**
PVID3				*e*S	**Sn**	**16 35 36.0**	**-0.5**
RIMA	**Rio Macho**	**1.71**	**328**	*e*P	**Pn**	**16 35 23.2**	**-0.6**
LCR2	**La Lucha 2**	**1.77**	**324**	*e*P	**Pn**	**16 35 25.0**	**+0.4**
GMAL	**Guarumal, Vera**	**1.78**	**107**	*e*P	**Pn**	**16 35 25.1**	**+0.5**
GMAL				*e*S	**Sn**	**16 35 46.5**	**-0.7**
BATAN	**Batan**	**1.83**	**347**	*e*P	**Pb**	**16 35 26.4**	**-1.0**
CVTR	**Volcan Turrial**	**1.88**	**335**	*e*P	**Pn**	**16 35 26.6**	**+0.3**
PONU3	**Ponuga, Veragu**	**2.00**	**102**	*e*P	**Pn**	**16 35 27.2**	**-0.3**
PONU3				*e*S	**Sb**	**16 35 54.7**	**-0.4**
HDC	**Heredia**	**2.04**	**326**	*e*P	**Pn**	**16 35 29.6**	**+1.4**
HDC				*e*S	**Sb**	**16 35 57.0**	**+0.5**
HDC	**Heredia**	**2.04**	**326**	⇑*e*P	**Pn**	**16 35 29.6**	**+1.3**
CACAO	**El Cacao, Vera**	**2.28**	**115**	*e*P	**Pn**	**16 35 32.4**	**+1.0**
CACAO				*e*S	**Sb**	**16 36 02.5**	**-0.7**
SRA1	**San Ramn**	**2.33**	**320**	*e*P	**Pn**	**16 35 32.8**	**+0.7**
PNME	**Penonome**	**2.60**	**86**	*e*P	**Pn**	**16 35 36.8**	**+0.9**
PNME				*e*S	**Sn**	**16 36 07.5**	**+0.1**
FORC	**Fortuna**	**2.74**	**322**	*i* P	**Pn**	**16 35 40.2**	**+2.5**
CEDE	**Laguna Cedeo**	**2.77**	**322**	*i* P	**Pn**	**16 35 40.3**	**+2.0**
JTS	**Las Juntas de**	**2.79**	**315**	Pn	**Pn**	**16 35 38.7**	**+0.2**
	20nm,0.3s,baz=142,slow=9.0,SNR=53						
JTS				Sn	**Sn**	**16 36 13.2**	**+1.0**
	17nm,0.3s,baz=345,slow=12,SNR=4.2						
JTS				LR	LR	16 36 17.5	
	comp=Z,58nm,21.2s,baz=250,slow=30						
JTS	**Las Juntas de**	**2.79**	**315**	*e*P	**Pn**	**16 35 38.8**	**+0.3**
JTS				*e*S	**Sb**	**16 36 16.7**	**-1.3**
JTS	**Las Juntas de**	**2.79**	**315**	*e*P	**Pn**	**16 35 38.5**	**0.0**
JTS	**Las Juntas de**	**2.79**	**315**		**Pn**	**16 35 38.0**	**-0.5**
COVE	**Coope Vega, Sa**	**2.80**	**329**	*e*P	**Pn**	**16 35 40.1**	**+1.6**
PLVR	**Palo Verde**	**3.12**	**311**	*e*P	**Pn**	**16 35 43.5**	**+0.4**
BCIP	**Isla Barro Col**	**3.19**	**74**		**Pn**	**16 35 44.4**	**+0.4**
ORTG	**Ortega, Santa**	**3.21**	**310**	*e*P	**Pn**	**16 35 44.8**	**+0.5**
COLC	**Colonia**	**3.23**	**317**	*i* P	**Pn**	**16 35 45.9**	**+1.3**
GPS2	**Hotel Rincn d**	**3.40**	**316**	*i* P	**Pn**	**16 35 48.8**	**+1.9**
LAPC	**Finca la Perla**	**3.46**	**315**	*i* P	**Pn**	**16 35 49.7**	**+2.0**
BUEV	**Buena Vista**	**3.47**	**316**	*i* P	**Pn**	**16 35 49.9**	**+2.0**
GB1A	**Borinquen Arri**	**3.48**	**316**	*e*P	**Pn**	**16 35 50.1**	**+2.1**
GBS3	**Finca Las Img**	**3.49**	**315**	*i* P	**Pn**	**16 35 49.9**	**+1.8**
ROSC	**El Rosal**	**9.24**	**111**	Pn	**Pn**	**16 37 08.0**	**+0.5**
SDV	**Santo Domingo**	**12.19**	**86**	LR	LR	16 43 29.7	
	comp=Z,85nm,20.1s,baz=262,slow=43						
SJG	**San Juan**	**19.02**	**57**	P	**Pn**	**16 39 17.9**	**+1.3**
KVTX	**Kingsville**	**23.79**	**325**	P	**P**	**16 40 05.1**	**-1.6**
GOGA	**Godfrey**	**24.99**	**359**	P	**P**	**16 40 18.5**	**+0.9**
GOGA				IAmb	IAmb	16 40 22.1	
	comp=Z,16nm,1.1s						
WVT	**Waverly**	**28.05**	**352**	P	**P**	**16 40 45.7**	**+0.5**
WVT				IAmb	IAmb	16 41 02.3	
	comp=Z,12nm,1.5s						
WHAR	**Wooly Hollow**	**28.19**	**344**	P	**P**	**16 40 46.6**	**+0.1**
WHAR				IAmb	IAmb	16 40 47.0	
	comp=Z,7.4nm,0.8s						
LCAR	**Lake Charles**	**28.64**	**346**	P	**P**	**16 40 50.8**	**+0.4**
LCAR				IAmb	IAmb	16 40 51.1	
	comp=Z,6.3nm,0.8s						
FCAR	**Ozark Folk Cen**	**28.71**	**344**	P	**P**	**16 40 51.2**	**+0.2**
CCM	**Cathedral Cave**	**30.55**	**347**	P	**P**	**16 41 07.7**	**+0.3**
CCM				IAmb	IAmb	16 41 09.6	
	comp=Z,12nm,1.4s						
KAN13	**South Haven SW**	**31.48**	**337**	P	**P**	**16 41 16.1**	**+0.5**
PDAR	**Pinedale Array**	**41.53**	**330**	P	**P**	**16 42 41.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=130,slow=9.9,SNR=2.0						
PDAR				LR	LR	17 02 08.6	
	comp=Z,109nm,18.2s,baz=3.0,slow=40						
ULM	**Lac du Bonnet**	**43.18**	**348**	P	**P**	**16 42 53.4**	**-1.1**
	comp=Z,5.7nm,0.9s,baz=155,slow=8.7,SNR=10						
ULM	**Lac du Bonnet**	**43.18**	**348**	P	**P**	**16 42 53.7**	**-0.9**
NVAR	**Mina Array Bea**	**43.72**	**319**	P	**P**	**16 43 01.1**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=138,slow=7.1,SNR=5.5						
FCC	**Fort Churchill**	**51.06**	**353**	P	**P**	**16 43 55.0**	**-0.9**
PGC	**Sidney**	**52.67**	**327**	P	**P**	**16 44 07.6**	**-0.4**
PGC				IAmb	IAmb	16 44 30.6	
	comp=Z,11nm,1.4s						
YKA	**Yellowknife Ar**	**58.79**	**343**	P	**P**	**16 44 51.4**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=135,slow=7.9,SNR=22						
RES	**Resolute Bay**	**66.70**	**357**	P	**P**	**16 45 44.0**	**-0.3**
RES				IAmb	IAmb	16 45 46.5	
	comp=Z,7.7nm,1.5s						
INK	**Inuvik**	**68.48**	**342**	P	**P**	**16 45 56.3**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=111,slow=5.9,SNR=5.0						
BCAR	**Beaver Creek A**	**68.84**	**335**	P	**P**	**16 45 56.3**	**-1.9**
SUMG	**Summit**	**69.55**	**13**	P	**P**	**16 46 02.2**	**-0.6**
SUMG	**Summit**	**69.55**	**13**	*i* P	**P**	**16 46 02.1**	**-0.6**
	comp=Z,24nm,1.1s						
SUMG	**Summit**	**69.55**	**13**	*i* P	**P**	**16 46 02.1**	**-0.6**
SUMG				IAmb	IAmb	16 46 03.1	
	comp=Z,24nm,1.1s						
IL31		**71.58**	**336**	P	**P**	**16 46 14.9**	**+0.1**
IL31				IAmb	IAmb	16 46 23.9	
	comp=Z,5.5nm,1.3s						
ILAR	**Eielson Array**	**71.58**	**336**	P	**P**	**16 46 15.3**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=112,slow=4.4,SNR=12						
ILAR	**Eielson Array**	**71.58**	**336**	P	**P**	**16 46 15.2**	**+0.4**

PPLA	Purkeypile	73.25	333	P	P	16 46 25.2	+0.2
IMAR	Indian Mountai	74.69	336	P	P	16 46 32.7	-0.5
SDPT	Sand Point	76.12	325	P	P	16 46 41.3	-0.3
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.7s,baz=284,slow=5.8,SNR=3.6	82.97	78	P	P	16 47 20.1	+0.4
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.8s	82.97	78	IAmb	IAmb	16 47 21.0	
ASAR	Alice Springs comp=Z,0.2nm,0.8s,baz=120,slow=3.2,SNR=1.5	141.57	242	PKhKP	PKPpre	16 54 20.7	
CMAR	Chiang Mai Arr comp=Z,0.9nm,1.0s,baz=354,slow=3.0,SNR=4.2	153.34	356	PKPbc	PKiKP	16 54 53.8	+0.6

MAN 11 16:37:05.3, 11°.65N×125°.91E, h10^{km}, mb4.7, ML3.6, MS3.5, Samar

*IDC **11** 16:37:19.5±3.5, 11°.18N×125°.60E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.1/50, mbtmp3.3/3, Error ellipse: s-maj=274.0km s-min=28.0km az=65.0*
*MAN **11** 16:37:22.4, 11°.38N×125°.94E, h1^{km}, mb4.4, ML3.2, MS3.0*
ISC 11 16:37:20.4±2.3, **11°.59N**±0°.08×**126°.07E**±0°.09, **h12**^{km}±12^{km}, **n9**, σ**1ˢ.20**/15, **mb3.3**/3, **2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.61	271	*e*P	Pg	16 37 32.3	-0.1
BESP				*e*S	Sg	16 37 40.3	-0.3
OCLP	Ormoc	1.52	250	*e*P	Pn	16 37 47.0	-0.6
OCLP				*e*S	Sn	16 38 08.2	+0.8
MSLP	Maasin	1.87	219	*e*P	Pn	16 37 52.8	+0.5
MSLP				*e*S	Sg	16 38 21.0	+0.4
LLP	Lapu-Lapu	2.42	239	⇓*e*P	Pn	16 38 01.5	+1.6
LLP				*i* S	Sb	16 38 32.9	-0.9
BUTP	Butuan	2.64	190	*e*P	Pn	16 38 04.0	+1.1
BUTP				*e*S	Sn	16 38 35.0	+0.2
CGP	Cagayan de Oro	3.39	204	⇓*e*P	Pn	16 38 14.8	+1.5
CGP				*e*S	Sn	16 38 53.0	-0.4
WRA	Warramunga Arr 0.2nm,0.6s,baz=344,slow=8.8,SNR=1.4	32.37	165	P	P	16 43 48.2	-1.9
ASAR	Alice Springs 0.2nm,0.5s,baz=351,slow=7.4,SNR=8.8	35.87	168	P	P	16 44 19.1	-1.4
MKAR	Makanchi Array 0.4nm,0.7s,baz=129,slow=7.0,SNR=5.1	50.87	322	P	P	16 46 22.4	+1.2

*SOME **11** 16:45:19.8, 41°.17N×74°.00E, h5^{km}*
*KRNET **11** 16:45:20.0±0.1, 41°.19N×73°.97E, h21^{km}, mb2.8*
*NNC **11** 16:45:22.4±1.8, 41°.26N×73°.83E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=15.2km s-min=8.6km az=157.0*
*KNET **11** 16:45:23.3±0.6, 41°.34N×74°.06E, h2^{km}±3^{km}, ml2.2, Error ellipse: s-maj=5.1km s-min=3.5km az=71.0*
ISC 11 16:45:20.3±1.2, **41°.17N**±0°.03×**73°.99E**±0°.02, **h2**^{km}±10^{km}, **n49**, σ**1ˢ.06**/84, **36C-22D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral baz=22	0.73	20	⇑*i*P	Pg	16 45 33.9	-0.5
ARLS	baz=22			⇑*i*S	Sg	16 45 43.6	-0.3
ARSB	Arslanbob baz=80	0.78	282	⇑*i*P	Pg	16 45 34.5	-0.7
ARSB	baz=80			⇑*i*S	Sg	16 45 45.0	-0.3
AML	Almayashu baz=48	0.99	347	⇑*i*P	Pg	16 45 38.5	-0.8
AML	baz=48			⇑*i*S	Sg	16 45 51.5	-0.6
AML	Almayashu 67nm,0.2s,SNR=194	0.99	347	P	Pg	16 45 39.2	0.0
AML	113nm,0.3s			⇓S	Sb	16 45 52.8	-1.3
OHH	Osh baz=34	1.12	235	⇑*i*P	Pg	16 45 40.7	-1.0
OHH	baz=34			⇑*i*S	Sg	16 45 56.4	+0.1
UCH	Uchtor baz=21	1.13	20	⇓*i*P	Pg	16 45 41.0	-0.9
UCH	baz=21			⇓*i*S	Sg	16 45 55.8	-0.8
UCH	Uchtor 13nm,0.1s,SNR=39	1.13	20	⇓P	Pg	16 45 41.8	-0.1
UCH	24nm,0.2s			⇓S	Sb	16 45 57.2	-0.9
EKS2	Erkin-Say baz=54	1.50	354	⇑*i*P	Pn	16 45 47.1	-1.3
EKS2	baz=54			⇑*i*S	Sb	16 46 07.1	-1.5
EKS2	Erkin-Say 9.9nm,0.2s,SNR=5.2	1.50	354	⇓P	Pn	16 45 48.5	+0.1
EKS2	8.2nm,0.1s			⇑S	Sn	16 46 08.4	-0.2
AAK	Ala-Archa baz=15	1.52	14	⇑*i*P	Pn	16 45 47.6	-1.0
AAK	baz=15			⇑*i*S	Sb	16 46 07.7	-1.3
AAK	Ala-Archa 7.5nm,0.2s,SNR=15	1.52	14	⇓P	Pn	16 45 48.6	+0.1
AAK	13nm,0.1s			⇑S	Sn	16 46 09.2	+0.2
AAK	Ala-Archa 3.5nm,0.3s	1.52	14	⇓P	Pn	16 45 48.7	+0.1
AAK	20nm,0.6s			⇑S	Sn	16 46 09.6	+0.5
KBK	Karagaybulak baz=26	1.65	25	⇓*e*P	Pn	16 45 49.9	-0.6
KBK	baz=26			⇓*i*S	Sn	16 46 11.8	-0.6
KBK	Karagaybulak 13nm,0.1s,SNR=32	1.65	25	⇑P	Pn	16 45 51.4	+0.9
KBK	29nm,0.2s			⇑S	Sg	16 46 14.2	+0.9
MRKS	Merke 29nm,0.2s	1.68	340	*e*P	Pg	16 45 53.2	+0.8
MRKS	86nm,0.2s			*e*S	Sg	16 46 17.6	+3.5
MRKS	Merke 29nm,0.2s	1.68	340	Pg	Pg	16 45 53.4	+1.0
FRU1	Bishkek baz=16	1.71	16	⇑*i*P	Pn	16 45 50.9	-0.3
FRU1	baz=16			⇑*i*S	Sb	16 46 13.4	-1.1
MNAS	Manas baz=20	1.73	320	⇓*i*P	Pn	16 45 50.9	-0.6
MNAS	baz=20			⇓*i*S	Sn	16 46 13.9	-0.3
CHMS	Chumysh baz=18	1.91	17	⇓*i*P	Pn	16 45 54.5	+0.5
CHMS	baz=18			⇓*i*S	Sb	16 46 19.4	-0.9
CHMS	Chumysh 8.8nm,0.2s,SNR=13	1.91	17	⇑P	Pb	16 45 56.6	+0.6
CHMS	17nm,0.3s			⇑S	Sg	16 46 21.4	-0.4
BOOM	Boomskoye usch baz=48	1.96	47	⇑*i*P	Pn	16 45 55.6	+0.8
BOOM	baz=48			⇑*i*S	Sb	16 46 21.2	-0.7
ULHL	Ulahol baz=57	2.00	57	⇓*i*P	Pn	16 45 56.1	+0.8
ULHL	baz=57			⇓*i*S	Sb	16 46 22.4	-0.5
ULHL	Ulahol 7.5nm,0.2s,SNR=27	2.00	57	⇓P	Pb	16 45 57.4	-0.1
TKM2	Tokmak 2 baz=34	2.12	34	⇑*i*P	Pn	16 45 57.5	+0.5
TKM2	baz=34			⇑*i*S	Sb	16 46 24.7	-1.7
TKM2	Tokmak 2 9.4nm,0.3s,SNR=29	2.12	34	⇑P	Pb	16 45 59.1	-0.5
TKM2	Tokmak 2 24nm,0.9s	2.12	34	⇑P	Pb	16 45 59.5	-0.1
TKM2	16nm,0.6s			⇑S	Sg	16 46 27.6	-0.8
USP	Ospenovka baz=11	2.13	10	⇑*i*P	Pn	16 45 57.5	+0.5
USP	baz=11			⇑*i*S	Sb	16 46 24.9	-1.7
USP	Ospenovka 19nm,0.2s,SNR=25	2.13	10	⇓P	Pb	16 46 00.1	+0.4
TRKS	Terek-Say baz=78	2.18	280	⇓*i*P	Pn	16 45 57.4	-0.3
TRKS	baz=78			⇓*i*S	Sn	16 46 25.1	-0.3
DRK	Karamyk baz=25	2.38	226	⇓*i*P	Pn	16 46 01.1	+0.5
DRK	baz=25			⇓*i*S	Sn	16 46 31.1	+0.6
KST	Kastek 11nm,0.4s	2.38	37	*e*P	Pb	16 46 05.2	+1.3
KST	26nm,0.6s			*e*S	Sg	16 46 38.1	+1.4
KST	Kastek 11nm,0.4s	2.38	37	Pg	Pb	16 46 05.3	+1.3
KST	26nm,0.6s			Lg	Lg	16 46 38.3	
DGS	Degeres 21nm,0.4s	2.46	32	*e*P	Pb	16 46 06.2	+0.9
DGS	35nm,0.4s			*e*S	Sg	16 46 39.4	+0.2
DGS	Degeres 21nm,0.4s	2.46	32	Pg	Pb	16 46 06.4	+1.1
DGS	35nm,0.4s			Lg	Lg	16 46 39.4	
DZA	Taraz	2.63	312	Pg	Pb	16 46 10.0	+1.9
DZA				Lg	Lg	16 46 45.8	
BTK	Batken baz=46	2.66	246	⇑*e*P	Pn	16 46 04.9	+0.6
BTK	baz=46			⇑*i*S	Sn	16 46 37.6	+0.5
MTBS	Maitube 11nm,0.2s	2.67	42	Pg	Pb	16 46 09.4	+0.6
MTBS	19nm,0.3s			Lg	Lg	16 46 44.5	
TNSS	Tian-Shan 2.0nm,0.5s	2.88	49	*e*P	Pb	16 46 13.4	+0.7
TNSS	7.3nm,0.4s			*e*S	Sg	16 46 52.1	-0.9
MDOK	Medeo 2.0nm,0.4s	3.02	48	*e*P	Pb	16 46 15.7	+0.8
MDOK	9.6nm,0.6s			*e*S	Sg	16 46 56.0	-1.3
MDOK	Medeo 5.0nm,0.6s	3.02	48	Pn	Pb	16 46 15.0	+0.1
MDOK	12nm,0.8s			⇑Sn	Sg	16 46 55.0	-2.3
KOTS	Kotyrbulak 7.6nm,0.4s	3.10	47	*e*P	Pb	16 46 17.6	+1.3
KOTS	32nm,0.6s			*e*S	Sg	16 46 59.5	-0.5
IUG	Iuzhnay 3.2nm,0.2s	3.13	290	*e*P	Pb	16 46 17.6	+1.0
IUG	44nm,0.5s			*e*S	Sg	16 46 59.6	-1.1
KTBS	Karatobe 2.5nm,0.4s	3.23	37	Pg	Pg	16 46 24.5	+2.4
KUU	Kurty 2.9nm,0.2s	3.23	32	*e*P	Pb	16 46 19.0	+0.6
KUU	12nm,0.6s			*e*S	Sg	16 47 01.7	-2.2
KUU	Kurty 3.4nm,0.2s	3.23	32	Pg	Pb	16 46 19.1	+0.8
KUU	12nm,0.5s			Lg	Lg	16 47 01.9	
KK31	Karatay Array 1.0nm,0.2s,baz=127,slow=16,SNR=63	3.23	308	Pg	Pb	16 46 18.8	+0.4
KK31	2.5nm,0.3s,baz=126,slow=28			⇑Lg	Lg	16 47 01.9	
BTLS	Baital 1.4nm,0.1s	3.87	1	Pg	Pb	16 46 31.0	+1.7
BTLS	4.2nm,0.2s			Lg	Lg	16 47 20.6	
ARXS	Arharly 6.6nm,0.4s	4.15	42	Pg	Pb	16 46 36.6	+2.5
ARXS	8.7nm,0.3s			Lg	Lg	16 47 30.1	
PDGK	Podgornoye 3.5nm,1.1s	4.62	60	⇑Pn	Pb	16 46 42.1	+0.1
PDGK	6.4nm,0.7s			⇑Lg	Lg	16 47 43.0	

*NEIC **11** 17:04:07.9±1.0, 17°.85S±0°.10×174°.7W±0°.2, h81^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=25.4km s-min=12.7km az=106.0*
*IDC **11** 17:04:08.8±3.0, 17°.80S×174°.57W, h95^{km}±28^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.8/38, mbtmp4.1/10, Error ellipse: s-maj=42.0km s-min=15.2km az=141.0*
ISC 11 17:04:09.2±0.7, **17°.8S**±0°.1×**174°.4W**±0°.1, **h100**^{km}, **n29**, σ**1ˢ.22**/27, **mb4.3**/13, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu 6.5nm,0.3s,baz=206,slow=3.3,SNR=10	4.60	34	P	Pn	17 05 17.6	+0.9
AFI	38nm,0.3s,baz=15,slow=24,SNR=14			S	Sn	17 06 06.7	-2.4
AFI	Afiamalu	4.60	34	Pn	Pn	17 05 17.4	+0.8
AFI	Afiamalu	4.60	34	P	Pn	17 05 17.8	+1.1
MSVF	Nonsavu 2.0nm,0.3s,baz=89,slow=13,SNR=16	7.19	269	P	Pn	17 05 60.0	+8.2
MSVF	0.8nm,0.3s,baz=69,slow=21,SNR=1.0			S	Sn	17 07 13.7	+1.7
URZ	Urewera 3.0nm,0.3s,baz=264,slow=1.2,SNR=6.4	21.71	198	P	P	17 08 51.2	-0.9
CTA	Charters Tower 1.1nm,0.4s,baz=83,slow=9.4,SNR=1.3	37.23	260	P	P	17 11 10.0	-1.3
CTAO	Charters Tower	37.23	260	P	P	17 11 10.7	-0.6
WR0	Warramunga Arr	48.21	259	P	P	17 12 39.0	-1.1
WB0	Warramunga Arr	48.37	259	P	P	17 12 40.4	-0.9
WB0	comp=Z,5.3nm,1.1s			IAmb	IAmb	17 12 54.1	
WB2	Warramunga Arr	48.39	259	P	P	17 12 40.0	-1.4
WB2	comp=Z,5.4nm,0.9s			IAmb	IAmb	17 12 40.5	
WRAB	Tennant Creek	48.39	259	P	P	17 12 39.9	-1.6
WRAB	comp=Z,5.7nm,1.1s			IAmb	IAmb	17 12 43.7	
WRA	Warramunga Arr comp=Z,2.5nm,0.4s,baz=98,slow=7.3,SNR=54	48.40	259	P	P	17 12 40.5	-1.1
WRA	Warramunga Arr	48.40	259	P	P	17 12 40.1	-1.5
AS31	Alice Springs	48.49	254	P	P	17 12 41.3	-1.0
ASAR	Alice Springs comp=Z,11nm,0.5s,baz=91,slow=7.8,SNR=346	48.49	254	P	P	17 12 41.2	-1.0
ASAR	Alice Springs	48.49	254	P	P	17 12 40.5	-1.7
FITZ	Fitzroy Crossi comp=Z,1.7nm,0.5s,baz=80,slow=6.0,SNR=2.2	56.81	260	P	P	17 13 42.2	-1.3
VNDA	Vanda	60.93	186	P	P	17 14 12.3	+1.2
MJAR	Matsushiro Arr	70.14	321	P	P	17 15 11.7	+0.6
QSPA	South Pole Qui	72.28	180	P	P	17 15 23.7	0.0
QSPA	comp=Z,4.1nm,0.8s			IAmb	IAmb	17 15 24.6	
NVAR	Mina Array Bea comp=Z,1.7nm,0.8s,baz=228,slow=8.9,SNR=14	76.73	42	P	P	17 15 51.4	+1.5
PDAR	Pinedale Array comp=Z,0.3nm,0.6s,baz=176,slow=2.4,SNR=4.3	84.67	42	P	P	17 16 32.5	+0.4
H03S2	Juan Fernandez baz=249,slow=75,SNR=10	84.69	124	T	T	18 49 20.3	
H03S1	Juan Fernandez baz=249,slow=75,SNR=11	84.71	124	T	T	18 49 21.5	
H03S3	Juan Fernandez baz=249,slow=75,SNR=12	84.71	124	T	T	18 49 30.7	
ILAR	Eielson Array comp=Z,0.5nm,0.5s,baz=228,slow=6.2,SNR=13	84.95	11	P	P	17 16 32.6	-0.1
YKA	Yellowknife Ar comp=Z,0.1nm,0.4s,baz=232,slow=3.9,SNR=3.6	92.65	24	P	P	17 17 09.6	+0.3
ARCES	ARCESS Array B comp=Z,3.0nm,1.0s,baz=318,slow=3.3,SNR=4.3	126.81	351	PKP	PKPdf	17 22 59.9	-0.7
GERES	GERESS Array B comp=Z,0.5nm,0.6s,baz=27,slow=4.7,SNR=1.8	148.32	350	PKPbc	PKPbc	17 23 44.2	+0.2

IDC 11 17:17:34.7±2.8, **2°.11N**×**127°.32E**, **h0**^{km}, **mb3.2**/3, **mb1 3.5**/3, **mb1mx3.2**/45, **mbtmp3.3**/3, **Error ellipse: s-maj=236.3km s-min=29.1km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.3nm,0.4s,baz=341,slow=11,SNR=1.7	22.97	163	P	P	17 22 39.8	-1.3
ASAR	Alice Springs 0.4nm,0.7s,baz=343,slow=9.0,SNR=5.2	26.41	166	P	P	17 23 14.2	+0.9
MKAR	Makanchi Array 0.2nm,0.5s,baz=110,slow=7.6,SNR=2.5	59.21	326	P	P	17 27 37.8	-0.1

*IDC **11** 17:33:32.1±1.0, 13°.11N×143°.54E, h215^{km}±13^{km}, mb2.9/6, mb1 3.2/6, mb1mx2.9/50, mbtmp3.4/6, Error ellipse: s-maj=29.3km s-min=17.4km az=102.0*
ISC 11 17:33:31.2±0.9, **13°.1N**±0°.2×**143°.3E**±0°.1, **h200**^{km}, **n7**, σ**0ˢ.98**/8, **mb3.1**/6, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 123nm,0.3s,baz=225,slow=11,SNR=50	1.56	73	P	Pn	17 34 06.1	+0.8
GUMO	22nm,0.3s,baz=218,slow=12,SNR=1.9			S	Sn	17 34 32.7	+0.8
WRA	Warramunga Arr 0.7nm,0.6s,baz=17,slow=9.5,SNR=9.5	34.04	195	P	P	17 39 56.2	-0.3
ASAR	Alice Springs 0.3nm,0.7s,baz=11,slow=10.0,SNR=6.3	37.72	194	P	P	17 40 27.6	-0.2
CMAR	Chiang Mai Arr 0.4nm,0.4s,baz=78,slow=6.4,SNR=8.2	42.97	283	P	P	17 41 11.8	+0.9
MKAR	Makanchi Array 0.2nm,0.6s,baz=86,slow=7.7,SNR=2.3	60.79	316	P	P	17 43 22.6	+0.4
ILAR	Eielson Array 0.2nm,0.5s,baz=246,slow=6.3,SNR=4.9	69.62	25	P	P	17 44 17.3	-1.2
YKA	Yellowknife Ar 0.1nm,0.3s,baz=287,slow=5.1,SNR=2.1	83.95	27	P	P	17 45 37.6	-1.0

*IDC **11** 17:53:46.3±1.0, 8°.64S×147°.77E, h93^{km}±7^{km}, mb3.9/11, mb1 4.0/13, mb1mx3.9/33, mbtmp4.2/13, MS3.4/2, Ms1 3.4/2, ms1mx2.7/40, Error ellipse: s-maj=22.8km s-min=13.5km az=104.0*
*DJA **11** 17:53:47.0±0.6, 8°S±8°×14°8E±°, h106^{km}±7^{km}, M4.5/9, mB5.1/3, mb4.2/9, MLv4.7/3, Mw(mB)4.4/3*
ISC 11 17:53:47.5±0.6, **8°.56S**±0°.09×**147°.7E**±0°.1, **h100**^{km}, **n20**, σ**1ˢ.47**/22, **mb4.2**/11, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 495nm,0.3s,baz=16,slow=4.3,SNR=2121	1.00	213	P	Pn	17 54 07.7	-0.3
PMG	1μm,0.3s,baz=163,slow=21,SNR=86			S	Sn	17 54 21.0	-2.4
PMG	comp=Z,129nm,20.7s,baz=194,slow=58			LR	LR	17 54 43.1	
KRVT	Keravat (AS076 46nm,0.3s,baz=360,slow=1.0,SNR=12	6.02	46	P	Pn	17 55 14.7	+0.6
CTA	Charters Tower 3.1nm,0.3s,baz=1.3,slow=13,SNR=47	11.55	187	P	Pn	17 56 31.1	+1.9
WRA	Warramunga Arr 0.4nm,0.3s,baz=50,slow=12,SNR=8.2	17.19	227	P	Pn	17 57 40.9	-0.7
WRA	1.3nm,0.3s,baz=54,slow=11,SNR=6.0			pP	pP	17 58 04.7	+4.3
WRA	0.1nm,0.3s,baz=48,slow=1.9,SNR=4.8			ScP	ScP	18 05 47.0	+0.9
ASAR	Alice Springs 0.0nm,0.3s,baz=57,slow=3.4,SNR=3.8	20.01	220	ScP	ScP	18 05 52.4	+0.2
DZM	Mont Dzumac comp=Z,108nm,20.3s,baz=12,slow=31	22.47	129	LR	LR	18 05 20.3	
FITZ	Fitzroy Crossi 1.8nm,0.3s,baz=60,slow=12,SNR=7.9	23.46	244	P	P	17 58 47.3	-1.0
STKA	Stephens Creek 1.3nm,0.5s,baz=343,slow=13,SNR=5.9	23.89	193	P	P	17 58 51.6	-0.3
MJAR	Matsushiro Arr 3.2nm,0.8s,baz=178,slow=8.5,SNR=5.7	45.75	349	P	P	18 01 58.3	-0.6
MJAR	comp=Z,33nm,19.7s,baz=335,slow=35			LR	LR	18 20 42.2	
KSRS	Korea Array 2.8nm,0.7s,baz=152,slow=8.0,SNR=8.4	49.38	339	P	P	18 02 27.4	+0.4
CMAR	Chiang Mai Arr 1.8nm,0.7s,baz=122,slow=5.3,SNR=16	55.10	299	P	P	18 03 11.0	+1.3
PETK	Petropavlovsk- 2.3nm,0.8s,baz=149,slow=6.9,SNR=5.9	62.02	7	P	P	18 03 57.6	+0.5
SONM	Songino Array 1.1nm,0.8s,baz=152,slow=5.2,SNR=7.8	66.98	331	P	P	18 04 29.7	0.0
VNDA	Vanda 1.4nm,0.6s,baz=327,slow=6.9,SNR=12	69.33	177	P	P	18 04 43.2	-0.5
MKAR	Makanchi Array 1.2nm,0.6s,baz=104,slow=6.7,SNR=17	79.92	321	P	P	18 05 45.8	+0.3
ZALV	Zalesovo Beam 3.4nm,0.5s,baz=116,slow=4.8,SNR=21	81.55	328	P	P	18 05 53.0	-1.0
ILAR	Eielson Array 1.6nm,0.7s,baz=249,slow=4.9,SNR=16	87.55	23	P	P	18 06 22.0	-1.9
TORD	Torodi Ar. Bea 0.9nm,0.6s,baz=74,slow=3.5,SNR=4.5	146.34	281	PKPbc	PKPbc	18 13 17.4	-0.4
BDFB	Brasilia 5.5nm,0.7s,baz=195,slow=6.4,SNR=6.4	151.34	147	PKPbc	PKPbc	18 13 29.3	-1.5
DBIC	Dimbokro 0.7nm,0.5s,baz=144,slow=8.7,SNR=3.5	152.75	268	PKPbc	PKPbc	18 13 33.6	-0.3

*IDC **11** 17:54:18.5±1.3, 5°.94S×128°.80E, h296^{km}±18^{km}, mb3.1/1, mb1 3.5/6, mb1mx3.1/37, mbtmp4.1/6, Error ellipse: s-maj=30.4km s-min=13.4km az=100.0*
ISC 11 17:54:17.7±0.9, **6°.04S**±0°.08×**128°.8E**±0°.1, **h264**^{km}, **n6**, σ**2ˢ.02**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 0.8nm,0.3s,baz=250,slow=23,SNR=9.7	5.69	26	P	Pn	17 55 44.5	+2.0
SIJI	5.1nm,0.3s,baz=170,slow=23,SNR=26			S	S	17 56 50.7	+0.3
BATI	Baumata 9.1nm,0.3s,baz=94,slow=3.1,SNR=15	6.57	231	P	Pn	17 55 54.6	+1.3
BATI	3.2nm,0.3s,baz=56,slow=19,SNR=5.6			S	S	17 57 10.7	+0.7
FITZ	Fitzroy Crossi 0.5nm,0.3s,baz=25,slow=12,SNR=12	12.38	194	P	P	17 57 07.1	-0.6
FITZ	baz=32,slow=19,SNR=1.4			S	S	17 59 25.4	+2.0
WRA	Warramunga Arr 0.9nm,0.3s,baz=340,slow=12,SNR=35	14.82	159	P	P	17 57 34.8	-0.1
ASAR	Alice Springs 1.2nm,0.3s,baz=345,slow=12,SNR=183	18.19	165	P	P	17 58 12.1	+0.4
ASAR	0.1nm,0.3s,baz=343,slow=21,SNR=13			S	S	18 01 23.3	-2.7
MKAR	Makanchi Array 0.3nm,0.4s,baz=115,slow=8.9,SNR=9.9	66.79	327	P	P	18 04 37.9	-3.2

*IDC **11** 17:59:02.6±1.2, 19°.38S×177°.44W, h564^{km}±14^{km}, mb3.8/13, mb1 3.9/17, mb1mx3.7/33, mbtmp4.7/17, Error ellipse: s-maj=18.2km s-min=11.5km az=145.0*
*NEIC **11** 17:59:03.4±0.8, 19°.2S±0°.2×177°.6W±0°.1, h574^{km}±13^{km}, mb4.3/13, Error ellipse: s-maj=25.6km s-min=16.3km az=164.0*
ISC 11 17:59:01.3±0.5, **19°.42S**±0°.09×**177°.42W**±0°.08, **h550**^{km}, **n82**, σ**1ˢ.41**/87, **mb4.3**/21, **10C-11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 31nm,0.3s,baz=143,slow=7.4,SNR=166	4.62	291	P	P	18 00 31.5	+3.4
AFI	Afiamalu 10nm,0.3s,baz=14,slow=1.1,SNR=25	7.70	45	P	P	18 00 56.5	+0.3
AFI	3.9nm,0.3s,baz=138,slow=16,SNR=2.4			S	S	18 02 25.6	-4.7
AFI	Afiamalu	7.70	45	P	P	18 00 56.3	+0.1
AFI	Afiamalu	7.70	45	P	P	18 00 56.7	+0.5
FUNA	Funafuti	11.32	343	P	P	18 01 32.5	-0.4
DZM	Mont Dzumac 1.4nm,0.3s,baz=132,slow=21,SNR=16	15.32	257	P	P	18 02 16.8	+2.6
RAR	Rarotonga 0.8nm,0.3s,baz=230,slow=6.9,SNR=8.4	16.65	99	P	P	18 02 27.9	+1.1
RAR	Rarotonga	16.65	99	P	P	18 02 29.0	+2.1
URZ	Urewera 2.3nm,0.3s,baz=277,slow=1.3,SNR=12	19.36	193	P	P	18 02 51.7	+0.3
URZ	0.4nm,0.3s,baz=210,slow=20,SNR=1.8			S	S	18 05 51.6	-6.6
CAN	Canberra	33.57	235	P	P	18 04 56.9	+0.8
CAN	comp=Z,13nm,0.9s			IAmb	IAmb	18 04 57.6	
CTA	Charters Tower comp=Z,13nm,0.6s,baz=94,slow=9.9,SNR=20	34.16	263	P	P	18 05 01.8	+0.5
CTAO	Charters Tower	34.16	263	P	P	18 05 01.2	0.0
STKA	Stephens Creek comp=Z,6.7nm,0.5s,baz=97,slow=10,SNR=27	38.76	243	P	P	18 05 39.8	+0.9
STKA	Stephens Creek	38.76	243	P	P	18 05 39.6	+0.7
WR0	Warramunga Arr	45.11	261	P	P	18 06 28.5	-0.6
WB0	Warramunga Arr	45.27	261	P	P	18 06 29.9	-0.5
WB0	comp=Z,6.9nm,0.7s			IAmb	IAmb	18 06 31.1	
WB2	Warramunga Arr	45.29	261	P	P	18 06 30.0	-0.5
WB2	comp=Z,9.1nm,0.8s			IAmb	IAmb	18 06 31.3	
WRAB	Tennant Creek	45.29	261	P	P	18 06 29.7	-0.8
WRAB	comp=Z,6.8nm,0.6s			IAmb	IAmb	18 06 30.1	
WRA	Warramunga Arr comp=Z,5.4nm,0.4s,baz=98,slow=7.8,SNR=106	45.30	261	P	P	18 06 29.7	-0.8

WRA				PcP	PcP	18 07 58.3	-0.4
	comp=Z,1.5nm,0.5s,baz=95,slow=3.4,SNR=5.9						
WRA				S	S	18 12 26.8	-4.6
	comp=Z,0.6nm,0.9s,baz=93,slow=14,SNR=3.6						
WRA	Warramunga Arr	45.30	261	P	P	18 06 29.8	-0.8
AS31	Alice Springs	45.30	256	P	P	18 06 30.6	0.0
AS31				IAmb	IAmb	18 06 31.8	
	comp=Z,5.0nm,0.8s						
ASAR	Alice Springs	45.31	256	P	P	18 06 30.5	-0.1
	comp=Z,12nm,0.5s,baz=86,slow=8.2,SNR=275						
ASAR				PcP	PcP	18 07 58.4	-0.3
	comp=Z,2.8nm,0.6s,baz=106,slow=3.8,SNR=9.5						
ASAR				S	S	18 12 28.4	-3.1
	comp=Z,2.0nm,0.9s,baz=88,slow=15,SNR=13						
ASAR	Alice Springs	45.31	256	P	P	18 06 29.8	-0.8
SIJI	Sorong	53.50	284	P	P	18 07 30.8	-0.2
	comp=Z,37nm,0.7s,baz=110,slow=3.6,SNR=10						
FITZ	Fitzroy Crossi	53.72	261	P	P	18 07 32.4	-0.1
	comp=Z,8.7nm,0.5s,baz=75,slow=4.7,SNR=43						
SOEI	Soe	57.02	271	P	P	18 07 56.8	+1.2
BATI	Baumata	57.46	270	P	P	18 07 59.2	+0.6
	comp=Z,14nm,0.6s,baz=118,slow=3.1,SNR=5.7						
NWAO	Narrogin (SRO)	59.34	243	P	P	18 08 11.1	+0.1
MJAR	Matsushiro Arr	69.67	323	P	P	18 09 15.0	-1.0
	comp=Z,4.0nm,0.8s,baz=157,slow=5.9,SNR=9.4						
UGM	Wanagama	70.54	268	P	P	18 09 21.3	-0.4
QSPA	South Pole Qui	70.64	180		P	18 09 22.9	+1.4
QSPA				IAmb	IAmb	18 09 24.0	
	comp=Z,5.3nm,0.9s						
PETK	Petropavlovsk-	75.38	345	P	P	18 09 47.5	-1.0
	comp=Z,5.0nm,0.9s,baz=112,slow=7.3,SNR=8.7						
USRK	Ussuriysk Ar.	78.39	325	P	P	18 10 06.7	+1.6
	comp=Z,4.8nm,1.0s,baz=87,slow=7.8,SNR=5.8						
NVAR	Mina Array Bea	79.87	43	P	P	18 10 14.7	+1.3
	comp=Z,0.4nm,0.7s,baz=231,slow=9.4,SNR=4.1						
TXAR	Lajitas Array	86.02	57	P	P	18 10 45.9	+1.7
	comp=Z,0.1nm,0.6s,baz=224,slow=6.3,SNR=2.4						
ILAR	Eielson Array	87.15	13	P	P	18 10 47.5	-1.1
	comp=Z,0.5nm,0.6s,baz=226,slow=5.5,SNR=14						
SNAA	Sanae	89.07	178	P	P	18 10 58.1	+0.4
VNA3	Neumayer Olymp	89.17	176	P	P	18 10 58.6	+0.5
VNA2	Neumayer--Watz	89.62	177	P	P	18 11 01.0	+0.8
	baz=184,slow=4.0						
VNA1	Neumayer--Stat	89.85	176	P	P	18 11 01.0	-0.2
CMAR	Chiang Mai Arr	90.27	289	P	P	18 11 05.1	+0.9
	comp=Z,3.1nm,0.9s,baz=121,slow=3.0,SNR=21						
SONM	Songino Array	95.30	319	P	P	18 11 26.1	-0.6
	comp=Z,0.2nm,0.6s,baz=91,slow=5.3,SNR=2.5						
MKAR	Makanchi Array	110.86	314	PKiKP	PKiKP	18 16 30.3	-1.7
	comp=Z,0.6nm,0.5s,baz=151,slow=0.4,SNR=18						
ARCES	ARCESS Array B	127.96	350	PKP	PKPdf	18 17 03.5	-0.6
	comp=Z,3.3nm,1.0s,baz=26,slow=2.0,SNR=11						
FINES	FINESS Array B	134.89	344	PKP	PKPdf	18 17 17.4	0.0
	comp=Z,5.8nm,1.1s,baz=20,slow=4.4,SNR=3.7						
AKASG	Malin Array Be	142.33	332	PKhKP	PKPpre	18 17 26.6	
	comp=Z,1.4nm,0.4s,baz=41,slow=4.2,SNR=14						
SORM	Soroca	144.56	330	⇓P	PKPdf	18 17 34.3	-0.9
MILM	Milestii Mici	145.18	328	⇑P	PKPdf	18 17 36.8	+0.4
TLCR		146.34	326	⇓P	PKPbc	18 17 40.7	0.0
BURAR	Bucovina Array	146.38	332	⇓P	PKPbc	18 17 41.5	+0.6
BIZ	Bicaz	146.48	330	⇓P	PKPbc	18 17 41.6	+0.6
BR131	Keskin Array S	146.51	314	PKPbc	PKPbc	18 17 41.1	-0.5
BRTR	Keskin Array B	146.51	314	PKPbc	PKPbc	18 17 40.8	-0.8
	comp=Z,4.1nm,0.7s,baz=135,slow=4.8,SNR=18						
BRTR	Keskin Array B	146.51	314		PKPbc	18 17 41.0	-0.5
CFR	Carcaliu	146.71	326	⇓P	PKPbc	18 17 41.9	+0.2
TPGR	Topolog	146.77	326	⇓P	PKPbc	18 17 42.4	+0.5
ODBI	Odobesti	146.86	328	⇑P	PKPbc	18 17 42.7	+0.6
VRI	Vrincioaia	146.95	328	⇓P	PKPbc	18 17 41.9	-0.5
OSTC	Ostas	147.10	344	*e*PKP	PKPbc	18 17 43.0	+0.4
CLL	Collm	147.13	348	*i* PKPbc	PKPbc	18 17 42.5	-0.1
HARR	Harsova	147.14	326	⇓P	PKPbc	18 17 43.3	+0.5
TLBR	Topalu	147.18	325	⇑P	PKPbc	18 17 43.0	0.0
DPC	Dobruska-Polom	147.26	344	*e*PKP	PKPbc	18 17 43.1	0.0
DOPR	Dopca	147.53	330	⇑P	PKPbc	18 17 44.5	+0.6
MLR	Muntele Rosu	147.61	329	⇑P	PKPdf	18 17 40.7	+0.1
CJR	Cluj-Napoca	147.78	332	⇑P	PKPbc	18 17 44.8	+0.2
PRU	Pruhonice	148.04	345	*e*PKP	PKPbc	18 17 44.3	-0.7
VOIR		148.08	329	⇑P	PKPbc	18 17 45.0	-0.3
DRGR		148.10	333	⇑P	PKPbc	18 17 45.2	-0.2
ARR	Arges	148.33	330	⇑P	PKiKP	18 17 46.7	-0.5
LEF	Lefka	149.01	307	⇓P	PKPbc	18 17 46.7	-1.1
KHC	Kasperske Hory	149.07	346	*e*PKP	PKPbc	18 17 47.5	-0.1
KHC				*e*x	x	18 17 53.7	
GZR	Gura Zlata	149.17	332	⇓P	PKPbc	18 17 47.3	-0.7
GERES	GERESS Array B	149.31	346	PKPbc	PKPbc	18 17 47.8	-0.5
	comp=Z,2.1nm,0.6s,baz=33,slow=3.2,SNR=7.0						
BZS	Buzias	149.50	333	⇓P	PKPbc	18 17 48.2	-0.5
CONA	Conrad Observa	149.59	342	*e*P	PKPbc	18 17 49.2	+0.2
	comp=Z,5.1nm,0.7s						
SOKA	Soboth	150.96	342	*e*P	PKPbc	18 17 51.6	-0.6
	comp=Z,4.2nm,0.8s						
VTS	Vitosha	151.03	327	⇑P	PKPbc	18 17 49.7	-2.9
WATA	Walderalm	151.20	347	*e*P	PKPbc	18 17 52.3	-0.5
	comp=Z,3.2nm,0.5s						
SQTA	Sankt Quirin	151.39	348	*e*P	PKPbc	18 17 53.0	-0.3
	comp=Z,4.8nm,0.6s						
ABTA	Abfaltersbach	151.55	346	*i* P	PKPbc	18 17 52.7	-0.9
	comp=Z,7.4nm,0.6s						
FETA	Feichten	151.68	348	*i* P	PKPbc	18 17 53.8	-0.1
	comp=Z,6.7nm,0.9s						

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*IDC **11** 18:01:34.2±5.7, 23.°27S×66.°53W, h230^{km}±58^{km}, mb3.0/3, mb1 3.1/5, mb1mx3.0/18, mbtmp3.6/5, Error ellipse: s-maj=38.2km s-min=25.9km az=144.0*

ISC 11 18:01:30.9±1.1**, 23.°2S**±0.°2×**66.°4W**±0.°2**, h200**^{km}**, n6, σ0^{s}.77**/6**, mb3.3**/3**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	17.85	190	P	P	18 05 25.1	-0.1
	0.1nm,0.3s,baz=324,slow=14,SNR=3.1						
BDFB	Brasilia	18.87	70	P	Pn	18 05 39.5	+0.1
	0.3nm,0.3s,baz=238,slow=9.2,SNR=4.7						
TXAR	Lajitas Array	63.34	324	P	P	18 11 39.8	+0.8
	0.1nm,0.6s,baz=139,slow=8.4,SNR=1.4						
TORD	Torodi Ar. Bea	75.75	69	P	P	18 12 55.2	+0.1
	0.2nm,0.3s,baz=259,slow=6.9,SNR=1.6						
ULM	Lac du Bonnet	77.63	341	P	P	18 13 03.8	-1.0
	0.5nm,0.4s,baz=153,slow=4.5,SNR=1.3						
MKAR	Makanchi Array	145.54	39	PKPbc	PKPbc	18 20 45.9	+0.2
	0.6nm,0.7s,baz=287,slow=3.4,SNR=5.8						

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*IDC **11** 18:11:08.0±4.4, 1.°81N×128.°18E, h128^{km}±46^{km}, mb3.2/5, mb1 3.2/6, mb1mx3.1/31, mbtmp3.5/6, Error ellipse: s-maj=76.2km s-min=17.4km az=70.0*

ISC 11 18:11:08.7±1.0**, 1.°8N**±0.°2×**128.°2E**±0.°3**, h134**^{km}**, n6, σ0^{s}.55**/8**, mb3.4**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.04	131	P	Pn	18 12 09.4	+0.3
	0.8nm,0.3s,baz=73,slow=19,SNR=6.4						
SIJI				S	Sn	18 12 55.5	-0.5
	0.9nm,0.3s,baz=152,slow=24,SNR=1.9						
WRA	Warramunga Arr	22.44	165	P	P	18 15 56.5	-0.2
	0.4nm,0.3s,baz=344,slow=11,SNR=8.4						
ASAR	Alice Springs	25.93	168	P	P	18 16 28.6	0.0
	0.2nm,0.7s,baz=350,slow=7.3,SNR=7.1						
ASAR				PcP	PcP	18 19 53.8	-0.3
	0.1nm,0.4s,baz=350,slow=2.3,SNR=6.5						
STKA	Stephens Creek	35.83	160	P	P	18 17 55.9	+0.4
	0.5nm,0.4s,baz=336,slow=10,SNR=4.8						
SONM	Songino Array	49.58	341	P	P	18 19 46.8	+0.6
	0.4nm,0.6s,baz=154,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	59.97	325	P	P	18 21 00.3	-0.7
	1.2nm,0.6s,baz=115,slow=7.9,SNR=15						

IDC 11 18:13:31.4±7.1**, 16.°57S**×**15.°18W, h0**^{km}**, mb3.9**/4**, mb1 3.8**/4**, mb1mx3.6**/31**, mbtmp3.9**/4**, MS3.8**/8**, Ms1 3.7**/8**, ms1mx3.4**/38**, Error ellipse: s-maj=367.6km s-min=119.2km az=107.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.58	4	T	T	18 23 44.0	
	baz=178,slow=74,SNR=16						
H10S3	ASCENSION HYDR	7.58	4	T	T	18 23 44.5	
	baz=42,slow=74,SNR=30						
H10N1	ASCENSION HYDR	8.69	5	T	T	18 25 01.5	
	baz=181,slow=77,SNR=11						
H10N3	ASCENSION HYDR	8.70	4	T	T	18 25 01.2	
	baz=181,slow=77,SNR=19						
H10N2	ASCENSION HYDR	8.71	5	T	T	18 25 04.3	
	baz=181,slow=77,SNR=9.5						
RCBR	Riachuelo	22.93	295	LR	LR	18 25 34.3	
	comp=Z,83nm,20.9s,baz=101,slow=32						
DBIC	Dimbokro	25.25	25	P	P	18 18 59.7	+0.4
	3.4nm,0.9s,baz=173,slow=11,SNR=2.9						
DBIC				LR	LR	18 26 31.0	
	comp=Z,102nm,19.5s,baz=161,slow=31						
BDFB	Brasilia	31.54	267	LR	LR	18 30 27.3	
	comp=Z,187nm,21.2s,baz=105,slow=32						
TORD	Torodi Ar. Bea	33.91	30	P	P	18 20 15.8	-0.5
	1.7nm,0.9s,baz=209,slow=8.4,SNR=4.9						
TORD				LR	LR	18 31 59.4	
	comp=Z,170nm,18.2s,baz=175,slow=33						
BOSA	Boshof	39.03	115	LR	LR	18 34 24.7	
	comp=Z,103nm,18.2s,baz=293,slow=32						
CPUP	Villa Florida	40.26	249	LR	LR	18 36 55.0	
	comp=Z,109nm,18.5s,baz=46,slow=35						
PLCA	Paso Flores	53.25	231	LR	LR	18 44 13.0	
	comp=Z,98nm,18.5s,baz=156,slow=35						
ROSC	El Rosal	62.20	285	LR	LR	18 51 29.5	
	comp=Z,177nm,18.1s,baz=46,slow=37						
BRTR	Keskin Array B	72.14	38	P	P	18 24 58.4	+0.3
	1.1nm,1.1s,baz=214,slow=8.3,SNR=4.5						
AKASG	Malin Array Be	77.47	27	P	P	18 25 28.3	-0.2
	0.3nm,0.5s,baz=224,slow=5.2,SNR=1.6						

IDC 11 18:31:06.6±2.4**, 6.°51S**×**129.°84E, h0**^{km}**, mb3.3**/1**, mb1 3.5**/3**, mb1mx3.3**/36**, mbtmp3.3**/3**, ML3.5**/2**, MS3.0**/1**, Ms1 2.9**/1**, ms1mx2.6**/12**, Error ellipse: s-maj=148.5km s-min=32.1km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.05	162	Pn	Pn	18 34 26.2	-1.0
	0.2nm,0.3s,baz=344,slow=13,SNR=11						
WRA				Sn	Sn	18 36 52.7	-11
	0.7nm,0.3s,baz=342,slow=22,SNR=10						
ASAR	Alice Springs	17.50	168	P	P	18 35 13.0	-0.5
	0.1nm,0.3s,baz=350,slow=10,SNR=25						
ASAR				S	Sn	18 38 17.4	-11
	0.2nm,0.3s,baz=345,slow=12,SNR=5.7						
STKA	Stephens Creek	27.53	158	LR	LR	18 47 55.8	
	comp=Z,31nm,18.9s,baz=20,slow=37						
MKAR	Makanchi Array	67.73	327	P	P	18 42 06.0	0.0
	0.1nm,0.6s,baz=132,slow=8.2,SNR=4.4						

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*TAP **11** 18:33:30.4, 24.°66N×122.°25E, h6^{km}, ML2.7, C*

*JMA **11** 18:33:31.3, 24.°59N×122.°24E, h35^{km}±4^{km}, M2.3*

ISC 11 18:33:29.6±1.0**, 24.°65N**±0.°02×**122.°35E**±0.°02**, h13**^{km}±8^{km}**, n80, σ0^{s}.88**/145**, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.46	265	⇓*i*P	Pg	18 33 37.9	-0.8
	baz=261						
TWC				S	Sg	18 33 44.0	-0.9
	baz=261						
TWB1	Santiao Chiao	0.49	317	*i* P	Pb	18 33 39.7	-0.4
	baz=326						
TWB1				S	Sg	18 33 46.0	+0.2
	baz=326						
NTC	Toucheng	0.52	294	*e*P	Pg	18 33 39.6	-0.2
	baz=296						
NTC				*e*S	Sg	18 33 47.2	+0.5
	baz=296						
ENAH	Nanao	0.53	248	*i* P	Pg	18 33 39.6	-0.5
	baz=242						
ENAH				S	Sg	18 33 47.3	+0.1
	baz=242						
ILA	Ilan	0.56	282	*i* P	Pg	18 33 40.4	-0.3
	baz=282						
ILA				S	Sg	18 33 49.5	+1.4
	baz=282						
JYNG	Yonagunijimaku	0.57	110	P	Pn	18 33 43.9	+0.4
JYNG				*e*S	Sn	18 33 53.7	+0.9
TIPB	Shuangxi	0.58	304	*i* P	Pb	18 33 41.4	-0.3
	baz=296						
TIPB				*i* S	Sg	18 33 47.5	-1.2
	baz=296						
YOJ	Yonaguni jima	0.63	107	P	Pn	18 33 44.7	+0.5
YOJ				*e*S	Sn	18 33 55.4	+1.3
YOJ	Yonaguni jima	0.63	107	P	Pn	18 33 45.0	+0.8
	baz=106						
TWE	Neicheng	0.63	277	⇓*i*P	Pg	18 33 41.2	-0.7
	baz=275						
TWE				S	Sg	18 33 49.2	-1.0
	baz=275						
NWF	Wu-fen Shan	0.67	309	*i* P	Pn	18 33 44.9	0.0
	baz=303						
NWF				*i* S	Sb	18 33 53.3	+0.8
	baz=303						
WFSB	Wu-fen Shan	0.67	309	P	Pb	18 33 42.9	-0.3
	baz=303						
WFSB				S	Sg	18 33 52.4	+0.9
	baz=303						
ENTT	Nioudou	0.72	270	*i* P	Pb	18 33 43.6	-0.4
	baz=267						
ENTT				S	Sg	18 33 52.5	-0.5
	baz=267						
TNOU	National Taiwa	0.73	314	P	Pg	18 33 43.4	-0.4
	baz=308						
TNOU				S	Sg	18 33 52.8	-0.5
	baz=308						
NDT	Datong Townshi	0.77	267	P	Pb	18 33 44.0	-0.9
	baz=264						
NDT				S	Sb	18 33 53.8	-1.4
	baz=264						
TWA	Mucha	0.77	296	*i* P	Pb	18 33 44.4	-0.6
	baz=286						
TWA				*i* S	Sb	18 33 53.8	-1.6
	baz=286						
NWLT	Wulai	0.78	280	*e*P	Pb	18 33 44.0	-1.1
	baz=279						
NWLT				*e*S	Sb	18 33 54.7	-1.0
	baz=279						
NHDH	Xindian Distri	0.81	293	*e*P	Pn	18 33 45.9	-1.0
	baz=283						
NHDH				*e*S	Sb	18 33 54.8	-1.8
	baz=283						
NACB	Ninganchiao	0.84	236	⇓P	Pb	18 33 45.1	-0.9
	baz=230						
NACB				*e*S	Sb	18 33 56.5	-0.7
	baz=230						
TAP1	Taipei	0.85	298	*e*P	Pn	18 33 47.3	0.0
	baz=288						
TATO	Taipei	0.85	293	P	Pn	18 33 46.5	-0.8
	baz=285						
TATO				S	Sb	18 33 57.8	+0.2
	baz=285						
TAP	Taipei	0.86	297	*e*P	Pn	18 33 46.9	-0.6
	baz=290						
TAP				S	Sn	18 33 59.4	-0.5
	baz=290						
YM01	YM01	0.87	305	P	Pn	18 33 47.8	+0.2
	baz=307						
YM01				S	Sg	18 33 58.7	+0.9
	baz=307						
YM11	YM11	0.88	306	*e*P	Pg	18 33 46.4	-0.2
	baz=309						
YM11				*e*S	Sg	18 33 59.4	+1.3
	baz=309						
YM08	YM08	0.88	308	*e*P	Pn	18 33 48.0	+0.2
	baz=310						
YM08				*e*S	Sb	18 33 58.7	+0.3
	baz=310						
YM10	YM10	0.88	305	*e*P	Pn	18 33 47.4	-0.4
	baz=307						
YM10				*e*S	Sg	18 33 59.6	+1.4
	baz=307						
YM05	YM05	0.88	306	*e*P	Pn	18 33 47.8	0.0
	baz=308						
YM05				*e*S	Sb	18 33 58.9	+0.3
	baz=308						
YHNB	Yeheng	0.89	272	P	Pb	18 33 46.2	-0.8
	baz=277						
YHNB				S	Sb	18 33 57.3	-1.5
	baz=277						
TWD	Chiawan	0.89	231	P	Pn	18 33 48.1	+0.2
	baz=235						
TWD				S	Sn	18 34 00.8	+0.1
	baz=235						
YM04	YM04	0.90	304	P	Pn	18 33 47.4	-0.6
	baz=306						
YM04				S	Sg	18 33 59.8	+1.0
	baz=306						
NSK	Sanguang	0.91	272	⇑*i*P	Pb	18 33 46.8	-0.5
	baz=278						
NSK				*i* S	Sb	18 33 57.8	-1.5
	baz=278						
ETLH	Xiulin Townshi	0.91	241	P	Pb	18 33 47.1	-0.2
	baz=247						
ETLH				*e*S	Sg	18 34 00.7	+1.6
	baz=247						
NNSB	Datong	0.91	256	P	Pb	18 33 46.4	-1.0
	baz=252						
NNSB				S	Sb	18 33 58.7	-0.7
	baz=252						
NNSH	Datong	0.91	256	P	Pb	18 33 47.3	-0.1
	baz=253						
NNSH				S	Sb	18 33 58.4	-1.1
	baz=253						
NNS	Nan Shan	0.92	257	*i* P	Pb	18 33 46.2	-1.2
	baz=253						
NNS				S	Sb	18 33 58.2	-1.5
	baz=253						
ANP	Anpu	0.93	306	P	Pn	18 33 48.3	-0.1
	baz=307						
TWY	Chenhua	0.93	313	P	Pn	18 33 49.4	+1.0
	baz=316						
TWY				*i* S	Sn	18 34 01.2	-0.4
	baz=316						
TWS1	Kuangyinshan	0.96	298	P	Pg	18 33 49.2	+1.0
	baz=299						
TWS1				S	Sn	18 34 02.2	-0.2
	baz=299						
NTST	Danshui	0.97	302	P	Pg	18 33 50.1	+1.7
	baz=304						
NTST				S	Sn	18 34 02.2	-0.3
	baz=304						
NTY	Taoyuan	1.02	290	*e*S	Sb	18 34 02.6	+0.1
	baz=290						
FUSS	Fushou	1.09	249	P	Pn	18 33 50.1	-0.7
	baz=244						
FUSS				S	Sb	18 34 04.3	-0.3
	baz=244						
NCU	National Centr	1.11	287	S	Sg	18 34 07.0	+1.6
	baz=286						
NCUH	Zhongli	1.11	287	*e*P	Pg	18 33 51.8	+0.8
	baz=286						
NCUH				*e*S	Sn	18 34 06.5	+0.4
	baz=286						
WHF	Hehuan Shan	1.11	243	*i* P	Pn	18 33 50.1	-1.2
	baz=238						
WHF				S	Sb	18 34 04.1	-1.4
	baz=238						
TWT	Tachien	1.14	250	*e*P	Pg	18 33 52.0	+0.3
	baz=246						
TWT				S	Sn	18 34 07.5	+0.4
	baz=246						
TDCB	Techi	1.16	250	P	Pg	18 33 51.8	-0.1
	baz=246						
ESL	Shilin	1.18	226	P	Pg	18 33 52.7	+0.4
	baz=198						
ESL				S	Sg	18 34 09.6	+1.9
	baz=198						
LIOB	Emei	1.22	270	P	Pg	18 33 53.4	+0.3
	baz=267						
HSN1	Hsinchu	1.22	276	P	Pg	18 33 54.3	+1.2
	baz=263						
HSN1				S	Sg	18 34 10.3	+1.3
	baz=263						
CHGB	Renai	1.22	242	*e*P	Pb	18 33 52.8	0.0
	baz=237						
CHGB				*e*S	Sg	18 34 10.3	+1.1
	baz=237						
NSTT	Nanjuang	1.23	270	P	Pg	18 33 53.6	+0.3
	baz=256						
NSTT				S	Sb	18 34 09.8	+1.3
	baz=256						
SBCB	Hsinchu	1.25	277	*e*S	Sg	18 34 12.3	+2.2
	baz=275						
EGFH	Guangfu	1.29	221	*e*P	Pb	18 33 53.4	-0.3
	baz=196						
EGFH				*e*S	Sb	18 34 11.0	+0.8
	baz=196						
IRIF	Iriomote-Funau	1.29	104	P	Pg	18 33 55.2	+0.7
IRIF				*e*S	Sg	18 34 13.1	+1.8
WHP	Taichung City	1.33	254	P	Pg	18 33 55.0	-0.3
	baz=250						
WHP				S	Sb	18 34 12.4	+0.8
	baz=250						
NMLH	Miaoli	1.43	266	*e*P	Pg	18 33 57.5	+0.4
	baz=253						
NMLH				*e*S	Sb	18 34 16.0	+1.8
	baz=253						
HGSD	Ruisui	1.43	217	P	Pb	18 33 55.0	-1.1
	baz=194						
HGSD				*e*S	Sb	18 34 14.0	-0.2
	baz=194						
NSY	Sanyi	1.47	261	*e*P	Pg	18 33 57.6	-0.2
	baz=257						
TWQ1	Liyutan	1.47	259	P	Pg	18 33 58.0	+0.1
	baz=255						
TWQ1				S	Sb	18 34 17.2	+1.7
	baz=255						
EHY	Hungye	1.48	220	P	Pb	18 33 56.2	-0.7
	baz=197						
EHY				S	Sb	18 34 16.1	+0.5
	baz=197						
SSLB	Suanglung	1.54	236	P	Pb	18 33 58.2	+0.2
	baz=240						
SSLB				*e*S	Sb	18 34 19.0	+1.5
	baz=240						
TYC	Yuchr	1.55	242	P	Pg	18 33 59.6	+0.1
	baz=237						
TYC				*e*S	Sn	18 34 17.2	+0.2
	baz=237						
JKRS	Kuro-shima	1.56	105	P	Pg	18 33 59.4	-0.3
JKRS				S	Sg	18 34 20.2	+0.2
YULB	Yu-li	1.58	218	P	Pb	18 33 57.8	-0.9
	baz=212						
YULB				*e*S	Sn	18 34 17.9	+0.2
	baz=212						
TWF1	Yuli	1.61	217	P	Pb	18 33 58.4	-0.9
	baz=211						
TWF1				*e*S	Sn	18 34 18.6	+0.1
	baz=211						
JIJ	Ishigaki jima	1.66	99	P	Pg	18 34 00.1	-1.3
JIJ				S	Sg	18 34 21.6	-1.3
WHYT	Xinyi Township	1.67	236	*e*P	Pg	18 34 01.4	-0.3
	baz=231						
WJS	Zhushan	1.70	241	*e*P	Pg	18 34 02.2	0.0
	baz=215						
WJS				*e*S	Sg	18 34 25.5	+1.3
	baz=215						
WNT	Mingjian	1.71	244	P	Pg	18 34 02.9	+0.6
	baz=261						
WNT				*e*S	Sg	18 34 24.9	+0.4
	baz=261						
YUS	Yu-Shan	1.72	228	P	Pg	18 34 02.0	-0.7
	baz=223						
YUS				*e*S	Sb	18 34 23.5	+0.3
	baz=223						
JISG	Ishigakijimahi	1.78	92	P	Pg	18 34 02.2	-1.7
ALS	Alishan	1.81	232	P	Pb	18 34 02.8	-0.1
	baz=209						
ALS				S	Sb	18 34 26.2	+0.6
	baz=209						
CHN5	Tsauling	1.85	236	*e*P	Pb	18 34 04.2	+0.7
	baz=231						
CHN5				*e*S	Sg	18 34 28.8	-0.5
	baz=231						
ELDTW	Lidau	1.90	220	*e*P	Pn	18 34 01.7	-0.1
	baz=200						
EDH	Donghe	1.92	210	*e*S	Sn	18 34 25.3	-0.9
	baz=190						
CHN4	Tsaushan	2.06	232	P	Pb	18 34 07.2	+0.2
	baz=208						
CHN4				S	Sb	18 34 32.9	+0.3
	baz=208						
TPUB	Ta-pu	2.07	230	*e*P	Pb	18 34 07.0	-0.1
	baz=206						
TPUB				*e*S	Sb	18 34 33.9	+1.2
	baz=206						
STYT	Tauyuan	2.08	225	P	Pb	18 34 06.5	-0.8
	baz=204						
STYT				S	Sb	18 34 32.7	-0.3
	baz=204						
WTP	Ta-pu	2.12	229	*e*P	Pb	18 34 07.9	0.0
	baz=207						
SGST	Jiashian	2.25	226	*e*P	Pb	18 34 09.1	-1.0
	baz=205						

IDC 11 18:34:59.5±4.7,**20°.18S**×**66°.21E**,**h0^{km}**,**mb3.8**/6, **mb1 3.9**/6,**mb1mx3.6**/49,**mbtmp3.8**/6,**MS3.7**/8,**Ms1 3.7**/8, **ms1mx3.4**/42,**Error ellipse: s-maj=139.8km s-min=31.9km az=59.0,Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.86	27	T	T	18 52 18.8	
	baz=205,slow=76,SNR=69						
H08S2	Diego Garcia H	13.87	27	T	T	18 52 22.7	
	baz=205,slow=76,SNR=46						
H08S3	Diego Garcia H	13.88	27	T	T	18 52 18.4	
	baz=205,slow=76,SNR=66						
MATP	Matopo	35.32	263	LR	LR	18 54 29.2	
	comp=Z,90nm,18.5s,baz=92,slow=33						
LBTB	Lobatse	37.70	255	LR	LR	18 55 11.5	
	comp=Z,98nm,19.5s,baz=90,slow=32						
CMAR	Chiang Mai Arr	50.05	42	P	P	18 43 56.1	-0.2
	0.6nm,1.0s,baz=240,slow=7.2,SNR=3.1						
CMAR				LR	LR	19 01 12.9	
	comp=Z,91nm,21.3s,baz=289,slow=31						
FITZ	Fitzroy Crossi	55.92	99	LR	LR	19 07 48.0	
	comp=Z,50nm,18.4s,baz=300,slow=35						
ASAR	Alice Springs	62.37	107	P	P	18 45 24.6	0.0
	1.0nm,0.8s,baz=258,slow=6.9,SNR=10.0						
ASAR				LR	LR	19 09 35.3	
	comp=Z,73nm,19.0s,baz=288,slow=33						
WRA	Warramunga Arr	63.55	103	P	P	18 45 32.3	-0.1
	1.1nm,0.9s,baz=259,slow=6.4,SNR=5.8						
STKA	Stephens Creek	67.55	117	LR	LR	19 12 08.6	
	comp=Z,46nm,18.7s,baz=233,slow=33						
MKAR	Makanchi Array	68.22	12	P	P	18 46 01.5	-0.4
	0.4nm,0.8s,baz=207,slow=6.8,SNR=4.4						
DBIC	Dimbokro	74.74	283	LR	LR	19 17 26.1	
	comp=Z,83nm,19.1s,baz=12,slow=34						
ZALV	Zalesovo Beam	75.55	11	P	P	18 46 45.7	+0.1
	1.0nm,0.6s,baz=194,slow=5.6,SNR=5.4						
SONM	Songino Array	76.70	27	P	P	18 46 53.1	+0.6
	0.6nm,0.8s,baz=196,slow=10,SNR=5.0						
MJAR	Matsushiro Arr	88.25	50	LR	LR	19 28 50.4	
	comp=Z,37nm,18.2s,baz=260,slow=37						

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*IDC **11** 18:46:06.0±1.2,64°.70N×17°.54W,h0^{km},mb3.5/4, mb1 3.7/5,mb1mx3.3/51,mbtmp3.5/5,ML4.0/1,Error ellipse: s-maj=38.1km s-min=12.5km az=9.0*

*REY **11** 18:46:05.9,64°.66N×17°.40W,h4^{km}*

ISC 11 18:46:06.0±0.6,**64°.67N**±0°.02×**17°.37W**±0°.03,**h10^{km},n45,** σ**1^s.77**/65,**mb3.5**/4,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.12	1	P	Pg	18 46 08.9	-0.2
	baz=7.1						
IDYN				S	Sg	18 46 11.0	-0.3
	baz=7.1						
IHAM	Hamarinn	0.27	226	P	Pg	18 46 10.9	-0.6
	baz=225						
IHAM				S	Sg	18 46 15.3	+0.1
	baz=225						
IKVE	Kverkfjoll	0.30	87	P	Pb	18 46 11.8	-1.8
	baz=87						
ISKR	Skrokkalda	0.45	257	P	Pg	18 46 13.8	-1.0
	baz=257						
ISKR				S	Sg	18 46 20.5	-0.2
	baz=257						
IASK	Askja	0.50	38	P	Pb	18 46 15.2	-1.7
	baz=39						
IASK				S	Sb	18 46 22.3	-1.9
	baz=39						
IJOK	Jokulheimar	0.51	227	P	Pg	18 46 15.1	-0.8
	baz=226						
IJOK				S	Sg	18 46 21.9	-0.8
	baz=226						
IMKO	Mokollar	0.54	54	P	Pb	18 46 16.3	-1.3
	baz=55						
IMKO				S	Sb	18 46 24.4	-1.0
	baz=55						
IKSK	Karasker	0.64	142	P	Pg	18 46 17.4	-1.0
	baz=141						
IKSK				S	Sb	18 46 27.1	-1.2
	baz=141						
IIEY	Innrieyrar	0.66	210	P	Pg	18 46 17.7	-1.0
	baz=209						
IIEY				S	Sg	18 46 26.7	-0.6
	baz=209						
ISVA	Svartarkot	0.68	4	P	Pb	18 46 18.0	-1.8
	baz=5.3						
ISVA				S	Sb	18 46 27.1	-2.2
	baz=5.3						
IVSH	V-Sauoahnukur	0.72	78	P	Pb	18 46 19.1	-1.5
	baz=78						
IKAL	Kalfafell	0.73	191	P	Pg	18 46 19.1	-1.0
	baz=190						
IKAL				S	Sb	18 46 29.5	-1.4
	baz=190						
IADA	Aoalbol	0.85	64	P	Pb	18 46 21.1	-1.6
	baz=65						
IADA				S	Sb	18 46 33.2	-1.0
	baz=65						
IFAG	Fagurholsmyri	0.85	158	P	Pg	18 46 21.4	-1.0
	baz=157						
IFAG				S	Sb	18 46 33.5	-0.8
	baz=157						
IMEL	Melhnausar	0.96	18	P	Pg	18 46 22.8	-1.6
	baz=19						
IMEL				S	Sb	18 46 35.8	-1.6
	baz=19						
IREN	Reynihlio	1.00	11	P	Pg	18 46 23.6	-1.7
	baz=12						
IREN				S	Sb	18 46 37.1	-1.6
	baz=12						
IKVO	Krokottuvotn	1.07	11	P	Pg	18 46 24.5	-2.0
	baz=12						
IKVO				S	Sb	18 46 39.0	-1.7
	baz=12						
ISNB	Snabyli	1.08	211	P	Pb	18 46 25.1	-1.7
	baz=210						
ISNB				S	Sg	18 46 39.1	-1.7
	baz=210						
IGRS	Grimsstaoir	1.11	28	P	Pb	18 46 25.5	-1.8
	baz=28						
IGRS				S	Sb	18 46 40.1	-1.6
	baz=28						
IRJU	Rjupnafell	1.20	209	P	Pn	18 46 27.1	-1.6
	baz=208						
ISKI	Skildingahlsh	1.22	7	P	Pb	18 46 26.9	-2.1
	baz=7.3						
ISKI				S	Sb	18 46 42.9	-1.9
	baz=7.3						
IGHA	Grjothals	1.22	14	P	Pb	18 46 27.1	-2.0
	baz=14						
IMJO	Mjoaskard	1.24	235	P	Pn	18 46 27.8	-1.6
	baz=234						
IGRA	Granastaoir	1.26	356	P	Pn	18 46 27.5	-2.1
	baz=357						
IGRA				S	Sb	18 46 44.1	-1.9
	baz=357						
IGYG	Gygjarholskot	1.29	254	P	Pn	18 46 28.3	-1.7
	baz=254						
IDIM	Dimmadalss	1.31	8	P	Pn	18 46 28.6	-1.8
	baz=8.4						
IHVO	Lagu-Hvolar	1.32	210	P	Pn	18 46 29.0	-1.4
	baz=210						
IHLA	Hella	1.35	342	P	Pn	18 46 29.1	-1.7
	baz=343						
IHED	Heoinshofoi	1.42	1	P	Pn	18 46 30.1	-1.7
	baz=1.5						
IBRE	Brettingsstaoi	1.48	352	P	Pn	18 46 31.2	-1.4
	baz=352						
IGIL	Gilhagi	1.48	16	P	Pn	18 46 31.1	-1.5
	baz=17						
ISAU	Saurbar	1.49	244	P	Pn	18 46 31.2	-1.6
	baz=244						
ISIG	Siglufjorour	1.61	337	P	Pn	18 46 32.9	-1.5
	baz=338						
BORG	Borgarnes	1.70	275	Pg	Pn	18 46 34.0	-1.7
	10nm,0.3s,baz=100,slow=8.7,SNR=23						
BORG				Lg	Lg	18 46 58.5	
	4.5nm,0.3s,baz=33,slow=22,SNR=11						
SCO	Scoresbysund	6.10	345	*e*S	Sn	18 48 49.3	+3.6
SCO	Scoresbysund	6.10	345	*i* P	Pn	18 47 38.3	+2.4
SCO				*e*S	Sn	18 48 49.2	+3.6
SCO	Scoresbysund	6.10	345	*e*	Pn	18 47 33.1	-2.9
	baz=172,slow=6.9						
SCO				*i* P	Pn	18 47 37.0	+1.0
SCO				*e*S	Sn	18 48 53.1	+7.4
SCO	Scoresbysund	6.10	345	*e*S	Sn	18 48 49.3	+3.6
SCO	Scoresbysund	6.10	345	*i* P	Pn	18 47 38.4	+2.4
SCO	Scoresbysund	6.10	345	*i* P	Pn	18 47 38.4	+2.4
EKA	Eskdalemuir Ar	11.72	136	Pn	Pn	18 48 56.6	+3.6
	baz=322,slow=13,SNR=5.5						
ESDC	Sonseca Array	26.23	156	P	P	18 51 42.9	+2.1
	0.8nm,0.9s,baz=346,slow=10,SNR=4.3						
BRTR	Keskin Array B	38.43	105	P	P	18 53 28.9	+1.4
	1.0nm,0.9s,baz=337,slow=9.4,SNR=3.6						
MKAR	Makanchi Array	52.68	58	P	P	18 55 21.9	+1.9
	0.4nm,0.9s,baz=331,slow=8.4,SNR=2.5						
PDAR	Pinedale Array	53.23	293	P	P	18 55 25.8	+1.4
	0.5nm,0.8s,baz=69,slow=8.1,SNR=5.0						

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*DNK **11** 18:47:02.0±2.1,70°.54N×8°.95W,h82^{km}±999^{km},ML2.8*

BER 11 18:47:07.3±3.7,**71°.13N**×**8°.18W,h10^{km},ML2.5, ML2.8**(DNK),**4D,Confirmed Earthquake,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.13	220	⇓*i*P	Pg	18 47 10.3	+0.1
JNW				IAML		18 47 15.2	
	comp=Z,5µm,0.2s						
JNE	Jan Mayen East	0.14	196	⇓*i*P	Pg	18 47 10.0	-0.5
JMIC	Jan Mayen	0.18	217	⇓*i*P	Pg	18 47 10.6	-0.5
JMIC				*e*S	Sg	18 47 15.1	+1.5
JMI	Jan Mayen	0.27	223	⇓*i*P	Pg	18 47 12.3	-0.4
JMI				*e*S	Sb	18 47 17.9	-0.9
JMI				IAML		18 47 18.2	
	comp=Z,2µm,0.2s						
DBG	Daneborg	4.80	317	*i* P	Pn	18 48 16.0	-3.5
DBG				*i* S	Sn	18 49 07.1	-8.0
DBG				IAML		18 49 10.8	
	comp=Z,2.8nm,0.3s						
DBG	Daneborg	4.80	317	*i* P	Pn	18 48 16.1	-3.4
DBG	Daneborg	4.80	317	*i* P	Pn	18 48 16.0	-3.5
DBG				*i* S	Sn	18 49 07.1	-8.0
DBG				IAML		18 49 10.8	
	comp=Z,2.8nm,0.3s						
DAG	Danmarks Havn	6.36	338	*e*	Pn	18 48 36.2	-4.6
	baz=147,slow=18						
DAG				*i* P	Pn	18 48 37.0	-3.9
DAG				*i* S	Sn	18 49 45.5	-7.9
DAG				IAML		18 49 49.4	
	comp=Z,4.6nm,0.4s						
DAG	Danmarks Havn	6.36	338	*e*	Pn	18 48 36.2	-4.6
	baz=147,slow=18						
DAG				*i* P	Pn	18 48 37.0	-3.9
DAG				*i* S	Sn	18 49 45.5	-7.9
DAG				IAML		18 49 49.4	
	comp=Z,4.6nm,0.4s						
HSPB	Hornsund (broa	8.71	37	*e*P	Pn	18 49 10.3	-2.8
KONS	Konsvik	8.96	111	*e*P	Pn	18 49 10.5	-6.0
STOK	Stokkvaagen	9.04	112	*e*P	Pn	18 49 11.7	-5.9
KBS	Kingsbay	9.32	24	*e*P	Pn	18 49 17.7	-3.7
KBS				*e*S	Sn	18 50 56.4	-10
KBS				IAML		18 51 01.9	
	comp=Z,3.1nm,0.4s						
KBS	Kingsbay	9.32	24	*i* P	Pn	18 49 17.4	-3.9
KBS				*e*S	Sn	18 50 56.4	-10
KBS				IAML		18 51 01.9	
	comp=Z,3.1nm,0.4s						
SPA0	Spitsbergen Ar	9.50	31	*e*P	Pn	18 49 21.6	-2.3
NSS	Namsos	10.03	121	*e*P	Pn	18 49 24.9	-6.3
KIF	Kilpisjarvi	10.06	88	*e*P	Pn	18 49 25.2	-6.4
HOPEN	Hopen	10.56	45	*e*P	Pn	18 49 35.6	-2.7

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*IDC **11** 18:47:19.3±0.5,16°.88S×14°.37W,h0^{km},mb4.4/19, mb1 4.5/19,mb1mx4.3/37,mbtmp4.4/19,MS4.1/18, Ms1 4.1/18,ms1mx4.0/30,Error ellipse: s-maj=17.6km s-min=14.2km az=145.0*

*BJI **11** 18:47:20.0±0.0,16°.80S×14°.30W,h12^{km},mb5.2/1, Ms5.1/3,Ms7 4.9/3*

*NEIC **11** 18:47:21.0±1.9,16°.83S±0°.10×14°.5W±0°.1,h10^{km}±1^{km}, mb4.9/22,Error ellipse: s-maj=19.4km s-min=15.9km az=108.0*

*GCMT **11** 18:47:24.0±0.2,16°.98S±0°.02×14°.29W±0°.02,h13^{km}, MW4.9/115,Moment Tensor Solution. s30,c38; s115,c162; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.90±.16; $M_{\theta\theta}$0.56±.10; $M_{\phi\phi}$2.34±.11; $M_{r\theta}$-0.54±.27; $M_{\theta\phi}$-1.32±.06; $M_{\phi r}$-0.13±.23; Best double couple: $M_0$3.02500×10^{16} NP1:ϕ_s342.00000°,δ45.00000°, λ-75.00000°. NP2:ϕ_s142.00000°,δ47.00000°, λ-105.00000°. Principal axes: T 3.0460, Plg1.0000°, Azm242.0000°; N -0.0390, Plg11.0000°, Azm152.0000°; P -3.0040, Plg79.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 18:47:20.8±0.4,**16°.81S**±0°.08×**14°.37W**±0°.07,**h10^{km},n160,** σ**1^s.34**/145,**mb4.7**/32,**MS4.3**/23,**1D,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.81	358	T	T	18 57 25.4	
	baz=42,slow=74,SNR=39						
H10S3	ASCENSION HYDR	7.81	358	T	T	18 57 11.4	
	baz=178,slow=74,SNR=49						
ASCN	Ascension	8.82	0	Pn	Pn	18 49 25.6	-2.9
H10N1	ASCENSION HYDR	8.91	359	T	T	18 58 45.1	
	baz=180,slow=79,SNR=20						
H10N3	ASCENSION HYDR	8.91	359	T	T	18 58 45.0	
	baz=180,slow=79,SNR=56						
H10N2	ASCENSION HYDR	8.93	359	T	T	18 58 39.2	
	baz=180,slow=79,SNR=25						
RCBR	Riachuelo	23.74	295	P	P	18 52 33.6	+0.1
	26nm,1.0s,baz=119,slow=8.3,SNR=5.7						
RCBR				LR	LR	19 00 19.4	
	comp=Z,369nm,19.6s,baz=108,slow=33						
RCBR	Riachuelo	23.74	295	P	P	18 52 31.7	-1.8
RCBR				IAmb	IAmb	18 52 35.4	
	comp=Z,31nm,1.0s						
RCBR	Riachuelo	23.74	295	*e*P	P	18 52 33.8	+0.3
GDU01	Guandu, BA	24.50	274	*e*P	P	18 52 41.5	+0.8
LIC	Lamto	24.68	23	*e*P	P	18 52 43.4	+1.3
	comp=Z,101nm,1.3s						
KIC	Kosan Boka	24.91	23	*e*P	P	18 52 45.5	+1.2
	comp=Z,173nm,1.4s						
TIC	Toumodi	25.07	22	*e*P	P	18 52 46.8	+1.1
DBIC	Dimbokro	25.15	23	P	P	18 52 47.9	+1.5
	comp=Z,34nm,1.1s,baz=191,slow=12,SNR=18						
DBIC				LR	LR	19 00 17.1	
	comp=Z,426nm,19.8s,baz=177,slow=31						
DBIC	Dimbokro	25.15	23	P	P	18 52 45.5	-0.9
SJMB	Sao Joao De Ma	25.60	262	*e*P	P	18 52 50.2	-0.4
CAM01	Campos-RJ	26.21	255	*e*P	P	18 52 56.2	+0.2
DUB01	Friburgo-RJ	26.90	254	*e*P	P	18 53 02.4	0.0
VAS01	Vassouras-RJ	27.91	254	*e*P	P	18 53 11.3	-0.1
JANB	Januaria	28.83	269	*e*P	P	18 53 19.3	-0.4
ESAR	Angra dos Reis	28.91	253	*e*P	P	18 53 23.1	+2.9
SDBA	SAO DESIDERIO	29.85	274	*e*P	P	18 53 28.8	0.0
IPMB	Ipameri, GO	32.29	263	*e*P	P	18 53 50.1	-0.1
BDFB	Brasilia	32.31	267	P	P	18 53 50.9	+0.4
	comp=Z,5.3nm,0.9s,baz=66,slow=8.7,SNR=5.9						
BDFB				LR	LR	19 04 24.9	
	comp=Z,609nm,20.8s,baz=122,slow=32						
BDFB	Brasilia	32.31	267	P	P	18 53 48.3	-2.1
KOWA	Kowa	32.74	19	P	P	18 53 54.7	+0.6
KOWA				IAmb	IAmb	18 53 57.3	
	comp=Z,17nm,1.1s						
SMTB	Santa Maria do	33.30	280	*e*P	P	18 53 59.2	+0.2
TOA0	Torodi Ar. Sit	33.73	29	P	P	18 54 03.9	+1.1
TORD	Torodi Ar. Bea	33.73	29	P	P	18 54 03.1	+0.4
	comp=Z,22nm,1.0s,baz=213,slow=9.1,SNR=40						
TORD				LR	LR	19 05 54.4	
	comp=Z,716nm,18.1s,baz=205,slow=33						
TORD	Torodi Ar. Bea	33.73	29	P	P	18 54 03.2	+0.4
ARAG	Araguaiana, MT	35.93	266	*e*P	P	18 54 21.5	-0.3
BOSA	Boshof	38.23	115	P	P	18 54 41.5	+0.2
	comp=Z,5.3nm,1.1s,baz=288,slow=13,SNR=3.8						
BOSA				LR	LR	19 07 34.2	
	comp=Z,240nm,20.0s,baz=280,slow=32						
BOSA	Boshof	38.23	115	P	P	18 54 39.1	-2.2
PLTB	Pedras Altas	38.51	240	*e*P	P	18 54 43.5	-0.1
AQDB	Aquidauana	39.26	258	*e*P	P	18 54 50.1	+0.1
MATP	Matopo	40.70	102	P	P	18 55 00.9	-1.2
	comp=Z,5.8nm,1.0s,baz=292,slow=9.5,SNR=8.3						
CPUP	Villa Florida	40.90	249	P	P	18 55 04.0	+0.4
	comp=Z,2.6nm,0.8s,baz=90,slow=9.4,SNR=7.2						
CPUP				LR	LR	19 10 52.0	
	comp=Z,303nm,18.0s,baz=80,slow=35						
CPUP	Villa Florida	40.90	249	P	P	18 55 02.5	-1.0
NPGB	Novo Progresso	41.18	279	*e*P	P	18 55 06.2	+0.2
MALB	Monte Alegre	41.95	286	*e*P	P	18 55 13.0	+0.7
ITTB	Itaituba	42.40	282	*e*P	P	18 55 16.4	+0.4
PTLB	Pontes e Lacer	42.96	265	*e*P	P	18 55 20.2	-0.2
VILB	Vilhena	44.39	269	*e*P	P	18 55 32.8	+0.8
SIV	San Ignacio	44.73	264	P	P	18 55 35.2	+0.4
	comp=Z,2.2nm,0.8s,baz=129,slow=8.0,SNR=9.5						
SIV				PcP	PcP	18 57 15.5	-1.7
	comp=Z,2.3nm,1.0s,baz=100,slow=4.3,SNR=4.2						
SAML	Samuel	48.12	273	P	P	18 56 01.8	+0.4
SAML				IAmb	IAmb	18 56 10.7	
	comp=Z,12nm,1.4s						
SAML	Samuel	48.12	273	*e*P	P	18 56 02.5	+1.1
ETMB	Extrema	50.81	271	*e*P	P	18 56 21.9	0.0
LVC	Limon Verde	51.44	254	*e*P	P	18 56 27.4	+0.3
KMBO	Kilima Mbogo	53.12	78	P	P	18 56 40.2	+0.8
	comp=Z,3.2nm,1.0s,baz=221,slow=5.0,SNR=4.7						
KMBO				LR	LR	19 16 36.3	
	comp=Z,253nm,20.3s,baz=277,slow=33						
PLCA	Paso Flores	53.71	232	LR	LR	19 17 33.0	
	comp=Z,445nm,19.0s,baz=140,slow=34						
BI02	San Fabin de	53.74	237	P	P	18 56 43.0	-0.6
BI02				IAmb	IAmb	18 56 44.1	
	comp=Z,27nm,1.5s						
VNA1	Neumayer--Stat	53.95	177	P	P	18 56 46.4	+2.0
VNA2	Neumayer--Watz	54.27	177	P	P	18 56 47.2	+0.4
	baz=344,slow=9.1						
SNAA	Sanae	55.28	176	P	P	18 56 55.5	+1.4
SNAA	Sanae	55.28	176	P	P	18 56 54.2	+0.1
	comp=Z,3.7nm,1.2s,baz=335,slow=6.3,SNR=5.1						
SNAA	Sanae	55.28	176	P	P	18 56 52.8	-1.4
KEST	Kesra	56.88	23	P	P	18 57 08.4	+2.4
	comp=Z,8.1nm,1.0s,baz=223,slow=8.3,SNR=4.7						
KEST	Kesra	56.88	23	P	P	18 57 08.4	+2.4
KEST				IAmb	IAmb	18 57 23.8	
	comp=Z,25nm,1.2s						
ESDC	Sonseca Array	57.02	10	P	P	18 57 07.6	+0.6
	comp=Z,1.5nm,1.0s,baz=186,slow=6.6,SNR=8.3						
ESDC				LR	LR	19 19 53.7	
	comp=Z,86nm,21.7s,baz=320,slow=34						
ESDC	Sonseca Array	57.02	10	IAmb	IAmb	18 57 10.2	
	comp=Z,7.6nm,1.3s						
CZSB	Cruzeiro do Su	57.54	271	*e*P	P	18 57 10.7	-0.4
SDV	Santo Domingo	61.22	290	P	P	18 57 36.4	-0.3
SDV	Santo Domingo	61.22	290	*e*P	P	18 57 37.8	+1.1
SYO	Syowa Base	61.89	161	⇓*e*pP	pP	18 57 42.6	+0.2
ROSC	El Rosal	63.01	285	LR	LR	19 24 07.4	
	comp=Z,309nm,18.5s,baz=131,slow=35						
OTAV	Otavalo	65.33	278	*e*P	P	18 58 05.5	+1.1
DAVA	Damuels	67.42	18	*e*P	P	18 58 16.5	-0.2
	comp=Z,11nm,1.0s						
FETA	Feichten	67.43	18	P	P	18 58 16.8	0.0
	comp=Z,8.2nm,1.2s						
RETA	Reutte	67.86	18	*e*P	P	18 58 19.4	+0.1
	comp=Z,15nm,1.7s						
ARSA	Arzberg	69.19	21	*e*P	P	18 58 27.2	-0.3
	comp=Z,5.9nm,1.2s						
MAW	Mawson	69.72	157	P	P	18 58 30.8	+0.1
	comp=Z,2.8nm,0.8s,baz=270,slow=10,SNR=2.7						
MAW				LR	LR	19 23 39.3	
	comp=Z,68nm,19.4s,baz=246,slow=31						
GERES	GERESS Array B	69.97	19	P	P	18 58 32.8	+0.4
	comp=Z,0.9nm,0.8s,baz=189,slow=5.9,SNR=1.8						
GERES				LR	LR	19 29 42.3	
	comp=Z,190nm,18.1s,baz=284,slow=36						
MODS	Modra-Piesok	70.76	22	*e*P	P	18 58 36.5	-0.7
RAYN	Ar Rayn	70.90	57	P	P	18 58 41.0	+2.3
RAYN				IAmb	IAmb	18 58 48.4	
	comp=Z,6.4nm,1.1s						
VYHS	Vyhne	71.43	23	*e*P	P	18 58 42.2	+0.9
BR131	Keskin Array S	71.86	37	P	P	18 58 44.3	0.0
BR131				IAmb	IAmb	18 58 48.1	
	comp=Z,12nm,1.1s						
BRTR	Keskin Array B	71.86	37	P	P	18 58 45.8	+1.5
	comp=Z,5.5nm,1.0s,baz=197,slow=6.2,SNR=16						
BRTR				LR	LR	19 29 10.5	
	comp=Z,44nm,21.3s,baz=284,slow=35						
BRTR	Keskin Array B	71.86	37	P	P	18 58 45.5	+1.2
QSPA	South Pole Qui	73.36	180	P	P	18 58 53.9	+1.0
QSPA				IAmb	IAmb	18 59 08.0	
	comp=Z,12nm,1.1s						
AKASG	Malin Array Be	77.33	27	P	P	18 59 14.5	-1.0
	comp=Z,3.8nm,0.9s,baz=221,slow=4.8,SNR=9.0						
AKASG	Malin Array Be	77.33	27	P	P	18 59 14.3	-1.2
U61A	Possum Corner	78.89	313	P	P	18 59 26.4	+1.8
	baz=121						
M61A	Granite Spring	79.73	319	P	P	18 59 30.1	+1.1
	baz=123						
N61A	South Mountain	79.76	318	P	P	18 59 30.4	+1.2
	baz=123						
KBZ	Khabaz	79.78	38	P	P	18 59 30.0	+0.8
	comp=Z,2.8nm,0.9s,baz=216,slow=11,SNR=4.3						
KBZ				LR	LR	19 35 14.3	
	comp=Z,152nm,18.2s,baz=312,slow=36						
U59A	Littleton	79.85	313	P	P	18 59 31.3	+1.6
	baz=120						
T59A	Double "B" Far	79.98	313	P	P	18 59 32.0	+1.5
	baz=120						
K61A	Williamstown	80.17	320	P	P	18 59 33.3	+1.9
	baz=124						
NOA	NORSAR Array B	80.25	12	LR	LR	19 34 25.6	
	comp=Z,65nm,18.5s,baz=210,slow=35						
M60A	Port Jervis	80.28	318	P	P	18 59 33.4	+1.4
	baz=123						
N60A	Cedar Hill Far	80.34	318	P	P	18 59 33.7	+1.4
	baz=122						
U58A	Oxford	80.40	313	P	P	18 59 34.2	+1.4
	baz=119						
F61A	St Evariste	80.71	324	P	P	18 59 36.0	+1.8
	baz=126						
H60A	Morristown	80.88	322	P	P	18 59 36.8	+1.6
	baz=124						
M59A	Waymart	80.91	318	P	P	18 59 36.7	+1.3
	baz=122						
R58A	Rapidan	80.95	314	P	P	18 59 37.0	+1.3
	baz=120						
L59A	Walton	81.01	319	P	P	18 59 37.7	+1.8
	baz=122						
Q58A	Fox Den Farm,	81.05	315	P	P	18 59 37.2	+1.0
	baz=120						
O58A	Lewisberry	81.14	316	P	P	18 59 38.0	+1.4
	baz=121						
K59A	Cooperstown	81.20	320	P	P	18 59 38.4	+1.5
	baz=123						
D60A	Saint Jean D'O	81.22	325	P	P	18 59 37.4	+0.5
	baz=126						
N58A	Sunbury	81.37	317	P	P	18 59 38.7	+0.9
	baz=121						
V56A	Mocksville	81.51	311	P	P	18 59 40.5	+1.8
	baz=118						
P57A	Homestead Farm	81.54	315	P	P	18 59 40.5	+1.7
	baz=120						
Q57A	Strasburg	81.59	315	P	P	18 59 40.9	+1.9
	baz=120						
BINY	Binghamton	81.61	319	P	P	18 59 40.9	+1.8
	baz=122						
O57A	Amberson	81.66	316	P	P	18 59 41.1	+1.7
	baz=120						
KMSC	Kings Mountain	81.81	310	P	P	18 59 41.7	+1.3
	baz=117						
N57A	Milroy	81.87	317	P	P	18 59 42.0	+1.4
	baz=120						
R56A	Bull Pasture M	81.97	314	P	P	18 59 43.1	+2.0
	baz=119						
G58A	Ormstown	82.01	322	P	P	18 59 41.5	+0.5
	baz=124						
SSPA	Standing Stone	82.03	317	P	P	18 59 42.9	+1.6
	baz=120						
P56A	Dayton Farm, R	82.11	315	P	P	18 59 43.5	+1.8
	baz=120						
Q56A	Snyder Ridge,	82.12	315	P	P	18 59 43.7	+1.8
	baz=119						
E58A	La Victoria	82.24	323	P	P	18 59 43.6	+1.3
	baz=124						
D58A	Chemin du LacG	82.42	324	P	P	18 59 44.0	+0.8
	baz=125						
N56A	West Decatur	82.44	317	P	P	18 59 44.8	+1.2
	baz=120						
LATQ	La Tuque	82.53	324	P	P	18 59 44.7	+0.9
	baz=125						
L56A	Greenwood	82.58	318	P	P	18 59 45.3	+1.0
	baz=121						
M56A	Emporium	82.65	317	P	P	18 59 43.7	-0.9
	baz=120						

S54A	**Dingess, Beckl**	**83.01**	**313**	P	**P**	**18 59 47.6**	**+1.0**
	baz=118						
N54A	**Moraine State**	**83.59**	**316**	P	**P**	**18 59 50.2**	**+0.7**
	baz=119						
M54A	**Oil Creek Stat**	**83.63**	**317**	P	**P**	**18 59 50.4**	**+0.7**
	baz=119						
O53A	**New Philadelph**	**84.07**	**315**	P	**P**	**18 59 53.3**	**+1.4**
	baz=118						
M53A	**WI Miller and**	**84.27**	**316**	P	**P**	**18 59 54.0**	**+1.1**
	baz=118						
VNDA	**Vanda**	**85.83**	**179**	P	**P**	**19 00 00.5**	**+0.3**
	comp=Z,2.0nm,1.1s,baz=191,slow=4.9,SNR=4.7						
VNDA				LR	LR	19 32 46.3	
	comp=Z,97nm,21.9s,baz=175,slow=32						
VNDA	**Vanda**	**85.83**	**179**	IAmb	IAmb	19 00 04.5	
	comp=Z,7.0nm,1.4s						
WCI	**Wyandotte Cave**	**86.74**	**311**	P	**P**	**19 00 05.6**	**+0.3**
	baz=114						
GEYT	**Alibeck**	**87.02**	**49**	LR	LR	19 37 46.6	
	comp=Z,164nm,18.6s,baz=320,slow=35						
WVT	**Waverly**	**87.02**	**309**	P	**P**	**19 00 06.8**	**+0.1**
	baz=113						
OXF	**Oxford**	**87.59**	**307**	P	**P**	**19 00 09.2**	**-0.3**
	baz=112						
W41B	**Gary Mavity, V**	**90.00**	**307**	P	**P**	**19 00 21.1**	**+0.2**
	baz=111						
WHAR	**Wooly Hollow**	**90.08**	**307**	P	**P**	**19 00 21.0**	**-0.2**
WHAR				IAmb	IAmb	19 00 22.1	
	comp=Z,9.5nm,0.9s						
FCAR	**Ozark Folk Cen**	**90.16**	**307**	P	**P**	**19 00 21.8**	**+0.2**
FCAR				IAmb	IAmb	19 00 22.5	
	comp=Z,9.9nm,1.0s						
CCM	**Cathedral Cave**	**90.27**	**310**	P	**P**	**19 00 22.8**	**+0.7**
	baz=111						
U40A	**Yellville**	**90.88**	**308**	P	**P**	**19 00 24.8**	**-0.2**
	baz=110						
W39A	**Magazine**	**91.19**	**306**	P	**P**	**19 00 27.3**	**+0.9**
	baz=110						
JFWS	**Jewell Farm**	**91.34**	**315**	P	**P**	**19 00 26.9**	**0.0**
	baz=112						
SCIA	**State Center**	**93.04**	**313**	P	**P**	**19 00 35.8**	**+1.0**
	baz=110						
WHTX	**Lake Whitney,**	**93.07**	**302**	P	**P**	**19 00 35.7**	**+0.5**
	baz=108						
SPMN	**Marine on St.**	**93.88**	**316**	P	**P**	**19 00 39.3**	**+0.7**
	baz=110						
JCT	**Junction City**	**94.55**	**300**	P	**P**	**19 00 40.5**	**-1.6**
ULM	**Lac du Bonnet**	**97.44**	**320**	LR	LR	19 36 56.1	
	comp=Z,60nm,20.9s,baz=64,slow=30						
TXAR	**Lajitas Array**	**97.46**	**298**	P	**P**	**19 00 55.1**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=124,slow=6.8,SNR=4.9						
MSTX	**Muleshoe**	**97.91**	**303**	P	**P**	**19 00 55.7**	**-1.8**
	baz=105						
KSH	**Kashi**	**100.75**	**52**	P	**Pdif**	**19 01 09.8**	**-0.2**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RKT	**Rikitea**	**109.68**	**237**	*e*LR	LR	19 38 07.8	
	comp=Z,1μm,39.8s						
WMQ	**Urumqi**	**110.07**	**49**	*e*PKP	**PKiKP**	**19 05 53.0**	**0.0**
GTA	**Gaotai**	**119.06**	**54**	*e*PKP	**PKPdf**	**19 06 10.2**	**-0.2**
GTA				LR	LR		
	comp=Z,170nm,18.2s						
GTA				LR	LR		
	comp=Z,250nm,18.9s						
TBI	**Tubuai**	**120.68**	**229**	*e*LR	LR	19 43 08.8	
	comp=Z,149nm,36.5s						
CD2	**Chengdu**	**122.34**	**64**	PKP	**PKPdf**	**19 06 15.4**	**-1.5**
LZH	**Lanzhou**	**122.36**	**58**	*e*PKP	**PKPdf**	**19 06 11.5**	**-5.4**
LZH				LR	LR		
	comp=Z,130nm,17.0s						
LZH				LR	LR		
	comp=Z,130nm,17.2s						
LZH				LR	LR		
	comp=Z,150nm,20.1s						
ILAR	**Eielson Array**	**122.49**	**338**	PKP	**PKPdf**	**19 06 13.9**	**-2.1**
	comp=Z,0.6nm,0.9s,baz=295,slow=0.6,SNR=6.2						
SONM	**Songino Array**	**122.85**	**44**	PKP	**PKPdf**	**19 06 16.0**	**-1.4**
	comp=Z,1.1nm,1.1s,baz=315,slow=0.6,SNR=4.8						
PPT2	**Papeete2**	**124.20**	**234**	*e*LR	LR	19 44 52.8	
	comp=Z,274nm,32.2s						
HHC	**Hu-ho-hao-te**	**127.85**	**51**	*e*PKP	**PKiKP**	**19 06 28.2**	**+0.4**
ASAR	**Alice Springs**	**129.22**	**142**	PKP	**PKPdf**	**19 06 29.9**	**-0.3**
	comp=Z,1.7nm,1.0s,baz=199,slow=2.3,SNR=7.7						
NJ2	**Nanjing**	**135.14**	**61**	*e*PKP	**PKPdf**	**19 06 40.6**	**-0.5**
CN2	**Changchun**	**136.72**	**43**	*e*PKP	**PKPdf**	**19 06 37.8**	**-5.9**
MJAR	**Matsushiro Arr**	**148.77**	**46**	PKPbc	**PKPbc**	**19 07 07.7**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=33,slow=2.9,SNR=2.3						

ANF **11** *18:49:50.0±1.4, 41°.91N×126°.59W, h0^{km}, ML2.6/6, Error ellipse: s-maj=15.9km s-min=7.9km az=99.0*

NEIC **11** *18:49:50.7±2.1, 41°.81N±0°.07×126°.6W±0°.1, h11^{km}±10^{km}, ML2.5/26, Error ellipse: s-maj=14.8km s-min=10.5km az=91.0*

IDC **11** *18:49:58.3±4.9, 42°.03N×125°.78W, h0^{km}, mb2.4/2, mb1 3.0/4, mb1mx2.9/53, mbtmp2.5/4, ML2.3/2, Error ellipse: s-maj=72.0km s-min=29.5km az=60.0*

ISC 11 18:49:54.6±1.9**, 41°.89N**±0°.06×**126°.4W**±0°.1**, h10**^{km}**, n37,** σ**2^{s}.11**/35**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.65**	**78**	Pn	**Pn**	**18 50 21.1**	**-2.5**
KBO				IAML		18 50 48.7	
	comp=N,32nm,2.0s						
KBO				IAML		18 51 27.4	
	comp=E,40nm,2.0s						
KEBM	**Edson Butte**	**1.81**	**57**	Pn	**Pn**	**18 50 23.1**	**-2.8**
KEBM				IAML		18 51 07.9	
	comp=E,30nm,3.2s						
KEBM				IAML		18 51 37.7	
	comp=N,29nm,4.1s						
KRMB	**Red Mountain**	**1.90**	**100**	Pn	**Pn**	**18 50 24.4**	**-2.7**
L02E	**Cave Junction**	**2.10**	**82**	P	**Pn**	**18 50 27.6**	**-2.2**
	baz=264,SNR=8.2						
K02D	**Willamette Mer**	**2.18**	**67**	P	**Pn**	**18 50 28.7**	**-2.3**
	baz=251,SNR=24						
K02D				S	**Sb**	**18 51 00.2**	**-1.0**
	baz=251						
J01E	**Myrtle Point**	**2.22**	**54**	P	**Pn**	**18 50 29.0**	**-2.4**
	baz=238,SNR=7.3						
J01E				S	**Sn**	**18 50 58.7**	**-0.2**
	baz=238						
KHMM	**Horse Mountain**	**2.25**	**116**	Pn	**Pn**	**18 50 29.8**	**-2.2**
KHMM				IAML		18 50 46.7	
	comp=E,22nm,3.9s						
KHMM				IAML		18 51 27.0	
	comp=N,20nm,4.6s						
KMRM	**Mail Ridge**	**2.63**	**129**	Pn	**Pn**	**18 50 33.3**	**-3.9**
KMRM				IAML		18 51 25.0	
	comp=E,24nm,4.3s						
KMRM				IAML		18 52 18.3	
	comp=N,30nm,3.8s						
HUMO	**Hull Mountain**	**2.65**	**73**		**Pn**	**18 50 35.5**	**-1.9**
M02C	**Callahan**	**2.70**	**100**	P	**Pn**	**18 50 36.4**	**-1.7**
	baz=282,SNR=13						
YBH	**Yreka Blue Hor**	**2.76**	**92**	Pn	**Pn**	**18 50 38.1**	**-0.9**
	comp=N,1.3nm,0.3s,baz=285,slow=13,SNR=22						
YBH	**Yreka Blue Hor**	**2.76**	**92**		**Pn**	**18 50 37.9**	**-1.0**
I03D	**Drain, OR**	**2.88**	**50**	P	**Pn**	**18 50 38.2**	**-2.2**
	baz=234,SNR=20						
I03D				S	**Sn**	**18 51 17.2**	**+2.1**
	baz=234						
I02D	**Swisshome**	**2.89**	**39**	P	**Pn**	**18 50 38.7**	**-2.0**
	baz=223,SNR=10						
I02D				S	**Sn**	**18 51 14.6**	**-0.9**
	baz=223						
N02D	**Trinity Center**	**2.92**	**107**	P	**Pn**	**18 50 38.6**	**-2.5**
	baz=289						
L04D	**Klamath Falls**	**3.06**	**83**	P	**Pn**	**18 50 42.4**	**-0.7**
	baz=266,SNR=9.4						
WDC	**Whiskeytown Da**	**3.19**	**113**	Pn	**Pn**	**18 50 42.0**	**-2.7**
WDC				IAML		18 51 28.2	
	comp=N,6.6nm,4.9s						
WDC				IAML		18 51 37.3	
	comp=E,5.6nm,4.2s						
M04C	**Macdoel**	**3.40**	**90**	P	**Pn**	**18 50 47.4**	**-0.5**
	baz=274,SNR=6.3						
I04A	**Tendick Farm,**	**3.49**	**56**	P	**Pn**	**18 50 47.9**	**-1.1**
	baz=240						
COR	**Corvallis**	**3.51**	**39**	Pn	**Pn**	**18 50 47.3**	**-1.9**
COR				IAML		18 51 47.4	
	comp=E,18nm,4.5s						
COR				IAML		18 52 17.2	
	comp=E,16nm,4.0s						
H04D	**Lebanon**	**3.75**	**44**	P	**Pn**	**18 50 51.2**	**-1.3**
	baz=228,SNR=7.0						
O03E	**Paynes Creek**	**3.82**	**113**	P	**Pn**	**18 50 52.1**	**-1.4**
	baz=296						
J05D	**Fort Rock, OR**	**4.05**	**68**	P	**Pn**	**18 50 55.8**	**-1.0**
	baz=252						
H04A	**Detroit Lake**	**4.15**	**46**		**Pn**	**18 50 56.0**	**-2.0**
H04A				IAML		18 51 51.1	
	comp=N,6.9nm,0.5s						
H04A				IAML		18 52 06.4	
	comp=E,8.1nm,4.9s						
K05A	**Summer Lake**	**4.16**	**77**	Pn	**Pn**	**18 50 55.1**	**-3.2**
PINE	**Pine Mountain**	**4.43**	**63**		**Pn**	**18 51 01.0**	**-1.1**
E03A	**Lebam**	**5.08**	**23**	Pn	**Pn**	**18 51 07.6**	**-3.1**
LON	**Longmire**	**5.86**	**33**		**Pn**	**18 51 20.7**	**-0.9**
NVAR	**Mina Array Bea**	**7.09**	**117**	Pn	**Pn**	**18 51 38.7**	**0.0**
	comp=E,0.0nm,0.3s,baz=298,slow=12,SNR=2.5						
YKA	**Yellowknife Ar**	**21.79**	**15**	P	**P**	**18 54 48.6**	**+2.3**
	comp=E,0.2nm,0.7s,baz=203,slow=11,SNR=3.1						
TXAR	**Lajitas Array**	**22.25**	**117**	P	**P**	**18 54 54.5**	**+2.9**
	comp=E,0.1nm,0.6s,baz=327,slow=6.5,SNR=1.9						
H11N3	**WAKE ISLAND Hy**	**59.91**	**270**	T	T	20 04 09.7	
	baz=52,slow=75,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**59.91**	**270**	T	T	20 04 09.3	
	baz=52,slow=75,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**59.93**	**270**	T	T	20 04 10.5	
	baz=52,slow=75,SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**60.80**	**269**	T	T	20 05 25.2	
	baz=52,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**60.81**	**269**	T	T	20 05 21.5	
	baz=52,slow=75,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**60.82**	**269**	T	T	20 05 27.2	
	baz=52,slow=75,SNR=5.4						

NEIC **11** *18:52:29.8±1.1, 52°.6N±0°.1×163°.02W±0°.10, h10^{km}±2^{km}, Error ellipse: s-maj=17.3km s-min=9.4km az=168.0*

IDC **11** *18:52:30.4±1.4, 52°.75N×162°.74W, h0^{km}, mb3.5/6, mb1 3.8/8, mb1mx3.4/61, mbtmp3.5/8, ML2.6/2, MS4.1/1, Ms1 4.1/1, ms1mx2.7/46, Error ellipse: s-maj=33.3km s-min=19.9km az=1.0*

AEIC **11** *18:52:31±0.7, 52°.3N±0°.1×162°.87W±0°.06, h7^{km}±9^{km}, ML3.1, mb3.5/2(NEIC), ML3.6/6(NEIC), Error ellipse: s-maj=20.3km s-min=4.7km az=171.0*

ISC 11 18:52:30.9±1.0**, 52°.6N**±0°.1×**162°.97W**±0°.04**, h10**^{km}**, n41,** σ**1^{s}.91**/38**, mb3.6**/6**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**2.21**	**314**		**Pn**	**18 53 07.2**	**-0.5**
AKSA					**Sn**	**18 53 34.5**	**-0.5**
AKSA	**Akutan Strait**	**2.21**	**314**		**Pn**	**18 53 07.2**	**-0.5**
AKSA					**Sn**	**18 53 35.2**	**+0.2**
AKUT	**Akutan**	**2.25**	**313**		**Pn**	**18 53 07.7**	**-0.4**
AKUT					**Sn**	**18 53 36.9**	**+1.1**
AKUT	**Akutan**	**2.25**	**313**	IAML		18 53 50.7	
	comp=E,131nm,2.4s						
AKBBA	**Akutan Broad B**	**2.29**	**311**		**Pn**	**18 53 08.2**	**-0.6**
ZRO	**Akutan Zero**	**2.31**	**310**		**Pn**	**18 53 08.4**	**-0.6**
AKMO	**Akutan Morgan**	**2.33**	**310**		**Pn**	**18 53 08.7**	**-0.5**
AKMO					**Sn**	**18 53 37.9**	**+0.1**
HSB	**Akutan Spr’s B**	**2.34**	**312**		**Pn**	**18 53 08.8**	**-0.6**
AKGG	**Akutan Green G**	**2.38**	**312**		**Pn**	**18 53 09.6**	**-0.4**
UNV	**Unalaska Valle**	**2.44**	**301**		**Pn**	**18 53 09.3**	**-1.4**
MNAT	**Makushin Natee**	**2.55**	**301**		**Pn**	**18 53 11.5**	**-0.8**
MNAT					**Sn**	**18 53 41.5**	**-2.0**
MREP	**Makushin Rep’t**	**2.55**	**299**		**Pn**	**18 53 11.3**	**-1.1**
MSW	**Makushin Switc**	**2.62**	**301**		**Pn**	**18 53 12.3**	**-0.9**
MAPS	**Pakushin South**	**2.65**	**298**		**Pn**	**18 53 12.7**	**-1.1**
MCIR	**Makushin Cirqu**	**2.69**	**301**		**Pn**	**18 53 13.7**	**-0.6**
OKFG	**Magazine Ridge**	**3.08**	**286**		**Pn**	**18 53 17.9**	**-1.7**
SDPT	**Sand Point**	**3.08**	**28**		**Sn**	**18 53 56.6**	**+0.1**
SDPT	**Sand Point**	**3.08**	**28**		**Pn**	**18 53 21.0**	**+1.4**
SDPT	**Sand Point**	**3.08**	**28**	IAML		18 54 05.7	
	comp=E,107nm,3.3s						
SDPT				IAML		18 54 54.7	
	comp=N,96nm,2.7s						
NIKH	**Nikolski High**	**3.58**	**278**		**Pn**	**18 53 25.8**	**-0.7**
CHGN	**Chignik**	**4.53**	**34**	Pn	**Pn**	**18 53 41.8**	**+2.4**
CHGN				IAML		18 56 16.3	
	comp=N,314nm,0.1s						
OHAK	**Old Harbor**	**7.22**	**47**	Pn	**Pn**	**18 54 15.0**	**-1.4**
KDAK	**Kodiak Island**	**7.86**	**45**	Pn	**Pn**	**18 54 22.7**	**-2.4**
	comp=N,0.2nm,0.3s,baz=218,slow=5.4,SNR=6.1						
KDAK				Sn	**Sn**	**18 55 47.0**	**-7.0**
	comp=N,0.2nm,0.3s,baz=297,slow=16,SNR=1.4						
KDAK	**Kodiak Island**	**7.86**	**45**	Pn	**Pn**	**18 54 24.4**	**-0.7**
ILAR	**Eielson Array**	**14.69**	**28**	Pn	**Pn**	**18 55 55.5**	**-3.0**
	comp=N,0.0nm,0.3s,baz=220,slow=14,SNR=1.8						
EGAK	**Eagle**	**16.50**	**34**	Pn	**P**	**18 56 26.4**	**+1.6**
EGAK				IAmb	IAmb	18 56 38.5	
	comp=Z,3.9nm,0.8s						
DAWY	**Dawson**	**16.72**	**38**	P	**P**	**18 56 32.2**	**+4.9**
DAWY				IAmb	IAmb	18 56 40.9	
	comp=Z,3.0nm,0.9s						
BMAR	**Burnt Mountain**	**17.32**	**24**	Pn	**P**	**18 56 36.0**	**+2.1**
PETK	**Petropavlovsk-**	**23.54**	**287**	P	**P**	**18 57 43.1**	**+2.0**
	comp=Z,1.9nm,0.6s,baz=78,slow=12,SNR=7.9						
YKA	**Yellowknife Ar**	**27.10**	**50**	P	**P**	**18 58 14.1**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=265,slow=8.6,SNR=3.6						
NVAR	**Mina Array Bea**	**33.78**	**97**	P	**P**	**18 59 13.3**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=295,slow=6.9,SNR=3.9						
PDAR	**Pinedale Array**	**36.50**	**84**	P	**P**	**18 59 36.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=308,slow=4.3,SNR=13						
H11N2	**WAKE ISLAND Hy**	**40.31**	**227**	T	T	19 45 31.4	
	baz=28						
H11N3	**WAKE ISLAND Hy**	**40.32**	**227**	T	T	19 45 37.1	
	baz=28						
H11N1	**WAKE ISLAND Hy**	**40.33**	**227**	T	T	19 45 35.3	
	baz=28						
H11S1	**WAKE ISLAND Hy**	**41.47**	**226**	T	T	19 46 38.0	
	baz=23,slow=74,SNR=3.4						
H11S2	**WAKE ISLAND Hy**	**41.49**	**226**	T	T	19 46 47.9	
	baz=23						
H11S3	**WAKE ISLAND Hy**	**41.49**	**226**	T	T	19 46 40.0	
	baz=23,slow=74,SNR=3.0						
ANMO	**Albuquerque**	**43.26**	**91**	LR	LR	19 17 27.0	
	comp=Z,236nm,21.0s,baz=55,slow=35						
TXAR	**Lajitas Array**	**48.85**	**94**	P	**P**	**19 01 15.8**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=288,slow=5.1,SNR=5.0						
SONM	**Songino Array**	**54.45**	**304**	P	**P**	**19 01 59.4**	**+1.1**
	comp=Z,0.8nm,1.1s,baz=75,slow=7.8,SNR=2.5						

JMA 11 19:04:05.1, 39°.56N×141°.04E, h11^{km}±1^{km}**, M0.8, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.21**	**114**	P	Pg	19 04 09.5	-0.1
JOM				*e*S	Sg	19 04 12.6	-0.1
JRG	**Rokugo**	**0.35**	**243**	*e*S	Sg	19 04 17.0	+0.1
JKZ	**Kuzumaki**	**0.48**	**28**	P	Pg	19 04 14.5	0.0
JKZ				*e*S	Sg	19 04 20.5	-0.4
JMK	**Ichinoseki**	**0.62**	**167**	*e*S	Sg	19 04 24.9	-0.5

JMA 11 19:05:06.2±0.1**, 36°.65N×137°.92E, h11**^{km}±1^{km}**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.26**	**115**	P	Pg	19 05 11.1	-0.4
MAT				S	Sg	19 05 14.7	-0.3
MAT	**Matsushiro**	**0.26**	**115**	P	Pg	19 05 11.1	-0.4
MAT				S	Sg	19 05 14.7	-0.3
JNG	**Nsakai**	**0.28**	**149**	P	Pg	19 05 11.9	-0.1
JNG				S	Sg	19 05 15.9	0.0

IDC **11** *19:05:17.8±2.9, 43°.00N×105°.00W, h0^{km}, mb1 3.7/2, mb1mx3.2/43, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=56.7km s-min=9.9km az=158.0*

NEIC **11** *19:05:22.1±1.4, 43°.80N±0°.05×105°.24W±0°.05, h0^{km}±2^{km}, ML3.2/40, Error ellipse: s-maj=8.7km s-min=5.7km az=18.0*

ISC 11 19:05:21.6±1.2**, 43°.79N**±0°.06×**105°.19W**±0°.07**, h0**^{km}**, n33,** σ**1^{s}.00**/30**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.90**	**68**	Pg	**Pb**	**19 05 39.6**	**-0.6**
PHWY	**Pilot Hill**	**2.50**	**185**		**Pn**	**19 06 03.4**	**-0.4**
PHWY				IAML		19 06 41.9	
	99nm,0.3s						
PHWY				IAML		19 06 46.5	
	74nm,0.4s						
RWWY	**Rawlins**	**2.58**	**216**		**Pn**	**19 06 05.0**	**+0.2**
RWWY				IAML		19 06 41.9	
	206nm,0.6s						
RWWY				IAML		19 06 43.3	
	144nm,0.3s						
LAO	**LASA Array**	**2.99**	**346**		**Pn**	**19 06 09.5**	**-0.8**
LAO				IAML		19 07 00.8	
	130nm,0.3s						
RLMT	**Red Lodge**	**3.21**	**296**		**Pn**	**19 06 13.6**	**+0.1**
RLMT				IAML		19 07 10.4	
	55nm,0.3s						
RLMT				IAML		19 07 13.2	
	60nm,0.6s						
BW06	**Boulder Array**	**3.35**	**254**		**Pn**	**19 06 14.8**	**-0.6**
BW06				IAML		19 07 04.7	
	37nm,0.3s						
BW06				IAML		19 07 05.4	
	38nm,0.7s						
PD31	**Pinedale Array**	**3.35**	**254**		**Pn**	**19 06 15.0**	**-0.4**
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**19 06 14.8**	**-0.6**
	2.6nm,0.3s,baz=75,slow=16,SNR=38						
PDAR				Lg	Lg	19 07 02.5	
	14nm,0.3s,baz=74,slow=32,SNR=10						
PDAR	**Pinedale Array**	**3.35**	**254**	Pn	**Pn**	**19 06 15.4**	**0.0**
YNE	**Yellowstone No**	**3.66**	**291**		**Pn**	**19 06 18.1**	**-1.6**
OGNE	**Ogallala**	**3.68**	**139**	Pn	**Pn**	**19 06 20.5**	**+0.6**
YMP	**Mirror Lake Pl**	**3.69**	**287**		**Pn**	**19 06 20.0**	**-0.1**
LOHW	**Long Hollow**	**3.93**	**269**		**Pn**	**19 06 24.8**	**+1.4**
FLWY	**Flagg Ranch**	**3.99**	**276**		**Pn**	**19 06 26.0**	**+1.8**
FLWY				IAML		19 07 37.7	
	35nm,3.1s						
FLWY				IAML		19 07 51.8	
	33nm,3.5s						
ISCO	**Idaho Springs**	**4.00**	**185**	Pn	**Pn**	**19 06 24.9**	**+0.4**
ISCO				IAML		19 07 31.4	
	17nm,0.8s						
MOOW	**Moose Ponds**	**4.02**	**271**	Pn	**Pn**	**19 06 24.5**	**-0.2**
REDW	**Red Top Meadow**	**4.14**	**266**		**Pn**	**19 06 28.0**	**+1.7**
REDW				IAML		19 07 34.1	
	47nm,1.4s						
REDW				IAML		19 07 38.5	
	37nm,0.9s						
YHH	**Holmes Hill**	**4.18**	**286**		**Pn**	**19 06 27.2**	**+0.3**
YMR	**Madison River**	**4.24**	**284**		**Pn**	**19 06 28.6**	**+0.9**
YHL	**Hebgen Lake**	**4.43**	**286**		**Pn**	**19 06 30.3**	**0.0**
DGMT	**Dagmar**	**4.73**	**8**	Pn	**Pn**	**19 06 36.5**	**+2.3**
BOZ	**Bozeman (W)**	**4.93**	**294**		**Pn**	**19 06 36.8**	**-0.3**
BOZ				IAML		19 07 57.3	
	15nm,1.4s						
BOZ				IAML		19 08 46.2	
	13nm,3.8s						
EGMT	**Eagleton**	**5.30**	**325**	Pn	**Pn**	**19 06 42.9**	**+0.9**
HRY	**Holter Researc**	**5.52**	**304**		**Pn**	**19 06 45.1**	**0.0**
HVU	**Hansel Valley**	**5.93**	**253**		**Pn**	**19 06 51.5**	**+0.7**
PV20	**West Nyswonger**	**6.15**	**209**	Pn	**Pn**	**19 06 55.2**	**+1.4**
SRU	**San Rafael Swe**	**6.16**	**222**		**Pn**	**19 06 53.1**	**-0.9**
NLU	**North Lily Min**	**6.41**	**236**		**Pn**	**19 06 55.8**	**-1.7**
DUG	**Dugway, Tooele**	**6.72**	**240**	Pn	**Pn**	**19 07 01.4**	**-0.2**
I10CA	**LAC DU BONNET**	**8.96**	**41**	*i*		20 00 50.0	
	baz=222,slow=325,SNR=1.8						
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn	**Pn**	**19 07 34.4**	**+0.8**
	0.6nm,0.3s,baz=226,slow=12,SNR=8.2						
ULM				Lg	Lg	19 10 12.5	
	0.4nm,0.3s,baz=128,slow=18,SNR=3.0						
NEW	**Newport**	**9.43**	**302**	Lg	Lg	19 10 20.2	
	0.1nm,0.3s,baz=219,slow=12,SNR=3.6						
I56US	**NEWPORT INFRAS**	**9.43**	**302**	*i*		20 08 50.0	
	baz=116,slow=327,SNR=5.0						

NEIC **11** *19:27:03.9±1.0, 68°.03N±0°.03×152°.48W±0°.07, h5^{km}±1^{km}, Error ellipse: s-maj=5.9km s-min=4.1km az=200.0*

AEIC **11** *19:27:03±1.2, 68°.01N±0°.03×152°.6W±0°.1, h9^{km}±5^{km}, ML3.9, mb3.9/5(NEIC), Error ellipse: s-maj=7.1km s-min=3.9km az=92.0*

IDC **11** *19:27:04.7±0.8, 68°.25N×152°.35W, h0^{km}, mb3.6/9, mb1 3.9/14, mb1mx3.8/47, mbtmp3.7/14, ML4.0/5, MS2.4/1, Ms1 2.4/1, ms1mx2.4/40, Error ellipse: s-maj=23.6km s-min=12.4km az=33.0*

ANF **11** *19:27:04.4±0.6, 68°.01N×152°.35W, h5^{km}, ML4.1/11, Error ellipse: s-maj=6.3km s-min=3.7km az=102.0*

ISC 11 19:27:04.0±1.5**, 68°.01N**±0°.03×**152°.25W**±0°.04**, h5**^{km}±9^{km}**, n131,** σ**1^{s}.50**/151**, mb3.8**/12**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLD	**Coldfoot**	**1.11**	**134**	P	**Pb**	**19 27 25.4**	**-0.3**
	baz=312,SNR=1000						
COLD				S	**Sn**	**19 27 41.7**	**-0.2**
	baz=312						
COLD	**Coldfoot**	**1.11**	**134**		**Pb**	**19 27 25.4**	**-0.3**
COLD	**Coldfoot**	**1.11**	**134**		**Sn**	**19 27 41.9**	**0.0**
PS04	**TAPS Pump Stn4**	**1.16**	**68**		**Pn**	**19 27 26.5**	**-0.4**
TOLK	**Toolik Lake Re**	**1.18**	**56**	P	**Pg**	**19 27 27.3**	**+0.7**
	baz=242,SNR=1000						
TOLK				S	**Sn**	**19 27 44.3**	**+0.5**
	baz=242						
TOLK	**Toolik Lake Re**	**1.18**	**56**		**Pg**	**19 27 27.3**	**+0.7**
TOLK					**Sn**	**19 27 45.6**	**+1.9**
PS05	**TAPS Pump Stn5**	**1.35**	**152**		**Pn**	**19 27 29.0**	**-0.5**
PS05					**Sg**	**19 27 48.4**	**+1.1**
IM03		**2.12**	**197**		**Pn**	**19 27 39.0**	**-1.0**
IM03					**Sn**	**19 28 06.4**	**-0.2**
PS06	**TAPS Pump Stn6**	**2.38**	**154**		**Pn**	**19 27 44.1**	**+0.5**
PS06					**Sb**	**19 28 15.2**	**-1.7**
BM03	**Burnt Mountain**	**2.97**	**98**		**Pn**	**19 27 53.1**	**+1.3**
BMAR	**Burnt Mountain**	**2.98**	**98**	Pn	**Pn**	**19 27 51.9**	**-0.1**
MLY	**Manley**	**3.05**	**168**	P	**Pn**	**19 27 53.0**	**+0.1**
	baz=347,SNR=47						
MLY	**Manley**	**3.05**	**168**		**Pn**	**19 27 53.0**	**+0.1**
FYU	**Fort Yukon**	**3.08**	**115**		**Pn**	**19 27 54.7**	**+1.4**
FYU					**Sn**	**19 28 33.8**	**+3.3**
I23K	**Minto, Yukon-K**	**3.10**	**157**	Pn	**Pn**	**19 27 54.0**	**+0.5**
	baz=338,SNR=56						
I23K				Pg	**Pg**	**19 28 02.6**	**-0.7**
	baz=338						
I23K	**Minto, Yukon-K**	**3.10**	**157**		**Pn**	**19 27 54.0**	**+0.5**
MDM	**Murphy Dome**	**3.46**	**150**		**Pn**	**19 27 58.9**	**+0.4**
POKR	**Poker Plat Res**	**3.48**	**144**	P	**Pn**	**19 27 59.7**	**+0.9**
	baz=327,SNR=54						
POKR				Sb	**Sg**	**19 28 53.3**	**-2.5**
	baz=327						
POKR	**Poker Plat Res**	**3.48**	**144**		**Pn**	**19 27 59.6**	**+0.8**
TCOL	**CIGO, UAF Yank**	**3.61**	**149**	P	**Pn**	**19 28 01.3**	**+0.8**
	baz=331,SNR=94						
TCOL				S	**Sn**	**19 28 45.6**	**+2.2**
	baz=331						
TCOL	**CIGO, UAF Yank**	**3.61**	**149**		**Pn**	**19 28 01.2**	**+0.8**
COLA	**College**	**3.61**	**149**		**Pn**	**19 28 01.1**	**+0.7**
PRP	**Porcupine Dome**	**3.65**	**130**		**Pn**	**19 28 02.5**	**+1.2**
NEA2	**Nenana**	**3.66**	**158**	P	**Pn**	**19 28 01.7**	**+0.4**
	baz=339,SNR=105						
NEA2				S	**Sn**	**19 28 46.2**	**+1.4**
	baz=339						
NEA2	**Nenana**	**3.66**	**158**		**Pn**	**19 28 01.6**	**+0.3**
A21K	**Barrow**	**3.66**	**337**	P	**Pn**	**19 27 59.9**	**-1.3**
	baz=155,SNR=11						
A21K	**Barrow**	**3.66**	**337**		**Pn**	**19 27 59.5**	**-1.8**
CCB	**Clear Creek Bu**	**3.82**	**150**		**Pn**	**19 28 03.8**	**+0.4**
IL31		**3.90**	**144**	Pn	**Pn**	**19 28 05.3**	**+0.8**
ILAR	**Eielson Array**	**3.90**	**144**	Pn	**Pn**	**19 28 05.2**	**+0.7**
	19nm,0.3s,baz=324,slow=12,SNR=828						
ILAR				Sn	**Sn**	**19 28 52.8**	**+2.2**
	14nm,0.3s,baz=329,slow=30,SNR=6.0						
ILAR				Lg	Lg	19 29 07.9	
	26nm,0.3s,baz=336,slow=32,SNR=5.3						
WRH	**Wood River Hil**	**3.93**	**153**		**Pn**	**19 28 05.5**	**+0.6**
BPAW	**Bear Paw Mtn.**	**3.96**	**172**		**Pn**	**19 28 05.6**	**+0.3**
RDOG	**Red Dog Mine**	**4.00**	**276**		**Pn**	**19 28 03.9**	**-2.1**
BWN	**Browne**	**4.02**	**162**		**Pn**	**19 28 06.9**	**+0.8**
PS08	**TAPS Pump Stn8**	**4.11**	**145**		**Pn**	**19 28 08.0**	**+0.5**
CHUM	**Lake Minchumin**	**4.14**	**180**		**Pn**	**19 28 08.1**	**+0.2**
HDA	**Harding Lake**	**4.20**	**147**	P	**Pn**	**19 28 09.2**	**+0.5**
	baz=330,SNR=216						
HDA				S	**Sn**	**19 28 58.8**	**+0.7**
	baz=330						
HDA				S	**Sn**	**19 28 58.8**	**+0.7**
	baz=330						
HDA	**Harding Lake**	**4.20**	**147**		**Pn**	**19 28 09.4**	**+0.7**
MCK	**McKinley**	**4.50**	**161**	P	**Pn**	**19 28 13.6**	**+0.7**
	baz=343,SNR=79						

MCK				S	Sn	19 29 06.9	+1.4
	baz=343						
MCK	McKinley	4.50	161		Pn	19 28 13.6	+0.7
KTH	Kantishna Hill	4.51	172		Pn	19 28 13.5	+0.5
TRF	Thorofare Moun	4.65	169		Pn	19 28 15.6	+0.6
RND	Reindeer	4.83	162		Pn	19 28 18.6	+1.2
PPLA	Purkeypile	5.13	180	Pn	Pn	19 28 21.9	+0.3
HUR	Hurricane	5.17	167		Pn	19 28 23.5	+1.5
RIDG	Independent Ri	5.25	141		Pn	19 28 24.0	+0.9
SCRK	Sand Creek	5.27	136	P	Pn	19 28 24.7	+1.3
	baz=323,SNR=89						
SCRK				S	Sn	19 29 25.4	+0.9
	baz=323						
SCRK	Sand Creek	5.27	136		Pn	19 28 24.5	+1.1
WAT2	Susitna Watana	5.29	162		Pn	19 28 25.3	+1.6
TTA	Tatalina	5.33	199	Pn	Pn	19 28 23.9	-0.4
TT01	Tatalina	5.36	199		Pn	19 28 24.1	-0.5
WAT7	Susitna Watana	5.39	163		Pn	19 28 26.4	+1.3
WAT1	Susitna Watana	5.42	162		Pn	19 28 27.0	+1.5
EGAK	Eagle	5.51	121	Pn	Pn	19 28 27.1	+0.5
DOT	Dot Lake	5.52	139	Pn	Pn	19 28 27.3	+0.6
CUT	Chulitna	5.69	171	P	Pn	19 28 31.2	+2.2
	baz=351						
CUT				S	Sn	19 29 35.5	+0.9
	baz=351						
K27K	Chicken	5.75	129	P	Pn	19 28 31.3	+1.3
	baz=318						
K27K				S	Sn	19 29 37.6	+1.3
	baz=318						
K27K	Chicken	5.75	129		Pn	19 28 31.5	+1.6
WAT6	Susitna Watana	5.77	159		Pn	19 28 31.4	+1.1
PAX	Paxson	5.79	148		Pn	19 28 31.8	+1.3
SKT	Skwentna	6.06	177		Pn	19 28 34.6	+0.4
MENT	Mentasta	6.20	141		Pn	19 28 36.8	+0.6
L26K	Log Cabin Wild	6.22	139	P	Pn	19 28 37.1	+0.8
	baz=327,SNR=34						
L26K	Log Cabin Wild	6.22	139		Pn	19 28 37.3	+0.9
EPYK	Eagle Plains	6.26	98	P	Pn	19 28 38.5	+1.6
	baz=292						
EPYK				S	Sn	19 29 50.3	+1.6
	baz=292						
EPYK	Eagle Plains	6.26	98		Pn	19 28 38.7	+1.8
ANM	Nome	6.32	243		Pn	19 28 35.3	-2.4
GHO	Glory Hole Cre	6.42	166		Pn	19 28 40.0	+0.8
SML	Sawmill	6.44	163		Pn	19 28 40.3	+0.8
M24K	Tolsona, Glenn	6.46	154	P	Pn	19 28 42.7	+3.0
	baz=338,SNR=11						
M24K	Tolsona, Glenn	6.46	154		Pn	19 28 41.1	+1.4
STLK	Strandline Lak	6.54	178		Pn	19 28 41.3	+0.5
SCM	Sheep Creek Mo	6.54	159		Pn	19 28 42.0	+1.1
DAWY	Dawson	6.56	121	Pn	Pn	19 28 41.9	+0.9
PMR	Palmer	6.58	167	Pn	Pn	19 28 42.0	+0.7
BC03		6.59	134		Pn	19 28 42.2	+0.8
BCAR	Beaver Creek A	6.59	134		Pn	19 28 41.9	+0.4
SUA	Susitna One	6.60	174		Pn	19 28 42.4	+0.7
SPCG	Spurr Capps Gl	6.75	179		Pn	19 28 43.9	+0.2
SPCP	Crater Peak Br	6.77	180		Pn	19 28 44.5	+0.5
SPCN	Chakachatna No	6.81	180		Pn	19 28 45.1	+0.6
KNK	Knik Glacier	6.82	164		Pn	19 28 46.1	+1.5
INK	Inuvik	6.99	79	Pn	Pn	19 28 47.7	+0.8
	1.5nm,0.3s,baz=288,slow=10,SNR=27						
INK				Sn	Sn	19 30 05.4	-1.1
	0.5nm,0.3s,baz=1.6,slow=22,SNR=1.8						
INK				Lg	Lg	19 30 48.6	
	1.1nm,0.3s,baz=4.9,slow=27,SNR=1.3						
INK				LR	LR	19 32 16.7	
	comp=Z,33nm,20.4s,baz=58,slow=45						
INK	Inuvik	6.99	79	Pn	Pn	19 28 48.6	+1.8
RC01	Rabbit Creek A	7.03	170	P	Pn	19 28 49.5	+2.1
	baz=351						
RC01				S	Sn	19 30 08.7	+1.0
	baz=351						
KLU	Klutina	7.08	155		Pn	19 28 49.4	+1.2
N25K	Chitina, Valde	7.20	149		Pn	19 28 50.3	+0.3
BVCY	Beaver Creek	7.37	134		Pn	19 28 53.2	+1.1
PWL	Port Wells	7.37	165		Pn	19 28 52.6	+0.4
GLB	Gilahina Butte	7.51	147		Pn	19 28 54.7	+0.6
RSO	Redoubt South	7.58	182		Pn	19 28 56.0	+0.7
SLKM	Skilak Lake	7.58	172		Pn	19 28 55.4	+0.3
RDSO	Redoubt South	7.59	182		Pn	19 28 54.9	-0.3
YUK1	Sand Pete Hill	7.67	134		Pn	19 28 57.4	+1.0
FID	Port Fidalgo	7.70	158		Pn	19 28 57.1	+0.4
MCARA	McCarthy VSAT	7.73	145		Pn	19 28 57.8	+0.8
BMRM	Bremner River	7.79	151		Pn	19 28 58.9	+0.9
YUK2	White River	7.89	137		Pn	19 29 00.3	+0.8
YUK3	Moose Creek	8.00	136		Pn	19 29 01.7	+0.7
PTPK	Patty Peak	8.02	144		Pn	19 29 01.8	+0.5
SEW	Seward	8.03	170	Pn	Pn	19 29 03.2	+2.0
IVE	Iliamna Volcan	8.03	183		Pn	19 29 01.0	-0.3
BALM	Baldy	8.19	144		Pn	19 29 04.5	+1.0
YUK4	Talbot Arm	8.85	133		Pn	19 29 13.2	+0.6
YAH	Yahtse	8.92	144		Pn	19 29 14.2	+0.6
YUK5	Granite Creek	9.24	131		Pn	19 29 19.6	+1.6
YUK6	Outpost Mounta	9.26	133		Pn	19 29 19.0	+0.8
PCA	Pinnacle	9.50	141	Pn	Pn	19 29 19.7	-1.7
HYT	Haines Junctio	9.60	132	Pn	Pn	19 29 24.4	+1.6
YUK7	Dusty Glacier	9.66	134		Pn	19 29 24.3	+0.6
KDAK	Kodiak Island	10.27	181	Pn	Pn	19 29 34.1	+2.4
	0.4nm,0.3s,baz=339,slow=16,SNR=1.6						
C36M	Paulatuk	10.30	70	P	Pn	19 29 31.1	-1.1
	baz=276,SNR=7.9						
WHY	Whitehorse	10.50	126		Pn	19 29 35.9	+0.8
DLBC	Dease Lake	13.77	123	Pn	Pn	19 30 21.7	+2.0
	0.8nm,0.3s,baz=306,slow=3.9,SNR=5.6						
YKA	Yellowknife Ar	16.48	91	Pn	Pn	19 30 53.6	-2.0
	0.2nm,0.3s,baz=308,slow=11,SNR=14						
YKA				Sn	Sn	19 33 48.6	-10
	0.2nm,0.3s,baz=304,slow=22,SNR=5.8						
RES	Resolute Bay	18.73	44	P	P	19 31 21.7	-1.3
	0.2nm,0.3s,baz=262,slow=6.2,SNR=4.7						
RES				S	Sn	19 34 35.9	-17
	0.2nm,0.3s,baz=157,slow=22,SNR=4.6						
RES	Resolute Bay	18.73	44	P	P	19 31 22.3	-0.8
EUNU	Eureka	20.11	27	P	Pn	19 31 39.9	-0.1
EUNU				IAmb	IAmb	19 31 41.9	
	comp=Z,5.3nm,0.9s						
SEY	Seymchan	22.83	284	P	P	19 32 09.8	+2.4
	comp=Z,1.6nm,0.7s,baz=63,slow=12,SNR=5.8						
NLWA	Neilton Lookou	25.20	131	P	P	19 32 30.6	+0.4
TIXI	Tiksi	25.62	314	P	P	19 32 31.5	-2.2
TIXI				IAmb	IAmb	19 32 36.2	
	comp=Z,1.9nm,1.0s						
FCC	Fort Churchill	26.60	81	P	P	19 32 40.8	-1.9
FCC				IAmb	IAmb	19 32 47.4	
	comp=Z,3.8nm,0.8s						
PDAR	Pinedale Array	33.84	116	P	P	19 33 49.9	+2.6
	comp=Z,0.9nm,0.9s,baz=344,slow=4.9,SNR=5.4						
NVAR	Mina Array Bea	35.03	130	P	P	19 34 00.1	+2.6
	comp=Z,0.9nm,0.6s,baz=322,slow=6.9,SNR=12						
TXAR	Lajitas Array	48.01	118	P	P	19 35 47.7	+3.9
	comp=Z,0.4nm,0.6s,baz=340,slow=6.4,SNR=4.7						
SONM	Songino Array	50.61	301	P	P	19 36 04.7	+1.2
	comp=Z,0.5nm,0.5s,baz=13,slow=7.7,SNR=2.8						
ZALV	Zalesovo Beam	51.23	320	P	P	19 36 07.0	-0.9
	comp=Z,0.5nm,0.4s,baz=10,slow=8.8,SNR=3.1						
HHC	Hu-ho-hao-te	55.05	293	*e*P	P	19 36 41.1	+4.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,6.6s						
MKAR	Makanchi Array	58.47	319	P	P	19 36 59.0	-1.5
	comp=Z,0.3nm,0.6s,baz=27,slow=6.8,SNR=1.9						
AKASG	Malin Array Be	61.61	359	P	P	19 37 20.5	-1.4
	comp=Z,0.5nm,0.5s,baz=0.4,slow=6.9,SNR=2.5						
BRTR	Keskin Array B	72.50	355	P	P	19 38 32.2	+0.7
	comp=Z,1.1nm,1.0s,baz=12,slow=7.8,SNR=3.3						

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*IDC **11** 19:31:07.6±1.5, 1°.20N×122°.94E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/39, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=139.0km s-min=25.4km az=65.0*

*DJA **11** 19:31:19.0±0.4, 1°N±3°×12°2E±°, h51^{km}±6^{km}, M4.0/7, MLv4.0/7*

ISC 11 19:31:16.6±1.1**, 0°.83N**±0°.08×**121°.99E**±0°.06**, h50^{km}, n11, σ2ˢ.94**/15**, mb3.3**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.35	188	P	Pn	19 31 29.4	+3.1
MRSI				S	Sn	19 31 37.9	+4.7
GTOI	Gorontalo	1.04	101	P	Pn	19 31 36.0	+1.1
APSI	Ampana	1.76	191	P	Pn	19 31 45.6	+0.8
APSI				S	Sn	19 32 07.9	+1.8
KMSI	Cibinong	2.01	97	P	Pn	19 31 52.3	+4.2
LUWI	Luwuk	2.02	157	P	Pn	19 31 50.1	+1.8
LUWI				S	Sn	19 32 13.9	+1.6
MPSI	Mapaga	2.15	257	P	Pn	19 31 52.3	+2.3
TTSI	Tana Toraja	4.42	209	P	Pn	19 32 22.9	+1.7
FITZ	Fitzroy Crossi	19.15	169	P	P	19 35 34.1	-1.8
	0.2nm,0.3s,baz=1.2,slow=9.8,SNR=7.1						
WRA	Warramunga Arr	23.93	150	P	P	19 36 22.2	-4.1
	2.0nm,0.8s,baz=335,slow=9.3,SNR=14						
ASAR	Alice Springs	26.97	155	P	P	19 36 50.3	-3.5
	0.6nm,0.7s,baz=345,slow=14,SNR=12						
ASAR				PcP	PcP	19 40 12.8	-1.9
	0.2nm,0.4s,baz=349,slow=2.1,SNR=11						
MKAR	Makanchi Array	57.38	329	P	P	19 41 00.0	0.0
	0.1nm,0.3s,baz=136,slow=7.4,SNR=2.1						

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*TRN **11** 19:31:39.2, 18°.10N×62°.77W, h39^{km}, MD4.1*

TRN Felt in Saint Maarten, MMI II.

*NEIC **11** 19:31:40.0±1.1, 18°.2N±0°.1×62°.84W±0°.08, h49^{km}±35^{km}, ML3.8/25, Md4.1/37(TRN), Error ellipse: s-maj=22.5km s-min=7.1km az=201.0*

ISC 11 19:31:38.9±1.9**, 18°.2N**±0°.1×**62°.82W**±0°.08**, h57^{km}**±19^{km}**, n51, σ0ˢ.82**/76**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEUS	St. Eustatius	0.70	193	*e*P	Pn	19 31 53.1	+0.1
SEUS				*e*S	Sn	19 32 02.9	-0.3
SEUS	St. Eustatius	0.70	193		Pn	19 31 53.1	+0.1
SEUS					Sn	19 32 02.9	-0.3
SKI	Saint Kitts	0.85	175	*e*P	Pn	19 31 55.2	+0.3
SKI				*e*S	Sn	19 32 06.1	-0.5
SKI	Saint Kitts	0.85	175		Sn	19 32 06.1	-0.5
SKOC	St. Kitts, UWI	0.89	175	*e*P	Pn	19 31 55.8	+0.4
SKOC				*e*S	Sn	19 32 06.9	-0.6
SKOC	St. Kitts, UWI	0.89	175		Pn	19 31 55.8	+0.4
SKOC					Sn	19 32 06.9	-0.6
ANBD	Bethesda, Anti	1.51	138	*e*P	Pn	19 32 04.4	+0.8
ANBD				*e*S	Sn	19 32 21.8	-0.5
ANBD	Bethesda, Anti	1.51	138		Pn	19 32 04.4	+0.8
ANBD					Sn	19 32 21.8	-0.5
MLYT	Lee's Yard	1.57	157	*e*P	Pn	19 32 05.6	+1.1
MLYT				*e*S	Sn	19 32 24.5	+0.6
CDVI	St. Croix	1.90	257	Pn	Pn	19 32 09.5	+0.5
ABD	La Joyeuse, An	2.12	143	*e*P	Pn	19 32 12.3	+0.3
ABD				*e*S	Sn	19 32 36.5	-0.7
ABD	La Joyeuse, An	2.12	143		Pn	19 32 12.3	+0.3
ABD					Sn	19 32 36.5	-0.7
CBE	Ff, Capester	2.40	151	*e*P	Pn	19 32 16.5	+0.7
CBE				*e*S	Sn	19 32 43.1	-1.0
CBE	Ff, Capester	2.40	151		Pn	19 32 16.5	+0.7
CBE					Sn	19 32 43.1	-1.0
TBG	Guadaloupe-3	2.58	154	*e*P	Pn	19 32 19.0	+0.8
TBG				*e*S	Sn	19 32 49.8	+1.4
TBG	Guadaloupe-3	2.58	154		Pn	19 32 19.0	+0.8
TDBA	Terre de Bas,	2.58	154	*e*P	Pn	19 32 19.2	+0.9
TDBA				*e*S	Sn	19 32 47.1	-1.4
TDBA	Terre de Bas,	2.58	154		Pn	19 32 19.2	+0.9
TDBA					Sn	19 32 47.1	-1.4
MTP	Monte Pirata	2.60	269	Pn	Pn	19 32 19.3	+0.8
MTP				IAML		19 32 50.8	
	comp=N,480nm,0.2s						
MAGL	Barre de l'ile	2.66	146	*e*P	Pn	19 32 20.3	+0.9
MAGL				*e*S	Sn	19 32 49.5	-1.0
MAGL	Barre de l'ile	2.66	146		Pn	19 32 20.3	+0.9
MAGL					Sn	19 32 49.5	-1.0
HUMP	Col San Antoni	2.88	270	Pn	Pn	19 32 23.4	+1.1
HUMP				IAML		19 32 58.4	
	comp=N,372nm,0.2s						
HUMP				IAML		19 32 59.2	
	comp=E,403nm,0.2s						
CBYP	Canovanas	2.89	272	Pn	Pn	19 32 22.8	+0.3
DSLB	Salisbury	3.04	154	*e*P	Pn	19 32 25.5	+0.9
DSLB				*e*S	Sn	19 32 59.2	-0.6
DSLB	Salisbury	3.04	154		Pn	19 32 25.5	+0.9
DSLB					Sn	19 32 59.2	-0.6
GCPR	Guaynabo City	3.10	273	Pn	Pn	19 32 25.3	-0.1
IGPR	InterUniversit	3.13	267	Pn	Pn	19 32 26.8	+1.0
IGPR				IAML		19 33 02.7	
	comp=E,318nm,0.3s						
SJG	San Juan	3.17	269	Pn	Pn	19 32 27.3	+1.0
SJG				IAML		19 33 06.2	
	comp=E,278nm,0.3s						
SJG				IAML		19 33 07.6	
	comp=E,219nm,0.6s						
ICMP	Isla Caja de M	3.54	266	Pn	Pn	19 32 31.9	+0.5
ICMP				IAML		19 33 11.3	
	comp=N,152nm,0.8s						
ICMP				IAML		19 33 11.6	
	comp=E,163nm,0.6s						
OBIP	Obispado Ponce	3.60	268	Pn	Pn	19 32 33.1	+0.9
PCM	Pelee Case Pet	3.69	155	*e*P	Pn	19 32 34.0	+0.6
BAMF	Morne Balai	3.71	154	*e*P	Pn	19 32 34.2	+0.3
AOPR	Arecibo Observ	3.74	273	Pn	Pn	19 32 33.9	-0.3
AOPR				IAML		19 33 26.2	
	comp=N,188nm,0.7s						
FDF	Fort de France	3.79	155	*e*P	Pn	19 32 35.8	+1.0
FDF				*e*S	Sn	19 33 18.1	0.0
FDF	Fort de France	3.79	155		Pn	19 32 35.8	+1.0
FDF					Sn	19 33 18.1	0.0
ZAM	Aeronautique	3.98	154	*e*P	Pn	19 32 38.3	+0.9
BIM	Bigot	4.01	155	*e*P	Pn	19 32 38.6	+0.7
BIM				*e*S	Sn	19 33 23.0	-0.8
BIM	Bigot	4.01	155		Pn	19 32 38.6	+0.7
BIM					Sn	19 33 23.0	-0.8
MLPR	Magueyes Islan	4.03	268	Pn	Pn	19 32 38.0	0.0
MLPR				IAML		19 33 23.8	
	comp=N,124nm,0.6s						
CRPR	Cabo Rojo, PR	4.08	268	Pn	Pn	19 32 38.9	+0.1
CRPR				IAML		19 33 35.4	
	comp=N,81nm,1.2s						
AGPR	Aguadilla, PR	4.09	275	Pn	Pn	19 32 38.2	-0.7
AGPR				IAML		19 34 03.1	
	comp=N,132nm,2.4s						
AGPR				IAML		19 34 29.0	
	comp=E,129nm,2.8s						
MPOM	Morne Pois Mar	4.17	153	*e*P	Pn	19 32 40.7	+0.7
MPOM	Morne Pois Mar	4.17	153	*e*S	Sn	19 33 26.1	-1.3
MPOM	Morne Pois Mar	4.17	153		Pn	19 32 40.7	+0.7
MPOM					Sn	19 33 26.1	-1.3
SLBI	Saint Lucia, B	4.50	157	*e*P	Pn	19 32 44.9	+0.4
SLBI	Saint Lucia, B	4.50	157	*e*S	Sn	19 33 34.2	-1.5
SLBI	Saint Lucia, B	4.50	157		Pn	19 32 44.9	+0.4
SLBI					Sn	19 33 34.2	-1.5
SLW	Petit Monier	4.52	156	*e*P	Pn	19 32 46.1	+1.2
SLW	Petit Monier	4.52	156		Pn	19 32 46.1	+1.2
DR12	Loma Pena Alta	6.26	277	Pn	Pn	19 33 10.0	+1.4
SDDR	Presa de Saban	8.07	277	Pn	Pn	19 33 33.8	+0.2

IDC 11 19:37:12.0±3.8**, 17°.77N**×**148°.04E, h0^{km}, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/39**, mbtmp3.6**/5**, Error ellipse: s-maj=106.5km s-min=33.8km az=84.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.82	200	P	P	19 44 47.2	0.0
	0.8nm,1.0s,baz=30,slow=8.7,SNR=2.6						
SONM	Songino Array	45.26	321	P	P	19 45 31.7	+0.3
	0.5nm,0.6s,baz=141,slow=7.1,SNR=2.1						
CMAR	Chiang Mai Arr	46.55	279	P	P	19 45 41.6	-0.2
	0.9nm,0.9s,baz=69,slow=6.1,SNR=6.7						
ZALV	Zalesovo Beam	60.10	323	P	P	19 47 20.9	-0.2
	0.5nm,0.6s,baz=95,slow=9.1,SNR=4.1						
MKAR	Makanchi Array	60.71	314	P	P	19 47 25.2	-0.2
	0.4nm,0.8s,baz=106,slow=7.7,SNR=4.5						

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*IDC **11** 19:55:57.8±2.7, 43°.05N×105°.20W, h0^{km}, mb1 3.7/2, mb1mx3.2/48, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=55.4km s-min=8.7km az=157.0*

*NEIC **11** 19:56:03.0±1.6, 43°.63N±0°.05×105°.28W±0°.04, h0^{km}±1^{km}, ML3.2/38, Error ellipse: s-maj=9.4km s-min=4.9km az=162.0*

ISC 11 19:56:01.1±1.3**, 43°.62N**±0°.06×**105°.23W**±0°.06**, h0^{km}, n37, σ1ˢ.73**/36**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	60	Pg	Pn	19 56 22.5	0.0
PHWY	Pilot Hill	2.33	184		Pn	19 56 42.5	+1.6
PHWY				IAML		19 57 18.8	
	148nm,0.5s						
PHWY				IAML		19 57 19.9	
	116nm,0.5s						
RWWY	Rawlins	2.42	218		Pn	19 56 44.0	+1.8
RWWY				IAML		19 57 18.6	
	158nm,1.0s						
RWWY				IAML		19 57 20.1	
	222nm,1.0s						
LAO	LASA Array	3.15	347		Pn	19 56 53.5	+1.5
LAO				IAML		19 57 57.2	
	110nm,1.1s						
RLMT	Red Lodge	3.26	299	Pn	Pn	19 56 54.5	+0.8
RLMT				IAML		19 58 35.9	
	52nm,3.5s						
RLMT				IAML		19 58 52.1	
	48nm,4.2s						
PD31	Pinedale Array	3.28	256	Pn	Pn	19 56 54.5	+0.5
PDAR	Pinedale Array	3.28	256	Pn	Pn	19 56 54.3	+0.3
	2.4nm,0.3s,baz=78,slow=16,SNR=35						
PDAR				Pg	Pb	19 56 57.7	-2.6
	4.7nm,0.3s,baz=75,slow=17,SNR=33						
PDAR				Lg	Lg	19 57 38.8	
	18nm,0.3s,baz=68,slow=34,SNR=17						
PDAR	Pinedale Array	3.28	256		Pn	19 56 56.8	+2.8
BW06	Boulder Array	3.28	256	Pn	Pn	19 56 54.7	+0.7
BW06				IAML		19 57 49.7	
	46nm,0.5s						
OGNE	Ogallala	3.57	137	Pn	Pn	19 57 00.4	+2.5
YNE	Yellowstone No	3.70	294		Pn	19 57 00.9	+1.1
YMP	Mirror Lake Pl	3.72	289		Pn	19 57 01.9	+1.9
ISCO	Idaho Springs	3.83	184	Pn	Pn	19 57 02.3	+0.7
ISCO				IAML		19 58 09.0	
	26nm,2.2s						
GCMT	Greycliff	3.84	306		Pn	19 57 02.9	+1.4
FLWY	Flagg Ranch	3.99	278		Pn	19 57 06.1	+2.5
FLWY				IAML		19 58 17.1	
	29nm,2.8s						
FLWY				IAML		19 59 02.5	
	35nm,4.8s						
MOOW	Moose Ponds	4.00	274	Pn	Pn	19 57 06.3	+2.4
YPP	Pitchstone Pla	4.08	281		Pn	19 57 06.4	+1.4
REDW	Red Top Meadow	4.10	268		Pn	19 57 07.2	+2.0
REDW				IAML		19 58 23.7	
	51nm,1.8s						
YHH	Holmes Hill	4.21	288	Pn	Pn	19 57 08.9	+2.1
YHB	Horse Butte	4.44	287		Pn	19 57 12.3	+2.4
DGMT	Dagmar	4.90	8		Pn	19 57 19.7	+3.7
BOZ	Bozeman (W)	4.98	296		Pn	19 57 17.0	-0.2
BOZ				IAML		20 00 20.4	
	21nm,4.7s						
BOZ				IAML		20 00 21.3	
	15nm,4.2s						
TCUT	Toone Canyon	5.22	243		Pn	19 57 21.8	+1.2
EGMT	Eagleton	5.42	326	Pn	Pn	19 57 23.2	0.0
HRY	Holter Researc	5.60	306	Pn	Pn	19 57 27.1	+1.4
P17A	Butcher Ranch,	5.86	227		Pn	19 57 30.7	+1.4
PV23	Carpenter Ridg	5.91	210		Pn	19 57 32.1	+2.0
PV04	Paradox Valley	5.92	209		Pn	19 57 32.3	+2.1
PV14	Lion Creek, Pa	5.98	210		Pn	19 57 32.6	+1.6
PV20	West Nyswonger	5.99	209	Pn	Pn	19 57 30.9	-0.2
PV11	David Mesa, Pa	5.99	209		Pn	19 57 31.9	+0.7
SRU	San Rafael Swe	6.02	223		Pn	19 57 32.4	+0.9
TMUT	Trail Mountain	6.23	228		Pn	19 57 36.0	+1.4
Q16A	Castle Valley	6.49	226		Pn	19 57 38.4	+0.4
I10CA	LAC DU BONNET	9.10	40	*i*		20 48 30.0	
	baz=220,slow=334,SNR=6.0						
ULM	Lac du Bonnet	9.21	41	Pn	Pn	19 58 15.1	0.0
	0.7nm,0.3s,baz=218,slow=11,SNR=10						
ULM				Lg	Lg	20 00 54.0	
	0.1nm,0.3s,baz=352,slow=14,SNR=3.9						
I56US	NEWPORT INFRAS	9.50	303	*i*		20 57 20.0	
	baz=115,slow=329,SNR=0.7						

IDC 11 20:00:16.7±5.6**, 57°.52S**×**150°.54W, h0^{km}, mb3.6**/1**, mb1 3.7**/1**, mb1mx3.4**/14**, mbtmp3.6**/1**, Error ellipse: s-maj=717.9km s-min=97.5km az=170.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	52.53	96	T	T	21 06 30.9	
	baz=219,slow=74,SNR=13						
H03S1	Juan Fernandez	52.54	96	T	T	21 06 32.2	
	baz=219,slow=74,SNR=15						
H03S3	Juan Fernandez	52.55	96	T	T	21 06 31.6	
	baz=219,slow=74,SNR=12						
H03N3	Juan Fernandez	52.83	95	T	T	21 06 49.2	
	baz=222,slow=72,SNR=13						
H03N2	Juan Fernandez	52.83	95	T	T	21 06 46.8	
	baz=222,slow=72,SNR=23						
H03N1	Juan Fernandez	52.84	95	T	T	21 06 45.6	
	baz=222,slow=72,SNR=16						
ASAR	Alice Springs	62.65	269	P	P	20 10 42.8	-0.1
	0.7nm,1.0s,baz=146,slow=6.6,SNR=8.6						
H01W1	Cape Leeuwin H	63.99	246	T	T	21 21 00.2	
	baz=141						
H01W2	Cape Leeuwin H	64.00	246	T	T	21 21 01.9	
	baz=141						
H01W3	Cape Leeuwin H	64.01	246	T	T	21 20 59.9	
	baz=141						
MKAR	Makanchi Array	146.69	274	PKPbc	PKPbc	20 19 59.4	0.0
	1.1nm,0.8s,baz=123,slow=4.2,SNR=13						
ZALV	Zalesovo Beam	149.36	287	PKPbc	PKPbc	20 20 04.7	-1.5
	0.5nm,0.6s,baz=104,slow=6.1,SNR=2.6						

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*IDC **11** 20:05:56.7±3.3, 37°.33N×72°.21E, h181^{km}±24^{km}, mb3.4/9, mb1 3.5/16, mb1mx3.2/46, mbtmp4.0/16, Error ellipse: s-maj=33.7km s-min=16.7km az=160.0*

*NNC **11** 20:05:57.3±2.8, 38°.48N×73°.37E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=20.0km s-min=14.8km az=172.0*

*NEIC **11** 20:05:58.5±0.9, 37°.51N±0°.07×72°.2E±0°.1, h188^{km}±8^{km}, mb4.2/7, Error ellipse: s-maj=14.4km s-min=10.3km az=85.0*

ISC 11 20:05:57.6±0.5**, 37°.46N**±0°.05×**72°.18E**±0°.05**, h200^{km}, n75, σ2ˢ.15**/86**, mb3.7**/10**, 12C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.63	184	P	Pn	20 06 55.7	+0.7
CEP				S	Sn	20 07 39.0	-1.0
KBL	Kabul	3.86	222	Pn	Pn	20 06 58.8	+0.8
NIL	Nilore	3.90	167	Pn	Pn	20 06 59.2	+1.0
THW	Thamme Wali	4.67	185	P	Pn	20 07 08.3	+0.5
AML	Almayashu	4.81	14	P	Pn	20 07 09.7	-0.2
	SNR=96						
UCH	Uchtor	5.09	20	P	Pn	20 07 13.3	-0.3
	SNR=56						
JMU	Jammu	5.23	154	*e*S	Sn	20 07 50.0	-26
EKS2	Erkin-Say	5.34	13	P	Pn	20 07 16.6	+0.2
	SNR=22						
MRKS	Merke	5.34	8	Pg	Pn	20 07 16.5	+0.1
	64nm,0.2s						
MRKS				Lg	Lg	20 08 15.0	
	166nm,0.4s						
DZA	Taraz	5.47	353	Pg	Pn	20 07 18.5	+0.6
	87nm,0.2s						
DZA				Lg	Lg	20 08 18.1	
	477nm,0.4s						
AAK	Ala-Archa	5.47	18	P	Pn	20 07 18.4	+0.3
	12nm,0.3s,baz=198,slow=9.6,SNR=204						
AAK				S	Sn	20 08 19.4	-2.4
	11nm,0.3s,baz=143,slow=20,SNR=28						
AAK	Ala-Archa	5.47	18	P	Pn	20 07 18.5	+0.4
	SNR=52						
AAK	Ala-Archa	5.47	18	⇑P	Pn	20 07 18.4	+0.3
	27nm,0.5s						
AAK				⇓S	Sn	20 08 19.3	-2.4
	196nm,0.8s						
SARP	Sargodha	5.54	176	P	Pn	20 07 19.2	+0.3
KBK	Karagaybulak	5.61	21	P	Pn	20 07 21.5	+1.6
	SNR=16						
ULHL	Ulahol	5.71	32	P	Pn	20 07 20.9	-0.3
	SNR=16						
KK31	Karatay Array	5.78	348	⇑P	Pn	20 07 22.0	+0.1
	9.5nm,0.5s,baz=152,slow=10,SNR=127						
KK31				⇑S	Sn	20 08 23.6	-5.2
	152nm,0.6s,baz=158,slow=22						
KK31	Karatay Array	5.78	348	Pn	Pn	20 07 21.9	-0.1
KKAR	Karatay Array	5.78	348	Pn	Pn	20 07 21.8	-0.2
CHMS	Chumysh	5.88	19	P	Pn	20 07 23.5	+0.3
	SNR=11						

TKM2	**Tokmak 2**	**6.05**	**25**	P	**Pn**	**20 07 25.5**	**-0.1**
	SNR=28						
TKM2	**Tokmak 2**	**6.05**	**25**	⇑Pn	**Pn**	**20 07 25.5**	**-0.1**
	0.6nm,0.2s						
TKM2				⇓Pg		20 07 39.5	
	19nm,0.8s						
TKM2				⇑Sn	**Sn**	**20 08 31.8**	**-3.6**
	69nm,1.8s						
TKM2				⇑Lg	Lg	20 08 53.8	
	24nm,0.7s						
USP	**Ospenovka**	**6.07**	**16**	P	**Pn**	**20 07 26.5**	**+0.8**
	SNR=11						
DHRM	**DHARAMSHALA**	**6.20**	**146**	⇓*i*P	**Pn**	**20 07 27.6**	**-0.1**
DHRM				*e*S	**Sn**	**20 08 34.5**	**-4.5**
DHRM				IAML		20 08 37.6	
	comp=N,282nm,0.5s						
DHRM				IAML		20 08 37.7	
	comp=E,452nm,0.6s						
KST	**Kastek**	**6.29**	**26**	Pg	**Pn**	**20 07 29.0**	**+0.4**
	comp=E,30nm,0.5s						
KST				Lg	Lg	20 08 37.5	
	comp=E,70nm,0.5s						
DGS	**Degeres**	**6.40**	**24**	Pg	**Pn**	**20 07 29.8**	**-0.2**
	comp=E,11nm,0.8s						
DGS				Lg	Lg	20 08 37.8	
	comp=E,25nm,0.7s						
MTBS	**Maitube**	**6.53**	**28**	Pg	**Pn**	**20 07 32.3**	**+0.5**
	comp=E,33nm,0.4s						
MTBS				Lg	Lg	20 08 43.5	
	comp=E,37nm,0.8s						
TNSS	**Tian-Shan**	**6.66**	**32**	Pg	**Pn**	**20 07 33.6**	**-0.1**
	comp=E,8.3nm,0.4s						
TNSS				Lg	Lg	20 08 45.6	
	comp=E,13nm,0.9s						
MDOK	**Medeo**	**6.81**	**32**	⇑Pn	**Pn**	**20 07 34.9**	**-0.5**
	comp=E,15nm,0.6s						
MDOK	**Medeo**	**6.81**	**32**	Pg	**Pn**	**20 07 35.1**	**-0.2**
	comp=E,16nm,0.4s						
MDOK				Lg	Lg	20 08 47.8	
	comp=E,12nm,0.9s						
SMLA	**Simla**	**7.54**	**145**	*i* P	**Pn**	**20 07 44.2**	**-0.6**
SMLA				*e*S	**Sn**	**20 09 03.2**	**-6.9**
SMLA				IAML		20 09 07.3	
	comp=N,238nm,0.6s						
SMLA				IAML		20 09 08.2	
	comp=E,374nm,0.6s						
PDGK	**Podgornoye**	**8.09**	**41**	⇑Pn	**Pn**	**20 07 50.9**	**-1.2**
	comp=E,8.1nm,0.8s						
HRA	**Herat**	**8.62**	**252**	Pn	**Pn**	**20 08 00.2**	**+1.1**
DDI	**Dehra Dun**	**8.63**	**144**	*e*P	**Pn**	**20 07 58.0**	**-1.1**
DDI				*e*S	**Sn**	**20 09 29.9**	**-6.2**
DDI				IAML		20 09 30.8	
	comp=N,72nm,0.3s						
GEYT	**Alibeck**	**11.15**	**277**	P	**Pn**	**20 08 31.4**	**-0.2**
	comp=N,0.3nm,0.3s,baz=104,slow=12,SNR=2.7						
GEYT				S	**Sn**	**20 10 30.9**	**-5.1**
	comp=N,0.5nm,0.3s,baz=108,slow=28,SNR=4.0						
MK31	**Makanchi Array**	**11.96**	**36**	P	**Pn**	**20 08 42.7**	**+0.8**
	comp=N,1.2nm,0.5s,baz=211,slow=7.7,SNR=25						
MK31	**Makanchi Array**	**11.96**	**36**	Pn	**Pn**	**20 08 40.4**	**-1.5**
MKAR	**Makanchi Array**	**11.96**	**36**	P	**Pn**	**20 08 41.6**	**-0.3**
	comp=N,0.1nm,0.3s,baz=212,slow=10,SNR=12						
MKAR	**Makanchi Array**	**11.96**	**36**	Pn	**Pn**	**20 08 42.4**	**+0.5**
DANN	**Dangsing**	**13.30**	**130**	*e*P	**Pn**	**20 08 58.2**	**-0.9**
	comp=N,8.8nm,0.4s						
KURBB	**Kurchatov Arra**	**13.93**	**17**	P	**P**	**20 09 09.4**	**+1.0**
	comp=N,0.2nm,0.3s,baz=206,slow=11,SNR=50						
KURBB	**Kurchatov Arra**	**13.93**	**17**	⇓P	**P**	**20 09 09.6**	**+1.2**
	comp=N,20nm,0.8s						
KURK	**Kurchatov**	**14.03**	**17**	⇑P	**P**	**20 09 10.4**	**+0.9**
	comp=N,18nm,1.0s						
KURK	**Kurchatov**	**14.03**	**17**		**P**	**20 09 10.8**	**+1.2**
KKN	**Kakani**	**14.64**	**127**	*e*P	**P**	**20 09 16.1**	**-0.7**
	comp=N,10.0nm,0.5s						
DMN	**Daman**	**14.66**	**128**	*e*P	**P**	**20 09 17.4**	**+0.4**
	comp=N,9.1nm,0.4s						
AB31	**Akbulak array**	**14.75**	**327**	⇑P	**P**	**20 09 16.6**	**-0.9**
	comp=N,2.0nm,0.5s,baz=135,slow=11,SNR=50						
AB31				⇑S	**S**	**20 11 51.7**	**-8.5**
	comp=N,4.2nm,0.5s,baz=135,slow=26						
PKIN	**Phulchoki**	**14.86**	**128**	*e*P	**P**	**20 09 19.2**	**-0.1**
	comp=N,7.7nm,0.4s						
BHPL	**Bhopal**	**14.87**	**161**	*e*S	S	20 11 42.6	-21
PKI	**Pulchoki**	**14.88**	**128**	*e*P	**P**	**20 09 19.2**	**-0.3**
	comp=N,11nm,0.6s						
GUN	**Gumba**	**14.94**	**126**	*e*P	**P**	**20 09 20.0**	**-0.2**
	comp=N,5.2nm,0.4s						
BVAR	**Borovoye Array**	**15.62**	**356**	P	**Pn**	**20 09 26.8**	**-0.3**
	comp=N,0.3nm,0.3s,baz=154,slow=14,SNR=5.9						
BRVK	**Borovoye**	**15.66**	**356**		**Pn**	**20 09 28.2**	**+0.6**
BRVK				IAmb	IAmb	20 09 29.9	
	comp=Z,8.5nm,0.9s						
AKTO	**Aktyubinsk**	**16.46**	**326**	P	**Pn**	**20 09 38.6**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=150,slow=7.8,SNR=15						
AKTO				S	**S**	**20 12 34.6**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=3.5						
AKTO	**Aktyubinsk**	**16.46**	**326**	⇓P	**Pn**	**20 09 39.4**	**+2.1**
	comp=Z,6.1nm,0.8s						
AKTO				⇓S	**S**	**20 12 35.0**	**-3.3**
	comp=Z,13nm,1.8s						
TAPN	**Taplejung**	**16.52**	**123**	*e*P	**Pn**	**20 09 40.6**	**+2.1**
	comp=Z,6.3nm,0.6s						
ODAN	**Odare**	**16.64**	**125**	*e*P	**Pn**	**20 09 42.0**	**+2.2**
	comp=Z,5.4nm,0.5s						
ZAA0	**Zalesovo Array**	**18.66**	**24**	⇑P	**Pn**	**20 10 01.7**	**-1.4**
	comp=Z,5.4nm,0.8s						
ZAA0	**Zalesovo Array**	**18.66**	**24**	P	**Pn**	**20 10 01.4**	**-1.6**
ZALV	**Zalesovo Beam**	**18.66**	**24**	P	**Pn**	**20 10 01.4**	**-1.6**
	comp=Z,2.8nm,0.3s,baz=220,slow=10,SNR=107						
ZALV	**Zalesovo Beam**	**18.66**	**24**	P	**Pn**	**20 10 01.2**	**-1.8**
ARU	**Arti**	**21.06**	**339**	P	**P**	**20 10 27.8**	**+1.9**
	comp=Z,1.8nm,0.7s,baz=162,slow=5.5,SNR=13						
ARU	**Arti**	**21.06**	**339**	P	**P**	**20 10 27.8**	**+1.9**
ARU				IAmb	IAmb	20 10 28.8	
	comp=Z,9.9nm,0.9s						
SONM	**Songino Array**	**27.02**	**57**	P	**P**	**20 11 23.3**	**+2.2**
	comp=Z,1.0nm,0.8s,baz=247,slow=11,SNR=4.5						
SONM				pP	**pP**	**20 12 03.6**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=257,slow=11,SNR=3.4						
FINES	**FINESS Array B**	**37.23**	**325**	P	**P**	**20 12 51.3**	**+1.9**
	comp=Z,1.5nm,0.9s,baz=122,slow=6.9,SNR=0.7						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**20 13 19.9**	**+2.3**
	comp=Z,3.0nm,1.0s,baz=112,slow=7.8,SNR=11						
ARCES	**ARCESS Array B**	**40.63**	**337**	P	**P**	**20 13 19.8**	**+2.3**
NOA	**NORSAR Array B**	**44.19**	**322**	P	**P**	**20 13 48.1**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=94,slow=7.6,SNR=1.7						
TIXI	**Tiksi**	**44.53**	**22**	P	**P**	**20 13 50.4**	**+1.6**
TIXI				IAmb	IAmb	20 13 51.4	
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.68**	**269**	P	**P**	**20 16 28.6**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=47,slow=5.6,SNR=14						
TORD	**Torodi Ar. Bea**	**66.68**	**269**	P	**P**	**20 16 28.6**	**+1.4**
INK	**Inuvik**	**72.81**	**10**	P	**P**	**20 17 05.6**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=248,slow=2.3,SNR=3.6						
INK	**Inuvik**	**72.81**	**10**	P	**P**	**20 17 06.0**	**+2.3**
ILAR	**Eielson Array**	**73.60**	**16**	P	**P**	**20 17 09.6**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=314,slow=5.3,SNR=7.4						
YKA	**Yellowknife Ar**	**80.24**	**3**	P	**P**	**20 17 47.5**	**+2.0**
	comp=Z,0.3nm,0.4s,baz=350,slow=5.4,SNR=11						

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*IDC **11** 20:16:58.4±1.1, 17°.12S×14°.26W, h0^{km}, mb4.3/11, mb1 4.4/11, mb1mx4.1/34, mbtmp4.3/11, MS3.9/11, Ms1 3.9/11, ms1mx3.7/41, Error ellipse: s-maj=34.0km s-min=18.4km az=152.0*

*NEIC **11** 20:16:60.0±1.1, 17°.2S±0°.2×14°.09W±0°.07, h10^{km}±1^{km}, mb4.7/14, Error ellipse: s-maj=26.0km s-min=11.2km az=188.0*

*GCMT **11** 20:17:03.0±0.5, 17°.19S±0°.04×14°.20W±0°.03, h23^{km}±1^{km}, MW5.0/67, Moment Tensor Solution.   s17,c17;   s67,c85; Duration: 0   Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.98±.35; M$_{\theta\theta}$2.53±.23; M$_{\phi\phi}$1.45±.18; M$_{r\theta}$-2.12±.35; M$_{\theta\phi}$-1.28±.10; M$_{\phi r}$-0.34±.23;   Best double couple: M$_0$4.21100×10^{16} NP1:φ$_s$315.00000°, δ35.00000°, λ-66.00000°.   NP2: φ$_s$106.00000°, δ59.00000°, λ-106.00000°.   Principal axes: T 3.7330, Plg13.0000°, Azm208.0000°; N 0.9560, Plg14.0000°, Azm115.0000°; P -4.6890, Plg71.0000°, Azm339.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 20:16:60.0±0.7**, 17°.1S**±0°.2×**14°.1W**±0°.1**, h10**^{km}**, n35, σ1^{s}.29**/29**, mb4.8**/16**, MS3.9**/11**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**24.07**	**295**	P	**P**	**20 22 13.4**	**-2.4**
	28nm,0.9s,baz=97,slow=7.8,SNR=7.4						
RCBR				LR	LR	20 29 00.8	
	comp=Z,96nm,19.4s,baz=102,slow=30						
RCBR	**Riachuelo**	**24.07**	**295**	P	**P**	**20 22 12.5**	**-3.3**
LIC	**Lamto**	**24.88**	**22**	*e*P	**P**	**20 22 23.3**	**+0.3**
	52nm,1.1s						
KIC	**Kosan Boka**	**25.11**	**22**	*e*P	**P**	**20 22 25.3**	**+0.2**
	85nm,1.4s						
TIC	**Toumodi**	**25.27**	**22**	*e*P	**P**	**20 22 26.7**	**+0.1**
DBIC	**Dimbokro**	**25.35**	**22**	P	**P**	**20 22 27.6**	**+0.3**
	19nm,1.0s,baz=181,slow=12,SNR=12						
DBIC				LR	LR	20 29 56.9	
	comp=Z,255nm,19.6s,baz=176,slow=31						
DBIC	**Dimbokro**	**25.35**	**22**	P	**P**	**20 22 24.9**	**-2.4**
DBIC				IAmb	IAmb	20 22 30.9	
	comp=Z,24nm,1.1s						
TSUM	**Tsumeb**	**30.19**	**99**	LR	LR	20 32 55.6	
	comp=Z,172nm,21.6s,baz=290,slow=32						
TSUM	**Tsumeb**	**30.19**	**99**	P	**P**	**20 23 09.7**	**-1.2**
BDFB	**Brasilia**	**32.52**	**268**	LR	LR	20 34 04.5	
	comp=Z,248nm,19.9s,baz=119,slow=32						
BDFB	**Brasilia**	**32.52**	**268**	P	**P**	**20 23 32.7**	**+1.2**
BDFB				IAmb	IAmb	20 23 33.2	
	comp=Z,5.2nm,1.1s						
KOWA	**Kowa**	**32.96**	**18**	P	**P**	**20 23 35.3**	**+0.3**
	comp=Z,6.9nm,0.9s,baz=206,slow=7.2,SNR=10						
KOWA				LR	LR	20 34 49.7	
	comp=Z,267nm,18.9s,baz=206,slow=32						
KOWA	**Kowa**	**32.96**	**18**	P	**P**	**20 23 35.6**	**+0.5**
KOWA				IAmb	IAmb	20 23 49.0	
	comp=Z,21nm,1.4s						
TOA0	**Torodi Ar. Sit**	**33.89**	**28**	P	**P**	**20 23 43.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**33.89**	**28**	P	**P**	**20 23 42.9**	**-0.3**
	comp=Z,15nm,1.0s,baz=211,slow=8.8,SNR=29						
TORD				LR	LR	20 35 34.1	
	comp=Z,397nm,18.1s,baz=220,slow=33						
TORD	**Torodi Ar. Bea**	**33.89**	**28**	P	**P**	**20 23 43.2**	**0.0**
BOSA	**Boshof**	**37.89**	**115**	LR	LR	20 38 28.2	
	comp=Z,82nm,18.2s,baz=293,slow=34						
MATP	**Matopo**	**40.42**	**102**	P	**P**	**20 24 38.9**	**0.0**
	comp=Z,3.4nm,1.0s,baz=276,slow=10,SNR=4.0						
CPUP	**Villa Florida**	**41.01**	**249**	P	**P**	**20 24 43.0**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=90,slow=6.1,SNR=4.2						
CPUP				LR	LR	20 38 36.8	
	comp=Z,199nm,21.8s,baz=83,slow=32						
CPUP	**Villa Florida**	**41.01**	**249**	P	**P**	**20 24 45.9**	**+2.4**
CPUP				IAmb	IAmb	20 24 55.3	
	comp=Z,13nm,1.5s						
SIV	**San Ignacio**	**44.92**	**264**	P	**P**	**20 25 14.5**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=90,slow=4.0,SNR=7.6						
LVC	**Limon Verde**	**51.58**	**254**	P	**P**	**20 26 07.3**	**+0.1**
PB07	**IPOC Station P**	**52.55**	**255**	P	**P**	**20 26 12.8**	**-1.5**
PB07				IAmb	IAmb	20 26 14.8	
	comp=Z,18nm,1.1s						
PB16	**IPOC Station P**	**52.59**	**260**	P	**P**	**20 26 15.7**	**+0.6**
LCO	**Las Campanas**	**52.95**	**246**	P	**P**	**20 26 17.6**	**+0.4**
PLCA	**Paso Flores**	**53.70**	**232**	LR	LR	20 47 30.9	
	comp=Z,209nm,18.4s,baz=140,slow=34						
KEST	**Kesra**	**57.07**	**23**	P	**P**	**20 26 48.1**	**+1.5**
	comp=Z,9.0nm,0.9s,baz=248,slow=3.2,SNR=4.3						
ESDC	**Sonseca Array**	**57.29**	**9**	P	**P**	**20 26 48.6**	**+0.7**
	comp=Z,1.2nm,1.1s,baz=183,slow=7.7,SNR=5.2						
ESDC	**Sonseca Array**	**57.29**	**9**	P	**P**	**20 26 48.5**	**+0.6**
SDV	**Santo Domingo**	**61.53**	**290**	P	**P**	**20 27 18.0**	**0.0**
SDV				IAmb	IAmb	20 27 18.9	
	comp=Z,9.4nm,1.1s						
BRTR	**Keskin Array B**	**71.97**	**37**	P	**P**	**20 28 25.8**	**+1.8**
	comp=Z,3.7nm,1.0s,baz=194,slow=7.4,SNR=14						
BRTR	**Keskin Array B**	**71.97**	**37**	P	**P**	**20 28 24.4**	**+0.4**
AKASG	**Malin Array Be**	**77.50**	**27**	P	**P**	**20 28 55.0**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=221,slow=4.9,SNR=6.0						
NOA	**NORSAR Array B**	**80.50**	**12**	LR	LR	21 03 47.9	
	comp=Z,70nm,18.5s,baz=15,slow=35						
VNDA	**Vanda**	**85.53**	**179**	LR	LR	21 02 36.4	
	comp=Z,106nm,19.0s,baz=200,slow=32						

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*IDC **11** 20:26:24.2±11.0, 34°.50S×179°.32E, h121^{km}±103^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.5/22, mbtmp4.2/3, ML3.9/1, Error ellipse: s-maj=138.4km s-min=38.0km az=11.0*

*WEL **11** 20:26:31.6±0.7, 35°S±10°×17°9E±1°3, h221^{km}±10^{km}, M4.0/25, ML4.3/7, MLv4.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=122.9*

ISC 11 20:26:33.6±1.4**, 35°.6S**±0°.1×**179°.4E**±0°.1**, h225**^{km}±10^{km}**, n51, σ1^{s}.30**/80**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.11**	**203**	P	**Pn**	**20 27 13.9**	**-1.1**
MXZ				S	**Sn**	**20 27 46.1**	**-1.6**
WMGZ	**Waiomatatini S**	**2.32**	**199**	P	**Pn**	**20 27 16.0**	**-1.2**
WMGZ				S	**Sn**	**20 27 50.6**	**-0.9**
HAZ	**Te Kaha**	**2.48**	**210**	P	**Pn**	**20 27 17.4**	**-1.4**
HAZ				S	**Sn**	**20 27 55.7**	**+1.3**
PKGZ	**Pakihiroa**	**2.48**	**204**	P	**Pn**	**20 27 18.6**	**-0.3**
PKGZ				S	**Sn**	**20 27 55.2**	**+0.6**
PUZ	**Puketiti**	**2.60**	**200**	P	**Pn**	**20 27 20.1**	**0.0**
PUZ				S	**Sn**	**20 27 57.1**	**+0.3**
RUGZ	**Raukumara Rang**	**2.70**	**210**	P	**Pn**	**20 27 19.5**	**-1.8**
RUGZ				S	**Sn**	**20 27 59.2**	**+0.3**
TWGZ	**Tauwhareparae**	**2.78**	**203**	P	**Pn**	**20 27 21.9**	**-0.2**
TWGZ				S	**Sn**	**20 28 02.0**	**+1.7**
WHRZ	**Whale Island**	**2.94**	**220**	P	**Pn**	**20 27 23.6**	**-0.2**
WHRZ				S	**Sn**	**20 28 04.4**	**+0.9**
CNGZ	**Carnagh Statio**	**3.00**	**198**	P	**Pn**	**20 27 24.2**	**-0.3**
TKGZ	**Te Karaka**	**3.06**	**203**	P	**Pn**	**20 27 25.2**	**0.0**
TKGZ				S	**Sn**	**20 28 07.7**	**+1.8**
MWZ	**Matawai**	**3.08**	**208**	P	**Pn**	**20 27 24.2**	**-1.3**
MWZ				S	**Sn**	**20 28 07.2**	**+0.9**
OPRZ	**Ohinepanea**	**3.16**	**225**	P	**Pn**	**20 27 25.4**	**-0.9**
URZ	**Urewera**	**3.19**	**214**	P	**Pn**	**20 27 25.8**	**-0.9**
	7.4nm,0.3s,baz=63,slow=6.8,SNR=58						
URZ				S	**Sn**	**20 28 07.6**	**-0.9**
	17nm,0.3s,baz=332,slow=21,SNR=13						
URZ	**Urewera**	**3.19**	**214**	P	**Pn**	**20 27 25.4**	**-1.2**
URZ				S	**Sn**	**20 28 08.6**	**+0.1**
MARZ	**Manawahe**	**3.19**	**222**	P	**Pn**	**20 27 26.6**	**-0.1**
MARZ				S	**Sn**	**20 28 12.7**	**+4.0**
RAGZ	**Rawiri**	**3.26**	**208**	P	**Pn**	**20 27 27.9**	**+0.3**
RAGZ				S	**Sn**	**20 28 11.9**	**+1.7**
RIGZ	**Rimuhau**	**3.33**	**202**	P	**Pn**	**20 27 27.4**	**-0.9**
RIGZ				S	**Sn**	**20 28 13.3**	**+1.7**
PRGZ	**Paritu Road**	**3.50**	**199**	P	**Pn**	**20 27 31.0**	**+0.7**
MUGZ	**Murupara**	**3.52**	**215**	P	**Pn**	**20 27 29.8**	**-0.8**
MUGZ				S	**Sn**	**20 28 15.5**	**-0.1**
RTZ	**Ruatahuna**	**3.54**	**212**	P	**Pn**	**20 27 29.8**	**-1.0**
RTZ				S	**Sn**	**20 28 16.4**	**+0.3**
SNGZ	**Shannon Statio**	**3.54**	**207**	P	**Pn**	**20 27 30.7**	**-0.1**
SNGZ				S	**Sn**	**20 28 17.9**	**+2.0**
KNZ	**Kokohu**	**3.65**	**201**	P	**Pn**	**20 27 31.7**	**-0.3**
KNZ				S	**Sn**	**20 28 16.8**	**-1.4**
MHGZ	**Mahia Peninsul**	**3.71**	**198**	P	**Pn**	**20 27 32.9**	**+0.2**
MHGZ				S	**Sn**	**20 28 18.3**	**-1.2**
RAHZ	**Arahi**	**3.75**	**208**	P	**Pn**	**20 27 33.3**	**0.0**
RAHZ				S	**Sn**	**20 28 21.5**	**+0.9**
MTHZ	**Maungataniwha**	**3.80**	**211**	P	**Pn**	**20 27 32.6**	**-1.3**
MTHZ				S	**Sn**	**20 28 22.4**	**+0.8**
WHHZ	**Waihua**	**3.84**	**206**	P	**Pn**	**20 27 34.3**	**0.0**
WHHZ				S	**Sn**	**20 28 24.0**	**+1.6**
NMHZ	**Naumai**	**4.02**	**210**	P	**Pn**	**20 27 35.5**	**-1.1**
NMHZ				S	**Sn**	**20 28 28.2**	**+1.8**
ARHZ	**Aropaoanui**	**4.09**	**207**	P	**Pn**	**20 27 37.1**	**-0.2**
ARHZ				S	**Sn**	**20 28 29.0**	**+1.2**
BKZ	**Black Stump Fm**	**4.21**	**212**	P	**Pn**	**20 27 37.1**	**-1.7**
BKZ				S	**Sn**	**20 28 32.4**	**+1.9**
MCHZ	**McNeill Hill**	**4.36**	**208**	P	**Pn**	**20 27 40.1**	**-0.5**
MCHZ				S	**Sn**	**20 28 36.0**	**+2.2**
OTVZ	**Oturere**	**4.60**	**219**	P	Sn	20 28 52.2	
KAHZ	**Kahuranaki**	**4.60**	**205**	P	**Pn**	**20 27 43.0**	**-0.6**
KAHZ				S	**Sn**	**20 28 41.6**	**+2.3**
NGZ	**Ngauruhoe**	**4.64**	**219**	P	Sn	20 28 52.8	
KRHZ	**Kereru**	**4.66**	**210**	P	**Pn**	**20 27 43.0**	**-1.3**
KRHZ				S	**Sn**	**20 28 40.0**	**-0.5**
KRHZ	**Kereru**	**4.66**	**210**	P	**Sn**	**20 28 41.9**	**+1.4**
BHHZ	**Black Hill Sta**	**4.66**	**213**	P	**Pn**	**20 27 43.4**	**-1.1**
BHHZ				S	**Sn**	**20 28 41.5**	**+0.9**
PNHZ	**Pukenui**	**4.96**	**209**	P	**Pn**	**20 27 46.5**	**-1.5**
PNHZ				S	**Sn**	**20 28 47.3**	**+0.1**
PNHZ	**Pukenui**	**4.96**	**209**	P	**Sn**	**20 28 47.6**	**+0.4**
WPHZ	**Waipukurau**	**5.00**	**207**	P	**Sn**	**20 28 49.5**	**+1.5**
TSZ	**Takapari Road**	**5.18**	**210**	P	**Sn**	**20 28 51.9**	**-0.3**
DVHZ	**Dannevirke**	**5.30**	**207**	P	**Sn**	**20 28 54.4**	**-0.6**
ANWZ	**Angora Road**	**5.34**	**204**	P	**Sn**	**20 28 57.1**	**+1.5**
PRWZ	**Pori Road**	**5.60**	**208**	P	**Sn**	**20 28 59.2**	**-2.5**
BFZ	**Birch Farm**	**5.61**	**205**	P	**Sn**	**20 28 58.5**	**-3.4**
ASAR	**Alice Springs**	**40.94**	**274**	P	**P**	**20 33 54.1**	**-0.3**
	1.7nm,0.3s,baz=116,slow=7.3,SNR=55						
WRA	**Warramunga Arr**	**42.41**	**279**	P	**P**	**20 34 05.1**	**-1.3**
	1.2nm,0.3s,baz=118,slow=7.6,SNR=29						
KURBB	**Kurchatov Arra**	**123.00**	**312**	PKP	**PKiKP**	**20 45 03.2**	**+0.5**
	0.6nm,0.5s,baz=111,slow=2.1,SNR=1.9						
ARCES	**ARCESS Array B**	**143.14**	**345**	PKP	**PKPdf**	**20 45 38.3**	**-1.3**
	3.7nm,1.1s,baz=40,slow=2.8,SNR=1.2						
FINES	**FINESS Array B**	**149.12**	**335**	PKPbc	**PKPbc**	**20 45 55.0**	**+0.7**
	4.1nm,0.8s,baz=35,slow=5.1,SNR=7.1						
BRTR	**Keskin Array B**	**152.66**	**289**	PKPbc	**PKiKP**	**20 46 05.4**	**+1.7**
	0.7nm,0.7s,baz=146,slow=3.3,SNR=2.2						
HFS	**Hagfors**	**153.78**	**344**	PKPbc	**PKiKP**	**20 46 05.9**	**+0.8**
	2.6nm,0.8s,baz=70,slow=4.1,SNR=1.6						

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*TEH **11** 20:34:19.5, 30°.05N×51°.87E, h5^{km}, ML3.6*

*OMAN **11** 20:34:27.1±0.9, 29°.32N×51°.64E, h10^{km}, mb5.1/13, ml3.7/1, ms2.5/4, Error ellipse: s-maj=12.2km s-min=8.3km az=139.0*

ISC 11 20:34:20.5±0.8**, 29°.93N**±0°.05×**51°.83E**±0°.04**, h8**^{km}**, n54, σ2^{s}.08**/74**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**0.34**	**209**	*e*Pg	**Pb**	**20 34 28.9**	**-0.1**
KAZ1				*e*		20 34 44.0	
	comp=Z,99nm,0.4s						
SHI	**Shiraz**	**0.66**	**116**	*e*Pg	**Pg**	**20 34 33.7**	**+0.4**
SHI				*e*Sg	**Sn**	**20 34 45.7**	**-1.4**
SHI				*e*		20 34 53.4	
	comp=Z,99nm,0.3s						
KLNJ	**Kolanjah**	**1.09**	**349**	*e*Pg	**Pg**	**20 34 39.2**	**-2.4**
ABEH	**Behbahan**	**1.52**	**297**	*e*Pg	**Pg**	**20 34 50.5**	**+0.8**
ABEH				*e*		20 35 41.6	
	comp=Z,99nm,0.6s						
QIR1	**Qir**	**1.80**	**143**	*e*Pn	**Pg**	**20 34 55.8**	**+0.8**
IRAM	**Ramesheh**	**1.93**	**14**	*e*Pn	**Pn**	**20 34 54.3**	**+0.4**
JHRM	**Jahrom**	**2.09**	**132**	*e*Pn	**Pb**	**20 34 58.5**	**-0.2**
JHRM				*e*		20 35 37.6	
	comp=Z,99nm,0.4s						
IGAR	**Gharneh**	**2.47**	**4**	*e*Pn	**Pn**	**20 35 03.1**	**+1.7**
IGAR				*e*		20 35 45.8	
	comp=Z,99nm,0.8s						
SHK1	**Shahrekord**	**2.52**	**342**	*e*Pn	**Pn**	**20 35 03.3**	**+1.2**
SHK1				*e*		20 35 54.0	
	comp=Z,99nm,1.2s						
ISAD	**Sadrabad**	**2.54**	**38**	*e*Pn	**Pn**	**20 35 04.4**	**+2.0**
ISAD				*e*		20 35 45.7	
	comp=Z,99nm,0.5s						
AMIS	**Naft Sefid**	**2.79**	**309**	*e*Pn	**Pn**	**20 35 07.6**	**+2.1**
AMIS				*e*		20 36 11.2	
	comp=Z,99nm,1.1s						
IMEH	**Mehriz**	**2.81**	**58**	*e*		20 35 54.9	
	comp=Z,99nm,0.8s						
IMEH				*e*Pn	**Pn**	**20 35 08.6**	**+2.6**
IPIR	**Pirpir**	**2.86**	**344**	*e*Pn	**Pn**	**20 35 08.1**	**+1.3**
IPIR				*e*		20 36 15.9	
	comp=Z,99nm,0.9s						
NASN	**Na'in**	**2.98**	**16**	*e*Pn	**Pn**	**20 35 09.7**	**+1.2**
IZEF	**Zefreh**	**2.99**	**8**	*e*Pn	**Pn**	**20 35 09.8**	**+1.3**
AHWZ	**Ahwaz**	**3.08**	**298**	*e*Pn	**Pn**	**20 35 12.7**	**+3.2**
ICHK	**Chekchek**	**3.20**	**43**	*e*Pn	**Pn**	**20 35 12.9**	**+1.6**
ICHK				*e*		20 36 15.0	
	comp=Z,99nm,0.5s						
IKLH	**Kolahrood**	**3.39**	**356**	*e*Pn	**Pn**	**20 35 15.4**	**+1.4**
IKLH				*e*		20 36 20.5	
	comp=Z,99nm,0.8s						
YZKH	**Yazd**	**3.41**	**43**	*e*Pn	**Pn**	**20 35 16.2**	**+2.1**
UMR	**Umm Al-Rimmam**	**3.60**	**265**	*e*P		20 35 18.9	
QRN	**Al-Qurain**	**3.61**	**252**	*e*P		20 35 19.7	
IBAF	**Bafgh**	**3.62**	**62**	*e*Pn	**Pn**	**20 35 19.1**	**+2.0**
ANAR	**Anarak**	**3.63**	**26**	*e*Pn	**Pn**	**20 35 18.1**	**+0.9**
KBD	**Kabd**	**3.68**	**259**	*e*P		20 35 19.9	
QAM	**Ghamsar**	**3.83**	**355**	*e*Pn	**Pn**	**20 35 21.8**	**+1.7**
RDF	**Al-Radifah**	**3.86**	**256**	*e*P		20 35 23.5	
MIB	**Mutribah**	**3.90**	**269**	*e*P		20 35 23.1	
KRSH	**Karshahi**	**4.04**	**4**	*e*Pn	**Pn**	**20 35 23.6**	**+0.8**
KHGB	**Koh Gabri**	**4.05**	**83**	*e*Pn	**Pn**	**20 35 24.9**	**+1.8**
KHMZ	**Khomeyn**	**4.12**	**338**	*e*Pn	**Pn**	**20 35 25.4**	**+1.4**
RST	**Umm Al-Ruwaisa**	**4.22**	**265**	*e*P		20 35 28.2	
NGRK	**Negar Kerman**	**4.27**	**93**	*e*Pn	**Pn**	**20 35 28.8**	**+2.6**
KRBR	**Kerman**	**4.28**	**88**	*e*Pn	**Pn**	**20 35 29.4**	**+3.1**
GENO	**Geno**	**4.57**	**122**	*e*Pn	**Pn**	**20 35 31.7**	**+1.5**
IKFM	**Kafar-mosalman**	**4.94**	**318**	*e*Pn	**Pn**	**20 35 37.0**	**+2.0**
IQOM	**Qom**	**4.94**	**353**	*e*Pn	**Pn**	**20 35 35.4**	**+0.1**
IVRN	**Varamin**	**5.05**	**359**	*e*Pn	**Pn**	**20 35 37.8**	**+1.1**
TPRV	**Parvadeh(Tabas**	**5.17**	**52**	*e*Pn	**Pn**	**20 35 39.9**	**+1.5**
BANOM	**Banah**	**5.62**	**134**	P	**Pn**	**20 35 45.6**	**+1.1**
	SNR=20						
BANOM				S	**Sn**	**20 36 50.0**	**+0.7**
IDMV	**Damavand**	**5.63**	**2**	*e*Pn	**Pn**	**20 35 45.7**	**+0.8**
TKDS	**Koohdasht(Taba**	**5.81**	**49**	*e*Pn	**Pn**	**20 35 47.6**	**+0.4**
KBAM	**BAM**	**5.83**	**96**	*e*Pn	**Pn**	**20 35 49.8**	**+2.5**
MDH	**Madha**	**6.08**	**138**	P	**Pn**	**20 35 52.2**	**+1.4**
MDH				S	**Sn**	**20 37 00.7**	**+0.1**
HSRG	**Sareghieh**	**6.08**	**331**	*e*Pn	**Pn**	**20 35 53.8**	**+2.7**
IGHG	**Ghaleghazi**	**6.26**	**316**	*e*Pn	**Pn**	**20 35 55.5**	**+2.1**
ASHO	**Ashiyiah**	**6.44**	**143**	P	**Pn**	**20 35 58.1**	**+2.4**
ASHO				S	**Sn**	**20 37 08.9**	**-0.5**
IDHR	**Dehrash**	**6.62**	**317**	*e*Pn	**Pn**	**20 36 00.0**	**+1.6**
SOHO	**SOHO**	**7.13**	**143**	P	**Pn**	**20 36 06.2**	**+1.0**
ARQ	**Araqi**	**7.79**	**146**	P	**Pn**	**20 36 15.9**	**+1.6**
	SNR=6.0						
ARQ				S	**Sn**	**20 37 39.4**	**-3.4**
HOQ	**Hoqain**	**8.00**	**141**	P	**Pn**	**20 36 18.8**	**+1.7**
	SNR=5.7						
HOQ				P	**Pn**	**20 36 18.8**	**+1.7**
	SNR=5.7						
HOQ				S	**Sn**	**20 37 46.6**	**-1.2**
HOQ				S	**Sn**	**20 37 46.6**	**-1.2**
BSY	**Bisya**	**8.62**	**145**	P	**Pn**	**20 36 27.0**	**+1.2**
BSY				S	**Sn**	**20 37 59.7**	**-3.5**
SMDO	**Samad**	**8.82**	**139**	P	**Pn**	**20 36 28.9**	**+0.4**
SMDO				P	**Pn**	**20 36 28.9**	**+0.4**
SMDO				S	**Sn**	**20 38 06.8**	**-1.4**
SMDO				S	**Sn**	**20 38 06.8**	**-1.4**
JMDO	**Jabal Madar**	**9.40**	**142**	P	**Pn**	**20 36 37.0**	**+0.7**
JMDO				P	**Pn**	**20 36 37.0**	**+0.7**
JMDO				S	**Sn**	**20 38 21.3**	**-1.1**
JMDO				S	**Sn**	**20 38 21.3**	**-1.1**
WBK	**Wadi Bani Khal**	**9.70**	**137**	P	**Pn**	**20 36 40.5**	**0.0**
WBK				S	**Sn**	**20 38 28.1**	**-1.7**
JLN	**Jalan Bani Buh**	**10.31**	**137**	P	**Pn**	**20 36 48.3**	**-0.6**
JLN				P	**Pn**	**20 36 48.3**	**-0.6**
MHTO	**MHTO**	**10.49**	**147**	P	**Pn**	**20 36 52.8**	**+1.5**
	SNR=9.0						
DQM	**DQM**	**11.22**	**151**	P	**Pn**	**20 37 02.3**	**+1.0**
DQM				S	**Sn**	**20 39 01.4**	**-5.6**
WHFO	**Wadi Hawf**	**12.09**	**171**	P	**Pn**	**20 37 14.9**	**+1.7**
	SNR=12						
WHFO				S	**Sn**	**20 39 22.8**	**-5.5**
DMTO	**DMTO**	**12.49**	**166**	P	**Pn**	**20 37 18.2**	**-0.4**
ABTO	**Aybut**	**12.59**	**174**	P	**Pn**	**20 37 21.1**	**+1.0**
	SNR=13						
ABTO				S	**Sn**	**20 39 32.6**	**-8.0**

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*BJI **11** 20:34:29.4±0.0, 77°.40N×7°.30E, h6^{km}, mB5.3/48, mb4.9/68, Ms5.1/53, Ms7 4.9/54*

*NAO **11** 20:34:29.5±1.6, 77°.29N×7°.45E, ML5.1*

*MOS **11** 20:34:31.3±1.1, 77°.38N×7°.58E, h10^{km}, mb5.2/49, MS4.5/23, Error ellipse: s-maj=20.1km s-min=4.4km az=93.5*

*IDC **11** 20:34:31.5±0.3, 77°.32N×7°.51E, h0^{km}, mb4.7/38, mb1 4.8/45, mb1mx4.7/57, mbtmp4.7/45, ML3.6/5, MS4.4/49, Ms1 4.5/49, ms1mx4.4/62, Error ellipse: s-maj=9.3km s-min=7.8km az=42.0*

*GCMT **11** 20:34:31.8±0.1, 77°.37N±0°.01×7°.14E±0°.03, h12^{km}, MW5.2/134, Moment Tensor Solution.   s75,c99; s134,c240;   Duration: 0   Moment tensor: Scale 10^{16}Nm; M$_{rr}$-5.84±.10; M$_{\theta\theta}$0.68±.11; M$_{\phi\phi}$5.15±.10; M$_{r\theta}$-0.98±.33; M$_{\theta\phi}$3.36±.09; M$_{\phi r}$-3.45±.26;   Best double couple: M$_0$7.34300×10^{16} NP1:φ$_s$217.00000°, δ31.00000°, λ-77.00000°.   NP2:φ$_s$21.00000°, δ60.00000°, λ-98.00000°.*

Principal axes: T 7.8530, Plg14.0000°, Azm117.0000°; N -1.0280, Plg7.0000°, Azm25.0000°; P -6.8330, Plg74.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*IEPN **11** 20:34:31.0,77°.68N×5°.03E,h10^{km}*

*NEIC **11** 20:34:32.8±2.5,77°.33N±0°.06×7°.9E±0°.4,h10^{km}±1^{km}, mb5.4/109,Ms_20 4.9/172,Error ellipse: s-maj=13.7km s-min=9.3km az=254.0*

*BER **11** 20:34:33.4±4.0,77°.51N×7°.93E,h10^{km},ML3.7, ML5.1(NAO)*

*DNK **11** 20:34:34.5±5.4,77°.77N×6°.36E,h54^{km}±58^{km},mb4.8, ML4.1*

ISC 11 20:34:33.0±0.2,**77°.42N**±0°.03×**7°.54E**±0°.03,**h10^{km},n830,** σ1°.94/778,**mb5.1**/181,**MS4.8**/155,**46C-27D,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.77	29c	iP	Pn	20 35 00.9	-2.6
KBS				pmax	pmax		
	comp=Z,1µm,1.0s						
KBS	Kingsbay	1.77	29	Pn	Pn	20 35 00.8	-2.6
KBS				Sn	Sn	20 35 20.7	-5.3
KBS	Kingsbay	1.77	29	Pn	Pn	20 35 01.0	-2.5
KBS	Kingsbay	1.77	29⇑	iP	Pn	20 35 00.9	-2.6
KBS				eS	Sn	20 35 20.8	-5.2
KBS				IAML		20 35 24.6	
	comp=Z,929nm,0.5s						
KBS	Kingsbay	1.77	29⇑	iP	Pn	20 35 00.9	-2.6
KBS				eS	Sn	20 35 20.2	-5.8
KBS	Kingsbay	1.77	29⇑	iP	Pn	20 35 00.9	-2.6
KBS				IAML		20 35 25.1	
	comp=Z,2µm,0.3s						
HSPB	Hornsund (broa	1.83	99	eP	Pn	20 35 00.7	-3.7
HSPB	Hornsund (broa	1.83	99	Pn	Pn	20 35 00.7	-3.7
HSPB				Lg	Lg	20 35 16.6	
HSPB	Hornsund (broa	1.83	99⇑	iP	Pn	20 35 00.5	-3.9
HSPB				eS	Sn	20 35 21.3	-6.1
HSPB	Hornsund (broa	1.83	99⇑	iP	Pn	20 35 00.4	-3.9
HSPB				eS	Sn	20 35 21.4	-6.1
SPA0	Spitsbergen Ar	2.02	64	Pn	Pn	20 35 05.6	-1.6
	baz=238,slow=14						
SPA0				Sn	Sn	20 35 28.6	-3.8
SPA0	Spitsbergen Ar	2.02	64		Pn	20 35 05.5	-1.6
SPA0	Spitsbergen Ar	2.02	64	Pn	Pn	20 35 05.6	-1.6
	baz=238,slow=14						
SPA0				Sn	Sn	20 35 28.6	-3.8
SPA0				IAML		20 35 34.0	
	comp=Z,3µm,0.6s						
SPA0	Spitsbergen Ar	2.02	64⇑	iP	Pn	20 35 05.5	-1.6
SPA0				eS	Sn	20 35 28.3	-4.1
SPITS	Spitsbergen Ar	2.02	64	Pn	Pn	20 35 05.5	-1.6
	baz=234,slow=14						
SPITS				Sn	Sn	20 35 27.6	-4.8
	baz=246,slow=26,SNR=14						
BJO1	Bjornoya	4.04	131	Pn	Pn	20 35 31.3	-3.4
BJO1				Sn	Sn	20 36 12.4	-10
BJO1	Bjornoya	4.04	131	eP	Pn	20 35 30.9	-3.8
BJO1	Bjornoya	4.04	131	eP	Pn	20 35 30.1	-4.6
BJO1				eS	Sn	20 36 12.6	-9.4
HOPEN	Hopen	4.05	94	Pn	Pn	20 35 31.6	-3.2
HOPEN				Sn	Sn	20 36 16.4	-5.9
HOPEN	Hopen	4.05	94	eP	Pn	20 35 31.8	-3.0
HOPEN				eS	Sn	20 36 15.6	-6.7
HOPEN				IAML		20 36 32.1	
	comp=Z,512nm,0.5s						
HOPEN	Hopen	4.05	94	eP	Pn	20 35 31.7	-3.2
HOPEN				eS	Sn	20 36 15.4	-6.9
DAG	Danmarks Havn	5.87	277	i P	Pn	20 35 56.1	-3.8
DAG	Danmarks Havn	5.87	277	e	Pn	20 35 54.7	-5.1
	baz=76,slow=16						
DAG				eP	Pn	20 35 56.3	-3.5
DAG				eS	Sn	20 36 56.5	-11
DAG				IAML		20 37 03.2	
	comp=Z,159nm,0.4s						
DAG	Danmarks Havn	5.87	277	e	Pn	20 35 54.7	-5.1
	baz=76,slow=16						
DAG				i P	Pn	20 35 56.1	-3.8
DAG				i S	Sn	20 36 56.6	-11
DAG				IAML		20 37 03.2	
	comp=Z,159nm,0.4s						
DBG	Daneborg	7.41	259	Pn	Pn	20 36 17.6	-3.4
DBG				Sn	Sn	20 37 34.2	-11
DBG	Daneborg	7.41	259	eP	Pn	20 36 17.8	-3.2
DBG				i		20 37 34.4	
DBG				eS	Sn	20 37 34.4	-11
DBG				IAML		20 37 40.0	
	comp=Z,57nm,0.4s						
DBG	Daneborg	7.41	259	i P	Pn	20 36 17.8	-3.2
DBG				i		20 37 34.4	
DBG				IAML		20 37 40.0	
	comp=Z,57nm,0.4s						
JNW	Jan Mayen West	7.71	222	eP	Pn	20 36 22.6	-2.5
JMIC	Jan Mayen	7.76	222	Pn	Pn	20 36 22.4	-3.5
	baz=45,slow=4.9,SNR=8.5						
JMIC				Sn	Sn	20 37 43.2	-10
	baz=53,slow=20,SNR=1.5						
JMIC				LR	LR	20 38 30.3	
	comp=Z,2µm,19.6s,baz=64,slow=31						
JMIC	Jan Mayen	7.76	222	Pn	Pn	20 36 22.8	-3.0
JMIC	Jan Mayen	7.76	222	eP	Pn	20 36 22.3	-3.5
HAMF	Hammerfest	8.09	139	Pn	Pn	20 36 25.7	-4.6
HAMF				Sn	Sn	20 37 48.9	-13
HAMF	Hammerfest	8.09	139	eP	Pn	20 36 25.6	-4.6
ZFI2	Zemlya Franca-	8.13	47⇑	iP	Pn	20 36 28.5	-2.4
ZFI2				eS	Sn	20 37 55.5	-7.2
ZFI	Zemlya Franca-	8.14	47	eP	Pn	20 36 30.0	-0.9
ZFI				i S	Sn	20 37 53.6	-9.0
TRO	Tromso	8.44	152	Pn	Pn	20 36 30.7	-4.3
TRO	Tromso	8.44	152	eP	Pn	20 36 30.9	-4.1
KIF	Kilpisjarvi	9.24	149	Pn	Pn	20 36 41.8	-4.2
KIF				Sn	Sn	20 38 18.6	-11
KIF	Kilpisjarvi	9.24	149	eP	Pn	20 36 41.9	-4.2
N2VI	Vinje	9.34	165	eP	Pn	20 36 44.6	-2.8
ARA0	ARCESS Array S	9.36	138	Pn	Pn	20 36 43.4	-4.3
	baz=337,slow=12						
ARA0	ARCESS Array S	9.36	138	Pn	Pn	20 36 43.4	-4.3
	baz=337,slow=12						
ARCES	ARCESS Array B	9.36	138	Pn	Pn	20 36 43.1	-4.6
	baz=335,slow=12,SNR=175						
ARCES				Sn	Sn	20 38 19.1	-14
	baz=351,slow=22,SNR=5.7						
ARCES				LR	LR	20 40 27.7	
	comp=Z,2µm,19.3s,baz=335,slow=38						
ARCES	ARCESS Array B	9.36	138	P	Pn	20 36 43.5	-4.2
ARCES	ARCESS Array B	9.36	138	Pn	Pn	20 36 43.5	-4.2
KEV	Kevo	9.39	135	P	Pn	20 36 43.3	-4.7
KEV	Kevo	9.39	135	Pn	Pn	20 36 43.3	-4.7
LOF	Lofoten	9.50	166	Pn	Pn	20 36 46.2	-3.3
LOF	Lofoten	9.50	166	eP	Pn	20 36 45.9	-3.6
KTK1	Kautokeino	9.53	144	eP	Pn	20 36 46.9	-3.2
N2SV	S¸rv¥gen	9.71	168	eP	Pn	20 36 50.2	-2.2
STEI	Steigen	9.79	163	eP	Pn	20 36 51.2	-2.4
N2IH	Innhavet	9.81	161	eP	Pn	20 36 51.5	-2.3
N2VA	Vr¸y	9.92	169	eP	Pn	20 36 52.4	-2.9
FAUS	Fauske	10.34	163	eP	Pn	20 36 59.2	-1.9
SCO	Scoresbysund	10.56	244	i P	Pn	20 37 04.0	-0.1
SCO	Scoresbysund	10.56	244	i P	Pn	20 37 04.0	-0.1
SCO	Scoresbysund	10.56	244	i P	Pn	20 37 04.0	-0.1
SCO	Scoresbysund	10.56	244	i P	Pn	20 37 04.0	-0.1
NBB30	Finnes	10.66	167	eP	Pn	20 37 02.5	-2.9
NBB17	Glomfjord B¥r	10.83	166	eP	Pn	20 37 06.0	-1.7
NBB40	Tonnes	11.08	169	eP	Pn	20 37 09.2	-2.0
KONS	Konsvik	11.10	168	eP	Pn	20 37 09.4	-2.1
STOK	Stokkvaagen	11.26	169	eP	Pn	20 37 11.8	-1.8
MOR8	Moi Rana	11.49	166	eP	Pn	20 37 14.0	-2.9
APA0	Apatity Array	12.30	129	Pn	Pn	20 37 22.4	-5.4
	baz=318,slow=10						
APA0	Apatity Array	12.30	129	Pn	Pn	20 37 22.4	-5.4
	baz=318,slow=10						
LVZ	Lovozero	12.32	126c	eP	Pn	20 37 22.5	-5.7
LVZ				pmax	pmax		
	comp=Z,81nm,0.9s						
LVZ	Lovozero	12.32	126	Pn	Pn	20 37 22.8	-5.4
APA	Apatity	12.40	129⇑	iP	Pn	20 37 23.1	-6.1
APA				pmax	pmax		
	comp=Z,155nm,1.0s						
APA				MLR	MLR		
	comp=Z,4µm,18.0s						
SUMG	Summit	12.52	271	i P	Pn	20 37 27.7	-3.4
SUMG	Summit	12.52	271	i P	Pn	20 37 27.8	-3.4
SUMG	Summit	12.52	271	i P	Pn	20 37 27.7	-3.4
SUMG	Summit	12.52	271	i P	Pn	20 37 27.8	-3.4
NSS	Namsos	13.03	171	eP	Pn	20 37 37.0	-0.7
ICESG	Greenland Ices	15.40	263	i P	Pn	20 38 05.1	-5.0
ICESG				IAmb	IAmb	20 38 08.0	
	comp=Z,42nm,0.9s						
ICESG	Greenland Ices	15.40	263	i P	Pn	20 38 05.1	-5.0
ICESG				IAmb	IAmb	20 38 08.0	
	comp=Z,42nm,0.9s						
BORG	Borgarnes	15.48	231	LR	LR	20 42 29.1	
	comp=Z,2µm,19.2s,baz=26,slow=31						
TULEG	Thule	16.13	305	i P	Pn	20 38 11.3	-8.0
TULEG	Thule	16.13	305	i P	Pn	20 38 11.3	-8.0
UPNV	Upernavik	16.19	287	i P	Pn	20 38 12.1	-8.0
UPNV				IAmb	IAmb	20 38 15.4	
	comp=Z,82nm,0.7s						
UPNV	Upernavik	16.19	287	i P	Pn	20 38 12.1	-8.0
UPNV				IAmb	IAmb	20 38 15.4	
	comp=Z,82nm,0.7s						
NC204	NORSAR Array S	16.26	174		Pn	20 38 20.7	-0.3
TMCR	Tamitsa	16.30	128	eP	Pn	20 38 16.8	-4.7
TMCR				e		20 41 14.5	
TMCR				pmax	pmax		
	comp=Z,153nm,1.0s						
TMCR	Tamitsa	16.30	128	eP	Pn	20 38 16.8	-4.7
	comp=Z,223nm,1.4s						
TMCR				eS	Sn	20 41 05.3	-17
NC303	NORSAR Array S	16.32	173		Pn	20 38 21.7	-0.1
AMDE	Amderma	16.39	89⇑	iP	Pn	20 38 15.0	-7.6
	comp=Z,88nm,0.8s						
AMDE				eS	Sn	20 41 03.7	-20
NC405	NORSAR Array S	16.44	173	Pn	Pn	20 38 23.1	-0.3
NC405				IAmb	IAmb	20 38 34.8	
	comp=Z,438nm,1.6s						
NB201	NORSAR Array S	16.50	174	Pn	Pn	20 38 23.8	-0.3
NBO00	NORSAR Array S	16.50	174		Pn	20 38 23.8	-0.4
NBO00				IAmb	IAmb	20 38 53.0	
	comp=Z,378nm,1.9s						
NOA	NORSAR Array B	16.50	174	Pn	Pn	20 38 24.0	-0.2
	comp=Z,0.0nm,0.3s,baz=353,slow=12,SNR=9.6						
NOA				LR	LR	20 43 53.5	
	comp=Z,888nm,18.9s,baz=355,slow=34						
NC602	NORSAR Array S	16.82	173	P	Pn	20 38 28.3	+0.2
LSH	Leshukonskoye	17.09	116	eP	Pn	20 38 25.1	-6.3
	comp=Z,548nm,0.7s						
LSH				eS	Sn	20 41 20.2	-21
FIA1	FINESS Array S	17.15	149	Pn	Pn	20 38 28.1	-4.1
FIA0	FINESS Array S	17.15	149	P	Pn	20 38 28.4	-3.8
	baz=355,slow=14						
FIA0	FINESS Array S	17.15	149	P	Pn	20 38 28.4	-3.8
	baz=355,slow=14						
FINES	FINESS Array B	17.15	149	Pn	Pn	20 38 27.9	-4.4
	comp=Z,0.7nm,0.3s,baz=359,slow=12,SNR=55						
FINES				LR	LR	20 45 22.0	
	comp=Z,2µm,18.2s,baz=348,slow=38						
FINES	FINESS Array B	17.15	149	P	Pn	20 38 28.7	-3.6
FINES	FINESS Array B	17.15	149	Pn	Pn	20 38 28.6	-3.6
HFS	Hagfors	17.49	170	P	Pn	20 38 34.7	-1.9
	comp=Z,0.4nm,0.3s,baz=358,slow=10,SNR=11						
HFS				LR	LR	20 44 26.5	
	comp=Z,1µm,19.9s,baz=353,slow=34						
HFS	Hagfors	17.49	170	P	Pn	20 38 34.8	-1.7
	baz=4.0,slow=16						
HFS	Hagfors	17.49	170	P	Pn	20 38 34.8	-1.7
	baz=4.0,slow=16						
PUL	Pulkovo	19.29	144d	iP	Pn	20 38 58.1	-0.4
PUL				pmax	pmax		
	comp=Z,153nm,1.1s						
SFJD	Kangerlussuaq	19.50	270	P	P	20 38 58.5	-1.3
	comp=Z,1.5nm,0.3s,baz=22,slow=14,SNR=18						
SFJD				LR	LR	20 46 00.9	
	comp=Z,2µm,21.1s,baz=36,slow=35						
SFJD	Kangerlussuaq	19.50	270	i P	P	20 38 58.7	-1.0
SFJD	Kangerlussuaq	19.50	270	i P	P	20 38 58.8	-1.0
SFJD	Kangerlussuaq	19.50	270	i P	P	20 38 58.7	-1.0
SFJD	Kangerlussuaq	19.50	270	i P	P	20 38 58.8	-1.0
KLMR	Klimovskoe	19.64	130	eP	P	20 38 57.6	-3.7
KLMR				pmax	pmax		
	comp=Z,256nm,1.4s						
KLMR	Klimovskoe	19.64	130	ePn	P	20 38 57.7	-3.6
KLMR				AMP		20 39 05.8	
	comp=Z,256nm,1.4s						
KLMR	Klimovskoe	19.64	130	eP	P	20 38 58.2	-3.1
	comp=Z,256nm,1.4s						
KLMR				S	S	20 42 19.9	-23
BORU	Boraas	19.96	172	i P	Pn	20 39 05.8	-0.7
VSU	Vasula	20.14	150c	iP	P	20 39 05.6	-1.1
VSU				pmax	pmax		
	comp=Z,400nm,1.2s						
DEL	Delary	21.16	170	i P	P	20 39 16.7	-1.1
RES	Resolute Bay	21.87	316	P	P	20 39 25.2	-0.1
	comp=Z,13nm,0.8s,baz=34,slow=13,SNR=42						
RES				S	S	20 43 16.7	-10
	comp=Z,8.4nm,0.9s,baz=319,slow=20,SNR=3.8						
RES				LR	LR	20 47 45.0	
	comp=Z,2µm,18.5s,baz=42,slow=36						
EKA	Eskdalemuir Ar	22.51	196	P	P	20 39 31.8	-0.5
	comp=Z,11nm,1.0s,baz=354,slow=12,SNR=6.4						
KIRV	Kirov	23.56	119	P	P	20 39 41.2	-1.8
	comp=Z,92nm,0.9s,baz=335,slow=5.4,SNR=50						
KIRV	Kirov	23.56	119⇓	iP	P	20 39 41.6	-1.4
BSEG	Bad Segeberg	23.61	176	eP	P	20 39 45.1	+1.6
	comp=Z,137nm,1.7s,baz=358,slow=9.1						
NACGM	Naroch	23.64	152	i P	P	20 39 42.9	-1.0
NACGM				i P	P	20 39 42.9	-1.0
NACGM				i P	P	20 39 42.9	-1.0
NACGM				i Pb	pwP	20 39 51.8	+1.7
	comp=Z,135nm,1.1s						
NACGM				i Pb	sP	20 39 52.0	+5.2
	comp=N,219nm,1.4s						
NACGM				i PP	PnPn	20 40 19.0	+8.2
NACGM				i S	S	20 43 56.2	-1.9
NACGM				i SS	SnSn	20 44 29.9	-4.9
NACGM				i SSS	SSS	20 45 00.5	
NACGM				i LQ	LQ	20 47 05.5	
NACGM				i LR	LR	20 48 07.1	
MNK	Minsk	24.16	150	i P	P	20 39 48.9	+0.1
	comp=E,2.0nm,0.6s						
MNK				i P	P	20 39 48.9	+0.1
	comp=N,85nm,1.2s						
MNK				i P	P	20 39 48.9	+0.1
	comp=Z,120nm,1.2s						
MNK				i PP	PnPn	20 40 17.9	+0.1
MNK				i PPP	PPP	20 40 25.8	
MNK				i PcP	PcP	20 43 29.5	+0.5
MNK				i S	S	20 44 07.9	+1.6
MNK				i SS	SnSn	20 44 50.1	+2.8
MNK				i SSS	SSS	20 45 03.6	
MNK				i ScP	ScP	20 47 08.0	+1.1
MNK				i PcS	PcS	20 47 09.3	+0.9
MNK				i LQ	LQ	20 47 19.2	
MNK				i LR	LR	20 49 09.3	
MNK				i LRM	MLR	20 50 03.7	
	comp=E,15nm,10.6s						
MNK				i LRM	MLR	20 50 03.7	
	comp=N,370nm,9.0s						
MNK				i LRM	MLR	20 50 03.7	
	comp=Z,493nm,11.3s						
MNK	Minsk	24.16	150⇓	iP	P	20 39 48.0	-0.8
MNK				pmax	pmax		
	comp=N,420nm,1.5s						
MNK				pmax	pmax		
	comp=Z,440nm,1.5s						
SUW	Suwalki	24.19	157	eP	P	20 39 54.0	+5.0
MOS	Moscow	24.23	136	eP	P	20 39 46.8	-2.6
MOS				e		20 40 18.1	
MOS				e		20 44 06.9	
MOS				pmax	pmax		
	comp=Z,169nm,1.7s						
MOS				MLR	MLR		
	comp=Z,1µm,17.0s						
GKP	Gorka Klasztor	24.51	166	eP	P	20 39 58.6	+6.6
OBN	Obninsk	24.67	138	P	P	20 39 51.9	-1.5
	comp=Z,7.3nm,0.9s,baz=340,slow=15,SNR=8.4						
OBN				LR	LR	20 49 41.4	
	comp=Z,353nm,19.3s,baz=355,slow=37						
OBN	Obninsk	24.67	138d	iP	P	20 39 51.7	-1.7
OBN				i		20 39 58.3	
OBN				i		20 40 23.3	
OBN				i		20 43 27.3	
OBN				i S	S	20 44 11.8	-2.7
OBN				i SS	SnSn	20 45 09.7	+10
OBN				pmax	pmax		
	comp=Z,76nm,1.2s						
OBN				MLR	MLR		
	comp=Z,1µm,19.0s						
NRDL	Niedersach Rie	25.05	176	eP	P	20 39 58.7	+2.0
	comp=Z,60nm,1.2s,baz=358,slow=9.1						
FLTG	Flechtingen	25.23	175	eP	P	20 39 59.6	+1.1
	comp=Z,25nm,1.3s,baz=358,slow=9.1						
GTTG	Gottingen	26.00	177	eP	P	20 40 08.0	+2.6
	comp=Z,45nm,1.3s,baz=358,slow=9.1						
BEL	Belsk	26.16	161	eP	P	20 40 09.6	+2.7
FRB	Frobisher Bay	26.19	282	P	P	20 40 06.6	-0.5
	comp=Z,9.3nm,0.9s,baz=31,slow=4.4,SNR=10.0						
FRB				LR	LR	20 51 09.0	
	comp=Z,3µm,18.7s,baz=34,slow=38						
CLL	Collm	26.30	172	eP	P	20 40 09.0	+0.8
CLL				e		20 40 16.0	
	comp=Z,26nm,1.4s						
CLL				e		20 40 24.0	
	comp=Z,27nm,1.3s						
CLL				i		20 40 32.2	
CLL				ePPP	PPP	20 40 55.0	
CLL				eS	S	20 44 41.0	+0.6
CLL				Lm	MLR	20 50 00.0	
	comp=Z,900nm,18.9s						
CLL	Collm	26.30	172	eP	P	20 40 16.0	+7.8
CLL				e		20 40 24.0	
CLL				eS	S	20 44 41.0	+0.6
CLL				pmax	pmax		
	comp=Z,26nm,1.4s						
CLL				MLR	MLR		
	comp=Z,900nm,18.9s						
BRG	Berggiesshubel	26.76	171	eP	P	20 40 12.3	-0.1
BRG				Amp		20 40 22.9	
	comp=Z,37nm,1.7s						
BRG	Berggiesshubel	26.76	171	eP	P	20 40 12.3	-0.1
BRG				pmax	pmax		
	comp=Z,37nm,1.7s						
BRG	Berggiesshubel	26.76	171	eP	P	20 40 12.3	-0.1
BRG				Amp		20 40 22.9	
	comp=Z,37nm,1.7s						
KSP	Ksiaz	26.89	168	eP	P	20 40 16.3	+2.7
MEM	Membach	26.92	182	bP	P	20 40 13.7	-0.1
MOX	Moxa	26.93	174	eP	P	20 40 15.9	+2.1
	comp=Z,18nm,1.1s,baz=358,slow=9.1						
PLN	Plauen	27.10	174	eP	P	20 40 17.5	+2.0
	comp=Z,16nm,1.2s,baz=358,slow=9.1						
CHVC	Chvalec	27.13	168	eP	P	20 40 15.7	-0.1
BGES	Gesves	27.16	183	bP	P	20 40 15.7	-0.3
	comp=Z,34nm,3.3s						
BGES				dPnPn	PnPn	20 40 58.7	-0.1
OSTC	Ostas	27.17	168	eP	P	20 40 21.1	+5.0
TIXI	Tiksi	27.21	36c	iP	P	20 40 17.9	+1.7
TIXI				pmax	pmax		
	comp=Z,157nm,1.3s						
TIXI	Tiksi	27.21	36	P	P	20 40 17.1	+0.9
GUNZ	Gunzen	27.22	173	eP	P	20 40 18.5	+1.9
	comp=Z,42nm,1.8s,baz=358,slow=9.1						
TNS	Taunus Mts	27.30	179	eP	P	20 40 17.6	+0.3
	comp=Z,35nm,1.5s,baz=358,slow=9.1						
NKC	Novy Kostel	27.36	173	eP	P	20 40 18.4	+0.6
NKC	Novy Kostel	27.36	173	eP	P	20 40 18.4	+0.6
DPC	Dobruska-Polom	27.38	168	eP	P	20 40 16.9	-1.1
DPC	Dobruska-Polom	27.38	168	eP	P	20 40 16.9	-1.1
DPC				ex	x	20 40 33.3	
ARU	Arti	27.39	110	P	P	20 40 17.9	-0.1
	comp=Z,11nm,0.8s,baz=330,slow=7.0,SNR=38						
ARU				LR	LR	20 53 18.3	
	comp=Z,555nm,19.6s,baz=334,slow=41						
ARU	Arti	27.39	110c	iP	P	20 40 18.3	+0.3
ARU						20 40 58.9	
ARU				PPP	PPP	20 41 11.9	
ARU				S	S	20 45 00.4	+2.8
ARU				pmax	pmax		
	comp=Z,137nm,1.3s						
ARU				MLR	MLR		
	comp=Z,1µm,16.0s						
ARU	Arti	27.39	110	P	P	20 40 18.6	+0.6
SVE	Sverdlovsk	27.45	108d	eP	P	20 40 18.9	+0.4
SVE				eS	S	20 45 05.4	+6.8
SVE				pmax	pmax		
	comp=Z,60nm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
LPSR	Galich'ya Gora	27.46	136	eP	P	20 40 17.7	-0.9
LPSR				pmax	pmax		
	comp=Z,100nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,780nm,13.0s						
PRU	Pruhonice	27.67	170	eP	P	20 40 22.6	+2.1
PRU	Pruhonice	27.67	170	eP	P	20 40 22.6	+2.1
OJC	Ojcow	27.70	163	eP	P	20 40 21.6	+0.7
PBCC	Pribram	27.95	171	eP	P	20 40 25.9	+2.8
MORC	Moravsky Berou	28.01	166	eP	P	20 40 28.7	+5.0
AKASG	Malin Array Be	28.05	150	P	P	20 40 22.4	-1.5
	comp=Z,7.0nm,0.7s,baz=349,slow=9.5,SNR=31						
AKASG				LR	LR	20 51 33.9	
	comp=Z,1µm,20.5s,baz=350,slow=37						
AKASG	Malin Array Be	28.05	150	i P	P	20 40 22.8	-1.1
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKBB	Malin Array Si	28.05	150⇓	eP	P	20 40 23.2	-0.7
AKBB				pmax	pmax		
	comp=Z,26nm,1.3s						
VORR	Voronezh	28.41	137	eP	P	20 40 26.0	-1.1
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
LVV	L'vov	28.42	157	eP	P	20 40 26.4	-0.8
LVV				eS	S	20 45 09.6	-4.3
LVV				MLR	MLR		
	comp=Z,600nm,15.0s						
VRAC	Vranov	28.43	168	P	P	20 40 27.3	-0.1
	comp=Z,7.5nm,0.9s,baz=1.4,slow=7.8,SNR=7.4						
VRAC				LR	LR	20 50 44.1	
	comp=Z,673nm,20.6s,baz=355,slow=34						
VRAC	Vranov	28.43	168	⇓P	P	20 40 28.2	+0.8
VRAC	Vranov	28.43	168	eP	P	20 40 26.9	-0.5
VRAC	Vranov	28.43	168	⇓P	P	20 40 28.2	+0.8
KHC	Kasperske Hory	28.49	172	eP	P	20 40 24.5	-3.4
KHC				e		20 40 33.5	
KHC	Kasperske Hory	28.49	172	eP	P	20 40 24.5	-3.4
KHC				ex	x	20 40 33.5	
NIE	Niedzica	28.54	162	eP	P	20 40 29.4	+1.1
KRUC	Moravsky	28.67	168	eP	P	20 40 28.9	-0.6
LANS	Liptovska Anna	28.75	164	eP	P	20 40 31.0	+0.8
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	28.75	164	eP	P	20 40 31.0	+0.8
GERES	GERESS Array B	28.78	172	P	P	20 40 31.1	+0.6
	comp=Z,1.6nm,0.8s,baz=9.2,slow=11,SNR=4.9						
GERES				LR	LR	20 51 49.7	
	comp=Z,694nm,18.1s,baz=352,slow=36						
BELG	Belogornoye	29.10	126	P	P	20 40 32.4	-0.8
	comp=Z,38nm,1.0s,baz=342,slow=2.5,SNR=13						
BELG	Belogornoye	29.10	126c	iP	P	20 40 32.4	-0.8
BELG				pmax	pmax		
	comp=Z,15nm,1.2s						
CRVS	Cervenica-Dubn	29.13	161	eP	P	20 40 36.6	+3.0
CRVS	Cervenica-Dubn	29.13	161	eP	P	20 40 36.6	+3.0
KOLS	Kolonicke sedl	29.16	160	eP	P	20 40 34.3	+0.5
KOLS				pmax	pmax		
	comp=Z,12nm,1.1s						
KOLS	Kolonicke sedl	29.16	160	eP	P	20 40 34.3	+0.5
VRH	Novokhopyorsk	29.25	134	eP	P	20 40 33.3	-1.3
VRH				pmax	pmax		
	comp=Z,60nm,1.4s						
VRH				MLR	MLR		
	comp=Z,970nm,12.0s						
SMOL	Smolenice	29.27	166	eP	P	20 40 36.2	+1.4
SMOL	Smolenice	29.27	166	eP	P	20 40 36.2	+1.4
VYHS	Vyhne	29.36	165	eP	P	20 40 35.9	+0.2
VYHS				pmax	pmax		
	comp=Z,11nm,1.2s						
VYHS	Vyhne	29.36	165	eP	P	20 40 35.9	+0.2
MODS	Modra-Piesok	29.40	167	eP	P	20 40 36.1	+0.1
MODS				pmax	pmax		
	comp=Z,25nm,1.3s						
MODS	Modra-Piesok	29.40	167	eP	P	20 40 36.0	+0.1
CONA	Conrad Observa	29.78	169	eP	P	20 40 40.0	+0.6
	comp=Z,11nm,1.3s						
PSZ	Piszkesteto	30.00	163	eP	P	20 40 45.1	+3.7
MOTA	Moosalm	30.22	175	eP	P	20 40 45.3	+2.0
	comp=Z,10.0nm,1.3s						
EGYH	Egyhazaskeszo	30.36	167	eP	P	20 40 42.2	-2.2
CSKK	Cskako	30.46	166	eP	P	20 40 43.2	-2.1
SORM	Soroca	30.49	152	⇑P	P	20 40 45.0	-0.6

SORM	Soroca	30.49	152	⇑P	P	20 40 45.0	-0.6
MPLH	Magyarpolny	30.61	167	*e*P	P	20 40 48.0	+1.3
C36M	Paulatuk	30.62	329	P	P	20 40 47.8	+1.3
	baz=19,SNR=18						
BUR08	Bucovina Ar. S	30.68	156	P	P	20 40 47.4	0.0
BURAR	Bucovina Array	30.71	156	⇑P	P	20 40 47.7	+0.1
BURAR	Bucovina Array	30.71	156	⇑P	P	20 40 47.7	+0.1
BURAR	Bucovina Array	30.71	156	P	P	20 40 46.9	-0.8
OBKA	Obir	31.14	171	*e*P	P	20 40 54.0	+2.5
	comp=Z,4.2nm,0.8s						
A21K	Barrow	31.16	350	P	P	20 40 53.0	+1.7
	baz=6.6						
DRGR		31.32	160	⇑P	P	20 40 55.2	+2.2
DRGR		31.32	160	⇑P	P	20 40 55.2	+2.2
BIZ	Bicaz	31.46	155	⇑P	P	20 40 54.9	+0.7
MORH	Mrgy, Hungar	31.63	165	*e*P	P	20 40 52.5	-3.1
MILM	Milestii Mici	31.74	152	⇑P	P	20 40 56.1	-0.5
BZS	Buzias	32.41	161	⇑P	P	20 41 04.0	+1.5
BZS	Buzias	32.41	161	⇑P	P	20 41 04.0	+1.5
VRI	Vrincioaia	32.58	155	⇓P	P	20 41 04.4	+0.4
VRI	Vrincioaia	32.58	155	⇓P	P	20 41 04.4	+0.4
INK	Inuvik	32.61	334	P	P	20 41 04.8	+0.8
INK				pmax	pmax		
	comp=Z,47nm,1.3s						
INK				MLR	MLR		
	comp=Z,800nm,22.0s						
INK	Inuvik	32.61	334	P	P	20 41 04.8	+0.8
INK				IAmb	IAmb	20 41 13.1	
	comp=Z,46nm,1.3s						
GZR	Gura Zlata	32.72	160	⇑P	P	20 41 06.5	+1.2
GZR	Gura Zlata	32.72	160	⇑P	P	20 41 06.5	+1.2
AKTO	Aktyubinsk	32.93	115	LR	LR	20 56 18.1	
	comp=Z,768nm,18.5s,baz=358,slow=40						
BRVK	Borovoye	33.02	100*c*	*i*P	P	20 41 08.3	+0.6
BRVK				pmax	pmax		
	comp=Z,49nm,1.7s						
BRVK	Borovoye	33.02	100	P	P	20 41 08.0	+0.2
MTUR	Matau	33.06	157	P	P	20 41 09.4	+1.1
MTUR	Matau	33.06	157	P	P	20 41 09.4	+1.1
TOLK	Toolik Lake Re	33.50	345	P	P	20 41 13.8	+1.9
	baz=8.8,SNR=8.2						
TPGR	Topolog	33.74	153	⇑P	P	20 41 14.6	+0.4
ABKAR	Akbulak array	34.44	113	P	P	20 41 19.0	-1.2
EPYK	Eagle Plains	34.80	336	P	P	20 41 24.0	+0.9
	baz=13						
ANN	Anapa	34.87	142	*e*P	P	20 41 18.6	-5.2
ANN				*e**PP	pP	20 41 22.3	-3.7
ANN				*e*		20 42 37.7	
ANN				*e*S	S	20 46 47.5	-6.9
ANN				pmax	pmax		
	comp=Z,197nm,1.8s						
COLD	Coldfoot	34.94	345	P	P	20 41 25.5	+1.2
	baz=8.3,SNR=14						
COLD	Coldfoot	34.94	345	P	P	20 41 25.6	+1.3
COLD				IAmb	IAmb	20 41 34.1	
	comp=Z,56nm,1.7s						
ZAA0	Zalesovo Array	35.36	85	P	P	20 41 28.0	0.0
ZAA0				IAmb	IAmb	20 41 29.6	
	comp=Z,28nm,0.9s						
ZALV	Zalesovo Beam	35.36	85	P	P	20 41 28.4	+0.4
	comp=Z,26nm,0.8s,baz=332,slow=8.6,SNR=93						
ZALV				PP	PnPn	20 42 45.3	-0.8
	comp=Z,10nm,1.0s,baz=340,slow=12,SNR=3.9						
ZALV				PcP	PcP	20 43 58.2	+0.5
	comp=Z,2.2nm,0.7s,baz=288,slow=4.0,SNR=2.2						
ZALV				LR	LR	21 00 50.3	
	comp=Z,595nm,18.2s,baz=342,slow=45						
ZALV	Zalesovo Beam	35.36	85	P	P	20 41 28.2	+0.2
ZALV	Zalesovo Beam	35.36	85	P	P	20 41 28.2	+0.2
GOF	Gofitskoye	35.43	135	⇑*e*P	P	20 41 29.2	+0.5
GOF				pmax	pmax		
	comp=Z,77nm,1.0s						
YKA	Yellowknife Ar	35.91	318	P	P	20 41 33.3	+0.7
	comp=Z,8.3nm,0.9s,baz=9.5,slow=8.7,SNR=93						
YKA				PcP	PcP	20 43 59.3	+0.1
	comp=Z,3.0nm,0.8s,baz=22,slow=3.1,SNR=8.2						
YKA				LR	LR	20 56 00.0	
	comp=Z,861nm,18.7s,baz=0.0,slow=36						
YKA	Yellowknife Ar	35.91	318	*i* P	P	20 41 33.4	+0.8
YKA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FCC	Fort Churchill	35.94	300	P	P	20 41 32.4	-0.5
FCC				pmax	pmax		
	comp=Z,43nm,1.2s						
FCC				MLR	MLR		
	comp=Z,2µm,18.0s						
FCC	Fort Churchill	35.94	300	P	P	20 41 32.4	-0.5
FCC				IAmb	IAmb	20 41 40.0	
	comp=Z,43nm,1.1s						
FCC				IAMs_20	IAMs_20	20 56 15.5	
	comp=Z,2µm,18.0s						
PGAV	Gavieira, Arco	36.17	200	*e*P	P	20 41 35.2	0.0
PBRG	Braganca	36.22	198	*e*P	P	20 41 35.7	+0.2
YAK	Yakutsk	36.35	42	*e*P	P	20 41 36.8	+0.4
YAK				*e**PP	pwP	20 41 42.1	-0.2
YAK				*e*		20 43 59.6	
YAK				*e*S	S	20 47 16.9	+0.1
YAK				*e*SS	SnSn	20 49 42.1	-1.4
YAK				*e*SSS	SSS	20 50 05.7	
YAK				pmax	pmax		
	comp=Z,41nm,1.2s						
YAK				pmax	pmax		
	comp=N,35nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,32nm,1.7s						
YAK				pmax	pmax		
	comp=E,36nm,2.2s						
YAK				pmax	pmax		
	comp=N,28nm,1.9s						
YAK				smax	smax		
	comp=N,138nm,3.6s						
YAK				smax	smax		
	comp=E,132nm,3.5s						
YAK				MLR	MLR		
	comp=Z,357nm,19.0s						
YAK				MLR	MLR		
	comp=N,273nm,19.0s						
YAK				MLR	MLR		
	comp=E,83nm,16.0s						
SOC	Sochi	36.38	139	*e*P	P	20 41 36.0	-0.8
SOC				*e*		20 43 00.4	
SOC				*e*PPP	PPP	20 43 13.3	
SOC				*e*S	S	20 47 17.6	-0.1
SOC				*e*SS	SnSn	20 49 44.7	-0.1
SOC				*e*SSS	SSS	20 50 06.4	
SOC				pmax	pmax		
	comp=Z,68nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
BRZS	Berezniki	36.42	99	*e*P	P	20 41 35.4	-1.9
	comp=Z,14nm,0.9s,baz=99						
BRZS	Berezniki	36.42	99	*e*P	P	20 41 35.3	-1.9
BRZS				pmax	pmax		
	comp=Z,14nm,0.9s						
KIV	Kislovodsk	36.46	136	⇓P	P	20 41 39.1	+1.5
KIV	Kislovodsk	36.46	136	*i* P	P	20 41 39.4	+1.8
	SNR=5.0						
KIV	Kislovodsk	36.46	136	*e*P	P	20 41 38.2	+0.6
KIV				*e*S	S	20 47 20.7	+1.6
KIV				pmax	pmax		
	comp=Z,51nm,1.1s						
KIV				pmax	pmax		
	comp=Z,1.0nm,16.0s						
KBZ	Khabaz	36.71	135	P	P	20 41 40.4	+0.8
	comp=Z,23nm,0.9s,baz=331,slow=3.3,SNR=33						
KBZ				LR	LR	20 57 20.2	
	comp=Z,760nm,18.4s,baz=353,slow=37						
KBZ	Khabaz	36.71	135*c*	*i*P	P	20 41 40.3	+0.7
KBZ				pmax	pmax		
	comp=Z,40nm,1.1s						
POLO	Lamas de Olo	36.72	199	*e*P	P	20 41 40.3	+0.4
	comp=Z,20nm,2.1s						
EGAK	Eagle	36.74	338	P	P	20 41 40.9	+1.2
EGAK				IAmb	IAmb	20 41 49.5	
	comp=Z,46nm,1.1s						
POKR	Poker Plat Res	36.87	343	P	P	20 41 43.3	+2.5
	baz=8.9						
MVO	Moncorvo	36.87	198	*e*P	P	20 41 41.3	+0.1
	comp=Z,35nm,1.3s						
I23K	Minto, Yukon-K	36.96	344	P	P	20 41 43.7	+2.1
	baz=8.2,SNR=14						
KURK	Kurchatov	37.03	93*c*	*i*P	P	20 41 42.6	+0.3
KURK				pmax	pmax		
	comp=Z,97nm,1.2s						
KURK	Kurchatov	37.03	93	P	P	20 41 42.6	+0.3
KURK				IAmb	IAmb	20 41 44.2	
	comp=Z,83nm,1.1s						
NCK	Nalchik	37.05	135	⇓*e*P	P	20 41 43.8	+1.2
NCK				pmax	pmax		
	comp=Z,96nm,1.8s						
KURBB	Kurchatov Arra	37.10	93	PcP	PcP	20 44 03.5	+0.5
	comp=Z,2.1nm,0.9s,baz=329,slow=2.7,SNR=2.5						
COLA	College	37.14	343*d*	*i*P	P	20 41 44.9	+1.8
COLA				pmax	pmax		
	comp=Z,16nm,1.1s						
TCOL	CIGO, UAF Yank	37.14	343	P	P	20 41 45.4	+2.3
	baz=8.7						
MLY	Manley	37.16	345	P	P	20 41 45.3	+2.0
	baz=7.7						
ILAR	Eielson Array	37.18	342	P	P	20 41 45.5	+2.0
	comp=Z,8.7nm,0.8s,baz=2.4,slow=7.0,SNR=105						
ILAR				PcP	PcP	20 44 03.0	+0.1
	comp=Z,1.7nm,0.8s,baz=353,slow=3.3,SNR=6.1						
ILAR				LR	LR	20 55 44.8	
	comp=Z,254nm,21.7s,baz=18,slow=34						
ILAR	Eielson Array	37.18	342	P	P	20 41 44.3	+0.8
DAWY	Dawson	37.30	337	P	P	20 41 45.3	+0.8
PVIS	Viseu	37.38	199	*e*P	P	20 41 45.4	-0.1
	comp=Z,34nm,1.5s						
NEA2	Nenana	37.49	344	P	P	20 41 47.6	+1.5
	baz=8.2						
HDA	Harding Lake	37.54	342	P	P	20 41 47.6	+1.1
	baz=8.9,SNR=11						
K27K	Chicken	37.56	339	P	P	20 41 48.3	+1.6
	baz=10						
CHVG	Ch'k'valeri	37.57	137	⇓P	P	20 41 48.7	+1.7
CHVG	Ch'k'valeri	37.57	137	⇓P	P	20 41 48.7	+1.7
MTE	Manteigas	37.67	199	*e*P	P	20 41 48.5	+0.6
SEM	Semipalatinsk	37.67	92	*e*P	P	20 41 46.1	-2.0
	comp=Z,17nm,0.9s,baz=92						
SEM	Semipalatinsk	37.67	92	*e*P	P	20 41 46.0	-2.0
SEM				pmax	pmax		
	comp=Z,17nm,0.9s						
BOD	Bodaibo	37.73	57	*e*P	P	20 41 47.6	-0.5
BOD				pmax	pmax		
	comp=Z,55nm,1.7s						
SCRK	Sand Creek	37.76	340	P	P	20 41 50.4	+1.8
	baz=9.8						
ZEI	Tsey	37.78	135	*e*P	P	20 41 48.3	-0.7
ZEI				pmax	pmax		
	comp=Z,31nm,1.7s						
PCAS	Casmilo, Conde	38.09	200	*e*P	P	20 41 51.6	+0.2
	comp=Z,69nm,1.8s						
ESBB	Sonseca Array	38.17	194	P	P	20 41 51.4	-0.7
ESDC	Sonseca Array	38.17	194	P	P	20 41 51.6	-0.5
	comp=Z,9.7nm,0.9s,baz=1.3,slow=8.8,SNR=59						
ESDC				LR	LR	20 55 41.2	
	comp=Z,271nm,18.7s,baz=0.0,slow=33						
ESDC	Sonseca Array	38.17	194	P	P	20 41 51.6	-0.5
PCBR	Castelo Branco	38.22	199	*e*P	P	20 41 53.1	+0.6
	comp=Z,29nm,1.9s						
PAB	San Pablo	38.32	195	P	P	20 41 53.4	0.0
PAB				pmax	pmax		
	comp=Z,22nm,1.0s						
PAB	San Pablo	38.32	195	P	P	20 41 53.4	0.0
PAB	San Pablo	38.32	195	P		20 41 53.6	
MCK	McKinley	38.34	343	P	P	20 41 55.0	+1.7
	baz=8.1						
PMRV	Marv??o	38.63	199	*e*P	P	20 41 56.0	+0.1
	comp=Z,57nm,1.2s						
L26K	Log Cabin Wild	38.65	339	P	P	20 41 58.2	+2.3
	baz=9.8,SNR=8.5						
KTUT	Trabzon	38.93	140	⇑P	P	20 41 59.7	+1.2
PMTG	Montargil	39.04	200	*e*P	P	20 41 59.5	+0.1
	comp=Z,43nm,1.6s						
AKH	Akhalkalaki	39.07	136	⇓P	P	20 42 01.8	+2.0
PESTR	Estremoz	39.20	199	P		20 42 01.1	
BRTR	Keskin Array B	39.38	148	P	P	20 42 02.9	+0.4
	comp=Z,12nm,1.0s,baz=338,slow=6.5,SNR=33						
BRTR				PP	PP	20 43 31.9	-0.6
	comp=Z,4.7nm,1.1s,baz=343,slow=9.3,SNR=2.8						
BRTR	Keskin Array B	39.38	148	*i* P	P	20 42 03.0	+0.6
BRTR				pmax	pmax		
	comp=Z,12nm,1.0s						
BRTR	Keskin Array B	39.38	148	P	P	20 42 01.8	-0.7
SESP	Santiago Espad	39.64	193	P		20 42 05.6	
CUT	Chulitna	39.74	344	P	P	20 42 05.3	+0.3
	baz=7.4						
M24K	Tolsona, Glenn	39.77	341	P	P	20 42 06.3	+0.9
	baz=8.7						
DGZ	Jazzator, Alta	39.91	85*c*	*i*P	P	20 42 07.9	+1.1
DGZ				pmax	pmax		
	comp=Z,25nm,1.1s						
PNCL	Nicolau / Gran	40.02	200	*e*P	P	20 42 07.4	-0.1
	comp=Z,39nm,1.7s						
HORN	Hornachuelos	40.06	196	P		20 42 08.1	
N25K	Chitina, Valde	40.15	340	P	P	20 42 10.2	+1.6
	baz=9.1						
MESJ	Messejana	40.26	199	*e*P	P	20 42 09.9	+0.3
MESJ				AMb	AMB	20 42 12.4	
	comp=Z,37nm,1.6s						
MESJ	Messejana	40.26	199	*e*P	P	20 42 09.9	+0.3
MESJ				pmax	pmax		
	comp=Z,37nm,1.6s						
MESJ	Messejana	40.26	199	*e*P	P	20 42 10.3	+0.7
	comp=Z,37nm,1.6s						
PCVE	Castro Verde	40.46	199	*e*P	P	20 42 10.2	-1.0
	comp=Z,38nm,1.4s						
GNI	Garni	40.49	134	LR	LR	21 00 01.1	
	comp=Z,518nm,19.7s,baz=338,slow=38						
GNI	Garni	40.49	134	P	P	20 42 12.7	+1.0
MORF	Marmelete	40.83	200	*e*P	P	20 42 14.5	+0.1
MORF				AMb	AMB	20 42 25.4	
	comp=Z,40nm,1.4s						
MORF	Marmelete	40.83	200	*e*P	P	20 42 14.4	+0.1
MORF				pmax	pmax		
	comp=Z,40nm,1.4s						
MORF	Marmelete	40.83	200	*e*P	P	20 42 15.0	+0.7
PBDV	Barranco-do-Ve	40.84	199	*e*P	P	20 42 15.2	+0.8
	comp=Z,48nm,1.8s						
MOY	Mondy	40.96	71	*e*P	P	20 42 17.2	+1.8
MOY				pmax	pmax		
	comp=Z,106nm,1.6s						
MATQ	Matagami	41.01	280	P	P	20 42 15.6	0.0
	baz=19,SNR=6.7						
RC01	Rabbit Creek A	41.02	343	P	P	20 42 16.8	+1.2
	baz=7.4						
IRK	Irkutsk	41.09	68	*e*P	P	20 42 16.1	-0.2
IRK				*e*		20 42 23.5	
IRK				pmax	pmax		
	comp=Z,27nm,1.8s						
FFC	Flin Flon	41.22	304	P	P	20 42 17.8	+0.6
FFC				pmax	pmax		
	comp=Z,174nm,1.8s						
FFC				MLR	MLR		
	comp=Z,2µm,19.0s						
FFC	Flin Flon	41.22	304	P	P	20 42 17.8	+0.6
FFC				IAmb	IAmb	20 42 25.6	
	comp=Z,174nm,1.8s						
FFC	Flin Flon	41.22	304	IAMs_20	IAMs_20	20 59 18.2	
	comp=Z,1µm,19.0s						
BTLS	Baital	41.41	101	*e*P	P	20 42 18.0	-0.9
	comp=Z,29nm,1.6s,baz=100						
BTLS	Baital	41.41	101	*e*P	P	20 42 18.0	-0.9
BTLS				pmax	pmax		
	comp=Z,29nm,1.6s						
MAKZ	Makanchi	41.45	92	IAMs_20	IAMs_20	21 02 04.4	
	comp=Z,1µm,18.0s						
ZSN	Zaisan	41.48	89	*e*P	P	20 42 18.4	-1.1
	comp=Z,33nm,1.0s,baz=89						
ZSN	Zaisan	41.48	89	*e*P	P	20 42 18.4	-1.1
ZSN				pmax	pmax		
	comp=Z,33nm,1.0s						
TLY	Talaya	41.50	69	P	P	20 42 20.7	+1.1
	comp=Z,8.6nm,0.8s,baz=348,slow=10,SNR=5.9						
TLY				LR	LR	21 03 00.5	
	comp=Z,634nm,18.3s,baz=334,slow=41						
TLY	Talaya	41.50	69*c*	*i*P	P	20 42 19.9	+0.3
TLY				pmax	pmax		
	comp=Z,31nm,1.6s						
TLY				MLR	MLR		
	comp=Z,619nm,17.0s						
D63A	Stockholm	41.50	270	P	P	20 42 23.0	+3.3
	baz=19						
LSQQ	Lebel-sur-Quev	41.53	279	P	P	20 42 19.3	-0.6
	baz=19						
MK31	Makanchi Array	41.54	91*c*	*i*P	P	20 42 20.3	+0.3
MK31	Makanchi Array	41.54	91	P	P	20 42 20.9	+0.8
MKAR	Makanchi Array	41.54	91	P	P	20 42 20.6	+0.6
	comp=Z,32nm,0.8s,baz=343,slow=6.8,SNR=240						
MKAR				PP	PP	20 43 57.0	+1.3
	comp=Z,10nm,0.9s,baz=335,slow=8.2,SNR=3.9						
MKAR				LR	LR	21 02 29.1	
	comp=Z,793nm,20.2s,baz=335,slow=40						
MKAR	Makanchi Array	41.54	91	P	P	20 42 20.7	+0.7
GBN	Guysborough	41.61	262	IAMs_20	IAMs_20	20 57 41.5	
	comp=Z,1µm,19.0s						
D62A	Allapoint, All	41.67	270	P	P	20 42 21.6	+0.6
	baz=19						
KEST	Kesra	41.79	178	P	P	20 42 23.1	+0.8
	comp=Z,10nm,1.1s,baz=18,slow=19,SNR=3.5						
D61A	St Aubert, Com	41.80	272	P	P	20 42 22.7	+0.6
	baz=19,SNR=5.5						
E64A	Bridgewater	42.03	269	P	P	20 42 24.2	+0.2
	baz=18						
D60A	Saint Jean D’O	42.24	272	P	P	20 42 25.4	-0.2
	baz=19						
TDK	Taldyqorghan	42.39	96	*e*P	P	20 42 26.8	-0.2
	comp=Z,74nm,1.5s,baz=96						
TDK	Taldyqorghan	42.39	96	*e*P	P	20 42 26.8	-0.2
TDK				pmax	pmax		
	comp=Z,74nm,1.5s						
D58A	Chemin du LacG	42.49	274	P	P	20 42 28.0	+0.2
	baz=19,SNR=5.2						
KKAR	Karatay Array	42.50	105	P	P	20 42 27.8	-0.1
KKAR	Karatay Array	42.50	105	P	P	20 42 27.8	-0.1
E61A	Lac Etchemin	42.60	272	P	P	20 42 29.2	+0.5
	baz=18,SNR=5.4						
PALE	Palemas	42.61	194	P		20 42 29.0	
ZAK	Zakamensk	42.65	70	*e*P	P	20 42 29.9	+0.7
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
F64A	Sherman	42.67	269	P	P	20 42 29.0	-0.2
	baz=18						
E60A	Ste Agathe de	42.87	272	P	P	20 42 30.5	-0.3
	baz=18						
DZA	Taraz	42.88	104	*e*P	P	20 42 30.5	-0.6
	comp=Z,13nm,1.0s,baz=104						
DZA	Taraz	42.88	104	*e*P	P	20 42 30.4	-0.6
DZA				pmax	pmax		
	comp=Z,13nm,1.0s						
IDI	Anoyia	42.92	159	LR	LR	21 02 23.7	
	comp=Z,261nm,19.3s,baz=57,slow=39						
KUU	Kurty	42.99	99	*e*P	P	20 42 30.6	-1.4
	comp=Z,71nm,1.3s,baz=99						
KUU	Kurty	42.99	99	*e*P	P	20 42 30.5	-1.4
KUU				pmax	pmax		
	comp=Z,71nm,1.3s						
SGDS	Sogindy	43.05	101	*e*P	P	20 42 31.6	-0.9
	comp=Z,19nm,1.3s,baz=101						
SGDS	Sogindy	43.05	101	*e*P	P	20 42 31.5	-0.9
SGDS				pmax	pmax		
	comp=Z,19nm,1.3s						
G65A	Princeton	43.13	268	P	P	20 42 32.4	-0.5
	baz=18						
D55A	Sainte-Anne-du	43.13	277	P	P	20 42 33.0	+0.1
	baz=18						
F61A	St Evariste	43.14	272	P	P	20 42 33.4	+0.3
	baz=18						
CHKK	Chushkaly	43.17	98	*e*P	P	20 42 33.4	0.0
	baz=98						
CHKK	Chushkaly	43.17	98	*e*P	P	20 42 33.3	0.0
USP	Ospenovka	43.20	101	P	P	20 42 34.7	+1.1
	SNR=11						
E58A	La Victoria	43.27	274	P	P	20 42 34.1	+0.1
	baz=18						
IUG	Iuzhnay	43.31	106	*e*P	P	20 42 34.2	-0.4
	comp=Z,18nm,1.0s,baz=106						
IUG				*e*PP	PP	20 44 14.8	-0.2
	baz=106						
IUG	Iuzhnay	43.31	106	*e*P	P	20 42 34.2	-0.4
IUG				*e*		20 44 14.7	
IUG				pmax	pmax		
	comp=Z,18nm,1.0s						
G64A	Maxfield	43.34	269	P	P	20 42 35.1	+0.5
	baz=18						
PKME	Peaks-Kenny Pk	43.45	270	P	P	20 42 35.9	+0.4
	baz=18						
E56A	St. Veronique	43.49	276	P	P	20 42 36.0	+0.2
	baz=18						
CHMS	Chumysh	43.51	101	P	P	20 42 37.7	+1.6
	SNR=22						
EKS2	Erkin-Say	43.62	102	P	P	20 42 39.1	+2.0
	SNR=12						
TKM2	Tokmak 2	43.76	100	P	P	20 42 40.2	+1.8
	SNR=12						
AAA	Alma-Ata	43.77	98	*e*P	P	20 42 38.8	+0.5
	baz=98						
AAA	Alma-Ata	43.77	98	*e*P	P	20 42 38.8	+0.5
AAK	Ala-Archa	43.80	101	P	P	20 42 39.9	+1.4
	comp=Z,10nm,1.0s,baz=292,slow=1.5						
AAK				PP	PP	20 44 20.9	+0.7
	comp=Z,5.3nm,1.0s,baz=335,slow=8.6,SNR=3.6						
AAK				LR	LR	21 04 25.5	
	comp=Z,757nm,18.6s,baz=342,slow=41						
AAK	Ala-Archa	43.80	101	P	P	20 42 40.2	+1.7
	SNR=12						
AAK	Ala-Archa	43.80	101	*i* P	P	20 42 39.9	+1.4
	SNR=14						
AAK	Ala-Archa	43.80	101*c*	*i*P	P	20 42 40.0	+1.4
AAK				pmax	pmax		
	comp=Z,112nm,1.7s						
AAK	Ala-Archa	43.80	101	IAMs_20	IAMs_20	21 01 57.1	
	comp=Z,925nm,18.0s						
MDOK	Medeo	43.85	98	*e*P	P	20 42 39.2	+0.2
	baz=98						
MDOK	Medeo	43.85	98	*e*P	P	20 42 39.1	+0.2
KBK	Karagaybulak	43.88	101	P	P	20 42 41.6	+2.4
	SNR=8.0						
KPKS	Kokpek	43.91	97	*e*P	P	20 42 38.8	-0.6
	comp=Z,11nm,1.1s,baz=96						
KPKS	Kokpek	43.91	97	*e*P	P	20 42 38.8	-0.6
KPKS				pmax	pmax		
	comp=Z,11nm,1.1s						
ZEA	Zeya	43.92	48	*e*P	P	20 42 40.8	+1.6
ZEA				*e*		20 42 47.9	
ZEA				*e*S	S	20 49 15.0	+4.9
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				smax	smax		
	comp=N,100nm,4.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,17.0s						
H64A	Troy	44.02	270	P	P	20 42 39.8	-0.4
	baz=18						
AML	Almayashu	44.11	102	P	P	20 42 43.6	+2.2
	SNR=14						
H63A	New Sharon	44.18	270	P	P	20 42 41.7	+0.3
	baz=18						
UCH	Uchtor	44.19	101	P	P	20 42 44.5	+2.4
	SNR=18						
G60A	Masonville	44.27	273	P	P	20 42 42.3	+0.1
	baz=18						
ULM	Lac du Bonnet	44.32	297	P	P	20 42 42.3	-0.2
	comp=Z,12nm,0.9s,baz=16,slow=8.0,SNR=23						
ULM				PcP	PP	20 44 25.8	+0.3
	comp=Z,7.9nm,0.9s,baz=20,slow=3.3,SNR=5.3						
ULM				LR	LR	21 01 32.7	
	comp=Z,1µm,18.5s,baz=16,slow=36						
ULM	Lac du Bonnet	44.32	297	P	P	20 42 42.6	+0.2
ULM				IAmb	IAmb	20 42 50.4	
	comp=Z,54nm,1.1s						
ULM				IAMs_20	IAMs_20	21 01 22.2	
	comp=Z,2µm,19.0s						
SHLS	Shalkode	44.38	96	*e*P	P	20 42 43.2	0.0
	comp=Z,36nm,1.2s,baz=96						
SHLS	Shalkode	44.38	96	*e*P	P	20 42 43.1	0.0
SHLS				pmax	pmax		
	comp=Z,36nm,1.2s						
KDAK	Kodiak Island	44.49	345	P	P	20 42 44.9	+1.2
KDAK				pmax	pmax		
	comp=Z,74nm,1.1s						
KDAK	Kodiak Island	44.49	345	P	P	20 42 44.9	+1.2
KDAK				IAmb	IAmb	20 42 53.2	
	comp=Z,74nm,1.1s						
H62A	Milan	44.51	271	P	P	20 42 44.5	+0.5
	baz=18						
ZHG	ZHG	44.53	197	P		20 42 45.0	
G58A	Ormstown	44.60	274	P	P	20 42 45.3	+0.6
	baz=18						
H61A	Lyndonville	44.72	272	P	P	20 42 45.7	0.0
	baz=18						
G57A	Newington	44.84	275	P	P	20 42 47.3	+0.6
	baz=18,SNR=5.7						

H60A	**Morristown**	**44.86**	**273**	P	**P**	**20 42 47.6**	**+0.7**
	baz=18,SNR=5.8						
GEYT	**Alibeck**	**44.98**	**120**	P	**P**	**20 42 48.6**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=292,slow=7.8,SNR=16						
GEYT				PP	**PcP**	**20 44 30.7**	**+1.9**
	comp=Z,7.3nm,1.1s,baz=305,slow=10,SNR=4.6						
GEYT				LR	LR	21 04 36.0	
	comp=Z,1µm,18.0s,baz=350,slow=40						
GEYT	**Alibeck**	**44.98**	**120**	P	**P**	**20 42 47.9**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**44.98**	**120**	P	**P**	**20 42 46.7**	**-1.2**
GYA0B				IAMs_20	IAMs_20	21 04 25.4	
	comp=Z,1µm,19.0s						
H59A	**Cadyville**	**45.00**	**274**	P	**P**	**20 42 48.4**	**+0.5**
	baz=18						
LBNH	**Lisbon**	**45.00**	**272**	IAMs_20	IAMs_20	21 02 35.5	
	comp=Z,1µm,19.0s						
MDT	**Midelt**	**45.03**	**195**	P		20 42 48.5	
VT1	**Waterbury**	**45.09**	**273**	IAMs_20	IAMs_20	21 03 18.2	
	comp=Z,914nm,18.0s						
LONY	**Lake Ozonia**	**45.22**	**275**	P	**P**	**20 42 50.4**	**+0.7**
	baz=18						
WMQ	**Urumqi**	**45.55**	**88**	P	**P**	**20 42 54.2**	**+1.8**
WMQ				pP	pwP	20 42 57.4	-1.1
WMQ				sP	sP	20 43 00.2	+4.7
WMQ				pmax	pmax		
	comp=Z,86nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,570nm,6.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.1s						
WMQ				LR	LR		
	comp=Z,2µm,16.5s						
WMQ				LR	LR		
	comp=Z,1µm,21.5s						
EYMN	**Ely**	**45.64**	**292**	P	**P**	**20 42 53.5**	**+0.4**
	baz=18,SNR=29						
EYMN	**Ely**	**45.64**	**292**	P	**P**	**20 42 53.0**	**-0.1**
EYMN	**Ely**	**45.64**	**292**	IAMs_20	IAMs_20	21 01 36.1	
	comp=Z,2µm,22.0s						
FFD	**Franklin Falls**	**45.67**	**271**	IAMs_20	IAMs_20	21 02 55.3	
	comp=Z,1µm,19.0s						
I60A	**Shoreham**	**45.67**	**273**	P	**P**	**20 42 54.3**	**+1.0**
	baz=18						
SONM	**Songino Array**	**45.71**	**68**	P	**P**	**20 42 54.6**	**+0.9**
	comp=Z,8.7nm,1.0s,baz=329,slow=7.1,SNR=50						
SONM				PcP	**PcP**	**20 44 32.0**	**+0.6**
	comp=Z,2.4nm,0.9s,baz=352,slow=4.4,SNR=3.8						
SONM				LR	LR	21 04 32.8	
	comp=Z,481nm,20.2s,baz=338,slow=39						
SONM	**Songino Array**	**45.71**	**68**	P	**P**	**20 42 53.7**	**-0.1**
ULN	**Ulaanbaatar**	**45.82**	**68***c*	*i*P	**P**	**20 42 55.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,46nm,1.0s						
ULN	**Ulaanbaatar**	**45.82**	**68**	P	**P**	**20 42 54.1**	**-0.5**
ULN				IAmb	IAmb	20 42 57.1	
	comp=Z,43nm,1.1s						
SADO	**Sadowa**	**46.07**	**279**	IAMs_20	IAMs_20	21 02 20.0	
	comp=Z,2µm,20.0s						
I57A	**Carthage**	**46.10**	**275**	P	**P**	**20 42 57.1**	**+0.4**
	baz=18						
H53A	**Bobcaygeon**	**46.13**	**278**	P	**P**	**20 42 56.9**	**0.0**
	baz=18						
GOLM	**Goulmima**	**46.16**	**195**	P		20 42 58.2	
AGMN	**Agassiz Nation**	**46.18**	**296**	P	**P**	**20 42 57.9**	**+0.6**
	baz=17,SNR=6.7						
AGMN	**Agassiz Nation**	**46.18**	**296**	IAMs_20	IAMs_20	21 02 19.5	
	comp=Z,1µm,20.0s						
ACCN	**Adirondack Com**	**46.19**	**273**	IAMs_20	IAMs_20	21 00 18.3	
	comp=Z,1µm,22.0s						
MMAI	**Mount Meron Ar**	**46.22**	**147**	LR	LR	21 06 03.1	
	comp=Z,158nm,18.2s,baz=10.0,slow=41						
J60A	**Lant Hill Farm**	**46.27**	**273**	P	**P**	**20 42 59.4**	**+1.4**
	baz=17						
J58A	**Remsen**	**46.57**	**275**	P	**P**	**20 43 01.1**	**+0.7**
	baz=17						
WES	**Weston**	**46.63**	**271**	IAMs_20	IAMs_20	21 02 23.7	
	comp=Z,1µm,21.0s						
HIA	**Hailar**	**46.93**	**56**	IAMs_20	IAMs_20	21 04 26.6	
	comp=Z,1µm,19.0s						
K60A	**Five Rivers En**	**46.97**	**273**	P	**P**	**20 43 05.4**	**+1.9**
	baz=17						
K59A	**Cooperstown**	**47.03**	**274**	P	**P**	**20 43 04.1**	**+0.1**
	baz=17						
OUZM	**OUZ**	**47.06**	**197**	P		20 43 06.0	
KSH	**Kashi**	**47.10**	**101**	P	**P**	**20 43 08.6**	**+3.9**
KSH				pP	pwP	20 43 12.4	+1.5
KSH				PP	**PP**	**20 44 56.4**	**+1.3**
KSH				S	**S**	**20 50 00.2**	**+3.6**
KSH				pmax	pmax		
	comp=Z,38nm,1.1s						
KSH				pmax	pmax		
	comp=Z,600nm,6.2s						
KSH				LR	LR		
	comp=Z,2µm,9.7s						
KSH				LR	LR		
	comp=Z,2µm,11.9s						
KSH				LR	LR		
	comp=Z,2µm,14.9s						
GLMI	**Grayling**	**47.19**	**284**	IAMs_20	IAMs_20	21 03 49.8	
	comp=Z,1µm,18.0s						
M64A	**Tiverton**	**47.41**	**270**	P	**P**	**20 43 08.0**	**+1.1**
	baz=17						
DGMT	**Dagmar**	**47.61**	**303**	P	**P**	**20 43 09.5**	**+1.1**
	baz=16						
DGMT	**Dagmar**	**47.61**	**303**	P	**P**	**20 43 08.9**	**+0.4**
DGMT				IAmb	IAmb	20 43 16.6	
	comp=Z,59nm,1.1s						
K56A	**Middlesex**	**47.65**	**277**	P	**P**	**20 43 09.5**	**+0.6**
	baz=17						
L60A	**Shokan**	**47.65**	**273**	P	**P**	**20 43 09.4**	**+0.6**
	baz=17						
ZGR	**Zagora**	**47.77**	**195**	P		20 43 11.0	
BINY	**Binghamton**	**47.83**	**275**	P	**P**	**20 43 11.4**	**+1.1**
	baz=17						
BINY	**Binghamton**	**47.83**	**275**	IAMs_20	IAMs_20	21 02 21.6	
	comp=Z,1µm,21.0s						
L58A	**Harry Jones Me**	**47.95**	**275**	P	**P**	**20 43 12.2**	**+1.1**
	baz=17						
WVNY	**West Valley, N**	**48.20**	**278**	IAMs_20	IAMs_20	21 03 05.5	
	comp=Z,1µm,20.0s						
L57A	**Andrews Acres**	**48.21**	**276**	P	**P**	**20 43 14.4**	**+1.2**
	baz=17						
GRNR	**Gornyy**	**48.22**	**42**⇑	*i*P	**P**	**20 43 10.5**	**-2.6**
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GRNR				MLR	MLR		
	comp=E,250nm,19.0s						
GRNR				MLR	MLR		
	comp=N,250nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,250nm,17.0s						
L56A	**Greenwood**	**48.23**	**277**	P	**P**	**20 43 13.8**	**+0.4**
	baz=17,SNR=5.6						
M59A	**Waymart**	**48.34**	**274**	P	**P**	**20 43 14.7**	**+0.5**
	baz=17						
M60A	**Port Jervis**	**48.37**	**273**	P	**P**	**20 43 15.9**	**+1.5**
	baz=17						
PETK	**Petropavlovsk-**	**48.41**	**24**	P	**P**	**20 43 14.6**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=44,slow=9.0,SNR=5.1						
PETK				LR	LR	21 04 46.8	
	comp=Z,238nm,19.4s,baz=350,slow=37						
SPMN	**Marine on St.**	**48.51**	**292**	P	**P**	**20 43 16.3**	**+0.8**
	baz=17,SNR=7.9						
PAL	**Palisades**	**48.52**	**273**	IAMs_20	IAMs_20	21 02 19.7	
	comp=Z,973nm,22.0s						
ODNJ	**Ogdensburg**	**48.60**	**273**	IAMs_20	IAMs_20	21 02 09.8	
	comp=Z,1µm,21.0s						
M58A	**Price's Panora**	**48.73**	**275**	P	**P**	**20 43 17.9**	**+0.8**
	baz=17						
WALA	**Waterton Lakes**	**48.73**	**312**	IAmb	IAmb	20 43 25.0	
	comp=Z,42nm,1.1s						
ERPA	**Erie**	**48.78**	**279**	P	**P**	**20 43 17.1**	**-0.4**
	baz=17						
M57A	**Sunshine Farm,**	**48.91**	**276**	P	**P**	**20 43 19.1**	**+0.6**
	baz=17						
N60A	**Cedar Hill Far**	**48.91**	**274**	P	**P**	**20 43 18.7**	**+0.2**
	baz=17						
TYV	**Tymovskoe**	**48.98**	**36**	*e*P	P	20 43 25.5	+6.6
TYV				pmax	pmax		
	comp=Z,23nm,1.6s						
TYV				pmax	pmax		
	comp=Z,300nm,4.7s						
KLR	**Kul'dur**	**49.01**	**46**	P	**P**	**20 43 19.9**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=343,slow=9.9,SNR=6.9						
KLR				LR	LR	21 05 42.3	
	comp=Z,330nm,21.0s,baz=342,slow=38						
KLR	**Kul'dur**	**49.01**	**46**⇑	*e*P	**P**	**20 43 19.9**	**+0.7**
KLR				pmax	pmax		
	comp=Z,13nm,1.9s						
KLR				MLR	MLR		
	comp=Z,719nm,16.0s						
N59A	**State Game Lan**	**49.01**	**274**	P	**P**	**20 43 20.0**	**+0.6**
	baz=17						
EGMT	**Eagleton**	**49.03**	**308**	P	**P**	**20 43 20.0**	**+0.5**
	baz=15						
EGMT	**Eagleton**	**49.03**	**308**	IAMs_20	IAMs_20	21 04 18.9	
	comp=Z,1µm,18.0s						
N58A	**Sunbury**	**49.29**	**275**	P	**P**	**20 43 21.2**	**-0.2**
	baz=17						
M54A	**Oil Creek Stat**	**49.29**	**278**	P	**P**	**20 43 21.5**	**0.0**
	baz=17						
O60A	**Telford**	**49.50**	**274**	P	**P**	**20 43 22.9**	**-0.2**
	baz=17						
N57A	**Milroy**	**49.55**	**276**	P	**P**	**20 43 23.8**	**+0.4**
	baz=17						
N56A	**West Decatur**	**49.56**	**277**	P	**P**	**20 43 23.6**	**0.0**
	baz=17						
M53A	**WI Miller and**	**49.58**	**279**	P	**P**	**20 43 23.8**	**+0.2**
	baz=17,SNR=5.7						
O59A	**Robesonia**	**49.68**	**274**	P	**P**	**20 43 24.7**	**+0.3**
	baz=17						
LAO	**LASA Array**	**49.69**	**304**	P	**P**	**20 43 25.9**	**+1.4**
	baz=15,SNR=18						
SSPA	**Standing Stone**	**49.74**	**276**	P	**P**	**20 43 25.2**	**+0.3**
	baz=17						
SSPA	**Standing Stone**	**49.74**	**276**	IAMs_20	IAMs_20	21 03 53.1	
	comp=Z,1µm,22.0s						
N54A	**Moraine State**	**49.89**	**278**	P	**P**	**20 43 26.6**	**+0.5**
	baz=17,SNR=6.4						
NEW	**Newport**	**50.02**	**314**	P	**P**	**20 43 27.6**	**+0.7**
	baz=14,SNR=7.4						
O58A	**Lewisberry**	**50.02**	**275**	P	**P**	**20 43 27.2**	**+0.1**
	baz=16						
JTMT	**Jette**	**50.06**	**312**	IAMs_20	IAMs_20	21 04 33.3	
	comp=Z,1µm,19.0s						
O57A	**Amberson**	**50.09**	**276**	P	**P**	**20 43 28.2**	**+0.6**
	baz=16						
JFWS	**Jewell Farm**	**50.20**	**289**	P	**P**	**20 43 28.2**	**-0.2**
JFWS				pmax	pmax		
	comp=Z,82nm,1.2s						
JFWS				MLR	MLR		
	comp=Z,2µm,20.0s						
JFWS	**Jewell Farm**	**50.20**	**289**	P	**P**	**20 43 28.7**	**+0.3**
	baz=16,SNR=7.3						
JFWS	**Jewell Farm**	**50.20**	**289**	P	**P**	**20 43 28.2**	**-0.2**
JFWS				IAmb	IAmb	20 43 35.9	
	comp=Z,82nm,1.1s						
O56A	**Blue Knob Stat**	**50.24**	**277**	P	**P**	**20 43 29.2**	**+0.4**
	baz=16						
KBL	**Kabul**	**50.43**	**110**	P	**P**	**20 43 30.1**	**-0.3**
KBL				pmax	pmax		
	comp=Z,17nm,1.1s						
KBL				MLR	MLR		
	comp=Z,400nm,21.0s						
KBL	**Kabul**	**50.43**	**110**	P	**P**	**20 43 30.1**	**-0.3**
C09A	**Chrisman Ranch**	**50.65**	**315**	IAMs_20	IAMs_20	21 05 01.8	
	comp=Z,759nm,18.0s						
SDMD	**Soldier's Deli**	**50.69**	**275**	P	**P**	**20 43 32.7**	**+0.6**
SDMD				IAmb	IAmb	20 43 40.5	
	comp=Z,55nm,1.7s						
ECSD	**EROS Data Cent**	**50.71**	**295**	P	**P**	**20 43 32.7**	**+0.5**
	baz=16,SNR=22						
ECSD	**EROS Data Cent**	**50.71**	**295**	IAMs_20	IAMs_20	21 05 17.2	
	comp=Z,2µm,19.0s						
P58A	**Pank, Wackersv**	**50.71**	**275**	P	**P**	**20 43 32.4**	**+0.2**
	baz=16						
B05A	**Bryant**	**50.77**	**318**	P	**P**	**20 43 33.1**	**+0.5**
	baz=13						
O53A	**New Philadelph**	**50.83**	**279**	P	**P**	**20 43 33.9**	**+0.7**
	baz=16,SNR=7.6						
MSO	**Missoula**	**50.90**	**311**	P	**P**	**20 43 34.3**	**+0.5**
	baz=14,SNR=26						
MSO	**Missoula**	**50.90**	**311**	IAMs_20	IAMs_20	21 05 18.3	
	comp=Z,881nm,18.0s						
P56A	**Dayton Farm, R**	**51.03**	**277**	P	**P**	**20 43 34.1**	**-0.5**
	baz=16,SNR=6.1						
MIB	**Mutribah**	**51.03**	**134**	*e*P		20 43 34.7	
MCWV	**Mont Chateau**	**51.10**	**278**	P	**P**	**20 43 35.8**	**+0.6**
	baz=16						
ACSO	**Alum Creek Sta**	**51.23**	**281**	P	**P**	**20 43 36.2**	**0.0**
	baz=16,SNR=6.5						
ACSO	**Alum Creek Sta**	**51.23**	**281**	IAmb	IAmb	20 43 44.3	
	comp=Z,89nm,1.3s						
ACSO				IAMs_20	IAMs_20	21 05 28.7	
	comp=Z,2µm,20.0s						
RST	**Umm Al-Ruwaisa**	**51.28**	**135**	*e*P		20 43 36.2	
Q58A	**Fox Den Farm,**	**51.32**	**275**	P	**P**	**20 43 36.9**	**0.0**
	baz=16						
UMR	**Umm Al-Rimmam**	**51.34**	**134**	*e*P		20 43 37.2	
Q57A	**Strasburg**	**51.39**	**276**	P	**P**	**20 43 37.2**	**-0.1**
	baz=16						
D08A	**Wollman Farm,**	**51.47**	**315**	IAMs_20	IAMs_20	21 05 42.6	
	comp=Z,763nm,18.0s						
Q56A	**Snyder Ridge,**	**51.55**	**277**	P	**P**	**20 43 38.9**	**+0.3**
	baz=16						
P52A	**Corning**	**51.62**	**280**	P	**P**	**20 43 38.5**	**-0.6**
	baz=16						
D03D	**Eldon**	**51.63**	**319**	P	**P**	**20 43 40.7**	**+1.7**
	baz=12,SNR=12						
BOZ	**Bozeman (W)**	**51.70**	**309**	P	**P**	**20 43 40.3**	**+0.4**
	baz=14,SNR=5.4						
KBD	**Kabd**	**51.70**	**134**	*e*P		20 43 39.7	
RLMT	**Red Lodge**	**51.75**	**306**	P	**P**	**20 43 41.3**	**+1.0**
	baz=14,SNR=29						
RLMT	**Red Lodge**	**51.75**	**306**	IAmb	IAmb	20 43 49.2	
	comp=Z,64nm,1.3s						
RSSD	**Black Hills**	**51.77**	**302**	P	**P**	**20 43 40.6**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,34nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,800nm,20.0s						
RSSD	**Black Hills**	**51.77**	**302**	P	**P**	**20 43 41.0**	**+0.6**
	baz=15						
RSSD	**Black Hills**	**51.77**	**302**	P	**P**	**20 43 40.6**	**+0.2**
RSSD				IAmb	IAmb	20 43 48.3	
	comp=Z,34nm,1.1s						
RSSD	**Black Hills**	**51.77**	**302**	IAMs_20	IAMs_20	21 04 54.3	
	comp=Z,795nm,20.0s						
SCIA	**State Center**	**51.78**	**291**	P	**P**	**20 43 40.7**	**+0.4**
	baz=16						
D05A	**Enumclaw**	**51.80**	**318**	P	**P**	**20 43 41.2**	**+0.9**
D05A				IAmb	IAmb	20 43 51.5	
	comp=Z,111nm,1.8s						
NLWA	**Neilton Lookou**	**51.88**	**320**	P	**P**	**20 43 42.7**	**+1.8**
NLWA				IAmb	IAmb	20 43 50.9	
	comp=Z,58nm,1.1s						
NLWA				IAMs_20	IAMs_20	21 05 44.3	
	comp=Z,872nm,19.0s						
D04E	**Lakebay**	**51.93**	**319**	P	**P**	**20 43 43.8**	**+2.5**
	baz=12						
CBN	**Corbin Frederi**	**51.96**	**275**	IAMs_20	IAMs_20	21 06 05.8	
	comp=Z,874nm,18.0s						
SFIN	**Lafayette**	**51.97**	**285**	P	**P**	**20 43 41.9**	**+0.3**
	baz=16						
R58A	**Rapidan**	**52.01**	**276**	P	**P**	**20 43 42.0**	**0.0**
	baz=16						
E08A	**Dider Farm, El**	**52.04**	**315**	P	**P**	**20 43 42.9**	**+0.8**
E08A				IAmb	IAmb	20 43 51.2	
	comp=Z,110nm,1.6s						
DLMT	**Dillon**	**52.10**	**309**	P	**P**	**20 43 43.3**	**+0.5**
E07A	**Sunnyside**	**52.10**	**316**	IAmb	IAmb	20 43 51.1	
	comp=Z,42nm,1.0s						
R57A	**Stanardsville**	**52.12**	**276**	P	**P**	**20 43 44.2**	**+1.4**
	baz=16						
NIL	**Nilore**	**52.17**	**106**	P	**P**	**20 43 43.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,25nm,1.0s						
NIL	**Nilore**	**52.17**	**106**	P	**P**	**20 43 43.4**	**+0.1**
LON	**Longmire**	**52.21**	**318**	IAmb	IAmb	20 43 52.7	
	comp=Z,119nm,1.5s						
R56A	**Bull Pasture M**	**52.21**	**277**	P	**P**	**20 43 43.1**	**-0.4**
	baz=16						
HAWA	**Hanford**	**52.21**	**316**	IAmb	IAmb	20 43 52.0	
	comp=Z,47nm,1.0s						
Q53A	**Leroy**	**52.23**	**279**	P	**P**	**20 43 44.1**	**+0.5**
	baz=16						
P49A	**Miami Univ. Ec**	**52.27**	**282**	P	**P**	**20 43 43.8**	**-0.1**
	baz=16,SNR=6.1						
GTA	**Gaotai**	**52.40**	**78**	⇑P	**P**	**20 43 46.0**	**+1.0**
GTA				pP	pwP	20 43 50.7	-0.4
GTA				sP	sP	20 43 53.2	+5.1
GTA				PP	**PP**	**20 45 45.2**	**+1.9**
GTA				S	**S**	**20 51 12.3**	**+1.8**
GTA				sS	sS	20 51 23.4	+9.0
GTA				SS	**SS**	**20 54 51.4**	**+3.7**
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,240nm,7.3s						
GTA				LR	LR		
	comp=Z,870nm,19.3s						
GTA				LR	LR		
	comp=Z,380nm,17.1s						
GTA				LR	LR		
	comp=Z,1µm,20.4s						
R55A	**Marlinton**	**52.48**	**278**	P	**P**	**20 43 49.5**	**+3.9**
	baz=16						
E04D	**Cinebar**	**52.51**	**318**	P	**P**	**20 43 46.9**	**+1.3**
	baz=12						
S58A	**Poland Farm, P**	**52.67**	**275**	P	**P**	**20 43 47.7**	**+0.8**
	baz=16						
H17A	**Grant Village**	**52.69**	**307**	P	**P**	**20 43 49.6**	**+2.3**
	baz=14,SNR=13						
S57A	**Dark Hollow, R**	**52.73**	**276**	P	**P**	**20 43 48.0**	**+0.7**
	baz=16						
YSS	**Yuzh-Sakhalins**	**52.83**	**37**⇓	*e*P	**P**	**20 43 48.4**	**+0.5**
YSS				pmax	pmax		
	comp=Z,60nm,1.8s						
T60A	**Surry**	**52.84**	**274**	P	**P**	**20 43 48.5**	**+0.3**
	baz=16						
S56A	**Natural Bridge**	**52.94**	**277**	P	**P**	**20 43 49.1**	**+0.1**
	baz=16						
F05D	**White Salmon**	**53.00**	**317**	P	**P**	**20 43 51.2**	**+1.9**
	baz=12						
T59A	**Double "B" Far**	**53.18**	**275**	P	**P**	**20 43 49.5**	**-1.1**
	baz=16,SNR=5.1						
G08A	**Pilot Rock**	**53.20**	**315**	IAmb	IAmb	20 44 00.7	
	comp=Z,71nm,1.3s						
S54A	**Dingess, Beckl**	**53.20**	**278**	P	**P**	**20 43 50.8**	**-0.1**
	baz=16						
CN2	**Changchun**	**53.23**	**53**	*e*P	**P**	**20 43 51.5**	**+0.6**
CN2				*e*sP	pwP	20 43 57.6	+0.6
CN2				*e*S	**S**	**20 51 19.1**	**-2.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,590nm,18.0s						
CN2				LR	LR		
	comp=Z,520nm,16.0s						
CN2				LR	LR		
	comp=Z,750nm,15.0s						
BGNE	**Belgrade**	**53.25**	**295**	P	**P**	**20 43 51.4**	**+0.2**
	baz=15,SNR=6.2						
BTO	**Baotou**	**53.38**	**68**	*e*P	P	20 43 47.1	-5.1
BTO				S	S	20 51 05.7	-18
T58A	**Grand View Acr**	**53.42**	**276**	P	**P**	**20 43 52.5**	**0.0**
	baz=16						
LOHW	**Long Hollow**	**53.45**	**307**	IAmb	IAmb	20 44 02.1	
	comp=Z,70nm,1.7s						
LOHW				IAMs_20	IAMs_20	21 07 02.9	
	comp=Z,1µm,19.0s						
HHC	**Hu-ho-hao-te**	**53.46**	**66**	*e*P	**P**	**20 43 53.4**	**+0.6**
HHC				sP	pwP	20 44 01.5	+2.6
HHC				S	**S**	**20 51 33.3**	**+8.4**
HHC				SS	**SS**	**20 55 04.9**	**+0.6**
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,7.6s						
HHC				LR	LR		
	comp=Z,860nm,14.4s						
HHC				LR	LR		
	comp=Z,390nm,12.8s						
HHC				LR	LR		
	comp=Z,1µm,15.7s						
T57A	**Hurt**	**53.53**	**276**	P	**P**	**20 43 53.3**	**+0.1**
	baz=16						
BLA	**Blacksburg**	**53.58**	**277**	P	**P**	**20 43 53.7**	**0.0**
	baz=16,SNR=5.1						
BLA	**Blacksburg**	**53.58**	**277**	IAMs_20	IAMs_20	21 07 05.7	
	comp=Z,1µm,19.0s						
G05D	**Wamic, OR**	**53.61**	**317**	P	**P**	**20 43 55.3**	**+1.5**
	baz=12						
K22A	**Casper**	**53.65**	**303**	P	**P**	**20 43 54.0**	**-0.3**
	baz=14,SNR=33						
T56A	**Rocky Mt**	**53.67**	**277**	P	**P**	**20 43 54.4**	**+0.1**
	baz=16						
REDW	**Red Top Meadow**	**53.74**	**307**	IAmb	IAmb	20 44 04.2	
	comp=Z,81nm,1.6s						
U59A	**Littleton**	**53.83**	**275**	P	**P**	**20 43 55.4**	**0.0**
	baz=16						
TEY	**Ternei**	**53.84**	**43**⇑	*e*P	**P**	**20 43 53.4**	**-2.0**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WCI	**Wyandotte Cave**	**53.86**	**283**	P	**P**	**20 43 55.2**	**-0.5**
WCI				pmax	pmax		
	comp=Z,60nm,1.2s						
WCI	**Wyandotte Cave**	**53.86**	**283**	P	**P**	**20 43 55.5**	**-0.2**
	baz=16						
WCI	**Wyandotte Cave**	**53.86**	**283**	P	**P**	**20 43 55.2**	**-0.5**
WCI				IAmb	IAmb	20 44 02.9	
	comp=Z,60nm,1.2s						
G03D	**McMinnville, O**	**53.92**	**319**	P	**P**	**20 43 58.2**	**+2.2**
	baz=12						
USRK	**Ussuriysk Ar.**	**53.94**	**47**	P	**P**	**20 43 56.4**	**+0.3**
	comp=Z,7.5nm,1.0s,baz=335,slow=7.1,SNR=7.6						
USRK				PcP	**PcP**	**20 45 00.1**	**-1.2**
	comp=Z,4.2nm,1.0s,baz=346,slow=3.7,SNR=2.9						
USRK				LR	LR	21 08 11.8	
	comp=Z,281nm,21.0s,baz=336,slow=37						
U58A	**Oxford**	**53.95**	**275**	P	**P**	**20 43 56.7**	**+0.4**
	baz=16						
BW06	**Boulder Array**	**54.09**	**306**	P	**P**	**20 43 57.4**	**-0.1**
	baz=14,SNR=32						
BW06	**Boulder Array**	**54.09**	**306**	IAmb	IAmb	20 44 05.8	
	comp=Z,50nm,1.4s						
BW06				IAMs_20	IAMs_20	21 07 10.7	
	comp=Z,1µm,19.0s						
PD31	**Pinedale Array**	**54.09**	**306**	IAmb	IAmb	20 44 05.8	
	comp=Z,46nm,1.4s						
PDAR	**Pinedale Array**	**54.09**	**306**	P	**P**	**20 43 57.6**	**0.0**
	comp=Z,7.9nm,1.1s,baz=35,slow=5.4,SNR=24						
PDAR				LR	LR	21 07 22.0	
	comp=Z,1µm,19.0s,baz=12,slow=36						
PDAR	**Pinedale Array**	**54.09**	**306**	P	**P**	**20 43 57.3**	**-0.3**
U57A	**Blanch**	**54.09**	**276**	P	**P**	**20 43 57.1**	**-0.3**
	baz=16						
HLID	**Hailey**	**54.15**	**310**	P	**P**	**20 43 58.6**	**+0.7**
	baz=13,SNR=38						
HLID	**Hailey**	**54.15**	**310**	IAmb	IAmb	20 44 06.7	
	comp=Z,108nm,1.9s						
HLID				IAMs_20	IAMs_20	21 06 33.4	
	comp=Z,710nm,18.0s						
V60A	**Jim Taylor Roa**	**54.28**	**274**	P	**P**	**20 43 58.8**	**+0.1**
	baz=16						
H04A	**Detroit Lake**	**54.28**	**317**	IAMs_20	IAMs_20	21 06 57.0	
	comp=Z,731nm,20.0s						
U56A	**King**	**54.40**	**277**	P	**P**	**20 43 59.7**	**+0.1**
	baz=16						
OGNE	**Ogallala**	**54.46**	**299**	P	**P**	**20 44 00.2**	**+0.2**
	baz=15,SNR=6.9						
OGNE	**Ogallala**	**54.46**	**299**	IAMs_20	IAMs_20	21 07 51.4	
	comp=Z,685nm,19.0s						
V59A	**Middlesex**	**54.49**	**275**	P	**P**	**20 44 00.6**	**+0.4**
	baz=16						
I05D	**Terrebonne, OR**	**54.49**	**317**	P	**P**	**20 44 01.8**	**+1.6**
	baz=12						
H04D	**Lebanon**	**54.52**	**318**	P	**P**	**20 44 02.0**	**+1.6**
	baz=12,SNR=7.4						
MFID	**Camas Ranch**	**54.53**	**312**	IAMs_20	IAMs_20	21 07 24.4	
	comp=Z,789nm,20.0s						
COR	**Corvallis**	**54.54**	**318**	P	**P**	**20 44 00.8**	**+0.3**
COR				pmax	pmax		
	comp=Z,272nm,1.9s						
COR	**Corvallis**	**54.54**	**318**	P	**P**	**20 44 00.8**	**+0.3**
U54A	**Nelsons Funny**	**54.54**	**279**	P	**P**	**20 44 01.0**	**+0.3**
	baz=16						
V58A	**Windy Hill, Pi**	**54.65**	**276**	P	**P**	**20 44 01.3**	**-0.2**
	baz=16						
V57A	**Coltrane Farms**	**54.71**	**276**	P	**P**	**20 44 02.0**	**+0.1**
	baz=16						
RWWY	**Rawlins**	**54.71**	**304**	P	**P**	**20 44 02.0**	**-0.2**
TZTN	**Tazewell**	**54.90**	**280**	P	**P**	**20 44 03.7**	**+0.4**
	baz=16,SNR=5.6						
CNNC	**Cliffs of the**	**54.92**	**274**	IAMs_20	IAMs_20	21 07 56.2	
	comp=Z,788nm,19.0s						
V56A	**Mocksville**	**54.94**	**277**	P	**P**	**20 44 03.9**	**+0.3**
	baz=16						
CCM	**Cathedral Cave**	**55.08**	**288**	P	**P**	**20 44 03.1**	**-1.3**
	baz=15						
I02D	**Swisshome**	**55.09**	**319**	P	**P**	**20 44 06.7**	**+2.2**

	baz=12						
BJI	Beijing	55.15	62	P	P	20 44 06.5	+1.5
BJI				S	S	20 51 42.8	-4.7
BJI				pmax	pmax		
	comp=Z,13nm,1.3s						
BJI				LR	LR		
	comp=Z,280nm,12.7s						
BJI				LR	LR		
	comp=Z,1µm,19.8s						
BJI				LR	LR		
	comp=Z,430nm,20.9s						
BJT	Baijiatuau	55.17	62	IAMs_20	IAMs_20	21 10 11.6	
	comp=Z,666nm,18.0s						
KSU1	Kansas State U	55.17	293	P	P	20 44 05.0	-0.2
	baz=15,SNR=7.2						
KSU1	Kansas State U	55.17	293	P	P	20 44 04.5	-0.6
KSU1	Kansas State U	55.17	293	IAMs_20	IAMs_20	21 07 42.2	
	comp=Z,1µm,19.0s						
I04A	Tendick Farm,	55.19	317	P	P	20 44 06.5	+1.2
	baz=12,SNR=16						
N23A	Red Feather La	55.25	302	P	P	20 44 06.6	+0.5
	baz=14,SNR=32						
I03D	Drain, OR	55.42	318	P	P	20 44 08.8	+1.9
	baz=12						
W58A	Raeford	55.42	276	P	P	20 44 06.9	-0.1
	baz=15						
W57A	Gilead	55.46	276	P	P	20 44 07.5	+0.2
	baz=15						
J05D	Fort Rock, OR	55.51	316	P	P	20 44 10.3	+2.6
	baz=12,SNR=15						
HWUT	Hardware Ranch	55.57	307	P	P	20 44 07.9	-0.3
HWUT				IAmb	IAmb	20 44 16.9	
	comp=Z,80nm,1.8s						
W56A	Indian Trail	55.61	277	P	P	20 44 08.8	+0.5
	baz=15						
J04D	Umpqua Nationa	55.68	317	P	P	20 44 11.3	+2.2
	baz=12						
KMSC	Kings Mountain	55.76	278	P	P	20 44 09.2	-0.2
	baz=15,SNR=5.9						
X58A	Rowland	55.89	276	P	P	20 44 11.3	+0.9
	baz=15						
CLTN	Cedars of Leba	55.93	283	IAmb	IAmb	20 44 18.2	
	comp=Z,68nm,1.5s						
WVOR	Wild Horse Val	55.94	314	IAMs_20	IAMs_20	21 07 59.7	
	comp=Z,635nm,18.0s						
HENM	Henderson Moun	55.99	286	IAMs_20	IAMs_20	21 08 38.9	
	comp=Z,1µm,19.0s						
J01E	Myrtle Point	56.03	319	P	P	20 44 13.5	+2.3
	baz=11						
CBKS	Cedar Bluff	56.07	296	P	P	20 44 11.9	+0.2
	baz=15,SNR=18						
PARMO	Parma	56.10	286	IAMs_20	IAMs_20	21 08 22.8	
	comp=Z,1µm,21.0s						
HICK	Hickman	56.11	286	IAMs_20	IAMs_20	21 07 60.0	
	comp=Z,953nm,20.0s						
CPCT	Cooper Cave	56.16	281	IAMs_20	IAMs_20	21 08 13.1	
	comp=Z,1µm,20.0s						
PAULI	Pauline	56.18	278	IAMs_20	IAMs_20	21 08 05.5	
	comp=Z,1µm,20.0s						
SHME	Shamm	56.18	126	P	P	20 44 12.5	0.0
WVT	Waverly	56.21	284	P	P	20 44 12.1	-0.5
WVT				pmax	pmax		
	comp=Z,54nm,1.4s						
WVT	Waverly	56.21	284	P	P	20 44 11.9	-0.7
	baz=15						
WVT	Waverly	56.21	284	P	P	20 44 12.1	-0.5
WVT				IAmb	IAmb	20 44 20.1	
	comp=Z,54nm,1.4s						
ISCO	Idaho Springs	56.24	302	P	P	20 44 14.0	+0.7
	baz=14,SNR=14						
ISCO	Idaho Springs	56.24	302	IAMs_20	IAMs_20	21 07 26.8	
	comp=Z,980nm,21.0s						
BG3	Lake Jocassee	56.25	279	IAMs_20	IAMs_20	21 08 26.6	
	comp=Z,1µm,20.0s						
PENMO	Penman	56.28	286	IAMs_20	IAMs_20	21 08 39.5	
	comp=Z,991nm,20.0s						
BANOM	Banah	56.33	126	P	P	20 44 15.4	+1.7
GLAT	Glass	56.39	286	IAMs_20	IAMs_20	21 08 42.2	
	comp=Z,1µm,20.0s						
O20A	White River Ci	56.40	304	P	P	20 44 15.3	+1.1
	baz=14,SNR=30						
KSCO	Kaye Shedlock’	56.44	299	P	P	20 44 14.7	+0.3
	baz=14,SNR=9.5						
K02D	Willamette Mer	56.45	318	P	P	20 44 16.2	+1.8
	baz=11,SNR=5.1						
LZH	Lanzhou	56.45	75	⇓P	P	20 44 16.0	+1.4
LZH				pP	pwP	20 44 20.2	-0.5
LZH				sP	sP	20 44 22.9	+5.2
LZH				pmax	pmax		
	comp=Z,21nm,1.6s						
LZH				pmax	pmax		
	comp=Z,260nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,15.7s						
LZH				LR	LR		
	comp=Z,970nm,17.3s						
LZH				LR	LR		
	comp=Z,850nm,13.6s						
JSC	Jenkinsville	56.58	277	IAMs_20	IAMs_20	21 09 07.1	
	comp=Z,822nm,19.0s						
UMQ	Umm Al-Quwin	56.61	126	P	P	20 44 17.2	+1.7
PEBM	Pemiscott Bayo	56.66	286	IAMs_20	IAMs_20	21 09 18.4	
	comp=Z,1µm,18.0s						
TIY	Taiyuan	56.66	67	*e*P	P	20 44 18.0	+2.1
TIY				pmax	pmax		
	comp=Z,18nm,0.4s						
L04D	Klamath Falls	56.71	317	P	P	20 44 17.4	+1.0
	baz=12,SNR=20						
HALT	Halls	56.74	285	IAMs_20	IAMs_20	21 08 52.7	
	comp=Z,839nm,20.0s						
GNAR	Gosnell	56.83	286	IAMs_20	IAMs_20	21 09 06.1	
	comp=Z,1µm,20.0s						
HODGE	Hodges	56.84	278	P	P	20 44 16.4	-0.7
HODGE				IAmb	IAmb	20 44 25.0	
	comp=Z,51nm,1.3s						
MSFE	Esma-Masafi	56.86	126	*i* P	P	20 44 18.2	+0.8
	SNR=8.2						
RAYN	Ar Rayn	56.92	138	*i* P	P	20 44 18.6	+0.7
	SNR=14						
RAYN	Ar Rayn	56.92	138	P	P	20 44 17.4	-0.5
RAYN				pmax	pmax		
	comp=Z,28nm,1.3s						
RAYN				MLR	MLR		
	comp=Z,200nm,18.0s						
RAYN	Ar Rayn	56.92	138	P	P	20 44 17.4	-0.5
RAYN				IAmb	IAmb	20 44 19.7	
	comp=Z,28nm,1.2s						
MDH	Madha	56.94	126	P	P	20 44 19.0	+1.0
L02E	Cave Junction	56.96	318	P	P	20 44 19.9	+1.9
	baz=11						
Q24A	Divide	56.97	301	P	P	20 44 19.0	+0.6
	baz=14,SNR=15						
LCAR	Lake Charles	56.97	287	P	P	20 44 17.5	-0.5
LCAR				IAmb	IAmb	20 44 25.0	
	comp=Z,31nm,1.1s						
ELK	Elko	57.03	310	LR	LR	21 08 35.7	
	comp=Z,570nm,18.7s,baz=14,slow=36						
ELK	Elko	57.03	310	P	P	20 44 19.3	+0.5
ELK				pmax	pmax		
	comp=Z,17nm,1.1s						
ELK				MLR	MLR		
	comp=Z,600nm,19.0s						
ELK	Elko	57.03	310	P	P	20 44 19.3	+0.5
ELK				IAMs_20	IAMs_20	21 08 14.7	
	comp=Z,627nm,19.0s						
U40A	Yellville	57.05	289	P	P	20 44 17.8	-0.8
	baz=15,SNR=24						
M04C	Macdoel	57.07	316	P	P	20 44 20.2	+1.3
	baz=12,SNR=7.1						
SMCO	Snowmass	57.10	303	IAmb	IAmb	20 44 27.9	
	comp=Z,57nm,1.1s						
SMCO				IAMs_20	IAMs_20	21 08 51.4	
	comp=Z,1µm,19.0s						
NAZ	Nazwa, Dubai	57.13	126	*i* P	P	20 44 19.7	+0.4
	SNR=6.2						
KS21	Milan North St	57.13	294	IAMs_20	IAMs_20	21 08 08.2	
	comp=Z,751nm,22.0s						
DUG	Dugway, Tooele	57.16	308	P	P	20 44 20.1	+0.6
	baz=13						
DUG	Dugway, Tooele	57.16	308	IAMs_20	IAMs_20	21 09 16.0	
	comp=Z,901nm,19.0s						
YBH	Yreka Blue Hor	57.25	317	LR	LR	21 09 20.0	
	comp=Z,491nm,18.2s,baz=10.0,slow=36						
FPAL	Fort Paine	57.27	282	IAMs_20	IAMs_20	21 09 05.5	
	comp=Z,1µm,20.0s						
UOSS	Minazif	57.27	126	P	P	20 44 20.4	+0.1
HHAR	Hobbs	57.34	290	IAMs_20	IAMs_20	21 09 24.7	
	comp=Z,1µm,21.0s						
FCAR	Ozark Folk Cen	57.35	288	IAmb	IAmb	20 44 27.5	
	comp=Z,59nm,1.0s						
FAQ	Al Faqa, Dubai	57.36	127	P	P	20 44 20.9	0.0
PLAL	Pickwick Lake	57.37	284	IAMs_20	IAMs_20	21 09 54.2	
	comp=Z,893nm,20.0s						
HATD	Hatta, Dubai	57.37	126	*i* P	P	20 44 21.5	+0.4
	SNR=9.2						
ASUD	Al Ashush, Dub	57.43	127	P	P	20 44 21.8	+0.4
ASHO	Ashiyiah	57.50	126	P	P	20 44 21.9	0.0
KAN14	Manchester OK	57.51	294	P	P	20 44 21.6	-0.2
M02C	Callahan	57.60	317	P	P	20 44 23.7	+1.1
	baz=11,SNR=13						
GOGA	Godfrey	57.89	279	P	P	20 44 24.3	-0.2
	baz=15						
N02D	Trinity Center	57.99	317	P	P	20 44 26.6	+1.3
	baz=11,SNR=5.1						
W41B	Gary Mavity, V	58.06	288	P	P	20 44 25.4	-0.4
	baz=15,SNR=7.2						
TUL1	Leonard	58.08	291	P	P	20 44 25.5	-0.4
	baz=14						
OXF	Oxford	58.10	285	P	P	20 44 25.6	-0.4
	baz=15						
SOHO	SOHO	58.12	126	*i* P	P	20 44 25.7	-0.5
	SNR=7.9						
SDCO	Great Sand Dun	58.22	301	P	P	20 44 27.4	+0.2
	baz=14,SNR=22						
SDCO	Great Sand Dun	58.22	301	IAMs_20	IAMs_20	21 09 02.9	
	comp=Z,741nm,21.0s						
PV18	Skein Mesa, Pa	58.36	304	IAMs_20	IAMs_20	21 09 52.8	
	comp=Z,1µm,20.0s						
W39A	Magazine	58.36	289	P	P	20 44 27.2	-0.6
	baz=15						
X43A	Marvell	58.41	286	P	P	20 44 29.1	+1.0
	baz=15						
S22A	4UR Ranch, Cre	58.46	302	P	P	20 44 29.8	+0.9
	baz=14,SNR=48						
O03E	Paynes Creek	58.52	316	P	P	20 44 30.6	+1.6
	baz=11						
T25A	Trinidad	58.60	300	P	P	20 44 28.7	-1.0
	baz=14						
O02D	Mt. Diablo Mer	58.78	317	P	P	20 44 32.1	+1.2
	baz=11,SNR=10						
X40A	Basin Creek Fa	58.85	288	P	P	20 44 30.7	-0.5
	baz=15,SNR=24						
OKCFA	Oklahoma City	58.90	293	IAMs_20	IAMs_20	21 09 56.9	
	comp=Z,1µm,21.0s						
MIAR	Mount Ida	58.95	289	P	P	20 44 31.9	0.0
	baz=14,SNR=25						
MVCO	Mesa Verde	59.29	303	P	P	20 44 35.8	+1.2
	baz=13,SNR=35						
MVCO	Mesa Verde	59.29	303	IAMs_20	IAMs_20	21 10 23.4	
	comp=Z,1µm,20.0s						
R11A	Troy Canyon, C	59.43	310	P	P	20 44 36.2	+0.7
	baz=12,SNR=13						
XAN	Xi'an	59.49	71	P	P	20 44 35.8	0.0
XAN				pP	sP	20 44 39.6	+0.7
XAN				sP	pwP	20 44 42.6	+0.7
XAN				PP	PP	20 46 50.4	+3.7
XAN				S	S	20 52 43.9	-0.9
XAN				sS	sS	20 52 51.7	+3.0
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN				pmax	pmax		
	comp=Z,250nm,5.2s						
XAN				LR	LR		
	comp=Z,1µm,15.7s						
XAN				LR	LR		
	comp=Z,710nm,15.7s						
XAN				LR	LR		
	comp=Z,1µm,16.3s						
DANN	Dangsing	59.54	97	*e*P	P	20 44 36.9	+0.4
	comp=Z,94nm,0.9s						
AFDM	Forest Hills D	59.71	315	IAmb	IAmb	20 44 46.2	
	comp=Z,94nm,1.9s						
AFDM				IAMs_20	IAMs_20	21 10 51.7	
	comp=Z,583nm,19.0s						
NVAR	Mina Array Bea	59.80	313	P	P	20 44 39.1	+1.1
	comp=Z,2.4nm,0.8s,baz=17,slow=3.3,SNR=17						
NVAR				LR	LR	21 11 15.4	
	comp=Z,630nm,19.1s,baz=7.0,slow=37						
NVAR	Mina Array Bea	59.80	313	P	P	20 44 38.6	+0.6
WMOK	Wichita Mounta	59.82	294	P	P	20 44 38.6	+0.6
	baz=14,SNR=26						
KSRS	Korea Array	59.83	53	P	P	20 44 38.4	+0.4
	comp=Z,3.2nm,0.9s,baz=340,slow=4.5,SNR=5.1						
KSRS				LR	LR	21 12 31.6	
	comp=Z,384nm,18.9s,baz=354,slow=38						
LSA	Lhasa	59.85	89	P	P	20 44 40.9	+2.1
Z41A	Richland Creek	60.03	288	P	P	20 44 40.1	+0.7
	baz=14						
AMTX	Amarillo	60.26	297	P	P	20 44 40.7	-0.3
	baz=14						
KKN	Kakani	60.41	95	*e*P	P	20 44 42.9	+0.5
	comp=Z,123nm,1.0s						
GUN	Gumba	60.43	95	*e*P	P	20 44 43.2	+0.6
	comp=Z,93nm,1.1s						
CMB	Columbia Colle	60.51	314	IAMs_20	IAMs_20	21 11 19.9	
	comp=Z,591nm,19.0s						
DMN	Daman	60.55	96	*e*P	P	20 44 43.9	+0.5
	comp=Z,68nm,1.1s						
VBMS	Vicksburg	60.55	285	P	P	20 44 43.5	+0.5
VBMS				IAMs_20	IAMs_20	21 12 35.6	
	comp=Z,856nm,18.0s						
PKIN	Phulchoki	60.64	95	*e*P	P	20 44 44.2	+0.2
	comp=Z,48nm,1.2s						
PKI	Pulchoki	60.65	95	*e*P	P	20 44 44.4	+0.3
	comp=Z,118nm,1.6s						
MDPB	Devils Postpil	60.70	313	IAMs_20	IAMs_20	21 11 03.8	
	comp=Z,704nm,21.0s						
TJN	Taejon	60.78	53	⇓*e*P	P	20 44 47.2	+2.7
TPNV	Topopah Spring	60.90	310	P	P	20 44 46.0	+0.5
	baz=12						
TPNV	Topopah Spring	60.90	310	IAMs_20	IAMs_20	21 10 50.2	
	comp=Z,603nm,18.0s						
ANMO	Albuquerque	61.11	301	LR	LR	21 10 59.9	
	comp=Z,529nm,21.6s,baz=20,slow=36						
ANMO	Albuquerque	61.11	301	*d i*P	P	20 44 47.3	+0.3
ANMO				pmax	pmax		
	comp=Z,22nm,1.9s						
ANMO	Albuquerque	61.11	301	P	P	20 44 47.5	+0.5
	baz=13						
ANMO	Albuquerque	61.11	301	P	P	20 44 47.2	+0.1
ANMO				IAmb	IAmb	20 44 55.9	
	comp=Z,68nm,1.6s						
ANMO	Albuquerque	61.11	301	IAMs_20	IAMs_20	21 12 00.6	
	comp=Z,876nm,18.0s						
MSTX	Muleshoe	61.35	297	P	P	20 44 49.1	+0.6
	baz=14,SNR=12						
TAPN	Taplejung	61.37	93	*e*P	P	20 44 49.4	+0.4
	comp=Z,71nm,1.2s						
CD2	Chengdu	61.42	77	P	P	20 44 49.8	+0.8
CD2				S	S	20 53 07.4	-2.3
CD2				pmax	pmax		
	comp=Z,20nm,1.3s						
CD2				LR	LR		
	comp=Z,1µm,15.1s						
WUAZ	Wupatki	61.46	306	P	P	20 44 50.1	+0.7
	baz=13,SNR=12						
WUAZ	Wupatki	61.46	306	IAmb	IAmb	20 44 57.8	
	comp=Z,40nm,1.1s						
RAMN	Ramite	61.51	94	*e*P	P	20 44 50.2	+0.3
	comp=Z,65nm,1.0s						
W18A	Petrified Fore	61.55	304	P	P	20 44 50.5	+0.5
	baz=13,SNR=7.4						
CWC	Cottonwood Cre	61.70	312	P	P	20 44 52.9	+2.0
	baz=12						
ODAN	Odare	61.77	94	*e*P	P	20 44 52.5	+0.9
	comp=Z,129nm,1.1s						
NATX	Nacogdoches	61.86	289	P	P	20 44 52.6	+0.8
	baz=14,SNR=5.5						
MPMC	Manual Prospec	61.98	311	P	P	20 44 53.9	+1.0
	baz=12,SNR=11						
ABTX	Abilene, Hawle	62.04	294	P	P	20 44 53.3	+0.1
	baz=14,SNR=7.5						
WHTX	Lake Whitney,	62.21	292	P	P	20 44 53.8	-0.4
	baz=14						
MAT	Matsushiro	62.40	44	P	P	20 44 54.8	-0.6
MJAR	Matsushiro Arr	62.40	44	P	P	20 44 56.5	+1.0
	comp=Z,7.0nm,0.9s,baz=354,slow=5.8,SNR=12						
MJAR				LR	LR	21 13 11.8	
	comp=Z,131nm,19.3s,baz=305,slow=37						
MJAR	Matsushiro Arr	62.40	44	P	P	20 44 56.3	+0.9
VES	Vestal, Richgr	62.45	313	P	P	20 44 57.1	+1.3
	baz=11						
ISA	Isabella, Lake	62.53	312	P	P	20 44 57.9	+1.5
	baz=12,SNR=7.2						
ISA	Isabella, Lake	62.53	312	IAmb	IAmb	20 45 06.2	
	comp=Z,56nm,1.4s						
ISA				IAMs_20	IAMs_20	21 12 34.2	
	comp=Z,649nm,20.0s						
GSC	Goldstone, Bar	62.60	310	P	P	20 44 58.7	+1.8
	baz=12						
GSC	Goldstone, Bar	62.60	310	IAmb	IAmb	20 45 06.9	
	comp=Z,62nm,1.7s						
GMRC	Granite Mounta	62.92	309	P	P	20 45 00.3	+1.2
	baz=12,SNR=19						
PDMCI	Parker Dam,Lak	63.13	308	P	P	20 45 01.9	+1.6
	baz=12,SNR=6.3						
KOWA	Kowa	63.21	193	P	P	20 44 59.3	-1.7
KOWA				IAmb	IAmb	20 45 02.2	
	comp=Z,41nm,1.2s						
EDW2	Edwards Air Fo	63.21	311	P	P	20 45 02.3	+1.4
	baz=12						
ENH	Enshi	63.25	71	IAMs_20	IAMs_20	21 16 59.1	
	comp=Z,894nm,19.0s						
435B	Jarrell	63.41	292	P	P	20 45 02.7	+0.5
	baz=14						
NJ2	Nanjing	63.41	62	*e*P	P	20 45 00.3	-1.9
NJ2				pP	pP	20 45 05.3	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,520nm,12.8s						
NJ2				LR	LR		
	comp=Z,370nm,13.7s						
NJ2				LR	LR		
	comp=Z,830nm,15.1s						
IRM	Iron Mountain	63.44	309	P	P	20 45 03.9	+1.4
	baz=12,SNR=7.4						
121A	Cookes Peak, D	63.71	302	P	P	20 45 04.9	+0.6
	baz=13,SNR=7.9						
BELC	Belle Mtn. Jos	63.74	309	P	P	20 45 05.9	+1.4
	baz=12,SNR=6.1						
BFSC	Mount Baldy Ra	63.78	311	P	P	20 45 06.2	+1.3
	baz=12						
WHN	Wuhan	63.98	67	⇓P	P	20 45 06.0	0.0
WHN				pmax	pmax		
	comp=Z,24nm,0.9s						
BC3	Big Chuckawall	63.98	309	P	P	20 45 06.7	+0.6
	baz=12,SNR=5.1						
MNTX	Cornudas Mount	64.06	299	P	P	20 45 06.7	+0.2
	baz=13						
MNTX	Cornudas Mount	64.06	299	IAMs_20	IAMs_20	21 13 47.7	
	comp=Z,716nm,19.0s						
JCT	Junction City	64.15	294	P	P	20 45 07.7	+0.5
	baz=13,SNR=5.9						
JCT	Junction City	64.15	294	IAMs_20	IAMs_20	21 13 14.0	
	comp=Z,855nm,21.0s						
PFO	Pinyon Flats O	64.20	310	LR	LR	21 14 38.3	
	comp=Z,312nm,18.3s,baz=354,slow=38						
PFO	Pinyon Flats O	64.20	310	⇑*i*P	P	20 45 09.0	+1.4
PFO				pmax	pmax		
	comp=Z,16nm,1.1s						
PFO	Pinyon Flats O	64.20	310	P	P	20 45 08.9	+1.4
	baz=12						
PFO	Pinyon Flats O	64.20	310	P	P	20 45 09.1	+1.4
TPFO	Pinon Flats	64.20	310	P	P	20 45 09.2	+1.6
	baz=12,SNR=5.2						
TOA0	Torodi Ar. Sit	64.34	186	P	P	20 45 07.9	-0.6
TOA0				IAmb	IAmb	20 45 09.2	
	comp=Z,29nm,1.1s						
TORD	Torodi Ar. Bea	64.34	186	P	P	20 45 07.9	-0.6
	comp=Z,14nm,1.0s,baz=352,slow=7.4,SNR=37						
TORD				PcP	PcP	20 45 42.4	-0.6
	comp=Z,6.9nm,0.9s,baz=346,slow=4.2,SNR=4.9						
TORD				LR	LR	21 13 03.2	
	comp=Z,140nm,19.4s,baz=15,slow=36						
TORD	Torodi Ar. Bea	64.34	186	P	P	20 45 08.1	-0.4
GLA	Glamis	64.47	308	P	P	20 45 11.1	+1.9
	baz=12						
TUC	Tucson	64.47	304	P	P	20 45 11.2	+1.9
TUC				pmax	pmax		
	comp=Z,69nm,1.4s						
TUC				MLR	MLR		
	comp=Z,800nm,21.0s						
TUC	Tucson	64.47	304	P	P	20 45 10.8	+1.5
	baz=12						
TUC	Tucson	64.47	304	P	P	20 45 11.2	+1.9
TUC	Tucson	64.47	304	IAMs_20	IAMs_20	21 13 24.7	
	comp=Z,758nm,21.0s						
SWSC	Sam W. Stewart	64.74	309	P	P	20 45 12.3	+1.4
	baz=12						
SSE	Sheshan	64.79	60	P	P	20 45 12.6	+1.4
SSE				S	S	20 53 52.3	+0.8
SSE				pmax	pmax		
	comp=Z,11nm,0.7s						
SSE				LR	LR		
	comp=Z,190nm,21.8s						
SSE				LR	LR		
	comp=Z,440nm,23.1s						
MONP2	Monument Peak	64.89	310	P	P	20 45 13.7	+1.5
	baz=12,SNR=6.0						
UABX	UABC, Campus M	64.98	309	IAMs_20	IAMs_20	21 14 18.2	
	comp=Z,633nm,20.0s						
IKP	In-Ko-Pah, Jac	65.08	309	P	P	20 45 15.2	+1.9
	baz=12,SNR=5.8						
214A	Organ Pipe Nat	65.18	306	P	P	20 45 14.4	+0.6
	baz=12						
TJX	Tijuana	65.37	310	IAMs_20	IAMs_20	21 14 25.5	
	comp=Z,707nm,18.0s						
TX32	Lajitas Array	66.03	297	IAmb	IAmb	20 45 27.9	
	comp=Z,83nm,1.9s						
TXAR	Lajitas Array	66.03	297	P	P	20 45 19.3	-0.2
	comp=Z,8.6nm,0.8s,baz=46,slow=4.8,SNR=100						
TXAR				PP	PP	20 47 45.4	+1.1
	comp=Z,9.7nm,1.3s,baz=27,slow=6.1,SNR=5.2						
833A	Chaparral WMA,	66.16	293	P	P	20 45 20.9	+0.7
	baz=13,SNR=6.2						
GYA	Guiyang	66.35	75	⇓P	P	20 45 22.0	+0.5
GYA				pmax	pmax		
	comp=Z,25nm,1.1s						
GYA				pmax	pmax		
	comp=Z,190nm,4.7s						
GYA				LR	LR		
	comp=Z,610nm,15.5s						
KMI	Kunming	66.80	79	⇓*e*P	P	20 45 24.2	-0.4
KMI				pP	sP	20 45 28.2	+0.5
KMI				sP	pwP	20 45 30.3	-0.4
KMI				S	S	20 54 14.3	-2.4
KMI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KMI				pmax	pmax		
	comp=Z,130nm,6.0s						
KMI				LR	LR		
	comp=Z,320nm,21.7s						
KMI				LR	LR		
	comp=Z,370nm,14.3s						
KMI				LR	LR		
	comp=Z,450nm,28.5s						
HSIG		67.71	304	IAMs_20	IAMs_20	21 17 24.4	
	comp=Z,557nm,20.0s						
SJG	San Juan	68.90	258	LR	LR	21 13 48.9	
	comp=Z,82nm,20.7s,baz=68,slow=34						
HYB	Hyderabad	69.00	105	*i* P	P	20 45 37.0	-1.3
DBIC	Dimbokro	71.02	193	P	P	20 45 49.8	-0.8
	comp=Z,6.5nm,1.1s,baz=349,slow=9.9,SNR=5.0						
DBIC				LR	LR	21 16 26.5	
	comp=Z,87nm,20.1s,baz=355,slow=36						
TIC	Toumodi	71.05	193	*e*P	P	20 45 49.4	-1.4
KIC	Kosan Boka	71.32	193	*e*P	P	20 45 50.9	-1.5
	comp=Z,30nm,0.8s						
LIC	Lamto	71.47	193	*e*P	P	20 45 52.3	-1.0
	comp=Z,50nm,0.8s						
LPIG	La Paz	72.39	302	LR	LR	21 17 43.6	
	comp=Z,554nm,20.3s,baz=6.0,slow=36						
CMAR	Chiang Mai Arr	72.42	84	P	P	20 45 59.0	-0.1
	comp=Z,8.9nm,1.0s,baz=341,slow=7.0,SNR=43						
CMAR				LR	LR	21 23 14.0	
	comp=Z,252nm,18.4s,baz=11,slow=40						
CMAR	Chiang Mai Arr	72.42	84	*i* P	P	20 45 59.2	+0.1
CMAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SLBS	Sierra La Lagu	72.72	302	P	P	20 46 02.0	+1.2
QIZ	Qiongzhong	74.22	74	P	P	20 46 08.6	-1.0
QIZ				S	S	20 55 40.3	-2.6
QIZ				LR	LR		
	comp=Z,660nm,5.9s						
QIZ				LR	LR		
	comp=Z,1µm,3.2s						
QIZ				LR	LR		
	comp=Z,990nm,14.3s						
CMIG	Matias Romero	76.12	286	LR	LR	21 23 15.4	
	comp=Z,338nm,20.7s,baz=0.5,slow=38						

TLIG	**Tlapa**	**76.43**	**289**	IAMs_20	IAMs_20	21 21 17.3	
	comp=Z,686nm,21.0s						
TGUH	**Tegucigalpa,Un**	**77.43**	**278**	IAMs_20	IAMs_20	21 21 45.5	
	comp=Z,764nm,19.0s						
PALK	**Pallekele**	**79.30**	**105**	LR	LR	21 24 58.7	
	comp=Z,334nm,20.1s,baz=104,slow=38						
OCAC	**Ocana**	**80.02**	**263**	*e*P	P	20 46 49.4	+7.0
KMBO	**Kilima Mbogo**	**80.14**	**150**	P	**P**	**20 46 44.5**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=20,slow=6.4,SNR=4.9						
JTS	**Las Juntas de**	**80.57**	**275**	IAMs_20	IAMs_20	21 22 17.8	
	comp=Z,480nm,20.0s						
PAMC	**Pamplona, Colo**	**80.75**	**262**	*e*P	P	20 46 53.4	+6.6
ZARC	**Zaragoza, Cauc**	**81.08**	**264**	*e*P	**P**	**20 46 46.2**	**-1.7**
BRRC	**Barranca, Sant**	**81.20**	**263**	*e*P	**P**	**20 46 48.2**	**-0.4**
BARC	**Barichara**	**81.58**	**262**	*e*P	**P**	**20 46 48.8**	**-2.1**
DBBC	**Dabeiba**	**81.83**	**265**	*e*P	**P**	**20 46 53.3**	**+1.3**
PTBC	**PUERTO BERRIO,**	**81.91**	**264**	*e*P	**P**	**20 46 51.6**	**-0.7**
RUSC	**La Rusia**	**82.24**	**262**	*e*P	**P**	**20 46 53.1**	**-1.5**
HELC	**Santa Helena**	**82.48**	**265**	*e*P	**P**	**20 46 56.0**	**+0.2**
SPBC	**San Pablo de B**	**82.69**	**263**	*e*P	**P**	**20 46 55.2**	**-1.3**
NORC	**Norcasia**	**82.95**	**264**	*e*P	**P**	**20 46 57.5**	**-0.3**
ROSC	**El Rosal**	**83.53**	**263**	P	**P**	**20 47 02.6**	**+1.3**
	comp=Z,12nm,0.7s,baz=52,slow=18,SNR=5.8						
ROSC	**El Rosal**	**83.53**	**263**	*e*P	**P**	**20 47 01.3**	**+0.1**
CHIC	**Chingaza**	**83.61**	**262**	*e*P	**P**	**20 47 01.1**	**-0.5**
RREF	**El Recreo**	**83.69**	**264**	*e*P	**P**	**20 47 03.4**	**+1.0**
PLMC	**San Jos del P**	**83.89**	**265**	*e*P	**P**	**20 47 02.2**	**-0.5**
TOLC	**Tolima**	**83.99**	**264**	*e*P	**P**	**20 47 03.4**	**-0.2**
VILC	**Villavicencio,**	**84.10**	**262**	*e*P	**P**	**20 47 01.3**	**-2.5**
ORTC	**Ortega, Tolima**	**84.63**	**264**	*e*P	**P**	**20 47 06.1**	**-0.3**
YOTC	**Yotoco, Valle**	**84.80**	**265**	*e*P	**P**	**20 47 06.5**	**-0.9**
BBAC	**Balboa, Cauca**	**86.90**	**265**	*e*P	**P**	**20 47 17.4**	**-0.5**
PSI	**Prapat**	**87.59**	**88**	P	**P**	**20 47 19.9**	**-1.1**
	comp=Z,8.3nm,0.8s,baz=359,slow=2.0						
PSI				LR	LR	21 33 10.3	
	comp=Z,284nm,20.5s,baz=271,slow=40						
PSI	**Prapat**	**87.59**	**88**	P	**P**	**20 47 20.0**	**-1.1**
DAV	**Davao City (W)**	**89.03**	**61**	LR	LR	21 30 18.1	
	comp=Z,159nm,21.3s,baz=312,slow=38						
BDFB	**Brasilia**	**98.16**	**233**	P	Pdif	20 48 10.0	+0.2
	comp=Z,4.4nm,1.1s,baz=90,slow=2.0,SNR=3.0						
BDFB	**Brasilia**	**98.16**	**233**	P	Pdif	20 48 10.0	+0.2
WRA	**Warramunga Arr**	**117.02**	**58**	PKP	**PKPdf**	**20 53 16.8**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=333,slow=2.3,SNR=5.6						
WR3	**Warramunga Arr**	**117.04**	**58**	IAMs_20	IAMs_20	21 52 15.9	
	comp=Z,297nm,18.0s						
WB1	**Warramunga Ar.**	**117.04**	**58**	IAMs_20	IAMs_20	21 49 30.0	
	comp=Z,292nm,20.0s						
PPT2	**Papeete2**	**119.06**	**335**	*e*LR	LR	21 29 47.6	
	comp=Z,126nm,21.5s						
ASAR	**Alice Springs**	**120.57**	**59**	PKP	**PKPdf**	**20 53 23.4**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=360,slow=1.8,SNR=21						
ASAR				PKKPab	**PKKPab**	**21 03 29.1**	**-1.3**
	comp=Z,1.0nm,1.0s,baz=182,slow=4.6,SNR=5.3						
DZM	**Mont Dzumac**	**123.66**	**24**	*e*LR	LR	21 31 55.5	
	comp=Z,198nm,24.4s						
TBI	**Tubuai**	**124.75**	**334**	*e*LR	LR	21 32 23.8	
	comp=Z,238nm,39.5s						
PLCA	**Paso Flores**	**126.86**	**248**	PKP	**PKPdf**	**20 53 35.2**	**-0.5**
	comp=Z,5.6nm,1.0s,baz=279,slow=4.0,SNR=5.3						
SYO	**Syowa Base**	**147.48**	**159⇑**	*e*PKPdf	**PKPdf**	**20 54 11.6**	**-0.7**
SYO	**Syowa Base**	**147.48**	**159⇓**	*e*pPKPdf	**PKiKP**	**20 54 17.4**	**+0.4**
NVL	**N'lazarevskaya**	**148.00**	**177**	*e*PKP2	**PKPbc**	**20 54 15.2**	**-1.1**
NVL				pmax	pmax		
	comp=Z,27nm,1.1s						
VNA1	**Neumayer--Stat**	**148.16**	**190**	PKPdf	**PKPbc**	**20 54 15.4**	**-1.3**
	baz=77,slow=7.7						
VNA2	**Neumayer--Watz**	**148.41**	**189**	PKPdf	**PKPbc**	**20 54 16.3**	**-1.1**
	baz=2.0,slow=3.4						
VNA3	**Neumayer Olymp**	**148.81**	**191**	PKPbc	**PKPbc**	**20 54 18.5**	**+0.1**
	baz=77,slow=7.7						
SNAA	**Sanae**	**149.02**	**186**	PKPbc	**PKPbc**	**20 54 19.5**	**+0.5**
	baz=77,slow=7.7						
QSPA	**South Pole Qui**	**167.39**	**180**	PKPab	**PKPab**	**20 55 42.0**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=302,slow=2.7,SNR=6.6						

IDC ***11*** *20:42:41.0±4.3, 21.°91N×122.°53E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.2/44, mbtmp3.3/4, Error ellipse: s-maj=331.4km s-min=24.5km az=62.0*
TAP ***11*** *20:42:53.7, 21.°66N×121.°42E, h86^{km}, ML3.8, D*
JMA ***11*** *20:42:54.1±0.3, 21.°69N×121.°52E, h67^{km}, M3.2*
ISC 11 20:42:53.3±1.0**, 21.°64N**±0.°05×**121.°41E**±0.°03**, h96**^{km}±6^{km}**, n118, σ1.^{s}03**/220**, mb3.3**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.42**	**18**	P	**Pn**	**20 43 07.4**	**-0.7**
	baz=18						
LAY				S	**Sn**	**20 43 18.6**	**-0.5**
	baz=18						
TSEB	**Hengchuen, Pin**	**0.54**	**299**	*e*P	**Pn**	**20 43 09.3**	**+0.3**
	baz=294						
TSEB				S	**Sn**	**20 43 20.9**	**+0.3**
	baz=294						
TWKBT	**Hengchun**	**0.63**	**298**	P	**Pn**	**20 43 09.5**	**-0.2**
	baz=296						
TWKBT				S	**Sn**	**20 43 21.2**	**-0.7**
	baz=296						
TWK1	**Hengchun**	**0.64**	**298**	P	**Pn**	**20 43 09.5**	**-0.3**
	baz=296						
TWK1				S	**Sn**	**20 43 21.4**	**-0.7**
	baz=296						
SNW	**Nanwan**	**0.69**	**297**	*e*S	**Sn**	**20 43 22.8**	**-0.1**
	baz=295						
HEN	**Hengchun**	**0.73**	**300**	P	**Pn**	**20 43 10.8**	**+0.3**
	baz=298						
HEN				S	**Sn**	**20 43 22.7**	**-0.8**
	baz=298						
SLIU	**Shizi**	**0.81**	**315**	P	**Pn**	**20 43 11.1**	**-0.3**
	baz=313						
SLIU				S	**Sn**	**20 43 23.8**	**-1.1**
	baz=313						
TAW	**Tawu**	**0.86**	**326**	*e*P	**Pn**	**20 43 11.5**	**-0.4**
	baz=325						
TAW				*e*S	**Sn**	**20 43 24.4**	**-1.4**
	baz=325						
EAST	**Anshuo**	**0.91**	**325**	P	**Pn**	**20 43 11.9**	**-0.6**
	baz=323						
EAST				*e*S	**Sn**	**20 43 25.2**	**-1.6**
	baz=323						
LDUT	**Ludao**	**1.03**	**3**	*e*P	**Pn**	**20 43 12.8**	**-0.9**
	baz=2.0						
LDUT				S	**Sn**	**20 43 28.1**	**-1.0**
	baz=2.0						
SCZT	**Fangliau**	**1.04**	**315**	*e*P	**Pn**	**20 43 14.0**	**+0.2**
	baz=313						
SCZT				*e*S	**Sn**	**20 43 28.8**	**-0.4**
	baz=313						
ECL	**Taimali**	**1.04**	**336**	*e*P	**Pn**	**20 43 13.2**	**-0.7**
	baz=335						
ECL				S	**Sn**	**20 43 27.9**	**-1.5**
	baz=335						
TTN	**Taitung**	**1.14**	**347**	*e*S	**Sn**	**20 43 32.0**	**+0.8**
	baz=347						
SSPT	**Xinbi**	**1.15**	**317**	*e*P	**Pn**	**20 43 15.7**	**+0.6**
	baz=315						
SSPT				*e*S	**Sn**	**20 43 32.0**	**+0.6**
	baz=315						
WLCH	**Liuqiu**	**1.19**	**307**	*e*P	**Pn**	**20 43 16.6**	**+1.0**
	baz=305						
WLCH				*e*S	**Sn**	**20 43 32.5**	**+0.1**
	baz=305						
TWP	**Hsiaoliuchiu**	**1.20**	**306**	*e*P	**Pn**	**20 43 16.6**	**+0.9**
	baz=304						
TWP				*e*S	**Sn**	**20 43 33.4**	**+0.8**
	baz=304						
MASBT	**Mashibuluo**	**1.21**	**323**	*e*P	**Pn**	**20 43 16.3**	**+0.5**
	baz=322						
MASBT				*e*S	**Sn**	**20 43 31.7**	**-1.0**
	baz=322						
TWGBT	**Beinan**	**1.21**	**345**	*e*P	**Pn**	**20 43 15.5**	**-0.3**
	baz=344						
TWGBT				S	**Sn**	**20 43 31.7**	**-1.1**
	baz=344						
TWG	**Pinlang**	**1.22**	**345**	*e*P	**Pn**	**20 43 15.7**	**-0.2**
	baz=344						
TWG				S	**Sn**	**20 43 31.3**	**-1.7**
	baz=344						
TSMG	**Majia**	**1.28**	**326**	*e*P	**Pn**	**20 43 17.0**	**+0.4**
	baz=325						
TSMG				S	**Sn**	**20 43 33.7**	**-0.5**
	baz=325						
LONT	**Longtian**	**1.29**	**348**	*e*P	**Pn**	**20 43 16.5**	**-0.3**
	baz=347						
LONT				S	**Sn**	**20 43 33.7**	**-0.7**
	baz=347						
SSD	**Sandimen**	**1.32**	**327**	*e*P	**Pn**	**20 43 17.6**	**+0.5**
	baz=326						
SSD				*e*S	**Sn**	**20 43 35.1**	**0.0**
	baz=326						
EDH	**Donghe**	**1.33**	**356**	*e*P	**Pn**	**20 43 17.1**	**-0.1**
	baz=355						
EDH				S	**Sn**	**20 43 35.2**	**-0.1**
	baz=355						
TSPT	**Pingtung City**	**1.34**	**321**	*e*S	**Sn**	**20 43 36.2**	**+0.7**
	baz=319						
KAU	**Kaohsiung**	**1.38**	**312**	*e*P	**Pn**	**20 43 18.6**	**+0.7**
	baz=311						
CHKT	**Chengkung**	**1.45**	**358**	*e*P	**Pn**	**20 43 18.9**	**+0.2**
	baz=358						
CHKT				*e*S	**Sn**	**20 43 37.8**	**-0.2**
	baz=358						
TWM1	**Shoushan**	**1.49**	**322**	*e*P	**Pn**	**20 43 20.7**	**+1.5**
	baz=321						
TWM1				*e*S	**Sn**	**20 43 39.8**	**+0.9**
	baz=321						
SCST	**Cishan**	**1.50**	**326**	*e*P	**Pn**	**20 43 18.8**	**-0.6**
	baz=324						
SCST				*e*S	**Sn**	**20 43 38.2**	**-1.0**
	baz=324						
SLGT	**Liugui**	**1.52**	**332**	*e*P	**Pn**	**20 43 20.4**	**+0.8**
	baz=331						
SLGT				*e*S	**Sn**	**20 43 39.4**	**-0.2**
	baz=331						
FULB	**Fuli**	**1.56**	**356**	*e*P	**Pn**	**20 43 20.6**	**+0.5**
	baz=355						
FULB				*e*S	**Sn**	**20 43 40.5**	**+0.2**
	baz=355						
ELDTW	**Lidau**	**1.58**	**347**	*e*P	**Pn**	**20 43 21.1**	**+0.6**
	baz=346						
ELDTW				*e*S	**Sn**	**20 43 41.0**	**-0.1**
	baz=346						
SGST	**Jiashian**	**1.63**	**332**	*e*P	**Pn**	**20 43 20.7**	**-0.3**
	baz=331						
SGST				*e*S	**Sn**	**20 43 41.5**	**-0.4**
	baz=331						
STYT	**Tauyuan**	**1.63**	**338**	*e*P	**Pn**	**20 43 21.7**	**+0.7**
	baz=337						
STYT				*e*S	**Sn**	**20 43 42.3**	**+0.2**
	baz=337						
EYUL	**Yuli**	**1.70**	**357**	*e*P	**Pn**	**20 43 22.8**	**+0.9**
	baz=356						
EYUL				*e*S	**Sn**	**20 43 43.6**	**0.0**
	baz=356						
TWF1	**Yuli**	**1.71**	**356**	*e*P	**Pn**	**20 43 23.2**	**+1.2**
	baz=356						
TWF1				*e*S	**Sn**	**20 43 42.5**	**-1.2**
	baz=356						
CHN3	**Shinhua**	**1.73**	**326**	*e*S	**Sn**	**20 43 44.8**	**+0.7**
	baz=325						
CHN1	**Nanshi**	**1.74**	**332**	*e*P	**Pn**	**20 43 23.4**	**+0.9**
	baz=331						
CHN1				*e*S	**Sn**	**20 43 44.2**	**-0.3**
	baz=331						
YULB	**Yu-li**	**1.75**	**356**	*e*P	**Pn**	**20 43 22.2**	**-0.3**
	baz=356						
YULB				*e*S	**Sn**	**20 43 43.8**	**-0.9**
	baz=356						
TAI	**Tainan**	**1.76**	**320**	*e*P	**Pn**	**20 43 22.6**	**+0.1**
	baz=319						
TAI				*e*S	**Sn**	**20 43 45.0**	**+0.2**
	baz=319						
WTP	**Ta-pu**	**1.76**	**335**	*e*P	**Pn**	**20 43 23.1**	**+0.4**
	baz=334						
WTP				*e*S	**Sn**	**20 43 44.9**	**-0.1**
	baz=334						
SNST	**Tainan City**	**1.79**	**332**	*e*P	**Pn**	**20 43 23.7**	**+0.8**
	baz=331						
SNST				*e*S	**Sn**	**20 43 45.8**	**+0.3**
	baz=331						
TPUB	**Ta-pu**	**1.81**	**336**	*e*P	**Pn**	**20 43 23.6**	**+0.4**
	baz=335						
TPUB				*e*S	**Sn**	**20 43 45.1**	**-0.9**
	baz=335						
TWK	**Hsinying**	**1.83**	**332**	*e*P	**Pn**	**20 43 24.4**	**+0.8**
	baz=331						
TWK				*e*S	**Sn**	**20 43 46.3**	**-0.3**
	baz=331						
HGSD	**Ruisui**	**1.84**	**0**	*e*P	**Pn**	**20 43 23.9**	**+0.2**
HGSD				*e*S	**Sn**	**20 43 46.6**	**-0.2**
EHY	**Hungye**	**1.86**	**357**	*e*P	**Pn**	**20 43 23.6**	**-0.3**
	baz=357						
EHY				*e*S	**Sn**	**20 43 46.0**	**-1.2**
	baz=357						
YUS	**Yu-Shan**	**1.89**	**347**	*e*P	**Pn**	**20 43 25.2**	**+0.5**
	baz=346						
YUS				*e*S	**Sn**	**20 43 48.0**	**-0.6**
	baz=346						
SCLT	**Jiali**	**1.90**	**324**	*e*P	**Pn**	**20 43 24.7**	**+0.3**
	baz=323						
SCLT				*e*S	**Sn**	**20 43 48.2**	**+0.2**
	baz=323						
ALS	**Alishan**	**1.94**	**343**	*e*P	**Pn**	**20 43 26.1**	**+0.8**
	baz=342						
ALS				*e*S	**Sn**	**20 43 49.5**	**-0.1**
	baz=342						
ICHU	**Yijhu**	**2.01**	**329**	*e*P	**Pn**	**20 43 26.3**	**+0.5**
	baz=327						
ICHU				*e*S	**Sn**	**20 43 50.5**	**-0.1**
	baz=327						
CHN8	**Yiju**	**2.03**	**327**	*e*P	**Pn**	**20 43 27.1**	**+1.0**
	baz=326						
CHN8				*e*S	**Sn**	**20 43 51.5**	**+0.4**
	baz=326						
CHN5	**Tsauling**	**2.06**	**341**	*e*P	**Pn**	**20 43 27.0**	**+0.4**
	baz=340						
CHN5				*e*S	**Sn**	**20 43 52.7**	**+0.6**
	baz=340						
CHY	**Chiayi**	**2.06**	**334**	*e*P	**Pn**	**20 43 27.0**	**+0.5**
	baz=333						
CHY				*e*S	**Sn**	**20 43 51.1**	**-0.8**
	baz=333						
CHN2	**Minshiung**	**2.07**	**335**	*e*S	**Sn**	**20 43 52.2**	**+0.1**
	baz=334						
WLGB	**Puzi**	**2.10**	**331**	*e*P	**Pn**	**20 43 26.9**	**-0.1**
	baz=330						
WLGB				*e*S	**Sn**	**20 43 52.3**	**-0.4**
	baz=330						
WHYT	**Xinyi Township**	**2.11**	**346**	*e*P	**Pn**	**20 43 28.1**	**+0.9**
	baz=345						
WHYT				*e*S	**Sn**	**20 43 53.1**	**+0.1**
	baz=345						
ESL	**Shilin**	**2.16**	**0**	*e*P	**Pn**	**20 43 27.9**	**+0.1**
ESL				*e*S	**Sn**	**20 43 54.0**	**-0.2**
SSLB	**Suanglung**	**2.18**	**349**	*e*P	**Pn**	**20 43 28.7**	**+0.6**
	baz=348						
SSLB				*e*S	**Sn**	**20 43 54.7**	**0.0**
	baz=348						
WGK	**Gukeng**	**2.18**	**339**	*e*P	**Pn**	**20 43 28.4**	**+0.3**
	baz=338						
WGK				*e*S	**Sn**	**20 43 54.3**	**-0.4**
	baz=338						
WDLH	**Douliu**	**2.19**	**339**	*e*P	**Pn**	**20 43 28.4**	**+0.2**
	baz=337						
WDLH				*e*S	**Sn**	**20 43 54.8**	**-0.1**
	baz=337						
WTK	**Tuku**	**2.25**	**335**	*e*P	**Pn**	**20 43 29.0**	**+0.1**
	baz=334						
WTK				*e*S	**Sn**	**20 43 55.6**	**-0.6**
	baz=334						
WJS	**Zhushan**	**2.26**	**344**	*e*P	**Pn**	**20 43 29.9**	**+0.8**
	baz=343						
WJS				*e*S	**Sn**	**20 43 57.0**	**+0.5**
	baz=343						
WSF	**Szhu**	**2.27**	**331**	*e*P	**Pn**	**20 43 29.3**	**+0.1**
	baz=330						
WSF				*e*S	**Sn**	**20 43 56.2**	**-0.6**
	baz=330						
WDGT	**Dungji**	**2.29**	**315**	*e*P	**Pn**	**20 43 29.7**	**+0.2**
	baz=314						
WDGT				*e*S	**Sn**	**20 43 55.7**	**-1.4**
	baz=314						
TYC	**Yuchr**	**2.31**	**347**	*e*P	**Pn**	**20 43 30.5**	**+0.8**
	baz=347						
TYC				*e*S	**Sn**	**20 43 58.3**	**+0.6**
	baz=347						
WNT	**Mingjian**	**2.33**	**343**	*e*P	**Pn**	**20 43 30.6**	**+0.6**
	baz=343						
WNT				*e*S	**Sn**	**20 43 58.6**	**+0.5**
	baz=343						
WNT1	**Nantou City**	**2.36**	**343**	*e*P	**Pn**	**20 43 30.6**	**+0.3**
	baz=342						
WNT1				*e*S	**Sn**	**20 43 59.0**	**+0.3**
	baz=342						
WPL	**Puli Township**	**2.40**	**350**	*e*P	**Pn**	**20 43 32.1**	**+1.2**
	baz=349						
WPL				*e*S	**Sn**	**20 43 59.8**	**0.0**
	baz=349						
VCHM	**Qimei**	**2.41**	**311**	*e*P	**Pn**	**20 43 31.5**	**+0.5**
	baz=309						
VCHM				*e*S	**Sn**	**20 43 58.3**	**-1.8**
	baz=309						
CHGB	**Renai**	**2.42**	**355**	*e*P	**Pn**	**20 43 32.4**	**+1.0**
	baz=354						
CHGB				*e*S	**Sn**	**20 44 00.9**	**+0.3**
	baz=354						
TWD	**Chiawan**	**2.44**	**4**	*e*S	**Sn**	**20 43 59.0**	**-1.6**
	baz=4.0						
WHF	**Hehuan Shan**	**2.50**	**357**	*e*P	**Pn**	**20 43 33.5**	**+0.8**
	baz=356						
WHF				*e*S	**Sn**	**20 44 02.1**	**-0.7**
	baz=356						
PHUB	**P'eng-hu**	**2.52**	**318**	*e*P	**Pn**	**20 43 32.4**	**-0.2**
	baz=317						
PHUB				*e*S	**Sn**	**20 44 00.6**	**-2.2**
	baz=317						
NACB	**Ninganchiao**	**2.53**	**4**	*e*P	**Pn**	**20 43 32.9**	**+0.2**
	baz=3.0						
NACB				*e*S	**Sn**	**20 44 02.3**	**-0.6**
	baz=3.0						
WCHH	**Zhanghua**	**2.55**	**342**	*e*P	**Pn**	**20 43 33.9**	**+0.9**
	baz=341						
WCHH				*e*S	**Sn**	**20 44 03.4**	**0.0**
	baz=341						
ETLH	**Xiulin Townshi**	**2.56**	**1**	*e*P	**Pn**	**20 43 33.6**	**+0.5**
	baz=1.0						
ETLH				*e*S	**Sn**	**20 44 04.0**	**+0.4**
	baz=1.0						
PNG	**Penghu**	**2.58**	**319**	*e*P	**Pn**	**20 43 33.1**	**-0.1**
	baz=317						
PNG				*e*S	**Sn**	**20 44 02.1**	**-1.8**
	baz=317						
TCU	**Taichung**	**2.59**	**345**	*e*P	**Pn**	**20 43 33.7**	**+0.3**
	baz=344						
TCU				*e*S	**Sn**	**20 44 03.9**	**-0.3**
	baz=344						
FUSS	**Fushou**	**2.60**	**357**	*e*P	**Pn**	**20 43 34.9**	**+1.1**
	baz=356						
FUSS				*e*S	**Sn**	**20 44 04.4**	**-0.5**
	baz=356						
TWT	**Tachien**	**2.61**	**355**	*e*S	**Sn**	**20 44 04.9**	**-0.1**
	baz=354						
TDCB	**Techi**	**2.61**	**355**	*e*P	**Pn**	**20 43 34.9**	**+1.0**
	baz=354						
TDCB				*e*S	**Sn**	**20 44 04.4**	**-0.7**
	baz=354						
WHP	**Taichung City**	**2.66**	**351**	*e*P	**Pn**	**20 43 35.1**	**+0.6**
	baz=350						
WHP				*e*S	**Sn**	**20 44 06.6**	**+0.5**
	baz=350						
TWQ1	**Liyutan**	**2.76**	**348**	*e*P	**Pn**	**20 43 36.8**	**+1.1**
	baz=347						
TWQ1				*e*S	**Sn**	**20 44 07.8**	**-0.6**
	baz=347						
NNSB	**Datong**	**2.78**	**359**	*e*P	**Pn**	**20 43 37.2**	**+1.2**
	baz=359						
NNSB				*e*S	**Sn**	**20 44 08.2**	**-0.7**
	baz=359						
NNS	**Nan Shan**	**2.79**	**359**	*e*P	**Pn**	**20 43 37.8**	**+1.6**
	baz=359						
NNS				*e*S	**Sn**	**20 44 09.1**	**-0.2**
	baz=359						
NSY	**Sanyi**	**2.83**	**348**	*e*S	**Sn**	**20 44 09.5**	**-0.5**
	baz=347						
NDT	**Datong Townshi**	**2.95**	**2**	*e*P	**Pn**	**20 43 39.5**	**+1.2**
	baz=1.0						
NDT				*e*S	**Sn**	**20 44 12.6**	**-0.3**
	baz=1.0						
TWC	**Suao**	**2.98**	**8**	*e*P	**Pn**	**20 43 39.6**	**+0.9**
	baz=7.0						
TWC				*e*S	**Sn**	**20 44 13.1**	**-0.6**
	baz=7.0						
NSTT	**Nanjuang**	**3.00**	**353**	*e*P	**Pn**	**20 43 39.9**	**+0.9**
	baz=352						
NSTT				*e*S	**Sn**	**20 44 12.9**	**-1.2**
	baz=352						
LIOB	**Emei**	**3.01**	**353**	*e*P	**Pn**	**20 43 39.9**	**+0.7**
	baz=352						
LIOB				*e*S	**Sn**	**20 44 13.8**	**-0.7**
	baz=352						
YHNB	**Yeheng**	**3.02**	**359**	*e*P	**Pn**	**20 43 40.2**	**+1.0**
	baz=359						
YHNB				*e*S	**Sn**	**20 44 13.8**	**-0.8**
	baz=359						
NSK	**Sanguang**	**3.02**	**359**	*e*P	**Pn**	**20 43 40.4**	**+1.1**
	baz=359						
NSK				*e*S	**Sn**	**20 44 14.4**	**-0.3**
	baz=359						
TWE	**Neicheng**	**3.08**	**4**	*e*P	**Pn**	**20 43 41.2**	**+1.2**
	baz=4.0						
NWLT	**Wulai**	**3.12**	**1**	*e*P	**Pn**	**20 43 41.5**	**+0.9**
	baz=1.0						
NWLT				*e*S	**Sn**	**20 44 16.6**	**-0.5**
	baz=1.0						
JYNG	**Yonagunijimaku**	**3.13**	**26**	P	**Pn**	**20 43 41.4**	**+0.7**
JYNG				S	**Sn**	**20 44 14.9**	**-2.4**
HATJ	**Hateruma jima**	**3.26**	**42**	P	**Pn**	**20 43 42.8**	**+0.3**
HATJ				S	**Sn**	**20 44 19.5**	**-0.9**
TIPB	**Shuangxi**	**3.34**	**6**	*e*P	**Pn**	**20 43 44.8**	**+1.3**
	baz=6.0						
TIPB				*e*S	**Sn**	**20 44 21.3**	**-1.0**
	baz=6.0						
IRIF	**Iriomote-Funau**	**3.43**	**38**	P	**Pn**	**20 43 45.1**	**+0.4**
IRIF				S	**Sn**	**20 44 24.2**	**-0.2**
YM04	**YM04**	**3.50**	**2**	*e*P	**Pn**	**20 43 46.3**	**+0.6**
	baz=1.0						
YM04				*e*S	**Sn**	**20 44 25.2**	**-1.0**
	baz=1.0						
YM05	**YM05**	**3.51**	**2**	*e*P	**Pn**	**20 43 46.9**	**+1.0**
	baz=2.0						
YM05				*e*S	**Sn**	**20 44 25.4**	**-1.1**
	baz=2.0						
JKRS	**Kuro-shima**	**3.52**	**42**	P	**Pn**	**20 43 46.5**	**+0.6**
JKRS				S	**Sn**	**20 44 25.6**	**-1.1**
JIJ	**Ishigaki jima**	**3.70**	**42**	P	**Pn**	**20 43 48.5**	**+0.2**
JIJ				S	**Sn**	**20 44 29.6**	**-1.3**
VWUC	**VWUC**	**3.79**	**332**	*e*P	**Pn**	**20 43 49.3**	**-0.3**
	baz=331						
VWUC				*e*S	**Sn**	**20 44 30.4**	**-2.8**
	baz=331						
KNM	**Kinmen**	**3.90**	**316**	*e*P	**Pn**	**20 43 52.1**	**+1.2**
	baz=313						
KNM				*e*S	**Sn**	**20 44 35.1**	**-0.6**
	baz=313						
KNMB	**Chin-men Tao**	**3.96**	**316**	*e*P	**Pn**	**20 43 52.1**	**+0.3**
	baz=314						
KNMB				*e*S	**Sn**	**20 44 34.2**	**-3.0**
	baz=314						
JISG	**Ishigakijimahi**	**3.96**	**42**	P	**Pn**	**20 43 52.1**	**+0.2**
JISG				S	**Sn**	**20 44 36.7**	**-0.6**
PTMZ	**Houxiangcun**	**3.99**	**329**	*e*P	**Pn**	**20 43 52.1**	**-0.1**
	baz=327						
PTMZ				*e*S	**Sn**	**20 44 34.9**	**-3.0**
	baz=327						
PTTC	**Pingtan**	**4.13**	**339**	*e*P	**Pn**	**20 43 54.0**	**-0.1**
	baz=338						
PTTC				*e*S	**Sn**	**20 44 39.0**	**-2.3**
	baz=338						
JTJ	**Tarama**	**4.25**	**45**	P	**Pn**	**20 43 56.8**	**+1.0**
JTJ				S	**Sn**	**20 44 43.2**	**-1.1**
AXDP	**Jialang**	**4.53**	**316**	*e*P	**Pn**	**20 43 59.2**	**-0.4**
	baz=315						
MATB	**Ma-tsu**	**4.69**	**344**	*e*P	**Pn**	**20 44 00.7**	**-1.0**
	baz=342						
MATB				*e*S	**Sn**	**20 44 51.4**	**-3.6**
	baz=342						
MSUT	**Lienchiang**	**4.71**	**343**	*e*S	**Sn**	**20 44 52.2**	**-3.3**
	baz=343						
MHZQ	**Yeshan**	**4.95**	**334**	*e*P	**Pn**	**20 44 05.4**	**+0.2**
	baz=333						
MHZQ				*e*S	**Sn**	**20 44 58.1**	**-3.1**
	baz=333						
LYJJ	**Jianjiangzhen**	**5.12**	**343**	*e*P	**Pn**	**20 44 07.6**	**+0.1**
	baz=342						
LYJJ				*e*S	**Sn**	**20 45 01.8**	**-3.5**
	baz=342						
XPSS	**Dashiqiu**	**5.38**	**348**	*e*P	**Pn**	**20 44 11.3**	**+0.1**
	baz=347						
XPSS				*e*S	**Sn**	**20 45 07.5**	**-4.3**
	baz=347						
MKAR	**Makanchi Array**	**40.33**	**318**	P	**P**	**20 50 24.3**	**+2.9**

```
      0.4nm,0.8s,baz=116,slow=9.4,SNR=2.3
WRA   Warramunga Arr  43.22 162  P      P       20 50 43.1  -2.0
      0.2nm,0.3s,baz=345,slow=9.4,SNR=2.1
KURBB Kurchatov Arra  44.20 322  P      P       20 50 54.9  +2.2
      0.2nm,0.4s,baz=118,slow=7.6,SNR=2.4
ASAR  Alice Springs   46.65 164  P      P       20 51 11.6  -0.7
      0.4nm,0.8s,baz=347,slow=7.8,SNR=7.6
```

NNC ***11*** *20:55:30.6±4.4, 36.°59N×70.°48E, h0^{km}, mb5.1, mpv5.0, Error ellipse: s-maj=46.7km s-min=22.7km az=155.0*

MOS ***11*** *20:55:32.8±1.2, 36.°22N×71.°09E, h105^{km}, mb4.7/24, Error ellipse: s-maj=6.9km s-min=4.3km az=86.4*

NEIC ***11*** *20:55:33.8±2.7, 36.°27N±0.°05×70.°83E±0.°09, h106^{km}±5^{km}, mb4.5/20, Error ellipse: s-maj=11.2km s-min=7.4km az=82.0*

IDC ***11*** *20:55:33.8±0.8, 36.°07N×70.°94E, h104^{km}±6^{km}, mb4.1/38, mb1 4.2/39, mb1mx4.0/64, mbtmp4.5/39, MS4.1/1, Ms1 4.1/1, ms1mx3.0/41, Error ellipse: s-maj=11.8km s-min=8.2km az=17.0*

BJI ***11*** *20:55:34.9±0.0, 36.°32N×71.°07E, h105^{km}, mB4.8/12, mb4.4/29*

ISC 11 20:55:33.1±0.4**, 36.°15N**±0.°04×**70.°90E**±0.°04**, h97**^{km}±4^{km}**, h97**^{km}**:pP-P, n256, σ2.°11**/289**, mb4.4**/83**, 19C-20D, Hindu Kush region**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op     ISC        h  m  s    ISC
KBL   Kabul            2.21 224  PN     Pn      20 56 10.9  +2.5
KBL   Kabul            2.21 224  Pn     Pn      20 56 10.9  +2.5
CEP   Cherat           2.46 160  P      Pn      20 56 15.2  +3.4
CEP                              S      Sn      20 56 45.0  +3.6
NIL   Nilore           3.15 141  PN     Pn      20 56 24.3  +3.4
NIL   Nilore           3.15 141  Pn     Pn      20 56 24.3  +3.4
THW   Thamme Wali      3.42 168  P      Pn      20 56 27.2  +2.8
SARP  Sargodha         4.46 160  P      Pn      20 56 40.0  +1.4
KSH   Kashi            5.24  49  P      Pn      20 56 47.0  -2.2
KSH                              S      Sn      20 57 40.0  -8.4
KSH                              smax   smax
      comp=N,2μm,0.4s
KSH                              smax   smax
      comp=E,1μm,0.4s
DHRM  DHARAMSHALA      5.93 129 eP      Pn      20 56 60.0  +1.3
DHRM                            eS      Sn      20 58 04.3  -1.0
IUG   Iuzhnay          6.03 354 eP      Pn      20 56 58.9  -1.0
      baz=353
IUG   Iuzhnay          6.03 354 ePN     Pn      20 56 58.9  -1.0
AML   Almayashu        6.36  19  P      Pn      20 57 04.6   0.0
      SNR=465
BHK   Bhakra           6.58 134 eP      Pn      20 57 10.8  +3.4
BHK                             eS      Sn      20 58 24.0  +3.0
UCH   Uchtor           6.69  24  P      Pn      20 57 09.1  -0.1
      SNR=62
DZA   Taraz            6.75   3  Pg     Pn      20 57 09.6  +0.1
      490nm,0.4s
DZA                              Lg     Lg      20 58 22.3
      853nm,0.5s
MRKS  Merke            6.83  15  Pg     Pn      20 57 10.5  -0.2
      149nm,0.5s
MRKS                             Lg     Lg      20 58 24.3
      368nm,0.3s
EKS2  Erkin-Say        6.88  18  P      Pn      20 57 11.5  +0.1
      SNR=75
KK31  Karatay Array    6.96 358 ⇓P      Pn      20 57 11.4  -0.9
      72nm,0.3s,baz=182,slow=13,SNR=688
KK31                            ⇓S      Sn      20 58 24.3  -5.6
      449nm,0.6s
KK31  Karatay Array    6.96 358  PN     Pn      20 57 11.5  -0.9
KK31  Karatay Array    6.96 358  Pn     Pn      20 57 11.4  -0.9
KKAR  Karatay Array    6.96 358  PN     Pn      20 57 11.0  -1.4
KKAR  Karatay Array    6.96 358  Pn     Pn      20 57 11.0  -1.4
AAK   Ala-Archa        7.05  22  P      Pn      20 57 14.0  +0.2
      28nm,0.3s,baz=178,slow=6.0,SNR=400
AAK                              S      Sn      20 58 29.6  -3.0
      28nm,0.3s,baz=140,slow=19,SNR=15
AAK   Ala-Archa        7.05  22  P      Pn      20 57 14.1  +0.2
      SNR=110
AAK   Ala-Archa        7.05  22 ⇓P      Pn      20 57 13.9   0.0
      60nm,0.5s
AAK                             ⇑S      Sn      20 58 30.0  -2.5
      171nm,0.8s
AAK   Ala-Archa        7.05  22d iPN    Pn      20 57 13.9   0.0
AAK                              pmax   pmax
      comp=Z,296nm,0.8s
AAK   Ala-Archa        7.05  22  Pn     Pn      20 57 14.0  +0.2
KBK   Karagaybulak     7.22  25  P      Pn      20 57 16.2  +0.1
      SNR=51
SMLA  Simla            7.24 132 eP      Pn      20 57 16.4  +0.2
SMLA                            eS      Sn      20 58 34.6  -2.2
SMLA                             IAML           20 58 37.5
      comp=N,630nm,0.3s
SMLA                             IAML           20 58 38.5
      comp=E,730nm,0.3s
ULHL  Ulahol           7.37  33  P      Pn      20 57 18.3  +0.1
      SNR=18
CHMS  Chumysh          7.46  22  P      Pn      20 57 19.1  -0.2
      SNR=104
USP   Ospenovka        7.63  20  P      Pn      20 57 21.2  -0.4
      SNR=42
TKM2  Tokmak 2         7.68  27  P      Pn      20 57 22.3   0.0
      SNR=58
TKM2  Tokmak 2         7.68  27 ⇓P      Pn      20 57 22.3   0.0
      comp=E,55nm,0.8s
TKM2                            ⇑S      Sn      20 58 47.2  -0.6
      comp=E,146nm,0.8s
SGDS  Sogindy          7.84  20 eP      Pn      20 57 22.9  -1.5
      comp=E,9.2nm,0.4s,baz=20
SGDS                            i S     Sn      20 58 49.0  -2.5
      baz=20
SGDS  Sogindy          7.84  20  Pg     Pn      20 57 23.3  -1.1
      comp=E,20nm,0.6s
SGDS  Sogindy          7.84  20 ePN     Pn      20 57 22.9  -1.5
SGDS                             pmax   pmax
      comp=Z,9.0nm,0.4s
KST   Kastek           7.92  28  Pg     Pn      20 57 26.0  +0.5
      comp=Z,32nm,0.7s
KST                              Lg     Lg      20 58 51.1
      comp=Z,62nm,0.8s
MTBS  Maitube          8.18  30 eP      Pn      20 57 28.2  -0.9
      baz=30
MTBS  Maitube          8.18  30 ePN     Pn      20 57 28.1  -0.9
DDI   Dehra Dun        8.35 132 eP      Pn      20 57 32.9  +1.5
DDI                             eS      Sn      20 58 57.8  -6.2
DDI                              IAML           20 59 05.4
      comp=N,824nm,0.4s
DDI                              IAML           20 59 05.5
      comp=E,547nm,0.3s
AAA   Alma-Ata         8.44  31 eP      Pn      20 57 31.8  -0.9
      baz=32
AAA   Alma-Ata         8.44  31 ePN     Pn      20 57 31.7  -0.9
MDOK  Medeo            8.46  32 ⇓P      Pn      20 57 33.0   0.0
      comp=E,30nm,0.7s
KUU   Kurty            8.79  27 eP      Pn      20 57 35.8  -1.6
      comp=E,8.5nm,0.4s,baz=27
KUU   Kurty            8.79  27 ePN     Pn      20 57 35.7  -1.6
KUU                              pmax   pmax
      comp=Z,9.0nm,0.4s
CHKK  Chushkaly        9.00  29 eP      Pn      20 57 39.2  -1.0
      baz=30
CHKK  Chushkaly        9.00  29 ePN     Pn      20 57 39.1  -1.1
NDI   New Delhi        9.16 143 eP      Pn      20 57 42.0  -0.4
NDI                             eS      Sn      20 59 17.5  -6.2
KPKS  Kokpek           9.45  37 eP      Pn      20 57 45.3  -1.0
      comp=Z,7.3nm,0.5s,baz=37
KPKS  Kokpek           9.45  37 eP      Pn      20 57 45.3  -1.0
KPKS                             pmax   pmax
      comp=Z,7.0nm,0.5s
SHLS  Shalkode         9.62  41 eP      Pn      20 57 50.9  +2.2
      comp=Z,14nm,0.9s,baz=42
SHLS  Shalkode         9.62  41 eP      Pn      20 57 50.9  +2.2
SHLS                             pmax   pmax
      comp=Z,14nm,0.9s
PDGK  Podgornoye       9.76  40 ⇓P      Pn      20 57 49.6  -0.9
      comp=Z,28nm,0.9s
PDGK                            ⇓S      Sn      20 59 37.9  -0.3
      comp=Z,28nm,0.9s
GEYT  Alibeck         10.37 284  P      Pn      20 57 57.3  -1.6
      comp=Z,1.3nm,0.3s,baz=130,slow=9.3,SNR=9.2
GEYT                             S      Sn      20 59 44.9  -8.2
      comp=Z,2.2nm,0.3s,baz=105,slow=20,SNR=2.2
GEYT  Alibeck         10.37 284         Pn      20 57 57.5  -1.3
GYA0B ALIBECK ARRAY   10.37 284 ⇓P      Pn      20 57 57.3  -1.6
GYA0B                           ⇑S      Sn      20 59 45.5  -7.6
GYA0B ALIBECK ARRAY   10.37 284  Pn     Pn      20 57 57.3  -1.6
TDK   Taldyqorghan    10.52  31 eP      Pn      20 57 58.9  -2.0
      comp=Z,25nm,0.9s,baz=31
TDK   Taldyqorghan    10.52  31 eP      Pn      20 57 58.9  -2.0
TDK                              pmax   pmax
      comp=Z,25nm,0.9s
BHUJ  Bhuj            12.89 185 eP      Pn      20 58 30.7  -2.0
BHUJ                            eS      Sn      21 00 45.8  -8.7
BHUJ                             IAML           21 00 53.8
      comp=E,96nm,0.5s
DANN  Dangsing        13.37 122 eP      Pn      20 58 36.7  -2.5
      comp=E,33nm,0.2s
MAKZ  Makanchi        13.49  34 ⇑P      Pn      20 58 38.7  -1.7
      comp=E,24nm,0.8s
MAKZ  Makanchi        13.49  34  P      Pn      20 58 38.8  -1.7
MAKZ  Makanchi        13.49  34  Pn     Pn      20 58 38.8  -1.7
MK31  Makanchi Array  13.63  35 ⇑P      Pn      20 58 40.2  -2.0
      comp=E,6.6nm,0.5s,baz=214,slow=10,SNR=100
MK31  Makanchi Array  13.63  35ceP      Pn      20 58 40.9  -1.3
MK31  Makanchi Array  13.63  35  Pn     Pn      20 58 41.2  -1.1
MKAR  Makanchi Array  13.63  35  P      Pn      20 58 40.5  -1.8
      comp=E,0.3nm,0.3s,baz=221,slow=13,SNR=34
MKAR  Makanchi Array  13.63  35  P      Pn      20 58 40.6  -1.6
MKAR  Makanchi Array  13.63  35         Pn      20 58 40.6  -1.6
BHPL  Bhopal          14.05 154 eP      Pn      20 58 45.4  -2.5
BHPL                            eS      Sn      21 01 13.3  -9.3
BHPL                             IAML           21 01 16.0
      comp=E,75nm,0.4s
BHPL                             IAML           21 01 16.6
      comp=N,58nm,0.6s
DMN   Daman           14.76 121 eP      Pn      20 58 55.4  -1.8
      comp=N,26nm,0.3s
KKN   Kakani          14.77 120 eP      Pn      20 58 54.8  -2.5
      comp=N,28nm,0.4s
PKIN  Phulchoki       14.98 121 eP      Pn      20 58 57.5  -2.5
      comp=N,48nm,0.3s
PKI   Pulchoki        14.99 121 eP      Pn      20 58 57.4  -2.8
      comp=N,20nm,0.2s
GUN   Gumba           15.12 119 eP      Pn      20 58 59.2  -2.6
      comp=N,22nm,0.3s
ZSN   Zaisan          15.34  38 eP      Pn      20 59 02.2  -2.0
      baz=38
ZSN   Zaisan          15.34  38 eP      Pn      20 59 02.2  -2.0
AB31  Akbulak array   15.36 332  P      Pn      20 59 01.8  -2.5
      comp=N,22nm,0.5s,baz=152,slow=12,SNR=992
AB31                             S      Sn      21 01 37.5   -16
      comp=N,1.3nm,0.2s,baz=154,slow=22,SNR=4.2
ABKAR Akbulak array   15.36 332  Pn     Pn      20 59 01.4  -2.9
KURBB Kurchatov Arra  15.48  18  P      Pn      20 59 01.7  -4.2
      comp=N,0.1nm,0.3s,baz=215,slow=13,SNR=18
KURBB                            S      Sn      21 01 51.2  -5.6
      comp=N,0.0nm,0.3s,baz=205,slow=19,SNR=1.8
KURBB Kurchatov Arra  15.48  18 ⇑P      Pn      20 59 02.3  -3.6
      comp=N,14nm,0.5s,baz=210,slow=10
KURK  Kurchatov       15.59  19 ⇑P      Pn      20 59 03.7  -3.5
      comp=N,9.1nm,0.7s
KURK  Kurchatov       15.59  19deP      P       20 59 08.6  -0.9
KURK                             pmax   pmax
      comp=Z,10.0nm,0.7s
RAMN  Ramite          16.21 120 eP      Pn      20 59 13.8  -1.6
      comp=Z,16nm,0.3s
NGP   Nagpur          16.55 152 eP      Pn      20 59 19.0  -0.5
WSAR  Wadi Sarin      16.68 223  P      P       20 59 23.5  +1.7
      comp=Z,0.4nm,0.3s,baz=70,slow=7.9,SNR=7.2
TAPN  Taplejung       16.76 117 eP      Pn      20 59 20.9  -1.3
      comp=Z,43nm,0.3s
ODAN  Odare           16.82 119 eP      Pn      20 59 20.3  -2.6
      comp=Z,32nm,0.4s
BVAR  Borovoye Array  16.88 359  P      Pn      20 59 16.2  -7.1
      comp=Z,1.0nm,0.3s,baz=170,slow=19,SNR=11
BRVK  Borovoye        16.92 359 ⇓P      Pn      20 59 21.9  -1.8
      comp=Z,14nm,0.8s
BRVK  Borovoye        16.92 359  P      Pn      20 59 21.5  -2.2
BRVK                             pmax   pmax
      comp=Z,15nm,0.7s
BRVK  Borovoye        16.92 359         Pn      20 59 21.5  -2.2
BRVK                             IAmb   IAmb    20 59 25.4
      comp=Z,15nm,0.7s
AKTO  Aktyubinsk      17.05 331  P      Pn      20 59 23.9  -1.4
      comp=Z,4.0nm,0.3s,baz=149,slow=14,SNR=64
AKTO                             S      Sn      21 02 19.4   -15
      comp=Z,1.0nm,0.3s,baz=162,slow=20,SNR=2.6
AKTO  Aktyubinsk      17.05 331 ⇑P      Pn      20 59 23.9  -1.4
      comp=Z,82nm,1.6s
AKTO                            ⇓S      Sn      21 02 14.7   -20
      comp=Z,93nm,1.2s
BOK   Bokaro          17.86 129 eP      P       20 59 35.5  +0.6
BOK                             eS      Sn      21 02 39.9   -15
BOK                              IAML           21 02 46.0
      comp=E,35nm,0.7s
BOK                              IAML           21 02 46.1
      comp=N,23nm,0.3s
DGZ   Jazzator, Alta  18.11  36⇑eP      P       20 59 36.6  -0.9
DGZ                              pmax   pmax
      comp=Z,11nm,0.5s
LSA   Lhasa           18.16 105  P      Pn      20 59 41.0  +1.5
LSA                              pmax   pmax
      comp=Z,22nm,1.0s
LSA                              LR     LR
      comp=Z,1μm,14.2s
LSA                              LR     LR
      comp=Z,550nm,12.5s
LSA                              LR     LR
      comp=Z,2μm,13.9s
HYB   Hyderabad       19.85 158 i P     Pn      20 59 59.0   0.0
HYB                             eS      S       21 03 27.0  -7.9
ZAA0  Zalesovo Array  20.27  24 ⇑P      P       21 00 00.2  -0.5
      comp=Z,5.1nm,0.6s,baz=212,slow=9.9
ZAA0  Zalesovo Array  20.27  24  P      P       21 00 00.3  -0.5
ZALV  Zalesovo Beam   20.27  24  P      P       21 00 00.3  -0.4
      comp=Z,38nm,0.5s,baz=214,slow=9.8,SNR=140
ZALV  Zalesovo Beam   20.27  24  P      P       21 00 00.1  -0.6
MIB   Mutribah        20.73 259 eP              21 00 04.7
SHL   Shillong        20.83 115 eP      P       21 00 08.3  +1.0
SHL                              IAmb   IAmb    21 00 11.6
      comp=Z,27nm,0.6s
GNI   Garni           20.93 289  P      P       21 00 08.6  +0.5
      comp=Z,28nm,0.8s,baz=359,slow=10,SNR=9.0
GNI   Garni           20.93 289⇑eP      Pn      21 00 11.8  +0.3
GNI                              pmax   pmax
      comp=Z,32nm,0.9s
RDF   Al-Radifah      20.93 257 eP              21 00 07.0
RST   Umm Al-Ruwaisa  21.12 259 eP              21 00 09.0
ZIRO  ZIRO            21.27 107 eP      P       21 00 13.0  +1.1
SVE   Sverdlovsk      21.81 345 eP      P       21 00 17.8  +0.6
SVE                             eS      S       21 04 13.2  +0.7
SVE                              pmax   pmax
      comp=Z,33nm,1.0s
ZEI   Tsey            21.82 296 eP      P       21 00 21.3  +3.7
ZEI                              pmax   pmax
      comp=Z,7.0nm,0.7s
ARU   Arti            21.94 341  P      P       21 00 19.6  +1.1
      comp=Z,9.6nm,0.5s,baz=158,slow=10.0,SNR=44
ARU                              S      S       21 04 15.7  +0.8
      comp=Z,1.4nm,0.5s,baz=90,slow=20,SNR=7.3
ARU   Arti            21.94 341c iP     P       21 00 19.5  +1.0
ARU                                             21 00 51.0
ARU                              S      S       21 04 15.5  +0.7
ARU                              SS     SnSn    21 04 57.9  +8.5
ARU                              pmax   pmax
      comp=Z,73nm,1.0s
ARU   Arti            21.94 341  P      P       21 00 19.1  +0.5
NCK   Nalchik         22.15 298⇓eP      P       21 00 23.1  +2.1
NCK                              pmax   pmax
      comp=Z,25nm,1.2s
MOKO  MOKOCHONG       22.40 109 eP      P       21 00 24.9  +1.1
MOKO                             IAmb   IAmb    21 00 30.9
      comp=Z,48nm,1.1s
MOKO                            eS      S       21 04 23.2  -0.3
KOHI  KOHIMA          22.41 111 eP      P       21 00 25.2  +1.2
KOHI                             IAmb   IAmb    21 00 31.2
      comp=Z,15nm,0.7s
KBZ   Khabaz          22.69 298  P      P       21 00 26.5   0.0
      comp=Z,3.6nm,0.8s,baz=114,slow=7.9,SNR=9.2
KBZ   Khabaz          22.69 298⇓eP      P       21 00 28.4  +1.9
KBZ                              pmax   pmax
      comp=Z,5.0nm,0.9s
GOF   Gofitskoye      22.86 302⇑eP      P       21 00 30.0  +1.8
KVAR  Kislovodsk Arr  22.88 299  P      P       21 00 30.3  +1.8
      comp=Z,2.4nm,0.7s,baz=262,slow=20,SNR=2.1
KIV   Kislovodsk      22.88 299 eP      P       21 00 30.6  +2.0
KIV                             eS      S       21 04 34.0  +3.2
KIV                              pmax   pmax
      comp=Z,32nm,1.0s
GTA   Gaotai          23.05  73 ⇑P      P       21 00 31.7  +1.4
GTA                              pmax   pmax
      comp=Z,7.0nm,1.2s
BELG  Belogornoye     23.11 322  P      P       21 00 31.2  +0.6
      comp=Z,70nm,1.0s,baz=214,slow=1.0,SNR=22
BELG  Belogornoye     23.11 322deP      P       21 00 31.2  +0.6
BELG                             pmax   pmax
      comp=Z,11nm,0.9s
SAIH  SAIHA           23.51 119 eP      P       21 00 36.0  +1.3
RAYN  Ar Rayn         25.28 247  P      P       21 00 50.3  -0.3
RAYN                             pmax   pmax
      comp=Z,4.0nm,0.7s
RAYN  Ar Rayn         25.28 247  P      P       21 00 50.3  -0.3
VRH   Novokhopyorsk   25.70 315 eP      P       21 00 53.6  -0.4
VRH                              pmax   pmax
      comp=Z,10.0nm,0.7s
KIRV  Kirov           26.52 335  P      P       21 01 02.8  +1.4
      comp=Z,22nm,0.5s,baz=154,slow=1.9,SNR=9.5
KIRV                             pP     pP      21 01 24.3  +0.7
      comp=Z,15nm,0.8s,baz=182,slow=7.7,SNR=2.9
KIRV  Kirov           26.52 335⇓iP      P       21 01 03.0  +1.7
ANN   Anapa           26.73 299 eP      P       21 01 03.4   0.0
ANN                             e*PP    pP      21 01 26.9  +0.9
ANN                             e               21 01 50.8
ANN                             eS      S       21 05 32.7  +0.8
ANN                             e*SS    sS      21 06 14.7  +3.2
ANN                              pmax   pmax
      comp=Z,159nm,1.1s
LPSR  Galich'ya Gora  27.85 316 eP      P       21 01 13.1  -0.2
LPSR                             pmax   pmax
      comp=Z,10.0nm,0.9s
SONM  Songino Array   28.61  55  P      P       21 01 20.7  +0.4
      comp=Z,1.4nm,0.7s,baz=251,slow=9.0,SNR=9.3
ULN   Ulaanbaatar     29.05  55⇓eP      P       21 01 25.4  +1.2
ULN                              pmax   pmax
      comp=Z,8.0nm,2.1s
KMI   Kunming         29.40 103⇓eP      P       21 01 29.0  +1.4
KMI                              pP     pP      21 01 50.1  -0.1
KMI                              sP     sP      21 02 02.7  +0.9
KMI                              S      S       21 06 20.6  +5.9
KMI                              pmax   pmax
      comp=Z,6.0nm,0.7s
KMI                              pmax   pmax
      comp=Z,180nm,4.9s
KMI                              LR     LR
      comp=Z,320nm,21.7s
KMI                              LR     LR
      comp=Z,370nm,14.3s
KMI                              LR     LR
      comp=Z,520nm,30.9s
BRTR  Keskin Array B  29.46 288  P      P       21 01 28.4  +0.5
      comp=Z,1.1nm,0.9s,baz=98,slow=8.9,SNR=4.3
MHMT  Maesarieng      29.83 120  P      P       21 01 33.9  +2.7
      comp=Z,28nm,0.8s
CHTO  Chiang Mai      30.13 117  P      P       21 01 32.9  -1.0
CHTO                             pmax   pmax
      comp=Z,5.0nm,0.5s
CHTO  Chiang Mai      30.13 117  P      P       21 01 32.9  -1.0
CHTO                             IAmb   IAmb    21 01 36.7
      comp=Z,4.8nm,0.5s
OBN   Obninsk         30.15 320  P      P       21 01 35.1  +1.5
      comp=Z,2.6nm,0.4s,baz=166,slow=18,SNR=4.4
OBN   Obninsk         30.15 320 eP      P       21 01 33.8  +0.1
OBN                             i               21 02 38.7
OBN                              pmax   pmax
      comp=Z,13nm,0.9s
CM32  Chiang Mai Arr  30.16 118  P      P       21 01 36.0  +1.8
CM13  Chiang Mai Arr  30.36 118  P      P       21 01 38.5  +2.5
      comp=Z,6.2nm,0.8s
CMAR  Chiang Mai Arr  30.36 118  P      P       21 01 37.0  +1.1
      comp=Z,4.4nm,0.8s,baz=296,slow=8.5,SNR=24
CMAR  Chiang Mai Arr  30.36 118  P      P       21 01 35.3  -0.6
CMAR  Chiang Mai Arr  30.36 118  P      P       21 01 35.3  -0.6
CM02  Chiang Mai Arr  30.38 118  P      P       21 01 38.0  +1.9
      comp=Z,7.1nm,0.9s
CM05  Chiang Mai Arr  30.40 118  P      P       21 01 38.5  +2.2
      comp=Z,6.6nm,1.0s
CM09  Chiang Mai Arr  30.40 118  P      P       21 01 39.0  +2.7
      comp=Z,79nmcomp=Z,7.9nm,0.8s
CM04  Chiang Mai Arr  30.42 118  P      P       21 01 39.0  +2.5
      comp=Z,69nmcomp=Z,7.7nm,0.7s
NANT  Nan             31.41 115  P      P       21 01 53.8  +8.7
SUKH  Sukhothai       31.49 119  P      P       21 01 48.3  +2.4
      comp=Z,17nm,0.8s
KLMR  Klimovskoe      31.75 331 eP      P       21 01 46.4  -1.3
KLMR                             pmax   pmax
      comp=Z,18nm,1.3s
KLMR  Klimovskoe      31.75 331 eP      P       21 01 46.4  -1.3
KLMR                             AMP            21 01 49.8
      comp=Z,18nm,1.3s
GYA   Guiyang         31.90  97 eP      P       21 01 51.3  +1.8
GYA                              pmax   pmax
      comp=Z,8.0nm,1.1s
UTTA  Uttaradit       31.98 117  P      P       21 01 52.3  +2.1
      comp=Z,19nm,0.7s
UTHA  Uthaitani       32.67 121  P      P       21 01 58.9  +2.7
      comp=Z,24nm,0.7s
AKASG Malin Array Be  33.10 309  P      P       21 02 00.3  +0.7
      comp=Z,3.5nm,0.5s,baz=81,slow=7.1,SNR=26
AKASG Malin Array Be  33.10 309 eP      P       21 02 00.8  +1.2
AKASG                            pmax   pmax
      comp=Z,5.0nm,0.5s
AKASG Malin Array Be  33.10 309  P      P       21 02 00.1  +0.5
AKBB  Malin Array Si  33.10 309⇑eP      P       21 02 01.2  +1.6
AKBB                             pmax   pmax
      comp=Z,5.0nm,0.6s
SRDT  SRDT            33.30 123  P      P       21 02 20.6   +19
NONG  Nongkai         33.67 114  P      P       21 02 07.1  +2.2
      comp=Z,8μmcomp=Z,32nm,1.4s
CHAI  Chaiyaphum      34.22 118  P      P       21 02 11.7  +2.0
TMCR  Tamitsa         34.33 335 eP      P       21 02 10.7  +0.6
TMCR                             pmax   pmax
      comp=Z,14nm,0.6s
MLR   Muntele Rosu    34.88 300  P      P       21 02 17.5  +2.2
      comp=Z,13nm,0.9s,baz=176,slow=4.1,SNR=7.0
BURAR Bucovina Array  35.41 303  P      P       21 02 19.6  -0.2
NACGM Naroch          35.41 316 i P     P       21 02 19.4  -0.1
NACGM                           i P     P       21 02 19.4  -0.1
NACGM                           i P     P       21 02 19.4  -0.1
NACGM                           i sP    sP      21 02 54.1  +0.1
NACGM                           i PP    PP      21 03 47.2  +5.7
NACGM                           i S     S       21 08 01.9   +15
NACGM                           i sS    sS      21 08 42.5   +15
KOLS  Kolonicke sedl  37.41 305 eP      P       21 02 39.0  +2.4
KOLS                             pmax   pmax
      comp=Z,5.0nm,1.0s
KOLS  Kolonicke sedl  37.41 305 eP      P       21 02 39.0  +2.4
FINES FINESS Array B  37.73 326  P      P       21 02 39.8  +0.7
      comp=Z,6.6nm,0.7s,baz=117,slow=9.0,SNR=19
FINES FINESS Array B  37.73 326 eP      P       21 02 40.6  +1.5
FINES                            pmax   pmax
      comp=Z,7.0nm,0.7s
FINES FINESS Array B  37.73 326  P      P       21 02 40.0  +0.9
LANS  Liptovska Anna  39.26 306 eP      P       21 02 55.0  +2.8
LANS  Liptovska Anna  39.26 306 eP      P       21 02 55.0  +2.8
VRAC  Vranov          41.14 306  P      P       21 03 10.0  +2.3
      comp=Z,3.9nm,0.7s,baz=102,slow=9.7,SNR=6.8
VRAC  Vranov          41.14 306  P      P       21 03 10.0  +2.3
ARCES ARCESS Array B  41.44 338  P      P       21 03 11.1  +1.3
      comp=Z,7.8nm,0.6s,baz=112,slow=7.8,SNR=27
ARCES                            pP     pP      21 03 34.4  +0.9
      comp=Z,6.6nm,0.8s,baz=113,slow=9.3,SNR=3.8
ARCES ARCESS Array B  41.44 338 eP      P       21 03 11.4  +1.6
ARCES                            pmax   pmax
      comp=Z,8.0nm,0.6s
ARCES ARCESS Array B  41.44 338  P      P       21 03 11.1  +1.3
ARCES                            IAmb   IAmb    21 03 12.8
      comp=Z,15nm,1.1s
CONA  Conrad Observa  41.71 304 eP      P       21 03 14.4  +2.0
      comp=Z,4.3nm,0.8s,SNR=4.8
PSI   Prapat          42.09 136  P      P       21 03 15.6  -0.3
      comp=Z,3.1nm,0.4s,baz=359,slow=6.0,SNR=7.3
SOKA  Soboth          42.39 302 eP      P       21 03 20.2  +2.3
      comp=Z,4.2nm,0.7s
GSI   Gunungsitoli    42.58 138  P      P       21 03 21.4  +1.7
BRG   Berggiesshubel  42.78 309 i P     P       21 03 23.2  +2.3
BRG                              Amp            21 03 24.4
      comp=Z,9.4nm,0.8s
BRG   Berggiesshubel  42.78 309 i P     P       21 03 23.2  +2.3
BRG                              pmax   pmax
      comp=Z,9.0nm,0.8s
BRG   Berggiesshubel  42.78 309 i P     P       21 03 23.2  +2.3
BRG                              Amp            21 03 24.4
      comp=Z,9.4nm,0.8s
MOA   Molln           42.78 304 eP      P       21 03 23.1  +2.1
      comp=Z,4.3nm,1.0s
GERES GERESS Array B  43.07 306  P      P       21 03 25.5  +2.1
      comp=Z,0.4nm,0.3s,baz=111,slow=5.4,SNR=3.0
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HFS	**Hagfors**	**43.29**	**322**	P	**P**	**21 03 24.6**	**-0.3**
	comp=Z,5.9nm,0.6s,baz=98,slow=9.1,SNR=21						
HFS				pP	**pP**	**21 03 50.1**	**+1.6**
	comp=Z,6.6nm,0.7s,baz=108,slow=9.5,SNR=3.0						
YAK	**Yakutsk**	**44.30**	**35**	P	**P**	**21 03 31.9**	**-1.1**
	comp=Z,3.0nm,0.4s,baz=223,slow=0.8,SNR=7.4						
YAK	**Yakutsk**	**44.30**	**35**	⇑*e*P	**P**	**21 03 31.9**	**-1.1**
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
NB2	**NORSAR Subarra**	**44.61**	**323**	P	**P**	**21 03 35.3**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.61**	**323**	P	**P**	**21 03 35.4**	**-0.2**
	comp=Z,4.6nm,0.7s,baz=96,slow=7.9,SNR=19						
NOA				pP	**pP**	**21 03 59.6**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=96,slow=8.1,SNR=3.7						
WATA	**Walderalm**	**44.65**	**304**	*i* P	**P**	**21 03 37.0**	**+0.9**
	comp=Z,2.7nm,0.7s						
SQTA	**Sankt Quirin**	**44.91**	**304**	*e*P	**P**	**21 03 38.4**	**+0.2**
	comp=Z,2.4nm,0.7s						
MOTA	**Moosalm**	**44.97**	**304**	*e*P	**P**	**21 03 38.6**	**-0.1**
	comp=Z,3.9nm,0.8s						
KSRS	**Korea Array**	**45.08**	**71**	P	**P**	**21 03 39.8**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=271,slow=7.1,SNR=17						
FETA	**Feichten**	**45.27**	**303**	*e*P	**P**	**21 03 42.4**	**+1.3**
	comp=Z,4.8nm,1.0s						
KLR	**Kul'dur**	**45.42**	**53**	P	**P**	**21 03 42.6**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=258,slow=2.3,SNR=5.4						
KLR	**Kul'dur**	**45.42**	**53**	⇑*e*P	**P**	**21 03 42.4**	**+0.4**
KLR				pmax	pmax		
	comp=Z,15nm,1.8s						
DAVA	**Damuels**	**45.80**	**304**	*e*P	**P**	**21 03 46.1**	**+0.9**
	comp=Z,8.0nm,0.8s						
DAVOX	**Davos/Dischmat**	**45.88**	**303**	P	**P**	**21 03 46.3**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=92,slow=9.6,SNR=7.1						
TIXI	**Tiksi**	**46.13**	**22**	*de*P	**P**	**21 03 47.4**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,21nm,0.6s						
TIXI	**Tiksi**	**46.13**	**22**	P	**P**	**21 03 46.8**	**-0.4**
TIXI				IAmb	IAmb	21 03 49.3	
	comp=Z,6.9nm,0.6s						
SPITS	**Spitsbergen Ar**	**47.82**	**347**	P	**P**	**21 04 01.7**	**+1.3**
	comp=Z,7.2nm,0.8s,baz=115,slow=9.7,SNR=9.1						
JNU	**Nakatsue**	**48.76**	**75**	P	**P**	**21 04 07.7**	**-0.6**
	comp=Z,6.7nm,0.8s,baz=245,slow=16						
KEST	**Kesra**	**49.07**	**289**	P	**P**	**21 04 12.1**	**+1.4**
	comp=Z,2.6nm,0.5s,baz=82,slow=5.0,SNR=5.4						
MJAR	**Matsushiro Arr**	**53.16**	**68**	P	**P**	**21 04 41.0**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=291,slow=9.9,SNR=6.0						
MJAR	**Matsushiro Arr**	**53.16**	**68**	P	**P**	**21 04 41.0**	**-0.2**
MJA0	**Matsu Arr-Jizo**	**53.19**	**68**	*e*P	**P**	**21 04 40.7**	**-0.7**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SEY	**Seymchan**	**54.76**	**34**	P	**P**	**21 04 52.9**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=312,slow=10,SNR=5.9						
SEY	**Seymchan**	**54.76**	**34**	⇑*e*P	**P**	**21 04 52.3**	**0.0**
LEM	**Lembang**	**54.91**	**133**	LR	LR	21 33 06.8	
	comp=Z,153nm,18.2s,baz=302,slow=41						
DAG	**Danmarks Havn**	**55.05**	**344**	*i* P	**P**	**21 04 54.7**	**+0.5**
DAG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DAG	**Danmarks Havn**	**55.05**	**344**	*i* P	**P**	**21 04 54.7**	**+0.5**
	comp=Z,7.5nm,0.6s						
DAG	**Danmarks Havn**	**55.05**	**344**	*i* P	**P**	**21 04 54.8**	**+0.5**
DAG				IAmb	IAmb	21 04 57.1	
	comp=Z,7.5nm,0.6s						
ESDC	**Sonseca Array**	**57.55**	**298**	P	**P**	**21 05 12.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=54,slow=7.9,SNR=9.6						
SUMG	**Summit**	**61.37**	**341**	P	**P**	**21 05 39.8**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,11nm,0.7s						
SUMG	**Summit**	**61.37**	**341**	P	**P**	**21 05 39.8**	**+1.0**
SUMG	**Summit**	**61.37**	**341**	*i* P	**P**	**21 05 40.0**	**+1.2**
	comp=Z,26nm,0.7s						
SUMG	**Summit**	**61.37**	**341**	*i* P	**P**	**21 05 40.0**	**+1.2**
SUMG				IAmb	IAmb	21 05 42.1	
	comp=Z,26nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.63**	**269**	P	**P**	**21 06 05.3**	**-1.9**
	comp=Z,3.5nm,0.5s,baz=46,slow=5.5,SNR=30						
TORD				pP	**pP**	**21 06 33.3**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=48,slow=5.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**65.63**	**269**	P	**P**	**21 06 05.1**	**-2.1**
TORD				IAmb	IAmb	21 06 09.4	
	comp=Z,4.4nm,0.7s						
KOWA	**Kowa**	**69.50**	**273**	P	**P**	**21 06 29.2**	**-2.4**
COLD	**Coldfoot**	**72.33**	**16**	P	**P**	**21 06 47.9**	**0.0**
IMAR	**Indian Mountai**	**72.53**	**18**	P	**P**	**21 06 48.7**	**-0.5**
BMAR	**Burnt Mountain**	**73.30**	**14**	P	**P**	**21 06 52.5**	**-1.2**
INK	**Inuvik**	**74.27**	**9**	P	**P**	**21 06 59.2**	**0.0**
	comp=Z,6.6nm,0.6s,baz=350,slow=6.7,SNR=7.6						
INK	**Inuvik**	**74.27**	**9**	P	**P**	**21 06 58.1**	**-1.1**
INK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
INK	**Inuvik**	**74.27**	**9**	P	**P**	**21 06 58.1**	**-1.1**
INK				IAmb	IAmb	21 07 02.1	
	comp=Z,7.3nm,0.7s						
LBTB	**Lobatse**	**74.36**	**222**	P	**P**	**21 06 59.6**	**-0.9**
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LBTB	**Lobatse**	**74.36**	**222**	P	**P**	**21 06 59.6**	**-0.9**
LBTB				IAmb	IAmb	21 07 02.8	
	comp=Z,9.5nm,1.1s						
DBIC	**Dimbokro**	**74.60**	**267**	P	**P**	**21 07 00.6**	**-1.4**
	comp=Z,3.3nm,0.6s,baz=37,slow=4.4,SNR=7.3						
KIC	**Kosan Boka**	**74.68**	**267**	*e*P	**P**	**21 07 01.0**	**-1.5**
	comp=Z,12nm,0.7s						
TIC	**Toumodi**	**74.74**	**267**	*e*P	**P**	**21 07 01.3**	**-1.6**
COLA	**College**	**74.84**	**16**	⇓*e*P	**P**	**21 07 02.8**	**+0.2**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LIC	**Lamto**	**74.99**	**267**	*e*P	**P**	**21 07 02.6**	**-1.7**
	comp=Z,14nm,0.6s						
IL31		**75.14**	**16**	P	**P**	**21 07 02.2**	**-2.1**
IL31				IAmb	IAmb	21 07 06.2	
	comp=Z,9.2nm,1.4s						
ILAR	**Eielson Array**	**75.14**	**16**	P	**P**	**21 07 03.6**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=311,slow=4.3,SNR=22						
ILAR				PP	**PP**	**21 09 54.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=312,slow=7.2,SNR=6.2						
ILAR	**Eielson Array**	**75.14**	**16**	P	**P**	**21 07 03.1**	**-1.3**
ILAR	**Eielson Array**	**75.14**	**16**	P	**P**	**21 07 03.1**	**-1.3**
K27K	**Chicken**	**76.80**	**14**	P	**P**	**21 07 13.7**	**-0.2**
PAX	**Paxson**	**77.02**	**16**	P	**P**	**21 07 14.8**	**-0.4**
PAX				pmax	pmax		
	comp=Z,13nm,1.5s						
PAX	**Paxson**	**77.02**	**16**	P	**P**	**21 07 14.8**	**-0.4**
PAX				IAmb	IAmb	21 07 16.3	
	comp=Z,13nm,1.5s						
BOSA	**Boshof**	**77.42**	**220**	P	**P**	**21 07 18.1**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=28,slow=3.5,SNR=10						
BOSA	**Boshof**	**77.42**	**220**	P	**P**	**21 07 17.7**	**-0.2**
BOSA				IAmb	IAmb	21 07 19.1	
	comp=Z,11nm,1.0s						
BCAR	**Beaver Creek A**	**77.73**	**15**	P	**P**	**21 07 19.5**	**+0.4**
YKA	**Yellowknife Ar**	**81.60**	**3**	P	**P**	**21 07 39.6**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=1.1,slow=5.0,SNR=53						
WRA	**Warramunga Arr**	**81.88**	**122**	P	**P**	**21 07 41.1**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=324,slow=4.9,SNR=29						
AS31	**Alice Springs**	**84.12**	**125**	P	**P**	**21 07 51.9**	**-1.7**
ASAR	**Alice Springs**	**84.12**	**125**	P	**P**	**21 07 53.0**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=310,slow=4.8,SNR=34						
ASAR	**Alice Springs**	**84.12**	**125**	P	**P**	**21 07 52.1**	**-1.5**
ASAR	**Alice Springs**	**84.12**	**125**	P	**P**	**21 07 52.1**	**-1.5**
QSPA	**South Pole Qui**	**125.94**	**180**	PKP	**PKPdf**	**21 14 21.7**	**-1.2**
	comp=Z,1.7nm,0.2s,baz=342,slow=2.5,SNR=3.8						
PLCA	**Paso Flores**	**149.63**	**249**	PKPbc	**PKPbc**	**21 15 10.8**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=131,slow=3.3,SNR=5.2						

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*IDC **11** 21:04:09.8±0.9, 53.°72N×108.°40E, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.5/82, mbtmp3.6/12, ML3.0/5, Error ellipse: s-maj=21.2km s-min=10.6km az=142.0*

*MOS **11** 21:04:10.8±2.2, 53.°63N×108.°38E, h11km, mb4.2/2, Error ellipse: s-maj=10.1km s-min=6.7km az=55.0*

MOS Felt (III) at Onguren.

*BYKL **11** 21:04:12.5±0.1, 53.°60N×108.°25E, h21km±2km, FELT I=III MSK at Onguren*

ISC 11 21:04:14.0±0.9**, 53.°58N**±0.°02×**108.°26E**±0.°02**, h26**km±8km**,**
n74, σ2.s01/152**, mb3.8**/8**, 11C-15D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGRR	**Ongureny**	**0.40**	**279**	⇑*i*Pg	**Pb**	**21 04 21.7**	**-0.9**
OGRR				Pmax		21 04 21.9	
	1µm,0.2s						
OGRR				*e*Sg	**Sb**	**21 04 27.3**	**-1.2**
OGRR				Smax		21 04 27.9	
	9µm,0.3s						
OGRR				*e*		21 04 29.7	
OGRR	**Ongureny**	**0.40**	**279**	⇑*i*PG	**Pb**	**21 04 21.8**	**-0.9**
OGRR				*e*		21 04 27.3	
OGRR				pmax	pmax		
	comp=Z,2µm,0.5s						
OGRR				smax	smax		
	comp=N,11µm,1.0s						
MXMB	**Maximikha**	**0.43**	**137**	⇑*i*Pg	**Pb**	**21 04 21.7**	**-1.5**
MXMB				*e*Sg	**Sb**	**21 04 28.1**	**-1.3**
SYVR	**Suvo**	**1.04**	**85**	⇑*i*Pg	**Pb**	**21 04 31.7**	**-1.7**
SYVR				Pmax		21 04 31.8	
	comp=N,1µm,0.4s						
SYVR				*e*Sg	**Sn**	**21 04 45.5**	**-1.2**
SYVR				*e*Sb	**Sb**	**21 04 47.1**	**+0.4**
SYVR				max		21 04 48.0	
	comp=N,5µm,0.4s						
SYVR	**Suvo**	**1.04**	**85**	⇑*i*PG	**Pb**	**21 04 31.6**	**-1.8**
SYVR				*e*		21 04 45.4	
SYVR				pmax	pmax		
	comp=Z,1µm,0.4s						
SYVR				smax	smax		
	comp=E,5µm,0.4s						
ZRHB	**Zarechye**	**1.23**	**213**	⇓*i*Pg	**Pb**	**21 04 35.5**	**-1.0**
ZRHB				*e*Pb	**Pn**	**21 04 36.6**	**+1.1**
ZRHB				max		21 04 42.0	
	comp=E,980nm,0.6s						
ZRHB				*e*Sg	**Sb**	**21 04 52.1**	**+0.2**
ZRHB				Smax		21 04 57.2	
	comp=E,5µm,0.6s						
TRG	**Tyrgan**	**1.41**	**235**	⇑*i*Pg	**Pn**	**21 04 37.5**	**-0.6**
TRG				Pmax		21 04 42.7	
	comp=E,307nm,0.3s						
TRG				*e*Sg	**Sb**	**21 04 57.0**	**-0.3**
TRG				Smax		21 04 59.4	
	comp=E,3µm,0.3s						
TRG	**Tyrgan**	**1.41**	**235**	*e*PG	**Pn**	**21 04 37.5**	**-0.6**
TRG				*e*		21 04 57.0	
TRG				pmax	pmax		
	comp=Z,307nm,0.3s						
TRG				smax	smax		
	comp=N,3µm,0.2s						
FFNB	**Fofonovo**	**1.78**	**211**	*e*Pn	**Pn**	**21 04 43.1**	**0.0**
FFNB				*e*Pg	**Pb**	**21 04 45.5**	**-0.5**
FFNB				*e*		21 04 49.7	
FFNB				*e*Sg	**Sb**	**21 05 08.3**	**+0.4**
KAB	**Kabansk**	**1.82**	**213**	*e*Pg	**Pb**	**21 04 45.7**	**-0.9**
KAB				*e*		21 04 50.6	
KAB				max		21 04 51.8	
	comp=N,543nm,0.6s						
KAB				*e*Sg	**Sb**	**21 05 10.3**	**+1.4**
KAB				Smax		21 05 23.6	
	comp=N,2µm,0.7s						
STDB	**Stepnoy Dvoret**	**1.82**	**220**	⇓*i*Pn	**Pb**	**21 04 44.1**	**-2.5**
STDB				*e*Pg	**Pn**	**21 04 45.9**	**+2.3**
STDB				*e*		21 04 51.0	
STDB				*e*Sg	**Sb**	**21 05 09.0**	**0.0**
STDB				*e*		21 05 12.6	
HRMR	**Khuramsha**	**2.11**	**203**	⇓*i*Pn	**Pn**	**21 04 47.9**	**+0.2**
HRMR				*e*Pg	**Pb**	**21 04 51.0**	**-0.6**
HRMR				*e*		21 04 57.7	
HRMR				max		21 05 01.0	
	comp=N,734nm,0.4s						
HRMR				*e*Sn	**Sn**	**21 05 14.2**	**+1.2**
HRMR				*e*Sg	**Sb**	**21 05 18.5**	**+1.1**
HRMR				Smax		21 05 18.9	
	comp=N,4µm,0.5s						
YLYR	**Ulyunkhan**	**2.14**	**52**	⇓*i*Pn	**Pn**	**21 04 48.0**	**-0.1**
YLYR				*e*Pg	**Pb**	**21 04 50.7**	**-1.5**
YLYR				Pmax		21 04 56.1	
	comp=N,178nm,0.6s						
YLYR				*e*Sn	**Sn**	**21 05 13.3**	**-0.5**
YLYR				*e*Sg	**Sb**	**21 05 18.7**	**+0.4**
YLYR				Smax		21 05 19.9	
	comp=N,1µm,0.3s						
YLYR	**Ulyunkhan**	**2.14**	**52**	⇓*i*PN	**Pn**	**21 04 48.0**	**-0.1**
YLYR				*e*		21 04 50.4	
YLYR				*e*		21 05 18.4	
YLYR				pmax	pmax		
	comp=Z,154nm,0.4s						
YLYR				smax	smax		
	comp=N,1µm,0.3s						
BGT	**Bolshoye Golou**	**2.31**	**229**	*e*Pn	**Pn**	**21 04 50.5**	**+0.1**
BGT				*e*Pg	**Pb**	**21 04 54.0**	**-1.0**
BGT				Pmax		21 05 03.1	
	comp=N,155nm,0.6s						
BGT				*e*Sn	**Sn**	**21 05 17.3**	**-0.7**
BGT				*e*Sg	**Sb**	**21 05 24.1**	**+0.9**
BGT				Smax		21 05 29.1	
	comp=N,856nm,0.8s						
NIZ	**Nizh Angarsk**	**2.32**	**18**	⇓*i*Pn	**Pn**	**21 04 50.7**	**+0.2**
NIZ				*e*Pg	**Pb**	**21 04 54.0**	**-1.2**
NIZ				Pmax		21 05 02.7	
	comp=N,161nm,0.3s						
NIZ				*e*Sn	**Sn**	**21 05 18.6**	**+0.4**
NIZ				*e*Sg	**Sb**	**21 05 23.1**	**-0.3**
NIZ				Smax		21 05 28.8	
	comp=N,1µm,0.3s						
NIZ	**Nizh Angarsk**	**2.32**	**18**	*e*PN	**Pb**	**21 04 53.0**	**-2.2**
NIZ				*e*		21 05 23.1	
NIZ				pmax	pmax		
	comp=Z,160nm,0.3s						
NIZ				smax	smax		
	comp=N,1µm,0.5s						
LSTR	**Listvyanka**	**2.70**	**232**	⇓*i*Pn	**Pn**	**21 04 55.9**	**+0.2**
LSTR				*e*Pg	**Pb**	**21 05 01.1**	**-0.5**
LSTR				*e*		21 05 02.2	
LSTR				max		21 05 02.6	
	comp=N,61nm,0.5s						
LSTR				*e*Sn	**Sn**	**21 05 28.2**	**+0.7**
LSTR				*e*Sg	**Sb**	**21 05 36.4**	**+2.2**
LSTR				Smax		21 05 45.2	
	comp=N,566nm,0.7s						
IRK	**Irkutsk**	**2.76**	**243**	*e*Pn	**Pn**	**21 04 56.7**	**+0.2**
IRK				*e*Pg	**Pb**	**21 05 01.5**	**-1.1**
IRK				Pmax		21 05 18.4	
	comp=N,272nm,0.2s						
IRK				*e*Sn	**Sn**	**21 05 28.7**	**-0.3**
IRK				*e*Sg	**Sb**	**21 05 36.4**	**+0.4**
IRK				*e*		21 05 39.9	
IRK				max		21 05 44.7	
	comp=N,3µm,0.8s						
IRK	**Irkutsk**	**2.76**	**243**	*e*PN	**Pb**	**21 05 02.6**	**0.0**
IRK				*e*		21 05 37.3	
IRK				pmax	pmax		
	comp=Z,182nm,0.3s						
IRK				smax	smax		
	comp=E,3µm,0.8s						
KMO	**Kumora**	**2.87**	**35**	⇓*i*Pn	**Pn**	**21 04 58.2**	**+0.1**
KMO				*e*Pg	**Pb**	**21 05 03.4**	**-1.2**
KMO				Pmax		21 05 13.1	
	comp=E,271nm,0.5s						
KMO				*e*Sn	**Sn**	**21 05 31.6**	**-0.2**
KMO				*e*Sg	**Sb**	**21 05 40.7**	**+1.4**
KMO				Smax		21 05 45.5	
	comp=E,734nm,0.8s						
KMO	**Kumora**	**2.87**	**35**	⇓*i*PN	**Pn**	**21 04 58.0**	**-0.1**
KMO				*e*S	**Sn**	**21 05 28.9**	**-2.9**
KMO				*e*S	**Sb**	**21 05 41.3**	**+2.0**
KMO				smax	smax		
	comp=E,735nm,0.8s						
IVK	**Ivanovka**	**2.94**	**234**	*e*Pn	**Pn**	**21 04 59.4**	**+0.4**
IVK				*e*Pg	**Pb**	**21 05 05.1**	**-0.6**
IVK				Pmax		21 05 11.6	
	comp=E,66nm,0.6s						
IVK				*e*Sn	**Sn**	**21 05 34.1**	**+0.6**
IVK				*e*Sg	**Sb**	**21 05 42.3**	**+1.1**
IVK				Smax		21 05 49.7	
	comp=E,1µm,1.0s						
YOA	**Uoyan**	**3.25**	**37**	*e*Pn	**Pn**	**21 05 03.9**	**+0.6**
YOA				*e*Pg	**Pb**	**21 05 10.9**	**-0.1**
YOA				Pmax		21 05 36.5	
	comp=E,429nm,0.5s						
YOA				*e*Sn	**Sn**	**21 05 41.2**	**+0.1**
YOA				*e*Sg	**Sb**	**21 05 52.2**	**+2.1**
YOA				*e*SgSg		21 05 57.5	
YOA				max		21 06 22.0	
	comp=E,2µm,1.4s						
TLY	**Talaya**	**3.39**	**238**	Pn	**Pn**	**21 05 05.3**	**-0.1**
	comp=E,0.1nm,0.3s,baz=43,slow=11,SNR=46						
TLY				Pg	**Pb**	**21 05 13.9**	**+0.4**
	comp=E,0.3nm,0.3s,baz=34,slow=9.5,SNR=38						
TLY				Sn	**Sn**	**21 05 45.9**	**+1.2**
	comp=E,0.1nm,0.3s,baz=78,slow=22,SNR=7.1						
TLY				Lg	Lg	21 05 52.9	
	comp=E,0.2nm,0.3s,baz=135,slow=19,SNR=8.5						
TLY	**Talaya**	**3.39**	**238**	*e*Pn	**Pn**	**21 05 05.2**	**-0.1**
TLY				*e*		21 05 11.2	
TLY				*e*Pg	**Pb**	**21 05 13.7**	**+0.3**
TLY				Pmax		21 05 27.6	
	comp=E,73nm,0.6s						
TLY				*e*Sn	**Sn**	**21 05 44.3**	**-0.4**
TLY				*e*		21 05 54.8	
TLY				*e*Sg	**Sb**	**21 05 57.4**	**+3.2**
TLY				*e*SgSg		21 06 00.5	
TLY				max		21 06 04.0	
	comp=E,683nm,0.8s						
TLY	**Talaya**	**3.39**	**238**	*d i*PN	**Pn**	**21 05 05.2**	**-0.1**
TLY				*e*		21 05 13.7	
TLY				*e*		21 05 57.4	
TLY				pmax	pmax		
	comp=Z,169nm,0.4s						
TLY				smax	smax		
	comp=E,1.0nm,0.4s						
CIT	**Chita**	**3.57**	**114**	*e*Pn	**Pn**	**21 05 06.8**	**-1.0**
CIT				*e*Pg	**Pb**	**21 05 16.9**	**+0.4**
CIT				Pmax		21 05 24.1	
	comp=E,291nm,0.4s						
CIT				*e*Sn	**Sn**	**21 05 48.0**	**-1.2**
CIT				*e*Sg	**Sb**	**21 06 03.7**	**+4.2**
CIT				Smax		21 06 11.6	
	comp=E,1µm,0.2s						
CIT	**Chita**	**3.57**	**114**	*e*PN	**Pn**	**21 05 08.4**	**+0.6**
CIT				*e*		21 05 16.9	
CIT				*e*		21 06 03.8	
CIT				pmax	pmax		
	comp=Z,214nm,1.1s						
CIT				smax	smax		
	comp=E,783nm,1.7s						
UKT	**Uakit**	**3.67**	**56**	*e*Pn	**Pn**	**21 05 09.0**	**-0.1**
UKT				*e*Pg	**Pb**	**21 05 18.1**	**0.0**
UKT				Pmax		21 05 45.3	
	comp=E,96nm,0.7s						
UKT				*e*Sn	**Sn**	**21 05 50.5**	**-1.0**
UKT				*e*Sg	**Sb**	**21 06 04.8**	**+2.7**
UKT				*e*		21 06 11.6	
UKT				max		21 06 14.9	
	comp=E,333nm,0.7s						
UKT	**Uakit**	**3.67**	**56**	*e*PN	**Pn**	**21 05 09.4**	**+0.3**
UKT				*e*		21 05 18.1	
UKT				*e*		21 06 04.8	
UKT				pmax	pmax		
	comp=Z,61nm,0.5s						
UKT				smax	smax		
	comp=N,145nm,0.5s						
ARS	**Arshan**	**3.91**	**247**	*e*Pn	**Pn**	**21 05 12.6**	**+0.1**
ARS				*e*Pg	**Pb**	**21 05 22.3**	**0.0**
ARS				Pmax		21 05 34.1	
	comp=N,125nm,0.4s						
ARS				*e*Sn	**Sn**	**21 05 57.2**	**-0.4**
ARS				*e*		21 06 09.2	
ARS				*e*Sg	**Sb**	**21 06 13.3**	**+4.1**
ARS				Smax		21 06 19.0	
	comp=N,2µm,0.7s						
ARS	**Arshan**	**3.91**	**247**	*e*PN	**Pn**	**21 05 12.6**	**+0.1**
ARS				*e*		21 05 22.3	
ARS				*e*		21 06 13.3	
ARS				pmax	pmax		
	comp=Z,125nm,0.4s						
ARS				smax	smax		
	comp=E,2µm,0.8s						
SVKR	**Severomuysk**	**3.98**	**48**	*e*Pn	**Pn**	**21 05 13.9**	**+0.5**
SVKR				*e*Pg	**Pb**	**21 05 24.7**	**+1.2**
SVKR				*e*		21 05 31.6	
SVKR				max		21 05 32.2	
	comp=E,160nm,0.6s						
SVKR				*e*Sn	**Sn**	**21 05 58.4**	**-0.8**
SVKR				*e*Sg	**Sb**	**21 06 16.2**	**+5.1**
SVKR				Smax		21 06 20.1	
	comp=E,1µm,0.6s						
ZAK	**Zakamensk**	**4.44**	**226**	*e*Pn	**Pn**	**21 05 20.1**	**+0.4**
ZAK				*e*Pg	**Pb**	**21 05 33.1**	**+1.8**
ZAK				Pmax		21 05 56.8	
	comp=E,33nm,0.6s						
ZAK				*e*Sn	**Sn**	**21 06 09.7**	**-0.9**
ZAK				*e*Sg	**Sb**	**21 06 31.0**	**+6.6**
ZAK				Smax		21 06 38.8	
	comp=E,168nm,0.6s						
ZAK	**Zakamensk**	**4.44**	**226**	*e*PN	Pb	21 05 26.3	-5.0
ZAK				*e*		21 06 30.9	
ZAK				pmax	pmax		
	comp=Z,31nm,0.5s						
ZAK				smax	smax		
	comp=N,168nm,0.6s						
KPC	**Khapcheranga**	**4.66**	**145**	*i* Pn	**Pn**	**21 05 21.2**	**-1.4**
KPC				*e*		21 05 24.0	
KPC				⇑*e*Pg	**Pb**	**21 05 37.0**	**+2.1**
KPC				Pmax		21 05 42.2	
	comp=N,67nm,0.6s						
KPC				*e*Sn	**Sn**	**21 06 12.7**	**-3.1**
KPC				*e*Sg	**Sb**	**21 06 36.4**	**+5.9**
KPC				Smax		21 06 41.4	
	comp=N,337nm,0.9s						
KPC	**Khapcheranga**	**4.66**	**145**	⇑*i*PN	**Pn**	**21 05 21.2**	**-1.4**
KPC				*e*		21 05 34.0	
KPC				*e*S	**Sn**	**21 06 12.5**	**-3.3**
KPC				*e*		21 06 34.3	
KPC				pmax	pmax		
	comp=Z,66nm,0.6s						
KPC				smax	smax		
	comp=E,337nm,1.1s						
MOY	**Mondy**	**4.82**	**249**	*e*Pn	**Pn**	**21 05 26.6**	**+1.6**
MOY				*e*		21 05 35.5	
MOY				*e*		21 05 41.9	
MOY				max		21 05 42.0	
	comp=E,112nm,0.8s						
MOY				*e*Sn	**Sn**	**21 06 19.7**	**-0.3**
MOY				*e*Sg	**Sb**	**21 06 41.0**	**+5.6**
MOY				*e*		21 06 50.6	
MOY				max		21 06 53.0	
	comp=E,1µm,1.4s						
MOY	**Mondy**	**4.82**	**249**	*e*PN	**Pn**	**21 05 26.6**	**+1.6**
MOY				*e*		21 05 39.9	
MOY				*e*S	**Sn**	**21 06 21.8**	**+1.8**
NLYR	**Nelyaty**	**5.18**	**53**	*e*Pn	**Pn**	**21 05 29.4**	**-0.4**
NLYR				*e*Pg	**Pb**	**21 05 46.0**	**+2.2**
NLYR				Pmax		21 06 19.3	
	comp=E,44nm,0.8s						
NLYR				*e*Sg	Sb	21 06 53.3	+7.7
NLYR				Smax		21 07 05.6	
	comp=E,390nm,1.2s						
NLYR	**Nelyaty**	**5.18**	**53**	*e*PN	**Pn**	**21 05 26.6**	**-3.2**
NLYR				*e*		21 05 44.9	
NLYR				*e*		21 06 53.1	
NLYR				pmax	pmax		
	comp=Z,47nm,3.0s						
NLYR				smax	smax		
	comp=E,389nm,1.2s						
ORL	**Orlik**	**5.20**	**262**	*e*Pn	**Pn**	**21 05 30.1**	**-0.1**
ORL				*e*		21 05 37.7	
ORL				*e*Pg	**Pb**	**21 05 44.6**	**+0.4**
ORL				Pmax		21 05 45.0	
	comp=E,75nm,0.5s						
ORL				*e*		21 06 28.3	
ORL				*e*Sg	**Sb**	**21 06 53.0**	**+6.8**
ORL				Smax		21 06 59.4	
	comp=E,336nm,1.7s						
ORL	**Orlik**	**5.20**	**262**	*e*PN	**Pn**	**21 05 30.4**	**+0.2**
ORL				*e*		21 05 46.0	
ORL				*e*S	**Sn**	**21 06 28.6**	**-0.7**
ORL				*e*		21 06 55.0	
ORL				pmax	pmax		
	comp=Z,87nm,0.5s						
ORL				smax	smax		
	comp=N,335nm,1.3s						
BOD	**Bodaibo**	**5.35**	**35**	*e*Pn	**Pn**	**21 05 31.6**	**-0.4**
BOD				*e*		21 05 36.9	
BOD				*e*Pg	**Pb**	**21 05 47.9**	**+1.3**
BOD				Pmax		21 06 01.9	
	comp=N,28nm,1.3s						
BOD				*e*Sn	**Sn**	**21 06 29.3**	**-3.4**
BOD				*e*Sg	**Sb**	**21 06 57.0**	**+6.7**
BOD				Smax		21 07 17.9	
	comp=N,159nm,1.3s						
ULN	**Ulaanbaatar**	**5.77**	**188**	*ce*PN	**Pn**	**21 05 38.7**	**+0.6**
SONM	**Songino Array**	**5.87**	**192**	Pn	**Pn**	**21 05 39.7**	**+0.2**
	comp=N,2.3nm,0.3s,baz=6.2,slow=14,SNR=46						

SONM				Pg	Pb	21 05 59.6	+3.9
	comp=N,4.1nm,0.3s,baz=7.1,slow=16,SNR=16						
SONM				Sn	Sn	21 06 42.6	-3.4
	comp=N,4.5nm,0.3s,baz=17,slow=26,SNR=4.1						
SONM				Lg	Lg	21 07 16.5	
	comp=N,12nm,0.3s,baz=6.2,slow=32,SNR=8.8						
VTMR	Vitim	6.33	20	ePn	Pn	21 05 44.5	-1.1
VTMR				ePg	Pb	21 06 06.9	+3.5
VTMR				eSg	Sb	21 07 28.6	+10
VTMR				e		21 07 35.3	
CRS	Chara	6.62	56	ePn	Pn	21 05 50.2	+0.6
CRS				ePg	Pb	21 06 11.9	+3.6
CRS				Pmax		21 06 19.1	
	comp=N,44nm,1.0s						
CRS				eSn	Sn	21 07 00.1	-4.0
CRS				eSg	Sb	21 07 37.4	+10
CRS				Smax		21 07 59.5	
	comp=N,150nm,1.0s						
TUP	Tupik	6.95	78	⇓iPn	Pn	21 05 53.5	-0.6
TUP				ePg	Pb	21 06 17.4	+3.5
TUP				Pmax		21 06 41.7	
	comp=N,25nm,0.7s						
TUP				eSg	Sb	21 07 47.0	+11
TUP				Smax		21 07 56.0	
	comp=N,434nm,0.5s						
TUP	Tupik	6.95	78	ePN	Pn	21 05 53.3	-0.8
TUP				e		21 06 15.9	
TUP				e		21 07 46.7	
TUP				pmax	pmax		
	comp=Z,11nm,0.5s						
TUP				smax	smax		
	comp=N,432nm,1.0s						
KNGR	Kungurtug, Tuv	7.25	250	ePn	Pn	21 05 57.1	-1.3
KNGR				e		21 06 20.3	
KNGR				eSn	Sn	21 07 18.4	-1.5
KNGR				eSg	Sb	21 07 56.7	+11
TDJR	Todzha	7.43	266	ePn	Pn	21 06 02.5	+1.7
TDJR				e		21 06 10.0	
TDJR				ePg	Pb	21 06 26.6	+4.4
TDJR				eSn	Sn	21 07 19.4	-4.8
TDJR				e		21 07 35.7	
TDJR				eSg	Sb	21 08 03.2	+13
YKLR	Yuktali	8.26	63	ePn	Pn	21 06 11.3	-0.7
YKLR				eSn	Sn	21 07 38.5	-5.8
YKLR				eSg	Sb	21 08 27.6	+14
KZLR	Kyzyl	8.60	263	e		21 08 14.8	
KZLR				eSg	Sn	21 08 38.5	+46
ZEA	Zeya	11.27	82	eP	Pn	21 06 52.8	-0.4
ZEA				eS	Sn	21 08 53.1	-5.1
ZEA				smax	smax		
	comp=E,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,200nm,7.0s						
ZALV	Zalesovo Beam	13.86	281	Pn	Pn	21 07 28.2	-0.3
	comp=Z,0.1nm,0.3s,baz=97,slow=12,SNR=3.2						
ZALV				Lg	Lg	21 11 22.4	
	comp=Z,0.1nm,0.3s,baz=84,slow=30,SNR=3.5						
KLR	Kul'dur	15.27	97	Lg	Lg	21 12 07.8	
	comp=Z,0.2nm,0.3s,baz=264,slow=18,SNR=4.1						
GTA	Gaotai	15.30	206	eP	P	21 07 54.6	+1.8
GTA				pP	sP	21 08 01.6	-1.8
GTA				sP	pP	21 08 05.0	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MK31	Makanchi Array	17.89	258	⇓eP	P	21 08 23.9	+2.5
MKAR	Makanchi Array	17.89	258	P	P	21 08 20.7	-0.6
	comp=Z,0.1nm,0.3s,baz=53,slow=8.5,SNR=2.1						
KURK	Kurchatov	18.35	273	⇑eP	Pn	21 08 30.3	+3.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURBB	Kurchatov Arra	18.43	273	P	P	21 08 25.5	-1.7
	comp=Z,0.0nm,0.3s,baz=68,slow=12,SNR=2.9						
TIXI	Tiksi	20.24	19	deP	P	21 08 46.2	-0.6
BVAR	Borovoye Array	22.46	284	P	P	21 09 09.5	-1.4
	comp=Z,0.4nm,0.4s,baz=72,slow=15,SNR=2.9						
BRVK	Borovoye	22.52	284	⇓eP	P	21 09 11.5	+0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	24.83	258	P	P	21 09 34.5	+0.4
	comp=Z,0.7nm,0.6s,baz=58,slow=15,SNR=2.3						
AAK	Ala-Archa	24.83	258	⇑eP	P	21 09 35.8	+1.7
AAK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
ARU	Arti	28.14	296	⇓eP	P	21 10 06.0	+2.4
FINES	FINESS Array B	42.01	315	P	P	21 12 01.0	-1.5
	comp=Z,4.1nm,1.0s,baz=64,slow=9.4,SNR=1.6						
ILAR	Eielson Array	48.72	33	P	P	21 12 55.6	-0.1
	comp=Z,1.2nm,0.7s,baz=300,slow=6.6,SNR=17						
YKA	Yellowknife Ar	59.46	22	P	P	21 14 12.4	-1.5
	comp=Z,0.4nm,0.8s,baz=334,slow=5.5,SNR=5.8						
WRA	Warramunga Arr	76.61	155	P	P	21 16 01.6	-0.4
	comp=Z,0.8nm,0.6s,baz=349,slow=7.1,SNR=3.0						
ASAR	Alice Springs	80.07	156	P	P	21 16 21.4	+0.2
	comp=Z,0.7nm,0.6s,baz=352,slow=5.6,SNR=14						

IDC ***11*** *21:06:17.7±1.4, 43°.58N×105°.32W, h0^{km}, mb3.8/5, mb1 3.7/10, mb1mx3.5/56, mbtmp3.6/10, ML3.4/5, MS3.9/2, Ms1 3.9/2, ms1mx3.1/45, Error ellipse: s-maj=34.4km s-min=7.9km az=151.0*

NEIC ***11*** *21:06:19.9±0.3, 43°.83N±0°.04×105°.26W±0°.05, h0^{km}±2^{km}, ML3.3/52, Error ellipse: s-maj=7.7km s-min=4.9km az=133.0*

ISC 11 21:06:19.2±0.7**, 43°.83N**±0°.06×**105°.27W**±0°.05**, h0^{km}, n80, σ0^s.65**/79**, mb3.8**/5**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	71	Pg	Pg	21 06 37.7	+0.5
RSSD				Sg	Sb	21 06 52.1	+0.5
PHWY	Pilot Hill	2.53	183		Pn	21 07 01.8	0.0
PHWY				IAML		21 07 40.5	
	100nm,0.5s						
RWWY	Rawlins	2.57	214		Pn	21 07 02.6	+0.3
RWWY				IAML		21 07 40.5	
	168nm,0.5s						
RWWY				IAML		21 07 42.8	
	195nm,0.7s						
LAO	LASA Array	2.94	347		Pn	21 07 07.7	+0.4
RLMT	Red Lodge	3.14	296		Pn	21 07 10.8	+0.6
RLMT				IAML		21 08 06.0	
	75nm,0.6s						
RLMT				IAML		21 08 12.4	
	78nm,0.9s						
BW06	Boulder Array	3.31	253	Pn	Pn	21 07 12.9	+0.5
BW06				IAML		21 08 04.4	
	67nm,0.4s						
BW06				IAML		21 08 04.6	
	68nm,0.6s						
PD31	Pinedale Array	3.31	253	Pn	Pn	21 07 12.9	+0.4
PDAR	Pinedale Array	3.31	253	Pn	Pn	21 07 13.1	+0.6
	3.7nm,0.3s,baz=64,slow=18,SNR=54						
PDAR				Pg	Pb	21 07 18.5	-0.4
	14nm,0.3s,baz=71,slow=20,SNR=38						
PDAR				Lg	Lg	21 07 56.7	
	4.2nm,0.3s,baz=67,slow=20,SNR=3.6						
PDAR	Pinedale Array	3.31	253	Pn	Pn	21 07 12.7	+0.3
YNE	Yellowstone No	3.59	291		Pn	21 07 16.7	+0.3
YMP	Mirror Lake Pl	3.62	286		Pn	21 07 17.4	+0.5
GCMT	Greycliff	3.69	304		Pn	21 07 18.4	+0.7
OGNE	Ogallala	3.75	139		Pn	21 07 19.2	+0.8
LKWY	Lake	3.76	283		Pn	21 07 19.3	+0.6
LKWY				IAML		21 07 50.9	
	61nm,0.7s						
LOHW	Long Hollow	3.87	269		Pn	21 07 20.9	+0.7
LOHW				IAML		21 08 22.9	
	30nm,0.7s						
FLWY	Flagg Ranch	3.93	276		Pn	21 07 21.5	+0.5
FLWY				IAML		21 08 33.2	
	42nm,2.1s						
MOOW	Moose Ponds	3.96	271		Pn	21 07 22.1	+0.6
YPP	Pitchstone Pla	4.01	278		Pn	21 07 22.8	+0.5
ISCO	Idaho Springs	4.03	184		Pn	21 07 22.8	+0.2
ISCO				IAML		21 08 26.3	
	11nm,1.1s						
ISCO				IAML		21 08 31.1	
	20nm,0.9s						
REDW	Red Top Meadow	4.08	265		Pn	21 07 23.8	+0.6
REDW				IAML		21 08 35.9	
	46nm,0.9s						
REDW				IAML		21 08 41.4	
	44nm,0.9s						
YHH	Holmes Hill	4.12	285		Pn	21 07 24.0	+0.4
YHB	Horse Butte	4.35	284		Pn	21 07 27.4	+0.6
YHL	Hebgen Lake	4.36	286		Pn	21 07 27.5	+0.4
QLMT	Earthquake Lak	4.53	285	Pn	Pn	21 07 30.1	+0.8
RDMU	Red Mountain	4.56	226		Pn	21 07 30.2	+0.5
DGMT	Dagmar	4.70	9		Pn	21 07 32.6	+1.1
SMCO	Snowmass	4.82	196	Pn	Pn	21 07 34.1	+0.7
SMCO				IAML		21 08 54.5	
	30nm,0.6s						
SMCO				IAML		21 09 00.2	
	19nm,1.3s						
BOZ	Bozeman (W)	4.87	294		Pn	21 07 34.5	+0.7
BOZ				IAML		21 08 52.5	
	14nm,1.7s						
BOZ				IAML		21 08 53.3	
	17nm,0.8s						
HWUT	Hardware Ranch	5.14	247		Pn	21 07 38.3	+0.7
HWUT				IAML		21 09 07.6	
	28nm,0.7s						
HWUT				IAML		21 09 14.2	
	22nm,0.9s						
EGMT	Eagleton	5.23	325		Pn	21 07 39.6	+0.8
TCUT	Toone Canyon	5.29	241		Pn	21 07 40.2	+0.5
DLMT	Dillon	5.45	289	Pn	Pn	21 07 42.5	+0.6
HRY	Holter Researc	5.45	304		Pn	21 07 42.7	+0.8
MCMT	McKenzie Canyo	5.53	283	Pn	Pn	21 07 43.5	+0.5
JLU	Jordanelle	5.61	237		Pn	21 07 44.6	+0.5
CTU	Camp Tracy	5.74	239		Pn	21 07 46.4	+0.5
HVU	Hansel Valley	5.89	252		Pn	21 07 48.3	+0.4
PV22	Blue Mesa, Par	5.92	208		Pn	21 07 48.9	+0.6
PV07	Paradox Valley	5.96	206		Pn	21 07 49.4	+0.5
P17A	Butcher Ranch,	5.98	225		Pn	21 07 49.7	+0.6
PV23	Carpenter Ridg	6.07	209	Pn	Pn	21 07 50.6	+0.2
SDCO	Great Sand Dun	6.08	182	Pn	Pn	21 07 51.3	+0.6
PV04	Paradox Valley	6.08	208		Pn	21 07 51.3	+0.8
MPU	Maple Canyon	6.08	233	Pn	Pn	21 07 50.4	-0.2
PV12	Saucer Basin,	6.12	207		Pn	21 07 51.7	+0.6
PV14	Lion Creek, Pa	6.14	209		Pn	21 07 52.0	+0.5
SRU	San Rafael Swe	6.15	222		Pn	21 07 51.8	+0.3
PV20	West Nyswonger	6.15	208		Pn	21 07 52.1	+0.6
PV11	David Mesa, Pa	6.16	207		Pn	21 07 52.0	+0.4
PV16	Nyswonger Mesa	6.16	208		Pn	21 07 52.4	+0.7
PV03	Paradox Valley	6.19	207		Pn	21 07 52.9	+0.8
PV17	East Wray Mesa	6.20	208		Pn	21 07 52.9	+0.6
PV01	Paradox Valley	6.21	205		Pn	21 07 53.1	+0.7
PV18	Skein Mesa, Pa	6.22	207		Pn	21 07 53.1	+0.6
ECSD	EROS Data Cent	6.27	88	Pn	Pn	21 07 53.1	+0.2
PV13	Radium Mtn., P	6.27	207		Pn	21 07 53.8	+0.6
TMUT	Trail Mountain	6.35	227		Pn	21 07 54.8	+0.5
NLU	North Lily Min	6.38	235		Pn	21 07 55.5	+0.7
PV05	Paradox Valley	6.43	208		Pn	21 07 54.5	-0.9
BGU	Big Grassy Mou	6.44	246		Pn	21 07 56.0	+0.6
Q16A	Castle Valley	6.61	224		Pn	21 07 58.3	+0.4
HLID	Hailey	6.63	271		Pn	21 07 58.5	+0.4
DUG	Dugway, Tooele	6.69	240	Pn	Pn	21 07 59.1	+0.3
MSO	Missoula	6.81	299		Pn	21 08 01.2	+0.8
MSU	Marysvale	7.44	227		Pn	21 08 09.8	+0.6
I10CA	LAC DU BONNET	8.97	41	i		22 00 30.0	
	baz=220,slow=334,SNR=2.1						
ULM	Lac du Bonnet	9.07	42	Pn	Pn	21 08 30.6	-0.7
	1.3nm,0.3s,baz=229,slow=12,SNR=23						
ULM				Lg	Lg	21 11 02.1	
	0.3nm,0.3s,baz=139,slow=22,SNR=3.1						
ULM	Lac du Bonnet	9.07	42	Pn	Pn	21 08 31.0	-0.4
NEW	Newport	9.36	302	Pn	Pn	21 08 35.2	-0.1
	0.2nm,0.3s,baz=107,slow=14,SNR=2.1						
NEW	Newport	9.36	302		Pn	21 08 35.9	+0.6
NVAR	Mina Array Bea	11.21	246	Pn	Pn	21 09 01.2	+0.4
	0.2nm,0.3s,baz=46,slow=11,SNR=5.9						
NVAR	Mina Array Bea	11.21	246		Pn	21 09 01.5	+0.6
YKA	Yellowknife Ar	19.48	347	P	P	21 10 46.7	-0.7
	0.1nm,0.3s,baz=154,slow=13,SNR=5.3						
INK	Inuvik	28.64	338	LR	LR	21 23 50.0	
	comp=Z,109nm,19.5s,baz=34,slow=36						
ILAR	Eielson Array	31.20	327	P	P	21 12 41.7	+1.9
	0.1nm,0.6s,baz=113,slow=7.7,SNR=1.7						
ARCES	ARCESS Array B	61.33	18	P	P	21 16 34.5	-1.6
	5.1nm,1.1s,baz=325,slow=5.6,SNR=4.3						
RAR	Rarotonga	81.73	230	LR	LR	21 46 39.7	
	comp=Z,173nm,21.0s,baz=296,slow=30						
ZALV	Zalesovo Beam	82.22	354	P	P	21 18 41.1	-0.8
	0.7nm,0.5s,baz=358,slow=7.2,SNR=3.0						
KURBB	Kurchatov Arra	85.87	358	P	P	21 19 00.0	-0.5
	0.2nm,0.5s,baz=1.6,slow=4.0,SNR=2.8						
MKAR	Makanchi Array	89.51	355	P	P	21 19 17.6	-0.6
	0.4nm,0.6s,baz=22,slow=4.7,SNR=4.0						

IDC ***11*** *21:15:48.8±1.4, 4°.52S×125°.73E, h418^{km}±19^{km}, mb2.9/2, mb1 3.2/6, mb1mx2.8/51, mbtmp4.0/6, Error ellipse: s-maj=23.7km s-min=14.6km az=106.0*

ISC 11 21:15:48.8±1.1**, 4°.61S**±0°.09×**125°.8E**±0°.1**, h400^{km}, n6, σ2^s.08**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.96	201	P	Pn	21 17 22.9	+1.8
	12nm,0.3s,baz=56,slow=3.6,SNR=14						
BATI				S	S	21 18 38.3	+2.1
	6.2nm,0.3s,baz=321,slow=21,SNR=7.0						
SIJI	Sorong	6.59	56	P	Pn	21 17 28.7	+0.6
	2.7nm,0.3s,baz=198,slow=20,SNR=11						
SIJI				S	S	21 18 50.7	+1.7
	1.2nm,0.3s,baz=324,slow=24,SNR=2.5						
FITZ	Fitzroy Crossi	13.41	181	P	P	21 18 44.7	+0.6
	2.3nm,0.3s,baz=14,slow=11,SNR=53						
FITZ				S	S	21 21 06.4	-2.6
	0.1nm,0.3s,baz=162,slow=19,SNR=4.1						
WRA	Warramunga Arr	17.36	152	P	P	21 19 26.4	-0.3
	0.2nm,0.3s,baz=331,slow=11,SNR=7.4						
WRA				S	S	21 22 24.3	-2.8
	0.1nm,0.3s,baz=322,slow=23,SNR=2.3						
ASAR	Alice Springs	20.50	158	P	P	21 19 58.0	+0.1
	1.1nm,0.3s,baz=332,slow=7.9,SNR=32						
ASAR				S	S	21 23 19.6	-1.6
	0.2nm,0.6s,baz=352,slow=21,SNR=2.9						
MKAR	Makanchi Array	63.98	328	P	P	21 25 38.6	-2.5
	0.3nm,0.4s,baz=116,slow=8.3,SNR=8.8						

IDC ***11*** *21:23:21.3±1.4, 20°.04S×66°.60E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.8/38, mbtmp3.9/8, MS3.5/1, Ms1 3.7/1, ms1mx3.0/39, Error ellipse: s-maj=45.6km s-min=25.5km az=33.0*

NEIC ***11*** *21:23:21.9±1.2, 20°.06S±0°.10×66°.6E±0°.1, h10^{km}±1^{km}, mb4.6/8, Error ellipse: s-maj=26.3km s-min=12.0km az=120.0*

ISC 11 21:23:23.1±1.0**, 20°.1S**±0°.2×**66°.6E**±0°.2**, h16^{km}, n25, σ0^s.99**/22**, mb4.1**/12**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.63	26	T	T	21 40 40.4	
	baz=204,slow=76,SNR=96						
H08S2	Diego Garcia H	13.64	26	T	T	21 40 56.7	
	baz=204,slow=76,SNR=35						
H08S3	Diego Garcia H	13.65	26	T	T	21 40 51.7	
	baz=204,slow=76,SNR=58						
TSUM	Tsumeb	46.00	262	P	P	21 31 45.8	-0.5
TSUM				IAmb	IAmb	21 31 55.1	
	comp=Z,7.5nm,1.2s						
CM31	Chiang Mai Arr	49.76	42	P	P	21 32 13.7	-1.5
CM31				IAmb	IAmb	21 32 24.2	
	comp=Z,19nm,1.8s						
CMAR	Chiang Mai Arr	49.76	42	P	P	21 32 16.9	+1.7
	comp=Z,0.2nm,0.3s,baz=242,slow=8.8,SNR=4.4						
CMAR				LR	LR	21 50 06.9	
	comp=Z,50nm,20.6s,baz=220,slow=32						
ASAR	Alice Springs	62.08	107	P	P	21 33 43.9	+0.3
	comp=Z,0.9nm,0.8s,baz=264,slow=6.4,SNR=7.2						
ASAR	Alice Springs	62.08	107	P	P	21 33 43.2	-0.4
WRA	Warramunga Arr	63.24	103	P	P	21 33 51.9	+0.5
	comp=Z,3.2nm,1.2s,baz=247,slow=6.0,SNR=5.7						
WR0	Warramunga Arr	63.42	103	P	P	21 33 52.6	0.0
BRTR	Keskin Array B	66.98	333	P	P	21 34 14.6	-0.7
	comp=Z,1.0nm,0.9s,baz=148,slow=8.1,SNR=5.4						
BRTR	Keskin Array B	66.98	333	P	P	21 34 15.6	+0.3
MK31	Makanchi Array	68.07	12	P	P	21 34 21.4	-0.5
MKAR	Makanchi Array	68.07	12	P	P	21 34 22.1	+0.2
	comp=Z,1.2nm,0.9s,baz=192,slow=5.0,SNR=8.1						
MKAR	Makanchi Array	68.07	12	P	P	21 34 21.8	-0.1
ABKAR	Akbulak array	69.28	355	P	P	21 34 29.3	0.0
TOA0	Torodi Ar. Sit	71.84	292	P	P	21 34 45.4	-0.3
TOA0				IAmb	IAmb	21 35 02.9	
	comp=Z,12nm,2.0s						
TORD	Torodi Ar. Bea	71.84	292	P	P	21 34 48.4	+2.7
	comp=Z,1.2nm,1.0s,baz=113,slow=6.9,SNR=3.2						
TORD	Torodi Ar. Bea	71.84	292	P	P	21 34 46.0	+0.3
ZALV	Zalesovo Beam	75.39	11	P	P	21 35 05.6	-0.1
	comp=Z,1.4nm,0.8s,baz=193,slow=5.6,SNR=6.8						
ZALV	Zalesovo Beam	75.39	11	P	P	21 35 05.1	-0.6
SONM	Songino Array	76.47	26	P	P	21 35 13.9	+1.7
	comp=Z,0.7nm,1.0s,baz=202,slow=7.4,SNR=2.4						
SONM	Songino Array	76.47	26	P	P	21 35 12.0	-0.2
ULN	Ulaanbaatar	76.77	27	P	P	21 35 13.1	-0.9
ULN				IAmb	IAmb	21 35 16.0	
	comp=Z,5.8nm,1.6s						
ULM	Lac du Bonnet	146.83	339	PKPbc	PKPbc	21 43 03.6	-0.8
	comp=Z,0.5nm,0.4s,baz=27,slow=2.3,SNR=3.4						

VAO ***11*** *21:39:33.8±0.4, 15°.83S×73°.92W, h10^{km}, mb5.1*

ARE ***11*** *21:39:37±1.6, 16°.03S±0°.07×74°.14W±0°.10, h41^{km}±3^{km}, ML5.1, mb4.9/99(NEIC), Error ellipse: s-maj=15.0km s-min=7.0km az=59.0*

GUC ***11*** *21:39:37.5±0.6, 15°.87S×74°.20W, h65^{km}±21^{km}, MW5.0*

IDC ***11*** *21:39:38.2±0.6, 15°.74S×73°.98W, h57^{km}±4^{km}, mb4.4/16, mb1 4.6/20, mb1mx4.5/30, mbtmp4.7/20, MS4.0/18, Ms1 4.0/18, ms1mx3.9/25, Error ellipse: s-maj=18.2km s-min=11.5km az=58.0*

NEIC ***11*** *21:39:38.5±0.8, 15°.76S±0°.08×73°.96W±0°.10, h68^{km}±6^{km}, Error ellipse: s-maj=15.8km s-min=7.8km az=54.0*

BJI ***11*** *21:39:38.2±0.0, 15°.70S×74°.00W, h50^{km}, mB5.3/2, Ms5.2/3, Ms7 5.1/4*

GCMT ***11*** *21:39:43.0±0.3, 16°.04S±0°.02×74°.05W±0°.02, h70^{km}±2^{km}, MW5.0/99, Moment Tensor Solution. s50,c56; s99,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.55±.14; $M_{\theta\theta}$2.86±.12; $M_{\phi\phi}$-0.31±.17; $M_{r\theta}$-1.22±.07; $M_{\theta\phi}$-1.66±.11; $M_{\phi r}$0.81±.10; Best double couple: $M_0$3.40100×10^{16} NP1:ϕ_s284.00000°,δ33.00000°,λ-104.00000°. NP2: ϕ_s120.00000°,δ58.00000°,λ-81.00000°. Principal axes: T 3.8930, Plg13.0000°, Azm204.0000°; N -0.9850, Plg8.0000°, Azm296.0000°; P -2.9090, Plg75.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 21:39:37.5±0.3**, 15°.82S**±0°.05×**74°.00W**±0°.06**, h54^{km}, n489, σ1^s.05**/468**, mb4.9**/58**, MS4.2**/22**, 9C-11D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	4.32	127	eP	Pn	21 40 42.1	+1.3
AP01				i S	Sn	21 41 29.2	-0.7
NNA	Nana	4.70	324	P	Pn	21 40 45.5	-0.6
	42nm,0.3s,baz=159,slow=11,SNR=34						
NNA	Nana	4.70	324	Pn	Pn	21 40 45.2	-0.8
NNA				Sn	Sn	21 41 38.1	-1.2
PB16	IPOC Station P	4.97	121	⇓iP	Pn	21 40 52.9	+2.7
PB16				i S	Sn	21 41 47.6	+0.9
PB16	IPOC Station P	4.97	121	Pn	Pn	21 40 52.9	+2.7
PSGC	Pisagua	5.27	136	⇑iP	Pn	21 40 54.2	+0.3
PSGCX	Pisagua	5.27	136	Pn	Pn	21 40 54.2	+0.4
MNMC	Minye Minye	5.34	129	eP	Pn	21 40 56.3	+1.3
MNMC	Minye Minye	5.34	129	Pn	Pn	21 40 56.0	+1.0
TA01	Diego Aracena	5.96	143	Pn	Pn	21 41 03.2	+0.1
GO01	Chusmiza	5.97	131	⇓iP	Pn	21 41 05.5	+1.7
GO01	Chusmiza	5.97	131	Pn	Pn	21 41 05.4	+1.6
PATCX	Punta Patache	6.17	144	Pn	Pn	21 41 06.2	0.0
PB08	IPOC Station P	6.31	134	Pn	Pn	21 41 09.3	+1.0
PB07	IPOC Station P	7.05	147	Pn	Pn	21 41 18.2	-0.1
PB04	IPOC Station P	7.43	151	Pn	Pn	21 41 23.0	-0.6
PB09	IPOC Station P	7.46	144	Pn	Pn	21 41 25.1	+1.1
CZSB	Cruzeiro do Su	8.14	9	eP	Pn	21 41 33.8	+0.7
LVC	Limon Verde	8.29	145	P	Pn	21 41 36.9	+1.4
	24nm,0.3s,baz=319,slow=11,SNR=107						
LVC				S	Sn	21 43 04.2	-3.8
	16nm,0.3s,baz=88,slow=18,SNR=8.2						
LVC				Lg	Lg	21 43 55.8	
	18nm,0.3s,baz=93,slow=20,SNR=9.4						
LVC	Limon Verde	8.29	145	Pn	Pn	21 41 36.5	+1.0
LVC				Sn	Sn	21 43 08.0	0.0
PB10	IPOC Station P	8.32	158	Pn	Pn	21 41 34.5	-1.0
PB14	IPOC Station P	9.39	160	Pn	Pn	21 41 49.0	-1.6
ATAH	Atahualpa	9.64	333	P	Pn	21 41 57.1	+3.0
	5.3nm,0.3s,baz=145,slow=8.0,SNR=24						
ATAH				S	Sn	21 43 43.1	+1.9
	baz=252,slow=20,SNR=0.8						
GO02	Mina Guanaco	10.17	157	Pn	Pn	21 42 01.2	0.0
AC01	Pan de Azucar	10.76	163	Pn	Pn	21 42 07.6	-1.3
AC02	Maricunga	11.86	158	Pn	Pn	21 42 25.9	+1.4
GO03	Copiap	12.23	164	Pn	Pn	21 42 29.0	-0.1
SIV	San Ignacio	12.44	93	P	Pn	21 42 30.7	-1.3
	1.6nm,0.3s,baz=281,slow=11,SNR=47						
SAML	Samuel	12.57	58	Pn	Pn	21 42 31.9	-1.8
SAML	Samuel	12.57	58	eP	Pn	21 42 33.6	-0.2
SAML	Samuel	12.57	58	eP	Pn	21 42 32.9	-0.9
LCO	Las Campanas	13.48	168	Pn	Pn	21 42 47.3	+1.0
VILB	Vilhena	13.67	80	eP	Pn	21 42 47.8	-0.9
PTLB	Pontes e Lacer	14.32	91	eP	Pn	21 42 56.0	-1.5
PTLC	Puerto Leguiza	15.90	357	eP	Pn	21 43 12.4	-5.6
PUAC	Puerto Asis, P	16.46	351	⇓eP	P	21 43 28.6	+1.6
OTAV	Otavalo	16.55	344	Pn	Pn	21 43 25.8	-0.7
OTAV	Otavalo	16.55	344	eP	Pn	21 43 26.7	+0.2
MACC	Macarena, Meta	17.85	0	eP	Pn	21 43 41.7	-0.5
GARC	Garzon, Huila	17.95	355	eP	Pn	21 43 44.1	+0.5
AQDB	Aquidauana	18.00	108	eP	Pn	21 43 44.3	+0.3
BBAC	Balboa, Cauca	18.01	349	⇑eP	Pn	21 43 45.5	+1.1
SOTA	Rioblanco	18.02	352	eP	Pn	21 43 46.9	+2.2
H03N1	Juan Fernandez	18.10	193	T	T	22 02 18.6	
	baz=16,slow=74,SNR=8102						
H03N2	Juan Fernandez	18.11	193	T	T	22 02 15.8	
	baz=16,slow=74						
H03N3	Juan Fernandez	18.12	193	T	T	22 02 15.2	
	baz=16,slow=74,SNR=9994						
MACA	Manacapuru-AM	18.16	48	eP	P	21 43 45.5	-0.3
PCON	Cinco Dias	18.18	352	⇓eP	Pn	21 43 47.5	+0.7
GUVC	San Jose del G	18.29	4	eP	P	21 43 45.8	-1.4
PP1B	Ponte de Pedra	18.40	98	eP	P	21 43 48.4	0.0
BETC	Betania	18.43	355	⇑eP	Pn	21 43 51.0	+1.6
MARP	Paez Belalcaza	18.64	354	eP	Pn	21 43 51.9	-0.2
CPUP	Villa Florida	18.73	127	P	P	21 43 52.2	+0.4
	0.3nm,0.3s,baz=292,slow=11,SNR=6.2						
CPUP				LR	LR	21 52 45.9	
	comp=Z,180nm,18.7s,baz=306,slow=42						
CPUP	Villa Florida	18.73	127	P	Pn	21 43 52.6	-0.2
CPUP	Villa Florida	18.73	127	eP	Pn	21 43 52.7	0.0
ORTC	Ortega, Tolima	19.64	356	⇓eP	Pn	21 44 03.6	-0.1
VILC	Villavicencio,	19.80	1	eP	Pn	21 44 06.3	+0.5
YOTC	Yotoco, Valle	19.81	353	eP	P	21 44 04.7	+0.8
PTGC	Puerto Gaitan,	19.97	5	⇓eP	P	21 44 06.4	+0.9
ANIL	Santa Ana	20.23	356	eP	Pn	21 44 11.4	+0.5
NPGB	Novo Progresso	20.23	67	eP	P	21 44 08.1	-0.2
TOLC	Tolima	20.31	356	eP	Pn	21 44 11.5	-0.5
CHIC	Chingaza	20.32	1	eP	Pn	21 44 11.9	-0.2
ROSC	El Rosal	20.53	359	P	Pn	21 44 16.9	+2.3
	25nm,0.7s,baz=223,slow=7.4,SNR=13						
ROSC				LR	LR	21 53 18.5	
	comp=Z,551nm,18.3s,baz=208,slow=40						
ROSC	El Rosal	20.53	359	P	P	21 44 11.6	-0.3
ROSC				IAmb	IAmb	21 44 23.8	
	comp=Z,40nm,0.8s						
ROSC	El Rosal	20.53	359	eP	Pn	21 44 16.7	+2.2
RREF	El Recreo	20.63	356	⇓eP	Pn	21 44 17.3	+1.3
PLMC	San Jos del P	20.71	354	eP	P	21 44 14.1	+0.5
BI02	San Fabin de	20.91	174	P	P	21 44 17.2	+1.6
BI02				IAmb	IAmb	21 44 23.0	
	comp=Z,39nm,0.9s						
ITQB	Itaqui	21.10	134	eP	P	21 44 19.0	+1.4
ITTB	Itaituba	21.25	60	eP	P	21 44 19.1	-0.3
NORC	Norcasia	21.26	358	⇓eP	P	21 44 20.4	+0.9
TRCB	Terra Rica	21.31	112	eP	P	21 44 20.2	+0.2
SPBC	San Pablo de B	21.33	360	eP	P	21 44 21.7	+1.4
ARAG	Araguaiana, MT	21.35	93	eP	P	21 44 19.8	-0.7
RUSC	La Rusia	21.59	2	⇓eP	P	21 44 24.8	+1.4
CBOC	Ciudad Bolivar	21.63	355	eP	P	21 44 22.8	-0.8
HELC	Santa Helena	21.92	356	eP	P	21 44 29.9	+3.0
PTBC	PUERTO BERRIO,	22.22	359	eP	P	21 44 30.3	+0.6
TAMC	Tame, Arauca	22.22	6	eP	P	21 44 29.8	0.0
BARC	Barichara	22.28	2	eP	P	21 44 31.0	+0.4
PCMB	Pacaembu	22.28	108	eP	P	21 44 30.2	-0.2
SNDB	Serra Nova Dou	22.36	83	eP	P	21 44 30.6	-0.8
PTGB	Pitanga	22.38	117	eP	P	21 44 31.5	0.0
BRRC	Barranca, Sant	22.78	1	eP	P	21 44 33.5	-2.2
DBBC	Dabeiba	22.79	354	eP	P	21 44 36.5	+0.6
ITRB	Iturama	22.84	103	eP	P	21 44 35.8	-0.5

PAMC	**Pamplona, Colo**	**23.04**	**3**	*e*P	**P**	**21 44 38.4**	**-0.5**
LC01	**Cunco**	**23.07**	**176**	P	**P**	**21 44 38.9**	**+0.4**
LC01				IAmb	IAmb	21 44 55.2	
	comp=Z,46nm,1.1s						
ZARC	**Zaragoza, Cauc**	**23.17**	**358**	*e*P	**P**	**21 44 39.2**	**-0.5**
ITAB	**Concordia**	**23.26**	**123**	*e*P	**P**	**21 44 38.7**	**-1.8**
CPSB	**Cacapava Do Su**	**23.78**	**131**	*e*P	**P**	**21 44 45.8**	**+0.4**
MALB	**Monte Alegre**	**23.89**	**56**	*e*P	**P**	**21 44 46.9**	**+0.5**
OCAC	**Ocana**	**23.91**	**2**	*e*P	**P**	**21 44 45.8**	**-0.9**
PLTB	**Pedras Altas**	**24.43**	**134**	*e*P	**P**	**21 44 52.8**	**+1.5**
SMLC	**San Martn de**	**24.46**	**360**⇓	*e*P	**P**	**21 44 50.7**	**-0.9**
MOTC	**Monteria, Cord**	**24.49**	**356**	*e*P	**P**	**21 44 52.2**	**+0.4**
BB19B	**Bebedouro**	**24.71**	**106**	*e*P	**P**	**21 44 54.2**	**+0.3**
IPMB	**Ipameri, GO**	**24.76**	**99**	*e*P	**P**	**21 44 55.0**	**+0.5**
SDV	**Santo Domingo**	**24.77**	**8**	P	**P**	**21 44 54.4**	**-0.2**
	comp=Z,14nm,0.8s,baz=225,slow=7.9,SNR=10						
SDV	**Santo Domingo**	**24.77**	**8**	P	**P**	**21 44 53.2**	**-1.4**
SDV				IAmb	IAmb	21 45 12.6	
	comp=Z,43nm,1.1s						
SDV	**Santo Domingo**	**24.77**	**8**⇓	*e*P	**P**	**21 44 53.8**	**-0.8**
SDV	**Santo Domingo**	**24.77**	**8**	*e*P	**P**	**21 44 55.0**	**+0.4**
PLCA	**Paso Flores**	**25.01**	**174**	P	**P**	**21 44 57.0**	**+0.6**
	comp=Z,18nm,0.9s,baz=350,slow=10.0,SNR=20						
PLCA				LR	LR	21 54 07.4	
	comp=Z,105nm,19.3s,baz=12,slow=35						
PLCA	**Paso Flores**	**25.01**	**174**	P	**P**	**21 44 57.1**	**+0.6**
PLCA				IAmb	IAmb	21 45 00.2	
	comp=Z,36nm,1.1s						
PLCA	**Paso Flores**	**25.01**	**174**	*e*P	**P**	**21 44 58.0**	**+1.6**
BDFB	**Brasilia**	**25.01**	**93**	P	**P**	**21 44 57.2**	**+0.5**
	comp=Z,23nm,0.9s,baz=262,slow=9.8,SNR=28						
BDFB	**Brasilia**	**25.01**	**93**	P	**P**	**21 44 55.5**	**-1.3**
BDFB				IAmb	IAmb	21 44 58.9	
	comp=Z,59nm,1.2s						
CNLB	**Canela**	**25.18**	**126**	*e*P	**P**	**21 44 58.4**	**+0.2**
PEXB	**Peixe**	**25.20**	**85**	*e*P	**P**	**21 44 58.6**	**+0.2**
ARGC	**Ariguani, Magd**	**25.51**	**359**⇑	*e*P	**P**	**21 45 02.0**	**+0.9**
PRPB	**Parauapebas**	**25.57**	**71**	*e*P	**P**	**21 45 00.8**	**-1.0**
SJCC	**San Jacinto, C**	**25.57**	**357**⇑	*e*P	**P**	**21 45 02.7**	**+0.9**
SPB	**Sao Paulo**	**26.15**	**111**	*e*P	**P**	**21 45 07.9**	**+1.0**
PET01	**Itanhaem-SP**	**26.45**	**113**	*e*P	**P**	**21 45 11.9**	**+2.3**
VAO	**Valinhos**	**26.45**	**110**	*e*P	**P**	**21 45 11.1**	**+1.3**
MCPB	**Macapa, AP**	**26.55**	**57**	*e*P	**P**	**21 45 11.1**	**+0.5**
CRJC	**Cerrejon, Guaj**	**26.69**	**2**	*e*P	**P**	**21 45 11.7**	**-0.1**
SMTB	**Santa Maria do**	**26.69**	**78**	*e*P	**P**	**21 45 12.7**	**+0.8**
PCRV	**Puerto La Cruz**	**27.44**	**20**	P	**P**	**21 45 17.4**	**-1.2**
	comp=Z,14nm,0.6s,baz=260,slow=6.1,SNR=2.4						
PLCV	**Puerto La Cruz**	**27.44**	**20**	P	**P**	**21 45 17.4**	**-1.2**
PARB	**Paraibuna**	**27.73**	**110**	*e*P	**P**	**21 45 22.2**	**+1.0**
BSCB	**Bom Sucesso**	**28.18**	**105**	*e*P	**P**	**21 45 26.8**	**+1.5**
SDBA	**SAO DESIDERIO**	**28.41**	**87**	*e*P	**P**	**21 45 27.2**	**-0.1**
JANB	**Januaria**	**28.62**	**93**	*e*P	**P**	**21 45 29.6**	**+0.4**
ESAR	**Angra dos Reis**	**28.75**	**109**	*e*P	**P**	**21 45 32.2**	**+2.1**
TMAB	**Tom-Au,PA,Br**	**28.80**	**65**	*e*P	**P**	**21 45 31.9**	**+1.1**
MAN01	**Angra dos Reis**	**29.16**	**109**	*e*P	**P**	**21 45 35.3**	**+1.4**
VAS01	**Vassouras-RJ**	**29.55**	**107**	*e*P	**P**	**21 45 39.1**	**+1.7**
DUB01	**Friburgo-RJ**	**30.52**	**107**	*e*P	**P**	**21 45 46.0**	**0.0**
SJMB	**Sao Joao De Ma**	**31.44**	**100**	*e*P	**P**	**21 45 54.6**	**+0.5**
ALF01	**Guarapari-ES**	**31.93**	**104**	*e*P	**P**	**21 46 00.1**	**+1.7**
ROSB	**Rosrio**	**32.09**	**69**	*e*P	**P**	**21 45 59.6**	**-0.1**
RIB01	**Linhares ES**	**32.20**	**101**	*e*P	**P**	**21 46 00.7**	**-0.1**
NAN01	**Guarapari, ES**	**32.46**	**98**	*e*P	**P**	**21 46 04.1**	**+1.0**
GDU01	**Guandu, BA**	**33.33**	**91**	*e*P	**P**	**21 46 10.9**	**+0.2**
SJG	**San Juan**	**34.59**	**13**	P	**P**	**21 46 20.7**	**-0.7**
RPN	**Rapa Nui**	**34.64**	**245**	LR	LR	21 56 50.2	
	comp=Z,362nm,18.7s,baz=46,slow=30						
DR12	**Loma Pena Alta**	**34.69**	**8**	P	**P**	**21 46 21.6**	**-0.7**
AOPR	**Arecibo Observ**	**34.69**	**12**	P	**P**	**21 46 20.6**	**-1.7**
CBYP	**Canovanas**	**34.81**	**14**	P	**P**	**21 46 21.9**	**-1.5**
GO09	**Cerro Castillo**	**35.39**	**178**	P	**P**	**21 46 26.8**	**-1.2**
GO09				IAmb	IAmb	21 46 30.4	
	comp=Z,18nm,1.0s						
EFI	**East Falkland**	**37.97**	**164**	P	**P**	**21 46 50.7**	**+0.8**
RCBR	**Riachuelo**	**38.65**	**79**	P	**P**	**21 46 55.4**	**-0.9**
RCBR				IAmb	IAmb	21 46 58.7	
	comp=Z,19nm,1.0s						
USHA	**Ushuaia**	**39.17**	**175**	P	**P**	**21 47 00.1**	**+0.2**
	comp=Z,28nm,0.7s,baz=19,slow=0.5,SNR=4.5						
RGRS	**Roger Stewart**	**48.81**	**353**	P	**P**	**21 48 16.7**	**-0.7**
PMSA	**Palmer Station**	**49.38**	**174**	*e*P	**P**	**21 48 22.6**	**+1.2**
GOGA	**Godfrey**	**49.78**	**350**	P	**P**	**21 48 24.4**	**-0.4**
GOGA				IAmb	IAmb	21 48 26.2	
	comp=Z,14nm,1.1s						
Y57A	**Sumter**	**49.93**	**353**	P	**P**	**21 48 25.8**	**-0.1**
	baz=172						
LRAL	**Lakeview Retre**	**50.14**	**346**	P	**P**	**21 48 26.4**	**-1.1**
	baz=164						
LRAL	**Lakeview Retre**	**50.14**	**346**	P	**P**	**21 48 26.9**	**-0.6**
LRAL				IAmb	IAmb	21 48 27.1	
	comp=Z,13nm,1.1s						
833A	**Chaparral WMA,**	**50.30**	**331**	P	**P**	**21 48 29.0**	**+0.2**
	baz=148						
HODGE	**Hodges**	**50.39**	**351**	P	**P**	**21 48 29.0**	**-0.3**
HODGE				IAmb	IAmb	21 48 29.4	
	comp=Z,11nm,1.2s						
X56A	**White Oak**	**50.47**	**352**	P	**P**	**21 48 30.0**	**-0.1**
	baz=172						
BIRD	**Birdtown, Kers**	**50.56**	**353**	P	**P**	**21 48 30.4**	**-0.3**
Y49A	**Blount Mountai**	**50.79**	**347**	P	**P**	**21 48 31.6**	**-0.9**
W58A	**Raeford**	**50.80**	**354**	P	**P**	**21 48 32.7**	**+0.2**
	baz=174						
W57A	**Gilead**	**51.01**	**354**	P	**P**	**21 48 33.6**	**-0.5**
	baz=173						
W56A	**Indian Trail**	**51.05**	**353**	P	**P**	**21 48 33.9**	**-0.5**
	baz=172						
KMSC	**Kings Mountain**	**51.15**	**352**	P	**P**	**21 48 35.0**	**-0.1**
	baz=171						
BG3	**Lake Jocassee**	**51.24**	**351**	P	**P**	**21 48 36.0**	**+0.2**
FPAL	**Fort Paine**	**51.28**	**348**	P	**P**	**21 48 35.9**	**-0.3**
FPAL				IAmb	IAmb	21 48 36.0	
	comp=Z,14nm,1.0s						
V60A	**Jim Taylor Roa**	**51.39**	**357**	P	**P**	**21 48 37.5**	**+0.6**
	baz=176						
V59A	**Middlesex**	**51.45**	**356**	P	**P**	**21 48 37.8**	**+0.5**
	baz=175						
V58A	**Windy Hill, Pi**	**51.56**	**355**	P	**P**	**21 48 37.8**	**-0.3**
	baz=174						
435B	**Jarrell**	**51.59**	**334**	P	**P**	**21 48 38.8**	**+0.3**
	baz=151						
V56A	**Mocksville**	**51.71**	**353**	P	**P**	**21 48 39.2**	**-0.1**
	baz=172,SNR=5.5						
V57A	**Coltrane Farms**	**51.71**	**354**	P	**P**	**21 48 38.8**	**-0.5**
	baz=173						
W50A	**Signal Mountai**	**51.86**	**348**	P	**P**	**21 48 39.6**	**-0.9**
W50A				IAmb	IAmb	21 48 40.6	
	comp=Z,12nm,1.0s						
V53A	**Saluda**	**51.88**	**351**	P	**P**	**21 48 40.1**	**-0.5**
U61A	**Possum Corner**	**51.92**	**357**	P	**P**	**21 48 41.6**	**+0.8**
	baz=177						
Z41A	**Richland Creek**	**52.00**	**340**	P	**P**	**21 48 42.2**	**+0.7**
	baz=157						
SWET	**Sewanee**	**52.00**	**348**	P	**P**	**21 48 41.2**	**-0.3**
SWET				IAmb	IAmb	21 48 58.5	
	comp=Z,14nm,1.1s						
U59A	**Littleton**	**52.01**	**356**	P	**P**	**21 48 42.1**	**+0.6**
	baz=176						
TKL	**Tuckaleechee C**	**52.02**	**350**	P	**P**	**21 48 40.8**	**-0.9**
U60A	**Pendleton**	**52.09**	**357**	P	**P**	**21 48 42.0**	**-0.1**
	baz=176						
OXF	**Oxford**	**52.15**	**344**	P	**P**	**21 48 41.6**	**-1.0**
	baz=161						
V52A	**Sevierville**	**52.17**	**350**	P	**P**	**21 48 42.2**	**-0.6**
V52A				IAmb	IAmb	21 48 59.7	
	comp=Z,11nm,0.8s						
U57A	**Blanch**	**52.21**	**355**	P	**P**	**21 48 42.9**	**-0.1**
	baz=174						
U56A	**King**	**52.23**	**353**	P	**P**	**21 48 43.5**	**+0.3**
	baz=172						
JCT	**Junction City**	**52.30**	**332**	P	**P**	**21 48 44.2**	**+0.3**
	baz=148						
JCT	**Junction City**	**52.30**	**332**	P	**P**	**21 48 43.3**	**-0.6**
JCT				IAmb	IAmb	21 48 47.4	
	comp=Z,14nm,1.1s						
WLAR	**White Oak Lake**	**52.49**	**340**	P	**P**	**21 48 44.9**	**-0.3**
U54A	**Nelsons Funny**	**52.58**	**352**	P	**P**	**21 48 45.5**	**-0.3**
	baz=171						
WHTX	**Lake Whitney,**	**52.59**	**335**	P	**P**	**21 48 46.0**	**+0.1**
	baz=152						
T59A	**Double "B" Far**	**52.61**	**356**	P	**P**	**21 48 46.5**	**+0.5**
	baz=176,SNR=8.6						
T58A	**Grand View Acr**	**52.65**	**355**	P	**P**	**21 48 46.5**	**+0.3**
	baz=175,SNR=5.7						
T60A	**Surry**	**52.73**	**357**	P	**P**	**21 48 47.8**	**+0.9**
	baz=177						
T57A	**Hurt**	**52.76**	**355**	P	**P**	**21 48 47.3**	**+0.2**
	baz=174,SNR=7.3						
TZTN	**Tazewell**	**52.85**	**350**	P	**P**	**21 48 46.0**	**-1.7**
TZTN				IAmb	IAmb	21 49 05.0	
	comp=Z,7.0nm,0.9s						
T56A	**Rocky Mt**	**52.87**	**354**	P	**P**	**21 48 48.1**	**+0.3**
	baz=173						
U49A	**Red Boiling Sp**	**53.22**	**348**	P	**P**	**21 48 49.3**	**-1.2**
TXAR	**Lajitas Array**	**53.25**	**327**	P	**P**	**21 48 50.4**	**-0.5**
	comp=Z,5.6nm,0.7s,baz=148,slow=9.0,SNR=54						
TXAR				LR	LR	22 12 07.8	
	comp=Z,100nm,18.9s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**53.25**	**327**	P	**P**	**21 48 50.7**	**-0.2**
TX31	**Lajitas Ar. Si**	**53.25**	**327**	P	**P**	**21 48 50.7**	**-0.2**
TX32	**Lajitas Array**	**53.25**	**327**	P	**P**	**21 48 50.5**	**-0.5**
TX32				IAmb	IAmb	21 48 51.9	
	comp=Z,14nm,1.1s						
S58A	**Poland Farm, P**	**53.28**	**356**	P	**P**	**21 48 51.3**	**+0.4**
	baz=175						
JSRW	**J. Sargeant Re**	**53.35**	**356**	P	**P**	**21 48 50.6**	**-0.8**
S59A	**Mechanicsville**	**53.38**	**357**	P	**P**	**21 48 52.2**	**+0.6**
	baz=176						
MIAR	**Mount Ida**	**53.43**	**340**	P	**P**	**21 48 51.5**	**-0.5**
	baz=157						
MIAR	**Mount Ida**	**53.43**	**340**	P	**P**	**21 48 51.4**	**-0.7**
MIAR				IAmb	IAmb	21 48 52.2	
	comp=Z,15nm,1.1s						
HBAR	**Harrisburg**	**53.48**	**343**	P	**P**	**21 48 49.6**	**-2.8**
S57A	**Dark Hollow, R**	**53.49**	**355**	P	**P**	**21 48 52.4**	**-0.1**
	baz=174						
T50A	**Nancy**	**53.54**	**349**	P	**P**	**21 48 52.1**	**-0.7**
W41B	**Gary Mavity, V**	**53.59**	**341**	P	**P**	**21 48 52.7**	**-0.5**
	baz=158						
R58B	**Mineral**	**53.62**	**356**	P	**P**	**21 48 53.8**	**+0.5**
	baz=176,SNR=8.5						
Z35A	**Perchaven, San**	**53.68**	**336**	P	**P**	**21 48 53.5**	**-0.4**
WHAR	**Wooly Hollow**	**53.71**	**341**	P	**P**	**21 48 53.9**	**-0.2**
WHAR				IAmb	IAmb	21 48 54.5	
	comp=Z,19nm,1.1s						
S54A	**Dingess, Beckl**	**53.77**	**353**	P	**P**	**21 48 54.1**	**-0.5**
	baz=172						
R59A	**King George, V**	**53.81**	**357**	P	**P**	**21 48 55.9**	**+1.1**
	baz=176						
CBN	**Corbin Frederi**	**53.83**	**357**	P	**P**	**21 48 55.3**	**+0.5**
	baz=176						
CBN	**Corbin Frederi**	**53.83**	**357**	P	**P**	**21 48 54.4**	**-0.4**
R58A	**Rapidan**	**53.96**	**356**	P	**P**	**21 48 56.2**	**+0.4**
	baz=175,SNR=5.6						
R57A	**Stanardsville**	**53.99**	**356**	P	**P**	**21 48 56.6**	**+0.5**
	baz=175						
ABTX	**Abilene, Hawle**	**54.06**	**333**	P	**P**	**21 48 56.6**	**-0.2**
	baz=149,SNR=20						
W39A	**Magazine**	**54.10**	**340**	P	**P**	**21 48 57.1**	**+0.2**
	baz=157						
LCAR	**Lake Charles**	**54.10**	**343**	P	**P**	**21 48 55.5**	**-1.4**
LCAR				IAmb	IAmb	21 48 56.8	
	comp=Z,14nm,1.1s						
R54A	**Victor**	**54.11**	**353**	P	**P**	**21 48 57.0**	**0.0**
	baz=172						
R55A	**Marlinton**	**54.12**	**354**	P	**P**	**21 48 57.4**	**+0.3**
	baz=173						
FCAR	**Ozark Folk Cen**	**54.21**	**342**	P	**P**	**21 48 55.2**	**-2.5**
PARMO	**Parma**	**54.27**	**344**	P	**P**	**21 48 56.8**	**-1.4**
Q58A	**Fox Den Farm,**	**54.58**	**356**	P	**P**	**21 49 01.4**	**+1.1**
	baz=176,SNR=8.3						
R50A	**Paris**	**54.68**	**350**	P	**P**	**21 48 58.9**	**-2.2**
Q57A	**Strasburg**	**54.72**	**356**	P	**P**	**21 49 02.2**	**+0.9**
	baz=175,SNR=7.0						
Q56A	**Snyder Ridge,**	**54.78**	**355**	P	**P**	**21 49 02.5**	**+0.6**
	baz=174,SNR=6.0						
Q53A	**Leroy**	**54.84**	**353**	P	**P**	**21 49 01.6**	**-0.6**
	baz=171						
U40A	**Yellville**	**54.87**	**341**	P	**P**	**21 49 02.0**	**-0.5**
	baz=158,SNR=6.4						
Q54A	**Coxs Mills**	**54.89**	**353**	P	**P**	**21 49 00.8**	**-1.7**
Q54A				IAmb	IAmb	21 49 19.3	
	comp=Z,16nm,1.0s						
WCI	**Wyandotte Cave**	**54.98**	**348**	P	**P**	**21 49 02.2**	**-1.1**
	baz=166						
WCI	**Wyandotte Cave**	**54.98**	**348**	P	**P**	**21 49 02.8**	**-0.5**
SDMD	**Soldier's Deli**	**55.00**	**357**	P	**P**	**21 49 02.7**	**-0.7**
SDMD				IAmb	IAmb	21 49 04.7	
	comp=Z,14nm,0.9s						
P58A	**Pank, Wackersv**	**55.10**	**357**	P	**P**	**21 49 04.8**	**+0.7**
	baz=176,SNR=8.7						
S44A	**Carbondale**	**55.12**	**345**	P	**P**	**21 49 03.4**	**-0.9**
S44A				IAmb	IAmb	21 49 04.3	
	comp=Z,17nm,0.9s						
P57A	**Homestead Farm**	**55.14**	**356**	P	**P**	**21 49 05.2**	**+0.9**
	baz=176						
HHAR	**Hobbs**	**55.14**	**340**	P	**P**	**21 49 03.6**	**-0.9**
HHAR				IAmb	IAmb	21 49 05.7	
	comp=Z,12nm,1.1s						
W35A	**Tecumseh**	**55.14**	**337**	P	**P**	**21 49 02.8**	**-1.8**
P59A	**Jarrettsville**	**55.18**	**358**	P	**P**	**21 49 05.3**	**+0.6**
	baz=177,SNR=7.6						
P56A	**Dayton Farm, R**	**55.22**	**355**	P	**P**	**21 49 05.7**	**+0.8**
	baz=174						
TUL1	**Leonard**	**55.43**	**339**	P	**P**	**21 49 06.5**	**0.0**
	baz=155,SNR=9.0						
MCWV	**Mont Chateau**	**55.45**	**355**	P	**P**	**21 49 07.0**	**+0.3**
	baz=173						
WUPA	**West Chester U**	**55.48**	**359**	P	**P**	**21 49 05.8**	**-1.0**
WUPA				IAmb	IAmb	21 49 08.2	
	comp=Z,6.9nm,1.0s						
WMOK	**Wichita Mounta**	**55.52**	**335**	P	**P**	**21 49 06.2**	**-1.1**
	baz=151						
WMOK	**Wichita Mounta**	**55.52**	**335**	P	**P**	**21 49 06.2**	**-1.1**
MVL	**Millersville**	**55.57**	**358**	P	**P**	**21 49 06.9**	**-0.5**
P52A	**Corning**	**55.68**	**352**	P	**P**	**21 49 06.8**	**-1.5**
	baz=171						
O58A	**Lewisberry**	**55.72**	**357**	P	**P**	**21 49 09.3**	**+0.7**
	baz=177,SNR=7.7						
O57A	**Amberson**	**55.84**	**357**	P	**P**	**21 49 09.9**	**+0.5**
	baz=176,SNR=11						
O56A	**Blue Knob Stat**	**55.96**	**356**	P	**P**	**21 49 10.6**	**+0.3**
	baz=175						
P49A	**Miami Univ. Ec**	**55.96**	**350**	P	**P**	**21 49 08.8**	**-1.5**
	baz=168						
CCM	**Cathedral Cave**	**55.98**	**344**	P	**P**	**21 49 09.7**	**-0.8**
	baz=160						
MNTX	**Cornudas Mount**	**56.02**	**328**	P	**P**	**21 49 10.1**	**-0.8**
	baz=143,SNR=9.4						
MNTX	**Cornudas Mount**	**56.02**	**328**	P	**P**	**21 49 10.1**	**-0.8**
MNTX				IAmb	IAmb	21 49 11.1	
	comp=Z,11nm,1.0s						
O53A	**New Philadelph**	**56.18**	**353**	P	**P**	**21 49 11.0**	**-0.8**
	baz=172						
SSPA	**Standing Stone**	**56.28**	**356**	P	**P**	**21 49 12.8**	**+0.2**
	baz=176						
SSPA	**Standing Stone**	**56.28**	**356**	P	**P**	**21 49 11.8**	**-0.7**
SSPA				IAmb	IAmb	21 49 13.3	
	comp=Z,11nm,0.8s						
N57A	**Milroy**	**56.38**	**357**	P	**P**	**21 49 13.3**	**+0.1**
	baz=176,SNR=5.7						
ACSO	**Alum Creek Sta**	**56.38**	**352**	P	**P**	**21 49 12.5**	**-0.8**
	baz=170,SNR=5.3						
N60A	**Cedar Hill Far**	**56.41**	**359**	P	**P**	**21 49 13.3**	**-0.1**
	baz=179						
N58A	**Sunbury**	**56.42**	**358**	P	**P**	**21 49 14.2**	**+0.7**
	baz=177,SNR=8.4						
N59A	**State Game Lan**	**56.47**	**358**	P	**P**	**21 49 14.5**	**+0.6**
	baz=178						
N56A	**West Decatur**	**56.58**	**356**	P	**P**	**21 49 14.8**	**+0.1**
	baz=175,SNR=7.4						
MSTX	**Muleshoe**	**56.59**	**331**	P	**P**	**21 49 15.1**	**0.0**
	baz=147						
N54A	**Moraine State**	**56.76**	**355**	P	**P**	**21 49 15.2**	**-0.8**
	baz=173						
M57A	**Sunshine Farm,**	**56.94**	**357**	P	**P**	**21 49 18.1**	**+0.9**
	baz=177,SNR=8.9						
M58A	**Price's Panora**	**56.94**	**358**	P	**P**	**21 49 18.0**	**+0.7**
	baz=177,SNR=7.2						
M63A	**Gales Ferry**	**56.96**	**2**	P	**P**	**21 49 18.2**	**+0.9**
	baz=182						
M59A	**Waymart**	**57.08**	**359**	P	**P**	**21 49 19.1**	**+0.9**
	baz=178,SNR=5.6						
HSIG		**57.11**	**321**	P	**P**	**21 49 18.1**	**-0.5**
HSIG				IAmb	IAmb	21 49 21.6	
	comp=Z,7.5nm,1.1s						
M56A	**Emporium**	**57.14**	**356**	P	**P**	**21 49 18.9**	**+0.2**
	baz=175,SNR=5.2						
SFIN	**Lafayette**	**57.22**	**348**	P	**P**	**21 49 17.1**	**-2.1**
	baz=165						
M54A	**Oil Creek Stat**	**57.27**	**355**	P	**P**	**21 49 19.4**	**-0.2**
	baz=174,SNR=7.8						
M53A	**WI Miller and**	**57.30**	**354**	P	**P**	**21 49 18.7**	**-1.0**
	baz=173						
L57A	**Andrews Acres**	**57.59**	**357**	P	**P**	**21 49 22.2**	**+0.4**
	baz=177						
L58A	**Harry Jones Me**	**57.59**	**358**	P	**P**	**21 49 22.8**	**+0.9**
	baz=178,SNR=9.0						
L59A	**Walton**	**57.72**	**359**	P	**P**	**21 49 23.5**	**+0.7**
	baz=179,SNR=6.0						
BINY	**Binghamton**	**57.75**	**358**	P	**P**	**21 49 23.7**	**+0.8**
	baz=178,SNR=6.0						
BINY	**Binghamton**	**57.75**	**358**	P	**P**	**21 49 22.4**	**-0.5**
L56A	**Greenwood**	**57.75**	**357**	P	**P**	**21 49 23.1**	**+0.1**
	baz=176						
ERPA	**Erie**	**57.91**	**355**	P	**P**	**21 49 23.6**	**-0.4**
	baz=173						
ERPA	**Erie**	**57.91**	**355**	P	**P**	**21 49 23.4**	**-0.6**
121A	**Cookes Peak, D**	**57.94**	**326**	P	**P**	**21 49 25.1**	**+0.4**
	baz=141,SNR=8.7						
K57A	**Scipio Center**	**58.30**	**358**	P	**P**	**21 49 26.5**	**-0.3**
	baz=177						
K56A	**Middlesex**	**58.30**	**357**	P	**P**	**21 49 26.6**	**-0.2**
	baz=176						
K59A	**Cooperstown**	**58.30**	**359**	P	**P**	**21 49 27.5**	**+0.6**
	baz=179						
K58A	**Earlville**	**58.31**	**359**	P	**P**	**21 49 27.2**	**+0.4**
	baz=178,SNR=5.8						
BNM	**Barren Site**	**58.60**	**328**	P	**P**	**21 49 28.4**	**-0.9**
J56A	**Wolcott**	**58.86**	**358**	P	**P**	**21 49 30.8**	**+0.2**
	baz=177						
J59A	**Piesco**	**58.99**	**360**	P	**P**	**21 49 32.0**	**+0.4**
	baz=180						
ANMO	**Albuquerque**	**59.15**	**329**	P	**P**	**21 49 33.1**	**0.0**
	baz=143						
ANMO	**Albuquerque**	**59.15**	**329**	P	**P**	**21 49 32.3**	**-0.7**
ANMO				IAmb	IAmb	21 49 34.2	
	comp=Z,12nm,1.1s						
TUC	**Tucson**	**59.42**	**324**	P	**P**	**21 49 34.6**	**-0.2**
	baz=138						
TUC	**Tucson**	**59.42**	**324**	P	**P**	**21 49 34.2**	**-0.7**
TUC				IAmb	IAmb	21 49 36.0	
	comp=Z,7.4nm,1.0s						
T25A	**Trinidad**	**59.96**	**332**	P	**P**	**21 49 38.5**	**-0.1**
	baz=146,SNR=9.4						
H53A	**Bobcaygeon**	**60.24**	**356**	P	**P**	**21 49 39.7**	**-0.5**
	baz=175						
214A	**Organ Pipe Nat**	**60.34**	**322**	P	**P**	**21 49 41.7**	**+0.6**
	baz=136,SNR=7.6						
G62A	**West of Eustis**	**60.82**	**3**	P	**P**	**21 49 45.0**	**+0.9**
	baz=184,SNR=5.6						
G61A	**St-Isidore-de-**	**60.85**	**2**	P	**P**	**21 49 44.9**	**+0.6**
	baz=183						
PKME	**Peaks-Kenny Pk**	**60.94**	**4**	P	**P**	**21 49 45.5**	**+0.7**
	baz=185						
SDCO	**Great Sand Dun**	**60.95**	**332**	P	**P**	**21 49 45.8**	**+0.3**
	baz=145,SNR=40						
SDCO	**Great Sand Dun**	**60.95**	**332**	P	**P**	**21 49 44.8**	**-0.7**
W18A	**Petrified Fore**	**60.96**	**327**	P	**P**	**21 49 45.8**	**+0.3**
	baz=140						
G65A	**Princeton**	**61.01**	**5**	P	**P**	**21 49 45.9**	**+0.6**
	baz=187						
G54A	**Lake Saint Pet**	**61.03**	**357**	P	**P**	**21 49 44.8**	**-0.7**
	baz=176,SNR=5.5						
S22A	**4UR Ranch, Cre**	**61.57**	**331**	P	**P**	**21 49 50.1**	**+0.4**
	baz=144,SNR=9.6						
ALGO	**Algonquin Park**	**61.59**	**357**	P	**P**	**21 49 48.7**	**-0.5**
	baz=176						
F64A	**Sherman**	**61.60**	**4**	P	**P**	**21 49 49.9**	**+0.6**
	baz=186						
Q24A	**Divide**	**61.80**	**333**	P	**P**	**21 49 51.2**	**0.0**
	baz=146						
MVCO	**Mesa Verde**	**61.95**	**329**	P	**P**	**21 49 52.3**	**+0.1**
	baz=142,SNR=6.7						
MVCO	**Mesa Verde**	**61.95**	**329**	P	**P**	**21 49 51.5**	**-0.7**
MVCO				IAmb	IAmb	21 49 54.0	
	comp=Z,6.3nm,1.1s						
E61A	**Lac Etchemin**	**62.04**	**3**	P	**P**	**21 49 52.7**	**+0.4**
	baz=184						
E56A	**St. Veronique**	**62.07**	**359**	P	**P**	**21 49 52.5**	**0.0**
	baz=179						
WUAZ	**Wupatki**	**62.13**	**326**	P	**P**	**21 49 54.2**	**+0.8**
	baz=139,SNR=11						
WUAZ	**Wupatki**	**62.13**	**326**	P	**P**	**21 49 52.7**	**-0.7**
D55A	**Sainte-Anne-du**	**62.56**	**359**	P	**P**	**21 49 55.3**	**-0.4**
	baz=179						
D58A	**Chemin du LacG**	**62.63**	**1**	P	**P**	**21 49 56.4**	**+0.2**
	baz=181						
ISCO	**Idaho Springs**	**62.69**	**333**	P	**P**	**21 49 57.2**	**+0.1**
	baz=146						
ISCO	**Idaho Springs**	**62.69**	**333**	P	**P**	**21 49 56.4**	**-0.7**
D62A	**Allapoint, All**	**62.76**	**4**	P	**P**	**21 49 57.2**	**+0.2**
	baz=186						
ECSD	**EROS Data Cent**	**62.77**	**342**	P	**P**	**21 49 56.2**	**-1.1**
	baz=156,SNR=12						
ECSD	**EROS Data Cent**	**62.77**	**342**	P	**P**	**21 49 56.8**	**-0.5**
ECSD				IAmb	IAmb	21 49 58.8	
	comp=Z,7.4nm,1.1s						
SMCO	**Snowmass**	**62.79**	**332**	P	**P**	**21 49 57.0**	**-0.9**
SMCO				IAmb	IAmb	21 50 01.9	
	comp=Z,7.3nm,1.0s						
BC3	**Big Chuckawall**	**63.10**	**322**	P	**P**	**21 50 00.6**	**+0.8**
	baz=135						
SPMN	**Marine on St.**	**63.11**	**345**	P	**P**	**21 49 58.8**	**-0.6**
	baz=160,SNR=5.9						
IRM	**Iron Mountain**	**63.27**	**322**	P	**P**	**21 50 01.8**	**+0.9**
	baz=135,SNR=6.7						
BELC	**Belle Mtn. Jos**	**63.67**	**322**	P	**P**	**21 50 04.9**	**+1.3**
	baz=134						
PFO	**Pinyon Flats O**	**63.68**	**321**	P	**P**	**21 50 04.8**	**+1.2**
	baz=134,SNR=7.2						
PFO	**Pinyon Flats O**	**63.68**	**321**	P	**P**	**21 50 03.0**	**-0.6**
PFO				IAmb	IAmb	21 50 05.6	
	comp=Z,19nm,1.1s						
GMRC	**Granite Mounta**	**64.02**	**323**	P	**P**	**21 50 06.6**	**+0.8**
	baz=135						
KNB	**Kanab**	**64.03**	**326**	P	**P**	**21 50 05.3**	**-0.6**
PKCU	**Pink Cliffs**	**64.08**	**327**	P	**P**	**21 50 05.5**	**-0.9**
MURC	**Murrieta**	**64.12**	**321**	P	**P**	**21 50 08.0**	**+1.6**
	baz=133						
O20A	**White River Ci**	**64.14**	**331**	P	**P**	**21 50 07.1**	**+0.5**
	baz=143,SNR=5.3						
HEC	**Hector,Ludlow**	**64.44**	**322**	P	**P**	**21 50 09.6**	**+1.0**
	baz=134						
MTPU	**Mount Pierson**	**64.46**	**327**	P	**P**	**21 50 08.0**	**-0.9**
LSQQ	**Lebel-sur-Quev**	**64.64**	**358**	P	**P**	**21 50 08.7**	**-0.7**
	baz=177						
CCUT	**Cedar City**	**64.72**	**326**	P	**P**	**21 50 09.7**	**-0.7**
TAOE	**Nuku Hiva Isla**	**64.78**	**268**	*e*LR	LR	22 09 30.5	
	comp=Z,375nm,28.4s						
MSU	**Marysvale**	**64.81**	**328**	P	**P**	**21 50 10.4**	**-0.6**
GSC	**Goldstone, Bar**	**65.05**	**322**	P	**P**	**21 50 13.6**	**+1.1**
	baz=134						
GSC	**Goldstone, Bar**	**65.05**	**322**	P	**P**	**21 50 12.1**	**-0.4**
RDMU	**Red Mountain**	**65.10**	**331**	P	**P**	**21 50 12.2**	**-0.7**
MATQ	**Matagami**	**65.36**	**357**	P	**P**	**21 50 13.6**	**-0.5**
	baz=176,SNR=8.1						
EYMN	**Ely**	**65.37**	**347**	P	**P**	**21 50 13.2**	**-1.0**
	baz=162,SNR=7.1						
EYMN	**Ely**	**65.37**	**347**	P	**P**	**21 50 13.5**	**-0.7**
K22A	**Casper**	**65.42**	**334**	P	**P**	**21 50 14.0**	**-0.8**
	baz=146						
EDW2	**Edwards Air Fo**	**65.47**	**321**	P	**P**	**21 50 15.6**	**+0.4**
	baz=133,SNR=5.4						
MPU	**Maple Canyon**	**65.67**	**329**	P	**P**	**21 50 15.9**	**-0.6**
LRMC	**Laurel Mtn Rad**	**65.69**	**322**	P	**P**	**21 50 17.0**	**+0.3**
	baz=134						
PSUT	**Pine Spring**	**65.70**	**327**	P	**P**	**21 50 16.1**	**-0.7**
TPNV	**Topopah Spring**	**65.88**	**324**	P	**P**	**21 50 19.1**	**+1.2**
	baz=135,SNR=8.0						
TPNV	**Topopah Spring**	**65.88**	**324**	P	**P**	**21 50 17.2**	**-0.7**
TPNV				IAmb	IAmb	21 50 19.5	
	comp=Z,7.9nm,1.1s						
FURC	**Furnace Creek,**	**65.89**	**323**	P	**P**	**21 50 18.8**	**+1.1**
	baz=134,SNR=6.0						
MPMC	**Manual Prospec**	**65.97**	**322**	P	**P**	**21 50 19.1**	**+0.5**
	baz=134						
ISA	**Isabella, Lake**	**66.29**	**321**	P	**P**	**21 50 21.5**	**+1.0**
	baz=133,SNR=5.2						
ISA	**Isabella, Lake**	**66.29**	**321**	P	**P**	**21 50 19.8**	**-0.6**
DUG	**Dugway, Tooele**	**66.40**	**328**	P	**P**	**21 50 21.8**	**+0.6**
	baz=139,SNR=16						
DUG	**Dugway, Tooele**	**66.40**	**328**	P	**P**	**21 50 20.5**	**-0.7**
DUG				IAmb	IAmb	21 50 23.0	
	comp=Z,19nm,1.1s						
R11A	**Troy Canyon, C**	**66.50**	**325**	P	**P**	**21 50 22.9**	**+0.9**
	baz=136,SNR=9.7						
CWC	**Cottonwood Cre**	**66.58**	**322**	P	**P**	**21 50 22.9**	**+0.4**
	baz=134						
PKM	**Mcpherson Peak**	**66.59**	**320**	P	**P**	**21 50 23.7**	**+1.1**

	baz=132						
AGMN	Agassiz Nation	66.74	344	P	P	21 50 22.4	-0.5
	baz=157						
VES	Vestal, Richgr	66.78	321	P	P	21 50 24.2	+0.8
	baz=132						
BW06	Boulder Array	66.83	332	P	P	21 50 23.2	-0.8
	baz=143						
PDAR	Pinedale Array	66.83	332	P	P	21 50 23.4	-0.6
	comp=Z,1.0nm,0.9s,baz=160,slow=4.7,SNR=6.9						
PDAR				pP	pP	21 50 40.0	+0.5
	comp=Z,0.6nm,0.6s,baz=152,slow=6.7,SNR=5.0						
PDAR				LR	LR	22 22 53.2	
	comp=Z,115nm,18.1s,baz=81,slow=39						
PDAR	Pinedale Array	66.83	332	P	P	21 50 23.3	-0.7
VNA3	Neumayer Olymp	66.97	162	P	P	21 50 25.6	+1.4
VNA1	Neumayer--Stat	67.22	161	P	P	21 50 26.5	+0.7
MDND	Maddock	67.39	342	P	P	21 50 27.6	+0.5
	baz=154						
VNA2	Neumayer--Watz	67.58	161	P	P	21 50 29.1	+1.0
	baz=292,slow=6.3						
NVAR	Mina Array Bea	68.08	324	P	P	21 50 32.6	+0.6
	comp=Z,2.8nm,1.0s,baz=144,slow=5.9,SNR=15						
NVAR				pP	pP	21 50 48.2	+0.6
	comp=Z,0.6nm,0.6s,baz=161,slow=7.4,SNR=4.0						
NVAR				LR	LR	22 18 41.8	
	comp=Z,73nm,18.7s,baz=37,slow=34						
NVAR	Mina Array Bea	68.08	324	P	P	21 50 31.3	-0.7
ULM	Lac du Bonnet	68.54	345	P	P	21 50 33.1	-1.1
	comp=Z,9.0nm,0.6s,baz=160,slow=5.7,SNR=26						
ULM				LR	LR	22 22 57.2	
	comp=Z,200nm,18.4s,baz=96,slow=38						
ULM	Lac du Bonnet	68.54	345	P	P	21 50 33.2	-1.1
ULM				IAmb	IAmb	21 50 34.3	
	comp=Z,23nm,1.1s						
RLMT	Red Lodge	68.58	334	P	P	21 50 35.0	+0.1
	baz=144						
RLMT	Red Lodge	68.58	334	P	P	21 50 34.4	-0.6
YHH	Holmes Hill	69.00	333	P	P	21 50 36.9	-0.7
SNAA	Sanae	69.19	161	P	P	21 50 39.2	+1.0
DGMT	Dagmar	69.42	339	P	P	21 50 40.2	+0.4
	baz=149						
HLID	Hailey	69.71	330	P	P	21 50 42.7	+0.8
	baz=139,SNR=5.7						
HLID	Hailey	69.71	330	P	P	21 50 41.3	-0.6
MCMT	McKenzie Canyo	69.93	332	P	P	21 50 42.6	-0.7
AFDM	Forest Hills D	69.96	323	P	P	21 50 43.0	-0.4
BOZ	Bozeman (W)	69.98	333	P	P	21 50 43.7	+0.3
	baz=142						
MFID	Camas Ranch	70.29	329	P	P	21 50 44.9	-0.5
MFID				IAmb	IAmb	21 50 47.3	
	comp=Z,16nm,1.1s						
MEH	Mehetia	70.47	256	*e*T	T	23 06 56.5	
	comp=Z,5.6nm,0.2s						
TBI	Tubuai	70.80	250	*e*T	T	23 07 37.2	
	comp=Z,7.9nm,0.2s						
O03E	Paynes Creek	71.33	323	P	P	21 50 52.0	+0.2
	baz=132						
TVO	Taravao	71.60	256	*e*T	T	23 08 21.1	
	comp=Z,1.8nm,0.3s						
LIC	Lamto	71.69	78	*e*P	P	21 50 53.8	-0.5
	comp=Z,0.9nm,0.2s						
TIAR	Tiarei	71.73	256	*e*T	T	23 08 30.5	
	comp=Z,1.7nm,0.2s						
TIC	Toumodi	71.83	77	*e*P	P	21 50 54.6	-0.6
PPT2	Papeete2	71.94	256	*e*LR	LR	22 12 46.5	
	comp=Z,197nm,26.0s						
MSO	Missoula	71.95	332	P	P	21 50 56.4	+1.0
	baz=140						
DBIC	Dimbokro	71.99	77	P	P	21 50 55.9	-0.3
	comp=Z,14nm,0.8s,baz=233,slow=6.2,SNR=21						
DBIC				LR	LR	22 21 37.0	
	comp=Z,177nm,19.3s,baz=232,slow=35						
DBIC	Dimbokro	71.99	77	P	P	21 50 54.9	-1.3
DBIC				IAmb	IAmb	21 50 56.8	
	comp=Z,17nm,0.9s						
KIC	Kosan Boka	72.00	78	*e*P	P	21 50 55.4	-0.8
	comp=Z,39nm,0.7s						
BMO	Blue Mountains	72.07	329	P	P	21 50 55.6	-0.5
M04C	Macdoel	72.34	324	P	P	21 50 58.3	+0.5
	baz=132						
I07A	Izee	72.64	327	P	P	21 50 59.0	-0.5
F10A	Beach Ranch, E	72.84	330	P	P	21 51 00.2	-0.5
J05D	Fort Rock, OR	73.01	326	P	P	21 51 02.9	+1.1
	baz=133						
J04D	Umpqua Nationa	73.45	325	P	P	21 51 05.5	+1.0
	baz=132						
L02E	Cave Junction	73.58	324	P	P	21 51 05.3	+0.3
	baz=130						
I05D	Terrebonne, OR	73.77	327	P	P	21 51 07.2	+1.1
	baz=133						
K02D	Willamette Mer	73.96	324	P	P	21 51 08.1	+0.8
	baz=131						
HAWA	Hanford	74.26	329	P	P	21 51 08.2	-0.7
HAWA				IAmb	IAmb	21 51 10.7	
	comp=Z,8.8nm,1.1s						
G05D	Wamic, OR	74.37	327	P	P	21 51 11.0	+1.4
	baz=133						
E07A	Sunnyside	74.54	329	P	P	21 51 09.8	-0.8
KOWA	Kowa	75.42	70	P	P	21 51 14.9	-1.3
KOWA				IAmb	IAmb	21 51 17.4	
	comp=Z,17nm,0.7s						
FCC	Fort Churchill	76.11	349	P	P	21 51 18.7	-0.5
B05A	Bryant	76.82	329	P	P	21 51 23.5	+0.1
	baz=133						
D03D	Eldon	76.82	328	P	P	21 51 24.3	+0.8
	baz=132						
TOA0	Torodi Ar. Sit	80.18	73	P	P	21 51 41.4	-1.4
TORD	Torodi Ar. Bea	80.18	73	P	P	21 51 42.9	+0.1
	comp=Z,28nm,0.8s,baz=260,slow=5.3,SNR=91						
TORD				LR	LR	22 25 02.1	
	comp=Z,123nm,21.6s,baz=340,slow=34						
TORD	Torodi Ar. Bea	80.18	73	P	P	21 51 41.5	-1.2
MORF	Marmelete	80.99	47	*e*P	P	21 51 48.8	+2.2
	comp=Z,52nm,1.5s						
PTEO	Sao Teotonio	81.05	47	*e*P	P	21 51 49.0	+2.1
PNCL	Nicolau / Gran	81.44	47	*e*P	P	21 51 51.0	+2.0
MESJ	Messejana	81.54	47	*e*P	P	21 51 51.1	+1.6
VNDA	Vanda	81.56	190	P	P	21 51 50.6	+1.7
	comp=Z,1.8nm,1.0s,baz=129,slow=5.3,SNR=6.6						
VNDA				LR	LR	22 20 33.8	
	comp=Z,137nm,20.9s,baz=156,slow=30						
PCVE	Castro Verde	81.57	47	*e*P	P	21 51 51.5	+1.8
	comp=Z,28nm,1.0s						
MDT	Midelt	82.00	53	LR	LR	22 28 08.1	
	comp=Z,107nm,18.5s,baz=310,slow=36						
EVO	Evora	82.00	46	*e*P	P	21 51 53.4	+1.5
PMRV	Marv??o	82.84	46	*e*P	P	21 51 57.6	+1.3
PCBR	Castelo Branco	82.97	45	*e*P	P	21 51 57.9	+1.0
MTE	Manteigas	83.18	45	*e*P	P	21 51 59.1	+1.0
	comp=Z,34nm,1.5s						
POLO	Lamas de Olo	83.46	44	*e*P	P	21 52 00.6	+1.1
	comp=Z,14nm,1.4s						
SYO	Syowa Base	83.46	161	⇑*e*PcP	PcP	21 52 01.3	-1.9
SYO	Syowa Base	83.46	161	⇑*e*pP	pP	21 52 10.2	-4.5
MVO	Moncorvo	83.87	44	*e*P	P	21 52 02.8	+1.1
YKA	Yellowknife Ar	84.29	342	P	P	21 52 02.2	-0.9
	comp=Z,5.7nm,0.9s,baz=135,slow=5.6,SNR=81						
YKA				pP	pP	21 52 18.9	-0.4
	comp=Z,3.2nm,0.8s,baz=135,slow=5.7,SNR=7.8						
PAB	San Pablo	85.01	47	P	P	21 52 06.5	-1.0
ESDC	Sonseca Array	85.33	47	P	P	21 52 10.0	+1.0
	comp=Z,9.4nm,1.0s,baz=252,slow=5.3,SNR=40						
ESDC	Sonseca Array	85.33	47	P	P	21 52 07.9	-1.1
ESBB	Sonseca Array	85.33	47	P	P	21 52 08.0	-1.1
ESBB				IAmb	IAmb	21 52 10.7	
	comp=Z,7.1nm,1.0s						
BORG	Borgarnes	89.67	20	LR	LR	22 30 48.9	
	comp=Z,170nm,18.9s,baz=126,slow=34						
BOSA	Boshof	90.41	120	P	P	21 52 33.9	+0.1
	comp=Z,4.4nm,1.1s,baz=192,slow=4.0,SNR=3.6						
BOSA				LR	LR	22 30 45.7	
	comp=Z,39nm,18.6s,baz=228,slow=34						
BOSA	Boshof	90.41	120	P	P	21 52 32.7	-1.1
BOSA				IAmb	IAmb	21 52 35.2	
	comp=Z,4.4nm,0.9s						
MAW	Mawson	91.09	165	LR	LR	22 31 11.6	
	comp=Z,106nm,21.1s,baz=238,slow=34						
SUMG	Summit	91.28	10	*i* P	P	21 52 37.6	+0.6
SUMG				*i*		21 52 56.9	
SUMG	Summit	91.28	10	*i* P	P	21 52 37.7	+0.6
SUMG				*i*		21 52 56.9	
KEST	Kesra	93.83	54	LR	LR	22 35 16.6	
	comp=Z,94nm,19.4s,baz=238,slow=36						
INK	Inuvik	94.01	341	P	P	21 52 49.0	-0.2
INK				IAmb	IAmb	21 52 49.6	
	comp=Z,6.7nm,1.1s						
ILAR	Eielson Array	97.08	336	P	Pdif	21 53 04.2	+0.7
	comp=Z,0.4nm,0.9s,baz=145,slow=3.2,SNR=4.3						
ILAR				PP	PP	21 56 56.1	-3.9
	comp=Z,0.5nm,0.9s,baz=109,slow=5.3,SNR=5.0						
ILAR				LR	LR	22 40 15.4	
	comp=Z,52nm,21.4s,baz=92,slow=38						
DAVOX	Davos/Dischmat	97.25	44	LR	LR	22 32 23.2	
	comp=Z,37nm,19.6s,baz=259,slow=33						
POKR	Poker Plat Res	97.43	336	P	P	21 53 04.4	-0.5
	baz=112						
GERES	GERESS Array B	100.24	42	P	Pdif	21 53 18.0	0.0
	comp=Z,0.5nm,0.6s,baz=243,slow=1.1,SNR=2.6						
CLL	Collm	100.33	40	*e*Pdif	Pdif	21 53 22.0	+3.8
DZM	Mont Dzumac	109.83	239	*e*LR	LR	22 30 19.4	
	comp=Z,244nm,26.4s						
AKASG	Malin Array Be	110.43	41	PP	PP	21 58 36.0	-3.8
	comp=Z,0.1nm,0.3s,baz=262,slow=7.1,SNR=4.3						
KBZ	Khabaz	120.15	48	PKP	PKiKP	21 58 23.1	+0.5
	comp=Z,2.9nm,0.9s,baz=222,slow=1.8,SNR=6.1						
H11N3	WAKE ISLAND Hy	122.12	284	T	T	00 12 20.5	
	baz=97,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	122.14	284	T	T	00 12 15.4	
	baz=97,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	122.14	284	T	T	00 12 15.4	
	baz=97,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	122.17	282	T	T	00 12 47.3	
	baz=98,slow=75,SNR=97						
H11S1	WAKE ISLAND Hy	122.17	282	T	T	00 12 28.6	
	baz=98,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	122.18	282	T	T	00 12 20.8	
	baz=98,slow=75,SNR=96						
ABKAR	Akbulak array	129.96	38	PKPdf	PKPdf	21 58 40.5	-0.6
ASAR	Alice Springs	132.21	215	PKP	PKPdf	21 58 46.2	-0.1
	comp=Z,1.3nm,0.7s,baz=130,slow=1.7,SNR=14						
ASAR				pPKP	pPKPdf	21 59 02.5	-0.2
	comp=Z,1.3nm,0.7s,baz=126,slow=1.7,SNR=4.9						
ASAR	Alice Springs	132.21	215	PKPdf	PKPdf	21 58 42.9	-3.4
WRA	Warramunga Arr	134.85	219	PKP	PKPdf	21 58 51.3	0.0
	comp=Z,2.3nm,0.7s,baz=134,slow=1.7,SNR=15						
WRA				pPKP	pPKPdf	21 59 08.1	+0.4
	comp=Z,2.1nm,0.6s,baz=145,slow=1.9,SNR=5.9						
ZAA0	Zalesovo Array	138.51	19	PKPdf	PKPdf	21 58 56.6	-0.3
ZALV	Zalesovo Beam	138.51	19	PKP	PKPdf	21 58 57.5	+0.5
	comp=Z,12nm,1.0s,baz=300,slow=2.9,SNR=27						
ZALV	Zalesovo Beam	138.51	19	PKPdf	PKPdf	21 58 56.6	-0.4
KURK	Kurchatov	138.81	26	PKPdf	PKPdf	21 58 57.0	-0.7
IUG	Iuzhnay	139.50	42	*e*PKP	PKPdf	21 58 57.5	-1.9
	baz=42						
MAKZ	Makanchi	143.21	28	PKPdf	PKPbc	21 59 03.3	+0.5
MK31	Makanchi Array	143.36	28	PKPdf	PKPbc	21 59 03.7	+0.5
MKAR	Makanchi Array	143.36	28	PKhKP	PKPpre	21 59 02.8	
	comp=Z,2.4nm,0.8s,baz=336,slow=2.7,SNR=27						
MKAR	Makanchi Array	143.36	28	PKPdf	PKPbc	21 59 03.5	+0.3
ZSN	Zaisan	143.93	25	*e*PKP	PKPbc	21 59 04.7	-0.1
	baz=24						
KPKS	Kokpek	143.94	35	*e*PKP	PKPbc	21 59 05.7	+0.5
	comp=Z,26nm,1.0s,baz=34						
SATY	Saty	144.05	35	*e*PKP	PKPbc	21 59 05.9	+0.4
	comp=Z,11nm,1.2s,baz=35						
USRK	Ussuriysk Ar.	144.15	327	PKP	PKPab	21 59 04.9	-0.2
	comp=Z,4.7nm,0.9s,baz=93,slow=2.9,SNR=5.1						
USRK	Ussuriysk Ar.	144.15	327		PKPab	21 59 05.1	-0.1
SHLS	Shalkode	144.57	34	*e*PKP	PKPab	21 59 06.9	-0.1
	comp=Z,28nm,1.1s,baz=34						
KSH	Kashi	144.72	42	PKP	PKPdf	21 59 09.2	+0.4
KSH				pPKP	pPKPdf	21 59 21.9	-3.6
KSH				PP	PP	22 02 30.8	+5.0
MJAR	Matsushiro Arr	144.74	312	PKP	PKPab	21 59 06.7	-1.0
	comp=Z,6.1nm,1.0s,baz=142,slow=1.0,SNR=8.2						
ULN	Ulaanbaatar	148.03	359	PKPdf	PKPdf	21 59 13.2	-1.0
WMQ	Urumqi	148.04	25	*e*PKPbc	PKPdf	21 59 12.5	-1.7
SONM	Songino Array	148.07	359	PKP	PKPdf	21 59 14.8	+0.6
	comp=Z,8.3nm,0.9s,baz=315,slow=0.6,SNR=23						
SONM				PKPbc	PKPbc	21 59 17.3	0.0
	comp=Z,8.3nm,0.9s,baz=332,slow=1.8,SNR=26						
SONM	Songino Array	148.07	359		PKPdf	21 59 13.2	-0.9
KSRS	Korea Array	151.01	322	PKPbc	PKPbc	21 59 24.9	+0.2
	comp=Z,7.1nm,1.0s,baz=336,slow=1.0,SNR=13						
KSRS				pPKPbc	sPKPdf	21 59 41.9	+0.4
	comp=Z,4.6nm,0.9s,baz=326,slow=1.2,SNR=5.0						
HHC	Hu-ho-hao-te	154.59	350	*e*PKPbc	PKPdf	21 59 25.5	+1.2
GTA	Gaotai	155.88	12	⇑PKP	PKPdf	21 59 27.2	+1.1
GTA				pPKP	pPKPdf	21 59 42.9	0.0
GTA				sPKP		21 59 49.5	
GTA				LR	LR		
	comp=Z,140nm,18.9s						
GTA				LR	LR		
	comp=Z,140nm,18.5s						
GTA				LR	LR		
	comp=Z,240nm,19.3s						
LZH	Lanzhou	159.72	5	⇑PKP	PKPdf	21 59 32.4	+1.4
LZH				pPKP	pPKPdf	21 59 43.4	-4.4
LZH				sPKP		21 59 46.8	
LZH				LR	LR		
	comp=Z,83nm,18.0s						
LZH				LR	LR		
	comp=Z,100nm,19.1s						
LZH				LR	LR		
	comp=Z,140nm,21.2s						
NJ2	Nanjing	160.05	326	*e*PKP	PKPdf	21 59 30.2	-1.0
XAN	Xi'an	161.66	352	PKP	PKPdf	21 59 33.9	+0.9
CMAR	Chiang Mai Arr	172.76	68	PKP	PKPdf	21 59 41.8	+0.3
	comp=Z,1.6nm,1.1s,baz=330,slow=3.4,SNR=5.6						
CMAR				PKPab	PKPab	22 01 08.1	+0.4
	comp=Z,2.6nm,1.0s,baz=297,slow=5.8,SNR=11						

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*IDC **11** 21:57:12.5±1.0, 87°.15N×50°.02E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/46, mbtmp3.6/12, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/41, Error ellipse: s-maj=37.5km s-min=15.9km az=106.0*

*NEIC **11** 21:57:13.9±1.1, 87°.09N±0°.07×4°7E±°, h15^{km}±4^{km}, mb4.0/2, Error ellipse: s-maj=15.8km s-min=10.2km az=72.0*

ISC 11 21:57:14.1±0.8, 87°.09N±0°.08×46°.3E±0°.1, h10^{km}, n20, σ1ˢ.42/22, mb3.5/10, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	8.88	225	Pn	Pn	21 59 22.2	+0.1
KBS				Sn	Sn	22 01 00.1	-2.0
SPA0	Spitsbergen Ar	9.47	219	Pn	Pn	21 59 30.7	+0.4
SPITS	Spitsbergen Ar	9.47	219	Pn	Pn	21 59 29.6	-0.6
	baz=29,slow=9.1,SNR=32						
SPITS				Sn	Sn	22 01 13.4	-3.2
	baz=50,slow=23,SNR=1.4						
EUNU	Eureka	12.19	323	Pn	Pn	22 00 07.2	-0.2
ARCES	ARCESS Array B	17.88	204	P	P	22 01 23.1	0.0
	baz=5.7,slow=10.0,SNR=3.7						
ARCES	ARCESS Array B	17.88	204		Pn	22 01 22.1	-0.3
ARCES				IAmb	IAmb	22 01 24.8	
	comp=Z,14nm,1.2s						
INK	Inuvik	24.76	360	P	P	22 02 34.8	-0.4
	comp=Z,0.8nm,0.7s,baz=14,slow=4.3,SNR=2.5						
INK				LR	LR	22 13 43.2	
	comp=Z,83nm,19.4s,baz=354,slow=40						
FINES	FINESS Array B	25.99	202	P	P	22 02 48.5	+2.1
	comp=Z,4.6nm,1.1s,baz=30,slow=11,SNR=1.7						
FINES	FINESS Array B	25.99	202	P	P	22 02 45.5	-0.9
NOA	NORSAR Array B	26.77	218	P	P	22 02 55.9	+2.3
	comp=Z,0.7nm,0.7s,baz=2.6,slow=8.5,SNR=2.0						
ILAR	Eielson Array	28.24	12	P	P	22 03 05.0	-1.6
	comp=Z,0.7nm,1.1s,baz=354,slow=7.7,SNR=4.4						
YKA	Yellowknife Ar	30.45	343	P	P	22 03 26.4	+0.3
	comp=Z,0.3nm,0.7s,baz=16,slow=7.7,SNR=5.7						
GERES	GERESS Array B	38.90	215	P	P	22 04 41.1	+1.8
	comp=Z,0.5nm,0.7s,baz=2.1,slow=7.9,SNR=2.2						
MKAR	Makanchi Array	41.05	142	P	P	22 04 56.5	-0.6
	comp=Z,0.7nm,1.0s,baz=34,slow=5.4,SNR=3.5						
MKAR	Makanchi Array	41.05	142	P	P	22 04 56.1	-1.0
ESDC	Sonseca Array	48.68	232	P	P	22 06 00.1	+2.1
	comp=Z,0.3nm,0.6s,baz=355,slow=6.4,SNR=2.3						
TXAR	Lajitas Array	63.38	331	P	P	22 07 43.3	+0.1
	comp=Z,0.3nm,0.6s,baz=31,slow=5.4,SNR=4.7						
TXAR	Lajitas Array	63.38	331	P	P	22 07 42.2	-1.1
TORD	Torodi Ar. Bea	74.86	225	P	P	22 08 54.7	+0.3
	comp=Z,1.1nm,0.8s,baz=0.1,slow=6.5,SNR=3.8						
TORD	Torodi Ar. Bea	74.86	225	P	P	22 08 54.1	-0.3
TORD				IAmb	IAmb	22 08 56.2	
	comp=Z,1.8nm,1.1s						

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*IDC **11** 21:57:48.5±0.8, 87°.00N×55°.29E, h0^{km}, mb3.7/10, mb1 3.9/12, mb1mx3.7/46, mbtmp3.7/12, ML3.4/2, Error ellipse: s-maj=31.2km s-min=16.0km az=102.0*

ISC 11 21:57:50.2±0.8, 86°.96N±0°.10×52°.0E±0°.1, h10^{km}, n12, σ1ˢ.66/13, mb3.8/10, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPITS	Spitsbergen Ar	9.58	226	Pn	Pn	22 00 08.8	+1.0
	baz=20,slow=19,SNR=1.8						
SPITS				Sn	Sn	22 01 51.5	-3.8
	baz=45,slow=25,SNR=1.6						
ARCES	ARCESS Array B	17.91	211	P	Pn	22 01 58.8	0.0
	baz=12,slow=13,SNR=1.1						
INK	Inuvik	24.87	5	P	P	22 03 11.4	-0.8
	2.2nm,0.9s,baz=8.1,slow=7.1,SNR=3.9						
FINES	FINESS Array B	26.00	209	P	P	22 03 23.2	+0.6
	3.2nm,0.9s,baz=358,slow=7.0,SNR=1.6						
ILAR	Eielson Array	28.29	17	P	P	22 03 42.5	-0.6
	0.8nm,0.9s,baz=354,slow=6.9,SNR=4.2						
YKA	Yellowknife Ar	30.65	348	P	P	22 04 03.0	-1.0
	0.5nm,0.8s,baz=6.0,slow=8.4,SNR=6.3						
GERES	GERESS Array B	38.98	221	P	P	22 05 18.4	+2.3
	0.6nm,0.6s,baz=356,slow=5.9,SNR=1.8						
MKAR	Makanchi Array	40.78	148	P	P	22 05 31.0	0.0
	0.5nm,0.9s,baz=27,slow=6.6,SNR=4.1						
NVAR	Mina Array Bea	54.77	351	P	P	22 07 20.8	+1.0
	0.9nm,1.0s,baz=13,slow=4.2,SNR=3.7						
TXAR	Lajitas Array	63.62	336	P	P	22 08 20.6	-0.3
	0.6nm,0.8s,baz=4.8,slow=3.5,SNR=5.4						
CMAR	Chiang Mai Arr	69.58	132	P	P	22 08 57.3	-1.6
	0.9nm,0.8s,baz=353,slow=6.7,SNR=1.8						
TORD	Torodi Ar. Bea	75.00	231	P	P	22 09 32.3	+0.9
	1.0nm,0.9s,baz=20,slow=4.6,SNR=2.5						

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*IDC **11** 21:58:18.2±1.3, 87°.04N×56°.26E, h0^{km}, mb3.7/5, mb1 4.0/7, mb1mx3.6/46, mbtmp3.8/7, ML3.2/2, MS3.4/2, Ms1 3.5/2, ms1mx2.8/49, Error ellipse: s-maj=32.7km s-min=30.2km az=81.0*

ISC 11 21:58:20.5±1.1, 86°.9N±0°.2×53°.0E±0°.1, h10^{km}, n8, σ2ˢ.13/8, mb3.9/5, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPITS	Spitsbergen Ar	9.56	228	Pn	Pn	22 00 39.3	+1.3
	baz=40,slow=12,SNR=1.7						
SPITS				Sn	Sn	22 02 21.6	-3.6
	baz=31,slow=20,SNR=1.7						
SPITS				LR	LR	22 03 40.9	
	comp=Z,112nm,18.5s,baz=205,slow=33						
ARCES	ARCESS Array B	17.86	212	P	P	22 02 30.6	+1.3
	baz=4.3,slow=13,SNR=1.7						
NOA	NORSAR Array B	26.85	226	LR	LR	22 15 34.8	
	comp=Z,130nm,18.0s,baz=265,slow=38						
MKAR	Makanchi Array	40.68	149	P	P	22 06 00.0	-0.5
	0.5nm,0.8s,baz=47,slow=8.9,SNR=2.2						
ESDC	Sonseca Array	48.85	239	P	P	22 07 07.6	+1.9
	0.8nm,1.0s,baz=357,slow=7.8,SNR=2.3						
TXAR	Lajitas Array	63.72	337	P	P	22 08 50.6	-1.4
	0.8nm,0.8s,baz=351,slow=2.3,SNR=4.7						
CMAR	Chiang Mai Arr	69.49	133	P	P	22 09 28.1	-0.7
	0.4nm,0.4s,baz=347,slow=7.5,SNR=2.3						
TORD	Torodi Ar. Bea	74.98	232	P	P	22 10 01.9	+0.3
	0.8nm,0.7s,baz=0.5,slow=6.6,SNR=2.6						

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*IDC **11** 22:03:32.8±1.0, 5°.20S×151°.44E, h144^{km}±7^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.3/33, mbtmp3.8/8, MS3.9/1, Ms1 3.9/1, ms1mx2.8/21, Error ellipse: s-maj=55.8km s-min=11.3km az=125.0*

ISC 11 22:03:32.7±1.7, 5°.3S±0°.3×151°.6E±0°.4, h150^{km}, n11, σ0ˢ.79/12, mb3.6/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.07	25	P	Pn	22 03 57.6	-0.5
	20nm,0.3s,baz=347,slow=0.7,SNR=6.4						
KRVT				S	Sn	22 04 16.8	-0.7
	105nm,0.3s,baz=68,slow=23,SNR=30						
PMG	Port Moresby	6.00	227	P	Pn	22 04 59.5	+0.1
	0.8nm,0.3s,baz=47,slow=18,SNR=2.2						
PMG				S	Sn	22 06 05.9	-1.3
	6.4nm,0.3s,baz=142,slow=15,SNR=7.6						
WRA	Warramunga Arr	22.22	227	P	P	22 08 17.2	-0.1
	1.8nm,0.7s,baz=49,slow=10.0,SNR=7.1						
ASAR	Alice Springs	24.98	221	P	P	22 08 43.7	+1.0
	1.2nm,0.4s,baz=54,slow=9.0,SNR=22						
FITZ	Fitzroy Crossi	28.36	241	P	P	22 09 12.6	-0.4
	1.8nm,0.7s,baz=50,slow=8.1,SNR=6.2						
USRK	Ussuriysk Ar.	52.31	342	LR	LR	22 34 13.6	
	comp=Z,105nm,18.1s,baz=10,slow=35						
SONM	Songino Array	66.08	328	P	P	22 14 04.9	+1.1
	0.4nm,0.4s,baz=134,slow=6.2,SNR=2.4						
MKAR	Makanchi Array	79.88	319	P	P	22 15 24.7	-0.2
	0.2nm,0.5s,baz=120,slow=5.9,SNR=4.3						
ZALV	Zalesovo Beam	80.87	327	P	P	22 15 29.2	-0.7
	0.3nm,0.4s,baz=120,slow=6.5,SNR=2.1						
ILAR	Eielson Array	83.06	22	P	P	22 15 41.1	0.0
	0.4nm,0.7s,baz=243,slow=4.9,SNR=8.2						
TORD	Torodi Ar. Bea	149.28	287	PKPbc	PKPbc	22 23 05.3	+0.5
	0.5nm,0.4s,baz=69,slow=3.0,SNR=3.8						

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*NOU **11** 22:10:01.7, 5°.17S×129°.31E, h143^{km}, mb4.0, Banda Sea*

*IDC **11** 22:10:17.7±2.0, 6°.41S×129°.41E, h161^{km}±24^{km}, mb2.8/1, mb1 3.5/6, mb1mx3.2/25, mbtmp4.0/6, MS2.9/1, Ms1 2.9/1, ms1mx2.6/11, Error ellipse: s-maj=27.7km s-min=17.8km az=113.0*

ISC 11 22:10:16.9±1.1, 6°.59S±0°.07×129°.6E±0°.1, h165^{km}, n7, σ2ˢ.97/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.92	16	P	Pn	22 11 41.9	-0.8
	2.9nm,0.3s,baz=189,slow=23,SNR=21						
SIJI				S	Sn	22 12 44.5	-5.6
	4.3nm,0.3s,baz=205,slow=22,SNR=10						
BATI	Baumata	6.89	238	P	Pn	22 11 55.4	-0.3
	1.3nm,0.3s,baz=59,slow=18,SNR=1.7						
BATI				S	Sn	22 13 13.9	+0.6
	14nm,0.3s,baz=79,slow=18,SNR=13						
FITZ	Fitzroy Crossi	12.07	198	P	Pn	22 13 05.0	+1.3
	0.9nm,0.3s,baz=28,slow=12,SNR=35						
FITZ				S	Sn	22 15 13.9	-3.7
	0.8nm,0.3s,baz=112,slow=18,SNR=2.1						
WRA	Warramunga Arr	14.04	161	P	Pn	22 13 31.6	+2.7
	0.6nm,0.3s,baz=337,slow=13,SNR=7.2						
WRA				S	Sn	22 16 00.4	-4.6
	0.8nm,0.3s,baz=333,slow=22,SNR=5.3						
DAV	Davao City (W)	14.15	343	LR	LR	22 18 29.1	
	comp=Z,44nm,19.1s,baz=317,slow=35						
ASAR	Alice Springs	17.47	167	P	Pn	22 14 14.2	+3.5
	0.4nm,0.3s,baz=339,slow=9.7,SNR=35						
ASAR				S	S	22 17 24.9	+2.0
	0.3nm,0.3s,baz=317,slow=16,SNR=5.7						
MKAR	Makanchi Array	67.68	327	P	P	22 20 55.8	-0.5
	0.1nm,0.4s,baz=116,slow=7.4,SNR=5.1						

TRN 11 22:20:37.5, 10°.19N×62°.35W, h100^{km}, MD3.5, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.89	81	*e*P	Pn	22 20 57.8	+1.0
TRN	Trinidad (W)	1.04	64	*e*P	Pn	22 20 58.3	0.0
TRN				*e*S	Sn	22 21 12.9	-1.2
ORIV	Oritupano	1.52	223	⇑*i*P	Pn	22 21 03.9	-0.2
ORIV				*e*S	Sn	22 21 24.4	+0.2
GRGR	Grenville	2.05	19	*e*P	Pn	22 21 11.3	+0.5
GRGR				*e*S	Sn	22 21 35.5	-0.8
GCMP	Grenada, Carri	2.46	21	*e*P	Pn	22 21 16.7	+0.5
GCMP				*e*S	Sn	22 21 44.8	-0.9
BAUV	El Baul	5.75	258	*e*P	Pn	22 21 60.0	-0.5
BAUV	El Baul	5.75	258	*e*S	Sn	22 23 01.3	-3.8

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*IDC **11** 22:24:33.9±3.0, 4°.95S×153°.35E, h55^{km}±24^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.6/45, mbtmp4.1/8, ML1.9/1, Error ellipse: s-maj=28.6km s-min=14.7km az=65.0*

ISC 11 22:24:34.0±1.0, 4°.88S±0°.10×153°.3E±0°.1, h56^{km}, n10, σ1ˢ.08/12, mb4.0/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.41	294	P	Pn	22 24 56.2	-1.2
	339nm,0.3s,baz=120,slow=2.0,SNR=78						
KRVT				S	Sn	22 25 16.2	+1.1

	800nm,0.3s,baz=211,slow=22,SNR=14						
PMG	**Port Moresby**	**7.59**	**233**	P	**Pn**	**22 26 23.6**	**+1.5**
	1.2nm,0.3s,baz=49,slow=9.3,SNR=2.8						
PMG				S	**Sn**	**22 27 45.1**	**-1.7**
	2.2nm,0.3s,baz=122,slow=20,SNR=2.3						
DZM	**Mont Dzumac**	**21.30**	**145**	P	**P**	**22 29 15.8**	**-0.4**
	9.1nm,0.5s,baz=255,slow=7.8,SNR=22						
WRA	**Warramunga Arr**	**23.79**	**229**	P	**P**	**22 29 41.2**	**-0.6**
	2.2nm,0.4s,baz=53,slow=9.7,SNR=6.4						
ASAR	**Alice Springs**	**26.45**	**223**	P	**P**	**22 30 06.4**	**+0.4**
	0.8nm,0.5s,baz=61,slow=9.0,SNR=4.7						
VNDA	**Vanda**	**72.73**	**178**	P	**P**	**22 35 55.4**	**-0.4**
	1.2nm,0.7s,baz=328,slow=6.8,SNR=9.5						
MKAR	**Makanchi Array**	**80.73**	**319**	P	**P**	**22 36 41.6**	**+0.1**
	0.4nm,0.5s,baz=104,slow=7.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**81.51**	**326**	P	**P**	**22 36 46.0**	**+0.7**
	1.0nm,0.6s,baz=109,slow=4.9,SNR=4.4						
AAK	**Ala-Archa**	**85.10**	**313**	P	**P**	**22 37 05.0**	**+0.7**
	0.9nm,0.6s,baz=129,slow=6.5,SNR=1.8						
TORD	**Torodi Ar. Bea**	**150.83**	**288**	PKPbc	**PKPbc**	**22 44 20.6**	**-0.7**
	1.8nm,0.7s,baz=67,slow=1.8,SNR=8.4						

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*IDC **11** 22:25:06.6±2.0, 7°.13S×129°.04E, h150^{km}±21^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.4/42, mbtmp4.0/8, Error ellipse: s-maj=19.9km s-min=16.5km az=78.0*

*NOU **11** 22:25:16.7, 8°.02S×129°.23E, h171^{km}, mb4.2, Timor Sea*

ISC 11 22:25:06.1±0.8**, 7°.12S**±0°.08×**129°.1E**±0°.1**, h150**^{km}**, n10, σ1^{s}70**/12**, mb3.6**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.22**	**240**	P	**Pn**	**22 26 36.9**	**+1.1**
	84nm,0.3s,baz=84,slow=2.7,SNR=47						
BATI				S	**Sn**	**22 27 44.4**	**-1.7**
	63nm,0.3s,baz=239,slow=19,SNR=12						
SIJI	**Sorong**	**6.56**	**19**	P	**Pn**	**22 26 41.0**	**+0.7**
	2.1nm,0.3s,baz=206,slow=12,SNR=12						
SIJI				S	**Sn**	**22 27 51.7**	**-2.5**
	6.5nm,0.3s,baz=128,slow=19,SNR=8.3						
FITZ	**Fitzroy Crossi**	**11.43**	**197**	P	**Pn**	**22 27 43.4**	**-1.7**
	0.5nm,0.3s,baz=4.2,slow=12,SNR=21						
FITZ				S	Sn	22 29 40.9	-11
	1.6nm,0.3s,baz=101,slow=21,SNR=9.2						
WRA	**Warramunga Arr**	**13.71**	**159**	P	**Pn**	**22 28 11.8**	**-2.7**
	1.2nm,0.3s,baz=332,slow=14,SNR=28						
WRA				S	Sn	22 30 34.3	-12
	1.7nm,0.3s,baz=337,slow=22,SNR=9.1						
ASAR	**Alice Springs**	**17.08**	**165**	P	**Pn**	**22 28 57.0**	**+1.0**
	2.4nm,0.3s,baz=344,slow=10,SNR=126						
ASAR				S	S	22 31 54.9	-11
	0.4nm,0.3s,baz=344,slow=19,SNR=4.3						
CTA	**Charters Tower**	**21.02**	**130**	P	**P**	**22 29 39.8**	**+1.8**
	5.4nm,0.9s,baz=301,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**27.24**	**156**	P	**P**	**22 30 36.7**	**+0.5**
	5.4nm,1.0s,baz=335,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**67.86**	**327**	P	**P**	**22 35 49.0**	**+0.8**
	0.5nm,0.5s,baz=116,slow=8.2,SNR=12						
KURBB	**Kurchatov Arra**	**72.17**	**329**	P	**P**	**22 36 14.2**	**-0.2**
	0.3nm,0.4s,baz=128,slow=5.3,SNR=3.2						
ILAR	**Eielson Array**	**93.82**	**25**	P	**P**	**22 38 06.3**	**+0.4**
	0.2nm,0.5s,baz=274,slow=5.0,SNR=4.2						

IDC 11 22:41:30.8±3.1**, 3°.44S×140°.83E, h0**^{km}**, mb3.1**/2**, mb1 3.6**/3**, mb1mx3.3**/37**, mbtmp3.4**/3**, ML3.8**/1**, Error ellipse: s-maj=109.9km s-min=12.5km az=90.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.93**	**352**	Pg	Pg	22 41 48.7	+0.1
	25nm,0.3s,baz=177,slow=19,SNR=13						
JAY				Lg	Lg	22 42 01.6	
	35nm,0.3s,baz=232,slow=22,SNR=7.7						
WRA	**Warramunga Arr**	**17.58**	**201**	P	Pn	22 45 37.4	0.0
	0.3nm,0.3s,baz=20,slow=12,SNR=15						
ASAR	**Alice Springs**	**21.19**	**198**	P	P	22 46 17.3	-0.7
	0.4nm,0.6s,baz=28,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**71.67**	**322**	P	P	22 52 54.8	+0.3
	0.2nm,0.4s,baz=101,slow=7.5,SNR=8.2						

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*IDC **11** 22:56:19.5±7.3, 36°.38N×71°.54E, h120^{km}±65^{km}, mb3.1/3, mb1 3.1/7, mb1mx2.8/49, mbtmp3.5/7, Error ellipse: s-maj=127.1km s-min=52.9km az=100.0*

ISC 11 22:56:20.6±3.4**, 36°.4N**±0°.2×**72°.4E**±0°.6**, h100**^{km}**, n7, σ1^{s}60**/7**, mb3.2**/3**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.46**	**14**	P	**Pn**	**22 57 53.7**	**+0.5**
	0.3nm,0.3s,baz=187,slow=8.1,SNR=6.7						
MKAR	**Makanchi Array**	**12.75**	**32**	P	**P**	**22 59 23.3**	**-2.0**
	0.1nm,0.3s,baz=214,slow=11,SNR=7.3						
KURBB	**Kurchatov Arra**	**14.91**	**15**	P	**P**	**22 59 48.4**	**-0.7**
	0.1nm,0.3s,baz=204,slow=11,SNR=5.9						
ZALV	**Zalesovo Beam**	**19.58**	**22**	P	**P**	**23 00 40.3**	**-0.1**
	0.3nm,0.3s,baz=219,slow=12,SNR=7.9						
SONM	**Songino Array**	**27.47**	**55**	P	**P**	**23 01 59.2**	**+1.9**
	0.3nm,0.5s,baz=278,slow=9.5,SNR=2.0						
WRA	**Warramunga Arr**	**80.95**	**123**	P	**P**	**23 08 25.0**	**+0.8**
	0.7nm,1.0s,baz=327,slow=6.0,SNR=1.8						
ASAR	**Alice Springs**	**83.24**	**126**	P	**P**	**23 08 34.9**	**-1.2**
	0.1nm,0.5s,baz=316,slow=3.9,SNR=1.3						

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*IDC **11** 22:56:47.2±1.1, 36°.40N×68°.76E, h0^{km}, mb3.7/8, mb1 3.9/13, mb1mx3.6/51, mbtmp3.8/13, ML3.6/5, Error ellipse: s-maj=24.3km s-min=18.0km az=140.0*

ISC 11 22:56:52.6±0.7**, 36°.6N**±0°.1×**68°.57E**±0°.07**, h35**^{km}**, n28, σ1^{s}49**/29**, mb3.7**/7**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.82**	**34**	P	**Pn**	**22 58 30.8**	**+0.2**
	SNR=7.3						
UCH	**Uchtor**	**7.28**	**37**	P	**Pn**	**22 58 37.2**	**+0.3**
	SNR=26						
AAK	**Ala-Archa**	**7.59**	**35**	Pn	**Pn**	**22 58 41.7**	**+0.9**
	3.9nm,0.3s,baz=214,slow=6.8,SNR=54						
AAK	**Ala-Archa**	**7.59**	**35**	P	**Pn**	**22 58 41.3**	**+0.5**
	SNR=16						
KBK	**Karagaybulak**	**7.82**	**37**	P	**Pn**	**22 58 44.7**	**+0.7**
	SNR=38						
CHMS	**Chumysh**	**7.99**	**35**	P	**Pn**	**22 58 46.0**	**-0.2**
	SNR=18						
USP	**Ospenovka**	**8.09**	**32**	P	**Pn**	**22 58 46.8**	**-0.8**
	SNR=5.2						
TKM2	**Tokmak 2**	**8.33**	**38**	P	**Pn**	**22 58 51.2**	**+0.1**
	SNR=5.2						
GEYT	**Alibeck**	**8.45**	**282**	Pn	**Pn**	**22 58 51.3**	**-1.2**
	0.9nm,0.3s,baz=116,slow=10,SNR=16						
GEYT				Sn	**Sn**	**23 00 24.3**	**-2.3**
	2.5nm,0.3s,baz=286,slow=26,SNR=8.1						
MKAR	**Makanchi Array**	**14.45**	**41**	Pn	**Pn**	**23 00 12.5**	**-2.0**
	0.3nm,0.3s,baz=233,slow=14,SNR=51						
DANN	**Dangsing**	**15.21**	**118**	*e*P	**Pn**	**23 00 23.5**	**-1.5**
	6.6nm,0.4s						
KURBB	**Kurchatov Arra**	**15.77**	**24**	Pn	**Pn**	**23 00 27.8**	**-4.1**
	0.0nm,0.3s,baz=214,slow=13,SNR=9.6						
KURBB				Lg	Lg	23 05 08.7	
	0.0nm,0.3s,baz=214,slow=28,SNR=2.8						
BVAR	**Borovoye Array**	**16.50**	**4**	Pn	**Pn**	**23 00 38.8**	**-2.4**
	0.4nm,0.3s,baz=210,slow=12,SNR=6.6						
KKN	**Kakani**	**16.62**	**117**	*e*P	**Pn**	**23 00 43.3**	**+0.2**
	22nm,0.6s						
PKIN	**Phulchoki**	**16.83**	**117**	*e*P	**Pn**	**23 00 45.9**	**+0.1**
	13nm,0.4s						
PKI	**Pulchoki**	**16.84**	**117**	*e*P	**Pn**	**23 00 45.9**	**-0.1**
	17nm,0.7s						
GUN	**Gumba**	**16.98**	**116**	*e*P	**Pn**	**23 00 48.1**	**+0.3**
	33nm,0.8s						
TAPN	**Taplejung**	**18.64**	**114**	*e*P	**Pn**	**23 01 08.1**	**0.0**
	29nm,1.1s						
ODAN	**Odare**	**18.68**	**116**	*e*P	**P**	**23 01 07.8**	**-0.3**
	15nm,0.6s						
ZALV	**Zalesovo Beam**	**20.71**	**28**	P	**P**	**23 01 28.8**	**-0.9**
	7.0nm,0.6s,baz=219,slow=10,SNR=21						
ARU	**Arti**	**20.98**	**344**	P	**P**	**23 01 34.0**	**+1.5**
	0.5nm,0.3s,baz=155,slow=13,SNR=4.3						
BELG	**Belogornoye**	**21.64**	**324**	P	**P**	**23 01 39.8**	**+0.2**
	8.9nm,0.6s,baz=76,slow=1.2,SNR=2.6						
ESDC	**Sonseca Array**	**55.69**	**297**	P	**P**	**23 06 28.2**	**+2.7**
	0.3nm,0.7s,baz=64,slow=6.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**63.77**	**267**	P	**P**	**23 07 22.2**	**+0.9**
	0.2nm,0.3s,baz=47,slow=6.1,SNR=1.3						
INK	**Inuvik**	**74.13**	**8**	P	**P**	**23 08 26.4**	**+1.6**
	0.8nm,0.6s,baz=301,slow=5.9,SNR=4.3						
YKA	**Yellowknife Ar**	**81.24**	**1**	P	**P**	**23 09 06.2**	**+1.7**
	0.3nm,0.6s,baz=354,slow=5.8,SNR=8.0						
WRA	**Warramunga Arr**	**83.70**	**120**	P	**P**	**23 09 16.7**	**-1.4**
	0.5nm,0.7s,baz=321,slow=5.2,SNR=2.2						
ASAR	**Alice Springs**	**85.92**	**123**	P	**P**	**23 09 27.9**	**-1.2**
	0.5nm,0.9s,baz=319,slow=4.1,SNR=2.6						

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*SKHL **11** 23:16:28.5±0.1, 43°.93N×148°.69E, h44^{km}±3^{km}, mb5.0/3*

*MOS **11** 23:16:29.8±1.1, 43°.97N×148°.38E, h41^{km}, mb4.5/8, Error ellipse: s-maj=8.3km s-min=7.7km az=120.3*

*NIED **11** 23:16:29.5, 43°.78N×148°.15E, h0^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.35; M$_{θθ}$-0.34; M$_{φφ}$-3.00; M$_{rθ}$0.27; M$_{θφ}$-1.22; M$_{φr}$4.55; Fault plane solution: M$_0$5.69000×10^{14} NP1:φ$_s$7.00000°, δ72.00000°, λ81.00000°. NP2:φ$_s$215.00000°, δ20.00000°, λ116.00000°.*

*JMA **11** 23:16:29.4±0.6, 43°.78N×148°.15E, h0^{km}, M4.6*

*NEIC **11** 23:16:31.4±2.6, 43°.75N±0°.03×148°.5E±0°.1, h55^{km}±7^{km}, mb4.4/20, Error ellipse: s-maj=11.2km s-min=3.8km az=84.0*

*IDC **11** 23:16:33.1±2.5, 44°.04N×148°.31E, h48^{km}±21^{km}, mb3.6/15, mb1 3.7/20, mb1mx3.6/42, mbtmp3.8/20, ML3.1/4, MS2.9/3, Ms1 2.9/3, ms1mx2.6/47, Error ellipse: s-maj=38.8km s-min=16.4km az=163.0*

ISC 11 23:16:30.7±1.1**, 43°.87N**±0°.06×**148°.43E**±0°.06**, h43**^{km}±9^{km}**, n117, σ1^{s}56**/122**, mb4.2**/30**, 3C-10D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.42**	**344**	*i* P	**Pn**	**23 16 51.9**	**-2.2**
KUR				AMB	AMB	23 16 52.7	
	290nm,0.4s						
KUR				*e*S	**Sn**	**23 17 07.6**	**-4.0**
KUR				A	A	23 17 11.8	
	1μm,0.4s						
KUR				A	A	23 17 11.8	
	1μm,0.4s						
KUR	**Kuril'sk**	**1.42**	**344**	*d i*PN	**Pn**	**23 16 52.0**	**-2.2**
KUR				*e*S	**Sn**	**23 17 07.7**	**-3.9**
KUR				pmax	pmax		
	comp=N,179nm,0.3s						
KUR				pmax	pmax		
	comp=Z,330nm,0.3s						
KUR				pmax	pmax		
	comp=E,119nm,0.2s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR				smax	smax		
	comp=E,847nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**276**	*i* P	**Pn**	**23 16 59.3**	**-0.9**
YUK				AMB	AMB	23 17 00.0	
	comp=E,340nm,0.3s						
YUK				*i* S	**Sn**	**23 17 22.5**	**+0.1**
YUK				A	A	23 17 25.7	
	comp=E,1μm,0.6s						
YUK				A	A	23 17 25.7	
	comp=E,1μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**276**	⇑*i*PN	**Pn**	**23 16 59.2**	**-0.9**
YUK				*i* S	**Sn**	**23 17 23.3**	**+0.9**
YUK				pmax	pmax		
	comp=N,128nm,0.3s						
YUK				pmax	pmax		
	comp=E,356nm,0.3s						
YUK				pmax	pmax		
	comp=Z,568nm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				smax	smax		
	comp=N,675nm,0.3s						
GRPR	**Tuman**	**1.92**	**275**	*e*P	**Pn**	**23 17 01.0**	**0.0**
GRPR				AMB	AMB	23 17 04.2	
	comp=N,247nm,0.3s						
GRPR				*e*S	**Sn**	**23 17 25.3**	**+1.4**
GRPR				A	A	23 17 26.6	
	comp=N,1μm,0.3s						
GRPR				A	A	23 17 26.6	
	comp=N,1μm,0.3s						
GRPR	**Tuman**	**1.92**	**275**	*e*PN	**Pn**	**23 17 00.0**	**-1.0**
GRPR				*e*S	**Sn**	**23 17 25.3**	**+1.4**
GRPR				pmax	pmax		
	comp=Z,247nm,0.1s						
GRPR				pmax	pmax		
	comp=N,312nm,0.2s						
GRPR				pmax	pmax		
	comp=E,103nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
NEM2	**Nemuro 2**	**2.02**	**256**	P	**Pn**	**23 17 01.9**	**-0.3**
NEM2				*e*S	**Sn**	**23 17 25.9**	**-0.2**
NMR	**Nemuro--Hokkai**	**2.02**	**257**	*e*P	**Pn**	**23 17 00.7**	**-1.6**
NMR				*e*S	**Sn**	**23 17 26.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**2.02**	**257**	*e*PN	**Pn**	**23 17 00.7**	**-1.6**
NMR				*e*S	**Sn**	**23 17 26.0**	**-0.4**
JRA	**Rausu**	**2.39**	**273**	P	**Pn**	**23 17 08.4**	**+1.0**
JRA				*e*S	**Sn**	**23 17 36.9**	**+1.5**
JNK	**Nakash**	**2.71**	**265**	P	**Pn**	**23 17 11.8**	**+0.1**
JNK				*e*S	**Sn**	**23 17 43.3**	**+0.1**
JTKR	**Abashiri--Toko**	**3.27**	**273**	P	**Pn**	**23 17 20.5**	**+1.1**
JAR	**Ashorobuto**	**3.43**	**262**	P	**Pn**	**23 17 22.7**	**+1.0**
JCH	**Churui**	**3.91**	**253**	P	**Pn**	**23 17 29.7**	**+1.5**
JKA	**Kamikawa-asahi**	**4.21**	**275**		**Pn**	**23 17 35.1**	**+2.7**
ASAJ	**Asahikawa**	**4.22**	**275**	P	**Pn**	**23 17 35.1**	**+2.7**
	comp=E,1.9nm,0.3s,baz=30,slow=25,SNR=1.6						
ASAJ				LR	LR	23 19 18.7	
	comp=E,180nm,18.8s,baz=117,slow=40						
JEM	**Erimo**	**4.29**	**246**	Pn	**Pn**	**23 17 36.4**	**+2.9**
ERM	**Erimo**	**4.29**	**246**	⇓*e*PN	**Pn**	**23 17 37.0**	**+3.5**
ERM	**Erimo**	**4.29**	**246**		**Pn**	**23 17 37.4**	**+3.9**
JNBK	**Urakawa-nobuka**	**4.45**	**251**	P	**Pn**	**23 17 37.3**	**+1.6**
YSS	**Yuzh-Sakhalins**	**5.05**	**310**	*e*P	**Pn**	**23 17 44.4**	**+0.6**
YSS	**Yuzh-Sakhalins**	**5.05**	**310**	*de*PN	**Pn**	**23 17 44.4**	**+0.6**
YSS	**Yuzh-Sakhalins**	**5.05**	**310**	Pn	**Pn**	**23 17 43.9**	**+0.1**
JEW	**Eniwo**	**5.19**	**261**	Pn	**Pn**	**23 17 49.6**	**+3.8**
JKB	**Kayabe**	**5.78**	**253**	P	**Pn**	**23 17 55.9**	**+2.0**
JOT	**Ohata**	**5.99**	**248**	P	**Pn**	**23 17 58.3**	**+1.6**
JOT				*e*S	**Sn**	**23 19 02.1**	**-1.8**
JTM	**Tenmabayashi**	**6.26**	**243**	Pn	**Pn**	**23 18 02.2**	**+1.6**
JTM				Sn	**Sn**	**23 19 09.9**	**-0.9**
TYV	**Tymovskoe**	**8.02**	**333**	*e*P	**Pn**	**23 18 23.8**	**-0.8**
JMM	**Marumori**	**8.33**	**227**	Pn	**Pn**	**23 18 29.2**	**+0.4**
JMM				Sn	**Sn**	**23 19 57.4**	**-4.2**
MJA0	**Matsu Arr-Jizo**	**10.68**	**230**	*e*PN	**Pn**	**23 19 03.4**	**+2.3**
MAJO	**Matsushiro**	**10.70**	**230**	⇑*e*PN	**Pn**	**23 19 02.9**	**+1.5**
MAJO	**Matsushiro**	**10.70**	**230**	Pn	**Pn**	**23 19 02.5**	**+1.1**
MJAR	**Matsushiro Arr**	**10.70**	**230**	P	**Pn**	**23 19 02.3**	**+1.0**
	comp=E,0.1nm,0.3s,baz=29,slow=14,SNR=8.1						
PETK	**Petropavlovsk-**	**11.10**	**30**	P	**Pn**	**23 19 07.0**	**+0.3**
	comp=E,0.4nm,0.3s,baz=212,slow=15,SNR=1.1						
PETK				LR	LR	23 23 07.5	
	comp=E,36nm,20.4s,baz=253,slow=36						
PETK	**Petropavlovsk-**	**11.10**	**30**	PN	**Pn**	**23 19 07.2**	**+0.5**
PETK	**Petropavlovsk-**	**11.10**	**30**	Pn	**Pn**	**23 19 07.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**11.84**	**277**	P	**Pn**	**23 19 16.6**	**-0.3**
	baz=75,slow=14,SNR=2.1						
USRK				LR	LR	23 23 52.3	
	comp=E,107nm,19.8s,baz=344,slow=37						
JGF	**Kuroka**	**11.86**	**230**	Pn	**Pn**	**23 19 16.1**	**-1.1**
KLR	**Kul'dur**	**12.66**	**301**	P	**Pn**	**23 19 29.1**	**+0.9**
	comp=E,0.1nm,0.3s,baz=117,slow=16,SNR=2.5						
JMN	**Monobe**	**15.18**	**233**	Pn	**Pn**	**23 20 01.2**	**-1.0**
JMN				IAmb	IAmb	23 20 11.3	
	comp=Z,48nm,1.4s						
SEY	**Seymchan**	**19.24**	**5**	⇓*e*P	**P**	**23 20 49.5**	**-1.6**
GSTR	**Great Sitkin T**	**24.95**	**58**	P	**P**	**23 21 47.8**	**-2.0**
H11N2	**WAKE ISLAND Hy**	**28.60**	**141**	T	T	23 53 16.1	
	baz=332,slow=76						
H11N1	**WAKE ISLAND Hy**	**28.61**	**141**	T	T	23 53 17.1	
	baz=332,slow=76						
H11N3	**WAKE ISLAND Hy**	**28.62**	**141**	T	T	23 53 17.5	
	baz=332,slow=76						
ULN	**Ulaanbaatar**	**28.84**	**293**	*e*P	**P**	**23 22 24.5**	**-0.5**
ULN	**Ulaanbaatar**	**28.84**	**293**	⇓*e*P	**P**	**23 22 24.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.6s						
SONM	**Songino Array**	**29.28**	**293**	P	**P**	**23 22 30.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=81,slow=8.2,SNR=4.1						
SONM	**Songino Array**	**29.28**	**293**	IAmb	IAmb	23 22 38.5	
	comp=Z,0.5nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**29.59**	**143**	T	T	23 54 29.4	
	baz=333,slow=76,SNR=440						
H11S3	**WAKE ISLAND Hy**	**29.59**	**143**	T	T	23 54 31.0	
	baz=333,slow=76,SNR=336						
H11S2	**WAKE ISLAND Hy**	**29.60**	**143**	T	T	23 54 30.2	
	baz=333,slow=76,SNR=374						
ILAR	**Eielson Array**	**40.84**	**36**	P	**P**	**23 24 09.4**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=281,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**41.67**	**307**	P	**P**	**23 24 16.0**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=76,slow=7.6,SNR=2.4						
ZALV	**Zalesovo Beam**	**41.67**	**307**	P	**P**	**23 24 16.0**	**+1.3**
MK31	**Makanchi Array**	**45.35**	**298**	*d i*P	**P**	**23 24 45.3**	**+0.8**
MKAR	**Makanchi Array**	**45.35**	**298**	P	**P**	**23 24 45.3**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=76,slow=8.2,SNR=21						
MKAR				PcP	**PcP**	**23 26 24.9**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=56,slow=3.7,SNR=2.7						
MKAR	**Makanchi Array**	**45.35**	**298**	P	**P**	**23 24 45.0**	**+0.4**
MAKZ	**Makanchi**	**45.55**	**298**	P	**P**	**23 24 47.0**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**45.55**	**298**	P	**P**	**23 24 47.0**	**+0.9**
MAKZ				IAmb	IAmb	23 24 47.5	
	comp=Z,2.5nm,0.8s						
INK	**Inuvik**	**45.83**	**30**	P	**P**	**23 24 49.6**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=301,slow=7.0,SNR=6.7						
INK	**Inuvik**	**45.83**	**30**	IAmb	IAmb	23 24 53.6	
	comp=Z,3.0nm,1.2s						
KURK	**Kurchatov**	**46.23**	**304**	*e*P	**P**	**23 24 51.3**	**-0.1**
KURK	**Kurchatov**	**46.23**	**304**	⇓*e*P	**P**	**23 24 51.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,14nm,3.8s						
BRVK	**Borovoye**	**50.19**	**310**	*e*P	**P**	**23 25 22.6**	**+0.7**
BRVK	**Borovoye**	**50.19**	**310**	⇑*e*P	**P**	**23 25 22.6**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.6s						
AAK	**Ala-Archa**	**52.14**	**296**	*e*P	**P**	**23 25 37.5**	**+0.6**
AAK	**Ala-Archa**	**52.14**	**296**	⇓*e*P	**P**	**23 25 37.5**	**+0.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KK31	**Karatay Array**	**54.48**	**298**	P	**P**	**23 25 54.4**	**+0.6**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KK31	**Karatay Array**	**54.48**	**298**	P	**P**	**23 25 54.4**	**+0.6**
KK31				IAmb	IAmb	23 25 54.9	
	comp=Z,3.1nm,0.5s						
KKAR	**Karatay Array**	**54.48**	**298**	P	**P**	**23 25 54.5**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KKAR	**Karatay Array**	**54.48**	**298**	P	**P**	**23 25 54.5**	**+0.7**
KKAR				IAmb	IAmb	23 25 54.9	
	comp=Z,3.1nm,0.5s						
RES	**Resolute Bay**	**54.59**	**17**	P	**P**	**23 25 54.2**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=316,slow=6.8,SNR=4.8						
RES	**Resolute Bay**	**54.59**	**17**	IAmb	IAmb	23 26 02.1	
	comp=Z,3.5nm,1.5s						
ARU	**Arti**	**54.89**	**317**	*e*P	**P**	**23 25 55.9**	**-0.7**
ARU	**Arti**	**54.89**	**317**	*d i*P	**P**	**23 25 55.6**	**-1.0**
ARU						23 26 56.0	
ARU				S	**S**	**23 33 34.5**	**-0.2**
ARU				SS	**SS**	**23 37 11.8**	**-6.0**
ARU				pmax	pmax		
	comp=Z,11nm,2.5s						
ARU	**Arti**	**54.89**	**317**	P	**P**	**23 25 56.4**	**-0.2**
ARU				IAmb	IAmb	23 26 12.0	
	comp=Z,4.5nm,1.2s						
YKA	**Yellowknife Ar**	**55.19**	**34**	P	**P**	**23 26 00.2**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=303,slow=5.7,SNR=8.0						
BTK	**Batken**	**55.82**	**295**	P	**P**	**23 26 04.8**	**+1.1**
BTK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BTK	**Batken**	**55.82**	**295**	P	**P**	**23 26 04.8**	**+1.1**
TULEG	**Thule**	**57.56**	**10**	P	**P**	**23 26 14.4**	**-0.9**
TULEG				IAmb	IAmb	23 26 27.7	
	comp=Z,5.1nm,0.8s						
NIL	**Nilore**	**57.64**	**287**	P	**P**	**23 26 16.6**	**0.0**
NIL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NIL	**Nilore**	**57.64**	**287**	P	**P**	**23 26 16.6**	**0.0**
SOEI	**Soe**	**57.71**	**209**	P	**P**	**23 26 15.1**	**-2.1**
ABKAR	**Akbulak array**	**57.71**	**309**	P	**P**	**23 26 16.4**	**-0.3**
ABKAR				IAmb	IAmb	23 26 17.9	
	comp=Z,1.7nm,0.6s						
ARCES	**ARCESS Array B**	**59.46**	**340**	P	**P**	**23 26 28.3**	**-0.4**
	comp=Z,3.0nm,1.0s,baz=36,slow=7.8,SNR=1.5						
KBL	**Kabul**	**60.02**	**290**	P	**P**	**23 26 32.9**	**-0.4**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	**Kabul**	**60.02**	**290**	P	**P**	**23 26 32.9**	**-0.4**
KBL				IAmb	IAmb	23 26 34.7	
	comp=Z,2.6nm,0.9s						
WRAB	**Tennant Creek**	**64.79**	**195**	⇓*i*P	**P**	**23 27 02.3**	**-2.6**
FINES	**FINESS Array B**	**65.19**	**333**	P	**P**	**23 27 06.4**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=20,slow=6.1,SNR=13						
FINES	**FINESS Array B**	**65.19**	**333**	P	**P**	**23 27 06.5**	**-0.5**
GEYT	**Alibeck**	**65.19**	**299**	P	**P**	**23 27 08.5**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=51,slow=3.0,SNR=4.9						
FCC	**Fort Churchill**	**65.45**	**31**	P	**P**	**23 27 09.8**	**+1.0**
FCC				pmax	pmax		
	comp=Z,9.0nm,1.5s						
FCC	**Fort Churchill**	**65.45**	**31**	P	**P**	**23 27 09.8**	**+1.0**
FCC				IAmb	IAmb	23 27 29.7	
	comp=Z,8.7nm,1.4s						
PNTR	**Pine Nut**	**65.52**	**59**	P	**P**	**23 27 10.2**	**+0.2**
PNTR				IAmb	IAmb	23 27 19.0	
	comp=Z,3.5nm,0.8s						
NC303	**NORSAR Array S**	**69.63**	**339**	P	**P**	**23 27 33.8**	**-1.3**
NC405	**NORSAR Array S**	**69.63**	**339**	P	**P**	**23 27 34.7**	**-0.5**
NC204	**NORSAR Array S**	**69.73**	**340**	P	**P**	**23 27 35.6**	**-0.3**
NB201	**NORSAR Array S**	**69.80**	**339**	P	**P**	**23 27 35.5**	**-0.7**
NB2	**NORSAR Subarra**	**69.82**	**339**	P	**P**	**23 27 36.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.82**	**339**	P	**P**	**23 27 36.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=31,slow=6.6,SNR=8.4						
NOA	**NORSAR Array B**	**69.82**	**339**	*e*P	**P**	**23 27 36.5**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIV	**Kislovodsk**	**70.37**	**312**	*e*P	**P**	**23 27 41.8**	**+1.7**
KIV	**Kislovodsk**	**70.37**	**312**	*e*P	**P**	**23 27 41.8**	**+1.7**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV	**Kislovodsk**	**70.37**	**312**	P	**P**	**23 27 41.9**	**+1.8**
KBZ	**Khabaz**	**70.41**	**312**	P	**P**	**23 27 41.8**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=93,slow=4.8,SNR=6.0						
KBZ	**Khabaz**	**70.41**	**312**	*e*P	**P**	**23 27 42.3**	**+2.1**
KBZ	**Khabaz**	**70.41**	**312**	*e*P	**P**	**23 27 42.3**	**+2.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**72.03**	**324**	P	**P**	**23 27 49.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=39,slow=6.0,SNR=4.5						
LENM	**Lemitar**	**76.41**	**56**	P	**P**	**23 28 14.8**	**-1.2**
CLL	**Collm**	**77.63**	**333**	*e*P	**P**	**23 28 23.0**	**+0.8**
CLL	**Collm**	**77.63**	**333**	*e*P	**P**	**23 28 23.0**	**+0.8**
BRTR	**Keskin Array B**	**78.13**	**314**	P	**P**	**23 28 26.7**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=64,slow=3.4,SNR=1.8						
TXAR	**Lajitas Array**	**81.81**	**57**	P	**P**	**23 28 46.9**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=308,slow=4.3,SNR=6.8						
H03N2	**Juan Fernandez**	**142.04**	**91**	T	T	02 14 53.5	
	baz=304,slow=77,SNR=5.8						
H03N3	**Juan Fernandez**	**142.05**	**91**	T	T	02 14 59.0	
	baz=304,slow=77,SNR=6.8						
H03N1	**Juan Fernandez**	**142.05**	**91**	T	T	02 15 00.7	
	baz=304,slow=77,SNR=7.7						

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*NEIC **11** 23:21:54.6±1.4, 4°.5N±0°.1×124°.6E±0°.1, h285^{km}±10^{km}, mb4.0/15, Error ellipse: s-maj=20.3km s-min=12.2km az=45.0*

*IDC **11** 23:22:01.6±9.8, 4°.36N×124°.49E, h360^{km}±112^{km}, mb3.2/6, mb1 3.4/6, mb1mx3.0/37, mbtmp4.0/6, Error ellipse: s-maj=77.5km s-min=20.0km az=66.0*

ISC 11 23:21:55.7±0.6**, 4°.48N**±0°.10×**124°.6E**±0°.1**, h300**^{km}**, n25, σ0^{s}87**/27**, mb3.8**/14**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**4.58**	**143**	Pn	**Pn**	**23 23 07.6**	**-0.9**
TNTI				S	**S**	**23 24 05.0**	**-1.8**
TOLI2	**Tolitoli**	**5.10**	**229**	Pn	**Pn**	**23 23 13.2**	**-1.3**
FAKI	**Fak Fak**	**10.57**	**134**	Pn	**Pn**	**23 24 21.6**	**+0.6**
TPUB	**Ta-pu**	**19.11**	**349**	P	**P**	**23 25 56.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**22.45**	**178**	P	**P**	**23 26 30.9**	**+1.0**
	1.6nm,0.3s,baz=3.8,slow=8.3,SNR=23						
FITZ	**Fitzroy Crossi**	**22.45**	**178**	P	**P**	**23 26 30.7**	**+0.8**
FITZ				IAmb	IAmb	23 26 44.9	

	comp=Z,7.3nm,1.1s						
WB0	Warramunga Arr	25.93	159	P	P	23 27 01.0	-0.4
WB0				IAmb	IAmb	23 27 07.1	
	comp=Z,6.6nm,1.1s						
COEN	Coen	25.95	135	P	P	23 27 00.6	-1.1
COEN				IAmb	IAmb	23 27 12.4	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	26.07	159	P	P	23 27 02.2	-0.4
	comp=Z,0.6nm,0.4s,baz=332,slow=11,SNR=16						
WB2	Warramunga Arr	26.08	159	P	P	23 27 02.4	-0.3
WB2				IAmb	IAmb	23 27 05.1	
	comp=Z,7.2nm,1.1s						
WR0	Warramunga Arr	26.16	158	P	P	23 27 03.2	-0.3
WR0				IAmb	IAmb	23 27 09.3	
	comp=Z,3.5nm,1.0s						
AS31	Alice Springs	29.39	162	P	P	23 27 31.8	-0.3
ASAR	Alice Springs	29.40	163	P	P	23 27 32.3	+0.2
	comp=Z,0.7nm,0.3s,baz=340,slow=7.9,SNR=29						
ASAR	Alice Springs	29.40	163	P	P	23 27 31.7	-0.4
FORT	Forrest	35.21	175	P	P	23 28 22.9	+0.7
SHL	Shillong	37.76	307	P	P	23 28 44.5	+0.4
BBOO	Buckleboo	38.63	165	P	P	23 28 51.8	+1.0
BBOO				IAmb	IAmb	23 28 56.3	
	comp=Z,9.4nm,1.1s						
STKA	Stephens Creek	39.59	157	P	P	23 28 59.9	+1.1
	comp=Z,2.2nm,0.5s,baz=329,slow=8.7,SNR=5.9						
CAN	Canberra	45.73	152	P	P	23 29 48.9	+1.1
CAN				IAmb	IAmb	23 30 00.8	
	comp=Z,17nm,1.1s						
SONM	Songino Array	45.95	343	P	P	23 29 50.4	+0.9
	comp=Z,0.3nm,0.4s,baz=160,slow=6.0,SNR=1.9						
MKAR	Makanchi Array	55.77	326	P	P	23 31 02.3	+0.2
	comp=Z,1.1nm,0.4s,baz=121,slow=7.8,SNR=30						
MKAR				PcP	PcP	23 31 55.9	-1.4
	comp=Z,0.3nm,0.5s,baz=137,slow=3.1,SNR=4.1						
MAKZ	Makanchi	55.95	326	P	P	23 31 03.4	+0.1
KURK	Kurchatov	60.00	328	P	P	23 31 31.2	0.0
KURK				IAmb	IAmb	23 31 31.6	
	comp=Z,1.9nm,0.8s						
BKZ	Black Stump Fm	64.53	137	P	P	23 32 02.0	+0.7
BKZ				IAmb	IAmb	23 32 02.7	
	comp=Z,6.6nm,1.0s						
ABKAR	Akbulak array	70.26	321	P	P	23 32 36.0	-0.8

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*IDC **11** 23:30:17.4±0.9, 56°.66S×150°.56W, h0^{km}, mb4.3/6, mb1 4.5/6, mb1mx4.2/26, mbtmp4.3/6, MS3.9/14, Ms1 3.9/14, ms1mx3.8/21, Error ellipse: s-maj=31.2km s-min=24.1km az=17.0*

*NEIC **11** 23:30:18.2±1.4, 56°.6S±0°.2×150°.4W±0°.2, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=29.3km s-min=18.9km az=22.0*

ISC 11 23:30:18.2±0.6**, 56°.7S**±0°.1×**150°.4W**±0°.1**, h10^{km}, n60,**
σ1^{s}10/24**, mb4.5**/10**, MS3.8**/18**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.52	201	P	P	23 35 56.5	+1.1
	4.4nm,1.1s,baz=70,slow=8.0,SNR=7.4						
VNDA				LR	LR	23 43 37.4	
	comp=Z,325nm,21.1s,baz=72,slow=30						
VNDA	Vanda	26.52	201	P	P	23 35 57.3	+1.9
VNDA				IAmb	IAmb	23 36 02.0	
	comp=Z,14nm,1.4s						
BHW	Baring Head	27.04	290	P	P	23 35 57.3	-3.0
RPZ	Rata Peaks	27.46	282	LR	LR	23 44 41.0	
	comp=Z,182nm,18.7s,baz=166,slow=32						
TUWZ	Tuamarina	27.50	288	P	P	23 36 04.7	+0.1
URZ	Urewera	28.27	297	LR	LR	23 45 22.0	
	comp=Z,270nm,19.1s,baz=211,slow=32						
TBI	Tubuai	33.31	2	*e*LR	LR	23 45 29.9	
	comp=Z,176nm,25.8s						
TBI	Tubuai	33.31	2	*e*T	T	00 11 54.0	
	comp=Z,40nm,0.3s						
QSPA	South Pole Qui	33.45	180	P	P	23 36 57.6	+0.6
	comp=Z,13nm,1.1s,baz=62,slow=6.5,SNR=13						
QSPA	South Pole Qui	33.45	180	P	P	23 36 57.7	+0.6
QSPA				IAmb	IAmb	23 37 00.5	
	comp=Z,28nm,1.2s						
MEH	Mehetia	38.79	4	*e*T	T	00 18 53.9	
	comp=Z,10.0nm,0.3s						
TVO	Taravao	38.85	2	*e*T	T	00 18 58.7	
	comp=Z,0.9nm,0.2s						
PAE	Paea	38.97	1	*e*T	T	00 19 06.7	
	comp=Z,1.0nm,0.3s						
PPT2	Papeete2	39.04	1	*e*LR	LR	23 48 08.4	
	comp=Z,172nm,24.8s						
PPT2	Papeete2	39.04	1	*e*T	T	00 19 12.7	
	comp=Z,2.3nm,0.3s						
PPT	Papeete	39.06	1	LR	LR	23 49 22.6	
	comp=Z,135nm,20.3s,baz=182,slow=29						
BELA	Belgrano 2	40.14	163	P	P	23 37 52.8	-0.8
VAH	Vaihoa	41.43	4	*e*T	T	00 22 04.9	
	comp=Z,89nm,0.3s						
DZM	Mont Dzumac	46.76	299	*e*LR	LR	23 51 53.6	
	comp=Z,153nm,29.1s						
TAOE	Nuku Hiva Isla	48.39	14	*e*LR	LR	23 52 30.6	
	comp=Z,191nm,24.7s						
SNAA	Sanae	49.92	167	LR	LR	23 58 18.3	
	comp=Z,91nm,21.4s,baz=188,slow=34						
SNAA	Sanae	49.92	167	P	P	23 39 09.4	-2.0
SNAA				IAmb	IAmb	23 39 13.5	
	comp=Z,12nm,1.4s						
EFI	East Falkland	50.32	126	P	P	23 39 13.9	-0.7
PLCA	Paso Flores	51.98	108	LR	LR	23 56 37.0	
	comp=Z,81nm,18.5s,baz=190,slow=30						
PLCA	Paso Flores	51.98	108	P	P	23 39 27.2	-0.2
PLCA				IAmb	IAmb	23 39 30.1	
	comp=Z,6.7nm,1.1s						
STKA	Stephens Creek	52.10	268	P	P	23 39 29.2	+0.9
	comp=Z,4.1nm,0.7s,baz=101,slow=5.3,SNR=5.9						
STKA				LR	LR	23 58 35.7	
	comp=Z,81nm,18.3s,baz=206,slow=33						
STKA	Stephens Creek	52.10	268	IAmb	IAmb	23 39 32.4	
	comp=Z,1.5nm,1.0s						
SANVU	Saraoutou	52.13	305	P	P	23 39 28.3	-0.3
H03S2	Juan Fernandez	52.55	96	T	T	00 36 21.4	
	baz=219,slow=74,SNR=148						
H03S1	Juan Fernandez	52.56	96	T	T	00 36 22.7	
	baz=219,slow=74,SNR=166						
H03S3	Juan Fernandez	52.57	96	T	T	00 36 21.9	
	baz=219,slow=74,SNR=150						
H03N3	Juan Fernandez	52.84	96	T	T	00 36 48.6	
	baz=222,slow=72,SNR=99						
H03N2	Juan Fernandez	52.85	96	T	T	00 36 40.4	
	baz=222,slow=72,SNR=209						
H03N1	Juan Fernandez	52.86	96	T	T	00 36 48.6	
	baz=222,slow=72,SNR=52						
MAW	Mawson	53.58	195	LR	LR	23 59 20.9	
	comp=Z,160nm,21.5s,baz=170,slow=32						
AS31	Alice Springs	62.74	268	P	P	23 40 43.6	+0.2
ASAR	Alice Springs	62.74	268	P	P	23 40 42.5	-0.9
	comp=Z,3.9nm,0.8s,baz=143,slow=6.3,SNR=22						
ASAR				LR	LR	00 04 58.1	
	comp=Z,48nm,19.0s,baz=164,slow=33						
ASAR	Alice Springs	62.74	268	P	P	23 40 43.0	-0.5
H01W1	Cape Leeuwin H	64.40	245	T	T	00 50 59.2	
	baz=141,slow=75,SNR=18						
H01W2	Cape Leeuwin H	64.41	245	T	T	00 50 55.2	
	baz=141,slow=75,SNR=19						
H01W3	Cape Leeuwin H	64.42	245	T	T	00 51 00.3	
	baz=141,slow=75,SNR=18						
WRA	Warramunga Arr	65.48	271	P	P	23 41 02.0	+0.5
	comp=Z,2.0nm,0.9s,baz=148,slow=5.6,SNR=9.8						
WRA	Warramunga Arr	65.48	271	IAmb	IAmb	23 41 05.4	
	comp=Z,0.1nm,1.0s						
LVC	Limon Verde	66.79	96	P	P	23 41 10.7	+0.4
LVC				IAmb	IAmb	23 41 12.7	
	comp=Z,4.0nm,0.9s						
PMG	Port Moresby	67.20	288	LR	LR	00 06 59.6	
	comp=Z,95nm,18.3s,baz=286,slow=33						
CPUP	Villa Florida	70.05	108	P	P	23 41 31.3	+1.1
	comp=Z,2.1nm,0.9s,baz=211,slow=5.8,SNR=4.9						
CPUP				LR	LR	00 07 49.7	
	comp=Z,80nm,18.2s,baz=180,slow=32						
CPUP	Villa Florida	70.05	108	P	P	23 41 30.3	+0.1
CPUP				IAmb	IAmb	23 41 34.1	
	comp=Z,7.9nm,1.4s						
SAML	Samuel	81.07	93	P	P	23 42 33.5	0.0
SAML				IAmb	IAmb	23 42 37.1	
	comp=Z,3.8nm,1.1s						
BDFB	Brasilia	83.73	109	LR	LR	00 17 01.9	
	comp=Z,60nm,18.6s,baz=109,slow=34						
TXAR	Lajitas Array	94.38	40	LR	LR	00 18 09.7	
	comp=Z,114nm,18.3s,baz=0.0,slow=30						
NVAR	Mina Array Bea	98.58	25	LR	LR	00 20 40.3	
	comp=Z,62nm,18.4s,baz=10.0,slow=31						
H10S3	ASCENSION HYDR	105.16	134	T	T	01 42 38.7	
	baz=16,slow=74,SNR=12						
H10S2	ASCENSION HYDR	105.16	134	T	T	01 42 32.5	
	baz=204,slow=74,SNR=10						
H10N3	ASCENSION HYDR	106.24	134	T	T	01 43 50.5	
	baz=203,slow=75,SNR=29						
H10N1	ASCENSION HYDR	106.24	134	T	T	01 43 50.8	
	baz=203,slow=75,SNR=24						
H10N2	ASCENSION HYDR	106.26	134	T	T	01 43 51.8	
	baz=203,slow=75,SNR=30						
ILAR	Eielson Array	121.17	2	PKP	PKiKP	23 49 10.2	+0.5
	comp=Z,1.0nm,1.0s,baz=213,slow=3.1,SNR=5.9						
YKA	Yellowknife Ar	122.07	19	PKP	PKiKP	23 49 11.6	+0.1
	comp=Z,0.1nm,0.4s,baz=196,slow=2.4,SNR=3.9						
MKAR	Makanchi Array	146.68	276	PKPbc	PKPbc	23 49 59.7	+0.5
	comp=Z,2.1nm,0.8s,baz=122,slow=5.9,SNR=3.7						
ESDC	Sonseca Array	152.28	114	PKPbc	PKiKP	23 50 14.9	+1.1
	comp=Z,1.0nm,0.9s,baz=254,slow=2.8,SNR=6.3						

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*IDC **11** 23:43:34.9±0.7, 43°.23N×82°.05E, h0^{km}, mb4.0/11, mb1 3.9/19, mb1mx3.8/61, mbtmp3.8/19, ML3.1/8, Error ellipse: s-maj=13.2km s-min=11.0km az=78.0*

*BJI **11** 23:43:37.9±0.0, 43°.33N×82°.12E, h17^{km}, mb3.9/6, ML3.9/9*

*NNC **11** 23:43:38.4±1.2, 43°.50N×81°.99E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=10.2km s-min=4.7km az=140.0*

ISC 11 23:43:39.1±0.5**, 43°.36N**±0°.04×**82°.05E**±0°.04**, h24^{km}, n66,**
σ1^{s}70/74**, mb3.9**/11**, 9C-12D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.24	275	S	Sb	23 44 18.4	+0.8
	877nm,0.3s						
PDGK	Podgornoye	1.87	270	Pg	Pb	23 44 11.8	-0.9
	193nm,0.3s						
PDGK				Lg	Lg	23 44 37.4	
	730nm,0.5s						
PDGK	Podgornoye	1.87	270	⇑P	Pb	23 44 11.5	-1.2
	280nm,0.6s						
PDGK				⇓S	Sb	23 44 36.9	+1.2
	980nm,0.5s						
SHLS	Shalkode	1.90	265	S	Sn	23 44 30.1	-3.4
	1µm,0.3s						
DJR	Jarkent	1.91	302	Pg	Pb	23 44 13.0	-0.3
	36nm,0.2s						
DJR				Lg	Lg	23 44 39.0	
	600nm,0.3s						
UZB	Uzynbulak	2.22	266	Pg	Pb	23 44 18.0	-0.7
	32nm,0.4s						
UZB				Lg	Lg	23 44 47.4	
	860nm,0.4s						
ZHN	Zhinishke	2.65	267	Pg	Pb	23 44 25.4	-0.5
	52nm,0.3s						
ZHN				Lg	Lg	23 45 00.9	
	113nm,0.3s						
SATY	Saty	2.68	265	Pg	Pb	23 44 26.5	0.0
	39nm,0.2s						
SATY				Lg	Lg	23 45 01.8	
	686nm,0.3s						
KAPS	Kapalarasan	2.73	316	Pg	Pb	23 44 27.2	-0.1
	17nm,0.1s						
KAPS				Lg	Lg	23 45 02.2	
	204nm,0.3s						
KURS	Kuram	2.83	274	Pg	Pb	23 44 26.9	-2.1
	14nm,0.5s						
TDK	Taldyqorghan	3.10	303	Pg	Pb	23 44 31.9	-1.6
	67nm,0.3s						
TDK				Lg	Lg	23 45 11.6	
	508nm,0.6s						
ARXS	Arharly	3.18	287	Pg	Pb	23 44 34.7	-0.2
	56nm,0.2s						
MKAR	Makanchi Array	3.44	3	Pn	Pn	23 44 33.1	+1.9
	9.9nm,0.3s,baz=182,slow=14,SNR=189						
MKAR				Pg	Pb	23 44 40.7	+1.3
	29nm,0.3s,baz=188,slow=13,SNR=27						
MKAR				Sn	Sn	23 45 14.3	+3.0
	36nm,0.3s,baz=185,slow=26,SNR=8.0						
MKAR				Lg	Lg	23 45 29.0	
	46nm,0.3s,baz=200,slow=30,SNR=6.6						
MAKZ	Makanchi	3.45	359	⇓Pn	Pn	23 44 33.0	+1.6
	32nm,0.3s						
MAKZ				⇑Sn	Sn	23 45 13.1	+1.5
	62nm,0.6s						
KOTS	Kotyrbulak	3.61	270	Pg	Pb	23 44 42.9	+0.6
	45nm,0.2s						
KOTS				Lg	Lg	23 45 30.7	
	426nm,0.5s						
MDOK	Medeo	3.66	269	Pn	Pn	23 44 36.3	+1.9
	5.1nm,0.5s						
MDOK				Pg	Pb	23 44 45.7	+2.5
	31nm,0.5s						
MDOK				⇓Lg	Lg	23 45 28.8	
	146nm,0.5s						
MDOK	Medeo	3.66	269	Pg	Pb	23 44 44.3	+1.1
	40nm,0.5s						
MDOK				Lg	Lg	23 45 33.0	
	199nm,0.6s						
CHKK	Chushkaly	3.71	279	Pg	Pb	23 44 43.6	-0.4
	11nm,0.4s						
CHKK				Lg	Lg	23 45 31.2	
	226nm,0.3s						
KNDC	Almaty	3.72	270	P	Pn	23 44 38.1	+3.0
KNDC				⇓Pg	Pb	23 44 51.4	+7.3
	107nm,0.6s						
KNDC				⇑Lg	Lg	23 45 36.7	
	179nm,0.6s						
TNSS	Tian-Shan	3.75	267	Pg	Pb	23 44 44.4	-0.5
	17nm,0.2s						
TNSS				Lg	Lg	23 45 32.8	
	71nm,0.6s						
AAA	Alma-Ata	3.75	270	Pg	Pb	23 44 46.1	+1.4
	19nm,0.2s						
AAA				Lg	Lg	23 45 35.6	
	210nm,0.5s						
MTBS	Maitube	4.12	269	Pg	Pb	23 44 51.1	+0.2
	14nm,0.3s						
MTBS				Lg	Lg	23 45 44.5	
	60nm,0.4s						
WMQ	Urumqi	4.12	82	*e*Pn	Pn	23 44 43.1	+2.4
WMQ				Sn	Sn	23 45 29.1	+0.9
WMQ				smax	smax		
	comp=N,180nm,0.9s						
WMQ				smax	smax		
	comp=E,260nm,1.1s						
KUU	Kurty	4.18	279	Pg	Pb	23 44 52.7	+0.7
	6.7nm,0.3s						
KUU				Lg	Lg	23 45 46.9	
	132nm,0.3s						
KST	Kastek	4.46	268	Pg	Pb	23 44 58.3	+1.5
	33nm,0.5s						
KST				Lg	Lg	23 45 57.0	
	120nm,0.6s						
ZSN	Zaisan	4.55	25	Pg	Pb	23 44 56.6	-1.6
	41nm,0.4s						
DGS	Degeres	4.59	271	Pg	Pb	23 44 60.0	+1.0
	13nm,0.3s						
DGS				Lg	Lg	23 45 59.4	
	182nm,0.6s						
KRBS	Karabastau	4.65	276	Pg	Pb	23 45 03.2	+3.2
	6.7nm,0.2s						
KRBS				Lg	Lg	23 46 04.8	
	70nm,0.3s						
TKM2	Tokmak 2	4.75	267	P	Pn	23 44 52.3	+3.0
TKM2				⇓Pg	Pb	23 45 07.6	+5.9
TKM2				⇓Lg	Lg	23 46 06.6	
SGDS	Sogindy	5.41	274	Pg	Pb	23 45 15.4	+2.5
	4.4nm,0.5s						
SGDS				Lg	Lg	23 46 26.6	
	32nm,0.8s						
AAK	Ala-Archa	5.59	265	Pn	Pn	23 45 02.7	+1.8
	0.5nm,0.3s,baz=106,slow=14,SNR=7.2						
AAK				Pg	Pb	23 45 16.1	+0.1
	0.8nm,0.3s,baz=85,slow=19,SNR=8.3						
AAK				Lg	Lg	23 46 32.2	
	3.4nm,0.3s,baz=279,slow=18,SNR=4.5						
AAK	Ala-Archa	5.59	265	⇑Pg	Pb	23 45 30.2	+14
	15nm,0.7s						
AAK				⇓Lg	Lg	23 46 36.6	
	58nm,0.8s						
BTLS	Baital	6.00	289	Pg	Pb	23 45 27.9	+5.0
	7.7nm,0.2s						
MRKS	Merke	6.50	268	Pg	Pb	23 45 37.6	+6.2
	5.4nm,0.4s						
SEM	Semipalatinsk	7.16	351	Pg	Pb	23 45 46.9	+4.1
	4.4nm,0.2s						
SEM				Lg	Lg	23 47 20.9	
	43nm,0.3s						
KURBB	Kurchatov Arra	7.66	343	Pn	Pn	23 45 29.7	+0.6
	0.3nm,0.3s,baz=161,slow=13,SNR=27						
KURBB				Sn	Sn	23 46 53.9	-1.1
	0.5nm,0.3s,baz=156,slow=24,SNR=5.8						
KURBB				Lg	Lg	23 47 37.0	
	0.8nm,0.3s,baz=156,slow=31,SNR=5.7						
KURBB	Kurchatov Arra	7.66	343	⇓Pn	Pn	23 45 29.5	+0.4
	8.3nm,0.6s,baz=168,slow=12						
KURBB				⇑Sn	Sn	23 46 50.5	-4.5
	38nm,0.7s						
KURBB				⇑Lg	Lg	23 47 39.4	
	127nm,0.7s						
KURK	Kurchatov	7.73	344	⇓Pn	Pn	23 45 29.7	-0.3
	6.7nm,0.7s						
KURK				⇑Sn	Sn	23 46 54.4	-2.2
	32nm,0.9s						
KURK				⇓Lg	Lg	23 47 41.9	
	114nm,1.1s						
KK31	Karatay Array	8.43	272	⇓Pg	Pb	23 46 15.0	+11
	1.2nm,0.4s,baz=77,slow=15,SNR=7.9						
KK31				⇑Lg	Lg	23 47 59.5	
	21nm,0.8s						
ZAA0	Zalesovo Array	10.76	9	⇓P	Pn	23 46 11.0	-0.5
	1.2nm,0.9s						
ZALV	Zalesovo Beam	10.76	9	Pn	Pn	23 46 10.9	-0.5
	1.8nm,0.3s,baz=190,slow=13,SNR=35						
ZALV				Sn	Sn	23 48 06.1	-4.9
	1.4nm,0.3s,baz=192,slow=22,SNR=6.5						
CEP	Cherat	12.38	223	P	Pn	23 46 36.9	+2.9
BVAR	Borovoye Array	12.40	325	Pn	Pn	23 46 33.0	-1.0
	0.2nm,0.3s,baz=153,slow=13,SNR=5.5						
THW	Thamme Wali	13.30	221	⇑P	Pn	23 46 47.4	+1.0
GTA	Gaotai	13.90	100	*e*P	Pn	23 46 53.6	-1.1
GTA				pP	P	23 46 57.8	-4.9
GTA				sP		23 47 00.7	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GUN	Gumba	15.72	167	*e*P	P	23 47 23.5	+0.4
	14nm,0.5s						
KKN	Kakani	15.75	169	*e*P	P	23 47 24.5	+1.1
PKIN	Phulchoki	15.97	169	*e*P	P	23 47 26.6	+0.7
	9.4nm,0.5s						
PKI	Pulchoki	15.98	169	*e*P	P	23 47 26.8	+0.7
	10nm,0.7s						
AB31	Akbulak array	16.35	299	P	Pn	23 47 25.2	-1.7
	0.9nm,0.5s,baz=108,slow=8.9,SNR=20						
TAPN	Taplejung	16.62	162	*e*P	P	23 47 34.6	+1.6
SONM	Songino Array	17.59	67	P	P	23 47 43.6	+0.1
	0.3nm,0.3s,baz=263,slow=12,SNR=8.6						
AKTO	Aktyubinsk	17.84	302	P	Pn	23 47 45.4	-0.2
	0.1nm,0.3s,baz=246,slow=22,SNR=1.9						
ARU	Arti	19.88	319	P	P	23 48 09.0	+0.6
	0.0nm,0.3s,baz=171,slow=12,SNR=3.8						
CMAR	Chiang Mai Arr	28.63	145	P	P	23 49 33.7	0.0
	1.4nm,0.3s,baz=327,slow=8.1,SNR=6.1						
FINES	FINESS Array B	37.25	319	P	P	23 50 49.2	+0.8
	3.5nm,1.0s,baz=96,slow=9.9,SNR=1.3						
ARCES	ARCESS Array B	38.58	332	P	P	23 51 01.1	+1.5
	2.3nm,0.9s,baz=93,slow=8.6,SNR=8.8						
ARCES				PcP	PcP	23 53 11.2	-0.4
	1.6nm,0.8s,baz=101,slow=3.8,SNR=4.1						
NB2	NORSAR Subarra	44.43	319	P	P	23 51 47.6	-0.1
	comp=Z,1.0nm,0.5s,baz=80,slow=7.9						
NOA	NORSAR Array B	44.43	319	P	P	23 51 47.8	+0.1
	comp=Z,0.8nm,0.4s,baz=77,slow=7.9,SNR=4.1						
ESDC	Sonseca Array	61.70	299	P	P	23 53 55.2	0.0
	comp=Z,0.3nm,0.8s,baz=53,slow=5.3,SNR=4.8						
ILAR	Eielson Array	65.62	21	P	P	23 54 19.8	-0.9
	comp=Z,0.5nm,0.7s,baz=322,slow=5.3,SNR=4.6						
YKA	Yellowknife Ar	73.65	8	P	P	23 55 08.8	-1.3
	comp=Z,0.2nm,0.7s,baz=350,slow=6.3,SNR=4.3						
TORD	Torodi Ar. Bea	74.12	273	P	P	23 55 12.7	-0.9
	comp=Z,2.3nm,0.5s,baz=40,slow=5.2,SNR=17						
WRA	Warramunga Arr	79.17	131	P	P	23 55 41.3	-0.7
	comp=Z,0.7nm,0.5s,baz=330,slow=5.2,SNR=11						
ASAR	Alice Springs	81.95	133	P	P	23 55 56.0	-0.8
	comp=Z,0.8nm,0.7s,baz=323,slow=5.2,SNR=12						
DBIC	Dimbokro	83.22	273	P	P	23 56 02.7	-1.0
	comp=Z,1.9nm,0.6s,baz=28,slow=6.8,SNR=3.8						

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*IDC **11** 23:51:07.5±0.8, 1°.99N×125°.73E, h0^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.9/35, mbtmp3.9/12, ML4.1/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/38, Error ellipse: s-maj=54.3km s-min=13.9km az=78.0*

*NEIC **11** 23:51:14.9±1.7, 2°.05N±0°.08×126°.08E±0°.08, h61^{km}±8^{km}, mb4.6/20, Error ellipse: s-maj=13.0km s-min=9.3km az=224.0*

*DJA **11** 23:51:15.1±1.3, 2°N±3°×12°6E±°, h33^{km}±20^{km}, M4.4/12, mb4.7/5, mB5.0/4, MLv4.3/12, Mw(mB)4.3/4*

ISC 11 23:51:13.5±0.6**, 2°.06N**±0°.05×**126°.20E**±0°.08**, h35^{km}, n59,**
σ1^{s}57/38**, mb4.2**/19**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.73	138	Pn	Pn	23 51 43.0	+1.9
TNTI	Ternate	1.73	138	P	Pn	23 51 42.8	+1.6
SGSI	Sangihe	1.75	337	P	Pn	23 51 42.1	+0.7
SGSI				S	Sn	23 52 03.7	+1.3
KMSI	Cibinong	2.67	236	P	Pn	23 51 56.1	+2.1
GTOI	Gorontalo	3.49	246	P	Pn	23 52 06.7	+1.4
SANI	Sanana	4.09	183	P	Pn	23 52 15.0	+1.4
MRSI	Marisa	4.54	250	P	Pn	23 52 21.8	+2.0
LUWI	Luwuk	4.61	228	Pn	Pn	23 52 20.8	0.0
LUWI	Luwuk	4.61	228	P	Pn	23 52 42.5	+22
KCP	Kidapawan	5.04	347	⇑*e*P	Pn	23 52 30.3	+3.6
APSI	Ampana	5.42	237	P	Pn	23 52 35.3	+3.3
	0.3nm962nm73nm,0.6s						
TOLI2	Tolitoli	5.50	260		Pn	23 52 32.6	-0.4
MPSI	Mapaga	6.53	255	P	Pn	23 52 49.4	+2.2
	0.3nm1µm12nm,0.8s						
FAKI	Fak Fak	7.81	129	Pn	Pn	23 53 12.8	+8.0
TTSI	Tana Toraja	8.15	232	P	Pn	23 53 10.1	+0.7
	1µm22nm,0.8s						
MYLDM	Lahad Datu	8.29	292		Pn	23 53 11.5	+0.3
KAPI	Kappang	9.53	222	LR	LR	23 57 38.6	
	comp=Z,68nm,18.8s,baz=80,slow=43						
KKM	Kota Kinabalu	10.71	292		Pn	23 53 47.3	+2.6
MTN	Manton Dam	15.60	162	P	Pn	23 54 49.7	-1.2
MTN				IAmb	IAmb	23 55 37.2	
	comp=Z,86nm,1.6s						
FITZ	Fitzroy Crossi	20.04	182	P	P	23 55 43.0	-0.7
	comp=Z,0.4nm,0.3s,baz=13,slow=9.0,SNR=10						
TPUB	Ta-pu	21.79	346	P	P	23 55 59.1	-3.5
WB0	Warramunga Arr	23.14	160	P	P	23 56 15.8	-1.0
WB0				IAmb	IAmb	23 56 24.0	
	comp=Z,40nm,1.8s						
COEN	Coen	23.16	134	P	P	23 56 16.2	-1.0
WRAB	Tennant Creek	23.28	160	P	P	23 56 17.6	-0.7
WRA	Warramunga Arr	23.28	160	P	P	23 56 17.5	-0.8
	comp=Z,3.9nm,0.6s,baz=339,slow=11,SNR=36						
WB2	Warramunga Arr	23.29	160	P	P	23 56 17.8	-0.5
WB2				IAmb	IAmb	23 56 35.0	
	comp=Z,8.5nm,0.8s						
WR0	Warramunga Arr	23.37	160	P	P	23 56 18.7	-0.5
AS31	Alice Springs	26.65	164	P	P	23 56 49.8	+0.5
ASAR	Alice Springs	26.65	164	P	P	23 56 49.4	+0.1
	comp=Z,1.2nm,0.5s,baz=341,slow=6.9,SNR=22						
FORT	Forrest	32.71	177	P	P	23 57 40.8	-2.0
FORT				IAmb	IAmb	23 58 02.2	
	comp=Z,17nm,0.9s						
KSRS	Korea Array	35.26	2	P	P	23 58 06.2	+1.4
	comp=Z,2.4nm,0.8s,baz=183,slow=8.8,SNR=4.7						
BBOO	Buckleboo	35.92	166	P	P	23 58 09.9	-0.7
BBOO				IAmb	IAmb	23 59 04.0	
	comp=Z,26nm,1.4s						
STKA	Stephens Creek	36.78	158	P	P	23 58 18.1	+0.1
	comp=Z,2.3nm,0.6s,baz=343,slow=8.0,SNR=5.0						
STKA	Stephens Creek	36.78	158	P	P	23 58 17.7	-0.3
ARMA	Armidale	40.39	145	P	P	23 58 49.1	+0.6
USRK	Ussuriysk Ar.	42.27	6	P	P	23 59 03.9	+0.3
	comp=Z,1.1nm,0.6s,baz=204,slow=8.4,SNR=2.0						
H11S3	WAKE ISLAND Hy	42.90	65	T	T	00 45 35.8	
	baz=252,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	42.91	65	T	T	00 45 36.8	
	baz=252,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	42.91	65	T	T	00 45 35.7	
	baz=252,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	43.46	63	T	T	00 46 15.7	
	baz=251,slow=75						
H11N2	WAKE ISLAND Hy	43.47	63	T	T	00 46 24.2	
	baz=251						
H11N3	WAKE ISLAND Hy	43.48	63	T	T	00 46 22.2	
	baz=251,slow=75						

KLR	Kul'dur	47.23	5	P	P	23 59 43.5	+0.5
	comp=Z,0.9nm,0.5s,baz=206,slow=6.9,SNR=7.2						
SONM	Songino Array	48.71	342	P	P	23 59 52.8	-1.9
	comp=Z,0.4nm,0.5s,baz=163,slow=6.6,SNR=2.5						
MK31	Makanchi Array	58.62	326	P	P	00 01 04.9	-2.3
MK31				IAmb	IAmb	00 02 24.9	
	comp=Z,3.1nm,1.3s						
MKAR	Makanchi Array	58.62	326	P	P	00 01 05.2	-2.0
	comp=Z,1.0nm,0.4s,baz=122,slow=8.2,SNR=55						
MKAR	Makanchi Array	58.62	326	P	P	00 01 04.8	-2.4
MAKZ	Makanchi	58.81	326	P	P	00 01 06.6	-1.9
MAKZ				IAmb	IAmb	00 01 24.5	
	comp=Z,2.5nm,1.1s						
QRZ	Quartz Range	59.97	141	P	P	00 01 12.1	-4.5
ZALV	Zalesovo Beam	61.83	334	P	P	00 01 26.3	-2.6
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=2.2						
KURK	Kurchatov	62.86	328	P	P	00 01 33.9	-2.0
KURK				IAmb	IAmb	00 01 34.5	
	comp=Z,3.1nm,0.7s						
ABKAR	Akbulak array	73.10	321	P	P	00 02 38.3	-2.1
VNDA	Vanda	81.85	173	P	P	00 03 27.1	-1.6
	comp=Z,0.5nm,0.6s,baz=7.8,slow=4.3,SNR=3.5						
VNDA	Vanda	81.85	173	IAmb	IAmb	00 03 50.6	
	comp=Z,6.7nm,1.5s						
TTA	Tatalina	82.62	27	P	P	00 03 34.0	+1.0
TTA				IAmb	IAmb	00 04 47.1	
	comp=Z,18nm,1.7s						
PPLA	Purkeypile	84.34	27	P	P	00 03 44.0	+2.0
ILAR	Eielson Array	86.83	25	P	P	00 03 53.4	-0.8
	comp=Z,0.4nm,0.9s,baz=269,slow=4.6,SNR=4.3						
BMAR	Burnt Mountain	87.81	23	P	P	00 03 57.3	-1.6
YAH	Yahtse	89.24	30	P	P	00 04 04.6	-1.5

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*NEIC **12** 00:18:04.7±2.5, 64°.46N±0°.09×17°.5W±0°.1, h7^{km}±4^{km}, mb4.7/27, Error ellipse: s-maj=13.9km s-min=8.6km az=193.0*

*REY **12** 00:18:04.3, 64°.62N×17°.40W, h11^{km}*

*IDC **12** 00:18:05.0±3.2, 64°.18N×17°.94W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.3/46, mbtmp3.6/3, Error ellipse: s-maj=98.8km s-min=22.7km az=14.0*

ISC 12 00:18:03.7±1.1**, 64°.56N**±0°.03×**17°.38W**±0°.02**, h2**^{km}±8^{km}**, n60,** σ1^{s}.**48**/69**, mb4.7**/16**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.21	247	P	Pg	00 18 09.1	+1.4
	baz=234						
IHAM				S	Sg	00 18 12.5	+2.0
	baz=234						
IDYN	Dyngjuhals	0.23	1	P	Pg	00 18 08.1	0.0
	baz=4.4						
IDYN				S	Sg	00 18 11.1	+0.1
	baz=4.4						
IKVE	Kverkfjoll	0.32	69	P	Pg	00 18 10.6	+0.7
	baz=78						
ISKR	Skrokkalda	0.43	270	P	Pg	00 18 12.2	+0.2
	baz=263						
ISKR				S	Sb	00 18 18.6	-2.5
	baz=263						
IJOK	Jokulheimar	0.44	236	P	Pb	00 18 12.7	-1.5
	baz=230						
IJOK				S	Sb	00 18 19.9	-1.3
	baz=230						
IKSK	Karasker	0.56	135	P	Pg	00 18 14.7	+0.3
	baz=138						
IKSK				S	Sb	00 18 24.0	-0.8
	baz=138						
IIEY	Innrieyrar	0.57	215	S	Sb	00 18 24.3	-0.7
	baz=212						
IIEY				P	Pb	00 18 15.2	-1.1
	baz=212						
IASK	Askja	0.58	32	P	Pg	00 18 14.2	-0.6
	baz=36						
IASK				S	Sg	00 18 21.6	-0.7
	baz=36						
IMKO	Mokollar	0.61	46	P	Pg	00 18 14.7	-0.6
	baz=51						
IMKO				S	Sg	00 18 23.3	+0.1
	baz=51						
IKAL	Kalfafell	0.63	192	P	Pb	00 18 16.5	-0.8
	baz=191						
IKAL				S	Sn	00 18 26.6	-3.6
	baz=191						
IVSH	V-Sauoahnukur	0.75	70	P	Pg	00 18 17.4	-0.6
	baz=74						
IFAG	Fagurholsmyri	0.76	155	P	Pb	00 18 18.7	-0.9
	baz=156						
IFAG				S	Sb	00 18 30.3	+0.1
	baz=156						
ISVA	Svartarkot	0.78	4	P	Pg	00 18 17.3	-1.3
	baz=4.7						
ISVA				S	Sg	00 18 27.5	-1.1
	baz=4.7						
IADA	Aoalbol	0.90	59	P	Pg	00 18 19.5	-1.3
	baz=62						
IADA				S	Sg	00 18 31.7	-0.8
	baz=62						
ISNB	Snabyli	1.00	214	P	Pb	00 18 22.5	-1.0
	baz=212						
ISNB				S	Sn	00 18 36.8	-2.3
	baz=212						
IMEL	Melhnausar	1.06	17	P	Pg	00 18 21.6	-2.3
	baz=18						
IREN	Reynihlio	1.11	10	P	Pb	00 18 22.9	-2.6
	baz=11						
IRJU	Rjupnafell	1.11	211	P	Pn	00 18 24.6	-1.5
	baz=210						
IKVO	Krokottuvotn	1.18	10	P	Pn	00 18 23.9	-3.1
	baz=11						
IGRS	Grimsstaoir	1.20	26	P	Pn	00 18 24.4	-3.1
	baz=27						
IHVO	Lagu-Hvolar	1.23	212	P	Pn	00 18 26.5	-1.2
	baz=211						
BORG	Borgarnes	1.71	278	Pg	Pn	00 18 32.2	-2.1
	16nm,0.3s,baz=98,slow=12,SNR=21						
BORG				Lg	Lg	00 18 55.9	
	6.2nm,0.3s,baz=58,slow=20,SNR=3.7						
BORG	Borgarnes	1.71	278		Pn	00 18 33.9	-0.5
SCO	Scoresbysund	6.20	346		Pn	00 19 38.4	+2.4
ANGG	Ammassalik, Gr	8.61	286	Pn	Pn	00 20 08.2	-0.8
EKB6	Eskdalemuir Ar	11.64	136	Pn	Pn	00 20 51.1	+0.6
EKR2	Eskdalemuir Ar	11.64	136	Pn	Pn	00 20 51.8	+1.2
EKB4	Eskdalemuir Ar	11.65	136	Pn	Pn	00 20 52.5	+1.9
NC602	NORSAR Array S	13.76	93		Pn	00 21 20.9	+1.5
KBS	Kingsbay	16.72	19	P	Pn	00 21 56.5	-2.0
KBS				IAmb	IAmb	00 22 15.0	
	comp=Z,26nm,1.1s						
UCC	Uccle	17.89	130	Pn	Pn	00 22 10.0	-3.3
BUR08	Bucovina Ar. S	28.42	106	P	P	00 23 58.7	-0.6
CART	Cartagena	28.72	152	P	P	00 24 01.6	-0.3
CART				IAmb	IAmb	00 24 20.0	
	comp=Z,30nm,1.2s						
VSL	Villasalto	29.57	135	P	P	00 24 09.6	+0.1
F64A	Sherman	33.36	261	P	P	00 24 42.7	0.0
F64A				IAmb	IAmb	00 24 44.1	
	comp=Z,22nm,1.5s						
LIT	Litokhoron	33.60	117	P	P	00 24 45.5	+0.6
LIT				IAmb	IAmb	00 24 58.9	
	comp=Z,13nm,1.1s						
G62A	West of Eustis	34.80	262	P	P	00 24 53.1	-2.2
G62A				IAmb	IAmb	00 24 55.0	
	comp=Z,31nm,1.5s						
TOKA	Tokat	39.09	102	P	P	00 25 33.8	+1.9
TOKA				IAmb	IAmb	00 25 38.3	
	comp=Z,34nm,1.5s						
YKA	Yellowknife Ar	39.32	313	P	P	00 25 35.0	+1.5
	comp=Z,0.8nm,1.1s,baz=42,slow=8.6,SNR=5.1						
AB07	Akbulak array	41.99	73	P	P	00 25 55.1	-0.6
TIXI	Tiksi	42.12	15	P	P	00 26 00.0	+3.6
TOLK	Toolik Lake Re	42.86	336	P	P	00 26 02.7	+0.1
N51A	Ashland	43.38	269	P	P	00 26 06.9	-0.1
N51A				IAmb	IAmb	00 26 10.7	
	comp=Z,15nm,1.1s						
ILAR	Eielson Array	45.80	333	P	P	00 26 29.9	+3.9
	comp=Z,0.7nm,1.0s,baz=22,slow=7.3,SNR=4.6						
BWN	Browne	46.84	334	P	P	00 26 36.9	+2.6
BWN				IAmb	IAmb	00 26 39.7	
	comp=Z,10.0nm,1.0s						
SKAG	Skagway	47.77	322	P	P	00 26 41.0	-0.5
SKAG				IAmb	IAmb	00 26 41.9	
	comp=Z,7.0nm,1.1s						
KURK	Kurchatov	48.12	58	P	P	00 26 44.8	+0.4
BCPM	Bancas Point	48.44	325	P	P	00 26 46.1	-0.6
PCA	Pinnacle	48.47	326	P	P	00 26 46.9	-0.1
RAGM	Ragged Mountai	49.24	329	P	P	00 26 53.7	+0.8
FID	Port Fidalgo	49.31	330	P	P	00 26 52.4	-1.0
FID				IAmb	IAmb	00 26 52.7	
	comp=Z,15nm,1.3s						
SUCK	Suckling Hills	49.32	328	P	P	00 26 53.9	+0.4
RWWY	Rawlins	53.23	291	P	P	00 27 24.0	+0.6
RWWY				IAmb	IAmb	00 27 27.7	
	comp=Z,9.8nm,1.1s						
PD31	Pinedale Array	53.27	293	P	P	00 27 23.1	-0.4
PDAR	Pinedale Array	53.27	293	P	P	00 27 25.4	+1.8
	comp=Z,0.9nm,0.8s,baz=56,slow=4.8,SNR=7.1						
PDAR	Pinedale Array	53.27	293	P	P	00 27 24.8	+1.2
LON	Longmire	54.49	305	P	P	00 27 32.7	+0.5
LON				IAmb	IAmb	00 27 34.4	
	comp=Z,4.8nm,1.4s						
DRK	Karamyk	54.83	71	P	P	00 27 33.0	-2.1
WMOK	Wichita Mounta	55.61	279	P	P	00 27 40.9	+0.5
WMOK				IAmb	IAmb	00 27 44.7	
	comp=Z,5.4nm,0.4s						
PV13	Radium Mtn., P	56.88	290	P	P	00 27 49.5	-0.2
PV13				IAmb	IAmb	00 27 53.8	
	comp=Z,5.9nm,1.1s						

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*IDC **12** 00:19:54.0±0.5, 20°.03S×66°.70E, h0^{km}, mb4.3/21, mb1 4.4/21, mb1mx4.2/48, mbtmp4.3/21, MS4.3/16, Ms1 4.2/16, ms1mx4.1/33, Error ellipse: s-maj=17.2km s-min=14.9km az=35.0*

*BJI **12** 00:19:56.0±0.0, 20°.10S×66°.50E, h10^{km}, mB5.1/26, mb4.7/43, Ms4.9/14, Ms7 4.6/13*

*NEIC **12** 00:19:57.1±2.8, 20°.04S±0°.08×66°.33E±0°.07, h10^{km}±1^{km}, mb5.0/80, Error ellipse: s-maj=14.1km s-min=8.9km az=209.0*

*GCMT **12** 00:19:59.1±0.2, 20°.01S±0°.02×66°.26E±0°.01, h12^{km}, MW5.0/119, Moment Tensor Solution. s52,c60; s119,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.95±.07; M$_{\theta\theta}$1.03±.08; M$_{\phi\phi}$2.92±.07; M$_{r\theta}$0.44±.29; M$_{\theta\phi}$-1.14±.06; M$_{\phi r}$2.20±.27; Best double couple: M$_0$4.29600×10^{16} NP1:ϕ_s324.00000°,δ33.00000°, λ-113.00000°. NP2:ϕ_s171.00000°,δ60.00000°, λ-76.00000°. Principal axes: T 3.8990, Plg14.0000°, Azm250.0000°; N 0.7940, Plg12.0000°, Azm343.0000°; P -4.6930, Plg71.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **12** 00:20:01.7±1.5, 20°.15S×66°.37E, h57^{km}, mb5.1/64 Error ellipse: s-maj=9.9km s-min=5.8km az=89.8*

ISC 12 00:19:58.2±0.3**, 20°.06S**±0°.06×**66°.37E**±0°.06**, h16**^{km}**, n307,** σ1^{s}.**77**/293**, mb4.9**/106**, MS4.4**/20**, 12C-10D, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	10.01	262	Pn	Pn	00 22 20.3	-1.3
H08S1	Diego Carcia H	13.69	26	T	T	00 37 22.0	
	baz=204,slow=76,SNR=180						
H08S2	Diego Garcia H	13.70	27	T	T	00 37 24.1	
	baz=204,slow=76,SNR=126						
H08S3	Diego Garcia H	13.71	26	T	T	00 37 25.0	
	baz=204,slow=76,SNR=165						
DGAR	Diego Garcia	13.89	26	P	Pn	00 23 12.0	-2.5
DGAR	Diego Garcia	13.89	26	Pn	Pn	00 23 12.0	-2.5
ABPO	Ambohimpanom	18.08	270	P	P	00 24 08.7	-0.7
ABPO				pmax	pmax		
	comp=Z,45nm,1.5s						
ABPO	Ambohimpanom	18.08	270		P	00 24 08.7	-0.7
COCO	West Island	30.25	80	P	P	00 26 07.7	-0.9
COCO				pmax	pmax		
	comp=Z,120nm,1.1s						
COCO	West Island	30.25	80	P	P	00 26 07.7	-0.9
KMBO	Kilima Mbogo	34.13	300	P	P	00 26 43.8	+0.8
	comp=Z,0.6nm,0.4s,baz=87,slow=5.7,SNR=4.2						
KMBO				LR	LR	00 37 57.7	
	comp=Z,267nm,21.1s,baz=85,slow=32						
KMBO	Kilima Mbogo	34.13	300	*i* P	P	00 26 46.0	+3.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LSZ	Lusaka	36.64	271	P	P	00 27 05.7	+1.3
LSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSZ	Lusaka	36.64	271	P	P	00 27 05.7	+1.3
GSI	Gunungsitoli	37.23	59	P	P	00 27 11.9	+2.6
GSI				IAmb	IAmb	00 27 22.2	
	comp=Z,32nm,1.2s						
LBTB	Lobatse	37.88	255	P	P	00 27 16.7	+1.8
	comp=Z,6.5nm,0.9s,baz=124,slow=9.4,SNR=10.0						
LBTB	Lobatse	37.88	255	P	P	00 27 14.3	-0.6
LBTB				pmax	pmax		
	comp=Z,14nm,1.0s						
LBTB	Lobatse	37.88	255	P	P	00 27 14.2	-0.6
BOSA	Boshof	38.27	249	P	P	00 27 18.4	+0.3
	comp=Z,2.7nm,0.9s,baz=113,slow=10.0,SNR=3.0						
BOSA	Boshof	38.27	249	P	P	00 27 18.4	+0.3
BOSA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOSA	Boshof	38.27	249	IAmb	IAmb	00 27 23.1	
	comp=Z,4.4nm,0.9s						
HYB	Hyderabad	39.12	19	*i* P	P	00 27 28.0	+2.9
LHMI	Lhok Sumawe	39.18	53	P	P	00 27 21.7	-4.0
	comp=Z,40nm,0.8s						
MBAR	Mbarara	39.87	295	P	P	00 27 30.3	-1.4
MBAR				pmax	pmax		
	comp=Z,16nm,1.3s						
MBAR	Mbarara	39.87	295	P	P	00 27 30.3	-1.4
IPM	Ipoh	41.88	58	P	P	00 27 46.8	-1.3
KULM	Kulim	42.07	57	P	P	00 27 48.0	-1.6
KULM				IAmb	IAmb	00 27 48.9	
	comp=Z,21nm,1.2s						
SRIT	Nakonsritamara	43.37	52	P	P	00 28 01.5	+1.4
WSAR	Wadi Sarin	43.70	350	P	P	00 28 01.3	-1.3
	comp=Z,2.3nm,0.5s,baz=154,slow=7.4,SNR=6.0						
MORW	Morawa	45.77	111	P	P	00 28 20.6	+1.3
MORW				IAmb	IAmb	00 28 23.1	
	comp=Z,20nm,1.2s						
TSUM	Tsumeb	45.83	262	P	P	00 28 21.9	+1.9
TSUM				IAmb	IAmb	00 28 28.7	
	comp=Z,13nm,1.4s						
MAW	Mawson	47.58	182	P	P	00 28 31.0	-1.8
	comp=Z,7.4nm,0.6s,baz=332,slow=9.4,SNR=6.9						
MAW				LR	LR	00 43 24.5	
	comp=Z,219nm,21.6s,baz=42,slow=30						
MAW	Mawson	47.58	182	P	P	00 28 31.0	-1.8
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	47.86	334	P	P	00 28 34.5	-1.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	Ar Rayn	47.86	334	P	P	00 28 34.5	-1.1
SUKH	Sukhothai	49.58	43	P	P	00 28 53.8	+5.0
CM05	Chiang Mai Arr	49.82	42	P	P	00 28 56.5	+5.9
CM04	Chiang Mai Arr	49.84	42	P	P	00 28 56.0	+5.2
CM01	Chiang Mai Arr	49.84	42	P	P	00 28 56.9	+6.1
CM02	Chiang Mai Arr	49.84	42	P	P	00 28 56.6	+5.8
CMAR	Chiang Mai Arr	49.86	42	P	P	00 28 48.2	-2.7
	comp=Z,1.5nm,0.3s,baz=244,slow=9.9,SNR=4.5						
CMAR				LR	LR	00 46 42.0	
	comp=Z,493nm,21.2s,baz=260,slow=32						
CMAR	Chiang Mai Arr	49.86	42	*ce*P	P	00 28 51.2	+0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CM09	Chiang Mai Arr	49.88	42	P	P	00 28 55.0	+3.9
CM36	Chiang Mai Arr	50.00	42	P	P	00 28 56.0	+4.0
CHTO	Chiang Mai	50.13	42	P	P	00 28 52.1	-0.9
CHTO				pmax	pmax		
	comp=Z,12nm,1.4s						
CHTO	Chiang Mai	50.13	42	P	P	00 28 52.1	-0.9
CM35	Chiang Mai Arr	50.16	42	P	P	00 28 58.0	+4.8
SBUM	Sibu	50.23	69	P	P	00 28 56.2	+2.3
SBUM				IAmb	IAmb	00 28 58.8	
	comp=Z,49nm,1.5s						
PAYA	Payao	51.11	42	P	P	00 29 06.0	+5.6
SYO	Syowa Base	51.65	192	⇓*e*P	P	00 29 03.0	-0.7
SHL	Shillong	51.69	30	P	P	00 29 06.4	+1.5
SHL				pmax	pmax		
	comp=Z,27nm,1.1s						
SHL	Shillong	51.69	30	P	P	00 29 06.4	+1.5
SHL				IAmb	IAmb	00 29 09.2	
	comp=Z,27nm,1.1s						
NIL	Nilore	53.81	7	P	P	00 29 20.9	+0.7
NIL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NIL	Nilore	53.81	7	P	P	00 29 20.9	+0.7
NIL				IAmb	IAmb	00 29 23.0	
	comp=Z,8.0nm,0.5s						
KAPI	Kappang	53.97	81	P	P	00 29 23.6	+1.8
KAPI				pmax	pmax		
	comp=Z,35nm,1.2s						
KAPI	Kappang	53.97	81	P	P	00 29 23.6	+1.8
HRA	Herat	54.29	356	P	P	00 29 22.8	-1.1
KBL	Kabul	54.36	3	P	P	00 29 23.9	-0.5
KBL				pmax	pmax		
	comp=Z,20nm,1.2s						
KBL	Kabul	54.36	3	P	P	00 29 23.9	-0.5
KBL				IAmb	IAmb	00 29 34.3	
	comp=Z,20nm,1.2s						
LSA	Lhasa	54.94	26	P	P	00 29 30.7	+1.7
LSA				pmax	pmax		
	comp=Z,18nm,1.4s						
LSA	Lhasa	54.94	26	P	P	00 29 30.7	+1.7
LSA				IAmb	IAmb	00 29 33.9	
	comp=Z,18nm,1.4s						
MMRI	Maumere	55.08	87	P	P	00 29 31.3	+1.5
SLVN	Son La	55.13	44	P	P	00 29 30.6	+0.4
SLVN				IAmb	IAmb	00 29 35.4	
	comp=Z,23nm,1.4s						
FITZ	Fitzroy Crossi	55.79	99	P	P	00 29 36.0	+1.1
SOEI	Soe	56.64	89	P	P	00 29 38.0	-3.2
SOEI				IAmb	IAmb	00 29 45.7	
	comp=Z,24nm,1.1s						
KMI	Kunming	57.17	40	⇑*e*P	P	00 29 48.5	+3.7
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KMI				LR	LR		
	comp=Z,240nm,10.1s						
KMI				LR	LR		
	comp=Z,220nm,12.6s						
KMI				LR	LR		
	comp=Z,380nm,33.9s						
TOLI2	Tolitoli	57.29	75	P	P	00 29 46.4	+0.8
TOLI2				IAmb	IAmb	00 29 54.5	
	comp=Z,14nm,0.9s						
GEYT	Alibeck	58.20	352	P	P	00 29 50.9	-0.7
	comp=Z,1.1nm,0.7s,baz=45,slow=55,SNR=1.3						
GEYT	Alibeck	58.20	352	P	P	00 29 53.0	+1.4
GYA0B	ALIBECK ARRAY	58.20	352	P	P	00 29 51.9	+0.3
LUWI	Luwuk	58.24	78	P	P	00 29 53.3	+1.0
DRK	Karamyk	59.45	5	P	P	00 29 58.0	-2.5
KSH	Kashi	59.94	9	P	P	00 29 58.6	-5.1
KSH				pP	pP	00 30 03.6	-4.4
KSH				S	S	00 38 09.5	-5.9
BTK	Batken	59.95	4	P	P	00 30 03.1	-0.6
BTK				pmax	pmax		
	comp=Z,12nm,1.2s						
BTK	Batken	59.95	4	P	P	00 30 03.1	-0.6
BTK				IAmb	IAmb	00 30 07.1	
	comp=Z,12nm,1.1s						
ARSB	Arslanbob	61.38	6	P	P	00 30 12.3	-1.2
ARSB				pmax	pmax		
	comp=Z,36nm,1.3s						
ARSB	Arslanbob	61.38	6	P	P	00 30 12.3	-1.2
MARD	Mardin	61.96	337	P	P	00 30 17.5	0.0
MARD				IAmb	IAmb	00 30 22.7	
	comp=Z,6.6nm,0.9s						
IUG	Iuzhnay	61.99	3	*e*P	P	00 30 19.8	+2.2
	comp=Z,6.5nm,1.2s,baz=2.9						
IUG	Iuzhnay	61.99	3	*e*P	P	00 30 19.7	+2.2
IUG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ASAR	Alice Springs	62.26	107	P	P	00 30 16.2	-3.6
	comp=Z,4.8nm,0.9s,baz=261,slow=6.4,SNR=20						
ASAR				LR	LR	00 53 30.9	
	comp=Z,451nm,21.2s,baz=279,slow=32						
ASAR	Alice Springs	62.26	107	P	P	00 30 17.4	-2.4
ASAR	Alice Springs	62.26	107	P	P	00 30 17.4	-2.4
AS31	Alice Springs	62.26	107	P	P	00 30 18.9	-0.9
DZA	Taraz	62.81	4	*e*P	P	00 30 25.1	+2.1
	comp=Z,8.8nm,1.0s,baz=3.9						
DZA	Taraz	62.81	4	*e*P	P	00 30 25.0	+2.1
DZA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AAK	Ala-Archa	62.83	7	⇑*e*P	P	00 30 22.4	-0.9
AAK				pmax	pmax		
	comp=Z,21nm,1.7s						
AAK	Ala-Archa	62.83	7	P	P	00 30 23.6	+0.3
AAK				IAmb	IAmb	00 30 27.8	
	comp=Z,24nm,1.4s						
BOOM	Boomskoye usch	62.86	8	P	P	00 30 23.0	-0.5
BOOM				pmax	pmax		
	comp=Z,30nm,1.3s						
BOOM	Boomskoye usch	62.86	8	P	P	00 30 23.0	-0.5
KK07	Karatay Array	62.95	3	P	P	00 30 24.3	+0.4
KK06	Karatay Array	62.96	3	P	P	00 30 25.3	+1.4
KK03	Karatay Array	62.97	3	P	P	00 30 24.6	+0.7
KK02	Karatay Array	62.97	3	P	P	00 30 23.5	-0.5
KK08	Karatay Array	62.97	3	P	P	00 30 23.4	-0.6
KK31	Karatay Array	62.97	3	P	P	00 30 23.1	-0.9
KK31				pmax	pmax		
	comp=Z,14nm,1.3s						
KK31	Karatay Array	62.97	3	P	P	00 30 23.1	-0.9
KK31				IAmb	IAmb	00 30 28.4	
	comp=Z,14nm,1.2s						
KKAR	Karatay Array	62.97	3	P	P	00 30 23.2	-0.8
KKAR				pmax	pmax		
	comp=Z,14nm,1.3s						
KKAR	Karatay Array	62.97	3	P	P	00 30 23.1	-0.9
KKAR	Karatay Array	62.97	3	P	P	00 30 23.2	-0.8
KKAR				IAmb	IAmb	00 30 28.4	
	comp=Z,14nm,1.2s						
KK01	Karatay Array	62.97	3	P	P	00 30 23.5	-0.5
KK04	Karatay Array	62.97	3	P	P	00 30 23.4	-0.6
KK05	Karatay Array	62.98	3	P	P	00 30 22.5	-1.6
KK09	Karatay Array	62.98	3	P	P	00 30 23.9	-0.2
FRU1	Bishkek	63.02	7	P	P	00 30 26.1	+1.7
FRU1				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FRU1	Bishkek	63.02	7	P	P	00 30 26.1	+1.7
FRU1				IAmb	IAmb	00 30 39.2	
	comp=Z,10nm,0.8s						
GNI	Garni	63.21	342	⇓*e*P	P	00 30 28.1	+2.3
GNI				pmax	pmax		
	comp=Z,43nm,1.2s						
GNI	Garni	63.21	342	P	P	00 30 26.5	+0.7
GAZ	Gaziantep	63.22	334	P	P	00 30 25.5	-0.4
GAZ				IAmb	IAmb	00 30 30.3	
	comp=Z,18nm,1.5s						
WRA	Warramunga Arr	63.42	103	P	P	00 30 24.6	-3.0
	comp=Z,6.1nm,1.0s,baz=257,slow=6.2,SNR=21						
WRA				LR	LR	00 54 18.8	
	comp=Z,266nm,21.2s,baz=270,slow=33						
WB2	Warramunga Arr	63.43	103	P	P	00 30 27.6	-0.1
WRAB	Tennant Creek	63.43	103	⇓*e*P	P	00 30 28.5	+0.8
WRAB				pmax	pmax		
	comp=Z,43nm,1.2s						
WRAB	Tennant Creek	63.43	103	P	P	00 30 28.2	+0.6
WB0	Warramunga Arr	63.51	103	P	P	00 30 27.6	-0.5
MTBS	Maitube	63.56	8	*e*P	P	00 30 30.6	+2.6
	baz=8.0						
MTBS	Maitube	63.56	8	*e*P	P	00 30 30.6	+2.6
WR0	Warramunga Arr	63.60	103	P	P	00 30 26.6	-2.2
WR0				IAmb	IAmb	00 30 31.5	
	comp=Z,23nm,1.2s						
SGDS	Sogindy	63.65	7	*e*P	P	00 30 30.4	+1.7
	comp=Z,8.6nm,1.4s,baz=6.5						
SGDS	Sogindy	63.65	7	*e*P	P	00 30 30.3	+1.7
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MDOK	Medeo	63.67	9	*e*P	P	00 30 30.6	+1.8
	baz=8.5						
MDOK	Medeo	63.67	9	*e*P	P	00 30 30.6	+1.8
SATY	Saty	63.78	10	*e*P	P	00 30 31.3	+1.7
	comp=Z,17nm,1.2s,baz=9.6						
SATY	Saty	63.78	10	*e*P	P	00 30 31.2	+1.7
SATY				pmax	pmax		
	comp=Z,17nm,1.2s						
SHLS	Shalkode	64.05	11	*e*P	P	00 30 33.7	+2.4
	comp=Z,22nm,1.5s,baz=11						
SHLS	Shalkode	64.05	11	*e*P	P	00 30 33.6	+2.4
SHLS				pmax	pmax		
	comp=Z,22nm,1.5s						
KPKS	Kokpek	64.22	10	*e*P	P	00 30 34.1	+1.8
	comp=Z,4.2nm,1.0s,baz=9.8						
KPKS	Kokpek	64.22	10	*e*P	P	00 30 34.1	+1.8
KPKS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KUU	Kurty	64.29	8	*e*P	P	00 30 33.9	+1.2
	comp=Z,23nm,1.3s,baz=7.8						

KUU	Kurty	64.29	8	eP	P	00 30 33.9	+1.2
KUU				pmax	pmax		
	comp=Z,23nm,1.3s						
CHKK	Chushkaly	64.34	9	eP	P	00 30 34.6	+1.5
	baz=8.3						
CHKK	Chushkaly	64.34	9	eP	P	00 30 34.6	+1.5
KOPT	Kop Dagi	64.46	338	P	P	00 30 34.1	-0.1
KOPT				IAmb	IAmb	00 30 44.4	
	comp=Z,21nm,1.3s						
SNAA	Sanae	64.59	199	P	P	00 30 36.7	+2.2
SNAA	Sanae	64.59	199	deP	P	00 30 35.7	+1.2
SNAA				pmax	pmax		
	comp=Z,12nm,1.4s						
SNAA	Sanae	64.59	199	P	P	00 30 34.9	+0.4
SNAA				IAmb	IAmb	00 30 42.3	
	comp=Z,8.8nm,1.1s						
AKH	Akhalkalaki	64.74	341	P	P	00 30 35.6	-0.3
AKH				pmax	pmax		
	comp=Z,72nm,1.4s						
AKH	Akhalkalaki	64.74	341	P	P	00 30 35.6	-0.3
BTLS	Baital	65.17	6	eP	P	00 30 40.0	+1.7
	comp=Z,16nm,1.7s,baz=5.8						
BTLS	Baital	65.17	6	eP	P	00 30 40.0	+1.7
BTLS				pmax	pmax		
	comp=Z,16nm,1.7s						
TDK	Taldyqorghan	65.67	9	eP	P	00 30 43.5	+1.7
	comp=Z,40nm,1.4s,baz=9.2						
TDK	Taldyqorghan	65.67	9	eP	P	00 30 43.4	+1.7
TDK				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEI	Tsey	65.88	342	eP	P	00 30 42.9	-0.4
ZEI				pmax	pmax		
	comp=Z,11nm,1.2s						
VNA2	Neumayer--Watz	65.89	200	P	P	00 30 45.3	+2.5
	baz=94,slow=6.0						
VNA1	Neumayer--Stat	66.14	201	P	P	00 30 49.8	+5.4
LZH	Lanzhou	66.15	33	eP	P	00 30 47.9	+2.8
LZH				pP	pwP	00 30 52.9	-0.4
LZH				sP	sP	00 30 57.0	+6.0
LZH				ePP	PP	00 33 18.6	+7.5
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,64nm,4.3s						
LZH				LR	LR		
	comp=Z,320nm,14.2s						
LZH				LR	LR		
	comp=Z,390nm,15.4s						
LZH				LR	LR		
	comp=Z,370nm,15.7s						
TOKA	Tokat	66.22	335	P	P	00 30 46.3	+1.0
WMQ	Urumqi	66.51	17	eP	P	00 30 50.4	+3.2
WMQ				pP	pwP	00 30 53.5	-1.8
WMQ				pmax	pmax		
	comp=Z,29nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,350nm,4.9s						
WMQ	Urumqi	66.51	17	P	P	00 30 47.9	+0.7
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ	Urumqi	66.51	17	P	P	00 30 47.9	+0.7
WMQ				IAmb	IAmb	00 30 52.0	
	comp=Z,20nm,1.1s						
NCK	Nalchik	66.62	342	⇑eP	P	00 30 50.3	+2.5
NCK				pmax	pmax		
	comp=Z,15nm,1.2s						
VNA3	Neumayer Olymp	66.67	200	P	P	00 30 51.5	+3.6
BR131	Keskin Array S	66.87	333	P	P	00 30 49.7	0.0
BR131				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BR131	Keskin Array S	66.87	333	P	P	00 30 49.7	0.0
BR131				IAmb	IAmb	00 30 53.0	
	comp=Z,10nm,0.9s						
BRTR	Keskin Array B	66.87	333	P	P	00 30 47.0	-2.7
	comp=Z,5.3nm,1.1s,baz=119,slow=12,SNR=6.3						
BRTR				LR	LR	00 58 19.6	
	comp=Z,94nm,18.9s,baz=118,slow=34						
BRTR	Keskin Array B	66.87	333	P	P	00 30 48.8	-0.8
GTA	Gaotai	66.92	28	⇑P	P	00 30 53.0	+3.1
GTA				pP	pwP	00 30 57.9	-0.2
GTA				sP	sP	00 31 00.2	+4.4
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,67nm,6.7s						
GTA				LR	LR		
	comp=Z,270nm,18.2s						
GTA				LR	LR		
	comp=Z,200nm,17.8s						
GTA				LR	LR		
	comp=Z,230nm,19.3s						
KBZ	Khabaz	67.03	342	P	P	00 30 51.1	+0.7
	comp=Z,3.9nm,0.9s,baz=143,slow=4.6,SNR=4.7						
KBZ				LR	LR	01 00 21.6	
	comp=Z,129nm,19.2s,baz=318,slow=36						
KBZ	Khabaz	67.03	342	⇑eP	P	00 30 53.5	+3.1
KBZ				pmax	pmax		
	comp=Z,22nm,2.0s						
KIV	Kislovodsk	67.30	342	eP	P	00 30 55.1	+2.9
KIV				pmax	pmax		
	comp=Z,37nm,1.0s						
KIV	Kislovodsk	67.30	342	P	P	00 30 53.1	+0.9
KIV				IAmb	IAmb	00 30 58.2	
	comp=Z,22nm,1.3s						
XAN	Xi'an	67.35	37	P	P	00 30 54.8	+2.1
XAN				pP	pwP	00 30 59.9	-1.0
XAN				pmax	pmax		
	comp=Z,14nm,1.4s						
XAN				pmax	pmax		
	comp=Z,170nm,5.4s						
STKA	Stephens Creek	67.47	117	P	P	00 30 49.9	-3.7
	comp=Z,1.6nm,0.7s,baz=98,slow=17,SNR=2.2						
STKA				LR	LR	00 56 31.5	
	comp=Z,179nm,20.1s,baz=218,slow=33						
STKA	Stephens Creek	67.47	117	⇓eP	P	00 30 55.8	+2.2
STKA	Stephens Creek	67.47	117	P	P	00 30 55.2	+1.6
MAKZ	Makanchi	68.03	11	P	P	00 30 55.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MAKZ	Makanchi	68.03	11	P	P	00 30 55.9	-0.8
MAKZ				IAmb	IAmb	00 30 59.7	
	comp=Z,8.6nm,1.1s						
MK31	Makanchi Array	68.08	12	deP	P	00 30 58.7	+1.7
MK31	Makanchi Array	68.08	12	P	P	00 30 54.8	-2.2
MK31				IAmb	IAmb	00 31 00.7	
	comp=Z,16nm,1.4s						
MKAR	Makanchi Array	68.08	12	P	P	00 30 54.1	-2.9
	comp=Z,1.2nm,0.9s,baz=198,slow=6.4,SNR=9.0						
MKAR				LR	LR	00 59 12.2	
	comp=Z,217nm,21.1s,baz=199,slow=35						
MKAR	Makanchi Array	68.08	12	P	P	00 30 54.0	-3.0
ZSN	Zaisan	69.23	13	eP	P	00 31 06.4	+2.2
	comp=Z,3.9nm,1.1s,baz=13						
ZSN	Zaisan	69.23	13	eP	P	00 31 06.3	+2.2
ZSN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ABKAR	Akbulak array	69.24	355	P	P	00 31 03.5	-0.6
ABKAR	Akbulak array	69.24	355	P	P	00 31 03.0	-1.2
ABKAR				IAmb	IAmb	00 31 07.2	
	comp=Z,17nm,1.1s						
BRZS	Berezniki	69.96	4	eP	P	00 31 10.0	+1.4
	comp=Z,16nm,1.7s,baz=4.2						
BRZS	Berezniki	69.96	4	eP	P	00 31 10.0	+1.4
BRZS				pmax	pmax		
	comp=Z,16nm,1.7s						
QSPA	South Pole Qui	70.05	180	P	P	00 31 09.3	0.0
QSPA				IAmb	IAmb	00 31 11.7	
	comp=Z,22nm,1.3s						
SEM	Semipalatinsk	71.22	9	eP	P	00 31 17.9	+1.3
	comp=Z,20nm,1.5s,baz=9.2						
SEM	Semipalatinsk	71.22	9	eP	P	00 31 17.8	+1.3
SEM				pmax	pmax		
	comp=Z,20nm,1.5s						
KURK	Kurchatov	71.29	8	⇓eP	P	00 31 18.7	+2.1
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
KURK	Kurchatov	71.29	8	P	P	00 31 14.9	-1.8
KURK				IAmb	IAmb	00 31 20.5	
	comp=Z,23nm,1.2s						
TORD	Torodi Ar. Bea	71.67	292	P	P	00 31 20.5	+0.8
	comp=Z,2.8nm,1.0s,baz=116,slow=3.7,SNR=8.6						
TORD	Torodi Ar. Bea	71.67	292	P	P	00 31 20.0	+0.3
VNDA	Vanda	71.74	167	P	P	00 31 17.1	-2.1
	comp=Z,2.4nm,1.1s,baz=266,slow=7.1,SNR=4.0						
VNDA	Vanda	71.74	167	P	P	00 31 20.1	+1.0
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VNDA	Vanda	71.74	167	P	P	00 31 20.1	+1.0
DGZ	Jazzator, Alta	71.92	14	⇑eP	P	00 31 19.6	-1.1
DGZ				pmax	pmax		
	comp=Z,15nm,1.6s						
NJ2	Nanjing	72.18	45	eP	P	00 31 24.0	+1.6
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
BELA	Belgrano 2	72.82	193	P	P	00 31 26.5	+0.9
BRVK	Borovoye	72.89	2	⇑eP	P	00 31 28.1	+1.9
BRVK				pmax	pmax		
	comp=Z,15nm,1.4s						
BRVK	Borovoye	72.89	2	P	P	00 31 24.7	-1.5
BRVK				IAmb	IAmb	00 31 29.1	
	comp=Z,11nm,1.1s						
FNA	Florina	73.57	326	P	P	00 31 30.1	-0.5
FNA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FNA	Florina	73.57	326	P	P	00 31 30.1	-0.5
HHC	Hu-ho-hao-te	73.72	34	eP	P	00 31 35.4	+3.9
HHC				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
BELG	Belogornoye	73.98	348	d iP	P	00 31 34.1	+1.5
BELG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VRH	Novokhopyorsk	74.19	344	eP	P	00 31 34.0	+0.2
VRH				pmax	pmax		
	comp=Z,20nm,1.5s						
VORD	Divnogorie	74.63	343	eP	P	00 31 36.3	-0.1
VORD				pmax	pmax		
	comp=Z,20nm,1.6s						
KIC	Kosan Boka	74.64	283	eP	P	00 31 38.5	+1.1
	comp=Z,13nm,0.9s						
LIC	Lamto	74.85	283	eP	P	00 31 39.9	+1.3
	comp=Z,7.9nm,0.7s						
DBIC	Dimbokro	74.86	283	P	P	00 31 37.4	-1.2
	comp=Z,3.3nm,0.7s,baz=307,slow=7.5,SNR=3.4						
DBIC				LR	LR	01 03 20.0	
	comp=Z,254nm,18.9s,baz=120,slow=35						
DBIC	Dimbokro	74.86	283	P	P	00 31 37.4	-1.2
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MLR	Muntele Rosu	74.87	332	P	P	00 31 36.0	-2.1
MLR				pmax	pmax		
	comp=Z,19nm,1.1s						
MLR	Muntele Rosu	74.87	332	P	P	00 31 36.0	-2.1
MLR				IAmb	IAmb	00 31 52.1	
	comp=Z,19nm,1.1s						
TIC	Toumodi	75.00	283	eP	P	00 31 41.2	+1.7
ZAA0	Zalesovo Array	75.40	11	P	P	00 31 38.6	-2.2
ZAA0				IAmb	IAmb	00 31 43.7	
	comp=Z,20nm,1.1s						
ZALV	Zalesovo Beam	75.40	11	P	P	00 31 38.2	-2.6
	comp=Z,9.0nm,0.9s,baz=197,slow=4.6,SNR=9.9						
ZALV				LR	LR	01 04 19.1	
	comp=Z,109nm,18.6s,baz=269,slow=35						
ZALV	Zalesovo Beam	75.40	11	i P	P	00 31 40.4	-0.4
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZALV	Zalesovo Beam	75.40	11	P	P	00 31 39.1	-1.7
LPSR	Galich'ya Gora	76.20	343	eP	P	00 31 45.6	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
ARU	Arti	76.48	356	c iP	P	00 31 48.3	+1.4
ARU				S	S	00 41 36.6	+4.9
ARU				pmax	pmax		
	comp=Z,32nm,1.4s						
ARU	Arti	76.48	356	P	P	00 31 48.3	+1.4
ARU				IAmb	IAmb	00 31 50.7	
	comp=Z,33nm,1.3s						
SONM	Songino Array	76.53	26	P	P	00 31 45.1	-2.5
	comp=Z,5.0nm,1.0s,baz=212,slow=5.3,SNR=4.8						
SONM				LR	LR	01 06 21.5	
	comp=Z,157nm,18.4s,baz=198,slow=36						
SONM	Songino Array	76.53	26	P	P	00 31 46.0	-1.6
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	76.53	26	P	P	00 31 46.0	-1.6
SVE	Sverdlovsk	76.74	357	eP	P	00 31 47.5	-0.9
SVE				pmax	pmax		
	comp=Z,27nm,1.4s						
ULN	Ulaanbaatar	76.83	27	⇑eP	P	00 31 51.8	+2.5
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	76.83	27	P	P	00 31 49.7	+0.4
ULN				IAmb	IAmb	00 31 52.7	
	comp=Z,13nm,1.3s						
BURAR	Bucovina Array	76.84	333	P	P	00 31 49.9	+0.6
BUR08	Bucovina Ar. S	76.86	333	P	P	00 31 49.7	+0.3
EIDS	Eidsvold	77.07	112	P	P	00 31 50.9	-0.2
EIDS				IAmb	IAmb	00 31 55.7	
	comp=Z,26nm,1.4s						
KOWA	Kowa	77.25	291	P	P	00 31 51.8	-0.4
AKASG	Malin Array Be	77.69	337	P	P	00 31 50.9	-3.0
	comp=Z,3.0nm,0.8s,baz=144,slow=4.6,SNR=6.8						
AKASG	Malin Array Be	77.69	337	P	P	00 31 54.0	+0.2
AKASG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
AKASG	Malin Array Be	77.69	337	P	P	00 31 54.0	+0.2
AKBB	Malin Array Si	77.69	337	⇑iP	P	00 31 55.8	+2.0
AKBB				pmax	pmax		
	comp=Z,22nm,1.5s						
OBN	Obninsk	79.08	343	⇓eP	P	00 32 04.1	+2.7
OBN				e		00 32 13.5	
OBN				e		00 35 04.5	
OBN				eS	S	00 41 50.2	-10
OBN				pmax	pmax		
	comp=Z,37nm,1.7s						
OBN				MLR	MLR		
	comp=Z,321nm,17.0s						
KOLS	Kolonicke sedl	79.12	332	eP	P	00 32 04.6	+2.8
KOLS				pmax	pmax		
	comp=Z,44nm,1.9s						
KOLS	Kolonicke sedl	79.12	332	eP	P	00 32 04.6	+2.8
MOS	Moscow	79.35	344	eP	P	00 31 58.3	-4.6
MOS				pmax	pmax		
	comp=Z,42nm,1.4s						
KECS	Kecovo	79.59	331	eP	P	00 32 06.6	+2.2
KECS	Kecovo	79.59	331	eP	P	00 32 06.6	+2.2
KIRV	Kirov	79.60	351	⇓eP	P	00 32 06.5	+2.3
VYHS	Vyhne	80.36	330	eP	P	00 32 10.8	+2.2
VYHS				pmax	pmax		
	comp=Z,17nm,1.7s						
VYHS	Vyhne	80.36	330	eP	P	00 32 10.8	+2.2
MODS	Modra-Piesok	81.01	329	eP	P	00 32 13.0	+0.9
MODS	Modra-Piesok	81.01	329	eP	P	00 32 13.0	+0.9
JNU	Nakatsue	81.14	50	LR	LR	01 07 34.1	
	comp=Z,292nm,18.7s,baz=280,slow=35						
KSAR	Wonju Array Be	81.35	45	P	P	00 32 14.7	+0.6
KSAR	Wonju Array Be	81.35	45	P	P	00 32 14.7	+0.6
MORC	Moravsky Berou	81.86	330	P	P	00 32 15.6	-1.0
MORC				pmax	pmax		
	comp=Z,14nm,1.4s						
MORC	Moravsky Berou	81.86	330	P	P	00 32 15.6	-1.0
MORC				IAmb	IAmb	00 32 19.8	
	comp=Z,14nm,1.4s						
TEOL	Teolo	81.89	324	P	P	00 32 15.5	-1.3
KLMR	Klimovskoe	83.50	347	eP	P	00 32 22.4	-2.3
KLMR				pmax	pmax		
	comp=Z,58nm,1.4s						
KLMR	Klimovskoe	83.50	347	eP	P	00 32 22.5	-2.3
KLMR				AMP		00 32 29.3	
	comp=Z,58nm,1.4s						
RPZ	Rata Peaks	86.44	135	LR	LR	01 03 47.9	
	comp=Z,63nm,18.8s,baz=22,slow=30						
TMCR	Tamitsa	86.79	348	eP	P	00 32 42.9	+1.7
BOD	Bodaibo	87.08	23	eP	P	00 32 38.8	-4.0
BOD				pmax	pmax		
	comp=Z,11nm,1.8s						
LTZ	Lake Taylor	87.64	135	P	P	00 32 44.9	-1.2
MJAR	Matsushiro Arr	88.06	50	P	P	00 32 45.4	-2.7
	comp=Z,1.6nm,0.7s,baz=191,slow=5.0,SNR=2.3						
MJAR	Matsushiro Arr	88.06	50	P	P	00 32 47.8	-0.3
MJAR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MJAR	Matsushiro Arr	88.06	50	P	P	00 32 47.8	-0.3
ESDC	Sonseca Array	88.44	313	P	P	00 32 50.2	+0.4
	comp=Z,5.0nm,1.2s,baz=100,slow=5.3,SNR=11						
ESDC	Sonseca Array	88.44	313	P	P	00 32 48.9	-0.9
THZ	Tophouse	88.50	134	P	P	00 32 47.6	-2.6
PAB	San Pablo	88.64	313	P	P	00 32 47.7	-3.1
PAB				pmax	pmax		
	comp=Z,15nm,1.5s						
PAB	San Pablo	88.64	313	P	P	00 32 47.7	-3.1
PAB				IAmb	IAmb	00 33 00.2	
	comp=Z,15nm,1.5s						
KLR	Kul'dur	90.04	37	⇑iP	P	00 32 58.4	+1.4
KLR				pmax	pmax		
	comp=Z,11nm,1.4s						
HNR	Honiara	90.13	100	LR	LR	01 08 59.2	
	comp=Z,100nm,21.4s,baz=250,slow=33						
ARCES	ARCESS Array B	93.97	347	LR	LR	01 15 12.9	
	comp=Z,239nm,19.3s,baz=255,slow=35						
A21K	Barrow	122.98	15	PKPdf	PKiKP	00 38 55.4	+2.1
TOLK	Toolik Lake Re	126.59	16	PKPdf	PKPdf	00 38 59.4	-0.7
ILAR	Eielson Array	130.17	18	PKP	PKPdf	00 39 06.7	-0.3
	comp=Z,0.8nm,1.0s,baz=316,slow=5.0,SNR=5.5						
INK	Inuvik	130.18	10	PKIKP	PKiKP	00 39 09.7	+2.0
INK	Inuvik	130.18	10	PKPdf	PKiKP	00 39 09.7	+2.0
MENT	Mentasta	132.47	18	PKPdf	PKPdf	00 39 11.4	0.0
YKA	Yellowknife Ar	137.60	1	PKP	PKPdf	00 39 18.2	-2.8
	comp=Z,0.7nm,1.0s,baz=16,slow=2.2,SNR=3.2						
YKA				PP	PP	00 42 07.8	+1.1
	comp=Z,0.9nm,1.0s,baz=358,slow=7.6,SNR=8.3						
M53A	WI Miller and	144.88	315	P	PKPdf	00 39 35.0	+0.3
	baz=63						
W60A	Pink Hill	145.05	303	P	PKPdf	00 39 36.1	+1.0
	baz=74						
V59A	Middlesex	145.26	304	P	PKiKP	00 39 37.0	-2.4
	baz=73						
M52A	Chesterland	145.28	315		PKiKP	00 39 37.2	-2.1
U58A	Oxford	145.31	305	P	PKPdf	00 39 36.2	+0.6
	baz=72						
T57A	Hurt	145.64	307	P	PKiKP	00 39 38.4	-1.8
	baz=70						
O53A	New Philadelph	145.78	313	P	PKiKP	00 39 39.0	-1.4
	baz=64						
R55A	Marlinton	145.82	309	P	PKiKP	00 39 39.4	-1.2
	baz=67						
U57A	Blanch	145.89	306	P	PKiKP	00 39 39.3	-1.4
	baz=71						
T56A	Rocky Mt	146.22	307	P	PKPab	00 39 39.5	+0.6
	baz=69						
V57A	Coltrane Farms	146.41	305	P	PKiKP	00 39 40.4	-1.4
	baz=71						
R54A	Victor	146.49	310	P	PKiKP	00 39 40.8	-1.1
	baz=67						
Q53A	Leroy	146.60	311	P	PKiKP	00 39 41.0	-1.1
	baz=65						
P52A	Corning	146.69	313	P	PKiKP	00 39 41.3	-1.0
	baz=63						
ULM	Lac du Bonnet	146.75	339	PKPbc	PKPdf	00 39 35.0	-2.6
	comp=Z,6.3nm,0.8s,baz=16,slow=6.1,SNR=3.1						
EYMN	Ely	146.92	332	P	PKiKP	00 39 41.4	-1.1
	baz=40						
EYMN	Ely	146.92	332		PKiKP	00 39 41.6	-0.9
ACSO	Alum Creek Sta	146.99	314		PKiKP	00 39 42.6	-0.2
SFIN	Lafayette	149.61	318	P	PKiKP	00 39 48.9	+0.6
	baz=56						
JFWS	Jewell Farm	149.91	324	PKP2	PKiKP	00 39 48.7	-0.1
JFWS	Jewell Farm	149.91	324	P	PKiKP	00 39 49.0	+0.2
	baz=48						
JFWS	Jewell Farm	149.91	324		PKiKP	00 39 48.7	-0.1
WCI	Wyandotte Cave	150.21	313	PKIKP	PKiKP	00 39 50.1	+0.5
WCI	Wyandotte Cave	150.21	313	P	PKiKP	00 39 49.3	-0.2
	baz=60						
WCI	Wyandotte Cave	150.21	313		PKiKP	00 39 50.1	+0.5
WALA	Waterton Lakes	151.07	0		PKiKP	00 39 52.5	+1.4
P43A	Skaggs, Pawnee	151.56	319		PKiKP	00 39 53.9	+1.6
NEW	Newport	151.72	5	PKPbc	PKPbc	00 39 50.8	-1.2
	comp=Z,1.0nm,0.7s,baz=44,slow=4.7,SNR=4.4						
NEW	Newport	151.72	5		PKiKP	00 39 53.5	+1.0
EGMT	Eagleton	151.93	354	P	PKiKP	00 39 54.1	+1.2
	baz=7.8						
WVT	Waverly	152.30	311	P	PKiKP	00 39 54.7	+0.8
	baz=62						
WVT	Waverly	152.30	311		PKiKP	00 39 54.7	+0.8
ECSD	EROS Data Cent	152.44	333	P	PKiKP	00 39 54.9	+0.8
	baz=36						
LAO	LASA Array	152.76	349	P	PKiKP	00 39 56.5	+1.9
	baz=15						
FVM	French Village	153.09	317		PKiKP	00 39 56.5	+1.0
BMO	Blue Mountains	155.09	6	PKP2	PKPab	00 40 14.9	-0.2
BMO	Blue Mountains	155.09	6		PKPab	00 40 14.9	-0.2
PDAR	Pinedale Array	157.11	352	PKP	PKPdf	00 39 51.7	-1.9
	comp=Z,0.4nm,1.0s,baz=308,slow=3.0,SNR=2.4						
NVAR	Mina Array Bea	161.25	11	PKPab	PKPab	00 40 40.9	-1.2
	comp=Z,1.3nm,0.9s,baz=20,slow=2.9,SNR=6.1						
MNTX	Cornudas Mount	166.25	329		PKPdf	00 39 59.7	-3.4
TXAR	Lajitas Array	167.08	318	PKPab	PKPab	00 41 08.2	+0.2
	comp=Z,1.3nm,0.8s,baz=55,slow=3.4,SNR=6.8						

REY ***12*** *00:22:40.5, 64.°62N×17.°45W, h12km*
IDC ***12*** *00:22:42.4±0.6, 64.°50N×17.°70W, h0km, mb3.7/15, mb1 4.0/19, mb1mx3.9/42, mbtmp3.8/19, ML2.8/3, MS3.6/2, Ms1 3.7/2, ms1mx3.0/52, Error ellipse: s-maj=22.5km s-min=8.9km az=17.0*
NEIC ***12*** *00:22:44.1±2.6, 64.°45N±0.°08×17.°8W±0.°1, h8km±4km, mb4.5/32, Error ellipse: s-maj=11.8km s-min=8.0km az=187.0*
ISC 12 00:22:43.9±0.4**, 64.°47N**±0.°03×**17.°68W**±0.°03**, h10km, n103, σ1.s68**/96**, mb4.3**/32**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.06	281	P	Pg	00 22 45.0	-1.2
	baz=230						
IJOK	Jokulheimar	0.28	237	P	Pg	00 22 48.9	-0.7
	baz=228						
IJOK				S	Sg	00 22 55.4	+2.1
	baz=228						
ISKR	Skrokkalda	0.32	287	P	Pg	00 22 47.9	-2.3
	baz=262						
IDYN	Dyngjuhals	0.35	23	P	Pg	00 22 44.4	-6.5
	baz=12						
IDYN				S	Sg	00 22 47.2	-8.3
	baz=12						
IIEY	Innrieyrar	0.42	207	P	Pg	00 22 51.4	-0.7
	baz=210						
IIEY				S	Sb	00 22 59.8	0.0
	baz=210						
IKVE	Kverkfjoll	0.48	64	P	Pg	00 22 47.4	-5.9
	baz=79						
IKVE				S	Sg	00 22 52.1	-7.5
	baz=79						
IKAL	Kalfafell	0.52	180	P	Pg	00 22 52.8	-1.2
	baz=189						
IKAL				S	Sb	00 23 02.6	-0.1
	baz=189						
IKSK	Karasker	0.61	120	P	Pg	00 22 51.2	-4.5
	baz=137						
IKSK				S	Sg	00 22 59.8	-3.9
	baz=137						
IFAG	Fagurholsmyri	0.75	142	P	Pg	00 22 55.1	-3.2
	baz=155						
IMKO	Mokollar	0.77	48	P	Pg	00 22 51.1	-7.6
	baz=52						
ISNB	Snabyli	0.85	210	P	Pg	00 22 58.7	-1.4
	baz=211						
ISNB				S	Sn	00 23 13.2	-1.1
	baz=211						
ISVA	Svartarkot	0.89	12	P	Pg	00 22 53.6	-7.3
	baz=6.5						
IVSH	V-Sauoahnukur	0.91	67	P	Pg	00 22 54.0	-7.3
	baz=75						
IVSH				S	Sg	00 23 04.8	-8.3
	baz=75						
IRJU	Rjupnafell	0.96	207	P	Pg	00 23 00.6	-1.7
	baz=209						
IMJO	Mjoaskard	1.02	239	P	Pg	00 23 01.4	-2.1
	baz=236						
IADA	Aoalbol	1.06	58	P	Pb	00 22 56.0	-8.2
	baz=62						
IADA				S	Sb	00 23 08.7	-9.5
	baz=62						
IHVO	Lagu-Hvolar	1.08	209	P	Pg	00 23 02.6	-1.9
	baz=210						
IGYG	Gygjarholskot	1.12	261	P	Pg	00 23 02.1	-3.2
	baz=256						
IMEL	Melhnausar	1.19	21	P	Pn	00 22 58.0	-8.5
	baz=19						
IREN	Reynihlio	1.23	15	P	Pn	00 22 59.3	-7.8
	baz=12						
IKVO	Krokottuvotn	1.30	15	P	Pn	00 23 00.1	-7.9
	baz=12						
IGRS	Grimsstaoir	1.35	29	P	Pn	00 23 00.9	-7.8
	baz=28						

ISKI	Skildingahlsh	1.43	11	P	Pn	00 23 02.5	-7.4
	baz=7.9						
BORG	Borgarnes	1.60	282	Pg	Pn	00 23 09.3	-2.7
	48nm,0.3s,baz=90,slow=7.9,SNR=78						
BORG				Lg	Lg	00 23 34.1	
	30nm,0.3s,baz=104,slow=18,SNR=12						
BORG	Borgarnes	1.60	282	Pn	Pn	00 23 09.5	-2.5
BORG				Sn	Sg	00 23 32.1	-3.0
SCO	Scoresbysund	6.26	347	Pn	Pn	00 24 15.4	-0.6
SCO	Scoresbysund	6.26	347	*e*	Pn	00 24 09.6	-6.5
	baz=163,slow=10						
SCO				*i* P	Pn	00 24 14.0	-2.1
SCO				*i* S	Sn	00 25 28.7	+1.2
SCO				IAML		00 25 34.7	
	comp=Z,1.6nm,0.6s						
ANGG	Ammassalik, Gr	8.51	287	Pn	Pn	00 24 45.3	-1.6
EKA	Eskdalemuir Ar	11.67	135	Pn	Pn	00 25 28.7	-1.6
	baz=328,slow=13,SNR=5.2						
ESK	Eskdalemuir	11.67	135	Pn	Pn	00 25 30.2	-0.1
NRS	Narsarsuaq	13.05	268	Pn	Pn	00 25 50.1	+1.2
NC204	NORSAR Array S	13.30	91	Pn	Pn	00 25 50.2	-2.3
NC303	NORSAR Array S	13.59	90	Pn	Pn	00 25 53.8	-2.6
NOA	NORSAR Array B	13.61	91	Pn	Pn	00 25 53.3	-3.3
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.2						
NOA				LR	LR	00 31 34.0	
	comp=Z,178nm,19.1s,baz=305,slow=39						
SFJD	Kangerlussuaq	13.68	295	Pn	Pn	00 25 53.4	-4.2
HFS	Hagfors	15.12	92	Pn	Pn	00 26 19.0	+1.8
	comp=Z,0.1nm,0.3s,baz=180,slow=39,SNR=2.1						
SPA0	Spitsbergen Ar	17.08	23		Pn	00 26 41.9	-0.4
SPA0				IAmb	IAmb	00 26 44.4	
	comp=Z,98nm,1.5s						
ARCES	ARCESS Array B	17.30	54	P	Pn	00 26 45.1	+0.1
	baz=275,slow=12,SNR=2.8						
FINES	FINESS Array B	19.82	79	P	Pn	00 27 15.9	+0.1
	comp=Z,0.1nm,0.3s,baz=294,slow=14,SNR=4.7						
FINES	FINESS Array B	19.82	79	P	Pn	00 27 16.3	+0.6
TULEG	Thule	19.98	328	P	Pn	00 27 16.6	-0.8
CLL	Collm	20.69	115	*e*P	Pn	00 27 27.0	+0.9
CLL	Collm	20.69	115	P	P	00 27 24.8	+1.1
ECH	Echery	21.09	129	P	P	00 27 29.2	+1.1
BFO	Black Forest	21.39	127	P	P	00 27 33.2	+1.9
BFO				IAmb	IAmb	00 27 37.0	
	comp=Z,15nm,1.2s						
BRG	Berggiesshubel	21.40	114	*e*P	P	00 27 22.1	-9.3
BRG				Amp		00 27 37.0	
	comp=Z,8.2nm,1.1s						
BRG	Berggiesshubel	21.40	114	*e*P	P	00 27 22.1	-9.3
BRG				Amp		00 27 37.0	
	comp=Z,8.2nm,1.1s						
FRB	Frobisher Bay	21.75	291	P	P	00 27 35.1	+0.2
	comp=Z,2.7nm,0.9s,baz=27,slow=8.7,SNR=3.8						
PRU	Pruhonice	22.34	115	*e*P	P	00 27 41.7	+0.3
CHVC	Chvalec	22.46	112	*e*P	P	00 27 45.2	+2.4
OSTC	Ostas	22.55	112	*e*P	P	00 27 45.6	+1.8
KHC	Kasperske Hory	22.65	118	*e*P	P	00 27 46.0	+1.2
KHC	Kasperske Hory	22.65	118	P	P	00 27 45.8	+0.9
KHC				IAmb	IAmb	00 27 49.8	
	comp=Z,19nm,1.5s						
DPC	Dobruska-Polom	22.76	112	*e*P	P	00 27 46.6	+0.6
GEC2	GERESS Array S	22.93	118	P	P	00 27 47.8	-0.1
GERES	GERESS Array B	22.93	118	P	P	00 27 47.6	-0.2
	comp=Z,1.5nm,0.8s,baz=316,slow=9.3,SNR=4.4						
DAVOX	Davos/Dischmat	23.26	126	P	P	00 27 52.7	+1.3
	comp=Z,4.8nm,1.1s,baz=340,slow=22,SNR=3.8						
TUE	Stuetta	23.34	128	P	P	00 27 51.1	-1.1
VRAC	Vranov	23.69	113	P	P	00 27 56.7	+1.3
	comp=Z,1.5nm,0.4s,baz=318,slow=7.8,SNR=3.8						
VRAC	Vranov	23.69	113	*e*P	P	00 27 56.6	+1.3
KRUC	Moravsky	23.80	114	*e*P	P	00 27 56.7	+0.2
NACGM	Naroch	23.89	93	*i* P	P	00 27 55.6	-1.6
NACGM				*i* P	P	00 27 55.6	-1.6
NACGM				*i* P	P	00 27 55.6	-1.6
NACGM				*i* PP	PnPn	00 28 27.4	+2.3
NACGM				*i* PPP	PPP	00 28 42.8	
NACGM				*i* S	S	00 32 14.9	+1.9
NACGM				*i* SS	SnSn	00 32 47.3	-4.5
NACGM				*i* SSS	SSS	00 33 28.6	
NACGM				*i* LQ	LQ	00 35 38.4	
NACGM				*i* LR	LR	00 37 30.4	
CTI	Castel Tesino	24.52	125	P	P	00 28 02.0	-1.2
CTI				IAmb	IAmb	00 28 15.7	
	comp=Z,13nm,1.3s						
SMOL	Smolenice	24.65	114	*e*P	P	00 28 05.4	+1.1
LANS	Liptovska Anna	24.97	110	*e*P	P	00 28 08.1	+0.9
VYHS	Vyhne	25.23	112	*e*P	P	00 28 09.3	-0.3
KWP	Kalwaria Pacla	25.93	106	P	P	00 28 18.4	+2.5
DRLN	Deer Lake	25.98	253	P	P	00 28 16.9	+0.5
ESBB	Sonseca Array	26.10	155	P	P	00 28 18.4	+0.8
ESDC	Sonseca Array	26.11	155	P	P	00 28 18.2	+0.6
	comp=Z,0.9nm,0.8s,baz=344,slow=9.8,SNR=7.6						
PSZ	Piszkesteto	26.12	111	P	P	00 28 18.4	+0.7
PSZ				IAmb	IAmb	00 28 23.8	
	comp=Z,11nm,1.2s						
KOLS	Kolonicke sedl	26.29	107	*e*P	P	00 28 21.6	+2.4
PESTR	Estremoz	26.32	162	P	P	00 28 20.8	+1.3
AKASG	Malin Array Be	27.89	97	P	P	00 28 32.2	-1.3
	comp=Z,0.1nm,0.3s,baz=319,slow=9.8,SNR=2.5						
BELG	Belogornoye	34.60	79	P	P	00 29 32.4	0.0
	comp=Z,14nm,1.0s,baz=196,slow=5.6,SNR=4.6						
I62A	Tamworth	36.08	262	P	P	00 29 46.4	+1.1
C36M	Paulatuk	36.95	326	P	P	00 29 51.4	-1.0
C36M				IAmb	IAmb	00 30 09.8	
	comp=Z,8.2nm,1.4s						
BRTR	Keskin Array B	38.51	105	P	P	00 30 06.4	+0.3
	comp=Z,1.6nm,0.8s,baz=341,slow=5.3,SNR=6.4						
SADO	Sadowa	38.74	270	LR	LR	00 45 13.7	
	comp=Z,119nm,18.4s,baz=68,slow=35						
KBZ	Khabaz	39.19	92	P	P	00 30 12.3	+0.8
	comp=Z,1.6nm,0.7s,baz=170,slow=11,SNR=2.6						
YKA	Yellowknife Ar	39.29	313	P	P	00 30 11.7	-0.5
	comp=Z,0.9nm,0.9s,baz=42,slow=8.7,SNR=8.0						
M54A	Oil Creek Stat	41.59	267	P	P	00 30 31.4	-0.1
A21K	Barrow	41.59	341	P	P	00 30 32.0	+0.9
A21K				IAmb	IAmb	00 30 35.0	
	comp=Z,12nm,1.1s						
TOLK	Toolik Lake Re	42.90	336	P	P	00 30 42.9	+1.0
TOLK				IAmb	IAmb	00 30 44.8	
	comp=Z,9.3nm,1.2s						
Q51A	Peebles	45.23	269	P	P	00 31 00.1	-0.8
Q51A				IAmb	IAmb	00 31 06.8	
	comp=Z,8.7nm,1.2s						
ILAR	Eielson Array	45.83	332	P	P	00 31 05.7	+0.4
	comp=Z,0.3nm,0.5s,baz=27,slow=6.1,SNR=6.6						
ZALV	Zalesovo Beam	47.82	51	P	P	00 31 20.3	-0.7
	comp=Z,0.5nm,0.4s,baz=347,slow=12,SNR=5.7						
EGMT	Eagleton	48.89	297	P	P	00 31 30.5	+1.0
RLMT	Red Lodge	51.10	295	P	P	00 31 48.5	+2.1
RLMT				IAmb	IAmb	00 31 52.3	
	comp=Z,7.7nm,1.4s						
BOZ	Bozeman (W)	51.63	297	IAmb	IAmb	00 31 56.5	
	comp=Z,8.3nm,1.4s						
H17A	Grant Village	52.22	295	IAmb	IAmb	00 32 02.3	
	comp=Z,9.2nm,1.4s						
TORD	Torodi Ar. Bea	52.99	156	P	P	00 32 00.4	-0.1
	comp=Z,1.7nm,0.9s,baz=346,slow=7.3,SNR=3.9						
TORD	Torodi Ar. Bea	52.99	156	IAmb	IAmb	00 32 02.1	
	comp=Z,1.7nm,0.9s						
BW06	Boulder Array	53.18	293	P	P	00 32 02.4	+0.4
BW06				IAmb	IAmb	00 32 03.2	
	comp=Z,5.3nm,1.2s						
PD31	Pinedale Array	53.18	293	P	P	00 32 02.3	+0.3
PD31				IAmb	IAmb	00 32 06.7	
	comp=Z,6.1nm,1.3s						
PDAR	Pinedale Array	53.18	293	P	P	00 32 01.2	-0.7
	comp=Z,1.5nm,0.8s,baz=54,slow=5.6,SNR=13						
BTK	Batken	54.10	71	P	P	00 32 10.0	+1.5
BTK				IAmb	IAmb	00 32 10.7	
	comp=Z,8.2nm,1.2s						
WMQ	Urumqi	57.41	56	*e*P	P	00 32 36.1	+3.9
NVAR	Mina Array Bea	60.32	297	P	P	00 32 52.1	-0.6
	comp=Z,0.3nm,0.8s,baz=46,slow=5.2,SNR=2.3						
TXAR	Lajitas Array	62.24	280	P	P	00 33 06.2	+0.5
	comp=Z,0.6nm,1.0s,baz=63,slow=3.1,SNR=4.2						
GTA	Gaotai	65.49	49	*e*P	P	00 33 26.7	-0.2
GTA				pP	pP	00 33 31.1	+0.5
GTA				sP	sP	00 33 33.6	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC	Hu-ho-hao-te	67.72	39	*e*P	P	00 33 43.5	+2.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
NJ2	Nanjing	77.94	37	*e*P	P	00 34 43.2	+1.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						

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*HEL **12** 00:23:45.4,67°.87N×20°.04E,h0^{km},ML1.6,Explosion*

UPP 12 00:23:46.6±0.1**,67°.81N×20°.19E,h1**^{km}±9^{km}**,ML1.9, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	22	P	Pg	00 23 49.5	0.0
KUA				S	Sg	00 23 51.5	0.0
KUA	Kurravaara	0.15	22	*i* P	Pg	00 23 49.5	0.0
KUA				*i* S	Sg	00 23 51.5	0.0
RATU	Laukkuluspa	0.23	273	P	Pg	00 23 50.9	0.0
RATU	Laukkuluspa	0.23	273	*i* P	Pg	00 23 50.9	0.0
KOVU	Salmi	0.41	359	P	Pg	00 23 54.3	-0.2
KOVU	Salmi	0.41	359	*i* P	Pg	00 23 54.3	-0.2
NIKU	Nikkaluokta	0.44	278	P	Pg	00 23 54.9	-0.1
NIKU	Nikkaluokta	0.44	278	*i* P	Pg	00 23 54.9	-0.1
DUNU	Dundret	0.71	168	P	Pg	00 23 59.7	-0.5
DUNU	Dundret	0.71	168	*i* P	Pg	00 23 59.7	-0.5
LANU	Lannavaara	0.72	70	P	Pg	00 24 00.1	-0.3
LANU	Lannavaara	0.72	70	*e*P	Pg	00 23 59.9	-0.5
LANU				*e*S	Sg	00 24 09.4	-0.3
SALU	Saltoluokta	0.78	237	P	Pg	00 24 01.1	-0.4
SALU	Saltoluokta	0.78	237	*i* P	Pg	00 24 01.1	-0.4
MASU	Masugnsbyn	0.78	117	P	Pg	00 24 01.0	-0.5
MASU	Masugnsbyn	0.78	117	*i* P	Pg	00 24 01.0	-0.5
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	00 24 09.6	-0.3
KIF	Kilpisjarvi	1.22	10	*e*PB	Pg	00 24 09.8	-0.1
KIF				MSG		00 24 22.0	
	comp=Z,4.1nm,0.2s						
KIF				*e*SB	Sg	00 24 25.9	+0.2
PAJU	Pajala	1.38	124	P	Pn	00 24 11.7	-1.3
PAJU	Pajala	1.38	124	*e*P	Pn	00 24 11.6	-1.3
PAJU				*e*SB	Sg	00 24 29.7	-1.1
KTK1	Kautokeino	1.65	42	*e*P	Pn	00 24 16.3	-0.4
TOF	Tornio	2.38	135	*e*PB	Pn	00 24 28.2	+1.5
TOF				MSG		00 24 58.2	
	comp=Z,2.1nm,0.2s						
TOF				*e*SB	Sb	00 24 58.5	-1.6
SGF	Sodankyl	2.45	96	*e*PB	Pb	00 24 29.6	-1.8
SGF				*e*SG	Sb	00 25 02.2	+0.1
RNF	Rovaniemi	2.57	115	*e*PB	Pb	00 24 31.5	-1.9
RNF				*e*SB	Sb	00 25 04.3	-1.1

UPP 12 00:24:43.1±0.5**,67°.86N×20°.20E,h1**^{km}±4^{km}**,ML2.0, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.10	30	P	Pg	00 24 45.2	+0.1
KUA				S	Sg	00 24 46.8	+0.3
RATU	Laukkuluspa	0.23	260	P	Pg	00 24 47.6	+0.1
KOVU	Salmi	0.36	358	P	Pg	00 24 50.1	+0.1
NIKU	Nikkaluokta	0.44	271	P	Pg	00 24 51.5	0.0
LANU	Lannavaara	0.70	74	P	Pg	00 24 56.3	-0.2
DUNU	Dundret	0.76	169	P	Pg	00 24 57.3	-0.3

IDC 12 00:29:26.8±3.3**,16°.26S×173°.15W,h0**^{km}**,mb3.8**/4**, mb1 4.1**/4**,mb1mx3.7**/42**,mbtmp3.8**/4**,MS3.2**/4**,Ms1 3.2**/4**, ms1mx3.0**/36**,Error ellipse: s-maj=179.4km s-min=27.6km az=146.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.55	259	LR	LR	00 34 43.8	
	comp=Z,140nm,18.0s,baz=330,slow=37						
RAR	Rarotonga	13.59	113	LR	LR	00 36 39.9	
	comp=Z,44nm,18.5s,baz=282,slow=32						
DZM	Mont Dzumac	20.12	250	*e*LR	LR	00 39 08.5	
	comp=Z,122nm,25.4s						
PAE	Paea	22.58	97	*e*T	T	00 57 13.3	
	1.2nm,0.3s						
PPT	Papeete	22.59	97	LR	LR	00 40 52.5	
	comp=Z,38nm,18.9s,baz=319,slow=30						
PPT2	Papeete2	22.59	97	*e*LR	LR	00 39 35.4	
	comp=Z,70nm,28.5s						
PPT2	Papeete2	22.59	97	*e*T	T	00 57 14.4	
	2.1nm,0.3s						
TVO	Taravao	22.89	97	*e*T	T	00 57 36.8	
	0.9nm,0.4s						
TBI	Tubuai	23.35	111	*e*T	T	00 58 23.7	
	7.3nm,0.4s						
VAH	Vaihoa	24.58	91	*e*T	T	00 59 35.6	
	2.5nm,0.2s						
HNR	Honiara	27.08	281	LR	LR	00 44 14.7	
	comp=Z,109nm,20.3s,baz=102,slow=33						
TAOE	Nuku Hiva Isla	33.00	81	*e*T	T	01 09 58.6	
	31nm,0.2s						
WRA	Warramunga Arr	49.89	257	P	P	00 38 22.1	-0.4
	0.3nm,0.6s,baz=99,slow=6.0,SNR=5.3						
ASAR	Alice Springs	50.08	253	P	P	00 38 23.6	-0.3
	1.5nm,0.6s,baz=89,slow=7.9,SNR=15						
PDAR	Pinedale Array	82.74	42	P	P	00 41 52.8	-0.2
	0.8nm,0.8s,baz=208,slow=3.3,SNR=6.6						
ILAR	Eielson Array	83.24	11	P	P	00 41 54.2	-0.5
	0.6nm,0.7s,baz=226,slow=6.2,SNR=9.9						
BRTR	Keskin Array B	146.98	320	PKPbc	PKPbc	00 49 12.3	+0.4
	1.1nm,0.7s,baz=113,slow=2.4,SNR=7.6						
GERES	GERESS Array B	147.03	352	PKPbc	PKPbc	00 49 11.3	-0.4
	0.2nm,0.3s,baz=16,slow=11,SNR=1.9						

HEL 12 00:33:09.6±0.5**,67°.19N×20°.81E,h0**^{km}**,ML1.7, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	Lannavaara	0.97	27	PG	Pg	00 33 27.5	-0.7
TOF	Tornio	1.79	127	PG	Pn	00 33 41.9	+0.1
TOF				MSG		00 34 03.2	
	comp=Z,2.8nm,0.2s						
TOF				SN	Sb	00 34 05.8	-0.4
KIF	Kilpisjarvi	1.82	360	PG	Pn	00 33 42.5	+0.4
	baz=178						
KIF				MSG		00 34 05.1	
	comp=Z,6.5nm,0.2s						
KIF				SG	Sb	00 34 06.7	-0.4
RNF	Rovaniemi	2.14	104	PG	Pn	00 33 47.5	+1.1
RNF				SG	Sb	00 34 16.1	0.0
SGF	Sodankyl	2.23	81	PG	Pn	00 33 48.8	+1.0
	baz=268						
SGF				SG	Sb	00 34 18.4	-0.5

UPP 12 00:33:53.3±0.0**,67°.83N×20°.20E,h0**^{km}**,ML2.2, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	23	P	Pg	00 33 56.1	+0.2
KUA				S	Sg	00 33 58.0	+0.4
RATU	Laukkuluspa	0.23	269	P	Pg	00 33 57.9	+0.2
KOVU	Salmi	0.40	358	P	Pg	00 34 00.8	0.0
NIKU	Nikkaluokta	0.44	275	P	Pg	00 34 01.8	0.0
LANU	Lannavaara	0.71	71	P	Pg	00 34 06.7	-0.2
DUNU	Dundret	0.73	168	P	Pg	00 34 06.8	-0.4
MASU	Masugnsbyn	0.78	118	P	Pg	00 34 08.2	-0.1
SALU	Saltoluokta	0.79	236	P	Pg	00 34 08.2	-0.2
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 34 16.4	+0.1
PAJU	Pajala	1.39	124	P	Pg	00 34 18.6	-1.2
KTK1	Kautokeino	1.64	42	*e*P	Pn	00 34 23.1	-0.2
HARU	Harads	1.70	169	P	Pn	00 34 24.1	0.0

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*NEIC **12** 00:37:14.1±1.4,20°.8S±0°.1×178°.1W±0°.1,h518^{km}±8^{km}, mb4.2/24,Error ellipse: s-maj=21.3km s-min=16.6km az=138.0*

*IDC **12** 00:37:17.1±2.2,20°.67S×178°.30W,h544^{km}±19^{km}, mb3.5/11,mb1 3.7/12,mb1mx3.4/42,mbtmp4.3/12,Error ellipse: s-maj=43.9km s-min=12.2km az=154.0*

ISC 12 00:37:17.6±0.7**,20°.5S**±0°.1×**178°.4W**±0°.1**,h550**^{km}**,n54,** σ**0^{s}.87**/56**,mb4.2**/23**,4C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.38	309	P	P	00 38 42.3	-0.2
	2.4nm,0.3s,baz=162,slow=3.5,SNR=8.4						
MSVF	Nonsavu	4.38	309	P	P	00 38 40.2	-2.3
RAO	Raoul Island	8.69	177	P	P	00 39 13.1	-8.9
AFI	Afiamalu	9.12	45	P	P	00 39 20.6	-6.1
DZM	Mont Dzumac	14.23	261	P	P	00 40 18.7	-0.6
OUZ	Omahuta	16.24	204	P	P	00 40 38.4	-0.8
WHZ	Wether Hill Ro	27.67	201	P	P	00 42 20.9	-0.7
WHZ				IAmb	IAmb	00 42 27.2	
	comp=Z,5.4nm,0.8s						
PYZ	Puysegur Point	28.35	202	P	P	00 42 19.9	-7.5
EIDS	Eidsvold	28.49	254	P	P	00 42 29.9	+0.8
ARMA	Armidale	28.73	244	P	P	00 42 30.7	-0.5
ARMA				IAmb	IAmb	00 42 33.6	
	comp=Z,6.8nm,1.1s						
CTAO	Charters Tower	33.13	264	P	P	00 43 09.4	+0.5
CTAO				IAmb	IAmb	00 43 11.1	
	comp=Z,12nm,1.1s						
PATS	Pohnpei	35.57	318	P	P	00 43 27.6	-1.7
COEN	Coen	37.23	274	P	P	00 43 43.8	+0.7
COEN				IAmb	IAmb	00 44 03.5	
	comp=Z,5.9nm,0.8s						
STKA	Stephens Creek	37.45	244	P	P	00 43 44.1	-0.6
	comp=Z,1.1nm,0.4s,baz=91,slow=11,SNR=3.7						
STKA	Stephens Creek	37.45	244	P	P	00 43 44.5	-0.1
BBOO	Buckleboo	42.21	244	P	P	00 44 22.5	-0.3
BBOO				IAmb	IAmb	00 44 40.6	
	comp=Z,10nm,1.1s						
JAY	Jayapura	43.72	289	P	P	00 44 35.7	+0.9
	comp=Z,13nm,0.5s,baz=89,slow=2.4,SNR=7.0						
WR0	Warramunga Arr	44.05	262	P	P	00 44 37.1	-0.2
AS31	Alice Springs	44.16	257	P	P	00 44 38.6	+0.5
ASAR	Alice Springs	44.16	257	P	P	00 44 38.6	+0.5
	comp=Z,8.9nm,0.8s,baz=95,slow=7.9,SNR=106						
ASAR				PcP	PcP	00 46 11.6	+0.6
	comp=Z,2.2nm,0.7s,baz=107,slow=3.9,SNR=11						
ASAR				S	S	00 50 32.4	+0.7
	comp=Z,2.0nm,1.0s,baz=94,slow=15,SNR=11						
ASAR	Alice Springs	44.16	257	P	P	00 44 38.0	-0.1
WB0	Warramunga Arr	44.22	262	P	P	00 44 38.7	+0.1
WB2	Warramunga Arr	44.23	262	P	P	00 44 38.9	+0.3
WB2				IAmb	IAmb	00 44 39.0	
	comp=Z,6.9nm,0.8s						
WRAB	Tennant Creek	44.23	262	P	P	00 44 38.8	+0.1
WRAB				IAmb	IAmb	00 44 39.4	
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	44.24	262	P	P	00 44 38.7	-0.1
	comp=Z,4.0nm,0.6s,baz=97,slow=8.6,SNR=51						
WRA				PcP	PcP	00 46 10.9	-0.3
	comp=Z,1.6nm,0.9s,baz=101,slow=3.1,SNR=5.0						
WRA	Warramunga Arr	44.24	262	P	P	00 44 38.4	-0.3
FITZ	Fitzroy Crossi	52.67	262	P	P	00 45 42.0	+0.7
PSA00	Pilbara Seismi	57.31	257	P	P	00 46 14.5	+0.8
PSA00	Pilbara Seismi	57.31	257	P	P	00 46 13.8	+0.1
PSA00				IAmb	IAmb	00 46 14.7	
	comp=Z,9.6nm,0.8s						
YBH	Yreka Blue Hor	80.54	39	P	P	00 48 33.5	+0.6
	comp=Z,1.5nm,0.7s,baz=277,slow=2.8,SNR=5.9						
NVAR	Mina Array Bea	81.30	44	P	P	00 48 37.8	+0.7
	comp=Z,0.9nm,0.8s,baz=220,slow=8.6,SNR=4.9						
PINE	Pine Mountain	82.83	38	P	P	00 48 46.1	+1.4
PINE				IAmb	IAmb	00 48 46.8	
	comp=Z,6.0nm,0.9s						
F10A	Beach Ranch, E	86.25	38	P	P	00 49 01.6	+0.4
F10A				IAmb	IAmb	00 49 02.2	
	comp=Z,4.5nm,0.9s						
SEY	Seymchan	86.33	347	P	P	00 49 01.7	+0.7
	comp=Z,3.9nm,0.6s,baz=161,slow=4.5,SNR=8.1						
TXAR	Lajitas Array	87.38	57	P	P	00 49 07.2	+0.4
	comp=Z,0.7nm,0.9s,baz=209,slow=6.9,SNR=7.3						
WRH	Wood River Hil	87.92	13	P	P	00 49 08.3	-0.2
CCB	Clear Creek Bu	88.13	13	P	P	00 49 09.0	-0.4
CCB				IAmb	IAmb	00 49 09.6	
	comp=Z,3.7nm,0.8s						
MDM	Murphy Dome	88.32	12	P	P	00 49 09.9	-0.5
MDM				IAmb	IAmb	00 49 10.5	
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	88.43	13	P	P	00 49 10.3	-0.5
	comp=Z,1.5nm,0.9s,baz=226,slow=6.3,SNR=8.2						
PDAR	Pinedale Array	89.23	43	P	P	00 49 14.8	-0.6
	comp=Z,0.7nm,0.8s,baz=182,slow=3.7,SNR=5.7						
CMAR	Chiang Mai Arr	89.79	290	P	P	00 49 20.2	+1.9
	comp=Z,1.2nm,0.6s,baz=135,slow=4.5,SNR=8.1						
ARCES	ARCESS Array B	128.89	349	PKP	PKPdf	00 55 22.5	+0.3
	comp=Z,2.7nm,1.0s,baz=48,slow=2.7,SNR=3.9						
FINES	FINESS Array B	135.71	343	PKP	PKPdf	00 55 35.6	+0.4
	comp=Z,5.2nm,1.0s,baz=72,slow=4.5,SNR=2.4						
AKASG	Malin Array Be	142.87	331	PKP	PKPdf	00 55 45.9	-2.7
	comp=Z,5.1nm,0.6s,baz=43,slow=4.4,SNR=48						
AKASG	Malin Array Be	142.87	331		PKPdf	00 55 46.1	-2.4
BR131	Keskin Array S	146.60	312		PKPbc	00 55 58.4	+0.3
BRTR	Keskin Array B	146.60	312	PKPbc	PKPbc	00 55 58.4	+0.3
	comp=Z,2.7nm,0.7s,baz=128,slow=4.7,SNR=14						
BURAR	Bucovina Array	146.92	330		PKiKP	00 55 59.7	-0.8
OSTC	Ostas	147.90	342	⇑*e*PKP	PKiKP	00 56 02.3	0.0
CLL	Collm	148.02	346	*e*PKPbc	PKiKP	00 56 02.0	-0.5
	comp=Z,12nm,0.9s						
CLL				*e*PKPab	PKPab	00 56 06.0	+0.1
	comp=Z,6.0nm,0.9s						
DPC	Dobruska-Polom	148.05	342	⇑*e*PKP	PKiKP	00 56 02.4	-0.3
PRU	Pruhonice	148.87	344	⇑*e*PKP	PKPbc	00 56 03.7	+0.4
KHC	Kasperske Hory	149.91	344	⇑*e*PKP	PKPbc	00 56 06.0	+0.1
KHC				*e*PKPAB	PKPab	00 56 15.1	+1.2
GERES	GERESS Array B	150.14	344	PKPbc	PKPbc	00 56 06.5	0.0
	comp=Z,1.8nm,0.8s,baz=64,slow=3.1,SNR=4.5						

GCMT 12 00:38:40.0±0.2**,44°.67S**±0°.02×**15°.78W**±0°.02**,h12**^{km}**, MW5.0**/115**,Moment Tensor Solution. s46,c58; s115,c159; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-3.57±.08; $M_{\theta\theta}$1.22±.10; $M_{\phi\phi}$2.36±.07; $M_{r\theta}$-0.68±.35; $M_{\theta\phi}$-1.36±.07; $M_{\phi r}$0.69±.29; **Best double couple:** $M_0$3.55000×10^{16} **NP1:**ϕ_s329.00000°**,**δ37.00000°, λ-86.00000°. **NP2:**ϕ_s144.00000°**,**δ53.00000°, λ-93.00000°. **Principal axes:** T 3.3930, Plg8.0000°, Azm236.0000°**;** N 0.3230, Plg2.0000°, Azm146.0000°**;** P -3.7070**,** Plg82.0000°**,** Azm38.0000°**; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern Mid-Atlantic Ridge**

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*IDC **12** 00:41:15.4±1.2,21°.01S×67°.77W,h139^{km}±12^{km},mb3.7/3, mb1 3.6/7,mb1mx3.4/34,mbtmp4.0/7 Error ellipse: s-maj=30.2km s-min=13.3km az=138.0*

*VAO **12** 00:41:16.5±0.4,21°.15S×67°.72W,h147^{km}±6^{km},mb4.0*

*SJA **12** 00:41:16.5±0.5,21°.31S×67°.91W,h166^{km}±4^{km},ML4.0, MW3.8*

*NEIC **12** 00:41:16.9±1.6,21°.30S±0°.06×68°.0W±0°.1,h175^{km}±8^{km}, mb4.0/4,Error ellipse: s-maj=15.3km s-min=8.6km az=89.0*

*GUC **12** 00:41:18.2±0.7,21°.25S×67°.96W,h167^{km}±6^{km},ML4.1*

*SCB **12** 00:41:21.8±2.2,21°.30S×68°.01W,h126^{km}±23^{km},ML3.9/4, Error ellipse: s-maj=11.3km s-min=8.0km az=1.0*

ISC 12 00:41:16.4±0.6**,21°.25S**±0°.03×**67°.98W**±0°.04**,h171**^{km}±7^{km}**, n105,**σ**1^{s}.45**/141**,mb3.8**/3**,13C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.30	245	⇑*i*P	Pn	00 41 47.5	+1.6
PB09				*i* S	Sn	00 42 09.6	+1.0
PB09				IAML		00 42 11.2	
	comp=N,1µm,0.3s						
PB09	IPOC Station P	1.30	245		Pn	00 41 47.4	+1.5
PB09				Sn	Sn	00 42 10.1	+1.5
PB09	IPOC Station P	1.30	245	P	Pn	00 41 46.9	+1.0
PB09				S	Sn	00 42 04.2	-4.4
PB09				IAML		00 42 12.3	
	comp=N,368nm,0.2s						
PB09	IPOC Station P	1.30	245	*e*P	Pn	00 41 35.7	-10
PB09				*e*S	Sn	00 42 10.3	+1.7
PB09				IAML		00 42 10.9	
	comp=Z,910nm,0.3s						
PB08	IPOC Station P	1.56	315	⇑*i*P	Pn	00 41 50.1	+1.4
PB08				*i* S	Sn	00 42 14.4	+0.9
PB08				IAML		00 42 16.1	
	comp=E,1µm,0.3s						
PB08	IPOC Station P	1.56	315		Pn	00 41 50.2	+1.5
PB08				Sn	Sn	00 42 14.5	+0.9
PB08	IPOC Station P	1.56	315	P	Pn	00 41 50.5	+1.8
PB08				S	Sn	00 42 10.1	-3.4
PB08	IPOC Station P	1.56	315	*e*S	Sn	00 42 14.6	+1.1
PB08				IAML		00 42 16.5	
	comp=Z,466nm,0.7s						

LVC	Limon Verde	1.60	213	P	Pn	00 41 50.1	+1.0
	comp=Z,173nm,0.3s,baz=33,slow=10,SNR=1057						
LVC				S	Sn	00 42 15.2	+0.8
	comp=Z,70nm,0.3s,baz=213,slow=18,SNR=31						
LVC	Limon Verde	1.60	213	eP	Pn	00 41 50.1	+1.0
LVC				eS	Sn	00 42 14.7	+0.3
LVC	Limon Verde	1.60	213	eP	Pn	00 41 50.1	+1.0
LVC				eS	Sn	00 42 13.4	-0.9
LVC	Limon Verde	1.60	213	eP	Pn	00 41 50.1	+1.0
PB02	IPOC Station P	1.79	268	⇑iP	Pn	00 41 51.9	+1.2
PB02				i S	Sn	00 42 17.3	+0.1
PB02				IAML		00 42 19.4	
	comp=E,2μm,0.4s						
PB02	IPOC Station P	1.79	268	P	Pn	00 41 52.4	+1.7
PB02				S	Sn	00 42 13.5	-3.7
PB02				IAML		00 42 19.2	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	1.79	268	eS	Sn	00 42 17.7	+0.5
PB02				IAML		00 42 18.9	
	comp=Z,2μm,0.1s						
PB03	IPOC Station P	1.83	244	⇑iP	Pn	00 41 52.3	+1.1
PB03				i S	Sn	00 42 18.3	+0.2
PB03	IPOC Station P	1.83	244	eS	Sn	00 42 18.4	+0.3
PB03				IAML		00 42 20.1	
	comp=Z,2μm,0.3s						
PB07	IPOC Station P	1.84	255	⇑iP	Pn	00 41 52.5	+1.1
PB07				i S	Sn	00 42 18.3	0.0
PB07				IAML		00 42 20.3	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.84	255	Pn	Pn	00 41 52.4	+1.1
PB07				Sn	Sn	00 42 18.3	0.0
PB07	IPOC Station P	1.84	255	eS	Sn	00 42 18.6	+0.3
PB07				IAML		00 42 20.9	
	comp=Z,1μm,0.4s						
GO01	Chusmiza	1.95	324	⇑iP	Pn	00 41 54.0	+1.1
GO01				eS	Sn	00 42 21.2	+0.3
GO01	Chusmiza	1.95	324		Pn	00 41 53.9	+1.1
HMBC	Humberstone	2.04	298	eP	Pn	00 41 53.9	+0.5
HMBC				i S	Sn	00 42 21.7	-0.3
HMBC				IAML		00 42 24.6	
	comp=N,968nm,0.4s						
PB06	IPOC Station P	2.07	225		Pn	00 41 54.9	+1.1
PATCX	Punta Patache	2.08	282	⇓iP	Pn	00 41 54.9	+1.0
PATCX				i S	Sn	00 42 22.8	0.0
PATCX				IAML		00 42 29.2	
	comp=N,724nm,0.4s						
PATCX	Punta Patache	2.08	282		Pn	00 41 55.0	+1.1
TA01	Diego Aracena	2.17	288	⇓iP	Pn	00 41 55.3	+0.5
TA01				i S	Sn	00 42 23.9	-0.5
TA01				IAML		00 42 27.7	
	comp=E,511nm,0.3s						
TA01	Diego Aracena	2.17	288		Pn	00 41 55.6	+0.8
TA02	Huaiquique	2.24	295	eP	Pn	00 41 56.1	+0.5
TA02				i S	Sn	00 42 25.4	-0.5
TA02				IAML		00 42 26.6	
	comp=N,1μm,0.1s						
PB04	IPOC Station P	2.29	242	⇑iP	Pn	00 41 57.3	+1.0
PB04				i S	Sn	00 42 26.9	-0.3
PB04				IAML		00 42 31.3	
	comp=E,886nm,0.7s						
PB04	IPOC Station P	2.29	242		Pn	00 41 57.3	+1.0
PB04	IPOC Station P	2.29	242	P	Pn	00 41 57.4	+1.0
PB04				S	Sn	00 42 22.3	-4.9
PB04				IAML		00 42 28.2	
	comp=E,415nm,0.2s						
PB04	IPOC Station P	2.29	242	eP	Pn	00 41 57.1	+0.8
PB04				eS	Sn	00 42 27.2	0.0
PB04				IAML		00 42 30.1	
	comp=Z,630nm,0.2s						
YJA	Yavi	2.47	112	P	Pn	00 41 59.6	+0.9
YJA	Yavi	2.47	112	eP	Pn	00 41 59.1	+0.4
YJA				eS	Sn	00 42 29.7	-1.6
PSGC	Pisagua	2.60	309	⇑iP	Pn	00 41 59.7	-0.2
PSGC				i S	Sn	00 42 31.9	-1.9
PSGC				IAML		00 42 34.4	
	comp=N,425nm,0.3s						
PSGC	Pisagua	2.60	309	P	Pn	00 42 00.9	+0.9
PSGCX	Pisagua	2.60	309		Pn	00 42 00.1	+0.1
MNMC	Minye Minye	2.60	324	⇑iP	Pn	00 42 01.2	+1.1
MNMC				i S	Sn	00 42 34.1	+0.1
MNMC	Minye Minye	2.60	324		Pn	00 42 01.3	+1.1
MNMC	Minye Minye	2.60	324	P	Pn	00 42 01.7	+1.5
MNMC				S	Sn	00 42 31.6	-2.4
MNMC				IAML		00 42 38.5	
	comp=N,1μm,0.3s						
PB05	IPOC Station P	2.61	232	⇑iP	Pn	00 42 00.9	+0.9
PB05				i S	Sn	00 42 33.1	-0.7
PB05				IAML		00 42 38.0	
	comp=N,855nm,0.2s						
PB05	IPOC Station P	2.61	232	eP	Pn	00 42 01.0	+1.0
PB05				eS	Sn	00 42 33.5	-0.4
PB05				IAML		00 42 40.6	
	comp=Z,361nm,0.5s						
HJA	Humahuaca	3.07	130	eP	Pn	00 42 06.2	+0.2
HJA				eS	Sn	00 42 44.3	-0.1
PB16	IPOC Station P	3.24	333	⇑iP	Pn	00 42 09.8	+1.4
PB16				i S	Sn	00 42 49.1	+0.6
PB16				IAML		00 42 50.6	
	comp=N,183nm,0.4s						
PB16	IPOC Station P	3.24	333		Pn	00 42 09.7	+1.4
PB16	IPOC Station P	3.24	333	eS	Sn	00 42 49.5	+1.0
PB16				IAML		00 42 51.6	
	comp=Z,174nm,0.5s						
PB10	IPOC Station P	3.28	226	⇑iP	Pn	00 42 08.2	+0.2
PB10				i S	Sn	00 42 47.2	-1.2
PB10	IPOC Station P	3.28	226	Pn	Pn	00 42 08.3	+0.2
PB10	IPOC Station P	3.28	226	P	Pn	00 42 08.5	+0.4
PB10	IPOC Station P	3.28	226	eP	Pn	00 42 08.7	+0.6
PB10				eS	Sn	00 42 47.7	-0.7
PB10				IAML		00 42 48.6	
	comp=Z,149nm,0.3s						
PB14	IPOC Station P	4.03	213		Pn	00 42 18.1	+0.1
PB14	IPOC Station P	4.03	213	eP	Pn	00 42 18.4	+0.4
PB14				eS	Sn	00 43 04.5	-1.6
PB14				IAML		00 43 06.4	
	comp=Z,284nm,0.3s						
SLA	San Lorenzo	4.13	147	P	Pn	00 42 20.7	+1.5
SLA	San Lorenzo	4.13	147	eP	Pn	00 42 20.5	+1.4
SLA				eS	Sn	00 43 09.2	+1.0
GO02	Mina Guanaco	4.16	201	⇑iP	Pn	00 42 20.0	+0.4
GO02				i S	Sn	00 43 07.8	-1.3
GO02	Mina Guanaco	4.16	201		Pn	00 42 20.1	+0.4
BBOE	La Paz, Chanca	4.42	360	P	Pn	00 42 25.5	+2.3
BBOD	La Paz, Gloria	4.63	353	P	Pn	00 42 28.0	+2.0
AC01	Pan de Azucar	5.43	206	Pn	Pn	00 42 34.8	-1.1
AC02	Maricunga	5.66	191		Pn	00 42 39.4	+0.1
AHML	Horco Molle	6.01	157	P	Pn	00 42 44.5	+0.9
AHML	Horco Molle	6.01	157	eP	Pn	00 42 44.4	+0.9
AHML				eS	Sn	00 43 54.6	+2.6
GO03	Copiap	6.64	198	Pn	Pn	00 42 50.1	-1.7
AC04	Llanos de Chal	7.47	202	Pn	Pn	00 42 59.8	-2.9
LCO	Las Campanas	8.11	197	Pn	Pn	00 43 08.6	-2.9
SIV	San Ignacio	8.38	52	P	Pn	00 43 11.8	-3.1
	comp=Z,8.2nm,0.3s,baz=255,slow=13,SNR=60						
SIV				S	Sn	00 44 38.0	-11
	comp=Z,1.6nm,0.3s,baz=320,slow=20,SNR=12						
CO01	Juntas del Tor	8.89	192		Pn	00 43 20.5	-1.3
GO04	Tololo Observa	9.24	195		Pn	00 43 23.2	-3.1
PTLB	Pontes e Lacer	10.19	57	eP	Pn	00 43 36.6	-2.0
ZON	Zonda	10.27	183	Pn	Pn	00 43 38.4	-1.3
CO02	Combarbal	10.27	195	Pn	Pn	00 43 36.1	-3.7
CPUP	Villa Florida	10.98	119	P	Pn	00 43 48.7	-0.2
	comp=Z,0.2nm,0.3s,baz=300,slow=12,SNR=4.5						
CPUP	Villa Florida	10.98	119	Pn	Pn	00 43 48.9	0.0
CPUP	Villa Florida	10.98	119	eP	Pn	00 43 46.7	-2.2
VILB	Vilhena	11.11	43	eP	Pn	00 43 48.8	-1.9
ETMB	Extrema	11.50	9	eP	Pn	00 43 53.5	-2.3
VA03	San Esteban	11.69	191	Pn	Pn	00 43 56.8	-1.4
MT02	Curacav	12.28	193	Pn	Pn	00 44 03.4	-2.4
SAML	Samuel	13.08	21		Pn	00 44 14.9	-1.1
SAML	Samuel	13.08	21	eP	Pn	00 44 13.4	-2.6
ITQB	Itaqui	13.24	132	eP	Pn	00 44 17.1	-0.8
BO02	Sierra Bellavi	13.71	190	Pn	Pn	00 44 24.1	+0.1
BI02	San Fabin de	15.62	190	P	Pn	00 44 47.8	+0.3
BI02				IAmb	IAmb	00 44 55.0	
	comp=Z,13nm,1.1s						
CPSB	Cacapava Do Su	15.93	128	eP	Pn	00 44 50.7	-0.6
SNDB	Serra Nova Dou	18.44	63	eP	P	00 45 18.5	-0.7
NPGB	Novo Progresso	18.67	43	eP	P	00 45 20.7	-1.0
MACA	Manacapuru-AM	19.33	23	eP	P	00 45 27.7	-1.1
PLCA	Paso Flores	19.54	186	P	Pn	00 45 36.1	+2.0
	comp=Z,0.3nm,0.3s,baz=14,slow=8.3,SNR=6.1						
PLCA	Paso Flores	19.54	186	P	Pn	00 45 36.2	+2.0
PLCA				IAmb	IAmb	00 45 36.9	
	comp=Z,5.0nm,0.8s						
PLCA	Paso Flores	19.54	186	eP	Pn	00 45 33.9	-0.3
BDFB	Brasilia	19.73	77	P	P	00 45 32.3	-1.0
	comp=Z,0.5nm,0.3s,baz=9.0,slow=19,SNR=4.9						
BDFB	Brasilia	19.73	77	P	P	00 45 34.0	+0.7
BDFB				IAmb	IAmb	00 45 46.5	
	comp=Z,3.0nm,1.1s						
ITTB	Itaituba	20.57	37	eP	P	00 45 41.2	-0.9
BSCB	Bom Sucesso	21.64	94	eP	P	00 45 53.3	-0.4
SMTB	Santa Maria do	23.19	61	eP	P	00 46 08.0	-0.2
JANB	Januaria	23.30	79	eP	P	00 46 09.8	+0.5
MALB	Monte Alegre	23.46	37	eP	P	00 46 10.6	-0.1
SDBA	SAO DESIDERIO	23.75	72	eP	P	00 46 13.4	+0.1
TORD	Torodi Ar. Bea	76.45	70	P	P	00 52 48.8	+1.0
	comp=Z,0.6nm,0.5s,baz=254,slow=5.9,SNR=2.4						
BOSA	Boshof	82.79	118	P	P	00 53 23.2	+1.2
	comp=Z,1.2nm,0.7s,baz=270,slow=7.1,SNR=1.8						
BOSA	Boshof	82.79	118	P	P	00 53 21.6	-0.5
YKA	Yellowknife Ar	91.25	340	P	P	00 54 03.7	+1.9
	comp=Z,0.7nm,0.7s,baz=130,slow=5.1,SNR=15						
ZALV	Zalesovo Beam	141.36	26	PKP	PKPdf	01 00 27.4	+0.8
	comp=Z,0.5nm,0.7s,baz=307,slow=5.2,SNR=1.9						
MKAR	Makanchi Array	144.92	36	PKP	PKPdf	01 00 35.0	+1.8
	comp=Z,1.1nm,0.7s,baz=335,slow=3.3,SNR=12						

SKHL ***12*** *00:43:06.7±0.8, 45°.89N×149°.61E, h143^{km}±5^{km}, mb5.0/2, msh5.1/2*

IDC ***12*** *00:43:07.4±3.7, 45°.90N×149°.38E, h149^{km}±33^{km}, mb3.6/18, mb1 3.8/21, mb1mx3.6/46, mbtmp4.0/21, Error ellipse: s-maj=16.6km s-min=14.3km az=157.0*

MOS ***12*** *00:43:07.6±1.0, 45°.93N×149°.46E, h165^{km}, mb4.3/8, Error ellipse: s-maj=11.7km s-min=7.9km az=88.9*

NEIC ***12*** *00:43:09.5±1.1, 46°.3N±0°.2×149°.3E±0°.2, h150^{km}±13^{km}, mb4.6/38, Error ellipse: s-maj=30.7km s-min=11.3km az=155.0*

JMA ***12*** *00:43:10.2±0.4, 45°.12N×149°.69E, h149^{km}, M3.7*

ISC 12 00:43:07.5±0.5, **45°.88N**±0°.06×**149°.44E**±0°.07, **h149**^{km}, **n155, σ1^{s}.67**/156, **mb4.3**/51, **4C-10D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.28	240	i P	Pn	00 43 36.5	+1.8
KUR				AMB	AMB	00 43 37.5	
	930nm,2.0s						
KUR				AMB	AMB	00 43 40.0	
	171nm,0.3s						
KUR				i S	Sn	00 43 58.2	+2.8
KUR				A	A	00 43 59.3	
	4μm,2.0s						
KUR				A	A	00 43 59.3	
	1μm,2.0s						
KUR				A	A	00 44 02.0	
	894nm,0.5s						
KUR				A	A	00 44 02.0	
	1μm,0.5s						
KUR	Kuril'sk	1.28	240	d iPN	Pn	00 43 36.6	+1.8
KUR				i S	Sn	00 43 58.8	+3.4
KUR				pmax	pmax		
	comp=N,82nm,0.3s						
KUR				pmax	pmax		
	comp=Z,171nm,0.3s						
KUR				pmax	pmax		
	comp=E,35nm,0.2s						
KUR				smax	smax		
	comp=N,894nm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
NEM2	Nemuro 2	3.64	228	P	Pn	00 44 02.3	-0.7
NEM2				eS	Sn	00 44 42.8	-3.3
JNK	Nakash	4.07	237	P	Pn	00 44 09.8	+1.2
JAK	Akkeshi	4.45	231	eS	Sn	00 45 02.2	-2.9
YSS	Yuzh-Sakhalins	4.75	286	eP	Pn	00 44 18.8	+1.4
JAR	Ashorobuto	4.80	239	P	Pn	00 44 19.8	+1.6
JOB	Onbets	5.00	235	eS	Sn	00 45 16.2	-1.7
JKA	Kamikawa-asahi	5.16	252	eP	Pn	00 44 26.0	+3.0
JKA	Kamikawa-asahi	5.16	252	Pn	Pn	00 44 26.0	+3.0
ASAJ	Asahikawa	5.16	252	PN	Pn	00 44 26.0	+3.0
JCH	Churui	5.45	235	P	Pn	00 44 27.0	+0.2
JCH				eS	Sn	00 45 25.9	-2.8
UGL	Uglegorsk	5.93	305	eP	Pn	00 44 34.9	+1.7
UGL				AMB	AMB	00 44 37.3	
	comp=E,70nm,0.5s						
ERM	Erimo	5.95	232	⇑ePN	Pn	00 44 34.6	+1.1
ERM	Erimo	5.95	232	Pn	Pn	00 44 37.6	+4.0
ERM				Sn	Sn	00 45 38.5	-2.3
JNBK	Urakawa-nobuka	6.01	236	P	Pn	00 44 34.7	+0.4
JEW	Eniwo	6.48	245	Pn	Pn	00 44 44.0	+3.5
SKR	Severo-Kuril's	6.55	40	eP	Pn	00 44 41.1	-0.4
SKR				AMB	AMB	00 44 44.2	
	comp=E,270nm,3.0s						
SKR				AMB	AMB	00 44 45.4	
	comp=E,20nm,0.5s						
SKR				eS	Sn	00 45 52.2	-2.9
SKR				A	A	00 45 53.3	
	comp=E,1μm,3.0s						
SKR				A	A	00 45 53.3	
	comp=E,940nm,3.0s						
SKR				A	A	00 45 55.4	
	comp=E,24nm,0.3s						
SKR				A	A	00 45 55.4	
	comp=E,23nm,0.3s						
TYV	Tymovskoe	6.73	320	eP	Pn	00 44 44.2	+0.4
TYV				AMB	AMB	00 44 46.2	
	comp=E,4.0nm,0.3s						
JNB	Noboribetsu	6.93	244	eS	Sn	00 46 03.3	-1.0
PAU	Pauzhetka	7.42	38	eP	Pn	00 44 51.7	-1.3
PAU				AMB	AMB	00 44 52.2	
	comp=E,50nm,0.7s						
PAU				eS	Sn	00 46 10.8	-5.0
PAU				A	A	00 46 13.8	
	comp=E,50nm,0.4s						
PAU				A	A	00 46 13.8	
	comp=E,50nm,0.4s						
JTM	Tenmabayashi	7.94	233	eS	Sn	00 46 20.4	-8.1
PEA0B	Petropavlovsk-	9.01	34	⇓ePN	Pn	00 45 15.1	+0.9
PEA0B	Petropavlovsk-	9.01	34	Pn	Pn	00 45 13.2	-1.0
PETK	Petropavlovsk-	9.01	34	P	Pn	00 45 14.1	-0.1
	comp=E,1.4nm,0.3s,baz=194,slow=11,SNR=8.8						
PETK	Petropavlovsk-	9.01	34	PN	Pn	00 45 13.4	-0.8
PETK	Petropavlovsk-	9.01	34	Pn	Pn	00 45 13.4	-0.8
JRG	Rokugo	9.16	228	eS	Sn	00 46 52.6	-5.4
SEY	Seymchan	17.17	5	P	P	00 46 57.4	0.0
	comp=E,0.4nm,0.3s,baz=187,slow=12,SNR=7.2						
SEY	Seymchan	17.17	5	eP	Pn	00 46 57.9	-0.3
SEY	Seymchan	17.17	5	⇓eP	Pn	00 46 57.9	-0.3
YAK	Yakutsk	19.78	332	P	P	00 47 26.3	+0.5
	comp=E,0.3nm,0.3s,baz=122,slow=2.2,SNR=9.2						
YAK	Yakutsk	19.78	332	eP	Pn	00 47 27.7	-1.2
YAK	Yakutsk	19.78	332	⇑eP	Pn	00 47 27.7	-1.2
YAK				pmax	pmax		
	comp=Z,18nm,0.6s						
TIXI	Tiksi	27.64	346	eP	P	00 48 38.7	-2.0
TIXI	Tiksi	27.64	346	⇓iP	P	00 48 38.7	-2.0
TIXI	Tiksi	27.64	346	P	P	00 48 38.6	-2.1
H11N2	WAKE ISLAND Hy	29.79	145	T	T	01 20 10.1	
	baz=335,slow=76,SNR=78						
H11N1	WAKE ISLAND Hy	29.80	145	T	T	01 20 11.2	
	baz=335,slow=76,SNR=55						
H11N3	WAKE ISLAND Hy	29.80	145	T	T	01 20 22.4	
	baz=335,slow=76,SNR=64						
H11S1	WAKE ISLAND Hy	30.82	147	T	T	01 21 28.2	
	baz=336,slow=76,SNR=3.8						
H11S3	WAKE ISLAND Hy	30.82	147	T	T	01 21 30.4	
	baz=336,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	30.84	147	T	T	01 21 33.0	
	baz=336,slow=76,SNR=33						
A21K	Barrow	35.92	26	P	P	00 49 52.2	-0.7
A21K				IAmb	IAmb	00 49 53.8	
	comp=Z,9.3nm,0.9s						
IMAR	Indian Mountai	35.97	36	P	P	00 49 53.0	-0.5
GTA	Gaotai	36.58	278	⇓P	P	00 50 01.2	+2.1
GTA				pP	pP	00 50 07.1	-23
GTA				sP	pwP	00 50 10.2	-24
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
COLD	Coldfoot	37.48	34	P	P	00 50 06.2	0.0
COLD				IAmb	IAmb	00 50 24.4	
	comp=Z,16nm,2.0s						
TOLK	Toolik Lake Re	37.83	31	P	P	00 50 09.4	+0.2
KNK	Knik Glacier	38.32	43	P	P	00 50 13.3	-0.1
KNK				IAmb	IAmb	00 51 18.8	
	comp=Z,24nm,1.5s						
SML	Sawmill	38.35	43	P	P	00 50 13.7	+0.1
SML				IAmb	IAmb	00 51 13.8	
	comp=Z,21nm,1.4s						
COLA	College	38.39	38	⇑eP	P	00 50 14.0	+0.2
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HDA	Harding Lake	38.80	38	P	P	00 50 16.9	-0.3
HDA				IAmb	IAmb	00 51 03.5	
	comp=Z,14nm,1.6s						
IL31		38.81	38	P	P	00 50 17.0	-0.3
IL31				IAmb	IAmb	00 50 18.3	
	comp=Z,12nm,1.6s						
ILAR	Eielson Array	38.81	38	P	P	00 50 16.8	-0.5
	comp=Z,1.3nm,0.8s,baz=266,slow=6.1,SNR=8.3						
ILAR	Eielson Array	38.81	38	P	P	00 50 17.1	-0.2
SCM	Sheep Creek Mo	38.82	43	P	P	00 50 18.1	+0.5
SCM				pmax	pmax		
	comp=Z,67nm,1.9s						
SCM	Sheep Creek Mo	38.82	43	P	P	00 50 18.1	+0.5
IL18	Eielson Array	38.86	38	P	P	00 50 19.2	+1.4
M24K	Tolsona, Glenn	39.33	42	P	P	00 50 22.5	+0.7
PRP	Porcupine Dome	39.35	37	P	P	00 50 22.2	+0.2
FYU	Fort Yukon	39.43	35	P	P	00 50 22.9	+0.5
FYU				IAmb	IAmb	00 50 57.7	
	comp=Z,19nm,1.5s						
BMAR	Burnt Mountain	39.66	34	P	P	00 50 23.1	-1.3
DGZ	Jazzator, Alta	40.79	299	⇓iP	P	00 50 34.9	+0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,2.9s						
ZALV	Zalesovo Beam	41.05	306	P	P	00 50 33.6	-2.3
	comp=Z,0.6nm,0.4s,baz=66,slow=7.0,SNR=4.1						
ZALV	Zalesovo Beam	41.05	306	eP	P	00 50 36.4	+0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	41.05	306	P	P	00 50 35.3	-0.7
BCAR	Beaver Creek A	41.22	40	P	P	00 50 37.6	+0.3
EGAK	Eagle	41.25	37	P	P	00 50 37.0	-0.4
EGAK				IAmb	IAmb	00 51 38.1	
	comp=Z,21nm,1.9s						
YAH	Yahtse	41.73	44	P	P	00 50 46.6	+4.9
TABL	Table Mountain	42.00	44	P	P	00 50 42.2	-1.6
INK	Inuvik	43.74	32	P	P	00 50 57.2	-0.2
	comp=Z,1.4nm,0.3s,baz=295,slow=6.8,SNR=13						
INK	Inuvik	43.74	32	P	P	00 50 57.1	-0.3
INK				pmax	pmax		
	comp=Z,21nm,1.8s						
INK	Inuvik	43.74	32	P	P	00 50 57.1	-0.3
INK				IAmb	IAmb	00 50 57.7	
	comp=Z,21nm,1.8s						
WHY	Whitehorse	44.94	42	P	P	00 51 05.3	-2.0
WHY				IAmb	IAmb	00 51 43.9	
	comp=Z,7.6nm,0.6s						
MK31	Makanchi Array	45.06	297	d iP	P	00 51 08.5	+0.2
MK31	Makanchi Array	45.06	297	P	P	00 51 07.9	-0.5
MKAR	Makanchi Array	45.06	297	P	P	00 51 08.2	-0.1
	comp=Z,0.6nm,0.5s,baz=75,slow=7.4,SNR=11						
MKAR	Makanchi Array	45.06	297	eP	P	00 51 08.5	+0.2
MKAR	Makanchi Array	45.06	297	P	P	00 51 08.7	+0.4
MKAR	Makanchi Array	45.06	297	P	P	00 51 08.7	+0.4
MAKZ	Makanchi	45.26	297	P	P	00 51 09.7	-0.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
MAKZ	Makanchi	45.26	297	P	P	00 51 09.7	-0.1
KURK	Kurchatov	45.71	303	eP	P	00 51 12.8	-0.5
KURK	Kurchatov	45.71	303	⇓iP	P	00 51 12.8	-0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
C36M	Paulatuk	46.83	29	P	P	00 51 21.5	-0.3
BRVK	Borovoye	49.47	309	eP	P	00 51 41.5	-0.7
BRVK	Borovoye	49.47	309	P	P	00 51 41.5	-0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	49.47	309	P	P	00 51 41.5	-0.7
KDJ	Kajisay	50.46	293	P	P	00 51 51.0	+0.8
KDJ				pmax	pmax		
	comp=Z,48nm,1.5s						
KDJ	Kajisay	50.46	293	P	P	00 51 51.0	+0.8
EUNU	Eureka	50.47	11	P	P	00 51 48.1	-1.4
EUNU				IAmb	IAmb	00 51 49.7	
	comp=Z,16nm,1.8s						
BOOM	Boomskoye usch	51.07	294	P	P	00 51 55.3	+0.6
BOOM				pmax	pmax		
	comp=Z,24nm,1.2s						
BOOM	Boomskoye usch	51.07	294	P	P	00 51 55.3	+0.6
BBB	Bella Bella	51.66	51	P	P	00 51 58.9	+0.3
RES	Resolute Bay	52.45	18	P	P	00 52 03.5	-0.6
	comp=Z,4.7nm,0.8s,baz=332,slow=7.5,SNR=22						
RES	Resolute Bay	52.45	18	P	P	00 52 03.8	-0.4
YKA	Yellowknife Ar	53.13	35	P	P	00 52 09.1	-0.2
	comp=Z,0.7nm,0.7s,baz=305,slow=5.5,SNR=13						
ARU	Arti	53.91	317	eP	P	00 52 14.2	-0.9
ARU	Arti	53.91	317	c iP	P	00 52 13.6	-1.5
ARU						00 54 14.7	
ARU				S	S	00 59 39.0	+0.5
ARU				SS	SKiKP	01 03 15.6	+4.1
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	Arti	53.91	317	P	P	00 52 14.3	-0.8
ARU				IAmb	IAmb	00 52 15.2	
	comp=Z,9.3nm,0.8s						
KKAR	Karatay Array	54.16	298	P	P	00 52 17.3	+0.1
KKAR	Karatay Array	54.16	298	P	P	00 52 17.2	+0.1
BTK	Batken	55.63	294	P	P	00 52 28.5	+0.6
BTK				pmax	pmax		
	comp=Z,19nm,2.0s						
BTK	Batken	55.63	294	P	P	00 52 28.5	+0.6
BTK				IAmb	IAmb	00 52 30.0	
	comp=Z,19nm,1.9s						
AB06	Akbulak array	56.99	309	P	P	00 52 37.3	+0.1
AB05	Akbulak array	56.99	309	P	P	00 52 37.3	+0.1
AB02	Akbulak array	57.00	309	P	P	00 52 37.2	-0.1
AB07	Akbulak array	57.00	309	P	P	00 52 37.3	0.0
AB01	Akbulak array	57.00	309	P	P	00 52 37.3	0.0
AB31	Akbulak array	57.00	309	P	P	00 52 37.0	-0.3
AB31				IAmb	IAmb	00 52 37.6	
	comp=Z,4.9nm,0.5s						
ABKAR	Akbulak array	57.00	309	P	P	00 52 36.9	-0.4
ABKAR	Akbulak array	57.00	309	IAmb	IAmb	00 52 37.6	
	comp=Z,4.9nm,0.5s						
AB03	Akbulak array	57.01	309	P	P	00 52 37.4	+0.1
AB04	Akbulak array	57.01	309	P	P	00 52 36.9	-0.5
AB09	Akbulak array	57.01	309	P	P	00 52 37.3	0.0
AB08	Akbulak array	57.02	309	P	P	00 52 37.7	+0.2
NIL	Nilore	57.74	287	P	P	00 52 44.5	+1.8
NIL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NIL	Nilore	57.74	287	P	P	00 52 44.5	+1.8
NIL				IAmb	IAmb	00 52 45.2	
	comp=Z,7.5nm,0.8s						
ARCES	ARCESS Array B	57.81	340	P	P	00 52 41.7	-1.0
	comp=Z,2.8nm,1.0s,baz=19,slow=7.7,SNR=5.5						
KBL	Kabul	59.99	290	P	P	00 52 59.0	+0.5
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBL	Kabul	59.99	290	P	P	00 52 59.0	+0.5
KBL				IAmb	IAmb	00 52 59.2	
	comp=Z,4.6nm,0.7s						
BELG	Belogornoye	61.46	317	⇓eP	P	00 53 06.4	-1.4
BELG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FCC	Fort Churchill	63.36	31	P	P	00 53 22.7	+2.4
FCC				pmax	pmax		
	comp=Z,14nm,1.7s						
FCC	Fort Churchill	63.36	31	P	P	00 53 22.7	+2.4
FCC				IAmb	IAmb	00 55 33.4	
	comp=Z,14nm,1.6s						
FIA1	FINESS Array S	63.71	333	P	P	00 53 21.3	-1.2
FINES	FINESS Array B	63.71	333	P	P	00 53 21.1	-1.5
	comp=Z,2.6nm,0.5s,baz=42,slow=8.7,SNR=30						
GEYT	Alibeck	64.83	299	P	P	00 53 30.9	+0.5
	comp=Z,2.5nm,0.7s,baz=29,slow=3.3,SNR=7.3						
GEYT	Alibeck	64.83	299	P	P	00 53 29.9	-0.5
GYA1	ALIBECK ARRAY	64.84	299	P	P	00 53 30.1	-0.3
GYB4	ALIBECK ARRAY	64.84	299	P	P	00 53 30.8	+0.3
GYB4				IAmb	IAmb	00 53 32.1	
	comp=Z,2.9nm,0.6s						
WRA	Warramunga Arr	66.93	195	P	P	00 53 42.8	-0.9
	comp=Z,0.6nm,0.6s,baz=11,slow=6.4,SNR=6.8						
WRA	Warramunga Arr	66.93	195	eP	P	00 53 43.2	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	Pinedale Array	67.30	52	P	P	00 53 48.1	+1.8

	comp=Z,0.2nm,0.5s,baz=359,slow=3.6,SNR=2.3						
NB2	NORSAR Subarra	68.19	340	P	P	00 53 49.9	-1.4
	comp=Z,1.1nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.19	340	P	P	00 53 50.1	-1.2
	comp=Z,1.6nm,0.7s,baz=29,slow=6.4,SNR=6.0						
KBZ	Khabaz	69.59	312	P	P	00 54 01.0	+0.8
	comp=Z,1.5nm,0.5s,baz=140,slow=4.6,SNR=7.2						
KBZ	Khabaz	69.59	312	eP	P	00 54 01.8	+1.6
KBZ	Khabaz	69.59	312	⇓eP	P	00 54 01.8	+1.6
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ASAR	Alice Springs	70.64	195	P	P	00 54 06.9	+0.2
	comp=Z,0.9nm,0.9s,baz=8.2,slow=5.3,SNR=7.8						
AKASG	Malin Array Be	70.81	324	P	P	00 54 06.5	-1.0
	comp=Z,1.5nm,0.4s,baz=37,slow=6.1,SNR=10						
BURAR	Bucovina Array	74.87	325	P	P	00 54 31.6	0.0
DPC	Dobruska-Polom	75.91	331	eP	P	00 54 36.4	-1.0
DPC	Dobruska-Polom	75.91	331	eP	P	00 54 36.4	-1.0
CLL	Collm	76.16	334	eP	P	00 54 38.0	-0.7
CLL	Collm	76.16	334	eP	P	00 54 38.0	-0.7
BRTR	Keskin Array B	77.23	315	P	P	00 54 45.9	+0.7
	comp=Z,0.9nm,0.8s,baz=101,slow=3.1,SNR=5.8						
KHC	Kasperske Hory	77.86	332	eP	P	00 54 47.2	-1.2
KHC	Kasperske Hory	77.86	332	eP	P	00 54 47.2	-1.2
GERES	GERESS Array B	78.07	332	P	P	00 54 49.5	-0.1
	comp=Z,0.9nm,0.4s,baz=38,slow=6.5,SNR=14						
WATA	Walderalm	80.08	332	eP	P	00 54 56.6	-4.0
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	80.13	58	P	P	00 55 00.9	-0.2
	comp=Z,0.2nm,0.6s,baz=295,slow=4.6,SNR=8.9						
MOTA	Moosalm	80.23	333	eP	P	00 54 58.4	-3.0
	comp=Z,9.2nm,1.6s						
ABTA	Abfaltersbach	80.29	332	eP	P	00 55 05.9	+4.2
	comp=Z,12nm,1.5s						
SQTA	Sankt Quirin	80.31	333	eP	P	00 55 02.2	+0.4
	comp=Z,0.6nm,0.3s						
DAVA	Damuels	80.67	333	eP	P	00 55 05.8	+2.0
	comp=Z,2.7nm,0.7s						

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*IDC **12** 00:51:43.3±5.9, 32°.52S×178°.95W, h97^{km}±50^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.7/37, mbtmp4.3/5, Error ellipse: s-maj=41.5km s-min=27.8km az=23.0*

*NEIC **12** 00:51:50.6±1.9, 32°.9S±0°.1×179°.2W±0°.2, h165^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=21.2km s-min=14.6km az=87.0*

ISC 12 00:51:43.4±0.7**, 32°.56S**±0°.08×**179°.0W**±0°.1**, h100**^{km}**, n91, σ1^{s}.99**/83**, mb4.5**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.47	203	Pn	Pn	00 53 05.4	+3.0
MXZ	Matakaoa Point	5.47	203	P	Pn	00 53 03.3	+0.9
WMGZ	Waiomatatini S	5.67	201	P	Pn	00 53 08.3	+3.2
HAZ	Te Kaha	5.83	206	P	Pn	00 53 07.7	+0.4
PKGZ	Pakihiroa	5.84	204	P	Pn	00 53 07.7	+0.1
PUZ	Puketiti	5.95	202	P	Pn	00 53 10.8	+1.9
PUZ	Puketiti	5.95	202	P	Sn	00 54 20.2	+4.5
RUGZ	Raukumara Rang	6.05	206	P	Pn	00 53 10.9	+0.4
TWGZ	Tauwhareparae	6.13	203	P	Pn	00 53 11.9	+0.4
TWGZ	Tauwhareparae	6.13	203	P	Sn	00 54 19.9	-0.4
CNGZ	Carnagh Statio	6.34	200	P	Pn	00 53 14.2	-0.1
TKGZ	Te Karaka	6.41	203	P	Pn	00 53 18.0	+2.7
OPRZ	Ohinepanea	6.42	214	P	Pn	00 53 18.9	+3.5
MWZ	Matawai	6.43	205	P	Pn	00 53 14.7	-0.9
MARZ	Manawahe	6.48	212	P	Pn	00 53 20.3	+4.1
URZ	Urewera	6.52	208	P	Pn	00 53 15.9	-0.9
	6.3nm,0.3s,baz=255,slow=4.7,SNR=20						
URZ				S	Sn	00 54 31.3	+1.6
	12nm,0.3s,baz=194,slow=21,SNR=15						
URZ	Urewera	6.52	208		Pn	00 53 17.4	+0.6
URZ	Urewera	6.52	208	P	Pn	00 53 16.6	-0.1
RAGZ	Rawiri	6.62	205	P	Pn	00 53 18.6	+0.5
RIGZ	Rimuhau	6.68	203	P	Pn	00 53 18.5	-0.5
OUZ	Omahuta	6.73	245	Pn	Pn	00 53 25.3	+5.7
PRGZ	Paritu Road	6.84	201	P	Pn	00 53 21.2	0.0
RTZ	Ruatahuna	6.88	207	P	Pn	00 53 20.4	-1.4
SNGZ	Shannon Statio	6.89	205	P	Pn	00 53 22.4	+0.6
KNZ	Kokohu	7.00	202	P	Pn	00 53 23.0	-0.2
MHGZ	Mahia Peninsul	7.05	200	P	Pn	00 53 24.4	+0.5
RAHZ	Arahi	7.11	206	P	Pn	00 53 26.6	+1.9
MTHZ	Maungataniwha	7.14	207	P	Pn	00 53 27.0	+1.8
NMHZ	Naumai	7.37	207	P	Pn	00 53 30.1	+1.8
ARHZ	Aropaoanui	7.45	205	P	Pn	00 53 30.2	+0.9
BKZ	Black Stump Fm	7.55	208		Pn	00 53 32.8	+2.1
BKZ	Black Stump Fm	7.55	208	P	Pn	00 53 30.9	+0.1
MCHZ	McNeill Hill	7.71	206	P	Pn	00 53 34.2	+1.3
HIZ	Hauiti	7.78	219	Pn	Pn	00 53 36.4	+2.5
OTVZ	Oturere	7.90	212	P	Pn	00 53 36.2	+0.6
KAHZ	Kahuranaki	7.96	204	P	Pn	00 53 34.1	-2.2
BHHZ	Black Hill Sta	8.00	209	P	Pn	00 53 37.2	+0.3
KRHZ	Kereru	8.01	207	P	Pn	00 53 36.5	-0.5
PNHZ	Pukenui	8.31	207	P	Pn	00 53 39.5	-1.6
TSZ	Takapari Road	8.53	207	P	Pn	00 53 44.7	+0.7
MRZ	Mangatainoka R	9.19	207	P	Pn	00 53 49.2	-3.9
HOWZ	Holdsworth Sta	9.42	206	P	Pn	00 53 52.7	-3.5
TMWZ	Te Maipa	9.47	204	P	Pn	00 53 54.1	-2.7
OGWZ	Otaki Gorge	9.49	208	P	Pn	00 53 54.5	-2.6
KIW	Kapiti Island	9.63	209	P	Pn	00 53 55.1	-3.9
MTW	Mount Morrison	9.65	206	P	Pn	00 53 56.1	-3.2
CAW	Cannon Point	9.78	208	P	Pn	00 53 58.0	-3.0
TCW	Tory Channel	10.18	210	P	Pn	00 54 03.4	-3.1
CMWZ	Cape Campbell	10.66	209	Pn	Pn	00 54 13.7	+0.7
KHZ	Kahutara	11.49	209	Pn	Pn	00 54 20.5	-3.7
KHZ	Kahutara	11.49	209	P	Pn	00 54 19.9	-4.3
LTZ	Lake Taylor	12.33	212	Pn	Pn	00 54 32.5	-2.9
RPZ	Rata Peaks	13.61	212	P	Pn	00 54 46.8	-5.4
	0.5nm,0.3s,baz=344,slow=15,SNR=2.3						
RPZ				S	Sn	00 57 10.6	-11
	0.8nm,0.3s,baz=229,slow=23,SNR=1.4						
SANVU	Saraoutou	21.17	320	P	P	00 56 22.2	+1.5
CTA	Charters Tower	33.40	283	P	P	00 58 14.4	+1.8
	2.9nm,0.4s,baz=112,slow=9.4,SNR=7.9						
CTAO	Charters Tower	33.40	283	P	P	00 58 14.4	+1.8
CTAO				IAmb	IAmb	00 58 14.7	
	comp=Z,6.0nm,1.1s						
BBOO	Buckleboo	37.63	257	P	P	00 58 49.0	+0.4
COEN	Coen	39.13	289	P	P	00 59 02.0	+0.6
COEN				IAmb	IAmb	00 59 03.2	
	comp=Z,8.2nm,1.1s						
AS31	Alice Springs	42.22	270	P	P	00 59 26.1	-0.7
ASAR	Alice Springs	42.22	270	P	P	00 59 26.9	+0.1
	comp=Z,0.8nm,0.3s,baz=108,slow=7.7,SNR=15						
WR0	Warramunga Arr	43.23	275	P	P	00 59 34.6	-0.3
WB2	Warramunga Arr	43.39	275	P	P	00 59 36.4	+0.1
WB2				IAmb	IAmb	00 59 37.5	
	comp=Z,5.0nm,0.8s						
WRAB	Tennant Creek	43.40	275	P	P	00 59 36.0	-0.3
WRAB				IAmb	IAmb	00 59 37.2	
	comp=Z,5.2nm,0.6s						
WRA	Warramunga Arr	43.40	275	P	P	00 59 36.3	-0.1
	comp=Z,3.7nm,0.4s,baz=112,slow=8.1,SNR=72						
WB0	Warramunga Arr	43.44	275	P	P	00 59 36.9	+0.2
WB0				IAmb	IAmb	00 59 37.8	
	comp=Z,7.0nm,0.8s						
CASY	Casey	52.85	209	P	P	01 00 44.5	-3.9
CASY				IAmb	IAmb	01 00 58.3	
	comp=Z,5.9nm,0.8s						
NWAO	Narrogin (SRO)	52.89	251	P	P	01 00 48.2	-1.0
GIRL	Giralia	59.18	261	P	P	01 01 30.7	-3.4
BELA	Belgrano 2	67.76	172	P	P	01 02 30.3	+0.5
SNAA	Sanae	76.02	179	P	P	01 03 22.7	+3.3
VNA3	Neumayer Olymp	76.21	176	P	P	01 03 23.6	+3.3
VNA2	Neumayer--Watz	76.63	177	P	P	01 03 23.8	+1.1
VNA1	Neumayer--Stat	76.87	177	P	P	01 03 23.5	-0.5
H03S2	Juan Fernandez	79.96	124	T	T	02 32 23.3	
	baz=236,slow=74,SNR=33						
H03S1	Juan Fernandez	79.97	124	T	T	02 32 24.5	
	baz=236,slow=74,SNR=27						
H03S3	Juan Fernandez	79.98	124	T	T	02 32 18.6	
	baz=236,slow=74,SNR=32						
H03N3	Juan Fernandez	80.17	123	T	T	02 32 32.1	
	baz=240,slow=72,SNR=26						
H03N2	Juan Fernandez	80.17	123	T	T	02 32 34.0	
	baz=240,slow=72,SNR=23						
H03N1	Juan Fernandez	80.19	123	T	T	02 32 36.7	
	baz=240,slow=72,SNR=53						
NVAR	Mina Array Bea	90.38	43	P	P	01 04 35.2	+1.6
	comp=Z,0.6nm,0.8s,baz=225,slow=8.1,SNR=4.6						
MKAR	Makanchi Array	118.51	309	PKP	PKPdf	01 10 18.1	-1.1
	comp=Z,0.4nm,0.7s,baz=201,slow=1.5,SNR=4.7						
ZALV	Zalesovo Beam	119.08	318	PKP	PKPdf	01 10 19.8	-0.1
	comp=Z,0.6nm,0.5s,baz=105,slow=2.3,SNR=5.2						
ARCES	ARCESS Array B	140.51	347	PKhKP	PKPpre	01 10 52.0	
	comp=Z,3.2nm,0.9s,baz=36,slow=6.4,SNR=1.9						
KBZ	Khabaz	145.57	301	PKPbc	PKPdf	01 11 09.3	-0.4
	comp=Z,1.9nm,0.8s,baz=94,slow=9.1,SNR=1.8						
FINES	FINESS Array B	146.86	338	PKPbc	PKPdf	01 11 11.9	+0.6
	comp=Z,6.6nm,0.5s,baz=56,slow=3.3,SNR=65						
NB2	NORSAR Subarra	150.74	350	PKP	PKPbc	01 11 22.6	-0.7
	comp=Z,0.7nm,0.4s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.74	350	PKPbc	PKPbc	01 11 22.6	-0.7
	comp=Z,1.5nm,0.5s,baz=17,slow=4.2,SNR=7.2						
AKASG	Malin Array Be	152.46	319	PKPbc	PKPbc	01 11 27.4	0.0
	comp=Z,1.3nm,0.4s,baz=61,slow=2.4,SNR=14						
AKASG	Malin Array Be	152.46	319		PKPbc	01 11 27.3	-0.2
BRTR	Keskin Array B	152.82	295	PKPbc	PKPbc	01 11 28.1	-0.7
	comp=Z,0.6nm,0.5s,baz=136,slow=2.9,SNR=6.8						
TORD	Torodi Ar. Bea	160.67	182	PKPab	PKPab	01 12 15.8	+1.6
	comp=Z,1.5nm,1.0s,baz=166,slow=3.5,SNR=4.5						

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*HLW **12** 00:58:59.1, 34°.66N×25°.56E, h10^{km}±14^{km}, Md4.0*

*ATH **12** 00:59:03.4, 34°.57N×25°.18E, h17^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=3.4km s-min=1.7km az=334.0*

*THE **12** 00:59:03.7, 34°.61N×25°.16E, h9^{km}±4^{km}, ML2.1/5, Error ellipse: s-maj=5.1km s-min=1.1km az=354.0*

ISC 12 00:59:01.7±1.6**, 34°.51N**±0°.06×**25°.20E**±0°.04**, h13**^{km}±13^{km}**, n17, σ0^{s}.66**/26**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.60	328	P	Pg	00 59 13.7	+0.3
SIVA				S	Sb	00 59 21.9	-0.5
SIVA				AML	AML	00 59 24.7	
	comp=N,717μm,0.3s						
SIVA				AML	AML	00 59 29.9	
	comp=E,1297μm,0.8s						
SIVA	Sivas	0.60	328	P	Pg	00 59 13.7	+0.3
SIVA				S	Sb	00 59 21.9	-0.5
	comp=E,488nm,0.5s						
IDI	Anoyia	0.82	342	P	Pg	00 59 17.1	-0.5
IDI				S	Sb	00 59 27.8	-0.9
IDI	Anoyia	0.82	342	P	Pg	00 59 17.1	-0.5
IDI				S	Sb	00 59 27.8	-0.9
	comp=E,92nm,0.4s						
NPS	Neapolis	0.83	24	P	Pg	00 59 18.2	+0.5
NPS				S	Sb	00 59 28.8	-0.1
NPS	Neapolis	0.83	24	P	Pg	00 59 18.2	+0.5
NPS				S	Sb	00 59 28.8	-0.1
	comp=E,155nm,0.6s						
GVD	Gavdhos	0.97	290	P	Pb	00 59 21.1	+0.8
GVD				S	Sb	00 59 33.5	+0.4
GVD				AML	AML	00 59 42.9	
	comp=E,475μm,0.6s						
GVD				AML	AML	00 59 43.7	
	comp=N,445μm,0.4s						
GVD	Gavdhos	0.97	290	P	Pb	00 59 21.1	+0.8
GVD				S	Sb	00 59 33.5	+0.4
	comp=N,228nm,0.6s						
ZKR	Zakros	1.03	54	P	Pb	00 59 21.6	+0.2
ZKR	Zakros	1.03	54	P	Pb	00 59 21.6	+0.2
ZKR				S	Sn	00 59 37.7	+1.5
	comp=N,105nm,0.6s						
VAM	Vamos	1.21	318	P	Pb	00 59 24.1	-0.4
VAM	Vamos	1.21	318	P	Pb	00 59 24.1	-0.4
IMMV	Iera Moni Meta	1.38	314	P	Pn	00 59 26.6	0.0
IMMV	Iera Moni Meta	1.38	314	P	Pn	00 59 26.6	0.0
SLUM	Salum	3.01	180	P	Pn	00 59 48.8	-0.3
	baz=186						
SWA2		5.25	178	P	Pn	01 00 19.2	-0.7
	baz=181						
HFRF	Wahat Farafira	7.81	159	P	Pn	01 00 53.7	-1.3
	baz=161						
HFRF				S	Sn	01 02 17.2	-6.1
	baz=161						

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*IDC **12** 00:59:14.3±0.6, 16°.25N×97°.93W, h0^{km}, mb4.5/18, mb1 4.7/20, mb1mx4.5/38, mbtmp4.5/20, ML3.8/2, MS4.0/15, Ms1 4.0/15, ms1mx3.8/37, Error ellipse: s-maj=21.7km s-min=11.3km az=50.0*

*MEX **12** 00:59:17.7±0.7, 16°.22N×98°.05W, h6^{km}±3^{km}, MD4.8*

*NEIC **12** 00:59:19.8±3.4, 16°.28N±0°.02×98°.06W±0°.03, h34^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=1.7km az=127.0*

*GCMT **12** 00:59:20.7±0.6, 16°.45N±0°.03×97°.63W±0°.05, h29^{km}±1^{km}, MW4.9/76, Moment Tensor Solution. s20,c22; s76,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.65±.21; $M_{\theta\theta}$-1.29±.12; $M_{\phi\phi}$-1.36±.15; $M_{r\theta}$1.34±.13; $M_{\theta\phi}$1.04±.09; $M_{\phi r}$-0.29±.20; Best double couple: $M_0$2.84300×10^{16} NP1:ϕ_s327.00000°, δ34.00000°, λ111.00000°. NP2: ϕ_s122.00000°, δ59.00000°, λ77.00000°. Principal axes: T 3.0630, Plg73.0000°, Azm359.0000°; N -0.4390, Plg11.0000°, Azm129.0000°; P -2.6240, Plg13.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 00:59:17.1±1.1**, 16°.27N**±0°.03×**98°.03W**±0°.03**, h17**^{km}±6^{km}**, n872, σ1^{s}.30**/885**, mb4.9**/212**, MS4.1**/16**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.15	323	eP	Pb	00 59 20.8	-0.7
PNIG				eS	Sg	00 59 23.7	-0.3
PNIG	Pinotepa	0.15	323		Pb	00 59 20.8	-0.7
PNIG					Sg	00 59 23.7	-0.3
YOIG	Yosondua	0.75	39	eP	Pb	00 59 31.2	-0.6
YOIG				i S	Sg	00 59 41.8	0.0
PEIG	Puerto Escondi	0.89	108	eP	Pb	00 59 32.9	-1.2
PEIG				i S	Sb	00 59 45.6	-0.3
TXIG	Tlaxiaco	1.01	15	eP	Pb	00 59 35.3	-1.0
TXIG				i S	Sb	00 59 49.1	-0.4
CRIG	Cruz Grande	1.15	294	eP	Pn	00 59 35.7	-2.8
CRIG				i S	Sb	00 59 50.8	-2.5
TLIG	Tlapa	1.38	338	eP	Pn	00 59 40.7	-1.1
TLIG				i S	Sn	00 59 58.9	-0.9
TLIG	Tlapa	1.38	338	Pn	Pn	00 59 40.7	-1.1
TLIG					Sn	00 59 57.6	-2.2
VHO	Vista Hermosa	1.48	57	eP	Pn	00 59 42.5	-0.6
VHO				i S	Sn	01 00 01.1	-1.2
HLIG	Huajuapan de L	1.57	8	eP	Pn	00 59 43.9	-0.5
HLIG				i S	Sn	01 00 03.0	-1.4
FTIG	Fresnillo de T	1.63	357	eP	Pn	00 59 44.7	-0.5
FTIG				eS	Sn	01 00 05.0	-0.9
ACP2	Acapulco	1.88	289	eP	Pn	00 59 47.1	-1.4
ACP2	Acapulco	1.88	289		Pn	00 59 47.1	-1.4
HUIG	Huatulco	1.92	105	eP	Pn	00 59 47.3	-1.7
HUIG				eS	Sn	01 00 10.2	-2.6
HUIG	Huatulco	1.92	105		Pn	00 59 47.3	-1.7
HUIG					Sn	01 00 10.2	-2.6
TOIG	Toxpalan	2.04	27	eP	Pn	00 59 50.2	-0.6
TOIG				i S	Sn	01 00 14.9	-1.0
TPIG	Tehuac#an	2.23	17	eP	Pn	00 59 53.4	-0.1
TPIG				i S	Sn	01 00 20.2	-0.6
TPIG	Tehuac#an	2.23	17		Pn	00 59 53.4	-0.1
TPIG					Sn	01 00 20.2	-0.6
MEIG	Mezcala	2.24	318	eP	Pn	00 59 52.7	-0.8
MEIG				i S	Sn	01 00 20.5	-0.3
MEIG	Mezcala	2.24	318		Pn	00 59 52.7	-0.8
MEIG					Sn	01 00 20.5	-0.3
CAIG	El Cayaco	2.28	290	eP	Pn	00 59 52.0	-1.9
CAIG				eS	Sn	01 00 19.5	-2.1
CAIG	El Cayaco	2.28	290		Pn	00 59 52.0	-1.9
CAIG					Sn	01 00 19.5	-2.1
PLIG	Platanillo	2.53	327	eP	Pn	00 59 57.4	-0.2
PLIG				i S	Sn	01 00 27.9	-0.3
PLIG	Platanillo	2.53	327		Pn	00 59 57.4	-0.2
PLIG					Sn	01 00 27.9	-0.3
YAIG	Yautepec	2.76	339	eP	Pn	01 00 00.7	0.0
YAIG				eS	Sn	01 00 33.4	-0.4
YAIG	Yautepec	2.76	339		Pn	01 00 00.7	0.0
YAIG					Sn	01 00 33.4	-0.4
PPM	Popocatepetl	2.84	349	eP	Pn	01 00 02.6	+0.5
PPM				i S	Sn	01 00 36.7	+0.5
ARIG	Puente Sto Nin	2.98	312	eP	Pn	01 00 03.5	-0.2
ARIG				i S	Sn	01 00 38.4	-0.7
ARIG	Puente Sto Nin	2.98	312		Pn	01 00 03.5	-0.2
ARIG					Sn	01 00 38.4	-0.7
CMIG	Matias Romero	3.13	74	Pn	Pn	01 00 04.5	-1.1
	56nm,0.3s,baz=257,slow=11,SNR=453						
CMIG				Sn	Sn	01 00 41.8	-0.8
	65nm,0.3s,baz=282,slow=16,SNR=5.3						
CMIG				Lg	Lg	01 00 55.9	
	592nm,0.3s,baz=325,slow=8.0,SNR=16						
CMIG	Matias Romero	3.13	74	eP	Pn	01 00 04.6	-1.1
CMIG				i S	Sn	01 00 41.9	-0.8
UNM	Universidad Na	3.23	340	i P	Pn	01 00 08.0	+0.6
UNM				i S	Sn	01 00 46.3	+0.7
UNM	Universidad Na	3.23	340	Pn	Pn	01 00 10.2	+2.9
ZIIG	Zihuatanejo	3.54	293	i P	Pn	01 00 11.1	-0.2
ZIIG				i S	Sn	01 00 52.6	-0.3
ZIIG	Zihuatanejo	3.54	293		Pn	01 00 11.1	-0.2
ZIIG					Sn	01 00 52.6	-0.3
DEIG	Demacu	4.12	347	i P	Pn	01 00 19.9	+0.3
DEIG				eS	Sn	01 01 06.9	-0.7
MOIG	Morelia	4.53	319	i P	Pn	01 00 25.5	+0.3
MOIG	Morelia	4.53	319		Pn	01 00 28.1	+3.0
PCIG		4.67	96	eP	Pn	01 00 26.1	-0.7
PCIG				eS	Sn	01 01 19.8	-0.8
PCIG		4.67	96		Pn	01 00 26.1	-0.7
PCIG					Sn	01 01 19.8	-0.8
TGIG		4.74	83	eP	Pn	01 00 27.9	0.0
TGIG				i S	Sn	01 01 22.2	-0.3
TGIG		4.74	83		Pn	01 00 27.9	0.0
TGIG					Sn	01 01 22.2	-0.3
IGIG	Irapuato, Guan	5.44	325	i P	Pn	01 00 37.6	-0.1
IGIG				i S	Sn	01 01 40.5	+0.3
IGIG	Irapuato, Guan	5.44	325		Pn	01 00 37.6	-0.1
IGIG					Sn	01 01 40.5	+0.3
CCIG	Comitan	5.66	89		Pn	01 00 41.8	+1.1
RTAL	Retalhuleu	6.36	105	Pn	Pn	01 00 52.7	+2.6
GTIG	Gomez Farias	6.84	351	i P	Pn	01 00 58.5	+1.7
ZAIG	Zacatecas	7.75	327		Pn	01 01 08.6	-0.9
PETF	Flores	7.86	84		Pn	01 01 10.2	-0.5
ESQI	Esquipulas	8.55	100	Pn	Pn	01 01 21.9	+1.5
MTO3	Montecristo	8.57	101		Pn	01 01 22.7	+1.9
SNET	Serv Nac Est T	8.88	106	Pn	Pn	01 01 26.9	+2.0
TEIG	Tepich	10.07	66		Pn	01 01 38.6	-2.4
TGUH	Tegucigalpa,Un	10.62	101		Pn	01 01 50.3	+1.6
KVTX	Kingsville	11.22	1	Pn	Pn	01 01 58.2	+1.4
833A	Chaparral WMA,	12.06	354	P	Pn	01 02 08.4	+0.2
	baz=173,SNR=11						
833A	Chaparral WMA,	12.06	354	Pn	Pn	01 02 08.7	+0.4
HPIG		12.76	328		Pn	01 02 20.4	+2.3
ACON	Acoyapa	13.18	107	Pn	Pn	01 02 24.0	+0.3
SLBS	Sierra La Lagu	13.40	305		Pn	01 02 30.3	+3.6
HKT	Hockley	13.77	8	Pn	Pn	01 02 31.3	-0.2
LPIG	La Paz	13.90	306	Pn	P	01 02 41.7	+0.1
	1.2nm,0.3s,baz=176,slow=9.2,SNR=2.0						
LPIG				LR	LR	01 07 32.0	
	comp=Z,418nm,18.5s,baz=120,slow=36						
ESPN	Las Esperanzas	13.91	105	Pn	Pn	01 02 33.4	-0.3
TXAR	Lajitas Array	14.00	339	Pn	Pn	01 02 36.6	+1.8
	0.0nm,0.3s,baz=161,slow=13,SNR=16						
TXAR				Lg	Lg	01 06 44.8	
	baz=158,slow=22,SNR=2.1						
TXAR				LR	LR	01 07 14.3	
	comp=Z,239nm,20.9s,baz=0.0,slow=34						
TXAR	Lajitas Array	14.00	339		Pn	01 02 36.3	+1.5
TX31	Lajitas Ar. Si	14.00	339		Pn	01 02 36.9	+2.0
TX32	Lajitas Array	14.00	339		Pn	01 02 36.9	+2.1
JTS	Las Juntas de	14.05	113	Pn	Pn	01 02 38.3	+2.7
	1.4nm,0.3s,baz=21,slow=10,SNR=6.2						
JTS	Las Juntas de	14.05	113		Pn	01 02 36.2	+0.7
JCT	Junction City	14.24	354	P	Pn	01 02 37.7	-0.4
	baz=172,SNR=6.7						
JCT	Junction City	14.24	354		Pn	01 02 38.5	+0.5
435B	Jarrell	14.45	2	P	Pn	01 02 41.4	+0.4
	baz=181,SNR=6.7						
435B	Jarrell	14.45	2		Pn	01 02 43.4	+2.4
HDC	Heredia	14.91	113	Pn	Pn	01 02 50.2	+2.7
441A	DeRidder	15.08	16	P	Pn	01 02 51.2	+1.7
545A	Edgard	15.36	25	Pn	Pn	01 02 53.0	-0.1
WHTX	Lake Whitney,	15.66	2	P	Pn	01 02 56.3	-0.8
	baz=181,SNR=32						
WHTX	Lake Whitney,	15.66	2	Pn	P	01 02 60.0	-1.1
WHTX				IAmb	IAmb	01 03 02.6	
	comp=Z,105nm,1.0s						
NATX	Nacogdoches	15.72	11	P	Pn	01 02 56.2	-1.7
	baz=191,SNR=5.9						
NATX	Nacogdoches	15.72	11		P	01 03 01.2	-0.6
237A	Washetta, Mont	15.79	7	Pn	P	01 03 01.6	-1.0
237A				IAmb	IAmb	01 03 03.9	
	comp=Z,125nm,1.0s						
342A	Flagon Creek P	15.91	18		Pn	01 03 01.8	+1.5
342A				IAmb	IAmb	01 03 11.8	
	comp=Z,75nm,0.9s						
ETX02	Prairie Street	15.91	11	Pn	Pn	01 02 58.6	-1.7
ABTX	Abilene, Hawle	16.35	355	P	Pn	01 03 05.4	-0.5
	baz=174,SNR=47						
ABTX	Abilene, Hawle	16.35	355	P	P	01 03 09.1	+0.3
ABTX				IAmb	IAmb	01 03 10.8	
	comp=Z,163nm,1.0s						
344A	Westbrook Farm	16.51	22		Pn	01 03 08.8	+0.8
344A				IAmb	IAmb	01 03 17.5	
	comp=Z,64nm,0.9s						
MNTX	Cornudas Mount	16.75	338	P	Pn	01 03 11.6	+0.6
	baz=154,SNR=19						
MNTX	Cornudas Mount	16.75	338		P	01 03 13.2	-0.1
GDL2	Guadalupe Moun	16.87	341	P	P	01 03 13.6	-1.0
346A	Big Creek Wild	16.95	26	P	Pn	01 03 13.2	-0.4
346A				IAmb	IAmb	01 03 31.7	
	comp=Z,54nm,0.8s						
Z35A	Perchaven, San	17.00	2		Pn	01 03 13.8	-0.4
Z35A				IAmb	IAmb	01 03 17.1	
	comp=Z,56nm,0.8s						
Z38A	Mt. Pleasant	17.14	9	P	Pn	01 03 16.6	+0.7
SRIG	Santa Rosalia	17.16	312		P	01 03 19.1	+1.4
VBMS	Vicksburg	17.28	22	P	Pn	01 03 15.5	-2.2
	baz=205						
VBMS	Vicksburg	17.28	22	P	P	01 03 20.0	+1.0
VBMS				IAmb	IAmb	01 03 25.1	
	comp=Z,142nm,0.9s						
HSIG		17.39	319		P	01 03 21.1	+0.8
143A	Socs Landing,	17.43	19	P	P	01 03 20.3	-0.4
143A				IAmb	IAmb	01 03 31.4	
	comp=Z,69nm,0.9s						
CPRX	Cap Rock	17.50	344	P	Pn	01 03 19.2	-1.3
Z41A	Richland Creek	17.56	15	P	Pn	01 03 19.6	-1.6
	baz=196,SNR=6.9						
Z41A	Richland Creek	17.56	15		P	01 03 23.0	+0.8
Z41A				IAmb	IAmb	01 03 30.3	
	comp=Z,87nm,1.2s						
BRAL	Brewton	17.90	32	P	Pn	01 03 21.6	-3.7
	baz=216						
BRAL	Brewton	17.90	32		P	01 03 27.5	+1.6
WLAR	White Oak Lake	17.90	13		P	01 03 26.5	+0.6
MSTX	Muleshoe	18.13	347	P	Pn	01 03 27.4	-1.0
	baz=164,SNR=14						
MSTX	Muleshoe	18.13	347	P	Pn	01 03 27.8	-0.5
451A	Vernon	18.17	36		P	01 03 31.1	+2.2
451A				IAmb	IAmb	01 03 33.6	
	comp=Z,99nm,1.1s						
319A	Douglas	18.20	328	P	P	01 03 31.3	+2.0
146A	Union	18.21	25	P	P	01 03 32.2	+2.9
146A				IAmb	IAmb	01 03 37.5	
	comp=Z,112nm,1.2s						
X37A	Clayton	18.40	7		P	01 03 30.7	-0.7
WMOK	Wichita Mounta	18.40	358	P	P	01 03 29.8	-1.7
	baz=177,SNR=29						
WMOK	Wichita Mounta	18.40	358	P	P	01 03 29.8	-1.7
121A	Cookes Peak, D	18.45	333	P	Pn	01 03 32.9	+0.6
	baz=148,SNR=10						
121A	Cookes Peak, D	18.45	333		Pn	01 03 34.0	+1.7
MIAR	Mount Ida	18.63	12	P	P	01 03 31.9	-2.1
	baz=193,SNR=25						
MIAR	Mount Ida	18.63	12	P	Pn	01 03 34.2	-0.1
MIAR				IAmb	IAmb	01 03 52.6	
	comp=Z,62nm,1.1s						
X40A	Basin Creek Fa	18.73	13	P	P	01 03 33.1	-1.9
	baz=195						
X40A	Basin Creek Fa	18.73	13	P	Pn	01 03 38.4	+2.9
AMTX	Amarillo	18.82	351	P	P	01 03 35.6	-0.6
	baz=168						
AMTX	Amarillo	18.82	351	P	P	01 03 36.2	0.0
AMTX				IAmb	IAmb	01 03 41.2	
	comp=Z,67nm,0.9s						
W35A	Tecumseh	18.83	3	P	P	01 03 35.3	-0.9
FNO	Franklin	18.92	2	P	Pn	01 03 37.9	+0.1
FNO				IAmb	IAmb	01 03 45.7	
	comp=Z,94nm,0.9s						
250A	Grady	18.94	32	P	Pn	01 03 40.1	+2.0
OKCSW	OKLAHOMA CITY	19.06	1	P	P	01 03 37.5	-1.2
OKCFA	Oklahoma City	19.07	1	P	P	01 03 38.9	+0.1
Z47A	Carrollton	19.11	26	P	Pn	01 03 39.9	-0.2

Z47A				IAmb	IAmb	01 03 48.6	
	comp=Z,142nm,1.4s						
Y45A	Yeager Farm, C	19.12	22	P	Pn	01 03 40.9	+0.8
Y45A				IAmb	IAmb	01 03 47.4	
	comp=Z,80nm,0.9s						
W39A	Magazine	19.23	11	P	P	01 03 40.0	-0.5
	baz=192,SNR=9.2						
W39A	Magazine	19.23	11	P	P	01 03 40.8	+0.3
W39A				IAmb	IAmb	01 03 56.4	
	comp=Z,52nm,0.9s						
OK025	Westminster Rd	19.24	2	P	P	01 03 40.3	-0.3
OK025				IAmb	IAmb	01 03 42.9	
	comp=Z,61nm,0.9s						
X43A	Marvell	19.27	18	P	P	01 03 40.3	-0.7
	baz=201,SNR=10.0						
X43A	Marvell	19.27	18	P	Pn	01 03 44.4	+2.4
X43A				IAmb	IAmb	01 03 51.9	
	comp=Z,128nm,1.1s						
352A	Blakely	19.28	36	P	Pn	01 03 42.7	+0.6
352A				IAmb	IAmb	01 03 57.8	
	comp=Z,52nm,1.1s						
656A	Willston	19.31	45	P	Pn	01 03 43.7	+1.2
656A				IAmb	IAmb	01 04 00.6	
	comp=Z,75nm,1.1s						
BNM	Barren Site	19.41	338		Pn	01 03 45.1	+1.2
LRAL	Lakeview Retre	19.45	29	P	P	01 03 40.6	-2.3
	baz=213,SNR=5.5						
LRAL	Lakeview Retre	19.45	29	P	Pn	01 03 43.6	-0.5
Y22D	IRIS PASSCAL I	19.45	337	P	P	01 03 42.9	-0.2
	baz=153,SNR=6.1						
Y22D	IRIS PASSCAL I	19.45	337	P	Pn	01 03 44.4	+0.1
Y22D				IAmb	IAmb	01 03 52.8	
	comp=Z,96nm,0.9s						
W41B	Gary Mavity, V	19.52	14	P	P	01 03 41.8	-1.9
	baz=196,SNR=7.3						
W41B	Gary Mavity, V	19.52	14	P	Pn	01 03 44.8	-0.2
LENM	Lemitar	19.55	337	P	Pn	01 03 45.7	+0.2
OK030	Cody Creek RV	19.61	3	P	P	01 03 43.9	-0.8
OK030				IAmb	IAmb	01 03 45.8	
	comp=Z,81nm,0.9s						
WHAR	Wooly Hollow	19.63	14	P	P	01 03 45.4	+0.6
OK031	S. Brethren Rd	19.63	3	P	P	01 03 44.1	-0.8
OK031				IAmb	IAmb	01 03 46.6	
	comp=Z,121nm,1.1s						
TUL1	Leonard	19.66	5	P	P	01 03 43.5	-1.8
	baz=186,SNR=17						
TUL1	Leonard	19.66	5	P	P	01 03 43.8	-1.4
TUL1				IAmb	IAmb	01 03 51.7	
	comp=Z,69nm,0.8s						
MTDJ	Mount Denham	19.67	81	P	Pn	01 03 49.5	+2.4
MTDJ				IAmb	IAmb	01 04 02.8	
	comp=Z,62nm,1.1s						
TUC	Tucson	19.72	326	P	Pn	01 03 47.5	0.0
	baz=140						
TUC	Tucson	19.72	326	P	Pn	01 03 48.0	+0.5
OXF	Oxford	19.75	22	P	P	01 03 44.6	-1.6
	baz=205,SNR=7.9						
OXF	Oxford	19.75	22	P	P	01 03 45.4	-0.8
OXF				IAmb	IAmb	01 03 52.0	
	comp=Z,46nm,0.9s						
QUOK	Quay	19.86	3	P	P	01 03 46.4	-0.9
QUOK				IAmb	IAmb	01 03 53.5	
	comp=Z,47nm,1.0s						
TIGA	Tifton	20.03	38	P	P	01 03 46.4	-2.9
	baz=224						
U32A	Winter Ranch,	20.05	358	P	P	01 03 49.4	-0.1
U32A				IAmb	IAmb	01 03 57.6	
	comp=Z,71nm,0.9s						
ANMO	Albuquerque	20.07	339	P	Pn	01 03 51.2	-0.6
	comp=Z,26nm,1.0s,baz=146,slow=11,SNR=34						
ANMO				Lg	Lg	01 09 59.9	
	comp=Z,0.2nm,0.3s,baz=354,slow=13,SNR=1.2						
ANMO				LR	LR	01 12 14.5	
	comp=Z,1µm,18.1s,baz=151,slow=39						
ANMO	Albuquerque	20.07	339	P	P	01 03 50.6	+0.7
	baz=155						
ANMO	Albuquerque	20.07	339	P	Pn	01 03 51.1	-0.6
MET	Memphis--Engin	20.12	20	P	Pn	01 03 53.9	+1.7
CROK	Carrier	20.15	0	P	P	01 03 49.8	-0.8
FCAR	Ozark Folk Cen	20.24	14	P	P	01 03 50.8	-0.7
HHAR	Hobbs	20.26	10	P	P	01 03 50.5	-1.3
HHAR				IAmb	IAmb	01 03 57.3	
	comp=Z,53nm,1.2s						
152A	Waverly Hall	20.30	34	P	P	01 03 51.8	-0.4
U38A	Gravette	20.35	8	P	P	01 03 51.7	-1.0
U38A				IAmb	IAmb	01 03 57.9	
	comp=Z,45nm,1.1s						
Y49A	Blount Mountai	20.40	29	P	P	01 03 52.4	-1.0
Y49A				IAmb	IAmb	01 04 00.8	
	comp=Z,48nm,0.7s						
W45A	Hickory Valley	20.41	21	P	P	01 03 52.1	-1.3
LPAR	Lepanto	20.45	18	P	P	01 03 53.6	-0.2
LPAR				IAmb	IAmb	01 04 03.1	
	comp=Z,80nm,1.1s						
GC02	Grant County #	20.50	0	P	Pn	01 03 55.7	-0.9
456A	Hilliard	20.52	43	P	Pn	01 03 57.0	+0.2
456A				IAmb	IAmb	01 04 05.3	
	comp=Z,94nm,0.9s						
U40A	Yellville	20.53	12	P	P	01 03 53.5	-1.2
	baz=194,SNR=32						
U40A	Yellville	20.53	12	P	P	01 03 53.6	-1.1
U40A				IAmb	IAmb	01 03 59.4	
	comp=Z,42nm,1.0s						
Z51A	Franklin	20.57	32	P	Pn	01 03 57.0	-0.4
214A	Organ Pipe Nat	20.60	322	P	P	01 03 56.5	+1.0
	baz=135,SNR=9.6						
214A	Organ Pipe Nat	20.60	322	P	Pn	01 03 57.5	-0.3
KAN14	Manchester OK	20.60	0	P	P	01 03 54.3	-1.2
T35A	Sooner Cattle	20.61	3	P	P	01 03 54.0	-1.5
T35A				IAmb	IAmb	01 04 02.8	
	comp=Z,50nm,0.7s						
X48A	Hartselle	20.62	27	P	P	01 03 54.3	-1.4
X48A				IAmb	IAmb	01 04 03.6	
	comp=Z,34nm,0.8s						
LCAR	Lake Charles	20.65	16	P	P	01 03 54.8	-1.1
PLAL	Pickwick Lake	20.66	24	P	P	01 03 56.8	+0.7
KAN13	South Haven SW	20.67	1	P	P	01 03 55.1	-1.1
KAN13				IAmb	IAmb	01 04 08.8	
	comp=Z,109nm,1.1s						
PIX	Pinacate	20.71	320	P	Pn	01 03 59.1	+0.1
KAN10	Anthony SW Sta	20.77	360	P	Pn	01 03 58.6	-1.1
X18A	Snowflake	21.10	332	P	P	01 04 03.3	+2.3
X18A				IAmb	IAmb	01 04 04.5	
	comp=Z,67nm,1.1s						
154A	Montrose	21.16	37	P	P	01 04 04.6	+3.1
SFX	San Felipe	21.25	317	P	P	01 04 03.6	+1.1
FPAL	Fort Paine	21.34	29	P	P	01 04 03.1	-0.3
FPAL				IAmb	IAmb	01 04 13.8	
	comp=Z,32nm,0.8s						
MGMO	Mountain Grove	21.42	13	P	P	01 04 03.2	-1.1
MGMO				IAmb	IAmb	01 04 08.3	
	comp=Z,88nm,1.1s						
W18A	Petrified Fore	21.49	333	P	P	01 04 05.3	0.0
	baz=147,SNR=14						
W18A	Petrified Fore	21.49	333	P	P	01 04 04.1	-1.2
W18A				IAmb	IAmb	01 04 19.6	
	comp=Z,41nm,1.1s						
PBMO	Poplar Bluff	21.51	17	P	P	01 04 07.8	+2.5
PBMO				IAmb	IAmb	01 04 08.2	
	comp=Z,69nm,0.9s						
T25A	Trinidad	21.54	346	P	P	01 04 06.4	+0.5
	baz=162,SNR=104						
T25A	Trinidad	21.54	346	P	P	01 04 08.5	+2.7
GOGA	Godfrey	21.54	35	P	P	01 04 03.5	-2.1
	baz=221,SNR=9.5						
GOGA	Godfrey	21.54	35	P	P	01 04 04.2	-1.4
GOGA				IAmb	IAmb	01 04 12.4	
	comp=Z,64nm,0.8s						
Y52A	Lilburn	21.57	33	P	P	01 04 04.6	-1.3
UTMT	University of	21.59	20	P	P	01 04 07.8	+1.7
PARMO	Parma	21.60	18	P	P	01 04 07.5	+1.3
SPX	San Pedro Mart	21.66	316	P	P	01 04 09.1	+1.8
X16A	Lo Mia Camp, P	21.71	329	P	P	01 04 10.4	+2.7
X16A				IAmb	IAmb	01 04 19.5	
	comp=Z,38nm,0.8s						
X51A	Calhoun	21.72	31	P	P	01 04 06.1	-1.5
X51A				IAmb	IAmb	01 04 15.1	
	comp=Z,25nm,0.7s						
S39A	Bolivar	21.74	10	P	P	01 04 06.9	-0.8
S39A				IAmb	IAmb	01 04 10.6	
	comp=Z,67nm,1.1s						
SWET	Sewanee	21.75	28	P	P	01 04 06.7	-1.2
SWET				IAmb	IAmb	01 04 14.9	
	comp=Z,57nm,0.9s						
WVT	Waverly	21.77	23	P	P	01 04 06.2	-1.8
	baz=207						
WVT	Waverly	21.77	23	P	P	01 04 06.4	-1.6
WVT				IAmb	IAmb	01 04 18.2	
	comp=Z,50nm,0.9s						
V48A	Smith Brothers	21.82	25	P	P	01 04 07.0	-1.5
V48A				IAmb	IAmb	01 04 19.3	
	comp=Z,63nm,0.8s						
W50A	Signal Mountai	22.02	29	P	P	01 04 09.5	-1.3
W50A				IAmb	IAmb	01 04 17.8	
	comp=Z,54nm,0.7s						
R32A	Long Quarter,	22.07	359	P	P	01 04 10.4	-1.0
R32A				IAmb	IAmb	01 04 13.8	
	comp=Z,34nm,0.8s						
GTBY	Guantanamo Bay	22.09	77	P	P	01 04 11.4	-0.2
T45A	Paducah	22.28	20	P	P	01 04 17.2	+3.7
CLTN	Cedars of Leba	22.32	26	P	P	01 04 12.9	-1.1
CLTN				IAmb	IAmb	01 04 21.9	
	comp=Z,53nm,1.1s						
SDCO	Great Sand Dun	22.38	344	P	P	01 04 15.4	+0.5
	baz=160,SNR=44						
SDCO	Great Sand Dun	22.38	344	P	P	01 04 15.4	+0.5
157A	Early Branch	22.47	40	P	P	01 04 13.5	-2.1
	baz=227						
CBKS	Cedar Bluff	22.51	357	P	P	01 04 14.5	-1.5
	baz=175						
CBKS	Cedar Bluff	22.51	357	P	P	01 04 17.6	+1.5
CBKS				IAmb	IAmb	01 04 29.6	
	comp=Z,92nm,1.2s						
CCM	Cathedral Cave	22.51	14	P	P	01 04 13.8	-2.2
	baz=197						
CCM	Cathedral Cave	22.51	14	P	P	01 04 16.4	+0.4
CCM				IAmb	IAmb	01 04 31.3	
	comp=Z,35nm,0.8s						
R40A	Maddies Statio	22.52	12	P	P	01 04 17.5	+1.5
R40A				IAmb	IAmb	01 04 17.6	
	comp=Z,59nm,1.1s						
WUAZ	Wupatki	22.57	331	P	P	01 04 18.6	+1.8
	baz=144,SNR=49						
WUAZ	Wupatki	22.57	331	P	P	01 04 18.7	+1.9
WUAZ				IAmb	IAmb	01 04 21.7	
	comp=Z,41nm,0.8s						
GLA	Glamis	22.57	321	P	P	01 04 17.8	+1.0
	baz=133,SNR=14						
GLA	Glamis	22.57	321	P	P	01 04 18.7	+1.9
GLA				IAmb	IAmb	01 04 21.0	
	comp=Z,36nm,1.1s						
ESJX	Sierra Juarez	22.59	317	P	P	01 04 18.2	+1.1
CPCT	Cooper Cave	22.59	30	P	P	01 04 15.3	-1.6
CPCT				IAmb	IAmb	01 04 27.2	
	comp=Z,43nm,0.9s						
W52A	Murphy	22.60	31	P	P	01 04 15.8	-1.3
FVM	French Village	22.64	16	P	P	01 04 16.7	-0.7
FVM				IAmb	IAmb	01 04 18.4	
	comp=Z,43nm,1.1s						
Z56A	Williston	22.69	38	P	P	01 04 15.6	-2.3
	baz=226						
Z56A	Williston	22.69	38	P	P	01 04 16.4	-1.5
S44A	Carbondale	22.70	18	P	P	01 04 17.9	-0.2
SIUC	Southern Illin	22.73	18	P	P	01 04 18.7	+0.3
S22A	4UR Ranch, Cre	22.76	342	P	P	01 04 19.3	+0.3
	baz=157,SNR=38						
S22A	4UR Ranch, Cre	22.76	342	P	P	01 04 19.9	+1.0
S22A				IAmb	IAmb	01 04 22.9	
	comp=Z,28nm,0.9s						
KSU1	Kansas State U	22.78	3	P	P	01 04 17.6	-1.2
	baz=183,SNR=19						
KSU1	Kansas State U	22.78	3	P	P	01 04 19.2	+0.4
KSU1				IAmb	IAmb	01 04 29.0	
	comp=Z,44nm,0.8s						
MVCO	Mesa Verde	22.82	338	P	P	01 04 19.8	+0.3
	baz=153,SNR=40						
MVCO	Mesa Verde	22.82	338	P	P	01 04 20.6	+1.1
MVCO				IAmb	IAmb	01 04 30.3	
	comp=Z,75nm,1.1s						
HODGE	Hodges	22.82	35	P	P	01 04 17.5	-1.9
U49A	Red Boiling Sp	22.91	26	P	P	01 04 18.9	-1.3
V51A	Loudon	22.96	30	P	P	01 04 19.9	-0.9
V51A				IAmb	IAmb	01 04 27.4	
	comp=Z,46nm,1.1s						
KSCO	Kaye Shedlock'	23.01	351	P	P	01 04 20.3	-1.1
	baz=168,SNR=6.2						
BG3	Lake Jocassee	23.03	33	P	P	01 04 20.1	-1.5
BG3				IAmb	IAmb	01 04 28.4	
	comp=Z,25nm,0.7s						
Y56A	Pelion	23.05	38	P	P	01 04 19.6	-2.1
	baz=225						
MOTC	Monteria, Cord	23.05	106	*e*P	P	01 04 21.2	-0.7
PDMCI	Parker Dam,Lak	23.06	324	P	P	01 04 22.6	+0.8
	baz=136,SNR=7.3						
Z57A	Bowman	23.07	40	P	P	01 04 19.5	-2.4
	baz=227						
SWSC	Sam W. Stewart	23.10	319	P	P	01 04 23.8	+1.6
	baz=131						
IKP	In-Ko-Pah, Jac	23.11	318	P	P	01 04 23.9	+1.5
	baz=130						
TKL	Tuckaleechee C	23.12	31	P	P	01 04 21.2	-1.2
	comp=Z,15nm,0.9s,baz=197,slow=13,SNR=9.6						
TKL	Tuckaleechee C	23.12	31	P	P	01 04 21.2	-1.2
TKL				IAmb	IAmb	01 04 30.7	
	comp=Z,57nm,1.1s						
SJCC	San Jacinto, C	23.13	103	*e*P	P	01 04 22.7	-0.1
DBBC	Dabeiba	23.25	111	*e*P	P	01 04 22.9	-1.1
CBX	Cerro Bola	23.25	317	P	P	01 04 26.4	+2.4
NHSC	New Hope	23.27	41	P	P	01 04 21.1	-2.7
	baz=228						
NHSC	New Hope	23.27	41	P	P	01 04 23.2	-0.7
V52A	Sevierville	23.36	31	P	P	01 04 24.2	-0.6
V52A				IAmb	IAmb	01 04 34.3	
	comp=Z,31nm,1.0s						
BC3	Big Chuckawall	23.37	321	P	P	01 04 26.1	+1.0
	baz=133,SNR=15						
JSC	Jenkinsville	23.43	37	P	P	01 04 24.4	-1.1
Q24A	Divide	23.45	346	P	P	01 04 26.5	+0.4
	baz=162,SNR=10						
Q24A	Divide	23.45	346	P	P	01 04 26.8	+0.7
Q24A				IAmb	IAmb	01 04 28.5	
	comp=Z,35nm,1.1s						
MONP2	Monument Peak	23.46	318	P	P	01 04 27.7	+1.6
	baz=130,SNR=5.7						
BAR	Barrett	23.49	317	P	P	01 04 27.9	+1.7
PAULI	Pauline	23.50	35	P	P	01 04 25.4	-0.9
PAULI				IAmb	IAmb	01 04 33.7	
	comp=Z,48nm,0.9s						
W13A	Hualapai Mount	23.51	326	P	P	01 04 28.5	+2.0
IRM	Iron Mountain	23.54	322	P	P	01 04 28.2	+1.6
	baz=134,SNR=12						
UREC	San Jos de Ur	23.56	108	*e*P	P	01 04 27.3	+0.3
P38A	Dawn	23.60	9	P	P	01 04 27.0	-0.1
P38A				IAmb	IAmb	01 04 28.0	
	comp=Z,50nm,0.9s						
V53A	Saluda	23.61	32	P	P	01 04 28.2	+0.8
V53A				IAmb	IAmb	01 04 37.7	
	comp=Z,38nm,1.1s						
Z58A	St. Stephen	23.65	41	P	P	01 04 25.5	-2.1
	baz=228						
NEE2	Needles Airpor	23.67	324	P	P	01 04 29.2	+1.3
	baz=136						
PV01	Paradox Valley	23.67	339	P	P	01 04 29.6	+1.5
PV01				IAmb	IAmb	01 04 39.1	
	comp=Z,46nm,1.0s						
X56A	White Oak	23.71	37	P	P	01 04 26.6	-1.6
	baz=224,SNR=6.5						
U15A	North Rim	23.74	330	P	P	01 04 30.6	+1.7
U15A				IAmb	IAmb	01 04 40.7	
	comp=Z,49nm,1.2s						
T50A	Nancy	23.75	27	P	P	01 04 27.6	-1.0
Y57A	Sumter	23.75	39	P	P	01 04 26.8	-1.8
	baz=226						
Y57A	Sumter	23.75	39	P	P	01 04 27.3	-1.3
P40A	Paris	23.76	12	P	P	01 04 26.7	-2.0
PV13	Radium Mtn., P	23.78	339	P	P	01 04 30.0	+0.8
PV13				IAmb	IAmb	01 04 39.2	
	comp=Z,50nm,1.0s						
PV05	Paradox Valley	23.81	338	P	P	01 04 30.7	+1.2
PV05				IAmb	IAmb	01 04 39.5	
	comp=Z,29nm,0.9s						
PV15	Paradox Valley	23.83	339	P	P	01 04 31.6	+1.9
PV15				IAmb	IAmb	01 04 32.3	
	comp=Z,35nm,0.9s						
PV03	Paradox Valley	23.88	339	P	P	01 04 30.9	+0.9
PV03				IAmb	IAmb	01 04 40.6	
	comp=Z,40nm,1.1s						
PV18	Skein Mesa, Pa	23.89	338	P	P	01 04 31.4	+1.2
PV18				IAmb	IAmb	01 04 40.2	
	comp=Z,31nm,1.0s						
Q44A	Meyer Farm, Va	23.89	18	P	P	01 04 28.7	-1.3
109C	Camp Elliot, M	23.90	317	P	P	01 04 31.4	+1.3
	baz=128						
PV12	Saucer Basin,	23.92	339	P	P	01 04 31.6	+1.2
PV12				IAmb	IAmb	01 04 32.8	
	comp=Z,47nm,0.9s						
PV11	David Mesa, Pa	23.93	339	P	P	01 04 31.4	+0.9
PV11				IAmb	IAmb	01 04 44.0	
	comp=Z,35nm,0.9s						
CBOC	Ciudad Bolivar	23.93	113	*e*P	P	01 04 32.2	+1.4
BELC	Belle Mtn. Jos	23.94	321	P	P	01 04 32.0	+1.4
	baz=132,SNR=8.2						
PV17	East Wray Mesa	23.94	338	P	P	01 04 31.5	+0.8
PV17				IAmb	IAmb	01 04 32.6	
	comp=Z,28nm,0.9s						
TZTN	Tazewell	23.94	30	P	P	01 04 29.3	-1.2
	baz=216,SNR=6.2						
TZTN	Tazewell	23.94	30	P	P	01 04 29.7	-0.8
TZTN				IAmb	IAmb	01 04 40.2	
	comp=Z,58nm,1.1s						
TPFO	Pinon Flats	23.95	319	P	P	01 04 31.6	+0.9
	baz=131						
PV16	Nyswonger Mesa	23.95	339	P	P	01 04 31.8	+1.0
PV16				IAmb	IAmb	01 04 40.7	
	comp=Z,40nm,1.2s						
XPFO	Pion Flat	23.95	319	P	P	01 04 32.8	+2.1
PFO	Pinyon Flats O	23.96	319	P	P	01 04 32.6	+1.8
	comp=Z,3.9nm,0.9s,baz=128,slow=8.7,SNR=6.0						
PFO	Pinyon Flats O	23.96	319	P	P	01 04 32.0	+1.2
	baz=131						
PFO	Pinyon Flats O	23.96	319	P	P	01 04 32.9	+2.1
PV07	Paradox Valley	23.97	339	P	P	01 04 32.5	+1.5
PV07				IAmb	IAmb	01 04 33.5	
	comp=Z,47nm,1.1s						
PV19	Morning Glory	23.98	338	P	P	01 04 32.2	+1.2
PV19				IAmb	IAmb	01 04 32.9	
	comp=Z,22nm,0.9s						
PV20	West Nyswonger	24.00	338	P	P	01 04 32.3	+1.1
KMSC	Kings Mountain	24.01	35	P	P	01 04 29.2	-1.9
	baz=223,SNR=7.6						
KMSC	Kings Mountain	24.01	35	P	P	01 04 29.9	-1.2
OLIL	Olney	24.02	19	P	P	01 04 34.1	+3.0
PV04	Paradox Valley	24.02	339	P	P	01 04 32.5	+1.1
PV04				IAmb	IAmb	01 04 33.6	
	comp=Z,44nm,1.0s						
PV14	Lion Creek, Pa	24.05	338	P	P	01 04 32.5	+0.8
PV14				IAmb	IAmb	01 04 33.6	
	comp=Z,24nm,1.0s						
PV10	Paradox Valley	24.05	338	P	P	01 04 32.2	+0.4
PV10				IAmb	IAmb	01 04 40.8	
	comp=Z,41nm,1.2s						
PV22	Blue Mesa, Par	24.11	339	P	P	01 04 33.4	+1.1
PV22				IAmb	IAmb	01 04 42.1	
	comp=Z,39nm,1.1s						
PV23	Carpenter Ridg	24.11	339	P	P	01 04 33.7	+1.3
PV23				IAmb	IAmb	01 04 42.0	
	comp=Z,55nm,1.2s						
Y58A	Scranton	24.12	40	P	P	01 04 30.3	-1.8
	baz=228						
SMCO	Snowmass	24.13	343	P	P	01 04 33.7	+1.0
SMCO				IAmb	IAmb	01 04 37.7	
	comp=Z,50nm,1.1s						
PLMC	San Jos del P	24.15	116	*e*P	P	01 04 32.7	0.0
BIRD	Birdtown, Kers	24.15	37	P	P	01 04 32.7	+0.3
BIRD				IAmb	IAmb	01 04 41.4	
	comp=Z,58nm,1.2s						
WCI	Wyandotte Cave	24.19	23	P	P	01 04 31.5	-1.3
	baz=208						
WCI	Wyandotte Cave	24.19	23	P	P	01 04 32.1	-0.6
X57A	Johnson Farm,	24.24	38	P	P	01 04 31.3	-1.9
	baz=226						
GMRC	Granite Mounta	24.28	323	P	P	01 04 35.2	+1.5
	baz=134,SNR=6.8						
ISCO	Idaho Springs	24.36	346	P	P	01 04 35.6	+1.0
	baz=162,SNR=86						
ISCO	Idaho Springs	24.36	346	P	P	01 04 36.2	+1.6
MURC	Murrieta	24.41	318	P	P	01 04 36.6	+1.7
	baz=130						
W56A	Indian Trail	24.43	36	P	P	01 04 33.5	-1.5
	baz=224,SNR=7.8						
P43A	Skaggs, Pawnee	24.44	16	P	P	01 04 38.3	+3.3
KNB	Kanab	24.47	330	P	P	01 04 37.5	+2.0
KNB				IAmb	IAmb	01 04 48.5	
	comp=Z,35nm,1.1s						
SMLC	San Martn de	24.52	105	*e*P	P	01 04 36.8	+0.8
YOTC	Yotoco, Valle	24.56	117	*e*P	P	01 04 37.8	+1.3
PKCU	Pink Cliffs	24.58	332	P	P	01 04 38.9	+2.2
PKCU				IAmb	IAmb	01 04 40.8	
	comp=Z,70nm,1.4s						
N35A	Tabor	24.59	4	P	P	01 04 36.3	-0.1
V55A	Taylorsville	24.60	34	P	P	01 04 36.2	-0.3
LCMT	Little Creek M	24.66	330	P	P	01 04 39.0	+1.7
Y59A	Loris	24.67	41	P	P	01 04 35.4	-1.7
	baz=229						
Y59A	Loris	24.67	41	P	P	01 04 37.0	-0.1
BBRC	Big Bear Solar	24.68	320	P	P	01 04 39.2	+1.7
	baz=131						
R49A	Shelbyville	24.68	25	P	P	01 04 36.2	-1.0
R49A				IAmb	IAmb	01 04 44.2	
	comp=Z,75nm,1.5s						
HEC	Hector,Ludlow	24.71	322	P	P	01 04 38.7	+1.1
	baz=133,SNR=5.1						
X58A	Rowland	24.75	39	P	P	01 04 37.0	-0.9
	baz=227,SNR=6.8						
X58A	Rowland	24.75	39	P	P	01 04 37.6	-0.3
W57A	Gilead	24.78	37	P	P	01 04 36.6	-1.6
	baz=225,SNR=5.7						
W57A	Gilead	24.78	37	P	P	01 04 37.3	-0.8
U54A	Nelsons Funny	24.78	32	P	P	01 04 37.0	-1.2
	baz=220,SNR=14						
U54A	Nelsons Funny	24.78	32	P	P	01 04 38.1	-0.1
N38A	Joes South For	24.79	9	P	P	01 04 37.7	-0.5
S51A	Beattyville	24.81	28	P	P	01 04 37.5	-0.9
S51A				IAmb	IAmb	01 04 46.7	
	comp=Z,34nm,0.8s						
OGNE	Ogallala	24.83	353	P	P	01 04 38.9	+0.3
	baz=170,SNR=13						
OGNE	Ogallala	24.83	353	P	P	01 04 39.9	+1.3
BBAC	Balboa, Cauca	24.89	123	*e*P	P	01 04 38.6	-1.0
BLO	Bloomington	24.94	22	P	P	01 04 39.0	-0.6
V56A	Mocksville	24.96	35	P	P	01 04 37.9	-1.9
	baz=223,SNR=7.3						
MTPU	Mount Pierson	25.01	333	P	P	01 04 42.4	+1.7
R50A	Paris	25.02	26	P	P	01 04 39.2	-1.1
R50A				IAmb	IAmb	01 04 48.6	
	comp=Z,41nm,1.1s						
PTBC	PUERTO BERRIO,	25.02	110	*e*P	P	01 04 41.1	+0.5
OTAV	Otavalo	25.04	128	P	P	01 04 43.9	+2.7
BGNE	Belgrade	25.05	360	P	P	01 04 39.1	-1.4
	baz=179						
SZCU	Shurtz Canyon	25.06	331	P	P	01 04 43.1	+2.2
SZCU				IAmb	IAmb	01 04 52.6	
	comp=Z,16nm,0.9s						
NORC	Norcasia	25.08	113	*e*P	P	01 04 33.3	-7.8
P46A	Rosedale	25.11	20	P	P	01 04 40.5	-0.5
BFSC	Mount Baldy Ra	25.12	319	P	P	01 04 42.7	+1.2
	baz=130						
N41A	Harden Midland	25.13	13	P	P	01 04 41.3	+0.1
N41A				IAmb	IAmb	01 04 50.1	
	comp=Z,37nm,0.8s						
W58A	Raeford	25.14	39	P	P	01 04 39.5	-1.9
	baz=227						
CCUT	Cedar City	25.15	330	P	P	01 04 43.8	+2.0
O44A	Mansfield	25.21	17	P	P	01 04 42.4	+0.5
X59A	McDuffie Farm,	25.22	40	P	P	01 04 39.6	-2.5
	baz=228						
SRU	San Rafael Swe	25.25	337	P	P	01 04 43.8	+1.3
SRU				IAmb	IAmb	01 04 53.6	
	comp=Z,31nm,0.9s						
SHPR	Sheep Range	25.25	326	P	P	01 04 44.3	+1.7
GSC	Goldstone, Bar	25.31	322	P	P	01 04 44.7	+1.6
	baz=133,SNR=6.7						
GSC	Goldstone, Bar	25.31	322	P	P	01 04 44.9	+1.8
O20A	White River Ci	25.38	342	P	P	01 04 44.3	+0.5
	baz=156,SNR=22						
O20A	White River Ci	25.38	342	P	P	01 04 44.8	+1.0
MSU	Marysvale	25.40	333	P	P	01 04 45.9	+1.9
MVU	Marysvale	25.41	333	P	P	01 04 46.0	+1.9
U56A	King	25.42	35	P	P	01 04 42.1	-1.9
	baz=223						
U56A	King	25.42	35	P	P	01 04 44.2	+0.3
V57A	Coltrane Farms	25.42	36	P	P	01 04 42.4	-1.5
	baz=224						
N23A	Red Feather La	25.48	346	P	P	01 04 45.3	+0.6
	baz=162,SNR=55						

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N23A  Red Feather La  25.48 346  P     P     01 04 46.1 +1.4
ORTC  Ortega, Tolima  25.54 116  eP    P     01 04 46.5 +1.2
P48A  Milroy          25.59  23  P     P     01 04 43.8 -1.7
P48A                             IAmb  IAmb  01 04 53.3
      comp=Z,30nm,0.9s
SDDR  Presa de Saban  25.62  80  P     P     01 04 47.9 +1.9
P17A  Butcher Ranch,  25.64 337  P     P     01 04 47.5 +1.3
P17A                             IAmb  IAmb  01 04 57.2
      comp=Z,21nm,1.0s
L34A  Svendsen Farm,  25.65   3  P     P     01 04 45.7 -0.3
TMUT  Trail Mountain  25.67 336  P     P     01 04 48.0 +1.4
V58A  Windy Hill, Pi  25.74  37  P     P     01 04 45.4 -1.4
      baz=226,SNR=7.4
V58A  Windy Hill, Pi  25.74  37  P     P     01 04 46.9 +0.1
EDW2  Edwards Air Fo  25.75 320  P     P     01 04 48.2 +1.2
      baz=130,SNR=5.9
PHWY  Pilot Hill      25.75 347  P     P     01 04 49.1 +1.8
PHWY                             IAmb  IAmb  01 04 50.4
      comp=Z,48nm,1.4s
SFIN  Lafayette       25.83  19  P     P     01 04 46.3 -1.3
      baz=204,SNR=14
SFIN  Lafayette       25.83  19  P     P     01 04 46.3 -1.3
PRN   Pahroc Range    25.87 328  P     P     01 04 50.4 +2.2
SCIA  State Center    25.88   8  P     P     01 04 47.3 -0.8
      baz=190,SNR=14
SCIA  State Center    25.88   8  P     P     01 04 47.9 -0.2
ROSC  El Rosal        25.89 113  P     P     01 04 51.5 +2.7
      comp=Z,5.9nm,0.3s,baz=71,slow=6.3,SNR=5.1
P49A  Miami Univ. Ec  25.93  24  P     P     01 04 46.5 -2.0
      baz=210,SNR=8.0
P49A  Miami Univ. Ec  25.93  24  P     P     01 04 47.4 -1.1
LRMC  Laurel Mtn Rad  25.96 321  P     P     01 04 50.2 +1.2
      baz=132
S54A  Dingess, Beckl  26.03  31  P     P     01 04 48.1 -1.4
      baz=219
S54A  Dingess, Beckl  26.03  31  P     P     01 04 49.9 +0.4
S54A                             IAmb  IAmb  01 04 58.8
      comp=Z,16nm,0.7s
BLA   Blacksburg      26.04  33  P     P     01 04 48.5 -1.1
      baz=221,SNR=6.9
BLA   Blacksburg      26.04  33  P     P     01 04 50.3 +0.7
OSI   Osito Audit: C  26.04 318  P     P     01 04 51.6 +1.9
      baz=129
U57A  Blanch          26.06  36  P     P     01 04 48.9 -0.8
      baz=224,SNR=7.5
Q51A  Peebles         26.07  27  P     P     01 04 48.8 -1.0
W60A  Pink Hill       26.08  40  P     P     01 04 48.3 -1.7
      baz=229
CNNC  Cliffs of the   26.10  40  P     P     01 04 48.7 -1.3
      baz=229
T56A  Rocky Mt        26.11  34  P     P     01 04 49.7 -0.5
      baz=222,SNR=8.2
R53A  Hurricane       26.13  30  P     P     01 04 49.9 -0.5
TPNV  Topopah Spring  26.17 325  P     P     01 04 52.1 +1.2
      baz=136,SNR=18
TPNV  Topopah Spring  26.17 325  P     P     01 04 53.1 +2.2
RDMU  Red Mountain    26.20 340  P     P     01 04 52.3 +1.0
RDMU                             IAmb  IAmb  01 05 07.9
      comp=Z,34nm,1.1s
MPMC  Manual Prospec  26.23 322  P     P     01 04 52.5 +0.9
      baz=133,SNR=11
V59A  Middlesex       26.23  39  P     P     01 04 49.7 -1.6
      baz=227,SNR=9.6
L40A  Anamosa         26.36  11  P     P     01 04 51.5 -0.9
ARVC  Arvin           26.43 319  P     P     01 04 54.4 +1.3
      baz=129
MPU   Maple Canyon    26.46 336  P     P     01 04 55.1 +1.5
MPU                              IAmb  IAmb  01 04 58.5
      comp=Z,21nm,0.9s
M44A  Midewin, Midew  26.48  17  P     P     01 04 53.0 -0.5
R54A  Victor          26.48  31  P     P     01 04 51.5 -2.1
      baz=219
U58A  Oxford          26.48  37  P     P     01 04 51.8 -1.8
      baz=226,SNR=7.4
Q52A  Bidwell         26.49  28  P     P     01 04 52.9 -0.7
CHIC  Chingaza        26.51 113  eP    P     01 04 53.5 -1.0
T57A  Hurt            26.51  35  P     P     01 04 51.5 -2.3
      baz=224,SNR=9.4
T57A  Hurt            26.51  35  P     P     01 04 54.3 +0.5
RUSC  La Rusia        26.53 110  eP    P     01 04 55.3 +0.5
RWWY  Rawlins         26.54 344  P     P     01 04 54.4 +0.1
RWWY                             IAmb  IAmb  01 05 05.4
      comp=Z,62nm,1.4s
ISA   Isabella, Lake  26.56 321  P     P     01 04 55.2 +0.9
      baz=131
ISA   Isabella, Lake  26.56 321  P     P     01 04 55.8 +1.4
P51A  Williamsport    26.57  27  P     P     01 04 53.2 -1.1
NLU   North Lily Min  26.58 335  P     P     01 04 56.2 +1.6
NLU                              IAmb  IAmb  01 04 57.2
      comp=Z,23nm,1.0s
L42A  Oliver, Polo    26.64  14  P     P     01 04 54.2 -0.7
O49A  Covington       26.64  24  P     P     01 04 53.8 -1.2
K38A  Parkersburg     26.67   9  P     P     01 04 53.6 -1.6
N47A  Urbana          26.75  21  P     P     01 04 54.5 -1.4
Q53A  Leroy           26.75  30  P     P     01 04 55.0 -1.0
      baz=217
GRAC  Grapevine Rang  26.82 324  P     P     01 04 57.4 +0.7
      baz=135
V60A  Jim Taylor Roa  26.83  40  P     P     01 04 55.1 -1.5
      baz=229
V60A  Jim Taylor Roa  26.83  40  P     P     01 04 55.3 -1.4
S56A  Natural Bridge  26.84  34  P     P     01 04 55.4 -1.4
      baz=222
CWC   Cottonwood Cre  26.84 322  P     P     01 04 57.7 +0.7
      baz=133
R11A  Troy Canyon, C  26.87 328  P     P     01 04 57.6 +0.4
      baz=140
R11A  Troy Canyon, C  26.87 328  P     P     01 04 58.0 +0.8
T58A  Grand View Acr  26.88  36  P     P     01 04 55.6 -1.5
      baz=225,SNR=8.0
JLU   Jordanelle      26.89 337  P     P     01 04 57.6 +0.1
U59A  Littleton       26.90  38  P     P     01 04 55.6 -1.8
      baz=227,SNR=5.2
U59A  Littleton       26.90  38  P     P     01 04 56.5 -0.8
U59A                             IAmb  IAmb  01 05 05.3
      comp=Z,39nm,1.1s
PKM   Mcpherson Peak  26.91 318  P     P     01 04 58.0 +0.3
      baz=127
HQIL  Hanson Quary C  26.91  17  P     P     01 04 55.9 -1.4
R55A  Marlinton       27.00  32  P     P     01 04 56.7 -1.6
      baz=220
R55A  Marlinton       27.00  32  P     P     01 04 58.6 +0.3
R55A                             IAmb  IAmb  01 05 09.2
      comp=Z,43nm,0.9s
VES   Vestal, Richgr  27.05 320  P     P     01 04 59.8 +1.1
      baz=130
DUG   Dugway, Tooele  27.08 335  P     P     01 04 59.5 +0.4
      baz=147,SNR=24
DUG   Dugway, Tooele  27.08 335  P     P     01 05 00.7 +1.6
DUG                              IAmb  IAmb  01 05 01.9
      comp=Z,20nm,1.0s
CTU   Camp Tracy      27.09 337  P     P     01 04 59.5 +0.3
P52A  Corning         27.10  28  P     P     01 04 57.4 -1.7
      baz=215
P52A  Corning         27.10  28  P     P     01 04 57.3 -1.8
P52A                             IAmb  IAmb  01 05 08.4
      comp=Z,19nm,0.8s
Q54A  Coxs Mills      27.18  30  P     P     01 04 59.0 -0.8
ACSO  Alum Creek Sta  27.23  26  P     P     01 04 58.5 -1.7
      baz=213
ACSO  Alum Creek Sta  27.23  26  P     P     01 04 59.7 -0.5
ACSO                             IAmb  IAmb  01 05 07.7
      comp=Z,25nm,0.9s
S57A  Dark Hollow, R  27.23  34  P     P     01 04 58.5 -1.8
      baz=223
S57A  Dark Hollow, R  27.23  34  P     P     01 05 00.0 -0.2
S57A                             IAmb  IAmb  01 05 11.5
      comp=Z,25nm,0.8s
L44A  Lake County Fo  27.24  17  P     P     01 04 59.4 -1.0
      baz=201
L44A  Lake County Fo  27.24  17  P     P     01 04 59.2 -1.1
K22A  Casper          27.28 346  P     P     01 05 01.5 +0.7
      baz=161,SNR=16
K22A  Casper          27.28 346  P     P     01 05 01.6 +0.7
K22A                             IAmb  IAmb  01 05 15.0
      comp=Z,37nm,1.1s
SMMC  Simmler         27.29 318  P     P     01 05 02.7 +1.8
      baz=128
P53A  Whipple         27.32  29  P     P     01 05 00.4 -0.7
P53A                             IAmb  IAmb  01 05 12.8
      comp=Z,31nm,0.9s
TCUT  Toone Canyon    27.33 338  P     P     01 05 02.4 +1.0
TCUT                             IAmb  IAmb  01 05 14.5
      comp=Z,31nm,0.9s
N49A  Columbus Grove  27.34  23  P     P     01 05 01.1  0.0
TIN   Tinemaha, Big   27.35 323  P     P     01 05 03.3 +1.7
      baz=133
U60A  Pendleton       27.36  39  P     P     01 04 59.3 -2.1
      baz=228,SNR=8.2
JFWS  Jewell Farm     27.38  12  P     P     01 05 00.4 -1.2
      baz=196,SNR=8.9
JFWS  Jewell Farm     27.38  12  P     P     01 05 00.9 -0.6
ECSD  EROS Data Cent  27.40   2  P     P     01 05 00.5 -1.2
      baz=182,SNR=11
ECSD  EROS Data Cent  27.40   2  P     P     01 05 01.3 -0.5
ECSD                             IAmb  IAmb  01 05 01.9
      comp=Z,14nm,0.8s
T59A  Double "B" Far  27.46  37  P     P     01 05 01.5 -0.8
      baz=227,SNR=5.5
T59A  Double "B" Far  27.46  37  P     P     01 05 01.7 -0.7
R56A  Bull Pasture M  27.46  33  P     P     01 05 01.4 -1.1
      baz=222
TPH   Tonopah         27.52 326  P     P     01 05 05.0 +1.9
TPH                              IAmb  IAmb  01 05 05.6
      comp=Z,40nm,1.1s
L46A  Eue Claire      27.57  19  P     P     01 05 00.7 -2.6
L46A                             IAmb  IAmb  01 05 13.1
      comp=Z,24nm,0.8s
S58A  Poland Farm, P  27.62  36  P     P     01 05 02.0 -1.8
      baz=225
K43A  Burlington      27.62  16  P     P     01 05 03.2 -0.6
O52A  Adamsville      27.62  27  P     P     01 05 03.7 -0.1
O52A                             IAmb  IAmb  01 05 16.1
      comp=Z,22nm,0.8s
U61A  Possum Corner   27.70  40  P     P     01 05 03.9 -0.6
      baz=229
U61A  Possum Corner   27.70  40  P     P     01 05 03.0 -1.5
SDV   Santo Domingo   27.71 102  P     P     01 05 05.3 +0.2
      comp=Z,17nm,0.8s,baz=306,slow=3.4,SNR=20
SDV   Santo Domingo   27.71 102  P     P     01 05 05.9 +0.9
SDV                              IAmb  IAmb  01 05 15.3
      comp=Z,20nm,0.8s
SDV   Santo Domingo   27.71 102  eP    P     01 05 05.2 +0.2
BGU   Big Grassy Mou  27.79 335  P     P     01 05 07.1 +1.6
BGU                              IAmb  IAmb  01 05 15.7
      comp=Z,18nm,1.1s
HWUT  Hardware Ranch  27.81 338  P     P     01 05 07.2 +1.5
HWUT                             IAmb  IAmb  01 05 18.7
      comp=Z,13nm,0.9s
R57A  Stanardsville   27.85  34  P     P     01 05 04.8 -1.0
      baz=223
I37A  Lemond, Waseca  27.93   7  P     P     01 05 05.4 -1.1
I37A                             IAmb  IAmb  01 05 14.6
      comp=Z,15nm,0.8s
R58B  Mineral         27.96  36  P     P     01 05 06.2 -0.7
      baz=225
R58B  Mineral         27.96  36  P     P     01 05 07.2 +0.3
R58B                             IAmb  IAmb  01 05 16.0
      comp=Z,17nm,0.8s
Q56A  Snyder Ridge,   28.05  32  P     P     01 05 07.1 -0.5
      baz=221
Q56A  Snyder Ridge,   28.05  32  P     P     01 05 07.1 -0.5
Q56A                             IAmb  IAmb  01 05 20.6
      comp=Z,34nm,1.1s
T60A  Surry           28.06  38  P     P     01 05 07.2 -0.5
      baz=228
T60A  Surry           28.06  38  P     P     01 05 06.3 -1.4
SUSD  Miller          28.09 359  P     P     01 05 07.2 -0.8
SUSD                             IAmb  IAmb  01 05 10.1
      comp=Z,16nm,0.8s
L48A  N Adams         28.13  22  P     P     01 05 07.0 -1.4
R58A  Rapidan         28.14  35  P     P     01 05 07.7 -0.7
      baz=224,SNR=5.5
S59A  Mechanicsville  28.15  36  P     P     01 05 08.1 -0.4
      baz=226
OMMB  Old Mammoth Mi  28.18 323  P     P     01 05 10.7 +1.5
PD31  Pinedale Array  28.19 342  P     P     01 05 09.7 +0.6
PD31                             IAmb  IAmb  01 05 22.3
      comp=Z,19nm,1.1s
PDAR  Pinedale Array  28.19 342  P     P     01 05 09.8 +0.8
      comp=Z,2.5nm,0.8s,baz=134,slow=11,SNR=19
PDAR                             PcP   PcP   01 08 21.6 -1.1
      comp=Z,0.8nm,0.8s,baz=146,slow=6.6,SNR=2.7
PDAR                             LR    LR    01 17 37.0
      comp=Z,359nm,21.2s,baz=168,slow=39
BW06  Boulder Array   28.19 342  P     P     01 05 09.4 +0.3
      baz=156,SNR=19
BW06  Boulder Array   28.19 342  P     P     01 05 09.7 +0.6
BW06                             IAmb  IAmb  01 05 22.3
      comp=Z,21nm,1.1s
MCWV  Mont Chateau    28.19  31  P     P     01 05 08.7 -0.1
      baz=219
MCWV  Mont Chateau    28.19  31  P     P     01 05 07.9 -0.9
MCWV                             IAmb  IAmb  01 05 18.6
      comp=Z,13nm,0.9s
M50A  Fremont         28.19  24  P     P     01 05 07.5 -1.3
M50A                             IAmb  IAmb  01 05 15.9
      comp=Z,25nm,0.9s
RSSD  Black Hills     28.22 351  P     P     01 05 09.6 +0.3
      baz=167
RSSD  Black Hills     28.22 351  P     P     01 05 10.4 +1.0
MDPB  Devils Postpil  28.24 323  P     P     01 05 11.8 +2.2
I40A  Norwalk         28.24  11  P     P     01 05 08.3 -0.9
I40A                             IAmb  IAmb  01 05 17.1
      comp=Z,40nm,1.2s
NV11  Mina Array Sit  28.28 325  P     P     01 05 11.9 +2.0
O54A  Avella          28.34  29  P     P     01 05 13.3 +3.0
O54A                             IAmb  IAmb  01 05 24.3
      comp=Z,28nm,1.0s
LHV   Little Huntoon  28.34 325  P     P     01 05 12.0 +1.8
NVAR  Mina Array Bea  28.36 325  P     P     01 05 13.0 +2.3
      comp=Z,9.6nm,0.9s,baz=147,slow=10.0,SNR=50
NVAR                             PcP   PcP   01 08 23.4 +0.2
      comp=Z,0.7nm,0.8s,baz=123,slow=3.3,SNR=3.0
NVAR                             LR    LR    01 17 01.1
      comp=Z,327nm,18.9s,baz=140,slow=38
NVAR  Mina Array Bea  28.36 325  P     P     01 05 12.6 +1.9
HVU   Hansel Valley   28.41 336  P     P     01 05 12.7 +1.7
HVU                              IAmb  IAmb  01 05 22.5
      comp=Z,15nm,1.1s
CBN   Corbin Frederi  28.42  36  P     P     01 05 10.1 -0.8
      baz=225
CBN   Corbin Frederi  28.42  36  P     P     01 05 12.1 +1.3
CBN                              IAmb  IAmb  01 05 19.4
      comp=Z,22nm,0.9s
Q57A  Strasburg       28.45  33  P     P     01 05 10.8 -0.4
      baz=222
S60A  Water View      28.48  37  P     P     01 05 11.5  0.0
      baz=227
R59A  King George, V  28.56  36  P     P     01 05 11.9 -0.2
      baz=226
P56A  Dayton Farm, R  28.58  32  P     P     01 05 11.9 -0.4
      baz=221
ELK   Elko            28.58 332  P     P     01 05 13.6 +1.0
      comp=Z,6.5nm,1.1s,baz=152,slow=7.4,SNR=15
ELK                              LR    LR    01 16 36.0
      comp=Z,474nm,18.7s,baz=164,slow=36
ELK   Elko            28.58 332  P     P     01 05 14.3 +1.6
I42A  Draeger Farm,   28.60  14  P     P     01 05 11.9 -0.6
I42A                             IAmb  IAmb  01 05 20.4
      comp=Z,39nm,1.2s
RYN   Ryan            28.62 325  P     P     01 05 10.6 -2.3
N53A  Lisbon          28.63  28  P     P     01 05 10.8 -2.0
AHID  Auburn Hatcher  28.68 340  P     P     01 05 14.3 +0.9
AAM   Ann Arbor       28.73  23  P     P     01 05 13.4 -0.2
AAM                              IAmb  IAmb  01 05 21.2
      comp=Z,19nm,0.6s
Q58A  Fox Den Farm,   28.77  34  P     P     01 05 12.5 -1.5
      baz=224
P57A  Homestead Farm  28.99  33  P     P     01 05 14.4 -1.5
      baz=223
P57A  Homestead Farm  28.99  33  P     P     01 05 13.1 -2.9
P57A                             IAmb  IAmb  01 05 26.1
      comp=Z,28nm,1.2s
M52A  Chesterland     29.00  26  P     P     01 05 13.9 -2.1
M52A                             IAmb  IAmb  01 05 23.0
      comp=Z,15nm,0.8s
ECR   Eagle Creek     29.02 340  P     P     01 05 16.9 +0.4
WAKR  Walker          29.05 324  P     P     01 05 16.8  0.0
S61A  Accomac         29.05  38  P     P     01 05 15.7 -0.8
      baz=229
REDW  Red Top Meadow  29.13 341  P     P     01 05 18.3 +0.9
REDW                             IAmb  IAmb  01 05 27.3
      comp=Z,29nm,1.2s
N54A  Moraine State   29.14  29  P     P     01 05 17.0 -0.3
      baz=217
N54A  Moraine State   29.14  29  P     P     01 05 17.9 +0.6
N54A                             IAmb  IAmb  01 05 27.0
      comp=Z,15nm,0.8s
SPMN  Marine on St.   29.20   8  P     P     01 05 16.7 -1.1
      baz=190,SNR=6.7
SPMN  Marine on St.   29.20   8  P     P     01 05 17.0 -0.7
SPMN                             IAmb  IAmb  01 05 25.4
      comp=Z,28nm,0.8s
M53A  WI Miller and   29.21  27  P     P     01 05 16.4 -1.5
      baz=216
M53A  WI Miller and   29.21  27  P     P     01 05 16.7 -1.2
M53A                             IAmb  IAmb  01 05 23.7
      comp=Z,30nm,1.3s
CMB   Columbia Colle  29.28 322  P     P     01 05 20.2 +1.6
LOHW  Long Hollow     29.28 341  P     P     01 05 19.6 +0.9
LOHW                             IAmb  IAmb  01 05 28.6
      comp=Z,17nm,1.0s
O56A  Blue Knob Stat  29.29  31  P     P     01 05 17.0 -1.7
      baz=221
P58A  Pank, Wackersv  29.37  34  P     P     01 05 17.7 -1.6
      baz=224
I45A  Fountain        29.43  17  P     P     01 05 20.9 +1.1
MOOW  Moose Ponds     29.44 341  P     P     01 05 21.0 +0.8
F33A  5 Mile Ranch,   29.52   2  P     P     01 05 18.9 -1.6
PNTR  Pine Nut        29.54 325  P     P     01 05 21.6 +0.4
SDMD  Soldier’s Deli  29.56  35  P     P     01 05 21.1  0.0
ALLY  Alegheny Colle  29.62  28  P     P     01 05 19.8 -1.8
ALLY                             IAmb  IAmb  01 05 31.2
      comp=Z,13nm,0.7s
MLPR  Magueyes Islan  29.65  82  P     P     01 05 22.1 +0.1
G40A  Rib Lake        29.65  11  P     P     01 05 20.9 -0.9
VCNR  Virginia City   29.71 325  P     P     01 05 24.3 +1.6
O57A  Amberson        29.72  33  P     P     01 05 20.6 -1.9
      baz=222
M54A  Oil Creek Stat  29.72  29  P     P     01 05 23.1 +0.6
M54A                             IAmb  IAmb  01 05 32.2
      comp=Z,17nm,0.8s
FLWY  Flagg Ranch     29.73 341  P     P     01 05 24.1 +1.3
F36A  Milaca          29.74   6  P     P     01 05 21.3 -1.3
F36A                             IAmb  IAmb  01 05 30.9
      comp=Z,16nm,1.0s
Q60A  Greensboro      29.83  36  P     P     01 05 21.7 -1.8
      baz=227
Q60A  Greensboro      29.83  36  P     P     01 05 23.1 -0.3
PAHR  Pah Rah Range   29.86 326  P     P     01 05 24.7 +0.9
N56A  West Decatur    29.91  31  P     P     01 05 23.0 -1.2
      baz=220
P59A  Jarrettsville   29.93  35  P     P     01 05 23.9 -0.4
      baz=225
YPP   Pitchstone Pla  29.93 341  P     P     01 05 26.0 +1.4
H17A  Grant Village   29.98 342  P     P     01 05 24.6 -0.4
      baz=155
H17A  Grant Village   29.98 342  P     P     01 05 27.9 +3.0
ERPA  Erie            30.06  27  P     P     01 05 23.5 -1.9
      baz=216
LKWY  Lake            30.08 342  P     P     01 05 25.7 -0.2
LKWY                             IAmb  IAmb  01 05 39.9
      comp=Z,20nm,1.4s
M55A  Ridgway         30.11  30  P     P     01 05 25.5 -0.4
M55A                             IAmb  IAmb  01 05 33.7
      comp=Z,23nm,0.9s
N57A  Milroy          30.17  32  P     P     01 05 25.8 -0.6
      baz=222
PAGS  Pennsylvania G  30.21  34  P     P     01 05 25.4 -1.3
PAGS                             IAmb  IAmb  01 05 28.0
      comp=Z,30nm,1.5s
AFDM  Forest Hills D  30.23 323  P     P     01 05 28.7 +1.7
MVL   Millersville    30.25  34  P     P     01 05 29.3 +2.2
MVL                              IAmb  IAmb  01 05 36.7
      comp=Z,16nm,1.0s
RLMT  Red Lodge       30.28 344  P     P     01 05 28.1 +0.6
      baz=158,SNR=14
RLMT  Red Lodge       30.28 344  P     P     01 05 28.2 +0.6
RLMT                             IAmb  IAmb  01 05 37.2
      comp=Z,32nm,1.3s
E28A  Huff            30.30 356  P     P     01 05 27.6 +0.1
ATAH  Atahualpa       30.31 139  P     P     01 05 29.1 +0.8
      comp=Z,14nm,0.9s,baz=326,slow=8.9,SNR=4.3
YMR   Madison River   30.34 342  P     P     01 05 28.2  0.0
YMR                              IAmb  IAmb  01 05 38.5
      comp=Z,21nm,1.2s
YNE   Yellowstone No  30.37 343  P     P     01 05 29.3 +0.8
M56A  Emporium        30.40  30  P     P     01 05 27.4 -1.1
      baz=220
M56A  Emporium        30.40  30  P     P     01 05 26.7 -1.8
M56A                             IAmb  IAmb  01 05 30.9
      comp=Z,28nm,1.3s
YHH   Holmes Hill     30.42 342  P     P     01 05 29.6 +0.6
YHH                              IAmb  IAmb  01 05 40.6
      comp=Z,16nm,1.3s
SJG   San Juan        30.50  82  P     P     01 05 27.8 -1.7
      comp=Z,9.3nm,0.7s,baz=247,slow=6.7,SNR=4.1
SJG                              LR    LR    01 19 00.8
      comp=Z,182nm,21.0s,baz=86,slow=39
SJG   San Juan        30.50  82  P     P     01 05 28.4 -1.2
BEKR  Beckworth       30.51 325  P     P     01 05 30.7 +1.1
P60A  Greenville      30.51  35  P     P     01 05 30.3 +0.9
      baz=226
G45A  Suttons Bay     30.52  17  P     P     01 05 32.1 +2.7
F42A  Maple Grove Fa  30.55  14  P     P     01 05 28.6 -1.0
HLID  Hailey          30.56 336  P     P     01 05 30.8 +0.7
      baz=147,SNR=12
HLID  Hailey          30.56 336  P     P     01 05 30.2 +0.1
YHL   Hebgen Lake     30.57 341  P     P     01 05 30.3  0.0
WUPA  West Chester U  30.61  35  P     P     01 05 29.8 -0.5
GLMI  Grayling        30.63  19  P     P     01 05 30.3 -0.2
      baz=206
GLMI  Grayling        30.63  19  P     P     01 05 33.8 +3.4
QLMT  Earthquake Lak  30.63 341  P     P     01 05 31.9 +1.2
PSUB  Penn St. - Bra  30.69  35  P     P     01 05 32.4 +1.4
E38A  The Farm, Brul  30.72   9  P     P     01 05 30.6 -0.7
E38A                             IAmb  IAmb  01 05 39.8
      comp=Z,11nm,0.7s
D32A  Dogwood Acres,  30.79   1  P     P     01 05 30.9 -0.9
D32A                             IAmb  IAmb  01 05 47.5
      comp=Z,17nm,0.8s
BCYI  Bear Canyon     30.83 338  P     P     01 05 33.0 +0.5
ORV   Oroville        30.94 323  P     P     01 05 34.8 +1.6
O60A  Telford         30.99  35  P     P     01 05 33.4 -0.2
      baz=226
GCMT  Greycliff       31.00 344  P     P     01 05 34.1 +0.3
MFID  Camas Ranch     31.01 334  P     P     01 05 35.5 +1.6
MFID                             IAmb  IAmb  01 05 50.2
      comp=Z,16nm,1.4s
MTP   Monte Pirata    31.06  82  P     P     01 05 34.3 -0.3
LAO   LASA Array      31.09 349  P     P     01 05 34.3 -0.2
      baz=164
LAO   LASA Array      31.09 349  P     P     01 05 34.4 -0.1
LAO                              IAmb  IAmb  01 05 43.5
      comp=Z,34nm,1.4s
MCMT  McKenzie Canyo  31.09 339  P     P     01 05 36.6 +1.8
M58A  Price’s Panora  31.18  32  P     P     01 05 34.8 -0.6
      baz=223
L56A  Greenwood       31.20  30  P     P     01 05 33.5 -2.1
      baz=220
LUPA  Lehigh Univers  31.20  34  P     P     01 05 34.7 -0.8
LUPA                             IAmb  IAmb  01 05 45.3
      comp=Z,19nm,1.0s
GDXM  Geysers         31.22 321  P     P     01 05 38.1 +2.3
BOZ   Bozeman (W)     31.38 342  P     P     01 05 37.9 +0.6
      baz=154,SNR=7.2
BOZ   Bozeman (W)     31.38 342  P     P     01 05 37.7 +0.4
BOZ                              IAmb  IAmb  01 05 47.6
      comp=Z,15nm,1.4s
E43A  Lone Tree Farm  31.40  15  P     P     01 05 36.2 -0.9
L57A  Andrews Acres   31.45  31  P     P     01 05 35.6 -2.1
      baz=222
DLMT  Dillon          31.48 340  P     P     01 05 38.9 +0.8
DLMT                             IAmb  IAmb  01 05 48.5
      comp=Z,20nm,0.9s
WVOR  Wild Horse Val  31.49 330  P     P     01 05 39.4 +1.2
WVOR                             IAmb  IAmb  01 05 40.7
      comp=Z,27nm,1.0s
MDND  Maddock         31.52 358  P     P     01 05 36.7 -1.5
      baz=177,SNR=7.1
MDND  Maddock         31.52 358  P     P     01 05 37.5 -0.7
N60A  Cedar Hill Far  31.54  34  P     P     01 05 36.0 -2.5
      baz=226
D41A  Chassel         31.69  12  P     P     01 05 39.0 -0.7
BRNJ  Basking Ridge   31.70  35  P     P     01 05 39.4 -0.5
LRM   Limekiln Ridge  31.84 341  P     P     01 05 42.6 +1.2
N61A  South Mountain  31.90  35  P     P     01 05 41.4 -0.2
      baz=227
MOD   Modoc Plateau   31.92 328  P     P     01 05 43.7 +1.7
MOD                              IAmb  IAmb  01 05 44.5
      comp=Z,15nm,1.0s
ODNJ  Ogdensburg      31.95  35  P     P     01 05 41.5 -0.6
ODNJ                             IAmb  IAmb  01 05 50.9
      comp=Z,21nm,1.0s
L58A  Harry Jones Me  31.98  32  P     P     01 05 41.1 -1.3
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	baz=223						
AGMN	Agassiz Nation	31.99	3	P	P	01 05 41.6	-0.7
EYMN	Ely	32.04	8	P	P	01 05 42.3	-0.6
	baz=192						
EYMN	Ely	32.04	8	P	P	01 05 41.8	-1.1
EYMN				IAmb	IAmb	01 05 50.6	
	comp=Z,16nm,0.9s						
CPNY	Central Park	32.11	36	P	P	01 05 45.2	+1.7
CPNY				IAmb	IAmb	01 05 47.8	
	comp=Z,36nm,1.4s						
M60A	Port Jervis	32.11	34	P	P	01 05 42.2	-1.4
	baz=226						
B35A	Bob, Littlefor	32.20	5	P	P	01 05 43.0	-1.2
B35A				IAmb	IAmb	01 05 51.7	
	comp=Z,16nm,0.7s						
TRNY	Table Rock, Ra	32.20	35	P	P	01 05 44.6	+0.3
PAL	Palisades	32.28	35	P	P	01 05 44.1	-1.0
	baz=227						
PAL	Palisades	32.28	35	P	P	01 05 43.7	-1.3
HRY	Holter Researc	32.45	342	P	P	01 05 47.6	+1.0
L59A	Walton	32.50	33	P	P	01 05 46.4	-0.6
	baz=224						
DGMT	Dagmar	32.51	352	P	P	01 05 46.9	0.0
	baz=168,SNR=7.0						
DGMT	Dagmar	32.51	352	P	P	01 05 46.5	-0.5
M61A	Granite Spring	32.57	35	P	P	01 05 46.9	-0.6
	baz=227						
K58A	Earlville	32.61	31	P	P	01 05 45.8	-2.1
	baz=223						
M04C	Macdoel	32.64	326	P	P	01 05 48.6	+0.3
	baz=134						
WSPT	Westport, CT	32.72	36	P	P	01 05 47.3	-1.6
L60A	Shokan	32.79	34	P	P	01 05 47.7	-1.7
	baz=226						
BMO	Blue Mountains	32.80	334	P	P	01 05 48.8	-0.8
K05A	Summer Lake	32.82	328	P	P	01 05 51.6	+1.7
M02C	Callahan	32.93	324	P	P	01 05 51.6	+0.8
	baz=132						
KSCT	Kent School, K	33.01	35	P	P	01 05 51.0	-0.3
YLE	Yale	33.04	36	P	P	01 05 51.1	-0.5
YBH	Yreka Blue Hor	33.08	325	P	P	01 05 50.7	-1.5
KHMM	Horse Mountain	33.09	323	P	P	01 05 53.9	+1.5
KHMM				IAmb	IAmb	01 06 04.4	
	comp=Z,18nm,1.2s						
EGMT	Eagleton	33.10	346	P	P	01 05 52.5	+0.3
	baz=159,SNR=5.7						
EGMT	Eagleton	33.10	346	P	P	01 05 53.3	+1.1
EGMT				IAmb	IAmb	01 06 01.8	
	comp=Z,34nm,1.4s						
I07A	Izee	33.16	331	P	P	01 05 53.8	+1.0
L04D	Klamath Falls	33.20	326	P	P	01 05 54.2	+1.0
	baz=133						
MSO	Missoula	33.21	340	P	P	01 05 53.7	+0.5
	baz=151,SNR=8.5						
MSO	Missoula	33.21	340	P	P	01 05 53.8	+0.5
J05D	Fort Rock, OR	33.40	328	P	P	01 05 55.1	+0.1
	baz=136						
I57A	Carthage	33.47	30	P	P	01 05 55.3	-0.1
	baz=221						
G54A	Lake Saint Pet	33.52	26	P	P	01 05 56.9	+1.1
	baz=216						
M63A	Gales Ferry	33.60	37	P	P	01 05 57.0	+0.5
	baz=229						
TRY	Troy	33.60	33	P	P	01 05 56.2	-0.4
TRY				IAmb	IAmb	01 06 06.3	
	comp=Z,22nm,1.2s						
PINE	Pine Mountain	33.62	329	P	P	01 05 58.4	+1.4
PINE				IAmb	IAmb	01 05 59.3	
	comp=Z,9.9nm,0.9s						
L62A	Suffield	33.67	35	P	P	01 05 57.2	+0.1
	baz=228						
F10A	Beach Ranch, E	33.68	336	P	P	01 05 57.2	-0.1
F10A				IAmb	IAmb	01 05 59.1	
	comp=Z,19nm,1.1s						
K61A	Williamstown	33.77	34	P	P	01 05 58.5	+0.5
	baz=226						
J04D	Umpqua Nationa	33.81	328	P	P	01 05 59.5	+0.8
	baz=135						
G08A	Pilot Rock	33.85	333	P	P	01 05 59.8	+0.9
G08A				IAmb	IAmb	01 06 00.6	
	comp=Z,12nm,1.0s						
ULM	Lac du Bonnet	33.94	2	P	P	01 05 58.4	-1.0
	comp=Z,14nm,1.0s,baz=193,slow=8.6,SNR=19						
ULM	Lac du Bonnet	33.94	2	P	P	01 05 58.0	-1.4
ULM				IAmb	IAmb	01 05 59.2	
	comp=Z,21nm,1.1s						
QUA2	Belchertown	34.00	35	P	P	01 06 00.6	+0.6
J60A	Lant Hill Farm	34.09	33	P	P	01 05 59.4	-1.4
	baz=225						
JTMT	Jette	34.13	340	P	P	01 06 01.1	-0.2
I05D	Terrebonne, OR	34.22	330	P	P	01 06 02.7	+0.7
	baz=137,SNR=5.8						
I04A	Tendick Farm,	34.36	328	P	P	01 06 03.8	+0.6
	baz=135						
E09A	Wood Farm, Sta	34.49	335	P	P	01 06 04.5	+0.3
LONY	Lake Ozonia	34.50	30	P	P	01 06 04.1	-0.2
	baz=222						
M66A	Nantucket	34.62	38	P	P	01 06 02.9	-2.6
	baz=232						
L64A	Middleborough	34.63	37	P	P	01 06 04.5	-1.0
	baz=230						
J01E	Myrtle Point	34.72	326	P	P	01 06 07.7	+1.5
	baz=132						
KEBM	Edson Butte	34.74	325	P	P	01 06 03.4	-3.1
I03D	Drain, OR	34.77	327	P	P	01 06 08.2	+1.5
	baz=134						
G05D	Wamic, OR	34.88	331	P	P	01 06 08.5	+0.9
	baz=138						
H04A	Detroit Lake	34.88	329	P	P	01 06 08.8	+1.1
J62A	Henniker	34.93	34	P	P	01 06 08.6	+0.5
	baz=228						
H59A	Cadyville	34.95	31	P	P	01 06 09.5	+1.3
	baz=224						
HAWA	Hanford	34.97	334	P	P	01 06 10.1	+1.7
H04D	Lebanon	35.04	329	P	P	01 06 09.7	+0.6
	baz=135						
WALA	Waterton Lakes	35.17	342	P	P	01 06 10.9	+0.7
WALA				IAmb	IAmb	01 06 12.1	
	comp=Z,12nm,0.9s						
I61A	Oroboro, Fairl	35.20	33	P	P	01 06 09.8	-0.6
	baz=226						
E07A	Sunnyside	35.23	334	P	P	01 06 12.0	+1.3
COR	Corvallis	35.37	328	P	P	01 06 13.8	+2.0
F05D	White Salmon	35.43	331	P	P	01 06 13.3	+0.9
	baz=138,SNR=10						
NEW	Newport	35.55	338	P	P	01 06 13.5	+0.1
	baz=147,SNR=9.7						
NEW	Newport	35.55	338	P	P	01 06 14.0	+0.6
C09A	Chrisman Ranch	35.59	336	P	P	01 06 14.7	+1.0
I62A	Tamworth	35.62	34	P	P	01 06 13.4	-0.6
	baz=228						
I62A	Tamworth	35.62	34	P	P	01 06 15.7	+1.7
TRQ	Mont Tremblant	35.71	28	P	P	01 06 17.3	+2.5
E56A	St. Veronique	35.73	28	P	P	01 06 14.5	-0.5
	baz=220						
H61A	Lyndonville	35.76	33	P	P	01 06 16.1	+0.9
	baz=226						
G03D	McMinnville, O	35.80	329	P	P	01 06 17.6	+2.1
	baz=135						
D55A	Sainte-Anne-du	35.91	27	P	P	01 06 14.9	-1.6
	baz=219						
LTY	Liberty	36.13	334	P	P	01 06 19.5	+1.1
LTY				IAmb	IAmb	01 06 20.7	
	comp=Z,37nm,1.5s						
I63A	Otisfield	36.15	34	P	P	01 06 18.6	+0.1
	baz=228						
I63A	Otisfield	36.15	34	P	P	01 06 15.8	-2.7
I63A				IAmb	IAmb	01 06 27.9	
	comp=Z,28nm,0.8s						
H62A	Milan	36.19	33	P	P	01 06 19.4	+0.5
	baz=227						
H62A	Milan	36.19	33	P	P	01 06 20.6	+1.7
H62A				IAmb	IAmb	01 06 29.1	
	comp=Z,19nm,0.9s						
LON	Longmire	36.24	332	P	P	01 06 20.8	+1.4
E58A	La Victoria	36.41	29	P	P	01 06 21.0	+0.2
	baz=222						
E04D	Cinebar	36.44	331	P	P	01 06 21.5	+0.5
	baz=137						
D05A	Enumclaw	36.65	332	P	P	01 06 23.1	+0.4
D05A				IAmb	IAmb	01 06 25.5	
	comp=Z,27nm,0.8s						
E03A	Lebam	36.90	330	P	P	01 06 25.0	+0.1
E03A				IAmb	IAmb	01 06 27.5	
	comp=Z,26nm,1.0s						
LSQQ	Lebel-sur-Quev	36.93	23	P	P	01 06 26.7	+1.5
	baz=215						
G62A	West of Eustis	36.95	33	P	P	01 06 26.3	+0.9
	baz=227						
G62A	West of Eustis	36.95	33	P	P	01 06 26.3	+0.9
G62A				IAmb	IAmb	01 06 36.1	
	comp=Z,24nm,0.8s						
WVL	Waterville	36.99	34	P	P	01 06 22.9	-2.7
WVL				IAmb	IAmb	01 06 27.8	
	comp=Z,39nm,1.3s						
D04E	Lakebay	37.00	332	P	P	01 06 27.7	+2.0
	baz=138						
D58A	Chemin du LacG	37.12	29	P	P	01 06 25.9	-0.9
	baz=222						
MATQ	Matagami	37.27	22	P	P	01 06 27.0	-1.0
	baz=213						
LATQ	La Tuque	37.38	29	P	P	01 06 31.5	+2.5
	baz=222						
LATQ	La Tuque	37.38	29	P	P	01 06 30.5	+1.5
D03D	Eldon	37.41	332	P	P	01 06 29.6	+0.4
	baz=138,SNR=13						
B06A	Marblemount	37.46	334	P	P	01 06 28.5	-1.1
B05A	Bryant	37.52	333	P	P	01 06 29.8	-0.3
	baz=140						
NLWA	Neilton Lookou	37.66	331	P	P	01 06 31.6	+0.2
NLWA				IAmb	IAmb	01 06 42.4	
	comp=Z,42nm,1.4s						
G64A	Maxfield	37.92	34	P	P	01 06 34.8	+1.2
	baz=230						
A05A	Maple Falls	38.08	334	P	P	01 06 34.8	0.0
A04D	Lummi Island	38.13	333	P	P	01 06 35.5	+0.3
	baz=139,SNR=12						
PGC	Sidney	38.40	333	P	P	01 06 38.6	+1.1
H66A	Whiting	38.42	36	P	P	01 06 37.5	-0.3
	baz=232						
FFC	Flin Flon	38.50	356	P	P	01 06 37.9	-0.4
FFC				IAmb	IAmb	01 06 46.8	
	comp=Z,24nm,0.8s						
F64A	Sherman	38.53	34	P	P	01 06 40.0	+1.3
G65A	Princeton	38.54	35	P	P	01 06 38.5	-0.3
	baz=231						
G65A	Princeton	38.54	35	P	P	01 06 39.1	+0.4
G65A				IAmb	IAmb	01 06 48.2	
	comp=Z,18nm,0.8s						
D62A	Allapoint, All	38.97	32	P	P	01 06 41.4	-0.9
	baz=228						
D62A	Allapoint, All	38.97	32	P	P	01 06 41.1	-1.3
D63A	Stockholm	39.42	33	P	P	01 06 46.3	+0.2
	baz=229						
BATG	Bathurst New B	40.65	34	P	P	01 06 58.5	+2.1
FCC	Fort Churchill	42.52	3	P	P	01 07 10.7	-0.8
SAML	Samuel	42.63	124	P	P	01 07 11.7	-1.3
PB16	IPOC Station P	44.40	140	P	P	01 07 29.1	+1.3
RPN	Rapa Nui	44.51	194	LR	LR	01 21 04.5	
	comp=Z,84nm,19.3s,baz=43,slow=29						
MNMC	Minye Minye	44.95	140	P	P	01 07 34.4	+2.6
GO01	Chusmiza	45.60	140	P	P	01 07 40.2	+3.0
GO01				IAmb	IAmb	01 07 44.6	
	comp=Z,12nm,1.2s						
PB09	IPOC Station P	47.20	142	P	P	01 07 51.5	+2.0
PB09				IAmb	IAmb	01 07 56.9	
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	47.62	350	P	P	01 07 51.1	-0.8
	comp=Z,5.7nm,0.9s,baz=154,slow=7.2,SNR=38						
YKA				PcP	PcP	01 09 20.5	-1.0
	comp=Z,0.9nm,0.7s,baz=146,slow=4.4,SNR=4.7						
YKA				PP	PP	01 09 44.3	+0.8
	comp=Z,3.1nm,1.0s,baz=155,slow=8.9,SNR=4.9						
YKA				LR	LR	01 29 29.1	
	comp=Z,144nm,19.1s,baz=0.0,slow=38						
PB06	IPOC Station P	47.71	143	P	P	01 07 53.0	-0.4
LVC	Limon Verde	48.02	143	P	P	01 07 57.4	+1.4
DLBC	Dease Lake	48.30	338	P	P	01 07 57.8	+0.4
SIV	San Ignacio	48.56	130	P	P	01 07 58.8	-1.1
	comp=Z,5.3nm,1.1s,baz=327,slow=7.7,SNR=6.4						
TAOE	Nuku Hiva Isla	48.59	242	*e*T	T	01 59 36.4	
	comp=Z,72nm,0.2s						
GO02	Mina Guanaco	49.64	146	P	P	01 08 10.0	+1.6
GO02				IAmb	IAmb	01 08 15.7	
	comp=Z,10nm,0.8s						
SKAG	Skagway	50.98	337	P	P	01 08 19.9	+2.2
AC02	Maricunga	51.23	146	P	P	01 08 22.6	+2.1
LCO	Las Campanas	52.19	149	P	P	01 08 30.3	+2.8
LCO				IAmb	IAmb	01 08 36.9	
	comp=Z,12nm,1.0s						
H03N2	Juan Fernandez	52.69	160	T	T	02 04 56.6	
	baz=338,slow=77,SNR=934						
H03N1	Juan Fernandez	52.70	160	T	T	02 04 57.9	
	baz=338,slow=77,SNR=1212						
HYT	Haines Junctio	52.70	337	P	P	01 08 31.6	+0.9
HYT				IAmb	IAmb	01 08 34.0	
	comp=Z,12nm,1.1s						
H03N3	Juan Fernandez	52.71	160	T	T	02 05 01.9	
	baz=338,slow=77,SNR=1062						
BARN	Barnard Glacie	54.45	336	P	P	01 08 43.1	-0.5
BARN				IAmb	IAmb	01 08 52.9	
	comp=Z,21nm,1.4s						
BALM	Baldy	54.71	335	P	P	01 08 46.8	+1.4
BALM				IAmb	IAmb	01 08 48.3	
	comp=Z,13nm,1.1s						
MCARA	McCarthy VSAT	55.17	336	P	P	01 08 48.9	+0.2
DAWY	Dawson	55.45	339	P	P	01 08 51.3	+0.6
GLB	Gilahina Butte	55.52	335	P	P	01 08 53.2	+2.0
GLB				IAmb	IAmb	01 08 53.8	
	comp=Z,11nm,0.8s						
BCAR	Beaver Creek A	55.68	338	P	P	01 08 57.1	+4.8
EYAK	Cordova Ski Ar	55.85	334	P	P	01 08 54.9	+1.4
EYAK				IAmb	IAmb	01 08 59.9	
	comp=Z,28nm,1.3s						
N25K	Chitina, Valde	55.93	335	P	P	01 08 54.6	+0.4
	baz=122						
N25K	Chitina, Valde	55.93	335	P	P	01 08 56.0	+1.8
N25K				IAmb	IAmb	01 09 05.1	
	comp=Z,12nm,1.1s						
L26K	Log Cabin Wild	56.23	337	P	P	01 08 56.7	+0.4
	baz=124						
FID	Port Fidalgo	56.26	334	P	P	01 08 58.5	+2.0
MENT	Mentasta	56.32	337	P	P	01 08 58.4	+1.5
MENT				IAmb	IAmb	01 09 07.0	
	comp=Z,15nm,1.2s						
K27K	Chicken	56.36	338	P	P	01 08 57.9	+0.8
	baz=126						
K27K	Chicken	56.36	338	P	P	01 08 57.9	+0.8
KLU	Klutina	56.41	335	P	P	01 08 59.3	+1.7
KLU				IAmb	IAmb	01 09 00.6	
	comp=Z,14nm,0.9s						
EGAK	Eagle	56.50	339	P	P	01 08 57.8	-0.3
EGAK				IAmb	IAmb	01 08 59.3	
	comp=Z,9.4nm,0.9s						
INK	Inuvik	56.69	345	P	P	01 08 59.3	0.0
INK				IAmb	IAmb	01 09 00.3	
	comp=Z,19nm,0.8s						
M24K	Tolsona, Glenn	56.83	335	P	P	01 08 59.8	-0.7
	baz=121						
M24K	Tolsona, Glenn	56.83	335	P	P	01 09 02.5	+2.0
M24K				IAmb	IAmb	01 09 12.3	
	comp=Z,16nm,0.9s						
DOT	Dot Lake	56.85	337	P	P	01 08 59.8	-0.9
DOT				IAmb	IAmb	01 09 02.9	
	comp=Z,17nm,1.0s						
PAX	Paxson	57.01	336	P	P	01 09 03.0	+1.2
PAX				IAmb	IAmb	01 09 11.6	
	comp=Z,15nm,1.0s						
SCRK	Sand Creek	57.01	338	P	P	01 09 02.5	+0.6
	baz=124,SNR=12						
RIDG	Independent Ri	57.20	337	P	P	01 09 04.2	+1.1
SEW	Seward	57.25	332	P	P	01 09 03.3	-0.1
KNK	Knik Glacier	57.42	334	P	P	01 09 04.0	-0.7
KNK				IAmb	IAmb	01 09 07.3	
	comp=Z,20nm,1.3s						
SML	Sawmill	57.56	334	P	P	01 09 06.8	+1.1
SML				IAmb	IAmb	01 09 15.4	
	comp=Z,20nm,1.0s						
BRLK	Bradley Lake	57.74	332	P	P	01 09 07.8	+0.8
BRLK				IAmb	IAmb	01 09 08.8	
	comp=Z,18nm,0.9s						
GHO	Glory Hole Cre	57.79	334	P	P	01 09 08.5	+1.1
PMR	Palmer	57.79	334	P	P	01 09 08.3	+1.1
PMR				IAmb	IAmb	01 09 08.9	
	comp=Z,13nm,0.8s						
RC01	Rabbit Creek A	57.82	333	P	P	01 09 06.1	-1.3
	baz=117						
CPUP	Villa Florida	57.95	136	P	P	01 09 07.6	-1.3
	comp=Z,3.5nm,1.0s,baz=33,slow=10,SNR=4.6						
CPUP	Villa Florida	57.95	136	P	P	01 09 08.7	-0.2
HDA	Harding Lake	58.34	337	P	P	01 09 10.1	-0.9
	baz=121,SNR=6.8						
HDA	Harding Lake	58.34	337	P	P	01 09 11.0	0.0
HDA				IAmb	IAmb	01 09 11.9	
	comp=Z,10.0nm,1.0s						
BI02	San Fabin de	58.40	155	P	P	01 09 13.5	+1.6
BI02				IAmb	IAmb	01 09 26.2	
	comp=Z,17nm,1.4s						
SUA	Susitna One	58.42	333	P	P	01 09 12.1	+0.3
PRP	Porcupine Dome	58.43	339	P	P	01 09 12.8	+0.9
PRP				IAmb	IAmb	01 09 13.6	
	comp=Z,14nm,1.0s						
RES	Resolute Bay	58.45	1	P	P	01 09 10.7	-1.0
IL31		58.51	338	P	P	01 09 12.4	+0.3
IL31				IAmb	IAmb	01 09 21.7	
	comp=Z,24nm,1.2s						
ILAR	Eielson Array	58.51	338	P	P	01 09 12.3	+0.1
	comp=Z,8.8nm,1.1s,baz=136,slow=4.7,SNR=44						
ILAR				LR	LR	01 35 43.4	
	comp=Z,63nm,19.3s,baz=95,slow=37						
RND	Reindeer	58.55	336	P	P	01 09 13.1	+0.5
CUT	Chulitna	58.65	334	P	P	01 09 11.5	-1.7
	baz=117						
BDFB	Brasilia	58.67	120	P	P	01 09 13.6	-0.6
	comp=Z,6.4nm,0.7s,baz=290,slow=6.1,SNR=11						
BDFB	Brasilia	58.67	120	P	P	01 09 14.2	0.0
BDFB				IAmb	IAmb	01 09 14.8	
	comp=Z,7.7nm,0.8s						
MCK	McKinley	58.74	336	P	P	01 09 14.3	+0.3
	baz=119,SNR=9.3						
CCB	Clear Creek Bu	58.78	337	P	P	01 09 14.2	+0.1
WRH	Wood River Hil	58.79	337	P	P	01 09 14.4	+0.2
WRH				IAmb	IAmb	01 09 18.0	
	comp=Z,8.6nm,1.1s						
POKR	Poker Plat Res	58.88	338	P	P	01 09 14.6	-0.3
POKR				IAmb	IAmb	01 09 24.4	
	comp=Z,11nm,0.9s						
RSO	Redoubt South	58.89	332	P	P	01 09 16.5	+1.3
COLA	College	58.91	338	P	P	01 09 16.0	+1.0
COLA				IAmb	IAmb	01 09 16.1	
	comp=Z,14nm,1.1s						
TCOL	CIGO, UAF Yank	58.91	338	P	P	01 09 16.0	+0.9
TCOL				IAmb	IAmb	01 09 16.1	
	comp=Z,14nm,1.1s						
SKT	Skwentna	58.99	334	P	P	01 09 16.3	+0.7
MDM	Murphy Dome	59.09	338	P	P	01 09 11.7	-4.6
TRF	Thorofare Moun	59.14	336	P	P	01 09 17.8	+0.9
BWN	Browne	59.16	336	P	P	01 09 17.6	+0.8
BMAR	Burnt Mountain	59.21	341	P	P	01 09 15.8	-1.4
NEA2	Nenana	59.22	337	P	P	01 09 16.9	-0.3
	baz=119						
SFJD	Kangerlussuaq	59.24	20	P	P	01 09 16.8	-0.5
SFJD	Kangerlussuaq	59.24	20	*i* P	P	01 09 16.4	-0.8
SFJD	Kangerlussuaq	59.24	20	*i* P	P	01 09 16.4	-0.8
KTH	Kantishna Hill	59.44	336	P	P	01 09 19.3	+0.5
I23K	Minto, Yukon-K	59.60	338	P	P	01 09 20.3	+0.5
	baz=119,SNR=9.2						
I23K	Minto, Yukon-K	59.60	338	P	P	01 09 20.4	+0.5
PPLA	Purkeypile	59.66	335	P	P	01 09 21.1	+0.7
PPLA				IAmb	IAmb	01 09 29.9	
	comp=Z,21nm,1.2s						
BPAW	Bear Paw Mtn.	59.72	336	P	P	01 09 21.1	+0.4
BPAW				IAmb	IAmb	01 09 21.3	
	comp=Z,9.7nm,1.0s						
MLY	Manley	60.06	337	P	P	01 09 23.2	+0.2
	baz=118,SNR=17						
PPT	Papeete	60.90	239	LR	LR	01 29 37.9	
	comp=Z,139nm,18.6s,baz=134,slow=30						
PPT2	Papeete2	60.91	239	*e*LR	LR	01 27 22.0	
	comp=Z,469nm,30.2s						
COLD	Coldfoot	60.93	339	P	P	01 09 29.1	+0.2
	baz=120,SNR=7.9						
COLD	Coldfoot	60.93	339	P	P	01 09 30.2	+1.3
COLD				IAmb	IAmb	01 09 32.6	
	comp=Z,12nm,1.2s						
TTA	Tatalina	61.28	334	P	P	01 09 31.4	0.0
TTA				IAmb	IAmb	01 09 32.0	
	comp=Z,11nm,1.0s						
TOLK	Toolik Lake Re	61.45	341	P	P	01 09 32.2	-0.2
	baz=121,SNR=8.0						
TOLK	Toolik Lake Re	61.45	341	P	P	01 09 32.9	+0.4
TOLK				IAmb	IAmb	01 09 33.9	
	comp=Z,10nm,0.9s						
IMAR	Indian Mountai	61.61	337	P	P	01 09 32.5	-1.0
TULEG	Thule	62.15	7	P	P	01 09 32.5	-4.4
TULEG				IAmb	IAmb	01 09 33.8	
	comp=Z,8.0nm,0.9s						
TULEG	Thule	62.15	7	*i* P	P	01 09 30.6	-6.4
PLCA	Paso Flores	62.19	157	P	P	01 09 37.6	-0.2
	comp=Z,5.2nm,1.0s,baz=321,slow=7.9,SNR=3.3						
PLCA				LR	LR	01 31 32.7	
	comp=Z,128nm,18.6s,baz=360,slow=31						
PLCA	Paso Flores	62.19	157	IAmb	IAmb	01 09 44.4	
	comp=Z,9.7nm,1.1s						
ICESG	Greenland Ices	63.85	20	*i* P	P	01 09 47.2	-1.6
TBI	Tubuai	63.85	233	*e*LR	LR	01 29 06.6	
	comp=Z,142nm,23.8s						
TBI	Tubuai	63.85	233	*e*T	T	02 18 43.3	
	comp=Z,15nm,0.3s						
EUNU	Eureka	64.04	2	P	P	01 09 49.8	+0.2
EUNU				IAmb	IAmb	01 09 58.5	
	comp=Z,16nm,1.1s						
A21K	Barrow	64.86	342	P	P	01 09 54.3	-0.6
	baz=115,SNR=12						
A21K	Barrow	64.86	342	P	P	01 09 55.1	+0.3
SUMG	Summit	65.67	17	P	P	01 10 00.2	-0.4
SUMG	Summit	65.67	17	*i* P	P	01 10 00.6	-0.1
SUMG	Summit	65.67	17	*i* P	P	01 10 00.6	-0.1
RDOG	Red Dog Mine	65.71	338	P	P	01 10 01.0	+0.4
RDOG				IAmb	IAmb	01 10 01.6	
	comp=Z,15nm,1.1s						
ANM	Nome	65.74	334	P	P	01 10 01.9	+1.1
ANM				IAmb	IAmb	01 10 02.5	
	comp=Z,7.5nm,0.8s						
DAG	Danmarks Havn	71.84	14	*i* P	P	01 10 37.0	-1.5
	comp=Z,5.0nm,0.8s						
DAG	Danmarks Havn	71.84	14	*i* P	P	01 10 37.0	-1.5
DAG				IAmb	IAmb	01 10 38.3	
	comp=Z,5.0nm,0.8s						
PCAS	Casmilo, Conde	79.37	51	*e*P	P	01 11 22.1	-0.3
	comp=Z,48nm,1.2s						
POLO	Lamas de Olo	79.61	50	*e*P	P	01 11 24.0	+0.2
	comp=Z,15nm,1.6s						
PMTG	Montargil	79.79	52	*e*P	P	01 11 23.6	-1.1
	comp=Z,23nm,1.1s						
MTE	Manteigas	80.01	51	*e*P	P	01 11 25.5	-0.5
	comp=Z,34nm,1.4s						
MTE	Manteigas	80.01	51	P	P	01 11 25.0	-0.9
MTE				IAmb	IAmb	01 11 34.5	
	comp=Z,32nm,1.2s						
EVO	Evora	80.07	53	*e*P	P	01 11 25.2	-1.0
	comp=Z,22nm,1.3s						
PCBR	Castelo Branco	80.18	51	*e*P	P	01 11 26.8	0.0
	comp=Z,26nm,1.7s						
PMRV	Marv??o	80.34	52	*e*P	P	01 11 27.3	-0.4
	comp=Z,26nm,1.6s						
PBDV	Barranco-do-Ve	80.42	54	*e*P	P	01 11 28.3	+0.1
	comp=Z,39nm,1.5s						
PVAQ	Vaqueiros	80.55	54	*e*P	P	01 11 29.2	+0.3
	comp=Z,32nm,1.5s						
ESDC	Sonseca Array	82.85	51	P	P	01 11 40.3	-0.7
	comp=Z,2.8nm,1.0s,baz=297,slow=5.1,SNR=11						
ESDC				LR	LR	01 44 22.1	
	comp=Z,73nm,21.0s,baz=335,slow=33						
SEY	Seymchan	84.24	334	P	P	01 11 47.9	+0.3
	comp=Z,4.5nm,0.3s,baz=74,slow=1.6,SNR=9.6						
TIXI	Tiksi	86.78	347	P	P	01 11 59.3	-0.8
TIXI				IAmb	IAmb	01 12 00.5	
	comp=Z,8.3nm,1.0s						
TORD	Torodi Ar. Bea	95.46	75	LR	LR	01 54 02.4	
	comp=Z,92nm,19.4s,baz=335,slow=34						
VAE	Valguarnera	97.07	48	LR	LR	01 54 31.8	
	comp=Z,522nm,18.7s,baz=24,slow=34						
DZM	Mont Dzumac	100.94	250	*e*LR	LR	01 46 18.2	
	comp=Z,104nm,23.1s						
LZH	Lanzhou	123.96	339	*e*PKP	PKiKP	01 18 20.1	+4.6
LZH				pPKP	sPKPdf	01 18 31.9	+9.0
LZH				sPKP		01 18 38.4	
STKA	Stephens Creek	124.02	242	PKP	PKPdf	01 18 14.5	-0.6
	comp=Z,1.8nm,0.8s,baz=162,slow=2.1,SNR=3.0						
BOSA	Boshof	126.59	114	PKP	PKPdf	01 18 19.5	-0.8
	comp=Z,2.9nm,0.8s,baz=326,slow=2.5,SNR=4.2						
WRA	Warramunga Arr	130.25	257	PKP	PKPdf	01 18 26.7	-0.7
	comp=Z,0.7nm,0.8s,baz=85,slow=2.1,SNR=6.3						
ASAR	Alice Springs	130.85	253	PKP	PKPdf	01 18 26.1	-2.3
	comp=Z,5.5nm,0.3s,baz=116,slow=2.2,SNR=6.2						
HYB	Hyderabad	146.36	6	*i* PKP	PKPdf	01 18 56.5	-0.3

*TAP **12** 01:03:20.9, 24°.55N×122°.62E, h93^{km}, ML4.0, C*
*JMA **12** 01:03:21.1±0.1, 24°.49N×122°.60E, h89^{km}±1^{km}, M2.9*
ISC 12 01:03:21.8±1.2**, 24°.53N**±0°.03×**122°.62E**±0°.02**, h85**^{km}±7^{km}**, n127, σ0ˢ.74**/220**, 3C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.31	105	P	Pn	01 03 34.8	+0.2
JYNG				S	Sn	01 03 44.5	+0.4
YOJ	Yonaguni jima	0.37	101	P	Pn	01 03 35.0	+0.1
YOJ				S	Sn	01 03 44.7	0.0
YOJ	Yonaguni jima baz=107	0.37	101	*i* P	Pn	01 03 35.1	+0.2
YOJ	baz=107			S	Sn	01 03 45.4	+0.6
TWC	Suao baz=278	0.70	276	⇑*i*P	Pn	01 03 37.4	-0.4
TWC	baz=278			S	Sn	01 03 49.4	-0.3
ENAH	Nanao baz=258	0.74	264	*e*P	Pn	01 03 38.3	+0.2
ENAH	baz=258			*e*S	Sn	01 03 51.6	+1.2
TWB1	Santiao Chiao baz=306	0.74	310	*i* P	Pn	01 03 38.0	-0.1
TWB1	baz=306			*e*S	Sn	01 03 50.5	+0.1
NTC	Toucheng baz=287	0.78	294	P	Pn	01 03 38.6	0.0
NTC	baz=287			*e*S	Sn	01 03 50.9	-0.3
ILA	Ilan baz=279	0.82	286	P	Pn	01 03 39.2	+0.1
ILA	baz=279			*e*S	Sn	01 03 52.5	+0.5
TIPB	Shuangxi baz=298	0.84	301	⇑P	Pn	01 03 39.1	-0.2
TIPB	baz=298			*e*S	Sn	01 03 52.4	0.0
TWE	Neicheng baz=280	0.88	282	P	Pn	01 03 39.6	-0.1
TWE	baz=280			S	Sn	01 03 53.2	0.0
NWF	Wu-fen Shan baz=298	0.93	305	P	Pn	01 03 40.4	+0.1
NWF	baz=298			*e*S	Sn	01 03 53.9	-0.4
WFSB	Wu-fen Shan baz=298	0.93	305	P	Pn	01 03 40.4	+0.2
WFSB	baz=298			*e*S	Sn	01 03 53.9	-0.2
ENTT	Nioudou baz=275	0.96	277	P	Pn	01 03 40.9	+0.3
ENTT	baz=275			S	Sn	01 03 55.2	+0.5
TNOU	National Taiwa baz=302	0.98	309	*e*P	Pn	01 03 39.2	-1.6
NACB	Ninganchiao baz=242	1.00	249	P	Pn	01 03 40.3	-0.7
NDT	Datong Townshi baz=274	1.01	274	*e*P	Pn	01 03 41.5	+0.4
NDT	baz=274			S	Sn	01 03 56.2	+0.5
TWD	Chiawan baz=236	1.03	244	⇑P	Pn	01 03 40.9	-0.6
TWD	baz=236			S	Sn	01 03 55.9	-0.4
IRIF	Iriomote-Funau	1.03	101	P	Pn	01 03 41.3	-0.2
IRIF				S	Sn	01 03 56.4	+0.1
TWA	Mucha baz=286	1.04	296	P	Pn	01 03 41.4	-0.1
TWA	baz=286			S	Sn	01 03 55.9	-0.5
NWLT	Wulai baz=288	1.04	284	P	Pn	01 03 41.5	0.0
NWLT	baz=288			*e*S	Sn	01 03 56.5	+0.1
HWA	Hwalien baz=237	1.08	239	*e*P	Pn	01 03 41.7	-0.3
HWA	baz=237			*e*S	Sn	01 03 57.7	+0.5
NHDH	Xindian Distri baz=286	1.08	294	P	Pn	01 03 41.9	-0.1
NHDH	baz=286			*e*S	Sn	01 03 57.1	0.0
ETLH	Xiulin Townshi baz=251	1.08	253	P	Pn	01 03 41.6	-0.5
ETLH	baz=251			*e*S	Sn	01 03 57.0	-0.5
TATO	Taipei baz=285	1.11	293	*e*P	Pn	01 03 42.2	-0.2
TATO	baz=285			*e*S	Sn	01 03 58.4	+0.4
NNSB	Datong baz=256	1.13	265	*e*P	Pn	01 03 42.5	-0.2
NNSB	baz=256			*e*S	Sn	01 03 58.9	+0.5
NNSH	Datong baz=258	1.13	265	*e*P	Pn	01 03 42.6	-0.1
NNSH	baz=258			*e*S	Sn	01 03 59.1	+0.7
YM01	YM01 baz=293	1.13	303	*e*P	Pn	01 03 42.6	-0.1
YM01	baz=293			*e*S	Sn	01 03 58.3	0.0
NNS	Nan Shan baz=257	1.14	266	*e*P	Pn	01 03 42.7	-0.2
NNS	baz=257			*e*S	Sn	01 03 58.8	+0.1
YHNB	Yeheng baz=275	1.14	277	P	Pn	01 03 43.0	+0.2
YHNB	baz=275			*e*S	Sn	01 03 58.7	+0.1
YM08	YM08 baz=297	1.14	305	*e*P	Pn	01 03 42.3	-0.4
YM08	baz=297			*e*S	Sn	01 03 58.3	-0.2
YM11	YM11 baz=295	1.14	304	*e*P	Pn	01 03 42.9	+0.1
YM10	YM10 baz=293	1.14	303	*e*P	Pn	01 03 42.8	0.0
YM10	baz=293			*e*S	Sn	01 03 58.6	0.0
YM05	YM05 baz=295	1.14	304	*e*P	Pn	01 03 42.7	-0.2
NSK	Sanguang baz=276	1.15	277	P	Pn	01 03 43.1	+0.1
NSK	baz=276			*e*S	Sn	01 03 59.0	+0.1
YM04	YM04 baz=292	1.16	302	*e*P	Pn	01 03 42.8	-0.2
YM04	baz=292			*e*S	Sn	01 03 58.4	-0.6
TWY	Chenhua baz=300	1.18	309	*e*P	Pn	01 03 43.5	+0.3
TWY	baz=300			*e*S	Sn	01 04 00.0	+0.6
HATJ	Hateruma jima	1.19	113	P	Pn	01 03 43.6	+0.3
HATJ				S	Sn	01 04 00.5	+1.0
ANP	Anpu baz=293	1.19	303	*e*P	Pn	01 03 43.3	-0.1
ANP	baz=293			*e*S	Sn	01 04 00.2	+0.5
TWS1	Kuangyinshan baz=290	1.23	298	*e*P	Pn	01 03 43.6	-0.2
TWS1	baz=290			*e*S	Sn	01 04 00.1	-0.3
NTST	Danshui baz=293	1.23	301	*e*P	Pn	01 03 44.0	+0.1
NTST	baz=293			*e*S	Sn	01 04 00.9	+0.4
FUSS	Fushou baz=256	1.28	257	P	Pn	01 03 44.7	0.0
FUSS	baz=256			*e*S	Sn	01 04 02.3	+0.3
NTY	Taoyuan baz=286	1.28	291	*e*S	Sn	01 04 02.1	+0.4
WHF	Hehuan Shan baz=257	1.29	253	P	Pn	01 03 44.8	-0.2
WHF	baz=257			*e*S	Sn	01 04 02.0	-0.5
ESL	Shilin baz=235	1.30	237	P	Pn	01 03 43.9	-0.8
ESL	baz=235			S	Sn	01 04 01.1	-0.9
JKRS	Kuro-shima	1.30	103	P	Pn	01 03 44.9	+0.1
JKRS				S	Sn	01 04 01.9	-0.2
TDCB	Techi baz=257	1.36	258	P	Pn	01 03 45.9	+0.3
TDCB	baz=257			S	Sn	01 04 03.2	-0.4
NCU	National Centr baz=287	1.37	289	*e*P	Pn	01 03 45.8	+0.2
NCU	baz=287			*e*S	Sn	01 04 04.4	+0.8
NCUH	Zhongli baz=287	1.37	289	*e*P	Pn	01 03 45.8	+0.2
NCUH	baz=287			*e*S	Sn	01 04 04.1	+0.5
EGFH	Guangfu baz=231	1.39	232	*e*P	Pn	01 03 45.4	-0.4
CHGB	Renai baz=242	1.40	251	P	Pn	01 03 46.2	+0.1
CHGB	baz=242			*e*S	Sn	01 04 04.4	-0.2
JIJ	Ishigaki jima	1.40	97	P	Pn	01 03 45.8	-0.2
JIJ				S	Sn	01 04 03.4	-0.9
LIOB	Emei baz=273	1.46	275	P	Pn	01 03 47.0	+0.2
LIOB	baz=273			*e*S	Sn	01 04 05.9	+0.3
HSN1	Hsinchu baz=278	1.47	280	*e*P	Pn	01 03 47.2	+0.3
HSN1	baz=278			*e*S	Sn	01 04 06.4	+0.5
NSTT	Nanjuang baz=273	1.47	274	*e*P	Pn	01 03 47.0	+0.1
NSTT	baz=273			*e*S	Sn	01 04 06.0	+0.1
HGSD	Ruisui baz=223	1.50	227	*e*P	Pn	01 03 46.7	-0.6
SBCB	Hsinchu baz=279	1.50	280	*e*P	Pn	01 03 47.6	+0.3
SBCB	baz=279			*e*S	Sn	01 04 07.0	+0.4
WHP	Taichung City baz=257	1.54	261	*e*P	Pn	01 03 48.8	+1.0
WHP	baz=257			*e*S	Sn	01 04 08.0	+0.3
JISG	Ishigakijimahi	1.54	88	P	Pn	01 03 47.6	-0.2
JISG				S	Sn	01 04 06.8	-0.7
EHY	Hungye baz=228	1.56	229	P	Pn	01 03 47.3	-0.8
EHY	baz=228			*e*S	Sn	01 04 06.1	-1.9
WPL	Puli Township baz=247	1.60	251	*e*P	Pn	01 03 49.2	+0.6
WPL	baz=247			*e*S	Sn	01 04 09.6	+0.8
YULB	Yu-li baz=234	1.66	227	*e*P	Pn	01 03 48.5	-0.9
NMLH	Miaoli baz=269	1.66	270	*e*P	Pn	01 03 49.7	+0.3
NMLH	baz=269			*e*S	Sn	01 04 10.5	+0.3
EYUL	Yuli baz=233	1.67	225	*e*P	Pn	01 03 49.1	-0.4
EYUL	baz=233			*e*S	Sn	01 04 10.9	+0.3
TWF1	Yuli baz=233	1.69	226	*e*P	Pn	01 03 48.9	-0.7
TWQ1	Liyutan baz=263	1.69	264	*e*P	Pn	01 03 50.0	+0.3
TWQ1	baz=263			*e*S	Sn	01 04 11.4	+0.5
SSLB	Suanglung baz=239	1.69	244	P	Pn	01 03 49.7	0.0
SSLB	baz=239			*e*S	Sn	01 04 11.2	+0.2
NSY	Sanyi baz=265	1.69	266	*e*P	Pn	01 03 50.3	+0.5
NSY	baz=265			*e*S	Sn	01 04 11.6	+0.5
SMLT	Sun Moon Lake baz=241	1.69	248	P	Pn	01 03 50.0	+0.1
SMLT	baz=241			*e*S	Sn	01 04 13.8	+2.6
TYC	Yuchr baz=242	1.72	249	*e*P	Pn	01 03 50.4	+0.3
TYC	baz=242			*e*S	Sn	01 04 12.8	+1.1
FULB	Fuli baz=216	1.80	223	P	Pn	01 03 50.8	-0.4
FULB	baz=216			*e*S	Sn	01 04 12.5	-1.0
WDJ	Dajia District baz=263	1.81	265	*e*P	Pn	01 03 51.5	+0.2
WDJ	baz=263			*e*S	Sn	01 04 14.1	+0.4
TCU	Taichung baz=256	1.81	258	*e*P	Pn	01 03 51.9	+0.6
WHYT	Xinyi Township baz=240	1.81	243	*e*S	Sn	01 04 14.8	+0.9
WWF	Wufeng baz=265	1.82	255	*e*P	Pn	01 03 52.1	+0.7
WWF	baz=265			*e*S	Sn	01 04 15.0	+1.1
CHKT	Chengkung baz=213	1.83	219	*e*P	Pn	01 03 50.7	-0.9
CHKT	baz=213			*e*S	Sn	01 04 12.2	-1.9
YUS	Yu-Shan baz=229	1.84	236	*e*P	Pn	01 03 52.3	+0.1
YUS	baz=229			*e*S	Sn	01 04 14.3	-0.9
WJS	Zhushan baz=240	1.86	248	*e*P	Pn	01 03 53.2	+1.2
WJS	baz=240			*e*S	Sn	01 04 16.6	+1.6
WNT1	Nantou City baz=250	1.87	251	*e*P	Pn	01 03 52.6	+0.5
WNT1	baz=250			*e*S	Sn	01 04 16.3	+1.0
WNT	Mingjian baz=249	1.88	250	*e*P	Pn	01 03 53.0	+0.8
WNT	baz=249			*e*S	Sn	01 04 16.8	+1.4
JTJ	Tarama	1.90	86	P	Pn	01 03 52.5	0.0
JTJ				S	Sn	01 04 16.2	+0.3
WCHH	Zhanghua baz=263	1.93	257	*e*P	Pn	01 03 53.1	+0.2
WCHH	baz=263			*e*S	Sn	01 04 16.7	+0.2
ALS	Alishan baz=232	1.94	239	*e*P	Pn	01 03 54.0	+0.6
ALS	baz=232			*e*S	Sn	01 04 17.2	-0.1
EDH	Donghe baz=213	1.96	218	*e*P	Pn	01 03 52.4	-0.9
EDH	baz=213			*e*S	Sn	01 04 15.4	-1.9
ELDTW	Lidau baz=226	1.98	228	P	Pn	01 03 53.0	-0.7
ELDTW	baz=226			*e*S	Sn	01 04 16.3	-1.7
CHN5	Tsauling baz=234	2.00	243	*e*P	Pn	01 03 54.7	+0.8
CHN5	baz=234			*e*S	Sn	01 04 20.0	+1.6
WDLH	Douliu baz=256	2.08	247	*e*P	Pn	01 03 55.6	+0.8
WDLH	baz=256			*e*S	Sn	01 04 21.2	+1.3
LDUT	Ludao baz=213	2.13	210	*e*P	Pn	01 03 54.7	-0.8
STYT	Tauyuan baz=230	2.18	232	*e*P	Pn	01 03 57.0	+0.7
STYT	baz=230			*e*S	Sn	01 04 23.4	+0.8
CHN4	Tsaushan baz=237	2.19	238	*e*P	Pn	01 03 57.5	+1.1
CHN4	baz=237			*e*S	Sn	01 04 24.6	+1.8
TPUB	Ta-pu baz=236	2.19	236	*e*P	Pn	01 03 57.0	+0.7
TPUB	baz=236			*e*S	Sn	01 04 24.1	+1.3
WTK	Tuku baz=256	2.20	248	*e*P	Pn	01 03 56.8	+0.3
WTK	baz=256			*e*S	Sn	01 04 23.4	+0.4
TWGBT	Beinan baz=218	2.21	220	*e*P	Pn	01 03 56.1	-0.5
TWGBT	baz=218			*e*S	Sn	01 04 22.0	-1.3
TTN	Taitung baz=212	2.23	218	*e*S	Sn	01 04 24.4	+0.9
CHY	Chiayi baz=253	2.25	243	*e*P	Pn	01 03 57.8	+0.7
CHY	baz=253			*e*S	Sn	01 04 25.1	+0.9
TWK	Hsinying baz=236	2.32	237	*e*P	Pn	01 03 59.0	+0.9
TWK	baz=236			*e*S	Sn	01 04 26.2	+0.3
CHN1	Nanshi baz=243	2.34	235	*e*P	Pn	01 03 59.3	+1.0
CHN1	baz=243			*e*S	Sn	01 04 27.5	+1.2
SNST	Tainan City baz=235	2.34	236	*e*P	Pn	01 03 58.5	+0.2
JIRB	Irabujima	2.34	82	P	Pn	01 03 58.3	0.0
JIRB				S	Sn	01 04 26.5	+0.1
SLGT	Liugui baz=235	2.37	230	*e*P	Pn	01 04 00.1	+1.4
SLGT	baz=235			*e*S	Sn	01 04 28.9	+1.9
JIKM	Ikemajima	2.42	80	P	Pn	01 03 59.9	+0.5
JIKM				S	Sn	01 04 28.8	+0.5
ICHU	Yijhu baz=240	2.44	242	*e*P	Pn	01 03 59.9	+0.3
ECL	Taimali baz=217	2.46	219	*e*P	Pn	01 04 00.4	+0.6
ECL	baz=217			S	Sn	01 04 26.9	-2.2
JMJ2	Miyako jima3	2.48	85	P	Pn	01 04 00.5	+0.4
JMJ2				S	Sn	01 04 30.1	+0.5
SSD	Sandimen baz=224	2.54	226	*e*P	Pn	01 04 03.0	+1.9
SSD	baz=224			*e*S	Sn	01 04 32.9	+1.7
TSMG	Majia baz=224	2.56	225	*e*P	Pn	01 04 03.1	+1.7
TSMG	baz=224			*e*S	Sn	01 04 31.6	-0.1
MASBT	Mashibuluo baz=234	2.64	224	*e*P	Pn	01 04 03.0	+0.7
MASBT	baz=234			*e*S	Sn	01 04 33.4	-0.1
LAY	Lan-yu baz=201	2.67	202	*e*P	Pn	01 04 03.1	+0.4
EAST	Anshuo baz=216	2.69	218	*e*P	Pn	01 04 02.9	-0.1
PTTC	Pingtan baz=290	2.75	291	*e*P	Pn	01 04 03.0	-0.8
SCZT	Fangliau baz=214	2.83	221	*e*P	Pn	01 04 06.5	+1.6
SLIU	Shizi baz=215	2.85	216	*e*P	Pn	01 04 04.9	-0.3
MATB	Ma-tsu baz=302	2.90	304	*e*P	Pn	01 04 05.2	-0.6
VWUC	VWUC baz=278	2.91	280	*e*P	Pn	01 04 05.0	-1.0
PNG	Penghu baz=250	2.96	252	*e*P	Pn	01 04 05.5	-1.1
PHUB	P'eng-hu baz=249	2.96	251	*e*P	Pn	01 04 05.6	-1.0
WDGT	Dungji baz=244	2.99	245	*e*P	Pn	01 04 06.7	-0.3
WDGT	baz=244			*e*S	Sn	01 04 40.6	-1.2
TWKBT	Hengchun baz=212	3.07	213	*e*P	Pn	01 04 08.5	+0.4
TWKBT	baz=212			*e*S	Sn	01 04 43.3	-0.5
TWK1	Hengchun baz=212	3.07	213	*e*P	Pn	01 04 08.6	+0.5
VCHM	Qimei baz=236	3.20	246	*e*P	Pn	01 04 10.0	+0.1
PTMZ	Houxiangcun baz=278	3.22	280	*e*P	Pn	01 04 09.3	-0.8
XPSS	Dashiqiu baz=316	3.24	318	*e*P	Pn	01 04 09.6	-0.8
LYJJ	Jianjiangzhen baz=307	3.27	308	*e*P	Pn	01 04 10.0	-0.8
MHZQ	Yeshan baz=295	3.60	296	*e*P	Pn	01 04 14.7	-0.5
KNM	Kinmen baz=267	3.81	269	*e*P	Pn	01 04 18.9	+0.7
KNMB	Chin-men Tao baz=268	3.85	270	*e*P	Pn	01 04 17.5	-1.2
AXDP	Jialang baz=266	4.24	276	*e*P	Pn	01 04 23.2	-0.7
ZPLA	Ao Xicun baz=261	4.48	263	*e*P	Pn	01 04 26.7	-0.6

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*IDC **12** 01:04:12.6±0.6, 25°.06N×126°.47E, h0^{km}, mb4.5/19, mb1 4.5/21, mb1mx4.3/44, mbtmp4.4/21, ML4.0/1, MS3.9/2, Ms1 3.9/2, ms1mx3.0/42, Error ellipse: s-maj=22.3km s-min=12.0km az=80.0*
*BJI **12** 01:04:13.1±0.0, 24°.97N×126°.67E, h20^{km}, mB4.7/22, mb4.4/37, Ms4.1/10, Ms7 3.8/10*
*NEIC **12** 01:04:18.6±1.8, 25°.03N±0°.08×126°.58E±0°.08, h40^{km}±7^{km}, mb4.7/41, Error ellipse: s-maj=12.8km s-min=9.9km az=148.0*
ISC 12 01:04:17.7±0.5**, 25°.05N**±0°.06×**126°.67E**±0°.07**, h35**^{km}**, n90, σ1ˢ.40**/87**, mb4.6**/42**, MS3.8**/4**, 1D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	3.38	261	Pn	Pn	01 05 06.7	-1.3
JMZ	Minamidaito 2	4.18	78	Pn	Pn	01 05 16.8	-2.3
NACB	Ninganchiao	4.70	260	Pn	Pn	01 05 24.9	-1.3
YHNB	Yeheng	4.82	267	Pn	Pn	01 05 28.6	+0.6
YULB	Yu-li	5.17	253	Pn	Pn	01 05 30.1	-2.6
SSLB	Suanglung	5.36	258	Pn	Pn	01 05 34.4	-0.9
TWG	Pinlang	5.58	248	Pn	Pn	01 05 35.0	-3.3
TPUB	Ta-pu	5.78	254	Pn	Pn	01 05 40.6	-0.5
JNU	Nakatsue 1.4nm,0.3s,baz=169,slow=23,SNR=6.9	8.85	24	Pn	Pn	01 06 24.1	+1.0
JNU	Nakatsue	8.85	24	Pn	Pn	01 06 24.4	+1.2
NJ2	Nanjing	9.79	317	*e*P	Pn	01 06 35.3	-0.7
NJ2	comp=Z,8.0nm,0.5s			pmax	pmax		
KSRS	Korea Array 0.2nm,0.3s,baz=174,slow=12,SNR=4.7	12.41	5	Pn	P	01 07 20.8	-2.5
MAT	Matsushiro	15.13	38	P	Pn	01 07 46.0	-2.9
XAN	Xi'an	17.83	304	P	P	01 08 22.9	-0.7
XAN	comp=Z,9.0nm,1.0s			pmax	pmax		
XAN	comp=Z,190nm,3.8s			pmax	pmax		
USRK	Ussuriysk Ar. baz=175,slow=17,SNR=2.3	19.59	11	P	P	01 08 41.2	-1.6
USRK	Ussuriysk Ar.	19.59	11	P	P	01 08 43.5	+0.8
HHC	Hu-ho-hao-te	20.18	325	*e*P	Pn	01 08 50.2	-1.1
HHC	comp=Z,6.0nm,0.7s			pmax	pmax		
HHC	comp=Z,120nm,6.6s			pmax	pmax		
HHC	comp=N,180nm,14.2s			LR	LR		
HHC	comp=E,280nm,14.4s			LR	LR		
HHC	comp=Z,280nm,15.7s			LR	LR		
KMI	Kunming	21.67	275	⇓*e*P	P	01 09 07.9	+2.2
KMI	comp=Z,7.0nm,1.1s			pmax	pmax		
LZH	Lanzhou	22.47	305	*e*P	P	01 09 14.9	+0.8
LZH				pP	pP	01 09 24.2	+1.1
LZH				sP	sP	01 09 29.4	+2.0
LZH	comp=Z,25nm,1.0s			pmax	pmax		
LZH	comp=Z,79nm,4.7s			pmax	pmax		
ASAJ	Asahikawa 10nm,0.8s,baz=26,slow=30,SNR=1.9	23.03	30	P	P	01 09 18.8	-0.8
TOLI2	Tolitoli	24.47	194	P	P	01 09 34.7	+1.1
TOLI2	comp=Z,16nm,0.8s			IAmb	IAmb	01 09 36.4	
GTA	Gaotai	26.73	309	*e*P	P	01 09 52.5	-1.6
GTA				pP	pP	01 10 02.2	-1.4
GTA				sP	sP	01 10 05.9	-1.8
GTA	comp=Z,8.0nm,1.0s			pmax	pmax		
GTA	comp=Z,59nm,5.8s			pmax	pmax		
GTA				LR	LR		

	comp=Z,220nm,14.5s						
GTA				LR	LR		
	comp=Z,280nm,16.4s						
GTA				LR	LR		
	comp=Z,220nm,16.4s						
ULN	Ulaanbaatar	27.55	331	P	P	01 10 00.2	-1.2
ULN				IAmb	IAmb	01 10 04.6	
	comp=Z,12nm,1.0s						
SONM	Songino Array	27.82	330	P	P	01 10 02.1	-1.7
	comp=Z,11nm,0.5s,baz=144,slow=8.8,SNR=53						
SONM				LR	LR	01 22 37.7	
	comp=Z,200nm,18.2s,baz=168,slow=40						
SONM	Songino Array	27.82	330	P	P	01 10 02.6	-1.2
FAKI	Fak Fak	28.32	168	P	P	01 10 09.1	+0.8
BATI	Baumata	35.16	185	P	P	01 11 06.7	-1.7
	comp=Z,28nm,0.6s,baz=314,slow=9.6,SNR=4.3						
WMQ	Urumqi	36.78	311	*e*P	P	01 11 23.6	+1.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.9s						
H11N1	WAKE ISLAND Hy	37.47	90	T	T	01 51 49.0	
	baz=287						
H11N2	WAKE ISLAND Hy	37.47	90	T	T	01 51 36.3	
	baz=287						
H11N3	WAKE ISLAND Hy	37.49	90	T	T	01 51 48.7	
	baz=287						
MTN	Manton Dam	37.91	173	P	P	01 11 32.3	+0.5
MK31	Makanchi Array	41.29	313	P	P	01 11 58.9	-0.9
MK31				IAmb	IAmb	01 11 59.3	
	comp=Z,8.9nm,0.6s						
MKAR	Makanchi Array	41.29	313	P	P	01 11 58.6	-1.1
	comp=Z,11nm,0.4s,baz=99,slow=10,SNR=228						
MAKZ	Makanchi	41.50	313	P	P	01 12 00.7	-0.8
MAKZ				IAmb	IAmb	01 12 01.2	
	comp=Z,14nm,1.0s						
SEY	Seymchan	41.56	17	P	P	01 12 02.1	+0.5
	comp=Z,4.3nm,0.7s,baz=128,slow=5.3,SNR=6.9						
ZAA0	Zalesovo Array	42.35	324	P	P	01 12 06.8	-1.5
ZALV	Zalesovo Beam	42.35	324	P	P	01 12 06.7	-1.6
	comp=Z,4.2nm,0.5s,baz=108,slow=8.1,SNR=22						
ZALV				LR	LR	01 32 17.5	
	comp=Z,151nm,19.7s,baz=318,slow=40						
FITZ	Fitzroy Crossi	42.90	181	P	P	01 12 13.4	+0.4
	comp=Z,8.6nm,0.7s,baz=11,slow=8.9,SNR=17						
FITZ	Fitzroy Crossi	42.90	181	P	P	01 12 13.6	+0.6
FITZ				IAmb	IAmb	01 12 14.3	
	comp=Z,8.2nm,0.7s						
KDJ	Kajisay	43.97	305	P	P	01 12 22.1	+0.3
KDJ				IAmb	IAmb	01 12 45.2	
	comp=Z,38nm,1.5s						
KSH	Kashi	44.66	302	P	P	01 12 30.5	+3.2
KSH				S	S	01 19 04.5	+3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,620nm,6.4s						
KURK	Kurchatov	44.73	318	P	P	01 12 26.3	-1.1
KURK				IAmb	IAmb	01 12 27.0	
	comp=Z,11nm,1.0s						
BOOM	Boomskoye usch	44.93	306	P	P	01 12 29.4	0.0
BOOM				IAmb	IAmb	01 12 52.8	
	comp=Z,23nm,1.2s						
WB0	Warramunga Arr	45.18	170	P	P	01 12 32.1	+0.8
WB0				IAmb	IAmb	01 12 45.1	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	45.34	170	P	P	01 12 33.3	+0.7
	comp=Z,3.5nm,0.6s,baz=348,slow=8.9,SNR=17						
WRA	Warramunga Arr	45.34	170	P	P	01 12 33.5	+0.9
WB2	Warramunga Arr	45.34	170	P	P	01 12 33.5	+0.9
WB2				IAmb	IAmb	01 12 34.9	
	comp=Z,11nm,1.0s						
WR0	Warramunga Arr	45.39	170	P	P	01 12 33.9	+0.9
WR0				IAmb	IAmb	01 12 34.7	
	comp=Z,20nm,1.4s						
AAK	Ala-Archa	46.00	306	P	P	01 12 38.0	+0.1
PSA00	Pilbara Seismi	46.81	189	P	P	01 12 43.9	-0.2
NIL	Nilore	46.91	293	P	P	01 12 44.6	-0.4
NIL				IAmb	IAmb	01 12 45.8	
	comp=Z,8.8nm,0.9s						
ARSB	Arslanbob	47.04	304	P	P	01 12 46.0	0.0
ARSB				IAmb	IAmb	01 13 01.8	
	comp=Z,9.8nm,1.4s						
AS31	Alice Springs	48.93	171	P	P	01 13 01.6	+1.0
ASAR	Alice Springs	48.93	171	P	P	01 13 01.1	+0.5
	comp=Z,5.1nm,0.3s,baz=352,slow=7.4,SNR=24						
KK31	Karatay Array	48.96	306	P	P	01 13 01.2	+0.5
KKAR	Karatay Array	48.96	306	P	P	01 13 01.1	+0.4
KKAR	Karatay Array	48.96	306	P	P	01 13 01.3	+0.6
KKAR				IAmb	IAmb	01 13 01.6	
	comp=Z,3.5nm,0.7s						
BRVK	Borovoye	50.30	319	P	P	01 13 10.2	-0.5
BRVK				IAmb	IAmb	01 13 11.3	
	comp=Z,4.4nm,0.8s						
KBL	Kabul	50.32	295	P	P	01 13 12.3	+0.9
KBL				IAmb	IAmb	01 13 13.5	
	comp=Z,13nm,1.1s						
ABKAR	Akbulak array	56.43	314	P	P	01 13 56.0	+0.1
ABKAR	Akbulak array	56.43	314	P	P	01 13 55.9	+0.1
BBOO	Buckleboo	58.23	171	P	P	01 14 09.3	+0.8
STKA	Stephens Creek	58.38	165	P	P	01 14 09.2	-0.4
	comp=Z,1.1nm,0.5s,baz=357,slow=7.2,SNR=5.0						
STKA	Stephens Creek	58.38	165	P	P	01 14 10.8	+1.2
GEYT	Alibeck	58.67	300	P	P	01 14 12.0	+0.1
	comp=Z,4.1nm,0.6s,baz=36,slow=2.8,SNR=10						
GEYT	Alibeck	58.67	300	P	P	01 14 12.6	+0.8
GYA0B	ALIBECK ARRAY	58.67	300	P	P	01 14 13.6	+1.8
GYA0B				IAmb	IAmb	01 14 14.2	
	comp=Z,5.7nm,0.8s						
DGAR	Diego Garcia	61.84	246	P	P	01 14 32.8	-0.9
PPLA	Purkeypile	64.01	30	P	P	01 14 49.2	+1.6
PPLA				IAmb	IAmb	01 15 09.2	
	comp=Z,8.4nm,1.1s						
SUA	Susitna One	64.81	32	P	P	01 14 54.8	+1.9
SUA				IAmb	IAmb	01 14 59.8	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	66.14	28	P	P	01 15 03.1	+1.8
	comp=Z,0.3nm,0.5s,baz=251,slow=5.2,SNR=9.5						
ILAR	Eielson Array	66.14	28	P	P	01 15 04.4	+3.1
BMAR	Burnt Mountain	66.67	25	P	P	01 15 08.2	+3.5
EGAK	Eagle	68.55	27	P	P	01 15 18.6	+2.1
KBZ	Khabaz	68.82	309	P	P	01 15 18.0	-0.5
	comp=Z,2.0nm,0.8s,baz=116,slow=7.5,SNR=3.6						
ARCES	ARCESS Array B	70.59	339	P	P	01 15 27.8	-1.2
	comp=Z,6.2nm,1.1s,baz=61,slow=7.1,SNR=7.0						
ARCES	ARCESS Array B	70.59	339	P	P	01 15 28.8	-0.2
FIA1	FINESS Array S	73.19	330	P	P	01 15 44.7	0.0
FINES	FINESS Array B	73.19	330	P	P	01 15 44.6	-0.1
	comp=Z,7.1nm,0.8s,baz=58,slow=6.0,SNR=27						
FINES	FINESS Array B	73.19	330	P	P	01 15 44.7	0.0
EUNU	Eureka	73.59	6	P	P	01 15 48.2	+1.3
AKASG	Malin Array Be	75.51	319	P	P	01 15 57.5	-0.9
	comp=Z,1.6nm,0.5s,baz=56,slow=6.4,SNR=8.9						
AKBB	Malin Array Si	75.51	319	P	P	01 15 58.0	-0.4
BRTR	Keskin Array B	76.64	308	P	P	01 16 05.6	+0.3
	comp=Z,1.3nm,0.7s,baz=106,slow=3.0,SNR=10						
NC405	NORSAR Array S	79.50	333	P	P	01 16 20.5	-0.1
NB201	NORSAR Array S	79.70	333	P	P	01 16 22.1	+0.4
NOA	NORSAR Array B	79.74	333	P	P	01 16 21.5	-0.4
	comp=Z,0.6nm,0.7s,baz=64,slow=8.7,SNR=4.2						
YKA	Yellowknife Ar	80.18	24	P	P	01 16 24.9	+0.8
	comp=Z,1.6nm,0.9s,baz=309,slow=5.0,SNR=14						
TKX	Tecate	96.82	49	P	P	01 17 42.6	-2.8

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*IDC **12** 01:16:23.6±1.3, 1°.66N×96°.64E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.7/46, mbtmp3.9/10, ML3.6/2, MS4.0/1, Ms1 4.0/1, ms1mx3.0/44, Error ellipse: s-maj=40.2km s-min=21.2km az=48.0*

*DJA **12** 01:16:28.3±0.4, 2°N±3°×9°7E±°, h10^{km}, M3.8/7, mb4.0/1, MLv3.8/7*

*NEIC **12** 01:16:28.7±1.6, 1°.67N±0°.10×96°.7E±0°.1, h29^{km}±6^{km}, mb4.4/13, Error ellipse: s-maj=19.6km s-min=11.6km az=59.0*

ISC 12 01:16:29.2±0.7, **1°.87N**±0°.06×**96°.82E**±0°.06, **h28**^{km}, **n47,** σ**1**^{s}.**13**/43, **mb4.3**/14, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.72	317	P	Pn	01 16 43.5	-0.1
SNSI				S	Sb	01 16 52.2	-0.7
GSI	Gunungsitoli	0.94	127		Pn	01 16 45.9	-0.7
GSI	Gunungsitoli	0.94	127	P	Pn	01 16 45.8	-0.8
GSI				S	Sn	01 16 59.7	+0.5
TPTI		1.42	15	P	Pn	01 16 51.5	-1.7
TPTI				S	Sn	01 17 10.2	-0.8
KCSI	Kotacane, Aceh	1.89	30	P	Pn	01 16 59.2	-0.5
RPSI	Rantau Prapat	2.26	69		Pb	01 17 07.1	-2.2
PSI	Prapat	2.30	66	Pn	Pn	01 17 07.1	+1.8
	2.5nm,0.3s,baz=180,slow=4.9,SNR=14						
TSI	Tuntungan	2.38	47	P	Pn	01 17 07.1	+0.8
MNSI	Mandailing Nat	2.96	111	P	Pn	01 17 14.4	+0.1
LHMI	Lhok Sumawe	3.34	2	P	Pn	01 17 20.7	+1.2
KULM	Kulim	5.11	48	Pn	Pn	01 17 44.0	0.0
DLV	T Lat	15.29	49	P	P	01 20 09.4	+1.3
PBKI	Pangkalan Bun	15.53	107	P	P	01 20 13.5	+3.0
CMAR	Chiang Mai Arr	16.61	7	Pn	Pn	01 20 20.3	+0.1
	0.3nm,0.3s,baz=193,slow=12,SNR=4.0						
H08S2	Diego Garcia H	26.04	248	T	T	01 49 06.6	
	baz=69,slow=76,SNR=376						
H08S3	Diego Garcia H	26.05	248	T	T	01 49 06.9	
	baz=69,slow=76,SNR=321						
H08S1	Diego Carcia H	26.06	248	T	T	01 49 08.0	
	baz=69,slow=76,SNR=646						
H01W3	Cape Leeuwin H	40.01	158	T	T	02 06 38.5	
	baz=334,slow=76,SNR=6.6						
H01W2	Cape Leeuwin H	40.02	158	T	T	02 06 39.5	
	baz=334,slow=76,SNR=7.0						
H01W1	Cape Leeuwin H	40.02	158	T	T	02 06 41.3	
	baz=334,slow=76,SNR=5.3						
WB0	Warramunga Arr	42.68	122	P	P	01 24 22.7	-1.2
WB0				IAmb	IAmb	01 24 35.4	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	42.71	122	P	P	01 24 23.1	-1.1
	comp=Z,0.6nm,0.8s,baz=302,slow=9.1,SNR=2.5						
WB2	Warramunga Arr	42.72	122	P	P	01 24 23.4	-0.9
WB2				IAmb	IAmb	01 24 23.8	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	42.89	122	P	P	01 24 24.6	-1.0
DRK	Karamyk	43.82	332	P	P	01 24 35.1	+1.9
ASAR	Alice Springs	44.10	127	P	P	01 24 33.5	-1.9
	comp=Z,0.3nm,0.6s,baz=305,slow=8.5,SNR=4.5						
ASAR	Alice Springs	44.10	127	P	P	01 24 35.0	-0.4
BOOM	Boomskoye usch	44.56	338	P	P	01 24 40.2	+1.3
BTK	Batken	44.74	331	P	P	01 24 42.1	+1.8
ARSB	Arslanbob	44.77	334	P	P	01 24 42.3	+1.7
ARSB				IAmb	IAmb	01 24 51.8	
	comp=Z,8.0nm,1.2s						
AAK	Ala-Archa	45.24	337	LR	LR	01 47 41.0	
	comp=Z,170nm,18.9s,baz=248,slow=41						
MK31	Makanchi Array	46.50	346	P	P	01 24 54.6	+0.6
MKAR	Makanchi Array	46.50	346	P	P	01 24 53.9	-0.2
	comp=Z,1.7nm,0.7s,baz=161,slow=7.6,SNR=22						
MKAR	Makanchi Array	46.50	346	P	P	01 24 54.2	+0.2
SONM	Songino Array	46.53	9	P	P	01 24 53.9	-0.5
	comp=Z,0.8nm,0.9s,baz=189,slow=8.2,SNR=4.1						
MAKZ	Makanchi	46.59	346	P	P	01 24 55.8	+1.0
MAKZ				IAmb	IAmb	01 24 55.9	
	comp=Z,1.6nm,0.6s						
KURK	Kurchatov	51.05	345	P	P	01 25 29.1	+0.3
KURK				IAmb	IAmb	01 25 30.0	
	comp=Z,6.2nm,1.4s						
ZAA0	Zalesovo Array	52.84	351	P	P	01 25 42.4	+0.3
ZAA0				IAmb	IAmb	01 25 42.8	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	52.84	351	P	P	01 25 42.2	+0.1
	comp=Z,2.9nm,0.5s,baz=174,slow=7.1,SNR=20						
ABKAR	Akbulak array	56.74	332	P	P	01 26 10.0	-0.5
FINES	FINESS Array B	79.23	332	P	P	01 28 30.6	-1.0
	comp=Z,2.6nm,0.8s,baz=106,slow=6.8,SNR=5.1						
FINES	FINESS Array B	79.23	332	P	P	01 28 30.7	-0.8
ARCES	ARCESS Array B	81.78	340	P	P	01 28 45.3	+0.2
	comp=Z,3.2nm,0.9s,baz=97,slow=7.4,SNR=5.1						
ARCES	ARCESS Array B	81.78	340	P	P	01 28 45.5	+0.4
GERES	GERESS Array B	84.06	319	P	P	01 28 57.7	+0.2
	comp=Z,0.2nm,0.4s,baz=67,slow=7.8,SNR=1.8						
TXAR	Lajitas Array	143.29	31	PKP	PKPdf	01 36 01.9	+0.1
	comp=Z,0.2nm,0.7s,baz=346,slow=1.5,SNR=2.3						
TXAR	Lajitas Array	143.29	31		PKPdf	01 36 00.8	-0.9

UPA 12 01:16:47.8±1.2, **8°.08N**×**82°.81W**, **h22**^{km}±5^{km}, **MW3.8, 1C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAGA3	Bagala, Chiriq	0.48	36	*e*P	Pb	01 16 57.4	-0.1
CDITO	Canoas	0.49	353	*i* P	Pb	01 16 57.9	0.0
LOCO3	Loma Colorada,	0.51	50	*e*P	Pb	01 16 57.7	-0.4
PIRO	Carate, Puerto	0.61	302	⇑*i*P	Pb	01 16 58.5	-1.5
PIRO				*i* S	Sb	01 17 08.7	+0.5
PTJ1	Puerto Jimnez	0.67	313	⇓*e*P	Pb	01 17 00.3	-0.5
GUAL3	Gualaca, Chiri	0.68	48	⇓*i*P	Pb	01 17 00.1	-0.9
PTAR3	Potrerillos Ar	0.68	27	*i* P	Pb	01 17 00.4	-0.7
PTAR3				*i* S	Sn	01 17 11.6	-0.8
BCO2	Palmira	0.69	24	*i* P	Pb	01 17 00.7	-0.7
BCO2				*i* S	Sb	01 17 11.4	+0.8
MLIR3	Monte Lirio, C	0.71	359	*e*P	Pb	01 16 58.8	-2.8
BRU2	Volcan	0.72	9	*i* P	Pb	01 17 01.5	-0.3
BRU2				*i* S	Sb	01 17 12.3	+1.0
BC3P	Paso Ancho	0.76	15	*i* P	Pb	01 17 02.0	-0.5
BC3P				*i* S	Sb	01 17 13.2	+0.8
REME3	Remedios, Chir	0.98	81	*e*P	Pb	01 17 04.5	-1.6
CHGR2	Aguacate	1.08	38	*e*P	Pn	01 17 06.3	-1.3
PVID3	Puerto Vidal,	1.19	91	*e*P	Pn	01 17 09.3	+0.2
DRK0	Durika	1.25	340	*e*P	Pn	01 17 09.9	-0.3
DRK0				*e*S	Sn	01 17 24.9	-1.6
GMAL	Guarumal, Vera	1.59	101	*e*P	Pn	01 17 14.6	-0.1
GMAL				*e*S	Sn	01 17 33.7	-1.0
CACAO	El Cacao, Vera	2.06	111	*e*P	Pn	01 17 21.0	-0.2
CACAO				*e*S	Sn	01 17 44.5	-1.8

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*IDC **12** 01:20:14.6±7.2, 16°.17S×13°.01W, h0^{km}, mb4.0/6, mb1 4.0/6, mb1mx3.7/38, mbtmp4.0/6, MS3.5/4, Ms1 3.4/4, ms1mx3.2/29, Error ellipse: s-maj=170.2km s-min=38.3km az=64.0*

ISC 12 01:20:16.5±7.1, **16°.2S**±0°.6×**1°3W**±°, **h10**^{km}, **n15,** σ**0**^{s}.**85**/9, **mb4.0**/8, **MS3.3**/4, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	8.45	349	T	T	01 31 34.4	
	baz=183,slow=80,SNR=4.8						
H10N3	ASCENSION HYDR	8.46	349	T	T	01 31 33.1	
	baz=183,slow=80,SNR=15						
H10N2	ASCENSION HYDR	8.47	349	T	T	01 31 35.0	
	baz=183,slow=80,SNR=6.0						
LIC	Lamto	23.62	20	*e*P	P	01 25 28.3	+0.4
	0.7nm,0.3s						
KIC	Kosan Boka	23.84	20	*e*P	P	01 25 30.9	+0.9
	17nm,0.9s						
TIC	Toumodi	24.01	20	*e*P	P	01 25 32.4	+0.7
DBIC	Dimbokro	24.09	20	P	P	01 25 31.4	-1.0
	5.8nm,0.9s,baz=166,slow=13,SNR=5.4						
DBIC				LR	LR	01 32 52.7	
	comp=Z,75nm,20.8s,baz=356,slow=32						
RCBR	Riachuelo	24.77	292	LR	LR	01 32 35.2	
	comp=Z,87nm,20.3s,baz=207,slow=30						
KOWA	Kowa	31.75	17	P	P	01 26 39.7	-1.3
	2.2nm,0.8s,baz=205,slow=10,SNR=4.5						
TORD	Torodi Ar. Bea	32.55	27	P	P	01 26 48.5	+0.5
	5.1nm,0.8s,baz=212,slow=8.8,SNR=11						
MATP	Matopo	39.47	103	P	P	01 27 47.5	0.0
	1.7nm,0.8s,baz=278,slow=6.4,SNR=4.5						
CPUP	Villa Florida	42.41	249	LR	LR	01 42 30.4	
	comp=Z,41nm,19.2s,baz=59,slow=32						
BRTR	Keskin Array B	70.56	36	P	P	01 31 32.3	+0.3
	0.9nm,0.8s,baz=220,slow=4.7,SNR=5.2						
AKASG	Malin Array Be	76.18	26	P	P	01 32 04.6	-0.1
	0.3nm,0.4s,baz=227,slow=5.6,SNR=1.9						
KBZ	Khabaz	78.45	38	LR	LR	02 05 56.1	
	comp=Z,56nm,20.4s,baz=343,slow=35						

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*IDC **12** 01:45:44.4±3.8, 0°.85S×100°.24E, h94^{km}±32^{km}, mb3.8/10, mb1 3.8/11, mb1mx3.5/50, mbtmp4.1/11, Error ellipse: s-maj=44.5km s-min=18.6km az=54.0*

*NEIC **12** 01:45:45.7±1.5, 0°.86S±0°.07×100°.11E±0°.08, h104^{km}±5^{km}, mb4.3/11, Error ellipse: s-maj=12.8km s-min=9.6km az=57.0*

*DJA **12** 01:45:46.6±0.3, 1°S±3°×10°0E±°, h58^{km}±7^{km}, M4.2/13, mb4.5/4, MLv4.0/13*

ISC 12 01:45:44.9±0.9, **0°.82S**±0°.06×**100°.08E**±0°.06, **h94**^{km}±7^{km}, **n48,** σ**1**^{s}.**23**/49, **mb4.2**/15, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.39	103	P	Pn	01 45 59.7	+0.4
PDSI				S	Sn	01 46 07.6	-2.4
SDSI	Sungai Dareh	1.35	95	P	Pn	01 46 09.5	+0.6
SDSI				S	Sn	01 46 26.9	-0.2
BKNI	Bangkinang	1.49	40	Pn	Pn	01 46 11.5	+0.8
BKNI				Sn	Sn	01 46 32.9	+2.7
BKNI	Bangkinang	1.49	40	P	Pn	01 46 11.4	+0.8
BKNI				S	Sn	01 46 29.9	-0.3
MNSI	Mandailing Nat	1.68	343	P	Pn	01 46 13.3	+0.1
MNSI				S	Sn	01 46 34.6	0.0
KRJI	Kerinci	1.87	132	P	Pn	01 46 17.2	+1.6
KRJI				S	Sn	01 46 39.8	+0.8
RGRI	Rengat	2.30	78	P	Pn	01 46 30.0	+8.9
GSI	Gunungsitoli	3.28	310	Pn	Pn	01 46 35.7	+1.4
GSI				Sn	Sn	01 47 11.2	-1.1
GSI	Gunungsitoli	3.28	310	P	Pn	01 46 35.7	+1.4
RPSI	Rantau Prapat	3.68	342		Pn	01 46 40.3	+0.7
PSI	Prapat	3.78	342	P	Pn	01 46 40.3	-0.8
	2.0nm,0.3s,baz=180,slow=20,SNR=4.2						
MNAI	Manna	4.54	141	Pn	Pn	01 46 52.2	+0.9
MNAI	Manna	4.54	141	P	Pn	01 46 53.7	+2.4
KCSI	Kotacane, Aceh	4.89	332	P	Pn	01 46 57.4	+1.2
TPTI		4.99	324	P	Pn	01 46 59.0	+1.6
MDSI	Maura Dua	5.48	132	P	Pn	01 47 05.8	+1.8
	0.1nm12nm,1.0s						
LWLI	Liwa	5.76	136	P	Pn	01 47 08.3	+0.3
	0.8nm43nm,0.5s						
KULM	Kulim	6.10	5	Pn	Pn	01 47 13.9	+1.4
H08S2	Diego Garcia H	28.32	255	T	T	02 19 54.3	
	baz=77,slow=76,SNR=8.7						
H08S3	Diego Garcia H	28.33	255	T	T	02 19 47.3	
	baz=77,slow=76,SNR=9.4						
H08S1	Diego Carcia H	28.34	255	T	T	02 19 54.6	
	baz=77,slow=76,SNR=7.1						
WB0	Warramunga Arr	38.50	121	P	P	01 52 56.5	-1.9
WRA	Warramunga Arr	38.53	122	P	P	01 52 56.7	-1.9
	0.3nm,0.4s,baz=305,slow=8.8,SNR=5.6						
WB2	Warramunga Arr	38.54	122	P	P	01 52 56.6	-2.0
WB2				IAmb	IAmb	01 53 06.6	
	comp=Z,6.5nm,1.2s						
WR0	Warramunga Arr	38.70	122	P	P	01 52 58.9	-1.1
WR0				IAmb	IAmb	01 53 10.4	
	comp=Z,7.0nm,1.3s						
ASAR	Alice Springs	39.88	127	P	P	01 53 08.3	-1.5
	comp=Z,0.3nm,0.5s,baz=299,slow=7.4,SNR=2.1						
KSRS	Korea Array	45.97	31	P	P	01 53 56.3	-2.3
	comp=Z,1.7nm,0.6s,baz=233,slow=8.9,SNR=3.0						
SONM	Songino Array	48.77	6	P	P	01 54 20.0	-0.4
	comp=Z,0.6nm,0.4s,baz=182,slow=9.9,SNR=7.2						
SONM	Songino Array	48.77	6	P	P	01 54 20.6	+0.2
MK31	Makanchi Array	49.92	344	P	P	01 54 29.7	+0.6
MK31				IAmb	IAmb	01 54 30.5	
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	49.92	344	P	P	01 54 29.4	+0.4
	comp=Z,1.6nm,0.3s,baz=155,slow=8.8,SNR=61						
MKAR	Makanchi Array	49.92	344	P	P	01 54 29.2	+0.1
MAKZ	Makanchi	50.02	344	P	P	01 54 30.4	+0.6
KK31	Karatay Array	51.15	332	P	P	01 54 40.4	+2.0
USA0B	Ussuriysk Arra	53.09	28	P	P	01 54 52.4	-0.2
USRK	Ussuriysk Ar.	53.09	28	P	P	01 54 52.6	0.0
	comp=Z,5.1nm,0.6s,baz=230,slow=3.0,SNR=17						
USRK	Ussuriysk Ar.	53.09	28	P	P	01 54 52.9	+0.2
KURK	Kurchatov	54.51	343		P	01 55 03.2	+0.4
KURK				IAmb	IAmb	01 55 04.0	
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	56.03	349	P	P	01 55 13.2	-0.5
	comp=Z,0.6nm,0.3s,baz=177,slow=8.4,SNR=6.4						
ZALV	Zalesovo Beam	56.03	349	P	P	01 55 13.8	0.0
KLR	Kul'dur	56.83	24	P	P	01 55 18.4	-1.1
	comp=Z,1.4nm,0.5s,baz=227,slow=9.0,SNR=3.7						
BRVK	Borovoye	59.18	340	P	P	01 55 35.9	0.0
BRVK				IAmb	IAmb	01 55 36.0	
	comp=Z,2.4nm,0.5s						
ABKAR	Akbulak array	60.65	331	P	P	01 55 46.5	+0.5
FINES	FINESS Array B	83.11	332	P	P	01 58 00.5	+0.4
	comp=Z,11nm,1.2s,baz=140,slow=4.2,SNR=6.8						
ARCES	ARCESS Array B	85.40	340	P	P	01 58 11.0	-0.6
	comp=Z,2.4nm,0.9s,baz=97,slow=5.7,SNR=5.0						
ARCES	ARCESS Array B	85.40	340	P	P	01 58 11.2	-0.4
TXAR	Lajitas Array	143.72	36	PKP	PKPab	02 05 07.6	+0.8
	comp=Z,0.3nm,0.6s,baz=323,slow=1.4,SNR=3.7						
TXAR	Lajitas Array	143.72	36		PKPab	02 05 07.8	+1.1

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*IDC **12** 03:00:11.8±1.0, 16°.16N×98°.01W, h0^{km}, mb4.0/13, mb1 4.2/16, mb1mx4.1/37, mbtmp4.0/16, ML3.7/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=22.5km s-min=13.0km az=31.0*

*NEIC **12** 03:00:14.7±2.4, 16°.34N±0°.07×97°.93W±0°.04, h7^{km}±5^{km}, mb4.5/187, Md4.2/48(MEX), Error ellipse: s-maj=10.4km s-min=4.4km az=206.0*

*MEX **12** 03:00:15.8±0.6, 16°.21N×98°.05W, h6^{km}±3^{km}, MD4.2*

ISC 12 03:00:14.0±1.0, **16°.25N**±0°.04×**97°.95W**±0°.03, **h12**^{km}±6^{km}, **n311,** σ**1**^{s}.**31**/286, **mb4.4**/78, **MS3.5**/3, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.22	309	*e*P	Pg	03 00 19.0	+0.4
PNIG				*i* S	Sg	03 00 21.9	+0.1
PNIG	Pinotepa	0.22	309		Pg	03 00 19.0	+0.4
PNIG					Sg	03 00 21.9	+0.1
YOIG	Yosondua	0.71	33	*i* P	Pn	03 00 29.4	-0.8
YOIG				*i* S	Sn	03 00 40.2	-1.0
PEIG	Puerto Escondi	0.81	108	*e*P	Pn	03 00 30.9	-0.4
PEIG				*i* S	Sn	03 00 42.7	-0.7
TXIG	Tlaxiaco	1.01	10	*e*P	Pn	03 00 33.6	-0.6
TXIG				*e*S	Sb	03 00 47.1	+0.2
CRIG	Cruz Grande	1.23	293	*e*P	Pg	03 00 33.9	-3.7
CRIG				*e*S	Sg	03 00 49.2	-4.4
VHO	Vista Hermosa	1.42	55	*e*P	Pb	03 00 40.7	+0.1
VHO				*i* S	Sn	03 00 58.3	-0.4
TLIG	Tlapa	1.43	336	*e*P	Pn	03 00 38.9	-1.0
TLIG				*e*S	Sb	03 00 56.7	-2.1
TLIG	Tlapa	1.43	336	Pn	Pn	03 00 39.3	-0.6
TLIG				Sn	Sb	03 00 56.9	-1.9
HLIG	Huajuapan de L	1.57	5	*e*P	Pn	03 00 42.1	+0.1
HLIG				*i* S	Sn	03 01 01.6	-0.8
FTIG	Fresnillo de T	1.65	354	*e*P	Pn	03 00 43.0	0.0
FTIG				*i* S	Sn	03 01 03.6	-0.7
HUIG	Huatulco	1.84	105	*e*P	Pn	03 00 45.3	-0.1
HUIG				*i* S	Sb	03 01 09.0	-1.5
HUIG	Huatulco	1.84	105		Pn	03 00 45.3	-0.1
HUIG					Sb	03 01 09.0	-1.5
TOIG	Toxpalan	2.02	25	*e*P	Pn	03 00 48.4	+0.4
TOIG				*i* S	Sb	03 01 13.8	-2.0
TPIG	Tehuac#an	2.23	15	*e*P	Pn	03 00 52.0	+1.0
TPIG				*i* S	Sn	03 01 18.7	+0.2
TPIG	Tehuac#an	2.23	15		Pn	03 00 52.0	+1.0
TPIG					Sn	03 01 18.7	+0.2
MEIG	Mezcala	2.30	316	*e*P	Pn	03 00 50.9	-1.0
MEIG				*i* S	Sn	03 01 18.7	-1.6
MEIG	Mezcala	2.30	316		Pn	03 00 50.9	-1.0
MEIG					Sn	03 01 18.7	-1.6
PLIG	Platanillo	2.59	325	*e*P	Pn	03 00 55.9	0.0
PLIG				*i* S	Sn	03 01 26.0	-1.4
PLIG	Platanillo	2.59	325		Pn	03 00 55.9	0.0
PLIG					Sn	03 01 26.0	-1.4
YAIG	Yautepec	2.80	338	*i* P	Pn	03 00 58.8	0.0
YAIG				*i* S	Sn	03 01 31.2	-1.4
YAIG	Yautepec	2.80	338		Pn	03 00 58.8	0.0
YAIG					Sn	03 01 31.2	-1.4
PPM	Popocatepetl	2.87	347	*e*P	Pn	03 01 00.3	+0.2
PPM				*i* S	Sn	03 01 33.8	-1.0
CMIG	Matias Romero	3.06	74	Pn	Pn	03 01 02.7	+0.5
	27nm,0.3s,baz=243,slow=11,SNR=274						
CMIG				Pg	Pg	03 01 09.7	-2.9
	42nm,0.3s,baz=249,slow=12,SNR=29						
CMIG				Sn	Sn	03 01 39.6	+0.9
	87nm,0.3s,baz=352,slow=9.4,SNR=6.7						
CMIG				Lg	Lg	03 01 52.9	
	309nm,0.3s,baz=188,slow=22,SNR=14						
CMIG	Matias Romero	3.06	74	*i* P	Pn	03 01 02.8	+0.7
CMIG				*i* S	Sb	03 01 40.4	-5.3
CMIG	Matias Romero	3.06	74		Pn	03 01 02.8	+0.7
CMIG					Sb	03 01 40.4	-5.3
UNM	Universidad Na	3.27	339	*i* P	Pn	03 01 06.0	+0.6
UNM				*i* S	Sn	03 01 43.1	-1.4
UNM	Universidad Na	3.27	339		Pn	03 01 08.9	+3.5
ZIIG	Zihuatanejo	3.62	292	*i* P	Pn	03 01 08.9	-1.1
ZIIG				*i* S	Sn	03 01 49.9	-2.7

ZIIG	Zihuatanejo	3.62	292		Pn	03 01 08.9	-1.1
ZIIG					Sn	03 01 49.9	-2.7
TUIG	Tuzandepetl	3.81	62	*i* P	Pn	03 01 13.1	+0.5
TUIG	Tuzandepetl	3.81	62		Pn	03 01 13.1	+0.5
PCIG		4.59	96	*e*P	Pn	03 01 23.8	+0.6
PCIG				*i* S	Sn	03 02 18.2	+1.7
PCIG		4.59	96		Pn	03 01 23.8	+0.6
PCIG					Sn	03 02 18.2	+1.7
MOIG	Morelia	4.59	318	*i* P	Pn	03 01 22.8	-0.7
MOIG				*i* S	Sn	03 02 15.1	-1.8
MOIG	Morelia	4.59	318		Pn	03 01 25.9	+2.4
TGIG		4.66	83	*i* P	Pn	03 01 25.2	+0.9
TGIG		4.66	83		Pn	03 01 25.2	+0.9
MMIG	Aquila	5.54	292	*i* P	Pn	03 01 35.3	-0.9
MMIG	Aquila	5.54	292		Pn	03 01 35.3	-0.9
CCIG	Comitan	5.59	89		Pn	03 01 40.8	+3.7
PETF	Flores	7.78	84	Pn	Pn	03 02 08.0	+0.9
TEIG	Tepich	10.01	65		Pn	03 02 35.9	-1.7
833A	Chaparral WMA,	12.09	354	P	Pn	03 03 07.2	+1.1
	baz=172						
JTS	Las Juntas de	13.97	114	Pn	Pn	03 03 33.4	+1.5
	0.4nm,0.3s,baz=294,slow=19,SNR=1.3						
LPIG	La Paz	13.97	306	LR	LR	03 08 22.0	
	comp=Z,86nm,18.1s,baz=94,slow=35						
TXAR	Lajitas Array	14.04	339	Pn	Pn	03 03 33.5	+0.6
	0.0nm,0.3s,baz=155,slow=16,SNR=8.9						
TXAR				LR	LR	03 08 42.9	
	comp=Z,82nm,21.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	14.04	339	Pn	Pn	03 03 35.6	+2.7
TX31	Lajitas Ar. Si	14.04	339	Pn	Pn	03 03 35.6	+2.7
TX32	Lajitas Array	14.04	339	Pn	Pn	03 03 36.2	+3.3
JCT	Junction City	14.26	354	P	Pn	03 03 36.4	+0.5
	baz=172						
JCT	Junction City	14.26	354	P	P	03 03 40.0	-3.2
WHTX	Lake Whitney,	15.67	2	P	Pn	03 03 55.3	+0.5
	baz=181,SNR=7.9						
WHTX	Lake Whitney,	15.67	2	P	P	03 03 59.4	+0.6
WHTX				IAmb	IAmb	03 04 00.6	
	comp=Z,30nm,0.8s						
NATX	Nacogdoches	15.72	10	P	Pn	03 03 55.4	-0.1
	baz=191						
237A	Washetta, Mont	15.80	7	P	P	03 04 01.0	+0.8
237A				IAmb	IAmb	03 04 01.9	
	comp=Z,33nm,0.8s						
ABTX	Abilene, Hawle	16.37	355	P	Pn	03 04 04.6	+0.9
	baz=174,SNR=21						
ABTX	Abilene, Hawle	16.37	355	P	P	03 04 07.3	+0.7
ABTX				IAmb	IAmb	03 04 08.9	
	comp=Z,52nm,0.9s						
MNTX	Cornudas Mount	16.80	338	P	Pn	03 04 10.2	+1.1
	baz=154,SNR=7.7						
MNTX	Cornudas Mount	16.80	338	P	Pn	03 04 11.0	+1.8
GDL2	Guadalupe Moun	16.91	341	P	P	03 04 14.3	+1.6
Z35A	Perchaven, San	17.02	2	P	P	03 04 13.8	+0.1
Z35A				IAmb	IAmb	03 04 15.1	
	comp=Z,20nm,0.8s						
Z38A	Mt. Pleasant	17.14	8	P	P	03 04 15.8	+0.7
Z38A				IAmb	IAmb	03 04 16.3	
	comp=Z,18nm,0.7s						
VBMS	Vicksburg	17.27	22	P	Pn	03 04 14.4	-0.6
	baz=204						
Z41A	Richland Creek	17.56	14	P	Pn	03 04 17.8	-0.8
	baz=196						
MSTX	Muleshoe	18.17	347	P	Pn	03 04 26.3	0.0
	baz=164,SNR=9.5						
MSTX	Muleshoe	18.17	347	P	Pn	03 04 26.3	0.0
319A	Douglas	18.25	328	P	Pn	03 04 28.4	+1.1
X37A	Clayton	18.41	7	P	Pn	03 04 28.9	-0.2
WMOK	Wichita Mounta	18.42	358	P	Pn	03 04 27.8	-1.6
	baz=177,SNR=8.2						
121A	Cookes Peak, D	18.50	333	P	P	03 04 30.9	+0.7
	baz=148						
121A	Cookes Peak, D	18.50	333	P	Pn	03 04 32.6	+2.2
MIAR	Mount Ida	18.63	11	P	P	03 04 30.4	-1.2
	baz=193						
MIAR	Mount Ida	18.63	11	P	P	03 04 31.7	+0.1
X40A	Basin Creek Fa	18.73	13	P	P	03 04 31.8	-0.8
	baz=195						
AMTX	Amarillo	18.85	350	P	P	03 04 34.6	+0.5
	baz=168						
AMTX	Amarillo	18.85	350	P	Pn	03 04 35.1	+0.5
AMTX				IAmb	IAmb	03 04 39.3	
	comp=Z,24nm,0.9s						
W39A	Magazine	19.23	10	P	P	03 04 38.5	+0.4
	baz=192						
OK025	Westminster Rd	19.26	2	P	P	03 04 38.3	-0.1
OK025				IAmb	IAmb	03 04 46.1	
	comp=Z,19nm,0.7s						
X43A	Marvell	19.26	18	P	P	03 04 38.7	+0.2
	baz=201						
X43A	Marvell	19.26	18	IAmb	IAmb	03 04 41.2	
	comp=Z,65nm,1.4s						
LRAL	Lakeview Retre	19.43	29	P	P	03 04 40.2	-0.1
	baz=213						
BNM	Barren Site	19.45	338	P	Pn	03 04 43.4	+1.4
OK030	Cody Creek RV	19.62	3	IAmb	IAmb	03 04 43.9	
	comp=Z,23nm,0.7s						
OK031	S. Brethren Rd	19.64	3	IAmb	IAmb	03 04 44.2	
	comp=Z,22nm,0.7s						
TUL1	Leonard	19.67	5	P	P	03 04 42.3	-0.6
	baz=186						
TUL1	Leonard	19.67	5	IAmb	IAmb	03 04 49.7	
	comp=Z,21nm,0.7s						
OXF	Oxford	19.73	21	P	P	03 04 42.6	-1.0
	baz=205						
TUC	Tucson	19.78	326	P	P	03 04 45.8	+1.6
	baz=140						
TUC	Tucson	19.78	326	P	P	03 04 45.9	+1.7
QUOK	Quay	19.87	3	IAmb	IAmb	03 04 57.7	
	comp=Z,28nm,1.4s						
U32A	Winter Ranch,	20.07	358	IAmb	IAmb	03 04 55.6	
	comp=Z,21nm,1.0s						
ANMO	Albuquerque	20.11	339	P	P	03 04 48.7	+0.7
	comp=Z,8.7nm,0.9s,baz=133,slow=12,SNR=17						
ANMO	Albuquerque	20.11	339	P	P	03 04 49.1	+1.1
	baz=155						
ANMO	Albuquerque	20.11	339	P	P	03 04 49.1	+1.1
Y49A	Blount Mountai	20.38	29	IAmb	IAmb	03 04 58.7	
	comp=Z,15nm,0.7s						
U40A	Yellville	20.53	12	P	P	03 04 51.9	-0.4
	baz=194						
U40A	Yellville	20.53	12	P	P	03 04 52.0	-0.2
X48A	Hartselle	20.60	26	IAmb	IAmb	03 05 01.5	
	comp=Z,14nm,0.7s						
T35A	Sooner Cattle	20.62	3	IAmb	IAmb	03 05 00.3	
	comp=Z,18nm,0.7s						
PLAL	Pickwick Lake	20.64	24	P	P	03 04 54.6	+1.1
214A	Organ Pipe Nat	20.66	322	P	P	03 04 54.9	+1.1
	baz=135						
X18A	Snowflake	21.15	332	IAmb	IAmb	03 05 02.6	
	comp=Z,17nm,0.9s						
FPAL	Fort Paine	21.32	29	P	P	03 04 59.8	-1.0
FPAL				IAmb	IAmb	03 05 11.9	
	comp=Z,9.6nm,0.7s						
PBMO	Poplar Bluff	21.51	17	P	P	03 05 05.2	+2.4
PBMO				IAmb	IAmb	03 05 13.9	
	comp=Z,20nm,0.7s						
GOGA	Godfrey	21.51	35	P	P	03 05 01.5	-1.4
	baz=221						
GOGA	Godfrey	21.51	35	IAmb	IAmb	03 05 10.4	
	comp=Z,20nm,0.7s						
W18A	Petrified Fore	21.54	333	P	P	03 05 04.7	+1.2
	baz=147						
T25A	Trinidad	21.57	346	P	P	03 05 04.1	+0.4
	baz=162,SNR=40						
SPX	San Pedro Mart	21.72	316	P	P	03 05 08.6	+3.0
S39A	Bolivar	21.74	10	IAmb	IAmb	03 05 17.0	
	comp=Z,15nm,1.1s						
WVT	Waverly	21.75	23	P	P	03 05 04.8	-0.7
	baz=207						
WVT	Waverly	21.75	23	P	P	03 05 04.3	-1.1
WVT				IAmb	IAmb	03 05 15.8	
	comp=Z,16nm,0.8s						
X16A	Lo Mia Camp, P	21.77	329	IAmb	IAmb	03 05 16.6	
	comp=Z,14nm,0.8s						
V48A	Smith Brothers	21.80	25	IAmb	IAmb	03 05 17.2	
	comp=Z,16nm,0.7s						
R32A	Long Quarter,	22.09	358	IAmb	IAmb	03 05 11.8	
	comp=Z,15nm,0.8s						
CLTN	Cedars of Leba	22.30	25	P	P	03 05 10.4	-1.0
SDCO	Great Sand Dun	22.42	344	P	P	03 05 13.0	+0.1
	baz=160,SNR=15						
SDCO	Great Sand Dun	22.42	344	P	P	03 05 13.9	+1.0
CCM	Cathedral Cave	22.51	14	P	P	03 05 13.3	-0.2
	baz=197						
CCM	Cathedral Cave	22.51	14	P	P	03 05 14.7	+1.1
CCM				IAmb	IAmb	03 05 29.4	
	comp=Z,8.6nm,0.7s						
R40A	Maddies Statio	22.52	12	IAmb	IAmb	03 05 16.1	
	comp=Z,13nm,0.9s						
CPCT	Cooper Cave	22.57	30	IAmb	IAmb	03 05 21.8	
	comp=Z,17nm,0.8s						
WUAZ	Wupatki	22.62	331	P	P	03 05 16.2	+1.2
	baz=144,SNR=25						
WUAZ	Wupatki	22.62	331	P	P	03 05 18.2	+3.2
WUAZ				IAmb	IAmb	03 05 19.7	
	comp=Z,17nm,0.8s						
GLA	Glamis	22.64	321	P	P	03 05 16.3	+1.3
	baz=133,SNR=5.9						
GLA	Glamis	22.64	321	P	P	03 05 17.1	+2.1
GLA				IAmb	IAmb	03 05 19.1	
	comp=Z,9.7nm,0.9s						
FVM	French Village	22.64	16	IAmb	IAmb	03 05 16.5	
	comp=Z,12nm,1.1s						
S44A	Carbondale	22.70	18	P	P	03 05 15.2	-0.3
SIUC	Southern Illin	22.73	18	P	P	03 05 16.2	+0.4
SIUC				IAmb	IAmb	03 05 25.1	
	comp=Z,20nm,0.8s						
HODGE	Hodges	22.79	35	P	P	03 05 15.4	-1.2
KSU1	Kansas State U	22.79	3	P	P	03 05 16.3	-0.3
	baz=183,SNR=7.5						
KSU1	Kansas State U	22.79	3	P	P	03 05 17.6	+1.1
KSU1				IAmb	IAmb	03 05 19.3	
	comp=Z,14nm,0.8s						
S22A	4UR Ranch, Cre	22.80	342	P	P	03 05 17.2	+0.3
	baz=157,SNR=18						
S22A	4UR Ranch, Cre	22.80	342	IAmb	IAmb	03 05 21.0	
	comp=Z,10.0nm,0.9s						
MVCO	Mesa Verde	22.87	338	P	P	03 05 18.3	+0.7
	baz=152,SNR=12						
MVCO	Mesa Verde	22.87	338	P	P	03 05 18.9	+1.3
MVCO				IAmb	IAmb	03 05 28.3	
	comp=Z,15nm,0.9s						
U49A	Red Boiling Sp	22.89	26	IAmb	IAmb	03 05 26.6	
	comp=Z,16nm,0.8s						
BG3	Lake Jocassee	23.00	33	IAmb	IAmb	03 05 29.2	
	comp=Z,8.5nm,0.7s						
KSCO	Kaye Shedlock’	23.04	351	P	P	03 05 18.8	-0.5
	baz=168						
KSCO	Kaye Shedlock’	23.04	351	IAmb	IAmb	03 05 21.4	
	comp=Z,16nm,1.0s						
TKL	Tuckaleechee C	23.10	31	P	P	03 05 19.4	-0.5
	comp=Z,11nm,1.1s,baz=217,slow=11,SNR=4.8						
TKL	Tuckaleechee C	23.10	31	P	P	03 05 19.3	-0.5
TKL				IAmb	IAmb	03 05 29.1	
	comp=Z,27nm,1.3s						
SWSC	Sam W. Stewart	23.17	319	P	P	03 05 22.5	+2.0
	baz=131						
BC3	Big Chuckawall	23.43	321	P	P	03 05 25.0	+1.7
	baz=133						
Q24A	Divide	23.49	346	P	P	03 05 24.8	+0.7
	baz=162						
Q24A	Divide	23.49	346	P	P	03 05 23.3	-0.8
MONP2	Monument Peak	23.53	318	P	P	03 05 25.7	+1.3
	baz=130						
V53A	Saluda	23.59	32	P	P	03 05 24.6	-0.1
V53A				IAmb	IAmb	03 05 34.1	
	comp=Z,28nm,1.5s						
IRM	Iron Mountain	23.60	322	P	P	03 05 26.3	+1.5
	baz=134						
P38A	Dawn	23.60	9	IAmb	IAmb	03 05 33.6	
	comp=Z,13nm,0.8s						
X56A	White Oak	23.68	37	P	P	03 05 24.1	-1.5
	baz=224						
PV01	Paradox Valley	23.72	339	IAmb	IAmb	03 05 37.0	
	comp=Z,11nm,0.8s						
Y57A	Sumter	23.72	39	P	P	03 05 24.5	-1.4
	baz=226						
T50A	Nancy	23.72	27	IAmb	IAmb	03 05 34.7	
	comp=Z,12nm,1.1s						
U15A	North Rim	23.79	330	P	P	03 05 28.7	+1.7
PV13	Radium Mtn., P	23.83	338	IAmb	IAmb	03 05 37.2	
	comp=Z,12nm,0.9s						
PV02	Paradox Valley	23.84	339	IAmb	IAmb	03 05 37.5	
	comp=Z,12nm,0.9s						
PV15	Paradox Valley	23.87	339	IAmb	IAmb	03 05 30.3	
	comp=Z,11nm,0.8s						
TZTN	Tazewell	23.92	30	P	P	03 05 27.3	-0.5
	baz=216						
PV03	Paradox Valley	23.92	338	IAmb	IAmb	03 05 30.1	
	comp=Z,8.4nm,0.8s						
PV18	Skein Mesa, Pa	23.94	338	IAmb	IAmb	03 05 30.1	
	comp=Z,9.2nm,0.9s						
PV12	Saucer Basin,	23.96	339	IAmb	IAmb	03 05 30.8	
	comp=Z,15nm,0.8s						
PV11	David Mesa, Pa	23.97	338	IAmb	IAmb	03 05 52.0	
	comp=Z,9.0nm,0.8s						
PV17	East Wray Mesa	23.98	338	IAmb	IAmb	03 05 30.6	
	comp=Z,9.8nm,0.7s						
PV16	Nyswonger Mesa	24.00	338	IAmb	IAmb	03 05 30.3	
	comp=Z,6.5nm,0.8s						
BELC	Belle Mtn. Jos	24.00	321	P	P	03 05 30.1	+1.3
	baz=132						
PV19	Morning Glory	24.02	338	P	P	03 05 28.8	-0.3
PV19				IAmb	IAmb	03 05 30.9	
	comp=Z,8.0nm,0.9s						
PFO	Pinyon Flats O	24.02	319	P	P	03 05 30.4	+1.4
	baz=131						
PV04	Paradox Valley	24.07	339	IAmb	IAmb	03 05 31.6	
	comp=Z,13nm,0.9s						
PV22	Blue Mesa, Par	24.15	339	IAmb	IAmb	03 05 32.6	
	comp=Z,9.8nm,0.9s						
PV23	Carpenter Ridg	24.16	338	IAmb	IAmb	03 05 32.5	
	comp=Z,11nm,0.9s						
SMCO	Snowmass	24.16	343	IAmb	IAmb	03 05 35.7	
	comp=Z,12nm,0.9s						
WCI	Wyandotte Cave	24.18	23	P	P	03 05 29.4	-0.8
	baz=208						
WCI	Wyandotte Cave	24.18	23	P	P	03 05 31.0	+0.7
GMRC	Granite Mounta	24.34	323	P	P	03 05 32.5	+0.5
	baz=134						
ISCO	Idaho Springs	24.39	346	P	P	03 05 33.6	+1.0
	baz=161,SNR=33						
X58A	Rowland	24.72	39	P	P	03 05 34.7	-0.5
	baz=227						
X58A	Rowland	24.72	39	P	P	03 05 35.7	+0.5
W57A	Gilead	24.75	37	P	P	03 05 35.9	+0.5
U54A	Nelsons Funny	24.75	32	P	P	03 05 35.5	-0.1
	baz=219						
HEC	Hector,Ludlow	24.77	322	P	P	03 05 37.9	+2.1
	baz=133						
S51A	Beattyville	24.79	28	IAmb	IAmb	03 05 44.6	
	comp=Z,12nm,0.7s						
OGNE	Ogallala	24.86	353	P	P	03 05 37.7	+1.2
	baz=170						
MTPU	Mount Pierson	25.06	333	P	P	03 05 40.7	+2.0
W58A	Raeford	25.10	38	P	P	03 05 38.9	+0.2
	baz=226						
GSC	Goldstone, Bar	25.37	322	P	P	03 05 42.4	+1.1
	baz=133						
U56A	King	25.39	35	P	P	03 05 41.0	-0.3
	baz=222						
O20A	White River Ci	25.42	341	P	P	03 05 43.0	+1.2
	baz=156,SNR=13						
MSU	Marysvale	25.45	333	P	P	03 05 43.8	+1.7
SHOC	Shoshone, Teco	25.48	324	P	P	03 05 43.3	+1.2
	baz=135						
N23A	Red Feather La	25.51	346	P	P	03 05 43.5	+0.8
	baz=161,SNR=16						
V58A	Windy Hill, Pi	25.70	37	P	P	03 05 44.0	-0.1
	baz=226						
EDW2	Edwards Air Fo	25.81	320	P	P	03 05 47.0	+1.8
	baz=130						
SFIN	Lafayette	25.82	19	P	P	03 05 44.9	-0.2
	baz=204						
SCIA	State Center	25.89	8	P	P	03 05 45.7	0.0
	baz=190						
P49A	Miami Univ. Ec	25.91	24	P	P	03 05 45.3	-0.7
	baz=210,SNR=5.3						
LRMC	Laurel Mtn Rad	26.02	321	P	P	03 05 48.4	+1.2
	baz=132						
W60A	Pink Hill	26.05	40	P	P	03 05 47.1	-0.2
	baz=229						
T56A	Rocky Mt	26.08	34	P	P	03 05 47.1	-0.4
	baz=222						
V59A	Middlesex	26.20	38	P	P	03 05 48.1	-0.6
	baz=227						
FURC	Furnace Creek,	26.22	324	P	P	03 05 50.6	+1.8
	baz=135						
TPNV	Topopah Spring	26.22	325	P	P	03 05 50.4	+1.4
	baz=136						
TPNV	Topopah Spring	26.22	325	P	P	03 05 53.3	+4.2
U58A	Oxford	26.45	37	P	P	03 05 50.3	-0.6
	baz=226						
R54A	Victor	26.46	31	P	P	03 05 50.9	-0.1
	baz=219						
T57A	Hurt	26.48	35	P	P	03 05 52.3	+1.1
T57A				IAmb	IAmb	03 06 02.5	
	comp=Z,16nm,0.9s						
RWWY	Rawlins	26.57	344	IAmb	IAmb	03 06 05.2	
	comp=Z,7.7nm,0.9s						
ISA	Isabella, Lake	26.62	320	P	P	03 05 54.9	+2.3
	baz=131						
N47A	Urbana	26.74	21	P	P	03 05 52.2	-1.3
V60A	Jim Taylor Roa	26.79	40	P	P	03 05 54.4	+0.4
	baz=229						
T58A	Grand View Acr	26.85	36	P	P	03 05 54.8	+0.4
	baz=225						
U59A	Littleton	26.86	38	P	P	03 05 53.7	-0.9
	baz=227						
GRAC	Grapevine Rang	26.88	324	P	P	03 05 56.4	+1.5
	baz=134						
R11A	Troy Canyon, C	26.92	328	P	P	03 05 57.1	+1.7
	baz=140						
VES	Vestal, Richgr	27.11	320	P	P	03 05 58.5	+1.6
	baz=130						
DUG	Dugway, Tooele	27.13	334	P	P	03 05 58.8	+1.6
	baz=147,SNR=6.8						
DUG	Dugway, Tooele	27.13	334	IAmb	IAmb	03 05 60.0	
	comp=Z,6.3nm,0.9s						
K22A	Casper	27.31	346	P	P	03 05 59.7	+0.9
	baz=161,SNR=6.9						
K22A	Casper	27.31	346	IAmb	IAmb	03 06 08.5	
	comp=Z,12nm,1.1s						
JFWS	Jewell Farm	27.38	12	P	P	03 05 58.7	-0.5
	baz=196						
ECSD	EROS Data Cent	27.41	2	P	P	03 05 58.8	-0.8
	baz=182,SNR=5.6						
ECSD	EROS Data Cent	27.41	2	IAmb	IAmb	03 06 00.4	
	comp=Z,5.5nm,0.8s						
T59A	Double "B" Far	27.43	37	P	P	03 05 59.5	-0.2
	baz=226						
SDV	Santo Domingo	27.63	102	P	P	03 06 02.3	+0.3
	comp=Z,3.6nm,0.8s,baz=317,slow=3.0,SNR=4.4						
L48A	N Adams	28.12	22	P	P	03 06 05.2	-0.6
BW06	Boulder Array	28.23	342	P	P	03 06 07.7	+0.6
PD31	Pinedale Array	28.23	342	P	P	03 06 08.2	+1.1
PDAR	Pinedale Array	28.23	342	P	P	03 06 07.5	+0.4
	comp=Z,0.7nm,0.5s,baz=139,slow=11,SNR=12						
PDAR				LR	LR	03 16 24.2	
	comp=Z,108nm,19.5s,baz=143,slow=34						
PDAR	Pinedale Array	28.23	342	P	P	03 06 07.8	+0.7
NVAR	Mina Array Bea	28.42	325	P	P	03 06 10.3	+1.5
	comp=Z,3.0nm,0.9s,baz=148,slow=10.0,SNR=20						
NVAR				LR	LR	03 18 09.6	
	comp=Z,80nm,21.5s,baz=354,slow=38						
NVAR	Mina Array Bea	28.42	325	P	P	03 06 11.0	+2.1
ELK	Elko	28.63	332	P	P	03 06 12.2	+1.4
	comp=Z,1.3nm,0.7s,baz=146,slow=7.5,SNR=10.0						
REDW	Red Top Meadow	29.17	340	P	P	03 06 15.7	+0.3
REDW				IAmb	IAmb	03 06 25.2	
	comp=Z,8.6nm,1.2s						
SPMN	Marine on St.	29.20	7	P	P	03 06 15.4	-0.1
	baz=190						
F36A	Milaca	29.75	6	IAmb	IAmb	03 06 27.9	
	comp=Z,5.4nm,0.8s						
RLMT	Red Lodge	30.31	344	P	P	03 06 26.1	+0.6
	baz=158,SNR=8.8						
RLMT	Red Lodge	30.31	344	P	P	03 06 27.1	+1.6
RLMT				IAmb	IAmb	03 06 35.8	
	comp=Z,4.8nm,0.7s						
HLID	Hailey	30.61	336	P	P	03 06 28.8	+0.7
	baz=147						
GCMT	Greycliff	31.04	344	P	P	03 06 33.5	+1.6
LAO	LASA Array	31.12	349	P	P	03 06 32.9	+0.5
	baz=164						
BOZ	Bozeman (W)	31.42	341	P	P	03 06 36.1	+0.8
	baz=154						
N60A	Cedar Hill Far	31.51	34	P	P	03 06 35.5	-0.4
	baz=225						
DLMT	Dillon	31.52	340	IAmb	IAmb	03 06 38.7	
	comp=Z,5.5nm,0.7s						
MDND	Maddock	31.54	358	P	P	03 06 36.9	+0.9
	baz=177						
WVOR	Wild Horse Val	31.54	330	P	P	03 06 38.3	+2.0
WVOR				IAmb	IAmb	03 06 38.7	
	comp=Z,8.1nm,0.9s						
MOD	Modoc Plateau	31.98	328	IAmb	IAmb	03 06 49.1	
	comp=Z,4.1nm,0.9s						
M60A	Port Jervis	32.08	34	P	P	03 06 38.9	-2.1
	baz=226						
B35A	Bob, Littlefor	32.21	5	IAmb	IAmb	03 06 49.6	
	comp=Z,7.8nm,0.8s						
N02D	Trinity Center	32.63	324	P	P	03 06 45.6	-0.2
	baz=131						
MSO	Missoula	33.26	340	P	P	03 06 52.0	+0.8
	baz=151						
MSO	Missoula	33.26	340	IAmb	IAmb	03 06 53.6	
	comp=Z,4.5nm,1.1s						
PINE	Pine Mountain	33.68	329	P	P	03 06 56.0	+1.0
F10A	Beach Ranch, E	33.73	336	IAmb	IAmb	03 06 58.5	
	comp=Z,5.3nm,0.9s						
ULM	Lac du Bonnet	33.95	2	P	P	03 06 56.5	-0.6
	comp=Z,3.7nm,0.7s,baz=186,slow=8.5,SNR=7.2						
ULM	Lac du Bonnet	33.95	2	IAmb	IAmb	03 06 57.3	
	comp=Z,9.6nm,1.1s						
I05D	Terrebonne, OR	34.27	330	P	P	03 07 01.4	+1.4
	baz=137						
J61A	Chester	34.59	33	P	P	03 07 02.6	-0.2
	baz=226						
I03D	Drain, OR	34.83	327	P	P	03 07 06.0	+1.2
	baz=133						
H04A	Detroit Lake	34.94	329	IAmb	IAmb	03 07 17.0	
	comp=Z,8.5nm,1.0s						
NEW	Newport	35.59	338	P	P	03 07 12.2	+0.8
	baz=147						
G03D	McMinnville, O	35.85	329	P	P	03 07 13.4	-0.2
	baz=135						
LTY	Liberty	36.18	334	P	P	03 07 17.8	+1.3
LTY				IAmb	IAmb	03 07 32.5	
	comp=Z,8.2nm,1.4s						
D05A	Enumclaw	36.70	332	P	P	03 07 22.4	+1.6
D03D	Eldon	37.46	332	P	P	03 07 27.8	+0.5
	baz=138,SNR=5.4						
B05A	Bryant	37.57	333	P	P	03 07 28.2	0.0
	baz=140						
A04D	Lummi Island	38.18	333	P	P	03 07 33.6	+0.3
	baz=139,SNR=5.7						
FFC	Flin Flon	38.52	356	P	P	03 07 36.5	+0.4
FFC				IAmb	IAmb	03 07 45.2	
	comp=Z,8.3nm,1.0s						
FCC	Fort Churchill	42.54	3	P	P	03 08 09.4	+0.1
PB16	IPOC Station P	44.34	140	P	P	03 08 32.3	+7.4
YKA	Yellowknife Ar	47.65	350	P	P	03 08 49.4	-0.5
	comp=Z,1.4nm,0.8s,baz=155,slow=7.6,SNR=18						
SIV	San Ignacio	48.49	130	P	P	03 08 55.9	-1.1
	comp=Z,0.4nm,0.6s,baz=315,slow=7.1,SNR=1.8						
H03N2	Juan Fernandez	52.65	160	T	T	04 05 57.6	
	baz=338,slow=77,SNR=458						
H03N1	Juan Fernandez	52.65	160	T	T	04 05 57.9	
	baz=338,slow=77,SNR=405						
H03N3	Juan Fernandez	52.66	160	T	T	04 05 57.7	
	baz=338,slow=77,SNR=354						
DAWY	Dawson	55.49	339	P	P	03 09 49.5	+0.8
DAWY				IAmb	IAmb	03 09 55.1	
	comp=Z,3.9nm,1.2s						
C36M	Paulatuk	55.52	349	P	P	03 09 48.6	0.0
	baz=149						
BCAR	Beaver Creek A	55.72	338	P	P	03 09 51.8	+1.5
N25K	Chitina, Valde	55.98	335	P	P	03 09 54.0	+1.9
	baz=122						
L26K	Log Cabin Wild	56.28	337	P	P	03 09 55.7	+1.4
	baz=124						
K27K	Chicken	56.40	338	P	P	03 09 57.0	+1.9
	baz=126						
EGAK	Eagle	56.54	339	P	P	03 09 56.4	+0.4
EGAK				IAmb	IAmb	03 09 57.2	
	comp=Z,2.9nm,0.8s						
M24K	Tolsona, Glenn	56.88	335	P	P	03 09 59.4	+0.8
	baz=121						
SCRK	Sand Creek	57.06	338	P	P	03 10 00.6	+0.7
	baz=124						
RIDG	Independent Ri	57.24	337	P	P	03 10 02.4	+1.2
CPUP	Villa Florida	57.89	136	P	P	03 10 05.5	-0.6
	comp=Z,0.5nm,0.2s,baz=321,slow=6.5,SNR=2.1						
CPUP	Villa Florida	57.89	136	P	P	03 10 05.6	-0.5
CPUP				IAmb	IAmb	03 10 12.1	
	comp=Z,5.4nm,1.3s						
HDA	Harding Lake	58.38	337	P	P	03 10 09.0	-0.1
	baz=121						

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HDA   Harding Lake      58.38 337  P      P      03 10 09.2 +0.2
HDA                                IAmb   IAmb   03 10 10.3
      comp=Z,4.7nm,0.9s
RES   Resolute Bay      58.46   1  P      P      03 10 09.1 -0.3
RES                                IAmb   IAmb   03 10 19.0
      comp=Z,4.3nm,1.4s
ILAR  Eielson Array     58.55 338  P      P      03 10 10.1 -0.2
      comp=Z,2.4nm,1.1s,baz=130,slow=5.2,SNR=15
ILAR                               LR     LR     03 37 58.0
      comp=Z,62nm,20.0s,baz=344,slow=39
ILAR  Eielson Array     58.55 338  P      P      03 10 11.0 +0.8
BDFB  Brasilia          58.60 120  P      P      03 10 10.9 -0.5
      comp=Z,1.4nm,0.6s,baz=40,slow=6.6,SNR=3.2
BDFB  Brasilia          58.60 120  P      P      03 10 11.8 +0.4
RND   Reindeer          58.60 336  P      P      03 10 11.9 +1.3
MCK   McKinley          58.79 336  P      P      03 10 12.1 +0.2
      baz=119
POKR  Poker Plat Res    58.93 338  P      P      03 10 13.4 +0.5
      baz=121
BMAR  Burnt Mountain    59.25 341  P      P      03 10 16.0 +0.9
KTH   Kantishna Hill    59.49 335  P      P      03 10 17.6 +0.8
I23K  Minto, Yukon-K    59.65 337  P      P      03 10 18.7 +0.9
      baz=119
I23K  Minto, Yukon-K    59.65 337  IAmb   IAmb   03 10 19.4
      comp=Z,3.8nm,0.8s
MLY   Manley            60.10 337  P      P      03 10 21.6 +0.6
      baz=118
COLD  Coldfoot          60.98 339  P      P      03 10 27.7 +0.8
      baz=119
TTA   Tatalina          61.33 334  P      P      03 10 29.0 -0.4
TTA                                IAmb   IAmb   03 10 30.5
      comp=Z,4.7nm,1.2s
TOLK  Toolik Lake Re    61.49 341  P      P      03 10 31.3 +0.9
      baz=121
TOLK  Toolik Lake Re    61.49 341  P      P      03 10 31.1 +0.7
TOLK                               IAmb   IAmb   03 10 31.4
      comp=Z,3.5nm,0.8s
IMAR  Indian Mountai    61.65 337  P      P      03 10 30.9 -0.6
EUNU  Eureka            64.05   2  P      P      03 10 47.9 +0.6
ANM   Nome              65.78 334  P      P      03 10 59.6 +0.9
ANM                                IAmb   IAmb   03 11 28.3
      comp=Z,5.5nm,1.1s
MIDW  Midway            73.35 295  P      P      03 11 47.7 +1.6
ESDC  Sonseca Array     82.80  51  P      P      03 12 38.8 +0.3
      comp=Z,0.4nm,0.7s,baz=306,slow=4.6,SNR=2.6
```

IDC ***12*** *03:04:19.2±0.5, 16°.88S×14°.38W, h0^{km}, mb4.5/20, mb1 4.6/20, mb1mx4.5/30, mbtmp4.5/20, MS4.3/21, Ms1 4.3/21, ms1mx4.2/26, Error ellipse: s-maj=17.1km s-min=14.3km az=127.0*

MOS ***12*** *03:04:19.6±1.0, 16°.87S×14°.45W, h12^{km}, mb5.0/22, Error ellipse: s-maj=12.4km s-min=9.6km az=50.1*

NEIC ***12*** *03:04:20.3±2.0, 16°.85S±0°.09×14°.37W±0°.06, h10^{km}±1^{km}, mb5.0/68, Error ellipse: s-maj=16.5km s-min=5.7km az=208.0*

GCMT ***12*** *03:04:26.3±0.2, 16°.98S±0°.02×14°.25W±0°.01, h12^{km}, MW5.1/127, Moment Tensor Solution. s48,c54; s127,c200; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.04±.17; $M_{\theta\theta}$0.89±.11; $M_{\phi\phi}$3.15±.12; $M_{r\theta}$-2.12±.38; $M_{\theta\phi}$-2.42±.07; $M_{\phi r}$-1.33±.30; Best double couple: $M_0$5.02900×10^{16} NP1:ϕ_s353.00000°, δ51.00000°, λ-53.00000°. NP2:ϕ_s122.00000°, δ51.00000°, λ-127.00000°. Principal axes: T 4.6910, Plg0.0000°, Azm237.0000°; N 0.6760, Plg28.0000°, Azm147.0000°; P -5.3680, Plg62.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 03:04:20.9±0.3**, 16°.87S**±0°.08×**14°.36W**±0°.06**, h10^{km}, n231,** σ**1^{s}.40**/217**, mb4.9**/72**, MS4.5**/26**, 6C-4D, Southern Mid-Atlantic Ridge**

```
Code  Station Name      Δ°    AZ°    Phase ID        Time       Res
                                   Op     ISC       h  m  s     ISC
H10S2 ASCENSION HYDR  7.87 358  T      T      03 14 22.2
      baz=42,slow=74,SNR=73
H10S3 ASCENSION HYDR  7.88 358  T      T      03 14 12.3
      baz=178,slow=74,SNR=120
SHEL  Horse Pasture     8.32  85   P      Pn     03 06 20.6 -1.1
SHEL  Horse Pasture     8.32  85   Pn     Pn     03 06 20.6 -1.1
H10N1 ASCENSION HYDR  8.97 359  T      T      03 15 45.2
      baz=189,slow=79,SNR=16
H10N3 ASCENSION HYDR  8.98 359  T      T      03 15 44.6
      baz=189,slow=79,SNR=37
H10N2 ASCENSION HYDR  8.99 359  T      T      03 15 47.7
      baz=189,slow=79,SNR=18
RCBR  Riachuelo         23.77 295  P      P      03 09 33.0 -0.9
      48nm,1.0s,baz=103,slow=10,SNR=8.9
RCBR                               LR     LR     03 17 10.9
      comp=Z,381nm,18.5s,baz=106,slow=32
RCBR  Riachuelo         23.77 295  P      P      03 09 32.8 -1.1
RCBR                               IAmb   IAmb   03 09 35.9
      comp=Z,57nm,1.1s
RCBR  Riachuelo         23.77 295 eP      P      03 09 34.0 +0.1
GDU01 Guandu, BA        24.52 274 eP      P      03 09 41.2 +0.4
NAN01 Guarapari, ES     24.61 264 eP      P      03 09 42.2 +0.6
LIC   Lamto             24.74  23 eP      P      03 09 43.0 +0.3
      comp=Z,137nm,1.4s
NBPA  Parau_RN          24.86 294 eP      P      03 09 44.3 +0.3
KIC   Kosan Boka        24.97  23 eP      P      03 09 45.2 +0.3
      comp=Z,201nm,1.5s
TIC   Toumodi           25.13  22 eP      P      03 09 45.8 -0.5
DBIC  Dimbokro          25.21  23  P      P      03 09 46.3 -0.7
      comp=Z,32nm,1.0s,baz=183,slow=12,SNR=13
DBIC                               LR     LR     03 17 16.4
      comp=Z,684nm,19.7s,baz=178,slow=31
DBIC  Dimbokro          25.21  23  P      P      03 09 46.9 -0.1
DBIC                               IAmb   IAmb   03 09 50.2
      comp=Z,56nm,1.2s
SJMB  Sao Joao De Ma    25.60 262 eP      P      03 09 49.8 -0.8
JANB  Januaria          28.84 269 eP      P      03 10 19.6 -0.2
ESAR  Angra dos Reis    28.89 253 eP      P      03 10 20.3 +0.1
BSCB  Bom Sucesso       29.03 257 eP      P      03 10 22.2 +0.6
SDBA  SAO DESIDERIO     29.86 274 eP      P      03 10 28.7 -0.2
PARB  Paraibuna         30.01 252 eP      P      03 10 30.4 +0.3
SPB   Sao Paulo         31.69 252 eP      P      03 10 46.7 +1.8
BDFB  Brasilia          32.31 267  P      P      03 10 49.5 -1.0
      comp=Z,3.7nm,0.9s,baz=113,slow=11,SNR=3.9
BDFB                               LR     LR     03 21 25.3
      comp=Z,870nm,20.7s,baz=105,slow=32
BDFB  Brasilia          32.31 267  P      P      03 10 49.5 -1.0
KOWA  Kowa              32.80  19  P      P      03 10 54.2 -0.4
KOWA                               IAmb   IAmb   03 10 56.3
      comp=Z,32nm,1.3s
SMTB  Santa Maria do    33.32 280 eP      P      03 10 59.9 +0.6
TOA0  Torodi Ar. Sit    33.79  29  P      P      03 11 02.8 -0.4
TORD  Torodi Ar. Bea    33.79  29  P      P      03 11 02.9 -0.4
      comp=Z,32nm,1.1s,baz=214,slow=8.3,SNR=47
TORD                               LR     LR     03 22 44.6
      comp=Z,1μm,18.9s,baz=205,slow=33
TORD  Torodi Ar. Bea    33.79  29  P      P      03 11 03.3  0.0
ARAG  Araguaiana, MT    35.93 266 eP      P      03 11 22.6 +0.7
TMAB  Tom-Au,PA,Br      36.15 290 eP      P      03 11 24.1 +0.3
PRPB  Parauapebas       36.26 283 eP      P      03 11 24.9 +0.1
BOSA  Boshof            38.19 115  P      P      03 11 41.1 -0.1
      comp=Z,8.4nm,1.2s,baz=276,slow=9.8,SNR=4.5
BOSA                               LR     LR     03 24 52.7
      comp=Z,348nm,19.5s,baz=278,slow=32
BOSA  Boshof            38.19 115  P      P      03 11 40.7 -0.5
AQDB  Aquidauana        39.25 258 eP      P      03 11 51.0 +1.0
MCPB  Macapa, AP        40.59 290 eP      P      03 12 01.8 +0.7
MATP  Matopo            40.68 102  P      P      03 12 01.8 -0.2
      comp=Z,6.3nm,0.8s,baz=262,slow=8.3,SNR=9.9
LSZ   Lusaka            40.86  94  P      P      03 12 03.5  0.0
LSZ                                pmax   pmax
      comp=Z,18nm,1.3s
LSZ   Lusaka            40.86  94  P      P      03 12 03.5  0.0
CPUP  Villa Florida     40.88 249  P      P      03 12 03.3 -0.2
      comp=Z,3.4nm,0.8s,baz=101,slow=6.3,SNR=9.6
CPUP                               LR     LR     03 28 01.2
      comp=Z,490nm,18.1s,baz=94,slow=35
CPUP  Villa Florida     40.88 249  P      P      03 12 03.3 -0.2
NPGB  Novo Progresso    41.20 279 eP      P      03 12 05.8 -0.4
MALB  Monte Alegre      41.98 287 eP      P      03 12 12.3 -0.2
ITTB  Itaituba          42.41 282 eP      P      03 12 16.2 +0.1
PTLB  Pontes e Lacer    42.96 265 eP      P      03 12 20.8 +0.3
TAM   Tamanrasset       43.96  27  P      P      03 12 28.8 +0.2
TAM                                pmax   pmax
      comp=Z,8.0nm,1.3s
TAM   Tamanrasset       43.96  27  P      P      03 12 28.8 +0.2
VILB  Vilhena           44.39 269 eP      P      03 12 33.4 +1.2
SIV   San Ignacio       44.73 264  P      P      03 12 34.5 -0.4
      comp=Z,2.2nm,1.0s,baz=110,slow=11,SNR=6.2
TRQA  Tornquist         46.64 233 eP      P      03 12 51.4 +1.7
MBAR  Mbarara           47.25  75⇑eP      P      03 12 57.4 +2.5
MBAR                               pmax   pmax
      comp=Z,7.0nm,1.1s
MBAR  Mbarara           47.25  75  P      P      03 12 53.7 -1.2
MACA  Manacapuru-AM     47.47 281 eP      P      03 12 57.3 +0.9
SAML  Samuel            48.13 273  P      P      03 13 02.3 +0.7
SAML                               pmax   pmax
      comp=Z,17nm,1.5s
SAML  Samuel            48.13 273  P      P      03 13 02.3 +0.7
SAML                               IAmb   IAmb   03 13 03.6
      comp=Z,17nm,1.4s
SAML  Samuel            48.13 273 eP      P      03 13 02.8 +1.2
ETMB  Extrema           50.82 271 eP      P      03 13 22.8 +0.7
ZON   Zonda             51.17 243  P      P      03 13 23.6 -1.0
ZON                                pmax   pmax
      comp=Z,7.0nm,0.9s
ZON   Zonda             51.17 243  P      P      03 13 23.6 -1.0
AC02  Maricunga         51.46 249  P      P      03 13 26.0 -1.4
AC02                               IAmb   IAmb   03 13 29.6
      comp=Z,20nm,1.2s
PB08  IPOC Station P    51.87 257  P      P      03 13 28.4 -1.9
PB08                               IAmb   IAmb   03 13 31.2
      comp=Z,13nm,1.0s
GO02  Mina Guanaco      51.92 251  P      P      03 13 28.6 -2.0
GO01  Chusmiza          51.96 258  P      P      03 13 29.4 -1.8
CO01  Juntas del Tor    52.32 245  P      P      03 13 32.9 -0.6
MNMC  Minye Minye       52.40 259  P      P      03 13 32.1 -2.1
PB07  IPOC Station P    52.40 255  P      P      03 13 32.3 -1.8
PB07                               IAmb   IAmb   03 13 35.3
      comp=Z,35nm,1.2s
GO03  Copiap            52.43 248  P      P      03 13 33.7 -0.5
GO03                               IAmb   IAmb   03 13 35.7
      comp=Z,25nm,1.2s
AC05  El Transito       52.47 246  P      P      03 13 35.0 +0.6
AC05                               IAmb   IAmb   03 13 39.2
      comp=Z,26nm,1.0s
PB04  IPOC Station P    52.59 255  P      P      03 13 32.5 -3.0
PB14  IPOC Station P    52.68 252  P      P      03 13 35.6 -0.7
PB14                               IAmb   IAmb   03 13 37.2
      comp=Z,41nm,1.4s
AC01  Pan de Azucar     52.79 250  P      P      03 13 34.6 -2.1
AC01                               IAmb   IAmb   03 13 37.7
      comp=Z,31nm,1.2s
LCO   Las Campanas      52.84 246 eP      P      03 13 36.8 -0.5
LCO   Las Campanas      52.84 246  P      P      03 13 36.8 -0.5
LCO                                IAmb   IAmb   03 13 39.1
      comp=Z,29nm,1.1s
PLCA  Paso Flores       53.67 232 eP      P      03 13 44.6 +1.6
SNAA  Sanae             55.22 176  P      P      03 13 53.1 -0.6
      comp=Z,1.7nm,1.0s,baz=7.5,slow=1.7,SNR=3.1
SNAA  Sanae             55.22 176deP      P      03 13 54.2 +0.5
SNAA                               pmax   pmax
      comp=Z,8.0nm,1.7s
SNAA  Sanae             55.22 176  P      P      03 13 54.6 +0.8
NVL   N'lazarevskaya    56.16 170 eP      P      03 13 59.5 -0.9
NVL                                pmax   pmax
      comp=Z,10.0nm,0.8s
KEST  Kesra             56.94  23  P      P      03 14 08.2 +1.7
      comp=Z,22nm,1.1s,baz=182,slow=5.9,SNR=5.7
KEST                               LR     LR     03 36 54.8
      comp=Z,298nm,20.9s,baz=136,slow=34
KEST  Kesra             56.94  23  P      P      03 14 06.9 +0.4
ESDC  Sonseca Array     57.09  10  P      P      03 14 08.0 +0.5
      comp=Z,2.1nm,1.0s,baz=190,slow=7.5,SNR=8.0
ESDC                               LR     LR     03 35 22.7
      comp=Z,316nm,21.3s,baz=15,slow=33
ESDC  Sonseca Array     57.09  10  P      P      03 14 08.3 +0.8
NNA   Nana              60.50 266  LR     LR     03 39 51.4
      comp=Z,350nm,18.7s,baz=120,slow=35
SDV   Santo Domingo     61.24 290  P      P      03 14 35.3 -1.7
SDV                                IAmb   IAmb   03 14 38.7
      comp=Z,17nm,1.1s
SDV   Santo Domingo     61.24 290 eP      P      03 14 37.8 +0.8
BELA  Belgrano 2        61.84 185  P      P      03 14 40.1 +0.3
ROSC  El Rosal          63.03 285  LR     LR     03 41 08.8
      comp=Z,441nm,18.8s,baz=176,slow=35
ATAH  Atahualpa         63.15 270  LR     LR     03 41 30.2
      comp=Z,354nm,18.7s,baz=130,slow=35
OSSC  Osservatorio P    64.53  20  P      P      03 14 58.1 +0.1
DAVA  Damuels           67.48  18 eP      P      03 15 17.2 +0.1
      comp=Z,8.9nm,1.0s
FETA  Feichten          67.49  18 eP      P      03 15 16.4 -0.8
      comp=Z,7.8nm,1.0s
ABTA  Abfaltersbach     67.80  20 eP      P      03 15 19.9 +0.9
      comp=Z,12nm,1.7s
SQTA  Sankt Quirin      67.81  19 eP      P      03 15 18.9 -0.2
      comp=Z,9.0nm,1.2s
MOTA  Moosalm           67.89  18 eP      P      03 15 22.7 +2.9
      comp=Z,8.8nm,1.5s
RETA  Reutte            67.92  18 eP      P      03 15 19.8 +0.1
      comp=Z,12nm,2.1s
BFO   Black Forest      68.00  16 eP      P      03 15 19.7 -0.5
BFO   Black Forest      68.00  16  P      P      03 15 19.7 -0.5
BFO                                IAmb   IAmb   03 15 21.6
      comp=Z,15nm,1.3s
SOKA  Soboth            68.58  21 eP      P      03 15 24.6 +0.6
      comp=Z,12nm,1.1s
BMRD  Maredsous         68.98  13 dP      P      03 15 25.6 -0.7
ARSA  Arzberg           69.25  21 eP      P      03 15 28.9 +0.8
      comp=Z,5.9nm,1.2s
MOA   Molln             69.34  20 eP      P      03 15 28.7 +0.1
      comp=Z,7.4nm,1.3s
MAW   Mawson            69.66 157  P      P      03 15 29.9 -0.4
      comp=Z,6.4nm,0.9s,baz=280,slow=4.5,SNR=8.6
MAW                                LR     LR     03 38 44.0
      comp=Z,92nm,21.8s,baz=242,slow=30
MAW   Mawson            69.66 157  P      P      03 15 30.6 +0.3
MAW                                pmax   pmax
      comp=Z,1.0nm,0.8s
MAW   Mawson            69.66 157  P      P      03 15 30.6 +0.3
CONA  Conrad Observa    69.95  21 eP      P      03 15 33.4 +1.0
      comp=Z,3.7nm,1.0s
GERES GERESS Array B    70.03  19  P      P      03 15 32.5 -0.4
      comp=Z,0.6nm,0.5s,baz=108,slow=4.3,SNR=4.2
GERES                              LR     LR     03 46 02.5
      comp=Z,331nm,18.4s,baz=225,slow=36
KHC   Kasperske Hory    70.24  19⇑eP      P      03 15 34.3 +0.2
KHC                                pmax   pmax
      comp=Z,17nm,1.7s
MODS  Modra-Piesok      70.82  22 eP      P      03 15 38.0 +0.3
MODS  Modra-Piesok      70.82  22 eP      P      03 15 38.0 +0.3
RAYN  Ar Rayn           70.93  57  P      P      03 15 39.5 +0.6
RAYN                               pmax   pmax
      comp=Z,10.0nm,1.2s
RAYN  Ar Rayn           70.93  57  P      P      03 15 39.5 +0.6
RAYN                               IAmb   IAmb   03 15 42.5
      comp=Z,9.8nm,1.1s
PSZ   Piszkesteto       71.41  24  P      P      03 15 40.8 -0.5
PSZ                                pmax   pmax
      comp=Z,9.0nm,1.1s
PSZ   Piszkesteto       71.41  24  P      P      03 15 40.8 -0.5
PSZ                                IAmb   IAmb   03 15 43.3
      comp=Z,9.3nm,1.1s
VYHS  Vyhne             71.48  23 eP      P      03 15 41.9 +0.2
VYHS                               pmax   pmax
      comp=Z,16nm,1.3s
VYHS  Vyhne             71.48  23 eP      P      03 15 41.9 +0.2
BR131 Keskin Array S    71.91  37  P      P      03 15 44.6  0.0
BR131                              pmax   pmax
      comp=Z,21nm,1.2s
BR131 Keskin Array S    71.91  37  P      P      03 15 44.6  0.0
BR131                              IAmb   IAmb   03 15 47.7
      comp=Z,21nm,1.1s
BRTR  Keskin Array B    71.91  37  P      P      03 15 44.7  0.0
      comp=Z,8.9nm,1.0s,baz=202,slow=4.4,SNR=21
BRTR                               LR     LR     03 45 55.6
      comp=Z,74nm,21.6s,baz=252,slow=35
BRTR  Keskin Array B    71.91  37  P      P      03 15 46.2 +1.6
BRTR  Keskin Array B    71.91  37  P      P      03 15 46.2 +1.6
GAZ   Gaziantep         72.44  41  P      P      03 15 47.7  0.0
GAZ                                IAmb   IAmb   03 15 50.8
      comp=Z,14nm,1.2s
QSPA  South Pole Qui    73.30 180  P      P      03 15 53.4 +0.8
BURAR Bucovina Array    73.33  27  P      P      03 15 52.5 -0.3
JTS   Las Juntas de     74.82 286  LR     LR     03 47 44.7
      comp=Z,331nm,21.9s,baz=178,slow=35
AKASG Malin Array Be    77.39  27  P      P      03 16 15.4 -0.6
      comp=Z,2.7nm,0.7s,baz=221,slow=5.0,SNR=10.0
AKASG                              LR     LR     03 49 49.2
      comp=Z,131nm,18.6s,baz=305,slow=35
AKASG Malin Array Be    77.39  27ceP      P      03 16 16.1 +0.2
AKASG                              pmax   pmax
      comp=Z,2.0nm,0.6s
AKASG Malin Array Be    77.39  27  P      P      03 16 14.5 -1.4
L64A  Middleborough     78.32 321  P      P      03 16 21.0 -0.3
      baz=126
U61A  Possum Corner     78.94 313  P      P      03 16 26.1 +1.2
      baz=120
GNI   Garni             78.95  42deP      P      03 16 26.4 +1.3
GNI                                pmax   pmax
      comp=Z,36nm,1.7s
HRV   Adam Dziewonsk    79.08 321  P      P      03 16 26.4 +0.8
      baz=125
U60A  Pendleton         79.51 313  P      P      03 16 29.3 +1.3
      baz=120
NACGM Naroch            79.58  23 i P     P      03 16 27.5 -0.4
NACGM                             i P     P      03 16 27.5 -0.4
NACGM                             i P     P      03 16 27.5 -0.4
NACGM                             i Pb    pP     03 16 30.2  0.0
      comp=Z,20nm,1.0s
NACGM                             i PP    PP     03 19 32.2 +3.4
NACGM                             i PPP   PPP    03 21 36.9
NACGM                             i S     S      03 26 17.3  -12
NACGM                             i PS    PnS    03 27 33.2  +20
NACGM                             i SS    SS     03 31 50.5  +12
NACGM                             i SSS   SSS    03 34 56.0
NACGM                             i LR    LR     03 52 45.9
KBZ   Khabaz            79.82  38  P      P      03 16 29.6 +0.1
      comp=Z,5.5nm,1.0s,baz=305,slow=3.4,SNR=5.5
KBZ                                LR     LR     03 52 04.6
      comp=Z,60nm,18.5s,baz=258,slow=36
KBZ   Khabaz            79.82  38⇓eP      P      03 16 30.7 +1.2
KIV   Kislovodsk        79.83  38  P      P      03 16 27.8 -1.9
KIV                                pmax   pmax
      comp=Z,10.0nm,1.0s
KIV   Kislovodsk        79.83  38  P      P      03 16 27.8 -1.9
U59A  Littleton         79.89 313  P      P      03 16 30.9 +0.8
      baz=120
U59A  Littleton         79.89 313  P      P      03 16 29.2 -0.9
U59A                               IAmb   IAmb   03 16 31.6
      comp=Z,19nm,1.1s
T59A  Double "B" Far    80.03 313  P      P      03 16 31.3 +0.5
      baz=120
NCK   Nalchik           80.11  39⇑eP      P      03 16 32.9 +1.8
NCK                                pmax   pmax
      comp=Z,15nm,1.0s
NOA   NORSAR Array B    80.31  12  P      P      03 16 32.4 +0.5
      comp=Z,2.7nm,1.0s,baz=205,slow=6.0,SNR=3.3
NOA                                LR     LR     03 53 55.8
      comp=Z,125nm,18.1s,baz=0.0,slow=37
UOSS  Minazif           80.32  60  P      P      03 16 30.4 -2.3
M60A  Port Jervis       80.33 318  P      P      03 16 33.2 +0.8
      baz=123
SDMD  Soldier's Deli    80.77 316  P      P      03 16 33.6 -1.2
L59A  Walton            81.06 319  P      P      03 16 37.0 +0.7
      baz=122
V57A  Coltrane Farms    81.08 312  P      P      03 16 36.0 -0.4
      baz=118
P57A  Homestead Farm    81.59 315  P      P      03 16 40.2 +1.1
      baz=120
P57A  Homestead Farm    81.59 315  P      P      03 16 38.6 -0.5
P57A                               IAmb   IAmb   03 16 41.2
      comp=Z,16nm,1.1s
Q57A  Strasburg         81.64 315  P      P      03 16 40.5 +1.0
      baz=120
BINY  Binghamton        81.66 319  P      P      03 16 40.3 +0.8
      baz=122
K58A  Earlville         81.74 319  P      P      03 16 40.2 +0.3
      baz=122
N57A  Milroy            81.93 317  P      P      03 16 41.4 +0.5
      baz=120
R56A  Bull Pasture M    82.02 314  P      P      03 16 42.7 +1.2
      baz=119
P56A  Dayton Farm, R    82.16 315  P      P      03 16 43.1 +1.0
      baz=119
Q56A  Snyder Ridge,     82.17 315  P      P      03 16 43.3 +1.1
      baz=119
LATQ  La Tuque          82.58 324  P      P      03 16 44.1 -0.1
      baz=125
U54A  Nelsons Funny     82.83 311  P      P      03 16 46.3 +0.4
      baz=117
N54A  Moraine State     83.64 316  P      P      03 16 50.5 +0.7
      baz=119
N54A  Moraine State     83.64 316  P      P      03 16 49.7 -0.1
TZTN  Tazewell          84.09 311  P      P      03 16 53.5 +1.3
      baz=116
FINES FINESS Array B    84.42  18  P      P      03 16 53.3 +0.1
      comp=Z,4.5nm,1.0s,baz=180,slow=5.1,SNR=2.0
VNDA  Vanda             85.77 179  P      P      03 17 01.3 +1.3
      comp=Z,3.1nm,0.6s,baz=199,slow=2.3,SNR=16
VNDA                               LR     LR     03 49 45.8
      comp=Z,152nm,21.2s,baz=171,slow=32
VNDA  Vanda             85.77 179  P      P      03 17 01.2 +1.2
LSQQ  Lebel-sur-Quev    85.85 324  P      P      03 17 00.0 -0.7
      baz=122
V48A  Smith Brothers    86.16 309  P      P      03 17 01.9 -0.7
V48A                               IAmb   IAmb   03 17 03.2
      comp=Z,12nm,1.1s
GEYT  Alibeck           87.06  49  LR     LR     03 54 47.1
      comp=Z,192nm,19.1s,baz=330,slow=35
WVT   Waverly           87.06 309  P      P      03 17 05.4 -1.6
WVT                                pmax   pmax
      comp=Z,11nm,1.2s
WVT   Waverly           87.06 309  P      P      03 17 05.6 -1.4
      baz=113
WVT   Waverly           87.06 309  P      P      03 17 05.4 -1.6
WVT                                IAmb   IAmb   03 17 09.6
      comp=Z,11nm,1.1s
344A  Westbrook Farm    87.53 304  P      P      03 17 09.3 -0.1
W45A  Hickory Valley    87.71 308  P      P      03 17 08.6 -1.6
OLIL  Olney             88.28 311  P      P      03 17 12.4 -0.4
143A  Socs Landing,     88.52 305  P      P      03 17 13.2 -0.8
FVM   French Village    89.69 310  P      P      03 17 19.2 -0.3
FVM                                pmax   pmax
      comp=Z,10.0nm,1.0s
FVM   French Village    89.69 310  P      P      03 17 19.2 -0.3
FVM                                IAmb   IAmb   03 17 20.3
      comp=Z,10nm,1.0s
W41B  Gary Mavity, V    90.05 307  P      P      03 17 19.8 -1.3
      baz=111
W41B  Gary Mavity, V    90.05 307  P      P      03 17 19.4 -1.7
W41B                               IAmb   IAmb   03 17 21.8
      comp=Z,8.8nm,1.1s
WHAR  Wooly Hollow      90.12 307  P      P      03 17 20.9 -0.6
WHAR                               IAmb   IAmb   03 17 21.9
      comp=Z,13nm,1.1s
TMCR  Tamitsa           90.19  20 eP      P      03 17 21.0 -0.1
TMCR                               pmax   pmax
      comp=Z,11nm,1.0s
FCAR  Ozark Folk Cen    90.21 307  P      P      03 17 21.2 -0.7
FCAR                               IAmb   IAmb   03 17 22.3
      comp=Z,6.3nm,1.0s
CCM   Cathedral Cave    90.32 310  P      P      03 17 21.6 -0.8
CCM                                pmax   pmax
      comp=Z,16nm,1.0s
CCM   Cathedral Cave    90.32 310  P      P      03 17 22.4  0.0
      baz=111
CCM   Cathedral Cave    90.32 310  P      P      03 17 21.6 -0.8
ARCES ARCESS Array B    90.66  13  LR     LR     03 59 33.3
      comp=Z,243nm,18.3s,baz=270,slow=36
MGMO  Mountain Grove    90.76 309  P      P      03 17 23.6 -0.9
MGMO                               IAmb   IAmb   03 17 25.1
      comp=Z,7.3nm,0.9s
U40A  Yellville         90.92 308  P      P      03 17 24.2 -1.0
      baz=110
U40A  Yellville         90.92 308  P      P      03 17 23.3 -2.0
U40A                               IAmb   IAmb   03 17 25.6
      comp=Z,5.8nm,1.0s
R40A  Maddies Statio    91.16 310  P      P      03 17 25.6 -0.7
W39A  Magazine          91.24 306  P      P      03 17 26.7  0.0
      baz=110
W39A  Magazine          91.24 306  P      P      03 17 26.8 +0.1
W39A                               IAmb   IAmb   03 17 30.2
      comp=Z,8.1nm,1.0s
HHAR  Hobbs             91.72 307  P      P      03 17 27.9 -1.0
U38A  Gravette          92.11 307  P      P      03 17 28.8 -2.0
U38A                               IAmb   IAmb   03 17 31.3
      comp=Z,7.7nm,0.9s
N38A  Joes South For    92.72 312  P      P      03 17 31.4 -2.1
N38A                               IAmb   IAmb   03 17 34.1
      comp=Z,10nm,1.0s
ABKAR Akbulak array     92.76  39  P      P      03 17 31.9 -1.5
435B  Jarrell           92.85 301  P      P      03 17 33.0 -1.3
WHTX  Lake Whitney,     93.11 302  P      P      03 17 35.8 +0.3
      baz=108
I37A  Lemond, Waseca    93.92 315  P      P      03 17 38.4 -0.6
SPMN  Marine on St.     93.93 316  P      P      03 17 39.1 +0.2
      baz=110
JCT   Junction City     94.58 300  P      P      03 17 42.1 -0.2
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JCT                                   pmax    pmax
      comp=Z,6.0nm,0.9s
JCT   Junction City      94.58 300  P       P       03 17 42.1 -0.2
JCT                                 IAmb    IAmb    03 17 51.6
      comp=Z,5.7nm,0.9s
KSU1  Kansas State U     94.63 309  P       P       03 17 42.5 +0.2
      baz=108
ECSD  EROS Data Cent     96.04 314  P       P       03 17 48.0 -0.6
      baz=108
TXAR  Lajitas Array      97.50 298  P       Pdif    03 17 55.9 +0.1
      comp=Z,1.0nm,1.1s,baz=104,slow=5.3,SNR=5.0
ANMO  Albuquerque       101.14 303⇑eP      Pdif    03 18 10.4 -1.6
ANMO                                pmax    pmax
      comp=Z,7.0nm,3.2s
RKT   Rikitea           109.65 237 eLR      LR      03 55 13.0
      comp=Z,258nm,25.5s
WMQ   Urumqi            110.11  49 eP       Pdif    03 19 05.8 +14
WMQ   Urumqi            110.11  49 eP       PKiKP   03 22 53.0 -0.1
WMQ                                 pmax    pmax
      comp=Z,180nm,6.3s
CMAR  Chiang Mai Arr    116.77  78  PKP     PKiKP   03 23 07.2 +0.8
      comp=Z,1.6nm,0.4s,baz=303,slow=8.0,SNR=6.1
CMAR  Chiang Mai Arr    116.77  78c iPKIKP  PKiKP   03 23 07.3 +0.8
CMAR                                pmax    pmax
      comp=Z,1.0nm,0.3s
TAOE  Nuku Hiva Isla    120.61 249 eLR      LR      04 00 12.1
      comp=Z,149nm,25.2s
TBI   Tubuai            120.64 229 eLR      LR      04 00 12.4
      comp=Z,238nm,35.5s
CD2   Chengdu           122.37  64  PKP     PKPdf   03 23 15.4 -1.6
SONM  Songino Array     122.89  44  PKP     PKPdf   03 23 15.5 -2.1
      comp=Z,1.2nm,1.0s,baz=256,slow=6.0,SNR=4.1
SONM  Songino Array     122.89  44  PKIKP   PKPdf   03 23 16.9 -0.7
SONM  Songino Array     122.89  44          PKPdf   03 23 16.9 -0.7
PPT2  Papeete2          124.16 234 eSS      SS      03 41 56.7 +0.5
      comp=Z,63nm,26.0s
PPT2  Papeete2          124.16 234 eLR      LR      04 01 53.0
      comp=Z,368nm,32.2s
STKA  Stephens Creek    126.32 155  PKP     PKPdf   03 23 24.6  0.0
      comp=Z,3.4nm,1.0s,baz=254,slow=3.5,SNR=3.5
STKA  Stephens Creek    126.32 155  PKIKP   PKPdf   03 23 24.4 -0.2
STKA  Stephens Creek    126.32 155          PKPdf   03 23 24.4 -0.2
HHC   Hu-ho-hao-te      127.89  51 eP       PKiKP   03 23 28.2 +0.3
ASAR  Alice Springs     129.16 142  PKP     PKPdf   03 23 28.7 -1.6
      comp=Z,1.9nm,1.0s,baz=247,slow=1.1,SNR=9.7
NJ2   Nanjing           135.16  61 eP       PKPdf   03 23 40.4 -0.8
NJ2                                 pmax    pmax
      comp=Z,6.0nm,0.5s
DZM   Mont Dzumac       141.29 181 eLR      LR      04 09 53.6
      comp=Z,144nm,26.0s
MJAR  Matsushiro Arr    148.81  46  PKPbc   PKPbc   03 24 08.9 -0.2
      comp=Z,6.2nm,1.1s,baz=302,slow=2.8,SNR=4.6
MJAR  Matsushiro Arr    148.81  46  PKP2    PKPbc   03 24 09.0 -0.2
MJAR  Matsushiro Arr    148.81  46          PKPbc   03 24 08.2 -1.0
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ASRS 12 03:20:50.9±0.2, 52°N±1°×95°.9E±0°.9, h5^{km}, MLh3.6/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Southwestern Siberia

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Code  Station Name          Δ°  AZ°   Phase ID            Time     Res
                                    Op      ISC       h  m  s    ISC
TDJR  Todzha              0.66  13  Pg      Pg      03 21 03.9 +0.3
TDJR                                Sg      Sg      03 21 13.1 +1.0
KZLR  Kyzyl               0.88 267  Pg      Pg      03 21 07.5 -0.3
KZLR                                Sg      Sg      03 21 19.0 -0.2
KNGR  Kungurtug, Tuv      1.55 137  Pg      Pn      03 21 19.2 -0.1
KNGR                                Sg      Sb      03 21 40.1 -0.1
ERNS  Erzin               1.56 197  Pg      Pn      03 21 19.5 +0.1
ERNS                                Sg      Sn      03 21 39.6 -0.5
ARDR  Aradan              1.71 300  Pg      Pb      03 21 22.4 -0.4
ARDR                                Sg      Sg      03 21 46.0 +0.1
BLRR  Bol'shaya Rech      2.47 303  Pg      Pb      03 21 35.9 +0.2
BLRR                                Sg      Sg      03 22 08.6 -1.5
DJOS  Djoyskaya Sosn      2.94 292  Pg      Pb      03 21 44.6 +0.9
DJOS                                Sg      Sg      03 22 22.7 -2.4
CERR  Cheremushki         2.94 294  Pg      Pb      03 21 43.1 -0.7
CERR                                Sg      Sg      03 22 23.8 -1.6
DJO   Djoy, Khakassi      3.03 292  Pg      Pb      03 21 46.6 +1.2
DJO                                 Sg      Sg      03 22 27.3 -1.0
MOY   Mondy               3.19  90  Pg      Pb      03 21 47.9 -0.2
MOY                                 Sg      Sg      03 22 30.6 -2.7
ORY   Orie                3.28 352  Pg      Pb      03 21 49.6 +0.1
ORY                                 Sg      Sb      03 22 31.4 +1.6
KTRR  Kuturchin           3.33 343  Pn      Pn      03 21 43.8 +0.1
KTRR                                Pg      Pg      03 21 55.6 +0.9
KTRR                                Sg      Sg      03 22 38.9 +0.9
TBTR  Tabat               3.37 292  Pg      Pb      03 21 51.7 +0.7
TBTR                                Sg      Sb      03 22 34.6 +2.4
TEL   Teeli               3.63 260  Pg      Pb      03 21 56.9 +1.4
TEL                                 Sg      Sb      03 22 42.3 +2.5
VEH   Verkhnyaya Baz      3.71 296  Pg      Pg      03 21 60.0 -1.9
VEH                                 Sg      Sg      03 22 46.6 -3.2
SHRR  Shira               4.39 311  Sg      Sg      03 23 12.7 +0.8
LUZB  Luzhba, Kemero      4.64 297  Sg      Sb      03 23 13.5 +4.5
TLY   Talaya              4.84  88  Pg      Pg      03 22 24.1 +0.7
TLY                                 Sg      Sg      03 23 20.8 -5.3
ZAK   Zakamensk           4.87 104  Pg      Pg      03 22 21.0 -3.2
ZAK                                 Sg      Sg      03 23 23.1 -4.2
TASR  Tashtagol           5.01 285  Pg      Pb      03 22 21.0 +2.1
TASR                                Sg      Sg      03 23 29.7 -1.9
CUR   Chagan-Uzun         5.04 254  Pg      Pg      03 22 23.6 -3.7
CUR                                 Sg      Sg      03 23 26.6 -5.9
ULGR  Ulagan, Altay       5.10 260  Pg      Pg      03 22 24.9 -3.6
ULGR                                Sg      Sg      03 23 31.6 -3.0
ARTR  Artybash            5.33 274  Pg      Pb      03 22 27.7 +3.2
ARTR                                Sg      Sg      03 23 41.5 -0.4
CHBI  Chibit, Altay       5.47 258  Pg      Pb      03 22 30.6 +3.7
CHBI                                Sg      Sg      03 23 43.0 -3.5
DGZ   Jazzator, Alta      5.74 252  Pg      Pg      03 22 38.2 -2.6
DGZ                                 Sg      Sg      03 23 53.0 -2.1
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IDC 12 03:26:59.7±5.2, 17°.84S×171°.61W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.6/38, mbtmp4.0/3, Error ellipse: s-maj=311.3km s-min=38.3km az=5.0, Tonga Islands region

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Code  Station Name          Δ°  AZ°   Phase ID            Time     Res
                                    Op      ISC       h  m  s    ISC
CTA   Charters Tower     39.84 260  P       P       03 34 34.9 -0.3
      1.8nm,0.4s,baz=84,slow=7.3,SNR=5.3
WRA   Warramunga Arr     51.00 259  P       P       03 36 03.9 +0.1
      0.5nm,0.3s,baz=96,slow=7.6,SNR=17
ASAR  Alice Springs      51.03 254  P       P       03 36 04.0 -0.1
      1.4nm,0.8s,baz=92,slow=8.8,SNR=11
TORD  Torodi Ar. Bea    172.04 125  PKPab   PKPab   03 48 33.9 -0.5
      0.3nm,0.3s,baz=256,slow=5.2,SNR=4.7
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*IDC **12** 03:44:16.6±0.6, 6°.30S×147°.17E, h0^{km}, mb4.4/18, mb1 4.6/22, mb1mx4.5/33, mbtmp4.5/22, ML4.1/2, MS3.9/12, Ms1 3.9/12, ms1mx3.6/35, Error ellipse: s-maj=17.6km s-min=8.8km az=111.0*

*BJI **12** 03:44:20.4±0.0, 6°.50S×147°.50E, h61^{km}, mB5.2/19, mb4.7/28, Ms4.9/5, Ms7 4.6/4*

*NEIC **12** 03:44:23.0±2.0, 6°.36S±0°.07×147°.22E±0°.04, h51^{km}±6^{km}, mb4.6/36, Error ellipse: s-maj=11.2km s-min=2.4km az=208.0*

*DJA **12** 03:44:26.1±0.5, 6°S±3°×14°7E±°, h74^{km}±5^{km}, M4.9/27, mB5.5/7, mb4.8/27, MLv4.8/3, Mw(mB)5.0/7*

*NOU **12** 03:44:30.3, 6°.72S×147°.30E, h58^{km}, mb4.7, Eastern New Guinea Reg., P.N.G.*

ISC 12 03:44:23.0±0.4, 6°.38S±0°.05×147°.27E±0°.07, h50^{km}, n116, σ1^{s}.15/102, mb4.7/44, MS4.0/11, 1C, Eastern New Guinea region

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Code  Station Name          Δ°  AZ°   Phase ID            Time     Res
                                    Op      ISC       h  m  s    ISC
PMG   Port Moresby        3.00 182  Pn      Pn      03 45 07.7 -0.4
      32nm,0.3s,baz=346,slow=5.2,SNR=28
PMG                                 Lg      Lg      03 45 47.8
      26nm,0.3s,baz=13,slow=22,SNR=2.3
PMG                                 LR      LR      03 46 38.6
      comp=Z,3µm,18.2s,baz=338,slow=46
PMG   Port Moresby        3.00 182          Pn      03 45 08.6 +0.4
PMG   Port Moresby        3.00 182  P       Pn      03 45 10.0 +1.8
KRVT  Keravat (AS076      5.17  67  Pn      Pn      03 45 37.0 -0.9
      11nm,0.3s,baz=98,slow=19,SNR=2.0
KRVT                                Lg      Lg      03 46 50.0
      baz=32,slow=13,SNR=1.7
KRVT                                LR      LR      03 47 33.1
      comp=Z,2µm,19.0s,baz=269,slow=38
RABL  Rabaul              5.34  66  P       Pn      03 45 49.1 +8.8
      547nm,0.8s
JAY   Jayapura            7.59 300  Pn      Pn      03 46 12.9 +1.8
      0.6nm,0.3s,baz=219,slow=9.6,SNR=1.4
JAY                                 LR      LR      03 49 40.3
      comp=Z,884nm,19.6s,baz=188,slow=43
JAY   Jayapura            7.59 300  P       Pn      03 46 13.4 +2.3
      0.1nm19nm,0.9s
COEN  Coen                8.54 208  Pn      Pn      03 46 23.4 -0.7
HNR   Honiara            12.92 104  LR      LR      03 50 55.9
      comp=Z,101nm,19.4s,baz=286,slow=31
CTA   Charters Tower     13.66 184  Pn      P       03 47 39.4 -2.2
      0.4nm,0.3s,baz=358,slow=11,SNR=2.2
SIJI  Sorong             16.88 288  Pn      Pn      03 48 14.0 -2.0
      baz=201,slow=22,SNR=4.5
SIJI                                LR      LR      03 56 20.4
      comp=Z,465nm,19.0s,baz=87,slow=43
SWI   Sorong             16.89 288  P       P       03 48 16.9 -0.6
      140nm,1.2s
WB0   Warramunga Arr     18.26 222  P       P       03 48 31.6 -1.0
WR0   Warramunga Arr     18.30 221  P       P       03 48 32.0 -1.0
WR0                                 IAmb    IAmb    03 48 47.7
      comp=Z,30nm,1.2s
WRAB  Tennant Creek      18.41 222  P       P       03 48 33.1 -1.1
WB2   Warramunga Arr     18.41 222  P       P       03 48 33.4 -0.9
WRA   Warramunga Arr     18.42 222  P       P       03 48 33.8 -0.6
      comp=Z,0.5nm,0.3s,baz=46,slow=12,SNR=27
WRA                                 S       Sn      03 51 59.4 -0.7
      comp=Z,0.1nm,0.3s,baz=45,slow=22,SNR=2.6
WRA   Warramunga Arr     18.42 222  P       P       03 48 32.8 -1.6
NLAI  Namlea             20.34 278  P       Pn      03 48 59.4 +1.6
      comp=Z,1µmcomp=Z,32nm,0.6s
AS31  Alice Springs      21.46 215  P       P       03 49 07.7 +0.3
ASAR  Alice Springs      21.46 215  P       P       03 49 08.1 +0.7
      comp=Z,4.6nm,0.6s,baz=50,slow=8.5,SNR=31
ASAR                                S       Sn      03 53 08.7 -4.4
      comp=Z,5.2nm,0.9s,baz=27,slow=22,SNR=8.7
ASAR  Alice Springs      21.46 215  P       P       03 49 07.1 -0.3
SANVU Saraoutou          21.53 116  P       P       03 49 08.5 +0.4
SANVU                               IAmb    IAmb    03 49 17.9
      comp=Z,20nm,0.8s
SANI  Sanana             21.65 281  P       P       03 49 11.9 +2.4
      comp=Z,32nm,1.0s
SOEI  Soe                23.01 260  P       P       03 49 24.1  0.0
SOEI  Soe                23.01 260  P       P       03 49 37.3 +13
BATI  Baumata            23.66 259  P       P       03 49 30.5 +0.3
      comp=Z,13nm,0.4s,baz=61,slow=12,SNR=1.7
BATI  Baumata            23.66 259  P       P       03 49 41.6 +11
FITZ  Fitzroy Crossi     24.09 239  P       P       03 49 33.4 -0.8
      comp=Z,5.4nm,0.7s,baz=47,slow=10,SNR=30
FITZ  Fitzroy Crossi     24.09 239  P       P       03 49 34.5 +0.3
FITZ                                IAmb    IAmb    03 49 45.6
      comp=Z,21nm,0.8s
DZM   Mont Dzumac        24.21 132  P       P       03 49 36.6 +1.3
      comp=Z,10nm,1.1s,baz=135,slow=22,SNR=3.4
DZM   Mont Dzumac        24.21 132 eP       P       03 49 35.8 +0.5
      comp=Z,63nm,1.8s
DZM                                eLR      LR      03 55 33.8
      comp=Z,461nm,25.9s
DZM   Mont Dzumac        24.21 132  P       P       03 49 36.3 +1.0
DZM                                 IAmb    IAmb    03 49 43.2
      comp=Z,35nm,1.3s
ARMA  Armidale           24.26 171  P       P       03 49 35.8 +0.1
ARMA                                IAmb    IAmb    03 49 39.2
      comp=Z,29nm,1.1s
LUWI  Luwuk              25.00 281  P       P       03 49 43.4 +0.9
LUWI  Luwuk              25.00 281  P       P       03 49 42.3 -0.2
      comp=Z,5µmcomp=Z,158nm,1.2s
GTOI  Gorontalo          25.20 285  P       P       03 49 46.1 +1.9
      comp=Z,536nmcomp=Z,58nm,0.6s
EDFI  Ende, Flores       25.46 263  P       P       03 49 45.6 -1.2
      comp=Z,12nm,0.9s
STKA  Stephens Creek     25.91 191  P       P       03 49 50.0 -0.5
      comp=Z,4.0nm,0.8s,baz=338,slow=7.8,SNR=6.9
STKA                                LR      LR      04 00 50.5
      comp=Z,607nm,18.5s,baz=13,slow=38
STKA  Stephens Creek     25.91 191  P       P       03 49 50.5  0.0
APSI  Ampana             26.13 281  P       P       03 49 53.2 +0.5
      comp=Z,47nm,1.2s
MRSI  Marisa             26.18 284  P       P       03 49 52.7 -0.5
      comp=Z,18nm,0.5s
WSI   Waingapu           26.90 261  P       P       03 49 55.1 -4.6
TOLI2 Tolitoli           27.47 285  P       P       03 50 02.8 -2.0
TOLI2                               IAmb    IAmb    03 50 06.0
      comp=Z,22nm,1.0s
MPSI  Mapaga             28.12 283  P       P       03 50 10.1 -0.5
      comp=Z,24nm,1.1s
PSA00 Pilbara Seismi     30.51 238  P       P       03 50 32.0 +0.3
PSA00                               IAmb    IAmb    03 50 44.7
      comp=Z,25nm,1.5s
MYLDM Lahad Datu         30.93 291  P       P       03 50 35.2 -0.3
H11S3 WAKE ISLAND Hy     31.27  37  T       T       04 23 27.3
      baz=220,slow=74,SNR=25
H11S2 WAKE ISLAND Hy     31.28  37  T       T       04 23 28.2
      baz=220,slow=74,SNR=3.6
H11S1 WAKE ISLAND Hy     31.29  37  T       T       04 23 28.5
      baz=220,slow=74,SNR=4.6
H11N1 WAKE ISLAND Hy     32.34  36  T       T       04 24 38.2
      baz=219,slow=76,SNR=12
H11N3 WAKE ISLAND Hy     32.35  36  T       T       04 24 39.3
      baz=219,slow=76,SNR=10
H11N2 WAKE ISLAND Hy     32.35  36  T       T       04 24 39.4
      baz=219,slow=76,SNR=13
MJAR  Matsushiro Arr     43.54 349  P       P       03 52 21.1 -0.9
      comp=Z,5.4nm,0.9s,baz=173,slow=7.6,SNR=6.2
MJAR  Matsushiro Arr     43.54 349  P       P       03 52 20.7 -1.2
MAT   Matsushiro         43.54 349  P       P       03 52 21.2 -0.7
MAT                                eS       S       03 58 47.6 +0.1
NJ2   Nanjing            46.85 326 eP       P       03 52 48.6 +0.4
NJ2                                 pmax    pmax
      comp=Z,12nm,0.5s
KSRS  Korea Array        47.20 339  P       P       03 52 50.5 -0.4
      comp=Z,6.1nm,0.8s,baz=159,slow=8.7,SNR=13
KSRS                                LR      LR      04 09 59.0
      comp=Z,124nm,21.4s,baz=150,slow=33
KSAR  Wonju Array Be     47.21 339  P       P       03 52 50.6 -0.4
IPM   Ipoh               47.41 282  P       P       03 52 53.3 +0.3
KULM  Kulim              47.96 283  P       P       03 52 57.1 -0.1
GSI   Gunungsitoli       50.19 277  P       P       03 53 13.4 -0.9
KCSI  Kotacane, Aceh     50.39 280  P       P       03 53 15.1 -0.7
      comp=Z,28nm,0.9s
USRK  Ussuriysk Ar.      52.20 346  P       P       03 53 29.5 +0.6
      comp=Z,2.1nm,0.6s,baz=171,slow=6.9,SNR=8.2
KMI   Kunming            53.44 308  P       P       03 53 42.4 +3.8
KMI                                 pmax    pmax
      comp=Z,10.0nm,0.8s
CMAR  Chiang Mai Arr     53.66 298  P       P       03 53 40.4 +0.3
      comp=Z,1.8nm,0.3s,baz=123,slow=6.1,SNR=5.1
CMAR  Chiang Mai Arr     53.66 298  P       P       03 53 40.0 -0.1
XAN   Xi'an              54.15 321  P       P       03 53 42.8 -0.6
XAN                                 pP      pP      03 53 57.7 -0.1
XAN                                 pmax    pmax
      comp=Z,16nm,0.9s
XAN                                 pmax    pmax
      comp=Z,220nm,5.7s
KLR   Kul'dur            57.02 348  P       P       03 54 04.6 +0.9
      comp=Z,0.7nm,0.4s,baz=96,slow=6.6,SNR=4.4
KLR                                 PcP     PcP     03 54 58.5 +0.2
      comp=Z,1.0nm,0.5s,baz=132,slow=4.1,SNR=5.5
HHC   Hu-ho-hao-te       57.30 328 eP       P       03 54 06.9 +0.9
HHC                                 pmax    pmax
      comp=Z,9.0nm,0.8s
HHC                                 pmax    pmax
      comp=Z,240nm,6.6s
PETK  Petropavlovsk-     59.92   7  P       P       03 54 25.6 +1.7
      comp=Z,2.5nm,0.7s,baz=98,slow=5.8,SNR=4.1
PETK                                LR      LR      04 17 18.2
      comp=Z,125nm,20.5s,baz=214,slow=33
HIA   Hailar             60.40 340  P       P       03 54 28.2 +1.0
PPT2  Papeete2           62.53 106 eLR      LR      04 13 14.5
      comp=Z,153nm,26.0s
TBI   Tubuai             62.98 113 eLR      LR      04 13 36.2
      comp=Z,65nm,26.2s
GTA   Gaotai             63.20 320 ⇑P       P       03 54 46.7 +0.3
GTA                                 pP      pP      03 54 59.0 -2.1
GTA                                 sP      sP      03 55 04.2 -2.8
GTA                                 S       S       04 03 13.2 -1.4
GTA                                 pmax    pmax
      comp=Z,3.0nm,0.7s
GTA                                 pmax    pmax
      comp=Z,130nm,5.8s
GTA                                 LR      LR
      comp=Z,160nm,17.1s
GTA                                 LR      LR
      comp=Z,280nm,17.8s
GTA                                 LR      LR
      comp=Z,230nm,16.4s
ULN   Ulaanbaatar        64.57 331  P       P       03 54 55.4 +0.1
ULN                                 IAmb    IAmb    03 54 56.8
      comp=Z,9.5nm,1.2s
SONM  Songino Array      64.87 331  P       P       03 54 56.3 -0.8
      comp=Z,3.1nm,1.0s,baz=139,slow=4.9,SNR=15
SONM  Songino Array      64.87 331  P       P       03 54 57.0 -0.1
MA2   Magadan            65.81   2  P       P       03 55 02.7 -0.1
      comp=Z,7.7nm,0.6s,baz=134,slow=6.9,SNR=5.8
MA2                                 LR      LR      04 18 32.9
      comp=Z,93nm,21.5s,baz=176,slow=31
VNDA  Vanda              71.52 177  P       P       03 55 39.4 +1.1
      comp=Z,3.9nm,0.8s,baz=320,slow=5.9,SNR=19
VNDA  Vanda              71.52 177  P       P       03 55 39.3 +1.1
VNDA                                IAmb    IAmb    03 55 41.2
      comp=Z,4.6nm,0.8s
WMQ   Urumqi             73.25 319 eP       P       03 55 50.8 +1.6
WMQ                                 pmax    pmax
      comp=Z,11nm,1.1s
WMQ                                 pmax    pmax
      comp=Z,56nm,7.3s
MK31  Makanchi Array     77.96 320  P       P       03 56 15.4 -0.6
MK31                                IAmb    IAmb    03 56 26.2
      comp=Z,5.0nm,1.4s
MKAR  Makanchi Array     77.96 320  P       P       03 56 15.2 -0.8
      comp=Z,2.9nm,0.9s,baz=103,slow=7.1,SNR=24
MAKZ  Makanchi           78.17 320  P       P       03 56 16.2 -0.9
MAKZ                                IAmb    IAmb    03 56 17.7
      comp=Z,3.5nm,0.8s
ZALV  Zalesovo Beam      79.48 328  P       P       03 56 22.3 -1.8
      comp=Z,5.0nm,0.6s,baz=107,slow=5.8,SNR=17
ZALV  Zalesovo Beam      79.48 328  P       P       03 56 22.7 -1.5
NIL   Nilore             80.36 306  P       P       03 56 28.9 -0.6
NIL                                 IAmb    IAmb    03 56 30.4
      comp=Z,10nm,0.9s
KURK  Kurchatov          81.67 323  P       P       03 56 35.2 -0.7
MAW   Mawson             82.00 203  P       P       03 56 37.7 +0.3
      comp=Z,4.3nm,0.9s,baz=53,slow=6.0,SNR=4.1
RDOG  Red Dog Mine       82.03  17  P       P       03 56 38.4 +0.9
RDOG                                IAmb    IAmb    03 56 40.1
      comp=Z,4.9nm,1.0s
QSPA  South Pole Qui     83.59 180  P       P       03 56 46.5 +0.7
QSPA                                IAmb    IAmb    03 56 48.1
      comp=Z,9.6nm,0.8s
RND   Reindeer           84.36  24  P       P       03 56 48.9 -0.8
KK31  Karatay Array      84.75 314  P       P       03 56 50.9 -1.1
KKAR  Karatay Array      84.75 314  P       P       03 56 51.6 -0.4
KKAR  Karatay Array      84.75 314  P       P       03 56 50.9 -1.1
KKAR                                IAmb    IAmb    03 57 09.6
      comp=Z,2.6nm,1.1s
ILAR  Eielson Array      85.73  23  P       P       03 56 56.5  0.0
      comp=Z,2.0nm,0.7s,baz=248,slow=4.8,SNR=20
ILAR                                LR      LR      04 31 31.3
      comp=Z,52nm,19.5s,baz=247,slow=33
A21K  Barrow             85.76  16  P       P       03 56 56.7 +0.3
A21K                                IAmb    IAmb    03 57 02.5
      comp=Z,6.1nm,0.8s
ABKAR Akbulak array      93.04 319  P       P       03 57 30.1 -1.2
ABKAR Akbulak array      93.04 319  P       P       03 57 29.4 -1.9
ABKAR                               IAmb    IAmb    03 57 35.4
      comp=Z,4.6nm,1.5s
BELA  Belgrano 2         95.86 180  P       P       03 57 43.0 -0.7
NVAR  Mina Array Bea     97.39  52  LR      LR      04 37 34.5
      comp=Z,49nm,18.0s,baz=339,slow=33
YKA   Yellowknife Ar     99.39  28  LR      LR      04 44 16.7
      comp=Z,23nm,18.4s,baz=0.0,slow=36
H03S2 Juan Fernandez    120.76 136  T       T       06 16 31.0
      baz=179,slow=74,SNR=8.6
H03S1 Juan Fernandez    120.77 136  T       T       06 16 31.0
      baz=241,slow=74,SNR=8.5
H03S3 Juan Fernandez    120.78 136  T       T       06 16 29.8
      SNR=8.7
GERES GERESS Array B    122.37 325  PKP     PKiKP   04 03 14.3 +1.1
      comp=Z,0.3nm,0.3s,baz=104,slow=22,SNR=2.4
SDV   Santo Domingo     142.36  84  PKP     PKPdf   04 03 52.9 +1.3
      comp=Z,5.7nm,0.7s,baz=298,slow=3.8,SNR=7.5
TORD  Torodi Ar. Bea    145.44 284  PKPbc   PKPab   04 03 58.3 +1.4
      comp=Z,35nm,0.9s,baz=79,slow=3.7,SNR=97
TORD  Torodi Ar. Bea    145.44 284          PKPab   04 03 57.4 +0.5
KIC   Kosan Boka        152.18 272 ePKP1    PKiKP   04 04 15.3 +0.7
      comp=Z,19nm,0.9s
DBIC  Dimbokro          152.31 272  PKPbc   PKiKP   04 04 14.8  0.0
      comp=Z,6.8nm,0.8s,baz=82,slow=4.0,SNR=8.4
DBIC  Dimbokro          152.31 272          PKiKP   04 04 15.7 +0.8
LIC   Lamto             152.46 271 ePKP1    PKiKP   04 04 16.0 +0.8
      comp=Z,33nm,1.1s
TIC   Toumodi           152.47 272 ePKP1    PKiKP   04 04 16.0 +0.8
BDFB  Brasilia          153.39 145  PKPbc   PKiKP   04 04 17.5 +0.4
      comp=Z,3.9nm,0.7s,baz=224,slow=3.6,SNR=6.2
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*UCR **12** 03:45:53.7±1.6, 12°.64N×88°.33W, h24^{km}±6^{km}, ML4.6, MW4.6, mb4.6(NEIC)*

*INET **12** 03:45:54.3, 13°.79N×87°.40W, h58^{km}, MW4.0*

*IDC **12** 03:45:54.2±0.6, 12°.85N×88°.03W, h77^{km}±5^{km}, mb4.1/17, mb1 4.3/21, mb1mx4.1/38, mbtmp4.4/21, MS3.6/13, Ms1 3.6/13, ms1mx3.4/39, Error ellipse: s-maj=20.9km s-min=8.8km az=54.0*

*SNET **12** 03:45:54.2±1.1, 12°.67N×88°.38W, h18^{km}±3^{km}, ML4.7*

*NEIC **12** 03:45:55.3±3.0, 12°.81N±0°.06×88°.12W±0°.05, h81^{km}±6^{km}, mb4.6/303, Md4.7(SNET), Error ellipse: s-maj=10.3km s-min=5.7km az=213.0*

*GCG **12** 03:46:03.3±3.4, 13°.39N×88°.71W, h0^{km}±999^{km}, MD4.4*

ISC 12 03:45:54.1±0.5, 12°.73N±0°.05×88°.18W±0°.04, h76^{km}±4^{km}, n535, σ1^{s}.05/468, mb4.6/144, 6D, Off coast of central America

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Code  Station Name          Δ°  AZ°   Phase ID            Time     Res
                                    Op      ISC       h  m  s    ISC
LCND  La Caada            0.64  26 eP       Pn      03 46 07.8 -1.1
LCND                               eS       Sn      03 46 19.5 -0.3
LCND                                IAML            03 46 22.4
      comp=Z,60µm,0.4s
LCND  La Caada            0.64  26 eP       Pn      03 46 07.8 -1.1
LCND                               eS       Sn      03 46 19.5 -0.3
LCND                                IAML            03 46 22.4
      comp=Z,60µm,0.4s
LCY   Lacayo              0.70 351⇓iP       Pn      03 46 08.6 -1.0
LCY   Lacayo              0.70 351⇓iP       Pn      03 46 08.6 -1.0
VSM   San Miguel          0.70 353⇓iP       Pn      03 46 08.8 -1.0
VSM   San Miguel          0.70 353⇓iP       Pn      03 46 08.8 -1.0
PACA  Pacayal             0.75 349 eP       Pn      03 46 09.4 -0.7
PACA                               eS       Sn      03 46 21.2 -0.8
PACA                                IAML            03 46 23.3
      comp=Z,9µm,0.2s
PACA  Pacayal             0.75 349 eP       Pn      03 46 09.4 -0.7
PACA                               eS       Sn      03 46 21.2 -0.8
PACA                                IAML            03 46 23.3
      comp=Z,9µm,0.2s
TECA  Tecapa              0.82 338⇓iP       Pn      03 46 10.0 -1.1
TECA  Tecapa              0.82 338⇓iP       Pn      03 46 10.0 -1.1
COEB  Comit de Eme        0.83 336 eP       Pn      03 46 10.0 -1.1
COEB                               eS       Sn      03 46 22.7 -1.0
COEB                                IAML            03 46 23.7
      comp=Z,26µm,0.5s
COEB  Comit de Eme        0.83 336 eP       Pn      03 46 10.0 -1.1
COEB                               eS       Sn      03 46 22.7 -1.0
COEB                                IAML            03 46 23.7
      comp=Z,26µm,0.5s
CRIN  San Cristobal       1.10  91          Pn      03 46 14.0 -0.4
CRIN                                Sn      Sn      03 46 29.5 +0.1
COEG  Centro de Oper      1.11 322 eP       Pn      03 46 13.5 -1.0
COEG                               eS       Sn      03 46 28.8 -0.9
COEG                                IAML            03 46 32.6
      comp=Z,23µm,0.4s
COEG  Centro de Oper      1.11 322 eP       Pn      03 46 13.5 -1.0
COEG                               eS       Sn      03 46 28.8 -0.9
COEG                                IAML            03 46 32.6
      comp=Z,23µm,0.4s
PAVA  Las Pavas           1.22 323 eP       Pn      03 46 15.2 -0.6
PAVA                               eS       Sn      03 46 32.6 +0.5
PAVA                                IAML            03 46 34.0
      comp=Z,26µm,0.5s
PAVA  Las Pavas           1.22 323 eP       Pn      03 46 15.2 -0.6
PAVA                               eS       Sn      03 46 32.6 +0.5
PAVA                                IAML            03 46 34.0
      comp=Z,26µm,0.5s
LBRS  Las Brisas          1.31 320 eP       Pn      03 46 16.6 -0.3
LBRS  Las Brisas          1.31 320 eP       Pn      03 46 16.6 -0.3
LALI  Alcalda de L        1.34 304 eP       Pn      03 46 15.9 -1.3
LALI                               eS       Sn      03 46 31.9 -2.7
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LALI	Alcalda de L	1.34	304	eP	Pn	03 46 15.9	-1.3
LALI				eS	Sn	03 46 31.9	-2.7
LFU	La Fuente	1.36	318	eP	Pn	03 46 17.6	0.0
LFU	La Fuente	1.36	318	eP	Pn	03 46 17.6	0.0
SNET	Serv Nac Est T	1.40	313	eP	Pn	03 46 17.7	-0.4
SNET				eS	Sn	03 46 34.8	-1.2
SNET				IAML		03 46 37.3	
	comp=Z,16µm,0.3s						
SNET	Serv Nac Est T	1.40	313	eP	Pn	03 46 17.7	-0.4
SNET				eS	Sn	03 46 34.8	-1.2
SNET				IAML		03 46 37.3	
	comp=Z,16µm,0.3s						
SNET	Serv Nac Est T	1.40	313	Pn	Pn	03 46 17.4	-0.6
SNET				Sn	Sn	03 46 35.0	-1.0
UEES	Universidad Ev	1.42	314	eP	Pn	03 46 18.1	-0.3
UEES				eS	Sn	03 46 35.9	-0.7
UEES				IAML		03 46 36.1	
	comp=Z,8µm,0.3s						
UEES	Universidad Ev	1.42	314	eP	Pn	03 46 18.1	-0.3
UEES				eS	Sn	03 46 35.9	-0.7
UEES				IAML		03 46 36.1	
	comp=Z,8µm,0.3s						
BOQS	Boqueron	1.46	313	eP	Pn	03 46 18.9	-0.1
BOQS	Boqueron	1.46	313	eP	Pn	03 46 18.9	-0.1
JAYA	Jayaque - finc	1.54	307	eP	Pn	03 46 18.8	-1.1
JAYA				eS	Sn	03 46 37.9	-1.6
JAYA	Jayaque - finc	1.54	307	eP	Pn	03 46 18.8	-1.1
JAYA				eS	Sn	03 46 37.9	-1.6
TGUH	Tegucigalpa,Un	1.59	34	Pn	Pn	03 46 20.8	+0.2
TGUH				Sn	Sn	03 46 41.2	+0.6
CEDA	San Andres	1.59	312	eP	Pn	03 46 20.3	-0.3
CEDA				eS	Sn	03 46 41.1	+0.6
CEDA				IAML		03 46 48.9	
	comp=Z,8µm,0.5s						
CEDA	San Andres	1.59	312	eP	Pn	03 46 20.3	-0.3
CEDA				eS	Sn	03 46 41.1	+0.6
CEDA				IAML		03 46 48.9	
	comp=Z,8µm,0.5s						
TACO	Tacachico	1.68	317	eP	Pn	03 46 21.5	-0.2
TACO				eS	Sn	03 46 42.7	+0.2
TACO				IAML		03 46 45.9	
	comp=Z,3µm,0.6s						
TACO	Tacachico	1.68	317	eP	Pn	03 46 21.5	-0.2
TACO				eS	Sn	03 46 42.7	+0.2
TACO				IAML		03 46 45.9	
	comp=Z,3µm,0.6s						
CEVE	Cerro Verde	1.78	308	eP	Pn	03 46 23.5	+0.3
CEVE				eS	Sn	03 46 45.1	-0.1
CEVE				IAML		03 46 47.9	
	comp=Z,11µm,0.4s						
CEVE	Cerro Verde	1.78	308	eP	Pn	03 46 23.5	+0.3
CEVE				eS	Sn	03 46 45.1	-0.1
CEVE				IAML		03 46 47.9	
	comp=Z,11µm,0.4s						
SBLS	San Blas	1.78	308	eP	Pn	03 46 23.6	+0.3
SBLS	San Blas	1.78	308	eP	Pn	03 46 23.6	+0.3
RTR	El Retiro	1.84	309	eP	Pn	03 46 24.3	+0.4
RTR	El Retiro	1.84	309	eP	Pn	03 46 24.3	+0.4
MTO3	Montecristo	2.02	325		Pn	03 46 26.2	-0.2
ESQI	Esquipulas	2.14	328	i P	Pn	03 46 28.4	+0.5
ESQI				eS	Sn	03 46 56.0	+2.3
ESQI	Esquipulas	2.14	328		Pn	03 46 28.2	+0.3
ESQI				Sn	Sn	03 46 55.5	+1.9
MRL	Marmol	2.75	328	eP	Pn	03 46 37.9	+1.5
NBG	Las Nubes	2.80	311	eP	Pn	03 46 38.8	+1.8
PCG	Pacaya	2.88	305	eP	Pn	03 46 40.0	+2.0
ACON	Acoyapa	3.04	104		Pn	03 46 39.0	-0.9
FUG	Fuego 3	3.10	304	eP	Pn	03 46 43.3	+2.3
ORTG	Ortega, Santa	3.56	131	eP	Pn	03 46 47.6	+0.5
PLVR	Palo Verde	3.65	130	eP	Pn	03 46 48.9	+0.5
DUNO	Dulce Nombre,	3.73	135	eP	Pn	03 46 49.5	+0.1
ESPN	Las Esperanzas	3.83	98	Pn	Pn	03 46 50.6	-0.1
RTAL	Retalhuleu	3.85	298		Pn	03 46 52.2	+1.1
JTS	Las Juntas de	3.99	127	P	Pn	03 46 53.3	+0.4
	comp=Z,9.8nm,0.3s,baz=173,slow=20,SNR=34						
JTS				S	Sn	03 47 33.5	-5.1
	baz=7.0,slow=20,SNR=0.8						
JTS	Las Juntas de	3.99	127	Pn	Pn	03 46 53.7	+0.7
ARE1	Arenal 1	4.08	123	eP	Pn	03 46 56.2	+2.0
HUEH	Huehuetenango	4.12	309	Pn	Pn	03 46 57.6	+2.6
LAFE	Finca La Fe, P	4.33	132	eP	Pn	03 46 57.8	+0.2
PETF	Flores	4.47	339	Pn	Pn	03 47 01.4	+2.0
JACO	JACO, Garabito	4.61	131	eP	Pn	03 47 02.9	+1.5
HDC	Heredia	4.82	124	eP	Pn	03 47 08.2	+3.8
HDC	Heredia	4.82	124	Pn	Pn	03 47 07.1	+2.7
LCR2	La Lucha 2	5.06	126	eP	Pn	03 47 09.8	+2.0
RIMA	Rio Macho	5.16	124	eP	Pn	03 47 11.5	+2.4
CCIG	Comitan	5.21	313	Pn	Pn	03 47 12.7	+2.9
EDLM	Las Mercedes	5.67	127	eP	Pn	03 47 17.8	+1.9
DRK0	Durika	5.95	125	eP	Pn	03 47 21.1	+1.3
EDPN	Palmar Norte	5.96	128	eP	Pn	03 47 22.0	+2.1
EDBA	Buenos Aires	5.98	126	eP	Pn	03 47 21.7	+1.5
RIOS	Rincon, Osa	6.09	131	eP	Pn	03 47 23.3	+1.7
PIRO	Carate, Puerto	6.42	132	eP	Pn	03 47 27.7	+1.6
TEIG	Tepich	7.45	359	Pn	Pn	03 47 42.2	+2.0
CMIG	Matias Romero	7.79	305	P	Pn	03 47 46.1	+1.2
	comp=Z,2.3nm,0.3s,baz=155,slow=11,SNR=25						
CMIG				S	Sn	03 49 07.6	-4.0
	comp=Z,0.6nm,0.3s,baz=154,slow=9.0,SNR=1.8						
FSCY	Frank Sound, G	9.38	45	Pn	Pn	03 48 10.2	+3.6
TLIG	Tlapa	11.12	297	Pn	Pn	03 48 33.1	+2.7
MTDJ	Mount Denham	11.62	61	Pn	Pn	03 48 40.3	+3.1
GTBY	Guantanamo Bay	14.44	59	P	P	03 49 19.9	+0.5
061Z	Ochoppi	14.75	27	P	P	03 49 25.3	+2.4
ROSC	El Rosal	15.78	119	P	P	03 49 32.3	-2.5
	comp=Z,1.1nm,0.3s,baz=175,slow=16,SNR=1.8						
ROSC	El Rosal	15.78	119		P	03 49 33.3	-1.5
SDV	Santo Domingo	17.65	101	P	P	03 49 54.4	-1.0
	comp=Z,1.0nm,0.3s,baz=287,slow=5.9,SNR=15						
SDV				LR	LR	03 57 12.4	
	comp=Z,153nm,19.5s,baz=261,slow=39						
SDV	Santo Domingo	17.65	101	P	P	03 49 54.5	-0.8
SDV	Santo Domingo	17.65	101	eP	P	03 49 55.2	-0.2
HKT	Hockley	18.55	339	P	Pn	03 50 06.1	+0.3
346A	Big Creek Wild	18.61	357	P	Pn	03 50 08.1	+1.6
346A				IAmb	IAmb	03 50 09.5	
	comp=Z,30nm,0.8s						
833A	Chaparral WMA,	18.71	328	P	Pn	03 50 08.0	+0.1
	baz=144,SNR=11						
833A	Chaparral WMA,	18.71	328	P	P	03 50 07.9	+1.2
833A				IAmb	IAmb	03 50 10.2	
	comp=Z,38nm,0.8s						
344A	Westbrook Farm	18.78	353	P	Pn	03 50 10.2	+1.6
344A				IAmb	IAmb	03 50 11.9	
	comp=Z,47nm,0.8s						
352A	Blakely	18.90	9	P	Pn	03 50 11.9	+1.8
342A	Flagon Creek P	18.94	349	P	Pn	03 50 12.0	+1.4
342A				IAmb	IAmb	03 50 18.6	
	comp=Z,31nm,0.8s						
TIGA	Tifton	19.09	12	P	Pn	03 50 13.3	+0.9
	baz=194						
TIGA	Tifton	19.09	12	P	Pn	03 50 14.0	+1.6
VBMS	Vicksburg	19.51	354	P	Pn	03 50 18.1	+0.7
	baz=173						
VBMS	Vicksburg	19.51	354	P	Pn	03 50 18.0	+0.7
146A	Union	19.83	358	IAmb	IAmb	03 50 21.8	
	comp=Z,36nm,0.8s						
NATX	Nacogdoches	19.86	344	P	Pn	03 50 20.9	-0.4
	baz=161						
435B	Jarrell	19.95	336	P	P	03 50 20.6	+0.4
	baz=152						
435B	Jarrell	19.95	336	P	P	03 50 20.4	+0.2
435B				IAmb	IAmb	03 50 35.8	
	comp=Z,30nm,1.1s						
152A	Waverly Hall	20.10	9		Pn	03 50 23.8	-0.4
152A				IAmb	IAmb	03 50 27.8	
	comp=Z,27nm,0.7s						
143A	Socs Landing,	20.10	352	IAmb	IAmb	03 50 26.1	
	comp=Z,20nm,0.8s						
LRAL	Lakeview Retre	20.24	3	P	Pn	03 50 25.2	-0.6
	baz=183,SNR=7.9						
LRAL	Lakeview Retre	20.24	3	P	Pn	03 50 26.1	+0.2
Z47A	Carrollton	20.37	0	IAmb	IAmb	03 50 32.0	
	comp=Z,30nm,1.1s						
JCT	Junction City	20.68	330	P	P	03 50 28.4	+0.4
	baz=146						
JCT	Junction City	20.68	330	P	P	03 50 27.6	-0.4
Z51A	Franklin	20.68	7	IAmb	IAmb	03 50 32.7	
	comp=Z,24nm,0.9s						
Z41A	Richland Creek	20.86	349	P	P	03 50 31.7	+1.8
	baz=167,SNR=7.8						
WHTX	Lake Whitney,	20.98	338	P	P	03 50 31.7	+0.5
WHTX				IAmb	IAmb	03 50 50.8	
	comp=Z,66nm,1.4s						
GOGA	Godfrey	21.03	11	P	P	03 50 33.1	+1.3
	baz=193,SNR=10						
GOGA	Godfrey	21.03	11	P	P	03 50 33.9	+2.1
GOGA				IAmb	IAmb	03 50 35.9	
	comp=Z,23nm,0.7s						
Y45A	Yeager Farm, C	21.07	357	IAmb	IAmb	03 50 54.6	
	comp=Z,40nm,1.1s						
Y52A	Lilburn	21.37	9	IAmb	IAmb	03 50 39.2	
	comp=Z,27nm,0.7s						
Z56A	Williston	21.42	16	P	P	03 50 36.9	+0.9
	baz=198,SNR=6.9						
Z56A	Williston	21.42	16	P	P	03 50 39.4	+3.5
OXF	Oxford	21.71	357	P	P	03 50 39.6	+0.5
	baz=177						
OXF	Oxford	21.71	357	IAmb	IAmb	03 50 59.4	
	comp=Z,35nm,1.1s						
FPAL	Fort Paine	21.84	6	P	P	03 50 40.0	-0.5
SJG	San Juan	21.89	73	P	P	03 50 40.5	-0.6
	comp=Z,5.3nm,0.3s,baz=250,slow=9.9,SNR=5.3						
SJG				LR	LR	03 59 29.6	
	comp=Z,124nm,20.6s,baz=257,slow=38						
TXAR	Lajitas Array	21.91	321	P	P	03 50 42.4	+1.1
	comp=Z,13nm,0.6s,baz=137,slow=10,SNR=189						
TXAR				pP	pP	03 50 57.6	+0.6
	comp=Z,4.9nm,0.8s,baz=140,slow=12,SNR=5.0						
TXAR				PcP	PcP	03 54 38.5	+0.5
	comp=Z,0.7nm,0.7s,baz=131,slow=4.1,SNR=3.7						
TXAR				ScP	ScP	03 58 10.4	+1.6
	comp=Z,0.7nm,0.7s,baz=146,slow=7.6,SNR=3.5						
TX32	Lajitas Array	21.91	321	IAmb	IAmb	03 50 45.0	
	comp=Z,17nm,0.8s						
ATAH	Atahualpa	22.00	153	P	P	03 50 45.1	+2.3
	comp=Z,4.2nm,0.8s,baz=325,slow=0.8,SNR=4.6						
ATAH				LR	LR	03 58 43.8	
	comp=Z,59nm,18.2s,baz=346,slow=35						
X40A	Basin Creek Fa	22.07	350	P	P	03 50 43.9	+1.1
	baz=168						
Z35A	Perchaven, San	22.12	339	IAmb	IAmb	03 50 48.1	
	comp=Z,18nm,0.8s						
PLAL	Pickwick Lake	22.15	0	P	P	03 50 43.6	-0.2
MIAR	Mount Ida	22.26	348	P	P	03 50 45.8	+0.8
	baz=166,SNR=26						
MIAR	Mount Ida	22.26	348	P	P	03 50 45.5	+0.5
Y57A	Sumter	22.35	17	P	P	03 50 46.3	+0.5
	baz=200,SNR=7.4						
JSC	Jenkinsville	22.36	15	IAmb	IAmb	03 50 48.7	
	comp=Z,26nm,0.9s						
ABTX	Abilene, Hawle	22.41	334	P	P	03 50 47.4	+0.7
	baz=149,SNR=7.3						
Y58A	Scranton	22.46	19	P	P	03 50 47.0	0.0
	baz=202						
W52A	Murphy	22.59	9	IAmb	IAmb	03 50 52.0	
	comp=Z,11nm,0.6s						
X56A	White Oak	22.62	16	P	P	03 50 48.6	-0.1
	baz=198,SNR=8.6						
W41B	Gary Mavity, V	22.64	351	P	P	03 50 49.3	+0.3
	baz=170,SNR=11						
W41B	Gary Mavity, V	22.64	351	IAmb	IAmb	03 50 50.5	
	comp=Z,18nm,0.8s						
BG3	Lake Jocassee	22.67	11	P	P	03 50 50.4	+1.0
BG3				IAmb	IAmb	03 50 51.6	
	comp=Z,23nm,1.1s						
X37A	Clayton	22.72	344	IAmb	IAmb	03 51 14.5	
	comp=Z,44nm,1.2s						
WHAR	Wooly Hollow	22.77	351	IAmb	IAmb	03 50 51.7	
	comp=Z,28nm,0.8s						
Y59A	Loris	22.80	20	P	P	03 50 50.3	-0.3
	baz=204						
X57A	Johnson Farm,	22.85	17	P	P	03 50 50.0	-1.1
	baz=200						
LPAR	Lepanto	22.85	356	P	P	03 50 51.6	+0.4
W39A	Magazine	22.93	348	P	P	03 50 52.7	+0.7
	baz=166,SNR=18						
W39A	Magazine	22.93	348	P	P	03 50 53.0	+1.0
W39A				IAmb	IAmb	03 50 54.5	
	comp=Z,27nm,0.8s						
KMSC	Kings Mountain	23.16	14	P	P	03 50 54.8	+0.6
	baz=197,SNR=15						
X58A	Rowland	23.16	19	P	P	03 50 54.0	-0.3
	baz=202						
X58A	Rowland	23.16	19	IAmb	IAmb	03 50 55.7	
	comp=Z,24nm,0.8s						
TKL	Tuckaleechee C	23.17	9	P	P	03 50 54.2	-0.1
	comp=Z,30nm,0.8s,baz=189,slow=11,SNR=24						
TKL				LR	LR	04 01 48.9	
	comp=Z,32nm,18.1s,baz=170,slow=41						
PCRV	Puerto La Cruz	23.21	94	P	P	03 50 53.8	-1.2
	comp=Z,21nm,1.0s,baz=204,slow=3.3,SNR=3.7						
WVT	Waverly	23.30	1	P	P	03 50 55.1	-0.4
	baz=181						
WVT	Waverly	23.30	1	P	P	03 50 56.1	+0.6
SLBS	Sierra La Lagu	23.33	301	P	P	03 50 59.4	+3.3
W56A	Indian Trail	23.34	16	P	P	03 50 56.5	+0.6
	baz=199,SNR=5.5						
V53A	Saluda	23.35	11	IAmb	IAmb	03 51 01.9	
	comp=Z,25nm,1.0s						
V52A	Sevierville	23.38	9	IAmb	IAmb	03 50 58.1	
	comp=Z,24nm,1.1s						
W57A	Gilead	23.52	17	P	P	03 50 57.8	+0.3
	baz=200,SNR=6.2						
W57A	Gilead	23.52	17	IAmb	IAmb	03 50 59.1	
	comp=Z,32nm,0.8s						
W58A	Raeford	23.63	19	P	P	03 50 58.9	+0.5
	baz=202,SNR=7.9						
X60A	Albert Glenn T	23.64	21	P	P	03 50 58.6	0.0
	baz=205						
U49A	Red Boiling Sp	23.78	5	IAmb	IAmb	03 51 01.4	
	comp=Z,33nm,1.4s						
U40A	Yellville	23.90	351	P	P	03 51 01.0	+0.1
	baz=169,SNR=17						
U40A	Yellville	23.90	351	P	P	03 51 00.9	0.0
U40A				IAmb	IAmb	03 51 03.3	
	comp=Z,18nm,0.7s						
WMOK	Wichita Mounta	23.93	338	P	P	03 51 01.1	-0.1
	baz=154,SNR=13						
V56A	Mocksville	24.00	16	P	P	03 51 01.3	-0.6
	baz=198,SNR=6.3						
HHAR	Hobbs	24.02	349	IAmb	IAmb	03 51 04.1	
	comp=Z,22nm,0.6s						
PBMO	Poplar Bluff	24.03	356	IAmb	IAmb	03 51 03.3	
	comp=Z,19nm,0.7s						
TZTN	Tazewell	24.07	9	P	P	03 51 02.6	+0.1
	baz=191						
TZTN	Tazewell	24.07	9	IAmb	IAmb	03 51 06.5	
	comp=Z,19nm,0.9s						
TUL1	Leonard	24.08	345	P	P	03 51 02.4	-0.1
	baz=161,SNR=7.4						
TUL1	Leonard	24.08	345	IAmb	IAmb	03 51 05.0	
	comp=Z,20nm,0.8s						
W60A	Pink Hill	24.16	21	P	P	03 51 02.8	-0.5
	baz=206						
OK025	Westminster Rd	24.21	342	IAmb	IAmb	03 51 23.6	
	comp=Z,27nm,1.1s						
U38A	Gravette	24.26	348	P	P	03 51 05.5	+1.3
U38A				IAmb	IAmb	03 51 06.3	
	comp=Z,19nm,0.8s						
CNNC	Cliffs of the	24.27	21	P	P	03 51 03.7	-0.6
	baz=205						
V57A	Coltrane Farms	24.27	17	P	P	03 51 04.2	-0.1
	baz=200,SNR=12						
OK030	Cody Creek RV	24.36	343	IAmb	IAmb	03 51 05.7	
	comp=Z,28nm,0.7s						
U54A	Nelsons Funny	24.37	12	P	P	03 51 05.9	+0.7
	baz=195,SNR=16						
V58A	Windy Hill, Pi	24.38	18	P	P	03 51 05.7	+0.4
	baz=202,SNR=19						
OK031	S. Brethren Rd	24.40	343	P	P	03 51 04.5	-1.0
U56A	King	24.54	15	P	P	03 51 07.1	+0.3
	baz=198						
U56A	King	24.54	15	IAmb	IAmb	03 51 10.5	
	comp=Z,31nm,1.0s						
V59A	Middlesex	24.63	20	P	P	03 51 07.8	+0.3
	baz=204						
MNTX	Cornudas Mount	24.63	323	P	P	03 51 07.8	+0.2
	baz=136,SNR=14						
MNTX	Cornudas Mount	24.63	323	P	P	03 51 07.0	-0.6
S44A	Carbondale	24.88	358	IAmb	IAmb	03 51 10.8	
	comp=Z,26nm,1.1s						
SIUC	Southern Illin	24.90	358	IAmb	IAmb	03 51 10.9	
	comp=Z,28nm,1.1s						
U57A	Blanch	24.91	17	P	P	03 51 10.6	+0.5
	baz=201,SNR=8.4						
V60A	Jim Taylor Roa	24.96	21	P	P	03 51 10.8	+0.2
	baz=206						
V60A	Jim Taylor Roa	24.96	21	IAmb	IAmb	03 51 12.6	
	comp=Z,29nm,0.9s						
MSTX	Muleshoe	24.97	330	P	P	03 51 10.9	+0.1
	baz=144,SNR=21						
MSTX	Muleshoe	24.97	330	P	P	03 51 11.0	+0.2
U58A	Oxford	25.11	19	P	P	03 51 12.1	+0.2
	baz=202,SNR=7.1						
AMTX	Amarillo	25.22	333	P	P	03 51 13.7	+0.7
	baz=148						
AMTX	Amarillo	25.22	333	IAmb	IAmb	03 51 36.4	
	comp=Z,14nm,0.7s						
V61A	Roper	25.23	23	P	P	03 51 13.0	0.0
	baz=207						
T56A	Rocky Mt	25.27	15	P	P	03 51 14.1	+0.7
	baz=199						
U59A	Littleton	25.31	20	P	P	03 51 14.1	+0.4
	baz=204						
U59A	Littleton	25.31	20	IAmb	IAmb	03 51 15.1	
	comp=Z,21nm,1.0s						
BLA	Blacksburg	25.35	15	P	P	03 51 14.7	+0.6
	baz=198,SNR=5.9						
BLA	Blacksburg	25.35	15	IAmb	IAmb	03 51 16.2	
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	25.37	354	P	P	03 51 13.8	-0.4
	baz=173						
CCM	Cathedral Cave	25.37	354	P	P	03 51 12.8	-1.4
CCM				IAmb	IAmb	03 51 14.6	
	comp=Z,15nm,0.7s						
WCI	Wyandotte Cave	25.45	3	P	P	03 51 14.7	-0.3
	baz=184						
WCI	Wyandotte Cave	25.45	3	P	P	03 51 13.8	-1.1
WCI				IAmb	IAmb	03 51 16.4	
	comp=Z,18nm,0.7s						
T57A	Hurt	25.46	17	P	P	03 51 15.6	+0.5
	baz=200,SNR=6.1						
T57A	Hurt	25.46	17	IAmb	IAmb	03 51 17.0	
	comp=Z,17nm,0.8s						
U32A	Winter Ranch,	25.48	339	IAmb	IAmb	03 51 16.7	
	comp=Z,24nm,0.8s						
CZSB	Cruzeiro do Su	25.49	142	eP	P	03 51 16.8	+1.2
T58A	Grand View Acr	25.62	18	P	P	03 51 16.7	+0.2
	baz=202						
U60A	Pendleton	25.63	21	P	P	03 51 16.7	0.0
	baz=205						
S54A	Dingess, Beckl	25.71	13	P	P	03 51 17.4	0.0
	baz=195						
OLIL	Olney	25.90	0	P	P	03 51 18.3	-0.7
OLIL				IAmb	IAmb	03 51 19.9	
	comp=Z,24nm,1.1s						
T59A	Double "B" Far	25.95	20	P	P	03 51 19.7	+0.2
	baz=204						
T59A	Double "B" Far	25.95	20	IAmb	IAmb	03 51 20.9	
	comp=Z,16nm,0.9s						
S56A	Natural Bridge	26.01	16	P	P	03 51 20.0	0.0
	baz=199						
Q44A	Meyer Farm, Va	26.08	359	IAmb	IAmb	03 51 21.2	
	comp=Z,22nm,0.8s						
R54A	Victor	26.14	13	P	P	03 51 21.4	+0.1
	baz=196						
S57A	Dark Hollow, R	26.25	17	P	P	03 51 22.2	0.0
	baz=201						
S58A	Poland Farm, P	26.38	18	P	P	03 51 23.7	+0.3
	baz=203						
T60A	Surry	26.38	21	P	P	03 51 23.4	0.0
	baz=206						
R55A	Marlinton	26.44	14	P	P	03 51 24.6	+0.5
	baz=198,SNR=7.4						
Q51A	Peebles	26.54	8	IAmb	IAmb	03 51 26.2	
	comp=Z,24nm,0.8s						
Q52A	Bidwell	26.65	10	P	P	03 51 25.0	-0.8
Q52A				IAmb	IAmb	03 51 26.8	
	comp=Z,27nm,1.2s						
121A	Cookes Peak, D	26.66	321	P	P	03 51 27.7	+1.5
	baz=133						
Q53A	Leroy	26.68	12	P	P	03 51 26.5	+0.3
	baz=194						
R56A	Bull Pasture M	26.74	15	P	P	03 51 27.5	+0.8
	baz=199						
R58B	Mineral	26.76	18	P	P	03 51 26.7	0.0
	baz=203						
S59A	Mechanicsville	26.76	19	P	P	03 51 26.7	0.0
	baz=204						
P49A	Miami Univ. Ec	26.87	6	P	P	03 51 26.8	-1.0
	baz=187						
R57A	Stanardsville	26.88	17	P	P	03 51 28.2	+0.3
	baz=201,SNR=10						
S60A	Water View	26.92	20	P	P	03 51 28.8	+0.6
	baz=205						
Q54A	Coxs Mills	26.95	13	P	P	03 51 28.1	-0.4
Q54A				IAmb	IAmb	03 51 29.7	
	comp=Z,19nm,0.7s						
R58A	Rapidan	27.03	18	P	P	03 51 29.6	+0.4
	baz=202						
CBN	Corbin Frederi	27.14	19	P	P	03 51 30.9	+0.8
	baz=204						
P38A	Dawn	27.20	351	IAmb	IAmb	03 51 31.5	
	comp=Z,20nm,0.8s						
R59A	King George, V	27.21	19	P	P	03 51 31.4	+0.6
	baz=204,SNR=5.9						
S61A	Accomac	27.24	22	P	P	03 51 31.3	+0.1
	baz=207						
R32A	Long Quarter,	27.25	342	IAmb	IAmb	03 51 31.8	
	comp=Z,9.1nm,0.6s						
KSU1	Kansas State U	27.31	346	P	P	03 51 31.9	+0.2
	baz=162						
O44A	Mansfield	27.32	360	IAmb	IAmb	03 51 31.7	
	comp=Z,13nm,0.6s						
P53A	Whipple	27.32	12	P	P	03 51 32.0	+0.2
P53A				IAmb	IAmb	03 51 33.2	
	comp=Z,18nm,0.8s						
P52A	Corning	27.32	10	P	P	03 51 31.9	0.0
	baz=193						
P52A	Corning	27.32	10	IAmb	IAmb	03 51 34.7	
	comp=Z,11nm,0.8s						
Q56A	Snyder Ridge,	27.39	15	P	P	03 51 33.3	+0.8
	baz=199						
Q56A	Snyder Ridge,	27.39	15	IAmb	IAmb	03 51 36.5	
	comp=Z,16nm,0.8s						
R60A	Leonardtown, M	27.45	20	P	P	03 51 33.8	+0.9
	baz=205,SNR=5.2						
SFIN	Lafayette	27.56	2	P	P	03 51 32.8	-1.2
	baz=182						
O49A	Covington	27.56	6	IAmb	IAmb	03 51 34.0	
	comp=Z,14nm,0.9s						
Q57A	Strasburg	27.59	17	P	P	03 51 34.5	+0.2
	baz=201						
ANMO	Albuquerque	27.63	326	P	P	03 51 35.8	+1.0
	comp=Z,1.2nm,0.5s,baz=139,slow=10,SNR=7.9						
ANMO	Albuquerque	27.63	326	P	P	03 51 35.6	+0.8
	baz=139						
ANMO	Albuquerque	27.63	326	P	P	03 51 36.3	+1.4
Q58A	Fox Den Farm,	27.72	18	P	P	03 51 35.4	0.0
	baz=202						
ACSO	Alum Creek Sta	27.77	9	P	P	03 51 35.6	-0.3
	baz=191,SNR=6.5						
ACSO	Alum Creek Sta	27.77	9	IAmb	IAmb	03 51 36.5	
	comp=Z,20nm,0.8s						
MCWV	Mont Chateau	27.81	14	P	P	03 51 36.3	+0.1
	baz=198,SNR=5.0						
O52A	Adamsville	27.84	10	IAmb	IAmb	03 51 37.2	
	comp=Z,18nm,0.8s						
P56A	Dayton Farm, R	27.92	16	P	P	03 51 37.8	+0.6
	baz=200,SNR=5.1						
CBKS	Cedar Bluff	27.93	340	P	P	03 51 37.7	+0.4
	baz=155						
CBKS	Cedar Bluff	27.93	340	P	P	03 51 36.8	-0.6
CBKS				IAmb	IAmb	03 51 38.2	
	comp=Z,12nm,0.8s						
R61A	Willards	27.94	22	P	P	03 51 38.2	+0.8
	baz=207						
O53A	New Philadelph	28.09	11	P	P	03 51 38.6	-0.1
	baz=194						
O53A	New Philadelph	28.09	11	IAmb	IAmb	03 51 39.6	
	comp=Z,13nm,0.8s						
P57A	Homestead Farm	28.12	17	P	P	03 51 39.8	+0.8
	baz=201,SNR=8.0						
O54A	Avella	28.20	13	IAmb	IAmb	03 51 41.1	
	comp=Z,17nm,0.8s						
N49A	Columbus Grove	28.30	6	IAmb	IAmb	03 51 41.5	
	comp=Z,17nm,0.9s						
T25A	Trinidad	28.32	332	P	P	03 51 42.5	+1.5
	baz=145,SNR=7.8						
P58A	Pank, Wackersv	28.34	18	P	P	03 51 41.4	+0.6
	baz=203,SNR=6.1						
SDMD	Soldier’s Deli	28.41	19	P	P	03 51 41.8	+0.3
TUC	Tucson	28.45	317	P	P	03 51 46.0	+3.9
N53A	Lisbon	28.70	12	IAmb	IAmb	03 51 45.7	
	comp=Z,9.8nm,0.6s						
O56A	Blue Knob Stat	28.71	15	P	P	03 51 44.2	0.0
	baz=200						
P59A	Jarrettsville	28.72	19	P	P	03 51 44.0	-0.3

	baz=204						
O57A	Amberson	28.91	17	P	P	03 51 45.6	-0.3
	baz=202						
N54A	Moraine State	29.03	13	P	P	03 51 46.9	-0.1
	baz=196,SNR=5.8						
N54A	Moraine State	29.03	13	IAmb	IAmb	03 51 47.8	
	comp=Z,18nm,0.8s						
O58A	Lewisberry	29.03	18	P	P	03 51 47.6	+0.5
	baz=203						
KSCO	Kaye Shedlock’	29.14	336	P	P	03 51 48.9	+0.7
	baz=150						
KSCO	Kaye Shedlock’	29.14	336	IAmb	IAmb	03 51 49.7	
	comp=Z,8.0nm,0.7s						
P60A	Greenville	29.16	20	P	P	03 51 48.2	+0.1
	baz=206						
SSPA	Standing Stone	29.23	16	P	P	03 51 49.2	+0.4
	baz=201						
SSPA	Standing Stone	29.23	16	P	P	03 51 48.6	-0.2
SSPA				IAmb	IAmb	03 51 50.2	
	comp=Z,11nm,0.8s						
SDCO	Great Sand Dun	29.32	331	P	P	03 51 51.2	+1.2
	baz=144,SNR=13						
L40A	Anamosa	29.34	355	IAmb	IAmb	03 51 50.5	
	comp=Z,16nm,0.8s						
M53A	WI Miller and	29.34	12	P	P	03 51 49.8	0.0
	baz=195						
N56A	West Decatur	29.39	15	P	P	03 51 50.3	+0.1
	baz=200,SNR=5.3						
O59A	Robesonia	29.43	19	P	P	03 51 50.9	+0.3
	baz=204						
N57A	Milroy	29.44	17	P	P	03 51 50.8	+0.1
	baz=201						
M54A	Oil Creek Stat	29.62	13	P	P	03 51 51.9	-0.4
	baz=197,SNR=5.1						
M54A	Oil Creek Stat	29.62	13	IAmb	IAmb	03 51 53.7	
	comp=Z,15nm,0.8s						
O60A	Telford	29.69	20	P	P	03 51 52.8	0.0
	baz=206						
AAM	Ann Arbor	29.72	7	P	P	03 51 52.6	-0.5
	baz=189						
AAM	Ann Arbor	29.72	7	IAmb	IAmb	03 51 53.2	
	comp=Z,12nm,0.7s						
N58A	Sunbury	29.75	18	P	P	03 51 53.8	+0.3
	baz=203						
N58A	Sunbury	29.75	18	IAmb	IAmb	03 51 55.8	
	comp=Z,12nm,0.8s						
O61A	Allentown	29.78	21	P	P	03 51 53.5	-0.2
	baz=207						
M55A	Ridgway	29.79	14	IAmb	IAmb	03 51 54.5	
	comp=Z,10nm,0.8s						
M56A	Emporium	29.95	15	P	P	03 51 55.0	-0.2
	baz=200						
M56A	Emporium	29.95	15	IAmb	IAmb	03 51 55.6	
	comp=Z,11nm,0.9s						
LUPA	Lehigh Univers	29.95	20	IAmb	IAmb	03 51 56.8	
	comp=Z,15nm,0.7s						
S22A	4UR Ranch, Cre	29.96	330	P	P	03 51 56.8	+1.1
	baz=141,SNR=16						
S22A	4UR Ranch, Cre	29.96	330	P	P	03 51 57.0	+1.3
S22A				IAmb	IAmb	03 51 58.0	
	comp=Z,9.0nm,0.8s						
M57A	Sunshine Farm,	30.09	17	P	P	03 51 56.7	+0.3
	baz=202,SNR=5.2						
N59A	State Game Lan	30.11	19	P	P	03 51 57.2	+0.6
	baz=205,SNR=6.4						
N59A	State Game Lan	30.11	19	IAmb	IAmb	03 51 58.1	
	comp=Z,13nm,0.7s						
ERPA	Erie	30.13	12	P	P	03 51 56.6	-0.2
	baz=196						
N60A	Cedar Hill Far	30.29	20	P	P	03 51 58.3	+0.2
	baz=206						
M58A	Price’s Panora	30.32	18	P	P	03 51 58.5	+0.1
	baz=203						
MVCO	Mesa Verde	30.41	327	P	P	03 52 00.5	+0.8
	baz=138						
MVCO	Mesa Verde	30.41	327	P	P	03 51 60.0	+0.3
N61A	South Mountain	30.46	21	P	P	03 52 00.0	+0.4
	baz=207						
L56A	Greenwood	30.72	16	P	P	03 52 01.5	-0.6
	baz=200						
L57A	Andrews Acres	30.79	17	P	P	03 52 02.5	-0.1
	baz=202						
M59A	Waymart	30.79	19	P	P	03 52 02.8	+0.2
	baz=205,SNR=6.0						
PAL	Palisades	30.82	21	P	P	03 52 02.9	0.0
	baz=208						
M60A	Port Jervis	30.86	20	P	P	03 52 03.2	0.0
	baz=206						
WUAZ	Wupatki	30.87	321	P	P	03 52 04.9	+1.2
	baz=131						
ISCO	Idaho Springs	31.04	333	P	P	03 52 06.1	+0.9
	baz=145,SNR=5.8						
L58A	Harry Jones Me	31.12	18	P	P	03 52 05.3	-0.1
	baz=204						
I40A	Norwalk	31.12	357	IAmb	IAmb	03 52 06.2	
	comp=Z,10nm,0.9s						
M61A	Granite Spring	31.14	21	P	P	03 52 05.7	0.0
	baz=208						
SMCO	Snowmass	31.16	331	P	P	03 52 07.4	+1.1
SMCO				IAmb	IAmb	03 52 08.5	
	comp=Z,8.3nm,0.8s						
BINY	Binghamton	31.22	18	P	P	03 52 06.3	0.0
	baz=203						
ETMB	Extrema	31.27	135	*e*P	P	03 52 07.6	+0.5
PV02	Paradox Valley	31.28	328	IAmb	IAmb	03 52 09.8	
	comp=Z,12nm,1.3s						
K56A	Middlesex	31.31	16	P	P	03 52 07.3	+0.1
	baz=201						
PV03	Paradox Valley	31.38	328	IAmb	IAmb	03 52 10.2	
	comp=Z,10nm,0.7s						
PV12	Saucer Basin,	31.40	328	P	P	03 52 09.5	+1.3
PV18	Skein Mesa, Pa	31.40	328	IAmb	IAmb	03 52 10.4	
	comp=Z,13nm,0.7s						
PV16	Nyswonger Mesa	31.45	328	IAmb	IAmb	03 52 10.8	
	comp=Z,9.8nm,0.7s						
PV19	Morning Glory	31.49	328	IAmb	IAmb	03 52 11.0	
	comp=Z,9.8nm,0.7s						
I37A	Lemond, Waseca	31.50	353	IAmb	IAmb	03 52 10.5	
	comp=Z,15nm,1.1s						
L59A	Walton	31.50	19	P	P	03 52 08.9	0.0
	baz=205						
L59A	Walton	31.50	19	P	P	03 52 08.7	-0.1
L59A				IAmb	IAmb	03 52 10.0	
	comp=Z,11nm,0.8s						
PV20	West Nyswonger	31.50	328	IAmb	IAmb	03 52 11.1	
	comp=Z,9.1nm,0.7s						
K57A	Scipio Center	31.56	17	P	P	03 52 09.3	0.0
	baz=202						
PV14	Lion Creek, Pa	31.56	328	IAmb	IAmb	03 52 11.6	
	comp=Z,9.6nm,0.7s						
PV22	Blue Mesa, Par	31.56	328	IAmb	IAmb	03 52 11.8	
	comp=Z,7.0nm,0.8s						
I51A	Listowel	31.57	10	P	P	03 52 09.1	-0.3
	baz=193						
L60A	Shokan	31.58	20	P	P	03 52 09.2	-0.4
	baz=207						
PV23	Carpenter Ridg	31.61	328	IAmb	IAmb	03 52 12.6	
	comp=Z,12nm,0.8s						
ECSD	EROS Data Cent	31.73	348	P	P	03 52 10.7	-0.2
	baz=164						
ECSD	EROS Data Cent	31.73	348	P	P	03 52 09.8	-1.1
ECSD				IAmb	IAmb	03 52 33.0	
	comp=Z,11nm,1.1s						
K58A	Earlville	31.84	18	P	P	03 52 11.3	-0.5
	baz=204						
M63A	Gales Ferry	31.86	23	P	P	03 52 12.4	+0.4
	baz=211						
PDMCI	Parker Dam,Lak	31.89	317	P	P	03 52 13.5	+1.2
	baz=126						
J56A	Wolcott	31.97	16	P	P	03 52 12.9	0.0
	baz=201						
N23A	Red Feather La	32.09	334	P	P	03 52 14.7	+0.3
	baz=146						
N23A	Red Feather La	32.09	334	IAmb	IAmb	03 52 19.4	
	comp=Z,13nm,1.4s						
BC3	Big Chuckawall	32.42	315	P	P	03 52 17.7	+0.6
	baz=123						
G40A	Rib Lake	32.47	357	IAmb	IAmb	03 52 17.0	
	comp=Z,8.2nm,0.9s						
J58A	Remsen	32.49	18	P	P	03 52 17.3	-0.2
	baz=204						
K61A	Williamstown	32.51	21	P	P	03 52 17.7	0.0
	baz=208						
O20A	White River Ci	32.51	331	P	P	03 52 19.3	+1.3
	baz=141,SNR=27						
L61B	Northampton	32.53	22	P	P	03 52 17.6	-0.2
	baz=209						
SPMN	Marine on St.	32.62	354	P	P	03 52 16.7	-1.9
H53A	Bobcaygeon	32.78	13	P	P	03 52 19.4	-0.6
	baz=197						
J59A	Piesco	32.82	19	P	P	03 52 21.8	+1.4
	baz=205						
SADO	Sadowa	32.85	12	P	P	03 52 19.5	-1.2
	comp=Z,7.7nm,0.6s,baz=222,slow=8.1,SNR=8.7						
SADO	Sadowa	32.85	12	IAmb	IAmb	03 52 20.5	
	comp=Z,8.7nm,0.6s						
SAML	Samuel	32.88	130	P	P	03 52 20.2	-1.0
SAML				IAmb	IAmb	03 52 21.2	
	comp=Z,9.4nm,1.1s						
BELC	Belle Mtn. Jos	32.98	315	P	P	03 52 22.8	+0.6
	baz=123						
LCMT	Little Creek M	32.99	321	P	P	03 52 23.7	+1.5
SZCU	Shurtz Canyon	33.28	322	P	P	03 52 25.5	+0.7
RWWY	Rawlins	33.28	334	IAmb	IAmb	03 52 27.0	
	comp=Z,10.0nm,0.8s						
F36A	Milaca	33.33	353	IAmb	IAmb	03 52 25.3	
	comp=Z,7.0nm,0.8s						
J62A	Henniker	33.52	22	P	P	03 52 27.0	+0.5
	baz=210						
I60A	Shoreham	33.55	20	P	P	03 52 25.7	-1.0
	baz=207						
MURC	Murrieta	33.61	313	P	P	03 52 28.7	+1.2
	baz=121						
G54A	Lake Saint Pet	33.67	13	P	P	03 52 27.3	-0.5
	baz=198						
HEC	Hector,Ludlow	33.67	316	P	P	03 52 28.7	+0.7
	baz=124						
E46A	Sault Ste Mari	33.69	5	P	P	03 52 29.1	+1.2
H58A	Gabriels	33.78	18	P	P	03 52 28.5	-0.3
	baz=205						
K22A	Casper	33.79	335	P	P	03 52 29.6	+0.5
	baz=146						
K22A	Casper	33.79	335	IAmb	IAmb	03 52 30.9	
	comp=Z,13nm,1.2s						
LONY	Lake Ozonia	33.84	18	P	P	03 52 28.7	-0.6
	baz=204						
E38A	The Farm, Brul	33.88	356	IAmb	IAmb	03 52 29.1	
	comp=Z,9.9nm,0.8s						
RSSD	Black Hills	34.12	339	P	P	03 52 32.9	+1.0
	baz=152						
RSSD	Black Hills	34.12	339	P	P	03 52 32.3	+0.4
RSSD				IAmb	IAmb	03 52 35.8	
	comp=Z,6.4nm,0.6s						
ALGO	Algonquin Park	34.21	13	P	P	03 52 31.6	-0.8
	baz=198						
I62A	Tamworth	34.25	22	P	P	03 52 33.1	+0.3
	baz=210						
JLU	Jordanelle	34.47	328	P	P	03 52 35.7	+0.7
TPNV	Topopah Spring	34.84	319	P	P	03 52 39.8	+1.6
	baz=126						
DUG	Dugway, Tooele	34.90	326	P	P	03 52 39.8	+1.2
	baz=135						
LRMC	Laurel Mtn Rad	34.95	315	P	P	03 52 40.5	+1.4
	baz=123						
FURC	Furnace Creek,	34.95	318	P	P	03 52 40.7	+1.7
	baz=125						
MPMC	Manual Prospec	35.14	316	P	P	03 52 42.0	+1.2
	baz=124						
BW06	Boulder Array	35.19	332	P	P	03 52 41.3	0.0
	baz=142,SNR=8.4						
BW06	Boulder Array	35.19	332	IAmb	IAmb	03 52 42.4	
	comp=Z,5.1nm,0.8s						
PD31	Pinedale Array	35.19	332	IAmb	IAmb	03 52 42.4	
	comp=Z,4.5nm,0.8s						
PDAR	Pinedale Array	35.19	332	P	P	03 52 41.5	+0.2
	comp=Z,4.0nm,0.6s,baz=126,slow=9.9,SNR=54						
PDAR				PcP	PcP	03 55 09.9	-1.0
	comp=Z,1.0nm,0.7s,baz=146,slow=4.9,SNR=5.3						
PDAR				pPcP		03 55 31.1	
	comp=Z,0.3nm,0.6s,baz=147,slow=3.0,SNR=3.7						
PDAR	Pinedale Array	35.19	332	P	P	03 52 41.2	0.0
EYMN	Ely	35.22	356	P	P	03 52 39.5	-1.6
	baz=174						
F59A	Saint Guilaume	35.50	19	P	P	03 52 44.4	+0.9
	baz=206						
GRAC	Grapevine Rang	35.59	318	P	P	03 52 46.3	+1.8
	baz=125						
G62A	West of Eustis	35.70	22	P	P	03 52 45.2	-0.1
	baz=210						
D55A	Sainte-Anne-du	35.81	15	P	P	03 52 45.9	-0.3
	baz=201						
B35A	Bob, Littlefor	35.82	354	IAmb	IAmb	03 52 47.2	
	comp=Z,4.6nm,0.8s						
E58A	La Victoria	35.82	18	P	P	03 52 45.9	-0.4
	baz=205						
PB16	IPOC Station P	35.95	149	P	P	03 52 50.1	+1.8
PB16				IAmb	IAmb	03 52 55.1	
	comp=Z,6.3nm,1.0s						
VES	Vestal, Richgr	36.11	315	P	P	03 52 50.5	+1.6
	baz=122						
H65A	Eastbrook	36.13	24	P	P	03 52 48.8	-0.1
	baz=214						
PKME	Peaks-Kenny Pk	36.20	23	P	P	03 52 49.5	+0.1
	baz=212						
REDW	Red Top Meadow	36.25	332	P	P	03 52 51.1	+0.8
MDND	Maddock	36.29	347	P	P	03 52 50.2	0.0
	baz=161						
MNMC	Minye Minye	36.58	150	P	P	03 52 55.6	+2.2
MNMC				IAmb	IAmb	03 52 58.9	
	comp=Z,8.7nm,0.9s						
H66A	Whiting	36.59	25	P	P	03 52 51.9	-0.9
	baz=216						
D58A	Chemin du LacG	36.59	18	P	P	03 52 52.7	-0.2
	baz=206						
ELK	Elko	36.62	325	LR	LR	04 09 34.9	
	comp=Z,90nm,18.9s,baz=127,slow=39						
FLWY	Flagg Ranch	36.74	333	P	P	03 52 55.1	+0.6
LATQ	La Tuque	36.88	17	P	P	03 52 54.5	-0.7
	baz=205,SNR=5.1						
LATQ	La Tuque	36.88	17	IAmb	IAmb	03 52 55.7	
	comp=Z,12nm,1.2s						
H17A	Grant Village	36.93	333	P	P	03 52 56.9	+0.8
	baz=142,SNR=9.5						
H17A	Grant Village	36.93	333	IAmb	IAmb	03 53 00.3	
	comp=Z,6.9nm,0.8s						
NV11	Mina Array Sit	36.93	319	P	P	03 52 57.6	+1.5
RLMT	Red Lodge	36.95	335	P	P	03 52 56.5	+0.3
	baz=144,SNR=13						
LKWY	Lake	36.98	333	IAmb	IAmb	03 52 59.2	
	comp=Z,6.2nm,0.7s						
NVAR	Mina Array Bea	37.02	319	P	P	03 52 57.5	+0.6
	comp=Z,3.0nm,0.8s,baz=131,slow=7.5,SNR=27						
NVAR				pP	pP	03 53 16.6	+1.5
	comp=Z,1.2nm,0.6s,baz=124,slow=8.2,SNR=4.5						
NVAR				PcP	PcP	03 55 17.6	+1.1
	comp=Z,3.3nm,0.6s,baz=137,slow=4.0,SNR=22						
NVAR				pPcP		03 55 38.0	
	comp=Z,4.1nm,0.7s,baz=139,slow=4.1,SNR=16						
NVAR				ScP	ScP	03 58 58.8	+1.9
	comp=Z,0.7nm,0.7s,baz=119,slow=4.9,SNR=3.7						
D60A	Saint Jean D’O	37.04	20	P	P	03 52 56.6	0.0
	baz=209						
LHV	Little Huntoon	37.05	319	IAmb	IAmb	03 53 00.3	
	comp=Z,5.1nm,0.7s						
LAO	LASA Array	37.11	339	P	P	03 52 57.6	+0.2
	baz=150						
LAO	LASA Array	37.11	339	IAmb	IAmb	03 53 18.9	
	comp=Z,7.7nm,0.8s						
GO01	Chusmiza	37.23	150	P	P	03 53 01.2	+2.1
GO01				IAmb	IAmb	03 53 27.0	
	comp=Z,4.4nm,0.7s						
LSQQ	Lebel-sur-Quev	37.39	12	P	P	03 52 59.2	-0.4
	baz=198						
E63A	Oxbow	37.50	23	P	P	03 53 00.5	-0.1
	baz=213						
VILB	Vilhena	37.70	132	*e*P	P	03 53 02.4	-0.2
E64A	Bridgewater	37.72	23	P	P	03 53 01.9	-0.6
	baz=214						
D62A	Allapoint, All	37.83	21	P	P	03 53 03.0	-0.3
	baz=211						
MATQ	Matagami	37.93	11	P	P	03 53 03.0	-1.1
	baz=197,SNR=5.5						
ULM	Lac du Bonnet	37.94	352	P	P	03 53 02.6	-1.6
	comp=Z,14nm,0.7s,baz=167,slow=8.4,SNR=38						
ULM				LR	LR	04 09 26.7	
	comp=Z,146nm,19.9s,baz=158,slow=37						
DGMT	Dagmar	38.04	343	P	P	03 53 05.5	+0.4
	baz=154,SNR=18						
DGMT	Dagmar	38.04	343	P	P	03 53 04.3	-0.8
NPGB	Novo Progresso	38.08	119	*e*P	P	03 53 06.3	+0.5
HLID	Hailey	38.13	329	P	P	03 53 06.9	+0.7
	baz=136,SNR=18						
HLID	Hailey	38.13	329	IAmb	IAmb	03 53 09.4	
	comp=Z,6.0nm,0.8s						
D63A	Stockholm	38.13	22	P	P	03 53 06.0	+0.1
	baz=213						
BOZ	Bozeman (W)	38.33	333	P	P	03 53 08.7	+0.9
	baz=141,SNR=25						
MFID	Camas Ranch	38.76	327	P	P	03 53 11.5	+0.1
SIV	San Ignacio	39.16	136	P	P	03 53 15.0	+0.2
	comp=Z,13nm,0.8s,baz=318,slow=7.9,SNR=71						
SIV				PcP	PcP	03 55 23.2	+0.1
	comp=Z,6.1nm,0.8s,baz=316,slow=3.4,SNR=11						
EGMT	Eagleton	39.52	337	P	P	03 53 18.0	+0.4
	baz=146,SNR=11						
WVOR	Wild Horse Val	39.66	324	P	P	03 53 19.2	+0.3
WVOR				IAmb	IAmb	03 53 22.0	
	comp=Z,7.0nm,1.1s						
MSO	Missoula	40.31	333	P	P	03 53 24.7	+0.5
	baz=139,SNR=7.4						
MSO	Missoula	40.31	333	IAmb	IAmb	03 53 25.6	
	comp=Z,11nm,0.8s						
O02D	Mt. Diablo Mer	40.88	318	P	P	03 53 28.6	-0.4
	baz=122						
WALA	Waterton Lakes	42.00	335	IAmb	IAmb	03 53 39.6	
	comp=Z,9.3nm,0.8s						
J04D	Umpqua Nationa	42.17	323	P	P	03 53 39.3	-0.3
	baz=126						
I04A	Tendick Farm,	42.67	323	P	P	03 53 43.5	0.0
	baz=126						
HAWA	Hanford	42.71	328	P	P	03 53 43.3	-0.4
NEW	Newport	42.82	332	P	P	03 53 44.3	-0.4
	baz=136,SNR=9.6						
D08A	Wollman Farm,	42.84	329	IAmb	IAmb	03 53 45.8	
	comp=Z,11nm,0.7s						
G05D	Wamic, OR	42.93	325	P	P	03 53 46.5	+1.0
	baz=128						
E07A	Sunnyside	42.99	328	P	P	03 53 46.1	+0.1
E07A				IAmb	IAmb	03 53 48.0	
	comp=Z,9.4nm,0.7s						
C09A	Chrisman Ranch	43.04	330	IAmb	IAmb	03 53 48.0	
	comp=Z,7.2nm,0.7s						
H04A	Detroit Lake	43.07	324	IAmb	IAmb	03 53 49.8	
	comp=Z,5.1nm,0.6s						
FFC	Flin Flon	43.28	348	P	P	03 53 47.4	-0.7
FFC				IAmb	IAmb	03 53 48.7	
	comp=Z,8.3nm,0.7s						
F05D	White Salmon	43.41	326	P	P	03 53 49.7	+0.4
	baz=129						
LTY	Liberty	43.87	328	IAmb	IAmb	03 53 54.1	
	comp=Z,5.8nm,0.7s						
SNDB	Serra Nova Dou	44.07	122	*e*P	P	03 53 54.9	-0.1
C06D	Leavenworth	44.42	329	P	P	03 53 57.9	+0.5
	baz=131						
B05A	Bryant	45.25	328	P	P	03 54 03.0	-0.9
	baz=130,SNR=5.2						
D03D	Eldon	45.31	327	P	P	03 54 04.1	-0.4
	baz=128						
ARAG	Araguaiana, MT	45.75	127	*e*P	P	03 54 07.8	-0.6
A04D	Lummi Island	45.86	328	P	P	03 54 08.6	-0.1
	baz=130,SNR=7.2						
AQDB	Aquidauana	45.93	136	*e*P	P	03 54 09.0	-0.7
PGC	Sidney	46.20	328	IAmb	IAmb	03 54 12.5	
	comp=Z,10.0nm,0.8s						
BDFB	Brasilia	48.73	124	P	P	03 54 30.2	-1.4
	comp=Z,1.1nm,0.5s,baz=293,slow=13,SNR=3.4						
BDFB				PcP	PcP	03 55 56.1	+0.3
	comp=Z,1.3nm,0.6s,baz=117,slow=1.3,SNR=3.9						
BDFB				LR	LR	04 17 19.4	
	comp=Z,30nm,19.4s,baz=70,slow=39						
BDFB	Brasilia	48.73	124	P	P	03 54 29.6	-2.1
CPUP	Villa Florida	49.07	142	P	P	03 54 33.4	-0.5
	comp=Z,2.1nm,0.7s,baz=312,slow=8.2,SNR=6.8						
CPUP	Villa Florida	49.07	142	P	P	03 54 33.2	-0.7
YKA	Yellowknife Ar	53.16	345	P	P	03 55 03.1	-0.9
	comp=Z,3.4nm,0.6s,baz=140,slow=7.8,SNR=83						
YKA				pP	pP	03 55 22.2	-0.9
	comp=Z,5.7nm,0.9s,baz=139,slow=7.5,SNR=8.3						
YKA				PcP	PcP	03 56 09.9	-1.3
	comp=Z,1.2nm,0.7s,baz=137,slow=4.5,SNR=7.8						
YKA				pPcP		03 56 30.8	
	comp=Z,0.9nm,0.8s,baz=141,slow=4.7,SNR=4.3						
YKA				ScP	ScP	04 00 01.6	-0.6
	comp=Z,0.3nm,0.7s,baz=140,slow=5.7,SNR=4.3						
DLBC	Dease Lake	55.35	335	P	P	03 55 20.6	+0.5
PLCA	Paso Flores	55.65	164	P	P	03 55 22.2	-0.2
	comp=Z,3.0nm,0.8s,baz=349,slow=7.6,SNR=4.8						
PLCA				pP	pP	03 55 42.2	+0.5
	comp=Z,4.7nm,0.9s,baz=347,slow=7.9,SNR=5.9						
PLCA				LR	LR	04 14 47.5	
	comp=Z,21nm,19.3s,baz=76,slow=31						
PLCA	Paso Flores	55.65	164	P	P	03 55 23.4	+0.9
WHY	Whitehorse	58.66	335	P	P	03 55 43.1	-0.4
WHY				IAmb	IAmb	03 55 52.9	
	comp=Z,11nm,1.4s						
RES	Resolute Bay	62.05	358	IAmb	IAmb	03 56 05.6	
	comp=Z,3.6nm,0.7s						
EPYK	Eagle Plains	62.56	340	P	P	03 56 09.5	-0.4
	baz=124						
EPYK	Eagle Plains	62.56	340	IAmb	IAmb	03 56 10.2	
	comp=Z,5.1nm,0.8s						
BCAR	Beaver Creek A	62.70	336	P	P	03 56 10.6	-0.4
INK	Inuvik	62.73	343	LR	LR	04 26 58.0	
	comp=Z,76nm,18.5s,baz=100,slow=39						
INK	Inuvik	62.73	343	P	P	03 56 10.1	-0.8
INK				IAmb	IAmb	03 56 11.1	
	comp=Z,9.5nm,1.3s						
N25K	Chitina, Valde	63.23	334	P	P	03 56 14.3	-0.2
	baz=114						
K27K	Chicken	63.27	337	P	P	03 56 14.3	-0.3
	baz=118						
K27K	Chicken	63.27	337	IAmb	IAmb	03 56 15.3	
	comp=Z,4.4nm,0.8s						
L26K	Log Cabin Wild	63.32	335	P	P	03 56 14.7	-0.2
	baz=116						
DOT	Dot Lake	63.88	336	P	P	03 56 16.8	-1.9
DOT				IAmb	IAmb	03 56 19.2	
	comp=Z,5.5nm,0.8s						
SCRK	Sand Creek	64.00	336	P	P	03 56 19.1	-0.5
	baz=116						
RIDG	Independent Ri	64.24	336	P	P	03 56 20.6	-0.4
RIDG				IAmb	IAmb	03 56 22.9	
	comp=Z,8.9nm,1.0s						
PRP	Porcupine Dome	65.26	337	P	P	03 56 26.8	-1.0
RC01	Rabbit Creek A	65.34	332	P	P	03 56 27.1	-1.0
	baz=109						
HDA	Harding Lake	65.36	336	P	P	03 56 27.2	-1.0
	baz=113,SNR=5.9						
HDA	Harding Lake	65.36	336	IAmb	IAmb	03 56 28.5	
	comp=Z,5.4nm,0.9s						
IL31		65.48	336	P	P	03 56 27.6	-1.4
IL31				IAmb	IAmb	03 56 48.4	
	comp=Z,7.8nm,1.2s						
ILAR	Eielson Array	65.48	336	P	P	03 56 27.6	-1.4
	comp=Z,2.7nm,0.8s,baz=160,slow=4.6,SNR=34						
ILAR				pP	pP	03 56 47.6	-1.0
	comp=Z,3.1nm,1.0s,baz=114,slow=4.9,SNR=6.8						
ILAR	Eielson Array	65.48	336	P	P	03 56 27.9	-1.0
RND	Reindeer	65.75	335	P	P	03 56 29.6	-1.3
POKR	Poker Plat Res	65.83	337	P	P	03 56 29.7	-1.6
	baz=113						
WRH	Wood River Hil	65.84	336	P	P	03 56 29.9	-1.4
WRH				IAmb	IAmb	03 56 32.5	
	comp=Z,6.6nm,1.1s						
MCK	McKinley	65.91	335	P	P	03 56 31.3	-0.5
	baz=111						
NEA2	Nenana	66.28	336	P	P	03 56 33.7	-0.5
	baz=111						
TRF	Thorofare Moun	66.38	334	IAmb	IAmb	03 56 35.1	
	comp=Z,8.1nm,1.0s						
SKT	Skwentna	66.44	333	P	P	03 56 34.6	-0.7
I23K	Minto, Yukon-K	66.59	336	P	P	03 56 35.6	-0.5
	baz=111						
I23K	Minto, Yukon-K	66.59	336	IAmb	IAmb	03 56 55.8	
	comp=Z,10nm,1.3s						
KTH	Kantishna Hill	66.68	334	P	P	03 56 35.8	-1.0
MLY	Manley	67.10	336	P	P	03 56 38.5	-1.0
	baz=110,SNR=5.7						
EUNU	Eureka	67.34	0	P	P	03 56 39.6	-1.1
PPT	Papeete	67.67	245	LR	LR	04 17 33.7	
	comp=Z,97nm,19.1s,baz=126,slow=28						
COLD	Coldfoot	67.67	338	P	P	03 56 42.5	-0.5
	baz=111						
COLD	Coldfoot	67.67	338	IAmb	IAmb	03 57 03.7	
	comp=Z,5.6nm,0.9s						
TOLK	Toolik Lake Re	67.98	340	P	P	03 56 43.8	-1.1
	baz=112						
TOLK	Toolik Lake Re	67.98	340	P	P	03 56 44.1	-0.8
TOLK				IAmb	IAmb	03 57 04.8	
	comp=Z,9.2nm,1.4s						
ANM	Nome	73.09	334	P	P	03 57 16.2	+0.2
SPIA	Saint Paul Isl	75.11	326	P	P	03 57 28.5	+0.7
ESDC	Sonseca Array	77.58	52	P	P	03 57 38.9	-3.5

	comp=Z,0.6nm,0.7s,baz=291,slow=5.3,SNR=5.6						
ESDC				pP	pP	03 58 02.3	-0.3
	comp=Z,1.0nm,0.8s,baz=295,slow=6.1,SNR=4.6						
ESDC				LR	LR	04 28 22.2	
	comp=Z,76nm,18.7s,baz=340,slow=33						
RAR	Rarotonga	77.95	245	LR	LR	04 22 56.8	
	comp=Z,198nm,20.2s,baz=52,slow=28						
ADK	Adak	79.18	321	P	P	03 57 51.0	+0.1
NOA	NORSAR Array B	83.47	29	LR	LR	04 35 29.0	
	comp=Z,107nm,18.0s,baz=280,slow=36						
ARCES	ARCESS Array B	86.15	19	P	P	03 58 25.1	-1.6
	comp=Z,2.1nm,0.9s,baz=292,slow=4.8,SNR=1.5						
ARCES	ARCESS Array B	86.15	19	P	P	03 58 24.9	-1.8
VYHS	Vyhne	91.52	40	*e*P	P	03 58 51.7	-0.8
SONM	Songino Array	118.32	349	PKP	PKPdf	04 04 32.1	-1.1
	comp=Z,0.4nm,0.4s,baz=35,slow=38,SNR=3.3						
KSRS	Korea Array	119.65	327	PKP	PKPdf	04 04 34.9	-1.0
	comp=Z,1.9nm,0.7s,baz=37,slow=1.0,SNR=6.1						
MKAR	Makanchi Array	120.14	8	PKP	PKPdf	04 04 34.3	-2.3
	comp=Z,0.1nm,0.3s,baz=306,slow=3.7,SNR=5.3						
KSH	Kashi	125.97	15	PKP	PKPdf	04 04 45.9	-2.2
STKA	Stephens Creek	130.63	239	PKP	PKPdf	04 04 54.6	-2.3
	comp=Z,0.6nm,0.4s,baz=3.4,slow=16,SNR=1.3						
WR0	Warramunga Arr	138.47	254	PKPdf	PKiKP	04 05 14.6	+0.5
WB0	Warramunga Arr	138.62	255	PKPdf	PKiKP	04 05 13.0	-1.4
WB2	Warramunga Arr	138.65	254	PKPdf	PKiKP	04 05 15.2	+0.8
WRA	Warramunga Arr	138.66	254	PKhKP	PKPpre	04 05 07.4	
	comp=Z,1.0nm,0.8s,baz=91,slow=2.6,SNR=4.7						
WRA	Warramunga Arr	138.66	254	PKPdf	PKiKP	04 05 15.2	+0.8
ASAR	Alice Springs	138.71	249	PKhKP	PKPpre	04 05 06.4	
	comp=Z,0.5nm,0.7s,baz=118,slow=3.0,SNR=2.5						
ASAR	Alice Springs	138.71	249	PKPdf	PKiKP	04 05 14.8	+0.3
CMAR	Chiang Mai Arr	148.22	347	PKPbc	PKPdf	04 05 29.1	0.0
	comp=Z,3.6nm,0.7s,baz=339,slow=3.9,SNR=8.6						
CMAR	Chiang Mai Arr	148.22	347		PKPdf	04 05 28.9	-0.2

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*IDC **12** 03:49:10.4±1.9, 20°.12N×87°.25W, h0km, mb3.8/4, mb1 4.1/7, mb1mx3.8/36, mbtmp3.8/7, ML4.0/3, MS3.5/1, Ms1 3.6/1, ms1mx2.7/36, Error ellipse: s-maj=44.7km s-min=33.4km az=163.0*

*NEIC **12** 03:49:14.4±2.6, 20°.33N±0°.09×87°.43W±0°.05, h15km±6km, mb4.0/20, Md4.2/10(MEX), Error ellipse: s-maj=12.5km s-min=6.2km az=168.0*

*MEX **12** 03:49:16.9±0.7, 20°.32N×87°.51W, h5km, MD4.2*

ISC 12 03:49:13.7±0.6**, 20°.35N**±0°.06×**87°.45W**±0°.05**, h10**km**, n75, σ1s.95**/80**, mb4.1**/5**, Yucatan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	0.79	261	*e*P	Pg	03 49 29.4	+0.6
TEIG				*e*S	Sg	03 49 40.1	+1.0
TEIG	Tepich	0.79	261	Pg	Pg	03 49 29.4	+0.6
TEIG				Sg	Sg	03 49 40.0	+0.9
MYIG	Mrida	2.23	286	*i* P	Pn	03 49 50.0	-0.6
MYIG				*i* S	Sn	03 50 14.4	-3.8
MYIG	Mrida	2.23	286		Pn	03 49 50.0	-0.6
MYIG					Sn	03 50 14.4	-3.8
SCIG	Sabancuy	3.78	249	*i* P	Pn	03 50 13.3	+1.3
SCIG				*i* S	Sn	03 50 55.2	-1.4
SCIG	Sabancuy	3.78	249		Pn	03 50 13.3	+1.3
SCIG					Sn	03 50 55.2	-1.4
PETF	Flores	4.12	214	Pn	Pn	03 50 15.7	-0.9
FSCY	Frank Sound, G	5.99	99	Pn	Pn	03 50 41.5	-0.9
CCIG	Comitan	6.02	228	*e*P	Pn	03 50 44.2	+1.2
CCIG				*i* S	Sn	03 51 51.3	-0.7
CCIG	Comitan	6.02	228	Pn	Pn	03 50 43.6	+0.6
ESQI	Esquipulas	6.04	198	Pn	Pn	03 50 44.3	+1.1
MTO3	Montecristo	6.20	197	Pn	Pn	03 50 45.3	-0.2
TGUH	Tegucigalpa,Un	6.26	178	Pn	Pn	03 50 49.5	+3.1
LCCY	Blossom Villag	6.96	94		Pn	03 50 55.1	-0.7
RTAL	Retalhuleu	7.07	216		Pn	03 50 58.1	+0.8
CBCY	The Bluff, Cay	7.26	94		Pn	03 50 59.0	-0.8
CMIG	Matias Romero	7.75	246	Pn	Pn	03 51 05.2	-1.5
	2.7nm,0.3s,baz=75,slow=5.4,SNR=18						
CMIG				Sn	Sn	03 52 28.1	-6.5
	3.7nm,0.3s,baz=230,slow=22,SNR=6.4						
061Z	Ochoppi	8.15	46	Pn	Pn	03 51 11.3	-0.8
656A	Willston	10.02	25	Pn	Pn	03 51 39.0	+1.2
TLIG	Tlapa	10.88	257	Pn	Pn	03 51 51.7	+2.1
352A	Blakely	11.31	11	Pn	Pn	03 51 56.3	+0.9
344A	Westbrook Farm	11.44	346	Pn	Pn	03 51 57.8	+0.6
250A	Grady	11.63	5	Pn	Pn	03 52 00.4	+0.7
HKT	Hockley	12.20	323	Pn	Pn	03 52 09.7	+2.2
255A	Hazlehurst	12.36	20	Pn	Pn	03 52 10.8	+1.1
152A	Waverly Hall	12.51	11	Pn	Pn	03 52 12.5	+0.7
LRAL	Lakeview Retre	12.64	2	Pn	Pn	03 52 14.0	+0.4
Z47A	Carrollton	12.81	358	Pn	Pn	03 52 15.9	0.0
Z51A	Franklin	13.07	8	Pn	Pn	03 52 21.3	+1.9
833A	Chaparral WMA,	13.46	308	Pn	Pn	03 52 25.5	+0.7
GOGA	Godfrey	13.48	14	Pn	Pn	03 52 26.7	+1.7
Y49A	Blount Mountai	13.48	4	Pn	Pn	03 52 29.4	+4.3
Y52A	Lilburn	13.79	12	Pn	Pn	03 52 32.0	+2.8
435B	Jarrell	13.83	321	Pn	Pn	03 52 32.6	+2.7
X48A	Hartselle	14.05	1	P	P	03 52 39.1	-1.6
RGRS	Roger Stewart	14.08	26	Pn	Pn	03 52 33.8	+0.6
WLAR	White Oak Lake	14.20	340	P	P	03 52 42.0	-0.5
OXF	Oxford	14.21	353	P	P	03 52 42.1	-0.4
NHSC	New Hope	14.26	26		Pn	03 52 36.1	+0.4
X51A	Calhoun	14.34	9		Pn	03 52 35.4	-1.5
Z38A	Mt. Pleasant	14.50	334	P	Pn	03 52 42.8	+3.8
HODGE	Hodges	14.57	17	Pn	Pn	03 52 40.5	+0.5
WHTX	Lake Whitney,	14.65	324	P	Pn	03 52 44.9	+3.8
X40A	Basin Creek Fa	14.86	342	P	Pn	03 52 46.4	+2.5
W50A	Signal Mountai	14.91	7	P	Pn	03 52 47.4	+2.7
W52A	Murphy	15.01	11	P	Pn	03 52 48.8	+2.9
JCT	Junction City	15.03	315	P	Pn	03 52 48.6	+2.3
JCT				IAmb	IAmb	03 53 03.8	
	comp=Z,5.2nm,0.7s						
BG3	Lake Jocassee	15.12	14	P	Pn	03 52 49.0	+1.6
BG3				IAmb	IAmb	03 53 01.4	
	comp=Z,8.8nm,1.3s						
CPCT	Cooper Cave	15.26	9	P	Pn	03 52 51.5	+2.3
CPCT				IAmb	IAmb	03 53 03.4	
	comp=Z,12nm,1.1s						
V48A	Smith Brothers	15.34	2	P	P	03 52 55.0	-0.1
V48A				IAmb	IAmb	03 53 02.0	
	comp=Z,9.9nm,1.3s						
W41B	Gary Mavity, V	15.36	345	P	Pn	03 52 54.0	+3.4
W41B				IAmb	IAmb	03 52 57.3	
	comp=Z,4.5nm,0.8s						
WHAR	Wooly Hollow	15.48	345	P	Pn	03 52 54.6	+2.5
WHAR				IAmb	IAmb	03 52 58.9	
	comp=Z,3.9nm,0.7s						
BIRD	Birdtown, Kers	15.52	22	P	Pn	03 52 53.6	+1.0
BIRD				IAmb	IAmb	03 53 03.7	
	comp=Z,19nm,1.3s						
TKL	Tuckaleechee C	15.59	11	Pn	Pn	03 52 56.2	+2.6
	comp=Z,0.5nm,0.3s,baz=190,slow=11,SNR=1.4						
TKL				Sn	Sn	03 55 36.0	-10
	comp=Z,0.2nm,0.3s,baz=159,slow=1.5,SNR=1.9						
TKL	Tuckaleechee C	15.59	11	P	Pn	03 52 56.4	+2.8
KMSC	Kings Mountain	15.69	19	P	Pn	03 52 56.2	+1.3
KMSC				IAmb	IAmb	03 53 10.3	
	comp=Z,6.4nm,0.9s						
WVT	Waverly	15.72	359	P	Pn	03 52 57.9	+2.6
V53A	Saluda	15.79	14	P	Pn	03 52 58.4	+2.1
ABTX	Abilene, Hawle	16.37	321	P	P	03 53 07.3	+0.8
ABTX				IAmb	IAmb	03 53 21.9	
	comp=Z,6.0nm,0.6s						
PBMO	Poplar Bluff	16.57	352	P	P	03 53 09.5	+0.8
U40A	Yellville	16.63	345	P	P	03 53 10.3	+0.9
TXAR	Lajitas Array	17.21	304	P	P	03 53 17.6	+1.6
	comp=Z,0.1nm,0.3s,baz=124,slow=14,SNR=2.5						
TXAR				S	Sn	03 56 13.7	-12
	comp=Z,0.4nm,0.3s,baz=14,slow=20,SNR=7.8						
TXAR	Lajitas Array	17.21	304	P	P	03 53 17.0	+1.1
TX31	Lajitas Ar. Si	17.21	304	P	P	03 53 17.1	+1.1
TX31				IAmb	IAmb	03 53 29.3	
	comp=Z,7.2nm,1.1s						
TX32	Lajitas Array	17.21	304	P	P	03 53 17.4	+1.4
L40A	Anamosa	21.88	352	P	P	03 54 07.7	+1.0
CCUT	Cedar City	28.28	313	P	P	03 55 07.5	-0.1
NVAR	Mina Array Bea	32.15	311	LR	LR	04 11 28.6	
	comp=Z,79nm,18.3s,baz=148,slow=41						
HLID	Hailey	32.29	322	P	P	03 55 41.4	-1.5
HLID				IAmb	IAmb	03 55 42.3	
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	46.06	343	P	P	03 57 37.7	+0.3
	comp=Z,0.4nm,0.5s,baz=131,slow=8.9,SNR=2.8						
ILAR	Eielson Array	58.88	334	P	P	03 59 12.9	+0.4
	comp=Z,0.3nm,0.8s,baz=122,slow=6.4,SNR=2.3						
ARCES	ARCESS Array B	78.76	19	P	P	04 01 13.6	-2.6
	comp=Z,2.9nm,0.9s,baz=304,slow=6.4,SNR=1.7						
TORD	Torodi Ar. Bea	84.73	78	P	P	04 01 47.7	-1.0
	comp=Z,0.7nm,0.6s,baz=295,slow=4.8,SNR=2.6						
WRA	Warramunga Arr	140.84	263	PKhKP	PKPpre	04 08 35.8	
	comp=Z,0.1nm,0.3s,baz=46,slow=1.5,SNR=1.5						
ASAR	Alice Springs	141.61	257	PKhKP	PKPpre	04 08 38.6	
	comp=Z,0.3nm,0.4s,baz=88,slow=3.0,SNR=5.6						

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*NEIC **12** 04:02:48.9±2.9, 7°.38N±0°.08×83°.4W±0°.1, h16km±6km, mb4.4/5, Mwr4.4(UCR), Error ellipse: s-maj=18.2km s-min=2.6km az=52.0*

*UCR **12** 04:02:55.9±1.8, 8°.32N×82°.99W, h5km, MW4.5*

*UPA **12** 04:02:55.7±2.3, 8°.38N×82°.93W, h1km±4km, MW4.5*

*IDC **12** 04:03:02.7±6.8, 8°.77N×86°.69W, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.7/37, mbtmp3.9/6, ML3.6/1, Error ellipse: s-maj=138.7km s-min=31.6km az=163.0*

ISC 12 04:02:55.3±1.0**, 8°.30N**±0°.04×**82°.99W**±0°.02**, h14**km±6km**, n79, σ1s.31**/109**, mb4.2**/7**, 7C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.11	7	*e*P	Pg	04 02 58.7	+0.1
CCOL				*e*S	Sb	04 03 02.2	+0.4
CDITO	Canoas	0.30	23	⇓*i*P	Pg	04 03 01.6	0.0
CDITO	Canoas	0.30	23	*e*P	Pg	04 03 01.6	0.0
PIRO	Carate, Puerto	0.36	287	⇑*i*P	Pg	04 03 03.1	+0.4
PIRO				*i* S	Sb	04 03 10.6	+1.6
PIRO	Carate, Puerto	0.36	287	*e*P	Pg	04 03 02.7	0.0
PTJ1	Puerto Jimnez	0.39	307	⇓*i*P	Pg	04 03 03.2	0.0
PTJ1	Puerto Jimnez	0.39	307	*e*P	Pg	04 03 03.2	0.0
BAGA3	Bagala, Chiriq	0.48	70	⇓*i*P	Pg	04 03 05.3	+0.4
BAGA3				*i* S	Sb	04 03 12.3	-0.3
MLIR3	Monte Lirio, C	0.52	18	⇓*i*P	Pg	04 03 06.1	+0.5
MLIR3				*i* S	Sg	04 03 12.0	-0.6
EDSV	San Vito	0.52	2	*e*P	Pg	04 03 05.8	+0.2
EDSV				*e*S	Sb	04 03 14.8	+1.1
BRU2	Volcan	0.57	31	⇓*i*P	Pg	04 03 06.7	+0.1
BRU2				*i* S	Sb	04 03 15.5	+0.2
LOCO3	Loma Colorada,	0.57	79	⇓*i*P	Pg	04 03 06.5	-0.1
LOCO3				*i* S	Sb	04 03 15.1	0.0
BCO2	Palmira	0.62	47	⇓*i*P	Pg	04 03 07.4	0.0
BCO2				*e*S	Sg	04 03 16.0	+0.3
PTAR3	Potrerillos Ar	0.62	51	⇓*i*P	Pg	04 03 07.6	0.0
PTAR3				*i* S	Sg	04 03 15.5	-0.4
BC3P	Paso Ancho	0.64	36	⇓*i*P	Pg	04 03 07.6	-0.2
BC3P				*i* S	Sb	04 03 17.3	+0.2
RIOS	Rincon, Osa	0.66	308	*e*P	Pg	04 03 07.2	-1.0
GUAL3	Gualaca, Chiri	0.72	71	⇓*i*P	Pg	04 03 08.8	-0.6
GUAL3				*i* S	Sg	04 03 18.0	-0.9
POTG	Potrero Grande	0.76	350	*e*P	Pg	04 03 09.6	-0.5
EDPN	Palmar Norte	0.81	325	⇓*e*P	Pb	04 03 09.8	-1.3
EDBA	Buenos Aires	0.91	342	*e*P	Pb	04 03 12.1	-0.7
DRK0	Durika	0.99	345	⇓*i*P	Pb	04 03 13.2	-1.2
DRK0				*i* S	Sg	04 03 27.9	+0.3
DRK0	Durika	0.99	345	*e*P	Pb	04 03 13.1	-1.2
CHGR2	Aguacate	1.05	53	⇑*i*P	Pb	04 03 14.1	-1.2
CHGR2				*i* S	Sb	04 03 28.1	-0.7
EDLM	Las Mercedes	1.14	329	*e*P	Pb	04 03 16.6	-0.3
EDLM				*e*S	Sg	04 03 33.4	+1.1
REME3	Remedios, Chir	1.15	93	⇑*e*P	Pn	04 03 15.9	-1.0
REME3				*i* S	Sb	04 03 31.8	+0.2
NANC3	Nancito, Chiri	1.24	93	*e*P	Pn	04 03 17.9	-0.4
NANC3				*i* S	Sb	04 03 34.7	+0.2
PEZE	Perez Zeledon,	1.27	328	*e*P	Pn	04 03 17.8	-1.0
EDDO	Dominical	1.28	318	*e*P	Pn	04 03 18.6	-0.2
EDDO				*e*S	Sg	04 03 37.5	+0.7
RGM0	Gandoca	1.34	16	⇓*e*P	Pb	04 03 20.5	+0.3
RIMA	Rio Macho	1.70	329	*e*P	Pn	04 03 24.4	-0.2
LCR2	La Lucha 2	1.75	325	*e*P	Pn	04 03 25.7	+0.3
CNAZ3	Canazas, Verag	1.76	88	*e*P	Pn	04 03 25.3	-0.1
GMAL	Guarumal, Vera	1.82	107	⇑*e*P	Pn	04 03 25.1	-1.1
BATAN	Batan	1.83	348	⇑*e*P	Pn	04 03 27.2	+0.9
BATAN				*e*S	Sb	04 03 50.7	-0.6
BATAN	Batan	1.83	348	*e*P	Pb	04 03 28.0	-0.5
CVTR	Volcan Turrial	1.87	336	*e*P	Pn	04 03 28.0	+0.8
HDC	Heredia	2.02	327	⇓*i*P	Pb	04 03 31.5	-0.5
HDC				*i* S	Sb	04 03 57.6	+0.5
HDC	Heredia	2.02	327	*e*P	Pb	04 03 30.9	-1.1
HDC	Heredia	2.02	327		Pb	04 03 30.8	-1.2
HDC				Sn	Sb	04 03 58.0	+0.9
PONU3	Ponuga, Veragu	2.03	102	⇑*e*P	Pn	04 03 29.4	+0.3
PONU3				*e*S	Sn	04 03 55.1	+0.8
MARI3	Mariato, Verag	2.08	108	*e*P	Pn	04 03 31.2	+1.4
MARI3				*i* S	Sb	04 03 58.5	0.0
JACO	JACO, Garabito	2.14	309	*e*P	Pn	04 03 30.6	0.0
CACAO	El Cacao, Vera	2.31	114	*i* P	Pn	04 03 34.5	+1.5
CACAO				*i* S	Sb	04 04 04.9	-0.3
PNME	Penonome	2.64	86	*e*P	Pn	04 03 38.4	+0.9
PNME				*e*S	Sn	04 04 11.5	+2.2
AZU	Azuero	2.73	100	⇓*i*P	Pn	04 03 41.0	+2.2
	baz=286,slow=9.3						
AZU				*i* S	Sn	04 04 13.8	+2.2
ARE1	Arenal 1	2.75	322	*e*P	Pb	04 03 42.0	-2.2
JTS	Las Juntas de	2.77	316	Pn	Pn	04 03 41.9	+2.6
	14nm,0.3s,baz=159,slow=23,SNR=74						
JTS				Sn	Sn	04 04 13.1	+0.5
	12nm,0.3s,baz=14,slow=20,SNR=2.3						
JTS	Las Juntas de	2.77	316	⇓*i*P	Pn	04 03 42.1	+2.8
JTS	Las Juntas de	2.77	316		Pn	04 03 40.0	+0.7
JTS				Sn	Sb	04 04 21.1	+2.6
COVE	Coope Vega, Sa	2.78	330	*e*P	Pb	04 03 42.4	-2.4
VTON	El Valle, Cocl	2.86	84	*e*P	Pn	04 03 42.9	+2.3
VTON				*i* S	Sn	04 04 16.8	+1.9
PCRI3	Pocri, Los San	2.91	102	*e*P	Pn	04 03 41.9	+0.7
ACHO3	Achotines, Los	2.92	107	*e*P	Pn	04 03 42.8	+1.5
PEDA3	Pedasi	3.03	104	*e*P	Pn	04 03 42.6	-0.3
ZANG	Zanguenga, Cho	3.15	78	*e*P	Pn	04 03 44.7	+0.1
ZANG				*i* S	Sn	04 04 22.8	+0.8
COLC	Colonia	3.21	317	*i* P	Pn	04 03 47.9	+2.5
BCIP	Isla Barro Col	3.23	74	⇓*i*P	Pn	04 03 46.2	+0.7
BCIP				*e*S	Sn	04 04 25.7	+1.8
BCIP	Isla Barro Col	3.23	74	Pn	Pn	04 03 46.9	+1.3
CHOR3	La Chorrera	3.24	79	*e*P	Pn	04 03 48.1	+2.4
CHOR3				*e*S	Sn	04 04 24.6	+0.5
FRIJ	El Hiral	3.35	74	*e*P	Pn	04 03 49.6	+2.4
ARRA3	Arraijan, Pana	3.36	78	*e*P	Pn	04 03 49.2	+1.9
LAPC	Finca la Perla	3.44	316	*i* P	Pn	04 03 51.3	+2.8
GBS3	Finca Las Img	3.47	316	*i* P	Pn	04 03 51.7	+2.9
UPA	Univ. de Panam	3.48	79	⇑*e*P	Pn	04 03 50.3	+1.2
UPA				*e*S	Sn	04 04 30.6	+0.6
ESPN	Las Esperanzas	4.08	342	Pn	Pn	04 03 59.1	+1.8
ACON	Acoyapa	4.23	330	Pn	Pn	04 04 01.7	+2.3
MTO3	Montecristo	8.71	315	Pn	Pn	04 04 57.5	-3.6
OTAV	Otavalo	9.20	150	Pn	Pn	04 04 52.5	-16
DLPL	La Plaine	22.39	70	P	P	04 07 55.3	+1.9
GOGA	Godfrey	25.00	359	P	P	04 08 20.8	+2.1
GOGA				IAmb	IAmb	04 08 24.3	
	comp=Z,30nm,1.4s						
WVT	Waverly	28.05	352	P	P	04 08 47.3	+1.0
ANMO	Albuquerque	34.16	324	P	P	04 09 30.1	-10
	comp=Z,0.5nm,0.4s,baz=131,slow=18,SNR=2.9						
N23A	Red Feather La	38.34	332	P	P	04 10 13.2	-2.9
N23A				IAmb	IAmb	04 10 29.5	
	comp=Z,9.6nm,1.4s						
ULM	Lac du Bonnet	43.17	348	P	P	04 10 55.0	-0.5
	comp=Z,3.7nm,0.8s,baz=171,slow=8.6,SNR=8.5						
ULM	Lac du Bonnet	43.17	348	P	P	04 10 55.8	+0.3
ULM				IAmb	IAmb	04 10 57.6	
	comp=Z,4.5nm,0.8s						
YKA	Yellowknife Ar	58.78	343	P	P	04 12 51.5	-1.3
	comp=Z,0.9nm,0.8s,baz=133,slow=8.2,SNR=16						
YKA	Yellowknife Ar	58.78	343	P	P	04 12 51.5	-1.3
INK	Inuvik	68.47	342	P	P	04 13 57.0	+0.3
	comp=Z,2.0nm,1.0s,baz=127,slow=5.1,SNR=2.9						
ILAR	Eielson Array	71.57	336	P	P	04 14 14.2	-1.5
	comp=Z,0.5nm,0.7s,baz=114,slow=4.6,SNR=13						

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*IDC **12** 04:07:17.6±1.1, 3°.69S×141°.64E, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.9/35, mbtmp4.0/8, ML4.2/1, MS3.4/5, Ms1 3.3/5, ms1mx3.1/32, Error ellipse: s-maj=33.2km s-min=19.0km az=86.0*

*NEIC **12** 04:07:23.9±2.7, 3°.65S±0°.07×141°.44E±0°.09, h33km±3km, mb4.5/25, Error ellipse: s-maj=15.0km s-min=7.0km az=61.0*

*DJA **12** 04:07:25.1±1.4, 3°S±4°×14°1E±°, h10km, M4.2/3, MLv4.2/3*

ISC 12 04:07:23.4±0.6**, 3°.68S**±0°.06×**141°.48E**±0°.08**, h33**km**, n48, σ1s.70**/49**, mb4.5**/17**, MS3.4**/4**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.39	326	Pn	Pn	04 07 46.5	-0.1
	62nm,0.3s,baz=148,slow=12,SNR=194						
JAY				Sn	Sn	04 08 01.2	-2.6
	97nm,0.3s,baz=66,slow=18,SNR=6.4						
JAY				LR	LR	04 08 26.4	
	comp=Z,337nm,19.6s,baz=340,slow=46						
JAY	Jayapura	1.39	326	P	Pn	04 07 46.5	-0.1
JAY				S	Sn	04 08 01.3	-2.6
GENI	Genyem	1.70	309	P	Pn	04 07 50.7	-0.1
GENI				S	Sn	04 08 10.9	-0.5
PMG	Port Moresby	8.01	136	Pn	Pn	04 09 15.6	-2.0
	1.1nm,0.3s,baz=339,slow=14,SNR=1.6						
PMG	Port Moresby	8.01	136		Pn	04 09 17.4	-0.2
FAKI	Fak Fak	9.25	274	Pn	Pn	04 09 36.3	+1.7
COEN	Coen	10.35	171	Pn	Pn	04 09 54.1	+4.4
MTN	Manton Dam	13.70	228	Pn	Pn	04 10 35.0	-0.6
WB0	Warramunga Arr	17.43	203	Pn	Pn	04 11 23.6	-0.6
WR0	Warramunga Arr	17.54	202	Pn	Pn	04 11 25.3	-0.3
WRAB	Tennant Creek	17.59	203	Pn	Pn	04 11 24.9	-1.3
WB2	Warramunga Arr	17.60	203		Pn	04 11 26.5	+0.2
WRA	Warramunga Arr	17.61	203	P	Pn	04 11 24.8	-1.6
	0.9nm,0.3s,baz=20,slow=12,SNR=34						
WRA				S	Sn	04 14 35.0	-6.6
	0.2nm,0.3s,baz=20,slow=22,SNR=2.5						
WRA	Warramunga Arr	17.61	203	Pn	Pn	04 11 25.2	-1.1
LUWI	Luwuk	18.88	278	P	P	04 11 40.2	-1.0
HNR	Honiara	19.21	108	LR	LR	04 18 27.7	
	comp=Z,62nm,19.4s,baz=288,slow=35						
FITZ	Fitzroy Crossi	21.12	226	P	P	04 12 06.2	+0.6
	1.6nm,0.5s,baz=42,slow=8.9,SNR=11						
FITZ	Fitzroy Crossi	21.12	226	P	P	04 12 06.8	+1.2
FITZ				IAmb	IAmb	04 12 14.3	
	comp=Z,14nm,1.2s						
AS31	Alice Springs	21.18	200	P	P	04 12 05.5	-0.7
ASAR	Alice Springs	21.18	200	P	P	04 12 05.2	-1.0
	comp=Z,1.8nm,0.7s,baz=30,slow=10,SNR=26						
ASAR				S	S	04 15 56.8	-3.4
	comp=Z,0.4nm,0.8s,baz=16,slow=25,SNR=2.2						
ASAR				LR	LR	04 20 53.3	
	comp=Z,91nm,20.9s,baz=321,slow=38						
TOLI2	Tolitoli	21.23	283	P	P	04 12 08.1	+1.3
TOLI2				IAmb	IAmb	04 12 26.8	
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	28.05	180	LR	LR	04 24 33.2	
	comp=Z,92nm,21.1s,baz=6.2,slow=37						
FORT	Forrest	29.79	204	P	P	04 13 28.4	+1.1
FORT				IAmb	IAmb	04 13 37.4	
	comp=Z,12nm,0.8s						
GIRL	Giralia	32.43	232	P	P	04 13 51.6	+0.9
MORW	Morawa	34.95	221	P	P	04 14 12.9	+0.3
MORW				IAmb	IAmb	04 14 23.1	
	comp=Z,11nm,1.4s						
BKZ	Black Stump Fm	47.51	143	P	P	04 15 57.0	+1.4
BKZ				IAmb	IAmb	04 16 11.5	
	comp=Z,14nm,1.2s						
TUWZ	Tuamarina	47.53	147	P	P	04 15 56.4	+0.7
KHZ	Kahutara	48.00	148	P	P	04 15 59.7	+0.5
RAR	Rarotonga	59.60	112	LR	LR	04 42 18.8	
	comp=Z,31nm,19.3s,baz=287,slow=35						
SONM	Songino Array	59.79	333	P	P	04 17 26.8	+1.2
	comp=Z,0.2nm,0.3s,baz=331,slow=46,SNR=2.4						
MK31	Makanchi Array	72.25	322	P	P	04 18 46.3	+0.8
MK31				IAmb	IAmb	04 18 47.1	
	comp=Z,2.8nm,1.0s						
MKAR	Makanchi Array	72.25	322	P	P	04 18 46.0	+0.5
	comp=Z,3.5nm,0.6s,baz=93,slow=9.2,SNR=52						
MAKZ	Makanchi	72.45	322	P	P	04 18 47.5	+0.8
MAKZ				IAmb	IAmb	04 18 48.0	
	comp=Z,5.7nm,0.7s						
ZALV	Zalesovo Beam	74.17	329	P	P	04 18 54.9	-1.8
	comp=Z,1.1nm,0.6s,baz=123,slow=5.5,SNR=5.2						
VNDA	Vanda	74.59	175	P	P	04 18 58.8	0.0
BOOM	Boomskoye usch	74.77	316	P	P	04 19 01.8	+1.1
KURK	Kurchatov	76.10	324	P	P	04 19 08.2	+0.3
KURK				IAmb	IAmb	04 19 08.9	
	comp=Z,3.2nm,1.1s						
TTA	Tatalina	81.13	24	P	P	04 19 36.7	+1.2
TTA				IAmb	IAmb	04 19 54.7	
	comp=Z,6.8nm,1.4s						
MAW	Mawson	82.28	202	LR	LR	04 55 21.7	
	comp=Z,22nm,18.1s,baz=303,slow=35						
IMAR	Indian Mountai	83.34	22	P	P	04 19 47.5	+0.7
RND	Reindeer	84.31	25	P	P	04 19 52.5	+0.6
WRH	Wood River Hil	84.98	24	P	P	04 19 55.3	+0.1
WRH				IAmb	IAmb	04 20 12.8	
	comp=Z,9.3nm,1.4s						
CCB	Clear Creek Bu	85.16	24	P	P	04 19 56.0	-0.1
CCB				IAmb	IAmb	04 19 57.7	
	comp=Z,4.1nm,0.9s						
IL31		85.57	24	P	P	04 19 57.2	-0.8
IL31				IAmb	IAmb	04 19 58.8	
	comp=Z,2.7nm,0.8s						
ILAR	Eielson Array	85.57	24	P	P	04 19 57.2	-0.9
	comp=Z,1.9nm,0.7s,baz=261,slow=5.0,SNR=21						
K27K	Chicken	87.37	25	P	P	04 20 09.1	+2.0
DBIC	Dimbokro	146.35	276	PKPbc	PKPdf	04 26 59.0	-1.9
	comp=Z,3.4nm,0.9s,baz=108,slow=1.6,SNR=4.9						
DBIC	Dimbokro	146.35	276		PKPdf	04 26 59.6	-1.2

IDC 12 04:18:51.9±16.0**, 28°.75N**×**44°.05W, h0**km**, mb3.6**/4**, mb1 4.0**/4**, mb1mx3.5**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=369.0km s-min=95.1km az=146.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	53.71	304	P	P	04 28 16.2	+0.3
	0.9nm,0.6s,baz=87,slow=7.5,SNR=10						
YKA	Yellowknife Ar	55.97	328	P	P	04 28 31.4	-0.4
	0.5nm,1.0s,baz=84,slow=7.3,SNR=4.9						
NVAR	Mina Array Bea	61.09	300	P	P	04 29 07.5	-0.6
	0.4nm,0.7s,baz=76,slow=7.5,SNR=3.5						
ILAR	Eielson Array	69.59	334	P	P	04 30 02.8	+0.3
	0.8nm,1.0s,baz=59,slow=4.8,SNR=6.6						

IDC 12 04:34:48.4±17.0**, 17°.24S**×**176°.42W, h0**km**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.7**/24**, mbtmp3.9**/3**, Error ellipse: s-maj=427.1km s-min=48.0km az=36.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.62	259	P	P	04 43 18.6	-0.3
	0.3nm,0.3s,baz=95,slow=7.2,SNR=12						
ASAR	Alice Springs	46.80	254	P	P	04 43 20.2	0.0
	1.6nm,0.6s,baz=86,slow=8.8,SNR=24						
VNDA	Vanda	61.28	185	P	P	04 45 05.0	-0.1
	1.7nm,0.9s,baz=9.5,slow=6.1,SNR=4.2						

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*TRN **12** 04:38:00.2, 10°.02N×61°.90W, h101km, MD3.8*

*FUNV **12** 04:38:01.5, 10°.06N×61°.99W, h27km, MW3.4*

ISC 12 04:37:59.1±1.6**, 10°.09N**±0°.06×**62°.01W**±0°.06**, h102**km±16km**, n23, σ1s.82**/34**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.59	67	*e*P	Pn	04 38 16.7	+0.9
TPP				*e*S	Sn	04 38 29.0	+0.7
TRN	Trinidad (W)	0.81	47	*e*P	Pn	04 38 17.9	+0.1
TRN				*e*S	Sn	04 38 31.5	-0.3
TRN	Trinidad (W)	0.81	47	*e*P	Pn	04 38 17.5	-0.2
TRN				*e*S	Sn	04 38 28.9	-2.9
CRUV	Carupano	1.34	296	*e*P	Pn	04 38 23.2	-0.4
CRUV				*e*S	Sn	04 38 39.8	-2.4
ORIV	Oritupano	1.71	234	*e*P	Pn	04 38 29.5	+1.4
ORIV				*e*S	Sn	04 38 52.0	+1.7
ORIV	Oritupano	1.71	234	*e*P	Pn	04 38 29.3	+1.1
RIOV	Rio Grande	2.02	175	*e*P	Pn	04 38 33.0	+0.9
GRGR	Grenville	2.06	10	*e*P	Pn	04 38 34.4	+1.8
GRGR	Grenville	2.06	10	*e*P	Pn	04 38 34.0	+1.4
GCMP	Grenada, Carri	2.45	13	*e*P	Pn	04 38 39.9	+2.3
PCRV	Puerto La Cruz	2.59	272	*e*P	Pn	04 38 40.4	+0.9
PCRV				*e*S	Sn	04 39 10.1	-0.5
SVOC	Richmond Hill,	3.14	14	*e*P	Pn	04 38 48.5	+1.7
SVB	Belmont	3.25	13	*e*P	Pn	04 38 50.7	+2.4
BIRV	Birongo	4.21	276	*e*P	Pn	04 39 03.6	+2.3
BIRV				*e*S	Sn	04 39 49.4	0.0

LUEV	**Luepa**	**4.25**	**173**	*e*P	**Pn**	**04 39 02.1**	**+0.1**
LUEV				*e*S	**Sn**	**04 39 48.8**	**-1.9**
MERV	**Las Mercedes**	**4.31**	**259**	*e*P	**Pn**	**04 39 03.5**	**+0.9**
MERV				*e*S	**Sn**	**04 39 51.2**	**-0.7**
FUNV	**FUNVISIS**	**4.74**	**275**	*e*P	**Pn**	**04 39 10.9**	**+2.4**
BAUV	**El Baul**	**6.06**	**260**	*e*P	**Pn**	**04 39 26.8**	**+0.5**
BAUV				*e*S	**Sn**	**04 40 30.8**	**-3.6**
MAPV	**Macapo**	**6.36**	**268**	*e*P	**Pn**	**04 39 31.4**	**+1.0**
PAYV	**Puerto Ayacuch**	**7.27**	**231**	*e*P	**Pn**	**04 39 43.9**	**+1.2**
CURV	**Curarigua**	**7.84**	**270**	*e*P	**Pn**	**04 39 50.9**	**+0.4**
ELOV	**Elorza**	**8.01**	**248**	*e*P	**Pn**	**04 39 54.4**	**+1.7**
ELOV				*e*S	**Sn**	**04 41 17.3**	**-4.4**
MONV	**Montecano**	**8.04**	**284**	*e*P	**Pn**	**04 39 54.7**	**+1.6**

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*RSPR **12** 04:41:01.0, 17°.86N×68°.34W, h90^{km}±3^{km}, MD3.4/12*
*NEIC **12** 04:41:01.4±2.1, 17°.9N±0°.2×68°.30W±0°.04, h80^{km}±23^{km}, Error ellipse: s-maj=28.2km s-min=4.8km az=186.0*
ISC 12 04:41:01.2±1.9, **17°.9N**±0°.2×**68°.33W**±0°.07, **h80**^{km}±22^{km}, **n39**, σ**0^{s}.84**/49, **12C**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.17**	**83**⇑	*e*P	**Pn**	**04 41 21.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.17**	**83**	*e*S	**Sn**	**04 41 38.9**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.17**	**83**		**Pn**	**04 41 21.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.17**	**83**		**Sn**	**04 41 38.8**	**+0.7**
CRPR				IAML		04 41 46.3	
	comp=E,64nm,3.2s						
CRPR				IAML		04 41 59.8	
	comp=N,60nm,3.1s						
MPR	**Mayaguez**	**1.18**	**73**	Pn	**Pn**	**04 41 22.2**	**-0.2**
LSP	**Las Mesas**	**1.22**	**75**⇑	*e*P	**Pn**	**04 41 22.9**	**-0.1**
LSP	**Las Mesas**	**1.22**	**75**	*e*S	**Sn**	**04 41 40.5**	**+1.0**
LSP	**Las Mesas**	**1.22**	**75**		**Pn**	**04 41 22.9**	**-0.1**
LSP					**Sn**	**04 41 40.5**	**+1.0**
MLPR	**Magueyes Islan**	**1.23**	**85**⇑	*e*P	**Pn**	**04 41 21.6**	**-1.5**
MLPR	**Magueyes Islan**	**1.23**	**85**	*e*S	**Sn**	**04 41 40.3**	**+0.8**
MLPR	**Magueyes Islan**	**1.23**	**85**		**Pn**	**04 41 21.5**	**-1.5**
MLPR					**Sn**	**04 41 39.8**	**+0.3**
AGPR	**Aguadilla, PR**	**1.30**	**63**⇑	*e*P	**Pn**	**04 41 23.4**	**-0.6**
AGPR	**Aguadilla, PR**	**1.30**	**63**	*e*S	**Sn**	**04 41 41.6**	**+0.4**
AGPR	**Aguadilla, PR**	**1.30**	**63**	Pn	**Pn**	**04 41 23.0**	**-1.0**
AGPR				Sn	**Sn**	**04 41 41.7**	**+0.6**
AGPR				IAML		04 41 43.3	
	comp=E,109nm,1.1s						
AGPR				IAML		04 41 50.7	
	comp=N,106nm,1.1s						
AOPR	**Arecibo Observ**	**1.57**	**72**⇑	*e*P	**Pn**	**04 41 27.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.57**	**72**	*e*S	**Sn**	**04 41 47.6**	**+0.2**
AOPR	**Arecibo Observ**	**1.57**	**72**	Pn	**Pn**	**04 41 27.4**	**-0.1**
AOPR				Sn	**Sn**	**04 41 47.0**	**-0.4**
OBIP	**Obispado Ponce**	**1.65**	**84**⇑	*e*P	**Pn**	**04 41 28.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.65**	**84**	*e*S	**Sn**	**04 41 49.6**	**+0.4**
OBIP	**Obispado Ponce**	**1.65**	**84**	Pn	**Pn**	**04 41 27.7**	**-0.8**
OBIP				Sn	**Sn**	**04 41 49.2**	**+0.1**
CELP	**Cerrillos**	**1.68**	**83**⇑	*e*P	**Pn**	**04 41 28.6**	**-0.2**
CELP	**Cerrillos**	**1.68**	**83**	*e*S	**Sn**	**04 41 50.2**	**+0.4**
CELP	**Cerrillos**	**1.68**	**83**		**Pn**	**04 41 28.6**	**-0.2**
CELP					**Sn**	**04 41 50.2**	**+0.4**
EMPR	**Esperanza - Ma**	**1.82**	**70**⇑	*e*P	**Pn**	**04 41 30.9**	**+0.2**
EMPR	**Esperanza - Ma**	**1.82**	**70**	*e*S	**Sn**	**04 41 53.8**	**+0.8**
EMPR	**Esperanza - Ma**	**1.82**	**70**	Pn	**Pn**	**04 41 29.8**	**-0.8**
EMPR				Sn	**Sn**	**04 41 53.0**	**-0.1**
SJG	**San Juan**	**2.09**	**83**	Pn	**Pn**	**04 41 33.4**	**-0.9**
SJG				IAML		04 42 05.7	
	comp=N,30nm,0.5s						
SJG				IAML		04 42 09.8	
	comp=N,29nm,0.3s						
IGPR	**InterUniversit**	**2.12**	**87**⇑	*e*P	**Pn**	**04 41 34.2**	**-0.5**
IGPR	**InterUniversit**	**2.12**	**87**	*e*S	**Sn**	**04 42 00.2**	**0.0**
GCPR	**Guaynabo City**	**2.18**	**78**⇑	*e*P	**Pn**	**04 41 34.9**	**-0.7**
GCPR	**Guaynabo City**	**2.18**	**78**	*e*S	**Sn**	**04 42 01.6**	**-0.1**
GCPR	**Guaynabo City**	**2.18**	**78**	Pn	**Pn**	**04 41 33.6**	**-1.9**
GCPR				Sn	**Sn**	**04 42 00.5**	**-1.3**
GCPR				IAML		04 42 24.9	
	comp=E,24nm,2.8s						
HUMP	**Col San Antoni**	**2.38**	**83**⇑	*e*P	**Pn**	**04 41 38.4**	**+0.2**
HUMP	**Col San Antoni**	**2.38**	**83**	*e*S	**Sn**	**04 42 06.4**	**-0.1**
HUMP	**Col San Antoni**	**2.38**	**83**	Pn	**Pn**	**04 41 37.5**	**-0.7**
HUMP				Sn	**Sn**	**04 42 07.9**	**+1.5**
HUMP				IAML		04 42 10.6	
	comp=E,44nm,0.2s						
HUMP				IAML		04 42 15.5	
	comp=N,31nm,0.6s						
MTP	**Monte Pirata**	**2.65**	**85**⇑	*e*P	**Pn**	**04 41 42.0**	**+0.1**
MTP	**Monte Pirata**	**2.65**	**85**	*e*S	**Sn**	**04 42 14.1**	**+0.9**
MTP	**Monte Pirata**	**2.65**	**85**	Pn	**Pn**	**04 41 41.3**	**-0.6**
MTP				Sn	**Sn**	**04 42 15.9**	**+2.8**
MTP				IAML		04 42 38.7	
	comp=N,27nm,2.6s						
MTP				IAML		04 42 49.3	
	comp=E,28nm,3.1s						
SDDR	**Presa de Saban**	**3.02**	**292**	Pn	**Pn**	**04 41 46.6**	**-0.2**
SDDR				IAML		04 43 49.3	
	comp=E,31nm,2.8s						

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*IDC **12** 04:53:30.4±1.5, 29°.45N×133°.55E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.4/35, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=44.5km s-min=30.7km az=83.0*
*JMA **12** 04:54:02.9±0.3, 30°.40N×138°.64E, h397^{km}, M3.4*
ISC 12 04:54:03.6±1.3, **30°.4N**±0°.1×**138°.8E**±0°.2, **h400**^{km}, **n10**, σ**1^{s}.24**/10, **mb2.9**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.86**	**17**	Pn	**Pn**	**04 55 08.0**	**+2.3**
	14nm,0.3s,baz=260,slow=22,SNR=1.4						
CBIJ	**Chichi jima**	**4.41**	**137**	P	**Pn**	**04 55 20.4**	**+0.7**
CBIJ				*e*S	**S**	**04 56 20.8**	**-0.6**
BSO1	**Boso 1**	**4.65**	**23**	P	**Pn**	**04 55 22.2**	**+0.9**
JHU	**Hanno**	**5.48**	**4**	P	**Pn**	**04 55 30.5**	**-0.1**
JRY	**Ryogami san**	**5.63**	**1**	P	**Pn**	**04 55 32.9**	**+0.7**
JYT	**Yasato**	**5.96**	**11**	P	**Pn**	**04 55 34.5**	**-1.1**
JAG	**Ashikaga**	**6.06**	**5**	P	**Pn**	**04 55 35.8**	**-1.0**
MKAR	**Makanchi Array**	**46.13**	**307**	P	P	05 01 31.7	-18
	0.1nm,0.4s,baz=86,slow=9.5,SNR=1.5						
WRA	**Warramunga Arr**	**50.21**	**185**	P	**P**	**05 02 19.9**	**-0.9**
	0.8nm,0.5s,baz=3.7,slow=7.9,SNR=8.9						
ASAR	**Alice Springs**	**53.93**	**186**	P	**P**	**05 02 47.5**	**-0.4**
	0.3nm,0.4s,baz=16,slow=12,SNR=12						

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*JMA **12** 04:59:22.4±0.1, 26°.14N×126°.52E, h75^{km}±1^{km}, M4.2*
JMA Felt II J1.
*NIED **12** 04:59:22.4, 26°.14N×126°.52E, h75^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.77; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-1.78; M$_{r\theta}$-0.54; M$_{\theta\phi}$-0.34; M$_{\phi r}$0.31; Fault plane solution: M$_{0}$1.91000×10^{15} NP1: ϕ_{s}354.00000°, δ51.00000°, λ68.00000°. NP2: ϕ_{s}207.00000°, δ44.00000°, λ115.00000°.*
*NEIC **12** 04:59:23.2±2.3, 26°.10N±0°.08×126°.61E±0°.07, h81^{km}±6^{km}, mb4.5/35 Error ellipse: s-maj=11.6km s-min=8.0km az=158.0*
*IDC **12** 04:59:23.6±3.0, 26°.12N×126°.40E, h87^{km}±27^{km}, mb3.8/14, mb1 3.9/17, mb1mx3.7/48, mbtmp4.1/17, MS2.8/4, Ms1 2.8/4, ms1mx2.6/41, Error ellipse: s-maj=23.5km s-min=12.3km az=74.0*
ISC 12 04:59:22.9±0.6, **26°.12N**±0°.05×**126°.55E**±0°.05, **h79**^{km}±6^{km}, **n83**, σ**1^{s}.12**/105, **mb4.3**/29, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.29**	**45**	P	**Pn**	**04 59 34.2**	**-0.9**
JKE				S	**Sn**	**04 59 42.9**	**-1.2**
JAGN	**Aguni-jima**	**0.78**	**53**	P	**Pn**	**04 59 39.0**	**-0.3**
JAGN				S	**Sn**	**04 59 51.1**	**-0.4**
JJT3	**Tamagusuku3**	**1.11**	**88**	P	**Pn**	**04 59 43.5**	**+0.3**
JJT3				S	**Sn**	**04 59 59.1**	**+0.7**
JNTH	**Nagotoyohara**	**1.38**	**73**	P	**Pn**	**04 59 46.5**	**-0.1**
JNTH				S	**Sn**	**05 00 04.4**	**-0.1**
JIH	**Iheya**	**1.56**	**54**	P	**Pn**	**04 59 48.9**	**-0.1**
JIH				S	**Sn**	**05 00 08.6**	**-0.1**
JIKM	**Ikemajima**	**1.68**	**225**	P	**Pn**	**04 59 50.0**	**-0.5**
JIKM				S	**Sn**	**05 00 10.7**	**-0.7**
JOW	**Kunigami**	**1.70**	**65**	P	**Pn**	**04 59 50.4**	**-0.4**
JOW				S	**Sn**	**05 00 11.9**	**-0.1**
JOW	**Kunigami**	**1.70**	**65**	Pn	**Pn**	**04 59 51.8**	**+0.9**
JOGS	**Gusukube**	**1.71**	**218**	P	**Pn**	**04 59 51.1**	**+0.2**
JOGS				S	**Sn**	**05 00 11.8**	**-0.3**
JMJ2	**Miyako jima3**	**1.77**	**219**	P	**Pn**	**04 59 51.5**	**-0.2**
JMJ2				S	**Sn**	**05 00 13.0**	**-0.5**
JIRB	**Irabujima**	**1.79**	**224**	P	**Pn**	**04 59 51.2**	**-0.9**
JIRB				S	**Sn**	**05 00 12.2**	**-2.0**
JYRO	**Yoronjima**	**1.92**	**62**	P	**Pn**	**04 59 53.1**	**-0.7**
JYRO				S	**Sn**	**05 00 16.0**	**-1.2**
JOKE	**Okinoerabujima**	**2.19**	**55**	P	**Pn**	**04 59 56.4**	**-0.9**
JOKE				*e*S	**Sn**	**05 00 23.0**	**-0.6**
JTJ	**Tarama**	**2.23**	**229**	P	**Pn**	**04 59 57.9**	**0.0**
JTJ				S	**Sn**	**05 00 23.3**	**-1.3**
YOJ	**Yonaguni jima**	**3.61**	**244**		**Pn**	**05 00 18.4**	**+1.9**
YOJ				Sn	**Sn**	**05 00 56.6**	**-1.4**
JMZ	**Minamidaito 2**	**4.21**	**93**	Pn	**Pn**	**05 00 21.6**	**-3.2**
TATO	**Taipei**	**4.72**	**257**	Pn	**Pn**	**05 00 33.4**	**+1.8**
NACB	**Ninganchiao**	**4.89**	**248**	Pn	**Pn**	**05 00 32.7**	**-1.4**
YHNB	**Yeheng**	**4.90**	**254**	Pn	**Pn**	**05 00 36.4**	**+2.2**
YULB	**Yu-li**	**5.50**	**242**	Pn	**Pn**	**05 00 40.2**	**-2.1**
SSLB	**Suanglung**	**5.59**	**247**	Pn	**Pn**	**05 00 43.1**	**-0.4**
TPUB	**Ta-pu**	**6.07**	**244**	Pn	**Pn**	**05 00 50.0**	**-0.2**
JSU	**Suzuyama**	**6.37**	**32**	Pn	**Pn**	**05 00 54.3**	**+0.1**
KNMB	**Chin-men Tao**	**7.57**	**259**	Pn	**Pn**	**05 01 11.6**	**+1.0**
JNU	**Nakatsue**	**7.93**	**27**	P	**Pn**	**05 01 15.9**	**+0.5**
	3.2nm,0.3s,baz=207,slow=13,SNR=14						
JNU				S	**Sn**	**05 02 45.0**	**+1.4**
	baz=169,slow=10,SNR=2.3						
JNU				LR	LR	05 05 04.3	
	comp=Z,102nm,19.7s,baz=358,slow=43						
JNU	**Nakatsue**	**7.93**	**27**	Pn	**Pn**	**05 01 16.5**	**+1.0**
JMN	**Monobe**	**9.89**	**38**	Pn	**Pn**	**05 01 39.2**	**-3.1**
KSRS	**Korea Array**	**11.36**	**6**	P	**Pn**	**05 02 04.4**	**+2.2**
	0.3nm,0.3s,baz=148,slow=43,SNR=2.8						
KSRS				LR	LR	05 06 39.9	
	comp=Z,19nm,18.2s,baz=185,slow=38						
JWT	**Wachi**	**11.88**	**38**	Pn	**Pn**	**05 02 06.7**	**-2.7**
MJAR	**Matsushiro Arr**	**14.38**	**41**	P	**P**	**05 02 45.7**	**-1.6**
	0.1nm,0.3s,baz=235,slow=10,SNR=5.0						
MJAR				LR	LR	05 08 43.5	
	comp=Z,44nm,20.1s,baz=305,slow=39						
MDJ	**Mudanjiang**	**18.62**	**7**	P	**Pn**	**05 03 35.3**	**+0.1**
JEW	**Eniwo**	**20.66**	**32**	P	Pn	05 03 59.6	+0.4
KLR	**Kul'dur**	**23.42**	**9**	LR	LR	05 15 01.6	
	comp=Z,24nm,19.3s,baz=2.5,slow=40						
TOLI2	**Tolitoli**	**25.48**	**194**	P	**P**	**05 04 45.2**	**+1.4**
TOLI2				IAmb	IAmb	05 04 46.2	
	comp=Z,12nm,0.9s						
SONM	**Songino Array**	**26.85**	**329**	P	**P**	**05 04 55.6**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=146,slow=12,SNR=3.4						
SONM	**Songino Array**	**26.85**	**329**	P	**P**	**05 04 57.7**	**+1.6**
SBUM	**Sibu**	**27.27**	**213**	P	**P**	**05 05 02.7**	**+2.7**
SBUM				IAmb	IAmb	05 05 03.7	
	comp=Z,11nm,0.7s						
FAKI	**Fak Fak**	**29.39**	**168**	P	**P**	**05 05 19.2**	**+0.4**
MTN	**Manton Dam**	**38.98**	**173**	P	**P**	**05 06 41.1**	**-0.5**
MK31	**Makanchi Array**	**40.49**	**312**	P	**P**	**05 06 53.7**	**-0.3**
MK31				PcP	**PcP**	**05 08 55.5**	**+0.3**
MKAR	**Makanchi Array**	**40.49**	**312**	P	**P**	**05 06 52.9**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=97,slow=9.3,SNR=23						
MKAR				PcP	**PcP**	**05 08 54.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=130,slow=2.2,SNR=1.9						
MKAR	**Makanchi Array**	**40.49**	**312**	P	**P**	**05 06 53.4**	**-0.6**
MKAR				PcP	**PcP**	**05 08 55.3**	**+0.1**
ZAA0	**Zalesovo Array**	**41.43**	**324**	P	**P**	**05 07 01.5**	**-0.1**
ZAA0				IAmb	IAmb	05 07 02.6	
	comp=Z,2.1nm,0.5s						
ZALV	**Zalesovo Beam**	**41.43**	**324**	P	**P**	**05 07 00.7**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=114,slow=9.3,SNR=7.5						
ZALV	**Zalesovo Beam**	**41.43**	**324**	P	**P**	**05 07 00.5**	**-1.0**
COEN	**Coen**	**42.99**	**156**	P	**P**	**05 07 15.7**	**+1.1**
COEN				IAmb	IAmb	05 07 21.6	
	comp=Z,17nm,1.4s						
KURK	**Kurchatov**	**43.87**	**317**	P	**P**	**05 07 21.1**	**-0.3**
KURBB	**Kurchatov Arra**	**43.90**	**317**	P	**P**	**05 07 21.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=104,slow=9.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**43.96**	**181**	P	**P**	**05 07 22.1**	**-0.2**
FITZ				IAmb	IAmb	05 07 22.6	
	comp=Z,6.2nm,0.6s						
WB0	**Warramunga Arr**	**46.24**	**170**	P	**P**	**05 07 40.0**	**-0.4**
WB0				IAmb	IAmb	05 07 40.9	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**46.41**	**170**	P	**P**	**05 07 41.5**	**-0.2**
	comp=Z,4.4nm,0.6s,baz=352,slow=8.5,SNR=25						
WRA	**Warramunga Arr**	**46.41**	**170**	P	**P**	**05 07 40.6**	**-1.1**
WB2	**Warramunga Arr**	**46.41**	**170**	P	**P**	**05 07 41.6**	**-0.1**
WB2				IAmb	IAmb	05 07 42.0	
	comp=Z,6.3nm,0.8s						
WR0	**Warramunga Arr**	**46.46**	**170**	P	**P**	**05 07 41.9**	**-0.2**
WR0				IAmb	IAmb	05 07 42.4	
	comp=Z,4.6nm,0.6s						
AS31	**Alice Springs**	**50.00**	**171**	P	**P**	**05 08 09.2**	**-0.2**
ASAR	**Alice Springs**	**50.00**	**171**	P	**P**	**05 08 09.6**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=357,slow=14,SNR=31						
ASAR				PcP	**PcP**	**05 09 28.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=358,slow=4.1,SNR=5.9						
ABKAR	**Akbulak array**	**55.62**	**313**	P	**P**	**05 08 50.3**	**-0.2**
ABKAR				IAmb	IAmb	05 08 52.8	
	comp=Z,3.8nm,1.5s						
ABKAR				PcP	**PcP**	**05 09 48.9**	**-0.4**
MORW	**Morawa**	**55.79**	**191**	P	**P**	**05 08 51.8**	**-0.1**
MORW				IAmb	IAmb	05 09 09.6	
	comp=Z,18nm,1.4s						
BBOO	**Buckleboo**	**59.30**	**171**	P	**P**	**05 09 16.5**	**+0.1**
STKA	**Stephens Creek**	**59.43**	**165**	P	**P**	**05 09 17.4**	**0.0**
	comp=Z,4.2nm,0.6s,baz=346,slow=7.5,SNR=11						
STKA				PcP	**PcP**	**05 10 02.6**	**-1.8**
	comp=Z,1.1nm,0.5s,baz=8.1,slow=15,SNR=3.1						
STKA	**Stephens Creek**	**59.43**	**165**	P	**P**	**05 09 17.7**	**+0.3**
STKA				PcP	**PcP**	**05 10 03.8**	**-0.6**
DZM	**Mont Dzumac**	**61.56**	**137**	P	**P**	**05 09 33.0**	**+0.8**
RND	**Reindeer**	**64.59**	**30**	P	**P**	**05 09 52.0**	**+0.3**
RND				IAmb	IAmb	05 10 00.1	
	comp=Z,4.7nm,1.2s						
MDM	**Murphy Dome**	**64.65**	**28**	P	**P**	**05 09 53.6**	**+1.6**
MDM				IAmb	IAmb	05 10 11.9	
	comp=Z,2.7nm,0.9s						
IL31		**65.25**	**28**	P	**P**	**05 09 56.9**	**+1.1**
IL31				IAmb	IAmb	05 10 04.5	
	comp=Z,4.7nm,1.4s						
ILAR	**Eielson Array**	**65.25**	**28**	P	**P**	**05 09 56.3**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=263,slow=5.4,SNR=5.9						
M24K	**Tolsona, Glenn**	**66.01**	**31**	P	**P**	**05 10 02.4**	**+1.5**
M24K				IAmb	IAmb	05 10 17.9	
	comp=Z,19nm,1.2s						
K27K	**Chicken**	**67.44**	**28**	P	**P**	**05 10 11.1**	**+1.2**
EPYK	**Eagle Plains**	**69.01**	**25**	P	**P**	**05 10 20.7**	**+1.0**
EPYK				IAmb	IAmb	05 10 21.4	
	comp=Z,3.5nm,1.0s						
SOCY	**Socotra**	**69.19**	**274**	P	**P**	**05 10 20.5**	**-1.2**
ARCES	**ARCESS Array B**	**69.56**	**338**	P	**P**	**05 10 21.7**	**-1.3**
	comp=Z,7.3nm,1.2s,baz=64,slow=9.1,SNR=4.3						
ARCES				PcP	**pwP**	**05 10 45.1**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=72,slow=4.0,SNR=3.5						
ARCES	**ARCESS Array B**	**69.56**	**338**	P	**P**	**05 10 22.9**	**-0.1**
INK	**Inuvik**	**69.58**	**23**	P	**P**	**05 10 23.6**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=304,slow=8.2,SNR=3.5						
INK	**Inuvik**	**69.58**	**23**	P	**P**	**05 10 23.3**	**+0.2**
INK				IAmb	IAmb	05 10 34.8	
	comp=Z,4.0nm,1.2s						
FIA1	**FINESS Array S**	**72.21**	**330**	P	**P**	**05 10 37.4**	**-1.8**
FINES	**FINESS Array B**	**72.22**	**330**	P	**P**	**05 10 37.9**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=48,slow=2.8,SNR=4.0						
AKASG	**Malin Array Be**	**74.63**	**319**	P	**P**	**05 10 52.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=64,slow=6.0,SNR=2.8						
AKBB	**Malin Array Si**	**74.63**	**319**	P	**P**	**05 10 53.7**	**+0.1**
RES	**Resolute Bay**	**75.93**	**10**	P	**P**	**05 11 00.8**	**+0.2**
RES				PcP	**PcP**	**05 11 15.5**	**+2.8**
NC405	**NORSAR Array S**	**78.50**	**333**	P	**P**	**05 11 14.9**	**-0.3**
NOA	**NORSAR Array B**	**78.74**	**333**	P	**P**	**05 11 15.6**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=287,slow=11,SNR=1.7						
YKA	**Yellowknife Ar**	**79.25**	**24**	P	**P**	**05 11 19.8**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=302,slow=4.3,SNR=22						
ELL	**Elmali**	**79.79**	**306**	P	**P**	**05 11 23.3**	**+0.4**

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*SKHL **12** 05:04:42.1±1.4, 46°.87N×145°.15E, h384^{km}±15^{km}, mb4.9/18, msh4.5/3*
*MOS **12** 05:04:43.1±0.8, 46°.95N×144°.83E, h387^{km}, mb3.6/8, Error ellipse: s-maj=10.9km s-min=7.4km az=77.5*
*IDC **12** 05:04:44.6±1.2, 46°.96N×144°.83E, h389^{km}±13^{km}, mb3.2/18, mb1 3.4/25, mb1mx3.3/42, mbtmp3.9/25, Error ellipse: s-maj=12.1km s-min=9.8km az=142.0*
*JMA **12** 05:04:44.7±0.5, 46°.48N×145°.03E, h399^{km}, M4.0*
*NEIC **12** 05:04:44.4±1.6, 46°.86N±0°.09×144°.8E±0°.2, h383^{km}±7^{km}, mb4.1/22, Error ellipse: s-maj=16.9km s-min=13.1km az=105.0*
ISC 12 05:04:43.4±0.5, **46°.73N**±0°.05×**144°.97E**±0°.06, **h384**^{km}±6^{km}, **n128**, σ**1^{s}.63**/144, **mb3.7**/35, **9C-1D**, **Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**1.54**	**279**	*e*P	**Pn**	**05 05 36.1**	**+1.1**
YSS				AMB	AMB	05 05 36.5	
	500nm,0.5s						
YSS				*e*S	**S**	**05 06 18.8**	**+2.0**
YSS				A	A	05 06 19.3	
	230nm,2.0s						
YSS				A	A	05 06 19.3	
	250nm,2.0s						
YSS				A	A	05 06 20.2	
	20nm,0.6s						
YSS				A	A	05 06 20.2	
	30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**1.54**	**279**α	*i*PN	**Pn**	**05 05 36.3**	**+1.2**
YSS				*e*S	**S**	**05 06 18.0**	**+1.2**
YSS				pmax	pmax		
	comp=Z,330nm,0.4s						
YSS				smax	smax		
	comp=N,40nm,1.1s						
YSS	**Yuzh-Sakhalins**	**1.54**	**279**		**Pn**	**05 05 36.2**	**+1.2**
KHLM	**Kholmsk**	**2.03**	**280**	*e*P	**Pn**	**05 05 39.0**	**+1.1**
KHLM				AMB	AMB	05 05 39.3	
	comp=N,700nm,0.3s						
JSE	**Soyaes**	**2.43**	**224**	P	**Pn**	**05 05 42.3**	**+1.5**
KUR	**Kuril'sk**	**2.51**	**125**	*e*P	**Pn**	**05 05 43.6**	**+2.1**
KUR				AMB	AMB	05 05 50.8	
	comp=N,70nm,0.6s						
KUR	**Kuril'sk**	**2.51**	**125**	*i* PN	**Pn**	**05 05 43.5**	**+2.1**
JWK2	**Keihoku**	**2.56**	**238**	P	**Pn**	**05 05 43.8**	**+2.0**
JWK2				*e*S	**S**	**05 06 30.8**	**+1.8**
YUK	**Yuzh-Kuril'sk**	**2.77**	**167**	*e*P	**Pn**	**05 05 44.6**	**+1.1**
YUK				AMB	AMB	05 05 47.0	
	comp=N,160nm,0.3s						
YUK				*e*S	**S**	**05 06 35.0**	**+3.1**
YUK				A	A	05 06 40.5	
	comp=N,380nm,0.5s						
YUK				A	A	05 06 40.5	
	comp=N,380nm,0.5s						
JTKR	**Abashiri--Toko**	**2.86**	**196**	P	**Pn**	**05 05 45.9**	**+1.7**
UGL	**Uglegorsk**	**3.06**	**321**	*e*P	**Pn**	**05 05 45.8**	**+0.2**
UGL				AMB	AMB	05 05 46.0	
	comp=N,400nm,0.4s						
UGL				*e*S	**S**	**05 06 34.1**	**-2.0**
UGL				A	A	05 06 36.6	
	comp=N,200nm,0.7s						
UGL				A	A	05 06 36.6	
	comp=N,240nm,0.7s						
UGL				A	A	05 06 40.0	
	comp=N,630nm,2.0s						
UGL				A	A	05 06 40.0	
	comp=N,820nm,2.0s						
JKA	**Kamikawa-asahi**	**3.10**	**213**	Pn	**Pn**	**05 05 48.1**	**+1.9**
ASAJ	**Asahikawa**	**3.10**	**213**	P	**Pn**	**05 05 48.3**	**+2.1**
	comp=N,3.6nm,0.3s,baz=313,slow=3.8,SNR=12						
ASAJ	**Asahikawa**	**3.10**	**213**	P	**Pn**	**05 05 48.3**	**+2.1**
ASAJ	**Asahikawa**	**3.10**	**213**	PN	**Pn**	**05 05 48.1**	**+1.9**
NEM2	**Nemuro 2**	**3.41**	**170**	P	**Pn**	**05 05 48.5**	**-0.4**
NEM2				*e*S	**S**	**05 06 39.7**	**-2.2**
JAR	**Ashorobuto**	**3.53**	**194**	P	**Pn**	**05 05 51.3**	**+1.2**
JAK	**Akkeshi**	**3.73**	**183**	P	**Pn**	**05 05 51.9**	**-0.1**
JAK				*e*S	**S**	**05 06 45.3**	**-2.1**
JCH	**Churui**	**4.27**	**196**	P	**Pn**	**05 05 57.4**	**+0.3**
JCH				*e*S	**S**	**05 06 53.9**	**-3.0**
TYV	**Tymovskoe**	**4.41**	**341**	*e*P	**Pn**	**05 05 57.7**	**-0.6**
TYV				AMB	AMB	05 05 57.9	
	comp=N,12nm,0.3s						
TYV				*e*S	**S**	**05 06 56.4**	**-2.8**
TYV				A	A	05 06 56.8	
	comp=N,30nm,0.8s						
TYV				A	A	05 06 56.8	
	comp=N,30nm,0.8s						
JNBK	**Urakawa-nobuka**	**4.72**	**200**	P	**Pn**	**05 06 01.5**	**-0.2**
ERM	**Erimo**	**4.89**	**196**⇑	*i*PN	**Pn**	**05 06 04.8**	**+1.4**
ERM	**Erimo**	**4.89**	**196**	Pn	**Pn**	**05 06 04.5**	**+1.1**
ERM					**S**	**05 07 08.0**	**-0.4**
JKB	**Kayabe**	**5.60**	**212**	P	**Pn**	**05 06 11.2**	**+0.2**
JKB				*e*S	**S**	**05 07 18.6**	**-3.7**
JOT	**Ohata**	**6.04**	**209**	P	**Pn**	**05 06 15.6**	**-0.3**
JOT				*e*S	**S**	**05 07 26.0**	**-5.2**
JOSM	**Okushiri--Mats**	**6.08**	**222**	P	**Pn**	**05 06 17.3**	**+1.0**
JTM	**Tenmabayashi**	**6.57**	**207**	Pn	**Pn**	**05 06 21.9**	**0.0**
JANG	**Nango**	**6.83**	**203**	P	**Pn**	**05 06 24.1**	**-0.6**
JANG				*e*S	**S**	**05 07 41.9**	**-5.5**
OKH	**Okha**	**6.96**	**350**	*e*P	**P**	**05 06 26.1**	**-0.6**
OKH				AMB	AMB	05 06 27.0	
	comp=N,130nm,0.6s						
JOM	**Ohasama**	**7.73**	**202**	P	**Pn**	**05 06 35.3**	**+0.3**
JOM				*e*S	**S**	**05 08 02.5**	**-3.8**
SKR	**Severo-Kuril's**	**8.37**	**58**	*e*P	**Pn**	**05 06 40.0**	**-2.1**
SKR				AMB	AMB	05 06 43.4	
	comp=N,20nm,0.7s						
SKR	**Severo-Kuril's**	**8.37**	**58**	*e*PN	**Pn**	**05 06 41.1**	**-1.0**
PAU	**Pauzhetka**	**9.10**	**54**	*e*P	**Pn**	**05 06 50.0**	**-0.6**
PAU				AMB	AMB	05 06 53.0	
	comp=N,16nm,0.5s						
KLR	**Kul'dur**	**9.21**	**291**	P	**P**	**05 06 51.7**	**-0.8**
	comp=N,0.4nm,0.3s,baz=103,slow=12,SNR=15						
KLR	**Kul'dur**	**9.21**	**291**	*e*P	**P**	**05 06 52.2**	**-0.3**
KLR	**Kul'dur**	**9.21**	**291***d*	*i*PN	**P**	**05 06 52.2**	**-0.3**
JMM	**Marumori**	**9.38**	**201**	Pn	**Pn**	**05 06 54.0**	**-0.1**
USA0B	**Ussuriysk Arra**	**9.46**	**259**⇑	*i*PN	**P**	**05 06 55.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**9.46**	**259**	P	**P**	**05 06 55.7**	**+0.3**
	baz=62,slow=13,SNR=4.9						
EKMR	**Ekimchan**	**10.01**	**314**	*e*P	**P**	**05 07 00.5**	**-0.9**
EKMR				AMB	AMB	05 07 03.0	
	comp=N,5.0nm,0.5s						
PEA0B	**Petropavlovsk-**	**10.39**	**47**⇑	*i*PN	**P**	**05 07 04.8**	**-0.8**
PETK	**Petropavlovsk-**	**10.39**	**47**	P	**Pn**	**05 07 06.4**	**+0.6**
	comp=N,0.1nm,0.3s,baz=214,slow=5.0,SNR=1.5						
PETK	**Petropavlovsk-**	**10.39**	**47**		**Pn**	**05 07 07.1**	**+1.4**
PET	**Petropavlovsk**	**10.84**	**49**	*e*P	**P**	**05 07 06.4**	**-4.1**
MJA0	**Matsu Arr-Jizo**	**11.34**	**209**	*e*PN	**Pn**	**05 07 19.2**	**+2.0**
MAJO	**Matsushiro**	**11.36**	**209***c*	*i*PN	**Pn**	**05 07 19.0**	**+1.7**
MAJO	**Matsushiro**	**11.36**	**209**		**P**	**05 07 18.2**	**+1.7**
MAT	**Matsushiro**	**11.36**	**209**	P	**Pn**	**05 07 19.2**	**+1.9**
MJAR	**Matsushiro Arr**	**11.36**	**209**	P	**Pn**	**05 07 19.3**	**+2.0**
	comp=N,0.3nm,0.3s,baz=14,slow=12,SNR=14						
MJAR	**Matsushiro Arr**	**11.36**	**209**	PN	**Pn**	**05 07 19.4**	**+2.1**
MJAR	**Matsushiro Arr**	**11.36**	**209**		**Pn**	**05 07 19.4**	**+2.1**
BMKR	**Bomnak**	**12.95**	**314**	*e*P	**P**	**05 07 33.0**	**-0.7**
BMKR				AMB	AMB	05 07 34.6	
	comp=N,5.0nm,0.7s						
MA2	**Magadan**	**13.33**	**13**	*e*P	**P**	**05 07 37.2**	**-0.6**
MA2	**Magadan**	**13.33**	**13**	*e*PN	**P**	**05 07 37.2**	**-0.6**
KROS	**Kirovskiy**	**13.76**	**311**	*e*P	**P**	**05 07 41.4**	**-1.3**
KROS				AMB	AMB	05 07 42.8	
	comp=N,4.0nm,0.4s						
KSRS	**Korea Array**	**15.65**	**240**	P	**P**	**05 08 05.0**	**+1.6**
	comp=N,0.2nm,0.3s,baz=48,slow=9.7,SNR=3.5						
SEY	**Seymchan**	**16.77**	**12**	P	**P**	**05 08 15.2**	**0.0**
	comp=N,0.8nm,0.3s,baz=354,slow=24,SNR=8.3						
HIA	**Hailar**	**17.05**	**288**⇑	*i*P	**P**	**05 08 17.6**	**-0.7**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	**Yakutsk**	**17.65**	**336**	*e*P	**P**	**05 08 22.4**	**-2.1**
YAK	**Yakutsk**	**17.65**	**336***c*	*i*P	**P**	**05 08 22.4**	**-2.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SONM	**Songino Array**	**26.01**	**287**	P	**P**	**05 09 44.4**	**+1.4**
	comp=Z,2.8nm,0.9s,baz=84,slow=8.6,SNR=12						
SONM	**Songino Array**	**26.01**	**287**	*e*P	**P**	**05 09 45.5**	**+2.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**26.01**	**287**	P	**P**	**05 09 45.1**	**+2.0**
TIXI	**Tiksi**	**26.13**	**348**	*e*P	**P**	**05 09 43.0**	**-0.6**
TIXI	**Tiksi**	**26.13**	**348***c*	*i*P	**P**	**05 09 43.0**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
IMAR	**Indian Mountai**	**37.11**	**37**	P	**P**	**05 11 17.9**	**-0.4**
DGZ	**Jazzator, Alta**	**37.65**	**296**	*e*P	**P**	**05 11 22.7**	**-0.5**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.9s						
ZALV	**Zalesovo Beam**	**38.02**	**304**	P	**P**	**05 11 25.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=77,slow=6.0,SNR=2.4						
ZALV				PcP	**PcP**	**05 13 32.0**	**0.0**
	comp=Z,1.1nm,0.6s,baz=170,slow=3.0,SNR=3.8						
ZALV	**Zalesovo Beam**	**38.02**	**304**		**PcP**	**05 13 33.2**	**+1.1**
IL31		**40.05**	**38**	P	**P**	**05 11 42.2**	**-0.2**

ILAR	Eielson Array	40.05	38	P	P	05 11 42.0	-0.4
	comp=Z,1.0nm,0.7s,baz=259,slow=6.1,SNR=11						
MK31	Makanchi Array	41.90	294	P	P	05 11 56.8	-0.8
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	41.90	294	P	P	05 11 56.8	-0.8
MKAR	Makanchi Array	41.90	294	P	P	05 11 56.9	-0.8
	comp=Z,1.2nm,0.5s,baz=74,slow=7.7,SNR=16						
MAKZ	Makanchi	42.09	294	P	P	05 11 58.5	-0.7
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	42.09	294	P	P	05 11 58.5	-0.7
BCAR	Beaver Creek A	42.57	40	P	P	05 12 03.4	+0.6
KURK	Kurchatov	42.63	301	*e*P	P	05 12 02.2	-1.2
KURK	Kurchatov	42.63	301	*i* P	P	05 12 02.2	-1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	42.63	301	P	P	05 12 02.3	-1.1
KURBB	Kurchatov Arra	42.72	301	P	P	05 12 03.0	-1.1
	comp=Z,1.2nm,0.5s,baz=72,slow=8.5,SNR=10.0						
INK	Inuvik	44.64	32	P	P	05 12 18.1	-0.8
	comp=Z,0.9nm,0.4s,baz=285,slow=7.0,SNR=8.7						
BRVK	Borovoye	46.50	307	*e*P	P	05 12 32.1	-1.4
BRVK	Borovoye	46.50	307	*i* P	P	05 12 32.1	-1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOOM	Boomskoye usch	47.89	291	P	P	05 12 44.9	+0.4
BOOM				pmax	pmax		
	comp=Z,50nm,1.5s						
BOOM	Boomskoye usch	47.89	291	P	P	05 12 44.9	+0.4
AAK	Ala-Archa	48.74	292	*e*P	P	05 12 50.7	-0.2
AAK	Ala-Archa	48.74	292	*i* P	P	05 12 50.7	-0.2
AAK				pmax	pmax		
	comp=Z,12nm,1.9s						
KKAR	Karatay Array	51.01	295	P	P	05 13 07.1	-0.5
KKAR	Karatay Array	51.01	295	P	P	05 13 07.1	-0.5
ABKAR	Akbulak array	54.03	306	P	P	05 13 28.6	-0.7
ABKAR				IAmb	IAmb	05 13 28.6	
	comp=Z,3.7nm,0.3s						
YKA	Yellowknife Ar	54.20	34	P	P	05 13 29.8	-0.5
	comp=Z,0.6nm,0.6s,baz=309,slow=6.2,SNR=9.2						
YKA				PcP	PcP	05 14 29.5	+0.5
	comp=Z,0.2nm,0.4s,baz=320,slow=2.6,SNR=5.7						
YKA	Yellowknife Ar	54.20	34	*e*P	P	05 13 29.9	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	55.91	338	P	P	05 13 40.6	-1.7
	comp=Z,2.0nm,0.8s,baz=34,slow=6.6,SNR=1.9						
ARCES	ARCESS Array B	55.91	338	IAmb	IAmb	05 13 46.6	
	comp=Z,6.3nm,1.1s						
FINES	FINESS Array B	61.52	331	P	P	05 14 19.0	-1.5
	comp=Z,2.7nm,0.6s,baz=39,slow=7.1,SNR=15						
FINES	FINESS Array B	61.52	331	P	P	05 14 19.3	-1.2
FINES	FINESS Array B	61.52	331	P	P	05 14 19.3	-1.2
PINE	Pine Mountain	62.29	55	P	P	05 14 28.8	+2.6
PINE				IAmb	IAmb	05 14 29.3	
	comp=Z,5.4nm,0.8s						
HRY	Holter Researc	65.26	48	P	P	05 14 47.1	+1.9
EGMT	Eagleton	65.40	45	P	P	05 14 47.0	+1.1
PNTR	Pine Nut	66.10	58	P	P	05 14 52.9	+2.2
PNTR				IAmb	IAmb	05 15 01.6	
	comp=Z,2.3nm,0.8s						
BOZ	Bozeman (W)	66.12	48	P	P	05 14 52.0	+1.4
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BOZ	Bozeman (W)	66.12	48	P	P	05 14 52.0	+1.4
BOZ				IAmb	IAmb	05 14 52.4	
	comp=Z,2.5nm,0.5s						
NOA	NORSAR Array B	66.27	337	P	P	05 14 49.4	-1.7
	comp=Z,0.5nm,0.6s,baz=33,slow=7.5,SNR=1.9						
WR0	Warramunga Arr	67.04	191	P	P	05 14 58.1	+1.7
WB2	Warramunga Arr	67.05	191	P	P	05 14 58.1	+1.7
WB2				IAmb	IAmb	05 14 58.9	
	comp=Z,4.9nm,1.2s						
WRA	Warramunga Arr	67.05	191	P	P	05 14 57.7	+1.3
	comp=Z,0.5nm,0.4s,baz=8.0,slow=6.7,SNR=11						
WRA				PcP	PcP	05 15 22.9	+1.5
	comp=Z,0.3nm,0.7s,baz=0.1,slow=4.4,SNR=4.8						
WRA	Warramunga Arr	67.05	191	*e*P	P	05 14 58.7	+2.3
WRA	Warramunga Arr	67.05	191	P	P	05 14 58.2	+1.8
NVAR	Mina Array Bea	67.30	58	P	P	05 14 58.1	-0.1
	comp=Z,1.4nm,0.7s,baz=296,slow=6.1,SNR=13						
NVAR	Mina Array Bea	67.30	58	P	P	05 15 00.1	+1.9
LHV	Little Huntoon	67.30	58	P	P	05 15 00.5	+2.6
LHV				IAmb	IAmb	05 15 00.8	
	comp=Z,2.4nm,0.8s						
AKASG	Malin Array Be	68.28	322	P	P	05 15 02.0	-1.7
	comp=Z,0.6nm,0.5s,baz=32,slow=7.9,SNR=3.3						
BW06	Boulder Array	69.15	49	P	P	05 15 10.9	+1.3
BW06				IAmb	IAmb	05 15 11.3	
	comp=Z,2.0nm,0.6s						
PD31	Pinedale Array	69.15	49	P	P	05 15 11.2	+1.6
PDAR	Pinedale Array	69.15	49	P	P	05 15 10.5	+1.0
	comp=Z,1.3nm,0.5s,baz=302,slow=0.8,SNR=18						
TPNV	Topopah Spring	69.50	58	P	P	05 15 13.8	+2.1
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TPNV	Topopah Spring	69.50	58	P	P	05 15 13.8	+2.1
TPNV				IAmb	IAmb	05 15 14.1	
	comp=Z,2.9nm,0.8s						
ULM	Lac du Bonnet	70.04	37	P	P	05 15 14.8	+0.4
	comp=Z,1.8nm,0.6s,baz=324,slow=6.3,SNR=4.1						
ULM	Lac du Bonnet	70.04	37	P	P	05 15 14.1	-0.4
ULM				IAmb	IAmb	05 15 21.7	
	comp=Z,7.5nm,1.3s						
ASAR	Alice Springs	70.77	191	P	P	05 15 21.6	+2.6
	comp=Z,0.8nm,0.6s,baz=2.6,slow=5.3,SNR=17						
PV13	Radium Mtn., P	72.83	52	P	P	05 15 33.1	+1.6
BRTR	Keskin Array B	74.39	312	P	P	05 15 40.0	-0.3
	comp=Z,0.5nm,0.8s,baz=118,slow=4.6,SNR=4.0						
BRTR	Keskin Array B	74.39	312	P	P	05 15 40.0	-0.3
TX31	Lajitas Ar. Si	82.25	55	P	P	05 16 24.6	+1.7
TX32	Lajitas Array	82.25	55	P	P	05 16 24.6	+1.6
TX32				IAmb	IAmb	05 16 25.4	
	comp=Z,3.7nm,1.1s						
TXAR	Lajitas Array	82.25	55	P	P	05 16 24.4	+1.5
	comp=Z,1.2nm,0.6s,baz=296,slow=4.0,SNR=26						

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*WEL **12** 05:12:00, 40°.38S×176°.06E, h15^{km}, ML4.4, Mw4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.35; M$_{\theta\theta}$0.24; M$_{\phi\phi}$-0.59; M$_{r\theta}$-0.03; M$_{\theta\phi}$-0.90; M$_{\phi r}$2.55; Fault plane solution: M$_0$2.74000×10^{15} NP1: ϕ_s255.00000°, δ20.00000°, λ166.00000°. NP2: ϕ_s359.00000°, δ85.00000°, λ71.00000°. Principal axes: T -286.1900, Plg47.0000°, Azm250.0000°; N 23.7000, Plg19.0000°, Azm1.0000°; P 262.4900, Plg37.0000°, Azm106.0000°;*

*IDC **12** 05:12:38.9±1.3, 40°.53S×176°.22E, h0^{km}, mb4.6/4, mb1 4.8/4, mb1mx4.2/19, mbtmp4.6/4, ML3.5/2, MS3.3/2, Ms1 3.3/2, ms1mx2.9/24 Error ellipse: s-maj=43.6km s-min=17.4km az=131.0*

*NOU **12** 05:12:41.1, 40°.73S×176°.74E, h33^{km}, MLv4.5, North Island, New Zealand*

*WEL **12** 05:12:43.6, 40°.4S±0°.6×176°.1E±1°.0, h13^{km}±1^{km}, M4.4/36, ML4.7/36, MLv4.4/36, Error ellipse: s-maj=0.0km s-min=0.0km az=81.1*

*NEIC **12** 05:12:44.3±1.5, 40°.53S±0°.05×176°.3E±0°.1, h41^{km}±4^{km}, mb4.8/5, Error ellipse: s-maj=13.5km s-min=5.3km az=117.0*

ISC 12 05:12:43.5±0.8, **40°.44S**±0°.02×**176°.12E**±0°.02, **h23**^{km}±5^{km}, **n187**, σ**1^{s}.20**/215, **mb4.6**/6, **MS3.3**/5, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVHZ	Dannevirke	0.14	15	P	Pb	05 12 47.3	-1.0
DVHZ				S	Sb	05 12 50.0	-1.6
PRWZ	Pori Road	0.16	224	P	Pb	05 12 49.2	+0.6
PRWZ				S	Sb	05 12 53.1	+1.1
BFZ	Birch Farm	0.26	158		Pn	05 12 51.4	-0.6
BFZ				Sn	Sb	05 12 56.8	+2.5
BFZ	Birch Farm	0.26	158	P	Pn	05 12 51.4	-0.6
BFZ				S	Sb	05 12 56.9	+2.7
POWZ	Post Office Ro	0.27	280	P	Pb	05 12 49.6	-0.3
POWZ				S	Sb	05 12 54.2	-0.2
ANWZ	Angora Road	0.27	95	P	Pn	05 12 51.2	-0.8
ANWZ				S	Sn	05 12 57.1	-0.4
TIWZ	Tintock	0.38	208	P	Pn	05 12 53.2	-0.4
TIWZ				S	Sn	05 13 00.0	-0.3
TSZ	Takapari Road	0.40	342	P	Pb	05 12 51.0	-1.0
TSZ				S	Sb	05 12 56.5	-1.2
PRHZ	Porangahau	0.43	67	P	Pn	05 12 53.6	-0.7
PRHZ				S	Sn	05 13 02.3	+0.9
WPHZ	Waipukurau	0.45	34	P	Pb	05 12 53.1	+0.3
WPHZ				S	Sb	05 13 00.4	+1.4
PNHZ	Pukenui	0.53	7	P	Pb	05 12 53.8	-0.4
PNHZ				S	Sb	05 13 01.6	+0.3
TMWZ	Te Maipa	0.69	194	P	Pn	05 12 58.9	+1.0
TMWZ				S	Sn	05 13 11.1	+3.2
PXZ	Pawanui	0.70	55	P	Pn	05 12 58.5	+0.6
PXZ				S	Sn	05 13 10.8	+2.8
OGWZ	Otaki Gorge	0.81	242	P	Pb	05 12 59.2	+0.3
OGWZ				S	Sn	05 13 11.0	+0.1
KRHZ	Kereru	0.82	14	P	Pb	05 12 59.1	+0.1
KRHZ				S	Sb	05 13 10.2	+0.6
MTW	Mount Morrison	0.86	213	P	Pn	05 13 00.9	+0.7
MTW				S	Sn	05 13 14.3	+2.4
KAHZ	Kahuranaki	0.87	42	P	Pn	05 13 01.2	+0.9
KAHZ				S	Sn	05 13 15.5	+3.3
BHHZ	Black Hill Sta	0.95	357	P	Pb	05 13 01.0	-0.3
BHHZ				S	Sb	05 13 12.8	-0.6
KIW	Kapiti Island	1.01	245	P	Pb	05 13 02.8	+0.5
KIW				S	Sn	05 13 17.3	+1.5
TRWZ	Traveller	1.01	199	P	Pb	05 13 03.0	+0.7
KWHZ	Kaweka Forest	1.04	13	P	Pb	05 13 03.1	+0.3
KWHZ				S	Sn	05 13 17.3	+0.8
CAW	Cannon Point	1.04	230	P	Pb	05 13 03.5	+0.7
MOVZ	Moawhango	1.07	345	P	Pn	05 13 03.1	0.0
PAWZ	Paruwai Farm	1.08	209	P	Pb	05 13 03.8	+0.3
MCHZ	McNeill Hill	1.09	24	P	Pb	05 13 04.1	+0.5
MCHZ				S	Sn	05 13 20.1	+2.5
WAZ	Wanganui	1.10	308	P	Pb	05 13 04.8	+0.9
WAZ				S	Sn	05 13 19.9	+1.8
MTVZ	Mangateitei	1.16	334	P	Pb	05 13 05.2	+0.3
MSWZ	Moikau Station	1.18	214		Pb	05 13 04.9	-0.3
MSWZ				Sn	Sb	05 13 20.8	+0.7
MSWZ	Moikau Station	1.18	214	P	Pb	05 13 04.9	-0.3
WNVZ	Wahianoa	1.18	340	P	Pb	05 13 05.2	-0.1
TRVZ	Turoa	1.22	339	P	Pb	05 13 05.9	-0.1
TUVZ	Tukino	1.22	343	P	Pb	05 13 06.2	+0.2
TUVZ				P	Pb	05 13 06.2	+0.2
WHVZ	Whangaehu Hut	1.22	340	P	Pb	05 13 06.1	0.0
DRZ	Dome Shelter	1.24	340	P	Pb	05 13 06.9	+0.6
FWVZ	Far West T-bar	1.26	340	P	Pb	05 13 06.6	-0.1
PKVZ	Pokaka	1.29	332	P	Pb	05 13 07.2	0.0
BKZ	Black Stump Fm	1.30	13	Pn	Pn	05 13 06.9	+0.6
BKZ				Sn	Sb	05 13 24.9	+1.3
BKZ	Black Stump Fm	1.30	13	P	Pn	05 13 06.9	+0.6
PLWZ	Palliser	1.31	210		Pn	05 13 06.5	+0.1
PLWZ				Sn	Sb	05 13 24.4	+0.7
PLWZ	Palliser	1.31	210	P	Pn	05 13 06.5	+0.1
OTVZ	Oturere	1.32	345	P	Pb	05 13 07.7	0.0
NGZ	Ngauruhoe	1.32	342	P	Pb	05 13 07.8	+0.1
WEL	Wellington	1.33	230	P	Pn	05 13 07.2	+0.6
ETVZ	East Tongariro	1.34	346	P	Pb	05 13 08.0	0.0
ARHZ	Aropaoanui	1.35	30	P	Pn	05 13 07.5	+0.6
BHW	Baring Head	1.35	224	Pn	Pn	05 13 07.3	+0.4
BHW				Sn	Sb	05 13 25.7	+0.7
BHW	Baring Head	1.35	224	P	Pn	05 13 07.3	+0.4
SNZO	South Karori	1.38	230		Pn	05 13 07.8	+0.5
SNZO				Sn	Sb	05 13 25.9	+0.1
WTVZ	West Tongariro	1.38	343	P	Pb	05 13 08.8	+0.1
KRVZ	Karewarewa	1.39	345	P	Pb	05 13 08.9	+0.1
NMHZ	Naumai	1.44	22	P	Pn	05 13 09.0	+0.8
TWVZ	Taurewa	1.46	339	P	Pb	05 13 09.8	-0.2
RITZ	Rihia Road	1.47	352	P	Pb	05 13 10.2	0.0
KATZ	Kakaramea	1.50	347	P	Pb	05 13 10.9	+0.3
HATZ	Hinemaiaia	1.54	359	P	Pn	05 13 10.6	+1.0
RATZ	Rangitukua	1.59	350	P	Pb	05 13 11.5	-0.7
TCW	Tory Channel	1.60	240	P	Pn	05 13 10.8	+0.6
WHHZ	Waihua	1.61	33	P	Pn	05 13 10.9	+0.4
MRHZ	Matea Rd	1.62	8	P	Pn	05 13 11.3	+0.7
LREZ	Lake Rotokare	1.64	306	P	Pb	05 13 13.4	+0.3
VRZ	Vera Road	1.68	321	P	Pb	05 13 13.1	-0.5
MTHZ	Maungataniwha	1.68	20	P	Pn	05 13 11.7	+0.3
RAHZ	Arahi	1.69	26	P	Pn	05 13 11.9	+0.3
DUWZ	D'Urville Isla	1.71	257	P	Pn	05 13 12.9	+1.1
WATZ	Wairara	1.75	350	P	Pn	05 13 13.6	+1.2
WHTZ	Whakaora	1.77	356	P	Pb	05 13 16.3	+0.9
KNZ	Kokohu	1.85	41	P	Pn	05 13 13.3	-0.5
PREZ	Palmer Road	1.86	305	P	Pb	05 13 16.9	0.0
ALRZ	Allen Road	1.88	5	P	Pn	05 13 14.4	+0.2
MHGZ	Mahia Peninsul	1.88	48	P	Pn	05 13 13.9	-0.3
SNGZ	Shannon Statio	1.90	30	P	Pn	05 13 14.6	0.0
WPRZ	Whakapapatarin	1.92	1	P	Pn	05 13 15.3	+0.6
TUWZ	Tuamarina	1.92	238	P	Pn	05 13 14.2	-0.6
DREZ	Durham Road	1.93	310	P	Pb	05 13 17.3	-0.8
RTZ	Ruatahuna	1.94	20	P	Pn	05 13 15.2	+0.2
MHEZ	Mangahewa	1.94	314	P	Pb	05 13 18.6	+0.5
NEZ	North Egmont	1.94	306	P	Pb	05 13 17.7	-0.6
CMWZ	Cape Campbell	1.95	227	Pn	Pn	05 13 15.8	+0.7
CMWZ	Cape Campbell	1.95	227	P	Pb	05 13 18.5	+0.3
KUTZ	Kaahu Road	1.96	353	P	Pn	05 13 16.2	+0.9
KHEZ	Kahui Hut	1.98	305	P	Pb	05 13 18.4	-0.4
NMEZ	Namu Road	2.00	300	P	Pb	05 13 18.8	-0.4
MUGZ	Murupara	2.02	15	P	Pn	05 13 16.0	-0.1
PRGZ	Paritu Road	2.04	43	P	Pn	05 13 15.9	-0.5
HRRZ	Handcock Road	2.05	4	P	Pn	05 13 17.1	+0.6
PKE	Pukeiti	2.06	306	P	Pb	05 13 19.4	-0.8
GRRZ	Galatos Road	2.08	360	P	Pn	05 13 18.0	+1.0
NBEZ	Newall Road No	2.09	303	P	Pb	05 13 19.9	-0.8
RRRZ	Republican Roa	2.12	8	P	Pn	05 13 17.6	+0.1
BSWZ	Blackbirch Sta	2.12	232		Pn	05 13 17.3	-0.2
BSWZ	Blackbirch Sta	2.12	232	P	Pn	05 13 17.5	0.0
HSRZ	Hossack Road	2.13	3	P	Pn	05 13 18.1	+0.5
RIGZ	Rimuhau	2.15	37	P	Pn	05 13 17.3	-0.6
TLZ	Tolley Road	2.15	348	P	Pn	05 13 18.8	+0.8
HIZ	Hauiti	2.16	333		Pn	05 13 19.7	+1.7
HIZ	Hauiti	2.16	333	P	Pn	05 13 20.0	+2.0
RAGZ	Rawiri	2.18	28	P	Pn	05 13 18.0	-0.4
HLRZ	Highlands Stat	2.19	5	P	Pb	05 13 23.4	+1.0
NNZ	Nelson	2.22	249	Pn	Pn	05 13 19.7	+0.8
NNZ	Nelson	2.22	249	P	Pn	05 13 19.6	+0.8
TARZ	Mount Tarawera	2.22	8	P	Pn	05 13 19.2	+0.2
UTU	Utuhina	2.26	2	P	Pb	05 13 24.4	+0.9
URZ	Urewera	2.31	20	Pn	Pn	05 13 19.2	-0.8
	13nm,0.3s,baz=234,slow=7.7,SNR=52						
URZ				Sn	Sn	05 13 48.0	+0.3
	21nm,0.3s,baz=178,slow=13,SNR=7.2						
URZ				LR	LR	05 14 12.9	
	comp=Z,276nm,18.5s,baz=210,slow=40						
URZ	Urewera	2.31	20	P	Pn	05 13 19.2	-0.8
MKRZ	Makatiti	2.31	7	P	Pb	05 13 24.2	-0.3
NGRZ	Ngongotaha	2.33	1	P	Pb	05 13 27.9	+3.0
OMRZ	Omania	2.34	5	P	Pb	05 13 27.9	+3.0
MWZ	Matawai	2.37	28	P	Pn	05 13 20.1	-0.8
EDRZ	Edgecumbe	2.38	12	P	Pn	05 13 20.8	-0.3
TKGZ	Te Karaka	2.40	34	P	Pn	05 13 20.6	-0.7
CNGZ	Carnagh Statio	2.53	40	P	Pn	05 13 22.5	-0.6
KMRZ	Kaimai	2.59	357	P	Pb	05 13 27.4	-1.9
OPRZ	Ohinepanea	2.61	8	P	Pn	05 13 23.9	-0.3
WHRZ	Whale Island	2.66	15	P	Pn	05 13 24.9	0.0
TWGZ	Tauwhareparae	2.68	33	P	Pn	05 13 24.8	-0.4
TGRZ	Tauranga	2.71	2	P	Pn	05 13 25.7	+0.2
TOZ	Tahuroa Road	2.75	350	P	Pn	05 13 27.2	+1.2
RUGZ	Raukumara Rang	2.75	27	P	Pn	05 13 25.3	-1.0
QRZ	Quartz Range	2.76	261	Pn	Pn	05 13 25.7	-0.6
QRZ	Quartz Range	2.76	261	P	Pn	05 13 26.5	+0.3
THZ	Tophouse	2.77	240		Pn	05 13 25.9	-0.5
THZ	Tophouse	2.77	240	P	Pn	05 13 26.1	-0.3
PUZ	Puketiti	2.89	36	P	Pn	05 13 26.5	-1.6
PKGZ	Pakihiroa	2.97	32	P	Pn	05 13 28.5	-0.7
HAZ	Te Kaha	2.97	26	P	Pn	05 13 27.8	-1.4
WMGZ	Waiomatatini S	3.17	35	P	Pn	05 13 30.6	-1.3
MXZ	Matakaoa Point	3.34	31	Pn	Pn	05 13 31.3	-2.9
MXZ	Matakaoa Point	3.34	31	P	Pn	05 13 33.8	-0.5
MKAZ	Moumakai	3.41	347	P	Pn	05 13 36.7	+1.4
GVZ	Greta Valley S	3.42	221	P	Pn	05 13 34.1	-1.3
DSZ	Denniston Nort	3.51	247	P	Pn	05 13 36.7	0.0
AWAZ	Awhitu Peninsu	3.56	341	P	Pn	05 13 40.3	+3.0
KUZ	Kuaotunu	3.70	355	P	Pn	05 13 40.1	+0.9
WTAZ	Waiatarua	3.70	340	P	Pn	05 13 43.2	+4.0
LTZ	Lake Taylor	3.71	230	Pn	Pn	05 13 38.8	-0.7
LTZ	Lake Taylor	3.71	230	P	Pn	05 13 38.2	-1.3
WIAZ	Waiheke Island	3.72	348	P	Pn	05 13 40.6	+1.1
AMCZ	Amberley	3.77	222	P	Pn	05 13 40.5	+0.4
MBAZ	Motutapu North	3.79	345	P	Pn	05 13 43.3	+2.9
OKCZ	Okains Bay	4.00	214	P	Pn	05 13 41.4	-1.8
MQZ	McQueen's Vall	4.16	217	Pn	Pn	05 13 45.4	-0.1
OXZ	Oxford	4.20	225		Pn	05 13 46.5	+0.5
WCZ	Waipu Caves	4.70	342	P	Pn	05 13 56.2	+3.2
WVZ	Waitaha Valley	4.81	235	P	Pn	05 13 54.9	+0.4
RPZ	Rata Peaks	4.99	227	Pn	Pn	05 13 55.2	-1.8
	1.6nm,0.3s,baz=38,slow=11,SNR=2.7						
RPZ				Pg		05 14 09.8	
	63nm,0.3s,baz=298,slow=3.1,SNR=53						
RPZ				Sn	Sn	05 14 50.2	-3.8
	17nm,0.3s,baz=114,slow=22,SNR=23						
RPZ				Lg	Lg	05 15 16.9	
	baz=100,slow=21,SNR=1.1						
RPZ	Rata Peaks	4.99	227	Pn	Pn	05 13 56.0	-1.0
RPZ	Rata Peaks	4.99	227	P	Pn	05 13 55.4	-1.6
ARCZ	Arundel	5.08	225	P	Pn	05 13 56.8	-1.3
GCSZ	Gaunt Creek Bo	5.19	234	P	Pn	05 14 02.5	+2.8
TMZ	Timaru	5.46	222	P	Pn	05 14 01.9	-1.6
OUZ	Omahuta	5.58	338	Pn	Pn	05 14 08.4	+3.4
OUZ	Omahuta	5.58	338	P	Pn	05 14 08.9	+4.0
FOZ	Fox Glacier	5.62	235	P	Pn	05 14 05.2	-0.3
LBZ	Lake Benmore	5.90	226	P	Pn	05 14 08.3	-1.1
CTZ	Chatham Island	6.33	124	P	Pn	05 14 16.2	+0.9
JCZ	Jackson Bay	6.54	234	P	Pn	05 14 19.2	+0.9
TUZ	Tuapeka	7.27	219	P	Pn	05 14 27.9	-0.3
SYZ	Scrubby Hill	7.93	217	P	Pn	05 14 37.0	-0.2
DZM	Mont Dzumac	20.07	333	*e*LR	LR	05 22 01.0	
	comp=Z,138nm,24.1s						
TBI	Tubuai	33.56	70	*e*LR	LR	05 28 47.0	
	comp=Z,73nm,23.8s						
PPT2	Papeete2	37.30	63	*e*LR	LR	05 30 30.5	
	comp=Z,40nm,22.2s						
AS31	Alice Springs	39.09	282	P	P	05 20 08.4	-0.5
ASAR	Alice Springs	39.09	282	P	P	05 20 08.8	-0.2
	5.3nm,0.4s,baz=131,slow=8.2,SNR=121						
ASAR				PcP	PcP	05 22 17.1	-1.4
	1.1nm,0.6s,baz=123,slow=3.8,SNR=7.3						
ASAR				LR	LR	05 36 46.5	
	comp=Z,72nm,18.4s,baz=130,slow=37						
ASAR	Alice Springs	39.09	282	P	P	05 20 08.0	-0.9
ASAR					PcP	05 22 17.4	-1.1
WB2	Warramunga Arr	41.01	287	P	P	05 20 24.7	-0.1
WRAB	Tennant Creek	41.01	287	P	P	05 20 24.2	-0.7
WRAB				IAmb	IAmb	05 20 25.2	
	comp=Z,11nm,0.5s						
WRA	Warramunga Arr	41.02	287	P	P	05 20 24.6	-0.3
	comp=Z,7.6nm,0.5s,baz=125,slow=8.3,SNR=126						
WRA	Warramunga Arr	41.02	287	P	P	05 20 24.6	-0.3
WB0	Warramunga Arr	41.09	287	P	P	05 20 25.2	-0.3
WB0				IAmb	IAmb	05 20 25.8	
	comp=Z,7.7nm,0.5s						
TAOE	Nuku Hiva Isla	49.92	63	*e*LR	LR	05 36 19.4	
	comp=Z,45nm,23.4s						
SNAA	Sanae	68.19	180	P	P	05 23 43.3	+1.8
VNA3	Neumayer Olymp	68.55	178	P	P	05 23 45.4	+1.7
VNA2	Neumayer--Watz	68.92	179	P	P	05 23 48.1	+2.2
	baz=163,slow=5.6						
VNA1	Neumayer--Stat	69.18	178	P	P	05 23 49.7	+2.2
KSRS	Korea Array	89.22	324	P	P	05 25 37.3	+0.2
	comp=Z,0.7nm,0.3s,baz=165,slow=5.0,SNR=2.9						
CMAR	Chiang Mai Arr	92.44	292	P	P	05 25 52.0	-0.6
	comp=Z,0.7nm,0.3s,baz=116,slow=4.2,SNR=1.3						
YKA	Yellowknife Ar	116.54	29	PKP	PKPdf	05 31 24.0	-0.3
	comp=Z,0.1nm,0.5s,baz=176,slow=1.1,SNR=4.1						
MKAR	Makanchi Array	120.30	307	PKP	PKPdf	05 31 30.8	-1.3
	comp=Z,0.6nm,0.5s,baz=201,slow=1.7,SNR=13						
MKAR	Makanchi Array	120.30	307		PKPdf	05 31 30.9	-1.2
KBZ	Khabaz	145.48	291	PKPbc	PKPdf	05 32 18.6	-0.5
	comp=Z,3.2nm,0.8s,baz=185,slow=2.4,SNR=4.3						
ARCES	ARCESS Array B	147.00	342	PKPbc	PKPbc	05 32 22.5	-0.5
	comp=Z,1.6nm,0.4s,baz=69,slow=1.6,SNR=42						
ARCES	ARCESS Array B	147.00	342		PKPbc	05 32 22.9	-0.1
BRTR	Keskin Array B	151.42	281	PKPbc	PKPbc	05 32 34.6	-0.6
	comp=Z,1.6nm,0.8s,baz=147,slow=7.0,SNR=8.4						
BRTR	Keskin Array B	151.42	281		PKPbc	05 32 35.0	-0.3
FINES	FINESS Array B	152.17	329	PKPbc	PKPbc	05 32 35.4	-0.6
	comp=Z,1.5nm,0.6s,baz=54,slow=3.3,SNR=7.5						
GERES	GERESS Array B	164.95	310	PKPab	PKPab	05 33 41.3	-0.4
	comp=Z,0.6nm,0.3s,baz=219,slow=40,SNR=2.4						
GERES	GERESS Array B	164.95	310		PKPab	05 33 40.3	-1.4

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*ECX **12** 05:26:16.2±0.6, 31°.50N×114°.36W, h2^{km}±6^{km}, MD2.7, ML3.0*

*MEX **12** 05:26:19.8±0.6, 31°.07N×114°.34W, h10^{km}, MD4.0*

ISC 12 05:26:15.3±1.1, **31°.38N**±0°.08×**114°.31W**±0°.04, **h17**^{km}±13^{km}, **n10**, σ**1^{s}.22**/15, **3C**, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.57	234	*e*P	Pb	05 26 27.5	+0.7
SFX				*e*S	Sb	05 26 36.2	+1.5
SFX				⇑*e*		05 26 37.5	
SFX				IAML		05 26 37.5	
	comp=N,724nm,0.3s						
SFX				*e*		05 26 37.9	
SFX				IAML		05 26 37.9	
	comp=E,1μm,0.2s						
ECBX	El Chinero	0.64	279	*e*P	Pg	05 26 26.4	-1.5
ECBX				*e*S	Sb	05 26 35.6	-1.1
PIX	Pinacate	0.75	76	*e*P	Pg	05 26 29.9	0.0
PIX				*e*S	Sg	05 26 40.6	+0.8
SPIG	San Pedro Mart	1.04	252	*e*P	Pn	05 26 35.3	-0.1
SPIG				*e*S	Sb	05 26 48.6	0.0
SPIG	San Pedro Mart	1.04	252	*e*P	Pn	05 26 35.3	-0.1
SPIG				*e*S	Sg	05 26 49.3	0.0
SPX	San Pedro Mart	1.05	251	*e*P	Pn	05 26 35.2	-0.2
SPX				*e*S	Sg	05 26 49.5	+0.2
SPX				IAML		05 26 50.9	
	comp=N,397nm,0.3s						
SPX				⇑*e*		05 26 50.9	
CPBX	Cerro Prieto	1.34	321	⇑*e*	Sg	05 27 01.5	+2.9
CPBX				IAML		05 27 01.5	
	comp=E,1μm,0.3s						
CPBX				IAML		05 27 07.7	
	comp=N,650nm,0.2s						
CPBX				*e*		05 27 07.7	
SQX	San Quintin	1.56	240	*e*P	Pb	05 26 44.0	+0.3
CBX	Cerro Bola	2.21	296	*e*	Sg	05 27 37.9	+12
CBX				IAML		05 27 37.9	
	comp=E,113nm,0.8s						
TUC	Tucson	3.14	72	*e*P	Pb	05 27 09.7	-1.0

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*DDA **12** 05:32:16.5, 37°.10N×36°.81E, h7^{km}±1^{km}, ML2.5*

*ISK **12** 05:32:16.6, 37°.13N×36°.78E, h9^{km}, ML2.5/12*

ISC 12 05:32:16.8±0.9, **37°.11N**±0°.03×**36°.79E**±0°.03, **h10**^{km}±7^{km}, **n24**, σ**0^{s}.59**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMA	Osmaniye	0.12	307	*i* P	Pg	05 32 19.9	0.0
KAMA				IAML		05 32 22.0	
	comp=N,2μm,0.1s						
KAMA				*i* S	Sg	05 32 22.4	+0.2
KAMA				IAML		05 32 23.0	
	comp=E,2μm,0.1s						
HCB	Kahramanmara	0.25	22	*i* P	Pg	05 32 21.7	-0.3
HCB				*i* S	Sg	05 32 25.6	+0.1
HCB				IAML		05 32 26.0	
	comp=E,943nm,0.3s						
HCB				IAML		05 32 26.0	
	comp=N,870nm,0.2s						
GAZ	Gaziantep	0.34	80	PG	Pg	05 32 23.2	-0.5
KMRS	Kahramanmaras	0.40	12	PG	Pg	05 32 24.9	+0.1
KMRS				SG	Sg	05 32 30.5	+0.3
KHMN	Narli-Kahraman	0.40	46	PG	Pg	05 32 25.0	+0.2
KHMN				SG	Sb	05 32 31.1	-1.2
KUZU	Kuzuini	0.41	146	*i* P	Pg	05 32 24.6	-0.2
KUZU				IAML		05 32 30.0	
	comp=E,1μm,0.2s						
KUZU				*i* S	Sg	05 32 30.0	-0.3
KUZU				IAML		05 32 31.0	
	comp=N,2μm,0.2s						
KAHM	Kahramanmaras,	0.43	21	*i* P	Pg	05 32 25.5	+0.1
KAHM				*i* S	Sg	05 32 31.1	-0.1
KAHM				IAML		05 32 32.0	
	comp=N,207nm,0.2s						
KAHM				IAML		05 32 33.0	
	comp=E,389nm,1.1s						
ANDN	Andirin	0.59	323	*i* P	Pb	05 32 28.6	-0.6
ANDN				IAML		05 32 38.0	
	comp=E,73nm,0.2s						
ANDN				IAML		05 32 38.0	
	comp=N,117nm,0.3s						
GZT	Gaziantep	0.66	68	*i* P	Pg	05 32 29.2	-0.6
GZT				IAML		05 32 42.0	
	comp=N,217nm,0.2s						

GZT				IAML		05 32 43.0	
	comp=E,190nm,0.2s						
CEYT	Ceyhan	0.84	263	PG	Pb	05 32 33.3	-0.2
KOZT	Kozan	0.85	296	PG	Pb	05 32 33.4	-0.3
KOZT				SG	Sb	05 32 44.9	-0.3
YURE	YUREGIR	0.97	253	PG	Pb	05 32 35.6	-0.1
SAIM	ADANA	1.03	327	iP	Pg	05 32 36.3	-0.4
SAIM				IAML		05 32 54.0	
	comp=N,173nm,0.2s						
SAIM				IAML		05 32 54.0	
	comp=E,201nm,0.3s						
ATAB	Bozova	1.25	73	iP	Pg	05 32 40.5	-0.4
ATAB				iS	Sn	05 32 57.6	+0.3
ATAB				IAML		05 32 58.0	
	comp=E,106nm,0.2s						
KRTS	Karatas	1.26	245	PN	Pg	05 32 40.7	-0.3
KARA	Karaisali	1.39	277	PN	Pn	05 32 42.3	0.0
CMRD	Camardi-Nigde	1.54	292	PN	Pn	05 32 44.4	0.0
DARE	Darende-Malaty	1.56	20	PN	Pb	05 32 45.5	-0.3
MALT	Malatya	1.77	47	PN	Pn	05 32 47.7	+0.2
BNN	Bunyan	1.89	337	PN	Pn	05 32 49.9	+0.6
KIZK	Mersin	2.22	254	PN	Pn	05 32 54.5	+0.9
GULA	Gulagac	2.37	302	PN	Pn	05 32 56.8	+1.0
DYBB	Diyarbakir	2.79	71	PN	Pn	05 33 03.1	+1.5
MAZI	Mazidag	2.94	82	PN	Pn	05 33 04.8	+1.2

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*IDC **12** 05:35:15.1±6.0, 8°.79N×82°.61W, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/29, mbtmp3.7/5, ML3.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/34, Error ellipse: s-maj=141.0km s-min=42.6km az=12.0*

*UPA **12** 05:35:15.9±2.0, 8°.35N×82°.94W, h6^{km}±3^{km}, MW4.6*

*UCR **12** 05:35:16.3±2.6, 8°.30N×82°.96W, h12^{km}, MW4.6*

ISC 12 05:35:15.7±0.9, **8°.31N**±0°.04×**82°.95W**±0°.02, **h16**^{km}±5^{km}, **n70**, σ**1^{s}.46**/100, **mb3.7**/4, **1C-13D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.10	348	eP	Pg	05 35 18.7	-0.5
CCOL				eS	Sg	05 35 22.2	+0.6
CDITO	Canoas	0.28	17	⇓iP	Pg	05 35 21.6	-0.2
CDITO	Canoas	0.28	17	eP	Pg	05 35 21.5	-0.2
PIRO	Carate, Puerto	0.39	284	⇑iP	Pg	05 35 23.0	-0.8
PIRO				iS	Sb	05 35 30.3	+0.2
PIRO	Carate, Puerto	0.39	284	eP	Pg	05 35 23.0	-0.8
PTJ1	Puerto Jimnez	0.41	303	⇓eP	Pg	05 35 23.2	-1.0
PTJ1	Puerto Jimnez	0.41	303	eP	Pg	05 35 23.1	-1.0
PTJ1				eS	Sb	05 35 32.8	+2.0
BAGA3	Bagala, Chiriq	0.45	69	⇓iP	Pb	05 35 25.4	+0.1
BAGA3				iS	Sb	05 35 31.7	-0.1
MLIR3	Monte Lirio, C	0.50	15	⇓iP	Pb	05 35 26.0	-0.2
EDSV	San Vito	0.51	358	eP	Pg	05 35 25.7	-0.3
EDSV				eS	Sb	05 35 35.2	+1.6
LOCO3	Loma Colorada,	0.54	79	⇓iP	Pg	05 35 26.5	+0.1
LOCO3				iS	Sb	05 35 35.1	+0.8
BRU2	Volcan	0.55	28	⇓iP	Pb	05 35 26.7	-0.4
BRU2				iS	Sb	05 35 35.4	+0.6
BCO2	Palmira	0.59	46	⇓iP	Pb	05 35 27.4	-0.3
BCO2				eS	Sb	05 35 35.9	0.0
PTAR3	Potrerillos Ar	0.59	50	⇓iP	Pb	05 35 27.5	-0.3
PTAR3				iS	Sb	05 35 35.9	-0.1
BC3P	Paso Ancho	0.61	34	⇓iP	Pg	05 35 27.6	-0.3
BC3P				iS	Sn	05 35 38.9	-0.6
RIOS	Rincon, Osa	0.68	305	eP	Pg	05 35 27.1	-2.0
GUAL3	Gualaca, Chiri	0.69	71	⇓iP	Pg	05 35 28.8	-0.4
GUAL3				eS	Sg	05 35 38.1	-0.2
POTG	Potrero Grande	0.76	347	eP	Pg	05 35 29.6	-1.0
EDPN	Palmar Norte	0.82	323	eP	Pg	05 35 29.7	-2.0
EDBA	Buenos Aires	0.91	339	eP	Pg	05 35 32.0	-1.5
DRK0	Durika	0.99	343	⇓iP	Pg	05 35 33.1	-1.9
DRK0				iS	Sg	05 35 46.8	-1.3
DRK0	Durika	0.99	343	eP	Pg	05 35 33.1	-1.9
CHGR2	Aguacate	1.02	52	eP	Pg	05 35 34.0	-1.4
CHGR2				eS	Sb	05 35 48.0	-0.1
REME3	Remedios, Chir	1.11	94	⇓eP	Pg	05 35 35.7	-1.5
REME3				eS	Sb	05 35 51.8	+1.0
EDLM	Las Mercedes	1.15	327	eP	Pg	05 35 35.9	-2.2
EDLM				eS	Sn	05 35 53.4	+0.6
NANC3	Nancito, Chiri	1.21	93	iP	Pg	05 35 37.1	-2.0
NANC3				eS	Sg	05 35 52.3	-2.6
PEZE	Perez Zeledon,	1.29	326	eP	Pg	05 35 37.7	-2.9
EDDO	Dominical	1.30	316	eP	Pn	05 35 37.7	-1.6
RGM0	Gandoca	1.32	15	eP	Pg	05 35 40.4	-0.8
PVID3	Puerto Vidal,	1.35	101	eP	Pn	05 35 38.9	-1.1
PVID3				eS	Sb	05 35 57.4	-0.4
CNAZ3	Canazas, Verag	1.73	88	iP	Pn	05 35 45.0	-0.1
CNAZ3				iS	Sn	05 36 07.0	+0.2
LCR2	La Lucha 2	1.76	324	eP	Pn	05 35 45.5	-0.3
GMAL	Guarumal, Vera	1.79	107	eP	Pn	05 35 46.1	+0.2
GMAL				eS	Sn	05 36 09.1	+0.8
BATAN	Batan	1.83	347	iP	Pn	05 35 47.1	+0.6
BATAN				iS	Sn	05 36 10.7	+1.4
BATAN	Batan	1.83	347	eP	Pn	05 35 47.8	+1.3
CVTR	Volcan Turrial	1.88	335	eP	Pn	05 35 47.6	+0.1
PONU3	Ponuga, Veragu	2.00	102	eP	Pn	05 35 50.2	+1.3
HDC	Heredia	2.04	326	eP	Pn	05 35 50.4	+0.9
HDC				eS	Sn	05 36 16.3	+1.6
HDC	Heredia	2.04	326	eP	Pn	05 35 50.0	+0.5
MARI3	Mariato, Verag	2.05	108	eP	Pn	05 35 50.8	+1.3
MARI3				eS	Sn	05 36 17.1	+2.3
CACAO	El Cacao, Vera	2.28	115	⇓iP	Pn	05 35 54.1	+1.4
CACAO				iS	Sn	05 36 22.7	+2.1
SRA1	San Ramn	2.32	320	eP	Pn	05 35 54.5	+1.0
PNME	Penonome	2.60	86	eP	Pn	05 35 58.3	+1.1
PNME				eS	Sn	05 36 32.1	+3.6
AZU	Azuero	2.70	101	eP	Pn	05 35 59.6	+1.1
AZU				eS	Sn	05 36 32.7	+1.8
FORC	Fortuna	2.73	322	iP	Pn	05 36 01.8	+2.8
CASO	Castillo	2.75	320	iP	Pn	05 36 02.4	+3.2
ARE1	Arenal 1	2.76	321	eP	Pn	05 36 01.6	+2.2
CEDE	Laguna Cedeo	2.77	322	iP	Pn	05 36 01.9	+2.3
JTS	Las Juntas de	2.79	315	Pn	Pn	05 36 01.1	+1.4
	13nm,0.3s,baz=159,slow=23,SNR=73						
JTS				Sn	Sn	05 36 35.8	+2.7
	13nm,0.3s,baz=103,slow=20,SNR=5.0						
JTS	Las Juntas de	2.79	315	eP	Pn	05 36 00.2	+0.4
JTS	Las Juntas de	2.79	315	eP	Pn	05 36 00.1	+0.3
COVE	Coope Vega, Sa	2.79	329	eP	Pn	05 36 02.2	+2.4
VTON	El Valle, Cocl	2.83	84	eP	Pn	05 36 01.7	+1.4
VTON				eS	Sb	05 36 39.8	-0.4
PCRI3	Pocri, Los San	2.88	103	eP	Pn	05 36 02.0	+1.0
ACHO3	Achotines, Los	2.89	108	eP	Pn	05 36 01.9	+0.7
ACAL	Aguas Claras	3.09	319	iP	Pn	05 36 06.9	+2.9
ZANG	Zanguenga, Cho	3.12	78	eP	Pn	05 36 05.5	+1.2
ZANG				eS	Sn	05 36 43.6	+2.4
BCIP	Isla Barro Col	3.20	74	eP	Pn	05 36 06.5	+1.2
BCIP				iS	Sn	05 36 44.2	+1.1
CHOR3	La Chorrera	3.21	79	eP	Pn	05 36 06.4	+0.9
CHOR3				eS	Sn	05 36 44.2	+0.8
COLC	Colonia	3.23	317	iP	Pn	05 36 07.9	+2.1
ARRA3	Arraijan, Pana	3.32	78	eP	Pn	05 36 06.4	-0.7
UPA	Univ. de Panam	3.45	79	eP	Pn	05 36 08.7	-0.1
UPA				eS	Sn	05 36 51.2	+1.9
BUEV	Buena Vista	3.46	316	iP	Pn	05 36 11.6	+2.5
GBS3	Finca Las Img	3.48	315	iP	Pn	05 36 11.5	+2.1
UPD2	Meteti	4.89	87	eP	Pn	05 36 30.5	+1.9
ATAH	Atahualpa	16.00	163	LR	LR	05 44 15.1	
	comp=Z,43nm,18.2s,baz=234,slow=33						
ULM	Lac du Bonnet	43.17	348	P	P	05 43 14.1	-1.6
	3.1nm,0.7s,baz=162,slow=9.9,SNR=8.4						
NVAR	Mina Array Bea	43.71	319	P	P	05 43 20.2	-0.3
	0.3nm,0.7s,baz=130,slow=3.6,SNR=2.4						
YKA	Yellowknife Ar	58.78	343	P	P	05 45 12.8	-0.1
	0.7nm,0.8s,baz=136,slow=7.5,SNR=14						
ILAR	Eielson Array	71.58	336	P	P	05 46 36.2	+0.3
	0.3nm,0.7s,baz=119,slow=5.2,SNR=7.2						

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*NOU **12** 05:35:41.9, 38°.60S×175°.22E, h282^{km}, MLv3.5, North Island, New Zealand*

WEL 12 05:35:40.4, 39°S±3°×**17°5E**±°, **h302**^{km}±7^{km}, **M2.8**/48, **MLv2.8**/48, **Error ellipse: s-maj=0.0km s-min=0.0km az=97.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIZ	Hauiti	0.32	295	P	Pn	05 36 19.0	0.0
WATZ	Wairara	0.40	99	P	Pn	05 36 18.1	-1.0
TWVZ	Taurewa	0.46	159	P	Pn	05 36 19.0	-0.3
WTVZ	West Tongariro	0.55	149	P	Pn	05 36 19.3	-0.2
KRVZ	Karewarewa	0.55	144	P	Pn	05 36 19.4	-0.2
NGZ	Ngauruhoe	0.60	151	P	Pn	05 36 19.6	-0.1
ETVZ	East Tongariro	0.62	142	P	Pn	05 36 19.7	0.0
OTVZ	Oturere	0.62	146	P	Pn	05 36 19.8	+0.1
PKVZ	Pokaka	0.65	172	P	Pn	05 36 19.6	-0.1
FWVZ	Far West T-bar	0.66	157	P	Pn	05 36 19.8	-0.2
TRVZ	Turoa	0.70	159	P	Pn	05 36 20.0	0.0
TUVZ	Tukino	0.70	152	P	Pn	05 36 14.2	-5.8
HATZ	Hinemaiaia	0.72	110	P	Pn	05 36 19.4	-0.6
WNVZ	Wahianoa	0.74	157	P	Pn	05 36 20.0	-0.1
WPRZ	Whakapapatarin	0.75	81	P	Pn	05 36 19.7	-0.3
MTVZ	Mangateitei	0.76	165	P	Pn	05 36 20.0	-0.1
MOVZ	Moawhango	0.86	152	P	Pn	05 36 20.1	-0.4
ALRZ	Allen Road	0.88	85	P	Pn	05 36 20.1	-0.5
TOZ	Tahuroa Road	0.94	14	P	Pn	05 36 20.8	-0.1
MRHZ	Matea Rd	0.95	102	P	Pn	05 36 20.2	-0.6
BHHZ	Black Hill Sta	1.06	142	P	Pn	05 36 21.2	-0.2
NEZ	North Egmont	1.08	234	P	Pn	05 36 22.1	+0.7
BKZ	Black Stump Fm	1.12	118	P	Pn	05 36 21.5	-0.2
WAZ	Wanganui	1.12	189	P	Pn	05 36 22.2	+0.6
KWHZ	Kaweka Forest	1.21	130	P	Pn	05 36 22.4	+0.3
MUGZ	Murupara	1.22	83	P	Pn	05 36 21.4	-0.7
MTHZ	Maungataniwha	1.28	100	P	Pn	05 36 22.4	-0.2
EDRZ	Edgecumbe	1.31	66	P	Pn	05 36 21.9	-0.8
NMHZ	Naumai	1.31	110	P	Pn	05 36 23.5	+0.8
MARZ	Manawahe	1.32	60	P	Pn	05 36 22.6	-0.1
KRHZ	Kereru	1.34	139	P	Pn	05 36 22.9	+0.1
RTZ	Ruatahuna	1.38	89	P	Pn	05 36 22.8	-0.3
MCHZ	McNeill Hill	1.40	125	P	Pn	05 36 23.9	+0.8
PNHZ	Pukenui	1.47	149	P	Pn	05 36 23.7	+0.1
RAHZ	Arahi	1.48	101	P	Pn	05 36 24.1	+0.4
ARHZ	Aropaoanui	1.51	115	P	Pn	05 36 24.4	+0.6
TSZ	Takapari Road	1.52	158	P	Pn	05 36 24.2	+0.3
URZ	Urewera	1.53	76	P	Pn	05 36 23.1	-0.8
WHHZ	Waihua	1.63	106	P	Pn	05 36 25.1	+0.5
SNGZ	Shannon Statio	1.66	95	P	Pn	05 36 25.1	+0.2
WPHZ	Waipukurau	1.70	147	P	Pn	05 36 25.5	+0.4
KAHZ	Kahuranaki	1.72	132	P	Pn	05 36 25.9	+0.7
RAGZ	Rawiri	1.72	86	P	Pn	05 36 25.4	0.0
CKHZ	Cape Kidnapper	1.76	126	P	Pn	05 36 26.1	+0.6
MWZ	Matawai	1.83	81	P	Pn	05 36 25.9	-0.2
PXZ	Pawanui	1.88	138	P	Pn	05 36 26.6	+0.3
MBAZ	Motutapu North	1.89	352	P	Pn	05 36 27.3	+0.7
KNZ	Kokohu	1.95	102	P	Pn	05 36 27.2	+0.2
PRHZ	Porangahau	1.95	146	P	Pn	05 36 27.4	+0.5
RIGZ	Rimuhau	1.99	92	P	Pn	05 36 27.7	+0.4
MRZ	Mangatainoka R	2.03	172	P	Pn	05 36 27.6	+0.1
RUGZ	Raukumara Rang	2.05	71	P	Pn	05 36 26.7	-1.2
ANWZ	Angora Road	2.05	152	P	Pn	05 36 28.3	+0.6
TKGZ	Te Karaka	2.07	85	P	Pn	05 36 28.4	+0.5
PRGZ	Paritu Road	2.10	98	P	Pn	05 36 28.6	+0.4
MHGZ	Mahia Peninsul	2.15	104	P	Pn	05 36 29.2	+0.6
OGWZ	Otaki Gorge	2.17	181	P	Pn	05 36 28.9	+0.3
BFZ	Birch Farm	2.18	159	P	Pn	05 36 29.3	+0.5
HAZ	Te Kaha	2.20	67	P	Pn	05 36 28.1	-0.9
TWGZ	Tauwhareparae	2.22	79	P	Pn	05 36 29.7	+0.5
KIW	Kapiti Island	2.23	186	P	Pn	05 36 29.2	+0.1
HOWZ	Holdsworth Sta	2.26	174	P	Pn	05 36 29.3	-0.1
CNGZ	Carnagh Statio	2.34	87	P	Pn	05 36 31.0	+0.8
PKGZ	Pakihiroa	2.37	72	P	Pn	05 36 30.5	-0.1
DUWZ	D'Urville Isla	2.38	205	P	Pn	05 36 30.8	+0.4
PUZ	Puketiti	2.45	77	P	Pn	05 36 31.1	-0.1
CAW	Cannon Point	2.46	183	P	Pn	05 36 31.4	+0.2
MTW	Mount Morrison	2.52	175	P	Pn	05 36 31.7	0.0
WMGZ	Waiomatatini S	2.65	73	P	Pn	05 36 33.1	+0.1
TCW	Tory Channel	2.66	196	P	Pn	05 36 33.4	+0.4
PAWZ	Paruwai Farm	2.74	177	P	Pn	05 36 33.9	+0.2
MSWZ	Moikau Station	2.77	180	P	Pn	05 36 34.1	+0.1
BHW	Baring Head	2.77	185	P	Pn	05 36 34.1	+0.1
PLWZ	Palliser	2.92	180	P	Pn	05 36 35.6	+0.1
NNZ	Nelson	2.93	208	P	Pn	05 36 35.9	+0.3
TUWZ	Tuamarina	2.95	199	P	Pn	05 36 36.3	+0.6
QRZ	Quartz Range	3.01	223	P	Pn	05 36 36.2	-0.1
BSWZ	Blackbirch Sta	3.23	198	P	Pn	05 36 39.4	+0.9
THZ	Tophouse	3.58	209	P	Pn	05 36 42.7	+0.5
KHZ	Kahutara	3.98	198	P	Pn	05 36 47.3	+0.9
DSZ	Denniston Nort	4.05	219	P	Pn	05 36 47.3	0.0
GVZ	Greta Valley S	4.62	200	P	Pn	05 36 54.2	+0.6
LTZ	Lake Taylor	4.70	208	P	Pn	05 36 55.0	+0.5
AMCZ	Amberley	4.93	202	P	Pn	05 36 57.7	+0.6
OKCZ	Okains Bay	5.33	197	P	Pn	05 37 02.6	+0.8
AKCZ	Akaroa Harbour	5.50	198	P	Pn	05 37 04.5	+0.7
WVZ	Waitaha Valley	5.58	216	P	Pn	05 37 05.2	+0.6
WACZ	Wakanui South	5.87	205	P	Pn	05 37 08.9	+0.7
GCSZ	Gaunt Creek Bo	5.96	217	P	Pn	05 37 09.9	+0.8
TMZ	Timaru	6.55	208	P	Pn	05 37 17.3	+1.0
ODZ	Otahua Downs	7.25	207	P	Pn	05 37 26.5	+1.8

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*IDC **12** 05:40:49.2±1.1, 6°.00S×147°.80E, h0^{km}, mb3.9/8, mb1 4.1/11, mb1mx4.0/31, mbtmp4.0/11, ML3.1/2, Error ellipse: s-maj=31.8km s-min=18.8km az=99.0*

ISC 12 05:40:56.4±0.8, **6°.18S**±0°.09×**147°.9E**±0°.1, **h60**^{km}, **n12**, σ**0^{s}.94**/13, **mb3.9**/8, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.29	193	Pn	Pn	05 41 45.6	0.0
	19nm,0.3s,baz=29,slow=7.5,SNR=27						
PMG				Sn	Sn	05 42 23.0	-0.4
	5.4nm,0.3s,baz=210,slow=20,SNR=2.4						
HNR	Honiara	12.35	106	Pn	Pn	05 43 49.4	-0.1
	12nm,0.3s,baz=81,slow=5.1,SNR=3.7						
WRA	Warramunga Arr	19.00	223	P	P	05 45 12.2	-1.2
	0.2nm,0.3s,baz=48,slow=11,SNR=10						
ASAR	Alice Springs	22.00	216	P	P	05 45 45.3	-0.5
	2.9nm,0.5s,baz=52,slow=8.9,SNR=58						
FITZ	Fitzroy Crossi	24.75	239	P	P	05 46 12.6	0.0
	2.8nm,0.6s,baz=58,slow=9.2,SNR=12						
STKA	Stephens Creek	26.24	192	P	P	05 46 27.3	+1.4
	2.6nm,0.6s,baz=358,slow=11,SNR=5.9						
CMAR	Chiang Mai Arr	54.14	298	P	P	05 50 16.5	+0.6
	1.0nm,0.4s,baz=316,slow=6.0,SNR=6.1						
SONM	Songino Array	65.01	330	P	P	05 51 30.8	+0.5
	0.4nm,0.7s,baz=142,slow=6.9,SNR=2.4						
MKAR	Makanchi Array	78.22	320	P	P	05 52 49.0	-0.7
	0.2nm,0.4s,baz=95,slow=8.2,SNR=5.4						
ZALV	Zalesovo Beam	79.65	328	P	P	05 52 55.5	-1.8
	0.4nm,0.3s,baz=55,slow=13,SNR=2.1						
ILAR	Eielson Array	85.29	23	P	P	05 53 26.4	0.0
	0.3nm,0.8s,baz=236,slow=4.2,SNR=1.9						
TORD	Torodi Ar. Bea	146.02	284	PKPbc	PKPab	06 00 32.2	+1.0
	1.7nm,0.6s,baz=77,slow=3.7,SNR=6.7						

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*IDC **12** 05:41:50.1±0.7, 16°.81S×14°.42W, h0^{km}, mb4.3/13, mb1 4.3/13, mb1mx4.1/31, mbtmp4.3/13, MS3.9/15, Ms1 3.9/15, ms1mx3.7/34, Error ellipse: s-maj=20.6km s-min=17.8km az=124.0*

*NEIC **12** 05:41:51.9±1.4, 16°.79S±0°.08×14°.4W±0°.1, h10^{km}±1^{km}, mb4.9/27, Error ellipse: s-maj=20.4km s-min=10.7km az=120.0*

*GCMT **12** 05:41:53.9±0.4, 16°.75S±0°.04×14°.28W±0°.03, h28^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s20,c20; s65,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.67±.27; $M_{\theta\theta}$1.18±.17; $M_{\phi\phi}$1.49±.17; $M_{r\theta}$2.05±.28; $M_{\theta\phi}$-1.21±.09; $M_{\phi r}$0.41±.22; Best double couple: $M_0$3.25700×10^{16} NP1:ϕ_s157.00000°, δ37.00000°, λ-51.00000°. NP2: ϕ_s291.00000°, δ62.00000°, λ-116.00000°. Principal axes: T 2.8110, Plg14.0000°, Azm39.0000°; N 0.8930, Plg23.0000°, Azm304.0000°; P -3.7040, Plg63.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 05:41:51.9±0.5, **16°.8S**±0°.1×**14°.41W**±0°.09, **h10**^{km}, **n71**, σ**1^{s}.20**/59, **mb4.8**/31, **MS3.9**/15, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.83	358	T	T	05 51 55.1	
	baz=178,slow=74,SNR=13						
H10S3	ASCENSION HYDR	7.84	358	T	T	05 51 56.4	
	baz=42,slow=74,SNR=22						
H10N1	ASCENSION HYDR	8.94	360	T	T	05 53 22.6	
H10N3	ASCENSION HYDR	8.94	359	T	T	05 53 21.4	
	SNR=3.4						
H10N2	ASCENSION HYDR	8.96	359	T	T	05 53 22.6	
RCBR	Riachuelo	23.72	295	P	P	05 47 04.7	+0.3
	26nm,1.1s,baz=118,slow=18,SNR=4.2						
RCBR				LR	LR	05 54 20.4	
	comp=Z,110nm,19.4s,baz=130,slow=32						
RCBR	Riachuelo	23.72	295	P	P	05 47 03.1	-1.2
RCBR				IAmb	IAmb	05 47 06.6	
	comp=Z,47nm,1.2s						
LIC	Lamto	24.72	23	eP	P	05 47 14.3	+0.7
	comp=Z,52nm,1.3s						
KIC	Kosan Boka	24.95	23	eP	P	05 47 17.1	+1.4
	comp=Z,131nm,1.5s						
TIC	Toumodi	25.11	22	eP	P	05 47 17.4	+0.3
DBIC	Dimbokro	25.19	23	P	P	05 47 17.6	-0.3
	comp=Z,21nm,1.1s,baz=193,slow=11,SNR=13						
DBIC				LR	LR	05 54 47.5	
	comp=Z,139nm,20.8s,baz=185,slow=31						
DBIC	Dimbokro	25.19	23	P	P	05 47 18.1	+0.2
DBIC				IAmb	IAmb	05 47 21.6	
	comp=Z,31nm,1.1s						
BDFB	Brasilia	32.27	267	LR	LR	05 58 44.5	
	comp=Z,248nm,21.7s,baz=104,slow=31						
KOWA	Kowa	32.78	19	P	P	05 48 25.7	+0.2
KOWA				IAmb	IAmb	05 48 28.3	
	comp=Z,14nm,1.2s						
TOA0	Torodi Ar. Sit	33.77	29	P	P	05 48 34.2	+0.1
TOA0				IAmb	IAmb	05 48 41.4	
	comp=Z,19nm,0.9s						
TORD	Torodi Ar. Bea	33.77	29	P	P	05 48 33.6	-0.5
	comp=Z,12nm,0.9s,baz=214,slow=8.9,SNR=29						
TORD				LR	LR	06 00 15.7	
	comp=Z,294nm,18.5s,baz=215,slow=33						
TORD	Torodi Ar. Bea	33.77	29	P	P	05 48 33.6	-0.5
LBTB	Lobatse	38.13	109	P	P	05 49 09.7	-1.9
BOSA	Boshof	38.25	115	P	P	05 49 12.7	+0.2
	comp=Z,4.0nm,1.0s,baz=244,slow=7.1,SNR=3.6						
BOSA				LR	LR	06 01 54.6	
	comp=Z,114nm,19.2s,baz=322,slow=32						
BOSA	Boshof	38.25	115	P	P	05 49 11.9	-0.7
BOSA				IAmb	IAmb	05 50 26.1	
	comp=Z,44nm,1.9s						
MATP	Matopo	40.73	102	P	P	05 49 33.7	+0.3
	comp=Z,6.5nm,1.1s,baz=280,slow=9.7,SNR=4.4						
CPUP	Villa Florida	40.86	249	P	P	05 49 33.3	-0.9
	comp=Z,1.9nm,0.9s,baz=80,slow=10,SNR=4.1						
CPUP				LR	LR	06 05 03.4	
	comp=Z,139nm,18.2s,baz=94,slow=34						
CPUP	Villa Florida	40.86	249	P	P	05 49 34.3	+0.1
LSZ	Lusaka	40.91	94	P	P	05 49 35.3	+0.4
SIV	San Ignacio	44.69	264	P	P	05 50 05.9	+0.3
	comp=Z,1.1nm,0.9s,baz=99,slow=7.8,SNR=4.9						
AC02	Maricunga	51.43	249	P	P	05 50 58.6	+0.5
PB08	IPOC Station P	51.84	257	P	P	05 51 00.3	-0.8
CO01	Juntas del Tor	52.30	245	P	P	05 51 05.3	+1.0
CO01				IAmb	IAmb	05 51 06.5	
	comp=Z,16nm,1.1s						
AC05	El Transito	52.44	246	P	P	05 51 04.9	-0.3
AC05				IAmb	IAmb	05 51 15.9	
	comp=Z,16nm,1.1s						
LCO	Las Campanas	52.82	246	P	P	05 51 07.8	-0.3
LCO				IAmb	IAmb	05 51 09.1	
	comp=Z,10nm,0.9s						
PLCA	Paso Flores	53.66	232	LR	LR	06 12 11.9	
	comp=Z,177nm,18.7s,baz=97,slow=34						
VNA1	Neumayer--Stat	53.93	177	P	P	05 51 15.7	+0.4
VNA2	Neumayer--Watz	54.24	177	P	P	05 51 17.8	+0.2
VNA3	Neumayer Olymp	54.47	178	P	P	05 51 24.7	+5.4
SNAA	Sanae	55.26	176	P	P	05 51 24.3	-0.8
SNAA	Sanae	55.26	176	P	P	05 51 24.2	-0.8
	comp=Z,1.5nm,1.0s,baz=342,slow=7.5,SNR=3.6						
KEST	Kesra	56.92	23	P	P	05 51 36.8	-0.6
	comp=Z,3.1nm,0.8s,baz=237,slow=12,SNR=1.4						
ESDC	Sonseca Array	57.06	10	P	P	05 51 37.7	-0.5
	comp=Z,1.1nm,0.9s,baz=175,slow=6.6,SNR=4.9						
ESDC				PcP	PcP	05 52 31.1	-2.1
	comp=Z,0.3nm,0.4s,baz=317,slow=39,SNR=2.1						
ESDC				LR	LR	06 13 07.4	
	comp=Z,181nm,18.5s,baz=355,slow=33						
VAE	Valguarnera	60.45	26	LR	LR	06 17 51.6	
	comp=Z,906nm,20.5s,baz=294,slow=36						
SDV	Santo Domingo	61.19	290	P	P	05 52 07.9	+0.3
SDV				IAmb	IAmb	05 52 09.5	
	comp=Z,13nm,1.2s						
ROSC	El Rosal	62.98	285	LR	LR	06 18 38.4	
	comp=Z,103nm,19.0s,baz=51,slow=35						
ATD	Arta Tunnel	63.22	67	LR	LR	06 17 43.4	
	comp=Z,70nm,19.0s,baz=228,slow=34						
EIL	Elat	66.35	46	LR	LR	06 20 28.4	
	comp=Z,110nm,18.1s,baz=266,slow=35						
RETA	Reutte	67.89	18	eP	P	05 52 52.4	+1.8
	comp=Z,1.7nm,0.3s						
KBA	Koelnbreinsper	68.34	20	eP	P	05 52 55.6	+2.1
	comp=Z,6.7nm,1.0s						
SOKA	Soboth	68.56	21	eP	P	05 52 56.8	+2.0
	comp=Z,6.3nm,1.0s						
ARSA	Arzberg	69.23	21	eP	P	05 53 01.0	+2.1
	comp=Z,0.4nm,0.4s						
MOA	Molln	69.32	20	eP	P	05 53 02.5	+3.0
	comp=Z,5.6nm,1.1s						
MAW	Mawson	69.71	157	P	P	05 53 02.1	+0.5
	comp=Z,2.6nm,0.7s,baz=293,slow=8.3,SNR=4.7						
MAW				LR	LR	06 18 04.0	
	comp=Z,44nm,18.8s,baz=55,slow=31						
MAW	Mawson	69.71	157	P	P	05 53 02.6	+1.0
CONA	Conrad Observa	69.93	21	eP	P	05 53 05.2	+2.0
	comp=Z,8.7nm,1.5s						
BRTR	Keskin Array B	71.91	37	P	P	05 53 15.7	+0.1
	comp=Z,4.1nm,1.0s,baz=197,slow=7.9,SNR=12						
BRTR	Keskin Array B	71.91	37	P	P	05 53 16.6	+1.0
AKASG	Malin Array Be	77.37	27	P	P	05 53 46.5	-0.3
	comp=Z,1.0nm,0.6s,baz=220,slow=5.0,SNR=6.7						
AKASG	Malin Array Be	77.37	27	P	P	05 53 45.2	-1.6
NOA	NORSAR Array B	80.28	12	LR	LR	06 31 01.8	
	comp=Z,30nm,19.3s,baz=280,slow=37						
P57A	Homestead Farm	81.54	316	P	P	05 54 10.4	+0.5
P57A				IAmb	IAmb	05 54 11.9	
	comp=Z,18nm,1.2s						
VNDA	Vanda	85.81	179	LR	LR	06 27 48.2	
	comp=Z,41nm,19.0s,baz=188,slow=32						
V48A	Smith Brothers	86.10	309	P	P	05 54 33.1	-0.2
W45A	Hickory Valley	87.65	308	P	P	05 54 39.8	-1.0
SIUC	Southern Illin	88.65	310	P	P	05 54 45.4	-0.1
CCM	Cathedral Cave	90.26	310	P	P	05 54 52.1	-1.0
CCM				IAmb	IAmb	05 54 54.0	
	comp=Z,11nm,0.9s						
R40A	Maddies Statio	91.10	310	P	P	05 54 56.0	-1.0
W39A	Magazine	91.18	306	P	P	05 54 57.4	0.0
HHAR	Hobbs	91.67	307	P	P	05 54 59.0	-0.7
HHAR				IAmb	IAmb	05 55 00.2	
	comp=Z,6.3nm,1.0s						
U38A	Gravette	92.06	307	P	P	05 55 01.2	-0.2
U38A				IAmb	IAmb	05 55 01.9	
	comp=Z,11nm,1.3s						
KSH	Kashi	100.80	52	P	Pdif	05 55 42.4	+1.2
KSH				pP	sP	05 55 44.9	+0.6
KSH				S	Sdif	06 07 15.0	-4.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WMQ	Urumqi	110.12	49	ePKP	PKiKP	06 00 23.8	-0.3
WMQ				AMB	AMB		
	comp=Z,170nm,7.1s						
HHC	Hu-ho-hao-te	127.90	51	ePKP	PKiKP	06 01 00.0	+1.1
NJ2	Nanjing	135.18	61	ePKP	PKPdf	06 01 10.8	-1.4
CN2	Changchun	136.77	43	ePKP	PKiKP	06 01 17.0	+0.4

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*IDC **12** 05:53:08.1±1.5, 29°.98S×178°.98W, h349^{km}±20^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/27, mbtmp4.0/4, Error ellipse: s-maj=50.2km s-min=32.9km az=129.0*

ISC 12 05:53:07.3±1.0, **30°.26S**±0°.09×**178°.9W**±0°.2, **h350**^{km}, **n46**, σ**2^{s}.89**/61, **mb3.3**/3, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.32	41	P	Pn	05 53 54.9	+0.4
GLKZ				S	S	05 54 28.6	-3.7
RIZ	Raoul Island	1.33	40	P	Pn	05 53 55.3	+0.7
RIZ				S	S	05 54 29.1	-3.3
RAO	Raoul Island	1.33	41	P	Pn	05 53 54.8	+0.2
	172nm,0.3s,baz=84,slow=23,SNR=6.1						
RAO				S	S	05 54 28.6	-3.8
	126nm,0.3s,baz=90,slow=23,SNR=12						
MXZ	Matakaoa Point	7.64	197	S	S	05 56 26.1	-0.3
WMGZ	Waiomatatini S	7.86	196	P	Pn	05 55 03.6	+4.0
WMGZ				S	S	05 56 33.2	+2.1
HAZ	Te Kaha	7.96	199	P	Pn	05 55 03.5	+2.7

HAZ				S	S	05 56 34.6	+1.2
PKGZ	**Pakihiroa**	8.00	197	P	P	05 55 05.8	+1.3
PKGZ				S	S	05 56 34.8	+0.3
PUZ	**Puketiti**	8.13	196	P	P	05 55 05.7	-0.1
PUZ				S	S	05 56 37.4	+0.2
RUGZ	**Raukumara Rang**	8.19	199	P	P	05 55 06.6	+0.1
RUGZ				S	S	05 56 38.4	-0.2
CNGZ	**Carnagh Statio**	8.54	195	P	P	05 55 11.5	+1.1
MWZ	**Matawai**	8.57	199	P	P	05 55 10.4	-0.3
MWZ				S	S	05 56 46.9	+0.1
TKGZ	**Te Karaka**	8.58	197	P	P	05 55 12.0	+1.2
TKGZ				S	S	05 56 47.3	+0.3
URZ	**Urewera**	8.63	201	P	P	05 55 11.7	+0.4
	3.3nm,0.3s,baz=270,slow=4.4,SNR=36						
URZ				S	S	05 56 47.2	-0.7
	5.4nm,0.3s,baz=325,slow=1.3,SNR=11						
URZ	**Urewera**	8.63	201	P	Pn	05 55 09.6	+0.9
URZ				S	S	05 56 48.6	+0.6
RAGZ	**Rawiri**	8.75	199	P	P	05 55 13.2	+0.4
RIGZ	**Rimuhau**	8.86	197	P	P	05 55 14.2	+0.2
RIGZ				S	S	05 56 48.6	-4.5
MUGZ	**Murupara**	8.94	202	P	P	05 55 14.2	-0.5
MUGZ				S	S	05 56 54.1	-0.7
RTZ	**Ruatahuna**	8.99	201	P	P	05 55 15.9	+0.4
MTHZ	**Maungataniwha**	9.25	201	P	P	05 55 19.7	+1.3
MTHZ				S	S	05 57 00.5	-1.3
NMHZ	**Naumai**	9.49	201	P	P	05 55 22.4	+1.4
NMHZ				S	S	05 57 07.4	+0.4
DVHZ	**Dannevirke**	10.79	201	P	S	05 57 30.6	-4.8
ANWZ	**Angora Road**	10.85	199	P	S	05 57 32.5	-4.2
POWZ	**Post Office Ro**	11.00	202	P	S	05 57 40.0	-0.1
PRWZ	**Pori Road**	11.08	201	P	S	05 57 37.3	-4.7
BFZ	**Birch Farm**	11.12	199	P	S	05 57 40.0	-2.7
MRZ	**Mangatainoka R**	11.30	202	P	S	05 57 41.2	-5.7
TIWZ	**Tintock**	11.31	201	P	S	05 57 43.8	-3.3
CPWZ	**Castlepoint**	11.34	199	P	S	05 57 47.8	+0.1
HOWZ	**Holdsworth Sta**	11.54	202	P	S	05 57 47.2	-4.9
OGWZ	**Otaki Gorge**	11.58	203	P	S	05 57 48.8	-4.2
TMWZ	**Te Maipa**	11.61	200	P	S	05 57 47.7	-6.1
KIW	**Kapiti Island**	11.71	204	P	S	05 57 51.8	-4.0
CAW	**Cannon Point**	11.87	203	P	S	05 57 55.0	-4.4
TRWZ	**Traveller**	11.94	200	P	S	05 57 57.8	-3.1
PAWZ	**Paruwai Farm**	12.00	201	P	S	05 57 57.9	-4.4
DUWZ	**D'Urville Isla**	12.02	207	P	S	05 58 00.0	-2.6
MSWZ	**Moikau Station**	12.09	201	P	S	05 57 58.9	-5.2
BHW	**Baring Head**	12.21	203	P	S	05 58 02.9	-3.6
PLWZ	**Palliser**	12.23	201	P	S	05 58 01.6	-5.4
TCW	**Tory Channel**	12.24	205	P	S	05 58 03.7	-3.5
TUWZ	**Tuamarina**	12.55	205	P	S	05 58 09.9	-3.7
NNZ	**Nelson**	12.59	208	P	S	05 58 09.8	-4.5
STKA	**Stephens Creek**	33.74	257	P	P	05 59 19.1	+1.9
	0.6nm,0.4s,baz=100,slow=12,SNR=1.8						
ASAR	**Alice Springs**	42.33	267	P	P	06 00 28.5	+0.2
	0.5nm,0.6s,baz=105,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	43.30	272	P	P	06 00 36.1	0.0
	2.3nm,0.4s,baz=110,slow=7.8,SNR=26						
FINES	**FINESS Array B**	144.74	339	PKP	PKPbc	06 12 01.8	-0.1
	3.6nm,0.4s,baz=58,slow=4.0,SNR=38						

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*NNC **12** 05:59:51.6±2.1, 54°.11N×86°.50E, h0^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=18.2km s-min=9.2km az=17.0, Suspected Mining explosion.*

*IDC **12** 05:59:52.1±2.5, 54°.15N×86°.54E, h0^{km}, mb1 3.2/2, mb1mx2.9/59, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=19.5km s-min=12.2km az=57.0*

ISC 12 05:59:53.6±4.0**, 54°.1N**±0°.2×**86°.3E**±0°.2**, h0^{km}, n9,** σ**1^{s}.01**/15**,**
6C-8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	0.91	260	*i*		06 05 10.0	
	baz=79,slow=332,SNR=1.8						
ZAA0	**Zalesovo Array**	0.91	260	⇓P	Pg	06 00 10.3	-0.8
	0.3nm,0.3s						
ZAA0				⇓S	Sb	06 00 25.2	+0.2
	10.0nm,1.1s						
ZALV	**Zalesovo Beam**	0.91	260	Pg	Pg	06 00 09.9	-1.1
	1.7nm,0.3s,baz=78,slow=16,SNR=15						
ZALV				Lg	Lg	06 00 26.5	
	3.4nm,0.3s,baz=79,slow=30,SNR=26						
ZALV				Rg	Rg	06 00 32.2	
	3.6nm,0.3s,baz=236,slow=43,SNR=5.4						
KURK	**Kurchatov**	5.82	237	⇓Pn	Pn	06 01 21.9	+0.9
	2.2nm,1.1s						
KURK				⇑Sn	Sn	06 02 27.2	-1.3
	1.1nm,0.7s						
KURK				⇑Lg	Lg	06 02 59.3	
	3.4nm,0.9s						
KURBB	**Kurchatov Arra**	5.92	237	Pn	Pn	06 01 23.5	+1.0
	0.2nm,0.3s,baz=55,slow=14,SNR=10						
KURBB				Sn	Sn	06 02 32.1	+1.1
	0.0nm,0.3s,baz=50,slow=21,SNR=2.9						
KURBB				Lg	Lg	06 03 05.3	
	0.1nm,0.3s,baz=57,slow=30,SNR=8.3						
KURBB	**Kurchatov Arra**	5.92	237	⇓Pn	Pn	06 01 23.5	+1.0
	3.5nm,0.9s						
KURBB				⇓Sn	Sn	06 02 31.4	+0.4
	4.9nm,0.7s						
KURBB				⇓Lg	Lg	06 03 04.6	
	5.7nm,0.8s						
MK31	**Makanchi Array**	7.76	201	⇑Pn	Pn	06 01 47.5	-0.4
	0.2nm,0.3s,baz=28,slow=14,SNR=25						
MK31				⇓Sn	Sn	06 03 14.9	-1.6
	1.5nm,0.9s,baz=28,slow=27,SNR=8.0						
MK31				⇑Lg	Lg	06 03 57.5	
	3.3nm,0.9s,baz=30,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	7.76	201	Pn	Pn	06 01 48.3	+0.4
	0.4nm,0.3s,baz=26,slow=14,SNR=21						
MKAR				Sn	Sn	06 03 17.0	+0.6
	0.1nm,0.3s,baz=30,slow=27,SNR=9.9						
MKAR				Lg	Lg	06 03 59.7	
	0.1nm,0.3s,baz=34,slow=31,SNR=7.9						
MAKZ	**Makanchi**	7.82	203	⇑Pn	Pn	06 01 49.4	+0.8
	0.4nm,0.5s						
MAKZ				⇑Sn	Sn	06 03 18.7	+0.9
	1.3nm,0.8s						
MAKZ				⇓Lg	Lg	06 04 00.7	
	2.3nm,0.9s						

IDC 12 06:07:33.7±7.1**, 21°.14S**×**179°.82W, h0^{km}, mb4.0**/2**,**
mb1 4.3/2**, mb1mx3.6**/25**, mbtmp4.0**/2**, Error ellipse:**
s-maj=304.0km s-min=67.8km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	42.71	258	P	P	06 15 31.9	-0.9
	1.2nm,0.8s,baz=98,slow=6.8,SNR=14						
WRA	**Warramunga Arr**	42.83	263	P	P	06 15 34.4	+0.6
	1.4nm,0.4s,baz=96,slow=8.4,SNR=32						
AKASG	**Malin Array Be**	142.72	329	PKhKP	PKPpre	06 27 00.8	
	0.4nm,0.3s,baz=43,slow=4.3,SNR=5.3						
BRTR	**Keskin Array B**	145.98	311	PKPbc	PKPdf	06 27 15.0	-0.1
	0.5nm,0.5s,baz=73,slow=3.8,SNR=4.2						

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*SOF **12** 06:08:24.5, 45°.88N×27°.02E, h13^{km}, MD4.3*

*BEO **12** 06:08:25.2±0.7, 45°.54N×27°.35E, h0^{km}, ML4.1/15*

*PRU **12** 06:08:27.6±0.0, 46°.23N×27°.52E, h0^{km}, M4.4*

*MOS **12** 06:08:28.4±0.8, 45°.53N×26°.97E, h21^{km}, mb4.4/9, Error ellipse: s-maj=6.2km s-min=4.3km az=119.8*

*IDC **12** 06:08:29.6±1.4, 45°.49N×27°.03E, h23^{km}±10^{km}, mb3.7/12, mb1 3.9/22, mb1mx3.7/48, mbtmp3.9/22, ML3.8/10, MS3.2/2, Ms1 3.2/2, ms1mx2.6/50, Error ellipse: s-maj=9.4km s-min=6.9km az=23.0*

*NEIC **12** 06:08:30.9±2.2, 45°.54N±0°.03×27°.04E±0°.03, h27^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.0km az=173.0*

*SIGU **12** 06:08:30.4, 45°.54N×27°.01E, h22^{km}*

*BUC **12** 06:08:31.2±0.2, 45°.54N×27°.05E, h19^{km}±1^{km}, ml4.2/60, Error ellipse: s-maj=1.4km s-min=1.2km az=21.0*

ISC 12 06:08:30.1±0.6**, 45°.57N**±0°.01×**27°.06E**±0°.01**, h25^{km}**±4^{km}**,**
n445, σ**1^{s}.63**/617**, mb4.0**/23**, 113C-167D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODBI	**Odobesti**	0.19	0	⇓P	Pn	06 08 37.3	-0.1
ODBI				⇓S	Sb	06 08 42.1	+2.6
ODBI	**Odobesti**	0.19	0	⇓P	Pn	06 08 37.3	-0.1
ODBI				⇓S	Sb	06 08 42.1	+2.6
PETR	**Petresti**	0.20	39	⇓P	Pn	06 08 37.5	+0.1
PETR				⇑S	Sb	06 08 41.5	+1.9
PETR	**Petresti**	0.20	39	⇓P	Pn	06 08 37.5	+0.1
PETR				⇑S	Sb	06 08 41.5	+1.9
PETR	**Petresti**	0.20	39		Pn	06 08 37.5	+0.1
PETR					Sb	06 08 41.5	+1.9
GRER		0.20	197	⇓P	Pb	06 08 36.0	+0.2
GRER				⇓S	Sb	06 08 39.2	-0.4
GRER		0.20	197	⇓P	Pb	06 08 36.0	+0.2
GRER				⇓S	Sb	06 08 39.2	-0.4
GRER		0.20	197		Pb	06 08 36.0	+0.2
GRER					Sb	06 08 39.2	-0.4
VRI	**Vrincioaia**	0.37	322	⇓P	Pb	06 08 38.5	+0.2
VRI				⇓S	Sn	06 08 45.6	-0.8
VRI	**Vrincioaia**	0.37	322	⇓P	Pb	06 08 38.5	+0.2
VRI				⇓S	Sn	06 08 45.6	-0.8
VRI	**Vrincioaia**	0.37	322	P	Pb	06 08 38.5	+0.2
VRI						06 08 45.6	
VRI	**Vrincioaia**	0.37	322		Pb	06 08 38.5	+0.2
VRI					Sn	06 08 45.6	-0.8
PLOR	**Plostina**	0.40	315	⇓P	Pb	06 08 38.8	+0.1
PLOR				⇑S	Sb	06 08 45.5	+1.0
PLOR	**Plostina**	0.40	315	⇓P	Pb	06 08 38.8	+0.1
PLOR				⇑S	Sb	06 08 45.5	+1.0
PLOR	**Plostina**	0.40	315		Pb	06 08 38.9	+0.1
PLOR					Sb	06 08 45.5	+1.0
TUDR		0.43	87	⇓P	Pn	06 08 40.7	+0.1
TUDR				⇓S	Sn	06 08 48.2	+0.4
TUDR		0.43	87	⇓P	Pn	06 08 40.7	+0.1
TUDR				⇓S	Sn	06 08 48.2	+0.4
TUDR		0.43	87		Pn	06 08 40.7	+0.1
SCHL	**Schela**	0.55	97	⇓P	Pn	06 08 42.0	-0.3
SCHL				⇑S	Sn	06 08 51.6	+1.0
SCHL	**Schela**	0.55	97	⇓P	Pn	06 08 42.0	-0.3
SCHL				⇑S	Sn	06 08 51.6	+1.0
NEHR	**Nehoiu**	0.55	255	⇓P	Pb	06 08 41.6	+0.3
NEHR				⇑S	Sn	06 08 51.3	+0.5
NEHR	**Nehoiu**	0.55	255	⇓P	Pb	06 08 41.6	+0.3
NEHR				⇑S	Sn	06 08 51.3	+0.5
VARL	**Varlezi**	0.65	59	⇓P	Pn	06 08 44.0	+0.4
VARL				⇑S	Sn	06 08 54.8	+1.8
VARL	**Varlezi**	0.65	59	⇓P	Pn	06 08 44.0	+0.4
VARL				⇑S	Sn	06 08 54.8	+1.8
PGOR	**Pogoanele**	0.67	184	⇓P	Pb	06 08 43.3	+0.3
PGOR	**Pogoanele**	0.67	184	⇓P	Pb	06 08 43.3	+0.3
GISR	**Galati**	0.71	100	⇑P	Pn	06 08 44.8	+0.3
GISR				⇓S	Sn	06 08 55.9	+1.2
GISR	**Galati**	0.71	100	⇑P	Pn	06 08 44.8	+0.3
GISR				⇓S	Sn	06 08 55.9	+1.2
GISR	**Galati**	0.71	100		Pn	06 08 44.8	+0.3
GISR					Sn	06 08 55.9	+1.2
MLR	**Muntele Rosu**	0.79	265	⇓P	Pn	06 08 45.5	-0.2
MLR				⇓S	Sn	06 08 57.0	+0.3
MLR	**Muntele Rosu**	0.79	265	Pg	Pn	06 08 45.5	-0.2
	207nm,0.3s,baz=55,slow=5.4,SNR=522						
MLR				Lg	Lg	06 08 56.2	
	426nm,0.3s,baz=53,slow=24,SNR=19						
MLR	**Muntele Rosu**	0.79	265	⇓P	Pn	06 08 45.5	-0.2
MLR				⇓S	Sn	06 08 57.0	+0.3
MLR	**Muntele Rosu**	0.79	265	*e*Pg	Pb	06 08 44.1	-1.1
MLR				*e*Sg	Sb	06 08 55.3	-0.2
MLR	**Muntele Rosu**	0.79	265		Pn	06 08 45.5	-0.2
MLR					Sn	06 08 57.0	+0.3
BIR	**Birlad**	0.80	30	⇓P	Pn	06 08 46.9	+1.1
BIR				⇓S	Sn	06 08 58.7	+1.8
BIR	**Birlad**	0.80	30	⇓P	Pn	06 08 46.9	+1.1
BIR				⇓S	Sn	06 08 58.7	+1.8
BIR	**Birlad**	0.80	30	P	Pn	06 08 46.9	+1.1
BIR						06 08 58.7	
BIR	**Birlad**	0.80	30		Pn	06 08 46.9	+1.1
BIR					Sn	06 08 58.7	+1.8
GIUM	**Giurgiulesti**	0.81	96	⇓P	Pn	06 08 46.6	+0.6
GIUM				⇓S	Sn	06 08 58.2	+1.0
GIUM	**Giurgiulesti**	0.81	96	⇓P	Pn	06 08 46.6	+0.6
GIUM				⇓S	Sn	06 08 58.2	+1.0
GIUM	**Giurgiulesti**	0.81	96		Pn	06 08 46.6	+0.6
GIUM					Sn	06 08 58.2	+1.0
GIUM	**Giurgiulesti**	0.81	96	P	Pn	06 08 46.5	+0.6
GIUM				S	Sn	06 08 58.2	+1.0
CFR	**Carcaliu**	0.86	117	⇓P	Pb	06 08 46.2	-0.1
CFR				⇑S	Sn	06 08 58.2	-0.1
CFR	**Carcaliu**	0.86	117	⇓P	Pb	06 08 46.2	-0.1
CFR				⇑S	Sn	06 08 58.2	-0.1
CFR	**Carcaliu**	0.86	117	P	Pb	06 08 46.2	-0.1
CFR						06 08 58.2	
CFR	**Carcaliu**	0.86	117		Pb	06 08 46.2	-0.1
CFR					Sn	06 08 58.2	-0.1
PLAR	**PLOIESTI**	0.98	228	⇑P	Pb	06 08 49.9	+1.5
PLAR				⇓S	Sn	06 09 03.3	+2.1
PLAR	**PLOIESTI**	0.98	228	⇑P	Pb	06 08 49.9	+1.5
PLAR				⇓S	Sn	06 09 03.3	+2.1
AMRR	**Amara**	0.98	168	⇓P	Pb	06 08 48.6	+0.2
AMRR				⇓S	Sn	06 09 03.6	+2.3
AMRR	**Amara**	0.98	168	⇓P	Pb	06 08 48.6	+0.2
AMRR				⇓S	Sn	06 09 03.6	+2.3
TESR	**Tescani**	0.98	343	⇓P	Pb	06 08 49.7	+1.2
TESR	**Tescani**	0.98	343	⇓P	Pb	06 08 49.7	+1.2
TESR	**Tescani**	0.98	343		Pb	06 08 49.7	+1.2
OZUR		1.03	301	⇓P	Pb	06 08 50.4	+1.1
OZUR				⇓S	Sn	06 09 06.6	+3.9
OZUR		1.03	301	⇓P	Pb	06 08 50.4	+1.1
OZUR				⇓S	Sn	06 09 06.6	+3.9
SULR		1.06	213	⇑P	Pb	06 08 50.3	+0.6
SULR				⇓S	Sn	06 09 05.8	+2.6
SULR		1.06	213	⇑P	Pb	06 08 50.3	+0.6
SULR				⇓S	Sn	06 09 05.8	+2.6
SULR		1.06	213		Pb	06 08 50.3	+0.6
HARR	**Harsova**	1.08	145	⇓P	Pb	06 08 50.2	+0.1
HARR	**Harsova**	1.08	145	⇓P	Pb	06 08 50.2	+0.1
LEHL	**Lehliu**	1.11	189	⇑P	Pb	06 08 51.0	+0.4
LEHL				⇓S	Sb	06 09 06.7	+2.0
LEHL	**Lehliu**	1.11	189	⇑P	Pb	06 08 51.0	+0.4
LEHL				⇓S	Sb	06 09 06.7	+2.0
VASR	**Vaslui**	1.19	25	⇓P	Pb	06 08 53.5	+1.5
VASR				⇓S	Sb	06 09 10.9	+4.0
VASR	**Vaslui**	1.19	25	⇓P	Pb	06 08 53.5	+1.5
VASR				⇓S	Sb	06 09 10.9	+4.0
VASR	**Vaslui**	1.19	25		Pb	06 08 53.5	+1.5
VASR					Sb	06 09 10.9	+4.0
TPGR	**Topolog**	1.20	126	⇑P	Pn	06 08 51.6	+0.4
TPGR				⇑S	Sb	06 09 08.2	+0.9
TPGR	**Topolog**	1.20	126	⇑P	Pn	06 08 51.6	+0.4
TPGR				⇑S	Sb	06 09 08.2	+0.9
DOPR	**Dopca**	1.23	289	⇑P	Pb	06 08 52.9	+0.2
DOPR				⇑S	Sb	06 09 10.8	+2.6
DOPR	**Dopca**	1.23	289	⇑P	Pb	06 08 52.9	+0.2
DOPR				⇑S	Sb	06 09 10.8	+2.6
TLBR	**Topalu**	1.24	145	⇓P	Pb	06 08 52.8	0.0
TLBR				⇑S	Sb	06 09 09.7	+1.2
TLBR	**Topalu**	1.24	145	⇓P	Pb	06 08 52.8	0.0
TLBR				⇑S	Sb	06 09 09.7	+1.2
INCR	**INCERC-Sediu C**	1.30	210	⇑P	Pb	06 08 53.5	-0.3
INCR				⇑S	Sb	06 09 12.3	+2.4
INCR	**INCERC-Sediu C**	1.30	210	⇑P	Pb	06 08 53.5	-0.3
INCR				⇑S	Sb	06 09 12.3	+2.4
TLCR		1.30	107	⇓P	Pb	06 08 54.4	+0.6
TLCR				⇑S	Sb	06 09 12.3	+2.2
TLCR		1.30	107	⇓P	Pb	06 08 54.4	+0.6
TLCR				⇑S	Sb	06 09 12.3	+2.2
RASA	**Rasa**	1.36	177	⇑P	Pb	06 08 55.2	+0.4
RASA				⇓S	Sb	06 09 14.6	+2.9
RASA	**Rasa**	1.36	177	⇑P	Pb	06 08 55.2	+0.4
RASA				⇓S	Sb	06 09 14.6	+2.9
VOIR		1.42	265	⇓P	Pb	06 08 55.9	0.0
VOIR				⇓S	Sb	06 09 16.1	+2.5
VOIR		1.42	265	⇓P	Pb	06 08 55.9	0.0
VOIR				⇓S	Sb	06 09 16.1	+2.5
VOIR		1.42	265		Pb	06 08 55.9	0.0
VOIR					Sb	06 09 16.1	+2.5
CVDA	**Cernavoda**	1.42	150	⇓P	Pb	06 08 55.8	-0.1
CVDA				⇑S	Sb	06 09 14.4	+0.9
CVDA	**Cernavoda**	1.42	150	⇓P	Pb	06 08 55.8	-0.1
CVDA				⇑S	Sb	06 09 14.4	+0.9
BUC1	**Bucharest**	1.42	211	⇓P	Pb	06 08 55.4	-0.5
BUC1				⇑S	Sb	06 09 15.6	+2.0
BUC1	**Bucharest**	1.42	211	⇓P	Pb	06 08 55.4	-0.5
BUC1				⇑S	Sb	06 09 15.6	+2.0
BUC1	**Bucharest**	1.42	211		Pb	06 08 55.4	-0.5
BUC1					Sb	06 09 15.6	+2.0
GIRR	**Girov**	1.44	345	⇓P	Pb	06 08 56.8	+0.6
GIRR	**Girov**	1.44	345	⇓P	Pb	06 08 56.8	+0.6
MTUR	**Matau**	1.45	257	⇑P	Pb	06 08 56.7	+0.4
MTUR	**Matau**	1.45	257	⇑P	Pb	06 08 56.7	+0.4
TIRR	**Tirgusor**	1.47	139	⇑P	Pb	06 08 56.0	-0.8
TIRR				⇓S	Sb	06 09 15.5	+0.5
TIRR	**Tirgusor**	1.47	139	⇑P	Pb	06 08 56.0	-0.8
TIRR				⇓S	Sb	06 09 15.5	+0.5
TIRR	**Tirgusor**	1.47	139	P	Pb	06 08 56.9	+0.1
TIRR						06 09 15.4	
TIRR	**Tirgusor**	1.47	139	Pn	Pn	06 08 55.8	+0.9
TIRR	**Tirgusor**	1.47	139		Pb	06 08 56.0	-0.8
TIRR					Sb	06 09 15.5	+0.5
BIZ	**Bicaz**	1.52	335	⇑P	Pb	06 08 57.5	-0.1
BIZ				⇑S	Sb	06 09 19.3	+2.9
BIZ	**Bicaz**	1.52	335	⇑P	Pb	06 08 57.5	-0.1
BIZ				⇑S	Sb	06 09 19.3	+2.9
JURR	**Jurilovca**	1.52	121	⇑P	Pb	06 08 57.2	-0.3
JURR	**Jurilovca**	1.52	121	⇑P	Pb	06 08 57.2	-0.3
ICOR	**Ion Corvin**	1.55	160	⇓P	Pb	06 08 57.4	-0.7
ICOR				⇑S	Sb	06 09 18.8	+1.6
ICOR	**Ion Corvin**	1.55	160	⇓P	Pb	06 08 57.4	-0.7
ICOR				⇑S	Sb	06 09 18.8	+1.6
SGRR	**Singureni**	1.55	210	⇑P	Pb	06 08 57.1	-1.0
SGRR				⇓S	Sb	06 09 19.1	+1.8
SGRR	**Singureni**	1.55	210	⇑P	Pb	06 08 57.1	-1.0
SGRR				⇓S	Sb	06 09 19.1	+1.8
STFAR	**Stefanesti-Arg**	1.64	245	⇑P	Pb	06 08 59.9	+0.3
STFAR	**Stefanesti-Arg**	1.64	245	⇑P	Pb	06 08 59.9	+0.3
IAS	**Iasi**	1.66	12	⇓P	Pb	06 08 59.2	-0.8
IAS				⇑S	Sb	06 09 21.2	+0.8
IAS	**Iasi**	1.66	12	⇓P	Pb	06 08 59.2	-0.8
IAS				⇑S	Sb	06 09 21.2	+0.8
MFTR	**Murfatlar**	1.70	145	⇑P	Pn	06 08 59.1	+1.0
MFTR				⇓S	Sb	06 09 20.7	-0.8
MFTR	**Murfatlar**	1.70	145	⇑P	Pn	06 08 59.1	+1.0
MFTR				⇓S	Sb	06 09 20.7	-0.8
ARR	**Arges**	1.72	264	⇑P	Pb	06 09 00.2	-0.8
ARR				⇑S	Sb	06 09 24.1	+1.9
ARR	**Arges**	1.72	264	⇑P	Pb	06 09 00.2	-0.8
ARR				⇑S	Sb	06 09 24.1	+1.9
HUMR	**Humele**	1.80	235	⇓P	Pn	06 08 59.9	+0.4
HUMR	**Humele**	1.80	235	⇓P	Pn	06 08 59.9	+0.4
TSCT	**Constanta Port**	1.81	141	⇑P	Pn	06 09 00.7	+1.1
TSCT				⇓S	Sb	06 09 24.5	-0.3
TSCT	**Constanta Port**	1.81	141	⇑P	Pn	06 09 00.7	+1.1
TSCT				⇓S	Sb	06 09 24.5	-0.3
MILM	**Milestii Mici**	1.82	42	⇓P	Pb	06 09 01.5	-1.1
MILM				⇓S	Sb	06 09 25.2	+0.2
MILM	**Milestii Mici**	1.82	42	⇓P	Pb	06 09 01.5	-1.1
MILM				⇓S	Sb	06 09 25.2	+0.2
EFOR	**EFORIE**	1.87	142	⇑P	Pn	06 09 01.6	+1.3
EFOR				⇓S	Sb	06 09 25.3	-1.1
EFOR	**EFORIE**	1.87	142	⇑P	Pn	06 09 01.6	+1.3
EFOR				⇓S	Sb	06 09 25.3	-1.1
KIS	**Kishinev**	1.88	40	*e*P	Pb	06 09 04.7	+1.0
	400nm,0.4s						
KIS				M	M	06 09 11.0	
	1μm,0.5s						
KIS				*i* S	Sb	06 09 28.6	+1.9
	5μm,0.7s						
KIS				dur		06 20 00.0	
KIS	**Kishinev**	1.88	40	*e*P	Pb	06 09 04.7	+1.0
KIS				*i* S	Sb	06 09 28.6	+1.9
KIS	**Kishinev**	1.88	40	*e*P	Pb	06 09 04.7	+1.0
KIS				Pm		06 09 05.6	
KIS				*i* S	Sb	06 09 28.6	+1.9
KIS				Sm		06 09 32.7	
PRAR	**RASCA**	1.88	343	⇑P	Pb	06 09 03.2	-0.5
PRAR	**RASCA**	1.88	343	⇑P	Pb	06 09 03.2	-0.5
TSSL	**Sulina**	1.93	101	⇑S	Sb	06 09 29.3	+1.2
TSSL	**Sulina**	1.93	101	⇑S	Sb	06 09 29.3	+1.2
COPA	**Copaceanca**	1.94	223	⇑P	Pn	06 09 01.6	+0.2
COPA				⇑S	Sn	06 09 26.6	+1.6
COPA	**Copaceanca**	1.94	223	⇑P	Pn	06 09 01.6	+0.2
COPA				⇑S	Sn	06 09 26.6	+1.6
MDB	**Medias**	1.95	288	⇓P	Pb	06 09 03.3	-1.7
MDB	**Medias**	1.95	288	⇓P	Pb	06 09 03.3	-1.7
PSN	**Preselentsi**	2.05	157	*i* P	Pn	06 09 04.7	+1.7
MANR	**Mangalia**	2.07	148	⇓P	Pn	06 09 04.5	+1.4
MANR				⇓S	Sn	06 09 30.0	+2.0
MANR	**Mangalia**	2.07	148	⇓P	Pn	06 09 04.5	+1.4
MANR				⇓S	Sn	06 09 30.0	+2.0
TSMN	**Mangalia Port-**	2.08	148	⇓P	Pn	06 09 04.8	+1.4
TSMN	**Mangalia Port-**	2.08	148	⇓P	Pn	06 09 04.8	+1.4
LOT	**Lotru**	2.31	268	⇑P	Pn	06 09 08.1	+1.4
LOT				⇓S	Sn	06 09 36.0	+1.6
LOT	**Lotru**	2.31	268	⇑P	Pn	06 09 08.1	+1.4
LOT				⇓S	Sn	06 09 36.0	+1.6
PRD	**Provadia**	2.38	174	*i* P	Pb	06 09 13.6	+1.3
BURAR	**Bucovina Array**	2.41	329	⇓P	Pb	06 09 10.4	-2.4
BURAR	**Bucovina Array**	2.41	329	⇓P	Pb	06 09 10.4	-2.4
BURAR	**Bucovina Array**	2.41	329		Pn	06 09 09.6	+1.7
ARCR	**ARCALIA**	2.41	310	⇓P	Pn	06 09 08.8	+0.9
ARCR	**ARCALIA**	2.41	310	⇓P	Pn	06 09 08.8	+0.9
BUR08	**Bucovina Ar. S**	2.44	329	Pn	Pn	06 09 10.2	+1.8
SZH	**Strazhica**	2.44	200	*i* P	Pn	06 09 09.3	+1.0
VLAD	**Vladila**	2.46	231	⇓P	Pn	06 09 09.0	+0.5
VLAD				⇑S	Sn	06 09 40.4	+2.7
VLAD	**Vladila**	2.46	231	⇓P	Pn	06 09 09.0	+0.5
VLAD				⇑S	Sn	06 09 40.4	+2.7
ROIA	**ROIAK**	2.49	175	*i* P	Pn	06 09 10.6	+1.6
PVL	**Pavlikeni**	2.66	208	*i* P	Pn	06 09 14.1	+2.8
CJR	**Cluj-Napoca**	2.66	297	⇓P	Pn	06 09 12.4	+1.0
CJR				⇑S	Sn	06 09 45.4	+2.6
CJR	**Cluj-Napoca**	2.66	297	⇓P	Pn	06 09 12.4	+1.0
CJR				⇑S	Sn	06 09 45.4	+2.6
SORM	**Soroca**	2.71	19	⇑P	Pn	06 09 13.1	+1.1
SORM	**Soroca**	2.71	19	⇑P	Pn	06 09 13.1	+1.1
CHRU	**Chernivtsi**	2.84	345	*e*S	Sb	06 09 51.4	-2.9
SRE	**Strehaia**	2.87	253	⇑P	Pn	06 09 15.2	+1.0
SRE	**Strehaia**	2.87	253	⇑P	Pn	06 09 15.2	+1.0
DEV	**Deva**	2.92	278	⇑P	Pn	06 09 16.9	+1.9
DEV				⇓S	Sn	06 09 53.0	+3.8
DEV	**Deva**	2.92	278	⇑P	Pn	06 09 16.9	+1.9
DEV				⇓S	Sn	06 09 53.0	+3.8
GZR	**Gura Zlata**	3.02	268	⇓P	Pn	06 09 18.0	+1.7
GZR	**Gura Zlata**	3.02	268	⇓P	Pn	06 09 18.0	+1.7
GZR	**Gura Zlata**	3.02	268	*e*Pn	Pn	06 09 17.3	+1.0
KMPD	**K-Podol'skiy**	3.02	352	*e*P	Pn	06 09 17.2	+0.9
KMPD				*e*S	Sn	06 09 51.7	+0.1
NDNU	**Novodnistrovsk**	3.03	4	*i* P	Pn	06 09 17.0	+0.6
NDNU				Pm		06 09 36.8	
NDNU				*e*S	Sn	06 09 53.4	+1.5
NDNU				Sm		06 10 14.6	
KSV	**Kosov**	3.06	334	⇓*i*P	Pn	06 09 18.7	+1.8
JMB	**Yambol**	3.12	186	*e*P	Pn	06 09 17.8	+0.1
RAKU	**Rahkiv**	3.16	322	⇓*i*P	Pn	06 09 19.7	+1.5
RAKU				Pm		06 09 37.1	
RAKU				*e*S	Sn	06 09 57.8	+2.8
RAKU				Sm		06 09 58.9	
NSLU	**Nyzhne Selyshc**	3.17	327	*e*P	Pb	06 09 25.9	+0.1
NSLU				Pm		06 09 45.9	
NSLU				*e*S	Sb	06 10 08.4	+4.4
NSLU				Sm		06 10 13.7	
BMR	**Baia Mare**	3.23	312	⇓P	Pn	06 09 20.7	+1.5
BMR				⇑S	Sn	06 09 58.8	+2.0
BMR	**Baia Mare**	3.23	312	⇓P	Pn	06 09 20.7	+1.5
BMR				⇑S	Sn	06 09 58.8	+2.0
DRGR		3.25	294	⇓P	Pn	06 09 20.5	+0.9
DRGR				⇑S	Sn	06 09 59.8	+2.3
DRGR		3.25	294	⇓P	Pn	06 09 20.5	+0.9
DRGR				⇑S	Sn	06 09 59.8	+2.3
DRGR		3.25	294	*e*Pn	Pn	06 09 20.6	+1.0
DJES	**Djerdap**	3.34	256	*e*Pn	Pn	06 09 21.8	+1.2
DJES				*e*Sn	Sn	06 10 02.3	+2.9
HERR	**Herculane**	3.35	260	⇓P	Pn	06 09 21.3	+0.5
HERR	**Herculane**	3.35	260	⇓P	Pn	06 09 21.3	+0.5
STNU	**Starunia**	3.59	332	*e*P	Pn	06 09 26.0	+1.9
HORU	**Horodok**	3.67	354	*e*P	Pn	06 09 27.9	+2.7
HORU				Pm		06 09 50.2	
HORU				*e*S	Sn	06 10 10.7	+3.1
HORU				Sm		06 10 30.2	
EDRB	**Edirne**	3.73	184	*e*P	Pn	06 09 25.8	-0.2
KORU	**Korolevo**	3.73	315	⇑*i*P	Pn	06 09 27.3	+1.3
KORU				Pm		06 09 27.8	
KORU				*e*S	Sn	06 10 11.6	+2.5
KORU				Sm		06 10 11.9	
TRSU	**Trosnyk**	3.78	313	⇑*i*P	Pn	06 09 27.8	+1.1
TRSU				*e*S	Sn	06 10 12.0	+1.7

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MEZ   Mezhgor'ye         3.81 322⇓iP    Pn       06 09 28.6 +1.4
MEZ                               Pm             06 09 49.3
MEZ                               eS    Sn       06 10 13.4 +2.3
MEZ                               Sm             06 10 16.4
BZS   Buzias             3.82 273 ⇓P    Pn       06 09 28.4 +1.2
BZS                               ⇓S    Sn       06 10 15.6 +4.3
BZS   Buzias             3.82 273 ⇓P    Pn       06 09 28.4 +1.2
BZS                               ⇓S    Sn       06 10 15.6 +4.3
BZS   Buzias             3.82 273 ePn   Pn       06 09 27.9 +0.7
MDVR  Moldovita          3.86 260 ⇓P    Pn       06 09 27.9  0.0
MDVR                              ⇓S    Sn       06 10 13.9 +1.5
MDVR  Moldovita          3.86 260 ⇓P    Pn       06 09 27.9  0.0
MDVR                              ⇓S    Sn       06 10 13.9 +1.5
MDVR  Moldovita          3.86 260 ePn   Pn       06 09 27.8 -0.1
PLD   Plovdiv            3.86 207 eP    Pn       06 09 26.4 -1.4
ZAGS  Zajecar            3.86 245 ePn   Pn       06 09 26.3 -1.5
BRIU  Brid               3.91 316⇑iP    Pn       06 09 29.9 +1.4
ZAPS  Zavoj              3.91 236 ePn   Pn       06 09 28.2 -0.4
PHSR  Pinarhisar         3.95 175 eP    Pn       06 09 29.8 +0.7
KUBS  Kucevo             3.99 255 ePn   Pn       06 09 28.0 -1.6
LTVH  Ltavrtes, Hu       4.00 299⇓ePN   Pn       06 09 31.5 +1.9
BERU  Beregovo           4.03 313⇓iP    Pn       06 09 30.9 +0.8
BERU                              i S   Sn       06 10 17.4 +1.0
VTS   Vitosha            4.04 224 ⇓P    Pn       06 09 31.1 +0.7
VTS                               ⇓S    Sn       06 10 19.7 +2.8
VTS   Vitosha            4.04 224 ⇓P    Pn       06 09 31.1 +0.7
VTS                               ⇓S    Sn       06 10 19.7 +2.8
VTS   Vitosha            4.04 224 i P   Pn       06 09 31.2 +0.8
KDZ   Kurdzhali          4.10 197 eP    Pn       06 09 31.4 +0.3
MUKU  Mukachevo          4.15 316⇓iP    Pn       06 09 33.0 +1.2
MORS  Morshin            4.16 330 eP    Pn       06 09 34.8 +2.9
BANR  Banloc             4.17 270 ePn   Pn       06 09 34.1 +2.1
CTYL  Yalikoy Yolu       4.19 167 eP    Pn       06 09 32.8 +0.4
BOVS  Bovan              4.28 245 ePn   Pn       06 09 32.6 -1.0
SVIS  Svilajnac          4.35 255 ePn   Pn       06 09 34.9 +0.4
SLVT  Silivri            4.42 169 eP    Pn       06 09 36.1 +0.6
SHIU  Shidnytsya         4.43 327 eP    Pn       06 09 39.2 +3.5
UZH   Uzhgorod           4.47 315 eP    Pn       06 09 36.4 +0.3
UZH                               eS    Sn       06 10 27.4 +0.2
UZH                               MLR   MLR
      comp=Z,40nm,1.0s
UZH   Uzhgorod           4.47 315 eP    Pn       06 09 36.9 +0.8
AMBH  Ambrzfalva         4.48 282⇓ePN   Pn       06 09 38.3 +2.0
BOSS  Bosilegrad         4.51 229 ePn   Pn       06 09 37.1 +0.3
KLYT  Kilyos             4.55 161 eP    Pn       06 09 37.8 +0.5
RDO   Rodhopi            4.56 195 i P   Pn       06 09 38.5 +1.1
BGKT  Bogazkoy           4.56 163 eP    Pn       06 09 37.4 -0.1
KOLS  Kolonicke sedl     4.68 318 eP    Pn       06 09 40.6 +1.5
KOLS  Kolonicke sedl     4.68 318 ePN   Pn       06 09 40.6 +1.5
KKB   Krupnik            4.69 219 i P   Pn       06 09 40.0 +0.8
LVV   L'vov              4.71 335 eP    Pn       06 09 41.3 +1.8
LVV                               e              06 10 36.0
LVV   L'vov              4.71 335 eP    Pn       06 09 41.7 +2.2
ALN   Alexandroupoli     4.73 189 eP    Pn       06 09 39.0 -0.8
ALN   Alexandroupoli     4.73 189  P    Pn       06 09 40.4 +0.7
ALN   Alexandroupoli     4.73 189       Pn       06 09 40.4 +0.7
AVCI  Avcilar-stanb      4.73 165 eP    Pn       06 09 40.6 +0.8
ISK   Istanbul-Kandi     4.74 161 eP    Pn       06 09 40.6 +0.8
KAVV  Kandilli-Istan     4.74 161 eP    Pn       06 09 41.0 +1.1
MAR4  Marsite Statio     4.78 178 eP    Pn       06 09 40.6  0.0
SEV   Sevastopol'        4.80 100⇓iP    Pn       06 09 41.9 +1.3
SEV                               eS    Sn       06 10 35.6 +0.2
SEV   Sevastopol'        4.80 100⇓iP    Pn       06 09 41.9 +1.3
SEV                               Pm             06 09 44.5
SEV                               eS    Sn       06 10 35.6 +0.2
SEV                               Sm             06 10 37.1
SILT  Sile               4.80 156 eP    Pn       06 09 41.6 +0.9
RKY   Sarkoy-Tekirda     4.88 179 eP    Pn       06 09 42.2 +0.3
TRUS  Trudelj            4.91 256 ePn   Pn       06 09 41.6 -0.7
ERIK  Erikli-Kesan       4.91 185 i P   Pn       06 09 41.8 -0.5
MRMT  Marmara Adasi      4.98 175 eP    Pn       06 09 42.9 -0.4
KWP   Kalwaria Pacla     5.01 326 eP    Pn       06 09 46.3 +2.6
KWP   Kalwaria Pacla     5.01 326  P    Pn       06 09 46.0 +2.3
KWP   Kalwaria Pacla     5.01 326  Pn   Pn       06 09 46.0 +2.3
SIM   Simferopol'        5.02  95  P    Pn       06 09 45.0 +1.2
SIM                               eS    Sn       06 10 41.6 +0.6
SIM                               pmax  pmax
      comp=Z,26nm,0.3s
SIM                               smax  smax
      comp=E,270nm,1.1s
SIM                               smax  smax
      comp=N,103nm,0.7s
SIM   Simferopol'        5.02  95⇑eP    Pn       06 09 44.8 +1.0
SIM                               eS    Sn       06 10 41.2 +0.2
CRVS  Cervenica-Dubn     5.06 313 eP    Pn       06 09 45.3 +1.0
CRVS                              e              06 10 42.6
CRVS  Cervenica-Dubn     5.06 313 ePN   Pn       06 09 45.3 +1.0
CRVS                              eSN   Sn       06 10 42.6 +0.7
HRT   Hereke             5.12 157 i P   Pn       06 09 45.7 +0.6
YAL   Yalta              5.15 100 eP    Pn       06 09 46.2 +0.7
YAL                               eS    Sn       06 10 46.4 +2.4
YAL   Yalta              5.15 100 eP    Pn       06 09 46.2 +0.7
YAL                               eS    Sn       06 10 46.4 +2.4
KRBG  Karabiga-Canak     5.18 178 i P   Pn       06 09 46.4 +0.5
GELI  Tayfur-Gelibol     5.19 185 eP    Pn       06 09 45.6 -0.5
TRML  Termal-Yalova      5.20 162 eP    Pn       06 09 46.4 +0.2
LPK   Lapseki            5.20 182 eP    Pn       06 09 45.8 -0.4
DIVS  Divibare           5.24 256 ePn   Pn       06 09 46.2 -0.6
DIVS  Divibare           5.24 256  Pn   Pn       06 09 46.0 -0.8
STIP  Stip               5.24 224 i Pn  Pn       06 09 44.3 -2.5
EDC   Edincik            5.25 173 eP    Pn       06 09 46.9 -0.1
ALU   Alushta            5.28  97⇑eP    Pn       06 09 48.2 +1.0
ALU                               i S   Sn       06 10 51.6 +4.4
ALU   Alushta            5.28  97⇑eP    Pn       06 09 48.2 +1.0
ALU                               Pm             06 09 52.2
ALU                               i S   Sn       06 10 51.6 +4.4
ALU                               Sm             06 10 53.7
IVAS  Ivanjica           5.32 250 ePn   Pn       06 09 46.7 -1.2
IVAS                              eSn   Sn       06 10 51.4 +3.0
KDZE  Karadeniz Ereo     5.32 142 ⇓P    Pn       06 09 48.2 +0.2
KDZE  Karadeniz Ereo     5.32 142 ⇓P    Pn       06 09 48.2 +0.2
KDZE  Karadeniz Ereo     5.32 142 eP    Pn       06 09 48.8 +0.9
AKASG Malin Array Be     5.33  15  Pn   Pn       06 09 47.4 -0.6
      comp=N,9.5nm,0.3s,baz=118,slow=4.3,SNR=26
AKASG                              Sn   Sn       06 10 46.1 -2.5
      comp=N,22nm,0.3s,baz=174,slow=12,SNR=6.8
AKASG                              Lg   Lg       06 11 16.8
      comp=N,63nm,0.3s,baz=197,slow=29,SNR=4.6
AKASG Malin Array Be     5.33  15       Pn       06 09 46.9 -1.2
AKBB  Malin Array Si     5.33  15deP    Pn       06 09 48.7 +0.7
AKBB  Malin Array Si     5.33  15  Pn   Pn       06 09 48.9 +0.8
KECS  Kecovo             5.35 305 eP    Pn       06 09 49.2 +0.9
KECS                              e              06 10 49.7
KECS  Kecovo             5.35 305 ePN   Pn       06 09 49.2 +0.9
KECS                              eSN   Sn       06 10 49.7 +0.6
GEMT  Gemlik             5.37 162 eP    Pn       06 09 48.8 +0.3
MDNY  Mudanya-Bursa      5.37 165 i P   Pn       06 09 49.0 +0.5
SAUV  Serdivan-Sakar     5.39 152  P    Pn       06 09 48.8  0.0
SPNC  Sapanca-Adapaz     5.43 153 eP    Pn       06 09 49.8 +0.4
GADA  Gvkgeada           5.44 189 eP    Pn       06 09 49.8 +0.2
PSZ   Piszkesteto        5.45 298 ⇓P    Pn       06 09 50.1 +0.4
PSZ   Piszkesteto        5.45 298 ⇓P    Pn       06 09 50.1 +0.4
PSZ   Piszkesteto        5.45 298⇑ePN   Pn       06 09 50.3 +0.6
PSZ                               eSN   Sn       06 10 51.0 -0.6
PSZ   Piszkesteto        5.45 298  P    Pn       06 09 50.0 +0.2
PSZ   Piszkesteto        5.45 298  Pn   Pn       06 09 50.0 +0.2
ADVT  Abdulvahap         5.50 158  P    Pn       06 09 51.5 +1.2
KURC  Kurucasile-Bar     5.55 130 eP    Pn       06 09 52.4 +1.3
SUDU  Sudak              5.65  94⇓iP    Pn       06 09 54.2 +1.8
SUDU  Sudak              5.65  94⇓iP    Pn       06 09 54.2 +1.8
SUDU                              Pm             06 10 04.4
SUDU                              i S   Sn       06 10 57.0 +0.5
SUDU                              Sm             06 11 01.7
ORLT  Orhaneli           5.69 166 i P   Pn       06 09 53.2 +0.2
OUR   Ouranopolis        5.70 204 eP    Pn       06 09 52.3 -0.8
BBLS  Lazi&#263;i        5.71 255 ePn   Pn       06 09 53.0 -0.3
BBLS                              eSn   Sn       06 11 00.7 +2.6
GULT  Gulveren           5.73 153 eP    Pn       06 09 54.1 +0.5
CAVI  Cavuskoy           5.74 158 eP    Pn       06 09 54.1 +0.4
HORT  Hortiatis          5.75 212 eP    Pn       06 09 51.6 -2.3
EZN   Ezine              5.77 186 eP    Pn       06 09 53.4 -0.6
BUD   Budapest           5.86 292 ePN   Pn       06 09 56.0 +0.7
FEO   Feodosiya          5.91  92 eP    Pn       06 09 57.6 +1.7
FEO                               eS    Sn       06 11 04.8 +2.1
FEO   Feodosiya          5.91  92 eP    Pn       06 09 57.6 +1.7
FEO                               Pm             06 09 59.9
FEO                               eS    Sn       06 11 04.8 +2.1
FEO                               Sm             06 11 10.7
MORH  Mrgy, Hungar       5.91 279⇑ePN   Pn       06 09 56.7 +0.8
MDUB  Mudurnu            5.93 148  Pn   Pn       06 09 58.2 +1.8
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BALB  Balikesir          5.96 174  P    Pn       06 09 56.7 +0.1
NIE   Niedzica           5.98 312 eP    Pn       06 09 58.8 +1.8
NIE                               eS    Sn       06 11 09.8 +5.3
AUBOZ BOZOYUK            6.07 158 eP    Pn       06 09 58.9 +0.7
SRCK  Saricakaya, Es     6.12 153 eP    Pn       06 09 59.6 +0.8
BZK   Bozkurt            6.19 123 ⇑P    Pn       06 09 59.9 +0.1
BZK   Bozkurt            6.19 123 ⇑P    Pn       06 09 59.9 +0.1
BZK   Bozkurt            6.19 123 i P   Pn       06 10 00.9 +1.1
YUVA  Yuva-Kibriscik     6.19 145 eP    Pn       06 10 01.1 +1.1
BORA  Eskisehir          6.21 155 eP    Pn       06 10 00.7 +0.5
LANS  Liptovska Anna     6.28 308 eP    Pn       06 10 03.2 +2.2
LANS                              e              06 11 12.8
LANS  Liptovska Anna     6.28 308 ePN   Pn       06 10 03.2 +2.2
LANS                              eSN   Sn       06 11 12.8 +0.9
VYHS  Vyhne              6.33 300 eP    Pn       06 10 02.4 +0.6
VYHS                              e              06 11 12.5
VYHS  Vyhne              6.33 300 ePN   Pn       06 10 02.4 +0.6
VYHS                              eSN   Sn       06 11 12.4 -0.8
CSKK  Cskako             6.33 290 ePN   Pn       06 10 10.2 +8.4
FNA   Florina            6.33 223  P    Pn       06 10 02.2 +0.4
FNA   Florina            6.33 223       Pn       06 10 02.2 +0.4
TVSB  Tavsanli           6.37 163 i P   Pn       06 10 02.1 -0.3
SIGR  SIGRI              6.42 188 eP    Pn       06 10 01.5 -1.4
SRO   Srobarova          6.42 294 eP    Pn       06 10 04.4 +1.5
SRO   Srobarova          6.42 294 ePN   Pn       06 10 04.4 +1.5
ILGA  Ilgaz              6.63 131  Pn   Pn       06 10 06.6 +0.4
OJC   Ojcow              6.74 316 eP    Pn       06 10 09.1 +1.7
OJC                               eS    Sn       06 11 23.2  0.0
OJC   Ojcow              6.74 316  P    Pn       06 10 08.1 +0.8
OJC   Ojcow              6.74 316  Pn   Pn       06 10 08.1 +0.8
MPLH  Magyarpolny        6.78 287⇓ePN   Pn       06 10 08.9 +1.1
CIFT  Cifteler, Eski     6.88 153 eP    Pn       06 10 09.5 +0.2
SVRH  Sivrihisar-ESK     6.95 150 eP    Pn       06 10 10.9 +0.5
AUSIV SIVRIHISAR         6.96 150 eP    Pn       06 10 11.3 +0.7
KULA  Kula-Manisa        7.15 170 eP    Pn       06 10 13.3 +0.2
JAVC  Velka Javorina     7.19 301 ePN   Pn       06 10 14.7 +1.2
SMOL  Smolenice          7.21 298 eP    Pn       06 10 14.2 +0.5
SMOL  Smolenice          7.21 298 ePN   Pn       06 10 14.2 +0.5
MODS  Modra-Piesok       7.25 296 eP    Pn       06 10 13.7 -0.7
MODS                              e              06 11 33.9
MODS  Modra-Piesok       7.25 296 ePN   Pn       06 10 13.7 -0.7
MODS                              eSN   Sn       06 11 33.9 -2.0
ZST   Bratislava         7.31 295 eP    Pn       06 10 15.6 +0.5
ZST   Bratislava         7.31 295 ePN   Pn       06 10 15.6 +0.5
SHUT  Suhut-Afyon        7.48 158 eP    Pn       06 10 17.5 -0.1
AFSR  Afar-Bala (An      7.56 142 eP    Pn       06 10 19.1 +0.4
BR131 Keskin Array S     7.59 138d iP   Pn       06 10 19.6 +0.3
BR131 Keskin Array S     7.59 138  Pn   Pn       06 10 19.7 +0.5
BRTR  Keskin Array B     7.59 138  Pn   Pn       06 10 19.7 +0.5
      comp=N,3.0nm,0.3s,baz=323,slow=11,SNR=108
BRTR                               Sn   Sn       06 11 41.6 -2.9
      comp=N,0.7nm,0.3s,baz=164,slow=12,SNR=3.8
BRTR  Keskin Array B     7.59 138 i P   Pn       06 10 19.5 +0.3
MORC  Moravsky Berou     7.67 307 ⇓P    Pn       06 10 21.4 +1.2
MORC  Moravsky Berou     7.67 307 ⇓P    Pn       06 10 21.4 +1.2
MORC  Moravsky Berou     7.67 307 ePN   Pn       06 10 20.6 +0.3
MORC                              eSN   Sn       06 11 42.8 -3.5
MORC  Moravsky Berou     7.67 307  P    Pn       06 10 20.5 +0.3
MORC  Moravsky Berou     7.67 307  Pn   Pn       06 10 20.5 +0.3
VRAC  Vranov             8.02 302 ⇑P    Pn       06 10 26.4 +1.5
VRAC  Vranov             8.02 302  Pn   Pn       06 10 25.9 +1.1
      comp=N,0.6nm,0.3s,baz=113,slow=13,SNR=14
VRAC                               Sn   Sn       06 11 53.6 -1.0
      comp=N,0.3nm,0.3s,baz=205,slow=23,SNR=7.0
VRAC  Vranov             8.02 302 ⇑P    Pn       06 10 26.4 +1.5
VRAC  Vranov             8.02 302 ePN   Pn       06 10 25.8 +0.9
VRAC                              eSN   Sn       06 11 53.4 -1.3
KRUC  Moravsky           8.04 300 ePN   Pn       06 10 25.3 +0.1
KRUC                              eSN   Sn       06 11 52.7 -2.5
CONA  Conrad Observa     8.04 291 ePn   Pn       06 10 26.2 +0.9
      comp=N,12nm,0.7s
ARSA  Arzberg            8.15 286 ePn   Pn       06 10 29.4 +2.8
      comp=N,3.4nm,0.6s
ISP   Isparta            8.16 160 eP    Pn       06 10 27.7 +0.7
ISP   Isparta            8.16 160  P    Pn       06 10 27.9 +0.9
ISP   Isparta            8.16 160  Pn   Pn       06 10 27.9 +0.9
SOKA  Soboth             8.43 282 ePn   Pn       06 10 31.7 +1.1
      comp=N,1.6nm,0.3s
DPC   Dobruska-Polom     8.64 307 eP    Pn       06 10 34.5 +1.0
DPC                               eS    Sn       06 12 09.0 -1.1
DPC   Dobruska-Polom     8.64 307 eP    Pn       06 10 34.5 +1.0
DPC                               eS    Sn       06 12 09.0 -1.1
OSTC  Ostas              8.80 308 eP    Pn       06 10 36.9 +1.2
OSTC                              eP    Pn       06 10 37.3 +1.6
SUW   Suwalki            8.81 345 eP    Pn       06 10 34.0 -1.7
UPC   Upice              8.89 308 eP    Pn       06 10 38.3 +1.4
UPC   Upice              8.89 308 eP    Pn       06 10 38.3 +1.4
CHVC  Chvalec            8.91 308 eP    Pn       06 10 40.1 +3.0
KSP   Ksiaz              8.91 310 eP    Pn       06 10 38.3 +1.2
KSP                               eS    Sn       06 12 15.6 -1.0
MNK   Minsk              8.96   3 i P   Pn       06 10 35.5 -2.2
      comp=E,6.0nm,0.9s
MNK                               i P   Pn       06 10 35.5 -2.2
      comp=N,23nm,0.7s
MNK                               i P   Pn       06 10 35.5 -2.2
      comp=Z,8.0nm,0.7s
MNK                               i PP  PnPn     06 10 43.1 -2.2
MNK                               i PPP PPP      06 10 50.8
MNK                               i S   Sn       06 12 17.0 -0.6
MNK                               i SS  SnSn     06 12 30.3 +1.0
MNK                               i SSS SSS      06 12 42.7
MNK                               i LQ  LQ       06 13 09.5
MNK                               i LR  LR       06 13 51.9
MNK                               i LRM MLR      06 14 15.9
      comp=N,2μm,25.8s
MNK                               i LRM MLR      06 14 15.9
      comp=Z,523nm,17.2s
MNK                               i LRM MLR      06 14 27.1
      comp=E,47nm,16.8s
MNK                               i PcP PcP      06 16 41.3  -20
MNK                               i PcS PcS      06 20 32.6 -1.1
MNK                               i ScS ScS      06 24 05.6 +0.8
MOA   Molln              9.08 289 ePn   Pn       06 10 41.1 +1.7
      comp=E,1.2nm,0.3s
NACGM Naroch             9.35 359 i P   Pn       06 10 43.5 +0.4
NACGM                             i P   Pn       06 10 43.5 +0.4
NACGM                             i P   Pn       06 10 43.5 +0.4
NACGM                             i PP           06 10 51.1
NACGM                             i S   Sn       06 12 25.0 -2.2
NACGM                             i SS  SnSn     06 12 44.8 +5.9
NACGM                             i LQ  LQ       06 13 14.1
NACGM                             i LR  LR       06 13 34.8
GEC2  GERESS Array S     9.66 295  Pn   Pn       06 10 49.7 +2.2
GERES GERESS Array B     9.66 295  Pn   Pn       06 10 48.5 +1.1
      comp=E,0.8nm,0.3s,baz=105,slow=14,SNR=14
GERES GERESS Array B     9.66 295       Pn       06 10 48.3 +0.8
IIGN  Ignalina           9.81 357 eP    Pn       06 10 48.8 -0.5
IIGN                               IAmb IAmb     06 10 53.5
      comp=Z,9.2nm,0.4s
IIGN                               IAML          06 12 48.3
      comp=Z,11nm,0.3s
KHC   Kasperske Hory     9.81 296⇓eP    Pn       06 10 50.9 +1.4
KHC                                pmax pmax
      comp=Z,10.0nm,0.6s
KHC   Kasperske Hory     9.81 296 eP    Pn       06 10 50.8 +1.3
KHC                               ex    x        06 11 00.0
KHC                               eS    Sn       06 12 49.9  +11
KHC   Kasperske Hory     9.81 296  Pn   Pn       06 10 51.5 +1.9
ISAL  Salakas           10.03 357 eP    Pn       06 10 50.8 -1.6
ISAL                               IAmb IAmb     06 10 56.0
      comp=Z,6.5nm,0.8s
ISAL                               IAML          06 12 45.3
      comp=Z,7.6nm,0.6s
PABE  Paberze           10.14 350 eP    Pn       06 10 52.8 -1.0
ABTA  Abfaltersbach     10.16 282 ePn   Pn       06 10 56.3 +2.0
      comp=Z,3.5nm,0.8s
IZAR  Zarasai           10.21 357  IAML          06 13 04.4
      comp=Z,16nm,0.5s
LPSR  Galich'ya Gora    10.48  44 eP    Pn       06 10 57.2 -1.4
LPSR                               pmax pmax
      comp=Z,20nm,0.7s
WATA  Walderalm         10.83 285 ePn   Pn       06 11 05.6 +2.1
      comp=Z,4.7nm,0.6s
CLL   Collm             10.95 307 e(Pn) Pn       06 11 04.0 -1.0
CLL                               e              06 11 23.0
CLL   Collm             10.95 307 eP    Pn       06 11 04.0 -1.0
SQTA  Sankt Quirin      11.07 284 ePn   Pn       06 11 06.4 -0.4
      comp=Z,0.7nm,0.2s
MOTA  Moosalm           11.15 285 ePn   Pn       06 11 08.8 +0.9
      comp=Z,2.5nm,0.5s
KIV   Kislovodsk        11.23  93 eP    Pn       06 11 08.8 -0.2
KIV                               eS    Sn       06 13 15.8 +2.1
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KIV                                pmax pmax
      comp=Z,25nm,1.1s
OBN   Obninsk           11.31  29⇑eP    Pn       06 11 10.8 +0.9
OBN                                pmax pmax
      comp=Z,22nm,0.5s
OBN                                MLR  MLR
      comp=Z,183nm,13.0s
FETA  Feichten          11.39 283 ePn   Pn       06 11 13.2 +2.0
      comp=Z,0.6nm,0.4s
KBZ   Khabaz            11.44  94 Pn    Pn       06 11 11.2 -0.5
      comp=Z,0.3nm,0.3s,baz=168,slow=6.6,SNR=7.1
DAVOX Davos/Dischmat    11.97 282 LR    LR       06 15 41.4
      comp=Z,96nm,18.9s,baz=74,slow=36
BSD   Bornholm Skovb    12.29 325 eP    Pn       06 11 22.3 -0.9
BSD   Bornholm Skovb    12.29 325 eP    Pn       06 11 24.1 +0.9
BSD   Bornholm Skovb    12.29 325 i P   Pn       06 11 24.1 +0.9
BSD   Bornholm Skovb    12.29 325 eP    Pn       06 11 24.1 +0.9
SLIT  Slitere, Latvi    12.43 348 eP    Pn       06 11 23.6 -1.5
VSU   Vasula            12.91 359 eP    Pn       06 11 29.4 -2.4
VSU   Vasula            12.91 359⇑iP    Pn       06 11 33.2 +1.4
VSU                                pmax pmax
      comp=Z,275nm,2.3s
MTSE  Matsula           13.31 353 eP    Pn       06 11 33.4 -3.8
MMAI  Mount Meron Ar    14.09 150 Pn    Pn       06 11 48.9 +0.8
      comp=Z,0.8nm,0.3s,baz=325,slow=12,SNR=2.0
MMAI                              LR    LR       06 18 47.9
      comp=Z,118nm,18.8s,baz=295,slow=44
BELG  Belogornoye       15.10  56 Pn    Pn       06 12 02.9 +1.3
      comp=Z,0.9nm,0.3s,baz=210,slow=21,SNR=2.2
FINES FINESS Array B    15.91 358 Pn    Pn       06 12 05.5 -6.5
      comp=Z,0.4nm,0.3s,baz=168,slow=14,SNR=7.8
HFS   Hagfors           16.61 336 Pn    Pn       06 12 17.8 -3.2
      comp=Z,1.0nm,0.3s,baz=135,slow=15,SNR=11
KLMR  Klimovskoe        16.98  21 eP    Pn       06 12 20.5 -5.1
KLMR                                             06 15 24.8
KLMR                               pmax pmax
      comp=Z,12nm,0.6s
KLMR  Klimovskoe        16.98  21 ePn   Pn       06 12 20.5 -5.1
KLMR                               AMP           06 12 37.9
      comp=Z,12nm,0.6s
KLMR                              ⇓Sn   Sn       06 15 24.8 -8.6
KLMR                              ⇓Sn   Sn       06 15 24.8 -8.6
NB2   NORSAR Subarra    18.07 335 P     Pn       06 12 35.6 -3.6
      comp=Z,2.0nm,0.5s,baz=142,slow=12
NOA   NORSAR Array B    18.07 335 Pn    Pn       06 12 35.1 -4.0
      comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=12
KIRV  Kirov             18.81  38⇑eP    Pn       06 12 49.5 +1.4
AKTO  Aktyubinsk        21.19  66 P     P        06 13 12.3 -1.2
      comp=Z,2.1nm,0.5s,baz=269,slow=10,SNR=8.6
EKA   Eskdalemuir Ar    21.41 308 P     P        06 13 10.9 -4.9
      comp=Z,0.3nm,0.3s,baz=55,slow=47,SNR=1.6
ARU   Arti              22.40  50 P     P        06 13 26.4  0.0
      comp=Z,4.5nm,0.4s,baz=249,slow=9.2,SNR=22
ARU   Arti              22.40  50c iP   P        06 13 26.1 -0.3
ARU                               S     S        06 17 35.8 +4.9
ARU                               pmax  pmax
      comp=Z,14nm,0.8s
ARU   Arti              22.40  50 P     P        06 13 26.9 +0.5
ARU                               IAmb  IAmb     06 13 46.5
      comp=Z,16nm,0.8s
ABKAR Akbulak array     22.46  69 P     P        06 13 27.8 +0.8
ABKAR                             IAmb  IAmb     06 13 54.8
      comp=Z,5.8nm,0.8s
ABKAR Akbulak array     22.46  69 P     P        06 13 27.8 +0.8
LVZ   Lovozero          22.73   7⇑eP    P        06 13 31.1 +1.2
LVZ                               pmax  pmax
      comp=Z,36nm,1.2s
LVZ   Lovozero          22.73   7 P     P        06 13 29.4 -0.4
LVZ                               IAmb  IAmb     06 13 55.4
      comp=Z,28nm,1.1s
ESBB  Sonseca Array     23.48 267 P     P        06 13 36.2 -1.5
ESBB                              IAmb  IAmb     06 13 52.1
      comp=Z,7.9nm,1.4s
ESDC  Sonseca Array     23.48 267 P     P        06 13 35.5 -2.2
      comp=Z,1.9nm,0.6s,baz=65,slow=9.4,SNR=17
ESDC  Sonseca Array     23.48 267 P     P        06 13 36.1 -1.6
PAB   San Pablo         23.80 267 P     P        06 13 39.8 -1.1
PAB                               pmax  pmax
      comp=Z,7.0nm,1.4s
PAB   San Pablo         23.80 267 P     P        06 13 39.8 -1.1
PAB                               IAmb  IAmb     06 14 04.2
      comp=Z,7.5nm,1.4s
ARCES ARCESS Array B    24.04 359 P     P        06 13 43.2 +0.4
      comp=Z,0.8nm,0.4s,baz=178,slow=10,SNR=13
ARCES ARCESS Array B    24.04 359 P     P        06 13 43.4 +0.7
ARCES                             pmax  pmax
      comp=Z,16nm,1.5s
ARCES ARCESS Array B    24.04 359 P     P        06 13 43.4 +0.7
GEYT  Alibeck           24.29  97 P     P        06 13 47.1 +1.8
      comp=Z,1.3nm,0.4s,baz=309,slow=16,SNR=1.9
BRVK  Borovoye          28.79  59⇑eP    P        06 14 26.4 +0.7
BRVK                              pmax  pmax
      comp=Z,19nm,4.1s
BRVK  Borovoye          28.79  59 P     P        06 14 26.7 +1.0
BVAR  Borovoye Array    28.85  59 P     P        06 14 28.2 +1.9
      comp=Z,0.4nm,0.5s,baz=235,slow=31,SNR=3.7
KKAR  Karatay Array     30.90  79 P     P        06 14 46.7 +2.2
KKAR  Karatay Array     30.90  79 P     P        06 14 46.6 +2.2
AAK   Ala-Archa         33.80  78⇓eP    P        06 15 12.2 +2.1
AAK                               pmax  pmax
      comp=Z,6.0nm,1.0s
KURBB Kurchatov Arra    34.17  63 P     P        06 15 14.0 +1.0
      comp=Z,0.4nm,0.4s,baz=288,slow=9.0,SNR=5.5
KURK  Kurchatov         34.21  62 P     P        06 15 14.5 +1.2
KURK                              pmax  pmax
      comp=Z,4.0nm,1.4s
KURK  Kurchatov         34.21  62 P     P        06 15 14.5 +1.2
KURK                              IAmb  IAmb     06 15 20.9
      comp=Z,3.5nm,1.4s
MK31  Makanchi Array    37.59  68⇓eP    P        06 15 43.8 +1.4
MK31  Makanchi Array    37.59  68 P     P        06 15 44.2 +1.8
MKAR  Makanchi Array    37.59  68 P     P        06 15 43.7 +1.3
      comp=Z,0.5nm,0.4s,baz=272,slow=8.8,SNR=19
MKAR  Makanchi Array    37.59  68 i P   P        06 15 44.0 +1.6
MKAR                              pmax  pmax
      comp=Z,1.0nm,0.4s
MKAR  Makanchi Array    37.59  68 P     P        06 15 43.9 +1.6
TOA0  Torodi Ar. Sit    38.81 222 P     P        06 15 52.6 -0.3
TORD  Torodi Ar. Bea    38.81 222 P     P        06 15 52.4 -0.5
      comp=Z,9.4nm,0.4s,baz=26,slow=8.7,SNR=64
TORD  Torodi Ar. Bea    38.81 222 P     P        06 15 52.5 -0.4
DGZ   Jazzator, Alta    39.94  62⇑eP    P        06 16 02.4 +0.2
DGZ                               pmax  pmax
      comp=Z,6.0nm,2.2s
KOWA  Kowa              40.56 230 P     P        06 16 06.2 -1.2
      comp=Z,0.8nm,0.3s,baz=30,slow=12,SNR=5.5
KOWA  Kowa              40.56 230 P     P        06 16 06.6 -0.8
KOWA                              IAmb  IAmb     06 16 21.1
      comp=Z,5.1nm,1.4s
DBIC  Dimbokro          47.59 225 P     P        06 17 02.4 -1.4
      comp=Z,3.0nm,0.4s,baz=11,slow=8.9,SNR=18
DBIC  Dimbokro          47.59 225 P     P        06 17 02.5 -1.3
DBIC                              pmax  pmax
      comp=Z,5.0nm,0.6s
DBIC  Dimbokro          47.59 225 P     P        06 17 02.5 -1.3
TIC   Toumodi           47.70 226 eP    P        06 17 03.9 -0.7
KIC   Kosan Boka        47.80 225 eP    P        06 17 03.7 -1.7
      comp=Z,5.2nm,0.5s
LIC   Lamto             48.06 225 eP    P        06 17 06.5 -0.9
      comp=Z,13nm,0.6s
SONM  Songino Array     52.16  57 P     P        06 17 40.4 +2.0
      comp=Z,0.8nm,0.5s,baz=294,slow=9.0,SNR=7.8
SONM  Songino Array     52.16  57 P     P        06 17 40.6 +2.3
SONM                              pmax  pmax
      comp=Z,1.0nm,0.7s
SONM  Songino Array     52.16  57 P     P        06 17 40.6 +2.3
YKA   Yellowknife Ar    68.00 342 P     P        06 19 26.5 -0.1
      comp=Z,0.3nm,0.6s,baz=35,slow=6.2,SNR=13
ASAR  Alice Springs    118.08  96 PKP   PKPdf    06 27 13.6 -1.2
      comp=Z,0.2nm,0.6s,baz=320,slow=1.1,SNR=4.1
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*IDC **12** 06:14:46.7±2.4, 54°.13N×87°.19E, h0km, mb1 3.7/3, mb1mx3.2/43, mbtmp3.7/3, ML3.5/3, Error ellipse: s-maj=21.9km s-min=13.8km az=70.0*

*NNC **12** 06:14:46.0±2.3, 54°.08N×87°.20E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=19.1km s-min=10.7km az=27.0, Suspected Mining explosion.*

ISC 12 06:14:48.8±4.1**, 54°.1N**±0°.2×**86°.9E**±0°.2**, h0km, n10, σ0s.99**/16**, 9C-4D, Southwestern Siberia**

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Code  Station Name        Δ°   AZ°    Phase ID          Time    Res
                                     Op    ISC       h  m  s    ISC
I46RU ZALESOVO INFRA     1.24 264  i                 06 22 35.9
      baz=79,slow=324,SNR=1.6
```

ZAA0	Zalesovo Array	1.24	264	⇓P	Pg	06 15 11.4	-1.1
	2.5nm,0.3s						
ZAA0				⇓S	Sn	06 15 32.0	+1.3
	12nm,0.5s						
ZALV	Zalesovo Beam	1.24	264	Pg	Pg	06 15 11.4	-1.1
	15nm,0.3s,baz=85,slow=17,SNR=97						
ZALV				Lg	Lg	06 15 31.1	
	17nm,0.3s,baz=79,slow=28,SNR=4.3						
KURK	Kurchatov	6.09	240	⇑Pn	Pn	06 16 20.8	+0.8
	2.7nm,0.7s						
KURK				⇑Sn	Sn	06 17 30.1	-0.2
	3.0nm,0.9s						
KURK				⇑Lg	Lg	06 18 01.9	
	9.2nm,0.7s						
KURBB	Kurchatov Arra	6.19	239	Pn	Pn	06 16 21.9	+0.5
	0.6nm,0.3s,baz=54,slow=13,SNR=34						
KURBB				Sn	Sn	06 17 32.4	-0.4
	0.1nm,0.3s,baz=40,slow=15,SNR=1.6						
KURBB				Lg	Lg	06 18 10.8	
	0.2nm,0.3s,baz=60,slow=33,SNR=4.3						
KURBB	Kurchatov Arra	6.19	239	⇑Pn	Pn	06 16 21.3	-0.1
	3.7nm,0.4s						
KURBB				⇑Sn	Sn	06 17 34.3	+1.5
	18nm,0.6s						
KURBB				⇑Lg	Lg	06 18 07.6	
	19nm,0.7s						
MK31	Makanchi Array	7.87	204	Pn	Pn	06 16 44.8	+0.3
	0.3nm,0.3s,baz=30,slow=14,SNR=27						
MK31				⇓Sn	Sn	06 18 12.7	-1.5
	1.1nm,0.5s,baz=29,slow=28,SNR=5.3						
MK31				⇑Lg	Lg	06 18 56.8	
	5.3nm,0.7s,baz=45,slow=30,SNR=4.6						
MKAR	Makanchi Array	7.87	204	Pn	Pn	06 16 44.5	0.0
	0.6nm,0.3s,baz=28,slow=14,SNR=20						
MKAR				Sn	Sn	06 18 15.4	+1.2
	0.8nm,0.3s,baz=28,slow=26,SNR=9.1						
MKAR				Lg	Lg	06 19 00.3	
	0.5nm,0.3s,baz=31,slow=34,SNR=2.9						
MAKZ	Makanchi	7.94	205	⇑Pn	Pn	06 16 46.0	+0.6
	1.3nm,0.7s						
MAKZ				⇓Sn	Sn	06 18 16.6	+0.8
	3.5nm,0.7s						
MAKZ				⇑Lg	Lg	06 18 59.2	
	10.0nm,1.1s						
BVAR	Borovoye Array	9.89	271	Pn	Pn	06 17 12.6	+0.6
	1.0nm,0.3s,baz=66,slow=18,SNR=7.1						
BVAR				Sn	Sn	06 18 53.8	-10
	0.2nm,0.3s,baz=74,slow=23,SNR=1.9						

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*ISK **12** 06:29:44.9, 37°.26N×42°.50E, h7^{km}, ML2.6/7*

*DDA **12** 06:29:45.9, 37°.32N×42°.51E, h7^{km}±3^{km}, ML1.8*

ISC 12 06:29:45.7±1.4, **37°.28N**±0°.06×**42°.51E**±0°.03, **h8**^{km}±10^{km}, **n13**, σ**0^{s}77**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.23	346	PG	Pg	06 29 50.3	-0.2
SIRT				SG	Sg	06 29 54.2	+0.5
CUKT	Cukurca	0.88	92	PG	Pg	06 30 02.2	-0.4
CUKT				SG	Sb	06 30 15.1	-0.1
MIDY	Mardin/Midyat-	0.90	279	i P	Pb	06 30 03.3	-0.3
MIDY				i S	Sb	06 30 15.8	+0.1
HAKT	HAKKARI	0.99	73	i P	Pg	06 30 04.7	-0.1
HAKT				i S	Sb	06 30 18.1	-0.6
HAKT				IAML		06 30 22.0	
	comp=N,15nm,0.4s						
HAKT				IAML		06 30 24.0	
	comp=E,28nm,0.3s						
AKDM	Akdamar-Van	1.11	19	PN	Pn	06 30 07.4	-0.5
AKDM				SN	Sn	06 30 23.4	-0.1
BLIS	Bitlis-Merkez	1.18	345	i P	Pn	06 30 09.8	+1.1
GURO	Guroymak-BITLI	1.33	344	PN	Pn	06 30 10.4	-0.4
SVAN	Silvan-Diyarba	1.36	310	PN	Pb	06 30 10.9	-0.6
SVAN	Silvan-Diyarba	1.36	310	i P	Pg	06 30 11.8	-0.1
SVAN				i S	Sn	06 30 31.0	+1.6
SVAN				IAML		06 30 31.0	
	comp=N,25nm,0.2s						
SVAN				IAML		06 30 32.0	
	comp=E,12nm,0.2s						
YOVA	Hakkari_Yksek	1.45	77	i P	Pg	06 30 13.3	-0.2
YOVA				i S	Sg	06 30 34.2	+1.9
YOVA				IAML		06 30 36.0	
	comp=N,21nm,0.6s						
YOVA				IAML		06 30 37.0	
	comp=E,27nm,0.6s						
MUSM	Mu-Merkez	1.65	332	i P	Pb	06 30 15.6	-0.9
MUSM				i S	Sg	06 30 38.8	0.0
MUSM				IAML		06 30 39.0	
	comp=E,22nm,0.3s						
MUSM				IAML		06 30 40.0	
	comp=N,12nm,0.4s						
MAZI	Mazidag	1.66	277	PN	Pn	06 30 14.8	-0.4
DYBB	Diyarbakir	2.00	290	PN	Pn	06 30 19.9	0.0

IDC 12 06:35:24.7±3.6, **55°.54N**×**86°.21E**, **h0**^{km}, **mb1 2.6**/2, **mb1mx2.6**/38, **mbtmp2.6**/2, **ML2.5**/2, **Error ellipse: s-maj=28.4km s-min=24.8km az=32.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.79	207	i		06 48 10.0	
	baz=23,slow=338,SNR=4.5						
ZALV	Zalesovo Beam	1.79	207	Pg	Pn	06 35 55.8	-1.0
	3.0nm,0.3s,baz=24,slow=18,SNR=18						
ZALV				Lg	Lg	06 36 21.7	
	1.5nm,0.3s,baz=28,slow=27,SNR=1.9						
KURBB	Kurchatov Arra	6.75	226	Pn	Pn	06 37 05.3	+0.3
	0.1nm,0.3s,baz=45,slow=14,SNR=3.4						
KURBB				Lg	Lg	06 39 02.2	
	0.0nm,0.3s,baz=47,slow=30,SNR=2.7						
MKAR	Makanchi Array	9.10	197	Pn	Pn	06 37 37.5	+0.3
	0.1nm,0.3s,baz=21,slow=14,SNR=2.4						
MKAR				Lg	Lg	06 40 10.7	
	0.0nm,0.3s,baz=32,slow=30,SNR=3.4						

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*NNC **12** 06:39:37.5±2.5, 55°.68N×86°.62E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=45.5km s-min=17.2km az=116.0, Suspected Mining explosion.*

*IDC **12** 06:39:42.3±2.9, 55°.47N×86°.33E, h0^{km}, mb1 3.1/3, mb1mx3.0/40, mbtmp3.1/3, ML2.7/3, Error ellipse: s-maj=26.2km s-min=19.9km az=73.0*

ISC 12 06:39:39.2±4.0, **55°.6N**±0°.2×**86°.5E**±0°.2, **h0**^{km}, **n8**, σ**0^{s}76**/10, **4C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.92	212	i		06 51 01.9	
	baz=22,slow=310,SNR=4.4						
ZAA0	Zalesovo Array	1.92	212	⇓Pn	Pn	06 40 12.8	-0.3
	1.0nm,0.5s						
ZAA0				⇑Sn	Sb	06 40 39.8	+0.2
	2.5nm,0.6s						
ZALV	Zalesovo Beam	1.92	212	Pg	Pn	06 40 12.7	-0.4
	4.7nm,0.3s,baz=30,slow=17,SNR=27						
ZALV				Lg	Lg	06 40 38.2	
	1.6nm,0.3s,baz=26,slow=27,SNR=6.3						
KURK	Kurchatov	6.82	228	⇑Pn	Pn	06 41 19.3	-1.0
	1.2nm,0.7s						
KURK				⇑Lg	Lg	06 43 15.1	
	4.2nm,1.1s						
KURBB	Kurchatov Arra	6.92	227	Pn	Pn	06 41 22.2	+0.4
	0.1nm,0.3s,baz=45,slow=14,SNR=10						
KURBB				Sn	Sn	06 42 40.8	-0.4
	0.0nm,0.3s,baz=101,slow=14,SNR=1.8						
KURBB				Lg	Lg	06 43 15.5	
	0.0nm,0.3s,baz=243,slow=34,SNR=5.0						
KURBB	Kurchatov Arra	6.92	227	⇑Pn	Pn	06 41 21.7	-0.2
	1.0nm,0.5s,baz=45,slow=14						
KURBB				⇓Lg	Lg	06 43 21.1	
	6.4nm,0.7s,baz=40,slow=30						
MKAR	Makanchi Array	9.20	199	Pn	Pn	06 41 53.9	+0.8
	0.1nm,0.3s,baz=16,slow=11,SNR=2.4						
MKAR				Sn	Sn	06 43 37.6	+0.3
	0.1nm,0.3s,baz=24,slow=36,SNR=2.8						
MKAR				Lg	Lg	06 44 28.7	
	0.1nm,0.3s,baz=22,slow=26,SNR=2.8						
BVAR	Borovoye Array	9.78	261	Pn	Pn	06 42 02.2	+1.2
	0.2nm,0.3s,baz=62,slow=16,SNR=2.7						

IDC 12 06:45:14.2±2.4, **54°.33N**×**86°.04E**, **h0**^{km}, **mb1 3.0**/2, **mb1mx2.9**/39, **mbtmp3.0**/2, **ML2.8**/2, **Error ellipse: s-maj=19.1km s-min=11.1km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.81	243	i		06 49 50.6	
	baz=60,slow=335,SNR=2.3						
ZALV	Zalesovo Beam	0.81	243	Pg	Pg	06 45 28.3	-1.4
	1.1nm,0.3s,baz=62,slow=17,SNR=8.1						
ZALV				Lg	Lg	06 45 41.6	
	4.4nm,0.3s,baz=64,slow=30,SNR=16						
KURBB	Kurchatov Arra	5.90	234	Pn	Pn	06 46 43.8	+1.0
	0.1nm,0.3s,baz=50,slow=13,SNR=13						
MKAR	Makanchi Array	7.91	199	Pn	Pn	06 47 11.2	+0.8
	0.3nm,0.3s,baz=23,slow=13,SNR=14						

IDC 12 06:55:24.6±2.6, **24°.05S**×**69°.31E**, **h0**^{km}, **mb3.8**/6, **mb1 3.9**/6, **mb1mx3.6**/44, **mbtmp3.8**/6, **MS3.3**/3, **Ms1 3.4**/3, **ms1mx3.0**/50, **Error ellipse: s-maj=96.5km s-min=29.1km az=44.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	16.59	11	T	T	07 16 05.5	
	baz=191,slow=76,SNR=41						
H08S2	Diego Garcia H	16.59	11	T	T	07 16 05.7	
	baz=191,slow=76,SNR=39						
H08S3	Diego Garcia H	16.61	11	T	T	07 16 08.5	
	baz=191,slow=76,SNR=43						
PALK	Pallekele	33.06	21	LR	LR	07 11 51.8	
	comp=Z,44nm,20.6s,baz=297,slow=30						
BOSA	Boshof	39.58	254	LR	LR	07 15 33.8	
	comp=Z,61nm,21.7s,baz=170,slow=31						
H01W2	Cape Leeuwin H	40.20	116	T	T	07 45 38.1	
	baz=273,slow=75,SNR=7.0						
H01W3	Cape Leeuwin H	40.20	116	T	T	07 45 39.6	
	baz=273,slow=75,SNR=6.6						
H01W1	Cape Leeuwin H	40.22	116	T	T	07 45 40.3	
	baz=273,slow=75,SNR=7.5						
CMAR	Chiang Mai Arr	51.19	37	LR	LR	07 23 53.9	
	comp=Z,28nm,18.4s,baz=185,slow=33						
ASAR	Alice Springs	58.58	104	P	P	07 05 23.6	-0.1
	0.9nm,0.6s,baz=251,slow=6.5,SNR=17						
WRA	Warramunga Arr	59.97	100	P	P	07 05 33.4	+0.1
	1.3nm,0.9s,baz=252,slow=7.0,SNR=5.8						
MKAR	Makanchi Array	71.48	9	P	P	07 06 46.9	0.0
	0.6nm,0.7s,baz=198,slow=5.5,SNR=6.4						
ZALV	Zalesovo Beam	78.82	9	P	P	07 07 28.6	-0.4
	0.5nm,0.6s,baz=216,slow=7.1,SNR=3.0						
SONM	Songino Array	78.94	24	P	P	07 07 30.3	+0.3
	0.2nm,0.4s,baz=182,slow=4.3,SNR=2.6						
AKASG	Malin Array Be	82.41	336	P	P	07 07 49.1	+0.8
	0.2nm,0.3s,baz=146,slow=4.1,SNR=2.1						
ULM	Lac du Bonnet	151.41	340	PKPbc	PKPbc	07 15 19.4	-0.8
	1.4nm,0.8s,baz=26,slow=2.2,SNR=2.4						

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*IDC **12** 07:11:58.9±0.7, 61°.66N×150°.92W, h58^{km}±6^{km}, mb3.5/12, mb1 3.7/16, mb1mx3.5/62, mbtmp3.7/16, MS3.0/4, Ms1 3.0/4, ms1mx2.7/43, Error ellipse: s-maj=13.7km s-min=9.1km az=97.0*

*NEIC **12** 07:11:59.8±1.1, 61°.60N±0°.03×150°.68W±0°.04, h66^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=2.5km az=209.0*

*ANF **12** 07:11:59.9±0.4, 61°.63N×150°.65W, h69^{km}±7^{km}, ML4.1/17, ML4.1/17, Error ellipse: s-maj=5.0km s-min=3.1km az=86.0*

*AEIC **12** 07:12:00±1.1, 61°.60N±0°.03×150°.66W±0°.04, h64^{km}±4^{km}, ML3.6, mb4.0/6(NEIC), ML3.8/104(NEIC), Error ellipse: s-maj=4.2km s-min=1.8km az=208.0*

ISC 12 07:11:59.0±0.6, **61°.61N**±0°.02×**150°.66W**±0°.03, **h58**^{km}±5^{km}, **n203**, σ**1^{s}38**/200, **mb3.8**/15, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUA	Susitna One	0.16	195		Pn	07 12 09.6	+1.5
SUA					Sn	07 12 17.2	+2.5
SUA	Susitna One	0.16	195	IAML		07 12 18.0	
	comp=E,7µm,0.8s						
SUA				IAML		07 12 18.4	
	comp=N,7µm,0.9s						
FIS	Fire Island	0.52	156		Pn	07 12 13.3	+2.3
SKT	Skwentna	0.55	312		Pn	07 12 12.3	+0.8
SKT					Sn	07 12 22.2	+1.8
STLK	Strandline Lak	0.57	259		Pn	07 12 13.1	+1.4
RC01	Rabbit Creek A	0.69	139	P	Pn	07 12 14.0	+1.0
	baz=319,SNR=350						
RC01				S	Sn	07 12 25.0	+1.9
	baz=319						
RC01	Rabbit Creek A	0.69	139		Pn	07 12 13.9	+0.9
RC01					Sn	07 12 25.1	+1.9
SPCG	Spurr Capps Gl	0.73	244		Pn	07 12 14.8	+1.2
SPCG					Sn	07 12 26.0	+1.8
PMR	Palmer	0.73	91		Pn	07 12 14.4	+0.9
PMR					Sn	07 12 25.9	+1.9
PMR	Palmer	0.73	91	IAML		07 12 26.8	
	comp=N,2µm,0.5s						
SPCP	Crater Peak Br	0.80	245		Pn	07 12 15.7	+1.2
SPCP					Sn	07 12 27.4	+1.6
CUT	Chulitna	0.81	13	P	Pn	07 12 15.9	+1.3
	baz=193,SNR=138						
CUT				S	Sn	07 12 28.3	+2.4
	baz=193						
CUT	Chulitna	0.81	13		Pn	07 12 15.9	+1.3
CUT					Sn	07 12 28.3	+2.4
SPCN	Chakachatna No	0.83	243		Pn	07 12 16.0	+1.2
GHO	Glory Hole Cre	0.84	78		Pn	07 12 16.1	+1.1
GHO					Sn	07 12 29.0	+2.2
SPCR	Spurr Chakacha	0.85	242		Pn	07 12 16.1	+0.9
SPCR					Sn	07 12 28.1	+1.2
CAPN	Captain Cook N	0.88	196	P	Pn	07 12 18.0	+2.7
	baz=16,SNR=26						
CAPN				S	Sn	07 12 32.4	+5.0
	baz=16						
CAPN	Captain Cook N	0.88	196		Pn	07 12 18.1	+2.7
SPBG	Spurr Blockage	0.90	247		Pn	07 12 16.8	+1.1
SPWE	Spurr West	0.97	250		Pn	07 12 18.0	+1.3
KNK	Knik Glacier	1.07	100		Pn	07 12 19.2	+1.2
KNK					Sn	07 12 34.8	+2.8
SML	Sawmill	1.13	79		Pn	07 12 19.6	+1.0
SML					Sn	07 12 34.8	+1.6
SML	Sawmill	1.13	79	IAML		07 12 36.2	
	comp=E,1µm,0.6s						
SML				IAML		07 12 41.9	
	comp=N,1µm,0.8s						
SLKM	Skilak Lake	1.13	169		Pn	07 12 19.0	+0.3
O22K	Cooper Landing	1.23	158	S	Sn	07 12 37.2	+1.7
	baz=338						
O22K	Cooper Landing	1.23	158		Pn	07 12 20.0	+0.1
PWL	Port Wells	1.36	123		Pn	07 12 22.3	+0.6
PWL					Sn	07 12 40.0	+1.3
HUR	Hurricane	1.45	19		Pn	07 12 24.5	+1.5
PPLA	Purkeypile	1.47	332		Pn	07 12 24.6	+1.1
WAT7	Susitna Watana	1.49	34		Pn	07 12 25.0	+1.4
WAT7					Sn	07 12 44.8	+2.7
NCT	North Crescent	1.53	227		Pn	07 12 25.4	+1.3
RSO	Redoubt South	1.54	222		Pn	07 12 25.3	+0.9
WAT1	Susitna Watana	1.57	38		Pn	07 12 26.0	+1.3
RED	Redoubt Volcan	1.58	222		Pn	07 12 26.0	+1.2
SCM	Sheep Creek Mo	1.60	81		Pn	07 12 26.2	+1.1
SCM					Sn	07 12 46.4	+1.7
SCM	Sheep Creek Mo	1.60	81	IAML		07 12 48.0	
	comp=N,1µm,0.7s						
SCM				IAML		07 12 48.1	
	comp=E,1µm,0.5s						
SEW	Seward	1.63	158		Pn	07 12 26.6	+1.2
WAT2	Susitna Watana	1.67	35		Pn	07 12 27.3	+1.3
WAT6	Susitna Watana	1.68	53		Pn	07 12 27.3	+1.0
WAT6					Sn	07 12 48.7	+1.9
TRF	Thorofare Moun	1.85	5		Pn	07 12 29.7	+1.1
TRF	Thorofare Moun	1.85	5	IAML		07 12 56.7	
	comp=N,815nm,0.4s						
TRF				IAML		07 12 58.4	
	comp=E,536nm,0.5s						
BRLK	Bradley Lake	1.86	184		Pn	07 12 28.9	+0.3
BRLK					Sn	07 12 51.6	+0.7
GLI	Glacier Island	1.88	112		Pn	07 12 28.6	-0.1
GLI	Glacier Island	1.88	112	IAML		07 12 58.4	
	comp=E,845nm,0.4s						
GLI				IAML		07 13 02.3	
	comp=N,749nm,0.6s						
BRSE	Bradley Lake S	1.88	181		Pn	07 12 29.1	+0.3
KTH	Kantishna Hill	1.95	357		Pn	07 12 31.2	+1.4
KTH	Kantishna Hill	1.95	357	IAML		07 12 56.7	
	comp=E,738nm,0.9s						
KTH				IAML		07 12 59.7	
	comp=N,675nm,1.0s						
IVE	Iliamna Volcan	1.98	217		Pn	07 12 31.2	+1.1
IVE					Sn	07 12 55.2	+1.3
RND	Reindeer	1.98	24		Pn	07 12 31.5	+1.2
RND	Reindeer	1.98	24	IAML		07 13 09.2	
	comp=E,510nm,0.9s						
HOM	Homer	2.02	194	P	Pn	07 12 31.6	+0.9
	baz=14,SNR=5.7						
HOM				S	Sn	07 12 57.0	+2.2
	baz=14						
ILS	Iliamna Low So	2.04	216		Pn	07 12 32.5	+1.5
CNPM	China Poot	2.12	188		Pn	07 12 32.4	+0.4
M24K	Tolsona, Glenn	2.18	75	P	Pn	07 12 34.8	+1.8
	baz=258,SNR=94						
M24K				S	Sn	07 13 00.8	+1.9
	baz=258						
M24K	Tolsona, Glenn	2.18	75		Pn	07 12 34.7	+1.8
M24K	Tolsona, Glenn	2.18	75	IAML		07 13 03.7	
	comp=N,847nm,0.8s						
FID	Port Fidalgo	2.20	111		Pn	07 12 32.6	-0.6
FID					Sn	07 12 59.5	+0.2
FID	Port Fidalgo	2.20	111	IAML		07 13 01.2	
	comp=N,620nm,0.5s						
MCK	McKinley	2.27	20	P	Pn	07 12 35.5	+1.4
	baz=201,SNR=105						
MCK				S	Sn	07 13 02.7	+1.8
	baz=201						
MCK	McKinley	2.27	20		Pn	07 12 35.6	+1.4
KLU	Klutina	2.27	91		Pn	07 12 34.4	+0.2
OPT	Oil Point	2.34	214		Pn	07 12 35.8	+0.7
HIN	Hinchinbrook I	2.37	119		Pn	07 12 35.4	0.0
HIN	Hinchinbrook I	2.37	119	IAML		07 13 17.6	
	comp=N,491nm,1.0s						
HIN				IAML		07 13 26.0	
	comp=E,420nm,0.9s						
DIV	Divide	2.40	100		Pn	07 12 35.8	-0.2
DIV					Sn	07 13 04.5	+0.2
BPAW	Bear Paw Mtn.	2.50	357		Pn	07 12 37.8	+0.5
BPAW	Bear Paw Mtn.	2.50	357	IAML		07 13 24.8	
	comp=N,292nm,0.5s						
PS11	TAPS Pump St11	2.50	77		Pn	07 12 39.1	+1.8
EYAK	Cordova Ski Ar	2.62	112		Pn	07 12 38.5	-0.2
BWN	Browne	2.62	12		Pn	07 12 40.2	+1.3
BWN	Browne	2.62	12	IAML		07 13 40.3	
	comp=N,545nm,0.7s						
BWN				IAML		07 13 40.8	
	comp=E,546nm,1.1s						
PAX	Paxson	2.78	58		Pn	07 12 42.8	+1.7
PAX					Sn	07 13 15.0	+1.5
TT01	Tatalina	2.82	300		Pn	07 12 42.6	+1.0
TTA	Tatalina	2.83	300		Pn	07 12 42.6	+0.8
TTA	Tatalina	2.83	300	IAML		07 13 30.7	
	comp=E,203nm,0.9s						
TTA				IAML		07 13 31.0	
	comp=N,308nm,1.0s						
N25K	Chitina, Valde	2.90	88	P	Pn	07 12 42.9	+0.2
	baz=272						
N25K				S	Sn	07 13 17.5	+1.2
	baz=272						
N25K	Chitina, Valde	2.90	88		Pn	07 12 43.0	+0.3
BMRM	Bremner River	2.99	100		Pn	07 12 44.8	+0.7
NEA2	Nenana	3.08	13	P	Pn	07 12 45.5	+0.4
	baz=194,SNR=43						
NEA2	Nenana	3.08	13		Pn	07 12 45.6	+0.5
WRH	Wood River Hil	3.10	21		Pn	07 12 46.5	+1.1
RAGM	Ragged Mountai	3.17	110		Pn	07 12 50.0	+3.7
HDA	Harding Lake	3.28	29	P	Pn	07 12 48.4	+0.6
	baz=213,SNR=74						
HDA	Harding Lake	3.28	29		Pn	07 12 49.2	+1.4
HDA	Harding Lake	3.28	29	IAML		07 13 37.5	
	comp=E,230nm,0.6s						
GLB	Gilahina Butte	3.29	90		Pn	07 12 49.0	+1.0
GLB	Gilahina Butte	3.29	90	IAML		07 13 47.7	
	comp=N,172nm,0.9s						
CCB	Clear Creek Bu	3.31	22		Pn	07 12 49.2	+0.9
CCB	Clear Creek Bu	3.31	22	IAML		07 13 46.1	
	comp=E,146nm,0.9s						
HMT	Hamilton	3.37	110		Pn	07 12 51.3	+2.1
PS08	TAPS Pump Stn8	3.42	29		Pn	07 12 50.8	+1.0
RIDG	Independent Ri	3.43	49		Pn	07 12 51.2	+1.3
MLY	Manley	3.43	359	P	Pn	07 12 50.4	+0.4
	baz=179,SNR=51						
MLY				S	Sn	07 13 27.7	-1.6
	baz=179						
MLY	Manley	3.43	359		Pn	07 12 50.6	+0.6
VRDI	Verde Repeater	3.49	93		Pn	07 12 50.6	-0.3
MENT	Mentasta	3.50	65		Pn	07 12 52.3	+1.3
TCOL	CIGO, UAF Yank	3.51	20	P	Pn	07 12 52.0	+1.0
	baz=202,SNR=23						
TCOL	CIGO, UAF Yank	3.51	20		Pn	07 12 52.1	+1.2
COLA	College	3.51	20		Pn	07 12 52.1	+1.1
MDM	Murphy Dome	3.53	17		Pn	07 12 52.5	+1.1
MDM	Murphy Dome	3.53	17	IAML		07 13 52.3	
	comp=E,139nm,0.8s						
I23K	Minto, Yukon-K	3.60	9	P	Pn	07 12 53.0	+0.9
	baz=190						
I23K	Minto, Yukon-K	3.60	9		Pn	07 12 53.5	+1.3
I23K	Minto, Yukon-K	3.60	9	IAML		07 14 06.5	
	comp=N,140nm,0.8s						
IL31		3.60	27		Pn	07 12 53.2	+1.0
ILAR	Eielson Array	3.60	27	P	Pn	07 12 52.9	+0.6
	comp=N,5.9nm,0.3s,baz=214,slow=15,SNR=199						
ILAR				S	Sn	07 13 32.4	-1.0
	comp=N,5.4nm,0.3s,baz=350,slow=19,SNR=3.1						
ILAR	Eielson Array	3.60	27		Pn	07 12 53.0	+0.8
BERG	Berg Lake	3.60	107		Pn	07 12 51.6	-0.8
DOT	Dot Lake	3.67	53	Pn	Pn	07 12 55.0	+1.7
MCARA	McCarthy VSAT	3.67	90		Pn	07 12 54.3	+1.1
MCARA	McCarthy VSAT	3.67	90	IAML		07 13 50.3	
	comp=E,210nm,0.6s						
MCARA				IAML		07 14 04.3	
	comp=N,217nm,0.9s						
L26K	Log Cabin Wild	3.69	64	P	Pn	07 12 55.0	+1.4
	baz=250,SNR=14						
L26K	Log Cabin Wild	3.69	64		Pn	07 12 54.4	+0.8
SUCK	Suckling Hills	3.71	112	Pn	Pn	07 12 56.2	+2.4
SUCK				IAML		07 13 57.4	
	comp=E,102nm,2.3s						
SUCK				IAML		07 14 00.8	
	comp=N,148nm,1.9s						
CRQM	Cirque	3.74	100		Pn	07 12 54.6	+0.2
CRQM	Cirque	3.74	100	IAML		07 14 00.4	
	comp=N,212nm,1.0s						
CRQM				IAML		07 14 01.2	
	comp=E,188nm,0.7s						
POKR	Poker Plat Res	3.80	21	P	Pn	07 12 55.8	+0.7
	baz=204						
POKR	Poker Plat Res	3.80	21		Pn	07 12 56.2	+1.1
SCRK	Sand Creek	3.87	49	P	Pn	07 12 57.2	+1.1
	baz=235,SNR=24						
SCRK	Sand Creek	3.87	49		Pn	07 12 57.2	+1.1
TGL	Tana Glacier	3.89	99		Pn	07 12 56.1	-0.2
TGL	Tana Glacier	3.89	99	IAML		07 13 57.5	
	comp=N,140nm,0.7s						
TGL				IAML		07 14 06.4	
	comp=E,124nm,0.5s						
PTPK	Patty Peak	3.96	93		Pn	07 12 57.4	0.0
KDAK	Kodiak Island	3.96	195	P	Pn	07 12 57.0	-0.3
	comp=E,1.4nm,0.3s,baz=59,slow=9.4,SNR=79						
KDAK				S	Sn	07 13 40.6	-1.8
	comp=E,3.2nm,0.3s,baz=238,slow=20,SNR=6.3						
KDAK	Kodiak Island	3.96	195		Pn	07 12 57.2	-0.1
KDAK	Kodiak Island	3.96	195	IAML		07 13 55.7	
	comp=E,83nm,0.8s						
BALM	Baldy	4.05	95		Pn	07 12 58.0	-0.5
BALM	Baldy	4.05	95	IAML		07 13 50.4	
	comp=N,109nm,0.7s						
KIAG	Kiagna River	4.07	96		Pn	07 12 58.3	-0.6
ISLE	Juniper Island	4.16	100		Pn	07 12 59.9	-0.2
ISLE	Juniper Island	4.16	100	IAML		07 14 09.0	
	comp=E,99nm,0.9s						
ISLE				IAML		07 14 18.5	
	comp=N,137nm,1.3s						
BARN	Barnard Glacie	4.37	93		Pn	07 13 03.8	+0.8
BARN	Barnard Glacie	4.37	93	IAML		07 14 18.2	
	comp=N,68nm,1.0s						
BARN				IAML		07 14 26.1	
	comp=E,84nm,0.8s						
BC03		4.39	67		Pn	07 13 04.3	+1.4
BCAR	Beaver Creek A	4.39	67		Pn	07 13 04.2	+1.2
GRNC	Granite Creek	4.40	98		Pn	07 13 03.2	-0.3
MESA	MESA	4.49	105	Pn	Pn	07 13 05.2	+0.6

MESA				IAML		07 14 27.1	
	comp=E,106nm,0.6s						
YAH	Yahtse	4.52	102		Pn	07 13 05.1	0.0
YAH	Yahtse	4.52	102	IAML		07 14 01.6	
	comp=N,79nm,0.8s						
PRP	Porcupine Dome	4.54	28		Pn	07 13 06.8	+1.5
PRP	Porcupine Dome	4.54	28	IAML		07 14 24.1	
	comp=E,63nm,0.8s						
PRP				IAML		07 14 28.4	
	comp=N,86nm,0.6s						
CTGM	Chitina Glacie	4.55	94		Pn	07 13 06.2	+0.9
CTGM	Chitina Glacie	4.55	94	IAML		07 14 23.1	
	comp=N,54nm,0.6s						
IM03		4.59	344		Pn	07 13 07.0	+1.2
OHAK	Old Harbor	4.61	198		Pn	07 13 05.1	-0.9
OHAK	Old Harbor	4.61	198	IAML		07 13 51.4	
	comp=E,66nm,3.3s						
OHAK				IAML		07 13 59.1	
	comp=N,68nm,3.2s						
K27K	Chicken	4.62	55	P	Pn	07 13 06.1	-0.1
	baz=242						
K27K	Chicken	4.62	55		Pn	07 13 08.2	+2.0
K27K				IAML		07 14 31.1	
	comp=E,61nm,0.9s						
K27K				IAML		07 14 31.1	
	comp=N,64nm,0.8s						
YUK2	White River	4.68	84		Pn	07 13 07.8	+0.7
LOGN	Logan Glacier	4.74	95		Pn	07 13 08.2	+0.2
TABL	Table Mountain	4.78	100		Pn	07 13 08.2	-0.4
TABL	Table Mountain	4.78	100	IAML		07 14 41.0	
	comp=N,48nm,0.9s						
YUK3	Moose Creek	4.86	84		Pn	07 13 10.6	+0.9
PCA	Pinnacle	5.31	102		Pn	07 13 15.7	-0.1
EGAK	Eagle	5.34	49		Pn	07 13 17.2	+1.1
FYU	Fort Yukon	5.51	23		Pn	07 13 20.5	+2.2
COLD	Coldfoot	5.64	2	P	Pn	07 13 21.2	+1.1
	baz=182						
COLD				S	Sn	07 14 23.1	-0.4
	baz=182						
COLD	Coldfoot	5.64	2		Pn	07 13 21.5	+1.3
DAWY	Dawson	5.72	60		Pn	07 13 22.4	+1.2
YUK4	Talbot Arm	5.76	87		Pn	07 13 23.4	+1.3
YUK6	Outpost Mounta	5.97	91		Pn	07 13 25.6	+0.7
BM03	Burnt Mountain	6.38	21		Pn	07 13 31.9	+1.5
BMAR	Burnt Mountain	6.40	22	Pn	Pn	07 13 29.8	-0.7
HYT	Haines Junctio	6.41	91	Pn	Pn	07 13 31.6	+0.9
TOLK	Toolik Lake Re	7.07	3	P	Pn	07 13 41.2	+1.4
	baz=184						
TOLK				S	Sn	07 14 58.4	-0.2
	baz=184						
TOLK	Toolik Lake Re	7.07	3	Pn	Pn	07 13 43.8	+4.1
ANM	Nome	7.30	300		Pn	07 13 44.0	+1.1
WHY	Whitehorse	7.70	90	Pn	Pn	07 13 48.7	+0.3
EPYK	Eagle Plains	7.75	46	Pn	Pn	07 13 51.0	+1.9
BESE	Bessie Mountai	8.46	104	Pn	Pn	07 13 59.4	+0.6
JIS	Juneau Island	8.82	105	Pn	Pn	07 14 03.9	+0.2
INK	Inuvik	9.86	40	P	Pn	07 14 18.0	+0.3
	comp=N,0.1nm,0.3s,baz=247,slow=20,SNR=4.7						
INK				S	Sn	07 16 06.7	0.0
	comp=N,0.1nm,0.3s,baz=39,slow=14,SNR=1.5						
INK	Inuvik	9.86	40		Pn	07 14 17.8	0.0
A21K	Barrow	10.03	349	S	Sn	07 16 08.4	-2.4
	baz=164						
A21K	Barrow	10.03	349		Pn	07 14 20.4	+0.4
DLBC	Dease Lake	10.79	98	P	Pn	07 14 27.0	-3.6
	comp=N,0.1nm,0.3s,baz=168,slow=12,SNR=1.3						
DLBC				LR	LR	07 19 16.1	
	comp=N,69nm,20.3s,baz=348,slow=40						
BBB	Bella Bella	15.44	118	LR	LR	07 20 35.3	
	comp=N,32nm,18.1s,baz=34,slow=33						
YKA	Yellowknife Ar	16.79	71	P	Pn	07 15 49.2	-0.7
	comp=N,0.0nm,0.3s,baz=281,slow=8.9,SNR=5.4						
YKA				LR	LR	07 23 48.5	
	comp=N,71nm,19.9s,baz=0.0,slow=42						
NEW	Newport	23.12	110	LR	LR	07 25 07.4	
	comp=N,39nm,19.0s,baz=21,slow=34						
RES	Resolute Bay	23.32	34	P	P	07 17 00.1	-1.4
	comp=N,0.5nm,0.5s,baz=55,slow=22,SNR=2.1						
RES	Resolute Bay	23.32	34	P	P	07 17 03.9	+2.3
YBH	Yreka Blue Hor	26.04	127	P	P	07 17 27.1	+0.4
	comp=N,0.9nm,1.0s,baz=131,slow=4.1,SNR=3.9						
WDC	Whiskeytown Da	27.10	128	P	P	07 17 38.8	+2.7
WDC				IAmb	IAmb	07 17 42.3	
	comp=Z,4.0nm,1.2s						
ELK	Elko	29.89	118	P	P	07 18 03.2	+2.0
	comp=Z,1.1nm,0.8s,baz=16,slow=9.5,SNR=4.0						
NVAR	Mina Array Bea	30.59	124	P	P	07 18 09.2	+1.7
	comp=Z,1.1nm,0.7s,baz=317,slow=9.0,SNR=11						
NVAR	Mina Array Bea	30.59	124	P	P	07 18 09.1	+1.6
PDAR	Pinedale Array	30.74	109	P	P	07 18 10.3	+1.6
	comp=Z,0.2nm,0.4s,baz=312,slow=4.3,SNR=4.8						
PDAR				pP	sP	07 18 25.7	-4.1
	comp=Z,0.2nm,0.4s,baz=289,slow=4.5,SNR=3.0						
PDAR	Pinedale Array	30.74	109	P	P	07 18 10.0	+1.3
MSU	Marysvale	33.05	116	P	P	07 18 31.3	+2.3
TXAR	Lajitas Array	44.54	114	P	P	07 20 06.3	+1.4
	comp=Z,0.7nm,0.7s,baz=325,slow=6.7,SNR=9.7						
SONM	Songino Array	54.76	306	P	P	07 21 22.8	+0.4
	comp=Z,2.1nm,0.6s,baz=41,slow=7.1,SNR=10						
SONM	Songino Array	54.76	306	P	P	07 21 22.9	+0.4
SONM				IAmb	IAmb	07 21 23.4	
	comp=Z,2.2nm,0.7s						
FINES	FINESS Array B	57.24	2	P	P	07 21 38.9	-0.8
	comp=Z,3.1nm,1.0s,baz=12,slow=7.1,SNR=1.5						
KURK	Kurchatov	61.32	327	P	P	07 22 07.6	-0.4
KURBB	Kurchatov Arra	61.43	327	P	P	07 22 07.4	-1.4
	comp=Z,0.4nm,0.4s,baz=29,slow=6.7,SNR=2.9						
KURBB				pP	pP	07 22 23.5	-0.9
	comp=Z,0.4nm,0.6s,baz=28,slow=7.7,SNR=2.0						
MKAR	Makanchi Array	63.87	322	P	P	07 22 23.4	-1.7
	comp=Z,0.2nm,0.4s,baz=349,slow=1.5,SNR=1.2						
MKAR				pP	pP	07 22 41.3	+0.6
	comp=Z,0.6nm,0.6s,baz=45,slow=5.3,SNR=3.4						
MKAR	Makanchi Array	63.87	322	P	P	07 22 22.8	-2.3
AKTO	Aktyubinsk	65.97	340	P	P	07 22 37.6	-1.1
	comp=Z,1.5nm,0.6s,baz=28,slow=10,SNR=4.2						
ABKAR	Akbulak array	66.79	339	P	P	07 22 42.9	-1.0
ABKAR				IAmb	IAmb	07 23 00.9	
	comp=Z,3.2nm,1.2s						
AKASG	Malin Array Be	68.03	0	P	P	07 22 50.8	-1.0
	comp=Z,0.7nm,0.5s,baz=1.0,slow=6.3,SNR=4.0						
AKASG				pP	pP	07 23 06.9	-0.7
	comp=Z,1.1nm,0.5s,baz=1.6,slow=6.1,SNR=3.3						
AKASG	Malin Array Be	68.03	0	P	P	07 22 50.9	-0.9
AKASG				IAmb	IAmb	07 23 10.7	
	comp=Z,0.9nm,0.9s						
KKAR	Karatay Array	70.45	329	P	P	07 23 05.5	-1.4
ESDC	Sonseca Array	75.50	26	pP	pP	07 23 53.7	+0.9
	comp=Z,0.7nm,0.7s,baz=336,slow=6.5,SNR=3.5						

IDC ***12*** *07:18:45.8±0.3, 50°.04N×78°.87E, h0^{km}, mb1 2.9/2, mb1mx2.8/47, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=13.4km s-min=0.9km az=63.0*

NNC ***12*** *07:18:45.5±0.5, 50°.02N×78°.70E, h0^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=5.3km s-min=2.1km az=67.0, Suspected Mining explosion.*

ISC 12 07:18:46.3±1.1**, 50°.15N**±0°.05×**78°.86E**±0°.08**, h0^{km}, n18, σ0^s.87**/31**, 16C-10D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.49	333	⇓P	Pb	07 18 56.8	-1.0
KUR07				⇓S	Sb	07 19 05.5	0.0
KUR14	Kurchatov Arra	0.50	340	⇑P	Pb	07 18 57.1	-0.9
KUR14				⇓S	Sb	07 19 05.7	-0.1
KUR06	Kurchatov Arra	0.50	334	⇑P	Pb	07 18 57.2	-0.9
KUR06				⇑S	Sb	07 19 06.1	+0.2
KUR15	Kurchatov Arra	0.51	338	⇓P	Pb	07 18 57.2	-0.9
KUR15				⇑S	Sb	07 19 06.1	+0.1
KURBB	Kurchatov Arra	0.52	336	Pg	Pb	07 18 57.4	-0.9
	1.9nm,0.3s,baz=165,slow=18,SNR=156						
KURBB				Lg	Lg	07 19 06.9	
	2.1nm,0.3s,baz=168,slow=33,SNR=13						
KURBB	Kurchatov Arra	0.52	336	⇓P	Pb	07 18 57.4	-0.9
	22nm,0.3s						
KURBB				⇑S	Sb	07 19 06.5	+0.1
	44nm,0.4s						
KUR16	Kurchatov Arra	0.53	334	⇑P	Pb	07 18 57.7	-0.9
KUR16				⇑S	Sb	07 19 06.6	-0.1
KUR05	Kurchatov Arra	0.54	337	⇑P	Pb	07 18 57.8	-0.8
KUR05				⇓S	Sb	07 19 06.6	-0.3
KUR17	Kurchatov Arra	0.54	333	⇑P	Pb	07 18 57.8	-1.0
KUR17				⇓S	Sb	07 19 07.1	0.0
KUR04	Kurchatov Arra	0.55	338	⇑P	Pb	07 18 58.1	-0.8
KUR04				⇑S	Sb	07 19 07.1	-0.3
KURK	Kurchatov	0.59	345	⇑P	Pb	07 18 58.8	-0.7
	8.0nm,0.4s						
KURK				⇑S	Sb	07 19 09.0	+0.6
	8.4nm,0.6s						
SEM	Semipalatinsk	0.93	73	P	Pn	07 19 06.3	-0.5
	7.5nm,0.3s						
SEM				S	Sn	07 19 20.8	-0.1
	26nm,0.3s						
MAKZ	Makanchi	3.93	147	⇓Pn	Pn	07 19 48.8	+0.8
	0.2nm,0.4s						
MAKZ				⇑Pg	Pb	07 19 56.3	-0.3
	1.6nm,0.7s						
MAKZ				⇑Lg	Lg	07 20 43.5	
	3.7nm,0.8s						
MK31	Makanchi Array	4.06	145	⇑Pn	Pn	07 19 49.7	0.0
	0.1nm,0.2s,baz=322,slow=9.4,SNR=37						
MK31				⇓Pg	Pb	07 19 58.0	-0.6
	0.9nm,0.5s,baz=326,slow=13,SNR=23						
MK31				⇓Lg	Lg	07 20 48.8	
	2.0nm,0.5s,baz=330,slow=26,SNR=12						
MKAR	Makanchi Array	4.06	145	Pn	Pn	07 19 49.4	-0.3
	0.4nm,0.3s,baz=322,slow=10,SNR=38						
MKAR				Pg	Pb	07 19 56.7	-2.0
	1.0nm,0.3s,baz=324,slow=14,SNR=20						
MKAR				Lg	Lg	07 20 52.9	
	1.2nm,0.3s,baz=333,slow=27,SNR=7.9						
KAPS	Kapalarasan	4.88	176	Pg	Pb	07 20 13.4	+0.7
	0.6nm,0.4s						
KAPS				Lg	Lg	07 21 16.0	
	4.1nm,0.7s						
I46RU	ZALESOVO INFRA	5.29	42	*i*		07 49 10.0	
	baz=224,slow=344,SNR=3.5						
ZALV	Zalesovo Beam	5.29	42	Pn	Pn	07 20 09.1	+2.6
	0.9nm,0.3s,baz=229,slow=14,SNR=6.6						

NNC ***12*** *07:28:07.4±3.5, 54°.16N×87°.36E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=34.7km s-min=17.6km az=15.0, Suspected Mining explosion.*

IDC ***12*** *07:28:10.7±2.7, 54°.21N×86°.98E, h0^{km}, mb1 3.0/2, mb1mx2.8/50, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=22.5km s-min=15.7km az=59.0*

ISC 12 07:28:13.8±4.6**, 54°.0N**±0°.2×**86°.8E**±0°.2**, h0^{km}, n8, σ1^s.31**/11**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.16	267	*i*		07 35 31.3	
	baz=75,slow=325,SNR=2.6						
ZAA0	Zalesovo Array	1.16	267	⇑P	Pg	07 28 34.0	-2.0
	0.2nm,0.3s						
ZAA0				⇓S	Sn	07 28 55.9	+2.1
	1.2nm,0.5s						
ZALV	Zalesovo Beam	1.16	267	Pg	Pg	07 28 34.8	-1.3
	0.9nm,0.3s,baz=82,slow=17,SNR=8.9						
ZALV				Lg	Lg	07 28 52.8	
	0.9nm,0.3s,baz=74,slow=26,SNR=5.6						
KURK	Kurchatov	6.00	240	⇑Pn	Pn	07 29 44.4	+0.7
	0.4nm,0.5s						
KURK				⇑Lg	Lg	07 31 27.0	
	7.9nm,1.1s						
KURBB	Kurchatov Arra	6.10	239	Pn	Pn	07 29 46.0	+0.8
	0.1nm,0.3s,baz=56,slow=14,SNR=8.8						
KURBB				Sn	Sn	07 30 55.8	+0.2
	0.0nm,0.3s,baz=60,slow=22,SNR=2.3						
KURBB				Lg	Lg	07 31 32.1	
	0.0nm,0.3s,baz=46,slow=29,SNR=6.5						
KURBB	Kurchatov Arra	6.10	239	⇓Pn	Pn	07 29 46.2	+1.0
	1.5nm,0.8s,baz=57,slow=14						
KURBB				⇑Lg	Lg	07 31 31.5	
	10nm,1.1s,baz=58,slow=30						
MK31	Makanchi Array	7.79	203	Pn	Pn	07 30 08.7	+0.3
	0.3nm,0.6s,baz=113,slow=8.3,SNR=11						
MK31				⇑Sn	Sn	07 31 36.8	-0.4
	2.2nm,0.9s,baz=28,slow=27,SNR=4.8						
MK31				⇑Lg	Lg	07 32 20.6	
	2.2nm,0.9s,baz=29,slow=29,SNR=3.9						
MKAR	Makanchi Array	7.79	203	Pn	Pn	07 30 09.3	+0.9
	0.2nm,0.3s,baz=23,slow=15,SNR=14						
MKAR				Sn	Sn	07 31 37.9	+0.6
	0.1nm,0.3s,baz=27,slow=27,SNR=11						
MKAR				Lg	Lg	07 32 26.6	
	0.0nm,0.3s,baz=29,slow=26,SNR=5.1						

NEIC ***12*** *07:38:30.1±0.8, 19°.0S±0°.2×177°.7W±0°.1, h574^{km}±7^{km}, mb4.2/20, Error ellipse: s-maj=24.7km s-min=16.7km az=148.0*

IDC ***12*** *07:38:30.9±1.6, 19°.16S×177°.64W, h585^{km}±18^{km}, mb3.0/7, mb1 3.3/9, mb1mx3.0/37, mbtmp4.0/9, Error ellipse: s-maj=20.8km s-min=15.2km az=151.0*

ISC 12 07:38:29.6±0.6**, 19°.1S**±0°.1×**177°.6W**±0°.1**, h570^{km}, n40, σ0^s.92**/44**, mb4.2**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.32	287	P	P	07 39 58.3	+2.9
	2.5nm,0.3s,baz=117,slow=23,SNR=11						
MSVF	Nonsavu	4.32	287	P	P	07 39 55.6	+0.2
AFI	Afiamalu	7.60	48	P	P	07 40 23.2	-1.0
URZ	Urewera	19.66	192	P	P	07 42 19.8	-1.6
	1.6nm,0.3s,baz=280,slow=1.0,SNR=8.9						
URZ	Urewera	19.66	192	P	P	07 42 20.3	-1.1
THZ	Tophouse	24.02	198	P	P	07 42 59.5	-1.0
MLZ	Mavora Lakes	28.77	201	P	P	07 43 42.6	+0.4
MLZ				IAmb	IAmb	07 43 58.0	
	comp=Z,20nm,1.2s						
WHZ	Wether Hill Ro	29.29	201	P	P	07 43 47.6	+1.0
STKA	Stephens Creek	38.75	243	P	P	07 45 05.8	-0.1
	comp=Z,1.8nm,0.8s,baz=109,slow=11,SNR=3.8						
STKA	Stephens Creek	38.75	243	P	P	07 45 06.4	+0.5
BBOO	Buckleboo	43.52	242	P	P	07 45 44.1	+0.5
BBOO				IAmb	IAmb	07 46 09.4	
	comp=Z,11nm,1.2s						
WR0	Warramunga Arr	44.98	261	P	P	07 45 55.1	+0.1
WR0				IAmb	IAmb	07 46 13.6	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	45.14	261	P	P	07 45 56.6	+0.2
WB0				IAmb	IAmb	07 45 58.5	
	comp=Z,7.9nm,1.3s						
WB2	Warramunga Arr	45.16	261	P	P	07 45 56.5	+0.1
WB2				IAmb	IAmb	07 45 57.2	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	45.17	261	P	P	07 45 56.4	-0.2
	comp=Z,0.5nm,0.3s,baz=98,slow=7.7,SNR=15						
WRA				PcP	PcP	07 47 24.3	-0.3
	comp=Z,0.4nm,0.5s,baz=95,slow=3.6,SNR=3.9						
WRA	Warramunga Arr	45.17	261	P	P	07 45 56.3	-0.2
AS31	Alice Springs	45.21	255	P	P	07 45 57.1	+0.3
ASAR	Alice Springs	45.21	255	P	P	07 45 57.1	+0.3
	comp=Z,1.6nm,0.4s,baz=87,slow=8.6,SNR=40						
ASAR				PcP	PcP	07 47 24.8	0.0
	comp=Z,0.9nm,0.7s,baz=107,slow=3.7,SNR=7.5						
ASAR				S	S	07 51 54.6	-1.4
	comp=Z,0.7nm,0.7s,baz=92,slow=16,SNR=6.0						
ASAR	Alice Springs	45.21	255	P	P	07 45 56.9	+0.1
ASAR					PcP	07 47 25.0	+0.2
FORT	Forrest	50.20	246	P	P	07 46 33.8	-0.2
FORT				IAmb	IAmb	07 46 44.8	
	comp=Z,18nm,1.2s						
FITZ	Fitzroy Crossi	53.59	261	P	P	07 46 57.6	-0.8
PSAC2	Pilbara Seismi	58.30	256	P	P	07 47 30.1	-0.9
PSAB3	Pilbara Seismi	58.34	256	P	P	07 47 31.4	+0.3
PSAB3				IAmb	IAmb	07 47 33.5	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	58.35	256	P	P	07 47 29.6	-1.6
PSA00				IAmb	IAmb	07 47 33.7	
	comp=Z,17nm,1.3s						
PSAD1	Pilbara Seismi	58.38	256	P	P	07 47 31.6	+0.1
PSAD1				IAmb	IAmb	07 47 54.0	
	comp=Z,22nm,1.4s						
PSAC1	Pilbara Seismi	58.39	256	P	P	07 47 31.4	-0.1
PSAC1				IAmb	IAmb	07 47 49.2	
	comp=Z,20nm,1.4s						
PSAD3	Pilbara Seismi	58.40	256	P	P	07 47 31.3	-0.3
PSAD3				IAmb	IAmb	07 48 00.3	
	comp=Z,21nm,1.4s						
QSPA	South Pole Qui	70.99	180	P	P	07 48 50.6	+0.5
	comp=Z,2.3nm,0.8s,baz=269,slow=1.2,SNR=9.4						
QSPA	South Pole Qui	70.99	180	P	P	07 48 50.8	+0.6
PFO	Pinyon Flats O	78.36	48	P	P	07 49 32.7	+0.7
NVAR	Mina Array Bea	79.74	43	P	P	07 49 40.3	+1.0
	comp=Z,0.3nm,0.7s,baz=216,slow=9.0,SNR=2.7						
NVAR	Mina Array Bea	79.74	43	P	P	07 49 39.6	+0.3
TXAR	Lajitas Array	85.98	57	P	P	07 50 11.3	+0.7
	comp=Z,0.3nm,0.7s,baz=215,slow=5.8,SNR=5.2						
TXAR	Lajitas Array	85.98	57	P	P	07 50 12.0	+1.4
ILAR	Eielson Array	86.85	13	P	P	07 50 12.1	-1.6
	comp=Z,0.2nm,0.4s,baz=236,slow=5.2,SNR=6.3						
ILAR	Eielson Array	86.85	13	P	P	07 50 13.7	0.0
MKAR	Makanchi Array	110.48	314	PKiKP	PKiKP	07 55 55.6	-2.1
	comp=Z,0.2nm,0.5s,baz=321,slow=0.4,SNR=2.0						
MKAR	Makanchi Array	110.48	314		PKiKP	07 55 56.8	-0.9
ARCES	ARCESS Array B	127.59	350	PKP	PKPdf	07 56 29.6	-0.2
	comp=Z,3.2nm,0.8s,baz=64,slow=2.8,SNR=3.8						
BRTR	Keskin Array B	146.13	314	PKPbc	PKPbc	07 57 06.6	-0.3
	comp=Z,0.6nm,0.5s,baz=126,slow=3.2,SNR=4.2						

IDC ***12*** *07:39:29.4±3.3, 37°.92N×143°.01E, h0^{km}, mb3.4/2, mb1 3.4/3, mb1mx3.2/41, mbtmp3.2/3, ML1.9/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/33, Error ellipse: s-maj=76.5km s-min=42.2km az=60.0*

JMA ***12*** *07:39:30.8±0.1, 38°.05N×142°.78E, h20^{km}±2^{km}, M3.7*

ISC 12 07:39:29.9±2.3**, 38°.04N**±0°.06×**142°.74E**±0°.08**, h1^{km}**±12^{km}**, n25, σ1^s.14**/30**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.04	285	P	Pg	07 39 50.2	+0.3
JIKH				S	Sb	07 40 04.8	0.0
JIO	Ouri	1.17	291	P	Pg	07 39 52.3	-0.1
JIO				S	Sg	07 40 08.1	+0.6
JKMT	Kesennumamotoy	1.25	308	P	Pg	07 39 53.6	-0.4
JKMT				*e*S	Sg	07 40 10.2	-0.1
OFUJ	Ofunato	1.33	321	P	Pg	07 39 54.8	-0.7
OFUJ				*e*S	Sg	07 40 12.2	-0.6
JMK	Ichinoseki	1.50	308	P	Pn	07 39 57.4	-0.6
JMM	Marumori	1.55	264	P	Pn	07 39 57.8	-0.9
JMM				S	Sn	07 40 17.9	-1.5
JFK	Kawauchi	1.63	246	P	Pn	07 39 58.8	-1.0
JFK				*e*S	Sn	07 40 19.8	-1.6
JOU	Okura	1.67	282	P	Pn	07 40 00.0	-0.3
JOU				*e*S	Sn	07 40 21.7	-0.6
JOM	Ohasama	1.82	322	P	Pn	07 40 02.2	-0.2
JOM				*e*S	Sn	07 40 24.3	-1.9
JFT	Otama	1.97	255	P	Pn	07 40 04.9	+0.4
JFT				*e*S	Sn	07 40 29.3	-0.6
JYK	Kaneyama	2.06	296	P	Pn	07 40 06.2	+0.5
JYK				*e*S	Sn	07 40 32.0	-0.1
JYS	Shirataka	2.12	276	P	Pn	07 40 06.9	+0.4
JRG	Rokugo	2.13	310	P	Pn	07 40 07.7	+1.0
JYA	Atsumi	2.44	284	P	Pn	07 40 12.3	+1.3
JANG	Nango	2.51	338	P	Pn	07 40 13.7	+1.7
MJAR	Matsushiro Arr	3.91	249	Pn	Pn	07 40 32.7	+1.5
	0.1nm,0.3s,baz=318,slow=9.3,SNR=1.7						
MJAR				LR	LR	07 42 17.4	
	comp=Z,68nm,20.1s,baz=180,slow=42						
MAT	Matsushiro	3.91	249	P	Pn	07 40 31.2	0.0
MAT				*e*S	Sn	07 41 20.8	+3.0
H11N2	WAKE ISLAND Hy	27.80	124	T	T	08 14 23.8	
	baz=316,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	27.81	124	T	T	08 14 24.4	
	baz=316,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	27.82	124	T	T	08 14 25.1	
	baz=316,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	28.56	126	T	T	08 15 26.1	
	baz=318,slow=76,SNR=4.6						
H11S3	WAKE ISLAND Hy	28.57	126	T	T	08 15 30.0	
	baz=318,slow=76,SNR=5.9						
H11S2	WAKE ISLAND Hy	28.58	126	T	T	08 15 24.6	
	baz=318,slow=76,SNR=4.2						
MKAR	Makanchi Array	44.48	301	P	P	07 47 44.1	+1.4
	0.5nm,0.8s,baz=91,slow=9.7,SNR=5.0						
WRA	Warramunga Arr	58.22	189	P	P	07 49 24.7	-1.1
	0.2nm,0.6s,baz=4.9,slow=7.4,SNR=1.5						

IDC ***12*** *07:54:05.3±1.1, 5°.12S×150°.08E, h0^{km}, mb4.0/5, mb1 4.2/7, mb1mx3.7/42, mbtmp4.1/7, ML1.4/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/30, Error ellipse: s-maj=45.2km s-min=16.5km az=138.0*

ISC 12 07:54:10.7±1.1**, 5°.2S**±0°.2×**150°.1E**±0°.2**, h35^{km}, n11, σ0^s.62**/10**, mb3.9**/5**, MS3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.12	67	Pn	Pn	07 54 43.0	-0.8
	80nm,0.3s,baz=230,slow=6.3,SNR=12						
KRVT				Sn	Sn	07 55 09.8	+0.9
	141nm,0.3s,baz=208,slow=21,SNR=6.3						
PMG	Port Moresby	5.12	214	Pn	Pn	07 55 24.4	-0.5
	0.9nm,0.3s,baz=31,slow=10,SNR=2.6						
PMG				Sn	Sn	07 56 23.2	+0.3
	1.9nm,0.3s,baz=74,slow=21,SNR=2.4						
WRA	Warramunga Arr	21.23	225	P	P	07 58 54.2	+0.4
	3.1nm,0.8s,baz=53,slow=11,SNR=15						
DZM	Mont Dzumac	23.12	138	LR	LR	08 07 00.3	
	comp=Z,107nm,19.6s,baz=19,slow=34						
ASAR	Alice Springs	24.12	219	P	P	07 59 23.1	-0.4
	4.5nm,0.7s,baz=56,slow=9.1,SNR=51						
FITZ	Fitzroy Crossi	27.12	240	P	P	07 59 51.1	+0.5
	1.6nm,0.7s,baz=72,slow=6.4,SNR=1.8						
STKA	Stephens Creek	27.75	196	P	P	07 59 56.4	+0.1
	3.5nm,1.0s,baz=35,slow=12,SNR=4.1						
URZ	Urewera	41.12	147	LR	LR	08 15 26.7	
	comp=Z,75nm,19.9s,baz=31,slow=31						
RPZ	Rata Peaks	42.64	157	LR	LR	08 18 29.9	
	comp=Z,65nm,18.0s,baz=352,slow=34						
ILAR	Eielson Array	83.51	23	P	P	08 06 34.5	-0.2
	0.8nm,0.9s,baz=254,slow=5.6,SNR=7.6						
TORD	Torodi Ar. Bea	147.81	286	PKPbc	PKPdf	08 13 50.6	+0.4
	1.9nm,0.8s,baz=75,slow=3.0,SNR=1.9						

UCR ***12*** *07:57:19.8±1.9, 15°.25N×93°.97W, h20^{km}±165^{km}, ML5.2, mb5.5(NEIC)*

SNET ***12*** *07:57:22.4±1.7, 15°.56N×93°.80W, h80^{km}, ML5.8*

INET ***12*** *07:57:26.9, 15°.36N×93°.49W, h15^{km}, MW4.2*

MOS ***12*** *07:57:27.5±1.0, 15°.68N×93°.06W, h90^{km}, mb5.5/22, Error ellipse: s-maj=9.6km s-min=4.8km az=110.5*

NEIC ***12*** *07:57:27.1±2.5, 15°.48N±0°.06×93°.38W±0°.05, h75^{km}±1^{km}, mb5.4/359, Mwb5.5/21, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=11.3km s-min=6.6km az=207.0*

IDC ***12*** *07:57:27.6±0.5, 15°.59N×92°.92W, h83^{km}±4^{km}, mb4.6/32, mb1 4.7/34, mb1mx4.6/50, mbtmp4.9/34, MS4.4/25, Ms1 4.4/25, ms1mx4.3/30, Error ellipse: s-maj=13.1km s-min=7.3km az=59.0*

MEX ***12*** *07:57:28.3±0.9, 15°.44N×93°.36W, h87^{km}±6^{km}, MD4.4*

GCMT ***12*** *07:57:28.1±0.1, 15°.56N±0°.01×93°.32W±0°.01, h90^{km}, MW5.5/148, Moment Tensor Solution. s148,c267; s139,c268; Duration: 1^s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.89±.02; $M_{\theta\theta}$1.18±.02; $M_{\phi\phi}$0.71±.02; $M_{r\theta}$0.80±.02; $M_{\theta\phi}$-1.06±.02; $M_{\phi r}$-0.35±.02; Best double couple: $M_0$2.14900×10^{17} NP1:ϕ_s136.00000°, δ34.00000°, λ-79.00000°. NP2:ϕ_s302.00000°, δ57.00000°, λ-97.00000°. Principal axes: T 2.2070, Plg12.0000°, Azm38.0000°; N -0.1150, Plg6.0000°, Azm306.0000°; P -2.0900, Plg77.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GCG ***12*** *07:57:29.0±9.4, 15°.65N×93°.08W, h35^{km}, MD4.9*

BJI ***12*** *07:57:29.4±0.0, 15°.40N×92°.79W, h107^{km}, mB5.3/16*

NEIC ***12*** *07:57:29, 15°.54N×93°.30W, h85^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.87; $M_{\theta\theta}$1.13; $M_{\phi\phi}$0.74; $M_{r\theta}$0.93; $M_{\theta\phi}$-1.06; $M_{\phi r}$-0.39; Fault plane solution: $M_0$2.19000×10^{17} NP1:ϕ_s138.00000°, δ32.00000°, λ-76.00000°. NP2:ϕ_s302.00000°, δ59.00000°, λ-99.00000°. Principal axes: T 2.2378, Plg13.0000°, Azm38.0000°; N -0.1032, Plg8.0000°, Azm306.0000°; P -2.1346, Plg75.0000°, Azm187.0000°;*

NEIC ***12*** *07:57:30, 15°.60N×93°.11W, h80^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.44; $M_{\theta\theta}$1.17; $M_{\phi\phi}$1.27; $M_{r\theta}$0.90; $M_{\theta\phi}$-1.14; $M_{\phi r}$-0.45; Fault plane solution: $M_0$2.60000×10^{17} NP1:ϕ_s309.03000°, δ56.15000°, λ-97.84000°. NP2:ϕ_s142.91000°, δ34.64000°, λ-78.50000°. Principal axes: T 2.5447, Plg11.0000°, Azm45.0000°; N 0.1127, Plg7.0000°, Azm313.0000°; P -2.6573, Plg77.0000°, Azm193.0000°;*

NEIC ***12*** *07:57:31, 15°.50N×93°.32W, h90^{km}, Moment Tensor*

Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.09; $M_{\theta\theta}$1.13; $M_{\phi\phi}$0.96; $M_{r\theta}$0.92; $M_{\theta\phi}$-0.70; $M_{\phi r}$-0.32; Fault plane solution: $M_0$2.17000×10^{17} NP1:ϕ_s138.00000°, δ33.00000°, λ-77.00000°. NP2:ϕ_s303.00000°, δ58.00000°, λ-98.00000°. Principal axes: T 1.9521, Plg13.0000°, Azm39.0000°; N 0.3845, Plg7.0000°, Azm307.0000°; P -2.3366, Plg75.0000°, Azm189.0000°;

UPA **12** 07:57:32.5±4.2, 15.°42N×93.°11W, h106^{km}, MW4.9

ANF **12** 07:57:51.9±1.8, 16.°94N×93.°23W, h231^{km}±17^{km}, Error ellipse: s-maj=9.7km s-min=4.2km az=177.0

ISC 12 07:57:27.8±0.4, **15.°48N**±0.°03×**93.°33W**±0.°03, **h89**^{km}±3^{km}, **h89**^{km}**:pP-P, n1023,** σ**1**^{s}**77**/1029, **mb5.3**/202, **10C-5D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.25	26	eP	Pn	07 57 39.5	-1.3
PCIG				eS	Sn	07 57 49.4	-1.1
PCIG		0.25	26	i P	Pn	07 57 39.5	-1.3
PCIG				eS	Sn	07 57 49.4	-1.1
PCIG		0.25	26		Pn	07 57 39.5	-1.3
PCIG					Sn	07 57 49.4	-1.1
THIG		1.18	119	i P	Pn	07 57 48.3	-1.2
THIG				eS	Sn	07 58 04.8	-0.9
THIG		1.18	119		Pn	07 57 48.3	-1.2
THIG					Sn	07 58 04.8	-0.9
TGIG		1.30	9	eP	Pn	07 57 50.7	-0.4
TGIG				i S	Sn	07 58 08.3	-0.3
TGIG		1.30	9	eP	Pn	07 57 50.7	-0.4
TGIG		1.30	9		Pn	07 57 50.7	-0.4
TGBT	Tuxtla Gutierr	1.31	10	eP	Pn	07 57 50.7	-0.3
CCIG	Comitan	1.40	55	eP	Pn	07 57 52.5	+0.2
CCIG				i S	Sn	07 58 12.0	+1.1
CCIG	Comitan	1.40	55	eP	Pn	07 57 52.2	-0.1
CCIG				eS	Sn	07 58 10.5	-0.4
CCIG	Comitan	1.40	55		Pn	07 57 52.6	+0.2
HUEH	Huehuetenango	1.77	95	Pn	Pn	07 57 57.5	+0.3
RTAL	Retalhuleu	1.84	121		Pn	07 57 57.6	-0.3
CMIG	Matias Romero	2.19	317	P	Pn	07 58 02.5	+0.1
	326nm,0.3s,baz=148,slow=12,SNR=1989						
CMIG				S	Sn	07 58 25.3	-3.6
	1µm,0.3s,baz=126,slow=14,SNR=9.7						
CMIG				LR	LR	07 59 00.0	
	comp=Z,8µm,20.6s,baz=86,slow=38						
CMIG	Matias Romero	2.19	317	eP	Pn	07 58 01.9	-0.5
CMIG				i S	Sn	07 58 28.7	-0.2
CMIG	Matias Romero	2.19	317	eP	Pn	07 58 02.0	-0.5
CMIG	Matias Romero	2.19	317		Pn	07 58 01.9	-0.5
CMIG					Sn	07 58 28.7	-0.2
FUG	Fuego 3	2.62	113	eP	Pn	07 58 09.5	+1.2
HUIG	Huatulco	2.69	276	eP	Pn	07 58 07.0	-2.1
HUIG				i S	Sn	07 58 37.9	-3.1
HUIG	Huatulco	2.69	276	eP	Pn	07 58 07.0	-2.1
HUIG				eS	Sn	07 58 38.8	-2.2
HUIG	Huatulco	2.69	276		Pn	07 58 07.0	-2.1
HUIG					Sn	07 58 37.9	-3.1
PCG	Pacaya	2.85	112	eP	Pn	07 58 13.5	+2.1
NBG	Las Nubes	3.02	107	eP	Pn	07 58 15.7	+1.9
NBG				eS	Sn	07 58 38.0	-11
PANG	Puerto Angel	3.04	274	eP	Pn	07 58 11.8	-2.0
MRL	Marmol	3.54	96	eP	Pn	07 58 20.6	-0.2
MRL	Marmol	3.54	96	eP	Pn	07 58 20.6	-0.2
MRL	Marmol	3.54	96	eP	Pn	07 58 21.5	+0.7
PETF	Flores	3.62	66	eP	Pn	07 58 22.7	+1.1
PETF	Flores	3.62	66	Pn	Pn	07 58 22.0	+0.3
VHO	Vista Hermosa	3.63	296	eP	Pn	07 58 20.4	-1.6
VHO				i S	Sn	07 59 03.0	-1.0
VHO	Vista Hermosa	3.63	296	eP	Pn	07 58 22.7	+0.7
VHO				eS	Sn	07 59 04.0	0.0
PEIG	Puerto Escondi	3.71	278	eP	Pn	07 58 20.9	-2.0
PEIG				i S	Sn	07 59 03.1	-2.5
PEIG	Puerto Escondi	3.71	278	i P	Pn	07 58 21.1	-1.8
PEIG				eS	Sn	07 59 04.8	-0.8
RTR	El Retiro	3.90	113	eP	Pn	07 58 27.5	+1.9
RTR	El Retiro	3.90	113	eP	Pn	07 58 27.5	+1.9
SBLS	San Blas	3.94	114	eP	Pn	07 58 28.1	+1.8
SBLS	San Blas	3.94	114	eP	Pn	07 58 28.1	+1.8
CEVE	Cerro Verde	3.95	114	eP	Pn	07 58 28.4	+2.1
CEVE				eS	Sn	07 59 20.0	+8.3
CEVE	Cerro Verde	3.95	114	eP	Pn	07 58 28.4	+2.1
CEVE				eS	Sn	07 59 20.0	+8.3
ESQI	Esquipulas	3.96	103	eP	Pn	07 58 26.8	+0.4
ESQI	Esquipulas	3.96	103		Pn	07 58 26.8	+0.4
MTO3	Montecristo	3.99	105		Pn	07 58 27.0	+0.1
CEDA	San Andres	4.16	113	eP	Pn	07 58 30.2	+1.2
CEDA				eS	Sn	07 59 23.1	+6.6
CEDA	San Andres	4.16	113	eP	Pn	07 58 30.2	+1.2
CEDA				eS	Sn	07 59 23.1	+6.6
JAYA	Jayaque - finc	4.17	115	eP	Pn	07 58 30.5	+1.1
JAYA				eS	Sn	07 59 22.4	+5.3
JAYA	Jayaque - finc	4.17	115	eP	Pn	07 58 30.5	+1.1
JAYA				eS	Sn	07 59 22.4	+5.3
YOIG	Yosondua	4.27	289	eP	Pn	07 58 29.9	-0.9
YOIG				eS	Sn	07 59 17.6	-2.1
YOIG	Yosondua	4.27	289	eP	Pn	07 58 30.8	0.0
BOQS	Boqueron	4.29	113	eP	Pn	07 58 33.7	+2.8
BOQS	Boqueron	4.29	113	eP	Pn	07 58 33.7	+2.8
UEES	Universidad Ev	4.33	113	eP	Pn	07 58 33.5	+2.1
UEES				IAML		07 59 40.9	
	comp=Z,6µm,0.3s						
UEES	Universidad Ev	4.33	113	eP	Pn	07 58 33.5	+2.1
UEES				IAML		07 59 40.9	
	comp=Z,6µm,0.3s						
SNET	Serv Nac Est T	4.35	114	eP	Pn	07 58 34.0	+2.3
SNET				eS	Sn	07 59 27.8	+6.5
SNET	Serv Nac Est T	4.35	114	eP	Pn	07 58 34.0	+2.3
SNET				eS	Sn	07 59 27.8	+6.5
SNET	Serv Nac Est T	4.35	114	Pn	Pn	07 58 32.1	+0.5
LALI	Alcalda de L	4.36	117	eP	Pn	07 58 33.1	+1.4
LALI				eS	Sn	07 59 27.1	+5.7
LALI	Alcalda de L	4.36	117	eP	Pn	07 58 33.1	+1.4
LALI				eS	Sn	07 59 27.1	+5.7
TOIG	Toxpalan	4.42	307	eP	Pn	07 58 32.9	+0.3
TOIG				i S	Sn	07 59 21.7	-1.3
TOIG	Toxpalan	4.42	307	eP	Pn	07 58 33.0	+0.3
TOIG				eS	Sn	07 59 22.4	-0.6
TXIG	Tlaxiaco	4.61	293	eP	Pn	07 58 35.1	-0.3
TXIG				i S	Sn	07 59 26.0	-1.9
TXIG	Tlaxiaco	4.61	293	eP	Pn	07 58 36.0	+0.7
COEG	Centro de Oper	4.69	113	eP	Pn	07 58 37.8	+1.6
COEG				IAML		07 59 57.1	
	comp=Z,7µm,0.5s						
COEG	Centro de Oper	4.69	113	eP	Pn	07 58 37.8	+1.6
COEG				IAML		07 59 57.1	
	comp=Z,7µm,0.5s						
TPIG	Tehuac#an	4.84	308	eP	Pn	07 58 38.8	+0.4
TPIG				i S	Sn	07 59 33.1	-0.2
TPIG	Tehuac#an	4.84	308	eP	Pn	07 58 38.8	+0.4
TPIG				eS	Sn	07 59 34.3	+1.0
TPIG	Tehuac#an	4.84	308		Pn	07 58 38.8	+0.4
TPIG					Sn	07 59 33.1	-0.2
COEB	Comit de Eme	5.05	112	eP	Pn	07 58 42.7	+1.5
COEB				eS	Sn	07 59 48.5	+10
COEB				IAML		08 00 01.7	
	comp=Z,5µm,0.4s						
COEB	Comit de Eme	5.05	112	eP	Pn	07 58 42.7	+1.5
COEB				eS	Sn	07 59 48.5	+10
COEB				IAML		08 00 01.7	
	comp=Z,5µm,0.4s						
FTIG	Fresnillo de T	5.20	298	eP	Pn	07 58 43.6	+0.4
FTIG				i S	Sn	07 59 40.7	-1.2
FTIG	Fresnillo de T	5.20	298	eP	Pn	07 58 44.5	+1.4
TLIG	Tlapa	5.43	293	eP	Pn	07 58 45.6	-0.8
TLIG				i S	Sn	07 59 46.1	-1.5
TLIG	Tlapa	5.43	293	Pn	Pn	07 58 47.9	+1.5
CRIG	Cruz Grande	5.71	283	eP	Pn	07 58 49.2	-1.0
CRIG				i S	Sn	07 59 52.9	-1.4
TGUH	Tegucigalpa,Un	6.03	103	Pn	Pn	07 58 55.1	+0.6
TGUH	Tegucigalpa,Un	6.03	103	eP	Pn	07 58 55.8	+1.2
PPM	Popocatepetl	6.19	306	i P	Pn	07 58 59.6	+2.5
PPM				i S	Sn	08 00 06.2	-0.5
YAIG	Yautepec	6.43	302	eP	Pn	07 59 01.8	+1.8
YAIG				i S	Sn	08 00 11.1	-1.0
MEIG	Mezcala	6.50	293	eP	Pn	07 59 01.8	+0.9
MEIG				i S	Sn	08 00 12.0	-1.6
PLIG	Platanillo	6.58	297	eP	Pn	07 59 03.6	+1.6
CRIN	San Cristobal	6.69	114		Pn	07 59 05.2	+1.7
TEIG	Tepich	6.74	45	eP	Pn	07 59 02.5	-1.6
TEIG	Tepich	6.74	45		Pn	07 59 02.6	-1.4
TEIG	Tepich	6.74	45	eP	Pn	07 59 03.8	-0.3
UNM	Universidad Na	6.77	305	P	Pn	07 59 08.2	+3.5
UNM	Universidad Na	6.77	305	i P	Pn	07 59 04.8	+0.1
UNM	Universidad Na	6.77	305	Pn	Pn	07 59 08.2	+3.5
CAIG	El Cayaco	6.84	284	eP	Pn	07 59 04.5	-1.0
CAIG				i S	Sn	08 00 18.1	-3.8
ZIIG	Zihuatanejo	8.08	286	eP	Pn	07 59 23.4	+1.0
ZIIG				i S	Sn	08 00 51.4	-0.8
MOIG	Morelia	8.58	300	Pn	Pn	07 59 32.7	+3.3
ACON	Acoyapa	8.66	113		Pn	07 59 30.3	-0.1
GPS2	Hotel Rincn d	9.08	120	eP	Pn	07 59 37.0	+0.9
ORTG	Ortega, Santa	9.21	123	eP	Pn	07 59 39.1	+1.3
PLVR	Palo Verde	9.30	122	eP	Pn	07 59 40.2	+1.0
DUNO	Dulce Nombre,	9.34	124	eP	Pn	07 59 40.8	+1.2
GTIG	Gomez Farias	9.34	325	eP	Pn	07 59 39.5	-0.1
GTIG				i S	Sn	08 01 20.6	-2.4
ESPN	Las Esperanzas	9.36	109		Pn	07 59 39.7	-0.1
JTS	Las Juntas de	9.66	121	P	Pn	07 59 44.7	+0.8
	comp=Z,44nm,0.3s,baz=20,slow=12,SNR=127						
JTS				S	Sn	08 01 30.6	-0.2
	baz=338,slow=21,SNR=0.9						
JTS	Las Juntas de	9.66	121	i P	Pn	07 59 44.8	+0.8
JTS				eS	Sn	08 01 32.1	+1.3
JTS	Las Juntas de	9.66	121	d iP	Pn	07 59 44.0	0.0
JTS	Las Juntas de	9.66	121	⇓eP	Pn	07 59 44.7	+0.8
JTS	Las Juntas de	9.66	121	Pn	Pn	07 59 44.6	+0.6
ARE1	Arenal 1	9.76	120	eP	Pn	07 59 47.0	+1.6
COVE	Coope Vega, Sa	9.90	117	eP	Pn	07 59 47.0	-0.3
LAFE	Finca La Fe, P	9.96	123	eP	Pn	07 59 48.8	+0.7
MMIG	Aquila	9.98	288	eP	Pn	07 59 47.6	-0.7
SRA1	San Ramn	10.16	121	eP	Pn	07 59 51.0	+0.1
JACO	JACO, Garabito	10.25	123	eP	Pn	07 59 52.9	+0.9
HDC	Heredia	10.51	120	eP	Pn	07 59 56.6	+0.9
HDC	Heredia	10.51	120	eP	Pn	07 59 56.6	+0.9
HDC	Heredia	10.51	120		Pn	07 59 56.6	+0.9
LCR2	La Lucha 2	10.74	121	eP	Pn	08 00 00.1	+1.2
CVTR	Volcan Turrial	10.80	119	eP	Pn	07 59 59.8	0.0
RIMA	Rio Macho	10.84	120	⇓eP	Pn	08 00 01.1	+0.8
BATAN	Batan	11.08	118	eP	Pn	08 00 03.8	+0.4
BATAN	Batan	11.08	118	eP	Pn	08 00 03.5	+0.1
EDDO	Dominical	11.13	123	eP	Pn	08 00 04.7	+0.8
PEZE	Perez Zeledon,	11.21	122	eP	Pn	08 00 05.2	+0.1
EDLM	Las Mercedes	11.34	122	eP	Pn	08 00 07.7	+0.9
ZAIG	Zacatecas	11.34	311	i P	Pn	08 00 06.2	-0.9
ZAIG	Zacatecas	11.34	311	Pn	Pn	08 00 10.7	+3.6
EDPN	Palmar Norte	11.62	123	eP	Pn	08 00 11.4	+0.8
DRK0	Durika	11.63	121	i P	Pn	08 00 11.8	+1.0
DRK0	Durika	11.63	121	eP	Pn	08 00 11.6	+0.7
EDBA	Buenos Aires	11.66	121	eP	Pn	08 00 11.5	+0.3
POTG	Potrero Grande	11.85	121	eP	Pn	08 00 13.8	0.0
PTJ1	Puerto Jimnez	11.99	124	eP	Pn	08 00 17.6	+1.9
PIRO	Carate, Puerto	12.04	125	eP	Pn	08 00 18.3	+2.0
EDSV	San Vito	12.10	122	eP	Pn	08 00 18.6	+1.5
FSCY	Frank Sound, G	12.20	70		Pn	08 00 17.8	-0.6
MLIR3	Monte Lirio, C	12.23	122	eP	Pn	08 00 20.1	+1.2
CDITO	Canoas	12.32	123	i P	Pn	08 00 20.8	+0.8
CDITO	Canoas	12.32	123	eP	Pn	08 00 20.7	+0.8
CCOL	Caracol de Cor	12.33	124	eP	Pn	08 00 22.6	+2.4
BC3P	Paso Ancho	12.40	121	eP	Pn	08 00 21.9	+0.6
BCO2	Palmira	12.52	121	i P	Pn	08 00 23.5	+0.6
PTAR3	Potrerillos Ar	12.56	121	eP	Pn	08 00 24.4	+1.0
BAGA3	Bagala, Chiriq	12.66	122	eP	Pn	08 00 25.7	+1.1
KVTX	Kingsville	12.73	341		Pn	08 00 28.3	+2.9
LOCO3	Loma Colorada,	12.78	122	eP	Pn	08 00 27.0	+0.8
LCCY	Blossom Villag	13.30	70		Pn	08 00 32.5	-0.5
REME3	Remedios, Chir	13.36	121	eP	Pn	08 00 35.7	+1.8
NANC3	Nancito, Chiri	13.44	121	eP	Pn	08 00 35.4	+0.5
CBCY	The Bluff, Cay	13.61	70	Pn	Pn	08 00 37.0	-0.2
735A	Kenedy	13.94	343		Pn	08 00 43.0	+1.7
833A	Chaparral WMA,	13.96	337	P	Pn	08 00 42.0	+0.4
	baz=154,SNR=112						
833A				S	Sn	08 03 04.7	-10
	baz=154						
833A	Chaparral WMA,	13.96	337	Pn	Pn	08 00 42.5	+0.9
GMAL	Guarumal, Vera	14.11	122	eP	Pn	08 00 43.2	-0.4
PNME	Penonome	14.49	117	eP	Pn	08 00 49.0	+0.4
HKT	Hockley	14.58	351	c iP	Pn	08 00 47.7	-1.9
HKT	Hockley	14.58	351		Pn	08 00 49.8	+0.2
BCIP	Isla Barro Col	14.60	114	eP	Pn	08 00 48.5	-1.5
VTON	El Valle, Cocl	14.61	116	eP	Pn	08 00 49.8	-0.5
CACAO	El Cacao, Vera	14.65	122	i P	Pn	08 00 51.2	+0.6
ZANG	Zanguenga, Cho	14.67	115	eP	Pn	08 00 49.5	-1.3
PDIG	Papasquiaro	14.77	312	i P	Pn	08 00 51.3	-1.0
CHOR3	La Chorrera	14.78	115	eP	Pn	08 00 52.2	-0.1
AZU	Azuero	14.89	119	eP	Pn	08 00 53.4	-0.3
UPA	Univ. de Panam	14.95	114	eP	Pn	08 00 51.1	-3.3
441A	DeRidder	15.20	0	Pn	Pn	08 00 57.3	-0.2
441A				IAmb	IAmb	08 01 28.4	
	comp=Z,295nm,0.9s						
MTDJ	Mount Denham	15.36	78		Pn	08 00 58.8	-1.0
061Z	Ochoppi	15.54	46	Pn	Pn	08 01 01.3	-0.5
061Z				IAmb	IAmb	08 01 09.5	
	comp=Z,284nm,0.7s						
PCJ	Portland Cotta	15.66	80	i P	P	08 01 11.1	+5.4
435B	Jarrell	15.72	346	P	Pn	08 01 04.2	+0.1
	baz=164,SNR=24						
435B				S	Sn	08 03 45.0	-13
	baz=164						
435B	Jarrell	15.72	346	Pn	Pn	08 01 04.2	+0.1
435B				IAmb	IAmb	08 01 42.6	
	comp=Z,234nm,0.7s						
342A	Flagon Creek P	15.85	3	Pn	Pn	08 01 05.5	-0.2
342A				IAmb	IAmb	08 01 09.7	
	comp=Z,289nm,1.1s						
STH	Stony Hill	16.03	78	i P	P	08 01 11.5	+1.7
JCT	Junction City	16.07	339	P	Pn	08 01 05.9	-2.5
JCT				pmax	pmax		
	comp=Z,617nm,1.7s						
JCT	Junction City	16.07	339	P	Pn	08 01 09.1	+0.7
	baz=156,SNR=98						
JCT				S	Sn	08 03 55.3	-11
	baz=156						
JCT	Junction City	16.07	339		Pn	08 01 05.9	-2.5
JCT				IAmb	IAmb	08 01 41.0	
	comp=Z,617nm,1.7s						
344A	Westbrook Farm	16.07	8	Pn	Pn	08 01 08.3	-0.2
344A				IAmb	IAmb	08 01 42.1	
	comp=Z,301nm,1.0s						
HOJ	Hope	16.08	79	i P	P	08 01 12.7	+2.3
HPIG		16.18	317	eP	Pn	08 01 10.0	0.0
HPIG		16.18	317		Pn	08 01 10.7	+0.7
346A	Big Creek Wild	16.22	12	Pn	Pn	08 01 10.3	-0.1
346A				IAmb	IAmb	08 01 16.6	
	comp=Z,288nm,0.8s						
NATX	Nacogdoches	16.25	356	P	Pn	08 01 10.1	-0.5
	baz=175,SNR=34						
NATX				S	Sn	08 03 55.4	-15
	baz=175						
NATX	Nacogdoches	16.25	356		Pn	08 01 10.2	-0.5
NATX				IAmb	IAmb	08 01 42.8	
	comp=Z,362nm,1.1s						
UPD2	Meteti	16.48	113	eP	Pn	08 01 10.8	-3.0
451A	Vernon	16.59	23		Pn	08 01 15.4	+0.4
451A				IAmb	IAmb	08 02 07.0	
	comp=Z,296nm,1.1s						
237A	Washetta, Mont	16.60	353		P	08 01 15.6	-0.4
237A				IAmb	IAmb	08 01 49.3	
	comp=Z,307nm,1.1s						
BRAL	Brewton	16.64	19	P	Pn	08 01 14.9	-0.6
	baz=201,SNR=14						
BRAL				S	Sn	08 04 05.8	-14
	baz=201						
BRAL	Brewton	16.64	19		P	08 01 16.6	+0.2
060A	Indiantown	16.66	44	Pn	Pn	08 01 14.6	-1.3
DWPF	Disney Wildern	16.72	39	P	P	08 01 16.9	-0.4
	baz=223						
DWPF				S	Sn	08 04 11.7	-10
	baz=223						
DWPF	Disney Wildern	16.72	39	Pn	Pn	08 01 16.4	-0.1
DWPF				IAmb	IAmb	08 01 49.7	
	comp=Z,560nm,1.4s						
TXAR	Lajitas Array	16.76	327	P	P	08 01 19.7	+1.8
	comp=Z,2.5nm,0.3s,baz=149,slow=11,SNR=309						
TXAR				P3KPbc		08 36 17.1	
	comp=Z,0.0nm,0.3s,baz=286,slow=0.7,SNR=1.4						
TXAR	Lajitas Array	16.76	327	P	P	08 01 18.3	+0.4
TXAR	Lajitas Array	16.76	327		P	08 01 18.3	+0.4
TX31	Lajitas Ar. Si	16.76	327		P	08 01 19.2	+1.2
TX31				IAmb	IAmb	08 01 23.6	
	comp=Z,624nm,1.4s						
TX32	Lajitas Array	16.76	327		P	08 01 19.1	+1.2
VBMS	Vicksburg	16.86	8	P	P	08 01 18.7	-0.2
	baz=189,SNR=27						
VBMS	Vicksburg	16.86	8	P	Pn	08 01 18.4	+0.2
WHTX	Lake Whitney,	16.86	348	P	Pn	08 01 18.5	+0.2
	baz=165,SNR=34						
WHTX	Lake Whitney,	16.86	348		Pn	08 01 18.3	+0.1
WHTX				IAmb	IAmb	08 02 03.6	
	comp=Z,378nm,1.1s						
656A	Willston	17.03	34	P	Pn	08 01 20.0	-0.3
656A				IAmb	IAmb	08 01 57.7	
	comp=Z,417nm,1.1s						
143A	Socs Landing,	17.23	5	P	Pn	08 01 22.1	-0.7
143A				IAmb	IAmb	08 01 56.9	
	comp=Z,458nm,1.2s						
146A	Union	17.51	12	P	P	08 01 26.0	-0.1
146A				IAmb	IAmb	08 01 48.5	
	comp=Z,474nm,1.2s						
250A	Grady	17.64	20	P	Pn	08 01 29.0	+1.3
250A				IAmb	IAmb	08 01 32.3	
	comp=Z,458nm,1.4s						
SLBS	Sierra La Lagu	17.64	300	P	Pn	08 01 29.4	+1.5
352A	Blakely	17.68	24	P	Pn	08 01 29.0	+0.8
352A				IAmb	IAmb	08 01 57.2	
	comp=Z,176nm,0.8s						
Z41A	Richland Creek	17.70	1	P	Pn	08 01 28.7	+0.2
	baz=181,SNR=57						
Z41A	Richland Creek	17.70	1	P	Pn	08 01 29.7	+1.1
Z38A	Mt. Pleasant	17.76	355	P	Pn	08 01 30.6	+1.3
GTBY	Guantanamo Bay	17.91	73	P	Pn	08 01 31.2	+0.1
GTBY				IAmb	IAmb	08 01 33.3	
	comp=Z,443nm,1.4s						
GTBY	Guantanamo Bay	17.91	73	eP	P	08 01 30.6	+0.1
ABTX	Abilene, Hawle	18.00	343	P	Pn	08 01 32.9	+0.7
	baz=159,SNR=46						
ABTX	Abilene, Hawle	18.00	343	P	Pn	08 01 33.2	+1.0
LPIG	La Paz	18.12	301	P	Pn	08 01 37.1	+3.6
	comp=Z,1.0nm,0.3s,baz=75,slow=3.2,SNR=15						
WLAR	White Oak Lake	18.13	1		Pn	08 01 33.5	-0.1
TIGA	Tifton	18.21	28	P	Pn	08 01 34.7	0.0
	baz=211,SNR=18						
TIGA	Tifton	18.21	28	P	Pn	08 01 34.6	0.0
TIGA				IAmb	IAmb	08 01 39.8	
	comp=Z,271nm,0.8s						
Z47A	Carrollton	18.27	14	P	Pn	08 01 34.9	-0.5
Z47A				IAmb	IAmb	08 02 07.2	
	comp=Z,363nm,0.9s						
LRAL	Lakeview Retre	18.39	17	P	P	08 01 35.7	-0.1
	baz=199,SNR=36						
LRAL	Lakeview Retre	18.39	17	P	P	08 01 36.1	+0.4
SJCC	San Jacinto, C	18.55	105	eP	P	08 01 36.4	-1.4
Y45A	Yeager Farm, C	18.62	10	P	Pn	08 01 39.1	-0.5
DBBC	Dabeiba	18.77	115	eP	P	08 01 39.2	-0.9
152A	Waverly Hall	18.81	23	P	Pn	08 01 41.1	-0.8
152A				IAmb	IAmb	08 02 15.0	
	comp=Z,231nm,1.2s						
X40A	Basin Creek Fa	18.93	1	P	P	08 01 41.1	-0.5
	baz=181,SNR=19						
X40A	Basin Creek Fa	18.93	1	P	P	08 01 42.1	+0.5
X40A				IAmb	IAmb	08 02 13.2	
	comp=Z,513nm,1.8s						
MIAR	Mount Ida	18.98	359	P	P	08 01 41.3	-0.9
MIAR				pmax	pmax		
	comp=Z,397nm,1.1s						
MIAR	Mount Ida	18.98	359	P	P	08 01 42.3	+0.1
	baz=179,SNR=110						
MIAR	Mount Ida	18.98	359	P	P	08 01 41.3	-0.9
MIAR				IAmb	IAmb	08 02 14.8	
	comp=Z,397nm,1.1s						
UREC	San Jos de Ur	19.04	112	eP	P	08 01 41.0	-2.0
X43A	Marvell	19.08	6	P	P	08 01 43.8	+0.6
	baz=187,SNR=80						
X43A	Marvell	19.08	6	P	Pn	08 01 45.8	+0.8
X37A	Clayton	19.11	355	P	Pn	08 01 45.6	+0.2
255A	Hazlehurst	19.13	29		P	08 01 44.1	+0.3
UALR	University of	19.23	2	P	P	08 01 45.1	+0.2
Z51A	Franklin	19.23	21	P	P	08 01 45.2	+0.2
OXF	Oxford	19.27	10	P	Pn	08 01 47.0	-0.2
	baz=191						
154A	Montrose	19.42	27	P	P	08 01 47.4	+0.4
CBOC	Ciudad Bolivar	19.50	117	eP	P	08 01 48.6	+0.4
MNTX	Cornudas Mount	19.53	328	P	Pn	08 01 49.6	-0.7
	baz=142,SNR=78						
W41B	Gary Mavity, V	19.63	3	P	P	08 01 49.3	0.0
	baz=182,SNR=46						
W41B	Gary Mavity, V	19.63	3	P	P	08 01 49.7	+0.4
W41B				IAmb	IAmb	08 01 56.7	
	comp=Z,358nm,1.3s						
W39A	Magazine	19.64	359	P	P	08 01 49.8	+0.5
	baz=178,SNR=18						
W39A	Magazine	19.64	359	IAmb	IAmb	08 02 23.3	
	comp=Z,223nm,1.1s						
X48A	Hartselle	19.72	16	P	P	08 01 49.5	-0.7
WHAR	Wooly Hollow	19.75	3	P	P	08 01 50.0	-0.5
WHAR				IAmb	IAmb	08 01 58.0	
	comp=Z,376nm,1.3s						
ZARC	Zaragoza, Cauc	19.75	112	eP	P	08 01 47.9	-2.9
HELC	Santa Helena	19.76	116	eP	P	08 01 50.8	-0.4
HELC	Santa Helena	19.76	116	eP	P	08 01 50.6	-0.6
PLMC	San Jos del P	19.78	120	eP	P	08 01 50.0	-1.2
WMOK	Wichita Mounta	19.79	347	P	P	08 01 51.0	-0.1
WMOK				pmax	pmax		
	comp=Z,92nm,1.0s						
WMOK	Wichita Mounta	19.79	347	P	Pn	08 01 52.4	-1.0
	baz=164,SNR=45						
WMOK	Wichita Mounta	19.79	347	P	P	08 01 51.0	-0.1
MET	Memphis--Engin	19.79	8	P	P	08 01 50.8	-0.2
W35A	Tecumseh	19.84	351	P	P	08 01 52.0	+0.5
SMLC	San Martn de	19.95	107	eP	P	08 01 50.3	-2.7
GOGA	Godfrey	19.96	25	P	P	08 01 51.8	-1.0
	baz=208,SNR=20						
PLAL	Pickwick Lake	19.98	13	IAmb	IAmb	08 02 27.5	
	comp=Z,231nm,1.1s						
HBAR	Harrisburg	20.13	6	P	Pn	08 01 56.3	-1.0
FPAL	Fort Paine	20.21	19	P	P	08 01 54.6	-1.0
FPAL				IAmb	IAmb	08 02 32.2	
	comp=Z,300nm,1.0s						
LPAR	Lepanto	20.22	7	P	P	08 01 55.2	-0.4
YOTC	Yotoco, Valle	20.25	123	eP	P	08 01 56.8	+0.6
MSTX	Muleshoe	20.29	337	P	P	08 01 57.1	+0.6
	baz=152,SNR=85						
MSTX	Muleshoe	20.29	337	P	P	08 01 56.8	+0.3
MSTX				IAmb	IAmb	08 02 29.4	
	comp=Z,223nm,1.1s						
OK025	Westminster Rd	20.34	351	P	P	08 01 57.1	+0.2
FCAR	Ozark Folk Cen	20.35	3	P	P	08 01 55.8	-1.3
FCAR				IAmb	IAmb	08 02 27.8	
	comp=Z,252nm,1.0s						
CRJC	Cerrejon, Guaj	20.39	100	eP	P	08 01 55.5	-2.3
157A	Early Branch	20.46	31	P	Pn	08 02 01.6	+0.5
	baz=216						
TUL1	Leonard	20.46	354	P	P	08 01 58.3	0.0
	baz=173,SNR=107						
TUL1	Leonard	20.46	354	P	P	08 01 58.8	+0.6
TUL1				IAmb	IAmb	08 02 05.6	
	comp=Z,260nm,0.8s						
X51A	Calhoun	20.48	20	P	Pn	08 02 00.5	-0.9
X51A				IAmb	IAmb	08 02 38.4	
	comp=Z,162nm,1.1s						
PTBC	PUERTO BERRIO,	20.53	114	eP	P	08 01 57.5	-1.7
RREF	El Recreo	20.57	119	eP	P	08 02 01.3	+1.1
LCAR	Lake Charles	20.59	5	P	P	08 01 59.9	+0.2
LCAR				IAmb	IAmb	08 02 30.1	
	comp=Z,336nm,1.1s						
GNAR	Gosnell	20.61	8	P	Pn	08 02 02.3	-0.6
OK031	S. Brethren Rd	20.63	352	P	P	08 02 00.6	+0.5
NORC	Norcasia	20.63	117	eP	P	08 01 59.9	-0.5
HHAR	Hobbs	20.72	359	P	P	08 02 01.6	+0.6
HHAR				IAmb	IAmb	08 02 35.0	
	comp=Z,157nm,1.0s						
AMTX	Amarillo	20.73	340	P	P	08 02 02.3	+1.1
	baz=156						
AMTX	Amarillo	20.73	340	P	P	08 02 02.0	+0.8
AMTX				IAmb	IAmb	08 02 07.3	
	comp=Z,201nm,0.7s						
ANIL	Santa Ana	20.74	120	eP	Pn	08 02 03.4	-1.5
BBAC	Balboa, Cauca	20.75	129	eP	Pn	08 02 03.7	-1.2
TOLC	Tolima	20.76	120	eP	P	08 02 03.3	+1.4
U40A	Yellville	20.79	1	P	P	08 02 02.5	+0.6
	baz=181,SNR=64						
U40A	Yellville	20.79	1	IAmb	IAmb	08 02 33.5	
	comp=Z,209nm,0.9s						
Z56A	Williston	20.81	29	P	P	08 02 01.5	-0.4
	baz=214,SNR=28						
OCAC	Ocana	20.85	108	eP	P	08 02 00.9	-1.9
U38A	Gravette	20.89	358	IAmb	IAmb	08 02 40.0	
	comp=Z,204nm,1.2s						
W50A	Signal Mountai	20.91	19	IAmb	IAmb	08 02 38.9	

	comp=Z,138nm,0.8s						
V48A	**Smith Brothers**	**21.00**	**15**	IAmb	IAmb	08 02 34.5	
	comp=Z,374nm,1.1s						
GLAT	**Glass**	**21.01**	**9**	P	**P**	**08 02 03.7**	**-0.5**
RGRS	**Roger Stewart**	**21.05**	**32**	P	**P**	**08 02 06.1**	**+1.5**
Z57A	**Bowman**	**21.10**	**31**	P	**P**	**08 02 08.0**	**+2.9**
	baz=215						
OTAV	**Otavalo**	**21.11**	**135**	P	**P**	**08 02 07.0**	**+1.2**
OTAV				pmax	pmax		
	comp=Z,69nm,1.2s						
OTAV	**Otavalo**	**21.11**	**135**	P	**P**	**08 02 07.0**	**+1.2**
OTAV	**Otavalo**	**21.11**	**135**	*e*P	**P**	**08 02 07.8**	**+2.0**
HSIG		**21.11**	**313**	P	**P**	**08 02 07.5**	**+2.1**
HSIG				IAmb	IAmb	08 02 50.2	
	comp=Z,510nm,2.0s						
PENMO	**Penman**	**21.14**	**8**	P	**P**	**08 02 06.7**	**+1.2**
WVT	**Waverly**	**21.14**	**12**	P	**P**	**08 02 06.3**	**+0.7**
WVT				pmax	pmax		
	comp=Z,195nm,1.2s						
WVT	**Waverly**	**21.14**	**12**	P	**P**	**08 02 03.4**	**-2.1**
	baz=194						
WVT	**Waverly**	**21.14**	**12**	P	**P**	**08 02 06.3**	**+0.7**
WVT				IAmb	IAmb	08 02 34.8	
	comp=Z,195nm,1.2s						
SRIG	**Santa Rosalia**	**21.15**	**307**	P	**P**	**08 02 07.5**	**+1.8**
SRIG				IAmb	IAmb	08 02 32.7	
	comp=Z,518nm,2.0s						
UTMT	**University of**	**21.15**	**10**	P	**P**	**08 02 07.0**	**+1.4**
HODGE	**Hodges**	**21.17**	**26**	P	**P**	**08 02 06.7**	**+0.9**
CSU	**Charleston Sou**	**21.17**	**32**	P	**P**	**08 02 08.2**	**+2.3**
ORTC	**Ortega, Tolima**	**21.19**	**121**	*e*P	**P**	**08 02 06.8**	**+0.5**
PCON	**Cinco Dias**	**21.20**	**126**	*e*P	**P**	**08 02 08.8**	**+1.8**
NHSC	**New Hope**	**21.21**	**32**	P	**P**	**08 02 09.7**	**+3.4**
	baz=217						
NHSC	**New Hope**	**21.21**	**32**	P	**P**	**08 02 09.8**	**+3.5**
Y56A	**Pelion**	**21.22**	**29**	P	**P**	**08 02 06.6**	**+0.2**
	baz=213,SNR=5.6						
MARP	**Paez Belalcaza**	**21.23**	**125**	*e*P	**P**	**08 02 08.8**	**+1.8**
W52A	**Murphy**	**21.27**	**22**	P	**P**	**08 02 07.3**	**+0.3**
SPBC	**San Pablo de B**	**21.28**	**115**	*e*P	**P**	**08 02 05.7**	**-1.6**
PARMO	**Parma**	**21.34**	**8**	P	**P**	**08 02 07.3**	**-0.3**
SDDR	**Presa de Saban**	**21.34**	**77**	P	**P**	**08 02 07.5**	**-0.4**
SDDR	**Presa de Saban**	**21.34**	**77**	*e*P	**P**	**08 02 07.1**	**-0.7**
PBMO	**Poplar Bluff**	**21.37**	**6**	P	**P**	**08 02 06.9**	**-1.0**
CPCT	**Cooper Cave**	**21.39**	**20**	P	**P**	**08 02 09.7**	**+1.4**
U32A	**Winter Ranch,**	**21.42**	**347**	P	**P**	**08 02 10.0**	**+1.4**
HENM	**Henderson Moun**	**21.43**	**9**	P	**P**	**08 02 09.6**	**+1.1**
CLTN	**Cedars of Leba**	**21.45**	**16**	IAmb	IAmb	08 02 40.0	
	comp=Z,178nm,1.0s						
121A	**Cookes Peak, D**	**21.46**	**325**	P	**P**	**08 02 12.0**	**+2.8**
	baz=138,SNR=172						
ROSC	**El Rosal**	**21.47**	**118**	P	**P**	**08 02 08.3**	**-1.4**
	comp=Z,16nm,0.5s,baz=307,slow=20,SNR=4.8						
ROSC	**El Rosal**	**21.47**	**118**	P	**P**	**08 02 09.8**	**+0.1**
ROSC	**El Rosal**	**21.47**	**118**	*e*P	**P**	**08 02 09.5**	**-0.2**
T35A	**Sooner Cattle**	**21.54**	**353**	P	**P**	**08 02 08.0**	**-1.7**
BG3	**Lake Jocassee**	**21.56**	**24**	P	**P**	**08 02 10.9**	**+0.9**
BG3				IAmb	IAmb	08 02 27.2	
	comp=Z,180nm,1.0s						
Z58A	**St. Stephen**	**21.58**	**32**	P	**P**	**08 02 10.0**	**-0.2**
	baz=217,SNR=7.6						
MGMO	**Mountain Grove**	**21.61**	**2**	P	**P**	**08 02 11.2**	**+0.7**
BARC	**Barichara**	**21.64**	**112**	*e*P	**P**	**08 02 09.3**	**-2.0**
GC02	**Grant County #**	**21.66**	**350**	P	**P**	**08 02 11.4**	**+0.3**
GC02					**S**	**08 06 08.0**	**+2.0**
BETC	**Betania**	**21.74**	**124**	*e*P	**P**	**08 02 12.6**	**+0.5**
KAN13	**South Haven SW**	**21.76**	**351**	P	**P**	**08 02 12.7**	**+0.6**
PAMC	**Pamplona, Colo**	**21.77**	**110**	*e*P	**P**	**08 02 11.2**	**-1.7**
V51A	**Loudon**	**21.77**	**20**	IAmb	IAmb	08 02 43.4	
	comp=Z,168nm,1.4s						
Z59A	**Georgetown, SC**	**21.79**	**33**	P	**P**	**08 02 15.2**	**+2.8**
	baz=219						
TKL	**Tuckaleechee C**	**21.84**	**21**	P	**P**	**08 02 11.7**	**-1.3**
	comp=Z,7.0nm,0.5s,baz=201,slow=10,SNR=18						
TKL				S	**S**	**08 06 06.9**	**-2.4**
	comp=Z,8.2nm,0.6s,baz=300,slow=15,SNR=1.3						
TKL	**Tuckaleechee C**	**21.84**	**21**	P	**P**	**08 02 13.6**	**+0.6**
TKL				IAmb	IAmb	08 02 47.5	
	comp=Z,119nm,0.9s						
Y57A	**Sumter**	**21.84**	**30**	P	**P**	**08 02 14.4**	**+1.5**
	baz=215,SNR=8.6						
PAULI	**Pauline**	**21.86**	**26**	IAmb	IAmb	08 02 48.5	
	comp=Z,382nm,1.6s						
X56A	**White Oak**	**21.93**	**28**	P	**P**	**08 02 14.6**	**+0.6**
	baz=213,SNR=7.9						
KAN10	**Anthony SW Sta**	**21.97**	**350**	P	**P**	**08 02 14.9**	**+0.6**
GARC	**Garzon, Huila**	**22.00**	**125**	*e*P	**P**	**08 02 15.7**	**+0.6**
U49A	**Red Boiling Sp**	**22.00**	**16**	P	**P**	**08 02 13.5**	**-1.1**
U49A				IAmb	IAmb	08 02 45.7	
	comp=Z,191nm,0.8s						
RUSC	**La Rusia**	**22.04**	**113**	*e*P	**P**	**08 02 13.3**	**-2.6**
KAN08	**Anthony NE Sta**	**22.05**	**350**	P	**P**	**08 02 16.4**	**+1.2**
V52A	**Sevierville**	**22.07**	**21**	P	**P**	**08 02 14.9**	**-0.5**
CHIC	**Chingaza**	**22.08**	**117**	*e*P	**P**	**08 02 16.0**	**-0.2**
Y58A	**Scranton**	**22.11**	**31**	P	**P**	**08 02 15.5**	**-0.3**
	baz=217,SNR=5.1						
Y58A	**Scranton**	**22.11**	**31**	P	**P**	**08 02 17.5**	**+1.7**
Y58A				IAmb	IAmb	08 02 44.9	
	comp=Z,123nm,0.8s						
BNM	**Barren Site**	**22.12**	**330**	P	**P**	**08 02 18.6**	**+2.3**
S39A	**Bolivar**	**22.12**	**0**	P	**P**	**08 02 15.1**	**-0.9**
V53A	**Saluda**	**22.20**	**23**	IAmb	IAmb	08 02 36.6	
	comp=Z,139nm,1.1s						
Y22D	**IRIS PASSCAL I**	**22.20**	**329**	P	**P**	**08 02 21.0**	**+3.9**
	baz=143						
BIRD	**Birdtown, Kers**	**22.32**	**29**	P	**P**	**08 02 19.3**	**+1.2**
BIRD				IAmb	IAmb	08 02 35.0	
	comp=Z,114nm,1.0s						
KMSC	**Kings Mountain**	**22.34**	**27**	P	**P**	**08 02 16.7**	**-1.7**
	baz=211,SNR=6.7						
KMSC	**Kings Mountain**	**22.34**	**27**	IAmb	IAmb	08 03 05.6	
	comp=Z,130nm,1.0s						
X57A	**Johnson Farm,**	**22.34**	**30**	P	**P**	**08 02 18.2**	**-0.1**
	baz=215,SNR=7.6						
VILC	**Villavicencio,**	**22.38**	**118**	*e*P	**P**	**08 02 19.1**	**0.0**
SIUC	**Southern Illin**	**22.44**	**9**	P	**P**	**08 02 17.9**	**-1.4**
FVM	**French Village**	**22.56**	**6**	P	**P**	**08 02 19.1**	**-1.5**
FVM				pmax	pmax		
	comp=Z,72nm,0.9s						
FVM	**French Village**	**22.56**	**6**	P	**P**	**08 02 19.1**	**-1.5**
CCM	**Cathedral Cave**	**22.56**	**4**	P	**P**	**08 02 19.1**	**-1.5**
CCM				pmax	pmax		
	comp=Z,113nm,0.7s						
CCM	**Cathedral Cave**	**22.56**	**4**	P	**P**	**08 02 17.8**	**-2.8**
	baz=185						
CCM				S	**S**	**08 06 19.4**	**-2.2**
	baz=185						
CCM	**Cathedral Cave**	**22.56**	**4**	P	**P**	**08 02 19.1**	**-1.5**
CCM				IAmb	IAmb	08 02 41.3	
	comp=Z,113nm,0.7s						
Y59A	**Loris**	**22.58**	**33**	P	**P**	**08 02 20.5**	**-0.4**
	baz=218						
Y59A	**Loris**	**22.58**	**33**	P	**P**	**08 02 22.5**	**+1.7**
Y59A				IAmb	IAmb	08 02 53.1	
	comp=Z,195nm,0.9s						
W56A	**Indian Trail**	**22.67**	**28**	P	**P**	**08 02 18.4**	**-3.3**
	baz=213						
ANMO	**Albuquerque**	**22.69**	**331**	P	**P**	**08 02 24.1**	**+1.9**
	comp=Z,57nm,0.9s,baz=149,slow=11,SNR=159						
ANMO				S	**S**	**08 06 28.0**	**+3.9**
	comp=Z,5.6nm,1.0s,baz=167,slow=9.4,SNR=1.5						
ANMO	**Albuquerque**	**22.69**	**331**	*ce*P	**P**	**08 02 22.2**	**0.0**
ANMO				pmax	pmax		
	comp=Z,72nm,1.0s						
ANMO	**Albuquerque**	**22.69**	**331**	P	**P**	**08 02 23.9**	**+1.7**
	baz=145						
ANMO				S	**S**	**08 06 30.3**	**+6.2**
	baz=145						
TZTN	**Tazewell**	**22.71**	**21**	P	**P**	**08 02 23.4**	**+1.2**
	baz=205						
TZTN	**Tazewell**	**22.71**	**21**	P	**P**	**08 02 21.2**	**-1.1**
TZTN				IAmb	IAmb	08 03 14.4	
	comp=Z,467nm,1.8s						
R40A	**Maddies Statio**	**22.74**	**2**	P	**P**	**08 02 21.5**	**-1.0**
T50A	**Nancy**	**22.74**	**18**	IAmb	IAmb	08 02 51.6	
	comp=Z,263nm,1.8s						
X58A	**Rowland**	**22.79**	**31**	P	**P**	**08 02 23.8**	**+0.8**
	baz=217						
X58A	**Rowland**	**22.79**	**31**	IAmb	IAmb	08 03 00.8	
	comp=Z,292nm,1.3s						
W57A	**Gilead**	**22.95**	**29**	P	**P**	**08 02 24.0**	**-0.7**
	baz=214						
W57A	**Gilead**	**22.95**	**29**	IAmb	IAmb	08 02 44.1	
	comp=Z,199nm,1.3s						
TAMC	**Tame, Arauca**	**22.96**	**111**	*e*P	**P**	**08 02 21.2**	**-3.8**
TUC	**Tucson**	**23.08**	**320**	P	**P**	**08 02 28.3**	**+2.3**
TUC				pmax	pmax		
	comp=Z,150nm,1.2s						
TUC	**Tucson**	**23.08**	**320**	P	**P**	**08 02 27.7**	**+1.7**
	baz=132						
TUC				S	Sn	08 06 44.0	-11
	baz=132						
TUC	**Tucson**	**23.08**	**320**	P	**P**	**08 02 28.3**	**+2.3**
TUC				IAmb	IAmb	08 02 50.5	
	comp=Z,150nm,1.1s						
SDV	**Santo Domingo**	**23.12**	**104**	P	**P**	**08 02 23.8**	**-2.9**
	comp=Z,27nm,0.7s,baz=313,slow=4.3,SNR=17						
SDV				ScP	**ScP**	**08 09 45.2**	**+2.3**
	comp=Z,7.2nm,0.6s,baz=37,slow=2.4,SNR=7.3						
SDV				LR	LR	08 12 35.9	
	comp=Z,821nm,18.8s,baz=284,slow=40						
SDV	**Santo Domingo**	**23.12**	**104**	P	**P**	**08 02 23.8**	**-2.9**
SDV	**Santo Domingo**	**23.12**	**104**	*e*P	**P**	**08 02 23.2**	**-3.5**
SDV	**Santo Domingo**	**23.12**	**104**	*e*P	**P**	**08 02 24.6**	**-2.1**
X59A	**McDuffie Farm,**	**23.17**	**32**	P	**P**	**08 02 26.4**	**-0.4**
	baz=218						
W58A	**Raeford**	**23.21**	**30**	P	**P**	**08 02 28.4**	**+1.3**
	baz=216						
SLM	**Saint Louis**	**23.23**	**6**	P	**P**	**08 02 25.6**	**-1.6**
SLM				pmax	pmax		
	comp=Z,725nm,1.5s						
SLM	**Saint Louis**	**23.23**	**6**	P	**P**	**08 02 25.6**	**-1.6**
V56A	**Mocksville**	**23.27**	**27**	P	**P**	**08 02 28.5**	**+0.8**
	baz=212						
U54A	**Nelsons Funny**	**23.33**	**24**	P	**P**	**08 02 28.3**	**+0.1**
	baz=209,SNR=8.7						
MACC	**Macarena, Meta**	**23.34**	**123**	*e*P	**P**	**08 02 28.8**	**+0.3**
R32A	**Long Quarter,**	**23.34**	**349**	P	**P**	**08 02 27.7**	**-0.6**
R32A				IAmb	IAmb	08 03 04.7	
	comp=Z,178nm,1.1s						
WCI	**Wyandotte Cave**	**23.50**	**14**	P	**P**	**08 02 28.4**	**-1.3**
WCI				pmax	pmax		
	comp=Z,236nm,0.9s						
WCI	**Wyandotte Cave**	**23.50**	**14**	P	**P**	**08 02 28.9**	**-0.7**
	baz=197						
WCI				S	**S**	**08 06 39.2**	**+2.6**
	baz=197						
WCI	**Wyandotte Cave**	**23.50**	**14**	P	**P**	**08 02 28.4**	**-1.3**
X60A	**Albert Glenn T**	**23.50**	**33**	P	**P**	**08 02 28.8**	**-0.9**
	baz=219						
Q44A	**Meyer Farm, Va**	**23.64**	**8**	P	**P**	**08 02 29.3**	**-1.6**
Q44A				IAmb	IAmb	08 02 52.3	
	comp=Z,259nm,1.1s						
V57A	**Coltrane Farms**	**23.66**	**28**	P	**P**	**08 02 31.0**	**-0.2**
	baz=214						
PTGC	**Puerto Gaitan,**	**23.67**	**116**	*e*P	**P**	**08 02 29.4**	**-2.1**
S51A	**Beattyville**	**23.69**	**20**	P	**P**	**08 02 30.5**	**-1.0**
S51A				IAmb	IAmb	08 03 24.8	
	comp=Z,112nm,1.1s						
KSU1	**Kansas State U**	**23.70**	**354**	P	**P**	**08 02 30.3**	**-1.3**
	baz=172,SNR=22						
KSU1				S	**S**	**08 06 39.2**	**-0.8**
	baz=172						
KSU1	**Kansas State U**	**23.70**	**354**	P	**P**	**08 02 30.5**	**-1.1**
KSU1				IAmb	IAmb	08 03 05.4	
	comp=Z,137nm,0.8s						
T25A	**Trinidad**	**23.71**	**338**	P	**P**	**08 02 34.2**	**+2.3**
	baz=152,SNR=136						
T25A				S	**S**	**08 06 47.3**	**+6.7**
	baz=152						
W59A	**Clinton**	**23.72**	**32**	P	**P**	**08 02 30.3**	**-1.4**
	baz=218						
U56A	**King**	**23.77**	**27**	P	**P**	**08 02 30.6**	**-1.6**
	baz=212,SNR=8.5						
U56A	**King**	**23.77**	**27**	IAmb	IAmb	08 03 06.7	
	comp=Z,336nm,1.4s						
PTLC	**Puerto Leguiza**	**23.80**	**128**	*e*P	**P**	**08 02 35.2**	**+2.5**
R49A	**Shelbyville**	**23.83**	**16**	IAmb	IAmb	08 02 53.1	
	comp=Z,146nm,1.1s						
V58A	**Windy Hill, Pi**	**23.89**	**30**	P	**P**	**08 02 33.5**	**+0.3**
	baz=215						
V58A	**Windy Hill, Pi**	**23.89**	**30**	IAmb	IAmb	08 03 08.6	
	comp=Z,252nm,1.4s						
CBKS	**Cedar Bluff**	**23.92**	**348**	P	**P**	**08 02 33.4**	**-0.1**
	baz=164,SNR=30						
CBKS	**Cedar Bluff**	**23.92**	**348**	IAmb	IAmb	08 03 20.8	
	comp=Z,391nm,1.6s						
P40A	**Paris**	**23.98**	**2**	IAmb	IAmb	08 03 04.2	
	comp=Z,257nm,1.1s						
W60A	**Pink Hill**	**24.01**	**33**	P	**P**	**08 02 33.3**	**-1.0**
	baz=219,SNR=6.0						
P38A	**Dawn**	**24.05**	**360**	P	**P**	**08 02 33.8**	**-0.8**
P38A				IAmb	IAmb	08 03 09.0	
	comp=Z,135nm,1.1s						
CNNC	**Cliffs of the**	**24.06**	**32**	P	**P**	**08 02 34.5**	**-0.3**
	baz=219						
CNNC	**Cliffs of the**	**24.06**	**32**	P	**P**	**08 02 34.7**	**0.0**
CNNC				IAmb	IAmb	08 03 08.4	
	comp=Z,363nm,1.5s						
GUVC	**San Jose del G**	**24.11**	**120**	*e*P	**P**	**08 02 36.8**	**+1.3**
X18A	**Snowflake**	**24.15**	**325**	P	**P**	**08 02 36.9**	**+1.0**
X18A				IAmb	IAmb	08 03 00.9	
	comp=Z,233nm,1.4s						
214A	**Organ Pipe Nat**	**24.16**	**316**	P	**P**	**08 02 38.2**	**+2.5**
	baz=128,SNR=28						
214A				S	S	08 07 03.7	+16
	baz=128						
214A	**Organ Pipe Nat**	**24.16**	**316**	P	**P**	**08 02 36.5**	**+0.7**
214A				IAmb	IAmb	08 03 01.7	
	comp=Z,370nm,1.7s						
V59A	**Middlesex**	**24.29**	**31**	P	**P**	**08 02 36.1**	**-0.7**
	baz=217,SNR=11						
U57A	**Blanch**	**24.31**	**28**	P	**P**	**08 02 36.4**	**-0.5**
	baz=214,SNR=9.6						
BLO	**Bloomington**	**24.34**	**13**	P	**P**	**08 02 35.3**	**-2.0**
BLO				pmax	pmax		
	comp=Z,196nm,0.9s						
BLO	**Bloomington**	**24.34**	**13**	P	**P**	**08 02 35.3**	**-2.0**
BLO				IAmb	IAmb	08 02 58.7	
	comp=Z,196nm,0.8s						
PIX	**Pinacate**	**24.36**	**315**	P	**P**	**08 02 40.0**	**+2.4**
W18A	**Petrified Fore**	**24.47**	**326**	P	**P**	**08 02 41.4**	**+2.6**
	baz=138						
W18A				S	S	08 07 10.8	+18
	baz=138						
W18A	**Petrified Fore**	**24.47**	**326**	P	**P**	**08 02 41.8**	**+3.1**
W18A				IAmb	IAmb	08 03 05.0	
	comp=Z,155nm,1.2s						
W61A	**Ground Anchor**	**24.48**	**34**	P	**P**	**08 02 38.8**	**+0.2**
	baz=220						
BLA	**Blacksburg**	**24.49**	**25**	P	**P**	**08 02 40.7**	**+2.0**
	baz=211						
T56A	**Rocky Mt**	**24.50**	**26**	P	**P**	**08 02 40.3**	**+1.5**
	baz=212						
P46A	**Rosedale**	**24.64**	**11**	P	**P**	**08 02 38.3**	**-1.7**
S54A	**Dingess, Beckl**	**24.64**	**23**	P	**P**	**08 02 42.2**	**+2.1**
	baz=208						
U58A	**Oxford**	**24.64**	**30**	P	**P**	**08 02 40.9**	**+0.9**
	baz=216						
SDCO	**Great Sand Dun**	**24.65**	**336**	P	**P**	**08 02 42.3**	**+1.8**
	baz=150,SNR=80						
V60A	**Jim Taylor Roa**	**24.79**	**32**	P	**P**	**08 02 43.2**	**+1.8**
	baz=219						
V60A	**Jim Taylor Roa**	**24.79**	**32**	P	**P**	**08 02 40.2**	**-1.1**
V60A				IAmb	IAmb	08 03 26.6	
	comp=Z,167nm,1.2s						
T57A	**Hurt**	**24.81**	**28**	P	**P**	**08 02 45.2**	**+3.6**
	baz=214						
KSCO	**Kaye Shedlock’**	**24.82**	**343**	P	**P**	**08 02 42.7**	**+0.8**
	baz=158,SNR=36						
KSCO	**Kaye Shedlock’**	**24.82**	**343**	P	**P**	**08 02 42.8**	**+0.9**
KSCO				IAmb	IAmb	08 03 29.8	
	comp=Z,101nm,0.9s						
P48A	**Milroy**	**24.87**	**15**	P	**P**	**08 02 39.5**	**-2.6**
P48A				IAmb	IAmb	08 03 03.1	
	comp=Z,104nm,0.8s						
R53A	**Hurricane**	**24.88**	**22**	P	**P**	**08 02 42.3**	**+0.1**
R53A				IAmb	IAmb	08 03 29.5	
	comp=Z,219nm,1.4s						
X16A	**Lo Mia Camp, P**	**24.93**	**322**	IAmb	IAmb	08 03 18.0	
	comp=Z,119nm,0.9s						
O44A	**Mansfield**	**24.94**	**9**	IAmb	IAmb	08 03 13.9	
	comp=Z,230nm,1.4s						
U59A	**Littleton**	**24.98**	**31**	P	**P**	**08 02 44.5**	**+1.4**
	baz=217						
Q51A	**Peebles**	**25.04**	**19**	IAmb	IAmb	08 03 19.1	
	comp=Z,130nm,0.8s						
T58A	**Grand View Acr**	**25.10**	**29**	P	**P**	**08 02 46.7**	**+2.5**
	baz=215						
P49A	**Miami Univ. Ec**	**25.12**	**16**	IAmb	IAmb	08 03 20.5	
	comp=Z,77nm,0.8s						
V61A	**Roper**	**25.17**	**33**	P	**P**	**08 02 48.7**	**+3.9**
	baz=220						
S22A	**4UR Ranch, Cre**	**25.19**	**334**	P	**P**	**08 02 47.5**	**+2.2**
	baz=148,SNR=59						
N38A	**Joes South For**	**25.22**	**0**	P	**P**	**08 02 43.9**	**-1.4**
N41A	**Harden Midland**	**25.23**	**4**	P	**P**	**08 02 44.3**	**-1.0**
N41A				IAmb	IAmb	08 03 19.6	
	comp=Z,203nm,1.1s						
HDIL	**Hopedale**	**25.23**	**7**	P	**P**	**08 02 43.9**	**-1.4**
	baz=189						
HDIL	**Hopedale**	**25.23**	**7**	P	**P**	**08 02 43.8**	**-1.5**
HDIL				IAmb	IAmb	08 03 16.6	
	comp=Z,152nm,0.8s						
S56A	**Natural Bridge**	**25.24**	**26**	P	**P**	**08 02 49.1**	**+3.6**
	baz=212						
MLPR	**Magueyes Islan**	**25.29**	**81**	P	**P**	**08 02 46.0**	**-0.1**
Q52A	**Bidwell**	**25.33**	**20**	P	**P**	**08 02 45.9**	**-0.4**
Q52A				IAmb	IAmb	08 03 22.6	
	comp=Z,113nm,1.0s						
U60A	**Pendleton**	**25.39**	**32**	P	**P**	**08 02 47.6**	**+0.8**
	baz=218,SNR=17						
SFIN	**Lafayette**	**25.39**	**11**	P	**P**	**08 02 45.3**	**-1.6**
	baz=194						
SFIN	**Lafayette**	**25.39**	**11**	IAmb	IAmb	08 03 21.6	
	comp=Z,133nm,0.9s						
MVCO	**Mesa Verde**	**25.49**	**331**	P	**P**	**08 02 50.4**	**+2.4**
	baz=144,SNR=102						
MVCO				S	**S**	**08 07 15.3**	**+6.3**
	baz=144						
Q53A	**Leroy**	**25.50**	**22**	P	**P**	**08 02 48.4**	**+0.6**
	baz=207						
R55A	**Marlinton**	**25.53**	**25**	P	**P**	**08 02 49.1**	**+1.0**
	baz=210						
R55A	**Marlinton**	**25.53**	**25**	IAmb	IAmb	08 03 22.5	
	comp=Z,93nm,0.9s						
AOPR	**Arecibo Observ**	**25.58**	**80**	P	**P**	**08 02 49.0**	**+0.3**
S57A	**Dark Hollow, R**	**25.58**	**27**	P	**P**	**08 02 49.5**	**+1.0**
	baz=213						
T59A	**Double "B" Far**	**25.59**	**30**	P	**P**	**08 02 49.6**	**+1.1**
	baz=217,SNR=7.9						
T59A	**Double "B" Far**	**25.59**	**30**	P	**P**	**08 02 49.3**	**+0.7**
Q24A	**Divide**	**25.59**	**338**	P	**P**	**08 02 51.3**	**+2.2**
	baz=152						
Q24A	**Divide**	**25.59**	**338**	P	**P**	**08 02 50.7**	**+1.7**
WUAZ	**Wupatki**	**25.67**	**324**	P	**P**	**08 02 52.2**	**+2.6**
	baz=136,SNR=35						
WUAZ	**Wupatki**	**25.67**	**324**	P	**P**	**08 02 52.5**	**+2.9**
WUAZ				IAmb	IAmb	08 03 16.0	
	comp=Z,235nm,1.4s						
O49A	**Covington**	**25.84**	**16**	P	**P**	**08 02 50.5**	**-0.3**
O49A				IAmb	IAmb	08 03 11.1	
	comp=Z,122nm,0.9s						
Q54A	**Coxs Mills**	**25.86**	**23**	P	**P**	**08 02 50.1**	**-1.0**
Q54A				IAmb	IAmb	08 03 39.5	
	comp=Z,174nm,1.4s						
S58A	**Poland Farm, P**	**25.86**	**29**	P	**P**	**08 02 51.5**	**+0.4**
	baz=215						
R56A	**Bull Pasture M**	**25.93**	**26**	P	**P**	**08 02 52.2**	**+0.4**
	baz=212						
P52A	**Corning**	**25.98**	**20**	P	**P**	**08 02 52.4**	**+0.2**
	baz=205						
T60A	**Surry**	**26.12**	**31**	P	**P**	**08 02 54.8**	**+1.4**
	baz=218						
SJG	**San Juan**	**26.14**	**80**	P	**P**	**08 02 51.0**	**-2.9**
	comp=Z,26nm,1.0s,baz=308,slow=6.3,SNR=3.7						
SJG				PcP	**PcP**	**08 06 18.8**	**-0.3**
	comp=Z,19nm,0.9s,baz=305,slow=3.4,SNR=3.2						
SJG	**San Juan**	**26.14**	**80**	P	**P**	**08 02 53.3**	**-0.5**
SJG					**PcP**	**08 06 20.2**	**+1.1**
N47A	**Urbana**	**26.16**	**13**	P	**P**	**08 02 54.2**	**+0.4**
N47A				IAmb	IAmb	08 03 29.4	
	comp=Z,206nm,1.1s						
BGNE	**Belgrade**	**26.17**	**352**	P	**P**	**08 02 54.0**	**+0.1**
	baz=169						
BGNE	**Belgrade**	**26.17**	**352**	P	**P**	**08 02 53.4**	**-0.5**
BGNE				IAmb	IAmb	08 03 38.4	
	comp=Z,163nm,1.0s						
GLA	**Glamis**	**26.18**	**316**	P	**P**	**08 02 56.4**	**+2.3**
GLA				pmax	pmax		
	comp=Z,213nm,1.4s						
GLA	**Glamis**	**26.18**	**316**	P	**P**	**08 02 56.7**	**+2.7**
	baz=126,SNR=26						
GLA	**Glamis**	**26.18**	**316**	P	**P**	**08 02 56.4**	**+2.3**
GLA				IAmb	IAmb	08 03 21.3	
	comp=Z,212nm,1.4s						
R58B	**Mineral**	**26.23**	**28**	P	**P**	**08 02 52.7**	**-1.7**
	baz=215						
ACSO	**Alum Creek Sta**	**26.26**	**18**	P	**P**	**08 02 52.3**	**-2.4**
	baz=203						
PV01	**Paradox Valley**	**26.27**	**332**	P	**P**	**08 02 58.0**	**+2.9**
PV01				IAmb	IAmb	08 02 59.5	
	comp=Z,85nm,1.0s						
SCIA	**State Center**	**26.33**	**0**	P	**P**	**08 02 54.1**	**-1.2**
	baz=180						
SCIA	**State Center**	**26.33**	**0**	P	**P**	**08 02 53.8**	**-1.5**
SCIA				IAmb	IAmb	08 03 17.3	
	comp=Z,134nm,0.8s						
S59A	**Mechanicsville**	**26.34**	**30**	P	**P**	**08 02 55.2**	**-0.1**
	baz=216						
ESJX	**Sierra Juarez**	**26.35**	**313**	P	**P**	**08 02 57.4**	**+1.6**
PV15	**Paradox Valley**	**26.40**	**332**	P	**P**	**08 02 59.3**	**+3.1**
PV15				IAmb	IAmb	08 03 01.4	
	comp=Z,90nm,1.0s						
PV02	**Paradox Valley**	**26.41**	**332**	P	**P**	**08 02 59.3**	**+3.0**
R58A	**Rapidan**	**26.45**	**28**	P	**P**	**08 02 54.1**	**-2.2**
	baz=214						
SMCO	**Snowmass**	**26.47**	**336**	P	**P**	**08 02 59.4**	**+2.4**
OGNE	**Ogallala**	**26.47**	**345**	P	**P**	**08 02 57.5**	**+0.8**
	baz=160,SNR=8.6						
OGNE	**Ogallala**	**26.47**	**345**	P	**P**	**08 02 58.0**	**+1.3**
ISCO	**Idaho Springs**	**26.50**	**338**	P	**P**	**08 02 58.6**	**+1.4**
ISCO				pmax	pmax		
	comp=Z,33nm,1.1s						
ISCO	**Idaho Springs**	**26.50**	**338**	P	**P**	**08 02 58.6**	**+1.4**
	baz=152,SNR=23						
ISCO	**Idaho Springs**	**26.50**	**338**	P	**P**	**08 02 58.5**	**+1.4**
PDMCI	**Parker Dam,Lak**	**26.50**	**319**	P	**P**	**08 02 58.6**	**+1.7**
	baz=130,SNR=31						
L34A	**Svendsen Farm,**	**26.52**	**355**	P	**P**	**08 02 56.0**	**-1.1**
L40A	**Anamosa**	**26.55**	**4**	P	**P**	**08 02 55.8**	**-1.4**
L40A				IAmb	IAmb	08 03 35.4	
	comp=Z,152nm,0.9s						
Q56A	**Snyder Ridge,**	**26.55**	**25**	P	**P**	**08 02 56.8**	**-0.6**
	baz=211						
S60A	**Water View**	**26.60**	**31**	P	**P**	**08 02 57.6**	**-0.2**
	baz=218						
L42A	**Oliver, Polo**	**26.62**	**6**	P	**P**	**08 02 56.8**	**-1.1**
L42A				IAmb	IAmb	08 03 32.6	
	comp=Z,130nm,1.1s						
CBN	**Corbin Frederi**	**26.66**	**29**	P	**P**	**08 02 59.2**	**+0.9**
	baz=216						
MTP	**Monte Pirata**	**26.71**	**80**	P	**P**	**08 02 56.9**	**-2.0**
PV23	**Carpenter Ridg**	**26.73**	**332**	P	**P**	**08 03 01.2**	**+2.0**
PV23				IAmb	IAmb	08 03 03.7	
	comp=Z,144nm,0.8s						
R59A	**King George, V**	**26.77**	**29**	P	**P**	**08 02 58.6**	**-0.7**
	baz=216						
RMX	**La Rumorosa**	**26.78**	**314**	P	**P**	**08 03 02.3**	**+2.7**
SWSC	**Sam W. Stewart**	**26.78**	**314**	P	**P**	**08 03 01.7**	**+2.3**
	baz=125,SNR=14						
IKP	**In-Ko-Pah, Jac**	**26.82**	**314**	P	**P**	**08 03 02.2**	**+2.3**
	baz=124,SNR=17						
U15A	**North Rim**	**26.84**	**325**	P	**P**	**08 03 03.3**	**+3.0**
U15A				IAmb	IAmb	08 03 52.1	
	comp=Z,152nm,1.6s						
W13A	**Hualapai Mount**	**26.86**	**320**	P	**P**	**08 03 03.6**	**+3.1**
Q57A	**Strasburg**	**26.88**	**26**	P	**P**	**08 02 58.1**	**-2.2**
	baz=213						
ATAH	**Atahualpa**	**26.91**	**146**	P	**P**	**08 03 01.7**	**+0.5**
	comp=Z,28nm,0.8s,baz=322,slow=5.6,SNR=20						
ATAH				PcP	**PcP**	**08 06 22.6**	**+1.1**
	comp=Z,9.2nm,1.0s,baz=341,slow=2.6,SNR=3.0						
ATAH				LR	LR	08 12 19.2	
	comp=Z,657nm,20.1s,baz=312,slow=33						
BC3	**Big Chuckawall**	**26.96**	**316**	P	**P**	**08 03 03.4**	**+2.2**
	baz=126,SNR=70						
L44A	**Lake County Fo**	**27.01**	**9**	P	**P**	**08 03 01.0**	**-0.4**
	baz=191						
CBX	**Cerro Bola**	**27.03**	**312**	P	**P**	**08 03 05.4**	**+3.6**
CBX					**PcP**	**08 06 23.1**	**+1.8**
IRM	**Iron Mountain**	**27.06**	**317**	P	**P**	**08 03 04.4**	**+2.4**
	baz=128,SNR=25						
O54A	**Avella**	**27.08**	**22**	P	**P**	**08 03 00.6**	**-1.4**
R60A	**Leonardtown, M**	**27.08**	**30**	P	**P**	**08 03 01.4**	**-0.7**
	baz=217						
NEE2	**Needles Airpor**	**27.10**	**319**	P	**P**	**08 03 05.0**	**+2.6**
	baz=129,SNR=6.5						

TKX	Tecate	27.13	313	P	P	08 03 01.2	-1.4
TKX				IAmb	IAmb	08 03 26.4	
	comp=Z,219nm,1.9s						
MONP2	Monument Peak	27.18	314	P	P	08 03 05.7	+2.5
	baz=124,SNR=14						
BAR	Barrett	27.23	313	P	P	08 03 05.5	+2.0
P57A	Homestead Farm	27.42	26	P	P	08 03 04.0	-1.1
	baz=213						
K31A	O'Neill	27.45	351	P	P	08 03 05.7	+0.4
K31A				IAmb	IAmb	08 04 02.9	
	comp=Z,132nm,1.1s						
JFWS	Jewell Farm	27.47	5	P	P	08 03 04.2	-1.2
	baz=186,SNR=8.9						
JFWS	Jewell Farm	27.47	5	IAmb	IAmb	08 03 27.0	
	comp=Z,134nm,0.8s						
Q59A	Harwood	27.52	29	P	P	08 03 05.3	-0.6
	baz=216						
BELC	Belle Mtn. Jos	27.53	316	P	P	08 03 08.4	+2.1
	baz=126,SNR=28						
N23A	Red Feather La	27.59	339	P	P	08 03 08.6	+1.7
	baz=152						
TPFO	Pinon Flats	27.61	315	P	P	08 03 08.8	+1.9
	baz=125,SNR=17						
XPFO	Pion Flat	27.61	315	P	P	08 03 08.6	+1.6
PFO	Pinyon Flats O	27.61	315	P	P	08 03 09.2	+2.1
	comp=Z,12nm,1.0s,baz=123,slow=6.8,SNR=19						
PFO	Pinyon Flats O	27.61	315	P	P	08 03 09.4	+2.3
	baz=125,SNR=16						
PFO	Pinyon Flats O	27.61	315	P	P	08 03 08.6	+1.5
109C	Camp Elliot, M	27.66	313	P	P	08 03 08.7	+1.4
	baz=123						
PHWY	Pilot Hill	27.79	340	P	P	08 03 09.8	+1.0
LCMT	Little Creek M	27.79	324	P	P	08 03 10.7	+2.0
O20A	White River Ci	27.80	335	P	P	08 03 11.0	+2.4
	baz=147,SNR=25						
O20A	White River Ci	27.80	335	P	P	08 03 11.2	+2.5
O56A	Blue Knob Stat	27.85	25	P	P	08 03 07.9	-1.1
	baz=211						
N54A	Moraine State	27.91	22	P	P	08 03 06.9	-2.5
	baz=208						
SRU	San Rafael Swe	27.96	331	P	P	08 03 12.7	+2.5
SRU				pmax	pmax		
	comp=Z,112nm,1.8s						
SRU	San Rafael Swe	27.96	331	P	P	08 03 12.7	+2.5
M53A	WI Miller and	28.09	20	P	P	08 03 12.3	+1.2
	baz=206						
MURC	Murrieta	28.11	314	P	P	08 03 14.4	+3.0
	baz=124,SNR=11						
O57A	Amberson	28.18	26	P	P	08 03 12.0	+0.1
	baz=213						
P59A	Jarrettsville	28.22	28	P	P	08 03 11.0	-1.2
	baz=216						
HEC	Hector,Ludlow	28.25	317	P	P	08 03 15.3	+2.7
	baz=127,SNR=17						
ECSD	EROS Data Cent	28.30	355	P	P	08 03 11.6	-1.2
	baz=173,SNR=36						
ECSD	EROS Data Cent	28.30	355	P	P	08 03 12.0	-0.9
BBRC	Big Bear Solar	28.30	316	P	P	08 03 16.2	+3.0
	baz=125,SNR=10						
I40A	Norwalk	28.41	4	P	P	08 03 13.9	0.0
SSPA	Standing Stone	28.43	25	P	P	08 03 12.4	-1.7
	baz=212						
I37A	Lemond, Waseca	28.44	360	P	P	08 03 14.1	0.0
I37A				IAmb	IAmb	08 04 17.6	
	comp=Z,58nm,0.8s						
PCRV	Puerto La Cruz	28.45	97	P	P	08 03 11.7	-2.9
	comp=Z,3.8nm,0.4s,baz=45,slow=22,SNR=1.5						
PCRV				LR	LR	08 15 39.5	
	comp=Z,353nm,18.6s,slow=39						
M54A	Oil Creek Stat	28.50	22	P	P	08 03 12.8	-1.9
	baz=208						
N56A	West Decatur	28.51	24	P	P	08 03 12.8	-2.0
	baz=211						
N57A	Milroy	28.67	26	P	P	08 03 15.1	-1.1
	baz=213						
SCI2	San Clemente I	28.73	312	P	P	08 03 16.4	-0.4
	baz=121						
P60A	Greenville	28.75	29	P	P	08 03 16.9	0.0
	baz=217						
BFSC	Mount Baldy Ra	28.79	315	P	P	08 03 19.1	+1.6
	baz=124,SNR=10						
GSC	Goldstone, Bar	28.84	318	P	P	08 03 20.1	+2.2
	baz=127,SNR=7.7						
SHOC	Shoshone, Teco	28.87	319	P	P	08 03 20.5	+2.5
	baz=128,SNR=12						
N58A	Sunbury	29.10	26	P	P	08 03 18.6	-1.4
	baz=214						
DECC	Green Verdugo	29.26	314	P	P	08 03 23.2	+1.7
	baz=123						
SUSD	Miller	29.26	352	P	P	08 03 21.5	+0.1
	baz=168						
SUSD	Miller	29.26	352	P	P	08 03 21.3	-0.1
SUSD				IAmb	IAmb	08 04 09.1	
	comp=Z,124nm,1.2s						
O60A	Telford	29.26	29	P	P	08 03 20.5	-0.9
	baz=217						
K22A	Casper	29.35	340	P	P	08 03 23.6	+1.2
	baz=153,SNR=15						
EDW2	Edwards Air Fo	29.38	316	P	P	08 03 24.9	+2.2
	baz=124,SNR=8.1						
O61A	Allentown	29.49	30	P	P	08 03 24.0	+0.6
	baz=219						
TPNV	Topopah Spring	29.52	321	P	P	08 03 27.3	+3.3
	baz=130,SNR=28						
LRMC	Laurel Mtn Rad	29.52	317	P	P	08 03 26.7	+2.7
	baz=126,SNR=13						
N59A	State Game Lan	29.57	28	P	P	08 03 24.3	0.0
	baz=216						
N59A	State Game Lan	29.57	28	IAmb	IAmb	08 03 57.5	
	comp=Z,126nm,1.9s						
FURC	Furnace Creek,	29.59	319	P	P	08 03 27.5	+3.1
	baz=128,SNR=28						
M58A	Price's Panora	29.64	26	P	P	08 03 24.3	-0.6
	baz=214						
SPMN	Marine on St.	29.65	1	P	P	08 03 23.8	-1.1
	baz=181,SNR=21						
SPMN	Marine on St.	29.65	1	IAmb	IAmb	08 03 54.5	
	comp=Z,79nm,0.8s						
MPMC	Manual Prospec	29.74	318	P	P	08 03 28.7	+2.7
	baz=127,SNR=29						
L56A	Greenwood	29.84	24	P	P	08 03 26.4	-0.2
	baz=211						
DUG	Dugway, Tooele	29.91	329	P	P	08 03 30.1	+2.7
	baz=140,SNR=9.7						
RSSD	Black Hills	29.96	344	P	P	08 03 28.8	+0.9
RSSD				pmax	pmax		
	comp=Z,41nm,1.2s						
RSSD	Black Hills	29.96	344	P	P	08 03 29.1	+1.2
	baz=159						
RSSD	Black Hills	29.96	344	P	P	08 03 28.8	+0.9
L57A	Andrews Acres	30.00	25	P	P	08 03 26.9	-1.1
	baz=213						
SCZ2	Santa Cruz Isl	30.03	313	P	P	08 03 28.9	+0.5
	baz=121						
R11A	Troy Canyon, C	30.06	324	P	P	08 03 31.6	+2.9
	baz=133,SNR=26						
ARVC	Arvin	30.08	315	P	P	08 03 31.5	+2.7
	baz=124,SNR=12						
ISA	Isabella, Lake	30.15	316	P	P	08 03 32.4	+2.9
	baz=125,SNR=11						
M59A	Waymart	30.23	27	P	P	08 03 29.1	-0.9
	baz=216						
GRAC	Grapevine Rang	30.24	320	P	P	08 03 32.1	+1.9
	baz=128,SNR=47						
CWC	Cottonwood Cre	30.35	318	P	P	08 03 34.3	+3.0
	baz=127						
K56A	Middlesex	30.40	24	P	P	08 03 29.3	-2.3
	baz=211						
HWUT	Hardware Ranch	30.43	332	P	P	08 03 34.0	+1.9
L58A	Harry Jones Me	30.46	26	P	P	08 03 30.6	-1.5
	baz=214						
PAL	Palisades	30.51	30	P	P	08 03 33.0	+0.6
	baz=219						
BINY	Binghamton	30.53	26	P	P	08 03 31.5	-1.1
	baz=214						
PDAR	Pinedale Array	30.55	336	P	P	08 03 33.8	+0.7
	comp=Z,5.1nm,0.7s,baz=130,slow=9.8,SNR=41						
PDAR				PcP	PcP	08 06 30.1	+0.1
	comp=Z,4.3nm,0.6s,baz=140,slow=5.6,SNR=9.0						
PDAR				pPcP		08 06 53.0	
	comp=Z,1.9nm,0.5s,baz=146,slow=5.3,SNR=6.2						
PDAR				LR	LR	08 19 24.4	
	comp=Z,610nm,18.3s,baz=153,slow=43						
PDAR	Pinedale Array	30.55	336	P	P	08 03 34.2	+1.1
PDAR				PcP	PcP	08 06 30.2	+0.1
BW06	Boulder Array	30.55	336	P	P	08 03 34.1	+1.1
	baz=148,SNR=14						
BW06				S	S	08 08 32.3	+3.7
	baz=148						
PKM	Mcpherson Peak	30.63	314	P	P	08 03 36.2	+2.3
	baz=122,SNR=7.2						
VES	Vestal, Richgr	30.66	316	P	P	08 03 36.5	+2.6
	baz=124,SNR=38						
M61A	Granite Spring	30.81	30	P	P	08 03 34.5	-0.6
	baz=219						
TIN	Tinemaha, Big	30.82	319	P	P	08 03 38.1	+2.7
	baz=127,SNR=17						
L59A	Walton	30.93	27	P	P	08 03 35.6	-0.6
	baz=216						
L59A	Walton	30.93	27	IAmb	IAmb	08 04 11.8	
	comp=Z,199nm,2.0s						
SMMC	Simmler	30.98	315	P	P	08 03 39.4	+2.6
	baz=122,SNR=6.0						
J56A	Wolcott	31.08	24	P	P	08 03 37.0	-0.4
	baz=212						
K58A	Earlville	31.13	26	P	P	08 03 36.8	-1.1
	baz=214						
K58A	Earlville	31.13	26	IAmb	IAmb	08 04 49.0	
	comp=Z,78nm,1.4s						
AHID	Auburn Hatcher	31.17	334	P	P	08 03 40.6	+2.1
E43A	Lone Tree Farm	31.25	8	IAmb	IAmb	08 04 25.5	
	comp=Z,114nm,1.8s						
MLAC	Mammoth, Mammo	31.55	319	P	P	08 03 45.0	+3.1
	baz=127,SNR=12						
ELK	Elko	31.55	327	P	P	08 03 44.5	+2.5
ELK						08 06 34.3	
ELK				pmax	pmax		
	comp=Z,22nm,1.1s						
ELK	Elko	31.55	327	P	P	08 03 44.5	+2.5
ELK					PcP	08 06 34.3	+1.6
REDW	Red Top Meadow	31.56	335	P	P	08 03 43.9	+1.9
SADO	Sadowa	31.57	19	P	P	08 03 39.0	-2.7
	comp=Z,8.4nm,0.9s,baz=233,slow=9.2,SNR=5.3						
E28A	Huff	31.60	350	P	P	08 03 42.4	+0.3
E28A				IAmb	IAmb	08 03 45.3	
	comp=Z,81nm,0.7s						
LOHW	Long Hollow	31.67	336	IAmb	IAmb	08 03 46.4	
	comp=Z,55nm,0.9s						
NVAR	Mina Array Bea	31.72	321	P	P	08 03 46.3	+2.9
	comp=Z,63nm,1.0s,baz=135,slow=7.8,SNR=271						
NVAR				pP	pP	08 04 05.4	+1.5
	comp=Z,28nm,0.7s,baz=129,slow=8.0,SNR=7.5						
NVAR				sP	sP	08 04 15.5	+1.3
	comp=Z,75nm,0.9s,baz=128,slow=7.4,SNR=7.7						
NVAR				PcP	PcP	08 06 34.2	+1.1
	comp=Z,13nm,0.9s,baz=148,slow=3.1,SNR=5.5						
NVAR				pPcP		08 06 58.2	
	comp=Z,3.2nm,0.7s,baz=158,slow=2.0,SNR=4.9						
NVAR				LR	LR	08 17 50.2	
	comp=Z,988nm,18.7s,baz=135,slow=38						
NVAR				P3KPbc		08 35 17.3	
	comp=Z,0.2nm,0.7s,baz=276,slow=2.6,SNR=4.5						
M63A	Gales Ferry	31.72	31	P	P	08 03 41.5	-1.6
	baz=221						
NNA	Nana	31.80	148	PcP	PcP	08 06 32.9	-0.6
	comp=Z,9.2nm,0.8s,baz=307,slow=5.1,SNR=2.7						
MOOW	Moose Ponds	31.84	336	IAmb	IAmb	08 03 47.8	
	comp=Z,42nm,0.9s						
FLWY	Flagg Ranch	32.10	336	IAmb	IAmb	08 03 53.8	
	comp=Z,38nm,0.8s						
J59A	Piesco	32.19	26	P	P	08 03 47.3	0.0
	baz=215						
M64A	Tiverton	32.25	32	P	P	08 03 47.3	-0.4
	baz=222						
H17A	Grant Village	32.32	337	P	P	08 03 50.9	+2.2
	baz=147,SNR=30						
EYMN	Ely	32.41	2	P	P	08 03 48.8	-0.3
	baz=183						
RLMT	Red Lodge	32.47	339	P	P	08 03 51.0	+1.1
	baz=150,SNR=30						
RLMT	Red Lodge	32.47	339	P	P	08 03 50.8	+0.9
MDND	Maddock	32.69	352	P	P	08 03 51.5	-0.1
	baz=168,SNR=7.0						
NCB	Newcomb	32.72	26	IAmb	IAmb	08 04 27.3	
	comp=Z,104nm,1.9s						
B35A	Bob, Littlefor	32.79	360	IAmb	IAmb	08 04 21.7	
	comp=Z,70nm,1.2s						
LAO	LASA Array	32.92	344	P	P	08 03 53.8	+0.2
	baz=156,SNR=14						
ALGO	Algonquin Park	32.97	20	P	P	08 03 53.1	-0.9
	baz=208						
H58A	Gabriels	33.10	25	P	P	08 03 52.8	-2.4
	baz=215						
LONY	Lake Ozonia	33.10	25	P	P	08 03 53.7	-1.4
	baz=214						
GCMT	Greycliff	33.19	339	P	P	08 03 57.1	+1.0
HLID	Hailey	33.27	332	P	P	08 03 58.9	+2.0
	baz=140,SNR=68						
BOZ	Bozeman (W)	33.74	337	P	P	08 04 03.0	+2.2
	baz=147,SNR=38						
DGMT	Dagmar	34.09	347	P	P	08 04 04.3	+0.5
	baz=161,SNR=17						
DGMT	Dagmar	34.09	347	IAmb	IAmb	08 04 05.7	
	comp=Z,42nm,0.9s						
E56A	St. Veronique	34.53	22	P	P	08 04 05.3	-2.3
	baz=212						
WVOR	Wild Horse Val	34.55	326	IAmb	IAmb	08 04 42.3	
	comp=Z,55nm,1.0s						
ULM	Lac du Bonnet	34.74	357	P	P	08 04 07.3	-1.9
	comp=Z,7.1nm,0.4s,baz=180,slow=9.1,SNR=14						
ULM				S	S	08 09 26.2	-6.7
	comp=Z,9.3nm,1.1s,baz=330,slow=14,SNR=3.6						
ULM				LR	LR	08 20 19.8	
	comp=Z,562nm,20.3s,baz=174,slow=40						
ULM	Lac du Bonnet	34.74	357	IAmb	IAmb	08 04 38.3	
	comp=Z,40nm,1.0s						
D55A	Sainte-Anne-du	34.78	22	P	P	08 04 07.4	-2.2
	baz=211						
O03E	Paynes Creek	35.00	321	P	P	08 04 13.7	+1.9
	baz=126,SNR=19						
E58A	La Victoria	35.06	24	P	P	08 04 10.1	-2.0
	baz=215						
EGMT	Eagleton	35.17	341	P	P	08 04 14.3	+1.2
	baz=151,SNR=43						
EGMT	Eagleton	35.17	341	P	P	08 04 14.4	+1.3
EGMT				IAmb	IAmb	08 04 16.0	
	comp=Z,77nm,1.0s						
O02D	Mt. Diablo Mer	35.54	320	P	P	08 04 18.0	+1.5
	baz=125,SNR=13						
MSO	Missoula	35.66	336	P	P	08 04 18.4	+1.1
	baz=144,SNR=52						
MSO	Missoula	35.66	336	IAmb	IAmb	08 04 20.4	
	comp=Z,49nm,1.0s						
D58A	Chemin du LacG	35.81	24	P	P	08 04 16.5	-2.1
	baz=215						
M04C	Macdoel	35.93	323	P	P	08 04 21.3	+1.6
	baz=128,SNR=13						
N02D	Trinity Center	35.95	321	P	P	08 04 20.4	+0.4
	baz=126						
K05A	Summer Lake	35.98	325	IAmb	IAmb	08 05 17.8	
	comp=Z,46nm,1.4s						
LATQ	La Tuque	36.09	24	P	P	08 04 18.5	-2.3
	baz=215						
M02C	Callahan	36.29	321	P	P	08 04 23.7	+0.8
	baz=126,SNR=7.5						
F10A	Beach Ranch, E	36.40	332	P	P	08 04 24.8	+1.1
K04D	Chiloquin, OR	36.41	324	P	P	08 04 25.0	+1.2
	baz=129,SNR=10.0						
YBH	Yreka Blue Hor	36.41	322	P	P	08 04 24.9	+1.0
YBH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
YBH	Yreka Blue Hor	36.41	322	P	P	08 04 24.9	+1.0
L04D	Klamath Falls	36.47	323	P	P	08 04 26.2	+1.9
	baz=128,SNR=11						
MATQ	Matagami	36.49	17	P	P	08 04 21.9	-2.4
	baz=206						
KHMM	Horse Mountain	36.53	320	P	P	08 04 25.8	+0.8
KHMM				IAmb	IAmb	08 04 28.9	
	comp=Z,53nm,1.0s						
J05D	Fort Rock, OR	36.54	325	P	P	08 04 26.4	+1.4
	baz=130,SNR=7.4						
PINE	Pine Mountain	36.71	326	IAmb	IAmb	08 04 59.5	
	comp=Z,37nm,1.1s						
G08A	Pilot Rock	36.72	329	IAmb	IAmb	08 04 58.4	
	comp=Z,67nm,1.9s						
ETMB	Extrema	36.79	131	*e*P	P	08 04 27.1	-0.1
F64A	Sherman	36.82	29	P	P	08 04 26.4	-0.7
	baz=222						
J04D	Umpqua Nationa	37.00	324	P	P	08 04 30.9	+2.0
	baz=129,SNR=13						
D61A	St Aubert, Com	37.01	26	P	P	08 04 29.0	+0.3
	baz=219						
L02E	Cave Junction	37.20	322	P	P	08 04 32.4	+2.0
	baz=126						
E09A	Wood Farm, Sta	37.23	331	IAmb	IAmb	08 05 02.8	
	comp=Z,37nm,1.0s						
MACA	Manacapuru-AM	37.24	117	*e*P	P	08 04 29.7	-1.4
I05D	Terrebonne, OR	37.29	326	P	P	08 04 32.8	+1.6
	baz=131,SNR=7.3						
WALA	Waterton Lakes	37.48	338	P	P	08 04 33.8	+1.0
WALA				IAmb	IAmb	08 05 23.8	
	comp=Z,46nm,1.4s						
I04A	Tendick Farm,	37.52	325	P	P	08 04 34.3	+1.1
	baz=129,SNR=9.3						
K02D	Willamette Mer	37.56	322	P	P	08 04 34.8	+1.3
	baz=127						
E08A	Dider Farm, El	37.64	331	P	P	08 04 34.9	+0.8
HAWA	Hanford	37.79	330	P	P	08 04 35.9	+0.6
G05D	Wamic, OR	37.88	327	P	P	08 04 38.5	+2.4
	baz=132,SNR=12						
I03D	Drain, OR	37.99	324	P	P	08 04 38.9	+1.9
	baz=128,SNR=10						
J01E	Myrtle Point	37.99	323	P	P	08 04 39.4	+2.4
	baz=127,SNR=5.3						
E07A	Sunnyside	38.07	330	P	P	08 04 39.6	+1.9
NEW	Newport	38.11	334	P	P	08 04 39.0	+1.0
	baz=141,SNR=19						
NEW	Newport	38.11	334	IAmb	IAmb	08 05 02.0	
	comp=Z,90nm,1.9s						
H04D	Lebanon	38.17	325	P	P	08 04 39.7	+1.2
	baz=130,SNR=9.7						
C09A	Chrisman Ranch	38.25	333	P	P	08 04 40.5	+1.3
C09A				IAmb	IAmb	08 04 42.3	
	comp=Z,52nm,0.9s						
F05D	White Salmon	38.39	328	P	P	08 04 43.1	+2.7
	baz=133,SNR=16						
I02D	Swisshome	38.52	324	P	P	08 04 43.2	+1.7
	baz=128						
F04D	Rainier, OR	39.33	327	P	P	08 04 50.4	+2.2
	baz=131						
E04D	Cinebar	39.41	328	P	P	08 04 50.5	+1.6
	baz=132						
C06D	Leavenworth	39.54	331	P	P	08 04 51.5	+1.5
	baz=135						
FFC	Flin Flon	39.73	352	P	P	08 04 51.4	0.0
FFC				pmax	pmax		
	comp=Z,22nm,0.9s						
FFC	Flin Flon	39.73	352	P	P	08 04 51.4	0.0
D04E	Lakebay	39.94	329	P	P	08 04 55.7	+2.5
	baz=132						
B06A	Marblemount	40.24	331	P	P	08 04 57.3	+1.6
B06A				IAmb	IAmb	08 05 27.7	
	comp=Z,35nm,0.8s						
D03D	Eldon	40.34	329	P	P	08 04 58.0	+1.4
	baz=132,SNR=6.4						
B05A	Bryant	40.35	330	P	P	08 04 57.3	+0.7
	baz=134,SNR=7.7						
A04D	Lummi Island	40.96	330	P	P	08 05 03.0	+1.4
	baz=134,SNR=23						
MDP	Montagnes des	41.27	100	PcP	PcP	08 07 02.6	+0.6
	comp=Z,36nm,1.0s,baz=352,slow=5.8,SNR=4.0						
PGC	Sidney	41.27	330	IAmb	IAmb	08 05 37.4	
	comp=Z,64nm,1.1s						
MNMC	Minye Minye	41.58	145	P	P	08 05 07.9	+0.5
MNMC				IAmb	IAmb	08 05 10.1	
	comp=Z,54nm,0.9s						
ITTB	Itaituba	42.12	115	*e*P	P	08 05 09.6	-2.1
GO01	Chusmiza	42.23	145	P	P	08 05 13.4	+0.4
GO01				IAmb	IAmb	08 05 16.9	
	comp=Z,68nm,1.4s						
MALB	Monte Alegre	42.29	111	*e*P	P	08 05 12.8	-0.2
TA01	Diego Aracena	42.43	147	P	P	08 05 14.9	+0.9
PB08	IPOC Station P	42.64	145	P	P	08 05 16.9	+0.8
FCC	Fort Churchill	43.21	359	P	P	08 05 18.4	-1.3
FCC				pmax	pmax		
	comp=Z,27nm,1.0s						
FCC	Fort Churchill	43.21	359	P	P	08 05 18.4	-1.3
VILB	Vilhena	43.28	129	*e*P	P	08 05 20.9	0.0
PB07	IPOC Station P	43.54	148	P	P	08 05 24.0	+0.8
MCPB	Macapa, AP	43.70	107	*e*P	P	08 05 23.3	-1.1
NPGB	Novo Progresso	43.77	118	*e*P	P	08 05 22.4	-2.6
PB09	IPOC Station P	43.94	147	P	P	08 05 27.2	+0.9
PB06	IPOC Station P	44.52	148	IAmb	IAmb	08 05 33.2	
	comp=Z,209nm,2.0s						
SIV	San Ignacio	44.64	133	P	P	08 05 30.9	-0.9
	comp=Z,24nm,0.5s,baz=311,slow=7.5,SNR=55						
LVC	Limon Verde	44.78	147	P	P	08 05 33.0	-0.2
	comp=Z,9.2nm,0.7s,baz=325,slow=6.7,SNR=9.9						
LVC	Limon Verde	44.78	147	P	P	08 05 33.9	+0.7
LVC				pmax	pmax		
	comp=Z,121nm,1.8s						
LVC	Limon Verde	44.78	147	P	P	08 05 33.9	+0.7
LVC				IAmb	IAmb	08 05 36.3	
	comp=Z,120nm,1.8s						
PB15	IPOC Station P	44.98	148	P	P	08 05 36.3	+1.6
RPN	Rapa Nui	45.12	200	P	P	08 05 37.2	+1.9
	comp=Z,40nm,0.9s,baz=275,slow=6.9,SNR=4.9						
PB14	IPOC Station P	45.71	150	P	P	08 05 41.7	+1.1
PB14				IAmb	IAmb	08 05 42.8	
	comp=Z,159nm,1.9s						
GO02	Mina Guanaco	46.56	150	IAmb	IAmb	08 05 50.7	
	comp=Z,66nm,1.4s						
TMAB	Tom-Au,PA,Br	48.13	108	*e*P	P	08 05 59.0	-0.1
PRPB	Parauapebas	48.17	113	*e*P	P	08 05 58.5	-1.1
YKA	Yellowknife Ar	49.30	347	P	P	08 06 07.4	0.0
	comp=Z,14nm,0.7s,baz=146,slow=8.2,SNR=202						
YKA				pP	pP	08 06 28.1	-1.1
	comp=Z,12nm,0.7s,baz=147,slow=8.1,SNR=5.6						
YKA				LR	LR	08 28 36.4	
	comp=Z,227nm,21.4s,baz=0.0,slow=38						
YKA				P4KPbc		08 43 41.1	
	comp=Z,0.6nm,0.8s,baz=144,slow=4.3,SNR=12						
LCO	Las Campanas	49.34	154	P	P	08 06 09.3	+0.8
LCO				pmax	pmax		
	comp=Z,170nm,1.8s						
LCO	Las Campanas	49.34	154	P	P	08 06 09.3	+0.8
AC05	El Transito	49.38	153	P	P	08 06 09.4	+0.8
AC05				IAmb	IAmb	08 06 11.0	
	comp=Z,26nm,0.7s						
SNDB	Serra Nova Dou	49.76	121	*e*P	P	08 06 09.8	-1.8
PP1B	Ponte de Pedra	50.17	129	*e*P	P	08 06 14.2	-0.6
GO04	Tololo Observa	50.32	154	IAmb	IAmb	08 06 19.0	
	comp=Z,42nm,0.8s						
CO01	Juntas del Tor	50.44	154	IAmb	IAmb	08 06 19.5	
	comp=Z,116nm,1.9s						
SMTB	Santa Maria do	51.37	115	*e*P	P	08 06 22.9	-0.9
ARAG	Araguaiana, MT	51.40	125	*e*P	P	08 06 24.1	+0.1
AQDB	Aquidauana	51.41	133	*e*P	P	08 06 23.2	-0.8
ROSB	Rosrio	51.99	106	*e*P	P	08 06 25.5	-2.9
TAOE	Nuku Hiva Isla	52.30	246	*e*LR	LR	08 21 36.3	
	comp=Z,2μm,27.4s						
TAOE	Nuku Hiva Isla	52.30	246	*e*T	T	09 01 38.6	
	comp=Z,56nm,0.2s						
ZON	Zonda	52.41	153	P	P	08 06 32.0	+0.8
ZON				pmax	pmax		
	comp=Z,30nm,0.8s						
ZON	Zonda	52.41	153	P	P	08 06 32.0	+0.8
ZON				IAmb	IAmb	08 06 34.9	
	comp=Z,30nm,0.8s						
ROC1	El Roble	52.70	156	P	P	08 06 34.6	+1.0
MT02	Curacav	52.90	157	IAmb	IAmb	08 06 37.4	
	comp=Z,102nm,1.6s						
CPUP	Villa Florida	54.34	140	P	P	08 06 43.9	-1.6
	comp=Z,14nm,0.7s,baz=327,slow=7.8,SNR=50						
CPUP				LR	LR	08 29 19.5	
	comp=Z,426nm,20.2s,baz=326,slow=35						
CPUP	Villa Florida	54.34	140	P	P	08 06 43.8	-1.6
BO02	Sierra Bellavi	54.40	157	P	P	08 06 46.9	+1.1
BO02				IAmb	IAmb	08 06 49.2	
	comp=Z,58nm,1.4s						
BDFB	Brasilia	54.40	123	P	P	08 06 44.4	-1.7
	comp=Z,48nm,0.7s,baz=293,slow=8.2,SNR=56						
BDFB				LR	LR	08 30 45.5	
	comp=Z,299nm,21.0s,baz=316,slow=37						
ITRB	Iturama	54.85	128	*e*P	P	08 06 49.4	+0.1
TRCB	Terra Rica	55.08	133	*e*P	P	08 06 50.2	-0.7
PCMB	Pacaembu	55.33	131	*e*P	P	08 06 52.0	-0.6
SDBA	SAO DESIDERIO	55.36	117	*e*P	P	08 06 51.7	-1.4
IPMB	Ipameri, GO	55.52	125	*e*P	P	08 06 53.7	-0.4
RKT	Rikitea	55.96	228	*e*S	S	08 14 37.2	-1.4
	comp=Z,434nm,27.5s						
RKT				*e*LR	LR	08 23 25.3	
	comp=Z,2μm,28.0s						
PTGB	Pitanga	56.72	134	*e*P	P	08 07 01.6	-1.0
BB19B	Bebedouro	57.03	128	*e*P	P	08 07 04.2	-0.6
JANB	Januaria	57.15	120	*e*P	P	08 07 05.1	-0.7
ITQB	Itaqui	57.17	142	*e*P	P	08 07 05.4	-0.2
C36M	Paulatuk	57.18	348	P	P	08 07 05.2	+0.2
	baz=144,SNR=6.3						
FRTB	Fartura	57.63	131	*e*P	P	08 07 08.9	-0.1

DAWY	Dawson	57.83	338	P	P	08 07 10.5	+0.7
VRDI	Verde Repeater	57.91	334	P	P	08 07 12.7	+2.0
VRDI				IAmb	IAmb	08 07 17.5	
	comp=Z,26nm,0.8s						
RAGM	Ragged Mountai	58.04	333	P	P	08 07 12.7	+1.3
GLB	Gilahina Butte	58.16	334	P	P	08 07 15.0	+2.8
GLB				IAmb	IAmb	08 07 16.0	
	comp=Z,40nm,0.9s						
BCAR	Beaver Creek A	58.17	336	P	P	08 07 13.9	+1.7
EPYK	Eagle Plains	58.32	341	P	P	08 07 13.8	+0.6
	baz=129						
EPYK	Eagle Plains	58.32	341	IAmb	IAmb	08 07 15.6	
	comp=Z,32nm,0.9s						
ITAB	Concordia	58.32	136	eP	P	08 07 12.9	-0.8
N25K	Chitina, Valde	58.58	334	P	P	08 07 16.6	+1.5
	baz=118,SNR=14						
INK	Inuvik	58.66	344	P	P	08 07 16.6	+1.1
	comp=Z,62nm,0.8s,baz=132,slow=6.5,SNR=7.4						
L26K	Log Cabin Wild	58.76	336	P	P	08 07 17.6	+1.3
	baz=120,SNR=16						
K27K	Chicken	58.79	337	P	P	08 07 18.7	+2.2
	baz=122						
K27K	Chicken	58.79	337	IAmb	IAmb	08 07 20.7	
	comp=Z,23nm,0.9s						
MENT	Mentasta	58.86	336	IAmb	IAmb	08 08 07.2	
	comp=Z,59nm,1.6s						
EGAK	Eagle	58.87	338	P	P	08 07 17.9	+1.0
EGAK				IAmb	IAmb	08 07 19.1	
	comp=Z,31nm,1.0s						
SPB	Sao Paulo	59.34	130	eP	P	08 07 21.4	+0.6
VAO	Valinhos	59.34	129	eP	P	08 07 21.1	+0.2
M24K	Tolsona, Glenn	59.47	334	P	P	08 07 23.3	+2.1
	baz=117,SNR=12						
SCRK	Sand Creek	59.49	337	P	P	08 07 23.0	+1.5
	baz=120,SNR=17						
PAX	Paxson	59.58	335	IAmb	IAmb	08 07 24.9	
	comp=Z,41nm,0.9s						
CPSB	Cacapava Do Su	59.63	140	eP	P	08 07 22.5	-0.2
PLCA	Paso Flores	59.79	160	P	P	08 07 23.9	+0.2
	comp=Z,24nm,0.9s,baz=334,slow=8.1,SNR=38						
PLCA				LR	LR	08 27 05.2	
	comp=Z,170nm,21.8s,baz=350,slow=30						
PLCA	Paso Flores	59.79	160	P	P	08 07 24.4	+0.7
PLCA				pmax	pmax		
	comp=Z,58nm,1.1s						
PLCA	Paso Flores	59.79	160	P	P	08 07 24.4	+0.7
PLCA				IAmb	IAmb	08 07 25.9	
	comp=Z,58nm,1.1s						
PLCA	Paso Flores	59.79	160	eP	P	08 07 24.6	+0.9
SCM	Sheep Creek Mo	59.84	334	P	P	08 07 25.7	+1.9
SCM				pmax	pmax		
	comp=Z,35nm,0.7s						
SCM	Sheep Creek Mo	59.84	334	P	P	08 07 25.7	+1.9
SCM				IAmb	IAmb	08 08 23.6	
	comp=Z,35nm,0.7s						
PET01	Itanhaem-SP	59.87	131	eP	P	08 07 24.0	-0.4
BSCB	Bom Sucesso	59.88	126	eP	P	08 07 26.0	+1.3
SEW	Seward	60.08	331	P	P	08 07 26.9	+1.6
SEW				IAmb	IAmb	08 07 28.6	
	comp=Z,50nm,1.1s						
KNK	Knik Glacier	60.15	333	IAmb	IAmb	08 07 29.0	
	comp=Z,41nm,1.0s						
SML	Sawmill	60.26	333	IAmb	IAmb	08 08 12.5	
	comp=Z,51nm,1.2s						
O22K	Cooper Landing	60.35	332	P	P	08 07 25.8	-1.4
	baz=112						
PLTB	Pedras Altas	60.48	141	eP	P	08 07 28.1	-0.5
PMR	Palmer	60.52	333	IAmb	IAmb	08 07 34.5	
	comp=Z,27nm,0.8s						
CNLB	Canela	60.54	137	eP	P	08 07 29.2	+0.2
PARB	Paraibuna	60.54	129	eP	P	08 07 28.4	-0.8
GDU01	Guandu, BA	60.56	116	eP	P	08 07 28.6	-0.7
RC01	Rabbit Creek A	60.59	332	P	P	08 07 30.1	+1.1
	baz=112,SNR=16						
BRLK	Bradley Lake	60.62	331	P	P	08 07 31.2	+2.0
RCBR	Riachuelo	60.68	106	P	P	08 07 28.1	-2.2
	comp=Z,10nm,0.4s,baz=288,slow=5.9,SNR=20						
LL01	San Ignacio de	60.71	162	P	P	08 07 29.8	0.0
KDAK	Kodiak Island	60.79	328	i P	P	08 07 29.0	-1.2
KDAK				pmax	pmax		
	comp=Z,58nm,1.0s						
HDA	Harding Lake	60.83	336	P	P	08 07 31.3	+0.9
	baz=117,SNR=24						
HDA	Harding Lake	60.83	336	IAmb	IAmb	08 07 32.9	
	comp=Z,33nm,1.0s						
ILAR	Eielson Array	60.98	337	P	P	08 07 32.0	+0.6
	comp=Z,28nm,0.9s,baz=127,slow=4.8,SNR=140						
ILAR				pP	pP	08 07 52.8	-1.2
	comp=Z,9.0nm,0.5s,baz=135,slow=4.4,SNR=5.0						
ILAR				LR	LR	08 36 31.1	
	comp=Z,190nm,18.1s,baz=122,slow=38						
ILAR				PKP2bc		08 36 53.2	
	comp=Z,0.6nm,1.0s,baz=293,slow=4.7,SNR=4.2						
ILAR	Eielson Array	60.98	337	P	P	08 07 31.8	+0.4
RND	Reindeer	61.15	335	P	P	08 07 34.4	+1.7
RND				pmax	pmax		
	comp=Z,149nm,1.1s						
RND	Reindeer	61.15	335	P	P	08 07 34.4	+1.7
SUA	Susitna One	61.18	332	P	P	08 07 34.5	+1.5
ESAR	Angra dos Reis	61.28	126	eP	P	08 07 35.9	+2.0
KIP	Kipapa	61.28	286	ceP	P	08 07 35.3	+1.1
KIP				pmax	pmax		
	comp=Z,114nm,1.3s						
MCK	McKinley	61.32	335	P	P	08 07 35.0	+1.2
	baz=115,SNR=24						
CUT	Chulitna	61.33	334	P	P	08 07 35.5	+1.7
	baz=113,SNR=7.4						
POKR	Poker Flat Res	61.34	337	P	P	08 07 34.4	+0.5
	baz=117,SNR=22						
POKR	Poker Flat Res	61.34	337	P	P	08 07 34.6	+0.7
POKR				IAmb	IAmb	08 07 36.5	
	comp=Z,40nm,1.0s						
COLA	College	61.39	337	di P	P	08 07 34.6	+0.4
COLA				pmax	pmax		
	comp=Z,31nm,0.9s						
COLA	College	61.39	337	P	P	08 07 35.2	+1.1
COLA				IAmb	IAmb	08 08 17.9	
	comp=Z,42nm,0.9s						
TCOL	CIGO, UAF Yank	61.40	337	P	P	08 07 35.1	+0.9
	baz=116,SNR=14						
TCOL	CIGO, UAF Yank	61.40	337	P	P	08 07 35.3	+1.1
TCOL				IAmb	IAmb	08 08 17.9	
	comp=Z,42nm,0.9s						
BMAR	Burnt Mountain	61.47	340	P	P	08 07 34.0	-0.7
MAN01	Angra dos Reis	61.53	127	eP	P	08 07 36.8	+0.9
SJMB	Sao Joao De Ma	61.56	122	eP	P	08 07 35.9	-0.1
MDM	Murphy Dome	61.57	337	IAmb	IAmb	08 08 18.7	
	comp=Z,32nm,1.2s						
VAS01	Vassouras-RJ	61.62	126	eP	P	08 07 37.7	+1.3
VAH	Vaihoa	61.71	243	eP	P	08 07 38.6	+1.5
	comp=Z,87nm,1.3s						
SKT	Skwentna	61.72	333	IAmb	IAmb	08 07 39.3	
	comp=Z,46nm,0.9s						
NEA2	Nenana	61.74	336	P	P	08 07 37.4	+0.8
	baz=115,SNR=11						
NAN01	Guarapari, ES	62.01	120	eP	P	08 07 39.0	-0.1
KTH	Kantishna Hill	62.06	335	IAmb	IAmb	08 07 41.1	
	comp=Z,46nm,0.9s						
I23K	Minto, Yukon-K	62.09	337	P	P	08 07 40.2	+1.3
	baz=115,SNR=46						
BPAW	Bear Paw Mtn.	62.30	335	P	P	08 07 41.2	+0.9
BPAW				IAmb	IAmb	08 07 42.7	
	comp=Z,43nm,1.0s						
PPLA	Purkeypile	62.34	334	P	P	08 07 42.0	+1.2
PPLA				IAmb	IAmb	08 08 31.1	
	comp=Z,58nm,1.2s						
TULEG	Thule	62.39	6	i P	P	08 07 37.4	-3.3
RIB01	Linhares ES	62.51	122	eP	P	08 07 42.7	+0.3
MLY	Manley	62.57	336	P	P	08 07 43.0	+0.8
	baz=114,SNR=47						
CAM01	Campos-RJ	62.77	125	eP	P	08 07 44.9	+0.8
ALF01	Guarapari-ES	62.87	120	eP	P	08 07 45.6	+0.7
ICESG	Greenland Ices	63.09	19	i P	P	08 07 44.8	-1.1
COLD	Coldfoot	63.29	339	P	P	08 07 48.6	+1.8
	baz=115,SNR=36						
COLD	Coldfoot	63.29	339	IAmb	IAmb	08 07 50.4	
	comp=Z,38nm,1.1s						
MEH	Mehetia	63.31	240	eP	P	08 07 48.9	+1.2
	comp=Z,31nm,1.5s						
MEH	Mehetia	63.31	240	eT	T	09 15 38.2	
	comp=Z,6.7nm,0.3s						
TOLK	Toolik Lake Re	63.70	340	P	P	08 07 51.1	+1.5
	baz=116,SNR=39						
TOLK	Toolik Lake Re	63.70	340	P	P	08 07 51.5	+1.9
TOLK				IAmb	IAmb	08 07 52.5	
	comp=Z,42nm,0.9s						
TTA	Tatalina	64.00	333	IAmb	IAmb	08 07 53.6	
	comp=Z,51nm,1.0s						
IMAR	Indian Mountai	64.10	337	P	P	08 07 52.5	+0.4
TIAR	Tiarei	64.24	241	eP	P	08 07 54.7	+0.8
	comp=Z,12nm,1.2s						
TVO	Taravao	64.26	241	eP	P	08 07 55.0	+0.9
	comp=Z,17nm,1.4s						
PPT	Papeete	64.44	242	LR	LR	08 28 10.2	
	comp=Z,233nm,21.9s,baz=38,slow=28						
PPT2	Papeete2	64.45	242	eS	S	08 16 25.9	-1.7
	comp=Z,135nm,23.8s						
PPT2	Papeete2	64.45	242	eLR	LR	08 27 16.3	
	comp=Z,1μm,27.5s						
EUNU	Eureka	64.68	1	IAmb	IAmb	08 08 20.5	
	comp=Z,27nm,0.8s						
SUMG	Summit	65.16	16	i P	P	08 07 59.2	-0.3
SUMG	Summit	65.16	16	i P	P	08 07 59.2	-0.3
SUMG	Summit	65.16	16	i P	P	08 07 59.2	-0.3
A21K	Barrow	67.00	342	P	P	08 08 11.9	+1.2
	baz=110,SNR=39						
A21K	Barrow	67.00	342	IAmb	IAmb	08 08 13.4	
	comp=Z,80nm,1.1s						
TBI	Tubuai	67.09	236	eS	S	08 16 57.7	-1.7
	comp=Z,451nm,28.0s						
TBI				eLQ	LQ	08 25 49.6	
	comp=Z,609nm,37.5s						
TBI				eLR	LR	08 28 27.4	
	comp=Z,1μm,30.8s						
UNV	Unalaska Valle	67.72	322	IAmb	IAmb	08 08 18.5	
	comp=Z,80nm,1.0s						
RDOG	Red Dog Mine	68.14	338	P	P	08 08 18.9	+0.9
ANM	Nome	68.43	334	P	P	08 08 21.5	+1.6
ANM				pmax	pmax		
	comp=Z,18nm,1.0s						
ANM	Nome	68.43	334	P	P	08 08 21.5	+1.6
DAG	Danmarks Havn	71.53	14	i P	P	08 08 37.0	-1.6
DAG				pmax	pmax		
	comp=Z,12nm,1.0s						
DAG	Danmarks Havn	71.53	14	i P	P	08 08 37.0	-1.6
	comp=Z,12nm,1.0s						
DAG	Danmarks Havn	71.53	14	i P	P	08 08 37.0	-1.6
DAG				IAmb	IAmb	08 08 39.6	
	comp=Z,12nm,1.0s						
PVIS	Viseu	76.66	51	eP	P	08 09 06.7	-2.6
PMTG	Montargil	76.67	53	eP	P	08 09 06.7	-2.6
MVO	Moncorvo	77.24	51	eP	P	08 09 10.0	-2.5
ESDC	Sonseca Array	79.81	52	P	P	08 09 24.5	-2.2
	comp=Z,3.4nm,1.1s,baz=283,slow=5.0,SNR=11						
ESDC				LR	LR	08 39 03.7	
	comp=Z,199nm,21.9s,baz=335,slow=31						
NB2	NORSAR Subarra	83.46	28	P	P	08 09 46.4	+1.0
	comp=Z,13nm,1.0s,baz=289,slow=5.1						
NB2	NORSAR Subarra	83.46	28	P	P	08 09 46.4	+1.0
	baz=289,slow=5.1						
NOA	NORSAR Array B	83.46	28	P	P	08 09 45.5	0.0
	comp=Z,7.5nm,0.9s,baz=290,slow=5.1,SNR=11						
NOA				LR	LR	08 44 01.2	
	comp=Z,193nm,21.0s,baz=280,slow=34						
MEM	Membach	83.98	39	dP	P	08 09 47.4	-0.8
HFS	Hagfors	84.93	29	P	P	08 09 51.3	-1.5
	comp=Z,3.4nm,0.8s,baz=225,slow=5.2,SNR=2.6						
ARCES	ARCESS Array B	85.14	18	P	P	08 09 53.7	0.0
	comp=Z,15nm,1.1s,baz=285,slow=4.7,SNR=28						
ARCES				LR	LR	08 47 52.5	
	comp=Z,265nm,20.7s,baz=245,slow=36						
ARCES	ARCESS Array B	85.14	18	P	P	08 09 53.9	+0.2
ARCES				pmax	pmax		
	comp=Z,16nm,1.2s						
ARCES	ARCESS Array B	85.14	18	P	P	08 09 53.9	+0.2
TIC	Toumodi	86.63	84	eP	P	08 09 59.9	-2.3
LIC	Lamto	86.73	84	eP	P	08 09 59.6	-3.1
	comp=Z,41nm,1.2s						
DBIC	Dimbokro	86.78	84	P	P	08 10 00.6	-2.3
	comp=Z,7.8nm,0.8s,baz=310,slow=3.8,SNR=7.2						
DBIC				LR	LR	08 44 04.8	
	comp=Z,183nm,21.9s,baz=282,slow=32						
SEY	Seymchan	86.88	335	P	P	08 10 03.2	+0.9
	baz=82,slow=6.5						
SEY	Seymchan	86.88	335	i P	P	08 10 02.0	-0.4
KIC	Kosan Boka	86.97	84	eP	P	08 10 01.7	-2.1
	comp=Z,52nm,1.2s						
GRF	Grafenberg Arr	87.45	39	eP	P	08 10 05.8	+0.3
	comp=Z,72nm,2.0s,baz=291,slow=5.2						
GRF				epP	pP	08 10 30.9	+1.5
	baz=291,slow=5.2						
DAVA	Damuels	87.46	42	eP	P	08 10 05.3	-0.4
	comp=Z,12nm,1.2s						
DAVOX	Davos/Dischmat	87.63	42	P	P	08 10 05.3	-1.3
	comp=Z,1.1nm,0.4s,baz=290,slow=6.3,SNR=3.5						
CLL	Collm	87.92	37	e(sP)	sP	08 10 36.0	-5.3
CLL				eS	S	08 20 48.0	+4.5
CLL				e(SP)		08 21 34.0	
CLL				eSS	SS	08 26 24.0	-8.1
CLL				e		08 28 36.0	
CLL				eSSS	SSS	08 29 54.0	
CLL				eSSSS		08 33 18.0	
RETA	Reutte	87.95	41	eP	P	08 10 08.3	+0.3
	comp=Z,13nm,1.6s						
NKC	Novy Kostel	88.00	38	eP	P	08 10 09.0	+0.9
NKC	Novy Kostel	88.00	38	eP	P	08 10 09.0	+0.9
FETA	Feichten	88.10	42	eP	P	08 10 09.6	+0.8
	comp=Z,14nm,2.0s						
PET	Petropavlovsk	88.21	325	eP	P	08 10 00.6	-8.3
PET				e*PP	pP	08 10 27.8	-4.9
PET				e*SP	sP	08 10 38.4	-3.8
PET				eS	S	08 20 34.7	-11
PET				eSPP	SPP	08 21 59.5	
PET				pmax	pmax		
	comp=Z,14nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
MOTA	Moosalm	88.22	41	eP	P	08 10 08.0	-1.3
	comp=Z,12nm,0.8s						
SQTA	Sankt Quirin	88.33	41	eP	P	08 10 08.5	-1.4
	comp=Z,12nm,1.3s						
WATA	Walderalm	88.52	41	eP	P	08 10 12.5	+1.7
	comp=Z,7.3nm,0.9s						
TIXI	Tiksi	88.55	348	ceP	P	08 10 09.3	-0.9
TIXI				pmax	pmax		
	comp=Z,239nm,1.3s						
TIXI	Tiksi	88.55	348	P	P	08 10 10.4	+0.2
TIXI				IAmb	IAmb	08 10 11.6	
	comp=Z,43nm,1.0s						
PETK	Petropavlovsk-	88.70	325	P	P	08 10 12.3	+1.0
	comp=Z,6.4nm,0.9s,baz=75,slow=11,SNR=5.0						
PETK				LR	LR	08 48 51.0	
	comp=Z,72nm,20.8s,baz=65,slow=35						
PETK	Petropavlovsk-	88.70	325	P	P	08 10 12.2	+0.9
KHC	Kasperske Hory	89.09	39	ceP	P	08 10 12.2	-1.1
KHC				pmax	pmax		
	comp=Z,16nm,1.3s						
KHC	Kasperske Hory	89.09	39	eP	P	08 10 13.2	-0.1
KHC				ex	x	08 11 07.5	
MA2	Magadan	89.20	333	ceP	P	08 10 14.2	+0.7
MA2				pmax	pmax		
	comp=Z,58nm,1.3s						
MA2	Magadan	89.20	333	P	P	08 10 14.6	+1.2
GERES	GERESS Array B	89.28	39	P	P	08 10 12.5	-1.7
	comp=Z,2.8nm,0.9s,baz=288,slow=5.1,SNR=4.2						
GERES				LR	LR	08 46 50.5	
	comp=Z,445nm,20.9s,baz=300,slow=33						
GERES	GERESS Array B	89.28	39	P	P	08 10 14.6	+0.3
PRU	Pruhonice	89.33	38	eP	P	08 10 16.6	+2.3
PRU	Pruhonice	89.33	38	eP	P	08 10 16.6	+2.3
ABTA	Abfaltersbach	89.33	41	eP	P	08 10 14.1	-0.4
	comp=Z,8.4nm,1.1s						
FINES	FINESS Array B	89.70	25	P	P	08 10 14.7	-1.1
	comp=Z,5.5nm,1.0s,baz=112,slow=2.1,SNR=5.3						
FINES				LR	LR	08 49 57.8	
	comp=Z,328nm,20.2s,baz=300,slow=35						
FINES	FINESS Array B	89.70	25	i P	P	08 10 15.8	0.0
FINES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FINES	FINESS Array B	89.70	25	P	P	08 10 15.9	+0.2
KBA	Koelnbreinsper	89.74	41	eP	P	08 10 15.5	-1.0
	comp=Z,3.1nm,0.6s						
CHVC	Chvalec	89.98	37	eP	P	08 10 20.3	+2.9
OSTC	Ostas	90.08	37	eP	P	08 10 19.7	+1.9
DPC	Dobruska-Polom	90.23	37	eP	P	08 10 19.3	+0.7
DPC	Dobruska-Polom	90.23	37	eP	P	08 10 19.3	+0.7
OBKA	Obir	90.72	41	eP	P	08 10 20.5	-0.5
	comp=Z,9.6nm,1.4s						
SOKA	Soboth	90.96	41	eP	P	08 10 22.6	+0.5
	comp=Z,4.3nm,1.0s						
CONA	Conrad Observa	90.97	39	eP	P	08 10 21.5	-0.6
	comp=Z,5.7nm,1.5s						
KEST	Kesra	91.03	53	LR	LR	08 45 28.8	
	comp=Z,251nm,21.8s,baz=282,slow=32						
TORD	Torodi Ar. Bea	91.28	76	P	P	08 10 21.8	-2.2
	comp=Z,2.7nm,0.9s,baz=291,slow=5.2,SNR=4.7						
TORD				LR	LR	08 46 19.1	
	comp=Z,140nm,21.8s,baz=295,slow=32						
TORD	Torodi Ar. Bea	91.28	76	P	P	08 10 22.3	-1.8
RAO	Raoul Island	92.84	241	LR	LR	08 44 50.8	
	comp=Z,80nm,20.3s,baz=113,slow=30						
MSVF	Nonsavu	93.33	253	LR	LR	08 42 38.8	
	comp=Z,460nm,20.7s,baz=32,slow=29						
NACGM	Naroch	93.60	30	i P	P	08 10 33.2	-0.7
NACGM				i P	P	08 10 33.2	-0.7
NACGM				i P	P	08 10 33.2	-0.7
NACGM				i Pb	PcP	08 10 35.5	+1.1
	comp=Z,12nm,0.8s						
NACGM				i PP	PP	08 13 53.5	-26
NACGM				i PPP	PPP	08 15 47.8	
NACGM				i S	S	08 21 00.8	-34
NACGM				i SS	SS	08 27 04.1	-50
NACGM				i SSS	SSS	08 30 45.8	
NACGM				i LQ	LQ	08 45 15.5	
NACGM				i LR	LR	08 52 03.6	
MNK	Minsk	94.36	30	i P	P	08 10 35.2	-2.2
	comp=E,7.0nm,1.1s						
MNK				i P	P	08 10 35.2	-2.2
	comp=N,16nm,0.9s						
MNK				i P	P	08 10 35.2	-2.2
	comp=Z,15nm,0.9s						
MNK				i pP	pP	08 11 01.6	+0.3
MNK				i PP	PP	08 14 23.1	-2.0
MNK				i PPP	PPP	08 16 24.6	
MNK				i S	SKSac	08 21 00.6	-4.0
MNK				i sS	ScS	08 21 48.4	+5.5
MNK				i SS	SS	08 28 02.7	-1.6
MNK				i SSS	SSS	08 31 44.9	
MNK				i LQ	LQ	08 47 09.2	
MNK				i LR	LR	08 52 25.8	
MNK				i LRM	MLR	08 53 44.0	
	comp=Z,231nm,17.4s						
MNK				i LRM	MLR	08 53 57.0	
	comp=N,296nm,16.6s						
MNK				i LRM	MLR	08 54 04.4	
	comp=E,41nm,18.1s						
KLMR	Klimovskoe	95.14	21	eP	P	08 10 37.7	-3.2
KLMR				pmax	pmax		
	comp=Z,18nm,1.5s						
KLMR	Klimovskoe	95.14	21	eP	P	08 10 37.7	-3.2
KLMR				AMP		08 10 44.7	
	comp=Z,18nm,1.5s						
YAK	Yakutsk	95.65	341	ceP	P	08 10 43.3	+0.1
YAK				pmax	pmax		
	comp=Z,20nm,1.0s						
AKASG	Malin Array Be	97.19	33	P	P	08 10 48.7	-1.8
	comp=Z,0.7nm,0.5s,baz=304,slow=4.1,SNR=2.6						
AKASG				LR	LR	08 54 14.1	
	comp=Z,220nm,20.9s,baz=335,slow=35						
OBN	Obninsk	97.94	26	⇑eP	P	08 10 50.3	-3.4
OBN				e*PP	pP	08 11 21.4	+3.8
OBN				e		08 14 53.5	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BELA	Belgrano 2	98.82	169	P	Pdif	08 10 58.0	+0.9
KIRV	Kirov	100.14	19	i P	Pdif	08 11 01.6	-1.8
VNA1	Neumayer--Stat	102.86	160	P	Pdif	08 11 16.0	+0.9
VNA2	Neumayer--Watz	103.18	160	P	Pdif	08 11 18.5	+1.9
SNAA	Sanae	104.73	161	P	Pdif	08 11 25.2	+1.7
DZM	Mont Dzumac	104.94	251	eLR	LR	08 46 05.0	
	comp=Z,698nm,23.1s						
ZALV	Zalesovo Beam	110.83	1	PKiKP	PKiKP	08 15 49.7	-0.7
	comp=Z,0.6nm,0.3s,baz=345,slow=3.5,SNR=2.1						
CN2	Changchun	111.18	331	ePKP	PKiKP	08 15 52.1	+0.7
KURK	Kurchatov	113.71	6	i PKiKP	PKiKP	08 15 55.3	-0.7
KURBB	Kurchatov Arra	113.80	6	PKiKP	PKiKP	08 15 55.3	-0.9
	comp=Z,1.5nm,0.6s,baz=350,slow=2.3,SNR=12						
ULN	Ulaanbaatar	114.36	345	i PKiKP	PKPdf	08 15 57.7	+0.2
SONM	Songino Array	114.55	346	PKP	PKiKP	08 15 56.7	-1.2
	comp=Z,2.4nm,1.0s,baz=5.7,slow=1.5,SNR=8.3						
SONM				PP	PP	08 16 55.8	+1.1
	comp=Z,1.4nm,0.9s,baz=2.9,slow=8.9,SNR=4.9						
SONM				PKKPbc	PKKPbc	08 26 35.2	-2.9
	comp=Z,0.2nm,0.3s,baz=176,slow=4.2,SNR=3.7						
SONM	Songino Array	114.55	346		PKPdf	08 15 58.0	+0.2
KSRS	Korea Array	114.60	325	PKP	PKPdf	08 15 58.2	+0.2
	comp=Z,2.3nm,0.7s,baz=35,slow=1.6,SNR=8.6						
KSRS				pPKP	pPKiKP	08 16 21.5	-1.3
	comp=Z,2.1nm,0.6s,baz=3.5,slow=1.9,SNR=4.0						
DGZ	Jazzator, Alta	115.10	359	i PKiKP	PKPdf	08 15 59.0	+0.1
MKAR	Makanchi Array	115.32	3	PKP	PKPdf	08 16 03.7	-0.5
	comp=Z,1.4nm,0.6s,baz=330,slow=1.6,SNR=13						
MKAR				PKKPbc	PKKPbc	08 26 24.4	-1.9
	comp=Z,0.3nm,0.6s,baz=188,slow=2.9,SNR=3.7						
MKAR				PKKP	PKKPdf	08 26 49.3	-4.1
	comp=Z,0.4nm,0.7s,baz=182,slow=3.2,SNR=3.6						
MKAR	Makanchi Array	117.89	3	PKPdf	PKiKP	08 16 03.9	-0.4
HHC	Hu-ho-hao-te	119.38	339	ePKP	PKiKP	08 16 08.2	+0.8
KUU	Kurty	120.16	9	ePKP	PKPdf	08 16 08.1	-0.6
	comp=Z,3.8nm,1.2s,baz=8.9						
KUU	Kurty	120.16	9	ePKiKP	PKPdf	08 16 08.0	-0.6
KUU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CHKK	Chushkaly	120.29	8	ePKP	PKPdf	08 16 08.7	-0.3
	baz=8.3						
CHKK	Chushkaly	120.29	8	ePKiKP	PKPdf	08 16 08.6	-0.3
SGDS	Sogindy	120.33	10	ePKP	PKPdf	08 16 08.2	-0.9
	comp=Z,3.2nm,1.5s,baz=10						
SGDS	Sogindy	120.33	10	ePKiKP	PKPdf	08 16 08.1	-0.9
SGDS				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GEYT	Alibeck	120.49	26	PKP	PKPdf	08 16 09.3	-0.1
	comp=Z,3.5nm,0.6s,baz=307,slow=5.4,SNR=8.1						
GEYT	Alibeck	120.49	26		PKiKP	08 16 10.0	+0.5
IUG	Iuzhnay	120.64	14	ePKP	PKPdf	08 16 09.2	-0.6
	comp=Z,4.8nm,1.4s,baz=14						
IUG	Iuzhnay	120.64	14	ePKiKP	PKPdf	08 16 09.1	-0.6
IUG				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KPKS	Kokpek	120.89	7	ePKP	PKPdf	08 16 09.2	-1.0
	baz=7.0						
KPKS	Kokpek	120.89	7	ePKiKP	PKPdf	08 16 09.1	-1.0
WMQ	Urumqi	120.98	359	ePKP	PKiKP	08 16 10.3	0.0
WMQ				AMB	AMB		
	comp=Z,470nm,6.3s						
TNSS	Tian-Shan	121.09	8	i PKP	PKPdf	08 16 09.9	-1.1
	baz=8.5						
TNSS	Tian-Shan	121.09	8	i PKiKP	PKPdf	08 16 09.9	-1.1
AAK	Ala-Archa	121.09	10	PKP	PKPdf	08 16 10.4	-0.3
	comp=Z,2.5nm,0.5s,baz=244,slow=2.7,SNR=6.4						
AAK	Ala-Archa	121.09	10		PKiKP	08 16 11.7	+0.9
SHLS	Shalkode	121.28	6	ePKP	PKPdf	08 16 10.4	-0.6
	comp=Z,4.1nm,1.5s,baz=6.1						
SHLS	Shalkode	121.28	6	ePKiKP	PKPdf	08 16 10.3	-0.6
SHLS				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BOSA	Boshof	122.14	114	PKP	PKPdf	08 16 12.9	0.0
	comp=Z,16nm,0.9s,baz=277,slow=1.5,SNR=16						
BOSA	Boshof	122.14	114	PKIKP	PKPdf	08 16 13.0	0.0
BOSA	Boshof	122.14	114	PKPdf	PKiKP	08 16 13.1	0.0
LBTB	Lobatse	122.32	110	PKIKP	PKiKP	08 16 14.1	+0.6
LBTB	Lobatse	122.32	110	PKPdf	PKiKP	08 16 14.1	+0.6
CTA	Charters Tower	123.32	256	PKP	PKiKP	08 16 16.2	+0.7
	comp=Z,6.4nm,1.1s,baz=125,slow=6.0,SNR=4.1						
CTA				pPKP	pPKPdf	08 16 39.9	-0.2
	comp=Z,2.3nm,0.5s,baz=90,slow=2.9,SNR=3.0						
NJ2	Nanjing	123.56	327	ePKP	PKiKP	08 16 15.4	-0.1
LSZ	Lusaka	123.77	98	PKIKP	PKiKP	08 16 16.6	0.0
LSZ	Lusaka	123.77	98	PKPdf	PKiKP	08 16 16.6	0.0
GTA	Gaotai	124.03	348	⇑PKP	PKiKP	08 16 17.1	+0.5
GTA				sPKP		08 16 54.1	
GTA				PP	PP	08 18 05.9	+6.0
GTA				SKS	SKSdf	08 23 16.8	-3.8
GTA				SS	SS	08 34 44.8	+2.4
GTA				AMB	AMB		
	comp=Z,97nm,7.6s						
GTA				LR	LR		
	comp=Z,250nm,16.7s						
GTA				LR	LR		
	comp=Z,280nm,17.4s						
GTA				LR	LR		
	comp=Z,370nm,20.0s						
KSH	Kashi	124.38	10	PKP	PKiKP	08 16 19.0	+1.7
KSH				PP	PP	08 18 08.7	+6.5
KSH				AMB	AMB		
	comp=Z,520nm,6.1s						
HRA	Herat	125.23	25	PKPdf	PKPdf	08 16 18.8	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MAW	Mawson	125.67	169	PKP	PKPdf	08 16 17.8	-0.5
	comp=Z,2.8nm,0.5s,baz=166,slow=2.9,SNR=8.9						
MAW	Mawson	125.67	169		PKiKP	08 16 18.9	+0.2
LZH	Lanzhou	126.20	343	*e*PKP	PKiKP	08 16 22.2	+1.1
LZH				sPKP		08 16 58.2	
LZH				AMB	AMB		
	comp=Z,190nm,7.0s						
LZH				LR	LR		
	comp=Z,330nm,16.3s						
LZH				LR	LR		
	comp=Z,370nm,14.6s						
LZH				LR	LR		
	comp=Z,370nm,17.9s						
XAN	Xi'an	126.39	337	PKP	PKiKP	08 16 21.3	-0.1
CASY	Casey	126.82	192		PKiKP	08 16 21.4	+0.3
STKA	Stephens Creek	127.65	242	PKP	PKiKP	08 16 23.5	-0.3
	comp=Z,8.8nm,0.8s,baz=84,slow=1.5,SNR=20						
ATD	Arta Tunnel	128.98	61	PKP	PKiKP	08 16 26.8	-0.2
	comp=Z,5.0nm,0.3s,baz=302,slow=22,SNR=2.5						
ATD	Arta Tunnel	128.98	61		PKPdf	08 16 26.3	-0.1
KMBO	Kilima Mbogo	129.22	79	PKP	PKPdf	08 16 26.8	-0.3
	comp=Z,0.9nm,0.2s,baz=64,slow=2.2,SNR=5.0						
CD2	Chengdu	131.03	340	PKP	PKiKP	08 16 31.8	+1.0
WSAR	Wadi Sarin	132.74	36	PKP	PKPdf	08 16 33.0	-0.3
	comp=Z,6.1nm,0.7s,baz=7.7,slow=6.8,SNR=4.8						
GYA	Guiyang	134.00	335	*e*PKP	PKiKP	08 16 37.4	+0.4
WB0	Warramunga Arr	134.43	257	PKPdf	PKPdf	08 16 36.3	-0.1
WB2	Warramunga Arr	134.48	257	PKPdf	PKPdf	08 16 37.1	+0.6
WRAB	Tennant Creek	134.48	257	*i* PKIKP	PKPdf	08 16 36.7	+0.2
WRAB	Tennant Creek	134.48	257		PKPdf	08 16 36.8	+0.3
WRA	Warramunga Arr	134.49	257	PKP	PKiKP	08 16 37.7	-0.2
	comp=Z,10nm,1.2s,baz=72,slow=2.0,SNR=16						
WRA				pPKP	pPKPdf	08 17 00.4	-0.9
	comp=Z,2.7nm,0.5s,baz=28,slow=0.8,SNR=5.5						
LSA	Lhasa	134.87	354	PKIKP	PKiKP	08 16 39.1	0.0
LSA	Lhasa	134.87	354	PKPdf	PKiKP	08 16 39.1	0.0
AS31	Alice Springs	134.92	252		PKiKP	08 16 38.1	-0.7
ASAR	Alice Springs	134.92	252	PKhKP	PKPpre	08 16 23.3	
	comp=Z,0.8nm,0.7s,baz=105,slow=3.3,SNR=7.9						
ASAR				PKP	PKiKP	08 16 38.2	-0.5
	comp=Z,2.3nm,0.8s,baz=90,slow=1.7,SNR=13						
KMI	Kunming	136.71	339	⇑*e*PKP	PKiKP	08 16 41.9	-0.7
KMI				sPKP		08 17 17.9	
KMI				PP	PP	08 19 29.2	+6.8
KMI				AMB	AMB		
	comp=Z,210nm,6.6s						
KMI				LR	LR		
	comp=Z,170nm,4.7s						
KMI				LR	LR		
	comp=Z,130nm,4.3s						
KMI				LR	LR		
	comp=Z,260nm,30.1s						
FITZ	Fitzroy Crossi	142.65	260	PKhKP	PKPpre	08 16 48.4	
	comp=Z,3.9nm,0.5s,baz=42,slow=3.3,SNR=2.6						
CM31	Chiang Mai Arr	144.17	340	PKPdf	PKPbc	08 16 53.3	+0.8
CMAR	Chiang Mai Arr	144.17	340	PKP	PKPbc	08 16 52.9	+0.5
	comp=Z,17nm,0.9s,baz=342,slow=3.8,SNR=74						
CMAR				pPKP	pPKPdf	08 17 15.6	-3.4
	comp=Z,5.7nm,0.7s,baz=338,slow=3.4,SNR=2.4						
MMRI	Maumere	144.59	277		PKPbc	08 16 54.3	+0.4
DLV	T Lat	145.23	320		PKPbc	08 16 56.0	-0.1
KAPI	Kappang	145.88	284	PKPbc	PKPab	08 16 58.9	+0.4
	comp=Z,48nm,0.9s,baz=111,slow=1.7,SNR=22						
KAPI	Kappang	145.88	284	PKPab	PKPab	08 16 59.6	+1.1
HYB	Hyderabad	146.34	14	*i* PKP	PKPdf	08 16 58.0	0.0
PSA00	Pilbara Seismi	148.01	254	PKPbc	PKPbc	08 17 03.8	0.0
MORW	Morawa	149.75	238	PKPbc	PKiKP	08 17 08.8	-0.2
KSM	Kuching	151.19	304		PKPbc	08 17 12.1	+0.2
KULM	Kulim	155.15	325	PKPdf	PKPdf	08 17 13.0	+1.4
KULM				PKPbc	pPKPdf	08 17 20.4	-16
KULM				PKPab	PKPab	08 17 37.2	+0.8

VAO ***12*** *07:57:44.6±1.4, 20°.47S×69°.75W, h10^{km}, mb4.6*

NEIC ***12*** *07:58:02.5±2.0, 20°.50S±0°.04×68°.82W±0°.07, h111^{km}±2^{km}, Error ellipse: s-maj=10.2km s-min=5.9km az=96.0*

IDC ***12*** *07:58:03.0±0.7, 20°.51S×68°.60W, h113^{km}±6^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.8/35, mbtmp4.1/10, Error ellipse: s-maj=21.0km s-min=8.6km az=101.0*

GUC ***12*** *07:58:03.9±0.7, 20°.50S×68°.86W, h104^{km}±4^{km}, ML4.0*

ISC 12 07:58:02.2±0.5**, 20°.49S**±0°.03×**68°.83W**±0°.06**, h111**^{km}±5^{km}**, n78,** σ**1ˢ.05**/99**, mb4.1**/6**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.46	319	⇑*i*P	Pn	07 58 20.0	+0.5
PB08				*i* S	Sn	07 58 32.6	+0.3
PB08	IPOC Station P	0.46	319		Pn	07 58 19.6	+0.1
PB08				Sn	Sn	07 58 32.8	+0.5
GO01	Chusmiza	0.89	337	⇑*i*P	Pn	07 58 23.5	+0.6
GO01				*i* S	Sn	07 58 39.0	+0.5
GO01				IAML		07 58 42.1	
	comp=N,9μm,0.2s						
GO01	Chusmiza	0.89	337		Pn	07 58 23.5	+0.6
GO01				Sn	Sn	07 58 39.1	+0.6
HMBC	Humberstone	1.01	282	⇑*i*P	Pn	07 58 23.6	-0.2
HMBC				*i* S	Sn	07 58 39.5	-0.5
HMBC				IAML		07 58 43.3	
	comp=N,10μm,0.4s						
TA02	Huaiquique	1.24	280	⇑*i*P	Pn	07 58 26.2	+0.1
TA02				*e*S	Sn	07 58 43.8	-0.3
TA01	Diego Aracena	1.27	266	⇑*i*P	Pn	07 58 26.2	-0.2
TA01				*i* S	Sn	07 58 43.7	-1.0
TA01				IAML		07 58 45.1	
	comp=E,3μm,0.4s						
TA01	Diego Aracena	1.27	266		Pn	07 58 26.2	-0.2
TA01				Sn	Sn	07 58 44.5	-0.1
PATCX	Punta Patache	1.28	255	⇑*i*P	Pn	07 58 26.7	+0.1
PATCX				*i* S	Sn	07 58 44.7	-0.4
PATCX				IAML		07 58 49.9	
	comp=E,6μm,0.5s						
PATCX	Punta Patache	1.28	255		Pn	07 58 26.7	+0.1
PATCX				Sn	Sn	07 58 45.7	+0.6
PB09	IPOC Station P	1.35	196	⇓*i*P	Pn	07 58 28.6	+1.1
PB09				*i* S	Sn	07 58 48.9	+2.2
PB09				IAML		07 58 52.7	
	comp=E,1μm,0.3s						
PB09	IPOC Station P	1.35	196		Pn	07 58 28.7	+1.1
PSGC	Pisagua	1.51	306	⇑*i*P	Pn	07 58 29.2	-0.1
PSGC				*i* S	Sn	07 58 49.4	-0.4
PSGC				IAML		07 58 52.7	
	comp=E,3μm,0.6s						
PSGCX	Pisagua	1.51	306	Pn	Pn	07 58 29.2	-0.1
MNMC	Minye Minye	1.53	332	*i* P	Pn	07 58 30.7	+0.9
MNMC				*i* S	Sn	07 58 52.1	+1.4
MNMC	Minye Minye	1.53	332		Pn	07 58 30.8	+0.9
PB07	IPOC Station P	1.57	219	*e*P	Pn	07 58 30.5	+0.4
PB07				*i* S	Sn	07 58 51.1	-0.3
PB07				IAML		07 58 56.9	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	1.57	219		Pn	07 58 30.6	+0.4
PB03	IPOC Station P	1.77	209	⇑*i*P	Pn	07 58 33.2	+0.6
PB03				*i* S	Sn	07 58 55.4	-0.3
PB03				IAML		07 59 03.8	
	comp=E,1μm,0.2s						
LVC	Limon Verde	2.11	182	P	Pn	07 58 38.7	+1.6
	comp=E,23nm,0.3s,baz=18,slow=10,SNR=213						
LVC				S	Sn	07 59 04.6	+1.1
	comp=E,60nm,0.3s,baz=354,slow=16,SNR=20						
LVC	Limon Verde	2.11	182	*e*P	Pn	07 58 38.6	+1.6
LVC				*i* S	Sn	07 59 05.2	+1.7
LVC	Limon Verde	2.11	182		Pn	07 58 38.6	+1.6
PB04	IPOC Station P	2.21	214	⇑*i*P	Pn	07 58 38.8	+0.7
PB04				IAML		07 59 15.4	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	2.21	214		Pn	07 58 38.8	+0.7
PB16	IPOC Station P	2.24	343	*i* P	Pn	07 58 40.4	+1.5
PB16				*i* S	Sn	07 59 08.6	+1.7
PB16				IAML		07 59 14.5	
	comp=E,662nm,0.6s						
PB16	IPOC Station P	2.24	343		Pn	07 58 40.1	+1.1
PB06	IPOC Station P	2.31	197		Pn	07 58 40.3	+1.0
AP01	Chacalluta	2.55	326	*e*P	Pn	07 58 41.9	-0.5
AP01				*i* S	Sn	07 59 12.9	-0.2
AP01	Chacalluta	2.55	326		Pn	07 58 42.0	-0.3
PB15	IPOC Station P	2.77	192		Pn	07 58 46.2	+0.8
PB10	IPOC Station P	3.40	208	Pn	Pn	07 58 54.2	+0.5
PB14	IPOC Station P	4.36	199	Pn	Pn	07 59 06.3	-0.5
GO02	Mina Guanaco	4.70	188	Pn	Pn	07 59 11.0	-0.4
AC01	Pan de Azucar	5.86	196	Pn	Pn	07 59 24.4	-2.3
AC02	Maricunga	6.32	182	Pn	Pn	07 59 33.0	-0.4
GO03	Copiap	7.18	190	Pn	Pn	07 59 43.5	-1.3
SIV	San Ignacio	8.62	60	P	Pn	08 00 02.5	-1.8
	comp=E,2.7nm,0.3s,baz=254,slow=12,SNR=54						
SIV				S	Sn	08 01 31.3	-8.7
	baz=255,slow=16,SNR=1.4						
GO04	Tololo Observa	9.80	190	Pn	Pn	08 00 17.0	-3.3
CO03	El Pedregal	10.44	189	Pn	Pn	08 00 25.3	-3.6
CPUP	Villa Florida	12.05	121	P	Pn	08 00 48.6	-1.7
	comp=E,0.2nm,0.3s,baz=301,slow=12,SNR=26						
CPUP	Villa Florida	12.05	121	Pn	Pn	08 00 49.5	-0.8
SAML	Samuel	12.71	26	*e*P	Pn	08 00 50.7	-8.3
TRCB	Terra Rica	15.23	102	*e*P	Pn	08 01 32.0	+0.5
PTGB	Pitanga	16.04	108	*e*P	Pn	08 01 41.2	-0.4
PCMB	Pacaembu	16.44	97	*e*P	Pn	08 01 47.3	+0.8
ARAG	Araguaiana, MT	16.86	76	*e*P	Pn	08 01 51.6	-0.1
ITRB	Iturama	17.37	91	*e*P	P	08 01 58.2	+0.6
PLTB	Pedras Altas	17.67	133	*e*P	P	08 01 59.8	-0.9
FRTB	Fartura	18.10	103	*e*P	P	08 02 05.3	-0.3
CNLB	Canela	18.51	122	*e*P	P	08 02 10.0	0.0
SNDB	Serra Nova Dou	18.84	66	*e*P	P	08 02 13.6	-0.1
BB19B	Bebedouro	19.00	95	*e*P	P	08 02 15.3	0.0
IPMB	Ipameri, GO	19.63	86	*e*P	P	08 02 21.7	-0.6
SPB	Sao Paulo	20.07	103	P	Pn	08 02 29.2	-0.5
SPB				IAmb	IAmb	08 02 31.7	
	comp=Z,12nm,0.6s						
SPB	Sao Paulo	20.07	103	*e*P	P	08 02 28.0	+1.0
PLCA	Paso Flores	20.23	184	P	P	08 02 29.8	+1.2
	comp=Z,1.7nm,0.8s,baz=24,slow=9.2,SNR=6.3						
PLCA	Paso Flores	20.23	184	P	P	08 02 29.6	+1.0
PET01	Itanhaem-SP	20.28	105	*e*P	P	08 02 29.6	+0.4
BDFB	Brasilia	20.37	80	P	P	08 02 28.4	-1.9
	comp=Z,2.9nm,0.6s,baz=255,slow=9.4,SNR=4.7						
BDFB	Brasilia	20.37	80	P	P	08 02 29.1	-1.2
BDFB				IAmb	IAmb	08 02 57.8	
	comp=Z,8.2nm,1.3s						
VAO	Valinhos	20.46	101	*e*P	P	08 02 30.6	-0.6
ITTB	Itaituba	20.48	40	*e*P	P	08 02 29.6	-1.8
PARB	Paraibuna	21.71	102	*e*P	P	08 02 43.6	-1.1
BSCB	Bom Sucesso	22.50	96	*e*P	P	08 02 52.4	-0.5
SMTB	Santa Maria do	23.54	64	*e*P	P	08 03 02.8	0.0
JANB	Januaria	23.95	81	*e*P	P	08 03 06.2	-0.3
SDBA	SAO DESIDERIO	24.29	74	*e*P	P	08 03 09.5	-0.1
NAN01	Guarapari, ES	27.23	89	*e*P	P	08 03 36.1	+0.1
USHA	Ushuaia	34.28	180	P	P	08 04 39.6	+2.0
	comp=Z,26nm,0.7s,baz=341,slow=12,SNR=2.2						
SNAA	Sanae	63.20	161	P	P	08 08 18.4	+0.1
	comp=Z,1.1nm,0.6s,baz=260,slow=7.9,SNR=5.2						
SNAA	Sanae	63.20	161	P	P	08 08 19.9	+1.5
SNAA				IAmb	IAmb	08 08 31.4	
	comp=Z,5.1nm,1.4s						
DBIC	Dimbokro	68.38	74	P	P	08 08 51.0	-1.4
	comp=Z,6.4nm,0.7s,baz=218,slow=6.5,SNR=8.6						
DBIC	Dimbokro	68.38	74	P	P	08 08 52.3	-0.1
NVAR	Mina Array Bea	74.75	322	P	P	08 09 31.6	+1.1
	comp=Z,0.9nm,1.0s,baz=152,slow=5.9,SNR=2.6						
NVAR				pP	pP	08 10 00.1	+0.5
	comp=Z,1.3nm,0.8s,baz=159,slow=6.8,SNR=5.4						
TORD	Torodi Ar. Bea	76.95	71	P	P	08 09 42.5	-0.6
	comp=Z,2.6nm,0.8s,baz=249,slow=5.5,SNR=8.4						
TORD				pP	pP	08 10 12.1	-0.5
	comp=Z,0.8nm,0.6s,baz=255,slow=5.8,SNR=2.5						
TORD	Torodi Ar. Bea	76.95	71	P	P	08 09 42.8	-0.4
YKA	Yellowknife Ar	90.27	341	P	P	08 10 50.8	+0.8
	comp=Z,1.4nm,0.8s,baz=127,slow=6.0,SNR=5.1						
YKA				pP	pP	08 11 20.3	0.0
	comp=Z,1.1nm,0.7s,baz=126,slow=5.8,SNR=4.8						
MKAR	Makanchi Array	144.78	35	PKP	PKPab	08 17 25.8	+0.5
	comp=Z,0.5nm,0.6s,baz=342,slow=3.1,SNR=2.0						
MKAR				pPKP	pPKPdf	08 17 57.1	-0.5
	comp=Z,1.6nm,0.8s,baz=359,slow=2.1,SNR=3.0						

UPA ***12*** *08:07:06.7±2.4, 8°.35N×82°.94W, h5^{km}±5^{km}, MW4.6*

UCR ***12*** *08:07:06.5±1.6, 8°.29N×83°.01W, h5^{km}, MW4.3*

ISC 12 08:07:06.8±1.0**, 8°.29N**±0°.04×**82°.98W**±0°.02**, h15**^{km}±6^{km}**, n58,** σ**1ˢ.37**/82**, 2C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.12	2	⇓*i*P	Pg	08 07 09.8	-0.6
CCOL				*e*S	Sg	08 07 13.3	+0.7
CDITO	Canoas	0.30	20	⇓*i*P	Pg	08 07 12.7	-0.4
CDITO	Canoas	0.30	20	⇓*i*P	Pg	08 07 12.7	-0.4
PIRO	Carate, Puerto	0.37	287	⇓*e*P	Pg	08 07 13.8	-0.7
PIRO	Carate, Puerto	0.37	287	*e*P	Pg	08 07 13.8	-0.7
PIRO				*e*S	Sb	08 07 22.5	+1.8
PTJ1	Puerto Jimnez	0.40	307	*i* P	Pg	08 07 14.4	-0.6
PTJ1	Puerto Jimnez	0.40	307	*e*P	Pg	08 07 14.5	-0.5
BAGA3	Bagala, Chiriq	0.48	69	⇓*i*P	Pg	08 07 16.2	-0.1
MLIR3	Monte Lirio, C	0.52	17	⇓*i*P	Pb	08 07 17.3	-0.4
EDSV	San Vito	0.53	0	⇓*i*P	Pg	08 07 17.0	-0.2
EDSV				*e*S	Sb	08 07 26.0	+0.8
LOCO3	Loma Colorada,	0.56	78	⇓*i*P	Pg	08 07 17.3	-0.7
LOCO3				*i* S	Sg	08 07 24.6	-0.9
BRU2	Volcan	0.57	29	⇓*i*P	Pg	08 07 17.8	-0.3
BRU2				*i* S	Sb	08 07 26.8	+0.2
BCO2	Palmira	0.61	46	⇓*i*P	Pg	08 07 18.4	-0.5
BCO2				*e*S	Sb	08 07 27.2	-0.6
PTAR3	Potrerillos Ar	0.62	50	⇓*i*P	Pg	08 07 18.6	-0.5
PTAR3				*i* S	Sb	08 07 27.3	-0.6
BC3P	Paso Ancho	0.63	35	⇓*i*P	Pg	08 07 18.7	-0.6
BC3P				*i* S	Sg	08 07 27.3	-0.5
RIOS	Rincon, Osa	0.67	307	*e*P	Pg	08 07 18.5	-1.4
GUAL3	Gualaca, Chiri	0.71	70	⇓*i*P	Pg	08 07 19.6	-1.1
POTG	Potrero Grande	0.77	349	⇓*e*P	Pg	08 07 20.9	-0.9
POTG				*e*S	Sb	08 07 32.9	+0.7
EDPN	Palmar Norte	0.82	325	*e*P	Pg	08 07 20.9	-1.8
EDPN				*e*S	Sb	08 07 34.2	+0.7
EDBA	Buenos Aires	0.91	341	*e*P	Pg	08 07 23.5	-1.1
EDBA				*e*S	Sn	08 07 38.7	+0.7
DRK0	Durika	1.00	345	*e*P	Pg	08 07 24.4	-1.8
DRK0				*i* S	Sb	08 07 38.7	-0.3
DRK0	Durika	1.00	345	⇓*e*P	Pg	08 07 24.4	-1.8
CHGR2	Aguacate	1.04	52	*i* P	Pg	08 07 24.9	-2.1
REME3	Remedios, Chir	1.14	93	⇑*i*P	Pg	08 07 26.2	-2.5
REME3				*i* S	Sn	08 07 45.6	+2.2
EDLM	Las Mercedes	1.15	328	*e*P	Pg	08 07 26.9	-2.1
EDLM				*e*S	Sn	08 07 45.1	+1.2
NANC3	Nancito, Chiri	1.23	92	⇓*e*P	Pg	08 07 27.7	-2.9
NANC3				*e*S	Sb	08 07 46.7	+1.2
PEZE	Perez Zeledon,	1.29	327	*e*P	Pg	08 07 28.9	-2.7
EDDO	Dominical	1.30	317	*e*P	Pg	08 07 28.8	-3.0
RGM0	Gandoca	1.34	16	*e*P	Pn	08 07 31.0	+0.1
PVID3	Puerto Vidal,	1.38	100	*e*P	Pn	08 07 29.5	-1.9
RIMA	Rio Macho	1.71	329	*e*P	Pn	08 07 35.9	-0.3
CNAZ3	Canazas, Verag	1.75	88	*i* P	Pn	08 07 35.6	-1.0
CNAZ3				*i* S	Sn	08 07 58.3	-0.3
LCR2	La Lucha 2	1.76	325	*e*P	Pn	08 07 36.8	-0.1
GMAL	Guarumal, Vera	1.81	107	*e*P	Pn	08 07 35.7	-1.7
GMAL				*e*S	Sn	08 08 00.1	+0.1
BATAN	Batan	1.84	348	*e*P	Pn	08 07 38.8	+0.9
BATAN				*i* S	Sg	08 08 04.4	-1.6
BATAN	Batan	1.84	348	*e*P	Pn	08 07 38.7	+0.9
SJS	Escuela Geolog	1.95	327	*e*P	Pb	08 07 41.5	-0.6
PONU3	Ponuga, Veragu	2.02	101	*e*P	Pn	08 07 41.2	+0.9
HDC	Heredia	2.04	327	⇑*i*P	Pn	08 07 42.5	+1.9
HDC	Heredia	2.04	327	*e*P	Pn	08 07 42.3	+1.7
MARI3	Mariato, Verag	2.07	108	*e*P	Pn	08 07 42.6	+1.6
MARI3				*i* S	Sb	08 08 10.4	+0.9
JACO	JACO, Garabito	2.15	309	*e*P	Pn	08 07 41.6	-0.5
JACO				*e*S	Sn	08 08 08.6	+0.2
CACAO	El Cacao, Vera	2.30	114	*e*P	Pn	08 07 44.8	+0.7
CACAO				*e*S	Sn	08 08 14.4	+2.3
PNME	Penonome	2.63	86	*e*P	Pn	08 07 49.6	+1.0
PNME				*i* S	Sn	08 08 24.2	+3.9
AZU	Azuero	2.72	100	⇓*i*P	Pn	08 07 51.5	+1.5
AZU				*i* S	Sn	08 08 23.4	+0.8
JTS	Las Juntas de	2.78	316	*e*P	Pn	08 07 51.6	+0.7
JTS	Las Juntas de	2.78	316	*e*P	Pn	08 07 51.5	+0.7
VTON	El Valle, Cocl	2.85	83	*e*P	Pn	08 07 53.8	+2.0
PCRI3	Pocri, Los San	2.90	102	*e*P	Pn	08 07 51.7	-0.7
ACHO3	Achotines, Los	2.91	107	*e*P	Pn	08 07 54.0	+1.5
DUNO	Dulce Nombre,	3.05	306	*e*P	Pn	08 07 55.1	+0.6
PLVR	Palo Verde	3.11	311	*e*P	Pn	08 07 56.9	+1.4
ZANG	Zanguenga, Cho	3.15	78	*e*P	Pn	08 07 55.1	-0.7
ORTG	Ortega, Santa	3.20	310	*e*P	Pn	08 07 58.0	+1.4
BCIP	Isla Barro Col	3.22	74	*e*P	Pn	08 07 57.0	+0.2
CHOR3	La Chorrera	3.23	79	*e*P	Pn	08 07 57.7	+0.7
CHOR3				*e*S	Sn	08 08 37.9	+2.7
ARRA3	Arraijan, Pana	3.35	78	*e*P	Pn	08 07 58.6	0.0
UPA	Univ. de Panam	3.47	78	*e*P	Pn	08 08 01.6	+1.3

NEIC ***12*** *08:07:33.8±1.5, 22°.3S±0°.2×171°.55E±0°.08, h126^{km}±6^{km}, mb4.2/11, Error ellipse: s-maj=22.2km s-min=10.4km az=168.0*

IDC ***12*** *08:07:34.0±2.9, 22°.15S×171°.49E, h122^{km}±21^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.6/33, mbtmp4.1/9, MS3.6/1, Ms1 3.6/1, ms1mx2.6/40, Error ellipse: s-maj=53.0km s-min=15.9km az=160.0*

NOU ***12*** *08:08:08.4, 22°.06S×168°.60E, h0^{km}, MLv3.8, New Caledonia*

ISC 12 08:07:31.5±0.7**, 22°.3S**±0°.1×**171°.63E**±0°.07**, h98**^{km}**, n29,** σ**1ˢ.53**/30**, mb4.2**/11**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YATNC	Mamie plateau,	4.40	272	P	Pn	08 08 37.1	+1.0
OUENC	Ouen Island, N	4.43	268	P	Pn	08 08 38.3	+1.8
DZM	Mont Dzumac	4.81	272	P	Pn	08 08 43.6	+1.9
	11nm,0.3s,baz=154,slow=14,SNR=288						
DZM				S	Sn	08 09 36.0	-0.4
	38nm,0.3s,baz=52,slow=16,SNR=21						
DZM	Mont Dzumac	4.81	272		Pn	08 08 43.5	+1.7
DZM				Sn	Sn	08 09 37.3	+1.0
DZM	Mont Dzumac	4.81	272	P	Pn	08 08 43.4	+1.7
NOUC	Port Laguerre	4.94	271	P	Pn	08 08 45.0	+1.6
MSVF	Nonsavu	7.56	54	P	Pn	08 09 21.9	+2.8
	0.4nm,0.3s,baz=346,slow=19,SNR=2.7						
BFZ	Birch Farm	18.73	169	P	P	08 11 43.0	+0.6
LTZ	Lake Taylor	20.42	179	P	P	08 12 01.8	+1.0
LTZ				IAmb	IAmb	08 12 28.0	
	comp=Z,15nm,1.1s						
CTA	Charters Tower	23.75	271	P	P	08 12 36.1	+1.0
	comp=Z,1.2nm,0.4s,baz=78,slow=18,SNR=2.0						
CTAO	Charters Tower	23.75	271	P	P	08 12 36.2	+1.2
CTAO				IAmb	IAmb	08 12 38.9	
	comp=Z,13nm,1.4s						
COEN	Coen	28.25	282	P	P	08 13 16.2	+0.6
STKA	Stephens Creek	28.31	244	P	P	08 13 15.8	-0.1
	comp=Z,1.5nm,0.8s,baz=135,slow=12,SNR=3.2						
STKA	Stephens Creek	28.31	244	P	P	08 13 16.1	+0.1
WR0	Warramunga Arr	34.62	267	P	P	08 14 10.0	-1.5
WR0				IAmb	IAmb	08 14 23.2	
	comp=Z,5.4nm,1.2s						
AS31	Alice Springs	34.69	260	P	P	08 14 11.2	-0.9
ASAR	Alice Springs	34.69	260	P	P	08 14 11.4	-0.7
	comp=Z,2.4nm,0.8s,baz=88,slow=8.8,SNR=28						
ASAR	Alice Springs	34.69	260	P	P	08 14 11.3	-0.9
WB0	Warramunga Arr	34.79	267	P	P	08 14 11.1	-1.8
WB0				IAmb	IAmb	08 14 22.5	
	comp=Z,7.6nm,1.4s						
WB2	Warramunga Arr	34.80	267	P	P	08 14 11.3	-1.7
WB2				IAmb	IAmb	08 14 14.4	
	comp=Z,5.7nm,1.2s						
WRA	Warramunga Arr	34.81	267	P	P	08 14 11.4	-1.7
	comp=Z,1.1nm,0.3s,baz=97,slow=8.6,SNR=32						
WRA	Warramunga Arr	34.81	267	P	P	08 14 10.7	-2.5
NWAO	Narrogin (SRO)	48.88	245	LR	LR	08 36 30.7	
	comp=Z,63nm,19.0s,baz=324,slow=36						
QSPA	South Pole Qui	67.76	180	P	P	08 18 17.7	-0.8
QSPA				IAmb	IAmb	08 18 18.7	
	comp=Z,4.1nm,1.1s						
KSRS	Korea Array	72.29	325	P	P	08 18 45.7	-0.7
	comp=Z,1.3nm,0.8s,baz=139,slow=6.3,SNR=5.6						
NVAR	Mina Array Bea	89.18	48	P	P	08 20 16.2	-0.3
	comp=Z,0.8nm,0.7s,baz=223,slow=8.3,SNR=11						
NVAR	Mina Array Bea	89.18	48	P	P	08 20 15.8	-0.7
ILAR	Eielson Array	92.51	17	P	P	08 20 28.7	-2.4
	comp=Z,0.7nm,0.9s,baz=230,slow=5.7,SNR=3.8						
ILAR	Eielson Array	92.51	17	P	P	08 20 28.5	-2.6

IDC 12 08:11:56.4±2.6**, 53°.61N**×**86°.90E, h0**^{km}**, mb1 2.6**/2**, mb1mx2.6**/50**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=23.3km s-min=13.1km az=75.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.28	286	*i*		08 18 59.9	
	baz=105,slow=328,SNR=4.2						
ZALV	Zalesovo Beam	1.28	286	Pg	Pg	08 12 20.0	-1.0
	1.1nm,0.3s,baz=106,slow=15,SNR=7.6						
ZALV				Lg	Lg	08 12 37.7	
	2.2nm,0.3s,baz=104,slow=29,SNR=12						
ZALV				Rg	Rg	08 12 46.5	
	32nm,1.1s,baz=109,slow=31,SNR=8.5						
KURBB	Kurchatov Arra	5.96	243	Pn	Pn	08 13 27.1	+1.3
	0.0nm,0.3s,baz=60,slow=13,SNR=3.6						
KURBB				Lg	Lg	08 15 04.3	
	0.0nm,0.3s,baz=61,slow=34,SNR=4.3						
MKAR	Makanchi Array	7.43	205	Pn	Pn	08 13 47.2	+1.2
	0.1nm,0.3s,baz=25,slow=14,SNR=6.1						
MKAR				Sn	Sn	08 15 11.1	+0.1
	0.1nm,0.3s,baz=29,slow=28,SNR=4.7						
MKAR				Lg	Lg	08 15 50.1	
	baz=26,slow=31,SNR=4.1						

DJA ***12*** *08:18:23.5±1.1, 3°S±6°×12°9E±°, h32^{km}±20^{km}, M3.7/6, MLv3.7/6*

IDC ***12*** *08:18:24.8±3.1, 3°.09S×129°.66E, h0^{km}, mb4.1/2, mb1 4.2/5, mb1mx3.8/32, mbtmp4.1/5, ML3.9/3, Error ellipse: s-maj=67.9km s-min=17.0km az=99.0*

NEIC ***12*** *08:18:29.7±2.7, 3°.0S±0°.2×129°.25E±0°.04, h51^{km}±25^{km}, mb4.1/10, Error ellipse: s-maj=23.9km s-min=4.8km az=183.0*

ISC 12 08:18:26.5±1.0**, 2°.88S**±0°.07×**129°.27E**±0°.08**, h28**^{km}**, n23,** σ**1ˢ.98**/26**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.58	216	P	Pn	08 18 39.1	+0.2
MSAI				S	Sn	08 18 48.6	+1.2
SIJI	Sorong	2.82	45	Pn	Pn	08 19 09.0	-0.7
	15nm,0.3s,baz=234,slow=13,SNR=26						
SIJI				Sn	Sn	08 19 44.1	+1.3
	6.5nm,0.3s,baz=219,slow=5.9,SNR=3.9						
SWI	Sorong	2.82	45	P	Pn	08 19 08.9	-0.8
FAKI	Fak Fak	2.97	91	Pn	Pn	08 19 14.5	+2.7
FAKI	Fak Fak	2.97	91	P	Pn	08 19 15.2	+3.4
SANI	Sanana	3.38	284	P	Pn	08 19 06.3	-11
SANI				S	Sn	08 19 40.9	-16
LUWI	Luwuk	6.75	286	Pn	Pn	08 20 06.7	+3.0
MTN	Manton Dam	10.07	170	Pn	Pn	08 20 52.9	+3.5
FITZ	Fitzroy Crossi	15.54	193	Pn	Pn	08 22 03.6	-0.1
	0.2nm,0.3s,baz=20,slow=12,SNR=2.9						
FITZ	Fitzroy Crossi	15.54	193		Pn	08 22 04.1	+0.4
WB0	Warramunga Arr	17.52	164	Pn	Pn	08 22 28.0	-0.8
WB0				IAmb	IAmb	08 22 46.4	
	comp=Z,16nm,1.2s						
WRA	Warramunga Arr	17.67	164	P	Pn	08 22 29.4	-1.3
	comp=Z,0.8nm,0.3s,baz=346,slow=12,SNR=23						
WRA				S	Sn	08 25 44.4	-2.5
	comp=Z,0.1nm,0.3s,baz=343,slow=22,SNR=2.1						
WRA	Warramunga Arr	17.67	164		Pn	08 22 28.8	-2.0
WB2	Warramunga Arr	17.67	164	P	Pn	08 22 30.1	-0.6
WB2				IAmb	IAmb	08 22 38.4	
	comp=Z,20nm,1.4s						
WR0	Warramunga Arr	17.74	164	P	P	08 22 32.4	+0.2
WR0				IAmb	IAmb	08 22 41.6	
	comp=Z,24nm,1.6s						
PSAB2	Pilbara Seismi	20.70	206	P	P	08 23 01.7	-2.9
PSAA2	Pilbara Seismi	20.71	206	P	P	08 23 01.2	-3.6
PSA00	Pilbara Seismi	20.72	206	P	P	08 23 01.8	-3.1
PSA00				IAmb	IAmb	08 23 08.7	
	comp=Z,16nm,1.1s						
AS31	Alice Springs	21.15	168	P	P	08 23 09.5	+0.1
ASAR	Alice Springs	21.15	168	P	P	08 23 09.5	0.0
	comp=Z,8.0nm,0.6s,baz=349,slow=12,SNR=114						
ASAR				S	S	08 27 02.4	-1.1
	comp=Z,3.2nm,0.8s,baz=348,slow=21,SNR=9.8						
ASAR	Alice Springs	21.15	168	P	P	08 23 09.9	+0.4
STKA	Stephens Creek	31.09	159	P	P	08 24 43.1	+0.6
	comp=Z,1.3nm,0.7s,baz=315,slow=10,SNR=3.1						
STKA	Stephens Creek	31.09	159	P	P	08 24 43.1	+0.6
STKA				IAmb	IAmb	08 25 31.1	
	comp=Z,5.9nm,2.0s						

IDC ***12*** *08:48:36.0±0.8, 59°.28N×147°.32E, h0^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.7/44, mbtmp3.8/12, ML3.8/3, Error* *ellipse: s-maj=23.7km s-min=11.6km az=164.0*

*NEIC **12** 08:48:37.8±1.8, 59°.4N±0°.1×146°.94E±0°.06, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=23.3km s-min=4.6km az=172.0*

*NERS **12** 08:48:37.7±0.0, 59°.60N×147°.12E, h14^{km}, Felt I=II MSK at Magadan(202km), Snezhnyj(212km)*

ISC 12 08:48:38.9±1.2**, 59°.51N**±0°.04×**147°.34E**±0°.03**, h17**^{km}±8^{km}**, n39, σ2^{s}.09**/58**, mb3.6**/13**, 2D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MA2	**Magadan**	**1.75**	**87**	Pg	**Pn**	**08 49 09.4**	**+1.0**
	384nm,0.3s,baz=303,slow=22,SNR=416						
MA2				Lg	Lg	08 49 37.3	
	1μm,0.3s,baz=253,slow=18,SNR=48						
MA2	**Magadan**	**1.75**	**87**	⇓*i*P	**Pn**	**08 49 09.4**	**+1.0**
MA2				*e*Pg	**Pb**	**08 49 11.6**	**+1.1**
MA2				Pgmax		08 49 12.5	
	780nm,0.3s						
MA2				*e*Sg	**Sg**	**08 49 37.5**	**+2.2**
MA2				Sgmax		08 49 39.0	
	2μm,0.2s						
MA2	**Magadan**	**1.75**	**87**	Pn	**Pn**	**08 49 09.8**	**+1.4**
MA2				Sn	**Sg**	**08 49 35.6**	**+0.4**
MGD	**Magadan 1**	**1.80**	**71**	⇓*i*P	**Pn**	**08 49 09.2**	**+0.1**
MGD				*i* Pg	**Pb**	**08 49 11.7**	**+0.4**
MGD				Pgmax		08 49 11.9	
	810nm,0.2s						
MGD				*e*Sg	**Sg**	**08 49 37.1**	**+0.3**
MGD				Sgmax		08 49 40.7	
	2μm,0.3s						
MGD				Sgmax		08 49 40.7	
	2μm,0.3s						
OKHR	**Okhotsk**	**2.09**	**268**	*e*P	**Pg**	**08 49 20.0**	**+0.9**
OKHR				*e*P	Pb	08 49 22.9	+6.5
OKHR				Pgmax		08 49 25.4	
	1μm,0.3s						
OKHR				*e*S	**Sg**	**08 49 48.1**	**+1.9**
OKHR				Sgmax		08 49 49.2	
	4μm,0.3s						
OKHR				Sgmax		08 49 49.2	
	4μm,0.4s						
OCHR	**Omchak**	**2.17**	**7**	*e*P	**Pn**	**08 49 13.4**	**-0.9**
OCHR				*e*Pg	**Pb**	**08 49 16.2**	**-1.6**
OCHR				Pgmax		08 49 20.5	
	380nm,0.2s						
OCHR				*e*Sg	**Sb**	**08 49 45.4**	**+0.9**
OCHR				Sgmax		08 49 47.7	
	2μm,0.3s						
OCHR				Sgmax		08 49 47.7	
	1μm,0.3s						
TLAR	**Talaya**	**3.00**	**55**	*e*P	**Pn**	**08 49 26.8**	**+1.2**
TLAR				*e*Pg	**Pg**	**08 49 35.6**	**-0.7**
TLAR				Pgmax		08 49 36.7	
	270nm,0.3s						
TLAR				*e*Sg	**Sg**	**08 50 13.9**	**-1.2**
TLAR				Sgmax		08 50 14.8	
	3μm,0.4s						
SUUS	**Susuman**	**3.30**	**7**	*e*P	**Pn**	**08 49 28.3**	**-1.5**
SUUS				*e*Pg	**Pb**	**08 49 38.4**	**+1.4**
SUUS				Pgmax		08 49 39.1	
	190nm,0.3s						
SUUS				*e*Sg	**Sb**	**08 50 18.9**	**+2.1**
SUUS				Sgmax		08 50 24.3	
	3μm,0.4s						
SEY	**Seymchan**	**4.21**	**33**	Pn	**Pn**	**08 49 43.0**	**+0.9**
	4.9nm,0.3s,baz=258,slow=23,SNR=51						
SEY				Pg	**Pb**	**08 49 56.4**	**+4.0**
	27nm,0.3s,baz=44,slow=23,SNR=21						
SEY				Sn	**Sn**	**08 50 31.5**	**+0.6**
	72nm,0.3s,baz=99,slow=24,SNR=8.2						
SEY				Lg	Lg	08 50 49.9	
	213nm,0.3s,baz=343,slow=22,SNR=17						
SEY	**Seymchan**	**4.21**	**33**	*e*P	**Pn**	**08 49 43.1**	**+0.9**
SEY				*e*Pg	**Pb**	**08 49 56.4**	**+4.0**
SEY				Pgmax		08 50 01.9	
	110nm,0.4s						
SEY				*e*S	**Sn**	**08 50 31.9**	**+1.0**
SEY				*e*Sg	**Sg**	**08 50 50.3**	**-3.6**
SEY				Sgmax		08 50 56.8	
	1μm,0.2s						
OMS	**Omsukchan**	**5.09**	**50**	*e*P	**Pn**	**08 49 55.1**	**+0.8**
OMS				*e*Pg	**Pg**	**08 50 13.9**	**-2.4**
OMS				Pgmax		08 50 16.6	
	70nm,0.4s						
OMS				*e*Sg	**Sg**	**08 51 19.6**	**-2.5**
OMS				Sgmax		08 51 30.0	
	290nm,0.4s						
OMS				Sgmax		08 51 30.0	
	480nm,0.5s						
EVEN	**Evensk**	**6.31**	**63**	*e*	Pn	08 50 01.6	-9.4
EVEN				*e*P	**Pn**	**08 50 15.4**	**+4.4**
EVEN				Pgmax		08 50 20.0	
	40nm,0.4s						
EVEN				*e*S	**Sb**	**08 51 38.7**	**-4.6**
EVEN				Sgmax		08 51 50.7	
	260nm,0.8s						
EVEN				Sgmax		08 51 50.7	
	250nm,0.6s						
PEA0B	**Petropavlovsk-**	**8.62**	**134**	Pn	**Pn**	**08 50 43.7**	**+1.0**
PETK	**Petropavlovsk-**	**8.62**	**134**	Pn	**Pn**	**08 50 43.7**	**+1.0**
	5.4nm,0.3s,baz=339,slow=9.7,SNR=35						
YAK	**Yakutsk**	**8.99**	**294**	Lg	Lg	08 53 06.5	
	0.3nm,0.3s,baz=160,slow=22,SNR=1.9						
KLR	**Kul'dur**	**13.69**	**228**	Pn	**Pn**	**08 51 49.6**	**-2.5**
	0.5nm,0.3s,baz=16,slow=16,SNR=7.7						
KLR				Lg	Lg	08 55 38.6	
	0.1nm,0.3s,baz=332,slow=4.2,SNR=2.3						
ASAJ	**Asahikawa**	**15.69**	**193**	Pn	**Pn**	**08 52 16.5**	**-2.4**
	0.6nm,0.3s,baz=62,slow=31,SNR=2.0						
A21K	**Barrow**	**25.02**	**39**	P	**P**	**08 54 01.6**	**+0.1**
SONM	**Songino Array**	**26.47**	**262**	P	**P**	**08 54 14.5**	**-0.4**
	0.3nm,0.5s,baz=46,slow=10,SNR=2.8						
TOLK	**Toolik Lake Re**	**27.75**	**45**	P	**P**	**08 54 30.0**	**+3.8**
TOLK				IAmb	IAmb	08 54 33.9	
	comp=Z,4.9nm,1.1s						
BMAR	**Burnt Mountain**	**29.88**	**46**	P	**P**	**08 54 47.1**	**+2.0**
ILAR	**Eielson Array**	**29.90**	**52**	P	**P**	**08 54 48.2**	**+3.0**
	comp=Z,0.6nm,0.7s,baz=284,slow=8.5,SNR=8.3						
ILAR	**Eielson Array**	**29.90**	**52**	P	**P**	**08 54 47.4**	**+2.2**
BCAR	**Beaver Creek A**	**32.66**	**53**	P	**P**	**08 55 13.5**	**+4.0**
C36M	**Paulatuk**	**36.03**	**37**	P	**P**	**08 55 39.7**	**+1.1**
C36M				IAmb	IAmb	08 55 46.1	
	comp=Z,7.9nm,1.4s						
KURK	**Kurchatov**	**38.58**	**288**	P	**P**	**08 55 58.5**	**-1.9**
MKAR	**Makanchi Array**	**39.39**	**281**	P	**P**	**08 56 07.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=59,slow=7.0,SNR=3.1						
MKAR	**Makanchi Array**	**39.39**	**281**	P	**P**	**08 56 07.0**	**-0.3**
YKA	**Yellowknife Ar**	**43.22**	**42**	P	**P**	**08 56 39.5**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=312,slow=7.8,SNR=8.7						
KK31	**Karatay Array**	**47.87**	**286**	P	**P**	**08 57 14.2**	**-1.3**
KK31				IAmb	IAmb	08 57 20.9	
	comp=Z,1.4nm,0.9s						
KKAR	**Karatay Array**	**47.87**	**286**	P	**P**	**08 57 12.9**	**-2.7**
ARSB	**Arslanbob**	**47.98**	**282**	P	**P**	**08 57 13.1**	**-3.5**
ABKAR	**Akbulak array**	**48.31**	**299**	P	**P**	**08 57 18.1**	**-0.7**
FINES	**FINESS Array B**	**51.15**	**328**	P	**P**	**08 57 40.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=56,slow=10,SNR=1.4						
PDAR	**Pinedale Array**	**60.21**	**56**	P	**P**	**08 58 48.5**	**+2.7**
	comp=Z,0.1nm,0.4s,baz=294,slow=0.9,SNR=3.1						
Q24A	**Divide**	**65.22**	**55**	P	**P**	**08 59 20.6**	**+1.2**
Q24A				IAmb	IAmb	08 59 24.3	
	comp=Z,3.2nm,0.5s						
ESDC	**Sonseca Array**	**78.35**	**338**	P	**P**	**09 00 38.6**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=12,slow=6.9,SNR=2.5						
WRA	**Warramunga Arr**	**79.88**	**192**	P	**P**	**09 00 44.5**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=3.2,slow=5.9,SNR=1.8						
ASAR	**Alice Springs**	**83.61**	**192**	P	**P**	**09 01 04.0**	**-1.9**
	comp=Z,0.3nm,0.7s,baz=12,slow=5.9,SNR=2.2						

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*UCR **12** 08:55:49.1±1.6, 6°.03N×82°.68W, h35^{km}±306^{km}, MW4.0*

*UPA **12** 08:55:50.0±2.0, 6°.39N×82°.59W, h0^{km}±13^{km}, MW4.4*

ISC 12 08:55:46.8±1.8**, 6°.04N**±0°.09×**82°.66W**±0°.07**, h14**^{km}**, n67, σ1^{s}.73**/80**, 12C-5D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACAO	**El Cacao, Vera**	**2.21**	**54**	*i* P	**Pn**	**08 56 22.4**	**-0.6**
CACAO				*i* S	**Sn**	**08 56 47.9**	**-2.3**
GMAL	**Guarumal, Vera**	**2.22**	**40**	*i* P	**Pn**	**08 56 23.1**	**-0.1**
GMAL				*i* S	**Sn**	**08 56 48.6**	**-1.9**
MAPC	**Malpelo**	**2.29**	**152**	*e*P	Pn	08 56 20.6	-3.5
MAPC				*e*S	Sn	08 56 44.7	-7.4
MARI3	**Mariato, Verag**	**2.30**	**46**	*e*P	**Pn**	**08 56 23.3**	**-1.1**
REME3	**Remedios, Chir**	**2.32**	**21**	*e*P	**Pn**	**08 56 22.2**	**-2.4**
REME3				*e*S	**Sn**	**08 56 50.1**	**-2.8**
LOCO3	**Loma Colorada,**	**2.36**	**6**	*e*P	**Pn**	**08 56 25.1**	**-0.1**
CCOL	**Caracol de Cor**	**2.37**	**353**	⇓*i*P	**Pn**	**08 56 25.3**	**0.0**
BAGA3	**Bagala, Chiriq**	**2.41**	**3**	*i* P	**Pn**	**08 56 26.2**	**+0.3**
PIRO	**Carate, Puerto**	**2.44**	**344**	*e*P	**Pn**	**08 56 25.8**	**-0.4**
PONU3	**Ponuga, Veragu**	**2.48**	**42**	*e*P	**Pn**	**08 56 27.3**	**+0.5**
GUAL3	**Gualaca, Chiri**	**2.50**	**8**	*e*P	**Pn**	**08 56 27.4**	**+0.4**
CDITO	**Canoas**	**2.52**	**355**	⇑*i*P	**Pn**	**08 56 26.9**	**-0.4**
CDITO	**Canoas**	**2.52**	**355**	⇑*i*P	**Pn**	**08 56 27.0**	**-0.4**
PTJ1	**Puerto Jimnez**	**2.56**	**346**	*i* P	**Pn**	**08 56 28.2**	**+0.3**
PTJ1	**Puerto Jimnez**	**2.56**	**346**	*e*P	**Pn**	**08 56 27.9**	**0.0**
PTAR3	**Potrerillos Ar**	**2.64**	**4**	*i* P	**Pn**	**08 56 29.3**	**+0.2**
BCO2	**Palmira**	**2.66**	**3**	*i* P	**Pn**	**08 56 29.6**	**+0.1**
BCO2				*e*S	**Sn**	**08 56 59.8**	**-1.9**
CNAZ3	**Canazas, Verag**	**2.71**	**32**	*e*P	**Pn**	**08 56 29.4**	**-0.5**
BRU2	**Volcan**	**2.73**	**359**	⇑*i*P	**Pn**	**08 56 30.4**	**0.0**
	baz=181,slow=3.7						
MLIR3	**Monte Lirio, C**	**2.73**	**357**	*e*P	**Pn**	**08 56 31.3**	**+0.8**
BC3P	**Paso Ancho**	**2.75**	**1**	*i* P	**Pn**	**08 56 31.1**	**+0.3**
RIOS	**Rincon, Osa**	**2.77**	**342**	⇑*i*P	**Pn**	**08 56 30.2**	**-0.6**
RIOS				*e*S	**Sn**	**08 57 03.3**	**-0.8**
EDSV	**San Vito**	**2.77**	**354**	*e*P	**Pn**	**08 56 31.4**	**+0.5**
AZU	**Azuero**	**2.94**	**54**	*i* P	**Pn**	**08 56 33.2**	**0.0**
EDPN	**Palmar Norte**	**3.00**	**345**	*e*P	**Pn**	**08 56 34.2**	**+0.2**
POTG	**Potrero Grande**	**3.02**	**351**	⇑*e*P	**Pn**	**08 56 34.7**	**+0.3**
EDBA	**Buenos Aires**	**3.16**	**349**	*e*P	**Pn**	**08 56 36.6**	**+0.4**
DRK0	**Durika**	**3.25**	**350**	*e*P	**Pn**	**08 56 38.0**	**+0.4**
DRK0				*e*S	**Sn**	**08 57 12.7**	**-3.4**
DRK0	**Durika**	**3.25**	**350**	⇓*e*P	**Pn**	**08 56 38.0**	**+0.4**
DRK0				*e*S	**Sn**	**08 57 17.9**	**+1.8**
EDLM	**Las Mercedes**	**3.34**	**344**	⇑*i*P	**Pn**	**08 56 39.5**	**+0.8**
EDLM				*e*S	**Sn**	**08 57 18.6**	**+0.3**
PNME	**Penonome**	**3.36**	**44**	*e*P	**Pn**	**08 56 40.3**	**+1.5**
PNME				*e*S	**Sn**	**08 57 18.4**	**-0.1**
PEZE	**Perez Zeledon,**	**3.46**	**343**	⇑*i*P	**Pn**	**08 56 41.1**	**+0.7**
VTON	**El Valle, Cocl**	**3.59**	**45**	*e*P	**Pn**	**08 56 42.5**	**+0.3**
VTON				*e*S	**Sn**	**08 57 23.1**	**-1.4**
RIMA	**Rio Macho**	**3.88**	**342**	⇑*i*P	**Pn**	**08 56 47.0**	**+0.7**
LCR2	**La Lucha 2**	**3.91**	**340**	⇑*i*P	**Pn**	**08 56 47.3**	**+0.6**
ZANG	**Zanguenga, Cho**	**4.01**	**44**	*e*P	**Pn**	**08 56 48.5**	**+0.6**
ZANG				*e*S	**Sn**	**08 57 32.0**	**-2.6**
CHOR3	**La Chorrera**	**4.04**	**45**	*e*P	**Pn**	**08 56 50.5**	**+2.2**
CHOR3				*e*S	**Sn**	**08 57 35.5**	**+0.1**
BATAN	**Batan**	**4.09**	**350**	*i* P	**Pn**	**08 56 51.3**	**+2.4**
CVTR	**Volcan Turrial**	**4.10**	**345**	*e*P	**Pn**	**08 56 50.7**	**+1.3**
JACO	**JACO, Garabito**	**4.10**	**331**	⇑*e*P	**Pn**	**08 56 48.9**	**-0.2**
SJS	**Escuela Geolog**	**4.11**	**341**	*e*P	**Pn**	**08 56 50.6**	**+1.2**
HDC	**Heredia**	**4.18**	**340**	⇑*i*P	**Pn**	**08 56 51.6**	**+1.2**
HDC	**Heredia**	**4.18**	**340**	⇑*i*P	**Pn**	**08 56 51.6**	**+1.2**
UPA	**Univ. de Panam**	**4.26**	**47**	*e*P	**Pn**	**08 56 52.5**	**+1.2**
UPA				*e*S	**Sn**	**08 57 38.6**	**-2.2**
LAFE	**Finca La Fe, P**	**4.35**	**329**	*e*P	**Pn**	**08 56 53.1**	**+0.5**
SRA1	**San Ramn**	**4.40**	**336**	*e*P	**Pn**	**08 56 54.0**	**+0.7**
JTS	**Las Juntas de**	**4.79**	**332**	*i* P	**Pn**	**08 56 59.5**	**+0.9**
JTS	**Las Juntas de**	**4.79**	**332**	*e*P	**Pn**	**08 56 59.5**	**+0.9**
ARE1	**Arenal 1**	**4.84**	**335**	*e*P	**Pn**	**08 57 00.6**	**+1.4**
COVE	**Coope Vega, Sa**	**4.95**	**340**	⇓*i*P	**Pn**	**08 57 02.5**	**+1.6**
PLVR	**Palo Verde**	**5.04**	**328**	⇓*e*P	**Pn**	**08 57 03.3**	**+1.2**
ORTG	**Ortega, Santa**	**5.10**	**327**	⇓*e*P	**Pn**	**08 57 04.3**	**+1.3**
SOLC	**Bahia Solano**	**5.23**	**88**	*e*P	**Pn**	**08 57 05.0**	**+0.4**
PLMC	**San Jos del P**	**6.45**	**100**	*e*P	**Pn**	**08 57 21.1**	**-0.5**
PLMC				*e*S	**Sn**	**08 58 32.4**	**-2.7**
CBOC	**Ciudad Bolivar**	**6.62**	**91**	*e*P	**Pn**	**08 57 23.9**	**-0.1**
YOTC	**Yotoco, Valle**	**6.62**	**108**	*e*P	**Pn**	**08 57 23.8**	**-0.1**
BBAC	**Balboa, Cauca**	**6.72**	**126**	*e*P	**Pn**	**08 57 26.0**	**+0.6**
BBAC				*e*S	Sn	08 58 34.1	-7.8
HELC	**Santa Helena**	**7.10**	**88**	*e*P	**Pn**	**08 57 34.1**	**+3.5**
HELC	**Santa Helena**	**7.10**	**88**	*e*P	**Pn**	**08 57 33.7**	**+3.1**
RREF	**El Recreo**	**7.37**	**99**	*e*P	**Pn**	**08 57 38.5**	**+3.8**
ANIL	**Santa Ana**	**7.39**	**102**	*e*P	**Pn**	**08 57 37.4**	**+2.7**
MARP	**Paez Belalcaza**	**7.41**	**115**	*e*P	**Pn**	**08 57 38.2**	**+3.3**
MOTC	**Monteria, Cord**	**7.45**	**68**	*e*P	**Pn**	**08 57 39.2**	**+4.0**
MONA	**Monteria**	**7.46**	**68**	*e*P	**Pn**	**08 57 39.5**	**+4.2**
TOLC	**Tolima**	**7.46**	**101**	*e*P	**Pn**	**08 57 39.1**	**+3.6**
ORTC	**Ortega, Tolima**	**7.69**	**106**	*e*P	**Pn**	**08 57 41.8**	**+3.3**
PTBC	**PUERTO BERRIO,**	**8.17**	**86**	*e*P	**Pn**	**08 57 49.2**	**+4.0**

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*NNC **12** 09:21:37.9±2.4, 40°.80N×70°.27E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=18.3km s-min=11.3km az=42.0*

*SOME **12** 09:21:38.3, 41°.00N×70°.32E, h0^{km}*

*KRNET **12** 09:21:38.6±0.1, 41°.01N×70°.26E, h15^{km}, mb2.6*

ISC 12 09:21:40.1±1.1**, 41°.00N**±0°.03×**70°.39E**±0°.03**, h17**^{km}±11^{km}**, n19, σ2^{s}.10**/36**, 19C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.78**	**47**	⇑*i*P	**Pg**	**09 21 54.3**	**-1.0**
	baz=56						
TRKS				⇑*i*S	**Sg**	**09 22 06.2**	**+0.6**
	baz=56						
TAS	**Tashkent**	**0.89**	**292**	⇑*i*P	**Pg**	**09 21 54.1**	**-3.2**
	baz=94						
TAS				⇑*i*S	**Sb**	**09 22 04.9**	**-3.6**
	baz=94						
BTK	**Batken**	**1.00**	**161**	⇑*i*P	**Pg**	**09 21 58.6**	**-0.8**
	baz=56						
BTK				⇑*i*S	**Sn**	**09 22 13.0**	**-0.1**
	baz=56						
IUG	**Iuzhnay**	**1.18**	**347**	*e*P	**Pg**	**09 22 03.2**	**+0.4**
	5.6nm,0.3s						
IUG				*e*S	**Sg**	**09 22 21.7**	**+3.5**
	75nm,0.6s						
IUG	**Iuzhnay**	**1.18**	**347**	P	**Pg**	**09 22 03.2**	**+0.4**
	17nm,0.4s						
IUG				S	**Sg**	**09 22 22.8**	**+4.7**
	75nm,0.6s						
DRK	**Karamyk**	**1.87**	**144**	⇓*i*P	**Pb**	**09 22 14.4**	**+0.5**
	baz=42						
DRK				⇓*i*S	**Sg**	**09 22 40.7**	**+0.5**
	baz=42						
OHH	**Osh**	**1.88**	**104**	⇑*i*P	**Pb**	**09 22 15.4**	**+1.3**
	baz=3.0						
OHH				⇑*i*S	**Sg**	**09 22 42.0**	**+1.3**
	baz=3.0						
ARSB	**Arslanbob**	**1.99**	**80**	⇑*e*P	**Pb**	**09 22 16.7**	**+0.9**
	baz=80						
ARSB				⇑*i*S	**Sg**	**09 22 44.4**	**+0.4**
	baz=80						
KK31	**Karatay Array**	**2.10**	**3**	Pn	**Pb**	**09 22 17.6**	**-0.2**
	3.3nm,0.6s,baz=194,slow=15,SNR=29						
KK31				⇑Sn	**Sg**	**09 22 46.7**	**-1.0**
	6.3nm,0.7s,baz=193,slow=25,SNR=7.2						
MNAS	**Manas**	**2.17**	**46**	⇑*e*P	**Pb**	**09 22 18.9**	**-0.1**
	baz=48						
MNAS				⇑*i*S	**Sg**	**09 22 48.7**	**-1.2**
	baz=48						
SFK	**Sufi-Kurgan**	**2.57**	**112**	⇑*i*P	**Pb**	**09 22 25.2**	**-0.7**
	baz=11						
SFK				⇑*i*S	**Sb**	**09 22 58.4**	**+1.1**
	baz=11						
AML	**Almayashu**	**2.73**	**64**	⇓*i*P	**Pb**	**09 22 27.0**	**-1.6**
	baz=65						
AML				⇓*i*S	**Sb**	**09 23 02.7**	**+0.8**
	baz=65						
MRKS	**Merke**	**2.74**	**50**	*e*P	**Pg**	**09 22 32.2**	**-0.4**
	4.8nm,0.6s						
MRKS				*e*S	**Sg**	**09 23 10.0**	**+1.8**
	6.3nm,0.5s						
MRKS	**Merke**	**2.74**	**50**	Pg	**Pg**	**09 22 32.4**	**-0.3**
	6.8nm,0.6s						
MRKS				Lg	Lg	09 23 13.2	
	6.2nm,0.8s						
EKS2	**Erkin-Say**	**3.03**	**56**	⇑*i*P	**Pb**	**09 22 31.1**	**-2.5**
	baz=57						
EKS2				⇑*i*S	**Sb**	**09 23 09.3**	**-1.0**
	baz=57						
ARLS	**Aral**	**3.08**	**73**	⇑*i*P	**Pb**	**09 22 32.0**	**-2.5**
	baz=73						
ARLS				⇑*i*S	**Sb**	**09 23 11.1**	**-0.8**
	baz=73						
AAK	**Ala-Archa**	**3.48**	**61**	⇓*i*P	**Pn**	**09 22 37.4**	**+3.8**
	baz=61						
AAK				⇓*i*S	**Sb**	**09 23 20.3**	**-3.0**
	baz=61						
KST	**Kastek**	**4.63**	**62**	*e*P	**Pg**	**09 23 05.1**	**-3.6**
	1.3nm,0.4s						
KST				*e*S	**Sg**	**09 24 07.0**	**-1.6**
	4.2nm,0.7s						
KST	**Kastek**	**4.63**	**62**	Pg	**Pg**	**09 23 05.1**	**-3.6**
	1.3nm,0.4s						
KST				Lg	Lg	09 24 08.9	
	4.2nm,0.7s						

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*IDC **12** 09:39:55.9±3.0, 53°.53N×87°.85E, h0^{km}, mb1 3.0/2, mb1mx2.9/40, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=25.5km s-min=15.0km az=62.0*

*NNC **12** 09:39:55.2±5.0, 53°.33N×87°.88E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=38.2km s-min=25.8km az=66.0, Suspected Mining explosion.*

ISC 12 09:39:53.6±2.0**, 52°.31N**±0°.06×**86°.5E**±0°.1**, h0**^{km}**, n7, σ2^{s}.00**/11**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.94**	**329**	⇑Pn	**Pn**	**09 40 28.0**	**+0.1**
	0.5nm,0.5s						
ZAA0				⇑Sn	**Sb**	**09 40 55.3**	**+0.8**
	2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**1.94**	**329**	Pg	**Pn**	**09 40 28.8**	**+1.0**
	1.8nm,0.3s,baz=107,slow=15,SNR=19						
ZALV				Lg	Lg	09 40 55.2	
	2.1nm,0.3s,baz=100,slow=24,SNR=16						
I46RU	**ZALESOVO INFRA**	**1.94**	**329**	*i*		09 51 10.0	
	baz=100,slow=324,SNR=1.1						
KURK	**Kurchatov**	**5.19**	**255**	⇑Pn	**Pg**	**09 41 31.2**	**-1.8**
	0.8nm,0.7s						
KURK				⇑Sn	**Sg**	**09 42 39.9**	**-0.3**
	1.3nm,0.9s						
KURK				⇑Lg	Lg	09 43 13.4	
	1.8nm,0.7s						
KURBB	**Kurchatov Arra**	**5.27**	**255**	Pn	**Pg**	**09 41 32.3**	**-2.3**
	0.1nm,0.3s,baz=62,slow=14,SNR=9.7						
KURBB				Sn	**Sg**	**09 42 44.9**	**+1.9**
	0.0nm,0.3s,baz=134,slow=23,SNR=2.4						
KURBB	**Kurchatov Arra**	**5.27**	**255**	⇓Pn	**Pg**	**09 41 32.7**	**-1.9**
	1.2nm,0.5s,baz=63,slow=15						
KURBB				⇓Sn	**Sg**	**09 42 44.8**	**+1.9**
	4.1nm,0.7s						
KURBB				⇑Lg	Lg	09 43 20.3	
	4.3nm,0.7s						
MKAR	**Makanchi Array**	**6.17**	**208**	Pn	**Pg**	**09 41 50.0**	**-1.8**
	0.1nm,0.3s,baz=30,slow=14,SNR=6.5						
MKAR				Sn	**Sg**	**09 43 14.3**	**+2.7**
	0.0nm,0.3s,baz=30,slow=29,SNR=2.4						
MKAR				Lg	Lg	09 43 56.6	
	0.1nm,0.3s,baz=30,slow=24,SNR=2.2						

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*IDC **12** 09:40:21.5±0.6, 56°.56S×150°.52W, h0^{km}, mb4.2/9, mb1 4.3/9, mb1mx4.2/24, mbtmp4.1/9, MS3.7/4, Ms1 3.6/4, ms1mx3.3/18, Error ellipse: s-maj=25.9km s-min=19.6km az=7.0*

*NEIC **12** 09:40:22.9±1.1, 56°.4S±0°.2×150°.6W±0°.2, h10^{km}±1^{km}, mb4.7/16, Error ellipse: s-maj=34.5km s-min=16.2km az=354.0*

ISC 12 09:40:23.1±0.6**, 56°.6S**±0°.2×**150°.6W**±0°.1**, h10**^{km}**, n55, σ0^{s}.98**/33**, mb4.5**/15**, MS3.7**/7**, 1C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**26.58**	**201**	P	**P**	**09 46 02.5**	**+1.7**
	0.6nm,0.9s,baz=61,slow=8.2,SNR=3.8						
VNDA				LR	LR	09 53 01.4	
	comp=Z,65nm,18.5s,baz=324,slow=28						
VNDA	**Vanda**	**26.58**	**201**	IAmb	IAmb	09 46 08.7	
	comp=Z,4.6nm,1.1s						
TBI	**Tubuai**	**33.22**	**2**	*e*LR	LR	09 55 21.4	
	comp=Z,125nm,31.5s						
TBI	**Tubuai**	**33.22**	**2**	*e*T	T	10 22 11.5	
	comp=Z,12nm,0.3s						
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**09 47 02.1**	**-0.6**
	comp=Z,3.9nm,1.1s,baz=122,slow=1.6,SNR=7.7						
QSPA				PcP	**PcP**	**09 49 42.0**	**-0.9**
	comp=Z,2.5nm,1.0s,baz=304,slow=3.9,SNR=3.6						
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**09 47 04.0**	**+1.2**
QSPA				IAmb	IAmb	09 47 05.9	
	comp=Z,5.7nm,1.1s						
PPT2	**Papeete2**	**38.95**	**1**	*e*LR	LR	09 58 14.9	
	comp=Z,150nm,27.2s						
PPT	**Papeete**	**38.97**	**1**	LR	LR	09 59 02.5	
	comp=Z,49nm,18.9s,baz=162,slow=29						
VAH	**Vaihoa**	**41.34**	**4**	*e*T	T	10 32 16.5	
	comp=Z,24nm,0.2s						
TAOE	**Nuku Hiva Isla**	**48.31**	**14**	*e*LR	LR	10 02 30.8	
	comp=Z,116nm,27.9s						
STKA	**Stephens Creek**	**52.03**	**268**	P	**P**	**09 49 34.1**	**+1.6**
	comp=Z,2.9nm,0.8s,baz=95,slow=5.9,SNR=5.4						
STKA	**Stephens Creek**	**52.03**	**268**	P	**P**	**09 49 33.7**	**+1.1**
PLCA	**Paso Flores**	**52.09**	**108**	P	**P**	**09 49 33.4**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=232,slow=7.0,SNR=6.1						
PLCA	**Paso Flores**	**52.09**	**108**	IAmb	IAmb	09 49 34.9	
	comp=Z,11nm,1.2s						
H03S2	**Juan Fernandez**	**52.64**	**96**	T	T	10 46 38.4	
	baz=219,slow=74,SNR=24						
H03S1	**Juan Fernandez**	**52.65**	**96**	T	T	10 46 31.9	
	baz=219,slow=74,SNR=23						
H03S3	**Juan Fernandez**	**52.66**	**96**	T	T	10 46 37.3	
	baz=219,slow=74,SNR=21						
LC01	**Cunco**	**52.72**	**106**	P	**P**	**09 49 38.3**	**+0.6**
LC01				IAmb	IAmb	09 49 39.0	
	comp=Z,12nm,0.9s						
H03N3	**Juan Fernandez**	**52.93**	**96**	T	T	10 46 58.0	
	baz=222,slow=72,SNR=48						
H03N2	**Juan Fernandez**	**52.94**	**96**	T	T	10 46 48.9	
	baz=222,slow=72,SNR=70						
H03N1	**Juan Fernandez**	**52.95**	**96**	T	T	10 46 51.4	
	baz=222,slow=72,SNR=45						
MAW	**Mawson**	**53.66**	**195**	P	**P**	**09 49 44.9**	**+0.8**
	comp=Z,5.8nm,1.1s,baz=170,slow=6.7,SNR=3.8						
MAW	**Mawson**	**53.66**	**195**	IAmb	IAmb	09 49 46.7	
	comp=Z,3.0nm,1.4s						
SYO	**Syowa Base**	**54.48**	**184**	⇑*e*P	**P**	**09 49 47.0**	**-3.1**
FORT	**Forrest**	**60.29**	**258**	P	**P**	**09 50 31.1**	**-0.6**
AC05	**El Transito**	**61.21**	**99**	P	**P**	**09 50 38.5**	**+0.4**
ASAR	**Alice Springs**	**62.66**	**268**	P	**P**	**09 50 47.2**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=140,slow=6.6,SNR=36						
ASAR	**Alice Springs**	**62.66**	**268**	P	**P**	**09 50 47.0**	**-0.8**
AS31	**Alice Springs**	**62.66**	**268**	P	**P**	**09 50 47.1**	**-0.7**
AS31				IAmb	IAmb	09 50 48.0	
	comp=Z,3.4nm,1.4s						
AC02	**Maricunga**	**63.40**	**99**	P	**P**	**09 50 53.5**	**+0.3**
AC02				IAmb	IAmb	09 50 54.5	
	comp=Z,7.0nm,0.9s						
H01W1	**Cape Leeuwin H**	**64.37**	**245**	T	T	11 01 12.9	
	baz=142,slow=75,SNR=16						
H01W2	**Cape Leeuwin H**	**64.38**	**245**	T	T	11 01 08.7	
	baz=142,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**64.39**	**245**	T	T	11 01 26.8	
	baz=142,slow=75,SNR=14						
WR0	**Warramunga Arr**	**65.28**	**271**	P	**P**	**09 51 03.8**	**-1.2**
WR0				IAmb	IAmb	09 51 08.7	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**65.40**	**271**	P	**P**	**09 51 05.1**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=149,slow=5.7,SNR=5.7						
LVC	**Limon Verde**	**66.88**	**96**	P	**P**	**09 51 16.5**	**+0.8**
PB16	**IPOC Station P**	**69.99**	**93**	P	**P**	**09 51 36.1**	**+0.6**
PB16				IAmb	IAmb	09 51 37.8	
	comp=Z,8.4nm,1.0s						
CPUP	**Villa Florida**	**70.15**	**108**	P	**P**	**09 51 35.1**	**-0.6**
	comp=Z,5.8nm,0.9s,baz=218,slow=6.2,SNR=13						
CPUP	**Villa Florida**	**70.15**	**108**	P	**P**	**09 51 35.4**	**-0.3**
CPUP				IAmb	IAmb	09 51 36.4	
	comp=Z,8.1nm,0.9s						
SAML	**Samuel**	**81.16**	**93**	P	**P**	**09 52 38.7**	**-0.1**
SAML				IAmb	IAmb	09 52 40.1	
	comp=Z,5.0nm,0.9s						
GUMO	**Guam**	**87.91**	**299**	LR	LR	10 24 28.5	
	comp=Z,154nm,20.9s,baz=260,slow=30						
TXAR	**Lajitas Array**	**94.36**	**40**	P	**P**	**09 53 43.1**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=207,slow=5.8,SNR=3.2						
BOSA	**Boshof**	**95.06**	**176**	LR	LR	10 33 29.5	
	comp=Z,32nm,18.5s,baz=194,slow=34						
H10N3	**ASCENSION HYDR**	**106.36**	**134**	T	T	11 54 11.7	
	baz=203,slow=75,SNR=6.8						
H10N1	**ASCENSION HYDR**	**106.37**	**134**	T	T	11 54 03.5	
	baz=203,slow=75,SNR=6.9						
H10N2	**ASCENSION HYDR**	**106.38**	**134**	T	T	11 54 14.3	
	baz=203,slow=75,SNR=6.8						
ILAR	**Eielson Array**	**121.07**	**2**	PKP	**PKiKP**	**09 59 14.9**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=242,slow=2.3,SNR=24						
ILAR	**Eielson Array**	**121.07**	**2**		**PKiKP**	**09 59 14.3**	**-0.1**
YKA	**Yellowknife Ar**	**122.00**	**19**	PKP	**PKiKP**	**09 59 15.9**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=196,slow=1.4,SNR=8.7						
KLR	**Kul'dur**	**123.49**	**310**	PKP	**PKiKP**	**09 59 19.3**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=267,slow=1.1,SNR=4.6						
MKAR	**Makanchi Array**	**146.60**	**276**	PKPbc	**PKPbc**	**10 00 03.6**	**-0.2**
	comp=Z,11nm,0.8s,baz=119,slow=4.6,SNR=98						
ZALV	**Zalesovo Beam**	**149.06**	**289**	PKPbc	**PKPbc**	**10 00 09.0**	**-1.2**

	comp=Z,3.7nm,0.7s,baz=118,slow=3.3,SNR=18						
ZALV	Zalesovo Beam	149.06	289		PKPbc	10 00 09.3	-0.8
ESDC	Sonseca Array	152.39	114	PKPbc	PKiKP	10 00 18.4	-0.4
	comp=Z,1.3nm,1.0s,baz=216,slow=2.5,SNR=5.3						
ESDC	Sonseca Array	152.39	114		PKiKP	10 00 19.1	+0.3

IDC ***12*** *09:41:38.5±1.1, 0°.40N×98°.23E, h0^{km}, mb3.6/7, mb1 3.6/8, mb1mx3.5/39, mbtmp3.5/8, ML2.9/1, Error ellipse: s-maj=31.3km s-min=18.1km az=85.0*
DJA ***12*** *09:41:42.7±1.4, 0°N±20°×9°8E±°, h19^{km}±35^{km}, M4.0/7, MLv4.0/7*
ISC 12 09:41:43.3±0.7**, 0°.45N**±0°.07×**98°.20E**±0°.07**, h29**^{km}**, n18, σ1^{s}12**/17**, mb3.8**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.51	171	P	Pb	09 41 54.0	+0.2
PBSI				S	Sn	09 42 02.2	-0.1
GSI	Gunungsitoli	1.05	324	P	Pn	09 42 02.4	+0.3
MNSI	Mandailing Nat	1.43	76	P	Pn	09 42 06.9	-0.3
MNSI				S	Sn	09 42 24.6	-0.4
PSI	Prapat	2.45	17	Pn	Pn	09 42 19.4	-2.0
	2.7nm,0.3s,baz=180,slow=12,SNR=6.9						
PSI				Lg	Lg	09 42 54.2	
	9.5nm,0.3s,baz=180,slow=9.2,SNR=5.5						
TPTI		2.97	340	P	Pn	09 42 29.4	+0.9
KCSI	Kotacane, Aceh	3.08	352	P	Pn	09 42 30.6	+0.5
SDSI	Sungai Dareh	3.51	113	P	Pb	09 42 47.7	+3.0
H08S2	Diego Garcia H	26.86	252	T	T	10 14 48.0	
	baz=73,slow=76,SNR=171						
H08S3	Diego Garcia H	26.87	252	T	T	10 14 50.5	
	baz=73,slow=76,SNR=241						
H08S1	Diego Carcia H	26.88	252	T	T	10 14 49.4	
	baz=73,slow=76,SNR=178						
WRA	Warramunga Arr	40.79	122	P	P	09 49 21.5	-1.0
	0.4nm,0.9s,baz=304,slow=9.0,SNR=1.4						
ASAR	Alice Springs	42.15	127	P	P	09 49 32.5	-1.0
	0.2nm,0.6s,baz=300,slow=7.4,SNR=1.9						
SONM	Songino Array	47.73	7	P	P	09 50 16.9	-0.8
	0.4nm,0.7s,baz=190,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	48.21	345	P	P	09 50 21.5	+0.2
	0.5nm,0.6s,baz=157,slow=9.3,SNR=7.5						
ZALV	Zalesovo Beam	54.46	350	P	P	09 51 08.1	+0.1
	0.8nm,0.4s,baz=164,slow=6.9,SNR=5.4						
KLR	Kul'dur	56.49	26	P	P	09 51 22.4	-0.3
	0.8nm,0.5s,baz=240,slow=6.3,SNR=5.2						
BRTR	Keskin Array B	70.35	312	P	P	09 52 54.6	-0.2
	1.0nm,1.0s,baz=128,slow=7.6,SNR=2.5						
ARCES	ARCESS Array B	83.58	340	P	P	09 54 08.9	+0.5
	7.7nm,1.1s,baz=117,slow=5.5,SNR=3.5						

THE ***12*** *10:00:26.9, 34°.41N×26°.19E, h0^{km}, ML3.0/4, Error ellipse: s-maj=1.9km s-min=0.7km az=161.0*
ATH ***12*** *10:00:26.6, 34°.36N×26°.21E, h15^{km}±5^{km}, ML3.0/3, Error ellipse: s-maj=6.5km s-min=2.8km az=20.0*
ISK ***12*** *10:00:27.7, 34°.54N×26°.10E, h69^{km}, ML3.6/16*
IDC ***12*** *10:00:28.9±2.2, 34°.64N×26°.18E, h39^{km}±21^{km}, mb3.8/9, mb1 3.7/13, mb1mx3.5/51, mbtmp3.8/13, ML3.5/4, Error ellipse: s-maj=24.2km s-min=17.4km az=1.0*
NIC ***12*** *10:00:29.5±0.0, 34°.42N×26°.47E, h11^{km}±8^{km}, Ml4.1/2*
HLW ***12*** *10:00:29.8, 34°.18N×26°.46E, h3^{km}±5^{km}, Md4.0, Ml3.9*
DDA ***12*** *10:00:31.0, 34°.74N×26°.73E, h10^{km}±4^{km}, MW4.1*
ISC 12 10:00:28.2±1.0**, 34°.40N**±0°.04×**26°.20E**±0°.04**, h49**^{km}±11^{km}**, n73, σ1^{s}90**/106**, mb3.8**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.71	1	P	Pn	10 00 41.0	-1.1
ZKR				S	Sn	10 00 52.0	-0.2
ZKR				AML	AML	10 00 52.6	
	comp=N,3997µm,0.5s						
ZKR				AML	AML	10 00 57.3	
	comp=E,4650µm,0.4s						
ZKR	Zakros	0.71	1	P	Pn	10 00 41.0	-1.1
ZKR				S	Sn	10 00 52.0	-0.2
	comp=E,2µm,0.5s						
ZKR	Zakros	0.71	1	PG	Pn	10 00 41.5	-0.6
ZKR				SG	Sn	10 00 52.1	-0.2
STIA	Sitia Lasithi	0.81	354	P	Pn	10 00 42.5	-0.8
STIA				S	Sn	10 00 55.0	+0.7
NPS	Neapolis	0.99	331	P	Pn	10 00 45.5	-0.3
NPS				S	Sn	10 00 59.2	+0.5
NPS				AML	AML	10 01 06.6	
	comp=E,1988µm,0.5s						
NPS				AML	AML	10 01 06.6	
	comp=N,1563µm,0.6s						
NPS	Neapolis	0.99	331	P	Pn	10 00 45.5	-0.3
NPS				S	Sn	10 01 00.9	+2.2
	comp=N,872nm,0.5s						
KSTL	Kastelli Herak	1.29	315	P	Pn	10 00 47.4	-2.5
SIVA	Sivas	1.30	299	P	Pn	10 00 51.3	+1.3
SIVA	Sivas	1.30	299	P	Pn	10 00 50.9	+1.0
KARP	Karpathos	1.39	34	P	Pn	10 00 52.2	+0.9
KARP	Karpathos	1.39	34	P	Pn	10 00 52.2	+0.9
KARP				S	Sn	10 01 12.1	+3.5
	comp=N,442nm,0.3s						
KARP	Karpathos	1.39	34	PN	Pn	10 00 51.7	+0.4
KARP	Karpathos	1.39	34	P	Pn	10 00 52.4	+1.1
KARP				S	Sn	10 01 11.2	+2.6
IDI	Anoyia	1.40	310	Pn	Pn	10 00 51.1	-0.2
	comp=N,6.7nm,0.3s,baz=138,slow=8.1,SNR=40						
IDI				Sn	Sn	10 01 03.0	-5.7
	comp=N,19nm,0.3s,baz=300,slow=21,SNR=9.8						
IDI	Anoyia	1.40	310	P	Pn	10 00 51.8	+0.5
IDI				AML	AML	10 01 19.8	
	comp=E,398µm,0.5s						
IDI				AML	AML	10 01 25.4	
	comp=N,584µm,0.5s						
IDI	Anoyia	1.40	310	P	Pn	10 00 51.8	+0.5
IDI				S	Sn	10 01 11.7	+3.1
	comp=N,248nm,0.5s						
IDI	Anoyia	1.40	310	PN	Pn	10 00 50.3	-1.0
SANT	Santorini	2.06	343	PN	Pn	10 00 59.2	-1.2
ARG	Arkhangelos	2.40	40	PN	Pn	10 01 05.6	+0.5
ARG				SN	Sn	10 01 33.3	0.0
ARG	Arkhangelos	2.40	40	P	Pn	10 01 06.7	+1.6
ARG				S	Sn	10 01 34.8	+1.6
APE	Apeiranthos	2.72	349	PN	Pn	10 01 08.5	-0.9
BODT	Bodrum	2.81	18	PN	Pn	10 01 10.3	-0.3
TURN	Turunc	2.90	35	PN	Pn	10 01 12.2	+0.3
TURN	Turunc	2.90	35	*i* P	Pn	10 01 12.2	+0.3
TURN				*i* S	Sn	10 01 43.9	-1.6
TURN				IAML		10 01 46.0	
	comp=N,164nm,1.0s						
TURN				IAML		10 01 54.0	
	comp=E,203nm,0.7s						
SLUM	Salum	3.02	196	P	Pn	10 01 15.9	+2.4
	baz=202						
SLUM				S	Sn	10 01 49.8	+1.5
	baz=202						
DALY	Dalyan (Mula)	3.13	39	PN	Pn	10 01 15.9	+0.8
DALY	Dalyan (Mula)	3.13	39	*i* P	Pn	10 01 16.4	+1.3
DALY				*i* S	Sn	10 01 50.2	-1.1
DALY				IAML		10 01 53.0	
	comp=N,56nm,0.4s						
YER	Yerkesik	3.21	31	PN	Pn	10 01 16.7	+0.5
FETY	Fethiye	3.24	46	PN	Pn	10 01 17.3	+0.7
KSL	Kastellorizon	3.27	57	P	Pn	10 01 18.2	+1.2
AKAS	Kas	3.33	56	PN	Pn	10 01 18.9	+1.0
AKAS	Kas	3.33	56	*i* P	Pn	10 01 18.5	+0.6
AKAS				*i* S	Sn	10 01 52.9	-3.5
AKAS				IAML		10 01 58.0	
	comp=E,31nm,0.6s						
AKAS				IAML		10 02 00.0	
	comp=N,54nm,0.9s						
CAEL	Denizli, Camel	3.72	42	*i* P	Pn	10 01 24.3	+1.1
CAEL				*i* S	Sn	10 02 06.2	+0.4
CAEL				IAML		10 02 08.0	
	comp=E,76nm,0.5s						
CAEL				IAML		10 02 14.0	
	comp=N,109nm,1.4s						
TAVA	DENIZLI_Tavas	3.77	35	*i* P	Pn	10 01 24.9	+1.0
TAVA				*i* S	Sn	10 02 04.8	-2.3
TAVA				IAML		10 02 07.0	
	comp=E,14nm,0.2s						
TAVA				IAML		10 02 11.0	
	comp=N,14nm,0.3s						
ELL	Elmali	3.83	51	PN	Pn	10 01 25.9	+1.2
ELL	Elmali	3.83	51	P	Pn	10 01 26.2	+1.5
AKUM	Antalya-Kumluc	3.89	59	*i* P	Pn	10 01 26.1	+0.6
AKUM				*i* S	Sn	10 02 08.8	-1.1
AKUM				IAML		10 02 13.0	
	comp=N,33nm,0.6s						
AKUM				IAML		10 02 17.0	
	comp=E,27nm,0.4s						
GOLH	Golhisar	3.94	43	*i* P	Pn	10 01 27.2	+1.0
GOLH				*i* S	Sn	10 02 11.1	0.0
GOLH				IAML		10 02 12.0	
	comp=N,54nm,0.4s						
GOLH				IAML		10 02 27.0	
	comp=E,704nm,0.8s						
KORT	Korkueli	4.26	51	PN	Pn	10 01 32.2	+1.5
KORT	Korkueli	4.26	51	*i* P	Pn	10 01 32.2	+1.5
KORT				*i* S	Sn	10 02 17.9	-1.3
KORT				IAML		10 02 21.0	
	comp=E,45nm,0.8s						
KORT				IAML		10 02 24.0	
	comp=N,38nm,0.5s						
OSC1	CSNet OBS 1	4.32	101	P	Pn	10 01 32.0	+0.7
OSC1				S	Sn	10 02 21.6	+1.3
BUCA	Burdur, Bucak-	4.59	49	*i* P	Pn	10 01 37.5	+2.3
BUCA				*i* S	Sn	10 02 26.4	-0.8
BUCA				IAML		10 02 29.0	
	comp=E,19nm,0.7s						
BUCA				IAML		10 02 29.0	
	comp=N,14nm,0.7s						
KHAL	Karahalli	4.77	33	*i* P	Pn	10 01 36.4	-1.3
KHAL				*i* S	Sn	10 02 27.7	-4.0
KEPZ	Antalya-Kepez	5.06	59	*i* P	Pn	10 01 42.3	+0.7
KEPZ				*i* S	Sn	10 02 36.1	-2.7
KEPZ				IAML		10 02 44.0	
	comp=N,24nm,0.6s						
KEPZ				IAML		10 02 45.0	
	comp=E,19nm,0.4s						
AKMS	Akamas	5.09	81	P	Pn	10 01 43.3	+1.3
AKMS				AML	AML	10 02 40.0	
	comp=E,0.3nm,0.2s						
AKMS				AML	AML	10 02 41.3	
	comp=E,0.5nm,0.4s						
SWA2		5.18	187	P	Pn	10 01 45.4	+2.3
	baz=191						
SWA2				AMP		10 02 00.0	
	baz=191						
SWA2				S	Sn	10 02 41.0	-0.6
	baz=191						
OSC2	CSNet OBS 4	5.23	103	P	Pn	10 01 45.4	+1.7
GAZI	Gazipasa	5.33	68	PN	Pn	10 01 46.9	+1.7
GAZI	Gazipasa	5.33	68	*i* P	Pn	10 01 45.0	-0.2
GAZI				*i* S	Sn	10 02 39.2	-6.0
GAZI				IAML		10 02 46.0	
	comp=N,59nm,0.4s						
GAZI				IAML		10 02 48.0	
	comp=E,30nm,0.5s						
SZAC	Souni	5.53	84	P	Pn	10 01 48.9	+0.9
SZAC				AML	AML	10 02 53.2	
	comp=E,0.3nm,0.2s						
SZAC				AML	AML	10 02 56.6	
	comp=E,0.4nm,0.3s						
YVAC	Isparta, Yalva	5.61	45	*i* P	Pn	10 01 50.1	+0.9
YVAC				*i* S	Sn	10 02 49.3	-3.0
YVAC				IAML		10 02 51.0	
	comp=E,12nm,2.6s						
YVAC				IAML		10 02 59.0	
	comp=N,19nm,2.5s						
ASGA	Asgata	5.83	84	P	Pn	10 01 53.9	+1.9
KONT	Konya--Tatoy	6.11	53	PN	Pn	10 01 56.8	+0.8
KKBE	Karaman, Kazim	6.16	61	*i* P	Pn	10 01 58.1	+1.4
KKBE				*i* S	Sn	10 03 02.7	-3.1
KKBE				IAML		10 03 05.0	
	comp=E,13nm,0.6s						
KKBE				IAML		10 03 10.0	
	comp=N,7.5nm,0.4s						
LADK	Ladik-KONYA	6.26	51	PN	Pn	10 01 58.7	+0.6
GLL	Jalalah	6.71	134	P	Pn	10 02 05.4	+1.3
	baz=134						
NBNS	Bani Suef	7.22	142	P	Pn	10 02 12.9	+1.8
	baz=142						
HFRF	Wahat Farafira	7.45	165	P	Pn	10 02 16.2	+1.9
	baz=166						
HFRF				S	Sn	10 03 33.2	-4.3
	baz=166						
MMAI	Mount Meron Ar	7.79	98	Pn	Pn	10 02 18.6	-0.4
	comp=N,0.7nm,0.3s,baz=260,slow=11,SNR=1.8						
MMAI				Sn	Sn	10 03 44.5	-1.4
	comp=N,4.5nm,0.3s,baz=275,slow=14,SNR=6.5						
BRTR	Keskin Array B	7.98	46	Pn	Pn	10 02 20.3	-1.3
	comp=N,0.1nm,0.3s,baz=251,slow=4.4,SNR=1.6						
BRTR				Sn	Sn	10 03 47.1	-3.4
	comp=N,0.1nm,0.3s,baz=312,slow=45,SNR=2.1						
EIL	Elat	8.80	120	Pn	Pn	10 02 34.3	+1.5
	comp=N,0.6nm,0.3s,baz=10,slow=5.9,SNR=6.6						
EIL				Sn	Sn	10 04 05.1	-5.4
	comp=N,2.7nm,0.3s,baz=195,slow=13,SNR=7.2						
HKAT	Jabal Katrina	8.87	129	P	Pn	10 02 33.7	-0.2
	baz=129						
HHRG	Al Ghardaqah	9.56	137	P	Pn	10 02 46.6	+3.4
	baz=137						
AKASG	Malin Array Be	16.44	7	Pn	Pn	10 04 13.0	-2.3
	comp=N,1.0nm,0.3s,baz=191,slow=10.0,SNR=4.7						
FINES	FINESS Array B	27.06	360	P	P	10 06 03.8	-1.9
	comp=N,2.0nm,0.9s,baz=152,slow=8.6,SNR=3.4						
TORD	Torodi Ar. Bea	30.68	232	P	P	10 06 40.6	+2.4
	comp=N,0.6nm,0.6s,baz=35,slow=9.1,SNR=2.7						
ARCES	ARCESS Array B	35.19	360	P	P	10 07 15.1	-2.0
	comp=N,1.6nm,0.8s,baz=179,slow=9.0,SNR=4.2						
KURBB	Kurchatov Arra	40.94	50	P	P	10 08 07.5	+1.8
	comp=N,2.0nm,0.2s,baz=273,slow=8.6,SNR=3.3						
MKAR	Makanchi Array	43.49	56	P	P	10 08 28.6	+2.0
	comp=N,0.5nm,0.5s,baz=273,slow=7.5,SNR=11						
SPITS	Spitsbergen Ar	44.09	357	P	P	10 08 29.9	-1.0
	comp=N,11nm,1.0s,baz=156,slow=7.9,SNR=2.3						
ZALV	Zalesovo Beam	44.92	46	P	P	10 08 38.6	+0.7
	comp=N,1.2nm,0.4s,baz=264,slow=8.3,SNR=5.2						
SONM	Songino Array	59.31	51	P	P	10 10 26.4	+1.4
	comp=N,0.4nm,0.7s,baz=298,slow=6.7,SNR=2.5						
YKA	Yellowknife Ar	78.43	343	P	P	10 12 23.4	+0.1
	comp=N,0.2nm,0.8s,baz=50,slow=5.9,SNR=4.1						

KOLA ***12*** *10:12:10.6, 67°.72N×34°.24E, h0^{km}, ML2.8, Khibiny Massif*
HEL ***12*** *10:12:10.5±0.4, 67°.75N×34°.18E, h0^{km}, ML2.9, Explosion*
NAO ***12*** *10:12:11.2±1.1, 67°.71N×34°.03E, ML3.4*
IDC ***12*** *10:12:12.5±1.5, 67°.75N×33°.92E, h0^{km}, mb1 3.7/5, mb1mx3.3/47, mbtmp3.7/5, ML3.0/5, Error ellipse: s-maj=16.2km s-min=8.5km az=90.0*
ISC 12 10:12:08.2±1.5**, 67°.56N**±0°.04×**34°.27E**±0°.08**, h0**^{km}**, n37, σ1^{s}67**/65**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA	Apatity	0.33	272	P	Pb	10 12 17.2	+0.2
APA				S	Sb	10 12 21.8	-1.1
APZ9	Apatity	0.33	272	Pg	Pg	10 12 16.4	+1.8
APZ9				Lg	Lg	10 12 21.4	
APZ9	Apatity	0.33	272	Pg	Pg	10 12 16.4	+1.8
APZ9				Sg	Sb	10 12 21.4	-1.5
APA0	Apatity Array	0.49	276	Pg	Pg	10 12 18.9	+1.3
	baz=91,slow=16						
APA0				Lg	Lg	10 12 25.1	
	baz=73,slow=37						
APA0				Rg	Rg	10 12 27.5	
APA0	Apatity Array	0.49	276	Pg	Pg	10 12 18.9	+1.3
	baz=91,slow=16						
APA0				Sg	Sg	10 12 25.1	+1.1
	baz=73,slow=37						
APA0				Rg	Rg	10 12 27.5	
APA0	Apatity Array	0.49	276	P	Pb	10 12 19.6	-0.1
APA0				S	Sb	10 12 26.0	-1.4
VRF	Varrio	1.79	278	PG	Pn	10 12 41.4	+1.1
VRF				MSG		10 13 02.3	
	comp=Z,168nm,0.2s						
VRF				SG	Sb	10 13 04.6	-0.2
KU6	Riekki	2.32	230	PN	Pb	10 12 50.8	-0.1
	baz=45						
KU6				MSG		10 13 22.0	
	comp=Z,42nm,0.2s						
KU6				SB	Sg	10 13 23.1	+0.5
MSF	Maaselka	2.65	234	PN	Pb	10 12 56.1	-0.5
	baz=50						
MSF				SB	Sg	10 13 32.9	-0.5
SGF	Sodankyl	2.98	271	PN	Pn	10 12 58.7	+2.0
SGF				SG	Sb	10 13 40.0	+1.0
RNF	Rovaniemi	3.37	257	PN	Pn	10 13 03.7	+1.8
	baz=68						
RNF				SN	Sn	10 13 45.3	+2.7
ARA0	ARCESS Array S	3.78	306	Pn	Pn	10 13 08.3	+0.6
	baz=120,slow=16						
ARA0				Sn	Sn	10 13 51.1	-1.6
	baz=115,slow=28						
ARA0				Lg	Lg	10 14 03.3	
	baz=116,slow=37						
ARA0	ARCESS Array S	3.78	306	Pn	Pn	10 13 08.3	+0.6
	baz=120,slow=16						
ARA0				Sn	Sn	10 13 51.1	-1.6
	baz=115,slow=28						
ARA0				Sg	Sb	10 14 03.3	+1.3
	baz=116,slow=37						
ARA0				IAML		10 14 06.2	
	comp=Z,76nm,0.7s						
ARA0	ARCESS Array S	3.78	306	PN	Pn	10 13 08.3	+0.6
	baz=118						
ARA0				SG	Sb	10 14 04.0	+2.0
ARCES	ARCESS Array B	3.78	306	Pn	Pn	10 13 08.3	+0.7
	baz=119,slow=14,SNR=208						
ARCES				Sn	Sn	10 13 51.1	-1.6
	baz=118,slow=25,SNR=16						
ARCES				Lg	Lg	10 14 03.4	
	baz=119,slow=33,SNR=14						
OUL	Oulu	4.19	238	PB	Pb	10 13 22.4	-0.3
OUL				SG	Sg	10 14 21.6	-1.1
TOF	Tornio	4.20	254	PN	Pn	10 13 15.5	+2.0
TOF				SN	Sn	10 14 04.3	+1.2
KTK1	Kautokeino	4.35	295	Pn	Pn	10 13 17.6	+2.1
KTK1				Pg	Pb	10 13 25.9	+0.4
KTK1				Sn	Sn	10 14 06.0	-0.8
KTK1				Lg	Lg	10 14 20.0	
KTK1	Kautokeino	4.35	295	*e*P	Pn	10 13 17.6	+2.1
KTK1				*e*S	Sn	10 14 05.5	-1.3
KTK1				IAML		10 14 23.2	
	comp=Z,78nm,0.4s						
PAJU	Pajala	4.36	268	PN	Pn	10 13 17.1	+1.5
	baz=80						
PAJU				SN	Sn	10 14 07.2	+0.1
LANU	Lannavaara	4.68	282	PN	Pn	10 13 20.3	+0.2
LANU				SN	Sn	10 14 14.0	-1.1
KIF	Kilpisjarvi	5.21	292	Pn	Pn	10 13 27.8	+0.7
KIF				Sn	Sn	10 14 25.7	-2.1
KIF				Lg	Lg	10 14 44.5	
KIF	Kilpisjarvi	5.21	292	Pn	Pn	10 13 27.8	+0.7
KIF				Sn	Sn	10 14 25.7	-2.1
FIA0	FINESS Array S	7.08	214	Pn	Pn	10 13 55.1	+2.3
	baz=24,slow=14						
FIA0				Sn	Sn	10 15 12.0	-1.9
	baz=34,slow=22						
FIA0				Lg	Lg	10 15 48.6	
	baz=20,slow=28						
FIA0	FINESS Array S	7.08	214	Pn	Pn	10 13 55.1	+2.3
	baz=24,slow=14						
FIA0				Sn	Sn	10 15 12.0	-1.9
	baz=34,slow=22						
FINES	FINESS Array B	7.08	214	Pn	Pn	10 13 56.1	+3.2
	comp=Z,0.5nm,0.3s,baz=30,slow=13,SNR=14						
FINES				Sn	Sn	10 15 14.9	+1.0
	comp=Z,1.0nm,0.3s,baz=39,slow=22,SNR=6.9						
FINES				Lg	Lg	10 15 51.0	
	comp=Z,2.1nm,0.3s,baz=27,slow=26,SNR=7.8						
HFS	Hagfors	11.68	240	Pn	Pn	10 14 56.6	+0.7
	comp=Z,0.2nm,0.3s,baz=60,slow=12,SNR=5.8						
HFS				Sn	Sn	10 17 01.8	-5.0
	comp=Z,0.4nm,0.3s,baz=51,slow=23,SNR=2.5						
HFS				Lg	Lg	10 18 15.3	
	comp=Z,0.5nm,0.3s,baz=43,slow=34,SNR=2.5						
HFS	Hagfors	11.68	240	Pn	Pn	10 14 56.2	+0.3
	baz=26,slow=12						
HFS	Hagfors	11.68	240	Pn	Pn	10 14 56.2	+0.3
	baz=26,slow=12						
SPA0	Spitsbergen Ar	11.80	342	Pn	Pn	10 14 56.2	-1.3
	baz=142,slow=14						
SPA0	Spitsbergen Ar	11.80	342	Pn	Pn	10 14 56.2	-1.3
	baz=142,slow=14						
SPITS	Spitsbergen Ar	11.80	342	Pn	Pn	10 14 55.4	-2.2
	baz=140,slow=16,SNR=15						
SPITS				Sn	Sn	10 16 59.7	-10
	baz=139,slow=29,SNR=1.3						
NB2	NORSAR Subarra	11.89	248	Pn	Pn	10 14 59.1	+0.3
NB2	NORSAR Subarra	11.89	248	Pn	Pn	10 14 59.1	+0.3
NOA	NORSAR Array B	11.89	248	Pn	Pn	10 14 59.0	+0.3
	comp=Z,0.0nm,0.3s,baz=46,slow=11,SNR=4.1						
NOA				Sn	Sn	10 17 06.4	-5.5
	comp=Z,0.0nm,0.3s,baz=50,slow=21,SNR=2.4						
NOA				Lg	Lg	10 18 22.0	
	comp=Z,0.1nm,0.3s,baz=46,slow=26,SNR=5.0						
NRA0	NORESS Array S	11.98	246	Pn	Pn	10 15 00.4	+0.4
	baz=42,slow=16						
NRA0	NORESS Array S	11.98	246	Pn	Pn	10 15 00.4	+0.4
	baz=42,slow=16						

IDC ***12*** *10:18:05.6±1.1, 30°.80N×133°.99E, h0^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.4/46, mbtmp3.5/7, ML2.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.5/31, Error ellipse: s-maj=40.9km s-min=24.7km az=84.0*
ISC 12 10:18:10.6±1.0**, 30°.9N**±0°.2×**134°.1E**±0°.2**, h35**^{km}**, n8, σ1^{s}60**/7**, mb3.7**/6**, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.62	30	Pn	Pn	10 19 44.5	-0.9
	0.1nm,0.3s,baz=161,slow=11,SNR=5.8						
KRVT	Keravat (AS076	38.92	151	LR	LR	10 38 23.9	
	comp=Z,77nm,19.2s,baz=115,slow=31						
KURBB	Kurchatov Arra	45.34	312	P	P	10 26 23.8	-1.4
	1.2nm,0.6s,baz=95,slow=7.3,SNR=9.4						
WRA	Warramunga Arr	50.51	180	P	P	10 27 04.3	-1.1
	0.2nm,0.6s,baz=6.8,slow=7.5,SNR=1.6						
ASAR	Alice Springs	54.21	180	P	P	10 27 33.2	+0.3
	0.3nm,0.8s,baz=1.6,slow=4.7,SNR=2.3						
YKA	Yellowknife Ar	72.12	27	P	P	10 29 32.4	+1.2
	0.1nm,0.7s,baz=287,slow=4.5,SNR=2.4						
AKASG	Malin Array Be	75.33	321	P	P	10 29 52.3	+2.1
	0.8nm,0.5s,baz=41,slow=4.0,SNR=5.6						
BRTR	Keskin Array B	78.22	309	P	P	10 30 06.3	-0.6
	0.9nm,0.6s,baz=63,slow=2.3,SNR=2.5						

BGR ***12*** *10:23:43.5±0.0, 22°.11S×172°.34E, h33^{km}*
IDC ***12*** *10:23:50.9±2.7, 21°.80S×170°.67E, h75^{km}±21^{km}, mb4.2/17, mb1 4.4/18, mb1mx4.3/23, mbtmp4.5/18, MS3.5/17, Ms1 3.5/17, ms1mx3.4/34, Error ellipse: s-maj=18.0km s-min=13.9km az=75.0*
GCMT ***12*** *10:23:52.9±0.4, 21°.82S±0°.03×170°.55E±0°.03, h114^{km}±4^{km}, MW4.8/65, Moment Tensor Solution. s25,c27; s65,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.57±.10; M$_{θθ}$0.97±.13; M$_{φφ}$0.59±.13; M$_{rθ}$0.41±.09; M$_{θφ}$1.46±.09; M$_{φr}$0.97±.07; Best double couple: M$_0$2.21700×10^{16} NP1:φ$_s$70.00000°, δ35.00000°, λ-57.00000°. NP2: φ$_s$211.00000°, δ61.00000°, λ-111.00000°. Principal axes: T 2.4830, Plg13.0000°, Azm317.0000°; N -0.5340, Plg18.0000°, Azm222.0000°; P -1.9510, Plg67.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NOU ***12*** *10:23:54.1, 21°.79S×170°.58E, h76^{km}, mb4.9, Southeast of Loyalty Islands*
NEIC ***12*** *10:23:54.9±2.0, 21°.76S±0°.08×170°.55E±0°.09, h109^{km}±2^{km}, mb4.7/43, Error ellipse: s-maj=11.7km s-min=10.9km az=103.0*
ISC 12 10:23:54.6±0.8**, 21°.82S**±0°.05×**170°.53E**±0°.05**, h103**^{km}±7^{km}**, n267, σ1^{s}25**/248**, mb4.6**/36**, 23C-16D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.35	278	P	Pn	10 24 31.0	-0.8
PINNC	Pines Island,	2.96	254	P	Pn	10 24 39.3	-0.6
LIFNC	LIFOU	3.24	288	P	Pn	10 24 41.3	-2.3
YATNC	Mamie plateau,	3.39	265	P	Pn	10 24 44.6	-1.0
OUENC	Ouen Island, N	3.47	259	P	Pn	10 24 46.6	-0.1
DZM	Mont Dzumac	3.80	266	P	Pn	10 24 50.8	-0.4
	67nm,0.3s,baz=121,slow=9.0,SNR=3267						
DZM				S	Sn	10 25 33.2	-1.9
	405nm,0.3s,baz=191,slow=19,SNR=23						
DZM				LR	LR	10 25 47.9	
	comp=Z,341nm,20.9s,baz=73,slow=30						
DZM	Mont Dzumac	3.80	266	*e*Pn	Pn	10 24 50.8	-0.4
	494nm,0.2s						
DZM				*e*Sn	Sn	10 25 33.0	-2.1
	2µm,0.2s						
DZM	Mont Dzumac	3.80	266	Pn	Pn	10 24 51.2	0.0

DZM	Mont Dzumac	3.80	266	P	Pn	10 24 51.3	0.0
NOUC	Port Laguerre	3.94	265	P	Pn	10 24 52.9	0.0
DVP	Devils Point	4.64	331	P	Pn	10 25 01.9	-0.5
SANVU	Saraoutou	7.08	333	Pn	Pn	10 25 34.0	-1.6
NFK	Norfolk Island	7.56	198	P	Pn	10 25 41.7	-0.4
MSVF	Nonsavu	8.16	61	P	Pn	10 25 54.2	+3.8
	0.3nm,0.3s,baz=242,slow=12,SNR=8.5						
MSVF				LR	LR	10 28 22.3	
	comp=Z,446nm,18.4s,baz=293,slow=34						
MSVF	Nonsavu	8.16	61	Pn	Pn	10 25 53.8	+3.4
MSVF	Nonsavu	8.16	61	P	Pn	10 25 50.8	+0.4
RAO	Raoul Island	12.78	128	P	Pn	10 26 41.6	-11
	57nm,0.3s,baz=107,slow=19,SNR=1.9						
OUZ	Omahuta	13.62	169	Pn	Pn	10 27 05.6	+2.3
HNR	Honiara	15.98	319	P	P	10 27 35.3	+0.3
	14nm,0.3s,baz=298,slow=2.3,SNR=7.5						
HNR				LR	LR	10 32 35.0	
	comp=Z,151nm,20.4s,baz=163,slow=33						
HNR	Honiara	15.98	319		P	10 27 34.8	-0.2
HNR	Honiara	15.98	319	P	P	10 27 35.3	+0.3
HIZ	Hauiti	17.05	168	Pn	P	10 27 49.5	+2.9
HIZ				IAmb	IAmb	10 27 55.7	
	comp=Z,58nm,0.8s						
HIZ	Hauiti	17.05	168	P	P	10 27 54.8	+8.2
URZ	Urewera	17.33	162	P	Pn	10 27 51.0	+1.1
	comp=Z,0.7nm,0.3s,baz=311,slow=9.3,SNR=3.1						
URZ				LR	LR	10 33 33.2	
	comp=Z,128nm,18.0s,baz=31,slow=34						
NEZ	North Egmont	17.66	171	P	Pn	10 28 04.4	+10
KHEZ	Kahui Hut	17.67	171	P	Pn	10 28 04.5	+10
PREZ	Palmer Road	17.74	171	P	Pn	10 28 01.4	+6.5
WTVZ	West Tongariro	17.77	167	P	Pn	10 28 05.7	+10
NGZ	Ngauruhoe	17.83	167	P	Pn	10 28 06.0	+10
OTVZ	Oturere	17.83	167	P	Pn	10 28 01.0	+4.9
WNVZ	Wahianoa	17.98	167	P	Pn	10 28 06.9	+9.0
MOVZ	Moawhango	18.09	167	P	Pn	10 28 01.5	+2.4
EIDS	Eidsvold	18.17	255	P	P	10 27 59.1	-0.1
BHHZ	Black Hill Sta	18.23	166	P	Pn	10 28 06.8	+6.0
KWHZ	Kaweka Forest	18.25	165	P	Pn	10 28 02.2	+1.1
KRHZ	Kereru	18.45	166	P	Pn	10 28 03.5	+0.1
AFI	Afiamalu	18.57	68		P	10 28 02.3	-1.4
AFI	Afiamalu	18.57	68	P	Pn	10 28 04.3	-0.8
KAHZ	Kahuranaki	18.71	165	P	Pn	10 28 09.1	+2.5
PXZ	Pawanui	18.93	165	P	P	10 28 07.7	+0.4
QRZ	Quartz Range	19.02	175	P	Pn	10 28 20.8	+11
DVHZ	Dannevirke	19.03	167	P	Pn	10 28 09.5	-0.7
ANWZ	Angora Road	19.25	166	P	Pn	10 28 12.1	-0.7
MRZ	Mangatainoka R	19.26	168	P	P	10 28 11.1	+0.2
OGWZ	Otaki Gorge	19.34	169	P	P	10 28 12.4	+0.7
BFZ	Birch Farm	19.42	167		P	10 28 12.7	+0.2
BFZ				IAmb	IAmb	10 28 12.9	
	comp=Z,31nm,0.7s						
BFZ	Birch Farm	19.42	167	P	P	10 28 12.5	0.0
HOWZ	Holdsworth Sta	19.48	169	P	P	10 28 13.2	-0.1
TCW	Tory Channel	19.59	172	P	Pn	10 28 15.5	-1.2
CAW	Cannon Point	19.61	170	P	P	10 28 14.9	+0.3
SNZO	South Karori	19.75	171		P	10 28 16.0	-0.1
SNZO				IAmb	IAmb	10 28 29.0	
	comp=Z,63nm,1.1s						
PAWZ	Paruwai Farm	19.93	169	P	P	10 28 17.5	-0.7
MSWZ	Moikau Station	19.94	170	P	P	10 28 17.8	-0.4
MSWZ	Moikau Station	19.94	170	P	P	10 28 17.8	-0.4
THZ	Tophouse	19.98	175	P	Pn	10 28 20.2	-1.2
THZ				IAmb	IAmb	10 28 36.0	
	comp=Z,55nm,0.8s						
BSWZ	Blackbirch Sta	20.03	173	P	Pn	10 28 21.1	-0.8
PLWZ	Palliser	20.09	170	P	P	10 28 19.4	-0.4
KHZ	Kahutara	20.69	174	P	P	10 28 26.5	+0.2
KHZ				IAmb	IAmb	10 28 30.6	
	comp=Z,22nm,0.8s						
OXZ	Oxford	21.48	177	P	P	10 28 35.1	+0.4
OXZ				IAmb	IAmb	10 28 37.8	
	comp=Z,23nm,0.9s						
RPZ	Rata Peaks	21.84	179	P	P	10 28 38.7	+0.1
	comp=Z,16nm,0.9s,baz=7.1,slow=8.1,SNR=4.1						
RPZ				LR	LR	10 35 01.8	
	comp=Z,114nm,21.5s,baz=237,slow=31						
RPZ	Rata Peaks	21.84	179	P	P	10 28 39.7	+1.1
RPZ				IAmb	IAmb	10 28 46.9	
	comp=Z,25nm,0.9s						
CTA	Charters Tower	22.73	270	P	P	10 28 48.4	+0.3
	comp=Z,5.4nm,0.5s,baz=88,slow=11,SNR=18						
CTAO	Charters Tower	22.73	270	P	P	10 28 48.9	+0.8
CAN	Canberra	23.14	230	P	P	10 28 53.0	+1.1
CAN				IAmb	IAmb	10 28 54.9	
	comp=Z,26nm,0.8s						
TARA	Tarawa	23.16	6	P	P	10 28 54.6	+2.4
DCZ	Deep Cove	23.74	186	P	P	10 28 58.7	+1.4
DCZ				IAmb	IAmb	10 28 59.5	
	comp=Z,57nm,1.1s						
WHZ	Wether Hill Ro	24.10	184	P	P	10 29 01.0	+0.5
WHZ				IAmb	IAmb	10 29 16.9	
	comp=Z,39nm,1.4s						
PMG	Port Moresby	25.63	295	P	P	10 29 15.1	+0.5
	comp=Z,48nm,0.8s,baz=103,slow=5.9,SNR=12						
PMG	Port Moresby	25.63	295	P	P	10 29 16.0	+1.4
PMG				IAmb	IAmb	10 29 16.5	
	comp=Z,36nm,0.8s						
PMG	Port Moresby	25.63	295	P	P	10 29 16.7	+2.1
TOO	Toolangi	26.71	228	P	P	10 29 25.9	+1.7
TOO				IAmb	IAmb	10 29 49.9	
	comp=Z,26nm,1.3s						
COEN	Coen	27.15	282	P	P	10 29 29.3	+1.0
RAR	Rarotonga	27.61	94	LR	LR	10 40 30.3	
	comp=Z,55nm,18.4s,baz=262,slow=36						
STKA	Stephens Creek	27.62	243	P	P	10 29 33.0	+0.6
	comp=Z,4.7nm,0.6s,baz=89,slow=10,SNR=10						
STKA				PcP	PcP	10 32 47.4	0.0
	comp=Z,4.4nm,0.7s,baz=30,slow=8.5,SNR=6.1						
BBOO	Buckleboo	32.39	243	P	P	10 30 15.3	+0.8
BBOO				IAmb	IAmb	10 30 16.2	
	comp=Z,21nm,1.1s						
WR0	Warramunga Arr	33.63	266	P	P	10 30 24.8	-0.7
WR0				IAmb	IAmb	10 30 43.9	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	33.77	260	P	P	10 30 26.9	+0.2
ASAR	Alice Springs	33.77	260	P	P	10 30 26.4	-0.3
	comp=Z,2.1nm,0.5s,baz=94,slow=8.3,SNR=52						
ASAR				PcP	PcP	10 33 03.7	-0.2
	comp=Z,2.4nm,0.8s,baz=97,slow=3.3,SNR=9.5						
ASAR				ScP	ScP	10 36 41.5	+2.3
	comp=Z,0.5nm,0.6s,baz=103,slow=3.8,SNR=8.1						
WB0	Warramunga Arr	33.80	267	P	P	10 30 26.3	-0.7
WB0				IAmb	IAmb	10 30 27.6	
	comp=Z,7.7nm,0.9s						
WB2	Warramunga Arr	33.81	266	P	P	10 30 26.9	-0.1
WB2				IAmb	IAmb	10 30 30.0	
	comp=Z,19nm,1.4s						
WRA	Warramunga Arr	33.82	266	P	P	10 30 26.7	-0.5
	comp=Z,1.9nm,0.5s,baz=98,slow=8.4,SNR=27						
WRA				PcP	PcP	10 33 03.4	-0.7
	comp=Z,3.2nm,0.9s,baz=100,slow=2.6,SNR=8.4						
WRA	Warramunga Arr	33.82	266	P	P	10 30 26.5	-0.6
WRA					PcP	10 33 03.9	-0.2
TBI	Tubuai	36.89	100	*e*LR	LR	10 41 02.2	
	comp=Z,196nm,30.5s						
PPT2	Papeete2	37.72	91	*e*LR	LR	10 41 23.7	
	comp=Z,244nm,30.0s						
FORT	Forrest	38.92	248	P	P	10 31 11.4	+1.1
FORT				IAmb	IAmb	10 31 12.5	
	comp=Z,31nm,1.2s						
FAKI	Fak Fak	41.66	291	P	P	10 31 32.7	-0.4
FITZ	Fitzroy Crossi	42.25	267	P	P	10 31 39.0	+1.1
FITZ				IAmb	IAmb	10 32 03.7	
	comp=Z,15nm,0.9s						
SANI	Sanana	47.55	288	P	P	10 32 21.3	+1.3
	comp=Z,58nm,0.8s						
NWAO	Narrogin (SRO)	48.16	245	P	P	10 32 24.8	+0.3
TAOE	Nuku Hiva Isla	49.07	83	*e*LR	LR	10 46 39.7	
	comp=Z,168nm,31.3s						
TOLI2	Tolitoli	53.62	289	P	P	10 33 06.1	+0.4
MPSI	Mapaga	54.04	287	P	P	10 33 09.8	+1.1
	comp=Z,12nm,0.9s						
VNDA	Vanda	55.91	182	P	P	10 33 20.6	-0.6
	comp=Z,3.1nm,0.8s,baz=356,slow=7.5,SNR=16						
VNDA				PcP	PcP	10 34 18.7	+0.1
	comp=Z,1.8nm,0.7s,baz=335,slow=6.4,SNR=6.5						
VNDA				LR	LR	10 53 15.4	
	comp=Z,37nm,19.8s,baz=316,slow=32						
VNDA	Vanda	55.91	182	P	P	10 33 20.3	-0.9
MTKI	Muara Teweh, K	57.96	283	P	P	10 33 47.5	+11
CASY	Casey	58.27	204	P	P	10 33 37.8	-0.1
CASY				IAmb	IAmb	10 33 38.5	
	comp=Z,13nm,0.9s						
KSM	Kuching	63.14	283	P	P	10 34 13.1	+1.2
MJAR	Matsushiro Arr	65.59	332	P	P	10 34 26.6	-0.8
	comp=Z,4.2nm,0.5s,baz=165,slow=7.1,SNR=18						
MJAR				LR	LR	11 02 26.9	
	comp=Z,17nm,19.3s,baz=0.0,slow=35						
MJAR	Matsushiro Arr	65.59	332	P	P	10 34 27.4	0.0
MAT	Matsushiro	65.59	332	P	P	10 34 27.3	-0.1
QSPA	South Pole Qui	68.24	180	P	P	10 34 43.0	-1.0
ASAJ	Asahikawa	70.43	339	LR	LR	10 58 16.0	
	comp=Z,54nm,21.2s,baz=170,slow=29						
KSRS	Korea Array	71.31	325	P	P	10 35 03.2	+0.3
	comp=Z,2.0nm,0.8s,baz=147,slow=6.5,SNR=7.1						
KSRS				LR	LR	11 04 35.9	
	comp=Z,22nm,18.1s,baz=216,slow=34						
NJ2	Nanjing	72.90	316	*e*P	P	10 35 15.8	+3.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PSI	Prapat	74.05	280	LR	LR	11 10 04.0	
	comp=Z,66nm,18.3s,baz=92,slow=37						
USRK	Ussuriysk Ar.	74.58	332	P	P	10 35 22.1	0.0
	comp=Z,1.8nm,0.7s,baz=96,slow=1.9,SNR=6.1						
PETK	Petropavlovsk-	75.44	352	P	P	10 35 25.8	-1.1
	comp=Z,5.4nm,0.8s,baz=136,slow=6.9,SNR=5.9						
PETK				LR	LR	11 04 50.3	
	comp=Z,23nm,21.3s,baz=163,slow=33						
MAW	Mawson	76.50	202	P	P	10 35 32.3	-0.6
	comp=Z,7.0nm,0.7s,baz=130,slow=6.9,SNR=16						
MAW	Mawson	76.50	202	P	P	10 35 32.4	-0.4
KLR	Kul'dur	78.71	335	LR	LR	11 08 23.2	
	comp=Z,17nm,18.4s,baz=101,slow=34						
BELA	Belgrano 2	79.43	175	P	P	10 35 47.2	-1.8
CMAR	Chiang Mai Arr	80.66	294	P	P	10 35 58.5	+2.0
	comp=Z,2.7nm,0.7s,baz=133,slow=4.1,SNR=17						
CMAR				LR	LR	11 14 06.3	
	comp=Z,21nm,18.2s,baz=115,slow=37						
CMAR	Chiang Mai Arr	80.66	294	P	P	10 35 58.0	+1.5
XAN	Xi'an	80.74	312	P	P	10 35 57.5	+0.8
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				pmax	pmax		
	comp=Z,230nm,5.7s						
SYO	Syowa Base	82.80	196	⇓*e*P	P	10 36 06.0	-0.8
HHC	Hu-ho-hao-te	82.96	319	*e*P	P	10 36 11.3	+3.1
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,87nm,6.6s						
SNAA	Sanae	86.64	182	P	P	10 36 25.0	-1.3
SNAA	Sanae	86.64	182	P	P	10 36 24.5	-1.7
VNA3	Neumayer Olymp	87.18	180	P	P	10 36 27.4	-1.4
VNA2	Neumayer--Watz	87.49	181	P	P	10 36 29.2	-1.0
	baz=183,slow=4.1						
VNA1	Neumayer--Stat	87.78	180	P	P	10 36 30.4	-1.2
ORV	Oroville	87.99	46	P	P	10 36 33.0	0.0
AFDM	Forest Hills D	88.04	47	P	P	10 36 32.4	-0.9
NVAR	Mina Array Bea	89.61	48	P	P	10 36 40.2	-0.8
	comp=Z,1.7nm,0.8s,baz=226,slow=8.7,SNR=13						
NVAR	Mina Array Bea	89.61	48	P	P	10 36 40.4	-0.6
ULN	Ulaanbaatar	89.65	323	P	P	10 36 40.7	-0.2
ULN				IAmb	IAmb	10 36 41.7	
	comp=Z,3.7nm,0.8s						
NV11	Mina Array Sit	89.71	48	P	P	10 36 41.2	-0.2
GTA	Gaotai	89.77	313	⇑P	P	10 36 42.7	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,49nm,6.0s						
GTA				LR	LR		
	comp=Z,170nm,17.1s						
GTA				LR	LR		
	comp=Z,150nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,17.8s						
SONM	Songino Array	90.00	323	P	P	10 36 42.5	0.0
	comp=Z,6.1nm,0.8s,baz=141,slow=5.5,SNR=36						
SONM				LR	LR	11 18 21.0	
	comp=Z,43nm,18.1s,baz=353,slow=36						
SONM	Songino Array	90.00	323	P	P	10 36 42.5	0.0
TPH	Tonopah	90.19	49	P	P	10 36 43.1	-0.6
ILAR	Eielson Array	92.33	17	P	P	10 36 50.5	-2.2
	comp=Z,0.8nm,0.6s,baz=226,slow=4.3,SNR=10						
DLBC	Dease Lake	93.78	27	LR	LR	11 09 38.8	
	comp=Z,32nm,21.2s,baz=320,slow=29						
PLCA	Paso Flores	95.81	138	P	P	10 37 09.2	-0.3
	comp=Z,2.9nm,0.8s,baz=256,slow=5.8,SNR=6.3						
TXAR	Lajitas Array	96.93	61	LR	LR	11 12 31.4	
	comp=Z,39nm,20.8s,baz=0.0,slow=30						
WMQ	Urumqi	99.86	313	*e*P	Pdif	10 37 29.3	+1.8
MKAR	Makanchi Array	104.42	315	Pdiff	Pdif	10 37 49.4	+1.7
	comp=Z,0.8nm,0.6s,baz=96,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	104.90	322	Pdiff	Pdif	10 37 49.1	-0.4
	comp=Z,0.4nm,0.3s,baz=64,slow=7.0,SNR=2.5						
BOSA	Boshof	119.69	215	PKP	PKPdf	10 42 32.8	-0.4
	comp=Z,1.3nm,0.6s,baz=145,slow=4.4,SNR=4.9						
BDFB	Brasilia	126.95	131	PKP	PKPdf	10 42 46.1	-1.3
	comp=Z,3.2nm,0.6s,baz=131,slow=2.6,SNR=4.7						
ARCES	ARCESS Array B	127.86	345	PKP	PKPdf	10 42 46.1	-1.2
	comp=Z,2.6nm,0.7s,baz=83,slow=2.0,SNR=15						
ARCES	ARCESS Array B	127.86	345		PKPdf	10 42 46.0	-1.4
FINES	FINESS Array B	133.43	337	PKP	PKPdf	10 42 56.8	-1.3
	comp=Z,2.9nm,0.8s,baz=66,slow=3.4,SNR=2.5						
BIZ	Bicaz	141.91	320	⇑P	PKPdf	10 43 10.3	-3.9
BURAR	Bucovina Array	142.10	321	⇑P	PKPdf	10 43 10.6	-4.1
MLR	Muntele Rosu	142.69	318	⇑P	PKPdf	10 43 13.9	-1.9
DOPR	Dopca	142.81	319	⇑P	PKPdf	10 43 13.3	-2.5
ARCR	ARCALIA	142.88	321	⇑P	PKPdf	10 43 13.4	-2.5
KOLS	Kolonicke sedl	143.03	325	*e*PKP	PKPbc	10 43 13.6	+0.4
VOIR		143.27	318	⇑P	PKPbc	10 43 13.9	-0.2
CRVS	Cervenica-Dubn	143.48	325	*e*PKP	PKPbc	10 43 15.0	+0.5
CRVS				*e*		10 43 18.8	
CJR	Cluj-Napoca	143.51	321	⇑P	PKPbc	10 43 15.6	+0.9
ARR	Arges	143.56	318	⇑P	PKPbc	10 43 14.8	-0.1
HUMR	Humele	143.74	317	⇑P	PKPbc	10 43 15.2	-0.1
DRGR		143.99	322	⇑P	PKPbc	10 43 16.4	+0.2
LTVH	Ltavrtes, Hu	144.12	323	*e*P	PKPdf	10 43 17.2	-0.8
KECS	Kecovo	144.25	325	*e*PKP	PKPdf	10 43 17.6	-0.7
DEV	Deva	144.36	320	⇑P	PKPbc	10 43 17.3	+0.1
BSEG	Bad Segeberg	144.59	340	*e*PKPbc	PKPbc	10 43 17.6	0.0
	baz=35,slow=2.7						
GZR	Gura Zlata	144.69	319	⇑P	PKPab	10 43 18.0	-0.2
SRE	Strehaia	144.79	318	⇑P	PKPbc	10 43 18.8	+0.2
MORC	Moravsky Berou	144.89	329	⇑P	PKPbc	10 43 18.6	-0.2
MORC	Moravsky Berou	144.89	329	*e*PKP	PKPab	10 43 18.9	+0.1
PSZ	Piszkesteto	144.91	325	⇑P	PKPab	10 43 19.1	+0.2
PSZ	Piszkesteto	144.91	325	*e*P	PKPdf	10 43 19.3	-0.2
OSTC	Ostas	144.96	331	*e*PKP	PKPab	10 43 19.2	+0.2
CHVC	Chvalec	145.01	331	*e*PKP	PKPdf	10 43 19.5	-0.1
KRLC	Kraliky	145.04	330	*e*PKP	PKPab	10 43 19.5	+0.1
DPC	Dobruska-Polom	145.06	331	*e*PKP	PKPab	10 43 19.5	+0.1
UPC	Upice	145.09	331	*e*PKP	PKPdf	10 43 19.6	-0.1
VYHS	Vyhne	145.10	327	*e*PKP	PKPdf	10 43 20.1	+0.3
HERR	Herculane	145.17	319	⇑P	PKPbc	10 43 19.6	-0.1
BZS	Buzias	145.26	321	⇑P	PKPbc	10 43 19.5	-0.6
JAVC	Velka Javorina	145.45	328	*e*PKP	PKPab	10 43 22.3	+1.4
FLTG	Flechtingen	145.61	337	*e*PKPbc	PKPbc	10 43 20.7	-0.2
	baz=35,slow=2.7						
BUD	Budapest	145.64	325	*e*P	PKPab	10 43 21.8	+0.2
MDVR	Moldovita	145.65	319	⇑P	PKPab	10 43 21.7	-0.1
VRAC	Vranov	145.67	329	⇑P	PKPbc	10 43 21.4	+0.2
VRAC	Vranov	145.67	329	*e*PKP	PKPab	10 43 21.6	0.0
PVCC	Panska Ves	145.71	333	*e*PKP	PKPab	10 43 21.6	-0.1
BRG	Berggiesshubel	145.71	333	⇓*i*PKP	PKPbc	10 43 21.3	+0.1
BRG				Amp		10 43 22.4	
	comp=Z,42nm,0.8s						
BRG	Berggiesshubel	145.71	333	⇓*i*PKP	PKPbc	10 43 21.3	+0.1
BRG				Amp		10 43 22.4	
	comp=Z,42nm,0.8s						
BRG	Berggiesshubel	145.71	333	*e*PKPbc	PKPbc	10 43 21.4	+0.1
	baz=35,slow=2.7						
VTS	Vitosha	145.74	315	⇑P	PKPbc	10 43 21.8	-0.1
CLL	Collm	145.76	335	⇓*i*PKPdf	PKPbc	10 43 21.2	-0.2
	comp=Z,36nm,1.0s						
CLL				*e*		10 43 30.0	
CLL				*e*pPKPdf	pPKPdf	10 43 46.0	-2.4
CLL	Collm	145.76	335	*e*PKPbc	PKPbc	10 43 21.2	-0.2
	baz=35,slow=2.7						
NRDL	Niedersach Rie	145.87	339	*e*PKPbc	PKPbc	10 43 21.7	+0.2
	baz=35,slow=2.7						
FBE	Freiberg	145.92	334	*e*PKPbc	PKPab	10 43 22.2	-0.3
	baz=35,slow=2.7						
KRUC	Moravsky	145.93	329	*e*PKP	PKPbc	10 43 22.2	+0.2
MODS	Modra-Piesok	145.97	328	*e*PKP	PKPbc	10 43 22.0	-0.2
ASSE	Asse, Remlinge	145.97	338	*e*PKPbc	PKPbc	10 43 22.1	+0.2
	baz=35,slow=2.7						
PRU	Pruhonice	146.12	332	*e*PKP	PKPbc	10 43 22.6	+0.1
CSKK	Cskako	146.12	325	*e*P	PKPbc	10 43 22.5	-0.1
ZST	Bratislava	146.17	327	*e*PKP	PKPab	10 43 24.0	+0.4
NEUB	Neuenburg	146.31	336	*e*PKPbc	PKPbc	10 43 23.3	+0.2
	baz=35,slow=2.7						
CLZ	Clausthal	146.32	338	*e*PKPbc	PKPbc	10 43 23.4	+0.3
	baz=35,slow=2.7						
EGYH	Egyhazaskeszo	146.57	326	*e*P	PKPdf	10 43 20.6	-1.7
PBCC	Pribram	146.58	332	*e*PKP	PKPbc	10 43 24.2	+0.3
TIH	Tihany	146.60	325	*e*P	PKPdf	10 43 21.9	-0.4
MPLH	Magyarpolny	146.62	326	*e*P	PKPbc	10 43 24.2	+0.1
MORH	Mrgy, Hungar	146.62	324	*e*P	PKPbc	10 43 24.1	0.0
MORH	Mrgy, Hungar	146.62	324	⇓*i*P	PKPbc	10 43 23.7	-0.4
TANN	Tannenbergstha	146.67	334	*e*PKPbc	PKPbc	10 43 24.2	0.0
	baz=35,slow=2.7						
GTTG	Gottingen	146.71	338	*e*PKPbc	PKPbc	10 43 24.5	+0.3
	baz=35,slow=2.7						
WERD	Werda	146.71	334	*e*PKPbc	PKPbc	10 43 24.3	0.0
	baz=35,slow=2.7						
PLN	Plauen	146.74	335	*e*PKPbc	PKPbc	10 43 24.3	0.0
	baz=35,slow=2.7						
GUNZ	Gunzen	146.76	334	*e*PKPbc	PKPbc	10 43 24.6	+0.2
	baz=35,slow=2.7						
SOP	Sopron	146.79	327	*e*P	PKPdf	10 43 20.7	-1.9
IBBN	Ibbenburen	146.79	341	*e*PKPbc	PKPbc	10 43 24.4	0.0
	baz=35,slow=2.7						
WERN	Wernitzgruen	146.80	334	*e*PKPbc	PKPbc	10 43 24.8	+0.2
	baz=35,slow=2.7						
NKC	Novy Kostel	146.82	334	*e*PKP	PKPbc	10 43 24.8	+0.2
MOX	Moxa	146.82	335	*e*PKPbc	PKPbc	10 43 24.4	-0.2
	baz=35,slow=2.7						
CONA	Conrad Observa	146.97	328	*i* P	PKPbc	10 43 25.1	-0.1
	comp=Z,14nm,0.9s,SNR=5.4						
DIVS	Divibare	147.06	319	⇓*i*P	PKPdf	10 43 24.3	+1.0
TEKS	Tekeris	147.09	320	*e*P	PKPbc	10 43 25.5	0.0
IDI	Anoyia	147.15	302	⇑P	PKPdf	10 43 24.3	+0.6
KHC	Kasperske Hory	147.17	332	*e*PKP	PKPbc	10 43 25.5	-0.1
ROTZ	Rotzenmuhle	147.28	334	*e*PKPbc	PKPbc	10 43 25.9	0.0
	baz=35,slow=2.7						
GEC2	GERESS Array S	147.33	331	*e*PKPbc	PKPbc	10 43 26.1	-0.1
	baz=35,slow=2.7						
GERES	GERESS Array B	147.33	331	PKPbc	PKPbc	10 43 25.9	-0.3
	comp=Z,16nm,0.9s,baz=46,slow=3.9,SNR=24						
GERES	GERESS Array B	147.33	331		PKPbc	10 43 25.8	-0.4
WET	Wettzell	147.47	332	*e*PKPbc	PKPbc	10 43 26.5	0.0
	baz=35,slow=2.7						
BEHE	Becsehely	147.47	325	*e*P	PKiKP	10 43 28.1	-0.5
KASTN	Kahler Asten	147.52	339	*e*PKPbc	PKPbc	10 43 26.4	-0.1
	baz=35,slow=2.7						
BBLS	Lazići	147.54	319	*e*P	PKPbc	10 43 26.9	0.0
ARSA	Arzberg	147.60	328	*e*P	PKPbc	10 43 26.3	-0.6
	comp=Z,4.9nm,0.8s						
HAPS	Han Pijesak,BI	147.69	320	*e*P	PKiKP	10 43 29.4	+0.1
GRF	Grafenberg Arr	147.73	335	*e*PKPbc	PKPbc	10 43 27.0	-0.1
	baz=35,slow=2.7						
MOA	Molln	147.79	329	*e*P	PKPbc	10 43 26.6	-0.7
	comp=Z,5.9nm,0.7s						
SOKA	Soboth	148.23	327	*e*P	PKPbc	10 43 27.9	-0.8
	comp=Z,14nm,0.9s						
BLY	Banja Luka	148.33	322	*e*P	PKPbc	10 43 29.0	+0.2
PDG	Podgorica	148.40	317	⇑P	PKPbc	10 43 28.1	-1.0
PDG	Podgorica	148.40	317	*e*P	PKPbc	10 43 28.3	-0.8
CRES	Cresnjev	148.59	326	⇓*i*P	PKPbc	10 43 28.4	-1.1
OBKA	Obir	148.59	327	*e*P	PKPbc	10 43 28.0	-1.6
	comp=Z,6.9nm,0.9s						
KBA	Koelnbreinsper	148.78	329	*e*P	PKPbc	10 43 28.7	-1.4
	comp=Z,13nm,0.9s						
BTNL	Ternell	148.79	341	*d*PKPbc	PKPbc	10 43 29.3	-0.6
MEM	Membach	148.81	341	*d*PKPbc	PKPbc	10 43 29.4	-0.5
LJU	Ljubljana	148.92	327	⇓*i*P	PKPbc	10 43 29.8	-0.5
MYKA	Terra Mystica	148.96	328	*e*P	PKPbc	10 43 29.6	-0.9
	comp=Z,9.3nm,0.6s						
BSTI	Sart Tilman	148.96	341	*d*PKPbc	PKPbc	10 43 30.5	+0.2
CEY	Cerknica	149.18	326	⇓*i*P	PKPbc	10 43 30.3	-0.7
STU	Stuttgart	149.27	336	*e*PKPbc	PKPbc	10 43 31.0	-0.1
	baz=35,slow=2.7						
SNF	Seneffe	149.40	343	*d*PKPbc	PKPbc	10 43 31.3	0.0
WATA	Walderalm	149.41	331	*e*P	PKPbc	10 43 30.8	-0.8
	comp=Z,9.4nm,0.6s						
ABTA	Abfaltersbach	149.41	330	*e*P	PKPbc	10 43 30.5	-1.1
	comp=Z,15nm,0.7s						
BMRD	Maredsous	149.45	342	*d*PKPbc	PKPbc	10 43 31.4	0.0
WLF	Walferdange	149.59	340	*d*PKPbc	PKPbc	10 43 32.1	+0.3
WLF	Walferdange	149.59	340	*e*PKPbc	PKPbc	10 43 32.3	+0.4
	baz=35,slow=2.7						
MOTA	Moosalm	149.61	332	*i* P	PKPbc	10 43 31.7	-0.5
	comp=Z,25nm,0.9s,SNR=7.9						
RETA	Reutte	149.65	332	*e*P	PKPbc	10 43 31.7	-0.4
	comp=Z,12nm,1.0s						
SQTA	Sankt Quirin	149.66	332	*i* P	PKPbc	10 43 31.8	-0.4
	comp=Z,20nm,0.6s,SNR=9.2						
DOU	Dourbes	149.68	342	*d*PKPbc	PKPbc	10 43 31.9	-0.1
UBR	Ueberruh	149.77	333	*e*PKPbc	PKPbc	10 43 32.0	-0.4
	baz=35,slow=2.7						
BFO	Black Forest	149.96	336	*e*PKPbc	PKPbc	10 43 32.3	-0.5
	baz=35,slow=2.7						
FETA	Feichten	150.02	332	*i* P	PKPbc	10 43 32.6	-0.6
	comp=Z,24nm,0.8s,SNR=9.3						
DAVA	Damuels	150.18	333	*e*P	PKPbc	10 43 33.2	-0.4
	comp=Z,10nm,0.7s						
LIC	Lamto	163.91	196	*e*PKIKP	PKPdf	10 43 45.4	-1.1
	comp=Z,26nm,1.0s						
LIC	Lamto	163.91	196	*e*PKP2	PKPab	10 44 40.2	+0.8
	comp=Z,5.2nm,0.5s						
KIC	Kosan Boka	163.96	197	*e*PKIKP	PKPdf	10 43 45.2	-1.3
	comp=Z,30nm,1.3s						
KIC	Kosan Boka	163.96	197	*e*PKP2	PKPab	10 44 39.5	-0.1
	comp=Z,18nm,0.9s						
DBIC	Dimbokro	164.29	197	PKP	PKPdf	10 43 45.9	-0.9
	comp=Z,7.8nm,1.0s,baz=148,slow=3.4,SNR=5.2						
DBIC				PKPab	PKPab	10 44 40.2	-0.8
	comp=Z,9.5nm,0.9s,baz=154,slow=6.4,SNR=8.6						
DBIC	Dimbokro	164.29	197		PKPab	10 44 41.0	0.0
TIC	Toumodi	164.31	197	*e*PKIKP	PKPdf	10 43 45.7	-1.2
TIC	Toumodi	164.31	197	*e*PKP2	PKPab	10 44 40.9	-0.3
TORD	Torodi Ar. Bea	166.30	233	PKP	PKPdf	10 43 47.9	-0.5
	comp=Z,2.6nm,0.8s,baz=19,slow=1.5,SNR=8.0						
TORD				PKPab	PKPab	10 44 49.4	-0.8
	comp=Z,0.7nm,0.7s,baz=114,slow=4.5,SNR=3.5						
TORD	Torodi Ar. Bea	166.30	233	PKPdf	PKPdf	10 43 47.5	-1.0

JMA ***12*** *10:46:41.5, 24°.10N×122°.20E, h31^{km}±2^{km}, M2.0*
TAP ***12*** *10:46:41.2, 24°.19N×122°.21E, h23^{km}, ML3.0, D*
ISC 12 10:46:40.7±2.7**, 24°.12N**±0°.02×**122°.22E**±0°.02**, h18**^{km}±7^{km}**,**
n82, σ**0^{s}.80**/155**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao	0.49	311	*i* P	Pb	10 46 50.5	-0.3
	baz=305						
ENAH				S	Sb	10 46 57.4	-0.2
	baz=305						
TWD	Chiawan	0.57	266	P	Pn	10 46 53.4	-0.4
	baz=243						
TWD				S	Sn	10 47 01.9	-0.8
	baz=243						
NACB	Ninganchiao	0.57	275	P	Pb	10 46 52.9	+0.9
	baz=251						
NACB				S	Sn	10 47 02.1	-0.7
	baz=251						
TWC	Suao	0.59	325	*i* P	Pb	10 46 51.6	-0.7
	baz=322						
TWC				S	Sb	10 46 58.4	-1.9
	baz=322						
ETLH	Xiulin Townshi	0.68	277	P	Pb	10 46 54.3	+0.4
	baz=271						
ETLH				S	Sn	10 47 04.7	-0.8
	baz=271						
JYNG	Yonagunijimaku	0.74	64	P	Pn	10 46 55.9	-0.3
JYNG				S	Sb	10 47 05.1	+0.3
EGS		0.76	340	*i* P	Pb	10 46 55.6	+0.2
	baz=339						
EGS				S	Sb	10 47 05.0	-0.4
	baz=339						
TWE	Neicheng	0.78	320	*i* P	Pb	10 46 55.4	-0.2
	baz=317						
TWE				S	Sb	10 47 05.8	0.0
	baz=317						
ENTT	Nioudou	0.78	311	*i* P	Pb	10 46 55.7	-0.1
	baz=307						
ENTT				S	Sb	10 47 06.0	-0.1
	baz=307						
NDT	Datong Townshi	0.80	307	P	Pb	10 46 56.5	+0.5
	baz=312						
NDT				S	Sb	10 47 06.7	+0.2

	baz=312						
YOJ	**Yonaguni jima**	**0.80**	**65**	P	**Pn**	**10 46 56.8**	**-0.2**
YOJ				*e*S	**Sb**	**10 47 07.0**	**+0.5**
YOJ	**Yonaguni jima** baz=70	**0.80**	**65**	P	**Pn**	**10 46 57.0**	**0.0**
YOJ	baz=70			S	**Sb**	**10 47 07.5**	**+1.0**
NTC	**Toucheng** baz=345	**0.81**	**334**	*i* P	**Pb**	**10 46 56.0**	**-0.1**
NTC	baz=345			*i* S	**Sb**	**10 47 05.8**	**-0.9**
NNSB	**Datong** baz=287	**0.82**	**292**	P	**Pb**	**10 46 56.9**	**+0.5**
NNSB	baz=287			S	**Sn**	**10 47 08.2**	**-0.9**
NNSH	**Datong** baz=287	**0.82**	**292**	P	**Pb**	**10 46 56.9**	**+0.5**
NNSH	baz=287			S	**Sn**	**10 47 08.8**	**-0.3**
NNS	**Nan Shan** baz=288	**0.83**	**292**	*i* P	**Pb**	**10 46 56.9**	**+0.3**
NNS	baz=288			S	**Sb**	**10 47 08.2**	**+0.7**
EGFH	**Guangfu** baz=220	**0.85**	**238**	P	**Pb**	**10 46 57.3**	**+0.4**
EGFH	baz=220			S	**Sn**	**10 47 09.5**	**-0.3**
WHF	**Hehuan Shan** baz=266	**0.87**	**272**	*i* P	**Pn**	**10 46 58.2**	**-0.2**
WHF	baz=266			*i* S	**Sb**	**10 47 09.9**	**+1.0**
FUSS	**Fushou** baz=273	**0.90**	**278**	*i* P	**Pb**	**10 46 58.2**	**+0.4**
FUSS	baz=273			*e*S	**Sn**	**10 47 10.6**	**-0.5**
TWB1	**Santiao Chiao** baz=347	**0.90**	**347**	*i* P	**Pb**	**10 46 57.4**	**-0.4**
TIPB	**Shuangxi** baz=336	**0.92**	**337**	*i* P	**Pb**	**10 46 57.9**	**-0.1**
TIPB	baz=336			*i* S	**Sb**	**10 47 09.1**	**-0.8**
NWLT	**Wulai** baz=319	**0.92**	**315**	*i* P	**Pb**	**10 46 58.4**	**+0.3**
NWLT	baz=319			S	**Sb**	**10 47 10.3**	**+0.3**
YHNB	**Yeheng** baz=287	**0.94**	**305**	P	**Pb**	**10 46 58.5**	**+0.1**
YHNB	baz=287			S	**Sb**	**10 47 10.8**	**+0.3**
CHGB	**Renai** baz=247	**0.95**	**266**	P	**Pb**	**10 46 59.1**	**+0.3**
CHGB	baz=247			S	**Sn**	**10 47 12.5**	**-0.1**
NSK	**Sanguang** baz=286	**0.96**	**305**	*i* P	**Pb**	**10 46 58.7**	**0.0**
NSK	baz=286			S	**Sb**	**10 47 10.9**	**-0.1**
TWT	**Tachien** baz=273	**0.96**	**278**	P	**Pn**	**10 46 59.8**	**+0.5**
TWT	baz=273			S	**Sn**	**10 47 13.1**	**+0.5**
HGSD	**Ruisui** baz=213	**0.96**	**229**	P	**Pb**	**10 46 58.9**	**+0.1**
HGSD	baz=213			S	**Sn**	**10 47 12.0**	**-0.4**
TDCB	**Techi** baz=273	**0.97**	**278**	P	**Pn**	**10 46 59.6**	**+0.1**
TDCB	baz=273			S	**Sn**	**10 47 12.9**	**-0.1**
NWF	**Wu-fen Shan** baz=336	**1.02**	**337**	*i* P	**Pb**	**10 46 59.4**	**-0.5**
NWF	baz=336			*i* S	**Sb**	**10 47 13.1**	**+0.1**
WFSB	**Wu-fen Shan** baz=351	**1.02**	**337**	P	**Pb**	**10 46 59.6**	**-0.2**
WFSB	baz=351			S	**Sb**	**10 47 12.9**	**0.0**
EHY	**Hungye** baz=228	**1.02**	**233**	*i* P	**Pb**	**10 46 59.5**	**-0.4**
EHY	baz=228			S	**Sn**	**10 47 13.7**	**-0.3**
TWA	**Mucha** baz=336	**1.03**	**326**	*i* P	**Pn**	**10 47 00.4**	**+0.2**
TWA	baz=336			S	**Sn**	**10 47 14.6**	**+0.5**
NHDH	**Xindian Distri** baz=335	**1.04**	**323**	P	**Pb**	**10 47 00.4**	**+0.2**
NHDH	baz=335			S	**Sn**	**10 47 14.4**	**-0.1**
TATO	**Taipei** baz=333	**1.08**	**322**	P	**Pn**	**10 47 01.4**	**+0.6**
TATO	baz=333			S	**Sn**	**10 47 16.4**	**+1.1**
YULB	**Yu-li** baz=241	**1.11**	**229**	P	**Pn**	**10 47 00.8**	**-0.6**
YULB	baz=241			S	**Sb**	**10 47 15.9**	**+0.4**
EYUL	**Yuli** baz=239	**1.13**	**227**	*i* P	**Pn**	**10 47 01.4**	**-0.2**
EYUL	baz=239			S	**Sn**	**10 47 17.5**	**+0.9**
TWF1	**Yuli** baz=239	**1.14**	**228**	*i* P	**Pn**	**10 47 01.2**	**-0.5**
TWF1	baz=239			S	**Sb**	**10 47 16.2**	**-0.1**
WPL	**Puli Township** baz=250	**1.16**	**265**	*e*S	**Sn**	**10 47 18.6**	**+1.3**
WHP	**Taichung City** baz=274	**1.17**	**278**	*i* P	**Pb**	**10 47 03.1**	**+0.7**
WHP	baz=274			S	**Sn**	**10 47 18.6**	**+0.8**
YM01	**YM01** baz=344	**1.18**	**330**	P	**Pn**	**10 47 02.5**	**+0.2**
YM01	baz=344			S	**Sn**	**10 47 17.9**	**+0.1**
YM10	**YM10** baz=344	**1.19**	**330**	P	**Pn**	**10 47 02.6**	**+0.2**
YM10	baz=344			*e*S	**Sb**	**10 47 17.1**	**-0.6**
YM11	**YM11** baz=345	**1.19**	**331**	P	**Pn**	**10 47 02.5**	**0.0**
YM11	baz=345			*e*S	**Sb**	**10 47 16.9**	**-0.9**
YM05	**YM05** baz=344	**1.19**	**330**	P	**Pn**	**10 47 01.9**	**-0.6**
YM05	baz=344			S	**Sn**	**10 47 18.3**	**+0.1**
YM04	**YM04** baz=343	**1.20**	**329**	P	**Pn**	**10 47 02.0**	**-0.5**
YM04	baz=343			*e*S	**Sb**	**10 47 17.2**	**-0.8**
SSLB	**Suanglung** baz=250	**1.20**	**254**	P	**Pb**	**10 47 03.6**	**+0.7**
SSLB	baz=250			*e*S	**Sb**	**10 47 18.1**	**-0.1**
YM08	**YM08** baz=346	**1.20**	**332**	P	**Pb**	**10 47 03.6**	**+0.7**
LIOB	**Emei** baz=293	**1.21**	**296**	*i* P	**Pb**	**10 47 03.5**	**+0.5**
LIOB	baz=293			S	**Sn**	**10 47 19.9**	**+1.3**
TWS1	**Kuangyinshan** baz=334	**1.21**	**323**	*e*P	**Pn**	**10 47 02.5**	**-0.2**
TWS1	baz=334			*e*S	**Sn**	**10 47 19.0**	**+0.4**
NSTT	**Nanjuang** baz=292	**1.22**	**295**	*i* P	**Pb**	**10 47 03.5**	**+0.4**
NSTT	baz=292			S	**Sn**	**10 47 19.4**	**+0.6**
YM03	**YM03** baz=328	**1.22**	**330**	P	**Pb**	**10 47 03.8**	**+0.6**
SMLT	**Sun Moon Lake** baz=255	**1.23**	**259**	*i* P	**Pb**	**10 47 03.6**	**+0.2**
SMLT	baz=255			*e*S	**Sb**	**10 47 18.2**	**-0.7**
ANP	**Anpu** baz=328	**1.23**	**329**	*e*P	**Pb**	**10 47 03.6**	**+0.1**
FULB	**Fuli** baz=204	**1.25**	**223**	*i* P	**Pn**	**10 47 02.8**	**-0.4**
FULB	baz=204			S	**Sb**	**10 47 19.2**	**-0.3**
TWQ1	**Liyutan** baz=277	**1.34**	**280**	P	**Pb**	**10 47 06.0**	**+0.9**
TWQ1	baz=277			S	**Sb**	**10 47 23.8**	**+1.9**
WJS	**Zhushan** baz=254	**1.39**	**258**	P	**Pb**	**10 47 06.6**	**+0.5**
WJS	baz=254			S	**Sb**	**10 47 26.1**	**+2.5**
IRIF	**Iriomote-Funau**	**1.40**	**81**	P	**Pn**	**10 47 05.8**	**+0.6**
IRIF				S	**Sn**	**10 47 23.0**	**-0.2**
EDH	**Donghe** baz=201	**1.42**	**216**	*i* P	**Pn**	**10 47 04.2**	**-1.4**
EDH	baz=201			*i* S	**Sn**	**10 47 21.9**	**-1.8**
ALS	**Alishan** baz=241	**1.43**	**245**	*i* P	**Pb**	**10 47 07.2**	**+0.2**
ALS	baz=241			*i* S	**Sb**	**10 47 25.3**	**+0.4**
ELDTW	**Lidau** baz=225	**1.44**	**230**	*i* P	**Pn**	**10 47 05.6**	**-0.4**
ELDTW	baz=225			S	**Sn**	**10 47 23.2**	**-1.2**
CHN5	**Tsauling** baz=231	**1.50**	**250**	*i* P	**Pb**	**10 47 09.2**	**+1.1**
CHN5	baz=231			*i* S	**Sb**	**10 47 29.1**	**+2.3**
WDLH	**Douliu** baz=236	**1.59**	**255**	S	**Sb**	**10 47 32.4**	**+3.0**
LDUT	**Ludao** baz=202	**1.60**	**206**	P	**Pn**	**10 47 07.2**	**-0.8**
LDUT	baz=202			S	**Sn**	**10 47 27.8**	**-0.4**
JKRS	**Kuro-shima**	**1.64**	**86**	P	**Pn**	**10 47 09.3**	**+0.7**
STYT	**Tauyuan** baz=220	**1.65**	**235**	*i* P	**Pn**	**10 47 09.7**	**+1.0**
STYT	baz=220			*i* S	**Sb**	**10 47 31.5**	**+0.6**
TWGBT	**Beinan** baz=215	**1.67**	**219**	P	**Pn**	**10 47 07.5**	**-1.5**
TWGBT	baz=215			S	**Sn**	**10 47 29.6**	**-0.3**
TPUB	**Ta-pu** baz=237	**1.67**	**241**	*i* P	**Pb**	**10 47 10.9**	**0.0**
TPUB	baz=237			S	**Sb**	**10 47 32.2**	**+0.7**
TWG	**Pinlang** baz=215	**1.67**	**219**	P	**Pn**	**10 47 08.3**	**-0.7**
TWG	baz=215			S	**Sn**	**10 47 29.0**	**-1.0**
CHN4	**Tsaushan** baz=228	**1.68**	**243**	*i* P	**Pb**	**10 47 11.6**	**+0.6**
CHN4	baz=228			*i* S	**Sb**	**10 47 33.7**	**+2.0**
WTP	**Ta-pu** baz=236	**1.71**	**240**	*e*P	**Pn**	**10 47 10.0**	**+0.4**
WTP	baz=236			S	**Sb**	**10 47 33.1**	**+0.4**
WTK	**Tuku** baz=238	**1.73**	**256**	P	**Pb**	**10 47 11.6**	**-0.2**
WTK	baz=238			S	**Sb**	**10 47 34.1**	**+0.9**
JIJ	**Ishigaki jima**	**1.77**	**82**	P	**Pn**	**10 47 11.0**	**+0.6**
JIJ				*e*S	**Sn**	**10 47 32.6**	**+0.1**
TWK	**Hsinying** baz=238	**1.80**	**242**	*i* P	**Pb**	**10 47 12.2**	**-0.9**
TWK	baz=238			*i* S	**Sb**	**10 47 37.0**	**+1.7**
CHN1	**Nanshi** baz=235	**1.81**	**239**	*e*P	**Pb**	**10 47 12.6**	**-0.7**
CHN1	baz=235			*i* S	**Sb**	**10 47 36.2**	**+0.7**
SNST	**Tainan City** baz=236	**1.81**	**241**	*e*S	**Sb**	**10 47 36.4**	**+0.6**
SGST	**Jiashian** baz=231	**1.82**	**236**	P	**Pn**	**10 47 12.2**	**+1.0**
SGST	baz=231			*e*S	**Sb**	**10 47 36.5**	**+0.5**
SLGT	**Liugui** baz=228	**1.83**	**232**	*e*P	**Pb**	**10 47 12.7**	**-0.9**
SLGT	baz=228			S	**Sb**	**10 47 36.9**	**+0.8**
JISG	**Ishigakijimahi**	**1.96**	**76**	P	**Pn**	**10 47 13.7**	**+0.7**
JISG				S	**Sn**	**10 47 37.2**	**0.0**
SSD	**Sandimen** baz=223	**2.00**	**227**	P	**Pb**	**10 47 16.2**	**-0.3**
SSD	baz=223			S	**Sb**	**10 47 41.0**	**-0.1**
SCST	**Cishan** baz=228	**2.00**	**232**	*e*S	**Sb**	**10 47 42.2**	**+1.0**
TSMG	**Majia** baz=211	**2.02**	**226**	*e*P	**Pn**	**10 47 15.5**	**+1.7**
TSMG	baz=211			S	**Sb**	**10 47 40.7**	**-1.0**
MASBT	**Mashibuluo** baz=212	**2.09**	**224**	P	**Pn**	**10 47 15.6**	**+0.8**
MASBT	baz=212			*e*S	**Sb**	**10 47 42.4**	**-1.4**
JTJ	**Tarama**	**2.33**	**77**	P	**Pn**	**10 47 19.8**	**+1.8**
JTJ				S	**Sn**	**10 47 47.2**	**+1.1**

IDC 12 10:59:21.9±1.5**, 1°.65N×126°.03E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/52**, mbtmp3.4**/4**, Error ellipse: s-maj=162.0km s-min=21.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=339,slow=11,SNR=9.3	**22.96**	**160**	P	P	11 04 27.7	-0.4
ASAR	**Alice Springs** 0.4nm,0.5s,baz=341,slow=7.2,SNR=16	**26.31**	**164**	P	P	11 04 59.8	+0.3
ASAR	0.2nm,0.8s,baz=0.0,slow=2.8,SNR=1.9			PcP	PcP	11 08 25.8	-0.2
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=130,slow=5.9,SNR=4.9	**58.87**	**326**	P	P	11 09 22.6	+0.1
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=125,slow=5.7,SNR=2.2	**63.11**	**328**	P	P	11 09 50.9	-0.4

IDC 12 11:11:18.3±9.1**, 36°.70N×70°.36E, h260^{km}**±64^{km}**, mb2.9**/1**, mb1 2.8**/4**, mb1mx2.4**/56**, mbtmp3.4**/4**, Error ellipse: s-maj=155.6km s-min=57.0km az=94.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa** 1.0nm,0.3s,baz=200,slow=8.0,SNR=6.2	**6.73**	**27**	P	Pn	11 12 55.7	0.0
AAK	0.9nm,0.3s,baz=288,slow=24,SNR=5.6			S	S	11 14 13.9	-0.2
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=227,slow=16,SNR=5.4	**13.44**	**38**	P	P	11 14 20.9	+0.7
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=213,slow=12,SNR=1.8	**19.95**	**26**	P	P	11 15 30.8	-0.1
ASAR	**Alice Springs** 0.3nm,0.7s,baz=312,slow=4.9,SNR=4.3	**84.79**	**124**	P	P	11 23 23.5	-0.2

IDC 12 11:15:49.9±4.2**, 2°.86S×139°.20E, h284^{km}**±42^{km}**, mb2.9**/3**, mb1 2.9**/4**, mb1mx2.7**/29**, mbtmp3.5**/4**, Error ellipse: s-maj=104.2km s-min=53.0km az=177.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura** 2.1nm,0.3s,baz=237,slow=11,SNR=6.0	**1.54**	**77**	P	Pn	11 16 31.7	-0.2
JAY	1.9nm,0.3s,baz=319,slow=20,SNR=2.0			S	S	11 17 05.3	+0.2
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=13,slow=13,SNR=8.7	**17.63**	**195**	P	P	11 19 36.8	+0.2
FITZ	**Fitzroy Crossi** 1.9nm,0.9s,baz=39,slow=13,SNR=1.8	**20.15**	**220**	P	P	11 20 03.2	-0.3
ASAR	**Alice Springs** 0.8nm,0.7s,baz=9.7,slow=11,SNR=15	**21.31**	**193**	P	P	11 20 15.6	+0.5
STKA	**Stephens Creek** 0.7nm,0.4s,baz=0.0,slow=8.1,SNR=2.3	**28.95**	**176**	P	P	11 21 22.6	-0.9

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*NNC **12** 11:34:32.4±3.0, 41°.46N×83°.77E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=22.3km s-min=14.9km az=150.0*

*SOME **12** 11:34:39.1, 42°.00N×83°.62E, h10^{km}*

ISC 12 11:34:39.4±2.4**, 41°.72N**±0°.10×**83°.38E**±0°.08**, h10^{km}, n23, σ2^{s}.45**/38**, 5C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen** 14nm,0.3s	**2.83**	**309**	*e*P	**Pg**	**11 35 31.5**	**-2.0**
KTMS	16nm,0.6s			*e*S	**Sg**	**11 36 09.6**	**-0.5**
KTMS	**Ketmen** 14nm,0.3s	**2.83**	**309**	Pg	**Pb**	**11 35 28.9**	**-1.1**
KTMS	16nm,0.6s			Lg	Lg	11 36 12.7	
SHLS	**Shalkode** 13nm,0.4s	**3.24**	**298**	*e*P	**Pb**	**11 35 35.1**	**-2.0**
SHLS	53nm,0.7s			*e*S	**Sb**	**11 36 15.5**	**-1.0**
SHLS	**Shalkode** 23nm,0.4s	**3.24**	**298**	Pg	**Pb**	**11 35 34.3**	**-2.8**
SHLS	63nm,0.9s			Lg	Lg	11 36 21.6	
PDGK	**Podgornoye** 4.3nm,0.8s	**3.29**	**301**	Pg	**Pg**	**11 35 39.5**	**-3.0**
PDGK	11nm,0.8s			Lg	Lg	11 36 31.0	
PDGK	**Podgornoye** 1.2nm,0.5s	**3.29**	**301**	⇓Pn	**Pn**	**11 35 30.0**	**-1.2**
PDGK	9.0nm,0.8s			⇓Pg	**Pb**	**11 35 38.9**	**+0.9**
PDGK	37nm,1.0s			⇑Lg	Lg	11 36 21.4	
UZB	**Uzynbulak** 1.9nm,0.4s	**3.53**	**295**	*e*P	**Pg**	**11 35 45.8**	**-1.2**
UZB	17nm,0.6s			*e*S	**Sg**	**11 36 33.3**	**+0.6**
UZB	**Uzynbulak** 7µm,0.1s	**3.53**	**295**	Pg	**Pg**	**11 35 45.6**	**-1.4**
UZB	17nm,0.6s			Lg	Lg	11 36 41.6	
DJR	**Jarkent** 3.9nm,0.8s	**3.71**	**316**	*e*P	**Pg**	**11 35 48.0**	**-2.4**
DJR	7.6nm,0.9s			*e*S	**Sg**	**11 36 37.7**	**-0.7**
DJR	**Jarkent** 3.9nm,0.8s	**3.71**	**316**	Pg	**Pg**	**11 35 46.8**	**-3.6**
DJR	7.6nm,0.9s			Lg	Lg	11 36 43.3	
KPKS	**Kokpek** 12nm,0.5s	**3.88**	**298**	*e*P	**Pb**	**11 35 48.7**	**+0.6**
KPKS	30nm,0.8s			*e*S	**Sb**	**11 36 39.1**	**+4.0**
SATY	**Saty** 8.3nm,0.9s	**3.92**	**292**	*e*P	**Pg**	**11 35 54.3**	**-0.2**
SATY	18nm,0.9s			*e*S	**Sg**	**11 36 48.7**	**+3.4**
SATY	**Saty** 8.3nm,0.9s	**3.92**	**292**	Pg	**Pg**	**11 35 51.8**	**-2.7**
SATY	18nm,0.9s			Lg	Lg	11 36 53.3	
KURS	**Kuram** 5.8nm,0.7s	**4.23**	**296**	*e*P	**Pg**	**11 35 57.6**	**-2.9**
KURS	7.4nm,1.0s			*e*S	**Sg**	**11 36 53.5**	**-1.8**
KAPS	**Kapalarasan** 4.3nm,0.6s	**4.61**	**322**	*e*P	**Pb**	**11 35 59.6**	**-0.9**
KAPS	6.5nm,0.6s			*e*S	**Sb**	**11 36 57.1**	**+1.0**
KAPS	**Kapalarasan** 4.3nm,0.6s	**4.61**	**322**	Pg	**Pb**	**11 35 58.3**	**-2.1**
KAPS	6.5nm,0.6s			Lg	Lg	11 37 03.3	
MDOK	**Medeo** 3.6nm,0.6s	**4.90**	**289**	*e*P	**Pg**	**11 36 12.7**	**-0.6**
MDOK	10nm,0.6s			*e*S	**Sg**	**11 37 19.9**	**+3.1**
TNSS	**Tian-Shan** 2.2nm,0.6s	**4.94**	**288**	*e*P	**Pb**	**11 36 09.1**	**+2.8**
TNSS	4.6nm,0.8s			*e*S	**Sg**	**11 37 14.1**	**-4.1**
TNSS	**Tian-Shan** 3.7nm,0.5s	**4.94**	**288**	Pg	**Pg**	**11 36 12.7**	**-1.5**
TNSS	5.6nm,0.9s			Lg	Lg	11 37 28.7	
MK31	**Makanchi Array** 0.3nm,0.7s,baz=186,slow=14,SNR=5.3	**5.13**	**352**	Pn	**Pn**	**11 35 56.1**	**-0.2**
MK31	1.6nm,0.9s,baz=164,slow=16,SNR=4.3			⇓Pg	**Pb**	**11 36 09.3**	**0.0**
MK31	1.8nm,0.6s			⇓Sn	**Sn**	**11 36 59.4**	**+3.8**
MK31	7.2nm,0.6s,baz=172,slow=28			⇓Lg	Lg	11 37 25.8	
MAKZ	**Makanchi** 0.3nm,0.6s	**5.19**	**349**	⇑Pn	**Pn**	**11 35 56.9**	**-0.2**
MAKZ	0.5nm,0.6s			⇓Pg	**Pb**	**11 36 10.5**	**+0.4**
MAKZ	2.4nm,0.8s			⇑Sn	**Sn**	**11 37 02.1**	**+5.2**
MAKZ	7.1nm,0.9s			⇑Lg	Lg	11 37 29.5	
KST	**Kastek** 2.4nm,0.4s	**5.65**	**286**	Pg	**Pb**	**11 36 22.2**	**+4.0**
KST	8.6nm,0.9s			Lg	Lg	11 37 43.8	
TKM2	**Tokmak 2** 1.4nm,0.5s	**5.89**	**284**	⇓Pn	**Pn**	**11 36 03.8**	**-3.2**
TKM2	7.0nm,0.8s			⇑Lg	Lg	11 37 45.3	

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*OTT **12** 11:36:36.7±0.3, 41°.43N×71°.91W, h18^{km}, MN3.4/17, Connecticut, U.S.A. 412km south from Coaticook, Qc*

*ANF **12** 11:36:37.9±0.1, 41°.73N×71°.89W, h10^{km}±1^{km}, ML3.9/93, Error ellipse: s-maj=1.1km s-min=0.6km az=128.0*

*WES **12** 11:36:38.5, 41°.75N×71°.90W, h2^{km}*

*NEIC **12** 11:36:38.9±0.7, 41°.75N±0°.03×71°.90W±0°.03, h5^{km}±7^{km}, mb_Lg3.3/91, Error ellipse: s-maj=4.6km s-min=2.3km az=136.0*

ISC 12 11:36:38.0±0.9**, 41°.73N**±0°.02×**71°.89W**±0°.02**, h11^{km}**±7^{km}**, n237, σ0^{s}.82**/263**, Southern New England**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
L63A	**North Scituate** baz=242,SNR=1000	**0.25**	**57**	P	**Pg**	**11 36 43.3**	**+0.2**
L63A	baz=242			S	**Sg**	**11 36 46.5**	**-0.1**
L63A	**North Scituate**	**0.25**	**57**	Pg	**Pg**	**11 36 43.4**	**+0.2**
L63A				Sg	**Sg**	**11 36 46.5**	**-0.1**
BRYW	**Bryant College**	**0.32**	**54**		**Pg**	**11 36 44.7**	**+0.2**
BRYW				Sg	**Sg**	**11 36 48.7**	**-0.2**
M63A	**Gales Ferry** baz=18,SNR=1000	**0.35**	**200**	P	**Pg**	**11 36 45.3**	**+0.4**
M63A	baz=18			S	**Sg**	**11 36 49.8**	**+0.2**
M63A	**Gales Ferry**	**0.35**	**200**	Pg	**Pg**	**11 36 45.3**	**+0.4**
M63A				Sg	**Sg**	**11 36 49.9**	**+0.4**
M64A	**Tiverton** baz=291,SNR=510	**0.54**	**109**	P	**Pg**	**11 36 48.7**	**+0.2**
M64A	baz=291			S	**Sg**	**11 36 55.6**	**0.0**
M64A	**Tiverton**	**0.54**	**109**	Pg	**Pg**	**11 36 48.9**	**+0.3**
M64A				Sg	**Sg**	**11 36 56.4**	**+0.7**
QUA2	**Belchertown**	**0.65**	**328**		**Pg**	**11 36 50.4**	**-0.3**
QUA2				Sg	**Sg**	**11 36 58.8**	**-0.4**
QUA2	**Belchertown** baz=148	**0.65**	**328**	P		11 36 50.4	
L62A	**Suffield** baz=116,SNR=46	**0.65**	**298**	P	**Pg**	**11 36 50.6**	**-0.1**
L62A	baz=116			S	**Sg**	**11 36 59.7**	**+0.4**
WES	**Weston**	**0.78**	**33**		**Pg**	**11 36 52.9**	**-0.2**
WES					**Sg**	**11 37 02.2**	**-1.1**
WES	**Weston** baz=214	**0.78**	**33**	P		11 36 52.8	
M62A	**Hamden** baz=67,SNR=236	**0.81**	**250**	P	**Pg**	**11 36 53.7**	**+0.1**
M62A	baz=67			S	**Sg**	**11 37 04.2**	**+0.1**
BCX	**Boston College**	**0.81**	**41**		**Pg**	**11 36 53.5**	**-0.2**
BCX				Sg	**Sg**	**11 37 04.2**	**0.0**
L64A	**Middleborough** baz=257,SNR=300	**0.81**	**75**	P	**Pg**	**11 36 53.6**	**-0.1**
L64A	baz=257			S	**Sg**	**11 37 04.5**	**+0.2**
L64A	**Middleborough** baz=257,SNR=89	**0.81**	**75**	P		11 36 53.6	
L64A	baz=257,SNR=89			P		11 36 53.6	
HRV	**Adam Dziewonsk** baz=199	**0.81**	**17**	P	**Pg**	**11 36 53.4**	**-0.4**
HRV	baz=199			S	**Sg**	**11 37 04.0**	**-0.5**
HRV	**Adam Dziewonsk**	**0.81**	**17**	Pg	**Pg**	**11 36 53.4**	**-0.4**
HRV				Sg	**Sg**	**11 37 03.9**	**-0.5**
HRV	**Adam Dziewonsk** baz=199,SNR=101	**0.81**	**17**	P		11 36 53.4	
HRV				S		11 37 04.2	

	baz=199						
N63A	Mattituck	0.88	213	P	Pg	11 36 54.5	-0.5
	baz=31						
YLE	Yale	0.89	243	Pg	Pg	11 36 55.1	-0.1
YLE				Sg	Sg	11 37 07.1	+0.3
L61B	Northampton	0.93	321	P	Pg	11 36 55.5	-0.5
	baz=140,SNR=309						
L61B	Northampton	0.93	321	P		11 36 55.4	
	baz=140,SNR=273						
M65A	Busby, Falmout	0.94	100	P	Pg	11 36 56.2	0.0
	baz=282,SNR=88						
M65A	Busby, Falmout	0.94	100		Pg	11 36 56.2	0.0
K62A	Royalston	0.97	345	P	Pg	11 36 56.1	-0.7
	baz=165,SNR=342						
K62A	Royalston	0.97	345		Pg	11 36 56.2	-0.5
K62A	Royalston	0.97	345	P		11 36 56.1	
	baz=165,SNR=282						
K62A				P		11 36 56.1	
	baz=165,SNR=282						
K62A				S		11 37 09.1	
	baz=165						
K62A				S		11 37 09.1	
	baz=165						
K63A	Dunstable	1.00	15	P	Pg	11 36 56.6	-0.6
	baz=196,SNR=149						
K63A				S	Sg	11 37 09.6	-0.6
	baz=196						
KSCT	Kent School, K	1.20	270		Pb	11 37 00.6	-0.1
KSCT				Sg	Sb	11 37 15.0	-1.1
WSPT	Westport, CT	1.22	243		Pn	11 37 01.1	+0.1
WSPT				Sg	Sb	11 37 15.9	-0.9
L61A	Hillsdale 1, H	1.33	291	P	Pn	11 37 02.3	-0.2
	baz=109,SNR=298						
L61A				S	Sb	11 37 19.6	-0.4
	baz=109						
K61A	Williamstown	1.39	313	P	Pn	11 37 03.1	-0.3
	baz=132,SNR=152						
K61A				S	Sb	11 37 21.3	-0.6
	baz=132						
M66A	Nantucket	1.40	109	P	Pn	11 37 03.4	-0.1
	baz=291						
L65A	Cape Cod Natio	1.40	77	P	Pn	11 37 03.5	-0.1
	baz=259						
N62A	Caumsett State	1.43	237	P	Pn	11 37 03.5	-0.4
	baz=55						
N62A				S	Sn	11 37 23.1	+0.4
	baz=55						
N62A	Caumsett State	1.43	237	P		11 37 04.1	
	baz=55,SNR=120						
N62A				P		11 37 04.1	
	baz=55,SNR=120						
N62A				S		11 37 23.2	
	baz=55						
N62A				S		11 37 23.2	
	baz=55						
M61A	Granite Spring	1.47	254	P	Pn	11 37 04.1	-0.4
	baz=72,SNR=404						
M61A				S	Sn	11 37 24.3	+0.5
	baz=72						
J62A	Henniker	1.50	2	P	Pn	11 37 04.7	-0.2
	baz=182,SNR=110						
UNH	University of	1.56	29	P		11 37 05.9	
	baz=210,SNR=116						
UNH				S		11 37 26.0	
	baz=210						
BRNY	Black Rk. Fore	1.62	260	P		11 37 07.0	
	baz=77						
BRNY				S		11 37 28.2	
	baz=77						
TRY	Troy	1.66	308		Pn	11 37 07.5	+0.4
TRY	Troy	1.66	308	P		11 37 07.5	
	baz=126						
TRY				S		11 37 29.2	
	baz=126						
J63A	Strafford	1.66	21	P	Pn	11 37 06.9	-0.2
	baz=202,SNR=99						
PAL	Palisades	1.68	245	P	Pn	11 37 07.1	-0.2
	baz=63,SNR=222						
PAL	Palisades	1.68	245	Pn	Pn	11 37 07.2	-0.2
PAL	Palisades	1.68	245	P		11 37 07.1	
	baz=63,SNR=143						
PAL				S		11 37 30.0	
	baz=63						
NPNY	Mohonk Preserv	1.69	272	P		11 37 07.7	
	baz=90						
NPNY				S		11 37 30.6	
	baz=90						
J61A	Chester	1.69	343	P	Pn	11 37 07.4	-0.1
	baz=163,SNR=32						
J61A	Chester	1.69	343	P		11 37 07.5	
	baz=163,SNR=23						
J61A				P		11 37 07.5	
	baz=163,SNR=23						
K60A	Five Rivers En	1.73	301	P	Pn	11 37 08.6	+0.5
	baz=120,SNR=40						
FOR	Fordham	1.74	241	P		11 37 09.0	
	baz=59,SNR=17						
FOR				S		11 37 31.8	
	baz=59						
FFD	Franklin Falls	1.75	6		Pn	11 37 08.7	+0.4
L60A	Shokan	1.76	279	P	Pn	11 37 08.7	+0.1
	baz=97,SNR=206						
L60A				S	Sn	11 37 31.4	+0.5
	baz=97						
CPNY	Central Park	1.82	240		Pn	11 37 09.5	+0.2
TRNY	Table Rock, Ra	1.85	252	Pn	Pn	11 37 09.4	-0.3
J60A	Lant Hill Farm	1.89	324	P	Pn	11 37 10.6	+0.3
	baz=143,SNR=68						
J60A				S	Sn	11 37 34.8	+0.6
	baz=143						
HNH	Hanover	2.00	352		Pn	11 37 11.7	0.0
N61A	South Mountain	2.06	243	P	Pn	11 37 12.4	-0.2
	baz=60						
M60A	Port Jervis	2.09	260	P	Pn	11 37 13.6	+0.5
	baz=77,SNR=240						
HCNY	Howe Caverns	2.10	298	P		11 37 14.0	
	baz=116,SNR=65						
ACCN	Adirondack Com	2.11	322	P		11 37 14.2	
	baz=141,SNR=16						
ODNJ	Ogdensburg	2.14	253		Pn	11 37 14.0	+0.2
ODNJ	Ogdensburg	2.14	253	P		11 37 13.9	
	baz=71,SNR=70						
I62A	Tamworth	2.18	11	P	Pn	11 37 14.5	+0.2
	baz=191,SNR=66						
I62A	Tamworth	2.18	11	Pn	Pn	11 37 15.1	+0.8
I62A	Tamworth	2.18	11	P		11 37 14.6	
	baz=191,SNR=57						
I62A				P		11 37 14.6	
	baz=191,SNR=57						
I61A	Oroboro, Fairl	2.21	354	P	Pn	11 37 14.6	-0.1
	baz=174						
I60A	Shoreham	2.35	334	P	Pn	11 37 17.0	+0.4
	baz=154,SNR=23						
MCVT	Middlebury Col	2.37	340	P		11 37 17.1	
	baz=160,SNR=13						
L59A	Walton	2.40	282	P	Pn	11 37 17.8	+0.5
	baz=100,SNR=105						
L59A	Walton	2.40	282		Pn	11 37 18.0	+0.7
L59A	Walton	2.40	282	P		11 37 17.9	
	baz=100,SNR=85						
L59A				P		11 37 17.9	
	baz=100,SNR=85						
K59A	Cooperstown	2.44	296	P	Pn	11 37 18.3	+0.5
	baz=114,SNR=109						
LBNH	Lisbon	2.51	359	PN	Pn	11 37 19.1	+0.3
LBNH				SN	Sb	11 37 52.4	-1.7
LBNH				LG	Lg	11 38 02.0	
LBNH				Trac		11 38 03.6	
	comp=Z,40nm,0.1s						
LBNH	Lisbon	2.51	359	P	Pn	11 37 18.9	+0.1
	baz=180,SNR=8.7						
LBNH	Lisbon	2.51	359		Pn	11 37 19.2	+0.4
LBNH	Lisbon	2.51	359	P		11 37 19.2	
	baz=180						
I63A	Otisfield	2.51	22	P	Pn	11 37 19.1	+0.3
	baz=203,SNR=32						
I63A				S	Sn	11 37 50.3	+0.9
	baz=203						
I63A	Otisfield	2.51	22	Pn	Pn	11 37 19.4	+0.6
I63A	Otisfield	2.51	22	P		11 37 19.2	
	baz=203,SNR=32						
I63A				P		11 37 19.2	
	baz=203,SNR=32						
PANJ	Princeton	2.52	239	P		11 37 19.5	
	baz=56,SNR=17						
N60A	Cedar Hill Far	2.57	252	P	Pn	11 37 20.0	+0.4
	baz=69,SNR=16						
J59A	Piesco	2.60	313	P	Pn	11 37 20.6	+0.6
	baz=131,SNR=24						
J59A	Piesco	2.60	313		Pn	11 37 20.8	+0.8
J59A	Piesco	2.60	313	P		11 37 21.0	
	baz=131,SNR=17						
J59A				P		11 37 21.0	
	baz=131,SNR=17						
O61A	Allentown	2.60	232	P	Pn	11 37 19.8	-0.1
	baz=50						
O61A				Sb	Sb	11 37 57.0	+0.5
	baz=50						
M59A	Waymart	2.66	267	P	Pn	11 37 21.7	+0.8
	baz=84,SNR=36						
VT1	Waterbury	2.68	347	Pn	Pn	11 37 22.2	+1.1
I64A	Boothbay	2.75	36	P	Pn	11 37 21.9	-0.1
	baz=218,SNR=25						
I64A				S	Sn	11 37 54.7	-0.5
	baz=218						
H61A	Lyndonville	2.80	359	P	Pn	11 37 23.1	+0.2
	baz=180,SNR=22						
NCB	Newcomb	2.82	323	PN	Pn	11 37 23.8	+0.7
NCB				SN	Sn	11 37 59.3	+2.1
NCB				Trac		11 38 07.7	
	comp=Z,1.0nm,0.4s						
NCB				LG	Lg	11 38 11.3	
NCB	Newcomb	2.82	323	Pn	Pn	11 37 23.8	+0.7
NCB					Sn	11 37 59.3	+2.1
NCB	Newcomb	2.82	323	P		11 37 23.7	
	baz=142,SNR=31						
H60A	Morristown	2.89	348	P	Pn	11 37 24.3	+0.2
	baz=168						
H62A	Milan	2.89	10	P	Pn	11 37 24.6	+0.5
	baz=191						
H62A	Milan	2.89	10	Pn	Pn	11 37 24.9	+0.8
H62A				IAmb_Lg		11 38 16.8	
	comp=Z,92nm,1.1s						
H62A	Milan	2.89	10	P		11 37 24.8	
	baz=191						
H62A				P		11 37 24.8	
	baz=191						
KSPA	Keystone Colle	2.91	268	P		11 37 25.2	
	baz=85						
TUPA	Temple Univers	2.94	239	P		11 37 25.7	
	baz=56						
L58A	Harry Jones Me	2.98	277	P	Pn	11 37 25.4	+0.2
	baz=94,SNR=57						
K58A	Earlville	2.98	292	P	Pn	11 37 25.6	+0.3
	baz=109,SNR=81						
K58A	Earlville	2.98	292		Pn	11 37 25.8	+0.6
K58A	Earlville	2.98	292	P		11 37 25.9	
	baz=109,SNR=67						
O60A	Telford	3.01	243	P	Pn	11 37 25.8	+0.1
	baz=60,SNR=41						
P61A	Hammonton	3.01	228		Pn	11 37 25.7	0.0
N59A	State Game Lan	3.03	256	P	Pn	11 37 26.3	+0.3
	baz=73,SNR=33						
N59A	State Game Lan	3.03	256	Pn	Pn	11 37 26.9	+0.9
N59A				IAmb_Lg		11 38 19.2	
	comp=Z,126nm,0.7s						
N59A	State Game Lan	3.03	256	P		11 37 26.6	
	baz=73,SNR=26						
BINY	Binghamton	3.09	280	PN	Pn	11 37 27.6	+0.8
BINY				SN	Sn	11 38 01.2	-2.6
BINY				LG	Lg	11 38 15.6	
BINY	Binghamton	3.09	280	P	Pn	11 37 27.1	+0.3
	baz=97,SNR=16						
BINY	Binghamton	3.09	280		Pn	11 37 27.9	+1.1
BINY	Binghamton	3.09	280	P		11 37 27.8	
	baz=97,SNR=16						
PSWB	Penn State Wil	3.13	264	P		11 37 28.3	
	baz=80						
H58A	Gabriels	3.17	329	P	Pn	11 37 28.4	+0.5
	baz=147,SNR=8.9						
H59A	Cadyville	3.20	336	P	Pn	11 37 28.3	0.0
	baz=155,SNR=12						
PSUB	Penn St. - Bra	3.25	238	Pn	Pn	11 37 29.8	+0.9
PSUB				IAmb_Lg		11 38 28.0	
	comp=Z,110nm,0.7s						
WVL	Waterville	3.27	29	Pn	Pn	11 37 30.0	+0.8
WVL				IAmb_Lg		11 38 19.7	
	comp=Z,99nm,0.8s						
FRNY	Flat Rock	3.34	339	PN	Pn	11 37 30.8	+0.5
FRNY				SN	Sn	11 38 13.8	+3.8
FRNY				LG	Lg	11 38 26.9	
FRNY				Trac		11 38 28.4	
	comp=Z,41nm,0.4s						
FRNY	Flat Rock	3.34	339	P		11 37 30.6	
	baz=158,SNR=13						
G60A	Masonville	3.38	355	PN	Pn	11 37 31.8	+0.9
G60A				SN	Sn	11 38 14.0	+3.1
G60A				Trac		11 38 24.7	
	comp=Z,59nm,0.3s						
G60A				LG	Lg	11 38 31.7	
G60A	Masonville	3.38	355	P	Pn	11 37 31.4	+0.6
	baz=174,SNR=17						
P60A	Greenville	3.43	237	P	Pn	11 37 31.3	-0.1
	baz=54						
P60A	Greenville	3.43	237		Pn	11 37 31.7	+0.3
P60A	Greenville	3.43	237	P		11 37 31.8	
	baz=54						
M58A	Price's Panora	3.45	266	P	Pn	11 37 32.1	+0.4
	baz=82,SNR=57						
LONY	Lake Ozonia	3.50	327	PN	Pn	11 37 33.4	+1.0
LONY				SN	Sn	11 38 15.6	+1.8
LONY				LG	Lg	11 38 29.9	
LONY				Trac		11 38 29.9	
	comp=Z,64nm,0.4s						
LONY	Lake Ozonia	3.50	327	P	Pn	11 37 32.8	+0.4
	baz=145,SNR=21						
LONY	Lake Ozonia	3.50	327	Pn	Pn	11 37 33.2	+0.8
H64A	Troy	3.50	33	P	Pn	11 37 32.4	0.0
	baz=215,SNR=21						
I57A	Carthage	3.54	310	P	Pn	11 37 33.0	0.0
	baz=127,SNR=13						
O59A	Robesonia	3.55	248	P	Pn	11 37 33.2	+0.2
	baz=65,SNR=19						
O59A	Robesonia	3.55	248	P		11 37 33.7	
	baz=65,SNR=10						
G61A	St-Isidore-de-	3.56	4	P	Pn	11 37 33.5	+0.3
	baz=184,SNR=10						
WCNY	West Carthage	3.57	310	P		11 37 34.3	
	baz=128						
K57A	Scipio Center	3.58	288	P	Pn	11 37 33.9	+0.4
	baz=104						
MOQ	Mont Orford	3.59	356	PN	Pn	11 37 34.8	+1.1
MOQ				SN	Sn	11 38 19.2	+3.0
MOQ				Trac		11 38 42.4	
	comp=Z,58nm,0.4s						
MOQ	Mont Orford	3.59	356		Pn	11 37 34.4	+0.7
G62A	West of Eustis	3.63	15	P	Pn	11 37 34.5	+0.4
	baz=196,SNR=6.9						
G62A	West of Eustis	3.63	15	Pn	Pn	11 37 35.4	+1.2
G62A	West of Eustis	3.63	15	P		11 37 34.8	
	baz=196,SNR=7.2						
G62A				P		11 37 34.8	
	baz=196,SNR=7.2						
L57A	Andrews Acres	3.71	276	P	Pn	11 37 36.4	+1.0
	baz=92,SNR=87						
N58A	Sunbury	3.74	258	P	Pn	11 37 36.0	+0.3
	baz=74,SNR=20						
N58A	Sunbury	3.74	258	Pn	Pn	11 37 36.0	+0.3
N58A	Sunbury	3.75	258	P		11 37 36.3	
	baz=74,SNR=18						
N58A				P		11 37 36.3	
	baz=74,SNR=18						
G58A	Ormstown	3.77	336	PN	Pn	11 37 36.8	+0.8
G58A	Ormstown	3.77	336	P	Pn	11 37 36.5	+0.5
	baz=155,SNR=8.3						
G63A	Kingsbury	3.77	25	P	Pn	11 37 36.4	+0.3
	baz=207,SNR=15						
M57A	Sunshine Farm,	3.95	266	P	Pn	11 37 39.0	+0.4
	baz=82,SNR=49						
M57A	Sunshine Farm,	3.95	266	Pn	Pn	11 37 39.4	+0.7
M57A	Sunshine Farm,	3.95	266	P		11 37 39.2	
	baz=82,SNR=43						
M57A				P		11 37 39.2	
	baz=82,SNR=43						
PAGS	Pennsylvania G	3.95	249		Pn	11 37 39.1	+0.5
H65A	Eastbrook	3.98	41	P	Pn	11 37 39.3	+0.3
	baz=223						
J56A	Wolcott	3.99	294	P	Pn	11 37 39.4	+0.3
	baz=111,SNR=12						
J56A	Wolcott	3.99	294		Pn	11 37 39.6	+0.5
J56A	Wolcott	3.99	294	P		11 37 39.9	
	baz=111,SNR=9.6						
J56A				P		11 37 39.9	
	baz=111,SNR=9.6						
PKME	Peaks-Kenny Pk	4.01	27	PN	Pn	11 37 40.6	+1.3
PKME				SN	Sn	11 38 28.3	+2.0
PKME				LG	Lg	11 38 49.2	
PKME				Trac		11 38 50.4	
	comp=Z,122nm,0.3s						
PKME	Peaks-Kenny Pk	4.01	27	P	Pn	11 37 39.7	+0.4
	baz=209						
PKME	Peaks-Kenny Pk	4.01	27		Pn	11 37 40.1	+0.8
PKME				IAmb_Lg		11 38 52.4	
	comp=Z,97nm,0.8s						
G57A	Newington	4.06	327	P	Pn	11 37 40.7	+0.7
	baz=145,SNR=7.5						
Q60A	Greensboro	4.07	229	P	Pn	11 37 39.9	-0.3
	baz=46						
Q60A	Greensboro	4.07	229	IAmb_Lg		11 38 46.2	
	comp=Z,100nm,0.8s						
O58A	Lewisberry	4.14	249	P	Pn	11 37 41.3	+0.1
	baz=65,SNR=6.6						
K56A	Middlesex	4.15	285	P	Pn	11 37 41.9	+0.5
	baz=102,SNR=19						
G64A	Maxfield	4.20	32	P	Pn	11 37 42.0	+0.1
	baz=214,SNR=23						
KGNO	Kingston	4.20	308	PN	Pn	11 37 45.4	+3.4
F60A	Warwick	4.24	359	P	Pn	11 37 42.7	+0.1
	baz=180						
L56A	Greenwood	4.25	277	P	Pn	11 37 42.0	-0.8
	baz=93,SNR=13						
L56A	Greenwood	4.25	277	Pn	Pn	11 37 44.2	+1.5
L56A				IAmb_Lg		11 39 02.1	
	comp=Z,66nm,0.8s						
L56A	Greenwood	4.25	277	P		11 37 44.0	
	baz=93,SNR=13						
L56A				P		11 37 44.0	
	baz=93,SNR=13						
F61A	St Evariste	4.29	8	P	Pn	11 37 43.4	+0.1
	baz=189,SNR=9.3						
R61A	Willards	4.30	219	IAmb_Lg		11 38 55.5	
	comp=Z,79nm,0.8s						
N57A	Milroy	4.38	259	P	Pn	11 37 44.6	+0.1
	baz=75,SNR=39						
EMMW	East Machias	4.40	46	Pn	Pn	11 37 44.5	-0.2
EMMW				IAmb_Lg		11 39 02.3	
	comp=Z,65nm,0.8s						
H66A	Whiting	4.53	46	P	Pn	11 37 45.9	-0.6
	baz=229,SNR=23						
ORIO	Orleans, Innes	4.56	326	PN	Pn	11 37 49.2	+2.3
ORIO				SN	Sn	11 38 42.6	+2.8
ORIO				Trac		11 38 56.6	
	comp=Z,36nm,0.4s						
ORIO				LG	Lg	11 39 03.9	
F57A	Harrington	4.56	334	P	Pn	11 37 47.2	+0.3
	baz=153						
O57A	Amberson	4.61	253	P	Pn	11 37 47.2	-0.4
	baz=69,SNR=13						
Q59A	Harwood	4.63	233	P	Pn	11 37 47.7	-0.2
	baz=50						
E60A	Ste Agathe de	4.65	4	P	Pn	11 37 48.3	+0.2
	baz=184						
SSPA	Standing Stone	4.66	258	P	Pn	11 37 48.3	0.0
	baz=74						
SSPA	Standing Stone	4.66	258	Pn	Pn	11 37 48.8	+0.5
SSPA	Standing Stone	4.66	258	P		11 37 48.6	
	baz=74,SNR=23						
G65A	Princeton	4.69	41	P	Pn	11 37 48.6	-0.1
	baz=224,SNR=11						
G65A	Princeton	4.69	41	Pn	Pn	11 37 48.7	+0.1
G65A				IAmb_Lg		11 39 05.5	
	comp=Z,56nm,0.7s						
G65A	Princeton	4.69	41	P		11 37 48.6	
	baz=224,SNR=9.9						
G65A				P		11 37 48.6	
	baz=224,SNR=9.9						
P58A	Pank, Wackersv	4.69	243	P	Pn	11 37 48.9	+0.2
	baz=59,SNR=12						
E58A	La Victoria	4.75	348	P	Pn	11 37 49.5	-0.1
	baz=167						
GAC	Glen Almond	4.75	328	PN	Pn	11 37 50.0	+0.4
GAC				SN	Sn	11 38 44.4	-0.2
GAC				Trac		11 39 03.8	
	comp=Z,43nm,0.5s						
GAC				LG	Lg	11 39 12.1	
E61A	Lac Etchemin	4.81	12	PN	Pn	11 37 51.1	+0.7
E61A				SN	Sn	11 38 48.5	+2.4
E61A				LG	Lg	11 39 16.1	
E61A	Lac Etchemin	4.81	12	P	Pn	11 37 50.7	+0.3
	baz=193						
KB1O	Rock site, Kin	4.81	321	PN	Pn	11 37 50.6	+0.2
KB1O				SN	Sn	11 38 46.7	+0.6
KB1O				LG	Lg	11 39 12.1	
KB1O				Trac		11 39 13.1	
	comp=Z,100nm,0.8s						
F64A	Sherman	4.86	31	P	Pn	11 37 51.3	+0.3
	baz=213,SNR=9.5						
F64A	Sherman	4.86	31	Pn	Pn	11 37 51.4	+0.3
F64A				IAmb_Lg		11 39 09.3	
	comp=Z,63nm,0.7s						
F64A	Sherman	4.86	31	P		11 37 51.2	
	baz=213,SNR=8.1						
F64A				P		11 37 51.2	
	baz=213,SNR=8.1						
TRQ	Mont Tremblant	4.89	338	PN	Pn	11 37 52.3	+0.8
TRQ				SN	Sn	11 38 50.5	+2.4
TRQ				Trac		11 39 18.2	
	comp=Z,8.0nm,0.2s						
TRQ	Mont Tremblant	4.89	338	Pn	Pn	11 37 52.3	+0.8
N56A	West Decatur	4.89	263	P	Pn	11 37 51.6	+0.1
	baz=78,SNR=6.4						
VABQ	Val Des Bois	4.97	328	PN	Pn	11 37 53.3	+0.7
VABQ				SN	Sn	11 38 48.9	-1.0
VABQ				Trac		11 39 14.4	
	comp=Z,38nm,0.5s						
VABQ				LG	Lg	11 39 15.2	
DPQ	Saint Jean	4.99	353	PN	Pn	11 37 54.8	+1.9
DPQ				SN	Sn	11 38 51.7	+1.1
DPQ				Trac		11 39 25.4	
	comp=Z,34nm,0.6s						
GGN	Saint George	5.00	46	PN	Pn	11 37 52.7	-0.3
GGN				SN	Sn	11 38 50.3	-0.4
GGN				LG	Lg	11 39 19.4	
GGN				Trac		11 39 23.0	
	comp=Z,72nm,0.6s						
GGN	Saint George	5.00	46	Pn	Pn	11 37 52.6	-0.3
GGN				IAmb_Lg		11 39 16.1	
	comp=Z,61nm,0.8s						
DELO	Deloro Mine	5.04	306	PN	Pn	11 37 54.0	+0.5
DELO	Deloro Mine	5.04	306	IAmb_Lg		11 39 21.5	
	comp=Z,45nm,1.0s						
WVNY	West Valley, N	5.04	280	P		11 37 54.4	
	baz=95,SNR=5.2						
QCQ	Quebec	5.07	5	SN	Sn	11 38 53.9	+1.5
QCQ				Trac		11 39 27.7	
	comp=Z,16nm,0.2s						
M55A	Ridgway	5.16	269		Pn	11 37 55.7	+0.5
M55A				IAmb_Lg		11 39 30.1	
	comp=Z,48nm,0.8s						
M55A	Ridgway	5.16	269	P		11 37 55.8	
	baz=85,SNR=13						
M55A				P		11 37 55.8	
	baz=85,SNR=13						
P57A	Homestead Farm	5.17	246	IAmb_Lg		11 39 24.9	
	comp=Z,71nm,0.7s						
J54A	Appleton	5.22	289	IAmb_Lg		11 39 28.7	
	comp=Z,66nm,0.9s						
Q58A	Fox Den Farm,	5.23	240	P	Pn	11 37 56.0	-0.1
	baz=56						
O56A	Blue Knob Stat	5.26	256	P	Pn	11 37 56.5	-0.2
	baz=71,SNR=24						
O56A	Blue Knob Stat	5.26	256		Pn	11 37 56.6	0.0
O56A	Blue Knob Stat	5.26	256	P		11 37 56.5	
	baz=71,SNR=22						
E63A	Oxbow	5.32	27	P	Pn	11 37 57.3	-0.1
	baz=209,SNR=8.9						
E63A	Oxbow	5.32	27	P		11 37 57.7	
	baz=209,SNR=8.1						
E63A				P		11 37 57.7	
	baz=209,SNR=8.1						
E56A	St. Veronique	5.32	336	P	Pn	11 37 57.8	+0.4
	baz=154						
R59A	King George, V	5.34	230	P	Pn	11 37 57.6	-0.1
	baz=47						
S60A	Water View	5.44	224	P	Pn	11 37 58.7	-0.4
	baz=41,SNR=5.5						
E64A	Bridgewater	5.53	31	P	Pn	11 37 60.0	-0.2
	baz=214						
HANN	Hanwell	5.56	40	PN	Pn	11 38 01.2	+0.5

HANN				SN	**Sn**	**11 39 04.0**	**-0.6**
HANN				LG	Lg	11 39 35.2	
HANN				Trac		11 39 39.0	
	comp=Z,71nm,0.3s						
Q57A	**Strasburg**	**5.66**	**244**	P	**Pn**	**11 38 02.4**	**+0.3**
	baz=59,SNR=7.7						
PQI	**Presque Isle**	**5.67**	**28**	IAmb_Lg		11 39 42.9	
	comp=Z,48nm,0.7s						
D62A	**Allapoint, All**	**5.72**	**20**	P	**Pn**	**11 38 02.7**	**-0.2**
	baz=202						
P56A	**Dayton Farm, R**	**5.74**	**250**	P	**Pn**	**11 38 02.8**	**-0.3**
	baz=65,SNR=16						
G54A	**Lake Saint Pet**	**5.81**	**311**	P	**Pn**	**11 38 03.6**	**-0.6**
	baz=127,SNR=6.9						
R58A	**Rapidan**	**5.81**	**236**	P	**Pn**	**11 38 03.6**	**-0.6**
	baz=52						
M54A	**Oil Creek Stat**	**5.83**	**270**	P	**Pn**	**11 38 04.9**	**+0.5**
	baz=85,SNR=25						
M54A	**Oil Creek Stat**	**5.83**	**270**		**Pn**	**11 38 05.2**	**+0.7**
M54A				IAmb_Lg		11 39 48.2	
	comp=Z,53nm,0.8s						
M54A	**Oil Creek Stat**	**5.83**	**270**	P		11 38 05.1	
	baz=85,SNR=23						
CRLO	**Chalk River**	**5.86**	**319**	SN	**Sn**	**11 39 09.2**	**-2.6**
CRLO				Trac		11 39 46.8	
	comp=Z,20nm,0.4s						
R58B	**Mineral**	**5.95**	**233**	Pn	**Pn**	**11 38 06.1**	**+0.1**
ERPA	**Erie**	**6.06**	**276**	P	**Pn**	**11 38 07.6**	**+0.1**
	baz=91						
ERPA	**Erie**	**6.06**	**276**	IAmb_Lg		11 39 50.5	
	comp=Z,62nm,0.7s						
R57A	**Stanardsville**	**6.14**	**238**	P	**Pn**	**11 38 08.7**	**0.0**
	baz=54,SNR=17						
N54A	**Moraine State**	**6.14**	**266**	P	**Pn**	**11 38 08.5**	**-0.2**
	baz=80,SNR=16						
N54A	**Moraine State**	**6.14**	**266**		**Pn**	**11 38 09.0**	**+0.2**
N54A				IAmb_Lg		11 39 50.6	
	comp=Z,46nm,1.0s						
N54A	**Moraine State**	**6.14**	**266**	P		11 38 09.0	
	baz=80,SNR=15						
Q56A	**Snyder Ridge,**	**6.18**	**247**	P	**Pn**	**11 38 09.5**	**+0.2**
	baz=62,SNR=9.7						
Q56A	**Snyder Ridge,**	**6.18**	**247**	Pn	**Pn**	**11 38 10.1**	**+0.8**
Q56A	**Snyder Ridge,**	**6.18**	**247**	P		11 38 09.9	
	baz=62,SNR=6.9						
Q56A				P		11 38 09.9	
	baz=62,SNR=6.9						
S58A	**Poland Farm, P**	**6.28**	**231**	P	**Pn**	**11 38 10.8**	**+0.2**
	baz=47,SNR=20						
S58A	**Poland Farm, P**	**6.28**	**231**		**Pn**	**11 38 10.7**	**0.0**
S58A				IAmb_Lg		11 40 06.9	
	comp=Z,37nm,0.7s						
MCWV	**Mont Chateau**	**6.39**	**254**	IAmb_Lg		11 39 57.9	
	comp=Z,37nm,0.8s						
U61A	**Possum Corner**	**6.45**	**215**	IAmb_Lg		11 40 12.0	
	comp=Z,41nm,0.7s						
T59A	**Double "B" Far**	**6.47**	**225**	P	**Pn**	**11 38 12.6**	**-0.5**
	baz=41						
T59A	**Double "B" Far**	**6.47**	**225**		**Pn**	**11 38 13.0**	**-0.2**
LMN	**Caledonia Moun**	**6.58**	**49**	PN	**Pn**	**11 38 14.8**	**+0.1**
LMN				SN	**Sn**	**11 39 27.9**	**-1.7**
LMN				LG	Lg	11 40 10.7	
LMN				Trac		11 40 20.8	
	comp=Z,22nm,0.5s						
M53A	**WI Miller and**	**6.59**	**270**	P	**Pn**	**11 38 15.1**	**+0.1**
	baz=84,SNR=20						
M53A	**WI Miller and**	**6.59**	**270**		**Pn**	**11 38 15.2**	**+0.3**
O54A	**Avella**	**6.61**	**259**	Pn	**Pn**	**11 38 15.1**	**0.0**
O54A				IAmb_Lg		11 40 05.6	
	comp=Z,40nm,0.8s						
R56A	**Bull Pasture M**	**6.65**	**243**	P	**Pn**	**11 38 15.4**	**-0.3**
	baz=57,SNR=9.9						
U60A	**Pendleton**	**6.66**	**220**	P	**Pn**	**11 38 15.4**	**-0.4**
	baz=36						
S57A	**Dark Hollow, R**	**6.73**	**236**	P	**Pn**	**11 38 16.9**	**+0.1**
	baz=51						
S57A	**Dark Hollow, R**	**6.73**	**236**		**Pn**	**11 38 16.7**	**-0.1**
S57A				IAmb_Lg		11 40 12.6	
	comp=Z,42nm,0.7s						
N53A	**Lisbon**	**6.81**	**265**	Pn	**Pn**	**11 38 18.3**	**+0.5**
N53A	**Lisbon**	**6.81**	**265**	P		11 38 18.3	
	baz=79,SNR=6.6						
N53A				P		11 38 18.3	
	baz=79,SNR=6.6						
BATG	**Bathurst New B**	**6.94**	**35**	Pn	**Pn**	**11 38 19.4**	**-0.2**
T58A	**Grand View Acr**	**7.02**	**229**	P	**Pn**	**11 38 20.8**	**0.0**
	baz=45						
M52A	**Chesterland**	**7.10**	**272**		**Pn**	**11 38 21.8**	**0.0**
M52A				IAmb_Lg		11 40 19.4	
	comp=Z,33nm,0.8s						
R55A	**Marlinton**	**7.19**	**244**	P	**Pn**	**11 38 23.3**	**+0.1**
	baz=58						
R55A	**Marlinton**	**7.19**	**244**	Pn	**Pn**	**11 38 24.8**	**+1.6**
O53A	**New Philadelph**	**7.21**	**261**	P	**Pn**	**11 38 23.0**	**-0.4**
	baz=75,SNR=9.3						
O53A	**New Philadelph**	**7.21**	**261**		**Pn**	**11 38 22.6**	**-0.7**
O53A				IAmb_Lg		11 40 29.6	
	comp=Z,39nm,0.9s						
Q54A	**Coxs Mills**	**7.36**	**251**	IAmb_Lg		11 40 46.3	
	comp=Z,36nm,0.9s						
P53A	**Whipple**	**7.57**	**256**	Pn	**Pn**	**11 38 28.1**	**-0.2**
P53A				IAmb_Lg		11 40 46.4	
	comp=Z,27nm,0.7s						
P53A	**Whipple**	**7.57**	**256**	P		11 38 27.9	
	baz=70,SNR=17						
P53A				P		11 38 27.9	
	baz=70,SNR=17						
O52A	**Adamsville**	**7.70**	**261**		**Pn**	**11 38 29.9**	**-0.2**
O52A				IAmb_Lg		11 40 47.3	
	comp=Z,28nm,0.8s						
U57A	**Blanch**	**7.84**	**230**	P	**Pn**	**11 38 31.5**	**-0.5**
	baz=45						
Q53A	**Leroy**	**7.90**	**252**	P	**Pn**	**11 38 32.4**	**-0.5**
	baz=65						
N51A	**Ashland**	**7.94**	**268**	Pn	**Pn**	**11 38 34.0**	**+0.7**
N51A				IAmb_Lg		11 40 54.8	
	comp=Z,28nm,0.7s						
BLA	**Blacksburg**	**7.99**	**238**	IAmb_Lg		11 40 55.5	
	comp=Z,42nm,0.7s						
CNNC	**Cliffs of the**	**8.01**	**218**	IAmb_Lg		11 41 00.7	
	comp=Z,43nm,0.9s						
P52A	**Corning**	**8.06**	**258**	P	**Pn**	**11 38 34.2**	**-0.8**
	baz=71,SNR=8.5						
P52A	**Corning**	**8.06**	**258**	Pn	**Pn**	**11 38 34.6**	**-0.4**
P52A				IAmb_Lg		11 40 56.4	
	comp=Z,28nm,0.8s						
S54A	**Dingess, Beckl**	**8.25**	**245**	IAmb_Lg		11 41 01.9	
	comp=Z,41nm,0.7s						
M50A	**Fremont**	**8.37**	**271**	IAmb_Lg		11 41 15.2	
	comp=Z,32nm,0.9s						
Q52A	**Bidwell**	**8.39**	**254**	Pn	**Pn**	**11 38 38.2**	**-1.4**
Q52A				IAmb_Lg		11 41 01.7	
	comp=Z,29nm,0.8s						
R53A	**Hurricane**	**8.43**	**250**	Pn	**Pn**	**11 38 39.6**	**-0.5**
U56A	**King**	**8.52**	**234**	IAmb_Lg		11 41 16.9	
	comp=Z,25nm,0.8s						
ACSO	**Alum Creek Sta**	**8.53**	**264**	IAmb_Lg		11 41 14.2	
	comp=Z,28nm,0.9s						
AAM	**Ann Arbor**	**8.78**	**278**	P	**Pn**	**11 38 44.4**	**-0.5**
	baz=90						
AAM	**Ann Arbor**	**8.78**	**278**	IAmb_Lg		11 41 15.3	
	comp=Z,29nm,0.9s						
Q51A	**Peebles**	**9.15**	**257**	Pn	**Pn**	**11 38 49.3**	**-0.7**
Q51A				IAmb_Lg		11 41 30.0	
	comp=Z,33nm,0.7s						
N49A	**Columbus Grove**	**9.29**	**269**	IAmb_Lg		11 41 27.5	
	comp=Z,20nm,0.8s						
U54A	**Nelsons Funny**	**9.30**	**239**	IAmb_Lg		11 41 28.5	
	comp=Z,34nm,0.7s						
S51A	**Beattyville**	**9.90**	**249**	IAmb_Lg		11 42 01.5	
	comp=Z,25nm,0.8s						
P49A	**Miami Univ. Ec**	**10.00**	**262**	IAmb_Lg		11 42 02.0	
	comp=Z,21nm,0.8s						
V53A	**Saluda**	**10.46**	**238**	Pn	**Pn**	**11 39 09.1**	**+1.1**
T50A	**Nancy**	**11.07**	**249**	Pn	**Pn**	**11 39 15.5**	**-0.8**

IDC 12 11:38:47.6±1.1**, 18°.08S**×**174°.76W, h0^{km}, mb3.9**/6**, mb1 4.3**/6**, mb1mx3.9**/40**, mbtmp4.0**/6**, Error ellipse: s-maj=50.8km s-min=24.0km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.33**	**198**	P	P	11 43 36.1	-0.1
	3.0nm,0.3s,baz=297,slow=0.9,SNR=5.9						
WRA	**Warramunga Arr**	**48.02**	**259**	P	P	11 47 28.9	-0.1
	2.2nm,0.4s,baz=98,slow=7.6,SNR=58						
ASAR	**Alice Springs**	**48.09**	**254**	P	P	11 47 29.4	-0.1
	7.6nm,0.6s,baz=90,slow=8.2,SNR=163						
TXAR	**Lajitas Array**	**83.17**	**56**	P	P	11 51 16.6	+0.5
	0.3nm,0.8s,baz=218,slow=5.7,SNR=4.0						
H03S2	**Juan Fernandez**	**84.81**	**124**	T	T	13 24 03.2	
	baz=249,slow=75						
H03S1	**Juan Fernandez**	**84.82**	**124**	T	T	13 24 13.8	
	baz=249,slow=75						
H03S3	**Juan Fernandez**	**84.82**	**124**	T	T	13 24 03.2	
	baz=249,slow=75						
PDAR	**Pinedale Array**	**85.11**	**42**	P	P	11 51 25.6	-0.3
	0.3nm,0.6s,baz=224,slow=5.0,SNR=3.4						
ILAR	**Eielson Array**	**85.31**	**12**	P	P	11 51 25.8	-0.3
	0.2nm,0.6s,baz=220,slow=8.2,SNR=5.0						

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*IDC **12** 11:46:32.2±2.7, 3°.21N×123°.00E, h406^{km}±23^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.1/45, mbtmp4.5/8, Error ellipse: s-maj=57.7km s-min=18.2km az=60.0*

*DJA **12** 11:46:41.9±0.5, 2°N±5°×12°3E±°, h422^{km}±5^{km}, M4.1/12, mb4.1/6, mB4.3/2, MLv4.1/12, Mw(mB)3.5/2*

ISC 12 11:46:36.7±1.5**, 2°.7N**±0°.1×**123°.4E**±0°.1**, h400^{km}, n20,** σ**2^{s}.62**/24**, mb3.9**/6**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**2.11**	**190**	P	**Pn**	**11 47 37.8**	**+4.4**
GTOI				S	**S**	**11 48 22.9**	**+3.8**
MRSI	**Marisa**	**2.66**	**213**	P	**Pn**	**11 47 41.4**	**+4.1**
MRSI				S	**S**	**11 48 29.2**	**+3.1**
LUWI	**Luwuk**	**3.79**	**189**	P	**Pn**	**11 47 49.3**	**+2.4**
LUWI				S	**S**	**11 48 42.7**	**-1.0**
APSI	**Ampana**	**4.00**	**206**	P	**Pn**	**11 47 51.3**	**+2.4**
MPSI	**Mapaga**	**4.21**	**236**	P	**Pn**	**11 47 53.1**	**+2.2**
TNTI	**Ternate**	**4.43**	**116**	P	Pn	11 48 00.1	+7.1
SANI	**Sanana**	**5.41**	**151**	P	**Pn**	**11 48 05.7**	**+2.7**
	0.3nm676nm17nm,0.6s						
TTSI	**Tana Toraja**	**6.75**	**212**	P	**P**	**11 48 18.6**	**+0.4**
	0.1nm25nm,0.5s						
SPSI	**Sidrap Palu**	**7.56**	**209**	P	**Pn**	**11 48 26.4**	**-0.4**
	0.1nm33nm,0.8s						
BNSI	**Bone**	**7.80**	**205**	P	**P**	**11 48 30.2**	**+0.3**
	0.2nm48nm,0.6s						
KAPI	**Kappang**	**8.50**	**205**	P	**P**	**11 48 37.5**	**-0.2**
	2.7nm,0.3s,baz=32,slow=8.7,SNR=12						
BKSI	**Bulukumba**	**8.63**	**202**	P	**Pn**	**11 48 38.0**	**-1.0**
BATI	**Baumata**	**12.85**	**179**	P	**P**	**11 49 26.6**	**+0.8**
	8.0nm,0.3s,baz=96,slow=4.9,SNR=7.3						
BATI				S	**S**	**11 51 45.4**	**-0.3**
	3.0nm,0.3s,baz=101,slow=22,SNR=2.7						
FITZ	**Fitzroy Crossi**	**20.81**	**174**	P	**P**	**11 50 47.8**	**-0.9**
	3.5nm,0.3s,baz=8.9,slow=7.9,SNR=29						
WRA	**Warramunga Arr**	**24.96**	**155**	P	**P**	**11 51 25.7**	**-0.5**
	3.4nm,0.3s,baz=332,slow=10.0,SNR=60						
WRA				ScP	**ScP**	**11 57 45.6**	**-4.1**
	0.4nm,0.7s,baz=338,slow=3.8,SNR=2.4						
ASAR	**Alice Springs**	**28.16**	**159**	P	**P**	**11 51 54.5**	**0.0**
	1.6nm,0.3s,baz=337,slow=7.2,SNR=100						
ASAR				PcP	**PcP**	**11 54 52.6**	**-4.1**
	0.2nm,0.5s,baz=349,slow=2.4,SNR=4.3						
ASAR				ScP	**ScP**	**11 57 54.5**	**-4.7**
	0.4nm,0.6s,baz=347,slow=3.1,SNR=7.1						
STKA	**Stephens Creek**	**38.51**	**155**	P	**P**	**11 53 23.5**	**+0.8**
	5.5nm,0.4s,baz=335,slow=8.7,SNR=27						
MKAR	**Makanchi Array**	**56.53**	**327**	P	P	11 55 30.6	-8.6
	0.1nm,0.7s,baz=138,slow=6.7,SNR=1.5						
VNDA	**Vanda**	**82.87**	**172**	P	**P**	**11 58 16.4**	**-0.8**
	0.8nm,0.8s,baz=302,slow=6.6,SNR=6.1						
BRTR	**Keskin Array B**	**88.08**	**309**	P	P	11 58 33.6	-10
	2.5nm,1.1s,baz=91,slow=6.9,SNR=2.9						

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*NOU **12** 12:24:32.4, 17°.14S×178°.09W, h506^{km}, mb4.4, Fiji Islands Region*

*NEIC **12** 12:24:38.7±1.3, 17°.5S±0°.2×178°.43W±0°.07, h556^{km}±9^{km}, mb4.4/30, Error ellipse: s-maj=23.6km s-min=7.1km az=163.0*

*IDC **12** 12:24:39.7±1.4, 17°.59S×178°.65W, h541^{km}±15^{km}, mb3.2/11, mb1 3.5/13, mb1mx3.3/31, mbtmp4.1/13, Error ellipse: s-maj=23.3km s-min=13.2km az=137.0*

ISC 12 12:24:39.2±0.5**, 17°.5S**±0°.1×**178°.5W**±0°.1**, h547^{km}, n55,** σ**1^{s}.28**/58**, mb4.3**/28**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.26**	**266**	P	**P**	**12 25 57.0**	**+1.2**
	18nm,0.3s,baz=58,slow=5.0,SNR=126						
MSVF	**Nonsavu**	**3.26**	**266**	P	**P**	**12 25 56.7**	**+1.0**
AFI	**Afiamalu**	**7.43**	**62**	P	**P**	**12 26 29.8**	**-1.6**
AFI	**Afiamalu**	**7.43**	**62**	P	**P**	**12 26 30.0**	**-1.4**
MARNC	**Mare, Loyalty**	**13.26**	**251**	P	**P**	**12 27 29.3**	**-1.5**
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**12 27 46.2**	**-0.9**
	0.5nm,0.3s,baz=102,slow=20,SNR=2.9						
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**12 27 46.7**	**-0.5**
KOUNC	**Koumac, New Ca**	**16.52**	**257**	P	**P**	**12 28 04.0**	**+0.3**
URZ	**Urewera**	**21.01**	**190**	P	**P**	**12 28 43.2**	**-1.1**
	5.2nm,0.7s,baz=30,slow=8.1,SNR=1.9						
TUWZ	**Tuamarina**	**24.69**	**194**	P	**P**	**12 29 16.4**	**-0.7**
THZ	**Tophouse**	**25.25**	**195**	P	**P**	**12 29 21.9**	**-0.3**
OXZ	**Oxford**	**26.94**	**195**	P	**P**	**12 29 36.4**	**-0.5**
OXZ				IAmb	IAmb	12 29 36.8	
	comp=Z,15nm,0.8s						
RPZ	**Rata Peaks**	**27.56**	**196**	P	**P**	**12 29 40.4**	**-2.0**
	comp=Z,3.6nm,0.5s,baz=20,slow=20,SNR=1.6						
LBZ	**Lake Benmore**	**28.42**	**197**	P	**P**	**12 29 48.6**	**-1.3**
WKZ	**Wanaka**	**29.16**	**198**	P	**P**	**12 29 56.0**	**-0.3**
EIDS	**Eidsvold**	**29.29**	**249**	P	**P**	**12 29 57.1**	**-0.6**
EIDS				IAmb	IAmb	12 29 58.2	
	comp=Z,4.8nm,0.6s						
MLZ	**Mavora Lakes**	**29.92**	**199**	P	**P**	**12 30 04.1**	**+1.2**
ARMA	**Armidale**	**30.03**	**239**	P	**P**	**12 30 04.6**	**+0.4**
ARMA				IAmb	IAmb	12 30 05.8	
	comp=Z,13nm,0.7s						
CTAO	**Charters Tower**	**33.39**	**260**	P	**P**	**12 30 32.4**	**-0.5**
CTAO				IAmb	IAmb	12 30 59.1	
	comp=Z,16nm,1.3s						
CAN	**Canberra**	**33.84**	**232**	P	**P**	**12 30 36.5**	**-0.1**
COEN	**Coen**	**36.98**	**270**	P	**P**	**12 31 02.7**	**-0.1**
COEN				IAmb	IAmb	12 31 03.9	
	comp=Z,6.3nm,0.7s						
TOO	**Toolangi**	**37.32**	**230**	P	**P**	**12 31 05.9**	**+0.6**
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**12 31 17.3**	**+0.6**
	comp=Z,7.5nm,0.4s,baz=90,slow=10.0,SNR=47						
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**12 31 17.2**	**+0.6**
BBOO	**Buckleboo**	**43.49**	**241**	P	**P**	**12 31 54.9**	**+0.4**
BBOO				IAmb	IAmb	12 31 55.6	
	comp=Z,19nm,0.9s						
WR0	**Warramunga Arr**	**44.39**	**259**	P	**P**	**12 32 00.9**	**-0.8**
WB0	**Warramunga Arr**	**44.55**	**259**	P	**P**	**12 32 02.3**	**-0.6**
WB2	**Warramunga Arr**	**44.57**	**259**	P	**P**	**12 32 02.0**	**-1.1**
WB2				IAmb	IAmb	12 32 04.9	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**44.58**	**259**	P	**P**	**12 32 02.2**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=95,slow=7.1,SNR=18						
WRA				ScP	**ScP**	**12 36 37.5**	**+2.8**
	comp=Z,0.7nm,0.9s,baz=100,slow=3.4,SNR=3.3						
AS31	**Alice Springs**	**44.78**	**254**	P	**P**	**12 32 04.5**	**-0.2**
AS31				IAmb	IAmb	12 32 05.2	
	comp=Z,7.9nm,0.6s						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**12 32 04.7**	**0.0**
	comp=Z,27nm,0.6s,baz=89,slow=7.8,SNR=854						
ASAR				PcP	**PcP**	**12 33 35.4**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=84,slow=2.9,SNR=2.4						
ASAR				ScP	**ScP**	**12 36 38.2**	**+2.8**
	comp=Z,0.6nm,0.8s,baz=100,slow=4.4,SNR=3.8						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**12 32 04.4**	**-0.2**
MTN	**Manton Dam**	**48.69**	**268**	P	**P**	**12 32 33.4**	**-0.8**
MTN				IAmb	IAmb	12 32 42.0	
	comp=Z,32nm,1.4s						
FORT	**Forrest**	**50.06**	**244**	P	**P**	**12 32 43.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.97**	**260**	P	**P**	**12 33 05.1**	**-0.2**
MORW	**Morawa**	**60.52**	**246**	P	**P**	**12 33 57.1**	**+0.1**
VNDA	**Vanda**	**60.82**	**185**	P	**P**	**12 33 58.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=8.5,slow=7.5,SNR=2.1						
QSPA	**South Pole Qui**	**72.53**	**180**	P	**P**	**12 35 09.9**	**-0.7**
NVAR	**Mina Array Bea**	**79.23**	**44**	P	**P**	**12 35 50.5**	**+2.3**
	comp=Z,1.0nm,0.7s,baz=224,slow=8.8,SNR=11						
NVAR	**Mina Array Bea**	**79.23**	**44**	P	**P**	**12 35 45.3**	**-2.9**
K05A	**Summer Lake**	**79.98**	**39**	P	**P**	**12 35 51.4**	**-0.7**
K05A				IAmb	IAmb	12 36 02.5	
	comp=Z,15nm,1.5s						
TTA	**Tatalina**	**82.12**	**10**	P	**P**	**12 36 01.4**	**-1.0**
PMR	**Palmer**	**82.26**	**14**	P	**P**	**12 36 01.4**	**-1.6**
SEY	**Seymchan**	**83.37**	**347**	P	**P**	**12 36 08.4**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=85,slow=17,SNR=7.4						
GLB	**Gilahina Butte**	**83.43**	**16**	P	**P**	**12 36 06.2**	**-2.8**
GLB				IAmb	IAmb	12 36 16.0	
	comp=Z,14nm,1.5s						
BALM	**Baldy**	**83.49**	**17**	P	**P**	**12 36 08.2**	**-1.2**
BALM				IAmb	IAmb	12 36 29.0	
	comp=Z,9.9nm,1.2s						
MCARA	**McCarthy VSAT**	**83.59**	**16**	P	**P**	**12 36 08.2**	**-1.5**
MCARA				IAmb	IAmb	12 36 36.7	
	comp=Z,14nm,1.3s						
TRF	**Thorofare Moun**	**83.66**	**12**	P	**P**	**12 36 08.6**	**-1.7**
TRF				IAmb	IAmb	12 36 35.8	
	comp=Z,9.5nm,1.3s						
RND	**Reindeer**	**83.92**	**13**	P	**P**	**12 36 11.2**	**-0.2**
RND				IAmb	IAmb	12 36 39.4	
	comp=Z,8.3nm,1.4s						
WRH	**Wood River Hil**	**85.02**	**13**	P	**P**	**12 36 15.7**	**-1.0**
WRH				IAmb	IAmb	12 36 27.0	
	comp=Z,11nm,1.5s						
ILAR	**Eielson Array**	**85.54**	**13**	P	**P**	**12 36 19.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=225,slow=5.1,SNR=8.8						
TXAR	**Lajitas Array**	**85.89**	**58**	P	**P**	**12 36 25.1**	**+3.2**
	comp=Z,1.1nm,0.8s,baz=218,slow=6.0,SNR=17						
PDAR	**Pinedale Array**	**87.16**	**43**	P	**P**	**12 36 29.4**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=215,slow=5.2,SNR=8.0						
YKA	**Yellowknife Ar**	**94.03**	**25**	P	**P**	**12 36 59.2**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=230,slow=3.9,SNR=7.4						
GERES	**GERESS Array B**	**147.21**	**345**	PKPbc	**PKPbc**	**12 43 20.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=28,slow=4.4,SNR=2.7						

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*IDC **12** 12:28:54.9±2.7, 40°.25N×77°.56E, h0^{km}, mb3.2/1, mb1 3.4/5, mb1mx3.1/49, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=30.4km s-min=23.4km az=11.0*

*KRNET **12** 12:28:55.2±0.1, 40°.21N×77°.62E, h11^{km}, mb3.8*

*SOME **12** 12:28:56.2, 40°.35N×77°.42E, h10^{km}*

*NNC **12** 12:28:58.6±1.0, 40°.38N×77°.47E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=7.1km s-min=5.5km az=171.0*

ISC 12 12:29:00.6±1.3**, 40°.46N**±0°.04×**77°.52E**±0°.03**, h11^{km}**±10^{km}**, n89,** σ**1^{s}.77**/130**, 39C-13D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.52**	**232**	Pg	**Pg**	**12 29 29.1**	**-0.7**
KSH				Sg	**Sg**	**12 29 55.5**	**+6.0**
KSH				smax	smax		
	comp=N,180nm,0.3s						
KSH				smax	smax		
	comp=E,310nm,0.8s						
KDJ	**Kajisay**	**1.69**	**351**	⇑*i*P	**Pn**	**12 29 31.3**	**+1.1**
	baz=51						
KDJ				⇑*i*S	**Sg**	**12 29 57.3**	**+2.4**
	baz=51						
ULHL	**Ulahol**	**2.03**	**332**	⇓*i*P	**Pn**	**12 29 36.2**	**+1.3**
	baz=33						
ULHL				⇓*i*S	**Sg**	**12 30 05.7**	**-0.1**
	baz=33						
ULHL	**Ulahol**	**2.03**	**332**	P	**Pn**	**12 29 36.4**	**+1.5**
	SNR=59						
PRZ	**Przheval'sk**	**2.12**	**18**	⇑*i*P	**Pn**	**12 29 37.6**	**+1.4**
	baz=14						
PRZ				⇑*i*S	**Sb**	**12 30 07.3**	**+1.7**
	baz=14						
ANVS	**Anan'yevo**	**2.32**	**3**	⇓*i*P	**Pn**	**12 29 41.0**	**+2.1**
	baz=1.0						
ANVS				⇓*i*S	**Sb**	**12 30 12.9**	**+1.6**
	baz=1.0						
BOOM	**Boomskoye usch**	**2.35**	**330**	⇑*i*P	**Pn**	**12 29 41.4**	**+2.1**
	baz=32						
BOOM				⇑*i*S	**Sb**	**12 30 13.5**	**+1.4**
	baz=32						
TNSS	**Tian-Shan**	**2.61**	**351**	*e*P	**Pb**	**12 29 47.8**	**+0.2**
	comp=E,59nm,0.4s						
TNSS				*e*S	**Sg**	**12 30 24.9**	**+0.4**
	comp=E,124nm,0.8s						
TNSS	**Tian-Shan**	**2.61**	**351**	Pg	**Pb**	**12 29 47.8**	**+0.2**
	comp=E,59nm,0.4s						
TNSS				Lg	Lg	12 30 24.4	
	comp=E,124nm,0.8s						
SATY	**Saty**	**2.68**	**14**	*e*P	**Pb**	**12 29 49.7**	**+1.1**
	comp=E,64nm,0.4s						
SATY				*e*S	**Sg**	**12 30 27.7**	**+1.1**
	comp=E,159nm,0.5s						
SATY	**Saty**	**2.68**	**14**	Pg	**Pb**	**12 29 49.7**	**+1.1**
	comp=E,64nm,0.4s						
SATY				Lg	Lg	12 30 27.7	
	comp=E,159nm,0.5s						
MDOK	**Medeo**	**2.72**	**353**	*e*P	**Pb**	**12 29 49.6**	**+0.2**
	comp=E,35nm,0.3s						
MDOK				*e*S	**Sg**	**12 30 27.8**	**-0.3**
	comp=E,328nm,0.7s						
MDOK	**Medeo**	**2.72**	**353**	⇑Pn	**Pn**	**12 29 45.9**	**+1.5**
	comp=E,16nm,0.4s						
MDOK				⇓Lg	Lg	12 30 28.0	
	comp=E,241nm,0.6s						
MDOK	**Medeo**	**2.72**	**353**	Pg	**Pb**	**12 29 49.6**	**+0.2**
	comp=E,35nm,0.3s						
MDOK				Lg	Lg	12 30 27.8	
	comp=E,328nm,0.7s						
AAA	**Alma-Ata**	**2.78**	**351**	*e*P	**Pb**	**12 29 51.8**	**+1.4**
	comp=E,55nm,0.1s						
AAA				*e*S	**Sg**	**12 30 31.2**	**+1.2**
	comp=E,245nm,0.7s						
AAA	**Alma-Ata**	**2.78**	**351**	Pg	**Pb**	**12 29 51.8**	**+1.4**
	comp=E,55nm,0.1s						
AAA				Lg	Lg	12 30 31.2	
	comp=E,245nm,0.7s						
KNDC	**Almaty**	**2.79**	**352**	⇑Pg	**Pb**	**12 29 49.2**	**-1.2**
	comp=E,46nm,0.6s						
KNDC				⇑Lg	Lg	12 30 31.2	
	comp=E,517nm,0.6s						
KOTS	**Kotyrbulak**	**2.79**	**354**	*e*P	**Pb**	**12 29 51.0**	**+0.5**
	comp=E,104nm,0.3s						
KOTS				*e*S	**Sg**	**12 30 29.7**	**-0.5**
	comp=E,653nm,0.5s						
KOTS	**Kotyrbulak**	**2.79**	**354**	Pg	**Pb**	**12 29 51.0**	**+0.5**
	comp=E,104nm,0.3s						
KOTS				Lg	Lg	12 30 29.7	
	comp=E,653nm,0.5s						
ZHN	**Zhinishke**	**2.79**	**14**	*e*P	**Pb**	**12 29 51.5**	**+1.0**
	comp=E,11nm,0.2s						
ZHN				*e*S	**Sg**	**12 30 30.7**	**+0.5**
	comp=E,64nm,0.7s						
ZHN	**Zhinishke**	**2.79**	**14**	Pg	**Pb**	**12 29 51.5**	**+1.0**
	comp=E,11nm,0.2s						
ZHN				Lg	Lg	12 30 30.7	
	comp=E,64nm,0.7s						
MTBS	**Maitube**	**2.79**	**343**	*e*P	**Pb**	**12 29 50.8**	**+0.3**
	comp=E,23nm,0.3s						
MTBS				*e*S	**Sg**	**12 30 29.6**	**-0.6**
	comp=E,146nm,0.6s						
MTBS	**Maitube**	**2.79**	**343**	Pg	**Pb**	**12 29 50.8**	**+0.3**
	comp=E,23nm,0.3s						
MTBS				Lg	Lg	12 30 29.6	
	comp=E,146nm,0.6s						
ARLS	**Aral**	**2.79**	**301**	⇑*i*P	**Pn**	**12 29 45.8**	**+0.5**
	baz=5.0						
ARLS				⇑*i*S	**Sb**	**12 30 22.6**	**-2.2**
	baz=5.0						
KST	**Kastek**	**2.83**	**336**	*e*P	**Pb**	**12 29 51.8**	**+0.5**
	comp=E,10.0nm,0.4s						
KST				*e*S	**Sg**	**12 30 31.3**	**-0.3**
	comp=E,142nm,0.5s						
KST	**Kastek**	**2.83**	**336**	Pg	**Pb**	**12 29 51.8**	**+0.5**
	comp=E,10.0nm,0.4s						
KST				Lg	Lg	12 30 31.3	
	comp=E,142nm,0.5s						
TKM2	**Tokmak 2**	**2.85**	**330**	⇓*i*P	**Pn**	**12 29 47.7**	**+1.5**
	baz=31						
TKM2				⇓*i*S	**Sb**	**12 30 26.0**	**-0.5**
	baz=31						
TKM2	**Tokmak 2**	**2.85**	**330**	P	**Pn**	**12 29 48.3**	**+2.1**
	SNR=48						
TKM2	**Tokmak 2**	**2.85**	**330**	⇑Pn	**Pn**	**12 29 48.2**	**+2.0**
	comp=E,25nm,0.8s						
TKM2				⇑Lg	Lg	12 30 30.4	
	comp=E,137nm,0.7s						
UCH	**Uchtor**	**2.87**	**309**	⇑*i*P	**Pn**	**12 29 47.7**	**+1.0**
	baz=12						
UCH				⇑*i*S	**Sb**	**12 30 26.2**	**-1.2**
	baz=12						
UCH	**Uchtor**	**2.87**	**309**	P	**Pn**	**12 29 47.4**	**+0.7**
	SNR=30						
UZB	**Uzynbulak**	**2.91**	**22**	*e*P	**Pb**	**12 29 54.1**	**+1.6**
	comp=E,31nm,0.7s						
UZB				*e*S	**Sg**	**12 30 35.1**	**+1.1**

	comp=E,54nm,0.5s						
UZB	Uzynbulak	2.91	22	Pg	Pb	12 29 54.1	+1.6
	comp=E,31nm,0.7s						
UZB				Lg	Lg	12 30 35.1	
	comp=E,54nm,0.5s						
KBK	Karagaybulak	2.92	319	⇑iP	Pn	12 29 49.1	+1.9
	baz=22						
KBK				⇑iS	Sb	12 30 27.8	-0.8
	baz=22						
KBK	Karagaybulak	2.92	319	P	Pb	12 29 52.0	-0.8
	SNR=30						
SHLS	Shalkode	3.06	28	eP	Pb	12 29 57.2	+2.2
	comp=E,70nm,0.7s						
SHLS				eS	Sg	12 30 40.7	+1.8
	comp=E,69nm,0.5s						
SHLS	Shalkode	3.06	28	Pg	Pb	12 29 57.2	+2.2
	comp=E,70nm,0.7s						
SHLS				Lg	Lg	12 30 40.7	
	comp=E,69nm,0.5s						
KURS	Kuram	3.06	9	eP	Pb	12 29 55.8	+0.7
	comp=E,34nm,0.5s						
KURS				eS	Sg	12 30 38.6	-0.3
	comp=E,69nm,0.4s						
KURS	Kuram	3.06	9	Pg	Pb	12 29 55.8	+0.7
	comp=E,34nm,0.5s						
KURS				Lg	Lg	12 30 38.6	
	comp=E,69nm,0.4s						
DGS	Degeres	3.07	335	eP	Pb	12 29 55.7	+0.4
	comp=E,13nm,0.4s						
DGS				eS	Sg	12 30 38.3	-0.9
	comp=E,197nm,0.5s						
DGS	Degeres	3.07	335	Pg	Pb	12 29 55.7	+0.4
	comp=E,13nm,0.4s						
DGS				Lg	Lg	12 30 38.3	
	comp=E,197nm,0.5s						
KPKS	Kokpek	3.12	16	eP	Pb	12 29 57.4	+1.2
	comp=E,58nm,0.3s						
KPKS				eS	Sg	12 30 41.0	+0.1
	comp=E,211nm,0.6s						
AAK	Ala-Archa	3.15	315	Pn	Pn	12 29 51.5	+1.3
	comp=E,2.8nm,0.3s,baz=136,slow=7.4,SNR=25						
AAK				Lg	Lg	12 30 38.4	
	comp=E,7.5nm,0.3s,baz=176,slow=5.0,SNR=13						
AAK	Ala-Archa	3.15	315	⇑iP	Pn	12 29 51.1	+0.9
	baz=17						
AAK				⇑iS	Sn	12 30 32.1	+4.3
	baz=17						
AAK	Ala-Archa	3.15	315	P	Pb	12 29 55.5	-1.1
	SNR=27						
AAK	Ala-Archa	3.15	315	⇓Pg	Pb	12 29 54.9	-1.7
	comp=E,15nm,0.6s						
AAK				⇑Lg	Lg	12 30 38.7	
	comp=E,122nm,1.0s						
FRU1	Bishkek	3.19	318	⇑iP	Pn	12 29 52.4	+1.6
	baz=20						
FRU1				⇑iS	Sb	12 30 33.9	-2.4
	baz=20						
PDGK	Podgornoye	3.22	26	Pg	Pb	12 29 58.5	+0.6
	comp=E,28nm,0.4s						
PDGK				Lg	Lg	12 30 42.8	
	comp=E,47nm,0.5s						
PDGK	Podgornoye	3.22	26	⇑Pn	Pn	12 29 52.0	+0.8
	comp=E,12nm,0.5s						
PDGK				⇑Lg	Lg	12 30 42.0	
	comp=E,68nm,0.5s						
CHMS	Chumysh	3.28	322	⇑iP	Pn	12 29 53.1	+1.2
	baz=23						
CHMS				⇑iS	Sn	12 30 35.0	+4.2
	baz=23						
CHMS	Chumysh	3.28	322	P	Pn	12 29 54.0	+2.1
	SNR=7.0						
AML	Almayashu	3.33	301	⇑iP	Pn	12 29 53.3	+0.3
	baz=4.0						
AML				⇑iS	Sn	12 30 35.4	+2.7
	baz=4.0						
AML	Almayashu	3.33	301	P	Pn	12 29 53.8	+0.8
	SNR=26						
CHKK	Chushkaly	3.41	353	eP	Pb	12 30 02.3	+1.3
	comp=E,20nm,0.4s						
CHKK				eS	Sg	12 30 49.6	-0.6
	comp=E,123nm,0.6s						
CHKK	Chushkaly	3.41	353	Pg	Pb	12 30 02.3	+1.3
	comp=E,20nm,0.4s						
CHKK				Lg	Lg	12 30 49.6	
	comp=E,123nm,0.6s						
KRBS	Karabastau	3.51	338	eP	Pb	12 30 03.2	+0.4
	comp=E,7.7nm,0.6s						
KRBS				eS	Sg	12 30 51.0	-2.4
	comp=E,43nm,0.5s						
KRBS	Karabastau	3.51	338	Pg	Pb	12 30 03.2	+0.4
	comp=E,7.7nm,0.6s						
KRBS				Lg	Lg	12 30 51.0	
	comp=E,43nm,0.5s						
KUU	Kurty	3.54	346	eP	Pb	12 30 03.5	+0.2
	comp=E,4.9nm,0.6s						
KUU				eS	Sg	12 30 51.8	-2.4
	comp=E,151nm,1.0s						
KUU	Kurty	3.54	346	Pg	Pb	12 30 03.5	+0.2
	comp=E,4.9nm,0.6s						
KUU				Lg	Lg	12 30 51.8	
	comp=E,151nm,1.0s						
ARSB	Arslanbob	3.55	286	⇑iP	Pn	12 29 56.1	+0.4
	baz=89						
ARSB				⇑iS	Sn	12 30 39.9	+2.2
	baz=89						
EKS2	Erkin-Say	3.57	309	⇓iP	Pn	12 29 57.5	+1.5
	baz=12						
EKS2				⇓iS	Sn	12 30 42.9	+4.7
	baz=12						
EKS2	Erkin-Say	3.57	309	P	Pn	12 29 58.3	+2.3
	SNR=15						
USP	Ospenovka	3.60	322	⇑iP	Pn	12 29 58.2	+1.9
	baz=24						
USP				⇑iS	Sn	12 30 43.8	+5.0
	baz=24						
USP	Ospenovka	3.60	322	P	Pb	12 30 03.5	-0.8
	SNR=27						
KTMS	Ketmen	3.65	34	eP	Pb	12 30 05.3	+0.1
	comp=E,13nm,0.3s						
KTMS				eS	Sg	12 30 54.9	-3.0
	comp=E,61nm,0.8s						
KTMS	Ketmen	3.65	34	Pg	Pb	12 30 05.3	+0.1
	comp=E,13nm,0.3s						
KTMS				Lg	Lg	12 30 54.9	
	comp=E,61nm,0.8s						
MNBS	Baschi	3.67	10	eP	Pb	12 30 07.7	+2.1
	comp=E,12nm,0.4s						
MNBS				eS	Sg	12 30 58.6	+0.1
	comp=E,113nm,0.5s						
MNBS	Baschi	3.67	10	Pg	Pb	12 30 07.7	+2.1
	comp=E,12nm,0.4s						
MNBS				Lg	Lg	12 30 58.6	
	comp=E,113nm,0.5s						
SGDS	Sogindy	3.69	325	Pg	Pb	12 30 06.1	+0.3
	comp=E,10nm,0.7s						
SGDS				Lg	Lg	12 30 55.8	
	comp=E,55nm,0.7s						
ARXS	Arharly	3.75	3	eP	Pb	12 30 08.4	+1.5
	comp=E,33nm,0.5s						
ARXS				eS	Sg	12 31 00.3	-0.9
	comp=E,54nm,0.5s						
ARXS	Arharly	3.75	3	Pg	Pb	12 30 08.4	+1.5
	comp=E,33nm,0.5s						
ARXS				Lg	Lg	12 31 00.3	
	comp=E,54nm,0.5s						
MRKS	Merke	3.95	307	eP	Pb	12 30 10.1	-0.2
	comp=E,12nm,0.6s						
MRKS				eS	Sb	12 31 02.7	+4.6
	comp=E,16nm,0.5s						
MRKS	Merke	3.95	307	Pg	Pb	12 30 10.1	-0.2
	comp=E,12nm,0.6s						
MRKS				Lg	Lg	12 31 02.7	
	comp=E,16nm,0.5s						
DJR	Jarkent	4.22	23	eP	Pb	12 30 16.9	+2.1
	comp=E,7.9nm,0.4s						
DJR				eS	Sg	12 31 14.5	-1.4
	comp=E,23nm,0.4s						
DJR	Jarkent	4.22	23	Pg	Pb	12 30 16.9	+2.1
	comp=E,7.9nm,0.4s						
DJR				Lg	Lg	12 31 14.5	
	comp=E,23nm,0.4s						
MNAS	Manas	4.28	300	⇑iP	Pn	12 30 06.3	+0.5
	baz=2.0						
MNAS				⇑iS	Sn	12 30 57.9	+2.2
	baz=2.0						
DRK	Karamyk	4.51	259	⇓iP	Pn	12 30 07.2	-1.8
	baz=63						
DRK				⇓iS	Sn	12 31 00.4	-1.1
	baz=63						
TRKS	Terek-Say	4.95	285	⇑iP	Pn	12 30 15.1	+0.1
	baz=86						
TRKS				⇑iS	Sn	12 31 13.7	+1.5
	baz=86						
KAPS	Kapalarasan	5.00	15	eP	Pb	12 30 29.5	+1.3
	comp=E,8.3nm,0.9s						
KAPS				eS	Sg	12 31 36.2	-5.1
	comp=E,16nm,0.5s						
KAPS	Kapalarasan	5.00	15	Pg	Pb	12 30 29.5	+1.3
	comp=E,8.3nm,0.9s						
KAPS				Lg	Lg	12 31 36.2	
	comp=E,16nm,0.5s						
KK31	Karatay Array	5.87	299	Pg	Pb	12 30 44.0	+1.1
	comp=E,3.3nm,0.7s,baz=130,slow=14,SNR=13						
KK31				⇑Lg	Lg	12 32 04.0	
	comp=E,5.8nm,0.7s,baz=123,slow=24,SNR=5.3						
MAKZ	Makanchi	7.12	25	⇓Pn	Pn	12 30 46.2	+1.6
	comp=E,1.9nm,1.1s						
MAKZ				⇑Lg	Lg	12 32 48.8	
	comp=E,4.0nm,0.9s						
MK31	Makanchi Array	7.21	27	Pn	Pn	12 30 45.7	-0.2
	comp=E,0.3nm,0.3s,baz=204,slow=15,SNR=15						
MK31				⇑Lg	Lg	12 32 50.8	
	comp=E,2.0nm,0.6s,baz=214,slow=27						
MKAR	Makanchi Array	7.21	27	Pn	Pn	12 30 45.4	-0.5
	comp=E,0.2nm,0.3s,baz=204,slow=15,SNR=13						
MKAR				Lg	Lg	12 32 46.0	
	comp=E,0.3nm,0.3s,baz=214,slow=28,SNR=3.4						
WMQ	Urumqi	8.27	63	eP	Pn	12 31 01.1	+0.6
WMQ				smax	smax		
	comp=N,24nm,0.7s						
WMQ				smax	smax		
	comp=E,16nm,0.9s						
KURBB	Kurchatov Arra	10.19	4	Pn	Pn	12 31 25.6	-1.0
	comp=E,0.1nm,0.3s,baz=188,slow=12,SNR=16						
KURBB				Lg	Lg	12 34 22.8	
	comp=E,0.0nm,0.3s,baz=185,slow=28,SNR=6.0						
BVAR	Borovoye Array	13.48	341	Lg	Lg	12 36 05.5	
	comp=E,0.1nm,0.3s,baz=151,slow=18,SNR=3.4						
ZALV	Zalesovo Beam	14.36	18	Pn	Pn	12 32 22.1	-1.6
	baz=200,slow=13,SNR=3.7						
YKA	Yellowknife Ar	76.93	6	P	P	12 40 48.3	-4.2
	comp=E,0.1nm,0.4s,baz=358,slow=5.1,SNR=5.7						

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*BJI **12** 12:39:02.4±0.0, 35°.81N×141°.99E, h4^{km}, mB5.2/60, mb4.7/70, Ms5.3/76, Ms7 5.1/72*

*IDC **12** 12:39:03.1±0.5, 35°.66N×142°.09E, h0^{km}, mb4.4/32, mb1 4.4/38, mb1mx4.4/56, mbtmp4.4/38, ML3.6/5, MS4.5/31, Ms1 4.5/31, ms1mx4.3/48, Error ellipse: s-maj=13.7km s-min=11.9km az=99.0*

*JMA **12** 12:39:04.1±0.2, 35°.73N×142°.28E, h59^{km}, M5.1*

*NIED **12** 12:39:04.2, 35°.73N×142°.28E, h59^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}3.80; $M_{\theta\theta}$0.40; $M_{\phi\phi}$-4.20; $M_{r\theta}$1.14; $M_{\theta\phi}$-1.73; $M_{\phi r}$0.45; Fault plane solution: $M_0$4.50000×10^{16} NP1:ϕ_s34.00000°, δ52.00000°, λ111.00000°. NP2:ϕ_s182.00000°, δ42.00000°, λ65.00000°.*

*MOS **12** 12:39:06.4±1.0, 35°.72N×142°.06E, h34^{km}, mb5.0/52, MS4.9/15 Error ellipse: s-maj=7.8km s-min=4.3km az=119.2*

*GCMT **12** 12:39:08.0±0.2, 35°.59N±0°.01×142°.24E±0°.01, h12^{km}, MW5.0/124, Moment Tensor Solution. s56,c74; s124,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.52±.13; $M_{\theta\theta}$-1.10±.08; $M_{\phi\phi}$-2.42±.08; $M_{r\theta}$1.62±.25; $M_{\theta\phi}$-1.55±.05; $M_{\phi r}$1.98±.23; Best double couple: $M_0$4.32100×10^{16} NP1:ϕ_s210.00000°, δ27.00000°, λ84.00000°. NP2:ϕ_s37.00000°, δ63.00000°, λ93.00000°. Principal axes: T 4.3650, Plg72.0000°, Azm314.0000°; N -0.0870, Plg3.0000°, Azm216.0000°; P -4.2770, Plg18.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 12:39:09.2±2.4, 35°.83N±0°.03×142°.04E±0°.08, h36^{km}±5^{km}, mb4.8/86 Error ellipse: s-maj=10.1km s-min=3.7km az=78.0*

ISC 12 12:39:07.1±0.3**, 35°.78N**±0°.03×**142°.06E**±0°.04**, h23**^{km}**, n375,** σ**1**^{s}**70**/401**, mb4.8**/116**, MS4.8**/55**, 24C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.98	266	⇑P	Pb	12 39 24.5	-0.9
CHOJ				eS	Sn	12 39 39.8	+1.2
JIHU	Itakohorinouch	1.26	279	P	Pn	12 39 29.1	-0.2
JHYU	Hitachinakayam	1.32	296	⇑P	Pn	12 39 29.4	-0.7
JHYU				eS	Sb	12 39 47.5	-0.1
JSMT	Sammumatsuo	1.32	265	P	Pn	12 39 29.8	-0.3
BSO1	Boso 1	1.43	219	P	Pn	12 39 29.3	-1.9
JYT	Yasato	1.58	287	Pn	Pn	12 39 32.8	-0.8
BSO3	Boso 3	1.60	233	P	Pn	12 39 32.4	-1.3
JFK	Kawauchi	1.85	329	⇑P	Pn	12 39 36.4	-1.1
JFK				eS	Sn	12 40 00.3	+0.2
JAG	Ashikaga	2.21	288	⇑P	Pn	12 39 41.8	-0.5
JFT	Otama	2.22	322	⇑P	Pn	12 39 42.7	+0.2
JFT				eS	Sn	12 40 11.0	+1.7
JMM	Marumori	2.32	334		Pn	12 39 43.9	+0.1
JSGW	Sagamiharawaka	2.33	266	⇑P	Pn	12 39 43.8	-0.2
JOD2	Odawara 2	2.48	259	P	Pn	12 39 45.0	-1.1
AJI	Ajiro2	2.53	254	P	Pn	12 39 45.2	-1.6
JRY	Ryogami san	2.57	276	P	Pn	12 39 47.6	+0.2
JHTM	Izuhatsuma	2.62	253	P	Pn	12 39 46.5	-1.6
JFNN	Fujinakano	2.81	259	P	Pn	12 39 49.8	-0.9
JHK	Hiroka	2.85	302	⇑P	Pn	12 39 51.7	+0.4
JNS	Sasagawa	3.00	314	P	Pn	12 39 54.3	+1.1
MJAR	Matsushiro Arr	3.21	285	Pn	Pn	12 39 56.5	+0.3
	1.6nm,0.3s,baz=88,slow=9.4,SNR=63						
MAJO	Matsushiro	3.21	285	c iP	Pn	12 39 56.6	+0.5
MAJO	Matsushiro	3.21	285	Pn	Pn	12 39 57.0	+0.8
MAT	Matsushiro	3.21	285	P	Pn	12 39 57.0	+0.9
MAT				eS	Sn	12 40 33.2	-0.5
MAT	Matsushiro	3.21	285	P	Pn	12 39 57.0	+0.9
SHZ3	Shizuoka 3	3.22	258	P	Pn	12 39 56.0	-0.4
JHJ2	Mitsune	3.24	215	Pn	Pn	12 39 56.7	+0.1
JHJ	Hachijo jima 2	3.25	216	Pn	Pn	12 39 54.9	-1.8
	64nm,0.3s,baz=347,slow=20,SNR=13						
JHJ				Sn	Sn	12 40 30.6	-4.1
	157nm,0.3s,baz=49,slow=22,SNR=8.8						
JNG	Nsakai	3.27	282	⇑P	Pn	12 39 57.5	+0.5
JSG	Sagara	3.36	252		Pn	12 40 00.0	+1.9
JYZW	Yoshizawa	3.62	259	P	Pn	12 40 01.2	-0.6
JSD	Sado	3.79	308	Pn	Pn	12 40 04.4	+0.4
JGF	Kuroka	3.83	269	Pn	Pn	12 40 06.5	+1.8
JGN	Niukaw	3.87	278	P	Pn	12 40 06.5	+1.2
INU	Inuyama	4.13	265	Pn	Pn	12 40 10.4	+1.6
JKN2	Miekihoku	4.99	254	P	Pn	12 40 20.9	+0.3
JTM	Tenmabayashi	5.06	351	Pn	Pn	12 40 22.4	+0.9
JWT	Wachi	5.45	267	Pn	Pn	12 40 27.8	+0.8
ERM	Erimo	6.29	7	P	Pn	12 40 37.9	-0.4
ERM	Erimo	6.29	7	Pn	Pn	12 40 37.9	-0.4
JMN	Monobe	7.04	255		Pn	12 40 50.1	+1.3
JEW	Eniwo	7.07	356	Pn	Pn	12 40 48.2	-0.9
JHS	Saijyo	7.35	267		Pn	12 40 54.8	+1.8
NMR	Nemuro--Hokkai	8.09	19	eP	Pn	12 41 00.2	-2.9
JKA	Kamikawa-asahi	8.34	3		Pn	12 41 05.6	-0.9
ASAJ	Asahikawa	8.34	3	Pn	Pn	12 41 04.8	-1.7
	2.4nm,0.3s,baz=206,slow=12,SNR=20						
ASAJ				Sn	Sn	12 42 38.2	-1.7
	5.8nm,0.3s,baz=135,slow=20,SNR=7.6						
ASAJ	Asahikawa	8.34	3	P	Pn	12 41 05.6	-0.9
JCJ	Chichijima	8.66	179	Pn	Pn	12 41 05.5	-5.5
	13nm,0.3s,baz=288,slow=20,SNR=1.7						
JCJ				Sn	Sn	12 42 35.0	-13
	7.1nm,0.3s,baz=274,slow=23,SNR=6.8						
GRPR	Tuman	8.68	18	eP	Pn	12 41 10.2	-1.1
GRPR				pmax	pmax		
	comp=Z,92nm,0.5s						
GRPR				pmax	pmax		
	comp=N,90nm,0.1s						
GRPR				pmax	pmax		
	comp=E,97nm,0.1s						
JNU	Nakatsue	9.61	257	Pn	Pn	12 41 22.9	-1.1
	comp=E,0.2nm,0.3s,baz=98,slow=14,SNR=3.7						
JNU				LR	LR	12 45 10.1	
	comp=E,3µm,21.7s,baz=83,slow=38						
JNU	Nakatsue	9.61	257	Pn	Pn	12 41 24.0	0.0
YSS	Yuzh-Sakhalins	11.18	2	eP	Pn	12 41 44.0	-1.4
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				MLR	MLR		
	comp=Z,7µm,16.0s						
YSS				MLR	MLR		
	comp=N,4µm,15.0s						
YSS	Yuzh-Sakhalins	11.18	2		Pn	12 41 43.1	-2.3
USA0B	Ussuriysk Arra	11.41	321	P	Pn	12 41 49.8	+1.2
USA0B	Ussuriysk Arra	11.41	321		Pn	12 41 49.8	+1.2
USRK	Ussuriysk Ar.	11.41	321	Pn	Pn	12 41 48.6	0.0
	baz=135,slow=13,SNR=9.9						
USRK				LR	LR	12 46 04.2	
	comp=N,3µm,18.1s,baz=131,slow=37						
USRK	Ussuriysk Ar.	11.41	321	P	Pn	12 41 48.8	+0.2
USRK	Ussuriysk Ar.	11.41	321	Pn	Pn	12 41 48.8	+0.2
KSRS	Korea Array	11.48	283	Pn	Pn	12 41 52.8	+3.1
	comp=N,0.2nm,0.3s,baz=101,slow=13,SNR=23						
KSRS				LR	LR	12 46 10.1	
	comp=N,2µm,19.6s,baz=92,slow=37						
KSAR	Wonju Array Be	11.51	282	P	Pn	12 41 50.4	+0.3
KSAR	Wonju Array Be	11.51	282	Pn	Pn	12 41 50.4	+0.3
KS19	Wonju Array Si	11.53	283		Pn	12 41 51.7	+1.4
UGL	Uglegorsk	13.29	0	P	Pn	12 42 17.7	+3.5
UGL				eS	Sn	12 44 41.9	+0.7
UGL				pmax	pmax		
	comp=Z,59nm,1.9s						
UGL				smax	smax		
	comp=N,2µm,16.6s						
UGL				MLR	MLR		
	comp=Z,6µm,14.0s						
UGL				MLR	MLR		
	comp=N,8µm,17.0s						
UGL				MLR	MLR		
	comp=E,4µm,15.0s						
CN2	Changchun	15.06	307	eP	Pn	12 42 38.7	+0.4
CN2				esP	P	12 42 44.7	+1.2
CN2				eS	Sn	12 45 27.7	+3.4
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,5µm,13.0s						
CN2				LR	LR		
	comp=E,6µm,13.0s						
CN2				LR	LR		
	comp=E,9µm,13.0s						
KLR	Kul'dur	15.42	334	Pn	Pn	12 42 41.8	-1.3
	comp=E,0.1nm,0.3s,baz=134,slow=10,SNR=11						
KLR				LR	LR	12 48 37.9	
	comp=E,4µm,18.8s,baz=143,slow=37						
KLR	Kul'dur	15.42	334	ceP	Pn	12 42 43.8	+0.7
GRNR	Gornyy	15.53	347	⇓iP	Pn	12 42 43.0	-1.5
GRNR				eS	Sn	12 45 35.1	-0.6
GRNR				pmax	pmax		
	comp=N,5.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GRNR				smax	smax		
	comp=N,4.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,2µm,18.0s						
GRNR				MLR	MLR		
	comp=N,2µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,5µm,16.0s						
SNY	Shenyang	15.61	298	⇑P	Pn	12 42 44.4	-1.2
SNY				pmax	pmax		
	comp=Z,14nm,1.3s						
SNY				pmax	pmax		
	comp=Z,850nm,9.9s						
SNY				LR	LR		
	comp=Z,5µm,14.2s						
SNY				LR	LR		
	comp=Z,2µm,16.6s						
SNY				LR	LR		
	comp=Z,6µm,13.5s						
DL2	Dalian	16.54	287	P	Pn	12 42 57.9	+0.3
DL2				S	Sn	12 46 01.8	+1.3
DL2				sS	S	12 46 09.9	-1.9
DL2				pmax	pmax		
	comp=Z,37nm,1.1s						
DL2				pmax	pmax		
	comp=Z,920nm,7.6s						
DL2				LR	LR		
	comp=Z,7µm,13.2s						
DL2				LR	LR		
	comp=Z,6µm,12.4s						
DL2				LR	LR		
	comp=Z,7µm,12.3s						
NKL	Nikolayevsk	17.39	357	eP	P	12 43 09.1	-0.2
NKL				eS	Sn	12 46 17.0	-3.9
NKL				pmax	pmax		
	comp=N,9.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,13nm,1.2s						
NKL				pmax	pmax		
	comp=E,37nm,1.0s						
NKL				smax	smax		
	comp=N,26nm,2.6s						
NKL				smax	smax		
	comp=E,96nm,2.6s						
NKL				MLR	MLR		
	comp=E,3µm,11.0s						
NKL				MLR	MLR		
	comp=N,76nm,10.0s						
NKL				MLR	MLR		
	comp=Z,3µm,14.0s						
SSE	Sheshan	18.03	261	P	Pn	12 43 16.3	+0.2
SSE				S	Sn	12 46 38.4	+1.8
SSE				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SSE				pmax	pmax		
	comp=Z,420nm,10.0s						
SSE				LR	LR		
	comp=Z,3µm,15.6s						
SSE				LR	LR		
	comp=Z,3µm,15.5s						
NJ2	Nanjing	19.60	266	eP	Pn	12 43 35.1	-0.1
NJ2				pP	pwP	12 43 43.0	-0.4
NJ2				pmax	pmax		
	comp=Z,370nm,4.5s						
NJ2				LR	LR		
	comp=Z,6µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,11.8s						
NJ2				LR	LR		
	comp=Z,3µm,13.7s						
PEA0B	Petropavlovsk-	20.53	28	i P	P	12 43 43.1	-0.6
PETK	Petropavlovsk-	20.53	28	P	Pn	12 43 45.1	-0.9
	comp=Z,3.7nm,0.7s,baz=235,slow=4.7,SNR=4.6						
PETK				LR	LR	12 53 20.6	
	comp=Z,1µm,18.9s,baz=213,slow=42						
ZEA	Zeya	20.73	335	eP	P	12 43 45.9	+0.1
ZEA				e		12 44 19.0	
ZEA				eS	S	12 47 29.2	-6.9
ZEA				pmax	pmax		
	comp=E,20nm,0.6s						
ZEA				pmax	pmax		
	comp=N,40nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,300nm,5.2s						
ZEA				pmax	pmax		
	comp=N,200nm,7.2s						
ZEA				pmax	pmax		
	comp=Z,200nm,7.0s						
ZEA				smax	smax		
	comp=E,1µm,10.1s						
ZEA				smax	smax		
	comp=N,1µm,8.3s						
ZEA				MLR	MLR		
	comp=N,4µm,14.0s						
ZEA				MLR	MLR		
	comp=E,2µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,14.0s						
BJI	Beijing	20.83	290	P	P	12 43 44.5	-2.5
BJI				S	S	12 47 36.5	-1.8
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
BJI				LR	LR		
	comp=Z,2µm,13.3s						
BJI				LR	LR		
	comp=Z,2µm,16.1s						
BJI				LR	LR		
	comp=Z,1µm,15.9s						
PET	Petropavlovsk	20.84	29	eP	Pn	12 43 48.2	-1.3
PET				eS	S	12 47 33.6	-4.5

PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
HIA	**Hailar**	**21.16**	**316**	P	**P**	**12 43 52.5**	**+1.9**
HIA				pmax	pmax		
	comp=Z,23nm,0.9s						
HIA	**Hailar**	**21.16**	**316**		**P**	**12 43 52.5**	**+1.9**
GUMO	**Guam**	**22.24**	**173**	LR	LR	12 55 02.3	
	comp=Z,364nm,20.1s,baz=348,slow=43						
WHN	**Wuhan**	**23.74**	**265**	P	**P**	**12 44 16.5**	**-1.1**
WHN				S	**S**	**12 48 29.3**	**-2.3**
WHN				LR	LR		
	comp=Z,10µm,13.1s						
WHN				LR	LR		
	comp=Z,8µm,14.0s						
WHN				LR	LR		
	comp=Z,8µm,14.3s						
TIY	**Taiyuan**	**23.77**	**283**	*e*P	**P**	**12 44 23.8**	**+5.8**
TIY				S	**S**	**12 48 26.5**	**-5.8**
TIY				sS	Sn	12 49 08.9	+14
TIY				pmax	pmax		
	comp=Z,350nm,5.7s						
TIY				LR	LR		
	comp=N,2µm,11.8s						
TIY				LR	LR		
	comp=E,5µm,13.2s						
TIY				LR	LR		
	comp=Z,6µm,13.8s						
HHC	**Hu-ho-hao-te**	**24.39**	**291**	*e*P	**P**	**12 44 24.6**	**+0.9**
HHC				pmax	pmax		
	comp=Z,34nm,1.4s						
HHC				pmax	pmax		
	comp=Z,380nm,7.6s						
HHC				LR	LR		
	comp=Z,2µm,12.9s						
HHC				LR	LR		
	comp=Z,3µm,14.4s						
HHC				LR	LR		
	comp=Z,4µm,13.6s						
MA2	**Magadan**	**24.48**	**11**	LR	LR	12 54 40.4	
	comp=Z,799nm,18.4s,baz=198,slow=38						
MA2	**Magadan**	**24.48**	**11**	*ce*P	**P**	**12 44 24.6**	**+0.4**
MA2				pmax	pmax		
	comp=Z,27nm,1.7s						
MA2	**Magadan**	**24.48**	**11**	P	**P**	**12 44 24.0**	**-0.2**
MA2				IAmb	IAmb	12 44 40.5	
	comp=Z,80nm,1.4s						
CIT	**Chita**	**25.95**	**318**	*e*P	**P**	**12 44 38.4**	**+0.7**
CIT				*e*		12 44 45.9	
CIT				*e*		12 45 19.5	
CIT				pmax	pmax		
	comp=Z,100nm,2.0s						
H11N2	**WAKE ISLAND Hy**	**27.07**	**120**	T	T	13 12 57.7	
	baz=311,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**27.08**	**120**	T	T	13 13 03.6	
	baz=311,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**27.09**	**120**	T	T	13 12 59.2	
	baz=311,slow=75,SNR=46						
XAN	**Xi'an**	**27.16**	**276**	P	**P**	**12 44 47.8**	**-1.0**
XAN				pP	sP	12 44 57.1	0.0
XAN				sP	pwP	12 45 01.1	+1.7
XAN				PP	**PnPn**	**12 45 38.3**	**+6.1**
XAN				S	**S**	**12 49 26.7**	**+0.6**
XAN				pmax	pmax		
	comp=Z,28nm,1.3s						
XAN				pmax	pmax		
	comp=Z,700nm,8.9s						
XAN				LR	LR		
	comp=Z,3µm,13.3s						
XAN				LR	LR		
	comp=Z,4µm,14.6s						
XAN				LR	LR		
	comp=Z,5µm,13.8s						
YAK	**Yakutsk**	**27.41**	**347**	P	**P**	**12 44 51.1**	**+0.6**
	comp=Z,19nm,0.7s,baz=163,slow=2.2,SNR=17						
YAK				LR	LR	12 55 59.6	
	comp=Z,2µm,18.5s,baz=147,slow=37						
YAK	**Yakutsk**	**27.41**	**347**	*c i*P	**P**	**12 44 50.8**	**+0.2**
YAK				*e**PP	**pP**	**12 44 57.3**	**+0.9**
YAK				*e*		12 45 36.6	
YAK				*e*		12 48 05.1	
YAK				*e*S	**S**	**12 49 31.1**	**+1.8**
YAK				*e*SSS	SSS	12 50 58.3	
YAK				pmax	pmax		
	comp=Z,46nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.3s						
YAK				pmax	pmax		
	comp=Z,68nm,1.6s						
YAK				pmax	pmax		
	comp=N,79nm,1.5s						
YAK				pmax	pmax		
	comp=E,39nm,1.7s						
YAK				smax	smax		
	comp=N,233nm,3.5s						
YAK				smax	smax		
	comp=E,180nm,3.0s						
YAK				MLR	MLR		
	comp=Z,3µm,16.0s						
YAK				MLR	MLR		
	comp=N,1µm,17.0s						
YAK				MLR	MLR		
	comp=E,2µm,17.0s						
YAK	**Yakutsk**	**27.41**	**347**	P	**P**	**12 44 50.3**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**27.75**	**122**	T	T	13 13 47.4	
	baz=314,slow=75,SNR=65						
H11S3	**WAKE ISLAND Hy**	**27.75**	**122**	T	T	13 13 47.5	
	baz=314,slow=75,SNR=52						
H11S2	**WAKE ISLAND Hy**	**27.77**	**122**	T	T	13 13 50.1	
	baz=314,slow=75,SNR=53						
ENH	**Enshi**	**27.78**	**268**	P	**P**	**12 44 52.0**	**-2.4**
ENH				IAmb	IAmb	12 45 01.4	
	comp=Z,28nm,0.9s						
SEY	**Seymchan**	**27.93**	**10**	P	**P**	**12 44 56.7**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=217,slow=20,SNR=10.0						
ULN	**Ulaanbaatar**	**28.50**	**306**	*ce*P	**P**	**12 45 01.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,32nm,1.7s						
ULN	**Ulaanbaatar**	**28.50**	**306**	P	**P**	**12 45 02.2**	**+1.4**
ULN				IAmb	IAmb	12 45 14.4	
	comp=Z,31nm,1.2s						
BOD	**Bodaibo**	**28.87**	**329**	*e*P	**P**	**12 45 03.9**	**+0.2**
BOD				pmax	pmax		
	comp=Z,57nm,1.6s						
SONM	**Songino Array**	**28.93**	**306**	P	**P**	**12 45 05.6**	**+1.1**
	comp=Z,14nm,0.7s,baz=104,slow=8.4,SNR=36						
SONM				LR	LR	12 56 26.3	
	comp=Z,784nm,20.0s,baz=102,slow=36						
SONM	**Songino Array**	**28.93**	**306**	P	**P**	**12 45 05.4**	**+0.8**
SONM	**Songino Array**	**28.93**	**306**	P	**P**	**12 45 05.4**	**+0.8**
LZH	**Lanzhou**	**30.81**	**282**	*e*P	**P**	**12 45 21.1**	**-0.3**
LZH				S	**S**	**12 50 21.5**	**-2.3**
LZH				sS	sS	12 50 32.8	-0.7
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,280nm,6.0s						
LZH				LR	LR		
	comp=Z,3µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,16.8s						
IRK	**Irkutsk**	**31.33**	**314**	*e*P	**P**	**12 45 27.1**	**+1.5**
IRK				pmax	pmax		
	comp=Z,46nm,3.0s						
TLY	**Talaya**	**31.55**	**312**	P	**P**	**12 45 29.0**	**+1.4**
	comp=Z,7.5nm,0.8s,baz=117,slow=7.6,SNR=10						
TLY				LR	LR	12 57 51.9	
	comp=Z,512nm,20.6s,baz=125,slow=36						
TLY	**Talaya**	**31.55**	**312**	*c i*P	**P**	**12 45 28.2**	**+0.7**
TLY				*e*S	**S**	**12 50 40.7**	**+6.0**
TLY				pmax	pmax		
	comp=Z,68nm,1.0s						
TLY				MLR	MLR		
	comp=Z,9µm,17.0s						
TLY	**Talaya**	**31.55**	**312**	P	**P**	**12 45 28.2**	**+0.7**
GYA	**Guiyang**	**31.55**	**263**	*e*P	**P**	**12 45 29.8**	**+1.9**
GYA				pP	pwP	12 45 37.7	-0.6
GYA				S	**S**	**12 50 39.3**	**+3.9**
GYA				pmax	pmax		
	comp=Z,18nm,1.6s						
GYA				LR	LR		
	comp=Z,3µm,14.6s						
GYA				LR	LR		
	comp=Z,2µm,13.8s						
GYA				LR	LR		
	comp=Z,3µm,16.2s						
CD2	**Chengdu**	**32.22**	**272**	P	**P**	**12 45 32.4**	**-1.3**
CD2				pP	sP	12 45 41.7	-0.3
CD2				S	**S**	**12 50 45.6**	**0.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
CD2				pmax	pmax		
	comp=Z,570nm,5.1s						
CD2				LR	LR		
	comp=Z,6µm,16.5s						
CD2				LR	LR		
	comp=Z,3µm,13.7s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
QIZ	**Qiongzhong**	**32.92**	**248**	P	**P**	**12 45 39.5**	**-0.3**
QIZ				S	**S**	**12 50 57.0**	**+0.5**
QIZ				sS	**sS**	**12 51 10.9**	**+4.5**
QIZ				LR	LR		
	comp=Z,2µm,15.1s						
QIZ				LR	LR		
	comp=Z,2µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,12.4s						
MOY	**Mondy**	**33.15**	**312**	*e*P	**P**	**12 45 42.1**	**+0.4**
MOY				pmax	pmax		
	comp=Z,43nm,2.2s						
GTA	**Gaotai**	**33.45**	**289**	⇑P	**P**	**12 45 44.5**	**+0.1**
GTA				pP	sP	12 45 53.6	+0.9
GTA				PP	**PnPn**	**12 46 55.5**	**-0.1**
GTA				PcP	**PcP**	**12 48 28.2**	**+2.9**
GTA				S	**S**	**12 51 04.8**	**+0.1**
GTA				pmax	pmax		
	comp=Z,15nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,7.1s						
GTA				LR	LR		
	comp=Z,3µm,15.6s						
GTA				LR	LR		
	comp=Z,2µm,15.3s						
GTA				LR	LR		
	comp=Z,2µm,14.2s						
KMI	**Kunming**	**35.31**	**264**	⇑*e*P	**P**	**12 46 02.2**	**+1.4**
KMI				PP	**PP**	**12 47 21.0**	**-0.1**
KMI				S	**S**	**12 51 25.3**	**-8.6**
KMI				SS	**SnSn**	**12 53 46.4**	**-6.3**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,130nm,4.1s						
KMI				LR	LR		
	comp=Z,2µm,17.4s						
KMI				LR	LR		
	comp=Z,1µm,18.5s						
KMI				LR	LR		
	comp=Z,2µm,16.5s						
TIXI	**Tiksi**	**36.59**	**353**	*ce*P	**P**	**12 46 10.9**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,28nm,0.7s						
TIXI	**Tiksi**	**36.59**	**353**	P	**P**	**12 46 10.6**	**-0.4**
TIXI				IAmb	IAmb	12 46 12.2	
	comp=Z,8.4nm,0.9s						
SIJI	**Sorong**	**37.83**	**198**	P	**P**	**12 46 21.7**	**-0.3**
	comp=Z,15nm,0.8s,baz=93,slow=24,SNR=3.1						
TOLI2	**Tolitoli**	**39.76**	**215**	P	**P**	**12 46 40.6**	**+2.4**
TOLI2				IAmb	IAmb	12 46 49.6	
	comp=Z,15nm,1.0s						
DGZ	**Jazzator, Alta**	**41.55**	**307**	*c i*P	**P**	**12 46 54.0**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,18nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.70**	**257**	P	**P**	**12 46 55.4**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=51,slow=6.5,SNR=6.2						
CMAR				LR	LR	13 05 24.1	
	comp=Z,896nm,18.1s,baz=90,slow=38						
CMAR	**Chiang Mai Arr**	**41.70**	**257**	*i* P	**P**	**12 46 55.7**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.70**	**257**	P	**P**	**12 46 53.7**	**-0.7**
WMQ	**Urumqi**	**41.88**	**298**	*e*P	**P**	**12 46 57.7**	**+2.1**
WMQ				pP	pwP	12 47 05.6	-0.9
WMQ				pmax	pmax		
	comp=Z,62nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,370nm,5.1s						
WMQ				LR	LR		
	comp=Z,4µm,18.5s						
WMQ				LR	LR		
	comp=Z,3µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ	**Urumqi**	**41.88**	**298**	P	**P**	**12 46 56.3**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,37nm,0.9s						
WMQ	**Urumqi**	**41.88**	**298**	P	**P**	**12 46 56.3**	**+0.7**
WMQ				IAmb	IAmb	12 47 01.7	
	comp=Z,36nm,0.9s						
LSA	**Lhasa**	**42.86**	**277**	P	**P**	**12 47 05.2**	**+1.0**
ZAA0	**Zalesovo Array**	**43.15**	**313**	P	**P**	**12 47 05.9**	**+0.2**
ZAA0				IAmb	IAmb	12 47 12.4	
	comp=Z,14nm,0.9s						
ZALV	**Zalesovo Beam**	**43.15**	**313**	P	**P**	**12 47 06.2**	**+0.5**
	comp=Z,11nm,0.8s,baz=90,slow=6.7,SNR=22						
ZALV				PcP	**PcP**	**12 48 53.4**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=107,slow=2.5,SNR=1.7						
ZALV				LR	LR	13 06 03.1	
	comp=Z,681nm,19.4s,baz=85,slow=38						
ZALV	**Zalesovo Beam**	**43.15**	**313**	P	**P**	**12 47 05.5**	**-0.2**
ZSN	**Zaisan**	**43.41**	**304**	*e*P	**P**	**12 47 08.0**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=304						
ZSN	**Zaisan**	**43.41**	**304**	*e*P	**P**	**12 47 07.9**	**+0.1**
ZSN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MK31	**Makanchi Array**	**45.23**	**303**	*i* P	**P**	**12 47 22.7**	**+0.2**
MK31				pmax	pmax		
	comp=Z,18nm,0.8s						
MK31	**Makanchi Array**	**45.23**	**303**	P	**P**	**12 47 22.4**	**-0.1**
MK31				IAmb	IAmb	12 47 29.4	
	comp=Z,14nm,0.8s						
MKAR	**Makanchi Array**	**45.23**	**303**	P	**P**	**12 47 22.9**	**+0.4**
	comp=Z,12nm,0.8s,baz=90,slow=7.5,SNR=50						
MKAR				LR	LR	13 06 09.2	
	comp=Z,895nm,18.8s,baz=78,slow=36						
MKAR	**Makanchi Array**	**45.23**	**303**	*i* P	**P**	**12 47 23.7**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**45.23**	**303**	P	**P**	**12 47 23.0**	**+0.5**
MAKZ	**Makanchi**	**45.44**	**303**	P	**P**	**12 47 24.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
MAKZ	**Makanchi**	**45.44**	**303**	P	**P**	**12 47 24.0**	**-0.2**
MAKZ				IAmb	IAmb	12 47 31.2	
	comp=Z,16nm,0.8s						
KAPI	**Kappang**	**45.66**	**212**	P	**P**	**12 47 26.8**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,71nm,1.2s						
KAPI	**Kappang**	**45.66**	**212**	P	**P**	**12 47 26.8**	**+0.7**
SEM	**Semipalatinsk**	**46.12**	**309**	*e*P	**P**	**12 47 28.4**	**-1.4**
	comp=Z,5.0nm,1.0s,baz=308						
SEM				*e*S	**S**	**12 54 13.6**	**-0.8**
	baz=308						
SEM				LR	LR	13 06 40.7	
	comp=Z,1µm,12.2s,baz=308						
SEM	**Semipalatinsk**	**46.12**	**309**	*e*P	**P**	**12 47 28.3**	**-1.4**
SEM				*e*S	**S**	**12 54 13.5**	**-0.8**
SEM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SEM				MLR	MLR		
	comp=Z,1µm,12.0s						
TAPN	**Taplejung**	**46.56**	**276**	*e*P	**P**	**12 47 34.6**	**+1.0**
ODAN	**Odare**	**47.03**	**275**	*e*P	**P**	**12 47 37.0**	**-0.1**
KURK	**Kurchatov**	**47.12**	**309**	P	**P**	**12 47 37.9**	**+0.7**
KURK	**Kurchatov**	**47.12**	**309**	P	**P**	**12 47 36.7**	**-0.5**
KURBB	**Kurchatov Arra**	**47.19**	**309**	P	**P**	**12 47 37.9**	**+0.2**
	comp=Z,9.3nm,0.7s,baz=84,slow=7.6,SNR=25						
A21K	**Barrow**	**47.41**	**23**	P	**P**	**12 47 40.8**	**+1.6**
RSO	**Redoubt South**	**47.57**	**38**	P	**P**	**12 47 42.8**	**+2.0**
GUN	**Gumba**	**47.81**	**277**	*e*P	**P**	**12 47 43.4**	**0.0**
SHLS	**Shalkode**	**47.89**	**299**	*e*P	**P**	**12 47 40.3**	**-3.2**
	comp=Z,2.8nm,0.7s,baz=298						
SHLS	**Shalkode**	**47.89**	**299**	*e*P	**P**	**12 47 40.3**	**-3.2**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HNR	**Honiara**	**48.03**	**156**	LR	LR	13 04 37.6	
	comp=Z,455nm,19.5s,baz=328,slow=32						
TDK	**Taldyqorghan**	**48.22**	**302**	*e*P	**P**	**12 47 45.7**	**-0.2**
	baz=301						
TDK				LR	LR	13 08 26.7	
	comp=Z,2µm,13.0s,baz=301						
TDK	**Taldyqorghan**	**48.22**	**302**	*e*P	**P**	**12 47 45.6**	**-0.3**
TDK				MLR	MLR		
	comp=Z,2µm,13.0s						
PKI	**Pulchoki**	**48.33**	**277**	*e*P	**P**	**12 47 47.1**	**-0.3**
PKIN	**Phulchoki**	**48.34**	**277**	*e*P	**P**	**12 47 47.0**	**-0.4**
KKN	**Kakani**	**48.34**	**277**	*e*P	**P**	**12 47 47.4**	**+0.1**
KPKS	**Kokpek**	**48.37**	**299**	*e*P	**P**	**12 47 46.8**	**-0.4**
	baz=299						
KPKS	**Kokpek**	**48.37**	**299**	*e*P	**P**	**12 47 46.7**	**-0.4**
SUA	**Susitna One**	**48.55**	**36**	P	**P**	**12 47 48.8**	**+0.4**
SUA				IAmb	IAmb	12 48 04.8	
	comp=Z,15nm,1.1s						
DMN	**Daman**	**48.56**	**277**	*e*P	**P**	**12 47 48.0**	**-1.0**
SATY	**Saty**	**48.66**	**299**	*e*P	**P**	**12 47 49.2**	**-0.3**
	baz=299						
SATY	**Saty**	**48.66**	**299**	*e*P	**P**	**12 47 49.2**	**-0.3**
GKN	**Gorkha**	**48.78**	**278**	*e*P	**P**	**12 47 50.6**	**0.0**
IPM	**Ipoh**	**48.95**	**240**	P	**P**	**12 47 50.2**	**-1.7**
COLD	**Coldfoot**	**49.00**	**29**	P	**P**	**12 47 52.0**	**+0.4**
PMR	**Palmer**	**49.33**	**36**	P	**P**	**12 47 54.5**	**+0.4**
PMR				pmax	pmax		
	comp=Z,19nm,1.2s						
PMR	**Palmer**	**49.33**	**36**	P	**P**	**12 47 54.5**	**+0.4**
PMR				IAmb	IAmb	12 48 07.1	
	comp=Z,19nm,1.2s						
DANN	**Dangsing**	**49.34**	**279**	*e*P	**P**	**12 47 55.3**	**+0.2**
TOLK	**Toolik Lake Re**	**49.35**	**27**	P	**P**	**12 47 54.6**	**+0.3**
TOLK				IAmb	IAmb	12 48 11.8	
	comp=Z,6.8nm,1.0s						
MTN	**Manton Dam**	**49.45**	**194**	P	**P**	**12 47 55.1**	**-0.4**
CHKK	**Chushkaly**	**49.47**	**300**	*e*P	**P**	**12 47 55.4**	**-0.1**
	baz=300						
CHKK	**Chushkaly**	**49.47**	**300**	*e*P	**P**	**12 47 55.4**	**-0.1**
COEN	**Coen**	**49.48**	**179**	P	**P**	**12 47 57.1**	**+1.4**
MDOK	**Medeo**	**49.60**	**299**	*e*P	**P**	**12 47 56.8**	**0.0**
	baz=299						
MDOK				LR	LR	13 09 45.1	
	comp=Z,780nm,12.6s,baz=299						
MDOK	**Medeo**	**49.60**	**299**	*e*P	**P**	**12 47 56.7**	**0.0**
MDOK				MLR	MLR		
	comp=Z,780nm,13.0s						
AAA	**Alma-Ata**	**49.68**	**300**	*e*P	**P**	**12 47 57.1**	**-0.1**
	comp=Z,7.7nm,0.5s,baz=299						
AAA				LR	LR	13 09 49.1	
	comp=Z,681nm,12.2s,baz=299						
AAA	**Alma-Ata**	**49.68**	**300**	*e*P	**P**	**12 47 57.1**	**-0.1**
AAA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AAA				MLR	MLR		
	comp=Z,681nm,12.0s						
TNSS	**Tian-Shan**	**49.70**	**299**	*e*P	**P**	**12 47 58.3**	**+0.4**
	baz=299						
TNSS	**Tian-Shan**	**49.70**	**299**	*e*P	**P**	**12 47 58.2**	**+0.4**
KOLN	**Koldanda**	**49.71**	**278**	*e*P	**P**	**12 47 57.9**	**+0.1**
KUU	**Kurty**	**49.92**	**301**	*e*P	**P**	**12 47 58.2**	**-0.8**
	comp=Z,7.7nm,1.6s,baz=300						
KUU	**Kurty**	**49.92**	**301**	*e*P	**P**	**12 47 58.1**	**-0.8**
KUU				pmax	pmax		
	comp=Z,8.0nm,1.6s						
POKR	**Poker Plat Res**	**50.04**	**31**	P	**P**	**12 47 58.5**	**-1.1**
PYUN	**Piuthan**	**50.06**	**279**	*e*P	**P**	**12 48 00.6**	**+0.1**
ILAR	**Eielson Array**	**50.28**	**32**	LR	LR	13 10 31.5	
	comp=Z,250nm,20.3s,baz=286,slow=38						
BOOM	**Boomskoye usch**	**50.56**	**299**	P	**P**	**12 48 05.1**	**+1.1**
BOOM				pmax	pmax		
	comp=Z,16nm,1.0s						
BOOM	**Boomskoye usch**	**50.56**	**299**	P	**P**	**12 48 05.1**	**+1.1**
BOOM				IAmb	IAmb	12 48 23.4	
	comp=Z,16nm,0.9s						
TKM2	**Tokmak 2**	**50.69**	**299**	*i* P	**P**	**12 48 05.8**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,46nm,1.7s						
BRZS	**Berezniki**	**50.99**	**309**	*e*P	**P**	**12 48 05.8**	**-1.2**
	baz=309						
BRZS	**Berezniki**	**50.99**	**309**	*e*P	**P**	**12 48 05.7**	**-1.2**
BTLS	**Baital**	**51.22**	**303**	*e*P	**P**	**12 48 07.4**	**-1.4**
	baz=302						
BTLS	**Baital**	**51.22**	**303**	*e*P	**P**	**12 48 07.3**	**-1.4**
SGDS	**Sogindy**	**51.23**	**300**	*e*P	**P**	**12 48 09.0**	**0.0**
	baz=300						
SGDS	**Sogindy**	**51.23**	**300**	*e*P	**P**	**12 48 08.9**	**0.0**
KSH	**Kashi**	**51.40**	**295**	P	P	12 48 15.7	+5.4
KSH				pP	pwP	12 48 24.6	+3.4
KSH				S	**S**	**12 55 31.8**	**+3.1**
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
KSH				pmax	pmax		
	comp=Z,880nm,6.0s						
KSH				LR	LR		
	comp=Z,2µm,11.8s						
KSH				LR	LR		
	comp=Z,2µm,10.8s						
KSH				LR	LR		
	comp=Z,3µm,14.1s						
AAK	**Ala-Archa**	**51.55**	**299**	P	**P**	**12 48 11.6**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=123,slow=3.4,SNR=4.0						
AAK	**Ala-Archa**	**51.55**	**299**	P	**P**	**12 48 12.6**	**+1.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AAK	**Ala-Archa**	**51.55**	**299**	P	**P**	**12 48 12.6**	**+1.1**
AAK				IAmb	IAmb	12 48 30.6	
	comp=Z,9.7nm,0.9s						
MENT	**Mentasta**	**51.77**	**34**	P	**P**	**12 48 14.4**	**+1.7**
BVAR	**Borovoye Array**	**51.80**	**313**	P	**P**	**12 48 12.7**	**-0.3**
	comp=Z,1.9nm,1.0s,baz=108,slow=14,SNR=9.9						
BRVK	**Borovoye**	**51.86**	**313**	*i* P	**P**	**12 48 13.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRVK	**Borovoye**	**51.86**	**313**	P	**P**	**12 48 13.2**	**-0.1**
BRVK				IAmb	IAmb	12 48 41.9	
	comp=Z,9.4nm,0.9s						
K27K	**Chicken**	**52.41**	**33**	P	**P**	**12 48 18.4**	**+1.1**
K27K				IAmb	IAmb	12 48 34.4	
	comp=Z,12nm,1.0s						
ARSB	**Arslanbob**	**53.02**	**298**	P	**P**	**12 48 23.5**	**+1.2**
ARSB				pmax	pmax		
	comp=Z,29nm,1.0s						
ARSB	**Arslanbob**	**53.02**	**298**	P	**P**	**12 48 23.5**	**+1.2**
GSI	**Gunungsitoli**	**53.62**	**240**	P	**P**	**12 48 25.8**	**-1.0**
DZA	**Taraz**	**53.70**	**301**	*e*P	**P**	**12 48 27.1**	**-0.2**
	baz=300						
DZA				LR	LR	13 11 38.5	
	comp=Z,375nm,12.6s,baz=300						
DZA	**Taraz**	**53.70**	**301**	*e*P	**P**	**12 48 27.0**	**-0.2**
DZA				MLR	MLR		
	comp=Z,375nm,13.0s						
KK31	**Karatay Array**	**54.21**	**301**	P	**P**	**12 48 31.0**	**+0.1**
KK31				pmax	pmax		
	comp=Z,22nm,1.2s						
KK31	**Karatay Array**	**54.21**	**301**	P	**P**	**12 48 31.0**	**+0.1**
KK31				IAmb	IAmb	12 48 56.6	
	comp=Z,22nm,1.2s						
KKAR	**Karatay Array**	**54.21**	**301**	P	**P**	**12 48 31.0**	**+0.1**
KKAR	**Karatay Array**	**54.21**	**301**	P	**P**	**12 48 31.0**	**+0.1**
KKAR	**Karatay Array**	**54.21**	**301**	P	**P**	**12 48 30.8**	**-0.1**
KKAR				IAmb	IAmb	12 48 56.6	
	comp=Z,22nm,1.2s						
EPYK	**Eagle Plains**	**54.36**	**29**	P	**P**	**12 48 32.5**	**+0.9**
IUG	**Iuzhnay**	**54.85**	**300**	*e*P	**P**	**12 48 35.6**	**0.0**
	comp=Z,7.1nm,1.1s,baz=300						
IUG	**Iuzhnay**	**54.85**	**300**	*e*P	**P**	**12 48 35.6**	**0.0**
IUG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HYT	**Haines Junctio**	**55.00**	**36**	P	**P**	**12 48 33.5**	**-3.0**
HYT				IAmb	IAmb	12 48 51.6	
	comp=Z,19nm,1.1s						
INK	**Inuvik**	**55.27**	**27**	P	**P**	**12 48 39.0**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=310,slow=6.6,SNR=10						
INK	**Inuvik**	**55.27**	**27**	P	**P**	**12 48 39.0**	**+0.9**
INK	**Inuvik**	**55.27**	**27**	P	**P**	**12 48 38.3**	**+0.3**
INK				IAmb	IAmb	12 48 56.4	
	comp=Z,8.4nm,1.1s						
NIL	**Nilore**	**55.51**	**289**	P	**P**	**12 48 39.9**	**-0.6**
NIL				pmax	pmax		
	comp=Z,14nm,0.9s						
NIL	**Nilore**	**55.51**	**289**	P	**P**	**12 48 39.9**	**-0.6**
NIL				IAmb	IAmb	12 48 53.2	
	comp=Z,14nm,0.8s						
WB0	**Warramunga Arr**	**55.72**	**189**	P	**P**	**12 48 40.0**	**-1.9**
FITZ	**Fitzroy Crossi**	**55.80**	**199**	P	**P**	**12 48 41.7**	**-0.7**
WRAB	**Tennant Creek**	**55.89**	**189**	*ce*P	**P**	**12 48 41.2**	**-1.9**
WRAB				pmax	pmax		

	comp=Z,18nm,1.0s						
WRAB	**Tennant Creek**	**55.89**	**189**	P	**P**	**12 48 41.6**	**-1.4**
WR0	**Warramunga Arr**	**55.89**	**189**	P	**P**	**12 48 41.9**	**-1.2**
WB2	**Warramunga Arr**	**55.90**	**189**	P	**P**	**12 48 41.5**	**-1.7**
WRA	**Warramunga Arr**	**55.90**	**189**	P	**P**	**12 48 41.3**	**-1.9**
	comp=Z,17nm,1.1s,baz=7.5,slow=7.4,SNR=59						
WRA				LR	LR	13 11 51.6	
	comp=Z,253nm,19.8s,baz=350,slow=35						
WRA	**Warramunga Arr**	**55.90**	**189**	*i* P	**P**	**12 48 41.2**	**-1.9**
WRA				pmax	pmax		
	comp=Z,11nm,0.8s						
SVE	**Sverdlovsk**	**56.43**	**319**	*e*P	**P**	**12 48 46.8**	**+0.2**
SVE				pmax	pmax		
	comp=Z,29nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2μm,13.0s						
ARU	**Arti**	**57.65**	**319**	P	**P**	**12 48 55.3**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=55,slow=3.8,SNR=12						
ARU	**Arti**	**57.65**	**319**	*c i*P	**P**	**12 48 55.3**	**+0.1**
ARU						12 49 47.2	
ARU						12 51 03.1	
ARU				S	**S**	**12 56 55.3**	**+3.3**
ARU				SS	**SS**	**13 00 42.7**	**+1.0**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ARU	**Arti**	**57.65**	**319**	P	**P**	**12 48 54.5**	**-0.7**
C36M	**Paulatuk**	**58.35**	**25**	P	**P**	**12 49 00.2**	**+0.3**
C36M				IAmb	IAmb	12 49 23.8	
	comp=Z,8.4nm,0.9s						
HYB	**Hyderabad**	**58.70**	**270**	*i* P	**P**	**12 49 03.0**	**-0.2**
ABKAR	**Akbulak array**	**59.15**	**311**	P	**P**	**12 49 05.5**	**-0.4**
ABKAR	**Akbulak array**	**59.15**	**311**	P	**P**	**12 49 05.8**	**-0.1**
ABKAR				IAmb	IAmb	12 49 16.7	
	comp=Z,7.8nm,0.8s						
AS31	**Alice Springs**	**59.62**	**189**	P	**P**	**12 49 07.9**	**-1.4**
AS31				IAmb	IAmb	12 49 20.5	
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**59.62**	**189**	P	**P**	**12 49 07.5**	**-1.8**
	comp=Z,4.2nm,0.9s,baz=1.2,slow=7.4,SNR=29						
ASAR				LR	LR	13 14 07.3	
	comp=Z,199nm,19.8s,baz=0.5,slow=35						
ASAR	**Alice Springs**	**59.62**	**189**	P	**P**	**12 49 07.9**	**-1.4**
ASAR	**Alice Springs**	**59.62**	**189**	P	**P**	**12 49 07.9**	**-1.4**
AKTO	**Aktyubinsk**	**59.90**	**313**	P	**P**	**12 49 10.0**	**-1.0**
	comp=Z,4.4nm,1.1s,baz=68,slow=4.9,SNR=9.5						
PSA00	**Pilbara Seismi**	**60.80**	**204**	P	**P**	**12 49 16.2**	**-1.1**
PSA00				IAmb	IAmb	12 49 30.2	
	comp=Z,6.5nm,0.8s						
EUNU	**Eureka**	**61.35**	**9**	P	**P**	**12 49 20.9**	**+0.4**
EUNU				IAmb	IAmb	12 49 32.6	
	comp=Z,8.6nm,0.9s						
KIRV	**Kirov**	**61.56**	**323**	P	**P**	**12 49 22.2**	**+0.1**
	comp=Z,5.1nm,0.4s,baz=65,slow=14,SNR=3.6						
KIRV	**Kirov**	**61.56**	**323**	*ce*P	**P**	**12 49 22.5**	**+0.4**
POO	**Poona**	**61.95**	**273**	*e*P	**P**	**12 49 26.0**	**+0.6**
DZM	**Mont Dzumac**	**62.00**	**154**	*e*P	P	12 49 30.6	+5.0
	comp=Z,58nm,1.3s						
DZM				*e*S	**S**	**12 57 52.7**	**+3.9**
	comp=Z,884nm,28.1s						
DZM				*e*LQ	LQ	13 05 04.6	
	comp=Z,642nm,26.9s						
DZM				*e*LR	LR	13 07 47.4	
	comp=Z,790nm,21.3s						
MSVF	**Nonsavu**	**63.20**	**141**	LR	LR	13 11 13.3	
	comp=Z,215nm,20.9s,baz=4.4,slow=31						
MSVF	**Nonsavu**	**63.20**	**141**	*i* P	**P**	**12 49 32.1**	**-1.6**
MSVF				pmax	pmax		
	comp=Z,17nm,1.2s						
HRA	**Herat**	**63.50**	**295**	P	**P**	**12 49 36.6**	**+0.8**
HRA				IAmb	IAmb	12 49 48.9	
	comp=Z,8.7nm,0.9s						
RES	**Resolute Bay**	**63.68**	**14**	P	**P**	**12 49 36.5**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=318,slow=6.5,SNR=22						
RES	**Resolute Bay**	**63.68**	**14**	P	**P**	**12 49 36.4**	**+0.3**
RES				IAmb	IAmb	12 49 58.6	
	comp=Z,10.0nm,0.9s						
TMCR	**Tamitsa**	**64.09**	**332**	*e*P	**P**	**12 49 37.5**	**-1.4**
TMCR				pmax	pmax		
	comp=Z,35nm,1.4s						
YKA	**Yellowknife Ar**	**64.63**	**30**	P	**P**	**12 49 42.3**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=295,slow=5.5,SNR=6.8						
GEYT	**Alibeck**	**64.90**	**300**	P	**P**	**12 49 45.2**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=64,slow=6.6,SNR=2.0						
GEYT				LR	LR	13 18 34.9	
	comp=Z,218nm,19.7s,baz=195,slow=36						
GEYT	**Alibeck**	**64.90**	**300**	P	**P**	**12 49 43.9**	**-0.9**
BELG	**Belogornoye**	**65.07**	**318**	P	**P**	**12 49 45.9**	**+0.4**
	comp=Z,19nm,1.1s,baz=76,slow=4.2,SNR=4.2						
KLMR	**Klimovskoe**	**65.09**	**328**	*e*P	**P**	**12 49 44.4**	**-1.0**
KLMR				*e*		12 52 07.6	
KLMR				pmax	pmax		
	comp=Z,31nm,1.5s						
KLMR	**Klimovskoe**	**65.09**	**328**	*e*P	**P**	**12 49 44.5**	**-1.0**
KLMR				AMP		12 50 01.4	
	comp=Z,31nm,1.5s						
KLMR				*e*PP	**PP**	**12 52 07.6**	**-0.7**
KLMR				LQ	LQ	13 13 45.9	
KLMR				LQ	LQ	13 13 45.9	
KLMR				LR	LR	13 17 53.4	
ARCES	**ARCESS Array B**	**65.35**	**340**	LR	LR	13 24 00.4	
	comp=Z,1μm,18.4s,baz=55,slow=41						
DAG	**Danmarks Havn**	**67.06**	**355**	*i* P	**P**	**12 49 57.0**	**-0.9**
DAG	**Danmarks Havn**	**67.06**	**355**	*i* P	**P**	**12 49 57.0**	**-0.9**
DAG	**Danmarks Havn**	**67.06**	**355**	*i* P	**P**	**12 49 57.0**	**-0.9**
STKA	**Stephens Creek**	**67.30**	**180**	P	**P**	**12 49 58.5**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=343,slow=15,SNR=3.5						
STKA				LR	LR	13 26 32.0	
	comp=Z,162nm,18.1s,baz=14,slow=42						
STKA	**Stephens Creek**	**67.30**	**180**	*i* P	**P**	**12 49 58.8**	**-1.1**
FORT	**Forrest**	**67.50**	**193**	P	**P**	**12 50 03.0**	**+1.8**
MOS	**Moscow**	**68.57**	**324**	*e*P	**P**	**12 50 06.8**	**-0.9**
MOS				pmax	pmax		
	comp=Z,43nm,1.0s						
MOS				MLR	MLR		
	comp=Z,1μm,14.0s						
VRH	**Novokhopyorsk**	**68.86**	**318**	*e*P	**P**	**12 50 08.0**	**-1.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN	**Obninsk**	**69.41**	**324**	*i* P	**P**	**12 50 13.1**	**+0.2**
OBN				*e*		12 50 35.4	
OBN				*e*		12 52 48.8	
OBN				*e*S	**S**	**12 59 17.6**	**-0.9**
OBN				pmax	pmax		
	comp=Z,16nm,1.5s						
LPSR	**Galich'ya Gora**	**69.60**	**321**	*e*P	**P**	**12 50 13.1**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAK	**Makhachkala**	**69.64**	**309**	*e*P	**P**	**12 50 12.4**	**-2.2**
MAK				*e*		12 52 48.3	
MAK				*e*S	**S**	**12 59 19.1**	**-2.5**
MAK				*e*SS	**SS**	**13 03 50.6**	**+1.4**
MAK				pmax	pmax		
	comp=Z,274nm,1.4s						
MAK				MLR	MLR		
	comp=Z,2μm,15.0s						
FINES	**FINESS Array B**	**70.16**	**333**	P	**P**	**12 50 17.9**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=57,slow=5.1,SNR=4.3						
FINES				LR	LR	13 23 15.1	
	comp=Z,413nm,18.5s,baz=28,slow=38						
PINE	**Pine Mountain**	**70.75**	**50**	P	**P**	**12 50 22.8**	**+1.1**
PINE				IAmb	IAmb	12 50 37.5	
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**71.94**	**0**	*i* P	**P**	**12 50 28.0**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,21nm,1.2s						
SUMG	**Summit**	**71.94**	**0**	*i* P	**P**	**12 50 28.0**	**-0.6**
	comp=Z,20nm,1.2s						
SUMG	**Summit**	**71.94**	**0**	*i* P	**P**	**12 50 28.0**	**-0.6**
SUMG				IAmb	IAmb	12 50 32.5	
	comp=Z,20nm,1.2s						
KBZ	**Khabaz**	**72.12**	**311**	P	**P**	**12 50 30.0**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=38,slow=5.9,SNR=5.3						
KBZ	**Khabaz**	**72.12**	**311**	*ce*P	**P**	**12 50 29.6**	**0.0**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	**Kislovodsk**	**72.12**	**312**	*e*P	**P**	**12 50 27.9**	**-1.9**
KIV				pmax	pmax		
	comp=Z,39nm,1.0s						
GNI	**Garni**	**72.88**	**307**	*i* P	**P**	**12 50 35.6**	**+1.1**
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
BEKR	**Beckworth**	**73.20**	**53**	P	**P**	**12 50 35.9**	**-0.5**
MNK	**Minsk**	**73.82**	**326**	*i* P	**P**	**12 50 36.2**	**-3.3**
	comp=E,5.0nm,1.0s						
MNK				*i* P	**P**	**12 50 36.2**	**-3.3**
	comp=N,13nm,0.8s						
MNK				*i* P	**P**	**12 50 36.2**	**-3.3**
	comp=Z,15nm,0.9s						
MNK				*i* PcP	**pwP**	**12 50 52.0**	**+1.5**
MNK				*i* PP	**PP**	**12 53 19.9**	**-3.9**
MNK				*i* PPP	PPP	12 55 02.3	
MNK				*i* S	**SKiKP**	**13 00 05.1**	**-2.0**
MNK				*i* SS	**SS**	**13 04 47.5**	**-5.0**
MNK				*i* SSS	SSS	13 08 09.0	
MNK				*i* LQ	LQ	13 18 00.3	
MNK				*i* LR	LR	13 23 41.1	
MNK				*i* LRM	MLR	13 26 32.6	
	comp=E,121nm,17.4s						
MNK				*i* LRM	MLR	13 26 36.2	
	comp=N,1μm,20.2s						
MNK				*i* LRM	MLR	13 26 36.9	
	comp=Z,747nm,18.1s						
NACGM	**Naroch**	**74.06**	**327**	*i* P	P	12 50 50.8	+10
NACGM				*i* P	P	12 50 50.8	+10
NACGM				*i* P	P	12 50 50.8	+10
NACGM				*i* Pb	pwP	12 50 52.9	+1.0
	comp=Z,18nm,0.9s						
NACGM				*i* PcP	**PcP**	**12 51 00.3**	**+4.3**
NACGM				*i* PP	PP	12 53 41.5	+16
NACGM				*i* PPP	PPP	12 55 33.1	
NACGM				*i* S	S	13 00 42.2	+30
NACGM				*i* S	**ScS**	**13 00 51.0**	**+1.5**
NACGM				*i* SS	SS	13 05 41.1	+45
NACGM				*i* SSS	SSS	13 08 49.4	
NACGM				*i* LQ	LQ	13 20 29.4	
NACGM				*i* LR	LR	13 25 47.6	
MFID	**Camas Ranch**	**74.08**	**48**	P	**P**	**12 50 40.3**	**-1.1**
DLMT	**Dillon**	**74.86**	**45**	P	**P**	**12 50 47.4**	**+1.4**
DLMT				IAmb	IAmb	12 51 07.6	
	comp=Z,15nm,1.5s						
FCC	**Fort Churchill**	**74.89**	**27**	P	**P**	**12 50 45.0**	**-0.6**
FCC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FCC	**Fort Churchill**	**74.89**	**27**	P	**P**	**12 50 45.0**	**-0.6**
FCC				IAmb	IAmb	12 51 02.9	
	comp=Z,8.9nm,1.1s						
BOZ	**Bozeman (W)**	**75.28**	**44**	P	**P**	**12 50 49.5**	**+1.1**
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BOZ	**Bozeman (W)**	**75.28**	**44**	P	**P**	**12 50 49.5**	**+1.1**
NVAR	**Mina Array Bea**	**75.32**	**53**	P	**P**	**12 50 50.3**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=274,slow=6.5,SNR=8.8						
NVAR				LR	LR	13 25 11.1	
	comp=Z,108nm,18.1s,baz=304,slow=37						
NVAR	**Mina Array Bea**	**75.32**	**53**	P	**P**	**12 50 48.7**	**-0.2**
ICESG	**Greenland Ices**	**75.43**	**1**	*e*P	**P**	**12 50 53.1**	**+4.1**
NB2	**NORSAR Subarra**	**75.54**	**338**	P	**P**	**12 50 49.5**	**0.0**
	comp=Z,2.4nm,0.7s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**75.54**	**338**	P	**P**	**12 50 48.2**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=40,slow=5.8,SNR=4.0						
NOA				LR	LR	13 28 45.8	
	comp=Z,851nm,18.3s,baz=25,slow=39						
AKASG	**Malin Array Be**	**75.61**	**323**	P	**P**	**12 50 49.3**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=44,slow=6.9,SNR=6.1						
AKASG				LR	LR	13 24 51.8	
	comp=Z,418nm,18.0s,baz=40,slow=36						
AKASG	**Malin Array Be**	**75.61**	**323**	P	**P**	**12 50 49.7**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**75.61**	**323**	P	**P**	**12 50 49.7**	**-0.2**
AKBB	**Malin Array Si**	**75.61**	**323**	*ce*P	**P**	**12 50 49.2**	**-0.7**
AKBB	**Malin Array Si**	**75.61**	**323**	P	**P**	**12 50 49.0**	**-0.9**
AKBB				IAmb	IAmb	12 51 04.3	
	comp=Z,14nm,1.1s						
YHH	**Holmes Hill**	**76.20**	**44**	P	**P**	**12 50 55.4**	**+1.6**
H17A	**Grant Village**	**76.59**	**45**	P	**P**	**12 50 57.6**	**+1.6**
H17A				IAmb	IAmb	12 51 06.8	
	comp=Z,8.2nm,1.1s						
HVU	**Hansel Valley**	**76.86**	**48**	P	**P**	**12 50 58.0**	**+0.5**
HVU				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HVU	**Hansel Valley**	**76.86**	**48**	P	**P**	**12 50 58.0**	**+0.5**
MOOW	**Moose Ponds**	**76.89**	**45**	P	**P**	**12 50 56.2**	**-1.5**
RLMT	**Red Lodge**	**76.89**	**44**	P	**P**	**12 50 59.1**	**+1.4**
DUG	**Dugway, Tooele**	**77.78**	**49**	P	**P**	**12 51 02.1**	**-0.6**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
DUG	**Dugway, Tooele**	**77.78**	**49**	P	**P**	**12 51 02.1**	**-0.6**
DUG				IAmb	IAmb	12 51 29.8	
	comp=Z,10nm,1.2s						
PSUT	**Pine Spring**	**78.12**	**51**	P	**P**	**12 51 03.5**	**-1.2**
PDAR	**Pinedale Array**	**78.17**	**46**	P	**P**	**12 51 05.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=270,slow=2.6,SNR=6.7						
PDAR	**Pinedale Array**	**78.17**	**46**	P	**P**	**12 51 03.7**	**-1.2**
MPU	**Maple Canyon**	**78.61**	**49**	P	**P**	**12 51 07.5**	**+0.2**
TCRU	**Three Creeks R**	**78.96**	**50**	P	**P**	**12 51 09.1**	**-0.2**
PFO	**Pinyon Flats O**	**79.30**	**56**	P	**P**	**12 51 10.6**	**-0.5**
PFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PFO	**Pinyon Flats O**	**79.30**	**56**	P	**P**	**12 51 10.6**	**-0.5**
P17A	**Butcher Ranch,**	**79.49**	**49**	P	**P**	**12 51 12.8**	**+0.7**
P17A				IAmb	IAmb	12 51 37.6	
	comp=Z,9.8nm,1.2s						
BURAR	**Bucovina Array**	**79.62**	**322**	P	**P**	**12 51 12.6**	**+0.1**
KNB	**Kanab**	**79.68**	**52**	P	**P**	**12 51 12.8**	**-0.4**
KNB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KNB	**Kanab**	**79.68**	**52**	P	**P**	**12 51 12.8**	**-0.4**
SRU	**San Rafael Swe**	**79.84**	**49**	P	**P**	**12 51 13.3**	**-0.8**
SRU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SRU	**San Rafael Swe**	**79.84**	**49**	P	**P**	**12 51 13.3**	**-0.8**
BRTR	**Keskin Array B**	**80.07**	**312**	P	**P**	**12 51 15.8**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=104,slow=5.2,SNR=9.2						
BRTR				LR	LR	13 31 22.7	
	comp=Z,74nm,19.1s,baz=16,slow=39						
KOLS	**Kolonicke sedl**	**80.14**	**324**	*e*P	**P**	**12 51 20.0**	**+4.8**
KOLS	**Kolonicke sedl**	**80.14**	**324**	*e*P	**P**	**12 51 20.0**	**+4.8**
PV23	**Carpenter Ridg**	**81.18**	**49**	P	**P**	**12 51 21.4**	**+0.1**
PV23				IAmb	IAmb	12 51 28.6	
	comp=Z,14nm,1.2s						
PV14	**Lion Creek, Pa**	**81.22**	**49**	P	**P**	**12 51 22.8**	**+1.3**
PV14				IAmb	IAmb	12 51 46.7	
	comp=Z,10nm,0.9s						
PV20	**West Nyswonger**	**81.27**	**49**	P	**P**	**12 51 23.4**	**+1.6**
PV20				IAmb	IAmb	12 51 36.0	
	comp=Z,7.7nm,1.0s						
PV17	**East Wray Mesa**	**81.32**	**49**	P	**P**	**12 51 22.8**	**+0.8**
PV17				IAmb	IAmb	12 51 49.0	
	comp=Z,11nm,1.1s						
PV16	**Nyswonger Mesa**	**81.32**	**49**	P	**P**	**12 51 19.7**	**-2.3**
PV03	**Paradox Valley**	**81.40**	**49**	P	**P**	**12 51 23.6**	**+1.1**
N23A	**Red Feather La**	**81.45**	**45**	P	**P**	**12 51 23.6**	**+0.9**
N23A				IAmb	IAmb	12 51 48.4	
	comp=Z,9.9nm,1.0s						
RAYN	**Ar Rayn**	**81.62**	**293**	P	**P**	**12 51 23.3**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RAYN	**Ar Rayn**	**81.62**	**293**	P	**P**	**12 51 23.3**	**-0.3**
PV01	**Paradox Valley**	**81.65**	**49**	P	**P**	**12 51 25.0**	**+1.2**
VYHS	**Vyhne**	**82.05**	**326**	*e*P	P	12 51 36.3	+11
CLL	**Collm**	**82.44**	**331**	*e*P	**P**	**12 51 30.0**	**+2.6**
CLL	**Collm**	**82.44**	**331**	*e*P	**P**	**12 51 30.0**	**+2.6**
PPT	**Papeete**	**83.61**	**117**	LR	LR	13 25 46.3	
	comp=Z,198nm,18.6s,baz=309,slow=34						
PPT2	**Papeete2**	**83.62**	**117**	*e*S	**S**	**13 01 58.7**	**+3.5**
	comp=Z,264nm,27.5s						
PPT2	**Papeete2**	**83.62**	**117**	*e*LR	LR	13 17 33.0	
	comp=Z,827nm,28.5s,baz=307						
KHC	**Kasperske Hory**	**83.88**	**329**	*i* P	**P**	**12 51 34.2**	**-0.7**
KHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KHC	**Kasperske Hory**	**83.88**	**329**	*e*P	P	12 51 29.5	-5.4
TUC	**Tucson**	**83.89**	**54**	P	**P**	**12 51 35.8**	**+0.5**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TUC	**Tucson**	**83.89**	**54**	P	**P**	**12 51 35.8**	**+0.5**
GERES	**GERESS Array B**	**84.05**	**329**	P	**P**	**12 51 36.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=60,slow=6.0,SNR=2.5						
GERES				LR	LR	13 31 04.0	
	comp=Z,717nm,19.7s,baz=24,slow=37						
GERES	**GERESS Array B**	**84.05**	**329**	P	**P**	**12 51 36.0**	**+0.1**
ANMO	**Albuquerque**	**84.99**	**50**	*i* P	**P**	**12 51 40.1**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANMO	**Albuquerque**	**84.99**	**50**	P	**P**	**12 51 41.6**	**+0.6**
ANMO				IAmb	IAmb	12 52 06.1	
	comp=Z,5.3nm,1.1s						
TAOE	**Nuku Hiva Isla**	**85.36**	**104**	*e*S	**S**	**13 02 15.5**	**+2.7**
	comp=Z,99nm,24.8s						
121A	**Cookes Peak, D**	**85.71**	**53**	P	**P**	**12 51 46.1**	**+1.5**
121A				IAmb	IAmb	12 51 47.9	
	comp=Z,7.7nm,1.1s						
BCLA	**Clavier**	**86.07**	**334**	*d*pP	pP	12 51 56.9	+4.9
BGES	**Gesves**	**86.18**	**334**	*d*pP	pP	12 51 56.2	+3.6
DOU	**Dourbes**	**86.59**	**334**	*d*pP	pP	12 51 56.3	+1.7
TBI	**Tubuai**	**87.44**	**121**	*e*S	**S**	**13 02 34.5**	**+2.1**
	comp=Z,79nm,27.2s						
TBI	**Tubuai**	**87.44**	**121**	*e*LR	LR	13 19 08.8	
	comp=Z,569nm,27.0s,baz=307						
TX31	**Lajitas Ar. Si**	**90.47**	**53**	P	**P**	**12 52 07.4**	**0.0**
TX32	**Lajitas Array**	**90.47**	**53**	P	**P**	**12 52 07.3**	**-0.1**
TX32				IAmb	IAmb	12 52 09.2	
	comp=Z,4.3nm,1.1s						
TXAR	**Lajitas Array**	**90.47**	**53**	P	**P**	**12 52 07.4**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=288,slow=3.0,SNR=26						
TXAR				LR	LR	13 31 21.0	
	comp=Z,58nm,18.0s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**90.47**	**53**	P	**P**	**12 52 07.0**	**-0.3**
U40A	**Yellville**	**91.93**	**41**	P	**P**	**12 52 13.0**	**-0.9**
U40A				IAmb	IAmb	12 52 20.4	
	comp=Z,9.4nm,1.1s						
KEST	**Kesra**	**96.33**	**323**	LR	LR	13 40 59.8	
	comp=Z,476nm,18.3s,baz=314,slow=38						
RKT	**Rikitea**	**97.79**	**113**	*e*LR	LR	13 24 17.5	
	comp=Z,383nm,23.8s						
ESDC	**Sonseca Array**	**98.64**	**334**	LR	LR	13 44 05.1	
	comp=Z,527nm,18.5s,baz=10.0,slow=40						
QSPA	**South Pole Qui**	**125.53**	**180**	PKPdf	**PKPdf**	**12 58 05.4**	**0.0**
VNA2	**Neumayer--Watz**	**141.26**	**195**	P	**PKPdf**	**12 58 29.1**	**-5.6**
VNA3	**Neumayer Olymp**	**141.49**	**194**	P	**PKPdf**	**12 58 28.6**	**-6.6**
VNA1	**Neumayer--Stat**	**141.65**	**195**	P	**PKPdf**	**12 58 29.9**	**-5.5**
SIV	**San Ignacio**	**151.47**	**52**	PKPbc	**PKPbc**	**12 58 59.3**	**-0.4**
	comp=Z,4.8nm,0.9s,baz=264,slow=6.1,SNR=14						
LCO	**Las Campanas**	**151.62**	**86**	PKIKP	**PKiKP**	**12 59 00.8**	**+0.3**
LCO	**Las Campanas**	**151.62**	**86**		**PKiKP**	**12 59 00.8**	**+0.3**
AC05	**El Transito**	**151.90**	**85**		**PKiKP**	**12 59 01.0**	**+0.1**

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*IDC **12** 12:54:48.1±1.2, 16°.68S×14°.14W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.0/38, mbtmp4.2/7, MS4.0/12, Ms1 4.0/12, ms1mx3.8/25, Error ellipse: s-maj=37.9km s-min=26.4km az=139.0*

*GCMT **12** 12:54:51.0±0.4, 17°.07S±0°.05×14°.11W±0°.04, h20^{km}±1^{km}, MW4.9/76, Moment Tensor Solution. s16,c16; s76,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.45±.23; $M_{\theta\theta}$1.13±.15; $M_{\phi\phi}$1.32±.13; $M_{r\theta}$-0.84±.34; $M_{\theta\phi}$-0.67±.09; $M_{\phi r}$-1.36±.27; Best double couple: $M_0$2.55500×10^{16} NP1:ϕ_s126.00000°,δ40.00000°,λ-124.00000°. NP2: ϕ_s347.00000°,δ58.00000°,λ-65.00000°. Principal axes: T 1.9830, Plg9.0000°, Azm59.0000°; N 1.1440, Plg21.0000°, Azm153.0000°; P -3.1270, Plg67.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 12 12:54:49.7±1.1**, 16°.8S**±0°.2×**14°.1W**±0°.2**, h10**^{km}**, n25,** σ**2^{s}.07**/11**, mb4.1**/9**, MS4.1**/12**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**7.78**	**356**	T	T	13 04 51.3	
	baz=178,slow=74,SNR=16						
H10S3	**ASCENSION HYDR**	**7.79**	**356**	T	T	13 04 55.0	
	baz=42,slow=74,SNR=25						
H10N1	**ASCENSION HYDR**	**8.88**	**358**	T	T	13 06 13.6	
	baz=167,slow=80,SNR=4.1						
H10N3	**ASCENSION HYDR**	**8.88**	**358**	T	T	13 06 11.9	
	baz=167,slow=80,SNR=9.4						
H10N2	**ASCENSION HYDR**	**8.89**	**358**	T	T	13 06 15.6	
	baz=167,slow=80,SNR=3.6						
RCBR	**Riachuelo**	**23.94**	**295**	LR	LR	13 07 37.6	
	comp=Z,181nm,18.4s,baz=122,slow=32						
LIC	**Lamto**	**24.55**	**22**	*e*P	**P**	**13 00 14.5**	**+4.6**
	31nm,1.3s						
KIC	**Kosan Boka**	**24.78**	**23**	*e*P	**P**	**13 00 12.9**	**+1.0**
	57nm,1.2s						
TIC	**Toumodi**	**24.94**	**22**	*e*P	**P**	**13 00 14.3**	**+0.9**
DBIC	**Dimbokro**	**25.02**	**22**	P	**P**	**13 00 13.7**	**-0.4**
	8.4nm,0.8s,baz=172,slow=9.7,SNR=12						
DBIC				LR	LR	13 07 43.8	
	comp=Z,172nm,20.3s,baz=170,slow=31						
BDFB	**Brasilia**	**32.55**	**267**	LR	LR	13 11 41.3	
	comp=Z,372nm,22.0s,baz=113,slow=31						
TORD	**Torodi Ar. Bea**	**33.58**	**29**	P	**P**	**13 01 30.0**	**-0.3**
	9.5nm,0.8s,baz=212,slow=8.3,SNR=26						
TORD				LR	LR	13 13 11.6	
	comp=Z,358nm,18.8s,baz=205,slow=33						
BOSA	**Boshof**	**38.03**	**115**	LR	LR	13 15 28.3	
	comp=Z,145nm,18.7s,baz=278,slow=33						
MATP	**Matopo**	**40.48**	**102**	P	**P**	**13 02 29.5**	**+0.4**
	2.5nm,0.6s,baz=240,slow=9.7,SNR=5.7						
CPUP	**Villa Florida**	**41.14**	**249**	P	**P**	**13 02 35.2**	**+0.9**
	1.7nm,0.6s,baz=89,slow=9.7,SNR=4.5						
CPUP				LR	LR	13 18 18.5	
	comp=Z,172nm,18.4s,baz=62,slow=34						
KMBO	**Kilima Mbogo**	**52.88**	**78**	LR	LR	13 23 52.2	
	comp=Z,183nm,21.2s,baz=252,slow=33						
PLCA	**Paso Flores**	**53.92**	**232**	LR	LR	13 24 01.1	
	comp=Z,206nm,20.5s,baz=104,slow=32						
ESDC	**Sonseca Array**	**56.94**	**9**	P	**P**	**13 04 35.2**	**-0.1**
	0.5nm,0.7s,baz=181,slow=7.5,SNR=5.7						
ROSC	**El Rosal**	**63.23**	**284**	LR	LR	13 31 35.0	
	comp=Z,175nm,18.6s,baz=16,slow=35						
BRTR	**Keskin Array B**	**71.69**	**37**	P	**P**	**13 06 12.7**	**+0.7**
	1.6nm,0.9s,baz=206,slow=9.5,SNR=5.9						
AKASG	**Malin Array Be**	**77.19**	**27**	P	**P**	**13 06 41.4**	**-2.2**
	0.9nm,0.5s,baz=223,slow=4.9,SNR=6.1						
VNDA	**Vanda**	**85.87**	**179**	LR	LR	13 42 27.6	
	comp=Z,91nm,18.2s,baz=337,slow=33						
CMIG	**Matias Romero**	**86.37**	**289**	LR	LR	13 48 38.2	
	comp=Z,102nm,18.1s,baz=98,slow=37						
ARCES	**ARCESS Array B**	**90.51**	**13**	LR	LR	13 47 44.7	
	comp=Z,100nm,18.4s,baz=245,slow=35						
ILAR	**Eielson Array**	**122.54**	**338**	PKP	**PKPdf**	**13 13 42.9**	**-2.1**
	0.4nm,0.9s,baz=28,slow=1.9,SNR=2.6						

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*IDC **12** 12:58:49.8±1.2, 22°.57S×66°.16W, h240^{km}±12^{km}, mb3.4/5, mb1 3.5/8, mb1mx3.3/30, mbtmp3.9/8, Error ellipse: s-maj=26.2km s-min=18.4km az=166.0*

*GUC **12** 12:58:52.0±0.4, 22°.61S×66°.68W, h295^{km}±6^{km}, MW4.1*

ISC 12 12:58:50.2±0.7**, 22°.62S**±0°.07×**66°.26W**±0°.07**, h245**^{km}**, n25,** σ**1^{s}.39**/40**, mb3.6**/5**, 4C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.45**	**270**	P	**Pn**	**12 59 39.0**	**+2.1**
	10.0nm,0.3s,baz=97,slow=5.2,SNR=12						
LVC				S	**S**	**13 00 14.1**	**+0.4**
	24nm,0.3s,baz=49,slow=19,SNR=18						
LVC	**Limon Verde**	**2.45**	**270**	*e*P	**Pn**	**12 59 39.0**	**+2.1**
LVC				*i* S	**S**	**13 00 15.1**	**+1.3**
PB09	**IPOC Station P**	**2.88**	**286**	*e*P	**Pn**	**12 59 43.5**	**+2.2**
PB09				*e*S	**S**	**13 00 22.7**	**+1.1**
PB03	**IPOC Station P**	**3.29**	**279**	⇓*i*P	**Pn**	**12 59 47.2**	**+1.5**
PB03				*e*S	**S**	**13 00 28.8**	**-0.7**
PB07	**IPOC Station P**	**3.48**	**284**	*e*P	**Pn**	**12 59 49.2**	**+1.3**
PB07				*i* S	**S**	**13 00 32.2**	**-1.3**
PB04	**IPOC Station P**	**3.61**	**274**	⇑*i*P	**Pn**	**12 59 50.8**	**+1.4**
PB04				*i* S	**S**	**13 00 34.8**	**-1.5**
PB02	**IPOC Station P**	**3.62**	**290**	*e*P	**Pn**	**12 59 51.0**	**+1.5**
PB02				*i* S	**S**	**13 00 35.1**	**-1.2**
PB05	**IPOC Station P**	**3.65**	**266**	⇑*i*P	**Pn**	**12 59 50.7**	**+1.0**
PB05				*i* S	**S**	**13 00 35.4**	**-1.6**
PB08	**IPOC Station P**	**3.66**	**312**	⇑*i*P	**Pn**	**12 59 52.5**	**+2.3**
PB08				*i* S	**S**	**13 00 38.6**	**+1.0**
PATCX	**Punta Patache**	**4.04**	**296**	*i* P	**Pn**	**12 59 55.2**	**+0.9**
PATCX				*i* S	**S**	**13 00 43.4**	**-1.8**
PB10	**IPOC Station P**	**4.05**	**257**	*e*P	**Pn**	**12 59 55.0**	**+0.7**
PB10				*e*S	**S**	**13 00 43.0**	**-2.3**
HMBC	**Humberstone**	**4.11**	**304**	⇑*i*P	**Pn**	**12 59 55.6**	**+0.4**
HMBC				*i* S	**S**	**13 00 45.1**	**-1.6**
TA01	**Diego Aracena**	**4.18**	**299**	⇓*i*P	**Pn**	**12 59 56.6**	**+0.7**
TA01				*i* S	**S**	**13 00 46.0**	**-2.1**
PB14	**IPOC Station P**	**4.29**	**242**	*e*P	**Pn**	**12 59 58.3**	**+0.8**
PB14				*i* S	**S**	**13 00 49.3**	**-1.7**
MNMC	**Minye Minye**	**4.67**	**317**	*e*P	**Pn**	**13 00 03.6**	**+1.5**
MNMC				*i* S	**S**	**13 00 57.7**	**-1.5**
SIV	**San Ignacio**	**8.21**	**37**	P	**Pn**	**13 00 45.9**	**-0.4**
	1.1nm,0.3s,baz=229,slow=7.9,SNR=11						
BDFB	**Brasilia**	**18.57**	**71**	P	**P**	**13 02 48.4**	**-1.2**

	0.7nm,0.3s,baz=268,slow=11,SNR=3.2						
SNAA	Sanae	60.42	161	P	P	13 08 34.0	+0.4
	1.1nm,0.8s,baz=241,slow=10,SNR=2.4						
TXAR	Lajitas Array	62.97	323	P	P	13 08 52.0	+0.8
	0.2nm,0.8s,baz=157,slow=4.9,SNR=2.1						
TORD	Torodi Ar. Bea	75.44	69	P	P	13 10 06.4	-1.3
	1.9nm,0.5s,baz=258,slow=5.6,SNR=9.3						
ULM	Lac du Bonnet	77.15	341	P	P	13 10 15.5	-1.0
	1.1nm,0.6s,baz=135,slow=5.7,SNR=2.4						
YKA	Yellowknife Ar	93.07	340	P	P	13 11 36.0	+0.4
	0.3nm,0.5s,baz=126,slow=5.6,SNR=12						
ASAR	Alice Springs	129.99	204	PKP	PKPdf	13 17 31.6	+0.1
	0.2nm,0.3s,baz=126,slow=1.7,SNR=8.8						
WRA	Warramunga Arr	133.16	207	PKP	PKPdf	13 17 38.0	+0.5
	0.2nm,0.3s,baz=158,slow=1.8,SNR=5.8						
MKAR	Makanchi Array	145.03	39	PKP	PKPbc	13 17 58.7	+0.6
	1.7nm,0.8s,baz=312,slow=3.3,SNR=16						

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*IDC **12** 13:04:10.9±5.8, 21°.01S×169°.07E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.6/24, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=248.6km s-min=33.0km az=147.0*

*NOU **12** 13:04:13.1, 21°.01S×168°.92E, h0^{km}, MLv4.2, Loyalty Islands*

ISC 12 13:04:15.5±1.5, 21°.01S±0°.09×168°.9E±0°.1, h25^{km}, n14, σ1s.07/15, mb3.3/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	0.92	239	P	Pb	13 04 32.2	-0.6
LIFNC	LIFOU	1.55	278	P	Pn	13 04 40.2	-1.3
PINNC	Pines Island,	2.08	220	P	Pn	13 04 48.9	+0.2
YATNC	Mamie plateau,	2.12	240	P	Pn	13 04 49.3	-0.1
OUENC	Ouen Island, N	2.36	233	P	Pn	13 04 53.2	+0.6
DZM	Mont Dzumac	2.50	245	Pn	Pn	13 04 55.2	+0.5
	17nm,0.3s,baz=112,slow=2.5,SNR=276						
DZM				Sn	Sn	13 05 23.8	-0.6
	55nm,0.3s,baz=121,slow=19,SNR=13						
DZM	Mont Dzumac	2.50	245	P	Pn	13 04 55.6	+0.9
NOUC	Port Laguerre	2.63	245	P	Pn	13 04 58.2	+1.8
DVP	Devils Point	3.33	349	P	Pn	13 05 06.6	+0.6
KOUNC	Koumac, New Ca	4.32	275	P	Pn	13 05 21.5	+1.9
SANVU	Saraoutou	5.76	344	P	Pn	13 05 40.0	+0.6
WRA	Warramunga Arr	32.34	266	P	P	13 10 42.6	-0.4
	0.4nm,1.0s,baz=104,slow=8.7,SNR=1.4						
ASAR	Alice Springs	32.41	259	P	P	13 10 45.0	+1.3
	0.2nm,0.6s,baz=78,slow=8.5,SNR=12						
ILAR	Eielson Array	92.02	17	P	P	13 17 21.0	-0.7
	0.5nm,0.9s,baz=240,slow=5.0,SNR=5.8						

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*IASPEI **12** 13:16:19.6±0.9, 44°.16N±0°.02×122°.92W±0°.02, h18^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.0km az=124.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SEA **12** 13:16:19.7±1.5, 44°.152N±0°.010×122°.90W±0°.02, h8^{km}±6^{km}, ML2.7/57, ML2.4/22(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=93.0*

*ANF **12** 13:16:19.3±0.2, 44°.15N×122°.90W, h13^{km}±2^{km}, ML2.6/12, Error ellipse: s-maj=2.1km s-min=1.3km az=112.0*

*NEIC **12** 13:16:20.1±2.7, 44°.16N±0°.02×122°.91W±0°.03, h20^{km}±5^{km}, Error ellipse: s-maj=3.6km s-min=2.2km az=127.0*

ISC 12 13:16:19.8±0.8, 44°.16N±0°.02×122°.92W±0°.02, h17^{km}±7^{km}, n65, σ0s.93/80, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUCK	Buck Mountain	0.06	310		Pg	13 16 23.9	+0.8
ALVY	Alvey	0.17	204		Pb	13 16 24.0	-0.6
LANE	Lane BPA Site-	0.25	245		Pg	13 16 25.4	0.0
LANE					Sb	13 16 29.8	-0.1
BROR	Big Rock Looko	0.35	72		Pg	13 16 26.6	-0.6
H04D	Lebanon	0.39	19	P	Pg	13 16 27.2	-0.7
	baz=197,SNR=123						
H04D				S	Sg	13 16 32.9	-0.3
	baz=197						
H04D	Lebanon	0.39	19		Pg	13 16 27.3	-0.6
H04D					Sg	13 16 33.1	-0.2
COR	Corvallis	0.51	327		Sb	13 16 37.8	+0.3
COR	Corvallis	0.51	327		Pg	13 16 29.6	-0.4
COR	Corvallis	0.51	327	IAML		13 16 38.1	
	329nm,0.8s						
COR				IAML		13 16 38.2	
	231nm,0.5s						
I04A	Tendick Farm,	0.52	135	P	Pg	13 16 29.3	-0.8
	baz=316,SNR=126						
I04A				S	Sg	13 16 36.4	-0.6
	baz=316						
I04A	Tendick Farm,	0.52	135		Pg	13 16 29.5	-0.6
I04A					Sg	13 16 36.5	-0.6
I03D	Drain, OR	0.56	214	P	Pg	13 16 30.2	-0.6
	baz=35,SNR=87						
I03D				S	Sg	13 16 38.1	-0.1
	baz=35						
I03D	Drain, OR	0.56	214		Pg	13 16 30.2	-0.6
I03D					Sg	13 16 38.4	+0.1
RNO	Roman Nose	0.64	248		Pb	13 16 32.4	-0.3
HSO	Harness Mounta	0.64	191		Pb	13 16 31.9	-0.7
PRLK	Prince Lake	0.69	85		Pb	13 16 32.9	-0.6
PRLK					Sb	13 16 42.7	-0.1
H04A	Detroit Lake	0.74	45		Pb	13 16 33.2	-1.2
H04A					Sb	13 16 42.9	-1.4
H04A	Detroit Lake	0.74	45	Pg	Pb	13 16 33.0	-1.3
MOON	Moon Mountain	0.91	96		Pb	13 16 37.0	-0.1
TCBUT	Trout Creek Bu	0.91	84		Pg	13 16 37.7	+0.2
DBO	Dodson Butte	1.06	193		Pb	13 16 38.9	-0.9
DBO					Sn	13 16 54.2	-0.3
J04D	Umpqua Nationa	1.09	147	P	Pb	13 16 40.1	-0.3
	baz=328,SNR=10						
J04D				S	Sb	13 16 54.9	+0.6
	baz=328						
J04D	Umpqua Nationa	1.09	147		Pg	13 16 41.6	+0.7
G04A	Mulino	1.09	17		Pb	13 16 39.3	-1.0
I05D	Terrebonne, OR	1.15	80	P	Pn	13 16 41.0	-0.2
	baz=261,SNR=36						
I05D				S	Sb	13 16 56.4	+0.4
	baz=261						
I05D	Terrebonne, OR	1.15	80		Pn	13 16 41.0	-0.2
ASBU	Astronaut Butt	1.17	106		Pn	13 16 41.3	-0.3
KWBU	Kawak Butte, N	1.23	109		Pb	13 16 42.9	+0.2
J01E	Myrtle Point	1.24	217	P	Pn	13 16 42.3	-0.1
	baz=37,SNR=47						
SVIC	Surveyors Ice	1.31	113		Pg	13 16 45.0	-0.1
TDH	Tom, Dick, Har	1.39	35		Pn	13 16 44.6	0.0
TMBU	Tom Butte, New	1.40	113		Pn	13 16 45.2	+0.4
PINE	Pine Mountain	1.47	104		Pn	13 16 46.2	+0.4
PINE				IAML		13 17 07.5	
	comp=E,41nm,0.5s						
PINE				IAML		13 17 09.8	
	comp=N,35nm,0.5s						
J05D	Fort Rock, OR	1.50	125	Pb	Pb	13 16 47.0	-0.3
	baz=306						
HIYU	Hiyu Mountain	1.50	31		Pn	13 16 46.4	+0.2
HUMO	Hull Mountain	1.55	181		Pn	13 16 46.9	+0.2
HUMO				IAML		13 17 09.6	
	comp=E,33nm,0.5s						
K02D	Willamette Mer	1.56	201	P	Pn	13 16 47.2	+0.3
	baz=21,SNR=60						
G05D	Wamic, OR	1.58	46	Pb	Pb	13 16 48.3	-0.2
	baz=226,SNR=73						
G05D				Sb	Sb	13 17 09.6	+1.4
	baz=226						
G05D	Wamic, OR	1.58	46		Pb	13 16 48.5	0.0
VLL	Laurance Lake	1.58	34		Pb	13 16 48.3	-0.3
CROR	Criterion Ridg	1.61	58		Pb	13 16 48.6	-0.5
VIPM	Ingram Point	1.69	77		Pb	13 16 49.9	-0.7
MTMW	Mount Mitchell	1.93	15		Pb	13 16 53.6	-1.1
LVP	Lakeview Peak	1.94	11		Pn	13 16 53.6	+1.4
L04D	Klamath Falls	1.99	167	Pb	Pb	13 16 54.8	-0.9
	baz=348						
L04D				Sb	Sb	13 17 21.3	+1.1
	baz=348						
L04D	Klamath Falls	1.99	167		Pb	13 16 55.0	-0.7
F05D	White Salmon	2.01	30	Pb	Pb	13 16 55.7	-0.3
	baz=211						
F05D				Sb	Sb	13 17 22.1	+1.3
	baz=211						
K05A	Summer Lake	2.06	133	Pn	Pn	13 16 54.4	+0.6
JLK	June Lake	2.06	15		Pb	13 16 57.7	+0.8
FL2	Flat Top 2	2.08	11		Pb	13 16 55.9	-1.3
SWF2	Southwest Flan	2.08	14		Pb	13 16 56.1	-1.1
STD	Studebaker Rid	2.14	13		Pb	13 16 58.1	0.0
B202	Windy Ridge, M	2.16	15		Pn	13 16 57.0	+1.8
ASR	Mount Adams--S	2.20	25		Pb	13 16 58.7	-0.6
E03A	Lebam	2.43	349	Pn	Pn	13 16 59.7	+1.0
E03A				IAML		13 17 43.2	
	comp=E,34nm,0.8s						
I07A	Izee	2.46	91	Pn	Pn	13 16 59.4	+0.1
M04C	Macdoel	2.50	161	Pb	Pb	13 17 03.4	-1.0
	baz=342						
M04C				Sb	Sb	13 17 36.9	+2.0
	baz=342						
LON	Longmire	2.71	16		Pn	13 17 03.0	+0.4
LON				IAML		13 17 44.9	
	comp=E,13nm,1.1s						
LON				IAML		13 17 46.9	
	comp=N,11nm,0.9s						
KRMB	Red Mountain	2.73	196	Pn	Pn	13 17 03.5	+0.5
KRMB				IAML		13 17 53.8	
	comp=E,15nm,3.9s						
KRMB				IAML		13 18 24.4	
	comp=N,17nm,4.0s						
M02C	Callahan	2.76	179	Pb	Pb	13 17 08.1	-0.8
	baz=359						
CPW	Capitol Peak	2.82	357		Pn	13 17 05.0	+0.8
E07A	Sunnyside	3.23	41	Pn	Pn	13 17 10.5	+0.7
LTY	Liberty	3.48	26	Pn	Pn	13 17 13.9	+0.7
LTY				IAML		13 18 09.6	
	comp=E,7.1nm,2.7s						
LTY				IAML		13 18 29.8	
	comp=N,7.4nm,4.9s						
C06D	Leavenworth	4.02	20		Pb	13 17 27.5	-2.7
OD2	Odessa Site #2	4.37	41		Pn	13 17 29.6	+4.1

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*MOS **12** 14:05:23.1±1.1, 50°.65N×156°.25E, h123^{km}, mb3.7/2, Error ellipse: s-maj=19.4km s-min=4.6km az=72.7*

*KRSC **12** 14:05:24.9±1.4, 50°.68N×156°.96E, h125^{km}±12^{km}, ML4.3*

*IDC **12** 14:05:26.7±2.0, 50°.97N×156°.45E, h144^{km}±15^{km}, mb3.1/13, mb1 3.4/14, mb1mx3.3/37, mbtmp3.5/14, Error ellipse: s-maj=23.2km s-min=14.3km az=161.0*

ISC 12 14:05:24.9±0.8, 50°.72N±0°.07×156°.72E±0°.06, h137^{km}±5^{km}, n89, σ1s.34/106, mb3.4/15, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.39	266	⇑iPN	Pn	14 05 44.7	+0.6
SKR				eS	Sn	14 05 58.2	-0.5
SKR				pmax	pmax		
	comp=Z,252nm,0.3s						
SKR				smax	smax		
	comp=N,5μm,0.3s						
SKR				smax	smax		
	comp=E,4μm,0.2s						
SKR	Severo-Kuril's	0.39	266	eP	Pn	14 05 44.6	+0.5
SKR				eS	Sn	14 05 58.4	-0.3
PAU	Pauzhetka	0.76	4	PN	Pn	14 05 46.8	+0.5
PAU				S	Sn	14 06 04.7	+2.0
PAU	Pauzhetka	0.76	4	eP	Pn	14 05 46.8	+0.5
PAU				eS	Sn	14 06 04.7	+2.0
ALID	Alaid	0.76	282	PN	Pn	14 05 47.2	+0.6
ALID				S	Sn	14 06 02.8	-0.2
ALID	Alaid	0.76	282	eP	Pn	14 05 47.2	+0.6
ALID				eS	Sn	14 06 02.8	-0.2
KDTR	Khodutka, Kamc	1.39	37	PN	Pn	14 05 52.1	-0.1
KDTR				S	Sn	14 06 11.5	-1.5
KDTR	Khodutka, Kamc	1.39	37	eP	Pn	14 05 52.1	-0.1
KDTR				eS	Sn	14 06 11.5	-1.5
MIPR	Malaya Ipel'ka	1.56	1	PN	Pn	14 05 54.9	+0.8
MIPR				S	Sn	14 06 16.8	+0.3
MIPR	Malaya Ipel'ka	1.56	1	eP	Pn	14 05 54.9	+0.8
MIPR				eS	Sn	14 06 16.8	+0.3
ASAK	Asacha	1.82	23	PN	Pn	14 05 58.0	+0.8
ASAK				S	Sn	14 06 22.3	+0.3
ASAK	Asacha	1.82	23	eP	Pn	14 05 58.0	+0.8
ASAK				eS	Sn	14 06 22.3	+0.3
MTVR	Mutnovka	1.99	27	PN	Pn	14 06 00.0	+0.8
MTVR				S	Sn	14 06 25.7	+0.1
MTVR	Mutnovka	1.99	27	eP	Pn	14 06 00.0	+0.8
MTVR				eS	Sn	14 06 25.7	+0.1
GRL	Gorelyy	2.02	24	PN	Pn	14 06 00.7	+1.1
GRL				S	Sn	14 06 26.7	+0.5
GRL	Gorelyy	2.02	24	eP	Pn	14 06 00.7	+1.1
GRL				eS	Sn	14 06 26.7	+0.5
RUS	Russkaya	2.05	32	PN	Pn	14 05 59.9	+0.2
RUS	Russkaya	2.05	32	eP	Pn	14 05 59.9	+0.2
APC	Apacha	2.23	7	PN	Pn	14 06 02.6	+0.7
APC	Apacha	2.23	7	eP	Pn	14 06 02.6	+0.7
KRMR	Karymshinskiy	2.29	22	PN	Pn	14 06 04.2	+1.5
KRMR	Karymshinskiy	2.29	22	eP	Pn	14 06 04.2	+1.5
PEA0B	Petropavlovsk-	2.47	14	i PN	Pn	14 06 05.6	+0.7
PETK	Petropavlovsk-	2.47	14	P	Pn	14 06 05.9	+0.9
	comp=E,2.6nm,0.3s,baz=173,slow=11,SNR=242						
PETK				S	Sn	14 06 34.2	-1.7
	comp=E,3.0nm,0.3s,baz=174,slow=16,SNR=6.9						
PET	Petropavlovsk	2.60	27	PN	Pn	14 06 07.2	+0.6
PET				S	Sn	14 06 38.2	-0.5
PET	Petropavlovsk	2.60	27	eP	Pn	14 06 07.2	+0.6
PET				eS	Sn	14 06 38.2	-0.5
DALK	Dalny	2.64	28	PN	Pn	14 06 07.7	+0.7
DALK				S	Sn	14 06 38.6	-0.9
DALK	Dalny	2.64	28	eP	Pn	14 06 07.7	+0.7
DALK				eS	Sn	14 06 38.6	-0.9
UGLR	Uglovaya	2.82	27	PN	Pn	14 06 10.9	+1.5
UGLR				S	Sn	14 06 44.4	+0.6
UGLR	Uglovaya	2.82	27	eP	Pn	14 06 10.9	+1.5
UGLR				eS	Sn	14 06 44.4	+0.6
KOK	Koryaka	2.84	24	PN	Pn	14 06 11.6	+1.9
KOK	Koryaka	2.84	24	eP	Pn	14 06 11.6	+1.9
AVH	Avacha	2.84	25	PN	Pn	14 06 11.5	+1.8
AVH	Avacha	2.84	25	eP	Pn	14 06 11.5	+1.8
SMAR	Somma	2.86	26	PN	Pn	14 06 11.4	+1.4
SMAR	Somma	2.86	26	eP	Pn	14 06 11.4	+1.4
KRER	Koryakskii	2.88	25	PN	Pn	14 06 11.8	+1.5
KRER	Koryakskii	2.88	25	eP	Pn	14 06 11.8	+1.5
KRX	Arik	2.90	23	PN	Pn	14 06 12.1	+1.6
KRX				S	Sn	14 06 46.6	+0.8
KRX	Arik	2.90	23	eP	Pn	14 06 12.1	+1.6
KRX				eS	Sn	14 06 46.6	+0.8
NLC	Nalytchevo	2.95	32	PN	Pn	14 06 10.6	-0.3
NLC				S	Sn	14 06 43.7	-2.8
NLC	Nalytchevo	2.95	32	eP	Pn	14 06 10.6	-0.3
NLC				eS	Sn	14 06 43.7	-2.8
GNL	Ganaly	3.08	14	PN	Pn	14 06 14.0	+1.2
GNL	Ganaly	3.08	14	eP	Pn	14 06 14.0	+1.2
SPN	Mys Shipunski	3.14	39	PN	Pn	14 06 13.8	+0.3
SPN	Mys Shipunski	3.14	39	eP	Pn	14 06 13.8	+0.3
SPN				eS	Sn	14 06 48.1	-3.0
KZV	Kizimen	4.91	25	PN	Pn	14 06 38.0	+1.2
KZV	Kizimen	4.91	25	eP	Pn	14 06 38.0	+1.2
TUMR	Tumrok	5.02	23	PN	Pn	14 06 41.1	+2.8
TUMR	Tumrok	5.02	23	eP	Pn	14 06 41.1	+2.8
ESO	Esso	5.35	12	PN	Pn	14 06 44.8	+2.2
ESO	Esso	5.35	12	eP	Pn	14 06 44.8	+2.2
SRDR	Sredinnyy	5.89	16	PN	Pn	14 06 51.6	+1.7
SRDR	Sredinnyy	5.89	16	eP	Pn	14 06 51.6	+1.7
KBTR	Krutoberegovo	6.60	31	PN	Pn	14 07 00.0	+0.7
KBTR	Krutoberegovo	6.60	31	eP	Pn	14 07 00.0	+0.7
KBG	Krutoberegovo	6.60	30	PN	Pn	14 07 01.1	+1.8
KBG	Krutoberegovo	6.60	30	eP	Pn	14 07 01.1	+1.8
SEY	Seymchan	12.47	351	P	P	14 08 23.7	+0.1
	comp=E,0.2nm,0.3s,baz=154,slow=13,SNR=7.0						
YAK	Yakutsk	18.61	318	P	P	14 09 30.1	-1.2
	comp=E,0.1nm,0.3s,baz=43,slow=1.0,SNR=4.9						
YAK	Yakutsk	18.61	318	i P	P	14 09 29.5	-1.8
MAJO	Matsushiro	19.42	230	i P	P	14 09 34.9	-5.5
MAJO				pmax	pmax		
	comp=Z,11nm,1.2s						
TIXI	Tiksi	24.47	339	i P	P	14 10 27.8	-2.8
H11N2	WAKE ISLAND Hy	31.95	162	T	T	14 45 41.9	
	baz=348,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	31.97	162	T	T	14 45 42.6	
	baz=348,slow=76,SNR=10.0						
H11N3	WAKE ISLAND Hy	31.97	162	T	T	14 45 42.6	
	baz=348,slow=76,SNR=16						
ILAR	Eielson Array	31.98	42	P	P	14 11 36.2	-1.3
	comp=Z,0.5nm,0.6s,baz=263,slow=6.1,SNR=10						
SONM	Songino Array	32.45	285	P	P	14 11 41.4	-0.5
	comp=Z,0.3nm,0.6s,baz=74,slow=8.2,SNR=2.5						
H11S1	WAKE ISLAND Hy	33.10	162	T	T	14 47 01.9	
	baz=348,slow=76,SNR=44						
H11S3	WAKE ISLAND Hy	33.11	163	T	T	14 47 00.3	
	baz=348,slow=76,SNR=50						
H11S2	WAKE ISLAND Hy	33.12	162	T	T	14 47 00.9	
	baz=348,slow=76,SNR=20						
YKA	Yellowknife Ar	46.33	40	P	P	14 13 38.0	+1.6
	comp=Z,0.6nm,0.7s,baz=301,slow=7.0,SNR=14						
YKA				PcP	PcP	14 15 09.2	0.0
	comp=Z,0.2nm,0.8s,baz=282,slow=4.0,SNR=2.3						
KURK	Kurchatov	47.22	302	i P	P	14 13 39.3	-4.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	47.30	296	i P	P	14 13 42.4	-1.9
MKAR	Makanchi Array	47.30	296	P	P	14 13 43.6	-0.7
	comp=Z,0.2nm,0.3s,baz=46,slow=6.3,SNR=14						
MKAR	Makanchi Array	47.30	296	i P	P	14 13 43.7	-0.6
BRVK	Borovoye	50.26	308	i P	P	14 14 01.9	-4.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
CMAR	Chiang Mai Arr	55.62	257	P	P	14 14 47.3	+0.8
	comp=Z,0.5nm,0.7s,baz=23,slow=7.2,SNR=2.2						
NVAR	Mina Array Bea	58.56	66	P	P	14 15 09.5	+2.3
	comp=Z,0.2nm,0.5s,baz=290,slow=5.6,SNR=2.2						
PDAR	Pinedale Array	60.54	58	P	P	14 15 22.8	+2.1
	comp=Z,0.1nm,0.3s,baz=307,slow=3.2,SNR=5.3						
FINES	FINESS Array B	61.45	335	P	P	14 15 24.7	-1.4
	comp=Z,1.6nm,0.7s,baz=70,slow=8.0,SNR=3.7						
NOA	NORSAR Array B	65.21	342	P	P	14 15 49.7	-1.3
	comp=Z,0.6nm,0.6s,baz=33,slow=8.9,SNR=2.5						
AKASG	Malin Array Be	69.53	327	P	P	14 16 16.6	-1.7
	comp=Z,0.2nm,0.3s,baz=35,slow=6.5,SNR=2.0						
WRA	Warramunga Arr	73.06	202	P	P	14 16 40.7	+0.9
	comp=Z,0.4nm,0.9s,baz=17,slow=6.0,SNR=1.9						
TXAR	Lajitas Array	73.53	64	P	P	14 16 43.7	+1.0
	comp=Z,0.2nm,0.5s,baz=314,slow=5.3,SNR=4.1						
ASAR	Alice Springs	76.75	201	P	P	14 17 02.9	+1.9
	comp=Z,0.3nm,0.8s,baz=15,slow=5.3,SNR=4.4						
H03N2	Juan Fernandez	136.33	89	T	T	16 55 35.9	
	baz=314,slow=78,SNR=4.3						
H03N1	Juan Fernandez	136.34	89	T	T	16 55 34.8	
	baz=314,slow=78,SNR=4.3						
H03N3	Juan Fernandez	136.34	89	T	T	16 55 35.9	
	baz=314,slow=78,SNR=3.2						

IDC 12 14:16:46.9±2.6, 7°.39S×154°.76E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.4/39, mbtmp3.4/5, Error ellipse: s-maj=93.1km s-min=29.9km az=123.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.40	236	P	P	14 21 57.7	+0.1
	0.5nm,0.8s,baz=72,slow=13,SNR=2.5						
ASAR	Alice Springs	25.74	229	P	P	14 22 19.1	-0.2
	0.2nm,0.7s,baz=57,slow=10,SNR=1.5						
SONM	Songino Array	69.55	327	P	P	14 27 56.1	-1.7
	0.3nm,0.5s,baz=138,slow=5.4,SNR=2.0						
MKAR	Makanchi Array	83.55	319	P	P	14 29 18.4	+1.4
	0.6nm,0.7s,baz=100,slow=6.3,SNR=7.2						
ILAR	Eielson Array	83.83	22	P	P	14 29 18.1	+0.1
	0.4nm,0.6s,baz=245,slow=5.1,SNR=5.0						

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*IDC **12** 14:22:34.4±3.0, 6°.55S×129°.99E, h112^{km}±40^{km}, mb3.2/1, mb1 3.2/5, mb1mx2.9/57, mbtmp3.5/5, Error ellipse: s-maj=71.4km s-min=22.7km az=89.0*

*NOU **12** 14:22:40.4, 6°.84S×129°.99E, h138^{km}, mb3.6, Banda Sea*

ISC 12 14:22:32.7±1.0, 6°.63S±0°.06×130°.4E±0°.2, h100^{km}, n5, σ3s.46/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.79	9	P	Pn	14 23 58.3	+2.1
	0.4nm,0.3s,baz=180,slow=20,SNR=1.8						
SIJI				S	Sn	14 24 58.3	-2.9
	0.8nm,0.3s,baz=234,slow=22,SNR=7.0						
FITZ	Fitzroy Crossi	12.31	202	P	Pn	14 25 24.5	0.0
	0.1nm,0.3s,baz=29,slow=9.7,SNR=7.9						
FITZ				S	Sn	14 27 30.8	-9.1
	0.1nm,0.3s,baz=354,slow=19,SNR=1.6						
WRA	Warramunga Arr	13.78	164	P	Pn	14 25 45.9	+2.0
	0.1nm,0.3s,baz=347,slow=14,SNR=2.5						
WRA				S	Sn	14 28 13.6	-2.2
	0.3nm,0.3s,baz=339,slow=22,SNR=6.6						
ASAR	Alice Springs	17.28	169	P	Pn	14 26 31.8	+4.0
	0.1nm,0.3s,baz=344,slow=9.9,SNR=21						
ASAR				S	Sn	14 29 35.6	-4.5
	0.0nm,0.3s,baz=348,slow=26,SNR=1.7						
MKAR	Makanchi Array	68.12	327	P	P	14 33 20.4	-1.5
	0.3nm,0.5s,baz=116,slow=8.2,SNR=3.8						

IDC 12 14:29:59.8±4.3, 25°.89S×28°.96E, h0^{km}, mb1 3.1/3, mb1mx2.9/53, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=63.9km s-min=16.4km az=111.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.16	285	Lg	Lg	14 31 46.2	
	7.9nm,0.3s,baz=193,slow=23,SNR=25						
BOSA	Boshof	4.27	230	Pn	Pn	14 31 07.3	+1.1
	0.1nm,0.3s,baz=55,slow=13,SNR=1.2						
BOSA				Pg	Pb	14 31 15.7	-0.1
	0.4nm,0.3s,baz=63,slow=11,SNR=7.2						
BOSA				Sn	Sn	14 31 55.9	-0.8
	0.7nm,0.3s,baz=148,slow=21,SNR=2.1						
BOSA				Lg	Lg	14 32 14.9	
	6.2nm,0.3s,baz=321,slow=13,SNR=16						
I47ZA	BOSHOF INFRASO	4.29	230	i		14 58 35.0	
	baz=56,slow=337,SNR=5.9						
MATP	Matopo	5.46	355	Pn	Pn	14 31 23.0	+0.5
	0.2nm,0.3s,baz=177,slow=18,SNR=6.8						
MATP				Sn	Sn	14 32 28.6	+2.6
	0.7nm,0.3s,baz=270,slow=16,SNR=5.2						
MATP				Lg	Lg	14 32 50.6	
	0.8nm,0.3s,baz=292,slow=21,SNR=5.2						
SUR	Sutherland	9.62	226	Pn	Pn	14 32 21.5	+1.9
	0.1nm,0.3s,baz=52,slow=17,SNR=1.9						
SUR				Sn	Sn	14 34 04.7	-3.8
	0.3nm,0.3s,baz=192,slow=9.2,SNR=2.1						
SUR				Lg	Lg	14 35 01.7	
	0.7nm,0.3s,baz=164,slow=19,SNR=2.0						
I35NA	TSUMEB INFRASO	12.45	300	i		15 49 30.0	
	baz=126,slow=312,SNR=1.6						

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*NORS **12** 14:41:07.2±0.0, 42°.71N×46°.32E, h4^{km}, MPVA3.4*

*MOS **12** 14:41:08.3±0.0, 42°.73N×46°.33E, h6^{km}, MPVA3.3*

*DRS **12** 14:41:09.4±0.0, 42°.74N×46°.31E, h9^{km}, ML2.2/6*

ISC 12 14:41:09.9±1.2, 42°.74N±0°.03×46°.35E±0°.03, h2^{km}±11^{km}, n14, σ1s.33/27, 3C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	Botlikh	0.12	230	⇓iPg	Pg	14 41 11.5	-0.9
	386nm,0.3s						
BTLR				⇓eSg	Sg	14 41 13.1	-0.9
	882nm,0.7s						
DVE	Vedeno	0.27	322	ePg	Pg	14 41 15.2	+0.1
DVE				eSg	Sg	14 41 19.5	+0.8
XNZR	Khunzakh	0.33	128	ePg	Pb	14 41 17.9	-0.7
XNZR				eSg	Sb	14 41 23.9	-0.5
DLMR	Dylym	0.39	32	⇓ePg	Pb	14 41 18.2	-1.3
	104nm,0.2s						
DLMR				⇓eSg	Sb	14 41 25.5	-0.3
	319nm,0.3s						
KRNR	Karanay	0.42	78	⇑iPg	Pb	14 41 19.2	-0.9
	13nm,0.3s						
KRNR				⇑iSg	Sb	14 41 26.7	-0.2
	67nm,0.2s						
DBC	Dubki	0.45	52	⇓iPg	Pb	14 41 19.6	-1.0
	19nm,0.6s						
DBC				⇓eSg	Sb	14 41 27.2	-0.5
	62nm,0.8s						
ARKR	Arakani	0.49	106	⇑iPg	Pb	14 41 20.5	-0.8
	18nm,0.5s						
ARKR				⇓iSg	Sb	14 41 29.2	+0.2
	53nm,0.5s						
GROC	Groznyy	0.61	319	ePg	Pb	14 41 23.0	-0.4
GROC				eSg	Sn	14 41 33.2	-2.8
LGD	Lagodekhi	0.91	185	P	Pb	14 41 27.3	-1.1
LGD				S	Sb	14 41 39.8	-1.2
KMGR	Komgaron	1.14	287	ePg	Pn	14 41 33.9	+1.1
KMGR				eSg	Sn	14 41 51.3	+2.3
DDFL	Dedoflistskaro	1.31	188	P	Pg	14 41 37.4	+2.4
BTKR	Batakoyurt	1.47	296	ePg	Pg	14 41 38.8	+0.7

BTKR				*e*Sg	Sg	14 41 59.8	+2.8
LACR	Lac	1.52	274	*e*Pg	Pg	14 41 38.5	-0.4
LACR				*e*Sg	Sg	14 41 58.6	0.0
DIGR	Digorskoe uzhe	2.04	275	*e*Pg	Pb	14 41 47.1	-0.8
DIGR				*e*Sg	Sg	14 42 14.5	-1.1

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*IDC **12** 14:45:15.9±2.4, 6°.60S×154°.54E, h0^{km}, mb3.7/4, mb1 3.9/6, mb1mx3.5/47, mbtmp3.8/6, ML1.8/1, Error ellipse: s-maj=46.3km s-min=29.2km az=93.0*

ISC 12 14:45:22.8±1.9, **6°.6S**±0°.1×**154°.4E**±0°.2, **h48**^{km}**, n10, σ1^{s}.83**/8**, mb3.6**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.32	314	Pn	Pn	14 46 09.8	-2.5
	7.1nm,0.3s,baz=160,slow=1.9,SNR=12						
KRVT				Sn	Sn	14 46 52.4	+1.9
	8.6nm,0.3s,baz=54,slow=23,SNR=2.7						
PMG	Port Moresby	7.71	249	Pn	Pn	14 47 11.4	-1.1
	0.8nm,0.3s,baz=344,slow=15,SNR=0.8						
WRA	Warramunga Arr	23.57	234	P	P	14 50 29.8	+0.5
	2.1nm,0.7s,baz=56,slow=9.5,SNR=14						
ASAR	Alice Springs	26.00	227	P	P	14 50 51.6	+0.2
	0.3nm,0.5s,baz=58,slow=8.9,SNR=11						
H11S3	WAKE ISLAND Hy	27.74	26	T	T	15 19 12.7	
	baz=207						
H11S2	WAKE ISLAND Hy	27.74	26	T	T	15 19 10.1	
	baz=207						
H11S1	WAKE ISLAND Hy	27.76	26	T	T	15 19 12.3	
	baz=207						
FITZ	Fitzroy Crossi	30.29	245	P	P	14 51 29.5	-0.2
	1.7nm,0.9s,baz=83,slow=16,SNR=1.8						
MKAR	Makanchi Array	82.76	319	P	P	14 57 43.9	+2.1
	0.3nm,0.7s,baz=107,slow=5.0,SNR=2.6						
TORD	Torodi Ar. Bea	152.38	286	PKPbc	PKiKP	15 05 13.8	-1.1
	0.7nm,0.8s,baz=90,slow=0.1,SNR=1.7						

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*ISK **12** 14:45:57.9, 37°.73N×26°.81E, h5^{km}, ML2.6/4*

*DDA **12** 14:46:00.3, 37°.91N×27°.04E, h7^{km}±4^{km}, ML2.0*

ISC 12 14:45:58.5±1.0, **37°.80N**±0°.05×**26°.90E**±0°.09, **h26**^{km}±11^{km}**, n8, σ0^{s}.44**/15**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.25	357	*i* P	Pb	14 46 04.6	-0.3
DGB				*i* S	Sb	14 46 08.8	-0.5
GCAM	G?zelcaml?	0.29	111	PG	Pb	14 46 05.2	-0.2
GCAM				SG	Sb	14 46 10.4	+0.4
GCAM	G?zelcaml?	0.29	111	*i* P	Pb	14 46 05.2	-0.2
GCAM				IAML		14 46 10.0	
	comp=E,180nm,0.2s						
GCAM				*i* S	Sb	14 46 10.6	+0.5
ZEYE	Izmir, Urla-Ze	0.54	325	*e*P	Pn	14 46 10.5	+0.1
ZEYE				*i* S	Sb	14 46 17.6	+0.9
ZEYE				IAML		14 46 20.0	
	comp=N,127nm,0.6s						
URLA	Izmir	0.61	337	PG	Pn	14 46 11.3	-0.1
URLA				SG	Sn	14 46 20.4	0.0
URLA	Izmir	0.61	337	*i* P	Pn	14 46 11.8	+0.3
URLA				*i* S	Sn	14 46 20.1	-0.3
BODT	Bodrum	0.81	156	PG	Pb	14 46 13.4	-0.5
BODT				SG	Sb	14 46 24.8	+0.4
APE	Apeiranthos	1.31	236	PN	Pn	14 46 21.2	+0.1

IDC 12 15:02:19.9±2.1**, 26°.96N**×**143°.69E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.3**/46**, mbtmp3.4**/4**, ML3.1**/1**, Error ellipse: s-maj=41.7km s-min=24.2km az=49.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.35	276	Pn	Pb	15 02 46.5	+0.4
	23nm,0.3s,baz=24,slow=20,SNR=5.9						
JCJ				Sn	Sn	15 03 04.8	+0.1
	31nm,0.3s,baz=37,slow=20,SNR=5.3						
MJAR	Matsushiro Arr	10.63	335	Pn	Pn	15 04 51.6	-1.9
	0.1nm,0.3s,baz=160,slow=11,SNR=8.6						
WRA	Warramunga Arr	47.50	192	P	P	15 10 56.7	-0.2
	0.9nm,0.9s,baz=12,slow=8.5,SNR=4.1						
ASAR	Alice Springs	51.21	192	P	P	15 11 24.9	-0.4
	0.2nm,0.8s,baz=7.3,slow=5.8,SNR=1.9						
MKAR	Makanchi Array	51.60	310	P	P	15 11 28.7	+0.6
	0.1nm,0.4s,baz=95,slow=8.3,SNR=1.8						

IDC 12 15:02:31.8±2.5**, 1°.97N**×**126°.46E, h0**^{km}**, mb3.0**/3**, mb1 3.2**/3**, mb1mx3.1**/42**, mbtmp3.0**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/16**, Error ellipse: s-maj=215.2km s-min=29.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.11	161	P	P	15 07 39.7	+0.2
	0.2nm,0.4s,baz=340,slow=11,SNR=1.5						
ASAR	Alice Springs	26.49	165	P	P	15 08 10.9	-0.1
	0.2nm,0.7s,baz=345,slow=12,SNR=1.7						
ASAR				LR	LR	15 18 32.6	
	comp=Z,39nm,18.5s,baz=182,slow=36						
MKAR	Makanchi Array	58.85	326	P	P	15 12 32.3	-0.1
	0.1nm,0.4s,baz=115,slow=8.5,SNR=2.1						

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*DDA **12** 15:04:08.1, 38°.19N×27°.06E, h7^{km}±1^{km}, ML2.1*

*ISK **12** 15:04:08.1, 38°.19N×27°.06E, h12^{km}, ML2.5/8*

ISC 12 15:04:08.2±0.9, **38°.19N**±0°.02×**27°.05E**±0°.03, **h15**^{km}±8^{km}**, n19, σ0^{s}.47**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.19	224	*i* P	Pb	15 04 12.8	-0.5
DGB				*i* S	Sg	15 04 16.2	+0.6
URLA	Izmir	0.40	296	PG	Pg	15 04 16.2	-0.1
URLA				SG	Sb	15 04 22.9	0.0
URLA	Izmir	0.40	296	*i* P	Pg	15 04 16.3	-0.1
URLA				*i* S	Sb	15 04 22.4	-0.4
ZEYE	Izmir, Urla-Ze	0.43	277	*i* P	Pg	15 04 16.8	-0.1
ZEYE				*i* S	Sb	15 04 23.6	-0.2
ZEYE				IAML		15 04 24.0	
	comp=N,222nm,0.1s						
GCAM	G?zelcaml?	0.51	163	PG	Pg	15 04 18.2	-0.1
GCAM				SG	Sb	15 04 25.6	-0.3
GCAM	G?zelcaml?	0.51	163	*i* P	Pb	15 04 18.4	-0.4
GCAM				*i* S	Sb	15 04 25.9	0.0
GCAM				IAML		15 04 26.0	
	comp=N,161nm,0.2s						
ZEDA	zmir-Bergama	0.78	2	*i* P	Pg	15 04 23.0	-0.4
ZEDA				*i* S	Sg	15 04 32.9	-0.8
DKL	Dikili	0.89	353	PG	Pb	15 04 25.8	+0.4
DKL				SG	Sn	15 04 38.6	-0.2
AKHS	Akhisar	0.92	41	*i* P	Pb	15 04 26.0	+0.2
AKHS				*i* S	Sg	15 04 37.6	-0.4
MLSB	Milas	1.06	147	PG	Pn	15 04 28.7	+0.2
BODT	Bodrum	1.14	169	PN	Pn	15 04 30.4	+0.8
MANT	Manisa	1.23	75	*i* P	Pn	15 04 31.1	+0.1
MANT				*i* S	Sb	15 04 45.8	-1.1
MANT				IAML		15 04 49.0	
	comp=E,43nm,0.2s						
STEP	BALIKESIR_Sava	1.30	24	*i* P	Pb	15 04 32.5	+0.1
STEP				*i* S	Sn	15 04 49.5	+0.6
STEP				IAML		15 04 57.0	
	comp=E,36nm,0.5s						
KULA	Kula-Manisa	1.31	75	PN	Pb	15 04 32.7	+0.1
BUHA	Balikesir, Bur	1.31	1	*i* P	Pb	15 04 32.7	+0.2
BUHA				*i* S	Sg	15 04 50.7	0.0
BUHA				IAML		15 04 55.0	
	comp=N,26nm,0.8s						
SIGR	SIGRI	1.39	318	PN	Pb	15 04 33.9	+0.1
YER	Yerkesik	1.44	137	PN	Pb	15 04 34.5	-0.2
BALB	Balikesir	1.59	24	PN	Pb	15 04 36.8	-0.5
USAK	Uak-Merkez	1.63	71	*i* P	Pb	15 04 38.3	+0.2
USAK				*i* S	Sb	15 04 59.6	+1.1

DJA 12 15:05:45.1±0.3**, 8°S**±4°×**11°5E**±°**, h11**^{km}±3^{km}**, M2.9**/6**, MLv2.9**/6**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.35	218	P	Pg	15 05 52.5	+0.4
DNP				S	Sb	15 05 59.6	+0.7
SRBI	Singaraja	0.38	326	P	Pb	15 05 53.7	-0.2
SRBI				S	Sg	15 05 57.9	+0.2
JAGI	Jajag, Banyuwa	1.27	267	P	Pn	15 06 07.9	-0.9
TWSI	Taliwang, Sumb	1.48	103	P	Pn	15 06 11.4	-0.2
GMJI	Gumukmas	1.97	274	P	Pn	15 06 19.1	+0.7
PLAI	Plampang	2.36	101	P	Pn	15 06 24.3	+0.5
PLAI				Pg	Pg	15 06 29.8	-0.6

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*TAP **12** 15:05:51.5, 24°.10N×122°.99E, h39^{km}, ML2.8, D*

*JMA **12** 15:05:53.9±0.2, 24°.17N×122°.78E, h21^{km}±4^{km}, M2.3*

ISC 12 15:05:53.3±1.0, **24°.14N**±0°.03×**122°.83E**±0°.02, **h25**^{km}±10^{km}**, n63, σ1^{s}.14**/120**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.33	19	P	Pb	15 06 00.8	-0.1
JYNG				S	Sb	15 06 04.9	-1.1
YOJ	Yonaguni jima	0.37	28	P	Pn	15 06 01.5	-1.5
YOJ				S	Sn	15 06 07.1	-2.3
YOJ	Yonaguni jima	0.37	28	P	Pb	15 06 00.6	-0.8
	baz=358						
YOJ				S	Sn	15 06 07.3	-2.0
	baz=358						
IRIF	Iriomote-Funau	0.85	76	P	Pb	15 06 10.1	+0.6
IRIF				S	Sn	15 06 22.2	+0.9
HATJ	Hateruma jima	0.90	95	P	Pb	15 06 10.9	+0.6
HATJ				S	Sn	15 06 23.9	+1.4
ENAH	Nanao	0.98	289	*e*P	Pn	15 06 10.7	-0.7
	baz=290						
ENAH				*e*S	Sb	15 06 26.4	+2.3
	baz=290						
TWC	Suao	1.01	298	*e*P	Pn	15 06 11.5	-0.4
	baz=311						
TWC				*e*S	Sb	15 06 25.9	+1.0
	baz=311						
JKRS	Kuro-shima	1.09	84	P	Pb	15 06 14.5	+1.0
JKRS				S	Sb	15 06 29.2	+2.0
NACB	Ninganchiao	1.12	272	*e*P	Pn	15 06 13.3	-0.1
	baz=261						
NACB				*e*S	Sb	15 06 30.2	+1.9
	baz=261						
TWD	Chiawan	1.12	267	*e*P	Pb	15 06 14.7	+0.6
	baz=271						
TWD				*e*S	Sb	15 06 29.3	+1.0
	baz=271						
TWE	Neicheng	1.21	299	P	Pn	15 06 14.4	-0.1
	baz=310						
TWE				*e*S	Sb	15 06 32.3	+1.6
	baz=310						
JIJ	Ishigaki jima	1.22	79	P	Pb	15 06 16.1	+0.3
JIJ				S	Sb	15 06 32.7	+1.5
ETLH	Xiulin Townshi	1.23	274	*e*P	Pn	15 06 15.0	0.0
	baz=277						
ETLH				S	Sb	15 06 32.5	+1.1
	baz=277						
TIPB	Shuangxi	1.23	313	*e*P	Pn	15 06 14.4	-0.6
	baz=311						
TIPB				*e*S	Sb	15 06 31.6	+0.1
	baz=311						
ENTT	Nioudou	1.25	294	*e*P	Pb	15 06 16.4	+0.1
	baz=280						
ENTT				*e*S	Sb	15 06 33.9	+1.9
	baz=280						
NDT	Datong Townshi	1.28	291	*e*P	Pb	15 06 16.2	-0.6
	baz=279						
NDT				*e*S	Sb	15 06 34.6	+1.6
	baz=279						
ESL	Shilin	1.31	256	*e*P	Pn	15 06 15.6	-0.5
	baz=251						
ESL				S	Sn	15 06 32.5	-0.3
	baz=251						
WFSB	Wu-fen Shan	1.33	315	*e*P	Pb	15 06 16.8	-0.9
	baz=312						
NNSB	Datong	1.35	283	*e*P	Pb	15 06 17.5	-0.5
	baz=285						
NNSB				*e*S	Sb	15 06 36.0	+1.1
	baz=285						
NNSH	Datong	1.35	283	*e*P	Pn	15 06 16.5	-0.2
	baz=284						
NNS	Nan Shan	1.36	283	P	Pb	15 06 17.7	-0.5
	baz=285						
NNS				*e*S	Sn	15 06 34.4	+0.3
	baz=285						
NWLT	Wulai	1.36	298	*e*P	Pb	15 06 18.2	0.0
	baz=310						
NWLT				*e*S	Sb	15 06 36.5	+1.2
	baz=310						
YHNB	Yeheng	1.42	292	*e*P	Pb	15 06 19.0	-0.2
	baz=279						
YHNB				*e*S	Sb	15 06 37.6	+0.6
	baz=279						
WHF	Hehuan Shan	1.43	271	*e*P	Pn	15 06 17.9	-0.1
	baz=274						
WHF				S	Sn	15 06 37.3	+1.1
	baz=274						
JISG	Ishigakijimahi	1.43	71	P	Pb	15 06 18.7	-0.6
JISG				S	Sb	15 06 37.8	+0.8
HGSD	Ruisui	1.43	244	*e*P	Pn	15 06 16.2	-1.5
	baz=248						
HGSD				*e*S	Sn	15 06 34.1	-1.7
	baz=248						
NSK	Sanguang	1.44	292	P	Pb	15 06 19.5	-0.1
	baz=280						
NSK				S	Sn	15 06 37.0	+1.0
	baz=280						
FUSS	Fushou	1.45	275	*e*P	Pb	15 06 19.2	-0.6
	baz=278						
FUSS				S	Sb	15 06 38.8	+0.9
	baz=278						
CHGB	Renai	1.51	267	*e*P	Pn	15 06 19.1	+0.1
	baz=271						
CHGB				*e*S	Sn	15 06 38.7	+0.7
	baz=271						
EHY	Hungye	1.51	246	P	Pn	15 06 17.9	-0.9
	baz=250						
EHY				S	Sn	15 06 37.3	-0.5
	baz=250						
TDCB	Techi	1.53	275	*e*P	Pb	15 06 20.5	-0.6
	baz=265						
TDCB				*e*S	Sb	15 06 40.1	+0.1
	baz=265						
YM05	YM05	1.54	312	*e*P	Pn	15 06 20.0	+0.8
	baz=311						
YM05				*e*S	Sb	15 06 39.6	-0.7
	baz=311						
YM04	YM04	1.55	311	*e*P	Pn	15 06 20.0	+0.6
	baz=320						
YM04				*e*S	Sn	15 06 39.7	+1.1
	baz=320						
YULB	Yu-li	1.58	242	*e*P	Pn	15 06 19.1	-0.7
	baz=237						
YULB				*e*S	Sn	15 06 38.8	-0.7
	baz=237						
EYUL	Yuli	1.59	241	P	Pn	15 06 19.1	-0.8
	baz=235						
EYUL				S	Sn	15 06 39.2	-0.4
	baz=235						
TWY	Chenhua	1.59	316	*e*P	Pn	15 06 18.7	-1.2
	baz=314						
TWF1	Yuli	1.60	241	*e*P	Pn	15 06 19.2	-0.9
	baz=236						
TWF1				*e*S	Sn	15 06 39.9	-0.1
	baz=236						
FULB	Fuli	1.69	237	*e*P	Pn	15 06 20.1	-1.1
	baz=232						
FULB				*e*S	Sn	15 06 40.4	-1.7
	baz=232						
WHP	Taichung City	1.72	275	*e*P	Pb	15 06 23.9	-0.5
	baz=267						
WHP				*e*S	Sb	15 06 45.5	-0.1
	baz=267						
LIOB	Emei	1.73	287	*e*P	Pb	15 06 23.2	-1.2
	baz=289						
LIOB				*e*S	Sb	15 06 45.9	+0.3
	baz=289						
NSTT	Nanjuang	1.73	287	*e*P	Pb	15 06 23.5	-1.0
	baz=289						
NSTT				*e*S	Sb	15 06 45.8	-0.1
	baz=289						
SSLB	Suanglung	1.75	259	*e*P	Pn	15 06 21.9	-0.1
	baz=263						
SSLB				*e*S	Sn	15 06 44.0	+0.4
	baz=263						
SMLT	Sun Moon Lake	1.78	262	*e*P	Pn	15 06 23.1	+0.5
	baz=266						
SMLT				*e*S	Sn	15 06 45.7	+1.2
	baz=266						
JTJ	Tarama	1.78	73	P	Pb	15 06 24.8	-0.6
JTJ				S	Sb	15 06 46.7	-0.6
EDH	Donghe	1.81	231	S	Sn	15 06 42.3	-2.8
	baz=227						
WHYT	Xinyi Township	1.86	257	*e*P	Pn	15 06 24.0	+0.4
	baz=249						
WHYT				*e*S	Sn	15 06 48.0	+1.7
	baz=249						
ELDTW	Lidau	1.91	241	P	Pn	15 06 23.0	-1.4
	baz=244						
ELDTW				S	Sn	15 06 45.4	-2.2
	baz=244						
WJS	Zhushan	1.94	261	*e*P	Pn	15 06 26.1	+1.3
	baz=265						
WJS				*e*S	Sb	15 06 52.0	+0.1
	baz=265						
ALS	Alishan	1.95	252	P	Pn	15 06 25.3	+0.2
	baz=255						
ALS				S	Sn	15 06 48.5	-0.5
	baz=255						
CHN5	Tsauling	2.04	255	*e*P	Pn	15 06 27.4	+1.2
	baz=249						
CHN5				*e*S	Sb	15 06 53.3	-1.4
	baz=249						
TWGBT	Beinan	2.07	231	*e*P	Pn	15 06 25.9	-0.6
	baz=226						
TWGBT				*e*S	Sn	15 06 50.3	-1.2
	baz=226						
STYT	Tauyuan	2.13	243	*e*P	Pn	15 06 27.9	+0.5
	baz=238						
STYT				S	Sn	15 06 53.5	+0.5
	baz=238						
TPUB	Ta-pu	2.18	248	P	Pn	15 06 29.5	+1.5
	baz=243						
TPUB				S	Sn	15 06 56.5	+2.3
	baz=243						
CHN4	Tsaushan	2.19	250	*e*P	Pb	15 06 31.0	-1.3
	baz=243						
CHN4				*e*S	Sb	15 06 58.8	-0.2
	baz=243						
WTP	Ta-pu	2.21	247	*e*P	Pn	15 06 30.3	+1.8
	baz=242						
WTP				*e*S	Sb	15 06 58.3	-1.4
	baz=242						
SLGT	Liugui	2.30	241	*e*P	Pn	15 06 31.1	+1.4
	baz=237						
SLGT				*e*S	Sn	15 06 58.8	+1.6
	baz=237						
CHN1	Nanshi	2.31	246	*e*P	Pn	15 06 31.0	+1.2
	baz=241						
CHN1				*e*S	Sn	15 07 00.1	+2.7
	baz=241						
SGST	Jiashian	2.31	243	*e*P	Pn	15 06 31.1	+1.3
	baz=237						
SGST				*e*S	Sn	15 06 59.4	+1.9
	baz=237						
TWK	Hsinying	2.31	248	*e*P	Pn	15 06 31.7	+1.9
	baz=251						
TWK				*e*S	Sb	15 07 00.8	-1.8
	baz=251						
SSD	Sandimen	2.44	236	*e*P	Pn	15 06 32.1	+0.5
	baz=233						
SSD				*e*S	Sn	15 06 60.0	-0.7
	baz=233						
ICHU	Yijhu	2.46	252	*e*P	Pn	15 06 33.0	+1.2
	baz=254						
TSMG	Majia	2.46	235	*e*P	Pn	15 06 31.5	-0.3
	baz=233						
TSMG				*e*S	Sn	15 06 59.1	-2.0
	baz=233						
MASBT	Mashibuluo	2.52	233	*e*S	Sn	15 07 01.8	-0.8
	baz=231						

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*IDC **12** 15:06:30.0±2.0, 1°.03N×126°.62E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.5/3, Error ellipse: s-maj=169.8km s-min=25.6km az=66.0*

*NEIC **12** 15:06:38.0±1.5, 1°.0N±0°.2×126°.63E±0°.04, h70^{km}±10^{km}, mb4.0/8, Error ellipse: s-maj=27.4km s-min=5.9km az=182.0*

ISC 12 15:06:35.4±0.9, **0°.9N**±0°.2×**126°.3E**±0°.2**, h39**^{km}**, n14, σ0^{s}.60**/13**, mb3.9**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.06	96	Pn	Pn	15 06 53.6	0.0
TNTI	Ternate	1.06	96	P	Pn	15 06 53.9	+0.2
TOLI2	Tolitoli	5.54	272	Pn	Pn	15 08 02.0	+6.7
WB0	Warramunga Arr	21.99	159	P	P	15 11 26.2	-0.1
WB0				IAmb	IAmb	15 11 28.5	
	comp=Z,3.6nm,0.7s						
WRA	Warramunga Arr	22.14	160	P	P	15 11 27.4	-0.5
	comp=Z,1.8nm,0.6s,baz=339,slow=11,SNR=12						
WR0	Warramunga Arr	22.22	159	P	P	15 11 28.1	-0.7
WR0				IAmb	IAmb	15 11 48.5	
	comp=Z,6.3nm,1.1s						
AS31	Alice Springs	25.49	164	P	P	15 12 01.0	+0.8
ASAR	Alice Springs	25.49	164	P	P	15 12 01.0	+0.8
	comp=Z,0.4nm,0.4s,baz=346,slow=12,SNR=14						
MK31	Makanchi Array	59.67	326	P	P	15 16 36.2	+0.4
MK31				IAmb	IAmb	15 16 44.8	
	comp=Z,1.4nm,1.2s						
MKAR	Makanchi Array	59.67	326	P	P	15 16 36.5	+0.6
	comp=Z,0.2nm,0.4s,baz=118,slow=7.2,SNR=5.5						
MAKZ	Makanchi	59.85	326	P	P	15 16 37.4	+0.3
MAKZ				IAmb	IAmb	15 16 46.0	
	comp=Z,3.0nm,1.4s						
KURK	Kurchatov	63.92	328	P	P	15 17 03.6	-0.7
KURK				IAmb	IAmb	15 17 22.8	
	comp=Z,2.1nm,1.2s						
HRA	Herat	68.28	307	P	P	15 17 33.1	+0.2
ABKAR	Akbulak array	74.09	321	P	P	15 18 07.0	-0.5

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*TAP **12** 16:05:52.7, 24°.10N×122°.97E, h40^{km}, ML3.7, D*

*JMA **12** 16:05:54.0±0.1, 24°.14N×122°.78E, h18^{km}±2^{km}, M3.3*

ISC 12 16:05:52.0±1.0, **24°.09N**±0°.02×**122°.85E**±0°.01, **h14**^{km}±9^{km}**, n128, σ0^{s}.98**/246**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.37	14	P	Pn	16 06 01.2	-1.8
JYNG				S	Sb	16 06 06.4	+0.3
YOJ	Yonaguni jima	0.40	22	P	Pn	16 06 01.9	-1.4
YOJ				S	Sb	16 06 07.3	+0.4
YOJ	Yonaguni jima	0.40	22	P	Pn	16 06 02.0	-1.4
	baz=1.0						
YOJ				S	Sn	16 06 08.7	-2.0
	baz=1.0						
IRIF	Iriomote-Funau	0.84	73	P	Pn	16 06 10.4	+0.9
IRIF				S	Sn	16 06 22.3	+0.7
HATJ	Hateruma jima	0.88	92	P	Pn	16 06 11.6	+1.7
HATJ				S	Sn	16 06 24.4	+1.9
ENAH	Nanao	1.01	291	P	Pb	16 06 11.0	-0.3
	baz=290						
ENAH				*e*S	Sn	16 06 26.5	+0.6
	baz=290						
TWC	Suao	1.05	300	P	Pb	16 06 11.8	-0.2
	baz=287						
TWC				*e*S	Sn	16 06 26.6	-0.1
	baz=287						
JKRS	Kuro-shima	1.07	82	P	Pn	16 06 14.6	+2.0
JKRS				S	Sn	16 06 29.7	+2.4
HWA	Hwalien	1.14	265	*e*P	Pb	16 06 13.9	+0.4
	baz=266						
HWA				*e*S	Sg	16 06 30.1	+1.2
	baz=266						
TWD	Chiawan	1.14	270	*e*P	Pn	16 06 13.6	0.0
	baz=271						
TWD				*e*S	Sb	16 06 28.9	+0.6
	baz=271						
NACB	Ninganchiao	1.15	275	P	Pb	16 06 13.9	+0.3
	baz=262						
NACB				*e*S	Sg	16 06 30.0	+0.9
	baz=262						
NTC	Toucheng	1.20	310	*e*P	Pg	16 06 14.7	-0.4
	baz=320						
NTC				*e*S	Sb	16 06 29.8	-0.1
	baz=320						
TWB1	Santiao Chiao	1.21	320	*e*P	Pg	16 06 15.9	+0.6
	baz=328						
TWB1				S	Sb	16 06 29.6	-0.5
	baz=328						
ILA	Ilan	1.21	304	*e*P	Pg	16 06 15.6	+0.3
	baz=314						
ILA				S	Sg	16 06 30.8	-0.2

	baz=314						
JIJ	**Ishigaki jima**	**1.21**	**77**	P	**Pg**	**16 06 16.5**	**+1.1**
JIJ				S	**Sg**	**16 06 33.1**	**+1.9**
TWE	**Neicheng**	**1.25**	**301**	P	**Pb**	**16 06 15.4**	**+0.1**
	baz=309						
TWE				S	**Sb**	**16 06 30.8**	**-0.5**
	baz=309						
ETLH	**Xiulin Townshi**	**1.25**	**276**	*e*P	**Pb**	**16 06 15.4**	**-0.1**
	baz=276						
ETLH				S	**Sb**	**16 06 31.8**	**+0.2**
	baz=276						
TIPB	**Shuangxi**	**1.28**	**314**	*e*P	**Pg**	**16 06 17.6**	**+0.9**
	baz=311						
TIPB				S	**Sg**	**16 06 32.9**	**-0.5**
	baz=311						
ENTT	**Nioudou**	**1.29**	**295**	*i* P	**Pg**	**16 06 16.5**	**-0.4**
	baz=281						
ENTT				*e*S	**Sg**	**16 06 34.9**	**+1.2**
	baz=281						
NDT	**Datong Townshi**	**1.32**	**293**	*e*P	**Pb**	**16 06 16.8**	**+0.2**
	baz=280						
NDT				*e*S	**Sg**	**16 06 35.4**	**+0.8**
	baz=280						
ESL	**Shilin**	**1.32**	**258**	P	**Pn**	**16 06 15.3**	**-0.8**
	baz=251						
ESL				S	**Sn**	**16 06 33.6**	**+0.1**
	baz=251						
EGFH	**Guangfu**	**1.36**	**252**	*e*P	**Pb**	**16 06 17.7**	**+0.3**
	baz=242						
EGFH				S	**Sn**	**16 06 34.9**	**+0.3**
	baz=242						
NNSB	**Datong**	**1.38**	**285**	P	**Pb**	**16 06 17.7**	**+0.1**
	baz=285						
NNSB				*e*S	**Sg**	**16 06 37.5**	**+1.0**
	baz=285						
NNSH	**Datong**	**1.38**	**285**	*e*P	**Pb**	**16 06 17.8**	**+0.2**
	baz=284						
NNSH				*e*S	**Sb**	**16 06 35.8**	**+0.6**
	baz=284						
WFSB	**Wu-fen Shan**	**1.38**	**315**	*e*P	**Pg**	**16 06 19.1**	**+0.5**
	baz=313						
WFSB				*e*S	**Sg**	**16 06 36.7**	**+0.2**
	baz=313						
NNS	**Nan Shan**	**1.39**	**285**	P	**Pb**	**16 06 18.3**	**+0.4**
	baz=285						
NNS				S	**Sn**	**16 06 35.5**	**+0.1**
	baz=285						
NWLT	**Wulai**	**1.41**	**300**	*e*P	**Pg**	**16 06 18.6**	**-0.4**
	baz=310						
NWLT				*e*S	**Sg**	**16 06 36.6**	**-0.7**
	baz=310						
JISG	**Ishigakijimahi**	**1.42**	**69**	P	**Pg**	**16 06 19.0**	**-0.4**
JISG				S	**Sg**	**16 06 38.9**	**+1.0**
HGSD	**Ruisui**	**1.43**	**246**	*e*P	**Pn**	**16 06 17.4**	**-0.2**
	baz=248						
HGSD				S	**Sn**	**16 06 34.9**	**-1.4**
	baz=248						
WHF	**Hehuan Shan**	**1.45**	**273**	*e*P	**Pn**	**16 06 18.5**	**+0.3**
	baz=274						
WHF				S	**Sb**	**16 06 37.9**	**+0.5**
	baz=274						
TWA	**Mucha**	**1.45**	**308**	P	**Pg**	**16 06 20.5**	**+0.5**
	baz=307						
TWA				*e*S	**Sb**	**16 06 37.4**	**+0.1**
	baz=307						
YHNB	**Yeheng**	**1.46**	**294**	*i* P	**Pg**	**16 06 19.6**	**-0.5**
	baz=279						
YHNB				*e*S	**Sg**	**16 06 38.9**	**-0.2**
	baz=279						
FUSS	**Fushou**	**1.47**	**277**	P	**Pb**	**16 06 19.8**	**+0.4**
	baz=277						
FUSS				*e*S	**Sb**	**16 06 38.9**	**+0.9**
	baz=277						
NSK	**Sanguang**	**1.48**	**294**	P	**Pb**	**16 06 19.5**	**+0.2**
	baz=280						
NSK				*e*S	**Sb**	**16 06 38.9**	**+0.9**
	baz=280						
NHDH	**Xindian Distri**	**1.49**	**306**	*e*P	**Pg**	**16 06 21.0**	**+0.4**
	baz=317						
NHDH				*e*S	**Sb**	**16 06 38.2**	**0.0**
	baz=317						
EHY	**Hungye**	**1.51**	**248**	P	**Pn**	**16 06 18.5**	**-0.2**
	baz=249						
EHY				S	**Sn**	**16 06 37.8**	**-0.4**
	baz=249						
TATO	**Taipei**	**1.52**	**306**	*e*P	**Pg**	**16 06 21.4**	**+0.1**
	baz=317						
TATO				S	**Sn**	**16 06 38.6**	**+0.2**
	baz=317						
CHGB	**Renai**	**1.53**	**269**	*e*P	**Pb**	**16 06 19.8**	**-0.5**
	baz=271						
CHGB				*e*S	**Sn**	**16 06 39.6**	**+0.7**
	baz=271						
TAP1	**Taipei**	**1.53**	**308**	*e*P	**Pg**	**16 06 21.9**	**+0.4**
	baz=307						
TAP1				*e*S	**Sg**	**16 06 40.5**	**-1.0**
	baz=307						
TWT	**Tachien**	**1.54**	**276**	*e*P	**Pg**	**16 06 21.3**	**-0.2**
	baz=265						
TWT				*e*S	**Sb**	**16 06 40.7**	**+1.0**
	baz=265						
TAP	**Taipei**	**1.55**	**308**	*e*P	**Pb**	**16 06 20.2**	**-0.2**
	baz=307						
TAP				*e*S	**Sg**	**16 06 40.6**	**-1.2**
	baz=307						
TDCB	**Techi**	**1.55**	**276**	*e*P	**Pb**	**16 06 20.5**	**-0.2**
	baz=265						
TDCB				S	**Sb**	**16 06 41.0**	**+0.8**
	baz=265						
YM01	**YM01**	**1.57**	**312**	*e*P	**Pg**	**16 06 22.3**	**+0.1**
	baz=311						
YM01				*e*S	**Sb**	**16 06 40.6**	**0.0**
	baz=311						
YM11	**YM11**	**1.58**	**313**	*e*P	**Pb**	**16 06 21.0**	**0.0**
	baz=311						
YM11				*e*S	**Sb**	**16 06 40.3**	**-0.6**
	baz=311						
YM10	**YM10**	**1.58**	**312**	*e*P	**Pg**	**16 06 21.9**	**-0.5**
	baz=311						
YM10				S	**Sb**	**16 06 41.4**	**+0.5**
	baz=311						
YULB	**Yu-li**	**1.58**	**244**	*e*P	**Pn**	**16 06 19.8**	**+0.1**
	baz=236						
YULB				S	**Sn**	**16 06 39.2**	**-0.8**
	baz=236						
EYUL	**Yuli**	**1.58**	**243**	*e*P	**Pn**	**16 06 19.5**	**-0.2**
	baz=234						
EYUL				*e*S	**Sn**	**16 06 39.8**	**-0.2**
	baz=234						
YM05	**YM05**	**1.58**	**313**	*e*P	**Pg**	**16 06 21.9**	**-0.6**
	baz=311						
YM05				*e*S	**Sg**	**16 06 41.9**	**-1.2**
	baz=311						
YM08	**YM08**	**1.58**	**314**	*e*P	**Pb**	**16 06 21.2**	**+0.1**
	baz=312						
YM08				*e*S	**Sn**	**16 06 40.0**	**0.0**
	baz=312						
YM04	**YM04**	**1.60**	**312**	*e*P	**Pb**	**16 06 21.2**	**-0.2**
	baz=320						
YM04				*e*S	**Sn**	**16 06 40.3**	**0.0**
	baz=320						
TWF1	**Yuli**	**1.60**	**243**	*e*P	**Pn**	**16 06 19.6**	**-0.3**
	baz=235						
TWF1				S	**Sn**	**16 06 40.3**	**0.0**
	baz=235						
YM03	**YM03**	**1.61**	**313**	*e*P	**Pb**	**16 06 21.0**	**-0.6**
	baz=311						
YM03				*e*S	**Sn**	**16 06 40.6**	**-0.2**
	baz=311						
ANP	**Anpu**	**1.63**	**312**	*e*P	**Pb**	**16 06 21.3**	**-0.6**
	baz=311						
ANP				*e*S	**Sn**	**16 06 41.4**	**+0.2**
	baz=311						
TWY	**Chenhua**	**1.64**	**316**	*e*P	**Pb**	**16 06 21.4**	**-0.6**
	baz=315						
TWY				*e*S	**Sb**	**16 06 42.0**	**-0.6**
	baz=315						
TWS1	**Kuangyinshan**	**1.65**	**308**	*e*P	**Pb**	**16 06 21.6**	**-0.6**
	baz=307						
TWS1				*e*S	**Sb**	**16 06 43.5**	**+0.8**
	baz=307						
NTST	**Danshui**	**1.66**	**310**	*e*P	**Pb**	**16 06 21.9**	**-0.6**
	baz=309						
NTST				*e*S	**Sb**	**16 06 42.7**	**-0.6**
	baz=309						
FULB	**Fuli**	**1.68**	**238**	*e*P	**Pn**	**16 06 19.6**	**-1.4**
	baz=232						
FULB				*e*S	**Sn**	**16 06 40.7**	**-1.6**
	baz=232						
NTY	**Taoyuan**	**1.68**	**303**	*e*P	**Pn**	**16 06 21.4**	**+0.5**
	baz=312						
NTY				*e*S	**Sb**	**16 06 43.5**	**-0.2**
	baz=312						
CHKT	**Chengkung**	**1.68**	**234**	*e*P	**Pn**	**16 06 19.9**	**-1.1**
	baz=227						
CHKT				*e*S	**Sn**	**16 06 39.8**	**-2.5**
	baz=227						
WPL	**Puli Township**	**1.73**	**268**	*e*P	**Pb**	**16 06 23.4**	**-0.2**
	baz=269						
WPL				*e*S	**Sb**	**16 06 45.5**	**+0.3**
	baz=269						
WHP	**Taichung City**	**1.75**	**277**	*e*P	**Pb**	**16 06 23.4**	**-0.5**
	baz=266						
WHP				*e*S	**Sb**	**16 06 45.9**	**+0.1**
	baz=266						
NCU	**National Centr**	**1.75**	**300**	P	**Pg**	**16 06 25.2**	**-0.4**
	baz=313						
NCU				S	**Sg**	**16 06 47.2**	**-1.2**
	baz=313						
NCUH	**Zhongli**	**1.75**	**300**	*e*P	**Pb**	**16 06 23.7**	**-0.2**
	baz=313						
NCUH				*e*S	**Sb**	**16 06 46.6**	**+0.8**
	baz=313						
SSLB	**Suanglung**	**1.76**	**261**	*e*P	**Pb**	**16 06 23.4**	**-0.7**
	baz=262						
SSLB				*e*S	**Sn**	**16 06 44.9**	**+0.6**
	baz=262						
LIOB	**Emei**	**1.76**	**289**	P	**Pg**	**16 06 25.2**	**-0.6**
	baz=289						
LIOB				S	**Sg**	**16 06 48.3**	**-0.4**
	baz=289						
NSTT	**Nanjuang**	**1.77**	**288**	*e*P	**Pb**	**16 06 23.3**	**-1.0**
	baz=288						
NSTT				S	**Sg**	**16 06 48.4**	**-0.5**
	baz=288						
JTJ	**Tarama**	**1.78**	**72**	P	**Pg**	**16 06 25.1**	**-1.1**
JTJ				*e*S	**Sg**	**16 06 48.4**	**-0.9**
SMLT	**Sun Moon Lake**	**1.79**	**264**	*e*P	**Pb**	**16 06 23.8**	**-0.9**
	baz=265						
SMLT				*e*S	**Sn**	**16 06 46.6**	**+1.3**
	baz=265						
EDH	**Donghe**	**1.80**	**232**	*e*P	**Pn**	**16 06 21.9**	**-0.7**
	baz=227						
EDH				S	**Sn**	**16 06 42.8**	**-2.5**
	baz=227						
HSN1	**Hsinchu**	**1.80**	**293**	*e*P	**Pb**	**16 06 24.9**	**+0.1**
	baz=292						
TYC	**Yuchr**	**1.83**	**265**	*e*P	**Pn**	**16 06 24.0**	**+0.9**
	baz=265						
SBCB	**Hsinchu**	**1.84**	**293**	*e*P	**Pg**	**16 06 26.8**	**-0.5**
	baz=293						
SBCB				*e*S	**Sg**	**16 06 50.0**	**-1.2**
	baz=293						
YUS	**Yu-Shan**	**1.84**	**251**	*e*S	**Sn**	**16 06 46.3**	**-0.6**
	baz=253						
WHYT	**Xinyi Township**	**1.87**	**258**	*e*P	**Pb**	**16 06 25.1**	**-0.9**
	baz=250						
WHYT				*e*S	**Sn**	**16 06 48.6**	**+1.5**
	baz=250						
LDUT	**Ludao**	**1.89**	**222**	*e*P	**Pn**	**16 06 23.7**	**-0.2**
	baz=224						
LDUT				*e*S	**Sn**	**16 06 45.4**	**-2.3**
	baz=224						
ELDTW	**Lidau**	**1.90**	**242**	*e*P	**Pn**	**16 06 23.4**	**-0.8**
	baz=243						
ELDTW				*e*S	**Sn**	**16 06 46.3**	**-1.7**
	baz=243						
TWQ1	**Liyutan**	**1.91**	**278**	*e*P	**Pb**	**16 06 26.9**	**+0.2**
	baz=279						
TWQ1				*e*S	**Sb**	**16 06 50.9**	**+0.5**
	baz=279						
NMLH	**Miaoli**	**1.93**	**284**	*e*P	**Pb**	**16 06 27.6**	**+0.6**
	baz=285						
NMLH				*e*S	**Sb**	**16 06 51.6**	**+0.7**
	baz=285						
NSY	**Sanyi**	**1.93**	**280**	*e*P	**Pb**	**16 06 27.6**	**+0.6**
	baz=281						
NSY				*e*S	**Sb**	**16 06 52.5**	**+1.4**
	baz=281						
ALS	**Alishan**	**1.96**	**253**	*e*P	**Pn**	**16 06 26.3**	**+1.2**
	baz=254						
ALS				*e*S	**Sn**	**16 06 50.2**	**+0.6**
	baz=254						
WJS	**Zhushan**	**1.96**	**263**	*e*P	**Pb**	**16 06 26.5**	**-1.0**
	baz=264						
WJS				*e*S	**Sb**	**16 06 52.8**	**+1.0**
	baz=264						
WWF	**Wufeng**	**1.96**	**269**	*e*S	**Sb**	**16 06 53.3**	**+1.4**
	baz=270						
LONT	**Longtian**	**1.97**	**234**	*e*S	**Sn**	**16 06 48.7**	**-0.8**
	baz=228						
TCU	**Taichung**	**1.98**	**272**	*e*P	**Pb**	**16 06 26.9**	**-1.0**
	baz=274						
TCU				*e*S	**Sb**	**16 06 53.9**	**+1.3**
	baz=274						
WNT	**Mingjian**	**1.99**	**264**	*e*P	**Pb**	**16 06 27.9**	**-0.1**
	baz=266						
WNT				*e*S	**Sb**	**16 06 53.7**	**+1.1**
	baz=266						
WNT1	**Nantou City**	**1.99**	**265**	*e*P	**Pb**	**16 06 28.5**	**+0.5**
	baz=267						
WNT1				*e*S	**Sg**	**16 06 55.1**	**-0.9**
	baz=267						
CHN5	**Tsauling**	**2.05**	**257**	*e*P	**Pb**	**16 06 28.3**	**-0.7**
	baz=248						
CHN5				*e*S	**Sb**	**16 06 54.1**	**-0.2**
	baz=248						
TWGBT	**Beinan**	**2.06**	**232**	*e*P	**Pn**	**16 06 25.9**	**-0.3**
	baz=226						
TWGBT				*e*S	**Sn**	**16 06 50.7**	**-1.0**
	baz=226						
TWG	**Pinlang**	**2.06**	**233**	*e*P	**Pn**	**16 06 26.6**	**+0.4**
	baz=226						
TWG				*e*S	**Sn**	**16 06 51.1**	**-0.7**
	baz=226						
WCHH	**Zhanghua**	**2.09**	**270**	P	**Pb**	**16 06 29.3**	**-0.5**
	baz=272						
WCHH				*e*S	**Sb**	**16 06 55.4**	**-0.2**
	baz=272						
STYT	**Tauyuan**	**2.13**	**245**	*e*P	**Pn**	**16 06 28.2**	**+0.9**
	baz=238						
STYT				S	**Sn**	**16 06 54.4**	**+0.9**
	baz=238						
WGK	**Gukeng**	**2.13**	**260**	*e*P	**Pn**	**16 06 28.7**	**+1.5**
	baz=261						
WGK				*e*S	**Sb**	**16 06 56.8**	**+0.1**
	baz=261						
WDLH	**Douliu**	**2.15**	**260**	*e*P	**Pb**	**16 06 29.3**	**-1.5**
	baz=261						
WDLH				*e*S	**Sb**	**16 06 58.4**	**+1.0**
	baz=261						
TPUB	**Ta-pu**	**2.18**	**249**	*e*P	**Pn**	**16 06 29.4**	**+1.5**
	baz=241						
TPUB				*e*S	**Sn**	**16 06 56.9**	**+2.2**
	baz=241						
CHN4	**Tsaushan**	**2.19**	**251**	*e*P	**Pb**	**16 06 30.7**	**-0.7**
	baz=243						
CHN4				S	**Sb**	**16 06 59.0**	**+0.5**
	baz=243						
WTP	**Ta-pu**	**2.21**	**248**	*e*P	**Pn**	**16 06 29.8**	**+1.5**
	baz=241						
WTP				*e*S	**Sb**	**16 06 58.9**	**-0.2**
	baz=241						
JIRB	**Irabujima**	**2.24**	**70**	P	**Pb**	**16 06 31.2**	**-1.1**
JIRB				S	**Sb**	**16 06 59.3**	**-0.7**
RLNB	**Erlin**	**2.28**	**266**	*e*P	**Pb**	**16 06 32.1**	**-0.9**
	baz=279						
RLNB				*e*S	**Sb**	**16 07 01.4**	**+0.3**
	baz=279						
WTK	**Tuku**	**2.29**	**260**	*e*P	**Pb**	**16 06 31.9**	**-1.1**
	baz=262						
WTK				*e*S	**Sb**	**16 07 02.0**	**+0.8**
	baz=262						
ECL	**Taimali**	**2.29**	**230**	*e*P	**Pn**	**16 06 30.2**	**+0.9**
	baz=242						
ECL				S	**Sn**	**16 06 54.7**	**-2.6**
	baz=242						
CHY	**Chiayi**	**2.30**	**256**	*e*P	**Pn**	**16 06 31.5**	**+2.0**
	baz=257						
CHY				*e*S	**Sb**	**16 07 01.0**	**-0.5**
	baz=257						
SGST	**Jiashian**	**2.31**	**245**	*e*P	**Pn**	**16 06 31.2**	**+1.6**
	baz=237						
SGST				*e*S	**Sn**	**16 06 58.9**	**+1.1**
	baz=237						
CHN1	**Nanshi**	**2.31**	**248**	*e*P	**Pb**	**16 06 31.9**	**-1.5**
	baz=241						
CHN1				S	**Sb**	**16 07 01.4**	**-0.5**
	baz=241						
TWK	**Hsinying**	**2.31**	**250**	*e*P	**Pb**	**16 06 31.9**	**-1.6**
	baz=250						
TWK				*e*S	**Sb**	**16 07 01.9**	**-0.2**
	baz=250						
SNST	**Tainan City**	**2.32**	**249**	*e*P	**Pb**	**16 06 32.8**	**-0.9**
	baz=249						
SNST				*e*S	**Sb**	**16 07 02.0**	**-0.3**
	baz=249						
JIKM	**Ikemajima**	**2.34**	**69**	*e*S	**Sb**	**16 07 02.5**	**-0.2**
JMJ	**Miyako jima 2**	**2.34**	**72**	*e*P	**Pn**	**16 06 28.4**	**-1.7**
	baz=70						
JMJ2	**Miyako jima3**	**2.35**	**73**	P	**Pb**	**16 06 33.9**	**-0.3**
JMJ2				S	**Sb**	**16 07 02.9**	**-0.2**
WLGB	**Puzi**	**2.41**	**256**	*e*P	**Pb**	**16 06 33.9**	**-1.3**
	baz=257						
WLGB				*e*S	**Sn**	**16 07 02.5**	**+2.1**
	baz=257						
SSD	**Sandimen**	**2.44**	**237**	*e*P	**Pn**	**16 06 31.5**	**+0.1**
	baz=234						
SSD				*e*S	**Sn**	**16 07 00.6**	**-0.4**
	baz=234						
WSF	**Szhu**	**2.44**	**260**	*e*P	**Pb**	**16 06 34.0**	**-1.7**
	baz=261						
WSF				*e*S	**Sn**	**16 07 03.9**	**+2.7**
	baz=261						
TSMG	**Majia**	**2.45**	**236**	*e*P	**Pn**	**16 06 33.0**	**+1.5**
	baz=232						
TSMG				*e*S	**Sn**	**16 07 00.5**	**-0.9**
	baz=232						
ICHU	**Yijhu**	**2.46**	**253**	*e*P	**Pn**	**16 06 33.8**	**+2.0**
	baz=254						
ICHU				*e*S	**Sb**	**16 07 04.6**	**-1.6**
	baz=254						
SCST	**Cishan**	**2.47**	**241**	*e*P	**Pn**	**16 06 33.3**	**+1.5**
	baz=233						
SCST				*e*S	**Sn**	**16 07 04.8**	**+2.9**
	baz=233						
EAST	**Anshuo**	**2.50**	**228**	*e*P	**Pn**	**16 06 33.3**	**+1.0**
	baz=237						
EAST				*e*S	**Sn**	**16 07 02.1**	**-0.6**
	baz=237						
MASBT	**Mashibuluo**	**2.51**	**235**	*e*P	**Pn**	**16 06 33.6**	**+1.2**
	baz=230						
MASBT				*e*S	**Sn**	**16 07 02.4**	**-0.5**
	baz=230						
CHN8	**Yiju**	**2.53**	**254**	*e*P	**Pb**	**16 06 35.6**	**-1.6**
	baz=254						
CHN8				*e*S	**Sn**	**16 07 05.9**	**+2.7**
	baz=254						
TWM1	**Shoushan**	**2.56**	**241**	*e*P	**Pb**	**16 06 37.8**	**+0.1**
	baz=233						
TWM1				*e*S	**Sb**	**16 07 08.0**	**-1.1**
	baz=233						
SSPT	**Xinbi**	**2.63**	**233**	*e*P	**Pn**	**16 06 34.2**	**0.0**
	baz=229						
SSPT				*e*S	**Sn**	**16 07 05.8**	**-0.2**
	baz=229						
SLIU	**Shizi**	**2.65**	**226**	*e*P	**Pn**	**16 06 35.6**	**+1.2**
	baz=227						
SLIU				*e*S	**Sn**	**16 07 06.3**	**0.0**
	baz=227						
SCZT	**Fangliau**	**2.67**	**231**	*e*P	**Pn**	**16 06 34.5**	**-0.1**
	baz=225						
SCZT				*e*S	**Sn**	**16 07 06.5**	**-0.3**
	baz=225						
TWKBT	**Hengchun**	**2.84**	**222**	*e*P	**Pn**	**16 06 37.2**	**+0.2**
	baz=222						
PHUB	**P'eng-hu**	**3.05**	**260**	*e*P	**Pn**	**16 06 41.4**	**+1.5**
	baz=275						
PHUB				*e*S	**Sn**	**16 07 17.9**	**+1.7**
	baz=275						
PTTC	**Pingtan**	**3.13**	**297**	*e*S	**Sn**	**16 07 19.0**	**+0.9**
	baz=298						
VWUC	**VWUC**	**3.22**	**287**	*e*P	**Pn**	**16 06 42.8**	**+0.6**
	baz=288						
VWUC				*e*S	**Sn**	**16 07 20.0**	**-0.4**
	baz=288						
PTMZ	**Houxiangcun**	**3.52**	**286**	*e*P	**Pn**	**16 06 47.9**	**+1.5**
	baz=287						
PTMZ				*e*S	**Sn**	**16 07 27.3**	**-0.6**
	baz=287						
KNMB	**Chin-men Tao**	**4.09**	**276**	*e*P	**Pn**	**16 06 54.9**	**+0.8**
	baz=266						
AXDP	**Jialang**	**4.52**	**281**	*e*P	**Pn**	**16 07 01.4**	**+1.4**
	baz=282						
AXDP				*e*S	**Sn**	**16 07 51.6**	**-0.7**
	baz=282						

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*TAP **12** 16:23:09.6, 24°.07N × 122°.96E, h33^{km}, ML3.5, C*
*JMA **12** 16:23:10.9 ± 0.1, 24°.14N × 122°.80E, h18^{km} ± 2^{km}, M3.0*
ISC 12 16:23:07.8 ± 1.0**, 23°.97N** ± 0°.02 × **122°.88E** ± 0°.02**, h15**^{km} ± 9^{km},
n113, σ**1ˢ.04**/214**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.48**	**8**	P	**Pn**	**16 23 18.0**	**-2.2**
JYNG				S	**Sg**	**16 23 22.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.50**	**14**	P	**Pn**	**16 23 18.7**	**-1.7**
YOJ				S	**Sb**	**16 23 24.1**	**-1.4**
YOJ	**Yonaguni jima**	**0.50**	**14**	P	**Pn**	**16 23 18.7**	**-1.7**
	baz=3.0						
YOJ				S	**Sb**	**16 23 25.4**	**-0.1**
	baz=3.0						
HATJ	**Hateruma jima**	**0.85**	**84**	P	Pn	16 23 27.9	+2.6
HATJ				S	**Sn**	**16 23 40.0**	**+2.5**
IRIF	**Iriomote-Funau**	**0.86**	**65**	P	**Pn**	**16 23 27.2**	**+1.8**
IRIF				*e*S	**Sn**	**16 23 39.1**	**+1.5**
JKRS	**Kuro-shima**	**1.07**	**75**	P	Pg	16 23 31.5	+3.0
JKRS				S	**Sn**	**16 23 46.9**	**+4.1**
ENAH	**Nanao**	**1.08**	**296**	*e*P	**Pb**	**16 23 27.9**	**-0.3**
	baz=292						
ENAH				*e*S	**Sn**	**16 23 43.2**	**+0.1**
	baz=292						
TWC	**Suao**	**1.13**	**304**	*e*P	**Pn**	**16 23 28.1**	**-1.0**
	baz=307						
HWA	**Hwalien**	**1.16**	**270**	*e*S	**Sg**	**16 23 47.2**	**+1.8**
	baz=251						
TWD	**Chiawan**	**1.18**	**275**	*e*P	**Pg**	**16 23 31.4**	**+0.8**
	baz=269						
TWD				*e*S	**Sg**	**16 23 47.6**	**+1.8**
	baz=269						
NACB	**Ninganchiao**	**1.19**	**280**	*e*P	**Pg**	**16 23 30.7**	**-0.1**
	baz=258						
NACB				*e*S	**Sg**	**16 23 47.4**	**+1.1**
	baz=258						
JIJ	**Ishigaki jima**	**1.22**	**71**	P	**Pg**	**16 23 33.1**	**+1.7**
JIJ				S	**Sg**	**16 23 49.6**	**+2.3**
ETLH	**Xiulin Townshi**	**1.29**	**281**	*e*P	**Pb**	**16 23 32.4**	**+0.5**
	baz=261						
ETLH				S	**Sg**	**16 23 50.5**	**+0.8**
	baz=261						
ILA	**Ilan**	**1.30**	**308**	*e*P	**Pb**	**16 23 32.1**	**+0.2**
	baz=317						
ILA				S	**Sn**	**16 23 48.2**	**-0.2**
	baz=317						
NTC	**Toucheng**	**1.30**	**313**	P	**Pb**	**16 23 32.1**	**+0.3**
	baz=323						
NTC				*e*S	**Sn**	**16 23 48.0**	**-0.4**
	baz=323						
TWB1	**Santiao Chiao**	**1.31**	**322**	*i* P	**Pb**	**16 23 32.3**	**+0.2**
	baz=329						
TWB1				*e*S	**Sn**	**16 23 46.6**	**-2.1**
	baz=329						
ESL	**Shilin**	**1.33**	**263**	*e*P	**Pn**	**16 23 31.6**	**-0.3**
	baz=248						
ESL				S	**Sb**	**16 23 50.5**	**+1.2**
	baz=248						
TWE	**Neicheng**	**1.33**	**304**	*e*P	**Pb**	**16 23 32.4**	**-0.1**
	baz=313						
TWE				*e*S	**Sn**	**16 23 49.1**	**-0.1**
	baz=313						
EGFH	**Guangfu**	**1.36**	**257**	*e*P	**Pb**	**16 23 33.1**	**+0.1**
	baz=240						
EGFH				S	**Sb**	**16 23 51.5**	**+1.3**
	baz=240						
ENTT	**Nioudou**	**1.37**	**299**	*e*P	**Pb**	**16 23 33.3**	**+0.2**
	baz=297						
ENTT				*e*S	**Sn**	**16 23 50.7**	**+0.5**
	baz=297						
TIPB	**Shuangxi**	**1.38**	**316**	P	**Pb**	**16 23 33.0**	**-0.3**
	baz=313						
TIPB				S	**Sn**	**16 23 50.3**	**-0.3**
	baz=313						

NDT	**Datong Townshi** baz=277	1.39	297	*e*P	Pb	16 23 33.7	+0.1
NDT	baz=277			*e*S	Sb	16 23 51.7	+0.5
HGSD	**Ruisui** baz=245	1.41	251	*e*P	Pb	16 23 33.7	-0.2
HGSD	baz=245			*e*S	Sg	16 23 53.4	-0.1
NNSB	**Datong** baz=285	1.44	289	P	Pb	16 23 34.6	+0.3
NNSB	baz=285			*e*S	Sn	16 23 52.1	0.0
NNSH	**Datong** baz=285	1.44	289	*e*P	Pg	16 23 35.2	-0.3
NNSH	baz=285			*e*S	Sn	16 23 52.1	0.0
JISG	**Ishigakijimahi**	1.45	65	P	Pg	16 23 35.8	+0.1
JISG				S	Sg	16 23 55.2	+0.7
NNS	**Nan Shan** baz=285	1.45	289	*e*P	Pb	16 23 35.0	+0.4
NNS	baz=285			*e*S	Sb	16 23 54.4	+1.5
NWF	**Wu-fen Shan** baz=316	1.48	318	*e*P	Pb	16 23 35.2	+0.1
NWF	baz=316			S	Sn	16 23 53.0	-0.1
WFSB	**Wu-fen Shan** baz=316	1.48	318	*i* P	Pb	16 23 34.6	-0.4
WFSB	baz=316			*e*S	Sn	16 23 52.2	-0.7
WHF	**Hehuan Shan** baz=272	1.48	277	*e*P	Pb	16 23 35.4	0.0
WHF	baz=272			S	Sn	16 23 54.2	+0.5
NWLT	**Wulai** baz=314	1.49	303	*e*P	Pb	16 23 35.4	+0.3
NWLT	baz=314			*e*S	Sn	16 23 53.4	+0.2
EHY	**Hungye** baz=247	1.50	252	P	Pb	16 23 35.2	-0.1
EHY	baz=247			S	Sb	16 23 54.6	+0.5
FUSS	**Fushou** baz=260	1.52	281	*e*P	Pg	16 23 36.5	-0.5
FUSS	baz=260			*e*S	Sb	16 23 56.1	+1.2
YHNB	**Yeheng** baz=276	1.53	297	P	Pb	16 23 36.3	+0.3
YHNB	baz=276			*e*S	Sb	16 23 56.6	+1.3
TWA	**Mucha** baz=309	1.55	311	*e*P	Pg	16 23 37.1	-0.5
TWA	baz=309			*e*S	Sn	16 23 53.9	-0.7
NSK	**Sanguang** baz=276	1.55	297	*e*P	Pb	16 23 36.5	+0.2
NSK	baz=276			S	Sn	16 23 55.4	+0.5
EYUL	**Yuli** baz=232	1.56	247	*e*P	Pb	16 23 36.0	-0.4
EYUL	baz=232			*e*S	Sb	16 23 56.3	+0.5
YULB	**Yu-li** baz=234	1.56	249	*e*P	Pb	16 23 36.1	-0.2
YULB	baz=234			*e*S	Sb	16 23 55.8	-0.1
CHGB	**Renai** baz=266	1.56	274	*e*P	Pb	16 23 36.5	0.0
CHGB	baz=266			*e*S	Sb	16 23 56.2	+0.1
TWF1	**Yuli** baz=233	1.57	247	P	Pb	16 23 36.7	0.0
TWF1	baz=233			S	Sb	16 23 56.5	+0.2
NHDH	**Xindian Distri** baz=321	1.58	309	P	Pg	16 23 37.9	-0.2
NHDH	baz=321			S	Sn	16 23 55.2	-0.2
TWT	**Tachien** baz=260	1.58	281	*e*P	Pb	16 23 37.6	+0.7
TWT	baz=260			*e*S	Sb	16 23 57.1	+0.4
TDCB	**Techi** baz=261	1.59	280	*e*P	Pb	16 23 37.3	+0.3
TDCB	baz=261			*e*S	Sb	16 23 57.2	+0.1
TAP1	**Taipei** baz=321	1.63	311	*e*P	Pb	16 23 37.2	-0.4
TAP1	baz=321			*e*S	Sn	16 23 57.1	+0.5
CHKT	**Chengkung** baz=224	1.64	238	*e*P	Pb	16 23 37.4	-0.3
CHKT	baz=224			S	Sn	16 23 56.3	-0.5
TAP	**Taipei** baz=321	1.64	311	*e*P	Pg	16 23 39.3	0.0
TAP	baz=321			*e*S	Sn	16 23 57.5	+0.6
FULB	**Fuli** baz=229	1.64	242	*e*P	Pb	16 23 37.2	-0.7
FULB	baz=229			*e*S	Sb	16 23 58.3	-0.1
BACT	**New Taipei Cit** baz=320	1.66	308	*e*S	Sn	16 23 57.3	-0.1
YM01	**YM01** baz=324	1.67	315	*e*P	Pb	16 23 37.6	-0.7
YM01	baz=324			*e*S	Sn	16 23 57.5	-0.2
YM11	**YM11** baz=314	1.68	315	*e*P	Pg	16 23 39.9	-0.2
YM11	baz=314			*e*S	Sn	16 23 57.9	-0.1
YM10	**YM10** baz=324	1.68	315	*e*P	Pb	16 23 38.5	0.0
YM10	baz=324			*e*S	Sn	16 23 56.6	-1.4
YM05	**YM05** baz=314	1.68	315	P	Pg	16 23 39.6	-0.6
YM05	baz=314			*e*S	Sn	16 23 58.1	0.0
YM08	**YM08** baz=315	1.68	316	*e*P	Pg	16 23 39.5	-0.7
YM08	baz=315			*e*S	Sn	16 23 57.9	-0.2
YM04	**YM04** baz=323	1.69	314	*e*P	Pn	16 23 37.1	+0.3
YM04	baz=323			*e*S	Sn	16 23 58.4	+0.1
YM03	**YM03** baz=324	1.71	315	*e*P	Pb	16 23 38.3	-0.7
YM03	baz=324			*e*S	Sn	16 23 58.2	-0.5
ANP	**Anpu** baz=313	1.73	315	*e*P	Pb	16 23 38.1	-1.2
TWS1	**Kuangyinshan** baz=321	1.74	311	*e*S	Sb	16 24 01.2	+0.1
TWY	**Chenhua** baz=317	1.74	318	*e*S	Sb	16 24 01.4	+0.2
EDH	**Donghe** baz=224	1.75	236	*e*P	Pb	16 23 38.8	-0.9
EDH	baz=224			*e*S	Sn	16 23 59.5	-0.2
WPL	**Puli Township** baz=265	1.75	272	*e*P	Pb	16 23 39.9	+0.1
WPL	baz=265			*e*S	Sb	16 24 02.3	+0.7
NTY	**Taoyuan** baz=316	1.76	306	P	Pn	16 23 38.2	+0.4
NTY	baz=316			*e*S	Sn	16 24 01.2	+1.2
SSLB	**Suanglung** baz=258	1.77	264	*e*P	Pb	16 23 39.7	-0.3
SSLB	baz=258			*e*S	Sb	16 24 02.3	+0.3
WHP	**Taichung City** baz=262	1.79	280	*e*P	Pb	16 23 40.2	-0.1
WHP	baz=262			S	Sb	16 24 04.6	+2.0
JTJ	**Tarama**	1.79	68	P	Pg	16 23 42.4	+0.1
JTJ				S	Sg	16 24 06.0	+0.4
SMLT	**Sun Moon Lake** baz=261	1.81	268	P	Pb	16 23 40.3	-0.4
SMLT	baz=261			S	Sb	16 24 03.5	+0.2
LIOB	**Emei** baz=291	1.82	292	*e*P	Pb	16 23 41.2	+0.3
LIOB	baz=291			S	Sb	16 24 05.8	+2.2
YUS	**Yu-Shan** baz=249	1.83	255	*e*P	Pb	16 23 41.0	-0.3
YUS	baz=249			*e*S	Sn	16 24 02.9	+0.7
LDUT	**Ludao** baz=223	1.83	225	*e*P	Pb	16 23 39.5	-1.5
LDUT	baz=223			S	Sn	16 24 01.6	0.0
NCUH	**Zhongli** baz=302	1.83	303	*e*P	Pg	16 23 42.8	-0.3
NSTT	**Nanjuang** baz=291	1.83	291	*e*P	Pg	16 23 42.1	-0.9
NSTT	baz=291			*e*S	Sb	16 24 04.8	+1.1
TYC	**Yuchr** baz=263	1.85	268	*e*P	Pb	16 23 40.9	-0.4
TYC	baz=263			*e*S	Sb	16 24 04.1	-0.2
WHYT	**Xinyi Township** baz=257	1.87	262	*e*P	Pb	16 23 42.0	+0.2
ELDTW	**Lidau** baz=241	1.88	246	*e*P	Pb	16 23 40.2	-1.6
ELDTW	baz=241			*e*S	Sn	16 24 03.7	+0.8
ALS	**Alishan** baz=251	1.95	257	P	Pb	16 23 43.0	-0.3
ALS	baz=251			S	Sb	16 24 07.0	-0.6
TWQ1	**Liyutan** baz=263	1.96	281	P	Pb	16 23 43.1	0.0
TWQ1	baz=263			S	Sb	16 24 08.8	+1.4
WJS	**Zhushan** baz=260	1.97	266	*e*P	Pg	16 23 44.5	-1.2
WJS	baz=260			S	Sg	16 24 10.6	-0.7
NSY	**Sanyi** baz=278	1.98	283	*e*P	Pb	16 23 43.9	+0.3
NSY	baz=278			*e*S	Sb	16 24 09.5	+1.4
NMLH	**Miaoli** baz=283	1.98	287	*e*P	Pb	16 23 44.3	+0.7
NMLH	baz=283			S	Sb	16 24 08.9	+0.7
WWF	**Wufeng** baz=266	1.99	272	*e*P	Pb	16 23 44.9	+1.1
WWF	baz=266			*e*S	Sb	16 24 10.2	+1.9
WNT	**Mingjian** baz=261	2.01	268	P	Pb	16 23 44.7	+0.7
WNT	baz=261			*e*S	Sb	16 24 10.6	+1.8
WNT1	**Nantou City** baz=262	2.01	269	*e*P	Pb	16 23 44.3	+0.2
WNT1	baz=262			*e*S	Sb	16 24 10.8	+1.9
TWGBT	**Beinan** baz=224	2.01	235	*e*P	Pb	16 23 43.4	-0.7
TWGBT	baz=224			*e*S	Sb	16 24 07.5	-1.4
TCU	**Taichung** baz=268	2.02	275	*e*P	Pg	16 23 45.9	-0.7
TCU	baz=268			*e*S	Sb	16 24 10.1	+0.9
CHN5	**Tsauling** baz=245	2.05	260	*e*P	Pb	16 23 44.6	-0.2
CHN5	baz=245			*e*S	Sb	16 24 11.6	+1.5
WDJ	**Dajia District** baz=275	2.08	281	*e*P	Pb	16 23 45.1	-0.1
WDJ	baz=275			S	Sb	16 24 11.0	+0.2
STYT	**Tauyuan** baz=236	2.10	248	*e*P	Pb	16 23 45.6	-0.1
STYT	baz=236			*e*S	Sb	16 24 10.4	-1.2
WCHH	**Zhanghua** baz=266	2.12	273	S	Sb	16 24 13.2	+1.0
WGK	**Gukeng** baz=256	2.14	263	*e*P	Pb	16 23 45.1	-1.2
WGK	baz=256			*e*S	Sb	16 24 13.2	+0.6
WDLH	**Douliu** baz=256	2.16	263	*e*P	Pb	16 23 46.5	-0.2
WDLH	baz=256			*e*S	Sb	16 24 14.5	+1.3
TPUB	**Ta-pu** baz=240	2.17	252	*e*P	Pb	16 23 46.4	-0.3
TPUB	baz=240			*e*S	Sb	16 24 13.9	+0.5
CHN4	**Tsaushan** baz=239	2.18	254	*e*P	Pb	16 23 46.6	-0.4
CHN4	baz=239			*e*S	Sb	16 24 14.9	+1.0
WTP	**Ta-pu** baz=238	2.20	251	*e*P	Pb	16 23 47.0	-0.3
WTP	baz=238			*e*S	Sb	16 24 15.5	+1.1
ECL	**Taimali** baz=240	2.23	233	*e*P	Pn	16 23 44.9	+0.6
ECL	baz=240			*e*S	Sn	16 24 12.6	+1.0
SLGT	**Liugui** baz=235	2.27	245	*e*P	Pb	16 23 47.8	-0.7
SLGT	baz=235			*e*S	Sb	16 24 15.5	-0.8
SGST	**Jiashian** baz=234	2.28	248	P	Pb	16 23 48.2	-0.6
SGST	baz=234			*e*S	Sb	16 24 17.3	+0.5
CHN1	**Nanshi** baz=238	2.29	250	P	Pb	16 23 49.0	+0.1
CHN1	baz=238			*e*S	Sb	16 24 18.2	+1.1
WTK	**Tuku** baz=257	2.29	263	*e*P	Pb	16 23 48.4	-0.5
WTK	baz=257			*e*S	Sb	16 24 18.0	+0.9
CHY	**Chiayi** baz=252	2.30	259	*e*P	Pg	16 23 50.3	-1.6
CHY	baz=252			*e*S	Sb	16 24 18.6	+1.5
TWK	**Hsinying** baz=247	2.30	253	P	Pb	16 23 48.7	-0.3
TWK	baz=247			*e*S	Sb	16 24 18.2	+0.9
RLNB	**Erlin** baz=273	2.30	268	*e*P	Pb	16 23 48.8	-0.3
RLNB	baz=273			*e*S	Sb	16 24 17.8	+0.5
SNST	**Tainan City** baz=246	2.31	252	*e*P	Pb	16 23 49.7	+0.6
SNST	baz=246			*e*S	Sb	16 24 18.8	+1.3
JMJ	**Miyako jima 2** baz=70	2.36	69	*e*P	Pb	16 23 45.7	-4.3
SSD	**Sandimen** baz=230	2.40	240	*e*P	Pb	16 23 49.1	-1.5
SSD	baz=230			*e*S	Sn	16 24 16.6	+1.0
TSMG	**Majia** baz=230	2.41	239	*e*P	Pb	16 23 48.0	-2.9
TSMG	baz=230			*e*S	Sn	16 24 15.9	0.0
WLGB	**Puzi** baz=252	2.41	259	*e*P	Pb	16 23 50.1	-0.8
WLGB	baz=252			*e*S	Sb	16 24 20.5	+0.1
SCST	**Cishan** baz=231	2.44	244	*e*P	Pb	16 23 49.4	-2.1
SCST	baz=231			*e*S	Sb	16 24 21.5	+0.2
EAST	**Anshuo** baz=235	2.45	230	*e*P	Pb	16 23 48.8	-2.8
EAST	baz=235			*e*S	Sn	16 24 18.0	+1.1
WSF	**Szhu** baz=256	2.45	263	P	Pb	16 23 50.7	-0.9
WSF	baz=256			S	Sb	16 24 22.6	+0.9
ICHU	**Yijhu** baz=250	2.46	256	*e*P	Pb	16 23 51.7	0.0
ICHU	baz=250			*e*S	Sb	16 24 21.7	-0.1
MASBT	**Mashibuluo** baz=228	2.47	237	*e*P	Pb	16 23 50.3	-1.6
MASBT	baz=228			*e*S	Sn	16 24 18.8	+1.4
CHN8	**Yiju** baz=250	2.52	256	*e*P	Pb	16 23 51.5	-1.3
CHN8	baz=250			*e*S	Sb	16 24 22.8	-0.8
SLIU	**Shizi** baz=225	2.59	228	*e*P	Pb	16 23 51.3	-2.7
SLIU	baz=225			*e*S	Sn	16 24 21.1	+0.7
SCZT	**Fangliau** baz=224	2.62	233	*e*P	Pb	16 23 51.3	-3.1
SCZT	baz=224			*e*S	Sn	16 24 22.1	+1.0

*NEIC **12** 16:23:21.9±0.7, 55°.00N±0°.04×134°.36W±0°.09, h15^{km}±7^{km},*
Error ellipse: s-maj=7.6km s-min=6.1km az=66.0
*PGC **12** 16:23:22.4±1.0, 54°.98N×134°.45W, h20^{km}, ML3.0/7,*
183km Wnw of Masset, Bc Haida Gwaii Region
ISC 12 16:23:20.8±1.6**, 55°.02N**±0°.04×**134°.35W**±0°.06**, h7**^{km}±11^{km}**,**
n24, σ0^{s}98/39**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRAG	**Craig**	0.83	57	Pn	Pn	16 23 38.8	-0.1
CRAG				Sn	Sb	16 23 50.4	+1.4
CRAG	comp=E,328nm,0.2s			IAML		16 23 51.4	
LIB	**Langara Island**	1.07	135	P	Pb	16 23 41.9	+0.3
LIB				S	Sb	16 23 56.7	+1.0
NDB	**Naden**	1.34	142	P	Pb	16 23 46.2	-0.2
NDB				S	Sn	16 24 05.0	+0.8
MASB	**Masset**	1.69	126	Pg	Pg	16 23 53.7	+0.5
WRAK	**Wrangell Islan**	1.80	38	Pn	Pn	16 23 52.7	+0.5
WRAK	comp=E,79nm,0.6s			IAML		16 24 24.8	
WRAK	comp=E,71nm,0.4s			IAML		16 24 29.0	
SIT	**Sitka**	2.12	345	Pn	Pn	16 23 55.7	-0.8
DIB	**Dawson Inlet,**	2.13	148	Pn	Pn	16 23 56.7	0.0
DIB				Sn	Sn	16 24 22.6	-0.7
DIB				Sg	Sg	16 24 28.5	-0.6
DIB	**Dawson Inlet,**	2.13	148	Pn	Pn	16 23 56.5	-0.1
DIB				Sn	Sn	16 24 21.2	-2.1
DIB	comp=E,82nm,0.3s			IAML		16 24 30.6	
MOBC	**Moresby Island**	2.34	142	Pn	Pn	16 24 00.6	+0.9
MOBC				Sg	Sg	16 24 35.0	-1.1
RUBB	**Prince Rupert**	2.48	105	Pn	Pn	16 24 01.8	+0.3
RUBB				Pg	Pg	16 24 07.4	-0.8
RUBB				Sn	Sn	16 24 31.6	-0.4
RUBB				Sg	Sg	16 24 40.5	+0.2
BNAB	**Bonilla**	2.66	124	Sn	Sn	16 24 35.2	-1.2
BNAB				Sg	Sg	16 24 46.6	+0.4
GRNB	**Grenville Isla**	2.82	113	Pn	Pn	16 24 05.8	-0.5
GRNB				Sn	Sn	16 24 39.7	-0.7
JIS	**Juneau Island**	3.27	360	Pn	Pn	16 24 12.6	+0.3
JIS	comp=E,20nm,1.0s			IAML		16 25 06.5	
JIS	comp=N,18nm,2.6s			IAML		16 25 07.7	
HG4B	**Hotspring**	3.31	144	Sg	Sb	16 25 03.0	+2.7
HWKB	**Hawksbury Isla**	3.36	113	Pn	Pn	16 24 14.0	+0.3
HWKB				Sn	Sn	16 24 52.9	-0.9
HWKB				Sg	Sg	16 25 07.7	-0.9
BESE	**Bessie Mountai**	3.58	356	Pn	Pn	16 24 16.9	+0.1
DLBC	**Dease Lake**	4.17	33	Sg	Sg	16 25 34.2	-0.4
BBB	**Bella Bella**	4.67	125	Pn	Pn	16 24 31.4	-0.3
BBB				Sn	Sn	16 25 23.4	-2.6
BBB	**Bella Bella**	4.67	125	Pn	Pn	16 24 32.0	+0.3
WHY	**Whitehorse**	5.66	357	Pn	Pn	16 24 45.6	+0.2
PCA	**Pinnacle**	6.00	330	Pn	Pn	16 24 50.4	+0.4
HYT	**Haines Junctio**	6.06	345	Pn	Pn	16 24 50.9	0.0
CTGM	**Chitina Glacie**	7.02	331	Pn	Pn	16 25 04.8	+0.8
BARN	**Barnard Glacie**	7.19	330	Pn	Pn	16 25 06.6	+0.2

*MAN **12** 16:28:07.0, 8°.98N×125°.93E, h1^{km}, mb4.7, ML3.6, MS3.5*
*NEIC **12** 16:28:12.6±1.1, 9°.04N±0°.10×126°.0E±0°.2, h54^{km}±10^{km},*
mb4.3/11, Error ellipse: s-maj=25.6km s-min=13.6km
az=77.0
*IDC **12** 16:28:13.9±2.5, 9°.01N×125°.95E, h69^{km}±24^{km}, mb3.5/10,*
mb1 3.7/11, mb1mx3.4/58, mbtmp3.9/11, MS3.4/1,
Ms1 3.4/1, ms1mx2.5/36, Error ellipse: s-maj=29.5km
s-min=14.7km az=72.0
ISC 12 16:28:09.0±0.5**, 9°.05N**±0°.03×**125°.96E**±0°.05**, h21**^{km}±2^{km}**,**
n44, σ1^{s}39/51**, mb4.1**/16**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	0.34	257	*e*P	Pb	16 28 15.4	-0.9
BUTP				*e*S	Sb	16 28 21.4	+0.1
GLSP	**General Luna,**	0.75	13	*e*P	Pb	16 28 22.8	-0.7
GLSP				*e*S	Sn	16 28 34.9	-0.2
BIP	**Bislig**	0.86	161	⇓*e*P	Pb	16 28 24.9	-0.4
BIP				*e*S	Sn	16 28 37.5	-0.4
CGP	**Cagayan de Oro**	1.38	245	⇑*i*P	Pn	16 28 32.5	-0.5
CGP				*i* S	Sb	16 28 51.9	+0.5
BUKP	**Musuan**	1.46	218	*e*P	Pb	16 28 34.4	-1.1
BUKP				*e*S	Sb	16 28 55.5	+1.9
MSLP	**Maasin**	1.53	315	*e*P	Pn	16 28 35.0	-0.1
MSLP				*e*S	Sb	16 28 58.8	+3.1
DAV	**Davao City (W)** 30nm,0.3s,baz=2.2,slow=2.9,SNR=5.2	2.00	191	P	Pb	16 28 44.0	-0.7
DAV	25nm,0.3s,baz=359,slow=17,SNR=4.8			S	Sb	16 29 09.6	+0.5
DAV	comp=Z,372nm,21.2s,baz=323,slow=46			LR	LR	16 29 44.9	
MATI	**Mati**	2.11	172	*e*P	Pn	16 28 42.5	-0.5
MATI				*e*S	Sb	16 29 09.9	-2.3
KCP	**Kidapawan**	2.20	203	⇓*e*P	Pb	16 28 46.6	-1.6
LLP	**Lapu-Lapu**	2.34	303	*e*P	Pn	16 28 45.7	-0.5
LLP				*i* S	Sb	16 29 17.0	-1.8
OCLP	**Ormoc**	2.40	326	*e*P	Pn	16 28 49.0	+2.0
OCLP				*e*S	Sb	16 29 21.1	+0.5
BESP	**Borongan**	2.59	349	*e*P	Pn	16 28 51.8	+2.1
BESP				*e*S	Sb	16 29 25.1	-1.1
PAGZ	**Pagadian**	2.81	245	*e*P	Pn	16 28 52.5	-0.2
PAGZ				*e*S	Sn	16 29 27.4	+1.4
TNTI	**Ternate**	8.34	170	Pn	Pn	16 30 11.9	+3.2
SIJI	**Sorong** 1.0nm,0.3s,baz=157,slow=22,SNR=1.7	11.18	152	P	Pn	16 30 51.3	+3.6
TPUB	**Ta-pu**	15.07	341	P	P	16 31 45.4	-0.5
BATI	**Baumata** 1.1nm,0.3s,baz=22,slow=3.7,SNR=5.3	19.26	187	P	Pn	16 32 36.5	+3.1
CMAR	**Chiang Mai Arr** 0.9nm,0.8s,baz=107,slow=6.3,SNR=6.9	27.82	293	P	P	16 33 57.7	+0.6
WB0	**Warramunga Arr**	29.81	164	P	P	16 34 13.2	-1.5
WB0	comp=Z,8.1nm,1.2s			IAmb	IAmb	16 34 14.1	
WRA	**Warramunga Arr** comp=Z,0.4nm,0.3s,baz=346,slow=9.5,SNR=9.2	29.96	164	P	P	16 34 15.4	-0.6
WB2	**Warramunga Arr**	29.97	164	P	P	16 34 15.2	-0.9
WB2	comp=Z,6.7nm,1.2s			IAmb	IAmb	16 34 30.4	
AS31	**Alice Springs**	33.42	167	P	P	16 34 46.0	-0.5
ASAR	**Alice Springs** comp=Z,0.2nm,0.5s,baz=345,slow=6.7,SNR=13	33.43	167	P	P	16 34 45.9	-0.6
ASAR	comp=Z,0.2nm,0.6s,baz=355,slow=2.9,SNR=1.3			PcP	PcP	16 37 27.0	-0.8
CTA	**Charters Tower** comp=Z,2.3nm,0.8s,baz=114,slow=20,SNR=2.1	35.17	146	P	P	16 35 01.7	+0.1
USRK	**Ussuriysk Ar.** comp=Z,2.4nm,0.7s,baz=207,slow=11,SNR=4.9	35.41	7	P	P	16 35 03.5	+0.1
FORT	**Forrest**	39.65	177	P	P	16 35 40.3	+0.9
KLR	**Kul'dur** comp=Z,1.0nm,0.6s,baz=175,slow=7.3,SNR=5.6	40.35	6	P	P	16 35 44.5	-0.5
H11S3	**WAKE ISLAND Hy** baz=262,slow=75,SNR=68	40.57	72	T	T	17 18 42.6	
H11S1	**WAKE ISLAND Hy** baz=262,slow=75,SNR=34	40.59	72	T	T	17 18 40.8	
H11S2	**WAKE ISLAND Hy** baz=262,slow=75,SNR=28	40.59	72	T	T	17 18 43.4	
H11N1	**WAKE ISLAND Hy** baz=266,slow=74,SNR=14	40.94	70	T	T	17 19 19.3	
H11N2	**WAKE ISLAND Hy** baz=266,slow=74,SNR=8.6	40.95	70	T	T	17 19 21.0	
H11N3	**WAKE ISLAND Hy** baz=266,slow=74,SNR=12	40.96	70	T	T	17 19 20.7	
BBOO	**Buckleboo**	42.72	167	P	P	16 36 04.7	0.0
BBOO	comp=Z,20nm,1.4s			IAmb	IAmb	16 36 23.8	
STKA	**Stephens Creek** comp=Z,0.9nm,0.4s,baz=308,slow=10,SNR=3.1	43.35	160	P	P	16 36 07.5	-2.3

STKA	Stephens Creek	43.35	160	IAmb	IAmb	16 36 14.1	
	comp=Z,1.0nm,1.2s						
MK31	Makanchi Array	52.82	323	P	P	16 37 22.7	-0.2
MK31				IAmb	IAmb	16 37 32.5	
	comp=Z,3.6nm,1.5s						
MKAR	Makanchi Array	52.82	323	P	P	16 37 21.6	-1.3
	comp=Z,0.4nm,0.6s,baz=123,slow=8.9,SNR=5.2						
MKAR				PcP	PcP	16 38 31.0	-1.1
	comp=Z,0.4nm,0.6s,baz=102,slow=7.0,SNR=2.6						
MKAR				LR	LR	16 59 35.4	
	comp=Z,34nm,19.4s,baz=324,slow=36						
MKAR	Makanchi Array	52.82	323	P	P	16 37 22.5	-0.5
MAKZ	Makanchi	53.01	323	P	P	16 37 24.1	-0.2
MAKZ				IAmb	IAmb	16 37 36.8	
	comp=Z,4.0nm,1.4s						
KKAR	Karatay Array	58.89	315	P	P	16 38 06.6	0.0
TIXI	Tiksi	62.58	1	P	P	16 38 30.6	-0.5
TIXI				IAmb	IAmb	16 38 42.8	
	comp=Z,3.2nm,1.2s						
ILAR	Eielson Array	80.67	26	P	P	16 40 20.7	+0.5
	comp=Z,0.4nm,1.0s,baz=271,slow=4.2,SNR=2.6						
FINES	FINESS Array B	86.82	332	P	P	16 40 50.1	-1.6
	comp=Z,4.6nm,1.1s,baz=256,slow=7.7,SNR=2.2						

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*IDC **12** 16:32:04.3±0.8, 17°.70N×148°.03E, h0km, mb3.8/17, mb1 4.0/18, mb1mx3.8/55, mbtmp3.8/18, ML4.3/1, Error ellipse: s-maj=25.1km s-min=14.1km az=103.0*

*NEIC **12** 16:32:12.4±1.1, 17°.69N±0°.08×147°.87E±0°.07, h56km±8km, mb4.5/29, Error ellipse: s-maj=11.8km s-min=8.6km az=210.0*

ISC 12 16:32:07.6±0.5**, 17°.68N**±0°.07×**148°.05E**±0°.10**, h21km, n51, σ1s.01**/48**, mb4.2**/26**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.09	217	Pn	Pn	16 33 23.9	+1.2
	10nm,0.3s,baz=39,slow=6.5,SNR=2.3						
GUMO				Sn	Sn	16 34 21.2	+0.3
	9.7nm,0.3s,baz=5.5,slow=17,SNR=1.6						
GUMO	Guam	5.09	217	Pn	Pn	16 33 25.2	+2.5
PATS	Pohnpei	14.71	136	Pn	Pn	16 35 32.7	-1.9
INU	Inuyama	20.15	333	Pn	Pn	16 36 42.5	+0.2
INU				IAmb	IAmb	16 36 43.5	
	comp=Z,20nm,1.2s						
JGF	Kuroka	20.22	334	Pn	Pn	16 36 44.2	+1.0
JGF				IAmb	IAmb	16 37 03.0	
	comp=Z,38nm,1.4s						
MJAR	Matsushiro Arr	20.70	337	P	P	16 36 46.7	+0.2
	comp=Z,0.8nm,0.6s,baz=101,slow=41,SNR=2.0						
MAJO	Matsushiro	20.70	337	P	Pn	16 36 49.0	+0.1
JWT	Wachi	20.83	330	P	Pn	16 36 49.2	-1.1
JWT				IAmb	IAmb	16 37 12.6	
	comp=Z,74nm,1.5s						
JNU	Nakatsue	21.79	318	P	P	16 36 58.6	+0.3
JNU				IAmb	IAmb	16 37 04.2	
	comp=Z,48nm,1.5s						
SIJI	Sorong	24.76	224	P	P	16 37 27.9	-0.1
	comp=Z,3.5nm,0.4s,baz=51,slow=23,SNR=1.7						
YHNB	Yeheng	25.80	290	P	P	16 37 36.7	-0.7
SSLB	Suanglung	26.03	288	P	P	16 37 39.1	-0.4
SSLB				IAmb	IAmb	16 37 51.0	
	comp=Z,50nm,1.4s						
KSRS	Korea Array	26.47	322	P	P	16 37 42.2	-1.0
	comp=Z,1.6nm,0.8s,baz=147,slow=8.9,SNR=6.2						
LUWI	Luwuk	31.08	236	P	P	16 38 22.7	-1.8
KLR	Kul'dur	34.13	341	P	P	16 38 50.2	-0.7
	comp=Z,0.7nm,0.6s,baz=170,slow=8.2,SNR=2.3						
BKB	Balikpapan	35.99	242	P	P	16 39 05.6	-1.8
WB0	Warramunga Arr	39.56	200	P	P	16 39 37.6	+0.3
WB0				IAmb	IAmb	16 39 55.1	
	comp=Z,12nm,1.5s						
WR0	Warramunga Arr	39.69	200	P	P	16 39 39.1	+0.6
WRA	Warramunga Arr	39.74	200	P	P	16 39 38.0	-0.9
	comp=Z,0.3nm,0.4s,baz=22,slow=10,SNR=4.9						
FITZ	Fitzroy Crossi	41.83	213	P	P	16 39 56.6	+0.5
	comp=Z,1.6nm,0.7s,baz=30,slow=11,SNR=1.8						
FITZ	Fitzroy Crossi	41.83	213	IAmb	IAmb	16 40 12.9	
	comp=Z,8.7nm,1.4s						
AS31	Alice Springs	43.35	199	P	P	16 40 09.2	+0.7
ASAR	Alice Springs	43.35	199	P	P	16 40 08.0	-0.5
	comp=Z,0.2nm,0.6s,baz=21,slow=7.3,SNR=7.7						
ASAR				PcP	PcP	16 41 57.5	+0.4
	comp=Z,0.6nm,1.1s,baz=22,slow=3.4,SNR=2.1						
ULN	Ulaanbaatar	44.95	321	P	P	16 40 21.8	+0.5
SONM	Songino Array	45.33	321	P	P	16 40 24.5	+0.2
	comp=Z,2.1nm,0.7s,baz=136,slow=8.6,SNR=15						
YAK	Yakutsk	46.15	348	P	P	16 40 29.4	-0.9
	comp=Z,1.1nm,0.3s,baz=141,slow=6.5,SNR=1.7						
CMAR	Chiang Mai Arr	46.57	279	P	P	16 40 34.1	-0.2
	comp=Z,1.8nm,0.8s,baz=69,slow=6.5,SNR=11						
BBOO	Buckleboo	51.50	193	P	P	16 41 11.8	+0.1
GSI	Gunungsitoli	52.16	258	P	P	16 41 17.1	0.0
GSI				IAmb	IAmb	16 41 19.3	
	comp=Z,11nm,1.1s						
TIXI	Tiksi	55.14	353	P	P	16 41 37.6	-0.4
TIXI				IAmb	IAmb	16 42 05.2	
	comp=Z,5.3nm,1.5s						
RSO	Redoubt South	59.73	30	P	P	16 42 11.9	+1.1
ZAA0	Zalesovo Array	60.18	323	P	P	16 42 13.6	-0.2
ZAA0				IAmb	IAmb	16 42 14.1	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	60.18	323	P	P	16 42 13.3	-0.4
	comp=Z,1.6nm,0.6s,baz=110,slow=8.6,SNR=9.5						
MK31	Makanchi Array	60.77	314	P	P	16 42 18.0	0.0
MKAR	Makanchi Array	60.77	314	P	P	16 42 17.7	-0.3
	comp=Z,0.7nm,0.5s,baz=89,slow=7.7,SNR=13						
MAKZ	Makanchi	60.99	314	P	P	16 42 18.8	-0.7
MAKZ				IAmb	IAmb	16 42 20.9	
	comp=Z,2.1nm,0.9s						
IMAR	Indian Mountai	61.25	23	P	P	16 42 21.4	+0.5
GHO	Glory Hole Cre	61.89	29	P	P	16 42 26.8	+1.4
M24K	Tolsona, Glenn	63.23	29	P	P	16 42 34.4	0.0
KURK	Kurchatov	63.51	318	P	P	16 42 35.8	-0.5
KURK				IAmb	IAmb	16 42 37.0	
	comp=Z,8.8nm,1.1s						
ILAR	Eielson Array	63.58	26	P	P	16 42 35.9	-0.5
	comp=Z,0.4nm,0.9s,baz=262,slow=6.3,SNR=2.1						
BRVK	Borovoye	68.74	321	P	P	16 43 09.5	-0.3
BRVK				IAmb	IAmb	16 43 10.8	
	comp=Z,3.5nm,0.9s						
KKAR	Karatay Array	69.13	310	P	P	16 43 12.0	-0.5
KKAR	Karatay Array	69.13	310	P	P	16 43 12.2	-0.3
KKAR				IAmb	IAmb	16 43 14.1	
	comp=Z,5.6nm,1.5s						
INK	Inuvik	69.43	23	P	P	16 43 13.2	-0.5
	comp=Z,0.5nm,0.5s,baz=280,slow=6.1,SNR=1.8						
INK	Inuvik	69.43	23	P	P	16 43 16.8	+3.1
INK				IAmb	IAmb	16 43 32.4	
	comp=Z,5.2nm,1.4s						
ABKAR	Akbulak array	75.60	317	P	P	16 43 50.0	-0.9
YKA	Yellowknife Ar	77.83	28	P	P	16 44 03.0	-0.2
	comp=Z,0.2nm,0.4s,baz=283,slow=4.7,SNR=6.1						
EUNU	Eureka	78.41	8	P	P	16 44 06.8	+0.5
NVAR	Mina Array Bea	82.00	52	P	P	16 44 28.2	+1.6
	comp=Z,0.4nm,0.7s,baz=267,slow=3.6,SNR=2.5						
ARCES	ARCESS Array B	84.13	343	P	P	16 44 38.7	+2.0
	comp=Z,2.5nm,0.9s,baz=52,slow=5.8,SNR=4.4						

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*IDC **12** 16:57:59.8±2.1, 4°.69S×145°.39E, h0km, mb4.1/3, mb1 4.4/5, mb1mx3.8/29, mbtmp4.3/5, ML4.6/1, Error ellipse: s-maj=49.4km s-min=27.5km az=84.0*

*NOU **12** 16:58:13.8, 5°.30S×146°.84E, h199km, mb4.0, Eastern New Guinea Reg., P.N.G.*

*NEIC **12** 16:58:15.2±0.4, 5°.52S±0°.09×146°.9E±0°.1, h220km±17km, mb4.4/8, Error ellipse: s-maj=17.0km s-min=12.9km az=95.0*

ISC 12 16:58:14.5±0.8**, 5°.52S**±0°.07×**146°.90E**±0°.10**, h195km, n20, σ1s.72**/22**, mb4.1**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.49	8	Pn	Pn	16 59 11.6	+1.8
PMG	Port Moresby	3.87	176	Pn	Pn	16 59 16.2	+1.8
	17nm,0.3s,baz=345,slow=4.4,SNR=154						
PMG				Sn	Sn	17 00 02.2	+0.7
	11nm,0.3s,baz=325,slow=1.0,SNR=3.6						
PMG	Port Moresby	3.87	176	P	Pn	16 59 16.4	+2.0
RABL	Rabaul	5.41	76	Pn	Pn	16 59 34.9	+0.8
COEN	Coen	9.15	203	Pn	Pn	17 00 25.4	+2.7
HNR	Honiara	13.50	107	Pn	Pn	17 01 17.8	-0.8
MTN	Manton Dam	17.17	244		P	17 02 01.2	-0.5
WB0	Warramunga Arr	18.67	220		P	17 02 17.5	-0.5
WB0				IAmb	IAmb	17 02 22.9	
	comp=Z,6.0nm,0.8s						
WR0	Warramunga Arr	18.72	219	P	P	17 02 18.2	-0.4
WR0				IAmb	IAmb	17 02 23.9	
	comp=Z,8.2nm,0.7s						
WB2	Warramunga Arr	18.83	219	P	P	17 02 19.3	-0.5
WB2				IAmb	IAmb	17 02 24.7	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	18.83	219	P	P	17 02 19.5	-0.3
	comp=Z,1.8nm,0.3s,baz=44,slow=9.8,SNR=71						
WRA				S	S	17 05 40.3	-3.4
	comp=Z,0.1nm,0.3s,baz=46,slow=20,SNR=5.7						
WRA	Warramunga Arr	18.83	219	P	P	17 02 18.8	-1.0
AS31	Alice Springs	21.95	213	P	P	17 02 52.2	-0.6
ASAR	Alice Springs	21.96	213	P	P	17 02 52.8	0.0
	comp=Z,2.2nm,0.7s,baz=45,slow=7.5,SNR=70						
ASAR				S	S	17 06 44.6	+3.3
	comp=Z,1.7nm,0.7s,baz=36,slow=21,SNR=7.5						
ASAR	Alice Springs	21.96	213	P	P	17 02 52.1	-0.7
FITZ	Fitzroy Crossi	24.23	237	P	P	17 03 11.3	-2.3
	comp=Z,3.7nm,0.3s,baz=61,slow=9.8,SNR=79						
FITZ	Fitzroy Crossi	24.23	237	P	P	17 03 12.5	-1.2
FITZ				IAmb	IAmb	17 03 14.6	
	comp=Z,6.2nm,0.6s						
ARMA	Armidale	25.16	170	P	P	17 03 20.6	-1.4
ARMA				IAmb	IAmb	17 03 47.9	
	comp=Z,16nm,1.3s						
STKA	Stephens Creek	26.68	190	P	P	17 03 47.1	+12
	comp=Z,1.5nm,0.4s,baz=14,slow=8.6,SNR=6.0						
SONM	Songino Array	63.94	331	P	P	17 08 25.2	-1.7
	comp=Z,0.1nm,0.4s,baz=140,slow=7.6,SNR=1.5						

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*NOU **12** 17:30:23.8, 7°.09S×130°.39E, h175km, mb3.8, Tanimbar Islands Reg., Indonesia*

IDC 12 17:30:01.3±2.4**, 5°.98S×130°.38E, h0km, mb3.5**/1**, mb1 4.0**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, ML3.9**/2**, Error ellipse: s-maj=138.5km s-min=31.6km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.40	165	Pn	Pn	17 33 25.6	-1.1
	0.5nm,0.3s,baz=348,slow=13,SNR=15						
WRA				Sn	Sn	17 35 54.5	-13
	0.5nm,0.3s,baz=351,slow=22,SNR=6.9						
ASAR	Alice Springs	17.91	169	P	P	17 34 12.9	+0.1
	0.4nm,0.3s,baz=351,slow=14,SNR=38						
ASAR				S	Sn	17 37 18.8	-14
	0.1nm,0.3s,baz=344,slow=25,SNR=2.1						
MKAR	Makanchi Array	67.59	326	P	P	17 40 59.8	-0.1
	0.3nm,0.6s,baz=121,slow=6.7,SNR=4.8						

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*DJA **12** 18:01:02.2±0.4, 3°S±5°×12°8E±°, h11km±5km, M3.7/8, mb4.2/1, MLv3.5/8*

*IDC **12** 18:01:09.5±5.3, 3°.06S×128°.39E, h99km±61km, mb3.0/3, mb1 3.4/6, mb1mx3.1/43, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=58.6km s-min=18.1km az=94.0*

ISC 12 18:01:04.2±0.9**, 3°.05S**±0°.08×**128°.05E**±0°.05**, h38km, n12, σ0s.55**/14**, mb3.2**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.92	109	P	Pn	18 01 20.4	-0.2
MSAI				S	Sn	18 01 32.7	0.0
NLAI	Namlea	0.97	259	P	Pn	18 01 22.2	+1.0
SANI	Sanana	2.29	296	P	Pn	18 01 38.9	-0.5
BNDI	Bandanaira	2.36	128	P	Pn	18 01 40.8	+0.4
SWI	Sorong	3.87	56	P	Pn	18 02 01.3	+0.1
SIJI	Sorong	3.87	56	P	Pn	18 02 01.8	+0.6
	5.6nm,0.3s,baz=78,slow=22,SNR=88						
SIJI				S	Sn	18 02 46.0	+0.5
	7.2nm,0.3s,baz=23,slow=22,SNR=19						
FAKI	Fak Fak	4.19	88	P	Pn	18 02 06.1	+0.5
FITZ	Fitzroy Crossi	15.14	189	P	P	18 04 40.5	+0.4
	0.2nm,0.3s,baz=21,slow=8.6,SNR=2.1						
WRA	Warramunga Arr	17.88	160	P	Pn	18 05 09.3	-0.8
	0.4nm,0.3s,baz=340,slow=11,SNR=15						
ASAR	Alice Springs	21.27	165	P	P	18 05 47.0	-0.3
	0.7nm,0.4s,baz=346,slow=12,SNR=24						
MKAR	Makanchi Array	63.88	327	P	P	18 11 32.6	-0.5
	0.1nm,0.5s,baz=115,slow=8.4,SNR=2.5						
KURBB	Kurchatov Arra	68.15	329	P	P	18 12 00.5	+0.2
	0.2nm,0.8s,baz=138,slow=5.1,SNR=1.5						

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*IDC **12** 18:14:03.5±1.5, 11°.56S×161°.88E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.6/39, mbtmp3.8/7, ML3.9/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/27, Error ellipse: s-maj=36.9km s-min=28.3km az=94.0*

ISC 12 18:14:08.8±1.0**, 11°.6S**±0°.1×**161°.8E**±0°.2**, h39km, n10, σ1s.43**/10**, mb3.6**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.87	320	Pn	Pn	18 14 52.1	+0.1
	26nm,0.3s,baz=176,slow=7.7,SNR=13						
HNR				Sn	Sn	18 15 23.4	-2.0
	37nm,0.3s,baz=185,slow=22,SNR=5.8						
DZM	Mont Dzumac	11.27	158	Pn	Pn	18 16 48.4	+0.9
	0.7nm,0.3s,baz=66,slow=6.8,SNR=24						
DZM				Sn	Sn	18 18 49.5	-2.7
	0.2nm,0.3s,baz=294,slow=23,SNR=1.8						
DZM				LR	LR	18 20 08.2	
	comp=Z,104nm,20.4s,baz=42,slow=32						
DZM	Mont Dzumac	11.27	158	*e*Pn	Pn	18 16 48.4	+0.9
	2.0nm,0.2s						
DZM				*e*LR	LR	18 19 25.0	
	comp=Z,147nm,26.1s						
WRA	Warramunga Arr	27.68	249	P	P	18 19 54.1	+0.7
	1.1nm,0.8s,baz=79,slow=8.9,SNR=5.3						
ASAR	Alice Springs	29.11	242	P	P	18 20 06.6	+0.5
	0.8nm,0.8s,baz=63,slow=9.7,SNR=9.5						
KSRS	Korea Array	58.28	329	LR	LR	18 49 02.1	
	comp=Z,44nm,18.0s,baz=336,slow=36						
SONM	Songino Array	76.92	325	P	P	18 25 57.9	+0.7
	0.5nm,0.8s,baz=137,slow=3.8,SNR=2.7						
ILAR	Eielson Array	85.32	20	P	P	18 26 41.2	-0.2
	0.4nm,0.8s,baz=222,slow=4.9,SNR=2.4						
MKAR	Makanchi Array	91.34	317	P	P	18 27 10.7	+0.1
	0.2nm,0.6s,baz=94,slow=6.3,SNR=2.1						
PDAR	Pinedale Array	96.78	48	LR	LR	19 05 52.4	
	comp=Z,38nm,18.1s,baz=51,slow=32						

IDC 12 18:15:10.5±3.9**, 28°.75S×177°.51W, h0km, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/31**, mbtmp3.6**/3**, Error ellipse: s-maj=79.5km s-min=22.7km az=105.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.61	216	Pn	Pn	18 15 27.0	+0.5
	218nm,0.3s,baz=101,slow=19,SNR=17						
RAO				Sn	Sn	18 15 36.5	-0.6
	baz=72,slow=20						
STKA	Stephens Creek	35.30	255	P	P	18 22 07.9	+0.6
	1.3nm,0.8s,baz=90,slow=13,SNR=1.5						
ASAR	Alice Springs	43.65	265	P	P	18 23 16.4	-0.8
	0.2nm,0.4s,baz=107,slow=8.0,SNR=8.4						
WRA	Warramunga Arr	44.49	270	P	P	18 23 24.1	+0.2
	0.2nm,0.4s,baz=110,slow=8.1,SNR=7.9						
FINES	FINESS Array B	143.74	341	PKP	PKPbc	18 34 44.8	+0.4
	5.1nm,1.1s,baz=40,slow=2.4,SNR=5.9						

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*IDC **12** 18:20:42.1±5.4, 22°.73S×179°.55E, h594km±43km, mb3.1/5, mb1 3.3/6, mb1mx2.9/34, mbtmp4.0/6, Error ellipse: s-maj=130.1km s-min=19.2km az=154.0*

ISC 12 18:20:41.8±1.3**, 22°.7S**±0°.3×**179°.6E**±0°.2**, h591km, n11, σ0s.68**/10**, mb3.6**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.18	344	P	P	18 22 15.8	-0.1
	2.1nm,0.3s,baz=93,slow=22,SNR=14						
CTA	Charters Tower	31.11	269	P	P	18 26 14.4	+0.8
	1.7nm,0.3s,baz=104,slow=12,SNR=5.2						
ASAR	Alice Springs	41.86	259	P	P	18 27 41.0	-0.7
	1.3nm,0.6s,baz=95,slow=7.5,SNR=19						
WRA	Warramunga Arr	42.12	265	P	P	18 27 43.3	-0.5
	0.8nm,0.3s,baz=92,slow=8.5,SNR=36						
TXAR	Lajitas Array	90.14	58	P	P	18 32 40.3	0.0
	0.4nm,0.7s,baz=219,slow=5.8,SNR=5.6						
PDAR	Pinedale Array	92.12	44	P	P	18 32 49.6	+0.3
	0.2nm,0.6s,baz=258,slow=3.3,SNR=3.0						
ARCES	ARCESS Array B	130.68	348	PKP	PKPdf	18 38 45.6	-0.1
	4.2nm,1.0s,baz=44,slow=4.0,SNR=3.6						
HFS	Hagfors	141.34	349	PKhKP	PKPpre	18 39 01.9	
	2.8nm,0.4s,baz=46,slow=4.3,SNR=15						
AKASG	Malin Array Be	143.79	328	PKP	PKPdf	18 39 10.1	-0.2
	1.7nm,0.5s,baz=44,slow=4.3,SNR=11						
BRTR	Keskin Array B	146.57	308	PKPbc	PKPdf	18 39 16.5	+0.9
	0.6nm,0.8s,baz=73,slow=3.6,SNR=1.7						
EKA	Eskdalemuir Ar	147.38	3	PKPbc	PKPbc	18 39 18.7	-1.0
	0.8nm,0.6s,baz=339,slow=1.8,SNR=1.2						

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*JMA **12** 18:24:34.2, 38°.64N×141°.90E, h48km±1km, M3.5*

JMA Felt I J1.

*IDC **12** 18:24:37.5±1.9, 39°.28N×140°.52E, h0km, mb3.5/3, mb1 3.5/5, mb1mx3.2/44, mbtmp3.5/5, ML2.8/2, Error ellipse: s-maj=48.4km s-min=23.8km az=99.0*

ISC 12 18:24:34.3±1.6**, 38°.64N**±0°.05×**141°.9E**±0°.1**, h45km**±10km**, n22, σ0s.83**/25**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	Kesennumamotoy	0.37	297	P	Pn	18 24 43.9	+0.2
JKMT				S	Sn	18 24 50.6	+0.3
OFUJ	Ofunato	0.47	337	P	Pn	18 24 45.1	+0.2
OFUJ				S	Sn	18 24 52.6	+0.2
JIO	Ouri	0.47	247	P	Pn	18 24 44.9	+0.1
JIO				S	Sn	18 24 52.3	-0.1
JIKH	Ishinomakikobu	0.48	226	P	Pn	18 24 44.9	0.0
JIKH				S	Sn	18 24 52.3	-0.1
JMK	Ichinoseki	0.62	300	P	Pn	18 24 46.9	+0.2
JMK				S	Sn	18 24 55.9	+0.3
JOM	Ohasama	0.95	330	P	Pn	18 24 51.5	+0.2
JOM				S	Sn	18 25 02.8	-0.9
JOU	Okura	1.01	254	P	Pn	18 24 52.0	0.0
JOU				S	Sn	18 25 05.3	+0.2
JMM	Marumori	1.17	229	P	Pn	18 24 53.6	-0.6
JMM				S	Sn	18 25 07.9	-1.0
JYK	Kaneyama	1.24	283	P	Pn	18 24 55.2	+0.1
JRG	Rokugo	1.24	308	P	Pn	18 24 55.5	+0.3
MJAR	Matsushiro Arr	3.61	236	Pn	Pn	18 25 29.4	+1.8
	0.2nm,0.3s,baz=41,slow=12,SNR=15						
MAT	Matsushiro	3.61	236	P	Pn	18 25 29.2	+1.6
MAT				S	Sn	18 26 10.4	+1.4
ASAJ	Asahikawa	5.49	5	Pn	Pn	18 25 53.6	+0.1
	0.5nm,0.3s,baz=207,slow=12,SNR=6.3						
ASAJ				Sn	Sn	18 26 56.9	+1.5
	0.2nm,0.3s,baz=242,slow=32,SNR=1.9						
H11N2	WAKE ISLAND Hy	28.68	124	T	T	19 00 52.4	
	baz=317,slow=75,SNR=87						
H11N1	WAKE ISLAND Hy	28.69	124	T	T	19 00 50.5	
	baz=317,slow=75,SNR=91						
H11N3	WAKE ISLAND Hy	28.70	124	T	T	19 00 53.8	
	baz=317,slow=75,SNR=111						
H11S1	WAKE ISLAND Hy	29.45	126	T	T	19 01 39.2	
	baz=318,slow=76,SNR=63						
H11S3	WAKE ISLAND Hy	29.45	126	T	T	19 01 39.2	
	baz=318,slow=76,SNR=93						
H11S2	WAKE ISLAND Hy	29.46	126	T	T	19 01 40.2	
	baz=318,slow=76,SNR=71						
ZALV	Zalesovo Beam	41.13	311	P	P	18 32 13.3	-0.5
	0.8nm,0.5s,baz=78,slow=9.4,SNR=4.4						
MKAR	Makanchi Array	43.61	301	P	P	18 32 32.9	-1.2
	0.3nm,0.6s,baz=86,slow=9.4,SNR=4.8						
ASAR	Alice Springs	62.43	188	P	P	18 35 06.1	+13
	0.3nm,0.7s,baz=24,slow=9.2,SNR=2.5						

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*REY **12** 18:30:23.8, 64°.66N×17°.49W, h13km*

*IDC **12** 18:30:25.3±0.6, 64°.65N×17°.72W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.8/38, mbtmp3.8/17, ML3.6/2, MS3.7/7, Ms1 3.7/7, ms1mx3.3/48, Error ellipse: s-maj=20.5km s-min=11.7km az=25.0*

*NEIC **12** 18:30:26.5±2.0, 64°.6N±0°.1×17°.8W±0°.2, h9km±5km, mb4.5/27, Error ellipse: s-maj=14.6km s-min=12.0km az=177.0*

ISC 12 18:30:26.4±0.4**, 64°.59N**±0°.04×**17°.68W**±0°.04**, h10km, n95, σ1s.46**/81**, mb4.1**/24**, MS3.8**/5**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.12	209	P	Pg	18 30 28.5	-0.9
	baz=218						
IDYN	Dyngjuhals	0.25	33	P	Pg	18 30 27.0	-4.5
	baz=23						
IDYN				S	Sg	18 30 29.7	-5.1
	baz=23						
ISKR	Skrokkalda	0.30	265	P	Pg	18 30 31.3	-1.2
	baz=255						
IURH	Urdarhals	0.33	44	P	Pg	18 30 28.2	-4.7
	baz=43						
IURH				S	Sg	18 30 31.7	-5.6
	baz=43						
IJOK	Jokulheimar	0.36	221	P	Pg	18 30 32.6	-0.9
	baz=222						
IJOK				S	Sb	18 30 38.4	-2.2
	baz=222						
IKVE	Kverkfjoll	0.44	78	P	Pg	18 30 30.7	-4.4
	baz=88						
IIEY	Innrieyrar	0.53	201	P	Pg	18 30 35.0	-1.6
	baz=206						
IIEY				S	Sb	18 30 44.0	-1.5
	baz=206						
THOR	Thorvaldshraun	0.56	51	P	Pg	18 30 32.0	-5.2
	baz=52						
THOR				S	Sg	18 30 38.4	-6.0
	baz=52						
IKRE	Kreppuhraun	0.59	70	P	Pg	18 30 32.7	-5.2
	baz=76						
IKRE				S	Sg	18 30 40.1	-5.6
	baz=76						
IKAL	Kalfafell	0.64	180	P	Pg	18 30 36.7	-2.0
	baz=187						
IKAL				S	Sb	18 30 47.4	-1.2
	baz=187						
IASK	Askja	0.64	43	P	Pg	18 30 33.1	-5.7
	baz=42						
IASK				S	Sg	18 30 41.3	-5.9
	baz=42						
IKSK	Karasker	0.68	129	P	Pg	18 30 35.6	-3.9
	baz=138						
IMKO	Mokollar	0.70	55	P	Pg	18 30 34.5	-5.4
	baz=57						
IMKO				S	Sg	18 30 42.7	-6.2
	baz=57						
ISVA	Svartarkot	0.78	13	P	Pg	18 30 36.1	-5.2
	baz=8.4						
IFAG	Fagurholsmyri	0.84	147	P	Pg	18 30 39.4	-3.2
	baz=155						
IVSH	V-Sauoahnukur	0.87	74	P	Pg	18 30 37.3	-5.8
	baz=78						
IVSH				S	Sg	18 30 48.2	-6.2
	baz=78						
ISNB	Snabyli	0.95	206	P	Pg	18 30 42.5	-2.1
	baz=209						
IADA	Aoalbol	1.00	63	P	Pb	18 30 39.3	-6.5
	baz=66						
IADA				S	Sg	18 30 51.6	-7.0
	baz=66						
IFED	Fedgar	1.04	238	P	Pg	18 30 44.2	-2.1
	baz=237						
IRJU	Rjupnafell	1.07	204	P	Pg	18 30 44.3	-2.5
	baz=207						
IMEL	Melhnausar	1.08	23	P	Pb	18 30 40.8	-6.3
	baz=21						
IREN	Reynihlio	1.11	17	P	Pb	18 30 41.5	-6.2
	baz=14						
IGYG	Gygjarholskot	1.14	256	P	Pg	18 30 45.4	-2.9
	baz=253						
IGRS	Grimsstaoir	1.25	31	P	Pn	18 30 43.6	-6.2
	baz=30						
ISKI	Skildingahlsh	1.32	12	P	Pn	18 30 44.8	-6.0
	baz=9.0						
IGHA	Grjothals	1.33	18	P	Pn	18 30 45.2	-5.8
	baz=16						
BORG	Borgarnes	1.58	278	Pg	Pn	18 30 51.8	-2.5
	98nm,0.3s,baz=95,slow=9.1,SNR=103						
BORG				Lg	Lg	18 31 17.2	
	35nm,0.3s,baz=50,slow=19,SNR=15						
BORG				LR	LR	18 31 34.9	
	comp=Z,370nm,19.6s,baz=150,slow=45						
BORG	Borgarnes	1.58	278	Pn	Pn	18 30 52.1	-2.2

SCO	Scoresbysund	6.14	346		Pn	18 31 54.3	-2.7
SCO	Scoresbysund	6.14	346	*e*	Pn	18 31 46.6	-10
	baz=168,slow=8.6						
SCO				*i* P	Pn	18 31 54.0	-3.0
SCO				*i* S	Sn	18 33 08.4	+1.2
SCO				IAML		18 33 13.8	
	comp=Z,2.2nm,0.4s						
EKA	Eskdalemuir Ar	11.76	135	Pn	Pn	18 33 13.6	-0.3
	baz=320,slow=13,SNR=9.8						
SPITS	Spitsbergen Ar	16.97	23	LR	LR	18 39 04.2	
	comp=Z,113nm,21.3s,baz=180,slow=31						
ARCES	ARCESS Array B	17.23	54	P	Pn	18 34 28.9	+2.2
	baz=278,slow=12,SNR=3.9						
ARCES				LR	LR	18 40 15.0	
	comp=Z,143nm,18.6s,baz=260,slow=34						
FINES	FINESS Array B	19.80	79	P	P	18 34 56.2	-0.2
	comp=Z,0.1nm,0.3s,baz=280,slow=8.3,SNR=2.0						
TULEG	Thule	19.88	328	P	P	18 34 57.4	+0.2
CLL	Collm	20.74	115	*e*P	P	18 35 08.0	+1.2
BRG	Berggiesshubel	21.45	115	*e*P	P	18 35 15.7	+1.3
BRG				Amp		18 35 17.7	
	comp=Z,8.9nm,1.3s						
BRG	Berggiesshubel	21.45	115	*e*P	P	18 35 15.7	+1.3
BRG				Amp		18 35 17.7	
	comp=Z,8.9nm,1.3s						
FRB	Frobisher Bay	21.70	291	LR	LR	18 43 12.7	
	comp=Z,182nm,19.3s,baz=26,slow=35						
KHC	Kasperske Hory	22.71	118	*e*P	P	18 35 29.8	+1.9
KHC	Kasperske Hory	22.71	118	P	P	18 35 29.5	+1.6
KHC				IAmb	IAmb	18 35 36.2	
	comp=Z,28nm,1.6s						
DPC	Dobruska-Polom	22.80	112	*e*P	P	18 35 30.8	+1.8
GEC2	GERESS Array S	22.99	118	P	P	18 35 31.1	+0.2
GEC2				IAmb	IAmb	18 35 54.8	
	comp=Z,30nm,1.7s						
GERES	GERESS Array B	22.99	118	P	P	18 35 31.1	+0.2
	comp=Z,1.0nm,0.9s,baz=318,slow=9.7,SNR=4.1						
GERES	GERESS Array B	22.99	118	P	P	18 35 29.1	-1.8
DAVOX	Davos/Dischmat	23.33	127	P	P	18 35 35.9	+1.4
	comp=Z,1.3nm,0.6s,baz=333,slow=15,SNR=2.4						
EUNU	Eureka	23.71	336	P	P	18 35 37.5	-0.4
VRAC	Vranov	23.73	114	LR	LR	18 44 54.6	
	comp=Z,389nm,19.7s,baz=334,slow=37						
VRAC	Vranov	23.73	114	*e*P	P	18 35 39.4	+1.1
MORC	Moravsky Berou	23.74	112	*e*P	P	18 35 39.3	+0.9
MORC	Moravsky Berou	23.74	112	P	P	18 35 37.0	-1.4
MORC				IAmb	IAmb	18 35 51.6	
	comp=Z,19nm,1.5s						
BNI	Bardonecchia	23.80	134	P	P	18 35 38.5	-0.7
BNI				IAmb	IAmb	18 36 01.5	
	comp=Z,58nm,2.0s						
KRUC	Moravsky	23.85	114	*e*P	P	18 35 40.3	+0.8
PSZ	Piszkesteto	26.16	112	P	P	18 36 00.0	-0.6
ESDC	Sonseca Array	26.21	156	P	P	18 36 01.8	+0.7
	comp=Z,1.7nm,1.1s,baz=341,slow=8.3,SNR=5.7						
ESDC				LR	LR	18 45 32.8	
	comp=Z,80nm,18.8s,baz=340,slow=34						
ESDC	Sonseca Array	26.21	156	P	P	18 36 02.6	+1.5
AKASG	Malin Array Be	27.91	97	P	P	18 36 17.0	+0.9
	comp=Z,0.1nm,0.2s,baz=318,slow=7.5,SNR=1.3						
BRTR	Keskin Array B	38.54	105	P	P	18 37 50.0	+1.2
	comp=Z,0.9nm,0.8s,baz=324,slow=4.1,SNR=3.0						
YKA	Yellowknife Ar	39.21	313	P	P	18 37 53.6	-0.4
	comp=Z,1.5nm,1.0s,baz=40,slow=9.0,SNR=11						
YKA				PcP	PcP	18 40 02.7	-0.1
	comp=Z,0.4nm,0.9s,baz=41,slow=4.4,SNR=4.3						
ULM	Lac du Bonnet	41.55	289	P	P	18 38 15.4	+1.9
	comp=Z,2.6nm,0.7s,baz=355,slow=23,SNR=5.0						
TIXI	Tiksi	42.13	15	P	P	18 38 18.5	+0.5
TOLK	Toolik Lake Re	42.79	336	P	P	18 38 23.8	+0.3
TOLK				IAmb	IAmb	18 38 26.7	
	comp=Z,9.6nm,1.1s						
BMAR	Burnt Mountain	42.93	333	P	P	18 38 25.0	+0.4
ILAR	Eielson Array	45.72	332	P	P	18 38 47.2	+0.3
	comp=Z,3.1nm,1.1s,baz=20,slow=6.3,SNR=10						
ILAR				PcP	PcP	18 40 24.9	+0.5
	comp=Z,0.6nm,1.1s,baz=357,slow=3.2,SNR=4.6						
ILAR	Eielson Array	45.72	332	P	P	18 38 47.6	+0.7
IMAR	Indian Mountai	45.90	337	P	P	18 38 49.8	+1.5
BCAR	Beaver Creek A	46.13	328	P	P	18 38 50.6	+0.3
ZALV	Zalesovo Beam	47.74	51	P	P	18 39 02.8	-0.1
	comp=Z,0.7nm,0.6s,baz=330,slow=8.6,SNR=4.4						
ZALV	Zalesovo Beam	47.74	51	P	P	18 39 03.3	+0.4
EGMT	Eagleton	48.84	297	P	P	18 39 12.0	+0.4
Y49A	Blount Mountai	50.91	268	P	P	18 39 27.2	-0.2
YNE	Yellowstone No	51.43	295	P	P	18 39 30.7	-0.7
BOZ	Bozeman (W)	51.57	297	P	P	18 39 33.3	+0.9
BOZ				IAmb	IAmb	18 39 35.4	
	comp=Z,5.0nm,1.1s						
YMP	Mirror Lake Pl	51.72	295	P	P	18 39 35.0	+1.4
YHL	Hebgen Lake	52.02	296	P	P	18 39 36.8	+0.8
H17A	Grant Village	52.17	295	P	P	18 39 38.0	+1.0
MKAR	Makanchi Array	52.83	58	P	P	18 39 42.2	+0.6
	comp=Z,1.2nm,1.0s,baz=0.0,slow=3.2,SNR=5.2						
MKAR	Makanchi Array	52.83	58	P	P	18 39 43.0	+1.4
TORD	Torodi Ar. Bea	53.10	156	P	P	18 39 44.9	+1.1
	comp=Z,1.5nm,0.8s,baz=342,slow=9.0,SNR=6.2						
TORD	Torodi Ar. Bea	53.10	156	P	P	18 39 44.1	+0.3
BW06	Boulder Array	53.13	293	P	P	18 39 43.4	-0.7
BW06				IAmb	IAmb	18 39 47.2	
	comp=Z,10nm,1.4s						
PD31	Pinedale Array	53.13	293	P	P	18 39 42.8	-1.3
PD31				IAmb	IAmb	18 39 47.2	
	comp=Z,8.7nm,1.4s						
PDAR	Pinedale Array	53.13	293	P	P	18 39 43.9	-0.2
	comp=Z,2.9nm,1.0s,baz=50,slow=5.4,SNR=12						
PDAR	Pinedale Array	53.13	293	P	P	18 39 43.5	-0.6
N23A	Red Feather La	53.26	289	P	P	18 39 44.4	-0.6
N23A				IAmb	IAmb	18 39 58.0	
	comp=Z,5.6nm,1.1s						
HWUT	Hardware Ranch	54.91	294	P	P	18 39 57.5	+0.4
HWUT				IAmb	IAmb	18 40 00.8	
	comp=Z,5.7nm,1.1s						
PV13	Radium Mtn., P	56.75	290	P	P	18 40 10.2	-0.1
PV13				IAmb	IAmb	18 40 13.4	
	comp=Z,6.1nm,1.0s						
ELK	Elko	57.08	296	LR	LR	19 04 03.5	
	comp=Z,97nm,19.3s,baz=34,slow=35						
MVU	Marysvale	57.82	292	P	P	18 40 18.6	+0.8
DBIC	Dimbokro	58.53	165	P	P	18 40 24.1	+1.4
	comp=Z,2.6nm,1.0s,baz=173,slow=9.7,SNR=3.4						
ANMO	Albuquerque	58.53	286	LR	LR	19 07 11.1	
	comp=Z,67nm,18.2s,baz=62,slow=38						
SONM	Songino Array	59.75	40	P	P	18 40 30.5	-0.6
	comp=Z,0.4nm,0.9s,baz=322,slow=9.1,SNR=2.1						
WUAZ	Wupatki	60.06	290	P	P	18 40 34.0	+0.6
X16A	Lo Mia Camp, P	61.04	289	P	P	18 40 41.1	+1.0
TXAR	Lajitas Array	62.22	280	P	P	18 40 48.9	+0.9
	comp=Z,0.9nm,0.9s,baz=20,slow=2.9,SNR=5.6						

MEX 12 18:34:39.8±0.3, 18°.97N×98°.57W, h3^{km}, MD3.5, 2D, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPM	Popocatepetl	0.11	329	⇓*e*P	Pg	18 34 41.9	-0.3
	baz=149,slow=12						
PPM				*e*S	Sg	18 34 43.4	-0.4
PPM	Popocatepetl	0.11	329	⇓*e*P	Pg	18 34 41.9	-0.3
	baz=149,slow=12						
PPM				*e*S	Sg	18 34 43.4	-0.4
YAIG	Yautepec	0.49	257	*i* P	Pg	18 34 48.7	-0.5
YAIG				*e*S	Sg	18 34 56.0	+0.5
YAIG	Yautepec	0.49	257	*i* P	Pg	18 34 48.7	-0.5
YAIG				*e*S	Sg	18 34 56.0	+0.5
PLIG	Platanillo	1.06	237	*e*P	Pg	18 34 57.6	-2.6
PLIG				*i* S	Sg	18 35 11.9	-1.9
PLIG	Platanillo	1.06	237	*e*P	Pg	18 34 57.6	-2.6
PLIG				*i* S	Sg	18 35 11.9	-1.9
FTIG	Fresnillo de T	1.14	159	*i* P	Pg	18 34 58.3	-3.3
FTIG				*i* S	Sg	18 35 13.8	-2.6
FTIG	Fresnillo de T	1.14	159	*i* P	Pg	18 34 59.9	-1.7
FTIG				*i* S	Sg	18 35 15.3	-1.0
HLIG	Huajuapan de L	1.35	147	*i* P	Pg	18 35 02.3	-3.4
HLIG				*i* S	Sg	18 35 18.5	-4.6
HLIG	Huajuapan de L	1.35	147	*i* P	Pg	18 35 03.6	-2.1
HLIG				*i* S	Sg	18 35 20.7	-2.5

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*IDC **12** 18:53:18.8±0.8, 1°.76N×126°.28E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/44, mbtmp3.8/9, ML3.5/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/42, Error ellipse: s-maj=49.2km s-min=16.5km az=78.0*

*DJA **12** 18:53:25.0±0.3, 2°N±4°×12°6E±°, h10^{km}, M3.8/8, MLv3.8/8*

*NEIC **12** 18:53:25.3±1.1, 1°.8N±0°.1×126°.4E±0°.1, h56^{km}±15^{km}, mb4.0/7, Error ellipse: s-maj=22.3km s-min=10.8km az=214.0*

ISC 12 18:53:25.7±0.7, 1°.76N±0°.06×126°.37E±0°.08, h47^{km}, n27, σ1^{s}41/28, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.40	135		Pn	18 53 48.8	0.0
TNTI	Ternate	1.40	135	P	Pn	18 53 48.5	-0.3
TNTI				S	Sn	18 54 07.3	+1.3
SGSI	Sangihe	2.09	336	P	Pn	18 54 01.8	+3.5
KMSI	Cibinong	2.67	244	P	Pn	18 54 08.8	+2.6
GTOI	Gorontalo	3.54	252	P	Pn	18 54 20.9	+2.7
SANI	Sanana	3.81	186	P	Pn	18 54 21.9	+0.1
TOLI2	Tolitoli	5.63	263	Pn	Pn	18 54 47.4	+0.6
MYLDM	Lahad Datu	8.56	294	Pn	Pn	18 55 26.0	-1.1
KAPI	Kappang	9.44	224	LR	LR	18 59 23.6	
	comp=Z,39nm,19.7s,baz=80,slow=39						
FITZ	Fitzroy Crossi	19.75	182	P	P	18 57 50.7	-1.0
	0.1nm,0.3s,baz=353,slow=8.1,SNR=1.3						
FITZ	Fitzroy Crossi	19.75	182	P	P	18 57 51.3	-0.4
FITZ				IAmb	IAmb	18 57 58.6	
	comp=Z,8.4nm,1.3s						
WB0	Warramunga Arr	22.80	160	P	P	18 58 23.5	-1.1
WB0				IAmb	IAmb	18 58 29.6	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	22.94	160	P	P	18 58 24.8	-1.3
	comp=Z,1.7nm,0.4s,baz=338,slow=11,SNR=29						
WRA	Warramunga Arr	22.94	160	P	P	18 58 24.6	-1.5
WB2	Warramunga Arr	22.95	160	P	P	18 58 25.2	-0.9
WB2				IAmb	IAmb	18 58 37.0	
	comp=Z,13nm,1.4s						
AS31	Alice Springs	26.32	164	P	P	18 58 56.7	-0.6
ASAR	Alice Springs	26.32	164	P	P	18 58 56.9	-0.3
	comp=Z,0.6nm,0.4s,baz=343,slow=7.9,SNR=20						
ASAR				PcP	PcP	19 02 22.6	0.0
	comp=Z,0.3nm,0.4s,baz=348,slow=2.3,SNR=6.6						
ASAR	Alice Springs	26.32	164	P	P	18 58 59.2	+2.0
MJAR	Matsushiro Arr	36.30	16	P	P	19 00 24.3	-0.5
	comp=Z,1.8nm,0.9s,baz=199,slow=10,SNR=2.3						
SONM	Songino Array	49.05	342	P	P	19 02 08.2	+0.1
	comp=Z,0.3nm,0.6s,baz=155,slow=8.7,SNR=4.1						
PETK	Petropavlovsk-	57.38	22	P	P	19 03 09.7	+0.6
	comp=Z,8.5nm,1.1s,baz=180,slow=1.5,SNR=4.6						
MK31	Makanchi Array	58.97	326	P	P	19 03 18.9	-1.6
MK31				IAmb	IAmb	19 03 45.3	
	comp=Z,2.2nm,1.4s						
MKAR	Makanchi Array	58.97	326	P	P	19 03 19.7	-0.8
	comp=Z,0.5nm,0.4s,baz=121,slow=7.4,SNR=14						
MKAR	Makanchi Array	58.97	326	P	P	19 03 19.6	-0.9
ZALV	Zalesovo Beam	62.18	334	P	P	19 03 40.9	-1.2
	comp=Z,0.4nm,0.5s,baz=146,slow=7.9,SNR=2.1						
KURK	Kurchatov	63.21	328	P	P	19 03 47.9	-1.1
ILAR	Eielson Array	87.02	25	P	P	19 06 05.0	-0.9
	comp=Z,0.3nm,0.8s,baz=269,slow=5.3,SNR=1.6						

IDC 12 19:05:21.8±6.4, 18°.96N×146°.13E, h234^{km}±35^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.0/58, mbtmp3.9/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/19, Error ellipse: s-maj=147.8km s-min=27.5km az=79.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.47	193	P	Pn	19 06 43.0	0.0
	5.3nm,0.3s,baz=197,slow=19,SNR=2.2						
GUMO				S	S	19 07 41.7	-5.9
	5.3nm,0.3s,baz=154,slow=23,SNR=1.1						
USRK	Ussuriysk Ar.	27.82	338	LR	LR	19 22 02.5	
	comp=Z,53nm,19.8s,baz=138,slow=36						
WRA	Warramunga Arr	40.35	197	P	P	19 12 37.5	+0.4
	2.5nm,0.6s,baz=21,slow=9.1,SNR=22						
FITZ	Fitzroy Crossi	41.96	210	P	P	19 12 49.8	-0.3
	0.7nm,0.3s,baz=39,slow=9.5,SNR=15						
ASAR	Alice Springs	44.01	196	P	P	19 13 06.0	-0.5
	0.5nm,0.6s,baz=12,slow=6.3,SNR=15						
MKAR	Makanchi Array	58.58	314	P	P	19 14 54.2	0.0
	0.1nm,0.6s,baz=88,slow=7.8,SNR=1.8						

IDC 12 19:06:55.7±19.0, 16°.26S×174°.52W, h0^{km}, mb4.2/5, mb1 4.3/5, mb1mx3.8/54, mbtmp4.2/5, Error ellipse: s-maj=369.5km s-min=147.2km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	37.41	258	P	P	19 14 11.1	+0.3
	1.4nm,0.6s,baz=84,slow=13,SNR=2.1						
STKA	Stephens Creek	42.68	240	P	P	19 14 55.0	+0.5
	5.4nm,1.2s,baz=94,slow=14,SNR=6.6						
WRA	Warramunga Arr	48.60	258	P	P	19 15 41.1	-0.4
	0.9nm,0.3s,baz=95,slow=7.3,SNR=28						
ASAR	Alice Springs	48.82	253	P	P	19 15 42.7	-0.6
	3.2nm,0.4s,baz=89,slow=8.5,SNR=102						
FITZ	Fitzroy Crossi	56.98	259	P	P	19 16 43.5	-0.1
	2.0nm,0.8s,baz=76,slow=4.2,SNR=2.3						

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*PGC **12** 19:09:11.9±2.4, 50°.73N×130°.53W, h10^{km}, MLSn3.2/19, Mw3.8/19, 219km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **12** 19:09:16.2±2.1, 50°.81N×129°.68W, h0^{km}, mb3.4/1, mb1 3.7/4, mb1mx3.3/54, mbtmp3.3/4, ML3.2/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/28, Error ellipse: s-maj=28.8km s-min=21.7km az=102.0*

ISC 12 19:09:12.0±1.2, 50°.83N±0°.06×130°.45W±0°.06, h10^{km}, n45, σ1^{s}87/56, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	Holberg	1.49	96	Pn	Pn	19 09 37.1	-1.7
HOLB				Sn	Sn	19 09 55.7	-2.6
HG4B	Hotspring	1.54	343	Pn	Pn	19 09 38.6	-1.0
HG4B				Sn	Sn	19 09 57.8	-1.8
PHC	Port Hardy	1.92	92	Pn	Pn	19 09 43.4	-1.3
PHC				Sn	Sn	19 10 06.2	-2.8
BBB	Bella Bella	2.00	46	Pn	Pn	19 09 45.3	-0.5
	14nm,0.3s,baz=255,slow=7.3,SNR=198						
BBB				Sn	Sn	19 10 08.2	-2.6
	114nm,0.3s,baz=314,slow=22,SNR=19						
BBB	Bella Bella	2.00	46	Pn	Pn	19 09 45.3	-0.5
BBB				Sn	Sn	19 10 08.5	-2.3
MAYB	Maynard	2.13	100	Pn	Pn	19 09 46.3	-1.5
FHRB	Fair Harbour	2.27	109	Pn	Pn	19 09 45.7	-3.7
TLCB	Telegraph Cove	2.32	96	Pn	Pn	19 09 49.4	-0.8
TLCB				Sn	Sn	19 10 18.2	-0.5
EDB	Eliza Dome	2.34	113	Pn	Pn	19 09 48.2	-2.2
MOBC	Moresby Island	2.50	339	Pn	Pn	19 09 51.7	-1.1
MOBC				Sn	Sn	19 10 22.1	-1.4
WOSB	Woss	2.57	104	Pn	Pn	19 09 52.5	-1.2
BNAB	Bonilla	2.67	358	Pn	Pn	19 09 54.2	-0.9
BNAB				Sn	Sn	19 10 25.0	-2.5
DIB	Dawson Inlet,	2.69	333	Pn	Pn	19 09 54.9	-0.4
DIB				Sn	Sn	19 10 24.7	-3.1
NCRB	Newcastle Ridg	2.83	97	Pn	Pn	19 09 56.3	-1.1
HWKB	Hawksbury Isla	2.89	16	Pn	Pn	19 09 57.8	-0.4
HWKB				Sn	Sn	19 10 32.9	-0.1
ETB	Estevan Point	2.91	118	Pn	Pn	19 09 56.5	-1.8
GDR	Gold River	3.02	109	Pn	Pn	19 09 58.4	-1.4
GRNB	Grenville Isla	3.04	6	Pn	Pn	19 10 00.0	-0.2
CBB	Campbell River	3.35	102	Pn	Pn	19 10 03.8	-0.6
BTB	Buttle Lake	3.45	111	Pn	Pn	19 10 04.7	-1.2
BTB				Sn	Sn	19 10 44.6	-2.3
RUBB	Prince Rupert	3.51	2	Pn	Pn	19 10 06.8	+0.2
OZB	Mount Ozzard	3.71	118	Pn	Pn	19 10 07.7	-1.7
TXB	Texada	4.02	104	Pn	Pn	19 10 13.0	-0.7
MGB	Mount Grey	4.15	114	Pn	Pn	19 10 13.9	-1.5
SHB	Sechelt	4.40	104	Pn	Pn	19 10 18.1	-0.9
PFB	Port Renfrew	4.51	118	Pn	Pn	19 10 19.3	-1.0
OCP	Olym-Cheeka Pk	4.56	121	Pn	Pn	19 10 20.7	-0.3
OBC	Olympics--Boni	5.01	121	Pn	Pn	19 10 27.6	+0.3
FSB	Fort Saint Jam	5.22	43	Pn	Pn	19 10 31.4	+1.3
OSD	Olympics--Snow	5.34	122	Pn	Pn	19 10 32.8	+0.9
MCW	Mount Constitu	5.39	111	Pn	Pn	19 10 33.7	+1.3
LLLB	Lillooet	5.45	89	Pn	Pn	19 10 34.1	+0.8
HDW	Hoodsport	5.79	120	Pn	Pn	19 10 38.4	+0.3
MBW	Mount Baker	5.90	107	Pn	Pn	19 10 41.3	+1.7
CMW	Cultus Mountai	5.92	111	Pn	Pn	19 10 41.2	+1.3
JCW	Jim Creek	6.14	112	Pn	Pn	19 10 44.3	+1.5
BMBC	Bull Mountain	7.21	40	Pn	Pn	19 10 59.8	+2.3
BMBC				Sn	Sn	19 12 20.2	+0.8
DLBC	Dease Lake	7.63	2	Pn	Pn	19 11 08.7	+5.5
	0.6nm,0.3s,baz=165,slow=16,SNR=1.8						
DLBC				LR	LR	19 14 18.3	
	comp=Z,37nm,19.2s,baz=264,slow=40						
NBC5	NorthernBC 5	8.11	31	Pn	Pn	19 11 11.7	+2.0
NBC5				Sn	Sn	19 12 43.8	+2.4
NEW	Newport	9.04	101	LR	LR	19 14 58.2	
	comp=Z,127nm,20.2s,baz=326,slow=40						
FNBB	Fort Nelson	9.14	25	Pn	Pn	19 11 26.4	+2.5
WHY	Whitehorse	10.17	348	Pn	Pn	19 11 40.2	+2.3
YKA	Yellowknife Ar	14.53	30	Pn	Pn	19 12 36.7	-0.7
	0.1nm,0.3s,baz=226,slow=12,SNR=8.0						
YKA				Sn	Sn	19 15 11.9	-6.3
	0.1nm,0.3s,baz=206,slow=23,SNR=3.6						
ILAR	Eielson Array	16.41	335	Pn	P	19 13 11.7	+6.7
	0.0nm,0.3s,baz=152,slow=8.3,SNR=4.6						
TXAR	Lajitas Array	29.40	127	P	P	19 15 17.7	+2.2
	0.3nm,0.8s,baz=338,slow=6.8,SNR=2.7						

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*JMA **12** 19:14:30.5, 41°.24N×142°.13E, h56^{km}±2^{km}, M3.6*

JMA Felt I J1.

*NIED **12** 19:14:30.5, 41°.24N×142°.13E, h56^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.29; $M_{\theta\theta}$2.25; $M_{\phi\phi}$-3.54; $M_{r\theta}$3.40; $M_{\theta\phi}$0.38; $M_{\phi r}$3.81; Fault plane solution: $M_0$5.98000×10^{14} NP1:ϕ_s36.00000°, δ83.00000°, λ119.00000°. NP2:ϕ_s139.00000°, δ30.00000°, λ14.00000°.*

*IDC **12** 19:14:32.9±2.2, 41°.28N×142°.13E, h82^{km}±19^{km}, mb3.5/10, mb1 3.5/14, mb1mx3.4/53, mbtmp3.7/14, MS2.9/2, Ms1 2.9/2, ms1mx2.5/44 Error ellipse: s-maj=21.6km s-min=15.3km az=109.0*

ISC 12 19:14:30.3±0.9, 41°.23N±0°.04×142°.12E±0°.04, h59^{km}±8^{km}, n42, σ1^{s}10/51, mb3.7/12, 1C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	Aomorihigashid	0.59	274	⇓P	Pn	19 14 43.4	+0.3
JAHD				S	Sn	19 14 53.0	+0.5
JARK	Aomorirokkasho	0.61	249	⇓P	Pn	19 14 43.5	+0.1
JARK				S	Sn	19 14 52.9	0.0
JOT	Ohata	0.82	281	⇓P	Pn	19 14 46.1	+0.1
JOT				*e*S	Sn	19 14 57.9	+0.4
JTM	Tenmabayashi	0.91	242	⇓P	Pn	19 14 47.5	+0.4
JTM				S	Sn	19 15 00.2	+0.8
JANG	Nango	0.97	209	⇑P	Pn	19 14 47.8	0.0
JANG				S	Sn	19 15 00.4	-0.4
JKB	Kayabe	1.05	309	⇓P	Pn	19 14 48.9	0.0
JKB				*e*S	Sn	19 15 02.7	0.0
JEM	Erimo	1.11	44	P	Pn	19 14 49.9	+0.2
JEM				*e*S	Sn	19 15 04.6	+0.5
JNBK	Urakawa-nobuka	1.16	24	P	Pn	19 14 50.4	+0.1
JNBK				*e*S	Sn	19 15 05.2	0.0
JSR	Shiriuchi	1.32	284	⇓P	Pn	19 14 53.2	+0.8
JSR				S	Sn	19 15 10.3	+1.3
JIAM	Iburiatsuma	1.41	354	P	Pn	19 14 54.8	+1.2
JIAM				*e*S	Sn	19 15 12.2	+1.1
JNB	Noboribetsu	1.48	327	P	Pn	19 14 54.5	-0.2
JNB				S	Sn	19 15 12.7	-0.3
JAH	Hinai	1.53	228	P	Pn	19 14 56.6	+1.3
JAH				*e*S	Sn	19 15 15.4	+1.2
JBT2	Biratori 2	1.56	7	P	Pn	19 14 56.8	+1.0
JYM2	Yakumo 2	1.59	305	P	Pn	19 14 56.8	+0.7
JYM2				*e*S	Sn	19 15 17.2	+1.7
JOMM	Oshimamatsumae	1.62	281	P	Pn	19 14 57.8	+1.3
JCH	Churui	1.67	33	P	Pn	19 14 57.9	+0.7
JCH				*e*S	Sn	19 15 18.0	+0.4
JEW	Eniwo	1.69	343	P	Pn	19 14 58.4	+0.9
JEW				S	Sn	19 15 19.9	+1.8
JOM	Ohasama	1.86	200	P	Pn	19 15 00.3	+0.5
JFR	Furan	1.97	10	P	Pn	19 15 02.1	+0.8
JOSM	Okushiri--Mats	2.16	294	P	Pn	19 15 04.0	+0.1
JOSM				*e*S	Sn	19 15 29.4	-0.1
ASAJ	Asahikawa	2.91	7	P	Pn	19 15 15.5	+1.4
	12nm,0.3s,baz=208,slow=9.6,SNR=65						
ASAJ				S	Sn	19 15 49.3	+1.4
	4.6nm,0.3s,baz=350,slow=28,SNR=8.8						
ASAJ				LR	LR	19 16 45.0	
	comp=Z,108nm,21.9s,baz=214,slow=46						
MJAR	Matsushiro Arr	5.58	214	P	Pn	19 15 54.6	+3.9
	0.1nm,0.3s,baz=25,slow=14,SNR=2.8						
USRK	Ussuriysk Ar.	8.03	295	P	Pn	19 16 25.9	+1.7
	baz=99,slow=16,SNR=6.4						
KSRS	Korea Array	11.62	256	P	Pn	19 17 18.2	+5.0
	0.2nm,0.3s,baz=62,slow=14,SNR=6.4						
YAK	Yakutsk	22.14	344	P	P	19 19 18.0	-2.7
	2.9nm,0.5s,baz=264,slow=2.0,SNR=4.8						
YAK				LR	LR	19 27 34.8	
	comp=Z,54nm,19.2s,baz=270,slow=35						
SEY	Seymchan	22.58	12	P	P	19 19 23.9	-1.6
	1.1nm,0.7s,baz=148,slow=19,SNR=2.6						
SONM	Songino Array	26.14	297	P	P	19 19 58.5	-0.4
	0.5nm,0.8s,baz=72,slow=6.9,SNR=4.3						
H11N2	WAKE ISLAND Hy	30.06	128	T	T	19 52 17.9	
	baz=321,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	30.07	128	T	T	19 52 16.5	
	baz=321,slow=75,SNR=52						
H11N3	WAKE ISLAND Hy	30.08	128	T	T	19 52 16.7	
	baz=321,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	30.90	130	T	T	19 53 48.4	
	baz=322,slow=74						
H11S3	WAKE ISLAND Hy	30.90	130	T	T	19 53 15.0	
	baz=322						
H11S2	WAKE ISLAND Hy	30.92	130	T	T	19 53 21.8	
	baz=322,slow=74						
ZALV	Zalesovo Beam	39.61	309	P	P	19 21 56.2	+0.4
	1.8nm,0.7s,baz=86,slow=11,SNR=8.2						
MKAR	Makanchi Array	42.48	298	P	P	19 22 20.1	+0.6
	0.8nm,0.6s,baz=81,slow=8.7,SNR=8.3						
ILAR	Eielson Array	45.70	34	P	P	19 22 45.5	+0.5
	0.7nm,0.9s,baz=264,slow=5.5,SNR=6.0						
INK	Inuvik	50.43	29	P	P	19 23 22.4	+1.1
	0.9nm,0.4s,baz=282,slow=7.3,SNR=8.6						
YKA	Yellowknife Ar	59.93	31	P	P	19 24 36.4	+6.6
	0.2nm,0.6s,baz=290,slow=11,SNR=1.8						
WRA	Warramunga Arr	61.28	188	P	P	19 24 39.4	-0.1
	0.3nm,0.4s,baz=4.8,slow=6.9,SNR=4.6						
ASAR	Alice Springs	65.01	188	P	P	19 25 04.0	-0.1
	0.3nm,0.7s,baz=3.4,slow=7.4,SNR=6.5						
FINES	FINESS Array B	65.38	332	P	P	19 25 04.8	-1.3
	3.0nm,0.7s,baz=56,slow=4.8,SNR=14						
AKASG	Malin Array Be	71.33	322	P	P	19 25 43.8	+0.3
	1.3nm,0.5s,baz=43,slow=6.3,SNR=7.5						

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*BJI **12** 19:22:46.0±0.0, 14°.40S×167°.40E, h192^{km}, mB5.1/22, mb4.9/35*

*NEIC **12** 19:22:48.7±1.2, 14°.39S±0°.08×167°.4E±0°.1, h195^{km}±5^{km}, mb4.6/119, Error ellipse: s-maj=16.4km s-min=12.1km az=83.0*

*IDC **12** 19:22:53.8±1.4, 14°.41S×167°.28E, h239^{km}±13^{km}, mb4.3/32, mb1 4.4/33, mb1mx4.3/47, mbtmp4.8/33, Error ellipse: s-maj=11.0km s-min=8.0km az=156.0*

*NOU **12** 19:23:08.9, 16°.00S×167°.07E, h0^{km}, MLv4.7, Vanuatu Islands*

ISC 12 19:22:48.7±0.3, 14°.36S±0°.05×167°.43E±0°.06, h200^{km}, n232, σ1^{s}43/230, mb4.6/97, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.10	192		Pn	19 23 18.4	-0.7
SANVU	Saraoutou	1.10	192	P	Pn	19 23 19.6	+0.5
DVP	Devils Point	3.42	168	P	Pn	19 23 43.5	+0.2
LIFNC	LIFOU	6.38	182	P	Pn	19 24 19.8	-1.1
KOUNC	Koumac, New Ca	6.85	206	P	Pn	19 24 28.8	+1.9
YATNC	Mamie plateau,	7.67	184	P	Pn	19 24 39.2	+1.5
DZM	Mont Dzumac	7.72	187	P	Pn	19 24 39.7	+1.3
	5.6nm,0.3s,baz=46,slow=10,SNR=80						
DZM				S	Sn	19 26 06.0	+0.3
	6.1nm,0.3s,baz=303,slow=22,SNR=5.8						
DZM	Mont Dzumac	7.72	187	*e*Pn	Pn	19 24 43.2	+4.8
	43nm,0.3s						
DZM				*e*Sn	Sn	19 26 07.4	+1.6
	40nm,0.3s						
DZM				*e*LR	LR	19 26 23.3	
	comp=Z,116nm,24.8s						
DZM	Mont Dzumac	7.72	187	Pn	Pn	19 24 39.2	+0.8
DZM	Mont Dzumac	7.72	187	P	Pn	19 24 40.3	+1.9
NOUC	Port Laguerre	7.77	188	P	Pn	19 24 41.3	+2.4
OUENC	Ouen Island, N	8.03	184	P	Pn	19 24 44.4	+2.1
	62nm,0.7s						
HNR	Honiara	8.81	303	P	Pn	19 24 53.6	+1.0

	2.7nm,0.3s,baz=236,slow=4.4,SNR=3.6						
HNR				S	Sn	19 26 44.3	+13
	6.0nm,0.3s,baz=223,slow=16,SNR=2.2						
MSVF	Nonsavu	10.74	110	P	P	19 25 22.4	-2.0
	0.4nm,0.3s,baz=242,slow=15,SNR=4.5						
EIDS	Eidsvold	18.86	232	P	Pn	19 26 55.7	-1.1
AFI	Afiamalu	20.17	91	P	Pn	19 27 12.5	-0.3
	92nm,0.8s,baz=13,slow=2.3,SNR=16						
AFI	Afiamalu	20.17	91	P	P	19 27 06.3	-1.8
PMG	Port Moresby	20.44	282	P	Pn	19 27 12.4	-3.7
	22nm,0.7s,baz=106,slow=7.5,SNR=7.1						
PMG	Port Moresby	20.44	282	P	P	19 27 10.2	-0.7
PMG				IAmb	IAmb	19 27 14.8	
	comp=Z,23nm,0.8s						
CTA	Charters Tower	21.01	251	P	P	19 27 17.5	+0.6
	comp=Z,11nm,0.7s,baz=83,slow=12,SNR=24						
CTAO	Charters Tower	21.01	251	P	P	19 27 17.2	+0.3
CTAO				IAmb	IAmb	19 27 19.4	
	comp=Z,11nm,0.6s						
ARMA	Armidale	21.61	220	P	P	19 27 24.7	+1.6
ARMA				IAmb	IAmb	19 27 25.1	
	comp=Z,15nm,0.8s						
COEN	Coen	23.52	268	P	P	19 27 42.3	+1.3
COEN				IAmb	IAmb	19 27 43.5	
	comp=Z,16nm,0.8s						
BKZ	Black Stump Fm	25.96	164	P	P	19 28 04.4	+1.5
BKZ				IAmb	IAmb	19 28 18.4	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	29.35	229	P	P	19 28 34.2	+1.2
	comp=Z,16nm,0.5s,baz=54,slow=8.8,SNR=96						
STKA				PcP	PcP	19 31 34.4	+0.2
	comp=Z,4.6nm,0.9s,baz=66,slow=5.9,SNR=3.5						
STKA	Stephens Creek	29.35	229	P	P	19 28 34.1	+1.2
TOO	Toolangi	30.24	216	P	P	19 28 42.2	+1.4
TOO				IAmb	IAmb	19 28 42.8	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	31.88	255	P	P	19 28 54.6	-0.8
WB0	Warramunga Arr	32.00	256	P	P	19 28 55.3	-1.2
WB0				IAmb	IAmb	19 28 56.4	
	comp=Z,18nm,1.2s						
WB2	Warramunga Arr	32.06	255	P	P	19 28 56.1	-0.9
WRA	Warramunga Arr	32.07	255	P	P	19 28 55.8	-1.2
	comp=Z,2.9nm,0.5s,baz=85,slow=9.3,SNR=22						
WRA				S	S	19 33 47.2	-7.2
	comp=Z,1.5nm,0.9s,baz=87,slow=14,SNR=6.3						
WRA	Warramunga Arr	32.07	255	P	P	19 28 56.0	-1.0
AS31	Alice Springs	32.95	249	P	P	19 29 03.6	-1.1
ASAR	Alice Springs	32.95	249	P	P	19 29 03.7	-1.0
	comp=Z,5.7nm,0.7s,baz=80,slow=9.4,SNR=79						
ASAR				S	S	19 34 03.4	-4.7
	comp=Z,1.8nm,0.9s,baz=78,slow=16,SNR=8.9						
BBOO	Buckleboo	33.93	232	P	P	19 29 13.4	+0.4
BBOO				IAmb	IAmb	19 29 41.7	
	comp=Z,33nm,1.5s						
SIJI	Sorong	38.19	287	P	P	19 29 49.5	+0.1
	comp=Z,30nm,0.7s,baz=88,slow=5.9,SNR=19						
SWI	Sorong	38.19	287	P	P	19 29 50.2	+0.8
	comp=Z,58nm,0.8s						
FORT	Forrest	39.62	239	P	P	19 30 00.8	-0.2
FORT				IAmb	IAmb	19 30 08.9	
	comp=Z,13nm,0.7s						
FITZ	Fitzroy Crossi	40.24	259	P	P	19 30 06.5	+0.2
SANI	Sanana	42.71	283	P	P	19 30 27.5	+1.1
	comp=Z,19nm,0.9s						
BATI	Baumata	42.92	270	P	P	19 30 29.7	+1.5
	comp=Z,35nm,0.9s,baz=160,slow=3.0,SNR=9.9						
BATI	Baumata	42.92	270	P	P	19 30 29.4	+1.3
NWAO	Narrogin (SRO)	49.07	239	P	P	19 31 15.6	-0.3
NWAO	Narrogin (SRO)	49.07	239	P	P	19 31 15.6	-0.3
NWAO				IAmb	IAmb	19 31 16.5	
	comp=Z,11nm,0.8s						
MORW	Morawa	49.57	244	P	P	19 31 19.5	-0.2
MORW				IAmb	IAmb	19 31 23.2	
	comp=Z,31nm,1.4s						
JYT	Yasato	56.52	334	P	P	19 32 10.7	+0.5
JGF	Kuroka	57.28	331	P	P	19 32 15.8	+0.3
JMN	Monobe	57.53	327	P	P	19 32 18.4	+1.0
MJAR	Matsushiro Arr	57.66	332	P	P	19 32 18.0	-0.1
	comp=Z,12nm,0.7s,baz=177,slow=7.8,SNR=29						
MJAR	Matsushiro Arr	57.66	332	P	P	19 32 18.1	0.0
MAJO	Matsushiro	57.66	332	P	P	19 32 18.4	+0.2
MAT	Matsushiro	57.66	332	P	P	19 32 18.3	+0.1
JSU	Suzuyama	57.78	323	P	P	19 32 20.0	+0.8
JNU	Nakatsue	58.72	324	P	P	19 32 26.1	+0.5
	comp=Z,19nm,0.7s,baz=114,slow=4.8						
JNU	Nakatsue	58.72	324	P	P	19 32 26.2	+0.5
JHS	Saijyo	58.91	327	P	P	19 32 27.6	+0.7
LEM	Lembang	59.14	271	P	P	19 32 27.9	-1.2
	comp=Z,21nm,0.6s,baz=322,slow=23,SNR=6.7						
TPUB	Ta-pu	59.14	309	P	P	19 32 28.4	-0.2
SSLB	Suanglung	59.17	309	P	P	19 32 28.9	-0.1
ASAJ	Asahikawa	62.45	340	P	P	19 32 52.0	+1.4
	comp=Z,20nm,0.6s,baz=187,slow=7.5,SNR=22						
VNDA	Vanda	63.23	181	P	P	19 32 56.6	+1.3
	comp=Z,0.8nm,0.5s,baz=356,slow=7.8,SNR=7.6						
KSRS	Korea Array	63.53	326	P	P	19 32 58.4	+0.6
	comp=Z,5.0nm,0.8s,baz=139,slow=7.1,SNR=22						
KSAR	Wonju Array Be	63.54	326	P	P	19 32 58.3	+0.4
YSS	Yuzh-Sakhalins	64.93	342	P	P	19 33 08.6	+1.9
USA0B	Ussuriysk Arra	66.63	333	P	P	19 33 18.7	+1.0
USRK	Ussuriysk Ar.	66.63	333	P	P	19 33 19.0	+1.4
	comp=Z,10nm,0.8s,baz=149,slow=6.5,SNR=16						
USRK	Ussuriysk Ar.	66.63	333	P	P	19 33 18.5	+0.9
PETK	Petropavlovsk-	67.72	354	P	P	19 33 25.7	+1.4
	comp=Z,22nm,0.7s,baz=154,slow=6.1,SNR=19						
PETK	Petropavlovsk-	67.72	354	P	P	19 33 25.5	+1.2
WHN	Wuhan	67.82	312	⇓P	P	19 33 26.0	+0.6
MDJ	Mudanjiang	68.03	332	P	P	19 33 27.7	+1.3
DL2	Dalian	68.10	323	P	P	19 33 27.7	+0.7
DL2				pmax	pmax		
	comp=Z,25nm,0.7s						
RPSI	Rantau Prapat	69.93	278	P	P	19 33 38.7	-0.1
PSI	Prapat	69.96	278	P	P	19 33 38.7	-0.4
	comp=Z,5.4nm,0.5s,baz=177,slow=1.7,SNR=5.4						
KLR	Kul'dur	70.74	336	P	P	19 33 44.3	+1.4
	comp=Z,6.6nm,0.6s,baz=144,slow=3.4,SNR=32						
GSI	Gunungsitoli	70.85	276	P	P	19 33 44.9	+0.5
ENH	Enshi	71.26	309	P	P	19 33 46.4	-0.1
GYA	Guiyang	71.64	304	*e*P	P	19 33 49.7	+0.7
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
BJT	Baijiatuau	72.07	321	P	P	19 33 51.7	+0.6
BJT				IAmb	IAmb	19 33 52.9	
	comp=Z,7.3nm,0.7s						
XAN	Xi'an	73.56	312	P	P	19 34 00.6	+0.5
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				pmax	pmax		
	comp=Z,220nm,5.4s						
KMI	Kunming	74.25	302	⇑*e*P	P	19 34 06.1	+1.6
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
MA2	Magadan	74.91	351	P	P	19 34 07.6	+0.4
MA2				IAmb	IAmb	19 34 08.4	
	comp=Z,9.6nm,0.8s						
CM31	Chiang Mai Arr	74.95	294	P	P	19 34 09.5	+1.1
CM31				IAmb	IAmb	19 34 10.7	
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	74.95	294	P	P	19 34 09.8	+1.4
	comp=Z,5.4nm,0.7s,baz=129,slow=4.7,SNR=37						
CMAR	Chiang Mai Arr	74.95	294	P	P	19 34 09.6	+1.3
CHTO	Chiang Mai	75.07	294	P	P	19 34 10.1	+1.1
CHTO				IAmb	IAmb	19 34 11.0	
	comp=Z,7.5nm,0.8s						
QSPA	South Pole Qui	75.66	180	P	P	19 34 11.7	0.0
HIA	Hailar	76.05	330	P	P	19 34 15.0	+1.0
HIA				IAmb	IAmb	19 34 15.6	
	comp=Z,10nm,0.9s						
SEY	Seymchan	77.94	353	P	P	19 34 25.1	+0.9
	comp=Z,13nm,0.8s,baz=157,slow=5.6,SNR=26						
YAK	Yakutsk	81.73	343	P	P	19 34 45.4	+1.0
	comp=Z,24nm,0.6s,baz=102,slow=0.6,SNR=37						
YAK	Yakutsk	81.73	343	P	P	19 34 45.3	+0.8
ULN	Ulaanbaatar	81.94	324	P	P	19 34 47.0	+0.8
ULN				IAmb	IAmb	19 34 48.2	
	comp=Z,17nm,0.9s						
MAW	Mawson	82.28	202	P	P	19 34 47.8	+0.4
	comp=Z,4.7nm,0.7s,baz=125,slow=5.6,SNR=4.7						
MAW	Mawson	82.28	202	IAmb	IAmb	19 34 48.9	
	comp=Z,1.3nm,0.8s						
SONM	Songino Array	82.30	323	P	P	19 34 48.6	+0.7
	comp=Z,3.9nm,0.4s,baz=140,slow=5.1,SNR=51						
SONM	Songino Array	82.30	323	P	P	19 34 48.6	+0.7
GTA	Gaotai	82.53	314	⇑P	P	19 34 50.6	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,7.5s						
GTA				LR	LR		
	comp=Z,270nm,16.0s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,250nm,15.6s						
KNK	Knik Glacier	83.19	20		P	19 34 52.5	+0.4
KNK				IAmb	IAmb	19 34 53.0	
	comp=Z,15nm,1.0s						
GLI	Glacier Island	83.26	21	P	P	19 34 53.2	+0.7
GHO	Glory Hole Cre	83.31	19	P	P	19 34 53.5	+0.8
GHO				IAmb	IAmb	19 34 54.5	
	comp=Z,14nm,0.9s						
FID	Port Fidalgo	83.38	21	P	P	19 34 53.6	+0.6
KMRM	Mail Ridge	83.74	46	P	P	19 34 56.7	+1.2
KMRM				IAmb	IAmb	19 34 57.8	
	comp=Z,11nm,0.6s						
SCM	Sheep Creek Mo	83.87	20	P	P	19 34 56.2	+0.6
SCM				IAmb	IAmb	19 34 57.6	
	comp=Z,13nm,0.8s						
KTH	Kantishna Hill	84.04	17	P	P	19 34 56.1	-0.3
KTH				IAmb	IAmb	19 34 57.5	
	comp=Z,18nm,0.9s						
TRF	Thorofare Moun	84.15	18	P	P	19 34 56.7	-0.4
TRF				IAmb	IAmb	19 34 57.8	
	comp=Z,14nm,0.8s						
RND	Reindeer	84.54	18	P	P	19 34 59.6	+0.6
RND				IAmb	IAmb	19 35 00.3	
	comp=Z,20nm,1.0s						
N25K	Chitina, Valde	84.63	21	P	P	19 35 00.4	+0.9
N25K				IAmb	IAmb	19 35 00.7	
	comp=Z,6.6nm,0.7s						
WDC	Whiskeytown Da	84.70	46	P	P	19 35 01.1	+0.9
ISLE	Juniper Island	84.75	22	P	P	19 35 00.8	+0.7
BWN	Browne	84.93	17	P	P	19 35 01.6	+0.8
RDOG	Red Dog Mine	84.94	11	P	P	19 35 02.1	+1.3
ORV	Oroville	85.02	47	P	P	19 35 02.6	+0.7
BALM	Baldy	85.04	22	P	P	19 35 02.4	+0.8
BALM				IAmb	IAmb	19 35 25.4	
	comp=Z,24nm,1.4s						
YBH	Yreka Blue Hor	85.05	45	P	P	19 35 03.2	+1.1
	comp=Z,4.4nm,0.7s,baz=155,slow=1.5,SNR=16						
YBH	Yreka Blue Hor	85.05	45	P	P	19 35 03.3	+1.3
AFDM	Forest Hills D	85.17	48	P	P	19 35 03.2	+0.6
AFDM				IAmb	IAmb	19 35 04.0	
	comp=Z,6.9nm,0.8s						
IMAR	Indian Mountai	85.17	15	P	P	19 35 02.9	+1.0
HUMO	Hull Mountain	85.24	44	P	P	19 35 03.7	+0.9
CMB	Columbia Colle	85.24	49	P	P	19 35 03.6	+0.6
BARN	Barnard Glacie	85.31	22	P	P	19 35 04.0	+1.0
BARN				IAmb	IAmb	19 35 04.2	
	comp=Z,14nm,0.9s						
CTGM	Chitina Glacie	85.36	22	P	P	19 35 04.2	+1.0
CTGM				IAmb	IAmb	19 35 05.2	
	comp=Z,13nm,1.0s						
LSA	Lhasa	85.50	302	P	P	19 35 05.9	+0.8
LSA				IAmb	IAmb	19 35 07.0	
	comp=Z,6.2nm,0.7s						
WRH	Wood River Hil	85.56	18	P	P	19 35 03.8	-0.1
WRH				IAmb	IAmb	19 35 04.9	
	comp=Z,10nm,1.0s						
CCB	Clear Creek Bu	85.77	18	P	P	19 35 04.6	-0.3
CCB				IAmb	IAmb	19 35 05.4	
	comp=Z,5.8nm,0.6s						
TLY	Talaya	85.78	326	P	P	19 35 06.1	+0.8
TLY				IAmb	IAmb	19 35 07.2	
	comp=Z,10nm,0.8s						
HDA	Harding Lake	85.85	18	P	P	19 35 05.5	+0.1
MDM	Murphy Dome	85.88	17	P	P	19 35 05.0	-0.5
MDM				IAmb	IAmb	19 35 06.1	
	comp=Z,7.6nm,0.8s						
TCOL	CIGO, UAF Yank	85.92	18	P	P	19 35 05.3	-0.3
TCOL				IAmb	IAmb	19 35 06.7	
	comp=Z,12nm,0.8s						
COLA	College	85.92	18	P	P	19 35 05.5	-0.1
COLA				IAmb	IAmb	19 35 06.7	
	comp=Z,12nm,0.8s						
BEKR	Beckworth	85.96	47	P	P	19 35 07.3	+0.6
RIDG	Independent Ri	86.03	19	P	P	19 35 06.3	0.0
RIDG				IAmb	IAmb	19 35 07.9	
	comp=Z,10nm,0.8s						
MDPB	Devils Postpil	86.06	50	P	P	19 35 08.2	+0.9
MDPB				IAmb	IAmb	19 35 09.4	
	comp=Z,6.0nm,0.9s						
WAKR	Walker	86.11	49	P	P	19 35 08.3	+0.8
IL31		86.13	18	P	P	19 35 05.9	-0.8
ILAR	Eielson Array	86.13	18	P	P	19 35 06.4	-0.4
	comp=Z,12nm,0.7s,baz=237,slow=4.6,SNR=88						
ILAR	Eielson Array	86.13	18	P	P	19 35 05.9	-0.8
DOT	Dot Lake	86.22	20	P	P	19 35 07.3	+0.1
DOT				IAmb	IAmb	19 35 08.5	
	comp=Z,5.5nm,0.8s						
POKR	Poker Plat Res	86.22	17	P	P	19 35 07.5	+0.3
POKR				IAmb	IAmb	19 35 07.6	
	comp=Z,6.9nm,0.7s						
BCAR	Beaver Creek A	86.58	21	P	P	19 35 10.0	+0.9
H04A	Detroit Lake	86.60	42	P	P	19 35 10.0	+0.5
H04A				IAmb	IAmb	19 35 10.6	
	comp=Z,4.9nm,0.7s						
RMX	La Rumorosa	86.62	55	P	P	19 35 11.3	+1.2
K05A	Summer Lake	86.68	44	P	P	19 35 11.4	+1.3
K05A				IAmb	IAmb	19 35 12.0	
	comp=Z,7.0nm,0.7s						
MOD	Modoc Plateau	86.77	45	P	P	19 35 11.4	+0.9
RYN	Ryan	86.82	49	P	P	19 35 11.4	+0.5
NVAR	Mina Array Bea	86.91	49	P	P	19 35 12.1	+0.6
	comp=Z,2.1nm,0.7s,baz=225,slow=7.4,SNR=11						
NV11	Mina Array Sit	87.02	49	P	P	19 35 12.7	+0.8
COLD	Coldfoot	87.04	15	P	P	19 35 12.4	+1.4
COLD				IAmb	IAmb	19 35 14.5	
	comp=Z,5.3nm,0.8s						
PINE	Pine Mountain	87.06	43	P	P	19 35 13.1	+1.1
PINE				IAmb	IAmb	19 35 13.9	
	comp=Z,6.9nm,0.7s						
TAPN	Taplejung	87.64	299	*e*P	P	19 35 15.6	+0.4
	comp=Z,22nm,0.8s						
ODAN	Odare	87.77	298	*e*P	P	19 35 16.1	+0.3
	comp=Z,46nm,0.7s						
EGAK	Eagle	87.92	20	P	P	19 35 14.8	-0.5
TPNV	Topopah Spring	87.93	51	P	P	19 35 17.3	+1.0
I07A	Izee	88.13	44	P	P	19 35 17.9	+0.9
I07A				IAmb	IAmb	19 35 18.7	
	comp=Z,5.4nm,0.7s						
RAMN	Ramite	88.47	298	*e*P	P	19 35 19.2	+0.1
	comp=Z,15nm,0.6s						
LTY	Liberty	88.59	40	P	P	19 35 19.5	+0.5
LTY				IAmb	IAmb	19 35 20.2	
	comp=Z,3.7nm,0.7s						
SHPR	Sheep Range	88.61	52	P	P	19 35 20.9	+1.4
E07A	Sunnyside	88.84	41	P	P	19 35 21.3	+1.2
G08A	Pilot Rock	88.94	43	P	P	19 35 21.6	+0.9
G08A				IAmb	IAmb	19 35 22.4	
	comp=Z,6.6nm,0.8s						
HAWA	Hanford	88.98	41	P	P	19 35 22.3	+1.5
HAWA				IAmb	IAmb	19 35 22.6	
	comp=Z,6.8nm,0.7s						
PRN	Pahroc Range	88.99	51	P	P	19 35 22.5	+1.3
PRN				IAmb	IAmb	19 35 23.3	
	comp=Z,7.7nm,0.8s						
W13A	Hualapai Mount	89.15	54	P	P	19 35 23.2	+1.2
E08A	Dider Farm, El	89.32	41	P	P	19 35 23.5	+1.2
E08A				IAmb	IAmb	19 35 24.2	
	comp=Z,12nm,1.0s						
GUN	Gumba	89.36	299	*e*P	P	19 35 23.5	+0.1
	comp=Z,29nm,1.0s						
TIXI	Tiksi	89.64	349	P	P	19 35 23.0	-0.2
TIXI				IAmb	IAmb	19 35 24.7	
	comp=Z,9.2nm,1.2s						
PKI	Pulchoki	89.66	298	*e*P	P	19 35 24.7	-0.1
	comp=Z,24nm,0.9s						
PKIN	Phulchoki	89.67	298	*e*P	P	19 35 24.4	-0.3
	comp=Z,22nm,0.8s						
KKN	Kakani	89.83	299	*e*P	P	19 35 25.4	0.0
	comp=Z,20nm,0.7s						
BMO	Blue Mountains	89.88	43	P	P	19 35 25.6	+0.5
BMO				IAmb	IAmb	19 35 26.6	
	comp=Z,4.2nm,0.8s						
E09A	Wood Farm, Sta	89.92	42	P	P	19 35 26.4	+1.3
E09A				IAmb	IAmb	19 35 26.6	
	comp=Z,5.2nm,0.8s						
ELK	Elko	89.93	48	P	P	19 35 26.5	+0.9
DMN	Daman	89.93	298	*e*P	P	19 35 26.1	+0.2
	comp=Z,34nm,0.9s						
LCMT	Little Creek M	90.23	52	P	P	19 35 28.4	+1.4
PSUT	Pine Spring	90.24	50	P	P	19 35 28.1	+1.0
F10A	Beach Ranch, E	90.32	42	P	P	19 35 27.6	+0.5
MFID	Camas Ranch	90.39	45	P	P	19 35 28.4	+0.9
MFID				IAmb	IAmb	19 35 29.2	
	comp=Z,5.6nm,0.9s						
SZCU	Shurtz Canyon	90.53	51	P	P	19 35 29.5	+1.1
U15A	North Rim	90.79	53	P	P	19 35 31.2	+1.5
U15A				IAmb	IAmb	19 35 32.0	
	comp=Z,3.8nm,0.8s						
NEW	Newport	91.18	40	P	P	19 35 31.0	0.0
	comp=Z,4.2nm,0.8s,baz=238,slow=6.3,SNR=8.4						
NEW	Newport	91.18	40	P	P	19 35 31.2	+0.2
NEW				IAmb	IAmb	19 35 32.7	
	comp=Z,5.4nm,0.9s						
DANN	Dangsing	91.28	299	*e*P	P	19 35 31.4	-0.8
	comp=Z,11nm,0.5s						
MTPU	Mount Pierson	91.34	51	P	P	19 35 34.1	+1.7
HLID	Hailey	91.41	45	P	P	19 35 33.3	+0.9
NLU	North Lily Min	91.98	49	P	P	19 35 35.6	+0.5
WMQ	Urumqi	92.59	315	*e*P	P	19 35 39.3	+1.7
PV22	Blue Mesa, Par	94.05	51	P	P	19 35 45.3	+0.7
PV22				IAmb	IAmb	19 35 46.4	
	comp=Z,5.0nm,0.8s						
VNA3	Neumayer Olymp	94.58	181	P	P	19 35 45.4	-0.8
PDAR	Pinedale Array	94.58	47	P	P	19 35 47.2	+0.2
	comp=Z,0.4nm,0.7s,baz=264,slow=4.5,SNR=4.1						
VNA2	Neumayer--Watz	94.85	182	P	P	19 35 47.4	0.0
	baz=184,slow=4.7						
VNA1	Neumayer--Stat	95.15	181	P	P	19 35 51.0	+2.3
ZSN	Zaisan	95.51	317	*e*P	P	19 35 50.9	+0.1
	comp=Z,4.2nm,0.7s,baz=317						
TXAR	Lajitas Array	95.97	61	P	P	19 35 54.5	+1.0
	comp=Z,0.3nm,0.6s,baz=219,slow=5.6,SNR=2.5						
MK31	Makanchi Array	97.05	316	P	Pdif	19 35 58.0	+0.1
MKAR	Makanchi Array	97.05	316	P	Pdif	19 35 58.4	+0.5
	comp=Z,6.6nm,0.6s,baz=96,slow=6.1,SNR=78						
MKAR				PKiKP	PKiKP	19 40 32.6	-0.1
	comp=Z,0.7nm,0.8s,baz=124,slow=1.3,SNR=4.7						
MKAR				PKKPbc	PKKPbc	19 52 37.3	-1.9
	comp=Z,0.2nm,0.5s,baz=256,slow=4.0,SNR=4.8						
MKAR	Makanchi Array	97.05	316	P	Pdif	19 35 58.0	+0.1
YKA	Yellowknife Ar	97.15	27	P	Pdif	19 35 57.4	-0.5
	comp=Z,2.0nm,0.8s,baz=248,slow=4.0,SNR=33						
ZAA0	Zalesovo Array	97.19	324	P	Pdif	19 35 57.6	-0.7
ZALV	Zalesovo Beam	97.19	324	P	Pdif	19 35 57.5	-0.8
	comp=Z,6.4nm,0.7s,baz=112,slow=5.0,SNR=29						
ZALV	Zalesovo Beam	97.19	324	P	Pdif	19 35 57.7	-0.6
MAKZ	Makanchi	97.26	316	P	Pdif	19 35 59.2	+0.4
SHLS	Shalkode	98.22	312	*e*P	Pdif	19 36 02.0	-1.3
	comp=Z,2.3nm,1.1s,baz=312						
KPKS	Kokpek	98.83	313	*e*P	Pdif	19 36 06.2	+0.1
	baz=312						
SEM	Semipalatinsk	99.15	320	*e*P	Pdif	19 36 05.7	-1.7
	baz=320						
IUG	Iuzhnay	104.93	310	*e*PKiKP	PKiKP	19 40 45.7	-1.5
	baz=310						
ARCES	ARCESS Array B	119.94	346	PKP	PKiKP	19 41 14.8	0.0
	comp=Z,7.2nm,0.6s,baz=63,slow=2.0,SNR=81						
KLMR	Klimovskoe	120.43	333	*e*PKPdf	PKiKP	19 41 13.5	-2.5
KLMR				AMP		19 41 30.1	
	comp=Z,17nm,1.4s						
KBZ	Khabaz	124.62	313	PKP	PKiKP	19 41 25.1	+0.4
	comp=Z,2.1nm,0.8s,baz=124,slow=7.1,SNR=4.5						
FINES	FINESS Array B	125.44	338	PKP	PKiKP	19 41 25.6	-0.3
	comp=Z,9.3nm,0.9s,baz=105,slow=3.4,SNR=20						
MNK	Minsk	129.08	331	*i* PKP	PKPdf	19 41 29.1	-3.5
	comp=E,3.0nm,1.0s						
MNK				*i* PKP	PKPdf	19 41 29.1	-3.5
	comp=N,19nm,1.2s						
MNK				*i* PKP	PKPdf	19 41 29.1	-3.5
	comp=Z,12nm,1.1s						
MNK				*i* pPKP	PKiKP	19 41 49.2	+16
MNK				*i* PP	PP	19 43 41.0	-1.8
MNK				*i* PPP	PPP	19 46 28.9	
MNK				*i* SKS	SKSdf	19 48 31.8	+6.7
MNK				*i* SS	SS	20 01 01.3	+15
MNK				*i* SSS	SSS	20 05 49.8	
MNK				*i* LR	LR	20 36 56.5	
MNK				*i* LRM	MLR	20 37 45.7	
	comp=E,28nm,10.8s						
MNK				*i* LRM	MLR	20 37 45.7	
	comp=N,194nm,13.8s						
MNK				*i* LRM	MLR	20 37 45.7	
	comp=Z,179nm,9.4s						
NB2	NORSAR Subarra	130.31	345	PKPdf	PKiKP	19 41 35.9	+0.2
	comp=Z,1.2nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.31	345	PKP	PKiKP	19 41 35.6	-0.1
	comp=Z,2.6nm,0.7s,baz=34,slow=2.0,SNR=5.5						
NOA				SKPbc	SKPab	19 44 39.1	-0.3
	comp=Z,3.9nm,0.7s,baz=35,slow=3.0,SNR=8.1						
AKASG	Malin Array Be	130.52	326	PKP	PKiKP	19 41 35.9	-0.4
	comp=Z,2.5nm,0.7s,baz=54,slow=2.1,SNR=10						
AKASG				SKP		19 44 43.3	
	comp=Z,5.9nm,0.6s,baz=48,slow=4.3,SNR=36						
BRTR	Keskin Array B	132.39	311	PKP	PKiKP	19 41 40.5	-0.2
	comp=Z,2.6nm,0.9s,baz=116,slow=2.9,SNR=7.4						
BRTR				SKP		19 44 51.4	
	comp=Z,1.3nm,0.7s,baz=98,slow=3.7,SNR=4.8						
KOLS	Kolonicke sedl	135.22	328	*e*PKP	PKiKP	19 41 46.9	+0.9
KOLS				*e*		19 45 00.2	
CRVS	Cervenica-Dubn	135.66	328	*e*PKP	PKiKP	19 41 47.6	+0.7
CLL	Collm	137.79	336	*e*PKPdf	PKiKP	19 41 50.0	-1.1
MODS	Modra-Piesok	138.09	330	*e*PKP	PKiKP	19 41 52.1	+0.3
CONA	Conrad Observa	139.08	331	*e*P	PKiKP	19 41 52.1	-1.9
	comp=Z,9.1nm,1.1s						
KHC	Kasperske Hory	139.23	334	*e*PKP	PKPdf	19 41 49.5	-2.4
GERES	GERESS Array B	139.39	333	PKhKP	PKPpre	19 41 43.6	
	comp=Z,0.6nm,0.6s,baz=54,slow=1.7,SNR=2.8						
GERES				PKP	PKiKP	19 41 53.9	-0.7
	comp=Z,2.5nm,0.7s,baz=56,slow=2.4,SNR=8.6						
GERES				SKP		19 45 12.3	
	comp=Z,0.2nm,0.3s,baz=64,slow=3.1,SNR=4.8						
GERES	GERESS Array B	139.39	333	PKPdf	PKiKP	19 41 55.1	+0.5
MOA	Molln	139.88	332	*e*P	PKiKP	19 41 54.2	-1.3
	comp=Z,4.1nm,0.9s						
MYKA	Terra Mystica	141.06	331	*i* P	PKPdf	19 41 52.3	-3.0
	comp=Z,5.6nm,0.9s						
WATA	Walderalm	141.47	333	*e*P	PKPdf	19 41 53.4	-2.7
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	141.50	332	*e*P	PKPdf	19 41 53.6	-2.5
	comp=Z,6.1nm,0.8s						
MOTA	Moosalm	141.66	334	*e*P	PKPdf	19 41 54.1	-2.3
	comp=Z,11nm,0.9s						
RETA	Reutte	141.69	334	*e*P	PKPdf	19 41 54.3	-2.1
	comp=Z,9.8nm,1.8s						
SQTA	Sankt Quirin	141.71	334	*e*P	PKPdf	19 41 53.0	-3.5
	comp=Z,8.2nm,1.3s						
FETA	Feichten	142.07	334	*e*P	PKPdf	19 41 54.5	-2.8
	comp=Z,8.4nm,1.1s						
RCBR	Riachuelo	149.37	129	PKPbc	PKiKP	19 42 15.2	-0.8
	comp=Z,4.4nm,0.5s,baz=248,slow=4.1,SNR=4.9						
KEST	Kesra	151.03	321	PKPbc	PKiKP	19 42 19.6	+0.7
	comp=Z,26nm,0.7s,baz=167,slow=2.2,SNR=29						
ESDC	Sonseca Array	153.68	345	PKP	PKPbc	19 42 17.3	-6.8
	comp=Z,0.7nm,0.9s,baz=352,slow=1.8,SNR=4.4						
ESDC				PKPbc	PKiKP	19 42 25.1	+0.9
	comp=Z,1.0nm,0.6s,baz=3.9,slow=5.5,SNR=12						
ESDC				PKPab	PKPab	19 42 37.7	+0.2
	comp=Z,4.1nm,0.8s,baz=17,slow=3.8,SNR=16						
ESDC				PP	PP	19 46 08.7	-2.8
	comp=Z,0.9nm,1.0s,baz=15,slow=5.3,SNR=4.5						
TORD	Torodi Ar. Bea	166.09	267	PKPab	PKPab	19 43 32.0	-0.3
	comp=Z,1.7nm,0.9s,baz=100,slow=4.1,SNR=4.8						

BJI **12** *19:31:43.0±0.0, 3°.63N×124°.75E, h349km, mB4.7/19, mb4.3/36*
KLM **12** *19:31:50, 4°.41N×124°.56E, h359km, mb5.1*
NEIC **12** *19:31:50.7±1.3, 4°.32N±0°.08×124°.34E±0°.08, h352km±6km, mb4.6/78, Error ellipse: s-maj=12.1km s-min=10.3km az=214.0*
IDC **12** *19:31:51.7±0.7, 4°.29N×124°.28E, h362km±6km, mb4.0/25, mb1 4.1/31, mb1mx4.0/50, mbtmp4.8/31, Error ellipse: s-maj=11.3km s-min=6.1km az=86.0*
DJA **12** *19:31:51.2±0.2, 4°N±3°×12°4E±°, h351km±2km, M4.6/58, mb4.8/58, mB5.1/25, MLv5.2/14, Mw(mB)4.5/25, MwMwp6.7/1, Mwp6.6/1*
NOU **12** *19:31:52.6, 4°.27N×124°.33E, h366km, mb4.8, Celebes Sea*
ISC 12 19:31:50.5±0.3, **4°.27N**±0°.03×**124°.31E**±0°.05, **h350**km, **n233**, σ**1§32**/250, **mb4.5**/85, **2C-5D, Celebes Sea**

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Code   Station Name        Δ°    AZ°    Phase ID        Time        Res
                                      Op      ISC      h  m  s     ISC
SGSI   Sangihe             1.35 115    P       Pn      19 32 38.8 +0.9
SGSI                                   S       S       19 33 16.8 +0.9
SKMP   Bagumbayan, Su      2.25   6   eP       Pn      19 32 44.4 +0.7
SKMP                                  eS       S       19 33 45.0  +19
DDMP   Don Marcelino,      2.30  37   eP       Pn      19 32 45.0 +0.9
DDMP                                  eS       S       19 33 28.5 +1.5
KCP    Kidapawan           2.83  16⥥iP       Pn      19 32 50.4 +1.8
KCP                                   i S      S       19 33 39.2 +4.0
DAV    Davao City (W)      3.06  24    P       Pn      19 32 52.1 +1.7
       67nm,0.3s,baz=71,slow=1.8,SNR=14
DAV                                    S       S       19 33 40.8 +2.2
       142nm,0.3s,baz=281,slow=17,SNR=5.9
BUKP   Musuan              3.66  12   eP       Pn      19 32 57.8 +1.6
BUKP                                  eS       S       19 33 55.8 +6.6
KMSI   Cibinong            3.68 185    P       Pn      19 32 57.1 +0.7
GTOI   Gorontalo           3.83 200    P       Pn      19 32 58.2 +0.3
CGP    Cagayan de Oro      4.18   5⥥iP       Pn      19 33 03.4 +2.0
MRSI   Marisa              4.45 212    P       Pn      19 33 05.8 +1.6
TNTI   Ternate             4.63 139    Pn      Pn      19 33 06.4 +0.2
TNTI   Ternate             4.63 139    P       Pn      19 33 06.3 +0.2
TOLI2  Tolitoli            4.71 228    Pn      Pn      19 33 08.4 +1.3
BUTP   Butuan              4.85  16   eP       Pn      19 33 14.7 +6.2
BUTP                                  eS       S       19 34 20.8 +9.3
LUWI   Luwuk               5.49 196            Pn      19 33 17.0 +1.3
LUWI   Luwuk               5.49 196    P       Pn      19 33 16.7 +1.0
       2.5nm7µm547nm,0.8s
APSI   Ampana              5.79 207    P       Pn      19 33 20.2 +1.2
       1.7nm5µm348nm,0.8s
MPSI   Mapaga              5.89 229    P       Pn      19 33 21.0 +0.9
       0.6nm2µm201nm,0.8s
SANI   Sanana              6.50 165    P       Pn      19 33 25.3 -1.9
       4.2nm16µm738nm,1.0s
NLAI   Namlea              7.96 159    P       Pn      19 33 44.6 +0.3
       2.1nm5µm230nm,0.5s
KKM    Kota Kinabalu       8.25 283    Pn      Pn      19 33 48.6 +0.7
TTSI   Tana Toraja         8.54 212    P       Pn      19 33 52.3 +1.2
       2µm204nm,0.9s
SWI    Sorong              8.62 126    P       P       19 33 53.6 -1.1
       58nm,0.6s
SIJI   Sorong              8.63 126    P       P       19 33 54.8  0.0
       9.9nm,0.3s,baz=323,slow=8.7,SNR=31
MSAI   Masohi              8.86 149    P       P       19 33 56.0 -1.4
       697nm58nm,0.6s
BKB    Balikpapan          9.22 234            P       19 34 01.3  0.0
BKB    Balikpapan          9.22 234    P       Pn      19 33 59.8 +0.5
       3µm350nm,0.8s
SPSI   Sidrap Palu         9.35 209    P       Pn      19 34 01.2 +0.4
       1µm144nm,0.8s
BNSI   Bone                9.58 206    P       P       19 34 05.4  0.0
       2µm216nm,0.8s
LQP    Lukban             10.15 345⥥eP       P       19 34 12.3 +0.4
KAPI   Kappang            10.28 206    P       P       19 34 13.7 +0.5
       6.2nm,0.3s,baz=24,slow=6.8,SNR=36
KAPI                                   S       S       19 36 07.8 -0.2
       1.0nm,0.3s,baz=174,slow=22,SNR=8.9
KAPI   Kappang            10.28 206            P       19 34 13.6 +0.4
TGY    Tagaytay City      10.32 341   eP       Pn      19 34 09.9 -2.6
BNDI   Bandanaira         10.37 147    P       Pn      19 34 13.2 +0.2
       823nm,0.9s
BKSI   Bulukumba          10.40 204    P       P       19 34 14.3 -0.2
       642nm80nm,0.7s
POLP   Polilio Island     10.65 348   eP       P       19 34 16.9 -0.4
FAKI   Fak Fak            10.68 132    P       P       19 34 18.3 +0.7
FAKI   Fak Fak            10.68 132    P       P       19 34 17.4 -0.2
       4µm421nm,0.8s
MTKI   Muara Teweh, K     10.73 241    P       P       19 34 19.4 +1.2
       29nm,0.7s
KBKI   Kotabaru           11.08 227    P       P       19 34 22.7 +0.7
       788nm85nm,0.8s
BBKI   Banjar Baru        12.18 231    P       Pn      19 34 36.1 +1.5
       970nm28nm,0.7s
SBUM   Sibu               12.20 262    P       Pn      19 34 35.3 +0.5
SBUM   Sibu               12.20 262    P       Pn      19 34 38.0 +3.2
CAUP   Cauayan            12.83 349   eP       Pn      19 34 44.1 +2.0
MMRI   Maumere            12.98 189    P       P       19 34 43.6 +0.4
MMRI   Maumere            12.98 189    P       Pn      19 34 43.8 -0.2
       67nm,0.8s
EDFI   Ende, Flores       13.19 191    P       Pn      19 34 46.2 -0.4
       39nm,0.7s
CVP    Callao Caves       13.57 350⥣eP       Pn      19 34 52.1 +1.2
SOEI   Soe                13.93 180    P       Pn      19 34 55.6 +0.3
SOEI   Soe                13.93 180    P       P       19 34 54.1 +0.4
       62nm,0.8s
KSM    Kuching            14.25 259            Pn      19 34 59.5 +0.6
KSM    Kuching            14.25 259    P       Pn      19 35 00.0 +1.1
BATI   Baumata            14.39 183    P       Pn      19 35 00.3 -0.2
       28nm,0.3s,baz=351,slow=0.8,SNR=97
BATI                                   S       S       19 37 35.1 +0.5
       5.1nm,0.3s,baz=292,slow=19,SNR=3.0
BATI   Baumata            14.39 183    P       P       19 34 59.2 +0.5
       1µm121nm,0.6s
PBKI   Pangkalan Bun      14.40 241    P       Pn      19 35 00.9 +0.3
       290µm5µm213nm,1.0s
PLAI   Plampang           14.55 207    P       P       19 35 01.5 +1.2
       56nm,0.8s
TWSI   Taliwang, Sumb     14.89 210    P       P       19 35 05.3 +1.2
       404nm38nm,0.7s
SRBI   Singaraja          15.26 216    P       Pn      19 35 14.5 +4.0
KMMI   Kalianget          15.26 223    P       Pn      19 35 10.0 -0.6
       162nm,1.1s
JAGI   Jajag, Banyuwa     16.21 219    P       P       19 35 18.7 +0.2
JAGI                                   IAmb    IAmb    19 35 25.3
       comp=Z,42nm,0.9s
JAY    Jayapura           17.72 112    P       P       19 35 37.3 +2.6
       comp=Z,2.6nm,0.3s,baz=185,slow=5.3,SNR=6.6
TPI    Tanjungpandan      18.05 248    P       P       19 35 40.5 +2.3
       comp=Z,1µmcomp=Z,126nm,0.9s
MTN    Manton Dam         18.30 158    P       P       19 35 40.8  0.0
MTN                                    IAmb    IAmb    19 35 41.8
       comp=Z,56nm,0.8s
TWG    Pinlang            18.71 351    P       P       19 35 43.9 -1.1
YULB   Yu-li              19.23 352    P       P       19 35 48.7 -2.0
TPUB   Ta-pu              19.25 350    P       P       19 35 49.9 -0.9
SSLB   Suanglung          19.67 351    P       P       19 35 54.2 -1.1
NACB   Ninganchiao        19.96 353    P       P       19 35 56.6 -1.5
NACB                                   IAmb    IAmb    19 35 58.3
       comp=Z,49nm,1.0s
LEM    Lembang            19.98 237    P       P       19 36 00.3 +1.7
       comp=Z,2.7nm,0.3s,baz=73,slow=10,SNR=9.5
CISI   Cisompet, Garu     20.22 235    P       P       19 36 00.1 -0.7
CISI                                   IAmb    IAmb    19 36 09.4
       comp=Z,24nm,0.7s
CBJI   Citeko             20.41 239    P       P       19 36 05.4 +2.9
       comp=Z,59nm,0.8s
YHNB   Yeheng             20.48 352    P       P       19 36 02.7 -0.4
PMBI   Palembang          20.79 250    P       P       19 36 09.5 +3.5
       comp=Z,238nm,0.9s
BLSI   Bandar Lampung     21.31 243    P       P       19 36 13.4 +2.7
       comp=Z,6µmcomp=Z,81nm,0.6s
KLSI                      21.49 246    P       P       19 36 14.1 +1.8
       comp=Z,40nm,0.8s
MDSI   Maura Dua          21.91 247    P       P       19 36 17.8 +1.7
       comp=Z,80nm,0.8s
KASI   Kota Agung         22.05 244    P       P       19 36 18.6 +1.2
       comp=Z,86nm,0.9s
LWLI   Liwa               22.23 246    P       P       19 36 21.0 +1.8
       comp=Z,3µmcomp=Z,186nm,0.9s
FITZ   Fitzroy Crossi     22.26 177    P       P       19 36 19.4 +0.1
       comp=Z,50nm,0.7s,baz=354,slow=5.6,SNR=224
FITZ                                   S       S       19 40 02.1 +3.7
       comp=Z,2.5nm,0.8s,baz=240,slow=20,SNR=1.2
FITZ   Fitzroy Crossi     22.26 177    P       P       19 36 19.8 +0.5
LHSI   Lahat              22.27 249    P       P       19 36 22.2 +2.8
       comp=Z,55nm,0.9s
KSI    Kapahiang          23.08 250    P       P       19 36 29.1 +2.2
       comp=Z,2µmcomp=Z,51nm,0.8s
IPM    Ipoh               23.21 271    P       P       19 36 28.0  0.0
SDSI   Sungai Dareh       23.44 258    P       P       19 36 31.2 +1.2
       comp=Z,9.9nm,0.5s
BKNI   Bangkinang         23.57 261    P       P       19 36 34.0 +2.8
       comp=Z,57nm,0.5s
MNSI   Mandailing Nat     24.94 263    P       P       19 36 46.2 +2.7
       comp=Z,9.8nm,0.6s
PSI    Prapat             25.38 268    P       P       19 36 47.4 -0.2
       comp=Z,3.9nm,0.4s,baz=3.3,slow=2.1,SNR=4.0
WB0    Warramunga Arr     25.86 158    P       P       19 36 51.0 -0.7
WRAB   Tennant Creek      26.00 158    P       P       19 36 52.4 -0.5
WRA    Warramunga Arr     26.00 158    P       P       19 36 52.1 -0.8
       comp=Z,22nm,0.4s,baz=330,slow=11,SNR=258
WRA                                    S       S       19 40 51.6 -5.9
       comp=Z,1.6nm,0.6s,baz=341,slow=15,SNR=4.0
WRA                                    ScP     ScP     19 43 14.8 -2.0
       comp=Z,1.4nm,0.5s,baz=340,slow=2.8,SNR=6.4
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WRA    Warramunga Arr     26.00 158    P       P       19 36 51.9 -1.0
WB2    Warramunga Arr     26.01 158    P       P       19 36 52.4 -0.6
WB2                                    IAmb    IAmb    19 36 53.5
       comp=Z,35nm,0.6s
COEN   Coen               26.05 134    P       P       19 36 52.5 -0.9
PSA00  Pilbara Seismi     26.05 189    P       P       19 36 53.2 -0.1
PSA00                                  IAmb    IAmb    19 36 54.4
       comp=Z,27nm,0.8s
PSA00  Pilbara Seismi     26.05 189    P       P       19 36 52.8 -0.5
PSA00                                  IAmb    IAmb    19 36 54.4
       comp=Z,33nm,1.3s
WR0    Warramunga Arr     26.09 158    P       P       19 36 53.0 -0.7
WR0                                    IAmb    IAmb    19 36 53.9
       comp=Z,16nm,0.5s
GSI    Gunungsitoli       26.86 264    P       P       19 36 59.5 -1.1
GSI                                    IAmb    IAmb    19 37 02.7
       comp=Z,31nm,0.8s
GSI    Gunungsitoli       26.86 264    P       P       19 36 59.4 -1.2
       comp=Z,40nm,0.8s
WHN    Wuhan              27.77 341  ⥥P       P       19 37 10.7 +2.2
WHN                                    pmax    pmax
       comp=Z,54nm,0.8s
CMAR   Chiang Mai Arr     28.52 302    P       P       19 37 15.9 +0.7
       comp=Z,0.9nm,0.8s,baz=115,slow=6.5,SNR=5.7
CMAR                                   ScP     ScP     19 43 23.0 -1.6
       comp=Z,3.0nm,0.9s,baz=147,slow=1.7,SNR=17
AS31   Alice Springs      29.30 162    P       P       19 37 21.9 -0.2
ASAR   Alice Springs      29.30 162    P       P       19 37 21.9 -0.1
       comp=Z,15nm,0.5s,baz=339,slow=7.1,SNR=458
ASAR                                   pP      pP      19 38 29.6 +2.6
       comp=Z,5.0nm,0.8s,baz=340,slow=9.2,SNR=3.1
ASAR                                   PcP     PcP     19 40 18.4 -0.6
       comp=Z,3.0nm,0.7s,baz=348,slow=2.5,SNR=6.6
ASAR                                   S       S       19 41 46.1 -3.1
       comp=Z,5.8nm,0.9s,baz=348,slow=23,SNR=18
ASAR                                   ScP     ScP     19 43 24.9 -2.1
       comp=Z,0.9nm,0.4s,baz=341,slow=3.2,SNR=8.2
ASAR   Alice Springs      29.30 162    P       P       19 37 22.0 -0.1
KMI    Kunming            29.32 317⥥eP       P       19 37 23.9 +1.5
KMI                                    pmax    pmax
       comp=Z,4.0nm,0.5s
JNU    Nakatsue           29.36  11    P       P       19 37 23.5 +1.0
       comp=Z,11nm,0.8s,baz=218,slow=7.1,SNR=5.1
ENH    Enshi              29.41 333    P       P       19 37 22.8 -0.1
ENH                                    IAmb    IAmb    19 37 25.1
       comp=Z,17nm,0.7s
JMN    Monobe             30.64  16    P       P       19 37 34.1 +0.5
JMN                                    IAmb    IAmb    19 37 34.5
       comp=Z,24nm,0.7s
CTA    Charters Tower     32.42 139    P       P       19 37 50.1 +0.8
       comp=Z,9.4nm,0.7s,baz=312,slow=12,SNR=14
CTAO   Charters Tower     32.42 139    P       P       19 37 50.1 +0.8
XAN    Xi'an              32.90 336    P       P       19 37 52.9 -0.4
XAN                                    pmax    pmax
       comp=Z,30nm,0.6s
XAN                                    pmax    pmax
       comp=Z,190nm,5.2s
INU    Inuyama            33.09  19    P       P       19 37 54.6 -0.2
INU                                    IAmb    IAmb    19 37 55.5
       comp=Z,35nm,0.8s
KSAR   Wonju Array Be     33.18   5    P       P       19 37 55.2 -0.3
KSRS   Korea Array        33.19   5    P       P       19 37 55.5 -0.2
       comp=Z,4.7nm,0.7s,baz=186,slow=9.7,SNR=18
KSRS                                   ScP     ScP     19 43 38.1 -1.6
       comp=Z,3.7nm,1.0s,baz=184,slow=3.5,SNR=8.0
JGF    Kuroka             33.43  20    P       P       19 37 57.2 -0.6
JGF                                    IAmb    IAmb    19 37 59.3
       comp=Z,20nm,0.8s
MORW   Morawa             34.08 193    P       P       19 38 03.0 -0.4
MORW                                   IAmb    IAmb    19 38 03.9
       comp=Z,23nm,0.9s
MAJO   Matsushiro         34.57  20    P       P       19 38 06.6 -0.9
MAJO                                   IAmb    IAmb    19 38 07.4
       comp=Z,25nm,0.8s
MAT    Matsushiro         34.57  20    P       P       19 38 06.3 -1.2
MJAR   Matsushiro Arr     34.57  20    P       P       19 38 06.7 -0.7
       comp=Z,27nm,0.8s,baz=192,slow=9.5,SNR=62
MJAR                                   ScP     ScP     19 43 43.0 -1.7
       comp=Z,3.9nm,0.8s,baz=192,slow=4.8,SNR=6.4
MJAR   Matsushiro Arr     34.57  20    P       P       19 38 06.1 -1.4
MJB9   Matsu-Tunnel       34.57  20    P       P       19 38 06.9 -0.6
MJB9                                   IAmb    IAmb    19 38 07.3
       comp=Z,30nm,0.7s
FORT   Forrest            35.03 174    P       P       19 38 11.4  0.0
BJT    Baijiatuau         36.34 349    P       P       19 38 22.1 -0.2
BJT                                    IAmb    IAmb    19 38 23.8
       comp=Z,17nm,0.6s
BJI    Beijing            36.36 349    P       P       19 38 22.4 -0.1
BJI                                    pmax    pmax
       comp=Z,24nm,0.7s
JMM    Marumori           36.68  22    P       P       19 38 25.3 +0.2
NWAO   Narrogin (SRO)     37.60 190    P       P       19 38 33.0 +0.1
NWAO                                   IAmb    IAmb    19 38 33.9
       comp=Z,39nm,0.9s
NWAO   Narrogin (SRO)     37.60 190    P       P       19 38 33.3 +0.4
NWAO                                   IAmb    IAmb    19 38 33.9
       comp=Z,31nm,0.9s
BBOO   Buckleboo          38.52 164    P       P       19 38 41.2 +0.6
BBOO                                   IAmb    IAmb    19 38 41.9
       comp=Z,50nm,0.8s
EIDS   Eidsvold           39.29 140    P       P       19 38 46.7 -0.3
STKA   Stephens Creek     39.53 157    P       P       19 38 49.7 +0.8
       comp=Z,60nm,0.7s,baz=339,slow=7.9,SNR=171
STKA   Stephens Creek     39.53 157    P       P       19 38 49.6 +0.8
LSA    Lhasa              40.28 313    P       P       19 38 54.9 -0.7
USRK   Ussuriysk Ar.      40.34   9    P       P       19 38 55.0 -0.2
       comp=Z,3.6nm,0.7s,baz=204,slow=8.3,SNR=9.4
USRK   Ussuriysk Ar.      40.34   9    P       P       19 38 54.7 -0.5
MDJ    Mudanjiang         40.45   6    P       P       19 38 55.8 -0.4
GTA    Gaotai             41.42 331  ⥣P       P       19 39 05.1 +0.8
GTA                                    pmax    pmax
       comp=Z,8.0nm,0.8s
GTA                                    pmax    pmax
       comp=Z,84nm,6.4s
GTA                                    LR      LR
       comp=Z,170nm,15.3s
GTA                                    LR      LR
       comp=Z,210nm,17.1s
GTA                                    LR      LR
       comp=Z,290nm,17.1s
TAPN   Taplejung          41.76 307   eP       P       19 39 07.4  0.0
       comp=Z,5.0nm,0.4s
ODAN   Odare              41.80 306   eP       P       19 39 07.8 +0.2
       comp=Z,16nm,0.7s
RAMN   Ramite             42.47 306   eP       P       19 39 13.1 +0.1
       comp=Z,12nm,0.6s
ASAJ   Asahikawa          42.84  19    P       P       19 39 16.2 +0.9
       comp=Z,44nm,0.7s,baz=215,slow=8.9,SNR=29
JKA    Kamikawa-asahi     42.84  19    P       P       19 39 16.1 +0.8
JKA                                    IAmb    IAmb    19 39 16.9
       comp=Z,67nm,0.9s
ARMA   Armidale           43.27 145    P       P       19 39 21.0 +1.9
GUN    Gumba              43.46 307   eP       P       19 39 21.0  0.0
       comp=Z,15nm,0.6s
PKI    Pulchoki           43.70 306   eP       P       19 39 22.0 -0.8
       comp=Z,5.0nm,0.6s
PKIN   Phulchoki          43.71 306   eP       P       19 39 22.3 -0.5
KKN    Kakani             43.89 306   eP       P       19 39 23.7 -0.5
HIA    Hailar             45.00 356    P       P       19 39 32.7 +0.3
KLR    Kul'dur            45.24   7    P       P       19 39 33.4 -0.8
       comp=Z,5.6nm,0.6s,baz=195,slow=5.5,SNR=23
DANN   Dangsing           45.34 306   eP       P       19 39 35.6 -0.1
       comp=Z,21nm,0.6s
CAN    Canberra           45.70 151    P       P       19 39 39.6 +1.6
CAN                                    IAmb    IAmb    19 39 40.7
       comp=Z,50nm,0.9s
ULN    Ulaanbaatar        45.90 344    P       P       19 39 39.3 -0.1
ULN                                    IAmb    IAmb    19 39 41.2
       comp=Z,27nm,1.2s
SONM   Songino Array      46.05 343    P       P       19 39 40.8 +0.1
       comp=Z,8.6nm,0.9s,baz=159,slow=8.5,SNR=45
SONM                                   ScP     ScP     19 44 27.2 -2.5
       comp=Z,1.1nm,0.9s,baz=137,slow=3.6,SNR=4.5
SONM   Songino Array      46.05 343    P       P       19 39 40.2 -0.4
TOO    Toolangi           46.06 156    P       P       19 39 42.4 +1.7
TOO                                    IAmb    IAmb    19 39 43.3
       comp=Z,24nm,0.8s
DZM    Mont Dzumac        48.83 124    P       P       19 40 03.3 +1.2
TLY    Talaya             50.30 343    P       P       19 40 13.7 +1.2
TLY                                    IAmb    IAmb    19 40 14.3
       comp=Z,14nm,0.7s
WMQ    Urumqi             50.92 326   eP       P       19 40 19.1 +1.7
WMQ    Urumqi             50.92 326    P       P       19 40 18.6 +1.3
ZSN    Zaisan             54.76 328   eP       P       19 40 45.0 -0.1
       baz=328
SHLS   Shalkode           55.40 321   eP       P       19 40 47.7 -2.1
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       comp=Z,5.2nm,0.8s,baz=321
MK31   Makanchi Array     55.75 326    P       P       19 40 52.2 +0.1
MK31                                   IAmb    IAmb    19 40 53.1
       comp=Z,8.0nm,0.6s
MKAR   Makanchi Array     55.75 326    P       P       19 40 52.2 +0.1
       comp=Z,9.0nm,0.5s,baz=120,slow=8.0,SNR=191
MKAR                                   PcP     PcP     19 41 46.2 -0.4
       comp=Z,1.2nm,0.5s,baz=120,slow=4.7,SNR=2.1
MKAR                                   ScP     ScP     19 45 08.6 -2.9
       comp=Z,3.0nm,0.6s,baz=115,slow=5.0,SNR=13
MKAR                                   S       S       19 48 10.9 -0.1
       comp=Z,2.5nm,1.1s,baz=138,slow=13,SNR=8.4
MKAR   Makanchi Array     55.75 326    P       P       19 40 51.9 -0.2
PETK   Petropavlovsk-     55.88  24    P       P       19 40 53.5 +0.7
       comp=Z,10nm,0.8s,baz=206,slow=3.7,SNR=15
MAKZ   Makanchi           55.93 326    P       P       19 40 53.4  0.0
MAKZ                                   IAmb    IAmb    19 40 54.3
       comp=Z,9.8nm,0.6s
SATY   Saty               56.02 321   eP       P       19 40 53.8 -0.3
       comp=Z,8.1nm,0.9s,baz=321
KPKS   Kokpek             56.05 321   eP       P       19 40 54.0 -0.3
       comp=Z,8.9nm,0.8s,baz=321
MDOK   Medeo              56.93 320   eP       P       19 41 00.6  0.0
       baz=320
TNSS   Tian-Shan          56.94 320   eP       P       19 41 01.8 +0.8
       baz=320
TDK    Taldyqorghan       57.01 323   eP       P       19 41 00.8 -0.1
       comp=Z,13nm,0.7s,baz=323
AAA    Alma-Ata           57.04 320   eP       P       19 41 00.6 -0.7
       baz=320
CHKK   Chushkaly          57.31 321   eP       P       19 41 02.9 -0.1
       baz=321
KUU    Kurty              57.74 321   eP       P       19 41 05.6 -0.3
       comp=Z,12nm,0.7s,baz=321
YAK    Yakutsk            57.77   3    P       P       19 41 05.2 -0.5
       comp=Z,10nm,0.5s,baz=112,slow=0.2,SNR=18
YAK    Yakutsk            57.77   3    P       P       19 41 05.0 -0.8
YAK                                    IAmb    IAmb    19 41 07.1
       comp=Z,24nm,0.8s
MA2    Magadan            58.80  15    P       P       19 41 13.4 +0.5
MA2                                    IAmb    IAmb    19 41 14.4
       comp=Z,25nm,0.8s
DRK    Karamyk            58.90 314    P       P       19 41 14.2 -0.2
SEM    Semipalatinsk      58.98 329   eP       P       19 41 13.3 -1.3
       baz=329
ZAA0   Zalesovo Array     59.03 334    P       P       19 41 13.4 -1.2
ZALV   Zalesovo Beam      59.03 334    P       P       19 41 13.7 -0.9
       comp=Z,4.5nm,0.4s,baz=134,slow=6.0,SNR=22
ZALV   Zalesovo Beam      59.03 334    P       P       19 41 13.3 -1.3
KBL    Kabul              59.28 308    P       P       19 41 16.6 -0.3
BTLS   Baital             59.73 321   eP       P       19 41 19.3 -0.2
       comp=Z,3.3nm,0.9s,baz=321
BTK    Batken             59.81 314    P       P       19 41 20.5 +0.2
KURK   Kurchatov          60.00 328    P       P       19 41 21.1 -0.1
IUG    Iuzhnay            61.15 316   eP       P       19 41 29.1 -0.2
       baz=316
KK31   Karatay Array      61.20 318    P       P       19 41 29.8 +0.4
KKAR   Karatay Array      61.20 318    P       P       19 41 29.7 +0.2
KKAR   Karatay Array      61.20 318    P       P       19 41 29.6 +0.2
SEY    Seymchan           62.08  14    P       P       19 41 35.5 +0.7
       comp=Z,1.7nm,0.2s,baz=169,slow=4.7,SNR=6.6
BRZS   Berezniki          62.86 325   eP       P       19 41 39.8 -0.4
       comp=Z,3.8nm,0.7s,baz=325
MLZ    Mavora Lakes       62.94 147    P       P       19 41 41.0 +0.2
MLZ                                    IAmb    IAmb    19 41 45.8
       comp=Z,47nm,1.5s
SMY    Shemya             63.24  31    P       P       19 41 41.1 -1.5
LBZ    Lake Benmore       63.50 145    P       P       19 41 45.2 +0.8
RPZ    Rata Peaks         63.60 144    P       P       19 41 45.9 +0.8
RPZ                                    IAmb    IAmb    19 41 58.5
       comp=Z,24nm,1.0s
THZ    Tophouse           63.62 141    P       P       19 41 45.7 +0.3
LTZ    Lake Taylor        63.80 142    P       P       19 41 46.9 +0.5
LTZ                                    IAmb    IAmb    19 41 48.0
       comp=Z,15nm,0.7s
OXZ    Oxford             63.96 143    P       P       19 41 47.5  0.0
OXZ                                    IAmb    IAmb    19 41 47.9
       comp=Z,16nm,0.7s
TUWZ   Tuamarina          64.09 140    P       P       19 41 48.2 -0.2
KHZ    Kahutara           64.37 142    P       P       19 41 50.1  0.0
SNZO   South Karori       64.52 140    P       P       19 41 50.5 -0.6
URZ    Urewera            64.59 136    P       P       19 41 51.7 +0.1
URZ                                    IAmb    IAmb    19 41 52.7
       comp=Z,14nm,0.7s
BKZ    Black Stump Fm     64.61 137    P       P       19 41 51.8  0.0
BHW    Baring Head        64.67 140    P       P       19 41 51.4 -0.6
MSWZ   Moikau Station     64.92 140    P       P       19 41 53.1 -0.5
PLWZ   Palliser           65.00 140    P       P       19 41 53.6 -0.6
BRVK   Borovoye           65.63 328    P       P       19 41 57.9 -0.1
BRVK                                   IAmb    IAmb    19 41 58.9
       comp=Z,13nm,0.9s
TIXI   Tiksi              67.36   2    P       P       19 42 06.7 -1.8
TIXI                                   IAmb    IAmb    19 42 09.1
       comp=Z,15nm,1.2s
ABKAR  Akbulak array      70.21 321    P       P       19 42 25.9 -0.5
ABKAR  Akbulak array      70.21 321    P       P       19 42 25.7 -0.6
ARU    Arti               73.20 328    P       P       19 42 42.6 -1.2
ARU                                    IAmb    IAmb    19 42 44.4
       comp=Z,15nm,1.3s
RAYN   Ar Rayn            78.05 293    P       P       19 43 11.1 -0.8
RAYN                                   IAmb    IAmb    19 43 12.0
       comp=Z,7.9nm,0.8s
HATHI  Halema‘uma‘u T     79.58  71    P       P       19 43 21.1 +0.9
MAW    Mawson             83.43 200    P       P       19 43 38.6 -0.5
       comp=Z,8.2nm,0.6s,baz=245,slow=0.8,SNR=11
MAW    Mawson             83.43 200    P       P       19 43 39.2 +0.1
KLMR   Klimovskoe         83.75 331   eP       P       19 43 38.9 -2.0
KLMR                                   AMP             19 43 40.6
       comp=Z,16nm,1.1s
VNDA   Vanda              84.27 172    P       P       19 43 43.0 -0.2
       comp=Z,5.0nm,0.7s,baz=312,slow=6.3,SNR=25
VNDA   Vanda              84.27 172    P       P       19 43 43.1  0.0
VNDA                                   IAmb    IAmb    19 43 43.3
       comp=Z,4.9nm,0.6s
ILAR   Eielson Array      85.66  25    P       P       19 43 49.2 -1.0
       comp=Z,0.2nm,0.5s,baz=225,slow=6.0,SNR=1.6
KMBO   Kilima Mbogo       87.15 269    P       P       19 43 58.4 -0.4
       comp=Z,2.4nm,0.9s,baz=63,slow=6.4,SNR=5.0
BRTR   Keskin Array B     87.82 309    P       P       19 44 00.1 -1.2
       comp=Z,1.0nm,0.8s,baz=133,slow=7.0,SNR=3.9
ARCES  ARCESS Array B     89.11 340    P       P       19 44 05.8 -0.7
       comp=Z,0.7nm,0.5s,baz=74,slow=4.4,SNR=4.2
FINES  FINESS Array B     90.21 332    P       P       19 44 09.9 -1.9
       comp=Z,2.2nm,0.9s,baz=46,slow=8.0,SNR=1.3
YKA    Yellowknife Ar    100.00  24    PKKPbc  PKKPbc  20 01 11.7 -4.9
       comp=Z,0.4nm,0.7s,baz=83,slow=1.8,SNR=4.6
PDAR   Pinedale Array    112.52  40    PKKPbc  PKKPbc  20 00 36.0 -1.9
       comp=Z,0.3nm,0.8s,baz=61,slow=7.0,SNR=3.5
TORD   Torodi Ar. Bea    120.45 288    PKP     PKPdf   19 50 00.4 -1.5
       comp=Z,1.0nm,0.7s,baz=66,slow=1.6,SNR=4.2
KOWA   Kowa              125.49 291    PKP     PKPdf   19 50 10.4 -1.1
       comp=Z,0.7nm,0.5s,baz=33,slow=3.1,SNR=1.9
LC01   Cunco             142.52 159            PKPpre  19 50 38.3
BI02   San Fabin de      144.72 158            PKPab   19 50 46.5 -0.1
VA03   San Esteban       148.43 156            PKPbc   19 50 57.2 +0.2
CO01   Juntas del Tor    151.03 154            PKPbc   19 51 03.1 -0.3
LCO    Las Campanas      151.57 152            PKiKP   19 51 05.0 -0.1
GO02   Mina Guanaco      155.30 149            PKPab   19 51 31.6 +1.0
SIV    San Ignacio       167.21 156    PKPab   PKPab   19 52 22.4  0.0
       comp=Z,1.7nm,0.6s,baz=168,slow=3.6,SNR=6.5
```

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*IDC **12** 19:51:47.3±2.5, 24.°24S×67.°31W, h153km±27km, mb3.4/4, mb1 3.6/6, mb1mx3.3/32, mbtmp4.0/6, Error ellipse: s-maj=36.0km s-min=27.0km az=166.0*

*GUC **12** 19:51:47.3±0.5, 24.°37S×67.°64W, h176km±7km, ML4.3*

ISC 12 19:51:46.8±1.1, **24.°37S**±0.°05×**67.°5W**±0.°1, **h158**km±13km, **n17,** σ1**§17**/26, **mb3.6**/3, **7C, Chile-Argentina border region**

```
Code   Station Name        Δ°    AZ°    Phase ID        Time        Res
                                      Op      ISC      h  m  s     ISC
GO02   Mina Guanaco        2.04 247⥣iP       Pn      19 52 24.1 +1.0
GO02                                  i S      Sn      19 52 51.7 +0.6
GO02                                   IAML            19 52 53.4
       comp=N,2µm,0.3s
LVC    Limon Verde         2.16 324    P       Pn      19 52 25.9 +1.2
       comp=N,46nm,0.3s,baz=133,slow=10.0,SNR=516
LVC                                    S       Sn      19 52 54.5 +0.6
       comp=N,160nm,0.3s,baz=348,slow=19,SNR=107
LVC    Limon Verde         2.16 324⥣iP       Pn      19 52 25.5 +0.8
LVC                                   eS       Sn      19 52 54.4 +0.6
PB14   IPOC Station P      2.63 264⥣iP       Pn      19 52 30.5 +0.3
AC02   Maricunga           2.85 210   eP       Pn      19 52 34.1 +1.0
PB10   IPOC Station P      2.90 286⥣iP       Pn      19 52 33.6 +0.4
```

PB10				*i* S	Sn	19 53 08.7	-0.4
PB09	**IPOC Station P**	**3.00**	**328**	*e*P	**Pn**	**19 52 35.8**	**+1.0**
PB09				*e*S	Sn	19 53 12.3	+0.4
PB09				IAML		19 53 13.1	
	comp=E,386nm,0.6s						
PB03	**IPOC Station P**	**3.08**	**318**	⇑*i*P	**Pn**	**19 52 36.2**	**+0.5**
PB03				*i* S	Sn	19 53 12.3	-1.3
PB03				IAML		19 53 13.3	
	comp=E,842nm,0.2s						
PB04	**IPOC Station P**	**3.15**	**310**	⇑*i*P	**Pn**	**19 52 36.8**	**+0.3**
PB04				*i* S	Sn	19 53 13.3	-1.7
AC01	**Pan de Azucar**	**3.30**	**237**	*e*P	**Pn**	**19 52 37.7**	**-0.5**
AC01				*i* S	Sn	19 53 15.8	-2.4
AC01				IAML		19 53 17.3	
	comp=E,344nm,0.4s						
PB07	**IPOC Station P**	**3.41**	**320**	⇑*i*P	**Pn**	**19 52 40.1**	**+0.3**
PB08	**IPOC Station P**	**4.47**	**340**	*e*P	**Pn**	**19 52 54.3**	**+0.6**
PB08				*e*S	Sn	19 53 45.1	-0.8
SIV	**San Ignacio**	**10.30**	**37**	P	**Pn**	**19 54 08.0**	**-2.8**
	comp=E,2.5nm,0.3s,baz=247,slow=8.7,SNR=18						
BDFB	**Brasilia**	**20.27**	**68**	P	**P**	**19 56 09.4**	**-0.9**
	comp=E,4.2nm,0.7s,baz=234,slow=9.9,SNR=3.9						
SNAA	**Sanae**	**59.17**	**161**	P	**P**	**20 01 31.8**	**+1.2**
	comp=E,1.0nm,0.6s,baz=255,slow=16,SNR=2.0						
TORD	**Torodi Ar. Bea**	**77.15**	**69**	P	**P**	**20 03 23.0**	**-0.4**
	comp=E,0.6nm,0.5s,baz=258,slow=4.8,SNR=4.8						
YKA	**Yellowknife Ar**	**94.30**	**340**	P	**P**	**20 04 48.9**	**+1.3**
	comp=E,0.1nm,0.5s,baz=134,slow=5.2,SNR=2.6						

IDC 12 19:54:31.5±2.2**,2°.11N×127°.76E,h0^{km},mb3.4**/3,
mb1 3.6/3**,mb1mx3.3**/43**,mbtmp3.4**/3**,MS3.4**/1**,Ms1 3.4**/1,
ms1mx2.6/30**,Error ellipse: s-maj=152.8km**
s-min=26.3km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.85**	**164**	P	P	19 59 37.0	+0.5
	0.6nm,0.5s,baz=344,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.31**	**167**	P	P	20 00 08.4	-0.7
	0.3nm,0.3s,baz=341,slow=7.1,SNR=4.8						
JNU	**Nakatsue**	**30.99**	**5**	LR	LR	20 14 28.1	
	comp=Z,62nm,18.8s,baz=69,slow=39						
MKAR	**Makanchi Array**	**59.46**	**325**	P	P	20 04 36.5	+0.1
	0.1nm,0.3s,baz=112,slow=7.2,SNR=5.1						

*IDC **12** 19:59:00.8±1.6, 15°.02S×177°.29W, h377^{km}±27^{km}, mb3.2/6,*
mb1 3.4/9, mb1mx3.1/39, mbtmp4.0/9, Error ellipse:
s-maj=98.4km s-min=16.0km az=154.0
ISC 12 19:59:00.8±0.9**,14°.8S**±0°.3×**177°.3W**±0°.2**,h372^{km},n9,**
σ1^{s}.17/9**,mb3.5**/6**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.28**	**236**	P	**Pn**	**20 00 25.2**	**+0.6**
	4.6nm,0.3s,baz=106,slow=24,SNR=26						
AFI	**Afiamalu**	**5.47**	**81**	P	**Pn**	**20 00 25.8**	**-0.8**
	7.1nm,0.3s,baz=46,slow=2.7,SNR=13						
DZM	**Mont Dzumac**	**16.98**	**243**	P	**P**	**20 02 37.0**	**+1.2**
	0.1nm,0.3s,baz=284,slow=23,SNR=3.1						
CTA	**Charters Tower**	**35.07**	**256**	P	**P**	**20 05 19.8**	**-0.7**
	0.8nm,0.3s,baz=97,slow=8.1,SNR=1.4						
WRA	**Warramunga Arr**	**46.27**	**256**	P	**P**	**20 06 49.7**	**-1.3**
	0.2nm,0.3s,baz=96,slow=5.9,SNR=6.5						
ASAR	**Alice Springs**	**46.68**	**251**	P	**P**	**20 06 53.0**	**-1.1**
	3.0nm,0.5s,baz=85,slow=8.3,SNR=53						
FITZ	**Fitzroy Crossi**	**54.60**	**258**	P	**P**	**20 07 53.5**	**+0.9**
	2.7nm,1.0s,baz=108,slow=6.4,SNR=2.2						
ILAR	**Eielson Array**	**82.68**	**13**	P	**P**	**20 10 43.2**	**+0.1**
	0.5nm,0.6s,baz=224,slow=6.0,SNR=6.0						
TXAR	**Lajitas Array**	**83.49**	**58**	P	**P**	**20 10 49.5**	**+1.3**
	0.4nm,0.6s,baz=212,slow=8.8,SNR=3.9						

*BGR **12** 20:20:35.5±0.0, 22°.09S×179°.44W, h33^{km}*
*NEIC **12** 20:21:33.9±1.9, 22°.0S±0°.1×179°.0W±0°.2, h555^{km}±4^{km},*
mb4.4/17, Error ellipse: s-maj=22.5km s-min=16.2km
az=112.0
*IDC **12** 20:21:35.2±1.7, 22°.01S×179°.12W, h561^{km}±19^{km},*
mb3.5/14, mb1 3.8/15, mb1mx3.6/45, mbtmp4.5/15, Error
ellipse: s-maj=17.6km s-min=13.0km az=110.0
ISC 12 20:21:34.7±0.4**,22°.11S**±0°.06×**178°.76W**±0°.09**,h576^{km},**
n128,σ1^{s}.58/130**,mb4.0**/21**,8C-15D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.29**	**325**	P	**P**	**20 23 06.5**	**-2.2**
	39nm,0.3s,baz=177,slow=3.9,SNR=345						
RAO	**Raoul Island**	**7.15**	**174**	S	**S**	**20 24 50.7**	**-4.6**
	52nm,0.3s,baz=259,slow=22,SNR=1.9						
GLKZ	**Green Lake**	**7.16**	**174**	P	**P**	**20 23 26.5**	**+1.5**
GLKZ				S	**S**	**20 24 51.9**	**-3.6**
AFI	**Afiamalu**	**10.52**	**40**	P	**P**	**20 23 56.4**	**-2.0**
	8.1nm,0.3s,baz=237,slow=17,SNR=8.1						
AFI				S	**S**	**20 25 50.7**	**-5.8**
	1.5nm,0.3s,baz=20,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**13.72**	**267**	P	**P**	**20 24 31.2**	**+0.1**
	1.0nm,0.3s,baz=115,slow=18,SNR=9.8						
OUZ	**Omahuta**	**14.67**	**205**	P	**P**	**20 24 39.6**	**-0.6**
GRZ	**Great Barrier**	**14.96**	**198**	P	P	20 24 52.8	+10
KUZ	**Kuaotunu**	**15.35**	**197**	P	**P**	**20 24 44.4**	**-2.3**
PKGZ	**Pakihiroa**	**15.96**	**189**	P	**P**	**20 24 52.5**	**-0.2**
PKGZ				S	**S**	**20 27 38.8**	**+4.8**
TWGZ	**Tauwhareparae**	**16.25**	**189**	P	**P**	**20 24 55.4**	**+0.1**
MWZ	**Matawai**	**16.48**	**190**	P	**P**	**20 24 55.7**	**-1.7**
URZ	**Urewera**	**16.48**	**192**	P	**P**	**20 24 54.4**	**-2.9**
	2.9nm,0.3s,baz=15,slow=5.1,SNR=22						
URZ	**Urewera**	**16.48**	**192**	P	**P**	**20 24 53.6**	**-3.7**
URZ	**Urewera**	**16.48**	**192**	P	**P**	**20 24 54.2**	**-3.2**
MUGZ	**Murupara**	**16.75**	**192**	P	**P**	**20 24 57.8**	**-2.0**
MTHZ	**Maungataniwha**	**17.11**	**192**	P	**P**	**20 25 02.5**	**-0.6**
BKZ	**Black Stump Fm**	**17.48**	**192**	P	**P**	**20 25 03.5**	**-3.0**
BKZ				IAmb	IAmb	20 25 13.9	
	comp=Z,21nm,1.2s						
ETVZ	**East Tongariro**	**17.61**	**194**	P	**P**	**20 25 06.8**	**-1.0**
TWVZ	**Taurewa**	**17.62**	**195**	P	**P**	**20 25 06.7**	**-1.1**
OTVZ	**Oturere**	**17.65**	**194**	P	**P**	**20 25 05.6**	**-2.5**
KWHZ	**Kaweka Forest**	**17.74**	**192**	P	**P**	**20 25 08.2**	**-0.7**
TUVZ	**Tukino**	**17.75**	**194**	P	**P**	**20 25 08.2**	**-0.9**
MOVZ	**Moawhango**	**17.86**	**194**	P	**P**	**20 25 08.7**	**-1.3**
BHHZ	**Black Hill Sta**	**17.88**	**193**	P	**P**	**20 25 07.6**	**-2.5**
BHHZ				S	**S**	**20 28 02.1**	**-3.2**
KAHZ	**Kahuranaki**	**18.01**	**191**	P	**P**	**20 25 10.1**	**-1.2**
PNHZ	**Pukenui**	**18.25**	**192**	P	**P**	**20 25 12.3**	**-1.2**
BFZ	**Birch Farm**	**18.99**	**192**	P	**P**	**20 25 17.4**	**-2.7**
BFZ				IAmb	IAmb	20 25 20.4	
	comp=Z,18nm,0.6s						
TUWZ	**Tuamarina**	**20.22**	**196**	P	**P**	**20 25 28.1**	**-3.2**
LTZ	**Lake Taylor**	**21.93**	**198**	P	**P**	**20 25 43.8**	**-2.9**
LTZ				IAmb	IAmb	20 25 47.8	
	comp=Z,17nm,0.8s						
RPZ	**Rata Peaks**	**23.14**	**199**	P	**P**	**20 25 57.5**	**0.0**
	comp=Z,7.9nm,0.5s,baz=292,slow=2.0,SNR=6.5						
WHZ	**Wether Hill Ro**	**26.08**	**201**	P	**P**	**20 26 23.9**	**+0.5**
CTA	**Charters Tower**	**32.66**	**267**	P	**P**	**20 27 19.1**	**-1.5**
	comp=Z,7.5nm,0.5s,baz=96,slow=10,SNR=14						
STKA	**Stephens Creek**	**36.47**	**246**	P	**P**	**20 27 51.2**	**-0.8**
	comp=Z,5.6nm,0.6s,baz=98,slow=12,SNR=17						
STKA	**Stephens Creek**	**36.47**	**246**	P	**P**	**20 27 51.0**	**-1.0**
AS31	**Alice Springs**	**43.48**	**258**	P	**P**	**20 28 46.7**	**-1.5**
ASAR	**Alice Springs**	**43.48**	**258**	P	**P**	**20 28 46.7**	**-1.5**
	comp=Z,14nm,0.8s,baz=101,slow=7.9,SNR=178						
ASAR	**Alice Springs**	**43.48**	**258**	P	**P**	**20 28 46.1**	**-2.1**
VNDA	**Vanda**	**56.25**	**185**	P	**P**	**20 30 23.5**	**+2.9**
	comp=Z,1.2nm,0.5s,baz=356,slow=6.1,SNR=14						
VNDA	**Vanda**	**56.25**	**185**	P	**P**	**20 30 21.9**	**+1.3**
QSPA	**South Pole Qui**	**67.96**	**180**		**P**	**20 31 38.3**	**+1.6**
QSPA				IAmb	IAmb	20 31 39.8	
	comp=Z,8.2nm,0.7s						
MJAR	**Matsushiro Arr**	**71.09**	**324**	P	**P**	**20 31 55.7**	**0.0**
	comp=Z,2.8nm,0.6s,baz=158,slow=5.6,SNR=11						
MJAR	**Matsushiro Arr**	**71.09**	**324**	P	**P**	**20 31 55.4**	**-0.3**
KSRS	**Korea Array**	**77.63**	**319**	P	**P**	**20 32 33.4**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=134,slow=5.7,SNR=4.8						
PETK	**Petropavlovsk-**	**77.65**	**346**	P	**P**	**20 32 33.0**	**+0.9**
	comp=Z,5.5nm,0.7s,baz=242,slow=3.2,SNR=13						
PETK	**Petropavlovsk-**	**77.65**	**346**	P	**P**	**20 32 32.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**79.90**	**326**	P	**P**	**20 32 45.2**	**+1.0**
	comp=Z,5.1nm,1.0s,baz=113,slow=4.3,SNR=4.4						
USRK	**Ussuriysk Ar.**	**79.90**	**326**	P	**P**	**20 32 45.6**	**+1.4**
WAKR	**Walker**	**82.00**	**43**	P	**P**	**20 32 55.3**	**-0.1**
NVAR	**Mina Array Bea**	**82.68**	**44**	P	**P**	**20 33 01.6**	**+2.8**
	comp=Z,2.0nm,0.8s,baz=225,slow=8.3,SNR=9.2						
NVAR	**Mina Array Bea**	**82.68**	**44**	P	**P**	**20 32 59.1**	**+0.2**
KLR	**Kul'dur**	**83.56**	**330**	P	**P**	**20 33 03.7**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=50,slow=3.1,SNR=7.6						
G08A	**Pilot Rock**	**86.32**	**38**	P	**P**	**20 33 16.6**	**+0.3**
G08A				IAmb	IAmb	20 33 20.8	
	comp=Z,3.7nm,1.1s						
GHO	**Glory Hole Cre**	**86.95**	**14**	P	**P**	**20 33 20.4**	**+1.5**
F10A	**Beach Ranch, E**	**87.71**	**38**	P	**P**	**20 33 24.2**	**+1.4**
F10A				IAmb	IAmb	20 33 26.0	
	comp=Z,4.3nm,0.8s						
TRF	**Thorofare Moun**	**88.17**	**12**	P	**P**	**20 33 25.5**	**+0.9**
TX31	**Lajitas Ar. Si**	**88.52**	**58**	P	**P**	**20 33 27.1**	**+0.1**
TX31				IAmb	IAmb	20 33 31.8	
	comp=Z,7.3nm,1.1s						
TX32	**Lajitas Array**	**88.52**	**58**	P	**P**	**20 33 27.0**	**0.0**
TX32				IAmb	IAmb	20 33 31.8	
	comp=Z,2.7nm,1.1s						
TXAR	**Lajitas Array**	**88.52**	**58**	P	**P**	**20 33 30.2**	**+3.3**
	comp=Z,1.5nm,0.9s,baz=214,slow=5.9,SNR=11						
CMAR	**Chiang Mai Arr**	**89.99**	**290**	P	**P**	**20 33 34.0**	**+0.1**
	comp=Z,19nm,0.8s,baz=126,slow=6.2,SNR=4.9						
ILAR	**Eielson Array**	**90.04**	**13**	P	**P**	**20 33 33.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=223,slow=4.7,SNR=10						
PDAR	**Pinedale Array**	**90.62**	**44**	P	**P**	**20 33 39.0**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=217,slow=2.7,SNR=8.5						
PDAR	**Pinedale Array**	**90.62**	**44**	P	**P**	**20 33 38.3**	**+1.8**
SPITS	**Spitsbergen Ar**	**123.42**	**356**	PKP	**PKPdf**	**20 39 26.0**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=80,slow=1.8,SNR=7.3						
ARCES	**ARCESS Array B**	**130.37**	**349**	PKP	**PKiKP**	**20 39 41.0**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=60,slow=2.2,SNR=5.3						
FINES	**FINESS Array B**	**137.10**	**343**	PKP	**PKiKP**	**20 39 54.8**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=48,slow=2.1,SNR=1.5						
HFS	**Hagfors**	**141.01**	**350**	PKhKP	PKPpre	20 39 54.7	
	comp=Z,5.3nm,0.7s,baz=72,slow=4.8,SNR=22						
MBAR	**Mbarara**	**143.43**	**236**		**PKPdf**	**20 40 05.5**	**+0.1**
AKASG	**Malin Array Be**	**144.06**	**329**	PKP	PKPbc	20 40 04.6	0.0
	comp=Z,6.4nm,0.5s,baz=44,slow=4.2,SNR=37						
AKASG	**Malin Array Be**	**144.06**	**329**		PKPbc	20 40 04.4	-0.3
AKBB	**Malin Array Si**	**144.06**	**329**		PKPbc	20 40 04.4	-0.3
SUW	**Suwalki**	**144.08**	**338**		**PKPdf**	**20 40 05.5**	**+0.5**
SORM	**Soroca**	**146.18**	**327**	⇓P	**PKPbc**	**20 40 11.6**	**+0.6**
MILM	**Milestii Mici**	**146.72**	**325**	⇓P	**PKPbc**	**20 40 13.0**	**+0.5**
BR131	**Keskin Array S**	**147.36**	**310**		**PKPbc**	**20 40 15.3**	**+0.6**
BRTR	**Keskin Array B**	**147.36**	**310**	PKPbc	**PKPbc**	**20 40 15.2**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=150,slow=6.2,SNR=12						
BRTR	**Keskin Array B**	**147.36**	**310**		**PKPbc**	**20 40 14.9**	**+0.2**
MMAI	**Mount Meron Ar**	**147.96**	**297**	PKPbc	**PKiKP**	**20 40 17.7**	**+0.1**
	comp=Z,4.2nm,0.4s,baz=76,slow=7.0,SNR=22						
BIZ	**Bicaz**	**148.12**	**327**	⇓P	**PKiKP**	**20 40 17.8**	**+0.4**
TESR	**Tescani**	**148.12**	**326**	⇑P	**PKiKP**	**20 40 17.2**	**-0.2**
CFR	**Carcaliu**	**148.16**	**323**	⇑P	**PKiKP**	**20 40 17.2**	**-0.3**
TPGR	**Topolog**	**148.19**	**322**	⇑P	**PKiKP**	**20 40 17.6**	**0.0**
KOLS	**Kolonicke sedl**	**148.44**	**333**	*e*PKP	**PKiKP**	**20 40 18.7**	**+0.7**
KOLS				*e*		20 43 44.0	
VRI	**Vrincioaia**	**148.50**	**325**	⇓P	**PKiKP**	**20 40 18.5**	**+0.2**
VRI				⇓P	**PKPbc**	**20 40 18.6**	**+1.5**
HARR	**Harsova**	**148.57**	**322**	⇑P	**PKiKP**	**20 40 18.3**	**0.0**
MANR	**Mangalia**	**148.70**	**320**	⇑P	**PKiKP**	**20 40 19.2**	**+0.6**
CRVS	**Cervenica-Dubn**	**148.81**	**334**	*e*PKP	**PKiKP**	**20 40 19.5**	**+0.7**
CRVS				*e*		20 43 43.7	
EIL	**Elat**	**148.84**	**291**	PKPbc	**PKiKP**	**20 40 19.8**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=229,slow=2.6,SNR=4.6						
DOPR	**Dopca**	**149.14**	**326**	⇓P	**PKiKP**	**20 40 20.7**	**+1.1**
OSTC	**Ostas**	**149.28**	**341**	*e*PKP	**PKiKP**	**20 40 20.9**	**+1.2**
CHVC	**Chvalec**	**149.30**	**341**	*e*PKP	**PKiKP**	**20 40 20.5**	**+0.8**
CHVC				*e*x	x	20 40 27.3	
LANS	**Liptovska Anna**	**149.38**	**336**	*e*PKP	**PKiKP**	**20 40 21.7**	**+1.7**
LANS				*e*		20 43 49.2	
DPC	**Dobruska-Polom**	**149.43**	**341**	*e*PKP	**PKiKP**	**20 40 20.8**	**+0.8**
CLL	**Collm**	**149.45**	**345**	⇓*i*PKPbc	**PKiKP**	**20 40 20.6**	**+0.6**
	comp=Z,16nm,0.6s						
CLL				*i* PKPab	**PKPab**	**20 40 27.0**	**+0.5**
	comp=Z,8.0nm,1.0s						
CLL	**Collm**	**149.45**	**345**		**PKiKP**	**20 40 20.6**	**+0.6**
CLL	**Collm**	**149.45**	**345**	*e*PKPbc	**PKiKP**	**20 40 20.6**	**+0.6**
	baz=21,slow=2.5						
LEF	**Lefka**	**149.48**	**302**	⇓P	**PKiKP**	**20 40 20.6**	**0.0**
CLZ	**Clausthal**	**149.49**	**349**	*e*PKPbc	**PKiKP**	**20 40 21.0**	**+0.9**
	baz=21,slow=2.5						
CJR	**Cluj-Napoca**	**149.51**	**329**	⇑P	**PKiKP**	**20 40 21.2**	**+0.8**
KRLC	**Kraliky**	**149.53**	**340**	*e*PKP	**PKiKP**	**20 40 21.1**	**+0.8**
MORC	**Moravsky Berou**	**149.54**	**339**	⇓P	**PKiKP**	**20 40 21.0**	**+0.7**
MORC	**Moravsky Berou**	**149.54**	**339**	*e*PKP	**PKiKP**	**20 40 20.9**	**+0.6**
MORC	**Moravsky Berou**	**149.54**	**339**		**PKiKP**	**20 40 21.1**	**+0.7**
BRG	**Berggiesshubel**	**149.62**	**344**	*i* P	**PKiKP**	**20 40 20.9**	**+0.6**
BRG				Amp		20 40 22.9	
	comp=Z,13nm,0.6s						
BRG				*i* x	x	20 40 28.3	
BRG				Amp		20 40 29.0	
	comp=Z,5.7nm,1.0s						
BRG	**Berggiesshubel**	**149.62**	**344**	*i* P	**PKiKP**	**20 40 20.9**	**+0.6**
BRG				Amp		20 40 22.9	
	comp=Z,13nm,0.6s						
BRG				*i* x	x	20 40 28.3	
BRG				Amp		20 40 29.0	
	comp=Z,5.7nm,1.0s						
BRG	**Berggiesshubel**	**149.62**	**344**	*e*PKPbc	**PKiKP**	**20 40 21.2**	**+0.8**
	baz=21,slow=2.5						
VOIR		**149.67**	**326**	⇓P	**PKiKP**	**20 40 20.7**	**-0.1**
PVCC	**Panska Ves**	**149.77**	**343**	*e*PKP	**PKiKP**	**20 40 21.8**	**+1.1**
PVCC				*e*PKP	**PKiKP**	**20 40 21.8**	**+1.1**
GTTG	**Gottingen**	**149.85**	**349**	*e*PKPbc	**PKiKP**	**20 40 21.8**	**+1.0**
	baz=21,slow=2.5						
ARR	**Arges**	**149.93**	**326**	⇓P	**PKiKP**	**20 40 22.7**	**+1.4**
VYHS	**Vyhne**	**150.16**	**336**	*e*PKP	**PKiKP**	**20 40 22.5**	**+0.9**
VYHS				*e*		20 43 46.0	
VRAC	**Vranov**	**150.26**	**340**	*e*PKP	**PKiKP**	**20 40 22.5**	**+0.8**
PRU	**Pruhonice**	**150.27**	**343**	*e*PKP	**PKiKP**	**20 40 22.5**	**+0.8**
JAVC	**Velka Javorina**	**150.28**	**338**	*e*PKP	**PKiKP**	**20 40 23.8**	**+1.9**
HUMR	**Humele**	**150.31**	**324**	⇓P	**PKiKP**	**20 40 22.1**	**+0.1**
TANN	**Tannenbergstha**	**150.41**	**345**	*e*PKPbc	**PKiKP**	**20 40 23.0**	**+0.9**
	baz=21,slow=2.5						
PLN	**Plauen**	**150.41**	**346**	*e*PKPbc	**PKiKP**	**20 40 23.0**	**+1.0**
	baz=21,slow=2.5						
WERD	**Werda**	**150.42**	**346**	*e*PKPbc	**PKiKP**	**20 40 23.0**	**+1.0**
	baz=21,slow=2.5						
GUNZ	**Gunzen**	**150.49**	**346**	*e*PKPbc	**PKiKP**	**20 40 23.4**	**+1.1**
	baz=21,slow=2.5						
KRUC	**Moravsky**	**150.53**	**340**	*e*PKP	**PKiKP**	**20 40 23.1**	**+0.8**
KRUC				*e*		20 40 32.5	
NKC	**Novy Kostel**	**150.58**	**345**	*e*PKP	**PKiKP**	**20 40 23.4**	**+1.0**
SIRR	**Siria**	**150.74**	**330**	⇑P	**PKiKP**	**20 40 23.8**	**+0.9**
MODS	**Modra-Piesok**	**150.83**	**338**	*e*PKP	**PKiKP**	**20 40 23.4**	**+0.4**
MODS				*e*		20 43 48.5	
GZR	**Gura Zlata**	**150.85**	**328**	⇑P	**PKiKP**	**20 40 23.5**	**+0.3**
BZS	**Buzias**	**151.25**	**329**	⇓P	**PKiKP**	**20 40 24.3**	**+0.4**
KHC	**Kasperske Hory**	**151.31**	**343**	*e*PKP	**PKiKP**	**20 40 24.8**	**+0.8**
KHC				*e*x	x	20 40 35.6	
HERR	**Herculane**	**151.40**	**328**	⇓P	**PKiKP**	**20 40 24.8**	**+0.5**
GERES	**GERESS Array B**	**151.54**	**343**	PKPbc	**PKiKP**	**20 40 25.3**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=8.5,slow=2.7,SNR=7.9						
VTS	**Vitosha**	**152.52**	**323**	⇓P	**PKiKP**	**20 40 26.9**	**+0.1**

*BJI **12** 20:25:10.4±0.0, 5°.94S×134°.35E, h32^{km}, mB5.6/58,*
mb5.4/82, Ms5.2/75, Ms7 4.9/70
*IDC **12** 20:25:11.3±0.3, 5°.58S×133°.89E, h0^{km}, mb5.4/41,*
mb1 5.4/51, mb1mx5.3/60, mbtmp5.4/51, ML5.4/8, MS5.0/27,
Ms1 5.0/27, ms1mx4.9/37, Error ellipse: s-maj=11.5km
s-min=8.7km az=64.0
*DJA **12** 20:25:13.9±0.1, 6°S±1°×13°4E±°, h10^{km}, M5.7/109,*
mB6.2/100, mb6.0/109, MLv6.4/13, Mw(mB)5.9/100,
MwMwp5.4/54, Mwp5.6/54
*MOS **12** 20:25:13.8±1.1, 5°.53S×133°.86E, h28^{km}, mb5.8/47,*
MS5.2/27, Error ellipse: s-maj=6.9km s-min=4.3km
az=116.5
*NEIC **12** 20:25:14.1, 5°.55S×133°.96E, h24^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.97;
M$_{\theta\theta}$0.05; M$_{\phi\phi}$1.92; M$_{r\theta}$0.38; M$_{\theta\phi}$1.07; M$_{\phi r}$0.78; Fault plane
solution: M$_0$2.38000×10^{17} NP1:ϕ$_s$23.37000°, δ34.19000°,
λ-91.49000°. NP2:ϕ$_s$205.18000°, δ55.82000°,
λ-88.99000°. Principal axes: T 2.5716, Plg11.0000°,
Azm294.0000°; N -0.4346, Plg1.0000°, Azm25.0000°; P
-2.1370, Plg79.0000°, Azm119.0000°;
*NEIC **12** 20:25:14.2±1.7, 5°.59S±0°.05×133°.92E±0°.06, h21^{km}±3^{km},*
mb5.8/202, Ms_20 5.4/347, Mwb5.5/29, Mww5.6,
Mwc5.6(GCMT) Error ellipse: s-maj=8.6km s-min=7.9km
az=98.0
*NOU **12** 20:25:16.0, 5°.60S×133°.90E, h25^{km}, ML5.8, Aru Islands*
Region, Indonesia
*GCMT **12** 20:25:18.2±0.1, 5°.47S±0°.01×133°.79E±0°.01, h22^{km},*
MW5.6/159, Moment Tensor Solution. s152,c284;
s159,c325; Duration: 1^{s}.6 Moment tensor: Scale 10^{17}
Nm; M$_{rr}$-3.27±.04; M$_{\theta\theta}$0.68±.03; M$_{\phi\phi}$2.58±.03;
M$_{r\theta}$0.23±.06; M$_{\theta\phi}$1.43±.02; M$_{\phi r}$1.30±.05; Best double
couple: M$_0$3.56300×10^{17} NP1:ϕ$_s$35.00000°, δ35.00000°,
λ-79.00000°. NP2:ϕ$_s$201.00000°, δ56.00000°,
λ-98.00000°. Principal axes: T 3.5790, Plg10.0000°,
Azm297.0000°; N -0.0370, Plg6.0000°, Azm206.0000°; P
-3.5470, Plg78.0000°, Azm85.0000°; nsta1 refers to body
waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*NEIC **12** 20:25:18, 5°.55S×134°.04E, h24^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.02;
M$_{\theta\theta}$0.63; M$_{\phi\phi}$2.39; M$_{r\theta}$-0.41; M$_{\theta\phi}$1.14; M$_{\phi r}$-0.06; Fault
plane solution: M$_0$3.01000×10^{17} NP1:ϕ$_s$200.00000°,
δ43.00000°, λ-99.00000°. NP2:ϕ$_s$32.00000°, δ48.00000°,
λ-81.00000°. Principal axes: T 2.9583, Plg2.0000°,
Azm116.0000°; N 0.1053, Plg6.0000°, Azm207.0000°; P
-3.0636, Plg83.0000°, Azm6.0000°;
*NEIC **12** 20:25:19, 5°.48S×133°.84E, h21^{km}, Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-3.25;
M$_{\theta\theta}$0.64; M$_{\phi\phi}$2.61; M$_{r\theta}$-0.12; M$_{\theta\phi}$1.44; M$_{\phi r}$1.17; Fault
plane solution: M$_0$3.51000×10^{17} NP1:ϕ$_s$38.00000°,
δ38.00000°, λ-73.00000°. NP2:ϕ$_s$197.00000°, δ54.00000°,
λ-103.00000°. Principal axes: T 3.5141, Plg8.0000°,
Azm296.0000°; N 0.0001, Plg10.0000°, Azm205.0000°; P
-3.5142, Plg77.0000°, Azm64.0000°;
ISC 12 20:25:14.6±0.4**,5°.61S**±0°.03×**133°.85E**±0°.03**,h25^{km}**±2^{km}**,**
h25^{km}:pP-P,n1405,σ1^{s}.51/1334**,mb5.8**/278**,MS5.3**/234**,**
20C-20D,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.11**	**329**	Pn	**Pn**	**20 26 02.0**	**-0.2**
FAKI	**Fak Fak**	**3.11**	**329**	P	**Pn**	**20 26 01.8**	**-0.4**
SAUI	**Saumlaki**	**3.46**	**227**	Pn	**Pn**	**20 26 08.9**	**+2.0**
SAUI	**Saumlaki**	**3.46**	**227**	P	**Pn**	**20 26 10.2**	**+3.3**
SAUI				S	**Sn**	**20 26 47.0**	**-0.2**
BNDI	**Bandanaira**	**4.08**	**285**	P	**Pn**	**20 26 16.9**	**+1.5**
BNDI				S	**Sn**	**20 27 02.1**	**-0.3**
BAKI	**Biak**	**4.93**	**27**	P	**Pn**	**20 26 27.9**	**+0.7**
WAMI	**Wamena**	**5.14**	**71**	P	**Pn**	**20 26 34.1**	**+4.1**
	88nm114µm7µm,0.7s						
SIJI	**Sorong**	**5.37**	**331**	Pn	**Pn**	**20 26 34.3**	**+1.0**
	406nm,0.3s,baz=159,slow=5.7,SNR=831						
SIJI				Sn	**Sn**	**20 27 29.1**	**-5.2**
	1µm,0.3s,baz=247,slow=21,SNR=19						
SIJI				LR	LR	20 29 19.4	
	comp=Z,17µm,19.3s,baz=104,slow=46						
SWI	**Sorong**	**5.38**	**331**	P	**Pn**	**20 26 32.7**	**-0.6**
	50nm39µm100µm3µm,0.5s						
MSAI	**Masohi**	**5.40**	**294**	P	**Pn**	**20 26 33.5**	**-0.1**
	9.6nm27µm3µm,0.7s						
MSAI				S	**Sn**	**20 27 32.9**	**-2.1**
	9.6nm27µm3µm,0.7s						
GENI	**Genyem**	**6.98**	**65**	P	**Pn**	**20 26 57.1**	**+1.8**
	9.1nm27µm18µm1µm,1.1s						
MMPI	**Merauke**	**7.08**	**114**	P	**Pn**	**20 26 59.2**	**+2.5**
	42nm43µm70µm5µm,0.6s						
NLAI	**Namlea**	**7.13**	**289**	P	**Pn**	**20 26 58.5**	**+1.1**
	9.5nm420µm52µm3µm,0.9s						
KDU	**Kakadu**	**7.16**	**191**	P	**Pn**	**20 26 59.6**	**+1.7**
	baz=7.2,SNR=444						
JAY	**Jayapura**	**7.50**	**66**	Pn	**Pn**	**20 27 03.2**	**+0.7**
	22nm,0.3s,baz=217,slow=11,SNR=33						
JAY				Sn	**Sn**	**20 28 25.3**	**-1.5**
	12nm,0.3s,baz=143,slow=23,SNR=5.0						
JAY				LR	LR	20 30 42.5	
	comp=Z,24µm,21.4s,baz=286,slow=44						
JAY	**Jayapura**	**7.50**	**66**	P	**Pn**	**20 27 03.6**	**+1.1**
	1.4nm3µm240nm,1.2s						
MTN	**Manton Dam**	**7.67**	**200**	P	**Pn**	**20 27 07.8**	**+2.9**
	baz=7.8,SNR=275						
MTN	**Manton Dam**	**7.67**	**200**	Pn	**Pn**	**20 27 06.9**	**+2.0**
SANI	**Sanana**	**8.60**	**294**	P	**Pn**	**20 27 15.7**	**-2.0**
	22µm22µm2µm,1.0s						
TNTI	**Ternate**	**9.06**	**314**	Pn	**Pn**	**20 27 24.2**	**+0.2**
TNTI	**Ternate**	**9.06**	**314**	P	**Pn**	**20 27 24.0**	**+0.1**
	13µm11µm1µm,1.0s						
SOEI	**Soe**	**10.35**	**246**	Pn	**Pn**	**20 27 41.8**	**0.0**
SOEI	**Soe**	**10.35**	**246**	P	**Pn**	**20 27 41.7**	**0.0**
	17µm25µm3µm,0.8s						
BATI	**Baumata**	**11.07**	**245**	Pn	**Pn**	**20 27 52.9**	**+1.4**
	279nm,0.3s,baz=120,slow=2.7,SNR=172						
BATI				Sn	**Sn**	**20 29 50.3**	**-4.4**
	452nm,0.3s,baz=71,slow=12,SNR=6.5						
BATI	**Baumata**	**11.07**	**245**	P	**Pn**	**20 27 51.6**	**0.0**
	8µm15µm2µm,0.8s						
KNRA	**Kununurra**	**11.18**	**206**	P	**Pn**	**20 27 54.4**	**+1.4**
	baz=11,SNR=22						
KNRA	**Kununurra**	**11.18**	**206**	Pn	**Pn**	**20 27 54.0**	**+1.0**
KMSI	**Cibinong**	**11.61**	**302**	P	**Pn**	**20 27 58.4**	**-0.5**
	626nm25µm3µm,1.0s						
MMRI	**Maumere**	**11.91**	**255**	Pn	**Pn**	**20 28 03.4**	**+0.4**
MMRI	**Maumere**	**11.91**	**255**	P	**Pn**	**20 28 03.3**	**+0.3**
	13µm16µm1µm,1.0s						
LUWI	**Luwuk**	**11.95**	**292**	Pn	**Pn**	**20 28 03.4**	**-0.2**
LUWI	**Luwuk**	**11.95**	**292**	P	**Pn**	**20 28 03.2**	**-0.4**
	18µm22µm3µm,0.9s						
COEN	**Coen**	**12.37**	**133**	Pn	**Pn**	**20 28 07.6**	**-1.8**
SGSI	**Sangihe**	**12.42**	**318**	P	**Pn**	**20 28 10.2**	**+0.2**
	8µm816nm,0.9s						
EDFI	**Ende, Flores**	**12.46**	**255**	P	**Pn**	**20 28 10.8**	**+0.2**
	7µm5µm291nm,0.9s						
GTOI	**Gorontalo**	**12.48**	**299**	P	**Pn**	**20 28 13.1**	**+2.4**
	13µm2µm,1.0s						
APSI	**Ampana**	**13.04**	**291**	P	**Pn**	**20 28 17.9**	**-0.6**
	9µm12µm1µm,0.8s						
BSSI	**Bau Bau, Buton**	**13.30**	**267**	P	**Pn**	**20 28 23.2**	**+1.2**
	6µm5µm487nm,1.2s						
MRSI	**Marisa**	**13.34**	**297**	P	**Pn**	**20 28 21.0**	**-1.6**
	14µm12µm1µm,1.1s						
BKSI	**Bulukumba**	**13.67**	**271**	P	**Pn**	**20 28 28.0**	**+1.0**
	11µm7µm735nm,0.9s						
PMG	**Port Moresby**	**13.72**	**107**	Pn	**Pn**	**20 28 28.7**	**+0.9**
	12nm,0.3s,baz=194,slow=1.2,SNR=16						
PMG				Sn	Sn	20 30 48.2	-11
	12nm,0.3s,baz=17,slow=11,SNR=1.6						
PMG				LR	LR	20 34 48.6	
	comp=Z,19µm,18.7s,baz=309,slow=42						
PMG	**Port Moresby**	**13.72**	**107**	*ce*P	**Pn**	**20 28 28.5**	**+0.8**
PMG				pmax	pmax		
	comp=Z,207nm,0.8s						
PMG	**Port Moresby**	**13.72**	**107**	Pn	**Pn**	**20 28 28.2**	**+0.4**
PMG	**Port Moresby**	**13.72**	**107**	P	**Pn**	**20 28 29.7**	**+2.0**
BNSI	**Bone**	**13.74**	**274**	P	**Pn**	**20 28 28.7**	**+0.6**
	comp=Z,11µmcomp=Z,7µmcomp=Z,535nm,1.5s						
BASI	**Baing, Sumba**	**13.92**	**250**	P	**Pn**	**20 28 29.0**	**-1.4**
	comp=Z,6µmcomp=Z,14µmcomp=Z,1µm,0.9s						
WSI	**Waingapu**	**14.02**	**252**	P	**Pn**	**20 28 29.9**	**-2.0**
	comp=Z,28µmcomp=Z,2µm,0.7s						
KAPI	**Kappang**	**14.05**	**272**	Pn	**Pn**	**20 28 33.3**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=91,slow=11,SNR=44						
KAPI				LR	LR	20 35 21.9	
	comp=Z,14µm,18.7s,baz=104,slow=43						
KAPI	**Kappang**	**14.05**	**272**	P	**Pn**	**20 28 33.5**	**+1.3**
KAPI	**Kappang**	**14.05**	**272**		**Pn**	**20 28 33.5**	**+1.3**
WB0	**Warramunga Arr**	**14.08**	**178**	Pn	**Pn**	**20 28 29.4**	**-3.3**
SPSI	**Sidrap Palu**	**14.13**	**276**	P	**Pn**	**20 28 33.4**	**+0.1**
	comp=Z,12µmcomp=Z,9µmcomp=Z,534nm,1.0s						
DDMP	**Don Marcelino,**	**14.19**	**325**	*e*P	**Pn**	**20 28 32.9**	**-1.3**
TTSI	**Tana Toraja**	**14.22**	**280**	P	**Pn**	**20 28 35.0**	**+0.4**
	comp=Z,11µmcomp=Z,6µmcomp=Z,271nm,1.0s						
WRAB	**Tennant Creek**	**14.24**	**178**	*ce*P	**Pn**	**20 28 32.7**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,383nm,1.3s						
WRAB	**Tennant Creek**	**14.24**	**178**	Pn	**Pn**	**20 28 31.6**	**-3.3**
WRA	**Warramunga Arr**	**14.25**	**178**	Pn	**Pn**	**20 28 33.0**	**-2.0**
	comp=Z,12nm,0.3s,baz=360,slow=13,SNR=124						
WRA				Sn	Sn	20 31 01.9	-11
	comp=Z,24nm,0.3s,baz=355,slow=24,SNR=4.2						
WRA				Lg	Lg	20 32 44.5	
	baz=359,slow=28,SNR=3.0						
WRA				LR	LR	20 35 11.1	
	comp=Z,3µm,21.2s,baz=10.0,slow=42						
WRA	**Warramunga Arr**	**14.25**	**178**		**Pn**	**20 28 30.3**	**-4.8**
WB2	**Warramunga Arr**	**14.26**	**178**	P	**Pn**	**20 28 32.0**	**-3.0**
	baz=14						
WB2	**Warramunga Arr**	**14.26**	**178**	Pn	**Pn**	**20 28 31.6**	**-3.4**
WR0	**Warramunga Arr**	**14.28**	**177**	Pn	**Pn**	**20 28 32.5**	**-2.8**
TOLI2	**Tolitoli**	**14.66**	**297**	Pn	**Pn**	**20 28 39.7**	**-0.8**

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FITZ  Fitzroy Crossi   14.78 212   P        Pn        20 28 38.6 -3.5
      baz=15,SNR=100
FITZ  Fitzroy Crossi   14.78 212   Pn       Pn        20 28 41.8 -0.3
      comp=Z,15nm,0.3s,baz=42,slow=11,SNR=184
FITZ                               Sn       Sn        20 31 17.4 -7.7
      comp=Z,43nm,0.3s,baz=197,slow=14,SNR=7.1
FITZ                               LR       LR        20 35 15.7
      comp=Z,13µm,18.2s,baz=37,slow=41
FITZ  Fitzroy Crossi   14.78 212   Pn       Pn        20 28 38.9 -3.2
DAV   Davao City (W)   15.06 327   Pn       Pn        20 28 46.4 +0.5
      comp=Z,40nm,0.3s,baz=138,slow=4.9,SNR=8.5
DAV                                LR       LR        20 35 33.4
      comp=Z,5µm,20.4s,baz=146,slow=41
MPSI  Mapaga           15.13 293   P        Pn        20 28 45.7 -1.2
      comp=Z,14µmcomp=Z,18µmcomp=Z,900nm,1.7s
KCP   Kidapawan        15.28 325⇓iP        Pn        20 28 49.4 +0.5
QIS   Mount Isa        15.88 160   P        Pn        20 28 53.4 -3.2
      baz=16,SNR=30
BUKP  Musuan           16.01 327  eP        Pn        20 28 58.6 +0.2
MTSU  Mount Surprise   16.11 141   P        Pn        20 28 55.9 -3.7
      baz=16,SNR=70
PLAI  Plampang         16.26 258   P        Pn        20 28 57.5 -4.1
      comp=Z,7µmcomp=Z,9µmcomp=Z,1µm,0.8s
CGP   Cagayan de Oro   16.69 327⇓eP        P         20 29 09.8 +0.7
PAGZ  Pagadian         16.96 322  eP        Pn        20 29 07.0 -3.4
TWSI  Taliwang, Sumb   17.12 259   P        Pn        20 29 08.7 -3.7
      comp=Z,3µmcomp=Z,2µmcomp=Z,145nm,0.8s
BKB   Balikpapan       17.46 284   P        P         20 29 18.1 +0.4
BKB                                IAmb     IAmb      20 29 48.7
      comp=Z,595nm,1.1s
BKB   Balikpapan       17.46 284   P        P         20 29 20.2 +2.5
      comp=Z,14µmcomp=Z,6µmcomp=Z,471nm,0.9s
KBKI  Kotabaru         17.78 277   P        Pn        20 29 18.6 -2.0
      comp=Z,3µmcomp=Z,304nm,1.1s
AS31  Alice Springs    17.95 180   P        Pn        20 29 21.4 -1.3
ASAR  Alice Springs    17.95 180   P        Pn        20 29 22.0 -0.7
      comp=Z,9.2nm,0.3s,baz=355,slow=12,SNR=153
ASAR                               S        Sn        20 32 33.7 -8.7
      comp=Z,7.2nm,0.3s,baz=3.9,slow=29,SNR=3.5
ASAR                               Lg       Lg        20 34 41.3
      baz=3.9,slow=30,SNR=1.9
ASAR                               LR       LR        20 37 26.5
      comp=Z,4µm,20.6s,baz=356,slow=41
ASAR  Alice Springs    17.95 180   P        Pn        20 29 22.0 -0.7
ASAR  Alice Springs    17.95 180   P        Pn        20 29 19.8 -2.9
ASPA  Alice Springs    17.95 180   P        Pn        20 29 21.4 -1.3
      baz=18
MSLP  Maasin           18.02 330  eP        Pn        20 29 22.1 -1.5
KRVT  Keravat (AS076   18.15  87   P        P         20 29 26.1 +0.7
      comp=Z,8.4nm,0.3s,baz=33,slow=4.0,SNR=9.4
KRVT                               LR       LR        20 36 59.6
      comp=Z,6µm,18.8s,baz=256,slow=39
RABL  Rabaul           18.30  86   P        P         20 29 24.0 -3.1
RABL  Rabaul           18.30  86   P        Pn        20 29 28.1 +1.1
LLP   Lapu-Lapu        18.64 328  eP        Pn        20 29 30.9 -0.1
SRBI  Singaraja        18.67 261   P        P         20 29 28.5 -2.5
      comp=Z,7µmcomp=Z,5µmcomp=Z,388nm,1.2s
MYLDM Lahad Datu       18.70 305   P        Pn        20 29 32.2 +0.3
CTA   Charters Tower   18.78 141   P        Pn        20 29 33.0 +0.2
      comp=Z,6.6nm,0.3s,baz=318,slow=12,SNR=70
CTA                                LR       LR        20 37 22.8
      comp=Z,21µm,19.5s,baz=324,slow=39
CTA   Charters Tower   18.78 141   P        Pn        20 29 33.0 +0.2
CTAO  Charters Tower   18.78 141   P        P         20 29 31.9 -0.3
CTAO                               pmax     pmax
      comp=Z,152nm,0.8s
CTAO  Charters Tower   18.78 141   P        P         20 29 31.9 -0.3
BBKI  Banjar Baru      19.07 276   P        Pn        20 29 37.0 +0.7
      comp=Z,14µmcomp=Z,1µm,1.3s
MTKI  Muara Teweh, K   19.48 283   P        Pn        20 29 41.3  0.0
      comp=Z,4µmcomp=Z,170nm,1.4s
ABJI  Asem Bagus       19.60 263   P        Pn        20 29 43.5 +0.8
      comp=Z,12µmcomp=Z,10µmcomp=Z,889nm,1.3s
GUIM  Jordan           19.64 325  eP        P         20 29 38.9 -2.8
JAGI  Jajag, Banyuwa   19.75 261   P        P         20 29 43.1 +0.2
JAGI  Jajag, Banyuwa   19.75 261   P        Pn        20 29 46.2 +1.7
      comp=Z,5µmcomp=Z,4µmcomp=Z,370nm,0.8s
KMMI  Kalianget        19.81 265   P        Pn        20 29 47.2 +2.0
      comp=Z,14µmcomp=Z,27µmcomp=Z,2µm,1.1s
SPMM  Sapulut          20.16 300   P        Pn        20 29 50.0 +0.6
PSAD1 Pilbara Seismi   20.80 219   P        P         20 29 55.5 +1.2
PSAD1                              IAmb     IAmb      20 30 13.1
      comp=Z,864nm,1.1s
PSAD1                              IAMs_20  IAMs_20   20 39 17.6
      comp=Z,11µm,19.0s
PSAC2 Pilbara Seismi   20.83 219   P        Pn        20 29 56.1 -1.0
PSAC2                              IAmb     IAmb      20 30 12.8
      comp=Z,352nm,0.8s
PSAC2                              IAMs_20  IAMs_20   20 39 18.5
      comp=Z,10µm,18.0s
PSAD2 Pilbara Seismi   20.84 219            Pn        20 29 56.7 -0.5
PSAB2 Pilbara Seismi   20.85 219   Pn       Pn        20 29 57.1 -0.2
PSAB2                              IAmb     IAmb      20 30 13.0
      comp=Z,970nm,1.4s
PSAC1 Pilbara Seismi   20.87 219   IAMs_20  IAMs_20   20 39 19.5
      comp=Z,11µm,18.0s
PSA00 Pilbara Seismi   20.88 219   P        Pn        20 29 56.7 -0.9
PSA00                              IAmb     IAmb      20 30 13.3
      comp=Z,942nm,1.4s
PSA00                              IAMs_20  IAMs_20   20 39 19.6
      comp=Z,10µm,18.0s
PSA00 Pilbara Seismi   20.88 219   P        P         20 29 56.0 +1.0
PSA00                              IAmb     IAmb      20 30 09.3
      comp=Z,201nm,0.9s
PSAD3 Pilbara Seismi   20.97 219   IAMs_20  IAMs_20   20 39 22.1
      comp=Z,10µm,18.0s
KKM   Kota Kinabalu    21.07 303   P        P         20 29 58.8 +1.5
GRJI  Gresik           21.28 265   P        P         20 30 01.9 +2.4
      comp=Z,4µmcomp=Z,319nm,0.7s
BATP  Bataraza         21.47 312  eP        P         20 30 01.3 -0.2
SJMP  San Jose         21.97 325  eP        P         20 30 07.8 +1.1
GUMO  Guam             21.99  30   P        P         20 30 08.0 +1.0
      comp=Z,1µm,1.1s,baz=168,slow=7.7,SNR=10
GUMO                               LR       LR        20 39 16.4
      comp=Z,4µm,18.2s,baz=196,slow=38
GUMO  Guam             21.99  30   P        P         20 30 05.7 -1.3
GUMO  Guam             21.99  30   P        P         20 30 08.5 +1.5
PWJI  Pagerwojo        22.02 263   P        P         20 30 09.9 +2.5
      comp=Z,2µmcomp=Z,249nm,0.9s
ENPP  El Nido          22.03 319  eP        P         20 30 06.7 -0.8
ENPP                              eS        S         20 34 07.5 -1.9
BUSP  Coron            22.15 322  eP        P         20 30 08.1 -0.7
PBKI  Pangkalan Bun    22.31 277   P        P         20 30 11.0 +0.5
      comp=Z,10µmcomp=Z,1µm,1.0s
BOAC  Boac             22.39 328  eP        P         20 30 11.2 -0.1
PGP   Puerto Galera    22.90 326⇑eP        P         20 30 16.9 +0.1
STKI  Sintang          23.04 283   P        P         20 30 20.8 +2.5
SBUM  Sibu             23.04 290   P        P         20 30 20.1 +1.9
SBUM                               IAmb     IAmb      20 30 23.3
      comp=Z,632nm,1.2s
SBUM  Sibu             23.04 290   P        P         20 30 20.0 +1.7
LQP   Lukban           23.09 328⇓eP        P         20 30 18.3 -0.6
QLP   Quilpie          23.09 156   P        P         20 30 20.4 +1.7
      baz=23,SNR=19
SMRI  Semarang         23.31 265   P        P         20 30 21.7 +0.7
SMRI                               IAmb     IAmb      20 30 47.2
      comp=Z,437nm,1.1s
SMRI  Semarang         23.31 265   P        P         20 30 23.5 +2.5
      comp=Z,8µmcomp=Z,8µmcomp=Z,474nm,1.8s
TGY   Tagaytay City    23.40 327   P        P         20 30 23.7 +1.7
      comp=Z,254nm,0.4s,baz=323,slow=3.7,SNR=7.2
TGY   Tagaytay City    23.40 327  eP        P         20 30 08.2  -14
LUBP  Lubang           23.49 325  eP        P         20 30 21.1 -1.5
LUBP                              eS        S         20 34 34.5 -0.6
KSM   Kuching          24.54 286   P        P         20 30 34.2 +1.6
KPJI  Karang Pucung    24.82 265   P        P         20 30 37.0 +1.9
      comp=Z,5µmcomp=Z,324nm,1.2s
RMQ   Roma             25.17 147   P        P         20 30 39.0 +0.9
      baz=25,SNR=20
CMJI  Cimerak          25.32 264   P        P         20 30 39.8 +0.2
      comp=Z,2µmcomp=Z,2µmcomp=Z,246nm,0.9s
CAUP  Cauayan          25.37 332  eP        P         20 30 42.4 +2.4
GIRL  Giralia          25.41 226   P        P         20 30 42.9 +2.6
      baz=26,SNR=19
GIRL  Giralia          25.41 226   P        P         20 30 43.0 +2.6
JCJI  Jatiwangi        25.45 267   P        P         20 30 43.7 +2.8
      comp=Z,10µmcomp=Z,455nm,0.8s
MEEK  Meekatharra      25.47 213   P        P         20 30 41.6 +0.7
      baz=26,SNR=14
FORT  Forrest          25.62 192   P        P         20 30 43.3 +1.1
      baz=26,SNR=304
FORT  Forrest          25.62 192   P        P         20 30 43.0 +0.8
FORT                               IAMs_20  IAMs_20   20 42 07.5
      comp=Z,9µm,18.0s
EIDS  Eidsvold         25.66 142   P        P         20 30 43.1 +0.4
      baz=26,SNR=46
EIDS  Eidsvold         25.66 142   P        P         20 30 42.8 +0.1
EIDS                               IAmb     IAmb      20 30 55.2
      comp=Z,430nm,1.1s
EIDS                               IAMs_20  IAMs_20   20 42 17.1
      comp=Z,7µm,19.0s
CISI  Cisompet, Garu   25.93 264   P        P         20 30 44.6 -0.7
CISI  Cisompet, Garu   25.93 264   P        P         20 30 46.7 +1.4
      comp=Z,5µmcomp=Z,6µmcomp=Z,516nm,1.1s
LEM   Lembang          26.11 266   P        P         20 30 48.5 +1.5
      comp=Z,204nm,1.0s,baz=79,slow=7.8,SNR=24
LEM                                LR       LR        20 43 06.5
      comp=Z,5µm,20.7s,baz=90,slow=41
HNR   Honiara          26.14 100   P        P         20 30 46.6 -0.5
      comp=Z,203nm,0.8s,baz=106,slow=0.5,SNR=17
HNR   Honiara          26.14 100   P        P         20 30 46.0 -1.1
HNR   Honiara          26.14 100   P        P         20 30 46.8 -0.3
TPI   Tanjungpandan    26.28 275   P        P         20 30 57.0 +8.6
CBJI  Citeko           26.86 267   P        P         20 30 55.6 +2.0
      comp=Z,4µmcomp=Z,360nm,0.9s
DBJI  Dramaga          26.96 267   P        P         20 30 57.7 +3.1
      comp=Z,10µmcomp=Z,84nm,1.4s
STKA  Stephens Creek   27.12 165   P        P         20 30 56.5 +0.7
      baz=27,SNR=38
STKA  Stephens Creek   27.12 165   P        P         20 30 56.4 +0.7
      comp=Z,32nm,0.7s,baz=337,slow=8.7,SNR=28
STKA                               LR       LR        20 42 10.7
      comp=Z,6µm,21.6s,baz=342,slow=38
STKA  Stephens Creek   27.12 165   P        P         20 30 56.1 +0.4
BBOO  Buckleboo        27.14 176   P        P         20 30 56.4 +0.5
      baz=27,SNR=33
BBOO  Buckleboo        27.14 176   P        P         20 30 55.9  0.0
BBOO                               IAmb     IAmb      20 31 43.6
      comp=Z,212nm,0.8s
BBOO                               IAMs_20  IAMs_20   20 42 04.1
      comp=Z,12µm,22.0s
PPBI  Pangkal Pinang   27.86 276   P        P         20 31 06.7 +4.1
      comp=Z,5µmcomp=Z,194nm,1.1s
KMBL  Kambalda         27.98 202   P        P         20 31 04.3 +0.9
      baz=28,SNR=17
CGJI  Cibinong         28.01 266   P        P         20 31 13.7  +10
HTT   Hallett          28.08 171   P        P         20 31 05.4 +1.0
      baz=28,SNR=8.1
XMIS  Christmas Isla   28.33 258   P        P         20 31 07.0 +0.2
MORW  Morawa           28.78 214   P        P         20 31 11.6 +1.0
      baz=29,SNR=12
MORW  Morawa           28.78 214   P        P         20 31 10.2 -0.4
MORW                               IAmb     IAmb      20 31 31.1
      comp=Z,285nm,1.5s
KLSI                   29.02 270   P        P         20 31 14.0 +1.1
      comp=Z,912nmcomp=Z,20nm,0.9s
PMBI  Palembang        29.12 274   P        P         20 31 14.5 +0.7
PMBI  Palembang        29.12 274   P        P         20 31 19.9 +6.1
KASI  Kota Agung       29.21 269   P        P         20 31 18.0 +3.3
      comp=Z,153nm,0.9s
MDSI  Maura Dua        29.58 271   P        P         20 31 21.5 +3.6
      comp=Z,1µmcomp=Z,66nm,1.2s
BLDU  Ballidu          29.64 211   P        P         20 31 19.6 +1.3
      baz=30,SNR=33
LWLI  Liwa             29.67 270   P        P         20 31 19.8 +1.0
      comp=Z,3µmcomp=Z,284nm,0.9s
ARMA  Armidale         29.82 148   P        P         20 31 20.6 +0.7
      baz=30,SNR=16
ARMA  Armidale         29.82 148   P        P         20 31 20.1 +0.1
ARMA                               IAMs_20  IAMs_20   20 44 09.5
      comp=Z,10µm,22.0s
KLBR  Kellerberrin     29.93 208   P        P         20 31 22.1 +1.3
      baz=30,SNR=24
LHSI  Lahat            30.27 272   P        P         20 31 27.0 +2.9
      comp=Z,3µmcomp=Z,188nm,1.2s
JMBI  JAMBI            30.40 276   P        P         20 31 31.2 +6.0
DLV   T  Lat           30.67 305   P        P         20 31 28.4 +0.7
MYKOM Kota Tinggi      30.85 283   P        P         20 31 31.1 +1.9
MYKOM                              IAmb     IAmb      20 31 47.5
      comp=Z,97nm,0.8s
MYKOM Kota Tinggi      30.85 283   P        P         20 31 32.0 +2.8
MUN   Mundaring        30.99 210   P        P         20 31 31.5 +1.3
      baz=31,SNR=7.1
KSI   Kapahiang        31.21 272   P        P         20 31 38.5 +6.1
NWAO  Narrogin (SRO)   31.28 208   P        P         20 31 34.0 +1.3
      baz=31,SNR=7.0
NWAO  Narrogin (SRO)   31.28 208   P        P         20 31 34.0 +1.3
NWAO                               pmax     pmax
      comp=Z,614nm,1.8s
NWAO                               MLR      MLR
      comp=Z,10µm,20.0s
NWAO  Narrogin (SRO)   31.28 208   P        P         20 31 34.0 +1.3
NWAO  Narrogin (SRO)   31.28 208   P        P         20 31 33.6 +0.9
NWAO                               IAmb     IAmb      20 31 52.4
      comp=Z,482nm,1.8s
NWAO  Narrogin (SRO)   31.28 208   IAMs_20  IAMs_20   20 45 03.8
      comp=Z,10µm,20.0s
YNG   Young            31.57 157   P        P         20 31 36.5 +1.2
      baz=32,SNR=6.6
ARPS  Mount Arapiles   31.86 168   P        P         20 31 39.6 +1.8
      baz=32,SNR=17
NACB  Ninganchiao      31.92 338   P        P         20 31 36.9 -1.5
SDSI  Sungai Dareh     32.69 277   P        P         20 31 47.4 +2.0
      comp=Z,3µmcomp=Z,149nm,1.2s
CAN   Canberra         32.70 157   P        P         20 31 44.8 -0.4
CAN                                pmax     pmax
      comp=Z,98nm,1.1s
CAN                                MLR      MLR
      comp=Z,23µm,20.0s
CAN   Canberra         32.70 157   P        P         20 31 44.8 -0.4
CAN                                IAmb     IAmb      20 32 23.5
      comp=Z,98nm,1.1s
CNB   Canberra Magne   32.84 156   P        P         20 31 47.8 +1.3
      baz=33,SNR=7.5
KOUNC Koumac, New Ca   33.06 120   P        P         20 31 48.9 +0.4
BKNI  Bangkinang       33.29 279   P        P         20 31 51.8 +1.2
BKNI  Bangkinang       33.29 279   P        P         20 31 54.2 +3.6
      comp=Z,3µmcomp=Z,4µmcomp=Z,278nm,1.1s
TOO   Toolangi         33.54 163   P        P         20 31 54.4 +1.9
      baz=34,SNR=5.5
TOO   Toolangi         33.54 163   P        P         20 31 53.8 +1.3
TOO                                pmax     pmax
      comp=Z,124nm,1.4s
TOO                                MLR      MLR
      comp=Z,12µm,18.0s
TOO   Toolangi         33.54 163   P        P         20 31 53.8 +1.3
TOO                                IAmb     IAmb      20 32 02.5
      comp=Z,124nm,1.4s
PDSI  Padang           33.65 277   P        P         20 31 55.1 +1.3
      comp=Z,2µmcomp=Z,2µmcomp=Z,93nm,1.1s
QIZ   Qiongzhong       34.04 317   P        P         20 31 56.6 -0.4
QIZ                                pP       pP        20 32 04.5 +1.1
QIZ                                PP       PP        20 33 14.9 +0.5
QIZ                                S        S         20 37 23.8 +2.5
QIZ                                LR       LR
      comp=Z,1µm,11.0s
QIZ                                LR       LR
      comp=Z,1µm,11.0s
QIZ                                LR       LR
      comp=Z,1µm,7.8s
SANVU Saraoutou        34.17 109   P        P         20 31 57.0 -1.1
SANVU                              IAmb     IAmb      20 32 18.6
      comp=Z,246nm,1.5s
SANVU                              IAMs_20  IAMs_20   20 45 20.4
      comp=Z,6µm,20.0s
SANVU Saraoutou        34.17 109   P        P         20 31 59.0 +0.8
IPM   Ipoh             34.28 286   P        P         20 31 59.9 +0.7
IPM                                IAmb     IAmb      20 32 16.9
      comp=Z,198nm,0.9s
IPM   Ipoh             34.28 286   P        P         20 32 01.0 +1.8
MNSI  Mandailing Nat   34.81 279   P        P         20 32 05.0 +1.2
      comp=Z,3µmcomp=Z,293nm,0.9s
KULM  Kulim            34.87 288   P        P         20 32 05.3 +1.0
KULM                               IAmb     IAmb      20 32 10.2
      comp=Z,215nm,1.2s
KULM  Kulim            34.87 288   P        P         20 32 07.0 +2.7
UBPT  Khong Chiam      34.95 307   P        P         20 32 06.3 +1.3
      comp=Z,66nm,1.3s
LHI   Lord Howe Isla   34.96 141   IAMs_20  IAMs_20   20 46 41.9
      comp=Z,7µm,18.0s
NOUC  Port Laguerre    35.39 121   P        P         20 32 08.8 +0.1
DZM   Mont Dzumac      35.50 121   P        P         20 32 09.8  0.0
      comp=Z,29nm,0.8s,baz=271,slow=9.4,SNR=22
DZM   Mont Dzumac      35.50 121  eP        P         20 32 09.6 -0.2
      comp=Z,237nm,1.6s
DZM                               eS        S         20 37 43.2 -0.9
      comp=Z,3µm,33.8s
DZM                               eLR       LR        20 41 36.3
      comp=Z,5µm,23.6s
DZM   Mont Dzumac      35.50 121   P        P         20 32 08.7 -1.1
DZM   Mont Dzumac      35.50 121   P        P         20 32 10.1 +0.3
RPSI  Rantau Prapat    35.85 282   P        P         20 32 13.7 +0.9
PSI   Prapat           35.87 283   P        P         20 32 13.7 +0.6
      comp=Z,24nm,0.6s,baz=18,slow=0.1,SNR=24
PSI                                LR       LR        20 50 37.8
      comp=Z,2µm,18.2s,baz=90,slow=42
YATNC Mamie plateau,   35.88 120   P        P         20 32 14.0 +1.1
OUENC Ouen Island, N   35.98 121   P        P         20 32 15.0 +1.3
TSI   Tuntungan        36.39 284   P        P         20 32 28.3  +11
TRTT  Trang            36.60 291   P        P         20 32 21.2 +2.1
      comp=Z,3µmcomp=Z,158nm,1.2s
GSI   Gunungsitoli     36.87 280   P        P         20 32 20.9 -0.6
GSI                                IAmb     IAmb      20 32 37.4
      comp=Z,193nm,0.9s
GSI   Gunungsitoli     36.87 280   P        P         20 32 21.7 +0.2
      comp=Z,3µmcomp=Z,210nm,0.7s
JSU   Suzuyama         37.05 355   P        P         20 32 22.9 +0.2
JSU                                IAmb     IAmb      20 32 30.5
      comp=Z,271nm,1.4s
SRAK  Srakaew          37.10 302   P        P         20 32 20.3 -3.1
      comp=Z,5µmcomp=Z,613nm,1.0s
KCSI  Kotacane, Aceh   37.16 283   P        P         20 32 26.0 +2.0
      comp=Z,1µmcomp=Z,58nm,0.8s
KHON  Khomkaen         37.65 306   P        P         20 32 29.6 +1.5
      comp=Z,4µmcomp=Z,534nm,1.0s
TPTI                   37.67 283   P        P         20 32 29.0 +0.7
      comp=Z,1µmcomp=Z,79nm,1.1s
SURT  Suratani         37.82 292   P        P         20 32 34.2 +4.7
      comp=Z,3.6nm,1.1s
PKDT  Phuket           37.88 290   P        P         20 32 32.0 +2.0
      comp=Z,3µmcomp=Z,165nm,0.8s
CHAI  Chaiyaphum       38.10 305   P        P         20 32 32.5 +0.7
      comp=Z,1µmcomp=Z,225nm,0.9s
LHMI  Lhok Sumawe      38.39 286   P        P         20 32 35.7 +1.4
LHMI  Lhok Sumawe      38.39 286   P        P         20 32 37.8 +3.5
      comp=Z,5µmcomp=Z,7µmcomp=Z,516nm,1.1s
SSE   Sheshan          38.45 342   P        P         20 32 38.1 +3.5
SSE                                S        S         20 38 28.1 -0.4
SSE                                pmax     pmax
      comp=Z,25nm,1.1s
SSE                                pmax     pmax
      comp=Z,520nm,6.7s
SSE                                LR       LR
      comp=Z,640nm,20.6s
SSE                                LR       LR
      comp=Z,610nm,20.6s
JNU   Nakatsue         38.62 356   P        P         20 32 36.5 +0.5
      comp=Z,176nm,1.0s,baz=170,slow=4.4,SNR=40
JNU   Nakatsue         38.62 356   P        P         20 32 36.2 +0.1
PHET  Kaeng Krachan    38.66 299   P        P         20 32 38.0 +1.4
      comp=Z,1µmcomp=Z,180nm,0.9s
JMN   Monobe           39.12   0   P        P         20 32 40.3 +0.1
SLVN  Son La           39.74 313   P        P         20 32 46.0 +0.4
UTHA  Uthaitani        40.04 302   P        P         20 32 49.5 +1.4
      comp=Z,1µmcomp=Z,149nm,0.8s
PHIT  Phitsanulok      40.06 305   P        P         20 32 50.0 +1.8
      comp=Z,5µmcomp=Z,628nm,0.9s
NJ2   Nanjing          40.09 340 ⇑P        P         20 32 49.4 +1.2
NJ2                                pP       pP        20 32 55.2 +0.6
NJ2                                sP       pwP       20 32 58.5 -0.9
NJ2                                S        S         20 38 50.5 -2.5
NJ2                                sS       sS        20 39 06.7 +3.1
NJ2                                pmax     pmax
      comp=Z,22nm,0.7s
NJ2                                pmax     pmax
      comp=Z,470nm,3.5s
NJ2                                LR       LR
      comp=Z,1µm,16.1s
NJ2                                LR       LR
      comp=Z,950nm,14.7s
NJ2                                LR       LR
      comp=Z,2µm,18.2s
JTU   Tsushima         40.14 354   P        P         20 32 49.4 +0.8
JTU                                IAmb     IAmb      20 33 08.1
      comp=Z,341nm,1.3s
UTTA  Uttaradit        40.24 306   P        P         20 32 51.1 +1.4
      comp=Z,998nmcomp=Z,134nm,1.0s
JHS   Saijyo           40.40 359   P        P         20 32 50.9 +0.2
JHS                                IAmb     IAmb      20 32 58.6
      comp=Z,435nm,1.2s
WHN   Wuhan            40.51 334 ⇑P        P         20 32 53.7 +2.0
WHN                                sP       pwP       20 33 03.2 +0.3
WHN                                S        S         20 39 02.0 +2.6
WHN                                pmax     pmax
      comp=Z,100nm,1.1s
WHN                                LR       LR
      comp=Z,3µm,23.3s
JWT   Wachi            40.70   2   P        P         20 32 53.7 +0.5
JWT                                IAMs_20  IAMs_20   20 48 36.2
      comp=Z,5µm,20.0s
SUKH  Sukhothai        40.85 305   P        P         20 32 57.0 +2.3
      comp=Z,99nm,1.2s
INU   Inuyama          40.85   4   P        P         20 32 53.8 -0.7
INU                                IAMs_20  IAMs_20   20 48 47.1
      comp=Z,4µm,19.0s
JGF   Kuroka           41.12   4   P        P         20 32 56.5 -0.3
JGF                                IAMs_20  IAMs_20   20 47 11.4
      comp=Z,4µm,21.0s
GYA   Guiyang          41.36 322 ⇓P        P         20 33 00.5 +1.5
GYA                                pP       pP        20 33 04.9 -0.5
GYA                                PcP      PcP       20 34 57.8 +0.7
GYA                                S        S         20 39 17.9 +5.5
GYA                                SS       SnSn      20 42 23.2 -3.1
GYA                                pmax     pmax
      comp=Z,52nm,0.8s
GYA                                LR       LR
      comp=Z,630nm,21.5s
GYA                                LR       LR
      comp=Z,730nm,25.2s
GYA                                LR       LR
      comp=Z,1µm,25.7s
LAMP  Lampang          41.39 306   P        P         20 33 01.0 +1.8
      comp=Z,1µmcomp=Z,150nm,1.0s
CM36  Chiang Mai Arr   41.82 306   P        P         20 33 04.0 +1.3
CM04  Chiang Mai Arr   41.85 306   P        P         20 33 04.8 +1.7
      comp=Z,619nmcomp=Z,71nm,1.0s
CM35  Chiang Mai Arr   41.86 306   P        P         20 33 04.0 +1.0
CM09  Chiang Mai Arr   41.87 306   P        P         20 33 05.0 +1.9
      comp=Z,626nmcomp=Z,88nm,1.0s
CM01  Chiang Mai Arr   41.88 306   P        P         20 33 05.0 +1.8
      comp=Z,535nmcomp=Z,72nm,0.8s
CM05  Chiang Mai Arr   41.88 306   P        P         20 33 04.0 +0.8
      comp=Z,415nmcomp=Z,52nm,1.2s
CM02  Chiang Mai Arr   41.90 306   P        P         20 33 05.2 +1.8
      comp=Z,684nmcomp=Z,92nm,1.0s
CM31  Chiang Mai Arr   41.91 306   P        P         20 33 05.0 +1.6
      comp=Z,19µmcomp=Z,2µm,0.9s
CM31  Chiang Mai Arr   41.91 306   P        P         20 33 04.9 +1.4
CMAR  Chiang Mai Arr   41.91 306   P        P         20 33 05.0 +1.5
      comp=Z,36nm,0.8s,baz=133,slow=7.0,SNR=114
CMAR  Chiang Mai Arr   41.91 306   P        P         20 33 04.2 +0.7
CMAR  Chiang Mai Arr   41.91 306   P        P         20 33 04.2 +0.7
CM13  Chiang Mai Arr   41.92 306   P        P         20 33 05.2 +1.6
      comp=Z,611nmcomp=Z,89nm,0.9s
CM15  Chiang Mai Arr   41.92 306   P        P         20 33 05.1 +1.5
      comp=Z,705nmcomp=Z,98nm,0.9s
CM34  Chiang Mai Arr   41.95 306   P        P         20 33 05.0 +1.2
JYT   Yasato           42.04   8   P        P         20 33 02.5 -1.7
JYT                                IAmb     IAmb      20 33 05.5
      comp=Z,171nm,0.9s
CM32  Chiang Mai Arr   42.09 306   P        P         20 33 06.0 +1.0
CMMT  Chiang Mai       42.09 306   P        P         20 33 06.2 +1.2
      comp=Z,1µmcomp=Z,57nm,1.1s
CHTO  Chiang Mai       42.10 306   P        P         20 33 06.0 +1.0
CHTO                               pmax     pmax
      comp=Z,196nm,1.3s
CHTO  Chiang Mai       42.10 306   P        P         20 33 06.0 +1.0
CHTO                               IAmb     IAmb      20 33 22.5
      comp=Z,196nm,1.3s
CM33  Chiang Mai Arr   42.10 306   P        P         20 33 05.0  0.0
MAJO  Matsushiro       42.13   5   P        P         20 33 04.0 -1.0
MAJO                               pmax     pmax
      comp=Z,98nm,0.9s
MAJO                               MLR      MLR
      comp=Z,3µm,21.0s
MAJO  Matsushiro       42.13   5   P        P         20 33 04.0 -1.0
MAT   Matsushiro       42.13   5   P        P         20 33 03.6 -1.4
MAT                                S        S         20 39 21.0 -2.4
MJAR  Matsushiro Arr   42.13   5   P        P         20 33 03.9 -1.1
      comp=Z,65nm,1.0s,baz=187,slow=9.4,SNR=83
MJAR                               PcP      PcP       20 34 59.6 +0.3
      comp=Z,13nm,0.8s,baz=167,slow=4.2,SNR=4.7
MJAR                               LR       LR        20 47 53.3
      comp=Z,3µm,21.2s,baz=190,slow=32
MJB9  Matsu-Tunnel     42.13   5   P        P         20 33 04.0 -1.1
MJB9                               IAmb     IAmb      20 33 05.7
      comp=Z,118nm,0.9s
TJN   Taejon           42.21 352ceP        P         20 33 06.3 +0.7
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MHMT	**Maesarieng**	42.59	305	P	P	20 33 11.1	+2.0
	comp=Z,2µmcomp=Z,133nm,1.0s						
ENH	**Enshi**	42.64	328	P	P	20 33 09.6	+0.3
KMI	**Kunming**	42.99	317	⇓eP	P	20 33 14.7	+2.2
KMI				pP	sP	20 33 22.4	+0.9
KMI				sP	pwP	20 33 24.4	+0.7
KMI				PP	PcP	20 35 01.4	-1.3
KMI				S	S	20 39 33.8	-3.0
KMI				SS	SS	20 42 51.1	+1.7
KMI				pmax	pmax		
	comp=Z,41nm,1.3s						
KMI				pmax	pmax		
	comp=Z,360nm,4.9s						
KMI				LR	LR		
	comp=Z,980nm,17.2s						
KMI				LR	LR		
	comp=Z,980nm,17.5s						
KMI				LR	LR		
	comp=Z,2µm,26.9s						
KMI	**Kunming**	42.99	317	P	P	20 33 12.9	+0.4
KMI				pmax	pmax		
	comp=Z,82nm,1.1s						
KMI	**Kunming**	42.99	317	P	P	20 33 12.9	+0.4
KSRS	**Korea Array**	43.20	353	P	P	20 33 14.5	+0.9
	comp=Z,22nm,0.8s,baz=174,slow=10.0,SNR=94						
KSRS				LR	LR	20 53 32.3	
	comp=Z,2µm,18.0s,baz=168,slow=39						
KS19	**Wonju Array Si**	43.25	353	P	P	20 33 14.8	+0.7
KS19				IAmb	IAmb	20 33 33.4	
	comp=Z,221nm,1.8s						
INCN	**Inchon**	43.40	352	P	P	20 33 16.2	+1.0
INCN				pmax	pmax		
	comp=Z,75nm,1.1s						
INCN				MLR	MLR		
	comp=Z,1µm,21.0s						
INCN	**Inchon**	43.40	352	P	P	20 33 16.2	+1.0
JSD	**Sado**	43.62	5	P	P	20 33 16.9	-0.1
JSD				IAmb	IAmb	20 33 19.7	
	comp=Z,212nm,1.3s						
JMM	**Marumori**	43.73	8	P	P	20 33 17.6	-0.3
TIA	**Tai'an**	44.46	341	P	P	20 33 27.9	+4.1
TIA				S	S	20 39 56.2	-1.3
TIA				pmax	pmax		
	comp=Z,27nm,1.3s						
TIA				pmax	pmax		
	comp=Z,440nm,6.0s						
TIA				LR	LR		
	comp=Z,610nm,19.2s						
TIA				LR	LR		
	comp=Z,810nm,17.6s						
MSVF	**Nonsavu**	44.81	109	P	P	20 33 27.4	+0.4
	comp=Z,2.6nm,0.3s,baz=272,slow=6.5,SNR=7.5						
MSVF	**Nonsavu**	44.81	109	P	P	20 33 27.6	+0.6
MSVF				pmax	pmax		
	comp=Z,48nm,1.1s						
MSVF	**Nonsavu**	44.81	109	P	P	20 33 27.6	+0.6
MSVF	**Nonsavu**	44.81	109	P	P	20 33 28.1	+1.1
FUNA	**Funafuti**	45.08	96	P	P	20 33 29.4	+0.3
DL2	**Dalian**	45.72	347	⇓P	P	20 33 34.4	+0.7
DL2				sP	pwP	20 33 47.2	+2.2
DL2				PP	PP	20 35 20.0	-1.2
DL2				S	S	20 40 15.0	-0.5
DL2				SS	ScS	20 43 33.7	+5.3
DL2				pmax	pmax		
	comp=Z,57nm,1.3s						
DL2				pmax	pmax		
	comp=Z,350nm,4.5s						
DL2				LR	LR		
	comp=Z,890nm,18.9s						
DL2				LR	LR		
	comp=Z,1µm,18.3s						
DL2				LR	LR		
	comp=Z,1µm,15.6s						
XAN	**Xi'an**	45.95	331	P	P	20 33 36.1	+0.4
XAN				pP	pP	20 33 41.6	-0.6
XAN				sP	sP	20 33 45.1	+0.3
XAN				PP	PP	20 35 24.1	+0.4
XAN				S	S	20 40 20.8	+1.7
XAN				SS	SS	20 43 40.3	-4.1
XAN				pmax	pmax		
	comp=Z,46nm,0.9s						
XAN				pmax	pmax		
	comp=Z,540nm,5.7s						
XAN				LR	LR		
	comp=Z,750nm,15.5s						
XAN				LR	LR		
	comp=Z,1µm,17.3s						
XAN				LR	LR		
	comp=Z,1µm,20.1s						
CD2	**Chengdu**	46.33	323	P	P	20 33 39.4	+0.6
CD2				sP	pwP	20 33 50.8	+0.7
CD2				PP	PP	20 35 29.9	+1.9
CD2				S	S	20 40 21.7	-3.1
CD2				pmax	pmax		
	comp=Z,100nm,1.6s						
CD2				pmax	pmax		
	comp=Z,920nm,7.6s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
CD2				LR	LR		
	comp=Z,2µm,20.1s						
JTM	**Tenmabayashi**	46.64	8	P	P	20 33 41.3	+0.4
OUZ	**Omahuta**	46.98	134	P	P	20 33 45.3	+1.6
OUZ				IAmb	IAmb	20 33 53.0	
	comp=Z,100nm,1.2s						
TIY	**Taiyuan**	47.49	337	eP	P	20 33 48.9	+1.1
TIY				S	S	20 40 42.7	+1.5
TIY				pmax	pmax		
	comp=Z,110nm,1.1s						
TIY				pmax	pmax		
	comp=Z,900nm,5.9s						
TIY				LR	LR		
	comp=Z,310nm,13.1s						
TIY				LR	LR		
	comp=Z,460nm,10.9s						
TIY				LR	LR		
	comp=Z,720nm,20.1s						
MSHR	**Mys Shultsa**	48.02	357	ceP	P	20 33 51.8	+0.1
MSHR				pmax	pmax		
	comp=Z,119nm,1.3s						
SNY	**Shenyang**	48.13	350	⇓P	P	20 33 53.2	+0.6
SNY				S	S	20 40 44.2	-5.8
SNY				pmax	pmax		
	comp=Z,28nm,0.9s						
SNY				pmax	pmax		
	comp=Z,300nm,4.1s						
SNY				LR	LR		
	comp=Z,1µm,19.9s						
SNY				LR	LR		
	comp=Z,510nm,23.7s						
SNY				LR	LR		
	comp=Z,2µm,21.8s						
BJT	**Baijiatuau**	48.24	342	P	P	20 33 53.3	-0.1
BJT				pmax	pmax		
	comp=Z,117nm,1.2s						
BJT	**Baijiatuau**	48.24	342	P	P	20 33 53.3	-0.1
BJT				IAmb	IAmb	20 34 00.9	
	comp=Z,117nm,1.2s						
JEW	**Eniwo**	48.71	7	P	P	20 33 57.4	+0.4
SAIH	**SAIHA**	48.76	306	eP	P	20 33 58.7	+0.8
SAIH				IAmb	IAmb	20 34 15.9	
	comp=Z,282nm,0.4s						
DCZ	**Deep Cove**	49.13	149	P	P	20 34 01.9	+1.6
DCZ				IAmb	IAmb	20 34 09.5	
	comp=Z,163nm,1.5s						
LKP	**Lekhapani**	49.21	314	eP	P	20 34 00.8	-0.3
LKP				IAmb	IAmb	20 34 07.2	
	comp=Z,116nm,1.2s						
FOZ	**Fox Glacier**	49.27	146	P	P	20 34 01.0	-0.3
FOZ				IAMs_20	IAMs_20	20 54 56.8	
	comp=Z,4µm,20.0s						
HIZ	**Hauiti**	49.50	137	P	P	20 34 05.1	+1.9
HIZ				IAMs_20	IAMs_20	20 55 56.6	
	comp=Z,3µm,18.0s						
MLZ	**Mavora Lakes**	49.56	149	P	P	20 34 03.2	-0.4
KOHI	**KOHIMA**	49.58	311	eP	P	20 34 04.0	-0.1
KOHI				IAmb	IAmb	20 34 11.6	
	comp=Z,319nm,1.1s						
MOKO	**MOKOCHONG**	49.60	312	eP	P	20 34 04.8	+0.4
MOKO				IAmb	IAmb	20 34 12.1	
	comp=Z,102nm,1.1s						
USA0B	**Ussuriysk Arra**	49.61	358	P	P	20 34 04.3	+0.5
USA0B				pmax	pmax		
	comp=Z,544nm,1.9s						
USA0B				MLR	MLR		
	comp=Z,2µm,19.0s						
USA0B	**Ussuriysk Arra**	49.61	358	P	P	20 34 04.3	+0.5
USRK	**Ussuriysk Ar.**	49.61	358	P	P	20 34 04.6	+0.7
	comp=Z,27nm,0.8s,baz=180,slow=7.1,SNR=43						
USRK				LR	LR	20 54 34.9	
	comp=Z,1µm,18.5s,baz=166,slow=36						
USRK	**Ussuriysk Ar.**	49.61	358	P	P	20 34 03.6	-0.2
WKZ	**Wanaka**	49.67	147	P	P	20 34 03.8	-0.6
WKZ				IAmb	IAmb	20 34 31.1	
	comp=Z,139nm,1.2s						
CN2	**Changchun**	49.77	352	⇓P	P	20 34 04.9	-0.2
CN2				eS	S	20 41 09.9	-3.0
CN2				pmax	pmax		
	comp=Z,40nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
WHZ	**Wether Hill Ro**	49.83	149	P	P	20 34 05.6	0.0
WHZ				IAmb	IAmb	20 34 14.0	
	comp=Z,107nm,1.3s						
TLZ	**Tolley Road**	49.87	137	P	P	20 34 19.7	+14
THZ	**Tophouse**	50.01	142	P	P	20 34 09.0	+1.8
THZ				IAmb	IAmb	20 34 31.1	
	comp=Z,263nm,1.8s						
LBZ	**Lake Benmore**	50.02	146	P	P	20 34 07.6	+0.5
LBZ				IAmb	IAmb	20 34 27.6	
	comp=Z,180nm,1.1s						
LBZ				IAMs_20	IAMs_20	20 53 40.7	
	comp=Z,4µm,20.0s						
RPZ	**Rata Peaks**	50.08	145	P	P	20 34 08.1	+0.5
RPZ				IAmb	IAmb	20 34 30.4	
	comp=Z,84nm,1.0s						
LZH	**Lanzhou**	50.12	328	eP	P	20 34 10.2	+2.1
LZH				pP	sP	20 34 18.0	+0.8
LZH				sP	pwP	20 34 21.2	+1.7
LZH				S	S	20 41 13.5	-5.0
LZH				SS	SS	20 44 56.9	+4.7
LZH				pmax	pmax		
	comp=Z,55nm,1.3s						
LZH				pmax	pmax		
	comp=Z,470nm,4.3s						
LZH				LR	LR		
	comp=Z,530nm,14.7s						
LZH				LR	LR		
	comp=Z,760nm,14.2s						
LZH				LR	LR		
	comp=Z,770nm,16.0s						
ASAJ	**Asahikawa**	50.12	8	P	P	20 34 08.2	+0.5
	comp=Z,41nm,0.8s,baz=236,slow=10,SNR=18						
JKA	**Kamikawa-asahi**	50.12	8	P	P	20 34 07.7	-0.1
JKA				IAmb	IAmb	20 34 35.6	
	comp=Z,82nm,0.9s						
MDJ	**Mudanjiang**	50.14	356	P	P	20 34 07.8	-0.1
MDJ				IAmb	IAmb	20 34 27.6	
	comp=Z,276nm,1.4s						
LTZ	**Lake Taylor**	50.22	143	P	P	20 34 08.6	-0.2
LTZ				IAmb	IAmb	20 34 18.3	
	comp=Z,371nm,1.8s						
BELO	**BELONIA**	50.37	306	eP	P	20 34 12.2	+2.2
OXZ	**Oxford**	50.41	144	P	P	20 34 09.6	-0.5
TUWZ	**Tuamarina**	50.46	141	P	P	20 34 09.8	-0.7
TEY	**Ternei**	50.48	3	⇑eP	P	20 34 10.5	+0.1
TEY				pmax	pmax		
	comp=Z,40nm,1.2s						
TEY				pmax	pmax		
	comp=N,40nm,1.1s						
HHC	**Hu-ho-hao-te**	50.55	338	eP	P	20 34 12.2	+0.9
HHC				S	S	20 41 21.0	-3.3
HHC				pmax	pmax		
	comp=N,37nm,1.6s						
HHC				pmax	pmax		
	comp=N,610nm,8.5s						
HHC				LR	LR		
	comp=N,740nm,17.2s						
HHC				LR	LR		
	comp=N,540nm,15.2s						
HHC				LR	LR		
	comp=N,850nm,17.1s						
BSWZ	**Blackbirch Sta**	50.58	141	P	P	20 34 10.8	-0.6
YUK	**Yuzh-Kuril'sk**	50.59	11	P	P	20 34 04.4	-6.9
YUK				S	S	20 41 17.6	-6.7
YUK				pmax	pmax		
	comp=Z,395nm,1.2s						
ODZ	**Otahua Downs**	50.69	147	P	P	20 34 12.8	+0.7
ZIRO	**ZIRO**	50.77	313	eP	P	20 34 13.8	+0.6
ZIRO				IAmb	IAmb	20 34 17.5	
	comp=Z,77nm,0.8s						
KHZ	**Kahutara**	50.77	142	P	P	20 34 13.2	+0.5
KHZ				IAmb	IAmb	20 34 20.0	
	comp=Z,152nm,1.4s						
BHHZ	**Black Hill Sta**	50.81	138	P	P	20 34 13.6	+0.4
CMWZ	**Cape Campbell**	50.81	141	P	P	20 34 12.6	-0.6
SNZO	**South Karori**	50.88	141	P	P	20 34 14.1	+0.6
URZ	**Urewera**	50.91	136	P	P	20 34 16.0	+2.1
BTO	**Baotou**	50.94	337	eP	P	20 34 12.0	-2.1
MQZ	**McQueen's Vall**	51.00	144	IAMs_20	IAMs_20	20 55 53.5	
	comp=Z,4µm,20.0s						
KWHZ	**Kaweka Forest**	51.01	138	P	P	20 34 18.3	+3.5
MTHZ	**Maungataniwha**	51.02	137	P	P	20 34 15.4	+0.7
BHW	**Baring Head**	51.04	141	P	P	20 34 13.7	-1.1
TEZP	**TEZPUR**	51.05	311	eP	P	20 34 15.3	+0.2
TEZP				IAmb	IAmb	20 34 23.5	
	comp=Z,68nm,1.1s						
KRHZ	**Kereru**	51.09	138	P	P	20 34 18.2	+2.9
RUGZ	**Raukumara Rang**	51.17	135	P	P	20 34 17.9	+1.9
SHL	**Shillong**	51.19	309	P	P	20 34 16.0	-0.5
SHL				pmax	pmax		
	comp=Z,154nm,1.0s						
SHL	**Shillong**	51.19	309	eP	P	20 34 17.0	+0.5
SHL				IAmb	IAmb	20 34 26.1	
	comp=Z,132nm,1.1s						
SHL	**Shillong**	51.19	309	P	P	20 34 15.9	-0.5
SHL				IAmb	IAmb	20 34 25.9	
	comp=Z,154nm,1.0s						
MCHZ	**McNeill Hill**	51.21	138	P	P	20 34 19.1	+2.9
RAGZ	**Rawiri**	51.24	136	P	P	20 34 18.4	+1.9
MWZ	**Matawai**	51.24	136	P	P	20 34 16.7	+0.3
MSWZ	**Moikau Station**	51.28	140	P	P	20 34 13.7	-2.9
SNGZ	**Shannon Statio**	51.32	136	P	P	20 34 18.0	+1.0
PLWZ	**Palliser**	51.37	141	P	P	20 34 14.9	-2.4
PKGZ	**Pakihiroa**	51.41	135	P	P	20 34 22.7	+4.9
KAHZ	**Kahuranaki**	51.50	138	P	P	20 34 20.4	+2.0
BFZ	**Birch Farm**	51.53	139	P	P	20 34 16.4	-2.1
GUWA	**GUWAHATI**	51.67	310	eP	P	20 34 20.1	+0.4
GUWA				IAmb	IAmb	20 34 26.2	
	comp=Z,310nm,1.5s						
KUR	**Kuril'sk**	52.15	13	eP	P	20 34 23.3	+0.4
KUR				S	S	20 41 48.7	+2.9
KUR				pmax	pmax		
	comp=Z,527nm,1.1s						
KUR				MLR	MLR		
	comp=Z,999nm,17.0s						
MCQ	**Macquarie Isla**	52.80	162	P	P	20 34 29.6	+2.0
	baz=53,SNR=7.0						
MCQ	**Macquarie Isla**	52.80	162	P	P	20 34 28.2	+0.5
MCQ				pmax	pmax		
	comp=Z,224nm,0.9s						
MCQ	**Macquarie Isla**	52.80	162	P	P	20 34 28.2	+0.5
MCQ	**Macquarie Isla**	52.80	162	P	P	20 34 30.0	+2.3
	comp=Z,360nm,1.1s						
YSS	**Yuzh-Sakhalins**	52.93	8	⇓eP	P	20 34 26.0	-2.7
YSS				eS	S	20 41 51.0	-5.4
YSS				pmax	pmax		
	comp=Z,600nm,3.5s						
YSS				pmax	pmax		
	comp=Z,70nm,1.2s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,19.0s						
YSS	**Yuzh-Sakhalins**	52.93	8	P	P	20 34 28.6	-0.1
YSS				IAmb	IAmb	20 34 35.6	
	comp=Z,146nm,1.2s						
YSS				IAMs_20	IAMs_20	20 55 34.7	
	comp=Z,3µm,21.0s						
LSA	**Lhasa**	53.95	313	P	P	20 34 39.0	+1.8
LSA				pmax	pmax		
	comp=Z,71nm,0.8s						
LSA				LR	LR		
	comp=Z,500nm,10.7s						
LSA				LR	LR		
	comp=Z,1µm,21.7s						
LSA				LR	LR		
	comp=Z,2µm,21.4s						
LSA	**Lhasa**	53.95	313	P	P	20 34 38.9	+1.8
LSA	**Lhasa**	53.95	313	P	P	20 34 38.3	+1.2
LSA				pmax	pmax		
	comp=Z,84nm,1.0s						
LSA	**Lhasa**	53.95	313	P	P	20 34 38.3	+1.2
LSA				IAmb	IAmb	20 34 57.7	
	comp=Z,84nm,1.0s						
PALK	**Pallekele**	54.55	283	P	P	20 34 41.4	+0.1
PALK				pmax	pmax		
	comp=Z,206nm,1.7s						
PALK				MLR	MLR		
	comp=Z,800nm,20.0s						
PALK	**Pallekele**	54.55	283	P	P	20 34 41.4	+0.1
PALK				IAmb	IAmb	20 34 59.3	
	comp=Z,206nm,1.7s						
KLR	**Kul'dur**	54.64	358	P	P	20 34 41.9	+0.7
	comp=Z,41nm,0.9s,baz=216,slow=3.2,SNR=86						
KLR	**Kul'dur**	54.64	358	ceP	P	20 34 41.5	+0.3
KLR				pmax	pmax		
	comp=Z,46nm,0.9s						
GTA	**Gaotai**	54.72	328	⇓P	P	20 34 43.8	+1.6
GTA				pP	pP	20 34 48.5	-0.3
GTA				S	S	20 42 22.9	+1.6
GTA				SS	SS	20 46 08.9	+4.1
GTA				pmax	pmax		
	comp=Z,46nm,0.9s						
GTA				pmax	pmax		
	comp=Z,460nm,7.3s						
GTA				LR	LR		
	comp=Z,580nm,16.4s						
GTA				LR	LR		
	comp=Z,600nm,18.5s						
GTA				LR	LR		
	comp=Z,840nm,19.6s						
BOK	**Bokaro**	55.15	304	eP	P	20 34 46.8	+1.4
BOK				IAmb	IAmb	20 35 04.0	
	comp=Z,42nm,0.9s						
TAPN	**Taplejung**	55.32	309	eP	P	20 34 47.8	+0.9
	comp=Z,535nm,1.4s						
ODAN	**Odare**	55.33	308	eP	P	20 34 47.8	+0.8
	comp=Z,165nm,0.8s						
RAMN	**Ramite**	55.99	308	eP	P	20 34 52.9	+1.2
	comp=Z,574nm,1.4s						
HIA	**Hailar**	56.02	349	i P	P	20 34 50.2	-1.0
HIA				pmax	pmax		
	comp=Z,21nm,1.3s						
HIA	**Hailar**	56.02	349	P	P	20 34 50.1	-1.1
MDRS	**Chennai**	56.38	290	eP	P	20 34 56.9	+2.6
MDRS				IAmb	IAmb	20 35 03.8	
	comp=Z,152nm,1.2s						
TYV	**Tymovskoe**	56.76	7	eP	P	20 34 57.8	+1.4
TYV				pmax	pmax		
	comp=Z,48nm,1.3s						
TYV				pmax	pmax		
	comp=Z,700nm,3.6s						
TYV				MLR	MLR		
	comp=Z,1µm,21.0s						
GUN	**Gumba**	57.01	308	eP	P	20 35 00.0	+0.9
	comp=Z,114nm,0.8s						
PKI	**Pulchoki**	57.22	308	eP	P	20 35 01.1	+0.6
	comp=Z,209nm,1.3s						
PKIN	**Phulchoki**	57.23	308	eP	P	20 35 00.9	+0.3
KKN	**Kakani**	57.42	308	eP	P	20 35 02.5	+0.7
	comp=Z,217nm,1.3s						
DMN	**Daman**	57.48	308	eP	P	20 35 03.2	+0.9
	comp=Z,314nm,1.3s						
ULN	**Ulaanbaatar**	58.24	339	ceP	P	20 35 07.5	+0.4
ULN				pmax	pmax		
	comp=Z,53nm,1.7s						
ULN	**Ulaanbaatar**	58.24	339	P	P	20 35 07.2	+0.1
ULN				IAmb	IAmb	20 35 27.0	
	comp=Z,101nm,1.4s						
TRD	**Trivandrum**	58.44	283	eP	P	20 35 13.5	+4.6
SONM	**Songino Array**	58.45	339	P	P	20 35 09.5	+0.9
	comp=Z,6.5nm,0.9s,baz=148,slow=7.7,SNR=39						
SONM				LR	LR	21 03 49.5	
	comp=Z,950nm,18.2s,baz=160,slow=40						
SONM				PKPPKP		21 04 49.2	
	comp=Z,2.9nm,1.2s,baz=270,slow=0.7,SNR=7.3						
SONM	**Songino Array**	58.45	339	P	P	20 35 08.8	+0.3
NKL	**Nikolayevsk**	58.82	5	eP	P	20 35 09.7	-1.1
NKL				e		20 35 59.9	
NKL				eS	S	20 43 07.6	-7.1
NKL				pmax	pmax		
	comp=E,69nm,0.7s						
NKL				pmax	pmax		
	comp=N,15nm,1.6s						
NKL				pmax	pmax		
	comp=Z,109nm,1.3s						
NKL				pmax	pmax		
	comp=Z,146nm,1.7s						
NKL				smax	smax		
	comp=E,58nm,1.1s						
NKL				smax	smax		
	comp=N,13nm,1.6s						
DANN	**Dangsing**	58.87	308	eP	P	20 35 12.9	+0.8
	comp=N,395nm,1.3s						
HYB	**Hyderabad**	59.20	294	i P	P	20 35 14.0	-0.2
	comp=N,130nm,1.0s						
HYB	**Hyderabad**	59.20	294	eP	P	20 35 14.8	+0.6
HYB				IAmb	IAmb	20 35 20.8	
	comp=Z,84nm,1.0s						
SKR	**Severo-Kuril's**	59.27	16	eP	P	20 35 17.3	+3.3
SKR				eS	S	20 43 29.9	+9.3
SKR				pmax	pmax		
	comp=Z,200nm,3.2s						
SKR				pmax	pmax		
	comp=Z,88nm,1.9s						
SKR				pmax	pmax		
	comp=Z,500nm,6.6s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s						
ZEA	**Zeya**	59.39	355	eP	P	20 35 15.3	+0.5
ZEA				e		20 35 31.4	
ZEA				e		20 36 10.0	
ZEA				e		20 37 28.8	
ZEA				eS	S	20 43 20.3	-1.7
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.1s						
ZEA				pmax	pmax		
	comp=N,200nm,3.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.2s						
ZEA				smax	smax		
	comp=N,400nm,11.0s						
ZEA				MLR	MLR		
	comp=N,500nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,19.0s						
NGP	**Nagpur**	59.95	298	eP	P	20 35 19.7	+0.4
CIT	**Chita**	59.97	346	eP	P	20 35 19.2	+0.3
CIT				e		20 35 33.2	
CIT				e		20 35 59.4	
CIT				e		20 37 27.5	
CIT				e		20 39 00.3	
CIT				pmax	pmax		
	comp=Z,153nm,2.3s						
PEA0B	**Petropavlovsk-**	61.88	16	i P	P	20 35 32.4	+0.6
PEA0B	**Petropavlovsk-**	61.88	16	P	P	20 35 31.9	+0.1
PETK	**Petropavlovsk-**	61.88	16	P	P	20 35 32.5	+0.7
	comp=Z,23nm,0.8s,baz=175,slow=4.0,SNR=32						
PETK				LR	LR	20 59 44.0	
	comp=Z,561nm,21.9s,baz=198,slow=34						
PETK	**Petropavlovsk-**	61.88	16	P	P	20 35 30.8	-1.0
PET	**Petropavlovsk**	62.07	17	eP	P	20 35 33.9	+0.9
PET				eS	S	20 43 58.4	+2.1
PET				ePS	PnS	20 44 17.7	+4.5
PET				eSS	SS	20 48 00.7	+1.2
PET				pmax	pmax		
	comp=Z,87nm,1.2s						
PET				pmax	pmax		
	comp=Z,300nm,12.6s						
PET				MLR	MLR		
	comp=Z,900nm,18.0s						

PET	**Petropavlovsk**	**62.07**	**17**	P	**P**	**20 35 33.7**	**+0.7**
PET				IAmb	IAmb	20 35 40.4	
	comp=Z,101nm,1.3s						
BHPL	**Bhopal**	**62.09**	**300**	*e*P	**P**	**20 35 34.3**	**+0.5**
BHPL				IAmb	IAmb	20 35 40.7	
	comp=Z,169nm,1.6s						
TLY	**Talaya**	**62.64**	**339**	P	**P**	**20 35 38.4**	**+1.4**
	comp=Z,6.0nm,0.7s,baz=129,slow=13,SNR=2.8						
TLY	**Talaya**	**62.64**	**339**	*e*P	P	20 35 31.9	-5.1
TLY				*e*S	**S**	**20 44 04.9**	**+1.2**
TLY				pmax	pmax		
	comp=Z,109nm,1.6s						
TLY				MLR	MLR		
	comp=Z,2µm,17.0s						
CASY	**Casey**	**62.70**	**190**	P	**P**	**20 35 37.5**	**+0.4**
CASY				IAmb	IAmb	20 36 17.6	
	comp=Z,67nm,1.2s						
CASY	**Casey**	**62.70**	**190**	IAMs_20	IAMs_20	21 01 01.5	
	comp=Z,3µm,20.0s						
IRK	**Irkutsk**	**62.90**	**340**	*e*P	**P**	**20 35 39.6**	**+1.0**
IRK				*e*		20 35 56.5	
IRK				pmax	pmax		
	comp=Z,94nm,2.2s						
GOA	**Goa**	**63.02**	**290**	*e*P	**P**	**20 35 42.8**	**+2.7**
GOA				IAmb	IAmb	20 35 47.8	
	comp=Z,93nm,1.3s						
KAD	**Karad**	**63.16**	**292**	*e*P	**P**	**20 35 41.2**	**+0.1**
MOY	**Mondy**	**63.59**	**338**	*e*P	**P**	**20 35 43.4**	**0.0**
MOY				pmax	pmax		
	comp=Z,175nm,1.8s						
POO	**Poona**	**63.80**	**294**	*e*P	**P**	**20 35 45.0**	**-0.3**
POO				*e*P	**pP**	**20 35 45.9**	**-6.2**
POO				IAmb	IAmb	20 35 50.9	
	comp=Z,37nm,0.7s						
DDI	**Dehra Dun**	**64.22**	**307**	*e*P	**P**	**20 35 48.9**	**+1.0**
DDI				IAmb	IAmb	20 35 52.6	
	comp=Z,106nm,0.8s						
NDI	**New Delhi**	**64.24**	**305**	*e*P	**P**	**20 35 48.0**	**0.0**
WMQ	**Urumqi**	**64.40**	**325**	P	**P**	**20 35 50.7**	**+1.9**
WMQ				pP	pP	20 35 55.3	-0.2
WMQ				sP	pwP	20 36 00.7	+0.4
WMQ				PcP	**PcP**	**20 36 24.3**	**+1.2**
WMQ				S	**S**	**20 44 27.7**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,240nm,0.9s						
WMQ				LR	LR		
	comp=Z,870nm,16.7s						
WMQ				LR	LR		
	comp=Z,700nm,22.7s						
WMQ				LR	LR		
	comp=Z,650nm,22.7s						
WMQ	**Urumqi**	**64.40**	**325**	P	**P**	**20 35 50.0**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,208nm,0.8s						
WMQ	**Urumqi**	**64.40**	**325**	P	**P**	**20 35 50.0**	**+1.1**
BOD	**Bodaibo**	**65.23**	**348**	*e*P	**P**	**20 35 53.9**	**+0.1**
BOD				pmax	pmax		
	comp=Z,104nm,1.8s						
SMLA	**Simla**	**65.24**	**308**	⇓*i*P	**P**	**20 35 56.0**	**+1.6**
SMLA				IAmb	IAmb	20 36 02.4	
	comp=Z,668nm,1.6s						
MA2	**Magadan**	**66.36**	**9**	P	**P**	**20 36 01.9**	**+0.9**
	comp=Z,14nm,1.0s,baz=185,slow=6.0,SNR=5.3						
MA2	**Magadan**	**66.36**	**9**	*ce*P	**P**	**20 36 01.1**	**+0.1**
MA2				pmax	pmax		
	comp=Z,93nm,2.5s						
MA2	**Magadan**	**66.36**	**9**	P	**P**	**20 36 01.6**	**+0.6**
MA2				IAmb	IAmb	20 36 09.7	
	comp=Z,161nm,1.5s						
DHRM	**DHARAMSHALA**	**66.36**	**309**	⇓*i*P	**P**	**20 36 02.4**	**+0.5**
DHRM				*e*P	**pP**	**20 36 02.6**	**-6.1**
DHRM				IAmb	IAmb	20 36 07.9	
	comp=Z,159nm,0.7s						
YAK	**Yakutsk**	**67.52**	**358**	*d i*P	**P**	**20 36 08.8**	**+0.4**
YAK				*e**PP	**pP**	**20 36 14.8**	**-0.4**
YAK				*e*		20 36 30.4	
YAK				*e*		20 38 40.7	
YAK				*e*S	**S**	**20 45 03.0**	**-0.1**
YAK				*e**SS	sS	20 45 26.7	+12
YAK				*e*		20 46 03.1	
YAK				*e*SS	**SS**	**20 49 24.4**	**+0.3**
YAK				pmax	pmax		
	comp=Z,216nm,0.9s						
YAK				pmax	pmax		
	comp=N,57nm,1.0s						
YAK				pmax	pmax		
	comp=E,13nm,0.9s						
YAK				pmax	pmax		
	comp=Z,62nm,2.0s						
YAK				pmax	pmax		
	comp=N,60nm,2.0s						
YAK				pmax	pmax		
	comp=E,35nm,2.0s						
YAK				smax	smax		
	comp=N,41nm,2.3s						
YAK				smax	smax		
	comp=E,58nm,2.5s						
YAK	**Yakutsk**	**67.52**	**358**	P	**P**	**20 36 08.4**	**0.0**
ZSN	**Zaisan**	**68.16**	**327**	*e*P	**P**	**20 36 11.7**	**-1.1**
	comp=E,20nm,1.0s,baz=326						
ZSN				*e*S	**S**	**20 45 11.5**	**0.0**
	baz=326						
ZSN	**Zaisan**	**68.16**	**327**	*e*P	**P**	**20 36 11.6**	**-1.1**
ZSN				*e*S	**S**	**20 45 11.5**	**0.0**
ZSN				pmax	pmax		
	comp=Z,20nm,1.0s						
DGZ	**Jazzator, Alta**	**68.18**	**330**	*d i*P	**P**	**20 36 14.0**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,131nm,1.2s						
BHUJ	**Bhuj**	**68.88**	**297**	*e*P	**P**	**20 36 19.4**	**+1.7**
SHLS	**Shalkode**	**69.03**	**320**	*e*P	**P**	**20 36 15.9**	**-2.5**
	comp=Z,50nm,0.9s,baz=320						
SHLS				*e*S	**S**	**20 45 18.9**	**-3.3**
	baz=320						
SHLS	**Shalkode**	**69.03**	**320**	*e*P	**P**	**20 36 15.9**	**-2.5**
SHLS				*e*S	**S**	**20 45 18.9**	**-3.3**
SHLS				pmax	pmax		
	comp=Z,50nm,0.9s						
MK31	**Makanchi Array**	**69.23**	**325**	*ce*P	**P**	**20 36 20.6**	**+1.1**
MK31	**Makanchi Array**	**69.23**	**325**	P	**P**	**20 36 20.6**	**+1.1**
MK31				IAmb	IAmb	20 36 39.1	
	comp=Z,131nm,1.0s						
MKAR	**Makanchi Array**	**69.23**	**325**	P	**P**	**20 36 20.8**	**+1.3**
	comp=Z,95nm,0.8s,baz=118,slow=8.0,SNR=767						
MKAR				PKPPKP	**P'P'df**	**21 04 28.2**	**-0.7**
	comp=Z,3.9nm,1.2s,baz=354,slow=1.2,SNR=8.4						
MKAR				LR	LR	21 07 14.7	
	comp=Z,504nm,21.3s,baz=107,slow=36						
MKAR	**Makanchi Array**	**69.23**	**325**	*ce*P	**P**	**20 36 20.7**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,95nm,0.8s						
MKAR	**Makanchi Array**	**69.23**	**325**	P	**P**	**20 36 20.2**	**+0.7**
NIL	**Nilore**	**69.27**	**309**	P	**P**	**20 36 19.9**	**-0.1**
NIL				pmax	pmax		
	comp=Z,71nm,0.7s						
NIL	**Nilore**	**69.27**	**309**	P	**P**	**20 36 19.9**	**-0.1**
NIL				IAmb	IAmb	20 36 40.8	
	comp=Z,71nm,0.7s						
MAKZ	**Makanchi**	**69.42**	**325**	P	**P**	**20 36 21.5**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,197nm,1.0s						
MAKZ	**Makanchi**	**69.42**	**325**	P	**P**	**20 36 21.5**	**+0.9**
KSH	**Kashi**	**69.65**	**316**	P	**P**	**20 36 24.7**	**+2.4**
KSH				sP	pwP	20 36 35.3	+1.4
KSH				S	**S**	**20 45 34.2**	**+4.6**
KSH				pmax	pmax		
	comp=Z,71nm,0.8s						
KSH				LR	LR		
	comp=Z,1µm,9.2s						
KSH				LR	LR		
	comp=Z,2µm,8.2s						
KSH				LR	LR		
	comp=Z,1µm,9.6s						
SATY	**Saty**	**69.65**	**320**	*e*P	**P**	**20 36 21.5**	**-0.9**
	comp=Z,47nm,1.0s,baz=320						
SATY	**Saty**	**69.65**	**320**	*e*P	**P**	**20 36 21.4**	**-0.9**
SATY				pmax	pmax		
	comp=Z,47nm,1.0s						
KPKS	**Kokpek**	**69.67**	**320**	*e*P	**P**	**20 36 21.3**	**-1.1**
	comp=Z,82nm,1.1s,baz=320						
KPKS				*e*S	**S**	**20 45 29.4**	**-0.4**
	baz=320						
KPKS	**Kokpek**	**69.67**	**320**	*e*P	**P**	**20 36 21.3**	**-1.1**
KPKS				*e*S	**S**	**20 45 29.3**	**-0.4**
KPKS				pmax	pmax		
	comp=Z,82nm,1.1s						
SEY	**Seymchan**	**69.80**	**9**	P	**P**	**20 36 23.4**	**+0.9**
	comp=Z,27nm,1.0s,baz=185,slow=4.4,SNR=32						
SEY	**Seymchan**	**69.80**	**9**	*i* P	**P**	**20 36 23.1**	**+0.5**
KDJ	**Kajisay**	**70.01**	**319**	P	**P**	**20 36 25.8**	**+1.2**
KDJ				pmax	pmax		
	comp=Z,115nm,1.1s						
KDJ	**Kajisay**	**70.01**	**319**	P	**P**	**20 36 25.8**	**+1.2**
KDJ				IAmb	IAmb	20 36 44.6	
	comp=Z,115nm,1.1s						
MDOK	**Medeo**	**70.58**	**320**	*e*P	**P**	**20 36 27.4**	**-0.6**
	baz=319						
MDOK				*e*S	**S**	**20 45 40.6**	**+0.1**
	baz=319						
MDOK	**Medeo**	**70.58**	**320**	*e*P	**P**	**20 36 27.4**	**-0.6**
MDOK				*e*S	**S**	**20 45 40.5**	**+0.1**
TDK	**Taldyqorghan**	**70.61**	**322**	*e*P	**P**	**20 36 27.4**	**-0.5**
	comp=Z,99nm,1.1s,baz=322						
TDK				*e*S	**S**	**20 45 40.9**	**+0.5**
	baz=322						
TDK	**Taldyqorghan**	**70.61**	**322**	*e*P	**P**	**20 36 27.4**	**-0.5**
TDK				*e*S	**S**	**20 45 40.9**	**+0.5**
TDK				pmax	pmax		
	comp=Z,99nm,1.1s						
AAA	**Alma-Ata**	**70.69**	**320**	*e*P	**P**	**20 36 28.4**	**-0.2**
	comp=Z,34nm,1.0s,baz=319						
AAA	**Alma-Ata**	**70.69**	**320**	*e*P	**P**	**20 36 28.3**	**-0.2**
AAA				pmax	pmax		
	comp=Z,34nm,1.0s						
CHKK	**Chushkaly**	**70.94**	**320**	*e*P	**P**	**20 36 30.1**	**+0.1**
	baz=320						
CHKK	**Chushkaly**	**70.94**	**320**	*e*P	**P**	**20 36 30.1**	**+0.1**
MTBS	**Maitube**	**70.96**	**319**	*e*P	**P**	**20 36 31.1**	**+0.8**
	baz=319						
MTBS	**Maitube**	**70.96**	**319**	*e*P	**P**	**20 36 31.0**	**+0.8**
BOOM	**Boomskoye usch**	**70.99**	**318**	P	**P**	**20 36 31.3**	**+0.8**
BOOM				pmax	pmax		
	comp=Z,114nm,1.1s						
BOOM	**Boomskoye usch**	**70.99**	**318**	P	**P**	**20 36 31.3**	**+0.8**
BOOM				IAmb	IAmb	20 36 51.0	
	comp=Z,114nm,1.1s						
ADK	**Adak**	**71.05**	**30**	P	**P**	**20 36 30.6**	**+0.2**
ADK				pmax	pmax		
	comp=Z,368nm,1.8s						
ADK	**Adak**	**71.05**	**30**	P	**P**	**20 36 30.6**	**+0.2**
KUU	**Kurty**	**71.37**	**320**	*e*P	**P**	**20 36 31.5**	**-1.2**
	comp=Z,120nm,1.0s,baz=320						
KUU				*e*S	**S**	**20 45 49.1**	**-0.2**
	baz=320						
KUU	**Kurty**	**71.37**	**320**	*e*P	**P**	**20 36 31.4**	**-1.2**
KUU				*e*S	**S**	**20 45 49.1**	**-0.2**
KUU				pmax	pmax		
	comp=Z,120nm,1.0s						
TKM2	**Tokmak 2**	**71.41**	**319**	P	**P**	**20 36 34.6**	**+1.5**
	SNR=46						
KBK	**Karagaybulak**	**71.72**	**318**	P	**P**	**20 36 36.7**	**+1.7**
	SNR=20						
UCH	**Uchtor**	**71.82**	**318**	P	**P**	**20 36 37.9**	**+1.9**
	SNR=43						
HON	**Honolulu**	**71.92**	**66**	P	**P**	**20 36 36.2**	**-0.1**
HON				pmax	pmax		
	comp=Z,207nm,1.2s						
HON	**Honolulu**	**71.92**	**66**	P	**P**	**20 36 36.2**	**-0.1**
KIP	**Kipapa**	**71.94**	**65**	*ce*P	**P**	**20 36 36.6**	**+0.2**
KIP				pmax	pmax		
	comp=Z,86nm,1.3s						
KIP	**Kipapa**	**71.94**	**65**		**P**	**20 36 37.1**	**+0.7**
KIP				IAmb	IAmb	20 37 07.7	
	comp=Z,174nm,1.5s						
FRU1	**Bishkek**	**72.00**	**318**	P	**P**	**20 36 38.1**	**+1.6**
FRU1				pmax	pmax		
	comp=Z,72nm,1.0s						
FRU1				MLR	MLR		
	comp=Z,800nm,19.0s						
FRU1	**Bishkek**	**72.00**	**318**	P	**P**	**20 36 38.1**	**+1.6**
FRU1				IAmb	IAmb	20 36 56.2	
	comp=Z,72nm,1.0s						
CHMS	**Chumysh**	**72.00**	**319**	P	**P**	**20 36 37.6**	**+1.2**
	SNR=20						
AAK	**Ala-Archa**	**72.01**	**318**	P	**P**	**20 36 38.4**	**+1.7**
	SNR=41						
AAK	**Ala-Archa**	**72.01**	**318**	*i* P	**P**	**20 36 38.1**	**+1.4**
	SNR=16						
AAK	**Ala-Archa**	**72.01**	**318**	*i* P	**P**	**20 36 35.8**	**-0.9**
AAK				pmax	pmax		
	comp=Z,182nm,1.3s						
AAK	**Ala-Archa**	**72.01**	**318**	P	**P**	**20 36 38.1**	**+1.4**
AAK				IAmb	IAmb	20 36 56.7	
	comp=Z,74nm,1.1s						
ZAA0	**Zalesovo Array**	**72.10**	**332**	P	**P**	**20 36 36.2**	**-0.5**
ZAA0				IAmb	IAmb	20 36 43.8	
	comp=Z,118nm,1.1s						
ZALV	**Zalesovo Beam**	**72.10**	**332**	P	**P**	**20 36 37.1**	**+0.4**
	comp=Z,43nm,0.9s,baz=108,slow=4.8,SNR=134						
ZALV				PKPPKP	**P'P'df**	**21 04 22.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=311,slow=7.5,SNR=4.1						
ZALV				LR	LR	21 13 28.9	
	comp=Z,340nm,18.1s,baz=124,slow=40						
ZALV	**Zalesovo Beam**	**72.10**	**332**	P	**P**	**20 36 35.7**	**-1.0**
SGDS	**Sogindy**	**72.28**	**319**	*e*P	**P**	**20 36 36.9**	**-1.3**
	comp=Z,20nm,1.0s,baz=319						
SGDS	**Sogindy**	**72.28**	**319**	*e*P	**P**	**20 36 36.9**	**-1.3**
SGDS				pmax	pmax		
	comp=Z,20nm,1.0s						
USP	**Ospenovka**	**72.28**	**319**	P	**P**	**20 36 39.5**	**+1.3**
	SNR=80						
AML	**Almayashu**	**72.33**	**317**	P	**P**	**20 36 40.8**	**+1.9**
	SNR=81						
SEM	**Semipalatinsk**	**72.35**	**327**	*e*P	**P**	**20 36 36.5**	**-2.2**
	comp=Z,46nm,1.3s,baz=327						
SEM				*i* S	**S**	**20 45 59.6**	**-1.2**
	baz=327						
SEM	**Semipalatinsk**	**72.35**	**327**	*e*P	**P**	**20 36 36.4**	**-2.2**
SEM				*i* S	**S**	**20 45 59.5**	**-1.2**
SEM				pmax	pmax		
	comp=Z,46nm,1.3s						
ARSB	**Arslanbob**	**72.48**	**316**	P	**P**	**20 36 40.8**	**+1.3**
ARSB				pmax	pmax		
	comp=Z,218nm,1.1s						
ARSB	**Arslanbob**	**72.48**	**316**	P	**P**	**20 36 40.8**	**+1.3**
ATKA	**Atka Island**	**72.49**	**31**	P	**P**	**20 36 39.2**	**+0.2**
ATKA				IAmb	IAmb	20 36 45.5	
	comp=Z,89nm,1.0s						
EKS2	**Erkin-Say**	**72.50**	**318**	P	**P**	**20 36 41.2**	**+1.6**
	SNR=28						
DRK	**Karamyk**	**72.57**	**314**	P	**P**	**20 36 41.2**	**+0.9**
KBL	**Kabul**	**72.85**	**309**	P	**P**	**20 36 42.5**	**+0.6**
KBL				pmax	pmax		
	comp=Z,43nm,1.0s						
KBL	**Kabul**	**72.85**	**309**	P	**P**	**20 36 42.5**	**+0.6**
BTLS	**Baital**	**73.36**	**320**	*e*P	**P**	**20 36 43.1**	**-1.3**
	comp=Z,39nm,1.3s,baz=320						
BTLS	**Baital**	**73.36**	**320**	*e*P	**P**	**20 36 43.1**	**-1.3**
BTLS				pmax	pmax		
	comp=Z,39nm,1.3s						
VNDA	**Vanda**	**73.38**	**174**	P	**P**	**20 36 45.1**	**+1.0**
	comp=Z,47nm,0.8s,baz=323,slow=6.4,SNR=204						
VNDA				LR	LR	21 07 34.8	
	comp=Z,2µm,19.4s,baz=351,slow=35						
VNDA	**Vanda**	**73.38**	**174**	P	**P**	**20 36 44.9**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,54nm,0.9s						
VNDA	**Vanda**	**73.38**	**174**	P	**P**	**20 36 44.9**	**+0.9**
VNDA				IAmb	IAmb	20 36 46.2	
	comp=Z,54nm,0.8s						
KURBB	**Kurchatov Arra**	**73.39**	**327**	P	**P**	**20 36 45.2**	**+0.7**
	comp=Z,78nm,0.8s,baz=126,slow=4.7,SNR=508						
KURK	**Kurchatov**	**73.39**	**327**	*ce*P	**P**	**20 36 45.1**	**+0.6**
KURK				pmax	pmax		
	comp=Z,168nm,1.3s						
KURK	**Kurchatov**	**73.39**	**327**	P	**P**	**20 36 44.9**	**+0.5**
KURK				IAmb	IAmb	20 37 04.2	
	comp=Z,181nm,1.1s						
BTK	**Batken**	**73.49**	**314**	P	**P**	**20 36 46.3**	**+0.9**
BTK				pmax	pmax		
	comp=Z,403nm,1.8s						
BTK	**Batken**	**73.49**	**314**	P	**P**	**20 36 46.3**	**+0.9**
KHU	**Kahuku**	**73.65**	**68**	P	**P**	**20 36 45.5**	**-1.4**
KHU				pmax	pmax		
	comp=Z,235nm,1.6s						
KHU	**Kahuku**	**73.65**	**68**	P	**P**	**20 36 45.5**	**-1.4**
KHU				IAmb	IAmb	20 38 03.7	
	comp=Z,235nm,1.6s						
POHA	**Pohakuloa**	**73.83**	**68**	P	**P**	**20 36 46.3**	**-1.7**
POHA				IAmb	IAmb	20 37 10.3	
	comp=Z,116nm,1.1s						
HMH	**Humu‘ula Sheep**	**73.84**	**68**	P	**P**	**20 36 49.0**	**+0.8**
HMH				IAmb	IAmb	20 37 11.5	
	comp=Z,183nm,1.2s						
SBA	**Scott Base**	**74.22**	**173**	IAMs_20	IAMs_20	21 08 04.1	
	comp=Z,2µm,21.0s						
DZA	**Taraz**	**74.24**	**317**	*e*P	**P**	**20 36 49.1**	**-0.7**
	comp=Z,25nm,0.9s,baz=317						
DZA	**Taraz**	**74.24**	**317**	*e*P	**P**	**20 36 49.0**	**-0.7**
DZA				pmax	pmax		
	comp=Z,25nm,0.9s						
IUG	**Iuzhnay**	**74.83**	**316**	*e*P	**P**	**20 36 52.5**	**-0.8**
	comp=Z,40nm,1.0s,baz=316						
IUG				*e*S	**S**	**20 46 29.1**	**+0.1**
	baz=316						
IUG	**Iuzhnay**	**74.83**	**316**	*e*P	**P**	**20 36 52.5**	**-0.8**
IUG				*e*S	**S**	**20 46 29.0**	**+0.1**
IUG				pmax	pmax		
	comp=Z,40nm,1.0s						
KK06	**Karatay Array**	**74.86**	**317**	P	**P**	**20 36 54.3**	**+1.0**
KK05	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.2**	**+0.9**
KK02	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.0**	**+0.7**
KK31	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.3**	**+0.9**
KK31				pmax	pmax		
	comp=Z,140nm,1.2s						
KK31	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.3**	**+0.9**
KK31				IAmb	IAmb	20 37 12.8	
	comp=Z,140nm,1.2s						
KKAR	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 53.8**	**+0.4**
KKAR	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.2**	**+0.9**
KKAR				IAmb	IAmb	20 37 12.8	
	comp=Z,140nm,1.2s						
KKAR	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 53.8**	**+0.4**
KK07	**Karatay Array**	**74.87**	**317**	P	**P**	**20 36 54.2**	**+0.8**
KK01	**Karatay Array**	**74.88**	**317**	P	**P**	**20 36 54.1**	**+0.7**
KK03	**Karatay Array**	**74.88**	**317**	P	**P**	**20 36 54.1**	**+0.7**
KK04	**Karatay Array**	**74.88**	**317**	P	**P**	**20 36 54.2**	**+0.8**
KK09	**Karatay Array**	**74.89**	**317**	P	**P**	**20 36 54.1**	**+0.7**
KK08	**Karatay Array**	**74.89**	**317**	P	**P**	**20 36 54.3**	**+0.8**
TAS	**Tashkent**	**75.04**	**315**	P	**P**	**20 36 55.0**	**+0.7**
TAS				pmax	pmax		
	comp=Z,233nm,1.0s						
TAS	**Tashkent**	**75.04**	**315**	P	**P**	**20 36 55.0**	**+0.7**
CHM	**Chimkent**	**75.19**	**316**	*e*S	**S**	**20 46 33.2**	**+0.4**
	baz=316						
BRLS	**Borolday**	**75.30**	**317**	*e*P	**P**	**20 36 55.9**	**+0.1**
	comp=Z,70nm,1.1s,baz=317						
BRLS	**Borolday**	**75.30**	**317**	*e*P	**P**	**20 36 55.8**	**-0.1**
BRLS				pmax	pmax		
	comp=Z,71nm,1.1s						
PAE	**Paea**	**75.54**	**107**	*e*P	**P**	**20 36 56.6**	**-1.1**
	comp=Z,15nm,1.2s						
PPT2	**Papeete2**	**75.55**	**107**	*e*P	**P**	**20 36 57.0**	**-0.8**
	comp=Z,56nm,1.1s						
PPT2				*e*S	**S**	**20 46 35.1**	**-2.6**
	comp=Z,1µm,25.5s						
PPT2	**Papeete2**	**75.55**	**107**	*e*LR	LR	21 00 12.3	
	comp=Z,1µm,23.0s,baz=272						
PPT	**Papeete**	**75.55**	**107**	P	**P**	**20 36 59.1**	**+1.4**
	comp=Z,13nm,0.5s,baz=51,slow=22,SNR=2.0						
PPT				LR	LR	21 09 27.5	
	comp=Z,516nm,18.0s,baz=268,slow=35						
PPT	**Papeete**	**75.55**	**107**	P	**P**	**20 36 57.2**	**-0.6**
PPT	**Papeete**	**75.55**	**107**		**P**	**20 36 57.2**	**-0.6**
PPTF	**Pamatai, Papee**	**75.56**	**107**	P	**P**	**20 36 57.1**	**-0.8**
PPTF				IAmb	IAmb	20 37 12.7	
	comp=Z,87nm,1.1s						
TBI	**Tubuai**	**75.59**	**113**	*e*S	**S**	**20 46 36.2**	**-1.6**
	comp=Z,1µm,26.2s						
TBI	**Tubuai**	**75.59**	**113**	*e*LQ	LQ	20 56 55.4	
	comp=Z,485nm,31.2s						
TBI				*e*LR	LR	21 00 05.9	
	comp=Z,2µm,23.8s,baz=272						
TIAR	**Tiarei**	**75.77**	**107**	*e*P	**P**	**20 36 58.4**	**-0.6**
	comp=Z,16nm,1.1s						
TVO	**Taravao**	**75.85**	**107**	*e*P	**P**	**20 36 58.7**	**-0.8**
	comp=Z,20nm,1.1s						
BRZS	**Berezniki**	**76.37**	**324**	*e*P	**P**	**20 37 00.3**	**-1.5**
	comp=Z,32nm,1.0s,baz=324						
BRZS	**Berezniki**	**76.37**	**324**	*e*P	**P**	**20 37 00.3**	**-1.5**
BRZS				pmax	pmax		
	comp=Z,32nm,1.0s						
TIXI	**Tiksi**	**77.18**	**358**	*d i*P	**P**	**20 37 05.0**	**-0.9**
TIXI	**Tiksi**	**77.18**	**358**	P	**P**	**20 37 04.9**	**-0.9**
TIXI				IAmb	IAmb	20 37 13.9	
	comp=Z,91nm,1.0s						
MAW	**Mawson**	**77.64**	**202**	P	**P**	**20 37 10.7**	**+2.1**
	baz=78,SNR=24						
MAW	**Mawson**	**77.64**	**202**	P	**P**	**20 37 10.3**	**+1.8**
	comp=Z,118nm,1.2s,baz=73,slow=6.3,SNR=29						
MAW				LR	LR	21 09 11.9	
	comp=Z,3µm,19.8s,baz=65,slow=34						
HRA	**Herat**	**78.16**	**307**	P	**P**	**20 37 12.7**	**+0.2**
WSAR	**Wadi Sarin**	**78.73**	**295**	P	**P**	**20 37 16.9**	**+1.4**
	comp=Z,50nm,1.1s,baz=171,slow=3.6,SNR=9.1						
WSAR				LR	LR	21 18 39.8	
	comp=Z,288nm,18.1s,baz=113,slow=41						
BVAR	**Borovoye Array**	**78.98**	**327**	P	**P**	**20 37 15.5**	**-0.7**
	comp=Z,19nm,0.6s,baz=28,slow=19,SNR=183						
BRVK	**Borovoye**	**79.05**	**327**	*ce*P	**P**	**20 37 17.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,167nm,1.3s						
BRVK	**Borovoye**	**79.05**	**327**	P	**P**	**20 37 16.9**	**+0.3**
BRVK				IAmb	IAmb	20 37 18.4	
	comp=Z,100nm,0.8s						
FALS	**False Pass**	**79.37**	**32**	P	**P**	**20 37 18.9**	**+0.6**
GAMB	**Gambell**	**80.21**	**22**	P	**P**	**20 37 23.6**	**+0.9**
SHAO	**Shalim**	**80.60**	**289**	P	**P**	**20 37 26.8**	**+1.0**
SOHO	**SOHO**	**80.78**	**295**	*i* P	**P**	**20 37 27.5**	**+0.9**
	SNR=19						
SDPT	**Sand Point**	**81.11**	**32**	P	**P**	**20 37 28.1**	**+0.4**
UOSS	**Minazif**	**81.22**	**296**	P	**P**	**20 37 30.1**	**+1.1**
UOSS	**Minazif**	**81.22**	**296**	P	**P**	**20 37 28.3**	**-0.7**
UOSS				IAmb	IAmb	20 37 47.5	
	comp=Z,176nm,1.8s						
HATD	**Hatta, Dubai**	**81.27**	**296**	P	**P**	**20 37 30.5**	**+1.3**
ASHO	**Ashiyiah**	**81.31**	**296**	*i* P	**P**	**20 37 30.7**	**+1.2**
	SNR=8.5						
BANOM	**Banah**	**81.32**	**297**	*i* P	**P**	**20 37 31.2**	**+1.7**
	SNR=7.4						
SOCY	**Socotra**	**81.32**	**283**	P	**P**	**20 37 30.2**	**+0.4**
SOCY				IAmb	IAmb	20 37 49.4	
	comp=Z,109nm,0.8s						
MSFE	**Esma-Masafi**	**81.34**	**297**	*i* P	**P**	**20 37 31.0**	**+1.4**
	SNR=7.2						
CNBA	**Chernabura Isl**	**81.38**	**32**	P	**P**	**20 37 29.5**	**+0.4**
ALNE	**Al Ain**	**81.47**	**295**	*i* P	**P**	**20 37 31.7**	**+1.4**
	SNR=9.7						
SHME	**Shamm**	**81.48**	**297**	P	**P**	**20 37 31.1**	**+0.8**
FAQ	**Al Faqa, Dubai**	**81.74**	**296**	*i* P	**P**	**20 37 33.0**	**+1.3**
	SNR=6.8						
ASUD	**Al Ashush, Dub**	**81.95**	**296**	P	**P**	**20 37 34.3**	**+1.5**
AJN	**Ajban**	**82.25**	**296**	P	**P**	**20 37 35.4**	**+1.0**
GYB1	**ALIBECK ARRAY**	**82.26**	**309**	P	**P**	**20 37 35.5**	**+1.3**
GYA1	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 35.2**	**+0.9**
GYA2	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 35.1**	**+0.9**
GEYT	**Alibeck**	**82.27**	**309**	P	**P**	**20 37 35.7**	**+1.4**
	comp=Z,19nm,0.8s,baz=132,slow=4.2,SNR=22						
GEYT				LR	LR	21 20 06.4	
	comp=Z,419nm,19.7s,baz=190,slow=40						
GEYT	**Alibeck**	**82.27**	**309**	P	**P**	**20 37 34.6**	**+0.3**
GYA0	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 35.2**	**+0.9**
GYA0				pmax	pmax		
	comp=Z,294nm,1.7s						
GYA0	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 35.2**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 34.9**	**+0.6**
GYA3	**ALIBECK ARRAY**	**82.27**	**309**	P	**P**	**20 37 35.0**	**+0.7**
GYB4	**ALIBECK ARRAY**	**82.28**	**309**	P	**P**	**20 37 35.2**	**+0.9**
ANM	**Nome**	**82.98**	**22**	P	**P**	**20 37 38.0**	**+0.7**
ANM				pmax	pmax		
	comp=Z,35nm,1.3s						
ANM				MLR	MLR		
	comp=Z,800nm,20.0s						
ANM	**Nome**	**82.98**	**22**	P	**P**	**20 37 38.0**	**+0.7**
AB06	**Akbulak array**	**83.82**	**321**	P	**P**	**20 37 42.0**	**0.0**
AB07	**Akbulak array**	**83.82**	**321**	P	**P**	**20 37 41.7**	**-0.3**
AB02	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 41.9**	**-0.1**
AB03	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 41.8**	**-0.3**
AB01	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 41.6**	**-0.4**
AB31	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 42.2**	**+0.1**
ABKAR	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 42.1**	**0.0**
ABKAR	**Akbulak array**	**83.83**	**321**	P	**P**	**20 37 42.2**	**+0.1**
ABKAR				IAmb	IAmb	20 38 01.7	
	comp=Z,388nm,2.0s						
AB04	**Akbulak array**	**83.84**	**321**	P	**P**	**20 37 42.2**	**+0.1**
AB05	**Akbulak array**	**83.84**	**321**	P	**P**	**20 37 42.0**	**-0.1**

AB08	**Akbulak array**	**83.84**	**321**	P	**P**	**20 37 42.2**	**+0.1**
AB09	**Akbulak array**	**83.85**	**321**	P	**P**	**20 37 42.1**	**0.0**
ABPO	**Ambohimpanom**	**85.01**	**251**	P	**P**	**20 37 49.0**	**+0.1**
ABPO				pmax	pmax		
	comp=Z,66nm,1.3s						
ABPO	**Ambohimpanom**	**85.01**	**251**	P	**P**	**20 37 49.0**	**+0.1**
ABPO				IAmb	IAmb	20 38 08.9	
	comp=Z,66nm,1.3s						
TAOE	**Nuku Hiva Isla**	**85.21**	**98**	*e*LR	LR	21 04 40.4	
	comp=Z,2µm,21.9s						
AKTO	**Aktyubinsk**	**85.35**	**322**	P	**P**	**20 37 49.7**	**0.0**
	comp=Z,55nm,0.9s,baz=104,slow=6.5,SNR=114						
RDOG	**Red Dog Mine**	**85.50**	**20**	P	**P**	**20 37 50.0**	**-0.1**
OHAK	**Old Harbor**	**85.53**	**31**	P	**P**	**20 37 51.0**	**+0.7**
OHAK				IAmb	IAmb	20 37 52.0	
	comp=Z,80nm,1.0s						
SVE	**Sverdlovsk**	**85.59**	**328**	*ce*P	**P**	**20 37 50.4**	**-0.3**
SVE				pmax	pmax		
	comp=Z,148nm,1.4s						
KDAK	**Kodiak Island**	**86.05**	**31**	P	**P**	**20 37 52.9**	**-0.1**
	comp=Z,45nm,0.7s,baz=275,slow=1.4,SNR=12						
KDAK	**Kodiak Island**	**86.05**	**31**	P	**P**	**20 37 52.0**	**-1.0**
KDAK				IAmb	IAmb	20 37 55.8	
	comp=Z,99nm,1.0s						
TTA	**Tatalina**	**86.08**	**26**	P	**P**	**20 37 53.3**	**+0.1**
TTA				pmax	pmax		
	comp=Z,121nm,1.4s						
TTA				MLR	MLR		
	comp=Z,1µm,20.0s						
TTA	**Tatalina**	**86.08**	**26**	P	**P**	**20 37 53.3**	**+0.1**
TTA				IAmb	IAmb	20 38 01.0	
	comp=Z,121nm,1.4s						
TTA				IAMs_20	IAMs_20	21 14 02.0	
	comp=Z,1µm,20.0s						
SYO	**Syowa Base**	**86.33**	**201**	⇓*e*P	**P**	**20 37 55.4**	**+1.2**
SYO	**Syowa Base**	**86.33**	**201**	⇑*e*pP	pP	20 38 00.2	-0.9
ARU	**Arti**	**86.58**	**327**	P	**P**	**20 37 55.0**	**-0.6**
	comp=Z,7.7nm,0.8s,baz=134,slow=3.7,SNR=20						
ARU	**Arti**	**86.58**	**327**	*d i*P	**P**	**20 37 54.6**	**-1.0**
ARU						20 41 15.9	
ARU				S	S	20 48 19.6	-11
ARU				pmax	pmax		
	comp=Z,33nm,0.9s						
ARU	**Arti**	**86.58**	**327**	P	**P**	**20 37 54.1**	**-1.5**
HOM	**Homer**	**87.06**	**29**	P	**P**	**20 37 56.0**	**-1.9**
	baz=254						
BRLK	**Bradley Lake**	**87.46**	**29**	P	**P**	**20 37 59.9**	**0.0**
BRLK				IAmb	IAmb	20 38 09.2	
	comp=Z,63nm,1.0s						
PPLA	**Purkeypile**	**87.73**	**26**	P	**P**	**20 38 01.0**	**-0.2**
SKT	**Skwentna**	**87.76**	**27**	P	**P**	**20 37 59.7**	**-1.6**
SKT				IAmb	IAmb	20 38 07.3	
	comp=Z,82nm,1.3s						
SUA	**Susitna One**	**87.98**	**28**	P	**P**	**20 38 02.1**	**-0.4**
O22K	**Cooper Landing**	**88.21**	**29**	P	**P**	**20 38 02.6**	**-0.8**
	baz=255						
O22K	**Cooper Landing**	**88.21**	**29**	P	**P**	**20 38 02.6**	**-0.8**
SEW	**Seward**	**88.24**	**29**	P	**P**	**20 38 03.7**	**+0.2**
SEW				IAMs_20	IAMs_20	21 12 13.7	
	comp=Z,1µm,21.0s						
RC01	**Rabbit Creek A**	**88.35**	**28**	P	**P**	**20 38 03.6**	**-0.5**
	baz=255,SNR=20						
CUT	**Chulitna**	**88.45**	**27**	P	**P**	**20 38 03.5**	**-0.9**
	baz=255,SNR=6.2						
KTH	**Kantishna Hill**	**88.47**	**26**	P	**P**	**20 38 04.7**	**0.0**
KTH				IAmb	IAmb	20 38 11.3	
	comp=Z,101nm,1.5s						
BPAW	**Bear Paw Mtn.**	**88.59**	**25**	P	**P**	**20 38 05.0**	**-0.2**
BPAW				IAmb	IAmb	20 38 15.1	
	comp=Z,89nm,1.6s						
BPAW				IAMs_20	IAMs_20	21 15 39.2	
	comp=Z,997nm,20.0s						
TRF	**Thorofare Moun**	**88.71**	**26**	P	**P**	**20 38 05.7**	**-0.3**
TRF				IAmb	IAmb	20 38 15.2	
	comp=Z,102nm,1.7s						
PMR	**Palmer**	**88.76**	**28**	P	**P**	**20 38 05.8**	**-0.2**
PMR	**Palmer**	**88.76**	**28**	P	**P**	**20 38 05.8**	**-0.2**
A21K	**Barrow**	**88.84**	**18**	P	**P**	**20 38 05.4**	**-0.7**
	baz=249,SNR=9.7						
A21K	**Barrow**	**88.84**	**18**	P	**P**	**20 38 05.8**	**-0.3**
A21K				IAmb	IAmb	20 38 24.2	
	comp=Z,50nm,0.6s						
GHO	**Glory Hole Cre**	**88.90**	**28**	P	**P**	**20 38 06.6**	**-0.2**
GHO				IAmb	IAmb	20 38 27.8	
	comp=Z,115nm,1.5s						
GHO				IAMs_20	IAMs_20	21 20 44.5	
	comp=Z,1µm,19.0s						
RKT	**Rikitea**	**88.91**	**113**	*e*LR	LR	21 06 22.9	
	comp=Z,1µm,26.8s						
MLY	**Manley**	**88.94**	**24**	P	**P**	**20 38 06.3**	**-0.6**
	baz=254,SNR=15						
KNK	**Knik Glacier**	**89.03**	**28**	P	**P**	**20 38 07.5**	**+0.2**
KNK				IAMs_20	IAMs_20	21 15 35.0	
	comp=Z,1µm,19.0s						
SML	**Sawmill**	**89.18**	**28**	P	**P**	**20 38 08.4**	**+0.4**
BWN	**Browne**	**89.25**	**25**	P	**P**	**20 38 08.2**	**-0.1**
BWN				IAmb	IAmb	20 38 18.1	
	comp=Z,100nm,1.2s						
RND	**Reindeer**	**89.33**	**26**	P	**P**	**20 38 07.7**	**-1.0**
RND				pmax	pmax		
	comp=Z,66nm,1.2s						
RND				MLR	MLR		
	comp=Z,1µm,20.0s						
RND	**Reindeer**	**89.33**	**26**	P	**P**	**20 38 07.7**	**-1.0**
RND				IAmb	IAmb	20 38 18.5	
	comp=Z,66nm,1.2s						
MCK	**McKinley**	**89.37**	**26**	P	**P**	**20 38 07.8**	**-1.0**
	baz=256,SNR=12						
NEA2	**Nenana**	**89.52**	**25**	P	**P**	**20 38 08.9**	**-0.6**
	baz=256,SNR=7.1						
I23K	**Minto, Yukon-K**	**89.54**	**24**	P	**P**	**20 38 09.2**	**-0.3**
	baz=256,SNR=17						
I23K	**Minto, Yukon-K**	**89.54**	**24**	P	**P**	**20 38 09.6**	**+0.1**
I23K				IAmb	IAmb	20 38 11.6	
	comp=Z,79nm,1.4s						
GLI	**Glacier Island**	**89.56**	**29**	P	**P**	**20 38 10.2**	**+0.4**
Q23K	**Middleton Isla**	**89.62**	**30**	P	**P**	**20 38 09.4**	**-0.6**
	baz=258						
SCM	**Sheep Creek Mo**	**89.65**	**28**	P	**P**	**20 38 10.1**	**-0.2**
SCM				pmax	pmax		
	comp=Z,144nm,1.4s						
SCM	**Sheep Creek Mo**	**89.65**	**28**	P	**P**	**20 38 10.1**	**-0.2**
SCM				IAmb	IAmb	20 38 18.6	
	comp=Z,144nm,1.4s						
COLD	**Coldfoot**	**89.74**	**22**	P	**P**	**20 38 09.7**	**-0.8**
	baz=255,SNR=24						
COLD	**Coldfoot**	**89.74**	**22**	P	**P**	**20 38 10.4**	**-0.1**
HIN	**Hinchinbrook I**	**89.74**	**29**	IAMs_20	IAMs_20	21 13 51.6	
	comp=Z,2µm,22.0s						
FID	**Port Fidalgo**	**89.83**	**29**	P	**P**	**20 38 11.3**	**+0.3**
FID				IAmb	IAmb	20 38 18.2	
	comp=Z,69nm,1.2s						
FID				IAMs_20	IAMs_20	21 14 50.4	
	comp=Z,1µm,19.0s						
WRH	**Wood River Hil**	**89.90**	**25**	P	**P**	**20 38 10.2**	**-1.1**
WRH				IAmb	IAmb	20 38 12.3	
	comp=Z,63nm,1.5s						
MDM	**Murphy Dome**	**89.96**	**25**	P	**P**	**20 38 10.7**	**-0.9**
CCB	**Clear Creek Bu**	**90.06**	**25**	P	**P**	**20 38 10.4**	**-1.6**
TCOL	**CIGO, UAF Yank**	**90.09**	**25**	P	**P**	**20 38 11.4**	**-0.7**
	baz=257						
TCOL	**CIGO, UAF Yank**	**90.09**	**25**	P	**P**	**20 38 10.2**	**-1.9**
COLA	**College**	**90.09**	**25**	*i* P	**P**	**20 38 10.6**	**-1.5**
COLA				pmax	pmax		
	comp=Z,11nm,1.0s						
COLA	**College**	**90.09**	**25**	P	**P**	**20 38 10.2**	**-1.9**
EYAK	**Cordova Ski Ar**	**90.14**	**29**	P	**P**	**20 38 12.2**	**-0.2**
KLU	**Klutina**	**90.24**	**28**	P	**P**	**20 38 13.7**	**+0.6**
KLU				IAmb	IAmb	20 38 21.6	
	comp=Z,65nm,1.4s						
KLU				IAMs_20	IAMs_20	21 18 14.9	
	comp=Z,1000nm,20.0s						
M24K	**Tolsona, Glenn**	**90.24**	**28**	P	**P**	**20 38 12.3**	**-0.7**
	baz=258						
M24K	**Tolsona, Glenn**	**90.24**	**28**	P	**P**	**20 38 13.6**	**+0.5**
M24K				IAmb	IAmb	20 38 50.5	
	comp=Z,55nm,1.0s						
POKR	**Poker Plat Res**	**90.32**	**25**	P	**P**	**20 38 11.9**	**-1.3**
	baz=257						
TOLK	**Toolik Lake Re**	**90.33**	**21**	P	**P**	**20 38 12.3**	**-1.0**
	baz=255,SNR=10						
TOLK	**Toolik Lake Re**	**90.33**	**21**	P	**P**	**20 38 12.6**	**-0.7**
HDA	**Harding Lake**	**90.37**	**25**	P	**P**	**20 38 12.0**	**-1.4**
	baz=258,SNR=8.6						
HDA	**Harding Lake**	**90.37**	**25**	P	**P**	**20 38 12.1**	**-1.4**
HDA				IAMs_20	IAMs_20	21 17 51.4	
	comp=Z,941nm,18.0s						
IL31		**90.47**	**25**	P	**P**	**20 38 11.9**	**-2.0**
ILAR	**Eielson Array**	**90.47**	**25**	P	**P**	**20 38 12.7**	**-1.3**
	comp=Z,7.9nm,0.7s,baz=268,slow=3.9,SNR=64						
ILAR				PKKPbc	**PKKPdf**	**20 55 42.6**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=11,slow=1.8,SNR=10						
ILAR				LR	LR	21 16 48.4	
	comp=Z,533nm,20.3s,baz=260,slow=34						
ILAR	**Eielson Array**	**90.47**	**25**	P	**P**	**20 38 11.6**	**-2.3**
IL18	**Eielson Array**	**90.52**	**25**	P	**P**	**20 38 12.0**	**-2.2**
RAYN	**Ar Rayn**	**90.70**	**293**	*i* P	**P**	**20 38 16.7**	**+0.7**
	SNR=26						
RAYN	**Ar Rayn**	**90.70**	**293**	P	**P**	**20 38 16.0**	**0.0**
RAYN				pmax	pmax		
	comp=Z,79nm,1.5s						
RAYN				MLR	MLR		
	comp=Z,1µm,22.0s						
RAYN	**Ar Rayn**	**90.70**	**293**	P	**P**	**20 38 15.9**	**0.0**
RAYN				IAmb	IAmb	20 38 35.0	
	comp=Z,78nm,1.4s						
RAYN				IAMs_20	IAMs_20	21 19 07.3	
	comp=Z,1µm,22.0s						
PAX	**Paxson**	**90.73**	**27**	P	**P**	**20 38 15.1**	**-0.2**
PAX				MLR	MLR		
	comp=Z,900nm,20.0s						
PAX	**Paxson**	**90.73**	**27**	P	**P**	**20 38 15.1**	**-0.2**
N25K	**Chitina, Valde**	**90.88**	**28**	P	**P**	**20 38 15.2**	**-0.9**
	baz=260						
N25K	**Chitina, Valde**	**90.88**	**28**	P	**P**	**20 38 16.1**	**+0.1**
MAK	**Makhachkala**	**91.11**	**313**	*e*P	**P**	**20 38 13.9**	**-3.5**
MAK				*e*		20 48 42.9	
MAK				*e*SS	SS	20 55 12.4	-6.0
MAK				pmax	pmax		
	comp=Z,947nm,2.1s						
RIDG	**Independent Ri**	**91.15**	**26**	P	**P**	**20 38 16.7**	**-0.5**
RIDG				IAmb	IAmb	20 38 23.6	
	comp=Z,38nm,1.1s						
RIDG				IAMs_20	IAMs_20	21 17 34.0	
	comp=Z,985nm,20.0s						
GLB	**Gilahina Butte**	**91.23**	**28**	P	**P**	**20 38 16.6**	**-1.0**
GLB				IAmb	IAmb	20 38 26.9	
	comp=Z,91nm,1.6s						
GLB				IAMs_20	IAMs_20	21 14 54.0	
	comp=Z,970nm,20.0s						
CRQM	**Cirque**	**91.44**	**29**	P	**P**	**20 38 19.8**	**+1.0**
CRQM				IAmb	IAmb	20 38 29.2	
	comp=Z,35nm,0.9s						
DOT	**Dot Lake**	**91.48**	**26**	P	**P**	**20 38 18.4**	**-0.2**
DOT				IAMs_20	IAMs_20	21 17 35.5	
	comp=Z,1µm,21.0s						
FYU	**Fort Yukon**	**91.50**	**23**	P	**P**	**20 38 18.7**	**+0.1**
FYU				IAmb	IAmb	20 38 29.5	
	comp=Z,124nm,1.5s						
MENT	**Mentasta**	**91.51**	**27**	P	**P**	**20 38 20.1**	**+1.3**
SCRK	**Sand Creek**	**91.56**	**26**	P	**P**	**20 38 18.2**	**-1.0**
	baz=260						
TGL	**Tana Glacier**	**91.59**	**29**	P	**P**	**20 38 20.1**	**+0.7**
TGL				IAmb	IAmb	20 38 29.8	
	comp=Z,94nm,1.4s						
MCARA	**McCarthy VSAT**	**91.59**	**29**	IAMs_20	IAMs_20	21 17 10.7	
	comp=Z,1µm,22.0s						
L26K	**Log Cabin Wild**	**91.69**	**27**	P	**P**	**20 38 19.1**	**-0.6**
	baz=261						
ISLE	**Juniper Island**	**91.81**	**29**	IAMs_20	IAMs_20	21 15 57.4	
	comp=Z,1µm,21.0s						
KIRV	**Kirov**	**91.84**	**329**	P	**P**	**20 38 19.4**	**-1.0**
	comp=Z,15nm,0.9s,baz=221,slow=4.4,SNR=7.0						
KIRV	**Kirov**	**91.84**	**329**	*ce*P	**P**	**20 38 18.9**	**-1.5**
BALM	**Baldy**	**91.87**	**29**	P	**P**	**20 38 20.9**	**+0.3**
BALM				IAmb	IAmb	20 38 40.3	
	comp=Z,39nm,1.3s						
MESA	**MESA**	**91.94**	**30**	IAMs_20	IAMs_20	21 20 16.9	
	comp=Z,1µm,19.0s						
ATD	**Arta Tunnel**	**92.08**	**281**	P	**P**	**20 38 22.3**	**-0.3**
	comp=Z,14nm,0.9s,baz=92,slow=5.7,SNR=3.2						
ATD	**Arta Tunnel**	**92.08**	**281**	P	**P**	**20 38 23.8**	**+1.2**
BELG	**Belogornoye**	**92.10**	**322**	P	**P**	**20 38 20.5**	**-1.2**
	comp=Z,50nm,0.9s,baz=82,slow=1.9,SNR=11						
BARN	**Barnard Glacie**	**92.20**	**29**	P	**P**	**20 38 23.2**	**+0.9**
BARN				IAmb	IAmb	20 38 31.3	
	comp=Z,53nm,1.2s						
CTGM	**Chitina Glacie**	**92.34**	**29**	P	**P**	**20 38 24.5**	**+1.6**
CTGM				IAmb	IAmb	20 38 33.3	
	comp=Z,49nm,1.0s						
TABL	**Table Mountain**	**92.37**	**30**	P	**P**	**20 38 23.8**	**+0.6**
TABL				IAmb	IAmb	20 38 26.9	
	comp=Z,43nm,0.9s						
TABL				IAMs_20	IAMs_20	21 18 07.3	
	comp=Z,928nm,20.0s						
GROC	**Groznyy**	**92.38**	**313**	*e*P	**P**	**20 38 21.9**	**-1.4**
GNI	**Garni**	**92.89**	**310**	*i* P	**P**	**20 38 25.1**	**-0.9**
GNI				pmax	pmax		
	comp=Z,24nm,1.1s						
EGAK	**Eagle**	**92.90**	**25**	P	**P**	**20 38 24.6**	**-0.5**
DAWY	**Dawson**	**93.58**	**26**	P	**P**	**20 38 28.9**	**+0.5**
DAWY				IAmb	IAmb	20 38 35.7	
	comp=Z,32nm,1.2s						
ZEI	**Tsey**	**93.73**	**312**	*e*P	**P**	**20 38 28.7**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,31nm,1.4s						
NCK	**Nalchik**	**94.00**	**313**	*i* P	**P**	**20 38 29.3**	**-1.5**
NCK				pmax	pmax		
	comp=Z,11nm,0.8s						
GEVA	**Gevas**	**94.06**	**308**	P	**P**	**20 38 30.5**	**-0.8**
GEVA				IAmb	IAmb	20 38 50.5	
	comp=Z,113nm,1.9s						
HYT	**Haines Junctio**	**94.19**	**29**	P	**P**	**20 38 31.0**	**-0.4**
KBZ	**Khabaz**	**94.53**	**313**	P	**P**	**20 38 32.5**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=126,slow=4.1,SNR=8.6						
KIV	**Kislovodsk**	**94.69**	**314**	*e*P	**P**	**20 38 33.2**	**-0.8**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
NVL	**N'lazarevskaya**	**94.77**	**196**	*e*P	**P**	**20 38 32.8**	**-0.9**
NVL				*e*S	**SKSac**	**20 49 00.6**	**-6.8**
NVL				pmax	pmax		
	comp=Z,26nm,1.1s						
NVL				MLR	MLR		
	comp=Z,4µm,19.0s						
BESE	**Bessie Mountai**	**95.42**	**32**	P	**P**	**20 38 38.0**	**+1.0**
WHY	**Whitehorse**	**95.47**	**30**	P	**P**	**20 38 35.5**	**-1.8**
JIS	**Juneau Island**	**95.66**	**32**	P	**P**	**20 38 37.8**	**-0.1**
JIS				IAmb	IAmb	20 38 40.7	
	comp=Z,34nm,1.1s						
VRH	**Novokhopyorsk**	**95.67**	**321**	*e*P	**P**	**20 38 35.6**	**-2.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KOPT	**Kop Dagi**	**96.14**	**310**	P	**P**	**20 38 39.9**	**-1.1**
INK	**Inuvik**	**96.15**	**22**	P	**P**	**20 38 38.7**	**-1.3**
	comp=Z,18nm,1.1s,baz=261,slow=5.5,SNR=15						
INK				PP	**PP**	**20 42 32.0**	**-0.9**
	comp=Z,10nm,1.1s,baz=271,slow=6.6,SNR=5.2						
INK	**Inuvik**	**96.15**	**22**	P	**P**	**20 38 38.0**	**-1.9**
BELA	**Belgrano 2**	**96.39**	**182**	P	**P**	**20 38 41.0**	**0.0**
KMBO	**Kilima Mbogo**	**96.46**	**268**	P	**P**	**20 38 43.8**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=49,slow=11,SNR=5.0						
SOC	**Sochi**	**96.83**	**313**	*e*P	**P**	**20 38 41.7**	**-1.9**
SOC				*e*		20 42 35.5	
SOC				*e*		20 49 17.3	
SOC				*e*SSS	SSS	21 00 22.5	
KLMR	**Klimovskoe**	**96.98**	**331**	*e*P	**P**	**20 38 40.8**	**-3.1**
KLMR				*e*		20 42 37.6	
KLMR				pmax	pmax		
	comp=Z,97nm,1.5s						
KLMR	**Klimovskoe**	**96.98**	**331**	*e*P	**P**	**20 38 40.8**	**-3.1**
KLMR				AMP		20 38 49.7	
	comp=Z,97nm,1.5s						
KLMR				*e*PP	**PP**	**20 42 37.6**	**-1.9**
VORD	**Divnogorie**	**97.19**	**321**	*e*P	**P**	**20 38 43.5**	**-1.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	**Galich'ya Gora**	**97.41**	**322**	*e*P	**P**	**20 38 44.7**	**-1.4**
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
TMCR	**Tamitsa**	**97.56**	**334**	*e*P	**P**	**20 38 43.2**	**-3.2**
TMCR				pmax	pmax		
	comp=Z,38nm,1.3s						
SNAA	**Sanae**	**97.87**	**193**	P	Pdif	20 38 48.9	+0.9
SNAA	**Sanae**	**97.87**	**193**	P	Pdif	20 38 48.7	+0.7
SNAA				pmax	pmax		
	comp=Z,23nm,1.1s						
SNAA				MLR	MLR		
	comp=Z,3µm,21.0s						
SNAA	**Sanae**	**97.87**	**193**	P	Pdif	20 38 48.7	+0.7
SNAA				IAmb	IAmb	20 39 07.6	
	comp=Z,23nm,1.1s						
DLBC	**Dease Lake**	**97.96**	**32**	P	Pdif	20 38 48.6	+0.1
	comp=Z,1.6nm,0.3s,baz=144,slow=14,SNR=3.8						
DLBC	**Dease Lake**	**97.96**	**32**	P	**P**	**20 38 47.3**	**-1.2**
MOS	**Moscow**	**98.11**	**325**	*e*P	**P**	**20 38 45.9**	**-3.2**
MOS				*e*		20 42 49.4	
MOS				pmax	pmax		
	comp=Z,44nm,1.5s						
ANN	**Anapa**	**98.48**	**314**	*e*P	**P**	**20 38 50.4**	**-0.6**
ANN				pmax	pmax		
	comp=Z,113nm,1.1s						
OBN	**Obninsk**	**98.74**	**325**	P	Pdif	20 38 52.2	+0.3
	comp=Z,1.8nm,0.5s,baz=74,slow=7.4,SNR=1.6						
OBN	**Obninsk**	**98.74**	**325**	⇑*e*P	**P**	**20 38 49.4**	**-2.5**
OBN				*e*		20 42 51.4	
OBN				*e*S	**SKSac**	**20 49 32.5**	**+4.1**
OBN				pmax	pmax		
	comp=Z,28nm,1.8s						
APA	**Apatity**	**99.14**	**338**	⇓*i*P	**Pdif**	**20 38 49.8**	**-3.7**
APA				*i*		20 42 56.0	
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,27.0s						
VNA2	**Neumayer--Watz**	**99.41**	**192**	Pdiff	**Pdif**	**20 38 55.7**	**+1.0**
	baz=146,slow=3.8						
C36M	**Paulatuk**	**99.48**	**21**	P	**Pdif**	**20 38 53.8**	**-1.2**
	baz=279						
C36M	**Paulatuk**	**99.48**	**21**	P	**Pdif**	**20 38 53.2**	**-1.7**
C36M				IAmb	IAmb	20 39 00.9	
	comp=Z,49nm,1.7s						
C36M				IAMs_20	IAMs_20	21 17 55.0	
	comp=Z,794nm,19.0s						
VNA3	**Neumayer Olymp**	**99.61**	**191**	Pdiff	**Pdif**	**20 38 55.1**	**-0.5**
VNA1	**Neumayer--Stat**	**99.80**	**192**	Pdiff	**Pdif**	**20 38 56.7**	**+0.3**
VNA1	**Neumayer--Stat**	**99.80**	**192**	sP	sP	20 39 05.3	-0.7
SPITS	**Spitsbergen Ar**	**100.94**	**349**	P	**Pdif**	**20 39 00.6**	**-0.7**
	comp=Z,7.0nm,0.9s,baz=86,slow=14,SNR=2.2						
BRTR	**Keskin Array B**	**101.41**	**309**	P	**Pdif**	**20 39 04.0**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=130,slow=6.7,SNR=7.9						
BRTR	**Keskin Array B**	**101.41**	**309**	P	**Pdif**	**20 39 04.0**	**-0.5**
ARCES	**ARCESS Array B**	**101.60**	**340**	P	**Pdif**	**20 39 04.0**	**-0.5**
	comp=Z,9.4nm,1.0s,baz=76,slow=5.1,SNR=16						
ARCES	**ARCESS Array B**	**101.60**	**340**	P	**Pdif**	**20 39 04.0**	**-0.5**
ARCES	**ARCESS Array B**	**101.60**	**340**		**Pdif**	**20 39 03.8**	**-0.7**
NLWA	**Neilton Lookou**	**102.42**	**43**	IAMs_20	IAMs_20	21 16 50.7	
	comp=Z,1µm,21.0s						
E03A	**Lebam**	**102.71**	**44**	IAMs_20	IAMs_20	21 16 13.3	
	comp=Z,1µm,21.0s						
FINES	**FINESS Array B**	**103.36**	**332**	Pdiff	**Pdif**	**20 39 11.7**	**-0.7**
	comp=Z,10nm,1.0s,baz=72,slow=6.2,SNR=7.5						
FINES				PKiKP	**PKiKP**	**20 43 32.8**	**+1.4**
	comp=Z,4.5nm,1.0s,baz=90,slow=0.4,SNR=4.1						
E04D	**Cinebar**	**103.39**	**44**	P	**Pdif**	**20 39 11.1**	**-1.7**
	baz=276						
H04D	**Lebanon**	**103.47**	**46**	P	**Pdif**	**20 39 11.6**	**-1.7**
	baz=275						
HUMO	**Hull Mountain**	**103.49**	**48**	IAMs_20	IAMs_20	21 23 40.2	
	comp=Z,941nm,20.0s						
AKASG	**Malin Array Be**	**103.58**	**321**	Pdiff	**Pdif**	**20 39 12.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=68,slow=4.8,SNR=6.0						
M02C	**Callahan**	**103.66**	**49**	P	**Pdif**	**20 39 11.9**	**-2.5**
	baz=275						
YBH	**Yreka Blue Hor**	**103.74**	**49**	Pdiff	**Pdif**	**20 39 15.2**	**+0.5**
	comp=Z,3.1nm,1.0s,baz=285,slow=2.7,SNR=2.5						
YBH	**Yreka Blue Hor**	**103.74**	**49**	IAMs_20	IAMs_20	21 22 35.0	
	comp=Z,967nm,21.0s						
I04A	**Tendick Farm,**	**103.78**	**46**	P	**Pdif**	**20 39 12.4**	**-2.4**
	baz=276						
O02D	**Mt. Diablo Mer**	**103.81**	**50**	P	**Pdif**	**20 39 12.9**	**-2.1**
	baz=274						
N02D	**Trinity Center**	**103.81**	**49**	P	**Pdif**	**20 39 13.4**	**-1.6**
	baz=275						
LON	**Longmire**	**103.89**	**43**	IAMs_20	IAMs_20	21 20 19.5	
	comp=Z,981nm,20.0s						
B06A	**Marblemount**	**103.89**	**41**	IAMs_20	IAMs_20	21 22 59.5	
	comp=Z,854nm,18.0s						
GDXM	**Geysers**	**103.90**	**52**	IAMs_20	IAMs_20	21 23 54.4	
	comp=Z,1µm,18.0s						
L04D	**Klamath Falls**	**104.00**	**48**	P	**Pdif**	**20 39 14.1**	**-1.8**
	baz=275						
J04D	**Umpqua Nationa**	**104.05**	**47**	P	**Pdif**	**20 39 13.9**	**-2.2**
	baz=276						
M04C	**Macdoel**	**104.39**	**48**	P	**Pdif**	**20 39 16.1**	**-1.5**
	baz=275						
LTY	**Liberty**	**104.60**	**43**	IAMs_20	IAMs_20	21 18 01.4	
	comp=Z,1µm,22.0s						
J05D	**Fort Rock, OR**	**104.68**	**47**	P	**Pdif**	**20 39 17.3**	**-1.6**
	baz=276						
YKA	**Yellowknife Ar**	**104.82**	**27**	Pdiff	**Pdif**	**20 39 18.5**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=298,slow=4.6,SNR=8.5						
YKA				PKiKP	**PKiKP**	**20 43 34.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=284,slow=4.3,SNR=3.6						
YKA				PKKPbc	**PKKPbc**	**20 55 02.4**	**-2.3**
	comp=Z,0.9nm,0.8s,baz=99,slow=3.7,SNR=8.5						
SAO	**San Andreas Ge**	**105.11**	**54**	IAMs_20	IAMs_20	21 23 33.6	
	comp=Z,1µm,22.0s						
B08A	**Colville Reser**	**105.33**	**41**	Pdif	**Pdif**	**20 39 21.5**	**0.0**
B08A				IAMs_20	IAMs_20	21 27 21.6	
	comp=Z,859nm,19.0s						
HAWA	**Hanford**	**105.49**	**43**	IAMs_20	IAMs_20	21 23 46.0	
	comp=Z,1µm,18.0s						
RES	**Resolute Bay**	**105.55**	**12**	Pdiff	**Pdif**	**20 39 21.5**	**-0.3**
	comp=Z,2.6nm,1.0s,baz=300,slow=7.3,SNR=7.8						
RES				PKiKP	**PKiKP**	**20 43 35.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=203,slow=4.5,SNR=6.2						
RES	**Resolute Bay**	**105.55**	**12**	P	**Pdif**	**20 39 21.9**	**+0.1**
RES	**Resolute Bay**	**105.55**	**12**	Pdif	**Pdif**	**20 39 21.9**	**+0.1**
PMPB	**Monarch Peak**	**105.67**	**54**	IAMs_20	IAMs_20	21 23 48.5	
	comp=Z,988nm,20.0s						
BEKR	**Beckworth**	**105.69**	**50**	Pdif	**Pdif**	**20 39 22.7**	**-0.8**
BEKR				IAMs_20	IAMs_20	21 21 57.7	
	comp=Z,822nm,19.0s						
E08A	**Dider Farm, El**	**105.80**	**43**	IAMs_20	IAMs_20	21 18 36.2	
	comp=Z,1µm,21.0s						
D08A	**Wollman Farm,**	**105.81**	**43**	IAMs_20	IAMs_20	21 21 13.3	
	comp=Z,980nm,20.0s						
I07A	**Izee**	**105.83**	**46**	IAMs_20	IAMs_20	21 27 26.1	
	comp=Z,787nm,20.0s						
CMB	**Columbia Colle**	**105.85**	**52**	IAMs_20	IAMs_20	21 26 59.0	
	comp=Z,951nm,19.0s						
RUBR	**Rubicon Trail**	**105.93**	**51**	IAMs_20	IAMs_20	21 20 50.1	
	comp=Z,819nm,22.0s						
C09A	**Chrisman Ranch**	**106.12**	**42**	IAMs_20	IAMs_20	21 21 25.6	
	comp=Z,1µm,21.0s						
E09A	**Wood Farm, Sta**	**106.42**	**43**	IAMs_20	IAMs_20	21 18 42.6	
	comp=Z,1µm,22.0s						
MLR	**Muntele Rosu**	**106.52**	**316**	Pdiff	**Pdif**	**20 39 26.8**	**-0.1**
	comp=Z,5.8nm,0.9s,baz=140,slow=2.8,SNR=5.3						
MLR	**Muntele Rosu**	**106.52**	**316**	P	**Pdif**	**20 39 26.6**	**-0.4**
MLR	**Muntele Rosu**	**106.52**	**316**	Pdif	**Pdif**	**20 39 26.6**	**-0.4**
WAKR	**Walker**	**106.55**	**52**	IAMs_20	IAMs_20	21 25 57.4	
	comp=Z,1µm,20.0s						
BURAR	**Bucovina Array**	**106.66**	**318**	Pdif	**Pdif**	**20 39 27.7**	**+0.2**
BUR08	**Bucovina Ar. S**	**106.66**	**318**	Pdif	**Pdif**	**20 39 27.7**	**+0.1**
WVOR	**Wild Horse Val**	**106.68**	**47**	IAMs_20	IAMs_20	21 26 01.7	
	comp=Z,883nm,20.0s						
OMMB	**Old Mammoth Mi**	**106.98**	**53**	IAMs_20	IAMs_20	21 27 25.0	
	comp=Z,903nm,19.0s						
RYN	**Ryan**	**107.24**	**51**	IAMs_20	IAMs_20	21 26 02.9	
	comp=Z,976nm,20.0s						
LHV	**Little Huntoon**	**107.30**	**52**	IAMs_20	IAMs_20	21 28 46.4	
	comp=Z,929nm,20.0s						
NVAR	**Mina Array Bea**	**107.44**	**52**	Pdiff	**Pdif**	**20 39 35.3**	**+3.9**
	comp=Z,6.1nm,1.1s,baz=261,slow=4.5,SNR=16						
NVAR				PKKP	**PKKPab**	**20 55 10.5**	**+0.9**
	comp=Z,2.0nm,1.0s,baz=109,slow=4.2,SNR=6.2						
NVAR	**Mina Array Bea**	**107.44**	**52**		**Pdif**	**20 39 32.9**	**+1.5**
OSI	**Osito Audit: C**	**107.50**	**56**	IAMs_20	IAMs_20	21 21 45.0	
	comp=Z,997nm,20.0s						
NV11	**Mina Array Sit**	**107.55**	**52**	IAMs_20	IAMs_20	21 27 08.1	
	comp=Z,1µm,19.0s						
ISA	**Isabella, Lake**	**107.61**	**54**	IAMs_20	IAMs_20	21 26 05.7	
	comp=Z,1µm,20.0s						
JTMT	**Jette**	**108.78**	**41**	IAMs_20	IAMs_20	21 20 30.7	
	comp=Z,1µm,22.0s						
GSC	**Goldstone, Bar**	**109.00**	**55**	IAMs_20	IAMs_20	21 25 32.5	
	comp=Z,954nm,20.0s						
109C	**Camp Elliot, M**	**109.01**	**57**	IAMs_20	IAMs_20	21 20 45.9	
	comp=Z,1µm,20.0s						
MSO	**Missoula**	**109.20**	**42**	IAMs_20	IAMs_20	21 23 40.1	
	comp=Z,1µm,20.0s						
TPNV	**Topopah Spring**	**109.24**	**53**	P	**PKiKP**	**20 43 42.4**	**-0.8**
	baz=278						
TPNV	**Topopah Spring**	**109.24**	**53**	IAMs_20	IAMs_20	21 25 53.8	
	comp=Z,964nm,20.0s						
HEC	**Hector,Ludlow**	**109.44**	**55**	P	**PKiKP**	**20 43 41.7**	**-1.9**

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      baz=277
ELK   Elko             109.45  49  IAMs_20 IAMs_20 21 25 45.2
      comp=Z,842nm,21.0s
TKX   Tecate           109.46  58  IAMs_20 IAMs_20 21 18 45.0
      comp=Z,768nm,19.0s
PFO   Pinyon Flats O   109.47  56  P       PKiKP   20 43 41.5 -2.2
      baz=276
PFO   Pinyon Flats O   109.47  56  IAMs_20 IAMs_20 21 26 39.3
      comp=Z,1µm,20.0s
XPFO  Pion Flat        109.48  56  IAMs_20 IAMs_20 21 26 39.3
      comp=Z,1µm,20.0s
TPFO  Pinon Flats      109.48  56  P       PKiKP   20 43 41.6 -2.1
      baz=276
CCX   Cicese           109.48  58  IAMs_20 IAMs_20 21 20 26.6
      comp=Z,835nm,22.0s
HLID  Hailey           109.55  46  P       PKiKP   20 43 42.0 -1.7
      baz=281
R11A  Troy Canyon, C   109.57  51  P       PKiKP   20 43 42.6 -1.2
      baz=278
R11A  Troy Canyon, C   109.57  51  IAMs_20 IAMs_20 21 29 52.3
      comp=Z,841nm,19.0s
MONP2 Monument Peak    109.58  57  P       PKiKP   20 43 43.1 -1.0
      baz=276
BELC  Belle Mtn. Jos   109.81  56  P       PKiKP   20 43 43.4 -1.0
      baz=277
ESJX  Sierra Juarez    110.07  58  IAMs_20 IAMs_20 21 20 57.3
      comp=Z,1µm,20.0s
SWSC  Sam W. Stewart   110.10  57  P       PKiKP   20 43 43.7 -1.0
      baz=276
PSZ   Piszkesteto      110.10 319 eP       PKiKP   20 43 46.2 +1.8
PRN   Pahroc Range     110.12  52  IAMs_20 IAMs_20 21 23 19.2
      comp=Z,652nm,18.0s
SHPR  Sheep Range      110.17  53  IAMs_20 IAMs_20 21 26 43.5
      comp=Z,1µm,19.0s
BC3   Big Chuckawall   110.30  56  P       PKiKP   20 43 44.9 -0.4
      baz=277
UABX  UABC, Campus M110.43     57  IAMs_20 IAMs_20 21 20 54.6
      comp=Z,1µm,22.0s
IRM   Iron Mountain    110.49  56  P       PKiKP   20 43 44.1 -1.4
      baz=277
GLA   Glamis           110.90  57  IAMs_20 IAMs_20 21 21 31.9
      comp=Z,928nm,20.0s
BOZ   Bozeman (W)      111.05  43  P       PKiKP   20 43 45.3 -1.1
      baz=284
MORC  Moravsky Berou   111.09 321 ePKIKP   PKiKP   20 43 47.1 +0.9
JAVC  Velka Javorina   111.28 321 ePKIKP   PKiKP   20 43 48.2 +1.6
MORH  Mrgy, Hungar     111.36 318 eP       PKiKP   20 43 47.8 +1.1
DUG   Dugway, Tooele   111.37  49  P       PKiKP   20 43 45.6 -1.5
      baz=281
DUG   Dugway, Tooele   111.37  49  IAMs_20 IAMs_20 21 24 22.0
      comp=Z,736nm,20.0s
EGMT  Eagleton         111.65  40  P       PKiKP   20 43 47.2 -0.2
      baz=286
DPC   Dobruska-Polom   111.67 322 ePKIKP   PKiKP   20 43 49.4 +2.1
DPC                               e                20 43 54.5
DPC   Dobruska-Polom   111.67 322 ePKP     PKiKP   20 43 49.4 +2.1
DPC                               epPKP    pPKiKP  20 43 54.5 -0.1
OSTC  Ostas            111.67 323 ePKP     PKiKP   20 43 48.8 +1.6
OSTC                              epPKP    pPKiKP  20 43 53.6 -0.9
VRAC  Vranov           111.82 321 ePKIKP   PKiKP   20 43 48.0 +0.5
MPLH  Magyarpolny      111.84 319 eP       PKiKP   20 43 47.5 -0.1
HWUT  Hardware Ranch   112.01  47  IAMs_20 IAMs_20 21 26 07.8
      comp=Z,951nm,21.0s
KRUC  Moravsky         112.02 321 ePKIKP   PKiKP   20 43 48.5 +0.6
FLWY  Flagg Ranch      112.06  45  IAMs_20 IAMs_20 21 29 15.8
      comp=Z,689nm,20.0s
H17A  Grant Village    112.07  44  IAMs_20 IAMs_20 21 29 21.1
      comp=Z,1µm,20.0s
MOOW  Moose Ponds      112.11  45  IAMs_20 IAMs_20 21 20 44.2
      comp=Z,799nm,22.0s
REDW  Red Top Meadow112.12     45  IAMs_20 IAMs_20 21 26 55.7
      comp=Z,954nm,21.0s
LOHW  Long Hollow      112.24  45  IAMs_20 IAMs_20 21 27 03.7
      comp=Z,895nm,21.0s
BEHE  Becsehely        112.54 318 eP       PKiKP   20 43 50.4 +1.5
CONA  Conrad Observa   112.71 320 eP       PKiKP   20 43 49.9 +0.5
      comp=Z,4.4nm,0.8s
214A  Organ Pipe Nat   112.73  58  IAMs_20 IAMs_20 21 21 08.5
      comp=Z,1µm,22.0s
RLMT  Red Lodge        112.78  43  P       PKiKP   20 43 49.3 -0.5
      baz=286
PRU   Pruhonice        112.87 322 ePKIKP   PKiKP   20 43 50.2 +0.7
PRU   Pruhonice        112.87 322 ePKP     PKiKP   20 43 50.2 +0.7
BRG   Berggiesshubel   112.93 323 e(P)     PKiKP   20 43 50.4 +0.8
BRG                                Amp             20 43 52.5
      comp=Z,16nm,1.4s
BRG                               ex       x       20 44 57.5
BRG                                Amp             20 44 59.4
      comp=Z,21nm,1.4s
BRG   Berggiesshubel   112.93 323 ePKIKP   PKiKP   20 43 50.3 +0.8
BRG                                pmax    pmax
      comp=Z,16nm,1.4s
BRG                                pmax    pmax
      comp=Z,21nm,1.4s
BRG   Berggiesshubel   112.93 323 e(P)     PKiKP   20 43 50.4 +0.8
BRG                                Amp             20 43 52.5
      comp=Z,16nm,1.4s
BRG                               ex       x       20 44 57.5
BRG                                Amp             20 44 59.4
      comp=Z,21nm,1.4s
SUMG  Summit           112.94 357 i PKIKP  PKiKP   20 43 50.0 +0.5
SUMG  Summit           112.94 357 i P      PKiKP   20 43 50.0 +0.5
SUMG  Summit           112.94 357 i P      PKiKP   20 43 50.0 +0.5
ARSA  Arzberg          113.13 319 eP       PKiKP   20 43 50.3 +0.2
      comp=Z,7.1nm,1.5s
BW06  Boulder Array    113.19  46  P       PKiKP   20 43 50.8 +0.2
      baz=284
PDAR  Pinedale Array   113.19  46  Pdiff   Pdif    20 39 58.8 +1.9
      comp=Z,0.1nm,0.3s,baz=311,slow=43,SNR=2.7
PDAR                               PKiKP   PKiKP   20 43 51.1 +0.5
      comp=Z,1.5nm,0.9s,baz=247,slow=1.1,SNR=9.3
PDAR  Pinedale Array   113.19  46          Pdif    20 39 58.3 +1.4
PDAR                               PKiKP   PKiKP   20 43 50.5 -0.1
CLL   Collm            113.32 324 ePKiKP   PKiKP   20 43 51.0 +0.7
CLL                               ePP      PP      20 44 40.0 -0.7
CLL   Collm            113.32 324 ePKIKP   PKiKP   20 43 51.0 +0.7
CLL                               e                20 44 40.0
WUAZ  Wupatki          113.36  54  P       PKiKP   20 43 49.7 -1.4
      baz=280
X16A  Lo Mia Camp, P   113.49  55  IAMs_20 IAMs_20 21 27 34.5
      comp=Z,1µm,20.0s
SOKA  Soboth           113.62 319 eP       PKiKP   20 43 51.6 +0.4
      comp=Z,10.0nm,1.3s
KHC   Kasperske Hory   113.75 322 ePKIKP   PKiKP   20 43 51.8 +0.5
KHC                               e                20 43 57.4
KHC   Kasperske Hory   113.75 322 ePKP     PKiKP   20 43 51.8 +0.5
KHC                               epPKP    PP      20 43 57.4  -47
KHC                               ex       x       20 44 08.5
GERES GERESS Array B 113.77   321  PKiKP   PKiKP   20 43 52.0 +0.6
      comp=Z,2.1nm,0.5s,baz=48,slow=2.0,SNR=12
GERES GERESS Array B 113.77   321 i PKIKP  PKiKP   20 43 52.0 +0.6
GERES GERESS Array B 113.77   321  PKiKP   PKiKP   20 43 51.0 -0.4
OBKA  Obir             114.00 319 eP       PKiKP   20 43 52.9 +1.0
      comp=Z,6.7nm,1.1s
LJU   Ljubljana        114.15 318 i PKPdf  PKiKP   20 43 52.2 +0.1
GBAS  Gorenja Brezov   114.24 318 ePKPdf   PKiKP   20 43 52.5 +0.2
LAO   LASA Array       114.35  41  P       PKPdf   20 43 52.2 -0.3
      baz=289
LAO   LASA Array       114.35  41  IAMs_20 IAMs_20 21 23 27.1
      comp=Z,848nm,20.0s
TUC   Tucson           114.38  57  IAMs_20 IAMs_20 21 22 22.1
      comp=Z,1µm,21.0s
MYKA  Terra Mystica    114.55 319 eP       PKiKP   20 43 52.9  0.0
      comp=Z,6.0nm,0.9s
VOJS  Vojsko           114.58 318 i PKPdf  PKiKP   20 43 53.0  0.0
KBA   Koelnbreinsper   114.59 320  P       PKPdf   20 43 53.9 +0.8
      comp=Z,8.6nm,0.9s
PV20  West Nyswonger 114.68    50  IAMs_20 IAMs_20 21 31 24.6
      comp=Z,855nm,21.0s
X18A  Snowflake        114.68  55  IAMs_20 IAMs_20 21 28 44.0
      comp=Z,1µm,21.0s
HSIG                   114.71  61  IAMs_20 IAMs_20 21 25 15.2
      comp=Z,969nm,19.0s
PV18  Skein Mesa, Pa   114.75  50  IAMs_20 IAMs_20 21 29 48.4
      comp=Z,806nm,21.0s
W18A  Petrified Fore   114.75  54  IAMs_20 IAMs_20 21 27 59.6
      comp=Z,818nm,20.0s
O20A  White River Ci   114.80  48  P       PKPdf   20 43 54.0 +0.2
      baz=284
GRF   Grafenberg Arr   114.98 323 ePKiKP   PKPdf   20 43 54.2 +0.7
      baz=68,slow=0.9
GRF                               ePP      PP      20 44 57.9 +5.3
      baz=73,slow=7.0
DGMT  Dagmar           115.03  39  IAMs_20 IAMs_20 21 27 17.9
      comp=Z,974nm,22.0s
ABTA  Abfaltersbach    115.24 320 i P      PKPdf   20 43 54.3  0.0
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      comp=Z,11nm,0.8s
STAL  STALIGIAL        115.28 319          PKiKP   20 43 54.0 -0.3
MVCO  Mesa Verde       115.29  51  P       PKiKP   20 43 54.3 -0.6
      baz=283
K22A  Casper           115.38  45  P       PKiKP   20 43 54.3 -0.5
      baz=287
FCC   Fort Churchill   115.49  25  PKIKP   PKiKP   20 43 53.3 -0.9
FCC   Fort Churchill   115.49  25          PKiKP   20 43 53.3 -0.9
WATA  Walderalm        115.64 320 eP       PKPdf   20 43 55.4 +0.4
      comp=Z,19nm,1.2s
319A  Douglas          115.79  58          PKPdf   20 43 53.9 -1.9
319A                               IAMs_20 IAMs_20 21 24 54.6
      comp=Z,997nm,20.0s
SQTA  Sankt Quirin     115.91 320 i P      PKPdf   20 43 55.9 +0.4
      comp=Z,19nm,1.2s
MOTA  Moosalm          115.93 321 eP       PKPdf   20 43 56.0 +0.3
      comp=Z,18nm,1.1s,SNR=7.3
SMCO  Snowmass         115.99  49          PKiKP   20 43 57.5 +1.2
CTI   Castel Tesino    116.05 319  PKIKP   PKPdf   20 43 52.7 -3.1
CTI   Castel Tesino    116.05 319          PKPdf   20 43 52.7 -3.1
RETA  Reutte           116.10 321 i P      PKiKP   20 43 56.1 +0.3
      comp=Z,14nm,1.3s
NRCA  Norcia           116.10 315          PKPdf   20 43 55.9 -0.2
TEOL  Teolo            116.27 318          PKiKP   20 43 56.2  0.0
FETA  Feichten         116.29 320 eP       PKiKP   20 43 57.0 +0.6
      comp=Z,16nm,1.2s,SNR=7.6
N23A  Red Feather La   116.29  47  P       PKPdf   20 43 56.0 -0.7
      baz=286
S22A  4UR Ranch, Cre   116.46  51  P       PKPdf   20 43 56.1 -1.0
      baz=284
S22A  4UR Ranch, Cre   116.46  51          PKiKP   20 43 58.8 +1.6
S22A                               IAMs_20 IAMs_20 21 28 08.8
      comp=Z,1µm,21.0s
ICESG Greenland Ices   116.47 357 eP       PKPdf   20 43 55.6 -0.7
PHWY  Pilot Hill       116.53  46          PKPdf   20 43 56.2 -1.0
RSSD  Black Hills      116.64  43  PKIKP   PKPdf   20 43 56.0 -1.2
RSSD  Black Hills      116.64  43  P       PKPdf   20 43 56.0 -1.2
      baz=289
RSSD  Black Hills      116.64  43          PKPdf   20 43 56.0 -1.2
DAVA  Damuels          116.73 321 eP       PKiKP   20 43 57.7 +0.5
      comp=Z,9.6nm,0.5s
121A  Cookes Peak, D   116.83  56  P       PKPdf   20 43 56.5 -1.3
      baz=281
121A  Cookes Peak, D   116.83  56          PKiKP   20 43 58.8 +0.9
121A                               IAMs_20 IAMs_20 21 25 30.1
      comp=Z,1µm,20.0s
ISCO  Idaho Springs    116.84  48  PKIKP   PKiKP   20 43 58.7 +0.8
ISCO  Idaho Springs    116.84  48  P       PKPdf   20 43 56.5 -1.3
      baz=286
ISCO  Idaho Springs    116.84  48          PKiKP   20 43 58.7 +0.8
ZCCA  Zocca            117.08 317          PKiKP   20 43 59.4 +1.6
LENM  Lemitar          117.17  54          PKiKP   20 43 59.9 +1.4
Y22D  IRIS PASSCAL I   117.23  55  IAMs_20 IAMs_20 21 32 08.3
      comp=Z,1µm,20.0s
TUE   Stuetta          117.38 320          PKiKP   20 43 58.7 +0.2
ANMO  Albuquerque      117.41  54 i PKIKP  PKPdf   20 43 57.7 -1.2
ANMO  Albuquerque      117.41  54  P       PKPdf   20 43 57.5 -1.4
      baz=283
ANMO  Albuquerque      117.41  54          PKiKP   20 44 00.1 +1.1
ANMO  Albuquerque      117.41  54  IAMs_20 IAMs_20 21 30 27.2
      comp=Z,868nm,20.0s
BNM   Barren Site      117.45  54          PKiKP   20 44 00.1 +1.0
SDCO  Great Sand Dun   117.48  50  P       PKPdf   20 43 57.7 -1.4
      baz=285
SDCO  Great Sand Dun   117.48  50          PKiKP   20 44 00.2 +1.1
SDCO                               IAMs_20 IAMs_20 21 28 42.7
      comp=Z,1µm,21.0s
MEM   Membach          117.64 325 dPKP     PKiKP   20 43 59.2 +0.6
EPT   El Paso          118.05  57  IAMs_20 IAMs_20 21 24 49.3
      comp=Z,1µm,21.0s
MDND  Maddock          118.10  38  P       PKPdf   20 43 58.9 -0.7
      baz=295
T25A  Trinidad         118.47  51  P       PKPdf   20 43 59.7 -1.3
      baz=286
T25A  Trinidad         118.47  51          PKPdf   20 43 59.9 -1.1
BMRD  Maredsous        118.48 326 dPKP     PKiKP   20 44 00.8 +0.5
SENIN Lac Senin/Sane   118.72 321          PKiKP   20 44 01.6 +0.4
MNTX  Cornudas Mount 119.00    57  P       PKPdf   20 44 01.4 -0.5
      baz=282,SNR=7.9
MNTX  Cornudas Mount 119.00    57          PKiKP   20 44 02.3 +0.4
MNTX                               IAMs_20 IAMs_20 21 26 26.5
      comp=Z,975nm,21.0s
ULM   Lac du Bonnet    119.18  34  PKP     PKPdf   20 44 00.8 -0.8
      comp=Z,5.6nm,1.0s,baz=305,slow=2.9,SNR=6.9
ULM   Lac du Bonnet    119.18  34  PKIKP   PKPdf   20 44 00.6 -1.0
ULM   Lac du Bonnet    119.18  34          PKPdf   20 44 00.6 -1.0
KSCO  Kaye Shedlock'   119.28  48  P       PKPdf   20 44 01.5 -0.8
      baz=288
KSCO  Kaye Shedlock'   119.28  48  IAMs_20 IAMs_20 21 33 28.3
      comp=Z,919nm,20.0s
BNI   Bardonecchia     119.65 319  PKIKP   PKiKP   20 44 03.0  0.0
BNI   Bardonecchia     119.65 319          PKiKP   20 44 03.0  0.0
FRB   Frobisher Bay    119.75  11  PKP     PKPdf   20 44 01.8 -0.4
      comp=Z,9.4nm,0.8s,baz=318,slow=3.2,SNR=13
VSL   Villasalto       119.83 313          PKPdf   20 44 01.9 -1.3
SUSD  Miller           119.92  41  IAMs_20 IAMs_20 21 34 43.5
      comp=Z,779nm,19.0s
AGMN  Agassiz Nation   120.14  36  P       PKPdf   20 44 02.8 -0.7
      baz=299
AGMN  Agassiz Nation   120.14  36          PKPdf   20 44 03.1 -0.4
AGMN                               IAMs_20 IAMs_20 21 35 17.9
      comp=Z,921nm,20.0s
MSTX  Muleshoe         120.60  54  P       PKPdf   20 44 03.5 -1.5
      baz=285,SNR=6.8
MSTX  Muleshoe         120.60  54          PKiKP   20 44 05.4 +0.3
MSTX                               IAMs_20 IAMs_20 21 32 44.7
      comp=Z,1µm,21.0s
SSB   Saint Sauveur    120.93 320  PKIKP   PKiKP   20 44 05.7 +0.4
SSB   Saint Sauveur    120.93 320          PKiKP   20 44 05.7 +0.4
TX31  Lajitas Ar. Si   120.93  59          PKPdf   20 44 05.7  0.0
TX32  Lajitas Array    120.93  59          PKiKP   20 44 06.3 +0.4
TXAR  Lajitas Array    120.94  59  PKP     PKiKP   20 44 06.1 +0.2
      comp=Z,2.3nm,0.7s,baz=255,slow=1.5,SNR=17
TXAR                               PKKPbc  PKKPab  20 54 10.4 +0.3
      comp=Z,2.0nm,0.9s,baz=128,slow=5.8,SNR=7.5
TXAR  Lajitas Array    120.94  59          PKPdf   20 44 05.7  0.0
TXAR                                       PKKPbc  20 54 09.2 -0.3
KEST  Kesra            121.01 309  PKP     PKiKP   20 44 07.0 +1.2
      comp=Z,31nm,1.0s,baz=279,slow=2.3,SNR=12
KEST  Kesra            121.01 309          PKiKP   20 44 06.7 +0.9
F33A  5 Mile Ranch,    121.02  39          PKPdf   20 44 04.3 -1.0
CLF   Chambon-Foret    121.03 324          PKiKP   20 44 06.4 +1.1
AMTX  Amarillo         121.22  52  P       PKPdf   20 44 04.4 -1.7
      baz=286
B35A  Bob, Littlefor   121.34  35          PKPdf   20 44 05.0 -0.8
CBKS  Cedar Bluff      121.48  47  PKIKP   PKPdf   20 44 06.5 +0.1
CBKS                               MLR     MLR
      comp=Z,700nm,22.0s
CBKS  Cedar Bluff      121.48  47  P       PKPdf   20 44 05.4 -1.1
      baz=290
CBKS  Cedar Bluff      121.48  47          PKPdf   20 44 06.5 +0.1
CBKS                               IAMs_20 IAMs_20 21 34 52.4
      comp=Z,729nm,22.0s
BGNE  Belgrade         121.66  44  P       PKPdf   20 44 05.3 -1.4
      baz=293
BGNE  Belgrade         121.66  44          PKPdf   20 44 06.5 -0.3
ECSD  EROS Data Cent   121.75  41  P       PKPdf   20 44 05.2 -1.6
      baz=296
ECSD  EROS Data Cent   121.75  41          PKPdf   20 44 06.6 -0.2
R32A  Long Quarter,    122.37  48          PKPdf   20 44 07.5 -0.6
F36A  Milaca           122.72  38          PKPdf   20 44 07.7 -0.9
EYMN  Ely              122.83  35  P       PKPdf   20 44 07.3 -1.4
      baz=303
EYMN  Ely              122.83  35          PKPdf   20 44 06.7 -2.1
ZAIG  Zacatecas        123.06  67  PKPdf   PKPdf   20 44 09.4 -0.8
SPMN  Marine on St.    123.47  38  P       PKPdf   20 44 09.1 -0.9
      baz=300
SPMN  Marine on St.    123.47  38  IAMs_20 IAMs_20 21 30 04.3
      comp=Z,896nm,20.0s
ABTX  Abilene, Hawle   123.49  54  P       PKPdf   20 44 09.3 -1.1
      baz=286
ABTX  Abilene, Hawle   123.49  54          PKiKP   20 44 10.9 +0.2
E38A  The Farm, Brul   123.51  36          PKPdf   20 44 09.6 -0.4
WMOK  Wichita Mounta   123.54  52  PKIKP   PKiKP   20 44 10.7  0.0
WMOK  Wichita Mounta   123.54  52  P       PKPdf   20 44 10.0 -0.5
      baz=288,SNR=8.2
WMOK  Wichita Mounta   123.54  52          PKiKP   20 44 10.7  0.0
N35A  Tabor            123.62  44  IAMs_20 IAMs_20 21 35 02.6
      comp=Z,929nm,20.0s
KSU1  Kansas State U   123.64  46  P       PKPdf   20 44 10.2 -0.4
      baz=293
KSU1  Kansas State U   123.64  46          PKiKP   20 44 10.9 +0.1
I37A  Lemond, Waseca 123.69    40          PKPdf   20 44 10.5  0.0
JCT   Junction City    123.94  57  PKIKP   PKPdf   20 44 11.5 +0.1
JCT                                MLR     MLR
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      comp=Z,700nm,21.0s
JCT   Junction City    123.94  57  P       PKPdf   20 44 10.9 -0.5
      baz=285
JCT   Junction City    123.94  57          PKPdf   20 44 11.5 +0.1
JCT                                IAMs_20 IAMs_20 21 30 05.2
      comp=Z,746nm,21.0s
OKCFA Oklahoma City    124.35  51  IAMs_20 IAMs_20 21 33 47.8
      comp=Z,674nm,19.0s
T35A  Sooner Cattle    124.54  49          PKPdf   20 44 12.2 -0.1
T35A                               IAMs_20 IAMs_20 21 36 14.4
      comp=Z,919nm,20.0s
OK031 S. Brethren Rd   124.64  50  IAMs_20 IAMs_20 21 37 09.2
      comp=Z,834nm,20.0s
QUOK  Quay             124.66  49          PKiKP   20 44 12.9  0.0
833A  Chaparral WMA,   124.81  59  P       PKPdf   20 44 11.7 -1.4
      baz=284
833A  Chaparral WMA,   124.81  59  IAMs_20 IAMs_20 21 33 49.7
      comp=Z,957nm,20.0s
G40A  Rib Lake         125.02  37          PKPdf   20 44 13.0  0.0
G40A                               IAMs_20 IAMs_20 21 33 21.3
      comp=Z,824nm,21.0s
Z35A  Perchaven, San   125.19  53  IAMs_20 IAMs_20 21 31 00.2
      comp=Z,917nm,21.0s
WHTX  Lake Whitney,    125.44  54  P       PKPdf   20 44 12.9 -1.2
      baz=288
WHTX  Lake Whitney,    125.44  54  IAMs_20 IAMs_20 21 30 27.1
      comp=Z,760nm,21.0s
TUL1  Leonard          125.44  49  P       PKPdf   20 44 12.9 -1.2
      baz=292
TUL1  Leonard          125.44  49          PKPdf   20 44 12.9 -1.2
P38A  Dawn             125.60  44          PKPdf   20 44 14.3  0.0
435B  Jarrell          125.69  56  IAMs_20 IAMs_20 21 30 37.7
      comp=Z,782nm,21.0s
L40A  Anamosa          126.03  41          PKPdf   20 44 14.4 -0.6
JFWS  Jewell Farm      126.23  39  PKIKP   PKPdf   20 44 14.5 -0.9
JFWS  Jewell Farm      126.23  39  P       PKPdf   20 44 14.5 -0.9
      baz=301
JFWS  Jewell Farm      126.23  39          PKPdf   20 44 14.5 -0.9
X37A  Clayton          126.24  51          PKPdf   20 44 14.8 -0.8
U38A  Gravette         126.30  48          PKPdf   20 44 15.3 -0.4
U38A                               IAMs_20 IAMs_20 21 40 00.1
      comp=Z,919nm,19.0s
S39A  Bolivar          126.57  46          PKPdf   20 44 16.1 -0.1
P40A  Paris            126.67  44          PKPpre  20 44 08.4
HHAR  Hobbs            126.69  48          PKPdf   20 44 15.7 -0.8
N41A  Harden Midland   126.93  42          PKPpre  20 44 08.9
L42A  Oliver, Polo     127.06  40          PKPdf   20 44 16.4 -0.6
R40A  Maddies Statio   127.07  45  IAMs_20 IAMs_20 21 34 39.2
      comp=Z,851nm,19.0s
W39A  Magazine         127.23  49  P       PKPdf   20 44 16.6 -0.8
      baz=293,SNR=6.9
W39A  Magazine         127.23  49          PKPdf   20 44 16.0 -1.5
TAM   Tamanrasset      127.37 294  PKIKP   PKiKP   20 44 20.1 +1.3
TAM   Tamanrasset      127.37 294          PKiKP   20 44 20.1 +1.3
HKT   Hockley          127.38  56  PKIKP   PKiKP   20 44 19.7 +1.3
HKT   Hockley          127.38  56  PKPdf   PKiKP   20 44 19.7 +1.3
TLIG  Tlapa            127.46  72          PKiKP   20 44 18.9 -0.2
U40A  Yellville        127.47  48  P       PKPdf   20 44 16.2 -1.8
      baz=294,SNR=6.5
K43A  Burlington       127.54  39  IAMs_20 IAMs_20 21 45 28.9
      comp=Z,889nm,19.0s
MIAR  Mount Ida        127.64  50  PKIKP   PKiKP   20 44 19.0 +0.1
MIAR  Mount Ida        127.64  50  P       PKPdf   20 44 16.3 -2.0
      baz=292,SNR=8.4
MIAR  Mount Ida        127.64  50          PKiKP   20 44 19.0 +0.1
E46A  Sault Ste Mari   127.73  33          PKPdf   20 44 17.9 -0.2
NATX  Nacogdoches      127.77  54  IAMs_20 IAMs_20 21 37 30.6
      comp=Z,824nm,19.0s
CCM   Cathedral Cave   127.90  45  P       PKPdf   20 44 17.4 -1.3
      baz=297
L44A  Lake County Fo   128.08  39  P       PKPdf   20 44 18.2 -0.7
      baz=303
X40A  Basin Creek Fa   128.22  50  P       PKPdf   20 44 18.0 -1.5
      baz=293
WLAR  White Oak Lake   128.31  51  PKPdf   PKPdf   20 44 18.4 -1.2
WHAR  Wooly Hollow     128.32  49          PKPdf   20 44 16.9 -2.7
W41B  Gary Mavity, V   128.40  49  P       PKPdf   20 44 18.4 -1.3
      baz=294
W41B  Gary Mavity, V   128.40  49          PKPdf   20 44 18.1 -1.6
MATQ  Matagami         128.63  26  P       PKPdf   20 44 19.3 -0.4
      baz=318
PLCA  Paso Flores      128.73 156  PKP     PKiKP   20 44 21.5 +0.5
      comp=Z,14nm,0.8s,baz=229,slow=2.1,SNR=29
PLCA  Paso Flores      128.73 156  PKIKP   PKiKP   20 44 21.3 +0.3
PLCA  Paso Flores      128.73 156          PKiKP   20 44 21.3 +0.3
PLCA  Paso Flores      128.73 156 eP       PKiKP   20 44 22.6 +1.6
O44A  Mansfield        128.79  41  IAMs_20 IAMs_20 21 38 56.3
      comp=Z,777nm,20.0s
Q44A  Meyer Farm, Va   129.04  43  IAMs_20 IAMs_20 21 36 39.2
      comp=Z,658nm,20.0s
PBMO  Poplar Bluff     129.05  46  IAMs_20 IAMs_20 21 40 09.7
      comp=Z,911nm,20.0s
ESDC  Sonseca Array    129.12 318  PKP     PKiKP   20 44 22.0 +0.3
      comp=Z,3.6nm,1.1s,baz=23,slow=1.5,SNR=10
ESDC  Sonseca Array    129.12 318          PKPdf   20 44 21.2 +0.1
PAB   San Pablo        129.44 318  PKHKP   PKPpre  20 44 09.4
PAB   San Pablo        129.44 318          PKPpre  20 44 09.3
LSQQ  Lebel-sur-Quev   129.44  26  P       PKPdf   20 44 20.7 -0.6
      baz=319
SFIN  Lafayette        129.56  40  P       PKPdf   20 44 21.6 -0.2
      baz=302
PARMO Parma            129.59  46  IAMs_20 IAMs_20 21 32 57.9
      comp=Z,847nm,20.0s
LPAR  Lepanto          129.66  48  IAMs_20 IAMs_20 21 42 04.0
      comp=Z,868nm,20.0s
LC01  Cunco            129.71 154          PKiKP   20 44 22.8 -0.1
PBRG  Braganca         129.75 322 ePKPdf   PKiKP   20 44 23.7 +0.8
HENM  Henderson Moun 129.76    46  IAMs_20 IAMs_20 21 40 43.5
      comp=Z,916nm,21.0s
143A  Socs Landing,    130.01  51  IAMs_20 IAMs_20 21 33 45.7
      comp=Z,916nm,22.0s
T45A  Paducah          130.21  45  IAMs_20 IAMs_20 21 40 45.3
      comp=Z,670nm,20.0s
MVO   Moncorvo         130.29 321 ePKPdf   PKiKP   20 44 24.6 +0.5
L48A  N Adams          130.35  37          PKPdf   20 44 23.3 +0.1
PCAB  Cabril           130.59 323 ePKPdf   PKiKP   20 44 26.1 +1.5
POLO  Lamas de Olo     130.64 322 ePKPdf   PKiKP   20 44 26.3 +1.5
PVRL  Vila Real        130.65 322 ePKPdf   PKiKP   20 44 25.1 +0.3
OXF   Oxford           130.79  48  P       PKPdf   20 44 23.8 -0.5
      baz=296
OXF   Oxford           130.79  48  IAMs_20 IAMs_20 21 53 36.0
      comp=Z,815nm,19.0s
VBMS  Vicksburg        130.89  52  P       PKPdf   20 44 24.2 -0.3
      baz=293
MTE   Manteigas        131.05 321 ePKPdf   PKiKP   20 44 27.0 +1.4
MTE   Manteigas        131.05 321          PKiKP   20 44 25.3 -0.4
PVIS  Viseu            131.09 321 ePKPdf   PKiKP   20 44 28.3 +2.6
N49A  Columbus Grove 131.10    38  IAMs_20 IAMs_20 21 33 30.3
      comp=Z,891nm,22.0s
P48A  Milroy           131.14  41  IAMs_20 IAMs_20 21 39 57.5
      comp=Z,815nm,20.0s
WVT   Waverly          131.21  46  P       PKPdf   20 44 24.6 -0.5
      baz=298
WCI   Wyandotte Cave   131.23  42  P       PKPdf   20 44 24.7 -0.3
      baz=302
PCBR  Castelo Branco   131.32 320 ePKPdf   PKiKP   20 44 26.5 +0.4
O49A  Covington        131.43  39  IAMs_20 IAMs_20 21 44 12.0
      comp=Z,886nm,20.0s
PMRV  Marv??o          131.49 320 ePKPdf   PKiKP   20 44 27.2 +0.7
SADO  Sadowa           131.51  31  IAMs_20 IAMs_20 21 36 29.5
      comp=Z,880nm,20.0s
PLAL  Pickwick Lake    131.57  47  IAMs_20 IAMs_20 21 37 20.4
      comp=Z,783nm,20.0s
BI02  San Fabin de     131.82 153  PKPdf   PKPdf   20 44 24.1 -2.2
PCAS  Casmilo, Conde   131.84 321 ePKPdf   PKiKP   20 44 26.9 -0.3
146A  Union            131.85  50  IAMs_20 IAMs_20 21 33 15.3
      comp=Z,838nm,22.0s
H53A  Bobcaygeon       131.94  31  P       PKPdf   20 44 25.6 -0.6
      baz=314
V48A  Smith Brothers   132.11  46  IAMs_20 IAMs_20 21 44 15.7
      comp=Z,833nm,20.0s
N51A  Ashland          132.21  37          PKPdf   20 44 26.3 -0.5
ACSO  Alum Creek Sta   132.25  38  P       PKPdf   20 44 26.7 -0.2
      baz=306
ACSO  Alum Creek Sta   132.25  38  IAMs_20 IAMs_20 21 45 26.6
      comp=Z,765nm,18.0s
TOA0  Torodi Ar. Sit   132.27 283          PKPdf   20 44 28.0 +0.4
TORD  Torodi Ar. Bea   132.27 283  PKP     PKPdf   20 44 28.0 +0.4
      comp=Z,20nm,0.8s,baz=58,slow=1.9,SNR=46
TORD  Torodi Ar. Bea   132.27 283          PKPpre  20 44 13.6
TORD                               PKPdf   PKPdf   20 44 26.6 -1.0
EVO   Evora            132.39 319 ePKPdf   PKiKP   20 44 28.5 +0.2
U49A  Red Boiling Sp   132.46  44  IAMs_20 IAMs_20 21 39 57.5
      comp=Z,691nm,20.0s
DELO  Deloro Mine      132.47  30  IAMs_20 IAMs_20 21 41 27.7
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	comp=Z,707nm,20.0s						
R50A	Paris	132.50	41	IAMs_20	IAMs_20	21 42 29.7	
	comp=Z,712nm,21.0s						
LATQ	La Tuque	132.52	24	P	PKPdf	20 44 27.1	-0.1
	baz=323						
X48A	Hartselle	132.56	47	IAMs_20	IAMs_20	21 34 29.8	
	comp=Z,641nm,21.0s						
PVAQ	Vaqueiros	132.81	318	ePKPdf	PKiKP	20 44 30.2	+1.0
M53A	WI Miller and	132.89	36	P	PKPdf	20 44 27.6	-0.5
	baz=310						
PCVE	Castro Verde	132.90	318	ePKPdf	PKiKP	20 44 29.4	0.0
MESJ	Messejana	132.91	318	ePKPdf	PKPdf	20 44 28.8	+0.6
MESJ	Messejana	132.91	318	ePKPdf	PKiKP	20 44 31.8	+2.4
PNCL	Nicolau / Gran	132.96	319	ePKPdf	PKiKP	20 44 30.1	+0.6
SWET	Sewanee	133.00	46	IAMs_20	IAMs_20	21 44 59.3	
	comp=Z,809nm,19.0s						
O52A	Adamsville	133.02	38		PKPdf	20 44 24.7	-3.7
PBDV	Barranco-do-Ve	133.04	318	ePKPdf	PKiKP	20 44 30.4	+0.7
E58A	La Victoria	133.11	26	P	PKPdf	20 44 28.0	-0.3
	baz=322						
P52A	Corning	133.13	38	P	PKPdf	20 44 28.0	-0.6
	baz=307						
P52A	Corning	133.13	38		PKPpre	20 44 13.8	
O53A	New Philadelph	133.32	37	P	PKPdf	20 44 28.3	-0.7
	baz=308						
PTEO	Sao Teotonio	133.41	318	ePKPdf	PKiKP	20 44 30.0	-0.4
WVNY	West Valley, N	133.41	33	IAMs_20	IAMs_20	21 40 28.0	
	comp=Z,877nm,20.0s						
M54A	Oil Creek Stat	133.42	35	P	PKPdf	20 44 29.0	-0.1
	baz=311						
M54A	Oil Creek Stat	133.42	35		PKPdf	20 44 25.9	-3.3
MORF	Marmelete	133.49	318	ePKPdf	PKPdf	20 44 29.7	+0.3
MORF	Marmelete	133.49	318	ePKPdf	PKiKP	20 44 32.1	+1.5
FPAL	Fort Paine	133.56	46	IAMs_20	IAMs_20	21 38 32.2	
	comp=Z,838nm,20.0s						
D60A	Saint Jean D’O	133.65	23	P	PKPdf	20 44 28.2	-1.1
	baz=325						
P53A	Whipple	133.68	38	PKPdf	PKPdf	20 44 27.5	-2.1
D61A	St Aubert, Com	133.70	23	P	PKPdf	20 44 29.5	+0.1
	baz=326						
G58A	Ormstown	133.71	27	P	PKPdf	20 44 29.3	-0.2
	baz=320						
O54A	Avella	133.86	37		PKPdf	20 44 30.4	+0.4
I57A	Carthage	133.86	30	P	PKPdf	20 44 29.1	-0.7
	baz=317						
E60A	Ste Agathe de	133.88	24	P	PKPdf	20 44 30.0	+0.2
	baz=324						
M55A	Ridgway	133.96	34	IAMs_20	IAMs_20	21 45 00.4	
	comp=Z,840nm,20.0s						
TZTN	Tazewell	133.97	43	IAMs_20	IAMs_20	21 36 37.7	
	comp=Z,680nm,20.0s						
F60A	Warwick	133.99	25	P	PKPdf	20 44 29.5	-0.5
	baz=323						
L56A	Greenwood	134.16	33	P	PKPdf	20 44 29.2	-1.3
	baz=314						
L56A	Greenwood	134.16	33		PKPdf	20 44 28.5	-2.0
H58A	Gabriels	134.21	28	P	PKPdf	20 44 30.0	-0.5
	baz=319						
E61A	Lac Etchemin	134.21	23	P	PKPdf	20 44 30.4	0.0
	baz=325						
D62A	Allapoint, All	134.22	22	IAMs_20	IAMs_20	21 49 31.7	
	comp=Z,738nm,19.0s						
H59A	Cadyville	134.26	27	P	PKPdf	20 44 30.5	0.0
	baz=320						
250A	Grady	134.27	50	IAMs_20	IAMs_20	21 36 46.2	
	comp=Z,811nm,21.0s						
K57A	Scipio Center	134.30	31	P	PKPdf	20 44 30.6	-0.1
	baz=315						
V52A	Sevierville	134.32	44	IAMs_20	IAMs_20	21 39 00.9	
	comp=Z,896nm,21.0s						
Q54A	Coxs Mills	134.32	38		PKPdf	20 44 30.1	-0.7
F61A	St Evariste	134.38	24	P	PKPdf	20 44 30.5	-0.2
	baz=324						
NCB	Newcomb	134.53	28	IAMs_20	IAMs_20	21 41 32.1	
	comp=Z,678nm,22.0s						
N56A	West Decatur	134.59	34	P	PKPdf	20 44 31.1	-0.3
	baz=312						
D63A	Stockholm	134.60	21	P	PKPdf	20 44 30.8	-0.4
	baz=328						
L57A	Andrews Acres	134.64	32	P	PKPdf	20 44 31.0	-0.3
	baz=314						
R54A	Victor	134.71	39	P	PKPdf	20 44 30.8	-0.8
	baz=307						
K58A	Earlville	134.72	31	P	PKPdf	20 44 31.4	-0.1
	baz=316						
S54A	Dingess, Beckl	134.73	40	P	PKPdf	20 44 31.4	-0.3
	baz=306						
J59A	Piesco	134.77	29	P	PKPdf	20 44 31.4	-0.2
	baz=318						
J59A	Piesco	134.77	29		PKPdf	20 44 31.3	-0.3
O56A	Blue Knob Stat	134.86	35	P	PKPdf	20 44 31.7	-0.2
	baz=311						
V53A	Saluda	134.95	43	IAMs_20	IAMs_20	21 46 26.5	
	comp=Z,769nm,20.0s						
M57A	Sunshine Farm,	134.95	33	P	PKPdf	20 44 32.0	+0.1
	baz=314						
M57A	Sunshine Farm,	134.95	33		PKPdf	20 44 31.7	-0.2
BINY	Binghamton	134.95	31	P	PKPdf	20 44 32.0	+0.1
	baz=316						
SSPA	Standing Stone	135.00	34	P	PKPdf	20 44 32.1	+0.1
	baz=312						
SSPA	Standing Stone	135.00	34		PKPdf	20 44 30.5	-1.6
SSPA	Standing Stone	135.00	34	IAMs_20	IAMs_20	21 41 49.2	
	comp=Z,837nm,20.0s						
E63A	Oxbow	135.01	22	P	PKPdf	20 44 31.7	-0.2
	baz=328						
I60A	Shoreham	135.06	28	P	PKPdf	20 44 31.6	-0.4
	baz=320						
K59A	Cooperstown	135.11	30	P	PKPdf	20 44 31.9	-0.3
	baz=317						
N57A	Milroy	135.11	34	P	PKPdf	20 44 31.9	-0.3
	baz=313						
152A	Waverly Hall	135.11	48	IAMs_20	IAMs_20	21 43 17.4	
	comp=Z,851nm,20.0s						
L58A	Harry Jones Me	135.13	32	P	PKPdf	20 44 32.2	-0.1
	baz=316						
H61A	Lyndonville	135.14	26	P	PKPdf	20 44 32.0	-0.3
	baz=322						
G62A	West of Eustis	135.19	24	P	PKPdf	20 44 32.0	-0.3
	baz=324						
R55A	Marlinton	135.19	39	P	PKPdf	20 44 31.9	-0.7
	baz=308						
R55A	Marlinton	135.19	39		PKPdf	20 44 31.8	-0.8
P56A	Dayton Farm, R	135.20	36	P	PKPdf	20 44 32.3	-0.1
	baz=310						
E64A	Bridgewater	135.23	21	P	PKPdf	20 44 32.3	0.0
	baz=328						
M58A	Price’s Panora	135.29	33	P	PKPdf	20 44 32.2	-0.4
	baz=314						
Q56A	Snyder Ridge,	135.29	37	P	PKPdf	20 44 32.0	-0.6
	baz=310						
VA03	San Esteban	135.35	150		PKPdf	20 44 32.9	-0.2
O57A	Amberson	135.43	35	P	PKPdf	20 44 32.4	-0.5
	baz=312						
H62A	Milan	135.44	26	P	PKPdf	20 44 31.9	-0.8
	baz=323						
L59A	Walton	135.44	31	P	PKPdf	20 44 32.5	-0.4
	baz=317						
N58A	Sunbury	135.52	33	P	PKPdf	20 44 32.3	-0.7
	baz=314						
N58A	Sunbury	135.52	33		PKPdf	20 44 33.1	+0.1
G63A	Kingsbury	135.64	24	P	PKPdf	20 44 32.7	-0.5
	baz=325						
PKME	Peaks-Kenny Pk	135.65	23	P	PKPdf	20 44 32.7	-0.4
	baz=326						
BLA	Blacksburg	135.65	40	PKIKP	PKPdf	20 44 31.1	-2.3
BLA	Blacksburg	135.65	40	P	PKPdf	20 44 32.8	-0.7
	baz=307						
BLA	Blacksburg	135.65	40		PKPdf	20 44 31.1	-2.3
P57A	Homestead Farm	135.70	36	P	PKPdf	20 44 32.4	-1.0
	baz=311						
M59A	Waymart	135.71	32	P	PKPdf	20 44 33.0	-0.4
	baz=316						
TRY	Troy	135.73	29		PKPdf	20 44 33.2	-0.1
Q57A	Strasburg	135.76	37	P	PKPdf	20 44 33.1	-0.4
	baz=310						
PETF	Flores	135.78	72	IAMs_20	IAMs_20	21 38 08.2	
	comp=Z,770nm,21.0s						
G64A	Maxfield	135.87	23	P	PKPdf	20 44 33.5	0.0
	baz=327						
O58A	Lewisberry	135.89	34	P	PKPdf	20 44 33.0	-0.8
	baz=313						
S56A	Natural Bridge	135.91	39	P	PKPdf	20 44 33.1	-0.8
	baz=308						
I62A	Tamworth	135.92	26	P	PKPdf	20 44 33.8	+0.1
	baz=322						
K61A	Williamstown	135.97	29	P	PKPdf	20 44 33.9	+0.1
	baz=319						
N59A	State Game Lan	135.98	33	P	PKPdf	20 44 32.9	-1.0
	baz=315						
N59A	State Game Lan	135.98	33	PKPdf	PKPdf	20 44 34.0	+0.1
L60A	Shokan	136.01	30	P	PKPdf	20 44 33.6	-0.3
	baz=318						
T56A	Rocky Mt	136.01	40	P	PKPdf	20 44 33.8	-0.3
	baz=307						
P58A	Pank, Wackersv	136.11	35	P	PKPdf	20 44 34.2	0.0
	baz=312						
I63A	Otisfield	136.11	25	P	PKPdf	20 44 32.9	-1.1
	baz=324						
I63A	Otisfield	136.11	25	IAMs_20	IAMs_20	21 43 45.8	
	comp=Z,805nm,20.0s						
R57A	Stanardsville	136.16	37	P	PKPdf	20 44 34.0	-0.3
	baz=310						
S57A	Dark Hollow, R	136.24	38	IAMs_20	IAMs_20	21 35 27.3	
	comp=Z,880nm,22.0s						
KMSC	Kings Mountain	136.25	43	P	PKPdf	20 44 33.7	-0.8
	baz=304						
KMSC	Kings Mountain	136.25	43		PKPdf	20 44 34.8	+0.3
Q58A	Fox Den Farm,	136.25	36	P	PKPdf	20 44 33.6	-0.8
	baz=311						
M60A	Port Jervis	136.29	31	P	PKPdf	20 44 34.3	-0.1
	baz=317						
MVL	Millersville	136.30	34		PKPdf	20 44 34.5	+0.1
MVL				IAMs_20	IAMs_20	21 44 51.4	
	comp=Z,818nm,20.0s						
154A	Montrose	136.33	47	IAMs_20	IAMs_20	21 47 22.5	
	comp=Z,762nm,20.0s						
N60A	Cedar Hill Far	136.37	32	P	PKPdf	20 44 34.1	-0.5
	baz=316						
G65A	Princeton	136.37	22	P	PKPdf	20 44 34.4	0.0
	baz=328						
L61B	Northampton	136.42	29	P	PKPdf	20 44 34.7	+0.1
	baz=320						
V56A	Mocksville	136.43	42	P	PKPdf	20 44 34.5	-0.4
	baz=306						
K62A	Royalston	136.46	28	P	PKPdf	20 44 34.7	0.0
	baz=321						
ODNJ	Ogdensburg	136.47	32		PKPdf	20 44 34.9	+0.1
T57A	Hurt	136.52	39	P	PKPdf	20 44 34.7	-0.3
	baz=308						
T57A	Hurt	136.52	39	PKPdf	PKiKP	20 44 36.4	-0.3
O60A	Telford	136.60	33	P	PKPdf	20 44 35.0	0.0
	baz=315						
M61A	Granite Spring	136.74	31	P	PKPdf	20 44 35.3	0.0
	baz=318						
W56A	Indian Trail	136.76	43	P	PKPdf	20 44 34.8	-0.7
	baz=305						
R58B	Mineral	136.77	37	P	PKPdf	20 44 34.0	-1.4
	baz=310						
K63A	Dunstable	136.77	27	P	PKPdf	20 44 34.4	-0.9
	baz=322						
X56A	White Oak	136.81	44	P	PKPdf	20 44 35.2	-0.4
	baz=304						
H66A	Whiting	136.81	22	P	PKPdf	20 44 35.2	0.0
	baz=328						
U57A	Blanch	136.82	40	P	PKPdf	20 44 35.3	-0.2
	baz=307						
CO03	El Pedregal	136.82	149		PKPdf	20 44 35.6	-0.3
P60A	Greenville	136.82	34	P	PKPdf	20 44 35.5	0.0
	baz=314						
PSUB	Penn St. - Bra	136.84	33		PKPdf	20 44 36.4	+0.9
V57A	Coltrane Farms	136.86	41	P	PKPdf	20 44 35.4	-0.3
	baz=306						
S58A	Poland Farm, P	136.89	38	P	PKPdf	20 44 35.8	+0.2
	baz=310						
PAL	Palisades	136.89	31	PKIKP	PKPdf	20 44 35.6	+0.1
PAL				MLR	MLR		
	comp=Z,900nm,20.0s						
PAL	Palisades	136.89	31	P	PKPdf	20 44 33.9	-1.6
	baz=317						
PAL	Palisades	136.89	31		PKPdf	20 44 35.6	+0.1
Q59A	Harwood	136.90	35	P	PKPdf	20 44 34.8	-0.8
	baz=312						
HRV	Adam Dziewonsk	136.90	28	P	PKPdf	20 44 34.6	-0.9
	baz=321						
CBN	Corbin Frederi	136.91	37	P	PKPdf	20 44 35.5	-0.2
	baz=311						
T58A	Grand View Acr	137.01	39	P	PKPdf	20 44 35.4	-0.5
	baz=309						
M62A	Hamden	137.08	30	P	PKPdf	20 44 36.3	+0.5
	baz=319						
W57A	Gilead	137.14	42	P	PKPdf	20 44 35.8	-0.4
	baz=306						
YLE	Yale	137.15	30	IAMs_20	IAMs_20	21 44 53.6	
	comp=Z,757nm,18.0s						
S59A	Mechanicsville	137.25	37	P	PKPdf	20 44 36.5	+0.2
	baz=311						
ZON	Zonda	137.25	151	PKIKP	PKPdf	20 44 36.4	-0.2
ZON	Zonda	137.25	151		PKPdf	20 44 36.4	-0.2
Q60A	Greensboro	137.27	35	P	PKPdf	20 44 35.9	-0.4
	baz=313						
Q60A	Greensboro	137.27	35	IAMs_20	IAMs_20	21 40 43.2	
	comp=Z,917nm,22.0s						
GO04	Tololo Observa	137.29	148		PKPdf	20 44 37.3	+0.3
U58A	Oxford	137.34	40	P	PKPdf	20 44 35.9	-0.6
	baz=308						
V58A	Windy Hill, Pi	137.34	41	P	PKPdf	20 44 36.1	-0.5
	baz=307						
L63A	North Scituate	137.38	28	P	PKPdf	20 44 36.0	-0.5
	baz=321						
M63A	Gales Ferry	137.52	29	P	PKPdf	20 44 36.3	-0.3
	baz=320						
T59A	Double "B" Far	137.60	38	P	PKPdf	20 44 36.3	-0.7
	baz=310						
T59A	Double "B" Far	137.60	38	PKPdf	PKPdf	20 44 36.2	-0.7
Q61A	Milford	137.65	34	P	PKPdf	20 44 36.8	-0.2
	baz=314						
KOWA	Kowa	137.65	285		PKPpre	20 44 26.4	
KOWA				PKPdf	PKPdf	20 44 37.6	-0.1
S60A	Water View	137.67	37	P	PKPdf	20 44 37.0	-0.1
	baz=311						
L64A	Middleborough	137.68	28	P	PKPdf	20 44 35.7	-1.2
	baz=322						
Z57A	Bowman	137.70	45	P	PKPdf	20 44 37.2	-0.1
	baz=303						
W58A	Raeford	137.72	42	P	PKPdf	20 44 36.9	-0.4
	baz=306						
M64A	Tiverton	137.81	28	P	PKPdf	20 44 36.9	-0.3
	baz=321						
CO01	Juntas del Tor	137.81	148		PKPdf	20 44 36.8	-1.2
V59A	Middlesex	137.93	40	P	PKPdf	20 44 37.1	-0.5
	baz=308						
T60A	Surry	137.99	37	P	PKPdf	20 44 37.6	-0.1
	baz=311						
LCO	Las Campanas	138.25	147	PKIKP	PKPdf	20 44 38.7	-0.1
LCO	Las Campanas	138.25	147		PKPdf	20 44 38.7	-0.1
Z58A	St. Stephen	138.30	44	P	PKPdf	20 44 38.4	0.0
	baz=304						
V60A	Jim Taylor Roa	138.55	39	IAMs_20	IAMs_20	21 48 08.5	
	comp=Z,760nm,20.0s						
AC05	El Transito	138.62	147		PKPdf	20 44 39.0	-0.4
TGUH	Tegucigalpa,Un	138.68	75	IAMs_20	IAMs_20	21 35 50.1	
	comp=Z,567nm,21.0s						
U61A	Possum Corner	138.69	38	P	PKPdf	20 44 38.7	-0.3
	baz=310						
KIC	Kosan Boka	138.82	273	ePKP1	PKPdf	20 44 33.1	-6.8
	comp=Z,22nm,0.7s						
DBIC	Dimbokro	138.94	274	PKhKP	PKPpre	20 44 33.8	
	comp=Z,4.4nm,0.8s,baz=13,slow=2.1,SNR=5.5						
DBIC				PKP	PKPdf	20 44 40.6	+0.6
	comp=Z,13nm,0.9s,baz=50,slow=0.8,SNR=11						
DBIC	Dimbokro	138.94	274	PKPdf	PKPdf	20 44 34.2	-5.9
Y60A	Bolivia	139.00	42	P	PKPdf	20 44 39.7	0.0
	baz=306						
LIC	Lamto	139.10	273	ePKP1	PKPdf	20 44 33.9	-6.5
	comp=Z,23nm,0.6s						
TIC	Toumodi	139.10	274	ePKP1	PKPdf	20 44 32.7	-7.7
JTS	Las Juntas de	141.31	81	PKHKP	PKPpre	20 44 36.9	
JTS				MLR	MLR		
	comp=Z,1µm,20.0s						
JTS	Las Juntas de	141.31	81		PKPpre	20 44 36.9	
GO02	Mina Guanaco	141.85	144		PKPpre	20 44 38.5	
PLTB	Pedras Altas	142.16	170	eP	PKPdf	20 44 44.9	-0.7
CPSB	Cacapava Do Su	143.51	169	eP	PKPbc	20 44 45.6	+0.5
CPSB	Cacapava Do Su	143.51	169	eP	PKPdf	20 44 49.5	+1.6
PB04	IPOC Station P	143.62	141		PKPdf	20 44 48.8	+0.2
LCCY	Blossom Villag	144.16	64		PKPbc	20 44 47.6	+0.3
LVC	Limon Verde	144.19	142	PKIKP	PKPdf	20 44 49.1	-0.7
LVC	Limon Verde	144.19	142		PKPdf	20 44 49.1	-0.7
LVC	Limon Verde	144.19	142	eP	PKPdf	20 44 50.8	+1.0
PB07	IPOC Station P	144.23	140		PKPdf	20 44 48.7	-0.9
PB09	IPOC Station P	144.59	141		PKPdf	20 44 50.3	+0.1
MAPC	Malpelo	144.64	91	eP	PKiKP	20 45 05.8	+12
PATCX	Punta Patache	144.71	139		PKPbc	20 44 49.3	+0.1
NNA	Nana	144.82	120	PKIKP	PKPbc	20 44 49.7	0.0
NNA				MLR	MLR		
	comp=Z,1µm,20.0s						
NNA	Nana	144.82	120		PKPbc	20 44 49.7	0.0
TA01	Diego Aracena	144.87	138		PKPdf	20 44 50.1	-0.4
CNLB	Canela	144.98	173	eP	PKPdf	20 44 52.0	+1.5
ASCN	Ascension	145.55	247		PKPab	20 44 53.9	+1.6
PSGCX	Pisagua	145.59	137		PKPbc	20 44 52.0	0.0
PB08	IPOC Station P	145.85	139		PKPab	20 44 53.4	-0.2
GO01	Chusmiza	146.16	139		PKPbc	20 44 53.9	-0.4
MNMC	Minye Minye	146.27	137		PKPbc	20 44 54.3	-0.1
BCIP	Isla Barro Col	146.42	82	eP	PKPbc	20 44 54.7	0.0
CPUP	Villa Florida	146.45	162	PKPbc	PKPbc	20 44 54.6	+0.2
	comp=Z,77nm,0.8s,baz=214,slow=2.1,SNR=142						
CPUP	Villa Florida	146.45	162	PKP2	PKPdf	20 44 53.5	+0.5
CPUP	Villa Florida	146.45	162		PKPdf	20 44 53.5	+0.5
CPUP	Villa Florida	146.45	162	eP	PKPab	20 44 55.0	-0.2
ITAB	Concordia	146.84	170	eP	PKPab	20 44 56.4	-0.3
ITAB	Concordia	146.84	170	eP	PKPab	20 44 56.2	-0.4
PB16	IPOC Station P	146.88	136		PKPbc	20 44 56.2	-0.3
OTAV	Otavalo	147.31	98	PKP2	PKPdf	20 44 56.2	+0.8
OTAV				MLR	MLR		
	comp=Z,500nm,20.0s						
OTAV	Otavalo	147.31	98		PKPdf	20 44 56.2	+0.8
OTAV	Otavalo	147.31	98	IAMs_20	IAMs_20	21 40 54.6	
	comp=Z,517nm,20.0s						
OTAV	Otavalo	147.31	98	eP	PKPdf	20 44 56.1	+0.6
OTAV	Otavalo	147.31	98	eP	PKPbc	20 44 57.1	-0.7
GTBY	Guantanamo Bay	148.45	61		PKPbc	20 44 59.8	-0.2
BBAC	Balboa, Cauca	148.77	95	eP	PKPdf	20 44 56.7	-0.8
PTGB	Pitanga	149.31	169	eP	PKPdf	20 45 00.0	+2.1
SOTA	Rioblanco	149.42	95	eP	PKPdf	20 45 00.4	+1.5
PCON	Cinco Dias	149.66	95	eP	PKPdf	20 45 01.2	+1.9
YOTC	Yotoco, Valle	149.87	92	eP	PKPdf	20 44 58.5	-0.7
MBO	M'Bour	149.99	289		PKiKP	20 45 05.6	+0.7
DBBC	Dabeiba	150.09	86	eP	PKPdf	20 45 01.3	+1.9
MARP	Paez Belalcaza	150.15	94	eP	PKPdf	20 45 01.1	+1.3
PET01	Itanhaem-SP	150.26	178	eP	PKPdf	20 45 01.7	+2.4
CBOC	Ciudad Bolivar	150.29	88	eP	PKPdf	20 44 59.9	+0.1
CZSB	Cruzeiro do Su	150.38	116	eP	PKPdf	20 45 01.7	+1.9
GARC	Garzon, Huila	150.53	95	eP	PKPbc	20 45 05.4	-0.3
MOTC	Monteria, Cord	150.56	82	eP	PKPdf	20 44 60.0	-0.1
BETC	Betania	150.65	94	eP	PKiKP	20 45 06.6	+0.1
UREC	San Jos de Ur	150.74	84	eP	PKPdf	20 45 02.8	+2.4
HELC	Santa Helena	150.77	87	eP	PKPdf	20 45 00.8	-0.1
ANIL	Santa Ana	150.84	91	eP	PKiKP	20 45 09.7	+2.5
PTLC	Puerto Leguiza	150.89	100	eP	PKPdf	20 45 01.8	+1.2
RREF	El Recreo	150.92	90	eP	PKPdf	20 45 02.6	+1.2
TOLC	Tolima	150.93	91	eP	PKPdf	20 45 00.8	-0.3
SJCC	San Jacinto, C	150.93	80	eP	PKPdf	20 45 00.0	-0.7
SPB	Sao Paulo	150.95	178		PKPdf	20 44 58.8	-1.6
SPB	Sao Paulo	150.95	178	eP	PKPdf	20 45 03.2	+2.8
ORTC	Ortega, Tolima	150.96	92	eP	PKPdf	20 44 59.4	-1.4
TRCB	Terra Rica	151.06	168	eP	PKPdf	20 45 02.5	+1.8
PARB	Paraibuna	151.22	181	eP	PKPdf	20 45 03.4	+2.4
NORC	Norcasia	151.42	89	eP	PKPbc	20 45 06.2	-1.4
ZARC	Zaragoza, Cauc	151.42	85	eP	PKPdf	20 45 01.2	-0.2
ESAR	Angra dos Reis	151.50	183	eP	PKPdf	20 45 03.8	+2.6
VAO	Valinhos	151.55	178	eP	PKPdf	20 45 03.4	+1.9
MAN01	Angra dos Reis	151.62	184	eP	PKPdf	20 45 04.0	+2.5
SMRC	Santa Marta, M	151.70	77	eP	PKPdf	20 45 02.4	+0.6
PTBC	PUERTO BERRIO,	151.84	87	eP	PKPdf	20 45 01.2	-0.8
ARGC	Ariguani, Magd	151.85	80	eP	PKPdf	20 45 01.8	-0.2
ROSC	El Rosal	151.94	90	PKP	PKPdf	20 45 03.9	+1.2
	comp=Z,22nm,0.6s,baz=173,slow=5.2,SNR=7.1						
ROSC				PKPbc	pPKPdf	20 45 10.1	+0.1
	comp=Z,48nm,0.7s,baz=206,slow=3.5,SNR=17						
ROSC	El Rosal	151.94	90		PKPdf	20 45 03.5	+0.9
ROSC				IAMs_20	IAMs_20	21 48 50.1	
	comp=Z,534nm,20.0s						
ROSC	El Rosal	151.94	90	eP	PKPbc	20 45 08.6	-0.6
SMLC	San Martn de	152.12	82	eP	PKPbc	20 45 08.4	-0.7
SDDR	Presa de Saban	152.13	59		PKPdf	20 45 01.5	-0.9
VAS01	Vassouras-RJ	152.16	185	eP	PKPdf	20 45 04.4	+2.1
SPBC	San Pablo de B	152.21	89	eP	PKPdf	20 45 02.0	-0.7
DUB01	Friburgo-RJ	152.23	188	eP	PKPdf	20 45 04.9	+2.4
CAM01	Campos-RJ	152.38	189	eP	PKPdf	20 45 05.1	+2.5
AQDB	Aquidauana	152.43	160	eP	PKPdf	20 45 05.1	+2.3
PCMB	Pacaembu	152.49	170	eP	PKPdf	20 45 05.1	+2.2
CHIC	Chingaza	152.51	91	eP	PKPdf	20 45 02.7	-0.9
VILC	Villavicencio,	152.52	92	eP	PKPbc	20 45 07.2	-3.0
OCAC	Ocana	152.91	83	eP	PKPdf	20 45 03.7	-0.1
RUSC	La Rusia	153.20	88	eP	PKPdf	20 45 05.7	+1.0
BB19B	Bebedouro	153.39	175	eP	PKPdf	20 45 06.5	+2.4
ALF01	Guarapari-ES	153.40	191	eP	PKPdf	20 45 06.3	+2.2
BSCB	Bom Sucesso	153.52	183	eP	PKPdf	20 45 06.5	+2.1
PAMC	Pamplona, Colo	153.57	85	eP	PKPdf	20 45 04.9	-0.3
ITRB	Iturama	154.50	171	eP	PKiKP	20 45 15.5	+1.3
ITRB	Iturama	154.50	171	eP	PKPdf	20 45 08.0	+2.2
RIB01	Linhares ES	154.59	193	eP	PKPdf	20 45 07.8	+1.9
ETMB	Extrema	154.81	127	eP	PKPdf	20 45 07.8	+1.5
SJMB	Sao Joao De Ma	155.35	191	eP	PKPdf	20 45 08.9	+1.9
PP1B	Ponte de Pedra	155.38	160	eP	PKPdf	20 45 09.1	+2.1
PTLB	Pontes e Lacer	155.44	149	eP	PKPdf	20 45 09.3	+2.2
SDV	Santo Domingo	155.50	81		PKPdf	20 45 07.3	-0.2
SDV	Santo Domingo	155.50	81	IAMs_20	IAMs_20	22 07 26.2	
	comp=Z,593nm,21.0s						
SDV	Santo Domingo	155.50	81	eP	PKPdf	20 45 07.2	-0.2
SDV	Santo Domingo	155.50	81	eP	PKPdf	20 45 07.6	+0.1
SDV	Santo Domingo	155.50	81	eP	PKPdf	20 45 08.4	+0.9
IPMB	Ipameri, GO	156.47	175	eP	PKPdf	20 45 10.5	+2.0
SJG	San Juan	156.85	56	PKIKP	PKPdf	20 45 07.7	-1.2
SJG	San Juan	156.85	56		PKPdf	20 45 07.7	-1.2
SJG	San Juan	156.85	56	eP	PKPdf	20 45 03.6	-5.3
VILB	Vilhena	156.87	143	eP	PKPdf	20 45 11.6	+2.5
HUMP	Col San Antoni	157.08	55		PKPdf	20 45 06.7	-2.4
SAML	Samuel	157.69	130	PKIKP	PKPdf	20 45 10.9	+0.8
SAML				MLR	MLR		
	comp=Z,900nm,20.0s						
SAML	Samuel	157.69	130		PKPdf	20 45 10.9	+0.8
SAML	Samuel	157.69	130	eP	PKPdf	20 45 12.6	+2.5
ARAG	Araguaiana, MT	158.09	165	eP	PKPdf	20 45 12.0	+1.5
ARAG	Araguaiana, MT	158.09	165	eP	PKPdf	20 45 12.6	+2.1
BDFB	Brasilia	158.80	175	PKP	PKPdf	20 45 12.4	+0.9
	comp=Z,1.5nm,0.4s,baz=0.0,slow=1.0,SNR=1.9						
BDFB				PKPab	PKPab	20 45 47.3	+0.3
	comp=Z,5.4nm,0.7s,baz=22,slow=8.0,SNR=5.5						
JANB	Januaria	159.38	185	eP	PKPdf	20 45 14.1	+2.0
GDU01	Guandu, BA	159.72	199	eP	PKPdf	20 45 14.5	+2.1
SMTB	Santa Maria do	165.55	174	eP	PKPdf	20 45 20.6	+2.3

TAP ***12*** *20:41:46.0, 23°.76N×121°.75E, h41km, ML3.2, B*

JMA ***12*** *20:41:45.6±0.2, 23°.73N×121°.65E, h52km±4km, M2.8*

ISC 12 20:41:47.4±1.4**, 23°.77N**±0°.02×**121°.72E**±0°.02**, h36**km±1km**,**
n97, σ0s.70/183**, 1C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.23	334	i P	Pn	20 41 55.3	-0.1
	baz=330						
ESL	Shilin	0.26	281	P	Pn	20 41 54.7	-0.7
	baz=280						
ESL				S	Sn	20 42 00.6	-1.2
	baz=280						
EGFH	Guangfu	0.28	250	i P	Pn	20 41 55.1	-0.3
	baz=252						
EGFH				S	Sn	20 42 00.8	-1.0
	baz=252						
TWD	Chiawan	0.33	341	⇑iP	Pn	20 41 55.8	+0.1
	baz=338						
TWD				i S	Sn	20 42 02.4	+0.3
	baz=338						
HGSD	Ruisui	0.38	225	P	Pn	20 41 56.9	+0.6
	baz=227						
NACB	Ninganchiao	0.42	345	P	Pn	20 41 56.4	-0.5
	baz=341						
NACB				S	Sn	20 42 03.7	+0.1
	baz=341						
EHY	Hungye	0.44	235	i P	Pn	20 41 56.3	-0.9
	baz=236						
EHY				i S	Sn	20 42 04.3	+0.2
	baz=236						
ETLH	Xiulin Townshi	0.49	334	P	Pn	20 41 56.9	-1.1
	baz=331						
ETLH				S	Sn	20 42 05.5	+0.1
	baz=331						
YULB	Yu-li	0.53	226	P	Pn	20 41 57.3	-1.3
	baz=228						
YULB				S	Sn	20 42 06.6	+0.3
	baz=228						

EYUL	**Yuli** baz=223	**0.55**	**221**	*e*P	**Pn**	**20 41 58.5**	**-0.4**
EYUL	baz=223			S	**Sn**	**20 42 07.5**	**+0.6**
WHF	**Hehuan Shan** baz=311	**0.56**	**313**	*i* P	**Pn**	**20 41 58.3**	**-1.1**
WHF	baz=311			*i* S	**Sn**	**20 42 06.6**	**-1.0**
TWF1	**Yuli** baz=224	**0.56**	**223**	*i* P	**Pn**	**20 41 57.8**	**-1.3**
TWF1	baz=224			S	**Sn**	**20 42 07.0**	**-0.1**
CHGB	**Renai** baz=299	**0.58**	**301**	P	**Pn**	**20 41 58.7**	**-0.8**
CHGB	baz=299			S	**Sn**	**20 42 07.1**	**-0.7**
FUSS	**Fushou** baz=316	**0.65**	**318**	P	**Pn**	**20 41 59.6**	**-0.8**
FUSS	baz=316			S	**Sn**	**20 42 09.8**	**+0.3**
FULB	**Fuli** baz=216	**0.68**	**215**	*i* P	**Pn**	**20 41 59.9**	**-0.8**
FULB	baz=216			S	**Sn**	**20 42 10.0**	**-0.1**
ENAH	**Nanao** baz=4.0	**0.69**	**7**	*e*P	**Pn**	**20 41 59.8**	**-0.9**
ENAH	baz=4.0			*e*S	**Sn**	**20 42 11.1**	**+0.9**
TWT	**Tachien** baz=312	**0.69**	**315**	*i* P	**Pn**	**20 42 00.4**	**-0.5**
TWT	baz=312			*i* S	**Sn**	**20 42 09.8**	**-0.8**
SSLB	**Suanglung** baz=272	**0.70**	**272**	P	**Pn**	**20 41 59.9**	**-1.0**
SSLB	baz=272			*e*S	**Sn**	**20 42 11.4**	**+0.9**
TDCB	**Techi** baz=312	**0.70**	**314**	⇓P	**Pn**	**20 42 00.5**	**-0.6**
TDCB	baz=312			S	**Sn**	**20 42 10.0**	**-0.8**
NNSB	**Datong** baz=333	**0.73**	**335**	P	**Pn**	**20 42 00.5**	**-0.9**
NNSB	baz=333			S	**Sn**	**20 42 10.7**	**-0.6**
NNSH	**Datong** baz=333	**0.73**	**335**	P	**Pn**	**20 42 00.6**	**-0.8**
NNSH	baz=333			*e*S	**Sn**	**20 42 10.6**	**-0.7**
WPL	**Puli Township** baz=289	**0.74**	**290**	P	**Pn**	**20 42 00.6**	**-0.8**
WPL	baz=289			S	**Sn**	**20 42 12.3**	**+0.9**
NNS	**Nan Shan** baz=333	**0.74**	**335**	*i* P	**Pn**	**20 42 00.7**	**-0.8**
NNS	baz=333			S	**Sn**	**20 42 11.3**	**-0.4**
YUS	**Yu-Shan** baz=249	**0.75**	**249**	*i* P	**Pn**	**20 42 01.4**	**-0.6**
YUS	baz=249			*i* S	**Sn**	**20 42 11.5**	**-0.9**
SMLT	**Sun Moon Lake** baz=279	**0.76**	**279**	⇓*i*P	**Pn**	**20 42 01.0**	**-0.7**
SMLT	baz=279			*i* S	**Sn**	**20 42 11.1**	**-0.9**
WHYT	**Xinyi Township** baz=265	**0.79**	**265**	*i* P	**Pn**	**20 42 01.9**	**-0.2**
WHYT	baz=265			S	**Sn**	**20 42 13.2**	**+0.4**
TYC	**Yuchr** baz=280	**0.80**	**280**	*i* P	**Pn**	**20 42 01.5**	**-0.7**
TYC	baz=280			*i* S	**Sn**	**20 42 13.6**	**+0.8**
TWC	**Suao** baz=7.0	**0.85**	**8**	P	**Pn**	**20 42 02.5**	**-0.4**
TWC	baz=7.0			S	**Sn**	**20 42 14.6**	**+0.4**
NDT	**Datong Townshi** baz=345	**0.85**	**348**	*i* P	**Pn**	**20 42 02.0**	**-1.0**
NDT	baz=345			*i* S	**Sn**	**20 42 15.0**	**+0.7**
ELDTW	**Lidau** baz=229	**0.86**	**228**	⇓*i*P	**Pn**	**20 42 01.7**	**-1.5**
ELDTW	baz=229			S	**Sn**	**20 42 14.5**	**-0.1**
WHP	**Taichung City** baz=305	**0.87**	**306**	P	**Pn**	**20 42 02.9**	**-0.4**
WHP	baz=305			S	**Sn**	**20 42 15.3**	**+0.5**
ALS	**Alishan** baz=253	**0.87**	**253**	*i* P	**Pn**	**20 42 03.0**	**-0.5**
ALS	baz=253			*i* S	**Sn**	**20 42 14.8**	**-0.3**
EDH	**Donghe** baz=207	**0.88**	**206**	P	**Pn**	**20 42 02.6**	**-0.6**
EDH	baz=207			S	**Sn**	**20 42 14.5**	**-0.2**
ENTT	**Nioudou** baz=349	**0.88**	**351**	*i* P	**Pn**	**20 42 02.5**	**-0.9**
ENTT	baz=349			*i* S	**Sn**	**20 42 14.7**	**-0.3**
WJS	**Zhushan** baz=273	**0.91**	**274**	P	**Pn**	**20 42 03.8**	**+0.1**
WJS	baz=273			S	**Sn**	**20 42 16.3**	**+0.7**
WNT	**Mingjian** baz=276	**0.95**	**277**	*i* P	**Pn**	**20 42 04.3**	**0.0**
WNT	baz=276			*i* S	**Sn**	**20 42 17.5**	**+0.9**
TWE	**Neicheng** baz=356	**0.95**	**357**	*i* P	**Pn**	**20 42 03.6**	**-0.7**
TWE	baz=356			S	**Sn**	**20 42 16.3**	**-0.3**
YHNB	**Yeheng** baz=339	**0.95**	**341**	P	**Pn**	**20 42 03.8**	**-0.6**
YHNB	baz=339			S	**Sn**	**20 42 16.0**	**-0.8**
WNT1	**Nantou City** baz=278	**0.96**	**279**	*e*P	**Pn**	**20 42 04.8**	**+0.4**
WNT1	baz=278			S	**Sn**	**20 42 17.5**	**+0.7**
NSK	**Sanguang** baz=339	**0.96**	**340**	*i* P	**Pn**	**20 42 03.9**	**-0.6**
NSK	baz=339			*i* S	**Sn**	**20 42 16.1**	**-1.0**
CHN5	**Tsauling** baz=260	**0.97**	**260**	*i* P	**Pn**	**20 42 04.3**	**-0.2**
CHN5	baz=260			*i* S	**Sn**	**20 42 18.0**	**+0.9**
WWF	**Wufeng** baz=286	**0.97**	**287**	P	**Pn**	**20 42 04.9**	**+0.4**
WWF	baz=286			S	**Sn**	**20 42 17.9**	**+0.8**
LONT	**Longtian** baz=213	**1.01**	**212**	P	**Pn**	**20 42 04.7**	**-0.4**
LONT	baz=213			*e*S	**Sn**	**20 42 18.2**	**+0.2**
TCU	**Taichung** baz=291	**1.02**	**292**	P	**Pn**	**20 42 05.5**	**+0.3**
TCU	baz=291			S	**Sn**	**20 42 19.8**	**+1.4**
NWLT	**Wulai** baz=347	**1.03**	**349**	*e*P	**Pn**	**20 42 05.2**	**-0.2**
NWLT	baz=347			*e*S	**Sn**	**20 42 18.8**	**+0.2**
TWQ1	**Liyutan** baz=303	**1.04**	**304**	*i* P	**Pn**	**20 42 05.3**	**-0.2**
TWQ1	baz=303			S	**Sn**	**20 42 19.1**	**+0.3**
WGK	**Gukeng** baz=266	**1.06**	**266**	P	**Pn**	**20 42 05.4**	**-0.4**
WGK	baz=266			S	**Sn**	**20 42 19.3**	**0.0**
STYT	**Tauyuan** baz=236	**1.06**	**236**	*i* P	**Pn**	**20 42 05.5**	**-0.4**
STYT	baz=236			S	**Sn**	**20 42 19.9**	**+0.4**
NSTT	**Nanjuang** baz=322	**1.08**	**323**	*i* P	**Pn**	**20 42 06.5**	**+0.4**
NSTT	baz=322			*i* S	**Sn**	**20 42 19.9**	**+0.1**
WDLH	**Douliu** baz=266	**1.08**	**266**	*e*P	**Pn**	**20 42 05.7**	**-0.4**
WDLH	baz=266			S	**Sn**	**20 42 21.2**	**+1.4**
LIOB	**Emei** baz=323	**1.08**	**324**	P	**Pn**	**20 42 06.2**	**+0.1**
LIOB	baz=323			S	**Sn**	**20 42 20.5**	**+0.5**
NSY	**Sanyi** baz=306	**1.09**	**307**	P	**Pn**	**20 42 06.0**	**-0.2**
NSY	baz=306			S	**Sn**	**20 42 20.6**	**+0.6**
NTC	**Toucheng** baz=4.0	**1.09**	**5**	*e*P	**Pn**	**20 42 05.0**	**-1.2**
NTC	baz=4.0			*e*S	**Sn**	**20 42 19.8**	**-0.2**
TPUB	**Ta-pu** baz=245	**1.10**	**245**	P	**Pn**	**20 42 06.4**	**+0.1**
TPUB	baz=245			S	**Sn**	**20 42 20.9**	**+0.6**
WCHH	**Zhanghua** baz=286	**1.10**	**287**	P	**Pn**	**20 42 06.2**	**-0.1**
WCHH	baz=286			S	**Sn**	**20 42 21.4**	**+1.0**
CHN4	**Tsaushan** baz=248	**1.11**	**248**	P	**Pn**	**20 42 06.5**	**+0.1**
CHN4	baz=248			*i* S	**Sn**	**20 42 21.8**	**+1.3**
TWGBT	**Beinan** baz=213	**1.11**	**212**	P	**Pn**	**20 42 06.0**	**-0.5**
TWGBT	baz=213			S	**Sn**	**20 42 20.5**	**0.0**
LDUT	**Ludao** baz=193	**1.11**	**192**	*e*P	**Pn**	**20 42 05.5**	**-1.0**
LDUT	baz=193			S	**Sn**	**20 42 19.3**	**-1.2**
NJD	**Zhudong** baz=328	**1.12**	**329**	P	**Pn**	**20 42 07.1**	**+0.5**
NJD	baz=328			S	**Sn**	**20 42 21.6**	**+0.7**
WTP	**Ta-pu** baz=243	**1.14**	**243**	*i* P	**Pn**	**20 42 06.7**	**-0.2**
WTP	baz=243			S	**Sn**	**20 42 22.3**	**+1.0**
NMLH	**Miaoli** baz=311	**1.14**	**313**	*e*S	**Sn**	**20 42 21.9**	**+0.6**
WDJ	**Dajia District** baz=300	**1.14**	**301**	P	**Pn**	**20 42 06.8**	**-0.1**
WDJ	baz=300			S	**Sn**	**20 42 22.1**	**+0.8**
NHDH	**Xindian Distri** baz=350	**1.21**	**352**	*e*P	**Pn**	**20 42 07.7**	**-0.1**
NHDH	baz=350			*e*S	**Sn**	**20 42 22.6**	**-0.3**
TIPB	**Shuangxi** baz=3.0	**1.21**	**5**	P	**Pn**	**20 42 08.4**	**+0.6**
TIPB	baz=3.0			*e*S	**Sn**	**20 42 22.4**	**-0.5**
CHY	**Chiayi** baz=257	**1.21**	**258**	*e*P	**Pn**	**20 42 07.1**	**-0.7**
CHY	baz=257			*e*S	**Sn**	**20 42 24.4**	**+1.3**
TWA	**Mucha** baz=353	**1.22**	**354**	P	**Pn**	**20 42 07.6**	**-0.3**
TWA	baz=353			S	**Sn**	**20 42 23.1**	**-0.1**
WTK	**Tuku** baz=266	**1.22**	**267**	*e*P	**Pn**	**20 42 07.7**	**-0.3**
WTK	baz=266			*e*S	**Sn**	**20 42 24.0**	**+0.8**
TATO	**Taipei** baz=349	**1.22**	**350**	P	**Pn**	**20 42 08.4**	**+0.3**
TATO	baz=349			S	**Sn**	**20 42 24.2**	**+0.9**
TWK	**Hsinying** baz=246	**1.23**	**246**	*e*P	**Pn**	**20 42 07.8**	**-0.4**
TWK	baz=246			S	**Sn**	**20 42 23.9**	**+0.3**
CHN1	**Nanshi** baz=242	**1.23**	**242**	*e*P	**Pn**	**20 42 07.3**	**-0.9**
CHN1	baz=242			S	**Sn**	**20 42 24.2**	**+0.6**
SGST	**Jiashian** baz=237	**1.24**	**237**	P	**Pn**	**20 42 07.7**	**-0.7**
SGST	baz=237			*e*S	**Sn**	**20 42 24.0**	**+0.2**
SNST	**Tainan City** baz=244	**1.24**	**244**	*e*P	**Pn**	**20 42 08.4**	**+0.1**
SNST	baz=244			S	**Sn**	**20 42 25.4**	**+1.6**
SLGT	**Liugui** baz=232	**1.25**	**232**	*e*P	**Pn**	**20 42 08.7**	**+0.3**
SLGT	baz=232			*e*S	**Sn**	**20 42 24.7**	**+0.8**
RLNB	**Erlin** baz=275	**1.25**	**276**	*e*S	**Sn**	**20 42 25.4**	**+1.5**
NTY	**Taoyuan** baz=342	**1.29**	**343**	P	**Pn**	**20 42 08.8**	**-0.1**
NTY	baz=342			*e*S	**Sn**	**20 42 25.1**	**+0.2**
JYNG	**Yonagunijimaku**	**1.31**	**58**	P	**Pn**	**20 42 09.8**	**+0.5**
JYNG				S	**Sn**	**20 42 26.4**	**+0.8**
ECL	**Taimali** baz=211	**1.36**	**211**	*e*P	**Pn**	**20 42 08.5**	**-1.3**
YOJ	**Yonaguni jima**	**1.37**	**59**	P	**Pn**	**20 42 10.5**	**+0.4**
YOJ				S	**Sn**	**20 42 27.6**	**+0.6**
YOJ	**Yonaguni jima** baz=58	**1.37**	**59**	*e*P	**Pn**	**20 42 09.8**	**-0.3**
WSF	**Szhu** baz=264	**1.38**	**265**	*e*S	**Sn**	**20 42 27.4**	**+0.3**
YM04	**YM04** baz=352	**1.39**	**353**	*e*P	**Pn**	**20 42 10.1**	**-0.3**
YM04	baz=352			*e*S	**Sn**	**20 42 27.4**	**-0.2**
YM10	**YM10** baz=353	**1.39**	**354**	*e*P	**Pn**	**20 42 09.4**	**-1.0**
YM05	**YM05** baz=353	**1.40**	**354**	P	**Pn**	**20 42 09.9**	**-0.6**
YM05	baz=353			S	**Sn**	**20 42 27.6**	**-0.2**
YM03	**YM03** baz=352	**1.42**	**354**	*e*P	**Pn**	**20 42 11.0**	**+0.2**
YM03	baz=352			*e*S	**Sn**	**20 42 29.5**	**+1.3**
SSD	**Sandimen** baz=225	**1.42**	**225**	*e*P	**Pn**	**20 42 10.7**	**-0.1**
SSD	baz=225			*e*S	**Sn**	**20 42 29.1**	**+0.9**
YM08	**YM08** baz=354	**1.42**	**355**	*e*P	**Pn**	**20 42 09.9**	**-0.8**
SCST	**Cishan** baz=232	**1.42**	**232**	*e*P	**Pn**	**20 42 09.8**	**-1.0**
SCST	baz=232			*e*S	**Sn**	**20 42 29.0**	**+0.7**
CHN8	**Yiju** baz=253	**1.44**	**254**	*e*S	**Sn**	**20 42 28.8**	**+0.1**
TSMG	**Majia** baz=223	**1.44**	**223**	*e*P	**Pn**	**20 42 11.3**	**+0.3**
TSMG	baz=223			*e*S	**Sn**	**20 42 29.7**	**+0.9**
MASBT	**Mashibuluo** baz=221	**1.52**	**221**	*e*P	**Pn**	**20 42 11.2**	**-0.9**
MASBT	baz=221			*e*S	**Sn**	**20 42 30.6**	**-0.1**
EAST	**Anshuo** baz=210	**1.59**	**210**	*e*P	**Pn**	**20 42 12.4**	**-0.7**
IRIF	**Iriomote-Funau**	**1.93**	**72**	P	**Pn**	**20 42 17.9**	**+0.2**
IRIF				S	**Sn**	**20 42 41.8**	**+1.1**
HATJ	**Hateruma jima**	**1.93**	**81**	P	**Pn**	**20 42 18.0**	**+0.2**
HATJ				*e*S	**Sn**	**20 42 40.7**	**-0.2**
JKRS	**Kuro-shima**	**2.15**	**77**	P	**Pn**	**20 42 21.3**	**+0.5**
JKRS				S	**Sn**	**20 42 48.1**	**+1.9**
JIJ	**Ishigaki jima**	**2.30**	**74**	P	**Pn**	**20 42 22.6**	**-0.2**
JIJ				S	**Sn**	**20 42 48.9**	**-0.9**
JISG	**Ishigakijimahi**	**2.51**	**70**	P	**Pn**	**20 42 25.4**	**-0.3**
JISG				S	**Sn**	**20 42 54.4**	**-0.6**
JTJ	**Tarama**	**2.86**	**72**	P	**Pn**	**20 42 30.5**	**-0.1**
JTJ				S	**Sn**	**20 43 04.4**	**+0.6**

TAP ***12*** *21:20:34.3, 24.°33N×122.°73E, h78^{km}, ML4.2, C*
JMA ***12*** *21:20:34.5±0.1, 24.°30N×122.°68E, h74^{km}±2^{km}, M3.2*
NEIC ***12*** *21:20:34.5±1.8, 24.°39N±0.°06×122.°71E±0.°06, h77^{km}±6^{km}, mb4.2/9, Error ellipse: s-maj=9.2km s-min=7.3km az=188.0*
IDC ***12*** *21:20:42.8±9.0, 24.°41N×122.°58E, h160^{km}±96^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.0/51, mbtmp3.9/6, Error ellipse: s-maj=83.7km s-min=15.4km az=66.0*
ISC 12 21:20:34.0±0.7**, 24.°31N**±0.°03×**122.°72E**±0.°02**, h73**^{km}±5^{km}**,**
n151, σ1.^{s}45/267**, mb4.1**/10**, 1C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.25**	**55**	P	**Pn**	**21 20 46.2**	**+1.1**
JYNG				S	**Sn**	**21 20 54.4**	**+1.1**
YOJ	**Yonaguni jima**	**0.31**	**60**	P	**Pn**	**21 20 46.4**	**+1.0**
YOJ				S	**Sn**	**21 20 54.9**	**+1.0**
YOJ	**Yonaguni jima** baz=53	**0.31**	**60**	⇓P	**Pn**	**21 20 46.5**	**+1.0**
YOJ	baz=53			S	**Sn**	**21 20 55.3**	**+1.4**
YOJ	**Yonaguni jima**	**0.31**	**60**		**Pn**	**21 20 46.3**	**+0.8**
YOJ				Sn	**Sn**	**21 20 54.7**	**+0.8**
ENAH	**Nanao** baz=278	**0.84**	**280**	P	**Pn**	**21 20 51.2**	**+0.5**
ENAH	baz=278			S	**Sn**	**21 21 04.0**	**+1.0**
TWC	**Suao** baz=296	**0.85**	**291**	⇓*i*P	**Pn**	**21 20 51.4**	**+0.7**
TWC	baz=296			*i* S	**Sn**	**21 21 03.2**	**0.0**
IRIF	**Iriomote-Funau**	**0.92**	**88**	P	**Pn**	**21 20 52.7**	**+1.1**
IRIF				S	**Sn**	**21 21 05.9**	**+1.1**
TWB1	**Santiao Chiao** baz=323	**0.96**	**317**	*i* P	**Pn**	**21 20 52.5**	**+0.4**
TWB1	baz=323			S	**Sn**	**21 21 06.1**	**+0.4**
NTC	**Toucheng** baz=303	**0.97**	**304**	*e*P	**Pn**	**21 20 53.3**	**+1.0**
NTC	baz=303			*e*S	**Sn**	**21 21 06.0**	**+0.1**
ILA	**Ilan** baz=296	**0.99**	**297**	*i* P	**Pn**	**21 20 53.6**	**+1.0**
ILA	baz=296			*i* S	**Sn**	**21 21 07.7**	**+1.4**
HATJ	**Hateruma jima**	**1.02**	**104**	P	**Pn**	**21 20 54.8**	**+1.9**
HATJ				S	**Sn**	**21 21 09.3**	**+2.3**
NACB	**Ninganchiao** baz=262	**1.03**	**263**	⇓P	**Pn**	**21 20 53.6**	**+0.5**
NACB	baz=262			S	**Sn**	**21 21 07.3**	**+0.1**
NACB	**Ninganchiao**	**1.03**	**263**		**Pn**	**21 20 53.5**	**+0.5**
NACB					**Sn**	**21 21 07.4**	**+0.1**
TWE	**Neicheng** baz=299	**1.04**	**293**	⇓*i*P	**Pn**	**21 20 54.0**	**+0.9**
TWE	baz=299			*i* S	**Sn**	**21 21 08.6**	**+1.2**
TIPB	**Shuangxi** baz=308	**1.05**	**309**	⇓*i*P	**Pn**	**21 20 53.8**	**+0.6**
TIPB	baz=308			*i* S	**Sn**	**21 21 07.9**	**+0.3**
TWD	**Chiawan** baz=249	**1.05**	**258**	*i* P	**Pn**	**21 20 53.8**	**+0.6**
TWD	baz=249			*i* S	**Sn**	**21 21 07.4**	**-0.1**
HWA	**Hwalien** baz=251	**1.07**	**252**	P	**Pn**	**21 20 54.4**	**+1.0**
HWA	baz=251			S	**Sn**	**21 21 08.3**	**+0.3**
ENTT	**Nioudou** baz=293	**1.10**	**288**	*i* P	**Pn**	**21 20 55.1**	**+1.3**
ENTT	baz=293			*i* S	**Sn**	**21 21 09.8**	**+1.1**
ETLH	**Xiulin Townshi** baz=258	**1.13**	**265**	P	**Pn**	**21 20 54.9**	**+0.6**
ETLH	baz=258			S	**Sn**	**21 21 10.0**	**+0.4**
NDT	**Datong Townshi** baz=278	**1.14**	**285**	*i* P	**Pn**	**21 20 55.7**	**+1.4**
NDT	baz=278			*i* S	**Sn**	**21 21 10.9**	**+1.3**
NWF	**Wu-fen Shan** baz=311	**1.14**	**312**	⇓*i*P	**Pn**	**21 20 55.2**	**+0.8**
NWF	baz=311			*i* S	**Sn**	**21 21 10.2**	**+0.4**
WFSB	**Wu-fen Shan** baz=311	**1.14**	**312**	P	**Pn**	**21 20 55.2**	**+0.9**
WFSB	baz=311			S	**Sn**	**21 21 10.2**	**+0.5**
JKRS	**Kuro-shima**	**1.18**	**93**	P	**Pn**	**21 20 56.6**	**+1.7**
JKRS				S	**Sn**	**21 21 12.7**	**+2.2**
NWLT	**Wulai** baz=298	**1.20**	**293**	*i* P	**Pn**	**21 20 56.5**	**+1.3**
NWLT	baz=298			*e*S	**Sn**	**21 21 11.6**	**+0.5**
NNSH	**Datong** baz=275	**1.22**	**276**	*i* P	**Pn**	**21 20 56.2**	**+0.7**
NNSH	baz=275			S	**Sn**	**21 21 11.9**	**+0.2**
NNSB	**Datong** baz=275	**1.22**	**276**	⇓P	**Pn**	**21 20 56.4**	**+0.9**
NNSB	baz=275			S	**Sn**	**21 21 11.9**	**+0.2**
TWA	**Mucha** baz=303	**1.23**	**303**	*i* P	**Pn**	**21 20 56.3**	**+0.8**
TWA	baz=303			*i* S	**Sn**	**21 21 12.1**	**+0.4**
NNS	**Nan Shan** baz=276	**1.23**	**276**	*i* P	**Pn**	**21 20 56.4**	**+0.7**
NNS	baz=276			*i* S	**Sn**	**21 21 12.2**	**+0.3**
NHDH	**Xindian Distri** baz=301	**1.27**	**301**	*e*P	**Pn**	**21 20 56.8**	**+0.8**
NHDH	baz=301			*e*S	**Sn**	**21 21 12.6**	**+0.2**
ESL	**Shilin** baz=241	**1.27**	**248**	*i* P	**Pn**	**21 20 56.3**	**+0.2**
ESL	baz=241			S	**Sn**	**21 21 12.5**	**-0.2**
YHNB	**Yeheng** baz=279	**1.27**	**287**	P	**Pn**	**21 20 57.4**	**+1.2**
YHNB	baz=279			S	**Sn**	**21 21 13.7**	**+0.9**
YHNB	**Yeheng**	**1.27**	**287**	Pn	**Pn**	**21 20 57.3**	**+1.1**
YHNB				Sn	**Sn**	**21 21 13.7**	**+0.9**
NSK	**Sanguang** baz=279	**1.29**	**287**	*i* P	**Pn**	**21 20 57.5**	**+1.1**
NSK	baz=279			*i* S	**Sn**	**21 21 14.4**	**+1.2**
JIJ	**Ishigaki jima**	**1.30**	**87**	P	**Pn**	**21 20 57.4**	**+1.0**
JIJ				S	**Sn**	**21 21 13.4**	**+0.1**
TATO	**Taipei** baz=300	**1.30**	**301**	P	**Pn**	**21 20 57.1**	**+0.6**
TATO	baz=300			S	**Sn**	**21 21 14.1**	**+0.8**
TATO	**Taipei**	**1.30**	**301**	Pn	**Pn**	**21 20 57.0**	**+0.6**
TATO				Sn	**Sn**	**21 21 12.9**	**-0.3**
TAP	**Taipei** baz=303	**1.32**	**304**	S	**Sn**	**21 21 13.7**	**-0.1**
WHF	**Hehuan Shan** baz=255	**1.34**	**263**	*i* P	**Pn**	**21 20 58.0**	**+0.7**
WHF	baz=255			*i* S	**Sn**	**21 21 14.9**	**+0.1**
YM01	**YM01** baz=308	**1.34**	**309**	P	**Pn**	**21 20 57.6**	**+0.6**
YM01	baz=308			S	**Sn**	**21 21 14.4**	**+0.2**
EGFH	**Guangfu** baz=236	**1.34**	**242**	*i* P	**Pn**	**21 20 57.5**	**+0.6**
EGFH	baz=236			*i* S	**Sn**	**21 21 15.2**	**+1.0**
YM11	**YM11** baz=301	**1.35**	**310**	P	**Pn**	**21 20 58.0**	**+0.9**
YM11	baz=301			S	**Sn**	**21 21 14.0**	**-0.4**
FUSS	**Fushou** baz=267	**1.35**	**268**	P	**Pn**	**21 20 58.5**	**+1.3**
FUSS	baz=267			S	**Sn**	**21 21 15.2**	**+0.5**
YM08	**YM08** baz=302	**1.35**	**311**	P	**Pn**	**21 20 57.4**	**+0.3**
YM08	baz=302			S	**Sn**	**21 21 14.1**	**-0.4**
YM10	**YM10** baz=308	**1.35**	**309**	P	**Pn**	**21 20 57.6**	**+0.5**
YM10	baz=308			S	**Sn**	**21 21 14.6**	**+0.1**
YM05	**YM05** baz=309	**1.35**	**309**	P	**Pn**	**21 20 57.8**	**+0.6**
YM05	baz=309			S	**Sn**	**21 21 14.2**	**-0.3**
YM04	**YM04** baz=298	**1.36**	**308**	P	**Pn**	**21 20 57.8**	**+0.5**
YM04	baz=298			S	**Sn**	**21 21 14.3**	**-0.5**
YM03	**YM03** baz=300	**1.38**	**309**	P	**Pn**	**21 20 58.2**	**+0.7**
YM03	baz=300			*e*S	**Sn**	**21 21 16.9**	**+1.7**
ANP	**Anpu** baz=299	**1.40**	**309**	*e*P	**Pn**	**21 20 59.5**	**+1.7**

ANP				*e*S	Sn	21 21 14.9	-0.8
	baz=299						
TWY	Chenhua	1.40	314	*i* P	Pn	21 20 58.7	+1.0
	baz=313						
TWY				*i* S	Sn	21 21 16.6	+1.0
	baz=313						
TWT	Tachien	1.41	268	*i* P	Pn	21 20 59.8	+1.8
	baz=267						
TWT				*i* S	Sn	21 21 17.3	+1.2
	baz=267						
NSM	Shimen	1.42	314	P	Pn	21 20 59.3	+1.3
	baz=302						
TWS1	Kuangyinshan	1.42	304	⇓*i*P	Pn	21 20 58.8	+0.8
	baz=304						
TWS1				*i* S	Sn	21 21 16.1	+0.1
	baz=304						
TDCB	Techi	1.42	268	P	Pn	21 20 59.6	+1.4
	baz=268						
TDCB				S	Sn	21 21 16.8	+0.4
	baz=268						
CHGB	Renai	1.43	260	P	Pn	21 20 59.4	+1.1
	baz=253						
CHGB				S	Sn	21 21 17.2	+0.5
	baz=253						
HGSD	Ruisui	1.44	236	P	Pn	21 20 58.6	+0.4
	baz=235						
HGSD				*e*S	Sn	21 21 16.7	+0.3
	baz=235						
PCYT	Pengchaiyu	1.44	336	P	Pn	21 20 59.5	+1.2
	baz=329						
NTY	Taoyuan	1.46	298	P	Pn	21 20 59.5	+0.9
	baz=305						
NTY				*e*S	Sn	21 21 18.3	+1.2
	baz=305						
JISG	Ishigakijimahi	1.48	79	P	Pn	21 20 59.5	+0.8
JISG				S	Sn	21 21 18.2	+0.8
EHY	Hungye	1.51	238	*i* P	Pn	21 20 59.4	+0.2
	baz=247						
EHY				*i* S	Sn	21 21 18.6	+0.5
	baz=247						
NCU	National Centr	1.54	296	P	Pn	21 21 00.7	+1.1
	baz=295						
NCU				*i* S	Sn	21 21 20.2	+1.3
	baz=295						
NCUH	Zhongli	1.54	296	*e*P	Pn	21 21 00.7	+1.2
	baz=295						
NCUH				S	Sn	21 21 20.7	+1.8
	baz=295						
LIOB	Emei	1.59	283	P	Pn	21 21 02.2	+2.0
	baz=291						
LIOB				S	Sn	21 21 21.9	+1.9
	baz=291						
YULB	Yu-li	1.59	235	⇑P	Pn	21 21 00.8	+0.6
	baz=245						
YULB				S	Sn	21 21 19.6	-0.4
	baz=245						
YULB	Yu-li	1.59	235	Pn	Pn	21 21 00.6	+0.4
NSTT	Nanjuang	1.60	282	*i* P	Pn	21 21 01.2	+0.9
	baz=292						
NSTT				*i* S	Sn	21 21 21.9	+1.7
	baz=292						
EYUL	Yuli	1.60	234	P	Pn	21 21 01.4	+1.0
	baz=228						
EYUL				S	Sn	21 21 21.7	+1.4
	baz=228						
TWF1	Yuli	1.61	234	*i* P	Pn	21 21 01.2	+0.6
	baz=245						
TWF1				S	Sn	21 21 20.5	-0.1
	baz=245						
HSN1	Hsinchu	1.62	287	P	Pn	21 21 02.7	+2.1
	baz=287						
HSN1				S	Sn	21 21 22.4	+1.7
	baz=287						
WHP	Taichung City	1.62	269	*i* P	Pn	21 21 02.7	+2.0
	baz=264						
WHP				*i* S	Sn	21 21 22.7	+1.8
	baz=264						
WPL	Puli Township	1.64	260	P	Pn	21 21 02.4	+1.6
	baz=256						
WPL				S	Sn	21 21 21.9	+0.8
	baz=256						
SBCB	Hsinchu	1.65	287	*e*P	Pn	21 21 01.7	+0.7
	baz=287						
SBCB				*e*S	Sn	21 21 23.2	+1.7
	baz=287						
HSN	Hsinchu	1.67	288	P	Pn	21 21 01.9	+0.7
	baz=288						
HSN				S	Sn	21 21 23.7	+1.8
	baz=288						
SSLB	Suanglung	1.69	253	P	Pn	21 21 02.9	+1.3
	baz=257						
SSLB				S	Sn	21 21 23.4	+0.8
	baz=257						
SSLB	Suanglung	1.69	253	Pn	Pn	21 21 02.7	+1.1
SSLB				Sn	Sn	21 21 22.3	-0.3
FULB	Fuli	1.71	230	*i* P	Pn	21 21 02.2	+0.3
	baz=230						
FULB				S	Sn	21 21 22.9	0.0
	baz=230						
SMLT	Sun Moon Lake	1.71	256	*i* P	Pn	21 21 03.4	+1.4
	baz=251						
SMLT				*i* S	Sn	21 21 24.9	+1.7
	baz=251						
CHKT	Chengkung	1.73	226	*i* P	Pn	21 21 01.9	-0.1
	baz=225						
CHKT				*i* S	Sn	21 21 22.7	-0.6
	baz=225						
TYC	Yuchr	1.75	257	*i* P	Pn	21 21 04.0	+1.7
	baz=252						
TYC				S	Sn	21 21 26.1	+2.3
	baz=252						
NMLH	Miaoli	1.77	278	P	Pn	21 21 04.4	+1.8
	baz=288						
NMLH				S	Sn	21 21 26.3	+1.9
	baz=288						
TWQ1	Liyutan	1.77	272	P	Pn	21 21 04.6	+1.9
	baz=271						
TWQ1				*i* S	Sn	21 21 26.7	+2.2
	baz=271						
WHYT	Xinyi Township	1.81	251	P	Pn	21 21 05.1	+1.9
	baz=247						
WHYT				S	Sn	21 21 27.3	+2.0
	baz=247						
JTJ	Tarama	1.84	79	P	Pn	21 21 04.6	+1.1
JTJ				S	Sn	21 21 27.1	+1.2
EDH	Donghe	1.86	225	P	Pn	21 21 04.1	+0.3
	baz=220						
EDH				S	Sn	21 21 26.0	-0.5
	baz=220						
WWF	Wufeng	1.86	262	*e*P	Pn	21 21 06.8	+3.0
	baz=262						
WWF				S	Sn	21 21 30.0	+3.4
	baz=262						
TCU	Taichung	1.87	266	*e*P	Pn	21 21 05.1	+1.2
	baz=277						
TCU				S	Sn	21 21 29.0	+2.3
	baz=277						
WJS	Zhushan	1.88	256	P	Pn	21 21 06.1	+2.0
	baz=253						
WJS				S	Sn	21 21 30.2	+3.2
	baz=253						
WDJ	Dajia District	1.90	272	*e*P	Pn	21 21 06.1	+1.8
	baz=282						
WDJ				S	Sn	21 21 29.8	+2.4
	baz=282						
WNT1	Nantou City	1.91	258	*e*P	Pn	21 21 06.6	+2.2
	baz=258						
WNT1				S	Sn	21 21 30.7	+3.2
	baz=258						
WNT	Mingjian	1.91	257	*i* P	Pn	21 21 07.1	+2.6
	baz=257						
WNT				*i* S	Sn	21 21 30.4	+2.8
	baz=257						
ELDTW	Lidau	1.92	235	*i* P	Pn	21 21 05.1	+0.5
	baz=234						
ELDTW				S	Sn	21 21 27.5	-0.5
	baz=234						
ALS	Alishan	1.92	246	*i* P	Pn	21 21 06.8	+1.9
	baz=240						
ALS				*i* S	Sn	21 21 29.7	+1.3
	baz=240						
WCHH	Zhanghua	1.98	264	*e*P	Pn	21 21 07.1	+1.6
	baz=273						
WCHH				*e*S	Sn	21 21 32.2	+2.7
	baz=273						
LDUT	Ludao	1.99	215	P	Pn	21 21 05.6	0.0
	baz=210						
LDUT				*e*S	Sn	21 21 28.6	-1.0
	baz=210						
CHN5	Tsauling	2.00	250	*i* P	Pn	21 21 07.6	+1.8
	baz=242						
CHN5				S	Sn	21 21 32.7	+2.8
	baz=242						
LONT	Longtian	2.02	227	P	Pn	21 21 06.1	+0.2
	baz=235						
LONT				S	Sn	21 21 31.0	+0.7
	baz=235						
WGK	Gukeng	2.07	253	*e*P	Pn	21 21 08.3	+1.7
	baz=244						
WGK				*e*S	Sn	21 21 34.6	+3.2
	baz=244						
WDLH	Douliu	2.09	253	*e*P	Pn	21 21 09.0	+2.2
	baz=245						
WDLH				*e*S	Sn	21 21 35.6	+3.7
	baz=245						
TWGBT	Beinan	2.11	226	P	Pn	21 21 07.3	+0.1
	baz=234						
TWGBT				S	Sn	21 21 31.4	-1.1
	baz=234						
TTN	Taitung	2.12	223	*i* P	Pn	21 21 08.8	+1.6
	baz=218						
TTN				S	Sn	21 21 32.7	+0.1
	baz=218						
TWG	Pinlang	2.12	226	P	Pn	21 21 07.6	+0.3
	baz=234						
TWG				S	Sn	21 21 32.4	-0.2
	baz=234						
TWG	Pinlang	2.12	226	Pn	Pn	21 21 07.3	0.0
STYT	Tauyuan	2.13	238	*i* P	Pn	21 21 09.0	+1.5
	baz=237						
STYT				*i* S	Sn	21 21 34.6	+1.6
	baz=237						
TPUB	Ta-pu	2.16	243	P	Pn	21 21 09.8	+1.9
	baz=242						
TPUB				S	Sn	21 21 36.1	+2.3
	baz=242						
TPUB	Ta-pu	2.16	243	Pn	Pn	21 21 09.9	+2.0
TPUB				Sn	Sn	21 21 36.3	+2.6
CHN4	Tsaushan	2.17	244	P	Pn	21 21 10.5	+2.5
	baz=244						
CHN4				S	Sn	21 21 35.7	+1.8
	baz=244						
CHN2	Minshiung	2.19	250	P	Pn	21 21 10.7	+2.5
	baz=249						
CHN2				S	Sn	21 21 38.0	+3.6
	baz=249						
RLNB	Erlin	2.19	260	P	Pn	21 21 10.2	+2.0
	baz=259						
RLNB				S	Sn	21 21 36.3	+1.8
	baz=259						
WTP	Ta-pu	2.20	242	*i* P	Pn	21 21 10.7	+2.3
	baz=241						
WTP				*i* S	Sn	21 21 37.0	+2.3
	baz=241						
WTK	Tuku	2.22	254	*e*P	Pn	21 21 10.0	+1.4
	baz=267						
WTK				*e*S	Sn	21 21 38.0	+3.0
	baz=267						
CHY	Chiayi	2.25	249	*e*P	Pn	21 21 11.7	+2.7
	baz=249						
CHY				*e*S	Sn	21 21 38.0	+2.2
	baz=249						
TWK	Hsinying	2.29	244	P	Pn	21 21 11.0	+1.3
	baz=243						
TWK				*e*S	Sn	21 21 38.0	+1.1
	baz=243						
JIRB	Irabujima	2.29	76	P	Pn	21 21 10.4	+0.8
JIRB				S	Sn	21 21 37.1	+0.2
CHN1	Nanshi	2.30	241	P	Pn	21 21 11.5	+1.7
	baz=241						
CHN1				*e*S	Sn	21 21 38.8	+1.7
	baz=241						
SNST	Tainan City	2.31	242	*e*P	Pn	21 21 12.2	+2.4
	baz=242						
SNST				*e*S	Sn	21 21 40.5	+3.3
	baz=242						
SGST	Jiashian	2.31	238	P	Pn	21 21 10.7	+0.9
	baz=244						
SGST				S	Sn	21 21 39.3	+2.0
	baz=244						
SLGT	Liugui	2.31	236	P	Pn	21 21 12.2	+2.3
	baz=235						
SLGT				S	Sn	21 21 39.8	+2.5
	baz=235						
ECL	Taimali	2.35	224	P	Pn	21 21 10.0	-0.4
	baz=230						
ECL				S	Sn	21 21 36.6	-1.7
	baz=230						
JIKM	Ikemajima	2.38	75	*e*S	Sn	21 21 39.3	+0.2
JMJ	Miyako jima 2	2.40	77	*e*P	Pn	21 21 13.9	+2.8
	baz=78						
JMJ				*e*S	Sn	21 21 40.2	+0.8
	baz=78						
JMJ2	Miyako jima3	2.42	79	P	Pn	21 21 12.8	+1.5
JMJ2				S	Sn	21 21 40.8	+0.9
ICHU	Yijhu	2.42	248	*e*P	Pn	21 21 12.9	+1.5
	baz=247						
SSD	Sandimen	2.47	231	*e*P	Pn	21 21 13.7	+1.7
	baz=228						
TSMG	Majia	2.48	230	*e*P	Pn	21 21 13.9	+1.7
	baz=227						
SCST	Cishan	2.48	236	*e*P	Pn	21 21 14.1	+1.9
	baz=235						
JOGS	Gusukube	2.49	79	P	Pn	21 21 14.8	+2.5
JOGS				S	Sn	21 21 44.1	+2.5
LAY	Lan-yu	2.50	206	*e*P	Pn	21 21 11.9	-0.5
	baz=205						
MASBT	Mashibuluo	2.55	229	*e*P	Pn	21 21 14.9	+1.7
	baz=225						
TAW	Tawu	2.56	221	*e*P	Pn	21 21 12.7	-0.6
	baz=226						
TWM1	Shoushan	2.57	235	*e*P	Pn	21 21 17.3	+3.9
	baz=235						
EAST	Anshuo	2.57	222	*e*P	Pn	21 21 13.4	-0.1
	baz=227						
KSRS	Korea Array	13.84	18	P	P	21 23 51.8	-1.0
	0.6nm,0.3s,baz=199,slow=12,SNR=18						
KS19	Wonju Array Si	13.87	17	P	P	21 23 53.2	+0.1
JHS	Saijyo	13.96	38	P	P	21 23 50.9	-3.2
SONM	Songino Array	26.82	335	P	P	21 26 06.3	-1.3
	0.8nm,0.6s,baz=150,slow=9.1,SNR=7.5						
SONM	Songino Array	26.82	335	P	P	21 26 06.5	-1.0
MK31	Makanchi Array	39.23	315	P	P	21 27 54.8	-0.5
MK31				IAmb	IAmb	21 27 56.9	
	comp=Z,1.8nm,1.4s						
MKAR	Makanchi Array	39.23	315	P	P	21 27 54.3	-0.9
	comp=Z,0.2nm,0.4s,baz=104,slow=9.1,SNR=9.1						
MKAR	Makanchi Array	39.23	315	P	P	21 27 54.4	-0.8
MKAR				PcP	PcP	21 30 02.1	-0.9
MAKZ	Makanchi	39.44	315	P	P	21 27 56.5	-0.4
COEN	Coen	42.96	150	P	P	21 28 27.0	+0.9
WB0	Warramunga Arr	45.26	164	P	P	21 28 44.7	+0.3
WB0				IAmb	IAmb	21 28 45.7	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	45.42	165	P	P	21 28 46.0	+0.4
	comp=Z,1.8nm,0.7s,baz=346,slow=8.7,SNR=9.4						
WRA	Warramunga Arr	45.42	165	P	P	21 28 47.1	+1.5
WB2	Warramunga Arr	45.42	165	P	P	21 28 46.4	+0.8
WB2				IAmb	IAmb	21 28 47.2	
	comp=Z,4.6nm,1.1s						
WR0	Warramunga Arr	45.48	164	P	P	21 28 46.7	+0.5
WR0				IAmb	IAmb	21 28 48.2	
	comp=Z,3.3nm,0.8s						
AS31	Alice Springs	48.91	166	P	P	21 29 13.9	+1.1
ASAR	Alice Springs	48.91	166	P	P	21 29 13.8	+1.0
	comp=Z,0.3nm,0.3s,baz=353,slow=6.8,SNR=11						
ASAR	Alice Springs	48.91	166	P	P	21 29 14.2	+1.4
ABKAR	Akbulak array	54.36	314	P	P	21 29 53.8	+0.6
ABKAR				IAmb	IAmb	21 30 05.8	
	comp=Z,3.0nm,1.4s						
FINES	FINESS Array B	72.04	330	P	P	21 31 48.3	-1.7
	comp=Z,2.8nm,1.1s,baz=85,slow=4.0,SNR=6.8						
FINES	FINESS Array B	72.04	330	P	P	21 31 47.7	-2.2

JMA 12 21:37:12.4, 35°.40N×138°.99E, h17^{km}±1^{km}, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.16	150	P	Pg	21 37 16.5	-0.2
JOD2				S	Sg	21 37 19.3	-0.2
JFNN	Fujinakano	0.32	231	P	Pg	21 37 19.2	0.0
JFNN				S	Sg	21 37 24.1	+0.2
JYN	Shimob	0.38	285	P	Pg	21 37 20.1	-0.1
JYN				S	Sg	21 37 25.7	+0.1
JRY	Ryogami san	0.62	353	P	Pg	21 37 24.4	-0.3
JRY				S	Sg	21 37 32.5	-0.5
JIZS	Izushimoda	0.69	188	P	Pg	21 37 25.1	-0.8
JIZS				S	Sg	21 37 33.7	-1.3
SHZ3	Shizuoka 3	0.72	243	P	Pg	21 37 26.1	-0.4
SHZ3				S	Sg	21 37 35.9	-0.2
JIM2	Oshima 3	0.77	152	P	Pb	21 37 26.8	-0.6
JIM2				S	Sb	21 37 36.7	-0.9
MAT	Matsushiro	1.30	331	P	Pb	21 37 36.2	-0.3
MAT				S	Sb	21 37 53.0	0.0

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*IDC **12** 21:39:14.8±1.1, 25°.08N×36°.37E, h0^{km}, mb4.0/12, mb1 4.1/16, mb1mx3.9/48, mbtmp4.0/16, ML2.6/3, MS3.9/12, Ms1 3.9/12, ms1mx3.6/38, Error ellipse: s-maj=26.9km s-min=15.2km az=156.0*

*NEIC **12** 21:39:16.7±2.2, 25°.05N±0°.07×36°.3E±0°.1, h10^{km}±2^{km}, mb4.2/13, Error ellipse: s-maj=19.2km s-min=8.5km az=244.0*

*GCMT **12** 21:39:16.7±0.5, 25°.02N±0°.04×36°.01E±0°.03, h29^{km}±1^{km}, MW5.0/74, Moment Tensor Solution. s15,c15; s74,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.29±.25; M$_{\theta\theta}$0.82±.14; M$_{\phi\phi}$2.47±.16; M$_{r\theta}$0.23±.17; M$_{\theta\phi}$-0.76±.08; M$_{\phi r}$1.36±.18; Best double couple: M$_0$3.31300×10^{16} NP1:φ$_s$331.00000°, δ35.00000°, λ-105.00000°. NP2: φ$_s$169.00000°, δ57.00000°, λ-80.00000°. Principal axes: T 2.9980, Plg11.0000°, Azm252.0000°; N 0.6300, Plg9.0000°, Azm344.0000°; P -3.6290, Plg76.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SGS **12** 21:39:17.2, 25°.12N×36°.45E, h25^{km}, Ml3.5*

ISC 12 21:39:16.4±0.7, **25°.18N**±0°.07×**36°.54E**±0°.06, **h10^{km}, n60, σ2^{s}.12**/55, **mb4.1**/15, **MS3.9**/8, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNY07	LNY07	0.94	93	S	Sn	21 39 46.9	-2.2
EWJHS	Al Wajh	0.98	6	S	Sn	21 39 47.4	-2.6
EWJHS	Al Wajh	0.98	6	P	Pb	21 39 34.0	-1.4
LNY16	LNY16	0.98	80	P	Pn	21 39 34.7	-1.4
LNY04	LNY04	1.01	85	P	Pn	21 39 35.1	-1.5
LNY09	LNY09	1.04	78	P	Pn	21 39 35.8	-1.3
LNY05	LNY05	1.06	97	P	Pn	21 39 35.3	-2.0
LNY14	LNY14	1.12	86	P	Pn	21 39 36.7	-1.4
LNY11	LNY11	1.13	83	P	Pn	21 39 36.9	-1.4
LNY15	LNY15	1.14	86	P	Pn	21 39 37.2	-1.3
LNY17	LNY17	1.15	87	P	Pn	21 39 37.1	-1.5
LNY08	LNY08	1.20	97	P	Pn	21 39 37.6	-1.7
LNY02	LNY02	1.20	92	P	Pn	21 39 37.8	-1.5
LNY10	LNY10	1.20	86	P	Pn	21 39 38.1	-1.2
LNYS	LNYS	1.28	94	P	Pn	21 39 39.0	-1.4
YNBS	Yanbu` al Bahr	1.57	122	P	Pn	21 39 41.5	-2.8
BIDS	Bi'r al Bayda'	1.72	13	P	Pb	21 39 45.5	-2.6
TRAS	Al Qrash	1.84	93	P	Pg	21 39 47.5	-4.3
DESA	DESA	2.34	352	P	Pn	21 39 53.4	-1.5
EIL	Elat	4.69	343	Pn	Pn	21 40 26.4	-0.8
	1.1nm,0.3s,baz=129,slow=4.8,SNR=20						
EIL				Sn	Sn	21 41 16.8	-4.8
	3.0nm,0.3s,baz=20,slow=11,SNR=5.3						
MMAI	Mount Meron Ar	7.87	353	Pn	Pn	21 41 11.8	+0.8
	3.3nm,0.3s,baz=158,slow=16,SNR=29						
MMAI				LR	LR	21 44 15.3	
	comp=Z,304nm,19.0s,baz=95,slow=38						
RAYN	Ar Rayn	8.34	100	Pn	Pn	21 41 19.3	+1.8
BR131	Keskin Array S	14.70	351	P	P	21 42 53.7	+2.9
BRTR	Keskin Array B	14.70	351	Pn	P	21 42 53.2	+2.5
	0.1nm,0.3s,baz=174,slow=13,SNR=6.4						
BRTR				LR	LR	21 49 02.7	
	comp=Z,108nm,18.1s,baz=306,slow=40						
BRTR	Keskin Array B	14.70	351	P	P	21 42 53.1	+2.3
BR231	Keskin MP Arra	14.95	349	P	P	21 42 57.0	+3.4
GNI	Garni	16.43	23	Pn	P	21 43 08.9	-1.1
	0.1nm,0.3s,baz=318,slow=20,SNR=2.7						
GNI				LR	LR	21 50 29.5	
	comp=Z,404nm,21.1s,baz=217,slow=41						
GNI	Garni	16.43	23	P	P	21 43 10.5	+0.5
GNI				IAmb	IAmb	21 43 20.6	
	comp=Z,27nm,1.1s						
UOSS	Minazif	17.82	87	P	P	21 43 29.0	+3.7
UOSS				IAmb	IAmb	21 43 37.8	
	comp=Z,23nm,1.1s						
KBZ	Khabaz	19.22	14	P	Pn	21 43 42.0	+0.6
	comp=Z,0.0nm,0.3s,baz=251,slow=15,SNR=2.7						
KBZ				LR	LR	21 52 30.7	
	comp=Z,305nm,18.4s,baz=209,slow=41						
WSAR	Wadi Sarin	20.24	91	P	Pn	21 43 52.1	-1.8
	comp=Z,1.9nm,0.5s,baz=289,slow=12,SNR=1.1						
WSAR				LR	LR	21 52 47.7	
	comp=Z,323nm,20.3s,baz=302,slow=40						
GEYT	Alibeck	22.29	50	P	P	21 44 16.2	+2.3
	comp=Z,5.9nm,0.8s,baz=274,slow=8.8,SNR=7.2						
GEYT				LR	LR	21 54 43.3	
	comp=Z,382nm,19.4s,baz=15,slow=41						
GEYT	Alibeck	22.29	50	P	P	21 44 16.7	+2.8
GYA0B	ALIBECK ARRAY	22.29	50	P	P	21 44 17.5	+3.7
GYA0B				IAmb	IAmb	21 44 22.9	
	comp=Z,7.5nm,0.8s						
HRA	Herat	24.07	62	P	P	21 44 35.3	+3.1
HRA				IAmb	IAmb	21 44 40.0	
	comp=Z,6.2nm,1.2s						
BURAR	Bucovina Array	24.12	341	P	P	21 44 33.1	+0.7
BUR08	Bucovina Ar. S	24.15	341	P	P	21 44 34.4	+1.7
KEST	Kesra	25.61	301	P	P	21 44 47.0	+0.9
	comp=Z,4.9nm,0.9s,baz=18,slow=12,SNR=5.6						
AKASG	Malin Array Be	26.09	349	P	P	21 44 51.2	+1.1
	comp=Z,9.2nm,0.9s,baz=164,slow=8.5,SNR=7.9						
AKASG	Malin Array Be	26.09	349	P	P	21 44 50.9	+0.8
AKBB	Malin Array Si	26.09	349	P	P	21 44 51.4	+1.2
MBAR	Mbarara	26.24	193	LR	LR	21 53 42.8	
	comp=Z,242nm,20.8s,baz=5.0,slow=33						
GERES	GERESS Array B	29.62	329	P	P	21 45 27.0	+5.1
	comp=Z,0.8nm,0.7s,baz=122,slow=8.2,SNR=2.8						
SENIN	Lac Senin/Sane	31.48	320	P	P	21 45 38.7	+0.2
KKAR	Karatay Array	33.02	49	P	P	21 45 55.0	+3.1
TORD	Torodi Ar. Bea	34.91	257	P	P	21 46 08.4	0.0
	comp=Z,0.7nm,0.9s,baz=69,slow=9.4,SNR=3.9						
TORD				LR	LR	22 00 29.3	
	comp=Z,315nm,18.2s,baz=50,slow=37						
ESDC	Sonseca Array	36.79	303	P	P	21 46 22.8	-1.6
	comp=Z,1.5nm,1.1s,baz=104,slow=8.7,SNR=6.0						
ESDC	Sonseca Array	36.79	303	P	P	21 46 24.3	-0.2
FINES	FINESS Array B	36.94	352	P	P	21 46 25.0	-0.3
	comp=Z,8.0nm,1.1s,baz=120,slow=8.2,SNR=3.0						
KOWA	Kowa	39.46	262	P	P	21 46 44.9	-2.2
	comp=Z,3.4nm,0.7s,baz=52,slow=6.6,SNR=8.4						
KOWA	Kowa	39.46	262	P	P	21 46 45.0	-2.1
KOWA				IAmb	IAmb	21 46 49.0	
	comp=Z,5.2nm,0.8s						
KURK	Kurchatov	41.05	40	P	P	21 47 01.9	+2.1
MK31	Makanchi Array	42.11	47	P	P	21 47 10.8	+2.1
MK31				IAmb	IAmb	21 47 16.1	
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	42.11	47	P	P	21 47 11.0	+2.3
	comp=Z,6.0nm,0.9s,baz=253,slow=5.7,SNR=16						
MKAR	Makanchi Array	42.11	47	P	P	21 47 11.1	+2.4
DBIC	Dimbokro	43.61	252	P	P	21 47 18.8	-2.4
	comp=Z,2.3nm,0.9s,baz=61,slow=12,SNR=3.9						
DBIC				LR	LR	22 06 35.3	
	comp=Z,660nm,19.5s,baz=263,slow=38						
ZALV	Zalesovo Beam	45.76	38	P	P	21 47 38.1	+0.3
	comp=Z,0.2nm,0.3s,baz=251,slow=9.0,SNR=1.6						
ZALV				LR	LR	22 08 19.7	
	comp=Z,227nm,18.8s,baz=292,slow=38						
CMAR	Chiang Mai Arr	57.89	83	LR	LR	22 19 38.0	
	comp=Z,48nm,18.8s,baz=295,slow=42						
SONM	Songino Array	58.47	48	P	P	21 49 14.3	+1.5
	comp=Z,1.0nm,1.0s,baz=264,slow=2.6,SNR=2.5						
KSRS	Korea Array	76.18	55	LR	LR	22 29 47.4	
	comp=Z,78nm,20.4s,baz=334,slow=40						

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*BJI **12** 21:51:57.0±0.0, 4°.40S×102°.10E, h40^{km}, mB5.2/20, mb4.5/28, Ms4.4/3, Ms7 4.1/3*

*DJA **12** 21:51:58.0±0.6, 4°S±3°×10°2E±°, h22^{km}±5^{km}, M4.6/18, mb4.7/13, mB5.1/3, MLv4.6/18, Mw(mB)4.4/3*

*KLM **12** 21:51:58, 4°.33S×102°.12E, h57^{km}, mb4.8*

*NEIC **12** 21:51:58.4±1.5, 4°.39S±0°.08×102°.10E±0°.08, h49^{km}±6^{km}, mb4.6/30, Error ellipse: s-maj=15.0km s-min=5.9km*

az=47.0

*IDC **12** 21:52:00.7±2.5, 4°.34S×102°.06E, h70km±19km, mb4.1/14, mb1 4.2/17, mb1mx3.9/37, mbtmp4.4/17, MS3.5/3, Ms1 3.5/3, ms1mx3.2/25, Error ellipse: s-maj=33.8km s-min=9.6km az=48.0*

ISC 12 21:51:57.0±0.5,**4°.46S**±0°.07×**102°.00E**±0°.06,**h37km,n120, σ1s.49**/115,**mb4.6**/41,**1D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.96	84		Pn	21 52 13.8	-0.2
MNAI	Manna	0.96	84	P	Pn	21 52 13.8	-0.2
MNAI				S	Sn	21 52 25.5	-0.9
KSI	Kapahiang	1.00	37	P	Pn	21 52 14.0	-0.5
KSI				S	Sn	21 52 26.1	-1.3
LHSI	Lahat	1.65	68	P	Pn	21 52 24.1	+0.7
LHSI				S	Sn	21 52 43.4	+0.1
LWLI	Liwa	2.13	105	P	Pn	21 52 31.3	+1.2
MDSI	Maura Dua	2.17	91	P	Pn	21 52 31.5	+0.8
KASI	Kota Agung	2.71	113	P	Pn	21 52 39.1	+1.2
KLSI		2.73	95	P	Pn	21 52 39.8	+1.4
PMBI	Palembang	3.16	61	Pn	Pn	21 52 43.9	-0.3
PMBI	Palembang	3.16	61	P	Pn	21 52 44.2	0.0
JMBI	JAMBI	3.25	30	P	Pn	21 52 47.7	+2.2
BLSI	Bandar Lampung	3.36	106	P	Pn	21 52 48.2	+1.2
SDSI	Sungai Dareh	3.55	351	P	Pn	21 52 52.1	+2.5
PDSI	Padang	3.84	336	P	Pn	21 52 56.2	+2.5
CGJI	Cibinong	4.26	120	P	Pn	21 53 00.4	+1.1
DBJI	Dramaga	5.17	114	P	Pn	21 53 17.7	+5.8
CBJI	Citeko	5.21	112	P	Pn	21 53 19.5	+7.1
MNSI	Mandailing Nat	5.75	335	P	Pn	21 53 22.3	+2.4
LEM	Lembang	6.07	113	P	Pn	21 53 29.0	+4.7
	5.2nm,0.3s,baz=322,slow=14,SNR=7.1						
LEM				S	Sn	21 54 38.8	+6.2
	0.7nm,0.3s,baz=28,slow=22,SNR=0.9						
LEM				LR	LR	21 56 08.1	
	comp=Z,456nm,20.5s,baz=241,slow=41						
LEM	Lembang	6.07	113	P	Pn	21 53 25.6	+1.2
	0.2nm37nm,0.8s						
CISI	Cisompet, Garu	6.55	118	Pn	Pn	21 53 31.6	+0.6
CISI	Cisompet, Garu	6.55	118	P	Pn	21 53 31.8	+0.9
	0.7nm3µm88nm,0.6s						
XMIS	Christmas Isla	6.99	149	Pn	Pn	21 53 34.8	-2.2
GSI	Gunungsitoli	7.23	322	Pn	Pn	21 53 41.3	+1.1
GSI	Gunungsitoli	7.23	322	P	Pn	21 53 41.3	+1.1
	0.3nm36nm,0.5s						
KPJI	Karang Pucung	7.46	113	P	Pn	21 53 44.8	+1.4
	0.1nm36nm,0.9s						
PSI	Prapat	7.84	337	P	Pn	21 53 50.5	+1.8
	0.5nm,0.3s,baz=180,slow=16,SNR=1.6						
PSI				LR	LR	21 57 21.7	
	comp=Z,130nm,21.7s,baz=266,slow=42						
IPM	Ipoh	8.93	354	Pn	Pn	21 54 07.5	+3.9
IPM	Ipoh	8.93	354	P	Pn	21 54 04.0	+0.4
TPTI		9.05	328	P	Pn	21 54 07.2	+2.0
	7.8nm,0.5s						
UGM	Wanagama	9.14	112	Pn	Pn	21 54 08.5	+2.0
UGM	Wanagama	9.14	112	P	Pn	21 54 07.8	+1.3
	98nm,0.7s						
KULM	Kulim	9.78	352	P	Pn	21 54 16.0	+0.8
KSM	Kuching	10.19	55	P	Pn	21 54 20.0	-0.7
PWJI	Pagerwojo	10.37	110	P	Pn	21 54 24.5	+1.2
	59nm,0.8s						
JAGI	Jajag, Banyuwa	12.72	109	Pn	Pn	21 54 55.4	0.0
MTKI	Muara Teweh, K	13.35	75	P	P	21 55 15.3	+2.2
BKB	Balikpapan	15.21	78	P	P	21 55 31.3	-2.5
BKB				IAmb	IAmb	21 55 45.5	
	comp=Z,26nm,0.8s						
KAPI	Kappang	17.70	92	P	Pn	21 56 01.0	+0.2
	comp=Z,1.2nm,0.3s,baz=266,slow=14,SNR=7.7						
KAPI	Kappang	17.70	92	P	Pn	21 56 00.3	-0.5
SPSI	Sidrap Palu	17.73	89	P	P	21 56 03.7	+2.0
TTSI	Tana Toraja	17.84	86	P	P	21 56 11.7	+8.8
BNSI	Bone	18.06	91	P	P	21 56 06.5	+1.2
	comp=Z,31nm,1.0s						
BKSI	Bulukumba	18.08	93	P	P	21 56 06.8	+1.2
	comp=Z,28nm,1.0s						
MPSI	Mapaga	18.51	76	P	Pn	21 56 10.7	0.0
	comp=Z,18nm,0.9s						
TOLI2	Tolitoli	19.57	74	P	P	21 56 21.8	-0.1
APSI	Ampana	19.94	80	P	Pn	21 56 27.3	-0.6
	comp=Z,495nmcomp=Z,50nm,0.9s						
MRSI	Marisa	20.52	77	P	P	21 56 32.8	+0.5
	comp=Z,34nm,0.6s						
MMRI	Maumere	20.53	103	P	P	21 56 26.5	-5.9
MMRI				IAmb	IAmb	21 56 34.6	
	comp=Z,21nm,0.8s						
BATI	Baumata	22.23	106	P	P	21 56 50.4	-0.3
	comp=Z,17nm,0.4s,baz=133,slow=6.3,SNR=4.4						
BATI	Baumata	22.23	106	P	P	21 56 49.1	-1.6
	comp=Z,17nm,0.7s						
SOEI	Soe	22.71	105	P	P	21 56 56.3	+0.4
SOEI				IAmb	IAmb	21 57 15.0	
	comp=Z,24nm,0.8s						
SOEI	Soe	22.71	105	P	P	21 57 14.6	+19
CM31	Chiang Mai Arr	22.97	353	P	P	21 56 57.8	-0.7
CMAR	Chiang Mai Arr	22.97	353	P	P	21 56 57.7	-0.8
	comp=Z,3.4nm,0.9s,baz=182,slow=8.7,SNR=22						
CMAR	Chiang Mai Arr	22.97	353	P	P	21 56 56.5	-2.0
SLVN	Son La	25.70	4	P	P	21 57 22.1	-1.8
SLVN				IAmb	IAmb	21 57 26.8	
	comp=Z,11nm,1.0s						
FITZ	Fitzroy Crossi	26.80	122	P	P	21 57 33.9	0.0
	comp=Z,7.5nm,0.7s,baz=276,slow=3.9,SNR=10						
FITZ	Fitzroy Crossi	26.80	122	P	P	21 57 34.0	+0.1
KMI	Kunming	29.42	1	⇓*e*P	P	21 57 59.4	+2.0
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
H08S2	Diego Garcia H	29.50	262	T	T	22 28 25.2	
	baz=85,slow=76,SNR=124						
H08S3	Diego Garcia H	29.51	262	T	T	22 28 24.4	
	baz=85,slow=76,SNR=112						
H08S1	Diego Carcia H	29.52	262	T	T	22 28 27.1	
	baz=85,slow=76,SNR=66						
H01W3	Cape Leeuwin H	32.29	161	T	T	22 32 20.6	
	baz=338,slow=76,SNR=44						
H01W2	Cape Leeuwin H	32.31	161	T	T	22 32 25.2	
	baz=338,slow=76,SNR=55						
H01W1	Cape Leeuwin H	32.31	161	T	T	22 32 19.6	
	baz=338,slow=76,SNR=47						
ODAN	Odare	34.19	336	*e*P	P	21 58 39.9	+0.6
	comp=Z,17nm,0.5s						
TAPN	Taplejung	34.51	337	*e*P	P	21 58 42.8	+0.7
	comp=Z,10nm,0.4s						
RAMN	Ramite	34.59	335	*e*P	P	21 58 43.7	+0.9
	comp=Z,6.4nm,0.4s						
WB0	Warramunga Arr	35.03	118	P	P	21 58 45.7	-0.8
WB0				IAmb	IAmb	21 59 04.7	
	comp=Z,8.8nm,1.0s						
WRA	Warramunga Arr	35.05	119	P	P	21 58 46.5	-0.2
	comp=Z,0.9nm,0.3s,baz=239,slow=10.0,SNR=45						
WRA	Warramunga Arr	35.05	119	P	P	21 58 46.5	-0.2
WB2	Warramunga Arr	35.06	119	P	P	21 58 46.4	-0.4
WB2				IAmb	IAmb	21 59 00.8	
	comp=Z,6.1nm,0.8s						
WR0	Warramunga Arr	35.23	119	P	P	21 58 48.0	-0.2
WR0				IAmb	IAmb	21 59 01.5	
	comp=Z,6.6nm,0.8s						
PKI	Pulchoki	35.64	334	*e*P	P	21 58 52.5	+0.5
PKIN	Phulchoki	35.66	334	*e*P	P	21 58 52.7	+0.7
	comp=Z,4.0nm,0.4s						
GUN	Gumba	35.74	335	*e*P	P	21 58 53.3	+0.5
	comp=Z,26nm,0.4s						
KKN	Kakani	35.89	334	*e*P	P	21 58 54.6	+0.6
	comp=Z,7.1nm,0.4s						
ASAR	Alice Springs	36.21	125	P	P	21 58 56.9	+0.3
	comp=Z,3.9nm,1.0s,baz=300,slow=7.7,SNR=22						
ASAR				S	S	22 04 33.8	-0.8
	comp=Z,0.5nm,1.0s,baz=306,slow=16,SNR=4.7						
ASAR	Alice Springs	36.21	125	P	P	21 58 56.6	0.0
AS31	Alice Springs	36.21	125	P	P	21 58 56.9	+0.3
DANN	Dangsing	37.05	333	*e*P	P	21 59 04.4	+0.5
	comp=Z,25nm,0.4s						
XAN	Xi'an	38.85	9	P	P	21 59 16.8	-1.9
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NJ2	Nanjing	39.70	23	*e*P	P	21 59 28.2	+2.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
COEN	Coen	41.66	106	P	P	21 59 40.8	-1.5
COEN				IAmb	IAmb	21 59 55.4	
	comp=Z,16nm,1.4s						
GTA	Gaotai	43.70	358	*e*P	P	21 59 57.0	-1.6
GTA				pP	pP	22 00 10.6	+1.5
GTA				sP	sP	22 00 15.6	+1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC	Hu-ho-hao-te	45.94	10	*e*P	P	22 00 16.3	-0.1
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
STKA	Stephens Creek	46.04	131	P	P	22 00 17.2	-0.1
	comp=Z,3.1nm,0.6s,baz=339,slow=5.8,SNR=7.3						
STKA	Stephens Creek	46.04	131	P	P	22 00 17.6	+0.3
NIL	Nilore	46.64	327	P	P	22 00 22.2	+0.2
NIL				IAmb	IAmb	22 00 41.7	
	comp=Z,12nm,0.9s						
KSRS	Korea Array	48.18	28	P	P	22 00 32.6	-1.2
	comp=Z,0.6nm,0.4s,baz=216,slow=7.1,SNR=7.8						
WMQ	Urumqi	49.76	346	*e*P	P	22 00 48.4	+2.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.7s						
KSH	Kashi	49.90	334	P	P	22 00 48.7	+1.5
KSH				pP	sP	22 01 04.5	+2.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,820nm,7.6s						
EIDS	Eidsvold	51.42	119	P	P	22 00 59.4	+0.7
EIDS				IAmb	IAmb	22 00 60.0	
	comp=Z,12nm,1.5s						
KDJ	Kajisay	51.57	337	P	P	22 00 59.9	+0.1
SONM	Songino Array	52.22	4	P	P	22 01 04.2	-0.2
	comp=Z,4.1nm,0.7s,baz=186,slow=9.6,SNR=26						
SONM				PcP	PcP	22 02 15.1	-0.5
	comp=Z,0.6nm,0.4s,baz=171,slow=3.8,SNR=6.2						
SONM	Songino Array	52.22	4	P	P	22 01 04.2	-0.2
BOOM	Boomskoye usch	52.38	336	P	P	22 01 05.9	+0.2
ARSB	Arslanbob	52.71	333	P	P	22 01 09.0	+0.8
MK31	Makanchi Array	53.93	343	P	P	22 01 16.6	-0.3
MK31				IAmb	IAmb	22 01 17.1	
	comp=Z,3.1nm,0.7s						
MKAR	Makanchi Array	53.93	343	P	P	22 01 16.3	-0.6
	comp=Z,3.2nm,0.4s,baz=155,slow=8.8,SNR=109						
MAKZ	Makanchi	54.03	343	P	P	22 01 17.0	-0.6
MAKZ				IAmb	IAmb	22 01 36.8	
	comp=Z,5.1nm,1.2s						
KKAR	Karatay Array	55.24	332	P	P	22 01 27.3	+0.9
USA0B	Ussuriysk Arra	55.43	26	P	P	22 01 26.5	-1.3
USRK	Ussuriysk Ar.	55.43	26	P	P	22 01 26.6	-1.1
	comp=Z,2.3nm,0.5s,baz=210,slow=3.4,SNR=14						
KURK	Kurchatov	58.52	343	P	P	22 01 49.2	-0.3
KURK				IAmb	IAmb	22 02 07.7	
	comp=Z,6.8nm,1.1s						
ZAA0	Zalesovo Array	59.95	348	P	P	22 01 58.5	-0.9
ZALV	Zalesovo Beam	59.95	348	P	P	22 01 58.3	-1.1
	comp=Z,7.9nm,0.4s,baz=161,slow=6.2,SNR=69						
BRVK	Borovoye	63.23	339	P	P	22 02 20.2	-1.3
BRVK				IAmb	IAmb	22 02 21.3	
	comp=Z,2.3nm,0.6s						
ABKAR	Akbulak array	64.74	331	P	P	22 02 31.0	-0.5
ARU	Arti	70.25	336	P	P	22 03 05.8	-0.3
ARU				IAmb	IAmb	22 03 25.6	
	comp=Z,9.3nm,1.4s						
BKZ	Black Stump Fm	75.18	129	P	P	22 03 36.3	+0.3
BOSA	Boshof	76.24	242	LR	LR	22 30 32.9	
	comp=Z,98nm,19.3s,baz=334,slow=30						
BRTR	Keskin Array B	76.44	312	P	P	22 03 43.4	+0.1
	comp=Z,1.5nm,0.8s,baz=126,slow=6.3,SNR=5.9						
BURAR	Bucovina Array	84.41	319	P	P	22 04 27.4	+1.6
FINES	FINESS Array B	87.20	332	P	P	22 04 39.2	0.0
	comp=Z,5.6nm,1.1s,baz=132,slow=2.8,SNR=4.5						
ARCES	ARCESS Array B	89.45	340	P	P	22 04 49.5	-0.3
	comp=Z,2.1nm,0.7s,baz=94,slow=3.6,SNR=5.6						
ARCES	ARCESS Array B	89.45	340	P	P	22 04 49.9	+0.1
TXAR	Lajitas Array	145.32	42	PKPbc	PKPbc	22 11 31.6	0.0
	comp=Z,7.9nm,0.8s,baz=288,slow=1.1,SNR=61						
TXAR	Lajitas Array	145.32	42		PKPbc	22 11 31.1	-0.4

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*IDC **12** 22:34:22.2±4.4, 4°.81N×127°.60E, h129km±45km, mb3.2/8, mb1 3.3/9, mb1mx3.2/33, mbtmp3.6/9, Error ellipse: s-maj=45.6km s-min=17.1km az=82.0*

ISC 12 22:34:20.2±0.9,**4°.9N**±0°.1×**127°.5E**±0°.3,**h108km,n9, σ1s.01**/9,**mb3.4**/8,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.83	146	P	Pn	22 35 58.5	+0.7
	1.2nm,0.3s,baz=253,slow=23,SNR=1.9						
FITZ	Fitzroy Crossi	22.88	184	P	P	22 39 15.3	+0.7
	1.0nm,0.8s,baz=357,slow=14,SNR=0.9						
WRA	Warramunga Arr	25.55	165	P	P	22 39 38.5	-0.6
	0.3nm,0.3s,baz=336,slow=11,SNR=12						
ASAR	Alice Springs	29.03	168	P	P	22 40 08.9	-1.3
	0.1nm,0.4s,baz=348,slow=8.5,SNR=1.3						
USRK	Ussuriysk Ar.	39.39	5	P	P	22 41 38.7	-0.5
	0.5nm,0.5s,baz=179,slow=9.0,SNR=2.1						
SONM	Songino Array	46.48	340	P	P	22 42 36.4	-0.2
	0.3nm,0.4s,baz=168,slow=6.8,SNR=5.8						
PETK	Petropavlovsk-	54.12	22	P	P	22 43 34.9	+1.0
	2.7nm,0.7s,baz=189,slow=7.3,SNR=1.2						
MKAR	Makanchi Array	57.07	324	P	P	22 43 56.0	+0.8
	0.8nm,0.6s,baz=123,slow=8.2,SNR=9.3						
ILAR	Eielson Array	83.78	25	P	P	22 46 36.0	-1.1
	0.3nm,0.7s,baz=265,slow=6.0,SNR=2.0						

IDC 12 23:25:51.2±6.8,**27°.44N**×**87°.93E,h0km,mb3.9**/4, **mb1 3.9**/5,**mb1mx3.4**/53,**mbtmp3.7**/5,**ML3.1**/1,**Error ellipse: s-maj=123.6km s-min=54.2km az=175.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	19.82	349	P	P	23 30 23.2	-0.2
	0.1nm,0.3s,baz=155,slow=12,SNR=4.6						
KURBB	Kurchatov Arra	24.23	345	P	P	23 31 09.8	+0.2
	1.0nm,0.7s,baz=163,slow=8.8,SNR=7.6						
SONM	Songino Array	24.95	30	P	P	23 31 16.4	+0.1
	0.4nm,0.4s,baz=221,slow=9.9,SNR=7.2						
FINES	FINESS Array B	52.88	328	P	P	23 35 08.6	0.0
	4.3nm,0.9s,baz=91,slow=7.1,SNR=5.1						
ARCES	ARCESS Array B	54.98	338	P	P	23 35 23.5	-0.3
	3.7nm,0.9s,baz=102,slow=7.5,SNR=1.2						

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*IDC **12** 23:44:01.3±1.4, 13°.50N×145°.59E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/49, mbtmp3.6/4, Error ellipse: s-maj=26.2km s-min=24.5km az=53.0*

*NEIC **12** 23:44:08.1±0.9, 13°.41N±0°.08×145°.37E±0°.09, h40km±10km, mb4.3/7, ML3.7/4, Error ellipse: s-maj=12.1km s-min=10.9km az=77.0*

ISC 12 23:44:07.9±0.9,**13°.5N**±0°.1×**145°.4E**±0°.1,**h45km,n14, σ0s.77**/14,**mb4.0**/9,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.49	286	Pn	Pn	23 44 18.7	-0.1
	840nm,0.3s,baz=102,slow=12,SNR=292						
GUMO				Sn	Sn	23 44 25.4	-1.2
	853nm,0.3s,baz=194,slow=22,SNR=12						
GUMO	Guam	0.49	286		Pn	23 44 18.8	-0.1
GUMO				IAML		23 44 27.6	
	5µm,0.6s						
PATS	Pohnpei	14.34	116	Pn	Pn	23 47 27.6	-0.8
JSD	Sado	25.29	347	P	P	23 49 31.4	+1.3
WB0	Warramunga Arr	34.73	198	P	P	23 50 54.4	+0.4
WB0				IAmb	IAmb	23 50 57.8	
	comp=Z,4.9nm,1.1s						
WR0	Warramunga Arr	34.87	198	P	P	23 50 54.7	-0.4
WR0				IAmb	IAmb	23 50 57.6	
	comp=Z,2.8nm,1.0s						
WB2	Warramunga Arr	34.91	198	P	P	23 50 55.9	+0.4
WB2				IAmb	IAmb	23 51 02.9	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	34.91	198	P	P	23 50 55.8	+0.3
	comp=Z,1.1nm,0.8s,baz=20,slow=9.7,SNR=8.0						
WRA	Warramunga Arr	34.91	198	IAmb	IAmb	23 51 02.7	
	comp=Z,0.3nm,1.1s						
FITZ	Fitzroy Crossi	36.90	212	P	P	23 51 12.9	+0.4
	comp=Z,1.4nm,0.9s,baz=8.1,slow=7.1,SNR=1.4						
ASAR	Alice Springs	38.56	197	P	P	23 51 27.1	+0.6
	comp=Z,0.4nm,0.6s,baz=19,slow=10,SNR=7.0						
BBOO	Buckleboo	46.85	191	P	P	23 52 34.1	+0.5
BBOO				IAmb	IAmb	23 52 44.6	
	comp=Z,10nm,1.1s						
ILAR	Eielson Array	68.49	25	P	P	23 55 04.2	-1.0
	comp=Z,0.2nm,0.6s,baz=254,slow=6.1,SNR=4.4						
TOLK	Toolik Lake Re	68.57	21	P	P	23 55 06.3	+0.5
TOLK				IAmb	IAmb	23 55 14.5	
	comp=Z,1.9nm,1.1s						

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*IDC **12** 23:51:24.2±0.8, 30°.98N×131°.36E, h0km, mb3.9/17, mb1 3.9/22, mb1mx3.8/57, mbtmp3.8/22, ML3.0/5, MS3.2/4, Ms1 3.2/4, ms1mx2.8/37, Error ellipse: s-maj=21.7km s-min=17.0km az=88.0*

*JMA **12** 23:51:30.2±0.1, 31°.11N×131°.52E, h29km±1km, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s355.00000°, δ22.00000°, λ-105.00000°. NP2: ϕ_s191.00000°, δ68.00000°, λ-84.00000°. Principal axes: T Plg23.0000°, Azm276.0000°; N Plg6.0000°, Azm8.0000°; P Plg66.0000°, Azm111.0000°;*

JMA Felt I J1.

*NIED **12** 23:51:30.3, 31°.11N×131°.52E, h29km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.96; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-6.09; $M_{r\theta}$4.84; $M_{\theta\phi}$-3.54; $M_{\phi r}$4.83; Fault plane solution: $M_0$9.73000×10^{14} NP1:ϕ_s41.00000°, δ68.00000°, λ105.00000°. NP2:ϕ_s184.00000°, δ26.00000°, λ56.00000°.*

*NEIC **12** 23:51:35.6±2.6, 31°.44N±0°.09×131°.05E±0°.06, h56km±5km, mb4.5/16 Error ellipse: s-maj=13.4km s-min=7.4km az=181.0*

ISC 12 23:51:29.9±1.1,**31°.12N**±0°.03×**131°.48E**±0°.05,**h32km**±7km, **n72,σ1s.12**/75,**mb4.3**/27,**7C-3D,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.44	337	⇓P	Pn	23 51 40.0	-0.1
JNAR				*e*S	Sn	23 51 47.2	+0.2
JTSR	Tashiro 2	0.48	276	⇑P	Pn	23 51 40.7	+0.1
JTSR				*e*S	Sn	23 51 48.5	+0.6
JNKG	Nichinankitago	0.55	351	⇓P	Pn	23 51 41.7	+0.2
JNKG				*e*S	Sb	23 51 49.3	+0.2
JTN	Tanegashima 3	0.63	223	⇑P	Pn	23 51 43.2	+0.6
JTN				*e*S	Sn	23 51 52.0	+0.5
JTZ	Takazaki	0.85	337	⇑P	Pb	23 51 46.4	+0.1
JTZ				*e*S	Sb	23 51 58.4	+1.0
JMTN	Minamitane	0.87	215	⇑P	Pb	23 51 46.6	0.0
JMTN				*e*S	Sb	23 51 58.2	+0.2
JSU	Suzuyama	0.95	294	⇑P	Pb	23 51 48.0	0.0
JSU	Suzuyama	0.95	294		Pb	23 51 48.2	+0.2
JTSN	Tsuno	1.12	1	⇓P	Pn	23 51 49.8	+0.3
JTSN				*e*S	Sb	23 52 04.9	-0.3
JYAK	Yakushimahirau	1.21	224	P	Pb	23 51 51.7	-0.6
JYAK				*e*S	Sb	23 52 07.7	+0.2
JZO	Okuchi	1.26	324	⇑P	Pb	23 51 52.5	-0.8
JKC	Kuchinoerabu	1.28	240	S	Sb	23 52 09.8	+0.2
JNU	Nakatsue	2.06	346	Pn	Pn	23 52 03.8	+1.4
	22nm,0.3s,baz=121,slow=4.1,SNR=28						
JNU				Sn	Sb	23 52 29.6	-2.4
	18nm,0.3s,baz=340,slow=2.4,SNR=5.5						
JNU				LR	LR	23 52 40.3	
	comp=Z,68nm,21.2s,baz=197,slow=35						
JMN	Monobe	3.30	37	Pn	Pb	23 52 26.7	-1.2
JTU	Tsushima	3.82	333	Pn	Pn	23 52 26.7	+0.1
JHS	Saijyo	4.11	19	Pn	Pn	23 52 32.2	+1.7
JWT	Wachi	5.30	37	Pn	Pn	23 52 51.9	+5.1
KSRS	Korea Array	6.97	336	Pn	Pn	23 53 10.8	+1.0
	0.1nm,0.3s,baz=152,slow=14,SNR=2.3						
KSRS				LR	LR	23 56 10.5	
	comp=Z,174nm,19.0s,baz=155,slow=40						
MJAR	Matsushiro Arr	7.79	44	Pn	Pn	23 53 20.8	-0.2
	0.1nm,0.3s,baz=227,slow=12,SNR=1.4						
NJ2	Nanjing	10.80	278	*e*P	Pn	23 54 01.9	-0.5
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
USRK	Ussuriysk Ar.	13.07	2	Pn	Pn	23 54 35.0	+1.7
	baz=177,slow=10,SNR=2.5						
ERM	Erimo	14.35	38	Pn	P	23 54 56.3	-1.1
KLR	Kul'dur	18.09	1	P	P	23 55 39.9	+1.0
	comp=Z,0.4nm,0.3s,baz=194,slow=8.3,SNR=11						
XAN	Xi'an	19.22	285	P	P	23 55 51.6	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	25.04	319	P	P	23 56 51.1	-0.1
SONM	Songino Array	25.40	318	P	P	23 56 54.1	-0.4
	comp=Z,1.6nm,0.8s,baz=140,slow=9.7,SNR=9.6						
SONM				LR	LR	00 08 03.1	
	comp=Z,207nm,18.2s,baz=44,slow=39						
SONM	Songino Array	25.40	318	P	P	23 56 53.5	-0.9
KMI	Kunming	25.99	264	⇑*e*P	P	23 56 59.9	-0.3
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA	Gaotai	27.04	297	*e*P	P	23 57 09.8	+0.4
GTA				pP	sP	23 57 24.4	+1.8
GTA				sP	pP	23 57 30.4	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,230nm,6.7s						
GTA				LR	LR		
	comp=N,310nm,15.6s						
GTA				LR	LR		
	comp=E,240nm,14.9s						
GTA				LR	LR		
	comp=Z,240nm,14.9s						
CMAR	Chiang Mai Arr	31.99	254	P	P	23 57 51.9	-1.4
	comp=Z,0.7nm,0.3s,baz=42,slow=7.2,SNR=1.7						
H11N2	WAKE ISLAND Hy	33.80	101	T	T	00 33 56.9	
	baz=296,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	33.81	101	T	T	00 34 02.0	
	baz=296,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	33.82	101	T	T	00 34 03.1	
	baz=296,slow=75,SNR=22						
SEY	Seymchan	34.53	17	LR	LR	00 14 04.2	
	comp=Z,49nm,18.6s,baz=319,slow=39						
WMQ	Urumqi	36.58	303	*e*P	P	23 58 34.4	+1.4
ZALV	Zalesovo Beam	40.29	318	P	P	23 59 03.6	-0.3
	comp=Z,0.3nm,0.3s,baz=100,slow=6.0,SNR=2.6						
MKAR	Makanchi Array	40.64	307	P	P	23 59 05.9	-1.0
	comp=Z,0.2nm,0.4s,baz=88,slow=11,SNR=6.6						
MKAR				PcP	PcP	00 01 07.1	-1.3
	comp=Z,0.2nm,0.7s,baz=69,slow=1.8,SNR=2.2						
MKAR	Makanchi Array	40.64	307	P	P	23 59 05.8	-1.2
MAKZ	Makanchi	40.86	307	P	P	23 59 08.0	-0.7
KURK	Kurchatov	43.43	313	P	P	23 59 28.6	-1.0
KURBB	Kurchatov Arra	43.48	312	P	P	23 59 29.2	-0.8
	comp=Z,1.8nm,0.6s,baz=100,slow=9.0,SNR=14						
KSH	Kashi	45.44	297	P	P	23 59 47.1	+1.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,730nm,7.7s						
BVAR	Borovoye Array	48.68	315	P	P	00 00 09.9	-1.0
	comp=Z,1.7nm,0.5s,baz=97,slow=10,SNR=21						
BRVK	Borovoye	48.74	315	P	P	00 00 11.0	-0.4
BRVK				IAmb	IAmb	00 00 11.4	
	comp=Z,4.2nm,0.6s						
KKAR	Karatay Array	49.08	302	P	P	00 00 14.1	-0.1
WRA	Warramunga Arr	50.84	177	P	P	00 00 25.3	-2.3
	comp=Z,0.3nm,0.5s,baz=356,slow=8.8,SNR=1.8						
WRA	Warramunga Arr	50.84	177	P	P	00 00 33.5	+5.8
WB2	Warramunga Arr	50.84	177	P	P	00 00 36.7	+9.0
WB2				IAmb	IAmb	00 00 53.6	
	comp=Z,16nm,1.5s						
ASAR	Alice Springs	54.52	177	P	P	00 00 54.3	-0.5
	comp=Z,0.4nm,0.8s,baz=17,slow=11,SNR=1.7						
ARU	Arti	55.42	320	P	P	00 00 59.6	-1.3
ARU				IAmb	IAmb	00 01 14.6	
	comp=Z,4.2nm,1.2s						
ABKAR	Akbulak array	55.49	311	P	P	00 01 00.5	-1.1
PPLA	Purkeypile	56.64	32	P	P	00 01 11.3	+1.5
SUA	Susitna One	57.44	34	P	P	00 01 17.9	+2.4
ILAR	Eielson Array	58.80	30	P	P	00 01 24.6	-0.1
	comp=Z,0.4nm,0.7s,baz=296,slow=7.9,SNR=5.4						
WHY	Whitehorse	65.12	33	P	P	00 02 11.6	+4.2
WHY				IAmb	IAmb	00 02 12.5	
	comp=Z,4.3nm,0.8s						
ARCES	ARCESS Array B	66.52	338	P	P	00 02 15.0	-1.2
	comp=Z,7.6nm,1.1s,baz=82,slow=6.6,SNR=2.3						
ARCES				LR	LR	00 36 32.3	
	comp=Z,294nm,18.4s,baz=235,slow=41						
EUNU	Eureka	67.12	7	P	P	00 02 20.6	+0.7
KBZ	Khabaz	68.31	309	P	P	00 02 26.1	-1.7
	comp=Z,2.6nm,0.9s,baz=77,slow=3.7,SNR=2.9						
FIA1	FINESS Array S	70.03	330	P	P	00 02 40.0	+1.8
FINES	FINESS Array B	70.03	330	P	P	00 02 36.7	-1.5
	comp=Z,5.1nm,1.0s,baz=62,slow=5.4,SNR=9.3						

FINES	FINESS Array B	70.03	330	P	P	00 02 37.0	-1.2
RES	Resolute Bay	70.21	12	P	P	00 02 39.0	-0.1
	comp=Z,1.3nm,0.7s,baz=314,slow=8.6,SNR=7.9						
RES	Resolute Bay	70.21	12	P	P	00 02 39.6	+0.5
RES				IAmb	IAmb	00 02 40.2	
	comp=Z,5.6nm,1.1s						
YKA	Yellowknife Ar	72.90	26	P	P	00 02 56.4	+0.8
	comp=Z,0.2nm,0.7s,baz=314,slow=6.2,SNR=4.2						
AKASG	Malin Array Be	73.67	320	P	P	00 02 59.7	-0.5
	comp=Z,0.4nm,0.4s,baz=54,slow=6.0,SNR=2.6						
BRTR	Keskin Array B	76.28	308	P	P	00 03 15.3	-0.5
	comp=Z,1.2nm,0.7s,baz=98,slow=4.9,SNR=5.2						
BRTR	Keskin Array B	76.28	308	P	P	00 03 16.1	+0.3
FCC	Fort Churchill	82.76	22	P	P	00 03 51.2	+0.8
FCC				IAmb	IAmb	00 04 01.8	
	comp=Z,4.0nm,1.1s						
ITM	Ithomi	85.40	311	P	P	00 04 03.7	-0.7
NRCA	Norcia	87.21	320	P	P	00 04 13.4	+0.2
NRCA				IAmb	IAmb	00 04 30.1	
	comp=Z,3.5nm,1.1s						
ULM	Lac du Bonnet	88.78	28	P	P	00 04 21.0	+0.6
	comp=Z,1.1nm,0.6s,baz=329,slow=7.5,SNR=3.1						
TUC	Tucson	93.70	49	P	P	00 04 45.4	+1.6
TUC				IAmb	IAmb	00 04 45.6	
	comp=Z,1.7nm,0.4s						

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*IDC **12** 23:54:44.4±6.1, 36°.37N×69°.32E, h78^{km}±56^{km}, mb3.0/1, mb1 3.0/6, mb1mx2.8/42, mbtmp3.3/6, ML3.1/5, Error ellipse: s-maj=75.5km s-min=20.7km az=157.0*

ISC 12 23:54:43.1±2.5**, 36°.3N**±0°.2×**69°.4E**±0°.1**, h48**^{km}**, n13, σ1^{s}52**/17**, 3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.73	29	P	Pn	23 56 21.5	+1.8
	SNR=21						
KK31	Karatay Array	6.86	7	Pn	Pn	23 56 23.1	+2.0
	1.3nm,0.4s,baz=207,slow=13,SNR=26						
KK31				⇓Sn	Sn	23 57 36.5	-1.4
	1.6nm,0.3s,baz=191,slow=20,SNR=12						
UCH	Uchtor	7.15	32	P	Pn	23 56 27.3	+1.8
	SNR=6.0						
EKS2	Erkin-Say	7.22	27	P	Pn	23 56 28.0	+1.9
	SNR=10.0						
AAK	Ala-Archa	7.48	30	P	Pn	23 56 30.9	+1.2
	2.0nm,0.3s,baz=188,slow=4.2,SNR=33						
AAK				S	Sn	23 57 52.5	-0.7
	0.2nm,0.3s,baz=324,slow=22,SNR=2.4						
AAK	Ala-Archa	7.48	30	P	Pn	23 56 31.5	+1.8
	SNR=7.3						
AAK	Ala-Archa	7.48	30	⇓Pn	Pn	23 56 31.4	+1.7
	1.8nm,0.3s						
AAK				⇓Sn	Sn	23 57 52.6	-0.6
	4.2nm,0.8s						
USP	Ospenovka	8.01	28	P	Pn	23 56 38.2	+1.3
	SNR=6.0						
GEYT	Alibeck	9.13	284	P	Pn	23 56 51.8	-0.5
	0.2nm,0.3s,baz=96,slow=15,SNR=2.5						
GEYT				S	Sn	23 58 34.0	+0.3
	0.2nm,0.3s,baz=313,slow=34,SNR=2.8						
MKAR	Makanchi Array	14.26	39	P	Pn	23 58 01.9	-0.2
	0.0nm,0.3s,baz=219,slow=12,SNR=0.9						
KURBB	Kurchatov Arra	15.78	22	P	Pn	23 58 21.2	-0.7
	0.0nm,0.3s,baz=212,slow=11,SNR=4.2						
BVAR	Borovoye Array	16.75	2	P	Pn	23 58 34.8	+0.7
	0.1nm,0.3s,baz=186,slow=12,SNR=2.0						
ZALV	Zalesovo Beam	20.67	26	P	P	23 59 16.5	-2.3
	0.6nm,0.4s,baz=211,slow=10,SNR=4.4						

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*NEIC **13** 00:03:10±2.4, 25°.0S±0°.1×12°.7W±0°.1, h10^{km}±1^{km}, mb4.8/23, Error ellipse: s-maj=21.8km s-min=16.8km az=123.0*

*IDC **13** 00:03:10.4±8.2, 25°.12S×12°.51W, h0^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.7/20, mbtmp3.9/3, MS3.6/3, Ms1 3.6/3, ms1mx3.2/24, Error ellipse: s-maj=210.7km s-min=44.0km az=57.0*

ISC 13 00:03:10.1±0.6**, 25°.0S**±0°.1×**12°.7W**±0°.1**, h10**^{km}**, n29, σ1^{s}20**/27**, mb4.6**/13**, MS3.5**/3**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	Horse Pasture	11.10	37	Pn	Pn	00 05 47.0	-2.1
ASCN	Ascension	17.07	354		Pn	00 07 08.9	-0.1
ASCN				IAmb	IAmb	00 07 22.5	
	comp=Z,93nm,1.1s						
DBIC	Dimbokro	32.40	15	LR	LR	00 19 38.8	
	comp=Z,114nm,20.6s,baz=72,slow=30						
BOSA	Boshof	33.94	105	P	P	00 09 54.2	+0.4
	comp=Z,2.1nm,0.6s,baz=269,slow=9.5,SNR=6.4						
BDFB	Brasilia	34.34	279	LR	LR	00 21 41.6	
	comp=Z,80nm,18.7s,baz=277,slow=32						
LBTB	Lobatse	34.60	98	P	P	00 09 59.8	+0.2
KOWA	Kowa	40.17	13	P	P	00 10 47.4	+0.8
TORD	Torodi Ar. Bea	40.44	22	P	P	00 10 51.0	+2.1
	comp=Z,0.5nm,0.4s,baz=195,slow=8.1,SNR=3.7						
TORD				LR	LR	00 25 02.5	
	comp=Z,85nm,18.2s,baz=330,slow=32						
TORD	Torodi Ar. Bea	40.44	22	P	P	00 10 48.3	-0.6
ZON	Zonda	49.31	249	P	P	00 11 59.4	-0.2
TAM	Tamanrasset	50.70	22	P	P	00 12 10.5	+0.3
CO01	Juntas del Tor	50.73	251	P	P	00 12 08.8	-1.9
AC05	El Transito	51.08	252	P	P	00 12 13.7	+0.5
AC05				IAmb	IAmb	00 12 25.8	
	comp=Z,6.5nm,1.1s						
GO02	Mina Guanaco	51.20	257	P	P	00 12 12.6	-1.7
GO02				IAmb	IAmb	00 12 12.9	
	comp=Z,7.5nm,1.1s						
PATCX	Punta Patache	52.78	262	P	P	00 12 25.6	-0.3
PATCX				IAmb	IAmb	00 12 26.6	
	comp=Z,23nm,1.0s						
BELA	Belgrano 2	53.92	186	P	P	00 12 32.7	-0.6
COI	Coimbra	65.01	4	P	P	00 13 50.7	+0.5
QSPA	South Pole Qui	65.19	180	P	P	00 13 51.4	0.0
QSPA				IAmb	IAmb	00 14 02.9	
	comp=Z,3.8nm,1.1s						
SDV	Santo Domingo	65.73	293	P	P	00 13 56.1	+0.4
SDV				IAmb	IAmb	00 14 00.4	
	comp=Z,5.5nm,1.1s						
SJG	San Juan	67.45	304	P	P	00 14 05.0	-1.3
CTI	Castel Tesino	74.10	17	P	P	00 14 44.8	-1.6
SOCY	Socotra	74.74	69	P	P	00 14 50.9	+0.1
SOCY				IAmb	IAmb	00 15 02.9	
	comp=Z,18nm,1.1s						
AKASG	Malin Array Be	83.98	25	P	P	00 15 42.4	+2.1
	comp=Z,0.2nm,0.3s,baz=225,slow=5.1,SNR=4.6						
LMN	Caledonia Moun	84.93	326	P	P	00 15 45.6	+0.4
BCX	Boston College	86.03	321	P	P	00 15 52.7	+1.9
L59A	Walton	88.21	319	P	P	00 16 02.1	+0.7
L59A				IAmb	IAmb	00 16 20.3	
	comp=Z,9.1nm,1.1s						
V55A	Taylorsville	88.61	311	P	P	00 16 05.4	+2.0
V55A				IAmb	IAmb	00 16 07.0	
	comp=Z,2.9nm,0.8s						
L56A	Greenwood	89.70	318	P	P	00 16 08.8	+0.4
L56A				IAmb	IAmb	00 16 20.3	
	comp=Z,3.3nm,0.9s						
S54A	Dingess, Beckl	89.71	312	P	P	00 16 08.8	+0.2
S54A				IAmb	IAmb	00 16 10.3	
	comp=Z,9.0nm,1.0s						

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*IDC **13** 00:10:28.1±1.3, 52°.65S×28°.93E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.7/17, mbtmp3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx3.1/15, Error ellipse: s-maj=73.8km s-min=35.4km az=56.0*

ISC 13 00:10:29.7±1.1**, 52°.6S**±0°.2×**28°.7E**±0°.3**, h10**^{km}**, n13, σ1^{s}75**/10**, mb3.8**/4**, MS3.4**/3**, 1C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	Syowa Base	17.22	167	⇑ePP	P	00 14 30.3	-1.2
SYO	Syowa Base	17.22	167	⇓ePP	P	00 14 35.6	+4.1
MAW	Mawson	22.25	145	LR	LR	00 21 00.2	
	comp=Z,24nm,20.5s,baz=246,slow=28						
SNAA	Sanae	23.60	204	P	P	00 15 39.5	-0.9
VNA2	Neumayer--Watz	24.41	208	P	P	00 15 47.1	-0.8
VNA1	Neumayer--Stat	24.53	209	P	P	00 15 48.8	-0.1
VNA3	Neumayer Olymp	25.22	208	P	P	00 15 46.3	-8.9
VNDA	Vanda	46.91	167	P	P	00 18 59.0	-0.7
	1.0nm,0.8s,baz=221,slow=5.8,SNR=1.7						
VNDA				LR	LR	00 38 08.9	
	comp=Z,42nm,19.5s,baz=194,slow=35						
PLCA	Paso Flores	63.85	237	LR	LR	00 43 12.6	
	comp=Z,27nm,21.2s,baz=146,slow=31						
TORD	Torodi Ar. Bea	69.52	332	P	P	00 21 38.9	+0.4
	0.5nm,0.6s,baz=162,slow=6.8,SNR=1.8						
ASAR	Alice Springs	80.21	116	P	P	00 22 39.5	-0.9
	0.2nm,0.7s,baz=216,slow=5.0,SNR=1.8						
WRA	Warramunga Arr	83.44	114	P	P	00 22 57.3	-0.1
	0.4nm,0.8s,baz=206,slow=3.7,SNR=2.3						
NVAR	Mina Array Bea	153.16	251	PKPbc	PKiKP	00 30 27.8	+0.4
	0.2nm,0.5s,baz=159,slow=2.7,SNR=1.5						

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*JMA **13** 00:32:57.5±0.1, 23°.70N×122°.87E, h53^{km}, M3.1*

*TAP **13** 00:32:58.3, 23°.76N×122°.85E, h32^{km}, ML3.5, C*

ISC 13 00:32:57.1±1.4**, 23°.69N**±0°.04×**122°.88E**±0°.02**, h27**^{km}±14^{km}**, n103, σ1^{s}23**/141**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.77	5	P	Pb	00 33 12.3	+0.5
JYNG				S	Sn	00 33 21.9	-0.9
YOJ	Yonaguni jima	0.78	9	P	Pb	00 33 12.3	+0.2
YOJ				S	Sn	00 33 22.3	-0.9
YOJ	Yonaguni jima	0.78	9	*i* P	Pb	00 33 12.3	+0.2
	baz=11						
YOJ				*i* S	Sn	00 33 22.4	-0.8
	baz=11						
HATJ	Hateruma jima	0.93	66	P	Pn	00 33 14.5	+0.1
HATJ				*e*S	Sn	00 33 27.0	+0.2
IRIF	Iriomote-Funau	1.01	50	P	Pn	00 33 15.6	+0.1
IRIF				*e*S	Sb	00 33 29.3	+0.3
JKRS	Kuro-shima	1.17	62	P	Pn	00 33 18.1	+0.4
JKRS				*e*S	Sn	00 33 33.3	+0.4
ENAH	Nanao	1.24	308	P	Pn	00 33 18.8	+0.2
	baz=306						
TWD	Chiawan	1.24	289	*e*P	Pn	00 33 18.1	-0.5
	baz=273						
NACB	Ninganchiao	1.27	293	*i* P	Pn	00 33 18.7	-0.4
	baz=278						
NACB				*e*S	Sn	00 33 34.2	-1.1
	baz=278						
TWC	Suao	1.31	315	*e*P	Pn	00 33 19.6	-0.1
	baz=313						
EGFH	Guangfu	1.33	270	*e*P	Pn	00 33 20.2	+0.3
	baz=266						
ESL	Shilin	1.33	276	*i* P	Pn	00 33 19.4	-0.5
	baz=261						
JIJ	Ishigaki jima	1.34	59	P	Pn	00 33 19.9	-0.1
JIJ				*e*S	Sn	00 33 36.0	-1.0
HGSD	Ruisui	1.35	262	P	Pn	00 33 20.0	-0.1
	baz=259						
HGSD				*e*S	Sn	00 33 35.6	-1.5
	baz=259						
ETLH	Xiulin Townshi	1.38	292	*e*P	Pn	00 33 20.4	-0.2
	baz=290						
ETLH				*i* S	Sn	00 33 37.6	-0.5
	baz=290						
EHY	Hungye	1.44	263	*i* P	Pn	00 33 21.6	+0.2
	baz=260						
EHY				*e*S	Sn	00 33 39.0	-0.4
	baz=260						
EYUL	Yuli	1.47	257	*e*P	Pn	00 33 22.1	+0.3
	baz=254						
YULB	Yu-li	1.48	259	P	Pn	00 33 22.2	+0.2
	baz=256						
YULB				*e*S	Sn	00 33 40.0	-0.5
	baz=256						
TWF1	Yuli	1.49	257	*i* P	Pn	00 33 22.3	+0.3
	baz=254						
TWF1				*e*S	Sn	00 33 41.4	+0.7
	baz=254						
CHKT	Chengkung	1.50	248	*i* P	Pn	00 33 22.2	-0.1
	baz=244						
TWE	Neicheng	1.51	313	P	Pn	00 33 23.1	+0.7
	baz=312						
ENTT	Nioudou	1.53	309	P	Pn	00 33 23.3	+0.6
	baz=293						
ENTT				*e*S	Sn	00 33 41.3	-0.4
	baz=293						
FULB	Fuli	1.53	252	*e*P	Pn	00 33 22.5	-0.2
	baz=248						
NDT	Datong Townshi	1.54	307	P	Pn	00 33 23.6	+0.8
	baz=292						
NDT				*e*S	Sn	00 33 42.1	0.0
	baz=292						
WHF	Hehuan Shan	1.54	288	P	Pn	00 33 23.3	0.0
	baz=274						
WHF				*e*S	Sn	00 33 42.2	-0.4
	baz=274						
NNSB	Datong	1.55	299	P	Pn	00 33 23.7	+0.6
	baz=286						
NNSB				*e*S	Sn	00 33 42.2	-0.2
	baz=286						
NNSH	Datong	1.55	299	P	Pn	00 33 23.9	+0.8
	baz=286						
NNSH				*e*S	Sn	00 33 42.2	-0.2
	baz=286						
NNS	Nan Shan	1.57	299	*i* P	Pn	00 33 23.9	+0.6
	baz=286						
NNS				*e*S	Sn	00 33 42.4	-0.3
	baz=286						
JISG	Ishigakijimahi	1.59	55	P	Pn	00 33 23.0	-0.5
JISG				*e*S	Sn	00 33 41.5	-1.6
FUSS	Fushou	1.59	291	P	Pn	00 33 24.2	+0.4
	baz=278						
TIPB	Shuangxi	1.60	323	*e*P	Pn	00 33 24.2	+0.5
	baz=335						
TIPB				*i* S	Sn	00 33 43.0	-0.5
	baz=335						
CHGB	Renai	1.60	284	*e*P	Pn	00 33 24.1	+0.3
	baz=272						
CHGB				*e*S	Sn	00 33 44.0	+0.2
	baz=272						
EDH	Donghe	1.61	244	*i* P	Pn	00 33 23.7	0.0
	baz=241						
EDH				*e*S	Sn	00 33 41.9	-1.8
	baz=241						
LDUT	Ludao	1.64	232	*e*P	Pn	00 33 24.1	0.0
	baz=230						
LDUT				*e*S	Sn	00 33 42.5	-1.9
	baz=230						
TWT	Tachien	1.66	290	*i* P	Pn	00 33 25.5	+1.0
	baz=278						
NWLT	Wulai	1.66	311	*e*P	Pn	00 33 25.3	+0.8
	baz=297						
NWLT				*e*S	Sn	00 33 44.8	-0.1
	baz=297						
YHNB	Yeheng	1.69	306	*e*P	Pn	00 33 25.6	+0.8
	baz=303						
YHNB				S	Sn	00 33 45.3	-0.4
	baz=303						
NSK	Sanguang	1.70	306	P	Pn	00 33 25.8	+0.7
	baz=304						
TWA	Mucha	1.75	318	*e*P	Pb	00 33 27.4	-1.1
	baz=317						
SSLB	Suanglung	1.76	274	*e*P	Pn	00 33 26.7	+0.8
	baz=271						
YUS	Yu-Shan	1.78	264	*e*P	Pn	00 33 27.4	+0.9
	baz=261						
ELDTW	Lidau	1.78	254	*e*P	Pn	00 33 26.5	+0.3
	baz=251						
ELDTW				*e*S	Sn	00 33 46.6	-1.3
	baz=251						
LONT	Longtian	1.78	245	*e*P	Pn	00 33 27.1	+1.0
	baz=242						
WPL	Puli Township	1.79	281	*e*P	Pn	00 33 27.1	+0.9
	baz=279						
TATO	Taipei	1.80	316	*e*P	Pb	00 33 28.1	-1.3
	baz=328						
SMLT	Sun Moon Lake	1.82	277	*e*P	Pn	00 33 27.7	+1.0
	baz=264						
TTN	Taitung	1.84	240	*e*P	Pn	00 33 29.0	+2.1
	baz=237						
TTN				*e*S	Sn	00 33 51.5	+2.2
	baz=237						
WHP	Taichung City	1.86	289	*e*P	Pb	00 33 29.3	-1.2
	baz=287						
WHP				*e*S	Sn	00 33 50.3	+0.3
	baz=287						
TYC	Yuchr	1.86	277	*e*P	Pn	00 33 28.3	+1.1
	baz=265						
TWGBT	Beinan	1.86	243	*e*P	Pn	00 33 28.0	+0.7
	baz=232						
TWGBT				*e*S	Sn	00 33 49.8	-0.2
	baz=232						
TWG	Pinlang	1.87	243	*e*P	Pn	00 33 28.0	+0.7
	baz=232						
TWG				*e*S	Sn	00 33 49.9	-0.2
	baz=232						
YM01	YM01	1.88	321	*e*P	Pn	00 33 28.8	+1.3
	baz=320						
YM10	YM10	1.89	321	*e*P	Pn	00 33 28.4	+0.7
	baz=320						
YM05	YM05	1.90	321	*e*P	Pn	00 33 29.1	+1.4
	baz=320						
YM08	YM08	1.90	322	*e*P	Pn	00 33 29.0	+1.3
	baz=321						
YM04	YM04	1.91	320	*e*P	Pn	00 33 28.5	+0.6
	baz=319						
ALS	Alishan	1.91	265	*e*P	Pn	00 33 29.6	+1.5
	baz=263						
JTJ	Tarama	1.92	60	P	Pn	00 33 28.6	+0.6
JTJ				S	Sn	00 33 51.4	+0.1
LIOB	Emei	1.95	300	*e*P	Pn	00 33 30.3	+1.8
	baz=298						
NSTT	Nanjuang	1.96	299	*e*P	Pb	00 33 30.5	-1.6
	baz=286						
NSTT				*e*S	Sn	00 33 53.2	+1.1
	baz=286						
WJS	Zhushan	1.97	274	*e*P	Pn	00 33 31.1	+2.4
	baz=272						
STYT	Tauyuan	2.01	255	*e*P	Pn	00 33 30.8	+1.4
	baz=244						
STYT				*e*S	Sn	00 33 54.3	+0.6
	baz=244						
WNT	Mingjian	2.02	276	*e*P	Pn	00 33 31.8	+2.4
	baz=274						
CHN5	Tsauling	2.02	268	*e*P	Pn	00 33 31.8	+2.3
	baz=265						
WNT1	Nantou City	2.02	277	*e*P	Pn	00 33 30.9	+1.5
	baz=275						
TWQ1	Liyutan	2.03	289	*e*P	Pn	00 33 31.8	+2.2
	baz=288						
LAY	Lan-yu	2.04	217	*e*P	Pn	00 33 29.7	-0.1
	baz=226						
TCU	Taichung	2.06	283	*e*P	Pb	00 33 32.5	-1.4
	baz=282						
NSY	Sanyi	2.07	291	*e*P	Pb	00 33 32.4	-1.6
	baz=290						
ECL	Taimali	2.07	239	*e*P	Pn	00 33 30.5	+0.3
	baz=248						
NMLH	Miaoli	2.09	294	*e*P	Pn	00 33 32.4	+2.1
	baz=293						
TPUB	Ta-pu	2.10	260	*e*P	Pn	00 33 32.5	+2.0
	baz=257						
CHN4	Tsaushan	2.12	261	*e*P	Pn	00 33 33.4	+2.6
	baz=249						
WTP	Ta-pu	2.12	259	*e*P	Pn	00 33 33.0	+2.2
	baz=256						
WDLH	Douliu	2.14	271	*e*P	Pn	00 33 33.6	+2.6
	baz=268						
WDJ	Dajia District	2.15	288	*e*P	Pn	00 33 32.6	+1.4
	baz=287						
WCHH	Zhanghua	2.16	281	*e*P	Pn	00 33 33.5	+2.2
	baz=279						
SLGT	Liugui	2.16	252	*e*P	Pn	00 33 33.2	+1.8
	baz=242						
CHN1	Nanshi	2.21	257	*e*P	Pn	00 33 34.6	+2.5
	baz=255						
TWK	Hsinying	2.23	260	*e*P	Pn	00 33 34.9	+2.5
	baz=257						
CHY	Chiayi	2.26	266	*e*P	Pn	00 33 35.4	+2.7
	baz=263						
SSD	Sandimen	2.27	246	*e*P	Pn	00 33 34.1	+1.3
	baz=237						
TSMG	Majia	2.27	245	*e*P	Pn	00 33 34.2	+1.4
	baz=242						
EAST	Anshuo	2.27	236	*e*P	Pn	00 33 33.6	+0.7
	baz=243						
WTK	Tuku	2.28	271	*e*P	Pn	00 33 35.5	+2.5
	baz=269						
RLNB	Erlin	2.31	276	*e*P	Pn	00 33 36.0	+2.5
	baz=263						
MASBT	Mashibuluo	2.32	243	*e*P	Pn	00 33 34.9	+1.3
	baz=234						
SCST	Cishan	2.33	251	*e*P	Pn	00 33 35.4	+1.7
	baz=240						
JIRB	Irabujima	2.38	61	P	Pn	00 33 35.3	+0.9
JIRB				*e*S	Sn	00 34 02.3	-0.5
ICHU	Yijhu	2.41	263	*e*P	Pn	00 33 37.1	+2.5
	baz=260						
SLIU	Shizi	2.41	233	*e*P	Pn	00 33 35.6	+0.9
	baz=231						
SCZT	Fangliau	2.46	238	*e*P	Pn	00 33 37.9	+2.6
	baz=236						
JMJ2	Miyako jima3	2.47	64	P	Pn	00 33 36.5	+0.9
JMJ2				*e*S	Sn	00 34 05.8	+0.9
WDGT	Dungji	2.98	262	*e*P	Pn	00 33 42.6	0.0
	baz=260						
PHUB	P'eng-hu	3.04	267	*e*P	Pn	00 33 45.4	+2.0
	baz=256						
PHUB				*e*S	Sn	00 34 19.4	+0.6
	baz=256						
PNG	Penghu	3.05	268	*e*P	Pn	00 33 45.3	+1.7
	baz=257						
PNG				*e*S	Sn	00 34 19.9	+0.8
	baz=257						
VWUC	VWUC	3.38	293	*e*P	Pn	00 33 48.4	+0.3
	baz=292						
PTMZ	Houxiangcun	3.68	292	*e*P	Pn	00 33 52.6	+0.4
	baz=291						
XPSS	Dashiqiu	4.04	324	*e*P	Pn	00 33 57.5	+0.3
	baz=322						
KNM	Kinmen	4.13	281	*e*P	Pn	00 34 01.1	+2.7
	baz=279						
KNMB	Chin-men Tao	4.17	282	*e*P	Pn	00 33 59.7	+0.6
	baz=280						
AXDP	Jialang	4.64	286	*e*P	Pn	00 34 06.3	+0.9
	baz=284						
ZPLA	Ao Xicun	4.70	274	*e*P	Pn	00 34 07.4	+1.1
	baz=282						

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*HEL **13** 00:57:12.9, 67°.75N×20°.11E, h0^{km}, ML1.7, Explosion*

UPP 13 00:57:13.7±0.0**, 67°.82N×20°.20E, h0**^{km}**, ML2.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	00 57 16.6	+0.2
KUA				S	Sg	00 57 18.7	+0.5
KUA	Kurravaara	0.14	22	*i* P	Pg	00 57 16.6	+0.2
KUA				*i* S	Sg	00 57 18.7	+0.5
RATU	Laukkuluspa	0.23	270	P	Pg	00 57 18.2	+0.1
RATU	Laukkuluspa	0.23	270	*i* P	Pg	00 57 18.2	+0.1
KOVU	Salmi	0.40	358	P	Pg	00 57 21.6	+0.2
KOVU	Salmi	0.40	358	*i* P	Pg	00 57 21.6	+0.2
NIKU	Nikkaluokta	0.44	276	P	Pg	00 57 22.3	+0.1
NIKU	Nikkaluokta	0.44	276	*i* P	Pg	00 57 22.3	+0.1
LANU	Lannavaara	0.71	71	P	Pg	00 57 27.1	-0.2
LANU	Lannavaara	0.71	71	*e*P	Pg	00 57 27.0	-0.3
LANU				*e*S	Sg	00 57 36.6	+0.1
DUNU	Dundret	0.72	168	P	Pg	00 57 27.3	-0.2
DUNU	Dundret	0.72	168	*i* P	Pg	00 57 27.3	-0.2
MASU	Masugnsbyn	0.78	117	P	Pg	00 57 28.4	-0.2
MASU	Masugnsbyn	0.78	117	*i* P	Pg	00 57 28.4	-0.2
SALU	Saltoluokta	0.79	236	P	Pg	00 57 28.6	-0.1
SALU	Saltoluokta	0.79	236	*i* P	Pg	00 57 28.6	-0.1
KIF	Kilpisjarvi	1.21	10	*e*P	Pg	00 57 36.9	+0.1
KIF	Kilpisjarvi	1.21	10	*e*PB	Pg	00 57 36.9	+0.1
KIF				MSG		00 57 52.8	
	comp=Z,7.0nm,0.2s						
KIF				*e*SB	Sb	00 57 53.5	0.0
PAJU	Pajala	1.38	124	P	Pg	00 57 38.9	-1.3
PAJU	Pajala	1.38	124	*e*P	Pg	00 57 38.8	-1.3
KTK1	Kautokeino	1.64	42	*e*P	Pn	00 57 43.7	0.0
HARU	Harads	1.70	169	P	Pn	00 57 44.6	+0.1
HARU	Harads	1.70	169	*e*P	Pn	00 57 44.6	+0.1
TOF	Tornio	2.39	135	*e*PB	Pn	00 57 55.4	+1.4
	baz=317						
TOF				MSG		00 58 22.9	
	comp=Z,2.9nm,0.2s						
TOF				*e*SG	Sb	00 58 27.5	+0.1
SGF	Sodankyl	2.45	96	*e*PB	Pb	00 57 56.9	-1.7
SGF				*e*SG	Sb	00 58 29.9	+0.6
RNF	Rovaniemi	2.57	116	*e*PB	Pn	00 57 58.5	+2.0
RNF				*e*SG	Sb	00 58 32.3	-0.4
ARA0	ARCESS Array S	2.59	46	*e*P	Pn	00 57 58.0	+1.2
	baz=227						
KU6	Riekki	4.22	111	*e*PG	Pb	00 58 29.4	+0.7
	baz=295						

UPP 13 00:57:18.8±0.1**,67°.82N×20°.20E,h0^{km},ML2.0, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	00 57 21.8	+0.3
KUA				S	Sg	00 57 23.9	+0.5
RATU	Laukkuluspa	0.23	270	P	Pg	00 57 23.4	+0.2
RATU				S	Sg	00 57 26.6	+0.4
KOVU	Salmi	0.40	358	P	Pg	00 57 26.5	+0.1
DUNU	Dundret	0.72	168	P	Pg	00 57 32.3	-0.3
SALU	Saltoluokta	0.79	236	P	Pg	00 57 33.9	+0.1
PAJU	Pajala	1.38	124	P	Pg	00 57 44.1	-1.2

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*IDC **13** 01:01:31.8±0.5,17°.70N×148°.16E,h0^{km},mb4.4/30, mb1 4.5/31,mb1mx4.5/47,mbtmp4.4/31,ML4.4/1,MS3.8/16, Ms1 3.8/16,ms1mx3.6/35,Error ellipse: s-maj=18.0km s-min=10.7km az=102.0*

*GCMT **13** 01:01:37.4±0.3,17°.60N±0°.03×148°.20E±0°.02,h20^{km}±1^{km}, MW4.9/87,Moment Tensor Solution. s19,c20; s87,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.54±.19; M$_{\theta\theta}$-0.28±.10; M$_{\phi\phi}$2.82±.13; M$_{r\theta}$-1.32±.21; M$_{\theta\phi}$-0.36±.07; M$_{\phi r}$0.48±.18; Best double couple: M$_0$3.05200×10^{16} NP1:φ$_s$15.00000°,δ43.00000°,λ-55.00000°. NP2: φ$_s$151.00000°,δ56.00000°,λ-118.00000°. Principal axes: T 2.9430, Plg7.0000°, Azm261.0000°; N 0.2180, Plg23.0000°, Azm167.0000°; P -3.1620, Plg66.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 01:01:37.4±0.6,17°.72N±0°.10×148°.0E±0°.1,h34^{km}±2^{km}, mb4.7/97 Error ellipse: s-maj=18.9km s-min=10.0km az=126.0*

*BJI **13** 01:01:38.3±0.0,18°.04N×147°.77E,h30^{km},mB5.1/15, mb4.5/35,Ms4.6/8,Ms7 4.4/8*

ISC 13 01:01:35.5±0.5**,17°.68N**±0°.06×**148°.07E**±0°.09**,h21^{km},n171,** σ**0^{s}.74**/159**,mb4.7**/79**,MS3.7**/17**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.11	218	Pn	Pn	01 02 51.0	+0.2
	15nm,0.3s,baz=55,slow=21,SNR=1.4						
GUMO				Sn	Sn	01 03 46.7	-2.5
	86nm,0.3s,baz=18,slow=22,SNR=7.6						
GUMO	Guam	5.11	218	Pn	Pn	01 02 51.8	+1.0
GUMO					Sn	01 03 50.0	+0.8
INU	Inuyama	20.16	333	P	P	01 06 07.4	-1.1
INU				IAmb	IAmb	01 06 23.8	
	comp=Z,37nm,1.0s						
JGF	Kuroka	20.23	334	P	P	01 06 09.0	-0.4
JGF				IAmb	IAmb	01 06 12.9	
	comp=Z,32nm,0.8s						
MJAR	Matsushiro Arr	20.71	337	P	P	01 06 14.7	+0.1
	comp=Z,3.5nm,0.9s,baz=174,slow=10,SNR=2.9						
MJAR	Matsushiro Arr	20.71	337	P	P	01 06 13.9	-0.6
MAT	Matsushiro	20.71	337	P	Pn	01 06 17.5	+0.5
MAT				*e*S	S	01 10 02.6	-2.4
JNU	Nakatsue	21.81	318	P	P	01 06 27.3	+0.9
	comp=Z,13nm,1.0s,baz=108,slow=9.6,SNR=2.7						
JNU	Nakatsue	21.81	318	P	P	01 06 26.0	-0.4
JNU				IAmb	IAmb	01 06 41.9	
	comp=Z,21nm,0.9s						
SIJI	Sorong	24.77	224	P	P	01 06 54.9	-1.2
	comp=Z,11nm,0.5s,baz=60,slow=12,SNR=5.9						
TGY	Tagaytay City	26.33	266	LR	LR	01 15 41.8	
	comp=Z,316nm,21.6s,baz=65,slow=32						
KSRS	Korea Array	26.49	322	P	P	01 07 10.8	-0.5
	comp=Z,5.0nm,0.6s,baz=146,slow=9.0,SNR=19						
KSRS				LR	LR	01 18 09.5	
	comp=Z,197nm,18.2s,baz=126,slow=38						
KSAR	Wonju Array Be	26.50	322	P	P	01 07 10.9	-0.7
ASAJ	Asahikawa	26.76	351	P	P	01 07 13.6	-0.2
	comp=Z,8.0nm,0.8s,baz=135,slow=5.7,SNR=1.9						
PMG	Port Moresby	26.93	182	LR	LR	01 16 37.8	
	comp=Z,90nm,18.7s,baz=347,slow=34						
USRK	Ussuriysk Ar.	29.71	336	P	P	01 07 40.9	+0.8
	comp=Z,4.3nm,0.8s,baz=153,slow=9.7,SNR=4.8						
USRK	Ussuriysk Ar.	29.71	336	P	P	01 07 39.8	-0.3
NJ2	Nanjing	30.01	304	*e*P	P	01 07 43.3	+0.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WHN	Wuhan	33.20	299	P	P	01 08 12.6	+1.6
PETK	Petropavlovsk-	36.15	10	LR	LR	01 27 49.2	
	comp=Z,92nm,18.2s,baz=207,slow=44						
CTA	Charters Tower	37.58	183	P	P	01 08 48.0	-0.6
	comp=Z,3.8nm,0.9s,baz=327,slow=7.0,SNR=5.0						
HHC	Hu-ho-hao-te	38.93	314	*e*P	P	01 09 00.2	+0.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
WB2	Warramunga Arr	39.74	200	P	P	01 09 07.4	+0.6
WB2				IAmb	IAmb	01 09 21.4	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	39.74	200	P	P	01 09 07.1	+0.2
	comp=Z,3.0nm,0.9s,baz=24,slow=8.9,SNR=18						
WRA				PcP	PcP	01 11 13.7	+0.5
	comp=Z,0.7nm,0.7s,baz=15,slow=3.5,SNR=2.1						
WRA				LR	LR	01 26 46.4	
	comp=Z,72nm,19.9s,baz=335,slow=38						
WRA	Warramunga Arr	39.74	200	P	P	01 09 06.0	-0.9
FITZ	Fitzroy Crossi	41.84	213	P	P	01 09 24.6	+0.4
	comp=Z,3.7nm,0.6s,baz=23,slow=5.0,SNR=8.0						
FITZ	Fitzroy Crossi	41.84	213	P	P	01 09 24.4	+0.2
MA2	Magadan	41.88	2	P	P	01 09 24.2	+0.1
	comp=Z,2.3nm,0.3s,baz=155,slow=6.7,SNR=3.7						
LZH	Lanzhou	43.08	304	*e*P	P	01 09 33.6	-0.8
LZH				pP	sP	01 09 43.0	+3.0
LZH				sP	pwP	01 09 46.9	-2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
AS31	Alice Springs	43.36	199	P	P	01 09 37.0	+0.5
ASAR	Alice Springs	43.36	199	P	P	01 09 37.1	+0.6
	comp=Z,1.8nm,0.7s,baz=23,slow=8.1,SNR=17						
ASAR				LR	LR	01 29 48.3	
	comp=Z,70nm,19.1s,baz=3.0,slow=39						
ASAR	Alice Springs	43.36	199	P	P	01 09 36.5	-0.1
ULN	Ulaanbaatar	44.97	321	P	P	01 09 49.0	-0.4
ULN				IAmb	IAmb	01 09 51.6	
	comp=Z,7.7nm,0.9s						
UTTA	Uttaradit	45.17	278	P	P	01 10 02.9	+12
	comp=Z,27nm,0.8s						
SEY	Seymchan	45.31	3	P	P	01 09 51.8	+0.2
	comp=Z,1.4nm,0.3s,baz=147,slow=4.3,SNR=6.7						
SONM	Songino Array	45.35	321	P	P	01 09 51.6	-0.7
	comp=Z,5.2nm,0.7s,baz=136,slow=8.7,SNR=27						
SONM				LR	LR	01 29 54.7	
	comp=Z,106nm,18.3s,baz=98,slow=38						
SONM	Songino Array	45.35	321	P	P	01 09 52.0	-0.4
PHIT	Phitsanulok	45.37	277	P	P	01 10 05.0	+12
	comp=Z,89nm,0.7s						
SUKH	Sukhothai	46.08	277	P	P	01 10 10.4	+12
CM34	Chiang Mai Arr	46.36	279	P	P	01 10 01.0	+0.4
CM35	Chiang Mai Arr	46.37	279	P	P	01 10 12.0	+11
CM36	Chiang Mai Arr	46.45	279	P	P	01 10 13.0	+12
CM09	Chiang Mai Arr	46.55	279	P	P	01 10 03.8	+1.7
	comp=Z,12nm,0.9s						
CM04	Chiang Mai Arr	46.57	279	P	P	01 10 03.5	+1.2
	comp=Z,135nmcomp=Z,16nm,0.8s						
CM01	Chiang Mai Arr	46.59	279	P	P	01 10 04.0	+1.7
	comp=Z,15nm,0.8s						
CM02	Chiang Mai Arr	46.60	279	P	P	01 10 04.0	+1.5
	comp=Z,126nmcomp=Z,19nm,0.9s						
CMAR	Chiang Mai Arr	46.60	279	P	P	01 10 02.0	-0.5
	comp=Z,6.5nm,0.9s,baz=72,slow=6.2,SNR=21						
CMAR				LR	LR	01 30 47.0	
	comp=Z,60nm,18.1s,baz=152,slow=38						
CM05	Chiang Mai Arr	46.60	279	P	P	01 10 03.0	+0.5
	comp=Z,133nmcomp=Z,17nm,0.9s						
CM15	Chiang Mai Arr	46.62	279	P	P	01 10 04.0	+1.4
	comp=Z,21nm,0.8s						
CM13	Chiang Mai Arr	46.64	279	P	P	01 10 03.0	+0.2
	comp=Z,152nmcomp=Z,20nm,0.8s						
GTA	Gaotai	46.95	308	P	P	01 10 05.9	+0.8
GTA				pP	pwP	01 10 17.3	-1.8
GTA				sP	sP	01 10 21.8	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,170nm,6.0s						
GTA				LR	LR		
	comp=Z,230nm,14.9s						
GTA				LR	LR		
	comp=Z,370nm,15.6s						
GTA				LR	LR		
	comp=Z,380nm,17.4s						
STKA	Stephens Creek	49.66	187	P	P	01 10 24.5	-1.3
	comp=Z,4.6nm,0.9s,baz=33,slow=13,SNR=5.5						
STKA				LR	LR	01 31 43.7	
	comp=Z,78nm,20.6s,baz=25,slow=36						
BBOO	Buckleboo	51.50	193	P	P	01 10 40.7	+1.0
GSI	Gunungsitoli	52.19	258	P	P	01 10 44.8	-0.4
TIXI	Tiksi	55.15	353	P	P	01 11 06.3	+0.3
WMQ	Urumqi	56.68	311	*e*P	P	01 11 19.8	+2.2
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
NWAO	Narrogin (SRO)	58.32	210	P	P	01 11 29.3	+0.2
	comp=Z,5.0nm,0.8s,baz=14,slow=4.2,SNR=2.2						
ZAA0	Zalesovo Array	60.19	323	P	P	01 11 41.2	-0.6
ZALV	Zalesovo Beam	60.19	323	P	P	01 11 40.8	-1.0
	comp=Z,7.2nm,0.8s,baz=104,slow=6.4,SNR=32						
ZALV				LR	LR	01 35 41.1	
	comp=Z,104nm,21.4s,baz=306,slow=34						
ZALV	Zalesovo Beam	60.19	323	P	P	01 11 41.0	-0.9
MK31	Makanchi Array	60.79	314	P	P	01 11 45.8	-0.3
MK31				IAmb	IAmb	01 12 01.0	
	comp=Z,4.4nm,0.9s						
MKAR	Makanchi Array	60.79	314	P	P	01 11 46.2	+0.2
	comp=Z,2.2nm,0.6s,baz=88,slow=7.0,SNR=35						
MKAR	Makanchi Array	60.79	314	P	P	01 11 45.9	-0.2
MAKZ	Makanchi	61.01	314	P	P	01 11 47.4	-0.2
URZ	Urewera	61.96	154	LR	LR	01 38 47.9	
	comp=Z,109nm,18.2s,baz=31,slow=36						
COLD	Coldfoot	63.01	23	P	P	01 12 01.2	+0.6
COLD				IAmb	IAmb	01 12 03.4	
	comp=Z,4.5nm,1.0s						
KURK	Kurchatov	63.53	318	P	P	01 12 04.1	-0.2
IL31		63.57	26	P	P	01 12 04.4	+0.1
IL31				IAmb	IAmb	01 12 04.8	
	comp=Z,5.1nm,0.9s						
ILAR	Eielson Array	63.57	26	P	P	01 12 02.6	-1.7
	comp=Z,2.9nm,0.8s,baz=254,slow=5.3,SNR=22						
ILAR				LR	LR	01 39 17.5	
	comp=Z,48nm,19.4s,baz=294,slow=36						
ILAR	Eielson Array	63.57	26	P	P	01 12 03.9	-0.5
RAR	Rarotonga	64.08	125	LR	LR	01 40 14.5	
	comp=Z,34nm,18.1s,baz=250,slow=36						
DOT	Dot Lake	64.50	27	P	P	01 12 11.2	+0.6
DOT				IAmb	IAmb	01 12 11.8	
	comp=Z,6.0nm,0.9s						
BMAR	Burnt Mountain	65.15	23	P	P	01 12 14.4	-0.4
KSH	Kashi	65.29	306	P	P	01 12 20.3	+4.0
KSH				pP	pwP	01 12 31.6	+1.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BCAR	Beaver Creek A	65.41	28	P	P	01 12 16.0	-0.5
DAWY	Dawson	66.61	27	P	P	01 12 24.8	+0.6
HYT	Haines Junctio	67.14	31	P	P	01 12 28.2	+0.5
HYT				IAmb	IAmb	01 12 30.5	
	comp=Z,9.9nm,0.8s						
ARSB	Arslanbob	67.46	308	P	P	01 12 29.8	-0.4
ARSB				IAmb	IAmb	01 12 42.8	
	comp=Z,4.7nm,0.7s						
NIL	Nilore	67.99	300	P	P	01 12 32.6	-0.9
BRVK	Borovoye	68.75	321	P	P	01 12 37.8	-0.1
KK31	Karatay Array	69.15	310	P	P	01 12 40.2	-0.3
KK31				IAmb	IAmb	01 12 53.1	
	comp=Z,3.6nm,0.7s						
KKAR	Karatay Array	69.15	310	P	P	01 12 40.1	-0.5
KKAR				IAmb	IAmb	01 12 53.1	
	comp=Z,3.6nm,0.7s						
INK	Inuvik	69.42	23	P	P	01 12 40.3	-1.4
	comp=Z,3.2nm,0.8s,baz=244,slow=5.6,SNR=8.8						
INK	Inuvik	69.42	23	P	P	01 12 42.3	+0.6
INK				IAmb	IAmb	01 12 43.0	
	comp=Z,6.4nm,1.1s						
PPT	Papeete	70.64	116	LR	LR	01 41 18.8	
	comp=Z,182nm,19.0s,baz=302,slow=34						
DLBC	Dease Lake	70.89	33	P	P	01 12 51.2	+0.3
	comp=Z,4.2nm,0.9s,baz=206,slow=7.8,SNR=3.9						
KBL	Kabul	71.33	301	P	P	01 12 53.5	-0.8
KBL				IAmb	IAmb	01 12 56.8	
	comp=Z,7.4nm,0.8s						
C36M	Paulatuk	72.85	22	P	P	01 13 02.2	-0.2
C36M				IAmb	IAmb	01 13 03.6	
	comp=Z,6.9nm,0.8s						
ARU	Arti	75.20	325	P	P	01 13 15.9	-0.5
ARU				IAmb	IAmb	01 13 30.4	
	comp=Z,11nm,1.1s						
ABKAR	Akbulak array	75.62	317	P	P	01 13 18.5	-0.5
ABKAR	Akbulak array	75.62	317	P	P	01 13 18.5	-0.5
ABKAR				IAmb	IAmb	01 13 31.5	
	comp=Z,9.6nm,0.8s						
HRA	Herat	76.88	302	P	P	01 13 25.9	-0.8
YKA	Yellowknife Ar	77.82	28	P	P	01 13 30.8	-0.4
	comp=Z,3.4nm,0.7s,baz=288,slow=5.1,SNR=40						
YKA				LR	LR	01 46 10.6	
	comp=Z,75nm,20.3s,baz=0.0,slow=34						
YBH	Yreka Blue Hor	77.88	50	P	P	01 13 32.4	+0.3
YBH				IAmb	IAmb	01 13 34.9	
	comp=Z,4.8nm,0.8s						
EUNU	Eureka	78.41	8	P	P	01 13 34.7	+0.5
EUNU				IAmb	IAmb	01 13 35.6	
	comp=Z,6.2nm,0.8s						
PINE	Pine Mountain	78.68	48	P	P	01 13 36.8	+0.2
PINE				IAmb	IAmb	01 13 39.4	
	comp=Z,10nm,0.8s						
B08A	Colville Reser	78.69	43	P	P	01 13 36.7	+0.3
B08A				IAmb	IAmb	01 13 38.4	
	comp=Z,4.5nm,0.8s						
E07A	Sunnyside	78.77	45	P	P	01 13 37.2	+0.4
K05A	Summer Lake	78.97	49	P	P	01 13 38.4	+0.2
K05A				IAmb	IAmb	01 13 40.9	
	comp=Z,10nm,1.2s						
ORV	Oroville	79.28	52	P	P	01 13 40.1	+0.4
GEYT	Alibeck	79.32	306	P	P	01 13 39.7	-0.2
	comp=Z,1.1nm,0.5s,baz=53,slow=7.1,SNR=2.4						
G08A	Pilot Rock	79.69	46	P	P	01 13 42.2	+0.3
RES	Resolute Bay	79.87	14	P	P	01 13 42.5	+0.3
E09A	Wood Farm, Sta	79.93	44	P	P	01 13 43.6	+0.5
E09A				IAmb	IAmb	01 13 45.4	
	comp=Z,3.9nm,0.7s						
BEKR	Beckworth	80.06	51	P	P	01 13 44.2	+0.1
BEKR				IAmb	IAmb	01 13 46.3	
	comp=Z,5.2nm,0.8s						
NEW	Newport	80.14	43	P	P	01 13 44.7	+0.5
NEW				IAmb	IAmb	01 13 46.3	
	comp=Z,7.2nm,0.8s						
CMB	Columbia Colle	80.50	53	P	P	01 13 46.8	+0.4
PNTR	Pine Nut	80.83	52	P	P	01 13 48.5	+0.1
BMO	Blue Mountains	80.94	46	P	P	01 13 48.9	+0.3
NVAR	Mina Array Bea	81.98	52	P	P	01 13 54.3	-0.1
	comp=Z,3.2nm,0.7s,baz=262,slow=6.4,SNR=17						
NVAR				LR	LR	01 49 48.1	
	comp=Z,83nm,18.4s,baz=312,slow=35						
NVAR	Mina Array Bea	81.98	52	P	P	01 13 54.5	0.0
NV11	Mina Array Sit	82.09	52	P	P	01 13 55.0	+0.1
JTMT	Jette	82.12	42	P	P	01 13 55.0	+0.1
MFID	Camas Ranch	82.36	47	P	P	01 13 56.4	+0.1
MFID				IAmb	IAmb	01 13 58.5	
	comp=Z,5.8nm,0.9s						
HLID	Hailey	83.30	47	P	P	01 14 01.3	+0.1
KLMR	Klimovskoe	83.41	332	*e*P	P	01 13 55.7	-5.4
KLMR				AMP		01 14 15.0	
	comp=Z,16nm,1.2s						
ELK	Elko	83.58	49	P	P	01 14 02.7	0.0
ELK				IAmb	IAmb	01 14 05.1	
	comp=Z,6.9nm,1.1s						
HRY	Holter Researc	84.03	43	P	P	01 14 05.1	+0.3
R11A	Troy Canyon, C	84.05	52	P	P	01 14 05.2	+0.1
ARCES	ARCESS Array B	84.14	343	P	P	01 14 04.9	+0.2
	comp=Z,1.8nm,0.6s,baz=64,slow=5.5,SNR=5.4						
ARCES	ARCESS Array B	84.14	343	P	P	01 14 05.0	+0.2
BOZ	Bozeman (W)	84.53	44	P	P	01 14 07.4	0.0
PRN	Pahroc Range	84.74	53	P	P	01 14 08.7	+0.1
HVU	Hansel Valley	85.01	48	P	P	01 14 10.1	+0.2
YHL	Hebgen Lake	85.08	45	P	P	01 14 10.3	-0.1
YHB	Horse Butte	85.11	45	P	P	01 14 10.5	+0.1
PSUT	Pine Spring	85.28	51	P	P	01 14 11.6	+0.2
YMR	Madison River	85.29	45	P	P	01 14 11.3	-0.1
YHH	Holmes Hill	85.33	45	P	P	01 14 11.4	-0.2
SPUT	South Promonto	85.40	48	P	P	01 14 12.1	+0.2
DUG	Dugway, Tooele	85.50	49	P	P	01 14 12.6	+0.2
H17A	Grant Village	85.64	45	P	P	01 14 13.1	0.0
H17A				IAmb	IAmb	01 14 17.9	
	comp=Z,4.5nm,0.9s						
FLWY	Flagg Ranch	85.67	45	P	P	01 14 13.3	+0.1
MOOW	Moose Ponds	85.76	45	P	P	01 14 13.6	-0.1
YMP	Mirror Lake Pl	85.81	44	P	P	01 14 14.0	0.0
HWUT	Hardware Ranch	85.92	48	P	P	01 14 14.4	-0.1
HWUT				IAmb	IAmb	01 14 16.6	
	comp=Z,5.0nm,0.8s						
CCUT	Cedar City	85.97	52	P	P	01 14 14.8	0.0
NLU	North Lily Min	86.12	49	P	P	01 14 15.4	-0.2
RLMT	Red Lodge	86.26	44	P	P	01 14 16.3	+0.1
RLMT				IAmb	IAmb	01 14 19.0	
	comp=Z,5.4nm,0.7s						
JLU	Jordanelle	86.35	49	P	P	01 14 16.6	-0.1
MVU	Marysvale	86.51	51	P	P	01 14 17.4	-0.1
MSU	Marysvale	86.53	51	P	P	01 14 17.5	-0.1
FFC	Flin Flon	86.72	33	P	P	01 14 18.2	+0.3
FFC				IAmb	IAmb	01 14 19.1	
	comp=Z,5.3nm,0.8s						
PDAR	Pinedale Array	86.91	46	P	P	01 14 18.2	-1.2
	comp=Z,0.7nm,0.6s,baz=221,slow=2.8,SNR=7.4						
TMUT	Trail Mountain	86.97	50	P	P	01 14 19.7	-0.2
U15A	North Rim	87.15	53	P	P	01 14 20.4	-0.3
SRU	San Rafael Swe	87.54	50	P	P	01 14 22.3	-0.1
LAO	LASA Array	87.63	42	P	P	01 14 22.8	+0.2
LAO				IAmb	IAmb	01 14 24.8	
	comp=Z,6.5nm,0.9s						
214A	Organ Pipe Nat	88.25	57	P	P	01 14 25.8	+0.1
214A				IAmb	IAmb	01 14 28.3	
	comp=Z,4.3nm,0.8s						
KBZ	Khabaz	88.45	316	P	P	01 14 28.2	+1.8
	comp=Z,3.5nm,0.9s,baz=130,slow=7.9,SNR=5.3						
FINES	FINESS Array B	88.74	336	P	P	01 14 25.7	-1.7
	comp=Z,7.3nm,1.1s,baz=52,slow=3.1,SNR=11						
PV23	Carpenter Ridg	88.88	50	P	P	01 14 28.7	-0.2
PV14	Lion Creek, Pa	88.90	50	P	P	01 14 28.7	-0.2
PV19	Morning Glory	88.95	50	P	P	01 14 29.2	0.0
PV20	West Nyswonger	88.95	50	P	P	01 14 29.1	0.0
PV04	Paradox Valley	88.97	50	P	P	01 14 29.4	+0.1
PV17	East Wray Mesa	88.98	50	P	P	01 14 29.4	0.0
PV16	Nyswonger Mesa	89.00	50	P	P	01 14 29.4	-0.1
PV11	David Mesa, Pa	89.03	50	P	P	01 14 29.4	-0.2
PV03	Paradox Valley	89.07	50	P	P	01 14 29.6	-0.1
PV03				IAmb	IAmb	01 14 31.7	
	comp=Z,4.8nm,0.8s						
PV12	Saucer Basin,	89.08	50	P	P	01 14 29.7	-0.1
PV13	Radium Mtn., P	89.12	50	P	P	01 14 29.9	-0.2
PV13				IAmb	IAmb	01 14 31.5	
	comp=Z,3.3nm,0.7s						
PV01	Paradox Valley	89.32	50	P	P	01 14 30.8	-0.1
PV01				IAmb	IAmb	01 14 32.8	
	comp=Z,4.0nm,0.7s						
SMCO	Snowmass	90.07	49	P	P	01 14 34.4	-0.3
SMCO				IAmb	IAmb	01 14 37.0	
	comp=Z,4.7nm,1.1s						
N23A	Red Feather La	90.12	47	P	P	01 14 34.5	-0.2
N23A				IAmb	IAmb	01 14 36.9	
	comp=Z,2.8nm,0.8s						
ULM	Lac du Bonnet	92.14	35	P	P	01 14 43.3	-0.2
	comp=Z,2.2nm,0.8s,baz=270,slow=5.9,SNR=5.8						
ULM	Lac du Bonnet	92.14	35	P	P	01 14 43.8	+0.3
ULM				IAmb	IAmb	01 14 45.1	
	comp=Z,4.5nm,0.9s						
BRTR	Keskin Array B	96.43	315	P	P	01 15 03.7	+0.1
	comp=Z,0.6nm,0.7s,baz=21,slow=4.8,SNR=2.3						
H03N2	Juan Fernandez	135.17	120	T	T	03 49 36.2	
	baz=262,slow=73						
H03N3	Juan Fernandez	135.17	120	T	T	03 49 40.9	
	baz=262,slow=73						
H03N1	Juan Fernandez	135.18	120	T	T	03 49 39.5	
	baz=262,slow=73						

IDC 13 01:17:08.1±10.0**,17°.73N**×**147°.84E,h0^{km},mb3.5**/5**, mb1 3.6**/5**,mb1mx3.5**/26**,mbtmp3.5**/5**,Error ellipse: s-maj=401.7km s-min=26.5km az=82.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.71	200	P	P	01 24 42.4	0.0
	0.6nm,0.9s,baz=20,slow=8.3,SNR=2.1						
ASAR	Alice Springs	43.33	199	P	P	01 25 11.9	-0.3
	0.4nm,0.8s,baz=19,slow=9.0,SNR=2.9						
SONM	Songino Array	45.17	321	P	P	01 25 27.3	+0.5
	0.7nm,0.8s,baz=134,slow=9.0,SNR=3.3						
ZALV	Zalesovo Beam	60.02	323	P	P	01 27 16.0	-0.5
	0.7nm,0.8s,baz=98,slow=7.4,SNR=3.7						
MKAR	Makanchi Array	60.59	314	P	P	01 27 20.6	-0.1
	0.2nm,0.4s,baz=95,slow=8.1,SNR=4.5						

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*JMA **13** 01:30:30.3±0.1,23°.70N×122°.86E,h53^{km},M2.3*

*TAP **13** 01:30:31.4,23°.77N×122°.85E,h33^{km},ML2.9,C*

ISC 13 01:30:29.9±1.3**,23°.70N**±0°.04×**122°.89E**±0°.03**,h25^{km}**±15^{km}**, n53,**σ**1^{s}.09**/81**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.75	4	P	Pn	01 30 45.1	+0.2
JYNG				S	Sn	01 30 55.1	-0.3
YOJ	Yonaguni jima	0.76	9	P	Pn	01 30 45.3	+0.2
YOJ				S	Sn	01 30 55.7	-0.1
YOJ	Yonaguni jima	0.76	9	*i* P	Pn	01 30 45.4	+0.2
	baz=11						
YOJ				*i* S	Sn	01 30 55.4	-0.5
	baz=11						
HATJ	Hateruma jima	0.91	67	P	Pb	01 30 47.4	+0.3
HATJ				S	Sn	01 30 59.4	-0.1
IRIF	Iriomote-Funau	1.00	51	P	Pb	01 30 48.6	+0.1
IRIF				S	Sb	01 31 01.8	+0.6
JKRS	Kuro-shima	1.16	62	P	Pb	01 30 51.2	0.0
JKRS				S	Sb	01 31 05.8	0.0
HWA	Hwalien	1.20	283	*e*P	Pn	01 30 51.6	+0.5
	baz=269						
TWD	Chiawan	1.24	288	*e*P	Pn	01 30 51.1	-0.6
	baz=274						
TWD				*e*S	Sn	01 31 05.5	-2.0
	baz=274						
NACB	Ninganchiao	1.27	292	*i* P	Pn	01 30 51.5	-0.6
	baz=277						
NACB				*e*S	Sn	01 31 07.2	-1.2
	baz=277						
TWC	Suao	1.31	314	*e*P	Pn	01 30 52.7	+0.1
	baz=313						
JIJ	Ishigaki jima	1.32	60	P	Pn	01 30 52.8	0.0
JIJ				S	Sn	01 31 08.7	-1.0
ESL	Shilin	1.33	275	P	Pn	01 30 52.6	-0.4
	baz=262						
HGSD	Ruisui	1.36	261	P	Pn	01 30 52.9	-0.4
	baz=259						
HGSD				*e*S	Sn	01 31 08.5	-2.0
	baz=259						
ETLH	Xiulin Townshi	1.38	292	*e*P	Pn	01 30 53.3	-0.4
	baz=290						
ETLH				*e*S	Sn	01 31 09.7	-1.5
	baz=290						
EHY	Hungye	1.45	262	P	Pn	01 30 54.7	+0.2
	baz=260						
EHY				*e*S	Sn	01 31 11.9	-0.9
	baz=260						
EYUL	Yuli	1.48	256	P	Pn	01 30 55.1	+0.1
	baz=253						
ILA	Ilan	1.48	316	*e*P	Pn	01 30 55.4	+0.4
	baz=315						
YULB	Yu-li	1.49	258	*e*P	Pn	01 30 55.3	+0.2
	baz=255						
YULB				*e*S	Sn	01 31 13.4	-0.4
	baz=255						
TWF1	Yuli	1.50	257	P	Pn	01 30 55.3	+0.1
	baz=254						
TWF1				*e*S	Sn	01 31 14.3	+0.3
	baz=254						
ENTT	Nioudou	1.52	308	*e*P	Pn	01 30 56.7	+1.1
	baz=293						
ENTT				*e*S	Sn	01 31 13.9	-0.7
	baz=293						
NDT	Datong Townshi	1.54	306	*e*S	Sn	01 31 14.7	-0.3
	baz=292						
FULB	Fuli	1.54	251	P	Pn	01 30 55.8	-0.1
	baz=249						
FULB				*e*S	Sn	01 31 13.7	-1.5
	baz=249						
WHF	Hehuan Shan	1.55	287	*i* P	Pn	01 30 56.3	0.0
	baz=274						
WHF				S	Sn	01 31 14.9	-0.9

	baz=274						
NNSB	**Datong**	**1.55**	**298**	P	**Pn**	**01 30 56.6**	**+0.5**
	baz=286						
NNSB				S	**Sn**	**01 31 14.8**	**-0.6**
	baz=286						
NNS	**Nan Shan**	**1.56**	**298**	P	**Pn**	**01 30 56.7**	**+0.5**
	baz=286						
NNS				S	**Sn**	**01 31 15.1**	**-0.7**
	baz=286						
JISG	**Ishigakijimahi**	**1.57**	**56**	P	**Pn**	**01 30 56.0**	**-0.2**
JISG				S	**Sn**	**01 31 14.7**	**-1.1**
TIPB	**Shuangxi**	**1.59**	**323**	*e*P	**Pn**	**01 30 57.1**	**+0.6**
	baz=332						
FUSS	**Fushou**	**1.60**	**290**	*e*P	**Pn**	**01 30 57.3**	**+0.5**
	baz=278						
CHGB	**Renai**	**1.61**	**283**	*e*P	**Pn**	**01 30 57.3**	**+0.4**
	baz=272						
CHGB				*e*S	**Sn**	**01 31 16.8**	**-0.2**
	baz=272						
EDH	**Donghe**	**1.63**	**244**	*e*P	**Pn**	**01 30 56.6**	**-0.4**
	baz=241						
EDH				*e*S	**Sn**	**01 31 15.0**	**-2.2**
	baz=241						
NWLT	**Wulai**	**1.65**	**311**	*i* P	**Pn**	**01 30 58.5**	**+1.1**
	baz=296						
NWLT				S	**Sn**	**01 31 18.1**	**+0.2**
	baz=296						
LDUT	**Ludao**	**1.66**	**232**	*e*P	**Pn**	**01 30 56.9**	**-0.5**
	baz=229						
TDCB	**Techi**	**1.67**	**289**	P	**Pn**	**01 30 58.4**	**+0.6**
	baz=278						
YHNB	**Yeheng**	**1.68**	**305**	*e*P	**Pn**	**01 30 58.6**	**+0.8**
	baz=303						
YHNB				S	**Sn**	**01 31 18.5**	**-0.1**
	baz=303						
SSLB	**Suanglung**	**1.77**	**273**	*e*P	**Pn**	**01 31 00.5**	**+1.5**
	baz=271						
SMLT	**Sun Moon Lake**	**1.83**	**276**	*e*P	**Pn**	**01 31 00.7**	**+0.9**
	baz=264						
WHP	**Taichung City**	**1.86**	**288**	*e*P	**Pb**	**01 31 03.0**	**-0.4**
	baz=278						
TYC	**Yuchr**	**1.87**	**277**	*e*P	**Pn**	**01 31 01.4**	**+1.1**
	baz=266						
ALS	**Alishan**	**1.92**	**265**	*e*P	**Pn**	**01 31 02.5**	**+1.2**
	baz=262						
LIOB	**Emei**	**1.95**	**299**	*e*P	**Pn**	**01 31 02.9**	**+1.4**
	baz=298						
NSTT	**Nanjuang**	**1.95**	**299**	*e*S	**Sn**	**01 31 25.7**	**+0.4**
	baz=286						
CHN5	**Tsauling**	**2.03**	**267**	*e*P	**Pn**	**01 31 04.5**	**+1.9**
	baz=265						
CHN5				*e*S	**Sn**	**01 31 29.3**	**+2.1**
	baz=265						
STYT	**Tauyuan**	**2.03**	**255**	*e*P	**Pn**	**01 31 03.9**	**+1.3**
	baz=243						
TPUB	**Ta-pu**	**2.11**	**259**	*e*P	**Pn**	**01 31 05.5**	**+1.8**
	baz=257						
TPUB				*e*S	**Sn**	**01 31 30.6**	**+1.5**
	baz=257						
WTP	**Ta-pu**	**2.13**	**258**	*e*P	**Pn**	**01 31 06.0**	**+2.0**
	baz=256						
SLGT	**Liugui**	**2.18**	**251**	*e*P	**Pn**	**01 31 06.7**	**+2.1**
	baz=243						
SLGT				*e*S	**Sn**	**01 31 33.0**	**+2.3**
	baz=243						
CHN1	**Nanshi**	**2.23**	**257**	*e*P	**Pb**	**01 31 08.0**	**-1.5**
	baz=255						
CHN1				*e*S	**Sn**	**01 31 34.8**	**+2.8**
	baz=255						
TWK	**Hsinying**	**2.24**	**259**	*e*P	**Pn**	**01 31 07.3**	**+1.8**
	baz=258						
TSMG	**Majia**	**2.29**	**245**	*e*P	**Pn**	**01 31 08.2**	**+2.1**
	baz=242						
EAST	**Anshuo**	**2.29**	**235**	*e*P	**Pb**	**01 31 09.3**	**-1.3**
	baz=242						
MASBT	**Mashibuluo**	**2.34**	**243**	*e*P	**Pn**	**01 31 08.4**	**+1.6**
	baz=233						
SLIU	**Shizi**	**2.43**	**233**	*e*P	**Pn**	**01 31 08.5**	**+0.5**
	baz=231						
PTMZ	**Houxiangcun**	**3.68**	**292**	*e*P	**Pn**	**01 31 25.7**	**+0.4**
	baz=290						

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*IDC **13** 01:45:19.0±2.3, 15°.49S×174°.95W, h247^{km}±31^{km}, mb3.2/5, mb1 3.5/6, mb1mx3.3/33, mbtmp3.8/6, Error ellipse: s-maj=136.7km s-min=17.7km az=148.0*

ISC 13 01:45:19.0±1.8, **15°.5S**±0°.7×**174°.8W**±0°.3, **h250^{km}, n8, σ1^s.20**/9, **mb3.3**/5, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.37**	**62**	P	**Pn**	**01 46 16.7**	**+1.0**
	7.1nm,0.3s,baz=184,slow=19,SNR=1.8						
AFI				S	**S**	**01 46 58.5**	**-2.0**
	15nm,0.3s,baz=162,slow=20,SNR=5.1						
WRA	**Warramunga Arr**	**48.47**	**257**	P	**P**	**01 53 36.2**	**-0.8**
	0.4nm,0.9s,baz=96,slow=8.0,SNR=6.8						
ASAR	**Alice Springs**	**48.76**	**252**	P	**P**	**01 53 38.4**	**-0.8**
	3.9nm,0.7s,baz=87,slow=8.0,SNR=46						
NVAR	**Mina Array Bea**	**75.35**	**43**	P	**P**	**01 56 36.4**	**+0.9**
	0.1nm,0.3s,baz=218,slow=8.4,SNR=2.5						
ILAR	**Eielson Array**	**82.83**	**12**	P	**P**	**01 57 14.6**	**-0.4**
	0.2nm,0.3s,baz=214,slow=4.9,SNR=6.9						
PDAR	**Pinedale Array**	**83.28**	**42**	P	**P**	**01 57 18.1**	**0.0**
	0.5nm,0.7s,baz=207,slow=3.7,SNR=6.9						
BRTR	**Keskin Array B**	**145.36**	**320**	PKPbc	**PKPbc**	**02 04 28.7**	**+0.7**
	16nm,0.4s,baz=96,slow=2.9,SNR=2.7						
GERES	**GERESS Array B**	**146.03**	**350**	PKPbc	**PKPdf**	**02 04 29.1**	**+0.8**
	0.3nm,0.5s,baz=58,slow=3.7,SNR=4.2						

IDC 13 02:16:33.0±2.4, **5°.96S×130°.34E, h0^{km}, mb3.5**/1, **mb1 3.6**/4, **mb1mx3.4**/27, **mbtmp3.4**/4, **ML3.2**/3, **Error ellipse: s-maj=95.0km s-min=29.5km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.91**	**200**	Pn	Pn	02 19 38.5	+0.6
	0.1nm,0.3s,baz=21,slow=12,SNR=7.2						
FITZ				Sn	Sn	02 21 47.7	-15
	0.3nm,0.3s,baz=60,slow=23,SNR=1.9						
WRA	**Warramunga Arr**	**14.44**	**165**	Pn	Pn	02 19 57.7	-1.0
	0.1nm,0.3s,baz=347,slow=12,SNR=1.7						
WRA				Sn	Sn	02 22 25.4	-14
	0.3nm,0.3s,baz=341,slow=23,SNR=7.5						
ASAR	**Alice Springs**	**17.94**	**169**	P	Pn	02 20 44.0	0.0
	0.2nm,0.3s,baz=348,slow=10,SNR=11						
ASAR				S	Sn	02 23 53.2	-12
	0.1nm,0.3s,baz=350,slow=21,SNR=1.7						
MKAR	**Makanchi Array**	**67.55**	**326**	P	P	02 27 31.3	+0.1
	0.2nm,0.4s,baz=126,slow=7.1,SNR=4.2						

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*IDC **13** 02:18:33.2±2.3, 56°.27N×113°.77E, h0^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.3/33, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=67.9km s-min=27.8km az=127.0*

*BYKL **13** 02:18:33.1±0.2, 56°.12N×113°.75E, h4^{km}±3^{km}*

*MOS **13** 02:18:33.5±1.5, 56°.10N×113°.80E, h19^{km}, mb3.5/1, Error ellipse: s-maj=14.6km s-min=8.4km az=67.3*

ISC 13 02:18:34.1±0.8, **56°.08N**±0°.02×**113°.76E**±0°.02, **h18^{km}**±2^{km}, **n38, σ2^s.32**/80, **mb3.5**/3, **6C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.12**	**288**	⇑*i*Pg	**Pb**	**02 18 35.2**	**-1.3**
SVKR				*e*Sg	**Sb**	**02 18 37.1**	**-0.8**
SVKR				Pmax			
	8μm,0.3s						
SVKR				Smax			
	29μm,0.8s						
SVKR	**Severomuysk**	**0.12**	**288**	⇑*i*PG	**Pb**	**02 18 35.3**	**-1.3**
SVKR				pmax	pmax		
	comp=Z,8μm,0.2s						
UKT	**Uakit**	**0.60**	**188**	⇑*i*Pg	**Pb**	**02 18 44.3**	**-1.7**
UKT				*e*Sg	**Sb**	**02 18 52.3**	**-1.8**
UKT				Pmax			
	comp=Z,129nm,0.3s						
UKT				Smax			
	comp=Z,480nm,0.4s						
UKT	**Uakit**	**0.60**	**188**	*e*PG	**Pb**	**02 18 44.4**	**-1.6**
UKT				*e*		02 18 53.6	
UKT				pmax	pmax		
	comp=Z,123nm,0.2s						
UKT				smax	smax		
	comp=E,476nm,0.2s						
YOA	**Uoyan**	**1.14**	**274**	*e*Pg	**Pn**	**02 18 54.5**	**-0.7**
YOA				*e*Pb	**Pg**	**02 18 56.6**	**+0.3**
YOA				*e*Sg	**Sb**	**02 19 09.3**	**-0.6**
YOA				*e*Sb	**Sg**	**02 19 12.6**	**+1.3**
YOA				max			
	comp=E,745nm,0.4s						
YOA				max			
	comp=E,2μm,0.6s						
YOA	**Uoyan**	**1.14**	**274**	*e*PG	**Pb**	**02 18 55.4**	**0.0**
YOA				*e*		02 19 11.2	
YOA				pmax	pmax		
	comp=Z,385nm,0.2s						
YOA				smax	smax		
	comp=E,2μm,0.5s						
NLYR	**Nelyaty**	**1.16**	**68**	⇓*i*Pg	**Pn**	**02 18 53.9**	**-1.5**
NLYR				*e*Pb	**Pg**	**02 18 55.6**	**-0.9**
NLYR				*e*Sg	**Sn**	**02 19 09.5**	**-1.3**
NLYR				*e*Sb	**Sg**	**02 19 14.0**	**+2.3**
NLYR				max			
	comp=E,776nm,0.4s						
NLYR				max			
	comp=E,1μm,0.9s						
NLYR	**Nelyaty**	**1.16**	**68**	*e*PG	**Pn**	**02 18 53.9**	**-1.5**
NLYR				*e*		02 19 10.2	
NLYR				pmax	pmax		
	comp=Z,774nm,0.4s						
NLYR				smax	smax		
	comp=E,1μm,0.8s						
KMO	**Kumora**	**1.45**	**263**	*e*Pg	**Pn**	**02 18 59.4**	**-0.1**
KMO				*e*Pb	**Pb**	**02 19 00.9**	**+0.3**
KMO				*e*		02 19 01.8	
KMO				*e*Sg	**Sb**	**02 19 18.7**	**0.0**
KMO				*e*Sb	**Sg**	**02 19 20.7**	**-0.4**
KMO				max			
	comp=E,372nm,0.3s						
KMO				max			
	comp=E,1μm,0.9s						
KMO	**Kumora**	**1.45**	**263**	⇑*i*PN	**Pn**	**02 18 59.4**	**-0.1**
KMO				*e*		02 19 18.7	
KMO				pmax	pmax		
	comp=Z,371nm,0.3s						
KMO				smax	smax		
	comp=N,1μm,1.0s						
BOD	**Bodaibo**	**1.75**	**4**	*e*Pg	**Pb**	**02 19 03.8**	**-1.9**
BOD				*e*Sg	**Sb**	**02 19 26.0**	**-1.2**
BOD				*e*		02 19 42.2	
BOD				Pmax			
	comp=N,241nm,1.4s						
BOD				Smax			
	comp=N,519nm,0.3s						
BOD	**Bodaibo**	**1.75**	**4**	*e*PN	**Pb**	**02 19 03.8**	**-1.9**
BOD				*e*		02 19 26.5	
BOD				pmax	pmax		
	comp=Z,244nm,0.6s						
BOD				smax	smax		
	comp=E,524nm,0.3s						
YLYR	**Ulyunkhan**	**1.91**	**232**	⇑*i*Pg	**Pb**	**02 19 07.7**	**-0.7**
YLYR				*e*Sg	**Sb**	**02 19 33.9**	**+2.0**
YLYR				Pmax			
	comp=E,114nm,0.4s						
YLYR				Smax			
	comp=E,907nm,0.3s						
YLYR	**Ulyunkhan**	**1.91**	**232**	⇑*i*PN	**Pb**	**02 19 07.6**	**-0.8**
YLYR				*e*		02 19 34.1	
YLYR				pmax	pmax		
	comp=Z,114nm,0.4s						
YLYR				smax	smax		
	comp=E,905nm,0.3s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*Pn	**Pn**	**02 19 14.1**	**+1.7**
NIZ				*e*Pg	**Pb**	**02 19 15.7**	**-1.0**
NIZ				*e*		02 19 46.1	
NIZ				*e*Sg	**Sg**	**02 19 48.5**	**-2.6**
NIZ				Pmax			
	comp=E,36nm,0.5s						
NIZ				Smax			
	comp=E,252nm,0.8s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*PN	**Pb**	**02 19 15.1**	**-1.6**
NIZ				*e*		02 19 46.4	
NIZ				pmax	pmax		
	comp=Z,36nm,0.6s						
NIZ				smax	smax		
	comp=N,252nm,0.9s						
CRS	**Chara**	**2.63**	**70**	*e*Pn	**Pn**	**02 19 16.8**	**+1.1**
CRS				*e*Pg	**Pb**	**02 19 21.1**	**+0.4**
CRS				*e*Sg	**Sg**	**02 19 55.1**	**-3.5**
CRS				Pmax			
	comp=N,171nm,0.9s						
CRS				Smax			
	comp=N,257nm,0.9s						
CRS	**Chara**	**2.63**	**70**	*e*PN	**Pn**	**02 19 16.6**	**+0.9**
CRS				*e*		02 19 20.9	
CRS				*e*		02 19 54.9	
CRS				pmax	pmax		
	comp=Z,137nm,0.8s						
CRS				smax	smax		
	comp=E,257nm,0.8s						
SYVR	**Suvo**	**3.26**	**223**	*e*Pn	**Pn**	**02 19 26.0**	**+1.7**
SYVR				*e*Pg	**Pb**	**02 19 32.0**	**+0.6**
SYVR				*e*PgPg	**PbPb**	**02 19 33.6**	**-0.9**
SYVR				*e*Sn	**Sn**	**02 20 04.7**	**+2.2**
SYVR				*e*Sg	**Sg**	**02 20 15.0**	**-3.7**
SYVR				max			
	comp=E,56nm,0.8s						
SYVR				Smax			
	comp=E,240nm,1.3s						
SYVR	**Suvo**	**3.26**	**223**	*e*PN	**Pn**	**02 19 26.0**	**+1.7**
SYVR				*e*		02 19 32.1	
SYVR				*e*		02 20 15.1	
SYVR				pmax	pmax		
	comp=Z,57nm,0.8s						
SYVR				smax	smax		
	comp=N,243nm,1.0s						
VTMR	**Vitim**	**3.43**	**350**	*e*Pn	**Pn**	**02 19 26.9**	**+0.3**
VTMR				*e*Pg	**Pb**	**02 19 33.8**	**-0.5**
VTMR				*e*Sn	**Sn**	**02 20 06.9**	**+0.1**
VTMR				*e*Sg	**Sb**	**02 20 17.5**	**+1.9**
TUP	**Tupik**	**3.91**	**113**	*e*Pn	**Pn**	**02 19 34.2**	**+1.0**
TUP				*e*		02 19 40.4	
TUP				*e*Pg	**Pb**	**02 19 43.7**	**+1.2**
TUP				*e*		02 20 10.1	
TUP				*e*Sn	**Sn**	**02 20 19.7**	**+1.1**
TUP				*e*Sg	**Sg**	**02 20 35.0**	**-4.6**
TUP				Pmax			
	comp=N,30nm,0.7s						
TUP				Smax			
	comp=N,197nm,1.2s						
TUP	**Tupik**	**3.91**	**113**	*e*PN	**Pn**	**02 19 34.4**	**+1.2**
TUP				*e*		02 19 44.6	
TUP				*e*S	**Sn**	**02 20 19.7**	**+1.1**
TUP				*e*		02 20 35.8	
TUP				pmax	pmax		
	comp=Z,30nm,0.6s						
TUP				smax	smax		
	comp=N,200nm,0.5s						
MXMB	**Maximikha**	**4.06**	**228**	*e*Pn	**Pn**	**02 19 36.6**	**+1.4**
MXMB				*e*		02 19 40.1	
MXMB				*e*Pg	**Pb**	**02 19 45.9**	**+0.9**
MXMB				*e*Sn	**Sn**	**02 20 22.3**	**+0.1**
MXMB				*e*Sg	**Sg**	**02 20 39.1**	**-5.2**
MXMB				*e*		02 20 43.0	
CIT	**Chita**	**4.07**	**182**	Pn	**Pn**	**02 19 37.5**	**+2.1**
CIT				*e*Pg	**Pb**	**02 19 47.2**	**+2.0**
CIT				*e*Sg	**Sg**	**02 20 40.4**	**-4.3**
CIT				Pmax			
	comp=N,94nm,0.2s						
CIT				Smax			
	comp=N,200nm,0.5s						
CIT	**Chita**	**4.07**	**182**	*e*PN	**Pn**	**02 19 37.7**	**+2.3**
CIT				*e*		02 19 47.4	
CIT				*e*		02 20 39.2	
CIT				pmax	pmax		
	comp=Z,77nm,0.3s						
CIT				smax	smax		
	comp=E,194nm,0.5s						
OGRR	**Ongureny**	**4.32**	**238**	*e*Pn	**Pn**	**02 19 41.2**	**+2.4**
OGRR				*e*Pg	**Pb**	**02 19 51.1**	**+1.6**
OGRR				*e*		02 20 15.9	
OGRR				*e*Sg	**Sg**	**02 20 47.3**	**-5.4**
OGRR				Pmax			
	comp=E,15nm,0.9s						
OGRR				Smax			
	comp=E,54nm,0.8s						
OGRR	**Ongureny**	**4.32**	**238**	*e*PN	**Pn**	**02 19 41.5**	**+2.7**
OGRR				*e*		02 19 52.5	
OGRR				*e*		02 20 46.9	
OGRR				pmax	pmax		
	comp=Z,13nm,0.6s						
OGRR				smax	smax		
	comp=N,60nm,1.8s						
YKLR	**Yuktali**	**4.42**	**80**	*e*Pn	**Pn**	**02 19 41.4**	**+1.2**
YKLR				*e*		02 19 48.5	
YKLR				*e*Pg	**Pb**	**02 19 51.4**	**+0.2**
YKLR				*e*		02 20 16.3	
YKLR				*e*Sg	**Sg**	**02 20 48.9**	**-7.1**
TRG	**Tyrgan**	**5.46**	**236**	*e*Pn	**Pn**	**02 19 55.4**	**+0.9**
TRG				*e*Pg	**Pb**	**02 20 10.2**	**+1.3**
TRG				*e*Sn	**Sn**	**02 20 56.5**	**-0.3**
TRG				*e*Sg	**Sg**	**02 21 21.9**	**-7.3**
TRG				Pmax			
	comp=N,7.0nm,0.6s						
TRG				Smax			
	comp=N,58nm,1.1s						
KPC	**Khapcheranga**	**6.44**	**188**	*e*Pn	**Pn**	**02 20 09.1**	**+1.1**
KPC				*e*		02 20 16.8	
KPC				*e*Pg	Pb	02 20 30.4	+4.8
KPC				*e*Sn	**Sn**	**02 21 20.6**	**-0.4**
KPC				*e*Sg	**Sg**	**02 21 54.9**	**-5.8**
KPC				Pmax			
	comp=N,7.0nm,0.8s						
KPC				Smax			
	comp=N,102nm,1.2s						
KPC	**Khapcheranga**	**6.44**	**188**	*e*PN	**Pn**	**02 20 08.4**	**+0.4**
KPC				*e*		02 20 29.1	
KPC				*e*		02 21 54.2	
KPC				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KPC				smax	smax		
	comp=E,102nm,1.2s						
MOY	**Mondy**	**8.74**	**245**	*e*PN	**Pn**	**02 20 42.8**	**+3.2**
MOY				*e*		02 21 13.0	
SONM	**Songino Array**	**9.42**	**212**	Pn	**Pn**	**02 20 52.0**	**+3.0**
	comp=E,0.2nm,0.3s,baz=20,slow=15,SNR=4.5						
SONM				Pg		02 21 28.2	
	comp=E,0.2nm,0.3s,baz=20,slow=17,SNR=4.3						
SONM				Lg	Lg	02 23 29.0	
	comp=E,0.8nm,0.3s,baz=24,slow=28,SNR=8.0						
SONM	**Songino Array**	**9.42**	**212**	P	**Pn**	**02 20 52.0**	**+3.0**
MKAR	**Makanchi Array**	**21.54**	**258**	P	**P**	**02 23 24.4**	**+2.3**
	comp=E,0.4nm,0.6s,baz=56,slow=10,SNR=5.4						
YKA	**Yellowknife Ar**	**55.91**	**25**	P	**P**	**02 28 10.8**	**+0.6**
	comp=E,0.3nm,0.6s,baz=333,slow=8.0,SNR=3.6						
ESDC	**Sonseca Array**	**71.02**	**314**	P	**P**	**02 29 51.8**	**+1.3**
	comp=E,0.6nm,1.1s,baz=22,slow=7.1,SNR=4.4						

DJA 13 02:19:19.9±1.6, **3°S**±3°×**12°2E**±°, **h35^{km}**±30^{km}, **M3.5**/10, **MLv3.5**/10, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.82**	**14**	P	Pn	02 19 49.7	+0.9
LUWI				S	Sn	02 20 11.5	+0.9
APSI	**Ampana**	**2.02**	**340**	P	Pn	02 19 51.8	+0.4
TTSI	**Tana Toraja**	**2.52**	**265**	P	Pn	02 19 59.0	+0.7
BNSI	**Bone**	**2.72**	**235**	P	Pn	02 20 01.1	0.0
SPSI	**Sidrap Palu**	**2.80**	**246**	P	Pn	02 20 03.1	+0.9
MRSI	**Marisa**	**3.30**	**353**	P	Pn	02 20 06.6	-2.5
BKSI	**Bulukumba**	**3.32**	**221**	P	Pn	02 20 09.9	+0.5
GTOI	**Gorontalo**	**3.50**	**11**	P	Pn	02 20 11.2	-0.7
MPSI	**Mapaga**	**3.97**	**322**	P	Pn	02 20 18.0	-0.3
NLAI	**Namlea**	**4.78**	**95**	P	Pn	02 20 30.1	+0.6

KRSC 13 02:25:18.8±1.1, **51°.98N×158°.91E, h105^{km}**±11^{km}, **ML4.1, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.52**	**332**	*e*P	Pn	02 25 36.6	+1.4
RUS				*e*S	Sn	02 25 47.8	+0.3
KDTR	**Khodutka, Kamc**	**0.54**	**252**	*e*P	Pn	02 25 36.9	+1.6
KDTR				*e*S	Sn	02 25 48.8	+1.1
MTVR	**Mutnovka**	**0.68**	**319**	*e*P	Pn	02 25 38.2	+1.6
MTVR				*e*S	Sn	02 25 51.5	+1.5
ASAK	**Asacha**	**0.74**	**304**	*e*P	Pn	02 25 38.7	+1.6
ASAK				*e*S	Sn	02 25 52.9	+2.0
GRL	**Gorelyy**	**0.77**	**319**	*e*P	Pn	02 25 39.5	+2.1
GRL				*e*S	Sn	02 25 53.2	+1.7
KRMR	**Karymshinskiy**	**0.98**	**331**	*e*P	Pn	02 25 41.1	+1.8
KRMR				*e*S	Sn	02 25 56.5	+1.7
DALK	**Dalny**	**1.06**	**355**	*e*P	Pn	02 25 41.6	+1.4
DALK				*e*S	Sn	02 25 57.1	+0.8
PET	**Petropavlovsk**	**1.06**	**352**	*e*P	Pn	02 25 41.6	+1.4
PET				*e*S	Sn	02 25 56.5	+0.2
NLC	**Nalytchevo**	**1.23**	**12**	*e*P	Pn	02 25 43.3	+1.3
NLC				*e*S	Sn	02 25 59.4	-0.2
UGLR	**Uglovaya**	**1.24**	**358**	*e*P	Pn	02 25 44.2	+1.9
UGLR				*e*S	Sn	02 26 01.4	+1.4
SMAR	**Somma**	**1.29**	**357**	*e*P	Pn	02 25 44.6	+1.6
SMAR				*e*S	Sn	02 26 02.1	+0.8
AVH	**Avacha**	**1.29**	**355**	*e*P	Pn	02 25 45.0	+2.1
AVH				*e*S	Sn	02 26 02.6	+1.4
SPN	**Mys Shipunski**	**1.31**	**31**	*e*P	Pn	02 25 45.2	+2.2
SPN				*e*S	Sn	02 26 02.8	+1.4
KOK	**Koryaka**	**1.33**	**353**	*e*P	Pn	02 25 45.5	+2.2
KOK				*e*S	Sn	02 26 03.9	+2.0
KRER	**Koryakskii**	**1.33**	**356**	*e*P	Pn	02 25 45.4	+1.9
KRER				*e*S	Sn	02 26 04.0	+1.8
MIPR	**Malaya Ipel'ka**	**1.36**	**284**	*e*P	Pn	02 25 45.0	+1.4
MIPR				*e*S	Sn	02 26 03.2	+0.8
KRX	**Arik**	**1.39**	**354**	*e*P	Pn	02 25 46.0	+1.8
KRX				*e*S	Sn	02 26 04.4	+1.0
PAU	**Pauzhetka**	**1.40**	**249**	*e*P	Pn	02 25 45.9	+1.8
PAU				*e*S	Sn	02 26 05.2	+2.0
APC	**Apacha**	**1.43**	**312**	*e*P	Pn	02 25 46.0	+1.6
APC				*e*S	Sn	02 26 04.7	+0.8
GNL	**Ganaly**	**1.82**	**342**	*e*P	Pn	02 25 50.5	+1.2
GNL				*e*S	Sn	02 26 13.4	+0.8
KII	**Karymskiy**	**2.09**	**9**	*e*P	Pn	02 25 55.6	+2.9
KII				*e*S	Sn	02 26 21.5	+2.8
SKR	**Severo-Kuril's**	**2.18**	**235**	*e*S	Sn	02 26 20.9	+0.3
ALID	**Alaid**	**2.38**	**244**	*e*P	Pn	02 25 58.2	+1.7
KZV	**Kizimen**	**3.25**	**14**	*e*P	Pn	02 26 10.4	+2.3
KZV				*e*S	Sn	02 26 47.2	+1.1
TUMR	**Tumrok**	**3.39**	**12**	*e*P	Pn	02 26 12.8	+2.9
KMNR	**Kamenistaya**	**3.87**	**11**	*e*P	Pn	02 26 19.3	+3.0
ESO	**Esso**	**3.96**	**358**	*e*P	Pn	02 26 19.8	+2.4
SRDR	**Sredinnyy**	**4.38**	**6**	*e*P	Pn	02 26 25.8	+2.7
BDR	**Baidarnaya**	**4.79**	**15**	*e*P	Pn	02 26 31.8	+3.1
KBTR	**Krutoberegovo**	**4.82**	**27**	*e*P	Pn	02 26 31.1	+2.0
KBG	**Krutoberegovo**	**4.83**	**26**	*e*S	Sn	02 27 23.2	-0.7
SMKR	**Semkarok**	**4.85**	**17**	*e*P	Pn	02 26 32.1	+2.6
SRKR	**Sorokina**	**4.87**	**15**	*e*P	Pn	02 26 32.4	+2.6
BKI	**Bering**	**5.31**	**50**	*e*P	Pn	02 26 38.0	+2.5
BKI				*e*S	Sn	02 27 32.9	-2.4

JMA 13 02:26:57.2, 34°.95N×134°.59E, h14^{km}, M3.6, 3C-3D Broadband fault plane solution: P waves. NP1: ϕ_s232.00000°, δ70.00000°, λ-177.00000°. **NP2:** ϕ_s141.00000°, δ87.00000°, λ-20.00000°. **Principal axes:** T Plg12.0000°, Azm188.0000°; N Plg70.0000°, Azm313.0000°; P Plg16.0000°, Azm95.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKS	**Kasai**	**0.21**	**81**	⇓P	Pg	02 27 01.9	0.0
JKS				S	Sg	02 27 05.1	0.0
JAD	**Aida**	**0.35**	**269**	⇓P	Pg	02 27 04.2	-0.1
JAD				S	Sg	02 27 09.1	0.0
JAWN	**Awajishima-nag**	**0.53**	**151**	⇑P	Pg	02 27 07.5	-0.1
JAWN				S	Sg	02 27 14.8	+0.1
JKSM	**Kasumi**	**0.64**	**5**	⇑P	Pg	02 27 09.5	-0.2
JKSM				S	Sg	02 27 18.0	-0.2
JWT	**Wachi**	**0.74**	**63**	⇓P	Pg	02 27 11.1	-0.6
JKY	**Yasaka**	**0.80**	**32**	⇑P	Pg	02 27 12.3	-0.4
JKY				S	Sg	02 27 22.8	-0.4
JHE	**Heguri**	**0.95**	**108**	P	Pb	02 27 14.8	-0.6
JHE				S	Sb	02 27 27.4	-0.4
MAT	**Matsushiro**	**3.34**	**61**	P	Pn	02 27 51.3	+2.2
MAT				*e*S	Sn	02 28 30.1	+1.5

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*SOME **13** 02:33:17.7, 43°.33N×83°.43E, h0^{km}*

*NNC **13** 02:33:19.8±2.6, 43°.38N×83°.48E, h0^{km}, mb3.6, mpv3.2,* *Error ellipse: s-maj=21.2km s-min=10.3km az=136.0*

ISC 13 02:33:23.1±1.9,**43°.42N**±0°.08×**83°.36E**±0°.07,**h10km,n31, σ1s.83**/46,**9C-5D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	2.19	272	⇓eP	Pn	02 34 00.8	+1.1
	3.8nm,0.2s						
KTMS				eS	Sb	02 34 31.8	+1.6
	118nm,0.2s						
KTMS	Ketmen	2.19	272	Pg	Pn	02 34 00.9	+1.1
	13nm,0.2s						
KTMS				Lg	Lg	02 34 32.6	
	118nm,0.2s						
DJR	Jarkent	2.74	291	eP	Pb	02 34 10.2	-2.1
	4.1nm,0.3s						
DJR				eS	Sb	02 34 48.2	+2.2
	31nm,0.3s						
DJR	Jarkent	2.74	291	Pg	Pb	02 34 10.4	-1.8
	4.1nm,0.3s						
DJR				Lg	Lg	02 34 48.6	
	17nm,0.3s						
PDGK	Podgornoye	2.83	270	Pg	Pb	02 34 12.2	-1.5
	1.0nm,0.3s						
PDGK				Lg	Lg	02 34 51.8	
	18nm,0.4s						
PDGK	Podgornoye	2.83	270	⇑Pn	Pn	02 34 08.5	+0.1
	3.0nm,1.0s						
PDGK				⇑Pg	Pb	02 34 13.7	-0.1
	1.9nm,0.3s						
PDGK				⇓Lg	Lg	02 34 53.9	
	28nm,0.6s						
SHLS	Shalkode	2.86	266	eP	Pn	02 34 07.7	-1.2
	4.5nm,0.2s						
SHLS				eS	Sn	02 34 44.0	+0.5
	158nm,0.4s						
SHLS	Shalkode	2.86	266	Pg	Pn	02 34 07.9	-1.0
	4.5nm,0.2s						
SHLS				Lg	Lg	02 34 44.0	
	158nm,0.4s						
UZB	Uzynbulak	3.18	267	eP	Pb	02 34 18.6	-1.1
	0.6nm,0.3s						
UZB				eS	Sg	02 35 02.9	-2.4
	17nm,0.2s						
UZB	Uzynbulak	3.18	267	Pg	Pb	02 34 19.1	-0.7
UZB				Lg	Lg	02 35 03.2	
KPKS	Kokpek	3.41	272	eP	Pb	02 34 22.5	-1.1
	2.4nm,0.4s						
KPKS				eS	Sg	02 35 09.5	-3.0
	28nm,0.3s						
KAPS	Kapalarasan	3.43	304	eP	Pb	02 34 22.4	-1.5
	1.9nm,0.3s						
KAPS				eS	Sb	02 35 08.9	+3.3
	12nm,0.6s						
MK31	Makanchi Array	3.46	348	⇑Pn	Pn	02 34 17.9	+0.8
	0.4nm,0.5s,baz=153,slow=15,SNR=134						
MK31				⇓Pg	Pb	02 34 24.9	+0.4
	1.8nm,0.4s,baz=165,slow=16,SNR=36						
MK31				⇑Lg	Lg	02 35 10.7	
	6.5nm,0.5s,baz=155,slow=28						
MAKZ	Makanchi	3.53	344	⇑Pg	Pb	02 34 26.6	+0.9
	1.9nm,0.6s						
MAKZ				⇓Lg	Lg	02 35 12.1	
	15nm,1.2s						
SATY	Saty	3.64	266	eP	Pb	02 34 25.8	-1.8
	1.7nm,0.4s						
SATY				eS	Sb	02 35 15.2	+3.3
	16nm,0.3s						
SATY	Saty	3.64	266	Pg	Pb	02 34 26.0	-1.6
	1.6nm,0.1s						
SATY				Lg	Lg	02 35 15.2	
	16nm,0.3s						
MNBS	Baschi	3.66	282	eP	Pb	02 34 25.4	-2.4
	1.6nm,0.1s						
MNBS				eS	Sb	02 35 14.5	+2.2
	14nm,0.3s						
MNBS	Baschi	3.66	282	Pg	Pb	02 34 26.3	-1.5
	2.2nm,0.1s						
MNBS				Lg	Lg	02 35 16.2	
	22nm,0.4s						
KURS	Kuram	3.78	273	eP	Pb	02 34 30.5	+0.5
	6.3nm,0.8s						
KURS				eS	Sg	02 35 22.9	-1.6
	9.0nm,0.8s						
KURS	Kuram	3.78	273	Pg	Pb	02 34 30.6	+0.6
	6.3nm,0.8s						
KURS				Lg	Lg	02 35 22.9	
	9.1nm,1.0s						
ARXS	Arharly	4.08	283	eP	Pb	02 34 35.7	+0.6
	1.8nm,0.2s						
ARXS				eS	Sg	02 35 31.9	-2.4
	24nm,0.5s						
ARXS	Arharly	4.08	283	Pg	Pb	02 34 34.5	-0.7
	3.0nm,0.3s						
ARXS				Lg	Lg	02 35 30.0	
	24nm,0.6s						
ZSN	Zaisan	4.17	14	eP	Pb	02 34 36.0	-0.5
	10nm,0.3s						
ZSN				eS	Sg	02 35 32.5	-4.5
	23nm,0.4s						
ZSN	Zaisan	4.17	14	Pg	Pn	02 34 27.6	+0.8
	4.8nm,0.3s						
ZSN				Lg	Lg	02 35 18.4	
	22nm,0.4s						
KOTS	Kotyrbulak	4.56	270	eP	Pb	02 34 44.3	+0.9
	6.3nm,0.2s						
KOTS				eS	Sg	02 35 46.7	-2.9
	44nm,0.7s						
KOTS	Kotyrbulak	4.56	270	Pg	Pb	02 34 44.3	+0.9
	6.3nm,0.2s						
KOTS				Lg	Lg	02 35 46.7	
	41nm,0.7s						
CHKK	Chushkaly	4.65	278	eP	Pb	02 34 46.2	+1.5
	1.2nm,0.4s						
CHKK				eS	Sg	02 35 49.9	-2.4
	8.2nm,0.4s						
TNSS	Tian-Shan	4.70	268	eP	Pb	02 34 47.8	+2.0
	3.2nm,0.5s						
TNSS				eS	Sg	02 35 52.6	-1.5
	3.7nm,0.4s						
TKM2	Tokmak 2	5.70	268	⇑Lg	Lg	02 36 25.2	
	4.7nm,0.6s						
KURBB	Kurchatov Arra	7.93	337	⇓Sn	Sn	02 36 49.7	+1.8
	2.9nm,0.7s						
KURBB				⇑Lg	Lg	02 37 34.7	
	9.1nm,1.1s						
KURK	Kurchatov	7.98	338	⇑Sn	Sn	02 36 48.7	-0.7
	0.9nm,0.6s						
KURK				⇑Lg	Lg	02 37 34.9	
	2.5nm,0.6s						

ISK ***13*** *02:40:39.8,35°.81N×29°.68E,h8km,ML2.7/7*

DDA ***13*** *02:40:45.0,36°.37N×29°.72E,h7km±2km,ML2.3*

ISC 13 02:40:42.5±1.6,**36°.01N**±0°.08×**29°.59E**±0°.04,**h26**km±8km, **n14,σ1s.99**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAS	Kas	0.23	3	PG	Pb	02 40 48.6	-0.1
AKAS				SG	Sb	02 40 55.0	+2.0
AKAS	Kas	0.23	3	i P	Pb	02 40 49.0	+0.2
AKAS				i S	Sb	02 40 52.1	-0.9
AKUM	Antalya-Kumluc	0.69	62	i P	Pb	02 40 55.1	-0.8
AKUM				i S	Sb	02 41 02.3	-2.7
FETY	Fethiye	0.75	327	PG	Pn	02 40 58.4	+1.0
FETY	Fethiye	0.75	327	i P	Pb	02 40 55.9	-1.0
FETY				i S	Sb	02 41 05.3	-1.5
ELL	Elmali	0.79	19	PG	Pn	02 40 58.4	+0.4
ELL				SG	Sn	02 41 12.1	+3.1
DALY	Dalyan (Mula)	1.11	317	PN	Pb	02 41 04.9	+1.9
DALY	Dalyan (Mula)	1.11	317	i P	Pn	02 41 01.9	-0.3
DALY				i S	Sb	02 41 11.8	-5.1
DALY				IAML		02 41 29.0	
	comp=N,85nm,2.5s						
KORT	Korkueli	1.17	31	PN	Pb	02 41 04.9	+0.8
GOLH	Golhisar	1.23	359	i P	Pb	02 41 05.8	+0.7
GOLH				i S	Sb	02 41 21.2	+0.5
GOLH				IAML		02 41 23.0	
	comp=E,80nm,3.8s						
GOLH				IAML		02 41 38.0	
	comp=N,144nm,4.1s						
YER	Yerkesik	1.54	317	PN	Pb	02 41 10.9	+0.5
TAVA	DENIZLI_Tavas	1.56	340	i P	Pb	02 41 11.1	+0.4
TAVA				i S	Sn	02 41 26.5	-1.5
TAVA				IAML		02 41 51.0	
	comp=E,51nm,3.1s						
MULA	Mugla, Merkez-	1.61	321	i P	Pb	02 41 14.4	+2.8
MULA				i S	Sn	02 41 27.2	-2.1
MULA				IAML		02 41 36.0	
	comp=E,55nm,1.5s						
MULA				IAML		02 41 37.0	
	comp=N,64nm,2.4s						
KARP	Karpathos	2.03	258	PN	Pn	02 41 16.2	+1.2

TEH 13 03:20:24.0,32°.33N×56°.40E,h10km,ML3.6,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPRV	Parvadeh(Tabas	0.74	19	ePg	Pb	03 20 39.3	+0.2
IBAF	Bafgh	1.02	224	ePg	Pb	03 20 44.0	+0.2
TKDS	Koohdasht(Taba	1.42	25	ePg	Pg	03 20 52.1	+0.8
TKDS				e		03 20 55.2	
	comp=Z,99nm,0.3s						
TABS	Tabas	1.45	25	ePn	Pg	03 20 52.8	+0.9
YZKH	Yazd	1.53	273	ePg	Pg	03 20 54.0	+0.6
TNSJ	Nastanj	1.64	6	ePg	Pg	03 20 55.3	-0.2
TNSJ				e		03 21 21.2	
	comp=Z,99nm,0.3s						
ICHK	Chekchek	1.69	268	ePg	Pg	03 20 56.6	+0.2
ICHK				e		03 21 21.6	
	comp=Z,99nm,0.2s						
IMEH	Mehriz	1.78	239	ePn	Pg	03 20 57.7	-0.5
IMEH				e		03 21 25.5	
	comp=Z,99nm,0.2s						
KHGB	Koh Gabri	1.95	178	ePn	Pb	03 21 00.0	+0.3
KHGB				e		03 21 31.3	
	comp=Z,99nm,0.3s						
ITEG	Tejag	2.06	73	ePn	Pb	03 21 01.3	-0.4
IKOO	Kooshah	2.21	87	ePn	Pb	03 21 03.0	-1.2
IKOO				e		03 21 39.9	
	comp=Z,99nm,0.3s						
ISAD	Sadrabad	2.34	261	e		03 21 42.3	
	comp=Z,99nm,0.6s						
ISAD				ePn	Pb	03 21 05.1	-1.3
BSRN	Basiran	2.34	98	ePn	Pb	03 21 04.7	-1.7
TVBK	TV Kerman	2.35	172	e		03 21 41.7	
	comp=Z,99nm,0.3s						
TVBK				ePn	Pb	03 21 05.4	-1.3
KRBR	Kerman	2.36	172	ePn	Pb	03 21 05.8	-1.0
ANAR	Anarak	2.41	292	ePn	Pb	03 21 06.1	-1.4
AFRZ	Afriz	2.46	63	e		03 21 50.1	
	comp=Z,99nm,0.8s						
AFRZ				ePn	Pb	03 21 06.5	-1.9
CHMN	Cheshme madani	2.65	158	ePn	Pn	03 21 09.1	+2.0
NGRK	Negar Kerman	2.69	174	e		03 21 50.9	
	comp=Z,99nm,0.3s						
NGRK				ePn	Pn	03 21 09.4	+1.7
IDAH	Dahanechah	2.96	81	ePn	Pb	03 21 14.5	-2.5
NHDN	Nehbandan	3.25	106	ePn	Pn	03 21 17.5	+2.4
IRAM	Ramesheh	3.45	262	ePn	Pn	03 21 21.1	+3.1
IZEF	Zefreh	3.48	280	ePn	Pn	03 21 21.2	+2.7
SHRT	Shahrakht	3.53	67	ePn	Pn	03 21 21.7	+2.7
IANJ	Anjilo	3.75	327	ePn	Pn	03 21 24.2	+2.0
KRSH	Karshahi	3.93	296	ePn	Pn	03 21 27.4	+2.8
SBZV	Sabzevar	4.17	14	ePn	Pn	03 21 31.3	+3.3
IKLH	Kolahrood	4.18	285	ePn	Pn	03 21 31.3	+3.2
ISHM	Shahmirzad	4.32	324	ePn	Pn	03 21 32.4	+2.3
IFIR	Firoozkooh	4.48	319	ePn	Pn	03 21 34.6	+2.3
IPAY	Payeh	4.64	27	ePn	Pn	03 21 37.6	+3.2
IGLO	Ghaloghah	4.67	334	ePn	Pn	03 21 39.0	+4.1
IAKL	Akhelmad	4.69	24	ePn	Pn	03 21 39.1	+4.0
IVRN	Varamin	4.72	306	ePn	Pn	03 21 38.1	+2.8
IDMV	Damavand	4.87	313	ePn	Pn	03 21 40.5	+2.9
IKRD	Kardeh	5.13	29	ePn	Pb	03 21 44.4	-3.5
IRAZ	Razeghan	6.19	301	ePn	Pn	03 21 58.8	+3.1
QALM	Alamut, Qazvin	6.27	312	ePn	Pn	03 22 00.5	+3.6
QABG	Abgarm-Qazvin	6.59	303	ePn	Pn	03 22 02.7	+1.5

IDC ***13*** *04:16:14.3±4.3,40°.32N×31°.40W,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.3/42,mbtmp3.7/4,Error ellipse: s-maj=99.8km s-min=47.1km az=63.0*

ISC 13 04:16:24.0±1.8,**40°.39N**±0°.08×**29°.2W**±0°.2,**h10km,n16, σ1s.16**/15,**Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	1.79	168	eP	Pg	04 16 58.2	-0.2
PCED	Cedros	1.79	168	eS	Sb	04 17 19.4	-0.1
ROSA	Rosais	1.82	156	eS	Sb	04 17 20.1	0.0
ROSA				A	A	04 17 21.6	
	36nm,0.3s						
CALA	Caldeira	1.84	168	eS	Sb	04 17 20.6	-0.3
PFCBR	Castelo Branco	1.90	169	eS	Sb	04 17 21.9	-0.5
HOR	Horta	1.91	167	eS	Sb	04 17 22.1	-0.6
PMAN	Manadas	1.94	154	eS	Sn	04 17 22.5	+1.0
PMAN				A	A	04 17 24.8	
	31nm,0.4s						
PICO	Pico	1.97	163	eS	Sb	04 17 24.4	-0.3
PCAN	Candelaria	2.00	164	eS	Sb	04 17 24.9	-0.4
PAGU	Agualva, Azore	2.24	136	eS	Sn	04 17 28.9	+0.2
PAGU	Agualva, Azore	2.24	136	eP	Pb	04 17 02.9	-1.6
ADH	Angra Heroismo	2.29	138	eS	Sn	04 17 30.6	+0.5
ESDC	Sonseca Array	19.31	84	P	Pn	04 20 59.3	+9.1
	0.7nm,0.9s,baz=295,slow=9.1,SNR=4.6						
TORD	Torodi Ar. Bea	38.33	126	P	P	04 23 48.0	+3.0
	0.8nm,1.0s,baz=309,slow=7.3,SNR=2.1						
KURBB	Kurchatov Arra	69.54	40	P	P	04 27 31.8	-0.9
	0.9nm,0.2s,baz=316,slow=6.5,SNR=1.7						
MKAR	Makanchi Array	73.93	42	P	P	04 27 58.0	-1.2
	0.4nm,0.8s,baz=320,slow=5.8,SNR=4.3						

ANF ***13*** *04:26:16.5±1.0,41°.88N×119°.59W,h8km±11km,ML2.9/12, Error ellipse: s-maj=5.7km s-min=2.6km az=82.0*

REN ***13*** *04:26:17.1±0.7,41°.89N±0°.04×119°.63W±0°.03,h10km±5km, ML2.9/5,ML3.1/19(SEA),ML2.6/54(NEIC),Error ellipse: s-maj=5.3km s-min=2.7km az=167.0*

SEA ***13*** *04:26:17.7±1.8,41°.83N±0°.01×119°.62W±0°.03,h0km±6km, Error ellipse: s-maj=3.0km s-min=1.5km az=58.0*

NEIC ***13*** *04:26:17.0±0.8,41°.88N±0°.02×119°.60W±0°.03,h10km±5km, Error ellipse: s-maj=3.0km s-min=2.5km az=52.0*

ISC 13 04:26:16.9±1.3,**41°.89N**±0°.03×**119°.61W**±0°.03,**h4**km±11km, **n51,σ0s.87**/64,**Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.52	271		Pg	04 26 27.2	+0.3
MOD					Sg	04 26 34.6	+1.0
MOD	Modoc Plateau	0.52	271	IAML		04 26 34.8	
	comp=E,2µm,0.6s						
MOD				IAML		04 26 36.1	
	comp=N,783nm,0.5s						
LKVW	Lakeview	0.65	301		Pg	04 26 29.5	+0.1
LKVW					Sg	04 26 38.7	+0.9
WVOR	Wild Horse Val	0.90	53		Pg	04 26 34.5	+0.3
WVOR	Wild Horse Val	0.90	53		Sb	04 26 47.4	-0.2
K05A	Summer Lake	1.27	312		Pn	04 26 41.1	-0.4
K05A					Sn	04 26 58.7	-0.3
LASM	Arnica Sink	1.50	259		Pn	04 26 43.9	-0.8
LASM					Sg	04 27 05.0	-0.1
LTIM	Timbered Crate	1.58	244		Pn	04 26 45.2	-0.5
M04C	Macdoel	1.67	267	P	Pn	04 26 46.2	-0.7
	baz=86,SNR=63						
M04C				S	Sn	04 27 08.7	-0.2
	baz=86						
M04C	Macdoel	1.67	267		Pn	04 26 46.3	-0.7
LBCM	Butte Creek Ri	1.68	232		Pn	04 26 46.5	-0.6
K04D	Chiloquin, OR	1.75	295	P	Pn	04 26 47.3	-0.8
	baz=114,SNR=15						
K04D				Sb	Sg	04 27 13.2	+0.1
	baz=114						
K04D	Chiloquin, OR	1.75	295		Sg	04 27 13.9	+0.8
J05D	Fort Rock, OR	1.84	320	Pb	Pb	04 26 50.7	-0.4
	baz=139,SNR=112						
J05D				Sb	Sg	04 27 15.7	-0.2
	baz=139						
J05D	Fort Rock, OR	1.84	320		Pb	04 26 50.7	-0.4
L04D	Klamath Falls	2.03	280	P	Pn	04 26 50.9	-1.1
	baz=98,SNR=51						
L04D				Sb	Sb	04 27 21.0	+0.9
	baz=98						
L04D	Klamath Falls	2.03	280		Pn	04 26 51.1	-0.9
BEKR	Beckworth	2.10	196	Pn	Pn	04 26 52.7	-0.2
BEKR				IAML		04 27 24.6	
	comp=N,38nm,0.3s						
BEKR				IAML		04 27 26.2	
	comp=E,43nm,0.6s						
SVIC	Surveyors Ice	2.13	326		Pb	04 26 56.1	0.0
PINE	Pine Mountain	2.14	333	Pn	Pn	04 26 53.3	-0.1
PINE				IAML		04 27 26.5	
	comp=E,48nm,0.7s						
PINE				IAML		04 27 34.2	
	comp=N,42nm,0.8s						
PAHR	Pah Rah Range	2.19	175	Pn	Pn	04 26 54.5	+0.4
I07A	Izee	2.19	2	Pn	Pn	04 26 53.7	-0.5
J04D	Umpqua Nationa	2.29	307	Pb	Pb	04 26 58.4	-0.3
	baz=126,SNR=17						
J04D				Sb	Sg	04 27 29.0	-1.3
	baz=126						
O03E	Paynes Creek	2.30	227	P	Pn	04 26 55.2	-0.4
	baz=45,SNR=25						
O03E				Sb	Sb	04 27 28.6	+0.9
	baz=45						
YBH	Yreka Blue Hor	2.32	267	Pn	Pn	04 26 54.8	-1.1
M02C	Callahan	2.48	259	P	Pn	04 26 56.8	-1.3
	baz=77						
N02D	Trinity Center	2.50	250	P	Pn	04 26 57.5	-0.9
	baz=67,SNR=9.1						
N02D				Sb	Sg	04 27 35.5	-1.7
	baz=67						
WDC	Whiskeytown Da	2.57	240	Pn	Pn	04 26 58.4	-0.8
WDC				IAML		04 27 36.8	
	comp=N,19nm,0.6s						
HUMO	Hull Mountain	2.59	287	Pn	Pn	04 26 58.5	-0.9
HUMO				IAML		04 27 38.4	
	comp=N,35nm,0.5s						
HUMO				IAML		04 27 42.0	
	comp=E,24nm,0.5s						
VCNR	Virginia City	2.59	181	Pn	Pn	04 26 59.0	-0.8
VCNR				IAML		04 27 41.2	
	comp=E,36nm,0.9s						
ORV	Oroville	2.74	212	Pn	Pn	04 27 01.3	-0.3
I05D	Terrebonne, OR	2.75	333	Pb	Pb	04 27 06.4	-0.2
	baz=152,SNR=9.1						
I05D				Sb	Sb	04 27 42.3	+1.5
	baz=152						
PNTR	Pine Nut	2.80	180	Pn	Pn	04 27 02.0	-0.6
PNTR				IAML		04 27 52.4	
	comp=E,28nm,1.6s						
PNTR				IAML		04 28 02.4	
	comp=N,25nm,1.2s						
I04A	Tendick Farm,	2.80	314	Sb	Sg	04 27 44.8	-2.1
	baz=132						
O02D	Mt. Diablo Mer	2.95	236	Pb	Pb	04 27 09.2	-0.8
	baz=53,SNR=6.9						
O02D				Sb	Sb	04 27 48.0	+1.5
	baz=53						
L02E	Cave Junction	2.99	276	P	Pn	04 27 05.0	0.0
	baz=94,SNR=14						
K02D	Willamette Mer	3.11	286	P	Pn	04 27 06.7	-0.1
	baz=104,SNR=53						
K02D				Sb	Sb	04 27 53.1	+1.9
	baz=104						
MFID	Camas Ranch	3.18	60	Pn	Pn	04 27 07.3	-0.3
KHMM	Horse Mountain	3.26	253	Pn	Pn	04 27 08.3	-0.6
KHMM				IAML		04 28 06.8	
	comp=N,14nm,1.4s						
KHMM				IAML		04 28 15.5	
	comp=E,17nm,1.0s						
I03D	Drain, OR	3.29	305	Sb	Sb	04 27 58.7	+2.6
	baz=122						
RYN	Ryan	3.36	165	Pn	Pn	04 27 10.1	-0.2
RYN				IAML		04 28 06.3	
	comp=E,13nm,0.6s						
RYN				IAML		04 28 08.4	
	comp=N,12nm,0.9s						
H04A	Detroit Lake	3.37	327	Pn	Pn	04 27 09.4	-0.7
H04A				IAML		04 28 09.3	
	comp=N,9.2nm,4.8s						
H04A				IAML		04 29 15.6	
	comp=E,9.2nm,3.9s						
WAKR	Walker	3.39	178	Pn	Pn	04 27 11.0	+0.4
WAKR				IAML		04 28 47.3	
	comp=E,11nm,4.8s						
BMO	Blue Mountains	3.40	29	Pn	Pn	04 27 10.2	-0.6
BMO				IAML		04 28 15.3	
	comp=E,9.9nm,4.0s						
G08A	Pilot Rock	3.43	8	Pn	Pn	04 27 10.6	-0.6
ELK	Elko	3.49	108	Pn	Pn	04 27 12.8	+0.7
ELK				IAML		04 28 10.1	
	comp=E,14nm,0.3s						
ELK				IAML		04 28 10.9	
	comp=E,8.6nm,0.5s						
NV11	Mina Array Sit	3.63	162	Pn	Pn	04 27 13.3	-0.6
NV11				IAML		04 28 17.2	
	comp=N,10nm,4.5s						
NV11				IAML		04 28 18.0	
	comp=E,9.7nm,4.2s						
LHV	Little Huntoon	3.73	167	Pn	Pn	04 27 15.0	-0.2
HLID	Hailey	4.18	65	Pn	Pn	04 27 21.2	-0.3
HLID				IAML		04 28 36.8	
	comp=E,9.4nm,0.7s						
HLID				IAML		04 28 41.6	
	comp=E,8.1nm,3.6s						
DUG	Dugway, Tooele	5.41	106	Pn	Pn	04 27 37.9	-0.5
PSUT	Pine Spring	5.54	125	Pn	Pn	04 27 39.6	-0.6

IDC ***13*** *04:29:40.3±0.7,41°.54N×119°.72W,h0km,mb3.2/2, mb1 3.5/5,mb1mx3.3/41,mbtmp3.2/5,ML2.7/3,MS3.2/5, Ms1 3.2/5,ms1mx2.9/23,Error ellipse: s-maj=15.3km s-min=5.5km az=11.0*

ANF ***13*** *04:29:41.8±0.7,41°.85N×119°.63W,h2km±6km,ML3.9/19, Error ellipse: s-maj=3.8km s-min=2.3km az=108.0*

REN ***13*** *04:29:42.8±1.3,41°.88N±0°.03×119°.62W±0°.03,h9km±3km, ML3.8/6,ML3.8/52(SEA),ML3.5/87(NEIC), Mwr4.0/71(NEIC),Error ellipse: s-maj=4.8km s-min=2.7km az=162.0*

NEIC ***13*** *04:29:42.8,41°.88N×119°.62W,h13km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.05; $M_{\theta\theta}$-0.64; $M_{\phi\phi}$0.60; $M_{r\theta}$-0.49; $M_{\theta\phi}$-0.18; $M_{\phi r}$-0.83; Fault plane solution: $M_0$1.16000×10^{15} NP1:ϕ_s123.71000°, δ33.97000°,λ177.68000°. NP2:ϕ_s215.63000°,δ88.70000°, λ56.05000°. Principal axes: T 1.2023, Plg37.0000°, Azm96.0000°; N -0.0926, Plg34.0000°, Azm216.0000°; P -1.1097, Plg35.0000°, Azm334.0000°;*

NEIC ***13*** *04:29:43.1±1.6,41°.85N±0°.04×119°.56W±0°.03,h10km±5km Error ellipse: s-maj=5.5km s-min=3.5km az=170.0*

SEA ***13*** *04:29:44.3±1.8,41°.85N±0°.04×119°.64W±0°.03,h0km±6km, Error ellipse: s-maj=5.4km s-min=3.0km az=186.0*

ISC 13 04:29:42.3±1.4,**41°.88N**±0°.03×**119°.60W**±0°.03,**h4**km±12km, **n113,σ1s.05**/119,**Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.53	272		Pg	04 29 52.7	+0.3
MOD	Modoc Plateau	0.53	272		Sg	04 30 00.7	+1.4
MOD	Modoc Plateau	0.53	272	IAML		04 30 01.0	
	comp=E,7µm,0.4s						
MOD				IAML		04 30 05.2	
	comp=N,3µm,0.7s						
LKVW	Lakeview	0.66	301		Pb	04 29 55.6	-0.9
LKVW					Sg	04 30 04.8	+1.2
WVOR	Wild Horse Val	0.90	52		Pb	04 30 00.2	-0.4
WVOR					Sn	04 30 13.5	-2.0
WVOR	Wild Horse Val	0.90	52	IAML		04 30 16.8	
	comp=N,2µm,0.8s						
K05A	Summer Lake	1.28	312		Pn	04 30 06.1	-1.1
K05A					Sg	04 30 24.9	+1.5
LASM	Arnica Sink	1.51	260		Pn	04 30 09.9	-0.4
LASM					Sg	04 30 31.1	+0.3
LTIM	Timbered Crate	1.59	244		Pn	04 30 10.8	-0.5
LTIM					Sg	04 30 33.9	+0.6
HOG	Hogback Mounta	1.61	284		Pb	04 30 12.0	-0.8
M04C	Macdoel	1.68	267	P	Pn	04 30 11.7	-0.9
	baz=86,SNR=9.5						
M04C				Sb	Sb	04 30 35.5	+0.1
	baz=86						
M04C	Macdoel	1.68	267		Pn	04 30 11.8	-0.8
LBCM	Butte Creek Ri	1.68	232		Pn	04 30 13.1	+0.5
K04D	Chiloquin, OR	1.77	296	P	Pn	04 30 13.3	-0.5
	baz=115,SNR=122						
K04D	Chiloquin, OR	1.77	296		Pb	04 30 15.0	-0.4
J05D	Fort Rock, OR	1.85	320	Pb	Pb	04 30 16.6	-0.3
	baz=139						
J05D				Sb	Sg	04 30 41.9	0.0
	baz=139						
J05D	Fort Rock, OR	1.85	320		Pb	04 30 16.5	-0.3

LHEM	Herd Peak	1.98	264		Pb	04 30 18.9	-0.1
M03C	McCloud	1.99	253		Pb	04 30 19.2	+0.1
L04D	Klamath Falls	2.04	280	P	Pn	04 30 16.6	-1.1
	baz=99,SNR=150						
L04D				Sb	Sg	04 30 46.8	-1.2
	baz=99						
TMBU	Tom Butte, New	2.06	327		Pb	04 30 20.1	-0.3
BEKR	Beckworth	2.10	196		Pn	04 30 16.1	-2.3
BEKR				IAML		04 30 52.5	
	comp=E,330nm,0.6s						
BEKR				IAML		04 30 52.5	
	comp=N,178nm,0.6s						
B040	Montague	2.11	270		Lg	04 30 49.8	
SVIC	Surveyors Ice	2.14	326		Pb	04 30 21.7	0.0
SVIC					LR	04 30 51.7	
NCOR	Newberry Crate	2.15	329		Pb	04 30 22.5	+0.6
PINE	Pine Mountain	2.15	333		Pn	04 30 17.0	-2.1
PINE				IAML		04 30 59.1	
	comp=N,399nm,0.9s						
PAHR	Pah Rah Range	2.18	176		Pn	04 30 18.9	-0.5
I07A	Izee	2.20	2	Pn	Pn	04 30 18.2	-1.6
I07A				IAML		04 30 53.5	
	comp=N,257nm,0.6s						
I07A				IAML		04 31 03.1	
	comp=E,353nm,1.6s						
J04D	Umpqua Nationa	2.30	307	P	Pn	04 30 20.5	-0.7
	baz=126,SNR=11						
O03E	Paynes Creek	2.30	227	Pb	Pb	04 30 23.4	-1.0
	baz=45						
O03E				Sb	Sb	04 30 54.4	+1.1
	baz=45						
YBH	Yreka Blue Hor	2.33	267	Pn	Pn	04 30 18.5	-3.1
	comp=E,1.2nm,0.3s,baz=83,slow=12,SNR=18						
YBH				Pg	Pb	04 30 21.1	-3.8
	comp=E,6.5nm,0.3s,baz=76,slow=9.4,SNR=36						
YBH				LR	LR	04 30 51.1	
	comp=E,86nm,19.0s,baz=84,slow=31						
YBH				Lg	Lg	04 30 53.6	
	comp=E,8.5nm,0.3s,baz=40,slow=8.1,SNR=2.9						
YBH	Yreka Blue Hor	2.33	267		Pn	04 30 20.1	-1.5
YBH				IAML		04 31 05.7	
	comp=N,157nm,2.1s						
M02C	Callahan	2.49	260	P	Pn	04 30 22.5	-1.2
	baz=78,SNR=20						
M02C				Sb	Sb	04 30 60.0	+1.3
	baz=78						
N02D	Trinity Center	2.51	250	P	Pn	04 30 22.8	-1.1
	baz=68,SNR=46						
N02D				Sb	Sb	04 31 01.2	+2.0
	baz=68						
WDC	Whiskeytown Da	2.57	241		Pn	04 30 22.6	-2.2
VCNR	Virginia City	2.58	181	Pn	Pn	04 30 24.6	-0.5
VCNR				IAML		04 31 10.0	
	comp=N,303nm,0.9s						
HUMO	Hull Mountain	2.60	287		Pn	04 30 24.2	-0.9
HUMO				IAML		04 31 04.4	
	comp=E,160nm,0.5s						
HUMO				IAML		04 31 04.9	
	comp=N,229nm,0.5s						
ORV	Oroville	2.74	213	Pn	Pn	04 30 26.6	-0.4
I05D	Terrebonne, OR	2.77	333	P	Pn	04 30 27.7	+0.2
	baz=152						
PNTR	Pine Nut	2.79	180	Pn	Pn	04 30 27.3	-0.7
PNTR				IAML		04 31 21.3	
	comp=N,221nm,1.0s						
I04A	Tendick Farm,	2.82	314	Pb	Pb	04 30 33.1	-0.1
	baz=132,SNR=41						
I04A				Sb	Sg	04 31 10.7	-2.1
	baz=132						
O02D	Mt. Diablo Mer	2.96	236	P	Pn	04 30 29.4	-0.7
	baz=54,SNR=14						
O02D				Sb	Sb	04 31 14.2	+2.1
	baz=54						
L02E	Cave Junction	3.00	277	P	Pn	04 30 30.3	-0.3
	baz=94,SNR=26						
L02E				Sb	Sb	04 31 14.1	+0.9
	baz=94						
AFDM	Forest Hills D	3.11	200	Pn	Pn	04 30 31.6	-0.6
K02D	Willamette Mer	3.13	286	P	Pn	04 30 32.8	+0.3
	baz=104						
MFID	Camas Ranch	3.17	60	Pn	Pn	04 30 32.6	-0.5
KRMB	Red Mountain	3.25	265	Pn	Pn	04 30 33.8	-0.4
KRMB				IAML		04 31 45.2	
	comp=N,97nm,1.6s						
KHMM	Horse Mountain	3.27	253	Pn	Pn	04 30 33.9	-0.6
KHMM				IAML		04 31 41.5	
	comp=N,144nm,1.5s						
KHMM				IAML		04 31 41.8	
	comp=E,152nm,1.8s						
I03D	Drain, OR	3.31	305	Pb	Pb	04 30 41.0	-0.5
	baz=122						
I03D				Sb	Sg	04 31 24.6	-3.8
	baz=122						
RYN	Ryan	3.35	165		Pn	04 30 35.8	+0.1
RYN				IAML		04 31 35.3	
	comp=E,101nm,0.7s						
RYN				IAML		04 31 36.9	
	comp=N,112nm,0.7s						
WAKR	Walker	3.38	178	Pn	Pn	04 30 35.9	0.0
WAKR				IAML		04 31 44.1	
	comp=N,60nm,1.2s						
H04A	Detroit Lake	3.38	327	Pn	Pn	04 30 36.6	+0.7
H04A				IAML		04 31 38.5	
	comp=E,55nm,1.2s						
BMO	Blue Mountains	3.41	29	Pn	Pn	04 30 36.1	-0.2
BMO				IAML		04 31 39.5	
	comp=E,64nm,1.0s						
BMO				IAML		04 31 42.2	
	comp=E,138nm,2.2s						
G08A	Pilot Rock	3.44	8	Pn	Pn	04 30 37.8	+1.0
J01E	Myrtle Point	3.45	293	Pg	Pg	04 30 48.6	+0.2
	baz=110						
KBO	Bosley Butte	3.46	277	Pn	Pn	04 30 37.1	0.0
ELK	Elko	3.47	108	Pn	Pn	04 30 37.5	+0.2
	comp=E,0.4nm,0.3s,baz=299,slow=15,SNR=8.8						
ELK				Pg	Pb	04 30 42.7	-1.8
	comp=E,7.9nm,0.3s,baz=302,slow=16,SNR=38						
ELK				Lg	Lg	04 31 28.9	
	comp=E,13nm,0.3s,baz=114,slow=14,SNR=6.9						
ELK	Elko	3.47	108	Pn	Pn	04 30 37.4	+0.1
ELK				IAML		04 31 36.9	
	comp=E,56nm,0.5s						
H04D	Lebanon	3.50	320	Pb	Pb	04 30 45.0	+0.2
	baz=138,SNR=29						
JCC	Jacoby Creek,	3.50	254	Pn	Pn	04 30 39.5	+2.0
JCC				IAML		04 31 40.0	
	comp=E,125nm,1.6s						
JCC				IAML		04 31 46.6	
	comp=N,95nm,1.8s						
KMRM	Mail Ridge	3.52	243	Pn	Pn	04 30 37.4	-0.5
KMRM				IAML		04 31 43.2	
	comp=N,97nm,1.7s						
G05D	Wamic, OR	3.58	340	Pb	Pb	04 30 46.2	0.0
	baz=159						
NVAR	Mina Array Bea	3.59	164	Pg	Pn	04 30 40.0	+1.2
	comp=N,0.5nm,0.3s,baz=342,slow=12,SNR=5.7						
NVAR				Lg	Lg	04 31 30.3	
	comp=N,2.8nm,0.3s,baz=332,slow=14,SNR=3.9						
NVAR				LR	LR	04 31 37.5	
	comp=N,74nm,18.3s,baz=319,slow=35						
NVAR	Mina Array Bea	3.59	164	Pn	Pn	04 30 40.1	+1.2
NV11	Mina Array Sit	3.62	162	Pn	Pn	04 30 40.4	+1.2
NV11				IAML		04 31 41.2	
	comp=N,53nm,0.6s						
NV11				IAML		04 31 47.2	
	comp=E,62nm,1.8s						
KEBM	Edson Butte	3.65	287	Pn	Pn	04 30 39.8	+0.2
LHV	Little Huntoon	3.72	167	Pn	Pn	04 30 41.6	+1.1
COR	Corvallis	3.83	316	Pn	Pn	04 30 43.2	+1.3
COR				IAML		04 31 55.9	
	comp=E,104nm,2.2s						
COR				IAML		04 32 08.9	
	comp=E,74nm,1.4s						
I02D	Swisshome	3.83	307	Pg	Pg	04 30 55.7	0.0
	baz=124						
CMB	Columbia Colle	3.89	189	Pn	Pn	04 30 42.7	-0.2
CMB				IAML		04 33 11.1	
	comp=E,43nm,0.7s						
CMB				IAML		04 33 13.4	
	comp=N,39nm,0.6s						
HLID	Hailey	4.17	65	P	Pn	04 30 47.3	+0.4
	baz=248						
HLID	Hailey	4.17	65		Pn	04 30 46.6	-0.3
HLID				IAML		04 32 07.7	
	comp=N,70nm,1.2s						
TPH	Tonopah	4.22	154		Pn	04 30 47.2	-0.4
TPH	Tonopah	4.22	154	IAML		04 32 01.2	
	comp=E,62nm,0.7s						
MDPB	Devils Postpil	4.26	174	Pn	Pn	04 30 47.4	-0.8
OMMB	Old Mammoth Mi	4.29	174	Pn	Pn	04 30 48.1	-0.5
F10A	Beach Ranch, E	4.43	22	Pn	Pn	04 30 49.8	-0.6
F10A				IAML		04 32 18.9	
	comp=E,53nm,2.2s						
F10A				IAML		04 32 28.0	
	comp=N,41nm,1.0s						
E07A	Sunnyside	4.68	358	Pn	Pn	04 30 53.7	0.0
E07A				IAML		04 32 29.3	
	comp=E,40nm,2.5s						
E07A				IAML		04 32 32.8	
	comp=N,32nm,0.9s						
R11A	Troy Canyon, C	4.68	138	Pn	Pn	04 30 53.6	-0.2
R11A				IAML		04 32 15.8	
	comp=E,43nm,1.1s						
R11A				IAML		04 32 15.8	
	comp=N,37nm,0.7s						
E09A	Wood Farm, Sta	4.75	12	Pn	Pn	04 30 54.5	-0.1
E09A				IAML		04 32 29.8	
	comp=E,29nm,1.9s						
LON	Longmire	5.12	343	Pn	Pn	04 30 59.7	-0.1
LON				IAML		04 32 38.4	
	comp=N,16nm,2.6s						
BCYI	Bear Canyon	5.14	60	Pn	Pn	04 30 59.6	-0.6
DUG	Dugway, Tooele	5.40	106	Pn	Pn	04 31 03.9	+0.2
LTY	Liberty	5.43	352	Pn	Pn	04 31 04.2	+0.2
PSUT	Pine Spring	5.52	125		Pn	04 31 04.9	-0.6
TPNV	Topopah Spring	5.57	151	Pn	Pn	04 31 05.8	-0.2
PRN	Pahroc Range	5.68	140	Pn	Pn	04 31 07.3	-0.3
MCMT	McKenzie Canyo	5.73	57	Pn	Pn	04 31 08.2	-0.2
NLU	North Lily Min	6.01	106		Pn	04 31 12.1	-0.2
HWUT	Hardware Ranch	6.01	90		Pn	04 31 12.3	+0.1
TCUT	Toone Canyon	6.20	94	Pn	Pn	04 31 15.4	+0.7
MSO	Missoula	6.39	37	Pn	Pn	04 31 17.6	+0.3
CCUT	Cedar City	6.46	130	Pn	Pn	04 31 18.2	-0.2
SZCU	Shurtz Canyon	6.59	128		Pn	04 31 19.9	-0.3
MSU	Marysvale	6.60	118	Pn	Pn	04 31 20.3	0.0
NEW	Newport	6.62	14	Lg	Lg	04 33 11.9	
	comp=N,0.2nm,0.3s,baz=288,slow=21,SNR=4.5						
BOZ	Bozeman (W)	6.86	55		Pn	04 31 23.4	-0.4
MTPU	Mount Pierson	6.86	122	Pn	Pn	04 31 23.6	-0.4
YPP	Pitchstone Pla	6.87	67	Pn	Pn	04 31 23.7	-0.3
FLWY	Flagg Ranch	6.88	68	Pn	Pn	04 31 24.4	+0.2
TMUT	Trail Mountain	6.89	109		Pn	04 31 23.8	-0.5
LKWY	Lake	7.23	65	Pn	Pn	04 31 30.1	+1.1
SRU	San Rafael Swe	7.45	109		Pn	04 31 31.5	-0.4
BW06	Boulder Array	7.49	80	Pn	Pn	04 31 32.2	-0.3
PD31	Pinedale Array	7.49	80	Pn	Pn	04 31 32.5	0.0
PDAR	Pinedale Array	7.49	80	Pn	Pn	04 31 37.0	+4.4
	comp=N,0.0nm,0.3s,baz=257,slow=16,SNR=6.1						
U15A	North Rim	7.86	131		Pn	04 31 37.7	0.0
ANMO	Albuquerque	12.41	120	LR	LR	04 38 14.4	
	comp=N,195nm,21.4s,baz=332,slow=42						
YKA	Yellowknife Ar	20.86	7	P	Pn	04 34 26.0	-1.3
	comp=N,0.4nm,0.9s,baz=187,slow=9.2,SNR=8.5						
YKA	Yellowknife Ar	20.86	7	P	Pn	04 34 26.0	-1.3
ILAR	Eielson Array	27.71	335	P	P	04 35 33.2	+1.9
	comp=N,0.7nm,0.9s,baz=138,slow=8.2,SNR=5.7						
TKL	Tuckaleechee C	28.47	91	LR	LR	04 47 40.1	
	comp=N,114nm,18.1s,baz=5.5,slow=38						
SADO	Sadowa	29.36	71	LR	LR	04 48 53.5	
	comp=N,175nm,19.4s,baz=68,slow=39						

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*ANF **13** 04:31:07.3±0.7, 41°.85N×119°.66W, h0^{km}, ML3.6/1, Error ellipse: s-maj=5.0km s-min=2.7km az=95.0*

*REN **13** 04:31:07.9±1.4, 41°.87N±0°.04×119°.64W±0°.03, h8^{km}±7^{km}, ML3.6/5, ML3.3/17(NEIC), Mwr3.6/10(SLM), Error ellipse: s-maj=5.9km s-min=3.1km az=160.0*

*NEIC **13** 04:31:07.9, 41°.87N×119°.64W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.89; M$_{\theta\theta}$0.29; M$_{\phi\phi}$1.60; M$_{r\theta}$-1.11; M$_{\theta\phi}$1.79; M$_{\phi r}$0.76; Fault plane solution: M$_0$2.85000×10^{14} NP1:ϕ_s185.00000°, δ55.00000°, λ-135.00000°. NP2:ϕ_s65.00000°, δ55.00000°, λ-45.00000°. Principal axes: T 2.8511, Plg0.0000°, Azm125.0000°; N -0.0040, Plg35.0000°, Azm215.0000°; P -2.8472, Plg55.0000°, Azm35.0000°;*

*NEIC **13** 04:31:08.1±0.7, 41°.87N±0°.04×119°.63W±0°.03, h13^{km}±7^{km} Error ellipse: s-maj=6.4km s-min=2.7km az=165.0*

ISC 13 04:31:07.2±1.4**, 41°.86N**±0°.04×**119°.60W**±0°.04**, h2**^{km}±14^{km}**, n28, σ0^{s}.92**/34**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.53	275		Pg	04 31 18.1	+0.7
MOD					Sg	04 31 25.0	+0.8
MOD	Modoc Plateau	0.53	275	IAML		04 31 25.3	
	comp=N,8µm,0.4s						
MOD				IAML		04 31 25.4	
	comp=E,9µm,0.6s						
WVOR	Wild Horse Val	0.91	51		Pg	04 31 25.8	+1.1
WVOR					Sb	04 31 38.5	+0.1
WVOR	Wild Horse Val	0.91	51	IAML		04 31 42.1	
	comp=E,1µm,0.8s						
K05A	Summer Lake	1.29	312	Pn	Pn	04 31 31.3	-1.2
K05A				IAML		04 31 52.9	
	comp=N,602nm,0.8s						
K05A				IAML		04 32 01.8	
	comp=E,455nm,0.8s						
M04C	Macdoel	1.68	268	P	Pn	04 31 36.9	-0.8
	baz=86,SNR=74						
M04C				Sb	Sg	04 32 01.0	-0.1
	baz=86						
K04D	Chiloquin, OR	1.77	296	Pb	Pb	04 31 39.9	-0.6
	baz=115,SNR=14						
J05D	Fort Rock, OR	1.87	320	Sb	Sg	04 32 07.2	0.0
	baz=140						
L04D	Klamath Falls	2.05	281	Sb	Sb	04 32 11.3	+0.1
	baz=99						
BEKR	Beckworth	2.08	196	Pn	Pn	04 31 43.0	-0.2
BEKR				IAML		04 32 15.0	
	comp=N,277nm,0.3s						
PINE	Pine Mountain	2.17	333	Pn	Pn	04 31 44.2	-0.3
PINE				IAML		04 32 17.1	
	comp=E,178nm,0.7s						
PINE				IAML		04 32 25.6	
	comp=N,175nm,0.8s						
O03E	Paynes Creek	2.29	228	Pb	Pb	04 31 48.9	-0.3
	baz=45,SNR=16						
O03E				Sb	Sg	04 32 19.2	-1.5
	baz=45						
YBH	Yreka Blue Hor	2.33	268	Pn	Pn	04 31 45.8	-0.8
YBH				IAML		04 32 22.0	
	comp=N,170nm,0.7s						
M02C	Callahan	2.49	260	Sb	Sb	04 32 24.3	+0.6
	baz=78						
N02D	Trinity Center	2.50	250	Sb	Sg	04 32 25.4	-2.1
	baz=68						
WDC	Whiskeytown Da	2.56	241	Pn	Pn	04 31 49.4	-0.3
WDC				IAML		04 32 27.0	
	comp=N,147nm,0.5s						
I05D	Terrebonne, OR	2.79	333	Pb	Pb	04 31 57.8	+0.1
	baz=153,SNR=6.4						
I04A	Tendick Farm,	2.83	314	Pb	Pb	04 31 58.3	-0.1
	baz=132,SNR=8.4						
I04A				Sb	Sg	04 32 35.9	-2.2
	baz=132						
O02D	Mt. Diablo Mer	2.94	236	Pb	Pb	04 31 59.9	-0.5
	baz=54,SNR=9.3						
O02D				Sb	Sb	04 32 38.4	+1.6
	baz=54						
L02E	Cave Junction	3.00	277	P	Pn	04 31 56.4	+0.7
	baz=94,SNR=15						
L02E				Sb	Sb	04 32 39.2	+0.8
	baz=94						
K02D	Willamette Mer	3.13	287	P	Pn	04 31 58.0	+0.4
	baz=104,SNR=40						
K02D				Sb	Sb	04 32 44.1	+1.9
	baz=104						
KRMB	Red Mountain	3.25	265	Pn	Pn	04 31 58.8	-0.4
KRMB				IAML		04 32 56.9	
	comp=N,55nm,1.4s						
KEBM	Edson Butte	3.65	288	Pn	Pn	04 32 05.1	+0.4
ISA	Isabella, Lake	6.25	172	Pn	Pn	04 32 40.5	+0.1
TCRU	Three Creeks R	6.36	118	Pn	Pn	04 32 41.9	-0.2
NEW	Newport	6.64	14	Pn	Pn	04 32 45.3	-0.4
LCMT	Little Creek M	6.90	133	Pn	Pn	04 32 49.2	-0.2
KNB	Kanab	7.13	131	Pn	Pn	04 32 52.4	-0.3

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*SFS **13** 04:39:35.0, 33°.50N×5°.00W, ML3.6, AZROU (MARRUECOS)*

*CNRM **13** 04:39:36.2, 33°.47N×4°.72W, h0^{km}, ml2.6, Hypocentre not reviewed by the ISC*

*INMG **13** 04:39:36.5±1.1, 33°.43N×5°.02W, h31^{km}±11^{km}, ML2.2, Error ellipse: s-maj=4.9km s-min=2.5km az=68.0*

*MDD **13** 04:39:36.4±2.0, 33°.57N×5°.15W, h0^{km}, mb4.3/2, Error ellipse: s-maj=18.0km s-min=12.7km az=1.0, PRXIMO*

*IGIL **13** 04:39:38.0, 33°.45N×4°.98W, h31^{km}*

ISC 13 04:39:36.4±1.0**, 33°.6N**±0°.1×**5°.16W**±0°.08**, h10**^{km}±18^{km}**, n36, σ1^{s}.14**/66**, 1C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFR	Ifrane	0.12	167	⇑ *i*P	Pg	04 39 39.0	-0.4
IFR				*i* S	Sg	04 39 41.5	-0.1
MDT	Midelt	0.94	150	P		04 39 48.7	
RSA	Sarsar	1.36	336	P		04 40 07.0	
AKLM	AKL	1.39	51	P		04 40 01.0	
CHEFC	Chefchaouen	1.48	354	P		04 40 07.4	
PVLZ	Peæn de	1.69	25	P	Pb	04 40 07.5	-0.1
PVLZ				S	Sb	04 40 30.8	+1.8
PVLZ	Peæn de	1.69	25	*e*P	Pb	04 40 07.5	-0.1
PVLZ				*e*S	Sb	04 40 30.8	+1.8
AVE	Averroes	1.91	261	*e*P	Pn	04 40 09.8	+0.7
AVE				*e*S	Sb	04 40 35.5	+0.1
GOLM	Goulmima	1.93	175	P		04 40 10.0	
ESPR	Espera	3.28	350	S	Sn	04 41 05.6	-1.3
	3.1nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	3.46	21	P	Pn	04 40 30.0	-0.5
	0.4nm,0.2s,SNR=7.9						
ELGU				S	Sn	04 41 10.0	-1.6
	0.1nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	4.25	329	P	Pn	04 40 41.7	+0.4
PBDV				S	Sn	04 41 30.1	-0.9
	1.4nm,0.1s						
PBDV	Barranco-do-Ve	4.25	329	*e*Pn	Pn	04 40 41.7	+0.4
PBDV				*e*Sn	Sn	04 41 30.1	-0.9
PBDV				A	A	04 41 35.4	
	1.4nm,0.1s						
PVAQ	Vaqueiros	4.30	332	P	Pn	04 40 42.2	+0.3
PVAQ				S	Sn	04 41 30.3	-1.9
	3.2nm,0.7s						
PVAQ	Vaqueiros	4.30	332	*e*Pn	Pn	04 40 42.2	+0.3
PVAQ				*e*Sn	Sn	04 41 30.3	-1.9
PVAQ				A	A	04 41 34.4	
	3.2nm,0.7s						
EMIN	Mina Concepcio	4.30	344	P	Pn	04 40 41.7	-0.3
	0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	04 41 31.0	-1.3
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	04 41 31.0	-1.3
	SNR=7.9						
EGRO	El Granado	4.33	335	P	Pn	04 40 42.8	+0.5
	2.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	04 41 31.9	-1.0
	1.1nm,0.1s,SNR=34						
ECAB	El Cabril	4.44	357	P	Pn	04 40 44.5	+0.7
	0.3nm,0.1s,SNR=8.6						
ECAB				S	Sn	04 41 36.3	+0.7
	0.4nm,0.1s,SNR=7.2						
EQES	Quesada	4.49	22	S	Sn	04 41 38.7	+1.6
	SNR=7.9						
EADA	Adamuz	4.55	6	P	Pn	04 40 45.8	+0.4
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	04 41 36.3	-2.0
	0.6nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.60	320	P	Pn	04 40 46.7	+0.7
	2.2nm,0.2s,SNR=7.9						
PFVI				S	Sn	04 41 39.3	-0.2
	0.7nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.60	320	*e*Pn	Pn	04 40 46.9	+0.8
PFVI				*e*Sn	Sn	04 41 39.0	-0.6
PCVE	Castro Verde	4.63	330	S	Sn	04 41 40.4	+0.2
	1.6nm,0.5s						
PCVE	Castro Verde	4.63	330	*e*Sn	Sn	04 41 40.4	+0.2
PCVE				A	A	04 41 42.6	
	1.6nm,0.5s						
MORF	Marmelete	4.64	323	P	Pn	04 40 47.9	+1.2
MORF				S	Sn	04 41 40.6	-0.1
	3.1nm,0.1s						
MORF	Marmelete	4.64	323	*e*Pn	Pn	04 40 47.9	+1.2
MORF				*e*Sn	Sn	04 41 40.6	-0.1
MORF				A	A	04 41 43.5	
	3.1nm,0.1s						
PTEO	Sao Teotonio	4.86	324	P	Pn	04 40 51.3	+1.6
PTEO				S	Sn	04 41 44.9	-1.2
	2.2nm,0.7s						
PTEO	Sao Teotonio	4.86	324	*e*Pn	Pn	04 40 51.3	+1.6
PTEO				*e*Sn	Sn	04 41 44.9	-1.2
PTEO				A	A	04 41 50.1	
	4.3nm,0.7s						
MESJ	Messejana	4.88	330	*e*P	Pn	04 40 50.1	+0.2
MESJ	Messejana	4.88	330	P	Pn	04 40 50.1	+0.2
MESJ				S	Sn	04 41 45.8	-0.6
	2.0nm,0.7s						
MESJ	Messejana	4.88	330	*e*Pn	Pn	04 40 51.4	+1.5
MESJ				*e*Sn	Sn	04 41 45.8	-0.6
MESJ				A	A	04 41 59.5	
	2.0nm,0.7s						
PNCL	Nicolau / Gran	5.24	329	P	Pn	04 40 56.3	+1.5
PNCL				S	Sn	04 41 54.9	-0.4
	1.9nm,0.6s						
PNCL	Nicolau / Gran	5.24	329	*e*Pn	Pn	04 40 56.3	+1.5
PNCL				*e*Sn	Sn	04 41 54.9	-0.4
PNCL				A	A	04 41 57.8	
	1.9nm,0.6s						
EVO	Evora	5.41	336	P	Pn	04 40 57.9	+0.8
EVO				S	Sn	04 41 57.3	-2.1
	2.1nm,0.1s						
EVO	Evora	5.41	336	*e*Pn	Pn	04 40 57.9	+0.8
EVO				*e*Sn	Sn	04 41 57.3	-2.1
EVO				A	A	04 42 01.7	
	2.1nm,0.1s						
PESTR	Estremoz	5.58	340	*e*Pn	Pn	04 41 00.0	+0.5
PESTR				*e*Sn	Sn	04 42 01.8	-1.9
PESTR				A	A	04 42 16.9	
	1.8nm,0.7s						
PMTG	Montargil	5.96	336	P	Pn	04 41 05.2	+0.5
PMTG				S	Sn	04 42 12.0	-1.1
PMTG	Montargil	5.96	336	*e*Pn	Pn	04 41 05.2	+0.5
PMTG				*e*Sn	Sn	04 42 12.0	-1.1
PMRV	Marv??o	6.05	343	P	Pn	04 41 06.6	+0.5
PMRV	Marv??o	6.05	343	*e*Pn	Pn	04 41 06.6	+0.5
EPLA	Plasencia	6.46	354	P	Pn	04 41 11.6	0.0
	0.6nm,0.1s,SNR=7.9						
EPLA				S	Sn	04 42 22.4	-3.0
	0.1nm,0.1s,SNR=5.6						

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*IDC **13** 05:23:55.4±1.9, 20°.19S×177°.64W, h491^{km}±18^{km}, mb3.4/10, mb1 3.7/12, mb1mx3.5/42, mbtmp4.2/12, Error ellipse: s-maj=27.2km s-min=17.5km az=137.0*

*NEIC **13** 05:23:57.1±1.6, 20°.2S±0°.1×177°.7W±0°.1, h515^{km}±7^{km}, mb4.2/12, Error ellipse: s-maj=21.8km s-min=15.3km az=201.0*

ISC 13 05:23:56.1±0.6**, 20°.2S**±0°.1×**177°.7W**±0°.1**, h500**^{km}**, n48, σ0^{s}.89**/49**, mb3.9**/14**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.71	301	P	P	05 25 21.7	+1.0
	9.7nm,0.3s,baz=197,slow=4.3,SNR=59						
MSVF				S	S	05 26 28.0	-1.5
	baz=294,slow=22,SNR=0.8						
MSVF	Nonsavu	4.71	301	P	P	05 25 22.2	+1.5
URZ	Urewera	18.56	193	P	P	05 27 41.1	-0.3
	0.8nm,0.3s,baz=56,slow=7.3,SNR=6.1						
URZ	Urewera	18.56	193	P	P	05 27 40.8	-0.7
URZ				IAmb	IAmb	05 27 46.1	
	comp=Z,18nm,1.3s						
CTA	Charters Tower	33.80	264	P	P	05 29 57.0	+0.8
	comp=Z,7.0nm,0.4s,baz=85,slow=11,SNR=2.1						
CTAO	Charters Tower	33.80	264	P	P	05 29 55.7	-0.5
CTAO				IAmb	IAmb	05 29 57.6	
	comp=Z,7.9nm,0.7s						
TOO	Toolangi	36.30	234	P	P	05 30 17.8	+0.8
ASAR	Alice Springs	44.86	256	P	P	05 31 26.0	+0.4
	comp=Z,8.9nm,0.8s,baz=80,slow=8.4,SNR=6.9						
ASAR				PcP	pP	05 32 57.3	-0.1
	comp=Z,1.5nm,0.5s,baz=102,slow=4.1,SNR=3.3						
WRA	Warramunga Arr	44.92	262	P	P	05 31 24.9	-1.2
	comp=Z,2.0nm,0.5s,baz=96,slow=7.7,SNR=5.7						
WRA	Warramunga Arr	44.92	262	P	P	05 31 25.0	-1.0
FITZ	Fitzroy Crossi	53.35	262	P	P	05 32 28.0	-0.5

FITZ				IAmb	IAmb	05 32 47.9	
	comp=Z,8.1nm,1.1s						
PSA00	**Pilbara Seismi**	58.01	257	P	P	05 33 00.2	-0.7
PSA00				IAmb	IAmb	05 33 19.9	
	comp=Z,62nm,1.4s						
KAPI	**Kappang**	62.54	275		pP	05 35 09.0	-2.9
PMBI	**Palembang**	77.29	272	P	P	05 34 59.6	+0.4
NVAR	**Mina Array Bea**	80.61	43	P	P	05 35 14.7	-1.8
	comp=Z,0.4nm,0.5s,baz=215,slow=6.9,SNR=5.6						
K05A	**Summer Lake**	81.55	39	P	P	05 35 22.2	+0.9
K05A				IAmb	IAmb	05 35 25.9	
	comp=Z,4.5nm,1.1s						
PINE	**Pine Mountain**	82.17	38	P	P	05 35 24.5	0.0
I07A	**Izee**	83.17	38	P	P	05 35 29.8	+0.4
U15A	**North Rim**	83.55	48	P	P	05 35 32.5	+0.8
U15A				IAmb	IAmb	05 35 33.7	
	comp=Z,2.3nm,0.8s						
GHO	**Glory Hole Cre**	84.86	13	P	P	05 35 37.0	-0.3
TXAR	**Lajitas Array**	86.65	57	P	P	05 35 48.1	+1.4
	comp=Z,0.5nm,0.7s,baz=216,slow=4.5,SNR=2.9						
ILAR	**Eielson Array**	87.95	13	P	P	05 35 50.9	-0.9
	comp=Z,0.8nm,0.6s,baz=220,slow=5.9,SNR=12						
ILAR	**Eielson Array**	87.95	13	P	P	05 35 50.3	-1.5
SNAA	**Sanae**	88.31	178	P	P	05 35 53.3	-0.4
SNAA	**Sanae**	88.31	178	P	P	05 35 53.5	-0.2
	comp=Z,1.1nm,0.9s,baz=175,slow=11,SNR=2.0						
SNAA	**Sanae**	88.31	178	P	P	05 35 52.7	-0.9
SNAA				IAmb	IAmb	05 36 18.2	
	comp=Z,3.2nm,1.2s						
VNA3	**Neumayer Olymp**	88.43	176	P	P	05 35 54.2	+0.1
PDAR	**Pinedale Array**	88.55	43	P	P	05 35 55.6	+0.2
	comp=Z,0.4nm,0.6s,baz=197,slow=3.2,SNR=5.9						
PDAR	**Pinedale Array**	88.55	43	P	P	05 35 55.3	-0.1
VNA2	**Neumayer--Watz**	88.87	177	P	P	05 35 56.6	+0.4
	baz=202,slow=3.5						
CMAR	**Chiang Mai Arr**	90.28	289	P	P	05 36 04.7	+1.0
	comp=Z,1.7nm,0.5s,baz=116,slow=3.1,SNR=1.5						
YKA	**Yellowknife Ar**	96.12	25	P	P	05 36 29.5	+0.2
	comp=Z,0.2nm,0.7s,baz=238,slow=3.5,SNR=2.4						
AKASG	**Malin Array Be**	142.88	332	PKhKP	PKPpre	05 42 28.6	
	comp=Z,2.3nm,0.4s,baz=41,slow=4.5,SNR=9.5						
AKASG	**Malin Array Be**	142.88	332		PKPdf	05 42 29.1	-3.1
BR131	**Keskin Array S**	146.84	313		PKPbc	05 42 42.1	-0.2
BRTR	**Keskin Array B**	146.84	313	PKPbc	PKPbc	05 42 42.2	0.0
	comp=Z,2.9nm,0.6s,baz=143,slow=5.1,SNR=18						
BRTR	**Keskin Array B**	146.84	313		PKPbc	05 42 42.1	-0.2
BURAR	**Bucovina Array**	146.93	331		PKPbc	05 42 42.9	+0.7
OSTC	**Ostas**	147.76	343	ePKP	PKPbc	05 42 44.7	+0.5
CLL	**Collm**	147.83	347	⇓iPKPbc	PKPbc	05 42 44.4	+0.1
	comp=Z,10.0nm,0.9s						
CLL				i PKPab	PKPab	05 42 48.8	+0.3
UPC	**Upice**	147.86	343	ePKP	PKPbc	05 42 45.0	+0.6
DPC	**Dobruska-Polom**	147.92	343	ePKP	PKPbc	05 42 45.0	+0.4
KRLC	**Kraliky**	148.04	342	ePKP	PKPbc	05 42 45.4	+0.5
PRU	**Pruhonice**	148.71	345	ePKP	PKPbc	05 42 46.8	+0.3
KHC	**Kasperske Hory**	149.74	345	ePKP	PKPbc	05 42 49.7	+0.6
KHC				ex	x	05 42 57.0	
KHC	**Kasperske Hory**	149.74	345		PKPbc	05 42 48.6	-0.5
GERES	**GERESS Array B**	149.98	345	PKPbc	PKPbc	05 42 49.9	+0.2
	comp=Z,3.1nm,0.8s,baz=29,slow=3.0,SNR=14						
GERES	**GERESS Array B**	149.98	345		PKPbc	05 42 49.6	-0.2

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*NEIC **13** 05:24:46.7±1.8, 5°.40S±0°.05×146°.09E±0°.07, h58^{km}±6^{km}, mb5.0/51, Error ellipse: s-maj=10.1km s-min=7.2km az=100.0*

*IDC **13** 05:24:47.3±1.6, 5°.37S×146°.12E, h66^{km}±15^{km}, mb4.4/24, mb1 4.5/29, mb1mx4.5/39, mbtmp4.7/29, MS4.0/12, Ms1 4.0/12, ms1mx3.7/37, Error ellipse: s-maj=13.0km s-min=8.0km az=68.0*

*BJI **13** 05:24:47.0±0.0, 5°.40S×146°.10E, h66^{km}, mB5.2/15, mb4.8/25, Ms4.8/4, Ms7 4.5/4*

*DJA **13** 05:24:48.9±0.3, 5°S±3°×14°6E±°, h89^{km}±5^{km}, M5.0/28, mb5.0/28, mB5.4/15, MLv5.3/5, Mw(mB)4.8/15, MwMwp6.2/1, Mwp6.2/1*

*NOU **13** 05:24:50.0, 5°.44S×146°.21E, h72^{km}, mb4.9, Eastern New Guinea Reg., P.N.G.*

ISC 13 05:24:48.3±0.4, **5°.47S**±0°.05×**146°.10E**±0°.06, **h69**^{km}, **n147**, σ**1^{s}.55**/135, **mb4.9**/52, **1C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	4.05	165	P	Pn	05 25 47.2	-0.6
	138nm,0.3s,baz=26,slow=6.2,SNR=108						
PMG				S	Sn	05 26 35.6	+1.4
	155nm,0.3s,baz=58,slow=7.4,SNR=10						
PMG	**Port Moresby**	4.05	165	P	Pn	05 25 47.3	-0.6
JAY	**Jayapura**	6.13	298	P	Pn	05 26 14.8	-1.5
	4.9nm,0.3s,baz=176,slow=4.7,SNR=10.0						
JAY				S	Sn	05 27 27.2	+2.2
	3.2nm,0.3s,baz=42,slow=20,SNR=1.6						
JAY				LR	LR	05 29 04.8	
	comp=Z,1μm,18.8s,baz=178,slow=42						
JAY	**Jayapura**	6.13	298	P	Pn	05 26 17.7	+1.4
	0.3nm1μm62nm,1.0s						
RABL	**Rabaul**	6.18	78		Pn	05 26 16.6	-0.3
RABL	**Rabaul**	6.18	78	P	Pn	05 26 18.1	+1.2
GENI	**Genyem**	6.57	296	P	Pn	05 26 26.8	+4.5
	1.8nm4μm368nm,1.0s						
SMPI	**Sarmi**	8.14	295	P	Pn	05 26 44.2	+0.4
	71nm,1.2s						
COEN	**Coen**	8.92	199	Pn	Pn	05 26 54.1	-0.4
FAKI	**Fak Fak**	14.04	280	Pn	Pn	05 28 02.0	-2.1
FAKI	**Fak Fak**	14.04	280	P	Pn	05 28 02.4	-1.6
	50nm,1.0s						
HNR	**Honiara**	14.29	107	LR	LR	05 32 51.6	
	comp=Z,250nm,18.9s,baz=278,slow=34						
CTA	**Charters Tower**	14.54	179	P	Pn	05 28 12.8	+2.3
	7.1nm,0.3s,baz=1.3,slow=14,SNR=62						
CTAO	**Charters Tower**	14.54	179	Pn	Pn	05 28 12.6	+2.1
SIJI	**Sorong**	15.49	287	P	Pn	05 28 20.9	-1.9
	1.8nm,0.3s,baz=113,slow=11,SNR=4.8						
SIJI				LR	LR	05 35 00.6	
	comp=Z,414nm,20.7s,baz=44,slow=40						
SWI	**Sorong**	15.50	287	P	Pn	05 28 20.5	-2.4
	87nm,0.8s						
MTN	**Manton Dam**	16.48	243	Pn	Pn	05 28 34.1	-1.2
MTN				IAmb	IAmb	05 28 47.0	
	comp=Z,45nm,0.6s						
WB0	**Warramunga Arr**	18.22	218	P	P	05 28 56.0	+0.1
WR0	**Warramunga Arr**	18.27	217	P	P	05 28 55.7	-0.9
WB2	**Warramunga Arr**	18.38	217	P	P	05 28 57.5	-0.3
WRA	**Warramunga Arr**	18.38	217	P	P	05 28 57.6	-0.2
	comp=Z,1.1nm,0.3s,baz=36,slow=12,SNR=30						
WRA				S	Sn	05 32 19.3	-4.2
	baz=45,slow=25,SNR=3.3						
WRA				LR	LR	05 36 51.9	
	comp=Z,424nm,18.1s,baz=30,slow=39						
WRA	**Warramunga Arr**	18.38	217	P	P	05 28 56.9	-0.9
NLAI	**Namlea**	19.07	276	P	Pn	05 29 06.4	-0.4
	comp=Z,2μmcomp=Z,79nm,1.2s						
SANI	**Sanana**	20.35	279	P	P	05 29 17.8	-1.5
	comp=Z,58nm,0.7s						
EIDS	**Eidsvold**	20.36	167	P	P	05 29 17.8	-1.5
AS31	**Alice Springs**	21.57	212	P	P	05 29 32.4	0.0
ASAR	**Alice Springs**	21.57	212	P	P	05 29 31.8	-0.5
	comp=Z,7.2nm,0.7s,baz=43,slow=8.5,SNR=22						
ASAR				S	S	05 33 28.7	+0.8
	comp=Z,0.9nm,0.7s,baz=26,slow=22,SNR=1.7						
ASAR				LR	LR	05 38 43.9	
	comp=Z,572nm,18.1s,baz=38,slow=39						
ASAR	**Alice Springs**	21.57	212	P	P	05 29 31.7	-0.7
SOEI	**Soe**	22.05	258	P	P	05 29 36.7	-1.0
SOEI	**Soe**	22.05	258	P	P	05 29 37.6	-0.1
	comp=Z,2μmcomp=Z,172nm,0.8s						
BATI	**Baumata**	22.71	257	P	P	05 29 44.5	-0.2
	comp=Z,150nm,0.8s,baz=172,slow=0.7,SNR=12						
BATI				LR	LR	05 41 17.1	
	comp=Z,620nm,18.7s,baz=106,slow=44						
BATI	**Baumata**	22.71	257	P	P	05 29 45.8	+1.1
	comp=Z,1μmcomp=Z,182nm,0.8s						
KMSI	**Cibinong**	22.89	285	P	P	05 29 45.9	-0.6
	comp=Z,96nm,0.4s						
SANVU	**Saraoutou**	22.98	117	P	P	05 29 45.3	-2.0
SANVU				IAmb	IAmb	05 30 17.6	
	comp=Z,64nm,1.0s						
FITZ	**Fitzroy Crossi**	23.60	236	P	P	05 29 52.7	-0.5
	comp=Z,29nm,0.6s,baz=52,slow=7.8,SNR=80						
FITZ				LR	LR	05 40 10.8	
	comp=Z,567nm,18.4s,baz=68,slow=39						
FITZ	**Fitzroy Crossi**	23.60	236	P	P	05 29 51.3	-1.9
FITZ				IAmb	IAmb	05 29 55.3	
	comp=Z,37nm,0.8s						
LUWI	**Luwuk**	23.69	280	P	P	05 29 53.0	-1.0
LUWI				IAmb	IAmb	05 30 19.0	
	comp=Z,94nm,0.8s						
LUWI	**Luwuk**	23.69	280	P	P	05 29 54.4	+0.3
	comp=Z,3μmcomp=Z,129nm,1.2s						
GTOI	**Gorontalo**	23.84	284	P	P	05 29 54.9	-0.5
	comp=Z,1μmcomp=Z,140nm,0.5s						
MMRI	**Maumere**	23.89	261	P	P	05 29 54.3	-1.5
MMRI				IAmb	IAmb	05 30 27.5	
	comp=Z,100nm,1.1s						
MMRI	**Maumere**	23.89	261	P	P	05 29 52.4	-3.4
	comp=Z,2μmcomp=Z,57nm,0.5s						
EDFI	**Ende, Flores**	24.43	261	P	P	05 29 58.9	-2.0
	comp=Z,316nmcomp=Z,42nm,0.8s						
APSI	**Ampana**	24.82	280	P	P	05 30 03.3	-1.0
	comp=Z,766nmcomp=Z,78nm,1.1s						
MRSI	**Marisa**	24.84	283	P	P	05 30 13.3	+8.9
ARMA	**Armidale**	25.36	169	P	P	05 30 09.6	+0.4
NOUC	**Port Laguerre**	25.60	132	P	P	05 30 11.0	-0.3
DZM	**Mont Dzumac**	25.69	132	P	P	05 30 10.9	-1.2
	comp=Z,33nm,0.8s,baz=279,slow=6.3,SNR=21						
DZM				LR	LR	05 39 37.2	
	comp=Z,359nm,19.7s,baz=346,slow=35						
DZM	**Mont Dzumac**	25.69	132	eP	P	05 30 11.0	-1.2
	comp=Z,104nm,1.1s						
DZM				eLR	LR	05 35 17.9	
	comp=Z,498nm,23.4s						
DZM	**Mont Dzumac**	25.69	132	P	P	05 30 11.5	-0.7
DZM				IAmb	IAmb	05 30 24.5	
	comp=Z,40nm,0.9s						
DZM	**Mont Dzumac**	25.69	132	P	P	05 30 11.5	-0.7
BASI	**Baing, Sumba**	25.71	258	P	P	05 30 17.4	+5.0
BKSI	**Bulukumba**	25.86	269	P	P	05 30 11.9	-1.8
	comp=Z,43nm,1.0s						
BNSI	**Bone**	25.92	271	P	P	05 30 13.8	-0.4
	comp=Z,44nm,1.1s						
YATNC	**Mamie plateau,**	26.01	131	P	P	05 30 14.9	-0.1
TOLI2	**Tolitoli**	26.11	284	P	P	05 30 15.6	-0.4
TOLI2				IAmb	IAmb	05 30 35.2	
	comp=Z,28nm,0.7s						
KAPI	**Kappang**	26.24	270	P	P	05 30 17.1	-0.1
	comp=Z,13nm,0.6s,baz=39,slow=2.6,SNR=5.8						
KAPI				LR	LR	05 42 31.6	
	comp=Z,186nm,18.4s,baz=94,slow=40						
KAPI	**Kappang**	26.24	270	P	P	05 30 17.3	+0.1
SPSI	**Sidrap Palu**	26.28	272	P	P	05 30 16.7	-0.8
	comp=Z,25nm,0.9s						
TTSI	**Tana Toraja**	26.31	274	P	P	05 30 24.6	+6.8
STKA	**Stephens Creek**	26.61	189	P	P	05 30 20.2	0.0
	comp=Z,8.0nm,0.9s,baz=353,slow=10.0,SNR=13						
STKA				LR	LR	05 41 29.3	
	comp=Z,229nm,19.7s,baz=13,slow=38						
STKA	**Stephens Creek**	26.61	189	P	P	05 30 20.3	0.0
MPSI	**Mapaga**	26.79	282	P	P	05 30 20.6	-1.5
PLAI	**Plampang**	28.29	262	P	P	05 30 43.9	+8.3
BBOO	**Buckleboo**	28.77	198	P	P	05 30 39.2	-0.5
BBOO				IAmb	IAmb	05 31 11.4	
	comp=Z,92nm,1.9s						
CAN	**Canberra**	29.83	175	P	P	05 30 49.0	0.0
CAN				IAmb	IAmb	05 31 38.3	
	comp=Z,85nm,1.9s						
PSA00	**Pilbara Seismi**	30.05	235	P	P	05 30 50.6	-0.5
H11S3	**WAKE ISLAND Hy**	31.29	40	T	T	06 04 05.2	
	baz=222,slow=74						
H11S2	**WAKE ISLAND Hy**	31.30	40	T	T	06 04 05.8	
	baz=222,slow=74						
H11S1	**WAKE ISLAND Hy**	31.31	40	T	T	06 04 06.4	
	baz=222,slow=74						
TOO	**Toolangi**	31.96	181	P	P	05 31 08.1	+0.3
TOO				IAmb	IAmb	05 31 19.8	
	comp=Z,47nm,1.6s						
H11N1	**WAKE ISLAND Hy**	32.32	39	T	T	06 05 25.5	
	baz=220,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	32.34	39	T	T	06 05 26.3	
	baz=220,slow=75,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	32.34	39	T	T	06 05 27.8	
	baz=220,slow=75,SNR=8.8						
MSVF	**Nonsavu**	33.52	114	P	P	05 31 21.9	+0.2
	comp=Z,3.6nm,0.7s,baz=291,slow=13,SNR=4.8						
MSVF	**Nonsavu**	33.52	114	P	P	05 31 22.3	+0.6
MSVF				IAmb	IAmb	05 31 47.2	
	comp=Z,25nm,1.4s						
GIRL	**Giralia**	35.18	238	P	P	05 31 37.0	+1.1
MORW	**Morawa**	36.87	227	P	P	05 31 50.2	0.0
MORW				IAmb	IAmb	05 32 03.2	
	comp=Z,16nm,1.1s						
OUZ	**Omahuta**	38.98	143	P	P	05 32 09.2	+1.2
OUZ				IAmb	IAmb	05 32 10.2	
	comp=Z,32nm,0.8s						
JNU	**Nakatsue**	41.00	340	P	P	05 32 22.4	-2.4
	comp=Z,30nm,1.0s,baz=109,slow=4.7,SNR=4.2						
JNU	**Nakatsue**	41.00	340	P	P	05 32 22.7	-2.1
JNU				IAmb	IAmb	05 32 24.1	
	comp=Z,60nm,1.1s						
KASI	**Kota Agung**	41.40	268	P	P	05 32 36.2	+7.9
MDSI	**Maura Dua**	41.77	269	P	P	05 32 39.1	+7.8
HIZ	**Hauiti**	41.98	146	P	P	05 32 34.0	+1.3
JHS	**Saijyo**	42.06	344	P	P	05 32 30.4	-2.9
JHS				IAmb	IAmb	05 33 14.6	
	comp=Z,98nm,1.7s						
QRZ	**Quartz Range**	42.43	150	P	P	05 32 35.7	-0.5
MJAR	**Matsushiro Arr**	42.44	351	P	P	05 32 33.8	-2.6
	comp=Z,3.5nm,0.9s,baz=167,slow=6.9,SNR=3.0						
URZ	**Urewera**	43.11	144	P	P	05 32 42.1	+0.3
	comp=Z,15nm,0.6s,baz=308,slow=3.2,SNR=20						
URZ	**Urewera**	43.11	144	P	P	05 32 41.8	0.0
URZ				IAmb	IAmb	05 32 55.1	
	comp=Z,17nm,0.8s						
NNZ	**Nelson**	43.15	150	P	P	05 32 42.8	+0.7
NNZ				IAmb	IAmb	05 34 02.4	
	comp=Z,50nm,1.2s						
THZ	**Tophouse**	43.32	151	P	P	05 32 44.0	+0.5
THZ				IAmb	IAmb	05 32 53.8	
	comp=Z,27nm,0.9s						
BKZ	**Black Stump Fm**	43.36	145	P	P	05 32 44.5	+0.6
BKZ				IAmb	IAmb	05 32 45.8	
	comp=Z,29nm,0.8s						
MXZ	**Matakaoa Point**	43.38	142	P	P	05 32 44.4	+0.4
TUWZ	**Tuamarina**	43.59	149	P	P	05 32 45.9	+0.3
LTZ	**Lake Taylor**	43.80	152	P	P	05 32 48.4	+1.0
LTZ				IAmb	IAmb	05 32 57.9	
	comp=Z,25nm,0.9s						
SNZO	**South Karori**	43.89	149	P	P	05 32 48.1	0.0
RPZ	**Rata Peaks**	43.98	154	P	P	05 32 49.7	+1.0
	comp=Z,25nm,0.7s,baz=335,slow=0.8,SNR=12						
RPZ	**Rata Peaks**	43.98	154	P	P	05 32 49.8	+1.0
RPZ				IAmb	IAmb	05 32 59.1	
	comp=Z,30nm,0.7s						
BHW	**Baring Head**	44.05	149	P	P	05 32 49.2	-0.1
OXZ	**Oxford**	44.11	153	P	P	05 32 49.1	-0.7
OXZ				IAmb	IAmb	05 32 58.7	
	comp=Z,19nm,0.7s						
KHZ	**Kahutara**	44.12	151	P	P	05 32 49.9	+0.1
KHZ				IAmb	IAmb	05 32 59.9	
	comp=Z,25nm,1.0s						
MLZ	**Mavora Lakes**	44.13	158	P	P	05 32 51.2	+1.3
LBZ	**Lake Benmore**	44.15	155	P	P	05 32 50.2	+0.2
MSWZ	**Moikau Station**	44.25	148	P	P	05 32 51.0	0.0
BFZ	**Birch Farm**	44.27	147	P	P	05 32 51.5	+0.4
MQZ	**McQueen's Vall**	44.69	153	P	P	05 32 52.8	-1.6
SDSI	**Sungai Dareh**	44.81	274	P	P	05 32 57.8	+2.0
NJ2	**Nanjing**	45.44	327	eP	P	05 33 01.8	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	**Korea Array**	45.94	340	P	P	05 33 02.4	-1.9
	comp=Z,13nm,1.0s,baz=159,slow=9.3,SNR=8.2						
KSRS				LR	LR	05 49 05.8	
	comp=Z,121nm,20.3s,baz=96,slow=32						
WHN	**Wuhan**	46.96	322	P	P	05 33 14.8	+2.4
KCSI	**Kotacane, Aceh**	49.09	279	P	P	05 33 34.6	+5.4
USRK	**Ussuriysk Ar.**	51.05	347	P	P	05 33 41.4	-2.0
	comp=Z,8.6nm,0.7s,baz=178,slow=6.9,SNR=11						
CMAR	**Chiang Mai Arr**	52.21	298	P	P	05 33 51.2	-1.5
	comp=Z,1.8nm,0.3s,baz=108,slow=5.7,SNR=1.8						
KLR	**Kul'dur**	55.89	349	P	P	05 34 16.6	-2.2
	comp=Z,5.1nm,0.9s,baz=152,slow=7.3,SNR=5.6						
HHC	**Hu-ho-hao-te**	55.91	329	eP	P	05 34 20.3	+1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,6.6s						
PETK	**Petropavlovsk-**	59.17	8	P	P	05 34 40.7	-1.2
	comp=Z,19nm,1.1s,baz=149,slow=6.1,SNR=5.7						
PETK	**Petropavlovsk-**	59.17	8	P	P	05 34 39.9	-2.0
GTA	**Gaotai**	61.76	321	eP	P	05 35 03.8	+3.8
GTA				pP	sP	05 35 23.1	-2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,210nm,6.2s						
GTA				LR	LR		
	comp=Z,280nm,17.8s						
GTA				LR	LR		
	comp=Z,380nm,17.5s						
GTA				LR	LR		
	comp=Z,400nm,17.8s						
SONM	**Songino Array**	63.51	331	P	P	05 35 11.4	0.0
	comp=Z,1.0nm,0.7s,baz=151,slow=9.2,SNR=2.6						
CASY	**Casey**	65.53	195	P	P	05 35 25.0	+0.9
CASY				IAmb	IAmb	05 35 25.7	
	comp=Z,18nm,1.1s						
HYB	**Hyderabad**	70.43	291	i P	P	05 35 47.0	-8.9
WMQ	**Urumqi**	71.80	320	eP	P	05 36 04.5	+0.8
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,92nm,5.9s						
VNDA	**Vanda**	72.50	176	P	P	05 36 07.7	+0.6
	comp=Z,8.6nm,0.6s,baz=330,slow=6.8,SNR=56						
VNDA	**Vanda**	72.50	176	P	P	05 36 07.8	+0.7
VNDA				IAmb	IAmb	05 36 08.6	
	comp=Z,9.4nm,0.6s						
MKAR	**Makanchi Array**	76.52	321	P	P	05 36 29.7	-1.3
	comp=Z,2.9nm,0.8s,baz=114,slow=5.9,SNR=4.1						
ZAA0	**Zalesovo Array**	78.08	328	P	P	05 36 38.7	-0.8
ZALV	**Zalesovo Beam**	78.08	328	P	P	05 36 38.5	-1.0
	comp=Z,3.5nm,0.4s,baz=120,slow=3.6,SNR=10						
KDAK	**Kodiak Island**	79.86	29	P	P	05 36 50.6	+1.4
KDAK	**Kodiak Island**	79.86	29	P	P	05 36 50.6	+1.4
KURK	**Kurchatov**	80.25	323	P	P	05 36 48.8	-2.7
MAW	**Mawson**	82.39	203	P	P	05 37 02.6	+0.2
	comp=Z,9.5nm,1.0s,baz=61,slow=12,SNR=3.6						
BWN	**Browne**	84.08	23	P	P	05 37 08.8	-2.4
QSPA	**South Pole Qui**	84.50	180	P	P	05 37 13.1	-0.4
	comp=Z,9.4nm,0.7s,baz=342,slow=1.4,SNR=22						
QSPA	**South Pole Qui**	84.50	180	P	P	05 37 13.5	-0.1
QSPA				IAmb	IAmb	05 37 14.1	
	comp=Z,10nm,0.7s						
I23K	**Minto, Yukon-K**	84.54	23	P	P	05 37 11.8	-1.8
ILAR	**Eielson Array**	85.35	23	P	P	05 37 16.7	-0.9
	comp=Z,2.4nm,0.7s,baz=259,slow=4.1,SNR=7.0						
SYO	**Syowa Base**	90.78	200	⇑eP	P	05 37 44.2	+0.7
KIRV	**Kirov**	98.12	328	LR	LR	06 25 02.9	
	comp=Z,248nm,19.0s,baz=310,slow=37						
YKA	**Yellowknife Ar**	99.12	28	P	Pdif	05 38 20.7	-1.0
	comp=Z,0.4nm,0.9s,baz=282,slow=4.7,SNR=5.6						
YKA				PKKP	PKKPdf	05 54 54.4	+1.5
	comp=Z,0.4nm,0.8s,baz=101,slow=3.0,SNR=4.6						
QRN	**Al-Qurain**	99.77	298	eP		05 38 10.0	
RDF	**Al-Radifah**	100.09	298	eP		05 38 12.0	
RST	**Umm Al-Ruwaisa**	100.58	299	eP		05 38 13.4	
ARCES	**ARCESS Array B**	105.47	342	PKKPbc	PKKPbc	05 54 31.3	+0.3
	comp=Z,2.7nm,0.9s,baz=255,slow=3.5,SNR=3.8						
CLL	**Collm**	120.04	328	esPKPdf	sPKPdf	05 43 54.0	-3.8
TORD	**Torodi Ar. Bea**	144.09	285	PKP	PKPbc	05 44 15.4	+0.1
	comp=Z,0.6nm,0.4s,baz=69,slow=3.3,SNR=5.7						
TORD	**Torodi Ar. Bea**	144.09	285		PKPdf	05 44 17.5	+0.3
KIC	**Kosan Boka**	150.98	273	ePKP1	PKPbc	05 44 34.6	+0.2
	comp=Z,11nm,0.7s						
DBIC	**Dimbokro**	151.09	274	PKPbc	PKiKP	05 44 35.3	+0.1
	comp=Z,2.9nm,0.7s,baz=54,slow=3.9,SNR=7.0						
DBIC	**Dimbokro**	151.09	274		PKiKP	05 44 35.5	+0.2
TIC	**Toumodi**	151.26	274	ePKP1	PKiKP	05 44 35.9	+0.3
LIC	**Lamto**	151.27	273	ePKP1	PKiKP	05 44 35.3	-0.3
	comp=Z,28nm,0.7s						

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*KRNET **13** 05:26:08.1±0.1, 41°.94N×76°.08E, h16^{km}, mb1.6*

*NNC **13** 05:26:11.5±0.3, 43°.12N×76°.75E, h0^{km}, mb2.7, mpv2.1, Error ellipse: s-maj=4.3km s-min=1.5km az=162.0*

*SOME **13** 05:26:12.0, 43°.20N×76°.80E, h0^{km}*

ISC 13 05:26:11.7±0.9, **43°.16N**±0°.04×**76°.76E**±0°.04, **h9**^{km}±11^{km}, **n15**, σ**0^{s}.62**/22, **13C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDC	**Almaty**	0.16	70	⇑P	Pg	05 26 15.1	0.0
	12nm,0.3s						
KNDC				⇑S	Sg	05 26 18.0	+0.6
	7.0nm,0.2s						
TNSS	**Tian-Shan**	0.18	133	eP	Pg	05 26 15.8	+0.2
	1.0nm,0.1s						
TNSS				eS	Sg	05 26 18.6	+0.2
	13nm,0.1s						
TNSS	**Tian-Shan**	0.18	133	P	Pg	05 26 15.9	+0.2
	1.0nm,0.1s						
TNSS				S	Sg	05 26 18.6	+0.2
	13nm,0.1s						
MDOK	**Medeo**	0.21	90	eP	Pg	05 26 15.9	-0.1
	0.8nm,0.1s						
MDOK				eS	Sg	05 26 18.7	-0.2
	18nm,0.2s						
MDOK	**Medeo**	0.21	90	⇓P	Pg	05 26 16.1	+0.1
	2.4nm,0.6s						
MDOK				⇑S	Sg	05 26 18.8	-0.1
	7.1nm,0.4s						
MDOK	**Medeo**	0.21	90	Pg	Pg	05 26 15.9	-0.1
	0.8nm,0.1s						
MDOK				Lg	Lg	05 26 18.7	
	18nm,0.2s						
KTBS	**Karatobe**	0.55	354	eP	Pg	05 26 22.4	0.0
	0.8nm,0.1s						
KTBS				eS	Sg	05 26 29.9	+0.3
	4.3nm,0.3s						
KTBS	**Karatobe**	0.55	354	P	Pg	05 26 22.4	0.0
	0.8nm,0.1s						
KTBS				S	Sg	05 26 29.9	+0.3
	4.3nm,0.3s						
TKM2	**Tokmak 2**	0.89	255	⇑iP	Pb	05 26 27.9	-1.6
	baz=40						
TKM2				⇑iS	Sg	05 26 41.6	+1.2
	baz=40						
TKM2	**Tokmak 2**	0.89	255	⇓P	Pb	05 26 28.4	-1.1
	5.7nm,1.5s						
TKM2				⇑S	Sg	05 26 40.6	+0.2
	0.9nm,0.3s						
BOOM	**Boomskoye usch**	0.91	222	⇑iP	Pb	05 26 18.8	-11
	baz=50						
BOOM				⇑eS	Sb	05 26 27.1	-15
	baz=50						
ULHL	**Ulahol**	0.99	203	⇓iP	Pb	05 26 15.1	-16
	baz=22						
ULHL				⇓iS	Sb	05 26 20.9	-24
	baz=22						
KDJ	**Kajisay**	1.08	163	⇑iP	Pb	05 26 24.5	-8.1
	baz=77						
KDJ				⇑iS	Sb	05 26 35.8	-11
	baz=77						
AAK	**Ala-Archa**	1.75	253	⇓P	Pn	05 26 42.9	+0.5
	1.6nm,0.8s						
AAK				⇑S	Sb	05 27 06.5	+0.3
	2.2nm,0.9s						
PDGK	**Podgornoye**	2.00	84	⇑Pg	Pn	05 26 46.7	+0.9
	5.5nm,1.4s						
PDGK				⇑Lg	Lg	05 27 13.1	
	4.9nm,1.4s						

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*MOS **13** 05:26:53.9±1.3, 30°.56N×131°.28E, h15^{km}, mb5.1/58, Error ellipse: s-maj=7.6km s-min=4.1km az=113.7*

*BJI **13** 05:26:54.1±0.0, 30°.34N×131°.69E, h40^{km}, mB5.0/47, mb4.9/70, Ms4.4/50, Ms7 4.3/52*

*NIED **13** 05:26:59.0, 30°.67N×131°.45E, h48^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.37; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$2.08; $M_{r\theta}$1.04; $M_{\theta\phi}$-0.70; $M_{\phi r}$1.53; Fault plane solution: $M_0$2.69000×10^{16} NP1: ϕ_s199.00000°, δ71.00000°, λ-57.00000°. NP2: ϕ_s315.00000°, δ38.00000°, λ-148.00000°.*

*NEIC **13** 05:26:59.2±2.1, 30°.60N±0°.05×131°.43E±0°.06, h41^{km}±6^{km}, mb5.0/84 Error ellipse: s-maj=8.3km s-min=6.6km az=65.0*

*JMA **13** 05:26:59.4±0.1, 30°.67N×131°.45E, h49^{km}±1^{km}, M4.7*

JMA Felt III J1.

*IDC **13** 05:27:00.1±1.3, 30°.70N×131°.33E, h45^{km}±12^{km}, mb4.5/24, mb1 4.6/30, mb1mx4.5/41, mbtmp4.7/30, ML4.0/5, MS4.2/31, Ms1 4.2/31, ms1mx4.1/46, Error ellipse: s-maj=15.7km s-min=9.1km az=69.0*

*BGR **13** 05:27:00.9±0.0, 30°.51N×131°.27E, h33^{km}, mb5.3*

*GCMT **13** 05:27:02.2±0.3, 30°.70N±0°.02×131°.42E±0°.02, h30^{km}±1^{km},* *MW5.0/91, Moment Tensor Solution. s31,c36; s91,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.44±.18; $M_{\theta\theta}$-1.82±.11; $M_{\phi\phi}$3.26±.13; $M_{r\theta}$1.52±.20; $M_{\theta\phi}$0.34±.10; $M_{\phi r}$2.63±.22; Best double couple: $M_0$4.07300×10^{16} NP1:ϕ_s324.00000°,δ33.00000°,λ-155.00000°. NP2: ϕ_s213.00000°,δ77.00000°,λ-59.00000°. Principal axes: T 4.5760, Plg25.0000°, Azm279.0000°; N -1.0070, Plg30.0000°, Azm25.0000°; P -3.5690, Plg49.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 05:26:56.3±0.6**, 30°.62N**±0°.03×**131°.51E**±0°.03**, h17**^{km}±3^{km}**, n452, σ1^{s}64**/466**, mb5.0**/157**, MS4.3**/41**, 42C-31D, Fault plane solution: NP1:**ϕ_s236.87416°**,**δ62.50840°, λ-59.72297°. **NP2:**ϕ_s5.20734°**,**δ39.99692°**,**λ-134.09418°. **Principal axes:** T Plg12.4323°**,** Azm305.4622°**;** N Plg26.5673°**,** Azm41.7913°**;** P Plg60.2401°, Azm192.7835°**; Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.46**	**275**	⇑P	**Pn**	**05 27 09.2**	**+1.2**
JTN				*e*S	**Sn**	**05 27 16.8**	**+1.0**
JMTN	**Minamitane**	**0.57**	**247**	⇑P	**Pn**	**05 27 11.2**	**+1.6**
JMTN				*e*S	**Sn**	**05 27 20.0**	**+1.5**
JTSR	**Tashiro 2**	**0.74**	**318**	⇓P	**Pn**	**05 27 12.5**	**+0.5**
JTSR				*e*S	**Sn**	**05 27 22.6**	**-0.3**
JNAR	**Kushima--Naru**	**0.93**	**347**	⇓P	**Pn**	**05 27 15.6**	**+1.1**
JNAR				*e*S	**Sn**	**05 27 27.7**	**+0.3**
JYAK	**Yakushimahirau**	**0.94**	**247**	⇑P	**Pn**	**05 27 16.2**	**+1.5**
JYAK				*e*S	**Sn**	**05 27 28.7**	**+1.0**
JNKG	**Nichinankitago**	**1.05**	**354**	⇓P	**Pg**	**05 27 17.4**	**+0.8**
JNKG				*e*S	**Sg**	**05 27 30.8**	**+0.4**
JKC	**Kuchinoerabu**	**1.14**	**263**	⇑P	**Pg**	**05 27 18.6**	**+0.2**
JKC				*e*S	**Sg**	**05 27 33.6**	**+0.2**
JSU	**Suzuyama**	**1.26**	**315**	⇑P	**Pb**	**05 27 19.5**	**-0.2**
JSU				*e*S	**Sb**	**05 27 35.0**	**-0.7**
JSU	**Suzuyama**	**1.26**	**315**		**Pb**	**05 27 19.8**	**+0.2**
JSU				Sn	**Sb**	**05 27 34.8**	**-0.9**
JTZ	**Takazaki**	**1.33**	**344**	⇓P	**Pb**	**05 27 21.3**	**+0.5**
JTZ				*e*S	**Sn**	**05 27 37.4**	**+0.1**
JNN	**Nakanoshima**	**1.61**	**242**	⇑P	**Pb**	**05 27 25.4**	**-0.2**
JNN				S	**Sb**	**05 27 45.3**	**-0.3**
JTSN	**Tsuno**	**1.62**	**360**	⇓P	**Pn**	**05 27 24.7**	**+0.6**
JTSN				S	**Sn**	**05 27 44.3**	**-0.3**
JZO	**Okuchi**	**1.71**	**333**	P	**Pb**	**05 27 26.3**	**-0.9**
JZO				S	**Sn**	**05 27 46.5**	**-0.2**
JSJ	**Shimokoshiki**	**1.86**	**305**	⇑P	**Pn**	**05 27 27.0**	**-0.4**
JSJ				S	**Sn**	**05 27 48.7**	**-1.9**
JNU	**Nakatsue**	**2.55**	**348**	P	**Pn**	**05 27 38.1**	**+1.2**
	26nm,0.3s,baz=200,slow=11,SNR=85						
JNU				S	**Sn**	**05 28 06.8**	**-0.9**
	155nm,0.3s,baz=349,slow=23,SNR=10						
JMN	**Monobe**	**3.70**	**32**	Pn	**Pn**	**05 27 54.0**	**+1.4**
JMN				Sn	**Sn**	**05 28 32.5**	**-3.4**
JTU	**Tsushima**	**4.28**	**336**	Pn	**Pn**	**05 28 01.9**	**+1.3**
JHS	**Saijyo**	**4.57**	**17**	Pn	**Pn**	**05 28 06.2**	**+1.5**
JMZ	**Minamidaito 2**	**4.79**	**183**	Pn	**Pn**	**05 28 09.4**	**+1.8**
JMZ				Sn	**Sn**	**05 28 59.5**	**-3.2**
JWT	**Wachi**	**5.69**	**34**		**Pn**	**05 28 21.8**	**+1.8**
INU	**Inuyama**	**6.61**	**43**	Pn	**Pn**	**05 28 35.1**	**+2.4**
TJN	**Taejon**	**6.71**	**330**	*ce*P	**Pn**	**05 28 35.1**	**+1.2**
JSG	**Sagara**	**6.93**	**53**		**Pn**	**05 28 39.7**	**+2.6**
JGF	**Kuroka**	**6.98**	**43**		**Pn**	**05 28 39.7**	**+1.9**
KSRS	**Korea Array**	**7.44**	**337**	P	**Pn**	**05 28 45.8**	**+1.8**
	4.0nm,0.3s,baz=159,slow=14,SNR=44						
KSRS				S	**Sn**	**05 30 07.2**	**-0.7**
	0.5nm,0.3s,baz=145,slow=30,SNR=4.4						
KSAR	**Wonju Array Be**	**7.44**	**337**	P	**Pn**	**05 28 46.6**	**+2.6**
KSAR	**Wonju Array Be**	**7.44**	**337**		**Pn**	**05 28 46.6**	**+2.6**
JHJ	**Hachijo jima 2**	**7.47**	**68**	P	**Pn**	**05 28 47.3**	**+2.9**
	24nm,0.3s,baz=136,slow=21,SNR=13						
JHJ				S	**Sn**	**05 30 06.3**	**-2.4**
	6.7nm,0.3s,baz=86,slow=21,SNR=2.0						
JHJ				LR	LR	05 31 28.2	
	comp=Z,1µm,19.8s,baz=278,slow=35						
JHJ2	**Mitsune**	**7.49**	**68**	Pn	**Pn**	**05 28 46.5**	**+1.8**
KS19	**Wonju Array Si**	**7.50**	**337**	Pn	**Pn**	**05 28 46.3**	**+1.4**
INCN	**Inchon**	**7.95**	**331**	P	**Pn**	**05 28 52.4**	**+1.3**
INCN	**Inchon**	**7.95**	**331**	Pn	**Pn**	**05 28 52.4**	**+1.3**
MAJO	**Matsushiro**	**8.13**	**42**	P	**Pn**	**05 28 55.0**	**+1.4**
MAJO	**Matsushiro**	**8.13**	**42**	Pn	**Pn**	**05 28 55.4**	**+1.9**
MAT	**Matsushiro**	**8.13**	**42**	P	**Pn**	**05 28 55.8**	**+2.2**
MAT				*e*S	**Sn**	**05 30 23.6**	**-1.5**
MJAR	**Matsushiro Arr**	**8.13**	**42**	P	**Pn**	**05 28 56.6**	**+3.1**
	2.7nm,0.3s,baz=242,slow=14,SNR=53						
MJAR				LR	LR	05 32 32.7	
	comp=Z,737nm,18.8s,baz=225,slow=41						
MJAR	**Matsushiro Arr**	**8.13**	**42**		**Pn**	**05 28 55.9**	**+2.3**
JYT	**Yasato**	**9.16**	**50**	Pn	**Pn**	**05 29 10.0**	**+2.4**
JCJ	**Chichijima**	**10.00**	**108**	LR	LR	05 32 41.1	
	comp=Z,1µm,20.5s,baz=309,slow=34						
JMM	**Marumori**	**10.55**	**44**		**Pn**	**05 29 30.3**	**+3.7**
YHNB	**Yeheng**	**10.76**	**239**	Pn	**Pn**	**05 29 30.0**	**+0.4**
NJ2	**Nanjing**	**10.91**	**281**	*e*P	**Pn**	**05 29 33.6**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,31nm,0.6s						
NJ2				LR	LR		
	comp=N,830nm,13.3s						
NJ2				LR	LR		
	comp=E,1µm,14.0s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
DL2	**Dalian**	**11.58**	**318**	*e*P	**Pn**	**05 29 44.8**	**+4.0**
DL2				sP		05 29 56.4	
DL2				*e*S	**Sn**	**05 31 53.8**	**+4.1**
DL2				sS		05 32 03.9	
DL2				pmax	pmax		
	comp=Z,27nm,0.9s						
DL2				LR	LR		
	comp=N,750nm,17.0s						
DL2				LR	LR		
	comp=E,660nm,15.3s						
DL2				LR	LR		
	comp=Z,1µm,17.6s						
SSLB	**Suanglung**	**11.59**	**237**	Pn	**Pn**	**05 29 40.3**	**-0.7**
YULB	**Yu-li**	**11.60**	**234**	Pn	**Pn**	**05 29 38.6**	**-2.5**
MSHR	**Mys Shultsa**	**11.94**	**359**	*ce*P	**Pn**	**05 29 47.9**	**+2.2**
MSHR				pmax	pmax		
	comp=Z,37nm,1.7s						
TPUB	**Ta-pu**	**12.13**	**236**	Pn	**Pn**	**05 29 47.8**	**-0.5**
TIA	**Tai'an**	**13.24**	**299**	P	**Pn**	**05 30 05.5**	**+2.0**
TIA				pmax	pmax		
	comp=Z,18nm,1.4s						
TIA				pmax	pmax		
	comp=Z,330nm,7.1s						
TIA				LR	LR		
	comp=Z,530nm,19.9s						
TIA				LR	LR		
	comp=Z,760nm,18.0s						
TIA				LR	LR		
	comp=Z,810nm,22.3s						
USRK	**Ussuriysk Ar.**	**13.56**	**1**	P	**Pn**	**05 30 10.0**	**+2.2**
	baz=164,slow=16,SNR=3.0						
USRK				LR	LR	05 35 30.0	
	comp=Z,635nm,19.4s,baz=172,slow=38						
USA0B	**Ussuriysk Arra**	**13.56**	**1**	*i* P	**Pn**	**05 30 10.6**	**+2.8**
CN2	**Changchun**	**14.01**	**342**	*e*P	**P**	**05 30 20.3**	**-1.5**
CN2				S	**Sn**	**05 32 50.8**	**+1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
WHN	**Wuhan**	**14.78**	**274**	⇑P	**Pn**	**05 30 27.1**	**+2.6**
WHN				S	**Sn**	**05 33 11.0**	**+3.1**
WHN				LR	LR		
	comp=Z,3µm,16.9s						
BJT	**Baijiatuau**	**15.62**	**311**	P	**P**	**05 30 38.2**	**-1.5**
BJT				pmax	pmax		
	comp=Z,146nm,1.0s						
BJT	**Baijiatuau**	**15.62**	**311**	P	**P**	**05 30 38.2**	**-1.5**
BJT				IAmb	IAmb	05 30 46.0	
	comp=Z,146nm,1.0s						
BJI	**Beijing**	**15.63**	**311**	P	**P**	**05 30 41.0**	**+1.2**
BJI				S	**Sn**	**05 33 28.6**	**+0.1**
BJI				pmax	pmax		
	comp=Z,110nm,0.9s						
BJI				LR	LR		
	comp=Z,600nm,17.1s						
BJI				LR	LR		
	comp=Z,640nm,18.8s						
BJI				LR	LR		
	comp=Z,720nm,23.5s						
TIY	**Taiyuan**	**17.28**	**299**	*e*P	**P**	**05 31 00.0**	**+1.8**
TIY				S	**Sn**	**05 34 10.3**	**+1.5**
TIY				pmax	pmax		
	comp=Z,97nm,0.9s						
TIY				pmax	pmax		
	comp=Z,350nm,5.4s						
TIY				LR	LR		
	comp=Z,230nm,3.8s						
TIY				LR	LR		
	comp=Z,440nm,6.8s						
TIY				LR	LR		
	comp=Z,770nm,17.2s						
YSS	**Yuzh-Sakhalins**	**18.49**	**25**	*e*P	**Pn**	**05 31 13.3**	**+1.8**
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
KLR	**Kul'dur**	**18.59**	**0**	P	**Pn**	**05 31 13.7**	**+0.9**
	comp=N,0.5nm,0.3s,baz=181,slow=8.2,SNR=18						
ENH	**Enshi**	**18.99**	**275**		**P**	**05 31 16.6**	**-0.5**
ENH				IAmb	IAmb	05 31 25.2	
	comp=Z,71nm,0.8s						
HHC	**Hu-ho-hao-te**	**19.10**	**308**	*e*P	**Pn**	**05 31 19.1**	**0.0**
HHC				pP	sP	05 31 29.1	+4.2
HHC				S	**S**	**05 34 55.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,81nm,1.2s						
HHC				pmax	pmax		
	comp=Z,340nm,6.6s						
HHC				LR	LR		
	comp=Z,610nm,15.3s						
HHC				LR	LR		
	comp=Z,930nm,20.1s						
HHC				LR	LR		
	comp=Z,930nm,15.0s						
XAN	**Xi'an**	**19.38**	**286**	P	**P**	**05 31 20.5**	**-0.8**
XAN				pP	sP	05 31 30.6	+2.6
XAN				sP	pP	05 31 37.1	+11
XAN				S	**Sn**	**05 34 54.8**	**-4.7**
XAN				sS	sS	05 35 10.6	+3.2
XAN				SS	**SnSn**	**05 35 21.8**	**+8.2**
XAN				pmax	pmax		
	comp=Z,48nm,1.4s						
XAN				pmax	pmax		
	comp=Z,240nm,5.7s						
XAN				LR	LR		
	comp=Z,760nm,12.2s						
XAN				LR	LR		
	comp=Z,2µm,13.8s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
BTO	**Baotou**	**20.07**	**306**	*e*P	Pn	05 31 30.0	-0.6
GRNR	**Gornyy**	**20.46**	**9**	⇓*i*P	**P**	**05 31 27.0**	**-5.9**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,350nm,13.0s						
GRNR				MLR	MLR		
	comp=N,310nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,350nm,18.0s						
HIA	**Hailar**	**20.65**	**338**	P	Pn	05 31 37.7	+0.4
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
HIA	**Hailar**	**20.65**	**338**		Pn	05 31 37.7	+0.4
GUMO	**Guam**	**20.95**	**141**	LR	LR	05 37 56.3	
	comp=Z,631nm,20.6s,baz=313,slow=31						
TYV	**Tymovskoe**	**21.87**	**19**	*e*P	**P**	**05 31 51.6**	**+3.6**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,5.2s						
GYA	**Guiyang**	**22.20**	**265**	⇑P	**P**	**05 31 52.3**	**+0.3**
GYA				sP	sP	05 32 08.3	+10
GYA				pmax	pmax		
	comp=Z,53nm,0.5s						
GYA				LR	LR		
	comp=Z,730nm,20.2s						
QIZ	**Qiongzhong**	**22.75**	**245**	P	**P**	**05 31 55.9**	**-1.9**
QIZ				S	**S**	**05 36 02.6**	**-3.3**
QIZ				pmax	pmax		
	comp=Z,450nm,4.1s						
QIZ				LR	LR		
	comp=Z,460nm,11.4s						
QIZ				LR	LR		
	comp=Z,490nm,4.3s						
QIZ				LR	LR		
	comp=Z,430nm,8.2s						
ZEA	**Zeya**	**23.31**	**354**	*e*P	**P**	**05 32 02.5**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
LZH	**Lanzhou**	**23.70**	**291**	*e*P	**P**	**05 32 06.4**	**-1.0**
LZH				pP	sP	05 32 20.1	+5.8
LZH				S	**S**	**05 36 22.5**	**+0.7**
LZH				sS	Sn	05 36 39.0	-4.4
LZH				SS	**SnSn**	**05 37 08.6**	**+8.9**
LZH				pmax	pmax		
	comp=Z,120nm,1.0s						
LZH				pmax	pmax		
	comp=Z,290nm,4.7s						
LZH				LR	LR		
	comp=Z,840nm,13.7s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
CD2	**Chengdu**	**23.83**	**278**	P	**P**	**05 32 06.8**	**-1.7**
CD2				sP	sP	05 32 20.6	+5.2
CD2				PP	**PnPn**	**05 32 42.9**	**+6.4**
CD2				S	**S**	**05 36 22.1**	**-1.6**
CD2				sS	sS	05 36 37.8	+5.8
CD2				pmax	pmax		
	comp=Z,220nm,0.9s						
CD2				LR	LR		
	comp=Z,1µm,15.1s						
CD2				LR	LR		
	comp=Z,1µm,15.1s						
CD2				LR	LR		
	comp=Z,1µm,15.8s						
DAV	**Davao City (W)**	**24.08**	**195**	LR	LR	05 39 56.2	
	comp=Z,471nm,21.5s,baz=46,slow=32						
ULN	**Ulaanbaatar**	**25.43**	**320**	*ce*P	**P**	**05 32 21.6**	**-1.6**
ULN				pmax	pmax		
	comp=Z,58nm,1.3s						
ULN	**Ulaanbaatar**	**25.43**	**320**	P	**P**	**05 32 22.6**	**-0.6**
ULN				IAmb	IAmb	05 32 24.3	
	comp=Z,31nm,0.8s						
SONM	**Songino Array**	**25.79**	**319**	P	**P**	**05 32 25.3**	**-1.1**
	comp=Z,12nm,0.5s,baz=136,slow=8.8,SNR=56						
SONM				LR	LR	05 43 44.9	
	comp=Z,658nm,20.1s,baz=136,slow=39						
SONM	**Songino Array**	**25.79**	**319**	P	**P**	**05 32 25.1**	**-1.3**
KMI	**Kunming**	**25.97**	**265**	⇓*i*P	**P**	**05 32 27.3**	**-1.1**
KMI				pP	sP	05 32 42.1	+6.8
KMI				pmax	pmax		
	comp=Z,44nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,3.8s						
KMI				LR	LR		
	comp=Z,470nm,14.0s						
KMI				LR	LR		
	comp=Z,630nm,16.8s						
KMI				LR	LR		
	comp=Z,700nm,16.8s						
KMI	**Kunming**	**25.97**	**265**	IAmb	IAmb	05 32 29.8	
	comp=Z,33nm,0.7s						
SLVN	**Son La**	**26.42**	**256**	P	**P**	**05 32 30.3**	**-2.0**
GTA	**Gaotai**	**27.29**	**297**	⇑P	**P**	**05 32 38.3**	**-1.7**
GTA				pP	sP	05 32 49.3	+2.4
GTA				sP	pP	05 32 54.3	+9.5
GTA				PcP	**PcP**	**05 35 57.8**	**-1.6**
GTA				sS	sS	05 37 30.6	+3.4
GTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA				pmax	pmax		
	comp=Z,220nm,7.6s						
GTA				LR	LR		
	comp=Z,370nm,16.7s						
GTA				LR	LR		
	comp=Z,530nm,17.4s						
GTA				LR	LR		
	comp=Z,680nm,18.9s						
NONG	**Nongkai**	**28.61**	**251**	P	**P**	**05 32 52.5**	**+0.7**
	comp=Z,11µmcomp=Z,39nm,1.2s						
ZAK	**Zakamensk**	**28.89**	**321**	*e*P	**P**	**05 32 51.4**	**-2.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PETK	**Petropavlovsk-**	**29.46**	**33**	LR	LR	05 45 47.5	
	comp=Z,348nm,19.5s,baz=223,slow=38						
PET	**Petropavlovsk**	**29.86**	**34**	*ce*P	**P**	**05 33 03.3**	**+0.8**
PET				pmax	pmax		
	comp=Z,201nm,1.7s						
CHAI	**Chaiyaphum**	**30.70**	**248**	P	**P**	**05 33 10.0**	**-0.4**
	comp=Z,99nm,1.0s						
MOY	**Mondy**	**30.79**	**322**	*e*P	**P**	**05 33 09.4**	**-1.6**
UTTA	**Uttaradit**	**30.90**	**253**	P	**P**	**05 33 11.0**	**-1.1**
	comp=Z,770nmcomp=Z,102nm,0.8s						
LAMP	**Lampang**	**31.28**	**255**	P	**P**	**05 33 15.4**	**-0.1**
	comp=Z,56nm,0.8s						
PHIT	**Phitsanulok**	**31.29**	**252**	P	**P**	**05 33 15.8**	**+0.2**
	comp=Z,202nm,0.8s						
YAK	**Yakutsk**	**31.45**	**358**	*e*P	**P**	**05 33 16.8**	**+0.4**
YAK				e*PP	**pP**	**05 33 20.9**	**-0.4**
YAK				*e*		05 34 25.0	
YAK				*e*		05 36 09.3	
YAK				*e*S	**S**	**05 38 26.4**	**+3.2**
YAK				e*SS	**sS**	**05 38 33.1**	**+1.9**
YAK				*e*SS	**SnSn**	**05 40 11.2**	**+3.4**
YAK				*e*		05 43 49.0	
YAK				pmax	pmax		
	comp=Z,13nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,173nm,4.7s						
YAK				pmax	pmax		
	comp=E,112nm,5.4s						
YAK				pmax	pmax		
	comp=N,125nm,5.0s						
YAK				smax	smax		
	comp=E,240nm,6.4s						
YAK				smax	smax		
	comp=N,187nm,6.2s						
YAK				MLR	MLR		
	comp=Z,179nm,17.0s						
YAK				MLR	MLR		
	comp=N,190nm,17.0s						
YAK				MLR	MLR		
	comp=E,119nm,24.0s						
CM34	**Chiang Mai Arr**	**31.53**	**256**	P	**P**	**05 33 17.0**	**-0.7**
CM35	**Chiang Mai Arr**	**31.60**	**255**	P	**P**	**05 33 17.0**	**-1.3**
CMMT	**Chiang Mai**	**31.71**	**256**	P	**P**	**05 33 18.0**	**-1.3**
	comp=E,280nmcomp=E,35nm,0.8s						
CHTO	**Chiang Mai**	**31.72**	**256**	P	**P**	**05 33 18.4**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,43nm,0.7s						
CHTO	**Chiang Mai**	**31.72**	**256**	P	**P**	**05 33 18.4**	**-0.9**
CM36	**Chiang Mai Arr**	**31.73**	**255**	P	**P**	**05 33 19.0**	**-0.4**
MA2	**Magadan**	**31.74**	**19**	*i* P	**P**	**05 33 19.0**	**-0.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SUKH	**Sukhothai**	**31.79**	**253**	P	**P**	**05 33 20.3**	**+0.4**
	comp=Z,26nm,0.9s						
CM09	**Chiang Mai Arr**	**31.85**	**255**	P	**P**	**05 33 21.0**	**+0.5**
	comp=Z,170nmcomp=Z,18nm,0.8s						
CM32	**Chiang Mai Arr**	**31.87**	**256**	P	**P**	**05 33 20.0**	**-0.7**
CM04	**Chiang Mai Arr**	**31.88**	**255**	P	**P**	**05 33 20.0**	**-0.8**
	comp=Z,181nmcomp=Z,22nm,0.9s						
CM31	**Chiang Mai Arr**	**31.88**	**255**	P	**P**	**05 33 20.0**	**-0.8**
	comp=Z,532nm,0.5s						
CM31	**Chiang Mai Arr**	**31.88**	**255**	P	**P**	**05 33 19.5**	**-1.3**
CM31				IAmb	IAmb	05 33 21.2	
	comp=Z,22nm,0.9s						
CMAR	**Chiang Mai Arr**	**31.88**	**255**	P	**P**	**05 33 20.2**	**-0.7**
	comp=Z,12nm,0.8s,baz=46,slow=7.1,SNR=47						
CMAR				LR	LR	05 48 16.8	
	comp=Z,376nm,18.8s,baz=98,slow=40						
CMAR	**Chiang Mai Arr**	**31.88**	**255**	*i* P	**P**	**05 33 20.6**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,12nm,0.8s						
CM01	**Chiang Mai Arr**	**31.89**	**255**	P	**P**	**05 33 21.1**	**+0.2**
	comp=Z,190nmcomp=Z,21nm,0.9s						
CM02	**Chiang Mai Arr**	**31.89**	**255**	P	**P**	**05 33 20.0**	**-0.9**
	comp=Z,156nmcomp=Z,22nm,0.9s						
CM15	**Chiang Mai Arr**	**31.90**	**255**	P	**P**	**05 33 20.9**	**0.0**
CM05	**Chiang Mai Arr**	**31.91**	**255**	P	**P**	**05 33 21.0**	**0.0**
	comp=Z,150nmcomp=Z,21nm,0.9s						
CM13	**Chiang Mai Arr**	**31.93**	**255**	P	**P**	**05 33 21.0**	**-0.2**
	comp=Z,147nmcomp=Z,18nm,0.8s						
MHMT	**Maesarieng**	**32.86**	**256**	P	**P**	**05 33 30.0**	**+0.6**
	comp=Z,33nm,0.9s						
FAKI	**Fak Fak**	**33.36**	**179**	P	**P**	**05 33 34.2**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**33.68**	**100**	T	T	06 09 43.7	
	baz=296,slow=75,SNR=82						
H11N1	**WAKE ISLAND Hy**	**33.69**	**100**	T	T	06 09 46.8	
	baz=296,slow=75,SNR=86						
H11N3	**WAKE ISLAND Hy**	**33.70**	**100**	T	T	06 09 44.8	
	baz=296,slow=75,SNR=79						
H11S3	**WAKE ISLAND Hy**	**34.06**	**103**	T	T	06 10 42.4	
	baz=304,slow=75,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**34.06**	**102**	T	T	06 11 13.5	
	baz=304,slow=75,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**34.08**	**102**	T	T	06 10 59.7	
	baz=304,slow=75,SNR=6.9						
SEY	**Seymchan**	**35.00**	**17**	*i* P	**P**	**05 33 45.3**	**-2.2**
SHL	**Shillong**	**35.19**	**272**	P	**P**	**05 33 47.9**	**-1.9**
SHL				pmax	pmax		
	comp=Z,30nm,0.9s						
SHL	**Shillong**	**35.19**	**272**	P	**P**	**05 33 47.9**	**-1.9**
WMQ	**Urumqi**	**36.88**	**303**	*e*P	**P**	**05 34 02.9**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,800nm,6.7s						
SRIT	**Nakonsritamara**	**36.97**	**240**	P	**P**	**05 34 03.6**	**-1.2**
SURT	**Suratani**	**37.34**	**242**	P	**P**	**05 34 11.7**	**+3.7**
	comp=Z,2.1nm,1.1s						
TRTT	**Trang**	**37.40**	**239**	P	**P**	**05 34 10.4**	**+1.9**
DGZ	**Jazzator, Alta**	**38.04**	**313**	*i* P	**P**	**05 34 10.1**	**-3.7**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TAPN	**Taplejung**	**38.27**	**276**	*e*P	**P**	**05 34 15.4**	**-0.8**
	comp=Z,20nm,0.6s						
KULM	**Kulim**	**38.43**	**235**	P	**P**	**05 34 17.4**	**+0.2**
KULM				IAmb	IAmb	05 34 19.3	
	comp=Z,33nm,1.1s						
ODAN	**Odare**	**38.68**	**276**	*e*P	**P**	**05 34 18.5**	**-1.0**
	comp=Z,81nm,0.6s						
IPM	**Ipoh**	**38.74**	**234**	P	**P**	**05 34 19.5**	**-0.3**
ZSN	**Zaisan**	**39.30**	**309**	*e*P	**P**	**05 34 21.9**	**-2.3**
	baz=309						
ZSN	**Zaisan**	**39.30**	**309**	*e*P	**P**	**05 34 21.8**	**-2.3**
RAMN	**Ramite**	**39.33**	**276**	*e*P	**P**	**05 34 24.2**	**-0.8**
	comp=Z,24nm,0.4s						
GUN	**Gumba**	**39.69**	**278**	*e*P	**P**	**05 34 27.3**	**-0.8**
	comp=Z,217nm,0.6s						
PKI	**Pulchoki**	**40.18**	**278**	*e*P	**P**	**05 34 31.1**	**-1.1**
	comp=Z,54nm,0.9s						
PKIN	**Phulchoki**	**40.19**	**278**	*e*P	**P**	**05 34 31.0**	**-1.2**
	comp=Z,20nm,0.4s						
KKN	**Kakani**	**40.23**	**278**	*e*P	**P**	**05 34 31.7**	**-0.8**
	comp=Z,29nm,0.5s						
DMN	**Daman**	**40.43**	**278**	*e*P	**P**	**05 34 33.2**	**-1.0**
	comp=Z,13nm,0.4s						
ZAA0	**Zalesovo Array**	**40.68**	**319**	P	**P**	**05 34 34.1**	**-1.4**
ZALV	**Zalesovo Beam**	**40.68**	**319**	P	**P**	**05 34 34.1**	**-1.4**
	comp=Z,9.8nm,0.8s,baz=100,slow=7.7,SNR=28						
ZALV				PcP	**PcP**	**05 36 35.5**	**-1.5**
	comp=Z,3.9nm,0.4s,baz=111,slow=3.2,SNR=12						
ZALV				ScP	**ScP**	**05 40 23.5**	**-2.2**
	comp=Z,1.2nm,0.6s,baz=103,slow=5.3,SNR=3.8						
ZALV				LR	LR	05 52 13.5	
	comp=Z,478nm,21.0s,baz=100,slow=37						
ZALV	**Zalesovo Beam**	**40.68**	**319**	P	**P**	**05 34 33.3**	**-2.3**
GKN	**Gorkha**	**40.73**	**278**	*e*P	**P**	**05 34 35.4**	**-1.1**
	comp=Z,52nm,0.8s						
MK31	**Makanchi Array**	**40.97**	**307**	P	**P**	**05 34 36.5**	**-1.6**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK31	**Makanchi Array**	**40.97**	**307**	P	**P**	**05 34 36.5**	**-1.6**
MKAR	**Makanchi Array**	**40.97**	**307**	P	**P**	**05 34 36.7**	**-1.4**
	comp=Z,7.1nm,0.5s,baz=95,slow=11,SNR=53						
MKAR				PcP	**PcP**	**05 36 37.2**	**-0.8**

	comp=Z,2.3nm,0.4s,baz=78,slow=3.9,SNR=13						
MKAR				ScP	ScP	05 40 24.6	-2.4
	comp=Z,1.0nm,0.7s,baz=95,slow=4.2,SNR=3.1						
MKAR				LR	LR	05 52 39.6	
	comp=Z,386nm,19.6s,baz=88,slow=38						
MKAR	Makanchi Array	40.97	307	P	P	05 34 36.1	-1.9
TIXI	Tiksi	41.11	359	*ce*P	P	05 34 39.3	+0.5
TIXI				pmax	pmax		
	comp=Z,73nm,2.5s						
TIXI	Tiksi	41.11	359	P	P	05 34 39.0	+0.2
MAKZ	Makanchi	41.18	307	P	P	05 34 38.2	-1.6
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAKZ	Makanchi	41.18	307	P	P	05 34 38.2	-1.6
DANN	Dangsing	41.38	279	*e*P	P	05 34 40.9	-1.1
	comp=Z,42nm,0.5s						
KOLN	Koldanda	41.67	279	*e*P	P	05 34 43.1	-1.2
	comp=Z,47nm,0.8s						
KCSI	Kotacane, Aceh	41.71	236	P	P	05 34 44.9	+0.4
PYUN	Piuthan	42.10	279	*e*P	P	05 34 46.9	-0.9
	comp=Z,132nm,1.1s						
MNSI	Mandailing Nat	42.39	232	P	P	05 34 52.1	+2.1
SEM	Semipalatinsk	42.72	313	*e*P	P	05 34 49.5	-3.1
	comp=Z,20nm,1.0s,baz=313						
SEM	Semipalatinsk	42.72	313	*e*P	P	05 34 49.5	-3.1
SEM				pmax	pmax		
	comp=Z,20nm,1.0s						
SHLS	Shalkode	42.83	302	*e*P	P	05 34 47.7	-5.7
	baz=302						
SHLS	Shalkode	42.83	302	*e*P	P	05 34 47.7	-5.8
KPKS	Kokpek	43.39	302	*e*P	P	05 34 55.4	-2.6
	comp=Z,13nm,1.1s,baz=302						
KPKS	Kokpek	43.39	302	*e*P	P	05 34 55.4	-2.6
KPKS				pmax	pmax		
	comp=Z,13nm,1.1s						
GSI	Gunungsitoli	43.40	234	P	P	05 34 59.9	+1.7
TDK	Taldyqorghan	43.58	305	*e*P	P	05 34 57.3	-2.2
	comp=Z,13nm,0.7s,baz=305						
TDK	Taldyqorghan	43.58	305	*e*P	P	05 34 57.2	-2.2
TDK				pmax	pmax		
	comp=Z,13nm,0.7s						
MDSI	Maura Dua	43.60	222	P	P	05 35 03.7	+4.0
	comp=Z,28nm,1.0s						
SATY	Saty	43.60	302	*e*P	P	05 34 57.7	-2.0
	baz=302						
SATY	Saty	43.60	302	*e*P	P	05 34 57.7	-2.0
KURK	Kurchatov	43.79	313	*i* P	P	05 34 59.1	-1.9
KURK				pmax	pmax		
	comp=Z,22nm,1.0s						
KURK	Kurchatov	43.79	313	P	P	05 34 59.0	-1.9
KURK				IAmb	IAmb	05 35 00.5	
	comp=Z,23nm,0.9s						
MDOK	Medeo	44.59	302	*e*P	P	05 35 05.3	-2.5
	baz=302						
MDOK	Medeo	44.59	302	*e*P	P	05 35 05.2	-2.5
CHKK	Chushkaly	44.61	303	*e*P	P	05 35 05.7	-2.0
	baz=303						
CHKK	Chushkaly	44.61	303	*e*P	P	05 35 05.7	-2.0
TNSS	Tian-Shan	44.67	302	*e*P	P	05 35 07.2	-1.4
	baz=302						
TNSS	Tian-Shan	44.67	302	*e*P	P	05 35 07.2	-1.4
AAA	Alma-Ata	44.69	302	*e*P	P	05 35 07.1	-1.3
	comp=Z,26nm,0.7s,baz=302						
AAA	Alma-Ata	44.69	302	*e*P	P	05 35 07.0	-1.3
AAA				pmax	pmax		
	comp=Z,26nm,0.7s						
KUU	Kurty	45.08	303	*e*P	P	05 35 09.2	-2.3
	comp=Z,19nm,1.0s,baz=303						
KUU	Kurty	45.08	303	*e*P	P	05 35 09.1	-2.3
KUU				pmax	pmax		
	comp=Z,19nm,1.0s						
TKM2	Tokmak 2	45.67	302	P	P	05 35 15.9	-0.4
	SNR=17						
TKM2	Tokmak 2	45.67	302	*i* P	P	05 35 14.8	-1.5
TKM2				pmax	pmax		
	comp=Z,33nm,0.8s						
KSH	Kashi	45.69	297	P	P	05 35 18.9	+2.5
KSH				sP	sP	05 35 35.6	+12
KSH				S	S	05 41 57.3	-1.5
KSH				pmax	pmax		
	comp=Z,27nm,1.0s						
KSH				LR	LR		
	comp=Z,1µm,9.6s						
KBK	Karagaybulak	46.16	301	P	P	05 35 19.9	-0.3
	SNR=7.6						
CHMS	Chumysh	46.28	302	P	P	05 35 20.2	-0.7
	SNR=7.8						
SGDS	Sogindy	46.34	303	*e*P	P	05 35 19.4	-2.0
	baz=303						
SGDS	Sogindy	46.34	303	*e*P	P	05 35 19.4	-2.0
AAK	Ala-Archa	46.50	301	P	P	05 35 22.1	-0.7
	SNR=6.0						
AAK	Ala-Archa	46.50	301	*ce*P	P	05 35 22.0	-0.7
AAK				pmax	pmax		
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	46.50	301	P	P	05 35 22.1	-0.7
AAK				IAmb	IAmb	05 35 22.8	
	comp=Z,8.8nm,0.8s						
UCH	Uchtor	46.52	301	P	P	05 35 23.1	-0.2
	SNR=16						
BTLS	Baital	46.67	305	*e*P	P	05 35 21.1	-2.9
	comp=Z,15nm,1.1s,baz=305						
BTLS	Baital	46.67	305	*e*P	P	05 35 21.0	-2.9
BTLS				pmax	pmax		
	comp=Z,15nm,1.1s						
AML	Almayashu	47.13	301	P	P	05 35 28.0	0.0
	SNR=5.9						
BRZS	Berezniki	47.54	312	*e*P	P	05 35 28.2	-2.4
	comp=Z,9.4nm,1.1s,baz=312						
BRZS	Berezniki	47.54	312	*e*P	P	05 35 28.2	-2.4
BRZS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARSB	Arslanbob	47.75	300	P	P	05 35 32.2	-0.3
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARSB	Arslanbob	47.75	300	P	P	05 35 32.2	-0.3
FITZ	Fitzroy Crossi	48.76	187	P	P	05 35 41.1	+0.9
	comp=Z,6.1nm,0.6s,baz=24,slow=8.3,SNR=6.2						
NIL	Nilore	48.86	290	P	P	05 35 40.6	-0.5
NIL				pmax	pmax		
	comp=Z,25nm,1.0s						
NIL	Nilore	48.86	290	P	P	05 35 40.6	-0.5
NIL				IAmb	IAmb	05 35 41.6	
	comp=Z,25nm,0.9s						
BRVK	Borovoye	49.12	316	P	P	05 35 41.2	-1.5
BRVK				pmax	pmax		
	comp=Z,28nm,0.8s						
BRVK	Borovoye	49.12	316	P	P	05 35 41.2	-1.5
KK31	Karatay Array	49.37	302	P	P	05 35 43.7	-1.2
KK31				pmax	pmax		
	comp=Z,27nm,1.2s						
KK31	Karatay Array	49.37	302	P	P	05 35 43.7	-1.2
KK31				IAmb	IAmb	05 35 44.9	
	comp=Z,27nm,1.1s						
KKAR	Karatay Array	49.37	302	P	P	05 35 43.5	-1.3
KKAR	Karatay Array	49.37	302	P	P	05 35 43.5	-1.3
KKAR	Karatay Array	49.37	302	IAmb	IAmb	05 35 44.9	
	comp=Z,27nm,1.1s						
BTK	Batken	49.55	298	IAmb	IAmb	05 35 47.1	
	comp=Z,11nm,1.1s						
IUG	Iuzhnay	49.84	301	*e*P	P	05 35 46.2	-2.4
	comp=Z,5.3nm,1.0s,baz=301						
IUG	Iuzhnay	49.84	301	*e*P	P	05 35 46.1	-2.4
IUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRAB	Tennant Creek	50.33	177	*i* P	P	05 35 51.6	-0.7
WRAB				pmax	pmax		
	comp=Z,23nm,1.0s						
WRA	Warramunga Arr	50.34	177	P	P	05 35 52.8	+0.4
	comp=Z,18nm,0.8s,baz=351,slow=8.1,SNR=20						
WRA				LR	LR	05 57 42.9	
	comp=Z,52nm,20.4s,baz=340,slow=36						
KBL	Kabul	52.05	292	P	P	05 36 04.9	-0.5
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
KBL	Kabul	52.05	292	P	P	05 36 04.9	-0.5
KBL				IAmb	IAmb	05 36 23.7	
	comp=Z,11nm,0.8s						
CTA	Charters Tower	52.37	162	P	P	05 36 08.5	+1.0
	comp=Z,6.2nm,0.9s,baz=334,slow=6.9,SNR=5.5						
PALK	Pallekele	52.83	255	*i* P	P	05 36 09.4	-1.8
AS31	Alice Springs	54.02	177	P	P	05 36 20.6	+0.9
ASAR	Alice Springs	54.02	177	P	P	05 36 20.6	+0.9
	comp=Z,10nm,0.6s,baz=10,slow=13,SNR=61						
ASAR				LR	LR	06 01 27.6	
	comp=Z,56nm,18.2s,baz=347,slow=38						
ASAR	Alice Springs	54.02	177	P	P	05 36 20.0	+0.3
SVE	Sverdlovsk	54.65	320	*e*P	P	05 36 23.6	-0.3
ARU	Arti	55.82	320	*c i*P	P	05 36 30.5	-1.8
ARU						05 37 28.8	
ARU				S	S	05 44 19.2	+0.7
ARU				SS	SS	05 48 06.5	+2.8
ARU				pmax	pmax		
	comp=Z,29nm,1.6s						
ARU	Arti	55.82	320	P	P	05 36 31.7	-0.7
ARU				IAmb	IAmb	05 36 39.5	
	comp=Z,18nm,1.0s						
ABKAR	Akbulak array	55.84	311	P	P	05 36 30.2	-2.4
ABKAR	Akbulak array	55.84	311	P	P	05 36 30.7	-1.9
ABKAR				IAmb	IAmb	05 36 33.1	
	comp=Z,12nm,0.7s						
KDAK	Kodiak Island	57.29	38	pmax	pmax		
	comp=Z,475nm,1.9s						
HRA	Herat	57.50	293	P	P	05 36 44.3	-0.6
HRA				IAmb	IAmb	05 36 47.0	
	comp=Z,18nm,1.1s						
TOLK	Toolik Lake Re	57.84	25	P	P	05 36 48.3	+1.7
	baz=272						
RND	Reindeer	58.51	31	P	P	05 36 52.4	+1.0
RND				pmax	pmax		
	comp=Z,17nm,0.8s						
RND	Reindeer	58.51	31	P	P	05 36 52.4	+1.0
RND				IAmb	IAmb	05 37 10.2	
	comp=Z,17nm,0.8s						
MDM	Murphy Dome	58.62	29	P	P	05 36 53.0	+0.9
MDM				IAmb	IAmb	05 37 12.0	
	comp=Z,13nm,0.8s						
COLA	College	58.79	30	*i* P	P	05 36 52.9	-0.3
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
POKR	Poker Plat Res	58.95	29	P	P	05 36 56.3	+2.0
	baz=276						
ILAR	Eielson Array	59.22	30	P	P	05 36 56.5	+0.3
	comp=Z,0.8nm,0.9s,baz=286,slow=6.5,SNR=6.4						
ILAR				LR	LR	06 03 49.5	
	comp=Z,84nm,20.3s,baz=306,slow=37						
HDA	Harding Lake	59.23	30	P	P	05 36 56.8	+0.6
	baz=277						
GEYT	Alibeck	59.66	299	P	P	05 36 59.4	-0.3
	comp=Z,1.9nm,0.4s,baz=219,slow=6.9,SNR=3.8						
GEYT	Alibeck	59.66	299	P	P	05 37 00.7	+0.9
KIRV	Kirov	60.41	323	*ce*P	P	05 37 03.5	-0.9
SCRK	Sand Creek	60.58	30	P	P	05 37 06.5	+0.8
	baz=280						
DOT	Dot Lake	60.60	31	IAmb	IAmb	05 37 22.1	
	comp=Z,6.8nm,0.8s						
K27K	Chicken	61.40	30	P	P	05 37 12.5	+1.4
	baz=282						
DZM	Mont Dzumac	62.21	143	P	P	05 37 18.0	+0.8
	comp=Z,10nm,0.7s,baz=259,slow=8.4,SNR=9.0						
DZM	Mont Dzumac	62.21	143	*e*LR	LR	05 55 29.0	
	comp=Z,196nm,25.6s						
DZM	Mont Dzumac	62.21	143	P	P	05 37 17.5	+0.4
DZM				IAmb	IAmb	05 37 19.9	
	comp=Z,11nm,0.8s						
BELG	Belogornoye	62.82	317	*i* P	P	05 37 18.3	-2.5
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
STKA	Stephens Creek	62.89	170	P	P	05 37 22.2	+0.9
	comp=Z,21nm,0.6s,baz=347,slow=7.0,SNR=41						
STKA				LR	LR	06 03 20.3	
	comp=Z,121nm,21.9s,baz=14,slow=35						
STKA	Stephens Creek	62.89	170	P	P	05 37 22.2	+0.9
EPYK	Eagle Plains	63.06	27	P	P	05 37 23.5	+1.3
	baz=285						
EPYK	Eagle Plains	63.06	27	P	P	05 37 23.1	+0.8
EPYK				IAmb	IAmb	05 37 40.3	
	comp=Z,12nm,0.7s						
INK	Inuvik	63.72	24	P	P	05 37 27.8	+1.3
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	Inuvik	63.72	24	P	P	05 37 27.8	+1.3
TMCR	Tamitsa	64.36	331	*e*P	P	05 37 29.5	-1.3
KLMR	Klimovskoe	64.71	327	*e*P	P	05 37 30.8	-2.3
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s						
KLMR	Klimovskoe	64.71	327	*e*P	P	05 37 30.9	-2.2
KLMR				AMP		05 37 46.2	
	comp=Z,30nm,1.4s						
APA	Apatity	65.08	335	⇓*i*P	P	05 37 43.2	+7.8
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,14.0s						
C36M	Paulatuk	66.57	22	P	P	05 37 45.7	+0.7
	baz=295						
C36M	Paulatuk	66.57	22	IAmb	IAmb	05 38 00.4	
	comp=Z,12nm,0.8s						
VRH	Novokhopyorsk	66.67	317	*e*P	P	05 37 43.4	-2.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	66.99	338	P	P	05 37 45.4	-2.4
	comp=Z,5.2nm,0.9s,baz=56,slow=6.6,SNR=7.4						
ARCES				LR	LR	06 11 12.8	
	comp=Z,536nm,18.6s,baz=240,slow=40						
ARCES	ARCESS Array B	66.99	338	P	P	05 37 45.7	-2.0
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARCES	ARCESS Array B	66.99	338	P	P	05 37 45.7	-2.0
LPSR	Galich'ya Gora	67.79	319	*e*P	P	05 37 51.2	-1.8
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
OBN	Obninsk	68.15	322	*ce*P	P	05 37 53.5	-1.7
OBN				*e*		05 40 23.5	
OBN				pmax	pmax		
	comp=Z,77nm,2.5s						
VSR	Storozhevoye	68.17	317	*e*P	P	05 37 52.4	-3.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEI	Tsey	68.31	308	*e*P	P	05 37 54.9	-1.9
ZEI				pmax	pmax		
	comp=Z,29nm,1.4s						
KBZ	Khabaz	68.64	309	P	P	05 37 58.3	-0.2
	comp=Z,20nm,0.9s,baz=83,slow=3.8,SNR=22						
KBZ				LR	LR	06 11 47.9	
	comp=Z,375nm,18.1s,baz=43,slow=39						
KBZ	Khabaz	68.64	309	*ce*P	P	05 37 57.3	-1.2
KBZ				pmax	pmax		
	comp=Z,26nm,1.0s						
KIV	Kislovodsk	68.69	309	*e*P	P	05 37 58.7	-0.3
KIV				pmax	pmax		
	comp=Z,131nm,1.1s						
KIV				MLR	MLR		
	comp=Z,539nm,17.0s						
KIV	Kislovodsk	68.69	309	P	P	05 37 58.3	-0.7
GNI	Garni	68.73	305	*ce*P	P	05 37 57.4	-2.0
GNI				pmax	pmax		
	comp=Z,34nm,1.3s						
GNI	Garni	68.73	305	P	P	05 38 00.7	+1.4
GNI				IAmb	IAmb	05 38 17.3	
	comp=Z,20nm,0.9s						
FINES	FINESS Array B	70.47	331	P	P	05 38 07.5	-2.0
	comp=Z,5.5nm,0.5s,baz=69,slow=5.9,SNR=44						
FINES				LR	LR	06 13 24.8	
	comp=Z,545nm,21.4s,baz=333,slow=40						
MNK	Minsk	72.95	324	*i* P	P	05 38 23.6	-0.9
	comp=E,7.0nm,1.0s						
MNK				*i* P	P	05 38 23.6	-0.9
	comp=N,39nm,1.0s						
MNK				*i* P	P	05 38 23.6	-0.9
	comp=Z,19nm,0.9s						
MNK				*i* PcP	PcP	05 38 40.4	-1.1
MNK				*i* PP	PP	05 41 05.7	-0.8
MNK				*i* PPP	PPP	05 42 50.1	
MNK				*i* S	S	05 47 52.0	+1.7
MNK				*i* ScS	ScS	05 48 44.0	+13
MNK				*i* SS	SS	05 52 59.1	+29
MNK				*i* SSS	SSS	05 56 19.5	
MNK				*i* LQ	LQ	06 04 28.7	
MNK				*i* LR	LR	06 07 16.6	
MNK				*i* LRM	MLR	06 13 30.8	
	comp=Z,329nm,18.1s						
MNK				*i* LRM	MLR	06 13 45.5	
	comp=N,567nm,18.1s						
MNK				*i* LRM	MLR	06 14 50.1	
	comp=E,93nm,18.4s						
SOCY	Socotra	73.23	274	P	P	05 38 25.9	-1.1
NACGM	Naroch	73.31	324	*i* P	P	05 38 27.1	+0.4
NACGM				*i* P	P	05 38 27.1	+0.4
NACGM				*i* P	P	05 38 27.1	+0.4
NACGM				*i* Pb	pP	05 38 28.2	-3.7
	comp=Z,38nm,1.3s						
NACGM				*i* PP	PP	05 41 10.8	+1.2
NACGM				*i* PPP	PPP	05 42 55.8	
NACGM				*i* S	S	05 47 23.6	-31
NACGM				*i* SS	SS	05 52 37.8	+2.2
NACGM				*i* SSS	SSS	05 56 21.2	
NACGM				*i* LQ	LQ	06 04 41.8	
NACGM				*i* LR	LR	06 10 47.1	
YKA	Yellowknife Ar	73.34	26	P	P	05 38 26.2	-0.4
	comp=Z,1.2nm,0.9s,baz=301,slow=5.4,SNR=12						
AKASG	Malin Array Be	74.07	320	P	P	05 38 30.3	-0.8
	comp=Z,5.6nm,0.4s,baz=52,slow=6.3,SNR=26						
AKASG				LR	LR	06 14 20.9	
	comp=Z,220nm,20.0s,baz=320,slow=38						
AKASG	Malin Array Be	74.07	320	*i* P	P	05 38 30.8	-0.4
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKBB	Malin Array Si	74.07	320	*ce*P	P	05 38 29.0	-2.2
AKBB	Malin Array Si	74.07	320	IAmb	IAmb	05 38 31.0	
	comp=Z,24nm,1.1s						
RAYN	Ar Rayn	75.15	289	P	P	05 38 37.7	-0.3
RAYN				pmax	pmax		
	comp=Z,40nm,0.9s						
RAYN	Ar Rayn	75.15	289	P	P	05 38 37.7	-0.3
GAZ	Gaziantep	75.33	305	IAmb	IAmb	05 38 40.7	
	comp=Z,29nm,0.9s						
SORM	Soroca	75.83	318	⇑P	P	05 38 40.7	-0.7
BRTR	Keskin Array B	76.61	308	P	P	05 38 45.2	-1.0
	comp=Z,20nm,1.0s,baz=96,slow=4.3,SNR=56						
BRTR				LR	LR	06 17 16.2	
	comp=Z,108nm,18.0s,baz=21,slow=40						
BRTR	Keskin Array B	76.61	308	P	P	05 38 44.8	-1.4
NB2	NORSAR Subarra	76.64	334	P	P	05 38 43.7	-2.1
	comp=Z,5.4nm,0.7s,baz=50,slow=5.9						
NOA	NORSAR Array B	76.64	334	P	P	05 38 43.4	-2.4
	comp=Z,1.9nm,0.5s,baz=49,slow=5.5,SNR=6.5						
NOA				LR	LR	06 13 40.9	
	comp=Z,192nm,21.4s,baz=60,slow=37						
TPGR	Topolog	77.44	315	⇑P	P	05 38 50.3	-0.4
TESR	Tescani	77.65	317	⇓P	P	05 38 51.7	0.0
BIZ	Bicaz	77.75	317	⇓P	P	05 38 52.5	+0.2
HARR	Harsova	77.83	315	⇑P	P	05 38 52.8	+0.1
BUR08	Bucovina Ar. S	77.90	318	P	P	05 38 52.1	-1.2
BUR08				IAmb	IAmb	05 38 59.0	
	comp=Z,7.7nm,0.8s						
BURAR	Bucovina Array	77.90	318	⇑P	P	05 38 53.2	-0.1
BURAR	Bucovina Array	77.90	318	P	P	05 38 52.0	-1.2
VRI	Vrincioaia	77.94	316	⇓P	P	05 38 53.6	+0.2
BISRR	Bisoca	78.12	316	⇓P	P	05 38 55.1	+0.6
KWP	Kalwaria Pacla	78.21	321	IAmb	IAmb	05 38 56.2	
	comp=Z,15nm,0.7s						
OZUR		78.38	317	⇑P	P	05 38 56.1	+0.2
DOPR	Dopca	78.68	317	⇑P	P	05 38 58.4	+0.9
KOLS	Kolonicke sedl	78.83	321	*e*P	P	05 38 58.6	+0.3
KOLS	Kolonicke sedl	78.83	321	*e*P	P	05 38 58.6	+0.3
CRVS	Cervenica-Dubn	79.29	321	*e*P	P	05 39 01.8	+1.0
CRVS	Cervenica-Dubn	79.29	321	*e*P	P	05 39 01.8	+1.0
OJC	Ojcow	79.42	323	*e*P	P	05 39 02.1	+0.6
OJC	Ojcow	79.42	323	IAmb	IAmb	05 39 02.7	
	comp=Z,22nm,1.1s						
NIE	Niedzica	79.62	322	*e*P	P	05 39 03.5	+1.0
G05D	Wamic, OR	79.70	43	P	P	05 39 04.5	+1.4
	baz=303						
LANS	Liptovska Anna	80.22	322	*e*P	P	05 39 06.6	+0.7
LANS				pmax	pmax		
	comp=Z,7.0nm,1.5s						
LANS	Liptovska Anna	80.22	322	*e*P	P	05 39 06.6	+0.7
DAMY	Dhamar	80.29	281	IAmb	IAmb	05 39 09.6	
	comp=Z,25nm,0.8s						
J04D	Umpqua Nationa	80.31	45	P	P	05 39 08.2	+1.5
	baz=303						
NEW	Newport	80.38	39	P	P	05 39 07.9	+1.2
	baz=306						
GZR	Gura Zlata	80.53	317	⇓P	P	05 39 08.3	+0.7
EIL	Elat	80.56	299	LR	LR	06 22 22.7	
	comp=Z,94nm,18.1s,baz=75,slow=41						
PSZ	Piszkesteto	80.71	321	⇓P	P	05 39 08.4	-0.1
PSZ	Piszkesteto	80.71	321	*e*P	P	05 39 09.8	+1.3
PSZ	Piszkesteto	80.71	321	P	P	05 39 09.2	+0.6
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSZ	Piszkesteto	80.71	321	P	P	05 39 09.2	+0.6
PINE	Pine Mountain	80.72	44	P	P	05 39 10.6	+1.7
PINE				IAmb	IAmb	05 39 28.0	
	comp=Z,14nm,1.1s						
L04D	Klamath Falls	80.75	46	P	P	05 39 10.1	+1.2
	baz=303						
J05D	Fort Rock, OR	80.83	45	P	P	05 39 10.7	+1.3
	baz=304						
KSP	Ksiaz	80.85	324	*e*P	P	05 39 09.8	+0.6
MORC	Moravsky Berou	80.86	323	⇑P	P	05 39 09.1	-0.1
MORC	Moravsky Berou	80.86	323	*e*P	P	05 39 10.1	+0.8
VYHS	Vyhne	80.95	322	*e*P	P	05 39 10.9	+1.2
VYHS				pmax	pmax		
	comp=Z,24nm,1.3s						
VYHS	Vyhne	80.95	322	*e*P	P	05 39 10.9	+1.2
HERR	Herculane	81.03	317	⇓P	P	05 39 10.5	+0.3
KRLC	Kraliky	81.07	324	*e*P	P	05 39 10.8	+0.4
KRLC	Kraliky	81.07	324	*e*P	P	05 39 10.8	+0.4
BZS	Buzias	81.08	318	⇑P	P	05 39 10.8	+0.4
DPC	Dobruska-Polom	81.14	324	*e*P	P	05 39 11.5	+0.8
DPC	Dobruska-Polom	81.14	324	*e*P	P	05 39 11.5	+0.8
JAVC	Velka Javorina	81.35	322	*e*P	P	05 39 13.9	+2.0
MDVR	Moldovita	81.50	317	⇑P	P	05 39 13.1	+0.4
VRAC	Vranov	81.64	323	LR	LR	06 17 27.1	
	comp=Z,338nm,18.3s,baz=22,slow=37						
VRAC	Vranov	81.64	323	*e*P	P	05 39 14.5	+1.1
SMOL	Smolenice	81.68	322	*e*P	P	05 39 15.1	+1.5
SMOL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SMOL	Smolenice	81.68	322	*e*P	P	05 39 15.1	+1.5
VTS	Vitosha	81.81	315	⇓P	P	05 39 15.4	+0.8
MODS	Modra-Piesok	81.85	322	*e*P	P	05 39 15.1	+0.6
MODS				pmax	pmax		
	comp=Z,37nm,1.5s						
MODS	Modra-Piesok	81.85	322	*e*P	P	05 39 15.1	+0.6
KRUC	Moravsky	81.89	323	*e*P	P	05 39 15.7	+1.0
CSKK	Cskako	81.93	321	*e*P	P	05 39 15.2	+0.2
ZST	Bratislava	82.05	322	*e*P	P	05 39 16.9	+1.4
ZST	Bratislava	82.05	322	*e*P	P	05 39 16.9	+1.4
CLL	Collm	82.17	326	*i* P	P	05 39 16.4	+0.3
	comp=Z,17nm,1.2s						
CLL	Collm	82.17	326	*i* P	P	05 39 16.4	+0.3
CLL				pmax	pmax		
	comp=Z,17nm,1.2s						
PRU	Pruhonice	82.26	325	*e*P	P	05 39 17.2	+0.6
PRU	Pruhonice	82.26	325	*e*P	P	05 39 17.2	+0.6
BMO	Blue Mountains	82.27	42	P	P	05 39 15.1	-1.8
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BMO	Blue Mountains	82.27	42	P	P	05 39 15.1	-1.8
MORH	Mrgy, Hungar	82.41	320	*e*P	P	05 39 17.6	+0.2
MORH	Mrgy, Hungar	82.41	320	*e*P	P	05 39 18.1	+0.7
MPLH	Magyarpolny	82.44	321	*e*P	P	05 39 17.5	-0.1
CONA	Conrad Observa	82.87	322	*e*P	P	05 39 21.2	+1.3
	comp=Z,14nm,0.9s,SNR=5.6						
DIVS	Divibare	82.90	318	⇓*i*P	P	05 39 19.9	-0.3
DIVS	Divibare	82.90	318	IAmb	IAmb	05 39 22.8	
	comp=Z,12nm,0.8s						
STIP	Stip	82.98	315	*i* P	P	05 39 19.5	-1.0
NKC	Novy Kostel	83.13	326	*e*P	P	05 39 22.1	+0.9
NKC	Novy Kostel	83.13	326	*e*P	P	05 39 22.1	+0.9
FCC	Fort Churchill	83.22	22	P	P	05 39 20.2	-1.2
FCC				pmax	pmax		
	comp=Z,11nm,1.0s						
FCC	Fort Churchill	83.22	22	P	P	05 39 20.2	-1.2
FCC				IAmb	IAmb	05 39 36.5	
	comp=Z,11nm,1.0s						
SKO	Skopje	83.28	315	*i* P	P	05 39 21.4	-0.7
KHC	Kasperske Hory	83.29	324	*ce*P	P	05 39 21.1	-0.9
KHC				pmax	pmax		
	comp=Z,23nm,1.7s						
KHC	Kasperske Hory	83.29	324	*e*P	P	05 39 22.5	+0.5
BBLS	Lazići	83.38	318	⇓*i*P	P	05 39 24.0	+1.4
FFC	Flin Flon	83.38	28	P	P	05 39 28.2	+5.9
FFC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FFC	Flin Flon	83.38	28	P	P	05 39 28.2	+5.8
FFC				IAmb	IAmb	05 39 38.2	
	comp=Z,8.2nm,0.9s						
SJES	Sjenica	83.40	317	⇓*i*P	P	05 39 23.0	+0.2
GERES	GERESS Array B	83.41	324	P	P	05 39 21.6	-1.1
	comp=Z,1.3nm,0.6s,baz=45,slow=4.5,SNR=12						
GERES				LR	LR	06 21 44.0	

	comp=Z,286nm,18.1s,baz=24,slow=39						
ARSA	Arzberg	83.47	322	*e*P	P	05 39 23.6	+0.6
	comp=Z,5.2nm,0.5s						
HAPS	Han Pijesak,BI	83.51	318	*e*P	P	05 39 22.9	-0.5
MOA	Molln	83.75	323	*e*P	P	05 39 25.6	+1.2
	comp=Z,14nm,1.5s						
MFID	Camas Ranch	83.97	43	P	P	05 39 26.6	+0.8
PAHR	Pah Rah Range	83.99	47	P	P	05 39 26.4	+0.4
UPM	Unac-Piva	84.06	317	*e*P	P	05 39 25.4	-0.9
GRF	Grafenberg Arr	84.09	326	*e*P	P	05 39 27.3	+1.3
	comp=Z,25nm,1.1s,baz=57,slow=4.8						
SOKA	Soboth	84.09	322	*i* P	P	05 39 26.9	+0.7
	comp=Z,29nm,0.9s,SNR=8.6						
BLY	Banja Luka	84.11	319	*e*P	P	05 39 26.9	+0.6
CMB	Columbia Colle	84.30	49	P	P	05 39 26.9	-0.5
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMB	Columbia Colle	84.30	49	P	P	05 39 26.9	-0.5
CMB				IAmb	IAmb	05 39 43.6	
	comp=Z,8.2nm,1.1s						
PDG	Podgorica	84.32	316	⇑P	P	05 39 28.1	+0.7
PDG	Podgorica	84.32	316	*e*P	P	05 39 28.0	+0.7
PDG	Podgorica	84.32	316	P	P	05 39 26.9	-0.5
CRES	Cresnjev	84.40	321	⇓*i*P	P	05 39 29.4	+1.6
EGMT	Eagleton	84.41	36	P	P	05 39 28.7	+0.8
	baz=311						
BRY	Bratogost	84.46	317	*e*P	P	05 39 29.0	+0.7
OBKA	Obir	84.46	322	*e*P	P	05 39 28.8	+0.7
	comp=Z,15nm,0.7s						
PDKS	Podkum	84.50	321	*e*P	P	05 39 28.6	+0.3
DRME	Dracevica, Mon	84.51	316	*e*P	P	05 39 29.1	+0.8
TREB	Trebinje	84.68	317	*e*P	P	05 39 29.7	+0.5
HLID	Hailey	84.70	42	P	P	05 39 30.9	+1.4
	baz=308						
BOJS	Bojanci	84.72	321	*i* P	P	05 39 30.8	+1.4
KBA	Koelnbreinsper	84.73	323	*e*P	P	05 39 30.1	+0.5
	comp=Z,16nm,0.8s,SNR=5.3						
HCY	Herceg Novi	84.76	317	*e*P	P	05 39 23.0	-6.6
LJU	Ljubljana	84.77	321	⇓*i*P	P	05 39 30.1	+0.5
MYKA	Terra Mystica	84.86	322	*e*P	P	05 39 30.2	+0.1
	comp=Z,15nm,0.6s,SNR=6.4						
BOZ	Bozeman (W)	84.99	39	P	P	05 39 31.6	+0.7
	baz=310						
CEY	Cerknica	85.02	321	*e*P	P	05 39 31.8	+0.9
ABTA	Abfaltersbach	85.38	323	*e*P	P	05 39 32.3	-0.4
	comp=Z,24nm,0.9s,SNR=8.9						
TRI	Trieste	85.39	322	P	P	05 39 31.7	-1.0
TRI				pmax	pmax		
	comp=Z,34nm,1.0s						
TRI	Trieste	85.39	322	P	P	05 39 31.7	-1.0
NVAR	Mina Array Bea	85.41	48	P	P	05 39 34.4	+1.1
	comp=Z,2.1nm,0.6s,baz=293,slow=5.5,SNR=16						
NVAR	Mina Array Bea	85.41	48	P	P	05 39 33.4	+0.2
WATA	Walderalm	85.47	324	*i* P	P	05 39 34.1	+0.8
	comp=Z,13nm,1.1s						
MLAC	Mammoth, Mammo	85.53	49	P	P	05 39 35.4	+1.5
	baz=306						
MOTA	Moosalm	85.71	324	*e*P	P	05 39 34.7	+0.3
	comp=Z,9.5nm,0.8s						
SQTA	Sankt Quirin	85.74	324	*e*P	P	05 39 34.8	+0.3
	comp=Z,7.5nm,0.8s						
RETA	Reutte	85.78	324	*e*P	P	05 39 35.8	+1.0
	comp=Z,12nm,1.1s						
ELK	Elko	85.94	44	LR	LR	06 11 40.3	
	comp=Z,57nm,21.9s,baz=358,slow=31						
EKA	Eskdalemuir Ar	86.01	336	LR	LR	06 21 32.1	
	comp=Z,382nm,18.4s,baz=0.0,slow=38						
FETA	Feichten	86.11	324	*i* P	P	05 39 36.8	+0.3
	comp=Z,10nm,0.9s						
CTI	Castel Tesino	86.29	323	P	P	05 39 37.7	+0.4
CTI				pmax	pmax		
	comp=Z,18nm,1.1s						
CTI	Castel Tesino	86.29	323	P	P	05 39 37.6	+0.4
CTI				IAmb	IAmb	05 39 38.1	
	comp=Z,18nm,1.1s						
H17A	Grant Village	86.33	39	P	P	05 39 40.7	+3.0
	baz=310						
DAVA	Damuels	86.36	324	*e*P	P	05 39 38.2	+0.5
	comp=Z,25nm,1.2s,SNR=5.9						
BFO	Black Forest	86.41	326	P	P	05 39 38.6	+0.8
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	86.41	326	P	P	05 39 38.6	+0.8
BFO				IAmb	IAmb	05 39 57.4	
	comp=Z,6.3nm,0.9s						
RLMT	Red Lodge	86.56	38	P	P	05 39 40.2	+1.4
	baz=311						
DAVOX	Davos/Dischmat	86.71	324	LR	LR	06 24 04.1	
	comp=Z,147nm,19.0s,baz=64,slow=40						
TEOL	Teolo	86.73	322	P	P	05 39 39.2	-0.1
ECH	Echery	87.05	326	IAmb	IAmb	05 39 42.3	
	comp=Z,17nm,1.1s						
LAO	LASA Array	87.09	36	P	P	05 39 43.1	+1.9
	baz=313						
TPNV	Topopah Spring	87.60	48	P	P	05 39 44.9	+0.9
	baz=307						
DUG	Dugway, Tooele	87.73	44	P	P	05 39 44.8	+0.3
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	87.73	44	P	P	05 39 45.8	+1.4
	baz=309						
DUG	Dugway, Tooele	87.73	44	P	P	05 39 44.8	+0.3
AQU	L'Aquila	87.76	319	P	P	05 39 44.7	+0.3
AQU				pmax	pmax		
	comp=Z,34nm,0.8s						
AQU	L'Aquila	87.76	319	⇓*i*P	P	05 39 45.8	+1.4
AQU	L'Aquila	87.76	319	P	P	05 39 44.7	+0.3
BW06	Boulder Array	87.95	40	P	P	05 39 46.2	+0.6
	baz=311						
PDAR	Pinedale Array	87.95	40	P	P	05 39 46.0	+0.3
	comp=Z,1.8nm,0.8s,baz=298,slow=1.4,SNR=14						
PDAR				LR	LR	06 20 41.0	
	comp=Z,56nm,19.4s,baz=1.0,slow=37						
PDAR	Pinedale Array	87.95	40	P	P	05 39 44.7	-0.9
MPU	Maple Canyon	88.54	43	P	P	05 39 48.7	+0.3
ULM	Lac du Bonnet	89.21	28	P	P	05 39 50.7	-0.3
	comp=Z,2.2nm,1.0s,baz=309,slow=6.5,SNR=3.7						
ULM				LR	LR	06 22 09.2	
	comp=Z,105nm,18.1s,baz=357,slow=37						
ULM	Lac du Bonnet	89.21	28	P	P	05 39 48.5	-2.5
ULM				IAmb	IAmb	05 40 06.5	
	comp=Z,12nm,0.9s						
PPT	Papeete	89.65	111	LR	LR	06 13 29.9	
	comp=Z,84nm,19.6s,baz=296,slow=31						
PPT2	Papeete2	89.66	111	*e*LR	LR	06 08 19.1	
	comp=Z,122nm,22.0s						
RSSD	Black Hills	89.98	36	P	P	05 39 56.3	+1.1
	baz=315						
N23A	Red Feather La	91.21	40	P	P	05 40 02.5	+1.6
	baz=314						
WUAZ	Wupatki	91.58	47	P	P	05 40 03.9	+1.3
	baz=310						
TBI	Tubuai	92.81	115	*e*LR	LR	06 09 43.4	
	comp=Z,169nm,24.8s						
214A	Organ Pipe Nat	92.90	50	P	P	05 40 10.0	+1.3
	baz=309						
ECSD	EROS Data Cent	93.90	33	P	P	05 40 14.1	+1.1
	baz=320						
TUC	Tucson	94.01	49	P	P	05 40 15.3	+1.5
	baz=310						
KEST	Kesra	94.51	316	P	P	05 40 15.5	-0.6
	comp=Z,5.6nm,0.9s,baz=27,slow=4.5,SNR=5.6						
ESDC	Sonseca Array	98.75	327	P	P	05 40 34.1	-1.0
	comp=Z,2.1nm,0.9s,baz=19,slow=3.8,SNR=8.4						
ESDC				LR	LR	06 30 57.6	
	comp=Z,173nm,18.2s,baz=345,slow=39						
SYO	Syowa Base	118.89	204	⇓*e*Pdiff	Pdif	05 42 05.8	+2.2
KIC	Kosan Boka	124.28	304	*e*PKIKP	PKiKP	05 45 58.6	+3.4
	comp=Z,3.7nm,0.4s						
TIC	Toumodi	124.28	304	*e*PKIKP	PKiKP	05 45 58.4	+3.2
LIC	Lamto	124.57	304	*e*PKIKP	PKiKP	05 45 59.1	+3.3
	comp=Z,6.0nm,0.5s						

MOS ***13*** *05:41:20.6±1.1, 52°.03N×105°.77E, h9^{km}, mb3.6/1 Error ellipse: s-maj=12.3km s-min=9.0km az=45.3*

MOS Felt (III) at Bolshoye Goloustnoye; (II-III) at Irkutsk;(II) at Shelekhov.

BYKL ***13*** *05:41:21.9±0.1, 52°.08N×105°.68E, h18^{km}±2^{km}, FELT I=III-IV MSK at Bolshoe Goloustnoe, III at Kabansk, II-III at Irkutsk, II at Shelehov*

ISC 13 05:41:21.0±0.7**, 52°.07N**±0°.03×**105°.76E**±0°.02**, h10**^{km}**, n37,** σ**1^{s}.65**/76**, 6C-3D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGT	Bolshoye Golou	0.22	264	⇓*i*Pg	Pg	05 41 26.7	+1.1
BGT				*e*Sg	Sg	05 41 30.0	+1.4
BGT				Pmax			
	1µm,0.1s						
BGT				Smax			
	11µm,0.1s						
BGT	Bolshoye Golou	0.22	264	⇓*i*PG	Pg	05 41 26.7	+1.1
BGT				*e*		05 41 30.0	
BGT				pmax	pmax		
	comp=Z,1µm,0.1s						
BGT				smax	smax		
	comp=N,11µm,0.1s						
KAB	Kabansk	0.55	92	*e*Pg	Pb	05 41 33.3	+0.4
KAB				*e*		05 41 40.9	
KAB				*e*Sg	Sb	05 41 41.8	+0.9
KAB				Pmax			
	comp=N,963nm,0.1s						
KAB				Smax			
	comp=N,12µm,0.3s						
KAB	Kabansk	0.55	92	*e*PG	Pb	05 41 33.4	+0.5
KAB				*e*		05 41 42.0	
KAB				pmax	pmax		
	comp=Z,966nm,0.2s						
KAB				smax	smax		
	comp=N,15µm,0.4s						
LSTR	Listvyanka	0.61	251	⇑*i*Pg	Pb	05 41 32.7	-1.0
LSTR				*e*Sg	Sg	05 41 40.2	-0.6
LSTR				Pmax			
	comp=N,208nm,0.1s						
LSTR				Smax			
	comp=N,2µm,0.2s						
LSTR	Listvyanka	0.61	251	⇑*i*PG	Pb	05 41 32.7	-1.0
LSTR				*e*		05 41 40.2	
LSTR				pmax	pmax		
	comp=Z,210nm,0.1s						
LSTR				smax	smax		
	comp=N,2µm,0.2s						
FFNB	Fofonovo	0.62	92	⇓*i*Pg	Pb	05 41 34.2	+0.2
FFNB				*e*Sg	Sb	05 41 43.3	+0.5
FFNB				Pmax			
	comp=N,97nm,0.3s						
FFNB				Smax			
	comp=N,1µm,0.3s						
TRG	Tyrgan	0.78	27	*e*Pg	Pb	05 41 36.7	0.0
TRG				*e*Sg	Sb	05 41 47.7	+0.3
TRG				*e*		05 41 51.1	
TRG				Pmax			
	comp=N,263nm,0.1s						
TRG				max			
	comp=N,3µm,0.2s						
TRG	Tyrgan	0.78	27	⇑*i*PG	Pb	05 41 36.8	0.0
TRG				*e*		05 41 47.8	
TRG				pmax	pmax		
	comp=Z,172nm,0.2s						
TRG				smax	smax		
	comp=N,3µm,0.1s						
HRMR	Khuramsha	0.86	120	⇑*i*Pg	Pb	05 41 38.0	-0.2
HRMR				*e*Sg	Sb	05 41 50.2	+0.4
HRMR				Pmax			
	comp=N,1µm,0.5s						
HRMR				Smax			
	comp=N,7µm,0.2s						
IVK	Ivanovka	0.87	253	*e*Pg	Pg	05 41 37.3	-0.6
IVK				*e*Sg	Sg	05 41 48.3	-0.9
IVK				*e*Sb	Sn	05 41 53.4	+1.2
IVK				Pmax			
	comp=N,289nm,0.2s						
IVK				Smax			
	comp=N,1µm,0.1s						
IVK	Ivanovka	0.87	253	⇑*i*PG	Pg	05 41 37.3	-0.6
IVK				*e*		05 41 48.3	
IVK				pmax	pmax		
	comp=Z,219nm,0.1s						
IVK				smax	smax		
	comp=N,1µm,0.2s						
IRK	Irkutsk	0.93	281	*e*Pg	Pb	05 41 39.0	-0.3
IRK				*e*Sg	Sg	05 41 50.7	-0.4
IRK				*e*Sb	Sn	05 41 55.0	+1.4
IRK				Pmax			
	comp=N,1µm,0.2s						
IRK				max			
	comp=N,10µm,0.2s						
IRK	Irkutsk	0.93	281	*e*PG	Pg	05 41 38.4	-0.6
IRK				*e*		05 41 49.6	
IRK				pmax	pmax		
	comp=Z,606nm,0.2s						
IRK				smax	smax		
	comp=N,10µm,0.2s						
ZRHB	Zarechye	0.98	60	*e*Pg	Pn	05 41 41.2	+0.3
ZRHB				*e*Sg	Sn	05 41 54.8	-0.1
ZRHB				Pmax			
	comp=N,188nm,0.3s						
ZRHB				Smax			
	comp=N,4µm,0.7s						
TLY	Talaya	1.37	254	*e*Pg	Pn	05 41 45.8	-0.4
TLY				*e*Sg	Sb	05 42 03.2	-1.0
TLY				*e*		05 42 05.0	
TLY				Pmax			
	comp=N,212nm,0.2s						
TLY				max			
	comp=N,2µm,0.2s						
TLY	Talaya	1.37	254	*c* *i*PG	Pn	05 41 45.8	-0.4
TLY				*e*		05 41 46.7	
TLY				*e*		05 42 03.4	
TLY				pmax	pmax		
	comp=Z,216nm,0.2s						
TLY				smax	smax		
	comp=E,2.0nm,0.2s						
OGRR	Ongureny	1.93	35	*e*PN	Pb	05 41 56.1	-0.2
OGRR				*e*		05 41 57.7	
OGRR				*e*		05 42 22.9	
OGRR				pmax	pmax		
	comp=Z,48nm,0.4s						
OGRR				smax	smax		
	comp=E,505nm,1.3s						
ARS	Arshan	2.07	267	*e*Pn	Pn	05 41 56.2	+0.4
ARS				*e*Pg	Pb	05 41 57.6	-1.1
ARS				*e*Sg	Sb	05 42 24.0	-0.4
ARS				Pmax			
	comp=E,166nm,0.6s						
ARS				Smax			
	comp=E,2µm,0.5s						
ARS	Arshan	2.07	267	*e*PN	Pn	05 41 56.3	+0.4
ARS				*e*		05 41 57.7	
ARS				*e*		05 42 23.9	
ARS				pmax	pmax		
	comp=Z,114nm,0.3s						
ARS				smax	smax		
	comp=E,2µm,0.5s						
MXMB	Maximikha	2.18	56	*e*Pn	Pb	05 41 58.9	-1.6
MXMB				*e*Pg	Pg	05 42 01.6	-1.1
MXMB				*e*Sn	Sn	05 42 25.5	+1.2
MXMB				*e*Sg	Sg	05 42 30.6	-0.3
ZAK	Zakamensk	2.30	224	*e*Pn	Pn	05 41 59.4	+0.4
ZAK				*e*Pg	Pb	05 42 02.4	-0.2
ZAK				*e*Sg	Sg	05 42 32.4	-2.4
ZAK				Pmax			
	comp=E,30nm,0.3s						
ZAK				Smax			
	comp=E,365nm,0.3s						
ZAK	Zakamensk	2.30	224	*e*PN	Pn	05 41 59.5	+0.4
ZAK				*e*		05 42 02.2	
ZAK				*e*		05 42 32.1	
ZAK				pmax	pmax		
	comp=Z,30nm,0.2s						
ZAK				smax	smax		
	comp=N,365nm,0.4s						
MOY	Mondy	2.98	264	*e*Pn	Pn	05 42 09.6	+1.1
MOY				*e*		05 42 12.4	
MOY				*e*Pg	Pb	05 42 14.2	-0.1
MOY				*e*		05 42 48.1	
MOY				*e*Sg	Sb	05 42 51.9	+1.1
MOY				*e*		05 43 01.0	
MOY				Pmax			
	comp=N,64nm,0.5s						
MOY				max			
	comp=N,756nm,0.6s						
MOY	Mondy	2.98	264	*e*PN	Pb	05 42 12.4	-1.9
MOY				*e*		05 42 50.3	
MOY				pmax	pmax		
	comp=Z,64nm,0.3s						
MOY				smax	smax		
	comp=E,751nm,0.5s						
SYVR	Suvo	3.02	57	*e*Pn	Pn	05 42 09.4	+0.4
SYVR				*e*Pg	Pb	05 42 16.5	+1.6
SYVR				*e*Sg	Sg	05 42 57.1	-1.0
SYVR				Pmax			
	comp=E,22nm,0.5s						
SYVR				Smax			
	comp=E,95nm,0.3s						
ORL	Orlik	3.68	280	*e*Pn	Pn	05 42 19.4	+1.3
ORL				*e*Pg	Pb	05 42 26.2	0.0
ORL				*e*Sn	Sn	05 42 59.4	-2.2
ORL				*e*		05 43 04.1	
ORL				*e*Sg	Sb	05 43 13.8	+2.9
ORL				Pmax			
	comp=E,40nm,0.5s						
ORL				Smax			
	comp=E,154nm,0.6s						
ORL	Orlik	3.68	280	*e*PN	Pn	05 42 20.0	+1.9
ORL				*e*		05 42 26.3	
ORL				*e*		05 43 13.8	
ORL				pmax	pmax		
	comp=Z,44nm,0.3s						
ORL				smax	smax		
	comp=N,159nm,0.8s						
YLYR	Ulyunkhan	4.28	47	*e*Pn	Pn	05 42 26.7	+0.5
YLYR				*e*		05 42 33.7	
YLYR				*e*Pg	Pb	05 42 38.8	+2.4
YLYR				*e*Sn	Sn	05 43 14.8	-1.4
YLYR				*e*Sg	Sg	05 43 34.9	-3.5
YLYR				Pmax			
	comp=N,11nm,0.7s						
YLYR				Smax			
	comp=N,64nm,0.9s						
YLYR	Ulyunkhan	4.28	47	*e*PN	Pn	05 42 28.0	+1.8
YLYR				*e*		05 42 39.5	
YLYR				*e*S	Sn	05 43 18.2	+2.0
YLYR				*e*		05 43 35.6	
YLYR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YLYR				smax	smax		
	comp=N,64nm,0.7s						
ULN	Ulaanbaatar	4.29	168	*i* PN	Pn	05 42 28.1	+1.6
NIZ	Nizh Angarsk	4.33	30	*e*Pn	Pn	05 42 28.0	+1.1
NIZ				Pg	Pb	05 42 39.6	+2.4
NIZ				*e*Sn	Sn	05 43 16.7	-0.8
NIZ				*e*Sg	Sg	05 43 36.0	-4.1
NIZ				Pmax			
	comp=N,14nm,0.4s						
NIZ				Smax			
	comp=N,107nm,0.7s						
NIZ	Nizh Angarsk	4.33	30	*e*PN	Pn	05 42 28.0	+1.1
NIZ				*e*		05 42 39.8	
NIZ				*e*S	Sn	05 43 17.4	-0.1
NIZ				*e*		05 43 36.6	
NIZ				pmax	pmax		
	comp=Z,12nm,0.4s						
NIZ				smax	smax		
	comp=N,103nm,1.0s						
KPC	Khapcheranga	4.81	117	*e*Pn	Pn	05 42 35.1	+1.5
KPC				*e*Pg	Pb	05 42 48.3	+2.8
KPC				*e*		05 42 52.1	
KPC				*e*Sg	Sg	05 43 51.4	-4.1
KPC				max			
	comp=N,17nm,0.3s						
KPC				Smax			
	comp=N,167nm,1.2s						
KPC	Khapcheranga	4.81	117	*e*PN	Pn	05 42 33.0	-0.6
KPC				*e*		05 42 47.3	
KPC				*e*		05 43 50.6	
KPC				pmax	pmax		
	comp=Z,18nm,0.3s						
KPC				smax	smax		
	comp=E,167nm,1.2s						
KMO	Kumora	4.99	38	*e*Pn	Pn	05 42 38.2	+2.2
KMO				*e*Pg	Pb	05 42 52.3	+3.8
KMO				*e*Sg	Sg	05 43 57.5	-3.7
KMO				Pmax			
	comp=E,13nm,0.6s						
KMO				Smax			
	comp=E,84nm,1.4s						
YOA	Uoyan	5.37	38	*e*Sn	Sn	05 43 41.3	-1.8
YOA				*e*Sg	Sg	05 44 08.8	-4.6
YOA				Smax			
	comp=E,245nm,1.6s						

SOME ***13*** *06:17:56.4, 40°.05N×76°.75E, h5^{km}*

KRNET ***13*** *06:17:58.5±0.1, 39°.85N×77°.02E, mb3.4*

NNC ***13*** *06:18:02.0±1.4, 40°.21N×76°.83E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=10.6km s-min=7.6km az=160.0*

ISC 13 06:17:55.3±1.6**, 39°.86N**±0°.05×**76°.42E**±0°.04**, h4**^{km}±12^{km}**, n76,** σ**1^{s}.79**/116**, 32C-18D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.25	275	⇓*i*P	Pg	06 18 42.3	+3.9
	baz=75						
SFK				⇓*i*S	Sg	06 19 14.3	+6.8
	baz=75						
KDJ	Kajisay	2.34	14	⇓*i*P	Pb	06 18 36.7	-1.5
	baz=3.0						
KDJ				⇓*i*S	Sn	06 19 04.2	+0.1
	baz=3.0						
ULHL	Ulahol	2.39	357	⇑*i*P	Pb	06 18 39.0	0.0
	baz=46						
ULHL				⇑*i*S	Sb	06 19 08.7	-0.3
	baz=46						
ULHL	Ulahol	2.39	357	P	Pb	06 18 39.5	+0.5
	SNR=44						
ARLS	Aral	2.56	322	⇑*i*P	Pg	06 18 44.6	+0.3
	baz=15						
ARLS				⇑*i*S	Sg	06 19 18.2	+0.8
	baz=15						
BOOM	Boomskoye usch	2.66	352	⇑*i*P	Pb	06 18 43.3	-0.2
	baz=43						
BOOM				⇑*i*S	Sb	06 19 16.0	-0.5
	baz=43						
UCH	Uchtor	2.77	329	⇓*i*P	Pg	06 18 47.0	-1.4
	baz=22						
UCH				⇓*i*S	Sg	06 19 22.5	-1.9
	baz=22						
UCH	Uchtor	2.77	329	P	Pg	06 18 49.6	+1.2
	SNR=18						
ARSB	Arslanbob	3.00	300	⇓*e*P	Pg	06 18 52.2	-0.6
	baz=97						
ARSB				⇓*i*S	Sg	06 19 31.8	+0.2
	baz=97						
KBK	Karagaybulak	3.01	339	⇓*i*P	Pb	06 18 49.2	-0.3
	baz=32						
KBK				⇓*e*S	Sb	06 19 26.7	0.0
	baz=32						
KBK	Karagaybulak	3.01	339	P	Pg	06 18 52.9	-0.1
	SNR=8.3						
PRZ	Przheval'sk	3.02	29	⇑*i*P	Pn	06 18 44.2	+0.1
	baz=21						
PRZ				⇑*i*S	Sn	06 19 17.6	-3.2
	baz=21						
AML	Almayashu	3.07	319	⇑*i*P	Pg	06 18 51.9	-2.1
	baz=13						
AML				⇑*i*S	Sg	06 19 31.1	-2.8
	baz=13						
AML	Almayashu	3.07	319	P	Pg	06 18 52.0	-2.1
	SNR=40						
ANVS	Anan'yevo	3.07	17	⇓*i*P	Pn	06 18 46.6	+1.8
	baz=9.0						
ANVS				⇓*i*S	Sn	06 19 21.0	-1.1
	baz=9.0						
TKM2	Tokmak 2	3.12	349	⇑*i*P	Pb	06 18 50.1	-1.4
	baz=41						
TKM2				⇑*i*S	Sb	06 19 27.8	-2.2
	baz=41						
TKM2	Tokmak 2	3.12	349	P	Pb	06 18 50.4	-1.1
	SNR=11						
TKM2	Tokmak 2	3.12	349	⇑Pn	Pb	06 18 50.4	-1.1
	6.8nm,0.5s						
TKM2				⇑Lg	Lg	06 19 33.5	
	30nm,0.7s						
AAK	Ala-Archa	3.13	333	⇑*i*P	Pb	06 18 51.6	-0.1
	baz=26						
AAK				⇑*i*S	Sb	06 19 30.6	+0.3
	baz=26						
AAK	Ala-Archa	3.13	333	P	Pg	06 18 58.1	+2.7
	SNR=8.6						
AAK	Ala-Archa	3.13	333	⇓Pn	Pb	06 18 51.7	0.0
	12nm,0.6s						
AAK				⇓Lg	Lg	06 19 36.8	

	63nm,0.8s						
IZV	**Izvestkoviy**	**3.18**	**3**	*e*P	**Pb**	**06 18 53.0**	**+0.6**
	13nm,0.5s						
IZV				*e*S	**Sb**	**06 19 33.3**	**+1.7**
	70nm,0.8s						
IZV	**Izvestkoviy**	**3.18**	**3**	Pg	**Pb**	**06 18 53.1**	**+0.6**
	21nm,0.5s						
IZV				Lg	Lg	06 19 33.3	
	70nm,0.8s						
KST	**Kastek**	**3.20**	**354**	*e*P	**Pb**	**06 18 54.5**	**+1.7**
	17nm,0.7s						
KST				*e*S	**Sg**	**06 19 35.9**	**-2.2**
	48nm,0.7s						
KST	**Kastek**	**3.20**	**354**	Pg	**Pg**	**06 18 54.7**	**-1.9**
	28nm,1.0s						
KST				Lg	Lg	06 19 36.0	
	48nm,0.8s						
TNSS	**Tian-Shan**	**3.20**	**7**	*e*P	**Pb**	**06 18 52.7**	**-0.3**
	35nm,0.4s						
TNSS				*e*S	**Sb**	**06 19 32.7**	**+0.2**
	37nm,0.5s						
TNSS	**Tian-Shan**	**3.20**	**7**	Pg	**Pb**	**06 18 52.7**	**-0.3**
	35nm,0.6s						
TNSS				Lg	Lg	06 19 33.3	
	37nm,0.5s						
FRU1	**Bishkek**	**3.24**	**336**	⇑*i*P	**Pb**	**06 18 52.9**	**-0.6**
	baz=30						
FRU1				⇑*i*S	**Sb**	**06 19 32.6**	**-0.8**
	baz=30						
MDOK	**Medeo**	**3.34**	**8**	*e*P	**Pb**	**06 18 54.8**	**-0.3**
	16nm,0.3s						
MDOK				*e*S	**Sb**	**06 19 36.7**	**+0.6**
	44nm,0.5s						
MDOK	**Medeo**	**3.34**	**8**	⇑Pn	**Pb**	**06 18 54.6**	**-0.5**
	32nm,1.0s						
MDOK				⇓Lg	Lg	06 19 37.1	
	47nm,0.6s						
MDOK	**Medeo**	**3.34**	**8**	Pg	**Pb**	**06 18 54.8**	**-0.3**
	19nm,0.7s						
MDOK				Lg	Lg	06 19 37.0	
	44nm,0.5s						
CHMS	**Chumysh**	**3.38**	**339**	⇑*i*P	**Pb**	**06 18 54.1**	**-1.7**
	baz=32						
CHMS				⇑*i*S	**Sb**	**06 19 35.2**	**-2.1**
	baz=32						
CHMS	**Chumysh**	**3.38**	**339**	P	**Pg**	**06 18 58.5**	**-1.6**
	SNR=5.1						
KOTS	**Kotyrbulak**	**3.41**	**9**	*e*P	**Pb**	**06 18 56.9**	**+0.5**
	45nm,0.2s						
KOTS				*e*S	**Sb**	**06 19 40.0**	**+1.7**
	243nm,0.5s						
KOTS	**Kotyrbulak**	**3.41**	**9**	Pg	**Pb**	**06 18 56.9**	**+0.5**
	45nm,0.3s						
KOTS				Lg	Lg	06 19 40.0	
	243nm,0.5s						
DGS	**Degeres**	**3.42**	**352**	*e*P	**Pb**	**06 18 58.4**	**+1.9**
	12nm,0.7s						
DGS				*e*S	**Sg**	**06 19 42.8**	**-2.2**
	37nm,0.5s						
DGS	**Degeres**	**3.42**	**352**	Pg	**Pb**	**06 18 58.4**	**+1.9**
	15nm,0.5s						
DGS				Lg	Lg	06 19 42.8	
	45nm,0.6s						
EKS2	**Erkin-Say**	**3.44**	**325**	⇑*i*P	**Pb**	**06 18 56.5**	**-0.3**
	baz=20						
EKS2				⇑*i*S	**Sb**	**06 19 38.8**	**-0.2**
	baz=20						
EKS2	**Erkin-Say**	**3.44**	**325**	P	**Pb**	**06 18 57.1**	**+0.3**
	SNR=7.7						
SATY	**Saty**	**3.53**	**24**	*e*P	**Pb**	**06 18 57.2**	**-1.3**
	7.9nm,0.4s						
SATY				*e*S	**Sb**	**06 19 40.7**	**-1.0**
	42nm,0.3s						
SATY	**Saty**	**3.53**	**24**	Pg	**Pb**	**06 18 56.0**	**-2.4**
	12nm,0.5s						
SATY				Lg	Lg	06 19 40.6	
	42nm,0.6s						
DRK	**Karamyk**	**3.58**	**265**	⇑*i*P	**Pg**	**06 19 01.1**	**-2.9**
	baz=66						
DRK				⇑*i*S	**Sg**	**06 19 46.8**	**-3.6**
	baz=66						
ZHN	**Zhinishke**	**3.64**	**24**	*e*P	**Pb**	**06 18 60.0**	**-0.2**
	35nm,0.2s						
ZHN				*e*S	**Sb**	**06 19 45.5**	**+0.7**
	21nm,0.5s						
ZHN	**Zhinishke**	**3.64**	**24**	Pg	**Pb**	**06 19 00.1**	**-0.2**
	2.6nm,0.2s						
ZHN				Lg	Lg	06 19 45.5	
	20nm,0.3s						
MRKS	**Merke**	**3.76**	**321**	*e*P	**Pg**	**06 19 07.5**	**+0.2**
	9.2nm,0.4s						
MRKS				*e*S	**Sg**	**06 19 58.5**	**+2.6**
	20nm,0.5s						
MRKS	**Merke**	**3.76**	**321**	Pg	**Pg**	**06 19 07.4**	**+0.2**
	9.2nm,0.8s						
MRKS				Lg	Lg	06 19 58.5	
	20nm,0.5s						
SGDS	**Sogindy**	**3.83**	**340**	Pg	**Pg**	**06 19 06.6**	**-2.2**
	11nm,0.6s						
SGDS				Lg	Lg	06 19 56.8	
	19nm,0.7s						
KTBS	**Karatobe**	**3.86**	**3**	*e*P	**Pb**	**06 19 04.4**	**+0.4**
	9.5nm,0.4s						
KTBS				*e*S	**Sb**	**06 19 53.1**	**+2.1**
	45nm,0.5s						
KTBS	**Karatobe**	**3.86**	**3**	Pg	**Pb**	**06 19 04.4**	**+0.4**
	9.6nm,0.5s						
KTBS				Lg	Lg	06 19 53.1	
	45nm,0.5s						
KURS	**Kuram**	**3.86**	**19**	*e*P	**Pb**	**06 19 03.2**	**-0.7**
	11nm,0.7s						
KURS				*e*S	**Sb**	**06 19 51.1**	**+0.1**
	23nm,0.7s						
KURS	**Kuram**	**3.86**	**19**	Pg	**Pb**	**06 19 03.1**	**-0.9**
	11nm,0.9s						
KURS				Lg	Lg	06 19 51.1	
	23nm,0.7s						
KRBS	**Karabastau**	**3.88**	**352**	*e*P	**Pb**	**06 19 06.4**	**+2.2**
	7.5nm,0.5s						
KRBS				*e*S	**Sg**	**06 19 56.2**	**-3.5**
	26nm,0.3s						
KRBS	**Karabastau**	**3.88**	**352**	Pg	**Pb**	**06 19 06.5**	**+2.2**
	11nm,0.5s						
KRBS				Lg	Lg	06 19 56.2	
	26nm,0.3s						
MNAS	**Manas**	**3.95**	**313**	⇑*i*P	**Pb**	**06 19 04.9**	**-0.7**
	baz=9.0						
MNAS				⇑*i*S	**Sb**	**06 19 53.2**	**-0.7**
	baz=9.0						
KPKS	**Kokpek**	**3.98**	**24**	*e*P	**Pb**	**06 19 04.6**	**-1.5**
	13nm,0.6s						
KPKS				*e*S	**Sb**	**06 19 53.4**	**-1.4**
	44nm,0.6s						
SHLS	**Shalkode**	**4.01**	**34**	*e*P	**Pb**	**06 19 08.7**	**+2.1**
	14nm,0.3s						
SHLS				*e*S	**Sb**	**06 20 00.6**	**+5.1**
	33nm,0.6s						
SHLS	**Shalkode**	**4.01**	**34**	Pg	**Pb**	**06 19 08.9**	**+2.3**
	14nm,0.5s						
SHLS				Lg	Lg	06 20 00.6	
	31nm,0.7s						
CHKK	**Chushkaly**	**4.02**	**6**	*e*P	**Pb**	**06 19 06.7**	**+0.1**
	11nm,0.4s						
CHKK				*e*S	**Sb**	**06 19 57.2**	**+1.7**
	21nm,0.3s						
CHKK	**Chushkaly**	**4.02**	**6**	Pg	**Pb**	**06 19 07.4**	**+0.8**
	12nm,0.4s						
CHKK				Lg	Lg	06 19 58.0	
	21nm,0.3s						
PDGK	**Podgornoye**	**4.16**	**33**	Pg	**Pb**	**06 19 08.1**	**-1.1**
	3.7nm,0.3s						
PDGK				Lg	Lg	06 19 59.3	
	24nm,0.9s						
PDGK	**Podgornoye**	**4.16**	**33**	⇑Pg	**Pb**	**06 19 10.2**	**+1.0**
	10nm,0.8s						
PDGK				⇑Lg	Lg	06 20 01.0	
	55nm,0.8s						
BTK	**Batken**	**4.31**	**274**	⇓*i*P	**Pb**	**06 19 11.1**	**-0.6**
	baz=74						
BTK				⇓*i*S	**Sb**	**06 20 03.6**	**-0.4**
	baz=74						
TRKS	**Terek-Say**	**4.35**	**294**	⇑*i*P	**Pb**	**06 19 10.7**	**-1.6**
	baz=92						
TRKS				⇑*i*S	**Sb**	**06 20 03.3**	**-1.9**
	baz=92						
MNBS	**Baschi**	**4.47**	**19**	*e*P	**Pb**	**06 19 14.5**	**+0.1**
	9.6nm,0.6s						
MNBS				*e*S	**Sb**	**06 20 10.6**	**+1.9**
	32nm,0.7s						
MNBS	**Baschi**	**4.47**	**19**	Pg	**Pb**	**06 19 14.6**	**+0.2**
	9.6nm,0.6s						
MNBS				Lg	Lg	06 20 10.6	
	32nm,0.7s						
ARXS	**Arharly**	**4.48**	**13**	*e*P	**Pb**	**06 19 14.3**	**-0.2**
	12nm,0.5s						
ARXS				*e*S	**Sb**	**06 20 10.4**	**+1.5**
	40nm,0.8s						
ARXS	**Arharly**	**4.48**	**13**	Pg	**Pb**	**06 19 14.6**	**0.0**
	17nm,0.7s						
ARXS				Lg	Lg	06 20 10.2	
	33nm,0.6s						
KTMS	**Ketmen**	**4.64**	**38**	*e*P	**Pb**	**06 19 16.0**	**-1.4**
	3.2nm,0.3s						
KTMS				*e*S	**Sb**	**06 20 13.0**	**-0.7**
	19nm,0.7s						
KTMS	**Ketmen**	**4.64**	**38**	Pg	**Pb**	**06 19 16.2**	**-1.1**
	3.2nm,0.3s						
KTMS				Lg	Lg	06 20 12.9	
	21nm,0.6s						
DJR	**Jarkent**	**5.13**	**28**	*e*P	**Pb**	**06 19 25.5**	**-0.1**
	1.4nm,0.5s						
DJR				*e*S	**Sb**	**06 20 29.6**	**+2.1**
	12nm,0.6s						
DJR	**Jarkent**	**5.13**	**28**	Pg	**Pb**	**06 19 25.8**	**+0.2**
	3.7nm,0.7s						
DJR				Lg	Lg	06 20 29.4	
	12nm,0.6s						
IUG	**Iuzhnay**	**5.35**	**297**	*e*P	**Pg**	**06 19 38.7**	**+1.0**
	5.9nm,0.4s						
IUG				*e*S	**Sg**	**06 20 52.3**	**+5.3**
	15nm,0.8s						
IUG	**Iuzhnay**	**5.35**	**297**	Pg	**Pg**	**06 19 40.1**	**+2.4**
	8.3nm,0.7s						
IUG				Lg	Lg	06 20 53.8	
	24nm,0.8s						
KK31	**Karatay Array**	**5.50**	**308**	⇓Pg	**Pg**	**06 19 44.5**	**+3.9**
	2.4nm,0.7s,baz=125,slow=16,SNR=7.3						
KK31				⇑Lg	Lg	06 20 55.2	
	3.8nm,0.6s,baz=127,slow=29,SNR=7.5						
KAPS	**Kapalarasan**	**5.84**	**21**	*e*P	**Pb**	**06 19 38.9**	**+1.2**
	2.4nm,0.7s						
KAPS				*e*S	**Sb**	**06 20 52.5**	**+4.4**
	6.6nm,0.8s						
KAPS	**Kapalarasan**	**5.84**	**21**	Pg	**Pb**	**06 19 38.8**	**+1.0**
	2.5nm,0.8s						
KAPS				Lg	Lg	06 20 52.0	
	8.8nm,0.8s						

*GCG **13** 06:27:02.2±0.6, 14°.17N×91°.98W, h34^{km}±999^{km}, MD4.0*
*SNET **13** 06:27:03.2±1.1, 14°.21N×91°.73W, h13^{km}±999^{km}, ML3.6*
*UCR **13** 06:27:03.3±1.2, 14°.21N×91°.73W, h13^{km}±999^{km}, ML3.4*
ISC 13 06:27:01.4±3.4, **14°.2N**±0°.1×**91°.8W**±0°.1, **h14**^{km}±13^{km}**, n19,**
σ**0^{s}.92**/27, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.01**	**73**	*e*P	**Pn**	**06 27 22.0**	**+0.6**
HUEH	**Huehuetenango**	**1.21**	**16**	*e*P	**Pb**	**06 27 23.7**	**-0.5**
HUEH				*e*S	**Sn**	**06 27 40.2**	**-0.2**
PCG	**Pacaya**	**1.22**	**78**	*e*P	**Pn**	**06 27 25.5**	**+1.2**
NBG	**Las Nubes**	**1.51**	**73**	*e*P	**Pg**	**06 27 30.4**	**-0.1**
NBG				*e*S	**Sg**	**06 27 50.8**	**+0.6**
CEVE	**Cerro Verde**	**2.18**	**98**	*e*P	**Pn**	**06 27 38.8**	**+1.3**
CEVE				*e*S	**Sn**	**06 28 05.4**	**+1.0**
CEVE	**Cerro Verde**	**2.18**	**98**	*e*P	**Pn**	**06 27 38.8**	**+1.3**
CEVE				*e*S	**Sn**	**06 28 05.4**	**+1.0**
SBLS	**San Blas**	**2.18**	**98**	*e*P	**Pn**	**06 27 38.1**	**+0.7**
SBLS				*e*S	**Sb**	**06 28 06.3**	**-1.4**
SBLS	**San Blas**	**2.18**	**98**	*e*P	**Pn**	**06 27 38.1**	**+0.7**
SBLS				*e*S	**Sb**	**06 28 06.3**	**-1.4**
SNJE	**San Jose**	**2.19**	**97**	*e*P	**Pn**	**06 27 38.9**	**+1.4**
SNJE	**San Jose**	**2.19**	**97**	*e*P	**Pn**	**06 27 38.9**	**+1.4**
MRL	**Marmol**	**2.29**	**66**	*e*P	**Pn**	**06 27 40.0**	**+1.0**
JAYA	**Jayaque - finc**	**2.38**	**102**	*e*P	**Pn**	**06 27 40.0**	**-0.1**
JAYA				*e*S	**Sn**	**06 28 08.6**	**-0.6**
JAYA				IAML		06 28 14.2	
	comp=Z,680nm,0.3s						
JAYA	**Jayaque - finc**	**2.38**	**102**	*e*P	**Pn**	**06 27 40.0**	**-0.1**
JAYA				*e*S	**Sn**	**06 28 08.6**	**-0.6**
JAYA				IAML		06 28 14.2	
	comp=Z,680nm,0.3s						
CEDA	**San Andres**	**2.40**	**98**	*e*P	**Pn**	**06 27 40.0**	**-0.4**
CEDA				IAML		06 28 24.2	
	comp=Z,452nm,0.3s						
CEDA	**San Andres**	**2.40**	**98**	*e*P	**Pn**	**06 27 40.0**	**-0.4**
CEDA				IAML		06 28 24.2	
	comp=Z,452nm,0.3s						
LALI	**Alcalda de L**	**2.54**	**105**	*e*P	**Pn**	**06 27 42.8**	**+0.7**
LALI				*e*S	**Sn**	**06 28 13.2**	**+0.4**
LALI	**Alcalda de L**	**2.54**	**105**	*e*P	**Pn**	**06 27 42.8**	**+0.7**
LALI				*e*S	**Sn**	**06 28 13.2**	**+0.4**
COEB	**Comit de Eme**	**3.28**	**101**	IAML		06 28 40.1	
	comp=Z,137nm,0.3s						
COEB	**Comit de Eme**	**3.28**	**101**	IAML		06 28 40.1	
	comp=Z,137nm,0.3s						

*IDC **13** 06:31:38.7±2.2, 5°.66S×149°.19E, h139^{km}±27^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.4/31, mbtmp4.0/6, Error ellipse: s-maj=70.6km s-min=9.5km az=134.0*
ISC 13 06:31:39.6±1.1, **5°.8S**±0°.2×**149°.3E**±0°.2, **h150**^{km}**, n6,**
σ**0^{s}.85**/9, **mb3.5**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.06**	**61**	P	**Pn**	**06 32 27.9**	**+0.2**
	20nm,0.3s,baz=247,slow=7.7,SNR=4.9						
KRVT				S	**Sn**	**06 33 04.3**	**-0.6**
	2.0nm,0.3s,baz=113,slow=14,SNR=1.5						
PMG	**Port Moresby**	**4.19**	**211**	P	**Pn**	**06 32 42.2**	**-0.1**
	6.0nm,0.3s,baz=9.3,slow=6.8,SNR=14						
PMG				S	**Sn**	**06 33 31.1**	**0.0**
	15nm,0.3s,baz=155,slow=15,SNR=16						
WRA	**Warramunga Arr**	**20.26**	**225**	P	**P**	**06 36 03.9**	**+0.4**
	2.6nm,0.6s,baz=49,slow=10,SNR=17						
WRA				S	**S**	**06 39 41.3**	**-1.4**
	0.5nm,0.8s,baz=46,slow=20,SNR=2.5						
ASAR	**Alice Springs**	**23.16**	**218**	P	**P**	**06 36 34.3**	**+1.3**
	1.2nm,0.7s,baz=47,slow=8.3,SNR=16						
FITZ	**Fitzroy Crossi**	**26.17**	**240**	P	**P**	**06 37 00.2**	**0.0**
	5.9nm,0.5s,baz=67,slow=9.7,SNR=24						
ILAR	**Eielson Array**	**84.39**	**23**	P	**P**	**06 43 54.5**	**-0.2**
	0.5nm,1.0s,baz=234,slow=5.5,SNR=4.0						

*NEIC **13** 06:34:17.7±0.7, 18°.3S±0°.1×170°.0E±0°.2, h228^{km}±15^{km}, mb4.4/16, Error ellipse: s-maj=21.8km s-min=15.7km az=76.0*
*NOU **13** 06:34:24.0, 19°.01S×169°.92E, h258^{km}, MLv4.5, Vanuatu Islands*
*IDC **13** 06:34:27.0±2.0, 18°.93S×169°.58E, h279^{km}±16^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.5/33, mbtmp4.2/9, Error ellipse: s-maj=26.0km s-min=15.2km az=11.0*
ISC 13 06:34:25.6±0.8, **18°.97S**±0°.07×**169°.60E**±0°.09, **h246**^{km}**, n56,**
σ**1^{s}.72**/51, **mb4.2**/10, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.82**	**313**	P	**Pn**	**06 35 08.3**	**+2.1**
MARNC	**Mare, Loyalty**	**2.90**	**210**	P	**Pn**	**06 35 17.2**	**+0.6**
YATNC	**Mamie plateau,**	**3.98**	**219**	P	**Pn**	**06 35 28.7**	**-0.2**
PINNC	**Pines Island,**	**4.14**	**209**	P	**Pn**	**06 35 31.8**	**+1.0**
SANVU	**Saraoutou**	**4.19**	**327**	Pn	Pn	06 35 19.4	-12
SANVU	**Saraoutou**	**4.19**	**327**	P	**Pn**	**06 35 32.7**	**+1.2**
DZM	**Mont Dzumac**	**4.27**	**223**	P	**Pn**	**06 35 33.6**	**+1.1**
	6.3nm,0.3s,baz=72,slow=19,SNR=74						
DZM				S	**S**	**06 36 31.5**	**+6.0**
	3.6nm,0.3s,baz=303,slow=22,SNR=1.9						
DZM	**Mont Dzumac**	**4.27**	**223**		**Pn**	**06 35 32.8**	**+0.4**
DZM	**Mont Dzumac**	**4.27**	**223**	P	**Pn**	**06 35 33.8**	**+1.4**
OUENC	**Ouen Island, N**	**4.29**	**216**	P	**Pn**	**06 35 34.0**	**+1.4**
NOUC	**Port Laguerre**	**4.38**	**224**	P	**Pn**	**06 35 35.2**	**+1.5**
KOUNC	**Koumac, New Ca**	**5.24**	**252**	P	**Pn**	**06 35 46.5**	**+2.3**
	42nm,0.9s						
MSVF	**Nonsavu**	**8.12**	**83**	P	**Pn**	**06 36 22.9**	**+2.3**
	1.3nm,0.3s,baz=273,slow=14,SNR=16						
OUZ	**Omahuta**	**16.57**	**168**	P	**P**	**06 38 01.9**	**-0.9**
OUZ				IAmb	IAmb	06 38 04.1	
	comp=Z,18nm,1.1s						
EIDS	**Eidsvold**	**18.28**	**246**	P	**P**	**06 38 21.4**	**-0.1**
EIDS				IAmb	IAmb	06 38 32.6	
	comp=Z,8.6nm,1.2s						
URZ	**Urewera**	**20.30**	**163**	P	**P**	**06 38 42.8**	**-0.1**
	comp=Z,4.3nm,0.4s,baz=262,slow=15,SNR=8.5						
URZ	**Urewera**	**20.30**	**163**	IAmb	IAmb	06 38 43.7	
	comp=Z,16nm,1.1s						
ETVZ	**East Tongariro**	**20.78**	**166**	P	Pn	06 38 51.6	-2.5
MTHZ	**Maungataniwha**	**20.78**	**164**	P	**P**	**06 38 49.8**	**+1.7**
OTVZ	**Oturere**	**20.80**	**167**	P	**P**	**06 38 50.2**	**+1.8**
CNGZ	**Carnagh Statio**	**20.83**	**161**	P	**P**	**06 38 49.2**	**+0.6**
RIGZ	**Rimuhau**	**20.90**	**162**	P	**P**	**06 38 48.7**	**-0.6**
WNVZ	**Wahianoa**	**20.94**	**167**	P	Pn	06 38 53.0	-3.0
BKZ	**Black Stump Fm**	**20.99**	**165**	P	**P**	**06 38 49.7**	**-0.6**
BKZ				IAmb	IAmb	06 39 03.9	
	comp=Z,22nm,1.4s						
BKZ	**Black Stump Fm**	**20.99**	**165**	P	**P**	**06 38 50.3**	**0.0**
NMHZ	**Naumai**	**21.00**	**164**	P	**P**	**06 38 51.4**	**+0.9**
BHHZ	**Black Hill Sta**	**21.20**	**166**	P	**P**	**06 38 52.4**	**+0.1**
KWHZ	**Kaweka Forest**	**21.22**	**165**	P	**P**	**06 38 52.5**	**0.0**
KRHZ	**Kereru**	**21.41**	**166**	P	**P**	**06 38 53.6**	**-0.8**
KAHZ	**Kahuranaki**	**21.68**	**165**	P	**P**	**06 38 56.2**	**-0.7**
CTA	**Charters Tower**	**22.02**	**263**	P	**P**	**06 38 60.0**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=100,slow=11,SNR=2.8						
MRZ	**Mangatainoka R**	**22.22**	**168**	P	**P**	**06 39 00.4**	**-1.3**
OGWZ	**Otaki Gorge**	**22.29**	**169**	P	**P**	**06 39 01.4**	**-1.0**
BFZ	**Birch Farm**	**22.38**	**167**	P	**P**	**06 39 01.8**	**-1.5**
BFZ	**Birch Farm**	**22.38**	**167**	P	**P**	**06 39 01.8**	**-1.5**
NNZ	**Nelson**	**22.41**	**172**	P	**P**	**06 39 03.6**	**+0.1**
HOWZ	**Holdsworth Sta**	**22.43**	**168**	P	**P**	**06 39 02.5**	**-1.3**
SNZO	**South Karori**	**22.69**	**170**	P	**P**	**06 39 04.0**	**-2.0**
MSWZ	**Moikau Station**	**22.89**	**169**	P	**P**	**06 39 06.2**	**-1.7**
MSWZ	**Moikau Station**	**22.89**	**169**	P	**P**	**06 39 06.4**	**-1.5**
THZ	**Tophouse**	**22.89**	**174**	P	**P**	**06 39 07.2**	**-0.7**
THZ				IAmb	IAmb	06 39 16.7	
	comp=Z,13nm,1.1s						
PLWZ	**Palliser**	**23.03**	**169**	P	**P**	**06 39 08.2**	**-1.0**
LTZ	**Lake Taylor**	**23.84**	**175**	P	**P**	**06 39 15.7**	**-0.9**
LTZ				IAmb	IAmb	06 39 39.5	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**28.27**	**237**	P	**P**	**06 39 55.6**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=57,slow=8.0,SNR=7.9						
STKA	**Stephens Creek**	**28.27**	**237**	IAmb	IAmb	06 39 56.6	
	comp=Z,1.0nm,0.7s						
WR0	**Warramunga Arr**	**33.03**	**262**	P	**P**	**06 40 35.6**	**-2.6**
WB0	**Warramunga Arr**	**33.18**	**263**	P	**P**	**06 40 37.2**	**-2.4**
WB2	**Warramunga Arr**	**33.21**	**262**	P	**P**	**06 40 37.3**	**-2.5**
WB2				IAmb	IAmb	06 40 50.1	
	comp=Z,8.2nm,1.4s						
WRA	**Warramunga Arr**	**33.22**	**262**	P	**P**	**06 40 37.4**	**-2.4**
	comp=Z,0.9nm,0.3s,baz=95,slow=8.4,SNR=19						
WRA	**Warramunga Arr**	**33.22**	**262**	P	**P**	**06 40 37.1**	**-2.8**
AS31	**Alice Springs**	**33.52**	**256**	P	**P**	**06 40 40.5**	**-1.9**
AS31				IAmb	IAmb	06 40 41.2	
	comp=Z,6.9nm,0.4s						
ASAR	**Alice Springs**	**33.52**	**256**	P	**P**	**06 40 40.9**	**-1.5**
	comp=Z,10nm,0.5s,baz=85,slow=8.2,SNR=154						
ASAR	**Alice Springs**	**33.52**	**256**	P	**P**	**06 40 40.0**	**-2.5**
FITZ	**Fitzroy Crossi**	**41.60**	**264**	P	**P**	**06 41 48.5**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=91,slow=11,SNR=12						
VNDA	**Vanda**	**58.71**	**182**	P	**P**	**06 43 55.0**	**-2.0**
	comp=Z,0.6nm,0.4s,baz=5.1,slow=6.9,SNR=5.5						
VNDA	**Vanda**	**58.71**	**182**	IAmb	IAmb	06 43 58.1	
	comp=Z,5.7nm,1.5s						

*DNK **13** 07:06:24.4±2.6, 80°.26N×1°.59W, h0^{km}±31^{km}, ML2.8*
*BER **13** 07:06:26.0±2.2, 80°.52N×2°.24W, h10^{km}, ML2.1, ML2.8(DNK), Confirmed Earthquake*
*IEPN **13** 07:06:26.0, 80°.77N×1°.09W, h10^{km}*
ISC 13 07:06:21.6±2.2, **80°.5N**±0°.2×**2°.53W**±0°.05, **h10**^{km}**, n20,**
σ**2^{s}.20**/33, **1D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**3.03**	**114**	*e*P	**Pn**	**07 07 10.5**	**+1.0**
KBS				*e*S	**Sn**	**07 07 44.0**	**-1.7**
KBS				IAML		07 07 49.8	
	comp=Z,10nm,0.4s						
KBS	**Kingsbay**	**3.03**	**114**	*e*P	**Pn**	**07 07 10.9**	**+1.4**
KBS				*e*S	**Sn**	**07 07 44.0**	**-1.7**
KBS	**Kingsbay**	**3.03**	**114**	*i* P	**Pn**	**07 07 10.9**	**+1.4**
KBS				*i* S	**Sn**	**07 07 44.0**	**-1.7**
KBS				IAML		07 07 49.3	
	comp=Z,18nm,0.3s						
BRBA	**Barentsburg A**	**3.96**	**120**	*e*P	**Pn**	**07 07 26.2**	**+4.0**
BRBA				*e*S	**Sn**	**07 08 08.9**	**+0.4**
BRBA				IAML		07 08 13.7	
	comp=Z,8.7nm,0.7s						
SPA0	**Spitsbergen Ar**	**4.19**	**114**	*e*P	**Pn**	**07 07 27.4**	**+1.9**
SPA0				*e*		07 07 28.9	
SPA0				*i*		07 07 32.1	
SPA0				*e*S	**Sn**	**07 08 13.3**	**-1.0**
SPA0				IAML		07 08 30.9	
	comp=Z,5.3nm,0.6s						
SPA0	**Spitsbergen Ar**	**4.19**	**114**	⇓*i*P	**Pn**	**07 07 27.4**	**+1.9**
SPA0				*e*S	**Sn**	**07 08 12.4**	**-2.0**
DAG	**Danmarks Havn**	**4.89**	**229**	*e*P	**Pn**	**07 07 37.6**	**+2.6**
DAG				*e*S	**Sn**	**07 08 30.5**	**-1.0**
DAG				IAML		07 08 35.5	
	comp=Z,8.3nm,0.3s						
DAG	**Danmarks Havn**	**4.89**	**229**	*i* P	**Pn**	**07 07 37.6**	**+2.6**
DAG				*i* S	**Sn**	**07 08 31.6**	**+0.1**
DAG	**Danmarks Havn**	**4.89**	**229**	*e*	**Pn**	**07 07 37.1**	**+2.1**
	baz=40,slow=14						
DAG				*i* P	Pb	07 07 37.6	-10
DAG				*i* S	**Sn**	**07 08 31.7**	**+0.1**
DAG				IAML		07 08 35.5	
	comp=Z,8.3nm,0.3s						
HSPB	**Hornsund (broa**	**4.95**	**126**	*e*P	**Pn**	**07 07 39.1**	**+3.3**
HSPB				*e*S	**Sn**	**07 08 33.7**	**+0.6**
HSPB				IAML		07 08 38.7	
	comp=Z,4.4nm,0.5s						
HSPB	**Hornsund (broa**	**4.95**	**126**	*e*P	**Pn**	**07 07 39.2**	**+3.3**
HSPB				*e*S	**Sn**	**07 08 34.1**	**+1.0**
HOPEN	**Hopen**	**6.72**	**112**	*e*P	**Pn**	**07 08 01.0**	**+0.9**
HOPEN				*e*S	**Sn**	**07 09 12.6**	**-3.9**
HOPEN				*e*		07 09 14.4	
HOPEN				IAML		07 09 18.8	
	comp=Z,3.7nm,1.0s						
HOPEN	**Hopen**	**6.72**	**112**	*e*P	**Pn**	**07 08 00.5**	**+0.4**
HOPEN				*e*S	**Sn**	**07 09 11.9**	**-4.7**
DBG	**Daneborg**	**7.27**	**221**	*e*P	**Pn**	**07 08 09.8**	**+2.1**
DBG				*e*S	**Sn**	**07 09 27.3**	**-2.7**
DBG				IAML		07 09 34.7	
	comp=Z,1.6nm,0.3s						
DBG	**Daneborg**	**7.27**	**221**	*i* P	**Pn**	**07 08 09.7**	**+2.1**
DBG				*i* S	**Sn**	**07 09 28.1**	**-1.9**
DBG				IAML		07 09 34.7	
	comp=Z,1.6nm,0.3s						
ZFI2	**Zemlya Franca-**	**7.96**	**63**	*e*P	Pn	07 08 14.8	-2.2
ZFI2				*e*S	Sn	07 09 34.2	-13
	comp=Z,3.6nm,1.0s						
ZFI	**Zemlya Franca-**	**7.96**	**63**	P	Pn	07 08 16.1	-0.9
ZFI				S	Sn	07 09 38.0	-8.9
SUMG	**Summit**	**11.24**	**245**	*i* P	**Pn**	**07 09 03.3**	**+1.0**
SUMG				*i* S	Sn	07 11 01.1	-6.8
SUMG				IAML		07 11 08.5	
	comp=Z,3.1nm,0.3s						
SUMG	**Summit**	**11.24**	**245**	*i* P	**Pn**	**07 09 03.3**	**+1.0**
SUMG				*i* S	Sn	07 11 01.1	-6.8
SUMG	**Summit**	**11.24**	**245**	*i* P	**Pn**	**07 09 03.3**	**+1.0**
SUMG				*i* S	Sn	07 11 01.1	-6.8
SUMG				IAML		07 11 08.5	
	comp=Z,3.1nm,0.3s						

*NNC **13** 07:18:27.5±0.6, 49°.99N×78°.70E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=7.6km s-min=2.9km az=70.0, Suspected Mining explosion.*
*IDC **13** 07:18:29.0±0.9, 50°.06N×78°.79E, h0^{km}, mb1 2.7/3, mb1mx2.7/59, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=18.2km s-min=6.2km az=62.0*
ISC 13 07:18:29.0±0.8, **50°.09N**±0°.04×**78°.77E**±0°.05, **h0**^{km}**, n22,**
σ**1^{s}.06**/35, **19C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.52**	**342**	⇑P	**Pg**	**07 18 39.3**	**+0.4**
KUR07				⇑S	**Sb**	**07 18 48.1**	**-0.9**
KUR06	**Kurchatov Arra**	**0.54**	**343**	⇑P	**Pg**	**07 18 39.5**	**+0.2**
KUR06				⇑S	**Sb**	**07 18 49.0**	**-0.5**
KUR14	**Kurchatov Arra**	**0.54**	**348**	⇑P	**Pg**	**07 18 39.6**	**+0.3**
KUR14				⇓S	**Sb**	**07 18 48.5**	**-1.1**
KUR15	**Kurchatov Arra**	**0.54**	**346**	⇑P	**Pg**	**07 18 39.7**	**+0.3**

KUR15				⇓S	Sb	07 18 49.1	-0.7
KURBB	Kurchatov Arra	0.55	344	Pg	Pg	07 18 39.6	0.0
	2.4nm,0.3s,baz=153,slow=25,SNR=104						
KURBB				Lg	Lg	07 18 49.4	
	4.2nm,0.3s,baz=177,slow=32,SNR=22						
KURBB	Kurchatov Arra	0.55	344	⇑P	Pg	07 18 40.1	+0.4
	10nm,0.3s						
KURBB				⇑S	Sb	07 18 50.0	-0.1
	47nm,0.5s						
KUR16	Kurchatov Arra	0.56	342	⇑P	Pg	07 18 40.0	+0.2
KUR16				⇑S	Sb	07 18 49.8	-0.6
KUR05	Kurchatov Arra	0.57	345	⇓P	Pg	07 18 40.0	0.0
KUR05				⇑S	Sb	07 18 49.5	-1.1
KUR17	Kurchatov Arra	0.57	340	⇑P	Pg	07 18 40.1	0.0
KUR17				⇓S	Sb	07 18 50.1	-0.6
KUR04	Kurchatov Arra	0.59	346	⇑P	Pg	07 18 40.6	+0.3
KUR04				⇑S	Sb	07 18 50.2	-0.9
KURK	Kurchatov	0.63	351	⇑P	Pg	07 18 41.4	+0.2
	4.4nm,0.3s						
KURK				⇑S	Sg	07 18 51.0	+1.7
	21nm,0.6s						
SEM	Semipalatinsk	1.00	71	P	Pb	07 18 49.1	-0.2
	5.5nm,0.1s						
SEM				S	Sb	07 19 03.8	+0.7
	32nm,0.4s						
MAKZ	Makanchi	3.92	146	⇑Pg	Pb	07 19 37.7	-1.3
	0.9nm,0.4s						
MAKZ				⇓Lg	Lg	07 20 28.7	
	3.7nm,0.5s						
MK31	Makanchi Array	4.05	143	⇑Pn	Pn	07 19 32.1	-0.2
	0.1nm,0.2s,baz=278,slow=7.1,SNR=20						
MK31				⇓Pg	Pb	07 19 39.9	-1.3
	1.1nm,0.5s,baz=325,slow=14,SNR=16						
MK31				⇑Lg	Lg	07 20 34.3	
	5.2nm,0.5s,baz=325,slow=27,SNR=12						
MKAR	Makanchi Array	4.05	143	Pn	Pn	07 19 32.2	0.0
	0.2nm,0.3s,baz=322,slow=10,SNR=25						
MKAR				Pg	Pb	07 19 39.3	-1.8
	0.3nm,0.3s,baz=328,slow=16,SNR=12						
MKAR				Lg	Lg	07 20 33.8	
	2.7nm,0.3s,baz=327,slow=26,SNR=17						
KAPS	Kapalarasan	4.83	175	Pg	Pb	07 19 54.0	-0.5
	1.0nm,0.5s						
KAPS				Lg	Lg	07 20 54.9	
	12nm,0.6s						
ZALV	Zalesovo Beam	5.37	42	Pn	Pn	07 19 52.1	+1.8
	0.8nm,0.3s,baz=232,slow=14,SNR=6.9						
ZALV				Lg	Lg	07 21 22.0	
	0.4nm,0.3s,baz=246,slow=30,SNR=2.0						
I46RU	ZALESOVO INFRA	5.37	42	*i*		07 49 08.3	
	baz=224,slow=338,SNR=1.8						
DJR	Jarkent	5.80	173	Pg	Pb	07 20 13.6	+2.5
	1.4nm,0.4s						
DJR				Lg	Lg	07 21 28.2	
	3.7nm,0.6s						
ARXS	Arharly	5.92	187	Pg	Pb	07 20 15.2	+2.1
	2.5nm,0.5s						
ARXS				Lg	Lg	07 21 30.9	
	7.2nm,0.7s						
BVAR	Borovoye Array	6.00	303	Pn	Pn	07 19 58.3	-0.6
	0.1nm,0.3s,baz=233,slow=44,SNR=1.8						
BVAR				Sn	Sn	07 21 07.6	-0.7
	0.6nm,0.3s,baz=101,slow=24,SNR=6.4						
MNBS	Baschi	6.02	183	Pg	Pb	07 20 17.1	+2.3
	1.0nm,0.2s						
MNBS				Lg	Lg	07 21 33.8	
	9.7nm,0.7s						

IDC ***13*** *07:21:15.2±0.8, 34°.16S×112°.68W, h0^{km}, mb4.3/11, mb1 4.5/12, mb1mx4.3/36, mbtmp4.3/12, ML4.3/1, MS4.5/18, Ms1 4.5/18, ms1mx4.3/26, Error ellipse: s-maj=28.4km s-min=19.9km az=88.0*

NEIC ***13*** *07:21:17.4±1.7, 34°.2S±0°.1×112°.5W±0°.2, h10^{km}±1^{km}, mb4.8/56, Error ellipse: s-maj=28.4km s-min=17.9km az=283.0*

GCMT ***13*** *07:21:20.4±0.2, 34°.41S±0°.01×112°.66W±0°.01, h12^{km}±1^{km}, MW5.1/126, Moment Tensor Solution. s72,c97; s126,c209; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.02±.12; $M_{\theta\theta}$-2.42±.11; $M_{\phi\phi}$3.44±.12; $M_{r\theta}$-1.78±.35; $M_{\theta\phi}$-5.10±.10; $M_{\phi r}$-0.43±.28; Best double couple: $M_0$6.21100×10^{16} NP1:ϕ_s13.00000°,δ73.00000°, λ-11.00000°. NP2:ϕ_s107.00000°,δ79.00000°, λ-163.00000°. Principal axes: T 6.4300, Plg4.0000°, Azm239.0000°; N -0.4370, Plg70.0000°, Azm138.0000°; P -5.9930, Plg20.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 07:21:17.5±0.6**, 34°.17S**±0°.09×**112°.5W**±0°.1**, h10^{km}, n130, σ1^{s}.28**/105**, mb4.7**/34**, MS4.6**/20**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	7.54	22	Pn	Pn	07 23 08.7	+1.2
	4.8nm,0.3s,baz=185,slow=11,SNR=8.2						
RPN				LR	LR	07 25 16.5	
	comp=Z,2µm,20.4s,baz=199,slow=32						
RPN	Rapa Nui	7.54	22	Pn	Pn	07 23 08.8	+1.3
RKT	Rikitea	22.50	293	*e*LQ	LQ	07 30 28.8	
	3µm,27.2s						
H03S2	Juan Fernandez	27.80	99	T	T	07 56 15.7	
	baz=258,slow=75,SNR=266						
H03S1	Juan Fernandez	27.82	99	T	T	07 56 16.7	
	baz=258,slow=75,SNR=290						
H03S3	Juan Fernandez	27.82	99	T	T	07 56 27.1	
	baz=258,slow=75,SNR=250						
BI02	San Fabin de	33.54	106	P	P	07 27 58.0	+0.5
BI02				IAmb	IAmb	07 28 11.6	
	comp=Z,26nm,1.5s						
PLCA	Paso Flores	33.73	114	P	P	07 27 59.3	+0.2
	comp=Z,6.6nm,1.1s,baz=269,slow=8.8,SNR=4.7						
PLCA				LR	LR	07 37 43.3	
	comp=Z,284nm,19.2s,baz=271,slow=29						
PLCA	Paso Flores	33.73	114	P	P	07 27 59.5	+0.3
PLCA				IAmb	IAmb	07 28 04.0	
	comp=Z,18nm,1.4s						
PLCA	Paso Flores	33.73	114	*e*P	P	07 28 03.0	+3.8
TBI	Tubuai	33.95	279	*e*LQ	LQ	07 35 36.9	
	comp=Z,779nm,31.9s						
TBI				*e*LR	LR	07 36 55.6	
	comp=Z,2µm,25.2s,baz=109						
GO04	Tololo Observa	35.38	95	P	P	07 28 12.5	-1.2
MEH	Mehetia	35.59	288	*e*T	T	08 05 42.1	
	comp=Z,17nm,0.3s						
LCO	Las Campanas	35.83	93	P	P	07 28 17.3	-0.3
GO03	Copiap	36.70	91	P	P	07 28 24.1	-0.7
GO03				IAmb	IAmb	07 28 33.1	
	comp=Z,10nm,0.8s						
TIAR	Tiarei	36.78	287	*e*T	T	08 07 11.2	
	comp=Z,3.8nm,0.3s						
PPT2	Papeete2	36.94	287	*e*S	S	07 34 14.0	+1.7
	comp=Z,37nm,20.9s						
PPT2				*e*LQ	LQ	07 36 52.7	
	comp=Z,830nm,22.5s						
PPT2				*e*LR	LR	07 38 09.9	
	comp=Z,536nm,25.2s						
PPT	Papeete	36.95	287	LR	LR	07 38 51.0	
	comp=Z,426nm,18.0s,baz=115,slow=29						
AC02	Maricunga	37.89	91	P	P	07 28 34.4	-1.0
AC02				IAmb	IAmb	07 28 59.9	
	comp=Z,21nm,1.1s						
LVC	Limon Verde	39.80	85	P	P	07 28 51.9	+0.5
	comp=Z,12nm,1.2s,baz=236,slow=10.0,SNR=4.5						
LVC	Limon Verde	39.80	85	P	P	07 28 51.5	+0.2
LVC	Limon Verde	39.80	85	*e*P	P	07 28 52.3	+0.9
PB09	IPOC Station P	39.90	84	P	P	07 28 51.8	-0.1
PB09				IAmb	IAmb	07 29 20.8	
	comp=Z,31nm,1.3s						
PB08	IPOC Station P	40.75	81	P	P	07 28 58.6	-0.7
MNMC	Minye Minye	40.89	80	P	P	07 28 59.2	-1.1
MNMC				IAmb	IAmb	07 29 08.6	
	comp=Z,20nm,1.3s						
ATAH	Atahualpa	41.41	57	P	P	07 29 05.7	+0.9
	comp=Z,8.5nm,1.1s,baz=238,slow=7.7,SNR=6.8						
RAR	Rarotonga	43.41	275	LR	LR	07 42 53.3	
	comp=Z,351nm,19.4s,baz=123,slow=30						
CZSB	Cruzeiro do Su	45.12	64	*e*P	P	07 29 34.1	-0.1
OTAV	Otavalo	46.81	50	P	P	07 29 46.9	-1.2
OTAV				IAmb	IAmb	07 30 08.7	
	comp=Z,12nm,1.4s						
OTAV	Otavalo	46.81	50	*e*P	P	07 29 46.7	-1.5
ITQB	Itaqui	47.18	101	*e*P	P	07 29 52.2	+1.9
CPUP	Villa Florida	47.84	96	LR	LR	07 47 18.7	
	comp=Z,326nm,18.1s,baz=253,slow=33						
CPUP	Villa Florida	47.84	96	*e*P	P	07 29 58.8	+3.2
ETMB	Extrema	48.78	71	*e*P	P	07 30 02.3	-0.5
PLTB	Pedras Altas	48.91	104	*e*P	P	07 30 06.5	+2.7
CPSB	Cacapava Do Su	49.51	103	*e*P	P	07 30 10.6	+2.3
SAML	Samuel	51.69	73	P	P	07 30 22.7	-2.2
SAML				IAmb	IAmb	07 30 25.0	
	comp=Z,12nm,1.2s						
SAML	Samuel	51.69	73	*e*P	P	07 30 23.0	-1.9
AQDB	Aquidauana	51.71	90	*e*P	P	07 30 25.2	+0.1
VILB	Vilhena	51.80	79	*e*P	P	07 30 26.1	+0.2
ROSC	El Rosal	52.97	51	LR	LR	07 49 32.1	
	comp=Z,955nm,18.6s,baz=230,slow=32						
ROSC	El Rosal	52.97	51	P	P	07 30 35.6	+0.8
TRCB	Terra Rica	53.20	94	*e*P	P	07 30 37.4	+1.3
PP1B	Ponte de Pedra	53.77	87	*e*P	P	07 30 40.8	+0.4
PCMB	Pacaembu	54.87	94	*e*P	P	07 30 51.1	+2.7
URZ	Urewera	55.65	244	LR	LR	07 48 39.2	
	comp=Z,1µm,21.7s,baz=34,slow=30						
VNDA	Vanda	55.98	195	P	P	07 30 55.9	+0.4
	comp=Z,1.3nm,0.9s,baz=119,slow=5.7,SNR=3.8						
VNDA				LR	LR	07 49 46.2	
	comp=Z,355nm,18.2s,baz=89,slow=31						
QSPA	South Pole Qui	56.03	180	P	P	07 30 55.7	-0.6
	comp=Z,3.1nm,0.7s,baz=134,slow=4.7,SNR=5.7						
QSPA	South Pole Qui	56.03	180	P	P	07 30 56.0	-0.2
QSPA				IAmb	IAmb	07 30 59.7	
	comp=Z,19nm,1.4s						
SPB	Sao Paulo	57.14	98	*e*P	P	07 31 06.6	+2.0
MACA	Manacapuru-AM	57.18	69	*e*P	P	07 31 03.4	-1.6
ARAG	Araguaiana, MT	57.26	87	*e*P	P	07 31 05.0	-0.4
RPZ	Rata Peaks	58.25	236	LR	LR	07 52 36.6	
	comp=Z,609nm,18.0s,baz=80,slow=32						
SDV	Santo Domingo	58.40	51	*e*P	P	07 31 10.7	-2.9
PARB	Paraibuna	58.74	98	*e*P	P	07 31 16.5	+0.7
NPGB	Novo Progresso	59.06	77	*e*P	P	07 31 16.8	-1.3
ITTB	Itaituba	60.34	74	*e*P	P	07 31 25.9	-1.0
BDFB	Brasilia	60.44	89	P	P	07 31 26.8	-0.9
	comp=Z,3.1nm,0.9s,baz=223,slow=9.1,SNR=3.4						
BDFB				LR	LR	07 54 29.7	
	comp=Z,311nm,20.9s,baz=256,slow=33						
VNA3	Neumayer Olymp	62.02	159	P	P	07 31 36.0	-1.5
VNA2	Neumayer--Watz	62.83	159	P	P	07 31 41.5	-1.4
	baz=246,slow=5.8						
TX31	Lajitas Ar. Si	63.71	9	P	P	07 31 50.3	+1.0
TX32	Lajitas Array	63.71	9	P	P	07 31 50.5	+1.2
TX32				IAmb	IAmb	07 32 08.2	
	comp=Z,14nm,1.5s						
TXAR	Lajitas Array	63.71	9	P	P	07 31 48.7	-0.6
	comp=Z,1.1nm,1.0s,baz=190,slow=11,SNR=5.5						
TXAR	Lajitas Array	63.71	9	P	P	07 31 48.4	-0.9
SNAA	Sanae	63.78	161	P	P	07 31 47.6	-1.7
SNAA	Sanae	63.78	161	P	P	07 31 48.3	-1.0
SMTB	Santa Maria do	64.38	83	*e*P	P	07 31 54.0	-0.1
SJMB	Sao Joao De Ma	64.57	96	*e*P	P	07 31 56.5	+1.3
JCT	Junction City	65.41	12	P	P	07 31 60.0	-0.4
HKT	Hockley	65.69	16	P	P	07 32 02.5	+0.5
MNTX	Cornudas Mount	65.86	7	P	P	07 32 03.4	+0.2
PFO	Pinyon Flats O	67.52	356	P	P	07 32 14.7	+0.8
PFO				IAmb	IAmb	07 32 19.4	
	comp=Z,10nm,1.3s						
X16A	Lo Mia Camp, P	68.23	1	P	P	07 32 17.6	-0.8
MSTX	Muleshoe	68.39	9	P	P	07 32 19.2	-0.1
MSTX				IAmb	IAmb	07 32 27.1	
	comp=Z,7.5nm,1.1s						
GSC	Goldstone, Bar	69.22	356	P	P	07 32 25.2	+0.8
GSC				IAmb	IAmb	07 32 30.0	
	comp=Z,9.1nm,1.1s						
U15A	North Rim	70.23	0	P	P	07 32 31.3	+0.5
SHPR	Sheep Range	70.35	358	P	P	07 32 32.4	+1.0
SHPR				IAmb	IAmb	07 32 46.9	
	comp=Z,9.0nm,1.3s						
DZM	Mont Dzumac	70.80	256	*e*LR	LR	07 54 05.3	
	comp=Z,1µm,27.4s						
W39A	Magazine	71.20	16	P	P	07 32 35.4	-1.0
W39A				IAmb	IAmb	07 32 42.2	
	comp=Z,15nm,1.4s						
CCUT	Cedar City	71.36	359	P	P	07 32 38.0	+0.4
TUL1	Leonard	71.45	14	P	P	07 32 36.5	-1.5
W41B	Gary Mavity, V	71.55	17	P	P	07 32 39.0	+0.5
PV04	Paradox Valley	72.27	3	P	P	07 32 44.6	+1.5
MSU	Marysvale	72.31	0	P	P	07 32 43.9	+0.5
NV11	Mina Array Sit	72.42	355	P	P	07 32 44.3	+0.4
NV11				IAmb	IAmb	07 32 50.2	
	comp=Z,12nm,1.1s						
NVAR	Mina Array Bea	72.43	355	P	P	07 32 43.5	-0.5
	comp=Z,2.0nm,0.8s,baz=186,slow=6.6,SNR=5.2						
NVAR				LR	LR	07 57 59.9	
	comp=Z,436nm,18.9s,baz=166,slow=30						
NVAR	Mina Array Bea	72.43	355	P	P	07 32 44.0	-0.1
SRU	San Rafael Swe	72.93	2	P	P	07 32 46.7	-0.3
TMUT	Trail Mountain	73.11	1	P	P	07 32 48.8	+0.6
P17A	Butcher Ranch,	73.29	1	P	P	07 32 49.3	+0.3
JLU	Jordanelle	74.41	1	P	P	07 32 56.2	+0.5
WDC	Whiskeytown Da	74.95	352	P	P	07 32 59.6	+1.1
N35A	Tabor	76.27	13	P	P	07 33 05.8	-0.2
BW06	Boulder Array	76.61	2	P	P	07 33 06.1	-2.2
PD31	Pinedale Array	76.61	2	P	P	07 33 08.4	+0.1
PDAR	Pinedale Array	76.61	2	P	P	07 33 07.7	-0.6
	comp=Z,2.3nm,1.0s,baz=157,slow=4.8,SNR=6.5						
PDAR				LR	LR	08 01 16.6	
	comp=Z,195nm,20.8s,baz=103,slow=31						
PDAR	Pinedale Array	76.61	2	P	P	07 33 07.6	-0.7
HLID	Hailey	77.38	359	P	P	07 33 13.1	+0.6
HLID				IAmb	IAmb	07 33 18.4	
	comp=Z,8.6nm,1.1s						
FLWY	Flagg Ranch	77.89	1	P	P	07 33 15.3	-0.2
FLWY				IAmb	IAmb	07 33 22.6	
	comp=Z,12nm,1.3s						
PINE	Pine Mountain	77.96	354	P	P	07 33 14.3	-1.5
PINE				IAmb	IAmb	07 33 21.9	
	comp=Z,6.5nm,0.8s						
I07A	Izee	78.14	355	P	P	07 33 17.4	+0.8
I07A				IAmb	IAmb	07 33 22.7	
	comp=Z,9.7nm,1.0s						
MAW	Mawson	78.49	178	LR	LR	08 04 57.9	
	comp=Z,382nm,20.7s,baz=206,slow=33						
MCMT	McKenzie Canyo	78.62	360	P	P	07 33 18.2	-1.3
BMO	Blue Mountains	78.77	357	P	P	07 33 20.7	+0.6
ECSD	EROS Data Cent	78.88	12	P	P	07 33 20.7	+0.1
H04A	Detroit Lake	78.97	353	P	P	07 33 20.6	-0.5
H04A				IAmb	IAmb	07 33 31.0	
	comp=Z,10.0nm,1.1s						
G08A	Pilot Rock	79.30	355	P	P	07 33 23.2	+0.2
I37A	Lemond, Waseca	79.74	14	P	P	07 33 24.0	-1.3
E08A	Dider Farm, El	80.50	355	P	P	07 33 28.4	-0.9
E08A				IAmb	IAmb	07 33 34.6	
	comp=Z,7.6nm,1.0s						
F33A	5 Mile Ranch,	80.98	11	P	P	07 33 30.0	-1.9
F33A				IAmb	IAmb	07 33 35.8	
	comp=Z,11nm,1.3s						
F36A	Milaca	81.49	13	P	P	07 33 32.8	-1.9
JTMT	Jette	81.56	359	P	P	07 33 33.3	-1.8
JTMT				IAmb	IAmb	07 33 40.7	
	comp=Z,8.9nm,1.1s						
C09A	Chrisman Ranch	81.76	356	P	P	07 33 36.4	+0.3
C09A				IAmb	IAmb	07 33 41.6	
	comp=Z,7.2nm,1.0s						
NEW	Newport	82.16	357	P	P	07 33 37.6	-0.6
	comp=Z,6.2nm,1.1s,baz=206,slow=4.5,SNR=5.4						
NEW	Newport	82.16	357	P	P	07 33 38.0	-0.2
NEW				IAmb	IAmb	07 33 43.1	
	comp=Z,8.7nm,1.1s						
STKA	Stephens Creek	84.21	235	LR	LR	08 07 12.5	
	comp=Z,223nm,18.4s,baz=120,slow=33						
ULM	Lac du Bonnet	85.33	11	LR	LR	08 06 34.4	
	comp=Z,152nm,19.7s,baz=126,slow=32						
H11S2	WAKE ISLAND Hy	92.85	290	T	T	09 17 43.6	
	baz=126,slow=75,SNR=6.3						
H11S1	WAKE ISLAND Hy	92.87	290	T	T	09 17 40.3	
	baz=126,slow=75,SNR=5.0						
H11S3	WAKE ISLAND Hy	92.87	290	T	T	09 17 44.9	
	baz=126,slow=75,SNR=6.3						
ASAR	Alice Springs	94.63	237	LR	LR	08 14 32.6	
	comp=Z,196nm,18.4s,baz=124,slow=34						
YKA	Yellowknife Ar	96.34	359	P	P	07 34 45.0	-0.7
	comp=Z,0.6nm,1.0s,baz=166,slow=4.4,SNR=4.7						
YKA				LR	LR	08 12 28.4	
	comp=Z,289nm,21.2s,baz=0.0,slow=32						
WRA	Warramunga Arr	96.70	241	LR	LR	08 13 31.9	
	comp=Z,375nm,20.1s,baz=125,slow=32						
H01W1	Cape Leeuwin H	98.58	217	T	T	09 24 59.4	
	baz=140,slow=75,SNR=5.2						
H01W2	Cape Leeuwin H	98.58	217	T	T	09 25 01.4	
	baz=140,slow=75,SNR=8.3						
H01W3	Cape Leeuwin H	98.59	217	T	T	09 25 04.2	
	baz=140,slow=75,SNR=6.5						
AKASG	Malin Array Be	147.73	47	PKPbc	PKPdf	07 40 59.6	+0.5
	comp=Z,1.7nm,0.7s,baz=280,slow=3.5,SNR=5.2						
AKASG	Malin Array Be	147.73	47	PKPdf	PKPdf	07 40 59.2	+0.1
BRTR	Keskin Array B	152.51	68	PKPbc	PKPbc	07 41 11.2	-2.9
	comp=Z,1.6nm,1.0s,baz=289,slow=3.8,SNR=4.5						
BRTR	Keskin Array B	152.51	68		PKPdf	07 41 10.4	+3.2

MAN ***13*** *07:26:02.6, 6°.09N×126°.08E, h132^{km}, mb4.7, ML3.6, MS3.5*

IDC ***13*** *07:26:03.5±0.7, 6°.25N×125°.95E, h146^{km}±5^{km}, mb3.6/13, mb1 3.8/14, mb1mx3.5/59, mbtmp4.1/14, Error ellipse: s-maj=29.3km s-min=11.2km az=86.0*

DJA ***13*** *07:26:07.7±1.6, 6°N±13°×12°6E±°, h103^{km}±15^{km}, M4.8/12, mB5.2/9, mb4.8/12, MLv5.0/11, Mw(mB)4.6/9*

ISC 13 07:26:02.4±0.8**, 6°.21N**±0°.05×**126°.27E**±0°.08**, h139^{km}**±6^{km}**, n39, σ1^{s}.42**/48**, mb3.8**/13**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.56	259	*e*P	Pn	07 26 22.8	0.0
DDMP				*e*S	Sn	07 26 38.1	-0.2
MATI	Mati	0.73	359	*e*P	Pn	07 26 24.8	+0.8
MATI				*e*S	Sn	07 26 40.7	+0.4
DAV	Davao City (W)	1.09	321	P	Pn	07 26 27.8	+0.8
	107nm,0.3s,baz=275,slow=6.8,SNR=6.7						
DAV				S	Sn	07 26 45.4	-0.2
	525nm,0.3s,baz=359,slow=5.7,SNR=8.6						
KCP	Kidapawan	1.41	304	⇑*i*P	Pn	07 26 30.4	+0.1
KCP				*i* S	Sn	07 26 51.4	-0.1
SKMP	Bagumbayan, Su	1.74	280	*e*P	Pn	07 26 32.7	-1.1
SKMP				*e*S	Sn	07 26 55.0	-2.8
BIP	Bislig	2.00	360	⇑*i*P	Pn	07 26 34.7	-2.2
BIP				*i* S	Sn	07 27 01.7	-1.7
BUKP	Musuan	2.04	324	*e*P	Pn	07 26 37.6	+0.2
BUKP				*e*S	Sn	07 27 04.4	+0.1
SGSI	Sangihe	2.62	196	P	Pn	07 26 40.7	-3.8
CGP	Cagayan de Oro	2.72	325	⇑*i*P	Pn	07 26 47.6	+1.8
CGP				*e*S	Sn	07 27 17.6	-1.6
BUTP	Butuan	2.81	347	*e*P	Pn	07 26 49.1	+2.1
BUTP				*e*S	Sn	07 27 23.6	+2.3
PAGZ	Pagadian	3.29	300	*e*P	Pn	07 26 52.5	-0.6
GLSP	General Luna,	3.55	358	*e*P	Pn	07 26 56.3	-0.2
MSLP	Maasin	4.14	340	*e*P	Pn	07 27 03.3	-0.9
TNTI	Ternate	5.52	168	P	Pn	07 27 22.9	+0.3
	1.3nm6µm156nm,0.9s						
KMSI	Cibinong	6.05	202	P	Pn	07 27 29.7	0.0
	2.0nm22µm330nm,0.4s						
GTOI	Gorontalo	6.42	210	P	Pn	07 27 35.2	+0.5
	0.7nm2µm168nm,0.7s						
MRSI	Marisa	7.15	217	P	Pn	07 27 45.3	+0.8
	0.4nm1µm121nm,0.6s						
LUWI	Luwuk	8.01	206	P	Pn	07 27 55.8	-0.2
	0.5nm3µm149nm,1.1s						
SANI	Sanana	8.21	182	P	Pn	07 27 56.5	-2.3
	0.8nm4µm194nm,0.7s						
APSI	Ampana	8.44	213	P	Pn	07 28 03.7	+1.8
	665nm34nm,0.6s						
MPSI	Mapaga	8.63	228	P	Pn	07 28 08.8	+4.5
	9.5nm,0.7s						
NLAI	Namlea	9.43	175	P	Pn	07 28 14.1	-0.9
	2µm67nm,0.6s						
TTSI	Tana Toraja	11.22	215	P	Pn	07 28 41.4	+2.5
	2µm57nm,1.3s						
BNSI	Bone	12.21	210	P	Pn	07 28 53.6	+1.8
KAPI	Kappang	12.91	210	P	Pn	07 29 01.2	+0.3
	2.0nm,0.3s,baz=21,slow=11,SNR=11						
BATI	Baumata	16.52	189	P	P	07 29 47.7	+1.4
	11nm,0.3s,baz=334,slow=3.1,SNR=4.7						
FITZ	Fitzroy Crossi	24.16	181	P	P	07 31 07.0	+1.1
	2.3nm,0.5s,baz=4.7,slow=16,SNR=12						
WRA	Warramunga Arr	27.18	163	P	P	07 31 33.9	+0.7
	0.3nm,0.4s,baz=327,slow=12,SNR=1.9						
ASAR	Alice Springs	30.62	166	P	P	07 32 04.8	+1.2
	0.5nm,0.4s,baz=341,slow=6.9,SNR=9.7						
KSRS	Korea Array	31.13	3	P	P	07 32 08.6	+0.7
	0.4nm,0.3s,baz=187,slow=9.6,SNR=4.5						
USRK	Ussuriysk Ar.	38.17	7	P	P	07 33 08.6	+0.3
	2.0nm,0.6s,baz=175,slow=6.9,SNR=6.1						
KLR	Kul'dur	43.12	5	P	P	07 33 49.5	+0.7
	3.0nm,0.6s,baz=198,slow=5.0,SNR=13						
PETK	Petropavlovsk-	53.33	23	P	P	07 35 08.9	+1.7
	3.8nm,0.9s,baz=221,slow=2.2,SNR=5.4						
MKAR	Makanchi Array	55.27	325	P	P	07 35 20.1	-1.3
	0.7nm,0.6s,baz=118,slow=8.3,SNR=9.6						
MKAR				PcP	PcP	07 36 18.7	-1.8
	1.0nm,0.8s,baz=114,slow=5.4,SNR=5.5						
KURBB	Kurchatov Arra	59.42	327	P	P	07 35 49.2	-1.0
	0.2nm,0.4s,baz=130,slow=6.8,SNR=5.7						
AKTO	Aktyubinsk	71.44	321	P	P	07 37 06.9	-0.8
	0.6nm,0.4s,baz=105,slow=13,SNR=4.5						
ILAR	Eielson Array	83.08	26	P	P	07 38 12.2	-0.1
	0.7nm,0.5s,baz=246,slow=5.0,SNR=12						
ARCES	ARCESS Array B	87.97	340	P	P	07 38 35.0	-1.3
	4.1nm,1.0s,baz=303,slow=6.8,SNR=3.9						
FINES	FINESS Array B	89.44	332	P	P	07 38 42.2	-1.2
	2.0nm,1.0s,baz=354,slow=36,SNR=1.3						

IDC 13 07:29:11.4±3.4**, 54°.46N**×**86°.86E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/58**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=31.4km s-min=19.5km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.30	248	*i*		07 36 20.0	
	baz=66,slow=342,SNR=1.0						
ZALV	Zalesovo Beam	1.30	248	Pg	Pg	07 29 35.0	-1.3
	1.0nm,0.3s,baz=66,slow=16,SNR=8.7						
ZALV				Lg	Lg	07 29 53.5	
	1.9nm,0.3s,baz=69,slow=22,SNR=6.0						
ZALV				Rg	Rg	07 30 03.5	
	1.3nm,0.3s,baz=58,slow=25,SNR=6.1						
KURBB	Kurchatov Arra	6.37	236	Pn	Pn	07 30 47.0	+0.6
	0.1nm,0.3s,baz=54,slow=14,SNR=12						
MKAR	Makanchi Array	8.20	203	Pn	Pn	07 31 12.8	+1.2
	0.1nm,0.3s,baz=26,slow=13,SNR=5.1						

REN ***13*** *07:29:12.0±3.3, 41°.89N±0°.04×119°.62W±0°.04, h9^{km}±6^{km}, ML2.7/5, ML3.0/15(SEA), ML2.5/42(NEIC), Error ellipse: s-maj=5.8km s-min=3.8km az=175.0*

ANF ***13*** *07:29:11.4±0.7, 41°.87N×119°.61W, h7^{km}±7^{km}, ML2.8/10, Error ellipse: s-maj=6.3km s-min=2.7km az=91.0*

SEA ***13*** *07:29:12.9±4.0, 41°.85N±0°.02×119°.62W±0°.03, h0^{km}±7^{km}, Error ellipse: s-maj=4.1km s-min=2.1km az=48.0*

NEIC 13 07:29:13.2±4.0**, 41°.87N**±0°.04×**119°.66W**±0°.02**, h4^{km}**±7^{km}**, Error ellipse: s-maj=5.2km s-min=2.5km az=167.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.48	274		Pg	07 29 22.1	-0.3
MOD					Sg	07 29 29.6	+0.8
MOD	Modoc Plateau	0.48	274	IAML		07 29 29.8	
	comp=E,1µm,0.6s						
MOD				IAML		07 29 31.1	
	comp=N,477nm,0.5s						
LKVW	Lakeview	0.63	305		Pg	07 29 24.4	-0.9
WVOR	Wild Horse Val	0.95	53		Pg	07 29 29.8	-1.6
WVOR	Wild Horse Val	0.95	53		Sg	07 29 42.7	-0.9
WVOR	Wild Horse Val	0.95	53	IAML		07 29 45.6	
	comp=N,127nm,0.9s						
WVOR				IAML		07 29 45.8	
	comp=N,137nm,0.7s						
K05A	Summer Lake	1.26	314		Pg	07 29 36.1	-1.1
K05A					Sg	07 29 53.6	0.0
LASM	Arnica Sink	1.46	260		Pn	07 29 39.0	-1.5
LTIM	Timbered Crate	1.54	244		Pn	07 29 40.4	-1.1
HOG	Hogback Mounta	1.57	284		Pn	07 29 40.7	-1.3
M04C	Macdoel	1.63	268	P	Pn	07 29 41.2	-1.5
	baz=86,SNR=13						
M04C				S	Sn	07 30 03.6	-0.7
	baz=86						
LBCM	Butte Creek Ri	1.64	232		Pn	07 29 41.8	-1.1
K04D	Chiloquin, OR	1.73	297	Pb	Pn	07 29 44.0	-0.1
	baz=114,SNR=7.8						
K04D				Sb	Sb	07 30 07.9	+0.1
	baz=114						
K04D	Chiloquin, OR	1.73	297		Pn	07 29 44.3	+0.2

J05D	**Fort Rock, OR**	**1.83**	**321**	Pb	Pn	07 29 45.7	+0.1
	baz=139,SNR=23						
J05D				Sb	Sb	07 30 10.7	0.0
	baz=139						
J05D	**Fort Rock, OR**	**1.83**	**321**		Pn	07 29 45.8	+0.2
LHEM	**Herd Peak**	**1.93**	**264**		Pn	07 29 47.8	+0.8
LHEM					Sg	07 30 15.8	+0.6
L04D	**Klamath Falls**	**2.00**	**281**	P	Pn	07 29 46.0	-1.8
	baz=99,SNR=5.7						
L04D				Sb	Sb	07 30 16.1	+0.5
	baz=99						
BEKR	**Beckworth**	**2.07**	**195**		Pn	07 29 47.5	-1.3
BEKR				IAML		07 30 19.7	
	comp=N,29nm,0.3s						
BEKR				IAML		07 30 20.3	
	comp=E,34nm,0.6s						
PINE	**Pine Mountain**	**2.14**	**334**		Pb	07 29 51.4	-1.2
PINE				IAML		07 30 28.1	
	comp=E,40nm,1.1s						
PINE				IAML		07 30 28.2	
	comp=N,25nm,1.0s						
PAHR	**Pah Rah Range**	**2.17**	**174**		Pb	07 29 51.7	-1.3
PAHR				IAML		07 30 24.2	
	comp=N,20nm,0.4s						
PAHR				IAML		07 30 24.5	
	comp=E,21nm,0.5s						
I07A	**Izee**	**2.22**	**3**		Pn	07 29 52.2	+1.4
O03E	**Paynes Creek**	**2.26**	**227**	Pb	Pb	07 29 53.0	-1.5
	baz=45,SNR=16						
O03E				Sb	Sb	07 30 23.7	+0.9
	baz=45						
J04D	**Umpqua Nationa**	**2.27**	**308**	Pb	Pb	07 29 53.5	-1.4
	baz=126,SNR=14						
YBH	**Yreka Blue Hor**	**2.29**	**268**		Pn	07 29 50.1	-1.6
M02C	**Callahan**	**2.44**	**260**	Sb	Sb	07 30 29.4	+1.3
	baz=77						
N02D	**Trinity Center**	**2.46**	**250**	Pb	Pn	07 29 56.0	+1.9
	baz=67,SNR=10						
N02D				Sb	Sb	07 30 30.3	+1.7
	baz=67						
WDC	**Whiskeytown Da**	**2.53**	**240**		Pn	07 29 53.4	-1.5
WDC				IAML		07 30 31.6	
	comp=N,15nm,0.5s						
HUMO	**Hull Mountain**	**2.56**	**288**		Pn	07 29 54.2	-1.2
HUMO				IAML		07 30 33.4	
	comp=N,19nm,0.5s						
HUMO				IAML		07 30 37.0	
	comp=E,19nm,0.7s						
VCNR	**Virginia City**	**2.57**	**180**		Pn	07 29 54.8	-0.9
ORV	**Oroville**	**2.70**	**212**		Pb	07 30 03.3	+1.3
I05D	**Terrebonne, OR**	**2.76**	**334**	Pg	Pg	07 30 05.0	-1.1
	baz=152,SNR=5.1						
PNTR	**Pine Nut**	**2.77**	**179**		Pb	07 30 03.5	0.0
PNTR				IAML		07 30 56.8	
	comp=N,20nm,1.0s						
O02D	**Mt. Diablo Mer**	**2.91**	**236**	Pb	Pb	07 30 04.1	-1.5
	baz=53,SNR=7.8						
O02D				Sb	Sb	07 30 42.8	+1.2
	baz=53						
L02E	**Cave Junction**	**2.96**	**277**	Sb	Sb	07 30 43.3	+0.5
	baz=94						
K02D	**Willamette Mer**	**3.09**	**287**	P	Pn	07 30 03.3	+0.5
	baz=104,SNR=16						
MFID	**Camas Ranch**	**3.22**	**60**		Pn	07 30 06.0	+1.4
MFID				IAML		07 31 02.6	
	comp=N,16nm,0.7s						
RYN	**Ryan**	**3.35**	**165**		Pn	07 30 04.5	-1.9
RYN				IAML		07 31 05.6	
	comp=N,11nm,1.1s						
RYN				IAML		07 31 07.7	
	comp=E,12nm,1.1s						
WAKR	**Walker**	**3.36**	**177**		Pn	07 30 08.0	+1.4
WAKR				IAML		07 31 05.8	
	comp=E,11nm,4.8s						
WAKR				IAML		07 31 27.6	
	comp=N,6.5nm,3.7s						
BMO	**Blue Mountains**	**3.44**	**29**		Pn	07 30 07.8	+0.2
BMO				IAML		07 31 11.1	
	comp=N,9.0nm,4.3s						
ELK	**Elko**	**3.51**	**107**		Pn	07 30 06.1	-2.6
NV11	**Mina Array Sit**	**3.62**	**161**		Pn	07 30 10.6	+0.5
NV11				IAML		07 31 15.3	
	comp=N,6.3nm,3.6s						
NV11				IAML		07 31 15.8	
	comp=E,7.2nm,2.4s						
HLID	**Hailey**	**4.22**	**65**		Pn	07 30 16.9	-1.4
HLID				IAML		07 31 31.7	
	comp=E,6.8nm,0.7s						
HLID				IAML		07 31 40.9	
	comp=E,4.6nm,3.5s						
PRN	**Pahroc Range**	**5.70**	**140**	Pn	Pn	07 30 40.5	+1.8

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*BJI **13** 07:30:16.2±0.0, 5°.22S×151°.65E, h140^{km}, mB5.1/13, mb4.8/33*

*IDC **13** 07:30:19.3±0.5, 5°.21S×151°.08E, h135^{km}±4^{km}, mb4.3/28, mb1 4.4/31, mb1mx4.3/48, mbtmp4.7/31, MS3.5/8, Ms1 3.6/8, ms1mx3.3/38, Error ellipse: s-maj=10.4km s-min=6.6km az=120.0*

*NEIC **13** 07:30:19.8±1.5, 5°.14S±0°.06×151°.12E±0°.05, h142^{km}±5^{km}, mb4.7/50, Error ellipse: s-maj=10.2km s-min=3.9km az=140.0*

*NOU **13** 07:30:19.8, 4°.93S×151°.09E, h147^{km}, mb4.9, New Britain Region, P.N.G.*

*DJA **13** 07:30:20.4±0.4, 5°S±4°×15°1E±°, h125^{km}±6^{km}, M5.0/12, mB5.2/4, mb4.6/12, MLv5.2/3, Mw(mB)4.5/4*

*GCMT **13** 07:30:21.8±0.3, 5°.17S±0°.02×151°.25E±0°.02, h150^{km}±3^{km}, MW5.0/88, Moment Tensor Solution. s16,c19; s88,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.14; $M_{\theta\theta}$-1.12±.17; $M_{\phi\phi}$2.24±.18; $M_{r\theta}$-1.69±.11; $M_{\theta\phi}$3.43±.15; $M_{\phi r}$0.14±.13; Best double couple: $M_0$4.27300×10^{16} NP1:ϕ_s170.00000°, δ64.00000°, λ-165.00000°. NP2: ϕ_s73.00000°, δ77.00000°, λ-26.00000°. Principal axes: T 4.4920, Plg8.0000°, Azm124.0000°; N -0.4370, Plg61.0000°, Azm229.0000°; P -4.0550, Plg28.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 07:30:21.0±0.3, **5°.18S**±0°.05×**151°.16E**±0°.05, **h155**^{km}**, n146, σ1^s.51**/151, **mb4.6**/56, **1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.22**	**45**	P	**Pn**	**07 30 45.8**	**-2.4**
	187nm,0.3s,baz=260,slow=1.4,SNR=48						
KRVT				S	**Sn**	**07 31 05.7**	**-3.3**
	287nm,0.3s,baz=75,slow=23,SNR=3.7						
RABL	**Rabaul**	**1.40**	**46**		**Pn**	**07 30 47.2**	**-2.7**
RABL	**Rabaul**	**1.40**	**46**	P	**Pn**	**07 30 47.5**	**-2.4**
MANU	**Manus Island**	**4.90**	**309**		**Pn**	**07 31 31.1**	**-2.2**
PMG	**Port Moresby**	**5.78**	**223**	P	**Pn**	**07 31 43.2**	**-1.6**
	55nm,0.3s,baz=55,slow=4.7,SNR=64						
PMG				S	**Sn**	**07 32 48.1**	**-2.4**
	121nm,0.3s,baz=310,slow=21,SNR=14						
PMG				LR	LR	07 34 12.1	
	comp=Z,467nm,19.9s,baz=322,slow=41						
PMG	**Port Moresby**	**5.78**	**223**		**Pn**	**07 31 43.1**	**-1.8**
PMG	**Port Moresby**	**5.78**	**223**	P	**Pn**	**07 31 44.6**	**-0.3**
HNR	**Honiara**	**9.68**	**116**	P	**Pn**	**07 32 34.9**	**-1.9**
	8.9nm,0.3s,baz=214,slow=2.6,SNR=9.4						
HNR	**Honiara**	**9.68**	**116**		**Pn**	**07 32 36.8**	**0.0**
HNR	**Honiara**	**9.68**	**116**	P	**Pn**	**07 32 37.2**	**+0.4**
JAY	**Jayapura**	**10.76**	**284**	P	**Pn**	**07 32 47.4**	**-3.7**
	1.5nm,0.3s,baz=91,slow=19,SNR=6.9						
JAY				LR	LR	07 36 10.1	
	comp=Z,260nm,19.1s,baz=86,slow=33						
JAY	**Jayapura**	**10.76**	**284**	P	**Pn**	**07 32 50.4**	**-0.7**
	36nm,1.6s						
GENI	**Genyem**	**11.27**	**283**	P	**Pn**	**07 32 56.1**	**-1.6**
COEN	**Coen**	**11.75**	**221**	Pn	**Pn**	**07 33 03.8**	**-0.2**
CTA	**Charters Tower**	**15.57**	**197**	P	**P**	**07 33 53.6**	**+0.3**
	0.7nm,0.3s,baz=24,slow=12,SNR=11						
CTAO	**Charters Tower**	**15.57**	**197**		**Pn**	**07 33 50.4**	**-1.9**
SANVU	**Saraoutou**	**18.78**	**124**	Pn	**Pn**	**07 34 31.5**	**+0.7**
SANVU	**Saraoutou**	**18.78**	**124**	P	**Pn**	**07 34 30.5**	**-0.3**
EIDS	**Eidsvold**	**20.08**	**180**	P	**P**	**07 34 42.6**	**+0.2**
EIDS				IAmb	IAmb	07 34 48.6	
	comp=Z,31nm,0.7s						
SIJI	**Sorong**	**20.32**	**282**	P	**P**	**07 34 46.0**	**+0.8**
	comp=Z,43nm,0.9s,baz=91,slow=9.2,SNR=9.3						
SWI	**Sorong**	**20.33**	**282**	P	**P**	**07 34 46.8**	**+1.5**
	comp=Z,81nm,1.0s						
MTN	**Manton Dam**	**21.18**	**248**	P	**P**	**07 34 55.0**	**+0.5**
MTN				IAmb	IAmb	07 35 17.5	
	comp=Z,45nm,1.0s						
WB0	**Warramunga Arr**	**21.84**	**227**	P	**P**	**07 35 00.7**	**-0.6**
WB0				IAmb	IAmb	07 35 28.4	
	comp=Z,49nm,1.2s						
WR0	**Warramunga Arr**	**21.85**	**226**	P	**P**	**07 35 00.9**	**-0.6**
WR0				IAmb	IAmb	07 35 28.5	
	comp=Z,20nm,0.8s						
WB2	**Warramunga Arr**	**21.98**	**227**	P	**P**	**07 35 02.2**	**-0.6**
WB2				IAmb	IAmb	07 35 29.7	
	comp=Z,26nm,1.1s						
WRA	**Warramunga Arr**	**21.99**	**227**	P	**P**	**07 35 01.9**	**-0.9**
	comp=Z,11nm,0.5s,baz=50,slow=9.8,SNR=60						
WRA				S	**S**	**07 38 54.6**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=56,slow=19,SNR=8.2						
WRA				ScP	**ScP**	**07 42 20.6**	**+2.3**
	comp=Z,2.3nm,0.6s,baz=54,slow=2.7,SNR=17						
WRA				LR	LR	07 42 53.6	
	comp=Z,75nm,20.7s,baz=90,slow=34						
WRA	**Warramunga Arr**	**21.99**	**227**	P	**P**	**07 35 02.1**	**-0.8**
DZM	**Mont Dzumac**	**22.38**	**140**	P	**P**	**07 35 07.5**	**+0.8**
	comp=Z,24nm,0.6s,baz=301,slow=6.6,SNR=44						
DZM	**Mont Dzumac**	**22.38**	**140**	*e*P	**P**	**07 35 07.3**	**+0.5**
	comp=Z,43nm,0.8s						
DZM	**Mont Dzumac**	**22.38**	**140**	P	**P**	**07 35 07.8**	**+1.0**
DZM				IAmb	IAmb	07 35 08.9	
	comp=Z,27nm,0.6s						
DZM	**Mont Dzumac**	**22.38**	**140**	P	**P**	**07 35 07.8**	**+1.0**
YATNC	**Mamie plateau,**	**22.66**	**139**	P	**P**	**07 35 12.0**	**+2.7**
AS31	**Alice Springs**	**24.79**	**220**	P	**P**	**07 35 29.0**	**+0.3**
ASAR	**Alice Springs**	**24.79**	**220**	P	**P**	**07 35 29.1**	**+0.3**
	comp=Z,12nm,0.5s,baz=57,slow=8.8,SNR=66						
ASAR				pP	**pP**	**07 35 54.6**	**-6.2**
	comp=Z,9.0nm,0.6s,baz=51,slow=9.1,SNR=5.7						
ASAR				S	**S**	**07 39 38.7**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=48,slow=12,SNR=2.0						
ASAR				ScP	**ScP**	**07 42 28.4**	**+2.5**
	comp=Z,1.8nm,0.7s,baz=54,slow=2.8,SNR=11						
ASAR				LR	LR	07 45 18.9	
	comp=Z,98nm,20.3s,baz=48,slow=36						
ASAR	**Alice Springs**	**24.79**	**220**	P	**P**	**07 35 29.5**	**+0.8**
STKA	**Stephens Creek**	**28.04**	**198**	P	**P**	**07 35 59.2**	**+1.5**
	comp=Z,2.8nm,0.6s,baz=31,slow=9.5,SNR=4.0						
STKA				LR	LR	07 47 00.4	
	comp=Z,128nm,18.9s,baz=27,slow=36						
FITZ	**Fitzroy Crossi**	**28.05**	**241**	P	**P**	**07 35 57.7**	**-0.3**
	comp=Z,12nm,0.3s,baz=55,slow=6.7,SNR=94						
FITZ				pP	**pP**	**07 36 24.4**	**-6.2**
	comp=Z,29nm,0.9s,baz=84,slow=7.0,SNR=8.4						
FITZ				LR	LR	07 47 50.5	
	comp=Z,108nm,21.9s,baz=53,slow=38						
FITZ	**Fitzroy Crossi**	**28.05**	**241**	P	**P**	**07 35 57.5**	**-0.5**
EDFI	**Ende, Flores**	**29.46**	**261**	P	**P**	**07 36 12.4**	**+1.7**
	comp=Z,4.4nm,1.1s						
TOZ	**Tahuroa Road**	**39.28**	**149**	P	P	07 38 02.7	+28
URZ	**Urewera**	**40.51**	**148**	P	**P**	**07 37 46.0**	**+1.1**
	comp=Z,4.9nm,0.6s,baz=167,slow=7.5,SNR=7.0						
URZ	**Urewera**	**40.51**	**148**	P	**P**	**07 37 46.2**	**+1.4**
URZ				IAmb	IAmb	07 37 48.0	
	comp=Z,29nm,1.4s						
DUWZ	**D'Urville Isla**	**40.93**	**153**	P	**P**	**07 37 51.7**	**+3.4**
NNZ	**Nelson**	**41.03**	**154**	P	**P**	**07 37 51.2**	**+2.3**
THZ	**Tophouse**	**41.27**	**155**	P	**P**	**07 37 52.7**	**+1.6**
TCW	**Tory Channel**	**41.41**	**153**	P	**P**	**07 37 54.3**	**+2.1**
TUWZ	**Tuamarina**	**41.44**	**154**	P	**P**	**07 37 53.6**	**+1.2**
TUWZ	**Tuamarina**	**41.44**	**154**	P	**P**	**07 37 54.2**	**+1.8**
JSU	**Suzuyama**	**41.48**	**333**	P	**P**	**07 37 53.8**	**+0.9**
HOWZ	**Holdsworth Sta**	**41.73**	**152**	P	**P**	**07 37 56.4**	**+1.6**
ANWZ	**Angora Road**	**41.85**	**151**	P	**P**	**07 37 53.4**	**-2.3**
BFZ	**Birch Farm**	**41.91**	**151**	P	**P**	**07 37 57.5**	**+1.3**
MTW	**Mount Morrison**	**41.93**	**152**	P	**P**	**07 37 57.7**	**+1.3**
JMN	**Monobe**	**42.01**	**338**	P	**P**	**07 37 58.4**	**+1.2**
PLWZ	**Palliser**	**42.14**	**153**	P	**P**	**07 37 59.3**	**+1.2**
RPZ	**Rata Peaks**	**42.20**	**158**	P	**P**	**07 37 59.4**	**+0.8**
	comp=Z,8.9nm,0.7s,baz=83,slow=6.4,SNR=4.0						
JNU	**Nakatsue**	**42.67**	**335**	P	**P**	**07 38 03.3**	**+0.8**
	comp=Z,53nm,0.7s,baz=143,slow=4.4,SNR=29						
JNU	**Nakatsue**	**42.67**	**335**	P	**P**	**07 38 03.0**	**+0.5**
MJAR	**Matsushiro Arr**	**43.23**	**345**	P	**P**	**07 38 06.0**	**-1.0**
	comp=Z,6.5nm,0.9s,baz=166,slow=8.6,SNR=7.9						
MAT	**Matsushiro**	**43.24**	**345**	P	**P**	**07 38 06.3**	**-0.7**
KSRS	**Korea Array**	**47.62**	**335**	P	**P**	**07 38 42.5**	**+1.1**
	comp=Z,9.1nm,1.0s,baz=154,slow=9.3,SNR=30						
NJ2	**Nanjing**	**48.13**	**322**	*e*P	**P**	**07 38 48.1**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
INCN	**Inchon**	**48.20**	**334**	P	**P**	**07 38 47.4**	**+1.4**
ASAJ	**Asahikawa**	**49.67**	**352**	P	**P**	**07 38 58.1**	**+1.2**
	comp=Z,4.9nm,0.5s,baz=254,slow=21,SNR=2.4						
TIA	**Tai'an**	**52.07**	**325**	P	**P**	**07 39 16.3**	**+1.3**
TIA				pmax	pmax		
	comp=Z,16nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.09**	**343**	P	**P**	**07 39 16.1**	**+1.1**
	comp=Z,5.5nm,0.8s,baz=151,slow=9.1,SNR=11						
USRK	**Ussuriysk Ar.**	**52.09**	**343**	P	**P**	**07 39 15.2**	**+0.2**
XAN	**Xi'an**	**55.78**	**318**	P	**P**	**07 39 43.3**	**+1.2**
XAN				pmax	pmax		
	comp=Z,15nm,1.2s						
XAN				pmax	pmax		
	comp=Z,250nm,6.0s						
CMAR	**Chiang Mai Arr**	**56.57**	**296**	P	**P**	**07 39 48.6**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=109,slow=4.8,SNR=6.1						
CMAR	**Chiang Mai Arr**	**56.57**	**296**	P	**P**	**07 39 48.4**	**+0.5**
KLR	**Kul'dur**	**56.76**	**345**	P	**P**	**07 39 49.3**	**+0.6**
	comp=Z,4.5nm,0.9s,baz=179,slow=4.6,SNR=14						
KLR				LR	LR	08 01 18.6	
	comp=Z,67nm,21.6s,baz=254,slow=33						
PETK	**Petropavlovsk-**	**58.33**	**5**	P	**P**	**07 39 60.0**	**+0.4**
	comp=Z,14nm,0.8s,baz=144,slow=5.4,SNR=23						
PETK	**Petropavlovsk-**	**58.33**	**5**	P	**P**	**07 39 59.5**	**-0.1**
HHC	**Hu-ho-hao-te**	**58.41**	**325**	*e*P	**P**	**07 40 02.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,6.6s						
BTO	**Baotou**	**59.14**	**324**	*e*P	**P**	**07 40 08.5**	**+2.9**
PPT2	**Papeete2**	**59.17**	**107**	*e*S	**S**	**07 48 00.0**	**-2.0**
	comp=Z,69nm,24.5s						
PPT2				*e*LR	LR	07 57 43.8	
	comp=Z,69nm,23.5s						
TBI	**Tubuai**	**59.89**	**114**	*e*LR	LR	07 58 06.7	
	comp=Z,217nm,25.0s						
LZH	**Lanzhou**	**60.37**	**317**	*e*P	P	07 40 19.0	+4.8
LZH				pP	pP	07 40 50.1	+0.1
LZH				sP	sP	07 41 04.9	-1.8
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HIA	**Hailar**	**60.72**	**337**	P	**P**	**07 40 16.7**	**+0.6**
MA2	**Magadan**	**64.55**	**360**	P	**P**	**07 40 41.6**	**+0.5**
	comp=Z,13nm,0.6s,baz=173,slow=5.1,SNR=13						
MA2	**Magadan**	**64.55**	**360**	P	**P**	**07 40 41.0**	**-0.1**
GTA	**Gaotai**	**64.83**	**318**	LR	LR		
	comp=N,270nm,16.4s						
GTA				LR	LR		
	comp=E,250nm,17.1s						
GTA				LR	LR		
	comp=Z,370nm,16.7s						
ULN	**Ulaanbaatar**	**65.46**	**329**	P	**P**	**07 40 48.8**	**+1.2**
ULN				IAmb	IAmb	07 40 50.3	
	comp=Z,9.1nm,1.1s						
SONM	**Songino Array**	**65.78**	**329**	P	**P**	**07 40 50.8**	**+1.2**
	comp=Z,5.6nm,1.0s,baz=134,slow=6.2,SNR=20						
SONM	**Songino Array**	**65.78**	**329**	P	**P**	**07 40 50.1**	**+0.5**
SEY	**Seymchan**	**67.92**	**1**	P	**P**	**07 41 03.3**	**+0.7**
	comp=Z,5.1nm,0.9s,baz=163,slow=7.2,SNR=7.2						
WMQ	**Urumqi**	**74.92**	**318**	*e*P	**P**	**07 41 47.3**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,7.1s						
TIXI	**Tiksi**	**78.06**	**353**	P	**P**	**07 42 02.0**	**0.0**
MK31	**Makanchi Array**	**79.54**	**319**	P	**P**	**07 42 11.0**	**+0.3**
MKAR	**Makanchi Array**	**79.54**	**319**	P	**P**	**07 42 11.2**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=101,slow=6.3,SNR=8.3						
MKAR				pP	**pP**	**07 42 45.1**	**-3.4**
	comp=Z,1.7nm,0.9s,baz=99,slow=5.5,SNR=4.3						
MKAR	**Makanchi Array**	**79.54**	**319**	P	**P**	**07 42 10.8**	**+0.1**
RDOG	**Red Dog Mine**	**79.78**	**16**	P	**P**	**07 42 10.4**	**-1.1**
RDOG				IAmb	IAmb	07 42 14.6	
	comp=Z,12nm,1.2s						
ZAA0	**Zalesovo Array**	**80.56**	**327**	P	**P**	**07 42 15.7**	**-0.3**
ZALV	**Zalesovo Beam**	**80.56**	**327**	P	**P**	**07 42 15.6**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=104,slow=6.3,SNR=9.3						
ZALV	**Zalesovo Beam**	**80.56**	**327**	P	**P**	**07 42 14.8**	**-1.2**
IMAR	**Indian Mountai**	**81.28**	**20**	P	**P**	**07 42 19.1**	**-0.4**
RND	**Reindeer**	**81.71**	**23**	P	**P**	**07 42 22.0**	**+0.1**
RND				IAmb	IAmb	07 42 23.0	
	comp=Z,9.1nm,0.7s						
KSH	**Kashi**	**81.94**	**311**	P	**P**	**07 42 27.3**	**+3.5**
KSH				sP	sP	07 43 16.1	-1.9
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDM	**Murphy Dome**	**82.71**	**22**	P	**P**	**07 42 26.4**	**-0.7**
MDM				IAmb	IAmb	07 42 28.4	
	comp=Z,19nm,1.4s						
HDA	**Harding Lake**	**82.93**	**23**	P	**P**	**07 42 28.0**	**-0.1**
HDA				IAmb	IAmb	07 42 29.2	
	comp=Z,7.2nm,0.5s						
KURK	**Kurchatov**	**83.06**	**322**	P	**P**	**07 42 29.1**	**0.0**
IL31		**83.12**	**22**	P	**P**	**07 42 28.7**	**-0.4**
IL31				IAmb	IAmb	07 42 30.0	
	comp=Z,6.2nm,0.7s						
ILAR	**Eielson Array**	**83.12**	**22**	P	**P**	**07 42 28.3**	**-0.9**
	comp=Z,5.3nm,0.6s,baz=248,slow=5.1,SNR=69						
ILAR				LR	LR	08 14 03.0	
	comp=Z,57nm,21.9s,baz=130,slow=32						
ILAR	**Eielson Array**	**83.12**	**22**	P	**P**	**07 42 27.0**	**-2.2**
DOT	**Dot Lake**	**83.73**	**24**	P	**P**	**07 42 32.6**	**+0.3**
DOT				IAmb	IAmb	07 42 34.2	
	comp=Z,7.6nm,0.8s						
AAK	**Ala-Archa**	**83.74**	**314**	P	**P**	**07 42 33.3**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=140,slow=4.3,SNR=4.2						
BCAR	**Beaver Creek A**	**84.43**	**25**	P	**P**	**07 42 35.4**	**-0.5**
MAW	**Mawson**	**84.60**	**203**	P	**P**	**07 42 37.2**	**+0.6**
	comp=Z,6.0nm,0.8s,baz=265,slow=2.9,SNR=5.2						
MAW	**Mawson**	**84.60**	**203**	P	**P**	**07 42 37.4**	**+0.8**
QSPA	**South Pole Qui**	**84.79**	**180**	P	**P**	**07 42 39.2**	**+1.4**
QSPA				IAmb	IAmb	07 42 39.7	
	comp=Z,6.1nm,0.7s						
BMAR	**Burnt Mountain**	**85.16**	**20**	P	**P**	**07 42 40.2**	**+0.8**
EGAK	**Eagle**	**85.35**	**23**	P	**P**	**07 42 41.5**	**+1.1**
KKAR	**Karatay Array**	**86.70**	**314**	P	**P**	**07 42 46.8**	**-0.8**
INK	**Inuvik**	**89.39**	**21**	P	**P**	**07 43 00.2**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=228,slow=4.5,SNR=4.1						
INK	**Inuvik**	**89.39**	**21**	P	**P**	**07 43 00.2**	**+0.6**
HUMO	**Hull Mountain**	**90.44**	**47**	P	**P**	**07 43 06.3**	**+1.1**
YBH	**Yreka Blue Hor**	**90.52**	**48**	P	**P**	**07 43 06.4**	**+0.7**
YBH				IAmb	IAmb	07 43 08.3	
	comp=Z,5.5nm,0.8s						
K05A	**Summer Lake**	**91.96**	**47**	P	**P**	**07 43 13.3**	**+0.9**
K05A				IAmb	IAmb	07 43 15.0	
	comp=Z,7.9nm,0.8s						
PINE	**Pine Mountain**	**92.03**	**46**	IAmb	IAmb	07 43 15.1	
	comp=Z,5.5nm,0.8s						
PINE				P	**P**	**07 43 15.1**	**+2.3**
MOD	**Modoc Plateau**	**92.33**	**48**	P	**P**	**07 43 14.2**	**+0.1**
MOD				IAmb	IAmb	07 43 16.4	
	comp=Z,5.9nm,0.9s						
SYO	**Syowa Base**	**92.77**	**200**	⇑*e*PcP	**PcP**	**07 43 17.2**	**+1.2**
I07A	**Izee**	**93.08**	**46**	P	**P**	**07 43 17.9**	**+0.4**
MWC	**Mount Wilson**	**93.52**	**56**	P	**P**	**07 43 20.8**	**+0.9**
NVAR	**Mina Array Bea**	**93.60**	**52**	P	**P**	**07 43 21.2**	**+1.1**
	comp=Z,3.6nm,0.7s,baz=253,slow=6.4,SNR=28						
NVAR	**Mina Array Bea**	**93.60**	**52**	P	**P**	**07 43 20.0**	**-0.1**
WVOR	**Wild Horse Val**	**93.60**	**48**	P	**P**	**07 43 19.6**	**-0.4**
NV11	**Mina Array Sit**	**93.71**	**52**	P	**P**	**07 43 21.5**	**+0.9**
NV11				IAmb	IAmb	07 43 24.3	
	comp=Z,8.5nm,1.3s						
E09A	**Wood Farm, Sta**	**94.19**	**44**	P	**P**	**07 43 23.3**	**+0.9**
E09A				IAmb	IAmb	07 43 25.7	
	comp=Z,3.6nm,0.7s						
BMO	**Blue Mountains**	**94.70**	**46**	P	**P**	**07 43 25.3**	**+0.4**
F10A	**Beach Ranch, E**	**94.80**	**44**	P	**P**	**07 43 25.9**	**+0.5**
F10A				IAmb	IAmb	07 43 27.5	
	comp=Z,4.3nm,0.7s						
PFO	**Pinyon Flats O**	**94.81**	**57**	P	**P**	**07 43 27.1**	**+1.4**
PFO				IAmb	IAmb	07 43 29.1	
	comp=Z,4.0nm,0.8s						
NEW	**Newport**	**94.97**	**42**	P	**P**	**07 43 26.4**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=324,slow=13,SNR=2.1						
TPNV	**Topopah Spring**	**95.14**	**53**	P	**P**	**07 43 28.2**	**+1.0**
TPNV				IAmb	IAmb	07 43 29.7	
	comp=Z,5.0nm,0.8s						
YKA	**Yellowknife Ar**	**96.52**	**28**	P	**P**	**07 43 33.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=267,slow=3.6,SNR=10.0						
HLID	**Hailey**	**96.74**	**47**	P	**P**	**07 43 34.5**	**+0.2**
PDAR	**Pinedale Array**	**100.31**	**48**	P	**Pdif**	**07 43 50.8**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=239,slow=2.5,SNR=25						
PDAR	**Pinedale Array**	**100.31**	**48**	Pdif	**Pdif**	**07 43 50.0**	**-0.4**
PLCA	**Paso Flores**	**120.45**	**144**	PKP	**PKiKP**	**07 48 55.3**	**+0.6**
	comp=Z,3.0nm,1.1s,baz=358,slow=1.6,SNR=4.6						
VYHS	**Vyhne**	**120.86**	**325**	*e*PKP	**PKPdf**	**07 48 52.9**	**-2.1**
GERES	**GERESS Array B**	**123.51**	**328**	PKP	**PKPdf**	**07 48 59.4**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=43,slow=2.7,SNR=5.5						
GERES	**GERESS Array B**	**123.51**	**328**		**PKPdf**	**07 48 59.7**	**-0.5**
CPUP	**Villa Florida**	**138.25**	**140**	PKP	**PKPdf**	**07 49 29.4**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=10,slow=8.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**148.86**	**287**	PKPbc	**PKPbc**	**07 49 50.5**	**-1.0**
	comp=Z,3.0nm,0.6s,baz=64,slow=3.5,SNR=7.5						
TORD	**Torodi Ar. Bea**	**148.86**	**287**		**PKPbc**	**07 49 51.3**	**-0.1**
BDFB	**Brasilia**	**151.92**	**138**	PKPbc	**PKiKP**	**07 49 59.1**	**0.0**
	comp=Z,8.6nm,0.5s,baz=241,slow=1.6,SNR=13						
DBIC	**Dimbokro**	**156.10**	**275**	PKP	**PKPdf**	**07 49 57.7**	**-0.3**
	comp=Z,4.5nm,1.1s,baz=146,slow=6.5,SNR=3.1						

JMA 13 07:31:25.9, 34°.84N×136°.90E, h10^{km}±1^{km}, M2.7, 4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.29**	**136**	⇓P	Pg	07 31 31.9	+0.2
JAA				S	Sg	07 31 35.8	+0.2
TSUJ	**Tsu 2**	**0.42**	**252**	⇓P	Pg	07 31 34.0	-0.1
TSUJ				S	Sg	07 31 39.8	+0.2
JICN	**Ichinomiyachia**	**0.46**	**354**	P	Pg	07 31 35.3	+0.3
JIE	**Ise**	**0.47**	**200**	⇓P	Pg	07 31 35.2	0.0
JIE				S	Sg	07 31 41.6	+0.2
JYTA	**Yamagatataniai**	**0.76**	**350**	P	Pg	07 31 40.9	+0.2
JYTA				S	Sg	07 31 50.5	-0.1
JKN2	**Miekihoku**	**0.79**	**221**	⇓P	Pg	07 31 40.6	-0.6
JKN2				S	Sg	07 31 50.8	-0.7
MAT	**Matsushiro**	**2.00**	**32**	P	Pb	07 32 01.7	-0.8
MAT				*e*S	Sn	07 32 26.0	+1.0

IDC 13 08:01:46.5±2.6, **54°.19N×86°.37E, h0**^{km}**, mb1 3.1**/2, **mb1mx2.9**/42, **mbtmp3.1**/2, **ML2.5**/2, **Error ellipse: s-maj=20.9km s-min=14.3km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**256**	*i*		08 07 10.0	
	baz=74,slow=336,SNR=3.3						
ZALV	**Zalesovo Beam**	**0.94**	**256**	Pg	Pg	08 02 03.4	-1.2
	3.2nm,0.3s,baz=77,slow=17,SNR=35						
ZALV				Lg	Lg	08 02 18.4	
	4.3nm,0.3s,baz=83,slow=30,SNR=23						
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn	Pn	08 03 16.8	+0.7
	0.1nm,0.3s,baz=54,slow=14,SNR=17						
KURBB				Lg	Lg	08 04 57.5	
	0.0nm,0.3s,baz=59,slow=33,SNR=4.0						
MKAR	**Makanchi Array**	**7.85**	**201**	Pn	Pn	08 03 43.0	+1.2
	0.1nm,0.3s,baz=23,slow=12,SNR=5.0						
MKAR				Lg	Lg	08 05 53.4	
	0.0nm,0.3s,baz=29,slow=31,SNR=7.0						

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*IDC **13** 08:28:14.0±2.8, 6°.09S×146°.70E, h17^{km}±17^{km}, mb4.1/13, mb1 4.3/16, mb1mx4.1/33, mbtmp4.2/16, ML3.9/1, MS3.5/13, Ms1 3.5/13, ms1mx3.3/36, Error ellipse: s-maj=23.3km s-min=12.4km az=84.0*

*NOU **13** 08:28:23.9, 6°.35S×146°.56E, h77^{km}, mb4.4, Eastern New Guinea Reg., P.N.G.*

*DJA **13** 08:28:23.7±1.3, 6°S±9°×14°7E±1°2, h60^{km}±10^{km}, M4.5/11, mB5.5/2, mb4.5/11, MLv4.6/1, Mw(mB)4.9/2*

ISC 13 08:28:23.6±0.7, **6°.24S**±0°.07×**146°.7E**±0°.1, **h100**^{km}**, n32, σ3^s.28**/24, **mb4.2**/13, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.18**	**171**	Pn	Pn	08 29 07.0	-4.9
	17nm,0.3s,baz=25,slow=8.2,SNR=26						
PMG				Sn	**Sn**	**08 29 47.2**	**-1.9**
	18nm,0.3s,baz=349,slow=14,SNR=4.7						
PMG				Lg	Lg	08 29 59.7	
	20nm,0.3s,baz=353,slow=12,SNR=3.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PMG				LR	LR	08 30 53.3	
	comp=Z,1µm,19.0s,baz=25,slow=48						
PMG	**Port Moresby**	**3.18**	**171**	P	**Pn**	**08 29 10.6**	**-1.3**
JAY	**Jayapura**	**6.99**	**302**	LR	LR	08 33 13.4	
	comp=Z,268nm,20.9s,baz=180,slow=43						
HNR	**Honiara**	**13.55**	**104**	LR	LR	08 35 48.0	
	comp=Z,76nm,18.6s,baz=279,slow=34						
CTA	**Charters Tower**	**13.77**	**182**	Pn	**Pn**	**08 31 34.2**	**-0.4**
	0.3nm,0.3s,baz=17,slow=16,SNR=2.1						
SIJI	**Sorong**	**16.25**	**289**	Pn	**Pn**	**08 32 03.2**	**-2.9**
	2.7nm,0.3s,baz=74,slow=9.0,SNR=9.1						
SIJI				LR	LR	08 39 24.3	
	comp=Z,123nm,20.2s,baz=142,slow=41						
SWI	**Sorong**	**16.26**	**289**	P	**P**	**08 32 07.8**	**+0.3**
	57nm,0.9s						
WRA	**Warramunga Arr**	**18.12**	**220**	P	**P**	**08 32 26.8**	**-1.3**
	0.4nm,0.3s,baz=44,slow=12,SNR=26						
WRA				LR	LR	08 40 17.0	
	comp=Z,84nm,20.1s,baz=35,slow=40						
WRA				ScP	**ScP**	**08 40 33.8**	**+10**
	0.1nm,0.3s,baz=43,slow=2.6,SNR=6.6						
ASAR	**Alice Springs**	**21.22**	**214**	P	**P**	**08 33 01.0**	**-0.6**
	1.5nm,0.6s,baz=51,slow=9.4,SNR=16						
ASAR				ScP	**ScP**	**08 40 41.1**	**+10**
	0.8nm,0.8s,baz=51,slow=3.4,SNR=5.7						
ASAR				LR	LR	08 42 14.1	
	comp=Z,192nm,21.2s,baz=25,slow=39						
FITZ	**Fitzroy Crossi**	**23.64**	**238**	P	**P**	**08 33 24.9**	**-1.1**
	17nm,0.7s,baz=58,slow=12,SNR=28						
DZM	**Mont Dzumac**	**24.77**	**131**	P	**P**	**08 33 36.5**	**+0.2**
	8.3nm,0.9s,baz=119,slow=19,SNR=4.1						
EDFI	**Ende, Flores**	**24.87**	**263**	P	**P**	**08 33 40.3**	**+3.0**
	9.6nm,0.7s						
STKA	**Stephens Creek**	**25.94**	**190**	P	**P**	**08 33 47.0**	**+0.3**
	2.0nm,0.6s,baz=349,slow=9.0,SNR=5.2						
STKA				LR	LR	08 45 11.5	
	comp=Z,187nm,18.1s,baz=22,slow=39						
WSI	**Waingapu**	**26.31**	**261**	P	P	08 34 03.9	+14
KAPI	**Kappang**	**26.79**	**271**	LR	LR	08 46 19.0	
	comp=Z,99nm,18.7s,baz=212,slow=40						
H11S3	**WAKE ISLAND Hy**	**31.54**	**38**	T	T	09 07 17.3	
	baz=228,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**31.55**	**38**	T	T	09 07 18.3	
H11S1	**WAKE ISLAND Hy**	**31.56**	**38**	T	T	09 07 22.5	
	baz=218,slow=75,SNR=4.4						
URZ	**Urewera**	**42.17**	**144**	LR	LR	08 52 14.6	
	comp=Z,52nm,20.3s,baz=30,slow=34						
RPZ	**Rata Peaks**	**43.04**	**154**	LR	LR	08 51 51.8	
	comp=Z,76nm,18.9s,baz=352,slow=33						
KSRS	**Korea Array**	**46.85**	**340**	P	**P**	**08 36 42.6**	**-1.1**
	4.3nm,0.8s,baz=158,slow=8.8,SNR=18						
KSRS				LR	LR	08 54 29.6	
	comp=Z,42nm,19.7s,baz=325,slow=34						
USRK	**Ussuriysk Ar.**	**51.92**	**347**	P	**P**	**08 37 21.1**	**-1.0**
	2.1nm,0.6s,baz=155,slow=9.6,SNR=6.4						
CMAR	**Chiang Mai Arr**	**53.06**	**299**	P	**P**	**08 37 31.4**	**+0.3**
	1.1nm,0.3s,baz=127,slow=5.8,SNR=7.3						
PETK	**Petropavlovsk-**	**59.86**	**8**	P	**P**	**08 38 18.1**	**-0.5**
	2.1nm,0.6s,baz=171,slow=8.4,SNR=4.1						
PETK				LR	LR	09 02 54.2	
	comp=Z,48nm,19.1s,baz=296,slow=35						
PPT	**Papeete**	**63.16**	**106**	LR	LR	09 02 44.0	
	comp=Z,25nm,19.0s,baz=43,slow=33						
SONM	**Songino Array**	**64.45**	**331**	P	**P**	**08 38 49.3**	**-0.2**
	1.0nm,0.6s,baz=142,slow=6.8,SNR=7.0						
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**08 39 35.1**	**+0.9**
	0.9nm,0.6s,baz=328,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**77.46**	**321**	P	**P**	**08 40 06.8**	**-1.3**
	0.3nm,0.5s,baz=96,slow=8.8,SNR=6.3						
ILAR	**Eielson Array**	**85.84**	**23**	P	**P**	**08 40 50.4**	**-1.5**
	1.3nm,0.7s,baz=254,slow=5.0,SNR=14						
YKA	**Yellowknife Ar**	**99.55**	**28**	P	**Pdif**	**08 41 55.1**	**-0.1**
	0.3nm,0.9s,baz=273,slow=5.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**144.81**	**284**	PKP	**PKPdf**	**08 47 50.0**	**0.0**
	3.7nm,0.7s,baz=71,slow=3.5,SNR=17						
DBIC	**Dimbokro**	**151.68**	**272**	PKPbc	**PKiKP**	**08 48 08.6**	**+0.6**
	3.5nm,0.7s,baz=108,slow=3.2,SNR=7.1						

IDC 13 08:31:07.6±2.5**, 54°.29N**×**86°.12E, h0^{km}, mb1 3.3**/2**, mb1mx3.1**/46**, mbtmp3.3**/2**, ML3.0**/2**, Error ellipse: s-maj=19.1km s-min=12.3km az=47.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.84**	**247**	*i*		08 36 10.0	
	baz=64,slow=344,SNR=7.4						
ZALV	**Zalesovo Beam**	**0.84**	**247**	Pg	Pg	08 31 21.9	-1.8
	2.1nm,0.3s,baz=70,slow=17,SNR=11						
ZALV				Lg	Lg	08 31 36.0	
	7.7nm,0.3s,baz=68,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**5.92**	**235**	Pn	Pn	08 32 37.8	+1.4
	0.2nm,0.3s,baz=51,slow=13,SNR=4.8						
KURBB				Lg	Lg	08 34 17.0	
	0.1nm,0.3s,baz=51,slow=37,SNR=3.5						
MKAR	**Makanchi Array**	**7.89**	**200**	Pn	Pn	08 33 04.5	+0.9
	0.5nm,0.3s,baz=27,slow=13,SNR=26						

IDC 13 08:31:36.6±2.8**, 54°.09N**×**86°.52E, h0^{km}, mb1 3.4**/2**, mb1mx3.1**/47**, mbtmp3.4**/2**, ML3.1**/2**, Error ellipse: s-maj=24.5km s-min=14.7km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**262**	*i*		08 37 20.0	
	baz=81,slow=345,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.01**	**262**	Pg	Pg	08 31 55.1	-0.9
	1.9nm,0.3s,baz=80,slow=18,SNR=4.0						
ZALV				Lg	Lg	08 32 10.6	
	4.0nm,0.3s,baz=71,slow=29,SNR=5.1						
ZALV				Rg	Rg	08 32 16.6	
	33nm,0.9s,baz=77,slow=27,SNR=12						
KURBB	**Kurchatov Arra**	**6.00**	**238**	Pn	Pn	08 33 06.9	+0.3
	0.2nm,0.3s,baz=55,slow=13,SNR=7.4						
MKAR	**Makanchi Array**	**7.79**	**202**	Pn	Pn	08 33 32.5	+1.4
	0.5nm,0.3s,baz=24,slow=14,SNR=9.5						
MKAR				Lg	Lg	08 35 42.6	
	0.1nm,0.3s,baz=21,slow=32,SNR=2.5						

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*IDC **13** 08:42:28.6±1.5, 29°.96S×179°.82W, h0^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.8/26, mbtmp4.0/4, ML3.1/1, Error ellipse: s-maj=39.9km s-min=23.1km az=157.0*

ISC 13 08:42:33.1±0.9**, 30°.15S**±0°.09×**179°.7W**±0°.1**, h35^{km}, n26,** σ**2s.77**/43**, mb4.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.79**	**61**	P	**Pn**	**08 43 02.3**	**+0.8**
GLKZ				S	**Sn**	**08 43 21.5**	**-1.5**
RIZ	**Raoul Island**	**1.79**	**60**	P	**Pn**	**08 43 02.7**	**+1.2**
RIZ				S	**Sn**	**08 43 22.3**	**-0.8**
RAO	**Raoul Island**	**1.80**	**61**	Pn	**Pn**	**08 43 01.0**	**-0.6**
	552nm,0.3s,baz=107,slow=22,SNR=14						
RAO				Sn	**Sn**	**08 43 21.4**	**-1.8**
	469nm,0.3s,baz=100,slow=22,SNR=9.6						
MXZ	**Matakaoa Point**	**7.58**	**192**	S	**Sn**	**08 45 44.1**	**-1.6**
WMGZ	**Waiomatatini S**	**7.81**	**191**	P	**Pn**	**08 44 26.1**	**+1.9**
WMGZ				S	**Sn**	**08 45 48.4**	**-3.0**
HAZ	**Te Kaha**	**7.87**	**195**	P	**Pn**	**08 44 27.3**	**+2.3**
HAZ				S	**Sn**	**08 45 50.6**	**-2.2**
PKGZ	**Pakihiroa**	**7.94**	**193**	P	**Pn**	**08 44 26.7**	**+0.7**
PKGZ				S	**Sn**	**08 45 52.2**	**-2.4**
PUZ	**Puketiti**	**8.08**	**191**	P	**Pn**	**08 44 29.1**	**+1.1**
PUZ				S	**Sn**	**08 46 00.6**	**+2.5**
RUGZ	**Raukumara Rang**	**8.09**	**195**	P	**Pn**	**08 44 31.9**	**+3.7**
RUGZ				S	**Sn**	**08 46 02.1**	**+3.6**
TWGZ	**Tauwhareparae**	**8.23**	**193**	S	**Sn**	**08 46 06.1**	**+4.2**
MWZ	**Matawai**	**8.48**	**195**	P	**Pn**	**08 44 34.5**	**+1.0**
MWZ				S	**Sn**	**08 46 10.6**	**+2.7**
URZ	**Urewera**	**8.51**	**197**	Pn	**Pn**	**08 44 35.9**	**+2.1**
	0.2nm,0.3s,baz=186,slow=15,SNR=1.4						
URZ				Sn	**Sn**	**08 46 12.4**	**+3.9**
	2.7nm,0.3s,baz=77,slow=22,SNR=14						
URZ	**Urewera**	**8.51**	**197**	S	**Sn**	**08 46 11.9**	**+3.3**
TKGZ	**Te Karaka**	**8.51**	**193**	S	**Sn**	**08 46 11.0**	**+2.3**
BFZ	**Birch Farm**	**11.01**	**196**	P	**Pn**	**08 45 09.1**	**+1.0**
BFZ				P	**Sn**	**08 47 06.0**	**-4.1**
MRZ	**Mangatainoka R**	**11.17**	**199**	P	**Pn**	**08 45 09.8**	**-0.5**
MRZ				P	**Sn**	**08 47 08.9**	**-4.9**
TIWZ	**Tintock**	**11.19**	**197**	P	**Pn**	**08 45 13.6**	**+2.9**
TIWZ				P	**Sn**	**08 47 10.3**	**-4.2**
HOWZ	**Holdsworth Sta**	**11.41**	**199**	P	**Pn**	**08 45 15.6**	**+2.0**
HOWZ				P	**Sn**	**08 47 15.5**	**-4.2**
TMWZ	**Te Maipa**	**11.50**	**197**	P	**Pn**	**08 45 14.1**	**-0.7**
TMWZ				P	**Sn**	**08 47 17.1**	**-4.9**
KIW	**Kapiti Island**	**11.55**	**201**	P	**Pn**	**08 45 15.7**	**+0.2**
KIW				P	**Sn**	**08 47 20.8**	**-2.4**
MTW	**Mount Morrison**	**11.65**	**198**	P	**Pn**	**08 45 18.6**	**+1.7**
MTW				P	**Sn**	**08 47 20.1**	**-5.6**
CAW	**Cannon Point**	**11.73**	**200**	P	**Pn**	**08 45 14.5**	**-3.4**
CAW				P	Sn	08 47 19.8	-7.7
NNZ	**Nelson**	**12.39**	**205**	P	**Pn**	**08 45 27.5**	**+0.6**
NNZ				P	Sn	08 47 32.0	-12
STKA	**Stephens Creek**	**33.09**	**257**	P	**P**	**08 49 07.3**	**+1.6**
	1.2nm,0.4s,baz=100,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**41.64**	**267**	P	**P**	**08 50 17.5**	**-0.8**
	0.8nm,0.4s,baz=106,slow=7.3,SNR=23						
WRA	**Warramunga Arr**	**42.61**	**273**	P	**P**	**08 50 25.5**	**-0.7**
	1.1nm,0.3s,baz=110,slow=8.1,SNR=34						

IDC 13 08:47:27.4±2.5**, 54°.15N**×**86°.41E, h0^{km}, mb1 2.6**/2**, mb1mx2.6**/48**, mbtmp2.6**/2**, ML2.3**/2**, Error ellipse: s-maj=19.6km s-min=12.0km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**258**	*i*		08 53 00.0	
	baz=75,slow=344,SNR=4.8						
ZALV	**Zalesovo Beam**	**0.96**	**258**	Pg	Pg	08 47 44.3	-1.5
	1.2nm,0.3s,baz=76,slow=16,SNR=12						
ZALV				Lg	Lg	08 47 59.7	
	4.4nm,0.3s,baz=82,slow=30,SNR=24						
ZALV				Rg	Rg	08 48 06.4	
	16nm,1.0s,baz=74,slow=32,SNR=16						
KURBB	**Kurchatov Arra**	**5.98**	**237**	Pn	Pn	08 48 57.8	+0.8
	0.0nm,0.3s,baz=54,slow=13,SNR=5.7						
KURBB				Lg	Lg	08 50 39.6	
	0.1nm,0.3s,baz=59,slow=33,SNR=3.2						
MKAR	**Makanchi Array**	**7.82**	**201**	Pn	Pn	08 49 23.6	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=9.6						
MKAR				Lg	Lg	08 51 35.5	
	0.1nm,0.3s,baz=30,slow=32,SNR=5.9						

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*KRNET **13** 09:26:49.0±0.1, 40°.74N×69°.98E, h16^{km}, mb2.5*

ISC 13 09:26:50.2±2.1**, 40°.73N**±0°.05×**70°.0E**±0°.1**, h10^{km}, n10,** σ**1s.61**/19**, 14C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	**Batken**	**0.94**	**135**	⇑*i*P	**Pg**	**09 27 06.9**	**-1.3**
	baz=36						
BTK				⇑*i*S	**Sg**	**09 27 19.7**	**-0.7**
	baz=36						
TRKS	**Terek-Say**	**1.20**	**48**	⇑*i*P	**Pb**	**09 27 10.7**	**-2.3**
	baz=51						
TRKS				⇑*i*S	**Sg**	**09 27 26.9**	**-1.8**
	baz=51						
DRK	**Karamyk**	**1.88**	**131**	⇑*i*P	**Pn**	**09 27 24.0**	**+1.3**
	baz=31						
DRK				⇑*i*S	**Sb**	**09 27 49.1**	**+0.6**
	baz=31						
OHH	**Osh**	**2.16**	**95**	⇑*i*P	**Pn**	**09 27 27.1**	**+0.8**
	baz=95						
OHH				⇑*i*S	**Sn**	**09 27 55.0**	**+1.9**
	baz=95						
ARSB	**Arslanbob**	**2.36**	**74**	⇑*i*P	**Pn**	**09 27 30.3**	**+1.2**
	baz=75						
ARSB				⇑*i*S	**Sn**	**09 28 00.1**	**+1.9**
	baz=75						
KK31	**Karatay Array**	**2.41**	**10**	⇓Pn	**Pn**	**09 27 31.1**	**+1.5**
	0.7nm,0.2s,baz=194,slow=17,SNR=46						
KK31				⇓Lg	Lg	09 28 04.5	
	1.1nm,0.2s,baz=192,slow=32,SNR=12						
MNAS	**Manas**	**2.59**	**47**	⇑*i*P	**Pn**	**09 27 33.7**	**+1.4**
	baz=47						
MNAS				⇑*i*S	**Sn**	**09 28 05.8**	**+1.9**
	baz=47						
AML	**Almayashu**	**3.14**	**62**	⇓*i*P	**Pn**	**09 27 41.0**	**+1.0**
	baz=62						
AML				⇓*i*S	**Sn**	**09 28 19.2**	**+1.5**
	baz=62						
ARLS	**Aral**	**3.47**	**70**	⇓*i*P	**Pn**	**09 27 46.1**	**+1.7**
	baz=70						
ARLS				⇓*i*S	**Sn**	**09 28 26.6**	**+0.9**
	baz=70						
UCH	**Uchtor**	**3.73**	**65**	⇑*i*P	**Pn**	**09 27 50.0**	**+1.8**
	baz=65						
UCH				⇑*i*S	**Sn**	**09 28 33.6**	**+1.1**
	baz=65						

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*IDC **13** 09:36:01.6±2.0, 5°.80S×151°.41E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.6/41, mbtmp3.7/6, ML1.4/1, Error ellipse: s-maj=85.0km s-min=24.6km az=124.0*

ISC 13 09:36:07.4±2.0**, 5°.8S**±0°.4×**151°.2E**±0°.5**, h35^{km}, n7,** σ**1s.50**/8**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.37**	**228**	Pn	**Pn**	**09 37 26.8**	**+1.7**
	0.8nm,0.3s,baz=33,slow=19,SNR=2.4						
PMG				Sn	**Sn**	**09 38 23.5**	**-2.3**
	2.7nm,0.3s,baz=144,slow=22,SNR=2.6						
WRA	**Warramunga Arr**	**21.59**	**228**	P	**P**	**09 40 54.1**	**-0.4**
	0.6nm,0.5s,baz=53,slow=11,SNR=8.1						
ASAR	**Alice Springs**	**24.34**	**221**	P	**P**	**09 41 23.0**	**+0.8**
	0.9nm,0.6s,baz=57,slow=9.4,SNR=17						
FITZ	**Fitzroy Crossi**	**27.79**	**242**	P	**P**	**09 41 53.5**	**0.0**
	3.1nm,1.0s,baz=63,slow=11,SNR=1.3						
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**09 48 14.5**	**+0.7**
	0.2nm,0.7s,baz=101,slow=7.5,SNR=2.1						
ILAR	**Eielson Array**	**83.70**	**22**	P	**P**	**09 48 31.1**	**-1.4**
	0.6nm,1.0s,baz=249,slow=4.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**149.11**	**286**	PKPbc	**PKPbc**	**09 55 53.1**	**0.0**
	2.3nm,0.6s,baz=61,slow=2.9,SNR=9.0						

IDC 13 09:36:12.3±2.8**, 53°.50N**×**87°.12E, h0^{km}, mb1 2.9**/2**, mb1mx2.8**/60**, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=27.6km s-min=16.6km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**289**	*i*		09 46 20.0	
	baz=106,slow=331,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.44**	**289**	Pg	Pn	09 36 39.2	-0.4
	0.7nm,0.3s,baz=104,slow=18,SNR=8.0						
ZALV				Lg	Lg	09 36 57.3	
	0.9nm,0.3s,baz=116,slow=28,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.03**	**245**	Pn	Pn	09 37 44.2	+1.5
	0.1nm,0.3s,baz=59,slow=14,SNR=4.3						
KURBB				Lg	Lg	09 39 22.3	
	0.1nm,0.3s,baz=58,slow=31,SNR=4.5						
MKAR	**Makanchi Array**	**7.40**	**207**	Pn	Pn	09 38 02.1	+0.6
	0.1nm,0.3s,baz=26,slow=14,SNR=5.7						

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*IDC **13** 09:37:26.6±0.9, 69°.72N×16°.04W, h0^{km}, mb3.6/7, mb1 4.0/10, mb1mx3.6/53, mbtmp3.8/10, ML3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/39, Error ellipse: s-maj=27.4km s-min=18.9km az=15.0*

ISC 13 09:37:27.8±0.7**, 69°.7N**±0°.1×**16°.13W**±0°.08**, h10^{km}, n14,** σ**0s.95**/13**, mb3.7**/7**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**2.14**	**294**	*i* P	**Pb**	**09 38 05.7**	**-0.8**
SCO				*i*		09 38 43.7	
SCO	**Scoresbysund**	**2.14**	**294**	*e*P	**Pb**	**09 38 05.7**	**-0.8**
SCO				*i*		09 38 43.7	
BORG	**Borgarnes**	**5.38**	**204**	Pn	**Pn**	**09 38 47.3**	**-0.7**
	0.8nm,0.3s,baz=44,slow=8.3,SNR=5.3						
SPITS	**Spitsbergen Ar**	**12.12**	**32**	Pn	**Pn**	**09 40 19.6**	**-0.6**
	baz=227,slow=14,SNR=14						
SFJD	**Kangerlussuaq**	**12.90**	**274**	LR	LR	09 44 45.9	
	comp=Z,211nm,20.2s,baz=66,slow=34						
FINES	**FINESS Array B**	**18.90**	**95**	P	**Pn**	**09 41 48.7**	**0.0**
	baz=284,slow=8.0,SNR=1.5						
GERES	**GERESS Array B**	**25.38**	**130**	P	**P**	**09 42 56.5**	**+1.6**
	0.2nm,0.3s,baz=353,slow=6.7,SNR=4.4						
YKA	**Yellowknife Ar**	**36.27**	**309**	P	**P**	**09 44 31.6**	**+1.0**
	1.4nm,0.9s,baz=36,slow=8.6,SNR=18						
ILAR	**Eielson Array**	**41.48**	**331**	P	**P**	**09 45 15.6**	**+1.4**
	0.4nm,0.8s,baz=14,slow=40,SNR=3.6						
MKAR	**Makanchi Array**	**49.77**	**63**	P	**P**	**09 46 19.3**	**-0.6**
	0.5nm,0.9s,baz=352,slow=7.7,SNR=4.4						
PDAR	**Pinedale Array**	**51.78**	**291**	P	**P**	**09 46 35.9**	**+0.4**
	0.7nm,0.7s,baz=39,slow=5.3,SNR=6.5						
TXAR	**Lajitas Array**	**61.97**	**279**	P	**P**	**09 47 47.6**	**-0.1**
	0.8nm,0.9s,baz=120,slow=5.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	**81.10**	**60**	P	**P**	**09 49 42.3**	**-0.7**
	0.8nm,0.3s,baz=334,slow=5.8,SNR=2.0						
ASAR	**Alice Springs**	**130.63**	**37**	PKP	**PKPdf**	**09 56 37.8**	**-0.5**
	0.2nm,0.6s,baz=358,slow=3.1,SNR=4.1						

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*IDC **13** 09:59:41.3±1.8, 37°.06N×97°.35W, h0^{km}, mb3.0/2, mb1 3.5/6, mb1mx3.4/35, mbtmp3.2/6, ML2.2/2, Error ellipse: s-maj=28.0km s-min=14.5km az=99.0*

*TUL **13** 09:59:46.4±1.5, 36°.82N±0°.02×97°.71W±0°.02, h6^{km}±7^{km}, ML3.6, mb_Lg3.6/128(NEIC), Error ellipse: s-maj=2.9km s-min=1.8km az=213.0*

*ANF **13** 09:59:46.2±0.3, 36°.80N×97°.71W, h5^{km}, ML4.4/16, Error ellipse: s-maj=3.4km s-min=2.7km az=63.0*

*NEIC **13** 09:59:46.7±1.0, 36°.80N±0°.01×97°.70W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=0.8km az=150.0*

ISC 13 09:59:46.2±0.8**, 36°.81N**±0°.02×**97°.71W**±0°.02**, h13^{km}**±6^{km}**, n142,** σ**1s.54**/137**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.13**	**290**		**Pg**	**09 59 49.5**	**-0.1**
GC02				Sg	**Sg**	**09 59 51.6**	**-0.4**
KAN14	**Manchester OK**	**0.25**	**306**		**Pg**	**09 59 51.7**	**+0.1**
KAN14				Sg	**Sg**	**09 59 55.3**	**0.0**
KAN13	**South Haven SW**	**0.28**	**42**		**Pg**	**09 59 52.1**	**+0.1**
KAN13				Sg	**Sg**	**09 59 55.9**	**0.0**
CROK	**Carrier**	**0.38**	**217**		**Pg**	**09 59 54.1**	**+0.4**
CROK				Sg	**Sg**	**09 59 59.3**	**+0.5**
KAN10	**Anthony SW Sta**	**0.44**	**316**		**Pg**	**09 59 55.2**	**+0.2**
KAN10				Sg	**Sg**	**10 00 01.1**	**+0.1**
KAN08	**Anthony NE Sta**	**0.47**	**333**		**Pg**	**09 59 55.7**	**+0.2**
KAN08				Sg	**Sg**	**10 00 02.2**	**+0.4**
KAN12	**Harper NE Stat**	**0.54**	**335**		**Pg**	**09 59 57.0**	**+0.2**
KAN12				Sg	**Sg**	**10 00 04.3**	**+0.2**
T35A	**Sooner Cattle**	**0.96**	**83**		**Pg**	**10 00 04.7**	**-0.1**
T35A				Sg	**Sg**	**10 00 17.8**	**+0.4**
T35B	**Sooner Cattle**	**0.96**	**83**	P		10 00 04.7	
	baz=264,SNR=340						
T35B				S		10 00 17.7	
	baz=264						
QUOK	**Quay**	**1.02**	**128**		**Pg**	**10 00 05.8**	**-0.1**
QUOK				Sg	**Sg**	**10 00 19.0**	**-0.4**
OK031	**S. Brethren Rd**	**1.10**	**140**		**Pg**	**10 00 07.4**	**0.0**
OK031				Sg	**Sg**	**10 00 22.0**	**+0.2**
U32A	**Winter Ranch,**	**1.13**	**248**	Pg	**Pg**	**10 00 07.5**	**-0.4**
U32A				Sg	**Sg**	**10 00 23.0**	**+0.5**
U32A	**Winter Ranch,**	**1.13**	**248**	P		10 00 07.5	
	baz=67						
U32A				S		10 00 23.0	
	baz=67						
OK030	**Cody Creek RV**	**1.15**	**139**		**Pg**	**10 00 08.2**	**-0.2**
OK030				Sg	**Sg**	**10 00 23.7**	**+0.3**
OK025	**Westminster Rd**	**1.26**	**166**		**Pg**	**10 00 10.2**	**-0.2**
OKCFA	**Oklahoma City**	**1.40**	**171**		**Pn**	**10 00 12.5**	**+1.0**
OKCSW	**OKLAHOMA CITY**	**1.42**	**171**		**Pn**	**10 00 12.9**	**+1.3**
FNO	**Franklin**	**1.57**	**171**		**Pn**	**10 00 15.1**	**+1.4**
W35A	**Tecumseh**	**1.78**	**158**		**Pn**	**10 00 18.4**	**+1.7**
TUL1	**Leonard**	**1.79**	**119**	P	**Pn**	**10 00 18.5**	**+1.8**
	baz=301						
TUL1				S	**Sb**	**10 00 42.4**	**+1.4**
	baz=301						
TUL1	**Leonard**	**1.79**	**119**	Pn	**Pn**	**10 00 18.4**	**+1.7**
TUL1	**Leonard**	**1.79**	**119**	P		10 00 18.7	
	baz=301,SNR=346						
TUL1				S		10 00 42.8	
	baz=301						
R32A	**Long Quarter,**	**1.80**	**334**		**Pb**	**10 00 19.3**	**+0.3**
R32A	**Long Quarter,**	**1.80**	**334**	P		10 00 19.2	
	baz=153,SNR=107						
R32A				S		10 00 42.9	
	baz=153						
WMOK	**Wichita Mounta**	**2.24**	**203**	P	**Pn**	**10 00 24.5**	**+1.5**
	baz=22						
WMOK				S	**Sn**	**10 00 52.8**	**+2.3**
	baz=22						
WMOK	**Wichita Mounta**	**2.24**	**203**	Pn	**Pn**	**10 00 24.5**	**+1.5**
WMOK	**Wichita Mounta**	**2.24**	**203**	P		10 00 24.4	
	baz=22						
KSU1	**Kansas State U**	**2.45**	**20**	P	**Pn**	**10 00 27.5**	**+1.6**
	baz=201						
KSU1				S	**Sn**	**10 00 57.6**	**+1.9**
	baz=201						
KSU1	**Kansas State U**	**2.45**	**20**	Pn	**Pn**	**10 00 27.5**	**+1.6**
KSU1	**Kansas State U**	**2.45**	**20**	P		10 00 27.6	
	baz=201,SNR=28						
CBKS	**Cedar Bluff**	**2.57**	**322**	P	**Pn**	**10 00 28.9**	**+1.3**
	baz=141						
CBKS	**Cedar Bluff**	**2.57**	**322**	Pn	**Pn**	**10 00 30.8**	**+3.2**
CBKS	**Cedar Bluff**	**2.57**	**322**	P		10 00 29.3	
	baz=141,SNR=39						
CBKS				Sb		10 01 05.5	
	baz=141						
U38A	**Gravette**	**2.70**	**97**		**Pn**	**10 00 31.6**	**+2.3**
U38A	**Gravette**	**2.70**	**97**	P		10 00 31.3	
	baz=279,SNR=164						
X37A	**Clayton**	**2.92**	**139**		**Pn**	**10 00 34.8**	**+2.5**
X37A				IAmb_Lg		10 01 23.8	
	comp=Z,172nm,0.9s						
X37A	**Clayton**	**2.92**	**139**	P		10 00 34.5	
	baz=320						
X37A				Sb		10 01 16.9	
	baz=320						
Z35A	**Perchaven, San**	**3.49**	**174**		**Pn**	**10 00 42.4**	**+2.3**
W39A	**Magazine**	**3.56**	**116**	P	**Pn**	**10 00 43.1**	**+1.9**
	baz=298,SNR=29						
W39A	**Magazine**	**3.56**	**116**		**Pn**	**10 00 44.2**	**+3.0**
W39A				IAmb_Lg		10 01 40.2	
	comp=Z,155nm,0.9s						
W39A	**Magazine**	**3.56**	**116**	P		10 00 43.1	
	baz=298,SNR=11						
S39A	**Bolivar**	**3.61**	**75**		**Pn**	**10 00 43.9**	**+2.1**
S39A				IAmb_Lg		10 01 44.0	
	comp=Z,137nm,0.7s						
S39A	**Bolivar**	**3.61**	**75**	P		10 00 43.1	
	baz=257,SNR=26						
AMTX	**Amarillo**	**3.75**	**240**	Pn	**Pn**	**10 00 46.6**	**+2.7**
AMTX				IAmb_Lg		10 01 46.3	
	comp=Z,115nm,0.8s						
N33A	**J Bar K, Exete**	**3.93**	**3**		**Pn**	**10 00 47.9**	**+1.6**
U40A	**Yellville**	**3.93**	**95**	P	**Pn**	**10 00 47.8**	**+1.6**
	baz=278						
U40A				S	**Sn**	**10 01 34.2**	**+1.9**
	baz=278						
U40A	**Yellville**	**3.93**	**95**		**Pn**	**10 00 48.3**	**+2.0**
U40A				IAmb_Lg		10 01 54.3	
	comp=Z,157nm,0.8s						
U40A	**Yellville**	**3.93**	**95**	P		10 00 47.8	
	baz=278,SNR=42						
U40A				P		10 00 47.8	
	baz=278,SNR=42						
U40A				S		10 01 34.0	
	baz=278						
U40A				S		10 01 34.0	
	baz=278						
MIAR	**Mount Ida**	**4.05**	**123**	P	**Pn**	**10 00 49.4**	**+1.6**
	baz=305,SNR=16						
MIAR				S	**Sn**	**10 01 37.4**	**+2.3**
	baz=305						
MIAR	**Mount Ida**	**4.05**	**123**	Pn	**Pn**	**10 00 50.4**	**+2.5**
MIAR				IAmb_Lg		10 01 58.3	
	comp=Z,173nm,0.8s						
MIAR	**Mount Ida**	**4.05**	**123**	P		10 00 49.6	
	baz=305,SNR=24						
Z38A	**Mt. Pleasant**	**4.18**	**147**		**Pn**	**10 00 52.0**	**+2.3**
P38A	**Dawn**	**4.33**	**48**		**Pn**	**10 00 54.5**	**+2.8**
P38A				IAmb_Lg		10 02 10.5	
	comp=Z,92nm,0.8s						
P38A	**Dawn**	**4.33**	**48**	P		10 00 53.3	
	baz=231,SNR=17						
N35A	**Tabor**	**4.36**	**21**		**Pn**	**10 00 53.7**	**+1.6**
MGMO	**Mountain Grove**	**4.37**	**84**		**Pn**	**10 00 54.8**	**+2.5**
MGMO				IAmb_Lg		10 02 03.1	
	comp=Z,208nm,0.8s						
ABTX	**Abilene, Hawle**	**4.47**	**201**	P	**Pn**	**10 00 54.7**	**+1.1**
	baz=20,SNR=18						
ABTX				S	**Sn**	**10 01 46.2**	**+0.7**
	baz=20						

ABTX	Abilene, Hawle	4.47	201		Pn	10 00 54.7	+1.1
KSCO	Kaye Shedlock’	4.47	301	P	Pn	10 00 54.7	+1.0
	baz=118						
KSCO	Kaye Shedlock’	4.47	301		Pn	10 00 54.6	+0.8
KSCO				IAmb_Lg		10 02 19.9	
	comp=Z,184nm,1.0s						
KSCO	Kaye Shedlock’	4.47	301	P		10 00 55.5	
	baz=118						
R40A	Maddies Statio	4.57	69	IAmb_Lg		10 02 10.9	
	comp=Z,87nm,0.8s						
R40A	Maddies Statio	4.57	69	P		10 00 56.3	
	baz=253,SNR=27						
X40A	Basin Creek Fa	4.59	119	P	Pn	10 00 57.1	+1.8
	baz=302,SNR=17						
X40A				S	Sn	10 01 50.1	+1.5
	baz=302						
X40A	Basin Creek Fa	4.59	119		Pn	10 00 57.1	+1.8
X40A				IAmb_Lg		10 02 23.5	
	comp=Z,81nm,1.0s						
FCAR	Ozark Folk Cen	4.60	100		Pn	10 00 58.2	+2.9
FCAR				IAmb_Lg		10 02 22.8	
	comp=Z,83nm,0.9s						
BGNE	Belgrade	4.61	356	P	Pn	10 00 56.9	+1.4
	baz=176						
BGNE				S	Sn	10 01 50.0	+1.0
	baz=176						
BGNE	Belgrade	4.61	356		Pn	10 00 57.4	+1.9
WHAR	Wooly Hollow	4.64	107		Pn	10 00 57.6	+1.6
WHAR				IAmb_Lg		10 02 16.0	
	comp=Z,107nm,0.9s						
W41B	Gary Mavity, V	4.72	109	S	Sn	10 01 53.0	+1.4
	baz=292						
W41B	Gary Mavity, V	4.72	109	IAmb_Lg		10 02 15.7	
	comp=Z,84nm,0.8s						
WHTX	Lake Whitney,	4.81	177	P	Pn	10 00 59.5	+1.2
	baz=358						
WHTX				S	Sn	10 01 54.5	+0.7
	baz=358						
WHTX	Lake Whitney,	4.81	177		Pn	10 00 59.1	+0.9
WLAR	White Oak Lake	4.88	128		Pn	10 01 01.1	+1.8
WLAR				IAmb_Lg		10 02 33.9	
	comp=Z,87nm,0.9s						
MSTX	Muleshoe	5.01	237		Pn	10 01 02.5	+1.3
MSTX				IAmb_Lg		10 02 33.4	
	comp=Z,75nm,0.7s						
237A	Washetta, Mont	5.04	161		Pn	10 01 02.4	+0.9
237A				IAmb_Lg		10 02 39.4	
	comp=Z,148nm,1.2s						
P40A	Paris	5.22	57	Pn	Pn	10 01 06.7	+2.7
P40A				IAmb_Lg		10 02 33.3	
	comp=Z,94nm,0.7s						
L34A	Svendsen Farm,	5.25	11		Pn	10 01 05.5	+1.0
CCM	Cathedral Cave	5.29	74	P	Pn	10 01 05.9	+1.0
	baz=258						
CCM				S	Sn	10 02 06.2	+0.5
	baz=258						
CCM	Cathedral Cave	5.29	74		Pn	10 01 06.2	+1.3
CCM				IAmb_Lg		10 02 39.4	
	comp=Z,148nm,0.8s						
N38A	Joes South For	5.29	40	Pn	Pn	10 01 06.2	+1.2
N38A				IAmb_Lg		10 02 41.5	
	comp=Z,174nm,0.8s						
N38A	Joes South For	5.29	40	P		10 01 06.4	
	baz=223,SNR=12						
T42A	Van Buren	5.30	86	Pn	Pn	10 01 07.9	+2.8
T42A				IAmb_Lg		10 02 42.7	
	comp=Z,68nm,0.9s						
LCAR	Lake Charles	5.33	96		Pn	10 01 07.8	+2.3
LCAR				IAmb_Lg		10 02 40.4	
	comp=Z,76nm,0.9s						
Z41A	Richland Creek	5.36	130	S	Sn	10 02 06.7	-0.7
	baz=313						
Z41A	Richland Creek	5.36	130		Pn	10 01 10.4	+4.6
Z41A				IAmb_Lg		10 02 47.3	
	comp=Z,114nm,1.0s						
T25A	Trinidad	5.38	276	P	Pn	10 01 07.3	+1.0
	baz=91						
NATX	Nacogdoches	5.63	153	IAmb_Lg		10 02 57.6	
	comp=Z,100nm,0.7s						
HBAR	Harrisburg	5.84	100	IAmb_Lg		10 03 01.0	
	comp=Z,118nm,0.9s						
PBMO	Poplar Bluff	5.84	88	IAmb_Lg		10 02 56.8	
	comp=Z,113nm,0.7s						
K31A	O'Neill	5.87	352		Pn	10 01 15.2	+2.4
FVM	French Village	5.92	76	IAmb_Lg		10 02 52.3	
	comp=Z,125nm,0.8s						
X43A	Marvell	6.01	110	IAmb_Lg		10 02 57.7	
	comp=Z,96nm,1.2s						
435B	Jarrell	6.01	179	P	Pn	10 01 15.7	+0.9
	baz=359						
435B				S	Sn	10 02 23.4	-0.1
	baz=359						
435B	Jarrell	6.01	179		Pn	10 01 15.6	+0.8
435B				IAmb_Lg		10 03 12.4	
	comp=Z,106nm,0.8s						
LPAR	Lepanto	6.11	99	IAmb_Lg		10 03 11.8	
	comp=Z,121nm,0.9s						
SCIA	State Center	6.17	33	P	Pn	10 01 18.2	+1.3
	baz=216						
SCIA				S	Sn	10 02 26.5	-0.8
	baz=216						
SCIA	State Center	6.17	33		Pn	10 01 17.9	+0.9
SCIA				IAmb_Lg		10 03 14.6	
	comp=Z,132nm,0.8s						
GNAR	Gosnell	6.26	95	IAmb_Lg		10 03 07.0	
	comp=Z,113nm,0.7s						
Q24A	Divide	6.27	292	P	Pn	10 01 19.4	+0.7
	baz=108,SNR=12						
Q24A				S	Sn	10 02 29.6	-0.7
	baz=108						
Q24A	Divide	6.27	292		Pn	10 01 20.0	+1.3
SDCO	Great Sand Dun	6.29	281	P	Pn	10 01 19.7	+0.8
	baz=96,SNR=11						
SDCO	Great Sand Dun	6.29	281		Pn	10 01 19.3	+0.4
JCT	Junction City	6.55	196	P	Pn	10 01 23.2	+1.0
	baz=15						
JCT	Junction City	6.55	196		Pn	10 01 23.1	+0.8
JCT				IAmb_Lg		10 03 30.5	
	comp=Z,54nm,0.8s						
143A	Socs Landing,	6.61	126	IAmb_Lg		10 03 21.8	
	comp=Z,54nm,0.8s						
N41A	Harden Midland	6.62	52		Pn	10 01 25.1	+2.0
HALT	Halls	6.81	95	IAmb_Lg		10 03 28.4	
	comp=Z,102nm,0.7s						
ISCO	Idaho Springs	6.90	298	P	Pn	10 01 28.0	+0.7
	baz=113,SNR=6.5						
ISCO	Idaho Springs	6.90	298		Pn	10 01 28.4	+1.1
K38A	Parkersburg	6.96	32		Pn	10 01 29.3	+1.4
ECSD	EROS Data Cent	6.97	7	P	Pn	10 01 27.8	-0.1
	baz=187						
ECSD	EROS Data Cent	6.97	7	Pn	Pn	10 01 27.2	-0.8
W45A	Hickory Valley	7.10	101	IAmb_Lg		10 03 41.9	
	comp=Z,82nm,0.8s						
OXF	Oxford	7.13	106		Pn	10 01 29.9	-0.3
Q44A	Meyer Farm, Va	7.19	70		Pn	10 01 30.2	-0.8
Q44A				IAmb_Lg		10 03 39.5	
	comp=Z,122nm,0.8s						
L40A	Anamosa	7.26	42	IAmb_Lg		10 03 40.5	
	comp=Z,86nm,0.7s						
T45A	Paducah	7.26	86	IAmb_Lg		10 03 56.5	
	comp=Z,118nm,0.7s						
ANMO	Albuquerque	7.34	258	Pn	Pn	10 01 35.7	+2.4
	comp=Z,0.1nm,0.3s,baz=22,slow=6.3,SNR=1.9						
ANMO				Pg	Pg	10 02 02.1	-4.7
	comp=Z,0.6nm,0.3s,baz=78,slow=16,SNR=11						
ANMO				Lg	Lg	10 03 34.6	
	comp=Z,2.5nm,0.3s,baz=348,slow=19,SNR=9.9						
ANMO	Albuquerque	7.34	258	IAmb_Lg		10 03 43.1	
	comp=Z,30nm,0.8s						
ANMO				IAmb_Lg		10 03 43.1	
	comp=Z,30nm,0.8s						
PHWY	Pilot Hill	7.52	309		Pn	10 01 36.8	+1.1
N23A	Red Feather La	7.61	305	P	Pn	10 01 38.4	+1.3
	baz=120,SNR=7.0						
N23A	Red Feather La	7.61	305		Pn	10 01 39.4	+2.4
N23A				IAmb_Lg		10 04 05.8	
	comp=Z,78nm,0.8s						
SUSD	Miller	7.69	353	IAmb_Lg		10 04 04.0	
	comp=Z,91nm,0.9s						
SMCO	Snowmass	7.69	291		Pn	10 01 40.9	+2.6
BNM	Barren Site	7.75	253		Pn	10 01 38.6	-0.3
I37A	Lemond, Waseca	7.91	23		Pn	10 01 40.6	-0.3
I37A				IAmb_Lg		10 04 15.2	
	comp=Z,49nm,1.0s						
735A	Kenedy	7.93	181	IAmb_Lg		10 04 14.6	
	comp=Z,43nm,0.7s						
Y22D	IRIS PASSCAL I	8.00	253	IAmb_Lg		10 04 22.7	
	comp=Z,104nm,0.8s						
USIN	University of	8.08	79	IAmb_Lg		10 04 10.2	
	comp=Z,104nm,0.8s						
L42A	Oliver, Polo	8.10	48	IAmb_Lg		10 04 11.1	
	comp=Z,71nm,0.8s						
MNTX	Cornudas Mount	8.14	233	P	Pn	10 01 45.1	+1.0
	baz=49						
MNTX	Cornudas Mount	8.14	233		Pn	10 01 45.9	+1.8
JFWS	Jewell Farm	8.37	41	P	Pn	10 01 47.9	+0.8
	baz=226						
JFWS	Jewell Farm	8.37	41		Pn	10 01 48.4	+1.2
JFWS				IAmb_Lg		10 04 24.3	
	comp=Z,73nm,0.8s						
MVCO	Mesa Verde	8.64	276	Pn	Pn	10 01 53.2	+2.1
RSSD	Black Hills	8.75	329		Pn	10 01 54.8	+2.2
RSSD				IAmb_Lg		10 04 31.2	
	comp=Z,40nm,1.1s						
M44A	Midewin, Midew	8.79	56	IAmb_Lg		10 04 35.5	
	comp=Z,73nm,0.9s						
RWWY	Rawlins	8.84	306	IAmb_Lg		10 04 43.7	
	comp=Z,48nm,1.0s						
K22A	Casper	8.95	313	IAmb_Lg		10 04 39.9	
	comp=Z,44nm,0.8s						
TX31	Lajitas Ar. Si	8.97	216		Pn	10 01 55.7	+0.1
TX32	Lajitas Array	8.97	216		Pn	10 01 56.5	+0.9
TXAR	Lajitas Array	8.97	216	Pn	Pn	10 01 55.1	-0.4
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=12						
TXAR				Pg	Pg	10 02 30.0	-8.0
	comp=Z,0.8nm,0.3s,baz=26,slow=16,SNR=6.2						
TXAR				Lg	Lg	10 04 22.8	
	comp=Z,0.7nm,0.3s,baz=34,slow=23,SNR=1.9						
TXAR	Lajitas Array	8.97	216		Pn	10 01 54.9	-0.7
F33A	5 Mile Ranch,	9.09	6	Pn	Pn	10 01 57.9	+0.9
F33A				IAmb_Lg		10 04 42.7	
	comp=Z,37nm,1.0s						
HQIL	Hanson Quary C	9.12	54	IAmb_Lg		10 04 54.4	
	comp=Z,81nm,1.1s						
WCI	Wyandotte Cave	9.18	78	IAmb_Lg		10 04 46.5	
	comp=Z,69nm,0.8s						
CLTN	Cedars of Leba	9.19	91	IAmb_Lg		10 04 34.4	
	comp=Z,37nm,1.1s						
U49A	Red Boiling Sp	9.59	88	IAmb_Lg		10 04 50.7	
	comp=Z,42nm,1.1s						
I42A	Draeger Farm,	9.75	41	IAmb_Lg		10 05 08.0	
	comp=Z,32nm,0.8s						
PDAR	Pinedale Array	10.88	307	Pn	Pn	10 02 20.6	-1.2
	comp=Z,0.2nm,0.3s,baz=121,slow=14,SNR=6.4						
PDAR				Pg		10 03 04.9	
	comp=Z,0.2nm,0.3s,baz=112,slow=11,SNR=4.2						
PDAR				Lg	Lg	10 05 22.5	
	comp=Z,0.4nm,0.3s,baz=109,slow=35,SNR=2.7						
PDAR	Pinedale Array	10.88	307		Pn	10 02 20.1	-1.7
B35A	Bob, Littlefor	11.91	13	Pn	Pn	10 02 34.5	-1.2
EYMN	Ely	12.04	20	Pn	Pn	10 02 36.7	-0.7
ULM	Lac du Bonnet	13.50	5	Pn	Pn	10 02 45.1	-12
	comp=Z,0.1nm,0.3s,baz=255,slow=22,SNR=1.8						
E46A	Sault Ste Mari	13.83	42	Pn	Pn	10 03 01.2	-0.6
LRM	Limekiln Ridge	14.26	314		Pn	10 03 06.0	-2.0
YKA	Yellowknife Ar	27.76	343	P	P	10 05 30.6	-3.7
	comp=Z,0.2nm,0.8s,baz=126,slow=8.5,SNR=1.9						
ILAR	Eielson Array	40.20	330	P	P	10 07 18.3	-3.6
	comp=Z,0.3nm,0.9s,baz=107,slow=6.6,SNR=2.3						

SNET ***13*** *10:37:56.5±1.0, 13°.89N×91°.10W, h15^{km}±6^{km}, ML3.5*
GCG ***13*** *10:37:58.8±0.4, 13°.70N×90°.87W, h23^{km}±49^{km}, MD3.8*
ISC 13 10:37:54.2±2.7, **13°.6N**±0°.1×**91°.18W**±0°.10, **h26**^{km}±16^{km}, **n10**, σ1^{s}.**19**/15, **1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	0.90	21	eP	Pb	10 38 11.7	+0.3
FUG				eS	Sn	10 38 24.5	+0.8
PCG	Pacaya	0.96	35	⇑iP	Pb	10 38 13.2	+0.9
PCG				eS	Sn	10 38 24.8	-0.4
NBG	Las Nubes	1.27	39	eP	Pb	10 38 18.1	+0.5
NBG				eS	Sn	10 38 32.9	+0.1
CEVE	Cerro Verde	1.53	81	eP	Pb	10 38 22.1	+0.1
CEVE				eS	Sb	10 38 42.0	+1.0
CEVE				IAML		10 38 45.7	
	comp=Z,895nm,0.2s						
JAYA	Jayaque - finc	1.68	88	eS	Sb	10 38 45.3	-0.2
JAYA				IAML		10 38 45.9	
	comp=Z,398nm,0.2s						
HUEH	Huehuetenango	1.73	350	eP	Pn	10 38 23.1	+0.2
HUEH				eS	Sn	10 38 43.0	-1.3
LALI	Alcalda de L	1.81	93	eP	Pb	10 38 26.1	-0.6
PMON	Piamonte	1.81	86	IAML		10 38 54.8	
ESQI	Esquipulas	2.02	62	eP	Pn	10 38 27.8	+1.1
ESQI				eS	Sb	10 38 52.1	-3.0
MRL	Marmol	2.06	44	eP	Pn	10 38 27.6	+0.2

IDC 13 11:12:30.6±3.2, **0°.05N**×**126°.82E**, **h64**^{km}±34^{km}, **mb3.4**/3, **mb1 3.7**/5, **mb1mx3.3**/51, **mbtmp3.8**/5, **ML3.6**/2, **Error ellipse: s-maj=29.5km s-min=22.2km az=7.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.54	102	P	Pn	11 13 36.5	-0.4
	1.7nm,0.3s,baz=281,slow=16,SNR=2.3						
SIJI				S	Sn	11 14 29.5	+1.1
	0.9nm,0.3s,baz=217,slow=20,SNR=1.5						
KAPI	Kappang	8.66	234	P	Pn	11 14 33.4	0.0
	1.4nm,0.3s,baz=60,slow=14,SNR=2.5						
KAPI				S	Sn	11 16 03.1	-6.5
	1.8nm,0.3s,baz=149,slow=23,SNR=7.4						
WRA	Warramunga Arr	21.19	160	P	P	11 17 10.2	-0.8
	0.4nm,0.3s,baz=341,slow=11,SNR=12						
ASAR	Alice Springs	24.56	164	P	P	11 17 45.1	+0.4
	0.9nm,0.6s,baz=342,slow=9.7,SNR=9.7						
MKAR	Makanchi Array	60.63	326	P	P	11 22 35.0	0.0
	0.8nm,0.4s,baz=124,slow=7.4,SNR=1.7						

IDC ***13*** *11:16:25.5±0.4, 18°.26N×71°.25W, h0^{km}, mb4.4/29, mb1 4.6/33, mb1mx4.5/58, mbtmp4.4/33, ML3.8/4, MS4.1/15, Ms1 4.1/15, ms1mx3.8/29, Error ellipse: s-maj=12.8km s-min=11.2km az=74.0*
OSPL ***13*** *11:16:27.7±1.8, 18°.27N×71°.24W, h2^{km}±12^{km}, ML4.6, Fault plane solution: NP1:φ$_s$43.00000°, δ6.00000°, λ72.50000°.*
NEIC ***13*** *11:16:28.2±2.7, 18°.26N±0°.05×71°.36W±0°.06, h10^{km}±1^{km}, mb4.8/199, Mwr4.7/14, Error ellipse: s-maj=10.7km s-min=7.6km az=225.0*
NEIC ***13*** *11:16:29.1, 18°.36N×71°.32W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.51; M$_{θθ}$-0.41; M$_{φφ}$0.91; M$_{rθ}$-0.42; M$_{θφ}$0.86; M$_{φr}$0.20; Fault plane solution: M$_0$1.26000×10^{16} NP1:φ$_s$167.13000°, δ65.77000°, λ-153.47000°. NP2:φ$_s$65.55000°, δ65.96000°, λ-26.70000°. Principal axes: T 1.3410, Plg0.0000°, Azm116.0000°; N -0.1779, Plg55.0000°, Azm207.0000°; P -1.1631, Plg35.0000°, Azm26.0000°;*
GCMT ***13*** *11:16:30.2±0.4, 18°.40N±0°.02×71°.14W±0°.02, h21^{km}±1^{km}, MW4.8/79, Moment Tensor Solution. s11,c11; s79,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.39±.13; M$_{θθ}$-1.47±.10; M$_{φφ}$1.86±.13; M$_{rθ}$-0.51±.17; M$_{θφ}$1.00±.07; M$_{φr}$0.18±.15; Best double couple: M$_0$2.03400×10^{16} NP1:φ$_s$59.00000°, δ76.00000°, λ-13.00000°. NP2: φ$_s$152.00000°, δ77.00000°, λ-165.00000°. Principal axes: T 2.1360, Plg1.0000°, Azm285.0000°; N -0.2010, Plg71.0000°, Azm192.0000°; P -1.9320, Plg19.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
JSN ***13*** *11:17:37.8±1.5, 18°.08N×76°.41W, h15^{km}±13^{km}*
ISC 13 11:16:27.1±0.8, **18°.26N**±0°.02×**71°.26W**±0°.03, **h10**^{km}±5^{km}, **n574**, σ1^{s}.**29**/583, **mb4.8**/122, **MS4.1**/12, **15C-18D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOBA1	Barahona	0.23	132	iP	Pg	11 16 31.4	-0.4
LOBA1				eS	Sg	11 16 36.2	+1.2
LOBA1				IAML		11 16 36.6	
	comp=Z,115μm,0.7s						
LOBA1	Barahona	0.23	132	ASPG		11 16 31.0	
	comp=Z,165μm,0.5s						
LOBA1				⇑iP	Pg	11 16 31.4	-0.4
LOBA1				ATPG		11 16 33.0	
	comp=Z,556μm,0.4s						
LOBA1				ASSG		11 16 35.6	
	comp=Z,318μm,0.3s						
LOBA1				eS	Sg	11 16 36.0	+0.9
LOBA1				IAML		11 16 36.6	
	comp=Z,115μm,0.7s						
LOBA1				ATSG		11 16 37.7	
	comp=Z,1098μm,0.3s						
SJM1	San Juan de la	0.55	4	⇑iP	Pg	11 16 37.0	-0.8
SJM1				eS	Sg	11 16 45.5	+0.5
SJM1	San Juan de la	0.55	4	ASPG		11 16 36.6	
SJM1				⇑iP	Pg	11 16 37.0	-0.8
SJM1				ASSG		11 16 44.9	
SJM1				eS	Sg	11 16 45.2	+0.2
SDDR	Presa de Saban	0.72	358	eP	Pg	11 16 39.6	-1.5
SDDR				eS	Sb	11 16 51.1	-0.8
SDDR	Presa de Saban	0.72	358	Pg	Pg	11 16 39.7	-1.5
SDDR	Presa de Saban	0.72	358	⇓iP	Pg	11 16 39.5	-1.6
SDDR				eS	Sg	11 16 49.8	-0.9
SDDR				IAML		11 17 02.5	
	comp=Z,15μm,0.5s						
SDDR	Presa de Saban	0.72	358	⇓iP	Pg	11 16 39.5	-1.6
SDDR				eS	Sg	11 16 49.8	-0.9
SDDR				IAML		11 17 02.5	
	comp=Z,15μm,0.5s						
BANI	BANI	0.86	81	⇓iP	Pg	11 16 42.9	-1.0
NQUSE	US Embassy, Po	0.99	288		Pg	11 16 44.6	-1.6
NQWLB	Fermate	1.03	283	Pg	Pg	11 16 44.8	-2.3
BON1	Bonao	1.07	50	ASPG		11 16 45.6	
	comp=Z,6μm,0.3s						
BON1				iP	Pg	11 16 46.0	-1.6
BON1				ATPG		11 16 46.9	
	comp=Z,17μm,0.3s						
BON1				ASSG		11 17 00.2	
	comp=Z,19μm,0.5s						
BON1				eS	Sg	11 17 00.6	-0.9
BON1				ATSG		11 17 02.0	
	comp=Z,49μm,0.4s						
BON1				IAML		11 17 10.2	
	comp=Z,13μm,0.8s						
LOSC1	San Cristbal	1.10	82	iP	Pb	11 16 47.5	-0.8
LOSC1				IAML		11 17 15.0	
	comp=Z,13μm,0.6s						
LOSC1	San Cristbal	1.10	82	ASPG		11 16 47.1	
	comp=Z,7μm,0.5s						
LOSC1				⇑iP	Pb	11 16 47.5	-0.8
LOSC1				ATPG		11 16 48.6	
	comp=Z,18μm,0.4s						
LOSC1				ASSG		11 17 00.5	
	comp=Z,20μm,0.3s						
LOSC1				eS	Sg	11 17 00.9	-1.8
LOSC1				ATSG		11 17 01.1	
	comp=Z,57μm,0.3s						
LOSC1				IAML		11 17 15.0	
	comp=Z,13μm,0.6s						
SC01	Santiago de lo	1.27	23	⇓iP	Pn	11 16 49.6	-1.3
SC01	Santiago de lo	1.27	23	⇓iP	Pn	11 16 49.6	-1.3
SC01				IAML		11 17 22.6	
	comp=Z,9μm,0.7s						
SDD	Santo Domingo	1.29	81	⇓iP	Pn	11 16 49.7	-1.5
SDD	Santo Domingo	1.29	81	ASPG		11 16 49.0	
	comp=Z,1μm,0.3s						
SDD				iP	Pn	11 16 49.4	-1.8
SDD				ATPG		11 16 51.2	
	comp=Z,4μm,0.3s						
SDD				ASSG		11 17 06.9	
	comp=Z,3μm,0.3s						
SDD				eS	Sb	11 17 07.3	-0.8
SDD				ATSG		11 17 09.2	
	comp=Z,8μm,0.3s						
GRTK	Grand Turk	3.24	2		Pn	11 17 18.2	+0.1
GRTK	Grand Turk	3.24	2	iP	Pn	11 17 18.5	+0.5
GRTK	Grand Turk	3.24	2	iP	Pn	11 17 17.6	-0.4
CRPR	Cabo Rojo, PR	3.95	93	Pn	Pn	11 17 30.7	+2.9
GTBY	Guantanamo Bay	4.01	295	Pn	Pn	11 17 27.0	-1.5
GTBY	Guantanamo Bay	4.01	295	iP	Pn	11 17 28.4	-0.2
AOPR	Arecibo Observ	4.28	88	eP	Pn	11 17 33.4	+1.1
AOPR	Arecibo Observ	4.28	88		Pn	11 17 35.0	+2.7
OBIP	Obispado Ponce	4.43	92	Pn	Pn	11 17 34.4	+0.1
SJG	San Juan	4.86	91	Pn	Pn	11 17 41.2	+0.9
	comp=Z,36nm,0.3s,baz=234,slow=15,SNR=29						
SJG				Sn	Sn	11 18 38.7	+2.1
	comp=Z,22nm,0.3s,baz=303,slow=13,SNR=3.8						
SJG				Lg	Lg	11 18 55.9	
	comp=Z,36nm,0.3s,baz=225,slow=20,SNR=3.9						
SJG	San Juan	4.86	91		Pn	11 17 42.8	+2.5
CMJ	Castle Mountai	4.86	269	iP	Pn	11 17 40.4	0.0
YHJ	Yallahs	4.99	267	iP	Pn	11 17 42.7	+0.5
CBYP	Canovanas	5.13	89		Pn	11 17 47.2	+3.1
HOJ	Hope	5.23	268	iP	Pn	11 17 44.8	-0.6
STH	Stony Hill	5.28	269	iP	Pn	11 17 45.4	-0.8
MTP	Monte Pirata	5.43	91	Pn	Pn	11 17 49.6	+1.5
PCJ	Portland Cotta	5.64	266	iP	Pn	11 17 50.7	-0.3
CUPR	Culebra, Puert	5.68	89	Pn	Pn	11 17 53.7	+2.1
MTDJ	Mount Denham	5.96	271	Pn	Pn	11 17 55.4	-0.2
MCJ	Malvern	6.12	268	iP	Pn	11 17 59.3	+1.5
SKI	Saint Kitts	8.17	95	e	Pn	11 18 27.2	+1.4
LCCY	Blossom Villag	8.47	281	Pn	Pn	11 18 30.8	+0.9
MLYT	Lee's Yard	8.79	99	eP	Pn	11 18 36.1	+1.8
ANBD	Bethesda, Anti	9.13	96	eP	Pn	11 18 39.3	+0.3
SDV	Santo Domingo	9.33	176	Pn	Pn	11 18 42.4	+0.5
	comp=Z,4.5nm,0.3s,baz=346,slow=8.2,SNR=28						
SDV				Sn	Sn	11 20 21.3	-5.8
	comp=Z,3.1nm,0.3s,baz=316,slow=22,SNR=8.2						
SDV				LR	LR	11 22 38.6	
	comp=Z,1μm,18.3s,baz=50,slow=40						
SDV	Santo Domingo	9.33	176	Pn	Pn	11 18 43.6	+1.6
SDV	Santo Domingo	9.33	176	eP	Pn	11 18 42.5	+0.6
SDV	Santo Domingo	9.33	176	eP	Pn	11 18 43.7	+1.8
FSCY	Frank Sound, G	9.46	278	Pn	Pn	11 18 42.4	-1.1
CBE	Ff, Capester	9.48	102	eP	Pn	11 18 43.4	-0.3
TDBA	Terre de Bas,	9.51	103	e	Pn	11 18 43.2	-0.9
MAGL	Barre de l’ile	9.81	102	eP	Pn	11 18 45.6	-2.6
DSLB	Salisbury	9.82	105	eP	Pn	11 18 49.2	+0.7
OCAC	Ocana	10.16	192	eP	Pn	11 18 53.5	+0.4
PCRV	Puerto La Cruz	10.28	140	Pn	Pn	11 18 54.5	-0.2
	comp=Z,21nm,0.3s,baz=296,slow=7.6,SNR=36						
PCRV				Sn	Sn	11 20 42.2	-7.9
	comp=Z,7.4nm,0.3s,baz=18,slow=24,SNR=5.0						
FDF	Fort de France	10.31	108	eP	Pn	11 18 55.6	+0.5
BIM	Bigot	10.46	109	eP	Pn	11 18 55.6	-1.6
MPOM	Morne Pois Mar	10.68	109	eP	Pn	11 18 58.8	-1.4
SLBI	Saint Lucia, B	10.74	112	eP	Pn	11 18 59.7	-1.3
PAMC	Pamplona, Colo	10.94	188	eP	Pn	11 19 05.0	+0.8
BRRC	Barranca, Sant	11.34	192	eP	Pn	11 19 09.1	-0.1
BARC	Barichara	11.74	189	eP	Pn	11 19 14.3	-0.7
PTBC	PUERTO BERRIO,	12.05	195	eP	Pn	11 19 20.6	+1.5
BCIP	Isla Barro Col	12.29	224	Pn	Pn	11 19 19.1	-3.1
RUSC	La Rusia	12.42	188	eP	Pn	11 19 23.8	-0.6
HELC	Santa Helena	12.69	200	eP	Pn	11 19 30.4	+2.3
PTAC	Punta Ardita,	12.75	211	eP	Pn	11 19 29.4	+0.8
NORC	Norcasia	13.10	196	eP	Pn	11 19 34.0	+0.7
CBOC	Ciudad Bolivar	13.16	201	eP	Pn	11 19 35.5	+1.2
SOLC	Bahia Solano	13.38	207	eP	Pn	11 19 37.4	+0.2
ROSC	El Rosal	13.66	193	Pn	Pn	11 19 42.2	+0.8
	comp=Z,3.4nm,0.3s,baz=60,slow=17,SNR=2.2						
ROSC				Sn	Sn	11 22 14.3	+0.8
	comp=Z,2.5nm,0.3s,baz=37,slow=21,SNR=1.6						
ROSC				LR	LR	11 25 08.3	
	comp=Z,417nm,20.9s,baz=14,slow=38						
TOLC	Tolima	14.15	197	eP	Pn	11 19 51.8	+3.7
ORTC	Ortega, Tolima	14.78	196	eP	Pn	11 19 58.1	+1.7
ACON	Acoyapa	14.81	247	P	P	11 20 00.4	-2.3
656A	Willston	15.12	319		Pn	11 19 59.4	-1.4
JTS	Las Juntas de	15.45	241	Pn	Pn	11 20 06.4	+1.2
	comp=Z,0.4nm,0.3s,baz=105,slow=12,SNR=1.8						
JTS				LR	LR	11 27 05.5	
	comp=Z,430nm,18.2s,baz=114,slow=41						
JTS	Las Juntas de	15.45	241	P	Pn	11 20 06.1	+0.9
JTS				IAmb	IAmb	11 20 15.9	
	comp=Z,79nm,1.1s						
TGUH	Tegucigalpa,Un	15.94	257	P	Pn	11 20 13.0	+1.3
TGUH				IAmb	IAmb	11 20 36.3	
	comp=Z,63nm,1.2s						
157A	Early Branch	16.82	330	P	P	11 20 24.8	-0.2
	baz=147						
Z58A	St. Stephen	16.86	335	P	P	11 20 25.1	-0.2
	baz=151						
Y60A	Bolivia	16.87	340	Pn	Pn	11 20 21.6	-1.8
Y60A				IAmb	IAmb	11 20 28.6	
	comp=Z,137nm,1.1s						
Y59A	Loris	17.09	338	P	P	11 20 28.0	+0.2
	baz=155						

TIGA	Tifton	17.23	322	P	P	11 20 29.3	-0.1
	baz=137						
Y58A	Scranton	17.31	336	P	P	11 20 30.6	+0.3
	baz=153						
W58A	Raeford	18.14	339	P	P	11 20 40.5	+1.1
	baz=155						
V60A	Jim Taylor Roa	18.23	344	P	P	11 20 40.9	+0.4
	baz=162						
BIRD	Birdtown, Kers	18.27	335	P	Pn	11 20 38.6	-2.1
V59A	Middlesex	18.51	342	P	P	11 20 43.6	+0.2
	baz=159						
W57A	Gilead	18.54	337	P	Pn	11 20 44.1	+0.1
	baz=153						
W57A	Gilead	18.54	337	P	P	11 20 42.2	-1.6
U61A	Possum Corner	18.58	347	P	P	11 20 43.9	-0.4
	baz=165						
HODGE	Hodges	18.70	330	P	P	11 20 44.0	-1.7
W56A	Indian Trail	18.75	336	P	Pn	11 20 46.6	+0.1
	baz=152						
V58A	Windy Hill, Pi	18.81	340	P	P	11 20 46.7	-0.1
	baz=157						
V58A	Windy Hill, Pi	18.81	340	P	P	11 20 47.0	+0.2
U60A	Pendleton	18.88	345	P	P	11 20 47.6	0.0
	baz=163						
U59A	Littleton	18.93	344	P	P	11 20 48.3	+0.2
	baz=161						
V57A	Coltrane Farms	19.11	338	P	P	11 20 50.5	+0.3
	baz=155						
U58A	Oxford	19.18	342	P	P	11 20 50.9	0.0
	baz=159						
250A	Grady	19.24	318	P	Pn	11 20 52.6	0.0
250A				IAmb	IAmb	11 20 57.1	
	comp=Z,67nm,1.1s						
OTAV	Otavalo	19.25	202	*e*P	Pn	11 20 55.8	+2.5
V56A	Mocksville	19.31	337	P	P	11 20 51.5	-0.8
	baz=153						
T59A	Double "B" Far	19.45	345	P	P	11 20 53.6	-0.2
	baz=162						
T59A	Double "B" Far	19.45	345	P	P	11 20 53.9	0.0
U57A	Blanch	19.46	340	P	P	11 20 53.9	-0.1
	baz=157,SNR=9.8						
BG3	Lake Jocassee	19.64	330	P	Pn	11 20 57.5	+0.1
T58A	Grand View Acr	19.69	342	P	P	11 20 56.7	+0.2
	baz=160						
U56A	King	19.74	338	P	P	11 20 57.4	+0.3
	baz=154						
CCIG	Comitan	20.04	268	P	Pn	11 21 01.8	-0.5
CCIG				IAmb	IAmb	11 21 09.4	
	comp=Z,57nm,1.0s						
S59A	Mechanicsville	20.14	346	P	P	11 21 02.3	+1.0
	baz=164						
V53A	Saluda	20.14	332	P	P	11 21 02.5	+1.0
S58A	Poland Farm, P	20.18	344	P	P	11 21 02.1	+0.2
	baz=161,SNR=6.8						
S58A	Poland Farm, P	20.18	344	P	P	11 21 00.9	-1.0
S58A				IAmb	IAmb	11 21 03.8	
	comp=Z,49nm,1.1s						
T56A	Rocky Mt	20.23	339	P	Pn	11 21 03.9	-0.5
	baz=156						
LRAL	Lakeview Retre	20.41	319	P	Pn	11 21 05.8	-0.6
	baz=133						
LRAL	Lakeview Retre	20.41	319		Pn	11 21 05.5	-0.8
U54A	Nelsons Funny	20.44	335	P	P	11 21 05.1	+0.3
	baz=150						
U54A	Nelsons Funny	20.44	335	P	Pn	11 21 06.1	-0.7
U54A				IAmb	IAmb	11 21 09.5	
	comp=Z,46nm,1.2s						
R58B	Mineral	20.47	345	P	P	11 21 05.2	+0.3
	baz=162						
R58B	Mineral	20.47	345	P	P	11 21 04.4	-0.5
R59A	King George, V	20.52	347	P	P	11 21 06.2	+0.8
	baz=164						
BLA	Blacksburg	20.53	339	P	P	11 21 06.4	+0.8
	baz=155						
BLA	Blacksburg	20.53	339	P	P	11 21 05.4	-0.3
BLA				IAmb	IAmb	11 21 13.3	
	comp=Z,44nm,0.9s						
S57A	Dark Hollow, R	20.57	342	P	P	11 21 06.5	+0.4
	baz=159						
S57A	Dark Hollow, R	20.57	342	P	P	11 21 07.0	+1.0
TKL	Tuckaleechee C	20.58	330	P	P	11 21 06.9	+0.8
	comp=Z,11nm,1.1s,baz=153,slow=11,SNR=4.8						
TKL				S	S	11 24 53.7	-2.6
	comp=Z,3.6nm,0.8s,baz=117,slow=16,SNR=2.5						
TKL				LR	LR	11 29 41.6	
	comp=Z,500nm,18.1s,baz=136,slow=39						
TKL	Tuckaleechee C	20.58	330		Pn	11 21 07.7	-0.7
Y49A	Blount Mountai	20.62	322		P	11 21 05.4	-1.3
V52A	Sevierville	20.64	330	P	P	11 21 07.3	+0.4
FPAL	Fort Paine	20.66	325		P	11 21 08.2	+1.1
S56A	Natural Bridge	20.68	341	P	P	11 21 07.4	+0.2
	baz=158						
R58A	Rapidan	20.82	345	P	P	11 21 08.6	-0.2
	baz=162						
R57A	Stanardsville	20.95	344	P	P	11 21 09.7	-0.5
	baz=161						
V51A	Loudon	20.98	329	P	P	11 21 09.2	-1.3
V51A				IAmb	IAmb	11 21 25.9	
	comp=Z,60nm,1.2s						
W50A	Signal Mountai	20.99	326	P	P	11 21 10.2	-0.5
W50A				IAmb	IAmb	11 21 26.2	
	comp=Z,40nm,1.2s						
Q60A	Greensboro	21.05	350	P	P	11 21 11.2	-0.1
	baz=168						
Q59A	Harwood	21.07	348	P	P	11 21 12.6	+1.2
	baz=166						
Z47A	Carrollton	21.19	318	P	P	11 21 12.2	-0.6
Z47A				IAmb	IAmb	11 21 17.5	
	comp=Z,41nm,1.0s						
TZTN	Tazewell	21.20	332	P	P	11 21 13.1	+0.2
	baz=146						
TZTN	Tazewell	21.20	332	P	P	11 21 13.8	+0.9
TZTN				IAmb	IAmb	11 21 20.8	
	comp=Z,76nm,1.1s						
R56A	Bull Pasture M	21.30	342	P	P	11 21 14.0	0.0
	baz=159						
Q58A	Fox Den Farm,	21.36	346	P	P	11 21 14.5	-0.1
	baz=163,SNR=8.7						
S54A	Dingess, Beckl	21.37	338	P	P	11 21 14.8	+0.1
	baz=153,SNR=9.6						
S54A	Dingess, Beckl	21.37	338	P	P	11 21 15.5	+0.7
S54A				IAmb	IAmb	11 21 20.6	
	comp=Z,56nm,0.9s						
R55A	Marlinton	21.40	341	P	P	11 21 15.2	+0.1
	baz=157						
R55A	Marlinton	21.40	341	P	P	11 21 15.9	+0.8
R54A	Victor	21.60	339	P	P	11 21 17.6	+0.4
	baz=154,SNR=12						
Q57A	Strasburg	21.62	345	P	P	11 21 17.2	-0.2
	baz=162						
SDMD	Soldier's Deli	21.63	348	P	P	11 21 17.4	-0.1
P59A	Jarrettsville	21.75	349	P	P	11 21 18.9	+0.2
	baz=167						
P58A	Pank, Wackersv	21.80	347	P	P	11 21 18.9	-0.3
	baz=165						
P60A	Greenville	21.81	351	P	P	11 21 19.1	-0.3
	baz=169						
Q56A	Snyder Ridge,	21.83	343	P	P	11 21 20.3	+0.7
	baz=160,SNR=7.7						
Q56A	Snyder Ridge,	21.83	343	P	P	11 21 20.5	+0.9
Q56A				IAmb	IAmb	11 21 23.2	
	comp=Z,32nm,0.9s						
P57A	Homestead Farm	21.95	346	P	P	11 21 21.2	+0.3
	baz=163						
P57A	Homestead Farm	21.95	346	P	P	11 21 21.1	+0.2
P57A				IAmb	IAmb	11 21 38.3	
	comp=Z,59nm,1.4s						
S51A	Beattyville	22.13	333	P	P	11 21 24.8	+1.9
S51A				IAmb	IAmb	11 21 28.5	
	comp=Z,54nm,1.4s						
P56A	Dayton Farm, R	22.17	344	P	P	11 21 24.7	+1.4
	baz=161						
T50A	Nancy	22.18	330	P	P	11 21 23.6	+0.1
T50A				IAmb	IAmb	11 21 33.7	
	comp=Z,38nm,1.1s						
VBMS	Vicksburg	22.24	312	P	P	11 21 24.9	+0.8
	baz=124						
U49A	Red Boiling Sp	22.25	328	P	P	11 21 23.5	-0.6
Q54A	Coxs Mills	22.27	340	P	P	11 21 21.4	-2.9
Q54A				IAmb	IAmb	11 21 30.9	
	comp=Z,50nm,1.1s						
O58A	Lewisberry	22.34	349	P	P	11 21 25.8	+0.8
	baz=166						
PLAL	Pickwick Lake	22.39	321	P	P	11 21 25.2	-0.4
PLAL				IAmb	IAmb	11 21 38.8	
	comp=Z,34nm,1.0s						
O59A	Robesonia	22.39	350	P	P	11 21 26.6	+1.0
	baz=168						
Q53A	Leroy	22.39	339	P	P	11 21 26.2	+0.6
	baz=154						
MDP	Montagnes des	22.40	123	LR	LR	11 31 37.7	
	comp=Z,189nm,18.9s,baz=312,slow=41						
CMIG	Matias Romero	22.54	271	P	P	11 21 27.2	-0.2
	comp=Z,1.9nm,0.5s,baz=77,slow=8.7,SNR=2.6						
CMIG				LR	LR	11 31 40.1	
	comp=Z,610nm,18.2s,baz=84,slow=41						
Y45A	Yeager Farm, C	22.56	317	P	P	11 21 28.8	+1.3
O57A	Amberson	22.56	347	P	P	11 21 28.9	+1.4
	baz=164						
MCWV	Mont Chateau	22.59	343	P	P	11 21 28.9	+1.1
	baz=159						
Q52A	Bidwell	22.75	337	P	P	11 21 29.1	-0.3
Q52A				IAmb	IAmb	11 21 57.2	
	comp=Z,53nm,1.1s						
N60A	Cedar Hill Far	22.78	352	P	P	11 21 30.1	+0.4
	baz=171						
O56A	Blue Knob Stat	22.83	345	P	P	11 21 31.4	+1.1
	baz=162						
O56A	Blue Knob Stat	22.83	345	P	P	11 21 30.8	+0.5
O56A				IAmb	IAmb	11 21 56.4	
	comp=Z,30nm,1.2s						
OXF	Oxford	22.89	319	P	P	11 21 31.5	+0.6
	baz=131,SNR=8.9						
N59A	State Game Lan	22.92	351	P	P	11 21 31.8	+0.6
	baz=169						
N59A	State Game Lan	22.92	351	P	P	11 21 33.4	+2.2
N59A				IAmb	IAmb	11 21 56.9	
	comp=Z,41nm,1.3s						
N58A	Sunbury	22.99	349	P	P	11 21 33.0	+1.1
	baz=167						
SSPA	Standing Stone	23.02	347	P	P	11 21 32.9	+0.6
	baz=164						
SSPA	Standing Stone	23.02	347	P	P	11 21 32.7	+0.4
SSPA				IAmb	IAmb	11 21 47.4	
	comp=Z,59nm,1.4s						
WVT	Waverly	23.05	324	P	P	11 21 33.0	+0.4
	baz=136						
WVT	Waverly	23.05	324	P	P	11 21 33.5	+0.9
WVT				IAmb	IAmb	11 21 46.2	
	comp=Z,25nm,0.9s						
N57A	Milroy	23.07	348	P	P	11 21 33.6	+0.8
	baz=165						
143A	Socs Landing,	23.13	312	P	P	11 21 32.0	-1.5
W45A	Hickory Valley	23.17	320	P	P	11 21 35.0	+1.1
Q51A	Peebles	23.21	336	P	P	11 21 35.4	+1.1
Q51A				IAmb	IAmb	11 22 03.8	
	comp=Z,27nm,0.9s						
P52A	Corning	23.29	338	P	P	11 21 35.2	+0.2
O53A	New Philadelph	23.54	341	P	P	11 21 38.7	+1.1
	baz=156						
M57A	Sunshine Farm,	23.55	349	P	P	11 21 39.3	+1.7
	baz=166						
MACA	Manacapuru-AM	23.70	153	*e*P	P	11 21 40.0	+0.8
HALT	Halls	23.77	321	P	P	11 21 41.2	+1.4
L60A	Shokan	23.79	355	P	P	11 21 40.8	+0.8
	baz=173						
UTMT	University of	23.79	323	P	P	11 21 41.7	+1.7
N54A	Moraine State	23.84	343	P	P	11 21 41.5	+1.0
	baz=159						
N54A	Moraine State	23.84	343	P	P	11 21 41.5	+1.0
N54A				IAmb	IAmb	11 21 43.7	
	comp=Z,47nm,1.1s						
WCI	Wyandotte Cave	23.84	330	P	P	11 21 40.7	+0.2
	baz=143						
L61A	Hillsdale 1, H	23.94	356	P	P	11 21 42.1	+0.8
	baz=175						
L58A	Harry Jones Me	24.04	352	P	P	11 21 43.2	+0.9
	baz=170						
L59A	Walton	24.07	353	P	P	11 21 44.0	+1.3
	baz=172						
ACSO	Alum Creek Sta	24.13	338	P	P	11 21 44.3	+1.1
	baz=152						
L57A	Andrews Acres	24.14	350	P	P	11 21 44.6	+1.3
	baz=167						
HRV	Adam Dziewonsk	24.18	359	P	P	11 21 45.0	+1.4
	baz=180						
P49A	Miami Univ. Ec	24.20	334	P	P	11 21 44.7	+0.8
	baz=148						
P49A	Miami Univ. Ec	24.20	334	P	P	11 21 43.0	-0.8
BINY	Binghamton	24.20	351	P	P	11 21 45.0	+1.1
	baz=169						
M54A	Oil Creek Stat	24.27	345	P	P	11 21 46.3	+1.9
	baz=161						
M54A	Oil Creek Stat	24.27	345	P	P	11 21 45.0	+0.5
M54A				IAmb	IAmb	11 21 54.4	
	comp=Z,36nm,1.4s						
K63A	Dunstable	24.36	360	P	P	11 21 46.9	+1.7
	baz=180						
L56A	Greenwood	24.40	349	P	P	11 21 47.2	+1.5
	baz=166						
M53A	WI Miller and	24.48	343	P	P	11 21 47.8	+1.4
	baz=158,SNR=6.4						
O49A	Covington	24.60	335	P	P	11 21 46.8	-0.7
O49A				IAmb	IAmb	11 22 13.2	
	comp=Z,33nm,1.1s						
K59A	Cooperstown	24.63	354	P	P	11 21 49.1	+1.3
	baz=172						
K58A	Earlville	24.71	352	P	P	11 21 50.0	+1.6
	baz=170						
K58A	Earlville	24.71	352	P	P	11 21 49.1	+0.6
J62A	Henniker	24.90	359	P	P	11 21 51.6	+1.5
	baz=179						
K56A	Middlesex	24.91	349	P	P	11 21 50.9	+0.6
	baz=166						
ERPA	Erie	24.92	344	P	P	11 21 51.4	+1.1
	baz=160						
SIUC	Southern Illin	24.96	325	P	P	11 21 51.7	+0.9
S44A	Carbondale	24.97	325	P	P	11 21 51.0	+0.1
LCAR	Lake Charles	24.98	319	P	P	11 21 51.6	+0.7
LCAR				IAmb	IAmb	11 22 01.2	
	comp=Z,31nm,1.4s						
X40A	Basin Creek Fa	25.12	314	P	P	11 21 54.5	+2.3
	baz=125						
W41B	Gary Mavity, V	25.12	316	P	P	11 21 54.4	+2.2
	baz=127						
W41B	Gary Mavity, V	25.12	316	P	P	11 21 54.0	+1.8
WHAR	Wooly Hollow	25.22	316	P	P	11 21 56.5	+3.4
WHAR				IAmb	IAmb	11 21 58.7	
	comp=Z,46nm,1.5s						
J59A	Piesco	25.28	354	P	P	11 21 55.0	+1.4
	baz=173						
P46A	Rosedale	25.38	330	P	P	11 21 56.2	+1.7
FCAR	Ozark Folk Cen	25.48	318	P	P	11 21 56.2	+0.8
FCAR				IAmb	IAmb	11 22 01.5	
	comp=Z,27nm,1.1s						
T42A	Van Buren	25.57	321	P	P	11 21 57.3	+1.0
MIAR	Mount Ida	25.66	314	P	P	11 21 58.2	+1.1
	baz=124,SNR=5.8						
I63A	Otisfield	25.72	1	P	P	11 21 60.0	+2.4
	baz=182						
Q44A	Meyer Farm, Va	25.73	327	P	P	11 21 58.0	+0.3
FVM	French Village	25.83	323	P	P	11 21 59.6	+1.0
CZSB	Cruzeiro do Su	25.86	183	*e*P	P	11 22 01.0	+2.0
I57A	Carthage	25.87	353	P	P	11 22 01.2	+2.3
	baz=171						
LBNH	Lisbon	25.91	359	P	P	11 22 00.3	+1.0
	baz=179						
SFIN	Lafayette	25.93	332	P	P	11 22 01.7	+2.2
	baz=144						
TLIG	Tlapa	25.99	273	P	P	11 22 02.0	+1.6
Z38A	Mt. Pleasant	25.99	310	P	P	11 22 01.7	+1.6
237A	Washetta, Mont	26.02	306	P	P	11 22 00.6	+0.1
MALB	Monte Alegre	26.06	138	*e*P	P	11 22 00.5	-0.4
W39A	Magazine	26.16	315	P	P	11 22 03.8	+2.1
	baz=125						
W39A	Magazine	26.16	315	P	P	11 22 04.0	+2.3
ATAH	Atahualpa	26.19	196	P	P	11 22 01.9	-0.6
	comp=Z,4.9nm,0.8s,baz=25,slow=14,SNR=2.9						
ATAH				LR	LR	11 33 41.9	
	comp=Z,299nm,20.2s,baz=6.1,slow=40						
U40A	Yellville	26.23	318	P	P	11 22 04.2	+1.9
	baz=128						
U40A	Yellville	26.23	318	P	P	11 22 03.7	+1.4
U40A				IAmb	IAmb	11 22 28.0	
	comp=Z,24nm,1.1s						
CCM	Cathedral Cave	26.35	323	P	P	11 22 04.7	+1.4
	baz=133						
CCM	Cathedral Cave	26.35	323	P	P	11 22 03.8	+0.4
MGMO	Mountain Grove	26.36	320	P	P	11 22 03.1	-0.4
MGMO				IAmb	IAmb	11 22 11.1	
	comp=Z,44nm,1.4s						
O44A	Mansfield	26.40	329	P	P	11 22 02.6	-1.1
O44A				IAmb	IAmb	11 22 08.4	
	comp=Z,34nm,1.1s						
MCPB	Macapa, AP	26.43	132	*e*P	P	11 22 03.8	-0.4
P43A	Skaggs, Pawnee	26.54	327	P	P	11 22 05.5	+0.6
G58A	Ormstown	26.92	356	P	P	11 22 11.6	+3.3
	baz=174						
435B	Jarrell	26.93	303	P	P	11 22 09.9	+1.2
435B				IAmb	IAmb	11 22 21.5	
	comp=Z,22nm,0.9s						
X37A	Clayton	26.93	312	P	P	11 22 10.2	+1.5
R40A	Maddies Statio	27.10	322	P	P	11 22 11.4	+1.2
R40A				IAmb	IAmb	11 22 17.6	
	comp=Z,16nm,0.8s						
ITTB	Itaituba	27.20	144	*e*P	P	11 22 11.5	+0.4
SADO	Sadowa	27.25	348	LR	LR	11 32 36.7	
	comp=Z,219nm,19.0s,baz=202,slow=36						
S39A	Bolivar	27.35	320	P	P	11 22 13.5	+1.1
S39A				IAmb	IAmb	11 22 17.2	
	comp=Z,40nm,1.2s						
P40A	Paris	27.82	324	P	P	11 22 16.4	-0.1
TUL1	Leonard	27.92	314	P	P	11 22 18.9	+1.4
	baz=123						
TUL1	Leonard	27.92	314	P	P	11 22 19.3	+1.8
TUL1				IAmb	IAmb	11 22 30.7	
	comp=Z,20nm,0.9s						
SAML	Samuel	28.18	163	P	P	11 22 20.6	+0.7
SAML				IAmb	IAmb	11 22 29.5	
	comp=Z,9.8nm,0.8s						
SAML	Samuel	28.18	163	*e*P	P	11 22 20.0	0.0
W35A	Tecumseh	28.28	312	P	P	11 22 21.2	+0.4
ETMB	Extrema	28.33	169	*e*P	P	11 22 23.0	+1.7
OK030	Cody Creek RV	28.61	313	P	P	11 22 25.3	+1.7
JCT	Junction City	28.62	301	P	P	11 22 26.2	+2.3
OK031	S. Brethren Rd	28.66	313	P	P	11 22 25.1	+1.0
P38A	Dawn	28.72	322	P	P	11 22 23.0	-1.6
P38A				IAmb	IAmb	11 22 28.8	
	comp=Z,16nm,1.1s						
D55A	Sainte-Anne-du	28.90	354	P	P	11 22 27.1	+1.0
	baz=172						
ABTX	Abilene, Hawle	29.24	305	P	P	11 22 30.2	+0.8
	baz=112						
WMOK	Wichita Mounta	29.47	309	P	P	11 22 32.6	+1.3
	baz=117						
NPGB	Novo Progresso	29.64	147	*e*P	P	11 22 32.2	-0.7
KSU1	Kansas State U	30.25	319	P	P	11 22 40.1	+1.9
	baz=126						
TMAB	Tom-Au,PA,Br	30.66	130	*e*P	P	11 22 42.5	+0.5
TXAR	Lajitas Array	31.54	297	P	P	11 22 50.1	+0.3
	comp=Z,3.2nm,1.1s,baz=106,slow=9.3,SNR=5.3						
TXAR				PcP	PcP	11 25 43.2	+0.6
	comp=Z,1.1nm,0.9s,baz=107,slow=4.3,SNR=4.4						
TXAR	Lajitas Array	31.54	297	P	P	11 22 50.3	+0.5
TX31	Lajitas Ar. Si	31.54	297	P	P	11 22 52.3	+2.5
TX31				IAmb	IAmb	11 23 02.7	
	comp=Z,12nm,0.9s						
AMTX	Amarillo	31.69	308	P	P	11 22 52.0	+0.9
	baz=114						
MATQ	Matagami	31.84	352	P	P	11 22 52.6	+0.5
	baz=169						
CBKS	Cedar Bluff	32.12	316	P	P	11 22 55.5	+0.8
	baz=122,SNR=8.9						
MSTX	Muleshoe	32.17	305	P	P	11 22 55.6	+0.3
	baz=111,SNR=6.2						
MSTX	Muleshoe	32.17	305	P	P	11 22 55.8	+0.5
MSTX				IAmb	IAmb	11 23 01.4	
	comp=Z,20nm,1.1s						
PRPB	Parauapebas	32.20	137	*e*P	P	11 22 55.0	-0.5
VILB	Vilhena	32.87	160	*e*P	P	11 23 02.7	+1.3
ECSD	EROS Data Cent	33.18	325	P	P	11 23 04.5	+0.6
	baz=132,SNR=5.5						
ECSD	EROS Data Cent	33.18	325	P	P	11 23 04.0	+0.2
ECSD				IAmb	IAmb	11 23 07.6	
	comp=Z,17nm,1.1s						
MNTX	Cornudas Mount	33.55	300	P	P	11 23 08.5	+1.1
	baz=105,SNR=21						
MNTX	Cornudas Mount	33.55	300	P	P	11 23 08.0	+0.7
MNTX				IAmb	IAmb	11 23 17.8	
	comp=Z,18nm,1.1s						
EYMN	Ely	33.91	335	P	P	11 23 11.5	+1.3
	baz=144						
T25A	Trinidad	34.62	310	P	P	11 23 18.1	+1.3
	baz=114,SNR=9.0						
T25A	Trinidad	34.62	310	P	P	11 23 20.8	+4.1
T25A				IAmb	IAmb	11 23 23.6	
	comp=Z,16nm,1.1s						
B35A	Bob, Littlefor	35.15	334	P	P	11 23 22.2	+1.3
BNM	Barren Site	35.25	304	P	P	11 23 23.7	+1.4
ANMO	Albuquerque	35.37	305	P	P	11 23 24.6	+1.4
	baz=109						
ANMO	Albuquerque	35.37	305	P	P	11 23 24.9	+1.7
ANMO				IAmb	IAmb	11 23 31.1	
	comp=Z,12nm,1.1s						
SIV	San Ignacio	35.48	163	P	P	11 23 24.1	+0.1
	comp=Z,2.5nm,0.8s,baz=351,slow=8.6,SNR=2.4						
PTLB	Pontes e Lacer	35.56	160	*e*P	P	11 23 25.5	+0.8
SDCO	Great Sand Dun	35.66	310	P	P	11 23 26.6	+0.9
	baz=114,SNR=6.0						
SDCO	Great Sand Dun	35.66	310	P	P	11 23 26.9	+1.2
SDCO				IAmb	IAmb	11 23 33.1	
	comp=Z,20nm,1.4s						
SMTB	Santa Maria do	35.66	137	*e*P	P	11 23 25.2	-0.5
121A	Cookes Peak, D	35.74	301	P	P	11 23 27.3	+0.9
	baz=105						
SNDB	Serra Nova Dou	35.92	145	*e*P	P	11 23 28.0	+0.2
ISCO	Idaho Springs	36.59	313	P	P	11 23 35.2	+1.5
	baz=116,SNR=9.2						
ISCO	Idaho Springs	36.59	313	P	P	11 23 34.3	+0.5
S22A	4UR Ranch, Cre	36.63	309	P	P	11 23 35.4	+1.3
	baz=112						
N23A	Red Feather La	37.30	315	P	P	11 23 40.7	+0.9
	baz=117						
N23A	Red Feather La	37.30	315	P	P	11 23 39.9	+0.1
ULM	Lac du Bonnet	37.50	334	P	P	11 23 40.6	-0.4
	comp=Z,6.2nm,0.9s,baz=132,slow=5.9,SNR=9.2						
ULM				LR	LR	11 38 44.8	
	comp=Z,184nm,19.6s,baz=157,slow=36						
MVCO	Mesa Verde	37.68	308	P	P	11 23 44.7	+1.7
	baz=110						
RSSD	Black Hills	37.68	320	P	P	11 23 44.2	+1.3
	baz=123						
GO01	Chusmiza	37.74	177	P	P	11 23 42.7	-1.1
GO01				IAmb	IAmb	11 23 59.4	
	comp=Z,28nm,1.4s						
TUC	Tucson	38.16	299	P	P	11 23 47.6	+0.7
	baz=102						
PB08	IPOC Station P	38.21	177	P	P	11 23 48.8	+1.1
PB08				IAmb	IAmb	11 23 58.2	
	comp=Z,20nm,1.2s						
PV03	Paradox Valley	38.30	309	P	P	11 23 50.2	+2.1
PV22	Blue Mesa, Par	38.35	310	P	P	11 23 52.1	+3.5
PV16	Nyswonger Mesa	38.37	309	P	P	11 23 53.1	+4.4
PV04	Paradox Valley	38.39	309	P	P	11 23 54.1	+5.2
PV17	East Wray Mesa	38.39	309	P	P	11 23 54.0	+5.1
PV17				IAmb	IAmb	11 23 55.7	
	comp=Z,19nm,1.4s						
PV05	Paradox Valley	38.42	309	P	P	11 23 51.0	+1.8
PV05				IAmb	IAmb	11 23 56.2	
	comp=Z,23nm,1.3s						
K22A	Casper	38.50	317	P	P	11 23 50.6	+0.9
	baz=118,SNR=6.7						
K22A	Casper	38.50	317	P	P	11 23 51.2	+1.5
K22A				IAmb	IAmb	11 23 57.6	
	comp=Z,14nm,1.1s						
RWWY	Rawlins	38.51	315	P	P	11 23 51.3	+1.4
RWWY				IAmb	IAmb	11 24 07.4	
	comp=Z,27nm,1.2s						
O20A	White River Ci	38.57	312	P	P	11 23 51.6	+1.2
	baz=114						
O20A	White River Ci	38.57	312	P	P	11 23 52.7	+2.3
ARAG	Araguaiana, MT	38.80	149	*e*P	P	11 23 52.6	+0.3
PP1B	Ponte de Pedra	39.10	155	*e*P	P	11 23 55.6	+0.8
X16A	Lo Mia Camp, P	39.16	302	P	P	11 23 58.3	+2.8
WUAZ	Wupatki	39.38	304	P	P	11 23 57.9	+0.6
	baz=105						
WUAZ	Wupatki	39.38	304	P	P	11 23 59.4	+2.1
214A	Organ Pipe Nat	39.78	298	P	P	11 24 01.2	+0.7
	baz=100						
214A	Organ Pipe Nat	39.78	298	P	P	11 24 02.1	+1.7
SDBA	SAO DESIDERIO	40.06	138	*e*P	P	11 24 01.1	-1.7
P17A	Butcher Ranch,	40.11	310	P	P	11 24 06.8	+3.6
DGMT	Dagmar	40.26	326	P	P	11 24 05.3	+1.2
	baz=127						
DGMT	Dagmar	40.26	326	P	P	11 24 05.4	+1.2
DGMT				IAmb	IAmb	11 24 09.2	
	comp=Z,44nm,1.3s						

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U15A  North Rim          40.34 305  P       P        11 24 05.5 +0.2
LAO   LASA Array         40.37 322  P       P        11 24 06.0 +0.9
      baz=123,SNR=6.0
LAO   LASA Array         40.37 322  P       P        11 24 06.5 +1.4
LAO                                 IAmb    IAmb     11 24 09.4
      comp=Z,24nm,1.2s
TMUT  Trail Mountain     40.39 310  P       P        11 24 07.8 +2.1
BW06  Boulder Array      40.55 315  P       P        11 24 07.5 +0.6
      baz=115,SNR=7.9
BW06  Boulder Array      40.55 315  P       P        11 24 07.5 +0.6
PD31  Pinedale Array     40.55 315  P       P        11 24 07.5 +0.5
PDAR  Pinedale Array     40.55 315  P       P        11 24 06.8 -0.2
      comp=Z,2.7nm,1.0s,baz=112,slow=12,SNR=15
PDAR                                PcP     PcP      11 26 08.7 -0.5
      comp=Z,0.2nm,0.4s,baz=110,slow=4.1,SNR=3.2
PDAR                                LR      LR       11 42 15.7
      comp=Z,246nm,20.4s,baz=117,slow=38
PDAR  Pinedale Array     40.55 315  P       P        11 24 07.0 +0.1
BDFB  Brasilia           40.73 144  P       P        11 24 08.1 -0.4
      comp=Z,4.9nm,0.7s,baz=16,slow=11,SNR=5.0
KNB   Kanab              40.91 306  P       P        11 24 11.9 +2.0
MPU   Maple Canyon       40.94 311  P       P        11 24 11.3 +1.2
JLU   Jordanelle         41.01 312  P       P        11 24 12.4 +1.6
TCUT  Toone Canyon       41.17 312  P       P        11 24 14.0 +1.9
CTU   Camp Tracy         41.26 312  P       P        11 24 14.5 +1.8
W13A  Hualapai Mount     41.28 303  P       P        11 24 14.7 +1.7
AQDB  Aquidauana         41.40 158  eP      P        11 24 14.9 +1.1
RLMT  Red Lodge          41.41 319  P       P        11 24 14.2 +0.2
      baz=118,SNR=7.0
RLMT  Red Lodge          41.41 319  P       P        11 24 14.2 +0.2
RLMT                                IAmb    IAmb     11 24 18.4
      comp=Z,17nm,1.2s
HWUT  Hardware Ranch     41.46 313  P       P        11 24 14.9 +0.6
HWUT                                IAmb    IAmb     11 24 24.3
      comp=Z,23nm,1.1s
AHID  Auburn Hatcher     41.59 315  P       P        11 24 15.5 +0.1
AHID                                IAmb    IAmb     11 24 32.0
      comp=Z,18nm,1.0s
LOHW  Long Hollow        41.60 316  P       P        11 24 15.9 +0.3
LOHW                                IAmb    IAmb     11 24 20.2
      comp=Z,26nm,1.4s
REDW  Red Top Meadow     41.66 316  P       P        11 24 16.8 +0.7
REDW                                IAmb    IAmb     11 24 29.9
      comp=Z,31nm,1.1s
MOOW  Moose Ponds        41.75 316  P       P        11 24 17.6 +0.8
YMP   Mirror Lake Pl     41.80 318  P       P        11 24 18.5 +1.2
YNE   Yellowstone No     41.83 318  P       P        11 24 17.5 +0.1
DUG   Dugway, Tooele     41.85 310  P       P        11 24 18.3 +0.7
      baz=109,SNR=7.2
DUG   Dugway, Tooele     41.85 310  P       P        11 24 18.9 +1.3
DUG                                 IAmb    IAmb     11 24 24.6
      comp=Z,20nm,1.3s
FLWY  Flagg Ranch        41.86 317  P       P        11 24 16.3 -1.4
FLWY                                IAmb    IAmb     11 24 36.9
      comp=Z,17nm,1.2s
ECR   Eagle Creek        41.88 315  P       P        11 24 19.9 +2.0
H17A  Grant Village      41.92 317  P       P        11 24 17.8 -0.4
      baz=116
IRM   Iron Mountain      42.10 301  P       P        11 24 20.5 +1.0
      baz=101
PSUT  Pine Spring        42.12 308  P       P        11 24 20.5 +0.7
BC3   Big Chuckawall     42.27 300  P       P        11 24 22.1 +1.1
      baz=100
IPMB  Ipameri, GO        42.55 147  eP      P        11 24 23.0 -0.3
SHPR  Sheep Range        42.60 304  P       P        11 24 25.1 +1.3
GMRC  Granite Mounta     42.64 302  P       P        11 24 25.3 +1.3
      baz=101
ITRB  Iturama            42.94 150  eP      P        11 24 27.3 +0.9
EGMT  Eagleton           43.11 322  P       P        11 24 28.6 +1.0
      baz=120,SNR=7.4
EGMT  Eagleton           43.11 322  P       P        11 24 29.5 +1.9
EGMT                                IAmb    IAmb     11 24 32.5
      comp=Z,26nm,1.2s
BOZ   Bozeman (W)        43.11 318  P       P        11 24 28.6 +0.8
      baz=116,SNR=5.9
BOZ   Bozeman (W)        43.11 318  P       P        11 24 29.6 +1.9
HEC   Hector,Ludlow      43.19 302  P       P        11 24 29.8 +1.3
      baz=101
R11A  Troy Canyon, C     43.38 307  P       P        11 24 31.7 +1.7
      baz=105
MCMT  McKenzie Canyo     43.57 317  P       P        11 24 31.6  0.0
DLMT  Dillon             43.63 318  P       P        11 24 33.3 +1.4
GSC   Goldstone, Bar     43.66 302  P       P        11 24 33.1 +0.9
      baz=101
GSC   Goldstone, Bar     43.66 302  P       P        11 24 33.3 +1.1
MURC  Murrieta           43.69 300  P       P        11 24 33.6 +1.1
      baz=99
BCYI  Bear Canyon        43.73 316  P       P        11 24 33.2 +0.3
FCC   Fort Churchill     43.77 343  P       P        11 24 32.8 +0.3
ELK   Elko               43.78 310  P       P        11 24 34.3 +1.0
FURC  Furnace Creek,     43.93 304  P       P        11 24 34.9 +0.6
      baz=102
HLID  Hailey             44.13 314  P       P        11 24 36.8 +0.7
      baz=111,SNR=6.7
HLID  Hailey             44.13 314  P       P        11 24 37.4 +1.3
BFSC  Mount Baldy Ra     44.17 301  P       P        11 24 37.2 +0.8
      baz=99
PCMB  Pacaembu           44.19 153  eP      P        11 24 37.0 +0.6
MPMC  Manual Prospec     44.35 303  P       P        11 24 38.6 +0.8
      baz=101
EDW2  Edwards Air Fo     44.55 301  P       P        11 24 40.9 +1.6
      baz=100
TPH   Tonopah            44.56 306  P       P        11 24 41.3 +1.7
TRCB  Terra Rica         44.68 155  eP      P        11 24 40.6 +0.3
CWC   Cottonwood Cre     44.89 304  P       P        11 24 43.4 +1.2
      baz=101
MFID  Camas Ranch        45.05 314  P       P        11 24 45.1 +1.8
MFID                                IAmb    IAmb     11 24 50.6
      comp=Z,11nm,1.2s
MSO   Missoula           45.09 319  P       P        11 24 44.6 +1.1
      baz=115
MSO   Missoula           45.09 319  P       P        11 24 44.0 +0.5
ARVC  Arvin              45.26 302  P       P        11 24 46.4 +1.4
      baz=99
NVAR  Mina Array Bea     45.47 306  P       P        11 24 47.3 +0.5
      comp=Z,0.5nm,0.6s,baz=106,slow=1.3,SNR=3.1
NVAR                                PcP     PcP      11 26 27.5 +1.7
      comp=Z,0.1nm,0.3s,baz=126,slow=5.8,SNR=1.7
NVAR                                LR      LR       11 46 41.8
      comp=Z,366nm,18.2s,baz=102,slow=40
NVAR  Mina Array Bea     45.47 306  P       P        11 24 47.6 +0.8
VES   Vestal, Richgr     45.58 303  P       P        11 24 48.2 +0.8
      baz=100
RYN   Ryan               45.68 306  P       P        11 24 49.2 +0.8
RYN                                 IAmb    IAmb     11 24 55.8
      comp=Z,17nm,1.4s
JTMT  Jette              45.69 320  P       P        11 24 49.3 +1.0
JTMT                                IAmb    IAmb     11 24 53.1
      comp=Z,16nm,1.4s
PKM   Mcpherson Peak     46.02 301  P       P        11 24 51.7 +0.5
      baz=98
CPUP  Villa Florida      46.34 163  P       P        11 24 52.0 -1.4
      comp=Z,6.9nm,1.0s,baz=336,slow=6.3,SNR=8.0
CPUP  Villa Florida      46.34 163  P       P        11 24 53.0 -0.4
CPUP                                IAmb    IAmb     11 24 55.3
      comp=Z,16nm,1.2s
CPUP  Villa Florida      46.34 163  eP      P        11 24 55.0 +1.6
FRTB  Fartura            46.46 152  eP      P        11 24 54.5  0.0
BMO   Blue Mountains     46.53 315  P       P        11 24 56.9 +2.0
BMO                                 IAmb    IAmb     11 25 20.0
      comp=Z,13nm,1.4s
PTGB  Pitanga            46.63 156  eP      P        11 24 55.0 -0.8
WVOR  Wild Horse Val     46.71 312  P       P        11 24 57.0 +0.5
AC05  El Transito        46.82 179  P       P        11 24 59.0 +1.6
AC05                                IAmb    IAmb     11 25 01.3
      comp=Z,13nm,0.9s
F10A  Beach Ranch, E     46.86 317  P       P        11 24 57.8 +0.3
F10A                                IAmb    IAmb     11 25 21.1
      comp=Z,18nm,1.4s
LCO   Las Campanas       46.99 179  P       P        11 24 58.7 -0.1
NEW   Newport            47.64 320  P       P        11 25 04.4 +1.0
      baz=113,SNR=9.9
NEW   Newport            47.64 320  P       P        11 25 04.1 +0.6
E09A  Wood Farm, Sta     47.65 317  P       P        11 25 04.8 +1.3
E09A                                IAmb    IAmb     11 25 07.8
      comp=Z,14nm,1.5s
MOD   Modoc Plateau      47.77 310  P       P        11 25 05.6 +0.9
MOD                                 IAmb    IAmb     11 25 11.5
      comp=Z,10nm,1.2s
G08A  Pilot Rock         47.78 315  P       P        11 25 07.1 +2.4
G08A                                IAmb    IAmb     11 25 21.1
      comp=Z,8.2nm,1.2s
I07A  Izee               47.78 313  P       P        11 25 06.7 +1.9
CO01  Juntas del Tor     47.97 179  P       P        11 25 08.7 +2.4
CO01                                IAmb    IAmb     11 25 23.3
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      comp=Z,7.0nm,0.9s
ORV   Oroville           48.14 307  P       P        11 25 09.7 +2.2
ORV                                 IAmb    IAmb     11 25 15.2
      comp=Z,8.4nm,1.3s
HAWA  Hanford            48.51 316  P       P        11 25 12.1 +1.9
HAWA                                IAmb    IAmb     11 25 23.0
      comp=Z,12nm,1.4s
O03E  Paynes Creek       48.51 308  P       P        11 25 11.1 +0.7
      baz=102
E07A  Sunnyside          48.77 317  P       P        11 25 14.5 +2.3
E07A                                IAmb    IAmb     11 25 17.6
      comp=Z,13nm,1.5s
J05D  Fort Rock, OR      48.78 312  P       P        11 25 12.9 +0.5
      baz=105
K04D  Chiloquin, OR      48.99 311  P       P        11 25 15.0 +0.9
      baz=104
B08A  Colville Reser     49.05 319  P       P        11 25 16.1 +1.7
B08A                                IAmb    IAmb     11 25 28.1
      comp=Z,10nm,1.1s
L04D  Klamath Falls      49.29 310  P       P        11 25 18.0 +1.5
      baz=103
N02D  Trinity Center     49.32 309  P       P        11 25 16.9 +0.3
      baz=102
J04D  Umpqua Nationa     49.39 312  P       P        11 25 19.1 +1.9
      baz=104
YBH   Yreka Blue Hor     49.48 310  P       P        11 25 19.9 +2.1
LTY   Liberty            49.53 317  P       P        11 25 20.7 +2.6
LTY                                 IAmb    IAmb     11 25 25.3
      comp=Z,10nm,1.2s
ZON   Zonda              49.58 177  P       P        11 25 19.1 +0.6
ZON                                 IAmb    IAmb     11 25 23.1
      comp=Z,15nm,1.0s
ITQB  Itaqui             49.69 163  eP      P        11 25 19.5 +0.2
H04A  Detroit Lake       49.80 314  P       P        11 25 21.1 +1.0
H04A                                IAmb    IAmb     11 25 27.6
      comp=Z,10nm,0.8s
HUMO  Hull Mountain      49.85 311  P       P        11 25 22.0 +1.5
HUMO                                IAmb    IAmb     11 25 50.9
      comp=Z,14nm,1.4s
LON   Longmire           50.12 316  P       P        11 25 23.8 +1.2
LON                                 IAmb    IAmb     11 25 48.4
      comp=Z,14nm,1.5s
I03D  Drain, OR          50.37 312  P       P        11 25 25.1 +0.7
      baz=103
K02D  Willamette Mer     50.38 311  P       P        11 25 25.1 +0.5
      baz=102
E04D  Cinebar            50.56 316  P       P        11 25 26.5 +0.7
      baz=106
YKA   Yellowknife Ar     53.37 337  P       P        11 25 44.9 -1.6
      comp=Z,5.8nm,0.9s,baz=117,slow=7.3,SNR=42
YKA                                 LR      LR       11 50 08.9
      comp=Z,260nm,18.2s,baz=0.0,slow=38
ICESG Greenland Ices     54.47  13  i P     P        11 25 54.0 -0.8
ICESG                               IAmb    IAmb     11 25 56.6
      comp=Z,19nm,0.8s
LC01  Cunco              56.85 181  P       P        11 26 11.3 -0.6
LC01                                IAmb    IAmb     11 26 12.9
      comp=Z,11nm,0.9s
SUMG  Summit             57.48  11  P       P        11 26 16.5  0.0
SUMG  Summit             57.48  11  i P     P        11 26 16.0 -0.5
      comp=Z,52nm,0.8s
SUMG  Summit             57.48  11  i P     P        11 26 16.0 -0.5
SUMG                                IAmb    IAmb     11 26 18.6
      comp=Z,52nm,0.8s
RES   Resolute Bay       57.89 353  P       P        11 26 18.2 -0.6
PLCA  Paso Flores        58.69 179  P       P        11 26 23.8 -1.1
      comp=Z,6.8nm,0.8s,baz=352,slow=7.2,SNR=16
PLCA                                PcP     PcP      11 27 17.2 +2.4
      comp=Z,1.7nm,0.8s,baz=27,slow=6.1,SNR=1.4
PLCA  Paso Flores        58.69 179  P       P        11 26 25.1 +0.2
PLCA                                IAmb    IAmb     11 26 25.5
      comp=Z,8.5nm,0.9s
PAB   San Pablo          60.95  54  P       P        11 26 41.9 +1.3
PAB                                 IAmb    IAmb     11 26 45.1
      comp=Z,13nm,1.1s
MDT   Midelt             60.98  62  P       P        11 26 41.5 +0.5
      comp=Z,4.8nm,0.9s,baz=285,slow=4.7,SNR=4.3
ESDC  Sonseca Array      61.24  54  P       P        11 26 42.5 -0.1
      comp=Z,4.4nm,0.7s,baz=275,slow=6.8,SNR=19
ESDC  Sonseca Array      61.24  54  P       P        11 26 43.1 +0.5
ESBB  Sonseca Array      61.24  54  P       P        11 26 43.9 +1.2
EKA   Eskdalemuir Ar     62.74  37  P       P        11 26 51.1 -1.1
      comp=Z,8.4nm,0.8s,baz=267,slow=5.5,SNR=7.2
INK   Inuvik             63.03 338  P       P        11 26 53.0 -1.1
      comp=Z,2.9nm,0.9s,baz=83,slow=6.2,SNR=5.1
INK   Inuvik             63.03 338  P       P        11 26 54.0  0.0
INK                                 IAmb    IAmb     11 27 06.8
      comp=Z,10nm,1.3s
EPYK  Eagle Plains       63.64 336  P       P        11 26 58.6 +0.5
      baz=105
EPYK  Eagle Plains       63.64 336  P       P        11 26 58.2 +0.1
DAG   Danmarks Havn      64.16  12  i P     P        11 26 59.0 -2.3
DAG   Danmarks Havn      64.16  12  i P     P        11 26 59.0 -2.3
DAWY  Dawson             64.20 333  P       P        11 27 02.5 +0.6
BCAR  Beaver Creek A     65.07 332  P       P        11 27 08.3 +0.7
K27K  Chicken            65.35 333  P       P        11 27 09.8 +0.5
      baz=99
DBIC  Dimbokro           65.56  91  LR      LR       11 51 50.9
      comp=Z,146nm,20.9s,baz=276,slow=32
CLF   Chambon-Foret      65.68  45  P       P        11 27 12.9 +1.2
L26K  Log Cabin Wild     65.77 332  P       P        11 27 12.7 +0.6
      baz=98
SCRK  Sand Creek         66.18 333  P       P        11 27 15.6 +0.7
      baz=97
M24K  Tolsona, Glenn     66.98 330  P       P        11 27 21.1 +1.2
      baz=95
FYU   Fort Yukon         67.03 335  P       P        11 27 19.2 -0.8
DOU   Dourbes            67.18  43  dP      P        11 27 21.6 +0.3
DOU                                 dpP     pP       11 27 25.0 +0.3
DOU                                 dPcP    PcP      11 27 50.9 +1.6
BMRD  Maredsous          67.29  42  κP      P        11 27 22.9 +0.9
IL31                     67.52 333  P       P        11 27 23.6 +0.5
ILAR  Eielson Array      67.52 333  P       P        11 27 22.2 -0.9
      comp=Z,2.6nm,0.9s,baz=98,slow=4.7,SNR=14
ILAR                                LR      LR       11 56 20.2
      comp=Z,134nm,21.8s,baz=95,slow=36
ILAR  Eielson Array      67.52 333  P       P        11 27 22.8 -0.4
POKR  Poker Plat Res     67.78 334  P       P        11 27 25.0 +0.2
      baz=95
POKR  Poker Plat Res     67.78 334  P       P        11 27 24.7 -0.1
MEM   Membach            68.07  42  dP      P        11 27 28.0 +1.1
WLF   Walferdange        68.21  43  dP      P        11 27 26.9 -0.9
MCK   McKinley           68.34 332  P       P        11 27 29.2 +0.8
      baz=93
I23K  Minto, Yukon-K     68.59 334  P       P        11 27 30.4 +0.5
      baz=93
I23K  Minto, Yukon-K     68.59 334  P       P        11 27 30.1 +0.2
RC01  Rabbit Creek A     68.63 329  P       P        11 27 30.8 +0.6
      baz=91
TOLK  Toolik Lake Re     68.89 337  P       P        11 27 31.8  0.0
      baz=94
TOLK  Toolik Lake Re     68.89 337  P       P        11 27 31.9 +0.2
TOLK                                IAmb    IAmb     11 27 42.1
      comp=Z,12nm,1.3s
COLD  Coldfoot           69.04 336  P       P        11 27 33.6 +0.9
      baz=93,SNR=9.8
COLD  Coldfoot           69.04 336  P       P        11 27 33.4 +0.7
SENIN Lac Senin/Sane     69.20  47  P       P        11 27 35.0 +0.7
KTH   Kantishna Hill     69.22 332  P       P        11 27 34.2 +0.3
TORD  Torodi Ar. Bea     70.02  82  P       P        11 27 38.4 -1.2
      comp=Z,3.3nm,0.9s,baz=254,slow=5.4,SNR=4.9
TORD                                LR      LR       11 55 19.0
      comp=Z,238nm,21.5s,baz=260,slow=33
IMAR  Indian Mountai     70.43 334  P       P        11 27 41.0 -0.3
NB2   NORSAR Subarra     70.58  31  P       P        11 27 43.3 +1.0
      comp=Z,6.1nm,0.8s,baz=274,slow=6.5
NOA   NORSAR Array B     70.58  31  P       P        11 27 43.0 +0.7
      comp=Z,2.9nm,0.7s,baz=274,slow=6.3,SNR=6.3
DAVA  Damuels            70.87  45  eP      P        11 27 45.5 +1.0
      comp=Z,20nm,1.6s
DAVOX Davos/Dischmat     70.92  46  P       P        11 27 46.4 +1.6
      comp=Z,4.7nm,0.8s,baz=256,slow=10,SNR=4.1
RETA  Reutte             71.44  45  eP      P        11 27 48.4 +0.5
      comp=Z,16nm,1.3s
FETA  Feichten           71.47  46  eP      P        11 27 49.2 +1.0
      comp=Z,23nm,1.3s
GRF   Grafenberg Arr     71.49  43  eP      P        11 27 48.9 +0.9
      comp=Z,26nm,1.5s,baz=277,slow=6.6
MOTA  Moosalm            71.69  45  eP      P        11 27 50.0 +0.6
      comp=Z,11nm,1.1s
SQTA  Sankt Quirin       71.78  45  eP      P        11 27 49.1 -0.9
      comp=Z,23nm,1.7s
HFS   Hagfors            71.86  32  P       P        11 27 49.5 -0.5
      comp=Z,2.0nm,0.6s,baz=201,slow=2.5,SNR=1.5
KEST  Kesra              72.11  58  P       P        11 27 51.9 -0.2
      comp=Z,14nm,0.9s,baz=245,slow=3.8,SNR=7.0
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KEST  Kesra              72.11  58  P       P        11 27 51.9 -0.2
CLL   Collm              72.42  41  eP      P        11 27 54.0 +0.5
ABTA  Abfaltersbach      72.72  46  P       P        11 27 55.8 +0.2
      comp=Z,14nm,1.2s
BRG   Berggiesshubel     73.07  41  eP      P        11 27 58.4 +1.0
BRG                                 Amp              11 28 01.0
      comp=Z,9.8nm,1.1s
BRG   Berggiesshubel     73.07  41  eP      P        11 27 58.4 +1.0
BRG                                 Amp              11 28 01.0
      comp=Z,9.8nm,1.1s
KHC   Kasperske Hory     73.08  43  eP      P        11 27 56.2 -1.4
KHC   Kasperske Hory     73.08  43  P       P        11 27 58.7 +1.1
GEC2  GERESS Array S     73.21  43  P       P        11 27 58.9 +0.4
GEC2                                IAmb    IAmb     11 28 02.6
      comp=Z,19nm,1.3s
GERES GERESS Array B     73.21  43  P       P        11 27 57.8 -0.6
      comp=Z,4.4nm,0.8s,baz=266,slow=3.6,SNR=13
GERES GERESS Array B     73.21  43  P       P        11 27 58.1 -0.3
KBA   Koelnbreinsper     73.24  45  eP      P        11 27 58.3 -0.4
      comp=Z,15nm,1.3s
MOA   Molln              73.73  44  P       P        11 28 01.9 +0.4
      comp=Z,14nm,1.2s
RDOG  Red Dog Mine       73.85 337  P       P        11 28 01.1 -0.6
RDOG                                IAmb    IAmb     11 28 08.3
      comp=Z,15nm,1.1s
OBKA  Obir               74.15  46  eP      P        11 28 04.5 +0.5
      comp=Z,19nm,1.3s
SOKA  Soboth             74.45  45  eP      P        11 28 05.7  0.0
      comp=Z,9.2nm,1.3s
DPC   Dobruska-Polom     74.65  42  eP      P        11 28 07.6 +0.9
ARSA  Arzberg            74.68  45  eP      P        11 28 07.4 +0.5
      comp=Z,12nm,1.5s
CONA  Conrad Observa     74.78  44  eP      P        11 28 08.3 +0.6
      comp=Z,7.0nm,1.2s
KRUC  Moravsky           74.92  43  eP      P        11 28 08.8 +0.5
KRLC  Kraliky            74.99  42  eP      P        11 28 09.7 +1.0
VRAC  Vranov             75.01  43  P       P        11 28 08.8  0.0
      comp=Z,2.7nm,0.5s,baz=229,slow=11,SNR=4.2
VRAC  Vranov             75.01  43  eP      P        11 28 09.5 +0.7
ARCES ARCESS Array B     75.40  21  P       P        11 28 10.8 +0.1
      comp=Z,2.2nm,0.6s,baz=289,slow=3.7,SNR=4.8
MORC  Moravsky Berou     75.53  42  ⇑P      P        11 28 13.1 +1.3
MORC  Moravsky Berou     75.53  42  eP      P        11 28 12.6 +0.8
MODS  Modra-Piesok       75.63  43  eP      P        11 28 12.5 +0.1
VYHS  Vyhne              76.62  43  eP      P        11 28 19.5 +1.5
OJC   Ojcow              76.86  41  P       P        11 28 19.6 +0.3
LANS  Liptovska Anna     76.88  42  eP      P        11 28 21.5 +1.9
PSZ   Piszkesteto        77.44  44  P       P        11 28 23.4 +0.7
FINES FINESS Array B     77.60  29  P       P        11 28 24.0 +0.8
      comp=Z,4.0nm,0.6s,baz=259,slow=4.3,SNR=6.3
FINES FINESS Array B     77.60  29  P       P        11 28 23.7 +0.4
CRVS  Cervenica-Dubn     78.22  42  eP      P        11 28 28.9 +1.9
PDG   Podgorica          78.29  49  ⇑P      P        11 28 28.3 +0.8
PDG   Podgorica          78.29  49  P       P        11 28 27.8 +0.4
DIVS  Divibare           78.41  47  P       P        11 28 28.4 +0.1
DIVS                                IAmb    IAmb     11 28 41.6
      comp=Z,8.8nm,0.9s
KOLS  Kolonicke sedl     78.73  42  eP      P        11 28 33.6 +3.8
BZS   Buzias             79.14  46  ⇓P      P        11 28 33.5 +1.4
MDVR  Moldovita          79.43  46  ⇓P      P        11 28 34.0 +0.3
DRGR                     79.57  44  ⇑P      P        11 28 34.9 +0.4
GZR   Gura Zlata         79.99  46  ⇓P      P        11 28 38.5 +1.7
BUR08 Bucovina Ar. S     80.96  43  P       P        11 28 40.7 -1.3
BUR08                               IAmb    IAmb     11 28 47.5
      comp=Z,14nm,1.1s
BURAR Bucovina Array     80.98  43  ⇑P      P        11 28 44.6 +2.5
BURAR Bucovina Array     80.98  43  P       P        11 28 43.4 +1.3
VTS   Vitosha            81.08  48  ⇑P      P        11 28 42.7 -0.1
ARR   Arges              81.25  45  ⇑P      P        11 28 44.3 +0.7
VOIR                     81.51  45  ⇓P      P        11 28 46.3 +1.3
DOPR  Dopca              81.58  44  ⇑P      P        11 28 47.1 +1.8
BIZ   Bicaz              81.76  43  ⇑P      P        11 28 47.6 +1.4
MLR   Muntele Rosu       82.10  45  P       P        11 28 49.6 +1.4
      comp=Z,32nm,1.0s,baz=307,slow=1.9,SNR=16
MLR   Muntele Rosu       82.10  45  ⇑P      P        11 28 49.4 +1.3
MLR   Muntele Rosu       82.10  45  P       P        11 28 48.4 +0.2
VRI   Vrincioaia         82.50  44  ⇓P      P        11 28 51.8 +1.7
AKASG Malin Array Be     82.51  39  P       P        11 28 51.6 +1.6
      comp=Z,0.7nm,0.4s,baz=285,slow=4.1,SNR=5.5
AKASG Malin Array Be     82.51  39  P       P        11 28 50.1 +0.1
SORM  Soroca             82.82  42  ⇑P      P        11 28 51.8 +0.1
CFR   Carcaliu           83.66  45  ⇑P      P        11 28 56.5 +0.5
KLMR  Klimovskoe         83.89  27  eP      P        11 28 56.0 -0.9
KLMR                                AMP              11 29 04.8
      comp=Z,34nm,1.4s
BR131 Keskin Array S     89.44  48  P       P        11 29 23.9 -0.8
BRTR  Keskin Array B     89.44  48  P       P        11 29 24.6 -0.1
      comp=Z,5.0nm,0.8s,baz=280,slow=4.0,SNR=12
BRTR  Keskin Array B     89.44  48  P       P        11 29 23.9 -0.8
KBZ   Khabaz             93.87  42  P       P        11 29 43.6 -1.3
      comp=Z,3.5nm,0.9s,baz=328,slow=2.2,SNR=4.6
CMAR  Chiang Mai Arr    142.27  15  PKhKP   PKPpre   11 35 56.7
      comp=Z,0.3nm,0.3s,baz=334,slow=4.9,SNR=5.1
STKA  Stephens Creek    147.44 239  PKPbc   PKPab    11 36 13.2 -0.5
      comp=Z,4.5nm,0.7s,baz=84,slow=3.7,SNR=8.9
STKA  Stephens Creek    147.44 239          PKiKP    11 36 14.6 +0.6
WRA   Warramunga Arr    155.76 262  PKP     PKPdf    11 36 21.6 -0.6
      comp=Z,0.3nm,0.6s,baz=11,slow=0.5,SNR=2.7
WRA                                 PKPbc   sPKPbc   11 36 36.8 +0.5
      comp=Z,1.9nm,0.9s,baz=87,slow=2.8,SNR=5.9
ASAR  Alice Springs     155.91 253  PKP     PKPdf    11 36 20.4 -1.9
      comp=Z,0.2nm,0.6s,baz=100,slow=2.2,SNR=3.0
ASAR                                PKPbc   pPKPbc   11 36 35.8 +0.4
      comp=Z,1.2nm,0.8s,baz=102,slow=2.4,SNR=8.4
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*BJI **13** 11:19:07.6±0.0, 36°.50N×22°.51E, h68^{km}, mB5.2/28, mb5.1/46, Ms5.2/5, Ms7 5.1/1*

*ATH **13** 11:19:08.3, 36°.44N×22°.79E, h72^{km}±2^{km}, ML4.7/11, Error ellipse: s-maj=2.2km s-min=1.2km az=162.0*

*IDC **13** 11:19:09.5±1.1, 36°.49N×22°.78E, h56^{km}±10^{km}, mb4.2/26, mb1 4.3/34, mb1mx4.2/58, mbtmp4.5/34, MS3.6/11, Ms1 3.6/11, ms1mx3.3/48, Error ellipse: s-maj=12.4km s-min=8.3km az=35.0*

*NEIC **13** 11:19:09.4±2.3, 36°.39N±0°.09×22°.64E±0°.07, h66^{km}±7^{km}, Error ellipse: s-maj=13.1km s-min=7.9km az=194.0*

*PDG **13** 11:19:10.6±0.1, 36°.93N×22°.66E, h9^{km}±3^{km}, MD4.7/1, ML4.7/13, Error ellipse: s-maj=4.3km s-min=0.9km az=90.0*

*MED_RC **13** 11:19:10.0±0.9, 36°.32N×22°.72E, h52^{km}±3^{km}, MW4.7/11, Moment Tensor Solution.Mantle waves: s11,c15; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.26±.11; $M_{\theta\theta}$0.55±.10; $M_{\phi\phi}$-0.29±.10; $M_{r\theta}$0.31±.05; $M_{\theta\phi}$-1.17±.06; $M_{\phi r}$-0.30±.04; Best double couple: $M_0$1.30000×10^{16} NP1:ϕ_s79.00000°, δ77.00000°, λ174.00000°. NP2:ϕ_s171.00000°, δ84.00000°, λ14.00000°. Principal axes: T 1.4800, Plg14.0000°, Azm35.0000°; N -0.3600, Plg75.0000°, Azm194.0000°; P -1.1200, Plg5.0000°, Azm304.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ISK **13** 11:19:11.4, 36°.55N×22°.93E, h31^{km}, ML4.5/25*

*THE **13** 11:19:11.5, 36°.39N×22°.72E, h52^{km}±1^{km}, ML4.7/7, Error ellipse: s-maj=1.7km s-min=0.7km az=76.0*

*BEO **13** 11:19:12.9±0.7, 36°.80N×22°.29E, h0^{km}, ML4.6/12*

*HLW **13** 11:19:14.9, 36°.09N×23°.50E, h30^{km}±45^{km}, Md5.0, Ml5.0*

*DDA **13** 11:19:14.8, 37°.12N×23°.21E, h7^{km}±3^{km}, MW4.6*

*TIR **13** 11:19:20.4, 37°.48N×21°.84E, h3^{km}±31^{km}, Md3.7*

ISC 13 11:19:08.9±0.5, **36°.45N**±0°.04×**22°.66E**±0°.03, **h56**^{km}±3^{km}, **h55**^{km}**:pP-P, n519,** σ**2^{s}60**/612, **mb4.7**/53, **33C-30D, Southern Greece**

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Code  Station Name       Δ°    AZ°  Phase ID         Time       Res
                                    Op      ISC      h  m  s    ISC
KTHR  Kythira             0.33 124  P       Pn       11 19 19.7 +0.9
KTHR                                S       Sn       11 19 27.3 +1.3
      96µm,0.4s
VLI   Veliai              0.35  39  P       Pn       11 19 20.9 +1.9
VLI                                 S       Sn       11 19 29.4 +3.2
VLI                                 AML     AML      11 19 33.6
VLI                                 AML     AML      11 19 36.6
VLI   Veliai              0.35  39  P       Pn       11 19 20.9 +1.9
VLI                                 S       Sn       11 19 29.5 +3.3
      56µm,0.7s
KTHA  Kythira Island      0.38 121  P       Pn       11 19 20.2 +1.0
KTHA                                AML     AML      11 19 28.2
KTHA                                AML     AML      11 19 28.7
KTHA  Kythira Island      0.38 121  P       Pn       11 19 20.2 +1.0
KTHA                                S       Sn       11 19 27.1 +0.4
      105µm,0.7s
KTHA  Kythira Island      0.38 121  PG      Pn       11 19 19.7 +0.5
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KTHA				SG	Sn	11 19 26.3	-0.4
MNVA	Monemvasia	0.38	52	P	Pn	11 19 20.8	+1.5
MNVA				S	Sn	11 19 29.8	+3.1
MNVA				AML	AML	11 19 30.0	
	comp=N,85086µm,0.8s						
MNVA				AML	AML	11 19 30.6	
	comp=E,74284µm,0.8s						
ANKY	Antikythira Is	0.78	138	P	Pn	11 19 25.5	+1.7
ANKY				S	Sn	11 19 37.0	+2.2
ANKY				AML	AML	11 19 40.0	
ANKY				AML	AML	11 19 40.7	
ANKY	Antikythira Is	0.78	138	P	Pn	11 19 25.5	+1.7
ANKY				S	Sn	11 19 36.5	+1.7
	comp=E,86µm,0.6s						
PYL	PYLOS	0.86	301	P	Pn	11 19 27.7	+2.7
PYL				S	Sn	11 19 43.2	+6.4
PYL				AML	AML	11 19 44.0	
	comp=E,57364µm,0.5s						
PYL				AML	AML	11 19 47.0	
	comp=N,45920µm,0.6s						
PYL	PYLOS	0.86	301	P	Pn	11 19 27.7	+2.7
PYL				S	Sn	11 19 40.5	+3.7
	comp=N,29µm,0.6s						
ITM	Ithomi	0.94	321	P	Pn	11 19 29.4	+3.4
ITM				S	Sn	11 19 43.8	+5.2
ITM				AML	AML	11 19 47.6	
	comp=N,33460µm,0.4s						
ITM				AML	AML	11 19 50.4	
	comp=E,48637µm,0.5s						
ITM	Ithomi	0.94	321	P	Pn	11 19 29.3	+3.4
ITM	Ithomi	0.94	321	PG	Pn	11 19 29.4	+3.4
ITM				SG	Sn	11 19 43.8	+5.2
ITM	Ithomi	0.94	321	Pn	Pn	11 19 29.3	+3.4
VLX	Vlachokerasia	0.95	346	P	Pn	11 19 29.9	+3.7
VLX				AML	AML	11 19 51.0	
VLX				AML	AML	11 19 53.2	
	comp=N,91262µm,0.6s						
VLX	Vlachokerasia	0.95	346	P	Pn	11 19 30.4	+4.2
KRND	KRANIDI	1.01	23	P	Pn	11 19 28.8	+1.9
KRND				S	Sn	11 19 43.8	+3.6
KRND				AML	AML	11 19 46.9	
	comp=E,77713µm,0.4s						
KRND				AML	AML	11 19 47.5	
	comp=N,75391µm,1.2s						
KRND	KRANIDI	1.01	23	P	Pn	11 19 30.0	+3.1
TRIP	Tripoli	1.12	344	P	Pn	11 19 32.0	+3.5
TRIP	Tripoli	1.12	344	P	Pn	11 19 32.0	+3.5
EPID	Epidavros	1.22	17	P	Pn	11 19 32.4	+2.7
EPID	Epidavros	1.22	17	P	Pn	11 19 33.5	+3.8
AMT	Artemida-Makis	1.32	325	P	Pn	11 19 34.7	+3.6
AMT	Artemida-Makis	1.32	325	P	Pn	11 19 34.7	+3.6
MHLO	Agia Marina, M	1.42	80	P	Pn	11 19 33.6	+1.2
MHLO	Agia Marina, M	1.42	80	P	Pn	11 19 33.8	+1.4
MHLA	Plaka, Milos I	1.45	78	P	Pn	11 19 34.3	+1.6
IMMV	Iera Moni Meta	1.46	132	P	Pn	11 19 34.5	+1.7
IMMV				AML	AML	11 20 04.7	
	comp=N,50052µm,0.5s						
IMMV				AML	AML	11 20 05.0	
	comp=E,46791µm,0.5s						
IMMV	Iera Moni Meta	1.46	132	P	Pn	11 19 34.8	+1.9
IMMV				S	Sn	11 19 51.6	+0.7
	comp=E,24µm,0.5s						
IMMV	Iera Moni Meta	1.46	132	PN	Pn	11 19 34.9	+2.0
IMMV				SN	Sn	11 19 52.8	+1.9
LOUT	Loutraki	1.56	9	P	Pn	11 19 37.4	+3.2
THAL	Thalero	1.58	0	P	Pn	11 19 38.2	+3.5
THAL	Thalero	1.58	0	P	Pn	11 19 37.9	+3.3
VAM	Vamos	1.62	129	P	Pn	11 19 36.9	+1.8
VAM	Vamos	1.62	129	P	Pn	11 19 36.6	+1.4
VAM				S	Sn	11 19 57.1	+2.1
	comp=E,23µm,0.5s						
KLV	Kalavryta, Ach	1.64	346	P	Pn	11 19 39.8	+4.3
KLV				AML	AML	11 20 08.5	
	comp=E,15406µm,0.8s						
KLV				AML	AML	11 20 15.9	
	comp=N,12689µm,0.7s						
KLV	Kalavryta, Ach	1.64	346	P	Pn	11 19 39.5	+4.0
VLY	Voula,Athens	1.67	33	P	Pn	11 19 37.5	+1.8
DRO	Drossia	1.68	333	P	Pn	11 19 40.4	+4.4
DRO				AML	AML	11 20 24.1	
	comp=E,10588µm,0.7s						
DRO				AML	AML	11 20 28.2	
	comp=N,25726µm,0.9s						
DRO	Drossia	1.68	333	P	Pn	11 19 40.4	+4.4
ATH	Athens Observa	1.74	29	P	Pn	11 19 39.5	+2.8
ATH	Athens Observa	1.74	29	P	Pn	11 19 38.9	+2.2
ATHU	Athens Univers	1.76	30	P	Pn	11 19 39.4	+2.4
PRNS	Prines Rethymn	1.84	125	P	Pn	11 19 40.8	+2.7
ALIK	Aliki, Aigiali	1.86	347	P	Pn	11 19 43.2	+4.9
PTL	Penteli	1.86	31	P	Pn	11 19 41.0	+2.6
PTL	Penteli	1.86	31	P	Pn	11 19 40.6	+2.2
RLS	Riolos of Patr	1.87	330	P	Pn	11 19 43.2	+4.8
RLS	Riolos of Patr	1.87	330	P	Pn	11 19 42.5	+4.1
VTN	Vitineika	1.88	322	P	Pn	11 19 43.4	+4.8
VTN	Vitineika	1.88	322	P	Pn	11 19 43.0	+4.4
DION	Dionisos Attik	1.92	32	P	Pn	11 19 41.8	+2.7
DION	Dionisos Attik	1.92	32	P	Pn	11 19 41.5	+2.4
TRIZ	Trizonia	1.97	346	P	Pn	11 19 44.3	+4.5
TRIZ	Trizonia	1.97	346	P	Pn	11 19 43.5	+3.7
GVDS	Gavdos	1.98	144	P	Pn	11 19 42.0	+2.0
GVDS	Gavdos	1.98	144	PN	Pn	11 19 42.3	+2.3
GVD	Gavdhos	1.98	144	P	Pn	11 19 40.0	0.0
GVD	Gavdhos	1.98	144	PN	Pn	11 19 43.1	+3.1
KALE	Kalithea	1.98	348	P	Pn	11 19 44.6	+4.5
KALE	Kalithea	1.98	348	P	Pn	11 19 43.9	+3.8
SERG	Sergoula	2.02	346	P	Pn	11 19 45.0	+4.5
SERG	Sergoula	2.02	346	P	Pn	11 19 43.8	+3.2
EFP	Efpalio	2.06	343	P	Pn	11 19 46.4	+5.3
EFP	Efpalio	2.06	343	P	Pn	11 19 45.9	+4.8
KARY	Karystos	2.12	41	P	Pn	11 19 44.0	+2.1
VLMS	Volimes, Zakyn	2.14	312	P	Pn	11 19 44.5	+2.3
IDI	Anoyia	2.15	122	P	Pn	11 19 42.0	-0.4
	comp=N,21nm,0.3s,baz=269,slow=9.2,SNR=40						
IDI				S	Sn	11 20 07.9	0.0
	comp=N,206nm,0.3s,baz=282,slow=21,SNR=8.3						
IDI				LR	LR	11 20 47.2	
	comp=N,916nm,18.1s,baz=42,slow=47						
IDI	Anoyia	2.15	122	P	Pn	11 19 42.6	+0.2
IDI	Anoyia	2.15	122	⇑P	Pn	11 19 42.7	+0.4
IDI				⇓S	Sn	11 20 06.8	-1.0
IDI	Anoyia	2.15	122	PN	Pn	11 19 43.8	+1.4
IDI	Anoyia	2.15	122	Pn	Pn	11 19 43.6	+1.2
SAP3	Santorini-Thir	2.16	90	P	Pn	11 19 44.0	+1.5
THR5	Thira Island,	2.17	90	P	Pn	11 19 43.9	+1.4
TMBK	Timbaki Herakl	2.19	128	P	Pn	11 19 44.3	+1.4
THR3	Thira Island,	2.21	90	P	Pn	11 19 44.9	+1.8
EREA	Eretria	2.21	27	P	Pn	11 19 45.7	+2.5
LKR	Lokris	2.21	7	P	Pn	11 19 45.3	+2.1
ANX	Ano Chora	2.22	345	P	Pn	11 19 46.9	+3.5
SANT	Santorini	2.26	91	⇑P	Pn	11 19 45.0	+1.2
SANT				⇑S	Sn	11 20 11.9	+1.4
SANT	Santorini	2.26	91	PN	Pn	11 19 44.7	+0.9
SANT	Santorini	2.26	91	Pn	Pn	11 19 45.6	+1.8
SIVA	Sivas	2.26	129	P	Pn	11 19 45.2	+1.4
ATAL	Atalanti	2.26	7	P	Pn	11 19 46.4	+2.6
IACM	Heraklion	2.26	120	P	Pn	11 19 44.4	+0.5
HRKL	Herakleio	2.28	119	P	Pn	11 19 46.6	+2.5
HRKL	Herakleio	2.28	119	PN	Pn	11 19 45.7	+1.6
AXAR	Agios Charalam	2.31	360	P	Pn	11 19 48.5	+3.9
PSDA	Pessada-Kefalo	2.35	316	P	Pn	11 19 47.7	+2.7
APE	Apeiranthos	2.38	74	P	Pn	11 19 46.9	+1.3
APE	Apeiranthos	2.38	74	⇑P	Pn	11 19 46.9	+1.4
APE				⇓S	Sn	11 20 17.8	+4.2
APE	Apeiranthos	2.38	74	PN	Pn	11 19 46.2	+0.6
VLS	Valsamata	2.39	317	P	Pn	11 19 48.3	+2.7
PDO	Prodromos	2.45	332	P	Pn	11 19 52.3	+5.9
PDO	Prodromos	2.45	332	P	Pn	11 19 50.4	+4.0
KYMI	Kymi, Euboea I	2.46	27	P	Pn	11 19 48.9	+2.3
SMIA	Simia	2.46	10	P	Pn	11 19 49.7	+3.1
KEF5	Kardakata, Kep	2.53	317	P	Pn	11 19 50.2	+2.7
KEF4	Livadi, Kephal	2.54	316	P	Pn	11 19 50.4	+2.8
KEF3	Kipouria, Keph	2.54	314	P	Pn	11 19 50.1	+2.4
DMLN	Damoulianata-K	2.55	315	P	Pn	11 19 50.2	+2.4
EVR	Evrytania	2.56	345	P	Pn	11 19 53.2	+5.3
VSK1	VASILIKIADES	2.57	320	P	Pn	11 19 51.2	+3.1
AGG	Agios Georgios	2.58	354	P	Pn	11 19 52.0	+3.8
AGG	Agios Georgios	2.58	354	PN	Pn	11 19 51.3	+3.0
AGG	Agios Georgios	2.58	354	i P	Pn	11 19 52.5	+4.3
AGG				i S	Sn	11 20 19.8	+1.3
AGG				IAML		11 20 28.0	
	comp=E,1µm,0.7s						
AGG				IAML		11 20 33.0	
	comp=N,1µm,0.6s						
AGG	Agios Georgios	2.58	354	Pn	Pn	11 19 52.1	+3.8
MAKR	Makrakomi, Fth	2.59	351	P	Pn	11 19 52.6	+4.2
FSK	Fiskardo	2.61	321	P	Pn	11 19 51.5	+2.9
NPS	Neapolis	2.67	115	P	Pn	11 19 50.5	+1.0
EVGI	Lefkada island	2.69	324	P	Pn	11 19 52.8	+3.1
NYDR	Nydri-Lefkada	2.75	326	P	Pn	11 19 53.7	+3.3
LKD2	Lefkada island	2.83	326	P	Pn	11 19 55.0	+3.4
TSLK	Tsoukalades, L	2.86	327	P	Pn	11 19 55.5	+3.5
THL	Klokotos Trika	3.15	351	P	Pn	11 19 59.7	+3.7
ZKR	Zakros	3.18	114	PN	Pn	11 19 58.4	+2.0
KOSK	Kos Island	3.49	84	PN	Pn	11 20 02.3	+1.7
JAN	Janina	3.51	336	P	Pn	11 20 04.8	+3.9
PAIG	Paliouri	3.56	13	P	Pn	11 20 04.0	+2.4
IGT	Igoumenitsa	3.59	330	P	Pn	11 20 04.4	+2.4
IGT	Igoumenitsa	3.59	330	ePn	Pn	11 20 04.7	+2.7
IGT				eSn	Sn	11 20 41.1	-2.0
IGT	Igoumenitsa	3.59	330	P	Pn	11 20 04.4	+2.4
	baz=331						
IGT				S	Sn	11 20 42.7	-0.4
	baz=331						
KPRO	Kipourio	3.65	344	P	Pn	11 20 06.7	+3.8
LIT	Litokhoron	3.65	358	P	Pn	11 20 06.8	+4.0
LIT	Litokhoron	3.65	358	i P	Pn	11 20 06.8	+4.0
LIT				i S	Sn	11 20 49.1	+4.5
LIT				IAML		11 20 54.0	
	comp=N,642nm,0.5s						
LIT				IAML		11 21 02.0	
	comp=E,456nm,0.7s						
LIT	Litokhoron	3.65	358	Pn	Pn	11 20 06.9	+4.0
URLA	Izmir	3.67	57	PN	Pn	11 20 04.3	+1.2
URLA	Izmir	3.67	57	i P	Pn	11 20 04.8	+1.7
URLA				i S	Sn	11 20 46.6	+1.6
URLA				IAML		11 20 48.0	
	comp=E,361nm,0.6s						
URLA				IAML		11 20 48.0	
	comp=N,372nm,0.7s						
SIGR	SIGRI	3.74	42	P	Pn	11 20 08.3	+4.2
SIGR	SIGRI	3.74	42	PN	Pn	11 20 05.8	+1.7
KARP	Karpathos	3.76	103	P	Pn	11 20 05.7	+1.4
KARP	Karpathos	3.76	103	PN	Pn	11 20 05.6	+1.3
KARP	Karpathos	3.76	103	Pn	Pn	11 20 06.6	+2.3
BODT	Bodrum	3.78	79	P	Pn	11 20 06.7	+2.0
BODT	Bodrum	3.78	79	PN	Pn	11 20 06.2	+1.5
DDIM	Aydin, Didim	3.80	73	i P	Pn	11 20 06.0	+1.1
DDIM				i S	Sn	11 21 09.5	+21
GCAM	G?zelcaml?	3.86	70	PN	Pn	11 20 07.4	+1.7
GCAM	G?zelcaml?	3.86	70	i P	Pn	11 20 08.2	+2.5
GCAM				i S	Sn	11 20 50.5	+0.7
GCAM				IAML		11 21 19.0	
	comp=N,264nm,1.0s						
GCAM				IAML		11 21 31.0	
	comp=E,294nm,0.8s						
KZN	Kozani	3.92	350	P	Pn	11 20 10.3	+3.8
KEK	Kerkira	3.96	326	P	Pn	11 20 09.2	+2.1
PLG	Polygyros	3.97	9	P	Pn	11 20 09.8	+2.6
OUR	Ouranopolis	4.01	15	P	Pn	11 20 10.1	+2.3
OUR	Ouranopolis	4.01	15	PN	Pn	11 20 10.4	+2.6
SRN	Sarande	4.02	329	P	Pn	11 20 10.3	+2.5
SRN	Sarande	4.02	329	P	Pn	11 20 10.3	+2.5
	baz=330						
SRN				S	Sn	11 20 53.3	-0.3
	baz=330						
LSK	Leskovik	4.04	337	P	Pn	11 20 11.5	+3.3
LSK	Leskovik	4.04	337	P	Pn	11 20 11.4	+3.2
	baz=341						
KOCA	Canakkale, Ayv	4.10	41	i P	Pn	11 20 10.0	+0.9
KOCA				i S	Sn	11 20 51.7	-4.1
KOCA				IAML		11 21 23.0	
	comp=N,269nm,1.4s						
KOCA				IAML		11 21 34.0	
	comp=E,340nm,0.9s						
HORT	Hortiatis	4.16	5	P	Pn	11 20 13.0	+3.2
NEST	Nestorio	4.16	343	P	Pn	11 20 14.4	+4.5
MLSB	Milas	4.19	77	PN	Pn	11 20 11.9	+1.7
DKL	Dikili	4.26	51	PN	Pn	11 20 12.9	+1.7
AYVA	Ayvalik	4.28	47	i P	Pn	11 20 12.8	+1.4
AYVA				i S	Sn	11 20 30.4	-30
AYVA				IAML		11 20 36.0	
	comp=N,193nm,0.7s						
AYVA				IAML		11 20 41.0	
	comp=E,123nm,0.6s						
SOH	Sokhos	4.40	7	P	Pn	11 20 16.3	+3.2
ARG	Arkhangelos	4.42	91	PN	Pn	11 20 15.6	+2.3
KBN	Korca	4.42	341	P	Pn	11 20 17.6	+4.2
KBN	Korca	4.42	341	P	Pn	11 20 18.8	+5.4
	baz=346						
EZN	Ezine	4.44	39	PN	Pn	11 20 15.4	+1.8
FNA	Florina	4.44	347	P	Pn	11 20 16.8	+3.0
FNA	Florina	4.44	347	ePn	Pn	11 20 16.8	+3.0
FNA				eSn	Sn	11 21 03.5	-0.7
FNA	Florina	4.44	347	i P	Pn	11 20 16.7	+2.9
FNA				i S	Sn	11 21 03.3	-0.9
FNA				IAML		11 21 09.0	
	comp=N,485nm,0.8s						
FNA				IAML		11 21 16.0	
	comp=E,361nm,0.4s						
FNA	Florina	4.44	347		Pn	11 20 16.8	+3.0
FNA	Florina	4.44	347	P	Pn	11 20 16.7	+2.9
	baz=354						
BAYC	CANAKKALE_Bayr	4.49	42	i P	Pn	11 20 16.1	+1.7
BAYC				i S	Sn	11 20 59.9	-5.5
BAYC				IAML		11 21 11.0	
	comp=E,100nm,1.0s						
BAYC				IAML		11 21 42.0	
	comp=N,76nm,0.9s						
TURN	Turunc	4.50	84	PN	Pn	11 20 16.5	+2.0
GRG	Griva	4.51	357	P	Pn	11 20 18.3	+3.7
GADA	Gvkgeada	4.52	33	PN	Pn	11 20 16.9	+2.2
YER	Yerkesik	4.56	80	PN	Pn	11 20 17.3	+1.9
KNT	Kendrikon	4.71	2	P	Pn	11 20 20.8	+3.4
SRS	Serrai	4.72	9	P	Pn	11 20 20.7	+3.2
SRS	Serrai	4.72	9	ePn	Pn	11 20 20.7	+3.2
SRS				eSn	Sn	11 21 10.8	-0.1
DALY	Dalyan (Mula)	4.83	84	PN	Pn	11 20 21.3	+2.3
VAY	Valandovo	4.87	359	ePn	Pn	11 20 23.0	+3.5
VAY	Valandovo	4.87	359	i Pn	Pn	11 20 23.5	+4.0
OHR	Ohrid	4.88	343	i Pn	Pn	11 20 22.4	+2.7
SCTE	Santa Cesarea	4.90	319	Pn	Pn	11 20 21.6	+1.7
SCTE	Santa Cesarea	4.90	319	P	Pn	11 20 21.5	+1.6
	baz=316						
GELI	Tayfur-Gelibol	4.95	36	PN	Pn	11 20 22.9	+2.3
STEP	BALIKESIR_Sava	4.95	52	i P	Pn	11 20 22.8	+2.1
STEP				IAML		11 22 12.0	
	comp=E,180nm,0.8s						
STEP				IAML		11 22 17.0	
	comp=N,253nm,1.1s						
NVR	Nevrokopi	4.98	10	P	Pn	11 20 23.9	+2.8
LPK	Lapseki	5.07	38	PN	Pn	11 20 24.8	+2.5
MANT	Manisa	5.11	65	i P	Pn	11 20 25.6	+2.5
MANT				i S	Sn	11 21 45.8	+25
MANT	Manisa	5.11	65	Pn	Pn	11 20 26.2	+3.1
ALN	Alexandroupoli	5.17	30	i P	Pn	11 20 24.9	+1.3
ALN				i S	Sn	11 20 58.1	-24
ALN				IAML		11 21 29.0	
	comp=N,38nm,2.0s						
ALN				IAML		11 21 34.0	
	comp=E,39nm,0.9s						
ALN	Alexandroupoli	5.17	30		Pn	11 20 24.8	+1.2
KULA	Kula-Manisa	5.20	65	PN	Pn	11 20 26.1	+2.0
RDO	Rodhopi	5.20	25	P	Pn	11 20 25.7	+1.7
BALB	Balikesir	5.21	51	PN	Pn	11 20 26.4	+2.3
STIP	Stip	5.25	356	i Pn	Pn	11 20 29.0	+4.2
TIR	Tirane	5.36	337	⇑P	Pn	11 20 28.8	+2.6
TIR	Tirane	5.36	337		Pn	11 20 28.4	+2.2
SLUM	Salum	5.38	156	P	Pn	11 20 26.0	-0.5
	baz=162						
SLUM				AMP		11 21 00.0	
	baz=162						
TIP	Timpagrande	5.41	302	⇑P	Pn	11 20 28.4	+1.4
TIP	Timpagrande	5.41	302	Pn	Pn	11 20 27.9	+0.9
PHP	Peshkopia	5.51	342	P	Pn	11 20 30.5	+2.2
PHP	Peshkopia	5.51	342	P	Pn	11 20 32.0	+3.7
	baz=347						
EDC	Edincik	5.64	45	PN	Pn	11 20 32.8	+2.7
CEL	Celeste	5.69	291		Pn	11 20 31.8	+1.0
ELL	Elmali	5.84	85	PN	Pn	11 20 35.9	+3.0
PUK	Puka	5.99	340	P	Pn	11 20 36.7	+1.8
	baz=343						
BOSS	Bosilegrad	6.04	359	ePn	Pn	11 20 39.1	+3.5
BASM	Basmaki-Afyon	6.08	74	PN	Pn	11 20 38.7	+2.5
ULC	Ulcinj	6.11	335	⇓iPn	Pn	11 20 36.8	+0.2
ULC				i Sn	Sn	11 21 41.7	-3.4
NOCI	Noci	6.16	316	P	Pn	11 20 38.1	+0.9
	baz=314						
KORT	Korkueli	6.20	83	PN	Pn	11 20 40.3	+2.4
BCI	Bajram Curri	6.24	342	P	Pn	11 20 40.7	+2.4
	baz=345						
MATE	Matera	6.28	314	⇑P	Pn	11 20 39.7	+0.9
DRME	Dracevica, Mon	6.33	336	⇓iPn	Pn	11 20 39.4	-0.2
DRME	Dracevica, Mon	6.33	336	⇓iPn	Pn	11 20 39.7	+0.1
DRME				i Sn	Sn	11 21 46.8	-3.7
KIRK	Kırklareli	6.34	32	i P	Pn	11 20 40.2	+0.5
MATC	Matruh	6.35	142	P	Pn	11 20 38.8	-1.0
	baz=145						
MATC				AMP		11 21 00.0	
	baz=145						
ISP	Isparta	6.43	75		Pn	11 20 45.4	+4.4
PVY	Plav	6.48	342	⇑iPn	Pn	11 20 41.7	-0.1
PVY				i Sn	Sn	11 21 50.2	-4.2
PDG	Podgorica	6.53	337	⇑P	Pn	11 20 43.2	+1.0
PDG	Podgorica	6.53	337	⇓iPn	Pn	11 20 42.8	+0.6
PDG	Podgorica	6.53	337		Pn	11 20 43.1	+0.8
TTG	Podgorica	6.53	337	⇓iPn	Pn	11 20 42.3	+0.1
TTG				i Sn	Sn	11 21 51.4	-3.9
BUM	Brajici-Budva	6.53	335	⇑iPn	Pn	11 20 42.5	+0.1
BUM				i Sn	Sn	11 21 51.6	-3.9
ARMN	Kirklareli, Me	6.55	33	i P	Pn	11 20 44.1	+1.5
SHUT	Suhut-Afyon	6.61	69	PN	Pn	11 20 45.9	+2.3
VAE	Valguarnera	6.69	281	P	Pn	11 20 48.1	+3.7
	comp=E,2.8nm,0.3s,baz=45,slow=6.5,SNR=4.7						
VAE				S	Sn	11 21 57.0	-2.2
	comp=E,21nm,0.3s,baz=339,slow=10,SNR=7.4						
RAFF	Raffo Rosso	6.70	279		Pn	11 20 44.9	+0.2
CEME	Cevo	6.74	336	⇓iPn	Pn	11 20 45.5	+0.3
CEME				i Sn	Sn	11 21 56.7	-3.9
IVA	Berane	6.76	342	⇑iPn	Pn	11 20 45.5	0.0
IVA				i Sn	Sn	11 21 56.8	-4.3
CAVI	Cavuskoy	6.77	54	PN	Pn	11 20 47.6	+1.9
HCY	Herceg Novi	6.80	333	⇓iPn	Pn	11 20 45.7	-0.3
HCY	Herceg Novi	6.80	333	⇓iPn	Pn	11 20 46.0	0.0
HCY				i Sn	Sn	11 21 58.2	-3.8
ZAPS	Zavoj	6.82	360	ePn	Pn	11 20 50.0	+3.8
KOME	Kolasin	6.84	340	⇓iPn	Pn	11 20 46.7	+0.1
KOME				i Sn	Sn	11 21 58.9	-4.1
NKME	Niksic	6.93	337	⇑iPn	Pn	11 20 48.0	+0.2
NKME				i Sn	Sn	11 22 01.1	-4.1
NKY	Niksic	6.96	337	⇑iPn	Pn	11 20 48.3	+0.1
NKY				i Sn	Sn	11 22 01.8	-4.2
BORA	Eskisehir	7.03	58	PN	Pn	11 20 51.4	+2.2
TREB	Trebinje	7.09	333	ePn	Pn	11 20 49.8	-0.1
SJES	Sjenica	7.11	344	ePn	Pn	11 20 51.8	+1.5
SJES				eSn	Sn	11 22 06.9	-2.9
SJES	Sjenica	7.11	344	⇓iPn	Pn	11 20 51.2	+0.9
BRY	Bratogost	7.18	335	⇓iPn	Pn	11 20 51.2	-0.2
BRY	Bratogost	7.18	335	⇑iPn	Pn	11 20 51.5	+0.1
BRY				i Sn	Sn	11 22 07.3	-4.3
BOVS	Bovan	7.21	354	ePn	Pn	11 20 52.5	+0.9
SRCK	Saricakaya, Es	7.22	58	PN	Pn	11 20 54.1	+2.4
CIFT	Cifteler, Eski	7.25	64	PN	Pn	11 20 55.0	+2.8
PLE	Pljevlja	7.32	341	⇓iPn	Pn	11 20 53.2	0.0
PLE				i Sn	Sn	11 22 10.2	-4.7
UPM	Unac-Piva	7.34	338	ePn	Pn	11 20 54.5	+1.0
UPM	Unac-Piva	7.34	338	⇓iPn	Pn	11 20 53.6	+0.1
UPM				i Sn	Sn	11 22 10.8	-4.6
ZAGS	Zajecar	7.36	358	ePn	Pn	11 20 56.4	+2.7
IVAS	Ivanjica	7.37	346	ePn	Pn	11 20 54.0	+0.1
IVAS				eSn	Sn	11 22 12.7	-3.5
STON	Ston	7.47	331	ePn	Pn	11 20 54.1	-1.0
STON				Sn	Sn	11 22 09.9	-8.4
STON	Ston	7.47	331	⇓iPn	Pn	11 20 54.4	-0.7
SGRT	San Giovanni R	7.55	317		Pn	11 20 56.6	+0.3
SGRT	San Giovanni R	7.55	317	P	Pn	11 20 57.8	+1.5
	baz=315						
SWA2		7.56	161	P	Pn	11 20 55.5	-0.9
	baz=165						
SWA2				AMP		11 22 00.0	
	baz=165						
SWA2				S	Sn	11 22 09.2	-12
	baz=165						
GRUS	Gruza	7.58	349	ePn	Pn	11 20 57.6	+1.0
GRUS				eSn	Sn	11 22 17.3	-3.8
RUDO	Rudo	7.59	342	ePn	Pn	11 20 56.5	-0.3
CORL	Corleone	7.61	284		Pn	11 20 57.1	0.0
PAOL	Paolisi	7.80	308		Pn	11 21 00.6	+0.8
BBLS	Lazići	7.82	342	ePn	Pn	11 21 00.3	+0.4
BBLS				eSn	Sn	11 22 22.2	-4.8
BBLS	Lazići	7.82	342	⇓iPn	Pn	11 21 00.3	+0.4
DIVS	Divibare	7.91	346	ePn	Pn	11 21 01.4	+0.2
DIVS				eSn	Sn	11 22 24.1	-5.2
DIVS	Divibare	7.91	346	⇓iPn	Pn	11 21 01.4	+0.2
DIVS	Divibare	7.91	346		Pn	11 21 01.4	+0.2
TRUS	Trudelj	7.95	348	ePn	Pn	11 21 02.1	+0.3
TRUS				eSn	Sn	11 22 26.8	-3.5
MAKA	Makarska	8.09	329	ePn	Pn	11 21 03.2	-0.4
MAKA				Sn	Sn	11 22 25.9	-7.7
YUVA	Yuva-Kibriscik	8.10	58	PN	Pn	11 21 05.8	+1.9
SRE	Strehaia	8.21	3	⇑P	Pn	11 21 09.3	+4.0
HVAR	Hvar	8.24	326	ePn	Pn	11 21 04.6	-1.2
HVAR				Sn	Sn	11 22 28.7	-8.7
MDVR	Moldovita	8.36	355	⇑P	Pn	11 21 09.4	+2.1
HERR	Herculane	8.43	359	⇑P	Pn	11 21 11.4	+3.2
TEKS	Tekeris	8.44	345	ePn	Pn	11 21 08.7	+0.3
TEKS				eSn	Sn	11 22 35.9	-6.2
TEKS	Tekeris	8.44	345	ePn	Pn	11 21 08.0	-0.4
ICOR	Ion Corvin	8.61	26	⇑P	Pn	11 21 15.2	+4.5
BR231	Keskin MP Arra	8.66	64		Pn	11 21 15.2	+3.7
INTR	Introdacqua	8.77	312		Pn	11 21 15.9	+2.8
FRGS	Fruska Gora	8.96	347	ePn	Pn	11 21 15.1	-0.5
FRGS				eSn	Sn	11 22 49.8	-5.2
FRGS	Fruska Gora	8.96	347	ePn	Pn	11 21 15.3	-0.3
ZIRJ	Zirje	8.98	325	ePn	Pn	11 21 15.5	-0.3
ZIRJ				Sn	Sn	11 22 47.3	-8.1
LOT	Lotru	9.03	5	⇑P	Pn	11 21 20.3	+3.7
ARR	Arges	9.03	9	⇑P	Pn	11 21 20.6	+4.0
MORI	Morici	9.12	326	ePn	Pn	11 21 16.9	-0.8
TIRR	Tirgusor	9.12	27	⇑P	Pn	11 21 19.6	+1.9
TIRR	Tirgusor	9.12	27	⇑P	Pn	11 21 19.6	+1.9
TIRR	Tirgusor	9.12	27		Pn	11 21 18.6	+1.0
ISR	Istrita	9.15	18	⇓P	Pn	11 21 20.9	+2.8
HARR	Harsova	9.15	24	⇑P	Pn	11 21 21.0	+2.9
VOIR		9.16	11	⇑P	Pn	11 21 20.5	+2.2
BR131	Keskin Array S	9.25	66		Pn	11 21 23.3	+3.6
BRTR	Keskin Array B	9.25	66	P	Pn	11 21 22.6	+2.9
	comp=E,1.2nm,0.3s,baz=251,slow=13,SNR=58						
BRTR	Keskin Array B	9.25	66		Pn	11 21 23.6	+3.9
BLY	Banja Luka	9.28	335	ePn	Pn	11 21 19.7	-0.1
MLR	Muntele Rosu	9.37	14	P	Pn	11 21 21.9	+0.7
	comp=E,0.2nm,0.3s,baz=192,slow=12,SNR=3.5						
MLR				LR	LR	11 25 12.5	
	comp=E,410nm,19.4s,baz=201,slow=39						
MLR	Muntele Rosu	9.37	14	⇑P	Pn	11 21 25.2	+4.0
MLR	Muntele Rosu	9.37	14		Pn	11 21 23.4	+2.2
TPGR	Topolog	9.47	26	⇑P	Pn	11 21 25.2	+2.7
DUGI	Dugi Otok	9.51	325	ePn	Pn	11 21 22.8	-0.3
HNAT	Natroun	9.52	133	P	Pn	11 21 20.9	-2.5
	baz=135						
HNAT				AMP		11 23 00.0	
	baz=135						
CFR	Carcaliu	9.65	24	⇑P	Pn	11 21 27.9	+2.9
DOPR	Dopca	9.73	11	⇑P	Pn	11 21 30.5	+4.5
NRCA	Norcia	9.74	314		Pn	11 21 29.1	+2.9
PLOR	Plostina	9.86	16	⇓P	Pn	11 21 30.9	+3.0
VRI	Vrincioaia	9.89	17	⇓P	Pn	11 21 32.4	+4.1
OZUR		9.92	13	⇓P	Pn	11 21 32.8	+4.1
NVLJ	Novalja	10.04	326	ePn	Pn	11 21 29.7	-0.6
NVLJ				Sn	Sn	11 23 13.8	-7.5
KOT	Kottamia	10.06	128	P	Pn	11 21 27.4	-3.3
	baz=129						
KOT				AMP		11 23 00.0	
	baz=129						
HSAF	As Saff	10.10	130	P	Pn	11 21 28.6	-2.7
	baz=131						
MORH	Mrgy, Hungar	10.21	344	⇑ePN	Pn	11 21 31.7	-0.9
MORH				eSN	Sn	11 23 19.2	-6.3
MORH	Mrgy, Hungar	10.21	344	⇓iPn	Pn	11 21 31.5	-1.1
HHAG	Hagoal	10.22	127	P	Pn	11 21 30.8	-2.0
	baz=127						
HHAG				AMP		11 23 00.0	
	baz=127						
GLL	Jalalah	10.22	130	P	Pn	11 21 29.9	-3.0
	baz=131						
DRGR		10.33	0	⇓P	Pn	11 21 37.3	+3.0
MURB	Monte Urbino	10.34	314		Pn	11 21 37.6	+3.1

TESR	Tescani	10.49	15	⇑P	Pn	11 21 40.7	+4.3
NBNS	Bani Suef	10.67	135	P	Pn	11 21 36.1	-2.9
	baz=136						
NBNS				AMP		11 23 00.0	
	baz=136						
NBNS				S	Sn	11 23 21.0	-16
	baz=136						
KALN	Kalnik	10.74	336	*e*Pn	Pn	11 21 39.8	0.0
KALN				Sn	Sn	11 23 31.3	-7.1
SUZ	Suez	10.77	125	P	Pn	11 21 37.6	-2.7
	baz=125						
BIZ	Bicaz	10.79	13	⇓P	Pn	11 21 44.9	+4.3
KEST	Kesra	10.80	270	S	Sn	11 23 36.6	-3.6
	comp=E,1.0nm,0.3s,baz=259,slow=23,SNR=11						
KEST				LR	LR	11 26 00.1	
	comp=E,210nm,20.5s,baz=152,slow=38						
RIY	Rijeka	10.81	328	*e*Pn	Pn	11 21 39.8	-1.0
RIY	Rijeka	10.81	328	⇓*i*Pn	Pn	11 21 40.3	-0.5
CRES	Cresnjev	10.82	332	*e*Pn	Pn	11 21 40.2	-0.8
BEHE	Becsehely	10.94	338	*e*PN	Pn	11 21 44.0	+1.4
BEHE	Becsehely	10.94	338	*e*Pn	Pn	11 21 43.5	+0.9
MMAI	Mount Meron Ar	11.03	104	P	Pn	11 21 39.3	-4.6
	comp=E,1.3nm,0.3s,baz=301,slow=14,SNR=2.5						
MMAI				S	Sn	11 23 35.7	-10
	comp=E,14nm,0.3s,baz=299,slow=24,SNR=4.5						
TIH	Tihany	11.03	343	*e*PN	Pn	11 21 43.3	-0.5
TIH	Tihany	11.03	343	*e*SN	Sn	11 23 44.4	-1.2
CASP	Castiglione de	11.08	308		Pn	11 21 46.6	+2.1
CEY	Cerknica	11.16	329	*e*Pn	Pn	11 21 45.7	+0.1
OSSC	Osservatorio P	11.24	312		Pn	11 21 49.9	+3.1
BURAR	Bucovina Array	11.32	9	⇓P	Pn	11 21 52.4	+4.5
BUR08	Bucovina Ar. S	11.34	9		Pn	11 21 51.6	+3.4
BUD	Budapest	11.35	347	*e*PN	Pn	11 21 49.5	+1.3
BUD	Budapest	11.35	347	*e*SN	Sn	11 23 51.5	-1.9
LJU	Ljubljana	11.37	330	⇓*i*Pn	Pn	11 21 47.4	-1.0
MPLH	Magyarpolny	11.37	342	⇓*e*PN	Pn	11 21 48.4	-0.1
MPLH	Magyarpolny	11.37	342	*e*SN	Sn	11 23 51.3	-2.5
CSKK	Cskako	11.38	345	*e*SN	Sn	11 23 52.9	-1.3
PSZ	Piszkesteto	11.64	351	⇑P	Pn	11 21 53.6	+1.4
PSZ	Piszkesteto	11.64	351	*e*SN	Sn	11 24 02.3	+1.7
PSZ	Piszkesteto	11.64	351		Pn	11 21 53.3	+1.0
SOKA	Soboth	11.70	333	*i* Pn	Pn	11 21 52.8	-0.3
	comp=E,25nm,0.7s,SNR=14						
SOKA				*e*Sn	Sn	11 23 56.2	-5.9
	comp=E,19nm,0.6s						
OBKA	Obir	11.74	331	*i* Pn	Pn	11 21 52.7	-0.9
	comp=E,22nm,0.5s,SNR=12						
OBKA				*e*Sn	Sn	11 23 59.8	-3.2
	comp=E,69nm,0.5s						
SRO	Srobarova	11.80	346	*e*S	Sn	11 24 02.3	-2.1
ZCCA	Zocca	11.89	315		Pn	11 21 53.3	-2.3
ARSA	Arzberg	12.03	336	*e*Pn	Pn	11 21 56.0	-1.5
	comp=E,11nm,0.5s,SNR=6.5						
ARSA				*e*Sn	Sn	11 24 05.3	-4.6
	comp=E,5.7nm,0.5s						
VLC	Villacollemand	12.12	313		Pn	11 22 00.2	+1.5
TEOL	Teolo	12.17	320		Pn	11 21 59.6	+0.2
MYKA	Terra Mystica	12.20	329	*i* Pn	Pn	11 22 00.8	+0.9
	comp=E,4.1nm,0.3s						
MYKA				*e*Sn	Sn	11 24 09.9	-4.4
	comp=E,20nm,0.5s						
STAL	STALIGIAL	12.32	326		Pn	11 22 00.8	-0.6
EIL	Elat	12.32	120	P	Pn	11 21 57.1	-4.4
	comp=E,1.0nm,0.3s,baz=313,slow=8.4,SNR=15						
EIL				S	Sn	11 24 05.0	-12
	comp=E,19nm,0.3s,baz=244,slow=3.1,SNR=11						
EIL				LR	LR	11 28 11.4	
	comp=E,72nm,20.6s,baz=296,slow=44						
VYHS	Vyhne	12.36	348	*e*P	Pn	11 22 04.1	+2.1
VYHS				*e*S	Sn	11 24 18.6	+0.5
SORM	Soroca	12.41	18	⇑P	Pn	11 22 06.2	+3.7
ZOU	Zoufplan	12.43	327		Pn	11 22 02.6	-0.4
KOLS	Kolonicke sedl	12.48	359	*e*P	P	11 22 08.8	-4.9
KOLL	Kolacno	12.52	347	*e*P	Pn	11 22 05.0	+0.9
CONA	Conrad Observa	12.52	338	*i* Pn	Pn	11 22 03.0	-1.2
	comp=E,2.9nm,0.4s						
CONA				*e*Sn	Sn	11 24 16.6	-5.5
	comp=E,4.0nm,0.4s						
MODS	Modra-Piesok	12.56	343	*e*P	Pn	11 22 03.7	-1.0
MODS				*e*S	Sn	11 24 15.7	-7.2
CTI	Castel Tesino	12.66	323		Pn	11 22 06.1	-0.1
KBA	Koelnbreinsper	12.68	330	*e*Pn	Pn	11 22 06.9	+0.3
	comp=E,10.0nm,0.6s						
KBA				*e*Sn	Sn	11 24 20.2	-6.0
	comp=E,9.5nm,0.4s						
ABTA	Abfaltersbach	12.78	327	*e*Pn	Pn	11 22 07.3	-0.4
	comp=E,11nm,0.4s,SNR=9.9						
ABTA				*e*Sn	Sn	11 24 25.0	-3.4
	comp=E,51nm,0.7s						
SALO	Salr	12.94	319		Pn	11 22 11.3	+1.4
MOA	Molln	12.97	334	*e*Pn	Pn	11 22 10.3	0.0
	comp=E,12nm,0.3s,SNR=11						
KRUC	Moravsky	13.41	342	*e*PN	Pn	11 22 16.3	0.0
VRAC	Vranov	13.59	343	LR	LR	11 29 09.5	
	comp=E,331nm,20.7s,baz=157,slow=44						
VRAC	Vranov	13.59	343	*e*PN	Pn	11 22 18.9	+0.1
WATA	Walderalm	13.64	326	*i* Pn	Pn	11 22 20.1	+0.6
	comp=E,24nm,0.5s,SNR=15						
WATA				*e*Sn	Sn	11 24 45.2	-4.2
	comp=E,30nm,0.5s						
SQTA	Sankt Quirin	13.72	325	*i* Pn	Pn	11 22 22.4	+1.8
	comp=E,16nm,0.4s,SNR=7.8						
SQTA				*e*Sn	Sn	11 24 47.5	-3.9
	comp=E,33nm,0.5s						
FETA	Feichten	13.80	324	*i* Pn	Pn	11 22 23.8	+2.1
	comp=E,3.5nm,0.4s						
FETA				*e*Sn	Sn	11 24 49.3	-4.1
	comp=E,16nm,0.8s						
MORC	Moravsky Berou	13.83	346	⇓P	Pn	11 22 24.3	+2.3
MOTA	Moosalm	13.86	325	*e*Pn	Pn	11 22 23.1	+0.5
	comp=E,49nm,0.8s,SNR=27						
MOTA				*e*Sn	Sn	11 24 50.0	-4.8
	comp=E,20nm,0.6s						
GEC2	GERESS Array S	14.02	335		Pn	11 22 25.1	+0.5
GEC2	GERESS Array S	14.02	335	*e*P	P	11 22 34.3	+3.4
	comp=E,11nm,0.6s,baz=148,slow=11						
GERES	GERESS Array B	14.02	335	P	Pn	11 22 23.9	-0.7
	comp=E,1.8nm,0.3s,baz=158,slow=13,SNR=40						
GERES				S	Sn	11 24 51.5	-7.1
	comp=E,2.2nm,0.3s,baz=152,slow=23,SNR=9.9						
GERES	GERESS Array B	14.02	335		Pn	11 22 24.9	+0.3
DAVOX	Davos/Dischmat	14.05	321	P	Pn	11 22 24.3	-0.8
	comp=E,0.4nm,0.3s,baz=327,slow=13,SNR=4.8						
DAVOX				S	Sn	11 24 53.3	-6.1
	comp=E,1.5nm,0.3s,baz=309,slow=21,SNR=2.9						
DAVOX				LR	LR	11 29 34.1	
	comp=E,277nm,19.2s,baz=71,slow=44						
TUE	Stuetta	14.12	319		Pn	11 22 27.4	+1.3
KRLC	Kraliky	14.27	344	*e*SN	Sn	11 25 00.5	-4.1
KHC	Kasperske Hory	14.31	335	*e*PN	Pn	11 22 28.5	+0.2
KHC				*e*P	P	11 22 36.6	+2.6
KHC				*e*SN	Sn	11 25 00.5	-5.0
KHC	Kasperske Hory	14.31	335		Pn	11 22 29.0	+0.7
DAVA	Damuels	14.40	323	*e*Pn	P	11 22 32.6	-2.5
	comp=E,11nm,0.5s						
DAVA				*e*Sn	Sn	11 25 02.0	-5.9
	comp=E,38nm,0.5s						
KOPT	Kop Dagi	14.46	70	P	P	11 22 35.8	-0.3
MARD	Mardin	14.53	81	P	P	11 22 34.2	-2.4
WET	Wettzell	14.56	334	*e*P	P	11 22 40.1	+3.3
	comp=E,24nm,0.7s,baz=148,slow=11						
DPC	Dobruska-Polom	14.63	344	*e*PN	Pn	11 22 32.2	-0.4
DPC				*e*P	P	11 22 44.7	+7.1
PRU	Pruhonice	14.76	339	*e*PN	Pn	11 22 34.5	+0.3
PRU				*e*P	P	11 22 41.2	+2.3
UPC	Upice	14.85	343	*e*P	P	11 22 43.0	+3.0
CHVC	Chvalec	14.91	343	*e*P	P	11 22 43.3	+2.6
AKASG	Malin Array Be	15.01	16	P	Pn	11 22 36.1	-1.4
	comp=E,5.1nm,0.3s,baz=206,slow=9.9,SNR=15						
AKASG				ScP	ScP	11 31 12.4	+0.5
	comp=E,0.3nm,0.3s,baz=230,slow=1.6,SNR=5.4						
AKASG	Malin Array Be	15.01	16	P	P	11 22 39.9	-1.8
AKBB	Malin Array Si	15.01	16	P	P	11 22 40.1	-1.6
KSP	Ksiaz	15.10	344	*e*P	P	11 22 46.0	+3.3
SENIN	Lac Senin/Sane	15.17	315	P	P	11 22 43.8	0.0
ROTZ	Rotzenmuhle	15.32	334	*e*P	P	11 22 48.0	+2.7
	comp=E,11nm,0.9s,baz=148,slow=11						
GRA1	Grafenberg Arr	15.63	331	P	P	11 22 49.1	+0.5
GRA1				IAmb	IAmb	11 22 52.3	
	comp=Z,42nm,0.7s						
GRF	Grafenberg Arr	15.63	331	*e*P	P	11 22 51.8	+3.1
	comp=Z,45nm,0.8s,baz=148,slow=11						
NKC	Novy Kostel	15.63	335	*e*PN	Pn	11 22 45.8	+0.3
NKC				*e*P	P	11 22 51.5	+2.8
WERN	Wernitzgruen	15.70	335	*e*P	P	11 22 52.5	+3.0
	comp=Z,16nm,0.8s,baz=148,slow=11						
BRG	Berggiesshubel	15.72	339	*e*x	Pn	11 22 47.6	+1.0
BRG				Amp		11 23 00.9	
	comp=Z,16nm,0.8s						
BRG	Berggiesshubel	15.72	339	*e*x	x	11 22 47.6	
BRG				Amp		11 23 00.9	
	comp=Z,16nm,0.8s						
TANN	Tannenbergstha	15.78	335	*e*P	P	11 22 53.4	+3.0
	comp=Z,22nm,1.4s,baz=148,slow=11						
PLN	Plauen	15.94	335	*e*P	P	11 22 55.2	+3.1
	comp=Z,22nm,0.8s,baz=148,slow=11						
GEVA	Gevas	16.32	77	P	P	11 22 57.5	+0.9
CLL	Collm	16.38	338	*e*P	P	11 22 56.0	-0.9
CLL				*i* Pmax		11 23 00.1	
	comp=Z,25nm,0.6s						
CLL				*e*pP	pP	11 23 07.0	-2.2
CLL				*i* sP	sP	11 23 15.3	-1.0
CLL	Collm	16.38	338	P	P	11 22 57.6	+0.7
CLL	Collm	16.38	338	*e*P	P	11 23 00.4	+3.5
	comp=Z,25nm,0.6s,baz=148,slow=11						
ECH	Echery	16.38	321	P	P	11 22 57.8	+0.8
UBBA	Unterbreizbach	17.00	332	*e*P	P	11 23 05.6	+1.9
	comp=Z,24nm,1.6s,baz=148,slow=11						
KIV	Kislovodsk	17.01	58	P	P	11 23 06.1	+2.0
KIV				IAmb	IAmb	11 23 08.2	
	comp=Z,38nm,0.8s						
KVAR	Kislovodsk Arr	17.02	58	P	Pn	11 23 03.5	+0.5
	baz=262,slow=20,SNR=6.8						
KBZ	Khabaz	17.08	59	P	P	11 23 05.2	+0.4
	comp=Z,2.3nm,0.3s,baz=250,slow=8.6,SNR=79						
KBZ				LR	LR	11 31 58.3	
	comp=Z,84nm,19.9s,baz=291,slow=45						
SUW	Suwalki	17.57	1	*e*P	P	11 23 10.6	+0.6
SUW	Suwalki	17.57	1	P	P	11 23 10.4	+0.4
SUW				IAmb	IAmb	11 23 32.8	
	comp=Z,61nm,0.9s						
GTTG	Gottingen	17.60	333	*e*P	P	11 23 13.0	+2.6
	comp=Z,28nm,1.0s,baz=148,slow=11						
GNI	Garni	17.71	71	P	P	11 23 12.1	+0.2
	comp=Z,2.4nm,0.3s,baz=280,slow=11,SNR=10.0						
GNI	Garni	17.71	71	P	P	11 23 13.9	+2.0
ASSE	Asse, Remlinge	17.83	335	*e*P	P	11 23 15.9	+3.0
	comp=Z,14nm,1.1s,baz=148,slow=11						
NRDL	Niedersach Rie	18.33	335	*e*P	Pn	11 23 22.6	+3.8
	comp=Z,28nm,1.2s,baz=148,slow=11						
MNK	Minsk	18.41	10	*i* P	Pn	11 23 21.0	+1.1
	comp=E,3.0nm,0.8s						
MNK				*i* P	Pn	11 23 21.0	+1.1
	comp=N,31nm,0.8s						
MNK				*i* P	Pn	11 23 21.0	+1.1
	comp=Z,13nm,0.8s						
MNK				*i* pP	pP	11 23 33.0	+1.3
MNK				*i* sP	sP	11 23 41.2	+2.4
MNK				*i* S	S	11 26 49.6	+3.2
MNK				*i* sS	sS	11 27 02.9	-2.8
MNK				*i* SS	SnSn	11 27 04.1	+4.9
MNK				*i* LR	LR	11 29 38.2	
NACGM	Naroch	18.67	7	*i* P	Pn	11 23 23.8	+0.7
NACGM				*i* P	Pn	11 23 23.8	+0.7
NACGM				*i* P	Pn	11 23 23.8	+0.7
NACGM				*i* Pb	sP	11 23 42.6	+1.1
	comp=Z,36nm,0.7s						
NACGM				*i* S	Sn	11 26 46.3	-4.7
NACGM				*i* SS	SnSn	11 27 09.3	+3.7
NACGM				*i* LQ	LQ	11 29 03.6	
NACGM				*i* LR	LR	11 30 01.1	
IIGN	Ignalina	19.06	6	*e*P	P	11 23 26.9	+0.5
IIGN				IAmb	IAmb	11 23 35.7	
	comp=Z,9.0nm,0.5s						
IDID	Didziasalis	19.07	7	*e*P	P	11 23 26.4	-0.1
PABE	Paberze	19.08	2	*e*P	Pn	11 23 28.2	+0.3
ISAL	Salakas	19.27	6	*e*P	P	11 23 27.9	-0.8
ISAL				IAmb	IAmb	11 23 37.4	
	comp=Z,11nm,0.4s						
BSD	Bornholm Skovb	19.41	347	*e*P	P	11 23 31.0	+0.8
BSD	Bornholm Skovb	19.41	347	*i* P	P	11 23 30.3	+0.1
BSD	Bornholm Skovb	19.41	347	*i* P	P	11 23 30.4	+0.1
BSEG	Bad Segeberg	19.48	338	*e*P	Pn	11 23 33.2	+0.6
	comp=Z,23nm,0.7s,baz=148,slow=11						
PBUR	Paburge	19.59	359	*e*P	P	11 23 32.2	+0.1
OBN	Obninsk	20.96	23	P	P	11 23 46.0	-1.0
	comp=Z,6.7nm,0.4s,baz=94,slow=8.6,SNR=3.7						
OBN	Obninsk	20.96	23	P	P	11 23 45.3	-1.7
OBN				IAmb	IAmb	11 24 11.8	
	comp=Z,84nm,1.3s						
ESDC	Sonseca Array	21.18	287	P	P	11 23 50.0	+0.4
	comp=Z,2.4nm,0.6s,baz=81,slow=10,SNR=9.7						
ESDC	Sonseca Array	21.18	287	P	P	11 23 50.9	+1.2
RST	Umm Al-Ruwaisa	21.53	102	*e*P		11 23 52.8	
MIB	Mutribah	21.67	101	*e*P		11 23 54.3	
VSU	Vasula	22.19	6	*e*P	P	11 23 59.5	-0.6
MDT	Midelt	22.70	269	P	P	11 24 08.1	+2.1
	comp=Z,1.4nm,0.7s,baz=101,slow=11,SNR=4.4						
MDT				LR	LR	11 34 01.2	
	comp=Z,175nm,18.0s,baz=66,slow=39						
RAYN	Ar Rayn	23.54	117	P	P	11 24 16.1	+1.8
UPP	Uppsala	23.65	354	*e*P	P	11 24 15.0	+0.1
BELG	Belogornoye	23.74	40	P	P	11 24 15.0	-0.7
	comp=Z,47nm,0.6s,baz=320,slow=3.3,SNR=8.7						
BELG				LR	LR	11 34 35.3	
	comp=Z,127nm,19.3s,baz=219,slow=39						
HFS	Hagfors	24.39	349	P	P	11 24 22.3	+0.6
	comp=Z,6.6nm,0.4s,baz=156,slow=11,SNR=36						
HFS				S	S	11 28 38.0	+0.7
	comp=Z,2.6nm,0.6s,baz=159,slow=20,SNR=2.2						
FINES	FINESS Array B	25.11	4	P	P	11 24 28.1	0.0
	comp=Z,10nm,0.5s,baz=154,slow=12,SNR=41						
FINES				PcP	PcP	11 28 02.2	+1.3
	comp=Z,2.3nm,0.5s,baz=143,slow=2.5,SNR=6.5						
FINES				ScP	ScP	11 31 34.6	-0.6
	comp=Z,4.5nm,0.9s,baz=212,slow=4.9,SNR=4.1						
FINES	FINESS Array B	25.11	4	P	P	11 24 27.4	-0.7
NB2	NORSAR Subarra	25.66	347	P	P	11 24 35.0	+1.8
	comp=Z,34nm,1.2s,baz=160,slow=10						
NOA	NORSAR Array B	25.66	347	P	P	11 24 33.0	-0.3
	comp=Z,1.5nm,0.7s,baz=154,slow=9.5,SNR=8.5						
EKA	Eskdalemuir Ar	25.82	325	P	P	11 24 35.9	+1.2
	comp=Z,16nm,0.6s,baz=124,slow=7.5,SNR=38						
KLMR	Klimovskoe	26.68	18	P	P	11 24 41.0	-1.3
KLMR				AMP		11 24 46.1	
	comp=Z,17nm,0.9s						
GEYT	Alibeck	28.18	76	P	P	11 24 54.3	-1.8
	comp=Z,1.8nm,0.4s,baz=349,slow=6.0,SNR=4.2						
GEYT	Alibeck	28.18	76	P	P	11 24 56.0	-0.1
KIRV	Kirov	28.24	30	P	P	11 24 54.8	-1.5
	comp=Z,16nm,0.4s,baz=284,slow=0.4,SNR=4.2						
KIRV				LR	LR	11 37 18.0	
	comp=Z,200nm,19.5s,baz=285,slow=39						
AKTO	Aktyubinsk	28.92	50	P	P	11 25 01.8	-0.7
	comp=Z,2.8nm,0.5s,baz=260,slow=9.9,SNR=12						
ABKAR	Akbulak array	29.86	53	P	P	11 25 10.0	-0.8
ABKAR	Akbulak array	29.86	53	P	P	11 25 09.7	-1.1
ABKAR				IAmb	IAmb	11 25 29.8	
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	29.88	224	P	P	11 25 12.8	+1.6
	comp=Z,0.8nm,0.6s,baz=37,slow=8.4,SNR=4.1						
KOWA	Kowa	32.33	234	P	P	11 25 32.8	-0.1
	comp=Z,0.6nm,0.3s,baz=38,slow=6.5,SNR=1.9						
ARCES	ARCESS Array B	33.18	2	P	P	11 25 39.7	-0.1
	comp=Z,6.7nm,0.5s,baz=183,slow=8.9,SNR=53						
ARCES				ScP	ScP	11 31 59.7	-1.1
	comp=Z,1.8nm,0.8s,baz=145,slow=4.4,SNR=5.0						
ARCES				LR	LR	11 38 54.0	
	comp=Z,261nm,18.3s,baz=250,slow=36						
IUG	Iuzhnay	36.72	66	*e*P	P	11 26 10.2	-0.5
	comp=Z,2.2nm,0.6s,baz=66						
BRVK	Borovoye	36.90	48	P	P	11 26 11.7	-0.2
BRVK				IAmb	IAmb	11 26 13.2	
	comp=Z,6.3nm,0.7s						
KK31	Karatay Array	36.96	65	P	P	11 26 12.1	-0.6
KKAR	Karatay Array	36.96	65	P	P	11 26 12.6	-0.1
KKAR	Karatay Array	36.96	65	P	P	11 26 12.3	-0.3
KKAR				IAmb	IAmb	11 26 14.6	
	comp=Z,11nm,0.5s						
BRZS	Berezniki	38.17	53	*e*P	P	11 26 22.0	-0.7
	comp=Z,3.6nm,0.7s,baz=53						
BTLS	Baital	39.29	61	*e*P	P	11 26 31.7	-0.5
	comp=Z,2.7nm,0.6s,baz=61						
SGDS	Sogindy	39.90	63	*e*P	P	11 26 36.6	-0.8
	baz=63						
AAK	Ala-Archa	39.92	65	P	P	11 26 38.6	+0.9
AAK				IAmb	IAmb	11 26 39.6	
	comp=Z,9.5nm,1.2s						
KUU	Kurty	41.06	62	*e*P	P	11 26 47.0	0.0
	comp=Z,5.7nm,0.6s,baz=62						
NIL	Nilore	41.13	78	P	P	11 26 48.0	+0.4
CHKK	Chushkaly	41.53	62	*e*P	P	11 26 51.3	+0.5
	baz=62						
AAA	Alma-Ata	41.59	63	*e*P	P	11 26 51.9	+0.6
	baz=63						
KSH	Kashi	41.62	69	P	P	11 26 51.0	-0.7
KSH				pP	pP	11 27 05.3	-0.8
KSH				pmax	pmax		
	comp=Z,18nm,0.6s						
KSH				pmax	pmax		
	comp=Z,690nm,6.8s						
TNSS	Tian-Shan	41.64	64	*e*P	P	11 26 52.2	+0.1
	baz=64						
MDOK	Medeo	41.69	63	*e*P	P	11 26 52.1	-0.1
	baz=63						
SPITS	Spitsbergen Ar	41.92	358	P	P	11 26 53.8	+0.3
	comp=Z,3.3nm,0.6s,baz=151,slow=10,SNR=20						
KURK	Kurchatov	41.97	52	P	P	11 26 53.2	-1.0
KURK				IAmb	IAmb	11 26 55.0	
	comp=Z,19nm,1.3s						
TDK	Taldyqorghan	42.37	60	*e*P	P	11 26 58.2	+0.7
	comp=Z,7.3nm,0.5s,baz=60						
SATY	Saty	42.69	63	*e*P	P	11 27 00.8	+0.5
	comp=Z,6.0nm,0.9s,baz=63						
KPKS	Kokpek	42.81	63	*e*P	P	11 27 00.7	-0.6
	baz=63						
SEM	Semipalatinsk	43.02	52	*e*P	P	11 27 02.4	-0.7
	baz=52						
SHLS	Shalkode	43.43	63	*e*P	P	11 27 08.7	+2.4
	comp=Z,3.2nm,0.7s,baz=63						
MAKZ	Makanchi	44.56	57	P	P	11 27 14.7	-0.4
MAKZ				IAmb	IAmb	11 27 16.1	
	comp=Z,22nm,1.4s						
MK31	Makanchi Array	44.77	57	P	P	11 27 16.0	-0.9
MK31				IAmb	IAmb	11 27 17.8	
	comp=Z,13nm,0.6s						
MKAR	Makanchi Array	44.77	57	P	P	11 27 17.1	+0.2
	comp=Z,13nm,0.5s,baz=270,slow=8.1,SNR=163						
MKAR	Makanchi Array	44.77	57	P	P	11 27 16.2	-0.7
ZAA0	Zalesovo Array	45.59	47	P	P	11 27 22.6	-0.6
ZAA0				IAmb	IAmb	11 27 23.8	
	comp=Z,13nm,0.6s						
ZALV	Zalesovo Beam	45.59	47	P	P	11 27 22.5	-0.8
	comp=Z,9.2nm,0.4s,baz=268,slow=8.8,SNR=46						
ZALV	Zalesovo Beam	45.59	47	P	P	11 27 22.1	-1.1
ZSN	Zaisan	46.40	56	*e*P	P	11 27 29.6	-0.1
	comp=Z,2.7nm,0.9s,baz=56						
WMQ	Urumqi	49.12	60	*e*P	P	11 27 51.8	+0.9
WMQ				pP	pP	11 28 06.1	+0.5
WMQ				sP	sP	11 28 16.4	+4.3
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,330nm,5.9s						
LSA	Lhasa	56.71	76	P	P	11 28 47.9	+0.4
LSA	Lhasa	56.71	76	P	P	11 28 46.9	-0.6
GTA	Gaotai	59.14	62	⇑P	P	11 29 04.3	+0.3
GTA				pP	pP	11 29 21.3	+2.3
GTA				sP	sP	11 29 28.5	+3.1
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=Z,290nm,16.4s						
GTA				LR	LR		
	comp=Z,240nm,17.1s						
SONM	Songino Array	60.24	50	P	P	11 29 11.5	+0.1
	comp=Z,4.5nm,0.8s,baz=283,slow=7.5,SNR=28						
SONM	Songino Array	60.24	50	P	P	11 29 10.6	-0.8
ULN	Ulaanbaatar	60.63	50	P	P	11 29 13.6	-0.5
ULN				IAmb	IAmb	11 29 15.3	
	comp=Z,7.3nm,0.8s						
TIXI	Tiksi	60.67	20	P	P	11 29 13.1	-0.6
TIXI				IAmb	IAmb	11 29 26.9	
	comp=Z,12nm,1.3s						
LZH	Lanzhou	63.45	63	*e*P	P	11 29 34.3	+1.1
LZH				pP	sP	11 29 51.9	-2.5
LZH				sP	pP	11 29 57.8	+10
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,99nm,4.7s						
BTO	Baotou	65.68	57	*e*P	P	11 29 47.0	-0.6
HHC	Hu-ho-hao-te	66.60	56	*e*P	P	11 29 54.0	+0.5
HHC				pmax	pmax		
	comp=Z,23nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
XAN	Xi'an	68.08	63	P	P	11 30 03.3	+0.4
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				pmax	pmax		
	comp=Z,290nm,6.5s						
CHTO	Chiang Mai	68.24	82	P	P	11 30 04.2	+0.2
CHTO				IAmb	IAmb	11 30 04.9	
	comp=Z,14nm,1.3s						
CMAR	Chiang Mai Arr	68.43	83	P	P	11 30 05.0	-0.2
	comp=Z,6.2nm,0.8s,baz=302,slow=7.9,SNR=31						
CMAR	Chiang Mai Arr	68.43	83	P	P	11 30 04.5	-0.7
BJI	Beijing	70.06	55	P	P	11 30 15.8	+0.9
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	Guiyang	70.27	71	*e*P	P	11 30 17.0	+0.4
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
SLVN	Son La	70.83	77	P	P	11 30 19.3	-0.7
SLVN				IAmb	IAmb	11 30 21.5	
	comp=Z,14nm,1.1s						
CN2	Changchun	73.81	47	*e*P	P	11 30 37.4	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	Magadan	75.17	24	P	P	11 30 45.5	+0.6
YKA	Yellowknife Ar	75.59	341	P	P	11 30 48.6	+1.4
	comp=Z,0.4nm,0.5s,baz=44,slow=6.0,SNR=12						
NJ2	Nanjing	76.20	60	*e*P	P	11 30 51.3	0.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USA0B	Ussuriysk Arra	77.35	44	P	P	11 30 56.7	-0.9
USRK	Ussuriysk Ar.	77.35	44	P	P	11 30 57.7	+0.1
	comp=Z,17nm,0.6s,baz=305,slow=3.9,SNR=48						
USRK	Ussuriysk Ar.	77.35	44	P	P	11 30 57.2	-0.4
ULM	Lac du Bonnet	78.10	325	P	P	11 31 01.9	+0.2
	comp=Z,0.8nm,0.4s,baz=38,slow=7.7,SNR=2.4						
ILAR	Eielson Array	78.78	355	P	P	11 31 06.1	+0.9
	comp=Z,0.5nm,0.7s,baz=350,slow=3.7,SNR=6.5						
ILAR	Eielson Array	78.78	355	P	P	11 31 06.3	+1.2
KS19	Wonju Array Si	79.02	51	P	P	11 31 06.7	-0.3
KSAR	Wonju Array Be	79.07	51	P	P	11 31 07.7	+0.4
KSRS	Korea Array	79.09	51	P	P	11 31 08.0	+0.7
	comp=Z,17nm,0.5s,baz=311,slow=4.6,SNR=111						
MJAR	Matsushiro Arr	85.95	47	P	P	11 31 43.6	+0.5
	comp=Z,9.4nm,0.8s,baz=315,slow=4.6,SNR=16						
MJAR	Matsushiro Arr	85.95	47	P	P	11 31 43.8	+0.7
PDAR	Pinedale Array	89.93	327	P	P	11 32 04.6	+2.2
	comp=Z,0.2nm,0.6s,baz=3.3,slow=6.3,SNR=1.8						
PDAR	Pinedale Array	89.93	327	P	P	11 32 01.2	-1.1
WRA	Warramunga Arr	118.73	94	PKP	PKPdf	11 37 49.9	-1.2
	comp=Z,0.5nm,0.6s,baz=326,slow=1.8,SNR=1.3						
ASAR	Alice Springs	120.26	98	PKP	PKPdf	11 37 53.9	-0.1
	comp=Z,0.7nm,0.5s,baz=302,slow=1.7,SNR=6.9						
ASAR	Alice Springs	120.26	98		PKiKP	11 37 54.3	+0.2

IDC ***13*** *11:20:16.8±4.9, 16°.93S×14°.41W, h0*^{km}*, mb4.3/7, mb1 4.3/7, mb1mx3.9/48, mbtmp4.3/7, MS4.3/13, Ms1 4.3/13, ms1mx4.1/21, Error ellipse: s-maj=134.1km s-min=93.3km az=101.0*

GCMT ***13*** *11:20:23.0±0.2, 16°.48S±0°.03×14°.33W±0°.01, h13*^{km}*±1*^{km}*, MW5.0/109, Moment Tensor Solution. s28,c36; s109,c144; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.97±.18;* $M_{\theta\theta}$*-0.17±.11;* $M_{\phi\phi}$*3.14±.13;* $M_{r\theta}$*2.13±.34;* $M_{\theta\phi}$*0.61±.08;* $M_{\phi r}$*0.51±.26; Best double couple:* M_0*3.75700×10*^{16} *NP1:*ϕ_s*347.00000°, δ42.00000°, λ-131.00000°. NP2:*ϕ_s*217.00000°, δ59.00000°, λ-59.00000°. Principal axes: T 3.3910, Plg9.0000°, Azm285.0000°; N 0.7300, Plg26.0000°, Azm20.0000°; P -4.1230, Plg62.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 13 11:20:16.8±4.9**, 17°.1S**±0°.7×**14°.6W**±1°.0**, h10**^{km}**, n21,** σ1^{s}**40**/10**, mb4.5**/9**, MS4.3**/13**, Southern Mid-Atlantic**

Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	23.66	296	LR	LR	11 32 19.4	
	comp=Z,588nm,20.9s,baz=104,slow=30						
LIC	Lamto	25.07	23	*e*PKIKP	P	11 25 44.7	+3.0
	33nm,1.1s						
KIC	Kosan Boka	25.30	24	*e*PKIKP	P	11 25 44.3	+0.5
	14nm,0.6s						
TIC	Toumodi	25.46	23	*e*PKIKP	P	11 25 45.1	-0.1
DBIC	Dimbokro	25.55	23	P	P	11 25 44.6	-1.3
	9.3nm,0.8s,baz=177,slow=11,SNR=13						
DBIC				LR	LR	11 33 14.8	
	comp=Z,305nm,20.2s,baz=182,slow=31						
TSUM	Tsumeb	30.65	99	LR	LR	11 36 15.0	
	comp=Z,584nm,22.0s,baz=320,slow=31						
BDFB	Brasilia	32.05	268	LR	LR	11 37 24.1	
	comp=Z,854nm,20.8s,baz=101,slow=32						
KOWA	Kowa	33.13	19	P	P	11 26 52.6	-0.8
	5.4nm,0.9s,baz=187,slow=6.8,SNR=6.1						
TORD	Torodi Ar. Bea	34.13	29	P	P	11 27 01.5	-0.6
	10.0nm,0.8s,baz=214,slow=8.8,SNR=28						
TORD				LR	LR	11 38 02.2	
	comp=Z,627nm,21.2s,baz=215,slow=32						
BOSA	Boshof	38.31	115	LR	LR	11 40 12.0	
	comp=Z,470nm,22.0s,baz=279,slow=31						
CPUP	Villa Florida	40.56	249	LR	LR	11 43 06.7	
	comp=Z,332nm,18.2s,baz=61,slow=34						
PLCA	Paso Flores	53.32	232	LR	LR	11 50 04.8	
	comp=Z,387nm,19.9s,baz=84,slow=33						
ESDC	Sonseca Array	57.38	10	P	P	11 30 05.8	+0.3
	1.2nm,0.9s,baz=169,slow=7.1,SNR=5.2						
ROSC	El Rosal	62.86	285	LR	LR	11 58 15.1	
	comp=Z,614nm,18.0s,baz=106,slow=36						
DAVOX	Davos/Dischmat	67.34	18	P	P	11 31 12.2	0.0
	1.7nm,0.7s,baz=270,slow=5.7,SNR=2.5						
BRTR	Keskin Array B	72.27	37	P	P	11 31 43.5	+0.8
	1.8nm,0.9s,baz=193,slow=5.1,SNR=4.7						
AKASG	Malin Array Be	77.73	27	P	P	11 32 12.9	-0.9
	0.5nm,0.5s,baz=225,slow=5.2,SNR=4.4						
NOA	NORSAR Array B	80.62	12	LR	LR	12 08 41.2	
	comp=Z,59nm,18.1s,baz=350,slow=36						
GEYT	Alibeck	87.41	49	LR	LR	12 12 04.0	
	comp=Z,188nm,18.2s,baz=225,slow=36						
ARCES	ARCESS Array B	90.97	13	LR	LR	12 14 23.9	
	comp=Z,175nm,18.5s,baz=250,slow=36						
ULM	Lac du Bonnet	97.54	320	LR	LR	12 10 34.0	
	comp=Z,89nm,18.7s,baz=100,slow=31						

*GCMT **13** 11:38:16.0±0.4, 16°.43S±0°.05×14°.27W±0°.03, h22^{km}±1^{km}, MW4.8/69, Moment Tensor Solution. s20,c21; s69,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.93±.22; M$_{\theta\theta}$0.03±.13; M$_{\phi\phi}$1.90±.16; M$_{r\theta}$1.06±.24; M$_{\theta\phi}$0.10±.09; M$_{\phi r}$-0.48±.22; Best double couple: M$_0$2.20400×10^{16} NP1:φ$_s$203.00000°, δ43.00000°, λ-55.00000°. NP2: φ$_s$339.00000°, δ56.00000°, λ-118.00000°. Principal axes: T 1.9610, Plg7.0000°, Azm89.0000°; N 0.4880, Plg23.0000°, Azm356.0000°; P -2.4470, Plg66.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 13 11:38:18.2±16.0**, 16°.65S×12°.71W, h0^{km}, mb4.2**/3**, mb1 4.1**/3**, mb1mx3.8**/23**, mbtmp4.2**/3**, MS4.0**/5**, Ms1 4.0**/5**, ms1mx3.6**/22 **Error ellipse: s-maj=570.8km s-min=123.0km az=86.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	24.44	19	P	P	11 43 38.9	0.0
	3.6nm,0.8s,baz=187,slow=8.1,SNR=5.1						
TORD	Torodi Ar. Bea	32.86	27	P	P	11 44 54.0	0.0
	4.3nm,0.8s,baz=212,slow=8.4,SNR=17						
BDFB	Brasilia	33.90	267	LR	LR	11 55 06.0	
	comp=Z,331nm,22.0s,baz=104,slow=30						
BOSA	Boshof	36.86	116	LR	LR	11 58 44.5	
	comp=Z,181nm,19.8s,baz=286,slow=33						
CPUP	Villa Florida	42.44	249	LR	LR	12 01 43.9	
	comp=Z,174nm,18.0s,baz=47,slow=33						
PLCA	Paso Flores	55.05	232	LR	LR	12 08 25.3	
	comp=Z,122nm,19.0s,baz=67,slow=33						
ROSC	El Rosal	64.51	284	LR	LR	12 16 07.4	
	comp=Z,182nm,18.1s,baz=174,slow=35						
BRTR	Keskin Array B	70.79	36	P	P	11 49 36.9	0.0
	1.6nm,0.9s,baz=213,slow=7.7,SNR=5.9						

*IDC **13** 11:39:49.6±2.0, 7°.58S×128°.54E, h158^{km}±22^{km}, mb3.5/4, mb1 3.5/8, mb1mx3.3/39, mbtmp4.0/8, Error ellipse: s-maj=25.3km s-min=19.7km az=134.0*

ISC 13 11:39:48.0±0.8**, 7°.72S**±0°.06×**128°.74E**±0°.09**, h151^{km}, n9, σ2^s.37**/14**, mb3.6**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.59	243	P	Pn	11 41 10.6	+1.2
	20nm,0.3s,baz=107,slow=4.9,SNR=11						
BATI				S	Sn	11 42 12.1	-0.8
	16nm,0.3s,baz=46,slow=22,SNR=8.4						
SIJI	Sorong	7.25	20	P	Pn	11 41 32.5	+0.9
	1.3nm,0.3s,baz=186,slow=23,SNR=7.2						
SIJI				S	Sn	11 42 49.4	-3.5
	1.1nm,0.3s,baz=244,slow=23,SNR=2.4						
FITZ	Fitzroy Crossi	10.75	196	P	Pn	11 42 16.7	-1.3
	0.9nm,0.3s,baz=35,slow=11,SNR=23						
FITZ				S	Sn	11 44 13.2	-3.7
	2.0nm,0.3s,baz=112,slow=22,SNR=9.8						
WRA	Warramunga Arr	13.31	156	P	Pn	11 42 53.2	+1.9
	0.3nm,0.3s,baz=328,slow=13,SNR=8.8						
WRA				S	Sn	11 45 18.1	-0.6
	1.2nm,0.3s,baz=335,slow=23,SNR=16						
ASAR	Alice Springs	16.62	163	P	Pn	11 43 37.0	+4.7
	0.8nm,0.3s,baz=338,slow=10,SNR=87						
ASAR				S	S	11 46 35.2	-1.9
	0.3nm,0.3s,baz=338,slow=38,SNR=6.3						
SONM	Songino Array	58.73	343	P	P	11 49 30.0	0.0
	0.3nm,0.4s,baz=86,slow=2.0,SNR=2.7						
PETK	Petropavlovsk-	65.40	19	P	P	11 50 14.6	+0.3
	4.3nm,0.9s,baz=224,slow=6.2,SNR=5.5						
MKAR	Makanchi Array	68.14	328	P	P	11 50 31.4	-0.5
	0.5nm,0.4s,baz=120,slow=8.5,SNR=12						
ZALV	Zalesovo Beam	71.68	334	P	P	11 50 52.3	-0.9
	0.4nm,0.5s,baz=143,slow=3.6,SNR=3.0						

*BJI **13** 11:40:00.0±0.0, 45°.60S×167°.10E, h82^{km}, mb5.3/9*

*WEL **13** 11:40:00, 45°.69S×166°.90E, h84^{km}, ML5.5, Mw5.1, Moment Tensor Solution. s9 Moment tensor: Scale 10^{16} Nm; M$_{rr}$0.29; M$_{\theta\theta}$4.10; M$_{\phi\phi}$-4.39; M$_{r\theta}$-2.03; M$_{\theta\phi}$-0.86; M$_{\phi r}$0.48; Fault plane solution: M$_0$4.79000×10^{16} NP1: φ$_s$228.00000°, δ71.00000°, λ166.00000°. NP2: φ$_s$323.00000°, δ76.00000°, λ20.00000°. Principal axes: T 5079.8500, Plg24.0000°, Azm187.0000°; N -588.0100, Plg66.0000°, Azm357.0000°; P -4491.8400, Plg3.0000°, Azm95.0000°;*

*WEL **13** 11:40:00.7, 46°S±3°×16°7E±°, h83^{km}±4^{km}, M5.8/13, ML6.0/12, MLv5.8/13 Error ellipse: s-maj=0.0km s-min=0.0km az=62.6*

*IDC **13** 11:40:01.3±2.5, 45°.48S×167°.07E, h86^{km}±24^{km}, mb4.2/11, mb1 4.4/11, mb1mx4.1/31, mbtmp4.5/11, MS3.7/12, Ms1 3.7/12, ms1mx3.6/26, Error ellipse: s-maj=19.2km s-min=14.2km az=54.0*

*NEIC **13** 11:40:01.3±1.6, 45°.55S±0°.08×167°.1E±0°.2, h89^{km}±5^{km}, mb4.7/12, Error ellipse: s-maj=16.7km s-min=10.9km az=95.0*

*GCMT **13** 11:40:02.3±0.3, 45°.43S±0°.02×166°.75E±0°.02, h93^{km}±2^{km}, MW5.1/94, Moment Tensor Solution. s46,c55; s94,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.26±.16; M$_{\theta\theta}$3.86±.17; M$_{\phi\phi}$-5.13±.16; M$_{r\theta}$-2.15±.10; M$_{\theta\phi}$-1.80±.15; M$_{\phi r}$0.78±.12; Best double couple: M$_0$5.46500×10^{16} NP1:φ$_s$232.00000°, δ68.00000°, λ161.00000°. NP2: φ$_s$330.00000°, δ73.00000°, λ23.00000°. Principal axes: T 5.4330, Plg28.0000°, Azm192.0000°; N 0.0550, Plg61.0000°, Azm4.0000°; P -5.4980, Plg3.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **13** 11:40:05.9, 45°.39S×167°.59E, h120^{km}, MLv5.7, South Island, New Zealand*

ISC 13 11:40:01.4±0.7**, 45°.60S**±0°.04×**167°.02E**±0°.05**, h86^{km}**±6^{km}**, n212, σ1^s.54**/210**, mb4.6**/15**, 1C-2D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.17	36		Pn	11 40 13.2	-0.6
DCZ	Deep Cove	0.17	36	P	Pn	11 40 13.0	-0.8
DCZ				S	Sn	11 40 22.1	-0.9
PYZ	Puysegur Point	0.61	202		Pn	11 40 15.4	-1.4
PYZ	Puysegur Point	0.61	202	P	Pn	11 40 15.3	-1.4
PYZ				S	Sn	11 40 25.5	-2.6
WHZ	Wether Hill Ro	0.71	114		Pn	11 40 18.1	+0.3
WHZ	Wether Hill Ro	0.71	114	P	Pn	11 40 18.0	+0.3
WHZ				S	Sn	11 40 30.8	+0.9
MLZ	Mavora Lakes	0.81	74		Pn	11 40 19.7	+0.9
MLZ	Mavora Lakes	0.81	74	P	Pn	11 40 19.6	+0.9
MLZ				S	Sn	11 40 33.5	+1.8
MSZ	Milford Sound	1.13	35	P	Pn	11 40 23.0	+0.6
MSZ				S	Sn	11 40 39.2	+1.2
APZ	The Paps	1.41	152	P	Pn	11 40 25.8	0.0
APZ				S	Sn	11 40 44.3	+0.1
WKZ	Wanaka	1.61	62		Pn	11 40 30.0	+1.6
WKZ	Wanaka	1.61	62	P	Pn	11 40 30.0	+1.6
WKZ				S	Sn	11 40 51.2	+2.3
EAZ	Earnscleugh	1.66	78	P	Pn	11 40 30.3	+1.3
EAZ				S	Sn	11 40 51.1	+1.2
SYZ	Scrubby Hill	1.75	123	P	Pn	11 40 30.6	+0.4
SYZ				S	Sn	11 40 52.0	0.0
TUZ	Tuapeka	1.86	102	P	Pn	11 40 32.5	+0.8
TUZ				S	Sn	11 40 55.0	+0.3
HHSZ	Highcliff Hill	2.52	98	P	Pn	11 40 41.2	+0.8
LBZ	Lake Benmore	2.56	63		Pn	11 40 40.8	-0.1
LBZ	Lake Benmore	2.56	63	P	Pn	11 40 40.8	-0.1
LBZ				S	Sn	11 41 10.8	-0.3
ODZ	Otahua Downs	2.62	79		Pn	11 40 41.7	0.0
ODZ	Otahua Downs	2.62	79	P	Pn	11 40 41.7	0.0
FOZ	Fox Glacier	2.88	45	Pn	Pn	11 40 45.0	-0.1
FOZ	Fox Glacier	2.88	45	P	Pn	11 40 44.9	-0.2
TMZ	Timaru	3.08	68	P	Pn	11 40 47.4	-0.6
GCSZ	Gaunt Creek Bo	3.29	47	P	Pn	11 40 49.9	-0.8
ARCZ	Arundel	3.39	62	P	Pn	11 40 51.2	-1.0
RPZ	Rata Peaks	3.44	58	P	Pn	11 40 52.1	-0.8
	1μm,0.3s,baz=220,slow=8.6,SNR=8909						
RPZ				S	Sn	11 41 30.4	-2.2
	3μm,0.3s,baz=74,slow=20,SNR=7.4						
RPZ				LR	LR	11 42 07.2	
	comp=Z,1μm,20.6s,baz=228,slow=38						
RPZ	Rata Peaks	3.44	58	P	Pn	11 40 52.1	-0.8
RPZ				S	Sn	11 41 32.1	-0.5
WVZ	Waitaha Valley	3.67	48	P	Pn	11 40 54.9	-1.0
WACZ	Wakanui South	3.81	66	P	Pn	11 40 57.0	-0.8
MHCZ	Mount Hutt	3.85	59	P	Pn	11 40 57.5	-1.0
RACZ	Rakaia	4.11	65	P	Pn	11 41 00.8	-1.0
OXZ	Oxford	4.25	59		Pn	11 41 02.2	-1.7
OXZ	Oxford	4.25	59	P	Pn	11 41 02.1	-1.7
INZ	Inchbonnie	4.29	50	P	Pn	11 41 03.2	-1.1
MQZ	McQueen's Vall	4.45	67	Pn	Pn	11 41 05.4	-1.0
MQZ	McQueen's Vall	4.45	67	P	Pn	11 41 05.2	-1.2
AKCZ	Akaroa Harbour	4.54	70	P	Pn	11 41 06.8	-0.9
OKCZ	Okains Bay	4.70	69	P	Pn	11 41 09.1	-0.9
AMCZ	Amberley	4.71	61	P	Pn	11 41 08.9	-1.1
LTZ	Lake Taylor	4.71	55	Pn	Pn	11 41 08.6	-1.5
LTZ	Lake Taylor	4.71	55	P	Pn	11 41 08.4	-1.8
GVZ	Greta Valley S	5.06	61	P	Pn	11 41 13.4	-1.4
DSZ	Denniston Nort	5.19	44	P	Pn	11 41 15.0	-1.6
KHZ	Kahutara	5.68	58	Pn	Pn	11 41 21.8	-1.4
KHZ	Kahutara	5.68	58	P	Pn	11 41 21.5	-1.7
THZ	Tophouse	5.74	50	Pn	Pn	11 41 22.3	-1.9
THZ	Tophouse	5.74	50	P	Pn	11 41 21.8	-2.3
QRZ	Quartz Range	6.24	42	Pn	Pn	11 41 29.9	-1.0
QRZ	Quartz Range	6.24	42	P	Pn	11 41 29.3	-1.7
BSWZ	Blackbirch Sta	6.31	54		Pn	11 41 32.3	+0.5
BSWZ	Blackbirch Sta	6.31	54	P	Pn	11 41 30.7	-1.1
NNZ	Nelson	6.38	49		Pn	11 41 31.7	-1.0
NNZ	Nelson	6.38	49	P	Pn	11 41 30.4	-2.4
CMWZ	Cape Campbell	6.48	56		Pn	11 41 35.1	+0.9
CMWZ	Cape Campbell	6.48	56	P	Pn	11 41 33.5	-0.7
TUWZ	Tuamarina	6.54	53		Pn	11 41 32.7	-2.2
TUWZ	Tuamarina	6.54	53	P	Pn	11 41 32.5	-2.4
TCW	Tory Channel	6.87	53	P	Pn	11 41 37.8	-1.7
DUWZ	D'Urville Isla	6.96	49	P	Pn	11 41 39.5	-1.2
SNZO	South Karori	7.05	55		Pn	11 41 41.0	-0.9
BHW	Baring Head	7.08	56	Pn	Pn	11 41 40.4	-2.0
BHW	Baring Head	7.08	56	P	Pn	11 41 40.5	-1.9
WEL	Wellington	7.10	55	P	Pn	11 41 41.7	-0.9
PLWZ	Palliser	7.21	59		Pn	11 41 43.0	-1.2
PLWZ	Palliser	7.21	59	P	Pn	11 41 42.0	-2.1
MSWZ	Moikau Station	7.30	58		Pn	11 41 43.6	-1.8
MSWZ	Moikau Station	7.30	58	P	Pn	11 41 42.4	-3.0
CAW	Cannon Point	7.39	55	P	Pn	11 41 43.0	-3.5
PAWZ	Paruwai Farm	7.43	58	P	Pn	11 41 44.7	-2.4
KIW	Kapiti Island	7.46	53	P	Pn	11 41 44.3	-3.2
TRWZ	Traveller	7.57	59	P	Pn	11 41 47.3	-1.7
OGWZ	Otaki Gorge	7.64	54	P	Pn	11 41 46.5	-3.4
HOWZ	Holdsworth Sta	7.78	56	P	Pn	11 41 49.0	-2.9
TMWZ	Te Maipa	7.87	58	P	Pn	11 41 50.8	-2.4
NMEZ	Namu Road	7.99	42	P	Pn	11 41 54.9	+0.2
TIWZ	Tintock	8.07	56	P	Pn	11 41 53.5	-2.4
NBEZ	Newall Road No	8.10	41	P	Pn	11 41 55.8	-0.5
OHWZ	Ohakea	8.13	51	P	Pn	11 41 56.8	+0.1
KHEZ	Kahui Hut	8.15	42	P	Pn	11 41 55.9	-1.1
CPWZ	Castlepoint	8.18	58	P	Pn	11 41 56.7	-0.5
PREZ	Palmer Road	8.18	43	P	Pn	11 41 57.0	-0.4
LREZ	Lake Rotokare	8.21	44	P	Pn	11 41 58.1	+0.4
NEZ	North Egmont	8.21	42	P	Pn	11 41 57.5	-0.3
PKE	Pukeiti	8.22	41	P	Pn	11 41 57.6	-0.3
POWZ	Post Office Ro	8.26	54	P	Pn	11 41 57.6	-0.8
PRWZ	Pori Road	8.27	56	P	Pn	11 41 55.7	-2.8
WAZ	Wanganui	8.28	48	P	Pn	11 41 58.6	-0.1
DREZ	Durham Road	8.32	42	P	Pn	11 41 58.9	-0.4
BFZ	Birch Farm	8.35	57		Pn	11 41 57.9	-1.7
BFZ	Birch Farm	8.35	57	P	Pn	11 41 56.6	-3.0
MHEZ	Mangahewa	8.47	42	P	Pn	11 42 02.5	+1.2
DVHZ	Dannevirke	8.55	55	P	Pn	11 41 59.7	-2.6
TSZ	Takapari Road	8.59	53	P	Pn	11 42 00.1	-2.9
ANWZ	Angora Road	8.62	57	P	Pn	11 42 00.7	-2.6
VRZ	Vera Road	8.64	44	P	Pn	11 42 02.8	-0.8
MTVZ	Mangateitei	8.80	48	P	Pn	11 42 07.5	+1.6
PKVZ	Pokaka	8.81	47	P	Pn	11 42 05.2	-0.8
PNHZ	Pukenui	8.82	53	P	Pn	11 42 04.0	-2.2
PRHZ	Porangahau	8.84	56	P	Pn	11 42 03.5	-2.9
WPHZ	Waipukurau	8.86	55	P	Pn	11 42 04.6	-2.0
TRVZ	Turoa	8.91	48	P	Pn	11 42 08.3	+0.9
WNVZ	Wahianoa	8.91	48	P	Pn	11 42 06.3	-1.2
DRZ	Dome Shelter	8.93	48	P	Pn	11 42 13.0	+5.1
MOVZ	Moawhango	8.94	49	P	Pn	11 42 06.3	-1.4
WHVZ	Whangaehu Hut	8.94	48	P	Pn	11 42 09.0	+1.1
FWVZ	Far West T-bar	8.94	48	P	Pn	11 42 08.3	+0.3
TUVZ	Tukino	8.99	48	P	Pn	11 42 10.2	+1.8
TWVZ	Taurewa	9.02	47	P	Pn	11 42 08.0	-0.9
NGZ	Ngauruhoe	9.03	48	P	Pn	11 42 08.4	-0.6
BHHZ	Black Hill Sta	9.04	51	P	Pn	11 42 06.2	-2.9
WTVZ	West Tongariro	9.07	47	P	Pn	11 42 08.8	-0.7
OTVZ	Oturere	9.07	48	P	Pn	11 42 07.8	-1.8
KRHZ	Kereru	9.11	52	P	Pn	11 42 07.6	-2.4
KRVZ	Karewarewa	9.11	47	P	Pn	11 42 09.2	-0.9
ETVZ	East Tongariro	9.11	48	P	Pn	11 42 09.3	-0.9
HIZ	Hauiti	9.17	42	Pn	Pn	11 42 09.2	-1.6
HIZ	Hauiti	9.17	42	P	Pn	11 42 08.9	-1.9
KATZ	Kakaramea	9.23	47	P	Pn	11 42 12.1	+0.4
KWHZ	Kaweka Forest	9.29	52	P	Pn	11 42 11.1	-1.4
KAHZ	Kahuranaki	9.29	55	P	Pn	11 42 09.9	-2.6
RITZ	Rihia Road	9.31	48	P	Pn	11 42 12.1	-0.7
RATZ	Rangitukua	9.35	47	P	Pn	11 42 13.8	+0.5
MCHZ	McNeill Hill	9.43	53	P	Pn	11 42 12.5	-1.8
WATZ	Wairara	9.45	46	P	Pn	11 42 13.5	-1.1
BKZ	Black Stump Fm	9.51	51	Pn	Pn	11 42 14.1	-1.4
TLZ	Tolley Road	9.64	44	P	Pn	11 42 16.0	-1.3
KUTZ	Kaahu Road	9.66	46	P	Pn	11 42 18.6	+1.0
MRHZ	Matea Rd	9.71	49	P	Pn	11 42 16.0	-2.2
ARHZ	Aropaoanui	9.72	53	P	Pn	11 42 17.5	-0.8
NMHZ	Naumai	9.73	52	P	Pn	11 42 16.1	-2.4
ALRZ	Allen Road	9.87	48	P	Pn	11 42 19.4	-1.0
GRRZ	Galatos Road	9.91	46	P	Pn	11 42 21.9	+0.9
PRRZ	Plateau Road	9.94	48	P	Pn	11 42 21.9	+0.6
HRRZ	Handcock Road	9.97	47	P	Pn	11 42 22.5	+0.8
WHHZ	Waihua	9.98	53	P	Pn	11 42 20.8	-1.1
HSRZ	Hossack Road	10.01	47	P	Pn	11 42 23.7	+1.4
RAHZ	Arahi	10.01	52	P	Pn	11 42 20.9	-1.4
TOZ	Tahuroa Road	10.10	42	P	Pn	11 42 21.7	-1.8
NGRZ	Ngongotaha	10.14	46	P	Pn	11 42 25.1	+1.0
MUGZ	Murupara	10.16	49	P	Pn	11 42 22.2	-2.1
TARZ	Mount Tarawera	10.20	47	P	Pn	11 42 25.6	+0.6
SNGZ	Shannon Statio	10.25	52	P	Pn	11 42 23.4	-2.2
MKRZ	Makatiti	10.25	47	P	Pn	11 42 28.7	+3.0
AWAZ	Awhitu Peninsu	10.27	37	P	Pn	11 42 25.9	+0.1
WTAZ	Waiatarua	10.36	36	P	Pn	11 42 27.4	+0.4
RVAZ	Riverhead Bore	10.50	35	P	Pn	11 42 29.2	+0.3
URZ	Urewera	10.50	49	P	Pn	11 42 24.4	-4.5
	4.5nm,0.3s,baz=236,slow=7.6,SNR=34						
URZ				S	Sn	11 44 14.5	-10
	21nm,0.3s,baz=74,slow=22,SNR=12						
URZ	Urewera	10.50	49	Pn	Pn	11 42 25.4	-3.5
OUZ	Omahuta	11.51	28	Pn	Pn	11 42 41.4	-1.3
MXZ	Matakaoa Point	11.65	50		Pn	11 42 41.6	-2.9
CAN	Canberra	17.09	301	P	P	11 43 55.6	+0.3
CAN				IAmb	IAmb	11 43 57.2	
	comp=Z,106nm,1.3s						
TOO	Toolangi	17.95	289	P	Pn	11 44 05.3	0.0
TOO				IAmb	IAmb	11 44 07.5	
	comp=Z,54nm,1.1s						
DZM	Mont Dzumac	23.48	359	P	P	11 45 01.8	-1.7
	comp=Z,5.2nm,0.9s,baz=202,slow=11,SNR=2.1						
DZM				LR	LR	11 54 00.4	
	comp=Z,128nm,18.1s,baz=196,slow=36						
DZM	Mont Dzumac	23.48	359	*e*S	S	11 49 07.0	-3.5
	comp=Z,149nm,27.9s						
DZM				*e*LQ	LQ	11 49 48.5	
	comp=Z,822nm,31.1s						
DZM				*e*LR	LR	11 50 53.3	
	comp=Z,379nm,34.1s						
EIDS	Eidsvold	23.91	322	P	P	11 45 08.2	+0.9
EIDS				IAmb	IAmb	11 45 10.3	
	comp=Z,56nm,1.1s						
STKA	Stephens Creek	23.98	296	P	P	11 45 08.9	+1.0
	comp=Z,30nm,0.9s,baz=125,slow=12,SNR=27						
STKA				LR	LR	11 52 23.4	
	comp=Z,331nm,21.8s,baz=142,slow=31						
STKA	Stephens Creek	23.98	296	P	P	11 45 08.8	+1.0
MSVF	Nonsavu	29.27	22	LR	LR	11 56 09.6	
	comp=Z,249nm,19.2s,baz=202,slow=33						
CTA	Charters Tower	30.67	319	P	P	11 46 08.3	+0.5
	comp=Z,8.6nm,1.0s,baz=172,slow=11,SNR=5.2						
VNDA	Vanda	32.09	182	P	P	11 46 20.8	+1.1
	comp=Z,4.5nm,1.1s,baz=12,slow=9.5,SNR=6.2						
VNDA				LR	LR	11 57 32.7	
	comp=Z,38nm,18.7s,baz=22,slow=33						
VNDA	Vanda	32.09	182	P	P	11 46 21.1	+1.4
VNDA				IAmb	IAmb	11 46 21.6	
	comp=Z,7.1nm,1.1s						
AS31	Alice Springs	34.57	298	P	P	11 46 41.0	-1.0
ASAR	Alice Springs	34.57	298	P	P	11 46 40.9	-1.0
	comp=Z,1.7nm,0.8s,baz=131,slow=9.9,SNR=5.0						
ASAR				PcP	PcP	11 49 14.1	-0.7
	comp=Z,1.6nm,0.7s,baz=134,slow=4.1,SNR=2.9						
ASAR				LR	LR	12 00 30.0	
	comp=Z,177nm,18.4s,baz=139,slow=36						
ASAR	Alice Springs	34.57	298	P	P	11 46 40.2	-1.7
CASY	Casey	36.09	215	P	P	11 46 54.1	-0.3
HNR	Honiara	36.55	348	LR	LR	12 02 18.0	
	comp=Z,104nm,18.4s,baz=172,slow=37						
WRA	Warramunga Arr	37.12	303	P	P	11 47 02.5	-1.2
	comp=Z,5.2nm,0.8s,baz=142,slow=8.0,SNR=11						
WRA				PcP	PcP	11 49 21.6	-0.7
	comp=Z,1.0nm,0.9s,baz=163,slow=3.7,SNR=2.9						
PMG	Port Moresby	39.90	328	LR	LR	12 02 38.4	
	comp=Z,66nm,18.7s,baz=126,slow=34						
H01W1	Cape Leeuwin H	41.07	266	T	T	12 31 26.4	
	baz=121,slow=75,SNR=15						
H01W2	Cape Leeuwin H	41.08	266	T	T	12 31 24.4	
	baz=121,slow=75,SNR=14						
H01W3	Cape Leeuwin H	41.08	266	T	T	12 31 25.0	
	baz=121,slow=75,SNR=15						
TBI	Tubuai	41.54	73	*e*LQ	LQ	11 57 11.6	
	comp=Z,360nm,25.0s						
TBI				*e*LR	LR	11 58 55.0	
	comp=Z,250nm,34.8s						
FITZ	Fitzroy Crossi	43.87	295	P	P	11 47 58.5	-0.8
	comp=Z,9.1nm,0.9s,baz=146,slow=8.1,SNR=5.5						
FITZ	Fitzroy Crossi	43.87	295	P	P	11 47 58.4	-0.8
FITZ				IAmb	IAmb	11 47 59.6	
	comp=Z,7.3nm,0.8s						
QSPA	South Pole Qui	44.52	180	P	P	11 48 05.2	+1.0
	comp=Z,23nm,0.9s,baz=13,slow=4.7,SNR=44						
QSPA	South Pole Qui	44.52	180	P	P	11 48 04.8	+0.6
PPT2	Papeete2	45.54	67	*e*LQ	LQ	11 58 53.5	
	comp=Z,1μm,26.5s						
PPT2				*e*LR	LR	12 00 47.2	
	comp=Z,265nm,33.2s						
RKT	Rikitea	51.65	85	*e*LR	LR	12 03 33.0	
	comp=Z,441nm,32.5s						
MAW	Mawson	53.70	207	P	P	11 49 13.9	0.0
	comp=Z,11nm,1.0s,baz=106,slow=8.3,SNR=4.3						
MAW				LR	LR	12 10 48.8	
	comp=Z,76nm,18.2s,baz=78,slow=34						
SIJI	Sorong	54.52	314	LR	LR	12 12 23.3	
	comp=Z,73nm,20.2s,baz=83,slow=36						
BELA	Belgrano 2	56.08	175	P	P	11 49 31.0	+0.1
KAPI	Kappang	57.56	300	LR	LR	12 15 08.4	
	comp=Z,115nm,18.2s,baz=153,slow=37						
SYO	Syowa Base	59.30	199	⇓*e*P	P	11 49 42.4	-11
SYO	Syowa Base	59.30	199	⇓*e*P	P	11 49 54.0	+0.5
SYO	Syowa Base	59.30	199	⇑*e*pP	pP	11 50 16.6	+1.4
SNAA	Sanae	62.81	184	P	P	11 50 17.4	0.0
SNAA	Sanae	62.81	184		P	11 50 17.3	-0.1
SNAA				IAmb	IAmb	11 50 18.8	
	comp=Z,20nm,1.1s						
VNA3	Neumayer Olymp	63.44	181	P	P	11 50 19.4	-2.1
VNA2	Neumayer--Watz	63.72	182	P	P	11 50 23.3	0.0
	baz=166,slow=7.0						
VNA1	Neumayer--Stat	64.01	182	P	P	11 50 25.1	0.0
PLCA	Paso Flores	79.82	139	P	P	11 52 01.0	+0.7
	comp=Z,3.9nm,1.0s,baz=207,slow=6.1,SNR=7.0						
PLCA	Paso Flores	79.82	139	P	P	11 51 59.5	-0.8
PLCA				IAmb	IAmb	11 52 07.7	
	comp=Z,5.6nm,1.1s						
H08S2	Diego Garcia H	87.75	261	T	T	13 29 29.1	
	baz=135,slow=76,SNR=425						
H08S1	Diego Carcia H	87.76	261	T	T	13 29 41.3	
	baz=135,slow=76,SNR=388						
H08S3	Diego Garcia H	87.77	261	T	T	13 29 28.9	
	baz=135,slow=76,SNR=475						
CMAR	Chiang Mai Arr	88.58	298	P	P	11 52 44.6	-0.1
	comp=Z,1.2nm,0.7s,baz=159,slow=3.3,SNR=9.0						
CMAR				LR	LR	12 34 00.2	
	comp=Z,27nm,19.7s,baz=255,slow=37						
CMAR	Chiang Mai Arr	88.58	298	P	P	11 52 44.5	-0.3
NJ2	Nanjing	88.76	321	*e*P	P	11 52 47.6	+2.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HHC	Hu-ho-hao-te	99.32	321	*e*P	Pdif	11 53 36.3	+2.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ	Urumqi	113.40	309	*e*PKP	PKiKP	11 58 29.3	+0.5
KSH	Kashi	117.46	299	PKP	PKiKP	11 58 36.4	-0.4
KSH				PP	PP	11 59 56.9	+6.5
MKAR	Makanchi Array	118.23	309	PKP	PKPdf	11 58 37.1	-0.8
	comp=Z,0.9nm,1.0s,baz=122,slow=3.4,SNR=4.9						
MKAR	Makanchi Array	118.23	309		PKPdf	11 58 36.8	-1.1
TORD	Torodi Ar. Bea	145.34	206	PKPbc	PKPbc	11 59 28.7	-0.7
	comp=Z,30nm,0.8s,baz=154,slow=2.1,SNR=106						
BRTR	Keskin Array B	145.61	277	PKPbc	PKPbc	11 59 29.2	-0.6
	comp=Z,2.7nm,0.8s,baz=128,slow=4.7,SNR=12						
BRTR	Keskin Array B	145.61	277		PKPdf	11 59 28.8	-0.6
KLMR	Klimovskoe	146.12	316	*e*PKPdf	PKPdf	11 59 29.4	+0.1
KLMR				AMP		11 59 32.1	
	comp=Z,18nm,1.4s						
ARCES	ARCESS Array B	149.30	335	PKPbc	PKPbc	11 59 38.5	-0.4
	comp=Z,3.4nm,0.7s,baz=73,slow=4.1,SNR=9.5						
AKASG	Malin Array Be	151.68	296	PKPbc	PKPbc	11 59 44.6	-0.3
	comp=Z,5.1nm,0.7s,baz=79,slow=2.3,SNR=12						
AKASG	Malin Array Be	151.68	296		PKPbc	11 59 44.4	-0.6
FINES	FINESS Array B	152.43	319	PKPbc	PKPbc	11 59 46.0	-0.3
	comp=Z,3.7nm,0.8s,baz=119,slow=2.4,SNR=9.5						
ESDC	Sonseca Array	171.10	231	PKPab	PKPab	12 01 19.1	-0.1
	comp=Z,0.2nm,0.6s,baz=123,slow=5.5,SNR=5.5						

*IDC **13** 11:57:24.3±1.3, 13°.05N×143°.89E, h154^{km}±27^{km}, mb3.5/7, mb1 3.6/7, mb1mx3.3/34, mbtmp3.9/7, Error ellipse: s-maj=60.8km s-min=16.0km az=84.0*

ISC 13 11:57:24.0±0.9**, 13°.1N**±0°.2×**143°.8E**±0°.1**, h150^{km}, n11, σ0^s.55**/9**, mb3.7**/7**, South of Mariana Islands**

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

GUMO	Guam	1.15	62	P	Pn	11 57 49.9	-0.1
	37nm,0.3s,baz=287,slow=1.4,SNR=11						
GUMO				S	Sn	11 58 10.3	+0.3
	60nm,0.3s,baz=180,slow=20,SNR=5.2						
H11N1	WAKE ISLAND Hy	23.08	70	T	T	12 26 06.3	
	baz=261,slow=75						
H11N2	WAKE ISLAND Hy	23.09	70	T	T	12 26 20.8	
	baz=261						
H11N3	WAKE ISLAND Hy	23.10	70	T	T	12 26 11.3	
	baz=261,slow=75						
WRA	Warramunga Arr	34.09	196	P	P	12 03 54.6	+0.2
	0.6nm,0.5s,baz=1.6,slow=9.6,SNR=9.4						
ASAR	Alice Springs	37.76	195	P	P	12 04 25.7	+0.1
	0.6nm,0.5s,baz=18,slow=13,SNR=16						
CMAR	Chiang Mai Arr	43.45	283	P	P	12 05 12.3	-0.1
	0.9nm,0.5s,baz=81,slow=7.0,SNR=4.9						
SONM	Songino Array	46.59	326	P	P	12 05 37.7	+0.7
	0.9nm,0.5s,baz=146,slow=6.9,SNR=7.9						
MKAR	Makanchi Array	61.17	316	P	P	12 07 23.2	+0.4
	1.2nm,0.5s,baz=91,slow=8.3,SNR=17						
ZALV	Zalesovo Beam	61.47	325	P	P	12 07 24.5	0.0
	0.5nm,0.4s,baz=119,slow=6.5,SNR=2.9						
FINES	FINESS Array B	91.22	335	P	P	12 10 10.9	-1.0
	1.9nm,0.7s,baz=64,slow=3.2,SNR=1.8						

JMA 13 12:16:42.5±0.2, 38°.09N×144°.53E, h41^{km}, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.42	276	P	Pn	12 17 20.8	+1.2
JIKH				S	Sn	12 17 49.4	+1.4
OFUJ	Ofunato	2.45	295	P	Pn	12 17 21.5	+1.5
OFUJ				*e*S	Sn	12 17 50.7	+2.0
JKMT	Kesennumamotoy	2.50	288	P	Pn	12 17 22.2	+1.5
JKMT				S	Sn	12 17 51.8	+1.8
JIO	Ouri	2.53	279	P	Pn	12 17 22.8	+1.8
JIO				S	Sn	12 17 52.4	+1.8
MIYJ	Miyakonagasawa	2.58	306	P	Pn	12 17 23.1	+1.3
MIYJ				S	Sn	12 17 53.1	+1.1
JMK	Ichinoseki	2.73	289	P	Pn	12 17 25.7	+1.8
JMK				*e*S	Sn	12 17 57.6	+1.9
JOM	Ohasama	2.88	300	P	Pn	12 17 28.2	+2.3
JOM				S	Sn	12 18 01.4	+2.1
JANG	Nango	3.27	315	P	Pn	12 17 33.1	+1.9
JANG				S	Sn	12 18 09.6	+0.8
JFT	Otama	3.37	262	S	Sn	12 18 13.5	+2.1
JYK	Kaneyama	3.38	285	P	Pn	12 17 35.3	+2.6
JYK				S	Sn	12 18 15.3	+3.8
JOT	Ohata	4.24	322	P	Pn	12 17 47.2	+2.6
BSO1	Boso 1	4.47	221	P	Pn	12 17 47.1	-0.1
JCH	Churui	4.61	349	P	Pn	12 17 49.8	+0.2
JCH				*e*S	Sn	12 18 39.9	-1.9
JKB	Kayabe	4.65	326	*e*S	Sn	12 18 41.9	-0.9
JRY	Ryogami san	4.95	247	P	Pn	12 17 55.5	+1.1
JRY				S	Sn	12 18 49.8	-0.7
NEM2	Nemuro 2	5.35	10	P	Pn	12 17 57.4	-2.3
NEM2				*e*S	Sn	12 18 53.4	-6.6
JTKR	Abashiri--Toko	5.89	356	P	Pn	12 18 07.5	+0.3
JTKR				*e*S	Sn	12 19 10.3	-3.1
JHR	Hokuryu	6.03	340	P	Pn	12 18 11.5	+2.3

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*ROM **13** 12:18:59.6±0.2, 44°.081N±0°.009×7°.27E±0°.01, h10^{km}, ML2.4/10, Error ellipse: s-maj=1.1km s-min=0.5km az=32.0*

*STR **13** 12:18:60.0±0.2, 44°N±1°×°±°, h5^{km}±2^{km}, MLv2.6/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*LDG **13** 12:18:59.7±0.1, 44°.06N×7°.25E, h2^{km}, Md2.7/2, Ml2.8/25, Error ellipse: s-maj=1.0km s-min=0.8km az=41.0*

*GEN **13** 12:18:59.6, 44°.06N×7°.24E, h8^{km}±1^{km}, Ml2.4*

ISC 13 12:18:59.5±0.8**, 44°.07N**±0°.01×**7°.22E**±0°.01**, h11**^{km}±5^{km}**, n74,** σ1^{s}**75**/141**, 5C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURF	col de Turini	0.16	127	Pg	Pg	12 19 02.4	-0.8
TURF				Sg	Sg	12 19 04.7	-1.0
ISO	Isola	0.17	313	Pg	Pg	12 19 03.4	+0.1
ISO				Sg	Sg	12 19 06.3	+0.4
STV	Sant Anna di V	0.19	24	P	Pg	12 19 03.9	+0.2
STV				S	Sg	12 19 07.0	+0.4
STV	Sant Anna di V	0.19	24	⇑*i*P	Pg	12 19 03.9	+0.2
STV				S	Sg	12 19 06.9	+0.4
STV				AML	AML		
	comp=N,1970μm,0.4s						
STV				AML	AML		
	comp=E,1720μm,1.4s						
ENR	Entracque	0.21	43	P	Pg	12 19 04.2	+0.1
ENR				S	Sg	12 19 07.5	+0.3
ENR	Entracque	0.21	43	⇑*i*P	Pg	12 19 04.2	+0.1
ENR				S	Sg	12 19 07.4	+0.3
ENR				AML	AML		
	comp=E,2660μm,0.8s						
ENR				AML	AML		
	comp=N,3045μm,0.3s						
SAOF	Saorge	0.26	109	Pg	Pg	12 19 04.7	-0.1
SAOF				Sg	Sg	12 19 08.0	-0.4
SAOF	Saorge	0.26	109	P	Pg	12 19 04.9	+0.1
SAOF				S	Sg	12 19 08.0	-0.4
SAOF	Saorge	0.26	109	AML	AML		
	comp=E,992μm,0.4s						
SAOF				AML	AML		
	comp=N,1555μm,0.6s						
SBF	Sospel	0.26	143	*e*Pg	Pg	12 19 04.2	-0.7
SBF				*e*Sg	Sg	12 19 07.9	-0.5
	comp=N,493nm,0.3s						
SBF				*e*S	Sb	12 19 16.2	+5.4
ESCA	l'Escarene	0.26	155	Pg	Pg	12 19 04.5	-0.4
ESCA				Sg	Sg	12 19 08.4	-0.1
MON	Monaco	0.37	156	Pg	Pg	12 19 07.0	+0.1
MON				Sg	Sg	12 19 12.3	+0.5
CALF	Calern	0.38	214	Pg	Pg	12 19 07.4	+0.3
CALF				Sg	Sg	12 19 13.0	+0.7
MGRO	Montegrosso	0.43	94	P	Pg	12 19 07.7	-0.2
MGRO				S	Sg	12 19 14.0	+0.4
MGRO	Montegrosso	0.43	94	⇑*i*P	Pg	12 19 07.8	-0.2
MGRO				S	Sg	12 19 13.7	+0.1
MGRO				AML	AML		
	comp=E,704μm,0.4s						
MGRO				AML	AML		
	comp=N,1154μm,1.1s						
MGRO				AML	AML		
	comp=N,1159μm,1.1s						
MGRO				AML	AML		
	comp=E,703μm,0.4s						
PZZ	Stroppo	0.44	350	P	Pg	12 19 08.7	+0.4
PZZ				S	Sg	12 19 15.3	+1.0
PZZ	Stroppo	0.44	350	P	Pg	12 19 08.6	+0.4
PZZ				S	Sg	12 19 15.2	+1.0
PZZ				AML	AML		
	comp=E,992μm,0.3s						
PZZ				AML	AML		
	comp=N,943μm,1.4s						
PZZ				AML	AML		
	comp=E,992μm,0.3s						
PZZ				AML	AML		
	comp=N,942μm,1.4s						
GBOS	Grotte di Boss	0.48	69	P	Pg	12 19 08.8	-0.1
GBOS				S	Sg	12 19 15.2	-0.1
GBOS	Grotte di Boss	0.48	69	⇑*i*P	Pg	12 19 08.8	-0.1
GBOS				S	Sg	12 19 15.2	-0.1
GBOS				AML	AML		
	comp=E,595μm,0.5s						
GBOS				AML	AML		
	comp=N,478μm,0.4s						
SURF	Saint Ours	0.50	325	Pg	Pg	12 19 10.0	+0.6
SURF				Sg	Sb	12 19 17.7	-0.3
IMI	Imperia	0.51	108	P	Pg	12 19 09.3	-0.2
IMI				S	Sg	12 19 16.3	-0.1
IMI	Imperia	0.51	108	P	Pg	12 19 09.3	-0.2
IMI				S	Sg	12 19 16.2	-0.1
IMI				AML	AML		
	comp=E,1105μm,0.4s						
IMI				AML	AML		
	comp=N,1195μm,1.5s						
EILF	Villa Eilenroc	0.53	187	Pg	Pg	12 19 09.9	+0.1
EILF				Sg	Sg	12 19 17.0	+0.4
RORO	Rocca Rossa	0.61	86	P	Pg	12 19 11.1	-0.3
RORO				S	Sg	12 19 19.3	-0.1
RORO	Rocca Rossa	0.61	86	⇓*i*P	Pg	12 19 11.1	-0.3
RORO				S	Sg	12 19 19.5	0.0
RORO				AML	AML		
	comp=N,548μm,0.3s						
RORO				AML	AML		
	comp=E,444μm,1.2s						
OGAG	Argentiere	0.62	309	Pg	Pn	12 19 16.6	+2.1
FRF	La Foret Royal	0.66	219	*e*Pg	Pg	12 19 12.1	-0.1
FRF				*e*Sg	Sg	12 19 20.6	-0.2
	comp=E,116nm,0.2s						
FRF				*e*S	Sn	12 19 26.7	+1.5
OGDI	Digne	0.66	274	Pg	Pn	12 19 14.8	-0.2
MBDF	Montbardon	0.73	334	*e*Pg	Pg	12 19 13.7	0.0
MBDF				*e*Sg	Sg	12 19 23.4	+0.1
	comp=E,22nm,0.1s						
BHB	Bricherasio	0.77	2	P	Pg	12 19 14.1	-0.4
BHB				S	Sg	12 19 24.9	+0.3
BHB	Bricherasio	0.77	2	P	Pg	12 19 14.0	-0.4
BHB				AML	AML		
	comp=E,202μm,0.4s						
BHB				AML	AML		
	comp=N,190μm,0.9s						
FINB	Finale Ligure	0.80	82	P	Pg	12 19 14.6	-0.5
FINB				S	Sg	12 19 25.7	+0.1
FINB				AML	AML		
	comp=E,414μm,0.4s						
FINB				AML	AML		
	comp=N,396μm,0.6s						
QLNO	Quiliano	0.85	72	⇑P	Pg	12 19 15.7	-0.2
BLAF	les Blancs	0.85	262	P	Pg	12 19 13.1	-2.9
BLAF				Pn	Pn	12 19 18.5	+0.9
BLAF				Sn	Sn	12 19 32.7	+2.5
LMR	La Mourre	0.90	215	*e*Pg	Pg	12 19 16.5	-0.3
LMR	La Mourre	0.90	215	*e*P	Pn	12 19 18.2	+0.1
LMR				*e*Sg	Sb	12 19 28.9	-0.2
LMR				*e*S	Sn	12 19 32.5	+1.4
MLYF	Mely	1.05	266	Pn	Pn	12 19 21.5	+1.2
MLYF				Sn	Sn	12 19 37.4	+2.4
PCP	Piancastagn	1.06	63	P	Pb	12 19 19.7	-0.3
PCP				S	Sg	12 19 32.8	-1.0
PCP	Piancastagn	1.06	63	AML	AML		
	comp=N,360μm,0.6s						
PCP				AML	AML		
	comp=E,325μm,0.9s						
RSP	Reno Superiore	1.08	2	P	Pb	12 19 19.2	-1.2
ARTF	Artigues	1.13	245	Pg	Pg	12 19 21.9	+0.6
ARTF				Sg	Sn	12 19 37.9	+1.0
BSTF	la Bastide-des	1.15	261	Pn	Pg	12 19 23.1	+1.5
BSTF				Sn	Sn	12 19 39.8	+2.3
SMRF	Simiane la Rot	1.19	266	*e*Pg	Pg	12 19 23.5	+1.1
SMRF				*e*Sg	Sn	12 19 38.3	-0.1
SMRF				*e*S	Sg	12 19 41.3	+3.5
ORIF	Oris-en-Rattie	1.28	312	*e*Pg	Pb	12 19 23.9	+0.1
ORIF				*e*Sg	Sn	12 19 40.7	0.0
	comp=E,34nm,0.3s						
ORIF				*e*S	Sg	12 19 43.4	+2.7
ORIF	Oris-en-Rattie	1.28	312	P	Pb	12 19 23.8	+0.1
ORIF				AML	AML		
	comp=N,138μm,1.6s						
ORIF				AML	AML		
	comp=E,166μm,1.2s						
GDM	Grand'Maison	1.38	326	Pn	Pg	12 19 26.2	+0.1
GDM				Sn	Sg	12 19 45.0	+1.0
LSD	Lago del Serru	1.39	358	AML	AML		
	comp=E,281μm,0.5s						
LSD				AML	AML		
	comp=N,236μm,0.3s						
LPG	La Plagne	1.47	347	*e*P	Pg	12 19 27.8	+0.1
LPG				*e*Sg	Sg	12 19 46.6	-0.1
	comp=N,92nm,0.4s						
LPL	La Plagne	1.49	347	*e*P	Pg	12 19 28.1	0.0
LPL				*e*Sg	Sb	12 19 47.0	+0.7
	comp=N,140nm,0.5s						
LPL				*e*S	Sg	12 19 49.2	+1.8
ASEAF	Site Antares,	1.49	211	Pn	Pb	12 19 27.4	+0.4
ASEAF				Sn	Sg	12 19 47.4	0.0
OGSM	Saint Maurice	1.88	325	Pn	Pb	12 19 33.6	-0.3
VIVF	Saint-Julien-l	1.98	294	*e*P	Pn	12 19 34.4	+1.3
VIVF				*e*Sn	Sn	12 19 57.4	-0.6
	comp=N,15nm,0.2s						
VIVF				*e*S	Sb	12 20 01.1	+0.6
VIVF				*e*Sg	Sg	12 20 03.1	-0.2
	comp=N,11nm,0.2s						
PGF	Pioggiola	2.00	139	*e*Pn	Pn	12 19 31.6	-1.8
PGF				*e*Sn	Sn	12 19 55.1	-3.4
	comp=N,5.9nm,0.2s						
PGF	Pioggiola	2.00	139	P	Pn	12 19 31.6	-1.8
LASF	Ste Croix	2.42	271	*e*Pn	Pn	12 19 39.1	0.0
LASF	Ste Croix	2.42	271	*e*Pg	Pg	12 19 44.8	-1.2
LASF				*e*Sn	Sn	12 20 06.7	-2.1
	comp=N,17nm,0.3s						
LASF				*e*S	Sb	12 20 12.3	-0.8
LASF				*e*Sg	Sg	12 20 16.9	-0.4
	comp=N,13nm,0.3s						
CABF	La Chapelle	2.66	343	*e*P	Pn	12 19 44.9	+2.4
CABF	La Chapelle	2.66	343	*e*Pg	Pg	12 19 50.2	-0.4
CABF				*e*Sn	Sn	12 20 13.2	-1.7
	comp=N,7.3nm,0.4s						
SMF	Signal de Mont	3.51	318	*e*Pn	Pn	12 19 54.2	+0.2
SMF	Signal de Mont	3.51	318	*e*Pg	Pg	12 20 05.7	-1.0
SMF				*e*Sn	Sn	12 20 33.4	-2.1
	comp=N,3.4nm,0.3s						
HINF	Hinteralfeld	3.76	356	*e*P	Pn	12 20 00.0	+2.5
HINF				*e*Sn	Sn	12 20 39.4	-2.3
	comp=N,3.0nm,0.2s						
CAF	Calviac	3.79	285	*e*P	Pn	12 19 59.5	+1.6
CAF				*e*Sn	Sn	12 20 40.5	-1.9
	comp=N,9.7nm,0.3s						
CAF				*e*S	Sb	12 20 46.2	-6.1
FETA	Feichten	3.85	39	*e*Pn	Pn	12 20 02.0	+3.1
	comp=N,1.4nm,0.4s						
FETA				*e*Sn	Sn	12 20 48.8	+4.7
	comp=N,4.2nm,0.8s						
AVF	Avril sur Loir	3.85	316	*e*P	Pn	12 20 01.0	+2.3
AVF				*e*Sn	Sn	12 20 40.9	-3.0
	comp=N,3.7nm,0.5s						
BGF	Bois d'Agland	3.96	310	*e*P	Pn	12 20 02.6	+2.3
BGF				*e*Sn	Sn	12 20 44.0	-2.7
	comp=N,9.5nm,0.4s						
SSF	Saint Saulge	3.97	320	*e*P	Pn	12 20 02.7	+2.3
SSF				*e*Sn	Sn	12 20 44.2	-2.7
	comp=N,2.4nm,0.3s						
LOR	Lormes	3.97	325	*e*P	Pn	12 20 02.9	+2.5
	baz=144						
LOR				*e*Sn	Sn	12 20 44.6	-2.4
	comp=N,2.5nm,0.2s						
HAU	Haudompre	3.98	352	*e*P	Pn	12 20 03.0	+2.4
HAU				*e*Sn	Sn	12 20 44.4	-2.9
	comp=N,5.2nm,0.3s						
SQTA	Sankt Quirin	4.21	40	*e*Pn	Pn	12 20 06.5	+2.7
	comp=N,1.5nm,0.3s						
SQTA				*e*Sn	Sb	12 20 59.4	-5.3
	comp=N,2.2nm,0.3s						
RJF	Les Rejaudoux	4.25	289	*e*Sn	Sn	12 20 51.2	-2.6
	comp=N,6.5nm,0.4s						
RJF				*e*Sg	Sg	12 21 13.3	-2.6
	comp=N,1.7nm,0.2s						
MOTA	Moosalm	4.26	38	*e*Pn	Pn	12 20 06.6	+2.1
	comp=N,1.0nm,0.3s						
MOTA				*i* Sn	Sn	12 20 59.0	+4.7
	comp=N,1.3nm,0.3s						
CDF	Champ du Feu	4.34	1	*e*P	Pn	12 20 07.8	+2.2
CDF				*e*Sn	Sn	12 20 53.0	-3.3
	comp=N,0.5nm,0.2s						
PAGF	Fort de Pagny	4.60	348	*e*P	Pn	12 20 12.1	+3.0
PAGF				*e*Sn	Sn	12 20 59.4	-3.2
	comp=N,0.5nm,0.2s						
GRR	Gorron	7.07	310	*e*P	Pn	12 20 45.5	+2.6

MEX 13 13:09:03.1±0.4**, 14°.81N×92°.39W, h97**^{km}±5^{km}**, MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.16	51	*e*P	Pn	13 09 15.7	-1.1
THIG				*e*S	Sn	13 09 26.1	-0.9
THIG		0.16	51	*e*P	Pn	13 09 15.6	-1.3
THIG				*e*S	Sn	13 09 25.2	-1.9
PCIG		1.20	318	*e*P	Pn	13 09 24.0	-1.6
PCIG				*e*S	Sn	13 09 41.3	-1.1

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*NNC **13** 13:34:53.6±14.0, 37°.02N×70°.15E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=115.3km s-min=108.0km az=145.0*

*IDC **13** 13:34:56.6±8.5, 36°.88N×70°.36E, h210^{km}±55^{km}, mb3.4/2, mb1 3.4/5, mb1mx2.9/42, mbtmp4.0/5, Error ellipse: s-maj=75.6km s-min=37.3km az=11.0*

ISC 13 13:34:49.3±1.5**, 36°.50N**±0°.09×**70°.2E**±0°.2**, h150**^{km}**, n21,** σ1^{s}**55**/25**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.25	25	P	Pn	13 36 21.9	+2.2
	SNR=133						
KK31	Karatay Array	6.61	2	⇑Pn	Pn	13 36 26.2	+2.2
	5.3nm,0.4s,baz=199,slow=16,SNR=56						
KK31				⇓Sn	Sn	13 37 37.6	-0.6
	2.4nm,0.3s,baz=196,slow=27,SNR=5.0						
UCH	Uchtor	6.63	29	P	Pn	13 36 26.9	+2.1
	SNR=32						
EKS2	Erkin-Say	6.75	23	P	Pn	13 36 28.6	+2.5
	SNR=31						
AAK	Ala-Archa	6.98	27	P	Pn	13 36 31.5	+2.4
	2.3nm,0.3s,baz=187,slow=5.5,SNR=37						
AAK				S	Sn	13 37 47.1	-0.3
	2.8nm,0.3s,baz=358,slow=20,SNR=28						
AAK	Ala-Archa	6.98	27	P	Pn	13 36 31.3	+2.1
	SNR=13						
AAK	Ala-Archa	6.98	27	⇓Pn	Pn	13 36 31.1	+1.9
	4.9nm,0.6s						
AAK				⇑Sn	Sn	13 37 46.9	-0.6
	40nm,0.7s						
USP	Ospenovka	7.53	25	P	Pn	13 36 38.7	+2.3
	SNR=11						
TKM2	Tokmak 2	7.65	31	P	Pn	13 36 39.9	+1.8
	SNR=16						
TKM2	Tokmak 2	7.65	31	⇓Pn	Pn	13 36 39.8	+1.6
	9.0nm,0.5s						
TKM2				⇑Sn	Sn	13 38 02.3	-1.4
	9.3nm,0.8s						
MKAR	Makanchi Array	13.69	38	P	Pn	13 37 57.5	+0.4
	0.5nm,0.3s,baz=226,slow=16,SNR=19						
DMN	Daman	15.43	121	*e*P	P	13 38 20.5	-0.1
KKN	Kakani	15.44	120	*e*P	P	13 38 20.8	+0.2
	4.6nm,0.3s						
PKIN	Phulchoki	15.65	120	*e*P	P	13 38 23.2	+0.2
	8.1nm,0.4s						
PKI	Pulchoki	15.67	120	*e*P	P	13 38 23.7	+0.5
	8.4nm,0.5s						
GUN	Gumba	15.79	118	*e*P	P	13 38 24.9	+0.3
	5.1nm,0.3s						
RAMN	Ramite	16.88	120	*e*P	Pn	13 38 37.1	+0.1
	6.2nm,0.5s						
ODAN	Odare	17.49	118	*e*P	Pn	13 38 44.9	+0.6
ZALV	Zalesovo Beam	20.20	26	P	P	13 39 10.8	-1.3
	1.2nm,0.3s,baz=210,slow=9.9,SNR=14						
SONM	Songino Array	28.88	56	P	P	13 40 32.7	-1.2
	0.3nm,0.3s,baz=262,slow=8.6,SNR=2.5						
ARCES	ARCESS Array B	40.90	338	P	P	13 42 15.1	-1.1
	5.5nm,1.0s,baz=118,slow=7.0,SNR=7.4						

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*SJA **13** 14:34:24.5±0.6, 33°.57S×70°.37W, h118^{km}±3^{km}, ML3.8, MW4.0*

*GUC **13** 14:34:25.8±0.5, 33°.59S×70°.33W, h114^{km}±1^{km}, ML4.2*

*NEIC **13** 14:34:26±1.4, 33°.61S±0°.05×70°.27W±0°.09, h102^{km}±5^{km}, Error ellipse: s-maj=10.9km s-min=7.4km az=101.0*

*IDC **13** 14:34:28.2±3.7, 33°.40S×70°.03W, h114^{km}±37^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.6/29, mbtmp3.9/7, Error ellipse: s-maj=33.9km s-min=27.3km az=154.0*

ISC 13 14:34:26.3±0.6**, 33°.59S**±0°.03×**70°.32W**±0°.03**, h106**^{km}±5^{km}**, n108,** σ1^{s}**14**/142**, mb4.4**/19**, 10C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MT03	Universidad Ad	0.19	302	⇑*i*P	Pn	14 34 41.2	-0.1
MT03				*i* S	Sn	14 34 52.5	-0.1
MT03				IAML		14 34 54.1	
	comp=E,24μm,0.1s						
FSR	Penalolen	0.21	303	*e*P	Pn	14 34 42.5	+1.1
FSR				*i* S	Sn	14 34 54.0	+1.3
LMEL	Las Melosas	0.27	159	⇓*i*P	Pn	14 34 41.4	-0.4
LMEL				*i* S	Sn	14 34 53.3	0.0
MT05	Renca	0.40	300	⇑*i*P	Pn	14 34 42.0	-0.2
MT05				*i* S	Sn	14 34 54.3	+0.1
MT05				IAML		14 34 55.7	
	comp=N,11μm,0.3s						
MT05	Renca	0.40	300		Pn	14 34 41.9	-0.3
MT05				Sn	Sn	14 34 53.9	-0.3
PEL	Peldehue	0.54	326	⇑*i*P	Pn	14 34 42.8	-0.3
PEL				*i* S	Sn	14 34 55.5	-0.2
PEL				IAML		14 34 56.7	
	comp=N,12μm,0.2s						
PEL	Peldehue	0.54	326		Pn	14 34 42.8	-0.3
PEL				Sn	Sn	14 34 55.1	-0.6
PEL	Peldehue	0.54	326	*e*P	Pn	14 34 42.9	-0.3
PEL				*e*S	Sn	14 34 56.4	+0.7
MT09	Talagante	0.59	252	⇑*i*P	Pn	14 34 43.4	-0.2
MT09				*i* S	Sn	14 34 56.8	+0.3
MT09				IAML		14 34 58.1	
	comp=N,15μm,0.1s						
MT02	Curacav	0.76	296	⇑*i*P	Pn	14 34 44.5	-0.3
MT02				*i* S	Sn	14 34 58.7	-0.1
MT02	Curacav	0.76	296		Pn	14 34 44.5	-0.3
MT02				Sn	Sn	14 34 57.8	-1.0
ROC1	El Roble	0.85	316		Pn	14 34 45.6	-0.3
ROC1				Sn	Sn	14 35 00.3	-0.4
ROC1	El Roble	0.85	316	*e*P	Pn	14 34 45.5	-0.4
ROC1				*e*S	Sn	14 35 01.1	+0.4
ROCH	El Roble	0.85	317	⇑*i*P	Pn	14 34 45.5	-0.4
ROCH				*i* S	Sn	14 35 00.6	0.0
ROCH				IAML		14 35 02.0	
	comp=N,6μm,0.2s						
VA03	San Esteban	0.85	347	⇑*i*P	Pn	14 34 45.7	-0.1
VA03				*i* S	Sn	14 35 00.5	0.0
VA03				IAML		14 35 02.8	
	comp=E,9μm,0.3s						
VA03	San Esteban	0.85	347		Pn	14 34 45.6	-0.2
VA03				Sn	Sn	14 35 00.3	-0.2
VA05	Santo Domingo	1.08	266	⇑*i*P	Pn	14 34 47.7	-0.3
VA05				*i* S	Sn	14 35 04.1	-0.4
VA05				IAML		14 35 05.6	
	comp=N,4μm,0.2s						
AAGR	Agrelo	1.35	68	*e*P	Pn	14 34 50.9	-0.3
AAGR				IAML		14 35 20.0	
	comp=Z,449nm,0.6s						
ARCO	CERRO ARCO	1.38	58	*e*P	Pn	14 34 51.7	0.0
ARCO				*e*S	Sn	14 35 11.8	+0.9
ARCO				IAML		14 35 12.3	
	comp=Z,1μm,0.7s						
AVIZ	Vizcacheras	1.51	86	*e*S	Pn	14 34 54.6	+1.5
AUSP	Uspallata	1.57	30	*e*P	Pn	14 34 54.0	-0.1
AUSP				*e*S	Sn	14 35 16.5	+1.3
ASAL	Salagasta	1.60	52	*e*P	Pn	14 34 54.2	0.0
ASAL				*e*S	Sn	14 35 16.7	+1.3
ASAL				IAML		14 35 20.3	
	comp=Z,633nm,0.6s						
LAMA	Las Malvinas	1.62	146	*e*P	Pn	14 34 54.8	+0.3
COIS	El Sosneado	1.63	159	*e*P	Pn	14 34 50.3	-4.2
COIS				*e*S	Sn	14 35 17.2	+1.4
BO03	Pichilemu	1.63	236	⇑*i*P	Pn	14 34 54.2	-0.2
BO03				*i* S	Sn	14 35 15.4	-0.5
RFA	San Rafael	1.94	128	*e*P	Pn	14 34 57.5	-0.8
RFA				*e*S	Sn	14 35 22.4	-0.5
RTLS	Leoncito	1.99	26	*e*P	Pn	14 34 59.9	+0.6
RTLS				*e*S	Sn	14 35 26.6	+2.2
RTLS				IAML		14 35 27.1	
	comp=Z,437nm,0.7s						
PUMA	Malargue	2.03	160	*e*P	Pn	14 34 59.9	+0.4
RTCV	Cerro Valdivia	2.29	41	*e*P	Pn	14 35 02.4	-0.4
RTCV				*e*S	Sn	14 35 30.9	0.0
ZON	Zonda	2.47	35	Pn	Pn	14 35 04.7	-0.5
ZON	Zonda	2.47	35	*e*P	Pn	14 35 05.2	0.0
ZON				*e*S	Sn	14 35 35.2	+0.1
RTLL	Cerro Villicun	2.74	35	*e*P	Pn	14 35 08.2	-0.6
RTLL				*i* S	Sn	14 35 40.4	-1.2
RTLL				IAML		14 35 42.0	
	comp=N,734nm,0.5s						
RTLL	Cerro Villicun	2.74	35	*e*P	Pn	14 35 08.4	-0.4
RTLL				*e*S	Sn	14 35 41.3	-0.3
RTLL				IAML		14 35 41.6	
	comp=Z,234nm,1.0s						
CO03	El Pedregal	2.76	353	⇑*e*P	Pn	14 35 09.0	-0.2
CO03				*i* S	Sn	14 35 40.9	-1.3
CO03				IAML		14 35 45.4	
	comp=N,458nm,0.3s						

CO03	El Pedregal	2.76	353		Pn	14 35 08.9	-0.3
BI02	San Fabin de	3.16	194		Pn	14 35 14.7	+0.3
ACCO	Cerro Coronel	3.18	20	eP	Pn	14 35 14.8	-0.2
ACCO				eS	Sn	14 35 53.1	+0.7
ACCO				IAML		14 35 57.8	
	comp=Z,207nm,0.7s						
GO04	Tololo Observa	3.43	353	eP	Pn	14 35 17.3	-1.0
GO04				*i* S	Sn	14 35 57.2	-1.1
GO04				IAML		14 35 59.4	
	comp=N,558nm,0.4s						
GO04	Tololo Observa	3.43	353		Pn	14 35 17.2	-1.0
GO04	Tololo Observa	3.43	353	eP	Pn	14 35 17.7	-0.6
GO04				eS	Sn	14 35 57.6	-0.7
AROD	Rodeo	3.49	12	eP	Pn	14 35 19.8	+0.7
AROD				eS	Sn	14 36 02.8	+3.0
ACDV	Cuesta del Vie	3.56	17	eP	Pn	14 35 19.3	-0.6
CO01	Juntas del Tor	3.61	3	eP	Pn	14 35 21.0	+0.4
CO01	Juntas del Tor	3.61	3		Pn	14 35 20.5	-0.1
BI03	Tigo	3.93	214	eP	Pn	14 35 23.1	-1.5
BI03				*i* S	Sn	14 36 07.6	-2.1
BI03	Tigo	3.93	214	Pn	Pn	14 35 22.7	-1.9
AGUA	GUANDACOL	4.38	21	eP	Pn	14 35 30.2	-0.7
AGUA				IAML		14 36 24.4	
	comp=Z,74nm,0.5s						
APLL	PUNTA DE LOS L	4.53	46	eP	Pn	14 35 30.9	-1.9
APLL				IAML		14 36 23.6	
	comp=Z,273nm,4.9s						
LCO	Las Campanas	4.58	356		Pn	14 35 32.3	-1.3
AC05	El Transito	4.74	0		Pn	14 35 34.7	-1.0
ACLC	CERRO LA CRUZ	5.05	36	eP	Pn	14 35 37.3	-2.6
ACLC				IAML		14 37 00.1	
	comp=Z,68nm,0.9s						
TCA	Tanti	5.34	67	eP	Pn	14 35 41.3	-2.4
TCA				eP		14 35 41.6	
TCA				eS	Sn	14 36 42.1	-1.9
TCA				IAML		14 37 37.6	
	comp=Z,50nm,1.2s						
AC04	Llanos de Chal	5.41	353	Pn	Pn	14 35 43.3	-1.3
LC01	Cunco	5.44	193	Pn	Pn	14 35 43.9	-1.1
GO03	Copiap	5.98	1	Pn	Pn	14 35 51.5	-0.9
CYA	Choya	6.43	38	eP	Pn	14 35 54.8	-3.8
CYA				eS	Sn	14 37 08.1	-2.5
CYA				IAML		14 37 48.5	
	comp=Z,29nm,1.3s						
AC02	Maricunga	6.81	9	Pn	Pn	14 36 02.5	-1.6
VA04	Juan Fernndez	7.10	267	Pn	Pn	14 36 08.2	+0.7
PLCA	Paso Flores	7.13	181	P	Pn	14 36 12.7	+4.8
	comp=Z,0.1nm,0.3s,baz=3.1,slow=14,SNR=2.1						
PLCA	Paso Flores	7.13	181		Pn	14 36 07.9	0.0
AC01	Pan de Azucar	7.42	358	Pn	Pn	14 36 10.5	-1.4
GO02	Mina Guanaco	8.43	5	Pn	Pn	14 36 24.1	-1.8
PSGCX	Pisagua	13.94	1	P	P	14 37 43.6	-0.3
MNMC	Minye Minye	14.42	3	P	P	14 37 49.7	+0.2
AP01	Chacalluta	15.16	360	Pn	Pn	14 37 53.2	-1.6
SIV	San Ignacio	19.41	28	P	P	14 38 42.8	-1.5
	comp=Z,0.2nm,0.3s,baz=225,slow=9.6,SNR=8.4						
EFI	East Falkland	20.15	157	P	P	14 38 51.7	-0.1
BDFB	Brasilia	26.93	54	P	P	14 39 55.9	-1.9
	comp=Z,5.4nm,0.6s,baz=212,slow=12,SNR=6.2						
BDFB	Brasilia	26.93	54	IAmb	IAmb	14 39 56.8	
	comp=Z,5.7nm,0.7s						
RCBR	Riachuelo	42.22	57	P	P	14 42 07.8	-1.3
BELA	Belgrano 2	47.03	170	P	P	14 42 47.8	+1.3
TEIG	Tepich	56.19	340	P	P	14 43 55.4	+0.2
QSPA	South Pole Qui	56.64	180	P	P	14 43 59.0	+0.9
SACV	Santiago Islan	65.68	51	P	P	14 45 00.3	+0.7
352A	Blakely	66.18	346	P	P	14 45 03.2	+0.9
TXAR	Lajitas Array	70.10	329	P	P	14 45 27.9	+0.9
	comp=Z,0.9nm,0.6s,baz=152,slow=8.3,SNR=10						
TXAR	Lajitas Array	70.10	329	P	P	14 45 27.5	+0.4
TX31	Lajitas Ar. Si	70.10	329	P	P	14 45 27.7	+0.6
TX31				IAmb	IAmb	14 45 28.5	
	comp=Z,5.5nm,0.8s						
TX32	Lajitas Array	70.10	329	P	P	14 45 27.7	+0.6
WVT	Waverly	71.27	345	P	P	14 45 33.8	-0.1
WVT				IAmb	IAmb	14 45 34.5	
	comp=Z,12nm,0.8s						
W39A	Magazine	71.88	340	P	P	14 45 38.6	+1.0
W39A				IAmb	IAmb	14 45 38.8	
	comp=Z,6.3nm,0.8s						
LCAR	Lake Charles	71.99	342	P	P	14 45 38.1	-0.1
LCAR				IAmb	IAmb	14 45 38.8	
	comp=Z,5.7nm,0.7s						
R55A	Marlinton	72.09	352	P	P	14 45 39.6	+0.7
R55A				IAmb	IAmb	14 46 03.8	
	comp=Z,19nm,1.4s						
MNTX	Cornudas Mount	72.88	329	P	P	14 45 43.7	+0.1
DBIC	Dimbokro	73.69	70	P	P	14 45 48.8	0.0
DBIC				IAmb	IAmb	14 46 03.5	
	comp=Z,6.3nm,1.2s						
CCM	Cathedral Cave	73.89	343	P	P	14 45 49.3	-0.1
CCM				IAmb	IAmb	14 45 50.3	
	comp=Z,6.5nm,0.9s						
S39A	Bolivar	74.08	341	P	P	14 45 51.0	+0.4
R40A	Maddies Statio	74.37	342	P	P	14 45 52.2	0.0
R40A				IAmb	IAmb	14 45 53.0	
	comp=Z,7.3nm,0.9s						
121A	Cookes Peak, D	74.64	328	P	P	14 45 55.0	+0.9
121A				IAmb	IAmb	14 45 56.6	
	comp=Z,4.2nm,0.8s						
P40A	Paris	75.49	343	P	P	14 45 58.6	0.0
P40A				IAmb	IAmb	14 45 59.1	
	comp=Z,6.4nm,0.8s						
PIX	Pinacate	76.52	323	P	P	14 46 06.0	+1.4
T25A	Trinidad	77.21	333	P	P	14 46 09.8	+1.1
T25A				IAmb	IAmb	14 46 11.1	
	comp=Z,6.3nm,0.8s						
NCB	Newcomb	77.28	357	P	P	14 46 09.1	+0.4
NCB				IAmb	IAmb	14 46 29.5	
	comp=Z,21nm,1.5s						
X16A	Lo Mia Camp, P	77.88	326	P	P	14 46 14.0	+1.6
SDCO	Great Sand Dun	78.16	332	P	P	14 46 15.2	+1.1
G62A	West of Eustis	78.44	360	P	P	14 46 15.5	+0.5
PV13	Radium Mtn., P	79.86	330	P	P	14 46 24.4	+1.2
PV13				IAmb	IAmb	14 46 25.8	
	comp=Z,8.7nm,1.4s						
ECSD	EROS Data Cent	80.61	341	P	P	14 46 26.9	0.0
ECSD				IAmb	IAmb	14 46 27.8	
	comp=Z,4.4nm,0.8s						
TORD	Torodi Ar. Bea	82.73	69	P	P	14 46 38.9	+0.3
	comp=Z,0.8nm,0.7s,baz=265,slow=4.1,SNR=4.4						
TORD	Torodi Ar. Bea	82.73	69	P	P	14 46 37.8	-0.8
PDAR	Pinedale Array	84.06	332	P	P	14 46 45.8	+0.7
	comp=Z,0.5nm,0.7s,baz=123,slow=5.5,SNR=5.8						
PDAR	Pinedale Array	84.06	332	P	P	14 46 45.1	0.0
NVAR	Mina Array Bea	84.38	324	P	P	14 46 48.2	+1.4
	comp=Z,0.6nm,0.6s,baz=160,slow=6.3,SNR=7.0						
NVAR	Mina Array Bea	84.38	324	P	P	14 46 47.9	+1.1
ZALV	Zalesovo Beam	153.11	33	PKPbc	PKPbc	14 54 10.7	-0.1
	comp=Z,2.3nm,0.6s,baz=314,slow=2.5,SNR=11						
ZALV	Zalesovo Beam	153.11	33		PKPbc	14 54 10.9	0.0
MKAR	Makanchi Array	155.42	49	PKPbc	PKPdf	14 54 15.6	+8.7
	comp=Z,0.3nm,0.7s,baz=314,slow=2.1,SNR=2.6						
MKAR				PKPab	PKPab	14 54 32.4	-0.6
	comp=Z,0.3nm,0.5s,baz=316,slow=3.3,SNR=4.1						
MKAR	Makanchi Array	155.42	49		PKPdf	14 54 15.4	+8.5

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*BGR **13** 15:00:31.7±0.0, 65°.67N×21°.49W, h33^{km}, mb4.4*
*REY **13** 15:00:43.4, 64°.61N×17°.43W, h8^{km}*
*IDC **13** 15:00:45.1±0.6, 64°.36N×17°.81W, h0^{km}, mb3.7/16, mb1 3.9/18, mb1mx3.7/58, mbtmp3.7/18, ML1.7/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/55, Error ellipse: s-maj=23.3km s-min=9.4km az=15.0*
*NEIC **13** 15:00:46.6±3.0, 64°.44N±0°.09×17°.9W±0°.1, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=15.7km s-min=9.8km az=183.0*
ISC 13 15:00:46.2±0.9**, 64°.44N**±0°.03×**17°.70W**±0°.04**, h7**^{km}±5^{km}**, n98,** σ**1ˢ.59**/89**, mb4.2**/29**, MS3.6**/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.07	305	P	Pg	15 00 47.7	-0.4
	baz=233						
IHAM				S	Sg	15 00 51.3	+1.8
	baz=233						
IJOK	Jokulheimar	0.26	241	P	Pg	15 00 51.8	+0.5
	baz=230						
ISKR	Skrokkalda	0.32	292	P	Pg	15 00 51.2	-1.2
	baz=263						
IDYN	Dyngjuhals	0.38	22	P	Pg	15 00 47.2	-6.4
	baz=8.4						
IIEY	Innrieyrar	0.40	208	P	Pg	15 00 54.4	+0.5
	baz=211						
IIEY				S	Sb	15 01 03.1	+1.3
	baz=211						
IURH	Urdarhals	0.45	32	P	Pg	15 00 48.4	-6.4
	baz=30						
IKAL	Kalfafell	0.50	180	P	Pg	15 00 55.8	0.0
	baz=190						
IKAL				S	Sb	15 01 05.6	+1.1
	baz=190						
IKVE	Kverkfjoll	0.50	61	P	Pg	15 00 49.9	-5.9
	baz=78						
IKSK	Karasker	0.60	117	P	Pg	15 00 54.1	-3.6
	baz=137						
IKSK				S	Sg	15 01 03.6	-2.0
	baz=137						
THOR	Thorvaldshraun	0.66	41	P	Pg	15 00 51.9	-7.0
	baz=44						
THOR				S	Sg	15 00 58.8	-8.6
	baz=44						
IKRE	Kreppuhraun	0.66	58	P	Pg	15 00 52.2	-6.7
	baz=68						
IKRE				S	Sg	15 00 59.2	-8.3
	baz=68						
IFAG	Fagurholsmyri	0.73	141	P	Pg	15 00 58.0	-2.1
	baz=155						
IFAG				S	Sg	15 01 09.9	+0.3
	baz=155						
IASK	Askja	0.76	36	P	Pg	15 00 53.5	-7.3
	baz=37						
IMKO	Mokollar	0.79	47	P	Pg	15 00 54.2	-7.1
	baz=51						
ISNB	Snabyli	0.82	211	P	Pg	15 01 01.5	-0.3
	baz=212						
ISNB				S	Sn	15 01 15.4	-1.0
	baz=212						
ISVA	Svartarkot	0.92	12	P	Pg	15 00 56.4	-7.4
	baz=5.7						
IVSH	V-Sauoahnukur	0.92	66	P	Pg	15 00 56.8	-7.1
	baz=74						
IRJU	Rjupnafell	0.93	208	P	Pg	15 01 03.7	-0.3
	baz=209						
IMJO	Mjoaskard	1.00	240	P	Pg	15 01 04.4	-1.0
	baz=236						
IADA	Aoalbol	1.08	57	P	Pb	15 00 58.9	-8.2
	baz=62						
IADA				S	Sb	15 01 11.9	-9.5
	baz=62						
IMEL	Melhnausar	1.22	21	P	Pn	15 01 01.0	-8.5
	baz=18						
IREN	Reynihlio	1.26	15	P	Pn	15 01 01.8	-8.3
	baz=12						
IKVO	Krokottuvotn	1.32	15	P	Pn	15 01 03.3	-7.7
	baz=12						
IGRS	Grimsstaoir	1.37	28	P	Pn	15 01 03.9	-7.8
	baz=28						
IGRS				S	Sn	15 01 19.9	-10
	baz=28						
BORG	Borgarnes	1.60	283	Pg	Pn	15 01 12.1	-2.7
	37nm,0.3s,baz=95,slow=7.7,SNR=67						
BORG				Lg	Lg	15 01 34.9	
	16nm,0.3s,baz=45,slow=24,SNR=12						
BORG	Borgarnes	1.60	283		Pn	15 01 11.8	-2.9
SCO	Scoresbysund	6.28	347	Pn	Pn	15 02 15.8	-3.2
SCO	Scoresbysund	6.28	347	*e*	Pn	15 02 12.6	-6.5
	baz=158,slow=6.9						
SCO				*i* P	Pn	15 02 17.0	-2.1
SCO				IAML		15 03 20.7	
	comp=Z,1.9nm,0.4s						
SCO				*i* S	Sn	15 03 32.3	+1.3
ANGG	Ammassalik, Gr	8.51	287	Pn	Pn	15 02 46.0	-3.5
EKA	Eskdalemuir Ar	11.66	135	Pn	Pn	15 03 32.1	-0.6
	baz=324,slow=13,SNR=4.6						
NRS	Narsarsuaq	13.04	268	Pn	Pn	15 03 50.8	-0.8
FINES	FINESS Array B	19.83	78	P	P	15 05 17.1	+0.1
	comp=Z,0.0nm,0.3s,baz=295,slow=14,SNR=1.7						
FINES	FINESS Array B	19.83	78	P	Pn	15 05 20.7	+2.1
CLL	Collm	20.68	115	eP	P	15 05 26.0	-0.4
GRF	Grafenberg Arr	21.29	120	eP	P	15 05 36.2	+3.2
	comp=Z,19nm,1.7s,baz=324,slow=9.9						
BRG	Berggiesshubel	21.39	114	eP	P	15 05 34.4	+0.4
BRG				Amp		15 05 39.7	
	comp=Z,22nm,1.4s						
BRG	Berggiesshubel	21.39	114	eP	P	15 05 34.4	+0.4
BRG				Amp		15 05 39.7	
	comp=Z,22nm,1.4s						
FRB	Frobisher Bay	21.75	291	P	P	15 05 38.4	+0.7
	comp=Z,1.4nm,0.5s,baz=54,slow=10,SNR=5.0						
CHVC	Chvalec	22.46	112	eP	P	15 05 47.4	+1.9
KHC	Kasperske Hory	22.64	118	eP	P	15 05 49.2	+1.7
DPC	Dobruska-Polom	22.75	112	eP	P	15 05 48.4	-0.2
GERES	GERESS Array B	22.92	118	P	P	15 05 50.2	-0.3
	comp=Z,0.2nm,0.3s,baz=316,slow=14,SNR=2.3						
GERES				LR	LR	15 16 58.0	
	comp=Z,202nm,18.4s,baz=290,slow=42						
GERES	GERESS Array B	22.92	118	P	P	15 05 53.1	+2.6
VRAC	Vranov	23.68	113	eP	P	15 05 58.2	+0.2
MORC	Moravsky Berou	23.69	111	eP	P	15 05 59.1	+0.9
KRUC	Moravsky	23.80	114	eP	P	15 05 58.8	-0.4
EUNU	Eureka	23.84	336	P	P	15 05 57.9	-1.5
VYHS	Vyhne	25.23	112	eP	P	15 06 17.0	+4.7
KLMR	Klimovskoe	25.75	71	eP	P	15 06 18.7	+1.8
KLMR				AMP		15 06 21.2	
	comp=Z,19nm,1.3s						
ESDC	Sonseca Array	26.08	155	P	P	15 06 20.4	+0.2
	comp=Z,0.7nm,0.9s,baz=1.6,slow=9.1,SNR=1.7						
ESDC				LR	LR	15 15 43.5	
	comp=Z,46nm,18.4s,baz=10.0,slow=34						
KOLS	Kolonicke sedl	26.29	107	eP	P	15 06 26.8	+4.9
AKASG	Malin Array Be	27.90	97	P	P	15 06 36.1	-0.2
	comp=Z,0.1nm,0.2s,baz=317,slow=9.4,SNR=2.0						
BURAR	Bucovina Array	28.55	105	P	P	15 06 44.2	+2.0
KIRV	Kirov	31.14	69	LR	LR	15 20 06.6	
	comp=Z,143nm,19.1s,baz=307,slow=37						
BRTR	Keskin Array B	38.50	105	P	P	15 08 09.3	+0.5
	comp=Z,0.8nm,0.7s,baz=346,slow=5.2,SNR=4.3						
YKA	Yellowknife Ar	39.31	313	P	P	15 08 15.0	-0.1
	comp=Z,1.5nm,1.1s,baz=42,slow=8.7,SNR=10.0						
YKA				PcP	PcP	15 10 23.8	+0.4
	comp=Z,1.2nm,1.2s,baz=48,slow=4.3,SNR=3.7						
PSUB	Penn St. - Bra	41.06	262	P	P	15 08 28.4	-1.5
AB31	Akbulak array	42.14	73	P	P	15 08 41.0	+2.4
ABKAR	Akbulak array	42.14	73	P	P	15 08 39.8	+1.1
AB03	Akbulak array	42.14	73	P	P	15 08 38.8	+0.2
AB06	Akbulak array	42.15	73	P	P	15 08 38.5	-0.2
AB08	Akbulak array	42.15	73	P	P	15 08 39.1	+0.4
AB07	Akbulak array	42.16	73	P	P	15 08 39.1	+0.4
TIXI	Tiksi	42.27	15	P	P	15 08 39.3	-0.1
TIXI				IAmb	IAmb	15 08 44.5	
	comp=Z,6.7nm,1.1s						
TOLK	Toolik Lake Re	42.92	336	P	P	15 08 44.9	+0.1
TOLK				IAmb	IAmb	15 08 51.8	
	comp=Z,16nm,1.5s						
ILAR	Eielson Array	45.85	332	P	P	15 09 08.4	+0.2
	comp=Z,1.0nm,1.0s,baz=31,slow=6.3,SNR=5.5						
ILAR				PcP	PcP	15 10 45.5	+0.2
	comp=Z,1.0nm,0.9s,baz=350,slow=3.1,SNR=6.3						
ZALV	Zalesovo Beam	47.84	51	P	P	15 09 25.0	+1.1
	comp=Z,0.7nm,0.7s,baz=327,slow=9.4,SNR=4.5						
ZALV	Zalesovo Beam	47.84	51	P	P	15 09 24.5	+0.6
KURBB	Kurchatov Arra	48.35	58	P	P	15 09 27.4	-0.4
	comp=Z,2.2nm,1.0s,baz=324,slow=7.9,SNR=8.4						
KK31	Karatay Array	51.43	69	P	P	15 09 51.4	-0.1
KK31				IAmb	IAmb	15 09 56.0	
	comp=Z,6.3nm,1.4s						
KKAR	Karatay Array	51.43	69	P	P	15 09 51.9	+0.4
KKAR				IAmb	IAmb	15 09 56.0	
	comp=Z,6.3nm,1.4s						
BOZ	Bozeman (W)	51.63	297	P	P	15 09 53.9	+0.8
BOZ				IAmb	IAmb	15 09 56.0	
	comp=Z,5.3nm,1.1s						
YMP	Mirror Lake Pl	51.77	295	P	P	15 09 55.1	+0.8
MK31	Makanchi Array	52.92	58	P	P	15 10 01.0	-1.4
MKAR	Makanchi Array	52.92	58	P	P	15 10 02.7	+0.3
	comp=Z,1.5nm,1.1s,baz=318,slow=7.8,SNR=6.6						
MKAR	Makanchi Array	52.92	58	P	P	15 10 01.2	-1.2
TORD	Torodi Ar. Bea	52.97	156	P	P	15 10 01.4	-1.7
	comp=Z,0.3nm,0.3s,baz=336,slow=6.8,SNR=3.4						
TORD	Torodi Ar. Bea	52.97	156	IAmb	IAmb	15 10 08.8	
	comp=Z,2.2nm,1.2s						
BW06	Boulder Array	53.19	293	P	P	15 10 04.6	-0.2
BW06				IAmb	IAmb	15 10 06.1	
	comp=Z,3.7nm,1.1s						
PD31	Pinedale Array	53.19	293	P	P	15 10 03.8	-1.0
PDAR	Pinedale Array	53.19	293	P	P	15 10 04.3	-0.4
	comp=Z,2.0nm,0.9s,baz=67,slow=5.0,SNR=9.4						
PDAR	Pinedale Array	53.19	293	P	P	15 10 02.8	-2.0
AAK	Ala-Archa	53.43	67	P	P	15 10 07.4	+0.9
	comp=Z,2.8nm,0.9s,baz=342,slow=6.2,SNR=8.2						
AAK	Ala-Archa	53.43	67	P	P	15 10 05.7	-0.8
AAK				IAmb	IAmb	15 10 11.2	
	comp=Z,4.3nm,1.0s						
NLWA	Neilton Lookou	54.62	307	P	P	15 10 13.5	-1.4
KSH	Kashi	56.66	68	P	P	15 10 33.1	+3.3
KSH				pP	sP	15 10 36.4	+2.8
KSH				pmax	pmax		
	comp=Z,32nm,1.3s						
KSH				pmax	pmax		
	comp=Z,1µm,7.3s						
PV14	Lion Creek, Pa	56.69	290	P	P	15 10 29.5	-0.7
PV14				IAmb	IAmb	15 10 32.5	
	comp=Z,2.9nm,0.8s						
PV01	Paradox Valley	56.71	289	P	P	15 10 30.8	+0.4
PV01				IAmb	IAmb	15 10 32.5	
	comp=Z,5.8nm,1.2s						
PV03	Paradox Valley	56.72	290	P	P	15 10 30.4	0.0
PV03				IAmb	IAmb	15 10 32.9	
	comp=Z,4.2nm,1.1s						
PV13	Radium Mtn., P	56.79	290	P	P	15 10 31.5	+0.6
PV05	Paradox Valley	56.98	290	P	P	15 10 31.2	-1.0
WMQ	Urumqi	57.43	56	eP	P	15 10 38.1	+3.0
NVAR	Mina Array Bea	60.33	297	P	P	15 10 56.3	+0.8
	comp=Z,0.7nm,0.9s,baz=56,slow=6.8,SNR=2.8						
TXAR	Lajitas Array	62.24	280	P	P	15 11 09.2	+0.8
	comp=Z,1.7nm,1.2s,baz=44,slow=4.0,SNR=4.6						
GTA	Gaotai	65.51	49	eP	P	15 11 27.0	-2.9
GTA				pP	pP	15 11 31.4	-1.2
GTA				sP	sP	15 11 34.3	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC	Hu-ho-hao-te	67.74	39	eP	P	15 11 45.0	+1.0
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.6s						
LPIG	La Paz	69.65	283	LR	LR	15 40 42.0	
	comp=Z,59nm,18.6s,baz=44,slow=34						
CMAR	Chiang Mai Arr	84.32	58	P	P	15 13 20.3	+1.6
	comp=Z,1.1nm,0.9s,baz=309,slow=5.7,SNR=5.3						

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*IDC **13** 15:06:37.7±1.2, 10°.25S×124°.13E, h0^{km}, mb3.8/3, mb1 4.0/6, mb1mx3.6/51, mbtmp3.8/6, ML3.9/3, Error ellipse: s-maj=26.0km s-min=9.4km az=3.0*
*NEIC **13** 15:06:39.6±2.9, 10°.54S±0°.06×123°.66E±0°.04, h22^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=8.7km s-min=5.8km az=167.0*
*DJA **13** 15:06:43.7±0.6, 10°S±6°×12°4E±°, h10^{km}, M3.9/8, mb4.3/3, mB4.9/1, MLv3.7/8, Mw(mB)4.2/1*
ISC 13 15:06:40.4±0.5**, 10°.52S**±0°.04×**123°.77E**±0°.05**, h27**^{km}**, n40,** σ**2ˢ.02**/49**, mb4.2**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	0.33	342	Pg	Pb	15 06 46.8	-1.3
	1µm,0.3s,baz=189,slow=4.0,SNR=470						
BATI				LR	LR	15 06 47.0	
	comp=Z,151nm,21.8s,baz=309,slow=20						
BATI				Lg	Lg	15 06 52.5	
	1µm,0.3s,baz=18,slow=20,SNR=20						
BATI	Baumata	0.33	342		Pb	15 06 46.8	-1.3
BATI	Baumata	0.33	342	P	Pb	15 06 46.7	-1.3
BATI				S	Sb	15 06 49.4	-3.8
SOEI	Soe	0.91	33	Pn	Pn	15 07 00.8	+3.3
SOEI	Soe	0.91	33	P	Pn	15 07 01.0	+3.5
SOEI				S	Sn	15 07 12.8	+3.1
MMRI	Maumere	2.41	321		Pn	15 07 19.8	+1.7
MMRI	Maumere	2.41	321	P	Pn	15 07 20.0	+2.0
MMRI				S	Sn	15 07 50.0	+3.4
EDFI	Ende, Flores	2.70	310	P	Pn	15 07 23.7	+1.5
EDFI				S	Sn	15 07 55.2	+1.1
BASI	Baing, Sumba	3.15	275	P	Pn	15 07 30.4	+2.1
BASI				S	Sn	15 08 07.6	+2.5
WSI	Waingapu	3.52	284	P	Pn	15 07 35.3	+1.9
PLAI	Plampang	6.14	285	P	Pn	15 08 11.1	+1.7
	0.2nm919nm34nm,0.7s						
PLAI				S	Sn	15 09 17.0	-1.9
	0.2nm919nm34nm,0.7s						
TWSI	Taliwang, Sumb	7.02	284	P	Pn	15 08 23.4	+1.9
MTN	Manton Dam	7.57	108	Pn	Pn	15 08 32.7	+3.6
FITZ	Fitzroy Crossi	7.75	167	Pn	Pn	15 08 33.9	+2.5
	1.3nm,0.3s,baz=346,slow=11,SNR=112						
FITZ				Sn	Sn	15 09 58.9	+0.5
	3.1nm,0.3s,baz=252,slow=20,SNR=8.9						
FITZ	Fitzroy Crossi	7.75	167		Pn	15 08 33.7	+2.2
JAGI	Jajag, Banyuwa	9.70	281	Pn	Pn	15 08 57.3	-1.1
PSA00	Pilbara Seismi	11.62	198	Pn	Pn	15 09 26.0	+1.5
TOLI2	Tolitoli	11.93	345	Pn	Pn	15 09 26.8	-2.1
WB0	Warramunga Arr	13.77	133	Pn	Pn	15 09 54.0	+0.1
WRA	Warramunga Arr	13.84	134	Pn	Pn	15 09 55.2	+0.2
	0.6nm,0.3s,baz=312,slow=15,SNR=20						
WRA				Sn	Sn	15 12 22.6	-5.3
	0.8nm,0.3s,baz=311,slow=25,SNR=10						
WRAB	Tennant Creek	13.84	134	Pn	Pn	15 09 54.8	-0.2
WB2	Warramunga Arr	13.85	134	Pn	Pn	15 09 55.1	0.0
WR0	Warramunga Arr	13.99	133	Pn	Pn	15 09 56.9	-0.2
GIRL	Giralia	15.12	216		Pn	15 10 14.5	+2.2
AS31	Alice Springs	16.26	145	Pn	Pn	15 10 27.1	+0.1
ASAR	Alice Springs	16.26	145	Pn	Pn	15 10 28.1	+1.0
	0.5nm,0.3s,baz=320,slow=12,SNR=39						
ASAR				Sn	Sn	15 13 22.9	-3.8
	0.5nm,0.3s,baz=309,slow=21,SNR=10						
ASAR	Alice Springs	16.26	145	Pn	Pn	15 10 27.3	+0.3
FORT	Forrest	20.55	169	P	P	15 11 18.2	+1.3
FORT				IAmb	IAmb	15 11 31.0	
	comp=Z,22nm,1.1s						
GSI	Gunungsitoli	28.59	293	P	P	15 12 34.9	+0.3
GSI				IAmb	IAmb	15 12 50.9	
	comp=Z,15nm,1.3s						
DZM	Mont Dzumac	42.40	111	P	P	15 14 31.7	-1.3
DZM				IAmb	IAmb	15 14 33.9	
	comp=Z,31nm,1.4s						
QRZ	Quartz Range	52.40	134	P	P	15 15 50.5	0.0
SONM	Songino Array	60.11	347	P	P	15 16 46.0	+0.5
	comp=Z,0.3nm,0.4s,baz=163,slow=5.9,SNR=2.0						
MK31	Makanchi Array	68.01	331	P	P	15 17 38.0	+0.8
MK31				IAmb	IAmb	15 17 39.6	
	comp=Z,1.8nm,1.0s						
MKAR	Makanchi Array	68.01	331	P	P	15 17 38.3	+1.0
	comp=Z,0.6nm,0.5s,baz=146,slow=6.0,SNR=14						
MKAR	Makanchi Array	68.01	331	P	P	15 17 37.9	+0.6
MAKZ	Makanchi	68.17	330	P	P	15 17 38.9	+0.6
MAKZ				IAmb	IAmb	15 18 08.2	
	comp=Z,2.7nm,1.5s						
ZAA0	Zalesovo Array	72.20	337	P	P	15 18 02.4	-0.3
ZALV	Zalesovo Beam	72.20	337	P	P	15 18 03.3	+0.6
	comp=Z,1.0nm,0.5s,baz=152,slow=5.4,SNR=4.6						
ZALV	Zalesovo Beam	72.20	337	P	P	15 18 02.4	-0.3
AMKA	Amchitka	78.03	32	P	P	15 18 35.3	-1.1

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*NNC **13** 15:10:27.4±4.9, 36°.88N×70°.42E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=39.1km s-min=31.3km az=163.0*
ISC 13 15:10:26.1±3.6**, 36°.5N**±0°.2×**70°.4E**±0°.1**, h35**^{km}**, n11,** σ**1ˢ.10**/15**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.16	24	P	Pn	15 11 55.4	+0.5
	SNR=118						
UCH	Uchtor	6.53	28	P	Pn	15 12 00.7	+0.6
	SNR=8.2						
KK31	Karatay Array	6.57	1	⇑P	Pn	15 12 02.1	+2.0
	2.4nm,0.3s,baz=190,slow=16,SNR=91						
KK31				⇓S	Sn	15 13 14.3	+0.5
	9.6nm,0.6s,baz=187,slow=24,SNR=6.4						
EKS2	Erkin-Say	6.67	22	P	Pn	15 12 02.8	+1.2
	SNR=21						
AAK	Ala-Archa	6.88	26	P	Pn	15 12 05.2	+0.6
	SNR=17						
AAK	Ala-Archa	6.88	26	P	Pn	15 12 05.5	+0.9
	4.2nm,0.3s						
AAK				⇓S	Sn	15 13 20.0	-1.7
	9.4nm,0.7s						
CHMS	Chumysh	7.29	26	P	Pn	15 12 10.1	0.0
	SNR=5.9						
USP	Ospenovka	7.44	24	P	Pn	15 12 12.6	+0.4
	SNR=6.0						
TKM2	Tokmak 2	7.55	31	P	Pn	15 12 14.1	+0.3
	SNR=8.2						
TKM2	Tokmak 2	7.55	31	⇑P	Pn	15 12 13.6	-0.2

	5.0nm,0.7s						
TKM2				⇑S	Sn	15 13 39.6	+1.4
	3.4nm,0.6s						
AB31	**Akbulak array**	14.82	332	⇑P	Pn	15 13 52.2	-0.7
	0.8nm,0.4s,baz=149,slow=12,SNR=39						
AB31				S	Sn	15 16 34.5	-1.2
	0.8nm,0.4s,baz=155,slow=24,SNR=6.7						

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*IDC **13** 15:12:12.7±4.1, 33°.29S×70°.42W, h84^{km}±40^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.3/33, mbtmp3.6/5, Error ellipse: s-maj=52.3km s-min=26.8km az=88.0*

*GUC **13** 15:12:13.0±0.6, 33°.33S×70°.63W, h99^{km}±1^{km}, ML4.0*

ISC 13 15:12:13.3±0.8**, 33°.32S**±0°.04×**70°.64W**±0°.06**, h96**^{km}±5^{km}**, n30, σ0^{s}.95**/41**, mb3.5**/3**, 7C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT05	**Renca**	0.11	231	⇓iP	Pn	15 12 26.4	-0.4
MT05				i S	Sn	15 12 36.5	-0.4
FSR	**Penalolen**	0.18	150	eP	Pn	15 12 27.6	+0.5
FSR				eS	Sn	15 12 36.9	-0.4
PEL	**Peldehue**	0.18	347	⇑iP	Pn	15 12 26.2	-0.8
PEL				i S	Sn	15 12 37.1	-0.2
PEL				IAML		15 12 37.9	
	comp=N,26μm,0.3s						
MT03	**Universidad Ad**	0.20	148	⇓iP	Pn	15 12 26.6	-0.6
MT03				i S	Sn	15 12 37.2	-0.3
MT03				IAML		15 12 38.6	
	comp=E,17μm,0.2s						
MT02	**Curacav**	0.42	279	⇑eP	Pn	15 12 27.7	-0.5
MT02				i S	Sn	15 12 38.6	-0.6
ROCH	**El Roble**	0.47	318	⇑iP	Pn	15 12 28.4	-0.4
ROCH				i S	Sn	15 12 40.0	-0.3
ROCH				IAML		15 12 41.6	
	comp=E,10μm,0.2s						
MT09	**Talagante**	0.54	213	⇓iP	Pn	15 12 28.7	-0.5
MT09				i S	Sn	15 12 40.8	-0.2
MT09				IAML		15 12 41.6	
	comp=E,17μm,0.2s						
VA03	**San Esteban**	0.56	7	⇑iP	Pn	15 12 28.9	-0.4
VA03				i S	Sn	15 12 41.0	-0.2
VA03				IAML		15 12 41.8	
	comp=E,8μm,0.1s						
LMEL	**Las Melosas**	0.64	145	⇓iP	Pn	15 12 29.6	-0.4
LMEL				i S	Sn	15 12 42.4	0.0
LMEL				IAML		15 12 42.9	
	comp=N,7μm,0.5s						
VA05	**Santo Domingo**	0.88	248	eP	Pn	15 12 31.9	-0.3
VA05				i S	Sn	15 12 46.0	-0.3
VA05				IAML		15 12 49.8	
	comp=N,9μm,0.3s						
BO03	**Pichilemu**	1.61	223	⇑iP	Pn	15 12 40.2	-0.5
BO03				eS	Sn	15 13 01.7	+0.2
CO03	**El Pedregal**	2.48	359	⇑eP	Pn	15 12 52.3	+0.2
CO03				i S	Sn	15 13 21.7	-0.2
CO03				IAML		15 13 22.5	
	comp=N,1μm,0.4s						
RTLL	**Cerro Villicun**	2.70	43	⇓iP	Pn	15 12 55.1	0.0
RTLL				i S	Sn	15 13 25.1	-2.1
RTLL				IAML		15 13 29.2	
	comp=N,354nm,0.4s						
GO04	**Tololo Observa**	3.15	357	⇑eP	Pn	15 13 00.2	-0.9
GO04				i S	Sn	15 13 37.6	-0.4
CO01	**Juntas del Tor**	3.37	8	eP	Pn	15 13 04.5	+0.3
CO01				IAML		15 13 47.9	
	comp=N,64nm,0.2s						
BI02	**San Fabin de**	3.37	189	eP	Pn	15 13 03.9	-0.1
BI02				i S	Sn	15 13 43.0	-0.2
BI02				IAML		15 13 46.0	
	comp=N,107nm,0.4s						
BI03	**Tigo**	4.02	208	eP	Pn	15 13 11.7	-1.0
BI03				i S	Sn	15 13 54.8	-3.9
AC05	**El Transito**	4.48	4	eP	Pn	15 13 18.5	-0.7
AC05				i S	Sn	15 14 08.3	-1.9
H03S1	**Juan Fernandez**	6.92	263	T	T	15 20 15.5	
	baz=86,slow=75,SNR=80						
H03N1	**Juan Fernandez**	6.92	267	T	T	15 20 38.4	
	baz=89,slow=73,SNR=69						
H03S3	**Juan Fernandez**	6.92	264	T	T	15 20 17.3	
	baz=86,slow=75,SNR=91						
H03N3	**Juan Fernandez**	6.93	267	T	T	15 20 22.2	
	baz=89,slow=73,SNR=76						
H03S2	**Juan Fernandez**	6.94	263	T	T	15 20 16.2	
	baz=86,slow=75,SNR=85						
H03N2	**Juan Fernandez**	6.94	267	T	T	15 20 26.7	
	baz=89,slow=73,SNR=64						
PLCA	**Paso Flores**	7.40	179	P	Pn	15 13 58.5	-0.1
	comp=N,0.2nm,0.3s,baz=352,slow=13,SNR=5.0						
SIV	**San Ignacio**	19.30	29	P	P	15 16 29.8	-1.0
	comp=N,0.2nm,0.3s,baz=210,slow=8.3,SNR=8.8						
SNAA	**Sanae**	51.77	158	P	P	15 21 11.0	+0.3
	comp=N,0.9nm,0.7s,baz=284,slow=8.3,SNR=2.2						
TXAR	**Lajitas Array**	69.73	330	P	P	15 23 14.1	+1.1
	comp=N,0.3nm,0.6s,baz=148,slow=8.0,SNR=4.8						
NVAR	**Mina Array Bea**	84.01	324	P	P	15 24 34.5	+1.4
	comp=N,0.3nm,0.5s,baz=153,slow=5.0,SNR=2.7						
ZALV	**Zalesovo Beam**	153.03	33	PKPbc	PKiKP	15 31 59.4	+0.2
	comp=N,0.6nm,0.4s,baz=299,slow=4.0,SNR=3.7						

MAN 13 15:21:49.8, 19°.09N×121°.20E, h4^{km}, mb4.4, ML3.2, MS3.0, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	1.16	136	eP	Pb	15 22 12.4	0.0
SGCP				eS	Sn	15 22 28.9	-0.3
APYP	**Conner**	1.22	178	eP	Pg	15 22 12.1	-1.1
APYP				eS	Sn	15 22 30.9	+0.3
CVP	**Callao Caves**	1.50	157	⇑iP	Pn	15 22 17.6	+0.1
CVP				i S	Sg	15 22 39.1	+1.1
ABRA	**Dolores**	1.50	198	eP	Pn	15 22 16.5	-1.0

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*NEIC **13** 15:22:37.2±1.5, 17°.29N±0°.08×97°.15W±0°.05, h73^{km}±24^{km}, mb4.0/8, Md4.2/24(MEX), Error ellipse: s-maj=11.7km s-min=6.8km az=181.0*

*MEX **13** 15:22:38.8±0.7, 17°.33N×97°.15W, h68^{km}±6^{km}, MD4.2*

ISC 13 15:22:37.5±0.9**, 17°.33N**±0°.04×**97°.13W**±0°.04**, h65**^{km}±9^{km}**, n27, σ0^{s}.98**/40**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	0.46	123	i P	Pn	15 22 49.8	+0.1
VHO				eS	Sn	15 22 58.5	-0.2
YOIG	**Yosondua**	0.61	220	i P	Pn	15 22 51.7	+0.2
YOIG				i S	Sn	15 23 02.1	+0.5
TXIG	**Tlaxiaco**	0.61	263	i P	Pn	15 22 51.3	-0.1
TXIG				eS	Sn	15 23 01.0	-0.6
TOIG	**Toxpalan**	0.77	5	eP	Pn	15 22 52.6	-0.5
TOIG				eS	Sn	15 23 03.6	-0.9
HLIG	**Huajuapan de L**	0.81	308	i P	Pn	15 22 53.4	-0.4
HLIG				eS	Sn	15 23 04.7	-0.9
FTIG	**Fresnillo de T**	1.12	301	eP	Pn	15 22 57.5	0.0
FTIG				eS	Sn	15 23 11.7	-0.6
PEIG	**Puerto Escondi**	1.32	181	eP	Pn	15 22 59.8	-0.3
PEIG				i S	Sn	15 23 16.0	-0.9
PNIG	**Pinotepa**	1.33	226	eP	Pn	15 22 59.9	-0.3
PNIG				i SG	Sn	15 23 15.5	-1.6
PNIG	**Pinotepa**	1.33	226		Pn	15 22 59.9	-0.3
PNIG					Sn	15 23 15.5	-1.6
TLIG	**Tlapa**	1.39	280		Pn	15 23 01.3	+0.3
HUIG	**Huatulco**	1.83	147	eP	Pn	15 23 07.5	+0.6
HUIG				i S	Sn	15 23 28.5	-0.6
HUIG	**Huatulco**	1.83	147		Pn	15 23 07.5	+0.6
HUIG					Sn	15 23 28.5	-0.6
CMIG	**Matias Romero**	2.16	96	eP	Pn	15 23 11.7	+0.4
CMIG				eS	Sn	15 23 36.7	-0.4
CMIG	**Matias Romero**	2.16	96		Pn	15 23 11.7	+0.4
CMIG					Sn	15 23 36.7	-0.4
CCIG	**Comitan**	4.89	102	Pn	Pn	15 23 48.1	-0.7
HUEH	**Huehuetenango**	5.76	109	Pn	Pn	15 24 02.4	+1.7
TEIG	**Tepich**	8.87	70	Pn	Pn	15 24 43.0	0.0
CRIN	**San Cristobal**	10.77	114	Pn	Pn	15 25 05.9	-3.2
TXAR	**Lajitas Array**	13.37	335	Pn	Pn	15 25 46.9	+2.4
Y49A	**Blount Mountai**	19.07	28	P	P	15 26 54.7	0.0
Y49A				IAmb	IAmb	15 26 57.7	
	comp=Z,12nm,1.4s						
T35A	**Sooner Cattle**	19.52	1	P	P	15 26 58.8	-0.9
SWET	**Sewanee**	20.42	27	P	P	15 27 08.4	-1.0
SWET				IAmb	IAmb	15 27 09.5	
	comp=Z,6.2nm,0.8s						
WVT	**Waverly**	20.47	22	P	P	15 27 08.8	-1.1
WVT				IAmb	IAmb	15 27 31.0	
	comp=Z,9.9nm,1.4s						
V48A	**Smith Brothers**	20.50	25	P	P	15 27 09.7	-0.6
V48A				IAmb	IAmb	15 27 10.0	
	comp=Z,5.2nm,0.7s						
S39A	**Bolivar**	20.56	9	P	P	15 27 10.3	-0.6
U49A	**Red Boiling Sp**	21.59	26	P	P	15 27 21.6	-0.3
O49A	**Covington**	25.34	23	P	P	15 27 58.6	+0.3

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*IDC **13** 15:33:23.4±0.6, 12°.72N×124°.45E, h0^{km}, mb4.0/20, mb1 4.1/20, mb1mx4.0/46, mbtmp4.0/20, MS3.9/32, Ms1 3.9/32, ms1mx3.8/49, Error ellipse: s-maj=22.5km s-min=13.1km az=79.0*

*GCMT **13** 15:33:24.9±0.2, 13°.03N±0°.01×124°.62E±0°.02, h24^{km}±1^{km}, MW4.9/93, Moment Tensor Solution. s27,c34; s93,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.87±.16; M$_{\theta\theta}$1.58±.11; M$_{\phi\phi}$-0.70±.11; M$_{r\theta}$0.53±.14; M$_{\theta\phi}$2.41±.07; M$_{\phi r}$0.16±.15; Best double couple: M$_0$2.71100×10^{16} NP1:φ$_s$12.00000°, δ80.00000°, λ179.00000°. NP2: φ$_s$103.00000°, δ89.00000°, λ10.00000°. Principal axes: T 3.1730, Plg7.0000°, Azm328.0000°; N -0.9240, Plg80.0000°, Azm107.0000°; P -2.2490, Plg6.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MAN **13** 15:33:24.6, 13°.01N×124°.52E, h3^{km}, mb5.7, ML4.7, MS5.0*

MAN INTENSITY III - SAN ISIDRO AND ALLEN.

*BJI **13** 15:33:26.1±0.0, 12°.39N×124°.68E, h54^{km}, mB5.0/24, mb4.5/42, Ms4.6/30, Ms7 4.3/26*

*NEIC **13** 15:33:28.9±1.0, 12°.80N±0°.08×124°.70E±0°.06, h56^{km}±7^{km}, mb4.7/39, Error ellipse: s-maj=12.9km s-min=5.2km az=212.0*

*DJA **13** 15:33:30.4±0.9, 13°N±4°×12°5E±°, h51^{km}±8^{km}, M4.8/29, mB5.4/10, mb4.7/29, Mw(mB)4.9/10*

ISC 13 15:33:25.7±1.3**, 12°.94N**±0°.03×**124°.71E**±0°.05**, h16**^{km}±8^{km}**, n190, σ2^{s}.19**/180**, mb4.6**/63**, MS3.9**/34**, 7C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	**Catarman**	0.43	186	eP	Pg	15 33 34.0	-0.3
CNP				eS	Sb	15 33 41.7	+0.7
PVCP	**Virac**	0.85	320	eP	Pb	15 33 39.0	-3.1
PVCP				eS	Sb	15 33 50.8	-2.5
SCSP	**San Jose Seism**	1.36	302	eP	Pn	15 33 48.0	-2.0
SCSP				eS	Sn	15 34 06.8	-0.9
OCLP	**Ormoc**	1.88	183	eP	Pn	15 33 57.5	+0.4
JCNP	**Jose Panganiba**	2.37	305	eP	Pn	15 34 04.5	+0.6
JCNP				eS	Sb	15 34 35.0	-2.2
GQP	**Guinayangan**	2.40	294	⇑eP	Pn	15 34 05.1	+0.7
GQP				eS	Sn	15 34 34.5	+1.0
OTRP	**Odiongan**	2.69	258	eP	Pn	15 34 07.1	-1.2
LLP	**Lapu-Lapu**	2.70	196	eP	Pn	15 34 08.4	-0.1
LLP				eS	Sn	15 34 41.4	+0.5
MSLP	**Maasin**	2.79	177	eP	Pb	15 34 13.4	-1.8
MSLP				eS	Sg	15 34 56.5	+1.1
BOAC	**Boac**	2.84	281	eP	Pn	15 34 09.3	-1.1
BOAC				eS	Sb	15 34 52.8	+2.3
GUIM	**Jordan**	3.10	222	eP	Pn	15 34 13.8	-0.1
GUIM				eS	Sn	15 34 49.1	-1.5
POLP	**Polilio Island**	3.23	304	eP	Pn	15 34 15.1	-0.6
POLP				eS	Sb	15 34 58.6	-3.1
LQP	**Lukban**	3.30	291	⇑eP	Pn	15 34 16.1	-0.8
GLSP	**General Luna,**	3.43	156	eP	Pn	15 34 18.2	-0.2
SJMP	**San Jose**	3.54	263	eP	Pn	15 34 19.6	-0.4
CNOP	**Candoni, Negro**	3.70	214	eP	Pn	15 34 19.4	-2.8
PGP	**Puerto Galera**	3.70	279	⇑eP	Pn	15 34 25.4	+3.1
TGY	**Tagaytay City**	3.85	288	Pn	Pn	15 34 27.6	+3.3
	82nm,0.3s,baz=307,slow=3.5,SNR=11						
TGY				Lg	Lg	15 35 19.6	
	197nm,0.3s,baz=172,slow=17,SNR=3.5						
TGY				LR	LR	15 36 17.4	
	comp=Z,3μm,18.5s,baz=123,slow=47						
TGY	**Tagaytay City**	3.85	288	eP	Pn	15 34 27.4	+3.1
BUTP	**Butuan**	4.04	167	eP	Pn	15 34 29.5	+2.5
MACP	**Maragondon, Ca**	4.10	289	eP	Pn	15 34 29.6	+1.9
MACP				eS	Sb	15 35 30.5	+3.7
BALP	**Baler**	4.12	313	eP	Pn	15 34 26.0	-2.0
BALP				eS	Sn	15 35 11.4	-4.5
CUYO	**Cuyo Island**	4.17	241	eP	Pn	15 34 28.2	-0.4
CGP	**Cagayan de Oro**	4.45	180	⇑eP	Pn	15 34 36.2	+3.7
BUSP	**Coron**	4.50	259	eP	Pn	15 34 32.3	-0.9
CAUP	**Cauayan**	4.86	325	eP	Pn	15 34 37.6	-0.6
CAUP				eS	Sn	15 35 32.4	-1.8
BUKP	**Musuan**	5.04	176	eP	Pn	15 34 44.9	+4.2
SMPP	**San Manuel, Pa**	5.04	310	eP	Pn	15 34 39.2	-1.5
SMPP				eS	Sn	15 35 40.2	+1.5
PAGZ	**Pagadian**	5.22	195	eP	Pn	15 34 46.7	+3.6
ENPP	**El Nido**	5.45	252	eP	Pn	15 34 45.1	-1.1
CVP	**Callao Caves**	5.50	330	⇑iP	Pn	15 34 47.9	+1.0
CVP				i S	Sn	15 35 53.7	+3.9
BOLP	**Bolinao**	5.77	307	eP	Pn	15 34 50.6	0.0
DAV	**Davao City (W)**	5.89	172	Pn	Pn	15 34 57.2	+4.8
	31nm,0.3s,baz=276,slow=9.2,SNR=1.2						
DAV				Lg	Lg	15 36 26.7	
	18nm,0.3s,baz=25,slow=14,SNR=1.4						
DAV				LR	LR	15 37 20.4	
	comp=Z,2μm,19.1s,baz=26,slow=41						
KCP	**Kidapawan**	5.90	176	⇓eP	Pn	15 34 59.1	+6.5
APYP	**Conner**	5.93	326	eP	Pn	15 34 52.5	-0.4
APYP				eS	Sn	15 36 01.1	+0.6
ABRA	**Dolores**	6.07	321	eP	Pn	15 34 55.1	+0.3
ABRA				eS	Sn	15 36 04.2	+0.3
MATI	**Mati**	6.14	166	eP	Pn	15 35 02.8	+6.9
MYLDM	**Lahad Datu**	9.85	219	Pn	Pn	15 35 45.1	-1.6
YULB	**Yu-li**	10.89	343	Pn	Pn	15 36 03.4	+2.4
YHNB	**Yeheng**	12.09	345	Pn	Pn	15 36 19.9	+2.5
GTOI	**Gorontalo**	12.34	188	P	Pn	15 36 21.7	+0.9
	14nm,1.1s						
MRSI	**Marisa**	12.68	193	P	Pn	15 36 30.3	+4.8
	25nm,1.0s						
MPSI	**Mapaga**	13.40	201	P	Pn	15 36 39.7	+4.4
	686nm12nm,1.3s						
LUWI	**Luwuk**	14.02	188	Pn	Pn	15 36 43.6	-0.2
LUWI	**Luwuk**	14.02	188	P	P	15 36 49.0	-2.6
	8μm62nm,1.0s						
APSI	**Ampana**	14.09	193	P	P	15 36 49.8	-2.6
	627nm48nm,1.3s						
SIJI	**Sorong**	15.18	154	LR	LR	15 43 16.7	
	comp=Z,419nm,21.5s,baz=325,slow=39						
QIZ	**Qiongzhong**	15.52	295	P	Pn	15 37 03.9	-0.1
QIZ				S	Sn	15 39 55.5	-0.2
QIZ				LR	LR		
	comp=N,810nm,9.8s						
QIZ				LR	LR		
	comp=E,540nm,4.7s						
DLV	**T Lat**	15.88	268		P	15 37 10.7	-1.8
DLV				IAmb	IAmb	15 37 20.4	
	comp=Z,59nm,1.1s						
SBUM	**Sibu**	16.17	231		Pn	15 37 13.3	+0.9
SBUM				IAmb	IAmb	15 37 34.4	
	comp=Z,65nm,1.3s						
TTSI	**Tana Toraja**	16.60	197	P	P	15 37 22.3	+2.0
	comp=Z,770nmcomp=Z,74nm,0.9s						
MTKI	**Muara Teweh, K**	16.88	216	P	P	15 37 25.0	+1.6
	comp=Z,42nm,0.9s						
SPSI	**Sidrap Palu**	17.49	197	P	P	15 37 31.7	+1.5
	comp=Z,610nmcomp=Z,48nm,0.9s						
BNSI	**Bone**	17.82	195	P	P	15 37 36.9	+3.1
	comp=Z,799nmcomp=Z,44nm,1.1s						
KAPI	**Kappang**	18.50	196	P	Pn	15 37 42.6	+1.1
	comp=Z,3.2nm,0.3s,baz=63,slow=2.3,SNR=1.7						
BKSI	**Bulukumba**	18.70	194	P	Pn	15 37 45.6	+1.6
	comp=Z,25nm,1.0s						
BBKI	**Banjar Baru**	19.01	212	P	Pn	15 37 48.9	+1.2
	comp=Z,32nm,1.3s						
NJ2	**Nanjing**	19.77	345	eP	Pn	15 37 57.1	+0.4
NJ2				pmax	pmax		
	comp=Z,28nm,1.0s						
JNU	**Nakatsue**	20.87	15	LR	LR	15 46 25.1	
	comp=Z,255nm,19.6s,baz=194,slow=37						
JCJ	**Chichijima**	21.59	47	LR	LR	15 45 10.0	
	comp=Z,144nm,20.8s,baz=281,slow=32						
GYA	**Guiyang**	21.63	311	eP	P	15 38 18.5	+3.0
GYA				sP	pwP	15 38 38.5	+15
GYA				LR	LR		
	comp=Z,370nm,11.0s						
GYA				LR	LR		
	comp=Z,580nm,13.6s						
GYA				LR	LR		
	comp=Z,710nm,16.4s						
GENI	**Genyem**	21.76	134	P	P	15 38 19.0	+2.2
	comp=Z,4μmcomp=Z,137nm,0.7s						
JAY	**Jayapura**	22.09	133	LR	LR	15 46 18.4	
	comp=Z,456nm,19.0s,baz=322,slow=35						
KMMI	**Kalianget**	22.54	209	P	P	15 38 26.5	+1.3
	comp=Z,2μmcomp=Z,96nm,1.4s						
PLAI	**Plampang**	22.69	198	P	P	15 38 26.0	-0.8
	comp=Z,80nm,1.2s						
TWSI	**Taliwang, Sumb**	22.89	200	P	P	15 38 29.5	+0.6
	comp=Z,21nm,1.4s						
BATI	**Baumata**	23.02	183	P	P	15 38 29.4	-0.7
	comp=Z,15nm,0.6s,baz=349,slow=19,SNR=4.2						
BATI	**Baumata**	23.02	183	P	P	15 38 29.3	-0.9
	comp=Z,23nm,1.1s						
JHS	**Saijyo**	23.25	18	P	P	15 38 33.2	+0.8
JHS				IAmb	IAmb	15 38 44.2	
	comp=Z,28nm,1.1s						
KMI	**Kunming**	24.00	304	eP	P	15 38 40.5	+0.4
KMI				pP	sP	15 38 48.3	+1.7
KMI				sP	pP	15 39 00.8	+16
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,220nm,4.6s						
KMI				LR	LR		
	comp=Z,670nm,15.6s						
KMI				LR	LR		
	comp=Z,450nm,13.0s						
NGJI	**Ngawi**	24.09	214	P	P	15 38 42.9	+2.3
	comp=Z,84nm,1.1s						
JWT	**Wachi**	24.26	22	P	P	15 38 41.7	-0.4
PWJI	**Pagerwojo**	24.45	212	P	P	15 38 46.9	+2.9
	comp=Z,51nm,1.3s						
KSAR	**Wonju Array Be**	24.57	6	P	P	15 38 45.9	+1.1
KSRS	**Korea Array**	24.58	6	P	P	15 38 47.1	+2.1
	comp=Z,2.9nm,0.9s,baz=187,slow=12,SNR=9.9						
KSRS				LR	LR	15 47 20.3	
	comp=Z,140nm,19.9s,baz=192,slow=34						
INU	**Inuyama**	24.93	24	P	P	15 38 47.7	-0.5
INU				IAmb	IAmb	15 38 59.5	
	comp=Z,46nm,1.4s						
CM35	**Chiang Mai Arr**	25.23	286	P	P	15 39 01.0	+10
CM36	**Chiang Mai Arr**	25.26	286	P	P	15 38 52.0	+0.7
CM34	**Chiang Mai Arr**	25.26	287	P	P	15 38 57.0	+5.6
CM09	**Chiang Mai Arr**	25.34	286	P	P	15 38 58.1	+6.0
	comp=Z,79nmcomp=Z,9.3nm,0.9s						
CM04	**Chiang Mai Arr**	25.35	286	P	P	15 39 01.0	+8.8
	comp=Z,7.5nm,1.1s						
CM01	**Chiang Mai Arr**	25.37	286	P	P	15 38 58.0	+5.6
	comp=Z,11nm,1.0s						
CM05	**Chiang Mai Arr**	25.38	286	P	P	15 38 53.5	+1.1
	comp=Z,4.4nm,1.0s						
CM02	**Chiang Mai Arr**	25.39	286	P	P	15 38 59.5	+7.0
	comp=Z,7.2nm,1.1s						
CMAR	**Chiang Mai Arr**	25.39	286	P	P	15 38 51.1	-1.4
	comp=Z,2.3nm,1.0s,baz=97,slow=7.4,SNR=12						
CMAR				PcP	PcP	15 42 25.6	+0.6
	comp=Z,0.8nm,0.8s,baz=58,slow=1.5,SNR=2.2						
CMAR	**Chiang Mai Arr**	25.39	286	P	P	15 38 50.1	-2.4
CM13	**Chiang Mai Arr**	25.42	286	P	P	15 38 59.2	+6.4
	comp=Z,7.9nm,0.9s						
JMBI	**JAMBI**	25.43	237	P	P	15 38 54.9	+2.0
CM33	**Chiang Mai Arr**	25.45	287	P	P	15 38 59.0	+6.0
XAN	**Xi'an**	25.45	328	P	P	15 38 52.6	-0.3
XAN				pP	pwP	15 39 03.0	+1.5
XAN				sS	sS	15 43 43.0	+17
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
XAN				pmax	pmax		
	comp=Z,270nm,4.9s						
XAN				LR	LR		
	comp=Z,740nm,14.6s						
XAN				LR	LR		
	comp=Z,340nm,12.2s						
XAN				LR	LR		
	comp=Z,680nm,16.3s						
CM32	**Chiang Mai Arr**	25.51	286	P	P	15 39 01.0	+7.4
LEM	**Lembang**	25.96	222	LR	LR	15 49 20.9	
	comp=Z,303nm,20.1s,baz=50,slow=37						
CD2	**Chengdu**	26.33	316	P	P	15 38 59.6	-1.4
CD2				S	S	15 43 33.3	-0.2
CD2				pmax	pmax		
	comp=Z,50nm,0.9s						
CD2				LR	LR		
	comp=Z,1μm,18.0s						
CD2				LR	LR		
	comp=Z,1μm,15.1s						
CD2				LR	LR		
	comp=Z,690nm,21.6s						
MJAR	**Matsushiro Arr**	26.45	25	LR	LR	15 49 18.4	
	comp=Z,171nm,18.7s,baz=225,slow=36						
BKNI	**Bangkinang**	26.60	244	P	P	15 39 03.4	-0.1
SDSI	**Sungai Dareh**	26.89	241	P	P	15 39 07.4	+1.2
	comp=Z,1μmcomp=Z,6.8nm,1.2s						
PSI	**Prapat**	27.42	251	P	P	15 39 08.9	-2.2
	comp=Z,1.7nm,0.4s,baz=0.0,slow=9.1,SNR=1.5						
PSI				LR	LR	15 50 02.7	
	comp=Z,439nm,18.8s,baz=90,slow=37						
RPSI	**Rantau Prapat**	27.46	250	P	P	15 39 08.9	-2.4
MNSI	**Mandailing Nat**	27.67	246	P	P	15 39 14.7	+1.6
BJI	**Beijing**	28.03	346	P	P	15 39 22.8	+6.8
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH	**Lanzhou**	29.73	324	eP	P	15 39 40.6	+9.1
LZH				pP	pwP	15 39 54.3	+18
LZH				sP	sP	15 40 01.3	+24
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,60nm,4.3s						
HHC	**Hu-ho-hao-te**	30.10	340	eP	P	15 39 43.4	+8.8
HHC				pmax	pmax		
	comp=Z,20nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
FITZ	**Fitzroy Crossi**	30.85	178	LR	LR	15 55 48.8	
	comp=Z,111nm,18.4s,baz=358,slow=44						
FITZ	**Fitzroy Crossi**	30.85	178	P	P	15 39 38.6	-2.7
USA0B	**Ussuriysk Arra**	31.77	10	P	P	15 39 48.7	-0.5
USA0B				IAmb	IAmb	15 40 10.3	
	comp=Z,7.2nm,0.8s						
USRK	**Ussuriysk Ar.**	31.77	10	P	P	15 39 51.6	+2.4
	comp=Z,0.9nm,0.5s,baz=188,slow=8.7,SNR=3.8						
USRK				LR	LR	15 52 06.4	
	comp=Z,70nm,21.5s,baz=175,slow=35						
USRK	**Ussuriysk Ar.**	31.77	10	P	P	15 39 49.0	-0.2
WB0	**Warramunga Arr**	33.87	163	P	P	15 40 05.1	-2.7
WRA	**Warramunga Arr**	34.02	164	P	P	15 40 06.8	-2.3
	comp=Z,1.0nm,0.6s,baz=343,slow=9.2,SNR=7.4						
WRA				LR	LR	15 56 59.3	
	comp=Z,94nm,18.3s,baz=350,slow=42						
WRA	**Warramunga Arr**	34.02	164	P	P	15 40 06.1	-3.0
WB2	**Warramunga Arr**	34.02	164	P	P	15 40 06.5	-2.6
WR0	**Warramunga Arr**	34.09	163	P	P	15 40 07.7	-2.0
GTA	**Gaotai**	34.33	325	eP	P	15 40 13.0	+1.2
GTA				pP	sP	15 40 25.8	+7.8
GTA				sP	pP	15 40 30.8	+15
GTA				PcP	PcP	15 42 49.9	+2.1
GTA				S	S	15 45 38.8	0.0
GTA				pmax	pmax		
	comp=Z,140nm,5.6s						
GTA				LR	LR		
	comp=Z,320nm,17.4s						
GTA				LR	LR		
	comp=Z,340nm,16.4s						
GTA				LR	LR		
	comp=Z,520nm,16.7s						
ASAJ	**Asahikawa**	34.66	23	LR	LR	15 52 08.7	
	comp=Z,112nm,21.4s,baz=148,slow=32						
LSA	**Lhasa**	35.26	304	P	P	15 40 19.6	-0.8
LSA				IAmb	IAmb	15 40 44.2	
	comp=Z,7.0nm,1.0s						
AS31	**Alice Springs**	37.47	166	P	P	15 40 36.4	-2.3
ASAR	**Alice Springs**	37.47	166	P	P	15 40 36.9	-1.8
	comp=Z,0.7nm,0.4s,baz=344,slow=6.5,SNR=26						
ASAR				LR	LR	15 59 06.7	
	comp=Z,74nm,18.4s,baz=354,slow=41						
ASAR	**Alice Springs**	37.47	166	P	P	15 40 36.2	-2.5
ODAN	**Odare**	37.57	297	eP	P	15 40 38.9	-1.0
	comp=Z,18nm,0.7s						
ULN	**Ulaanbaatar**	37.81	341	P	P	15 40 42.1	+0.6
ULN				IAmb	IAmb	15 40 52.9	
	comp=Z,18nm,1.0s						

SONM	Songino Array	38.00	340	P	P	15 40 43.8	+0.7
	comp=Z,3.9nm,1.0s,baz=159,slow=8.4,SNR=16						
SONM				LR	LR	15 55 41.7	
	comp=Z,193nm,21.6s,baz=106,slow=35						
SONM	Songino Array	38.00	340	P	P	15 40 43.0	-0.1
RAMN	Ramite	38.28	297	eP	P	15 40 45.1	-0.7
	comp=Z,8.2nm,0.5s						
GUN	Gumba	39.13	298	eP	P	15 40 52.3	-0.8
	comp=Z,25nm,0.8s						
PKI	Pulchoki	39.45	298	eP	P	15 40 54.2	-1.6
	comp=Z,10nm,0.7s						
PKIN	Phulchoki	39.47	298	eP	P	15 40 53.9	-1.9
KKN	Kakani	39.62	298	eP	P	15 40 55.6	-1.4
H11S3	WAKE ISLAND Hy	40.72	77	T	T	16 25 11.1	
	baz=269,slow=75,SNR=268						
H11S1	WAKE ISLAND Hy	40.73	77	T	T	16 25 13.9	
	baz=269,slow=75,SNR=120						
H11S2	WAKE ISLAND Hy	40.73	77	T	T	16 25 21.1	
	baz=269,slow=75,SNR=144						
H11N1	WAKE ISLAND Hy	40.95	75	T	T	16 25 15.2	
	baz=267,slow=74,SNR=1013						
H11N2	WAKE ISLAND Hy	40.96	75	T	T	16 25 07.5	
	baz=267,slow=74,SNR=636						
H11N3	WAKE ISLAND Hy	40.97	75	T	T	16 25 28.3	
	baz=267,slow=74,SNR=863						
DANN	Dangsing	41.05	298	eP	P	15 41 07.6	-1.4
	comp=Z,31nm,1.1s						
FORT	Forrest	43.58	176	P	P	15 41 26.8	-2.3
FORT				IAmb	IAmb	15 41 46.7	
	comp=Z,22nm,0.8s						
WMQ	Urumqi	44.20	321	eP	P	15 41 34.9	+0.8
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,220nm,7.3s						
BBOO	Buckleboo	46.76	167	P	P	15 41 53.0	-1.4
STKA	Stephens Creek	47.41	160	P	P	15 41 58.8	-0.6
	comp=Z,3.7nm,0.7s,baz=347,slow=11,SNR=4.8						
STKA				LR	LR	16 04 28.9	
	comp=Z,103nm,18.6s,baz=9.7,slow=40						
STKA	Stephens Creek	47.41	160	P	P	15 41 57.1	-2.3
PETK	Petropavlovsk-	47.90	26	P	P	15 42 06.1	+3.2
	comp=Z,5.7nm,1.0s,baz=234,slow=11,SNR=2.0						
PETK				LR	LR	16 02 17.2	
	comp=Z,82nm,19.5s,baz=219,slow=36						
MK31	Makanchi Array	48.99	322	P	P	15 42 10.9	-0.7
MK31				IAmb	IAmb	15 42 20.9	
	comp=Z,12nm,0.9s						
MKAR	Makanchi Array	48.99	322	P	P	15 42 12.0	+0.4
	comp=Z,6.7nm,1.0s,baz=120,slow=6.7,SNR=27						
MKAR				LR	LR	16 02 52.8	
	comp=Z,203nm,18.2s,baz=112,slow=36						
MKAR	Makanchi Array	48.99	322	P	P	15 42 10.8	-0.9
YAK	Yakutsk	49.15	3	P	P	15 42 11.6	-0.8
MAKZ	Makanchi	49.19	322	P	P	15 42 12.5	-0.6
ARMA	Armidale	50.29	149	P	P	15 42 18.8	-2.9
ARMA				IAmb	IAmb	15 42 34.3	
	comp=Z,8.8nm,0.9s						
KSH	Kashi	50.33	311	P	P	15 42 23.9	+1.9
KSH				pP	sP	15 42 38.3	+10
KSH				PcP	PcP	15 43 37.8	-2.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZAA0	Zalesovo Array	51.57	331	P	P	15 42 29.7	-1.2
ZALV	Zalesovo Beam	51.57	331	P	P	15 42 31.0	+0.1
	comp=Z,3.5nm,0.6s,baz=115,slow=6.5,SNR=17						
ZALV				LR	LR	16 05 36.2	
	comp=Z,110nm,19.2s,baz=117,slow=37						
ZALV	Zalesovo Beam	51.57	331	P	P	15 42 29.6	-1.3
KURK	Kurchatov	53.02	325	P	P	15 42 40.7	-1.1
SEY	Seymchan	53.64	15	P	P	15 42 48.3	+2.2
	comp=Z,1.0nm,0.6s,baz=232,slow=19,SNR=4.3						
KBL	Kabul	54.59	303	P	P	15 42 52.2	-1.6
KBL				IAmb	IAmb	15 43 04.2	
	comp=Z,5.4nm,0.9s						
KK31	Karatay Array	55.31	314	P	P	15 42 57.5	-1.1
KK31				IAmb	IAmb	15 43 07.9	
	comp=Z,8.4nm,1.1s						
KKAR	Karatay Array	55.31	314	P	P	15 42 57.6	-1.0
KKAR	Karatay Array	55.31	314	P	P	15 42 57.8	-0.8
KKAR				IAmb	IAmb	15 43 07.8	
	comp=Z,8.4nm,1.1s						
BRVK	Borovoye	58.69	325	P	P	15 43 21.9	-0.5
TIXI	Tiksi	58.73	2	P	P	15 43 21.5	-0.9
TIXI				IAmb	IAmb	15 43 38.9	
	comp=Z,7.0nm,1.1s						
HRA	Herat	60.15	302	P	P	15 43 31.7	-1.4
HRA				IAmb	IAmb	15 43 37.5	
	comp=Z,4.6nm,0.9s						
MSVF	Nonsavu	60.83	119	LR	LR	16 10 14.0	
	comp=Z,47nm,18.4s,baz=348,slow=36						
GEYT	Alibeck	63.74	306	P	P	15 43 58.1	+1.1
	comp=Z,0.8nm,0.5s,baz=90,slow=4.5,SNR=1.8						
GEYT				LR	LR	16 16 27.7	
	comp=Z,165nm,18.1s,baz=65,slow=41						
ABKAR	Akbulak array	63.87	319	P	P	15 43 56.5	-1.0
ABKAR	Akbulak array	63.87	319	P	P	15 43 56.4	-1.2
ABKAR				IAmb	IAmb	15 44 06.1	
	comp=Z,5.1nm,0.8s						
ARU	Arti	66.17	326	P	P	15 44 10.8	-1.6
ARU				IAmb	IAmb	15 44 21.0	
	comp=Z,8.1nm,0.7s						
GAMB	Gambell	66.92	26	P	P	15 44 14.8	-2.2
NNZ	Nelson	70.14	143	P	P	15 44 33.0	-4.5
BKZ	Black Stump Fm	70.79	140	P	P	15 44 39.1	-2.5
BKZ				IAmb	IAmb	15 44 54.2	
	comp=Z,9.3nm,1.0s						
RAYN	Ar Rayn	75.18	291	P	P	15 45 06.2	-1.8
KBZ	Khabaz	75.29	312	LR	LR	16 21 08.5	
	comp=Z,116nm,19.4s,baz=62,slow=38						
TRF	Thorofare Moun	76.30	27	P	P	15 45 12.1	-1.6
TRF				IAmb	IAmb	15 45 29.5	
	comp=Z,11nm,1.4s						
KLMR	Klimovskoe	76.47	330	eP	P	15 45 12.9	-1.6
KLMR				AMP		15 45 24.0	
	comp=Z,25nm,1.4s						
ILAR	Eielson Array	77.72	26	P	P	15 45 24.1	+2.6
	comp=Z,0.4nm,0.9s,baz=270,slow=5.0,SNR=2.6						
SPITS	Spitsbergen Ar	81.12	349	LR	LR	16 27 23.7	
	comp=Z,102nm,18.1s,baz=215,slow=40						
ARCES	ARCESS Array B	81.18	339	P	P	15 45 41.4	+1.1
	comp=Z,4.5nm,1.0s,baz=77,slow=6.4,SNR=4.5						
INK	Inuvik	82.38	22	P	P	15 45 49.3	+2.8
	comp=Z,1.1nm,0.8s,baz=280,slow=6.1,SNR=2.1						
BRTR	Keskin Array B	82.67	309	P	P	15 45 48.4	-0.5
	comp=Z,0.4nm,0.7s,baz=116,slow=6.6,SNR=2.4						
BRTR				LR	LR	16 26 23.2	
	comp=Z,40nm,18.8s,baz=38,slow=38						
FINES	FINESS Array B	82.83	331	LR	LR	16 25 20.6	
	comp=Z,137nm,18.7s,baz=300,slow=38						
AKASG	Malin Array Be	83.55	320	P	P	15 45 52.4	-0.6
	comp=Z,0.1nm,0.3s,baz=56,slow=4.9,SNR=1.4						
NACGM	Naroch	84.03	325	iP	P	15 46 03.7	+8.3
NACGM				iP	P	15 46 03.7	+8.3
NACGM				iP	P	15 46 03.7	+8.3
NACGM				iPb	pwP	15 46 06.0	+2.9
	comp=Z,17nm,1.4s						
NACGM				iPP	PP	15 49 29.9	+21
NACGM				iPPP	PPP	15 51 23.8	
NACGM				iS	S	15 56 28.2	+9.1
NACGM				iSS	SS	16 01 47.5	+0.5
NACGM				iSSS	SSS	16 05 28.6	
NACGM				iLR	LR	16 26 17.8	
TESR	Tescani	86.19	317	⇓P	P	15 46 10.0	+3.6
VRI	Vrincioaia	86.30	316	⇑P	P	15 46 11.5	+4.5
BURAR	Bucovina Array	86.85	318	⇑P	P	15 46 13.9	+4.2
BURAR	Bucovina Array	86.85	318	P	P	15 46 08.4	-1.3
HFS	Hagfors	88.99	332	LR	LR	16 27 33.2	
	comp=Z,201nm,18.6s,baz=47,slow=36						
NOA	NORSAR Array B	89.70	333	LR	LR	16 29 14.8	
	comp=Z,158nm,20.5s,baz=65,slow=37						
PPT	Papeete	89.84	108	LR	LR	16 20 11.5	
	comp=Z,32nm,18.9s,baz=344,slow=31						
YKA	Yellowknife Ar	91.95	24	P	P	15 46 35.6	+2.3
	comp=Z,0.2nm,0.6s,baz=314,slow=3.9,SNR=4.0						
YKA				LR	LR	16 31 39.0	
	comp=Z,43nm,18.2s,baz=0.0,slow=38						
VNDA	Vanda	92.75	172	LR	LR	16 29 52.5	
	comp=Z,57nm,18.9s,baz=329,slow=37						
MBAR	Mbarara	94.00	270	LR	LR	16 24 07.2	
	comp=Z,14nm,19.6s,baz=67,slow=32						
PLCA	Paso Flores	149.24	157	PKPbc	PKPbc	15 53 14.2	+0.2
	comp=Z,1.0nm,0.5s,baz=225,slow=2.9,SNR=9.1						

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*VAO **13** 15:36:51.8±3.4, 9.°49S×75.°17W, h78^{km}±15^{km}, mb4.4*
*IDC **13** 15:37:02.8±2.8, 8.°82S×74.°53W, h139^{km}±35^{km}, mb3.6/3, mb1 3.6/6, mb1mx3.3/31, mbtmp4.0/6, Error ellipse: s-maj=36.0km s-min=14.1km az=64.0*
ISC 13 15:37:03.6±0.7**, 8.°84S**±0.°08×**74.°53W**±0.°07**, h150^{km}, n16, σ1^{s}53**/18**, mb3.8**/3**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.87	216	P	Pn	15 38 02.5	+0.3
	7.7nm,0.3s,baz=42,slow=12,SNR=7.9						
NNA				S	Sn	15 38 47.0	-0.8
	48nm,0.3s,baz=312,slow=21,SNR=16						
ATAH	Atahualpa	4.19	294	P	Pn	15 38 06.3	-0.4
	4.5nm,0.3s,baz=139,slow=2.1,SNR=31						
ATAH				S	Sn	15 38 54.2	-1.5
	9.7nm,0.3s,baz=76,slow=11,SNR=15						
ETMB	Extrema	8.26	97	eP	Pn	15 38 58.1	-2.5
SAML	Samuel	11.21	91	eP	Pn	15 39 37.1	-2.5
MACA	Manacapuru-AM	14.87	69	eP	P	15 40 29.2	+0.7
SIV	San Ignacio	14.94	120	P	Pn	15 40 27.7	+0.3
	0.5nm,0.3s,baz=302,slow=13,SNR=7.4						
SDV	Santo Domingo	18.03	13	eP	Pn	15 41 05.7	+0.6
NPGB	Novo Progresso	19.07	86	eP	P	15 41 14.9	+0.3
MALB	Monte Alegre	21.32	72	eP	P	15 41 42.2	+3.3
SNDB	Serra Nova Dou	23.06	100	eP	P	15 41 56.0	0.0
MCPB	Macapa, AP	23.91	71	eP	P	15 42 06.2	+2.3
PRPB	Parauapebas	24.64	86	eP	P	15 42 11.0	+0.5
GDU01	Guandu, BA	34.60	101	eP	P	15 43 37.5	-1.0
TXAR	Lajitas Array	47.21	325	P	P	15 45 22.4	+0.9
	0.4nm,0.6s,baz=146,slow=8.8,SNR=4.5						
DBIC	Dimbokro	71.13	80	P	P	15 48 06.5	+0.1
	2.2nm,0.6s,baz=244,slow=7.8,SNR=4.4						
TORD	Torodi Ar. Bea	78.77	75	P	P	15 48 50.5	+0.3
	1.0nm,0.5s,baz=257,slow=6.2,SNR=5.1						

IDC 13 16:05:36.1±5.8**, 55.°46S**×**151.°53W, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/27**, mbtmp3.5**/2**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.8**/22**, Error ellipse: s-maj=547.8km s-min=88.3km az=168.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	51.26	168	LR	LR	16 35 04.5	
	comp=Z,81nm,19.1s,baz=118,slow=34						
H03N3	Juan Fernandez	53.60	98	T	T	17 12 08.3	
	baz=222,slow=72,SNR=11						
H03N2	Juan Fernandez	53.61	98	T	T	17 11 58.5	
	baz=222,slow=72,SNR=18						
H03N1	Juan Fernandez	53.62	98	T	T	17 12 07.0	
	baz=222,slow=72,SNR=9.9						
ASAR	Alice Springs	62.16	268	P	P	16 15 59.2	+0.2
	0.5nm,0.6s,baz=138,slow=6.8,SNR=11						
WRA	Warramunga Arr	64.84	271	P	P	16 16 16.4	-0.4
	0.4nm,0.9s,baz=106,slow=7.4,SNR=1.6						
MKAR	Makanchi Array	145.92	278	PKPbc	PKPdf	16 25 15.8	0.0
	1.2nm,0.8s,baz=112,slow=4.4,SNR=13						
ZALV	Zalesovo Beam	148.16	291	PKPbc	PKPbc	16 25 21.8	-0.8
	0.5nm,0.6s,baz=90,slow=2.9,SNR=2.5						

IDC 13 16:07:11.0±3.9**, 26.°03S**×**29.°06E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/34**, mbtmp2.8**/2**, ML2.1**/2**, Error ellipse: s-maj=32.7km s-min=24.5km az=113.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.29	287	Pg	Pb	16 08 11.6	+1.2
	0.1nm,0.3s,baz=103,slow=18,SNR=2.4						
LBTB				Lg	Lg	16 08 56.4	
	1.0nm,0.3s,baz=18,slow=23,SNR=18						
BOSA	Boshof	4.25	232	Pn	Pn	16 08 17.5	+0.3
	0.1nm,0.3s,baz=41,slow=11,SNR=1.6						
BOSA				Pg	Pg	16 08 29.8	-2.7
	0.1nm,0.3s,baz=52,slow=14,SNR=1.3						
BOSA				Lg	Lg	16 09 23.9	
	0.5nm,0.3s,baz=328,slow=17,SNR=9.5						
I47ZA	BOSHOF INFRASO	4.27	232	i		16 33 30.0	
	baz=50,slow=288,SNR=2.2						
MATP	Matopo	5.61	355	Pn	Pn	16 08 34.9	-0.9
	0.1nm,0.3s,baz=168,slow=9.3,SNR=2.0						
MATP				Lg	Lg	16 10 00.5	
	0.1nm,0.3s,baz=101,slow=13,SNR=6.7						
I35NA	TSUMEB INFRASO	12.60	300	i		17 26 20.0	
	baz=126,slow=312,SNR=3.4						

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*BEO **13** 16:18:48.6±0.6, 41.°18N×19.°93E, h0^{km}, ML2.7/11*
*PDG **13** 16:18:49.8±0.2, 41.°33N×19.°93E, h6^{km}, ML2.8/14, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*TIR **13** 16:18:49.0, 41.°29N×20.°01E, h1^{km}±2^{km}, Md3.1*
*THE **13** 16:18:50.0, 41.°28N×19.°98E, h0^{km}±4^{km}, ML2.5/2, Error ellipse: s-maj=4.5km s-min=0.9km az=208.0*
*SKO **13** 16:18:50.2, 41.°32N×19.°91E, h7^{km}*
ISC 13 16:18:50.4±0.8**, 41.°29N**±0.°02×**19.°91E**±0.°02**, h10^{km}**±4^{km}**, n84, σ1^{s}24**/137**, 18C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.07	327	P	Pg	16 18 51.9	-0.6
TIR				S	Sg	16 18 54.2	+0.1
	3µm,0.3s						
TIR	Tirane	0.07	327	⇑P	Pg	16 18 51.9	-0.6
TIR				S	Sg	16 18 54.0	-0.1
TIR	Tirane	0.07	327	ePg	Pg	16 18 51.8	-0.7
TIR				eSg	Sg	16 18 53.9	-0.2
TIR	Tirane	0.07	327	P	Pg	16 18 52.0	-0.5
	baz=300						
TIR				S	Sg	16 18 54.2	+0.1
	baz=300						
TIR	Tirane	0.07	327	⇓iPg	Pg	16 18 51.9	-0.6
ELBAS	Elbasan	0.21	144	P	Pg	16 18 53.3	-1.5
	baz=162						
ELBAS				S	Sg	16 18 56.0	-1.7
	baz=162						
PHP	Peshkopia	0.56	45	P	Pg	16 18 59.8	-1.4
PHP				S	Sg	16 19 08.6	0.0
PHP	Peshkopia	0.56	45	P	Pg	16 18 59.9	-1.4
	baz=39						
PHP				S	Sg	16 19 08.2	-0.4
	baz=39						
OHR	Ohrid	0.69	105	⇓iPg	Pg	16 19 02.3	-1.4
OHR				iSg	Sb	16 19 13.4	-0.8
OHR				eLg	Lg	16 19 15.1	
	comp=E,309nm,0.5s						
PUK	Puka	0.75	359	P	Pg	16 19 04.1	-0.8
	baz=354						
PUK				S	Sb	16 19 16.0	0.0
	baz=354						
ULC	Ulcinj	0.84	323	⇓iPg	Pg	16 19 05.0	-1.5
ULC	Ulcinj	0.84	323	⇑iPg	Pg	16 19 05.0	-1.5
ULC				iSg	Sg	16 19 18.0	+0.5
VLO	Vlora	0.88	201	P	Pb	16 19 08.1	+0.4
	baz=206						
VLO				S	Sn	16 19 21.6	-0.1
	baz=206						
KBN	Korca	0.94	135	P	Pg	16 19 06.5	-1.9
KBN	Korca	0.94	135	P	Pg	16 19 06.7	-1.7
	baz=138						
KBN				S	Sb	16 19 21.6	+0.2
	baz=138						
DRME	Dracevica, Mon	1.05	329	ePn	Pg	16 19 08.7	-1.8
DRME	Dracevica, Mon	1.05	329	⇓iPg	Pg	16 19 08.8	-1.8
DRME				iSg	Sb	16 19 25.1	+0.6
BCI	Bajram Curri	1.08	6	P	Pg	16 19 09.4	-1.7
	baz=2.0						
BCI				S	Sn	16 19 28.4	+1.6
	baz=2.0						
FNA	Florina	1.22	114	P	Pg	16 19 11.7	-2.0
FNA				S	Sg	16 19 28.7	-0.8
	comp=E,330nm,0.3s						
FNA	Florina	1.22	114	⇑iPg	Pg	16 19 11.7	-2.0
FNA				iSg	Sn	16 19 30.2	+0.1
NEST	Nestorio	1.23	135	P	Pg	16 19 12.7	-1.2
PDG	Podgorica	1.24	337	⇓P	Pg	16 19 12.2	-2.0
PDG				⇑S	Sg	16 19 29.2	-1.1
PDG	Podgorica	1.24	337	ePg	Pg	16 19 11.5	-2.7
PDG				eSg	Sn	16 19 32.0	+1.4
PDG	Podgorica	1.24	337	ePn	Pg	16 19 11.8	-2.4
PDG	Podgorica	1.24	337	ePg	Pg	16 19 11.8	-2.4
TTG	Podgorica	1.24	337	⇓iPg	Pg	16 19 12.2	-2.0
TTG				iSg	Sn	16 19 31.3	+0.7
LSK	Leskovik	1.25	155	P	Pg	16 19 13.4	-1.0
	baz=158						
LSK				S	Sn	16 19 32.8	+1.7
	baz=158						
BUM	Brajici-Budva	1.27	323	⇑iPg	Pg	16 19 12.8	-1.9
BUM				iSg	Sn	16 19 32.4	+1.0
PVY	Plav	1.30	1	⇓iPg	Pg	16 19 13.2	-2.2
PVY				iSg	Sn	16 19 33.1	+0.7
SKO	Skopje	1.33	59	ePg	Pg	16 19 13.8	-2.1
SKO				eSg	Sg	16 19 32.3	-0.9
SKO	Skopje	1.33	59	⇑iPg	Pg	16 19 14.0	-1.9
SKO				iSg	Sg	16 19 32.1	-1.1
SKO				eLg	Lg	16 19 32.6	
	comp=N,27nm,0.5s						
SRN	Sarande	1.41	177	P	Pb	16 19 17.9	+1.2
	baz=181						
SRN				S	Sn	16 19 36.7	+1.9
	baz=181						
PENT	Pentalofos	1.44	139	P	Pn	16 19 16.7	+0.1
CEME	Cevo	1.46	330	⇑iPg	Pn	16 19 16.2	-0.7
CEME				iSg	Sn	16 19 38.6	+2.5
HCY	Herceg Novi	1.57	318	ePn	Pb	16 19 19.6	+0.1
HCY	Herceg Novi	1.57	318	⇑iPg	Pn	16 19 18.3	0.0
HCY				iSg	Sg	16 19 41.9	+1.1
BEY	Berane	1.58	359	iPn	Pn	16 19 18.3	-0.4
IVA	Berane	1.58	359	⇓iPg	Pn	16 19 18.2	-0.4
IVA				iSg	Sg	16 19 41.8	+0.6
KOME	Kolasin	1.59	349	⇑iPg	Pn	16 19 18.3	-0.4
KOME				iSg	Sg	16 19 42.0	+0.6
GJIK	Gjilan	1.63	44	iPn	Pn	16 19 19.1	-0.1
NKME	Niksic	1.64	334	ePn	Pn	16 19 19.4	0.0
NKME				eSn	Sg	16 19 43.4	+0.3
NKY	Niksic	1.67	336	⇑iPn	Pn	16 19 19.9	+0.1
NKY				iSn	Sg	16 19 44.1	+0.1
STIP	Stip	1.75	76	iPn	Pg	16 19 23.2	-0.8
STIP				iSn	Sg	16 19 49.4	+2.6
STIP				eLg	Lg	16 19 50.2	
	comp=E,12nm,0.5s						
IGT	Igoumenitsa	1.79	170	iPn	Pn	16 19 21.9	+0.6
TREB	Trebinje	1.84	321	ePn	Pn	16 19 21.9	-0.1
TREB				eSg	Sg	16 19 50.4	+0.8
TREB	Trebinje	1.84	321	ePn	Pn	16 19 22.0	-0.1
BRY	Bratogost	1.91	328	ePn	Pn	16 19 24.1	+1.0
BRY	Bratogost	1.91	328	⇑iPn	Pn	16 19 23.6	+0.5
BRY				iSn	Sb	16 19 49.9	+0.6
GRG	Griva	1.91	99	P	Pn	16 19 22.9	-0.1
GRG	Griva	1.91	99	⇓iPn	Pn	16 19 23.0	0.0
SJES	Sjenica	1.97	1	ePn	Pn	16 19 24.9	+0.9
SJES				eSn	Sn	16 19 50.7	+1.9
SJES	Sjenica	1.97	1	ePn	Pn	16 19 24.8	+0.8
VAY	Valandovo	2.00	88	iPn	Pn	16 19 24.4	+0.1
VAY				iSn	Sb	16 19 52.8	+0.9
VAY				eLg	Lg	16 19 53.5	
	comp=E,35nm,0.8s						
UPM	Unac-Piva	2.05	339	ePn	Pb	16 19 27.3	-0.6
UPM	Unac-Piva	2.05	339	⇓iPn	Pn	16 19 25.6	+0.4
UPM				iSn	Sb	16 19 53.4	-0.2
PLE	Pljevlja	2.08	349	ePn	Pn	16 19 25.8	+0.4
PLE				iSn	Sb	16 19 53.8	-0.3
KNT	Kendrikon	2.25	92	⇓iPn	Pn	16 19 29.2	+1.4
BOSS	Bosilegrad	2.26	57	ePn	Pn	16 19 29.0	+1.1
BOSS				eSn	Sn	16 19 56.6	+0.7
STON	Ston	2.28	315	ePn	Pn	16 19 28.4	+0.3
STON				eSn	Sn	16 19 59.0	+2.7
STON	Ston	2.28	315	ePn	Pn	16 19 27.3	-0.8
STON				Sn	Sn	16 19 55.4	-0.9
STON	Ston	2.28	315	ePn	Pn	16 19 27.8	-0.3
IVAS	Ivanjica	2.29	4	ePn	Pn	16 19 28.6	+0.3
IVAS				eSn	Sb	16 20 00.3	0.0
RUDO	Rudo	2.36	350	ePn	Pb	16 19 32.1	-0.9
MATE	Matera	2.51	256	⇑P	Pn	16 19 32.0	+0.7
BBLS	Lazići	2.60	352	ePn	Pn	16 19 34.7	+2.1
BBLS				eSn	Sn	16 20 07.2	+2.9
BBLS	Lazići	2.60	352	ePn	Pn	16 19 34.9	+2.3
GRUS	Gruza	2.66	13	ePn	Pn	16 19 34.2	+0.8
DIVS	Divibare	2.81	1	ePn	Pn	16 19 36.2	+0.8
DIVS				eSn	Sn	16 20 12.1	+2.7
DIVS	Divibare	2.81	1	ePn	Pn	16 19 35.9	+0.5
VTS	Vitosha	2.81	61	⇑P	Pn	16 19 37.1	+1.6
VTS				⇑S	Sn	16 20 11.6	+2.1
ZAPS	Zavoj	2.83	45	ePn	Pn	16 19 37.4	+1.7
ZAPS				eSn	Sn	16 20 10.3	+0.4
TRUS	Trudelj	2.95	7	ePn	Pn	16 19 36.9	-0.5
RICI	Ricice	3.02	318	ePn	Pn	16 19 38.3	+0.1
RICI				Sn	Sn	16 20 16.0	+1.5
ZAGS	Zajecar	3.05	33	ePn	Pn	16 19 38.2	-0.5
HVAR	Hvar	3.19	307	ePn	Pn	16 19 39.7	-0.9
HVAR				Sn	Sn	16 20 17.6	-1.1
MDVR	Moldovita	3.73	20	⇓P	Pn	16 19 48.6	+0.6
MDVR				⇑S	Sn	16 20 33.5	+1.4
KIJV	Kijevo	3.75	318	ePn	Pn	16 19 46.4	-1.9
KIJV				Sn	Sn	16 20 33.1	+0.5
FRGS	Fruska Gora	3.87	359	ePn	Pn	16 19 48.2	-1.7
HERR	Herculane	4.03	26	⇑P	Pn	16 19 52.5	+0.3
HERR				⇑S	Sn	16 20 41.2	+1.8
BZS	Buzias	4.50	15	⇑P	Pn	16 19 58.8	+0.2
BZS				⇓S	Sn	16 20 50.5	-0.4
GZR	Gura Zlata	4.60	26	⇓P	Pn	16 20 00.6	+0.5
GZR				⇓S	Sn	16 20 54.8	+1.2
MORH	Mrgy, Hungar	5.01	350	ePn	Pn	16 20 05.6	0.0
CRES	Cresnjev	5.57	326	ePn	Pn	16 20 13.8	+0.5
CEY	Cerknica	5.97	320	ePn	Pn	16 20 19.4	+0.5

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*SJA **13** 16:19:36.3±0.6, 21.°93S×68.°58W, h134^{km}±4^{km}, ML4.2, MW4.0*
*NEIC **13** 16:19:37.2±2.5, 21.°92S±0.°05×68.°48W±0.°08, h114^{km}±6^{km}, Error ellipse: s-maj=11.0km s-min=7.0km az=84.0*
*IDC **13** 16:19:37.5±0.8, 21.°92S×68.°45W, h112^{km}±9^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.7/24, mbtmp4.0/10, Error ellipse: s-maj=23.7km s-min=18.9km az=30.0*
*GUC **13** 16:19:38.0±0.7, 21.°94S×68.°50W, h115^{km}±3^{km}, ML4.0*
*VAO **13** 16:19:43.4±2.6, 21.°59S×68.°09W, h152^{km}±13^{km}, mb4.3*
ISC 13 16:19:37.2±0.6**, 21.°97S**±0.°03×**68.°56W**±0.°04**, h121^{km}**±5^{km}**, n122, σ1^{s}52**/155**, mb4.2**/10**, 14C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.66	285	⇑iP	Pn	16 19 57.2	+0.7
PB09				iS	Sn	16 20 11.5	+0.5
PB09				IAML		16 20 14.4	
	comp=E,4µm,0.5s						
PB09	IPOC Station P	0.66	285		Pn	16 19 57.1	+0.7
PB09				Sn	Sn	16 20 10.8	-0.3
PB09	IPOC Station P	0.66	285	eP	Pn	16 19 57.3	+0.8
PB09				eS	Sn	16 20 13.0	+2.0
PB09				IAML		16 20 14.2	
	comp=Z,4µm,0.2s						
LVC	Limon Verde	0.72	207	P	Pn	16 19 57.9	+0.6
	comp=Z,213nm,0.3s,baz=29,slow=8.5,SNR=1564						
LVC				S	Sn	16 20 13.1	+0.8
	comp=Z,479nm,0.3s,baz=105,slow=20,SNR=22						
LVC				LR	LR	16 20 29.5	
	comp=Z,342nm,18.7s,baz=354,slow=64						
LVC	Limon Verde	0.72	207	eP	Pn	16 19 57.7	+0.5
LVC				iS	Sn	16 20 13.1	+0.8
LVC	Limon Verde	0.72	207	Pn	Pn	16 19 57.7	+0.5
LVC				Sn	Sn	16 20 12.3	0.0
LVC	Limon Verde	0.72	207	eP	Pn	16 19 57.8	+0.6
LVC				eS	Sn	16 20 13.0	+0.7
PB03	IPOC Station P	1.11	266	⇑iP	Pn	16 20 01.1	+0.5
PB03				iS	Sn	16 20 18.8	+0.5
PB03				IAML		16 20 20.5	
	comp=E,3µm,0.2s						
PB03	IPOC Station P	1.11	266	eP	Pn	16 20 01.2	+0.5
PB03				eS	Sn	16 20 19.5	+1.2
PB03				IAML		16 20 20.6	
	comp=Z,2µm,0.2s						
PB06	IPOC Station P	1.19	232	⇑iP	Pn	16 20 02.5	+1.0
PB06				iS	Sn	16 20 21.1	+1.3
PB06				IAML		16 20 22.5	
	comp=N,3µm,0.2s						
PB06	IPOC Station P	1.19	232		Pn	16 20 02.4	+1.0
PB06				Sn	Sn	16 20 20.9	+1.1
PB06	IPOC Station P	1.19	232	eP	Pn	16 20 02.5	+1.0
PB06				eS	Sn	16 20 22.0	+2.2
PB06				IAML		16 20 23.1	
	comp=Z,5µm,0.7s						
PB07	IPOC Station P	1.26	281	⇑iP	Pn	16 20 02.7	+0.5
PB07				iS	Sn	16 20 21.5	+0.5
PB07				IAML		16 20 23.5	

	comp=N,4µm,0.3s						
PB07	IPOC Station P	1.26	281		Pn	16 20 02.6	+0.5
PB07	IPOC Station P	1.26	281	eP	Pn	16 20 02.9	+0.7
PB07				eS	Sn	16 20 22.3	+1.3
PB07				IAML		16 20 23.7	
	comp=Z,3µm,0.5s						
PB02	IPOC Station P	1.40	297	⇑iP	Pn	16 20 03.7	+0.1
PB02				i S	Sn	16 20 23.6	-0.2
PB02				IAML		16 20 25.5	
	comp=E,4µm,0.3s						
PB02	IPOC Station P	1.40	297	eP	Pn	16 20 04.0	+0.4
PB02				eS	Sn	16 20 24.4	+0.7
PB02				IAML		16 20 26.2	
	comp=Z,3µm,0.3s						
PB15	IPOC Station P	1.50	214		Pn	16 20 05.9	+1.0
PB04	IPOC Station P	1.52	256	⇑iP	Pn	16 20 05.6	+0.5
PB04				i S	Sn	16 20 26.7	+0.4
PB04				IAML		16 20 30.6	
	comp=N,4µm,0.2s						
PB04	IPOC Station P	1.52	256		Pn	16 20 05.5	+0.5
PB04	IPOC Station P	1.52	256	eP	Pn	16 20 05.7	+0.7
PB04				eS	Sn	16 20 28.1	+1.8
PB04				IAML		16 20 28.7	
	comp=Z,1µm,0.7s						
PB05	IPOC Station P	1.76	240	⇑iP	Pn	16 20 08.4	+0.5
PB05				i S	Sn	16 20 31.8	+0.6
PB05				IAML		16 20 38.9	
	comp=N,2µm,0.3s						
PB05	IPOC Station P	1.76	240	eP	Pn	16 20 08.5	+0.7
PB05				eS	Sn	16 20 33.1	+1.9
PB05				IAML		16 20 38.6	
	comp=Z,1µm,0.4s						
PATCX	Punta Patache	1.87	307	⇑iP	Pn	16 20 09.2	0.0
PATCX				i S	Sn	16 20 33.5	-0.2
PATCX				IAML		16 20 39.9	
	comp=N,2µm,0.4s						
PATCX	Punta Patache	1.87	307		Pn	16 20 09.3	0.0
PATCX	Punta Patache	1.87	307	eP	Pn	16 20 09.4	+0.2
PB08	IPOC Station P	1.90	343	eP	Pn	16 20 10.5	+0.6
PB08				i S	Sn	16 20 34.8	+0.1
PB08				IAML		16 20 37.2	
	comp=E,654nm,0.4s						
PB08	IPOC Station P	1.90	343		Pn	16 20 10.8	+0.9
PB08	IPOC Station P	1.90	343	eP	Pn	16 20 11.0	+1.1
PB08				eS	Sn	16 20 35.7	+1.0
TA01	Diego Aracena	2.06	312	⇑iP	Pn	16 20 11.1	-0.4
TA01				i S	Sn	16 20 36.9	-0.7
TA01				IAML		16 20 40.1	
	comp=N,1µm,0.5s						
TA01	Diego Aracena	2.06	312	Pn	Pn	16 20 11.3	-0.1
HMBC	Humberstone	2.09	323	⇑iP	Pn	16 20 11.5	-0.5
HMBC				eS	Sn	16 20 38.2	-0.3
HMBC				IAML		16 20 42.9	
	comp=N,915nm,0.3s						
TA02	Huaiquique	2.24	319	eP	Pn	16 20 14.1	+0.4
TA02				IAML		16 20 49.6	
GO01	Chusmiza	2.36	345	⇑iP	Pn	16 20 16.1	+0.3
GO01				eS	Sn	16 20 46.0	+0.7
GO01				IAML		16 20 47.5	
	comp=N,540nm,0.3s						
GO01	Chusmiza	2.36	345		Pn	16 20 16.0	+0.3
PB10	IPOC Station P	2.40	230	⇑eP	Pn	16 20 16.6	+0.9
PB10				i S	Sn	16 20 46.6	+1.3
PB10				IAML		16 20 58.9	
	comp=N,584nm,0.7s						
PB10	IPOC Station P	2.40	230	Pn	Pn	16 20 14.8	-0.9
PB10	IPOC Station P	2.40	230	eP	Pn	16 20 15.8	+0.1
PB10				eS	Sn	16 20 56.9	+12
PB10				IAML		16 20 57.8	
	comp=Z,451nm,0.7s						
PSGC	Pisagua	2.78	328	eP	Pn	16 20 19.4	-1.3
PSGC				i S	Sn	16 20 53.1	-1.1
PSGC				IAML		16 20 58.5	
	comp=E,208nm,0.6s						
PSGCX	Pisagua	2.78	328	Pn	Pn	16 20 19.3	-1.4
YJA	Yavi	2.83	95	eP	Pn	16 20 23.5	+1.8
YJA				eS	Sn	16 20 59.1	+3.1
MNMC	Minye Minye	2.98	341	⇑iP	Pn	16 20 23.5	-0.1
MNMC				i S	Sn	16 20 59.3	0.0
MNMC				IAML		16 21 09.8	
	comp=N,587nm,0.6s						
MNMC	Minye Minye	2.98	341		Pn	16 20 23.1	-0.5
MNMCX	Minye Minye	2.98	341	eP	Pn	16 20 23.6	-0.1
MNMCX				eS	Sn	16 20 58.8	-0.5
PB14	IPOC Station P	3.14	212	eP	Pn	16 20 26.8	+1.1
PB14				i S	Sn	16 21 03.5	+0.4
PB14				IAML		16 21 17.3	
	comp=E,534nm,0.9s						
PB14	IPOC Station P	3.14	212	Pn	Pn	16 20 25.8	+0.1
PB14	IPOC Station P	3.14	212	eP	Pn	16 20 26.8	+1.1
PB14				eS	Sn	16 21 03.6	+0.5
PB14				IAML		16 21 16.1	
	comp=Z,414nm,0.5s						
HJA	Humahuaca	3.16	114	eP	Pn	16 20 27.6	+1.6
GO02	Mina Guanaco	3.32	196	⇑iP	Pn	16 20 28.2	+0.2
GO02				IAML		16 21 35.2	
	comp=N,536nm,0.3s						
GO02	Mina Guanaco	3.32	196	Pn	Pn	16 20 28.3	+0.3
PB16	IPOC Station P	3.72	346	eP	Pn	16 20 34.1	+0.5
PB16				i S	Sn	16 21 06.2	-11
PB16	IPOC Station P	3.72	346	Pn	Pn	16 20 33.4	-0.2
AZAP	Zapla	3.92	126	eP	Pn	16 20 37.1	+1.1
AC01	Pan de Azucar	4.56	204	Pn	Pn	16 20 43.2	-1.1
AC02	Maricunga	4.87	186	Pn	Pn	16 20 49.0	+0.1
GO03	Copiap	5.80	195		Pn	16 20 59.3	-1.8
GO03	Copiap	5.80	195	eP	Pn	16 20 59.6	-1.5
GO03				eS	Sn	16 22 03.8	-2.7
AC04	Llanos de Chal	6.62	200		Pn	16 21 08.4	-3.5
AC05	El Transito	7.01	192		Pn	16 21 15.3	-2.2
LCO	Las Campanas	7.28	195	Pn	Pn	16 21 17.9	-3.2
CO01	Juntas del Tor	8.10	190	Pn	Pn	16 21 30.4	-1.8
AROD	Rodeo	8.21	186	eP	Pn	16 21 33.2	-0.6
GO04	Tololo Observa	8.42	193		Pn	16 21 32.5	-4.0
ACCO	Cerro Coronel	8.60	183	eP	Pn	16 21 37.6	-1.4
ACCO				IAML		16 23 18.7	
	comp=Z,14nm,3.5s						
CO03	El Pedregal	9.04	192	Pn	Pn	16 21 40.6	-4.1
SIV	San Ignacio	9.24	51	P	Pn	16 21 43.6	-4.0
	comp=Z,6.6nm,0.3s,baz=245,slow=13,SNR=103						
SIV				S	Sn	16 23 19.6	-10
	comp=Z,0.3nm,0.3s,baz=114,slow=20,SNR=2.4						
RTLL	Cerro Villicun	9.32	180	eP	Pn	16 21 47.7	-0.9
RTLL				eS	Sn	16 23 24.8	-6.9
RTLL				IAML		16 23 48.8	
	comp=Z,6.9nm,2.3s						
VA03	San Esteban	10.90	189	Pn	Pn	16 22 06.1	-3.7
PTLB	Pontes e Lacer	11.03	56	eP	Pn	16 22 08.0	-3.6
CPUP	Villa Florida	11.13	115	P	Pn	16 22 14.1	+1.2
	comp=Z,0.1nm,0.3s,baz=284,slow=12,SNR=3.4						
MT02	Curacav	11.48	191	Pn	Pn	16 22 15.1	-2.4
VILB	Vilhena	11.99	43	eP	Pn	16 22 22.1	-2.3
SAML	Samuel	13.94	23	Pn	Pn	16 22 48.3	-1.3
SAML	Samuel	13.94	23	eP	Pn	16 22 49.0	-0.6
BI02	San Fabin de	14.83	189	Pn	Pn	16 22 58.1	-2.8
PTGB	Pitanga	15.39	103	eP	P	16 23 10.3	+0.4
ITAB	Concordia	15.83	113	eP	Pn	16 23 14.0	+0.6
PCMB	Pacaembu	16.07	92	eP	Pn	16 23 17.3	+0.9
ARAG	Araguaiana, MT	17.02	71	eP	P	16 23 26.1	-1.9
ITRB	Iturama	17.16	86	eP	P	16 23 29.2	-0.3
BB19B	Bebedouro	18.66	91	eP	P	16 23 45.1	-0.8
PLCA	Paso Flores	18.78	185	P	Pn	16 23 49.3	+0.3
	comp=Z,0.0nm,0.3s,baz=5.7,slow=10,SNR=1.3						
SNDB	Serra Nova Dou	19.25	62	eP	P	16 23 50.4	-2.0
IPMB	Ipameri, GO	19.53	82	eP	P	16 23 54.1	-1.3
NPGB	Novo Progresso	19.55	43	eP	P	16 23 53.0	-2.6
PET01	Itanhaem-SP	19.71	101	eP	P	16 23 56.6	-0.7
VAO	Valinhos	19.98	97	eP	P	16 23 59.0	-1.3
MACA	Manacapuru-AM	20.20	23	eP	P	16 24 00.5	-2.1
BDFB	Brasilia	20.43	76	P	P	16 24 06.8	+1.6
	comp=Z,2.2nm,0.4s,baz=260,slow=11,SNR=4.0						
BDFB	Brasilia	20.43	76	P	P	16 24 05.0	-0.2
ITTB	Itaituba	21.46	37	eP	P	16 24 13.7	-2.5
PEXB	Peixe	21.68	66	eP	P	16 24 16.0	-2.5
BSCB	Bom Sucesso	22.15	92	eP	P	16 24 22.4	-1.1
PRPB	Parauapebas	23.97	52	eP	P	16 24 38.5	-2.2
JANB	Januaria	23.98	77	eP	P	16 24 38.6	-2.2
SMTB	Santa Maria do	24.01	60	eP	P	16 24 39.5	-1.5
MALB	Monte Alegre	24.36	37	eP	P	16 24 42.9	-1.2
SDBA	SAO DESIDERIO	24.48	71	eP	P	16 24 44.3	-1.1
VNA3	Neumayer Olymp	59.53	161	P	P	16 29 29.0	+1.5
VNA2	Neumayer--Watz	60.10	161	P	P	16 29 32.9	+1.5
TXAR	Lajitas Array	61.20	325	P	P	16 29 40.8	+1.4
	comp=Z,0.3nm,0.6s,baz=135,slow=9.0,SNR=2.5						
SNAA	Sanae	61.73	161	P	P	16 29 43.9	+1.4
	comp=Z,1.9nm,0.6s,baz=274,slow=8.7,SNR=5.3						
SNAA	Sanae	61.73	161	IAmb	IAmb	16 29 44.6	
	comp=Z,1.9nm,0.7s						
DBIC	Dimbokro	68.56	73	P	P	16 30 27.1	-0.2
	comp=Z,1.5nm,0.5s,baz=234,slow=8.4,SNR=3.7						
PDAR	Pinedale Array	74.68	330	P	P	16 31 05.2	+1.4
	comp=Z,0.5nm,0.7s,baz=125,slow=7.8,SNR=4.6						
NVAR	Mina Array Bea	76.06	322	P	P	16 31 13.9	+2.1
	comp=Z,0.5nm,0.6s,baz=157,slow=7.7,SNR=6.6						
YNE	Yellowstone No	76.62	331	P	P	16 31 16.6	+1.8
TOA0	Torodi Ar. Sit	77.20	70	P	P	16 31 17.6	-0.8
TORD	Torodi Ar. Bea	77.20	70	P	P	16 31 18.1	-0.3
	comp=Z,3.1nm,0.7s,baz=259,slow=5.3,SNR=10						
TORD	Torodi Ar. Bea	77.20	70	P	P	16 31 17.6	-0.8
PAHR	Pah Rah Range	77.55	322	P	P	16 31 21.6	+1.6
HLID	Hailey	77.61	328	P	P	16 31 22.4	+2.1
HLID				IAmb	IAmb	16 31 23.9	
	comp=Z,2.9nm,0.8s						
MCMT	McKenzie Canyo	77.79	329	P	P	16 31 22.8	+1.5
HRY	Holter Researc	78.74	331		P	16 31 28.4	+2.1
TSUM	Tsumeb	79.59	107	P	P	16 31 32.8	+1.1
TSUM				IAmb	IAmb	16 31 34.0	
	comp=Z,5.0nm,1.1s						
WDC	Whiskeytown Da	79.94	321		P	16 31 33.4	+0.6
WDC				IAmb	IAmb	16 32 02.7	
	comp=Z,5.0nm,1.1s						
YKA	Yellowknife Ar	91.73	340	P	P	16 32 31.8	+1.2
	comp=Z,1.7nm,0.7s,baz=130,slow=5.1,SNR=37						
ASAR	Alice Springs	129.65	207	PKP	PKPdf	16 38 34.1	+1.2
	comp=Z,0.8nm,0.8s,baz=132,slow=1.7,SNR=10						
WRA	Warramunga Arr	132.72	210	PKP	PKPdf	16 38 40.2	+1.5
	comp=Z,0.2nm,0.4s,baz=162,slow=1.8,SNR=7.0						
ZALV	Zalesovo Beam	142.23	26	PKP	PKPdf	16 38 56.5	+1.5
	comp=Z,1.2nm,0.5s,baz=305,slow=2.6,SNR=6.1						
MKAR	Makanchi Array	145.81	37	PKPbc	PKPdf	16 39 03.1	+1.5
	comp=Z,0.7nm,0.4s,baz=311,slow=2.9,SNR=17						
SONM	Songino Array	153.87	8	PKP	PKPdf	16 39 14.4	0.0
	comp=Z,0.5nm,0.8s,baz=344,slow=1.6,SNR=4.1						

JMA 13 16:28:23.6±0.1, 38°.08N×144°.54E, h56^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.43	276	P	Pn	16 29 01.7	+0.8
JIKH				S	Sn	16 29 30.0	+0.5
OFUJ	Ofunato	2.46	295	P	Pn	16 29 02.5	+1.2
OFUJ				eS	Sn	16 29 31.6	+1.4
JKMT	Kesennumamotoy	2.52	288	P	Pn	16 29 03.1	+1.1
JKMT				eS	Sn	16 29 32.6	+1.1
JIO	Ouri	2.54	279	S	Sn	16 29 33.3	+1.2
MIYJ	Miyakonagasawa	2.60	306	P	Pn	16 29 03.9	+0.8
MIYJ				S	Sn	16 29 34.1	+0.6
JMK	Ichinoseki	2.75	290	P	Pn	16 29 06.5	+1.3
JMK				eS	Sn	16 29 38.5	+1.4
JOM	Ohasama	2.89	300	P	Pn	16 29 09.0	+1.8
JOM				eS	Sn	16 29 42.5	+1.7
JANG	Nango	3.28	315	eS	Sn	16 29 51.0	+0.7
JCH	Churui	4.62	349	P	Pn	16 29 30.5	-0.3
JCH				eS	Sn	16 30 21.3	-1.8
JKB	Kayabe	4.66	326	P	Pn	16 29 33.1	+1.7
JKB				eS	Sn	16 30 23.6	-0.5
JRY	Ryogami san	4.96	247	P	Pn	16 29 36.4	+0.9
JTKR	Abashiri--Toko	5.90	356	P	Pn	16 29 48.3	-0.1
JTKR				eS	Sn	16 30 51.3	-3.4

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*BJI **13** 17:04:07.2±0.0, 40°.85N×143°.54E, h13^{km}, mB5.0/33, mb4.5/51, Ms4.2/12, Ms7 4.0/13*

*NEIC **13** 17:04:11.2±2.0, 40°.94N±0°.02×143°.54E±0°.10, h20^{km}±5^{km}, mb4.7/48, Error ellipse: s-maj=10.8km s-min=1.0km az=78.0*

*NIED **13** 17:04:12.9, 40°.86N×143°.28E, h36^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.73; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$-0.83; $M_{r\theta}$1.16; $M_{\theta\phi}$-1.90; $M_{\phi r}$3.79; Fault plane solution: $M_0$4.64000×10^{15} NP1:ϕ_s19.00000°, δ77.00000°, λ71.00000°. NP2:ϕ_s257.00000°, δ22.00000°, λ146.00000°.*

*JMA **13** 17:04:12.8±0.1, 40°.86N×143°.28E, h36^{km}, M4.3*

*MOS **13** 17:04:12.0±1.0, 40°.92N×143°.27E, h31^{km}, mb4.6/16, Error ellipse: s-maj=7.2km s-min=5.1km az=99.3*

*IDC **13** 17:04:17.0±1.8, 40°.87N×143°.00E, h49^{km}±16^{km}, mb3.8/20, mb1 4.0/27, mb1mx3.9/54, mbtmp4.1/27, ML3.3/7, MS3.7/11, Ms1 3.7/11, ms1mx3.3/38, Error ellipse: s-maj=15.7km s-min=13.2km az=119.0*

ISC 13 17:04:13.4±0.6, **40°.87N**±0°.04×**143°.44E**±0°.05, **h37**^{km}±1^{km}, **n218**, σ1§**44**/223, **mb4.5**/85, **MS3.9**/6, **31C-5D, Fault plane solution: NP1:**ϕ_s312.52167°**,** δ21.79206°**,** λ-170.13634°. **NP2:**ϕ_s213.35046°**,** δ86.35382°**,** λ-68.50048°. **Principal axes:** T Plg37.7058°, Azm284.2300°; N Plg21.4538°, Azm31.9155°; P Plg44.5510°, Azm144.6753°; **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	Erimo	1.16	349	c iP	Pn	17 04 33.0	-0.1
ERM	Erimo	1.16	349	Pn	Pn	17 04 33.0	-0.1
JEM	Erimo	1.17	349	⇑P	Pn	17 04 33.0	-0.1
JTHR	Tokachihiroo	1.42	356	P	Pn	17 04 36.9	+0.3
JTHR				eS	Sn	17 04 55.0	+0.9
JKEN	Kujiedanarisaw	1.48	244	⇑P	Pn	17 04 35.8	-1.6
JNBK	Urakawa-nobuka	1.50	340	⇑P	Pn	17 04 37.8	+0.1
JTH	Tanohata	1.52	233	⇑P	Pn	17 04 37.0	-1.0
JANG	Nango	1.55	252	P	Pn	17 04 37.3	-1.1
JCH	Churui	1.74	358	P	Pn	17 04 41.4	+0.4
JCH				eS	Sn	17 05 02.7	+0.7
JTM	Tenmabayashi	1.80	268	P	Pn	17 04 41.2	-0.6
JTM				eS	Sn	17 05 01.5	-2.0
JTM	Tenmabayashi	1.80	268	Pn	Pn	17 04 41.2	-0.6
JOT	Ohata	1.88	287	⇑P	Pn	17 04 42.2	-0.7
JKB	Kayabe	2.08	300	⇑P	Pn	17 04 45.0	-0.6
JKB				eS	Sn	17 05 09.2	-1.0
JOM	Ohasama	2.16	230	⇑P	Pn	17 04 47.1	+0.3
JAK	Akkeshi	2.32	23	P	Pn	17 04 49.5	+0.5
JAK				eS	Sn	17 05 16.5	+0.3
JFR	Furan	2.38	345	P	Pn	17 04 50.6	+0.8
JEW	Eniwo	2.47	324	Pn	Pn	17 04 50.5	-0.5
JMK	Ichinoseki	2.57	222	⇑P	Pn	17 04 53.0	+0.6
JMK				eS	Sn	17 05 22.7	+0.4
NMR	Nemuro--Hokkai	3.02	33	⇓iP	Pn	17 04 59.2	+0.6
NMR				eS	Sn	17 05 32.4	-1.1
GLVR	Golovnino	3.25	28	eP	Pn	17 05 02.2	+0.4
GLVR				eS	Sn	17 05 38.2	-1.0
GLVR				pmax	pmax		
	comp=Z,191nm,0.1s						
GLVR				smax	smax		
	comp=N,850nm,0.4s						
GLVR				smax	smax		
	comp=E,2µm,0.4s						
JKA	Kamikawa-asahi	3.30	349	Pn	Pn	17 05 02.5	+0.1
JKA	Kamikawa-asahi	3.30	349		Sn	17 05 47.1	+6.6
ASAJ	Asahikawa	3.30	349	P	Pn	17 05 03.9	+1.4
	comp=E,8.7nm,0.3s,baz=202,slow=12,SNR=92						
ASAJ				S	Sn	17 05 47.1	+6.6
	comp=E,16nm,0.3s,baz=351,slow=30,SNR=2.1						
RUSJ	Misakicho	3.50	22	i P	Pn	17 05 06.7	+1.6
RUSJ				eS	Sn	17 05 45.2	0.0
GRPR	Tuman	3.56	28	eP	Pn	17 05 06.3	+0.2
GRPR				eS	Sn	17 05 45.8	-1.1
GRPR				pmax	pmax		
	comp=Z,261nm,0.3s						
GRPR				pmax	pmax		
	comp=E,85nm,0.2s						
GRPR				pmax	pmax		
	comp=N,143nm,0.3s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,457nm,0.2s						
YUK	Yuzh-Kuril'sk	3.63	29	eP	Pn	17 05 07.9	+0.9
YUK				eS	Sn	17 05 47.8	-0.8
YUK				pmax	pmax		
	comp=Z,392nm,0.3s						
YUK				pmax	pmax		
	comp=N,106nm,0.4s						
YUK				pmax	pmax		
	comp=E,138nm,0.3s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
YUK				smax	smax		
	comp=N,2µm,0.5s						
YUK				MLR	MLR		
	comp=Z,479nm,12.0s						
JMM	Marumori	3.63	215		Pn	17 05 06.6	-0.5
JSD	Sado	4.91	236	Pn	Pn	17 05 25.1	+0.5
JYT	Yasato	5.29	210	Pn	Pn	17 05 28.8	-1.0
KUR	Kuril'sk	5.43	35	ceP	Pn	17 05 33.7	+2.0
KUR				i S	Sn	17 06 34.8	+1.9
KUR				pmax	pmax		
	comp=Z,147nm,0.4s						
KUR				pmax	pmax		
	comp=N,41nm,0.3s						
KUR				pmax	pmax		
	comp=E,52nm,0.3s						
KUR				smax	smax		
	comp=N,286nm,0.4s						
KUR				smax	smax		
	comp=E,113nm,0.2s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
MJAR	Matsushiro Arr	5.95	225	P	Pn	17 05 40.5	+1.6
	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=22						
MJAR				LR	LR	17 08 17.3	
	comp=Z,451nm,19.2s,baz=60,slow=42						
MJAR	Matsushiro Arr	5.95	225	Pn	Pn	17 05 39.5	+0.6
MAJO	Matsushiro	5.95	225	ceP	Pn	17 05 40.1	+1.2
MAJO	Matsushiro	5.95	225	Pn	Pn	17 05 39.5	+0.6
MAT	Matsushiro	5.95	225	P	Pn	17 05 40.1	+1.2
MAT				eS	Sn	17 06 43.8	-2.0
YSS	Yuzh-Sakhalins	6.10	356	eP	Pn	17 05 41.6	+0.7
YSS				eS	Sn	17 06 49.6	+0.2
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS	Yuzh-Sakhalins	6.10	356	Pn	Pn	17 05 39.8	-1.1
TEY	Ternei	6.52	312	eP	Pn	17 05 43.9	-2.7
JGF	Kuroka	7.11	224	Pn	Pn	17 05 56.1	+1.2
INU	Inuyama	7.48	225		Pn	17 06 01.3	+1.4
JHJ2	Mitsune	8.27	202	Pn	Pn	17 06 10.0	-0.6
JHJ	Hachijo jima 2	8.27	202	P	Pn	17 06 10.8	+0.1
	comp=Z,7.7nm,0.3s,baz=247,slow=20,SNR=1.7						
JHJ				S	Sn	17 07 38.1	-4.8
	comp=Z,6.9nm,0.3s,baz=73,slow=18,SNR=2.0						
JHJ				LR	LR	17 09 46.1	
	comp=Z,155nm,21.2s,baz=84,slow=40						
JWT	Wachi	8.44	231	Pn	Pn	17 06 15.4	+2.3
USA0B	Ussuriysk Arra	9.09	295	⇑iP	Pn	17 06 23.7	+1.9
USA0B	Ussuriysk Arra	9.09	295	Pn	Pn	17 06 22.3	+0.4
USRK	Ussuriysk Ar.	9.09	295	P	Pn	17 06 23.1	+1.3
	baz=101,slow=11,SNR=29						
USRK				LR	LR	17 09 55.5	
	comp=Z,513nm,18.6s,baz=67,slow=38						
USRK	Ussuriysk Ar.	9.09	295	Pn	Pn	17 06 22.5	+0.7
MSHR	Mys Shultsa	9.35	285	ceP	Pn	17 06 26.0	+0.6
MSHR				pmax	pmax		
	comp=Z,12nm,1.3s						
TYV	Tymovskoe	10.01	357	eP	Pn	17 06 43.2	+8.8
TYV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,5.2s						
JHS	Saijyo	10.04	238	Pn	Pn	17 06 36.1	+1.1
JMN	Monobe	10.43	230	Pn	Pn	17 06 41.0	+0.7
MDJ	Mudanjiang	10.85	295		Pn	17 06 45.0	-1.0
KLR	Kul'dur	11.75	319	P	Pn	17 06 59.3	+1.1
	comp=Z,0.1nm,0.3s,baz=118,slow=14,SNR=9.3						
KLR				LR	LR	17 11 57.4	
	comp=Z,261nm,18.3s,baz=142,slow=40						
KLR	Kul'dur	11.75	319	⇓eP	Pn	17 06 58.0	-0.2
KSRS	Korea Array	12.52	259	P	Pn	17 07 10.2	+1.3
	comp=Z,0.1nm,0.3s,baz=70,slow=14,SNR=7.9						
KSRS				LR	LR	17 11 35.9	
	comp=Z,393nm,18.6s,baz=69,slow=36						
KS19	Wonju Array Si	12.54	259	Pn	Pn	17 07 08.4	-0.8
KSAR	Wonju Array Be	12.55	259	P	Pn	17 07 10.4	+1.1
KSAR	Wonju Array Be	12.55	259	Pn	Pn	17 07 10.4	+1.1
JNU	Nakatsue	12.67	236	LR	LR	17 12 07.2	
	comp=Z,82nm,21.4s,baz=50,slow=38						
SKR	Severo-Kuril's	13.19	38	eP	Pn	17 07 19.0	+1.1
SKR				eS	Sn	17 09 45.8	+2.6
SKR				pmax	pmax		
	comp=Z,700nm,3.5s						
SKR				pmax	pmax		
	comp=Z,300nm,3.9s						
SKR				pmax	pmax		
	comp=Z,40nm,0.9s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
CN2	Changchun	13.63	288	eP	Pn	17 07 25.3	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
PEA0B	Petropavlovsk-	15.60	34	P	Pn	17 07 46.3	-3.9
PEA0B				pmax	pmax		
	comp=Z,85nm,1.6s						
PEA0B	Petropavlovsk-	15.60	34	Pn	Pn	17 07 46.3	-3.9
PEA0B				IAmb	IAmb	17 08 03.5	
	comp=Z,85nm,1.6s						
PETK	Petropavlovsk-	15.60	34	P	P	17 07 54.4	+0.4
	comp=Z,0.1nm,0.3s,baz=179,slow=5.8,SNR=1.5						
PETK	Petropavlovsk-	15.60	34	Pn	Pn	17 07 48.0	-2.3
DL2	Dalian	16.86	270	P	P	17 08 07.3	-0.8
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
ZEA	Zeya	16.87	325	eP	Pn	17 08 03.8	-2.6
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HIA	Hailar	18.67	305	P	P	17 08 25.5	-2.6
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	18.67	305	P	P	17 08 25.5	-2.6
TIA	Tai'an	21.07	266	P	P	17 08 51.9	-2.4
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
NJ2	Nanjing	21.59	254	eP	P	17 09 00.9	+1.1
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
SEY	Seymchan	22.73	11	P	P	17 09 09.4	-2.4
	comp=Z,5.0nm,0.8s,baz=186,slow=6.7,SNR=14						
SEY	Seymchan	22.73	11	⇑eP	P	17 09 09.2	-2.6
YAK	Yakutsk	22.76	343	P	P	17 09 08.1	-4.0
	comp=Z,12nm,0.8s,baz=348,slow=2.6,SNR=15						
YAK	Yakutsk	22.76	343	eP	P	17 09 09.0	-3.1
YAK				e*PP	pP	17 09 17.0	-4.2
YAK				e		17 09 34.9	
YAK				e		17 13 00.3	
YAK				eS	S	17 13 14.9	-3.2
YAK				e*SS	Sn	17 13 32.5	-1.7
YAK				e		17 20 20.5	
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,155nm,4.0s						
YAK				pmax	pmax		
	comp=E,105nm,3.8s						
YAK				pmax	pmax		
	comp=N,86nm,4.2s						
YAK				smax	smax		
	comp=N,51nm,2.2s						
YAK				smax	smax		
	comp=E,17nm,2.0s						
YAK	Yakutsk	22.76	343	P	P	17 09 07.8	-4.3
YAK				IAmb	IAmb	17 09 10.6	
	comp=Z,21nm,0.8s						
HHC	Hu-ho-hao-te	24.05	280	eP	P	17 09 25.0	0.0
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						

HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
YHNB	**Yeheng**	**24.50**	**236**	P	**P**	**17 09 27.9**	**-1.3**
NACB	**Ninganchiao**	**24.73**	**234**	P	**P**	**17 09 30.4**	**-0.8**
BOD	**Bodaibo**	**25.30**	**322**	*e*P	**P**	**17 09 34.5**	**-1.6**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s						
YULB	**Yu-li**	**25.48**	**234**	P	**P**	**17 09 38.4**	**+0.3**
YULB				IAmb	IAmb	17 09 40.6	
	comp=Z,94nm,1.7s						
TPUB	**Ta-pu**	**25.96**	**235**	P	**P**	**17 09 44.0**	**+1.6**
TPUB				IAmb	IAmb	17 09 55.8	
	comp=Z,55nm,1.4s						
ULN	**Ulaanbaatar**	**26.75**	**297**	⇑*e*P	**P**	**17 09 50.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**26.75**	**297**	P	**P**	**17 09 49.5**	**0.0**
SONM	**Songino Array**	**27.19**	**297**	P	**P**	**17 09 53.5**	**0.0**
	comp=Z,3.5nm,0.8s,baz=84,slow=8.5,SNR=20						
SONM				LR	LR	17 21 23.2	
	comp=Z,307nm,18.7s,baz=76,slow=38						
SONM	**Songino Array**	**27.19**	**297**	P	**P**	**17 09 53.1**	**-0.3**
XAN	**Xi'an**	**28.11**	**267**	P	**P**	**17 10 01.5**	**-0.2**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**29.06**	**129**	T	T	17 41 08.0	
	baz=322,slow=75,SNR=168						
H11N1	**WAKE ISLAND Hy**	**29.07**	**130**	T	T	17 41 02.9	
	baz=322,slow=75,SNR=113						
H11N3	**WAKE ISLAND Hy**	**29.08**	**129**	T	T	17 40 48.8	
	baz=322,slow=75,SNR=114						
TLY	**Talaya**	**29.21**	**305**	⇑*e*P	**P**	**17 10 11.3**	**0.0**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAK	**Zakamensk**	**29.33**	**303**	*e*P	**P**	**17 10 11.6**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**29.91**	**131**	T	T	17 42 48.4	
	baz=324,slow=76,SNR=88						
H11S3	**WAKE ISLAND Hy**	**29.91**	**131**	T	T	17 42 57.0	
	baz=324,slow=76,SNR=57						
H11S2	**WAKE ISLAND Hy**	**29.93**	**131**	T	T	17 42 51.1	
	baz=324,slow=76,SNR=61						
LZH	**Lanzhou**	**31.18**	**274**	*e*P	**P**	**17 10 28.4**	**-0.6**
LZH				pP	pP	17 10 32.8	-6.2
LZH				sP	pwP	17 10 35.8	-5.3
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA	**Gaotai**	**33.13**	**282**	⇓P	**P**	**17 10 46.4**	**+0.3**
GTA				pP	pP	17 10 50.6	-5.4
GTA				sP	pwP	17 10 53.6	-4.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,140nm,6.9s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
GTA				LR	LR		
	comp=Z,330nm,18.2s						
GTA				LR	LR		
	comp=Z,310nm,17.1s						
GYA	**Guiyang**	**33.55**	**256**	⇑P	**P**	**17 10 49.3**	**-0.5**
GYA				pmax	pmax		
	comp=Z,17nm,0.8s						
NIKH	**Nikolski High**	**34.13**	**53**	P	**P**	**17 10 51.6**	**-2.8**
DGZ	**Jazzator, Alta**	**39.56**	**302**	*ce*P	**P**	**17 11 41.6**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZAA0	**Zalesovo Array**	**40.61**	**309**	P	**P**	**17 11 49.4**	**+0.1**
ZALV	**Zalesovo Beam**	**40.61**	**309**	P	**P**	**17 11 49.5**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=86,slow=7.9,SNR=20						
ZALV				PcP	**PcP**	**17 13 51.8**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=119,slow=5.1,SNR=4.0						
ZALV				LR	LR	17 27 35.1	
	comp=Z,74nm,18.8s,baz=62,slow=35						
ZALV	**Zalesovo Beam**	**40.61**	**309**	P	**P**	**17 11 48.8**	**-0.5**
WMQ	**Urumqi**	**40.65**	**293**	*e*P	**P**	**17 11 52.0**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
A21K	**Barrow**	**42.31**	**24**	P	**P**	**17 12 01.3**	**-1.7**
A21K				IAmb	IAmb	17 12 06.9	
	comp=Z,12nm,0.9s						
KDAK	**Kodiak Island**	**43.23**	**45**	P	P	17 12 15.4	+4.9
	comp=Z,11nm,0.8s,baz=118,slow=9.1,SNR=1.9						
MK31	**Makanchi Array**	**43.53**	**299**	*ce*P	**P**	**17 12 13.0**	**-0.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**43.53**	**299**	P	**P**	**17 12 13.1**	**-0.2**
MKAR	**Makanchi Array**	**43.53**	**299**	P	**P**	**17 12 13.4**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=83,slow=9.5,SNR=31						
MKAR				LR	LR	17 31 20.2	
	comp=Z,152nm,18.1s,baz=64,slow=38						
MKAR	**Makanchi Array**	**43.53**	**299**	P	**P**	**17 12 13.0**	**-0.2**
LSA	**Lhasa**	**43.54**	**272**	P	**P**	**17 12 15.8**	**+1.8**
LSA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LSA	**Lhasa**	**43.54**	**272**	P	**P**	**17 12 15.8**	**+1.8**
MAKZ	**Makanchi**	**43.73**	**299**	P	**P**	**17 12 14.3**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAKZ	**Makanchi**	**43.73**	**299**	P	**P**	**17 12 14.3**	**-0.6**
MAKZ				IAmb	IAmb	17 12 29.2	
	comp=Z,5.5nm,0.8s						
CHTO	**Chiang Mai**	**43.84**	**253**	P	**P**	**17 12 16.3**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**43.84**	**253**	P	**P**	**17 12 16.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.06**	**253**	P	**P**	**17 12 17.6**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=48,slow=6.4,SNR=12						
CMAR				LR	LR	17 30 14.2	
	comp=Z,65nm,20.9s,baz=144,slow=36						
CMAR	**Chiang Mai Arr**	**44.06**	**253**	P	**P**	**17 12 17.8**	**0.0**
CMAR	**Chiang Mai Arr**	**44.06**	**253**	P	**P**	**17 12 17.8**	**0.0**
GHO	**Glory Hole Cre**	**44.71**	**39**	P	**P**	**17 12 19.6**	**-2.9**
GHO				IAmb	IAmb	17 12 47.4	
	comp=Z,53nm,1.7s						
KURK	**Kurchatov**	**44.91**	**305**	*ce*P	**P**	**17 12 23.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**44.91**	**305**	P	**P**	**17 12 24.0**	**-0.1**
KURK				IAmb	IAmb	17 12 24.9	
	comp=Z,10nm,0.8s						
COLA	**College**	**45.01**	**34**	⇑*e*P	**P**	**17 12 25.4**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**45.42**	**34**	P	**P**	**17 12 30.9**	**+2.8**
	comp=Z,0.7nm,0.6s,baz=258,slow=5.9,SNR=13						
PRP	**Porcupine Dome**	**45.95**	**33**	P	**P**	**17 12 29.5**	**-2.9**
PRP				IAmb	IAmb	17 12 30.4	
	comp=Z,7.3nm,0.6s						
M24K	**Tolsona, Glenn**	**45.97**	**38**	P	P	17 12 27.5	-5.0
FYU	**Fort Yukon**	**46.01**	**32**	P	**P**	**17 12 30.6**	**-2.0**
FYU				IAmb	IAmb	17 13 06.4	
	comp=Z,8.1nm,0.9s						
TAPN	**Taplejung**	**47.34**	**272**	*e*P	**P**	**17 12 44.4**	**+0.5**
	comp=Z,5.6nm,0.5s						
ODAN	**Odare**	**47.84**	**271**	*e*P	**P**	**17 12 48.6**	**+0.9**
RAMN	**Ramite**	**48.39**	**272**	*e*P	**P**	**17 12 52.1**	**+0.1**
GUN	**Gumba**	**48.43**	**273**	*e*P	**P**	**17 12 52.7**	**+0.2**
	comp=Z,23nm,0.3s						
KKN	**Kakani**	**48.95**	**274**	*e*P	**P**	**17 12 56.6**	**+0.3**
	comp=Z,18nm,0.7s						
PKI	**Pulchoki**	**48.97**	**273**	*e*P	**P**	**17 12 58.0**	**+1.5**
	comp=Z,6.7nm,0.5s						
PKIN	**Phulchoki**	**48.97**	**273**	*e*P	**P**	**17 12 58.1**	**+1.6**
	comp=Z,6.0nm,0.4s						
BRVK	**Borovoye**	**49.28**	**310**	⇓*e*P	**P**	**17 12 59.2**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
DANN	**Dangsing**	**49.81**	**275**	*e*P	**P**	**17 13 03.4**	**+0.5**
	comp=Z,57nm,0.6s						
AAK	**Ala-Archa**	**50.14**	**296**	⇑*e*P	**P**	**17 13 03.2**	**-1.9**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH	**Kashi**	**50.37**	**292**	P	P	17 13 11.1	+4.3
KSH				pP	pP	17 13 15.4	-1.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**52.64**	**298**	P	**P**	**17 13 23.5**	**-0.1**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**52.64**	**298**	P	**P**	**17 13 23.5**	**-0.1**
KKAR	**Karatay Array**	**52.64**	**298**	P	**P**	**17 13 23.1**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**52.64**	**298**	P	**P**	**17 13 23.1**	**-0.5**
KKAR	**Karatay Array**	**52.64**	**298**	P	**P**	**17 13 23.4**	**-0.2**
KKAR				IAmb	IAmb	17 13 48.9	
	comp=Z,3.1nm,0.8s						
SVE	**Sverdlovsk**	**53.37**	**317**	*e*P	**P**	**17 13 29.7**	**+1.0**
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
ARU	**Arti**	**54.58**	**317**	*c i*P	**P**	**17 13 38.0**	**+0.4**
ARU						17 15 37.6	
ARU				S	**S**	**17 21 16.5**	**+2.3**
ARU				SS	**SS**	**17 24 59.4**	**+2.8**
ARU				pmax	pmax		
	comp=Z,18nm,1.1s						
ARU	**Arti**	**54.58**	**317**	P	**P**	**17 13 37.9**	**+0.3**
ARU				IAmb	IAmb	17 13 39.1	
	comp=Z,13nm,0.9s						
MTN	**Manton Dam**	**54.64**	**195**	P	**P**	**17 13 39.1**	**+0.7**
NIL	**Nilore**	**54.98**	**287**	P	**P**	**17 13 41.6**	**+0.7**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	**Nilore**	**54.98**	**287**	P	**P**	**17 13 41.6**	**+0.7**
NIL				IAmb	IAmb	17 13 42.8	
	comp=Z,8.0nm,0.8s						
PMBI	**Palembang**	**56.06**	**229**	P	**P**	**17 13 49.1**	**+0.4**
EUNU	**Eureka**	**56.16**	**9**	P	**P**	**17 13 50.1**	**+1.4**
EUNU				IAmb	IAmb	17 13 53.4	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**56.72**	**309**	P	**P**	**17 13 53.4**	**+0.3**
ABKAR	**Akbulak array**	**56.72**	**309**	P	**P**	**17 13 52.9**	**-0.2**
ABKAR				IAmb	IAmb	17 13 54.6	
	comp=Z,6.3nm,0.9s						
GSI	**Gunungsitoli**	**57.13**	**239**	P	**P**	**17 13 57.4**	**+1.0**
GSI				IAmb	IAmb	17 14 21.3	
	comp=Z,32nm,1.6s						
KIRV	**Kirov**	**58.17**	**322**	⇓*e*P	**P**	**17 14 04.1**	**+1.0**
YKA	**Yellowknife Ar**	**59.71**	**32**	P	**P**	**17 14 15.7**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=302,slow=6.4,SNR=4.8						
WB0	**Warramunga Arr**	**60.91**	**190**	P	**P**	**17 14 23.4**	**+1.0**
WB0				IAmb	IAmb	17 14 42.4	
	comp=Z,3.4nm,0.8s						
ARCES	**ARCESS Array B**	**60.97**	**339**	P	**P**	**17 14 24.1**	**+1.8**
	comp=Z,3.4nm,0.9s,baz=58,slow=8.6,SNR=1.9						
WR0	**Warramunga Arr**	**61.08**	**190**	P	**P**	**17 14 22.1**	**-1.4**
WR0				IAmb	IAmb	17 14 47.2	
	comp=Z,8.5nm,1.3s						
WB2	**Warramunga Arr**	**61.09**	**190**	P	**P**	**17 14 24.4**	**+0.8**
WB2				IAmb	IAmb	17 14 47.8	
	comp=Z,6.0nm,1.1s						
WRA	**Warramunga Arr**	**61.09**	**190**	P	**P**	**17 14 24.6**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=7.5,slow=6.7,SNR=8.3						
WRA	**Warramunga Arr**	**61.09**	**190**	P	**P**	**17 14 23.9**	**+0.3**
WRA	**Warramunga Arr**	**61.09**	**190**	P	**P**	**17 14 23.9**	**+0.3**
BELG	**Belogornoye**	**62.10**	**316**	⇑*e*P	**P**	**17 14 30.4**	**+0.3**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEYT	**Alibeck**	**63.39**	**298**	P	**P**	**17 14 39.6**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=72,slow=0.5,SNR=6.0						
GEYT	**Alibeck**	**63.39**	**298**	IAmb	IAmb	17 14 40.2	
	comp=Z,3.3nm,0.9s						
AS31	**Alice Springs**	**64.81**	**190**	P	**P**	**17 14 49.6**	**+1.2**
ASAR	**Alice Springs**	**64.81**	**190**	P	**P**	**17 14 50.0**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=360,slow=4.9,SNR=10						
ASAR	**Alice Springs**	**64.81**	**190**	P	**P**	**17 14 49.4**	**+1.1**
OBN	**Obninsk**	**65.98**	**323**	*e*P	**P**	**17 14 56.1**	**+0.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA1	**FINESS Array S**	**66.16**	**332**	P	**P**	**17 14 57.2**	**+0.6**
FINES	**FINESS Array B**	**66.16**	**332**	P	**P**	**17 14 57.3**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=61,slow=8.3,SNR=16						
SUMG	**Summit**	**66.85**	**1**	P	**P**	**17 15 02.7**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SUMG	**Summit**	**66.85**	**1**	P	**P**	**17 15 02.7**	**+1.4**
SUMG				IAmb	IAmb	17 15 24.7	
	comp=Z,6.3nm,1.6s						
SUMG	**Summit**	**66.85**	**1**	*i* P	**P**	**17 15 03.0**	**+1.7**
SUMG	**Summit**	**66.85**	**1**	*i* P	**P**	**17 15 03.0**	**+1.7**
KIV	**Kislovodsk**	**69.60**	**311**	P	**P**	**17 15 20.3**	**+1.6**
KIV				pmax	pmax		
	comp=Z,21nm,1.0s						
KIV	**Kislovodsk**	**69.60**	**311**	P	**P**	**17 15 20.3**	**+1.6**
KBZ	**Khabaz**	**69.61**	**311**	P	**P**	**17 15 20.0**	**+1.4**
	comp=Z,5.8nm,0.9s,baz=84,slow=5.1,SNR=14						
KBZ				LR	LR	17 49 53.8	
	comp=Z,163nm,18.2s,baz=5.5,slow=40						
KBZ	**Khabaz**	**69.61**	**311**	⇑*e*P	**P**	**17 15 19.9**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,26nm,2.5s						
FCC	**Fort Churchill**	**69.87**	**28**	P	**P**	**17 15 21.6**	**+1.7**
FCC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FCC	**Fort Churchill**	**69.87**	**28**	P	**P**	**17 15 21.6**	**+1.7**
FCC				IAmb	IAmb	17 15 24.9	
	comp=Z,4.7nm,1.1s						
GNI	**Garni**	**70.69**	**307**	⇑*e*P	**P**	**17 15 27.4**	**+1.9**
GNI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
NC405	**NORSAR Array S**	**71.05**	**337**	P	**P**	**17 15 27.3**	**+0.2**
NC303	**NORSAR Array S**	**71.06**	**338**	P	**P**	**17 15 27.5**	**+0.3**
NB2	**NORSAR Subarra**	**71.25**	**338**	P	**P**	**17 15 29.0**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**71.25**	**338**	P	**P**	**17 15 29.2**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=35,slow=5.9,SNR=4.0						
NVAR	**Mina Array Bea**	**71.46**	**55**	P	P	17 15 36.1	+5.8
	comp=Z,0.4nm,0.6s,baz=300,slow=7.1,SNR=2.2						
AKASG	**Malin Array Be**	**72.23**	**322**	P	**P**	**17 15 35.0**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=44,slow=5.9,SNR=11						
AKASG	**Malin Array Be**	**72.23**	**322**	P	**P**	**17 15 34.8**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**72.23**	**322**	P	**P**	**17 15 34.8**	**+0.5**
AKBB	**Malin Array Si**	**72.23**	**322**	P	**P**	**17 15 35.1**	**+0.7**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AKBB	**Malin Array Si**	**72.23**	**322**	P	**P**	**17 15 35.1**	**+0.7**
AKBB				IAmb	IAmb	17 16 00.1	
	comp=Z,7.1nm,1.2s						
PDAR	**Pinedale Array**	**73.88**	**47**	P	P	17 15 49.9	+5.3
	comp=Z,0.6nm,0.7s,baz=259,slow=3.3,SNR=7.2						
BUR08	**Bucovina Ar. S**	**76.26**	**322**	P	**P**	**17 15 59.3**	**+1.2**
BURAR	**Bucovina Array**	**76.27**	**322**	⇑P	**P**	**17 15 59.4**	**+1.3**
BURAR	**Bucovina Array**	**76.27**	**322**	P	**P**	**17 15 59.4**	**+1.3**
BIZ	**Bicaz**	**76.34**	**321**	⇑P	**P**	**17 16 00.1**	**+1.6**
OZUR		**77.11**	**321**	⇑P	**P**	**17 16 04.6**	**+1.8**
BRTR	**Keskin Array B**	**77.48**	**312**	P	**P**	**17 16 05.9**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=327,slow=16,SNR=2.0						
VOIR		**77.94**	**321**	⇑P	**P**	**17 16 09.5**	**+2.0**
CLL	**Collm**	**78.54**	**331**	*e*P	**P**	**17 16 12.0**	**+1.4**
CLL	**Collm**	**78.54**	**331**	*e*P	**P**	**17 16 12.0**	**+1.4**
ECSD	**EROS Data Cent**	**79.94**	**40**	P	**P**	**17 16 17.1**	**-1.3**
ECSD				IAmb	IAmb	17 16 21.0	
	comp=Z,6.5nm,0.9s						
KHC	**Kasperske Hory**	**80.08**	**329**	⇑*e*P	**P**	**17 16 21.1**	**+2.0**
KHC				pmax	pmax		
	comp=Z,21nm,2.5s						
KHC	**Kasperske Hory**	**80.08**	**329**	*e*P	**P**	**17 16 20.8**	**+1.7**
CONA	**Conrad Observa**	**80.14**	**327**	*e*P	**P**	**17 16 20.4**	**+0.9**
	comp=Z,6.3nm,1.8s						
GERES	**GERESS Array B**	**80.27**	**329**	P	**P**	**17 16 21.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=30,slow=6.2,SNR=5.9						
SOKA	**Soboth**	**81.47**	**327**	*e*P	**P**	**17 16 26.9**	**+0.3**
	comp=Z,3.6nm,0.7s						
OBKA	**Obir**	**81.81**	**327**	*e*P	**P**	**17 16 25.6**	**-2.8**
	comp=Z,2.2nm,0.7s						
KBA	**Koelnbreinsper**	**81.84**	**328**	*e*P	**P**	**17 16 29.1**	**+0.5**
	comp=Z,4.0nm,0.8s						
WATA	**Walderalm**	**82.32**	**329**	*e*P	**P**	**17 16 30.7**	**-0.5**
	comp=Z,2.6nm,0.7s						
MOTA	**Moosalm**	**82.50**	**330**	*e*P	**P**	**17 16 30.8**	**-1.3**
	comp=Z,5.2nm,1.1s						
RETA	**Reutte**	**82.51**	**330**	*e*P	**P**	**17 16 30.0**	**-2.1**
	comp=Z,3.8nm,0.8s						
SQTA	**Sankt Quirin**	**82.56**	**329**	*e*P	**P**	**17 16 31.1**	**-1.3**
	comp=Z,3.4nm,0.9s						
FETA	**Feichten**	**82.91**	**330**	*e*P	**P**	**17 16 32.1**	**-2.2**
	comp=Z,7.6nm,1.4s						
DAVA	**Damuels**	**83.01**	**330**	*e*P	**P**	**17 16 35.1**	**+0.3**
	comp=Z,1.3nm,0.3s						
TXAR	**Lajitas Array**	**86.55**	**54**	P	P	17 16 58.2	+5.3
	comp=Z,0.2nm,0.7s,baz=249,slow=0.8,SNR=1.9						

IDC 13 17:07:28.9±2.1**,2˚.28N**×**126˚.73E,h0**^{km}**,mb3.4**/4**,mb1 3.7**/4**,mb1mx3.3**/40**,mbtmp3.5**/4 **Error ellipse: s-maj=117.1km s-min=26.8km az=69.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.27**	**183**	P	P	17 12 06.9	+0.6
	1.0nm,0.5s,baz=12,slow=11,SNR=1.5						
WRA	**Warramunga Arr**	**23.31**	**162**	P	P	17 12 38.2	-0.5
	0.9nm,0.4s,baz=339,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.71**	**165**	P	P	17 13 10.4	+0.2
	0.2nm,0.5s,baz=347,slow=7.4,SNR=10						
MKAR	**Makanchi Array**	**58.75**	**326**	P	P	17 17 28.7	-0.1
	0.3nm,0.6s,baz=116,slow=6.6,SNR=2.5						

WEL ***13*** *17:11:00,40˚.85S×175˚.51E,h27*^{km}*,ML4.1,Mw4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{15} *Nm;* M_{rr}*-0.23;* $M_{\theta\theta}$*0.62;* $M_{\phi\phi}$*-0.39;* $M_{r\theta}$*-0.65;* $M_{\theta\phi}$*0.49;* $M_{\phi r}$*-0.96; Fault plane solution:* M_0*1.36000×10*^{15} *NP1:* ϕ_s*291.00000°,δ29.00000°,λ-13.00000°. NP2:*ϕ_s*32.00000°, δ84.00000°,λ-119.00000°. Principal axes: T 144.6000, Plg33.0000°, Azm146.0000°; N -16.9400, Plg28.0000°, Azm35.0000°; P -127.6600, Plg44.0000°, Azm275.0000°;*

WEL 13 17:11:38.7±0.5**,41˚S**±2˚×**17˚5E**±˚**,h19**^{km}±4^{km}**,M3.9**/17**, ML4.5**/17**,MLv3.9**/17 **Error ellipse: s-maj=0.0km s-min=0.0km az=131.3,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	**Holdsworth Sta**	**0.06**	**153**	P	Pg	17 11 43.7	+1.4
HOWZ				S	Sg	17 11 47.0	+2.3
MRZ	**Mangatainoka R**	**0.20**	**23**	P	Pg	17 11 45.0	+1.2
MRZ				S	Sg	17 11 49.3	+2.1
OGWZ	**Otaki Gorge**	**0.23**	**276**	P	Pg	17 11 45.9	+1.6
OGWZ				S	Sg	17 11 50.8	+2.6
MTW	**Mount Morrison**	**0.32**	**177**	P	Pb	17 11 46.5	+0.8
MTW				S	Sb	17 11 52.3	+1.9
TIWZ	**Tintock**	**0.32**	**78**	P	Pb	17 11 46.4	+0.6
TIWZ				S	Sb	17 11 51.7	+1.2
CAW	**Cannon Point**	**0.41**	**230**	P	Pb	17 11 48.3	+0.9
CAW				S	Sb	17 11 54.7	+1.4
TMWZ	**Te Maipa**	**0.41**	**130**	P	Pb	17 11 48.1	+0.7
TMWZ				S	Sn	17 11 55.3	-1.4
KIW	**Kapiti Island**	**0.43**	**267**	P	Pn	17 11 49.1	-0.8
PRWZ	**Pori Road**	**0.47**	**53**	P	Pb	17 11 49.2	+0.8
POWZ	**Post Office Ro**	**0.50**	**26**	P	Pb	17 11 49.6	+0.7
PAWZ	**Paruwai Farm**	**0.54**	**184**	P	Pg	17 11 50.3	+0.6
PAWZ				S	Sn	17 11 58.5	-1.5
CPWZ	**Castlepoint**	**0.55**	**97**	P	Pn	17 11 50.9	-0.6
CPWZ				S	Sn	17 12 00.6	+0.4
TRWZ	**Traveller**	**0.58**	**164**	P	Pg	17 11 50.6	+0.3
TRWZ				S	Sn	17 12 00.2	-0.6
MSWZ	**Moikau Station**	**0.60**	**197**	P	Pg	17 11 51.2	+0.5
MSWZ				S	Sn	17 12 00.1	-1.3
BFZ	**Birch Farm**	**0.60**	**75**	P	Pg	17 11 51.1	+0.3
BFZ				S	Sn	17 12 00.7	-0.8
OHWZ	**Ohakea**	**0.65**	**349**	P	Pn	17 11 53.1	+0.3
WEL	**Wellington**	**0.69**	**230**	P	Pg	17 11 52.9	+0.5
BHW	**Baring Head**	**0.73**	**219**	P	Pg	17 11 53.3	+0.3
PLWZ	**Palliser**	**0.74**	**193**	P	Pb	17 11 53.1	0.0
DVHZ	**Dannevirke**	**0.76**	**44**	P	Pg	17 11 53.5	-0.1
ANWZ	**Angora Road**	**0.85**	**64**	P	Pb	17 11 54.7	-0.1
TSZ	**Takapari Road**	**0.87**	**25**	P	Pg	17 11 55.6	-0.1
TCW	**Tory Channel**	**0.98**	**248**	P	Pn	17 11 57.4	0.0
PRHZ	**Porangahau**	**1.05**	**57**	P	Pb	17 11 57.3	-0.9
WPHZ	**Waipukurau**	**1.07**	**44**	P	Pb	17 11 58.2	-0.3
PNHZ	**Pukenui**	**1.08**	**31**	P	Pb	17 11 58.5	-0.3
WAZ	**Wanganui**	**1.15**	**341**	P	Pg	17 12 01.6	+0.6
DUWZ	**D'Urville Isla**	**1.18**	**272**	P	Pb	17 12 00.8	+0.3
TUWZ	**Tuamarina**	**1.30**	**243**	P	Pn	17 12 01.2	-0.5
CMWZ	**Cape Campbell**	**1.31**	**226**	P	Pb	17 12 02.7	-0.1
PXZ	**Pawanui**	**1.33**	**53**	P	Pn	17 12 01.0	-1.2
KRHZ	**Kereru**	**1.38**	**30**	P	Pn	17 12 02.4	-0.5
BHHZ	**Black Hill Sta**	**1.43**	**19**	P	Pn	17 12 03.8	+0.2
MOVZ	**Moawhango**	**1.45**	**8**	P	Pn	17 12 04.4	+0.5
MTVZ	**Mangateitei**	**1.46**	**360**	P	Pb	17 12 05.8	+0.6
BSWZ	**Blackbirch Sta**	**1.49**	**234**	P	Pn	17 12 03.9	-0.5
KAHZ	**Kahuranaki**	**1.50**	**46**	P	Pn	17 12 03.5	-1.0
WNVZ	**Wahianoa**	**1.52**	**4**	P	Pb	17 12 05.9	-0.4
TRVZ	**Turoa**	**1.54**	**2**	P	Pb	17 12 06.6	-0.2
PKVZ	**Pokaka**	**1.56**	**356**	P	Pb	17 12 07.0	+0.1
WHVZ	**Whangaehu Hut**	**1.56**	**3**	P	Pb	17 12 06.8	-0.3
DRZ	**Dome Shelter**	**1.57**	**2**	P	Pb	17 12 07.4	+0.2
TUVZ	**Tukino**	**1.58**	**5**	P	Pb	17 12 07.0	-0.3
FWVZ	**Far West T-bar**	**1.59**	**2**	P	Pb	17 12 07.1	-0.4
KWHZ	**Kaweka Forest**	**1.59**	**27**	P	Pn	17 12 05.3	-0.5
LREZ	**Lake Rotokare**	**1.61**	**329**	P	Pg	17 12 08.8	-0.9
NNZ	**Nelson**	**1.63**	**256**	P	Pn	17 12 06.6	+0.3
NGZ	**Ngauruhoe**	**1.67**	**3**	P	Pb	17 12 08.3	-0.6
MCHZ	**McNeill Hill**	**1.68**	**34**	P	Pn	17 12 06.3	-0.7
OTVZ	**Oturere**	**1.68**	**5**	P	Pb	17 12 08.3	-0.9
CKHZ	**Cape Kidnapper**	**1.70**	**46**	P	Pn	17 12 05.9	-1.4
ETVZ	**East Tongariro**	**1.71**	**6**	P	Pb	17 12 08.7	-0.9
WTVZ	**West Tongariro**	**1.73**	**3**	P	Pb	17 12 09.0	-0.9
KRVZ	**Karewarewa**	**1.75**	**4**	P	Pb	17 12 09.4	-0.8
TWVZ	**Taurewa**	**1.77**	**359**	P	Pn	17 12 09.4	+1.1
VRZ	**Vera Road**	**1.80**	**342**	P	Pb	17 12 10.9	-0.2
PREZ	**Palmer Road**	**1.81**	**326**	P	Pb	17 12 11.5	+0.3
BKZ	**Black Stump Fm**	**1.85**	**25**	P	Pn	17 12 08.6	-0.7
KATZ	**Kakaramea**	**1.87**	**5**	P	Pn	17 12 10.8	+1.0
NMEZ	**Namu Road**	**1.88**	**319**	P	Pb	17 12 12.7	+0.3
RITZ	**Rihia Road**	**1.89**	**9**	P	Pn	17 12 10.9	+1.0
NEZ	**North Egmont**	**1.90**	**326**	P	Pb	17 12 12.9	+0.2
KHEZ	**Kahui Hut**	**1.91**	**324**	P	Pb	17 12 12.7	-0.3
DREZ	**Durham Road**	**1.92**	**329**	P	Pb	17 12 13.2	+0.1
ARHZ	**Aropaoanui**	**1.96**	**37**	P	Pn	17 12 10.0	-0.9
RATZ	**Rangitukua**	**1.99**	**7**	P	Pb	17 12 14.3	0.0
NBEZ	**Newall Road No**	**2.00**	**321**	P	Pb	17 12 14.6	+0.2
HATZ	**Hinemaiaia**	**2.01**	**14**	P	Pn	17 12 11.7	+0.1
PKE	**Pukeiti**	**2.01**	**325**	P	Pb	17 12 14.6	0.0
NMHZ	**Naumai**	**2.02**	**31**	P	Pn	17 12 11.2	-0.6
MRHZ	**Matea Rd**	**2.13**	**20**	P	Pn	17 12 12.6	-0.7
KHZ	**Kahutara**	**2.14**	**222**	P	Pn	17 12 12.5	-0.8
WATZ	**Wairara**	**2.14**	**5**	P	Pn	17 12 13.8	+0.4
THZ	**Tophouse**	**2.15**	**244**	P	Pn	17 12 12.7	-0.8
QRZ	**Quartz Range**	**2.24**	**269**	P	Pn	17 12 14.8	+0.1
MTHZ	**Maungataniwha**	**2.25**	**28**	P	Pn	17 12 13.7	-1.1
RAHZ	**Arahi**	**2.29**	**33**	P	Pn	17 12 14.3	-1.1
KUTZ	**Kaahu Road**	**2.37**	**7**	P	Pb	17 12 21.7	+1.0
HIZ	**Hauiti**	**2.38**	**348**	P	Pb	17 12 18.9	-1.9
KNZ	**Kokohu**	**2.48**	**44**	P	Pn	17 12 16.1	-1.9
SNGZ	**Shannon Statio**	**2.51**	**35**	P	Pn	17 12 16.9	-1.6
TLZ	**Tolley Road**	**2.51**	**1**	P	Pn	17 12 19.6	+1.1
MHGZ	**Mahia Peninsul**	**2.52**	**49**	P	Pn	17 12 16.7	-1.9
MUGZ	**Murupara**	**2.56**	**23**	P	Pn	17 12 17.9	-1.3
PRGZ	**Paritu Road**	**2.67**	**45**	P	Pn	17 12 18.7	-1.9
TARZ	**Mount Tarawera**	**2.72**	**17**	P	Pn	17 12 18.5	-3.0
GVZ	**Greta Valley S**	**2.80**	**220**	P	Pn	17 12 21.3	-1.2
LTZ	**Lake Taylor**	**3.08**	**230**	P	Pn	17 12 25.6	-0.8
TOZ	**Tahuroa Road**	**3.11**	**0**	P	Pn	17 12 29.9	+3.2
OKCZ	**Okains Bay**	**3.39**	**211**	P	Pn	17 12 29.2	-1.4
INZ	**Inchbonnie**	**3.55**	**237**	P	Pn	17 12 32.0	-0.7
OXZ	**Oxford**	**3.56**	**225**	P	Pn	17 12 31.0	-2.0
AKCZ	**Akaroa Harbour**	**3.58**	**211**	P	Pn	17 12 32.8	-0.3
AWAZ	**Awhitu Peninsu**	**3.83**	**350**	P	Pn	17 12 40.4	+3.9
ETAZ	**East Tamaki Re**	**3.91**	**354**	P	Pb	17 12 46.0	-0.9
WIAZ	**Waiheke Island**	**4.05**	**356**	P	Pn	17 12 41.8	+2.1
WVZ	**Waitaha Valley**	**4.18**	**236**	P	Pb	17 12 47.1	-4.4
ARCZ	**Arundel**	**4.45**	**224**	P	Pn	17 12 44.5	-0.6
TMZ	**Timaru**	**4.84**	**222**	P	Pn	17 12 48.7	-1.7
WCZ	**Waipu Caves**	**4.98**	**349**	P	Pn	17 12 57.4	+5.1
FOZ	**Fox Glacier**	**4.99**	**236**	P	Pn	17 12 52.8	+0.3
ODZ	**Otahua Downs**	**5.50**	**219**	P	Pn	17 12 57.4	-2.1
JCZ	**Jackson Bay**	**5.91**	**235**	P	Pn	17 13 04.1	-1.1
CTZ	**Chatham Island**	**6.54**	**119**	P	Pn	17 13 11.9	-1.8

WEL 13 17:11:57.6,38˚S±1˚×**17˚8E**±˚**,h16**^{km}±2^{km}**,M2.2**/11**, ML2.2**/10**,MLv2.2**/11**,Error ellipse: s-maj=0.0km s-min=0.0km az=51.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	**Tauwhareparae**	**0.12**	**271**	P	Pb	17 12 02.1	+0.5
PUZ	**Puketiti**	**0.14**	**41**	P	Pb	17 12 01.7	-0.2
PKGZ	**Pakihiroa**	**0.29**	**350**	P	Pb	17 12 04.6	+0.1
CNGZ	**Carnagh Statio**	**0.31**	**170**	P	Pb	17 12 04.8	+0.1
TKGZ	**Te Karaka**	**0.35**	**221**	P	Pb	17 12 05.7	+0.4
WMGZ	**Waiomatatini S**	**0.42**	**31**	P	Pb	17 12 07.3	+0.7
RUGZ	**Raukumara Rang**	**0.42**	**300**	P	Pb	17 12 06.6	-0.1

MWZ	Matawai	0.51	252	P	Pb	17 12 07.9	-0.2
HAZ	Te Kaha	0.51	326	P	Pb	17 12 07.9	-0.1
RIGZ	Rimuhau	0.60	209	P	Pb	17 12 10.0	+0.2
MXZ	Matakaoa Point	0.63	12	P	Pb	17 12 10.8	+0.6
RAGZ	Rawiri	0.65	241	P	Pb	17 12 11.0	+0.5
URZ	Urewera	0.81	264	P	Pg	17 12 13.4	0.0

WEL 13 17:12:01.6,41°S±2°×**17°5E**±°**,h23**$^{km}\pm1^{km}$**,M4.1**/13, **ML4.5**/13**,MLv4.1**/13**,Error ellipse: s-maj=0.0km s-min=0.0km az=64.5,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOWZ	Holdsworth Sta	0.05	161	P	Pb	17 12 06.2	+0.4
HOWZ				S	Sb	17 12 09.6	+1.0
MRZ	Mangatainoka R	0.20	19	P	Pb	17 12 07.5	+0.3
MRZ				S	Sb	17 12 11.7	+0.9
OGWZ	Otaki Gorge	0.25	278	P	Pb	17 12 08.4	+0.7
OGWZ				S	Sb	17 12 13.2	+1.3
TIWZ	Tintock	0.31	76	P	Pb	17 12 08.9	+0.3
TIWZ				S	Sb	17 12 14.2	+0.8
MTW	Mount Morrison	0.31	179	P	Pb	17 12 09.0	+0.3
TMWZ	Te Maipa	0.39	131	P	Pb	17 12 10.6	+0.5
TMWZ				S	Sn	17 12 17.6	-1.2
CAW	Cannon Point	0.41	232	P	Pb	17 12 10.8	+0.5
CAW				S	Sb	17 12 17.3	+1.1
KIW	Kapiti Island	0.44	268	P	Pb	17 12 11.5	+0.6
KIW				S	Sb	17 12 18.5	+1.4
PRWZ	Pori Road	0.47	51	P	Pb	17 12 11.7	+0.5
POWZ	Post Office Ro	0.50	25	P	Pn	17 12 12.7	-0.7
POWZ				S	Sn	17 12 20.2	-1.2
PAWZ	Paruwai Farm	0.53	185	S	Sn	17 12 21.4	-0.9
CPWZ	Castlepoint	0.54	97	P	Pn	17 12 13.4	-0.5
CPWZ				S	Sn	17 12 23.0	+0.8
TRWZ	Traveller	0.57	165	P	Pb	17 12 13.4	+0.5
MSWZ	Moikau Station	0.59	198	S	Sn	17 12 22.8	-0.9
BFZ	Birch Farm	0.59	74	P	Pb	17 12 13.9	+0.5
BHW	Baring Head	0.73	220	P	Pb	17 12 15.9	+0.2
DVHZ	Dannevirke	0.75	43	P	Pb	17 12 16.2	+0.1
ANWZ	Angora Road	0.84	63	P	Pb	17 12 17.2	-0.4
TSZ	Takapari Road	0.87	24	P	Pn	17 12 18.4	0.0
TSZ	Takapari Road	0.87	24	P	Sn	17 12 30.5	0.0

NEIC ***13*** *17:16:17.0±1.0, 17°.6S±0°.2×178°.2W±0°.1, h605$^{km}\pm11^{km}$, mb4.4/19, Error ellipse: s-maj=24.0km s-min=11.6km az=152.0*

IDC ***13*** *17:16:20.4±2.1, 17°.40S×178°.75W, h605$^{km}\pm20^{km}$, mb3.1/7, mb1 3.4/8, mb1mx3.0/29, mbtmp4.1/8, Error ellipse: s-maj=95.7km s-min=20.7km az=155.0*

ISC 13 17:16:16.9±0.8**,17°.6S**±0°.1×**178°.2W**±0°.1**,h600**^{km}**,n30,** σ**0^{s}65**/28**,mb4.2**/15**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.55	268	P	P	17 17 40.5	+1.0
	7.1nm,0.3s,baz=114,slow=2.6,SNR=77						
AFI	Afiamalu	7.22	60	P	P	17 18 08.8	-0.4
AFI					S	17 19 49.5	+8.5
THZ	Tophouse	25.24	196	P	P	17 20 57.0	-0.1
THZ				IAmb	IAmb	17 21 26.6	
	comp=Z,19nm,1.4s						
KWAJ	Kwajalein Atol	29.74	331	P	P	17 21 36.6	0.0
ARMA	Armidale	30.23	239	P	P	17 21 41.1	+0.2
ARMA				IAmb	IAmb	17 22 12.4	
	comp=Z,18nm,1.4s						
CTA	Charters Tower	33.66	260	P	P	17 22 09.3	-0.6
	comp=Z,2.3nm,0.7s,baz=93,slow=12,SNR=2.5						
CTAO	Charters Tower	33.66	260	P	P	17 22 09.7	-0.2
CTAO				IAmb	IAmb	17 22 39.4	
	comp=Z,18nm,1.6s						
COEN	Coen	37.27	270	P	P	17 22 40.5	+0.8
TOO	Toolangi	37.48	231	P	P	17 22 41.9	+0.7
STKA	Stephens Creek	38.92	241	P	P	17 22 52.7	-0.1
	comp=Z,2.3nm,0.5s,baz=87,slow=10,SNR=8.1						
BBOO	Buckleboo	43.70	241	P	P	17 23 30.2	-0.2
BBOO				IAmb	IAmb	17 23 44.5	
	comp=Z,21nm,1.2s						
WR0	Warramunga Arr	44.66	259	P	P	17 23 37.5	-0.6
WB0	Warramunga Arr	44.82	259	P	P	17 23 37.8	-1.4
WB0				IAmb	IAmb	17 23 59.3	
	comp=Z,12nm,1.6s						
WB2	Warramunga Arr	44.84	259	P	P	17 23 38.7	-0.7
WB2				IAmb	IAmb	17 24 01.1	
	comp=Z,9.7nm,1.4s						
WRA	Warramunga Arr	44.85	259	P	P	17 23 38.8	-0.7
	comp=Z,1.3nm,0.4s,baz=92,slow=7.4,SNR=31						
WRA	Warramunga Arr	44.85	259	P	P	17 23 38.6	-0.9
AS31	Alice Springs	45.03	254	P	P	17 23 40.7	-0.2
AS31				IAmb	IAmb	17 23 41.7	
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	45.03	254	P	P	17 23 40.8	-0.1
	comp=Z,13nm,0.6s,baz=87,slow=8.5,SNR=254						
ASAR	Alice Springs	45.03	254	P	P	17 23 40.3	-0.6
MTN	Manton Dam	48.98	268	P	P	17 24 10.2	-0.3
FORT	Forrest	50.28	244	P	P	17 24 19.1	-0.7
FORT				IAmb	IAmb	17 24 19.5	
	comp=Z,13nm,0.7s						
FITZ	Fitzroy Crossi	53.24	260	P	P	17 24 42.1	+1.0
	comp=Z,2.6nm,1.0s,baz=111,slow=14,SNR=2.0						
FITZ	Fitzroy Crossi	53.24	260	P	P	17 24 41.3	+0.2
NWAO	Narrogin (SRO)	59.50	242	P	P	17 25 23.4	-0.4
NWAO				IAmb	IAmb	17 25 45.0	
	comp=Z,20nm,1.2s						
YOJ	Yonaguni jima	70.92	304	P	P	17 26 34.9	-0.3
PETK	Petropavlovsk-	73.44	345	P	P	17 26 49.1	+0.1
LCMT	Little Creek M	81.81	47	P	P	17 27 34.1	-0.6
TXAR	Lajitas Array	85.70	58	P	P	17 27 58.9	+5.0
	comp=Z,0.3nm,0.8s,baz=231,slow=5.7,SNR=5.1						
TXAR	Lajitas Array	85.70	58	P	P	17 27 55.0	+1.1
PDAR	Pinedale Array	87.02	43	P	P	17 28 03.0	+2.9
	comp=Z,0.2nm,0.5s,baz=217,slow=2.8,SNR=2.6						

BJI ***13*** *17:46:38.9±0.0, 39°.25N×142°.37E, h45^{km}, mB5.1/39, mb4.8/61, Ms4.4/44, Ms7 4.3/45*

MOS ***13*** *17:46:42.8±1.0, 39°.45N×141°.96E, h53^{km}, mb5.1/36, Error ellipse: s-maj=5.9km s-min=3.9km az=102.8*

BGR ***13*** *17:46:43.3±0.0, 39°.58N×142°.52E, h33^{km}, mb5.1*

NIED ***13*** *17:46:43.6, 39°.34N×142°.06E, h48^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}2.22; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-1.96; $M_{r\theta}$1.48; $M_{\theta\phi}$-0.43; $M_{\phi r}$2.28; Fault plane solution: $M_0$3.45000×10^{16} NP1:ϕ_s28.00000°, δ71.00000°, λ99.00000°. NP2:ϕ_s183.00000°, δ21.00000°, λ66.00000°.*

NEIC ***13*** *17:46:43.6±2.0, 39°.37N±0°.04×142°.02E±0°.08, h44$^{km}\pm5^{km}$, mb5.1/185, Mwr4.8/19 Error ellipse: s-maj=9.3km s-min=5.3km az=78.0*

JMA ***13*** *17:46:43.5, 39°.34N×142°.06E, h48$^{km}\pm1^{km}$, M4.9*

JMA Felt III J1.

NEIC ***13*** *17:46:44.3, 39°.42N×141°.91E, h48^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.56; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-1.06; $M_{r\theta}$0.80; $M_{\theta\phi}$-0.40; $M_{\phi r}$1.63; Fault plane solution: $M_0$2.32000×10^{16} NP1:ϕ_s207.80000°, δ18.96000°, λ91.35000°. NP2:ϕ_s26.37000°, δ71.05000°, λ89.54000°. Principal axes: T 2.4491, Plg64.0000°, Azm296.0000°; N -0.2940, Plg0.0000°, Azm27.0000°; P -2.1551, Plg26.0000°, Azm117.0000°;*

GCMT ***13*** *17:46:45.6±0.2, 39°.41N±0°.01×142°.19E±0°.02, h52$^{km}\pm1^{km}$, MW5.1/115, Moment Tensor Solution. s57,c82; s115,c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.17±.17; $M_{\theta\theta}$-0.69±.12; $M_{\phi\phi}$-3.48±.11; $M_{r\theta}$1.55±.09; $M_{\theta\phi}$-1.24±.10; $M_{\phi r}$2.23±.09; Best double couple: $M_0$4.88300×10^{16} NP1:ϕ_s194.00000°, δ29.00000°, λ78.00000°. NP2:ϕ_s28.00000°, δ62.00000°, λ97.00000°. Principal axes: T 5.0260, Plg72.0000°, Azm314.0000°; N -0.2860, Plg6.0000°, Azm205.0000°; P -4.7390, Plg17.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***13*** *17:46:46.1±0.7, 39°.34N×141°.97E, h71$^{km}\pm4^{km}$, mb4.3/39, mb1 4.3/45, mb1mx4.3/68, mbtmp4.6/45, MS4.1/36, Ms1 4.1/36, ms1mx4.0/52 Error ellipse: s-maj=13.0km s-min=10.0km az=149.0*

ISC 13 17:46:43.5±0.4**,39°.35N**±0°.03×**142°.08E**±0°.04**,h49**$^{km}\pm2^{km}$**,** **h49**^{km}**:pP-P,n592,**σ**1^{s}41**/576**,mb5.0**/223**,MS4.4**/42**, 47C-15D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.30	318	P	Pn	17 46 52.5	-0.2
MIYJ				S	Sn	17 46 58.7	-0.5
OFUJ	Ofunato	0.42	230	P	Pn	17 46 53.6	-0.2
OFUJ				S	Sn	17 47 00.4	-0.8
JTH	Tanohata	0.61	344	P	Pn	17 46 56.0	-0.1
JTH				S	Sn	17 47 04.9	-0.3
JOM	Ohasama	0.62	281	P	Pn	17 46 56.0	-0.3
JKMT	Kesennumamotoy	0.72	222	P	Pn	17 46 57.1	-0.4
JKMT				S	Sn	17 47 06.5	-1.1
JMK	Ichinoseki	0.78	240	P	Pn	17 46 57.9	-0.4
JMK				S	Sn	17 47 08.2	-0.9
JKZ	Kuzumaki	0.86	318	P	Pn	17 46 59.7	+0.3
JKZ				*e*S	Sn	17 47 11.4	+0.4
JIO	Ouri	1.06	213	P	Pn	17 47 01.5	-0.6
JIO				S	Sn	17 47 14.4	-1.4
JANG	Nango	1.11	337	P	Pn	17 47 02.6	-0.2
JANG				*e*S	Sn	17 47 16.8	-0.2
JRG	Rokugo	1.12	273	P	Pn	17 47 02.7	-0.2
JRG				*e*S	Sn	17 47 16.0	-1.3
JAH	Hinai	1.40	307	P	Pn	17 47 06.7	+0.1
JYK	Kaneyama	1.41	253	P	Pn	17 47 06.8	0.0
JTM	Tenmabayashi	1.63	332	Pn	Pn	17 47 10.1	+0.2
JTM				Sn	Sn	17 47 22.7	-6.9
JMM	Marumori	1.79	215		Pn	17 47 11.0	-1.0
ERM	Erimo	2.78	17	*de*P	Pn	17 47 26.0	+0.4
ERM	Erimo	2.78	17	Pn	Pn	17 47 26.5	+1.0
JSD	Sado	3.27	248	Pn	Pn	17 47 32.2	0.0
JYT	Yasato	3.46	206	Pn	Pn	17 47 34.3	-0.6
JEW	Eniwo	3.52	352	Pn	Pn	17 47 37.6	+2.0
MAJO	Matsushiro	4.15	229	*c i*P	Pn	17 47 47.1	+2.7
MAJO	Matsushiro	4.15	229	Pn	Pn	17 47 46.4	+2.0
MAT	Matsushiro	4.15	229	P	Pn	17 47 46.4	+2.0
MAT				*e*S	Sn	17 48 31.7	0.0
MJAR	Matsushiro Arr	4.15	229	P	Pn	17 47 46.4	+2.0
	3.4nm,0.3s,baz=39,slow=11,SNR=151						
MJAR				LR	LR	17 49 31.4	
	comp=Z,2μm,20.7s,baz=55,slow=41						
MJAR	Matsushiro Arr	4.15	229	P	Pn	17 47 45.9	+1.5
MJAR	Matsushiro Arr	4.15	229	Pn	Pn	17 47 45.9	+1.5
MJB9	Matsu-Tunnel	4.15	229		Pn	17 47 47.3	+2.9
ASAJ	Asahikawa	4.78	4	P	Pn	17 47 54.0	+1.1
	11nm,0.3s,baz=212,slow=13,SNR=64						
JKA	Kamikawa-asahi	4.78	4	Pn	Pn	17 47 53.5	+0.6
NMR	Nemuro--Hokkai	4.86	33	⇓*i*P	Pn	17 47 52.7	-1.4
NMR				*i* S	Sn	17 48 44.8	-4.2
GLVR	Golovnino	5.08	29	⇓*i*P	Pn	17 47 56.9	-0.2
GLVR				*e*S	Sn	17 48 51.4	-3.1
GLVR				pmax	pmax		
	comp=Z,954nm,0.5s						
GLVR				pmax	pmax		
	comp=E,321nm,0.6s						
GLVR				pmax	pmax		
	comp=N,640nm,0.5s						
GLVR				smax	smax		
	comp=N,3μm,0.6s						
GLVR				smax	smax		
	comp=E,3μm,0.4s						
GLVR				smax	smax		
	comp=N,6μm,1.4s						
GLVR				smax	smax		
	comp=E,7μm,1.4s						
JGF	Kuroka	5.30	227		Pn	17 48 01.9	+1.7
GRPR	Tuman	5.40	30	⇑*i*P	Pn	17 48 01.3	-0.1
GRPR				*e*S	Sn	17 48 58.4	-3.8
GRPR				pmax	pmax		
	comp=Z,1μm,0.2s						
GRPR				pmax	pmax		
	comp=E,403nm,0.3s						
GRPR				pmax	pmax		
	comp=N,136nm,0.2s						
GRPR				smax	smax		
	comp=E,2μm,0.4s						
GRPR				smax	smax		
	comp=N,4μm,0.5s						
YUK	Yuzh-Kuril'sk	5.47	30	*c i*P	Pn	17 48 02.2	-0.2
YUK				*i* S	Sn	17 49 00.6	-3.3
YUK				pmax	pmax		
	comp=N,155nm,0.2s						
YUK				pmax	pmax		
	comp=E,346nm,0.2s						
YUK				pmax	pmax		
	comp=Z,997nm,0.2s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK				MLR	MLR		
	comp=Z,822nm,13.0s						
JSG	Sagara	5.61	215		Pn	17 48 05.8	+1.4
INU	Inuyama	5.68	227	Pn	Pn	17 48 07.2	+1.8
JHJ2	Mitsune	6.49	197	Pn	Pn	17 48 17.0	+0.6
JHJ	Hachijo jima 2	6.49	197	P	Pn	17 48 15.2	-1.2
	comp=Z,16nm,0.3s,baz=312,slow=23,SNR=24						
JHJ				S	Sn	17 49 24.7	-4.5
	comp=Z,56nm,0.3s,baz=56,slow=24,SNR=1.9						
JHJ				LR	LR	17 51 24.8	
	comp=Z,580nm,18.8s,baz=30,slow=43						
JWT	Wachi	6.70	235	Pn	Pn	17 48 22.8	+3.5
TEY	Ternei	6.99	326	⇑*e*P	Pn	17 48 25.6	+2.4
TEY				pmax	pmax		
	comp=N,10.0nm,2.4s						
TEY				pmax	pmax		
	comp=Z,20nm,2.4s						
TEY				pmax	pmax		
	comp=E,20nm,2.0s						
KUR	Kuril'sk	7.27	34	*e*P	Pn	17 48 27.0	-0.1
KUR				*e*S	Sn	17 49 44.5	-3.8
KUR				pmax	pmax		
	comp=Z,292nm,0.4s						
KUR				pmax	pmax		
	comp=E,85nm,0.3s						
KUR				MLR	MLR		
	comp=Z,474nm,15.0s						
YSS	Yuzh-Sakhalins	7.62	3	*e*P	Pn	17 48 33.3	+1.5
YSS				*e*S	Sn	17 49 56.4	-0.2
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,12.0s						
YSS				MLR	MLR		
	comp=N,700nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS	Yuzh-Sakhalins	7.62	3	Pn	Pn	17 48 33.0	+1.2
JHS	Saijyo	8.37	242	Pn	Pn	17 48 45.0	+2.7
JMN	Monobe	8.66	232	Pn	Pn	17 48 46.3	+0.1
MSHR	Mys Shultsa	8.87	295	*de*P	Pn	17 48 50.3	+1.3
USRK	Ussuriysk Ar.	8.96	306	P	Pn	17 48 53.3	+3.0
	baz=116,slow=13,SNR=56						
USRK				LR	LR	17 52 02.9	
	comp=E,3μm,21.4s,baz=121,slow=36						
USRK	Ussuriysk Ar.	8.96	306	Pn	Pn	17 48 48.9	-1.3
USA0B	Ussuriysk Arra	8.96	306	*ce*P	Pn	17 48 52.7	+2.4
USA0B	Ussuriysk Arra	8.96	306	Pn	Pn	17 48 50.3	0.0
MDJ	Mudanjiang	10.68	304	Pn	Pn	17 49 15.5	+1.7
JNU	Nakatsue	10.97	239	P	Pn	17 49 19.9	+2.0
	comp=E,0.7nm,0.3s,baz=107,slow=6.2,SNR=9.8						
JNU				LR	LR	17 53 47.5	
	comp=E,773nm,21.8s,baz=40,slow=39						
KSRS	Korea Array	11.27	265	P	Pn	17 49 25.3	+3.4
	comp=E,1.3nm,0.3s,baz=74,slow=14,SNR=31						
KSRS				LR	LR	17 53 20.9	
	comp=E,1μm,20.1s,baz=78,slow=35						
KS19	Wonju Array Si	11.31	265	Pn	Pn	17 49 26.4	+4.0
KSAR	Wonju Array Be	11.31	265	P	Pn	17 49 25.7	+3.3
KSAR	Wonju Array Be	11.31	265		Pn	17 49 25.6	+3.3
TYV	Tymovskoe	11.52	2	*e*P	Pn	17 49 30.9	+5.7
TYV				*e*S	Sn	17 51 42.4	+10
TYV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV				smax	smax		
	comp=E,10.0nm,1.5s						
TYV				smax	smax		
	comp=E,800nm,9.6s						
TYV				MLR	MLR		
	comp=Z,1μm,20.0s						
TJN	Taejon	12.01	260	*ce*P	Pn	17 49 37.0	+5.1
GRNR	Gornyy	12.09	343	⇑*i*P	Pn	17 49 33.6	+0.6
GRNR				*e*S	Sn	17 51 47.6	+1.3
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,380nm,18.0s						
GRNR				MLR	MLR		
	comp=N,260nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,520nm,17.0s						
JCJ	Chichijima	12.22	180	P	Pn	17 49 31.6	-3.3
	comp=Z,9.7nm,0.3s,baz=280,slow=21,SNR=13						
JCJ				S	Sn	17 51 38.0	-12
	comp=Z,13nm,0.3s,baz=152,slow=19,SNR=1.9						
JCJ				LR	LR	17 55 09.6	
	comp=Z,153nm,21.5s,baz=350,slow=41						
JCJ	Chichijima	12.22	180	Pn	Pn	17 49 33.1	-1.8
INCN	Inchon	12.26	266	P	Pn	17 49 38.7	+3.2
INCN	Inchon	12.26	266	Pn	Pn	17 49 38.7	+3.2
KLR	Kul'dur	12.33	327	P	Pn	17 49 37.0	+0.8
	comp=Z,0.2nm,0.3s,baz=143,slow=13,SNR=6.0						
KLR				LR	LR	17 54 22.7	
	comp=Z,2μm,18.7s,baz=140,slow=37						
CN2	Changchun	13.22	295	*e*P	P	17 49 54.5	-2.5
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,700nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,15.0s						
CN2				LR	LR		
	comp=E,800nm,15.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
DL2	Dalian	15.88	275	P	P	17 50 25.8	-0.8
DL2				sP	pP	17 50 40.1	+2.1
DL2				S	Sn	17 53 20.3	+1.7
DL2				pmax	pmax		
	comp=Z,45nm,1.2s						
DL2				pmax	pmax		
	comp=Z,200nm,4.9s						
DL2				LR	LR		
	comp=Z,200nm,22.2s						
DL2				LR	LR		
	comp=Z,650nm,20.8s						
DL2				LR	LR		
	comp=Z,1μm,22.9s						
PETK	Petropavlovsk-	17.44	33	P	Pn	17 50 41.2	-1.9
	comp=Z,0.2nm,0.3s,baz=194,slow=8.4,SNR=5.5						
PETK				LR	LR	17 58 21.6	
	comp=Z,308nm,18.8s,baz=218,slow=40						
ZEA	Zeya	17.59	330	*e*P	Pn	17 50 42.0	-2.8
ZEA				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=N,20nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEA				MLR	MLR		
	comp=E,400nm,14.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,18.0s						
PET	Petropavlovsk	17.79	34	⇑*e*P	Pn	17 50 46.4	-0.9
HIA	Hailar	18.75	309	⇓*e*P	P	17 50 55.5	-2.7
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJI	Beijing	19.93	280	P	P	17 51 09.1	-2.0
BJI				S	S	17 54 47.8	-4.8
BJI				LR	LR		
	comp=Z,230nm,6.9s						
BJI				LR	LR		
	comp=Z,240nm,8.0s						
NJ2	Nanjing	20.19	256	*e*P	P	17 51 12.9	-1.1
NJ2				sP	sP	17 51 31.0	-0.8
NJ2				pmax	pmax		
	comp=Z,24nm,1.1s						
NJ2				LR	LR		
	comp=Z,640nm,9.0s						
NJ2				LR	LR		
	comp=Z,840nm,13.7s						
NJ2				LR	LR		
	comp=Z,810nm,11.8s						
MA2	Magadan	20.98	12	P	P	17 51 23.0	+0.7
	comp=Z,40nm,0.9s,baz=195,slow=9.1,SNR=25						
MA2				LR	LR	17 59 47.2	
	comp=Z,264nm,19.9s,baz=212,slow=37						
MA2	Magadan	20.98	12	*c i*P	P	17 51 22.4	+0.1
MA2				pmax	pmax		
	comp=Z,56nm,1.0s						
MA2	Magadan	20.98	12	P	P	17 51 22.2	-0.2
MA2				IAmb	IAmb	17 51 40.4	
	comp=Z,70nm,0.8s						
NACB	Ninganchiao	23.00	235	P	P	17 51 41.4	-2.7
HHC	Hu-ho-hao-te	23.34	284	*e*P	P	17 51 46.8	-0.7
HHC				pP	pP	17 52 00.8	+1.1
HHC				sP	sP	17 52 07.5	+1.6
HHC				PP	PnPn	17 52 18.9	+3.8
HHC				S	S	17 55 56.0	-0.6
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				LR	LR		
	comp=Z,460nm,18.2s						
HHC				LR	LR		
	comp=Z,750nm,18.0s						
HHC				LR	LR		
	comp=Z,1μm,18.8s						
CIT	Chita	23.44	312	*e*P	P	17 51 48.4	+0.1
SSLB	Suanglung	23.68	235	P	P	17 51 48.8	-1.9
SSLB				IAmb	IAmb	17 52 14.1	
	comp=Z,72nm,1.3s						
YULB	Yu-li	23.75	234	P	P	17 51 50.0	-1.3
YAK	Yakutsk	23.94	346	P	P	17 51 51.2	-1.5
	comp=Z,36nm,0.6s,baz=122,slow=1.7,SNR=58						
YAK				LR	LR	18 01 47.3	
	comp=Z,501nm,18.3s,baz=114,slow=38						
YAK	Yakutsk	23.94	346	*e*P	P	17 51 51.0	-1.7
YAK				*e**PP	pP	17 52 07.0	+1.6
YAK				*e*		17 52 21.8	
YAK				*e*		17 55 34.3	
YAK				*e*S	S	17 56 04.8	-0.8
YAK				*e**SS	Sn	17 56 31.3	-0.7
YAK				*e*SS		17 56 52.6	
YAK				*e*		18 02 53.6	
YAK				pmax	pmax		
	comp=Z,30nm,0.9s						
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,40nm,0.8s						
YAK				pmax	pmax		
	comp=N,26nm,0.8s						
YAK				pmax	pmax		
	comp=E,25nm,1.0s						
YAK				smax	smax		
	comp=N,292nm,2.8s						
YAK				smax	smax		
	comp=E,95nm,2.8s						
YAK	Yakutsk	23.94	346	P	P	17 51 50.8	-1.9
TPUB	Ta-pu	24.24	235	P	P	17 51 54.2	-1.7
WHN	Wuhan	24.30	257	⇓P	P	17 51 55.8	-0.5
WHN				S	S	17 56 09.1	-2.8
WHN				LR	LR		
	comp=E,2μm,15.4s						
TWG	Pinlang	24.31	233	P	P	17 51 55.5	-0.9
TWG				IAmb	IAmb	17 52 22.6	
	comp=Z,81nm,1.0s						
SEY	Seymchan	24.42	11	P	P	17 51 58.0	+0.9
	comp=Z,8.4nm,0.5s,baz=198,slow=8.1,SNR=41						
SEY	Seymchan	24.42	11	⇓*e*P	P	17 51 57.4	+0.3
BTO	Baotou	24.53	283	*e*P	P	17 51 59.1	+0.6
BTO				S	S	17 56 12.8	-3.0
GUMO	Guam	25.78	174	LR	LR	18 02 03.3	
	comp=Z,162nm,21.9s,baz=25,slow=36						
BOD	Bodaibo	25.90	325	*e*P	P	17 52 09.6	-0.9
BOD				pmax	pmax		
	comp=Z,51nm,1.4s						
ULN	Ulaanbaatar	26.57	300	⇓*e*P	P	17 52 17.3	+0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ULN	Ulaanbaatar	26.57	300	P	P	17 52 15.3	-1.7
SONM	Songino Array	27.01	300	P	P	17 52 20.6	-0.2

	comp=Z,1.7nm,0.6s,baz=107,slow=9.4,SNR=12						
SONM				LR	LR	18 03 34.2	
	comp=Z,798nm,18.7s,baz=98,slow=37						
SONM	**Songino Array**	**27.01**	**300**	P	**P**	**17 52 20.2**	**-0.7**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**27.01**	**300**	P	**P**	**17 52 20.2**	**-0.7**
XAN	**Xi'an**	**27.02**	**269**	P	**P**	**17 52 20.3**	**-0.7**
XAN				pP	pP	17 52 37.3	+3.4
XAN				S	**S**	**17 56 58.9**	**+3.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,250nm,4.1s						
XAN				LR	LR		
	comp=Z,310nm,14.6s						
XAN				LR	LR		
	comp=Z,590nm,15.2s						
XAN				LR	LR		
	comp=Z,470nm,17.6s						
ENH	**Enshi**	**28.13**	**261**	P	**P**	**17 52 30.1**	**-0.8**
ENH				IAmb	IAmb	17 52 49.4	
	comp=Z,51nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.97**	**125**	T	T	18 23 02.1	
	baz=318,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.98**	**125**	T	T	18 23 02.8	
	baz=318,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.98**	**125**	T	T	18 23 03.3	
	baz=318,slow=75						
TLY	**Talaya**	**29.27**	**308**	P	**P**	**17 52 41.1**	**+0.3**
	comp=Z,5.7nm,0.5s,baz=32,slow=8.7,SNR=4.4						
TLY				LR	LR	18 04 59.0	
	comp=Z,865nm,19.4s,baz=110,slow=37						
TLY	**Talaya**	**29.27**	**308**	*e*P	**P**	**17 52 41.0**	**+0.1**
TLY				*e*		17 53 53.4	
TLY				*e*S	**S**	**17 57 36.6**	**+6.3**
TLY				*e*SS	**ScP**	**17 59 26.0**	**+2.0**
TLY				pmax	pmax		
	comp=Z,59nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,17.0s						
ZAK	**Zakamensk**	**29.31**	**305**	*e*P	**P**	**17 52 40.4**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**29.76**	**127**	T	T	18 24 13.6	
	baz=319,slow=76,SNR=623						
H11S3	**WAKE ISLAND Hy**	**29.76**	**127**	T	T	18 24 14.7	
	baz=319,slow=76,SNR=975						
H11S2	**WAKE ISLAND Hy**	**29.77**	**127**	T	T	18 24 02.5	
	baz=319,slow=76,SNR=876						
MOY	**Mondy**	**30.90**	**307**	*e*P	**P**	**17 52 55.4**	**0.0**
MOY				pmax	pmax		
	comp=Z,36nm,1.8s						
GYA	**Guiyang**	**32.19**	**257**	⇑P	**P**	**17 53 05.8**	**-1.1**
GYA				pP	pP	17 53 18.9	-1.1
GYA				sP	sP	17 53 23.1	-2.8
GYA				pmax	pmax		
	comp=Z,23nm,1.2s						
GYA				LR	LR		
	comp=Z,540nm,16.5s						
GTA	**Gaotai**	**32.45**	**284**	*e*P	**P**	**17 53 08.8**	**-0.4**
GTA				pP	pP	17 53 21.9	-0.3
GTA				sP	sP	17 53 27.1	-1.0
GTA				PcP	**PcP**	**17 55 55.9**	**+0.6**
GTA				ScP	**ScP**	**17 59 33.6**	**-1.3**
GTA				PcS	**PcS**	**17 59 40.6**	**+0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,270nm,8.0s						
GTA				LR	LR		
	comp=Z,400nm,20.4s						
GTA				LR	LR		
	comp=Z,720nm,19.6s						
GTA				LR	LR		
	comp=Z,1µm,19.3s						
TIXI	**Tiksi**	**33.06**	**352**	⇓*e*P	**P**	**17 53 13.5**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,17nm,0.6s						
TIXI	**Tiksi**	**33.06**	**352**	P	**P**	**17 53 13.2**	**-0.7**
QIZ	**Qiongzhong**	**34.40**	**243**	P	**P**	**17 53 24.8**	**-1.3**
QIZ				S	**S**	**17 58 51.5**	**+0.8**
QIZ				LR	LR		
	comp=Z,540nm,4.3s						
QIZ				LR	LR		
	comp=Z,500nm,6.3s						
KMI	**Kunming**	**35.88**	**259**	⇑*i*P	**P**	**17 53 38.6**	**-0.5**
KMI				pP	pP	17 53 51.9	-0.4
KMI				sP	sP	17 53 56.0	-2.2
KMI				pmax	pmax		
	comp=Z,21nm,1.4s						
KMI				pmax	pmax		
	comp=Z,130nm,5.0s						
KMI				LR	LR		
	comp=Z,290nm,15.7s						
KMI				LR	LR		
	comp=Z,520nm,18.1s						
KMI				LR	LR		
	comp=Z,480nm,17.8s						
KMI	**Kunming**	**35.88**	**259**	P	**P**	**17 53 37.9**	**-1.2**
KMI				pmax	pmax		
	comp=Z,50nm,1.1s						
KMI	**Kunming**	**35.88**	**259**	P	**P**	**17 53 37.9**	**-1.2**
ANM	**Nome**	**39.35**	**33**	P	**P**	**17 54 10.0**	**+2.3**
ANM				pmax	pmax		
	comp=Z,37nm,1.1s						
ANM	**Nome**	**39.35**	**33**	P	**P**	**17 54 10.0**	**+2.3**
ANM				IAmb	IAmb	17 54 28.5	
	comp=Z,37nm,1.1s						
DGZ	**Jazzator, Alta**	**39.51**	**304**	*c* *i*P	**P**	**17 54 09.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NONG	**Nongkai**	**39.79**	**249**	P	P	17 54 17.5	+5.7
	comp=Z,17nm,0.9s						
UBPT	**Khong Chiam**	**40.00**	**244**	P	**P**	**17 54 14.3**	**+0.8**
UBPT				IAmb	IAmb	17 54 32.2	
	comp=Z,47nm,1.5s						
WMQ	**Urumqi**	**40.31**	**295**	P	**P**	**17 54 16.4**	**+0.4**
WMQ				pP	pP	17 54 27.9	-1.4
WMQ				sP	sP	17 54 33.4	-1.7
WMQ				pmax	pmax		
	comp=Z,34nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,430nm,6.1s						
WMQ	**Urumqi**	**40.31**	**295**	P	**P**	**17 54 15.9**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,65nm,1.5s						
WMQ	**Urumqi**	**40.31**	**295**	P	**P**	**17 54 15.9**	**-0.1**
WMQ				IAmb	IAmb	17 54 20.4	
	comp=Z,65nm,1.5s						
TNTI	**Ternate**	**40.69**	**203**	P	**P**	**17 54 20.1**	**+0.9**
	comp=Z,19nm,1.6s						
ZAA0	**Zalesovo Array**	**40.78**	**310**	P	**P**	**17 54 18.9**	**-0.7**
ZALV	**Zalesovo Beam**	**40.78**	**310**	P	**P**	**17 54 19.6**	**-0.1**
	comp=Z,8.8nm,0.4s,baz=89,slow=8.3,SNR=51						
ZALV				pP	**sP**	**17 54 37.0**	**-1.8**
	comp=Z,72nm,0.7s,baz=85,slow=8.0,SNR=27						
ZALV				PcP	**PcP**	**17 56 20.0**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=101,slow=3.8,SNR=1.8						
ZALV				LR	LR	18 12 02.1	
	comp=Z,809nm,18.3s,baz=84,slow=37						
ZALV	**Zalesovo Beam**	**40.78**	**310**	P	**P**	**17 54 18.4**	**-1.2**
KHON	**Khomkaen**	**41.15**	**247**	P	**P**	**17 54 23.0**	**-0.1**
	comp=Z,3µmcomp=Z,39nm,0.6s						
RDOG	**Red Dog Mine**	**41.21**	**28**	P	**P**	**17 54 24.1**	**+1.2**
SIJI	**Sorong**	**41.24**	**197**	LR	LR	18 08 27.6	
	comp=Z,146nm,20.8s,baz=38,slow=32						
MANU	**Manus Island**	**41.48**	**172**	P	**P**	**17 54 27.0**	**+1.3**
ZIRO	**ZIRO**	**41.50**	**269**	*e*P	**P**	**17 54 26.2**	**+0.1**
ZIRO				IAmb	IAmb	17 54 45.1	
	comp=Z,36nm,0.8s						
ZSN	**Zaisan**	**41.52**	**301**	*e*P	**P**	**17 54 24.9**	**-0.9**
	baz=300						
ZSN	**Zaisan**	**41.52**	**301**	*e*P	pP	17 54 43.0	+3.9
	baz=300						
ZSN	**Zaisan**	**41.52**	**301**	*e*P	**P**	**17 54 24.8**	**-1.1**
ZSN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOKO	**MOKOCHONG**	**41.58**	**267**	*e*P	**P**	**17 54 26.9**	**+0.2**
MOKO				IAmb	IAmb	17 54 31.2	
	comp=Z,60nm,0.5s						
GENI	**Genyem**	**41.77**	**183**	P	**P**	**17 54 30.5**	**+2.4**
	comp=Z,40nm,1.1s						
KMSI	**Cibinong**	**41.99**	**208**	P	**P**	**17 54 28.4**	**-1.5**
	comp=Z,50nm,0.9s						
KMSI	**Cibinong**	**41.99**	**208**	P	**P**	**17 54 28.7**	**-1.2**
	comp=Z,50nm,0.9s						
CHAI	**Chaiyaphum**	**42.04**	**248**	P	**P**	**17 54 30.4**	**0.0**
	comp=Z,32nm,0.8s						
KOHI	**KOHIMA**	**42.20**	**266**	*e*P	**P**	**17 54 30.2**	**-1.6**
KOHI				IAmb	IAmb	17 54 34.2	
	comp=Z,31nm,0.8s						
GTOI	**Gorontalo**	**42.29**	**209**	P	**P**	**17 54 33.8**	**+1.4**
	comp=Z,18nm,1.2s						
GTOI	**Gorontalo**	**42.29**	**209**	P	**P**	**17 54 33.3**	**+0.9**
	comp=Z,18nm,1.2s						
CMMT	**Chiang Mai**	**42.41**	**254**	P	**P**	**17 54 33.5**	**+0.1**
	comp=Z,9.7nm,1.0s						
CHTO	**Chiang Mai**	**42.41**	**254**	P	**P**	**17 54 32.4**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,13nm,0.8s						
CHTO	**Chiang Mai**	**42.41**	**254**	P	**P**	**17 54 32.4**	**-1.0**
LSA	**Lhasa**	**42.57**	**273**	P	**P**	**17 54 35.1**	**0.0**
LSA				pmax	pmax		
	comp=Z,24nm,1.4s						
LSA	**Lhasa**	**42.57**	**273**	P	**P**	**17 54 34.9**	**-0.3**
LSA				pmax	pmax		
	comp=Z,30nm,1.1s						
LSA	**Lhasa**	**42.57**	**273**	P	**P**	**17 54 34.9**	**-0.3**
LSA				IAmb	IAmb	17 54 54.4	
	comp=Z,30nm,1.1s						
CM31	**Chiang Mai Arr**	**42.63**	**253**	P	P	17 54 40.6	+5.5
	comp=Z,199nm,0.5s						
CM31	**Chiang Mai Arr**	**42.63**	**253**	P	**P**	**17 54 34.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**42.63**	**253**	P	**P**	**17 54 35.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=44,slow=6.6,SNR=22						
CMAR				LR	LR	18 13 45.7	
	comp=Z,119nm,18.9s,baz=84,slow=38						
CMAR	**Chiang Mai Arr**	**42.63**	**253**	P	**P**	**17 54 35.2**	**0.0**
CM04	**Chiang Mai Arr**	**42.64**	**253**	P	**P**	**17 54 37.0**	**+1.7**
	comp=Z,90nmcomp=Z,11nm,0.8s						
CM02	**Chiang Mai Arr**	**42.64**	**253**	P	**P**	**17 54 37.0**	**+1.7**
	comp=Z,76nmcomp=Z,11nm,0.8s						
CM15	**Chiang Mai Arr**	**42.65**	**253**	P	P	17 54 40.2	+4.9
	comp=Z,68nmcomp=Z,7.0nm,0.8s						
CM13	**Chiang Mai Arr**	**42.68**	**253**	P	**P**	**17 54 37.2**	**+1.7**
	comp=Z,71nmcomp=Z,9.0nm,0.8s						
SUKH	**Sukhothai**	**42.73**	**252**	P	**P**	**17 54 37.0**	**+1.0**
	comp=Z,19nm,0.7s						
TOLI2	**Tolitoli**	**42.74**	**212**	P	**P**	**17 54 35.9**	**-0.1**
TEZP	**TEZPUR**	**42.76**	**268**	*e*P	**P**	**17 54 35.9**	**-0.2**
TEZP				IAmb	IAmb	17 54 38.6	
	comp=Z,15nm,0.7s						
MRSI	**Marisa**	**42.85**	**210**	P	**P**	**17 54 37.5**	**+0.6**
	comp=Z,550nmcomp=Z,36nm,1.5s						
MRSI				pP	**pP**	**17 54 49.7**	**-0.4**
	comp=Z,550nmcomp=Z,36nm,1.5s						
MRSI	**Marisa**	**42.85**	**210**	P	**P**	**17 54 37.5**	**+0.6**
	comp=Z,550nmcomp=Z,36nm,1.5s						
FAKI	**Fak Fak**	**43.03**	**194**	P	**P**	**17 54 38.5**	**+0.2**
FAKI				IAmb	IAmb	17 55 04.9	
	comp=Z,48nm,1.4s						
TTA	**Tatalina**	**43.23**	**36**	P	**P**	**17 54 41.1**	**+1.5**
TTA				pmax	pmax		
	comp=Z,19nm,1.3s						
TTA	**Tatalina**	**43.23**	**36**	P	**P**	**17 54 41.1**	**+1.5**
SRAK	**Srakaew**	**43.27**	**246**	P	**P**	**17 54 38.0**	**-2.4**
	comp=Z,261nm,1.5s						
MK31	**Makanchi Array**	**43.37**	**300**	*c* *i*P	**P**	**17 54 40.5**	**-0.4**
MK31	**Makanchi Array**	**43.37**	**300**	P	**P**	**17 54 40.2**	**-0.7**
MK31				IAmb	IAmb	17 54 59.1	
	comp=Z,50nm,1.0s						
MKAR	**Makanchi Array**	**43.37**	**300**	P	**P**	**17 54 40.6**	**-0.3**
	comp=Z,6.1nm,0.7s,baz=85,slow=9.5,SNR=50						
MKAR				pP	**sP**	**17 54 58.5**	**-1.6**
	comp=Z,32nm,0.9s,baz=84,slow=10.0,SNR=26						
MKAR				LR	LR	18 13 23.2	
	comp=Z,503nm,21.3s,baz=61,slow=37						
MKAR	**Makanchi Array**	**43.37**	**300**	P	**P**	**17 54 39.9**	**-1.0**
MHMT	**Maesarieng**	**43.56**	**254**	P	P	17 54 48.6	+6.0
MAKZ	**Makanchi**	**43.58**	**300**	P	**P**	**17 54 42.0**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,58nm,1.0s						
MAKZ	**Makanchi**	**43.58**	**300**	P	**P**	**17 54 42.0**	**-0.6**
MAKZ				IAmb	IAmb	17 55 00.9	
	comp=Z,58nm,1.0s						
SANI	**Sanana**	**43.78**	**204**	P	**P**	**17 54 43.7**	**-0.7**
	comp=Z,20nm,0.8s						
SANI	**Sanana**	**43.78**	**204**	P	**P**	**17 54 40.8**	**-3.6**
	comp=Z,20nm,0.8s						
MPSI	**Mapaga**	**43.81**	**213**	P	**P**	**17 54 44.5**	**-0.2**
	comp=Z,9.4nm,1.1s						
MPSI	**Mapaga**	**43.81**	**213**	P	**P**	**17 54 44.8**	**+0.1**
	comp=Z,9.4nm,1.1s						
LUWI	**Luwuk**	**43.93**	**208**	P	**P**	**17 54 47.6**	**+2.0**
	comp=Z,33nm,1.0s						
LUWI	**Luwuk**	**43.93**	**208**	P	**P**	**17 54 45.2**	**-0.4**
	comp=Z,33nm,1.0s						
SEM	**Semipalatinsk**	**43.99**	**306**	*e*P	**P**	**17 54 43.6**	**-2.5**
	baz=305						
SEM	**Semipalatinsk**	**43.99**	**306**	*e*P	pP	17 55 01.9	+2.5
	baz=305						
SEM	**Semipalatinsk**	**43.99**	**306**	*e*P	**P**	**17 54 43.5**	**-2.5**
SEM				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SHL	**Shillong**	**44.00**	**267**	P	**P**	**17 54 44.9**	**-1.5**
SHL				pmax	pmax		
	comp=Z,30nm,0.9s						
SHL	**Shillong**	**44.00**	**267**	P	**P**	**17 54 44.9**	**-1.5**
SHL				IAmb	IAmb	17 55 06.1	
	comp=Z,30nm,0.9s						
A21K	**Barrow**	**44.12**	**24**	P	**P**	**17 54 47.2**	**+0.7**
A21K				IAmb	IAmb	17 55 06.4	
	comp=Z,49nm,1.1s						
APSI	**Ampana**	**44.23**	**210**	P	**P**	**17 54 48.1**	**+0.1**
	comp=Z,29nm,1.3s						
OHAK	**Old Harbor**	**44.71**	**44**	P	**P**	**17 54 51.8**	**+0.3**
RSO	**Redoubt South**	**44.77**	**40**	P	**P**	**17 54 54.4**	**+2.3**
SAIH	**SAIHA**	**44.79**	**263**	*e*P	**P**	**17 54 51.6**	**-1.0**
SAIH				IAmb	IAmb	17 54 54.5	
	comp=Z,57nm,0.5s						
KURK	**Kurchatov**	**44.95**	**306**	*c* *i*P	**P**	**17 54 52.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,18nm,0.7s						
KURK	**Kurchatov**	**44.95**	**306**	P	**P**	**17 54 52.3**	**-1.1**
PPLA	**Purkeypile**	**44.98**	**36**	P	**P**	**17 54 55.5**	**+1.9**
KURBB	**Kurchatov Arra**	**45.03**	**306**	P	**P**	**17 54 53.5**	**-0.5**
	comp=Z,10nm,0.5s,baz=82,slow=8.3,SNR=82						
KURBB				pP	**sP**	**17 55 11.4**	**-2.0**
	comp=Z,79nm,0.9s,baz=80,slow=8.5,SNR=24						
KDAK	**Kodiak Island**	**45.04**	**43**	P	**P**	**17 54 55.0**	**+1.0**
	comp=Z,18nm,0.6s,baz=288,slow=6.8,SNR=12						
KDAK				LR	LR	18 13 34.0	
	comp=Z,227nm,18.8s,baz=257,slow=36						
KDAK	**Kodiak Island**	**45.04**	**43**	⇑*e*P	**P**	**17 54 53.1**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,49nm,1.6s						
KDAK	**Kodiak Island**	**45.04**	**43**	P	**P**	**17 54 55.3**	**+1.2**
SKT	**Skwentna**	**45.30**	**37**	P	**P**	**17 54 58.0**	**+1.9**
SKT				IAmb	IAmb	17 56 02.5	
	comp=Z,49nm,1.8s						
BPAW	**Bear Paw Mtn.**	**45.51**	**35**	P	**P**	**17 55 00.8**	**+3.1**
BPAW				IAmb	IAmb	17 55 19.8	
	comp=Z,43nm,1.7s						
KTH	**Kantishna Hill**	**45.54**	**35**	P	**P**	**17 54 59.9**	**+1.8**
KTH				IAmb	IAmb	17 55 18.7	
	comp=Z,51nm,1.3s						
CNPM	**China Poot**	**45.59**	**41**	P	**P**	**17 54 59.3**	**+0.8**
SBUM	**Sibu**	**45.69**	**224**	P	**P**	**17 55 00.4**	**+0.8**
SBUM				IAmb	IAmb	17 55 22.4	
	comp=Z,64nm,1.8s						
SUA	**Susitna One**	**45.70**	**38**	P	**P**	**17 54 59.6**	**+0.2**
SUA				IAmb	IAmb	17 55 21.7	
	comp=Z,36nm,1.0s						
BRLK	**Bradley Lake**	**45.75**	**41**	P	**P**	**17 55 01.7**	**+2.0**
TRF	**Thorofare Moun**	**45.83**	**35**	P	**P**	**17 55 02.4**	**+2.0**
TRF				IAmb	IAmb	17 55 30.8	
	comp=Z,56nm,1.6s						
COLD	**Coldfoot**	**45.88**	**30**	P	**P**	**17 55 02.9**	**+2.4**
COLD				IAmb	IAmb	17 55 28.6	
	comp=Z,26nm,1.1s						
BWN	**Browne**	**46.17**	**34**	P	**P**	**17 55 06.9**	**+4.0**
TOLK	**Toolik Lake Re**	**46.18**	**28**	P	**P**	**17 55 04.3**	**+1.3**
TOLK				IAmb	IAmb	17 55 30.2	
	comp=Z,16nm,0.8s						
I23K	**Minto, Yukon-K**	**46.20**	**33**	P	**P**	**17 55 04.8**	**+1.8**
I23K				IAmb	IAmb	17 55 24.5	
	comp=Z,30nm,1.4s						
SHLS	**Shalkode**	**46.26**	**296**	*e*P	**P**	**17 55 00.6**	**-3.5**
	baz=295						
SHLS	**Shalkode**	**46.26**	**296**	*e*P	pP	17 55 18.5	+0.9
	baz=296						
SHLS	**Shalkode**	**46.26**	**296**	*e*P	**P**	**17 55 00.6**	**-3.5**
TAPN	**Taplejung**	**46.34**	**272**	*e*P	**P**	**17 55 04.9**	**-0.2**
	comp=Z,14nm,0.5s						
TDK	**Taldyqorghan**	**46.45**	**299**	*e*P	**P**	**17 55 04.9**	**-0.5**
	baz=298						
TDK	**Taldyqorghan**	**46.45**	**299**	*e*P	pP	17 55 22.5	+3.6
	baz=298						
TDK	**Taldyqorghan**	**46.45**	**299**	*e*P	**P**	**17 55 04.9**	**-0.5**
TDK				pmax	pmax		
	comp=Z,23nm,1.7s						
PMR	**Palmer**	**46.46**	**38**	P	**P**	**17 55 06.6**	**+1.4**
PMR				pmax	pmax		
	comp=Z,57nm,1.7s						
PMR	**Palmer**	**46.46**	**38**	P	**P**	**17 55 06.6**	**+1.4**
PMR				IAmb	IAmb	17 55 50.3	
	comp=Z,57nm,1.7s						
RND	**Reindeer**	**46.48**	**35**	P	**P**	**17 55 06.8**	**+1.4**
RND				pmax	pmax		
	comp=Z,23nm,1.0s						
RND	**Reindeer**	**46.48**	**35**	P	**P**	**17 55 06.8**	**+1.4**
RND				IAmb	IAmb	17 55 26.1	
	comp=Z,23nm,1.0s						
GHO	**Glory Hole Cre**	**46.55**	**38**	P	**P**	**17 55 07.2**	**+1.2**
GHO				IAmb	IAmb	17 55 26.5	
	comp=Z,31nm,1.0s						
MDM	**Murphy Dome**	**46.68**	**33**	P	**P**	**17 55 08.1**	**+1.2**
MDM				IAmb	IAmb	17 55 28.0	
	comp=Z,30nm,1.0s						
KPKS	**Kokpek**	**46.71**	**297**	*e*P	**P**	**17 55 06.2**	**-1.4**
	baz=296						
KPKS	**Kokpek**	**46.71**	**297**	*e*P	pP	17 55 24.3	+3.2
	baz=296						
KPKS	**Kokpek**	**46.71**	**297**	*e*P	**P**	**17 55 06.2**	**-1.4**
KPKS				pmax	pmax		
	comp=Z,15nm,1.9s						
WRH	**Wood River Hil**	**46.76**	**34**	P	**P**	**17 55 08.8**	**+1.3**
KNK	**Knik Glacier**	**46.80**	**38**	P	**P**	**17 55 08.9**	**+1.0**
SML	**Sawmill**	**46.83**	**38**	P	**P**	**17 55 09.2**	**+1.1**
ODAN	**Odare**	**46.83**	**272**	*e*P	**P**	**17 55 08.2**	**-0.7**
	comp=Z,30nm,0.7s						
TCOL	**CIGO, UAF Yank**	**46.84**	**33**	P	**P**	**17 55 08.5**	**+0.4**
TCOL				IAmb	IAmb	17 55 38.0	
	comp=Z,24nm,1.1s						
COLA	**College**	**46.85**	**33**	⇑*e*P	**P**	**17 55 09.2**	**+1.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
COLA	**College**	**46.85**	**33**	P	**P**	**17 55 08.9**	**+0.8**
COLA				IAmb	IAmb	17 55 37.9	
	comp=Z,15nm,0.7s						
CCB	**Clear Creek Bu**	**46.88**	**34**		**P**	**17 55 10.3**	**+1.9**
POKR	**Poker Plat Res**	**47.01**	**33**	P	**P**	**17 55 11.1**	**+1.6**
SATY	**Saty**	**47.03**	**296**	*e*P	**P**	**17 55 08.9**	**-1.2**
	baz=296						
SATY	**Saty**	**47.03**	**296**	*e*P	pP	17 55 26.9	+3.3
	baz=296						
SATY	**Saty**	**47.03**	**296**	*e*P	**P**	**17 55 08.9**	**-1.2**
MTKI	**Muara Teweh, K**	**47.21**	**218**	P	**P**	**17 55 11.6**	**0.0**
	comp=Z,19nm,0.9s						
MTKI	**Muara Teweh, K**	**47.21**	**218**	P	**P**	**17 55 11.5**	**0.0**
	comp=Z,19nm,0.9s						
HDA	**Harding Lake**	**47.26**	**34**	P	**P**	**17 55 12.1**	**+0.7**
HDA				IAmb	IAmb	17 55 31.4	
	comp=Z,28nm,1.2s						
IL31		**47.27**	**33**	P	**P**	**17 55 12.2**	**+0.9**
IL31				IAmb	IAmb	17 55 31.0	
	comp=Z,19nm,0.9s						
ILAR	**Eielson Array**	**47.27**	**33**	P	**P**	**17 55 12.6**	**+1.2**
	comp=Z,4.6nm,0.6s,baz=264,slow=5.5,SNR=76						
ILAR	**Eielson Array**	**47.27**	**33**	P	**P**	**17 55 12.1**	**+0.7**
ILAR	**Eielson Array**	**47.27**	**33**	P	**P**	**17 55 12.1**	**+0.7**
RAMN	**Ramite**	**47.40**	**272**	*e*P	**P**	**17 55 13.1**	**-0.2**
GUN	**Gumba**	**47.49**	**274**	*e*P	**P**	**17 55 13.9**	**-0.2**
	comp=Z,68nm,0.7s						
CHKK	**Chushkaly**	**47.76**	**298**	*e*P	**P**	**17 55 15.1**	**-0.5**
	baz=297						
CHKK	**Chushkaly**	**47.76**	**298**	*e*P	pP	17 55 32.7	+3.5
	baz=297						
CHKK	**Chushkaly**	**47.76**	**298**	*e*P	**P**	**17 55 15.1**	**-0.5**
PRP	**Porcupine Dome**	**47.79**	**32**	P	**P**	**17 55 16.9**	**+1.2**
PRP				IAmb	IAmb	17 55 45.4	
	comp=Z,23nm,1.0s						
FYU	**Fort Yukon**	**47.85**	**31**	P	**P**	**17 55 18.5**	**+2.6**
MDOK	**Medeo**	**47.94**	**297**	*e*P	**P**	**17 55 16.0**	**-1.2**
	baz=296						
MDOK	**Medeo**	**47.94**	**297**	*e*P	pP	17 55 34.4	+3.7
	baz=296						
MDOK	**Medeo**	**47.94**	**297**	*e*P	**P**	**17 55 15.9**	**-1.2**
KLU	**Klutina**	**48.00**	**38**	P	**P**	**17 55 18.9**	**+1.6**
KLU				IAmb	IAmb	17 55 38.3	
	comp=Z,27nm,1.0s						
KKN	**Kakani**	**48.01**	**274**	*e*P	**P**	**17 55 17.9**	**-0.1**
	comp=Z,61nm,0.7s						
AAA	**Alma-Ata**	**48.02**	**297**	*e*P	**P**	**17 55 17.2**	**-0.5**
	baz=296						
AAA	**Alma-Ata**	**48.02**	**297**	*e*P	**P**	**17 55 17.2**	**-0.5**
PKI	**Pulchoki**	**48.02**	**274**	*e*P	**P**	**17 55 17.6**	**-0.6**
	comp=Z,18nm,0.7s						
PKIN	**Phulchoki**	**48.02**	**274**	*e*P	**P**	**17 55 17.6**	**-0.6**
	comp=Z,15nm,0.5s						
BNSI	**Bone**	**48.03**	**210**	P	**P**	**17 55 17.8**	**0.0**
	comp=Z,22nm,1.2s						
BNSI	**Bone**	**48.03**	**210**	P	**P**	**17 55 13.7**	**-4.1**
	comp=Z,21nm,1.2s						
TNSS	**Tian-Shan**	**48.05**	**297**	*e*P	**P**	**17 55 18.1**	**-0.3**
	baz=296						
TNSS	**Tian-Shan**	**48.05**	**297**	*e*P	pP	17 55 35.6	+3.7
	baz=296						
TNSS	**Tian-Shan**	**48.05**	**297**	*e*P	**P**	**17 55 18.0**	**-0.3**
KUU	**Kurty**	**48.20**	**298**	*e*P	**P**	**17 55 17.1**	**-1.9**
	baz=297						
KUU	**Kurty**	**48.20**	**298**	*e*P	pP	17 55 35.4	+2.8
	baz=298						
KUU	**Kurty**	**48.20**	**298**	*e*P	**P**	**17 55 17.1**	**-1.9**
KUU				pmax	pmax		
	comp=Z,11nm,0.9s						
DMN	**Daman**	**48.23**	**274**	*e*P	**P**	**17 55 19.4**	**-0.4**
	comp=Z,12nm,0.5s						
DOT	**Dot Lake**	**48.59**	**35**	P	**P**	**17 55 22.9**	**+1.2**
DOT				IAmb	IAmb	17 56 22.8	
	comp=Z,45nm,1.7s						
KAPI	**Kappang**	**48.73**	**210**	LR	LR	18 15 59.2	
	comp=Z,53nm,20.6s,baz=30,slow=36						
BRZS	**Berezniki**	**48.83**	**307**	*e*P	**P**	**17 55 22.4**	**-1.4**
	baz=306						
BRZS	**Berezniki**	**48.83**	**307**	*e*P	pP	17 55 40.1	+2.9
	baz=306						
BRZS	**Berezniki**	**48.83**	**307**	*e*P	**P**	**17 55 22.3**	**-1.4**
MENT	**Mentasta**	**48.84**	**36**	P	**P**	**17 55 25.4**	**+1.8**
MENT				IAmb	IAmb	17 55 45.0	
	comp=Z,29nm,1.1s						
DANN	**Dangsing**	**48.91**	**276**	*e*P	**P**	**17 55 25.1**	**+0.1**
	comp=Z,175nm,0.6s						
TKM2	**Tokmak 2**	**49.02**	**297**	P	**P**	**17 55 26.1**	**+0.5**
	SNR=17						
BTLS	**Baital**	**49.39**	**300**	*e*P	**P**	**17 55 26.6**	**-1.5**
	baz=299						
BTLS	**Baital**	**49.39**	**300**	*e*P	pP	17 55 44.7	+3.0
	baz=300						
BTLS	**Baital**	**49.39**	**300**	*e*P	**P**	**17 55 26.5**	**-1.5**
BRVK	**Borovoye**	**49.48**	**311**	*c* *i*P	**P**	**17 55 28.4**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,31nm,2.5s						
BRVK	**Borovoye**	**49.48**	**311**	P	**P**	**17 55 28.3**	**-0.3**
BRVK				IAmb	IAmb	17 55 47.4	
	comp=Z,24nm,1.0s						
SGDS	**Sogindy**	**49.51**	**298**	*e*P	**P**	**17 55 27.9**	**-1.3**
	baz=297						
SGDS	**Sogindy**	**49.51**	**298**	*e*P	pP	17 55 45.9	+3.1
	baz=298						
SGDS	**Sogindy**	**49.51**	**298**	*e*P	**P**	**17 55 27.8**	**-1.3**
SGDS				pmax	pmax		
	comp=Z,7.0nm,1.9s						
USP	**Ospenovka**	**49.66**	**298**	P	**P**	**17 55 30.2**	**-0.1**
	SNR=8.9						
EGAK	**Eagle**	**49.71**	**33**	P	**P**	**17 55 32.1**	**+1.9**
EGAK				IAmb	IAmb	17 56 00.1	
	comp=Z,15nm,1.1s						
BALM	**Baldy**	**49.78**	**38**	P	**P**	**17 55 32.7**	**+1.7**
BALM				IAmb	IAmb	17 55 52.5	
	comp=Z,26nm,1.1s						
AAK	**Ala-Archa**	**49.88**	**297**	LR	LR	18 18 39.6	
	comp=Z,293nm,18.1s,baz=75,slow=38						
AAK	**Ala-Archa**	**49.88**	**297**	P	**P**	**17 55 31.2**	**-0.9**
	SNR=8.7						
AAK	**Ala-Archa**	**49.88**	**297**	⇓*e*P	**P**	**17 55 32.2**	**+0.1**
AAK				pmax	pmax		

	comp=Z,57nm,1.7s						
AAK	**Ala-Archa**	**49.88**	**297**	P	**P**	**17 55 31.4**	**-0.7**
AAK				IAmb	IAmb	17 55 50.8	
	comp=Z,29nm,1.1s						
AAK	**Ala-Archa**	**49.88**	**297**	⇑iS	**P**	**17 55 31.1**	**-1.0**
	baz=79						
KSH	**Kashi**	**49.98**	**293**	P	**P**	**17 55 36.8**	**+4.0**
KSH				pP	pP	17 55 49.5	+3.1
KSH				S	**S**	**18 02 43.0**	**+3.1**
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				LR	LR		
	comp=Z,600nm,11.0s						
EKS2	**Erkin-Say**	**50.37**	**297**	P	**P**	**17 55 35.7**	**-0.1**
	SNR=12						
AML	**Almayashu**	**50.62**	**297**	P	**P**	**17 55 38.0**	**+0.1**
	SNR=15						
HNR	**Honiara**	**51.29**	**157**	LR	LR	18 15 54.9	
	comp=Z,281nm,20.8s,baz=316,slow=34						
DZA	**Taraz**	**51.97**	**298**	eP	**P**	**17 55 47.2**	**-0.4**
	baz=298						
DZA	**Taraz**	**51.97**	**298**	eP	pP	17 56 04.5	+3.1
	baz=298						
DZA	**Taraz**	**51.97**	**298**	eP	**P**	**17 55 47.1**	**-0.4**
DZA				pmax	pmax		
	comp=Z,11nm,0.7s						
INK	**Inuvik**	**52.09**	**28**	P	**P**	**17 55 49.0**	**+1.0**
	comp=Z,4.9nm,0.6s,baz=291,slow=7.0,SNR=12						
INK	**Inuvik**	**52.09**	**28**	P	**P**	**17 55 49.4**	**+1.4**
INK				pmax	pmax		
	comp=Z,19nm,0.8s						
INK	**Inuvik**	**52.09**	**28**	P	**P**	**17 55 49.4**	**+1.4**
INK				IAmb	IAmb	17 56 08.7	
	comp=Z,19nm,0.8s						
HYT	**Haines Junctio**	**52.13**	**38**	P	**P**	**17 55 50.9**	**+2.2**
KK31	**Karatay Array**	**52.45**	**299**	P	**P**	**17 55 51.0**	**-0.1**
KK31				pmax	pmax		
	comp=Z,68nm,1.3s						
KK31	**Karatay Array**	**52.45**	**299**	P	**P**	**17 55 51.0**	**-0.1**
KKAR	**Karatay Array**	**52.45**	**299**	P	**P**	**17 55 50.7**	**-0.4**
KKAR	**Karatay Array**	**52.45**	**299**	P	**P**	**17 55 50.7**	**-0.4**
SMLA	**Simla**	**52.65**	**282**	eP	**P**	**17 55 52.0**	**-0.7**
SMLA				IAmb	IAmb	17 55 54.9	
	comp=Z,42nm,0.6s						
DHRM	**DHARAMSHALA**	**52.78**	**284**	eP	**P**	**17 55 53.2**	**-0.8**
DHRM				IAmb	IAmb	17 55 57.2	
	comp=Z,20nm,0.7s						
IUG	**Iuzhnay**	**53.14**	**298**	eP	**P**	**17 55 55.1**	**-1.2**
	baz=297						
IUG	**Iuzhnay**	**53.14**	**298**	eP	pP	17 56 13.4	+3.2
	baz=298						
IUG	**Iuzhnay**	**53.14**	**298**	eP	**P**	**17 55 55.1**	**-1.2**
IUG				pmax	pmax		
	comp=Z,12nm,1.5s						
PSI	**Prapat**	**53.45**	**238**	LR	LR	18 20 18.2	
	comp=Z,114nm,18.2s,baz=32,slow=38						
RGRI	**Rengat**	**53.68**	**233**	P	P	17 55 54.9	-5.5
SVE	**Sverdlovsk**	**53.78**	**318**	eP	**P**	**17 56 01.1**	**+0.5**
SVE				pmax	pmax		
	comp=Z,29nm,0.9s						
BKNI	**Bangkinang**	**53.96**	**234**	P	P	17 55 55.5	-7.0
	comp=Z,84nm,1.0s						
NIL	**Nilore**	**54.42**	**287**	P	**P**	**17 56 06.2**	**+0.5**
NIL				pmax	pmax		
	comp=Z,85nm,1.0s						
NIL	**Nilore**	**54.42**	**287**	P	**P**	**17 56 06.2**	**+0.5**
SDSI	**Sungai Dareh**	**54.70**	**233**	P	P	17 56 01.0	-6.8
	comp=Z,38nm,1.0s						
ARU	**Arti**	**54.99**	**318**	P	**P**	**17 56 09.4**	**-0.1**
	comp=Z,7.3nm,0.5s,baz=74,slow=4.1,SNR=53						
ARU	**Arti**	**54.99**	**318**	c iP	**P**	**17 56 09.2**	**-0.3**
ARU				*PP	**pP**	**17 56 25.5**	**+2.3**
ARU				S	**S**	**18 03 49.3**	**+1.6**
ARU				SS	**SS**	**18 07 30.2**	**-1.0**
ARU				pmax	pmax		
	comp=Z,72nm,1.6s						
ARU	**Arti**	**54.99**	**318**	P	**P**	**17 56 09.3**	**-0.1**
C36M	**Paulatuk**	**55.11**	**26**	P	**P**	**17 56 10.9**	**+0.8**
C36M				IAmb	IAmb	17 56 30.1	
	comp=Z,21nm,0.9s						
GSI	**Gunungsitoli**	**55.45**	**238**	P	**P**	**17 56 13.2**	**-0.1**
ABKAR	**Akbulak array**	**56.87**	**309**	P	**P**	**17 56 22.1**	**-0.9**
ABKAR	**Akbulak array**	**56.87**	**309**	IAmb	IAmb	17 56 24.0	
	comp=Z,21nm,0.6s						
KBL	**Kabul**	**57.10**	**290**	P	**P**	**17 56 24.1**	**-1.1**
KBL				pmax	pmax		
	comp=Z,33nm,1.1s						
KBL	**Kabul**	**57.10**	**290**	P	**P**	**17 56 24.1**	**-1.1**
AKTO	**Aktyubinsk**	**57.54**	**311**	P	**P**	**17 56 27.2**	**-0.5**
	comp=Z,7.4nm,0.7s,baz=75,slow=13,SNR=20						
EUNU	**Eureka**	**57.82**	**9**	P	**P**	**17 56 29.4**	**0.0**
HOPEN	**Hopen**	**57.92**	**346**	eP	**P**	**17 56 30.4**	**+0.4**
SPA0	**Spitsbergen Ar**	**58.36**	**349**	eP	**P**	**17 56 33.6**	**+0.5**
SPITS	**Spitsbergen Ar**	**58.36**	**349**	P	**P**	**17 56 33.7**	**+0.6**
	comp=Z,12nm,0.8s,baz=93,slow=9.3,SNR=8.3						
KIRV	**Kirov**	**58.73**	**322**	P	**P**	**17 56 36.0**	**+0.1**
	comp=Z,9.7nm,0.5s,baz=14,slow=5.7,SNR=7.7						
KIRV	**Kirov**	**58.73**	**322**	⇑eP	**P**	**17 56 35.7**	**-0.2**
KIRV				i *PP	**pP**	**17 56 50.9**	**+1.3**
HYB	**Hyderabad**	**58.81**	**267**	i P	**P**	**17 56 36.0**	**-1.1**
WRAB	**Tennant Creek**	**59.42**	**188**	⇑eP	**P**	**17 56 39.9**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**59.43**	**188**	P	**P**	**17 56 40.1**	**-1.0**
	comp=Z,4.0nm,0.7s,baz=7.0,slow=6.8,SNR=11						
RES	**Resolute Bay**	**60.23**	**15**	P	**P**	**17 56 46.3**	**+0.4**
	comp=Z,4.6nm,0.7s,baz=309,slow=6.9,SNR=24						
RES	**Resolute Bay**	**60.23**	**15**	P	**P**	**17 56 46.0**	**0.0**
RES				pmax	pmax		
	comp=Z,18nm,1.0s						
RES	**Resolute Bay**	**60.23**	**15**	P	**P**	**17 56 46.0**	**0.0**
RES				IAmb	IAmb	17 57 05.0	
	comp=Z,18nm,1.0s						
TMCR	**Tamitsa**	**60.97**	**331**	eP	**P**	**17 56 49.4**	**-1.8**
TMCR				pmax	pmax		
	comp=Z,17nm,0.8s						
YKA	**Yellowknife Ar**	**61.55**	**31**	P	**P**	**17 56 55.8**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=297,slow=6.6,SNR=18						
YKA				LR	LR	18 24 43.6	
	comp=Z,46nm,21.0s,baz=0.0,slow=37						
HAMF	**Hammerfest**	**61.81**	**341**	eP	**P**	**17 56 57.1**	**+0.4**
ARA0	**ARCESS Array S**	**62.02**	**339**	eP	**P**	**17 56 58.8**	**+0.6**
ARCES	**ARCESS Array B**	**62.02**	**339**	P	**P**	**17 56 58.5**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=47,slow=7.2,SNR=18						
ARCES				LR	LR	18 27 38.9	
	comp=Z,299nm,18.9s,baz=260,slow=40						
HRA	**Herat**	**62.09**	**293**	P	**P**	**17 56 59.4**	**-0.1**
HRA				IAmb	IAmb	17 57 19.0	
	comp=Z,21nm,0.9s						
KLMR	**Klimovskoe**	**62.09**	**327**	eP	**P**	**17 56 57.5**	**-1.2**
KLMR				e		17 59 14.6	
KLMR				pmax	pmax		
	comp=Z,43nm,1.5s						
KLMR	**Klimovskoe**	**62.09**	**327**	eP	**P**	**17 56 57.6**	**-1.2**
KLMR				AMP		17 57 00.5	
	comp=Z,43nm,1.5s						
KLMR				ePP	**PP**	**17 59 14.7**	**-0.6**
BELG	**Belogornoye**	**62.48**	**316**	⇑eP	**P**	**17 57 01.1**	**-0.4**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TULEG	**Thule**	**62.74**	**8**	i P	**P**	**17 57 02.3**	**-0.5**
TULEG				IAmb	IAmb	17 57 03.4	
	comp=Z,8.1nm,0.7s						
KTK1	**Kautokeino**	**62.98**	**339**	eP	**P**	**17 57 05.4**	**+0.8**
ASAR	**Alice Springs**	**63.15**	**188**	P	**P**	**17 57 05.8**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=4.5,slow=6.1,SNR=9.1						
ASAR				LR	LR	18 24 09.1	
	comp=Z,93nm,21.9s,baz=45,slow=36						
GEYT	**Alibeck**	**63.19**	**298**	P	**P**	**17 57 06.2**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=338,slow=1.6,SNR=9.2						
GEYT				LR	LR	18 25 21.6	
	comp=Z,196nm,21.1s,baz=115,slow=37						
DAG	**Danmarks Havn**	**63.51**	**355**	i P	**P**	**17 57 07.0**	**-1.0**
DAG				i		17 57 26.5	
DAG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DAG	**Danmarks Havn**	**63.51**	**355**	i P	**P**	**17 57 07.0**	**-1.0**
	comp=Z,6.3nm,0.8s						
DAG				i		17 57 26.5	
DAG	**Danmarks Havn**	**63.51**	**355**	i P	**P**	**17 57 07.0**	**-1.0**
DAG				IAmb	IAmb	17 57 08.6	
	comp=Z,6.3nm,0.8s						
DAG				i		17 57 26.5	
TRO	**Tromso**	**63.70**	**341**	eP	**P**	**17 57 09.6**	**+0.3**
DZM	**Mont Dzumac**	**65.21**	**155**	eLR	LR	18 16 58.2	
	comp=Z,418nm,22.9s						
MOS	**Moscow**	**65.71**	**323**	eP	**P**	**17 57 21.2**	**-1.4**
MOS				e		17 57 38.9	
MOS				pmax	pmax		
	comp=Z,72nm,1.3s						
STEI	**Steigen**	**65.86**	**341**	eP	**P**	**17 57 23.2**	**-0.2**
MSVF	**Nonsavu**	**65.99**	**142**	LR	LR	18 21 13.3	
	comp=Z,132nm,19.4s,baz=1.4,slow=31						
DBG	**Daneborg**	**66.01**	**355**	i P	**P**	**17 57 23.5**	**-0.8**
VRH	**Novokhopyorsk**	**66.22**	**317**	eP	**P**	**17 57 24.6**	**-1.4**
VRH				e*SP	**pP**	**17 57 42.2**	**+2.2**
VRH				pmax	pmax		
	comp=Z,40nm,1.7s						
FAUS	**Fauske**	**66.25**	**340**	eP	**P**	**17 57 26.2**	**+0.3**
LON	**Longmire**	**66.31**	**48**	P	**P**	**17 57 28.3**	**+1.5**
LON				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LON	**Longmire**	**66.31**	**48**	P	**P**	**17 57 28.3**	**+1.5**
OBN	**Obninsk**	**66.56**	**323**	P	**P**	**17 57 28.7**	**+0.6**
	comp=Z,3.0nm,0.5s,baz=149,slow=16,SNR=3.2						
OBN	**Obninsk**	**66.56**	**323**	⇑eP	**P**	**17 57 27.4**	**-0.7**
OBN				i		17 57 45.7	
OBN				e		17 59 54.8	
OBN				pmax	pmax		
	comp=Z,53nm,1.7s						
OBN				MLR	MLR		
	comp=Z,362nm,13.0s						
LTY	**Liberty**	**66.69**	**47**	P	**P**	**17 57 30.0**	**+0.8**
B08A	**Colville Reser**	**66.84**	**46**		**P**	**17 57 30.4**	**+0.3**
B08A				IAmb	IAmb	17 57 45.4	
	comp=Z,29nm,1.5s						
NBB05	**Inndyr**	**66.84**	**340**	eP	**P**	**17 57 29.8**	**+0.2**
LPSR	**Galich'ya Gora**	**66.87**	**320**	eP	**P**	**17 57 29.5**	**-0.6**
LPSR				e*SP	**pP**	**17 57 47.3**	**+3.2**
LPSR				pmax	pmax		
	comp=Z,30nm,1.6s						
FINES	**FINESS Array B**	**67.02**	**332**	P	**P**	**17 57 30.8**	**-0.1**
	comp=Z,7.5nm,0.6s,baz=37,slow=9.4,SNR=35						
FINES				pP	**sP**	**17 57 49.3**	**-1.2**
	comp=Z,9.7nm,0.6s,baz=38,slow=7.5,SNR=5.9						
FINES				LR	LR	18 28 07.5	
	comp=Z,484nm,20.3s,baz=41,slow=37						
FINES	**FINESS Array B**	**67.02**	**332**	P	**P**	**17 57 30.6**	**-0.3**
H04A	**Detroit Lake**	**67.21**	**50**	P	**P**	**17 57 33.9**	**+1.4**
H04A				IAmb	IAmb	17 57 48.7	
	comp=Z,25nm,1.4s						
MOR8	**Moi Rana**	**67.38**	**340**	eP	**P**	**17 57 32.0**	**-1.1**
E07A	**Sunnyside**	**67.54**	**48**	P	**P**	**17 57 35.5**	**+1.0**
E07A				IAmb	IAmb	17 57 50.3	
	comp=Z,22nm,1.3s						
C09A	**Chrisman Ranch**	**67.74**	**46**	P	**P**	**17 57 36.5**	**+0.8**
NEW	**Newport**	**68.11**	**45**	P	**P**	**17 57 39.2**	**+1.1**
NEW				pmax	pmax		
	comp=Z,15nm,1.2s						
NEW	**Newport**	**68.11**	**45**	P	**P**	**17 57 39.2**	**+1.1**
NEW				IAmb	IAmb	17 57 53.3	
	comp=Z,15nm,1.2s						
AKT	**Akhty**	**68.13**	**306**	eP	**P**	**17 57 37.8**	**-0.7**
AKT				e		17 58 03.0	
AKT				e		18 00 06.9	
AKT				pmax	pmax		
	comp=Z,24nm,1.2s						
SUMG	**Summit**	**68.37**	**0**	P	**P**	**17 57 40.0**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,41nm,1.4s						
SUMG	**Summit**	**68.37**	**0**	P	**P**	**17 57 40.0**	**+0.2**
SUMG				IAmb	IAmb	17 57 59.9	
	comp=Z,41nm,1.4s						
SUMG	**Summit**	**68.37**	**0**	i P	**P**	**17 57 39.5**	**-0.2**
SUMG	**Summit**	**68.37**	**0**	i P	**P**	**17 57 39.6**	**-0.2**
PINE	**Pine Mountain**	**68.45**	**51**	P	**P**	**17 57 42.4**	**+1.9**
PINE				IAmb	IAmb	17 57 59.2	
	comp=Z,15nm,0.8s						
YBH	**Yreka Blue Hor**	**68.52**	**53**	P	**P**	**17 57 41.2**	**+0.3**
YBH				pmax	pmax		
	comp=Z,23nm,1.5s						
YBH	**Yreka Blue Hor**	**68.52**	**53**		**P**	**17 57 41.2**	**+0.3**
YBH				IAmb	IAmb	17 57 57.0	
	comp=Z,23nm,1.4s						
E09A	**Wood Farm, Sta**	**68.54**	**47**	IAmb	IAmb	17 57 56.3	
	comp=Z,24nm,1.4s						
G08A	**Pilot Rock**	**68.77**	**48**	P	**P**	**17 57 43.7**	**+1.3**
GOF	**Gofitskoye**	**68.95**	**311**	⇑eP	**P**	**17 57 43.4**	**0.0**
GOF				pmax	pmax		
	comp=Z,29nm,0.8s						
K05A	**Summer Lake**	**69.08**	**52**	P	**P**	**17 57 45.9**	**+1.5**
I07A	**Izee**	**69.14**	**50**	P	**P**	**17 57 46.3**	**+1.6**
NSS	**Namsos**	**69.30**	**339**	eP	**P**	**17 57 43.7**	**-1.5**
NCK	**Nalchik**	**69.52**	**310**	⇑iP	**P**	**17 57 47.4**	**+0.5**
NCK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZEI	**Tsey**	**69.75**	**309**	eP	**P**	**17 57 47.1**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,15nm,1.5s						
KIV	**Kislovodsk**	**69.80**	**311**	⇑P	**P**	**17 57 48.9**	**+0.2**
KIV	**Kislovodsk**	**69.80**	**311**	eP	**P**	**17 57 48.7**	**0.0**
KIV				pmax	pmax		
	comp=Z,96nm,1.0s						
KIV				MLR	MLR		
	comp=Z,594nm,17.0s						
KIV	**Kislovodsk**	**69.80**	**311**	P	**P**	**17 57 48.7**	**0.0**
KBZ	**Khabaz**	**69.80**	**310**	P	**P**	**17 57 49.0**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=42,slow=3.0,SNR=16						
KBZ				LR	LR	18 33 31.3	
	comp=Z,245nm,18.4s,baz=33,slow=40						
KBZ	**Khabaz**	**69.80**	**310**	⇑eP	**P**	**17 57 48.9**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,31nm,1.7s						
MOD	**Modoc Plateau**	**69.91**	**52**		**P**	**17 57 50.8**	**+1.2**
BMO	**Blue Mountains**	**69.98**	**48**	P	**P**	**17 57 50.5**	**+0.6**
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BMO	**Blue Mountains**	**69.98**	**48**	P	**P**	**17 57 50.5**	**+0.6**
ORV	**Oroville**	**70.51**	**55**	P	**P**	**17 57 53.5**	**+0.4**
ORV				pmax	pmax		
	comp=Z,44nm,2.0s						
ORV	**Oroville**	**70.51**	**55**		**P**	**17 57 53.5**	**+0.4**
ORV				IAmb	IAmb	17 58 08.6	
	comp=Z,44nm,2.0s						
MSO	**Missoula**	**70.70**	**45**		**P**	**17 57 54.8**	**+0.6**
GNI	**Garni**	**70.75**	**306**	P	**P**	**17 57 52.8**	**-1.9**
	comp=Z,4.7nm,0.8s,baz=110,slow=6.0,SNR=4.7						
GNI	**Garni**	**70.75**	**306**	⇓eP	**P**	**17 57 55.7**	**+1.0**
GNI				pmax	pmax		
	comp=Z,21nm,1.7s						
GNI	**Garni**	**70.75**	**306**	P	**P**	**17 57 53.9**	**-0.8**
GNI				IAmb	IAmb	17 58 19.5	
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**70.87**	**180**	⇑eP	**P**	**17 57 58.0**	**+3.0**
CHVG	**Ch'k'valeri**	**70.87**	**310**	⇑P	**P**	**17 57 56.2**	**+1.0**
BEKR	**Beckworth**	**71.05**	**54**	P	**P**	**17 57 57.8**	**+1.2**
BEKR				IAmb	IAmb	17 58 11.9	
	comp=Z,17nm,1.1s						
NACGM	**Naroch**	**71.08**	**326**	i P	**P**	**17 57 55.5**	**-0.7**
NACGM				i P	**P**	**17 57 55.5**	**-0.7**
NACGM				i P	**P**	**17 57 55.5**	**-0.7**
NACGM				i PcP	**sP**	**17 58 19.1**	**+3.2**
NACGM				i PP	**PP**	**18 00 28.2**	**-5.5**
NACGM				i PPP	PPP	18 02 08.8	
NACGM				i S	S	18 06 59.3	-9.4
NACGM				i PS	PnS	18 08 04.6	+22
NACGM				i SS	**SS**	**18 11 43.6**	**+1.8**
NACGM				i SSS	SSS	18 14 42.8	
NACGM				i LQ	LQ	18 23 45.4	
NACGM				i LR	LR	18 27 53.6	
FFC	**Flin Flon**	**71.48**	**33**	P	**P**	**17 57 59.0**	**+0.3**
FFC				pmax	pmax		
	comp=Z,18nm,1.3s						
FFC	**Flin Flon**	**71.48**	**33**	P	**P**	**17 57 59.0**	**+0.3**
FFC				IAmb	IAmb	17 58 14.1	
	comp=Z,18nm,1.2s						
MFID	**Camas Ranch**	**71.69**	**49**		**P**	**17 58 01.3**	**+1.0**
SOC	**Sochi**	**71.75**	**312**	eP	**P**	**17 58 00.9**	**+0.4**
SOC				e		18 00 41.1	
SOC				ePPP	PPP	18 02 19.6	
SOC				eS	**S**	**18 07 17.3**	**+0.5**
SOC				eSSS	SSS	18 15 02.1	
SOC				MLR	MLR		
	comp=Z,165nm,15.0s						
PAHR	**Pah Rah Range**	**71.75**	**53**	P	**P**	**17 58 01.6**	**+0.8**
PAHR				IAmb	IAmb	17 58 16.2	
	comp=Z,22nm,1.3s						
ICESG	**Greenland Ices**	**71.87**	**1**	eP	**P**	**17 58 01.4**	**+0.2**
DOMB	**Dombas**	**72.08**	**339**	eP	**P**	**17 58 02.5**	**+0.4**
CMB	**Columbia Colle**	**72.11**	**55**	P	**P**	**17 58 04.1**	**+1.3**
CMB				pmax	pmax		
	comp=Z,12nm,1.0s						
CMB	**Columbia Colle**	**72.11**	**55**		**P**	**17 58 04.1**	**+1.3**
EGMT	**Eagleton**	**72.19**	**42**	IAmb	IAmb	17 58 18.4	
	comp=Z,22nm,1.1s						
HFS	**Hagfors**	**72.20**	**336**	P	**P**	**17 58 02.9**	**0.0**
	comp=Z,5.0nm,0.5s,baz=43,slow=6.7,SNR=23						
NB2	**NORSAR Subarra**	**72.26**	**337**	P	**P**	**17 58 02.6**	**-0.6**
	comp=Z,19nm,1.0s,baz=38,slow=6.2						
NB2	**NORSAR Subarra**	**72.26**	**337**	P	**P**	**17 58 02.6**	**-0.6**
	baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.26**	**337**	P	**P**	**17 58 03.0**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=39,slow=6.0,SNR=14						
NOA				LR	LR	18 32 29.1	
	comp=Z,240nm,21.2s,baz=40,slow=38						
NOA	**NORSAR Array B**	**72.26**	**337**	P	**P**	**17 58 03.0**	**-0.3**
MORW	**Morawa**	**72.27**	**204**	P	**P**	**17 58 04.2**	**+0.6**
MORW				IAmb	IAmb	17 58 05.0	
	comp=Z,36nm,1.5s						
HLID	**Hailey**	**72.42**	**48**		**P**	**17 58 05.2**	**+0.5**
BOZ	**Bozeman (W)**	**72.72**	**45**	IAmb	IAmb	17 58 21.8	
	comp=Z,31nm,1.6s						
AKASG	**Malin Array Be**	**72.79**	**322**	P	**P**	**17 58 06.0**	**-0.5**
	comp=Z,5.5nm,0.5s,baz=45,slow=6.4,SNR=32						
AKASG				LR	LR	18 33 31.3	
	comp=Z,170nm,18.0s,baz=0.0,slow=39						
AKASG	**Malin Array Be**	**72.79**	**322**	P	**P**	**17 58 05.9**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**72.79**	**322**	P	**P**	**17 58 05.9**	**-0.6**
AKBB	**Malin Array Si**	**72.79**	**322**	⇑eP	**P**	**17 58 05.8**	**-0.7**
AKBB	**Malin Array Si**	**72.79**	**322**	IAmb	IAmb	17 58 26.1	
	comp=Z,16nm,1.0s						
RYN	**Ryan**	**72.93**	**54**	P	**P**	**17 58 09.8**	**+2.0**
LHV	**Little Huntoon**	**73.17**	**54**	IAmb	IAmb	17 58 26.0	
	comp=Z,30nm,1.1s						
NVAR	**Mina Array Bea**	**73.19**	**54**	P	**P**	**17 58 11.0**	**+1.6**
	comp=Z,1.9nm,0.6s,baz=292,slow=6.2,SNR=16						
NVAR	**Mina Array Bea**	**73.19**	**54**	P	**P**	**17 58 10.0**	**+0.6**
NV11	**Mina Array Sit**	**73.28**	**54**		**P**	**17 58 11.2**	**+1.3**
YHL	**Hebgen Lake**	**73.44**	**45**	P	**P**	**17 58 12.6**	**+1.7**
ELK	**Elko**	**73.66**	**51**	P	**P**	**17 58 13.8**	**+1.6**
ELK				pmax	pmax		
	comp=Z,11nm,1.5s						
ELK	**Elko**	**73.66**	**51**	P	**P**	**17 58 13.8**	**+1.6**
YNE	**Yellowstone No**	**73.98**	**45**	P	**P**	**17 58 14.8**	**+0.8**
SIM	**Simferopol'**	**74.05**	**315**	eP	P	17 58 24.0	+10
SIM				pmax	pmax		
	comp=Z,36nm,0.5s						
TPH	**Tonopah**	**74.08**	**54**	P	**P**	**17 58 15.9**	**+1.3**
TPH				pmax	pmax		
	comp=Z,67nm,1.1s						
TPH	**Tonopah**	**74.08**	**54**	P	**P**	**17 58 15.9**	**+1.3**
FLWY	**Flagg Ranch**	**74.19**	**46**	P	**P**	**17 58 17.1**	**+1.9**
RLMT	**Red Lodge**	**74.31**	**44**	IAmb	IAmb	17 58 32.5	
	comp=Z,24nm,1.6s						
FRB	**Frobisher Bay**	**74.40**	**14**	P	**P**	**17 58 15.8**	**+0.1**
	comp=Z,5.1nm,0.5s,baz=330,slow=5.2,SNR=16						
SORM	**Soroca**	**74.94**	**321**	⇑P	**P**	**17 58 18.4**	**-0.8**
MIB	**Mutribah**	**75.14**	**296**	eP		17 58 19.0	
QRN	**Al-Qurain**	**75.36**	**295**	eP		17 58 20.2	
TPNV	**Topopah Spring**	**75.38**	**54**	IAmb	IAmb	17 58 37.7	
	comp=Z,21nm,1.1s						
DUG	**Dugway, Tooele**	**75.45**	**50**	IAmb	IAmb	17 59 49.5	
	comp=Z,17nm,0.8s						
PDAR	**Pinedale Array**	**75.67**	**46**	P	**P**	**17 58 24.6**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=272,slow=1.2,SNR=27						
PDAR	**Pinedale Array**	**75.67**	**46**	P	**P**	**17 58 24.2**	**+0.4**
LVV	**L'vov**	**75.82**	**324**	eP	**P**	**17 58 23.6**	**-0.6**
BUR08	**Bucovina Ar. S**	**76.81**	**322**	P	**P**	**17 58 30.1**	**+0.1**
BURAR	**Bucovina Array**	**76.82**	**322**	⇑P	**P**	**17 58 30.3**	**+0.2**
BURAR	**Bucovina Array**	**76.82**	**322**	P	**P**	**17 58 29.8**	**-0.3**
BIZ	**Bicaz**	**76.87**	**321**	⇑P	**P**	**17 58 30.6**	**+0.4**
TESR	**Tescani**	**76.89**	**320**	⇑P	**P**	**17 58 30.4**	**0.0**
CFR	**Carcaliu**	**77.06**	**318**	⇓P	**P**	**17 58 31.4**	**+0.1**
TPGR	**Topolog**	**77.14**	**318**	⇑P	**P**	**17 58 32.0**	**+0.3**
KOLS	**Kolonicke sedl**	**77.26**	**324**	eP	**P**	**17 58 33.0**	**+0.6**
KOLS	**Kolonicke sedl**	**77.26**	**324**	eP	**P**	**17 58 33.0**	**+0.6**
ULM	**Lac du Bonnet**	**77.28**	**34**	P	**P**	**17 58 32.5**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=328,slow=6.9,SNR=7.5						
VRI	**Vrincioaia**	**77.31**	**320**	⇑P	**P**	**17 58 32.6**	**-0.1**
OJC	**Ojcow**	**77.41**	**326**	P	**P**	**17 58 32.9**	**-0.3**
OJC				pmax	pmax		
	comp=Z,29nm,1.3s						
OJC	**Ojcow**	**77.41**	**326**	P	**P**	**17 58 32.9**	**-0.3**
OJC				IAmb	IAmb	17 58 35.6	
	comp=Z,29nm,1.3s						
K22A	**Casper**	**77.43**	**45**	IAmb	IAmb	17 58 48.8	
	comp=Z,26nm,1.3s						
OZUR		**77.61**	**320**	⇑P	**P**	**17 58 35.3**	**+0.9**
CRVS	**Cervenica-Dubn**	**77.65**	**324**	eP	**P**	**17 58 34.9**	**+0.4**
CRVS	**Cervenica-Dubn**	**77.65**	**324**	eP	**P**	**17 58 34.9**	**+0.4**
BR131	**Keskin Array S**	**77.71**	**312**	ceP	**P**	**17 58 34.8**	**-0.4**
BR131	**Keskin Array S**	**77.71**	**312**	IAmb	IAmb	17 59 06.4	
	comp=Z,41nm,1.8s						
BRTR	**Keskin Array B**	**77.71**	**312**	P	**P**	**17 58 35.1**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=90,slow=2.9,SNR=14						
BRTR				LR	LR	18 38 02.8	
	comp=Z,68nm,18.1s,baz=50,slow=40						
BRTR	**Keskin Array B**	**77.71**	**312**	P	**P**	**17 58 34.8**	**-0.5**
BRTR	**Keskin Array B**	**77.71**	**312**	P	**P**	**17 58 34.8**	**-0.5**
RSSD	**Black Hills**	**77.76**	**42**	P	**P**	**17 58 35.2**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RSSD	**Black Hills**	**77.76**	**42**	P	**P**	**17 58 35.2**	**-0.3**
DOPR	**Dopca**	**77.90**	**320**	⇓P	**P**	**17 58 36.4**	**+0.4**
U15A	**North Rim**	**78.17**	**53**	IAmb	IAmb	17 58 54.2	
	comp=Z,33nm,1.4s						
LANS	**Liptovska Anna**	**78.35**	**326**	eP	**P**	**17 58 40.2**	**+1.7**
LANS				pmax	pmax		
	comp=Z,14nm,1.7s						
LANS	**Liptovska Anna**	**78.35**	**326**	eP	**P**	**17 58 40.2**	**+1.7**
VOIR		**78.44**	**320**	⇑P	**P**	**17 58 39.1**	**0.0**
ARR	**Arges**	**78.70**	**320**	⇑P	**P**	**17 58 41.5**	**+1.0**
MORC	**Moravsky Berou**	**78.71**	**327**	⇑P	**P**	**17 58 40.7**	**+0.3**
MORC	**Moravsky Berou**	**78.71**	**327**	eP	**P**	**17 58 40.4**	**0.0**
MORC	**Moravsky Berou**	**78.71**	**327**	P	**P**	**17 58 40.9**	**+0.5**
MORC				pmax	pmax		
	comp=Z,24nm,1.4s						
MORC	**Moravsky Berou**	**78.71**	**327**	P	**P**	**17 58 40.9**	**+0.5**
MORC				IAmb	IAmb	17 58 42.3	
	comp=Z,24nm,1.4s						
DPC	**Dobruska-Polom**	**78.78**	**328**	eP	**P**	**17 58 41.5**	**+0.7**
DPC				e		17 58 58.3	
DPC	**Dobruska-Polom**	**78.78**	**328**	eP	**P**	**17 58 41.5**	**+0.7**
DPC				esP	**pP**	**17 58 58.3**	**+3.2**
PV14	**Lion Creek, Pa**	**78.87**	**49**	IAmb	IAmb	17 58 57.4	
	comp=Z,47nm,1.4s						
PV04	**Paradox Valley**	**78.92**	**49**	IAmb	IAmb	17 58 57.8	
	comp=Z,40nm,1.3s						
N23A	**Red Feather La**	**78.94**	**46**	IAmb	IAmb	17 58 58.7	
	comp=Z,28nm,1.2s						
PV17	**East Wray Mesa**	**78.97**	**49**	IAmb	IAmb	17 58 57.9	
	comp=Z,34nm,1.1s						
PV16	**Nyswonger Mesa**	**78.97**	**49**	IAmb	IAmb	17 58 58.0	
	comp=Z,27nm,1.3s						
PV11	**David Mesa, Pa**	**79.00**	**49**	IAmb	IAmb	17 58 58.9	
	comp=Z,30nm,1.2s						
PV18	**Skein Mesa, Pa**	**79.02**	**49**	IAmb	IAmb	17 58 58.2	
	comp=Z,43nm,1.4s						
PSZ	**Piszkesteto**	**79.08**	**325**	⇓P	**P**	**17 58 43.3**	**+0.7**
PSZ	**Piszkesteto**	**79.08**	**325**	eP	**P**	**17 58 43.2**	**+0.7**
VYHS	**Vyhne**	**79.12**	**325**	eP	**P**	**17 58 43.1**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,22nm,1.5s						
VYHS	**Vyhne**	**79.12**	**325**	eP	**P**	**17 58 43.1**	**+0.4**
PV13	**Radium Mtn., P**	**79.13**	**49**	IAmb	IAmb	17 58 59.6	
	comp=Z,36nm,1.3s						
WUAZ	**Wupatki**	**79.33**	**53**	P	**P**	**17 58 45.2**	**+0.9**
WUAZ				IAmb	IAmb	17 59 00.8	
	comp=Z,19nm,1.1s						
JAVC	**Velka Javorina**	**79.35**	**326**	eP	**P**	**17 58 45.5**	**+1.5**
CLL	**Collm**	**79.35**	**330**	i P	**P**	**17 58 43.5**	**-0.3**
	comp=Z,26nm,1.4s						
CLL				i sP	**sP**	**17 59 01.8**	**-1.9**
CLL	**Collm**	**79.35**	**330**	i P	**P**	**17 58 43.5**	**-0.3**
CLL				i		17 59 01.8	
CLL				pmax	pmax		
	comp=Z,26nm,1.4s						
CLL	**Collm**	**79.35**	**330**	IAmb	IAmb	17 59 02.7	
	comp=Z,12nm,0.8s						
VRAC	**Vranov**	**79.46**	**327**	P	**P**	**17 58 45.0**	**+0.5**
	comp=Z,2.4nm,0.4s,baz=49,slow=5.1,SNR=4.7						
VRAC	**Vranov**	**79.46**	**327**	⇑P	**P**	**17 58 45.3**	**+0.8**

VRAC	Vranov	79.46	327	eP	P	17 58 44.7	+0.2
SMCO	Snowmass	79.52	48		P	17 58 46.6	+1.1
GZR	Gura Zlata	79.59	321	⇑P	P	17 58 45.2	-0.1
SMOL	Smolenice	79.72	326	eP	P	17 58 46.8	+0.9
SMOL	Smolenice	79.72	326	eP	P	17 58 46.8	+0.9
KRUC	Moravsky	79.74	327	eP	P	17 58 46.1	+0.1
PRU	Pruhonice	79.78	329	esP	sP	17 59 04.5	-1.6
MODS	Modra-Piesok	79.89	326	eP	P	17 58 46.7	-0.2
MODS	Modra-Piesok	79.89	326	eP	P	17 58 46.7	-0.2
BZS	Buzias	79.98	322	⇑P	P	17 58 47.1	-0.3
HERR	Herculane	80.14	321	⇑P	P	17 58 47.6	-0.6
RAYN	Ar Rayn	80.27	292	P	P	17 58 48.6	-0.7
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAYN	Ar Rayn	80.27	292	P	P	17 58 48.6	-0.7
MDVR	Moldovita	80.55	321	⇑P	P	17 58 50.1	-0.4
CONA	Conrad Observa	80.84	327	eP	P	17 58 52.5	+0.5
	comp=Z,16nm,1.4s						
KHC	Kasperske Hory	80.84	329	eP	P	17 58 52.2	+0.2
KHC				e		17 59 09.7	
KHC	Kasperske Hory	80.84	329	eP	P	17 58 52.2	+0.2
KHC				esP	pP	17 59 09.7	+3.3
MORH	Mrgy, Hungar	80.92	324	eP	P	17 58 51.7	-0.6
MORH	Mrgy, Hungar	80.92	324	eP	P	17 58 47.5	-4.9
GERES	GERESS Array B	81.02	328	P	P	17 58 53.1	+0.1
	comp=Z,1.6nm,0.6s,baz=38,slow=6.8,SNR=7.8						
GERES				pP	sP	17 59 11.2	-1.7
	comp=Z,1.5nm,0.7s,baz=54,slow=6.6,SNR=3.2						
GERES				LR	LR	18 37 55.4	
	comp=Z,332nm,19.1s,baz=32,slow=38						
EKA	Eskdalemuir Ar	81.12	341	P	P	17 58 53.0	-0.3
	comp=Z,1.0nm,0.6s,baz=39,slow=5.5,SNR=4.3						
EKA				pP	sP	17 59 12.6	-0.5
	comp=Z,2.4nm,0.6s,baz=32,slow=5.7,SNR=2.8						
FRGS	Fruska Gora	81.18	323	eP	P	17 58 53.7	-0.1
GRF	Grafenberg Arr	81.33	330	eP	P	17 58 55.1	+0.5
	comp=Z,29nm,1.5s,baz=37,slow=4.4						
VTS	Vitosha	81.38	319	⇑P	P	17 58 55.6	+0.5
ARSA	Arzberg	81.51	326	eP	P	17 58 55.9	+0.4
	comp=Z,3.6nm,0.7s						
MOA	Molln	81.57	327	eP	P	17 58 56.4	+0.5
	comp=Z,14nm,1.4s						
DIVS	Divibare	81.89	322	eP	P	17 58 56.6	-1.1
DIVS	Divibare	81.89	322	IAmb	IAmb	17 58 58.7	
	comp=Z,28nm,1.7s						
SOKA	Soboth	82.17	326	i P	P	17 58 59.2	+0.1
	comp=Z,6.2nm,0.5s,SNR=8.7						
BBLS	Lazići	82.34	322	eP	P	17 59 00.0	0.0
OBKA	Obir	82.50	326	eP	P	17 59 01.0	+0.2
	comp=Z,4.5nm,0.8s						
SJES	Sjenica	82.52	321	eP	P	17 59 01.1	+0.1
KBA	Koelnbreinsper	82.56	327	eP	P	17 59 01.6	+0.3
	comp=Z,0.4nm,0.5s						
CRES	Cresnjev	82.64	326	eP	P	17 59 00.8	-0.7
ANMO	Albuquerque	82.70	50	⇓eP	P	17 59 04.2	+2.0
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ANMO	Albuquerque	82.70	50	P	P	17 59 03.1	+0.9
ANMO				IAmb	IAmb	17 59 18.3	
	comp=Z,17nm,1.3s						
MYKA	Terra Mystica	82.80	327	eP	P	17 59 01.8	-0.6
	comp=Z,5.3nm,0.5s						
WATA	Walderalm	83.08	329	eP	P	17 59 03.9	0.0
	comp=Z,7.2nm,0.9s						
CEY	Cerknica	83.16	326	eP	P	17 59 03.6	-0.6
ABTA	Abfaltersbach	83.17	328	eP	P	17 59 03.9	-0.5
	comp=Z,8.4nm,1.3s						
MOTA	Moosalm	83.27	329	eP	P	17 59 05.2	+0.3
	comp=Z,17nm,1.3s						
RETA	Reutte	83.29	329	i P	P	17 59 05.2	+0.3
	comp=Z,23nm,1.3s,SNR=5.4						
SQTA	Sankt Quirin	83.33	329	eP	P	17 59 04.3	-0.8
	comp=Z,3.9nm,0.9s						
BRY	Bratogost	83.48	322	eP	P	17 59 05.1	-1.0
PDG	Podgorica	83.49	321	IAmb	IAmb	17 59 24.5	
	comp=Z,15nm,0.8s						
BFO	Black Forest	83.54	331	P	P	17 59 05.9	-0.2
BFO				pmax	pmax		
	comp=Z,64nm,1.8s						
BFO	Black Forest	83.54	331	P	P	17 59 05.9	-0.2
FETA	Feichten	83.68	329	eP	P	17 59 06.9	-0.1
	comp=Z,6.4nm,0.9s						
TREB	Trebinje	83.71	322	eP	P	17 59 06.1	-1.0
DAVA	Damuels	83.80	330	eP	P	17 59 07.5	-0.1
	comp=Z,16nm,1.1s						
STON	Ston	83.90	322	eP	P	17 59 06.1	-1.9
DAVOX	Davos/Dischmat	84.22	329	P	P	17 59 10.1	+0.3
	comp=Z,4.5nm,0.8s,baz=354,slow=5.8,SNR=6.3						
PPT	Papeete	85.21	117	LR	LR	18 30 35.7	
	comp=Z,174nm,21.2s,baz=343,slow=31						
PPT2	Papeete2	85.22	117	eS	S	18 09 44.9	+3.3
	comp=Z,65nm,24.5s						
PPT2	Papeete2	85.22	117	eLR	LR	18 26 10.7	
	comp=Z,348nm,22.5s,baz=305						
PPT2	Papeete2	85.22	117	eT	T	19 33 14.0	
	comp=Z,28nm,0.3s						
TIAR	Tiarei	85.36	117	eT	T	19 33 23.4	
	comp=Z,8.7nm,0.3s						
TAOE	Nuku Hiva Isla	86.23	105	eT	T	19 34 21.5	
	comp=Z,30nm,0.2s						
MEH	Mehetia	86.46	116	eT	T	19 34 46.0	
	comp=Z,216nm,0.3s						
TX31	Lajitas Ar. Si	88.30	53	IAmb	IAmb	17 59 46.7	
	comp=Z,18nm,1.1s						
TXAR	Lajitas Array	88.30	53	P	P	17 59 30.9	+0.9
	comp=Z,0.7nm,0.6s,baz=298,slow=3.4,SNR=10						
TXAR	Lajitas Array	88.30	53	P	P	17 59 30.1	+0.1
CCM	Cathedral Cave	88.73	39	P	P	17 59 32.0	+0.2
CCM				pmax	pmax		
	comp=Z,27nm,1.4s						
CCM	Cathedral Cave	88.73	39	P	P	17 59 32.0	+0.2
TBI	Tubuai	89.27	121	eS	S	18 10 19.8	-0.3
	comp=Z,86nm,26.0s						
TBI	Tubuai	89.27	121	eLR	LR	18 27 35.5	
	comp=Z,244nm,23.2s,baz=318						
TBI	Tubuai	89.27	121	eT	T	19 38 18.3	
	comp=Z,64nm,0.3s						
FCAR	Ozark Folk Cen	89.98	41	IAmb	IAmb	17 59 52.2	
	comp=Z,19nm,1.5s						
MIAR	Mount Ida	90.26	43	P	P	17 59 39.7	+0.7
MIAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MIAR	Mount Ida	90.26	43	P	P	17 59 39.7	+0.7
MIAR				IAmb	IAmb	18 02 44.7	
	comp=Z,9.1nm,0.8s						
KEST	Kesra	93.49	323	LR	LR	18 47 26.9	
	comp=Z,186nm,18.6s,baz=266,slow=39						
ESDC	Sonseca Array	95.44	334	LR	LR	18 48 15.6	
	comp=Z,197nm,18.9s,baz=15,slow=39						
061Z	Ochoppi	103.71	39	Pdif	Pdif	18 00 39.0	-1.1
VNA2	Neumayer--Watz	144.69	197	P	PKPab	18 06 12.0	-0.3
	baz=123,slow=2.3						
VNA3	Neumayer Olymp	144.94	195	P	PKPbc	18 06 12.1	-1.2
PB16	IPOC Station P	145.57	62		PKPab	18 06 18.0	+0.2
MNMC	Minye Minye	146.05	63		PKPab	18 06 19.1	-0.1
PB08	IPOC Station P	147.04	64		PKPbc	18 06 20.6	-1.0

NOU ***13*** *17:47:12.2, 29°.02S×176°.54W, h232^{km}, mb4.5, Kermadec Islands Region*

BJI ***13*** *17:47:14.1±0.0, 28°.22S×177°.58W, h190^{km}, mB5.3/8, mb4.9/24*

IDC ***13*** *17:47:17.4±0.5, 28°.25S×178°.25W, h191^{km}±4^{km}, mb4.3/20, mb1 4.3/21, mb1mx4.2/37, mbtmp4.8/21, MS3.7/5, Ms1 3.7/5, ms1mx3.3/34, Error ellipse: s-maj=13.7km s-min=10.3km az=63.0*

NEIC ***13*** *17:47:17.2±2.4, 28°.20S±0°.08×178°.2W±0°.1, h194^{km}±5^{km}, mb5.0/67, Error ellipse: s-maj=15.0km s-min=10.7km az=108.0*

GCMT ***13*** *17:47:18.2±0.2, 28°.35S±0°.02×178°.09W±0°.02, h200^{km}±1^{km}, MW5.2/101, Moment Tensor Solution. s59,c73; s101,c151; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.03±.02; $M_{\theta\theta}$-0.57±.02; $M_{\phi\phi}$0.59±.02; $M_{r\theta}$-0.48±.02; $M_{\theta\phi}$0.31±.02; $M_{\phi r}$-0.26±.02; Best double couple: $M_0$0.85300×10^{17} NP1:ϕ_s150.00000°, δ50.00000°, λ-178.00000°. NP2:ϕ_s58.00000°, δ88.00000°, λ-40.00000°. Principal axes: T 0.8460, Plg25.0000°, Azm111.0000°; N 0.0150, Plg50.0000°, Azm236.0000°; P -0.8610, Plg28.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 17:47:18.4±0.3, 28°.78S±0°.03×178°.26W±0°.06, h210^{km}, n390, σ1^s.81/384, mb4.9/46, 10C-9D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.55	149	P	Pn	17 47 47.1	+0.3
RIZ				S	S	17 48 08.8	-0.3
RAO	Raoul Island	0.56	148	P	Pn	17 47 47.2	+0.3
	3μm,0.3s,baz=68,slow=2.4,SNR=47						
RAO				S	S	17 48 09.2	0.0
	3μm,0.3s,baz=123,slow=12,SNR=7.4						
RAO				LR	LR	17 48 10.8	
	comp=Z,2μm,19.1s,baz=136,slow=51						
RAO	Raoul Island	0.56	148	P	Pn	17 47 47.4	+0.6
GRZ	Great Barrier	9.15	214	P	Pn	17 49 31.0	+4.6
MXZ	Matakaoa Point	9.22	197		Pn	17 49 23.8	-3.5
MXZ	Matakaoa Point	9.22	197	P	Pn	17 49 24.8	-2.6
MXZ				S	S	17 51 08.5	-2.4
OUZ	Omahuta	9.44	225	Pn	Pn	17 49 34.2	+4.0
OUZ	Omahuta	9.44	225	P	P	17 49 36.9	-1.6
WMGZ	Waiomatatini S	9.44	196	P	Pn	17 49 27.8	-2.4
WCZ	Waipu Caves	9.49	219	P	P	17 49 36.5	-2.6
HAZ	Te Kaha	9.55	199	P	Pn	17 49 29.3	-2.3
HAZ				S	S	17 51 20.4	+1.7
PKGZ	Pakihiroa	9.59	198	P	Pn	17 49 28.8	-3.4
PKGZ				S	S	17 51 19.0	-0.7
MYRZ	Mayor Island	9.65	207	P	Pn	17 49 35.6	+2.6
PUZ	Puketiti	9.72	197	P	Pn	17 49 29.8	-3.9
PUZ				S	S	17 51 20.4	-2.3
RUGZ	Raukumara Rang	9.77	199	P	Pn	17 49 32.5	-2.1
RUGZ				S	S	17 51 23.1	-1.1
TWGZ	Tauwhareparae	9.89	198	P	Pn	17 49 34.0	-2.0
TWGZ				S	S	17 51 27.3	+0.6
WHRZ	Whale Island	9.89	203	P	Pn	17 49 39.2	+3.2
WHRZ				S	S	17 51 28.1	+1.3
OPRZ	Ohinepanea	10.03	204	P	Pn	17 49 35.9	-1.9
TGRZ	Tauranga	10.04	206	P	Pn	17 49 39.3	+1.4
MARZ	Manawahe	10.11	203	P	Pn	17 49 39.4	+0.5
MARZ				S	S	17 51 33.2	+0.9
MWZ	Matawai	10.16	199	P	Pn	17 49 36.3	-3.2
MWZ				S	S	17 51 31.4	-2.1
TKGZ	Te Karaka	10.17	198	P	Pn	17 49 37.0	-2.6
TKGZ				S	S	17 51 30.6	-3.0
URZ	Urewera	10.22	201	P	Pn	17 49 37.6	-2.5
	9.8nm,0.3s,baz=233,slow=1.6,SNR=37						
URZ				S	S	17 51 32.9	-1.8
	45nm,0.3s,baz=271,slow=6.2,SNR=14						
URZ	Urewera	10.22	201		Pn	17 49 36.9	-3.3
URZ	Urewera	10.22	201	P	Pn	17 49 37.3	-2.8
URZ				S	S	17 51 34.2	-0.5
KARZ	Kaharoa	10.30	205	P	P	17 49 45.9	-2.5
RAGZ	Rawiri	10.34	199	P	Pn	17 49 39.2	-2.7
RAGZ				S	S	17 51 36.9	-0.9
TOZ	Tahuroa Road	10.34	209	P	Pn	17 49 44.4	+2.6
TARZ	Mount Tarawera	10.40	203	P	Pn	17 49 44.5	+1.9
TARZ				S	S	17 51 39.9	+0.8
RIGZ	Rimuhau	10.44	197	P	Pn	17 49 38.9	-4.2
RIGZ				S	S	17 51 38.6	-1.5
MUGZ	Murupara	10.52	202	P	Pn	17 49 41.8	-2.3
MUGZ				S	S	17 51 41.2	-0.8
RTZ	Ruatahuna	10.58	201	P	Pn	17 49 41.4	-3.5
PRGZ	Paritu Road	10.62	197	P	Pn	17 49 42.4	-2.9
PRGZ				S	S	17 51 38.9	-5.3
SNGZ	Shannon Statio	10.63	199	P	Pn	17 49 42.5	-3.0
SNGZ				S	S	17 51 43.5	-0.9
KNZ	Kokohu	10.76	197	P	Pn	17 49 44.1	-3.0
MHGZ	Mahia Peninsul	10.83	196	P	Pn	17 49 44.9	-3.1
MHGZ				S	S	17 51 44.1	-5.0
RAHZ	Arahi	10.83	200	P	Pn	17 49 45.7	-2.3
RAHZ				S	S	17 51 46.0	-3.1
TLZ	Tolley Road	10.84	207	P	Pn	17 49 48.4	+0.2
MTHZ	Maungataniwha	10.84	201	P	Pn	17 49 45.0	-3.2
MTHZ				S	S	17 51 47.6	-2.0
WHHZ	Waihua	10.93	199	P	Pn	17 49 48.2	-1.1
WHHZ				S	S	17 51 46.8	-4.8
MRHZ	Matea Rd	10.96	202	P	Pn	17 49 46.6	-3.2
MRHZ				S	S	17 51 52.8	+0.4
NMHZ	Naumai	11.08	200	P	Pn	17 49 48.1	-3.1
NMHZ				S	S	17 51 52.7	-1.2
WATZ	Wairara	11.09	205	P	Pn	17 49 52.1	+0.6
ARHZ	Aropaoanui	11.18	199	P	Pn	17 49 48.2	-4.2
ARHZ				S	S	17 51 55.5	-0.6
BKZ	Black Stump Fm	11.24	201		Pn	17 49 49.1	-4.2
BKZ	Black Stump Fm	11.24	201	P	Pn	17 49 50.4	-2.9
BKZ				S	S	17 51 57.8	+0.1
HIZ	Hauiti	11.28	209		Pn	17 49 52.2	-1.5
HIZ	Hauiti	11.28	209	P	Pn	17 49 54.7	+0.9
KATZ	Kakaramea	11.34	205	P	Pn	17 49 56.0	+1.3
MCHZ	McNeill Hill	11.43	200	P	Pn	17 49 52.4	-3.3
MCHZ				S	S	17 52 01.7	-0.5
KRVZ	Karewarewa	11.47	205	P	Pn	17 49 56.6	+0.3
KRVZ				S	S	17 52 07.2	+4.0
ETVZ	East Tongariro	11.48	204	P	Pn	17 49 53.8	-2.6
KWHZ	Kaweka Forest	11.50	201	P	Pn	17 49 51.7	-4.9
KWHZ				S	S	17 52 03.8	-0.1
MSVF	Nonsavu	11.50	342	P	Pn	17 49 51.5	-5.3
	28nm,0.3s,baz=150,slow=10.0,SNR=427						
MSVF	Nonsavu	11.50	342	Pn	Pn	17 49 50.7	-6.1
WTVZ	West Tongariro	11.51	205	P	Pn	17 49 54.8	-2.0
CKHZ	Cape Kidnapper	11.52	198	P	Pn	17 49 54.5	-2.3
NGZ	Ngauruhoe	11.55	205	P	Pn	17 49 55.0	-2.4
FWVZ	Far West T-bar	11.64	205	P	Pn	17 49 55.6	-3.0
BHHZ	Black Hill Sta	11.67	202	P	Pn	17 49 54.2	-4.6
WNVZ	Wahianoa	11.69	204	P	Pn	17 49 57.1	-2.1
KAHZ	Kahuranaki	11.70	199	P	Pn	17 49 55.3	-3.9
MOVZ	Moawhango	11.71	203	P	Pn	17 49 55.2	-4.0
KRHZ	Kereru	11.71	201	P	Pn	17 49 54.4	-4.9
PXZ	Pawanui	11.93	198	P	Pn	17 49 56.1	-5.8
PNHZ	Pukenui	12.01	201	P	Pn	17 49 59.0	-4.1
PRHZ	Porangahau	12.21	199	P	Pn	17 50 01.7	-3.9
TSZ	Takapari Road	12.22	201	P	Pn	17 50 02.4	-3.3
NIUE	Niue	12.29	40		Pn	17 49 57.3	-9.5
DVHZ	Dannevirke	12.38	200	P	Pn	17 50 03.1	-4.6
BFZ	Birch Farm	12.71	199		Pn	17 50 05.5	-6.3
MSWZ	Moikau Station	13.68	201		Pn	17 50 18.3	-5.6
BHW	Baring Head	13.79	202		Pn	17 50 18.9	-6.4
PLWZ	Palliser	13.82	201		Pn	17 50 18.6	-7.0
TUWZ	Tuamarina	14.14	205		Pn	17 50 23.3	-6.2
NNZ	Nelson	14.17	207		Pn	17 50 25.8	-4.1
QRZ	Quartz Range	14.19	210		Pn	17 50 27.2	-3.1
CMWZ	Cape Campbell	14.32	203		Pn	17 50 27.3	-4.5
BSWZ	Blackbirch Sta	14.41	204		Pn	17 50 28.2	-4.7
THZ	Tophouse	14.82	207		Pn	17 50 33.5	-4.4
THZ				IAmb	IAmb	17 51 05.6	
	comp=Z,67nm,1.5s						
YATNC	Mamie plateau,	14.99	293	P	P	17 50 49.1	+8.5
KHZ	Kahutara	15.15	204		Pn	17 50 37.3	-4.5
KHZ				IAmb	IAmb	17 50 42.0	
	comp=Z,54nm,0.4s						
DZM	Mont Dzumac	15.34	292	P	Pn	17 50 42.0	-2.5
	comp=Z,0.2nm,0.3s,baz=108,slow=18,SNR=2.5						
DZM	Mont Dzumac	15.34	292	eP	Pn	17 50 41.9	-2.6
	comp=Z,63nm,1.2s						
DZM	Mont Dzumac	15.34	292	P	Pn	17 50 42.4	-2.1
DZM	Mont Dzumac	15.34	292	P	P	17 50 53.2	+8.6
LIFNC	LIFOU	15.38	298	P	P	17 50 52.8	+7.9
NOUC	Port Laguerre	15.44	292	P	P	17 50 54.5	+8.9
LTZ	Lake Taylor	15.93	206		P	17 50 47.3	-3.6
LTZ				IAmb	IAmb	17 51 45.6	
	comp=Z,111nm,1.8s						
AFI	Afiamalu	15.97	23	Pn	P	17 50 39.2	-12
AFI	Afiamalu	15.97	23	P	P	17 50 39.8	-12
OXZ	Oxford	16.49	206		P	17 50 53.8	-3.1
MQZ	McQueen’s Vall	16.59	204		P	17 50 53.5	-4.5
MQZ				IAmb	IAmb	17 51 43.7	
	comp=Z,168nm,1.8s						
DVP	Devils Point	16.60	309	P	Pn	17 51 07.0	+7.5
RPZ	Rata Peaks	17.20	207	P	P	17 51 04.0	-0.7
	comp=Z,3.0nm,0.3s,baz=63,slow=6.3,SNR=11						
RPZ				S	S	17 54 08.1	-4.7
	comp=Z,6.1nm,0.3s,baz=122,slow=23,SNR=17						
RPZ	Rata Peaks	17.20	207	P	P	17 51 03.4	-1.3
RPZ				IAmb	IAmb	17 51 58.6	
	comp=Z,84nm,1.7s						
FOZ	Fox Glacier	17.57	210	P	P	17 51 06.8	-1.8
LBZ	Lake Benmore	18.10	208	P	P	17 51 14.3	-0.2
LBZ				IAmb	IAmb	17 51 52.1	
	comp=Z,110nm,2.0s						
RAR	Rarotonga	18.36	70	P	P	17 51 12.8	-4.6
	comp=Z,1.2nm,0.3s,baz=212,slow=18,SNR=2.2						
ODZ	Otahua Downs	18.47	206	P	P	17 51 17.8	-0.8
ODZ				IAmb	IAmb	17 51 51.3	
	comp=Z,98nm,1.9s						
SANVU	Saraoutou	18.88	312	P	P	17 51 21.4	-1.7
SANVU				IAmb	IAmb	17 51 35.3	
	comp=Z,162nm,1.6s						
WKZ	Wanaka	18.95	209	P	P	17 51 24.6	+0.9
WKZ				IAmb	IAmb	17 51 34.6	
	comp=Z,61nm,1.4s						
FUNA	Funafuti	20.29	353	P	P	17 51 30.5	-7.8
TBI	Tubuai	26.39	85	eLQ	LQ	17 57 56.3	
	comp=Z,652nm,25.5s						
TBI				eLR	LR	17 59 10.5	
	comp=Z,112nm,21.7s						
KNTN	Kanton	26.60	15	P	P	17 52 31.9	-5.5
KNTN	Kanton	26.60	15	P	P	17 52 30.0	-7.4
EIDS	Eidsvold	27.47	270	P	P	17 52 48.0	+2.8
EIDS				IAmb	IAmb	17 53 49.7	
	comp=Z,28nm,1.4s						
HNR	Honiara	28.09	309	P	P	17 52 46.8	-4.0
	comp=Z,18nm,0.6s,baz=161,slow=6.5,SNR=1.9						
CAN	Canberra	28.42	248	P	P	17 52 56.7	+3.1
CAN				IAmb	IAmb	17 53 49.5	
	comp=Z,48nm,1.2s						
PPT2	Papeete2	28.55	73	eLQ	LQ	17 58 54.3	
	comp=Z,1μm,28.2s						
PPT2				eLR	LR	18 00 08.7	
	comp=Z,93nm,27.2s						
TOO	Toolangi	31.43	244	P	P	17 53 20.6	+0.6
TOO				IAmb	IAmb	17 54 16.5	
	comp=Z,49nm,1.4s						
CTA	Charters Tower	33.35	277	P	P	17 53 37.4	+0.5
	comp=Z,3.8nm,0.5s,baz=94,slow=10,SNR=13						
CTAO	Charters Tower	33.35	277	P	P	17 53 37.4	+0.5
STKA	Stephens Creek	34.66	255	P	P	17 53 50.3	+2.3
	comp=Z,2.2nm,0.5s,baz=102,slow=17,SNR=7.7						
STKA				LR	LR	18 05 21.5	
	comp=Z,133nm,20.0s,baz=87,slow=31						
STKA	Stephens Creek	34.66	255	P	P	17 53 49.8	+1.7
COEN	Coen	38.63	284	P	P	17 54 22.2	+0.5
BBOO	Buckleboo	39.22	252	P	P	17 54 27.6	+1.2
BBOO				IAmb	IAmb	17 55 23.7	
	comp=Z,32nm,1.4s						
AS31	Alice Springs	42.99	265	P	P	17 54 57.3	0.0
ASAR	Alice Springs	42.99	265	P	P	17 54 57.9	+0.6
	comp=Z,3.4nm,0.8s,baz=95,slow=7.3,SNR=62						
ASAR				ScP	ScP	18 00 16.8	+2.0
	comp=Z,1.3nm,0.8s,baz=103,slow=4.4,SNR=4.9						
ASAR				PKiKP	PKiKP	18 03 46.5	-0.2
	comp=Z,0.4nm,0.7s,baz=86,slow=1.9,SNR=5.3						
ASAR	Alice Springs	42.99	265	P	P	17 54 57.3	0.0
WR0	Warramunga Arr	43.65	271	P	P	17 55 02.1	-0.4
WB2	Warramunga Arr	43.82	271	P	P	17 55 03.8	-0.2
WRAB	Tennant Creek	43.83	271	P	P	17 55 04.0	0.0
WRA	Warramunga Arr	43.83	271	P	P	17 55 04.0	0.0
	comp=Z,3.3nm,0.5s,baz=106,slow=8.0,SNR=35						
WRA				ScP	ScP	18 00 20.2	+2.0
	comp=Z,1.3nm,0.8s,baz=104,slow=4.1,SNR=5.6						
WRA	Warramunga Arr	43.83	271	P	P	17 55 03.8	-0.2
WB0	Warramunga Arr	43.85	271	P	P	17 55 04.0	-0.1
FORT	Forrest	46.27	254	P	P	17 55 23.6	+0.6
MTN	Manton Dam	49.52	278	P	P	17 55 47.8	-0.3
MTN				IAmb	IAmb	17 57 20.1	
	comp=Z,77nm,1.6s						
VNDA	Vanda	49.68	186	P	P	17 55 54.5	+6.1
	comp=Z,1.8nm,0.6s,baz=1.5,slow=8.7,SNR=12						
VNDA				ScP	ScP	18 00 45.9	+4.3
	comp=Z,1.8nm,0.9s,baz=356,slow=8.1,SNR=5.0						
VNDA	Vanda	49.68	186	P	P	17 55 54.5	+6.1
WAKE	Wake Island	49.95	341	P	P	17 55 48.0	-3.2
FITZ	Fitzroy Crossi	52.15	269	P	P	17 56 08.0	+0.3
HMH	Humu‘ula Sheep	52.89	27	P	P	17 56 11.7	-1.6
HMH				IAmb	IAmb	17 56 11.7	
	comp=Z,46nm,0.8s						
NWAO	Narrogin (SRO)	54.77	248	P	P	17 56 30.6	+4.0
NWAO				IAmb	IAmb	17 58 22.2	
	comp=Z,75nm,2.0s						
SIJI	Sorong	55.54	291	P	P	17 56 30.9	-1.4
	comp=Z,11nm,0.9s,baz=59,slow=12,SNR=2.9						
PSAA3	Pilbara Seismi	55.94	262	P	P	17 56 36.0	+0.9
PSAA3				IAmb	IAmb	17 56 38.0	
	comp=Z,21nm,1.2s						
CASY	Casey	56.47	207	P	P	17 56 41.1	+3.0
CASY				IAmb	IAmb	17 57 50.9	
	comp=Z,62nm,1.7s						
MORW	Morawa	56.79	252	P	P	17 56 41.0	+0.1
GIRL	Giralia	60.42	259	P	P	17 57 08.9	+2.8
QSPA	South Pole Qui	61.33	180	P	P	17 57 16.9	+5.2
	comp=Z,24nm,0.8s,baz=10,slow=0.8,SNR=79						
QSPA	South Pole Qui	61.33	180	P	P	17 57 16.7	+5.1
QSPA				IAmb	IAmb	17 57 17.9	
	comp=Z,38nm,1.0s						
JCJ	Chichijima	67.27	322	P	P	17 57 48.3	-2.1
	comp=Z,38nm,0.5s,baz=150,slow=20,SNR=1.5						
BELA	Belgrano 2	71.42	172	P	P	17 58 17.1	+1.9
CISI	Cisompet, Garu	72.33	271	P	P	17 58 22.7	+1.0
JHJ	Hachijo jima 2	73.30	324	LR	LR	18 27 19.5	
	comp=Z,28nm,18.2s,baz=82,slow=33						
KSM	Kuching	74.50	280	P	P	17 58 36.0	+1.7
KSM				IAmb	IAmb	18 00 15.3	
	comp=Z,52nm,1.5s						
JYT	Yasato	75.56	326	P	P	17 58 37.5	-2.3
JYT				IAmb	IAmb	17 58 39.9	
	comp=Z,59nm,1.2s						
INU	Inuyama	76.47	324	P	P	17 58 43.5	-1.4
INU				IAmb	IAmb	17 58 45.3	
	comp=Z,45nm,1.3s						
JGF	Kuroka	76.48	324	P	P	17 58 43.1	-2.0
JGF				IAmb	IAmb	17 58 45.2	
	comp=Z,55nm,1.7s						
MJAR	Matsushiro Arr	76.78	325	P	P	17 58 45.2	-1.6
	comp=Z,7.3nm,0.5s,baz=161,slow=5.2,SNR=29						
MJAR	Matsushiro Arr	76.78	325	P	P	17 58 44.6	-2.2
MAJO	Matsushiro	76.78	325	P	P	17 58 45.0	-1.7
MAT	Matsushiro	76.78	325	P	P	17 58 45.4	-1.3
JWT	Wachi	77.26	323	P	P	17 58 48.9	-0.5
JWT				IAmb	IAmb	17 58 51.7	
	comp=Z,76nm,1.7s						
JSD	Sado	77.93	326	P	P	17 58 52.0	-1.0
JSD				IAmb	IAmb	18 00 16.9	
	comp=Z,71nm,1.2s						
YULB	Yu-li	77.95	305	P	P	17 58 51.7	-1.7
JNU	Nakatsue	78.20	318	P	P	17 58 53.0	-1.7
JHS	Saijyo	78.29	321	P	P	17 58 53.6	-1.6
JHS				IAmb	IAmb	17 58 56.1	
	comp=Z,37nm,1.1s						
SSLB	Suanglung	78.44	305	P	P	17 58 54.1	-2.1
JTM	Tenmabayashi	78.82	330	P	P	17 58 57.5	-0.3
SNAA	Sanae	79.78	179	P	P	17 59 06.2	+3.4
SNAA	Sanae	79.78	179	P	P	17 59 05.8	+3.0
VNA3	Neumayer Olymp	79.94	176	P	P	17 59 06.6	+3.1
ADK	Adak	80.32	1	P	P	17 59 03.6	-2.0
ADK				IAmb	IAmb	18 00 31.2	
	comp=Z,55nm,1.2s						
VNA2	Neumayer--Watz	80.37	177	P	P	17 59 09.4	+3.5
	baz=180,slow=5.3						
VNA1	Neumayer--Stat	80.60	177	P	P	17 59 10.6	+3.5
ATKA	Atka Island	80.71	3	P	P	17 59 05.3	-2.3
JKA	Kamikawa-asahi	80.90	333	P	P	17 59 09.0	+0.1
JKA				IAmb	IAmb	17 59 10.2	
	comp=Z,69nm,1.3s						
ASAJ	Asahikawa	80.90	333	P	P	17 59 08.7	-0.1
	comp=Z,25nm,0.9s,baz=248,slow=14,SNR=7.6						
ASAJ				LR	LR	18 27 46.9	
	comp=Z,260nm,21.7s,baz=172,slow=30						
NIKH	Nikolski High	81.81	6	P	P	17 59 11.3	-2.1
UNV	Unalaska Valle	82.91	7	P	P	17 59 16.4	-2.6
KSRS	Korea Array	82.97	320	P	P	17 59 19.9	+0.1
	comp=Z,9.0nm,1.2s,baz=139,slow=5.7,SNR=15						
KSRS				LR	LR	18 32 33.4	
	comp=Z,16nm,19.7s,baz=320,slow=33						
KSAR	Wonju Array Be	82.98	320	P	P	17 59 19.4	-0.5
YSS	Yuzh-Sakhalins	83.19	334	P	P	17 59 19.9	-0.8
AKUT	Akutan	83.27	7	P	P	17 59 18.5	-2.4
PLCA	Paso Flores	83.78	133	P	P	17 59 26.7	+2.5
	comp=Z,12nm,0.8s,baz=233,slow=5.5,SNR=32						
PLCA	Paso Flores	83.78	133	P	P	17 59 27.6	+3.4
PLCA				IAmb	IAmb	17 59 29.0	
	comp=Z,36nm,1.3s						
LC01	Cunco	83.90	131	P	P	17 59 27.8	+3.0
LC01				IAmb	IAmb	17 59 28.9	
	comp=Z,29nm,0.8s						
PEA0B	Petropavlovsk-	84.19	346	P	P	17 59 24.4	-1.3
PEA0B				IAmb	IAmb	18 01 45.7	
	comp=Z,77nm,1.4s						
PETK	Petropavlovsk-	84.19	346	P	P	17 59 24.2	-1.5

	comp=Z,10nm,0.5s,baz=110,slow=8.4,SNR=54						
PETK	Petropavlovsk-	84.19	346	P	P	17 59 24.4	-1.3
EFI	East Falkland	84.27	147	P	P	17 59 29.4	+3.1
MONP2	Monument Peak	84.85	48	P	P	17 59 30.5	+0.7
	baz=231						
IKP	In-Ko-Pah, Jac	84.90	48	P	P	17 59 30.9	+1.1
	baz=231						
NJ2	Nanjing	85.02	311	*e*P	P	17 59 31.1	+0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
EDW2	Edwards Air Fo	85.10	46	P	P	17 59 31.4	+0.6
	baz=230						
PFO	Pinyon Flats O	85.28	48	P	P	17 59 32.8	+1.0
	baz=231						
SWSC	Sam W. Stewart	85.29	48	P	P	17 59 32.4	+0.7
	baz=232						
ISA	Isabella, Lake	85.31	45	P	P	17 59 32.4	+0.6
	baz=230						
LRMC	Laurel Mtn Rad	85.68	45	P	P	17 59 34.8	+1.1
	baz=230						
USRK	Ussuriysk Ar.	85.69	327	P	P	17 59 33.0	-0.2
	comp=Z,11nm,0.8s,baz=143,slow=2.6,SNR=24						
USRK				LR	LR	18 33 15.2	
	comp=Z,36nm,20.3s,baz=158,slow=32						
USRK	Ussuriysk Ar.	85.69	327	P	P	17 59 32.4	-0.9
O02D	Mt. Diablo Mer	85.78	39	P	P	17 59 35.0	+1.0
	baz=227						
BELC	Belle Mtn. Jos	85.82	47	P	P	17 59 35.3	+0.9
	baz=231						
BC3	Big Chuckawall	85.96	48	P	P	17 59 36.3	+1.2
	baz=232						
GLA	Glamis	86.00	49	P	P	17 59 36.5	+1.3
	baz=232						
GSC	Goldstone, Bar	86.12	46	P	P	17 59 36.4	+0.6
	baz=231						
HEC	Hector,Ludlow	86.12	47	P	P	17 59 36.6	+0.8
	baz=231						
MPMC	Manual Prospec	86.17	45	P	P	17 59 37.4	+1.2
	baz=230						
N02D	Trinity Center	86.38	39	P	P	17 59 37.8	+0.9
	baz=227						
IRM	Iron Mountain	86.47	48	P	P	17 59 38.8	+1.3
	baz=232						
M02C	Callahan	86.58	38	P	P	17 59 38.9	+1.0
	baz=226						
NVAR	Mina Array Bea	87.20	43	P	P	17 59 41.3	+0.2
	comp=Z,2.5nm,0.7s,baz=222,slow=7.7,SNR=5.4						
DL2	Dalian	87.61	317	P	P	17 59 43.3	+0.6
DL2				pmax	pmax		
	comp=Z,24nm,1.3s						
TUC	Tucson	88.28	51	P	P	17 59 47.8	+1.6
	baz=234						
CN2	Changchun	88.72	323	*e*P	P	17 59 47.8	0.0
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
J05D	Fort Rock, OR	88.75	38	P	P	17 59 48.3	+0.1
	baz=228						
I05D	Terrebonne, OR	89.41	37	P	P	17 59 52.1	+0.9
	baz=228						
KLR	Kul'dur	89.52	330	P	P	17 59 51.5	0.0
	comp=Z,9.0nm,0.9s,baz=116,slow=3.0,SNR=23						
BJI	Beijing	91.61	316	P	P	18 00 01.8	+0.4
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMAR	Chiang Mai Arr	92.65	289	P	P	18 00 08.7	+2.0
	comp=Z,0.4nm,0.6s,baz=165,slow=4.7,SNR=4.0						
CMAR	Chiang Mai Arr	92.65	289	P	P	18 00 07.9	+1.1
KMI	Kunming	92.89	297	*e*P	P	18 00 10.0	+2.0
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,210nm,4.9s						
SEY	Seymchan	94.35	347	P	P	18 00 12.2	-1.3
	comp=Z,4.9nm,0.8s,baz=158,slow=4.6,SNR=11						
MSTX	Muleshoe	94.79	54	P	P	18 00 16.0	-0.3
	baz=239						
HHC	Hu-ho-hao-te	94.94	314	*e*P	P	18 00 17.0	+0.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CD2	Chengdu	95.03	302	P	P	18 00 16.4	-1.0
ILAR	Eielson Array	96.40	13	P	P	18 00 20.8	-2.0
	comp=Z,0.9nm,0.5s,baz=227,slow=5.5,SNR=9.3						
ILAR	Eielson Array	96.40	13	P	P	18 00 20.7	-2.1
YKA	Yellowknife Ar	104.08	25	PKiKP	PKiKP	18 05 12.5	-0.4
	comp=Z,0.2nm,0.6s,baz=256,slow=1.4,SNR=2.4						
WMQ	Urumqi	112.04	309	*e*PKP	PKiKP	18 05 28.4	-0.2
MKAR	Makanchi Array	116.55	311	PKP	PKPdf	18 05 36.6	-0.4
	comp=Z,2.4nm,0.7s,baz=80,slow=1.4,SNR=27						
MKAR	Makanchi Array	116.55	311		PKPdf	18 05 36.4	-0.6
ZALV	Zalesovo Beam	116.67	319	PKP	PKPdf	18 05 36.4	-0.6
	comp=Z,1.5nm,0.7s,baz=166,slow=2.0,SNR=8.0						
ZALV	Zalesovo Beam	116.67	319		PKPdf	18 05 35.5	-1.5
BOSA	Boshof	118.66	204	PKP	PKiKP	18 05 43.5	+1.5
	comp=Z,2.8nm,0.6s,baz=188,slow=2.8,SNR=11						
KSH	Kashi	119.21	301	PKP	PKiKP	18 05 43.8	+1.2
KURK	Kurchatov	119.76	315		PKPdf	18 05 42.7	-0.3
KURBB	Kurchatov Arra	119.80	314	PKP	PKPdf	18 05 42.7	-0.4
	comp=Z,7.1nm,0.9s,baz=110,slow=1.9,SNR=15						
KBK	Karagaybulak	120.69	305	P	PKiKP	18 05 45.7	+0.2
	SNR=5.0						
UCH	Uchtor	120.92	304	P	PKiKP	18 05 47.3	+1.0
	SNR=6.3						
AAK	Ala-Archa	121.02	305	PKP	PKPdf	18 05 45.6	-0.4
	comp=Z,2.7nm,0.7s,baz=152,slow=4.0,SNR=12						
AAK	Ala-Archa	121.02	305	PKPdf	PKiKP	18 05 46.5	+0.4
USP	Ospenovka	121.14	305	P	PKPdf	18 05 46.1	+0.1
	SNR=6.9						
AML	Almayashu	121.49	304	P	PKiKP	18 05 47.9	+0.5
	SNR=12						
EKS2	Erkin-Say	121.54	305	P	PKiKP	18 05 47.6	+0.5
	SNR=6.3						
FRB	Frobisher Bay	124.10	30	PKP	PKPdf	18 05 49.1	-1.8
	comp=Z,4.3nm,0.8s,baz=329,slow=3.6,SNR=7.2						
BVAR	Borovoye Array	125.08	317	PKP	PKPdf	18 05 52.8	-0.4
	comp=Z,3.2nm,0.7s,baz=7.0,slow=26,SNR=12						
SPA0	Spitsbergen Ar	130.07	356	*e*PKPdf	PKPdf	18 06 01.4	-0.8
SPITS	Spitsbergen Ar	130.07	356	PKP	PKPdf	18 06 01.3	-0.8
	comp=Z,18nm,1.0s,baz=54,slow=7.3,SNR=6.6						
ARU	Arti	131.69	321	PKP	PKPdf	18 06 05.7	0.0
	comp=Z,1.3nm,0.3s,baz=349,slow=0.9,SNR=11						
GEYT	Alibeck	132.65	296	PKP	PKiKP	18 06 09.1	-0.2
	comp=Z,5.4nm,0.8s,baz=222,slow=2.0,SNR=9.5						
GEYT	Alibeck	132.65	296		PKiKP	18 06 08.8	-0.5
AKTO	Aktyubinsk	132.83	314	PKP	PKPdf	18 06 08.5	+0.5
	comp=Z,5.5nm,0.7s,baz=86,slow=2.3,SNR=21						
KIRV	Kirov	135.85	326	PKP	PKPdf	18 06 13.8	+0.4
	comp=Z,6.7nm,0.5s,baz=222,slow=8.4,SNR=3.8						
ARCES	ARCESS Array B	136.96	348	PKhKP	PKPpre	18 06 07.6	
	comp=Z,7.2nm,1.1s,baz=327,slow=2.0,SNR=5.1						
ARCES				PKP	PKPdf	18 06 15.9	+0.7
	comp=Z,3.0nm,0.5s,baz=26,slow=1.5,SNR=22						
KTK1	Kautokeino	137.82	349	*e*PKPdf	PKPdf	18 06 17.7	+0.9
BELG	Belogornoye	138.84	318	PKP	PKPdf	18 06 19.9	+0.8
	comp=Z,12nm,0.8s,baz=336,slow=4.4,SNR=4.1						
FINES	FINESS Array B	143.55	341	PKhKP	PKPpre	18 06 23.9	
	comp=Z,4.2nm,0.5s,baz=63,slow=3.1,SNR=17						
NSS	Namsos	143.65	353	*e*PKPdf	PKPbc	18 06 25.9	+0.4
CLDR	Caldiran	143.81	298	*e*P	PKPdf	18 06 28.4	-0.4
KBZ	Khabaz	144.00	306	PKP	PKPbc	18 06 27.3	+0.2
	comp=Z,6.8nm,1.0s,baz=150,slow=1.6,SNR=13						
KIV	Kislovodsk	144.11	306	⇓P	PKPbc	18 06 28.2	+0.5
CUKT	Cukurca	144.13	295	*e*P	PKPdf	18 06 29.1	-0.2
CHVG	Ch'k'valeri	144.77	304	⇑P	PKPdf	18 06 30.3	+0.3
SENK	Senkaya-Erzuru	144.88	300	*e*P	PKPdf	18 06 32.1	+1.5
SIRT	Sirnak	145.05	295	*e*P	PKPdf	18 06 32.0	+1.2
KOPR	Koprukoy-ERZUR	145.32	300	*e*P	PKPab	18 06 32.4	+0.4
VSU	Vasula	145.65	337	*e*P	PKPbc	18 06 31.7	0.0
MOL	Molde	145.99	355	*e*PKPab	PKPbc	18 06 32.2	-0.4
SVAN	Silvan-Diyarba	146.00	296	*e*P	PKPbc	18 06 33.8	+0.3
BNGB	Bingl	146.33	298	*e*P	PKPab	18 06 35.6	-0.2
DOMB	Dombas	146.38	354	*e*PKPab	PKPdf	18 06 33.1	+0.8
AKN	Aaknes	146.41	356	*e*PKPab	PKPdf	18 06 32.6	+0.4
MTSE	Matsula	146.41	339	*e*P	PKPbc	18 06 34.5	+0.5
DYBB	Diyarbakir	146.84	296	*e*P	PKPbc	18 06 35.8	-0.2
ERZN	Erzincan	147.00	299	*e*P	PKPab	18 06 37.7	-0.8
UPP	Uppsala	147.09	345	*e*P	PKPdf	18 06 34.6	+1.2
NB2	NORSAR Subarra	147.12	352	PKP	PKPdf	18 06 34.6	+1.1
	comp=Z,3.3nm,0.5s,baz=14,slow=3.0						
NB2	NORSAR Subarra	147.12	352	PKPab	PKPdf	18 06 34.6	+1.1
	baz=14,slow=3.0						
NOA	NORSAR Array B	147.12	352	PKPbc	PKPbc	18 06 35.3	-0.7
	comp=Z,5.9nm,0.5s,baz=15,slow=4.5,SNR=20						
ESPY	Espiye-Giresun	147.55	302	*e*P	PKPbc	18 06 38.4	+0.6
HFS	Hagfors	147.61	349	PKPbc	PKPbc	18 06 36.5	-0.8
	comp=Z,29nm,0.8s,baz=82,slow=3.1,SNR=26						
SKAR	Skarslia	147.79	354	*e*PKPab	PKPbc	18 06 38.0	+0.2
IDID	Didziasalis	147.97	333	*e*P	PKPbc	18 06 39.0	+0.6
ISAL	Salakas	148.03	334	*e*P	PKiKP	18 06 39.5	-0.6
MNK	Minsk	148.06	331	*i* PKP	PKPdf	18 06 36.9	+1.8
	comp=E,5.0nm,1.0s						
MNK				*i* PKP	PKPdf	18 06 36.9	+1.8
	comp=N,31nm,1.0s						
MNK				*i* PKP	PKPdf	18 06 36.9	+1.8
	comp=Z,63nm,1.0s						
MNK				*i* pPKP	pPKPdf	18 07 28.9	0.0
MNK				*i* sPKP		18 07 49.5	
MNK				*i* SKP		18 09 51.5	
MNK				*i* PP	PP	18 10 09.0	+0.6
MNK				*i* PKS	PKSdf	18 10 12.1	+2.1
MNK				*i* SKS	SKSdf	18 13 26.2	+2.9
MNK				*i* PPP	PPP	18 13 27.7	
MNK				*i* SKKS	SKKSdf	18 22 26.8	+2.5
MNK				*i* SPP	SPP	18 26 55.0	
MNK				*i* PPS	PPS	18 26 55.0	
MNK				*i* SS	SS	18 29 05.0	+8.2
MNK				*i* SSS	SSS	18 34 33.9	
IIGN	Ignalina	148.15	333	*e*P	PKiKP	18 06 39.7	-0.7
MALT	Malatya	148.15	297	*e*P	PKiKP	18 06 40.7	-0.4
NACGM	Naroch	148.24	332	*i* PKP	PKPbc	18 06 39.4	+0.3
NACGM				*i* PKP	PKPbc	18 06 39.4	+0.3
NACGM				*i* PKP	PKPbc	18 06 39.4	+0.3
NACGM				*i* PP	PP	18 08 58.6	-71
NACGM				*i* PPP	PPP	18 12 05.4	
NACGM				*i* SKS	SKSdf	18 12 57.2	-26
NACGM				*i* SKKS		18 14 42.0	
NACGM				*i* PS		18 18 31.2	
NACGM				*i* SSS	SSS	18 31 41.2	
KONO	Kongsberg	148.67	352	*e*PKPbc	PKPbc	18 06 39.5	-0.6
ODD1	Odda	148.69	355	*e*PKPab	PKPbc	18 06 40.0	-0.1
RSDY	Resadiye-TOKAT	148.69	301	*e*P	PKiKP	18 06 42.7	+0.6
DARE	Darende-Malaty	148.86	298	*e*P	PKiKP	18 06 43.2	+0.6
PABE	Paberze	148.89	335	*e*P	PKPbc	18 06 40.8	+0.2
SVSK	Karacayir	149.03	300	*e*P	PKiKP	18 06 43.1	+0.4
BLS5	Blasjo	149.19	355	*e*PKPbc	PKPbc	18 06 41.0	-0.4
PBUR	Paburge	149.19	338	*e*P	PKPab	18 06 44.7	-1.8
GAZ	Gaziantep	149.23	295	*e*P	PKiKP	18 06 42.9	-0.4
KMRS	Kahramanmaras	149.44	296	*i* P	PKiKP	18 06 43.5	-0.2
KVT	Kavak	149.51	303	*e*P	PKiKP	18 06 44.4	+0.6
AKASG	Malin Array Be	149.87	324	PKPbc	PKPbc	18 06 43.2	-0.1
	comp=Z,44nm,0.9s,baz=45,slow=3.0,SNR=87						
BNN	Bunyan	150.09	299	*e*P	PKiKP	18 06 45.4	+0.3
HOMB	Homborsund	150.14	353	*e*PKPbc	PKPbc	18 06 43.0	-0.6
HOMB	Homborsund	150.14	353	*i* P	PKPbc	18 06 43.2	-0.5
SNART	Snartemo	150.20	354	*i* P	PKPbc	18 06 44.2	+0.4
KOZT	Kozan	150.29	296	*e*P	PKPbc	18 06 44.3	-0.4
SUW	Suwalki	150.33	334	*e*PKP	PKPbc	18 06 44.5	+0.3
SUW	Suwalki	150.33	334	*e*P	PKiKP	18 06 44.7	-0.2
CEYT	Ceyhan	150.41	295	*e*P	PKiKP	18 06 46.3	+0.6
KRTS	Karatas	150.75	294	*e*P	PKiKP	18 06 46.8	+0.4
CORM	Corum	150.76	302	*e*P	PKiKP	18 06 47.4	+0.9
MMAI	Mount Meron Ar	150.88	287	PKPbc	PKiKP	18 06 48.4	+1.5
	comp=Z,57nm,0.8s,baz=73,slow=4.8,SNR=31						
KARA	Karaisali	150.93	296	*e*P	PKiKP	18 06 46.8	0.0
BRTR	Keskin Array B	151.60	301	PKPbc	PKiKP	18 06 48.3	0.0
	comp=Z,14nm,0.9s,baz=135,slow=4.0,SNR=40						
SORM	Soroca	151.81	321	⇑P	PKPbc	18 06 47.9	+0.1
BSD	Bornholm Skovb	152.01	344	*e*P	PKPbc	18 06 47.5	-0.6
BSD	Bornholm Skovb	152.01	344	*i* P	PKPbc	18 06 48.1	0.0
BSD	Bornholm Skovb	152.01	344	*i* P	PKPbc	18 06 48.1	0.0
BEL	Belsk	152.93	334	*e*PKP	PKiKP	18 06 51.4	+1.0
EKA	Eskdalemuir Ar	153.23	6	PKPbc	PKPbc	18 06 50.1	-0.7
	comp=Z,0.9nm,0.4s,baz=332,slow=2.0,SNR=9.1						
EKA				PKPab	PKPab	18 07 01.4	-2.0
	comp=Z,2.8nm,0.5s,baz=329,slow=3.1,SNR=13						
CFR	Carcaliu	153.47	315	⇑P	PKPbc	18 06 51.1	-0.5
TESR	Tescani	153.67	319	⇑P	PKiKP	18 06 52.5	+0.4
BIZ	Bicaz	153.74	320	⇓P	PKiKP	18 06 52.8	+0.5
KWP	Kalwaria Pacla	153.75	328	*e*PKP	PKPab	18 07 05.9	+0.1
BURAR	Bucovina Array	153.82	322	⇓P	PKiKP	18 06 54.0	+1.5
HARR	Harsova	153.84	314	⇓P	PKiKP	18 06 53.8	+1.3
VRI	Vrincioaia	153.97	318	⇓P	PKPbc	18 06 51.3	-1.5
PLOR	Plostina	154.03	318	⇓P	PKPbc	18 06 52.1	-0.8
BSEG	Bad Segeberg	154.09	348	*e*PKPab	PKPab	18 07 06.2	-0.9
	baz=19,slow=4.3						
KOLS	Kolonicke sedl	154.44	328	*e*PKP	PKPab	18 07 09.0	+0.1
OJC	Ojcow	154.58	332	*e*PKP	PKiKP	18 06 54.8	+0.9
MLR	Muntele Rosu	154.64	318	⇑P	PKPbc	18 06 53.9	-0.4
DOPR	Dopca	154.70	319	⇑P	PKiKP	18 06 55.6	+1.3
CRVS	Cervenica-Dubn	154.84	328	*e*PKP	PKPab	18 07 10.1	-0.5
NIE	Niedzica	154.98	331	*e*PKP	PKPab	18 07 11.3	+0.1
VOIR		155.19	318	⇑P	PKPab	18 07 04.1	-8.2
KSP	Ksiaz	155.38	338	*e*PKP	PKPab	18 07 12.8	+0.1
FLTG	Flechtingen	155.43	346	*e*PKPab	PKPab	18 07 11.4	-1.5
	baz=19,slow=4.3						
ARR	Arges	155.47	319	⇓P	PKPdf	18 06 57.9	+11
NRDL	Niedersach Rie	155.50	348	*e*PKPab	PKPab	18 07 11.6	-1.5
	baz=19,slow=4.3						
DRGR		155.67	323	⇓P	PKPdf	18 06 56.6	+10
UPC	Upice	155.76	337	*e*PKPAB	PKPab	18 07 13.8	-0.6
DPC	Dobruska-Polom	155.78	337	*e*PKPAB	PKPab	18 07 13.8	-0.8
MORC	Moravsky Berou	155.82	334	*e*PKP	PKPab	18 07 13.9	-0.8
KRLC	Kraliky	155.85	336	*e*PKPAB	PKPab	18 07 13.9	-1.0
CLL	Collm	155.96	342	*i* PKPdiff	PKPdf	18 06 57.5	+10
CLL				*i* PKPab	PKPab	18 07 12.9	-2.3
IBBN	Ibbenburen	156.07	351	*e*PKPab	PKPab	18 07 14.5	-1.1
	baz=19,slow=4.3						
CLZ	Clausthal	156.07	347	*e*PKPab	PKPab	18 07 14.7	-1.0
	baz=19,slow=4.3						
BRG	Berggiesshubel	156.09	341	*i* PKP	PKPab	18 07 14.7	-1.1
BRG				Amp		18 07 17.0	
	comp=Z,16nm,1.4s						
BRG	Berggiesshubel	156.09	341	*i* PKP	PKPab	18 07 14.7	-1.1
BRG				Amp		18 07 17.0	
	comp=Z,16nm,1.4s						
BRG	Berggiesshubel	156.09	341	*e*PKPab	PKPab	18 07 14.7	-1.0
	baz=19,slow=4.3						
FBE	Freiberg	156.21	342	*e*PKPab	PKPab	18 07 15.7	-0.6
	baz=19,slow=4.3						
VYHS	Vyhne	156.31	331	*e*PKP	PKPab	18 07 16.3	-0.6
JAVC	Velka Javorina	156.51	333	*e*PKP	PKPab	18 07 18.1	+0.3
VRAC	Vranov	156.56	335	PKPab	PKPab	18 07 17.4	-0.5
	comp=Z,8.9nm,0.9s,baz=39,slow=5.6,SNR=9.1						
VRAC	Vranov	156.56	335	*e*PKP	PKPab	18 07 17.3	-0.6
LIC	Lamto	156.67	163	*e*PKP2	PKPab	18 07 22.0	+2.8
	comp=Z,13nm,0.6s						
PRU	Pruhonice	156.68	339	*e*PKPAB	PKPab	18 07 17.5	-0.9
KRUC	Moravsky	156.83	335	*e*PKP	PKPab	18 07 18.3	-0.8
KIC	Kosan Boka	156.88	163	*e*PKP2	PKPab	18 07 22.9	+2.8
	comp=Z,10nm,0.8s						
SMOL	Smolenice	156.88	333	*e*PKP	PKPab	18 07 19.2	-0.1
TANN	Tannenbergstha	156.91	342	*e*PKPab	PKPab	18 07 18.6	-0.9
	baz=19,slow=4.3						
MOX	Moxa	156.92	344	*e*PKPab	PKPab	18 07 18.3	-1.1
	baz=19,slow=4.3						
BZS	Buzias	157.01	322	⇑P	PKPdf	18 06 58.3	+10
HERR	Herculane	157.03	320	⇑P	PKPdf	18 06 59.4	+11
KASTN	Kahler Asten	157.04	349	*e*PKPab	PKPab	18 07 18.4	-1.5
	baz=19,slow=4.3						
WERN	Wernitzgruen	157.05	342	*e*PKPab	PKPab	18 07 19.2	-0.8
	baz=19,slow=4.3						
MODS	Modra-Piesok	157.05	333	*e*PKP	PKPab	18 07 19.6	-0.5
TIC	Toumodi	157.08	163	*e*PKP2	PKPab	18 07 23.8	+2.8
NKC	Novy Kostel	157.08	342	*e*PKPAB	PKPab	18 07 19.2	-0.9
DBIC	Dimbokro	157.15	163	PKPab	PKPab	18 07 24.2	+3.0
	comp=Z,1.9nm,0.6s,baz=190,slow=11,SNR=2.5						
ZST	Bratislava	157.26	333	*e*PKP	PKPab	18 07 19.3	-1.6
MDVR	Moldovita	157.49	321	⇓P	PKPdf	18 06 58.7	+9.4
KHC	Kasperske Hory	157.74	339	*e*PKPAB	PKPab	18 07 21.9	-1.1
VTS	Vitosha	157.82	314	⇑P	PKPab	18 07 18.2	-5.6
GRF	Grafenberg Arr	157.89	343	*e*PKPab	PKPab	18 07 22.9	-0.7
	baz=19,slow=4.3						
WET	Wettzell	157.94	340	*e*PKPab	PKPab	18 07 23.5	-0.4
	baz=19,slow=4.3						
GEC2	GERESS Array S	157.95	339	*e*PKPab	PKPab	18 07 23.0	-1.0
	baz=19,slow=4.3						
GERES	GERESS Array B	157.95	339	PKPab	PKPab	18 07 23.0	-1.0
	comp=Z,2.1nm,0.8s,baz=38,slow=5.0,SNR=12						
CONA	Conrad Observa	157.97	334	*i* P	PKPab	18 07 23.4	-0.8
	comp=Z,10nm,0.9s,SNR=5.7						
TNS	Taunus Mts	157.98	348	*e*PKPab	PKPab	18 07 22.8	-1.2
	baz=19,slow=4.3						
MOA	Molln	158.62	336	*e*P	PKPab	18 07 25.8	-1.1
	comp=Z,12nm,1.2s						
ARSA	Arzberg	158.66	334	*e*P	PKPab	18 07 25.4	-1.6
	comp=Z,8.6nm,1.5s						
WLF	Walferdange	158.87	352	*e*PKPab	PKPab	18 07 26.7	-1.2
	baz=19,slow=4.3						
SOKA	Soboth	159.32	333	*i* P	PKPab	18 07 28.9	-1.1
	comp=Z,15nm,1.3s,SNR=7.2						
KBA	Koelnbreinsper	159.60	337	*e*P	PKPab	18 07 30.0	-1.3
	comp=Z,14nm,1.4s						
OBKA	Obir	159.65	334	*e*P	PKPab	18 07 30.4	-1.0
	comp=Z,8.1nm,1.1s						
MYKA	Terra Mystica	159.88	336	*e*P	PKPab	18 07 31.0	-1.5
	comp=Z,8.3nm,0.9s						
WATA	Walderalm	159.95	340	*e*P	PKPab	18 07 31.7	-1.1
	comp=Z,19nm,1.3s						
RETA	Reutte	160.04	342	*e*P	PKPab	18 07 31.9	-1.2
	comp=Z,18nm,1.2s						
MOTA	Moosalm	160.08	341	*e*P	PKPab	18 07 32.6	-0.8
	comp=Z,16nm,1.1s						
SQTA	Sankt Quirin	160.16	341	*e*P	PKPab	18 07 33.4	-0.3
	comp=Z,14nm,1.1s						
ABTA	Abfaltersbach	160.18	338	*e*P	PKPab	18 07 32.6	-1.1
	comp=Z,11nm,0.9s						
DAVA	Damuels	160.46	343	*e*P	PKPab	18 07 33.3	-1.8
	comp=Z,11nm,1.1s						
FETA	Feichten	160.48	341	*e*P	PKPab	18 07 34.4	-0.8
	comp=Z,9.1nm,1.3s						
DAVOX	Davos/Dischmat	160.93	343	PKPab	PKPab	18 07 35.8	-1.3
	comp=Z,2.3nm,0.5s,baz=352,slow=3.3,SNR=3.6						
TORD	Torodi Ar. Bea	164.45	180	PKP	PKPdf	18 06 58.3	+0.8
	comp=Z,4.3nm,1.0s,baz=352,slow=2.5,SNR=6.8						
TORD				PKPab	PKPab	18 07 55.9	+2.9
	comp=Z,8.5nm,0.9s,baz=172,slow=3.6,SNR=14						
ESDC	Sonseca Array	168.15	22	PKP	PKPdf	18 07 01.0	+1.3
	comp=Z,2.2nm,1.1s,baz=343,slow=4.5,SNR=5.7						
KEST	Kesra	170.54	319	PKPab	PKPab	18 08 19.6	-0.2
	comp=Z,5.7nm,0.8s,baz=325,slow=1.5,SNR=6.0						

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*BJI **13** 17:51:57.0±0.0, 64.°60N×17.°40W, h5^{km}, mB5.2/8, mb4.6/14, Ms4.9/1, Ms7 4.5/1*

*REY **13** 17:51:58.0, 64.°66N×17.°41W, h10^{km}*

*IDC **13** 17:51:59.7±0.8, 64.°53N×17.°61W, h0^{km}, mb3.8/10, mb1 4.1/13, mb1mx3.7/59, mbtmp3.9/13, ML3.5/3, MS3.7/5, Ms1 3.7/5, ms1mx3.2/53, Error ellipse: s-maj=23.7km s-min=10.7km az=22.0*

*NEIC **13** 17:52:00.7±2.8, 64.°68N±0.°08×17.°3W±0.°1, h9^{km}±4^{km}, mb4.7/21, Error ellipse: s-maj=11.5km s-min=8.4km az=180.0*

ISC 13 17:52:00.5±0.4**, 64.°69N**±0.°03×**17.°29W**±0.°03**, h10^{km}, n97,** σ**2.^{s}21**/102**, mb4.6**/27**, MS3.4**/3**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.11	341	P	Pg	17 52 00.9	-2.4
	baz=7.3						
IDYN				S	Sg	17 52 03.6	-1.8
	baz=7.3						
IURH	Urdarhals	0.15	24	P	Pg	17 52 02.1	-1.7
	baz=34						
IURH				S	Sg	17 52 05.2	-1.0
	baz=34						
IKVE	Kverkfjoll	0.26	92	P	Pg	17 52 04.3	-1.5
	baz=86						
IKVE				S	Sg	17 52 08.8	-0.7
	baz=86						
IHAM	Hamarinn	0.31	228	P	Pg	17 52 03.0	-3.8
	baz=225						
THOR	Thorvaldshraun	0.36	46	P	Pg	17 52 05.8	-1.8
	baz=48						
THOR				S	Sb	17 52 12.1	-2.6
	baz=48						
IKRE	Kreppuhraun	0.40	76	P	Pg	17 52 06.4	-1.9
	baz=74						
IKRE				S	Sg	17 52 13.0	-0.6
	baz=74						
IASK	Askja	0.46	36	P	Pg	17 52 07.2	-2.2
	baz=39						
IASK				S	Sb	17 52 14.6	-2.9
	baz=39						
ISKR	Skrokkalda	0.49	255	P	Pg	17 52 06.2	-3.9
	baz=257						
IMKO	Mokollar	0.50	54	P	Pg	17 52 08.2	-1.9
	baz=54						
IMKO				S	Sb	17 52 16.6	-2.1
	baz=54						
IJOK	Jokulheimar	0.55	228	P	Pg	17 52 07.2	-4.0
	baz=226						
IKSK	Karasker	0.64	146	P	Pg	17 52 09.0	-3.7
	baz=140						
IKSK				S	Sg	17 52 18.2	-2.9
	baz=140						
ISVA	Svartarkot	0.65	1	P	Pg	17 52 10.2	-2.9
	baz=5.3						
ISVA				S	Sg	17 52 19.6	-2.0
	baz=5.3						
IVSH	V-Sauoahnukur	0.68	79	P	Pg	17 52 11.0	-2.6
	baz=78						
IVSH				S	Sg	17 52 21.0	-1.5
	baz=78						
IIEY	Innrieyrar	0.70	212	P	Pg	17 52 09.7	-4.2
	baz=209						
IIEY				S	Sg	17 52 18.6	-4.4
	baz=209						
IKAL	Kalfafell	0.76	193	P	Pg	17 52 11.0	-4.1
	baz=190						
IKAL				S	Sg	17 52 21.4	-3.7
	baz=190						
IADA	Aoalbol	0.80	65	P	Pg	17 52 13.1	-2.8
	baz=64						
IADA				S	Sb	17 52 25.1	-2.3
	baz=64						
IFAG	Fagurholsmyri	0.86	161	P	Pg	17 52 13.1	-3.9
	baz=157						
IFAG				S	Sg	17 52 25.1	-3.1
	baz=157						
IMEL	Melhnausar	0.93	16	P	Pg	17 52 14.9	-3.3
	baz=19						
IREN	Reynihlio	0.98	9	P	Pg	17 52 15.7	-3.6
	baz=12						
IKVO	Krokottuvotn	1.04	9	P	Pg	17 52 16.7	-3.8
	baz=12						
IGRS	Grimsstaoir	1.07	27	P	Pg	17 52 17.5	-3.6
	baz=28						
ISNB	Snabyli	1.12	212	P	Pn	17 52 17.0	-5.2
	baz=211						
IGHA	Grjothals	1.19	12	P	Pg	17 52 19.1	-4.3
	baz=14						
ISKI	Skildingahlsh	1.19	5	P	Pb	17 52 19.1	-4.0
	baz=7.3						
IGRA	Granastaoir	1.24	354	P	Pb	17 52 19.6	-4.3
	baz=357						
BORG	Borgarnes	1.74	274	Pg	Pn	17 52 27.4	-3.3
	33nm,0.3s,baz=103,slow=7.9,SNR=54						
BORG				Lg	Lg	17 52 49.6	
	7.4nm,0.3s,baz=35,slow=23,SNR=4.0						
BORG	Borgarnes	1.74	274		Pn	17 52 27.1	-3.5
BORG				Sn	Sn	17 52 50.8	-2.0
SCO	Scoresbysund	6.09	345	Pn	Pn	17 53 29.6	-0.7
SCO				Sn	Sn	17 54 40.6	+0.7
SCO	Scoresbysund	6.09	345	*e*	Pn	17 53 23.3	-7.0
	baz=164,slow=10						
SCO				*i* P	Pb	17 53 30.0	-16
SCO				*i* S	Sn	17 54 44.9	+4.9
SCO				IAML		17 54 54.7	
	comp=Z,1.7nm,0.5s						
ANGG	Ammassalik, Gr	8.61	285	Pn	Pn	17 54 09.4	+4.5
SUMG	Summit	10.98	325	Pn	Pn	17 54 40.8	+3.1
EKB9	Eskdalemuir Ar	11.69	136	Pn	Pn	17 54 47.7	+0.6
EKB	Eskdalemuir	11.70	137	Pn	Pn	17 54 46.2	-1.1
EKA	Eskdalemuir Ar	11.71	137	Pn	Pn	17 54 46.4	-0.9
	baz=326,slow=13,SNR=11						
ESK	Eskdalemuir	11.71	137	Pn	Pn	17 54 46.2	-1.2
NC204	NORSAR Array S	13.14	92	Pn	Pn	17 55 05.2	-1.7
NBO00	NORSAR Array S	13.26	93	Pn	Pn	17 55 07.0	-1.5
NOA	NORSAR Array B	13.44	93	Pn	Pn	17 55 08.6	-2.4
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.4						
SFJD	Kangerlussuaq	13.74	295	LR	LR	18 00 04.7	
	comp=Z,444nm,19.8s,baz=98,slow=36						
HFS	Hagfors	14.96	93	Pn	Pn	17 55 31.1	-0.5
	comp=Z,0.1nm,0.3s,baz=264,slow=13,SNR=2.6						
FINES	FINESS Array B	19.61	79	P	Pn	17 56 30.3	+0.4
	comp=Z,0.1nm,0.3s,baz=284,slow=11,SNR=4.7						
FINES				LR	LR	18 03 38.2	
	comp=Z,254nm,19.1s,baz=293,slow=35						
CLL	Collm	20.63	116	*i* P	P	17 56 40.1	+0.4
	comp=Z,77nm,2.3s						
CLL				*i*		17 56 46.2	
NKC	Novy Kostel	21.28	119	*e*P	P	17 56 52.5	+5.8
BRG	Berggiesshubel	21.34	115	*i* P	P	17 56 47.4	+0.1
BRG				Amp		17 56 50.5	
	comp=Z,22nm,1.5s						
BRG				*e*x	x	17 56 56.4	

BRG				Amp		17 57 00.4	
	comp=Z,29nm,1.6s						
BRG	Berggiesshubel	21.34	115	iP	P	17 56 47.4	+0.1
BRG				Amp		17 56 50.5	
	comp=Z,22nm,1.5s						
BRG				ex	x	17 56 56.4	
BRG				Amp		17 57 00.4	
	comp=Z,29nm,1.6s						
BFO	Black Forest	21.39	128	P	P	17 56 49.1	+1.1
FRB	Frobisher Bay	21.83	291	LR	LR	18 04 17.5	
	comp=Z,171nm,21.5s,baz=59,slow=34						
KHC	Kasperske Hory	22.60	119	eP	P	17 57 03.9	+2.9
KHC				ex	x	17 57 11.7	
KHC	Kasperske Hory	22.60	119	P	P	17 57 01.9	+0.9
KHC				IAmb	IAmb	17 57 07.2	
	comp=Z,40nm,2.0s						
DPC	Dobruska-Polom	22.68	113	eP	P	17 57 02.1	+0.3
GEC2	GERESS Array S	22.89	119	P	P	17 57 05.1	+1.2
GEC2B	GERESS ARRAY S	22.89	119	P	P	17 57 02.9	-1.1
GERES	GERESS Array B	22.89	119	P	P	17 57 05.2	+1.2
	comp=Z,0.9nm,0.7s,baz=329,slow=9.3,SNR=5.9						
TUE	Stuetta	23.35	129	P	P	17 57 10.2	+1.3
TUE				IAmb	IAmb	17 57 32.3	
	comp=Z,25nm,1.4s						
VRAC	Vranov	23.62	114	LR	LR	18 07 54.0	
	comp=Z,235nm,19.9s,baz=330,slow=40						
VRAC	Vranov	23.62	114	eP	P	17 57 12.8	+1.5
MORC	Moravsky Berou	23.62	112	eP	P	17 57 11.9	+0.5
MORC	Moravsky Berou	23.62	112	P	P	17 57 11.4	+0.1
KRUC	Moravsky	23.74	115	eP	P	17 57 13.9	+1.4
CTI	Castel Tesino	24.50	126	P	P	17 57 20.3	+0.6
CTI				IAmb	IAmb	17 57 28.0	
	comp=Z,42nm,2.0s						
ZOU	Zoufplan	24.54	123	P	P	17 57 21.5	+1.4
ZOU				IAmb	IAmb	17 57 28.9	
	comp=Z,23nm,1.7s						
SMOL	Smolenice	24.59	114	eP	P	17 57 22.8	+2.5
MODS	Modra-Piesok	24.64	115	eP	P	17 57 23.0	+2.2
LANS	Liptovska Anna	24.89	111	eP	P	17 57 24.2	+1.1
VYHS	Vyhne	25.16	113	eP	P	17 57 27.1	+1.6
KWP	Kalwaria Pacla	25.83	106	P	P	17 57 33.5	+2.0
PSZ	Piszkesteto	26.04	112	P	P	17 57 34.7	+1.1
PSZ				IAmb	IAmb	17 57 37.4	
	comp=Z,36nm,1.7s						
ESDC	Sonseca Array	26.23	156	P	P	17 57 35.9	+0.5
	comp=Z,1.4nm,0.8s,baz=343,slow=8.8,SNR=8.2						
ESDC	Sonseca Array	26.23	156	P	P	17 57 36.4	+1.0
MURB	Monte Urbino	27.24	128	P	P	17 57 46.0	+1.6
MURB				IAmb	IAmb	17 57 58.7	
	comp=Z,38nm,1.6s						
MDT	Midelt	32.84	160	P	P	17 58 35.8	+1.7
	comp=Z,2.4nm,0.9s,baz=11,slow=7.2,SNR=6.0						
MDT				LR	LR	18 11 33.9	
	comp=Z,54nm,19.1s,baz=13,slow=36						
YKA	Yellowknife Ar	39.27	313	P	P	17 59 30.1	+1.5
	comp=Z,1.1nm,1.0s,baz=51,slow=8.9,SNR=4.2						
YKA				PcP	PcP	18 01 39.8	+2.7
	comp=Z,0.6nm,1.0s,baz=58,slow=5.9,SNR=3.9						
TIXI	Tiksi	41.99	15	P	P	17 59 51.2	+0.2
TIXI				IAmb	IAmb	17 59 58.5	
	comp=Z,22nm,2.0s						
TOLK	Toolik Lake Re	42.77	336	P	P	17 59 58.9	+1.5
TOLK				IAmb	IAmb	18 00 03.1	
	comp=Z,37nm,1.8s						
IL31		45.71	333	P	P	18 00 20.8	-0.1
V53A	Saluda	48.00	266	P	P	18 00 39.4	+0.1
KURK	Kurchatov	48.02	58	P	P	18 00 38.4	-0.8
EGMT	Eagleton	48.95	297	P	P	18 00 49.1	+2.6
EGMT				IAmb	IAmb	18 00 51.6	
	comp=Z,18nm,1.3s						
KOWA	Kowa	50.96	163	P	P	18 01 01.4	-0.5
	comp=Z,0.7nm,0.3s,baz=349,slow=7.8,SNR=4.4						
KOWA	Kowa	50.96	163	IAmb	IAmb	18 01 28.6	
	comp=Z,15nm,1.9s						
MKAR	Makanchi Array	52.63	58	P	P	18 01 15.0	+0.8
	comp=Z,0.8nm,0.8s,baz=324,slow=6.0,SNR=4.9						
MKAR	Makanchi Array	52.63	58	P	P	18 01 14.6	+0.4
TORD	Torodi Ar. Bea	53.12	157	P	P	18 01 17.0	-1.1
	comp=Z,1.4nm,0.8s,baz=338,slow=7.9,SNR=4.1						
PDAR	Pinedale Array	53.25	293	P	P	18 01 19.5	+0.4
	comp=Z,1.8nm,0.9s,baz=76,slow=3.8,SNR=4.9						
TUL1	Leonard	53.36	278	P	P	18 01 20.8	+1.1
KSH	Kashi	56.41	68	P	P	18 01 44.8	+3.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	Urumqi	57.14	56	eP	P	18 01 50.9	+4.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.9s						
DBIC	Dimbokro	58.59	165	P	P	18 01 56.2	-1.0
	comp=Z,2.4nm,0.8s,baz=2.6,slow=11,SNR=4.4						
DBIC	Dimbokro	58.59	165	P	P	18 01 56.5	-0.7
TIC	Toumodi	58.59	166	eP	P	18 01 56.4	-0.9
KIC	Kosan Boka	58.91	165	eP	P	18 01 58.6	-0.8
	comp=Z,5.5nm,0.9s						
LIC	Lamto	59.01	166	eP	P	18 01 59.7	-0.4
	comp=Z,6.2nm,0.6s						
TXAR	Lajitas Array	62.37	280	P	P	18 02 24.8	+1.7
	comp=Z,0.8nm,1.0s,baz=353,slow=3.6,SNR=2.5						
GTA	Gaotai	65.22	49	eP	P	18 02 43.1	+1.3
GTA				pP	sP	18 02 47.8	+1.0
GTA				sP	pP	18 02 50.3	+4.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC	Hu-ho-hao-te	67.44	40	eP	P	18 02 58.0	+2.1
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
LZH	Lanzhou	69.55	48	eP	P	18 03 08.6	-0.7
LZH				pP	pP	18 03 13.1	+0.1
LZH				sP	sP	18 03 16.4	+2.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
NJ2	Nanjing	77.67	37	eP	P	18 03 57.6	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						

KRNET 13 17:55:26.0±0.1, 42°.62N×74°.69E, mb1.9, 5C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	0.15	279	⇑iP	Pg	17 55 29.2	+0.3
	baz=79						
KBK	Karagaybulak	0.19	77	⇑iP	Pg	17 55 29.8	+0.1
	baz=77						
KBK				⇑iS	Sg	17 55 32.7	+0.5
	baz=77						
KBK	Karagaybulak	0.19	77	P	Pg	17 55 30.0	+0.3
	SNR=23						
FRU1	Bishkek	0.20	346	⇑iP	Pg	17 55 30.4	+0.5
	baz=45						
FRU1				⇑iS	Sg	17 55 33.9	+1.4
	baz=45						

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*IDC **13** 18:02:24.3±3.2, 40°.54N×143°.95E, h0km, mb3.7/7, mb1 3.7/10, mb1mx3.4/61, mbtmp3.7/10, ML3.0/2, Error ellipse: s-maj=57.5km s-min=28.9km az=120.0*

*JMA **13** 18:02:32.0±0.1, 40°.86N×143°.32E, h28km, M3.6*

*NIED **13** 18:02:32.1, 40°.86N×143°.32E, h28km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.31; $M_{\theta\theta}$-2.09; $M_{\phi\phi}$-1.21; $M_{r\theta}$-0.63; $M_{\theta\phi}$-3.00; $M_{\phi r}$2.55; Fault plane solution: $M_0$4.93000×10^{14} NP1:ϕ_s20.00000°, δ62.00000°, λ53.00000°. NP2:ϕ_s258.00000°, δ45.00000°, λ138.00000°.*

ISC 13 18:02:31.0±3.7, 40°.87N±0°.05×143°.37E±0°.08, h14km±23km, n37, σ1s.63/40, mb3.6/8, 2C-2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	1.16	352	P	Pb	18 02 52.7	-0.1
JEM				eS	Sb	18 03 07.9	+0.2
JTHR	Tokachihiroo	1.43	358	P	Pn	18 02 57.0	+0.5
JTHR				eS	Sn	18 03 14.8	-0.2
JKEN	Kujiedanarisaw	1.43	243	⇑P	Pn	18 02 55.8	-0.6
JTH	Tanohata	1.48	232	P	Pn	18 02 57.1	0.0
JTH				eS	Sn	18 03 14.9	-1.3
JNBK	Urakawa-nobuka	1.49	342	P	Pn	18 02 57.5	+0.2
JANG	Nango	1.49	251	P	Pn	18 02 56.9	-0.5
JCH	Churui	1.75	360	P	Pn	18 03 01.3	+0.4
JCH				eS	Sn	18 03 21.9	-1.0
JTM	Tenmabayashi	1.75	268	P	Pn	18 03 01.0	+0.1
JTM				eS	Sn	18 03 21.9	-1.0
JOT	Ohata	1.83	287	⇑P	Pn	18 03 02.0	0.0
JKB	Kayabe	2.03	301	P	Pn	18 03 05.1	+0.3
JOM	Ohasama	2.11	230	P	Pn	18 03 07.2	+1.3
JAK	Akkeshi	2.35	25	P	Pn	18 03 09.3	+0.2
JAK				eS	Sn	18 03 36.7	-1.0
JFR	Furan	2.37	346	P	Pn	18 03 10.3	+0.9
JEW	Eniwo	2.44	325	P	Pn	18 03 11.7	+1.3
JAR	Ashorobuto	2.45	7	⇓P	Pn	18 03 10.6	+0.1
JAR				eS	Sn	18 03 38.1	-2.1
JMK	Ichinoseki	2.53	222	⇓P	Pn	18 03 13.2	+1.6
JMK				eS	Sn	18 03 43.1	+1.0
ASAJ	Asahikawa	3.30	350	Pn	Pn	18 03 23.2	+1.0
	2.0nm,0.3s,baz=206,slow=11,SNR=33						
ASAJ				Sn	Sb	18 04 07.5	-1.8
	2.4nm,0.3s,baz=304,slow=32,SNR=1.5						
MJAR	Matsushiro Arr	5.91	225	Pn	Pn	18 03 54.2	-3.9
	0.0nm,0.3s,baz=30,slow=14,SNR=1.4						
USRK	Ussuriysk Ar.	9.04	295	Pn	Pn	18 04 44.1	+3.2
	baz=92,slow=15,SNR=6.0						
SEY	Seymchan	22.75	11	P	P	18 07 29.9	-2.5
	0.8nm,0.6s,baz=24,slow=23,SNR=1.7						
SONM	Songino Array	27.14	297	P	P	18 08 13.5	-0.2
	0.5nm,0.5s,baz=96,slow=7.9,SNR=5.2						
H11N2	WAKE ISLAND Hy	29.10	129	T	T	18 39 12.8	
	baz=322,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	29.11	129	T	T	18 39 12.4	
	baz=322,slow=74,SNR=8.2						
H11N3	WAKE ISLAND Hy	29.12	129	T	T	18 39 13.8	
	baz=322,slow=74,SNR=10.0						
H11S1	WAKE ISLAND Hy	29.95	131	T	T	18 40 20.4	
	baz=323,slow=76,SNR=5.7						
H11S3	WAKE ISLAND Hy	29.95	131	T	T	18 40 22.5	
	baz=323,slow=76,SNR=5.1						
H11S2	WAKE ISLAND Hy	29.96	131	T	T	18 40 22.2	
	baz=323,slow=76,SNR=4.5						
ZALV	Zalesovo Beam	40.57	309	P	P	18 10 09.9	+0.2
	0.8nm,0.5s,baz=78,slow=8.0,SNR=4.3						
MKAR	Makanchi Array	43.48	299	P	P	18 10 33.5	-0.2
	0.4nm,0.4s,baz=83,slow=9.8,SNR=8.9						
KURBB	Kurchatov Arra	44.94	305	P	P	18 10 44.6	-0.6
	1.6nm,0.7s,baz=78,slow=8.9,SNR=11						
GUN	Gumba	48.38	273	eP	P	18 11 15.3	+2.4
	5.9nm,0.4s						
KKN	Kakani	48.89	274	eP	P	18 11 20.1	+3.4
PKIN	Phulchoki	48.92	273	eP	P	18 11 19.9	+3.0
DMN	Daman	49.12	273	eP	P	18 11 21.0	+2.5
BVAR	Borovoye Array	49.19	310	P	P	18 11 18.0	-0.4
	0.3nm,0.5s,baz=197,slow=39,SNR=2.6						
DANN	Dangsing	49.75	275	eP	P	18 11 26.2	+2.8
FINES	FINESS Array B	66.14	332	P	P	18 13 16.7	-0.7
	3.5nm,0.9s,baz=66,slow=6.7,SNR=2.0						

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*BJI **13** 18:03:37.9±0.0, 26°.85N×143°.67E, h18km, mB4.9/28, mb4.5/42, Ms4.4/8, Ms7 4.1/7*

*IDC **13** 18:03:39.0±0.5, 27°.12N×143°.54E, h0km, mb4.3/28, mb1 4.5/32, mb1mx4.3/57, mbtmp4.3/32, ML3.7/4, MS3.3/6, Ms1 3.3/6, ms1mx3.0/41, Error ellipse: s-maj=13.0km s-min=11.4km az=101.0*

*JMA **13** 18:03:42.9±0.1, 27°.28N×143°.39E, h79km±5km, M4.5*

*NEIC **13** 18:03:43.2±1.7, 27°.16N±0°.07×143°.57E±0°.07, h26km±4km, mb5.0/157, Error ellipse: s-maj=10.8km s-min=8.1km az=149.0*

ISC 13 18:03:40.8±2.1, 27°.22N±0°.05×143°.52E±0°.06, h10km±12km, n306, σ1s.27/333, mb4.9/115, 1C, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.20	264	P	Pb	18 04 03.2	-0.4
CBIJ				eS	Sg	18 04 18.3	-1.2
JCJ	Chichijima	1.20	264	Pn	Pb	18 04 03.3	-0.4
	614nm,0.3s,baz=281,slow=23,SNR=321						
JCJ				Sn	Sg	18 04 19.2	-0.3
	526nm,0.3s,baz=114,slow=23,SNR=6.1						
JHH2	Haha-jima-NKT2	1.34	244	P	Pn	18 04 05.2	-0.4
JAOM	Aogashimamukai	6.16	329	eS	Sn	18 06 19.8	-2.5
JHCJ	Hachijojimakas	6.66	332	P	Pn	18 05 18.1	-0.6
JHCJ				eS	Sn	18 06 30.1	-4.6
JHJ2	Mitsune	6.69	332	P	Pn	18 05 19.0	-0.1
JHJ2				S	Sn	18 06 31.3	-4.0
JHJ2	Mitsune	6.69	332	Pn	Pn	18 05 18.9	-0.1
JHJ	Hachijo jima 2	6.71	332	Pn	Pn	18 05 18.9	-0.5
	7.3nm,0.3s,baz=91,slow=22,SNR=7.9						
JHJ				Sn	Sn	18 06 30.5	-5.4
	26nm,0.3s,baz=74,slow=23,SNR=2.1						
JHJ				LR	LR	18 08 09.1	
	comp=Z,122nm,18.3s,baz=85,slow=40						
JMKN	Mikurajimanish	7.46	334	P	Pn	18 05 28.9	-0.8
JMKN				S	Sn	18 06 49.9	-4.4
BSO1	Boso 1	7.72	344	P	Pn	18 05 32.4	-0.4
JKO	Kozu shima	7.90	333	eS	Sn	18 07 02.5	-2.7
JOD2	Odawara 2	8.87	336	P	Pn	18 05 47.7	-1.3
JOD2				S	Sn	18 07 25.4	-3.6
JYT	Yasato	9.41	343	Pn	Pn	18 05 56.0	-0.5
INU	Inuyama	9.82	327	Pn	Pn	18 06 03.1	+1.0
JGF	Kuroka	9.87	329	Pn	Pn	18 06 04.3	+1.5
MJAR	Matsushiro Arr	10.33	335	Pn	Pn	18 06 08.9	-0.1
	0.7nm,0.3s,baz=160,slow=11,SNR=25						
MJAR				Sn	Sn	18 08 03.3	-1.6
	0.2nm,0.3s,baz=150,slow=29,SNR=4.3						
MJAR	Matsushiro Arr	10.33	335		Pn	18 06 08.1	-0.9
MAJO	Matsushiro	10.33	335	Pn	Pn	18 06 09.1	+0.1
MAT	Matsushiro	10.33	335	P	Pn	18 06 09.1	+0.1
MAT				S	Sn	18 07 57.6	-7.3
JMN	Monobe	10.54	310	Pn	Pn	18 06 12.8	+0.8
JWT	Wachi	10.62	321	Pn	Pn	18 06 15.2	+2.2
JMM	Marumori	10.86	348		Pn	18 06 12.9	-3.3
JSD	Sado	11.65	339	Pn	Pn	18 06 25.7	-1.5
JHS	Saijyo	11.81	314	Pn	Pn	18 06 28.7	-0.6
JMK	Ichinoseki	11.85	351	P	Pn	18 06 26.8	-3.1
JMK				S	Sn	18 08 30.6	-12
JSU	Suzuyama	12.17	294	Pn	Pn	18 06 35.0	+0.8
JNU	Nakatsue	12.41	301	LR	LR	18 11 29.4	
	comp=Z,238nm,18.2s,baz=116,slow=38						
JNU	Nakatsue	12.41	301	Pn	Pn	18 06 39.4	+1.7
JTM	Tenmabayashi	13.68	352	Pn	Pn	18 06 53.6	-1.2
ERM	Erimo	14.76	359	Pn	Pn	18 07 06.8	-2.8
JEW	Eniwo	15.67	354	Pn	Pn	18 07 20.4	-1.2
JEW				IAmb	IAmb	18 08 19.1	
	comp=Z,180nm,1.5s						
KSRS	Korea Array	16.65	312	Pn	P	18 07 35.9	-0.7
	comp=Z,0.5nm,0.3s,baz=120,slow=11,SNR=22						
KSRS				LR	LR	18 12 50.0	
	comp=Z,107nm,18.9s,baz=116,slow=33						
KS19	Wonju Array Si	16.71	312	P	P	18 07 36.5	-0.8
JKA	Kamikawa-asahi	16.87	358	Pn	Pn	18 07 36.1	-0.9
USA0B	Ussuriysk Arra	19.32	334	P	Pn	18 08 06.6	-0.5
USRK	Ussuriysk Ar.	19.32	334	P	Pn	18 08 07.5	+0.4
	baz=148,slow=12,SNR=10.0						
USRK	Ussuriysk Ar.	19.32	334		Pn	18 08 07.6	+0.5
NACB	Ninganchiao	19.99	266	P	P	18 08 12.8	-0.8
NACB				IAmb	IAmb	18 08 18.1	
	comp=Z,251nm,2.0s						
YHNB	Yeheng	20.08	268	P	P	18 08 14.6	+0.1
YULB	Yu-li	20.45	264	P	P	18 08 17.4	-1.1
YULB				IAmb	IAmb	18 09 13.5	
	comp=Z,60nm,1.3s						
MDJ	Mudanjiang	20.65	331	P	P	18 08 21.2	+0.7
SSLB	Suanglung	20.65	265		P	18 08 20.5	-0.3
SSLB				IAmb	IAmb	18 08 25.2	
	comp=Z,50nm,0.9s						
TWG	Pinlang	20.80	263	P	P	18 08 21.6	-0.8
TWG				IAmb	IAmb	18 08 46.7	
	comp=Z,207nm,1.8s						
TPUB	Ta-pu	21.06	264	P	P	18 08 25.9	+0.7
TPUB				IAmb	IAmb	18 08 32.9	
	comp=Z,172nm,1.7s						
NJ2	Nanjing	21.96	289	eP	P	18 08 35.5	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KNMB	Chin-men Tao	22.78	269	P	P	18 08 44.1	+0.6
KNMB				IAmb	IAmb	18 09 28.9	
	comp=Z,46nm,0.8s						
KLR	Kul'dur	23.78	341	P	P	18 08 54.7	+1.3
	comp=Z,2.9nm,0.6s,baz=159,slow=11,SNR=8.9						
TGY	Tagaytay City	24.79	243	LR	LR	18 17 00.6	
	comp=Z,80nm,21.5s,baz=115,slow=32						
WHN	Wuhan	25.73	284	⇑P	P	18 09 14.6	+3.2
PETK	Petropavlovsk-	27.93	18	LR	LR	18 20 14.9	
	comp=Z,48nm,22.0s,baz=150,slow=36						
HIA	Hailar	28.64	327	P	P	18 09 39.5	+2.0
HHC	Hu-ho-hao-te	29.59	306	eP	P	18 09 50.0	+3.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
QIZ	Qiongzhong	31.95	262	P	P	18 10 08.0	+1.0
GYA	Guiyang	32.82	277	eP	P	18 10 15.6	+0.8
GYA				pmax	pmax		
	comp=Z,15nm,1.6s						
LZH	Lanzhou	34.72	295	eP	P	18 10 33.3	+2.1
LZH				pP	pwP	18 10 40.8	-0.9
LZH				sP	sP	18 10 45.6	+13
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,87nm,4.2s						
CD2	Chengdu	34.83	286	P	P	18 10 31.0	-1.1
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
ULN	Ulaanbaatar	35.05	316	P	P	18 10 34.8	+0.8
SONM	Songino Array	35.45	315	P	P	18 10 37.3	0.0
	comp=Z,0.7nm,0.4s,baz=126,slow=8.2,SNR=9.3						
SONM	Songino Array	35.45	315	P	P	18 10 37.1	-0.3
SEY	Seymchan	36.18	7	P	P	18 10 43.8	+0.6
	comp=Z,2.5nm,0.8s,baz=81,slow=23,SNR=6.0						
GTA	Gaotai	38.15	300	eP	P	18 11 01.1	+0.7
GTA				pP	pwP	18 11 08.3	-2.6
GTA				sP	sP	18 11 11.8	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,240nm,5.6s						
GTA				LR	LR		
	comp=Z,200nm,16.0s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,240nm,17.1s						
NONG	Nongkai	38.23	265	P	P	18 11 01.7	+0.6
	comp=Z,33µmcomp=Z,41nm,1.1s						
ADK	Adak	38.63	39	P	P	18 11 05.3	+1.2
CHAI	Chaiyaphum	40.07	262	P	P	18 11 19.0	+2.4
	comp=Z,15nm,0.9s						
UTTA	Uttaradit	40.64	266	P	P	18 11 24.2	+2.9
	comp=Z,8.1nm,1.1s						
COEN	Coen	40.94	181	P	P	18 11 23.0	-0.7
CM34	Chiang Mai Arr	41.50	268	P	P	18 11 28.0	-0.4
CM35	Chiang Mai Arr	41.56	268	P	P	18 11 29.0	+0.1
MTN	Manton Dam	41.60	198	P	P	18 11 28.1	-1.1
MTN				IAmb	IAmb	18 12 23.9	
	comp=Z,39nm,1.4s						
CM36	Chiang Mai Arr	41.66	268	P	P	18 11 32.0	+2.2
CM33	Chiang Mai Arr	41.69	268	P	P	18 11 29.0	-1.0
CMMT	Chiang Mai	41.70	268	P	P	18 11 30.7	+0.7
	comp=Z,2.8nm,1.5s						
CHTO	Chiang Mai	41.70	268	P	P	18 11 28.8	-1.2
CM04	Chiang Mai Arr	41.81	268	P	P	18 11 33.0	+2.1
	comp=Z,7.3nm,1.0s						
CMAR	Chiang Mai Arr	41.82	268	P	P	18 11 30.5	-0.5
	comp=Z,1.4nm,0.4s,baz=63,slow=8.2,SNR=11						
CMAR				LR	LR	18 28 48.0	
	comp=Z,27nm,20.2s,baz=240,slow=36						
CM02	Chiang Mai Arr	41.83	268	P	P	18 11 33.6	+2.6
	comp=Z,4.8nm,1.1s						
CM15	Chiang Mai Arr	41.84	268	P	P	18 11 35.1	+4.0
	comp=Z,4.8nm,1.0s						
CM13	Chiang Mai Arr	41.87	268	P	P	18 11 32.1	+0.7
BATI	Baumata	41.90	210	P	P	18 11 30.1	-1.5
	comp=Z,12nm,0.5s,baz=127,slow=1.6,SNR=7.7						
UNV	Unalaska Valle	45.10	40	P	P	18 11 56.4	-0.5
TIXI	Tiksi	45.21	354	P	P	18 11 57.7	+0.1
AKUT	Akutan	45.59	40	P	P	18 12 00.3	-0.5
LSA	Lhasa	45.79	286	P	P	18 12 05.5	+2.2
UGM	Wanagama	47.35	227	P	P	18 12 15.8	+0.6
WMQ	Urumqi	47.47	306	eP	P	18 12 17.8	+1.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WB0	Warramunga Arr	47.54	192	P	P	18 12 15.2	-1.4
WB0				IAmb	IAmb	18 12 16.2	
	comp=Z,17nm,0.9s						
WR0	Warramunga Arr	47.70	191	P	P	18 12 16.4	-1.4
WR0				IAmb	IAmb	18 12 17.6	
	comp=Z,7.6nm,0.7s						
WRAB	Tennant Creek	47.71	192	P	P	18 12 16.6	-1.3
WRAB				IAmb	IAmb	18 12 17.6	
	comp=Z,19nm,0.6s						
WB2	Warramunga Arr	47.72	192	P	P	18 12 16.4	-1.6
WB2				IAmb	IAmb	18 12 17.7	
	comp=Z,20nm,0.7s						
WB2				PcP	PcP	18 13 47.3	+0.1
WRA	Warramunga Arr	47.73	192	P	P	18 12 16.9	-1.0
	comp=Z,18nm,0.7s,baz=12,slow=8.6,SNR=112						
WRA	Warramunga Arr	47.73	192	P	P	18 12 16.0	-2.0
WRA				PcP	PcP	18 13 47.3	+0.1
SANVU	Saraoutou	48.24	149	P	P	18 12 21.6	-0.4
FITZ	Fitzroy Crossi	48.28	203	P	P	18 12 22.0	-0.2
	comp=Z,5.8nm,0.8s,baz=24,slow=9.5,SNR=8.2						
FITZ	Fitzroy Crossi	48.28	203	P	P	18 12 21.8	-0.4
FITZ				PcP	PcP	18 13 49.5	+0.3
SDPT	Sand Point	48.86	39	P	P	18 12 25.8	-0.5
TAPN	Taplejung	49.23	284	eP	P	18 12 30.0	0.0
	comp=Z,5.5nm,0.5s						
ANM	Nome	49.32	26	P	P	18 12 30.2	+0.5
ANM				IAmb	IAmb	18 13 50.6	
	comp=Z,20nm,1.4s						
ZSN	Zaisan	49.57	310	eP	P	18 12 33.7	+1.7
	comp=Z,2.7nm,1.2s,baz=310						
ODAN	Odare	49.62	283	eP	P	18 12 32.9	-0.1
	comp=Z,13nm,0.5s						
ZAA0	Zalesovo Array	50.17	319		P	18 12 37.5	+1.0
ZALV	Zalesovo Beam	50.17	319	P	P	18 12 37.7	+1.3
	comp=Z,1.6nm,0.5s,baz=99,slow=7.5,SNR=11						
ZALV				PcP	PcP	18 13 55.3	-0.3
	comp=Z,1.1nm,0.5s,baz=118,slow=4.2,SNR=4.0						
ZALV	Zalesovo Beam	50.17	319	P	P	18 12 38.0	+1.6
ZALV				PcP	PcP	18 13 55.2	-0.5
RAMN	Ramite	50.29	284	eP	P	18 12 37.8	-0.2
GUN	Gumba	50.68	285	eP	P	18 12 41.3	+0.2
GSI	Gunungsitoli	51.00	248	P	P	18 12 42.8	-0.4
GSI				IAmb	IAmb	18 12 43.7	
	comp=Z,28nm,1.4s						
PKI	Pulchoki	51.17	285	eP	P	18 12 44.2	-0.5
PKIN	Phulchoki	51.18	285	eP	P	18 12 44.4	-0.3
KKN	Kakani	51.23	285	eP	P	18 12 45.0	0.0
	comp=Z,22nm,1.0s						
MK31	Makanchi Array	51.31	310	P	P	18 12 45.7	+0.5
MKAR	Makanchi Array	51.31	310	P	P	18 12 45.9	+0.7
	comp=Z,0.8nm,0.4s,baz=87,slow=10,SNR=17						
MKAR	Makanchi Array	51.31	310	P	P	18 12 45.5	+0.4
DMN	Daman	51.42	285	eP	P	18 12 46.0	-0.5
AS31	Alice Springs	51.44	191	P	P	18 12 44.6	-1.7
ASAR	Alice Springs	51.44	191	P	P	18 12 44.9	-1.4
	comp=Z,1.7nm,0.5s,baz=358,slow=4.6,SNR=57						
ASAR				PcP	PcP	18 13 59.9	-0.8
	comp=Z,1.5nm,0.8s,baz=17,slow=5.1,SNR=5.5						
ASAR	Alice Springs	51.44	191	P	P	18 12 44.4	-1.9
ASAR				PcP	PcP	18 14 00.6	-0.1
MAKZ	Makanchi	51.53	310		P	18 12 47.5	+0.7
DANN	Dangsing	52.40	286	eP	P	18 12 54.2	+0.3
SEM	Semipalatinsk	52.70	314	eP	P	18 12 55.8	0.0
	comp=Z,3.6nm,1.0s,baz=314						
SEM				eS	S	18 20 22.6	-1.0
	baz=314						
TTA	Tatalina	52.74	30	P	P	18 12 55.6	0.0
TTA				IAmb	IAmb	18 13 40.8	
	comp=Z,35nm,1.8s						
TTA				PcP	PcP	18 14 05.3	+0.2
EIDS	Eidsvold	52.79	171	P	P	18 12 54.2	-2.1
EIDS				IAmb	IAmb	18 13 02.0	
	comp=Z,31nm,1.9s						
OHAK	Old Harbor	53.11	37	P	P	18 12 56.2	-2.1
OHAK				PcP	PcP	18 14 06.5	+0.1
KDAK	Kodiak Island	53.55	37	P	P	18 13 01.4	-0.2
	comp=Z,8.6nm,0.7s,baz=297,slow=6.4,SNR=6.5						
KDAK	Kodiak Island	53.55	37	P	P	18 13 01.3	-0.2
KDAK				PcP	PcP	18 14 11.4	+3.3
KURK	Kurchatov	53.75	314	P	P	18 13 03.3	+0.2
KURK				IAmb	IAmb	18 13 06.8	
	comp=Z,17nm,1.1s						
KURK				PcP	PcP	18 14 11.5	+2.4
DZM	Mont Dzumac	53.79	153	P	P	18 13 04.4	+0.6
DZM				IAmb	IAmb	18 14 29.9	
	comp=Z,44nm,1.5s						
KURBB	Kurchatov Arra	53.80	314	P	P	18 13 04.0	+0.5
	comp=Z,4.6nm,0.4s,baz=91,slow=7.8,SNR=92						

CNPM	China Poot	54.44	35	P	P	18 13 07.3	-0.7
PPLA	Purkeypile	54.45	30	P	P	18 13 09.6	+1.4
PPLA				PcP	PcP	18 14 13.0	+1.3
PPLA				IAmb	IAmb	18 14 24.1	
	comp=Z,37nm,1.5s						
SKT	Skwentna	54.61	32	P	P	18 13 07.0	-2.3
SKT				IAmb	IAmb	18 13 09.6	
	comp=Z,26nm,1.5s						
SKT				PcP	PcP	18 14 12.0	-0.2
BRLK	Bradley Lake	54.64	34	P	P	18 13 08.6	-1.0
MDOK	Medeo	55.23	305	*e*P	P	18 13 15.1	+0.8
	baz=305						
O22K	Cooper Landing	55.29	34	P	P	18 13 14.4	+0.3
TRF	Thorofare Moun	55.38	30	P	P	18 13 15.5	+0.4
TRF				PcP	PcP	18 14 16.8	+1.4
SEW	Seward	55.39	34	P	P	18 13 14.8	-0.1
KUU	Kurty	55.66	306	*e*P	P	18 13 17.3	+0.1
	comp=Z,3.6nm,0.8s,baz=306						
MLOA	Mauna Loa Obse	55.97	84	P	P	18 13 18.9	-1.3
KNK	Knik Glacier	55.99	33	P	P	18 13 19.1	-0.2
KNK				PcP	PcP	18 14 18.6	+1.0
RND	Reindeer	56.02	30	P	P	18 13 19.1	-0.3
RND				IAmb	IAmb	18 14 03.4	
	comp=Z,16nm,1.4s						
RND				PcP	PcP	18 14 17.8	+0.1
MCK	McKinley	56.02	30	P	P	18 13 19.6	+0.2
	baz=263						
I23K	Minto, Yukon-K	56.03	28	P	P	18 13 20.6	+1.3
	baz=262						
I23K	Minto, Yukon-K	56.03	28	P	P	18 13 20.8	+1.4
I23K				IAmb	IAmb	18 13 22.4	
	comp=Z,22nm,1.4s						
KHU	Kahuku	56.03	84	P	P	18 13 20.0	-0.4
COLD	Coldfoot	56.04	25	P	P	18 13 21.1	+1.7
	baz=259						
COLD	Coldfoot	56.04	25	P	P	18 13 20.2	+0.8
NEA2	Nenana	56.08	29	P	P	18 13 21.2	+1.4
	baz=262						
MLH	Mauna Loa	56.15	84	P	P	18 13 21.1	-0.1
MDM	Murphy Dome	56.48	28	P	P	18 13 23.1	+0.4
MDM				IAmb	IAmb	18 13 56.0	
	comp=Z,27nm,1.9s						
MDM				PcP	PcP	18 14 20.4	+1.0
WRH	Wood River Hil	56.48	29	P	P	18 13 22.5	-0.1
WRH				PcP	PcP	18 14 19.6	+0.2
WRH				IAmb	IAmb	18 14 34.2	
	comp=Z,53nm,2.0s						
TOLK	Toolik Lake Re	56.54	24	P	P	18 13 24.4	+1.3
	baz=259						
TOLK	Toolik Lake Re	56.54	24	P	P	18 13 24.1	+1.0
TOLK				IAmb	IAmb	18 13 25.3	
	comp=Z,15nm,1.4s						
TOLK				PcP	PcP	18 14 20.3	+0.8
SCM	Sheep Creek Mo	56.57	32	P	P	18 13 24.2	+0.8
SCM				PcP	PcP	18 14 20.7	+0.9
CCB	Clear Creek Bu	56.62	29	P	P	18 13 24.1	+0.4
CCB					PcP	18 14 19.8	-0.1
POKR	Poker Plat Res	56.83	28	P	P	18 13 25.6	+0.4
POKR				IAmb	IAmb	18 15 14.1	
	comp=Z,6.7nm,0.8s						
HDA	Harding Lake	56.97	29	P	P	18 13 25.9	-0.2
	baz=264						
HDA	Harding Lake	56.97	29	P	P	18 13 25.0	-1.1
HDA				IAmb	IAmb	18 15 06.5	
	comp=Z,46nm,2.0s						
IL31		57.03	29	P	P	18 13 25.8	-0.6
IL31				IAmb	IAmb	18 14 15.2	
	comp=Z,28nm,1.8s						
ILAR	Eielson Array	57.03	29	P	P	18 13 25.9	-0.6
	comp=Z,3.7nm,0.9s,baz=260,slow=5.9,SNR=27						
IL18	Eielson Array	57.07	29	P	P	18 13 26.4	-0.5
GIRL	Giralia	57.09	213	P	P	18 13 26.5	-0.9
M24K	Tolsona, Glenn	57.13	32	P	P	18 13 29.6	+2.2
M24K				PcP	PcP	18 14 23.5	+1.4
AAK	Ala-Archa	57.16	305	P	P	18 13 28.5	+0.5
	comp=Z,0.7nm,0.4s,baz=207,slow=20,SNR=4.3						
AAK	Ala-Archa	57.16	305	P	P	18 13 28.6	+0.5
AAK				IAmb	IAmb	18 13 33.0	
	comp=Z,20nm,1.9s						
KLU	Klutina	57.22	33	P	P	18 13 28.7	+0.7
KLU				IAmb	IAmb	18 14 16.9	
	comp=Z,49nm,1.7s						
EYAK	Cordova Ski Ar	57.26	34	P	P	18 13 28.8	+0.6
PAX	Paxson	57.51	31	P	P	18 13 30.8	+0.7
PAX				IAmb	IAmb	18 14 55.0	
	comp=Z,30nm,1.9s						
BRZS	Berezniki	57.58	314	*e*P	P	18 13 31.9	+1.3
	comp=Z,3.3nm,1.0s,baz=314						
N25K	Chitina, Valde	57.85	32	P	P	18 13 33.3	+0.8
N25K				IAmb	IAmb	18 14 11.6	
	comp=Z,19nm,1.4s						
N25K				PcP	PcP	18 14 26.5	+1.6
DOT	Dot Lake	58.18	30	P	P	18 13 34.9	+0.2
DOT				IAmb	IAmb	18 14 38.7	
	comp=Z,19nm,1.4s						
SCRK	Sand Creek	58.23	30	P	P	18 13 35.5	+0.4
	baz=267						
GLB	Gilahina Butte	58.23	33	P	P	18 13 35.6	+0.5
GLB				IAmb	IAmb	18 13 40.2	
	comp=Z,49nm,1.8s						
SUCK	Suckling Hills	58.23	34	P	P	18 13 36.0	+0.9
MENT	Mentasta	58.31	31	P	P	18 13 36.9	+1.3
MENT				IAmb	IAmb	18 13 57.2	
	comp=Z,39nm,1.9s						
L26K	Log Cabin Wild	58.48	31	P	P	18 13 37.8	+1.0
	baz=268						
CRQM	Cirque	58.55	33	P	P	18 13 38.3	+0.8
MCARA	McCarthy VSAT	58.60	33	P	P	18 13 38.1	+0.5
MCARA				IAmb	IAmb	18 14 16.9	
	comp=Z,39nm,1.4s						
TGL	Tana Glacier	58.70	33	P	P	18 13 37.7	-0.7
TGL				IAmb	IAmb	18 14 34.6	
	comp=Z,28nm,1.2s						
BVAR	Borovoye Array	58.76	317	P	P	18 13 39.1	+0.2
	comp=Z,1.7nm,0.5s,baz=95,slow=7.8,SNR=9.0						
STKA	Stephens Creek	58.80	182	P	P	18 13 37.4	-1.9
	comp=Z,2.0nm,0.6s,baz=338,slow=10,SNR=4.8						
STKA	Stephens Creek	58.80	182	P	P	18 13 37.1	-2.1
BRVK	Borovoye	58.82	318	P	P	18 13 39.7	+0.5
BRVK				IAmb	IAmb	18 13 45.6	
	comp=Z,22nm,1.7s						
BALM	Baldy	58.94	33	P	P	18 13 40.6	+0.5
BALM				PcP	PcP	18 14 30.5	+1.3
ISLE	Juniper Island	58.94	34	P	P	18 13 40.3	+0.1
K27K	Chicken	59.07	30	P	P	18 13 41.7	+0.8
K27K				PcP	PcP	18 14 31.4	+1.8
K27K				IAmb	IAmb	18 15 05.0	
	comp=Z,16nm,1.6s						
BARN	Barnard Glacie	59.27	33	P	P	18 13 43.0	+0.4
BARN				IAmb	IAmb	18 14 18.2	
	comp=Z,32nm,1.4s						
BARN				PcP	PcP	18 14 31.6	+0.9
DZA	Taraz	59.42	306	*e*P	P	18 13 45.6	+1.9
	baz=306						
CTGM	Chitina Glacie	59.43	33	PcP	PcP	18 14 33.2	+2.0
EGAK	Eagle	59.48	29	P	P	18 13 43.9	+0.2
EGAK				IAmb	IAmb	18 14 38.8	
	comp=Z,26nm,1.9s						
TABL	Table Mountain	59.54	34	P	P	18 13 44.0	-0.4
FORT	Forrest	59.54	195	P	P	18 13 43.4	-1.0
FORT				IAmb	IAmb	18 13 57.0	
	comp=Z,13nm,0.8s						
NIL	Nilore	59.89	295	P	P	18 13 47.9	+0.9
NIL				IAmb	IAmb	18 13 54.5	
	comp=Z,17nm,1.5s						
KK05	Karatay Array	59.96	306	P	P	18 13 47.8	+0.4
KK06	Karatay Array	59.97	306	P	P	18 13 48.2	+0.8
KK31	Karatay Array	59.98	306	P	P	18 13 47.8	+0.3
KK31				IAmb	IAmb	18 13 52.1	
	comp=Z,7.7nm,0.8s						
KKAR	Karatay Array	59.98	306	P	P	18 13 47.5	+0.1
KKAR	Karatay Array	59.98	306	P	P	18 13 47.8	+0.3
KKAR				IAmb	IAmb	18 13 52.1	
	comp=Z,7.7nm,0.8s						
KK01	Karatay Array	59.98	306	P	P	18 13 47.7	+0.2
BBOO	Buckleboo	60.12	187	P	P	18 13 46.8	-1.6
IUG	Iuzhnay	60.50	305	*e*P	P	18 13 52.1	+0.9
	comp=Z,3.6nm,0.9s,baz=305						
EPYK	Eagle Plains	61.30	27	P	P	18 13 57.1	+0.9
	baz=272						
HYT	Haines Junctio	61.31	33	P	P	18 13 56.8	+0.4
HYT				IAmb	IAmb	18 13 59.8	
	comp=Z,18nm,1.3s						
INK	Inuvik	62.42	25	P	P	18 14 03.9	+0.4
	comp=Z,3.2nm,0.6s,baz=299,slow=6.3,SNR=5.6						
INK	Inuvik	62.42	25	P	P	18 14 03.5	0.0
INK				IAmb	IAmb	18 14 04.9	
	comp=Z,11nm,1.3s						
WHY	Whitehorse	62.60	33	P	P	18 14 04.3	-0.8
WHY				IAmb	IAmb	18 14 21.3	
	comp=Z,34nm,1.9s						
ARU	Arti	65.05	322	P	P	18 14 21.1	-0.1
ARU				IAmb	IAmb	18 14 24.8	
	comp=Z,44nm,1.8s						
C36M	Paulatuk	65.66	23	P	P	18 14 25.0	+0.2
	baz=282						
C36M	Paulatuk	65.66	23	P	P	18 14 24.5	-0.3
C36M				IAmb	IAmb	18 14 25.9	
	comp=Z,12nm,0.8s						
AB06	Akbulak array	65.84	314	P	P	18 14 26.8	+0.4
AB07	Akbulak array	65.85	314	P	P	18 14 26.9	+0.5
ABKAR	Akbulak array	65.86	314	P	P	18 14 26.0	-0.5
ABKAR	Akbulak array	65.86	314	P	P	18 14 26.4	-0.1
ABKAR				IAmb	IAmb	18 14 30.3	
	comp=Z,4.4nm,1.1s						
AKTO	Aktyubinsk	66.77	316	P	P	18 14 32.4	0.0
	comp=Z,0.9nm,0.6s,baz=245,slow=9.4,SNR=2.7						
HRA	Herat	68.44	298	P	P	18 14 44.4	+1.0
EUNU	Eureka	69.61	8	P	P	18 14 50.4	+0.7
EUNU				IAmb	IAmb	18 16 20.3	
	comp=Z,26nm,1.9s						
GEYT	Alibeck	70.43	303	P	P	18 14 56.7	+1.2
	comp=Z,1.3nm,0.5s,baz=40,slow=4.9,SNR=4.6						
GEYT	Alibeck	70.43	303	IAmb	IAmb	18 15 00.8	
	comp=Z,1.9nm,0.8s						
SPB1	Spitsbergen Ar	70.46	350	P	P	18 14 55.8	+0.9
YKA	Yellowknife Ar	71.46	29	P	P	18 15 01.2	0.0
	comp=Z,2.6nm,0.8s,baz=294,slow=5.3,SNR=25						
RES	Resolute Bay	71.65	14	P	P	18 15 02.2	+0.1
QRZ	Quartz Range	72.86	157	P	P	18 15 09.2	-0.6
BKZ	Black Stump Fm	72.87	154	P	P	18 15 08.3	-1.6
BKZ				IAmb	IAmb	18 15 46.3	
	comp=Z,47nm,1.8s						
NNZ	Nelson	73.51	157	P	P	18 15 12.5	-1.0
ARCES	ARCESS Array B	73.81	341	P	P	18 15 15.8	+0.7
	comp=Z,4.4nm,0.9s,baz=54,slow=11,SNR=2.0						
THZ	Tophouse	73.83	158	P	P	18 15 15.3	-0.1
THZ				IAmb	IAmb	18 15 41.0	
	comp=Z,54nm,1.8s						
B08A	Colville Reser	74.62	43	P	P	18 15 20.7	+0.4
M02C	Callahan	75.08	51	P	P	18 15 24.4	+1.3
	baz=293						
L04D	Klamath Falls	75.14	50	P	P	18 15 24.4	+0.9
	baz=293						
N02D	Trinity Center	75.35	51	P	P	18 15 25.9	+1.2
	baz=293						
PINE	Pine Mountain	75.43	48	P	P	18 15 26.4	+1.1
PINE				IAmb	IAmb	18 15 27.6	
	comp=Z,10nm,1.0s						
J05D	Fort Rock, OR	75.44	49	P	P	18 15 26.3	+1.1
	baz=294						
O02D	Mt. Diablo Mer	75.61	52	P	P	18 15 27.3	+1.1
	baz=293						
K05A	Summer Lake	75.89	49	P	P	18 15 28.7	+0.8
K05A				IAmb	IAmb	18 15 29.5	
	comp=Z,13nm,1.1s						
NEW	Newport	76.00	43	P	P	18 15 28.8	+0.5
	baz=295						
NEW	Newport	76.00	43	P	P	18 15 28.8	+0.5
NEW				IAmb	IAmb	18 15 30.2	
	comp=Z,36nm,1.9s						
E09A	Wood Farm, Sta	76.11	45	P	P	18 15 29.5	+0.7
ORV	Oroville	76.77	52	P	P	18 15 32.4	-0.2
BMO	Blue Mountains	77.36	46	P	P	18 15 36.6	+0.6
BMO				IAmb	IAmb	18 15 37.8	
	comp=Z,18nm,1.7s						
BEKR	Beckworth	77.44	52	P	P	18 15 36.9	+0.2
JTMT	Jette	77.94	42	P	P	18 15 39.5	+0.3
PAHR	Pah Rah Range	78.19	51	P	P	18 15 41.3	+0.5
CMB	Columbia Colle	78.19	53	P	P	18 15 40.4	-0.4
CMB				IAmb	IAmb	18 15 42.2	
	comp=Z,15nm,1.3s						
FINES	FINESS Array B	78.35	334	P	P	18 15 41.2	+0.2
	comp=Z,2.1nm,0.7s,baz=70,slow=4.3,SNR=8.2						
KBZ	Khabaz	78.79	313	P	P	18 15 44.7	+0.9
	comp=Z,3.6nm,0.8s,baz=108,slow=2.1,SNR=9.6						
MFID	Camas Ranch	78.95	47	P	P	18 15 45.2	+0.3
MFID				IAmb	IAmb	18 15 46.7	
	comp=Z,13nm,1.3s						
NVAR	Mina Array Bea	79.50	52	P	P	18 15 48.9	+0.7
	comp=Z,2.4nm,0.6s,baz=288,slow=6.1,SNR=14						
NVAR	Mina Array Bea	79.50	52	P	P	18 15 48.0	-0.2
HLID	Hailey	79.79	46	P	P	18 15 50.0	+0.4
	baz=298						
HLID	Hailey	79.79	46	P	P	18 15 49.8	+0.2
PKM	Mcpherson Peak	79.97	56	P	P	18 15 51.5	+0.8
	baz=296						
DLMT	Dillon	80.09	44	P	P	18 15 50.7	-0.4
DLMT				IAmb	IAmb	18 15 52.7	
	comp=Z,14nm,1.4s						
BOZ	Bozeman (W)	80.57	43	P	P	18 15 54.4	+0.7
	baz=299						
BOZ	Bozeman (W)	80.57	43	P	P	18 15 53.7	0.0
FFC	Flin Flon	81.00	32	P	P	18 15 55.7	+0.1
MPMC	Manual Prospec	81.14	54	P	P	18 15 57.4	+0.4
	baz=297						
YHL	Hebgen Lake	81.21	44	P	P	18 15 58.2	+0.9
YHB	Horse Butte	81.25	44	P	P	18 15 58.0	+0.6
EDW2	Edwards Air Fo	81.31	55	P	P	18 15 58.4	+0.6
	baz=297						
R11A	Troy Canyon, C	81.44	51	P	P	18 15 59.1	+0.6
	baz=298						
YMR	Madison River	81.44	44	P	P	18 15 59.2	+0.7
TPNV	Topopah Spring	81.62	53	P	P	18 15 59.8	+0.4
	baz=298						
H17A	Grant Village	81.81	44	P	P	18 16 03.4	+3.0
	baz=300						
H17A	Grant Village	81.81	44	P	P	18 16 02.0	+1.5
LKWY	Lake	81.84	44	P	P	18 16 02.0	+1.4
YMP	Mirror Lake Pl	81.90	44	P	P	18 16 01.9	+0.9
RLMT	Red Lodge	82.25	43	P	P	18 16 03.9	+1.2
	baz=301						
RLMT	Red Lodge	82.25	43	P	P	18 16 02.9	+0.2
RLMT				IAmb	IAmb	18 16 05.1	
	comp=Z,23nm,1.6s						
DUG	Dugway, Tooele	82.45	49	P	P	18 16 04.3	+0.6
	baz=299						
DUG	Dugway, Tooele	82.45	49	P	P	18 16 03.9	+0.1
DUG				IAmb	IAmb	18 16 04.8	
	comp=Z,6.1nm,0.6s						
PFO	Pinyon Flats O	83.02	56	P	P	18 16 06.9	0.0
	baz=298						
PFO	Pinyon Flats O	83.02	56	P	P	18 16 06.4	-0.4
GMRC	Granite Mounta	83.06	55	P	P	18 16 07.5	+0.5
	baz=298						
AKASG	Malin Array Be	83.21	324	P	P	18 16 06.3	-1.0
	comp=Z,1.0nm,0.3s,baz=52,slow=6.0,SNR=7.2						
AKASG	Malin Array Be	83.21	324	P	P	18 16 06.5	-0.8
PD31	Pinedale Array	83.28	45	P	P	18 16 07.8	-0.3
PDAR	Pinedale Array	83.28	45	P	P	18 16 08.1	-0.1
	comp=Z,1.0nm,0.7s,baz=27,slow=0.9,SNR=9.3						
PDAR	Pinedale Array	83.28	45	P	P	18 16 07.3	-0.9
MONP2	Monument Peak	83.39	57	P	P	18 16 09.2	+0.3
	baz=298						
KNB	Kanab	84.00	51	P	P	18 16 11.8	0.0
Q16A	Castle Valley	84.18	49	P	P	18 16 12.0	-0.8
P17A	Butcher Ranch,	84.19	48	P	P	18 16 12.0	-0.8
RDMU	Red Mountain	84.40	47	P	P	18 16 13.4	-0.5
SRU	San Rafael Swe	84.52	49	P	P	18 16 13.9	-0.6
RWWY	Rawlins	85.33	45	IAmb	IAmb	18 16 19.7	
	comp=Z,16nm,1.2s						
WUAZ	Wupatki	85.76	52	P	P	18 16 21.4	+0.7
	baz=300						
PV23	Carpenter Ridg	85.87	49	P	P	18 16 21.3	-0.1
PV23				IAmb	IAmb	18 16 22.5	
	comp=Z,12nm,0.8s						
PV14	Lion Creek, Pa	85.91	49	P	P	18 16 21.4	-0.1
PV19	Morning Glory	85.97	49	IAmb	IAmb	18 16 22.9	
	comp=Z,12nm,0.8s						
PV04	Paradox Valley	85.97	49	IAmb	IAmb	18 16 23.0	
	comp=Z,16nm,1.3s						
PV12	Saucer Basin,	86.08	49	P	P	18 16 22.4	+0.1
PV12				IAmb	IAmb	18 16 24.2	
	comp=Z,6.8nm,0.9s						
RAYN	Ar Rayn	86.18	294	P	P	18 16 22.9	+0.1
RAYN				IAmb	IAmb	18 16 26.9	
	comp=Z,9.2nm,0.8s						
PIX	Pinacate	86.23	56	P	P	18 16 22.0	-0.9
N23A	Red Feather La	86.56	45	P	P	18 16 25.9	+1.2
	baz=303						
N23A	Red Feather La	86.56	45	IAmb	IAmb	18 16 26.7	
	comp=Z,20nm,1.5s						
BRTR	Keskin Array B	86.78	313	P	P	18 16 25.3	-0.4
	comp=Z,1.3nm,0.9s,baz=64,slow=4.3,SNR=5.6						
SMCO	Snowmass	86.83	47	P	P	18 16 26.3	0.0
VYHS	Vyhne	89.85	327	*e*P	P	18 16 42.3	+2.4
MNTX	Cornudas Mount	92.02	53	P	P	18 16 50.9	+0.6
	baz=304						
MNTX	Cornudas Mount	92.02	53	P	P	18 16 50.4	+0.1
MNTX				IAmb	IAmb	18 16 51.7	
	comp=Z,3.4nm,0.8s						
AMTX	Amarillo	92.75	48	P	P	18 16 54.3	+0.6
	baz=306						
AMTX	Amarillo	92.75	48	IAmb	IAmb	18 16 54.8	
	comp=Z,7.0nm,0.7s						
TX31	Lajitas Ar. Si	94.57	54	P	P	18 17 01.8	-0.4
TX32	Lajitas Array	94.57	54	P	P	18 17 02.1	-0.1
TX32				IAmb	IAmb	18 20 23.1	
	comp=Z,15nm,1.9s						
TXAR	Lajitas Array	94.57	54	P	P	18 17 03.1	+0.9
	comp=Z,1.3nm,0.7s,baz=320,slow=1.6,SNR=14						
TXAR	Lajitas Array	94.57	54	P	P	18 17 02.0	-0.2
WMOK	Wichita Mounta	94.75	47	P	P	18 17 02.9	+0.1
	baz=308						
TORD	Torodi Ar. Bea	125.39	312	PKP	PKPdf	18 22 42.5	-0.3
	comp=Z,0.5nm,0.4s,baz=22,slow=1.1,SNR=3.4						
PLCA	Paso Flores	148.90	124	PKPbc	PKPbc	18 23 29.2	+0.2
	comp=Z,1.1nm,0.5s,baz=250,slow=4.3,SNR=11						

IDC 13 18:07:00.6±5.5,**39°.03N**×**110°.44E**,**h0**^{km},**mb3.4**/3, **mb1 3.6**/4,**mb1mx3.2**/55,**mbtmp3.4**/4,**ML2.7**/1,**MS3.6**/2, **Ms1 3.6**/2,**ms1mx2.9**/34,**Error ellipse: s-maj=114.6km s-min=24.7km az=85.0,Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.28	343	Pn	Pn	18 09 15.8	0.0
	0.1nm,0.3s,baz=155,slow=13,SNR=7.9						
SONM				Lg	Lg	18 11 54.7	
	0.1nm,0.3s,baz=163,slow=27,SNR=5.8						
MKAR	Makanchi Array	21.95	300	P	P	18 11 55.8	0.0
	1.2nm,0.8s,baz=101,slow=12,SNR=6.7						
MJAR	Matsushiro Arr	22.05	88	LR	LR	18 21 40.1	
	comp=Z,75nm,19.2s,baz=165,slow=40						
CMAR	Chiang Mai Arr	22.80	209	P	P	18 12 04.8	-0.2
	1.7nm,0.7s,baz=13,slow=9.1,SNR=8.6						
KURBB	Kurchatov Arra	25.23	308	P	P	18 12 28.3	+0.3
	0.4nm,0.7s,baz=109,slow=9.3,SNR=4.0						
CTA	Charters Tower	67.69	144	LR	LR	18 49 11.9	
	comp=Z,87nm,19.1s,baz=22,slow=37						

IDC 13 18:18:18.4±3.3,**7°.15S**×**125°.28E**,**h511**^{km}±44^{km},**mb2.4**/1, **mb1 3.0**/5,**mb1mx2.6**/33,**mbtmp3.7**/5,**Error ellipse: s-maj=106.0km s-min=25.3km az=54.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.43	208	P	P	18 19 34.3	+1.0
	14nm,0.3s,baz=106,slow=3.2,SNR=32						
BATI				S	S	18 20 33.8	-0.4
	7.0nm,0.3s,baz=270,slow=20,SNR=5.9						
FITZ	Fitzroy Crossi	10.89	178	P	P	18 20 45.9	+0.7
	0.1nm,0.3s,baz=7.9,slow=8.7,SNR=6.4						
WRA	Warramunga Arr	15.46	146	P	P	18 21 31.8	-1.5
	0.6nm,0.3s,baz=328,slow=10,SNR=19						
ASAR	Alice Springs	18.39	154	P	P	18 22 02.5	+0.6
	0.5nm,0.3s,baz=328,slow=7.3,SNR=80						
MKAR	Makanchi Array	65.87	329	P	P	18 28 12.8	-0.3
	0.1nm,0.5s,baz=129,slow=5.7,SNR=1.9						

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*IDC **13** 19:43:39.4±1.1,27°.14N×143°.53E,h0^{km},mb3.5/8, mb1 3.8/11,mb1mx3.6/53,mbtmp3.6/11,ML3.4/3,Error ellipse: s-maj=21.1km s-min=19.7km az=79.0*

*NEIC **13** 19:43:44.0±1.9,27°.20N±0°.09×143°.4E±0°.1,h29^{km}±6^{km}, mb4.5/13,Error ellipse: s-maj=17.1km s-min=11.6km az=125.0*

ISC 13 19:43:44.7±0.7,**27°.25N**±0°.09×**143°.38E**±0°.08,**h35**^{km},**n33**, σ**1^{s}.41**/35,**mb3.8**/14,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.07	262	Pn	Pn	19 44 04.0	+0.7
	60nm,0.3s,baz=306,slow=6.0,SNR=26						
JCJ				Sn	Sn	19 44 19.8	+2.8
	51nm,0.3s,baz=299,slow=23,SNR=10						
JCJ	Chichijima	1.07	262		Pn	19 44 03.8	+0.5
MJAR	Matsushiro Arr	10.25	336	Pn	Pn	19 46 09.5	+0.1
	0.1nm,0.3s,baz=161,slow=11,SNR=7.4						
MAJO	Matsushiro	10.25	336	Pn	Pn	19 46 08.4	-1.0
JWT	Wachi	10.52	322	Pn	Pn	19 46 12.7	-0.2
JMM	Marumori	10.81	349	Pn	Pn	19 46 16.6	-0.4
JNU	Nakatsue	12.29	301	Pn	Pn	19 46 36.6	-0.7
	0.3nm,0.3s,baz=205,slow=15,SNR=1.6						
JNU				Sn	Sn	19 48 48.3	-4.7
	0.2nm,0.3s,baz=19,slow=16,SNR=2.8						
KSRS	Korea Array	16.53	312	Pn	P	19 47 36.6	+0.5
	0.1nm,0.3s,baz=119,slow=11,SNR=6.3						
YHNB	Yeheng	19.95	268	P	P	19 48 13.0	-0.9
YULB	Yu-li	20.32	264	P	P	19 48 15.0	-2.9
YULB				IAmb	IAmb	19 48 20.1	
	comp=Z,44nm,1.3s						
KLR	Kul'dur	23.72	341	P	P	19 48 54.9	+1.5
	comp=Z,1.1nm,0.8s,baz=182,slow=7.1,SNR=3.5						
SONM	Songino Array	35.34	316	P	P	19 50 38.4	+1.6
	comp=Z,0.3nm,0.7s,baz=113,slow=6.9,SNR=2.5						
SOEI	Soe	41.19	209	P	P	19 51 24.6	-1.7
SOEI				IAmb	IAmb	19 51 25.0	
	comp=Z,13nm,1.0s						
CMAR	Chiang Mai Arr	41.69	268	P	P	19 51 31.5	+1.2
	comp=Z,0.5nm,0.7s,baz=69,slow=6.2,SNR=4.7						
TIXI	Tiksi	45.17	354	P	P	19 51 58.5	+0.8
WB0	Warramunga Arr	47.54	191	P	P	19 52 16.6	-0.3
WB0				IAmb	IAmb	19 52 45.6	
	comp=Z,4.4nm,1.2s						
WB2	Warramunga Arr	47.72	192	P	P	19 52 18.1	-0.1
WB2				IAmb	IAmb	19 52 40.9	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	47.72	192	P	P	19 52 17.6	-0.7
	comp=Z,1.1nm,0.7s,baz=13,slow=8.5,SNR=10						
MKAR	Makanchi Array	51.20	309	P	P	19 52 46.0	+1.4
	comp=Z,0.2nm,0.7s,baz=99,slow=4.5,SNR=2.8						
MAKZ	Makanchi	51.41	310	P	P	19 52 46.8	+0.6
ASAR	Alice Springs	51.44	191	P	P	19 52 45.7	-0.9
	comp=Z,0.3nm,0.8s,baz=4.5,slow=5.9,SNR=5.2						
RDOG	Red Dog Mine	51.68	23	P	P	19 52 46.1	-1.8
RDOG				IAmb	IAmb	19 52 46.6	
	comp=Z,7.8nm,1.4s						
KK05	Karatay Array	59.84	306	P	P	19 53 48.0	+1.2
KK06	Karatay Array	59.85	306	P	P	19 53 47.5	+0.7
KK31	Karatay Array	59.85	306	P	P	19 53 47.5	+0.6
KKAR	Karatay Array	59.85	306	P	P	19 53 48.1	+1.2
KKAR				IAmb	IAmb	19 53 53.1	
	comp=Z,3.0nm,1.2s						
INK	Inuvik	62.45	25	P	P	19 54 04.5	+0.5
INK				IAmb	IAmb	19 54 19.4	
	comp=Z,5.5nm,1.4s						
SKAG	Skagway	62.59	35	P	P	19 54 04.6	-0.4
WHY	Whitehorse	62.66	33	P	P	19 54 06.1	+0.4
AB06	Akbulak array	65.73	314	P	P	19 54 25.4	-0.4
AB07	Akbulak array	65.74	314	P	P	19 54 26.5	+0.5
YKA	Yellowknife Ar	71.50	29	P	P	19 55 01.9	+0.3
	comp=Z,0.2nm,0.6s,baz=301,slow=4.3,SNR=6.5						
AKASG	Malin Array Be	83.12	324	P	P	19 56 06.5	-0.4
	comp=Z,0.2nm,0.3s,baz=46,slow=39,SNR=2.1						

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*IDC **13** 19:44:22.9±0.7,27°.17N×143°.52E,h0^{km},mb3.9/19, mb1 4.2/23,mb1mx4.0/52,mbtmp4.0/23,ML3.3/4,MS3.3/2, Ms1 3.3/2,ms1mx2.6/46,Error ellipse: s-maj=16.1km s-min=14.1km az=141.0*

*JMA **13** 19:44:25.2,27°.26N×143°.63E,h56^{km},M4.4*

*NEIC **13** 19:44:28.2±2.1,27°.31N±0°.08×143°.45E±0°.07,h29^{km}±4^{km}, mb4.7/35,Error ellipse: s-maj=12.2km s-min=8.0km az=145.0*

ISC 13 19:44:29.0±0.5,**27°.35N**±0°.06×**143°.43E**±0°.07,**h35**^{km},**n87**, σ**1^{s}.24**/96,**mb4.2**/31,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.14	257	P	Pn	19 44 47.5	-1.0
CBIJ				S	Sn	19 45 03.7	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JCJ	**Chichijima**	**1.14**	**257**	Pn	**Pn**	**19 44 47.2**	**-1.3**
	268nm,0.3s,baz=280,slow=21,SNR=16						
JCJ				Sn	**Sn**	**19 45 03.0**	**+0.1**
	157nm,0.3s,baz=286,slow=23,SNR=2.9						
JCJ	**Chichijima**	**1.14**	**257**	Sn	**Sn**	**19 45 03.2**	**+0.2**
JHH2	**Haha-jima-NKT2**	**1.33**	**238**	P	**Pn**	**19 44 49.3**	**-1.8**
JHCJ	**Hachijojimakas**	**6.51**	**332**	*e*S	**Sn**	**19 47 14.7**	**-0.7**
JHJ2	**Mitsune**	**6.54**	**332**	P	**Pn**	**19 46 03.6**	**+0.9**
JHJ2				S	**Sn**	**19 47 15.5**	**-0.6**
JHJ2	**Mitsune**	**6.54**	**332**	Pn	**Pn**	**19 46 03.9**	**+1.2**
JHJ2				Sn	**Sn**	**19 47 13.2**	**-2.9**
JHJ	**Hachijo jima 2**	**6.56**	**332**	Pn	**Pn**	**19 46 03.6**	**+0.6**
	4.2nm,0.3s,baz=96,slow=21,SNR=2.2						
JHJ				Sn	**Sn**	**19 47 13.2**	**-3.4**
	10.0nm,0.3s,baz=229,slow=19,SNR=2.0						
BSO1	**Boso 1**	**7.58**	**344**	P	**Pn**	**19 46 16.6**	**+0.1**
BSO1				*e*S	**Sn**	**19 47 40.3**	**-0.6**
BSO3	**Boso 3**	**7.84**	**342**	P	**Pn**	**19 46 19.3**	**-1.0**
BSO3				*e*S	**Sn**	**19 47 49.2**	**+1.5**
BSO4	**Boso 4**	**8.06**	**342**	*e*S	**Sn**	**19 47 54.7**	**+1.3**
JIM2	**Oshima 3**	**8.11**	**336**	P	**Pn**	**19 46 23.9**	**-0.4**
JIM2				*e*S	**Sn**	**19 47 54.0**	**-0.7**
JKUC	**kamogawauchiur**	**8.26**	**341**	P	**Pn**	**19 46 26.1**	**-0.3**
JIZS	**Izushimoda**	**8.32**	**333**	P	**Pn**	**19 46 27.9**	**+0.8**
JSG	**Sagara**	**8.58**	**330**	Pn	**Pn**	**19 46 30.1**	**-0.6**
JOD2	**Odawara 2**	**8.72**	**336**	P	**Pn**	**19 46 32.2**	**-0.5**
JYT	**Yasato**	**9.27**	**344**	Pn	**Pn**	**19 46 38.4**	**-1.8**
JRY	**Ryogami san**	**9.46**	**337**	P	**Pn**	**19 46 43.0**	**+0.1**
JRY				*e*S	**Sn**	**19 48 27.7**	**-0.3**
JHO	**Hitachi**	**9.55**	**346**	P	**Pn**	**19 46 42.3**	**-1.7**
JAG	**Ashikaga**	**9.66**	**341**	P	**Pn**	**19 46 44.1**	**-1.4**
JAG				*e*S	**Sn**	**19 48 30.8**	**-2.0**
MJAR	**Matsushiro Arr**	**10.18**	**335**	Pn	**Pn**	**19 46 53.0**	**+0.3**
	0.2nm,0.3s,baz=151,slow=11,SNR=11						
MAJO	**Matsushiro**	**10.18**	**335**		**Pn**	**19 46 53.8**	**+1.1**
JMM	**Marumori**	**10.72**	**349**		**Pn**	**19 46 58.9**	**-1.1**
JSD	**Sado**	**11.51**	**339**	Pn	**Pn**	**19 47 10.8**	**0.0**
JHS	**Saijyo**	**11.66**	**313**	Pn	**Pn**	**19 47 10.6**	**-2.5**
KSRS	**Korea Array**	**16.50**	**311**	Pn	**P**	**19 48 18.8**	**-1.4**
	0.2nm,0.3s,baz=122,slow=12,SNR=14						
USRK	**Ussuriysk Ar.**	**19.17**	**334**	P	**Pn**	**19 48 49.5**	**-1.1**
	baz=164,slow=14,SNR=7.3						
NACB	**Ninganchiao**	**19.92**	**266**	P	**P**	**19 48 56.2**	**-1.6**
NACB				IAmb	IAmb	19 49 14.5	
	comp=Z,37nm,1.1s						
YHNB	**Yeheng**	**20.00**	**267**	P	**P**	**19 48 57.8**	**-1.0**
YULB	**Yu-li**	**20.38**	**264**	P	**P**	**19 49 03.0**	**+0.2**
YULB				IAmb	IAmb	19 49 29.8	
	comp=Z,40nm,1.3s						
SSLB	**Suanglung**	**20.58**	**265**	P	**P**	**19 49 05.1**	**0.0**
SSLB				IAmb	IAmb	19 49 09.8	
	comp=Z,24nm,0.7s						
TWG	**Pinlang**	**20.74**	**262**	P	**P**	**19 49 07.0**	**+0.2**
TWG				IAmb	IAmb	19 49 14.9	
	comp=Z,108nm,1.7s						
TPUB	**Ta-pu**	**21.00**	**264**	P	**P**	**19 49 09.7**	**+0.1**
TPUB				IAmb	IAmb	19 49 57.5	
	comp=Z,60nm,1.2s						
KNMB	**Chin-men Tao**	**22.70**	**268**	P	**P**	**19 49 28.1**	**+0.3**
KLR	**Kul'dur**	**23.64**	**341**	P	**P**	**19 49 37.3**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=188,slow=7.1,SNR=2.6						
SONM	**Songino Array**	**35.31**	**315**	P	**P**	**19 51 20.2**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=126,slow=8.2,SNR=5.9						
SEY	**Seymchan**	**36.07**	**7**	P	**P**	**19 51 26.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=94,slow=15,SNR=1.4						
SOEI	**Soe**	**41.30**	**209**	P	**P**	**19 52 12.0**	**+0.5**
SOEI				IAmb	IAmb	19 52 44.1	
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**41.62**	**268**	P	**P**	**19 52 12.7**	**-1.4**
MTN	**Manton Dam**	**41.70**	**198**	P	**P**	**19 52 15.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**41.75**	**267**	P	**P**	**19 52 14.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=73,slow=5.1,SNR=7.3						
CMAR				LR	LR	20 08 47.3	
	comp=Z,14nm,21.3s,baz=190,slow=35						
UNV	**Unalaska Valle**	**45.05**	**40**	P	**P**	**19 52 40.0**	**-1.3**
TIXI	**Tiksi**	**45.08**	**354**	P	**P**	**19 52 42.0**	**+0.8**
LSA	**Lhasa**	**45.68**	**286**	P	**P**	**19 52 47.7**	**+0.6**
WB0	**Warramunga Arr**	**47.65**	**192**	P	**P**	**19 52 59.8**	**-2.2**
WB0				IAmb	IAmb	19 53 17.2	
	comp=Z,19nm,1.6s						
WR0	**Warramunga Arr**	**47.81**	**191**	P	**P**	**19 53 00.9**	**-2.4**
WR0				IAmb	IAmb	19 53 04.1	
	comp=Z,6.4nm,1.1s						
WB2	**Warramunga Arr**	**47.83**	**192**	P	**P**	**19 53 01.2**	**-2.2**
WB2				IAmb	IAmb	19 53 27.2	
	comp=Z,6.8nm,0.9s						
WRA	**Warramunga Arr**	**47.83**	**192**	P	**P**	**19 53 00.9**	**-2.5**
	comp=Z,3.7nm,0.7s,baz=12,slow=8.3,SNR=11						
FITZ	**Fitzroy Crossi**	**48.36**	**203**	P	**P**	**19 53 05.8**	**-1.7**
	comp=Z,2.6nm,0.8s,baz=11,slow=11,SNR=2.2						
FITZ	**Fitzroy Crossi**	**48.36**	**203**	P	**P**	**19 53 07.2**	**-0.3**
FITZ				IAmb	IAmb	19 53 25.5	
	comp=Z,9.2nm,1.2s						
ANM	**Nome**	**49.24**	**26**	P	**P**	**19 53 14.9**	**+1.1**
ZALV	**Zalesovo Beam**	**50.03**	**319**	P	**P**	**19 53 21.5**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=89,slow=5.9,SNR=2.8						
ZALV				LR	LR	20 17 11.1	
	comp=Z,71nm,18.6s,baz=22,slow=39						
MK31	**Makanchi Array**	**51.17**	**309**	P	**P**	**19 53 29.9**	**+1.1**
MKAR	**Makanchi Array**	**51.17**	**309**	P	**P**	**19 53 29.4**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=89,slow=11,SNR=7.0						
MAKZ	**Makanchi**	**51.39**	**309**	P	**P**	**19 53 31.8**	**+1.4**
ASAR	**Alice Springs**	**51.55**	**191**	P	**P**	**19 53 29.0**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=9.8,slow=6.2,SNR=7.3						
RDOG	**Red Dog Mine**	**51.57**	**23**	P	**P**	**19 53 28.9**	**-2.4**
RDOG				IAmb	IAmb	19 53 52.4	
	comp=Z,18nm,1.7s						
KDAK	**Kodiak Island**	**53.49**	**37**	P	**P**	**19 53 45.4**	**-0.3**
KURK	**Kurchatov**	**53.60**	**314**	P	**P**	**19 53 48.0**	**+1.4**
KNK	**Knik Glacier**	**55.93**	**33**	P	**P**	**19 54 03.2**	**-0.2**
ILAR	**Eielson Array**	**56.96**	**29**	P	**P**	**19 54 10.5**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=270,slow=4.5,SNR=2.5						
KLU	**Klutina**	**57.15**	**33**	P	**P**	**19 54 12.8**	**+0.7**
BRVK	**Borovoye**	**58.67**	**317**	P	**P**	**19 54 25.2**	**+2.4**
KK05	**Karatay Array**	**59.83**	**306**	P	**P**	**19 54 30.2**	**-0.8**
KK06	**Karatay Array**	**59.83**	**306**	P	**P**	**19 54 29.5**	**-1.5**
KK31	**Karatay Array**	**59.84**	**306**	P	**P**	**19 54 31.3**	**+0.3**
KK31				IAmb	IAmb	19 54 34.8	
	comp=Z,1.9nm,0.6s						
KKAR	**Karatay Array**	**59.84**	**306**	P	**P**	**19 54 31.6**	**+0.5**
KKAR				IAmb	IAmb	19 54 34.8	
	comp=Z,1.9nm,0.6s						
INK	**Inuvik**	**62.34**	**25**	P	**P**	**19 54 47.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=299,slow=9.1,SNR=3.9						
INK	**Inuvik**	**62.34**	**25**	IAmb	IAmb	19 55 28.1	
	comp=Z,13nm,1.6s						
WHY	**Whitehorse**	**62.54**	**33**	P	**P**	**19 54 50.9**	**+1.6**
WHY				IAmb	IAmb	19 55 04.7	
	comp=Z,15nm,1.4s						
C36M	**Paulatuk**	**65.57**	**23**	P	**P**	**19 55 08.2**	**-0.6**
C36M				IAmb	IAmb	19 55 57.8	
	comp=Z,5.4nm,1.3s						
AB06	**Akbulak array**	**65.70**	**314**	P	**P**	**19 55 10.4**	**+0.4**
AB07	**Akbulak array**	**65.71**	**314**	P	**P**	**19 55 10.2**	**+0.1**
ABKAR	**Akbulak array**	**65.71**	**314**	P	**P**	**19 55 09.9**	**-0.2**
HRA	**Herat**	**68.31**	**298**	P	**P**	**19 55 29.2**	**+2.1**
EUNU	**Eureka**	**69.49**	**8**	P	**P**	**19 55 35.0**	**+1.5**
EUNU				IAmb	IAmb	19 56 00.7	
	comp=Z,9.1nm,1.6s						
ASHT	**Ashkhabad**	**70.09**	**303**	P	**P**	**19 55 38.5**	**+0.7**
YKA	**Yellowknife Ar**	**71.39**	**29**	P	**P**	**19 55 44.5**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=294,slow=5.5,SNR=10.0						
YBH	**Yreka Blue Hor**	**75.03**	**51**	P	**P**	**19 56 06.9**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=329,slow=4.5,SNR=4.4						
JTMT	**Jette**	**77.91**	**42**	P	**P**	**19 56 24.3**	**+0.8**
JTMT				IAmb	IAmb	19 56 32.8	
	comp=Z,9.9nm,1.6s						
FINES	**FINESS Array B**	**78.21**	**334**	P	**P**	**19 56 25.3**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=90,slow=0.6,SNR=1.3						
KBZ	**Khabaz**	**78.65**	**313**	P	**P**	**19 56 28.6**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=40,slow=3.9,SNR=4.2						
NVAR	**Mina Array Bea**	**79.49**	**52**	P	**P**	**19 56 32.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=291,slow=5.7,SNR=6.1						
AKASG	**Malin Array Be**	**83.06**	**324**	P	**P**	**19 56 51.2**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=48,slow=4.7,SNR=4.3						
PDAR	**Pinedale Array**	**83.25**	**45**	P	**P**	**19 56 52.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=272,slow=5.0,SNR=2.4						
RAYN	**Ar Rayn**	**86.06**	**294**	P	**P**	**19 57 08.3**	**+1.6**
RAYN				IAmb	IAmb	19 57 11.0	
	comp=Z,3.5nm,0.8s						
TXAR	**Lajitas Array**	**94.56**	**54**	P	**P**	**19 57 46.5**	**0.0**
	comp=Z,0.9nm,0.9s,baz=306,slow=3.0,SNR=5.2						

IDC ***13*** *19:50:41.6±0.6, 37°.22N×141°.52E, h0^{km}, mb4.1/23, mb1 4.2/30, mb1mx4.1/48, mbtmp4.0/30, ML3.3/6, MS3.3/7, Ms1 3.3/7, ms1mx3.0/40, Error ellipse: s-maj=15.1km s-min=11.8km az=115.0*

NEIC ***13*** *19:50:43.9±1.6, 37°.28N±0°.03×141°.51E±0°.06, h12^{km}±4^{km}, mb4.7/36, Mwr4.0/15, Error ellipse: s-maj=7.1km s-min=4.5km az=86.0*

NIED ***13*** *19:50:43.6, 37°.22N×141°.61E, h33^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.51; $M_{\theta\theta}$0.22; $M_{\phi\phi}$1.29; $M_{r\theta}$0.17; $M_{\theta\phi}$0.64; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.56000×10^{15} NP1: ϕ_s210.00000°, δ47.00000°, λ-83.00000°. NP2: ϕ_s20.00000°, δ43.00000°, λ-98.00000°.*

JMA ***13*** *19:50:43.6±0.1, 37°.22N×141°.61E, h33^{km}±2^{km}, M4.4*

JMA Felt I J1.

MOS ***13*** *19:50:44.9±1.1, 37°.28N×141°.52E, h31^{km}, mb4.7/11, Error ellipse: s-maj=9.4km s-min=6.1km az=102.7*

BJI ***13*** *19:50:46.1±0.0, 37°.33N×141°.47E, h36^{km}, mB5.0/20, mb4.4/28, Ms4.1/4, Ms7 3.9/4*

NEIC ***13*** *19:50:47.5, 37°.28N×141°.42E, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.98; $M_{\theta\theta}$0.15; $M_{\phi\phi}$0.83; $M_{r\theta}$-0.33; $M_{\theta\phi}$0.34; $M_{\phi r}$0.37; Fault plane solution: $M_0$1.10000×10^{15} NP1: ϕ_s181.67000°, δ55.11000°, λ-114.71000°. NP2: ϕ_s40.49000°, δ41.83000°, λ-59.06000°. Principal axes: T 0.9976, Plg7.0000°, Azm289.0000°; N 0.1782, Plg20.0000°, Azm196.0000°; P -1.1759, Plg69.0000°, Azm37.0000°;*

ISC 13 19:50:45.7±0.8**, 37°.28N**±0°.04×**141°.53E**±0°.04**, h26**^{km}±4^{km}**, n154, σ1^{s}70**/164**, mb4.3**/58**, 9C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.53**	**280**	P	**Pn**	**19 50 55.4**	**-2.2**
JFK				*e*S	**Sn**	**19 51 03.4**	**-2.3**
ONAJ	**Iwakimizuishiy**	**0.61**	**254**	P	**Pn**	**19 50 56.3**	**-2.4**
ONAJ				*e*S	**Sn**	**19 51 05.2**	**-2.5**
JMST	**Minamisoumatoc**	**0.68**	**311**	P	**Pn**	**19 50 57.8**	**-1.8**
JMST				*e*S	**Sn**	**19 51 07.8**	**-1.5**
JFFD	**Fukushimafurud**	**0.80**	**257**	P	**Pb**	**19 50 59.1**	**-1.8**
JFFD				S	**Sn**	**19 51 10.2**	**-2.0**
JMM	**Marumori**	**0.83**	**315**	P	**Pb**	**19 51 00.1**	**-1.4**
JMM				S	**Sb**	**19 51 12.1**	**-0.2**
JMM	**Marumori**	**0.83**	**315**		**Pb**	**19 51 00.1**	**-1.4**
JMM				Sn	**Sb**	**19 51 11.8**	**-0.5**
JFT	**Otama**	**0.98**	**285**	P	**Pb**	**19 51 03.0**	**-1.0**
JFT				*e*S	**Sb**	**19 51 17.2**	**+0.6**
JHO	**Hitachi**	**1.02**	**230**	P	**Pn**	**19 51 01.7**	**-2.5**
JIO	**Ouri**	**1.19**	**353**	P	**Pn**	**19 51 05.0**	**-1.5**
JIO				*e*S	**Sb**	**19 51 20.3**	**-2.1**
JOU	**Okura**	**1.29**	**328**	P	**Pb**	**19 51 07.9**	**-1.3**
JOU				S	**Sb**	**19 51 25.9**	**+0.5**
JFY	**Yanaizu**	**1.46**	**276**	P	**Pb**	**19 51 10.3**	**-1.9**
JFY				*e*S	**Sb**	**19 51 30.8**	**+0.4**
JYT	**Yasato**	**1.50**	**226**	Pn	**Pn**	**19 51 08.8**	**-2.0**
JYT				Sn	**Sn**	**19 51 27.5**	**-2.0**
JSD	**Sado**	**2.71**	**287**		**Pn**	**19 51 27.4**	**0.0**
MJAR	**Matsushiro Arr**	**2.76**	**256**	Pn	**Pn**	**19 51 28.2**	**0.0**
	1.1nm,0.3s,baz=84,slow=15,SNR=36						
MJAR				Sn	**Sb**	**19 52 02.5**	**-5.2**
	1.6nm,0.3s,baz=178,slow=39,SNR=3.2						
MAJO	**Matsushiro**	**2.76**	**256**	*d* *i*P	**Pn**	**19 51 28.9**	**+0.6**
MAJO	**Matsushiro**	**2.76**	**256**		**Pn**	**19 51 28.9**	**+0.6**
MAT	**Matsushiro**	**2.76**	**256**	P	**Pn**	**19 51 29.0**	**+0.7**
MAT				*e*S	**Sn**	**19 51 59.9**	**-0.9**
JTM	**Tenmabayashi**	**3.52**	**354**		**Pn**	**19 51 39.1**	**+0.4**
JSG	**Sagara**	**3.75**	**227**	Pn	**Pn**	**19 51 43.2**	**+1.4**
JGF	**Kuroka**	**3.76**	**245**	Pn	**Pn**	**19 51 42.8**	**+0.8**
INU	**Inuyama**	**4.12**	**244**		**Pn**	**19 51 47.6**	**+0.7**
JHJ2	**Mitsune**	**4.38**	**199**	Pn	**Pn**	**19 51 51.0**	**+0.5**
JHJ	**Hachijo jima 2**	**4.39**	**200**	Pn	**Pn**	**19 51 49.9**	**-0.7**
	11nm,0.3s,baz=307,slow=22,SNR=8.4						
JHJ				Sn	**Sn**	**19 52 41.2**	**+0.4**
	13nm,0.3s,baz=73,slow=19,SNR=2.1						
JHJ				LR	LR	19 53 27.0	
	comp=Z,164nm,18.2s,baz=62,slow=38						
ERM	**Erimo**	**4.90**	**14**	⇑*e*P	**Pn**	**19 51 59.1**	**+1.6**
JEM	**Erimo**	**4.90**	**14**	Pn	Pb	19 52 25.2	+14
JWT	**Wachi**	**5.34**	**250**		**Pn**	**19 52 03.3**	**-0.3**
JEW	**Eniwo**	**5.56**	**359**	Pn	**Pn**	**19 52 06.1**	**-0.5**
NMR	**Nemuro--Hokkai**	**6.88**	**26**	*e*P	**Pn**	**19 52 21.9**	**-2.8**
NMR				*e*S	**Sn**	**19 53 35.9**	**-6.2**
ASAJ	**Asahikawa**	**6.88**	**6**	Pn	**Pn**	**19 52 24.2**	**-0.6**
	2.4nm,0.3s,baz=255,slow=6.8,SNR=8.7						
ASAJ				Sn	**Sn**	**19 53 45.0**	**+2.8**
	baz=90,slow=20,SNR=1.2						
JKA	**Kamikawa-asahi**	**6.88**	**6**	Pn	**Pn**	**19 52 24.4**	**-0.4**
GLVR	**Golovnino**	**7.13**	**24**	*e*P	**Pn**	**19 52 26.3**	**-1.9**
GLVR				*e*S	**Sn**	**19 53 43.8**	**-4.6**
JMN	**Monobe**	**7.17**	**243**	Pn	**Pn**	**19 52 28.1**	**-0.8**
JHS	**Saijyo**	**7.18**	**254**	Pn	**Pn**	**19 52 30.3**	**+1.4**
GRPR	**Tuman**	**7.44**	**24**	*e*P	**Pn**	**19 52 30.2**	**-2.3**
GRPR				*e*S	**Sn**	**19 53 49.1**	**-6.9**
YUK	**Yuzh-Kuril'sk**	**7.51**	**25**	P	**Pn**	**19 52 31.2**	**-2.2**
YUK				*e*S	**Sn**	**19 53 52.7**	**-4.9**
KUR	**Kuril'sk**	**9.27**	**29**	*e*P	**Pn**	**19 52 55.1**	**-2.4**
KUR				*e*S	**Sn**	**19 54 35.1**	**-5.7**
JNU	**Nakatsue**	**9.65**	**248**	Pn	**Pn**	**19 53 02.0**	**-0.8**
	0.2nm,0.3s,baz=67,slow=18,SNR=2.0						
JNU				LR	LR	19 57 20.7	
	comp=Z,112nm,19.6s,baz=35,slow=42						
JNU	**Nakatsue**	**9.65**	**248**	Pn	**Pn**	**19 53 03.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**9.71**	**5**	*e*P	**Pn**	**19 53 03.7**	**+0.1**
USRK	**Ussuriysk Ar.**	**10.01**	**317**	Pn	**Pn**	**19 53 08.4**	**+0.8**
	baz=122,slow=13,SNR=2.5						
USRK				LR	LR	19 56 42.7	
	comp=Z,271nm,19.4s,baz=147,slow=36						
JTU	**Tsushima**	**10.22**	**258**	Pn	**Pn**	**19 53 11.2**	**+0.6**
KSRS	**Korea Array**	**10.84**	**275**	Pn	Pn	19 53 23.2	+4.2
	0.0nm,0.3s,baz=83,slow=13,SNR=7.0						
KSRS				LR	LR	19 56 57.5	
	comp=Z,193nm,21.1s,baz=72,slow=35						
MDJ	**Mudanjiang**	**11.62**	**313**	Pn	**Pn**	**19 53 29.2**	**-0.6**
KLR	**Kul'dur**	**13.90**	**332**	Pn	**Pn**	**19 54 01.5**	**+0.7**
	0.1nm,0.3s,baz=169,slow=16,SNR=3.3						
KLR				LR	LR	19 58 44.6	
	comp=Z,106nm,19.9s,baz=142,slow=35						
ZEA	**Zeya**	**19.20**	**334**	*e*P	**Pn**	**19 55 08.6**	**+0.2**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	**Nanjing**	**19.35**	**261**	*e*P	**Pn**	**19 55 08.0**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	**Petropavlovsk-**	**19.43**	**30**	P	**Pn**	**19 55 09.2**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=268,slow=11,SNR=1.5						
MA2	**Magadan**	**23.10**	**12**	P	**P**	**19 55 49.1**	**-0.1**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MA2	**Magadan**	**23.10**	**12**	P	**P**	**19 55 49.1**	**-0.1**
HHC	**Hu-ho-hao-te**	**23.49**	**288**	*e*P	**P**	**19 55 53.6**	**+0.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
YAK	**Yakutsk**	**25.86**	**347**	P	**P**	**19 56 14.9**	**+0.2**
	comp=Z,7.8nm,0.5s,baz=350,slow=0.3,SNR=10						
YAK	**Yakutsk**	**25.86**	**347**	*e*P	**P**	**19 56 14.9**	**+0.2**
YAK				*e**PP	**sP**	**19 56 25.0**	**-0.6**
YAK				*e*		19 56 58.4	
YAK				*e*		19 59 41.7	
YAK				*e*S	**S**	**20 00 44.5**	**+1.9**
YAK				*e**SS	**sS**	**20 00 59.1**	**+3.8**
YAK				*e*SS	**SnSn**	**20 01 39.8**	**+0.3**
YAK				*e*		20 07 10.4	
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,89nm,3.5s						
YAK				pmax	pmax		
	comp=E,68nm,3.5s						
YAK				smax	smax		
	comp=E,70nm,3.0s						
YAK				smax	smax		
	comp=N,59nm,3.0s						
YAK	**Yakutsk**	**25.86**	**347**	P	**P**	**19 56 13.8**	**-0.9**
YAK				IAmb	IAmb	19 56 20.9	
	comp=Z,26nm,0.8s						
SEY	**Seymchan**	**26.54**	**11**	P	**P**	**19 56 22.4**	**+1.5**
	comp=Z,2.9nm,0.9s,baz=176,slow=6.1,SNR=5.6						
SEY	**Seymchan**	**26.54**	**11**	*i* P	**P**	**19 56 23.6**	**+2.7**
ULN	**Ulaanbaatar**	**27.30**	**304**	⇑*e*P	**P**	**19 56 27.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.30**	**304**	P	**P**	**19 56 27.6**	**-0.5**
SMY	**Shemya**	**27.43**	**45**	P	**P**	**19 56 29.4**	**+0.4**
SMY				pmax	pmax		
	comp=Z,548nm,1.7s						
SMY	**Shemya**	**27.43**	**45**	P	**P**	**19 56 29.4**	**+0.4**
SONM	**Songino Array**	**27.73**	**304**	P	**P**	**19 56 31.5**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=100,slow=9.0,SNR=17						
SONM				LR	LR	20 08 00.9	
	comp=Z,51nm,19.0s,baz=179,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.19**	**121**	T	T	20 26 00.8	
	baz=314,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.20**	**121**	T	T	20 25 58.0	
	baz=314,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.21**	**121**	T	T	20 26 01.4	
	baz=314,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	20 26 51.2	
	baz=316,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	20 26 51.2	
	baz=316,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.93**	**123**	T	T	20 26 52.4	
	baz=316,slow=76						
LZH	**Lanzhou**	**30.12**	**279**	*e*P	P	19 56 56.6	+3.2
LZH				pP	sP	19 57 08.1	+3.8
LZH				sP	pP	19 57 14.6	+14
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA	**Gaotai**	**32.58**	**287**	*e*P	**P**	**19 57 15.5**	**+0.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**35.06**	**353**	⇑*e*P	**P**	**19 57 37.2**	**+1.3**
DGZ	**Jazzator, Alta**	**40.33**	**306**	⇑*e*P	**P**	**19 58 22.5**	**+1.6**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TOLI2	**Tolitoli**	**40.76**	**213**	P	**P**	**19 58 25.2**	**+0.6**
TOLI2				IAmb	IAmb	19 58 36.5	
	comp=Z,6.4nm,0.9s						
WMQ	**Urumqi**	**40.81**	**297**	*e*P	**P**	**19 58 26.3**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.3s						
CMAR	**Chiang Mai Arr**	**41.65**	**255**	P	**P**	**19 58 31.4**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=41,slow=7.9,SNR=5.9						
CMAR	**Chiang Mai Arr**	**41.65**	**255**	*i* P	**P**	**19 58 34.0**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZAA0	**Zalesovo Array**	**41.82**	**312**	P	**P**	**19 58 33.4**	**+0.4**
ZALV	**Zalesovo Beam**	**41.82**	**312**	P	**P**	**19 58 33.1**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=83,slow=7.2,SNR=20						
ZALV	**Zalesovo Beam**	**41.82**	**312**	*i* P	**P**	**19 58 33.5**	**+0.5**
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**42.28**	**275**	P	**P**	**19 58 36.6**	**-1.0**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSA	**Lhasa**	**42.28**	**275**	P	**P**	**19 58 36.6**	**-1.0**
MK31	**Makanchi Array**	**44.07**	**302**	*i* P	**P**	**19 58 51.6**	**+0.3**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**44.07**	**302**	P	**P**	**19 58 51.4**	**0.0**
MKAR	**Makanchi Array**	**44.07**	**302**	P	**P**	**19 58 51.6**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=86,slow=8.1,SNR=30						
MKAR				LR	LR	20 19 54.8	
	comp=Z,101nm,18.2s,baz=338,slow=40						
MAKZ	**Makanchi**	**44.28**	**302**	P	**P**	**19 58 53.3**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	**Makanchi**	**44.28**	**302**	P	**P**	**19 58 53.3**	**+0.3**
KURK	**Kurchatov**	**45.86**	**308**	*i* P	**P**	**19 59 05.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
KURK	**Kurchatov**	**45.86**	**308**	P	**P**	**19 59 05.1**	**-0.3**
KURK				IAmb	IAmb	19 59 19.1	
	comp=Z,7.7nm,0.8s						
KDAK	**Kodiak Island**	**46.86**	**42**	P	**P**	**19 59 14.1**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,73nm,1.3s						
KDAK	**Kodiak Island**	**46.86**	**42**	P	**P**	**19 59 14.1**	**+1.0**
PPLA	**Purkeypile**	**46.92**	**35**	P	**P**	**19 59 12.9**	**-0.8**
KTH	**Kantishna Hill**	**47.49**	**34**	P	P	19 59 21.1	+2.9
SUA	**Susitna One**	**47.61**	**37**	P	P	19 59 22.3	+3.2
TRF	**Thorofare Moun**	**47.78**	**34**	P	**P**	**19 59 20.4**	**-0.1**
TRF				IAmb	IAmb	19 59 20.9	
	comp=Z,26nm,1.6s						
RND	**Reindeer**	**48.43**	**34**	P	**P**	**19 59 25.6**	**+0.2**
RND				pmax	pmax		
	comp=Z,20nm,1.6s						
RND	**Reindeer**	**48.43**	**34**	P	**P**	**19 59 25.6**	**+0.2**
RND				IAmb	IAmb	19 59 49.1	
	comp=Z,20nm,1.6s						
GHO	**Glory Hole Cre**	**48.46**	**37**	P	**P**	**19 59 26.1**	**+0.4**
MDM	**Murphy Dome**	**48.66**	**32**	P	**P**	**19 59 27.6**	**+0.5**
MDM				IAmb	IAmb	19 59 34.2	
	comp=Z,6.3nm,1.1s						
KNK	**Knik Glacier**	**48.71**	**37**	P	**P**	**19 59 28.7**	**+1.1**
SML	**Sawmill**	**48.74**	**36**	P	**P**	**19 59 29.1**	**+1.2**
SCM	**Sheep Creek Mo**	**49.22**	**36**	P	**P**	**19 59 31.9**	**+0.4**
SCM				pmax	pmax		
	comp=Z,88nm,1.8s						
SCM	**Sheep Creek Mo**	**49.22**	**36**	P	**P**	**19 59 31.9**	**+0.4**
IL31		**49.24**	**32**	P	**P**	**19 59 33.0**	**+1.5**
IL31				IAmb	IAmb	20 00 06.1	
	comp=Z,7.9nm,1.5s						
ILAR	**Eielson Array**	**49.24**	**32**	P	**P**	**19 59 31.9**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=264,slow=6.7,SNR=13						
GLI	**Glacier Island**	**49.41**	**38**	P	**P**	**19 59 34.1**	**+1.3**
HIN	**Hinchinbrook I**	**49.75**	**38**	P	**P**	**19 59 36.9**	**+1.4**
KSH	**Kashi**	**50.39**	**294**	P	P	19 59 43.8	+3.0
KSH				pP	sP	19 59 57.1	+5.2
KSH				S	**S**	**20 06 54.1**	**+1.5**
KSH				sS	sS	20 07 15.8	+10
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,560nm,5.5s						
AAK	**Ala-Archa**	**50.46**	**298**	⇑*e*P	**P**	**19 59 42.0**	**+0.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	**Borovoye**	**50.53**	**312**	*i* P	**P**	**19 59 41.3**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRVK	**Borovoye**	**50.53**	**312**	P	**P**	**19 59 41.5**	**0.0**
COEN	**Coen**	**50.98**	**178**	P	**P**	**19 59 47.1**	**+1.9**
COEN				IAmb	IAmb	20 00 04.7	
	comp=Z,5.8nm,1.2s						
KK31	**Karatay Array**	**53.09**	**300**	P	**P**	**19 59 59.8**	**-0.9**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KK31	**Karatay Array**	**53.09**	**300**	P	**P**	**19 59 59.8**	**-0.9**
KK31				IAmb	IAmb	20 00 05.6	
	comp=Z,6.3nm,1.4s						
KKAR	**Karatay Array**	**53.09**	**300**	P	**P**	**20 00 00.2**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KKAR	**Karatay Array**	**53.09**	**300**	P	**P**	**20 00 00.2**	**-0.5**
KKAR				IAmb	IAmb	20 00 05.6	
	comp=Z,6.3nm,1.4s						
EPYK	**Eagle Plains**	**53.27**	**30**	P	**P**	**20 00 03.5**	**+1.8**
EPYK				IAmb	IAmb	20 00 09.3	
	comp=Z,9.0nm,0.9s						
NIL	**Nilore**	**54.63**	**288**	P	**P**	**20 00 12.1**	**-0.1**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NIL	**Nilore**	**54.63**	**288**	P	**P**	**20 00 12.1**	**-0.1**
NIL				IAmb	IAmb	20 00 14.8	
	comp=Z,4.5nm,0.7s						
SVE	**Sverdlovsk**	**55.03**	**319**	*e*P	**P**	**20 00 16.0**	**+1.4**
SVE				pmax	pmax		
	comp=Z,12nm,1.1s						
ARU	**Arti**	**56.24**	**318**	*c* *i*P	**P**	**20 00 24.0**	**+0.6**
ARU						20 01 25.5	
ARU						20 02 25.7	
ARU				S	**S**	**20 08 12.1**	**+0.8**
ARU				SS	**SS**	**20 11 51.0**	**-6.5**
ARU				pmax	pmax		
	comp=Z,19nm,1.2s						

ARU	Arti	56.24	318	P	P	20 00 23.6	+0.2
ARU				IAmb	IAmb	20 00 24.6	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	57.31	188	P	P	20 00 30.1	-1.2
	comp=Z,2.0nm,0.7s,baz=5.3,slow=7.4,SNR=10						
ABKAR	Akbulak array	57.86	310	P	P	20 00 35.0	+0.1
ABKAR				IAmb	IAmb	20 00 35.9	
	comp=Z,4.6nm,0.7s						
KIRV	Kirov	60.11	323	⇑eP	P	20 00 51.4	+1.1
ASAR	Alice Springs	61.04	188	P	P	20 00 56.4	-0.7
	comp=Z,1.5nm,0.8s,baz=8.2,slow=7.3,SNR=14						
YKA	Yellowknife Ar	63.55	30	P	P	20 01 13.9	+0.5
	comp=Z,0.7nm,0.7s,baz=305,slow=6.6,SNR=9.2						
KLMR	Klimovskoe	63.60	328	eP	P	20 01 13.4	-0.3
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
KLMR	Klimovskoe	63.60	328	eP	P	20 01 13.5	-0.3
KLMR				AMP		20 01 19.1	
	comp=Z,25nm,1.4s						
BELG	Belogornoye	63.69	317	⇑eP	P	20 01 15.2	+0.7
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GEYT	Alibeck	63.80	299	P	P	20 01 15.8	+0.3
	comp=Z,1.9nm,0.7s,baz=328,slow=5.1,SNR=3.8						
ARCES	ARCESS Array B	63.80	339	P	P	20 01 15.1	+0.1
	comp=Z,4.7nm,1.0s,baz=51,slow=8.6,SNR=5.1						
FINES	FINESS Array B	68.64	332	P	P	20 01 46.7	+0.5
	comp=Z,2.7nm,0.7s,baz=38,slow=9.6,SNR=6.1						
STKA	Stephens Creek	68.80	180	P	P	20 01 47.4	0.0
	comp=Z,2.4nm,0.9s,baz=337,slow=10.0,SNR=4.2						
PINE	Pine Mountain	70.11	50	P	P	20 01 57.0	+1.2
PINE				IAmb	IAmb	20 02 03.4	
	comp=Z,8.2nm,1.0s						
YBH	Yreka Blue Hor	70.12	52	P	P	20 01 57.9	+2.1
	comp=Z,0.7nm,0.6s,baz=270,slow=8.1,SNR=2.0						
KBZ	Khabaz	70.82	311	P	P	20 02 01.2	+1.4
	comp=Z,6.9nm,1.1s,baz=39,slow=19,SNR=3.9						
KBZ	Khabaz	70.82	311	⇑eP	P	20 02 00.7	+0.9
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	70.82	311	eP	P	20 02 01.8	+1.8
KIV				pmax	pmax		
	comp=Z,34nm,1.1s						
NB2	NORSAR Subarra	74.00	337	P	P	20 02 19.4	+0.8
	comp=Z,1.1nm,0.6s,baz=39,slow=6.5						
NOA	NORSAR Array B	74.00	337	P	P	20 02 18.8	+0.2
	comp=Z,0.8nm,0.8s,baz=40,slow=6.0,SNR=1.5						
AKASG	Malin Array Be	74.16	322	P	P	20 02 19.4	-0.3
	comp=Z,0.9nm,0.4s,baz=46,slow=5.8,SNR=6.0						
NVAR	Mina Array Bea	74.77	53	P	P	20 02 24.2	+0.5
	comp=Z,1.0nm,0.7s,baz=309,slow=5.7,SNR=5.9						
H17A	Grant Village	75.83	45	P	P	20 02 31.4	+1.6
H17A				IAmb	IAmb	20 02 39.0	
	comp=Z,3.5nm,0.9s						
PDAR	Pinedale Array	77.43	46	P	P	20 02 39.3	+0.5
	comp=Z,0.4nm,0.6s,baz=259,slow=0.8,SNR=4.6						
BRTR	Keskin Array B	78.76	312	P	P	20 02 46.0	-0.1
	comp=Z,0.2nm,0.3s,baz=94,slow=4.0,SNR=2.0						
CRVS	Cervenica-Dubn	79.08	324	eP	P	20 02 48.8	+1.3
CRVS	Cervenica-Dubn	79.08	324	eP	P	20 02 48.8	+1.3
VYHS	Vyhne	80.58	325	eP	P	20 02 57.5	+1.8
VYHS	Vyhne	80.58	325	eP	P	20 02 57.5	+1.8
CLL	Collm	80.93	330	eP	P	20 03 00.0	+2.5
CLL	Collm	80.93	330	eP	P	20 03 00.0	+2.5
GERES	GERESS Array B	82.56	328	P	P	20 03 05.6	-0.6
	comp=Z,0.3nm,0.4s,baz=51,slow=6.4,SNR=2.9						
TXAR	Lajitas Array	89.90	52	P	P	20 03 43.4	+0.7
	comp=Z,0.6nm,0.7s,baz=305,slow=3.2,SNR=3.9						
H03N2	Juan Fernandez	146.95	96	T	T	22 54 34.2	
	baz=294,slow=76						
H03N3	Juan Fernandez	146.97	96	T	T	22 54 38.8	
	baz=294,slow=76						
H03N1	Juan Fernandez	146.97	96	T	T	22 54 36.5	
	baz=294,slow=76						

MAN 13 19:52:42.5, 8°.23N×124°.65E, h32^{km}, mb3.9, ML2.7, MS2.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.22	11	⇓eP	Pn	19 52 51.0	+1.3
CGP				eS	Sn	19 52 56.5	+2.3
BUKP	Musuan	0.54	131	eP	Pn	19 52 54.6	+0.6
BUKP				eS	Sn	19 53 03.7	+1.7
KCP	Kidapawan	1.29	160	⇑eP	Pb	19 53 06.7	+0.4
PAGZ	Pagadian	1.31	253	eP	Pn	19 53 03.9	-0.7
PAGZ				eS	Sn	19 53 22.0	+0.9

IDC ***13*** *20:03:51.5±0.4, 6°.30S×147°.17E, h0^{km}, mb5.0/25, mb1 5.0/32, mb1mx5.0/37, mbtmp5.0/32, ML4.7/4, MS4.1/16, Ms1 4.1/16, ms1mx4.0/24, Error ellipse: s-maj=13.3km s-min=9.8km az=69.0*

BJI ***13*** *20:03:54.8±0.0, 6°.38S×147°.38E, h50^{km}, mB5.3/42, mb5.1/72, Ms4.9/16, Ms7 4.5/15*

MOS ***13*** *20:03:55.9±0.9, 6°.32S×146°.96E, h38^{km}, mb5.2/28, Error ellipse: s-maj=9.2km s-min=5.1km az=106.9*

NEIC ***13*** *20:03:58.2±1.9, 6°.39S±0°.06×147°.06E±0°.06, h46^{km}±4^{km}, mb5.2/141, Error ellipse: s-maj=8.6km s-min=8.1km az=98.0*

DJA ***13*** *20:03:59.5±0.3, 6°S±2°×14°7E±°, h53^{km}±4^{km}, M5.1/66, mB5.5/30, mb5.3/66, MLv5.4/5, Mw(mB)4.9/30, MwMwp5.7/4, Mwp5.8/4*

GCMT ***13*** *20:03:59.2±0.2, 6°.49S±0°.01×146°.96E±0°.02, h21^{km}, MW5.0/83, Moment Tensor Solution. s51,c67; s83,c129; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.93±.14; $M_{\theta\theta}$-2.98±.09; $M_{\phi\phi}$-0.95±.10; $M_{r\theta}$0.36±.16; $M_{\theta\phi}$2.32±.07; $M_{\phi r}$-1.42±.19; Best double couple: $M_0$4.48000×10^{16} NP1:ϕ_s289.00000°, δ40.00000°, λ67.00000°. NP2: ϕ_s137.00000°, δ54.00000°, λ108.00000°. Principal axes: T 4.3230, Plg74.0000°, Azm98.0000°; N 0.3120, Plg14.0000°, Azm306.0000°; P -4.6360, Plg7.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***13*** *20:04:00.4, 6°.39S×147°.08E, h58^{km}, mb5.2, Eastern New Guinea Reg., P.N.G.*

ISC 13 20:03:58.2±0.4**, 6°.39S**±0°.03×**147°.08E**±0°.04**, h46**^{km}±3^{km}**, h47**^{km}**:pP-P, n551,** σ**1°.16**/581**, mb5.2**/193**, MS4.3**/21**, 35C-28D, Fault plane solution: NP1:**ϕ_s148.89761°, δ76.01926°**,** λ112.23763°. **NP2:**ϕ_s269.47656°**,** δ26.07721°, λ33.33981°. **Principal axes:** T Plg53.7030°, Azm85.7732°**;** N Plg21.5454°, Azm323.2563°**;** P Plg27.6644°**,** Azm221.3112°**; Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	Port Moresby	3.00	179	Pn	Pn	20 04 43.3	-0.1
	73nm,0.3s,baz=39,slow=5.1,SNR=73						
PMG				Sn	Sn	20 05 20.4	+2.4
	92nm,0.3s,baz=260,slow=16,SNR=3.0						
PMG				Lg	Lg	20 05 26.3	
	274nm,0.3s,baz=183,slow=22,SNR=9.5						
PMG	Port Moresby	3.00	179	d iP	Pn	20 04 43.0	-0.3
PMG				pmax	pmax		
	comp=Z,746nm,1.0s						
PMG	Port Moresby	3.00	179	Pn	Pn	20 04 42.7	-0.7
PMG	Port Moresby	3.00	179	P	Pn	20 04 44.6	+1.3
MANU	Manus Island	4.32	4		Pn	20 05 02.8	+1.3
RABL	Rabaul	5.51	67		Pn	20 05 18.8	+1.0
RABL	Rabaul	5.51	67	P	Pn	20 05 20.0	+2.2
JAY	Jayapura	7.43	301	Pn	Pn	20 05 43.8	-0.4
	comp=Z,0.7nm,0.3s,baz=108,slow=7.0,SNR=3.1						
JAY				Sn	Sn	20 07 09.2	+2.0
	baz=22,slow=19,SNR=0.9						
JAY				Lg	Lg	20 07 42.9	
	comp=Z,2.2nm,0.3s,baz=114,slow=16,SNR=4.3						
JAY				LR	LR	20 09 14.6	
	comp=Z,2µm,18.4s,baz=126,slow=43						
JAY	Jayapura	7.43	301	P	Pn	20 05 43.4	-0.8
	comp=Z,0.3nmcomp=Z,40nm,1.0s						
GENI	Genyem	7.86	298	P	Pn	20 05 50.5	+0.5
	comp=Z,1.7nmcomp=Z,3µmcomp=Z,153nm,0.5s						
COEN	Coen	8.45	207	P	Pn	20 05 57.1	-1.1
	baz=8.5						
COEN	Coen	8.45	207	Pn	Pn	20 05 57.3	-0.8
MTSU	Mount Surprise	11.98	193	P	Pn	20 06 46.1	-0.5
	baz=12,SNR=37						
HNR	Honiara	13.10	104	Pn	Pn	20 06 59.9	-1.8
	comp=Z,7.2nm,0.3s,baz=166,slow=2.4,SNR=11						
HNR				Sn	Sn	20 09 25.4	-0.7
	comp=Z,3.8nm,0.3s,baz=0.0,slow=20,SNR=1.4						
HNR				LR	LR	20 10 30.1	
	comp=Z,209nm,20.9s,baz=282,slow=31						
HNR	Honiara	13.10	104		Pn	20 07 02.4	+0.6
HNR	Honiara	13.10	104	P	Pn	20 07 04.4	+2.7
CTA	Charters Tower	13.64	183	Pn	Pn	20 07 09.2	-0.1
	comp=Z,1.4nm,0.3s,baz=0.4,slow=14,SNR=16						
CTA				Sn	Sn	20 09 39.0	-0.4
	comp=Z,0.5nm,0.3s,baz=17,slow=10,SNR=2.0						
CTAO	Charters Tower	13.64	183	P	Pn	20 07 08.8	-0.4
CTAO	Charters Tower	13.64	183	Pn	Pn	20 07 08.8	-0.4
FAKI	Fak Fak	15.18	282		P	20 07 32.9	-1.1
FAKI	Fak Fak	15.18	282	P	Pn	20 07 30.3	+0.6
	comp=Z,78nm,1.2s						
KDU	Kakadu	15.70	245	P	Pn	20 07 35.8	-0.6
	baz=16,SNR=15						
SAUI	Saumlaki	15.74	263	Pn	Pn	20 07 37.3	+0.4
SAUI				IAmb	IAmb	20 07 43.2	
	comp=Z,257nm,0.9s						
QIS	Mount Isa	15.85	207	P	Pn	20 07 37.8	-0.5
	baz=16,SNR=19						
SIJI	Sorong	16.70	289	Pn	Pn	20 07 48.8	-0.3
	comp=Z,2.3nm,0.3s,baz=90,slow=8.8,SNR=22						
SIJI				Sn	Sn	20 10 56.4	+2.5
	comp=Z,0.4nm,0.3s,baz=127,slow=20,SNR=1.2						
SWI	Sorong	16.71	289	P	Pn	20 07 49.5	+0.3
	comp=Z,3µmcomp=Z,343nm,0.7s						
MTN	Manton Dam	16.98	247	P	Pn	20 07 52.1	-0.4
	baz=17,SNR=13						
MTN	Manton Dam	16.98	247		Pn	20 07 52.2	-0.3
PATS	Pohnpei	17.27	41	P	Pn	20 07 55.5	-0.6
	baz=17						
PATS	Pohnpei	17.27	41	P	P	20 07 58.6	+1.5
PATS				IAmb	IAmb	20 08 37.4	
	comp=Z,369nm,1.2s						
WB0	Warramunga Arr	18.14	222	P	Pn	20 08 05.2	-1.7
WR0	Warramunga Arr	18.18	221	P	Pn	20 08 05.6	-1.7
WRAB	Tennant Creek	18.28	221	d iP	P	20 08 07.5	-0.8
WRAB				pmax	pmax		
	comp=Z,50nm,0.7s						
WRAB	Tennant Creek	18.28	221	P	P	20 08 06.9	-1.5
WB2	Warramunga Arr	18.29	221	P	P	20 08 07.6	-0.8
	baz=18						
WB2	Warramunga Arr	18.29	221	P	P	20 08 07.0	-1.4
WRA	Warramunga Arr	18.30	221	P	P	20 08 07.3	-1.1
	comp=Z,2.3nm,0.3s,baz=47,slow=12,SNR=110						
WRA				S	Sn	20 11 32.5	+0.1
	comp=Z,0.3nm,0.3s,baz=46,slow=24,SNR=5.8						
WRA				LR	LR	20 15 29.0	
	comp=Z,489nm,19.3s,baz=55,slow=38						
WRA	Warramunga Arr	18.30	221	i P	P	20 08 07.8	-0.7
WRA				pmax	pmax		
	comp=Z,39nm,0.8s						
MSAI	Masohi	18.34	279	P	Pn	20 08 09.8	+0.5
	comp=Z,34nm,0.6s						
EIDS	Eidsvold	19.26	169	P	Pn	20 08 20.6	+0.3
	baz=19,SNR=12						
EIDS	Eidsvold	19.26	169	P	P	20 08 19.3	+0.3
GUMO	Guam	19.97	354	P	P	20 08 25.0	-1.7
	comp=Z,12nm,0.3s,baz=173,slow=11,SNR=4.1						
GUMO	Guam	19.97	354	P	P	20 08 27.4	+0.7
GUMO				pmax	pmax		
	comp=Z,615nm,1.2s						
GUMO	Guam	19.97	354	P	P	20 08 27.4	+0.7
RMQ	Roma	20.05	176	P	Pn	20 08 29.6	-0.1
	baz=20,SNR=42						
NLAI	Namlea	20.15	278	P	Pn	20 08 30.7	-0.3
	comp=Z,113nm,1.0s						
QLP	Quilpie	20.27	187	P	Pn	20 08 31.1	-1.2
	baz=20,SNR=11						
TNTI	Ternate	20.92	289	P	P	20 08 37.0	-0.2
TNTI				IAmb	IAmb	20 09 00.8	
	comp=Z,102nm,1.0s						
TNTI	Ternate	20.92	289	P	Pn	20 08 39.1	-1.1
	comp=Z,1µmcomp=Z,108nm,1.5s						
AS31	Alice Springs	21.35	215	P	P	20 08 41.6	-0.1
ASAR	Alice Springs	21.35	215	P	P	20 08 41.5	-0.3
	comp=Z,33nm,0.6s,baz=53,slow=9.0,SNR=131						
ASAR				S	S	20 12 39.4	+3.0
	comp=Z,7.5nm,0.7s,baz=37,slow=23,SNR=6.3						
ASAR				ScP	ScP	20 16 21.1	+3.1
	comp=Z,1.3nm,0.7s,baz=32,slow=4.7,SNR=1.6						
ASAR				PKiKP	PKiKP	20 20 31.2	-0.7
	comp=Z,0.8nm,0.7s,baz=110,slow=0.6,SNR=8.6						
ASPA	Alice Springs	21.35	215	P	P	20 08 42.5	+0.8
	baz=21						
SANI	Sanana	21.47	281	P	P	20 08 44.4	+1.4
	comp=Z,1µmcomp=Z,128nm,0.8s						
SANVU	Saraoutou	21.69	116	P	P	20 08 45.2	-0.2
SANVU				IAmb	IAmb	20 09 13.6	
	comp=Z,69nm,0.8s						
SANVU	Saraoutou	21.69	116	P	P	20 08 47.0	+1.6
	comp=Z,104nm,0.8s						
KOUNC	Koumac, New Ca	21.83	132	P	P	20 08 49.4	+2.6
SOEI	Soe	22.83	260	P	P	20 08 57.8	0.0
SOEI				IAmb	IAmb	20 09 37.5	
	comp=Z,151nm,1.0s						
SOEI	Soe	22.83	260	P	P	20 08 59.1	+1.4
	comp=Z,1µmcomp=Z,110nm,0.7s						
BATI	Baumata	23.48	259	P	P	20 09 03.9	-0.1
	comp=Z,61nm,0.8s,baz=136,slow=2.6,SNR=12						
BATI	Baumata	23.48	259	P	P	20 09 05.6	+1.6
	comp=Z,974nmcomp=Z,133nm,0.8s						
FITZ	Fitzroy Crossi	23.93	239	P	P	20 09 07.5	-0.8
	baz=24,SNR=71						
FITZ	Fitzroy Crossi	23.93	239	P	P	20 09 08.1	-0.1
	comp=Z,31nm,0.7s,baz=76,slow=5.7,SNR=48						
FITZ	Fitzroy Crossi	23.93	239	P	P	20 09 08.1	-0.1
FITZ				IAmb	IAmb	20 09 17.0	
	comp=Z,49nm,0.8s						
KMSI	Cibinong	24.07	286	P	P	20 09 10.8	+1.3
	comp=Z,5µmcomp=Z,432nm,0.6s						
LIFNC	LIFOU	24.21	128	P	P	20 09 11.1	+0.4
NOUC	Port Laguerre	24.26	132	P	P	20 09 11.4	+0.2
ARMA	Armidale	24.29	170	P	P	20 09 12.1	+0.7
	baz=24,SNR=19						
ARMA	Armidale	24.29	170	P	P	20 09 11.5	+0.1
ARMA				IAmb	IAmb	20 09 21.4	
	comp=Z,37nm,0.8s						
DZM	Mont Dzumac	24.35	132	P	P	20 09 11.1	-1.0
	comp=Z,30nm,1.0s,baz=100,slow=23,SNR=12						
DZM				LR	LR	20 17 50.8	
	comp=Z,791nm,18.8s,baz=308,slow=34						
DZM	Mont Dzumac	24.35	132	eP	P	20 09 11.4	-0.7
	comp=Z,96nm,1.1s						
DZM				eS	S	20 13 24.3	-4.3
	comp=Z,359nm,23.9s						
DZM				eLR	LR	20 15 16.5	
	comp=Z,1µm,25.8s						
DZM	Mont Dzumac	24.35	132	P	P	20 09 11.8	-0.3
DZM	Mont Dzumac	24.35	132	P	P	20 09 12.1	0.0
MMRI	Maumere	24.73	263	P	P	20 09 14.6	-1.0
MMRI				IAmb	IAmb	20 09 38.7	
	comp=Z,136nm,1.1s						
MMRI	Maumere	24.73	263	P	P	20 09 14.8	-0.7
	comp=Z,1µmcomp=Z,115nm,0.7s						
LUWI	Luwuk	24.82	281	P	P	20 09 16.9	+0.6
LUWI	Luwuk	24.82	281	P	P	20 09 18.4	+2.0
	comp=Z,3µmcomp=Z,433nm,1.2s						
EDFI	Ende, Flores	25.28	263	P	P	20 09 19.2	-1.4
	comp=Z,467nmcomp=Z,50nm,0.9s						
KCP	Kidapawan	25.66	301	⇓iP	P	20 09 24.1	+0.1
STKA	Stephens Creek	25.88	191	P	P	20 09 25.7	0.0
	baz=26,SNR=23						
STKA	Stephens Creek	25.88	191	P	P	20 09 25.9	+0.1
	comp=Z,17nm,0.8s,baz=8.9,slow=8.1,SNR=32						
STKA				LR	LR	20 20 33.2	
	comp=Z,2µm,18.2s,baz=14,slow=39						
STKA	Stephens Creek	25.88	191	ceP	P	20 09 25.4	-0.3
STKA	Stephens Creek	25.88	191	P	P	20 09 25.4	-0.3
SKMP	Bagumbayan, Su	25.89	299	eP	P	20 09 26.1	0.0
APSI	Ampana	25.95	281	P	P	20 09 28.3	+1.7
	comp=Z,1µmcomp=Z,123nm,1.0s						
MRSI	Marisa	26.00	284	P	P	20 09 27.2	+0.1
	comp=Z,735nmcomp=Z,85nm,0.6s						
BKSI	Bulukumba	26.84	271	P	P	20 09 35.6	+1.0
	comp=Z,42nm,0.9s						
BNSI	Bone	26.93	273	P	P	20 09 36.3	+0.9
	comp=Z,577nmcomp=Z,44nm,0.9s						
KAPI	Kappang	27.23	271	P	P	20 09 38.9	+0.7
	comp=Z,4.8nm,0.2s,baz=92,slow=3.9,SNR=7.6						
KAPI	Kappang	27.23	271	P	P	20 09 39.4	+1.3
KAPI				pmax	pmax		
	comp=Z,25nm,0.8s						
KAPI	Kappang	27.23	271	P	P	20 09 39.4	+1.3
TOLI2	Tolitoli	27.29	285	P	P	20 09 38.3	-0.4
TOLI2				IAmb	IAmb	20 09 51.6	
	comp=Z,159nm,1.6s						
SPSI	Sidrap Palu	27.30	274	P	P	20 09 39.7	+0.9
	comp=Z,28nm,1.2s						
TTSI	Tana Toraja	27.37	276	P	P	20 09 39.0	-0.4
	comp=Z,558nmcomp=Z,36nm,1.3s						
PAGZ	Pagadian	27.54	301	eP	P	20 09 41.0	+0.1
MSLP	Maasin	27.55	306	eP	P	20 09 39.8	-1.2
YNG	Young	27.80	178	P	P	20 09 44.1	+1.1
	baz=28,SNR=14						
MPSI	Mapaga	27.94	283	P	P	20 09 44.7	+0.2
	comp=Z,546nmcomp=Z,68nm,1.0s						
HTT	Hallett	27.96	195	P	P	20 09 44.7	+0.2
	baz=28,SNR=7.8						
BBOO	Buckleboo	28.22	200	P	P	20 09 46.7	-0.1
	baz=28,SNR=10						
BBOO	Buckleboo	28.22	200	P	P	20 09 46.1	-0.7
BBOO				IAmb	IAmb	20 09 54.0	
	comp=Z,36nm,0.8s						
CAN	Canberra	28.85	177	P	P	20 09 53.5	+1.1
CAN				pmax	pmax		
	comp=Z,169nm,1.9s						
CAN	Canberra	28.85	177	P	P	20 09 53.5	+1.1
CAN				IAmb	IAmb	20 10 38.1	
	comp=Z,169nm,1.9s						
PLAI	Plampang	29.14	263	P	P	20 09 53.1	-2.1
	comp=Z,40nm,0.8s						
FORT	Forrest	30.12	214	P	P	20 10 04.0	+0.3
	baz=30,SNR=14						
FORT	Forrest	30.12	214	P	P	20 10 03.1	-0.6
FORT				IAmb	IAmb	20 10 11.4	
	comp=Z,39nm,0.8s						
PSA00	Pilbara Seismi	30.35	237	P	P	20 10 06.0	+0.1
BKB	Balikpapan	30.54	278	P	P	20 10 08.6	+1.0
BKB				IAmb	IAmb	20 10 11.0	
	comp=Z,60nm,0.9s						
ARPS	Mount Arapiles	30.62	188	P	P	20 10 09.1	+1.1
	baz=31,SNR=5.0						
MYLDM	Lahad Datu	30.76	291	P	P	20 10 10.5	+1.0
TOO	Toolangi	31.08	182	P	P	20 10 12.8	+0.7
TOO				pmax	pmax		
	comp=Z,79nm,1.7s						
TOO	Toolangi	31.08	182	P	P	20 10 12.8	+0.7
TOO				IAmb	IAmb	20 10 41.3	
	comp=Z,79nm,1.6s						
FUNA	Funafuti	31.91	96	P	P	20 10 20.5	+0.9
MSVF	Nonsavu	32.26	113	P	P	20 10 22.2	-0.5
	comp=Z,4.4nm,0.6s,baz=229,slow=19,SNR=4.0						
MSVF	Nonsavu	32.26	113	⇓eP	P	20 10 24.2	+1.4
MSVF				pmax	pmax		
	comp=Z,12nm,1.0s						
MSVF	Nonsavu	32.26	113	P	P	20 10 22.5	-0.2
MSVF	Nonsavu	32.26	113	P	P	20 10 25.1	+2.3
H11N1	WAKE ISLAND Hy	32.45	37	T	T	20 44 15.9	
	baz=219,slow=76						
H11N3	WAKE ISLAND Hy	32.46	37	T	T	20 44 15.4	
	baz=219,slow=76						
H11N2	WAKE ISLAND Hy	32.47	37	T	T	20 44 13.9	
	baz=219,slow=76						
MTKI	Muara Teweh, K	32.56	278	P	P	20 10 24.3	-1.1
	comp=Z,17nm,0.9s						
TGY	Tagaytay City	32.98	308	P	P	20 10 27.0	-2.0
	comp=Z,119nm,0.3s,baz=91,slow=17,SNR=3.9						
TGY	Tagaytay City	32.98	308	P	P	20 10 27.0	-2.0
KKM	Kota Kinabalu	33.19	291	P	P	20 10 30.2	-0.8
JCJ	Chichijima	33.62	352	P	P	20 10 34.4	0.0
MEEK	Meekatharra	33.77	230	P	P	20 10 35.8	0.0
	baz=34,SNR=36						
KMBL	Kambalda	34.26	220	P	P	20 10 40.7	+0.7
	baz=34,SNR=6.5						
APYP	Conner	35.09	314	eP	P	20 10 45.4	-1.8
GIRL	Giralia	35.54	240	P	P	20 10 51.1	0.0
	baz=36,SNR=4.2						
GIRL	Giralia	35.54	240	P	P	20 10 52.6	+1.5
SBUM	Sibu	35.90	283	P	P	20 10 54.8	+0.5
SBUM				IAmb	IAmb	20 10 57.4	
	comp=Z,27nm,0.9s						
UGM	Wanagama	36.30	265	P	P	20 10 57.1	-0.7
MORW	Morawa	36.98	229	P	P	20 11 03.8	+0.5
	baz=37,SNR=4.7						
MORW	Morawa	36.98	229	P	P	20 11 02.8	-0.6
MORW				IAmb	IAmb	20 11 24.4	
	comp=Z,35nm,1.4s						
KLBR	Kellerberrin	37.15	224	P	P	20 11 04.3	-0.5
	baz=37,SNR=22						
BLDU	Ballidu	37.32	226	P	P	20 11 06.3	0.0
	baz=37,SNR=6.6						
KSM	Kuching	37.53	281	P	P	20 11 08.9	+0.7
KSM				IAmb	IAmb	20 11 11.9	
	comp=Z,66nm,1.4s						
OUZ	Omahuta	37.66	143	P	P	20 11 10.2	+1.1
OUZ				IAmb	IAmb	20 11 32.8	
	comp=Z,68nm,1.7s						
KPJI	Karang Pucung	37.88	266	P	P	20 11 11.5	+0.3
	comp=Z,47nm,0.8s						
NWAO	Narrogin (SRO)	38.30	222	P	P	20 11 15.3	+0.9
	baz=38,SNR=9.6						
NWAO	Narrogin (SRO)	38.30	222	P	P	20 11 15.1	+0.6
NWAO				pmax	pmax		
	comp=Z,16nm,1.0s						
NWAO	Narrogin (SRO)	38.30	222	P	P	20 11 15.1	+0.6
NWAO				IAmb	IAmb	20 11 24.2	
	comp=Z,20nm,1.0s						
NWAO	Narrogin (SRO)	38.30	222	P	P	20 11 15.1	+0.6
NWAO				IAmb	IAmb	20 11 24.2	
	comp=Z,16nm,1.0s						
MUN	Mundaring	38.45	225	P	P	20 11 16.7	+1.0
	baz=38,SNR=4.8						
YOJ	Yonaguni jima	38.61	323	P	P	20 11 17.2	+0.1
YOJ				pmax	pmax		
	comp=Z,599nm,1.6s						
YOJ	Yonaguni jima	38.61	323	P	P	20 11 17.2	+0.1
YULB	Yu-li	38.87	320	P	P	20 11 18.7	-0.6
CISI	Cisompet, Garu	38.98	266	P	P	20 11 19.1	-1.5
CISI	Cisompet, Garu	38.98	266	P	P	20 11 21.4	+0.9
	comp=Z,110nm,0.8s						
TPUB	Ta-pu	39.23	320	P	P	20 11 20.8	-1.6
NACB	Ninganchiao	39.25	322	P	P	20 11 22.4	-0.1
SSLB	Suanglung	39.37	321	P	P	20 11 23.1	-0.4
SSLB				IAmb	IAmb	20 12 03.2	
	comp=Z,104nm,1.7s						
YHNB	Yeheng	39.75	322	P	P	20 11 27.3	+0.6
TATO	Taipei	39.91	322	P	P	20 11 27.4	-0.5
TATO	Taipei	39.91	322		P	20 11 27.6	-0.4
JSU	Suzuyama	40.89	338	P	P	20 11 35.6	-0.4
JSU				IAmb	IAmb	20 11 39.3	
	comp=Z,42nm,1.2s						
CGJI	Cibinong	41.12	267	P	P	20 11 36.6	-1.5
	comp=Z,39µmcomp=Z,50nm,0.6s						
AFI	Afiamalu	41.13	104	P	P	20 11 39.4	+1.1
AFI				pmax	pmax		
	comp=Z,55nm,1.3s						
AFI	Afiamalu	41.13	104	P	P	20 11 39.4	+1.1
AFI				IAmb	IAmb	20 11 43.4	
	comp=Z,55nm,1.2s						
QRZ	Quartz Range	41.15	150	P	P	20 11 40.2	+2.2
QRZ				IAmb	IAmb	20 11 48.2	
	comp=Z,43nm,0.9s						
XMIS	Christmas Isla	41.16	261	P	P	20 11 39.8	+1.3
XMIS				IAmb	IAmb	20 11 55.4	
	comp=Z,75nm,1.1s						
KNTN	Kanton	41.21	87	P	P	20 11 39.6	+0.7
URZ	Urewera	41.80	144	P	P	20 11 42.3	-1.0
	comp=Z,4.1nm,0.5s,baz=292,slow=4.4,SNR=5.1						
URZ				LR	LR	20 28 08.4	
	comp=Z,225nm,18.1s,baz=32,slow=35						
URZ	Urewera	41.80	144	P	P	20 11 42.1	-1.2
JMN	Monobe	41.81	343		P	20 11 43.4	-0.2
JMN				IAmb	IAmb	20 12 01.9	
	comp=Z,30nm,1.1s						
NNZ	Nelson	41.87	150	P	P	20 11 45.1	+1.3
NNZ				IAmb	IAmb	20 11 53.6	
	comp=Z,59nm,1.1s						
THZ	Tophouse	42.05	151	P	P	20 11 45.6	+0.2
THZ				IAmb	IAmb	20 11 47.8	
	comp=Z,36nm,0.9s						
BKZ	Black Stump Fm	42.05	145	P	P	20 11 46.4	+0.9
FOZ	Fox Glacier	42.05	155	P	P	20 11 46.6	+1.3
JNU	Nakatsue	42.20	340	P	P	20 11 45.7	-1.0
TUWZ	Tuamarina	42.31	150	P	P	20 11 47.1	-0.4
DLV	T Lat	42.48	295	P	P	20 11 48.7	-0.8
DLV				IAmb	IAmb	20 11 50.4	
	comp=Z,42nm,0.8s						

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BSWZ  Blackbirch Sta    42.48 150   P      P       20 11 49.4 +0.4
LTZ   Lake Taylor       42.53 152   P      P       20 11 50.2 +0.8
LTZ                                 IAmb   IAmb    20 11 58.2
      comp=Z,99nm,1.7s
INU   Inuyama           42.58 348   P      P       20 11 50.6 +0.9
SNZO  South Karori      42.60 149   P      P       20 11 50.2 +0.3
DCZ   Deep Cove         42.66 159   P      P       20 11 51.5 +1.3
DCZ                                 IAmb   IAmb    20 11 59.4
      comp=Z,28nm,0.9s
RPZ   Rata Peaks        42.73 154   P      P       20 11 51.4 +0.5
      comp=Z,33nm,0.6s,baz=306,slow=1.4,SNR=4.6
RPZ   Rata Peaks        42.73 154   P      P       20 11 51.0 +0.1
RPZ                                 IAmb   IAmb    20 11 53.0
      comp=Z,34nm,0.7s
MDSI  Maura Dua         42.74 270   P      P       20 11 50.6 -0.8
      comp=Z,20nm,1.4s
JGF   Kuroka            42.75 348   P      P       20 11 50.2 -1.0
BHW   Baring Head       42.76 149   P      P       20 11 51.3 +0.2
WKZ   Wanaka            42.80 157   P      P       20 11 52.8 +1.3
WKZ                                 IAmb   IAmb    20 12 04.3
      comp=Z,72nm,1.2s
KHZ   Kahutara          42.85 151   P      P       20 11 52.2 +0.3
OXZ   Oxford            42.85 153   P      P       20 11 51.8 -0.1
OXZ                                 IAmb   IAmb    20 12 07.1
      comp=Z,92nm,1.8s
JYT   Yasato            42.88 352   P      P       20 11 53.0 +0.9
JYT                                 IAmb   IAmb    20 12 03.7
      comp=Z,29nm,0.9s
JWT   Wachi             42.88 346   P      P       20 11 51.4 -0.8
JWT                                 IAmb   IAmb    20 11 57.4
      comp=Z,133nm,1.9s
JWT                                 PcP    PcP     20 13 42.9 +0.4
LBZ   Lake Benmore      42.91 156   P      P       20 11 52.8 +0.4
LBZ                                 IAmb   IAmb    20 11 53.7
      comp=Z,33nm,0.7s
MLZ   Mavora Lakes      42.92 158   P      P       20 11 53.6 +1.1
MLZ                                 IAmb   IAmb    20 11 56.8
      comp=Z,80nm,1.6s
MSWZ  Moikau Station    42.96 149   P      P       20 11 52.8  0.0
BFZ   Birch Farm        42.97 147   P      P       20 11 53.4 +0.5
BFZ                                 IAmb   IAmb    20 12 04.9
      comp=Z,36nm,0.7s
PLWZ  Palliser          43.08 149   P      P       20 11 53.6 -0.2
PYZ   Puysegur Point    43.10 160   P      P       20 11 54.4 +0.5
PYZ                                 IAmb   IAmb    20 12 03.2
      comp=Z,69nm,1.0s
JHS   Saijyo            43.22 343   P      P       20 11 54.4 -0.5
WHZ   Wether Hill Ro    43.31 159   P      P       20 11 55.2 -0.3
WHZ                                 IAmb   IAmb    20 12 04.6
      comp=Z,98nm,1.7s
MQZ   McQueen's Vall    43.43 153   P      P       20 11 56.1 -0.4
LHSI  Lahat             43.45 271   P      P       20 11 55.4 -1.8
      comp=Z,41nm,1.1s
MJAR  Matsushiro Arr    43.50 350   P      P       20 11 56.3 -1.0
      comp=Z,10nm,0.8s,baz=178,slow=8.3,SNR=16
MJAR                                PcP    PcP     20 13 43.9 -0.7
      comp=Z,7.6nm,0.8s,baz=158,slow=3.1,SNR=6.7
MJAR                                LR     LR      20 28 29.9
      comp=Z,177nm,18.8s,baz=225,slow=34
MAJO  Matsushiro        43.51 350⇑eP     P       20 11 56.1 -1.1
MAJO                                pmax   pmax
      comp=Z,16nm,0.7s
MAJO  Matsushiro        43.51 350   P      P       20 11 55.9 -1.3
MAJO                                       PcP     20 13 44.5 -0.1
MAT   Matsushiro        43.51 350   P      P       20 11 56.0 -1.2
MAT                                eS      S       20 18 24.4 +1.6
ODZ   Otahua Downs      43.63 156   P      P       20 11 58.9 +0.7
ODZ                                 IAmb   IAmb    20 13 07.6
      comp=Z,116nm,1.9s
MYKOM Kota Tinggi       43.92 279   P      P       20 12 00.3 -0.6
MYKOM                               IAmb   IAmb    20 12 04.7
      comp=Z,42nm,1.0s
MYKOM Kota Tinggi       43.92 279   P      P       20 12 04.0 +3.1
MNAI  Manna             43.97 270   P      P       20 12 01.7 +0.3
MNAI                                PcP    PcP     20 13 48.3 +1.6
JTU   Tsushima          43.99 339   P      P       20 12 00.6 -0.5
JTU                                 IAmb   IAmb    20 13 09.4
      comp=Z,50nm,1.1s
JTU                                 PcP    PcP     20 13 46.1 -0.1
JMM   Marumori          44.41 353   P      P       20 12 04.8 +0.3
JMM                                 IAmb   IAmb    20 12 06.0
      comp=Z,31nm,1.0s
QIZ   Qiongzhong        44.54 305   P      P       20 12 05.0 -0.8
SSE   Sheshan           44.75 328   P      P       20 12 07.7 +0.5
SSE                                 IAmb   IAmb    20 12 08.1
      comp=Z,63nm,0.9s
JSD   Sado              44.95 350   P      P       20 12 09.4 +0.7
JSD                                 IAmb   IAmb    20 13 01.6
      comp=Z,83nm,1.3s
JSD                                 PcP    PcP     20 13 50.0 +0.5
SDSI  Sungai Dareh      45.86 275   P      P       20 12 16.3 -0.1
      comp=Z,11µmcomp=Z,27nm,0.9s
TJN   Taejon            46.38 338⇓eP     P       20 12 20.9 +0.8
UBPT  Khong Chiam       46.51 298   P      P       20 12 22.2 +0.7
UBPT                                IAmb   IAmb    20 12 28.1
      comp=Z,26nm,1.0s
NJ2   Nanjing           46.74 327 ⇑P     P       20 12 23.3 +0.3
NJ2                                 pmax   pmax
      comp=Z,30nm,0.7s
KSRS  Korea Array       47.14 339   P      P       20 12 25.9 -0.1
      comp=Z,16nm,0.7s,baz=158,slow=9.0,SNR=51
KSRS                                PcP    PcP     20 13 56.8 -0.3
      comp=Z,4.2nm,0.6s,baz=203,slow=2.5,SNR=12
KSRS                                LR     LR      20 30 32.6
      comp=Z,307nm,21.3s,baz=148,slow=34
KSAR  Wonju Array Be    47.14 339   P      P       20 12 26.1 +0.1
KSAR                                               20 13 58.1
KSAR  Wonju Array Be    47.14 339   P      P       20 12 26.1 +0.1
KSAR                                PcP    PcP     20 13 58.0 +0.9
KS19  Wonju Array Si    47.20 339   P      P       20 12 25.7 -0.8
KS19                                IAmb   IAmb    20 12 29.8
      comp=Z,23nm,0.8s
KS19                                PcP    PcP     20 13 57.8 +0.4
IPM   Ipoh              47.23 282   P      P       20 12 27.1  0.0
IPM                                        PcP     20 13 58.9 +0.9
JTM   Tenmabayashi      47.27 354   P      P       20 12 26.5 -0.4
JTM                                 PcP    PcP     20 13 57.0 -0.5
INCN  Inchon            47.63 338   P      P       20 12 30.0 +0.1
INCN                                pmax   pmax
      comp=Z,51nm,1.1s
INCN  Inchon            47.63 338   P      P       20 12 30.0 +0.1
KULM  Kulim             47.78 283   P      P       20 12 32.1 +0.7
KULM                                PcP    PcP     20 13 59.1 -0.9
MNSI  Mandailing Nat    47.95 277   P      P       20 12 33.5 +0.8
MCQ   Macquarie Isla    48.92 171   P      P       20 12 39.8 +0.3
MCQ                                 pmax   pmax
      comp=Z,516nm,2.0s
MCQ   Macquarie Isla    48.92 171   P      P       20 12 39.8 +0.3
SRAK  Srakaew           49.07 295   P      P       20 12 39.1 -2.2
      comp=Z,299nm,0.9s
JEW   Eniwo             49.26 355   P      P       20 12 43.3 +1.1
TRTT  Trang             49.33 286   P      P       20 12 45.6 +2.3
      comp=Z,57nm,0.8s
NONG  Nongkai           49.70 300   P      P       20 12 47.7 +1.7
      comp=Z,39nm,0.7s
PATY  Pattaya           49.76 293   P      P       20 12 48.2 +1.6
      comp=Z,91nm,0.8s
CHAI  Chaiyaphum        49.83 297   P      P       20 12 48.0 +0.9
      comp=Z,770nmcomp=Z,82nm,0.7s
GSI   Gunungsitoli      50.01 277   P      P       20 12 48.3 -0.2
GSI                                 PcP    PcP     20 14 09.8 +1.7
GSI   Gunungsitoli      50.01 277   P      P       20 12 48.4 -0.1
      comp=Z,47nm,0.6s
KCSI  Kotacane, Aceh    50.21 280   P      P       20 12 49.6 -0.4
JKA   Kamikawa-asahi    50.43 356   P      P       20 12 52.3 +1.2
ASAJ  Asahikawa         50.43 356   P      P       20 12 52.3 +1.2
ASAJ                                pmax   pmax
      comp=Z,64nm,1.4s
PKDT  Phuket            50.64 286   P      P       20 12 55.0 +1.7
      comp=Z,105nm,1.6s
TPTI                    50.74 279   P      P       20 12 53.8 -0.2
      comp=Z,52nm,0.9s
TIA   Tai'an            50.85 329   P      P       20 12 53.4 -1.0
TIA                                 pmax   pmax
      comp=Z,25nm,0.8s
DL2   Dalian            50.87 334   P      P       20 12 54.8 +0.3
DL2                                 sP     sP      20 13 12.0 -2.1
DL2                                 S      S       20 20 07.8 +0.2
DL2                                 pmax   pmax
      comp=Z,20nm,0.7s
DL2                                 LR     LR
      comp=Z,270nm,19.2s
DL2                                 LR     LR
      comp=Z,320nm,17.9s
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DL2                                 LR     LR
      comp=Z,270nm,19.4s
PHET  Kaeng Krachan     50.89 292   P      P       20 12 56.0 +0.9
      comp=Z,1µmcomp=Z,196nm,0.8s
GYA   Guiyang           51.00 312  eP      P       20 12 58.8 +2.9
GYA                                 pmax   pmax
      comp=Z,7.0nm,1.4s
LHMI  Lhok Sumawe       51.36 282   P      P       20 12 59.1 +0.4
PHIT  Phitsanulok       51.72 298   P      P       20 13 03.0 +1.7
      comp=Z,137nm,0.8s
UTTA  Uttaradit         51.81 298   P      P       20 13 03.7 +1.8
      comp=Z,416nmcomp=Z,50nm,0.9s
UTHA  Uthaitani         51.97 295   P      P       20 13 04.0 +0.8
      comp=Z,957nmcomp=Z,127nm,1.1s
NANT  Nan               52.11 300   P      P       20 13 07.1 +2.8
      comp=Z,14µmcomp=Z,335nm,0.7s
USA0B Ussuriysk Arra    52.16 346   P      P       20 13 03.9 -0.2
USA0B                               pmax   pmax
      comp=Z,12nm,0.7s
USA0B Ussuriysk Arra    52.16 346   P      P       20 13 03.9 -0.2
USA0B                               IAmb   IAmb    20 13 09.0
      comp=Z,12nm,0.7s
USRK  Ussuriysk Ar.     52.16 346   P      P       20 13 04.0 -0.1
      comp=Z,10nm,0.6s,baz=162,slow=7.7,SNR=21
USRK                                PcP    PcP     20 14 15.0 -0.4
      comp=Z,3.3nm,0.6s,baz=167,slow=4.2,SNR=5.3
USRK                                LR     LR      20 34 37.9
      comp=Z,93nm,18.1s,baz=153,slow=35
USRK  Ussuriysk Ar.     52.16 346   P      P       20 13 03.4 -0.7
USRK                                PcP    PcP     20 14 14.9 -0.4
SUKH  Sukhothai         52.52 298   P      P       20 13 09.0 +1.8
      comp=Z,43nm,1.0s
LAMP  Lampang           52.93 299   P      P       20 13 12.8 +2.5
      comp=Z,34nm,0.9s
YSS   Yuzh-Sakhalins    53.24 356  eP      P       20 13 13.5 +1.5
YSS                                 pmax   pmax
      comp=Z,30nm,0.8s
YSS                                 MLR    MLR
      comp=Z,400nm,16.0s
YSS   Yuzh-Sakhalins    53.24 356   P      P       20 13 12.2 +0.2
YSS                                 IAmb   IAmb    20 13 16.1
      comp=Z,23nm,0.8s
KMI   Kunming           53.30 308  eP      P       20 13 14.3 +1.2
KMI                                 pP     sP      20 13 27.3 -5.1
KMI                                 sP     pP      20 13 33.1 +6.3
KMI                                 pmax   pmax
      comp=Z,16nm,1.3s
KMI                                 pmax   pmax
      comp=Z,240nm,4.0s
CM36  Chiang Mai Arr    53.39 299   P      P       20 13 15.0 +1.3
CM35  Chiang Mai Arr    53.41 299   P      P       20 13 15.0 +1.2
CM04  Chiang Mai Arr    53.45 298   P      P       20 13 16.0 +1.9
      comp=Z,207nmcomp=Z,29nm,0.9s
CM09  Chiang Mai Arr    53.46 298   P      P       20 13 16.4 +2.2
      comp=Z,197nmcomp=Z,29nm,0.9s
CM01  Chiang Mai Arr    53.48 298   P      P       20 13 16.4 +2.1
      comp=Z,190nmcomp=Z,25nm,0.9s
CM34  Chiang Mai Arr    53.48 299   P      P       20 13 16.0 +1.7
CM05  Chiang Mai Arr    53.48 298   P      P       20 13 16.0 +1.7
      comp=Z,177nmcomp=Z,20nm,0.8s
CM02  Chiang Mai Arr    53.49 298   P      P       20 13 16.4 +2.0
      comp=Z,188nmcomp=Z,26nm,0.9s
CM31  Chiang Mai Arr    53.50 298   P      P       20 13 16.3 +1.8
      comp=Z,6µmcomp=Z,619nm,0.9s
CM31  Chiang Mai Arr    53.50 298   P      P       20 13 15.2 +0.7
CM31                                IAmb   IAmb    20 13 17.9
      comp=Z,23nm,0.8s
CMAR  Chiang Mai Arr    53.50 298   P      P       20 13 15.8 +1.4
      comp=Z,14nm,0.8s,baz=120,slow=5.1,SNR=5.5
CMAR                                LR     LR      20 37 25.0
      comp=Z,47nm,19.7s,baz=176,slow=38
CMAR  Chiang Mai Arr    53.50 298  i P     P       20 13 13.6 -0.9
CMAR                                pmax   pmax
      comp=Z,15nm,0.8s
CM15  Chiang Mai Arr    53.52 298   P      P       20 13 16.4 +1.9
      comp=Z,192nmcomp=Z,27nm,0.8s
CM13  Chiang Mai Arr    53.52 298   P      P       20 13 16.5 +1.9
      comp=Z,186nmcomp=Z,25nm,0.9s
CMMT  Chiang Mai        53.64 299   P      P       20 13 17.0 +1.5
      comp=Z,8.5nm,0.9s
CHTO  Chiang Mai        53.64 299   P      P       20 13 16.0 +0.5
CHTO                                               20 14 20.3
CHTO                                pmax   pmax
      comp=Z,17nm,1.1s
CHTO  Chiang Mai        53.64 299   P      P       20 13 16.0 +0.5
CHTO                                IAmb   IAmb    20 13 18.6
      comp=Z,18nm,1.1s
CHTO                                PcP    PcP     20 14 20.2 -1.3
CM33  Chiang Mai Arr    53.64 299   P      P       20 13 16.0 +0.5
CN2   Changchun         53.65 341  eP      P       20 13 14.8 -0.3
CN2                                esP     sP      20 13 34.8 +0.2
CN2                                 PcP    PcP     20 14 19.8 -1.2
CN2                                 S      S       20 20 44.8 -0.7
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.8s
CN2                                 pmax   pmax
      comp=Z,200nm,4.0s
CN2                                 LR     LR
      comp=Z,200nm,16.0s
CN2                                 LR     LR
      comp=Z,200nm,16.0s
CN2                                 LR     LR
      comp=Z,200nm,18.0s
CM32  Chiang Mai Arr    53.66 299   P      P       20 13 19.0 +3.3
XAN   Xi'an             54.03 321   P      P       20 13 17.3 -0.8
XAN                                 pmax   pmax
      comp=Z,49nm,0.9s
XAN                                 pmax   pmax
      comp=Z,240nm,6.0s
BJI   Beijing           54.28 331   P      P       20 13 19.3 -0.4
BJI                                 pmax   pmax
      comp=Z,17nm,0.8s
BJI                                 LR     LR
      comp=Z,200nm,6.5s
BJI                                 LR     LR
      comp=Z,210nm,9.8s
MHMT  Maesarieng        54.28 298   P      P       20 13 22.7 +2.5
CD2   Chengdu           55.60 314   P      P       20 13 29.6  0.0
CD2                                 pmax   pmax
      comp=Z,40nm,0.8s
KLR   Kul'dur           56.98 348⇓eP     P       20 13 39.4 +0.4
KLR                                 pmax   pmax
      comp=Z,25nm,1.7s
TYV   Tymovskoe         57.15 357  eP      P       20 13 40.8 +0.7
TYV                                eS      S       20 21 34.6 +2.7
TYV                                 pmax   pmax
      comp=Z,28nm,0.7s
TYV                                 pmax   pmax
      comp=Z,200nm,4.5s
TYV                                 smax   smax
      comp=N,8.0nm,1.4s
TYV                                 smax   smax
      comp=E,900nm,7.9s
HHC   Hu-ho-hao-te      57.20 328  eP      P       20 13 40.8 -0.1
HHC                                 pP     pP      20 13 53.3 -1.6
HHC                                 pmax   pmax
      comp=E,18nm,0.8s
HHC                                 pmax   pmax
      comp=E,320nm,6.6s
BTO   Baotou            57.84 327  eP      P       20 13 34.6  -11
LZH   Lanzhou           58.55 319  eP      P       20 13 51.1 +0.6
LZH                                 pP     pP      20 14 02.1 -2.4
LZH                                 sP     sP      20 14 11.3 +1.1
LZH                                 pmax   pmax
      comp=E,25nm,1.0s
LZH                                 pmax   pmax
      comp=E,140nm,4.9s
LZH                                 LR     LR
      comp=E,280nm,14.3s
LZH                                 LR     LR
      comp=E,310nm,14.6s
LZH                                 LR     LR
      comp=E,360nm,15.1s
PEA0B Petropavlovsk-    59.95   7⇑eP     P       20 13 59.8 +0.2
PEA0B Petropavlovsk-    59.95   7   P      P       20 14 00.0 +0.4
PEA0B                               PcP    PcP     20 14 42.5 -2.9
PETK  Petropavlovsk-    59.95   7   P      P       20 14 00.1 +0.5
      comp=E,16nm,0.8s,baz=157,slow=6.0,SNR=29
PETK                                LR     LR      20 37 13.3
      comp=E,262nm,20.2s,baz=193,slow=33
PETK  Petropavlovsk-    59.95   7   P      P       20 13 59.7 +0.1
PETK  Petropavlovsk-    59.95   7   P      P       20 13 59.7 +0.1
PETK                                PcP    PcP     20 14 44.6 -0.8
PET   Petropavlovsk     59.99   8  eP      P       20 14 07.0 +7.2
PET                                eS      S       20 22 18.1 +9.2
SAIH  SAIHA             60.20 300  eP      P       20 14 02.6 +0.6
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SAIH                                IAmb   IAmb    20 14 07.7
      comp=Z,104nm,0.5s
MOKO  MOKOCHONG         60.43 305  eP      P       20 14 03.0 -0.6
MOKO                                IAmb   IAmb    20 14 09.3
      comp=Z,19nm,0.5s
KOHI  KOHIMA            60.52 304  eP      P       20 14 03.3 -0.9
TEZP  TEZPUR            61.95 305  eP      P       20 14 13.6 -0.1
TEZP                                IAmb   IAmb    20 14 16.2
      comp=Z,21nm,0.8s
ZEA   Zeya              62.19 347  eP      P       20 14 15.0 +0.2
ZEA                                 pmax   pmax
      comp=Z,30nm,0.8s
PPT   Papeete           62.71 106   LR     LR      20 37 05.2
      comp=Z,97nm,21.5s,baz=236,slow=32
PPT2  Papeete2          62.71 106  eS      S       20 22 41.2 -3.7
      comp=Z,171nm,25.8s
PPT2  Papeete2          62.71 106  eLR     LR      20 32 52.0
      comp=Z,192nm,23.2s
GTA   Gaotai            63.09 320 ⇑P     P       20 14 21.5 +0.3
GTA                                 pP     pP      20 14 34.1 -1.3
GTA                                 sP     sP      20 14 38.8 -2.3
GTA                                 pmax   pmax
      comp=Z,10.0nm,0.7s
GTA                                 pmax   pmax
      comp=Z,160nm,6.2s
GTA                                 LR     LR
      comp=Z,170nm,16.0s
GTA                                 LR     LR
      comp=Z,150nm,17.4s
GTA                                 LR     LR
      comp=Z,250nm,16.4s
TBI   Tubuai            63.15 113  eS      S       20 22 49.0 -1.0
      comp=Z,81nm,30.8s
TBI   Tubuai            63.15 113  eLR     LR      20 33 10.4
      comp=Z,112nm,24.5s
ULN   Ulaanbaatar       64.48 331c iP      P       20 14 30.5 +0.2
ULN                                 pmax   pmax
      comp=Z,24nm,1.3s
ULN   Ulaanbaatar       64.48 331   P      P       20 14 30.6 +0.2
ULN                                 IAmb   IAmb    20 14 31.6
      comp=Z,16nm,0.9s
ULN                                 PcP    PcP     20 15 04.3 +0.2
LSA   Lhasa             64.54 307   P      P       20 14 31.6 +0.2
LSA                                 pmax   pmax
      comp=Z,53nm,0.7s
SONM  Songino Array     64.78 331   P      P       20 14 32.2  0.0
      comp=Z,12nm,1.0s,baz=140,slow=4.7,SNR=49
SONM                                PcP    PcP     20 15 05.1 -0.2
      comp=Z,3.6nm,0.6s,baz=147,slow=4.7,SNR=4.2
SONM  Songino Array     64.78 331   P      P       20 14 32.2  0.0
SONM                                PcP    PcP     20 15 04.5 -0.9
CIT   Chita             64.84 338  eP      P       20 14 33.0 +0.6
CIT                                e               20 14 41.5
CIT                                e               20 14 49.9
CIT                                 pmax   pmax
      comp=Z,77nm,1.2s
CASY  Casey             64.91 195   P      P       20 14 33.0 +0.5
CASY                                IAmb   IAmb    20 14 42.2
      comp=Z,40nm,1.4s
GTK   Tadong            65.68 304  eP      P       20 14 39.1 +0.7
GTK                                 IAmb   IAmb    20 14 41.6
      comp=Z,27nm,0.8s
MA2   Magadan           65.82   2⇑eP     P       20 14 38.5 +0.1
MA2                                 pmax   pmax
      comp=Z,63nm,1.3s
MA2   Magadan           65.82   2   P      P       20 14 38.6 +0.1
TAPN  Taplejung         66.43 303  eP      P       20 14 43.7 +0.2
      comp=Z,49nm,0.8s
ODAN  Odare             66.52 303  eP      P       20 14 44.3 +0.3
      comp=Z,62nm,0.9s
BOK   Bokaro            66.78 299  eP      P       20 14 47.1 +1.8
BOK                                 IAmb   IAmb    20 14 48.9
      comp=Z,15nm,0.9s
RAMN  Ramite            67.21 303  eP      P       20 14 48.6 +0.2
      comp=Z,22nm,0.5s
PALK  Pallekele         67.59 281   P      P       20 14 51.7 +1.0
      comp=Z,25nm,0.7s,baz=194,slow=6.4
PALK  Pallekele         67.59 281⇑eP     P       20 14 51.5 +0.7
PALK                                pmax   pmax
      comp=Z,27nm,0.9s
PALK  Pallekele         67.59 281   P      P       20 14 51.1 +0.3
PALK                                IAmb   IAmb    20 14 53.5
      comp=Z,30nm,0.8s
ZAK   Zakamensk         68.02 331  eP      P       20 14 52.0 -0.8
ZAK                                 pmax   pmax
      comp=Z,23nm,1.1s
GUN   Gumba             68.15 303  eP      P       20 14 54.6 +0.2
      comp=Z,66nm,0.6s
PKI   Pulchoki          68.42 303  eP      P       20 14 55.7 -0.4
      comp=Z,41nm,0.9s
PKIN  Phulchoki         68.43 303  eP      P       20 14 55.7 -0.4
      comp=Z,37nm,0.9s
KKN   Kakani            68.60 303  eP      P       20 14 57.0 -0.1
      comp=Z,64nm,0.8s
DMN   Daman             68.69 303  eP      P       20 14 58.2 +0.5
      comp=Z,92nm,0.8s
TLY   Talaya            68.72 333⇑eP     P       20 14 56.4 -0.7
TLY                                 pmax   pmax
      comp=Z,15nm,1.5s
SEY   Seymchan          69.24   3⇑eP     P       20 15 00.1 +0.1
BOD   Bodaibo           69.37 342⇓iP     P       20 15 00.0 -0.9
BOD                                 pmax   pmax
      comp=Z,34nm,0.8s
YAK   Yakutsk           69.53 351  eP      P       20 15 01.2 -0.6
YAK                                e*PP    pP      20 15 16.0 -0.1
YAK                                e               20 15 24.3
YAK                                e               20 17 39.6
YAK                                eS      S       20 24 06.2 +0.2
YAK                                e*SS    sS      20 24 31.7 +3.1
YAK                                e               20 24 59.3
YAK                                 pmax   pmax
      comp=N,16nm,1.0s
YAK                                 pmax   pmax
      comp=Z,44nm,0.9s
YAK                                 pmax   pmax
      comp=E,3.0nm,1.1s
YAK                                 pmax   pmax
      comp=Z,112nm,3.8s
YAK                                 smax   smax
      comp=N,60nm,4.8s
YAK                                 smax   smax
      comp=E,41nm,4.1s
YAK   Yakutsk           69.53 351   P      P       20 15 01.1 -0.6
MOY   Mondy             69.95 331  eP      P       20 15 04.5 -0.3
MOY                                 pmax   pmax
      comp=Z,35nm,1.8s
DANN  Dangsing          70.06 303  eP      P       20 15 05.8 -0.4
      comp=Z,38nm,0.6s
VNDA  Vanda             71.53 177   P      P       20 15 14.5 +0.7
      comp=Z,19nm,0.8s,baz=332,slow=6.9,SNR=85
VNDA  Vanda             71.53 177   P      P       20 15 14.5 +0.7
VNDA                                IAmb   IAmb    20 15 15.8
      comp=Z,22nm,0.8s
HYB   Hyderabad         71.67 291  i P     P       20 15 16.0 +0.2
HYB   Hyderabad         71.67 291⇑eP     P       20 15 16.0 +0.2
HYB                                 IAmb   IAmb    20 15 22.1
      comp=Z,26nm,0.7s
WMQ   Urumqi            73.14 319  eP      P       20 15 24.1  0.0
WMQ                                 pP     pP      20 15 38.0 -0.3
WMQ                                 sP     PcP     20 15 42.0 +1.4
WMQ                                 pmax   pmax
      comp=Z,16nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,630nm,6.7s
BHPL  Bhopal            74.07 296  eP      P       20 15 29.6 -0.4
BHPL                                IAmb   IAmb    20 15 31.2
      comp=Z,29nm,1.0s
GOA   Goa               75.72 288  eP      P       20 15 41.0 +1.5
GOA                                 IAmb   IAmb    20 15 44.2
      comp=Z,24nm,0.7s
DGZ   Jazzator, Alta    75.99 325⇑iP     P       20 15 39.8 -0.9
DGZ                                 pmax   pmax
      comp=Z,5.0nm,0.8s
POO   Poona             76.28 291  eP      P       20 15 43.1 +0.3
POO                                 IAmb   IAmb    20 15 49.4
      comp=Z,39nm,0.9s
SMLA  Simla             76.36 304  eP      P       20 15 42.2 -0.7
SMLA                                IAmb   IAmb    20 15 47.1
      comp=Z,11nm,0.8s
ZSN   Zaisan            76.51 322  eP      P       20 15 42.8 -0.7
      baz=322
ZSN   Zaisan            76.51 322  eP      P       20 15 42.7 -0.7
DHRM  DHARAMSHALA       77.38 305  eP      P       20 15 48.1 -0.9
DHRM                                IAmb   IAmb    20 15 48.7
      comp=Z,36nm,0.6s
MK31  Makanchi Array    77.84 321c iP      P       20 15 50.2 -0.8
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MK31                                  pmax     pmax
      comp=Z,4.0nm,0.5s
MK31  Makanchi Array    77.84 321     P        P         20 15 49.7 -1.3
MKAR  Makanchi Array    77.84 321     P        P         20 15 50.5 -0.5
      comp=Z,7.6nm,0.7s,baz=98,slow=8.3,SNR=95
MKAR  Makanchi Array    77.84 321     P        P         20 15 50.1 -0.9
MAKZ  Makanchi          78.05 320     P        P         20 15 51.3 -0.8
MAKZ                                  pmax     pmax
      comp=Z,15nm,1.0s
MAKZ  Makanchi          78.05 320     P        P         20 15 51.3 -0.8
MAKZ                                  IAmb     IAmb      20 15 54.6
      comp=Z,15nm,1.0s
SHLS  Shalkode          78.37 316     eP       P         20 15 51.7 -2.4
      comp=Z,4.0nm,0.7s,baz=316
SHLS  Shalkode          78.37 316     eP       P         20 15 51.7 -2.4
SHLS                                  pmax     pmax
      comp=Z,4.0nm,0.7s
TIXI  Tiksi             78.80 354⇓    eP       P         20 15 54.4 -1.3
TIXI                                  pmax     pmax
      comp=Z,46nm,0.8s
TIXI  Tiksi             78.80 354     P        P         20 15 54.0 -1.7
KPKS  Kokpek            79.01 316     eP       P         20 15 56.7 -0.9
      comp=Z,2.8nm,0.7s,baz=316
KPKS  Kokpek            79.01 316     eP       P         20 15 56.6 -0.9
KPKS                                  pmax     pmax
      comp=Z,3.0nm,0.7s
SATY  Saty              79.06 316     eP       P         20 15 57.3 -0.7
      comp=Z,2.4nm,0.7s,baz=316
SATY  Saty              79.06 316     eP       P         20 15 57.2 -0.7
SATY                                  pmax     pmax
      comp=Z,2.0nm,0.7s
ZAA0  Zalesovo Array    79.38 328     P        P         20 15 57.5 -1.7
ZAA0                                  IAmb     IAmb      20 15 59.4
      comp=Z,16nm,0.7s
ZALV  Zalesovo Beam     79.38 328     P        P         20 15 57.6 -1.6
      comp=Z,22nm,0.7s,baz=110,slow=5.7,SNR=101
ZALV                                  LR       LR        20 51 31.9
      comp=Z,130nm,19.3s,baz=86,slow=36
ZALV  Zalesovo Beam     79.38 328     P        P         20 15 57.4 -1.8
KSH   Kashi             79.69 312     P        P         20 16 02.6 +1.2
KSH                                   sP       sP        20 16 22.0 +0.6
KSH                                   pmax     pmax
      comp=Z,11nm,0.8s
TDK   Taldyqorghan      79.72 318     eP       P         20 16 00.6 -0.7
      comp=Z,6.6nm,0.7s,baz=318
TDK   Taldyqorghan      79.72 318     eP       P         20 16 00.6 -0.7
TDK                                   pmax     pmax
      comp=Z,7.0nm,0.7s
MDOK  Medeo             80.04 316     eP       P         20 16 02.8 -0.4
      baz=316
MDOK  Medeo             80.04 316     eP       P         20 16 02.8 -0.4
TNSS  Tian-Shan         80.07 316     eP       P         20 16 03.6 -0.2
      baz=316
TNSS  Tian-Shan         80.07 316     eP       P         20 16 03.5 -0.2
AAA   Alma-Ata          80.14 316     eP       P         20 16 03.5 -0.3
      baz=316
AAA   Alma-Ata          80.14 316     eP       P         20 16 03.4 -0.3
NIL   Nilore            80.22 306     P        P         20 16 04.0 -0.3
NIL                                   pmax     pmax
      comp=Z,31nm,0.9s
NIL   Nilore            80.22 306     P        P         20 16 04.0 -0.3
NIL                                   IAmb     IAmb      20 16 12.1
      comp=Z,31nm,0.8s
SEM   Semipalatinsk     80.49 323     eP       P         20 16 03.5 -2.1
      baz=323
SEM   Semipalatinsk     80.49 323     eP       P         20 16 03.4 -2.1
KUU   Kurty             80.76 316     eP       P         20 16 06.0 -0.9
      comp=Z,13nm,0.8s,baz=316
KUU   Kurty             80.76 316     eP       P         20 16 06.0 -0.9
KUU                                   pmax     pmax
      comp=Z,13nm,0.8s
TKM2  Tokmak 2          80.97 315     P        P         20 16 08.1 -0.3
      SNR=5.0
KBK   Karagaybulak      81.35 315     P        P         20 16 10.5 +0.1
      SNR=5.5
UCH   Uchtor            81.54 314     P        P         20 16 12.0 +0.4
      SNR=9.0
KURK  Kurchatov         81.57 323     ceP      P         20 16 09.7 -1.3
KURK                                  pmax     pmax
      comp=Z,8.0nm,0.8s
KURK  Kurchatov         81.57 323     P        P         20 16 10.1 -0.9
AAK   Ala-Archa         81.67 315     P        P         20 16 12.3 +0.3
      SNR=7.5
AAK   Ala-Archa         81.67 315⇑    eP       P         20 16 11.6 -0.4
AAK                                   pmax     pmax
      comp=Z,16nm,0.8s
AAK   Ala-Archa         81.67 315     P        P         20 16 11.6 -0.4
SGDS  Sogindy           81.81 315     eP       P         20 16 11.4 -1.2
      baz=316
SGDS  Sogindy           81.81 315     eP       P         20 16 11.4 -1.2
MAW   Mawson            81.92 203     P        P         20 16 13.8 +1.2
      comp=Z,7.7nm,0.7s,baz=58,slow=8.3,SNR=6.9
MAW                                   LR       LR        20 51 51.4
      comp=Z,178nm,19.1s,baz=64,slow=35
RDOG  Red Dog Mine      82.08  17     P        P         20 16 13.9 +0.5
RDOG                                  IAmb     IAmb      20 16 14.9
      comp=Z,15nm,0.8s
AML   Almayashu         82.10 314     P        P         20 16 14.8 +0.2
      SNR=16
EKS2  Erkin-Say         82.18 315     P        P         20 16 15.2 +0.5
      SNR=9.1
BTLS  Baital            82.67 317     eP       P         20 16 16.1 -0.8
      comp=Z,2.7nm,0.6s,baz=317
BTLS  Baital            82.67 317     eP       P         20 16 16.1 -0.8
BTLS                                  pmax     pmax
      comp=Z,3.0nm,0.6s
RC01  Rabbit Creek A    83.03  26     P        P         20 16 18.5  0.0
      baz=243
KBL   Kabul             83.82 306     P        P         20 16 22.2 -1.2
KBL                                   pmax     pmax
      comp=Z,5.0nm,0.9s
KBL   Kabul             83.82 306     P        P         20 16 22.1 -1.2
DZA   Taraz             83.98 314     eP       P         20 16 23.4 -0.5
      baz=314
DZA   Taraz             83.98 314     eP       P         20 16 23.3 -0.5
RND   Reindeer          84.44  24     P        P         20 16 24.5 -1.2
RND                                   pmax     pmax
      comp=Z,12nm,0.8s
RND   Reindeer          84.44  24     P        P         20 16 24.5 -1.2
RND                                   IAmb     IAmb      20 16 28.8
      comp=Z,12nm,0.8s
MLY   Manley            84.44  22     P        P         20 16 26.1 +0.4
      baz=242
MCK   McKinley          84.55  24     P        P         20 16 25.8 -0.4
      baz=244
KK31  Karatay Array     84.62 314     P        P         20 16 26.3 -0.7
KK31                                  pmax     pmax
      comp=Z,6.0nm,0.9s
KK31  Karatay Array     84.62 314     P        P         20 16 26.3 -0.7
KKAR  Karatay Array     84.62 314     P        P         20 16 26.4 -0.6
KKAR                                  pmax     pmax
      comp=Z,6.0nm,0.9s
KKAR  Karatay Array     84.62 314     P        P         20 16 26.4 -0.6
KKAR  Karatay Array     84.62 314     P        P         20 16 26.5 -0.6
KKAR                                  IAmb     IAmb      20 16 34.2
      comp=Z,5.5nm,0.9s
IUG   Iuzhnay           84.73 313     eP       P         20 16 26.9 -0.8
      baz=313
IUG   Iuzhnay           84.73 313     eP       P         20 16 26.9 -0.8
BRZS  Berezniki         84.94 321     eP       P         20 16 27.4 -1.2
      comp=Z,6.0nm,1.1s,baz=321
BRZS  Berezniki         84.94 321     eP       P         20 16 27.3 -1.2
BRZS                                  pmax     pmax
      comp=Z,6.0nm,1.1s
M24K  Tolsona, Glenn    85.01  26     P        P         20 16 29.6 +1.1
      baz=246
I23K  Minto, Yukon-K    85.02  22     P        P         20 16 28.8 +0.4
      baz=243
I23K  Minto, Yukon-K    85.02  22     P        P         20 16 28.6 +0.1
I23K                                  IAmb     IAmb      20 17 19.9
      comp=Z,21nm,1.6s
TCOL  CIGO, UAF Yank    85.47  23     P        P         20 16 30.1 -0.6
TCOL                                  IAmb     IAmb      20 16 42.7
      comp=Z,13nm,0.5s
COLA  College           85.47  23⇑    eP       P         20 16 30.1 -0.6
COLA                                  pmax     pmax
      comp=Z,6.0nm,0.8s
HDA   Harding Lake      85.63  23     P        P         20 16 31.0 -0.6
      baz=246
COLD  Coldfoot          85.67  20     P        P         20 16 32.4 +0.7
      baz=242
IL31                    85.80  23     IAmb     IAmb      20 16 34.5
      comp=Z,8.9nm,0.7s
ILAR  Eielson Array     85.80  23     P        P         20 16 30.9 -1.4
      comp=Z,8.4nm,0.7s,baz=251,slow=5.0,SNR=94
ILAR                                  LR       LR        20 49 51.9
      comp=Z,126nm,21.4s,baz=250,slow=32
ILAR  Eielson Array     85.80  23     P        P         20 16 31.0 -1.4
ILAR  Eielson Array     85.80  23     P        P         20 16 29.9 -2.5
A21K  Barrow            85.81  16     P        P         20 16 32.7 +0.5
      baz=236
DOT   Dot Lake          86.50  25     P        P         20 16 35.7 -0.2
DOT                                   IAmb     IAmb      20 16 36.5
      comp=Z,14nm,1.1s
TOLK  Toolik Lake Re    86.53  19     P        P         20 16 36.8 +0.8
      baz=243
TOLK  Toolik Lake Re    86.53  19     P        P         20 16 36.3 +0.3
TOLK                                  IAmb     IAmb      20 17 12.1
      comp=Z,18nm,1.4s
L26K  Log Cabin Wild    86.57  25     P        P         20 16 36.9 +0.7
      baz=249
SCRK  Sand Creek        86.65  24     P        P         20 16 37.0 +0.2
      baz=248
BRVK  Borovoye          87.20 324⇓    eP       P         20 16 38.2 -1.3
BRVK                                  pmax     pmax
      comp=Z,6.0nm,0.9s
BRVK  Borovoye          87.20 324     P        P         20 16 38.0 -1.5
K27K  Chicken           87.45  25     P        P         20 16 41.8 +1.3
      baz=250
EGAK  Eagle             88.08  24     IAmb     IAmb      20 17 05.6
      comp=Z,16nm,1.1s
HRA   Herat             89.32 305     IAmb     IAmb      20 16 51.9
      comp=Z,9.1nm,0.9s
SYO   Syowa Base        90.26 200⇑    epP      pP        20 17 10.8 +3.1
EPYK  Eagle Plains      90.32  23     P        P         20 16 54.5 +0.5
      baz=255
ABKAR Akbulak array     92.92 319     P        P         20 17 04.4 -2.0
ABKAR                                 IAmb     IAmb      20 17 05.7
      comp=Z,19nm,1.7s
GEYT  Alibeck           93.06 308     P        P         20 17 06.5 -0.8
      comp=Z,2.5nm,0.8s,baz=194,slow=5.2,SNR=5.3
GEYT  Alibeck           93.06 308     P        P         20 17 06.2 -1.1
BELA  Belgrano 2        95.86 180     P        P         20 17 18.9 -0.5
OPO   Ambohidratompo    97.30 250     P        Pdif      20 17 28.5 +1.1
      comp=Z,3.5nm,0.6s,baz=90,slow=10,SNR=3.6
NVAR  Mina Array Bea    97.54  52     P        Pdif      20 17 28.5 +0.4
      comp=Z,1.9nm,0.9s,baz=258,slow=6.0,SNR=5.7
YKA   Yellowknife Ar    99.47  28     P        Pdif      20 17 35.0 -0.8
      comp=Z,0.6nm,0.8s,baz=270,slow=4.1,SNR=8.7
YKA                                   PKiKP    PKiKP     20 22 05.2 +0.3
      comp=Z,0.4nm,0.6s,baz=287,slow=1.4,SNR=5.3
YKA                                   PKKPbc   PKKPbc    20 33 58.1 -3.0
      comp=Z,0.7nm,0.7s,baz=91,slow=3.5,SNR=10
YKA                                   LR       LR        20 59 31.7
      comp=Z,58nm,20.6s,baz=0.0,slow=34
YKA   Yellowknife Ar    99.47  28     P        Pdif      20 17 35.0 -0.8
SNAA  Sanae             99.63 189     P        Pdif      20 17 35.9 -0.6
VNA2  Neumayer--Watz   100.98 188     P        Pdif      20 17 39.0 -3.5
VNA3  Neumayer Olymp   101.00 187     P        Pdif      20 17 42.1 -0.5
PDAR  Pinedale Array   104.11  48     Pdiff    Pdif      20 17 59.0 +1.8
      comp=Z,0.4nm,0.3s,baz=250,slow=2.7,SNR=3.9
APA   Apatity          104.78 339⇓    iP       Pdif      20 17 56.3 -3.0
APA                                   pmax     pmax
      comp=Z,8.0nm,0.8s
APA                                   MLR      MLR
      comp=Z,2µm,19.0s
ARCES ARCESS Array B   106.65 342     Pdiff    Pdif      20 18 06.0 -1.6
      comp=Z,5.9nm,0.8s,baz=46,slow=3.5,SNR=11
FINES FINESS Array B   110.05 334     Pdiff    Pdif      20 18 21.1 -1.8
      comp=Z,1.5nm,0.6s,baz=70,slow=6.7,SNR=6.7
FINES                                 PKiKP    PKiKP     20 22 24.3 -0.1
      comp=Z,2.4nm,0.8s,baz=88,slow=3.3,SNR=2.4
ULM   Lac du Bonnet    112.01  38     PKiKP    PKiKP     20 22 27.8 -0.7
      comp=Z,2.5nm,0.8s,baz=285,slow=5.6,SNR=3.7
AKASG Malin Array Be   112.37 323     PKiKP    PKiKP     20 22 28.2 -0.9
      comp=Z,0.2nm,0.3s,baz=66,slow=2.2,SNR=4.8
BIZ   Bicaz            115.53 319     ⇑P       PKPdf     20 22 35.8 +0.4
BURAR Bucovina Array   115.87 320     ⇓P       PKPdf     20 22 36.8 +0.7
ARR   Arges            117.02 318     ⇑P       PKPdf     20 22 36.9 -1.4
KOLS  Kolonicke sedl   117.21 322     ePKIKP   PKiKP     20 22 39.1 +0.5
KOLS  Kolonicke sedl   117.21 322     ePKP     PKiKP     20 22 39.0 +0.5
DRGR                   117.76 320     ⇓P       PKPdf     20 22 38.4 -1.4
U40A  Yellville        117.85  52     P        PKPdf     20 22 40.2 +0.1
      baz=284
HERR  Herculane        118.66 318     ⇑P       PKPdf     20 22 41.0 -0.4
LANS  Liptovska Anna   118.79 324     ePKIKP   PKiKP     20 22 42.4 +0.8
LANS  Liptovska Anna   118.79 324     ePKP     PKiKP     20 22 42.4 +0.8
BZS   Buzias           118.91 319     ⇑P       PKPdf     20 22 41.3 -0.5
MDVR  Moldovita        119.16 318     ⇑P       PKPdf     20 22 42.1 -0.3
VYHS  Vyhne            119.46 323     ePKIKP   PKiKP     20 22 43.4 +0.5
VYHS  Vyhne            119.46 323     ePKP     PKPdf     20 22 43.3 +0.4
DPC   Dobruska-Polom   120.03 326     ePKIKP   PKPdf     20 22 44.4 +0.4
DPC   Dobruska-Polom   120.03 326     ePKPDF   PKPdf     20 22 44.4 +0.4
MODS  Modra-Piesok     120.44 324     ePKIKP   PKPdf     20 22 44.3 -0.5
MODS  Modra-Piesok     120.44 324     ePKP     PKPdf     20 22 44.3 -0.5
E46A  Sault Ste Mari   120.61  39     PKPdf    PKPdf     20 22 44.4 -0.7
ZST   Bratislava       120.62 323     ePKIKP   PKPdf     20 22 44.8 -0.3
ZST   Bratislava       120.62 323     ePKP     PKPdf     20 22 44.8 -0.3
PRU   Pruhonice        121.21 326     ePKIKP   PKPdf     20 22 46.1  0.0
PRU   Pruhonice        121.21 326     ePKPDF   PKPdf     20 22 46.1  0.0
CLL   Collm            121.33 328     ePKPdf   PKPdf     20 22 46.0 -0.3
CLL   Collm            121.33 328     ePKIKP   PKPdf     20 22 46.0 -0.3
CONA  Conrad Observa   121.48 324     i P      PKPdf     20 22 46.4 -0.4
      comp=Z,3.1nm,0.6s,SNR=5.2
PLCA  Paso Flores      121.76 147     PKP      PKPdf     20 22 47.0 -0.6
      comp=Z,2.1nm,0.7s,baz=263,slow=3.2,SNR=7.0
ARSA  Arzberg          122.01 323     eP       PKPdf     20 22 46.3 -1.5
      comp=Z,4.6nm,0.9s
KHC   Kasperske Hory   122.19 326⇑    iPKIKP   PKPdf     20 22 48.2 +0.1
KHC   Kasperske Hory   122.19 326     ePKPDF   PKPdf     20 22 48.0 -0.1
NKC   Novy Kostel      122.22 327     ePKIKP   PKPdf     20 22 47.7 -0.4
NKC   Novy Kostel      122.22 327     ePKPDF   PKPdf     20 22 47.7 -0.4
GERES GERESS Array B   122.27 325     PKP      PKPdf     20 22 47.2 -1.1
      comp=Z,2.6nm,0.6s,baz=56,slow=1.8,SNR=19
GERES GERESS Array B   122.27 325     PKIKP    PKPdf     20 22 47.7 -0.7
GERES GERESS Array B   122.27 325     PKPdf    PKPdf     20 22 47.6 -0.7
SOKA  Soboth           122.58 323     i P      PKPdf     20 22 48.7 -0.3
      comp=Z,3.3nm,0.7s,SNR=4.9
OBKA  Obir             122.95 323     eP       PKPdf     20 22 49.6 -0.1
      comp=Z,2.0nm,0.8s
CLTN  Cedars of Leba   123.00  51              PKPdf     20 22 49.9 -0.1
KBA   Koelnbreinsper   123.39 324     eP       PKPdf     20 22 49.6 -1.0
      comp=Z,3.4nm,0.9s
MYKA  Terra Mystica    123.44 323     eP       PKPdf     20 22 50.5 -0.1
      comp=Z,3.8nm,0.6s
LSQQ  Lebel-sur-Quev   123.57  33     P        PKPdf     20 22 50.0 -0.7
      baz=304
ABTA  Abfaltersbach    124.05 324     eP       PKPdf     20 22 50.6 -1.2
      comp=Z,4.9nm,0.8s
WATA  Walderalm        124.28 325     eP       PKPdf     20 22 52.5 +0.2
      comp=Z,2.0nm,0.5s
MOTA  Moosalm          124.54 325     i P      PKPdf     20 22 52.4 -0.5
      comp=Z,4.7nm,0.7s,SNR=6.0
SQTA  Sankt Quirin     124.55 325     eP       PKPdf     20 22 52.5 -0.3
      comp=Z,5.2nm,0.8s
ALGO  Algonquin Park   124.63  37     P        PKPdf     20 22 52.3 -0.5
      baz=301
RETA  Reutte           124.66 325     eP       PKPdf     20 22 52.3 -0.6
      comp=Z,2.0nm,0.5s
FETA  Feichten         124.93 325     eP       PKPdf     20 22 52.7 -1.0
      comp=Z,3.0nm,0.7s
H53A  Bobcaygeon       125.01  39     P        PKPdf     20 22 53.5 -0.1
      baz=300
DAVA  Damuels          125.27 325     eP       PKPdf     20 22 53.3 -0.9
      comp=Z,4.9nm,0.6s
D56A  ZEC Mazanza, M   125.94  34     P        PKPdf     20 22 55.3 -0.1
      baz=305
GOGA  Godfrey          126.07  53     P        PKPdf     20 22 56.1 +0.1
      baz=288
H58A  Gabriels         127.77  37     P        PKPdf     20 22 59.2 +0.2
      baz=304
J59A  Piesco           128.10  38     P        PKPdf     20 23 00.1 +0.5
      baz=303
JTS   Las Juntas de    128.41  82⇓    iPKIKP   PKPdf     20 23 01.3 +0.3
JTS   Las Juntas de    128.41  82     PKPdf    PKPdf     20 23 01.5 +0.5
PTAC  Punta Ardita,    135.43  86     eP       PKPdf     20 23 13.6 -0.6
BBAC  Balboa, Cauca    135.59  94     eP       PKPdf     20 23 14.0 -0.8
SOTA  Rioblanco        136.24  94     eP       PKiKP     20 23 18.9 +0.8
PCON  Cinco Dias       136.47  93     eP       PKPdf     20 23 16.8 -0.2
YOTC  Yotoco, Valle    136.69  91     eP       PKPdf     20 23 17.2 +0.4
PLMC  San Jos del P    136.83  90     eP       PKPdf     20 23 18.2 +1.2
DBBC  Dabeiba          137.01  87     eP       PKPdf     20 23 18.5 +1.2
CBOC  Ciudad Bolivar   137.16  88     eP       PKPdf     20 23 17.4 -0.2
MOTC  Monteria, Cord   137.58  84     eP       PKPdf     20 23 17.3 -0.9
HELC  Santa Helena     137.65  88     eP       PKPdf     20 23 18.5 -0.4
ANIL  Santa Ana        137.67  90     eP       PKPdf     20 23 18.7 -0.1
UREC  San Jos de Ur    137.70  86     eP       PKPdf     20 23 18.7 +0.2
TOLC  Tolima           137.76  90     eP       PKPdf     20 23 17.3 -1.7
ORTC  Ortega, Tolima   137.78  91     eP       PKPdf     20 23 18.2 -0.5
ESDC  Sonseca Array    137.85 326     PKP      PKPdf     20 23 18.4 +0.3
      comp=Z,0.9nm,1.0s,baz=16,slow=1.9,SNR=3.1
SJCC  San Jacinto, C   138.04  82     eP       PKPdf     20 23 18.2 -0.9
ZARC  Zaragoza, Cauc   138.36  86     eP       PKPdf     20 23 19.7  0.0
ROSC  El Rosal         138.78  90     PKP      PKPdf     20 23 20.6 -0.3
      comp=Z,20nm,0.5s,baz=55,slow=23,SNR=7.0
ROSC  El Rosal         138.78  90     PKPdf    PKPdf     20 23 21.8 +0.8
ROSC  El Rosal         138.78  90     eP       PKPdf     20 23 21.2 +0.3
MACC  Macarena, Meta   138.98  94     eP       PKPdf     20 23 20.3 -0.6
SMLC  San Martn de     139.15  84     eP       PKPdf     20 23 18.9 -2.2
CHIC  Chingaza         139.34  90     eP       PKPdf     20 23 21.1 -0.9
CPUP  Villa Florida    139.77 145     PKP      PKPdf     20 23 21.4 -0.5
      comp=Z,3.0nm,0.7s,baz=222,slow=3.8,SNR=4.6
BARC  Barichara        140.00  87     eP       PKPdf     20 23 16.0 -7.0
RUSC  La Rusia         140.07  88     eP       PKPdf     20 23 14.6 -8.8
PAMC  Pamplona, Colo   140.50  86     eP       PKPdf     20 23 17.0 -7.2
SDV   Santo Domingo    142.55  84     PKPdf    PKPdf     20 23 23.8 -3.7
SDV   Santo Domingo    142.55  84     eP       PKPdf     20 23 23.1 -4.4
SHEL  Horse Pasture    145.12 230     PKIKP    PKPdf     20 23 32.6 +0.9
SHEL  Horse Pasture    145.12 230     PKPdf    PKPdf     20 23 32.6 +0.9
TOA0  Torodi Ar. Sit   145.26 284              PKPbc     20 23 32.0 +0.3
TORD  Torodi Ar. Bea   145.26 284     PKPbc    PKPdf     20 23 32.5 +0.5
      comp=Z,141nm,1.0s,baz=72,slow=3.4,SNR=254
TORD  Torodi Ar. Bea   145.26 284              PKPab     20 23 32.3 +0.4
KOWA  Kowa             150.49 288     PKPdf    PKPdf     20 23 40.0 -0.5
KOWA                                  PKPbc    PKiKP     20 23 47.0 +0.4
KIC   Kosan Boka       152.00 272     ePKP1    PKiKP     20 23 50.1 +0.3
      comp=Z,49nm,0.8s
DBIC  Dimbokro         152.12 272     PKPbc    PKiKP     20 23 50.6 +0.5
      comp=Z,21nm,0.8s,baz=84,slow=2.6,SNR=30
DBIC                                  PKPab    sPKPdf    20 24 00.6 -3.0
      comp=Z,19nm,0.6s,baz=75,slow=4.6,SNR=19
DBIC  Dimbokro         152.12 272     PKIKP    PKPbc     20 23 49.6 -0.1
DBIC                                                     20 24 00.8
DBIC  Dimbokro         152.12 272     PKPdf    PKPdf     20 23 42.6 -0.4
DBIC                                           PKPbc     20 23 49.6 -0.1
DBIC                                  PKPab    sPKPdf    20 24 00.8 -2.8
LIC   Lamto            152.28 271     ePKP1    PKiKP     20 23 50.7 +0.3
      comp=Z,125nm,0.9s
TIC   Toumodi          152.28 272     ePKP1    PKPbc     20 23 50.6 +0.5
BDFB  Brasilia         153.49 146     PKP      PKPdf     20 23 46.1 +0.9
      comp=Z,3.1nm,0.8s,baz=321,slow=1.5,SNR=4.1
BDFB                                  PKPbc    PKPbc     20 23 53.1 +0.3
      comp=Z,11nm,0.6s,baz=189,slow=2.4,SNR=12
BDFB  Brasilia         153.49 146     PKPdf    PKPdf     20 23 45.8 +0.6
BDFB                                  PKPbc    PKPbc     20 23 53.2 +0.3
```

IDC 13 20:23:32.8±6.3**, 10°.06S**×**120°.69E, h227**km±60km**, mb2.8**/1**,**
mb1 2.6/3**, mb1mx2.5**/21**, mbtmp3.1**/3 **Error ellipse:**
s-maj=193.9km s-min=18.1km az=52.0, Sumba region

```
Code  Station Name        Δ°   AZ°    Phase ID              Time       Res
                                      Op       ISC          h  m  s    ISC
WRA   Warramunga Arr    16.43 128     P        P         20 27 08.4 -1.5
      0.1nm,0.3s,baz=302,slow=13,SNR=3.1
WRA                                   S        S         20 29 58.1  -12
      0.4nm,0.3s,baz=264,slow=19,SNR=10.0
ASAR  Alice Springs     18.50 139     P        P         20 27 33.2 +0.8
      0.0nm,0.3s,baz=307,slow=9.4,SNR=2.7
ASAR                                  S        S         20 30 52.2 +0.8
      0.1nm,0.3s,baz=318,slow=26,SNR=2.7
MKAR  Makanchi Array    66.16 332     P        P         20 33 56.0  0.0
      0.2nm,0.6s,baz=143,slow=6.1,SNR=2.2
```

VAO ***13*** *20:53:46.4±4.0, 24°.49S×68°.58W, h186km±21km, mb4.4*
SJA ***13*** *20:54:02.6±0.6, 24°.07S×66°.93W, h205km±4km, ML4.2,*
MW4.1
NEIC ***13*** *20:54:02.3±2.2, 24°.11S±0°.07×66°.9W±0°.1, h204km±10km,*
mb4.2/6, Md3.8(SJA), Error ellipse: s-maj=14.0km
s-min=9.8km az=109.0
IDC ***13*** *20:54:02.3±1.3, 24°.03S×66°.80W, h190km±11km, mb3.4/5,*
mb1 3.7/10, mb1mx3.4/37, mbtmp4.0/10, MS1.8/1,
Ms1 1.8/1, ms1mx1.8/11, Error ellipse: s-maj=24.1km
s-min=14.4km az=12.0
GUC ***13*** *20:54:03.6±0.6, 24°.07S×67°.01W, h206km±6km, ML4.5*
ISC 13 20:54:02.6±0.6**, 24°.03S**±0°.04×**66°.94W**±0°.04**, h202**km±6km**,**
n110, σ1s.42/141**, mb3.5**/5**, 12C-2D, Salta Province**

```
Code  Station Name        Δ°   AZ°    Phase ID              Time       Res
                                      Op       ISC          h  m  s    ISC
SLA   San Lorenzo        1.48 118⇓    iP       Pn        20 54 37.7 +1.2
SLA                                   i S      S         20 55 03.7 +1.3
SLA   San Lorenzo        1.48 118     eP       Pn        20 54 37.7 +1.2
SLA                                   eS       S         20 55 02.5 +0.1
AZAP  Zapla              1.73  97     eP       Pn        20 54 39.6 +0.8
FSA   Cafayete           2.25 157     eP       Pn        20 54 44.7 +0.7
FSA                                   eS       S         20 55 15.6 -0.3
ASTB  Santa Barbara      2.28  88     eP       Pn        20 54 45.1 +0.7
LVC   Limon Verde        2.30 308     P        Pn        20 54 46.1 +1.3
      54nm,0.3s,baz=120,slow=7.9,SNR=320
LVC                                   LR       LR        20 55 14.2
      comp=Z,23nm,21.8s,baz=228,slow=30
LVC                                   S        S         20 55 17.7 +0.7
      110nm,0.3s,baz=8.5,slow=21,SNR=55
LVC   Limon Verde        2.30 308⇓    iP       Pn        20 54 46.1 +1.3
LVC                                   i S      S         20 55 17.9 +0.9
LVC   Limon Verde        2.30 308     eP       Pn        20 54 46.1 +1.3
LVC                                   eS       S         20 55 18.7 +1.7
PB15  IPOC Station P     2.46 289⇑    iP       Pn        20 54 47.6 +1.2
PB15                                  i S      S         20 55 20.1 +0.3
PB15  IPOC Station P     2.46 289              Pn        20 54 47.6 +1.2
PB15  IPOC Station P     2.46 289     eP       Pn        20 54 47.6 +1.2
PB15                                  eS       S         20 55 20.7 +0.8
GO02  Mina Guanaco       2.66 244⇑    iP       Pn        20 54 49.7 +1.0
GO02                                  i S      S         20 55 24.8 +0.8
GO02                                  IAML               20 55 27.4
      comp=N,995nm,0.4s
GO02  Mina Guanaco       2.66 244              Pn        20 54 49.6 +0.9
PB06  IPOC Station P     2.75 298⇑    iP       Pn        20 54 50.8 +1.1
PB06                                  i S      S         20 55 25.5 -0.2
PB06                                  IAML               20 55 26.3
      comp=N,1µm,0.2s
PB06  IPOC Station P     2.75 298              Pn        20 54 50.8 +1.1
PB06  IPOC Station P     2.75 298     eP       Pn        20 54 50.8 +1.1
PB06                                  eS       S         20 55 26.1 +0.3
PB06                                  IAML               20 55 29.9
      comp=Z,954nm,0.3s
PB09  IPOC Station P     3.08 316⇑    iP       Pn        20 54 54.8 +1.4
PB09                                  i S      S         20 55 33.6 +1.1
PB09                                  IAML               20 55 36.1
      comp=E,553nm,0.6s
PB09  IPOC Station P     3.08 316              Pn        20 54 54.9 +1.4
PB09  IPOC Station P     3.08 316     eP       Pn        20 54 54.8 +1.4
PB09                                  eS       S         20 55 32.8 +0.3
PB09                                  IAML               20 55 34.1
      comp=Z,425nm,0.9s
AHML  Horco Molle        3.10 152     eP       Pn        20 54 54.3 +0.7
PB14  IPOC Station P     3.21 259⇑    iP       Pn        20 54 55.6 +0.4
PB14                                  i S      S         20 55 35.6  0.0
PB14  IPOC Station P     3.21 259              Pn        20 54 55.6 +0.4
PB14  IPOC Station P     3.21 259     eP       Pn        20 54 55.9 +0.7
PB14                                  eS       S         20 55 35.6  0.0
PB05  IPOC Station P     3.22 291⇑    iP       Pn        20 54 55.8 +0.8
PB05                                  i S      S         20 55 33.9 -1.5
PB05  IPOC Station P     3.22 291     eP       Pn        20 54 55.9 +0.8
PB05                                  eS       S         20 55 35.1 -0.3
PB05                                  IAML               20 55 42.0
      comp=Z,371nm,0.3s
PB03  IPOC Station P     3.26 307⇑    iP       Pn        20 54 56.3 +0.7
PB03                                  i S      S         20 55 36.1 -0.2
PB03  IPOC Station P     3.26 307     eS       S         20 55 35.7 -0.6
PB03                                  IAML               20 55 39.6
      comp=Z,874nm,0.2s
PB10  IPOC Station P     3.35 278⇑    iP       Pn        20 54 57.0 +0.5
PB10                                  i S      S         20 55 38.2 +0.2
PB10  IPOC Station P     3.35 278              Pn        20 54 57.3 +0.8
PB10  IPOC Station P     3.35 278     eP       Pn        20 54 57.3 +0.8
PB10                                  eS       S         20 55 38.2 +0.2
PB10                                  IAML               20 55 39.8
      comp=Z,423nm,0.5s
PB04  IPOC Station P     3.40 299⇑    iP       Pn        20 54 57.9 +0.6
PB04                                  i S      S         20 55 38.3 -1.2
PB04  IPOC Station P     3.40 299              Pn        20 54 57.9 +0.6
PB04  IPOC Station P     3.40 299     eP       Pn        20 54 58.3 +0.9
PB04                                  eS       S         20 55 39.7 +0.2
PB04                                  IAML               20 55 40.8
      comp=Z,670nm,0.7s
AC02  Maricunga          3.42 215     eP       Pn        20 54 58.8 +1.0
AC02  Maricunga          3.42 215              Pn        20 54 58.8 +1.0
PB07  IPOC Station P     3.56 310⇑    iP       Pn        20 54 59.6 +0.4
PB07                                  i S      S         20 55 41.1 -1.8
PB07  IPOC Station P     3.56 310              Pn        20 54 59.7 +0.5
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PB07  IPOC Station P     3.56 310  eP     Pn      20 54 59.7 +0.5
PB07                               eS     S       20 55 41.6 -1.3
PB07                                IAML          20 55 49.3
      comp=Z,495nm,0.5s
PB02  IPOC Station P     3.84 314⇑iP     Pn      20 55 02.4 -0.2
PB02                               i S    S       20 55 47.0 -2.1
AC01  Pan de Azucar      3.93 237⇑iP     Pn      20 55 03.0 -0.6
AC01                               i S    S       20 55 48.6 -2.3
AC01  Pan de Azucar      3.93 237   Pn    Pn      20 55 03.0 -0.6
PATCX Punta Patache      4.36 316  eP     Pn      20 55 09.4 +0.2
PATCX Punta Patache      4.36 316         Pn      20 55 09.3 +0.2
PB08  IPOC Station P     4.38 332  eP     Pn      20 55 11.5 +1.8
PB08                               i S    S       20 56 01.7 -0.1
PB08  IPOC Station P     4.38 332         Pn      20 55 11.2 +1.6
CYA   Choya              4.51 167  eP     Pn      20 55 12.7 +1.9
CYA                                eS     S       20 56 04.9 +0.8
TA01  Diego Aracena      4.57 318   Pn    Pn      20 55 11.7  0.0
GO03  Copiap             4.62 219   Pn    Pn      20 55 11.3 -1.0
GO03  Copiap             4.62 219  eP     Pn      20 55 11.7 -0.6
GO03                               eS     S       20 56 04.9 -1.8
VCA   Vinchina           4.82 193  eP     Pn      20 55 15.2 +0.3
VCA                                eS     S       20 56 14.4 +3.0
GO01  Chusmiza           4.82 334         Pn      20 55 16.3 +1.0
PSGCX Pisagua            5.31 326   Pn    Pn      20 55 20.6 -0.7
MNMC  Minye Minye        5.47 333         Pn      20 55 23.2 -0.2
AC04  Llanos de Chal     5.57 221         Pn      20 55 22.9 -1.4
AGUA  GUANDACOL          5.60 194  eS     S       20 56 30.2 +0.6
AC05  El Transito        5.64 211   Pn    Pn      20 55 24.5 -0.8
LCO   Las Campanas       5.99 213   Pn    Pn      20 55 28.6 -1.4
PB16  IPOC Station P     6.16 337   Pn    Pn      20 55 32.8 +0.3
AP01  Chacalluta         6.47 330   Pn    Pn      20 55 37.0 +1.0
CO01  Juntas del Tor     6.55 205   Pn    Pn      20 55 37.2 -0.1
ACCO  Cerro Coronel      6.79 196  eP     Pn      20 55 41.3 +0.8
ACCO                               eS     S       20 56 56.9 -1.0
GO04  Tololo Observa     7.01 208         Pn      20 55 41.0 -2.2
RTLL  Cerro Villicun     7.39 190  eP     Pn      20 55 48.0  0.0
RTLL                               eS     S       20 57 06.3 -5.4
RTLL                                IAML          20 57 10.8
      comp=Z,16nm,2.3s
CO03  El Pedregal        7.55 205   Pn    Pn      20 55 48.0 -2.1
ZON   Zonda              7.64 191   Pn    Pn      20 55 51.0 -0.1
RTLS  Leoncito           8.01 195  eS     S       20 57 24.7 -2.0
RTLS                                IAML          20 57 31.9
      comp=Z,10nm,0.8s
CPUP  Villa Florida      9.00 107   P     Pn      20 56 06.9 -2.0
      comp=Z,0.2nm,0.3s,baz=293,slow=11,SNR=6.9
VA03  San Esteban        9.26 199   Pn    Pn      20 56 08.8 -3.5
SIV   San Ignacio        9.72  36   P     Pn      20 56 17.0 -1.3
      comp=Z,1.5nm,0.3s,baz=227,slow=10,SNR=24
SIV                                 S     S       20 58 01.2 -6.1
      comp=Z,0.2nm,0.3s,baz=225,slow=5.0,SNR=3.5
MT02  Curacav            9.90 201   Pn    Pn      20 56 17.3 -3.2
BO02  Sierra Bellavi    11.23 196   Pn    Pn      20 56 35.6 -2.1
PP1B  Ponte de Pedra    12.96  63  eP     P       20 57 04.3 +1.4
BI02  San Fabin de      13.13 196         Pn      20 57 03.0 +1.3
TRCB  Terra Rica        13.20  88  eP     P       20 57 05.9 +0.4
PTGB  Pitanga           13.58  96  eP     P       20 57 11.2 +1.5
PCMB  Pacaembu          14.66  84  eP     P       20 57 23.6 +1.9
SAML  Samuel            15.43  14         Pn      20 57 28.9 -1.1
ITRB  Iturama           15.98  78  eP     Pn      20 57 37.2 +0.4
ARAG  Araguaiana, MT    16.46  63  eP     Pn      20 57 43.3 +0.9
PLCA  Paso Flores       16.92 189   P     P       20 57 46.9 +0.4
      comp=Z,0.4nm,0.3s,baz=4.7,slow=11,SNR=13
PLCA  Paso Flores       16.92 189   Pn    P       20 57 47.3 +0.8
PLCA                                IAmb  IAmb    20 58 01.8
      comp=Z,3.5nm,0.8s
PET01 Itanhaem-SP       17.95  95  eP     P       20 57 58.1 +0.2
VAO   Valinhos          18.35  91  eP     P       20 58 02.3  0.0
IPMB  Ipameri, GO       18.49  75  eP     P       20 58 04.1 +0.4
LL01  San Ignacio de    18.85 193         P       20 58 05.4 -1.9
LL01                                IAmb  IAmb    20 58 09.3
      comp=Z,13nm,0.9s
SNDB  Serra Nova Dou    19.09  54  eP     P       20 58 09.8 -0.5
BDFB  Brasilia          19.65  68   P     P       20 58 16.4  0.0
      comp=Z,2.5nm,0.3s,baz=242,slow=11,SNR=36
BDFB  Brasilia          19.65  68   P     P       20 58 16.7 +0.3
NPGB  Novo Progresso    20.22  35  eP     P       20 58 20.3 -2.1
PEXB  Peixe             21.30  59  eP     P       20 58 32.9 -0.8
ITTB  Itaituba          22.34  31  eP     P       20 58 38.8 -5.2
JANB  Januaria          23.09  71  eP     P       20 58 50.3 -0.6
SMTB  Santa Maria do    23.87  54  eP     P       20 58 57.8  0.0
SDBA  SAO DESIDERIO     23.88  65  eP     P       20 58 57.4 -0.6
PRPB  Parauapebas       24.21  46  eP     P       20 58 59.2 -1.8
GDU01 Guandu, BA        27.80  73  eP     P       20 59 32.2 -1.0
ROSB  Rosrio            30.45  50  eP     P       20 59 55.6 -1.0
VNA3  Neumayer Olymp    57.10 161   P     P       21 03 29.2 +1.7
VNA2  Neumayer--Watz    57.67 160   P     P       21 03 33.3 +1.8
      baz=281,slow=7.4
SNAA  Sanae             59.30 161   P     P       21 03 44.5 +1.6
TXAR  Lajitas Array     63.74 324   P     P       21 04 14.3 +1.3
      comp=Z,0.4nm,0.9s,baz=82,slow=7.6,SNR=2.3
DBIC  Dimbokro          67.76  71   P     P       21 04 39.1 +0.1
      comp=Z,1.0nm,0.3s,baz=220,slow=5.7,SNR=5.4
DBIC  Dimbokro          67.76  71   IAmb  IAmb    21 04 39.3
      comp=Z,5.5nm,1.2s
TORD  Torodi Ar. Bea    76.53  69   P     P       21 05 30.5 -0.5
      comp=Z,0.9nm,0.4s,baz=270,slow=7.1,SNR=8.3
TORD  Torodi Ar. Bea    76.53  69   IAmb  IAmb    21 05 34.1
      comp=Z,1.0nm,0.6s
PDAR  Pinedale Array    77.20 329   P     P       21 05 35.9 +1.5
      comp=Z,0.4nm,0.7s,baz=146,slow=7.1,SNR=1.7
YKA   Yellowknife Ar    94.17 340   P     P       21 06 59.4 +1.5
      comp=Z,0.2nm,0.5s,baz=128,slow=5.1,SNR=6.7
ASAR  Alice Springs    128.45 205   PKP   PKPdf   21 12 46.9 +0.8
      comp=Z,0.7nm,0.6s,baz=123,slow=1.6,SNR=7.3
WRA   Warramunga Arr   131.62 207   PKP   PKiKP   21 12 53.5 +0.4
      comp=Z,0.4nm,0.3s,baz=154,slow=2.0,SNR=11
MKAR  Makanchi Array   146.52  40   PKPbc PKPbc   21 13 20.3 +0.2
      comp=Z,0.6nm,0.5s,baz=319,slow=2.7,SNR=13
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*IDC **13** 20:56:33.6±2.3, 7°.43S×127°.17E, h0^{km}, mb1 5.0/2, mb1mx3.8/19, mbtmp4.8/2, ML4.7/2, Error ellipse: s-maj=270.4km s-min=32.9km az=63.0*

*NEIC **13** 20:56:49.2±2.4, 7°.65S±0°.09×127°.98E±0°.07, h139^{km}±10^{km}, mb4.5/13, Error ellipse: s-maj=13.3km s-min=10.6km az=179.0*

*NOU **13** 20:56:52.3, 8°.01S×127°.99E, h132^{km}, mb4.2, Timor Region*

ISC 13 20:56:49.7±0.7**, 7°.79S**±0°.07×**128°.03E**±0°.07**, h150**^{km}**, n31, σ2^{s}43**/33**, mb4.5**/5**, Banda Sea**

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Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
SAUI  Saumlaki           3.24  94   Pn    Pn      20 57 41.7 +1.5
SOEI  Soe                4.20 242         Pn      20 57 53.0 +0.2
MMRI  Maumere            5.80 261   Pn    Pn      20 58 11.0 -2.8
MTN   Manton Dam         5.88 149         Pn      20 58 16.2 +1.3
FAKI  Fak Fak            6.40  41   Pn    Pn      20 58 18.6 -3.3
KNRA  Kununurra          7.87 175   Pn    Pn      20 58 40.9 -0.6
KAPI  Kappang            8.68 288   Pn    Pn      20 58 50.4 -1.9
FITZ  Fitzroy Crossi    10.51 193         Pn      20 59 15.2 -1.3
WB0   Warramunga Arr    13.41 153         Pn      20 59 53.3 -1.0
WRAB  Tennant Creek     13.54 154         Pn      20 59 54.8 -1.0
WRA   Warramunga Arr    13.54 154   Pn    Pn      20 59 56.0  0.0
      4.2nm,0.3s,baz=328,slow=14,SNR=106
WRA                                 Sn    Sn      21 02 18.6 -7.3
      5.0nm,0.3s,baz=330,slow=22,SNR=14
WRA   Warramunga Arr    13.54 154         Pn      20 59 52.7 -3.2
WB2   Warramunga Arr    13.54 154         Pn      20 59 54.8 -1.1
WR0   Warramunga Arr    13.64 153         Pn      20 59 56.0 -1.2
JAGI  Jajag, Banyuwa    13.76 266   P     P       21 00 03.7 +1.4
PSA00 Pilbara Seismi    15.82 209   Pn    Pn      21 00 24.7 +0.3
PSA00                               IAmb  IAmb    21 00 46.9
      comp=Z,32nm,1.5s
COEN  Coen              16.08 114         P       21 00 29.4 +1.4
AS31  Alice Springs     16.76 161         Pn      21 00 38.4 +2.6
ASAR  Alice Springs     16.76 161   P     Pn      21 00 38.5 +2.6
      comp=Z,1.4nm,0.3s,baz=340,slow=11,SNR=115
ASAR                                S     S       21 03 38.1 -4.2
      comp=Z,0.5nm,0.3s,baz=335,slow=17,SNR=4.5
ASAR  Alice Springs     16.76 161   Pn    Pn      21 00 39.2 +3.3
GIRL  Giralia           19.86 220   P     P       21 01 09.7 +0.5
FORT  Forrest           22.87 180   P     P       21 01 42.2 +1.9
FORT                                IAmb  IAmb    21 01 43.0
      comp=Z,22nm,1.1s
MORW  Morawa            23.99 207   P     P       21 01 52.5 +1.9
MORW                                IAmb  IAmb    21 02 09.8
      comp=Z,20nm,1.4s
BBOO  Buckleboo         25.99 164   P     P       21 02 10.9 +2.2
BBOO                                IAmb  IAmb    21 02 41.4
      comp=Z,32nm,1.4s
NWAO  Narrogin (SRO)    26.94 200   P     P       21 02 18.0 +0.8
NWAO                                IAmb  IAmb    21 02 51.7
      comp=Z,23nm,1.2s
NWAO  Narrogin (SRO)    26.94 200   P     P       21 02 18.0 +0.8
NWAO                                IAmb  IAmb    21 02 51.6
      comp=Z,17nm,1.1s
STKA  Stephens Creek    27.09 154   P     P       21 02 20.5 +1.9
YOJ   Yonaguni jima     32.43 351   P     P       21 03 08.2 +2.6
QRZ   Quartz Range      51.39 137   P     P       21 05 40.8 +1.5
MKAR  Makanchi Array    67.83 328   P     P       21 07 28.9 -2.8
      baz=129,slow=6.1,SNR=2.2
QSPA  South Pole Qui    82.19 180   P     P       21 08 54.1 +0.2
QSPA                                IAmb  IAmb    21 09 27.5
      comp=Z,9.4nm,1.6s
```

IDC 13 21:14:21.1±2.3**, 6°.84N**×**122°.81E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.3**/49**, mbtmp3.4**/3**, Error ellipse: s-maj=241.6km s-min=29.3km az=63.0, Mindanao**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
WRA   Warramunga Arr    28.93 157   P     P       21 20 22.0 -0.3
      0.4nm,0.4s,baz=335,slow=10,SNR=5.8
ASAR  Alice Springs     32.20 161   P     P       21 20 51.4 +0.3
      0.3nm,0.3s,baz=341,slow=7.5,SNR=6.7
MKAR  Makanchi Array    52.80 326   P     P       21 23 38.2 -0.1
      0.1nm,0.5s,baz=118,slow=7.8,SNR=2.1
```

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*VAO **13** 21:17:05.7±0.6, 31°.00S×65°.66W, h165^{km}±6^{km}, mb4.4*

*NEIC **13** 21:17:05.6±1.4, 31°.04S±0°.08×65°.5W±0°.1, h172^{km}±6^{km}, mb4.5/54, Md4.5(SJA), Error ellipse: s-maj=12.8km s-min=11.1km az=86.0*

*SJA **13** 21:17:06.2±0.6, 31°.08S×65°.79W, h206^{km}±11^{km}, ML4.6, MW4.4*

*IDC **13** 21:17:06.8±0.5, 30°.99S×65°.56W, h177^{km}±4^{km}, mb3.8/12, mb1 4.0/15, mb1mx3.9/35, mbtmp4.3/15, Error ellipse: s-maj=16.1km s-min=13.6km az=82.0*

ISC 13 21:17:06.4±0.3**, 31°.00S**±0°.04×**65°.64W**±0°.05**, h178**^{km}**, n178, σ0^{s}98**/210**, mb4.5**/34**, 3C-3D, Cordoba Province**

```
Code  Station Name        Δ°  AZ°    Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
TCA   Tanti              0.95 111⇓iP     Pn      21 17 34.9 +1.2
TCA                                 IAML          21 17 57.2
      comp=E,1μm,0.6s
RTLL  Cerro Villicun     2.45 262⇑iP     Pn      21 17 48.7 +0.2
RTLL  Cerro Villicun     2.45 262  eP     Pn      21 17 48.8 +0.3
RTLL                               eS     Sn      21 18 20.7 -0.5
RTLL                                IAML          21 18 21.4
      comp=Z,3μm,0.3s
RTCV  Cerro Valdivia     2.62 250  eP     Pn      21 17 50.6  0.0
RTCV                               eS     Sn      21 18 23.9 -0.9
RTCV                                IAML          21 18 28.5
      comp=Z,923nm,1.6s
ZON   Zonda              2.66 257   Pn    Pn      21 17 51.1 +0.2
ZON   Zonda              2.66 257  eP     Pn      21 17 51.2 +0.2
ZON                                eS     Sn      21 18 24.7 -0.9
ZON                                 IAML          21 18 26.6
      comp=Z,3μm,0.6s
ACCO  Cerro Coronel      2.98 277  eP     Pn      21 17 55.5 +0.4
ACCO                               eS     Sn      21 18 30.7 -2.1
ACCO                                IAML          21 18 33.2
      comp=Z,1μm,0.7s
ACDV  Cuesta del Vie     3.11 285  eP     Pn      21 17 57.4 +0.8
ACDV                               eS     Sn      21 18 34.8 -0.8
ACDV                                IAML          21 18 39.0
      comp=Z,793nm,0.3s
ASAL  Salagasta          3.15 239  eP     Pn      21 17 57.0 +0.1
ASAL                               eS     Sn      21 18 33.6 -2.7
ASAL                                IAML          21 18 37.7
      comp=Z,1μm,0.7s
VCA   Vinchina           3.17 315⇑eP     Pn      21 17 59.1 +1.8
VCA                                i S    Sn      21 18 34.7 -2.2
ARCO  CERRO ARCO         3.35 236  eP     Pn      21 17 59.4  0.0
ARCO                               eS     Sn      21 18 41.3 +0.5
ARCO                                IAML          21 18 44.2
      comp=Z,1μm,0.4s
AROD  Rodeo              3.41 283  eP     Pn      21 18 01.3 +1.0
AROD                               eS     Sn      21 18 41.8 -0.6
AAGR  Agrelo             3.42 232  eP     Pn      21 18 00.1 -0.1
AAGR                               eS     Sn      21 18 41.3 -0.9
AAGR                                IAML          21 18 44.4
      comp=Z,947nm,1.5s
AUSP  Uspallata          3.42 248  eP     Pn      21 18 00.6 +0.1
AUSP                               eS     Sn      21 18 40.2 -2.4
CO01  Juntas del Tor     3.98 284⇑iP     Pn      21 18 08.9 +1.4
CO01                               i S    Sn      21 18 53.9 -1.3
CO01  Juntas del Tor     3.98 284         Pn      21 18 08.8 +1.4
CO03  El Pedregal        4.34 271  eP     Pn      21 18 11.2 -0.8
CO03                               i S    Sn      21 19 01.0 -2.2
CO03  El Pedregal        4.34 271   Pn    Pn      21 18 12.8 +0.8
RFA   San Rafael         4.45 212  eP     Pn      21 18 12.5 -0.7
RFA                                eS     Sn      21 19 05.1 -0.6
RFA                                 IAML          21 19 24.6
      comp=Z,259nm,0.9s
GO04  Tololo Observa     4.53 279  eP     Pn      21 18 13.4 -1.1
GO04                               i S    Sn      21 19 05.0 -2.7
GO04  Tololo Observa     4.53 279   Pn    Pn      21 18 15.1 +0.7
GO04  Tololo Observa     4.53 279  eP     Pn      21 18 15.2 +0.7
GO04                               eS     Sn      21 19 07.1 -0.6
VA03  San Esteban        4.53 246  eP     Pn      21 18 14.5 +0.1
VA03                               eS     Sn      21 19 07.2 -0.5
VA03  San Esteban        4.53 246   Pn    Pn      21 18 14.8 +0.4
AC05  El Transito        4.57 297         Pn      21 18 16.3 +1.5
CO02  Combarbal          4.60 266   Pn    Pn      21 18 15.6 +0.3
PEL   Peldehue           4.79 242         Pn      21 18 17.1 -0.6
PEL   Peldehue           4.79 242  eP     Pn      21 18 17.1 -0.6
PEL                                eS     Sn      21 19 13.0 -0.5
LCO   Las Campanas       4.82 293   Pn    Pn      21 18 18.8 +0.5
MT03  Universidad Ad     4.82 238⇓iP     Pn      21 18 18.0 -0.1
MT03                               eS     Sn      21 19 13.9 -0.3
MT05  Renca              4.94 240  eP     Pn      21 18 19.3 -0.3
MT05                               i S    Sn      21 19 15.7 -1.2
MT05  Renca              4.94 240         Pn      21 18 19.3 -0.3
LAMA  Las Malvinas       4.94 216  eP     Pn      21 18 19.2 -0.4
LAMA                               eS     Sn      21 18 57.6  -19
ROCH  El Roble           4.97 245  eP     Pn      21 18 19.6 -0.6
ROCH                               eS     Sn      21 19 15.6 -2.4
ROC1  El Roble           4.97 245   Pn    Pn      21 18 19.0 -1.2
ROC1  El Roble           4.97 245  eP     Pn      21 18 19.1 -1.2
MT02  Curacav            5.18 243         Pn      21 18 21.1 -1.5
GO03  Copiap             5.26 309         Pn      21 18 24.2 +0.4
COIS  El Sosneado        5.27 218  eP     Pn      21 18 17.9 -6.0
COIS                               eS     Sn      21 19 09.8  -15
MT09  Talagante          5.30 237⇓iP     Pn      21 18 23.7 -0.7
MT09                               i S    Sn      21 19 24.0 -1.7
AC04  Llanos de Chal     5.49 299         Pn      21 18 26.9 +0.1
PUMA  Malargue           5.50 214  eS     Sn      21 19 21.1 -9.1
BO02  Sierra Bellavi     5.75 227         Pn      21 18 29.2 -0.9
AC01  Pan de Azucar      6.51 317         Pn      21 18 40.3 +0.1
GO02  Mina Guanaco       6.78 328   Pn    Pn      21 18 44.3 +0.3
BI02  San Fabin de       7.34 218         Pn      21 18 49.0 -2.0
PB14  IPOC Station P     7.62 325   Pn    Pn      21 18 55.4 +0.3
ITQB  Itaqui             7.90  83  eP     Pn      21 18 57.9 -0.6
CPUP  Villa Florida      8.65  60   P     Pn      21 19 06.9 -1.5
      comp=Z,1.3nm,0.3s,baz=238,slow=12,SNR=42
CPUP  Villa Florida      8.65  60   Pn    Pn      21 19 07.1 -1.3
CPUP  Villa Florida      8.65  60  eP     Pn      21 19 06.8 -1.6
LVC   Limon Verde        8.85 340   P     Pn      21 19 03.2 -8.2
      comp=Z,0.5nm,0.3s,baz=263,slow=3.0,SNR=2.8
LVC                                 S     Sn      21 20 38.8  -12
      comp=Z,0.5nm,0.3s,baz=282,slow=16,SNR=1.8
LVC   Limon Verde        8.85 340   Pn    Pn      21 19 11.5 +0.2
LVC   Limon Verde        8.85 340  eP     Pn      21 19 11.2 -0.2
PB06  IPOC Station P     8.98 336   Pn    Pn      21 19 12.9 +0.1
LC01  Cunco              9.39 211   Pn    Pn      21 19 14.8 -3.2
PLTB  Pedras Altas      10.31  97  eP     Pn      21 19 29.1 -1.0
PLCA  Paso Flores       10.49 201   P     Pn      21 19 31.4 -1.0
      comp=Z,0.2nm,0.3s,baz=9.9,slow=13,SNR=7.7
PLCA  Paso Flores       10.49 201   Pn    Pn      21 19 31.2 -1.2
PLCA  Paso Flores       10.49 201  eP     Pn      21 19 31.9 -0.5
CPSB  Cacapava Do Su    10.52  90  eP     Pn      21 19 31.4 -1.4
PB08  IPOC Station P    11.27 343         Pn      21 19 43.4 +0.5
MNMC  Minye Minye       12.35 342         Pn      21 19 57.5 +0.7
ITAB  Concordia         12.39  76  eP     P       21 19 58.6 -3.2
CNLB  Canela            12.90  86  eP     Pn      21 20 03.3 -0.3
PB16  IPOC Station P    13.09 344         Pn      21 20 07.9 +1.5
PTGB  Pitanga           13.54  66  eP     Pn      21 20 12.2 +0.6
TRCB  Terra Rica        14.18  58  eP     Pn      21 20 19.6  0.0
SIV   San Ignacio       15.51  17   P     Pn      21 20 34.9 -1.2
      comp=Z,1.4nm,0.3s,baz=215,slow=13,SNR=31
PCMB  Pacaembu          15.91  57  eP     P       21 20 40.6 -0.3
PP1B  Ponte de Pedra    16.54  39  eP     Pn      21 20 48.6 +0.2
PTLB  Pontes e Lacer    16.59  22  eP     Pn      21 20 48.9  0.0
PET01 Itanhaem-SP       17.58  72  eP     Pn      21 20 59.2 -1.5
SPB   Sao Paulo         17.77  70  eP     Pn      21 21 02.5 -0.5
ITRB  Iturama           17.79  54  eP     Pn      21 21 02.1 -1.2
BB19B Bebedouro         18.26  61  eP     P       21 21 06.7  0.0
VAO   Valinhos          18.43  69  eP     Pn      21 21 09.2 -1.6
VILB  Vilhena           18.65  17  eP     P       21 21 10.1 -0.8
PARB  Paraibuna         19.36  72  eP     P       21 21 19.1 +0.5
ARAG  Araguaiana, MT    19.79  43  eP     P       21 21 23.1 -0.1
IPMB  Ipameri, GO       20.44  55  eP     P       21 21 29.9 -0.4
ESAR  Angra dos Reis    20.47  72  eP     P       21 21 30.6 +0.2
MAN01 Angra dos Reis    20.93  72  eP     P       21 21 36.4 +1.1
ETMB  Extrema           21.09 358  eP     P       21 21 37.1 +0.1
EFI   East Falkland     21.40 167   P     P       21 21 38.4 -1.6
VAS01 Vassouras-RJ      21.63  72  eP     P       21 21 44.5 +1.7
SAML  Samuel            22.06   6   P     P       21 21 45.6 -1.5
SAML  Samuel            22.06   6  eP     P       21 21 46.3 -0.8
BDFB  Brasilia          22.21  50   P     P       21 21 47.7 -1.0
      comp=Z,5.8nm,0.4s,baz=228,slow=8.7,SNR=9.9
BDFB  Brasilia          22.21  50   P     P       21 21 47.0 -1.8
BDFB                                IAmb  IAmb    21 21 48.8
      comp=Z,8.3nm,0.6s
DUB01 Friburgo-RJ       22.59  72  eP     P       21 21 52.9 +0.7
CZSB  Cruzeiro do Su    24.08 343  eP     P       21 22 06.1 +0.5
ALF01 Guarapari-ES      24.64  71  eP     P       21 22 10.5 -0.2
BELA  Belgrano 2        48.97 172   P     P       21 25 35.1 +0.9
VNA3  Neumayer Olymp    50.18 160   P     P       21 25 44.7 +1.2
VNA1  Neumayer--Stat    50.39 159   P     P       21 25 46.8 +1.7
MTO3  Montecristo       50.57 330   P     P       21 25 48.2 +0.8
VNA2  Neumayer--Watz    50.76 159   P     P       21 25 49.1 +1.3
      baz=282,slow=9.4
SNAA  Sanae             52.38 159   P     P       21 26 01.0 +1.1
SNAA  Sanae             52.38 159   P     P       21 25 59.9 -0.1
      comp=Z,4.6nm,0.7s,baz=264,slow=9.3,SNR=11
SNAA  Sanae             52.38 159   P     P       21 26 00.2 +0.3
SNAA                                IAmb  IAmb    21 26 02.8
      comp=Z,24nm,1.5s
TEIG  Tepich            55.38 334   P     P       21 26 22.3 +0.2
QSPA  South Pole Qui    59.23 180   P     P       21 26 49.8 +1.0
QSPA                                IAmb  IAmb    21 26 50.7
      comp=Z,7.5nm,0.8s
GOGA  Godfrey           66.24 344   P     P       21 27 35.0 -0.2
GOGA                                IAmb  IAmb    21 27 35.9
      comp=Z,11nm,1.1s
X58A  Rowland           66.47 348   P     P       21 27 37.4 +0.8
W57A  Gilead            67.18 347   P     P       21 27 41.6 +0.6
VNDA  Vanda             68.04 190   P     P       21 27 47.9 +1.9
      comp=Z,0.9nm,0.8s,baz=141,slow=5.0,SNR=3.6
VNDA  Vanda             68.04 190   P     P       21 27 47.1 +1.1
DBIC  Dimbokro          69.07  68   P     P       21 27 52.8 -0.6
      comp=Z,1.3nm,0.6s,baz=159,slow=8.6,SNR=2.1
DBIC  Dimbokro          69.07  68   P     P       21 27 52.7 -0.6
JCT   Junction City     69.22 329   P     P       21 27 54.5 +0.6
JCT                                 IAmb  IAmb    21 27 56.4
      comp=Z,14nm,1.2s
WVT   Waverly           69.95 341   P     P       21 27 58.2  0.0
WVT                                 IAmb  IAmb    21 27 58.8
      comp=Z,10nm,0.8s
TX32  Lajitas Array     70.07 325   P     P       21 27 59.7 +0.4
TXAR  Lajitas Array     70.07 325   P     P       21 27 59.9 +0.6
      comp=Z,1.0nm,0.6s,baz=148,slow=6.9,SNR=12
TXAR  Lajitas Array     70.07 325   P     P       21 27 59.8 +0.5
LCAR  Lake Charles      70.89 338   P     P       21 28 04.5 +0.6
LCAR                                IAmb  IAmb    21 28 05.0
      comp=Z,13nm,1.0s
W39A  Magazine          70.97 336   P     P       21 28 05.2 +0.8
W39A                                IAmb  IAmb    21 28 06.3
      comp=Z,10.0nm,0.8s
FCAR  Ozark Folk Cen    71.04 337   P     P       21 28 05.1 +0.3
U40A  Yellville         71.70 337   P     P       21 28 09.3 +0.4
U40A                                IAmb  IAmb    21 28 10.0
      comp=Z,13nm,1.1s
MGMO  Mountain Grove    72.24 338   P     P       21 28 12.4 +0.4
MGMO                                IAmb  IAmb    21 28 13.3
      comp=Z,13nm,1.0s
FVM   French Village    72.43 340   P     P       21 28 13.0 -0.1
FVM                                 IAmb  IAmb    21 28 13.9
      comp=Z,12nm,0.8s
CCM   Cathedral Cave    72.74 339   P     P       21 28 15.1 +0.2
CCM                                 IAmb  IAmb    21 28 16.0
      comp=Z,13nm,1.1s
S39A  Bolivar           73.07 337   P     P       21 28 17.3 +0.4
L59A  Walton            73.34 353   P     P       21 28 19.6 +1.2
N49A  Columbus Grove    73.59 345   P     P       21 28 19.7 -0.1
P40A  Paris             74.34 339   P     P       21 28 24.5 +0.2
KOWA  Kowa              74.47  62   P     P       21 28 25.6 +0.1
ANMO  Albuquerque       76.02 326   P     P       21 28 35.2 +1.0
SADO  Sadowa            76.41 350   P     P       21 28 36.1 +0.2
SADO                                IAmb  IAmb    21 28 55.2
      comp=Z,8.7nm,1.1s
BOSA  Boshof            76.56 115   P     P       21 28 37.5  0.0
      comp=Z,2.5nm,0.9s,baz=256,slow=2.6,SNR=8.0
BOSA  Boshof            76.56 115   P     P       21 28 37.0 -0.5
SDCO  Great Sand Dun    77.87 329   P     P       21 28 45.8 +1.2
TOA0  Torodi Ar. Sit    78.08  67   P     P       21 28 45.6 -0.3
TOA0                                IAmb  IAmb    21 28 46.6
      comp=Z,7.9nm,0.7s
TORD  Torodi Ar. Bea    78.08  67   P     P       21 28 45.6 -0.3
      comp=Z,7.2nm,0.8s,baz=268,slow=5.5,SNR=14
TORD  Torodi Ar. Bea    78.08  67   P     P       21 28 45.7 -0.1
X16A  Lo Mia Camp, P    78.08 323   P     P       21 28 47.0 +1.3
X16A                                IAmb  IAmb    21 28 48.2
      comp=Z,6.1nm,0.9s
S22A  4UR Ranch, Cre    78.47 328   P     P       21 28 49.0 +1.0
Q24A  Divide            78.73 330   P     P       21 28 50.3 +1.0
Q24A                                IAmb  IAmb    21 28 51.5
      comp=Z,8.9nm,0.8s
ECSD  EROS Data Cent    79.59 338   P     P       21 28 53.8 +0.3
ECSD                                IAmb  IAmb    21 28 54.6
      comp=Z,10nm,0.9s
SMCO  Snowmass          79.71 329   P     P       21 28 56.3 +1.6
SMCO                                IAmb  IAmb    21 28 57.4
      comp=Z,5.9nm,0.8s
KNB   Kanab             80.80 324   P     P       21 29 01.6 +1.2
MTPU  Mount Pierson     81.27 325   P     P       21 29 03.9 +0.9
HWUT  Hardware Ranch    83.75 327   P     P       21 29 16.2 +0.6
HWUT                                IAmb  IAmb    21 29 17.2
      comp=Z,12nm,1.4s
PD31  Pinedale Array    83.76 329   P     P       21 29 15.8 +0.2
PDAR  Pinedale Array    83.76 329   P     P       21 29 16.3 +0.6
      comp=Z,1.9nm,0.7s,baz=128,slow=8.4,SNR=16
PDAR                                pP    pP      21 29 59.9 +0.3
      comp=Z,0.7nm,0.7s,baz=122,slow=7.2,SNR=2.7
PDAR  Pinedale Array    83.76 329   P     P       21 29 16.1 +0.5
NVAR  Mina Array Bea    84.73 321   P     P       21 29 20.8 +0.2
      comp=Z,1.0nm,0.8s,baz=152,slow=4.7,SNR=5.3
ELK   Elko              84.86 324   P     P       21 29 21.4 +0.2
ULM   Lac du Bonnet     85.22 341   P     P       21 29 22.6 +0.2
      comp=Z,5.6nm,0.8s,baz=118,slow=4.9,SNR=12
ULM                                 pP    pP      21 30 05.5 -1.0
      comp=Z,3.5nm,0.9s,baz=191,slow=2.3,SNR=3.5
ULM   Lac du Bonnet     85.22 341   P     P       21 29 22.8 +0.4
ULM                                 IAmb  IAmb    21 29 23.5
      comp=Z,6.8nm,0.8s
FLWY  Flagg Ranch       85.31 329   P     P       21 29 24.3 +1.0
FLWY                                IAmb  IAmb    21 29 25.1
      comp=Z,7.1nm,0.8s
RLMT  Red Lodge         85.52 331   P     P       21 29 25.1 +0.7
RLMT                                IAmb  IAmb    21 29 25.7
      comp=Z,4.6nm,0.7s
YNE   Yellowstone No    85.74 330   P     P       21 29 26.3 +0.8
PNTR  Pine Nut          85.91 321   P     P       21 29 27.8 +1.3
PNTR                                IAmb  IAmb    21 29 29.3
      comp=Z,11nm,0.9s
YHH   Holmes Hill       85.93 330   P     P       21 29 27.6 +1.1
YHL   Hebgen Lake       86.13 329   P     P       21 29 28.7 +1.3
HLID  Hailey            86.59 327   P     P       21 29 30.3 +0.7
HLID                                IAmb  IAmb    21 29 32.1
      comp=Z,8.3nm,1.1s
MCMT  McKenzie Canyo    86.85 328   P     P       21 29 32.2 +1.4
ORV   Oroville          87.28 320   P     P       21 29 34.0 +1.2
ORV                                 IAmb  IAmb    21 29 34.9
      comp=Z,5.4nm,1.1s
K05A  Summer Lake       89.19 323   P     P       21 29 43.5 +1.5
YBH   Yreka Blue Hor    89.46 321   P     P       21 29 42.0 -1.1
      comp=Z,1.5nm,0.7s,baz=88,slow=7.5,SNR=4.3
ESDC  Sonseca Array     90.66  43   P     P       21 29 47.9 -0.8
      comp=Z,0.3nm,0.5s,baz=221,slow=4.9,SNR=2.7
YKA   Yellowknife Ar   101.08 339   P     Pdif    21 30 35.4 +0.1
      comp=Z,0.7nm,0.6s,baz=136,slow=4.8,SNR=13
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YKA				pP	pPdif	21 31 19.9	-0.1
	comp=Z,0.5nm,0.8s,baz=141,slow=4.9,SNR=3.0						
ILAR	Eielson Array	114.02	332	PKP	PKiKP	21 35 23.7	+0.3
	comp=Z,0.5nm,0.8s,baz=188,slow=2.7,SNR=4.3						
ASAR	Alice Springs	122.51	201	PKP	PKPdf	21 35 40.8	-0.5
	comp=Z,0.8nm,0.5s,baz=132,slow=1.5,SNR=10.0						
ASAR				pPKP	pPKPdf	21 36 26.6	-1.2
	comp=Z,0.8nm,0.9s,baz=176,slow=2.2,SNR=3.9						
ASAR	Alice Springs	122.51	201	PKPdf	PKPdf	21 35 40.4	-0.8
WRA	Warramunga Arr	125.83	203	PKP	PKPdf	21 35 47.5	-0.1
	comp=Z,1.4nm,0.4s,baz=171,slow=1.6,SNR=27						
WRA				pPKP	pPKPdf	21 36 33.3	-0.9
	comp=Z,1.5nm,0.9s,baz=180,slow=1.9,SNR=6.1						
GEYT	Alibeck	133.71	65	PKP	PKiKP	21 36 02.6	-0.7
	comp=Z,1.0nm,0.6s,baz=17,slow=1.5,SNR=2.3						
SEY	Seymchan	139.92	334	PKP	PKPdf	21 36 11.9	-0.7
	comp=Z,1.5nm,0.6s,baz=19,slow=16,SNR=4.4						
SIJI	Sorong	144.47	210	PKP	PKPdf	21 36 21.9	-0.4
	comp=Z,12nm,0.9s,baz=19,slow=4.4,SNR=5.0						
YAK	Yakutsk	147.40	347	PKPbc	PKPbc	21 36 28.7	+0.3
	comp=Z,4.7nm,0.5s,baz=301,slow=1.4,SNR=6.5						
YAK				pPKPbc	pPKPbc	21 37 13.8	-0.7
	comp=Z,2.7nm,0.3s,baz=264,slow=1.4,SNR=1.3						
YAK	Yakutsk	147.40	347		PKPbc	21 36 28.6	+0.2
KSH	Kashi	147.72	64	PKPbc	PKPbc	21 36 29.3	-0.9
KSH				pPKP	pPKPdf	21 37 09.3	-4.6
ZALV	Zalesovo Beam	148.76	34	PKP	PKPdf	21 36 28.8	+0.7
	comp=Z,15nm,0.7s,baz=304,slow=3.6,SNR=51						
ZALV				PKPbc	PKiKP	21 36 33.2	-0.2
	comp=Z,14nm,0.7s,baz=315,slow=2.8,SNR=40						
ZALV				pPKPbc	pPKPbc	21 37 19.2	+0.7
	comp=Z,7.2nm,0.8s,baz=306,slow=3.9,SNR=8.1						
MKAR	Makanchi Array	150.73	48	PKP	PKPdf	21 36 32.1	+0.5
	comp=Z,0.5nm,0.7s,baz=317,slow=1.0,SNR=5.2						
MKAR				PKPbc	PKiKP	21 36 37.9	0.0
	comp=Z,7.6nm,0.8s,baz=300,slow=2.2,SNR=60						
MKAR				PKPab	PKPab	21 36 45.7	+0.7
	comp=Z,1.4nm,0.5s,baz=277,slow=3.0,SNR=12						
MKAR				pPKPbc	pPKPbc	21 37 23.6	-0.2
	comp=Z,1.3nm,0.8s,baz=306,slow=2.9,SNR=2.5						
CMAR	Chiang Mai Arr	161.26	128	PKP	PKPdf	21 36 45.9	-0.3
	comp=Z,0.4nm,0.3s,baz=258,slow=3.5,SNR=4.1						
CMAR				PKPab	PKPab	21 37 30.8	-0.1
	comp=Z,0.5nm,0.4s,baz=228,slow=5.3,SNR=4.2						
SONM	Songino Array	162.12	18	PKP	PKPdf	21 36 47.4	+1.1
	comp=Z,0.3nm,0.7s,baz=250,slow=1.0,SNR=2.0						
SONM				PKPab	PKPab	21 37 34.2	+0.3
	comp=Z,0.9nm,0.9s,baz=357,slow=1.8,SNR=6.0						
GTA	Gaotai	165.46	51	ePKP	PKPdf	21 36 51.0	+1.3
GTA				pPKP	pPKPdf	21 37 33.8	-2.8
GTA				sPKP		21 37 50.0	

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*IDC **13** 21:17:21.0±2.2, 14°.97S×170°.57E, h633^{km}±27^{km}, mb2.9/7, mb1 3.2/8, mb1mx2.9/51, mbtmp3.9/8, Error ellipse: s-maj=37.3km s-min=21.5km az=145.0*

ISC 13 21:17:18.6±0.9**, 14°.8S**±0°.2×**170°.7E**±0°.2**, h600**^{km}**, n9, σ1^{s}67**/10**, mb3.5**/7**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.29	209	P	P	21 19 23.0	+2.3
	1.1nm,0.3s,baz=212,slow=15,SNR=11						
STKA	Stephens Creek	31.53	232	P	P	21 22 52.9	-0.5
	4.3nm,0.4s,baz=56,slow=8.6,SNR=16						
WRA	Warramunga Arr	35.03	256	P	P	21 23 21.5	-1.5
	0.2nm,0.3s,baz=80,slow=6.8,SNR=4.6						
ASAR	Alice Springs	35.76	250	P	P	21 23 28.1	-0.8
	1.3nm,0.3s,baz=76,slow=9.5,SNR=34						
ASAR				ScP	S	21 28 26.6	+1.6
	0.6nm,0.8s,baz=80,slow=4.4,SNR=4.7						
VNDA	Vanda	62.90	182	P	P	21 26 44.6	-2.2
	0.6nm,0.8s,baz=78,slow=15,SNR=1.6						
NVAR	Mina Array Bea	84.82	48	P	P	21 28 52.8	+1.5
	0.8nm,0.6s,baz=227,slow=7.4,SNR=6.0						
ILAR	Eielson Array	85.60	17	P	P	21 28 53.6	-0.6
	0.6nm,0.9s,baz=220,slow=5.2,SNR=2.7						
YKA	Yellowknife Ar	96.10	27	P	P	21 29 43.3	+0.7
	0.2nm,0.4s,baz=159,slow=23,SNR=2.9						
ARCES	ARCESS Array B	121.13	346	PKP	PKPdf	21 35 02.7	-0.8
	2.0nm,0.9s,baz=66,slow=2.3,SNR=6.0						

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*IDC **13** 21:17:14.8±0.5, 27°.14N×143°.59E, h0^{km}, mb4.1/24, mb1 4.3/28, mb1mx4.2/53, mbtmp4.1/28, ML3.2/4, Error ellipse: s-maj=15.2km s-min=12.7km az=96.0*

*NEIC **13** 21:17:16.3±0.9, 27°.10N±0°.09×143°.55E±0°.04, h10^{km}±1^{km}, mb4.6/29, Error ellipse: s-maj=14.7km s-min=5.4km az=188.0*

*JMA **13** 21:17:17.5, 27°.34N×143°.56E, h41^{km}, M4.4*

ISC 13 21:17:20.4±0.5**, 27°.24N**±0°.06×**143°.46E**±0°.06**, h35**^{km}**, n77, σ1^{s}38**/80**, mb4.3**/36**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.15	263	P	Pn	21 17 39.1	-0.9
CBIJ				eS	Sn	21 17 54.9	+0.4
JCJ	Chichijima	1.15	263	Pn	Pn	21 17 39.2	-0.8
	333nm,0.3s,baz=290,slow=23,SNR=140						
JCJ				Sn	Sn	21 17 53.6	-0.9
	290nm,0.3s,baz=296,slow=23,SNR=6.6						
JHH2	Haha-jima-NKT2	1.30	243	P	Pn	21 17 41.5	-0.6
JHJ	Hachijo jima 2	6.67	332	Pn	Pn	21 18 54.2	-1.7
	0.6nm,0.3s,baz=152,slow=7.2,SNR=1.5						
JHJ				Sn	Sn	21 20 03.8	-6.8
	12nm,0.3s,baz=83,slow=20,SNR=1.6						
JOD2	Odawara 2	8.83	336	P	Pn	21 19 23.8	-1.8
JHU	Hanno	9.30	338	iS	Sn	21 21 09.6	-5.7
JRY	Ryogami san	9.57	337	P	Pn	21 19 34.8	-1.0
JRY				S	Sn	21 21 17.5	-4.6
JAG	Ashikaga	9.77	341	P	Pn	21 19 36.5	-1.9
JAG				S	Sn	21 21 20.8	-6.1
JGF	Kuroka	9.83	329	Pn	Pn	21 19 41.0	+1.7
MJAR	Matsushiro Arr	10.29	336	Pn	Pn	21 19 44.1	-1.5
	0.3nm,0.3s,baz=150,slow=11,SNR=20						
MJAR	Matsushiro Arr	10.29	336		Pn	21 19 45.0	-0.6
MAJO	Matsushiro	10.29	336		Pn	21 19 45.0	-0.6
KSRS	Korea Array	16.60	312	Pn	Pn	21 21 12.5	+2.2
	0.3nm,0.3s,baz=121,slow=12,SNR=20						
USRK	Ussuriysk Ar.	19.29	334	P	P	21 21 43.3	+1.2
	baz=158,slow=12,SNR=7.0						
USRK	Ussuriysk Ar.	19.29	334	P	P	21 21 43.1	+1.0
YHNB	Yeheng	20.02	268	P	P	21 21 49.5	-0.9
SSLB	Suanglung	20.60	265	P	P	21 21 56.7	+0.1
SSLB				IAmb	IAmb	21 22 01.1	
	comp=Z,43nm,1.0s						
KLR	Kul'dur	23.75	341	P	P	21 22 30.2	+0.9
	comp=Z,1.4nm,0.5s,baz=122,slow=22,SNR=5.8						
HIA	Hailar	28.60	327	P	P	21 23 12.4	-0.9
HIA				IAmb	IAmb	21 23 20.7	
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	35.01	316	P	P	21 24 10.3	+0.7
SONM	Songino Array	35.41	315	P	P	21 24 13.6	+0.6
	comp=Z,0.8nm,0.6s,baz=128,slow=7.7,SNR=6.9						
SONM	Songino Array	35.41	315	P	P	21 24 14.0	+0.9
SEY	Seymchan	36.17	7	P	P	21 24 20.1	+0.9
	comp=Z,2.0nm,1.0s,baz=202,slow=6.7,SNR=4.3						
CMAR	Chiang Mai Arr	41.77	268	P	P	21 25 06.7	0.0
	comp=Z,1.1nm,0.5s,baz=63,slow=6.1,SNR=7.8						
CMAR	Chiang Mai Arr	41.77	268	P	P	21 25 06.1	-0.6
TIXI	Tiksi	45.19	354	P	P	21 25 34.0	+0.5
LSA	Lhasa	45.73	286	P	P	21 25 39.7	+0.7
CTA	Charters Tower	47.12	176	P	P	21 25 48.1	-1.2
	comp=Z,1.5nm,0.2s,baz=66,slow=16,SNR=3.1						
WB0	Warramunga Arr	47.55	192	P	P	21 25 51.2	-1.4
WB0				IAmb	IAmb	21 25 54.5	
	comp=Z,6.9nm,1.1s						
WRAB	Tennant Creek	47.72	192	P	P	21 25 52.5	-1.4
WRA	Warramunga Arr	47.73	192	P	P	21 25 53.0	-1.0
	comp=Z,4.9nm,0.6s,baz=12,slow=8.6,SNR=38						
WRA	Warramunga Arr	47.73	192	P	P	21 25 51.8	-2.2
FITZ	Fitzroy Crossi	48.27	203	P	P	21 25 58.0	-0.2
	comp=Z,2.6nm,0.8s,baz=168,slow=20,SNR=2.7						
FITZ	Fitzroy Crossi	48.27	203	P	P	21 25 56.9	-1.3
FITZ				IAmb	IAmb	21 26 00.5	
	comp=Z,3.8nm,0.9s						
SANVU	Saraoutou	48.28	149	P	P	21 25 56.8	-1.5
ZALV	Zalesovo Beam	50.13	319	P	P	21 26 13.8	+1.7
	comp=Z,0.5nm,0.4s,baz=97,slow=8.2,SNR=3.7						
ZALV	Zalesovo Beam	50.13	319	P	P	21 26 10.1	-1.9
GSI	Gunungsitoli	50.96	248	P	P	21 26 18.3	-0.6
GSI				IAmb	IAmb	21 26 23.8	
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	51.26	309	P	P	21 26 21.5	+0.7
MKAR	Makanchi Array	51.26	309	P	P	21 26 21.2	+0.4
	comp=Z,0.4nm,0.6s,baz=87,slow=10,SNR=12						
ASAR	Alice Springs	51.44	191	P	P	21 26 20.9	-1.4
	comp=Z,0.7nm,0.6s,baz=6.8,slow=5.5,SNR=14						
ASAR	Alice Springs	51.44	191	P	P	21 26 20.6	-1.7
KDAK	Kodiak Island	53.57	37	P	P	21 26 36.7	-1.0
	comp=Z,31nm,1.2s,baz=169,slow=3.4,SNR=2.6						
KURK	Kurchatov	53.70	314	P	P	21 26 39.5	+0.8
KURK				IAmb	IAmb	21 26 42.4	
	comp=Z,4.2nm,0.8s						
DZM	Mont Dzumac	53.83	153	P	P	21 26 38.2	-1.8
	comp=Z,7.9nm,0.8s,baz=246,slow=23,SNR=4.0						
DZM	Mont Dzumac	53.83	153	P	P	21 26 38.1	-1.9
KNK	Knik Glacier	56.01	33	P	P	21 26 55.4	+0.1
COLD	Coldfoot	56.05	25	P	P	21 26 56.6	+1.2
COLD				IAmb	IAmb	21 26 58.6	
	comp=Z,2.8nm,0.8s						
SCM	Sheep Creek Mo	56.58	32	P	P	21 26 59.1	-0.3
ILAR	Eielson Array	57.04	29	P	P	21 27 01.9	-0.7
	comp=Z,1.7nm,0.9s,baz=260,slow=5.9,SNR=13						
ILAR	Eielson Array	57.04	29	P	P	21 27 02.2	-0.4
AAK	Ala-Archa	57.11	305	P	P	21 27 04.3	+0.7
BMAR	Burnt Mountain	58.23	26	P	P	21 27 12.2	+1.2
NIL	Nilore	59.83	295	P	P	21 27 23.8	+1.2
NIL				IAmb	IAmb	21 27 40.7	
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	59.92	306	P	P	21 27 23.8	+0.7
KK31				IAmb	IAmb	21 27 26.9	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	59.92	306	P	P	21 27 23.6	+0.5
KKAR				IAmb	IAmb	21 27 26.9	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	59.92	306	P	P	21 27 23.7	+0.6
INK	Inuvik	62.42	25	P	P	21 27 40.0	+0.5
	comp=Z,1.6nm,0.8s,baz=229,slow=4.7,SNR=5.1						
INK	Inuvik	62.42	25	P	P	21 27 40.1	+0.6
INK				IAmb	IAmb	21 27 42.3	
	comp=Z,5.7nm,1.3s						
ARU	Arti	65.01	322	P	P	21 27 59.0	+2.3
ARU				IAmb	IAmb	21 28 07.7	
	comp=Z,3.6nm,0.9s						
C36M	Paulatuk	65.67	23	P	P	21 28 01.0	+0.3
C36M				IAmb	IAmb	21 28 01.8	
	comp=Z,4.8nm,0.8s						
ABKAR	Akbulak array	65.81	314	P	P	21 28 02.8	+0.7
ABKAR	Akbulak array	65.81	314	P	P	21 28 02.4	+0.4
ABKAR				IAmb	IAmb	21 28 06.8	
	comp=Z,1.7nm,0.7s						
EUNU	Eureka	69.60	8	P	P	21 28 26.3	+0.8
YKA	Yellowknife Ar	71.47	29	P	P	21 28 37.1	0.0
	comp=Z,1.0nm,0.7s,baz=295,slow=5.1,SNR=15						
ARCES	ARCESS Array B	73.78	341	P	P	21 28 51.8	+1.0
	comp=Z,6.1nm,1.1s,baz=55,slow=10.0,SNR=1.8						
YBH	Yreka Blue Hor	75.08	51	P	P	21 28 58.9	0.0
	comp=Z,1.8nm,0.7s,baz=156,slow=18,SNR=4.8						
NEW	Newport	76.03	43	P	P	21 29 04.0	-0.2
	comp=Z,2.7nm,0.8s,baz=285,slow=3.6,SNR=3.8						
FINES	FINESS Array B	78.32	334	P	P	21 29 16.4	-0.2
	comp=Z,0.7nm,0.6s,baz=74,slow=7.4,SNR=4.2						
KBZ	Khabaz	78.74	313	P	P	21 29 21.0	+1.7
	comp=Z,1.6nm,0.8s,baz=84,slow=4.9,SNR=5.0						
AKASG	Malin Array Be	83.17	324	P	P	21 29 42.6	-0.2
	comp=Z,0.2nm,0.3s,baz=45,slow=4.7,SNR=4.3						
PDAR	Pinedale Array	83.31	45	P	P	21 29 44.3	+0.3
	comp=Z,0.7nm,0.8s,baz=310,slow=4.2,SNR=2.8						
PDAR	Pinedale Array	83.31	45	P	P	21 29 43.7	-0.4
FRB	Frobisher Bay	85.87	14	P	P	21 29 55.6	-0.6
	baz=343,slow=6.2						
RAYN	Ar Rayn	86.13	294	P	P	21 29 59.8	+1.4
RAYN				IAmb	IAmb	21 30 03.2	
	comp=Z,4.8nm,0.9s						
BRTR	Keskin Array B	86.74	313	P	P	21 30 03.0	+1.8
	comp=Z,0.5nm,0.8s,baz=130,slow=4.5,SNR=2.9						
TXAR	Lajitas Array	94.60	54	P	P	21 30 38.9	+0.8
	comp=Z,1.1nm,0.9s,baz=296,slow=0.6,SNR=5.2						

MAN 13 21:18:10.2, 5°.75N×126°.34E, h47^{km}, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.72	300	eP	Pn	21 18 24.5	+0.4
DDMP				eS	Sn	21 18 37.1	+3.0
MATI	Mati	1.20	356	eP	Pn	21 18 32.1	+1.6
KCP	Kidapawan	1.77	315	⇑eP	Pn	21 18 38.5	+0.1
KCP				eS	Sn	21 19 00.4	+0.7
SKMP	Bagumbayan, Su	1.95	293	eP	Pn	21 18 38.8	-2.0
SKMP				eS	Sn	21 19 00.9	-3.2

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*BJI **13** 21:20:22.1±0.0, 27°.06N×143°.51E, h11^{km}, mB5.0/23, mb4.3/33, Ms4.2/3, Ms7 3.9/3*

*IDC **13** 21:20:22.6±0.5, 27°.15N×143°.56E, h0^{km}, mb4.3/24, mb1 4.4/28, mb1mx4.3/50, mbtmp4.3/28, ML3.5/4, MS3.4/10, Ms1 3.5/10, ms1mx3.2/37, Error ellipse: s-maj=15.3km s-min=11.8km az=109.0*

*NEIC **13** 21:20:25.1±1.1, 27°.22N±0°.09×143°.44E±0°.07, h10^{km}±1^{km}, mb4.7/64, Error ellipse: s-maj=15.0km s-min=10.2km az=161.0*

*NIED **13** 21:20:26.8, 27°.37N×143°.46E, h50^{km}, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.32; $M_{\theta\theta}$0.79; $M_{\phi\phi}$1.53; $M_{r\theta}$-0.75; $M_{\theta\phi}$-1.13; $M_{\phi r}$2.42; Fault plane solution: $M_0$3.44000×10^{15} NP1: ϕ_s158.00000°, δ69.00000°, λ-80.00000°. NP2: ϕ_s312.00000°, δ23.00000°, λ-114.00000°.*

*JMA **13** 21:20:26.7±0.1, 27°.37N×143°.46E, h50^{km}, M4.5*

ISC 13 21:20:28.8±0.4**, 27°.32N**±0°.05×**143°.43E**±0°.06**, h35**^{km}**, n128, σ1^{s}38**/132**, mb4.6**/54**, MS3.5**/8**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.13	259	P	Pn	21 20 47.2	-0.9
CBIJ				eS	Sn	21 21 01.9	-0.5
JCJ	Chichijima	1.13	259	Pn	Pn	21 20 47.2	-0.9
	274nm,0.3s,baz=16,slow=5.8,SNR=24						
JCJ				Sn	Sn	21 21 01.4	-0.9
	417nm,0.3s,baz=287,slow=23,SNR=16						
JCJ	Chichijima	1.13	259	Pn	Pn	21 20 47.2	-0.9
JCJ				Sn	Sn	21 21 02.1	-0.3
JHH2	Haha-jima-NKT2	1.31	239	P	Pn	21 20 49.8	-0.8
JHJ	Hachijo jima 2	6.59	332	Pn	Pn	21 22 03.1	0.0
	3.1nm,0.3s,baz=258,slow=22,SNR=1.6						
JHJ				Sn	Sn	21 23 13.0	-4.0
	2.8nm,0.3s,baz=56,slow=18,SNR=1.8						
JOD2	Odawara 2	8.75	336	P	Pn	21 22 32.5	-0.3
JRY	Ryogami san	9.49	337	P	Pn	21 22 42.5	-0.5
JHO	Hitachi	9.58	346	P	Pn	21 22 42.0	-2.2
JHO				S	Sn	21 24 23.8	-6.8
JAG	Ashikaga	9.69	341	P	Pn	21 22 44.7	-1.0
JAG				S	Sn	21 24 28.8	-4.4
MJAR	Matsushiro Arr	10.21	336	LR	LR	21 26 49.5	
	comp=Z,62nm,21.3s,baz=140,slow=37						
MAT	Matsushiro	10.21	336	P	Pn	21 22 52.5	-0.3
MAT				S	Sn	21 24 42.5	-3.6
JMM	Marumori	10.75	349		Pn	21 22 58.4	-1.8
JMK	Ichinoseki	11.75	352	P	Pn	21 23 11.0	-2.9
JNU	Nakatsue	12.29	301	LR	LR	21 28 14.4	
	comp=Z,287nm,18.8s,baz=178,slow=38						
KSRS	Korea Array	16.52	312	Pn	Pn	21 24 19.1	+1.3
	0.3nm,0.3s,baz=118,slow=11,SNR=11						
KSRS				LR	LR	21 31 07.2	
	comp=Z,118nm,18.3s,baz=124,slow=38						
ASAJ	Asahikawa	16.78	358	Pn	Pn	21 24 20.0	-0.9
	0.6nm,0.3s,baz=282,slow=27,SNR=1.6						
JKA	Kamikawa-asahi	16.78	358		Pn	21 24 21.6	+0.7
USRK	Ussuriysk Ar.	19.20	334	P	Pn	21 24 51.5	+0.9
	baz=165,slow=11,SNR=5.4						
USRK	Ussuriysk Ar.	19.20	334	P	P	21 24 49.5	-0.1
YHNB	Yeheng	20.00	267	P	P	21 24 58.0	-0.5
YHNB				IAmb	IAmb	21 25 02.2	
	comp=Z,52nm,1.2s						
YULB	Yu-li	20.37	264		P	21 25 02.9	+0.4
YULB				IAmb	IAmb	21 25 05.8	
	comp=Z,43nm,1.2s						
SSLB	Suanglung	20.57	265	P	P	21 25 04.5	-0.2
NJ2	Nanjing	21.85	288	eP	P	21 25 28.1	+10
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KLR	Kul'dur	23.67	341	P	P	21 25 38.5	+1.5
	comp=Z,3.7nm,0.7s,baz=162,slow=12,SNR=8.1						
TGY	Tagaytay City	24.75	242	LR	LR	21 36 27.4	
	comp=Z,141nm,18.1s,baz=322,slow=39						
DAV	Davao City (W)	26.32	223	LR	LR	21 34 16.6	
	comp=Z,109nm,21.9s,baz=326,slow=32						
PETK	Petropavlovsk-	27.87	19	LR	LR	21 36 48.1	
	comp=Z,47nm,21.9s,baz=188,slow=35						
HIA	Hailar	28.52	327	P	P	21 26 21.9	+1.0
HHC	Hu-ho-hao-te	29.47	305	eP	P	21 26 32.0	+2.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,320nm,6.6s						
SIJI	Sorong	30.37	205	LR	LR	21 36 09.9	
	comp=Z,92nm,20.9s,baz=28,slow=31						
ULN	Ulaanbaatar	34.93	316	P	P	21 27 18.2	+0.9
SONM	Songino Array	35.33	315	P	P	21 27 21.4	+0.6
	comp=Z,0.9nm,0.6s,baz=126,slow=8.4,SNR=6.9						
SONM				PcP	PcP	21 29 51.3	+0.7
	comp=Z,0.4nm,0.5s,baz=116,slow=5.0,SNR=3.2						
SONM	Songino Array	35.33	315	P	P	21 27 22.0	+1.2
SEY	Seymchan	36.10	7	P	P	21 27 27.0	0.0
	comp=Z,2.5nm,0.8s,baz=180,slow=6.4,SNR=6.3						
SLVN	Son La	36.40	269	P	P	21 27 30.0	-0.1
KMI	Kunming	36.46	276	P	P	21 27 30.0	-0.8
KMI				IAmb	IAmb	21 27 34.0	
	comp=Z,8.6nm,0.5s						
GTA	Gaotai	38.03	300	eP	P	21 27 44.8	+0.9
GTA				pP	pP	21 27 52.3	+1.0
GTA				sP	sP	21 27 55.6	+1.2
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,7.8s						
GTA				LR	LR		
	comp=Z,150nm,18.5s						
GTA				LR	LR		
	comp=Z,200nm,16.7s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
TLY	Talaya	38.47	320	P	P	21 27 46.8	-0.5
CHTO	Chiang Mai	41.62	268	P	P	21 28 13.2	-0.5
CMAR	Chiang Mai Arr	41.74	267	P	P	21 28 14.6	-0.2
	comp=Z,2.7nm,0.9s,baz=70,slow=6.5,SNR=10						
CMAR				LR	LR	21 43 58.9	
	comp=Z,58nm,20.8s,baz=167,slow=34						
BATI	Baumata	41.94	210	P	P	21 28 14.4	-1.9
	comp=Z,11nm,0.4s,baz=271,slow=20,SNR=2.5						
TIXI	Tiksi	45.11	354	P	P	21 28 42.1	+0.9
WMQ	Urumqi	47.35	306	eP	P	21 29 02.0	+2.7
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.9s						
WMQ	Urumqi	47.35	306	P	P	21 28 59.4	+0.1
WMQ				IAmb	IAmb	21 29 08.3	
	comp=Z,3.7nm,0.5s						
WB0	Warramunga Arr	47.62	192	P	P	21 28 59.8	-1.7
WB0				IAmb	IAmb	21 29 00.7	
	comp=Z,8.5nm,1.1s						
WRAB	Tennant Creek	47.79	192	P	P	21 29 01.1	-1.7
WRAB				IAmb	IAmb	21 29 18.7	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	47.80	192	P	P	21 29 01.0	-1.9
	comp=Z,2.4nm,0.4s,baz=12,slow=8.6,SNR=16						
FITZ	Fitzroy Crossi	48.33	203	P	P	21 29 05.1	-1.8
	comp=Z,1.7nm,0.6s,baz=122,slow=19,SNR=1.9						
FITZ	Fitzroy Crossi	48.33	203	P	P	21 29 06.3	-0.7
FITZ				IAmb	IAmb	21 29 23.1	
	comp=Z,8.8nm,0.9s						
SANVU	Saraoutou	48.37	149	P	P	21 29 05.8	-1.5
LEM	Lembang	48.50	231	P	P	21 29 07.7	-0.9
	comp=Z,20nm,0.8s,baz=121,slow=18,SNR=3.8						
PSI	Prapat	49.01	248	P	P	21 29 12.0	-0.6
	comp=Z,3.3nm,0.4s,baz=360,slow=22,SNR=11						
ANM	Nome	49.27	26	P	P	21 29 14.5	+0.8
ANM				IAmb	IAmb	21 29 17.7	
	comp=Z,6.5nm,1.0s						
ZALV	Zalesovo Beam	50.05	319	P	P	21 29 20.1	+0.3
	comp=Z,0.9nm,0.5s,baz=94,slow=6.7,SNR=5.2						
ZALV				PcP	PcP	21 30 37.4	-1.8
	comp=Z,1.4nm,0.6s,baz=112,slow=6.4,SNR=4.2						
ZALV	Zalesovo Beam	50.05	319	P	P	21 29 20.6	+0.8
GSI	Gunungsitoli	50.96	247	P	P	21 29 26.0	-1.2
GSI				IAmb	IAmb	21 29 30.9	
	comp=Z,8.5nm,0.7s						
MK31	Makanchi Array	51.19	309	P	P	21 29 29.6	+1.0
MKAR	Makanchi Array	51.19	309	P	P	21 29 29.9	+1.3
	comp=Z,1.0nm,0.7s,baz=85,slow=10,SNR=13						
MKAR				PcP	PcP	21 30 43.1	-0.6
	comp=Z,0.9nm,0.9s,baz=89,slow=5.8,SNR=2.6						
MKAR	Makanchi Array	51.19	309	P	P	21 29 29.1	+0.5
AS31	Alice Springs	51.51	191	P	P	21 29 30.4	-0.7
ASAR	Alice Springs	51.51	191	P	P	21 29 28.4	-2.8
	comp=Z,0.5nm,0.5s,baz=9.1,slow=7.0,SNR=6.1						
ASAR				PcP	PcP	21 30 43.0	-2.0
	comp=Z,1.0nm,0.9s,baz=22,slow=4.9,SNR=5.1						
ASAR	Alice Springs	51.51	191	P	P	21 29 29.7	-1.4
RDOG	Red Dog Mine	51.60	23	P	P	21 29 32.2	+0.9
RDOG				IAmb	IAmb	21 29 33.5	
	comp=Z,8.7nm,0.9s						
TTA	Tatalina	52.70	30	P	P	21 29 40.0	+0.4
KDAK	Kodiak Island	53.52	37	P	P	21 29 45.1	-0.5
	comp=Z,8.6nm,0.7s,baz=147,slow=22,SNR=1.9						
KURK	Kurchatov	53.62	314	P	P	21 29 47.1	+0.6
KURK				IAmb	IAmb	21 29 48.9	
	comp=Z,12nm,1.1s						
DZM	Mont Dzumac	53.91	153	P	P	21 29 47.7	-1.3
	comp=Z,4.7nm,0.6s,baz=184,slow=19,SNR=2.7						
DZM	Mont Dzumac	53.91	153	P	P	21 29 48.6	-0.3
IMAR	Indian Mountai	54.35	27	P	P	21 29 52.2	+0.6
PPLA	Purkeypile	54.41	31	P	P	21 29 52.4	+0.2
PPLA				IAmb	IAmb	21 30 00.5	
	comp=Z,14nm,1.3s						
KSH	Kashi	56.42	301	P	P	21 30 11.8	+4.7
KSH				pP	pP	21 30 16.3	+1.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MDM	Murphy Dome	56.44	28	P	P	21 30 07.3	+0.6
TOLK	Toolik Lake Re	56.49	24	P	P	21 30 08.4	+1.4
TOLK				IAmb	IAmb	21 30 09.4	
	comp=Z,13nm,1.2s						
IL31		56.99	29	P	P	21 30 10.0	-0.5
IL31				IAmb	IAmb	21 30 11.0	
	comp=Z,9.3nm,1.1s						
ILAR	Eielson Array	56.99	29	P	P	21 30 10.0	-0.6
	comp=Z,4.3nm,0.9s,baz=260,slow=5.7,SNR=25						
ILAR				PcP	PcP	21 31 03.8	-1.6
	comp=Z,1.4nm,0.8s,baz=271,slow=4.2,SNR=5.8						
ILAR	Eielson Array	56.99	29	P	P	21 30 09.9	-0.6
BMAR	Burnt Mountain	58.18	26	P	P	21 30 18.9	-0.1
BRVK	Borovoye	58.69	317	P	P	21 30 23.3	+0.6
EGAK	Eagle	59.44	29	P	P	21 30 27.9	+0.2
NIL	Nilore	59.77	295	P	P	21 30 32.3	+1.8
NIL				IAmb	IAmb	21 30 34.0	
	comp=Z,4.0nm,0.6s						
KKAR	Karatay Array	59.85	306	P	P	21 30 31.9	+1.0
KKAR				IAmb	IAmb	21 30 36.2	
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	59.85	306	P	P	21 30 31.9	+1.0
HYT	Haines Junctio	61.28	33	P	P	21 30 41.2	+0.7
INK	Inuvik	62.37	25	P	P	21 30 47.1	-0.3
	comp=Z,3.6nm,0.8s,baz=263,slow=4.8,SNR=7.3						
INK	Inuvik	62.37	25	P	P	21 30 48.0	+0.5
INK				IAmb	IAmb	21 30 49.2	
	comp=Z,8.8nm,1.2s						
ARU	Arti	64.93	322	P	P	21 31 05.6	+1.0
C36M	Paulatuk	65.61	23		P	21 31 08.5	-0.2
ABKAR	Akbulak array	65.73	314	P	P	21 31 10.3	+0.3
ABKAR				IAmb	IAmb	21 31 14.8	
	comp=Z,3.3nm,0.8s						
HRA	Herat	68.32	298	P	P	21 31 27.9	+1.0
EUNU	Eureka	69.53	8	P	P	21 31 34.3	+0.9
YKA	Yellowknife Ar	71.42	29	P	P	21 31 45.0	-0.2
	comp=Z,2.8nm,0.8s,baz=295,slow=5.1,SNR=23						
ARCES	ARCESS Array B	73.69	341	P	P	21 32 00.2	+1.6
	comp=Z,9.9nm,1.2s,baz=291,slow=3.8,SNR=2.0						
TULEG	Thule	74.49	7	P	P	21 32 03.8	+0.7
PINE	Pine Mountain	75.43	48	P	P	21 32 10.6	+1.2
PINE				IAmb	IAmb	21 32 11.6	
	comp=Z,8.4nm,0.9s						
K05A	Summer Lake	75.89	49	P	P	21 32 12.9	+0.9
NEW	Newport	76.00	43	P	P	21 32 13.1	+0.7
NEW				IAmb	IAmb	21 32 13.3	
	comp=Z,5.0nm,0.9s						
G08A	Pilot Rock	76.11	46	P	P	21 32 13.3	+0.1
E09A	Wood Farm, Sta	76.11	45	P	P	21 32 13.5	+0.5
E09A				IAmb	IAmb	21 32 14.7	
	comp=Z,6.3nm,0.9s						

ORV	**Oroville**	**76.78**	**52**	P	**P**	**21 32 17.0**	**+0.1**
ORV				IAmb	IAmb	21 32 18.1	
	comp=Z,8.8nm,1.2s						
BMO	**Blue Mountains**	**77.35**	**46**	P	**P**	**21 32 20.6**	**+0.5**
BMO				IAmb	IAmb	21 32 21.8	
	comp=Z,7.2nm,1.1s						
BEKR	**Beckworth**	**77.45**	**52**	P	**P**	**21 32 21.1**	**+0.2**
BEKR				IAmb	IAmb	21 32 22.1	
	comp=Z,6.5nm,0.9s						
JTMT	**Jette**	**77.93**	**42**	P	**P**	**21 32 24.0**	**+0.7**
JTMT				IAmb	IAmb	21 32 25.1	
	comp=Z,7.8nm,0.9s						
CMB	**Columbia Colle**	**78.21**	**53**	P	**P**	**21 32 24.6**	**-0.4**
CMB				IAmb	IAmb	21 32 26.4	
	comp=Z,8.8nm,1.1s						
FIA1	**FINESS Array S**	**78.23**	**334**	P	**P**	**21 32 25.4**	**+0.8**
FINES	**FINESS Array B**	**78.24**	**334**	P	**P**	**21 32 25.2**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=64,slow=4.4,SNR=6.4						
KBZ	**Khabaz**	**78.67**	**313**	P	**P**	**21 32 28.3**	**+1.0**
	comp=Z,4.6nm,0.8s,baz=105,slow=1.8,SNR=11						
KIV	**Kislovodsk**	**78.70**	**314**	P	**P**	**21 32 28.7**	**+1.1**
KIV				IAmb	IAmb	21 32 37.7	
	comp=Z,6.3nm,1.2s						
MFID	**Camas Ranch**	**78.94**	**47**	P	**P**	**21 32 29.2**	**+0.1**
MFID				IAmb	IAmb	21 32 30.7	
	comp=Z,11nm,1.2s						
LKWY	**Lake**	**81.83**	**44**	P	**P**	**21 32 46.2**	**+1.5**
LKWY				IAmb	IAmb	21 32 48.3	
	comp=Z,8.6nm,1.2s						
RLMT	**Red Lodge**	**82.24**	**43**		**P**	**21 32 47.9**	**+1.1**
AKASG	**Malin Array Be**	**83.09**	**324**	P	**P**	**21 32 49.9**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=48,slow=5.0,SNR=9.0						
AKASG	**Malin Array Be**	**83.09**	**324**	P	**P**	**21 32 50.6**	**-0.2**
AKBB	**Malin Array Si**	**83.09**	**324**	P	**P**	**21 32 50.9**	**+0.1**
AKBB				IAmb	IAmb	21 32 51.7	
	comp=Z,4.2nm,0.8s						
PD31	**Pinedale Array**	**83.27**	**45**	P	**P**	**21 32 52.2**	**0.0**
PD31				IAmb	IAmb	21 32 53.1	
	comp=Z,6.5nm,1.5s						
PDAR	**Pinedale Array**	**83.27**	**45**	P	**P**	**21 32 52.1**	**0.0**
	comp=Z,2.8nm,1.1s,baz=298,slow=3.2,SNR=7.2						
PDAR				LR	LR	22 08 07.2	
	comp=Z,54nm,20.0s,baz=320,slow=34						
SRU	**San Rafael Swe**	**84.52**	**49**	P	**P**	**21 32 59.4**	**+0.8**
SFJD	**Kangerlussuaq**	**85.38**	**5**	P	**P**	**21 33 03.4**	**+1.3**
PV19	**Morning Glory**	**85.97**	**49**	P	**P**	**21 33 06.0**	**+0.1**
RAYN	**Ar Rayn**	**86.07**	**294**	P	**P**	**21 33 06.9**	**+0.5**
ULM	**Lac du Bonnet**	**86.65**	**34**	LR	LR	22 11 43.4	
	comp=Z,22nm,20.3s,baz=314,slow=36						
BRTR	**Keskin Array B**	**86.66**	**313**	P	**P**	**21 33 09.7**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=120,slow=2.6,SNR=5.6						
BRTR	**Keskin Array B**	**86.66**	**313**	P	**P**	**21 33 09.5**	**+0.3**
VYHS	**Vyhne**	**89.72**	**327**	*e*P	**P**	**21 33 24.0**	**+0.6**
MNTX	**Cornudas Mount**	**92.03**	**53**	P	**P**	**21 33 34.5**	**+0.1**
TXAR	**Lajitas Array**	**94.58**	**54**	P	**P**	**21 33 46.7**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=324,slow=2.3,SNR=9.4						
TXAR	**Lajitas Array**	**94.58**	**54**	P	**P**	**21 33 46.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**125.26**	**312**	PKP	**PKPdf**	**21 39 26.2**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=23,slow=0.8,SNR=1.9						
PLCA	**Paso Flores**	**149.02**	**124**	PKPbc	**PKPbc**	**21 40 12.6**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=263,slow=4.5,SNR=5.2						

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*SOME **13** 21:40:39.3, 40°.90N×74°.32E, h5^{km}*
*KRNET **13** 21:40:39.5±0.1, 40°.90N×74°.17E, h16^{km}, mb3.0*
*NNC **13** 21:40:40.5±1.1, 40°.86N×74°.28E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=7.8km s-min=5.7km az=169.0*
ISC 13 21:40:38.7±1.1, **40°.86N**±0°.03×**74°.23E**±0°.02, **h14**^{km}±10^{km}, **n60,** σ1^{s}.**78**/98, **33C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**1.00**	**4**	⇓*i*P	**Pb**	**21 40 58.1**	**+0.2**
	baz=7.0						
ARLS				⇓*i*S	**Sn**	**21 41 11.6**	**-0.8**
	baz=7.0						
SFK	**Sufi-Kurgan**	**1.01**	**213**	⇑*i*P	**Pb**	**21 40 58.4**	**+0.3**
	baz=10.0						
SFK				⇑*i*S	**Sg**	**21 41 13.1**	**+1.6**
	baz=10.0						
ARSB	**Arslanbob**	**1.05**	**297**	⇑*i*P	**Pb**	**21 40 58.4**	**-0.2**
	baz=95						
ARSB				⇑*i*S	**Sn**	**21 41 12.7**	**-0.8**
	baz=95						
OHH	**Osh**	**1.15**	**253**	⇑*i*P	**Pn**	**21 41 00.8**	**+0.5**
	baz=51						
OHH				⇑*i*S	**Sg**	**21 41 16.5**	**+0.8**
	baz=51						
AML	**Almayashu**	**1.33**	**343**	⇓*i*P	**Pb**	**21 41 03.7**	**+0.1**
	baz=44						
AML				⇓*i*S	**Sg**	**21 41 20.6**	**-1.1**
	baz=44						
AML	**Almayashu**	**1.33**	**343**	P	**Pg**	**21 41 04.8**	**+0.4**
	SNR=62						
UCH	**Uchtor**	**1.38**	**9**	⇑*i*P	**Pg**	**21 41 05.5**	**+0.1**
	baz=11						
UCH				⇑*i*S	**Sg**	**21 41 24.4**	**+1.0**
	baz=11						
UCH	**Uchtor**	**1.38**	**9**	P	**Pg**	**21 41 05.7**	**+0.3**
	SNR=24						
AAK	**Ala-Archa**	**1.79**	**6**	⇑*i*P	**Pg**	**21 41 12.4**	**-0.6**
	baz=8.0						
AAK				⇑*i*S	**Sg**	**21 41 36.1**	**-0.1**
	baz=8.0						
AAK	**Ala-Archa**	**1.79**	**6**	P	**Pg**	**21 41 13.2**	**+0.2**
	SNR=49						
AAK	**Ala-Archa**	**1.79**	**6**	⇓P	**Pg**	**21 41 13.1**	**+0.1**
	23nm,0.5s						
AAK				⇑S	**Sg**	**21 41 36.9**	**+0.7**
	16nm,0.8s						
EKS2	**Erkin-Say**	**1.83**	**350**	⇑*i*P	**Pb**	**21 41 12.7**	**+0.7**
	baz=51						
EKS2				⇑*i*S	**Sg**	**21 41 36.4**	**-1.2**
	baz=51						
EKS2	**Erkin-Say**	**1.83**	**350**	P	**Pg**	**21 41 13.8**	**0.0**
	SNR=31						
KBK	**Karagaybulak**	**1.87**	**17**	⇓*i*P	**Pg**	**21 41 14.2**	**-0.5**
	baz=18						
KBK				⇓*i*S	**Sg**	**21 41 39.6**	**+0.6**
	baz=18						
KBK	**Karagaybulak**	**1.87**	**17**	P	**Pg**	**21 41 14.3**	**-0.3**
	SNR=38						
FRU1	**Bishkek**	**1.97**	**9**	⇑*i*P	**Pb**	**21 41 15.6**	**+1.2**
	baz=10.0						
FRU1				⇑*i*S	**Sg**	**21 41 41.4**	**-0.7**
	baz=10.0						
MRKS	**Merke**	**2.02**	**339**	*e*P	**Pg**	**21 41 17.3**	**-0.3**
	27nm,0.3s						
MRKS				*e*S	**Sg**	**21 41 44.5**	**+0.7**
	21nm,0.3s						
MRKS	**Merke**	**2.02**	**339**	Pg	**Pg**	**21 41 17.3**	**-0.3**
	27nm,0.3s						
MRKS				Lg	Lg	21 41 44.9	
	21nm,0.3s						
ULHL	**Ulahol**	**2.05**	**47**	P	**Pb**	**21 41 16.6**	**+0.8**
	SNR=45						
BOOM	**Boomskoye usch**	**2.07**	**38**	⇑*i*P	**Pb**	**21 41 17.4**	**+1.2**
	baz=39						
BOOM				⇑*i*S	**Sg**	**21 41 44.9**	**-0.5**
	baz=39						
MNAS	**Manas**	**2.07**	**322**	⇓*i*P	**Pb**	**21 41 16.6**	**+0.4**
	baz=22						
MNAS				⇓*i*S	**Sg**	**21 41 43.8**	**-1.6**
	baz=22						
CHMS	**Chumysh**	**2.17**	**10**	⇓*i*P	**Pb**	**21 41 18.2**	**+0.4**
	baz=12						
CHMS				⇓*i*S	**Sb**	**21 41 45.8**	**+1.3**
	baz=12						
CHMS	**Chumysh**	**2.17**	**10**	P	**Pg**	**21 41 20.0**	**-0.4**
	SNR=10						
TKM2	**Tokmak 2**	**2.30**	**26**	⇓*i*P	**Pb**	**21 41 20.5**	**+0.5**
	baz=27						
TKM2				⇓*i*S	**Sb**	**21 41 50.4**	**+2.0**
	baz=27						
TKM2	**Tokmak 2**	**2.30**	**26**	P	**Pg**	**21 41 21.9**	**-0.9**
	SNR=5.0						
TKM2	**Tokmak 2**	**2.30**	**26**	⇑Pn	**Pb**	**21 41 21.7**	**+1.6**
	2.9nm,0.3s						
TKM2				⇑Lg	Lg	21 41 53.3	
	16nm,0.5s						
DRK	**Karamyk**	**2.31**	**234**	⇑*i*P	**Pb**	**21 41 20.6**	**+0.3**
	baz=33						
DRK				⇑*i*S	**Sb**	**21 41 51.3**	**+2.4**
	baz=33						
TRKS	**Terek-Say**	**2.42**	**287**	⇑*i*P	**Pb**	**21 41 21.0**	**-1.1**
	baz=85						
TRKS				⇑*i*S	**Sb**	**21 41 51.9**	**0.0**
	baz=85						
KST	**Kastek**	**2.54**	**30**	*e*P	**Pb**	**21 41 25.4**	**+1.4**
	27nm,0.5s						
KST				*e*S	**Sg**	**21 41 58.8**	**-1.5**
	20nm,0.5s						
KST	**Kastek**	**2.54**	**30**	Pg	**Pb**	**21 41 26.0**	**+2.0**
	26nm,0.4s						
KST				Lg	Lg	21 42 00.2	
	19nm,0.5s						
KDJ	**Kajisay**	**2.56**	**59**	⇑*i*P	**Pb**	**21 41 24.6**	**+0.2**
	baz=61						
KDJ				⇑*i*S	**Sb**	**21 41 57.4**	**+1.7**
	baz=61						
SGDS	**Sogindy**	**2.61**	**7**	Pg	**Pg**	**21 41 28.1**	**-0.5**
	14nm,0.3s						
SGDS				Lg	Lg	21 42 04.3	
	7.5nm,0.6s						
DGS	**Degeres**	**2.64**	**25**	*e*P	**Pg**	**21 41 28.3**	**-1.1**
	9.3nm,0.4s						
DGS				*e*S	**Sg**	**21 42 03.7**	**+0.1**
	50nm,0.7s						
DGS	**Degeres**	**2.64**	**25**	Pg	**Pg**	**21 41 28.6**	**-0.7**
	16nm,0.4s						
DGS				Lg	Lg	21 42 04.5	
	50nm,0.7s						
BTK	**Batken**	**2.72**	**254**	⇑*i*P	**Pb**	**21 41 25.9**	**-1.2**
	baz=53						
BTK				⇑*i*S	**Sb**	**21 41 59.9**	**-0.5**
	baz=53						
MTBS	**Maitube**	**2.80**	**35**	*e*P	**Pb**	**21 41 30.5**	**+2.0**
	6.6nm,0.2s						
MTBS				*e*S	**Sg**	**21 42 07.1**	**-1.6**
	37nm,0.3s						
TNSS	**Tian-Shan**	**2.98**	**42**	*e*P	**Pb**	**21 41 33.6**	**+2.0**
	7.5nm,0.4s						
TNSS				*e*S	**Sg**	**21 42 12.6**	**-1.7**
	19nm,0.5s						
KNDC	**Almaty**	**3.12**	**40**	⇓Pg	**Pb**	**21 41 35.6**	**+1.7**
	9.4nm,0.5s						
KNDC				⇓Lg	Lg	21 42 18.4	
	60nm,0.5s						
MDOK	**Medeo**	**3.12**	**42**	*e*P	**Pb**	**21 41 36.0**	**+2.1**
	4.5nm,0.4s						
MDOK				*e*S	**Sg**	**21 42 16.7**	**-2.1**
	26nm,0.6s						
MDOK	**Medeo**	**3.12**	**42**	⇑Pg	**Pb**	**21 41 36.0**	**+2.1**
	2.7nm,0.4s						
MDOK				⇑Lg	Lg	21 42 17.2	
	21nm,0.6s						
KOTS	**Kotyrbulak**	**3.20**	**41**	*e*P	**Pb**	**21 41 37.5**	**+2.2**
	12nm,0.2s						
KOTS				*e*S	**Sg**	**21 42 19.7**	**-1.8**
	175nm,0.5s						
KOTS	**Kotyrbulak**	**3.20**	**41**	Pg	**Pb**	**21 41 37.6**	**+2.2**
	12nm,0.2s						
KOTS				Lg	Lg	21 42 19.8	
	50nm,0.5s						
ANVS	**Anan'yevo**	**3.21**	**52**	⇓*i*P	**Pb**	**21 41 33.4**	**-2.1**
	baz=53						
ANVS				⇓*i*S	**Sb**	**21 42 13.1**	**-1.5**
	baz=53						
IUG	**Iuzhnay**	**3.40**	**294**	*e*P	**Pg**	**21 41 42.6**	**-1.2**
	4.7nm,0.3s						
IUG				*e*S	**Sg**	**21 42 27.8**	**-0.1**
	31nm,0.4s						
IUG	**Iuzhnay**	**3.40**	**294**	Pg	**Pg**	**21 41 42.7**	**-1.1**
	4.4nm,0.5s						
IUG				Lg	Lg	21 42 27.8	
	32nm,0.5s						
KUU	**Kurty**	**3.41**	**27**	*e*P	**Pb**	**21 41 41.4**	**+2.5**
	5.2nm,0.5s						
KUU				*e*S	**Sg**	**21 42 26.4**	**-1.8**
	40nm,0.7s						
KUU	**Kurty**	**3.41**	**27**	Pg	**Pb**	**21 41 41.6**	**+2.7**
	5.2nm,0.5s						
KUU				Lg	Lg	21 42 26.7	
	40nm,0.7s						
KK31	**Karatay Array**	**3.56**	**310**	⇑Pg	**Pg**	**21 41 44.9**	**-1.9**
	0.6nm,0.3s,baz=129,slow=16,SNR=9.8						
KK31				⇑Lg	Lg	21 42 32.9	
	7.1nm,0.6s,baz=133,slow=28,SNR=20						
CHKK	**Chushkaly**	**3.62**	**33**	*e*P	**Pb**	**21 41 45.4**	**+2.9**
	2.0nm,0.2s						
CHKK				*e*S	**Sg**	**21 42 32.9**	**-2.2**
	26nm,0.5s						
CHKK	**Chushkaly**	**3.62**	**33**	Pg	**Pb**	**21 41 45.4**	**+2.9**
	2.0nm,0.2s						
CHKK				Lg	Lg	21 42 32.8	
	26nm,0.5s						
CHM	**Chimkent**	**3.76**	**294**	*e*P	**Pg**	**21 41 50.1**	**-0.6**
	4.4nm,0.2s						
CHM				*e*S	**Sg**	**21 42 41.0**	**+1.6**
	41nm,0.3s						
SATY	**Saty**	**3.81**	**53**	*e*P	**Pb**	**21 41 48.6**	**+2.8**
	1.7nm,0.2s						
SATY				*e*S	**Sg**	**21 42 38.2**	**-2.9**
	19nm,0.3s						
ZHN	**Zhinishke**	**3.89**	**52**	*e*P	**Pb**	**21 41 50.0**	**+2.9**
	1.4nm,0.2s						
ZHN				*e*S	**Sg**	**21 42 40.4**	**-3.2**
	17nm,0.6s						
KURS	**Kuram**	**3.94**	**47**	*e*P	**Pb**	**21 41 50.2**	**+2.4**
	10nm,1.1s						
KURS				*e*S	**Sg**	**21 42 41.3**	**-3.7**
	10nm,0.9s						
KPKS	**Kokpek**	**4.21**	**50**	*e*P	**Pb**	**21 41 55.8**	**+3.2**
	3.8nm,0.4s						
KPKS				*e*S	**Sg**	**21 42 50.3**	**-3.6**
	30nm,0.5s						
UZB	**Uzynbulak**	**4.24**	**56**	*e*P	**Pb**	**21 41 56.1**	**+3.0**
	1.1nm,0.2s						
UZB				*e*S	**Sg**	**21 42 51.2**	**-3.7**
	10.0nm,0.3s						
ARXS	**Arharly**	**4.28**	**37**	*e*P	**Pb**	**21 41 56.4**	**+2.7**
	4.7nm,0.5s						
ARXS				*e*S	**Sg**	**21 42 51.8**	**-4.2**
	28nm,0.5s						
ARXS	**Arharly**	**4.28**	**37**	Pg	**Pb**	**21 41 56.4**	**+2.7**
	5.2nm,0.5s						
ARXS				Lg	Lg	21 42 52.1	
	28nm,0.5s						
SHLS	**Shalkode**	**4.53**	**58**	*e*P	**Pg**	**21 42 05.5**	**+0.2**
	3.3nm,0.2s						
SHLS				*e*S	**Sg**	**21 43 07.2**	**+3.2**
	14nm,0.7s						
PDGK	**Podgornoye**	**4.63**	**56**	⇑Pg	**Pg**	**21 42 05.0**	**-2.4**
	2.4nm,0.7s						
PDGK				⇑Lg	Lg	21 43 05.5	
	16nm,1.1s						

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*IDC **13** 22:12:03.2±1.8, 14°.66S×178°.14W, h376^{km}±18^{km}, mb3.2/9, mb1 3.5/10, mb1mx3.3/29, mbtmp3.9/10, Error ellipse: s-maj=31.7km s-min=18.0km az=137.0*
ISC 13 22:12:04.5±0.7, **15°.0S**±0°.2×**178°.0W**±0°.1, **h400**^{km}**, n14,** σ1^{s}.**52**/16, **mb3.4**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.66**	**234**	P	**Pn**	**22 13 21.6**	**-1.6**
	5.2nm,0.3s,baz=78,slow=7.9,SNR=41						
MSVF				S	**S**	**22 14 26.1**	**-0.8**
	baz=106,slow=23,SNR=6.0						
RAR	**Rarotonga**	**18.39**	**112**	P	**P**	**22 15 50.3**	**-2.9**
	4.0nm,0.3s,baz=293,slow=19,SNR=7.4						
WRA	**Warramunga Arr**	**45.61**	**257**	P	**P**	**22 19 46.1**	**-1.1**
	0.9nm,0.9s,baz=83,slow=7.6,SNR=5.9						
ASAR	**Alice Springs**	**46.01**	**252**	P	**P**	**22 19 51.4**	**+1.0**
	4.9nm,0.8s,baz=84,slow=8.3,SNR=29						
ASAR				PcP	**PcP**	**22 21 21.2**	**+1.8**
	0.6nm,0.7s,baz=98,slow=4.8,SNR=3.2						
VNDA	**Vanda**	**63.35**	**185**	P	**P**	**22 21 55.1**	**+2.9**
	0.6nm,0.7s,baz=351,slow=5.8,SNR=5.8						
NVAR	**Mina Array Bea**	**77.08**	**44**	P	**P**	**22 23 15.2**	**-0.1**
	0.2nm,0.3s,baz=207,slow=5.8,SNR=2.6						
SEY	**Seymchan**	**81.05**	**347**	P	**P**	**22 23 35.6**	**-0.1**
	2.2nm,0.7s,baz=164,slow=8.5,SNR=4.8						
ILAR	**Eielson Array**	**82.99**	**13**	P	**P**	**22 23 45.1**	**-0.6**
	1.1nm,0.5s,baz=214,slow=5.5,SNR=16						
TXAR	**Lajitas Array**	**84.12**	**58**	P	**P**	**22 23 53.8**	**+1.4**
	0.6nm,0.9s,baz=217,slow=7.9,SNR=4.2						
PDAR	**Pinedale Array**	**84.99**	**43**	P	**P**	**22 23 56.6**	**+0.1**
	0.4nm,0.7s,baz=207,slow=5.1,SNR=3.9						
YKA	**Yellowknife Ar**	**91.55**	**25**	P	**P**	**22 24 26.1**	**-0.4**
	0.2nm,0.8s,baz=238,slow=3.5,SNR=1.9						
ARCES	**ARCESS Array B**	**123.54**	**350**	PKP	**PKiKP**	**22 30 15.1**	**+0.3**
	3.1nm,0.9s,baz=20,slow=3.9,SNR=4.0						
BRTR	**Keskin Array B**	**142.96**	**318**	PKP	**PKPdf**	**22 30 50.9**	**-1.0**
	1.0nm,0.9s,baz=111,slow=2.8,SNR=4.4						
GERES	**GERESS Array B**	**144.91**	**347**	PKP	**PKPab**	**22 30 55.9**	**+0.4**
	0.7nm,0.7s,baz=21,slow=4.6,SNR=5.7						

IDC 13 22:30:08.4±11.0, **30°.17S**×**177°.64W, h0**^{km}**, mb3.4**/2, **mb1 3.7**/2, **mb1mx3.5**/25, **mbtmp3.4**/2, **Error ellipse: s-maj=481.7km s-min=62.8km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.43**	**267**	P	P	22 38 13.2	-0.1
	0.2nm,0.4s,baz=101,slow=7.8,SNR=2.2						
WRA	**Warramunga Arr**	**44.40**	**272**	P	P	22 38 20.9	-0.2
	0.3nm,0.3s,baz=112,slow=8.1,SNR=2.2						
FINES	**FINESS Array B**	**145.04**	**340**	PKPbc	PKPbc	22 49 45.4	-0.9
	1.8nm,0.8s,baz=67,slow=4.7,SNR=4.7						

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*TIR **13** 22:35:41.2, 40°.21N×20°.75E, h2^{km}±1^{km}, Md2.5*
*ATH **13** 22:35:42.1, 40°.22N×20°.70E, h15^{km}±3^{km}, ML1.9/4, Error ellipse: s-maj=3.9km s-min=1.1km az=131.0*
*SKO **13** 22:35:44.4, 40°.23N×20°.75E, h4^{km}*
ISC 13 22:35:42.1±1.0, **40°.21N**±0°.03×**20°.68E**±0°.03, **h10**^{km}±6^{km}, **n17,** σ1^{s}.**16**/33, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSK	**Leskovik**	**0.09**	**225**	P	**Pg**	**22 35 44.4**	**-0.2**
	baz=243						
LSK				S	**Sg**	**22 35 46.6**	**+0.1**
	baz=243						
NEST	**Nestorio**	**0.35**	**54**	P	**Pg**	**22 35 49.2**	**+0.1**
NEST				S	**Sg**	**22 35 53.3**	**-0.5**
NEST				AML	AML	22 35 55.7	
	comp=N,695µm,0.3s						
NEST				AML	AML	22 35 55.9	
	comp=E,633µm,0.3s						
PENT	**Pentalofos**	**0.35**	**92**	P	**Pg**	**22 35 48.8**	**-0.3**
PENT				S	**Sg**	**22 35 54.2**	**+0.3**
KBN	**Korca**	**0.42**	**11**	P	**Pg**	**22 35 50.1**	**-0.3**
	baz=3.0						
KBN				S	**Sb**	**22 35 57.1**	**-1.0**
	baz=3.0						
JAN	**Janina**	**0.57**	**167**	P	**Pg**	**22 35 53.4**	**+0.2**
JAN				S	**Sg**	**22 36 00.9**	**+0.2**
JAN				AML	AML	22 36 04.2	
	comp=N,306µm,0.2s						
JAN				AML	AML	22 36 05.2	
	comp=E,346µm,0.2s						
KPRO	**Kipourio**	**0.58**	**116**	P	**Pg**	**22 35 53.1**	**-0.3**
KPRO				S	**Sb**	**22 36 01.6**	**-1.2**
SRN	**Sarande**	**0.62**	**238**	P	**Pg**	**22 35 54.5**	**+0.5**
	baz=241						
SRN				S	**Sn**	**22 36 05.2**	**-1.5**
	baz=241						
IGT	**Igoumenitsa**	**0.73**	**202**	P	**Pg**	**22 35 56.0**	**-0.1**
IGT				S	**Sb**	**22 36 07.4**	**+0.6**
IGT				AML	AML	22 36 10.3	
	comp=E,107µm,0.6s						
IGT				AML	AML	22 36 10.9	
	comp=N,183µm,0.4s						
IGT	**Igoumenitsa**	**0.73**	**202**	P	**Pg**	**22 35 56.6**	**+0.4**
	baz=206						
IGT				S	**Sn**	**22 36 08.9**	**-0.6**
	baz=206						
IGT	**Igoumenitsa**	**0.73**	**202**	*i* Pg	**Pg**	**22 35 56.6**	**+0.4**
IGT				*i* Sg	**Sn**	**22 36 10.0**	**+0.5**
FNA	**Florina**	**0.78**	**43**	P	**Pg**	**22 35 56.5**	**-0.7**
FNA				S	**Sb**	**22 36 07.5**	**-1.0**
FNA				AML	AML	22 36 09.3	
	comp=E,256µm,0.3s						
FNA				AML	AML	22 36 11.0	
	comp=N,213µm,0.3s						
FNA	**Florina**	**0.78**	**43**	P	**Pg**	**22 35 56.8**	**-0.4**
	baz=40						
FNA				S	**Sb**	**22 36 08.3**	**-0.2**
	baz=40						
FNA	**Florina**	**0.78**	**43**	*i* Pg	**Pg**	**22 35 56.9**	**-0.4**
FNA				*i* Sg	**Sb**	**22 36 08.5**	**0.0**
OHR	**Ohrid**	**0.91**	**6**	*e*Pg	**Pn**	**22 36 00.3**	**-0.6**
OHR				*i* Sg	**Sn**	**22 36 13.6**	**-0.5**
OHR				*e*Lg	Lg	22 36 14.6	
	comp=E,10nm,0.6s						
LIT	**Litokhoron**	**1.39**	**94**	*i* Pg	**Pg**	**22 36 08.4**	**-0.4**
LIT				*i* Sg	**Sg**	**22 36 30.4**	**+3.5**
GRG	**Griva**	**1.51**	**60**	*i* Pg	**Pg**	**22 36 10.2**	**-0.9**
STIP	**Stip**	**1.87**	**37**	*i* Pn	**Pg**	**22 36 19.9**	**+1.9**
STIP				*i* Sn	**Sg**	**22 36 45.8**	**+3.6**
STIP				*e*Lg	Lg	22 36 47.3	
	comp=N,0.5nm,0.4s						

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*NIC **13** 22:45:45.9±0.0, 37°.15N×27°.62E, h31^{km}±7^{km}, Ml4.2/1*
*DDA **13** 22:45:50.7, 36°.95N×28°.27E, h9^{km}±2^{km}, ML3.5*
*ATH **13** 22:45:50.8, 36°.93N×28°.30E, h35^{km}±10^{km}, ML3.5/2, Error ellipse: s-maj=10.0km s-min=1.3km az=197.0*
*THE **13** 22:45:50.5, 36°.95N×28°.37E, h0^{km}±1^{km}, ML3.5/2, Error ellipse: s-maj=4.2km s-min=0.6km az=87.0*
*ISK **13** 22:45:51.3, 36°.95N×28°.27E, h7^{km}, ML3.6/16*
*IDC **13** 22:45:55.8±1.1, 36°.72N×28°.41E, h50^{km}±28^{km}, mb3.3/1, mb1 3.8/7, mb1mx3.2/55, mbtmp3.6/7, ML3.7/6, Error ellipse: s-maj=16.7km s-min=9.7km az=160.0*
ISC 13 22:45:51.4±0.8, **36°.96N**±0°.02×**28°.27E**±0°.02, **h11**^{km}±5^{km}, **n73,** σ1^{s}.**38**/109, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.18**	**4**	P	**Pg**	**22 45 55.1**	**-0.3**
YER				S	**Sg**	**22 45 58.4**	**+0.2**
YER	**Yerkesik**	**0.18**	**4**	PG	**Pg**	**22 45 55.2**	**-0.2**
YER				SG	**Sg**	**22 45 58.8**	**+0.6**
TURN	**Turunc**	**0.18**	**186**	PG	**Pg**	**22 45 55.2**	**-0.2**
TURN				SG	**Sg**	**22 45 58.3**	**+0.2**
TURN	**Turunc**	**0.18**	**186**	*i* P	**Pg**	**22 45 55.2**	**-0.2**
TURN				*i* S	**Sg**	**22 45 57.4**	**-0.7**
TURN				IAML		22 45 59.0	
	comp=N,16µm,0.8s						
TURN				IAML		22 45 59.0	
	comp=E,11µm,0.3s						
MRSB	**Marmaris-Mugla**	**0.25**	**193**	PG	**Pg**	**22 45 56.1**	**-0.5**
MRSB				SG	**Sg**	**22 46 01.2**	**+1.2**
MULA	**Mugla, Merkez-**	**0.30**	**8**	*i* P	**Pg**	**22 45 57.2**	**-0.4**
MULA				*i* S	**Sg**	**22 46 00.8**	**-1.0**
DALY	**Dalyan (Mula)**	**0.34**	**114**	PG	**Pg**	**22 45 58.6**	**+0.4**
DALY				SG	**Sg**	**22 46 03.4**	**+0.6**
DALY	**Dalyan (Mula)**	**0.34**	**114**	*i* P	**Pg**	**22 45 57.7**	**-0.6**
DALY				*i* S	**Sg**	**22 46 02.6**	**-0.1**
MLSB	**Milas**	**0.52**	**311**	PG	**Pg**	**22 46 02.1**	**+0.5**
DATC	**Datca-Mugla**	**0.53**	**248**	PG	**Pg**	**22 46 01.3**	**-0.4**
BDRM	**Kayabasi**	**0.67**	**280**	*i* P	**Pg**	**22 46 04.1**	**-0.2**
BDRM				*i* S	**Sg**	**22 46 13.3**	**+0.2**
BDRM				IAML		22 46 20.0	
	comp=N,2µm,0.5s						
TAVA	**DENIZLI_Tavas**	**0.72**	**45**	*i* P	**Pg**	**22 46 04.9**	**-0.6**
TAVA				*i* S	**Sg**	**22 46 14.9**	**-0.1**
FETY	**Fethiye**	**0.73**	**116**	PG	**Pg**	**22 46 04.8**	**-0.7**
FETY	**Fethiye**	**0.73**	**116**	*i* P	**Pg**	**22 46 05.0**	**-0.5**
FETY				*i* S	**Sg**	**22 46 14.6**	**-0.5**
ARG	**Arkhangelos**	**0.75**	**189**	P	**Pg**	**22 46 05.4**	**-0.6**
ARG				S	**Sg**	**22 46 14.7**	**-1.0**
ARG				AML	AML	22 46 20.0	
	comp=N,5424µm,0.4s						
ARG				AML	AML	22 46 21.0	
	comp=E,8454µm,0.3s						
ARG	**Arkhangelos**	**0.75**	**189**	P	**Pg**	**22 46 05.3**	**-0.6**
ARG				S	**Sb**	**22 46 18.0**	**+1.4**
	comp=E,4µm,0.3s						
ARG	**Arkhangelos**	**0.75**	**189**	PG	**Pg**	**22 46 05.5**	**-0.4**
ARG	**Arkhangelos**	**0.75**	**189**	P	**Pg**	**22 46 04.9**	**-1.0**
ARG				S	**Sb**	**22 46 17.8**	**+1.2**
AYDN	**Tasoluk**	**0.77**	**336**	*i* P	**Pg**	**22 46 05.3**	**-0.9**
BODT	**Bodrum**	**0.77**	**278**	PG	**Pb**	**22 46 07.4**	**+0.5**
CAEL	**Denizli, Camel**	**0.86**	**79**	*i* P	**Pb**	**22 46 08.6**	**+0.2**
CAEL				*i* S	**Sb**	**22 46 19.6**	**-0.4**
CAEL				IAML		22 46 33.0	
	comp=E,2µm,0.9s						
CAEL				IAML		22 46 34.0	
	comp=N,1µm,0.6s						
DDIM	**Aydin, Didim**	**0.96**	**302**	*i* P	**Pg**	**22 46 09.8**	**-0.1**
DDIM				*i* S	**Sb**	**22 46 24.1**	**+1.4**

DDIM				IAML		22 46 27.0	
	comp=N,1µm,0.6s						
DDIM				IAML		22 46 31.0	
	comp=E,2µm,0.7s						
NISR	Nisiros	0.98	250	P	Pg	22 46 08.8	-1.4
NISR				S	Sg	22 46 22.6	-0.4
KOSK	Kos Island	1.05	259	PG	Pn	22 46 12.6	+0.5
GOLH	Golhisar	1.07	74	*i* P	Pb	22 46 11.0	-1.0
GOLH				*i* S	Sb	22 46 25.8	-0.3
GCAM	G?zelcaml?	1.11	312	PN	Pb	22 46 12.9	+0.3
GCAM	G?zelcaml?	1.11	312	*i* P	Pb	22 46 12.3	-0.3
GCAM				*i* S	Sb	22 46 27.0	0.0
GCAM				IAML		22 46 33.0	
	comp=E,1µm,0.6s						
GCAM				IAML		22 46 34.0	
	comp=N,1µm,0.6s						
AKAS	Kas	1.30	123	PN	Pb	22 46 15.8	-0.1
AKAS	Kas	1.30	123	*i* P	Pn	22 46 15.2	-0.3
AKAS				*i* S	Sg	22 46 35.6	+2.4
AKAS				IAML		22 46 41.0	
	comp=N,1µm,0.6s						
KSL	Kastellorizon	1.33	127	P	Pn	22 46 14.1	-1.8
KSL				S	Sb	22 46 31.0	-2.4
KSL	Kastellorizon	1.33	127	S	Sg	22 46 38.9	+4.6
ELL	Elmali	1.33	98	PN	Pg	22 46 16.8	-0.2
ELL	Elmali	1.33	98	P	Pn	22 46 15.6	-0.5
ELL				S	Sg	22 46 39.1	+4.8
SMG	Samos	1.36	304	P	Pn	22 46 16.0	-0.4
SMG				S	Sn	22 46 33.9	-0.5
SMG				AML	AML	22 46 41.3	
	comp=E,3438µm,0.4s						
SMG				AML	AML	22 46 42.6	
	comp=N,2484µm,0.4s						
SMG	Samos	1.36	304	P	Pn	22 46 16.0	-0.4
SMG				S	Sg	22 46 37.1	+1.7
	comp=N,1µm,0.4s						
MANT	Manisa	1.55	8	*i* P	Pn	22 46 19.0	-0.1
MANT				*i* S	Sn	22 46 39.0	-0.3
DGB	zmir	1.55	315	*i* P	Pn	22 46 17.8	-1.1
DGB				*i* S	Sn	22 46 37.6	-1.5
KULA	Kula-Manisa	1.59	11	PN	Pb	22 46 20.4	-0.4
BRDR	BURDUR-Merkez	1.61	62	*i* P	Pb	22 46 21.4	+0.3
BRDR				*i* S	Sg	22 46 43.4	+0.1
KARP	Karpathos	1.67	213	P	Pn	22 46 20.2	-0.4
KARP				S	Sn	22 46 42.6	+0.7
KORT	Korkueli	1.67	88	PN	Pb	22 46 21.9	-0.3
KORT	Korkueli	1.67	88	*i* P	Pb	22 46 22.3	0.0
KHAL	Karahalli	1.71	34	*i* P	Pn	22 46 21.7	+0.4
KHAL				*i* S	Sn	22 46 42.8	-0.4
BASM	Basmaki-Afyon	1.71	55	PN	Pb	22 46 22.7	-0.3
AKUM	Antalya-Kumluc	1.79	110	*i* P	Pg	22 46 25.5	-0.1
AKUM				*i* S	Sg	22 46 50.1	+1.3
BUCA	Burdur, Bucak-	1.87	78	*i* P	Pb	22 46 26.1	+0.5
ZEYE	Izmir, Urla-Ze	1.90	313	*i* P	Pn	22 46 22.9	-0.8
ZEYE				IAML		22 46 59.0	
	comp=N,386nm,0.7s						
ANTB	Antalya	1.91	91	PN	Pb	22 46 25.8	-0.5
BCK	Bucak	1.92	74	PN	Pb	22 46 25.5	-1.0
ISP	Isparta	1.99	64	P	Pn	22 46 25.9	+0.8
ISP	Isparta	1.99	64	PN	Pb	22 46 27.1	-0.6
APE	Apeiranthos	2.19	274	P	Pn	22 46 27.7	-0.1
SHUT	Suhut-Afyon	2.41	48	PN	Pn	22 46 32.6	+1.7
ZKR	Zakros	2.48	223	P	Pn	22 46 33.3	+1.6
ZKR				S	Sn	22 47 03.9	+2.0
ZKR	Zakros	2.48	223	P	Pn	22 46 32.4	+0.7
NPS	Neapolis	2.73	233	P	Pn	22 46 35.9	+0.7
NPS				S	Sn	22 47 10.8	+2.5
PRK	Paraskevi	2.77	326	P	Pn	22 46 37.0	+1.2
IDI	Anoyia	3.20	240	P	Pn	22 46 42.4	+0.7
	comp=N,4.2nm,0.3s,baz=30,slow=16,SNR=12						
IDI				S	Sn	22 47 21.2	+1.3
	comp=N,4.9nm,0.3s,baz=358,slow=19,SNR=5.5						
AKMS	Akamas	3.82	119	P	Pn	22 46 50.7	+0.5
AKMS				AML	AML	22 47 37.8	
	comp=N,0.7nm,0.4s						
AKMS				AML	AML	22 47 38.0	
	comp=N,0.8nm,0.7s						
NATA	Nata	4.12	121	P	Pn	22 46 54.9	+0.7
OSC1	CSNet OBS 1	4.24	144	P	Pn	22 46 55.4	-0.4
SZAC	Souni	4.34	119	P	Pn	22 46 58.1	+0.7
CSS	Mathiatis	4.56	114	P	Pn	22 47 01.1	+0.7
ASGA	Asgata	4.59	117	P	Pn	22 47 01.3	+0.6
MVOU	Mavrovouni	4.76	112	P	Pn	22 47 04.2	+1.2
BRTR	Keskin Array B	5.05	55	P	Pn	22 47 09.4	+2.3
	comp=N,0.8nm,0.3s,baz=235,slow=15,SNR=22						
BRTR				S	Sn	22 48 08.0	+2.5
	comp=N,0.3nm,0.3s,baz=228,slow=26,SNR=5.8						
OSC2	CSNet OBS 4	5.08	139	P	Pn	22 47 07.0	-0.4
STIP	Stip	6.68	317	*i* P	Pn	22 47 30.1	+0.7
MMAI	Mount Meron Ar	7.05	122	P	Pn	22 47 33.8	-0.9
	comp=N,4.8nm,0.3s,baz=306,slow=11,SNR=43						
MMAI				S	Sn	22 48 51.1	-3.8
	comp=N,5.4nm,0.3s,baz=305,slow=23,SNR=3.1						
MLR	Muntele Rosu	8.70	349	P	Pn	22 48 02.1	+4.8
	comp=N,0.2nm,0.3s,baz=135,slow=15,SNR=2.5						
EIL	Elat	9.17	141	P	Pn	22 48 02.2	-1.3
	comp=N,1.3nm,0.3s,baz=340,slow=1.7,SNR=13						
EIL				S	Sn	22 49 41.4	-5.3
	comp=N,1.4nm,0.3s,baz=104,slow=12,SNR=5.0						
GERES	GERESS Array B	15.94	323	P	P	22 49 40.8	+1.6
	comp=N,0.1nm,0.3s,baz=140,slow=11,SNR=6.8						
TORD	Torodi Ar. Bea	33.57	232	P	P	22 52 30.5	-1.0
	comp=N,0.4nm,0.6s,baz=40,slow=7.0,SNR=1.7						

IDC ***13*** *22:48:40.1±1.0, 35°.49N×27°.31E, h0^{km}, mb3.8/10, mb1 3.8/16, mb1mx3.6/51, mbtmp3.6/16, ML3.6/6, Error ellipse: s-maj=22.1km s-min=11.4km az=167.0*

NEIC ***13*** *22:48:42.6±1.6, 35°.38N±0°.05×27°.29E±0°.06, h16^{km}±6^{km}, Error ellipse: s-maj=8.1km s-min=6.5km az=197.0*

NIC ***13*** *22:48:42.5±0.0, 35°.42N×27°.30E, h20^{km}, Ml4.4/3*

ISK ***13*** *22:48:43.5, 35°.56N×27°.25E, h10^{km}, ML3.7/17*

DDA ***13*** *22:48:43.3, 35°.58N×27°.15E, h30^{km}±2^{km}, ML3.5*

THE ***13*** *22:48:44.1, 35°.47N×27°.33E, h10^{km}±1^{km}, ML3.8/3, Error ellipse: s-maj=2.7km s-min=1.0km az=318.0*

ATH ***13*** *22:48:44.1, 35°.66N×27°.16E, h17^{km}±2^{km}, ML3.7/7, Error ellipse: s-maj=3.1km s-min=1.1km az=142.0*

ISC 13 22:48:42.5±1.0, **35°.48N**±0°.03×**27°.31E**±0°.02, **h14**^{km}±6^{km}, **n148, σ1^{s}.15**/181, **mb3.9**/13, **8C-8D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.14	299	P	Pb	22 48 47.6	+0.6
KARP				S	Sb	22 48 50.3	+0.4
KARP				AML	AML	22 48 51.1	
KARP				AML	AML	22 48 51.1	
KARP	Karpathos	0.14	299	P	Pb	22 48 47.6	+0.6
KARP				S	Sb	22 48 50.8	+0.9
KARP	Karpathos	0.14	299	PG	Pg	22 48 46.6	+0.4
KARP	Karpathos	0.14	299	Pg	Pb	22 48 47.4	+0.4
KARP				Sg	Sb	22 48 50.8	+0.9
KARP	Karpathos	0.14	299	P	Pb	22 48 47.5	+0.6
KARP				AML	AML	22 48 50.7	
	340nm,0.3s						
KARP				AML	AML	22 48 50.7	
	340nm,0.3s						
KARP				AML	AML	22 48 50.9	
	267nm,0.4s						
KARP				AML	AML	22 48 50.9	
	267nm,0.4s						
KARP				S	Sb	22 48 51.0	+1.1
ZKR	Zakros	0.97	248	P	Pb	22 49 01.0	0.0
ZKR				S	Sb	22 49 13.8	+0.1
ZKR				AML	AML	22 49 19.7	
	comp=N,7260µm,0.5s						
ZKR				AML	AML	22 49 22.3	
	comp=E,14504µm,0.4s						
ZKR	Zakros	0.97	248	P	Pb	22 49 00.9	-0.1
ZKR				S	Sn	22 49 15.5	+0.3
	comp=E,6µm,0.5s						
ZKR	Zakros	0.97	248	PG	Pn	22 49 02.2	+0.6
ZKR				SG	Sn	22 49 15.9	+0.7
ARG	Arkhangelos	0.99	42	P	Pb	22 49 02.0	+0.6
ARG				S	Sb	22 49 13.9	-0.4
ARG				AML	AML	22 49 18.9	
	comp=N,8020µm,0.6s						
ARG				AML	AML	22 49 22.7	
	comp=E,9298µm,0.5s						
ARG	Arkhangelos	0.99	42	P	Pb	22 49 02.0	+0.6
ARG				S	Sg	22 49 15.4	+0.8
	comp=E,4µm,0.6s						
ARG	Arkhangelos	0.99	42	PG	Pb	22 49 01.7	+0.3
ARG				SG	Sn	22 49 16.5	+0.8
ARG	Arkhangelos	0.99	42	P	Pb	22 49 02.1	+0.7
ARG				S	Sn	22 49 16.9	+1.1
STIA	Sitia Lasithi	1.03	255	P	Pb	22 49 02.4	+0.2
STIA				S	Sn	22 49 17.8	+1.0
NISR	Nisiros	1.14	353	P	Pb	22 49 01.8	-2.2
NISR				S	Sb	22 49 13.7	-4.9
NISR				AML	AML	22 49 24.1	
	comp=N,5929µm,0.4s						
NISR				AML	AML	22 49 25.4	
	comp=E,11184µm,0.4s						
KOSK	Kos Island	1.30	348	P	Pb	22 49 07.5	+0.8
KOSK				S	Sn	22 49 23.6	+0.3
	comp=E,4µm,0.5s						
KOSK	Kos Island	1.30	348	PN	Pb	22 49 07.1	+0.4
KOSK				SN	Sg	22 49 24.1	-0.3
DATC	Datca-Mugla	1.31	12	PN	Pn	22 49 06.9	+0.6
NPS	Neapolis	1.41	262	P	Pn	22 49 08.3	+0.6
NPS				S	Sn	22 49 25.4	-0.6
NPS				AML	AML	22 49 36.7	
	comp=E,4183µm,0.6s						
NPS				AML	AML	22 49 37.0	
	comp=N,4274µm,0.5s						
NPS	Neapolis	1.41	262	P	Pb	22 49 09.1	+0.6
MRSB	Marmaris-Mugla	1.43	30	PN	Pb	22 49 09.6	+0.7
TURN	Turunc	1.50	30	PN	Pn	22 49 09.9	+1.0
TURN	Turunc	1.50	30	*i* P	Pb	22 49 10.1	+0.1
TURN				*i* S	Sg	22 49 31.4	+0.7
TURN				IAML		22 49 39.0	
	comp=E,617nm,0.3s						
TURN				IAML		22 49 43.0	
	comp=N,559nm,0.3s						
BODT	Bodrum	1.58	360	P	Pn	22 49 10.5	+0.4
BODT	Bodrum	1.58	360	PN	Pn	22 49 10.7	+0.6
BDRM	Kayabasi	1.58	4	*i* P	Pn	22 49 09.3	-0.9
BDRM				*i* S	Sn	22 49 30.4	-0.1
BDRM				IAML		22 49 38.0	
	comp=N,617nm,0.4s						
DALY	Dalyan (Mula)	1.72	39	PN	Pb	22 49 13.9	0.0
DALY	Dalyan (Mula)	1.72	39	*i* P	Pb	22 49 14.7	+0.9
DALY				*i* S	Sg	22 49 37.8	-0.1
DALY				IAML		22 49 46.0	
	comp=E,460nm,0.8s						
DALY				IAML		22 49 47.0	
	comp=N,619nm,0.7s						
SANT	Santorini	1.75	301	P	Pn	22 49 12.4	0.0
SANT				S	Sn	22 49 31.6	-2.9
SANT				AML	AML	22 49 39.9	
	comp=N,1299µm,0.5s						
SANT				AML	AML	22 49 42.8	
	comp=E,4678µm,0.4s						
SANT	Santorini	1.75	301	P	Pn	22 49 13.4	+1.0
SANT	Santorini	1.75	301	⇑P	Pn	22 49 13.3	+1.0
SANT				⇓S	Sn	22 49 34.8	+0.4
SANT	Santorini	1.75	301	PN	Pn	22 49 13.4	+1.0
SANT	Santorini	1.75	301		Pn	22 49 13.0	+0.6
THR8	Santorini-Mono	1.75	302	P	Pn	22 49 13.5	+1.1
THR6	Thira Island,	1.78	300	P	Pn	22 49 13.9	+1.1
SNT1	Gialos, Santor	1.79	302	P	Pn	22 49 13.4	+0.4
SNT1	Gialos, Santor	1.79	302	P	Pn	22 49 14.0	+1.1
SFIR	Foira Santorin	1.79	302	P	Pn	22 49 14.2	+1.2
THR7	Fira-Santorini	1.79	302	P	Pn	22 49 14.2	+1.2
THR3	Thira Island,	1.81	301	P	Pn	22 49 14.0	+0.8
HRKL	Herakleio	1.81	265	P	Pb	22 49 14.8	-0.6
HRKL	Herakleio	1.81	265	PN	Pb	22 49 14.9	-0.5
YER	Yerkesik	1.83	25	P	Pn	22 49 15.1	+1.5
YER	Yerkesik	1.83	25	PN	Pn	22 49 15.2	+1.6
IACM	Heraklion	1.84	265	P	Pn	22 49 14.6	+1.0
IACM	Heraklion	1.84	265	P	Pb	22 49 15.2	-0.7
FETY	Fethiye	1.84	51	PN	Pb	22 49 15.9	-0.1
FETY	Fethiye	1.84	51	*i* P	Pb	22 49 16.4	+0.4
FETY				*i* S	Sb	22 49 39.6	+0.7
MLSB	Milas	1.85	12	PN	Pn	22 49 15.3	+1.5
SAP3	Santorini-Thir	1.86	301	P	Pn	22 49 12.9	-1.0
SAP4	Santorini-Oia	1.86	303	P	Pn	22 49 13.8	-0.1
MULA	Mugla, Merkez-	1.95	24	*i* P	Pn	22 49 16.5	+1.2
MULA				*i* S	Sb	22 49 42.4	+0.3
MULA				IAML		22 49 50.0	
	comp=E,336nm,0.4s						
DDIM	Aydin, Didim	1.97	358	*i* P	Pn	22 49 16.6	+1.2
DDIM				*i* S	Sg	22 49 44.8	-1.3
DDIM				IAML		22 49 54.0	
	comp=E,383nm,1.0s						
DDIM				IAML		22 49 57.0	
	comp=N,412nm,1.2s						
IDI	Anoyia	1.99	265	Pg	Pn	22 49 16.7	+0.9
	comp=N,25nm,0.3s,baz=24,slow=3.7,SNR=33						
IDI				Lg	Lg	22 49 41.9	
	comp=N,52nm,0.3s,baz=328,slow=21,SNR=6.3						
IDI	Anoyia	1.99	265	P	Pn	22 49 16.5	+0.8
IDI				S	Sn	22 49 42.0	+1.5
IDI				AML	AML	22 49 46.1	
	comp=E,983µm,0.5s						
IDI				AML	AML	22 49 50.5	
	comp=N,1482µm,0.5s						
IDI	Anoyia	1.99	265	P	Pn	22 49 16.8	+1.1
IDI	Anoyia	1.99	265	⇑P	Pn	22 49 17.2	+1.5
IDI	Anoyia	1.99	265	PN	Pn	22 49 16.9	+1.2
AKAS	Kas	2.01	67	PN	Pb	22 49 18.7	-0.2
AKAS	Kas	2.01	67	*i* P	Pn	22 49 18.1	+2.0
AKAS				IAML		22 50 02.0	
	comp=N,277nm,0.6s						
AKAS	Kas	2.01	67		Pn	22 49 17.4	+1.3
SIVA	Sivas	2.10	258	P	Pb	22 49 20.2	-0.1
SIVA				S	Sb	22 49 46.2	0.0
APE	Apeiranthos	2.14	318	P	Pn	22 49 18.2	+0.4
APE	Apeiranthos	2.14	318	P	Pn	22 49 18.6	+0.8
APE	Apeiranthos	2.14	318	⇑P	Pn	22 49 18.9	+1.1
APE				⇓S	Sn	22 49 43.9	-0.3
APE	Apeiranthos	2.14	318	PN	Pn	22 49 18.9	+1.1
APE	Apeiranthos	2.14	318	P	Pn	22 49 18.2	+0.4
APE				S	Sn	22 49 45.2	+1.0
GCAM	G?zelcaml?	2.22	358	PN	Pn	22 49 20.4	+1.6
GCAM	G?zelcaml?	2.22	358	*i* P	Pn	22 49 19.7	+0.9
SMG	Samos	2.26	350	P	Pn	22 49 19.7	+0.3
SMG	Samos	2.26	350	P	Pn	22 49 19.9	+0.5
CAEL	Denizli, Camel	2.31	44	*i* P	Pb	22 49 22.9	-1.0
CAEL				IAML		22 50 10.0	
	comp=E,460nm,1.0s						
CAEL				IAML		22 50 19.0	
	comp=N,772nm,0.6s						
TAVA	DENIZLI_Tavas	2.37	33	*i* P	Pn	22 49 23.4	+2.4
TAVA				*i* S	Sn	22 49 51.1	+1.3
TAVA				IAML		22 50 00.0	
	comp=E,251nm,0.5s						
TAVA				IAML		22 50 04.0	
	comp=N,206nm,0.5s						
ELL	Elmali	2.46	58	PN	Pn	22 49 24.7	+2.5
ELL	Elmali	2.46	58		Pn	22 49 24.5	+2.3
GOLH	Golhisar	2.52	45	*i* P	Pb	22 49 26.5	-1.1
GOLH				*i* S	Sb	22 49 57.3	-1.3
GOLH				IAML		22 50 17.0	
	comp=N,286nm,0.9s						
VAM	Vamos	2.54	269	P	Pn	22 49 25.6	+2.3
DGB	zmir	2.59	352	*i* P	Pn	22 49 24.3	+0.4
DGB				*i* S	Sg	22 50 03.7	-2.1
GVDS	Gavdos	2.71	257	PN	Pn	22 49 28.3	+2.6
GVD	Gavdhos	2.72	257	P	Pb	22 49 28.9	-2.0
GVD	Gavdhos	2.72	257	PN	Pn	22 49 28.4	+2.7
IMMV	Iera Moni Meta	2.72	271	PN	Pn	22 49 27.4	+1.7
ZEYE	Izmir, Urla-Ze	2.83	347	*i* P	Pn	22 49 27.1	-0.1
URLA	Izmir	2.93	349	*i* P	Pn	22 49 31.4	+2.8
MANT	Manisa	3.17	18	*i* P	Pn	22 49 32.5	+0.3
MANT	Manisa	3.17	18	Pn	Pn	22 49 32.8	+0.6
AKHS	Akhisar	3.42	7	*i* P	Pn	22 49 35.9	+0.6
ISP	Isparta	3.48	47		Pn	22 49 38.3	+2.0
ZEDA	zmir-Bergama	3.48	357	*i* P	Pn	22 49 37.2	+0.9
OSC1	CSNet OBS 1	3.83	120	P	Pn	22 49 40.2	-0.7
OSC1				S	Sn	22 50 25.9	+0.2
AKMS	Akamas	4.14	95	P	Pn	22 49 45.7	+0.4
AKMS				AML	AML	22 50 35.0	
	comp=N,1.0nm,0.6s						
AKMS				AML	AML	22 50 36.9	
	comp=N,0.8nm,0.6s						
NATA	Nata	4.37	98	P	Pn	22 49 48.5	+0.1
LEF	Lefka	4.58	93	⇑P	Pn	22 49 51.5	+0.2
SZAC	Souni	4.62	97	P	Pn	22 49 51.8	-0.2
SZAC				AML	AML	22 50 46.1	
	comp=N,1.1nm,0.5s						
SZAC				AML	AML	22 50 47.3	
	comp=N,1.1nm,0.5s						
OSC2	CSNet OBS 4	4.75	119	P	Pn	22 49 54.1	+0.4
OSC2				S	Sn	22 50 48.7	+0.2
ASGA	Asgata	4.92	96	P	Pn	22 49 55.7	-0.2
CSS	Mathiatis	4.96	94	Pn	Pn	22 49 56.5	0.0
CSS	Mathiatis	4.96	94	P	Pn	22 49 56.2	-0.3
ATHAL	Athalassa	4.99	92	S	Sn	22 50 54.6	+0.2
MVOU	Mavrovouni	5.19	93	P	Pn	22 50 00.3	+0.5
AGG	Agios Georgios	5.32	313	Pn	Pn	22 50 01.3	-0.2
ALN	Alexandroupoli	5.50	350	Pn	Pn	22 50 05.1	+1.2
LIT	Litokhoron	5.99	322	Pn	Pn	22 50 11.4	+0.7
BR131	Keskin Array S	6.57	48	Pn	Pn	22 50 20.2	+1.4
BRTR	Keskin Array B	6.57	48	Pn	Pn	22 50 18.2	-0.6
	comp=N,0.2nm,0.3s,baz=217,slow=15,SNR=3.7						
BRTR	Keskin Array B	6.57	48		Pn	22 50 20.4	+1.5
MMAI	Mount Meron Ar	7.14	108	Pn	Pn	22 50 25.0	-1.6
	comp=N,4.5nm,0.3s,baz=306,slow=12,SNR=15						
MMAI				Sn	Sn	22 51 43.9	-3.6
	comp=N,5.6nm,0.3s,baz=297,slow=27,SNR=7.6						
VTS	Vitosha	7.80	337	⇑P	Pn	22 50 36.0	+0.3
EIL	Elat	8.66	130	Pn	Pn	22 50 45.3	-2.2
	comp=N,1.0nm,0.3s,baz=336,slow=2.1,SNR=8.5						
EIL				Sn	Sn	22 52 16.6	-8.3
	comp=N,1.3nm,0.3s,baz=40,slow=15,SNR=2.7						
TIRR	Tirgusor	9.01	5	Pn	Pn	22 50 53.3	+1.2
TIP	Timpagrande	9.18	297	⇓P	Pn	22 50 55.0	+0.4
TIP	Timpagrande	9.18	297	Pn	Pn	22 50 54.9	+0.4
CFR	Carcaliu	9.71	3	⇓P	Pn	22 51 01.9	+0.3
MLR	Muntele Rosu	10.05	354	⇓P	Pn	22 51 05.9	-0.7
VOIR		10.09	351	⇑P	Pn	22 51 07.9	+0.9
HERR	Herculane	10.11	340	⇓P	Pn	22 51 06.6	-0.5
PLOR	Plostina	10.37	357	⇓P	Pn	22 51 09.3	-1.5
VRI	Vrincioaia	10.38	358	⇑P	Pn	22 51 11.6	+0.6
RAFF	Raffo Rosso	10.59	283	Pn	Pn	22 51 13.8	0.0
SGRT	San Giovanni R	11.00	308	Pn	Pn	22 51 19.6	+0.1
BZS	Buzias	11.01	339	⇑P	Pn	22 51 19.5	0.0
TESR	Tescani	11.03	358	⇓P	Pn	22 51 20.3	+0.4
CORL	Corleone	11.50	286	Pn	Pn	22 51 27.7	+1.4
BUR08	Bucovina Ar. S	12.26	353	Pn	Pn	22 51 37.1	+0.4
NRCA	Norcia	13.23	308	Pn	Pn	22 51 51.4	+1.5
KOLS	Kolonicke sedl	13.95	346	*e*	P	22 52 15.3	+7.6
KBZ	Khabaz	14.55	51	Pn	P	22 52 12.8	-1.6
	comp=N,0.1nm,0.3s,baz=111,slow=3.1,SNR=2.1						
AKASG	Malin Array Be	15.28	5	Pn	Pn	22 52 17.7	+0.1
	comp=N,0.6nm,0.3s,baz=195,slow=12,SNR=4.2						
ABTA	Abfaltersbach	15.81	320	*e*Pn	Pn	22 52 25.6	+0.9
	comp=N,0.8nm,0.4s						
GERES	GERESS Array B	16.70	327	Pn	Pn	22 52 34.9	-1.2
	comp=N,0.1nm,0.3s,baz=150,slow=15,SNR=2.6						
FETA	Feichten	16.94	318	*e*Pn	P	22 52 41.7	+0.5
	comp=N,1.4nm,0.7s						
KHC	Kasperske Hory	16.97	328	*e*P	P	22 52 42.2	+0.9
SENIN	Lac Senin/Sane	18.57	312	P	P	22 52 59.0	-0.1
SENIN				IAmb	IAmb	22 53 02.2	
	comp=Z,9.1nm,1.1s						
ESBB	Sonseca Array	25.07	289	P	P	22 54 06.4	-0.1
ESBB				IAmb	IAmb	22 54 20.8	
	comp=Z,6.3nm,1.2s						
ESDC	Sonseca Array	25.07	289	P	P	22 54 06.7	+0.2
	comp=Z,1.3nm,0.6s,baz=81,slow=9.4,SNR=20						
PAB	San Pablo	25.37	289	P	P	22 54 09.1	-0.2
FINES	FINESS Array B	26.00	359	P	P	22 54 12.7	-1.9
	comp=Z,4.0nm,1.0s,baz=153,slow=12,SNR=1.9						
FINES	FINESS Array B	26.00	359	P	P	22 54 14.8	+0.3
HFS	Hagfors	26.20	345	P	P	22 54 16.3	-0.1
	comp=Z,2.8nm,0.9s,baz=157,slow=12,SNR=1.4						
AKTO	Aktyubinsk	26.75	47	P	P	22 54 25.1	+3.5
	comp=Z,1.2nm,0.6s,baz=248,slow=8.6,SNR=4.4						
TOA0	Torodi Ar. Sit	32.06	233	P	P	22 55 08.9	-0.1
TOA0				IAmb	IAmb	22 55 26.8	
	comp=Z,1.8nm,0.9s						
TORD	Torodi Ar. Bea	32.06	233	P	P	22 55 09.5	+0.5
	comp=Z,0.6nm,0.4s,baz=34,slow=8.5,SNR=4.7						
TORD	Torodi Ar. Bea	32.06	233	P	P	22 55 09.3	+0.3
ARCES	ARCESS Array B	34.12	359	P	P	22 55 25.3	-1.2
	comp=Z,4.6nm,1.0s,baz=186,slow=8.2,SNR=2.0						
KURBB	Kurchatov Arra	39.55	51	P	P	22 56 12.8	-0.1
	comp=Z,0.2nm,0.3s,baz=276,slow=8.6,SNR=1.2						
ZALV	Zalesovo Beam	43.51	46	P	P	22 56 45.6	+0.4
	comp=Z,0.6nm,0.4s,baz=270,slow=12,SNR=1.7						
SONM	Songino Array	57.92	51	P	P	22 58 33.4	-0.9
	comp=Z,0.2nm,0.4s,baz=72,slow=42,SNR=1.9						
USRK	Ussuriysk Ar.	75.36	46	P	P	23 00 26.2	+0.7
	comp=Z,0.4nm,0.3s,baz=305,slow=5.1,SNR=1.7						
YKA	Yellowknife Ar	77.67	343	P	P	23 00 38.3	+0.2
	comp=Z,0.2nm,0.8s,baz=50,slow=6.8,SNR=1.6						

NEIC ***13*** *22:53:16.5±1.4, 10°.5S±0°.1×161°.5E±0°.1, h112^{km}±7^{km}, mb4.5/28, Error ellipse: s-maj=18.5km s-min=12.1km az=53.0*

IDC ***13*** *22:53:16.1±2.1, 10°.51S×161°.44E, h108^{km}±15^{km}, mb3.9/13, mb1 4.1/14, mb1mx3.9/35, mbtmp4.3/14, MS3.2/9, Ms1 3.2/9, ms1mx3.0/33, Error ellipse: s-maj=22.6km s-min=13.7km az=92.0*

ISC 13 22:53:14.8±0.6, **10°.50S**±0°.07×**161°.63E**±0°.09, **h100**^{km}, **n58, σ1^{s}.48**/56, **mb4.4**/26, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.97	303	P	Pn	22 53 47.3	+0.4
	510nm,0.3s,baz=147,slow=7.0,SNR=81						
HNR				S	Sn	22 54 09.9	-1.6
	88nm,0.3s,baz=104,slow=22,SNR=1.2						
HNR				LR	LR	22 54 31.5	
	comp=Z,131nm,21.0s,baz=87,slow=41						
SANVU	Saraoutou	7.33	133		Pn	22 54 58.7	-0.5
NOUC	Port Laguerre	12.37	159	P	Pn	22 56 10.5	+3.1
DZM	Mont Dzumac	12.39	159	P	Pn	22 56 10.8	+3.0
	1.7nm,0.3s,baz=14,slow=7.4,SNR=21						
DZM				S	Sn	22 58 19.0	-5.2
	2.5nm,0.3s,baz=246,slow=21,SNR=7.3						
DZM				LR	LR	22 59 26.6	
	comp=Z,104nm,19.5s,baz=290,slow=30						
DZM	Mont Dzumac	12.39	159		Pn	22 56 09.8	+2.0
DZM	Mont Dzumac	12.39	159	P	Pn	22 56 10.1	+2.3
YATNC	Mamie plateau,	12.55	157	P	Pn	22 56 12.7	+2.9
OUENC	Ouen Island, N	12.86	158	P	Pn	22 56 18.2	+4.4
PMG	Port Moresby	14.29	273	LR	LR	23 01 12.4	
	comp=Z,115nm,19.6s,baz=159,slow=34						
MSVF	Nonsavu	17.47	116	LR	LR	23 02 03.6	
	comp=Z,28nm,22.0s,baz=165,slow=30						
CTA	Charters Tower	17.61	235	P	Pn	22 57 15.9	+2.0
	0.5nm,0.3s,baz=60,slow=12,SNR=6.6						
CTAO	Charters Tower	17.61	235		Pn	22 57 14.6	+0.7
COEN	Coen	18.35	257	P	Pn	22 57 23.6	+0.7
ARMA	Armidale	21.89	204	P	P	22 58 00.5	+0.7
ARMA				IAmb	IAmb	22 58 20.3	
	comp=Z,21nm,1.3s						
WR0	Warramunga Arr	27.73	247	P	P	22 58 53.3	-0.8
WR0				IAmb	IAmb	22 59 12.1	
	comp=Z,9.9nm,1.2s						
WB0	Warramunga Arr	27.82	247	P	P	22 58 54.3	-0.6
WB0				IAmb	IAmb	22 58 55.6	
	comp=Z,7.0nm,0.9s						
WB2	Warramunga Arr	27.90	247	P	P	22 58 54.9	-0.8
WB2				IAmb	IAmb	22 58 55.4	
	comp=Z,8.4nm,1.2s						
WRA	Warramunga Arr	27.91	247	P	P	22 58 55.1	-0.6
	comp=Z,3.0nm,0.5s,baz=78,slow=9.1,SNR=17						
STKA	Stephens Creek	28.20	218	P	P	22 58 57.7	-0.5
	comp=Z,1.8nm,0.6s,baz=59,slow=13,SNR=5.3						
STKA				LR	LR	23 09 15.1	
	comp=Z,62nm,19.2s,baz=31,slow=34						
STKA	Stephens Creek	28.20	218	P	P	22 58 58.0	-0.1
ASAR	Alice Springs	29.48	240	P	P	22 59 07.8	-1.8
	comp=Z,1.4nm,0.7s,baz=72,slow=9.5,SNR=12						
ASAR				LR	LR	23 09 52.4	
	comp=Z,47nm,19.0s,baz=354,slow=34						
ASAR	Alice Springs	29.48	240	P	P	22 59 10.0	+0.4
TOO	Toolangi	30.61	206	P	P	22 59 20.1	+0.7
TOO				IAmb	IAmb	22 59 21.1	
	comp=Z,7.5nm,0.6s						
BBOO	Buckleboo	32.35	223	P	P	22 59 33.9	-0.8
BBOO				IAmb	IAmb	22 59 34.9	
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	35.63	254	P	P	23 00 02.1	-1.1
	comp=Z,2.9nm,0.7s,baz=55,slow=12,SNR=7.1						
FITZ	Fitzroy Crossi	35.63	254	P	P	23 00 02.2	-1.1
FITZ				IAmb	IAmb	23 00 08.2	
	comp=Z,15nm,1.5s						
PSA00	Pilbara Seismi	41.51	249	P	P	23 00 51.3	-1.2
MORW	Morawa	46.36	240	P	P	23 01 30.6	-0.6
MORW				IAmb	IAmb	23 01 30.9	
	comp=Z,17nm,1.4s						

JMN	Monobe	51.30	330	P	P	23 02 09.4	+0.6
MJAR	Matsushiro Arr	51.73	336	P	P	23 02 11.2	-0.7
	comp=Z,2.4nm,0.7s,baz=168,slow=8.5,SNR=6.5						
JNU	Nakatsue	52.35	327	P	P	23 02 16.7	0.0
KSRS	Korea Array	57.22	328	P	P	23 02 51.8	+0.2
	comp=Z,3.8nm,0.9s,baz=141,slow=7.5,SNR=12						
KSRS				LR	LR	23 24 50.0	
	comp=Z,30nm,20.5s,baz=333,slow=33						
KSAR	Wonju Array Be	57.23	328	P	P	23 02 51.4	-0.3
USA0B	Ussuriysk Arra	60.73	336	P	P	23 03 15.8	+0.1
USRK	Ussuriysk Ar.	60.73	336	P	P	23 03 16.4	+0.7
	comp=Z,7.7nm,0.9s,baz=141,slow=7.8,SNR=19						
PETK	Petropavlovsk-	63.45	357	LR	LR	23 26 46.2	
	comp=Z,12nm,21.9s,baz=306,slow=32						
VNDA	Vanda	67.00	180	P	P	23 03 57.0	+0.6
	comp=Z,0.8nm,0.7s,baz=328,slow=5.6,SNR=5.3						
VNDA	Vanda	67.00	180	P	P	23 03 57.1	+0.6
VNDA				IAmb	IAmb	23 03 59.8	
	comp=Z,5.8nm,1.5s						
CMAR	Chiang Mai Arr	68.20	295	P	P	23 04 04.9	-0.1
	comp=Z,1.6nm,0.6s,baz=126,slow=4.9,SNR=8.9						
CMAR				LR	LR	23 35 31.3	
	comp=Z,12nm,18.7s,baz=260,slow=37						
CMAR	Chiang Mai Arr	68.20	295	P	P	23 04 04.5	-0.5
ULN	Ulaanbaatar	75.53	325	P	P	23 04 48.8	+0.3
ULN				IAmb	IAmb	23 04 50.0	
	comp=Z,7.1nm,1.0s						
SONM	Songino Array	75.88	325	P	P	23 04 50.8	+0.4
	comp=Z,4.4nm,0.8s,baz=142,slow=6.1,SNR=27						
SONM	Songino Array	75.88	325	P	P	23 04 50.5	+0.1
YAK	Yakutsk	76.48	345	P	P	23 04 53.4	+0.1
QSPA	South Pole Qui	79.50	180	P	P	23 05 10.0	-0.2
TTA	Tatalina	80.13	18	P	P	23 05 14.3	+0.8
SCM	Sheep Creek Mo	82.30	22	P	P	23 05 26.0	+0.9
KLU	Klutina	82.61	23	P	P	23 05 28.4	+1.7
KLU				IAmb	IAmb	23 05 41.9	
	comp=Z,15nm,1.4s						
IMAR	Indian Mountai	83.04	17	P	P	23 05 29.6	+0.9
N25K	Chitina, Valde	83.18	23	P	P	23 05 30.8	+1.2
N25K				IAmb	IAmb	23 05 42.9	
	comp=Z,12nm,1.1s						
MDM	Murphy Dome	84.01	19	P	P	23 05 34.1	+0.4
MDM				IAmb	IAmb	23 05 34.6	
	comp=Z,5.0nm,1.1s						
HDA	Harding Lake	84.08	20	P	P	23 05 35.1	+1.0
HDA				IAmb	IAmb	23 05 35.4	
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	84.33	20	P	P	23 05 35.3	0.0
	comp=Z,0.9nm,0.6s,baz=246,slow=5.4,SNR=12						
EGAK	Eagle	86.30	21	P	P	23 05 46.5	+1.4
EGAK				IAmb	IAmb	23 05 47.5	
	comp=Z,9.8nm,1.1s						
DLBC	Dease Lake	87.89	29	LR	LR	23 45 58.7	
	comp=Z,29nm,18.5s,baz=335,slow=36						
MK31	Makanchi Array	90.38	318	P	P	23 06 03.9	-1.0
MKAR	Makanchi Array	90.38	318	P	P	23 06 04.2	-0.8
	comp=Z,1.4nm,0.5s,baz=94,slow=6.2,SNR=27						
YKA	Yellowknife Ar	96.36	28	P	P	23 06 31.6	-0.4
	comp=Z,0.5nm,0.7s,baz=256,slow=4.2,SNR=7.8						

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*KRNET **13** 22:54:14.7±0.1, 40°.85N×74°.29E, h15^{km}, mb4.1*
*SOME **13** 22:54:15.3, 40°.92N×74°.33E, h5^{km}*
*NNC **13** 22:54:16.1±0.8, 40°.86N×74°.35E, h0^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=5.4km s-min=3.9km az=3.0*
ISC 13 22:54:14.0±1.2**, 40°.84N**±0°.02×**74°.29E**±0°.02**, h5^{km}**±11^{km}**, n89,** σ**2^{s}.03**/137**, 33C-26D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARLS	Aral	1.02	1	⇓*i*P	Pb	22 54 34.0	-0.3
	baz=2.0						
ARLS				⇓*i*S	Sg	22 54 47.8	+1.0
	baz=2.0						
SFK	Sufi-Kurgan	1.02	216	⇑*i*P	Pb	22 54 33.9	-0.5
	baz=16						
SFK				⇑*i*S	Sn	22 54 48.5	-1.7
	baz=16						
ARSB	Arslanbob	1.10	296	⇓*i*P	Pb	22 54 35.5	-0.2
	baz=96						
ARSB				⇓*i*S	Sg	22 54 50.4	+1.0
	baz=96						
OHH	Osh	1.19	255	⇑*i*P	Pn	22 54 36.8	-0.7
	baz=55						
OHH				⇑*i*S	Sg	22 54 53.0	+0.7
	baz=55						
AML	Almayashu	1.36	341	⇓*i*P	Pb	22 54 40.2	-0.1
	baz=41						
AML				⇓*i*S	Sg	22 54 58.4	+0.5
	baz=41						
AML	Almayashu	1.36	341	P	Pb	22 54 40.5	+0.2
	SNR=172						
UCH	Uchtor	1.39	7	⇑*i*P	Pb	22 54 41.1	+0.2
	baz=7.0						
UCH				⇑*i*S	Sg	22 55 00.0	+1.1
	baz=7.0						
UCH	Uchtor	1.39	7	P	Pg	22 54 41.3	+0.5
	SNR=164						
AAK	Ala-Archa	1.80	5	⇓*i*P	Pg	22 54 48.4	-0.1
	baz=5.0						
AAK				⇓*i*S	Sg	22 55 11.9	0.0
	baz=5.0						
AAK	Ala-Archa	1.80	5	P	Pg	22 54 48.6	+0.1
	SNR=296						
AAK	Ala-Archa	1.80	5	⇓P	Pg	22 54 48.6	+0.1
	281nm,0.6s						
AAK				⇑S	Sg	22 55 12.7	+0.8
	168nm,0.8s						
KSH	Kashi	1.85	135	Pn	Pg	22 54 50.9	+1.4
KSH				Sn	Sg	22 55 16.3	+2.9
KSH				smax	smax		
	comp=N,450nm,0.5s						
KSH				smax	smax		
	comp=E,330nm,0.8s						
EKS2	Erkin-Say	1.86	348	⇑*i*P	Pb	22 54 48.8	+0.2
	baz=48						
EKS2				⇑*i*S	Sg	22 55 13.2	-0.5
	baz=48						
EKS2	Erkin-Say	1.86	348	P	Pg	22 54 49.5	-0.2
	SNR=156						
KBK	Karagaybulak	1.88	15	⇑*i*P	Pb	22 54 49.7	+0.7
	baz=15						
KBK				⇑*i*S	Sg	22 55 14.6	+0.2
	baz=15						
KBK	Karagaybulak	1.88	15	P	Pg	22 54 50.1	0.0
	SNR=354						
FRU1	Bishkek	1.98	7	⇓*i*P	Pb	22 54 51.5	+0.8
	baz=7.0						
FRU1				⇓*i*S	Sg	22 55 17.6	-0.1
	baz=7.0						
ULHL	Ulahol	2.03	46	⇓*i*P	Pb	22 54 52.1	+0.6
	baz=46						
ULHL				⇓*i*S	Sg	22 55 19.1	-0.1
	baz=46						
ULHL	Ulahol	2.03	46	P	Pb	22 54 52.1	+0.6
	SNR=25						
BOOM	Boomskoye usch	2.06	36	⇓*i*P	Pb	22 54 52.9	+0.9
	baz=36						
BOOM				⇓*i*S	Sg	22 55 20.3	+0.1
	baz=36						
MRKS	Merke	2.06	338	*e*P	Pg	22 54 53.8	+0.3
	comp=E,262nm,0.3s						
MRKS				*e*S	Sg	22 55 22.0	+1.8
	comp=E,200nm,0.3s						
MRKS	Merke	2.06	338	Pg	Pb	22 54 53.0	+0.9
	comp=E,262nm,0.3s						
MRKS				Lg	Lg	22 55 19.9	
	comp=E,200nm,0.3s						
MNAS	Manas	2.12	321	⇑*i*P	Pb	22 54 53.4	+0.3
	baz=22						
MNAS				⇑*i*S	Sg	22 55 21.3	-0.8
	baz=22						
CHMS	Chumysh	2.18	9	⇑*i*P	Pb	22 54 54.2	+0.1
	baz=9.0						
CHMS				⇑*i*S	Sb	22 55 22.1	+0.7
	baz=9.0						
CHMS	Chumysh	2.18	9	P	Pg	22 54 55.3	-0.6
	SNR=47						
TKM2	Tokmak 2	2.29	25	⇑*i*P	Pb	22 54 56.0	-0.1
	baz=25						
TKM2				⇑*i*S	Sb	22 55 25.5	+0.7
	baz=25						
TKM2	Tokmak 2	2.29	25	P	Pb	22 54 56.7	+0.6
	SNR=32						
TKM2	Tokmak 2	2.29	25	⇓Pn	Pb	22 54 56.7	+0.6
	comp=E,37nm,0.3s						
TKM2				⇓Lg	Lg	22 55 28.6	
	comp=E,167nm,0.5s						
DRK	Karamyk	2.34	235	⇓*i*P	Pb	22 54 56.4	-0.6
	baz=35						
DRK				⇓*i*S	Sb	22 55 27.0	+0.6
	baz=35						
USP	Ospenovka	2.43	4	⇑*i*P	Pb	22 54 57.5	-0.8
	baz=4.0						
USP				⇑*i*S	Sb	22 55 27.9	-0.6
	baz=4.0						
USP	Ospenovka	2.43	4	P	Pb	22 54 58.2	0.0
	SNR=149						
TRKS	Terek-Say	2.48	287	⇑*i*P	Pb	22 54 57.9	-1.2
	baz=86						
TRKS				⇑*i*S	Sb	22 55 28.3	-1.7
	baz=86						
KDJ	Kajisay	2.52	58	⇑*i*P	Pb	22 54 58.6	-1.4
	baz=59						
KDJ				⇑*i*S	Sb	22 55 30.4	-1.0
	baz=59						
KST	Kastek	2.53	29	*e*P	Pg	22 55 01.6	-0.9
	comp=E,287nm,0.4s						
KST				*e*S	Sg	22 55 35.5	+0.2
	comp=E,181nm,0.4s						
KST	Kastek	2.53	29	Pg	Pg	22 55 01.9	-0.6
	comp=E,287nm,0.4s						
KST				Lg	Lg	22 55 35.9	
	comp=E,181nm,0.4s						
SGDS	Sogindy	2.62	5	Pg	Pg	22 55 04.0	-0.2
	comp=E,143nm,0.5s						
SGDS				Lg	Lg	22 55 39.1	
	comp=E,135nm,0.7s						
DGS	Degeres	2.64	24	*e*P	Pg	22 55 04.4	-0.2
	comp=E,169nm,0.4s						
DGS				*e*S	Sg	22 55 39.8	+1.0
	comp=E,425nm,0.6s						
DGS	Degeres	2.64	24	Pg	Pg	22 55 04.4	-0.2
	comp=E,169nm,0.4s						
DGS				Lg	Lg	22 55 39.8	
	comp=E,425nm,0.6s						
BTK	Batken	2.76	255	⇑*i*P	Pb	22 55 02.3	-1.7
	baz=55						
BTK				⇑*i*S	Sb	22 55 36.7	-1.5
	baz=55						
MTBS	Maitube	2.79	34	*e*P	Pg	22 55 06.3	-1.1
	comp=E,81nm,0.3s						
MTBS				*e*S	Sg	22 55 43.4	-0.2
	comp=E,243nm,0.3s						
MTBS	Maitube	2.79	34	Pg	Pg	22 55 06.4	-1.1
	comp=E,81nm,0.3s						
MTBS				Lg	Lg	22 55 43.4	
	comp=E,243nm,0.3s						
TNSS	Tian-Shan	2.96	41	*e*P	Pg	22 55 09.4	-1.2
	comp=E,107nm,0.3s						
TNSS				*e*S	Sg	22 55 48.5	-0.5
	comp=E,192nm,0.4s						
TNSS	Tian-Shan	2.96	41	Pg	Pg	22 55 09.4	-1.2
	comp=E,107nm,0.3s						
TNSS				Lg	Lg	22 55 48.5	
	comp=E,192nm,0.4s						
DZA	Taraz	3.01	314	*e*P	Pb	22 55 09.8	+1.5
	comp=E,90nm,0.4s						
DZA				*e*S	Sb	22 55 47.9	+2.5
	comp=E,325nm,0.4s						
DZA	Taraz	3.01	314	Pg	Pb	22 55 09.7	+1.5
	comp=E,90nm,0.4s						
DZA				Lg	Lg	22 55 47.9	
	comp=E,325nm,0.4s						
KNDC	Almaty	3.10	39	⇓Pg	Pg	22 55 12.2	-1.2
	comp=E,96nm,0.6s						
KNDC				⇓Lg	Lg	22 55 53.8	
	comp=E,733nm,0.5s						
MDOK	Medeo	3.10	41	*e*P	Pg	22 55 12.3	-1.1
	comp=E,44nm,0.3s						
MDOK				*e*S	Sg	22 55 52.8	-0.8
	comp=E,209nm,0.4s						
MDOK	Medeo	3.10	41	⇓Pg	Pb	22 55 10.8	+1.0
	comp=E,26nm,0.4s						
MDOK				⇑Lg	Lg	22 55 52.9	
	comp=E,140nm,0.5s						
MDOK	Medeo	3.10	41	Pg	Pg	22 55 12.3	-1.1
	comp=E,44nm,0.3s						
MDOK				Lg	Lg	22 55 52.8	
	comp=E,209nm,0.4s						
KOTS	Kotyrbulak	3.18	40	*e*P	Pg	22 55 14.0	-1.0
	comp=E,201nm,0.4s						
KOTS				*e*S	Sg	22 55 55.7	-0.6
	comp=E,510nm,0.4s						
KOTS	Kotyrbulak	3.18	40	Pg	Pg	22 55 14.0	-1.0
	comp=E,201nm,0.4s						
KOTS				Lg	Lg	22 55 55.7	
	comp=E,510nm,0.4s						
ANVS	Anan'yevo	3.18	51	⇑*i*P	Pb	22 55 08.3	-2.9
	baz=51						
ANVS				⇑*i*S	Sb	22 55 47.2	-3.2
	baz=51						
KUU	Kurty	3.41	26	*e*P	Pb	22 55 17.3	+2.4
	comp=E,53nm,0.6s						
KUU				*e*S	Sg	22 56 02.4	-1.0
	comp=E,396nm,0.5s						
KUU	Kurty	3.41	26	Pg	Pb	22 55 17.3	+2.4
	comp=E,53nm,0.6s						
KUU				Lg	Lg	22 56 02.4	
	comp=E,396nm,0.5s						
IUG	Iuzhnay	3.46	294	*e*P	Pg	22 55 18.4	-1.8
	comp=E,63nm,0.5s						
IUG				*e*S	Sg	22 56 03.6	-1.4
	comp=E,298nm,0.4s						
PRZ	Przheval'sk	3.49	61	⇑*i*P	Pn	22 55 12.4	+3.2
	baz=60						
PRZ				⇑*i*S	Sb	22 55 54.3	-4.9
	baz=60						
KK31	Karatay Array	3.61	310	Pn	Pn	22 55 13.2	+2.5
	comp=E,0.4nm,0.2s,baz=126,slow=12,SNR=113						
KK31				⇑Pg	Pb	22 55 20.2	+1.8
	comp=E,22nm,0.8s,baz=129,slow=15,SNR=57						
KK31				Lg	Lg	22 56 08.8	
	comp=E,85nm,0.6s,baz=128,slow=28,SNR=22						
CHKK	Chushkaly	3.61	33	*e*P	Pg	22 55 21.3	-1.9
	comp=E,19nm,0.4s						
CHKK				*e*S	Sg	22 56 08.5	-1.5
	comp=E,253nm,0.5s						
CHKK	Chushkaly	3.61	33	Pg	Pg	22 55 21.3	-1.9
	comp=E,19nm,0.4s						
CHKK				Lg	Lg	22 56 08.5	
	comp=E,253nm,0.5s						
SATY	Saty	3.78	53	*e*P	Pg	22 55 24.3	-2.2
	comp=E,32nm,0.3s						
SATY				*e*S	Sg	22 56 13.6	-2.0
	comp=E,171nm,0.4s						
SATY	Saty	3.78	53	Pg	Pg	22 55 24.3	-2.2
	comp=E,32nm,0.3s						
SATY				Lg	Lg	22 56 13.6	
	comp=E,171nm,0.4s						
CHM	Chimkent	3.81	294	*e*P	Pg	22 55 26.0	-1.1
	comp=E,30nm,0.5s						
CHM				*e*S	Sg	22 56 17.0	+0.5
	comp=E,254nm,0.4s						
ZHN	Zhinishke	3.86	52	*e*P	Pb	22 55 25.4	+2.6
	comp=E,8.6nm,0.1s						
ZHN				*e*S	Sg	22 56 15.8	-2.4
	comp=E,165nm,0.6s						
ZHN	Zhinishke	3.86	52	Pg	Pb	22 55 25.4	+2.6
	comp=E,8.6nm,0.1s						
ZHN				Lg	Lg	22 56 16.0	
	comp=E,165nm,0.6s						
KURS	Kuram	3.91	46	*e*P	Pg	22 55 27.0	-2.0
	comp=E,10nm,0.6s						
KURS				*e*S	Sg	22 56 18.2	-1.4
	comp=E,101nm,0.6s						
KURS	Kuram	3.91	46	Pg	Pb	22 55 26.2	+2.6
	comp=E,19nm,0.5s						
KURS				Lg	Lg	22 56 18.2	
	comp=E,101nm,0.6s						
KPKS	Kokpek	4.19	50	*e*P	Pb	22 55 31.3	+3.0
	comp=E,34nm,0.2s						
KPKS				*e*S	Sg	22 56 26.1	-2.4
	comp=E,238nm,0.5s						
UZB	Uzynbulak	4.21	55	*e*P	Pb	22 55 31.9	+3.2
	comp=E,31nm,0.2s						
UZB				*e*S	Sg	22 56 26.7	-2.6
	comp=E,88nm,0.5s						
UZB	Uzynbulak	4.21	55	Pg	Pb	22 55 31.9	+3.2
	comp=E,31nm,0.2s						
UZB				Lg	Lg	22 56 26.7	
	comp=E,88nm,0.5s						
ARXS	Arharly	4.26	37	*e*P	Pb	22 55 32.1	+2.6
	comp=E,79nm,0.5s						
ARXS				*e*S	Sg	22 56 27.4	-3.5
	comp=E,303nm,0.4s						
ARXS	Arharly	4.26	37	Pg	Pb	22 55 32.1	+2.6
	comp=E,79nm,0.5s						
ARXS				Lg	Lg	22 56 27.4	
	comp=E,303nm,0.4s						
MNBS	Baschi	4.44	42	*e*P	Pg	22 55 36.4	-2.7
	comp=E,22nm,0.3s						
MNBS				*e*S	Sg	22 56 34.4	-2.2
	comp=E,198nm,0.3s						
MNBS	Baschi	4.44	42	Pg	Pg	22 55 36.3	-2.7
	comp=E,22nm,0.3s						
MNBS				Lg	Lg	22 56 34.4	
	comp=E,198nm,0.3s						
SHLS	Shalkode	4.49	57	*e*P	Pg	22 55 41.7	+1.5
	comp=E,33nm,0.3s						
SHLS				*e*S	Sg	22 56 43.0	+4.7
	comp=E,174nm,0.5s						
SHLS	Shalkode	4.49	57	Pg	Pg	22 55 41.7	+1.5
	comp=E,33nm,0.3s						
SHLS				Lg	Lg	22 56 43.0	
	comp=E,174nm,0.5s						
PDGK	Podgornoye	4.60	56	Pg	Pb	22 55 37.9	+2.6
	comp=E,9.4nm,0.4s						
PDGK				Lg	Lg	22 56 37.4	
	comp=E,50nm,0.6s						
PDGK	Podgornoye	4.60	56	⇑Pg	Pg	22 55 39.7	-2.5
	comp=E,17nm,0.6s						
PDGK				⇓Lg	Lg	22 56 41.8	
	comp=E,100nm,0.7s						
TDK	Taldyqorghan	5.14	35	*e*P	Pg	22 55 48.9	-3.5
	comp=E,82nm,0.5s						
TDK				*e*S	Sg	22 56 55.3	-3.7
	comp=E,256nm,0.7s						
TDK	Taldyqorghan	5.14	35	Pg	Pg	22 55 48.9	-3.5
	comp=E,82nm,0.5s						
TDK				Lg	Lg	22 56 55.3	
	comp=E,256nm,0.7s						
KTMS	Ketmen	5.20	58	*e*P	Pb	22 55 49.1	+3.5
	comp=E,6.6nm,0.2s						
KTMS				*e*S	Sg	22 56 55.8	-5.3
	comp=E,34nm,0.5s						
KTMS	Ketmen	5.20	58	Pg	Pb	22 55 49.1	+3.5
	comp=E,6.6nm,0.2s						
KTMS				Lg	Lg	22 56 55.8	
	comp=E,34nm,0.5s						
DJR	Jarkent	5.35	48	*e*P	Pb	22 55 52.3	+4.2
	comp=E,15nm,0.3s						
DJR				*e*S	Sg	22 57 01.7	-4.2
	comp=E,60nm,0.6s						
DJR	Jarkent	5.35	48	Pg	Pb	22 55 52.3	+4.2
	comp=E,15nm,0.3s						
DJR				Lg	Lg	22 57 01.7	
	comp=E,60nm,0.6s						
KAPS	Kapalarasan	5.79	38	*e*P	Pg	22 56 00.9	-4.0
	comp=E,5.0nm,0.7s						
KAPS				*e*S	Sg	22 57 16.7	-3.1
	comp=E,53nm,0.7s						
KAPS	Kapalarasan	5.79	38	Pg	Pg	22 56 00.9	-4.0
	comp=E,6.5nm,0.3s						
KAPS				Lg	Lg	22 57 13.6	
	comp=E,40nm,0.6s						
MAKZ	Makanchi	8.15	40	⇓Pn	Pn	22 56 15.4	+2.4
	comp=E,5.5nm,1.4s						
MAKZ				⇑Lg	Lg	22 58 34.4	
	comp=E,18nm,1.1s						
MK31	Makanchi Array	8.29	42	Pn	Pn	22 56 18.9	+3.9
	comp=E,2.3nm,0.8s,baz=222,slow=15,SNR=17						
MK31				⇓Lg	Lg	22 58 39.3	
	comp=E,6.6nm,0.7s,baz=225,slow=28,SNR=4.8						
KURK	Kurchatov	10.32	16	⇓Lg	Lg	22 59 42.4	
	comp=E,30nm,1.0s						
WMQ	Urumqi	10.36	69	*e*P	Pn	22 56 45.8	+2.4
WMQ				smax	smax		
	comp=N,9.0nm,0.7s						
WMQ				smax	smax		
	comp=E,13nm,0.5s						

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*GCG **13** 23:07:27.6±0.7, 12°.57N×90°.71W, h29^{km}±392^{km}, MD4.3*
*SNET **13** 23:07:34.3±0.9, 13°.09N×90°.38W, h16^{km}±5^{km}, ML4.3*
*UCR **13** 23:07:34.4±0.8, 13°.10N×90°.38W, h18^{km}±5^{km}, ML4.3, mb4.2(NEIC)*
*INET **13** 23:07:36.2, 13°.10N×90°.36W, h32^{km}, MW4.0*
*IDC **13** 23:07:40.2±2.9, 13°.62N×89°.79W, h65^{km}±25^{km}, mb3.7/12, mb1 4.0/14, mb1mx3.7/43, mbtmp4.0/14, ML3.5/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/37, Error ellipse: s-maj=33.5km s-min=13.8km az=46.0*
*NEIC **13** 23:07:40.1±2.4, 13°.34N±0°.08×90°.14W±0°.07, h64^{km}±6^{km}, mb4.2/70, Md4.3(SNET), Error ellipse: s-maj=12.6km s-min=8.6km az=215.0*
ISC 13 23:07:34.0±0.5**, 13°.10N**±0°.05×**90°.37W**±0°.04**, h24^{km}, n161,** σ**1^{s}.66**/169**, mb4.3**/35**, MS3.1**/3**, 4C-19D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	1.03	45	⇓*i*P	Pb	23 07 53.4	+0.1
CEVE				*e*S	Sn	23 08 09.4	+2.5
CEVE	Cerro Verde	1.03	45	⇓*i*P	Pb	23 07 53.4	+0.1
CEVE				*e*S	Sn	23 08 09.4	+2.5
SBLS	San Blas	1.04	44	⇓*i*P	Pb	23 07 53.5	+0.1
SBLS	San Blas	1.04	44	⇓*i*P	Pb	23 07 53.5	+0.1
JAYA	Jayaque - finc	1.06	58	⇓*i*P	Pn	23 07 53.6	+0.2
JAYA				IAML		23 08 12.5	
	comp=Z,10µm,0.2s						
JAYA	Jayaque - finc	1.06	58	⇓*i*P	Pn	23 07 53.6	+0.2
JAYA				IAML		23 08 12.5	
	comp=Z,10µm,0.2s						
RTR	El Retiro	1.06	41	*i* P	Pn	23 07 53.9	+0.3
RTR	El Retiro	1.06	41	*i* P	Pn	23 07 53.9	+0.3
SNJE	San Jose	1.07	44	⇓*i*P	Pn	23 07 53.9	+0.2
SNJE	San Jose	1.07	44	⇓*i*P	Pn	23 07 53.9	+0.2
LALI	Alcalda de L	1.10	69	⇓*e*P	Pn	23 07 54.2	+0.4
LALI	Alcalda de L	1.10	69	⇓*e*P	Pn	23 07 54.2	+0.4
CEDA	San Andres	1.18	53	⇓*i*P	Pn	23 07 55.6	+0.5
CEDA				IAML		23 08 21.4	
	comp=Z,8µm,0.4s						
CEDA	San Andres	1.18	53	⇓*i*P	Pn	23 07 55.6	+0.5
CEDA				IAML		23 08 21.4	
	comp=Z,8µm,0.4s						
SNET	Serv Nac Est T	1.26	62	*i* P	Pn	23 07 56.6	+0.5
SNET				*e*S	Sb	23 08 13.8	+1.0
SNET	Serv Nac Est T	1.26	62	*i* P	Pn	23 07 56.6	+0.5
SNET				*e*S	Sb	23 08 13.8	+1.0
SNET	Serv Nac Est T	1.26	62	Pn	Pn	23 07 56.5	+0.3
PCG	Pacaya	1.31	350	*e*P	Pn	23 07 57.2	+0.2
TACO	Tacachico	1.32	49	⇓*i*P	Pn	23 07 57.5	+0.6
TACO				*e*S	Sb	23 08 15.8	+1.2
TACO	Tacachico	1.32	49	⇓*i*P	Pn	23 07 57.5	+0.6
TACO				*e*S	Sb	23 08 15.8	+1.2
LFRS	El Faro	1.38	67	*i* P	Pn	23 07 58.4	+0.6
LFRS	El Faro	1.38	67	*i* P	Pn	23 07 58.4	+0.6
LFU	La Fuente	1.39	62	*e*P	Pb	23 07 59.3	0.0
LFU	La Fuente	1.39	62	*e*P	Pb	23 07 59.3	0.0
FUG	Fuego 3	1.42	341	*e*P	Pn	23 07 58.4	-0.1
FUG				*e*S	Sb	23 08 22.1	+4.4
LBRS	Las Brisas	1.44	64	*e*P	Pn	23 07 59.7	+1.0
LBRS	Las Brisas	1.44	64	*e*P	Pn	23 07 59.7	+1.0
NBG	Las Nubes	1.48	1	*e*P	Pn	23 08 01.2	+1.8
PAVA	Las Pavas	1.52	66	*e*P	Pn	23 08 01.2	+1.3
PAVA	Las Pavas	1.52	66	*e*P	Pn	23 08 01.2	+1.3
COEG	Centro de Oper	1.54	70	⇑*e*P	Pn	23 08 01.1	+1.0
COEG				IAML		23 08 28.4	
	comp=Z,7µm,0.4s						
COEG	Centro de Oper	1.54	70	⇑*e*P	Pn	23 08 01.1	+1.0
COEG				IAML		23 08 28.4	
	comp=Z,7µm,0.4s						
MTO3	Montecristo	1.63	37	⇓*i*P	Pn	23 08 02.4	+1.0
MTO3	Montecristo	1.63	37	⇓*i*P	Pn	23 08 02.4	+1.0
MTO3	Montecristo	1.63	37	Pn	Pn	23 08 02.4	+1.0
ESQI	Esquipulas	1.77	34	⇓*i*P	Pn	23 08 04.5	+1.3
ESQI	Esquipulas	1.77	34	Pn	Pn	23 08 04.0	+0.8
COEB	Comit de Eme	1.84	77	*e*P	Pn	23 08 05.0	+0.8
COEB				IAML		23 08 31.5	
	comp=Z,3µm,0.4s						
COEB	Comit de Eme	1.84	77	*e*P	Pn	23 08 05.0	+0.8
COEB				IAML		23 08 31.5	
	comp=Z,3µm,0.4s						
JUCU	Jucuar¡n	2.07	85	⇑*e*P	Pn	23 08 09.0	+1.6
JUCU	Jucuar¡n	2.07	85	⇑*e*P	Pn	23 08 09.0	+1.6
MRL	Marmol	2.08	19	*e*P	Pn	23 08 09.7	+2.1
FAGO	Alcalda de S	2.28	75	*e*P	Pn	23 08 11.1	+0.8

FAGO	Alcalda de S	2.28	75	*e*P	Pn	23 08 11.1	+0.8
LCND	La Caada	2.43	85⇓	*i*P	Pn	23 08 13.7	+1.5
LCND	La Caada	2.43	85⇓	*i*P	Pn	23 08 13.7	+1.5
HUEH	Huehuetenango	2.47	334	Pn	Pn	23 08 14.6	+1.6
TGUH	Tegucigalpa,Un	3.16	72	Pn	Pn	23 08 23.6	+1.2
CRIN	San Cristobal	3.26	97	Pn	Pn	23 08 26.9	+3.2
CCIG	Comitan	3.60	332	Pn	Pn	23 08 30.7	+2.2
PETF	Flores	3.83	7	Pn	Pn	23 08 33.4	+1.9
ACON	Acoyapa	5.20	102	Pn	Pn	23 08 50.6	+0.3
CMIG	Matias Romero	5.90	313	P	Pn	23 09 00.2	+0.4
	comp=Z,2.3nm,0.3s,baz=131,slow=11,SNR=13						
CMIG				S	Sn	23 10 03.6	-3.1
	comp=Z,2.8nm,0.3s,baz=121,slow=19,SNR=5.9						
CMIG				LR	LR	23 11 45.7	
	comp=Z,237nm,20.3s,baz=90,slow=41						
ESPN	Las Esperanzas	5.99	98	Pn	Pn	23 09 02.8	+1.6
JTS	Las Juntas de	6.00	117	P	Pn	23 09 03.7	+2.5
	comp=Z,3.5nm,0.3s,baz=358,slow=22,SNR=7.7						
JTS				S	Sn	23 10 07.9	-1.3
	comp=Z,1.8nm,0.3s,baz=224,slow=21,SNR=1.2						
JTS	Las Juntas de	6.00	117	Pn	Pn	23 09 04.3	+3.1
TEIG	Tepich	7.37	16	Pn	Pn	23 09 22.1	+2.0
PLMC	San Jos del P	16.11	119	*e*P	Pn	23 11 21.5	+2.4
YOTC	Yotoco, Valle	16.55	122	*e*P	P	23 11 28.2	+1.0
RREF	El Recreo	16.92	117	*e*P	Pn	23 11 30.2	+0.3
HKT	Hockley	17.52	344	P	P	23 11 39.7	+2.1
RUSC	La Rusia	18.48	111	*e*P	P	23 11 39.8	-9.2
SDV	Santo Domingo	19.82	100	P	P	23 12 01.6	-1.7
	comp=Z,0.5nm,0.3s,baz=274,slow=7.6,SNR=6.4						
SDV				LR	LR	23 19 45.1	
	comp=Z,65nm,19.4s,baz=260,slow=37						
SDV	Santo Domingo	19.82	100	P	P	23 12 01.4	-1.9
HPIG		19.87	316	P	P	23 12 05.9	+2.1
HPIG				IAmb	IAmb	23 12 11.4	
	comp=Z,5.8nm,0.5s						
LRAL	Lakeview Retre	20.09	8	P	P	23 12 07.8	+2.0
LRAL				IAmb	IAmb	23 12 11.2	
	comp=Z,7.8nm,0.8s						
Z47A	Carrollton	20.12	6	P	Pn	23 12 08.7	+0.5
Z47A				IAmb	IAmb	23 12 12.0	
	comp=Z,13nm,0.7s						
TX32	Lajitas Array	20.33	325	P	P	23 12 10.5	+1.8
TXAR	Lajitas Array	20.33	325	P	P	23 12 11.1	+2.4
	comp=Z,4.7nm,0.7s,baz=151,slow=12,SNR=46						
TXAR	Lajitas Array	20.33	325	P	P	23 12 10.8	+2.1
TX31	Lajitas Ar. Si	20.33	325	P	P	23 12 10.5	+1.9
TX31				IAmb	IAmb	23 12 14.6	
	comp=Z,17nm,0.9s						
Y49A	Blount Mountai	20.98	9	P	P	23 12 16.7	+1.1
Y49A				IAmb	IAmb	23 12 22.5	
	comp=Z,8.8nm,0.8s						
ABTX	Abilene, Hawle	21.21	338	P	P	23 12 19.2	+1.2
X48A	Hartselle	21.48	8	P	P	23 12 22.9	+2.1
X48A				IAmb	IAmb	23 12 29.3	
	comp=Z,8.2nm,0.8s						
MIAR	Mount Ida	21.55	353	P	P	23 12 24.0	+2.3
FPAL	Fort Paine	21.78	11	P	P	23 12 24.5	+0.3
FPAL				IAmb	IAmb	23 12 41.1	
	comp=Z,15nm,1.2s						
X37A	Clayton	21.87	349	P	P	23 12 25.9	+0.8
X37A				IAmb	IAmb	23 12 29.4	
	comp=Z,16nm,1.2s						
W39A	Magazine	22.22	353	P	P	23 12 29.4	+0.6
SWET	Sewanee	22.39	10	P	P	23 12 30.0	-0.7
SWET				IAmb	IAmb	23 12 37.1	
	comp=Z,11nm,1.1s						
W35A	Tecumseh	22.73	346	P	P	23 12 32.6	-1.8
WMOK	Wichita Mounta	22.86	342	P	P	23 12 36.0	+0.3
CPCT	Cooper Cave	22.88	12	P	P	23 12 33.8	-2.0
CPCT				IAmb	IAmb	23 12 46.1	
	comp=Z,9.0nm,1.1s						
LCAR	Lake Charles	22.89	358	P	P	23 12 38.2	+2.3
LCAR				IAmb	IAmb	23 12 55.2	
	comp=Z,7.6nm,0.9s						
FNO	Franklin	22.96	345	P	P	23 12 35.6	-1.1
WVT	Waverly	23.05	5	P	P	23 12 37.3	-0.3
WVT				IAmb	IAmb	23 12 55.7	
	comp=Z,19nm,1.5s						
MNTX	Cornudas Mount	23.09	326	P	P	23 12 39.5	+1.4
MNTX				IAmb	IAmb	23 12 39.7	
	comp=Z,10nm,0.8s						
CLTN	Cedars of Leba	23.18	8	P	P	23 12 39.2	+0.2
CLTN				IAmb	IAmb	23 12 39.7	
	comp=Z,7.6nm,0.8s						
TKL	Tuckaleechee C	23.24	14	P	P	23 12 36.4	-3.1
	comp=Z,3.9nm,0.7s,baz=181,slow=9.0,SNR=5.0						
TKL				LR	LR	23 21 56.8	
	comp=Z,63nm,19.1s,baz=168,slow=38						
TKL	Tuckaleechee C	23.24	14	P	P	23 12 38.9	-0.6
TKL				IAmb	IAmb	23 12 40.8	
	comp=Z,11nm,1.1s						
U49A	Red Boiling Sp	23.68	9	P	P	23 12 43.1	-0.7
U49A				IAmb	IAmb	23 12 44.1	
	comp=Z,12nm,1.0s						
AMTX	Amarillo	23.99	337	P	P	23 12 47.6	+0.7
AMTX				IAmb	IAmb	23 12 49.3	
	comp=Z,5.8nm,0.5s						
T50A	Nancy	24.34	11	P	P	23 12 49.9	0.0
S44A	Carbondale	24.52	2	P	P	23 12 52.0	+0.4
S39A	Bolivar	24.64	354	P	P	23 12 53.7	+1.0
V58A	Windy Hill, Pi	24.77	22	P	P	23 12 52.5	-1.4
CCM	Cathedral Cave	24.87	358	P	P	23 12 54.5	-0.3
CCM				IAmb	IAmb	23 13 03.8	
	comp=Z,11nm,1.4s						
121A	Cookes Peak, D	25.07	323	P	P	23 12 59.3	+2.5
S51A	Beattyville	25.18	13	P	P	23 12 55.9	-1.8
S51A				IAmb	IAmb	23 13 05.9	
	comp=Z,23nm,1.4s						
WCI	Wyandotte Cave	25.29	8	P	P	23 12 57.2	-1.4
BNM	Barren Site	25.64	328	P	P	23 13 03.9	+1.8
X18A	Snowflake	27.76	324	P	P	23 13 23.1	+2.0
GRGR	Grenville	28.04	89	P	P	23 13 27.0	+3.4
NNA	Nana	28.30	151	LR	LR	23 22 41.0	
	comp=Z,41nm,20.6s,baz=341,slow=32						
WUAZ	Wupatki	29.28	323	P	P	23 13 35.5	+0.8
PV03	Paradox Valley	29.96	330	P	P	23 13 41.9	+1.1
PV12	Saucer Basin,	29.99	330	P	P	23 13 42.3	+1.3
PV12				IAmb	IAmb	23 13 43.8	
	comp=Z,8.7nm,0.9s						
W13A	Hualapai Mount	30.52	320	P	P	23 13 48.6	+2.8
W13A				IAmb	IAmb	23 13 49.8	
	comp=Z,4.7nm,1.1s						
MTPU	Mount Pierson	31.53	326	P	P	23 13 56.9	+2.1
P17A	Butcher Ranch,	31.84	329	P	P	23 13 58.7	+1.5
CCUT	Cedar City	31.84	324	P	P	23 13 59.6	+2.2
K58A	Earlville	32.19	21	P	P	23 13 57.7	-2.4
K58A				IAmb	IAmb	23 14 12.6	
	comp=Z,6.1nm,1.1s						
J56A	Wolcott	32.26	19	P	P	23 13 58.0	-2.6
PSUT	Pine Spring	32.80	325	P	P	23 14 07.5	+1.7
SADO	Sadowa	32.99	15	P	P	23 14 04.4	-2.6
	comp=Z,1.1nm,0.4s,baz=228,slow=12,SNR=1.8						
SADO	Sadowa	32.99	15	P	P	23 14 04.5	-2.6
E43A	Lone Tree Farm	33.30	4	P	P	23 14 07.6	-2.1
R11A	Troy Canyon, C	33.67	323	P	P	23 14 15.9	+2.6
R11A				IAmb	IAmb	23 14 16.8	
	comp=Z,2.5nm,1.0s						
PDAR	Pinedale Array	33.91	334	P	P	23 14 14.9	-0.5
	comp=Z,0.3nm,0.6s,baz=130,slow=8.4,SNR=2.3						
PDAR	Pinedale Array	33.91	334	P	P	23 14 15.2	-0.1
REDW	Red Top Meadow	34.94	334	P	P	23 14 26.2	+1.9
REDW				IAmb	IAmb	23 14 26.5	
	comp=Z,2.9nm,0.7s						
ELK	Elko	35.11	326	P	P	23 14 27.8	+1.9
ELK				IAmb	IAmb	23 14 29.7	
	comp=Z,2.3nm,0.9s						
MOOW	Moose Ponds	35.21	334	P	P	23 14 27.8	+1.2
NV11	Mina Array Sit	35.28	321	P	P	23 14 29.7	+2.5
NVAR	Mina Array Bea	35.37	321	P	P	23 14 30.3	+2.3
	comp=Z,6.9nm,0.8s,baz=138,slow=8.7,SNR=36						
NVAR				PcP	PcP	23 16 59.0	+1.1
	comp=Z,1.3nm,0.6s,baz=137,slow=3.6,SNR=7.9						
NVAR				LR	LR	23 31 01.1	
	comp=Z,88nm,18.4s,baz=198,slow=40						
NVAR	Mina Array Bea	35.37	321	P	P	23 14 30.5	+2.5
MDPB	Devils Postpil	35.38	319	P	P	23 14 31.5	+3.3
MDPB				IAmb	IAmb	23 14 32.7	
	comp=Z,4.5nm,0.9s						
MCMT	McKenzie Canyo	36.98	333	P	P	23 14 43.4	+1.7
ULM	Lac du Bonnet	37.32	354	P	P	23 14 41.5	-2.8
	comp=Z,1.5nm,0.4s,baz=175,slow=8.3,SNR=5.2						
ULM	Lac du Bonnet	37.32	354	P	P	23 14 41.8	-2.5
BEKR	Beckworth	37.51	321	P	P	23 14 49.0	+2.7
WVOR	Wild Horse Val	38.13	325	P	P	23 14 52.3	+0.9
WVOR				IAmb	IAmb	23 14 55.1	
	comp=Z,5.2nm,1.1s						
F10A	Beach Ranch, E	39.87	331	P	P	23 15 06.0	+0.2
PINE	Pine Mountain	40.29	325	P	P	23 15 09.1	-0.5
PINE				IAmb	IAmb	23 15 10.8	
	comp=Z,5.3nm,0.9s						
KRMB	Red Mountain	40.67	320	P	P	23 15 13.7	+1.1
KBO	Bosley Butte	41.25	321	P	P	23 15 19.3	+1.9
H04A	Detroit Lake	41.55	325	P	P	23 15 20.3	+0.7
FFC	Flin Flon	42.52	350	P	P	23 15 27.5	+0.1
FFC				IAmb	IAmb	23 15 28.7	
	comp=Z,3.8nm,1.1s						
YKA	Yellowknife Ar	52.27	346	P	P	23 16 41.5	-1.7
	comp=Z,1.4nm,0.7s,baz=146,slow=8.2,SNR=32						
YKA				PcP	PcP	23 17 53.0	-1.2
	comp=Z,0.4nm,0.9s,baz=141,slow=5.7,SNR=5.5						
RCBR	Riachuelo	57.27	106	P	P	23 17 20.9	+0.7
RES	Resolute Bay	61.63	359	P	P	23 17 46.4	-2.9
	comp=Z,0.9nm,0.7s,baz=186,slow=5.0,SNR=2.6						
ILAR	Eielson Array	64.29	337	P	P	23 18 05.8	-1.3
	comp=Z,0.9nm,0.9s,baz=162,slow=4.2,SNR=5.5						
ILAR	Eielson Array	64.29	337	P	P	23 18 09.6	+2.4
SUMG	Summit	66.69	15	P	P	23 18 20.9	-2.1
TTA	Tatalina	67.42	333	P	P	23 18 28.0	+0.6
TTA				IAmb	IAmb	23 18 43.2	
	comp=Z,2.6nm,1.0s						
GAMB	Gambell	74.52	333	P	P	23 19 10.2	-0.1
ESDC	Sonseca Array	79.03	52	P	P	23 19 34.0	-2.5
	comp=Z,0.9nm,0.7s,baz=289,slow=4.6,SNR=10.0						
ESDC	Sonseca Array	79.03	52	P	P	23 19 34.4	-2.0
DBIC	Dimbokro	84.17	85	P	P	23 20 02.9	-1.0
	comp=Z,1.8nm,0.7s,baz=227,slow=2.2,SNR=3.2						
DBIC	Dimbokro	84.17	85	P	P	23 20 04.0	+0.1
DBIC				IAmb	IAmb	23 20 21.3	
	comp=Z,6.0nm,1.3s						
TORD	Torodi Ar. Bea	89.05	77	P	P	23 20 24.6	-3.2
	comp=Z,1.0nm,1.0s,baz=299,slow=4.0,SNR=2.2						
TORD	Torodi Ar. Bea	89.05	77	P	P	23 20 24.8	-3.0
SONM	Songino Array	117.53	347	PKP	PKPdf	23 26 16.8	-1.4
	comp=Z,0.3nm,0.8s,baz=64,slow=3.4,SNR=2.3						
SONM	Songino Array	117.53	347		PKPdf	23 26 17.7	-0.5
KSRS	Korea Array	118.18	326	PKP	PKPdf	23 26 20.2	+0.7
	comp=Z,0.6nm,0.4s,baz=344,slow=1.0,SNR=2.0						
BOSA	Boshof	118.54	116	PKP	PKPdf	23 26 21.8	+1.2
	comp=Z,3.3nm,0.9s,baz=258,slow=3.0,SNR=8.4						
BOSA	Boshof	118.54	116	PKPdf	PKiKP	23 26 22.5	+1.9
MKAR	Makanchi Array	120.03	6	PKP	PKPdf	23 26 22.3	-0.6
	comp=Z,0.1nm,0.3s,baz=300,slow=3.2,SNR=2.8						
WRA	Warramunga Arr	136.70	255	PKP	PKPdf	23 26 57.2	+2.0
	comp=Z,0.7nm,0.7s,baz=90,slow=2.6,SNR=7.0						
WRA	Warramunga Arr	136.70	255	PKPdf	PKPdf	23 26 56.9	+1.7
ASAR	Alice Springs	136.84	249	PKP	PKPdf	23 26 57.2	+1.8
	comp=Z,0.3nm,0.5s,baz=107,slow=1.8,SNR=2.5						
CMAR	Chiang Mai Arr	147.33	343	PKPbc	PKPdf	23 27 16.1	+1.9
	comp=Z,3.0nm,0.6s,baz=348,slow=3.4,SNR=19						

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*TIF **13** 23:19:08.5, 41°.30N×43°.09E, h18^{km}*
*ISK **13** 23:19:08.9, 41°.32N×43°.13E, h5^{km}, ML2.9/12*
*DDA **13** 23:19:09.3, 41°.34N×43°.09E, h5^{km}±1^{km}, ML2.8*
ISC 13 23:19:09.4±1.0**, 41°.32N**±0°.02×**43°.09E**±0°.02**, h8**^{km}±9^{km},
n41, σ1.^{s}00/66**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.32	73	P	Pg	23 19 15.9	0.0
AKH				S	Sg	23 19 21.0	+0.8
AKH	Akhalkalaki	0.32	73	PG	Pg	23 19 15.9	0.0
AKH				SG	Sg	23 19 20.9	+0.8
EPOS	Posof	0.33	305	*i* P	Pg	23 19 16.1	+0.1
EPOS				IAML		23 19 21.0	
	comp=E,1μm,0.2s						
EPOS				*i* S	Sg	23 19 21.1	+0.7
ABS	Abastumani	0.49	335	P	Pg	23 19 18.9	0.0
ABS				S	Sb	23 19 26.5	-1.2
BRNG	Burnasheti	0.64	61	P	Pb	23 19 22.0	-0.9
BRNG				S	Sb	23 19 31.7	-0.3
KARS	Kars	0.69	180	PG	Pb	23 19 23.4	-0.3
KARS				SG	Sb	23 19 34.5	+1.1
EAK	Akyaka	0.74	148	*i* P	Pg	23 19 23.5	-0.2
EAK				*i* S	Sb	23 19 33.9	-1.1
EAK				IAML		23 19 38.0	
	comp=E,338nm,0.5s						
EAK				IAML		23 19 41.0	
	comp=N,390nm,0.7s						
DMNI	Dmanisi	0.83	89	P	Pg	23 19 25.1	-0.4
DMNI				S	Sb	23 19 36.6	-1.0
SENK	Senkaya-Erzuru	0.94	217	PG	Pb	23 19 28.1	+0.1
SENK				SG	Sn	23 19 42.9	+0.2
KZRT	Kazreti	0.99	85	P	Pg	23 19 27.8	-0.7
KZRT				S	Sb	23 19 41.4	-0.7
KZRT	Kazreti	0.99	85	*i* P	Pg	23 19 27.5	-1.0
KZRT				*i* S	Sg	23 19 40.5	-0.9
TKB	Tkibuli	1.04	356	P	Pg	23 19 28.9	-0.5
TKB				S	Sb	23 19 43.8	+0.4
DBOC	Borcka	1.07	272	*i* P	Pg	23 19 29.0	-1.0
DBOC				*i* S	Sg	23 19 43.5	-0.3
DBOC				IAML		23 19 45.0	
	comp=E,179nm,0.3s						
BTNK	Botanikuri	1.34	73	P	Pg	23 19 35.4	+0.3
BTNK				S	Sn	23 19 53.8	+1.4
BTNK	Botanikuri	1.34	73	*i* P	Pg	23 19 35.4	+0.3
BTNK				*i* S	Sn	23 19 52.6	+0.2
KOTA	Agri, Merkez-K	1.51	177	*i* P	Pg	23 19 38.5	0.0
EATA	Eleskirt	1.52	198	*i* P	Pb	23 19 37.7	-0.3
EATA				*i* S	Sg	23 19 59.7	+1.4
HOMI	Horasan	1.55	216	*i* P	Pb	23 19 38.2	-0.3
HOMI				IAML		23 20 07.0	
	comp=N,90nm,0.5s						
HOMI				IAML		23 20 10.0	
	comp=E,124nm,1.1s						
CHVG	Ch'k'valeri	1.59	332	P	Pb	23 19 38.9	-0.1
CHVG				S	Sg	23 19 59.9	-0.6
TASB	TASBURUN-IGDIR	1.59	146	PN	Pb	23 19 38.5	-0.6
KOPR	Koprukoy-ERZUR	1.62	216	PN	Pg	23 19 40.2	-0.3
IGDI	IGDIR	1.63	152	*i* P	Pn	23 19 38.8	+0.3
IGDI				*i* S	Sn	23 19 58.9	-0.8
GNI	Garni	1.71	132	PN	Pb	23 19 41.0	-0.2
AGRB	Hanur-Agry	1.74	182	PN	Pb	23 19 41.8	+0.1
PNSH	Pansheti	1.74	40	P	Pg	23 19 42.0	-0.9
PNSH				S	Sb	23 20 04.1	+0.2
AKDA	Akdag	1.78	228	*i* P	Pg	23 19 43.0	-0.7
DYDN	Diyadin	1.83	165	*i* P	Pb	23 19 43.3	+0.1
KRIK	Erzurum-spir	1.91	240	*i* P	Pb	23 19 43.8	-0.8
KRIK				*i* S	Sg	23 20 09.4	-1.3
EMRE	Erzurum,Aziziy	2.06	232	*i* P	Pg	23 19 47.7	-1.1
EMRE				IAML		23 20 22.0	
	comp=E,76nm,0.9s						
EMRE				IAML		23 20 32.0	
	comp=N,83nm,0.9s						
MLAZ	Malazgirt-MUS	2.21	191	PN	Pb	23 19 48.8	-0.9
CLDR	Caldiran	2.26	163	PN	Pb	23 19 49.4	-1.2
DDFL	Dedoflistskaro	2.29	86	P	Pg	23 19 52.1	-1.1
DDFL	Dedoflistskaro	2.29	86	*i* P	Pg	23 19 51.7	-1.5
DDFL				*i* S	Sg	23 20 24.8	+2.0
KOPT	Kop Dagi	2.36	238	*i* P	Pg	23 19 53.6	-1.1
KOPT				*i* S	Sg	23 20 26.8	+1.7
BAYB	BAYBURT	2.39	245	*i* P	Pb	23 19 52.8	0.0
BAYB				*i* S	Sb	23 20 24.0	+1.5
BAYT	Aydıntepe-Bayb	2.42	249	PN	Pb	23 19 51.7	-1.5
LGD	Lagodekhi	2.42	77	P	Pb	23 19 52.8	-0.5
LGD				S	Sg	23 20 25.1	-2.2
KTUT	Trabzon	2.53	264	PN	Pb	23 19 53.1	-1.9
MACK	Trabzon	2.53	263	*i* P	Pn	23 19 52.7	+1.8
MACK				*i* S	Sb	23 20 25.2	-1.3
MACK				IAML		23 20 29.0	
	comp=N,52nm,0.3s						
MACK				IAML		23 20 31.0	
	comp=E,44nm,0.3s						
KARO	Karliova-Bingo	2.54	219	PN	Pb	23 19 53.5	-1.8
KIV	Kislovodsk	2.66	354	PN	Pn	23 19 54.5	+1.9

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*IDC **13** 23:24:35.1±1.2, 11°.41N×139°.61E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.7/35, mbtmp3.7/7, Error ellipse: s-maj=33.5km s-min=28.5km az=93.0*
ISC 13 23:24:38.5±1.1**, 11°.4N**±0°.2×**139°.6E**±0°.2**, h22**^{km}**, n10,**
σ1.^{s}02/7**, mb3.8**/7**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	27.10	72	T	T	23 59 27.9	
	baz=256,slow=75,SNR=7.6						
H11S1	WAKE ISLAND Hy	27.12	72	T	T	23 59 31.7	
	baz=256,slow=75,SNR=4.7						
H11S2	WAKE ISLAND Hy	27.12	72	T	T	23 59 32.3	
	baz=256,slow=75,SNR=8.5						
ASAR	Alice Springs	35.27	189	P	P	23 31 31.8	-0.1
	0.3nm,0.4s,baz=18,slow=12,SNR=5.0						
CMAR	Chiang Mai Arr	39.83	285	P	P	23 32 10.8	+0.2
	2.6nm,0.8s,baz=92,slow=6.9,SNR=14						
SONM	Songino Array	45.75	329	P	P	23 32 58.4	0.0
	0.5nm,0.8s,baz=149,slow=6.6,SNR=3.6						
MKAR	Makanchi Array	59.57	318	P	P	23 34 40.2	-0.3
	1.3nm,0.8s,baz=104,slow=8.9,SNR=12						
ZALV	Zalesovo Beam	60.49	326	P	P	23 34 46.7	-0.1
	0.5nm,0.6s,baz=124,slow=7.6,SNR=2.3						
ILAR	Eielson Array	72.76	25	P	P	23 36 03.6	-1.3
	0.2nm,0.4s,baz=244,slow=5.7,SNR=6.2						
YKA	Yellowknife Ar	87.16	27	P	P	23 37 24.2	+1.5
	0.6nm,0.6s,baz=292,slow=4.4,SNR=11						

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*IDC **13** 23:36:59.1±9.3, 42°.12S×145°.60E, h0^{km}, mb2.9/2, mb1 3.4/3, mb1mx3.4/14, mbtmp3.3/3, ML3.4/1, Error ellipse: s-maj=325.2km s-min=84.9km az=79.0*
*AUST **13** 23:37:09.2±1.3, 41°.42S×145°.10E, h0^{km}±11^{km}, Error ellipse: s-maj=17.9km s-min=3.1km az=29.0*
ISC 13 23:37:09.3±2.4**, 41°.5S**±0°.2×**145°.1E**±0°.1**, h10**^{km}**, n13,**
σ0.^{s}94/9**, Tasmania region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AULHS	Lilydale High	1.60	82	P	Pn	23 37 38.3	+0.7
	baz=1.6						
AULHS				S	Sg	23 38 00.2	-0.6
	baz=1.6						
TOO	Toolangi	3.93	4	P	Pn	23 38 09.6	-0.2
	baz=3.9						
ARPS	Mount Arapiles	5.36	331	P	Pn	23 38 29.4	+0.1
	baz=5.3						
ARPS				S	Sn	23 39 32.2	+1.0
	baz=5.3						
STKA	Stephens Creek	10.01	343	Pn	Pn	23 39 33.5	+0.4
	0.1nm,0.3s,baz=159,slow=14,SNR=2.9						
STKA				Sn	Sn	23 41 35.2	+10
	0.1nm,0.3s,baz=290,slow=19,SNR=1.4						
STKA				Lg	Lg	23 42 21.4	
	0.3nm,0.3s,baz=216,slow=20,SNR=3.1						
BBOO	Buckleboo	11.28	317	P	Pn	23 39 50.9	+0.4
	baz=11						
ASAR	Alice Springs	20.10	329	P	P	23 41 41.9	-1.3
	0.4nm,0.8s,baz=158,slow=8.0,SNR=2.4						
WRA	Warramunga Arr	23.36	334	P	P	23 42 16.7	-1.2
	0.3nm,0.4s,baz=152,slow=8.4,SNR=3.3						
H01W1	Cape Leeuwin H	25.12	275	T	T	00 08 14.8	
	baz=113,slow=75,SNR=16						
H01W2	Cape Leeuwin H	25.13	275	T	T	00 08 15.6	
	baz=113,slow=75,SNR=17						
H01W3	Cape Leeuwin H	25.14	275	T	T	00 08 16.1	
	baz=113,slow=75,SNR=16						
H08S2	Diego Garcia H	71.96	276	T	T	01 06 44.0	
	baz=132,slow=75,SNR=18						
H08S1	Diego Carcia H	71.97	276	T	T	01 06 46.2	
	baz=132,slow=75,SNR=14						
H08S3	Diego Garcia H	71.98	276	T	T	01 06 46.2	
	baz=132,slow=75,SNR=20						

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*NIED **13** 23:45:36.6, 28°.35N×128°.13E, h10^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.07; $M_{\theta\theta}$1.14; $M_{\phi\phi}$-1.06; $M_{r\theta}$-0.17; $M_{\theta\phi}$1.04; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.52000×10^{15} NP1: ϕ_s293.00000°, δ88.00000°, λ6.00000°. NP2:ϕ_s203.00000°, δ84.00000°, λ178.00000°.*
JMA 13 23:45:36.5±0.2**, 28°.35N×128°.13E, h10**^{km}±2^{km}**, M3.6,**
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.92	128	P	Pg	23 45 53.7	-0.5
JTK				*e*S	Sg	23 46 06.1	0.0
JAMN	Amaminishikomi	0.93	96	P	Pg	23 45 54.3	-0.1
JAMN				*e*S	Sg	23 46 06.7	+0.3
JOKE	Okinoerabujima	1.06	158	P	Pg	23 45 56.4	-0.5
JOKE				*e*S	Sb	23 46 10.8	-0.1
JTAJ	Takarajima	1.24	49	P	Pn	23 45 59.4	-0.4
JAM	Amami Oshima	1.30	87	P	Pn	23 46 00.4	-0.3
JAM				*e*S	Sb	23 46 17.8	0.0
JIH	Iheya	1.32	186	P	Pn	23 46 01.1	+0.1
JIH				*e*S	Sb	23 46 18.3	0.0
JYRO	Yoronjima	1.35	168	P	Pn	23 46 01.1	-0.3
JYRO				*e*S	Sb	23 46 19.1	-0.1
JOW	Kunigami	1.52	175	P	Pn	23 46 03.6	-0.1
JOW				*e*S	Sn	23 46 23.2	-0.3
JZK	Kikaishima	1.62	91	P	Pn	23 46 05.4	+0.2
JNTH	Nagotoyohara	1.83	183	P	Pn	23 46 08.5	+0.5
JNTH				*e*S	Sb	23 46 32.1	-0.8
JYAK	Yakushimahirau	2.80	47	S	Sn	23 46 56.4	+1.1

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*TUL **14** 00:06:42.4±1.7, 35°.81N±0°.01×97°.42W±0°.03, h7^{km}±7^{km}, ML3.0, mb_Lg3.0/84(NEIC), Error ellipse: s-maj=3.1km s-min=1.9km az=102.0*
*ANF **14** 00:06:42.1±0.4, 35°.75N×97°.39W, h0^{km}, ML3.8/8, Error ellipse: s-maj=5.1km s-min=3.9km az=169.0*
*NEIC **14** 00:06:42.7±1.3, 35°.82N±0°.02×97°.41W±0°.04, h8^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=1.1km az=123.0*
ISC 14 00:06:42.8±0.9**, 35°.75N**±0°.02×**97°.37W**±0°.03**, h13**^{km}±7^{km},
n85, σ1.^{s}24/66**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK025	Westminster Rd	0.17	172		Pb	00 06 47.4	-0.5
OK025				Sg	Sb	00 06 51.1	-0.1
OK009	Oakdale Elemen	0.18	195		Pg	00 06 47.5	+0.6
BCOK	Bluff Creek, N	0.22	244		Pg	00 06 47.0	-0.6
BCOK				Sg	Sg	00 06 50.3	-0.5
OKCFA	Oklahoma City	0.34	192		Pg	00 06 50.3	+0.5
OKCFA				Sg	Sb	00 06 56.1	0.0
OKCSW	OKLAHOMA CITY	0.35	190		Pb	00 06 50.4	-0.5
OKCSW				Sg	Sb	00 06 56.3	0.0
OK031	S. Brethren Rd	0.47	65		Pg	00 06 52.1	0.0
OK031				Sg	Sg	00 06 58.9	+0.5
FNO	Franklin	0.50	183		Pb	00 06 53.1	-0.2
FNO				Sg	Sb	00 07 01.1	+0.6
OK030	Cody Creek RV	0.50	70		Pg	00 06 52.7	0.0
OK030				Sg	Sg	00 06 60.0	+0.5
QUOK	Quay	0.68	52		Pg	00 06 55.5	-0.5
QUOK				Sg	Sg	00 07 04.8	-0.1
W35A	Tecumseh	0.72	146		Pb	00 06 57.2	0.0
W35A				Sg	Sn	00 07 08.0	-1.5
CROK	Carrier	0.90	327	Pg	Pb	00 06 58.3	-2.0
GC02	Grant County #	1.17	340		Pn	00 07 03.0	-1.8
KAN13	South Haven SW	1.26	356		Pn	00 07 05.0	-1.1
TUL1	Leonard	1.29	83	P	Pn	00 07 06.2	-0.3
	baz=266						
TUL1				S	Sg	00 07 24.4	0.0
	baz=266						
TUL1	Leonard	1.29	83		Pn	00 07 06.1	-0.3
TUL1	Leonard	1.29	83	P		00 07 06.2	
	baz=266						
TUL1				S		00 07 24.5	
	baz=266						
KAN14	Manchester OK	1.29	338		Pn	00 07 05.3	-1.3
T35A	Sooner Cattle	1.35	30	Pn	Pn	00 07 06.8	-0.6
T35B	Sooner Cattle	1.35	30	P		00 07 06.8	
	baz=214						
T35B				S		00 07 24.6	
	baz=214						
U32A	Winter Ranch,	1.47	296	Pn	Pn	00 07 08.0	-0.9
U32A	Winter Ranch,	1.47	296	P		00 07 08.2	
	baz=114						
U32A				S		00 07 27.7	
	baz=114						
KAN10	Anthony SW Sta	1.49	337	Pn	Pn	00 07 08.7	-0.6
WMOK	Wichita Mounta	1.54	229	P	Pn	00 07 10.5	+0.5
	baz=46						
WMOK				S	Sb	00 07 31.2	+0.7
	baz=46						
WMOK	Wichita Mounta	1.54	229	Pn	Pn	00 07 10.3	+0.3
WMOK	Wichita Mounta	1.54	229	P		00 07 10.3	
	baz=46						
WMOK				S		00 07 31.5	
	baz=46						
KS21	Milan North St	1.55	351	IAmb_Lg		00 07 31.2	

	comp=Z,81nm,0.9s						
X37A	**Clayton**	**2.00**	**125**	Pn	**Pb**	**00 07 17.9**	**-1.1**
X37A				IAmb_Lg		00 07 50.2	
	comp=Z,83nm,0.9s						
X37A	**Clayton**	**2.00**	**125**	P		00 07 18.1	
	baz=307						
X37A				S		00 07 45.8	
	baz=307						
Z35A	**Perchaven, San**	**2.42**	**178**	Pn	**Pb**	**00 07 23.9**	**-2.2**
U38A	**Gravette**	**2.51**	**73**	Pn	**Pb**	**00 07 25.8**	**-1.9**
R32A	**Long Quarter,**	**2.87**	**338**	Pn	**Pn**	**00 07 29.9**	**+1.6**
W39A	**Magazine**	**2.98**	**100**	P	**Pn**	**00 07 31.3**	**+1.6**
	baz=283						
W39A	**Magazine**	**2.98**	**100**	Pn	**Pn**	**00 07 31.0**	**+1.4**
W39A				IAmb_Lg		00 08 24.1	
	comp=Z,76nm,1.0s						
W39A	**Magazine**	**2.98**	**100**	P		00 07 31.3	
	baz=283						
MIAR	**Mount Ida**	**3.33**	**110**	P	**Pn**	**00 07 36.9**	**+2.3**
	baz=293						
MIAR	**Mount Ida**	**3.33**	**110**	Pn	**Pn**	**00 07 36.7**	**+2.2**
KSU1	**Kansas State U**	**3.40**	**10**	Pb	**Pb**	**00 07 43.9**	**+1.2**
	baz=191						
KSU1	**Kansas State U**	**3.40**	**10**	Pn	**Pn**	**00 07 35.8**	**+0.3**
CBKS	**Cedar Bluff**	**3.59**	**329**	P	**Pn**	**00 07 39.5**	**+1.3**
	baz=148						
CBKS				Sb	**Sb**	**00 08 33.0**	**+3.3**
	baz=148						
CBKS	**Cedar Bluff**	**3.59**	**329**	Pn	**Pn**	**00 07 39.0**	**+0.8**
CBKS				IAmb_Lg		00 08 36.0	
	comp=Z,50nm,0.8s						
AMTX	**Amarillo**	**3.63**	**257**	IAmb_Lg		00 08 44.8	
	comp=Z,31nm,0.7s						
ABTX	**Abilene, Hawle**	**3.65**	**212**	Pn	**Pn**	**00 07 40.8**	**+1.8**
ABTX				IAmb_Lg		00 08 41.1	
	comp=Z,29nm,0.8s						
U40A	**Yellville**	**3.71**	**79**		**Pn**	**00 07 41.1**	**+1.4**
U40A				IAmb_Lg		00 08 44.3	
	comp=Z,50nm,0.8s						
U40A	**Yellville**	**3.71**	**79**	P		00 07 41.1	
	baz=263						
U40A				P		00 07 41.1	
	baz=263						
WHTX	**Lake Whitney,**	**3.75**	**181**	Pb	**Pb**	**00 07 48.8**	**-0.1**
	baz=0.5						
WHTX	**Lake Whitney,**	**3.75**	**181**	Pn	**Pn**	**00 07 41.8**	**+1.5**
WHTX	**Lake Whitney,**	**3.75**	**181**	P		00 07 41.7	
	baz=0.5						
S39A	**Bolivar**	**3.78**	**58**	Pn	**Pn**	**00 07 41.8**	**+1.0**
S39A	**Bolivar**	**3.78**	**58**	P		00 07 41.5	
	baz=241						
X40A	**Basin Creek Fa**	**3.92**	**107**	P	**Pn**	**00 07 44.9**	**+2.2**
	baz=291						
X40A	**Basin Creek Fa**	**3.92**	**107**	IAmb_Lg		00 08 57.3	
	comp=Z,37nm,0.8s						
X40A	**Basin Creek Fa**	**3.92**	**107**	P		00 07 44.8	
	baz=291						
X40A				P		00 07 44.8	
	baz=291						
WHAR	**Wooly Hollow**	**4.17**	**95**	Pn	**Pn**	**00 07 47.9**	**+1.9**
WHAR				IAmb_Lg		00 08 55.6	
	comp=Z,42nm,1.0s						
W41B	**Gary Mavity, V**	**4.22**	**96**	IAmb_Lg		00 09 05.4	
	comp=Z,48nm,0.9s						
UALR	**University of**	**4.22**	**102**	IAmb_Lg		00 09 07.2	
	comp=Z,34nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.26**	**87**	Pn	**Pn**	**00 07 47.9**	**+0.6**
FCAR				IAmb_Lg		00 09 08.0	
	comp=Z,37nm,0.7s						
MGMO	**Mountain Grove**	**4.34**	**70**	IAmb_Lg		00 09 12.4	
	comp=Z,30nm,0.9s						
Z41A	**Richland Creek**	**4.51**	**122**	IAmb_Lg		00 09 18.7	
	comp=Z,26nm,0.8s						
MSTX	**Muleshoe**	**4.79**	**250**		**Pn**	**00 07 56.1**	**+1.4**
R40A	**Maddies Statio**	**4.80**	**57**	Pn	**Pn**	**00 07 54.7**	**0.0**
R40A				IAmb_Lg		00 09 22.6	
	comp=Z,30nm,0.9s						
P38A	**Dawn**	**4.92**	**37**	IAmb_Lg		00 09 22.6	
	comp=Z,20nm,0.8s						
435B	**Jarrell**	**4.96**	**182**	IAmb_Lg		00 09 21.2	
	comp=Z,33nm,0.8s						
N33A	**J Bar K, Exete**	**4.98**	**359**	IAmb_Lg		00 09 17.1	
	comp=Z,26nm,0.8s						
LCAR	**Lake Charles**	**5.05**	**85**	IAmb_Lg		00 09 28.6	
	comp=Z,30nm,0.8s						
T42A	**Van Buren**	**5.22**	**74**	IAmb_Lg		00 09 33.1	
	comp=Z,20nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.30**	**309**	Pn	**Pn**	**00 08 03.1**	**+1.3**
JCT	**Junction City**	**5.64**	**202**	IAmb_Lg		00 09 53.6	
	comp=Z,34nm,0.8s						
P40A	**Paris**	**5.66**	**47**	IAmb_Lg		00 09 47.8	
	comp=Z,25nm,0.7s						
PBMO	**Poplar Bluff**	**5.70**	**78**	Pn	**Pn**	**00 08 07.5**	**+0.5**
PBMO				IAmb_Lg		00 09 58.1	
	comp=Z,26nm,0.8s						
T25A	**Trinidad**	**5.84**	**286**	IAmb_Lg		00 09 51.9	
	comp=Z,26nm,0.8s						
FVM	**French Village**	**5.99**	**66**	Pn	**Pn**	**00 08 11.9**	**+0.8**
FVM				IAmb_Lg		00 09 54.8	
	comp=Z,20nm,0.7s						
L34A	**Svendsen Farm,**	**6.25**	**7**		**Pn**	**00 08 16.3**	**+1.6**
OGNE	**Ogallala**	**6.35**	**326**	Pn	**Pn**	**00 08 16.6**	**+0.5**
OGNE				IAmb_Lg		00 10 09.0	
	comp=Z,17nm,0.7s						
SLM	**Saint Louis**	**6.38**	**61**	IAmb_Lg		00 10 01.9	
	comp=Z,30nm,0.9s						
OXF	**Oxford**	**6.64**	**98**	IAmb_Lg		00 10 24.2	
	comp=Z,26nm,0.7s						
W45A	**Hickory Valley**	**6.70**	**93**	IAmb_Lg		00 10 30.6	
	comp=Z,25nm,0.8s						
SDCO	**Great Sand Dun**	**6.83**	**289**	Pn	**Pn**	**00 08 22.8**	**-0.1**
SIUC	**Southern Illin**	**6.83**	**71**	IAmb_Lg		00 10 20.7	
	comp=Z,22nm,0.7s						
Q24A	**Divide**	**6.98**	**300**	IAmb_Lg		00 10 24.0	
	comp=Z,13nm,0.8s						
N41A	**Harden Midland**	**7.12**	**44**	IAmb_Lg		00 10 25.5	
	comp=Z,23nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.33**	**56**	IAmb_Lg		00 10 46.4	
	comp=Z,25nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.36**	**62**	IAmb_Lg		00 10 53.8	
	comp=Z,19nm,0.8s						
PLAL	**Pickwick Lake**	**7.63**	**93**	IAmb_Lg		00 10 46.7	
	comp=Z,14nm,1.0s						
ISCO	**Idaho Springs**	**7.68**	**304**		**Pn**	**00 08 35.0**	**+0.4**
WVT	**Waverly**	**7.74**	**84**		**Pn**	**00 08 37.5**	**+2.3**
ECSD	**EROS Data Cent**	**7.99**	**4**	Pn	**Pn**	**00 08 36.2**	**-2.3**
TX31	**Lajitas Ar. Si**	**8.32**	**221**	Pn	**Pn**	**00 08 43.3**	**+0.1**
TXAR	**Lajitas Array**	**8.32**	**221**	Pn	**Pn**	**00 08 43.3**	**+0.1**
PHWY	**Pilot Hill**	**8.42**	**314**	IAmb_Lg		00 11 24.7	
	comp=Z,13nm,1.2s						
N23A	**Red Feather La**	**8.47**	**310**	IAmb_Lg		00 11 14.5	
	comp=Z,18nm,1.1s						
L42A	**Oliver, Polo**	**8.66**	**42**	IAmb_Lg		00 11 25.7	
	comp=Z,17nm,0.8s						
I37A	**Lemond, Waseca**	**8.79**	**19**	IAmb_Lg		00 11 29.6	
	comp=Z,17nm,0.7s						
JFWS	**Jewell Farm**	**9.03**	**35**	IAmb_Lg		00 11 41.7	
	comp=Z,15nm,0.7s						
WCI	**Wyandotte Cave**	**9.20**	**71**	IAmb_Lg		00 11 31.5	
	comp=Z,16nm,0.9s						
K22A	**Casper**	**9.89**	**317**	IAmb_Lg		00 12 21.4	
	comp=Z,15nm,1.3s						

JMA ***14*** *00:40:35.1±0.3, 28°.35N×128°.12E, h19^{km}±4^{km}, M4.7*
JMA Felt I J1.
NIED ***14*** *00:40:35.1, 28°.36N×128°.12E, h19^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.36; $M_{r\theta}$-0.70; $M_{\theta\phi}$0.62; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.10000×10^{16} NP1: ϕ_s103.00000°, δ80.00000°, λ-45.00000°. NP2: ϕ_s203.00000°, δ45.00000°, λ-166.00000°.*
BJI ***14*** *00:40:37.8±0.0, 28°.15N×128°.40E, h51^{km}, mB4.8/39, mb4.3/43, Ms4.6/46, Ms7 4.4/47*
NEIC ***14*** *00:40:40.2±2.2, 28°.21N±0°.07×128°.27E±0°.09, h50^{km}±8^{km}, mb4.6/33, Error ellipse: s-maj=12.1km s-min=9.7km az=103.0*
IDC ***14*** *00:40:42.7±2.4, 28°.36N×128°.16E, h71^{km}±23^{km}, mb3.6/17, mb1 3.9/23, mb1mx3.7/44, mbtmp4.0/23, MS3.9/23, Ms1 4.0/23, ms1mx3.8/40, Error ellipse: s-maj=17.0km s-min=13.2km az=68.0*
ISC 14 00:40:40.6±0.7, **28°.23N**±0°.04×**128°.27E**±0°.04, **h50**^{km}±8^{km}, **n112**, σ1^{s}.**78**/117, **mb4.3**/39, **MS4.2**/22, **1C-1D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.75**	**126**	P	**Pn**	**00 40 52.1**	**-2.9**
JTK				S	**Sn**	**00 41 04.2**	**-1.3**
JAMN	**Amaminishikomi**	**0.80**	**89**	P	**Pn**	**00 40 52.6**	**-3.1**
JAMN				S	**Sn**	**00 41 04.7**	**-2.0**
JOKE	**Okinoerabujima**	**0.91**	**163**	P	**Pn**	**00 40 54.6**	**-2.5**
JOKE				*e*S	**Sn**	**00 41 08.7**	**-0.5**
JAM	**Amami Oshima**	**1.20**	**81**	P	**Pn**	**00 40 58.2**	**-2.7**
JAM				S	**Sn**	**00 41 15.2**	**-0.9**
JYRO	**Yoronjima**	**1.21**	**172**	P	**Pn**	**00 40 59.5**	**-1.7**
JIH	**Iheya**	**1.22**	**193**	P	**Pn**	**00 40 58.3**	**-3.0**
JIH				S	**Sn**	**00 41 16.8**	**+0.1**
JTAJ	**Takarajima**	**1.23**	**42**	P	**Pn**	**00 40 57.3**	**-4.2**
JTAJ				S	**Sn**	**00 41 13.1**	**-3.9**
JOW	**Kunigami**	**1.39**	**180**	P	**Pn**	**00 41 01.6**	**-2.1**
JZK	**Kikaishima**	**1.51**	**86**	P	**Pn**	**00 41 04.2**	**-1.0**
JNTH	**Nagotoyohara**	**1.72**	**187**	P	**Pn**	**00 41 06.4**	**-1.7**
JYAK	**Yakushimahirau**	**2.80**	**44**	P	**Pn**	**00 41 20.4**	**-2.5**
JTN	**Tanegashima 3**	**3.38**	**44**	P	**Pn**	**00 41 29.2**	**-1.7**
JKDJ	**Kitadaitoujima**	**3.53**	**129**	P	**Pn**	**00 41 31.5**	**-1.4**
JMZ	**Minamidaito 2**	**3.57**	**132**	P	**Pn**	**00 41 32.4**	**-1.0**
JMZ	**Minamidaito 2**	**3.57**	**132**	Pn	**Pn**	**00 41 31.5**	**-1.9**
JSU	**Suzuyama**	**3.78**	**30**	Pn	**Pn**	**00 41 37.5**	**+1.1**
JNU	**Nakatsue**	**5.37**	**24**	P	**Pn**	**00 42 00.8**	**+2.6**
	7.0nm,0.3s,baz=186,slow=5.7,SNR=48						
JNU	**Nakatsue**	**5.37**	**24**	Pn	**Pn**	**00 42 00.2**	**+2.0**
JMN	**Monobe**	**7.30**	**40**	Pn	**Pn**	**00 42 24.1**	**-0.6**
JHS	**Saijyo**	**7.91**	**30**	Pn	**Pn**	**00 42 32.7**	**-0.4**
YULB	**Yu-li**	**7.91**	**234**	Pn	**Pn**	**00 42 34.2**	**+1.1**
TPUB	**Ta-pu**	**8.45**	**236**	Pn	**Pn**	**00 42 39.2**	**-1.2**
NJ2	**Nanjing**	**8.99**	**297**	*e*P	**Pn**	**00 42 49.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,2μm,11.0s						
NJ2				LR	LR		
	comp=E,2μm,10.4s						
NJ2				LR	LR		
	comp=Z,2μm,12.6s						
KSAR	**Wonju Array Be**	**9.19**	**358**	Pn	**Pn**	**00 42 50.3**	**-0.2**
KSRS	**Korea Array**	**9.20**	**358**	P	**Pn**	**00 42 50.4**	**-0.3**
	0.2nm,0.3s,baz=181,slow=14,SNR=12						
KSRS				S	**Sn**	**00 44 36.0**	**+3.3**
	0.3nm,0.3s,baz=176,slow=29,SNR=1.8						
KSRS				LR	LR	00 46 23.8	
	comp=Z,1μm,19.2s,baz=177,slow=38						
JWT	**Wachi**	**9.29**	**39**	Pn	**Pn**	**00 42 51.5**	**-0.3**
INU	**Inuyama**	**10.28**	**44**	Pn	**Pn**	**00 43 05.3**	**-0.1**
JGF	**Kuroka**	**10.66**	**44**	Pn	**Pn**	**00 43 11.3**	**+0.7**
JHJ	**Hachijo jima 2**	**11.05**	**61**	LR	LR	00 47 25.0	
	comp=Z,352nm,19.6s,baz=259,slow=36						
MAT	**Matsushiro**	**11.79**	**43**	P	**Pn**	**00 43 25.3**	**-0.8**
MJAR	**Matsushiro Arr**	**11.79**	**43**	P	**Pn**	**00 43 27.4**	**+1.3**
	0.1nm,0.3s,baz=244,slow=13,SNR=8.1						
MJAR				LR	LR	00 47 49.2	
	comp=Z,297nm,21.7s,baz=235,slow=36						
MJAR	**Matsushiro Arr**	**11.79**	**43**	Pn	**Pn**	**00 43 26.4**	**+0.3**
WHN	**Wuhan**	**12.35**	**284**	P	P	00 43 52.3	+7.8
WHN				LR	LR		
	comp=Z,3μm,12.7s						
JCJ	**Chichijima**	**12.39**	**92**	P	**Pn**	**00 43 36.9**	**+2.6**
	comp=Z,3.1nm,0.3s,baz=292,slow=19,SNR=1.6						
JCJ				LR	LR	00 48 11.7	
	comp=Z,318nm,19.4s,baz=150,slow=36						
BJT	**Baijiatuau**	**15.43**	**323**	P	**P**	**00 44 17.9**	**-0.7**
BJI	**Beijing**	**15.44**	**323**	P	**P**	**00 44 18.9**	**+0.2**
BJI				S	**Sn**	**00 47 07.8**	**+2.8**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
BJI				LR	LR		
	comp=Z,780nm,14.1s						
BJI				LR	LR		
	comp=Z,610nm,14.9s						
BJI				LR	LR		
	comp=Z,500nm,18.1s						
CN2	**Changchun**	**15.70**	**352**	*e*P	**Pn**	**00 44 19.9**	**+1.5**
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
USA0B	**Ussuriysk Arra**	**16.21**	**10**	P	**P**	**00 44 27.1**	**-0.2**
USA0B				IAmb	IAmb	00 44 36.1	
	comp=Z,44nm,1.5s						
USRK	**Ussuriysk Ar.**	**16.21**	**10**	P	**Pn**	**00 44 24.7**	**-0.2**
	baz=170,slow=12,SNR=9.4						
USRK				LR	LR	00 49 52.0	
	comp=Z,311nm,20.3s,baz=179,slow=34						
USRK	**Ussuriysk Ar.**	**16.21**	**10**		**P**	**00 44 26.8**	**-0.5**
MDJ	**Mudanjiang**	**16.39**	**3**	P	**P**	**00 44 30.0**	**+0.8**
ENH	**Enshi**	**16.52**	**282**	P	**P**	**00 44 30.9**	**+0.1**
XAN	**Xi'an**	**17.54**	**294**	P	**Pn**	**00 44 39.0**	**-2.5**
XAN				pP	pP	00 44 48.5	-4.7
XAN				sP	sP	00 44 54.3	-5.1
XAN				S	**Sn**	**00 47 51.6**	**-4.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,3.8s						
XAN				LR	LR		
	comp=Z,2μm,16.3s						
XAN				LR	LR		
	comp=Z,1μm,16.0s						
XAN				LR	LR		
	comp=Z,1μm,10.8s						
HHC	**Hu-ho-hao-te**	**18.61**	**317**	*e*P	**Pn**	**00 44 54.4**	**-0.2**
HHC				S	**Sn**	**00 48 17.9**	**-3.9**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.3s						
HHC				LR	LR		
	comp=Z,1μm,12.7s						
HHC				LR	LR		
	comp=Z,860nm,14.1s						
HHC				LR	LR		
	comp=Z,1μm,12.8s						
QIZ	**Qiongzhong**	**19.18**	**245**	P	**P**	**00 44 58.3**	**-1.9**
QIZ				S	**S**	**00 48 32.4**	**-2.7**
QIZ				LR	LR		
	comp=Z,630nm,13.4s						
QIZ				LR	LR		
	comp=Z,640nm,11.5s						
QIZ				LR	LR		
	comp=Z,640nm,8.8s						
GYA	**Guiyang**	**19.27**	**270**	⇑P	**Pn**	**00 45 06.6**	**+3.9**
GYA				pP	sP	00 45 16.6	-2.0
GYA				pmax	pmax		
	comp=Z,20nm,2.2s						
GYA				LR	LR		
	comp=Z,1μm,11.9s						
GYA				LR	LR		
	comp=Z,890nm,10.9s						
GYA				LR	LR		
	comp=Z,1μm,13.3s						
BTO	**Baotou**	**19.42**	**314**	*e*P	**Pn**	**00 45 03.9**	**-0.4**
ASAJ	**Asahikawa**	**19.58**	**32**	P	**P**	**00 45 03.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=1.2						
ASAJ				LR	LR	00 53 42.2	
	comp=Z,293nm,19.2s,baz=154,slow=40						
KLR	**Kul'dur**	**21.14**	**6**	P	**P**	**00 45 19.0**	**-2.2**
	comp=Z,2.0nm,0.8s,baz=221,slow=5.5,SNR=5.1						
KLR				LR	LR	00 53 17.7	
	comp=Z,257nm,18.8s,baz=186,slow=36						
CD2	**Chengdu**	**21.47**	**283**	P	**P**	**00 45 23.6**	**-1.4**
CD2				pP	pP	00 45 34.6	-1.8
CD2				sP	sP	00 45 41.0	-1.5
CD2				S	**S**	**00 49 21.6**	**+1.0**
CD2				sS	sS	00 49 39.8	+1.0
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				pmax	pmax		
	comp=Z,170nm,3.9s						
CD2				LR	LR		
	comp=Z,5μm,13.4s						
CD2				LR	LR		
	comp=Z,2μm,14.0s						
CD2				LR	LR		
	comp=Z,2μm,13.4s						
LZH	**Lanzhou**	**22.07**	**297**	*e*P	P	00 45 38.5	+7.0
LZH				pP	sP	00 45 51.3	+2.2
LZH				sP	pP	00 45 56.6	+14
LZH				S	**S**	**00 49 31.3**	**-0.8**
LZH				sS	sS	00 49 49.3	-1.5
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,1μm,13.0s						
LZH				LR	LR		
	comp=E,1μm,13.7s						
LZH				LR	LR		
	comp=Z,2μm,14.6s						
KMI	**Kunming**	**23.00**	**268**	*e*P	**P**	**00 45 43.8**	**+2.3**
KMI				pP	pP	00 45 47.8	-5.2
KMI				sP	sP	00 45 58.1	-1.0
KMI				pmax	pmax		
	comp=Z,120nm,3.9s						
KMI				LR	LR		
	comp=Z,830nm,11.2s						
KMI				LR	LR		
	comp=Z,850nm,9.1s						
KMI				LR	LR		
	comp=Z,800nm,11.0s						
MYLDM	**Lahad Datu**	**24.73**	**204**	P	**P**	**00 45 57.7**	**+0.3**
MYLDM				IAmb	IAmb	00 46 07.1	
	comp=Z,39nm,1.2s						
SONM	**Songino Array**	**25.92**	**325**	P	**P**	**00 46 07.8**	**-0.2**
	comp=Z,6.2nm,1.1s,baz=135,slow=6.7,SNR=19						
SONM				LR	LR	00 57 43.4	
	comp=Z,412nm,18.6s,baz=128,slow=40						
SONM	**Songino Array**	**25.92**	**325**	P	**P**	**00 46 06.6**	**-1.5**
GTA	**Gaotai**	**26.03**	**303**	⇓P	**P**	**00 46 08.8**	**-0.4**
GTA				pP	pP	00 46 21.4	-0.3
GTA				sP	sP	00 46 26.4	-1.2
GTA				S	**S**	**00 50 35.4**	**-1.4**
GTA				sS	sS	00 50 55.5	-2.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,6.4s						
GTA				LR	LR		
	comp=Z,1μm,16.0s						
GTA				LR	LR		
	comp=Z,950nm,18.9s						
GTA				LR	LR		
	comp=Z,880nm,13.5s						
CMAR	**Chiang Mai Arr**	**28.56**	**256**	P	**P**	**00 46 32.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=64,slow=6.2,SNR=1.8						
CMAR				LR	LR	00 58 40.9	
	comp=Z,169nm,21.2s,baz=100,slow=38						
TLY	**Talaya**	**29.81**	**329**	LR	LR	01 00 00.4	
	comp=Z,396nm,19.7s,baz=122,slow=39						
BKB	**Balikpapan**	**31.29**	**202**	P	**P**	**00 46 53.3**	**-2.8**
PETK	**Petropavlovsk-**	**32.99**	**33**	P	**P**	**00 47 09.8**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=251,slow=9.0,SNR=2.1						
PETK				LR	LR	01 00 22.3	
	comp=Z,101nm,21.4s,baz=228,slow=36						
WMQ	**Urumqi**	**35.92**	**307**	*e*P	**P**	**00 47 38.3**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,12nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.9s						
WMQ				LR	LR		
	comp=Z,550nm,17.7s						
WMQ				LR	LR		
	comp=Z,330nm,16.7s						
WMQ				LR	LR		
	comp=Z,350nm,21.5s						
MK31	**Makanchi Array**	**40.25**	**310**	P	**P**	**00 48 11.0**	**-1.5**
MKAR	**Makanchi Array**	**40.25**	**310**	P	**P**	**00 48 11.5**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=98,slow=9.6,SNR=9.8						
MKAR				LR	LR	01 06 12.0	
	comp=Z,198nm,19.4s,baz=102,slow=38						
MKAR	**Makanchi Array**	**40.25**	**310**	P	**P**	**00 48 10.9**	**-1.7**
MAKZ	**Makanchi**	**40.46**	**310**	P	**P**	**00 48 13.6**	**-0.7**
MAKZ				IAmb	IAmb	00 48 31.9	
	comp=Z,7.2nm,1.2s						
ZAA0	**Zalesovo Array**	**40.69**	**321**	P	**P**	**00 48 13.7**	**-2.4**
ZALV	**Zalesovo Beam**	**40.69**	**321**	P	**P**	**00 48 13.5**	**-2.5**
	comp=Z,0.9nm,0.4s,baz=107,slow=8.8,SNR=5.7						
ZALV				LR	LR	01 06 35.4	
	comp=Z,346nm,18.0s,baz=72,slow=38						
ZALV	**Zalesovo Beam**	**40.69**	**321**	P	**P**	**00 48 13.9**	**-2.1**
KURK	**Kurchatov**	**43.41**	**315**	P	**P**	**00 48 36.9**	**-1.3**
KURK				IAmb	IAmb	00 48 45.6	
	comp=Z,8.0nm,1.0s						
KURBB	**Kurchatov Arra**	**43.45**	**315**	P	**P**	**00 48 37.3**	**-1.2**
	comp=Z,2.3nm,0.6s,baz=102,slow=8.6,SNR=8.7						
KSH	**Kashi**	**44.30**	**299**	P	**P**	**00 48 49.8**	**+4.1**
KSH				pP	pP	00 49 00.3	+1.6
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,590nm,6.1s						
AAK	**Ala-Archa**	**45.38**	**303**	P	**P**	**00 48 53.9**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=135,slow=7.1,SNR=2.2						
FITZ	**Fitzroy Crossi**	**46.13**	**183**	P	**P**	**00 49 00.5**	**+0.4**
FITZ				IAmb	IAmb	00 49 07.4	
	comp=Z,9.0nm,0.8s						
WRA	**Warramunga Arr**	**48.25**	**172**	P	**P**	**00 49 17.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=354,slow=8.4,SNR=11						
WRA				LR	LR	01 08 37.5	
	comp=Z,75nm,21.6s,baz=250,slow=35						
WRA	**Warramunga Arr**	**48.25**	**172**	P	**P**	**00 49 17.4**	**+0.8**
KK31	**Karatay Array**	**48.30**	**304**	P	**P**	**00 49 19.9**	**+3.0**
KK31				IAmb	IAmb	00 49 21.3	
	comp=Z,9.7nm,1.4s						
KKAR	**Karatay Array**	**48.30**	**304**	P	**P**	**00 49 17.6**	**+0.6**
BVAR	**Borovoye Array**	**48.82**	**317**	P	**P**	**00 49 19.1**	**-1.7**
	comp=Z,2.1nm,0.7s,baz=276,slow=27,SNR=5.9						
BRVK	**Borovoye**	**48.89**	**317**	P	**P**	**00 49 20.3**	**-1.0**
BRVK				IAmb	IAmb	00 49 23.1	
	comp=Z,12nm,0.8s						
KBL	**Kabul**	**50.33**	**293**	P	**P**	**00 49 36.2**	**+3.4**
KBL				IAmb	IAmb	00 49 37.3	
	comp=Z,9.1nm,1.0s						
ASAR	**Alice Springs**	**51.88**	**173**	P	**P**	**00 49 45.1**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=2.9,slow=12,SNR=16						
ASAR				LR	LR	01 10 13.6	
	comp=Z,58nm,21.8s,baz=358,slow=34						
ASAR	**Alice Springs**	**51.88**	**173**	P	**P**	**00 49 45.4**	**+1.3**
ABKAR	**Akbulak array**	**55.32**	**312**	P	**P**	**00 50 08.1**	**-0.9**
ABKAR				IAmb	IAmb	00 50 20.0	
	comp=Z,8.6nm,1.2s						
ABKAR	**Akbulak array**	**55.32**	**312**	P	**P**	**00 50 08.0**	**-1.1**
STKA	**Stephens Creek**	**61.11**	**167**	P	**P**	**00 50 50.5**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=342,slow=10,SNR=5.2						
STKA				LR	LR	01 17 16.5	
	comp=Z,44nm,20.5s,baz=22,slow=36						
TOLK	**Toolik Lake Re**	**61.19**	**24**	P	**P**	**00 50 49.9**	**0.0**
TOLK				IAmb	IAmb	00 51 06.7	
	comp=Z,6.2nm,1.4s						
SUA	**Susitna One**	**61.37**	**33**	P	**P**	**00 50 50.4**	**-0.9**
RND	**Reindeer**	**62.00**	**30**	P	**P**	**00 50 53.9**	**-1.5**
MDM	**Murphy Dome**	**62.08**	**29**	P	**P**	**00 50 55.5**	**-0.3**
MDM				IAmb	IAmb	00 50 56.7	
	comp=Z,12nm,0.9s						
WRH	**Wood River Hil**	**62.20**	**29**	P	**P**	**00 50 56.8**	**+0.1**
WRH				IAmb	IAmb	00 51 15.3	
	comp=Z,6.3nm,1.2s						
POKR	**Poker Plat Res**	**62.39**	**28**	P	**P**	**00 50 58.4**	**+0.5**
POKR				IAmb	IAmb	00 50 58.9	
	comp=Z,6.7nm,0.8s						
ILAR	**Eielson Array**	**62.67**	**29**	P	**P**	**00 50 58.3**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=272,slow=5.3,SNR=12						
ILAR	**Eielson Array**	**62.67**	**29**	P	**P**	**00 50 59.0**	**-0.8**
SCM	**Sheep Creek Mo**	**62.93**	**32**	P	**P**	**00 51 01.1**	**-0.6**
KLU	**Klutina**	**63.65**	**32**	P	**P**	**00 51 06.0**	**-0.4**
GLB	**Gilahina Butte**	**64.66**	**32**	P	**P**	**00 51 13.0**	**0.0**
GLB				IAmb	IAmb	00 51 27.5	
	comp=Z,11nm,1.2s						
K27K	**Chicken**	**64.86**	**29**	P	**P**	**00 51 14.4**	**+0.2**
VRDI	**Verde Repeater**	**64.87**	**32**	P	**P**	**00 51 14.3**	**-0.3**
ISLE	**Juniper Island**	**65.55**	**33**	P	**P**	**00 51 18.6**	**-0.3**
EPYK	**Eagle Plains**	**66.45**	**26**	P	**P**	**00 51 24.2**	**-0.2**
EPYK				IAmb	IAmb	00 51 36.1	
	comp=Z,4.6nm,1.1s						
INK	**Inuvik**	**67.05**	**24**	P	**P**	**00 51 27.4**	**-0.7**
INK				IAmb	IAmb	00 51 41.8	
	comp=Z,5.8nm,1.4s						
KBZ	**Khabaz**	**67.93**	**309**	P	**P**	**00 51 36.9**	**+2.7**
	comp=Z,1.9nm,1.0s,baz=104,slow=8.3,SNR=3.2						
ARCES	**ARCESS Array B**	**68.16**	**338**	LR	LR	01 27 17.7	
	comp=Z,176nm,18.2s,baz=255,slow=41						
FINES	**FINESS Array B**	**71.15**	**330**	LR	LR	01 26 47.6	
	comp=Z,358nm,18.4s,baz=74,slow=39						
BRTR	**Keskin Array B**	**75.84**	**308**	P	**P**	**00 52 19.1**	**-2.8**
	comp=Z,1.3nm,1.0s,baz=259,slow=1.3,SNR=4.7						
BRTR				LR	LR	01 30 29.1	

	comp=Z,57nm,19.1s,baz=58,slow=40						
YKA	Yellowknife Ar	76.71	25	P	P	00 52 26.0	-0.1
	comp=Z,1.5nm,0.8s,baz=299,slow=5.0,SNR=13						
NOA	NORSAR Array B	77.54	334	LR	LR	01 31 07.1	
	comp=Z,229nm,18.5s,baz=330,slow=39						
GERES	GERESS Array B	83.63	323	LR	LR	01 32 30.1	
	comp=Z,248nm,18.9s,baz=75,slow=37						
PINE	Pine Mountain	84.39	43	P	P	00 53 09.5	+1.5
PINE				IAmb	IAmb	00 53 09.9	
	comp=Z,6.4nm,0.9s						
NVAR	Mina Array Bea	89.10	46	P	P	00 53 31.7	+0.7
	comp=Z,0.3nm,0.6s,baz=293,slow=4.6,SNR=2.3						
PDAR	Pinedale Array	91.58	39	P	P	00 53 43.6	+1.1
	comp=Z,0.6nm,0.7s,baz=321,slow=2.3,SNR=2.2						
PDAR				LR	LR	01 39 01.6	
	comp=Z,45nm,18.1s,baz=342,slow=38						
ESDC	Sonseca Array	99.12	325	LR	LR	01 47 35.5	
	comp=Z,144nm,20.2s,baz=0.0,slow=41						

DJA 14 00:44:54.8±0.3**, 0°S**±3°×**12°5E**±°**, h10**^{km}**, M4.0**/10**, mb4.2**/1**, MLv3.8**/10**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.53	307	P	Pn	00 45 21.0	-1.2
KMSI				S	Sn	00 45 40.8	-1.4
SANI	Sanana	1.85	155	P	Pn	00 45 26.2	-0.5
LUWI	Luwuk	2.52	254	P	Pn	00 45 36.5	+0.7
MRSI	Marisa	3.36	284	P	Pn	00 45 46.3	-1.1
NLAI	Namlea	3.43	146	P	Pn	00 45 47.4	-1.0
APSI	Ampana	3.59	261	P	Pn	00 45 51.2	+0.6
MPSI	Mapaga	5.35	277	P	Pn	00 46 15.6	+0.9
TTSI	Tana Toraja	6.00	244	P	Pb	00 46 37.8	-1.8

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*TUL **14** 00:46:27.6±1.2, 36°.75N±0°.02×97°.56W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg3.1/73(NEIC), Error ellipse: s-maj=3.6km s-min=1.6km az=222.0*
*NEIC **14** 00:46:27.8±0.9, 36°.74N±0°.02×97°.55W±0°.01, h3^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=0.9km az=203.0*
*ANF **14** 00:46:29.3±0.8, 36°.73N×97°.54W, h12^{km}±6^{km}, ML3.8/8, Error ellipse: s-maj=3.9km s-min=3.1km az=15.0*
ISC 14 00:46:27.9±1.1**, 36°.74N**±0°.02×**97°.55W**±0°.02**, h5**^{km}±11^{km}**, n85, σ0**^{s}**.62**/75**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.27	294		Pg	00 46 33.1	-0.1
GC02				Sg	Sg	00 46 37.2	+0.3
KAN13	South Haven SW	0.28	12		Pg	00 46 33.3	-0.1
KAN13				Sg	Sg	00 46 37.1	0.0
KAN14	Manchester OK	0.40	303		Pg	00 46 35.5	-0.2
KAN14				Sg	Sg	00 46 40.6	-0.2
CROK	Carrier	0.42	236	Pg	Pg	00 46 36.1	+0.1
CROK					Sg	00 46 42.1	+0.6
KAN10	Anthony SW Sta	0.58	311		Pg	00 46 38.9	-0.2
KAN10					Sg	00 46 46.6	-0.1
KAN08	Anthony NE Sta	0.59	325		Pg	00 46 39.0	-0.3
KAN08					Sg	00 46 46.9	-0.1
KAN12	Harper NE Stat	0.66	327		Pg	00 46 40.2	-0.5
T35A	Sooner Cattle	0.85	78		Pg	00 46 43.8	-0.4
T35A				Sg	Sg	00 46 54.9	-0.4
T35B	Sooner Cattle	0.85	78	P		00 46 43.8	
	baz=259						
T35B				S		00 46 55.1	
	baz=259						
QUOK	Quay	0.88	130		Pg	00 46 44.6	-0.3
QUOK				Sg	Sg	00 46 56.5	+0.1
OK031	S. Brethren Rd	0.97	144		Pg	00 46 46.2	-0.3
OK030	Cody Creek RV	1.02	142		Pg	00 46 47.2	-0.3
OK030				Sg	Sg	00 47 00.8	+0.1
BCOK	Bluff Creek, N	1.08	183		Pg	00 46 48.2	-0.4
BCOK				IAmb_Lg		00 47 02.8	
	comp=Z,78nm,0.8s						
OK025	Westminster Rd	1.17	172		Pg	00 46 50.0	-0.3
U32A	Winter Ranch,	1.22	253		Pg	00 46 50.4	-1.0
U32A				Sg	Sg	00 47 06.9	-0.3
U32A	Winter Ranch,	1.22	253	P		00 46 50.4	
	baz=72						
U32A				S		00 47 07.1	
	baz=72						
OKCFA	Oklahoma City	1.32	177		Pn	00 46 52.5	-0.7
OKCSW	OKLAHOMA CITY	1.33	176		Pn	00 46 52.7	-0.6
FNO	Franklin	1.48	175		Pn	00 46 55.2	-0.1
TUL1	Leonard	1.64	120	P	Pn	00 46 57.6	+0.1
	baz=301						
TUL1				S	Sb	00 47 20.0	+0.3
	baz=301						
TUL1	Leonard	1.64	120		Pn	00 46 57.5	0.0
TUL1				IAmb_Lg		00 47 24.0	
	comp=Z,83nm,0.8s						
TUL1	Leonard	1.64	120	P		00 46 57.6	
	baz=301						
TUL1				S		00 47 20.0	
	baz=301						
W35A	Tecumseh	1.68	161		Pn	00 46 58.0	0.0
R32A	Long Quarter,	1.92	332		Pn	00 47 01.9	+0.5
R32A	Long Quarter,	1.92	332	S		00 47 27.0	
	baz=151						
WMOK	Wichita Mounta	2.23	207	P	Pn	00 47 06.0	+0.3
	baz=26						
WMOK	Wichita Mounta	2.23	207	Pn	Pn	00 47 05.9	+0.3
WMOK	Wichita Mounta	2.23	207	P		00 47 06.0	
	baz=26						
KSU1	Kansas State U	2.47	17	P	Pn	00 47 09.4	+0.4
	baz=198						
KSU1	Kansas State U	2.47	17	Pn	Pn	00 47 09.8	+0.8
U38A	Gravette	2.56	96	Pn	Pn	00 47 10.4	+0.2
CBKS	Cedar Bluff	2.70	321	Pn	Pn	00 47 13.5	+1.3
X37A	Clayton	2.78	140	Pn	Pn	00 47 14.4	+1.2
X37A				IAmb_Lg		00 48 02.9	
	comp=Z,97nm,0.7s						
X37A	Clayton	2.78	140	P		00 47 13.9	
	baz=321						
X37A				S		00 47 54.2	
	baz=321						
HHAR	Hobbs	2.94	98	Pn	Pn	00 47 15.8	+0.4
HHAR	Hobbs	2.94	98	P		00 47 15.9	
	baz=280						
Z35A	Perchaven, San	3.41	176	Pn	Pn	00 47 22.0	+0.2
W39A	Magazine	3.42	116	P	Pn	00 47 22.0	+0.1
	baz=298						
W39A	Magazine	3.42	116	Pn	Pn	00 47 21.5	-0.4
W39A				IAmb_Lg		00 48 25.6	
	comp=Z,61nm,0.8s						
W39A	Magazine	3.42	116	S		00 48 03.8	
	baz=298						
S39A	Bolivar	3.50	73	Pn	Pn	00 47 23.2	+0.1
S39A	Bolivar	3.50	73	P		00 47 23.1	
	baz=256						
S39A				S		00 48 05.5	
	baz=256						
U40A	Yellville	3.80	94	P	Pn	00 47 27.4	+0.2
	baz=277						
U40A	Yellville	3.80	94	Pn	Pn	00 47 26.8	-0.5
U40A	Yellville	3.80	94	P		00 47 27.4	
	baz=277						
U40A				P		00 47 27.4	
	baz=277						
AMTX	Amarillo	3.83	242	IAmb_Lg		00 48 31.3	
	comp=Z,46nm,0.8s						
MIAR	Mount Ida	3.91	123	Pb	Pb	00 47 38.4	+1.1
	baz=306						
MIAR				S	Sn	00 48 15.1	+0.2
	baz=306						
MIAR	Mount Ida	3.91	123	Pn	Pn	00 47 28.4	-0.2
MIAR				IAmb_Lg		00 48 34.2	
	comp=Z,52nm,0.8s						
N33A	J Bar K, Exete	3.99	1	Pn	Pn	00 47 28.8	-1.1
MGMO	Mountain Grove	4.25	83		Pn	00 47 33.5	+0.1
MGMO				IAmb_Lg		00 48 47.5	
	comp=Z,28nm,0.7s						
P38A	Dawn	4.28	46	Pn	Pn	00 47 34.7	+0.9
N35A	Tabor	4.38	19	Pn	Pn	00 47 33.8	-1.3
X40A	Basin Creek Fa	4.45	119	Pn	Pn	00 47 36.7	+0.5
X40A	Basin Creek Fa	4.45	119	S		00 48 28.3	
	baz=302						
X40A				S		00 48 28.3	
	baz=302						
FCAR	Ozark Folk Cen	4.46	99	IAmb_Lg		00 48 48.3	
	comp=Z,35nm,0.9s						
R40A	Maddies Statio	4.47	68	Pn	Pn	00 47 36.1	-0.3
R40A				IAmb_Lg		00 48 58.1	
	comp=Z,24nm,0.8s						
R40A	Maddies Statio	4.47	68	P		00 47 36.4	
	baz=252						
WHAR	Wooly Hollow	4.50	107	Pn	Pn	00 47 37.2	+0.3
WHAR				IAmb_Lg		00 48 57.6	
	comp=Z,30nm,0.9s						
W41B	Gary Mavity, V	4.58	108	IAmb_Lg		00 48 53.8	
	comp=Z,20nm,0.7s						
KSCO	Kaye Shedlock'	4.61	301	P	Pn	00 47 39.6	+1.1
	baz=118						
KSCO	Kaye Shedlock'	4.61	301	Pn	Pn	00 47 39.2	+0.6
KSCO				IAmb_Lg		00 49 04.7	
	comp=Z,40nm,0.9s						
BGNE	Belgrade	4.69	354	IAmb_Lg		00 49 04.4	
	comp=Z,42nm,0.8s						
WHTX	Lake Whitney,	4.74	179	P	Pn	00 47 40.3	+0.3
	baz=359						
WHTX	Lake Whitney,	4.74	179	Pn	Pn	00 47 39.8	-0.2
WLAR	White Oak Lake	4.74	129	IAmb_Lg		00 48 56.7	
	comp=Z,20nm,0.9s						
P40A	Paris	5.15	56	IAmb_Lg		00 49 17.4	
	comp=Z,34nm,0.8s						
CCM	Cathedral Cave	5.19	73	IAmb_Lg		00 49 20.2	
	comp=Z,26nm,0.8s						
LCAR	Lake Charles	5.20	95	Pn	Pn	00 47 47.0	+0.6
Z41A	Richland Creek	5.22	130	IAmb_Lg		00 49 22.9	
	comp=Z,26nm,0.8s						
N38A	Joes South For	5.27	38	Pn	Pn	00 47 47.5	+0.2
N38A				IAmb_Lg		00 49 23.5	
	comp=Z,49nm,1.0s						
L34A	Svendsen Farm,	5.30	10	IAmb_Lg		00 49 26.0	
	comp=Z,39nm,0.7s						
OGNE	Ogallala	5.47	322	Pn	Pn	00 47 50.9	+0.7
OGNE				IAmb_Lg		00 49 27.7	
	comp=Z,32nm,0.7s						
FVM	French Village	5.81	76	IAmb_Lg		00 49 30.7	
	comp=Z,24nm,0.9s						
435B	Jarrell	5.94	180	IAmb_Lg		00 49 44.9	
	comp=Z,24nm,0.8s						
K31A	O'Neill	5.95	351	IAmb_Lg		00 49 43.1	
	comp=Z,38nm,0.7s						
SLM	Saint Louis	6.10	70	IAmb_Lg		00 49 40.6	
	comp=Z,32nm,0.8s						
SCIA	State Center	6.16	32	IAmb_Lg		00 49 53.1	
	comp=Z,38nm,0.8s						
Q24A	Divide	6.41	293	Pn	Pn	00 48 03.4	0.0
Q24A				IAmb_Lg		00 49 56.7	
	comp=Z,13nm,0.7s						
SDCO	Great Sand Dun	6.42	281	Pn	Pn	00 48 03.5	0.0
JCT	Junction City	6.52	197	IAmb_Lg		00 50 10.3	
	comp=Z,26nm,1.0s						
S44A	Carbondale	6.69	79	Pn	Pn	00 48 06.6	-0.3
SIUC	Southern Illin	6.72	79	IAmb_Lg		00 50 03.4	
	comp=Z,34nm,0.8s						
K38A	Parkersburg	6.95	30	IAmb_Lg		00 50 22.6	
	comp=Z,30nm,0.9s						
W45A	Hickory Valley	6.96	101	IAmb_Lg		00 50 13.2	
	comp=Z,20nm,0.8s						
ECSD	EROS Data Cent	7.02	6	Pn	Pn	00 48 10.3	-1.2
ISCO	Idaho Springs	7.04	298	Pn	Pn	00 48 12.2	+0.2
L40A	Anamosa	7.23	41	Pn	Pn	00 48 13.6	-0.7
L40A				IAmb_Lg		00 50 23.4	
	comp=Z,21nm,0.7s						
S22A	4UR Ranch, Cre	7.47	281	Pn	Pn	00 48 17.3	-0.6
PHWY	Pilot Hill	7.66	309	IAmb_Lg		00 50 31.6	
	comp=Z,10nm,0.7s						
N23A	Red Feather La	7.75	305	Pn	Pn	00 48 19.6	-2.2
N23A				IAmb_Lg		00 50 50.2	
	comp=Z,21nm,0.8s						
SMCO	Snowmass	7.83	291	Pn	Pn	00 48 24.2	+1.2
L42A	Oliver, Polo	8.05	47	Pn	Pn	00 48 26.8	+1.2
Y22D	IRIS PASSCAL I	8.10	254	IAmb_Lg		00 51 03.1	
	comp=Z,19nm,0.7s						
JFWS	Jewell Farm	8.34	40	Pn	Pn	00 48 29.2	-0.3
SFIN	Lafayette	8.96	63	IAmb_Lg		00 51 12.1	
	comp=Z,17nm,0.8s						
TX31	Lajitas Ar. Si	8.99	217	Pn	Pn	00 48 38.3	-0.3
K22A	Casper	9.09	313	IAmb_Lg		00 51 38.8	
	comp=Z,14nm,0.9s						

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*JMA **14** 00:46:34.9±0.4, 28°.35N×128°.10E, h11^{km}±4^{km}, M4.2*
*NIED **14** 00:46:35.0, 28°.35N×128°.10E, h11^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.42; $M_{\theta\theta}$3.00; $M_{\phi\phi}$-1.58; $M_{r\theta}$-2.60; $M_{\theta\phi}$2.54; $M_{\phi r}$0.37; Fault plane solution: $M_0$4.38000×10^{15} NP1: ϕ_s103.00000°, δ79.00000°, λ-43.00000°. NP2: ϕ_s203.00000°, δ48.00000°, λ-165.00000°.*
*IDC **14** 00:46:45.0±3.2, 28°.35N×128°.23E, h89^{km}±31^{km}, mb3.3/9, mb1 3.5/13, mb1mx3.4/33, mbtmp3.7/13 Error ellipse: s-maj=30.1km s-min=17.5km az=71.0*
ISC 14 00:46:36.0±0.7**, 28°.27N**±0°.05×**128°.24E**±0°.06**, h10**^{km}**, n23, σ1**^{s}**.15**/25**, mb3.6**/9**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	0.79	127	P	Pb	00 46 52.6	+0.8
JTK				S	Sn	00 47 04.8	-0.2
JAMN	Amaminishikomi	0.82	91	P	Pn	00 46 53.1	-0.6
JAMN				S	Sn	00 47 05.9	0.0
JOKE	Okinoerabujima	0.95	162	P	Pg	00 46 54.8	+0.6
JAM	Amami Oshima	1.21	83	P	Pn	00 46 58.8	-0.2
JAM				eS	Sn	00 47 16.5	+1.1
JTAJ	Takarajima	1.22	43	P	Pn	00 46 58.0	-1.2
JYRO	Yoronjima	1.25	172	P	Pb	00 47 00.0	+0.3
JIH	Iheya	1.25	191	P	Pn	00 46 58.9	-0.6
JIH				S	Sb	00 47 16.0	+0.2
JOW	Kunigami	1.43	179	P	Pn	00 47 01.9	-0.1
JZK	Kikaishima	1.52	88	P	Pg	00 47 05.4	+0.1
JNTH	Nagotoyohara	1.75	187	P	Pn	00 47 07.0	+0.6
JNU	Nakatsue	5.35	24	P	Pn	00 48 01.6	+5.6
	2.1nm,0.3s,baz=190,slow=6.7,SNR=21						
KSRS	Korea Array	9.17	358	P	Pn	00 48 51.6	+3.3
	0.2nm,0.3s,baz=215,slow=27,SNR=1.7						
MJAR	Matsushiro Arr	11.78	43	P	Pn	00 49 30.5	+6.3
	0.0nm,0.3s,baz=242,slow=15,SNR=1.5						
USRK	Ussuriysk Ar.	16.18	10	P	Pn	00 50 24.5	+1.0
	baz=196,slow=10,SNR=2.5						
KLR	Kul'dur	21.11	6	P	P	00 51 22.8	+2.1
	1.0nm,0.8s,baz=181,slow=23,SNR=2.2						
SONM	Songino Array	25.88	325	P	P	00 52 07.4	-0.6
	1.2nm,0.8s,baz=138,slow=9.1,SNR=5.1						
MKAR	Makanchi Array	40.21	310	P	P	00 54 12.6	-0.1
	1.1nm,0.7s,baz=101,slow=9.2,SNR=9.8						
ZALV	Zalesovo Beam	40.65	321	P	P	00 54 15.1	-1.1
	1.1nm,0.8s,baz=100,slow=7.7,SNR=4.2						
WRA	Warramunga Arr	48.28	172	P	P	00 55 17.7	+0.2
	1.0nm,0.9s,baz=351,slow=8.1,SNR=4.1						
ASAR	Alice Springs	51.92	173	P	P	00 55 45.7	+0.6
	0.4nm,0.7s,baz=357,slow=7.5,SNR=3.2						
STKA	Stephens Creek	61.15	167	P	P	00 56 50.0	-0.6
	1.0nm,0.7s,baz=354,slow=9.2,SNR=1.4						
ILAR	Eielson Array	62.65	29	P	P	00 56 58.3	-2.1
	0.5nm,0.8s,baz=268,slow=5.3,SNR=3.2						
YKA	Yellowknife Ar	76.68	25	P	P	00 58 26.0	-1.0
	0.4nm,0.8s,baz=296,slow=5.4,SNR=4.4						

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*BJI **14** 01:15:33.3±0.0, 26°.12N×128°.76E, h22^{km}, mB4.8/38, mb4.6/54, Ms4.3/38, Ms7 4.1/38*
*GCMT **14** 01:15:39.7±0.4, 26°.49N±0°.03×128°.56E±0°.03, h32^{km}, MW4.9/69, Moment Tensor Solution. s23,c25; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.43±.17; $M_{\theta\theta}$-1.27±.11; $M_{\phi\phi}$-1.17±.12; $M_{r\theta}$-0.63±.12; $M_{\theta\phi}$1.16±.05; $M_{\phi r}$0.57±.13; Best double couple: $M_0$2.55200×10^{16} NP1: ϕ_s134.00000°, δ35.00000°, λ91.00000°. NP2: ϕ_s313.00000°, δ55.00000°, λ89.00000°. Principal axes: T 2.5760, Plg80.0000°, Azm221.0000°; N -0.0590, Plg0.0000°, Azm314.0000°; P -2.5270, Plg10.0000°, Azm44.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **14** 01:15:39.6±1.1, 26°.53N×128°.44E, h36^{km}, mb5.0/51 Error ellipse: s-maj=6.5km s-min=4.2km az=107.1*
*NEIC **14** 01:15:39.7±1.9, 26°.38N±0°.05×128°.45E±0°.06, h28^{km}±4^{km}, mb4.9/69, Error ellipse: s-maj=8.4km s-min=6.5km az=221.0*
*IDC **14** 01:15:40.8±0.8, 26°.52N×128°.34E, h31^{km}±5^{km}, mb4.3/22, mb1 4.5/26, mb1mx4.3/37, mbtmp4.5/26, ML5.0/2, MS3.9/26, Ms1 3.9/26, ms1mx3.7/51, Error ellipse: s-maj=16.0km s-min=12.1km az=94.0*
*NIED **14** 01:15:41.0, 26°.46N×128°.50E, h32^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.93; $M_{\theta\theta}$-0.42; $M_{\phi\phi}$-0.51; $M_{r\theta}$-0.16; $M_{\theta\phi}$0.73; $M_{\phi r}$0.70; Fault plane solution: $M_0$1.30000×10^{16} NP1: ϕ_s335.00000°, δ63.00000°, λ111.00000°. NP2: ϕ_s116.00000°, δ33.00000°, λ55.00000°.*
*JMA **14** 01:15:40.9±0.1, 26°.46N×128°.50E, h32^{km}±2^{km}, M4.7*
JMA Felt III J1.
*BGR **14** 01:15:57.1±0.0, 28°.69N×126°.60E, h33^{km}, mb4.9*
ISC 14 01:15:40.0±0.4**, 26°.42N**±0°.03×**128°.52E**±0°.03**, h30**^{km}±2^{km}**, h30**^{km}**:pP-P, n404, σ1**^{s}**.57**/431**, mb4.8**/127**, MS4.1**/29**, 40C-43D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNTH	Nagotoyohara	0.45	282	P	Pb	01 15 50.0	+0.3
JNTH				S	Sb	01 15 56.3	0.0
JOW	Kunigami	0.46	332	P	Pn	01 15 50.2	-0.5
JOW				S	Sb	01 15 56.6	0.0
JOW	Kunigami	0.46	332		Pn	01 15 50.4	-0.2
JOW				Sg	Sb	01 15 56.5	0.0
JYRO	Yoronjima	0.60	354	P	Pb	01 15 52.1	0.0
JYRO				S	Sb	01 15 59.9	-0.5
JJT3	Tamagusuku3	0.71	247	P	Pn	01 15 54.6	+0.5
JJT3				S	Sn	01 16 05.1	+1.0
JIH	Iheya	0.79	321	P	Pb	01 15 55.1	-0.1
JIH				S	Sn	01 16 05.7	-0.1
JOKE	Okinoerabujima	0.94	3	P	Pn	01 15 57.2	0.0
JOKE				S	Sb	01 16 09.5	-0.3
JAGN	Aguni-jima	1.16	279	P	Pb	01 16 00.9	-0.5
JAGN				S	Sn	01 16 15.2	+0.3
JTK	Tokunoshima	1.41	16	P	Pn	01 16 03.8	+0.1
JTK				S	Sn	01 16 21.1	-0.3
JKE	Kume jima 2	1.56	267	P	Pn	01 16 05.7	0.0
JKE				eS	Sn	01 16 24.0	-0.9
JMZ	Minamidaito 2	2.50	103	P	Pn	01 16 17.5	-1.2
JMZ				S	Sn	01 16 44.6	-3.6
JMZ	Minamidaito 2	2.50	103		Pn	01 16 17.3	-1.4
JKDJ	Kitadaitoujima	2.54	100	P	Pn	01 16 18.2	-1.0
JKDJ				eS	Sn	01 16 46.6	-2.6
JSU	Suzuyama	5.34	18	Pn	Pn	01 16 57.6	-0.2
YOJ	Yonaguni jima	5.35	250	P	Pn	01 16 57.1	-0.7
YOJ	Yonaguni jima	5.35	250	Pn	Pn	01 16 57.1	-0.7
NACB	Ninganchiao	6.65	252	Pn	Pn	01 17 13.7	-2.1
YHNB	Yeheng	6.68	256	Pn	Pn	01 17 17.1	+0.9
JNU	Nakatsue	6.99	17	Pn	Pn	01 17 21.6	+1.3
	25nm,0.3s,baz=188,slow=3.3,SNR=103						
JNU				Sn	Sn	01 18 38.9	+0.1
	3.1nm,0.3s,baz=87,slow=18,SNR=1.0						
JNU				LR	LR	01 20 33.5	
	comp=Z,734nm,20.0s,baz=207,slow=42						
JNU	Nakatsue	6.99	17	Pn	Pn	01 17 21.4	+1.1
YULB	Yu-li	7.21	247	Pn	Pn	01 17 19.9	-3.6
SSLB	Suanglung	7.34	251	Pn	Pn	01 17 22.8	-2.5
TWG	Pinlang	7.66	244	Pn	Pn	01 17 25.4	-4.2
JMN	Monobe	8.64	31	Pn	Pn	01 17 42.3	-0.8
JHS	Saijyo	9.42	24	Pn	Pn	01 17 52.7	-1.0
TJN	Taejon	9.97	355	⇑eP	Pn	01 17 59.4	-1.9
NJ2	Nanjing	10.13	306	eP	Pn	01 18 04.4	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JWT	Wachi	10.63	32	Pn	Pn	01 18 10.1	-0.1
KSRS	Korea Array	11.01	358	Pn	Pn	01 18 16.9	+1.4
	0.3nm,0.3s,baz=176,slow=13,SNR=20						
KSRS				Sn	Sn	01 20 18.4	+0.8
	0.3nm,0.3s,baz=197,slow=10,SNR=4.7						
KSRS				LR	LR	01 22 54.6	
	comp=Z,706nm,19.6s,baz=178,slow=40						
INU	Inuyama	11.50	37	Pn	Pn	01 18 23.4	+1.1
JHJ	Hachijo jima 2	11.84	53	Pn	Pn	01 18 28.7	+1.8
	42nm,0.3s,baz=70,slow=21,SNR=11						
JHJ				LR	LR	01 22 20.9	
	comp=Z,496nm,21.4s,baz=270,slow=34						
JHJ2	Mitsune	11.86	53	Pn	Pn	01 18 28.3	+1.1
JGF	Kuroka	11.88	37	Pn	Pn	01 18 26.6	-0.8
JCJ	Chichijima	12.23	84	Pn	Pn	01 18 31.1	-1.3
	9.6nm,0.3s,baz=301,slow=19,SNR=1.7						
JCJ	Chichijima	12.23	84		Pn	01 18 31.0	-1.3
MAJO	Matsushiro	13.04	37	c iP	Pn	01 18 43.8	+0.6
MAJO	Matsushiro	13.04	37	Pn	Pn	01 18 43.6	+0.4
MAT	Matsushiro	13.04	37	P	Pn	01 18 43.5	+0.3
MJAR	Matsushiro Arr	13.04	37	Pn	Pn	01 18 42.9	-0.3
	0.3nm,0.3s,baz=201,slow=12,SNR=22						
MJAR	Matsushiro Arr	13.04	37	P	Pn	01 18 44.3	+1.1
MJAR	Matsushiro Arr	13.04	37	Pn	Pn	01 18 44.2	+1.1
DL2	Dalian	13.73	337	eP	P	01 18 57.0	-3.9
DL2				S	Sn	01 21 33.1	+9.1
DL2				pmax	pmax		
	comp=Z,180nm,5.6s						
DL2				LR	LR		
	comp=N,530nm,15.2s						
DL2				LR	LR		
	comp=E,700nm,17.8s						
DL2				LR	LR		
	comp=Z,580nm,18.8s						
JYT	Yasato	13.96	43	Pn	Pn	01 18 55.4	-0.4
TGY	Tagaytay City	14.16	212	LR	LR	01 24 24.6	
	comp=Z,264nm,20.5s,baz=13,slow=37						
JSD	Sado	14.21	33	P	P	01 19 05.6	-0.6
BJT	Baijiatuau	17.02	326	P	P	01 19 38.0	+0.5
BJT				pmax	pmax		
	comp=Z,11nm,0.6s						
BJT	Baijiatuau	17.02	326	P	P	01 19 38.0	+0.5
BJI	Beijing	17.04	326	P	P	01 19 38.3	+0.7
BJI				S	S	01 22 51.1	-2.5
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				LR	LR		
	comp=Z,500nm,16.5s						
BJI				LR	LR		
	comp=Z,520nm,19.0s						
CN2	Changchun	17.52	353	eP	Pn	01 19 42.0	0.0
CN2				PP	sP	01 19 56.8	+2.4
CN2				S	Sn	01 22 55.9	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,810nm,15.0s						
CN2				LR	LR		
	comp=Z,560nm,17.0s						
USA0B	Ussuriysk Arra	17.96	8	⇑eP	P	01 19 47.6	-0.2
USRK	Ussuriysk Ar.	17.96	8	P	Pn	01 19 47.0	-0.4
	baz=187,slow=9.8,SNR=17						
USRK				LR	LR	01 27 18.1	
	comp=Z,324nm,18.6s,baz=176,slow=39						
USRK	Ussuriysk Ar.	17.96	8	P	Pn	01 19 46.6	-0.8
XAN	Xi'an	18.54	299	P	Pn	01 19 54.6	-0.1
XAN				pP	pP	01 20 00.8	-1.4
XAN				sP	sP	01 20 04.8	-1.2
XAN				S	Sn	01 23 20.0	-1.1
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
XAN				pmax	pmax		
	comp=Z,190nm,4.3s						
XAN				LR	LR		
	comp=Z,500nm,10.3s						
XAN				LR	LR		
	comp=Z,640nm,10.8s						
XAN				LR	LR		
	comp=Z,750nm,14.6s						
QIZ	Qiongzhong	18.72	251	P	P	01 19 53.1	-3.2
QIZ				S	Sn	01 23 21.8	-3.7
QIZ				LR	LR		
	comp=Z,820nm,16.1s						
QIZ				LR	LR		
	comp=Z,920nm,20.8s						
GYA	Guiyang	19.57	275	⇑P	Pn	01 20 08.8	+1.6
GYA				pmax	pmax		
	comp=Z,15nm,1.3s						
GYA				LR	LR		
	comp=Z,600nm,12.0s						
GYA				LR	LR		
	comp=Z,710nm,13.2s						
ERM	Erimo	19.66	34	P	P	01 20 05.5	-1.0
ERM				pmax	pmax		
	comp=Z,46nm,0.9s						
ERM	Erimo	19.66	34	P	P	01 20 05.5	-1.0
ERM				IAmb	IAmb	01 20 07.8	
	comp=Z,46nm,0.8s						
GUMO	Guam	19.95	127	LR	LR	01 26 21.4	
	comp=Z,180nm,20.3s,baz=307,slow=32						

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HHC   Hu-ho-hao-te      20.11 320  eP      Pn      01 20 13.6 +0.2
HHC                                pmax    pmax
      comp=Z,10.0nm,1.0s
HHC                                pmax    pmax
      comp=Z,100nm,5.7s
BTO   Baotou            20.87 317  eP      Pn      01 20 22.9 +0.6
ASAJ  Asahikawa         21.01  29  P       P       01 20 19.2 -1.9
      comp=Z,28nm,0.7s,baz=218,slow=13,SNR=6.3
ASAJ                               LR      LR      01 29 37.8
      comp=Z,213nm,19.4s,baz=206,slow=40
ASAJ  Asahikawa         21.01  29  P       P       01 20 20.4 -0.7
ASAJ                               pmax    pmax
      comp=Z,46nm,0.9s
JKA   Kamikawa-asahi    21.02  29  P       P       01 20 20.4 -0.7
JKA                                IAmb    IAmb    01 20 23.9
      comp=Z,46nm,0.9s
CD2   Chengdu           22.16 287  P       P       01 20 31.1 -2.6
CD2                                S       S       01 24 33.0 -3.3
CD2                                pmax    pmax
      comp=Z,20nm,0.5s
CD2                                pmax    pmax
      comp=Z,430nm,5.1s
CD2                                LR      LR
      comp=Z,890nm,20.3s
CD2                                LR      LR
      comp=Z,990nm,14.9s
CD2                                LR      LR
      comp=Z,830nm,18.7s
YUK   Yuzh-Kuril'sk     22.49  34  eP      P       01 20 28.7 -8.3
YUK                                eS      S       01 24 37.0 -5.0
YUK                                pmax    pmax
      comp=Z,735nm,1.3s
YUK                                pmax    pmax
      comp=N,533nm,1.4s
KLR   Kul'dur           22.91   5  P       P       01 20 39.5 -1.8
      comp=N,2.3nm,0.5s,baz=186,slow=10,SNR=14
KLR                                LR      LR      01 29 20.2
      comp=N,201nm,21.8s,baz=189,slow=36
KLR   Kul'dur           22.91   5⇓eP      P       01 20 39.1 -2.2
KLR                                pmax    pmax
      comp=Z,18nm,3.7s
SLVN  Son La            23.05 263  P       P       01 20 43.9 +0.8
LZH   Lanzhou           23.14 301  eP      P       01 20 43.3 -0.7
LZH                                pP      pP      01 20 49.5 -2.4
LZH                                sP      sP      01 20 54.9 -0.7
LZH                                PP      PnPn    01 21 18.0 +8.3
LZH                                pmax    pmax
      comp=Z,24nm,1.0s
LZH                                pmax    pmax
      comp=Z,98nm,4.3s
LZH                                LR      LR
      comp=Z,460nm,14.1s
LZH                                LR      LR
      comp=Z,440nm,12.7s
LZH                                LR      LR
      comp=Z,600nm,14.9s
KMI   Kunming           23.24 273  eP      P       01 20 45.8 +0.6
KMI                                pmax    pmax
      comp=Z,14nm,0.9s
KMI                                pmax    pmax
      comp=Z,170nm,3.7s
KMI                                LR      LR
      comp=Z,440nm,15.0s
KMI                                LR      LR
      comp=Z,610nm,12.8s
KMI                                LR      LR
      comp=Z,660nm,14.9s
YSS   Yuzh-Sakhalins    23.39  25d iP      P       01 20 46.3 +0.1
YSS                                pmax    pmax
      comp=Z,346nm,1.3s
YSS   Yuzh-Sakhalins    23.39  25  P       P       01 20 45.5 -0.7
NONG  Nongkai           24.88 256  P       P       01 21 02.4 +2.1
      comp=Z,32nm,1.1s
TOLI2 Tolitoli          26.24 198  P       P       01 21 12.5 -0.1
TOLI2                              IAmb    IAmb    01 21 14.3
      comp=Z,34nm,1.3s
TYV   Tymovskoe         26.69  20  eP      P       01 21 17.7 +1.3
TYV                                eS      S       01 25 53.6 +3.8
TYV                                pmax    pmax
      comp=Z,15nm,0.8s
TYV                                smax    smax
      comp=E,4.0nm,0.3s
CHAI  Chaiyaphum        26.81 252  P       P       01 21 20.2 +2.4
      comp=E,624nmcomp=E,27nm,1.1s
GTA   Gaotai            27.23 306 ⇑P       P       01 21 20.0 -1.6
GTA                                pP      pP      01 21 27.0 -3.0
GTA                                sP      sP      01 21 31.5 -2.1
GTA                                PcP     PcP     01 24 42.0 +0.9
GTA                                pmax    pmax
      comp=E,16nm,1.0s
GTA                                pmax    pmax
      comp=E,250nm,6.5s
GTA                                LR      LR
      comp=E,310nm,16.0s
GTA                                LR      LR
      comp=E,430nm,16.4s
GTA                                LR      LR
      comp=E,540nm,19.6s
ULN   Ulaanbaatar       27.23 327⇑eP      P       01 21 21.9 +0.4
ULN                                pmax    pmax
      comp=Z,6.0nm,0.9s
ULN   Ulaanbaatar       27.23 327  P       P       01 21 22.7 +1.2
SIJI  Sorong            27.26 174  LR      LR      01 31 38.1
      comp=Z,230nm,20.9s,baz=20,slow=35
SONM  Songino Array     27.53 327  P       P       01 21 21.6 -2.6
      comp=Z,3.5nm,1.0s,baz=141,slow=9.9,SNR=21
SONM                               PcP     PcP     01 24 43.2 +1.5
      comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=2.0
SONM                               ScP     ScP     01 28 30.7  +11
      comp=Z,0.2nm,0.3s,baz=106,slow=3.1,SNR=2.5
SONM                               LR      LR      01 33 44.7
      comp=Z,182nm,18.4s,baz=146,slow=40
SONM  Songino Array     27.53 327  P       P       01 21 24.9 +0.7
SONM                               pmax    pmax
      comp=Z,4.0nm,0.8s
SONM  Songino Array     27.53 327  P       P       01 21 24.9 +0.7
PHIT  Phitsanulok       27.61 256  P       P       01 21 27.5 +2.6
      comp=Z,94nm,1.1s
CM34  Chiang Mai Arr    28.09 261  P       P       01 21 31.0 +1.7
CM35  Chiang Mai Arr    28.14 260  P       P       01 21 32.0 +2.2
CM36  Chiang Mai Arr    28.25 260  P       P       01 21 37.0 +6.2
CMMT  Chiang Mai        28.28 261  P       P       01 21 33.0 +2.0
      comp=Z,314nmcomp=Z,3.8nm,1.1s
CHTO  Chiang Mai        28.28 261  P       P       01 21 31.5 +0.5
CHTO                               pmax    pmax
      comp=Z,11nm,1.2s
CHTO  Chiang Mai        28.28 261  P       P       01 21 31.5 +0.5
CMAR  Chiang Mai Arr    28.41 260  P       P       01 21 31.8 -0.4
      comp=Z,1.4nm,0.4s,baz=61,slow=6.0,SNR=6.0
CMAR                               PcP     PcP     01 24 45.7 +1.5
      comp=Z,0.9nm,0.4s,baz=42,slow=1.1,SNR=6.7
CMAR                               LR      LR      01 34 06.7
      comp=Z,252nm,19.2s,baz=176,slow=39
CMAR  Chiang Mai Arr    28.41 260ceP      P       01 21 34.7 +2.5
CMAR                               pmax    pmax
      comp=Z,1.0nm,0.4s
SURT  Suratani          33.09 244  P       P       01 22 18.9 +5.5
PEA0B Petropavlovsk-    34.40  31  P       P       01 22 27.1 +2.6
PEA0B                              pmax    pmax
      comp=Z,73nm,1.5s
PEA0B Petropavlovsk-    34.40  31  P       P       01 22 27.1 +2.6
PETK  Petropavlovsk-    34.40  31  P       P       01 22 25.1 +0.6
      comp=Z,6.4nm,0.8s,baz=350,slow=0.2,SNR=10.0
PETK                               LR      LR      01 36 53.2
      comp=Z,137nm,20.9s,baz=226,slow=37
PETK  Petropavlovsk-    34.40  31  P       P       01 22 24.8 +0.3
YAK   Yakutsk           35.61   1  eP      P       01 22 32.6 -2.1
YAK                                e*PP    pP      01 22 43.1 +0.1
YAK                                e               01 23 52.4
YAK                                eS      S       01 28 07.8 -1.0
YAK                                e*SS    sS      01 28 29.1 +6.5
YAK                                eSSS    SSS     01 30 58.7
YAK                                e               01 32 46.8
YAK                                pmax    pmax
      comp=Z,9.0nm,0.9s
YAK                                pmax    pmax
      comp=N,3.0nm,1.0s
YAK                                pmax    pmax
      comp=E,3.0nm,1.1s
YAK                                pmax    pmax
      comp=Z,157nm,4.2s
YAK                                pmax    pmax
      comp=N,99nm,4.8s
YAK                                pmax    pmax
      comp=E,66nm,3.7s
YAK                                smax    smax
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      comp=N,163nm,5.2s
YAK                                smax    smax
      comp=E,114nm,5.5s
YAK                                MLR     MLR
      comp=Z,125nm,20.0s
H11N1 WAKE ISLAND Hy    35.83  93  T       T       02 00 50.2
      baz=290,slow=74,SNR=23
H11N2 WAKE ISLAND Hy    35.83  93  T       T       02 00 50.1
      baz=290,slow=74,SNR=42
H11N3 WAKE ISLAND Hy    35.85  93  T       T       02 00 51.5
      baz=290,slow=74,SNR=31
H11S3 WAKE ISLAND Hy    36.04  95  T       T       02 01 14.4
      baz=300
H11S1 WAKE ISLAND Hy    36.05  95  T       T       02 01 34.7
      baz=300
H11S2 WAKE ISLAND Hy    36.06  95  T       T       02 01 10.6
      baz=300
TAPN  Taplejung         36.30 281  eP      P       01 22 41.0 -0.4
      comp=Z,13nm,0.5s
MA2   Magadan           36.55  19⇑eP      P       01 22 42.4 -0.4
MA2                                pmax    pmax
      comp=Z,13nm,1.9s
ODAN  Odare             36.65 280  eP      P       01 22 44.0 -0.4
      comp=Z,59nm,0.6s
PSI   Prapat            36.84 235  P       P       01 22 46.9 +1.0
      comp=Z,2.8nm,0.6s,baz=360,slow=5.8,SNR=4.3
RPSI  Rantau Prapat     36.91 235  P       P       01 22 46.9 +0.5
WMQ   Urumqi            37.20 308  eP      P       01 22 48.8 +0.1
WMQ                                pP      pP      01 22 55.3 -2.0
WMQ                                sP      sP      01 23 00.8  0.0
WMQ                                pmax    pmax
      comp=Z,30nm,1.1s
WMQ                                pmax    pmax
      comp=Z,130nm,5.3s
RAMN  Ramite            37.33 280  eP      P       01 22 49.4 -0.8
      comp=Z,16nm,0.5s
GUN   Gumba             37.83 282  eP      P       01 22 54.0 -0.5
      comp=Z,15nm,0.4s
PKI   Pulchoki          38.29 282  eP      P       01 22 57.5 -0.9
      comp=Z,25nm,0.5s
PKIN  Phulchoki         38.30 282  eP      P       01 22 57.3 -1.1
      comp=Z,21nm,0.4s
KKN   Kakani            38.37 282  eP      P       01 22 58.3 -0.6
DMN   Daman             38.55 282  eP      P       01 22 59.8 -0.7
      comp=Z,74nm,1.1s
DGZ   Jazzator, Alta    39.15 317⇓eP      P       01 23 03.8 -1.4
DGZ                                pmax    pmax
      comp=Z,2.0nm,1.3s
DANN  Dangsing          39.62 283  eP      P       01 23 09.2 -0.3
      comp=Z,75nm,0.7s
SEY   Seymchan          39.76  17⇑eP      P       01 23 10.8 +1.0
ZSN   Zaisan            40.06 313  eP      P       01 23 10.9 -1.7
      baz=313
ZSN   Zaisan            40.06 313  eP      P       01 23 10.8 -1.8
MK31  Makanchi Array    41.60 312deP      P       01 23 24.3 -1.0
MK31  Makanchi Array    41.60 312  P       P       01 23 24.3 -1.0
MKAR  Makanchi Array    41.60 312  P       P       01 23 24.0 -1.3
      comp=Z,5.1nm,0.7s,baz=100,slow=10,SNR=49
MKAR                               PcP     PcP     01 25 22.4 +0.4
      comp=Z,1.4nm,0.7s,baz=98,slow=4.2,SNR=4.3
MKAR                               LR      LR      01 43 25.2
      comp=Z,118nm,18.2s,baz=100,slow=40
MKAR  Makanchi Array    41.60 312  P       P       01 23 23.7 -1.6
MAKZ  Makanchi          41.81 312  P       P       01 23 26.0 -1.0
MAKZ                               pmax    pmax
      comp=Z,19nm,1.2s
MAKZ  Makanchi          41.81 312  P       P       01 23 26.0 -1.0
MAKZ                               IAmb    IAmb    01 23 27.1
      comp=Z,19nm,1.1s
ZAA0  Zalesovo Array    42.25 323  P       P       01 23 28.6 -1.9
ZALV  Zalesovo Beam     42.25 323  P       P       01 23 29.1 -1.3
      comp=Z,2.1nm,0.4s,baz=109,slow=8.0,SNR=14
ZALV                               ScP     ScP     01 29 21.3 +8.8
      comp=Z,1.7nm,0.5s,baz=127,slow=4.4,SNR=7.2
ZALV                               LR      LR      01 43 13.0
      comp=Z,223nm,18.5s,baz=63,slow=39
ZALV  Zalesovo Beam     42.25 323  P       P       01 23 28.4 -2.0
SHLS  Shalkode          42.97 306  eP      P       01 23 32.6 -4.0
      comp=Z,12nm,1.1s,baz=306
SHLS  Shalkode          42.97 306  eP      P       01 23 32.6 -4.0
SHLS                               pmax    pmax
      comp=Z,12nm,1.1s
KPKS  Kokpek            43.57 306  eP      P       01 23 40.0 -1.5
      comp=Z,20nm,1.1s,baz=306
KPKS  Kokpek            43.57 306  eP      P       01 23 39.9 -1.5
KPKS                               pmax    pmax
      comp=Z,20nm,1.1s
SATY  Saty              43.73 306  eP      P       01 23 41.9 -0.9
      comp=Z,12nm,1.4s,baz=306
SATY  Saty              43.73 306  eP      P       01 23 41.8 -0.9
SATY                               pmax    pmax
      comp=Z,12nm,1.4s
SEM   Semipalatinsk     43.78 316  eP      P       01 23 41.1 -2.1
      baz=316
SEM   Semipalatinsk     43.78 316  eP      P       01 23 41.0 -2.1
TDK   Taldyqorghan      43.95 308  eP      P       01 23 43.5 -0.9
      comp=Z,29nm,1.2s,baz=308
TDK   Taldyqorghan      43.95 308  eP      P       01 23 43.5 -0.9
TDK                                pmax    pmax
      comp=Z,29nm,1.2s
MDOK  Medeo             44.73 306  eP      P       01 23 50.0 -0.9
      baz=306
MDOK  Medeo             44.73 306  eP      P       01 23 49.9 -0.9
TNSS  Tian-Shan         44.80 305  eP      P       01 23 50.8 -0.9
      baz=305
TNSS  Tian-Shan         44.80 305  eP      P       01 23 50.7 -0.9
AAA   Alma-Ata          44.83 306  eP      P       01 23 51.0 -0.5
      baz=306
AAA   Alma-Ata          44.83 306  eP      P       01 23 51.0 -0.5
CHKK  Chushkaly         44.84 307  eP      P       01 23 50.6 -0.9
      baz=306
CHKK  Chushkaly         44.84 307  eP      P       01 23 50.6 -0.9
KURK  Kurchatov         44.86 316deP      P       01 23 50.4 -1.1
KURK                               pmax    pmax
      comp=Z,19nm,1.7s
KURK  Kurchatov         44.86 316  P       P       01 23 49.0 -2.5
KURBB Kurchatov Arra    44.89 316  P       P       01 23 50.5 -1.3
      comp=Z,2.0nm,0.4s,baz=102,slow=9.4,SNR=24
TIXI  Tiksi             45.27   0⇑eP      P       01 23 55.3 +0.9
KUU   Kurty             45.31 307  eP      P       01 23 54.0 -1.3
      comp=Z,12nm,0.8s,baz=306
KUU   Kurty             45.31 307  eP      P       01 23 53.9 -1.3
KUU                                pmax    pmax
      comp=Z,12nm,0.8s
KSH   Kashi             45.39 300  P       P       01 23 59.3 +3.3
KSH                                pP      sP      01 24 09.8 +1.7
KSH                                pmax    pmax
      comp=Z,24nm,1.1s
KSH                                pmax    pmax
      comp=Z,470nm,6.9s
KSH                                LR      LR
      comp=Z,800nm,7.3s
TKM2  Tokmak 2          45.78 305  P       P       01 23 59.8 +0.6
      SNR=8.2
KBK   Karagaybulak      46.24 305  P       P       01 24 03.5 +0.7
      SNR=6.2
WB0   Warramunga Arr    46.27 172  P       P       01 24 02.1 -0.8
CHMS  Chumysh           46.40 305  P       P       01 24 04.0 +0.1
      SNR=8.0
WRAB  Tennant Creek     46.42 172c iP      P       01 24 04.3 +0.2
WRAB                               pmax    pmax
      comp=Z,16nm,1.1s
WRA   Warramunga Arr    46.43 172  P       P       01 24 04.8 +0.5
      comp=Z,8.6nm,0.5s,baz=353,slow=8.4,SNR=59
WRA   Warramunga Arr    46.43 172  P       P       01 24 04.6 +0.4
WRA                                pmax    pmax
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr    46.43 172  P       P       01 24 04.6 +0.4
WB2   Warramunga Arr    46.43 172  P       P       01 24 03.7 -0.5
WR0   Warramunga Arr    46.47 172  P       P       01 24 04.3 -0.2
WR0                                IAmb    IAmb    01 24 06.2
      comp=Z,30nm,1.2s
FRU1  Bishkek           46.48 305  P       P       01 24 04.7 +0.1
FRU1                               pmax    pmax
      comp=Z,21nm,0.4s
FRU1  Bishkek           46.48 305  P       P       01 24 04.7 +0.1
SGDS  Sogindy           46.51 306  eP      P       01 24 03.6 -1.3
      baz=306
SGDS  Sogindy           46.51 306  eP      P       01 24 03.5 -1.3
UCH   Uchtor            46.55 304  P       P       01 24 06.6 +1.1
      SNR=13
AAK   Ala-Archa         46.57 305⇓eP      P       01 24 05.6 +0.2
AAK                                pmax    pmax
      comp=Z,18nm,1.7s
AAK   Ala-Archa         46.57 305  P       P       01 24 04.8 -0.6
USP   Ospenovka         46.60 306  P       P       01 24 04.8 -0.7
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      SNR=7.0
HYB   Hyderabad         46.97 270  i P     P       01 24 09.0 +0.4
BTLS  Baital            47.03 308  eP      P       01 24 07.4 -1.3
      comp=Z,7.2nm,1.1s,baz=308
BTLS  Baital            47.03 308  eP      P       01 24 07.4 -1.3
BTLS                               pmax    pmax
      comp=Z,7.0nm,1.1s
NIL   Nilore            47.91 293  P       P       01 24 15.6 -0.2
NIL                                pmax    pmax
      comp=Z,34nm,1.2s
NIL   Nilore            47.91 293  P       P       01 24 15.6 -0.2
BRZS  Berezniki         48.47 314  eP      P       01 24 18.2 -1.6
      baz=314
BRZS  Berezniki         48.47 314  eP      P       01 24 18.2 -1.6
DZA   Taraz             48.91 305  eP      P       01 24 22.9 -0.4
      baz=305
DZA   Taraz             48.91 305  eP      P       01 24 22.9 -0.4
CTAO  Charters Tower    49.33 158  P       P       01 24 27.3 +0.6
CTAO                               pmax    pmax
      comp=Z,27nm,1.2s
CTAO  Charters Tower    49.33 158  P       P       01 24 27.3 +0.6
KK31  Karatay Array     49.51 305  P       P       01 24 28.3 +0.4
KK31                               pmax    pmax
      comp=Z,18nm,1.2s
KK31  Karatay Array     49.51 305  P       P       01 24 28.3 +0.4
KK31                               IAmb    IAmb    01 24 29.6
      comp=Z,18nm,1.2s
KKAR  Karatay Array     49.51 305  P       P       01 24 27.8 -0.1
KKAR  Karatay Array     49.51 305  P       P       01 24 27.8 -0.1
KKAR                               IAmb    IAmb    01 24 29.7
      comp=Z,18nm,1.2s
IUG   Iuzhnay           49.88 304  eP      P       01 24 30.0 -0.8
      comp=Z,4.2nm,1.1s,baz=304
IUG   Iuzhnay           49.88 304  eP      P       01 24 30.0 -0.8
IUG                                pmax    pmax
      comp=Z,4.0nm,1.1s
AS31  Alice Springs     50.06 174  P       P       01 24 32.5 +0.2
ASAR  Alice Springs     50.06 174  P       P       01 24 33.3 +1.0
      comp=Z,8.8nm,0.8s,baz=5.9,slow=14,SNR=82
ASAR  Alice Springs     50.06 174  P       P       01 24 32.5 +0.2
BRVK  Borovoye          50.37 318c iP      P       01 24 33.2 -1.1
BRVK                               pmax    pmax
      comp=Z,18nm,1.0s
BRVK  Borovoye          50.37 318  P       P       01 24 33.3 -0.9
BRVK                               IAmb    IAmb    01 24 45.9
      comp=Z,12nm,0.8s
KBL   Kabul             51.26 294  P       P       01 24 41.1 -0.4
KBL                                pmax    pmax
      comp=Z,21nm,0.9s
KBL   Kabul             51.26 294  P       P       01 24 41.1 -0.4
KBL                                IAmb    IAmb    01 24 43.4
      comp=Z,21nm,0.9s
SVE   Sverdlovsk        56.27 322  eP      P       01 25 17.3 -0.2
SVE                                pmax    pmax
      comp=Z,21nm,1.3s
ABKAR Akbulak array     56.70 313  P       P       01 25 20.3 -0.5
ABKAR                              IAmb    IAmb    01 25 21.5
      comp=Z,9.1nm,0.9s
HRA   Herat             56.82 295  P       P       01 25 21.0 -1.1
FORT  Forrest           56.88 180  P       P       01 25 21.8 -0.3
ARU   Arti              57.40 322c iP      P       01 25 23.5 -2.1
ARU                                S       S       01 33 19.1 -1.3
ARU                                SS      SS      01 37 04.0 -5.8
ARU                                pmax    pmax
      comp=Z,17nm,1.2s
ARU   Arti              57.40 322  P       P       01 25 24.2 -1.4
ARU                                IAmb    IAmb    01 25 25.6
      comp=Z,8.8nm,0.9s
RDOG  Red Dog Mine      57.77  24  P       P       01 25 29.2 +1.1
STKA  Stephens Creek    59.30 167  P       P       01 25 39.6 +0.6
      comp=Z,3.6nm,0.8s,baz=355,slow=6.4,SNR=5.1
STKA                               LR      LR      01 52 06.3
      comp=Z,41nm,20.1s,baz=23,slow=37
STKA  Stephens Creek    59.30 167⇓eP      P       01 25 39.9 +0.9
GEYT  Alibeck           59.42 300  P       P       01 25 40.0 -0.1
      comp=Z,5.4nm,0.8s,baz=46,slow=4.3,SNR=11
GEYT  Alibeck           59.42 300  P       P       01 25 39.3 -0.8
DZM   Mont Dzumac       60.61 139  LR      LR      01 50 57.7
      comp=Z,240nm,19.3s,baz=120,slow=35
DZM   Mont Dzumac       60.61 139  eP      P       01 25 48.7 +0.4
      comp=Z,38nm,1.4s
DZM   Mont Dzumac       60.61 139  eLR     LR      01 43 47.3
      comp=Z,71nm,22.4s
KIRV  Kirov             62.24 324  LR      LR      01 56 16.7
      comp=Z,333nm,20.3s,baz=81,slow=39
KIRV  Kirov             62.24 324⇓eP      P       01 25 59.4 +0.7
TOLK  Toolik Lake Re    62.74  24  P       P       01 26 05.6 +3.6
TOLK                               IAmb    IAmb    01 26 15.9
      comp=Z,6.5nm,0.9s
RND   Reindeer          63.45  30  P       P       01 26 07.4 +0.5
RND                                pmax    pmax
      comp=Z,24nm,1.3s
RND   Reindeer          63.45  30  P       P       01 26 07.4 +0.5
MDM   Murphy Dome       63.56  28  P       P       01 26 09.4 +1.9
ILAR  Eielson Array     64.15  28  P       P       01 26 15.4 +4.1
      comp=Z,1.3nm,0.7s,baz=281,slow=7.3,SNR=13
BMAR  Burnt Mountain    64.72  25  P       P       01 26 17.5 +2.3
AKT   Akhty             66.43 306  eP      P       01 26 26.3 -0.4
AKT                                e               01 26 56.2
AKT                                pmax    pmax
      comp=Z,7.0nm,0.9s
TMCR  Tamitsa           66.76 332  eP      P       01 26 27.6 -0.6
TMCR                               pmax    pmax
      comp=Z,21nm,1.1s
KLMR  Klimovskoe        66.82 328  eP      P       01 26 25.4 -3.2
KLMR                               pmax    pmax
      comp=Z,30nm,1.5s
KLMR  Klimovskoe        66.82 328  eP      P       01 26 25.5 -3.2
KLMR                               AMP             01 26 30.3
      comp=Z,30nm,1.5s
VRH   Novokhopyorsk     67.94 317  eP      P       01 26 34.5 -1.4
VRH                                pmax    pmax
      comp=Z,3.0nm,1.0s
EPYK  Eagle Plains      67.98  26  P       P       01 26 37.6 +1.6
EPYK                               IAmb    IAmb    01 26 48.9
      comp=Z,9.0nm,0.8s
INK   Inuvik            68.61  23  P       P       01 26 40.9 +1.1
      comp=Z,1.6nm,0.5s,baz=283,slow=5.5,SNR=11
INK                                LR      LR      02 00 58.5
      comp=Z,80nm,18.1s,baz=295,slow=40
INK   Inuvik            68.61  23  P       P       01 26 40.8 +1.0
INK                                IAmb    IAmb    01 26 59.9
      comp=Z,13nm,1.4s
SPA0  Spitsbergen Ar    68.69 348  P       P       01 26 41.2 +1.0
ZEI   Tsey              68.81 308  eP      P       01 26 39.2 -2.6
ZEI                                pmax    pmax
      comp=Z,11nm,1.0s
NCK   Nalchik           68.82 309⇑eP      P       01 26 40.9 -0.7
NCK                                pmax    pmax
      comp=Z,5.0nm,0.9s
GNI   Garni             68.98 305⇑eP      P       01 26 44.2 +1.3
GNI                                pmax    pmax
      comp=Z,6.0nm,1.0s
GNI   Garni             68.98 305  P       P       01 26 43.6 +0.7
GNI                                IAmb    IAmb    01 26 50.5
      comp=Z,10nm,1.1s
LPSR  Galich'ya Gora    69.23 319  eP      P       01 26 42.3 -1.6
LPSR                               pmax    pmax
      comp=Z,10.0nm,0.9s
KBZ   Khabaz            69.24 309  P       P       01 26 44.7 +0.5
      comp=Z,12nm,0.9s,baz=143,slow=1.6,SNR=30
KBZ   Khabaz            69.24 309deP      P       01 26 44.5 +0.4
KBZ                                pmax    pmax
      comp=Z,13nm,0.9s
KIV   Kislovodsk        69.32 310  eP      P       01 26 45.3 +0.5
KIV                                pmax    pmax
      comp=Z,41nm,1.0s
KIV                                MLR     MLR
      comp=Z,241nm,17.0s
KIV   Kislovodsk        69.32 310  P       P       01 26 44.8 -0.1
KIV                                IAmb    IAmb    01 26 47.1
      comp=Z,14nm,1.0s
VSR   Storozhevoye      69.48 318  eP      P       01 26 44.2 -1.4
VSR                                pmax    pmax
      comp=Z,6.0nm,1.2s
AKH   Akhalkalaki       69.50 307  P       P       01 26 46.6 +0.5
AKH                                pmax    pmax
      comp=Z,29nm,0.9s
AKH   Akhalkalaki       69.50 307  P       P       01 26 46.6 +0.5
OBN   Obninsk           69.83 322  LR      LR      02 00 04.3
      comp=Z,73nm,18.6s,baz=136,slow=38
OBN   Obninsk           69.83 322⇓eP      P       01 26 46.9 -0.7
OBN                                *SP     pP      01 26 57.0 +0.5
OBN                                                01 27 10.0
OBN                                pmax    pmax
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	comp=Z,8.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,291nm,19.0s						
ARCES	ARCESS Array B	69.92	339	P	P	01 26 47.0	-1.0
	comp=Z,4.4nm,0.9s,baz=39,slow=4.7,SNR=4.8						
ARCES	ARCESS Array B	69.92	339	P	P	01 26 47.9	-0.1
ARCES				pmax	pmax		
	comp=Z,27nm,1.3s						
ARCES	ARCESS Array B	69.92	339	P	P	01 26 47.9	-0.1
SOCY	Socotra	70.93	274	P	P	01 26 54.0	-1.1
C36M	Paulatuk	71.42	21	P	P	01 26 57.7	+0.6
C36M				IAmb	IAmb	01 27 09.7	
	comp=Z,11nm,0.8s						
EUNU	Eureka	72.06	6	P	P	01 27 03.1	+2.2
MARD	Mardin	72.82	304	P	P	01 27 07.2	+0.9
MARD				IAmb	IAmb	01 27 08.5	
	comp=Z,28nm,1.5s						
FIA1	FINESS Array S	72.82	331	P	P	01 27 05.2	-0.4
FINES	FINESS Array B	72.82	331	P	P	01 27 05.2	-0.3
	comp=Z,5.0nm,0.7s,baz=70,slow=5.3,SNR=28						
FINES				LR	LR	02 03 01.0	
	comp=Z,214nm,21.6s,baz=52,slow=39						
FINES	FINESS Array B	72.82	331	ceP	P	01 27 05.0	-0.6
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	FINESS Array B	72.82	331	P	P	01 27 05.4	-0.2
RAYN	Ar Rayn	73.99	289	P	P	01 27 13.7	+0.5
RAYN				pmax	pmax		
	comp=Z,22nm,1.2s						
RAYN	Ar Rayn	73.99	289	P	P	01 27 13.7	+0.5
RAYN				IAmb	IAmb	01 27 14.8	
	comp=Z,22nm,1.1s						
MNK	Minsk	74.75	324	i P	P	01 27 16.8	-0.3
	comp=E,1.0nm,0.9s						
MNK				i P	P	01 27 16.8	-0.3
	comp=N,3.0nm,0.9s						
MNK				i P	P	01 27 16.8	-0.3
	comp=Z,15nm,0.9s						
MNK				i PcP	PcP	01 27 30.6	-0.5
MNK				i PP	PP	01 30 03.8	-0.2
MNK				i PPP	PPP	01 31 49.6	
MNK				i S	S	01 36 52.2	+0.8
MNK				i ScS	ScS	01 37 26.0	-0.6
MNK				i SS	SS	01 41 49.9	+11
MNK				i SSS	SSS	01 44 49.1	
MNK				i LQ	LQ	01 55 14.1	
MNK				i LR	LR	01 58 34.6	
MNK				i LRM	MLR	02 03 09.3	
	comp=E,23nm,18.5s						
MNK				i LRM	MLR	02 03 11.8	
	comp=N,197nm,18.5s						
MNK				i LRM	MLR	02 03 18.9	
	comp=Z,119nm,18.5s						
TOKA	Tokat	74.88	308	P	P	01 27 18.4	+0.3
DAG	Danmarks Havn	75.10	353	i P	P	01 27 18.0	-0.6
DAG	Danmarks Havn	75.10	353	i P	P	01 27 18.0	-0.6
DAG	Danmarks Havn	75.10	353	i P	P	01 27 18.0	-0.6
NACGM	Naroch	75.17	324	i P	P	01 27 19.6	+0.1
NACGM				i P	P	01 27 19.6	+0.1
NACGM				i P	P	01 27 19.6	+0.1
NACGM				i Pb	pP	01 27 21.8	-6.6
	comp=Z,21nm,0.9s						
NACGM				i PP	PP	01 30 18.1	+11
NACGM				i PPP	PPP	01 32 06.8	
NACGM				i S	S	01 37 05.2	+9.2
NACGM				i SS	SS	01 41 44.3	-0.6
NACGM				i SSS	SSS	01 45 01.1	
NACGM				i LQ	LQ	01 54 58.0	
NACGM				i LR	LR	02 02 07.8	
RES	Resolute Bay	75.31	11	LR	LR	02 04 21.7	
	comp=Z,43nm,18.9s,baz=152,slow=39						
RES	Resolute Bay	75.31	11	P	P	01 27 20.9	+1.0
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RES	Resolute Bay	75.31	11	P	P	01 27 20.9	+1.0
AKASG	Malin Array Be	75.55	320	P	P	01 27 21.0	-0.7
	comp=Z,4.9nm,0.5s,baz=56,slow=6.2,SNR=21						
AKASG				LR	LR	02 03 01.4	
	comp=Z,151nm,19.0s,baz=320,slow=38						
AKASG	Malin Array Be	75.55	320	P	P	01 27 21.1	-0.7
AKBB	Malin Array Si	75.55	320	⇑eP	P	01 27 20.9	-0.8
AKBB	Malin Array Si	75.55	320	P	P	01 27 20.9	-0.8
AKBB				IAmb	IAmb	01 27 21.4	
	comp=Z,7.6nm,0.6s						
TULEG	Thule	76.72	4	i P	P	01 27 26.9	-1.0
BR131	Keskin Array S	77.12	308	deP	P	01 27 30.9	-0.1
BR131	Keskin Array S	77.12	308	P	P	01 27 31.0	-0.1
BR131				IAmb	IAmb	01 27 33.1	
	comp=Z,13nm,0.8s						
BRTR	Keskin Array B	77.12	308	P	P	01 27 30.9	-0.1
	comp=Z,11nm,1.1s,baz=114,slow=3.6,SNR=30						
BRTR				PP	PP	01 30 23.6	-0.9
	comp=Z,0.5nm,1.0s,baz=51,slow=9.4,SNR=1.7						
BRTR	Keskin Array B	77.12	308	ceP	P	01 27 30.8	-0.2
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	77.12	308	P	P	01 27 31.1	+0.1
SORM	Soroca	77.14	317	⇑P	P	01 27 30.1	-0.6
SORM	Soroca	77.14	317	⇑P	P	01 27 30.1	-0.6
SUW	Suwalki	77.45	324	P	P	01 27 32.0	-0.4
SUW				pmax	pmax		
	comp=Z,35nm,1.0s						
SUW	Suwalki	77.45	324	P	P	01 27 32.0	-0.4
YKA	Yellowknife Ar	78.24	25	P	P	01 27 38.4	+1.8
	comp=Z,0.5nm,0.6s,baz=312,slow=4.8,SNR=14						
YKA				LR	LR	02 07 28.8	
	comp=Z,39nm,18.8s,baz=0.0,slow=40						
YKA	Yellowknife Ar	78.24	25	ceP	P	01 27 38.2	+1.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BIR	Birlad	78.39	316	⇓P	P	01 27 38.5	+0.7
BIR	Birlad	78.39	316	⇓P	P	01 27 38.5	+0.7
VARL	Varlezi	78.41	316	⇑P	P	01 27 37.4	-0.4
TPGR	Topolog	78.50	314	⇓P	P	01 27 37.7	-0.8
CFR	Carcaliu	78.55	315	⇓P	P	01 27 49.5	+11
TIRR	Tirgusor	78.68	314	⇑P	P	01 27 39.6	+0.2
TIRR	Tirgusor	78.68	314	⇑P	P	01 27 39.6	+0.2
PRAR	RASCA	78.77	317	⇓P	P	01 27 39.7	-0.1
TESR	Tescani	78.89	316	⇓P	P	01 27 40.6	+0.1
HARR	Harsova	78.89	314	⇓P	P	01 27 41.2	+0.7
HARR	Harsova	78.89	314	⇓P	P	01 27 41.2	+0.7
BIZ	Bicaz	79.03	317	⇑P	P	01 27 41.5	+0.2
VRI	Vrincioaia	79.13	316	⇑P	P	01 27 43.4	+1.5
VRI	Vrincioaia	79.13	316	⇑P	P	01 27 43.4	+1.5
PLOR	Plostina	79.19	316	⇓P	P	01 27 41.9	-0.3
PLOR	Plostina	79.19	316	⇓P	P	01 27 41.9	-0.3
GRER		79.19	315	⇓P	P	01 27 45.0	+2.8
ICOR	Ion Corvin	79.23	314	⇓P	P	01 27 42.7	+0.3
NB2	NORSAR Subarra	79.26	334	P	P	01 27 41.5	-0.8
	comp=Z,1.3nm,0.7s,baz=52,slow=5.6						
NOA	NORSAR Array B	79.26	334	P	P	01 27 41.8	-0.5
	comp=Z,5.2nm,1.0s,baz=51,slow=5.3,SNR=7.1						
NOA				pP	pP	01 27 51.4	+0.1
	comp=Z,2.7nm,0.6s,baz=52,slow=5.6,SNR=6.1						
NOA				LR	LR	02 07 29.5	
	comp=Z,109nm,19.7s,baz=65,slow=39						
BUR08	Bucovina Ar. S	79.26	318	P	P	01 27 42.2	-0.4
BURAR	Bucovina Array	79.26	318	⇑P	P	01 27 42.8	+0.1
BURAR	Bucovina Array	79.26	318	⇑P	P	01 27 42.8	+0.1
BURAR	Bucovina Array	79.26	318	P	P	01 27 42.1	-0.6
BISRR	Bisoca	79.28	316	⇑P	P	01 27 44.0	+1.2
NEHR	Nehoiu	79.60	316	⇑P	P	01 27 46.2	+1.7
OZUR		79.61	316	⇑P	P	01 27 45.2	+0.7
MLR	Muntele Rosu	79.79	316	⇓P	P	01 27 46.0	+0.3
MLR	Muntele Rosu	79.79	316	⇓P	P	01 27 46.0	+0.3
MLR	Muntele Rosu	79.79	316	P	P	01 27 46.3	+0.6
MLR				IAmb	IAmb	01 27 46.8	
	comp=Z,13nm,1.2s						
DOPR	Dopca	79.92	316	⇑P	P	01 27 47.0	+0.9
ARCR	ARCALIA	80.03	318	⇓P	P	01 27 47.6	+0.9
KOLS	Kolonicke sedl	80.37	320	eP	P	01 27 48.5	0.0
KOLS	Kolonicke sedl	80.37	320	eP	P	01 27 48.5	0.0
VOIR		80.37	316	⇓P	P	01 27 52.3	+3.6
VOIR		80.37	316	⇓P	P	01 27 52.3	+3.6
CJR	Cluj-Napoca	80.66	318	⇓P	P	01 27 52.0	+1.8
CJR	Cluj-Napoca	80.66	318	⇓P	P	01 27 52.0	+1.8
ARR	Arges	80.66	316	⇓P	P	01 27 51.1	+0.8
HUMR	Humele	80.84	315	⇓P	P	01 27 51.3	+0.1
SUMG	Summit	80.86	356	P	P	01 27 51.8	+0.6
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
SUMG	Summit	80.86	356	P	P	01 27 51.8	+0.6
SUMG				IAmb	IAmb	01 27 53.5	
	comp=Z,14nm,1.2s						
SUMG	Summit	80.86	356	i P	P	01 27 52.0	+0.8
	comp=Z,20nm,0.8s						
SUMG	Summit	80.86	356	i P	P	01 27 52.0	+0.8
SUMG				IAmb	IAmb	01 27 53.4	
	comp=Z,20nm,0.8s						
CEI	Carei	80.87	319	⇑P	P	01 27 39.0	-12
COPA	Copaceanca	80.88	315	⇑P	P	01 27 51.2	-0.1
OJC	Ojcow	81.12	322	P	P	01 27 52.9	+0.4
OJC				pmax	pmax		
	comp=Z,14nm,1.0s						
OJC	Ojcow	81.12	322	P	P	01 27 52.9	+0.4
OJC				IAmb	IAmb	01 27 56.4	
	comp=Z,14nm,1.0s						
DRGR		81.16	318	⇑P	P	01 27 53.3	+0.4
DRGR		81.16	318	⇑P	P	01 27 53.3	+0.4
LOT	Lotru	81.16	316	⇓P	P	01 27 53.7	+0.7
GZR	Gura Zlata	81.80	317	⇓P	P	01 27 56.1	-0.2
GZR	Gura Zlata	81.80	317	⇓P	P	01 27 56.1	-0.2
PUNG	Punghina	82.25	316	⇑P	P	01 27 59.1	+0.6
HERR	Herculane	82.27	316	⇓P	P	01 27 59.0	+0.3
VYHS	Vyhne	82.56	321	eP	P	01 28 00.8	+0.7
VYHS				pmax	pmax		
	comp=Z,14nm,1.2s						
VYHS	Vyhne	82.56	321	eP	P	01 28 00.8	+0.7
MORC	Moravsky Berou	82.60	322	⇓P	P	01 28 02.0	+1.6
MORC	Moravsky Berou	82.60	322	P	P	01 28 01.0	+0.6
MORC				pmax	pmax		
	comp=Z,14nm,1.3s						
MORC	Moravsky Berou	82.60	322	P	P	01 28 00.9	+0.6
MORC				IAmb	IAmb	01 28 02.5	
	comp=Z,14nm,1.3s						
MDVR	Moldovita	82.76	317	⇑P	P	01 28 01.5	+0.2
VTS	Vitosha	82.87	314	⇓P	P	01 28 02.9	+0.9
VTS	Vitosha	82.87	314	⇓P	P	01 28 02.9	+0.9
DPC	Dobruska-Polom	82.95	323	eP	P	01 28 02.5	+0.3
DPC	Dobruska-Polom	82.95	323	eP	P	01 28 02.5	+0.3
SMOL	Smolenice	83.34	321	eP	P	01 28 05.3	+1.1
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SMOL	Smolenice	83.34	321	eP	P	01 28 05.3	+1.1
VRAC	Vranov	83.37	322	⇓P	P	01 28 05.8	+1.5
VRAC	Vranov	83.37	322	⇓P	P	01 28 05.8	+1.5
MODS	Modra-Piesok	83.50	321	eP	P	01 28 05.6	+0.6
MODS	Modra-Piesok	83.50	321	eP	P	01 28 05.6	+0.6
MORH	Mrgy, Hungar	83.87	319	eP	P	01 28 06.9	0.0
BRG	Berggiesshubel	83.91	325	eP	P	01 28 07.4	+0.4
BRG				Amp		01 28 10.6	
	comp=Z,10nm,1.3s						
BRG	Berggiesshubel	83.91	325	eP	P	01 28 07.4	+0.4
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRG	Berggiesshubel	83.91	325	eP	P	01 28 07.4	+0.4
BRG				Amp		01 28 10.6	
	comp=Z,10nm,1.3s						
VAY	Valandovo	83.94	313	i P	P	01 28 07.6	+0.3
STIP	Stip	84.00	314	i P	P	01 28 06.8	-1.0
RAR	Rarotonga	84.07	117	LR	LR	01 56 06.2	
	comp=Z,23nm,22.0s,baz=318,slow=29						
PRU	Pruhonice	84.10	324	eP	P	01 28 08.9	+0.9
PRU	Pruhonice	84.10	324	eP	P	01 28 08.9	+0.9
CLL	Collm	84.14	325	i P	P	01 28 08.2	0.0
	comp=Z,16nm,1.1s						
CLL				LmV		02 09 00.0	
	comp=Z,300nm,20.2s						
CLL	Collm	84.14	325	i P	P	01 28 08.2	0.0
CLL				pmax	pmax		
	comp=Z,16nm,1.1s						
CLL				MLR	MLR		
	comp=Z,300nm,20.2s						
CLL	Collm	84.14	325	P	P	01 28 07.8	-0.4
CLL				IAmb	IAmb	01 28 09.4	
	comp=Z,11nm,1.0s						
DIVS	Divibare	84.17	317	P	P	01 28 07.7	-0.9
DIVS				IAmb	IAmb	01 28 09.5	
	comp=Z,9.3nm,1.0s						
ICESG	Greenland Ices	84.38	356	i P	P	01 28 09.0	-0.5
CONA	Conrad Observa	84.54	321	eP	P	01 28 11.3	+0.9
	comp=Z,11nm,1.2s						
ARSA	Arzberg	85.10	321	eP	P	01 28 13.9	+0.7
	comp=Z,6.5nm,1.3s						
KHC	Kasperske Hory	85.10	323	⇓eP	P	01 28 12.8	-0.4
KHC				pmax	pmax		
	comp=Z,25nm,2.5s						
KHC	Kasperske Hory	85.10	323	eP	P	01 28 13.4	+0.2
KHC				epP	sP	01 28 23.9	-1.6
GEC2	GERESS Array S	85.20	323	P	P	01 28 11.7	-2.1
GEC2				IAmb	IAmb	01 28 15.5	
	comp=Z,19nm,1.6s						
GERES	GERESS Array B	85.20	323	P	P	01 28 13.2	-0.5
	comp=Z,1.8nm,0.7s,baz=44,slow=4.4,SNR=13						
GERES				LR	LR	02 11 38.7	
	comp=Z,211nm,19.5s,baz=298,slow=40						
GERES	GERESS Array B	85.20	323	P	P	01 28 13.5	-0.2
GERES	GERESS Array B	85.20	323	P	P	01 28 13.5	-0.2
MOA	Molln	85.47	322	eP	P	01 28 14.6	-0.4
	comp=Z,8.0nm,1.3s						
PDG	Podgorica	85.50	315	⇓P	P	01 28 15.4	+0.2
PDG	Podgorica	85.50	315	P	P	01 28 15.4	+0.2
PDG				IAmb	IAmb	01 28 18.4	
	comp=Z,8.0nm,0.8s						
PINE	Pine Mountain	85.56	43	P	P	01 28 17.3	+1.5
SOKA	Soboth	85.70	321	eP	P	01 28 16.0	-0.3
	comp=Z,8.8nm,1.3s						
GRF	Grafenberg Arr	86.02	325	eP	P	01 28 19.2	+1.5
	comp=Z,9.6nm,1.1s,baz=61,slow=5.1						
OBKA	Obir	86.08	321	eP	P	01 28 18.0	-0.1
	comp=Z,3.2nm,0.9s						
MOZS	Mozjanca	86.26	321	eP	P	01 28 18.8	-0.2
KBA	Koelnbreinsper	86.42	322	eP	P	01 28 19.0	-1.0
	comp=Z,12nm,1.9s						
GBRS	Gornja Briga	86.48	320	eP	P	01 28 20.4	+0.3
CEY	Cerknica	86.58	320	i P	P	01 28 20.5	0.0
ABTA	Abfaltersbach	87.08	322	eP	P	01 28 22.9	-0.1
	comp=Z,10nm,1.1s						
WATA	Walderalm	87.24	323	eP	P	01 28 22.4	-1.5
	comp=Z,4.4nm,0.7s						
MOTA	Moosalm	87.50	323	eP	P	01 28 23.9	-1.3
	comp=Z,6.1nm,1.0s						
RETA	Reutte	87.59	323	eP	P	01 28 25.8	+0.3
	comp=Z,4.8nm,1.2s						
FETA	Feichten	87.89	323	eP	P	01 28 25.7	-1.4
	comp=Z,7.9nm,1.2s						
BEKR	Beckworth	88.06	46	P	P	01 28 29.2	+1.1
BEKR				IAmb	IAmb	01 31 20.9	
	comp=Z,7.9nm,0.8s						
DAVA	Damuels	88.19	323	eP	P	01 28 27.8	-0.7
	comp=Z,8.7nm,1.0s						
FFC	Flin Flon	88.31	27	P	P	01 28 29.7	+1.1
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FFC	Flin Flon	88.31	27	P	P	01 28 29.7	+1.1
FFC				IAmb	IAmb	01 28 41.5	
	comp=Z,8.0nm,0.9s						
HLID	Hailey	89.58	40	P	P	01 28 35.9	+0.8
NVAR	Mina Array Bea	90.19	46	pP	pP	01 28 49.6	+2.4
	comp=Z,0.6nm,0.5s,baz=310,slow=5.0,SNR=3.6						
PPT2	Papeete2	90.72	109	eLR	LR	01 57 45.7	
	comp=Z,42nm,22.5s						
PDAR	Pinedale Array	92.85	39	P	P	01 28 51.0	+0.6
	comp=Z,0.3nm,0.7s,baz=306,slow=3.0,SNR=3.1						
PDAR				pP	pwP	01 29 00.7	-0.8
	comp=Z,0.5nm,0.7s,baz=297,slow=0.7,SNR=3.7						
PFO	Pinyon Flats O	94.17	49	⇑eP	P	01 28 55.5	-1.0
PFO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TORD	Torodi Ar. Bea	115.06	301	PKP	PKiKP	01 34 17.4	-1.6
	comp=Z,0.7nm,0.6s,baz=48,slow=2.1,SNR=2.8						
TORD				pPKP	pPKiKP	01 34 30.2	+1.7
	comp=Z,1.5nm,0.6s,baz=24,slow=2.8,SNR=6.2						
TORD	Torodi Ar. Bea	115.06	301	PKiKP	PKiKP	01 34 18.1	-0.9
DBIC	Dimbokro	124.10	299	PKP	PKiKP	01 34 36.7	0.0
	comp=Z,1.6nm,0.6s,baz=36,slow=3.3,SNR=4.1						
DBIC				pPKP	sPKPdf	01 34 47.8	-1.3
	comp=Z,2.6nm,0.5s,baz=9.7,slow=1.9,SNR=4.1						
DBIC	Dimbokro	124.10	299		PKPdf	01 34 36.4	-0.1
VNA2	Neumayer--Watz	129.03	197	PKPdf	PKPdf	01 34 44.2	+0.1
	baz=84,slow=1.2						
VNA3	Neumayer Olymp	129.42	196	PKPdf	PKPdf	01 34 43.0	-1.9

IDC 14 01:24:53.9±1.7, 6°.07S×129°.60E, h0km, mb3.8/1, mb1 4.0/4, mb1mx3.7/29, mbtmp3.9/4, ML3.5/3, Error ellipse: s-maj=66.3km s-min=27.8km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.42	18	Pn	Pn	01 26 17.4	+1.2
	3.1nm,0.3s,baz=233,slow=24,SNR=8.6						
SIJI				Sn	Sn	01 27 11.8	-7.5
	2.3nm,0.3s,baz=230,slow=22,SNR=2.0						
WRA	Warramunga Arr	14.54	162	Pn	Pn	01 28 19.3	-1.8
	0.1nm,0.3s,baz=347,slow=13,SNR=5.3						
WRA				Sn	Sn	01 30 50.5	-13
	0.5nm,0.3s,baz=347,slow=20,SNR=7.7						
ASAR	Alice Springs	17.98	167	P	P	01 29 06.6	+0.5
	0.4nm,0.3s,baz=346,slow=10,SNR=19						
ASAR				S	Sn	01 32 13.2	-14
	0.1nm,0.3s,baz=346,slow=21,SNR=3.2						
MKAR	Makanchi Array	67.24	327	P	P	01 35 49.9	-0.3
	0.8nm,0.7s,baz=125,slow=7.7,SNR=9.4						

ROM 14 01:27:09.2±0.2, 38°.98N±0°.01×15°.45E±0°.02, h194km±1km, ML3.0/1, 1C, Error ellipse: s-maj=1.9km s-min=0.5km az=109.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	Joppolo	0.51	137	P	Pn	01 27 36.0	+0.3
JOPP				S	Sn	01 27 55.5	-0.5
CAR1	CAROLEI	0.66	65	P	Pn	01 27 36.3	0.0
CAR1				S	Sn	01 27 56.7	-0.6
CAR1				AML	AML		
	comp=N,460µm,0.9s						
CAR1				AML	AML		
	comp=E,180µm,1.3s						
CET2	Cetraro	0.68	36	P	Pn	01 27 36.7	+0.3
CET2				S	Sn	01 27 57.1	-0.5
MILZ	Milazzo	0.73	193	P	Pn	01 27 37.4	+0.8
T0702	Acquaformosa (	0.89	34	P	Pn	01 27 37.9	+0.2
T0702				S	Sn	01 27 58.8	-1.0
CELI	Celico	0.93	63	P	Pn	01 27 38.5	+0.6
CELI				S	Sn	01 27 59.4	-0.8
MCSR	Castroreale	0.93	190	P	Pn	01 27 38.6	+0.6
MCSR				S	Sn	01 27 59.7	-0.5
PLAC	Placanica	0.94	124	⇑P	Pn	01 27 38.3	+0.3
PLAC				S	Sn	01 27 59.0	-1.2
SERS	Sersale	0.97	86	P	Pn	01 27 38.4	+0.2
SERS				S	Sn	01 28 00.3	-0.4
TIP	Timpagrande	1.04	79	P	Pn	01 27 38.9	+0.2
TIP				S	Sn	01 28 01.2	-0.3
MPAZ	Palizzi	1.12	157	P	Pn	01 27 40.1	+0.8
MPAZ				S	Sn	01 28 01.9	-0.6
PIPA	Pietrapaola	1.18	64	P	Pn	01 27 40.0	+0.4
PIPA				S	Sn	01 28 03.0	-0.2

IDC 14 01:32:07.2±9.1, 18°.44S×177°.36W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/27, mbtmp3.7/2, Error ellipse: s-maj=390.9km s-min=71.1km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.52	260	P	P	01 40 28.9	0.0
	0.3nm,0.3s,baz=97,slow=7.4,SNR=4.5						
ASAR	Alice Springs	45.61	255	P	P	01 40 29.4	-0.2
	0.8nm,0.7s,baz=84,slow=8.1,SNR=7.4						
AKASG	Malin Array Be	141.48	333	PKhKP	PKPpre	01 51 35.4	
	0.7nm,0.5s,baz=43,slow=4.3,SNR=3.3						
BRTR	Keskin Array B	145.86	315	PKPbc	PKPdf	01 51 48.2	-0.3
	0.2nm,0.6s,baz=62,slow=3.4,SNR=1.8						

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*IDC **14** 02:03:37.0±1.6, 39°.44N×69°.16E, h0km, mb3.7/2, mb1 3.6/5, mb1mx3.3/31, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=42.5km s-min=5.9km az=154.0*

*KRNET **14** 02:03:39.3±0.1, 39°.58N×69°.32E, h13km, mb3.6*

*NNC **14** 02:03:40.4±1.6, 39°.68N×69°.05E, h12km±5km, mb3.8, mpv3.5, Error ellipse: s-maj=11.7km s-min=6.3km az=0.0*

ISC 14 02:03:36.9±1.7, 39°.54N±0°.05×69°.21E±0°.04, h0km±10km, n34, σ2.^{s}46/55, 27C-17D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.34	67	⇓iP	Pb	02 04 03.0	+0.1
	baz=67						
BTK				⇓iS	Sn	02 04 20.1	-1.4
	baz=67						
TAS	Tashkent	1.79	2	⇑iP	Pb	02 04 12.1	+1.6
	baz=59						
TAS				⇑iS	Sg	02 04 35.8	+1.5
	baz=59						
DRK	Karamyk	2.00	91	⇓iP	Pb	02 04 14.9	+0.6
	baz=92						
DRK				⇓iS	Sg	02 04 41.5	+0.2
	baz=92						
TRKS	Terek-Say	2.47	36	⇑eP	Pb	02 04 21.3	-1.0
	baz=36						
TRKS				⇑iS	Sb	02 04 51.4	-2.0
	baz=36						
IUG	Iuzhnay	2.68	13	Pg	Pb	02 04 25.9	+0.2
	5.0nm,0.1s						
IUG				Lg	Lg	02 05 02.7	
	118nm,0.7s						
OHH	Osh	2.92	69	⇑eP	Pb	02 04 27.7	-2.1
	baz=69						
OHH				⇑eS	Sb	02 05 02.6	-3.4
	baz=69						
SFK	Sufi-Kurgan	3.34	80	⇓iP	Pn	02 04 33.6	+3.1
	baz=81						
SFK				⇓eS	Sn	02 05 13.0	+2.0
	baz=81						
ARSB	Arslanbob	3.39	57	⇑eP	Pn	02 04 34.1	+3.0
	baz=57						
ARSB				⇑iS	Sb	02 05 14.4	-5.2
	baz=57						
KK31	Karatay Array	3.69	15	⇑Pn	Pn	02 04 36.3	+1.1
	1.2nm,0.3s,baz=166,slow=8.6,SNR=25						
KK31				⇑Pg	Pg	02 04 46.7	-0.9
	2.8nm,0.3s,baz=199,slow=16,SNR=9.3						
KK31				⇑Lg	Lg	02 05 35.5	
	6.4nm,0.3s,baz=200,slow=30,SNR=5.9						
MNAS	Manas	3.86	39	⇑eP	Pn	02 04 40.9	+3.3
	baz=39						
MNAS				⇑iS	Sn	02 05 25.9	+2.2
	baz=39						
AML	Almayashu	4.28	51	⇑iP	Pn	02 04 46.8	+3.3
	baz=51						
AML				⇑iS	Sn	02 05 36.4	+2.1
	baz=51						
AML	Almayashu	4.28	51	P	Pn	02 04 45.7	+2.2
	SNR=16						
MRKS	Merke	4.41	42	Pg	Pg	02 04 59.8	-1.6
	6.2nm,0.2s						
MRKS				Lg	Lg	02 06 01.3	
	19nm,0.5s						
ARLS	Aral	4.53	58	⇑eP	Pn	02 04 50.4	+3.6
	baz=58						
ARLS				⇑iS	Sn	02 05 41.3	+1.2
	baz=58						
EKS2	Erkin-Say	4.65	46	⇓iP	Pn	02 04 52.0	+3.6
	baz=46						
EKS2				⇓iS	Sn	02 05 44.7	+1.5
	baz=46						
UCH	Uchtor	4.83	55	⇓iP	Pn	02 04 53.9	+2.6
	baz=54						
UCH				⇓iS	Sn	02 05 49.5	+1.3
	baz=54						
UCH	Uchtor	4.83	55	P	Pn	02 04 54.9	+3.7
	SNR=11						
AAK	Ala-Archa	5.05	51	⇑iP	Pn	02 04 57.0	+3.0
	baz=50						
AAK				⇑iS	Sn	02 05 54.4	+1.3
	baz=50						
AAK	Ala-Archa	5.05	51	P	Pn	02 04 57.2	+3.2
	SNR=13						
AAK	Ala-Archa	5.05	51	⇑Pn	Pn	02 04 56.9	+2.9
	3.9nm,0.3s						
AAK				⇑Sn	Sn	02 05 55.7	+2.6
	16nm,0.8s						
AAK				⇑Lg	Lg	02 06 21.0	
	21nm,0.8s						
KBK	Karagaybulak	5.34	52	⇑iP	Pn	02 05 01.2	+3.3
	baz=52						
KBK				⇑iS	Sn	02 06 01.2	+1.0
	baz=52						
KBK	Karagaybulak	5.34	52	P	Pn	02 05 02.4	+4.5
	SNR=8.2						

CHMS	Chumysh	5.42	49	⇓*i*P	Pn	02 05 02.6	+3.7
	baz=48						
CHMS				⇓*i*S	Sn	02 06 03.1	+1.1
	baz=48						
CHMS	Chumysh	5.42	49	P	Pn	02 05 02.7	+3.8
	SNR=6.7						
USP	Ospenovka	5.45	45	⇓*i*P	Pn	02 05 02.9	+3.6
	baz=45						
USP				⇓*i*S	Sn	02 06 04.0	+1.3
	baz=45						
TKM2	Tokmak 2	5.88	53	⇓Pn	Pn	02 05 08.0	+2.6
	1.9nm,0.4s						
TKM2				⇓Sn	Sn	02 06 15.4	+1.8
	9.1nm,0.7s						
TKM2				⇑Lg	Lg	02 06 48.6	
	5.7nm,0.6s						
PDGK	Podgornoye	8.60	61	⇑Lg	Lg	02 08 15.8	
	6.7nm,1.1s						
GEYT	Alibeck	8.82	263	Pn	Pn	02 05 46.0	+0.4
	0.3nm,0.3s,baz=66,slow=15,SNR=3.3						
GEYT				Sn	Sn	02 07 24.1	-1.5
	0.7nm,0.3s,baz=42,slow=24,SNR=2.1						
AB31	Akbulak array	11.75	329	Pn	Pn	02 06 24.7	-0.9
	0.4nm,0.3s,baz=140,slow=14,SNR=58						
AB31				Sn	Sn	02 08 35.5	-1.9
	1.5nm,0.5s,baz=156,slow=22,SNR=5.5						
MKAR	Makanchi Array	11.98	49	Pn	Pn	02 06 29.4	+0.6
	0.1nm,0.3s,baz=232,slow=14,SNR=4.9						
AKTO	Aktyubinsk	13.45	328	⇓Pn	Pn	02 06 49.4	+0.5
	3.4nm,1.1s						
AKTO				⇑Sn	Sn	02 09 16.1	-2.9
	2.4nm,0.7s						
ZALV	Zalesovo Beam	17.89	31	P	P	02 07 48.9	+1.3
	0.1nm,0.3s,baz=224,slow=12,SNR=2.4						
ESDC	Sonseca Array	54.83	295	P	P	02 13 08.3	-0.4
	0.4nm,0.8s,baz=52,slow=6.6,SNR=4.9						
TORD	Torodi Ar. Bea	64.44	266	P	P	02 14 14.6	-0.7
	1.0nm,0.6s,baz=48,slow=5.9,SNR=5.2						

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*JMA **14** 02:57:06.7±0.1, 30°.58N×141°.67E, h52^{km}, M3.6*

*IDC **14** 02:57:08.5±2.7, 30°.27N×140°.84E, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.3/43, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=113.8km s-min=24.5km az=69.0*

ISC 14 02:57:09.6±1.2, **30°.59N**±0°.08×**141°.8E**±0°.3, **h35**^{km}, **n10**, σ**1^{s}.60**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.02	327	*e*S	Sn	02 58 27.4	-2.5
CBIJ	Chichi jima	3.49	174	*e*S	Sn	02 58 40.3	-1.3
JCJ	Chichijima	3.50	174	Pn	Pn	02 58 03.5	+2.0
	2.3nm,0.3s,baz=204,slow=20,SNR=2.8						
JCJ				Sn	Sn	02 58 39.1	-2.4
	7.7nm,0.3s,baz=307,slow=20,SNR=3.2						
BSO1	Boso 1	4.11	351	P	Pn	02 58 08.6	-0.8
BSO1				*e*S	Sn	02 58 55.4	-0.6
BSO3	Boso 3	4.34	346	P	Pn	02 58 12.0	-0.8
BSO3				*e*S	Sn	02 59 01.2	-0.8
JAG	Ashikaga	6.14	342	P	Pn	02 58 36.9	-0.9
MJAR	Matsushiro Arr	6.65	334	Pn	Pn	02 58 46.0	+1.2
	0.2nm,0.3s,baz=161,slow=12,SNR=8.7						
MAT	Matsushiro	6.65	334	P	Pn	02 58 46.0	+1.2
MKAR	Makanchi Array	48.04	307	P	P	03 05 46.5	+1.2
	0.3nm,0.6s,baz=100,slow=8.2,SNR=4.2						
WRA	Warramunga Arr	50.74	189	P	P	03 06 06.3	+0.1
	0.5nm,0.5s,baz=6.1,slow=7.5,SNR=7.1						

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*SIGU **14** 03:10:52.8, 45°.60N×26°.41E, h152^{km}*

*IDC **14** 03:10:53.4±0.7, 45°.60N×26°.21E, h145^{km}±3^{km}, mb3.3/6, mb1 3.2/12, mb1mx3.0/59, mbtmp3.6/12, MS2.8/1, Ms1 2.7/1, ms1mx2.2/35, Error ellipse: s-maj=19.5km s-min=14.7km az=112.0*

*BUC **14** 03:10:53.6±0.2, 45°.55N×26°.35E, h146^{km}±2^{km}, ml4.2/60, Error ellipse: s-maj=1.7km s-min=1.4km az=9.0*

*SOF **14** 03:10:54.0, 41°.21N×25°.79E, h2^{km}, MD3.1*

*BEO **14** 03:11:03.1±0.3, 45°.14N×25°.26E, h0^{km}, ML2.8/11*

ISC 14 03:10:53.1±0.7, **45°.55N**±0°.03×**26°.32E**±0°.02, **h155**^{km}±4^{km}, **n205**, σ**1^{s}.67**/328, **mb3.6**/6, **148C-108D**, **Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEHR	Nehoiu	0.12	187	⇑P	Pn	03 11 14.1	+0.1
NEHR				⇓S	Sn	03 11 29.2	-0.5
NEHR	Nehoiu	0.12	187	⇑P	Pn	03 11 14.1	+0.1
NEHR				⇓S	Sn	03 11 29.2	-0.5
MLR	Muntele Rosu	0.27	258	⇑P	Pn	03 11 14.3	0.0
MLR				⇓S	Sn	03 11 29.7	-0.7
MLR	Muntele Rosu	0.27	258	P	Pn	03 11 14.2	-0.1
	46nm,0.3s,baz=170,slow=1.4,SNR=1135						
MLR				S	Sn	03 11 29.6	-0.7
	128nm,0.3s,baz=195,slow=19,SNR=20						
MLR	Muntele Rosu	0.27	258	⇑P	Pn	03 11 14.3	0.0
MLR				⇓S	Sn	03 11 29.7	-0.7
MLR	Muntele Rosu	0.27	258	*e*Pg	Pn	03 11 14.2	-0.1
MLR				*e*Sg	Sn	03 11 23.1	-7.3
BISRR	Bisoca	0.28	90	⇑P	Pn	03 11 14.5	+0.3
BISRR				⇓S	Sn	03 11 30.2	-0.1
BISRR	Bisoca	0.28	90	⇑P	Pn	03 11 14.5	+0.3
BISRR				⇓S	Sn	03 11 30.2	-0.1
PLOR	Plostina	0.38	37	⇑P	Pn	03 11 14.1	-0.5
PLOR				⇓S	Sn	03 11 30.4	-0.5
PLOR	Plostina	0.38	37	⇑P	Pn	03 11 14.1	-0.5
PLOR				⇓S	Sn	03 11 30.4	-0.5
VRI	Vrincioaia	0.43	42	⇑P	Pn	03 11 14.4	-0.3
VRI				⇓S	Sn	03 11 30.0	-1.3
VRI	Vrincioaia	0.43	42	⇑P	Pn	03 11 14.4	-0.3
VRI				⇓S	Sn	03 11 30.0	-1.3
ISR	Istrita	0.46	159	⇑P	Pn	03 11 15.0	+0.1
ISR				⇑S	Sn	03 11 31.0	-0.5
ISR	Istrita	0.46	159	⇑P	Pn	03 11 15.0	+0.1
ISR				⇑S	Sn	03 11 31.0	-0.5
GRER		0.49	110	⇑P	Pn	03 11 15.9	+0.9
GRER		0.49	110	⇑P	Pn	03 11 15.9	+0.9
ODBI	Odobesti	0.56	67	⇑P	Pn	03 11 16.1	+0.8
ODBI	Odobesti	0.56	67	⇑P	Pn	03 11 16.1	+0.8
OZUR		0.66	326	⇓P	Pn	03 11 15.5	-0.5
OZUR				⇑S	Sn	03 11 31.8	-1.7
OZUR		0.66	326	⇓P	Pn	03 11 15.5	-0.5
OZUR				⇑S	Sn	03 11 31.8	-1.7
PETR	Petresti	0.67	74	⇑P	Pn	03 11 16.3	+0.5
PETR				⇑S	Sn	03 11 32.9	-0.3
PETR	Petresti	0.67	74	⇑P	Pn	03 11 16.3	+0.5
PETR				⇑S	Sn	03 11 32.9	-0.3
PLAR	PLOIESTI	0.67	198	⇑P	Pn	03 11 16.5	+0.6
PLAR				⇓S	Sn	03 11 34.0	+0.8
PLAR	PLOIESTI	0.67	198	⇑P	Pn	03 11 16.5	+0.6
PLAR				⇓S	Sn	03 11 34.0	+0.8
DOPR	Dopca	0.77	303	⇓P	Pn	03 11 16.4	-0.3
DOPR				⇓S	Sn	03 11 33.6	-1.0
DOPR	Dopca	0.77	303	⇓P	Pn	03 11 16.4	-0.3
DOPR				⇓S	Sn	03 11 33.6	-1.0
PGOR	Pogoanele	0.79	143	⇑P	Pn	03 11 17.1	+0.4
PGOR				⇓S	Sn	03 11 35.3	+0.5
PGOR	Pogoanele	0.79	143	⇑P	Pn	03 11 17.1	+0.4
PGOR				⇓S	Sn	03 11 35.3	+0.5
SULR		0.87	183	⇑P	Pn	03 11 17.8	+0.5
SULR				⇑S	Sn	03 11 36.1	+0.4
SULR		0.87	183	⇑P	Pn	03 11 17.8	+0.5
SULR				⇑S	Sn	03 11 36.1	+0.4
VOIR		0.90	263	⇓P	Pn	03 11 17.3	-0.3
VOIR				⇓S	Sn	03 11 35.1	-1.2
VOIR		0.90	263	⇓P	Pn	03 11 17.3	-0.3
VOIR				⇓S	Sn	03 11 35.1	-1.2
TUDR		0.95	87	⇓P	Pn	03 11 17.5	-0.3
TUDR				⇑S	Sn	03 11 35.8	-1.0
TUDR		0.95	87	⇓P	Pn	03 11 17.5	-0.3
TUDR				⇑S	Sn	03 11 35.8	-1.0
TESR	Tescani	0.99	13	⇑P	Pn	03 11 17.8	-0.4
TESR				⇓S	Sn	03 11 35.4	-2.2
TESR	Tescani	0.99	13	⇑P	Pn	03 11 17.8	-0.4
TESR				⇓S	Sn	03 11 35.4	-2.2
SCHL	Schela	1.06	92	⇑P	Pn	03 11 18.5	-0.4
SCHL				⇓S	Sn	03 11 36.9	-1.5
SCHL	Schela	1.06	92	⇑P	Pn	03 11 18.5	-0.4
SCHL				⇓S	Sn	03 11 36.9	-1.5
INCR	INCERC-Sediu C	1.11	186	⇑P	Pn	03 11 19.5	+0.2
INCR				⇑S	Sn	03 11 38.8	-0.4
INCR	INCERC-Sediu C	1.11	186	⇑P	Pn	03 11 19.5	+0.2
INCR				⇑S	Sn	03 11 38.8	-0.4
LEHL	Lehliu	1.13	161	⇑P	Pn	03 11 19.8	+0.4
LEHL				⇑S	Sn	03 11 39.6	+0.1
LEHL	Lehliu	1.13	161	⇑P	Pn	03 11 19.8	+0.4
LEHL				⇑S	Sn	03 11 39.6	+0.1
VARL	Varlezi	1.13	71	⇑P	Pn	03 11 19.2	-0.2
VARL				⇑S	Sn	03 11 38.5	-1.0
VARL	Varlezi	1.13	71	⇑P	Pn	03 11 19.2	-0.2
VARL				⇑S	Sn	03 11 38.5	-1.0
BIR	Birlad	1.16	51	⇑P	Pn	03 11 19.7	-0.1
BIR				⇑S	Sn	03 11 38.5	-1.7
BIR	Birlad	1.16	51	⇑P	Pn	03 11 19.7	-0.1
BIR				⇑S	Sn	03 11 38.5	-1.7
STFAR	Stefanesti-Arg	1.18	235	⇓P	Pn	03 11 20.8	+0.9
STFAR				⇓S	Sn	03 11 40.2	-0.2
STFAR	Stefanesti-Arg	1.18	235	⇓P	Pn	03 11 20.8	+0.9
STFAR				⇓S	Sn	03 11 40.2	-0.2
AMRR	Amara	1.18	142	⇑P	Pn	03 11 20.2	+0.3
AMRR				⇑S	Sn	03 11 39.9	-0.5
AMRR	Amara	1.18	142	⇑P	Pn	03 11 20.2	+0.3
AMRR				⇑S	Sn	03 11 39.9	-0.5
ARR	Arges	1.20	262	⇓P	Pn	03 11 20.2	+0.1
ARR				⇑S	Sn	03 11 39.8	-1.0
ARR	Arges	1.20	262	⇓P	Pn	03 11 20.2	+0.1
ARR				⇑S	Sn	03 11 39.8	-1.0
BUC1	Bucharest	1.22	190	⇑P	Pn	03 11 20.6	+0.3
BUC1				⇑S	Sn	03 11 40.5	-0.4
BUC1	Bucharest	1.22	190	⇑P	Pn	03 11 20.6	+0.3
BUC1				⇑S	Sn	03 11 40.5	-0.4
GISR	Galati	1.23	94	⇑P	Pn	03 11 20.3	0.0
GISR				⇓S	Sn	03 11 40.0	-1.1
GISR	Galati	1.23	94	⇑P	Pn	03 11 20.3	0.0
GISR				⇓S	Sn	03 11 40.0	-1.1
JOSR	Joseni	1.29	335	⇓P	Pn	03 11 20.5	-0.5
JOSR	Joseni	1.29	335	⇓P	Pn	03 11 20.5	-0.5
GIUM	Giurgiulesti	1.33	92	⇑P	Pn	03 11 21.4	+0.1
GIUM				⇓S	Sn	03 11 41.9	-1.0
GIUM	Giurgiulesti	1.33	92	⇑P	Pn	03 11 21.4	+0.1
GIUM				⇓S	Sn	03 11 41.9	-1.0
CFR	Carcaliu	1.33	105	⇑P	Pn	03 11 20.8	-0.5
CFR				⇑S	Sn	03 11 41.7	-1.2
CFR	Carcaliu	1.33	105	⇑P	Pn	03 11 20.8	-0.5
CFR				⇑S	Sn	03 11 41.7	-1.2
SGRR	Singureni	1.35	191	⇓P	Pn	03 11 21.6	+0.1
SGRR				⇓S	Sn	03 11 42.2	-0.9
SGRR	Singureni	1.35	191	⇓P	Pn	03 11 21.6	+0.1
SGRR				⇓S	Sn	03 11 42.2	-0.9
HUMR	Humele	1.39	223	⇓P	Pn	03 11 21.9	0.0
HUMR				⇓S	Sn	03 11 43.2	-0.8
HUMR	Humele	1.39	223	⇓P	Pn	03 11 21.9	0.0
HUMR				⇓S	Sn	03 11 43.2	-0.8
BIZ	Bicaz	1.40	354	⇓P	Pn	03 11 22.7	+0.7
BIZ				⇑S	Sn	03 11 42.7	-1.5
BIZ	Bicaz	1.40	354	⇓P	Pn	03 11 22.7	+0.7
BIZ				⇑S	Sn	03 11 42.7	-1.5
GIRR	Girov	1.42	5	⇓P	Pn	03 11 22.4	+0.3
GIRR	Girov	1.42	5	⇓P	Pn	03 11 22.4	+0.3
HARR	Harsova	1.43	126	⇑P	Pn	03 11 22.3	0.0
HARR	Harsova	1.43	126	⇑P	Pn	03 11 22.3	0.0
RASA	Rasa	1.46	156	⇑P	Pn	03 11 22.6	+0.1
RASA				⇑S	Sn	03 11 44.8	-0.3
RASA	Rasa	1.46	156	⇑P	Pn	03 11 22.6	+0.1
RASA				⇑S	Sn	03 11 44.8	-0.3
MDB	Medias	1.48	294	⇑P	Pn	03 11 23.4	+0.6
MDB	Medias	1.48	294	⇑P	Pn	03 11 23.4	+0.6
VASR	Vaslui	1.50	43	⇑P	Pn	03 11 22.8	-0.2
VASR				⇓S	Sn	03 11 44.2	-1.8
VASR	Vaslui	1.50	43	⇑P	Pn	03 11 22.8	-0.2
VASR				⇓S	Sn	03 11 44.2	-1.8
RMVG	GOVORA	1.52	251	⇑P	Pn	03 11 24.6	+1.4
RMVG				⇑S	Sn	03 11 47.3	+1.0
RMVG	GOVORA	1.52	251	⇑P	Pn	03 11 24.6	+1.4
RMVG				⇑S	Sn	03 11 47.3	+1.0
TLBR	Topalu	1.58	129	⇑P	Pn	03 11 23.9	+0.1
TLBR				⇓S	Sn	03 11 45.5	-2.0
TLBR	Topalu	1.58	129	⇑P	Pn	03 11 23.9	+0.1
TLBR				⇓S	Sn	03 11 45.5	-2.0
COPA	Copaceanca	1.61	209	⇓P	Pn	03 11 24.3	0.0
COPA				⇓S	Sn	03 11 47.2	-0.8
COPA	Copaceanca	1.61	209	⇓P	Pn	03 11 24.3	0.0
COPA				⇓S	Sn	03 11 47.2	-0.8
TPGR	Topolog	1.64	114	⇑P	Pn	03 11 24.1	-0.4
TPGR				⇑S	Sn	03 11 46.5	-2.1
TPGR	Topolog	1.64	114	⇑P	Pn	03 11 24.1	-0.4
TPGR				⇑S	Sn	03 11 46.5	-2.1
CVDA	Cernavoda	1.72	134	⇑P	Pn	03 11 25.5	+0.2
CVDA				⇑S	Sn	03 11 48.6	-1.5
CVDA	Cernavoda	1.72	134	⇑P	Pn	03 11 25.5	+0.2
CVDA				⇑S	Sn	03 11 48.6	-1.5
ICOR	Ion Corvin	1.78	143	⇑P	Pn	03 11 26.3	+0.3
ICOR				⇑S	Sn	03 11 50.1	-1.1
ICOR	Ion Corvin	1.78	143	⇑P	Pn	03 11 26.3	+0.3
ICOR				⇑S	Sn	03 11 50.1	-1.1
LOT	Lotru	1.79	268	⇑P	Pn	03 11 26.6	+0.3
LOT				⇑S	Sn	03 11 51.4	-0.4
LOT	Lotru	1.79	268	⇑P	Pn	03 11 26.6	+0.3
LOT				⇑S	Sn	03 11 51.4	-0.4
TLCR		1.80	101	⇑P	Pn	03 11 25.9	-0.3
TLCR				⇓S	Sn	03 11 50.3	-1.2
TLCR		1.80	101	⇑P	Pn	03 11 25.9	-0.3
TLCR				⇓S	Sn	03 11 50.3	-1.2
PRAR	RASCA	1.82	358	⇑P	Pn	03 11 26.9	+0.5
PRAR	RASCA	1.82	358	⇑P	Pn	03 11 26.9	+0.5
TIRR	Tirgusor	1.84	125	⇑P	Pn	03 11 26.7	0.0
TIRR				⇓S	Sn	03 11 50.6	-1.9
TIRR	Tirgusor	1.84	125	⇑P	Pn	03 11 26.7	0.0
TIRR				⇓S	Sn	03 11 50.6	-1.9
IAS	Iasi	1.86	27	⇑P	Pn	03 11 26.6	-0.3
IAS				⇓S	Sn	03 11 50.7	-2.2
IAS	Iasi	1.86	27	⇑P	Pn	03 11 26.6	-0.3
IAS				⇓S	Sn	03 11 50.7	-2.2
JURR	Jurilovca	1.97	112	⇓P	Pn	03 11 28.3	+0.2
JURR	Jurilovca	1.97	112	⇓P	Pn	03 11 28.3	+0.2
ZIMR		2.01	200	⇑P	Pn	03 11 28.8	+0.2
ZIMR				⇑S	Sn	03 11 54.7	-1.1
ZIMR		2.01	200	⇑P	Pn	03 11 28.8	+0.2
ZIMR				⇑S	Sn	03 11 54.7	-1.1
ARCR	ARCALIA	2.05	319	⇓P	Pn	03 11 28.9	-0.2
ARCR	ARCALIA	2.05	319	⇓P	Pn	03 11 28.9	-0.2
VLAD	Vladila	2.06	222	⇓P	Pn	03 11 29.1	-0.1
VLAD	Vladila	2.06	222	⇓P	Pn	03 11 29.1	-0.1
TSCT	Constanta Port	2.17	129	⇓P	Pn	03 11 30.6	+0.2
TSCT				⇑S	Sn	03 11 57.5	-1.7
TSCT	Constanta Port	2.17	129	⇓P	Pn	03 11 30.6	+0.2
TSCT				⇑S	Sn	03 11 57.5	-1.7
BURAR	Bucovina Array	2.20	340	⇓P	Pn	03 11 32.2	+1.2
BURAR				⇓S	Sn	03 12 01.3	+1.1
BURAR	Bucovina Array	2.20	340	⇓P	Pn	03 11 32.2	+1.2
BURAR				⇓S	Sn	03 12 01.3	+1.1
EFOR	EFORIE	2.21	131	⇓S	Sn	03 11 58.9	-1.1
EFOR	EFORIE	2.21	131	⇓S	Sn	03 11 58.9	-1.1
MILM	Milestii Mici	2.21	51	⇑P	Pn	03 11 30.6	-0.3
MILM	Milestii Mici	2.21	51	⇑P	Pn	03 11 30.6	-0.3
MILM	Milestii Mici	2.21	51	P	Pn	03 11 30.6	-0.3
CJR	Cluj-Napoca	2.22	303	⇓P	Pn	03 11 31.3	+0.1
CJR	Cluj-Napoca	2.22	303	⇓P	Pn	03 11 31.3	+0.1
KIS	Kishinev	2.26	49	⇑*i*P	Pn	03 11 31.1	-0.4
	60nm,0.2s						
KIS				*e*S	Sn	03 11 58.6	-2.6
	620nm,0.5s						
KIS	Kishinev	2.26	49	⇑P	Pn	03 11 31.3	-0.3
KIS	Kishinev	2.26	49	⇑P	Pn	03 11 31.3	-0.3
KIS	Kishinev	2.26	49	⇓*i*P	Pn	03 11 31.1	-0.4
KIS				Pm		03 11 31.4	
KIS				*e*S	Sn	03 11 58.6	-2.6
KIS				Sm		03 11 59.0	
KIS				m		03 12 00.0	
PSN	Preselentsi	2.29	144	*i* P	Pn	03 11 43.6	+12
SZH	Strazhica	2.30	187	*i* P	Pn	03 11 31.9	-0.1
MANR	Mangalia	2.37	136	⇓P	Pn	03 11 33.2	+0.3
MANR				⇓S	Sn	03 12 02.5	-1.0
MANR	Mangalia	2.37	136	⇓P	Pn	03 11 33.2	+0.3
MANR				⇓S	Sn	03 12 02.5	-1.0
SRE	Strehaia	2.37	249	⇓P	Pn	03 11 32.9	0.0
SRE				⇓S	Sn	03 12 02.8	-0.8
SRE	Strehaia	2.37	249	⇓P	Pn	03 11 32.9	0.0
SRE				⇓S	Sn	03 12 02.8	-0.8
TSMN	Mangalia Port-	2.38	136	⇑S	Sn	03 12 03.0	-0.8
TSMN	Mangalia Port-	2.38	136	⇑S	Sn	03 12 03.0	-0.8
DEV	Deva	2.42	279	⇓P	Pn	03 11 34.1	+0.7
DEV	Deva	2.42	279	⇓P	Pn	03 11 34.1	+0.7
TSSL	Sulina	2.44	98	⇓S	Sn	03 12 04.4	-0.4
TSSL	Sulina	2.44	98	⇓S	Sn	03 12 04.4	-0.4
PRD	Provadia	2.47	161	*i* P	Pn	03 11 34.9	+0.8
GZR	Gura Zlata	2.50	268	⇑P	Pn	03 11 34.8	+0.3
GZR				⇑S	Sn	03 12 07.2	+0.9
GZR	Gura Zlata	2.50	268	⇑P	Pn	03 11 34.8	+0.3
GZR				⇑S	Sn	03 12 07.2	+0.9
GZR	Gura Zlata	2.50	268	*e*Pn	Pn	03 11 34.4	-0.1
GZR				*e*Sn	Sn	03 11 58.4	-7.9
BAIL	Bailesti	2.61	235	⇓P	Pn	03 11 36.1	+0.3
BAIL				⇑S	Sn	03 12 07.7	-1.0
BAIL	Bailesti	2.61	235	⇓P	Pn	03 11 36.1	+0.3
BAIL				⇑S	Sn	03 12 07.7	-1.0
CHRU	Chernivtsi	2.77	355	Pm		03 11 37.7	
CHRU				*i* S	Sn	03 12 11.4	-0.8
CHRU				Sm		03 12 13.1	
DRGR		2.80	298	⇓P	Pn	03 11 37.8	-0.3
DRGR		2.80	298	⇓P	Pn	03 11 37.8	-0.3
HERR	Herculane	2.84	258	⇑P	Pn	03 11 38.4	-0.2
HERR	Herculane	2.84	258	⇑P	Pn	03 11 38.4	-0.2
BMR	Baia Mare	2.88	319	⇑P	Pn	03 11 39.5	+0.3
BMR	Baia Mare	2.88	319	⇑P	Pn	03 11 39.5	+0.3
RAKU	Rahkiv	2.89	330	⇓*i*P	Pn	03 11 39.5	+0.3
RAKU				Pm		03 11 40.8	
RAKU				*e*S	Sn	03 12 15.3	+0.4
RAKU				Sm		03 12 19.5	
KSV	Kosov	2.90	343	*i* P	Pn	03 11 39.5	+0.1
KSV				Pm		03 11 40.1	
KSV				Sm		03 12 17.1	
SORM	Soroca	2.94	28	⇑P	Pn	03 11 39.2	-0.6
SORM	Soroca	2.94	28	⇑P	Pn	03 11 39.2	-0.6
NSLU	Nyzhne Selyshc	2.94	335	⇑*i*P	Pn	03 11 44.8	+4.9
NSLU				Pm		03 11 45.3	
NSLU				*e*S	Sn	03 12 25.1	+9.0
NSLU				Sm		03 12 32.2	
KMPD	K-Podol'skiy	3.02	2	*i* P	Pn	03 11 40.2	-0.6
NDNU	Novodnistrovsk	3.13	13	⇓*i*P	Pn	03 11 41.8	-0.5
NDNU				Pm		03 11 42.2	
NDNU				*i* S	Sn	03 12 17.6	-2.8
NDNU				Sm		03 12 18.1	
BZS	Buzias	3.30	273	⇑P	Pn	03 11 44.5	+0.1
BZS	Buzias	3.30	273	⇑P	Pn	03 11 44.5	+0.1
BZS	Buzias	3.30	273	*e*Pn	Pn	03 11 46.2	+1.8
SIRR	Siria	3.33	284	⇓P	Pn	03 11 45.0	+0.2
SIRR	Siria	3.33	284	⇓P	Pn	03 11 45.0	+0.2
MDVR	Moldovita	3.34	258	⇑P	Pn	03 11 45.0	-0.1
MDVR	Moldovita	3.34	258	⇑P	Pn	03 11 45.0	-0.1
MDVR	Moldovita	3.34	258	*e*Pn	Pn	03 11 44.8	-0.3
MDVR				*e*Sn	Sn	03 12 18.1	-7.2
ZAGS	Zajecar	3.39	241	*e*Pn	Pn	03 11 44.3	-1.3
ZAGS				*e*Sn	Sn	03 12 18.3	-8.0
STNU	Starunia	3.40	339	*i* P	Pn	03 11 45.3	-0.4
STNU				*e*S	Sn	03 12 27.3	+0.8
KORU	Korolevo	3.40	321	⇓*i*P	Pn	03 11 46.2	+0.5
KORU				Pm		03 11 48.8	
KORU				*e*S	Sn	03 12 27.6	+1.0
KORU				Sm		03 12 32.0	
TRSU	Trosnyk	3.44	319	*i* P	Pn	03 11 47.0	+0.9
ZAPS	Zavoj	3.48	231	*e*Pn	Pn	03 11 46.9	+0.1
ZAPS				*e*Sn	Sn	03 12 21.2	-7.3
MEZ	Mezhgor'ye	3.53	328	*i* P	Pn	03 11 48.3	+0.9
MEZ				Pm		03 11 50.5	
MEZ				*e*S	Sn	03 12 30.3	+0.7
MEZ				Sm		03 12 39.8	
BRIU	Brid	3.59	322	⇑*i*P	Pn	03 11 48.8	+0.7
HORU	Horodok	3.67	1	⇑*i*P	Pn	03 11 48.9	-0.2
HORU				*i* S	Sn	03 12 32.1	-0.6
BERU	Beregovo	3.68	318	*i* P	Pn	03 11 50.0	+0.7
MUKU	Mukachevo	3.82	321	⇑*i*P	Pn	03 11 51.6	+0.5
MUKU				*e*S	Sn	03 12 37.2	+1.0
MORS	Morshin	3.95	336	*i* P	Pn	03 11 52.7	0.0
MORS				*e*S	Sn	03 12 39.6	+0.4
BOSS	Bosilegrad	4.12	224	*e*Pn	Pn	03 11 55.7	+0.7
UZH	Uzhgorod	4.13	320	*i* P	Pn	03 11 55.7	+0.6
GRUS	Gruza	4.32	249	*e*Pn	Pn	03 11 57.7	0.0
GRUS				*e*Sn	Sn	03 12 40.6	-7.3
KOLS	Kolonicke sedl	4.37	322	*e*P	Pn	03 11 58.8	+0.6
TRUS	Trudelj	4.40	255	*e*Pn	Pn	03 11 58.4	-0.3
TRUS				*e*Sn	Sn	03 12 42.9	-6.9
CRVS	Cervenica-Dubn	4.71	317	*e*P	Pn	03 12 03.4	+0.6
DIVS	Divibare	4.73	254	*e*Pn	Pn	03 12 03.5	+0.4
DIVS				*e*Sn	Sn	03 12 49.5	-8.1
STIP	Stip	4.88	219	*i* Pn	Pn	03 12 04.0	-1.0
SJES	Sjenica	5.09	246	*e*Pn	Pn	03 12 08.3	+0.5
BBLS	Lazići	5.21	254	*e*Pn	Pn	03 12 10.8	+1.4
BBLS				*e*Sn	Sn	03 13 00.9	-8.0
SEV	Sevastopol'	5.30	98	*e*P	Pn	03 12 10.5	-0.1
SEV				Pm		03 12 11.8	
SEV				*e*S	Sn	03 13 09.2	-1.9
SEV				Sm		03 13 10.0	
MORH	Mrgy, Hungar	5.40	280	⇑*e*PN	Pn	03 12 12.7	+0.9
AKASG	Malin Array Be	5.51	20	P	Pn	03 12 12.3	-0.9
	1.6nm,0.3s,baz=205,slow=12,SNR=5.8						
AKASG				S	Sn	03 13 12.1	-3.9
	2.2nm,0.3s,baz=195,slow=22,SNR=5.7						
SIM	Simferopol'	5.54	93	*e*P	Pn	03 12 13.2	-0.5
SIM				*e*S	Sn	03 13 14.2	-2.5
VYHS	Vyhne	5.90	303	*e*P	Pn	03 12 16.0	-2.5
SUDU	Sudak	6.17	93	*e*P	Pn	03 12 21.5	-0.5
SUDU				Pm		03 12 23.3	
SUDU				*e*S	Sn	03 13 29.5	-2.2
SUDU				Sm		03 13 31.4	
BZK	Bozkurt	6.62	120	⇓P	Pn	03 12 28.0	0.0
BZK	Bozkurt	6.62	120	⇓P	Pn	03 12 28.0	0.0
VRAC	Vranov	7.59	303	P	Pn	03 12 41.6	+0.6
	0.1nm,0.3s,baz=114,slow=10.0,SNR=2.9						
BRTR	Keskin Array B	7.93	135	P	Pn	03 12 46.0	+0.2
	0.0nm,0.3s,baz=302,slow=9.4,SNR=2.0						
MNK	Minsk	9.02	6	*i* P	Pn	03 12 56.5	-3.4
	comp=E,2.0nm,0.9s						
MNK				*i* P	Pn	03 12 56.5	-3.4
	comp=N,4.0nm,0.9s						
MNK				*i* P	Pn	03 12 56.5	-3.4
	comp=Z,9.0nm,0.9s						
MNK				*i* sP		03 13 30.3	
MNK				*i* S	Sn	03 14 35.0	-5.0
KBZ	Khabaz	11.95	93	LR	LR	03 18 39.9	
	comp=Z,47nm,20.2s,baz=242,slow=39						
FINES	FINESS Array B	15.93	360	P	Pn	03 14 28.2	-0.2
	comp=Z,0.1nm,0.3s,baz=185,slow=15,SNR=1.7						
HFS	Hagfors	16.43	337	P	Pn	03 14 34.7	+0.1
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=7.2						
NOA	NORSAR Array B	17.88	336	P	P	03 14 50.0	-0.5
	comp=Z,0.0nm,0.3s,baz=145,slow=11,SNR=4.3						
EKA	Eskdalemuir Ar	21.02	308	P	P	03 15 23.8	-0.6
	comp=Z,0.3nm,0.3s,baz=92,slow=9.2,SNR=1.5						
ESDC	Sonseca Array	22.96	266	P	P	03 15 43.3	-0.7
	comp=Z,0.7nm,0.7s,baz=65,slow=9.7,SNR=7.0						
ARCES	ARCESS Array B	24.06	359	P	P	03 15 54.5	+0.8
	comp=Z,6.5nm,1.2s,baz=175,slow=11,SNR=1.5						
MKAR	Makanchi Array	38.08	67	P	P	03 17 58.5	+1.8
	comp=Z,0.1nm,0.4s,baz=265,slow=11,SNR=1.3						
TORD	Torodi Ar. Bea	38.45	221	P	P	03 18 01.7	+1.7
	comp=Z,2.0nm,0.5s,baz=27,slow=8.7,SNR=11						
DBIC	Dimbokro	47.21	224	P	P	03 19 11.0	+0.6
	comp=Z,1.5nm,0.4s,baz=9.6,slow=6.9,SNR=11						

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*IDC **14** 03:36:20.5±1.4, 63°.06N×151°.20W, h99^{km}±14^{km}, mb3.2/7, mb1 3.4/11, mb1mx3.2/41, mbtmp3.5/11, Error ellipse: s-maj=20.2km s-min=10.4km az=111.0*

*NEIC **14** 03:36:22.5±0.7, 63°.04N±0°.04×150°.98W±0°.09, h124^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=5.1km az=85.0*

*AEIC **14** 03:36:23±1.0, 63°.03N±0°.03×150°.95W±0°.09, h118^{km}±2^{km}, ML3.3, mb3.7/1(NEIC), ML3.6/92(NEIC), Error ellipse: s-maj=5.7km s-min=4.5km az=82.0*

*ANF **14** 03:36:23.3±0.4, 63°.06N×150°.86W, h113^{km}±6^{km}, ML3.6/16, Error ellipse: s-maj=4.4km s-min=2.1km az=103.0*

ISC 14 03:36:22.8±0.7, **63°.05N**±0°.02×**150°.96W**±0°.03, **h125**^{km}±5^{km}, **n166**, σ**0^{s}.92**/181, **mb3.4**/7, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.50	37		Pn	03 36 41.3	-0.2
TRF					Sn	03 36 55.5	-0.2
TRF	Thorofare Moun	0.50	37	IAML		03 36 56.2	
	comp=E,876nm,0.6s						
KTH	Kantishna Hill	0.50	2		Pn	03 36 41.2	-0.2
KTH					Sn	03 36 54.8	-0.8

KTH	**Kantishna Hill**	**0.50**	**2**	IAML		03 36 55.2	
	comp=E,2μm,0.7s						
KTH				IAML		03 36 55.5	
	comp=N,2μm,0.6s						
PPLA	**Purkeypile**	**0.58**	**255**		**Pn**	**03 36 41.6**	**-0.4**
PPLA					**Sn**	**03 36 55.7**	**-0.8**
HUR	**Hurricane**	**0.61**	**96**		**Pn**	**03 36 41.6**	**-0.4**
CUT	**Chulitna**	**0.72**	**154**	P	**Pn**	**03 36 42.5**	**-0.3**
	baz=333,SNR=55						
CUT				S	**Sn**	**03 36 57.4**	**-0.5**
	baz=333						
CUT	**Chulitna**	**0.72**	**154**		**Pn**	**03 36 42.5**	**-0.3**
CUT					**Sn**	**03 36 57.6**	**-0.3**
WAT7	**Susitna Watana**	**0.99**	**102**		**Pn**	**03 36 44.9**	**-0.4**
WAT7					**Sn**	**03 37 02.4**	**+0.1**
RND	**Reindeer**	**1.02**	**69**		**Pn**	**03 36 45.1**	**-0.4**
CHUM	**Lake Minchumin**	**1.03**	**325**		**Pn**	**03 36 45.1**	**-0.4**
CHUM					**Sn**	**03 37 02.0**	**-0.8**
BPAW	**Bear Paw Mtn.**	**1.05**	**359**		**Pn**	**03 36 45.5**	**-0.3**
BPAW					**Sn**	**03 37 02.2**	**-1.0**
BPAW	**Bear Paw Mtn.**	**1.05**	**359**	IAML		03 37 02.6	
	comp=E,505nm,0.7s						
WAT2	**Susitna Watana**	**1.09**	**94**		**Pn**	**03 36 45.7**	**-0.5**
SKT	**Skwentna**	**1.11**	**194**		**Pn**	**03 36 45.6**	**-0.7**
SKT					**Sn**	**03 37 03.1**	**-1.0**
SKT	**Skwentna**	**1.11**	**194**	IAML		03 37 03.7	
	comp=E,698nm,0.6s						
SKT				IAML		03 37 05.4	
	comp=N,817nm,0.3s						
WAT1	**Susitna Watana**	**1.12**	**100**		**Pn**	**03 36 46.1**	**-0.4**
WAT1					**Sn**	**03 37 04.7**	**+0.1**
MCK	**McKinley**	**1.14**	**52**	P	**Pn**	**03 36 46.7**	**0.0**
	baz=233,SNR=73						
MCK				S	**Sn**	**03 37 03.8**	**-1.0**
	baz=233						
MCK	**McKinley**	**1.14**	**52**		**Pn**	**03 36 46.7**	**0.0**
BWN	**Browne**	**1.31**	**30**		**Pn**	**03 36 49.0**	**+0.6**
WAT6	**Susitna Watana**	**1.55**	**106**		**Pn**	**03 36 51.0**	**-0.4**
WAT6					**Sn**	**03 37 12.6**	**-0.4**
GHO	**Glory Hole Cre**	**1.60**	**143**		**Pn**	**03 36 51.6**	**-0.1**
SUA	**Susitna One**	**1.60**	**176**		**Pn**	**03 36 51.4**	**-0.4**
STLK	**Strandline Lak**	**1.61**	**195**		**Pn**	**03 36 51.3**	**-0.6**
PMR	**Palmer**	**1.70**	**149**		**Pn**	**03 36 52.6**	**-0.2**
PMR					**Sn**	**03 37 14.8**	**-0.9**
PMR	**Palmer**	**1.70**	**149**	IAML		03 37 20.5	
	comp=E,365nm,0.5s						
PMR				IAML		03 37 21.0	
	comp=N,320nm,0.3s						
SML	**Sawmill**	**1.75**	**134**		**Pn**	**03 36 53.0**	**-0.5**
SML	**Sawmill**	**1.75**	**134**	IAML		03 37 17.8	
	comp=E,597nm,0.6s						
NEA2	**Nenana**	**1.76**	**28**	P	**Pn**	**03 36 53.1**	**-0.5**
	baz=209,SNR=30						
NEA2				S	**Sn**	**03 37 15.4**	**-1.7**
	baz=209						
NEA2	**Nenana**	**1.76**	**28**		**Pn**	**03 36 53.1**	**-0.5**
SPCG	**Spurr Capps Gl**	**1.83**	**196**		**Pn**	**03 36 54.1**	**-0.5**
SPCP	**Crater Peak Br**	**1.88**	**198**		**Pn**	**03 36 54.7**	**-0.5**
SPCP					**Sn**	**03 37 19.3**	**-0.5**
WRH	**Wood River Hil**	**1.91**	**41**		**Pn**	**03 36 55.2**	**-0.2**
SPBG	**Spurr Blockage**	**1.92**	**201**		**Pn**	**03 36 55.6**	**0.0**
SPCN	**Chakachatna No**	**1.92**	**198**		**Pn**	**03 36 55.6**	**0.0**
SPWE	**Spurr West**	**1.94**	**203**		**Pn**	**03 36 55.6**	**-0.2**
SPCR	**Spurr Chakacha**	**1.95**	**198**		**Pn**	**03 36 55.5**	**-0.4**
MLY	**Manley**	**1.99**	**3**	P	**Pn**	**03 36 56.1**	**-0.3**
	baz=183,SNR=33						
MLY				S	**Sn**	**03 37 20.6**	**-1.5**
	baz=183						
MLY	**Manley**	**1.99**	**3**		**Pn**	**03 36 56.1**	**-0.3**
KNK	**Knik Glacier**	**2.02**	**143**		**Pn**	**03 36 56.5**	**-0.3**
KNK	**Knik Glacier**	**2.02**	**143**	IAML		03 37 31.4	
	comp=N,323nm,0.5s						
RC01	**Rabbit Creek A**	**2.05**	**163**	P	**Pn**	**03 36 56.6**	**-0.5**
	baz=344						
RC01				S	**Sn**	**03 37 21.9**	**-1.5**
	baz=344						
RC01	**Rabbit Creek A**	**2.05**	**163**		**Pn**	**03 36 56.6**	**-0.5**
RC01					**Sn**	**03 37 21.9**	**-1.5**
SCM	**Sheep Creek Mo**	**2.08**	**124**		**Pn**	**03 36 57.3**	**-0.3**
CCB	**Clear Creek Bu**	**2.13**	**40**		**Pn**	**03 36 57.7**	**-0.3**
I23K	**Minto, Yukon-K**	**2.22**	**18**	P	**Pn**	**03 36 59.1**	**0.0**
	baz=199,SNR=34						
I23K				S	**Sn**	**03 37 25.4**	**-1.6**
	baz=199						
I23K	**Minto, Yukon-K**	**2.22**	**18**		**Pn**	**03 36 59.1**	**0.0**
HDA	**Harding Lake**	**2.25**	**51**	P	**Pn**	**03 36 59.1**	**-0.3**
	baz=234,SNR=45						
HDA				S	**Sn**	**03 37 26.2**	**-1.4**
	baz=234						
HDA				S	**Sn**	**03 37 26.2**	**-1.4**
	baz=234						
HDA	**Harding Lake**	**2.25**	**51**		**Pn**	**03 36 59.2**	**-0.3**
HDA	**Harding Lake**	**2.25**	**51**	IAML		03 37 32.3	
	comp=E,305nm,0.4s						
HDA				IAML		03 37 33.7	
	comp=N,214nm,0.5s						
MDM	**Murphy Dome**	**2.26**	**31**		**Pn**	**03 36 59.5**	**-0.2**
MDM					**Sn**	**03 37 26.6**	**-1.5**
TCOL	**CIGO, UAF Yank**	**2.28**	**35**	P	**Pn**	**03 36 59.8**	**-0.1**
	baz=218,SNR=17						
TCOL				S	**Sn**	**03 37 26.9**	**-1.6**
	baz=218						
TCOL	**CIGO, UAF Yank**	**2.28**	**35**		**Pn**	**03 36 59.9**	**-0.1**
TCOL	**CIGO, UAF Yank**	**2.28**	**35**	IAML		03 37 27.9	
	comp=E,198nm,0.6s						
TCOL				IAML		03 37 31.6	
	comp=N,385nm,0.6s						
COLA	**College**	**2.29**	**35**		**Pn**	**03 36 59.8**	**-0.2**
COLA	**College**	**2.29**	**35**	IAML		03 37 27.9	
	comp=N,207nm,0.6s						
COLA				IAML		03 37 31.6	
	comp=N,425nm,0.5s						
CAPN	**Captain Cook N**	**2.29**	**182**	P	**Pn**	**03 37 01.3**	**+1.2**
	baz=2.3						
CAPN				S	**Sn**	**03 37 31.4**	**+2.7**
	baz=2.3						
CAPN	**Captain Cook N**	**2.29**	**182**		**Pn**	**03 37 01.1**	**+1.0**
TTA	**Tatalina**	**2.31**	**269**		**Pn**	**03 36 59.4**	**-1.0**
TT01	**Tatalina**	**2.31**	**269**		**Pn**	**03 36 59.5**	**-0.9**
PS08	**TAPS Pump Stn8**	**2.37**	**49**		**Pn**	**03 37 01.2**	**+0.1**
M24K	**Tolsona, Glenn**	**2.41**	**111**	P	**Pn**	**03 37 01.7**	**0.0**
	baz=295,SNR=28						
M24K				S	**Sn**	**03 37 33.2**	**+1.7**
	baz=295						
M24K	**Tolsona, Glenn**	**2.41**	**111**		**Pn**	**03 37 01.9**	**+0.2**
M24K	**Tolsona, Glenn**	**2.41**	**111**	IAML		03 37 49.7	
	comp=N,298nm,1.1s						
IL31		**2.50**	**44**		**Pn**	**03 37 02.2**	**-0.4**
ILAR	**Eielson Array**	**2.50**	**44**	P	**Pn**	**03 37 02.3**	**-0.4**
	comp=N,5.3nm,0.3s,baz=225,slow=12,SNR=326						
ILAR				S	**Sn**	**03 37 31.3**	**-2.0**
	comp=N,4.2nm,0.3s,baz=229,slow=17,SNR=14						
ILAR	**Eielson Array**	**2.50**	**44**	Pn	**Pn**	**03 37 01.6**	**-1.1**
PAX	**Paxson**	**2.51**	**89**		**Pn**	**03 37 02.7**	**-0.2**
PWL	**Port Wells**	**2.53**	**149**		**Pn**	**03 37 02.5**	**-0.6**
PWL					**Sn**	**03 37 32.1**	**-1.9**
SLKM	**Skilak Lake**	**2.58**	**172**		**Pn**	**03 37 03.5**	**-0.2**
POKR	**Poker Plat Res**	**2.59**	**35**	P	**Pn**	**03 37 03.8**	**0.0**
	baz=218,SNR=16						
POKR				S	**Sn**	**03 37 34.1**	**-1.4**
	baz=218						
POKR	**Poker Plat Res**	**2.59**	**35**		**Pn**	**03 37 03.8**	**0.0**
O22K	**Cooper Landing**	**2.65**	**167**	P	**Pn**	**03 37 04.2**	**-0.4**
	baz=348						
O22K				S	**Sn**	**03 37 34.5**	**-2.2**
	baz=348						
O22K	**Cooper Landing**	**2.65**	**167**	Pn	**Pn**	**03 37 03.9**	**-0.7**
O22K					**Sn**	**03 37 35.4**	**-1.3**
PS11	**TAPS Pump St11**	**2.72**	**109**		**Pn**	**03 37 06.1**	**+0.5**
RSO	**Redoubt South**	**2.73**	**199**		**Pn**	**03 37 05.3**	**-0.7**
RED	**Redoubt Volcan**	**2.78**	**199**		**Pn**	**03 37 06.2**	**-0.3**
KLU	**Klutina**	**2.83**	**121**		**Pn**	**03 37 06.1**	**-1.0**
KLU					**Sn**	**03 37 39.9**	**-1.2**
KLU	**Klutina**	**2.83**	**121**	IAML		03 37 40.5	
	comp=E,166nm,0.5s						
KLU				IAML		03 37 53.1	
	comp=N,242nm,0.5s						
RIDG	**Independent Ri**	**2.84**	**73**		**Pn**	**03 37 07.5**	**+0.4**
RIDG	**Independent Ri**	**2.84**	**73**	IAML		03 37 49.5	
	comp=N,155nm,0.6s						
RIDG				IAML		03 38 07.7	
	comp=E,108nm,0.7s						
GLI	**Glacier Island**	**2.84**	**138**		**Pn**	**03 37 06.4**	**-0.7**
PS06	**TAPS Pump Stn6**	**2.87**	**10**		**Pn**	**03 37 07.5**	**+0.1**
JPK	**Jack Peak**	**2.87**	**132**		**Pn**	**03 37 06.6**	**-1.0**
SEW	**Seward**	**3.04**	**166**		**Pn**	**03 37 09.1**	**-0.7**
SEW	**Seward**	**3.04**	**166**		**Sn**	**03 37 44.7**	**-1.3**
DIV	**Divide**	**3.11**	**126**		**Pn**	**03 37 09.5**	**-1.2**
DIV					**Sn**	**03 37 45.3**	**-2.4**
FID	**Port Fidalgo**	**3.13**	**135**		**Pn**	**03 37 10.0**	**-1.0**
DOT	**Dot Lake**	**3.17**	**76**		**Pn**	**03 37 11.1**	**-0.3**
IM03		**3.18**	**339**		**Pn**	**03 37 11.0**	**-0.5**
IMAR	**Indian Mountai**	**3.18**	**339**		**Pn**	**03 37 10.9**	**-0.6**
IVE	**Iliamna Volcan**	**3.20**	**199**		**Pn**	**03 37 11.9**	**0.0**
SCRK	**Sand Creek**	**3.26**	**70**	P	**Pn**	**03 37 12.5**	**-0.2**
	baz=256,SNR=32						
SCRK				S	**Sn**	**03 37 49.0**	**-2.3**
	baz=256						
SCRK	**Sand Creek**	**3.26**	**70**		**Pn**	**03 37 12.5**	**-0.2**
BRLK	**Bradley Lake**	**3.30**	**179**		**Pn**	**03 37 12.8**	**-0.3**
BRLK	**Bradley Lake**	**3.30**	**179**	IAML		03 38 02.3	
	comp=E,81nm,1.4s						
BRLK				IAML		03 38 14.0	
	comp=N,77nm,3.7s						
N25K	**Chitina, Valde**	**3.30**	**113**	P	**Pn**	**03 37 12.9**	**-0.4**
	baz=298,SNR=18						
N25K				S	**Sn**	**03 37 50.5**	**-1.7**
	baz=298						
N25K	**Chitina, Valde**	**3.30**	**113**		**Pn**	**03 37 12.8**	**-0.4**
N25K	**Chitina, Valde**	**3.30**	**113**	IAML		03 37 53.9	
	comp=E,85nm,0.3s						
N25K				IAML		03 38 06.1	
	comp=N,86nm,0.6s						
MENT	**Mentasta**	**3.31**	**89**		**Pn**	**03 37 13.4**	**+0.2**
BRSE	**Bradley Lake S**	**3.32**	**178**		**Pn**	**03 37 12.8**	**-0.7**
HOM	**Homer**	**3.42**	**186**	P	**Pn**	**03 37 14.7**	**0.0**
	baz=5.4						
HOM	**Homer**	**3.42**	**186**		**Pn**	**03 37 14.6**	**-0.1**
PRP	**Porcupine Dome**	**3.43**	**41**		**Pn**	**03 37 14.7**	**-0.2**
L26K	**Log Cabin Wild**	**3.47**	**87**	P	**Pn**	**03 37 15.4**	**0.0**
	baz=273,SNR=38						
L26K				S	**Sn**	**03 37 55.2**	**-0.8**
	baz=273						
L26K	**Log Cabin Wild**	**3.47**	**87**		**Pn**	**03 37 15.7**	**+0.3**
EYAK	**Cordova Ski Ar**	**3.52**	**133**		**Pn**	**03 37 16.4**	**+0.4**
CNPM	**China Poot**	**3.54**	**182**		**Pn**	**03 37 15.8**	**-0.5**
CNPM	**China Poot**	**3.54**	**182**	IAML		03 37 58.9	
	comp=N,74nm,0.6s						
CNPM				IAML		03 38 15.7	
	comp=E,95nm,2.2s						
BMRM	**Bremner River**	**3.65**	**122**		**Pn**	**03 37 16.8**	**-1.1**
GLB	**Gilahina Butte**	**3.71**	**113**		**Pn**	**03 37 18.2**	**-0.4**
GLB	**Gilahina Butte**	**3.71**	**113**	IAML		03 38 02.2	
	comp=E,104nm,0.4s						
GLB				IAML		03 38 02.8	
	comp=N,87nm,0.5s						
PS05	**TAPS Pump Stn5**	**3.78**	**2**		**Pn**	**03 37 19.6**	**+0.3**
VRDI	**Verde Repeater**	**3.97**	**114**		**Pn**	**03 37 21.3**	**-0.9**
VRDI	**Verde Repeater**	**3.97**	**114**	IAML		03 38 07.9	
	comp=N,69nm,0.6s						
RAGM	**Ragged Mountai**	**4.01**	**129**		**Pn**	**03 37 21.9**	**-0.6**
RAGM				Sn	**Sn**	**03 38 08.0**	**-0.9**
MCARA	**McCarthy VSAT**	**4.08**	**111**		**Pn**	**03 37 23.4**	**0.0**
K27K	**Chicken**	**4.10**	**72**	P	**Pn**	**03 37 23.4**	**-0.2**
	baz=260						
K27K				S	**Sn**	**03 38 08.3**	**-2.5**
	baz=260						
K27K	**Chicken**	**4.10**	**72**		**Pn**	**03 37 23.4**	**-0.2**
K27K	**Chicken**	**4.10**	**72**	IAML		03 38 14.9	
	comp=E,46nm,0.6s						
K27K				IAML		03 38 16.4	
	comp=N,56nm,0.7s						
BC03		**4.18**	**86**		**Pn**	**03 37 24.1**	**-0.6**
HMT	**Hamilton**	**4.19**	**127**	Pn	**Pn**	**03 37 24.4**	**-0.6**
HMT					**Sn**	**03 38 11.7**	**-1.6**
COLD	**Coldfoot**	**4.21**	**4**	P	**Pn**	**03 37 24.9**	**-0.2**
	baz=185						
COLD	**Coldfoot**	**4.21**	**4**		**Pn**	**03 37 25.1**	**0.0**
FYU	**Fort Yukon**	**4.29**	**32**	Pn	**Pn**	**03 37 26.5**	**+0.3**
FYU				IAML		03 38 06.5	
	comp=E,54nm,4.9s						
FYU				IAML		03 39 19.6	
	comp=N,58nm,4.7s						
CRQM	**Cirque**	**4.36**	**118**		**Pn**	**03 37 26.5**	**-0.8**
CRQM	**Cirque**	**4.36**	**118**	IAML		03 38 18.7	
	comp=E,82nm,0.8s						
PTPK	**Patty Peak**	**4.41**	**111**		**Pn**	**03 37 27.5**	**-0.5**
TGL	**Tana Glacier**	**4.48**	**117**		**Pn**	**03 37 27.9**	**-1.0**
TGL	**Tana Glacier**	**4.48**	**117**	IAML		03 38 20.6	
	comp=E,80nm,0.7s						
TGL				IAML		03 38 43.9	
	comp=N,72nm,0.9s						
BALM	**Baldy**	**4.53**	**113**		**Pn**	**03 37 28.6**	**-0.9**
BALM	**Baldy**	**4.53**	**113**	IAML		03 38 26.0	
	comp=E,39nm,0.5s						
BALM				IAML		03 38 40.0	
	comp=N,47nm,0.7s						
KIAG	**Kiagna River**	**4.58**	**114**		**Pn**	**03 37 29.6**	**-0.8**
EGAK	**Eagle**	**4.66**	**64**		**Pn**	**03 37 30.9**	**-0.3**
EGAK	**Eagle**	**4.66**	**64**	IAML		03 38 28.7	
	comp=N,65nm,0.8s						
EGAK				IAML		03 38 56.9	
	comp=N,42nm,0.9s						
ISLE	**Juniper Island**	**4.77**	**117**		**Pn**	**03 37 31.5**	**-1.2**
ISLE	**Juniper Island**	**4.77**	**117**	IAML		03 38 47.0	
	comp=E,58nm,0.8s						
ISLE				IAML		03 38 48.2	
	comp=N,61nm,1.4s						
BARN	**Barnard Glacie**	**4.81**	**110**		**Pn**	**03 37 33.2**	**-0.2**
BARN	**Barnard Glacie**	**4.81**	**110**	IAML		03 38 29.6	
	comp=N,27nm,0.6s						
BARN				IAML		03 38 53.8	
	comp=E,29nm,0.8s						
KULT	**Kultieth River**	**4.83**	**122**		**Pn**	**03 37 33.3**	**-0.2**
YUK2	**White River**	**4.87**	**101**		**Pn**	**03 37 34.3**	**+0.2**
GRNC	**Granite Creek**	**4.94**	**114**		**Pn**	**03 37 34.3**	**-0.8**
YUK3	**Moose Creek**	**5.05**	**100**		**Pn**	**03 37 36.7**	**+0.1**
BM03	**Burnt Mountain**	**5.13**	**29**		**Pn**	**03 37 37.5**	**-0.1**
BMAR	**Burnt Mountain**	**5.15**	**29**		**Pn**	**03 37 37.5**	**-0.2**
YAH	**Yahtse**	**5.15**	**117**	Pn	**Pn**	**03 37 37.5**	**-0.4**
YAH					**Sn**	**03 38 34.3**	**-2.1**
YAH				IAML		03 39 08.9	
	comp=E,52nm,3.3s						
RKAV	**Rock Avalanche**	**5.34**	**117**		**Pn**	**03 37 40.6**	**+0.1**
KDAK	**Kodiak Island**	**5.35**	**189**	P	**Pn**	**03 37 38.5**	**-1.8**
	comp=E,0.8nm,0.3s,baz=57,slow=8.4,SNR=18						
KDAK				S	**Sn**	**03 38 37.2**	**-3.6**
	comp=E,2.5nm,0.3s,baz=145,slow=22,SNR=8.9						
TABL	**Table Mountain**	**5.35**	**115**		**Pn**	**03 37 40.4**	**-0.3**
PCA	**Pinnacle**	**5.91**	**115**		**Pn**	**03 37 47.8**	**-0.2**
BCPM	**Bancas Point**	**6.25**	**115**		**Pn**	**03 37 52.2**	**-0.3**
PNL	**Peninsula**	**6.51**	**116**		**Pn**	**03 37 55.8**	**-0.2**
EPYK	**Eagle Plains**	**6.94**	**55**		**Pn**	**03 38 00.8**	**-1.0**
INK	**Inuvik**	**8.89**	**46**	P	**Pn**	**03 38 27.1**	**-1.0**
	comp=E,0.1nm,0.3s,baz=266,slow=15,SNR=2.1						
YKA	**Yellowknife Ar**	**16.51**	**76**	P	**Pn**	**03 40 06.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=286,slow=10.0,SNR=9.1						
RES	**Resolute Bay**	**22.21**	**36**	P	**P**	**03 41 08.4**	**-0.2**
	comp=E,0.3nm,0.4s,baz=267,slow=9.8,SNR=3.5						
RES	**Resolute Bay**	**22.21**	**36**	P	**P**	**03 41 08.5**	**0.0**
RES				IAmb	IAmb	03 41 14.6	
	comp=Z,7.8nm,2.0s						
PDAR	**Pinedale Array**	**31.36**	**111**	P	**P**	**03 42 32.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=329,slow=3.4,SNR=4.6						
PDAR	**Pinedale Array**	**31.36**	**111**	P	**P**	**03 42 31.9**	**+0.4**
TXAR	**Lajitas Array**	**45.28**	**115**	P	**P**	**03 44 29.3**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=333,slow=7.2,SNR=4.6						
TXAR	**Lajitas Array**	**45.28**	**115**	P	**P**	**03 44 28.9**	**+1.2**
SONM	**Songino Array**	**53.80**	**305**	P	**P**	**03 45 32.5**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=24,slow=7.9,SNR=2.7						
FINES	**FINESS Array B**	**55.80**	**2**	P	**P**	**03 45 48.5**	**+2.3**
	comp=Z,4.0nm,1.0s,baz=11,slow=2.9,SNR=7.2						
FINES	**FINESS Array B**	**55.80**	**2**	P	**P**	**03 45 48.0**	**+1.8**
MKAR	**Makanchi Array**	**62.65**	**322**	P	**P**	**03 46 32.3**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=43,slow=5.0,SNR=6.4						
AKASG	**Malin Array Be**	**66.59**	**360**	P	**P**	**03 46 58.0**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=360,slow=6.3,SNR=3.1						

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*BJI **14** 03:39:44.4±0.0, 15°.30S×173°.30W, h5km, mB5.5/11, mb4.9/17, Ms5.3/2, Ms7 5.0/2*

*NEIC **14** 03:39:49.0±1.8, 15°.28S±0°.06×173°.15W±0°.07, $h28^{km}\pm4^{km}$, mb4.7/127, Error ellipse: s-maj=9.8km s-min=8.1km az=105.0*

*GCMT **14** 03:39:57.0±0.2, 15°.31S±0°.02×172°.98W±0°.01, $h50^{km}\pm2^{km}$, MW5.0/102, Moment Tensor Solution. s43,c49; s102,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.20; $M_{\theta\theta}$2.79±.15; $M_{\phi\phi}$-0.57±.16; $M_{r\theta}$-3.10±.14; $M_{\theta\phi}$-0.83±.10; $M_{\phi r}$2.34±.11; Best double couple: $M_0$4.71300×10^{16} NP1:ϕ_s258.00000°,δ22.00000°, λ-134.00000°. NP2:ϕ_s124.00000°,δ74.00000°, λ-75.00000°. Principal axes: T 4.8750, Plg28.0000°, Azm202.0000°; N -0.3310, Plg15.0000°, Azm300.0000°; P -4.5500, Plg58.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **14** 03:39:58.4±4.1, 15°.57S×173°.19W, $h112^{km}\pm37^{km}$, mb4.0/15, mb1 4.2/16, mb1mx4.1/38, mbtmp4.4/16, MS4.1/19, Ms1 4.1/19, ms1mx3.9/32 Error ellipse: s-maj=23.1km s-min=16.4km az=125.0*

ISC 14 03:39:48.6±0.3**, 15°.27S**±0°.05×**173°.15W**±0°.06**,** $\mathbf{h29}^{km}$**, n199,** $\sigma 1^{s}.31$/151**, mb4.7**/70**, MS4.1**/21**, 4C-11D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.90**	**45**	Pn	**Pn**	**03 40 19.0**	**-0.1**
AFI				Sn	**Sn**	**03 40 38.7**	**-3.3**
NIUE	**Niue**	**4.88**	**141**	Pn	**Pn**	**03 40 59.5**	**-0.6**
NIUE				Sn	**Sn**	**03 41 49.7**	**-5.9**
MSVF	**Nonsavu**	**8.79**	**253**	P	Pn	03 42 02.8	+8.9
	0.8nm,0.3s,baz=93,slow=9.4,SNR=22						
MSVF				LR	LR	03 45 00.5	
	comp=Z,3μm,20.8s,baz=142,slow=35						
MSVF	**Nonsavu**	**8.79**	**253**		Pn	03 42 01.8	+7.9
FUNA	**Funafuti**	**10.05**	**311**	Pn	**Pn**	**03 42 11.3**	**+0.2**
FUNA					**Sn**	**03 44 00.0**	**-2.8**
KNTN	**Kanton**	**12.49**	**7**	Pn	**Pn**	**03 42 43.8**	**-0.7**
KNTN					**Sn**	**03 44 58.1**	**-4.7**
RAR	**Rarotonga**	**14.01**	**117**	LR	LR	03 47 07.7	
	comp=Z,140nm,19.1s,baz=286,slow=31						
RAR	**Rarotonga**	**14.01**	**117**	Pn	**Pn**	**03 43 07.2**	**+1.9**
DZM	**Mont Dzumac**	**20.47**	**248**	P	Pn	03 44 27.3	+0.8
	31nm,0.9s,baz=80,slow=16,SNR=13						
DZM				LR	LR	03 52 16.2	
	comp=Z,297nm,18.1s,baz=61,slow=36						
DZM	**Mont Dzumac**	**20.47**	**248**	*e*P	Pn	03 44 27.3	+0.8
	179nm,1.4s						
DZM				*e*LR	LR	03 49 18.3	
	comp=Z,2μm,27.4s						
DZM	**Mont Dzumac**	**20.47**	**248**	P	**P**	**03 44 23.7**	**-0.5**
PAE	**Paea**	**22.73**	**99**	*e*T	T	04 08 14.9	
	4.1nm,0.3s						
PPT	**Papeete**	**22.73**	**99**	LR	LR	03 51 09.7	
	comp=Z,112nm,19.1s,baz=268,slow=30						
PPT2	**Papeete2**	**22.73**	**99**	*e*S	**S**	**03 48 51.0**	**-4.5**
	890nm,30.0s						
PPT2				*e*LR	LR	03 50 18.3	
	comp=Z,596nm,25.8s						
PPT2	**Papeete2**	**22.73**	**99**	*e*T	T	04 08 15.7	
	7.0nm,0.3s						
TIAR	**Tiarei**	**22.94**	**99**	*e*T	T	04 08 31.6	
	3.6nm,0.3s						
TVO	**Taravao**	**23.04**	**100**	*e*T	T	04 08 38.7	
	2.6nm,0.3s						
OUZ	**Omahuta**	**23.16**	**209**	P	**P**	**03 44 51.7**	**-1.0**
MXZ	**Matakaoa Point**	**23.46**	**197**	P	**P**	**03 44 55.7**	**+0.1**
MXZ				IAmb	IAmb	03 45 09.2	
	comp=Z,19nm,0.8s						
TBI	**Tubuai**	**23.73**	**113**	*e*LQ	LQ	03 49 48.2	
	comp=Z,582nm,32.2s						
TBI				*e*LR	LR	03 50 35.2	
	comp=Z,476nm,29.2s						
TBI	**Tubuai**	**23.73**	**113**	*e*T	T	04 09 30.4	
	comp=Z,17nm,0.3s						
URZ	**Urewera**	**24.46**	**199**	P	**P**	**03 45 03.9**	**-1.1**
	comp=Z,23nm,0.6s,baz=38,slow=2.8,SNR=25						
URZ				S	**S**	**03 49 24.1**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=0.0,slow=20,SNR=2.5						
URZ				LR	LR	03 53 56.5	
	comp=Z,366nm,18.1s,baz=31,slow=35						
URZ	**Urewera**	**24.46**	**199**	P	**P**	**03 45 03.6**	**-1.4**
VAH	**Vaihoa**	**24.62**	**93**	*e*T	T	04 10 36.7	
	comp=Z,6.5nm,0.2s						
HIZ	**Hauiti**	**25.46**	**202**	P	**P**	**03 45 15.7**	**+1.6**
BKZ	**Black Stump Fm**	**25.49**	**199**	P	**P**	**03 45 12.5**	**-1.9**
BKZ				IAmb	IAmb	03 45 18.9	
	comp=Z,12nm,0.7s						
HNR	**Honiara**	**26.90**	**279**	LR	LR	03 54 41.4	
	comp=Z,291nm,20.8s,baz=132,slow=33						
BFZ	**Birch Farm**	**26.95**	**198**	P	**P**	**03 45 27.3**	**-0.3**
QRZ	**Quartz Range**	**28.35**	**203**	P	**P**	**03 45 40.3**	**+0.2**
QRZ				IAmb	IAmb	03 45 41.5	
	comp=Z,21nm,0.9s						
THZ	**Tophouse**	**29.02**	**202**	P	**P**	**03 45 44.8**	**-1.3**
THZ				IAmb	IAmb	03 45 52.6	
	comp=Z,15nm,1.0s						
LTZ	**Lake Taylor**	**30.14**	**202**	P	**P**	**03 45 56.5**	**+0.5**
OXZ	**Oxford**	**30.70**	**201**	P	**P**	**03 45 58.8**	**-2.0**
RPZ	**Rata Peaks**	**31.39**	**202**	P	**P**	**03 46 06.1**	**-0.9**
	comp=Z,11nm,0.6s,baz=311,slow=1.4,SNR=9.4						
RPZ	**Rata Peaks**	**31.39**	**202**	P	**P**	**03 46 07.5**	**+0.5**
FOZ	**Fox Glacier**	**31.71**	**204**	P	**P**	**03 46 08.1**	**-1.6**
LBZ	**Lake Benmore**	**32.29**	**203**	P	**P**	**03 46 14.1**	**-0.7**
LBZ				IAmb	IAmb	03 46 18.6	
	comp=Z,6.0nm,0.7s						
TAOE	**Nuku Hiva Isla**	**32.87**	**83**	*e*LR	LR	03 54 53.7	
	comp=Z,819nm,26.3s						
TAOE	**Nuku Hiva Isla**	**32.87**	**83**	*e*T	T	04 20 54.5	
	comp=Z,48nm,0.2s						
DCZ	**Deep Cove**	**34.37**	**205**	P	**P**	**03 46 31.6**	**-1.4**
RKT	**Rikitea**	**36.80**	**108**	*e*LR	LR	03 56 45.6	
	comp=Z,391nm,27.5s						
COEN	**Coen**	**42.23**	**266**	P	**P**	**03 47 38.5**	**-1.0**
COEN				IAmb	IAmb	03 47 40.9	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**44.31**	**240**	P	**P**	**03 47 54.5**	**-1.6**
	comp=Z,6.6nm,0.7s,baz=99,slow=12,SNR=12						
STKA				LR	LR	04 04 23.2	
	comp=Z,122nm,21.4s,baz=39,slow=33						
STKA	**Stephens Creek**	**44.31**	**240**	P	**P**	**03 47 55.1**	**-1.0**
BBOO	**Buckleboo**	**49.09**	**240**	P	**P**	**03 48 32.0**	**-1.6**
WRA	**Warramunga Arr**	**50.11**	**257**	LR	LR	04 07 46.1	
	comp=Z,181nm,21.7s,baz=65,slow=33						
AS31	**Alice Springs**	**50.38**	**252**	P	**P**	**03 48 42.0**	**-1.6**
ASAR	**Alice Springs**	**50.38**	**252**	P	**P**	**03 48 42.2**	**-1.4**
	comp=Z,13nm,0.7s,baz=87,slow=8.5,SNR=98						
ASAR				LR	LR	04 08 19.0	
	comp=Z,605nm,21.9s,baz=93,slow=34						
ASAR	**Alice Springs**	**50.38**	**252**	P	**P**	**03 48 41.7**	**-1.9**
FORT	**Forrest**	**55.69**	**243**	P	**P**	**03 49 20.8**	**-1.8**
PSA00	**Pilbara Seismi**	**63.47**	**253**	P	**P**	**03 50 15.8**	**-0.6**
PSA00				IAmb	IAmb	03 50 30.0	
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**63.53**	**186**	P	**P**	**03 50 17.5**	**+1.7**
	comp=Z,4.4nm,0.8s,baz=7.9,slow=7.6,SNR=16						
VNDA				LR	LR	04 13 12.2	
	comp=Z,36nm,21.8s,baz=10,slow=32						
VNDA	**Vanda**	**63.53**	**186**	P	**P**	**03 50 17.1**	**+1.3**
VNDA				IAmb	IAmb	03 50 18.6	
	comp=Z,6.2nm,0.9s						
MJAR	**Matsushiro Arr**	**69.00**	**320**	P	**P**	**03 50 52.9**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=144,slow=5.5,SNR=7.3						
MJAR	**Matsushiro Arr**	**69.00**	**320**	P	**P**	**03 50 51.6**	**+0.1**
MJB9	**Matsu-Tunnel**	**69.00**	**320**	P	**P**	**03 50 51.7**	**+0.2**
PAGB	**Antelope Grade**	**71.24**	**43**	P	**P**	**03 51 06.5**	**+1.2**
PAGB				IAmb	IAmb	03 51 15.0	
	comp=Z,5.0nm,1.1s						
KMRM	**Mail Ridge**	**71.81**	**38**	P	**P**	**03 51 09.8**	**+1.2**
KMRM				IAmb	IAmb	03 51 11.5	
	comp=Z,9.8nm,0.9s						
PETK	**Petropavlovsk-**	**72.58**	**342**	P	**P**	**03 51 14.5**	**+1.6**
	comp=Z,7.2nm,1.0s,baz=111,slow=8.3,SNR=3.6						
PETK	**Petropavlovsk-**	**72.58**	**342**	P	**P**	**03 51 13.7**	**+0.8**
YBH	**Yreka Blue Hor**	**73.35**	**37**	P	**P**	**03 51 18.9**	**+1.0**
YBH				IAmb	IAmb	03 51 28.2	
	comp=Z,5.6nm,1.1s						
PNTR	**Pine Nut**	**73.62**	**41**	IAmb	IAmb	03 51 22.8	
	comp=Z,7.1nm,0.9s						
HUMO	**Hull Mountain**	**73.76**	**36**	IAmb	IAmb	03 51 23.0	
	comp=Z,5.6nm,1.0s						
NVAR	**Mina Array Bea**	**74.07**	**42**	P	**P**	**03 51 24.0**	**+1.7**
	comp=Z,1.8nm,0.6s,baz=228,slow=9.8,SNR=18						
NVAR				LR	LR	04 16 50.1	
	comp=Z,298nm,20.1s,baz=215,slow=30						
NVAR	**Mina Array Bea**	**74.07**	**42**		**P**	**03 51 23.1**	**+0.9**
QSPA	**South Pole Qui**	**74.78**	**180**	P	**P**	**03 51 26.9**	**+1.0**
MOD	**Modoc Plateau**	**74.87**	**38**	IAmb	IAmb	03 51 29.0	
	comp=Z,7.2nm,0.9s						
K05A	**Summer Lake**	**75.02**	**37**	P	**P**	**03 51 28.6**	**+0.9**
K05A				IAmb	IAmb	03 51 30.2	

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            comp=Z,11nm,0.9s
H04A   Detroit Lake       75.51  35 IAmb     IAmb     03 51 33.0
            comp=Z,6.9nm,0.8s
PRN    Pahroc Range       75.65  44 IAmb     IAmb     03 51 41.2
            comp=Z,6.3nm,1.1s
TUC    Tucson             76.12  51 P        P        03 51 35.0 +0.9
TUC                                 IAmb     IAmb     03 51 36.5
            comp=Z,6.7nm,1.0s
WVOR   Wild Horse Val     76.18  38 IAmb     IAmb     03 51 36.4
            comp=Z,8.7nm,1.1s
KSRS   Korea Array        76.23 315 P        P        03 51 36.4 +2.0
            comp=Z,1.7nm,0.8s,baz=128,slow=6.0,SNR=7.1
X16A   Lo Mia Camp, P     76.65  48 IAmb     IAmb     03 51 39.6
            comp=Z,6.8nm,0.9s
I07A   Izee               76.65  37 IAmb     IAmb     03 51 39.1
            comp=Z,5.7nm,0.9s
319A   Douglas            76.82  52 IAmb     IAmb     03 51 41.5
            comp=Z,7.5nm,0.8s
U15A   North Rim          77.04  46 IAmb     IAmb     03 51 42.0
            comp=Z,6.8nm,1.0s
USRK   Ussuriysk Ar.      77.42 323 P        P        03 51 43.0 +1.9
            comp=Z,1.7nm,0.9s,baz=111,slow=11,SNR=2.6
G08A   Pilot Rock         77.69  36 IAmb     IAmb     03 51 44.8
            comp=Z,10nm,1.1s
E07A   Sunnyside          77.96  34 IAmb     IAmb     03 51 46.2
            comp=Z,6.0nm,0.9s
BMO    Blue Mountains     78.38  37 IAmb     IAmb     03 51 48.2
            comp=Z,6.7nm,1.1s
MFID   Camas Ranch        78.43  39 IAmb     IAmb     03 51 48.7
            comp=Z,8.3nm,1.1s
121A   Cookes Peak, D     78.47  52 IAmb     IAmb     03 51 50.0
            comp=Z,7.8nm,0.9s
F10A   Beach Ranch, E     79.07  36 IAmb     IAmb     03 51 51.8
            comp=Z,8.7nm,0.9s
B08A   Colville Reser     79.34  33 IAmb     IAmb     03 51 52.8
            comp=Z,6.5nm,1.0s
HLID   Hailey             79.37  39 IAmb     IAmb     03 51 54.5
            comp=Z,7.5nm,0.8s
C09A   Chrisman Ranch     79.57  34 IAmb     IAmb     03 51 54.5
            comp=Z,4.7nm,0.8s
SRU    San Rafael Swe     79.58  45 P        P        03 51 54.2 +0.9
P17A   Butcher Ranch,     79.61  44 P        P        03 51 55.0 +1.5
MNTX   Cornudas Mount     79.95  53 P        P        03 51 56.2 +0.9
PV05   Paradox Valley     80.06  46 IAmb     IAmb     03 51 58.8
            comp=Z,11nm,1.0s
PV14   Lion Creek, Pa     80.25  46 IAmb     IAmb     03 51 59.1
            comp=Z,8.8nm,0.9s
PV17   East Wray Mesa     80.25  46 IAmb     IAmb     03 51 59.1
            comp=Z,7.6nm,1.0s
PV20   West Nyswonger     80.28  46 IAmb     IAmb     03 51 59.2
            comp=Z,10nm,1.1s
NJ2    Nanjing            80.28 307 eP       P        03 51 57.8 +0.8
NJ2                                 pmax     pmax
            comp=Z,7.0nm,0.5s
PV03   Paradox Valley     80.32  46 IAmb     IAmb     03 51 59.4
            comp=Z,7.7nm,1.1s
TXAR   Lajitas Array      80.34  56 P        P        03 51 59.4 +1.8
            comp=Z,1.5nm,0.8s,baz=215,slow=11,SNR=6.4
TXAR                                LR       LR       04 19 21.0
            comp=Z,144nm,21.8s,baz=0.0,slow=29
TXAR   Lajitas Array      80.34  56          P        03 51 58.5 +1.0
PV04   Paradox Valley     80.35  46 IAmb     IAmb     03 51 59.7
            comp=Z,6.9nm,0.8s
PV01   Paradox Valley     80.46  46 IAmb     IAmb     03 52 00.2
            comp=Z,7.3nm,0.9s
ANMO   Albuquerque        80.53  50 P        P        03 51 59.4 +0.8
KLR    Kul'dur            80.54 327 P        P        03 51 58.0 -0.1
            comp=Z,0.9nm,0.8s,baz=45,slow=5.1,SNR=3.6
CN2    Changchun          81.14 320 eP       P        03 52 02.0 +0.7
CN2                                 pmax     pmax
            comp=Z,10.0nm,1.0s
MSO    Missoula           81.43  37 P        P        03 52 04.0 +1.1
DLMT   Dillon             81.44  38 IAmb     IAmb     03 52 05.2
            comp=Z,6.2nm,1.0s
REDW   Red Top Meadow     81.48  41 IAmb     IAmb     03 52 14.6
            comp=Z,8.1nm,1.1s
S22A   4UR Ranch, Cre     81.50  47 P        P        03 52 04.6 +0.7
S22A                                IAmb     IAmb     03 52 06.4
            comp=Z,6.9nm,0.9s
LOHW   Long Hollow        81.76  41 IAmb     IAmb     03 52 23.9
            comp=Z,6.0nm,1.1s
QLMT   Earthquake Lak     81.86  39 P        P        03 52 06.5 +1.0
HDA    Harding Lake       81.93  11 P        P        03 52 06.5 +1.5
HDA                                 IAmb     IAmb     03 52 24.9
            comp=Z,8.9nm,1.1s
FLWY   Flagg Ranch        81.94  40 P        P        03 52 06.8 +0.9
FLWY                                IAmb     IAmb     03 52 08.3
            comp=Z,11nm,1.1s
YPP    Pitchstone Pla     81.97  40 P        P        03 52 06.9 +0.8
YHB    Horse Butte        81.97  39 P        P        03 52 07.0 +1.0
CCB    Clear Creek Bu     81.99  11 P        P        03 52 06.4 +1.0
CCB                                 IAmb     IAmb     03 52 24.5
            comp=Z,7.0nm,1.0s
PDAR   Pinedale Array     82.01  42 P        P        03 52 07.3 +1.0
            comp=Z,1.1nm,0.7s,baz=238,slow=2.8,SNR=8.0
PDAR                                LR       LR       04 22 41.6
            comp=Z,186nm,20.0s,baz=238,slow=31
PDAR   Pinedale Array     82.01  42 P        P        03 52 07.2 +0.9
YHL    Hebgen Lake        82.03  39 P        P        03 52 07.2 +0.8
SMCO   Snowmass           82.05  46 P        P        03 52 07.4 +0.7
SMCO                                IAmb     IAmb     03 52 09.0
            comp=Z,5.5nm,0.9s
YMR    Madison River      82.07  40 P        P        03 52 07.4 +0.8
BOZ    Bozeman (W)        82.14  39 P        P        03 52 07.8 +1.1
BOZ                                          P        03 52 08.3 +1.5
YHH    Holmes Hill        82.20  40 P        P        03 52 08.2 +0.9
ILAR   Eielson Array      82.27  11 P        P        03 52 07.5 +0.6
            comp=Z,1.3nm,0.6s,baz=229,slow=6.1,SNR=31
ILAR                                LR       LR       04 20 46.8
            comp=Z,162nm,21.2s,baz=203,slow=30
ILAR   Eielson Array      82.27  11          P        03 52 08.2 +1.3
POKR   Poker Plat Res     82.48  11 IAmb     IAmb     03 52 23.0
            comp=Z,8.3nm,0.9s
YMP    Mirror Lake Pl     82.60  40 P        P        03 52 10.3 +0.9
YNE    Yellowstone No     82.83  40 P        P        03 52 11.6 +1.1
RWWY   Rawlins            83.03  44 IAmb     IAmb     03 52 13.4
            comp=Z,8.3nm,1.1s
PRP    Porcupine Dome     83.20  11 IAmb     IAmb     03 52 32.7
            comp=Z,8.3nm,1.0s
Q24A   Divide             83.22  47 P        P        03 52 13.5 +0.7
BELA   Belgrano 2         84.09 172 P        P        03 52 17.7 +1.5
EGMT   Eagleton           84.48  37 IAmb     IAmb     03 52 34.4
            comp=Z,4.5nm,1.0s
BMAR   Burnt Mountain     85.08  11 P        P        03 52 22.7 +1.4
HKT    Hockley            86.91  58 P        P        03 52 32.2 +1.2
MAW    Mawson             87.99 199 LR       LR       04 28 05.2
            comp=Z,142nm,21.8s,baz=64,slow=33
HHC    Hu-ho-hao-te       89.11 313 eP       P        03 52 41.6 +0.1
HHC                                 pmax     pmax
            comp=Z,7.0nm,1.1s
HHC                                 pmax     pmax
            comp=Z,180nm,5.6s
YKA    Yellowknife Ar     89.88  23 P        P        03 52 45.4 +1.0
            comp=Z,0.3nm,0.5s,baz=232,slow=4.2,SNR=8.6
YKA                                 LR       LR       04 26 11.4
            comp=Z,179nm,20.9s,baz=0.0,slow=31
CD2    Chengdu            91.95 301 P        P        03 52 43.3  -12
CD2                                 pmax     pmax
            comp=Z,20nm,0.5s
VNA3   Neumayer Olymp     92.97 175 P        P        03 52 59.1 +0.3
VNA2   Neumayer--Watz     93.46 175 P        P        03 53 01.6 +0.6
VNA2   Neumayer--Watz     93.46 175 S        S        04 03 54.5  -13
ULM    Lac du Bonnet      93.68  39 LR       LR       04 27 07.4
            comp=Z,259nm,21.8s,baz=266,slow=30
SONM   Songino Array      94.91 318 LR       LR       04 29 03.0
            comp=Z,59nm,21.6s,baz=123,slow=31
GTA    Gaotai             97.29 309 eP       P        03 53 18.8 -0.4
GTA                                 pP       pP       03 53 24.1 -3.8
GTA                                 sP       pwP      03 53 27.0 -3.7
GTA                                 pmax     pmax
            comp=Z,2.0nm,0.9s
PB16   IPOC Station P     97.72 111 P        P        03 53 22.2 -0.1
ROSC   El Rosal           99.76  88 LR       LR       04 28 14.6
            comp=Z,83nm,21.9s,baz=244,slow=29
MKAR   Makanchi Array    110.91 315 PKiKP    PKiKP    03 58 18.1 -1.0
            comp=Z,0.4nm,0.7s,baz=24,slow=1.7,SNR=4.4
KOLS   Kolonicke sedl    144.12 343 ePKP     PKPdf    03 59 22.9 +1.3
DPC    Dobruska-Polom    144.18 350 ePKP     PKPdf    03 59 21.1 -0.6
DPC                                 epPKP    pPKPdf   03 59 28.8 -1.5
BURAR  Bucovina Array    144.34 339          PKPdf    03 59 22.4 +0.3
CRVS   Cervenica-Dubn    144.38 343 ePKP     PKiKP    03 59 25.9 +0.2
MORC   Moravsky Berou    144.50 348 ePKP     PKPab    03 59 20.1 -0.5
PRU    Pruhonice         144.81 351 ePKP     PKPdf    03 59 23.5 +0.8
PRU                                 epPKP    pPKPdf   03 59 30.4 -1.0
TLCR                     144.89 333 ⇓P       PKPdf    03 59 23.9 +0.9
VRAC   Vranov            145.13 349 ePKP     PKPdf    03 59 24.5 +1.2
VRI    Vrincioaia        145.23 335 ⇓P       PKPdf    03 59 24.5 +0.9
TPGR   Topolog           145.32 333 ⇓P       PKPdf    03 59 25.0 +1.2
JAVC   Velka Javorina    145.34 347 ePKP     PKiKP    03 59 26.1 -1.6
GAZ    Gaziantep         145.35 315          PKPdf    03 59 24.1  0.0
KRUC   Moravsky          145.40 349 ePKP     PKPab    03 59 24.8 +0.9
VYHS   Vyhne             145.43 346 ePKP     PKPab    03 59 25.3 +1.3
GRF    Grafenberg Arr    145.48 355 ePKPbc   PKPab    03 59 25.3 +1.1
            baz=7.7,slow=2.8
TIRR   Tirgusor          145.63 332 ⇓P       PKPab    03 59 25.9 +1.1
HARR   Harsova           145.67 333 ⇓P       PKPab    03 59 26.2 +1.3
DOPR   Dopca             145.67 337 ⇑P       PKPab    03 59 25.9 +0.9
SMOL   Smolenice         145.72 347 ePKP     PKiKP    03 59 26.8 -1.6
TLBR   Topalu            145.73 333 ⇑P       PKPab    03 59 26.0 +0.8
KHC    Kasperske Hory    145.78 352 ePKP     PKPab    03 59 25.7 +0.4
KHC                                 epPKP    pPKPdf   03 59 32.8 -0.4
KHC    Kasperske Hory    145.78 352          PKPbc    03 59 25.1 +0.2
KMBO   Kilima Mbogo      145.81 244 PKPbc    PKPab    03 59 26.6 -0.1
            comp=Z,3.4nm,0.8s,baz=54,slow=5.4,SNR=7.2
MLR    Muntele Rosu      145.85 336 ⇓P       PKPab    03 59 27.0 +1.2
MLR    Muntele Rosu      145.85 336          PKPbc    03 59 25.2 -0.1
MODS   Modra-Piesok      145.89 348 ePKP     PKPab    03 59 26.4 +0.7
DRGR                     145.90 340 ⇓P       PKPab    03 59 26.4 +0.5
ISR    Istrita           145.91 335 ⇓P       PKPab    03 59 27.1 +1.2
GERES  GERESS Array B    146.05 352 PKPbc    PKPab    03 59 26.8 +0.4
            comp=Z,0.9nm,0.7s,baz=46,slow=3.9,SNR=7.0
GERES  GERESS Array B    146.05 352          PKPbc    03 59 25.6 -0.2
BR131  Keskin Array S    146.21 321          PKPdf    03 59 25.9 +0.3
BRTR   Keskin Array B    146.21 321 PKPbc    PKPab    03 59 27.6 +0.2
            comp=Z,24nm,1.1s,baz=101,slow=1.6,SNR=58
BRTR   Keskin Array B    146.21 321          PKPdf    03 59 25.8 +0.1
VOIR                     146.24 337 ⇓P       PKPab    03 59 28.3 +1.1
ARR    Arges             146.46 337 ⇑P       PKiKP    03 59 29.4 -0.7
CONA   Conrad Observa    146.59 349 eP       PKPab    03 59 28.3 -0.2
            comp=Z,7.9nm,1.1s
MOA    Molln             146.94 351 eP       PKPab    03 59 29.5 -0.2
            comp=Z,7.9nm,1.2s
GZR    Gura Zlata        147.10 339 ⇑P       PKiKP    03 59 31.0 -0.4
ARSA   Arzberg           147.31 349 eP       PKPbc    03 59 29.4  0.0
            comp=Z,3.2nm,1.0s
HERR   Herculane         147.68 339 ⇓P       PKiKP    03 59 32.1 -0.4
RETA   Reutte            147.71 355 eP       PKPbc    03 59 30.6  0.0
            comp=Z,12nm,1.2s
WATA   Walderalm         147.79 354 eP       PKPbc    03 59 31.1 +0.2
            comp=Z,3.8nm,1.0s
MOTA   Moosalm           147.82 355 eP       PKiKP    03 59 32.1 -0.9
            comp=Z,11nm,1.8s
KBA    Koelnbreinsper    147.83 352 eP       PKPbc    03 59 30.6 -0.4
            comp=Z,5.5nm,1.4s
SQTA   Sankt Quirin      147.94 354 eP       PKiKP    03 59 32.7 -0.5
            comp=Z,9.3nm,1.2s
SOKA   Soboth            147.95 349 eP       PKiKP    03 59 32.6 -0.6
            comp=Z,6.0nm,0.9s
DAVA   Damuels           147.98 356 eP       PKiKP    03 59 32.6 -0.7
            comp=Z,7.3nm,1.3s
MDVR   Moldovita         148.00 340 ⇓P       PKPab    03 59 35.8 +1.7
FETA   Feichten          148.18 355 eP       PKiKP    03 59 33.9 +0.2
            comp=Z,8.3nm,1.1s
OBKA   Obir              148.19 350 eP       PKPdf    03 59 29.5 +0.8
            comp=Z,5.9nm,1.2s
MYKA   Terra Mystica     148.22 351 eP       PKPbc    03 59 32.7 +0.7
            comp=Z,7.2nm,1.0s
ABTA   Abfaltersbach     148.26 353 eP       PKPbc    03 59 32.8 +0.7
            comp=Z,6.6nm,0.9s
TORD   Torodi Ar. Bea    174.57 112 PKP      PKPdf    03 59 54.2 -2.3
            comp=Z,1.0nm,1.0s,baz=278,slow=4.2,SNR=3.6
TORD   Torodi Ar. Bea    174.57 112          PKPdf    03 59 56.3 -0.3
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*NEIC **14** 03:45:52.9±1.4, 36°.71N±0°.04×98°.25W±0°.05, h11^{km}±7^{km},*
Error ellipse: s-maj=6.3km s-min=5.2km az=125.0
*TUL **14** 03:45:52±1.5, 36°.73N±0°.04×98°.31W±0°.05, h5^{km}±7^{km},*
ML3.3, mb_Lg3.0/66(NEIC), Error ellipse: s-maj=6.2km
s-min=5.2km az=139.0
*ANF **14** 03:45:53.1±1.1, 36°.73N×98°.29W, h6^{km}±8^{km}, ML3.8/10,*
Error ellipse: s-maj=3.7km s-min=2.9km az=119.0
ISC 14 03:45:52.4±1.3**, 36°.71N**±0°.02×**98°.29W**±0°.03**, h1**^{km}±12^{km}**,**
n77, σ0^{s}92/63**, Oklahoma**

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Code   Station Name         Δ°  AZ°   Phase ID           Time    Res
                                    Op       ISC      h  m  s    ISC
CROK   Carrier             0.32 129          Pg       03 45 59.1 +0.6
CROK                                Sg       Sg       03 46 04.0 +1.3
KAN14  Manchester OK       0.36  47          Pg       03 45 59.5  0.0
GC02   Grant County #      0.38  67          Pg       03 45 59.8 +0.2
GC02                                         Sg       03 46 05.2 +0.7
KAN10  Anthony SW Sta      0.45  21          Pg       03 46 00.9 -0.1
KAN10                               Sg       Sg       03 46 07.0 +0.2
KAN08  Anthony NE Sta      0.58  26 Pg       Pg       03 46 03.3 -0.2
KAN08                               Sg       Sg       03 46 11.2 +0.1
KAN12  Harper NE Stat      0.64  22 Pg       Pg       03 46 04.2 -0.4
KAN12                               Sg       Sg       03 46 13.1 +0.2
U32A   Winter Ranch,       0.66 240 Pg       Pg       03 46 04.5 -0.4
U32A   Winter Ranch,       0.66 240 P                 03 46 04.6
            baz=58
KAN13  South Haven SW      0.72  65          Pg       03 46 05.9 -0.3
BCOK   Bluff Creek, N      1.19 152 Pg       Pg       03 46 14.1 -1.0
BCOK                                IAmb_Lg           03 46 30.7
            comp=Z,162nm,1.1s
OK025  Westminster Rd      1.36 145 Pn       Pn       03 46 17.4 -1.2
QUOK   Quay                1.39 112          Pn       03 46 17.9 -1.0
OK031  S. Brethren Rd      1.40 122          Pn       03 46 18.1 -0.9
T35A   Sooner Cattle       1.45  81          Pn       03 46 18.6 -1.2
T35B   Sooner Cattle       1.45  81 P                 03 46 18.9
            baz=263
T35B                                S                 03 46 38.6
            baz=263
OK030  Cody Creek RV       1.45 122          Pn       03 46 18.8 -1.0
OKCFA  Oklahoma City       1.46 152 Pn       Pn       03 46 18.9 -1.0
OKCSW  OKLAHOMA CITY       1.47 152 Pn       Pn       03 46 19.2 -0.9
FNO    Franklin            1.62 153 Pn       Pn       03 46 21.4 -0.7
R32A   Long Quarter,       1.75 349 Pn       Pn       03 46 23.6 -0.3
R32A   Long Quarter,       1.75 349 P                 03 46 23.6
            baz=169,SNR=63
R32A                                S                 03 46 46.8
            baz=169
W35A   Tecumseh            1.93 143 Pn       Pn       03 46 26.1 -0.4
WMOK   Wichita Mounta      2.00 192 P        Pn       03 46 27.2 -0.3
            baz=11
WMOK                                S        Sb       03 46 54.6 -0.6
            baz=11
WMOK   Wichita Mounta      2.00 192 Pn       Pn       03 46 27.2 -0.3
WMOK   Wichita Mounta      2.00 192 P                 03 46 27.0
            baz=11,SNR=70
WMOK                                S                 03 46 54.2
            baz=11
TUL1   Leonard             2.17 111 P        Pn       03 46 30.3 +0.6
            baz=293
TUL1                                S        Sn       03 46 57.9 +0.5
            baz=293
TUL1   Leonard             2.17 111 Pn       Pn       03 46 29.5 -0.3
TUL1                                IAmb_Lg           03 47 02.0
            comp=Z,70nm,0.9s
TUL1   Leonard             2.17 111 P                 03 46 29.2
            baz=293,SNR=27
TUL1                                S                 03 46 57.7
            baz=293
CBKS   Cedar Bluff         2.40 332 P        Pn       03 46 33.3 +0.4
            baz=151
CBKS   Cedar Bluff         2.40 332 Pn       Pn       03 46 32.4 -0.4
CBKS   Cedar Bluff         2.40 332 P                 03 46 31.8
            baz=151
CBKS                                S                 03 47 05.4
            baz=151
KSU1   Kansas State U      2.74  29 Sb       Sb       03 47 17.5 +1.2
            baz=210
X37A   Clayton             3.18 131 Pn       Pn       03 46 43.4 -0.2
X37A                                IAmb_Lg           03 47 40.2
            comp=Z,43nm,0.8s
X37A   Clayton             3.18 131 P                 03 46 43.4
            baz=313
X37A                                S                 03 47 22.9
            baz=313
AMTX   Amarillo            3.30 238 P        Pn       03 46 46.2 +0.9
            baz=55
AMTX   Amarillo            3.30 238 Pn       Pn       03 46 46.0 +0.6
Z35A   Perchaven, San      3.47 165 Pn       Pn       03 46 47.7  0.0
Z35A   Perchaven, San      3.47 165 P                 03 46 47.5
            baz=346
HHAR   Hobbs               3.53  96 Pn       Pn       03 46 48.5  0.0
W39A   Magazine            3.96 111 P        Pn       03 46 54.2 -0.1
            baz=294
W39A                                S        Sn       03 47 42.1 +0.7
            baz=294
W39A   Magazine            3.96 111 Pn       Pn       03 46 53.9 -0.4
W39A                                IAmb_Lg           03 47 59.0
            comp=Z,43nm,0.7s
W39A   Magazine            3.96 111 P                 03 46 53.9
            baz=294
N33B   J Bar K, Exete      4.08   9 P                 03 46 54.8
            baz=190
N33A   J Bar K, Exete      4.08   9 Pn       Pn       03 46 54.6 -1.4
N33A                                IAmb_Lg           03 48 08.7
            comp=Z,32nm,0.7s
S39A   Bolivar             4.09  75 Pn       Pn       03 46 55.2 -0.9
S39A                                IAmb_Lg           03 48 03.7
            comp=Z,25nm,0.7s
S39A   Bolivar             4.09  75 P                 03 46 55.2
            baz=258
KSCO   Kaye Shedlock'      4.13 305 IAmb_Lg           03 48 05.0
            comp=Z,29nm,0.7s
ABTX   Abilene, Hawle      4.22 196 Pn       Pn       03 46 57.0 -1.0
ABTX                                IAmb_Lg           03 48 09.7
            comp=Z,24nm,0.7s
Z38A   Mt. Pleasant        4.38 141 Pn       Pn       03 46 56.8 -3.3
U40A   Yellville           4.39  93 Pn       Pn       03 46 59.8 -0.6
U40A                                IAmb_Lg           03 48 09.0
            comp=Z,24nm,0.7s
MIAR   Mount Ida           4.41 118 P        Pn       03 47 00.7 +0.2
            baz=301
MIAR   Mount Ida           4.41 118 Pn       Pn       03 47 00.7 +0.2
MSTX   Muleshoe            4.57 235 Pn       Pn       03 47 02.4 -0.4
MSTX                                IAmb_Lg           03 48 22.7
            comp=Z,23nm,1.2s
N35A   Tabor               4.64  26 Pn       Pn       03 47 02.1 -1.5
BGNE   Belgrade            4.70   1 P        Pn       03 47 03.7 -0.8
            baz=182
BGNE   Belgrade            4.70   1 Pn       Pn       03 47 03.5 -1.0
BGNE   Belgrade            4.70   1 P                 03 47 03.7
            baz=182,SNR=9.2
P38A   Dawn                4.75  51 Pn       Pn       03 47 05.3 +0.1
WHTX   Lake Whitney,       4.75 171 P        Pn       03 47 05.1 -0.2
            baz=352
WHTX   Lake Whitney,       4.75 171 Pn       Pn       03 47 05.0 -0.2
T25A   Trinidad            4.92 277 Pn       Pn       03 47 09.6 +1.9
X40A   Basin Creek Fa      4.97 115 P        Pn       03 47 08.8 +0.6
            baz=298
X40A   Basin Creek Fa      4.97 115 Pn       Pn       03 47 08.4 +0.2
X40A                                IAmb_Lg           03 48 33.1
            comp=Z,27nm,0.8s
WHAR   Wooly Hollow        5.07 104 IAmb_Lg           03 48 42.2
            comp=Z,32nm,0.7s
237A   Washetta, Mont      5.12 156 Pn       Pn       03 47 09.4 -0.9
237A   Washetta, Mont      5.12 156 P                 03 47 09.3
            baz=337
W41B   Gary Mavity, V      5.14 106 IAmb_Lg           03 48 46.6
            comp=Z,26nm,0.9s
OGNE   Ogallala            5.14 327 Pn       Pn       03 47 08.9 -1.8
OGNE                                IAmb_Lg           03 48 44.9
            comp=Z,21nm,0.8s
WLAR   White Oak Lake      5.20 124 IAmb_Lg           03 48 45.8
            comp=Z,19nm,0.7s
UALR   University of       5.21 110 IAmb_Lg           03 48 52.3
            comp=Z,27nm,0.8s
Z41A   Richland Creek      5.67 126 IAmb_Lg           03 49 01.5
            comp=Z,18nm,0.7s
N38A   Joes South For      5.68  43 Pn       Pn       03 47 16.9 -1.1
T42A   Van Buren           5.78  85 Pn       Pn       03 47 18.9 -0.5
LCAR   Lake Charles        5.79  94 IAmb_Lg           03 49 00.1
            comp=Z,19nm,0.8s
SDCO   Great Sand Dun      5.84 282 Pn       Pn       03 47 18.6 -1.9
Q24A   Divide              5.88 295 IAmb_Lg           03 49 00.0
            comp=Z,22nm,1.0s
K31A   O'Neill             5.92 357 IAmb_Lg           03 49 15.8
            comp=Z,27nm,0.9s
435B   Jarrell             5.94 174 IAmb_Lg           03 49 13.3
            comp=Z,17nm,0.9s
PBMO   Poplar Bluff        6.32  87 IAmb_Lg           03 49 22.1
            comp=Z,16nm,0.8s
FVM    French Village      6.40  76 IAmb_Lg           03 49 13.2
            comp=Z,24nm,0.7s
SCIA   State Center        6.52  36 IAmb_Lg           03 49 21.3
            comp=Z,27nm,0.7s
N41A   Harden Midland      7.05  53 IAmb_Lg           03 49 38.6
            comp=Z,21nm,0.9s
S44A   Carbondale          7.28  80 IAmb_Lg           03 49 47.0
            comp=Z,19nm,0.7s
N23A   Red Feather La      7.29 307 IAmb_Lg           03 49 49.5
            comp=Z,21nm,1.0s
K38A   Parkersburg         7.30  34 IAmb_Lg           03 49 49.1
            comp=Z,21nm,0.8s
SIUC   Southern Illin      7.31  79 IAmb_Lg           03 49 43.4
            comp=Z,20nm,0.7s
P43A   Skaggs, Pawnee      7.50  64 IAmb_Lg           03 49 56.7
            comp=Z,13nm,0.7s
L40A   Anamosa             7.65  44 IAmb_Lg           03 49 59.4
            comp=Z,23nm,0.7s
Q44A   Meyer Farm, Va      7.66  71 IAmb_Lg           03 50 06.5
            comp=Z,15nm,0.9s
SUSD   Miller              7.75 356 IAmb_Lg           03 50 06.1
            comp=Z,14nm,0.8s
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*UCR **14** 04:10:02.6±7.2, 8°.89N×84°.08W, h4^{km}, MW4.1*
*UPA **14** 04:10:03.5±1.0, 8°.94N×84°.04W, h7^{km}±4^{km}, MW4.4*
ISC 14 04:10:02.6±1.4**, 8°.89N**±0°.05×**84°.07W**±0°.04**, h9**^{km}±10^{km}**,**
n50, σ0^{s}73/70**, 3D, Off coast of Costa Rica**

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Code   Station Name         Δ°  AZ°   Phase ID           Time    Res
                                    Op       ISC      h  m  s    ISC
EDDO   Dominical           0.42  30⇓iP       Pg       04 10 11.1 +0.3
RIOS   Rincon, Osa         0.58 108 eP       Pb       04 10 14.6 -0.3
RIOS                                eS       Sb       04 10 24.0 +0.6
EDPN   Palmar Norte        0.61  83⇓eP       Pg       04 10 14.8 +0.3
EDPN                                eS       Sb       04 10 23.9 -0.3
EDLM   Las Mercedes        0.62  51 eP       Pg       04 10 14.6  0.0
PEZE   Perez Zeledon,      0.63  38 eP       Pg       04 10 14.6 -0.2
EDBA   Buenos Aires        0.83  71 eP       Pg       04 10 18.5 -0.2
EDBA                                eS       Sb       04 10 30.9 +0.3
PTJ1   Puerto Jimnez       0.84 114 eP       Pb       04 10 19.9 +0.6
PTJ1                                eS       Sn       04 10 32.1 -0.9
PTJ1   Puerto Jimnez       0.84 114 eP       Pb       04 10 19.9 +0.6
LCR2   La Lucha 2          0.85   5 eP       Pg       04 10 18.8 -0.3
PIRO   Carate, Puerto      0.87 123 eP       Pb       04 10 20.0 +0.1
PIRO                                eS       Sn       04 10 33.4 -0.5
PIRO   Carate, Puerto      0.87 123 eP       Pb       04 10 19.9 +0.1
RIMA   Rio Macho           0.90  13 eP       Pg       04 10 19.2 -0.7
DRK0   Durika              0.90  65 eP       Pg       04 10 20.0 +0.1
DRK0                                eS       Sb       04 10 32.7  0.0
DRK0   Durika              0.90  65 eP       Pg       04 10 19.4 -0.6
POTG   Potrero Grande      0.96  80 eP       Pb       04 10 21.3 -0.1
JACO   JACO, Garabito      0.96 323 eP       Pg       04 10 20.8 -0.3
SJS    Escuela Geolog      1.05   1 eP       Pg       04 10 22.3 -0.4
EDSV   San Vito            1.09  93 eP       Pg       04 10 23.4 -0.1
HDC    Heredia             1.11 358⇓iP       Pg       04 10 23.6 -0.4
HDC                                 eS       Sg       04 10 39.0 +0.6
HDC    Heredia             1.11 358 eP       Pg       04 10 23.5 -0.4
CVTR   Volcan Turrial      1.17  15 eP       Pg       04 10 24.5 -0.6
LAFE   Finca La Fe, P      1.23 318 eP       Pb       04 10 24.8 -1.2
SRA1   San Ramn            1.26 341 eP       Pg       04 10 25.5 -1.3
LESP3  La Esperanza,       1.36 111 eP       Pn       04 10 27.6 -0.1
LESP3                               eS       Sb       04 10 44.2 -1.4
BRU2   Volcan              1.37  94 eP       Pn       04 10 27.7 -0.3
BRU2                                eS       Sn       04 10 46.4  0.0
BRU2   Volcan              1.37  94 eP       Pn       04 10 27.6 -0.4
BC3P   Paso Ancho          1.45  93 eP       Pn       04 10 29.1 -0.1
BC3P                                eS       Sg       04 10 48.8 -0.5
BCO2   Palmira             1.54  96 eP       Pn       04 10 30.2 -0.1
BCO2                                eS       Sb       04 10 51.1 +0.2
PTAR3  Potrerillos Ar      1.57  97 eP       Pn       04 10 30.8  0.0
PTAR3                               eS       Sb       04 10 51.9 -0.1
BAGA3  Bagala, Chiriq      1.58 105 eP       Pn       04 10 31.5 +0.6
BAGA3                               eS       Sn       04 10 51.6 +0.1
RGM0   Gandoca             1.61  64 eP       Pb       04 10 32.8 +0.3
RGM0                                eS       Sb       04 10 52.7 -0.2
JTS    Las Juntas de       1.64 328 eP       Pn       04 10 30.9 -0.8
JTS                                 eS       Sn       04 10 53.8 +0.8
CASO   Castillo            1.67 337 i P      Pb       04 10 33.4 -0.1
CASO                                i S      Sg       04 10 56.5 +0.2
FORC   Fortuna             1.68 340 i P      Pn       04 10 32.3 +0.2
FORC                                i S      Sg       04 10 56.8 +0.2
LOCO3  Loma Colorada,      1.70 106 eP       Pn       04 10 33.1 +0.6
LOCO3                               eS       Sn       04 10 54.5 +0.1
CEDE   Laguna Cedeo        1.71 339 i P      Pn       04 10 33.4 +0.8
PEDE3  Pedregal, Chir      1.71 107 eP       Pg       04 10 44.7 +9.3
PEDE3                               eS       Sg       04 11 06.2 +8.7
TRT1   Tortuguero          1.74  12 eP       Pn       04 10 34.0 +1.0
GUAL3  Gualaca, Chiri      1.79 101 eP       Pn       04 10 34.2 +0.5
GUAL3                               eS       Sn       04 10 57.2 +0.7
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DUNO	Dulce Nombre,	1.83	310	*e*P	Pn	04 10 35.4	+1.1
GRZA	Playa Garza	1.85	304	*e*P	Pn	04 10 35.6	+1.1
COVE	Coope Vega, Sa	1.85	350	*e*P	Pn	04 10 34.9	+0.4
CHGR2	Aguacate	1.91	88	*e*P	Pn	04 10 35.2	-0.1
CHGR2				*e*S	Sn	04 10 59.5	0.0
GUAI	GUAI	1.97	314	*i* P	Pb	04 10 38.9	+0.2
ACAL	Aguas Claras	1.98	331	*i* P	Pn	04 10 37.5	+1.2
HORNC	Hornillas	2.12	329	*i* P	Pb	04 10 40.5	-0.7
LAPC	Finca la Perla	2.30	324	*i* P	Pn	04 10 42.4	+1.7
BUEV	Buena Vista	2.31	325	*i* P	Pn	04 10 43.1	+2.2
GBS3	Finca Las Img	2.32	324	*i* P	Pb	04 10 43.5	-1.2
NANC3	Nancito, Chiri	2.40	105	*e*P	Pn	04 10 43.3	+1.2
NANC3				*e*S	Sn	04 11 09.5	-2.2

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*JMA **14** 04:10:25.4±0.2, 29°.45N×130°.95E, h58^{km}, M3.3*

*NEIC **14** 04:10:35.3±0.5, 30°.08N±0°.03×130°.6E±0°.2, h77^{km}±11^{km}, mb4.0/5, Error ellipse: s-maj=22.0km s-min=3.7km az=89.0*

*IDC **14** 04:10:38.9±3.4, 30°.32N×130°.23E, h83^{km}±33^{km}, mb3.5/10, mb1 3.6/12, mb1mx3.4/52, mbtmp3.8/12, MS3.8/3, Ms1 3.8/3, ms1mx2.9/39, Error ellipse: s-maj=31.0km s-min=16.7km az=68.0*

ISC 14 04:10:27.3±1.4, **29°.51N**±0°.05×**130°.87E**±0°.08, **h42**^{km}±12^{km}, **n41**, σ**1^{s}45**/44, **mb3.9**/12, **MS3.9**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAK	Yakushimahirau	0.79	337	P	Pn	04 10 41.7	-0.4
JYAK				*e*S	Sn	04 10 54.1	+1.3
JMTN	Minamitane	0.89	1	P	Pn	04 10 42.8	-0.6
JMTN				*e*S	Sn	04 10 57.0	+1.9
JNN	Nakanoshima	0.93	291	P	Pn	04 10 43.6	-0.4
JNN				*e*S	Sn	04 10 58.5	+2.4
JKC	Kuchinoerabu	1.12	328	P	Pn	04 10 46.5	0.0
JTN	Tanegashima 3	1.15	5	P	Pn	04 10 46.4	-0.5
JTN				*e*S	Sn	04 11 01.4	0.0
JTAJ	Takarajima	1.50	257	P	Pn	04 10 51.8	+0.1
JAM	Amami Oshima	1.56	226	P	Pn	04 10 51.8	-0.7
JAM				*e*S	Sn	04 11 10.9	-0.6
JTSR	Tashiro 2	1.65	1	P	Pn	04 10 53.9	0.0
JTSR				*e*S	Sn	04 11 14.4	+0.5
JAMN	Amaminishikomi	1.95	230	P	Pn	04 10 57.2	-0.7
JAMN				*e*S	Sn	04 11 21.3	+0.1
JSU	Suzuyama	2.02	350	Pn	Pn	04 10 59.8	+0.8
JSU				Sn	Sn	04 11 18.1	-4.9
JNAR	Kushima--Naru	2.04	10	P	Pn	04 10 59.0	-0.2
JTK	Tokunoshima	2.41	225	P	Pn	04 11 03.4	-0.8
JTK				*e*S	Sn	04 11 33.0	+0.5
JNU	Nakatsue	3.60	0	P	Pn	04 11 21.6	+0.9
	1.7nm,0.3s,baz=355,slow=4.9,SNR=5.7						
JNU	Nakatsue	3.60	0	Pn	Pn	04 11 21.8	+1.2
JNU				Sn	Sn	04 11 56.8	-5.2
JMN	Monobe	4.93	31	Pn	Pn	04 11 39.1	+0.3
JHS	Saijyo	5.79	19	Pn	Pn	04 11 53.6	+2.9
JWT	Wachi	6.91	32	Pn	Pn	04 12 07.0	+0.9
JGF	Kuroka	8.17	40		Pn	04 12 31.6	+8.2
KLR	Kul'dur	19.71	2	P	Pn	04 14 53.8	-0.9
	0.1nm,0.3s,baz=175,slow=11,SNR=5.8						
SONM	Songino Array	26.28	321	P	P	04 15 57.9	-0.9
	0.6nm,0.6s,baz=129,slow=9.8,SNR=4.3						
SONM	Songino Array	26.28	321	P	P	04 15 57.7	-1.1
MK31	Makanchi Array	41.21	309	P	P	04 18 07.7	-0.2
MKAR	Makanchi Array	41.21	309	P	P	04 18 08.1	+0.2
	1.3nm,0.8s,baz=96,slow=9.8,SNR=14						
MKAR	Makanchi Array	41.21	309	P	P	04 18 07.9	0.0
KURK	Kurchatov	44.15	314	P	P	04 18 31.4	-0.2
KURK				IAmb	IAmb	04 18 42.2	
	comp=Z,1.6nm,0.8s						
KURBB	Kurchatov Arra	44.19	314	P	P	04 18 32.3	+0.3
	comp=Z,1.1nm,0.2s,baz=101,slow=8.6,SNR=4.5						
WRA	Warramunga Arr	49.28	176	P	P	04 19 24.9	+13
	comp=Z,0.5nm,0.8s,baz=13,slow=8.0,SNR=3.2						
BVAR	Borovoye Array	49.46	316	P	P	04 19 13.2	+0.1
	comp=Z,1.9nm,0.8s,baz=105,slow=9.1,SNR=8.5						
KKAR	Karatay Array	49.51	303	P	P	04 19 14.1	+0.4
BRVK	Borovoye	49.53	316	P	P	04 19 13.9	+0.3
ASAR	Alice Springs	52.95	177	P	P	04 19 53.8	+14
	comp=Z,0.4nm,0.7s,baz=9.5,slow=12,SNR=3.4						
ABKAR	Akbulak array	56.17	312	P	P	04 20 02.7	+0.1
ABKAR				IAmb	IAmb	04 20 03.9	
	comp=Z,1.5nm,0.8s						
ABKAR	Akbulak array	56.17	312	P	P	04 20 02.8	+0.1
AKTO	Aktyubinsk	57.24	313	LR	LR	04 46 51.8	
	comp=Z,132nm,19.7s,baz=35,slow=39						
ILAR	Eielson Array	60.45	29	P	P	04 20 36.9	+4.6
	comp=Z,0.2nm,0.8s,baz=284,slow=7.3,SNR=3.0						
BELG	Belogornoye	63.25	317	LR	LR	04 50 50.6	
	comp=Z,37nm,18.1s,baz=167,slow=39						
KBZ	Khabaz	68.91	309	P	P	04 21 28.6	+0.8
	comp=Z,2.8nm,0.8s,baz=84,slow=3.0,SNR=9.6						
GNI	Garni	68.91	305	LR	LR	04 53 50.0	
	comp=Z,66nm,18.4s,baz=54,slow=38						
FINES	FINESS Array B	71.17	331	P	P	04 21 40.9	-0.4
	comp=Z,2.6nm,0.9s,baz=125,slow=7.0,SNR=3.4						
BRTR	Keskin Array B	76.86	308	P	P	04 22 16.6	+1.4
	comp=Z,1.3nm,0.8s,baz=107,slow=5.4,SNR=8.9						
BRTR	Keskin Array B	76.86	308	P	P	04 22 16.1	+0.9

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*IDC **14** 04:14:33.8±0.6, 37°.92N×144°.80E, h0^{km}, mb4.2/23, mb1 4.3/30, mb1mx4.2/55, mbtmp4.2/30, ML3.5/6, MS3.2/10, Ms1 3.2/10, ms1mx3.0/41, Error ellipse: s-maj=15.3km s-min=12.9km az=152.0*

*JMA **14** 04:14:38.3±0.2, 38°.09N×144°.52E, h50^{km}, M4.5*

*NIED **14** 04:14:38.4, 38°.09N×144°.52E, h50^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.60; M$_{\theta\theta}$0.81; M$_{\phi\phi}$1.80; M$_{r\theta}$0.86; M$_{\theta\phi}$0.88; M$_{\phi r}$2.53; Fault plane solution: M$_0$3.63000×10^{15} NP1: φ$_s$202.00000°, δ69.00000°, λ-95.00000°. NP2:φ$_s$36.00000°, δ22.00000°, λ-77.00000°.*

*NEIC **14** 04:14:39.0±0.8, 37°.91N±0°.07×144°.7E±0°.1, h36^{km}±7^{km}, mb4.6/45 Error ellipse: s-maj=12.4km s-min=8.6km az=118.0*

ISC 14 04:14:38.2±3.7, **38°.04N**±0°.05×**144°.68E**±0°.06, **h28**^{km}±26^{km}, **n129**, σ**1^{s}32**/134, **mb4.5**/49, **MS3.2**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.55	277	P	Pn	04 15 16.4	-1.3
JIKH				*e*S	Sn	04 15 44.6	-3.2
OFUJ	Ofunato	2.58	295	P	Pn	04 15 16.9	-1.2
OFUJ				*e*S	Sn	04 15 45.6	-3.0
JKMT	Kesennumamotoy	2.63	288	P	Pn	04 15 17.7	-1.2
JKMT				*e*S	Sn	04 15 47.3	-2.6
JIO	Ouri	2.65	280	P	Pn	04 15 18.4	-0.8
JIO				*e*S	Sn	04 15 47.8	-2.6
MIYJ	Miyakonagasawa	2.71	305	P	Pn	04 15 18.3	-1.7
MIYJ				*e*S	Sn	04 15 48.7	-3.1
JMK	Ichinoseki	2.86	290	P	Pn	04 15 21.2	-0.8
JMK				*e*S	Sn	04 15 53.1	-2.5
JOM	Ohasama	3.01	299	P	Pn	04 15 23.7	-0.4
JOM				*e*S	Sn	04 15 56.9	-2.3
JMM	Marumori	3.08	268		Pn	04 15 24.2	-0.7
JMM				Sn	Sn	04 15 57.9	-2.9
JANG	Nango	3.39	314	P	Pn	04 15 28.0	-1.3
JANG				*e*S	Sn	04 16 05.0	-3.5
JFT	Otama	3.48	263	P	Pn	04 15 30.4	-0.1
JFT				*e*S	Sn	04 16 08.9	-1.9
JYT	Yasato	4.01	245		Pn	04 15 36.5	-1.3
JYT				Sn	Sn	04 16 20.9	-3.0
ERM	Erimo	4.14	344	Pn	Pn	04 15 38.6	-1.0
ERM				Sn	Sn	04 16 25.6	-1.4
JOT	Ohata	4.36	321	P	Pn	04 15 42.7	+0.1
BSO1	Boso 1	4.51	223	P	Pn	04 15 42.4	-1.8
JCH	Churui	4.68	348	P	Pn	04 15 45.4	-1.6
JCH				*e*S	Sn	04 16 35.6	-4.8
JRY	Ryogami san	5.04	248	P	Pn	04 15 50.8	-1.3
JRY				*e*S	Sn	04 16 44.7	-4.7
JSD	Sado	5.07	272		Pn	04 15 53.3	+0.9
MJAR	Matsushiro Arr	5.37	256	Pn	Pn	04 15 56.9	+0.3
	1.0nm,0.3s,baz=83,slow=15,SNR=27						
MJAR				Sn	Sn	04 16 58.4	+0.9
	0.4nm,0.3s,baz=81,slow=17,SNR=4.8						
MJAR				LR	LR	04 18 06.3	
	comp=Z,271nm,21.7s,baz=35,slow=39						
MJAR	Matsushiro Arr	5.37	256		Pn	04 15 56.5	0.0
MAJO	Matsushiro	5.37	256		Pn	04 15 56.3	-0.3
MAT	Matsushiro	5.37	256	P	Pn	04 15 57.0	+0.4
MAT				S	Sn	04 16 55.6	-1.9
NEM2	Nemuro 2	5.38	8	P	Pn	04 15 52.8	-3.8
NEM2				*e*S	Sn	04 16 50.1	-7.5
JEW	Eniwo	5.39	334		Pn	04 15 58.1	+1.4
JTKR	Abashiri--Toko	5.96	355	P	Pn	04 16 02.5	-2.0
JTKR				*e*S	Sn	04 17 05.8	-6.0
JKA	Kamikawa-asahi	6.27	346		Pn	04 16 08.9	0.0
ASAJ	Asahikawa	6.27	346	Pn	Pn	04 16 08.9	0.0
	3.1nm,0.3s,baz=185,slow=17,SNR=9.4						
ASAJ				Sn	Sn	04 17 16.3	-3.3
	3.4nm,0.3s,baz=186,slow=22,SNR=4.5						
ASAJ				LR	LR	04 19 15.0	
	comp=Z,158nm,19.0s,baz=352,slow=44						
JHJ	Hachijo jima 2	6.32	221	Pn	Pn	04 16 06.4	-3.2
	11nm,0.3s,baz=74,slow=20,SNR=4.6						
JHJ				Sn	Sn	04 17 13.0	-7.9
	7.3nm,0.3s,baz=246,slow=19,SNR=1.3						
JGF	Kuroka	6.36	250		Pn	04 16 10.0	-0.1
JCJ	Chichijima	11.11	192	Sn	Sn	04 19 06.4	-12
	5.1nm,0.3s,baz=301,slow=19,SNR=1.8						
USRK	Ussuriysk Ar.	11.37	307	Pn	Pn	04 17 20.1	+1.4
	baz=108,slow=15,SNR=5.0						
JNU	Nakatsue	12.26	251	LR	LR	04 22 30.0	
	comp=Z,136nm,19.8s,baz=62,slow=39						
MDJ	Mudanjiang	13.10	305	Pn	Pn	04 17 43.2	+0.9
KSRS	Korea Array	13.28	273	Pn	Pn	04 17 47.4	+2.5
	0.3nm,0.3s,baz=88,slow=13,SNR=5.1						
KSRS				LR	LR	04 22 33.2	
	comp=Z,69nm,19.4s,baz=106,slow=36						
KLR	Kul'dur	14.56	324	Pn	Pn	04 18 02.1	-0.2
	0.1nm,0.3s,baz=130,slow=7.8,SNR=3.9						
KLR				LR	LR	04 23 52.2	
	comp=Z,119nm,18.1s,baz=80,slow=38						
PETK	Petropavlovsk-	17.57	27	P	Pn	04 18 41.8	+0.9
	0.1nm,0.3s,baz=206,slow=9.6,SNR=3.5						
SEY	Seymchan	25.36	8	P	P	04 20 04.0	+1.4
	7.2nm,0.8s,baz=196,slow=6.9,SNR=15						
H11N2	WAKE ISLAND Hy	26.55	127	T	T	04 47 42.0	
	baz=319,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	26.56	127	T	T	04 47 40.9	
	baz=319,slow=74,SNR=7.5						
H11N3	WAKE ISLAND Hy	26.57	127	T	T	04 47 35.6	
	baz=319,slow=74,SNR=9.4						
SONM	Songino Array	29.42	302	P	P	04 20 41.0	+1.5
	0.7nm,0.8s,baz=111,slow=8.0,SNR=3.3						
ZAA0	Zalesovo Array	43.17	312	P	P	04 22 35.1	-1.2
ZAA0					PcP	04 24 25.4	0.0
ZALV	Zalesovo Beam	43.17	312	P	P	04 22 37.3	+1.0
	2.0nm,0.5s,baz=84,slow=7.6,SNR=6.5						
ZALV	Zalesovo Beam	43.17	312	P	P	04 22 36.9	+0.6
ZALV					PcP	04 24 25.7	+0.3
CMAR	Chiang Mai Arr	44.26	257	LR	LR	04 42 36.6	
	comp=Z,35nm,21.1s,baz=112,slow=38						
KDAK	Kodiak Island	44.61	43	P	P	04 22 47.6	-0.1
	23nm,0.7s,baz=300,slow=5.6,SNR=8.0						
KDAK	Kodiak Island	44.61	43	P	P	04 22 47.8	0.0
MKAR	Makanchi Array	45.79	302	P	P	04 22 58.5	+1.1
	2.5nm,0.7s,baz=90,slow=8.6,SNR=21						
POKR	Poker Plat Res	47.02	32	P	P	04 23 07.9	+1.2
POKR				IAmb	IAmb	04 23 08.6	
	comp=Z,6.4nm,1.0s						
IL31		47.25	33	P	P	04 23 08.8	+0.3
ILAR	Eielson Array	47.25	33	P	P	04 23 08.4	-0.1
	comp=Z,1.9nm,0.8s,baz=257,slow=5.5,SNR=21						
ILAR	Eielson Array	47.25	33	P	P	04 23 08.7	+0.2
KURK	Kurchatov	47.36	308	P	P	04 23 10.2	+0.6
KURBB	Kurchatov Arra	47.44	308	P	P	04 23 10.9	+0.8
	comp=Z,7.0nm,0.5s,baz=82,slow=8.0,SNR=34						
HNR	Honiara	49.33	160	LR	LR	04 41 50.5	
	comp=Z,26nm,21.8s,baz=335,slow=33						
BCAR	Beaver Creek A	49.59	35	P	P	04 23 27.6	+0.9
EPYK	Eagle Plains	51.36	30	P	P	04 23 41.2	+1.3
EPYK				IAmb	IAmb	04 23 41.8	
	comp=Z,12nm,1.0s						
BVAR	Borovoye Array	51.82	312	P	P	04 23 43.8	+0.2
	comp=Z,2.1nm,0.8s,baz=60,slow=8.5,SNR=12						
BRVK	Borovoye	51.87	312	P	P	04 23 44.5	+0.7
BRVK				IAmb	IAmb	04 23 45.9	
	comp=Z,5.4nm,0.9s						
HYT	Haines Junctio	51.94	37	P	P	04 23 45.6	+1.1
INK	Inuvik	52.30	28	P	P	04 23 47.1	+0.3
	comp=Z,2.8nm,1.0s,baz=311,slow=7.9,SNR=5.5						
HMH	Humu‘ula Sheep	54.64	92	P	P	04 24 02.7	-2.4
ARU	Arti	57.32	319	P	P	04 24 24.3	+0.9
	comp=Z,1.3nm,0.2s,baz=56,slow=3.5,SNR=8.6						
ARU	Arti	57.32	319	P	P	04 24 23.2	-0.1
ARU				IAmb	IAmb	04 24 25.1	
	comp=Z,7.9nm,0.9s						
WRA	Warramunga Arr	58.48	191	P	P	04 24 30.8	-1.1
	comp=Z,3.5nm,0.6s,baz=12,slow=7.3,SNR=15						
FITZ	Fitzroy Crossi	58.64	201	P	P	04 24 32.2	-0.7
KIRV	Kirov	61.00	323	P	P	04 24 49.8	+1.1
	comp=Z,9.1nm,0.7s,baz=109,slow=4.0,SNR=3.8						
YKA	Yellowknife Ar	61.62	31	P	P	04 24 52.8	-0.1
	comp=Z,0.8nm,0.7s,baz=300,slow=6.3,SNR=13						
ASAR	Alice Springs	62.21	191	P	P	04 24 56.7	-0.6
	comp=Z,1.2nm,0.8s,baz=14,slow=6.8,SNR=9.5						
ASAR	Alice Springs	62.21	191	P	P	04 24 56.4	-0.9
DZM	Mont Dzumac	63.19	157	LR	LR	04 49 38.2	
	comp=Z,8.2nm,19.6s,baz=18,slow=33						
FINES	FINESS Array B	69.11	333	P	P	04 25 41.8	+0.3
	comp=Z,4.4nm,0.8s,baz=33,slow=11,SNR=8.2						
FINES	FINESS Array B	69.11	333	P	P	04 25 42.0	+0.6
STKA	Stephens Creek	69.62	183	LR	LR	04 59 51.0	
	comp=Z,15nm,18.0s,baz=27,slow=39						
FFC	Flin Flon	71.44	34	P	P	04 25 56.5	+0.7
FFC				IAmb	IAmb	04 25 57.0	
	comp=Z,5.7nm,0.9s						
HLID	Hailey	71.77	49	P	P	04 25 58.4	+0.1
KIV	Kislovodsk	72.19	312	P	P	04 26 00.4	-0.2
KIV				IAmb	IAmb	04 26 03.9	
	comp=Z,8.4nm,0.8s						
KBZ	Khabaz	72.19	312	P	P	04 26 02.3	+1.8
	comp=Z,5.7nm,0.9s,baz=352,slow=2.5,SNR=13						
NVAR	Mina Array Bea	72.30	55	P	P	04 26 02.4	+0.8
	comp=Z,0.9nm,0.7s,baz=298,slow=6.0,SNR=8.2						
NVAR	Mina Array Bea	72.30	55	P	P	04 26 01.6	+0.1
AKASG	Malin Array Be	75.06	324	P	P	04 26 17.6	+0.3
	comp=Z,2.9nm,0.5s,baz=45,slow=6.2,SNR=13						
AKASG	Malin Array Be	75.06	324	P	P	04 26 17.5	+0.3
BW06	Boulder Array	75.10	47	P	P	04 26 18.3	+0.3
PD31	Pinedale Array	75.10	47	P	P	04 26 18.2	+0.3
PDAR	Pinedale Array	75.10	47	P	P	04 26 18.3	+0.3
	comp=Z,1.7nm,0.6s,baz=286,slow=1.7,SNR=25						
PDAR				LR	LR	04 57 13.2	
	comp=Z,21nm,19.9s,baz=344,slow=34						
CCUT	Cedar City	75.97	53	P	P	04 26 23.2	+0.1
LCMT	Little Creek M	76.38	54	P	P	04 26 25.2	0.0
RDMU	Red Mountain	76.45	49	P	P	04 26 25.5	-0.2
KNB	Kanab	76.64	53	P	P	04 26 26.9	+0.2
SRU	San Rafael Swe	76.78	51	P	P	04 26 27.8	+0.3
ULM	Lac du Bonnet	77.22	35	P	P	04 26 28.4	-1.2
	comp=Z,2.5nm,0.7s,baz=292,slow=9.2,SNR=3.9						
ULM	Lac du Bonnet	77.22	35	P	P	04 26 30.0	+0.5
ULM				IAmb	IAmb	04 26 49.1	
	comp=Z,3.7nm,0.9s						
U15A	North Rim	77.34	54	P	P	04 26 30.9	+0.1
PV23	Carpenter Ridg	78.12	50	P	P	04 26 35.0	-0.1
PV23				IAmb	IAmb	04 26 36.9	
	comp=Z,8.8nm,1.1s						
PV10	Paradox Valley	78.15	50	P	P	04 26 35.1	-0.2
PV14	Lion Creek, Pa	78.16	50	P	P	04 26 35.2	-0.1
PV14				IAmb	IAmb	04 26 37.1	
	comp=Z,7.5nm,0.9s						
PV22	Blue Mesa, Par	78.20	50	P	P	04 26 35.4	-0.1
PV22				IAmb	IAmb	04 26 37.2	
	comp=Z,5.1nm,0.9s						
PV20	West Nyswonger	78.21	50	P	P	04 26 35.4	-0.1
PV20				IAmb	IAmb	04 26 37.3	
	comp=Z,7.8nm,0.9s						
PV19	Morning Glory	78.22	50	P	P	04 26 35.5	-0.1
PV19				IAmb	IAmb	04 26 37.4	
	comp=Z,8.8nm,0.8s						
PV17	East Wray Mesa	78.26	50	P	P	04 26 35.9	+0.1
PV16	Nyswonger Mesa	78.27	50	P	P	04 26 35.7	-0.1
PV16				IAmb	IAmb	04 26 37.6	
	comp=Z,11nm,1.1s						
PV05	Paradox Valley	78.30	51	P	P	04 26 36.4	+0.3
PV03	Paradox Valley	78.34	50	P	P	04 26 36.4	+0.1
PV03				IAmb	IAmb	04 26 38.0	
	comp=Z,4.8nm,0.9s						
N23A	Red Feather La	78.37	47	P	P	04 26 36.4	-0.1
N23A				IAmb	IAmb	04 26 39.0	
	comp=Z,6.7nm,1.1s						
PV02	Paradox Valley	78.44	50	P	P	04 26 36.9	0.0
PV02				IAmb	IAmb	04 26 38.8	
	comp=Z,5.1nm,0.9s						
WUAZ	Wupatki	78.48	54	P	P	04 26 36.9	-0.2
WUAZ				IAmb	IAmb	04 26 39.0	
	comp=Z,5.2nm,0.9s						
SMCO	Snowmass	78.88	49	P	P	04 26 39.4	0.0
BUR08	Bucovina Ar. S	79.09	323	P	P	04 26 40.0	-0.1
BUR08				IAmb	IAmb	04 26 43.8	
	comp=Z,5.0nm,1.1s						
BURAR	Bucovina Array	79.10	323	P	P	04 26 40.5	+0.4
X16A	Lo Mia Camp, P	79.13	55	P	P	04 26 40.7	+0.1
X16A				IAmb	IAmb	04 26 42.6	
	comp=Z,4.4nm,1.0s						
S22A	4UR Ranch, Cre	79.89	50	P	P	04 26 44.2	-0.7
BRTR	Keskin Array B	80.10	313	P	P	04 26 47.7	+1.9
	comp=Z,0.5nm,0.7s,baz=59,slow=4.6,SNR=4.6						
BRTR	Keskin Array B	80.10	313	P	P	04 26 45.7	0.0
K31A	O'Neill	81.18	42	P	P	04 26 51.5	+0.2
PRU	Pruhonice	81.94	330	*e*P	P	04 26 54.7	-0.5
KHC	Kasperske Hory	83.01	330	*e*P	P	04 27 01.4	+0.6
CONA	Conrad Observa	83.04	328	*e*P	P	04 27 02.3	+1.3
	comp=Z,4.8nm,1.3s						
GERES	GERESS Array B	83.19	330	P	P	04 27 01.3	-0.5
	comp=Z,0.4nm,0.6s,baz=27,slow=7.5,SNR=4.2						
N35A	Tabor	84.07	41	P	P	04 27 06.3	-0.1
SOKA	Soboth	84.37	328	*e*P	P	04 27 08.3	+0.4
	comp=Z,6.5nm,1.0s						
MNTX	Cornudas Mount	84.76	54	P	P	04 27 10.1	0.0
MNTX				IAmb	IAmb	04 27 11.3	
	comp=Z,2.5nm,0.8s						
ABTA	Abfaltersbach	85.35	329	*e*P	P	04 27 13.5	+0.6
	comp=Z,4.4nm,1.2s						
MOTA	Moosalm	85.42	330	*e*P	P	04 27 14.2	+0.9
	comp=Z,7.5nm,1.1s						
RETA	Reutte	85.44	331	*e*P	P	04 27 14.0	+0.8
	comp=Z,6.8nm,0.9s						
FETA	Feichten	85.84	330	*e*P	P	04 27 14.8	-0.6
	comp=Z,4.5nm,1.0s						
DAVA	Damuels	85.95	331	*e*P	P	04 27 13.0	-2.9
	comp=Z,7.9nm,1.1s						
TXAR	Lajitas Array	87.44	54	P	P	04 27 23.7	+0.2
	comp=Z,0.3nm,0.5s,baz=320,slow=2.9,SNR=5.1						
TXAR	Lajitas Array	87.44	54	P	P	04 27 22.8	-0.6
CCM	Cathedral Cave	88.43	41	P	P	04 27 27.2	-0.6
CCM				IAmb	IAmb	04 27 28.7	
	comp=Z,5.6nm,1.1s						
VNDA	Vanda	115.77	176	PKP	PKPdf	04 33 16.6	-0.1
	comp=Z,2.0nm,1.1s,baz=27,slow=2.3,SNR=2.9						

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*NEIC **14** 04:16:17.4±0.7, 18°.4N±0°.1×145°.29E±0°.08, h461^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=15.5km s-min=10.7km az=183.0*

*IDC **14** 04:16:19.1±1.4, 18°.50N×145°.23E, h471^{km}±16^{km}, mb3.6/26, mb1 3.7/29, mb1mx3.5/53, mbtmp4.4/29, Error ellipse: s-maj=14.2km s-min=9.7km az=95.0*

ISC 14 04:16:17.0±0.5, **18°.44N**±0°.06×**145°.3E**±0°.1, **h450**^{km}, **n52**, σ**1^{s}01**/56, **mb4.0**/32, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.84	185	P	P	04 17 41.9	+1.9
	9.8nm,0.3s,baz=162,slow=20,SNR=3.1						
GUMO				S	S	04 18 46.4	-1.1
	18nm,0.3s,baz=274,slow=15,SNR=2.3						
GUMO	Guam	4.84	185	P	P	04 17 41.6	+1.6
GUMO					S	04 18 48.4	+0.9
JCJ	Chichijima	9.08	342	P	P	04 18 26.1	+2.0
	17nm,0.3s,baz=295,slow=18,SNR=6.5						
JCJ				S	S	04 20 10.8	+2.2
	0.5nm,0.3s,baz=204,slow=20,SNR=2.4						
JCJ	Chichijima	9.08	342	P	P	04 18 25.2	+1.1
INU	Inuyama	18.38	338	P	P	04 20 03.0	-0.2
JGF	Kuroka	18.48	339	P	P	04 20 04.1	-0.3
JGF				IAmb	IAmb	04 20 05.7	
	comp=Z,27nm,1.0s						
MJAR	Matsushiro Arr	19.09	342	P	P	04 20 08.0	-2.0
	comp=Z,0.1nm,0.3s,baz=168,slow=9.2,SNR=7.7						
MAJO	Matsushiro	19.09	342	P	P	04 20 09.6	-0.3
MAJO				IAmb	IAmb	04 20 10.6	
	comp=Z,12nm,0.7s						
JSD	Sado	20.47	344	P	P	04 20 22.5	-0.1
KSRS	Korea Array	24.30	325	P	P	04 20 56.9	-0.2
	comp=Z,2.9nm,0.7s,baz=140,slow=9.6,SNR=11						
USRK	Ussuriysk Ar.	28.01	339	P	P	04 21 30.1	+0.3
	comp=Z,2.0nm,0.8s,baz=133,slow=8.1,SNR=5.0						
KLR	Kul'dur	32.60	343	P	P	04 22 09.7	0.0
	comp=Z,10nm,0.7s,baz=163,slow=6.8,SNR=33						
PETK	Petropavlovsk-	35.92	13	P	P	04 22 38.9	+1.2
	comp=Z,1.9nm,0.8s,baz=141,slow=5.6,SNR=5.4						
WRA	Warramunga Arr	39.63	196	P	P	04 23 09.5	+1.0
	comp=Z,2.0nm,0.4s,baz=17,slow=8.5,SNR=31						
SONM	Songino Array	43.11	322	P	P	04 23 36.6	+0.5
	comp=Z,2.3nm,0.6s,baz=139,slow=7.6,SNR=15						
SONM				PcP	PcP	04 25 16.1	-0.2
	comp=Z,0.9nm,0.7s,baz=116,slow=3.4,SNR=4.0						
SONM	Songino Array	43.11	322	P	P	04 23 35.5	-0.6
ASAR	Alice Springs	43.30	195	P	P	04 23 38.5	+0.7
	comp=Z,1.3nm,0.4s,baz=12,slow=6.7,SNR=17						
ASAR	Alice Springs	43.30	195	P	P	04 23 36.8	-1.0
CMAR	Chiang Mai Arr	43.88	278	P	P	04 23 43.5	+1.0
	comp=Z,4.4nm,0.7s,baz=69,slow=6.7,SNR=14						
SEY	Seymchan	44.72	5	P	P	04 23 49.4	+1.1
	comp=Z,3.2nm,0.6s,baz=177,slow=6.8,SNR=5.7						
YAK	Yakutsk	44.90	350	P	P	04 23 49.1	-0.6
	comp=Z,12nm,0.4s,baz=293,slow=0.7,SNR=8.9						
YAK	Yakutsk	44.90	350	P	P	04 23 49.3	-0.4
DZM	Mont Dzumac	45.27	152	P	P	04 23 54.4	+1.2
DZM				IAmb	IAmb	04 24 02.8	
	comp=Z,7.0nm,1.0s						
MSVF	Nonsavu	48.26	136	P	P	04 24 14.7	-1.3
MSVF				IAmb	IAmb	04 24 33.3	
	comp=Z,7.6nm,1.1s						
ZALV	Zalesovo Beam	57.99	323	P	P	04 25 24.2	-0.9
	comp=Z,0.7nm,0.3s,baz=113,slow=5.8,SNR=3.2						
MKAR	Makanchi Array	58.37	314	P	P	04 25 27.8	-0.2
	comp=Z,1.8nm,0.4s,baz=84,slow=10,SNR=7.3						
MKAR	Makanchi Array	58.37	314	P	P	04 25 27.3	-0.6
KDAK	Kodiak Island	59.78	33	P	P	04 25 38.0	+0.8
	comp=Z,7.5nm,0.9s,baz=252,slow=6.4,SNR=6.3						
KURK	Kurchatov	61.21	318	P	P	04 25 46.4	-0.4
KURK				IAmb	IAmb	04 25 47.3	
	comp=Z,13nm,1.1s						
KURBB	Kurchatov Arra	61.26	318	P	P	04 25 46.9	-0.2
	comp=Z,11nm,0.7s,baz=97,slow=7.1,SNR=26						
IL31		64.04	26	P	P	04 26 04.2	-0.7
ILAR	Eielson Array	64.04	26	P	P	04 26 04.1	-0.9
	comp=Z,1.6nm,0.5s,baz=243,slow=6.2,SNR=34						
BVAR	Borovoye Array	66.43	320	P	P	04 26 19.6	-0.7
	comp=Z,2.4nm,0.6s,baz=52,slow=15,SNR=12						
BRVK	Borovoye	66.50	321	P	P	04 26 20.2	-0.5
BRVK				IAmb	IAmb	04 26 20.8	
	comp=Z,4.7nm,0.8s						
KKAR	Karatay Array	66.64	310	P	P	04 26 21.2	-0.6
INK	Inuvik	69.76	23	P	P	04 26 40.4	+0.1
	comp=Z,2.4nm,0.8s,baz=238,slow=4.8,SNR=6.6						
ARU	Arti	73.06	325	P	P	04 26 59.6	-0.3
	comp=Z,2.1nm,0.2s,baz=130,slow=4.3,SNR=4.4						
ARU	Arti	73.06	325	P	P	04 26 59.5	-0.5
ARU				IAmb	IAmb	04 26 59.8	
	comp=Z,6.8nm,0.9s						
C36M	Paulatuk	73.13	22	P	P	04 27 00.2	+0.1
C36M				IAmb	IAmb	04 27 01.0	
	comp=Z,7.3nm,1.0s						
ABKAR	Akbulak array	73.27	317	P	P	04 27 00.9	-0.5
ABKAR				IAmb	IAmb	04 27 00.9	
	comp=Z,4.2nm,0.8s						
ABKAR	Akbulak array	73.27	317	P	P	04 27 00.5	-0.8
AKTO	Aktyubinsk	74.31	318	P	P	04 27 06.5	-0.8
	comp=Z,1.1nm,0.6s,baz=78,slow=7.6,SNR=3.8						
KIRV	Kirov	77.47	328	P	P	04 27 24.6	-0.1
	comp=Z,5.8nm,0.5s,baz=39,slow=3.7,SNR=2.8						
YKA	Yellowknife Ar	78.39	28	P	P	04 27 29.7	+0.1
	comp=Z,1.5nm,0.7s,baz=291,slow=5.1,SNR=16						
ARCES	ARCESS Array B	82.62	342	P	P	04 27 51.0	-0.7
	comp=Z,3.6nm,0.6s,baz=83,slow=7.3,SNR=12						
NVAR	Mina Array Bea	83.60	52	P	P	04 27 58.5	+1.1
	comp=Z,1.5nm,0.7s,baz=264,slow=6.5,SNR=11						
NVAR	Mina Array Bea	83.60	52	P	P	04 27 56.5	-1.0
ELK	Elko	85.08	49	P	P	04 28 03.8	-0.9
KBZ	Khabaz	86.06	315	P	P	04 28 08.0	-1.1
	comp=Z,2.8nm,0.9s,baz=132,slow=4.6,SNR=4.2						
FINES	FINESS Array B	86.96	335	P	P	04 28 10.9	-2.0
	comp=Z,1.4nm,0.4s,baz=74,slow=5.1,SNR=9.3						
BRTR	Keskin Array B	94.02	314	P	P	04 28 44.5	-1.9

	comp=Z,0.8nm,0.7s,baz=60,slow=4.9,SNR=4.4						
TORD	Torodi Ar. Bea	132.32	309	PKP	PKPdf	04 34 38.4	-1.6
	comp=Z,0.2nm,0.4s,baz=39,slow=2.4,SNR=3.2						

SOME ***14*** *04:20:23.1, 38°.62N×75°.32E, h15^{km}*

IDC ***14*** *04:20:36.8±0.8, 38°.94N×75°.21E, h0^{km}, mb3.9/17, mb1 4.0/20, mb1mx3.9/45, mbtmp3.9/20, ML3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.8/55, Error ellipse: s-maj=17.4km s-min=14.4km az=15.0*

BJI ***14*** *04:20:39.6±0.0, 39°.10N×75°.14E, h7^{km}, ML3.9/8*

KRNET ***14*** *04:20:40.8±0.1, 39°.19N×75°.18E, h15^{km}, mb4.1*

NNC ***14*** *04:20:41.6±0.9, 39°.25N×75°.22E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=7.5km s-min=5.2km az=164.0*

NEIC ***14*** *04:20:45.4±1.5, 39°.21N±0°.05×75°.1E±0°.1, h57^{km}±7^{km}, mb4.3/6, Error ellipse: s-maj=12.4km s-min=7.9km az=99.0*

ISC 14 04:20:39.8±1.1**, 39°.21N**±0°.02×**75°.24E**±0°.03**, h8**^{km}±7^{km}**,**
n139, σ2ˢ63/174**, mb4.0**/18**, 36C-15D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.65	61	Pg	Pg	04 20 45.4	-6.9
KSH				Sg	Sg	04 20 49.6	-11
KSH				smax	smax		
	comp=N,11μm,0.3s						
KSH				smax	smax		
	comp=E,19μm,0.2s						
SFK	Sufi-Kurgan	1.56	302	⇑eP	Pn	04 21 09.6	+1.5
	baz=3.0						
SFK				⇑iS	Sg	04 21 30.4	+0.2
	baz=3.0						
OHH	Osh	2.30	306	⇑eP	Pb	04 21 21.5	-0.1
	baz=7.0						
OHH				⇑iS	Sb	04 21 51.2	+0.9
	baz=7.0						
DRK	Karamyk	2.68	277	⇓iP	Pn	04 21 26.9	+3.4
	baz=77						
DRK				⇓iS	Sb	04 22 00.2	-1.2
	baz=77						
ARSB	Arslanbob	2.73	321	⇑eP	Pb	04 21 27.5	-1.5
	baz=22						
ARSB				⇑iS	Sb	04 22 02.0	-0.7
	baz=22						
ARLS	Aral	2.74	346	⇓eP	Pb	04 21 28.2	-1.0
	baz=47						
ARLS				⇓iS	Sb	04 22 02.8	-0.2
	baz=47						
UCH	Uchtor	3.07	350	⇑iP	Pb	04 21 33.0	-1.9
	baz=51						
UCH				⇑iS	Sb	04 22 10.3	-2.4
	baz=51						
UCH	Uchtor	3.07	350	P	Pb	04 21 32.9	-1.9
	SNR=25						
ULHL	Ulahol	3.13	14	⇑iP	Pb	04 21 34.3	-1.5
	baz=14						
ULHL				⇑iS	Sb	04 22 13.0	-1.2
	baz=14						
ULHL	Ulahol	3.13	14	P	Pb	04 21 33.8	-2.0
	SNR=19						
AML	Almayashu	3.15	339	⇓iP	Pn	04 21 33.7	+3.6
	baz=39						
AML				⇓iS	Sb	04 22 12.2	-2.7
	baz=39						
AML	Almayashu	3.15	339	P	Pn	04 21 33.2	+3.1
	SNR=16						
KDJ	Kajisay	3.27	26	⇑iP	Pb	04 21 36.1	-2.1
	baz=27						
KDJ				⇑iS	Sb	04 22 16.5	-1.8
	baz=27						
BOOM	Boomskoye usch	3.32	9	⇑iP	Pb	04 21 36.7	-2.4
	baz=10.0						
BOOM				⇑iS	Sb	04 22 17.1	-2.6
	baz=10.0						
KBK	Karagaybulak	3.45	356	⇑iP	Pn	04 21 38.2	+4.2
	baz=57						
KBK				⇑iS	Sb	04 22 19.7	-3.8
	baz=57						
KBK	Karagaybulak	3.45	356	P	Pb	04 21 38.6	-2.7
	SNR=35						
AAK	Ala-Archa	3.47	351	Pn	Pn	04 21 38.5	+4.2
	5.6nm,0.3s,baz=148,slow=5.9,SNR=43						
AAK				Sn	Sb	04 22 21.2	-2.8
	8.9nm,0.3s,baz=50,slow=1.0,SNR=4.3						
AAK				LR	LR	04 22 44.8	
	comp=Z,44nm,20.0s,baz=184,slow=34						
AAK	Ala-Archa	3.47	351	⇑iP	Pn	04 21 38.4	+4.1
	baz=52						
AAK				⇑iS	Sb	04 22 20.4	-3.7
	baz=52						
AAK	Ala-Archa	3.47	351	P	Pn	04 21 38.5	+4.1
	SNR=20						
AAK	Ala-Archa	3.47	351	⇓Pn	Pn	04 21 37.4	+3.1
	29nm,0.5s						
AAK				⇑Lg	Lg	04 22 31.0	
	143nm,0.8s						
AAK	Ala-Archa	3.47	351		Pn	04 21 38.0	+3.7
AAK					Sn	04 22 16.9	+1.2
BTK	Batken	3.52	285	⇑iP	Pn	04 21 38.6	+3.8
	baz=86						
BTK				⇑iS	Sn	04 22 20.8	+4.1
	baz=86						
EKS2	Erkin-Say	3.63	343	⇑eP	Pn	04 21 40.4	+4.1
	baz=43						
EKS2				⇑iS	Sn	04 22 23.7	+4.3
	baz=43						
FRU1	Bishkek	3.63	353	Pn	Pn	04 21 38.7	+2.4
FRU1				Sn	Sn	04 22 20.2	+0.8
TKM2	Tokmak 2	3.72	4	⇑iP	Pn	04 21 42.0	+4.3
	baz=5.0						
TKM2				⇑iS	Sn	04 22 26.2	+4.3
	baz=5.0						
TKM2	Tokmak 2	3.72	4	P	Pn	04 21 42.3	+4.6
	SNR=94						
TKM2	Tokmak 2	3.72	4	⇓Pn	Pn	04 21 40.9	+3.1
	28nm,0.2s						
TKM2				⇑Lg	Lg	04 22 38.5	
	148nm,0.8s						
CHMS	Chumysh	3.81	355	⇑iP	Pn	04 21 43.0	+4.2
	baz=55						
CHMS				⇑iS	Sn	04 22 28.5	+4.8
	baz=55						
CHMS	Chumysh	3.81	355	P	Pn	04 21 43.1	+4.4
	SNR=12						
KST	Kastek	3.87	8	eP	Pn	04 21 44.3	+4.5
	18nm,0.4s						
KST				eS	Sg	04 22 42.3	-1.8
	180nm,0.7s						
KST	Kastek	3.87	8	Pg	Pb	04 21 50.5	+2.1
	54nm,0.5s						
KST				Lg	Lg	04 22 42.3	
	180nm,0.7s						
MNAS	Manas	3.88	329	⇑iP	Pn	04 21 43.4	+3.6
	baz=29						
MNAS				⇑iS	Sn	04 22 29.5	+3.8
	baz=29						
IZV	Izvestkoviy	3.96	15	eP	Pb	04 21 46.5	-3.5
	62nm,0.6s						
IZV				eS	Sg	04 22 46.7	-0.4
	80nm,0.7s						
IZV	Izvestkoviy	3.96	15	Pg	Pb	04 21 53.2	+3.2
	62nm,0.6s						
IZV				Lg	Lg	04 22 46.7	
	80nm,0.7s						
MTBS	Maitube	4.02	13	eP	Pb	04 21 47.8	-3.1
	24nm,0.3s						
MTBS				eS	Sg	04 22 48.8	-0.2
	69nm,0.5s						
MTBS	Maitube	4.02	13	Pg	Pb	04 21 54.1	+3.2
	24nm,0.3s						
MTBS				Lg	Lg	04 22 48.3	
	69nm,0.5s						
TNSS	Tian-Shan	4.04	18	eP	Pn	04 21 47.8	+5.5
	52nm,0.3s						
TNSS				eS	Sg	04 22 49.1	-0.4
	51nm,0.5s						
TNSS	Tian-Shan	4.04	18	Pg	Pb	04 21 54.3	+2.9
	52nm,0.3s						
TNSS				Lg	Lg	04 22 49.1	
	51nm,0.5s						
DGS	Degeres	4.05	6	eP	Pb	04 21 48.9	-2.5
	49nm,0.5s						
DGS				eS	Sg	04 22 51.1	+1.2
	118nm,0.8s						
DGS	Degeres	4.05	6	Pg	Pg	04 21 55.5	-1.9
	47nm,0.5s						
DGS				Lg	Lg	04 22 51.1	
	118nm,0.8s						
MDOK	Medeo	4.18	18	eP	Pb	04 21 50.2	-3.5
	31nm,0.5s						
MDOK				eS	Sg	04 22 53.2	-0.8
	108nm,0.9s						
MDOK	Medeo	4.18	18	⇓Pn	Pn	04 21 47.4	+3.4
	9.6nm,1.0s						
MDOK				⇑Pg	Pb	04 21 56.9	+3.2
	33nm,0.6s						
MDOK	Medeo	4.18	18	Pg	Pb	04 21 56.8	+3.1
	31nm,0.5s						
MDOK				Lg	Lg	04 22 53.2	
	108nm,0.9s						
KNDC	Almaty	4.21	17	⇓Pg	Pb	04 21 57.9	+3.7
	99nm,0.8s						
KNDC				⇑Lg	Lg	04 22 55.9	
	303nm,0.7s						
KOTS	Kotyrbulak	4.26	19	eP	Pb	04 21 52.0	-3.1
	96nm,0.6s						
KOTS				eS	Sg	04 22 56.0	-0.7
	127nm,0.4s						
KOTS	Kotyrbulak	4.26	19	Pg	Pb	04 21 58.7	+3.6
	96nm,0.6s						
KOTS				Lg	Lg	04 22 56.0	
	127nm,0.4s						
SGDS	Sogindy	4.27	354	Pg	Pg	04 21 59.8	-1.7
	48nm,0.6s						
SGDS				Lg	Lg	04 22 58.5	
	35nm,0.6s						
KRBS	Karabastau	4.50	4	eP	Pb	04 21 60.0	+1.0
	8.7nm,0.3s						
KRBS				eS	Sg	04 23 09.2	+5.0
	23nm,0.4s						
KRBS	Karabastau	4.50	4	Pg	Pg	04 22 04.9	-1.1
	8.7nm,0.3s						
KRBS				Lg	Lg	04 23 07.3	
	23nm,0.4s						
KTBS	Karatobe	4.63	13	eP	Pb	04 22 01.2	-0.1
	24nm,0.3s						
KTBS				eS	Sg	04 23 11.3	+2.9
	86nm,0.4s						
KTBS	Karatobe	4.63	13	Pg	Pb	04 22 05.0	+3.7
	24nm,0.3s						
KTBS				Lg	Lg	04 23 07.2	
	86nm,0.4s						
ZHN	Zhinishke	4.63	30	eP	Pb	04 21 58.8	-2.6
	13nm,0.4s						
ZHN				eS	Sg	04 23 07.9	-0.7
	48nm,0.7s						
KUU	Kurty	4.75	10	eP	Pb	04 22 00.4	-3.0
	23nm,0.5s						
KUU				eS	Sg	04 23 10.2	-2.3
	160nm,0.8s						
KUU	Kurty	4.75	10	Pg	Pb	04 22 06.6	+3.3
	23nm,0.5s						
KUU				Lg	Lg	04 23 10.2	
	160nm,0.8s						
KURS	Kuram	4.81	26	eP	Pb	04 22 00.6	-3.8
	33nm,0.6s						
KURS				eS	Sg	04 23 10.6	-3.7
	62nm,1.1s						
KURS	Kuram	4.81	26	Pg	Pb	04 22 07.0	+2.6
	33nm,0.6s						
KURS				Lg	Lg	04 23 10.6	
	62nm,1.1s						
CHKK	Chushkaly	4.83	15	eP	Pb	04 22 01.5	-3.0
	23nm,0.5s						
CHKK				eS	Sg	04 23 12.5	-2.2
	82nm,0.9s						
UZB	Uzynbulak	4.86	35	eP	Pb	04 22 01.7	-3.6
	20nm,0.3s						
UZB				eS	Sg	04 23 12.9	-3.0
	107nm,0.9s						
UZB	Uzynbulak	4.86	35	Pg	Pb	04 22 08.1	+2.9
	20nm,0.3s						
UZB				Lg	Lg	04 23 12.9	
	107nm,0.9s						
IUG	Iuzhnay	4.93	308	eP	Pb	04 22 04.3	-2.1
	25nm,0.2s						
IUG				eS	Sg	04 23 17.1	-1.0
	160nm,0.8s						
IUG	Iuzhnay	4.93	308	Pg	Pb	04 22 10.6	+4.2
	25nm,0.2s						
IUG				Lg	Lg	04 23 17.1	
	160nm,0.8s						
KPKS	Kokpek	4.98	30	eP	Pb	04 22 04.0	-3.3
	27nm,0.5s						
KPKS				eS	Sg	04 23 16.6	-3.2
	204nm,0.5s						
TAS	Tashkent	5.02	297	Pn	Pn	04 21 56.5	+1.2
SHLS	Shalkode	5.07	38	eP	Pb	04 22 10.8	+2.0
	57nm,0.8s						
SHLS				eS	Sg	04 23 27.9	+5.3
	116nm,0.7s						
SHLS	Shalkode	5.07	38	Pg	Pg	04 22 17.4	+0.5
	57nm,0.8s						
SHLS				Lg	Lg	04 23 29.1	
	116nm,0.7s						
PDGK	Podgornoye	5.22	36	Pg	Pb	04 22 14.6	+3.3
	14nm,0.8s						
PDGK				Lg	Lg	04 23 23.9	
	51nm,0.8s						
PDGK	Podgornoye	5.22	36	⇓Pn	Pn	04 22 01.4	+3.2
	22nm,0.7s						
PDGK				⇓Pg	Pb	04 22 16.1	+4.8
	32nm,0.7s						
PDGK				⇓Lg	Lg	04 23 27.3	
	119nm,0.8s						
KK31	Karatay Array	5.28	319	⇓Pn	Pn	04 22 01.0	+2.0
	2.5nm,0.2s,baz=124,slow=12,SNR=131						
KK31				⇑Sn	Sn	04 23 01.8	+1.8
	16nm,0.6s,baz=136,slow=24,SNR=5.3						
KK31				⇑Lg	Lg	04 23 27.9	
	9.5nm,0.4s,baz=133,slow=24,SNR=3.9						
KK31	Karatay Array	5.28	319		Pn	04 22 01.2	+2.2
KK31				Sn	Sn	04 22 59.6	-0.5
KKAR	Karatay Array	5.28	319		Pn	04 22 01.2	+2.2
KKAR				Sn	Sn	04 22 59.6	-0.4
KKAR	Karatay Array	5.28	319		Pn	04 22 01.2	+2.2
KKAR				Sn	Sn	04 22 59.1	-0.9
ARXS	Arharly	5.36	20	Pg	Pb	04 22 17.1	+3.3
	30nm,0.4s						
ARXS				Lg	Lg	04 23 28.3	
	76nm,0.5s						
MNBS	Baschi	5.41	25	eP	Pb	04 22 13.2	-1.4
	39nm,0.6s						
MNBS				eS	Sg	04 23 32.3	-1.3
	118nm,0.7s						
MNBS	Baschi	5.41	25	Pg	Pb	04 22 18.7	+4.1
	39nm,0.6s						
MNBS				Lg	Lg	04 23 31.2	
	118nm,0.7s						
KTMS	Ketmen	5.72	41	Pg	Pb	04 22 24.3	+4.4
	20nm,0.3s						
KTMS				Lg	Lg	04 23 40.9	
	55nm,0.9s						
NIL	Nilore	5.77	197	Pn	Pn	04 22 09.1	+3.4
NIL				Sn	Sn	04 23 13.7	+1.5
BTLS	Baital	5.90	352	Pg	Pb	04 22 28.1	+5.3
	3.1nm,0.4s						
BTLS				Lg	Lg	04 23 47.4	
	4.3nm,0.5s						
CEP	Cherat	6.00	208	P	Pn	04 22 12.1	+3.1
CEP				S	Sn	04 23 20.0	+2.0
DJR	Jarkent	6.15	32	Pg	Pg	04 22 34.5	-3.0
	13nm,0.4s						
DJR				Lg	Lg	04 23 58.0	
	38nm,0.6s						
THN	Thein Dam	6.77	177	eP	Pn	04 22 23.0	+3.6
THN				eS	Sn	04 23 36.0	-0.7
KAPS	Kapalarasan	6.80	25	Pg	Pb	04 22 43.5	+5.3
	7.4nm,0.4s						
KAPS				Lg	Lg	04 24 14.0	
	24nm,0.7s						
KBL	Kabul	6.81	229		Pn	04 22 22.7	+2.6
KBL				Sn	Sn	04 23 36.5	-1.5
DHRM	DHARAMSHALA	6.99	173	eP	Pn	04 22 25.0	+2.2
DHRM				eS	Sn	04 23 41.8	-0.8
DHRM				IAML		04 23 48.7	
	comp=N,173nm,0.2s						
DHRM				IAML		04 23 48.8	
	comp=E,168nm,0.2s						
THW	Thamme Wali	7.00	205	P	Pn	04 22 25.4	+2.8
SARP	Sargodha	7.56	197	P	Pn	04 22 31.8	+1.5
SMLA	Simla	8.21	168	eP	Pn	04 22 41.0	+1.8
SMLA				eS	Sn	04 24 08.9	-3.2
SMLA				IAML		04 24 14.5	
	comp=E,53nm,0.2s						
MAKZ	Makanchi	9.06	31	⇑Pn	Pn	04 22 54.3	+3.5
	comp=E,5.9nm,1.2s						
MAKZ	Makanchi	9.06	31	Pn	Pn	04 22 53.9	+3.1
MK31	Makanchi Array	9.17	32	⇑Pn	Pn	04 22 55.2	+2.8
	comp=E,3.5nm,0.7s,baz=204,slow=12,SNR=27						
MK31	Makanchi Array	9.17	32	Pn	Pn	04 22 55.4	+3.1
MKAR	Makanchi Array	9.17	32	Pn	Pn	04 22 55.5	+3.1
	comp=E,0.6nm,0.3s,baz=204,slow=13,SNR=37						
MKAR	Makanchi Array	9.17	32	Pn	Pn	04 22 55.1	+2.8
WMQ	Urumqi	10.41	60	eP	Pn	04 23 12.6	+3.2
KURBB	Kurchatov Arra	11.65	10	Lg	Lg	04 26 49.9	
	comp=E,0.0nm,0.3s,baz=208,slow=27,SNR=6.1						
PYUN	Piuthan	12.81	148	eP	Pn	04 23 40.2	-2.2
	comp=E,43nm,0.3s						
DANN	Dangsing	12.93	144	eP	Pn	04 23 41.1	-3.0
	comp=E,32nm,0.4s						
KOLN	Koldanda	13.36	146	eP	Pn	04 23 47.1	-2.8
	comp=E,16nm,0.4s						
GKN	Gorkha	13.63	142	eP	Pn	04 23 50.4	-3.2
	comp=E,23nm,0.5s						
DMN	Daman	14.19	142	eP	Pn	04 23 58.7	-2.6
	comp=E,12nm,0.5s						
BVAR	Borovoye Array	14.22	348	Pn	Pn	04 24 01.1	-0.2
	comp=E,0.2nm,0.3s,baz=145,slow=5.3,SNR=2.9						
GUN	Gumba	14.32	139	eP	Pn	04 23 59.8	-3.4
	comp=E,13nm,0.4s						
PKIN	Phulchoki	14.36	141	eP	Pn	04 24 00.8	-2.8
	comp=E,11nm,0.5s						
PKI	Pulchoki	14.37	141	eP	Pn	04 24 00.9	-2.9
	comp=E,2.9nm,0.2s						
AB31	Akbulak array	14.84	318	P	Pn	04 24 07.8	-2.0
	comp=E,1.7nm,0.6s,baz=125,slow=13,SNR=37						
ABKAR	Akbulak array	14.84	318	Pn	Pn	04 24 08.7	-1.1
ABKAR	Akbulak array	14.84	318	Pn	Pn	04 24 08.8	-1.1
RAMN	Ramite	15.47	139	eP	Pn	04 24 14.3	-4.3
	comp=E,21nm,0.6s						
ODAN	Odare	15.96	137	eP	Pn	04 24 20.5	-4.4
	comp=E,12nm,0.5s						
ZALV	Zalesovo Beam	16.13	21	Pn	Pn	04 24 25.1	-1.6
	comp=E,0.3nm,0.3s,baz=206,slow=9.9,SNR=9.4						
AKTO	Aktyubinsk	16.55	318	Pn	Pn	04 24 31.9	-0.2
	comp=E,0.3nm,0.3s,baz=127,slow=12,SNR=7.7						
AKTO	Aktyubinsk	16.55	318	⇓P	Pn	04 24 31.6	-0.5
	comp=E,4.4nm,0.8s						
ARU	Arti	20.46	333	P	P	04 25 18.5	+0.9
	comp=E,1.7nm,0.2s,baz=194,slow=17,SNR=2.5						
ARU	Arti	20.46	333	P	P	04 25 16.9	-0.6
GNI	Garni	23.44	282	P	P	04 25 47.7	-2.0
	comp=E,1.9nm,0.5s,baz=60,slow=20,SNR=2.3						
GNI				LR	LR	04 36 30.8	
	comp=E,46nm,20.1s,baz=47,slow=41						
SONM	Songino Array	24.05	59	P	P	04 25 55.9	+0.5
	comp=E,0.4nm,0.6s,baz=266,slow=9.7,SNR=3.5						
KIRV	Kirov	25.50	328	P	P	04 26 07.4	-0.8
	comp=E,7.2nm,0.5s,baz=40,slow=0.5,SNR=4.6						
BR131	Keskin Array S	31.91	284	P	P	04 27 05.3	-0.6
BR131				IAmb	IAmb	04 27 14.8	
	comp=Z,4.1nm,1.1s						
BRTR	Keskin Array B	31.91	284	P	P	04 27 05.9	0.0
	comp=Z,1.8nm,0.7s,baz=93,slow=7.7,SNR=10						
AKASG	Malin Array Be	34.01	305	P	P	04 27 22.7	-1.2
	comp=Z,0.8nm,0.5s,baz=79,slow=7.1,SNR=3.4						
FINES	FINESS Array B	37.23	323	P	P	04 27 51.1	-0.2
	comp=Z,1.9nm,0.5s,baz=108,slow=8.7,SNR=10						
ARCES	ARCESS Array B	40.01	335	P	P	04 28 14.7	0.0
	comp=Z,3.8nm,0.9s,baz=103,slow=3.9,SNR=6.3						
KLR	Kul'dur	40.85	57	P	P	04 28 21.9	0.0
	comp=Z,0.5nm,0.4s,baz=263,slow=6.4,SNR=4.4						
VYHS	Vyhne	40.88	302	eP	P	04 28 24.4	+2.2
GERES	GERESS Array B	44.17	304	P	P	04 28 49.3	+0.3
	comp=Z,0.4nm,0.6s,baz=55,slow=8.5,SNR=3.0						
NB2	NORSAR Subarra	44.31	321	P	P	04 28 49.0	-0.9
	comp=Z,0.9nm,0.5s,baz=90,slow=7.9						
NOA	NORSAR Array B	44.31	321	P	P	04 28 49.2	-0.7
	comp=Z,1.0nm,0.5s,baz=91,slow=7.8,SNR=4.0						
MAJO	Matsushiro	48.88	72	P	P	04 29 24.9	-1.2
ESDC	Sonseca Array	59.16	298	P	P	04 30 39.9	-1.2
	comp=Z,0.8nm,0.6s,baz=55,slow=6.7,SNR=7.0						
COLD	Coldfoot	68.43	17	P	P	04 31 41.0	-0.7
COLD				IAmb	IAmb	04 31 43.7	
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	69.10	270	P	P	04 31 44.5	-2.1
	comp=Z,0.6nm,0.4s,baz=50,slow=5.7,SNR=6.2						
TORD	Torodi Ar. Bea	69.10	270	P	P	04 31 44.8	-1.9
C36M	Paulatuk	70.82	7	P	P	04 31 55.9	-0.5
C36M				IAmb	IAmb	04 32 00.1	
	comp=Z,3.2nm,0.5s						
ILAR	Eielson Array	71.22	18	P	P	04 31 57.8	-1.1
	comp=Z,1.0nm,0.8s,baz=318,slow=4.5,SNR=15						
ILAR	Eielson Array	71.22	18	P	P	04 31 58.3	-0.6
DBIC	Dimbokro	78.15	269	LR	LR	05 11 03.2	
	comp=Z,96nm,19.4s,baz=128,slow=39						
YKA	Yellowknife Ar	78.34	5	P	P	04 32 39.6	-0.4
	comp=Z,1.2nm,0.7s,baz=353,slow=5.4,SNR=27						
WRA	Warramunga Arr	80.68	125	P	P	04 32 51.2	-2.3
	comp=Z,0.5nm,0.6s,baz=318,slow=5.0,SNR=4.7						
ASAR	Alice Springs	83.16	128	P	P	04 33 04.3	-2.1
	comp=Z,0.5nm,0.6s,baz=314,slow=4.7,SNR=5.0						
ASAR	Alice Springs	83.16	128	P	P	04 33 04.6	-1.8

IDC ***14*** *04:48:34.5±0.8, 30°.56N×142°.12E, h0^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/43, mbtmp3.8/12, ML3.4/3, MS2.4/1, Ms1 2.4/1, ms1mx2.1/40, Error ellipse: s-maj=31.2km s-min=15.4km az=80.0*

JMA ***14*** *04:48:35.1±0.2, 30°.67N×142°.35E, h45^{km}, M4.1*

ISC 14 04:48:39.5±0.7**, 30°.63N**±0°.06×**142°.1E**±0°.1**, h35**^{km}**, n19,**
σ1ˢ51/24**, mb3.9**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.16	322	P	Pn	04 49 25.1	-1.7
JHJ	Hachijo jima 2	3.18	322	Pn	Pn	04 49 25.4	-1.8
	5.3nm,0.3s,baz=72,slow=20,SNR=2.0						
JHJ				Sn	Sn	04 50 03.2	-0.6
	13nm,0.3s,baz=41,slow=19,SNR=2.9						
CBIJ	Chichi jima	3.52	179	eS	Sn	04 50 10.4	-1.7
JCJ	Chichijima	3.52	179	Pn	Pn	04 49 31.4	-0.3
	11nm,0.3s,baz=88,slow=22,SNR=7.5						
JCJ				Sn	Sn	04 50 10.6	-1.5
	24nm,0.3s,baz=96,slow=23,SNR=6.7						
BSO1	Boso 1	4.13	347	P	Pn	04 49 37.8	-1.8
BSO1				S	Sn	04 50 24.9	-1.5
JRY	Ryogami san	6.01	334	eS	Sn	04 51 12.7	-0.9
MJAR	Matsushiro Arr	6.74	332	Pn	Pn	04 50 15.3	-0.7
	0.5nm,0.3s,baz=161,slow=11,SNR=23						
MJAR				LR	LR	04 52 53.9	
	comp=Z,32nm,20.4s,baz=325,slow=38						
MAT	Matsushiro	6.74	332	P	Pn	04 50 16.1	+0.1
MAT				eS	Sn	04 51 28.9	-2.7
JFK	Kawauchi	6.80	352	P	Pn	04 50 14.1	-2.8
KLR	Kul'dur	20.18	340	P	P	04 53 10.0	-0.9
	0.7nm,0.6s,baz=178,slow=12,SNR=2.4						
SONM	Songino Array	32.21	312	P	P	04 55 06.1	+1.7
	0.4nm,0.6s,baz=128,slow=9.7,SNR=3.9						
ZALV	Zalesovo Beam	46.83	317	PcP	PcP	04 58 38.7	+0.4
	0.7nm,0.5s,baz=106,slow=5.1,SNR=3.2						
MKAR	Makanchi Array	48.24	307	P	P	04 57 17.1	+0.2
	1.2nm,0.7s,baz=91,slow=9.6,SNR=10						
MKAR				PcP	PcP	04 58 43.1	-0.5
	0.1nm,0.5s,baz=79,slow=3.1,SNR=2.3						
WRA	Warramunga Arr	50.83	189	P	P	04 57 36.0	-0.8
	3.3nm,0.6s,baz=6.7,slow=7.6,SNR=17						
ASAR	Alice Springs	54.55	189	P	P	04 58 03.8	-0.5
	0.5nm,0.5s,baz=0.8,slow=5.1,SNR=8.3						
ILAR	Eielson Array	54.67	30	P	P	04 58 05.0	+0.3
	0.4nm,1.0s,baz=281,slow=6.2,SNR=3.1						
FINES	FINESS Array B	74.77	333	P	P	05 00 16.2	+0.5
	0.9nm,0.4s,baz=72,slow=6.2,SNR=8.6						
KBZ	Khabaz	75.58	312	P	P	05 00 23.2	+2.6
	1.3nm,0.8s,baz=150,slow=4.6,SNR=3.6						
NVAR	Mina Array Bea	78.40	52	P	P	05 00 38.5	+1.6
	0.2nm,0.3s,baz=309,slow=7.5,SNR=2.5						

IDC 14 04:48:48.9±1.5**, 9°.32S×112°.97E, h0**^{km}**, mb3.5**/3**,**
mb1 3.8/4**, mb1mx3.5**/35**, mbtmp3.6**/4**, ML3.2**/1**, Error ellipse: s-maj=102.5km s-min=11.2km az=49.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.08	127	Pn	Pn	04 52 22.9	-0.5
	0.1nm,0.3s,baz=282,slow=9.3,SNR=2.2						

FITZ				Sn	Sn	04 54 58.6	-13
	0.1nm,0.3s,baz=108,slow=9.6,SNR=3.3						
WRA	Warramunga Arr	23.19	119	P	P	04 53 57.6	0.0
	0.8nm,0.9s,baz=292,slow=11,SNR=3.2						
ASAR	Alice Springs	24.58	128	P	P	04 54 10.9	0.0
	1.1nm,0.6s,baz=305,slow=9.3,SNR=14						
MKAR	Makanchi Array	62.20	337	P	P	04 59 12.2	-0.1
	0.3nm,0.4s,baz=158,slow=6.7,SNR=6.0						

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*UCC **14** 04:53:55.9±1.0, 51°.23N×6°.85E, h6km±2km, ML1.9*
*BNS **14** 04:53:55.8±0.7, 51°.24N×6°.86E, h2km±7km, ML1.9*
BNS Felt IV EMS.
*BUG **14** 04:53:55.8±0.0, 51°.24N×6°.94E, h4km±4km, MD2.4/7, ML2.8/7*
*LDG **14** 04:53:56.3±0.1, 51°.24N×6°.87E, h3km, Md2.4/2, Ml2.5/20, Error ellipse: s-maj=1.4km s-min=1.0km az=129.0*
*BGR **14** 04:53:56.0±0.2, 51°.20N×6°.92E, h10km, ML2.3/6, Error ellipse: s-maj=3.3km s-min=2.2km az=106.0*
ISC 14 04:53:55.2±0.8**, 51°.22N**±0°.02×**6°.86E**±0°.02**, h14**km±6km**,**
n88, σ0ˢ93/148**, 19C-34D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.14	22	⇑iPg	Pg	04 53 58.4	-0.6
LAUG				⇑eSg	Sg	04 54 00.3	-1.2
	658nm,0.2s						
HES	Velbert-Hesper	0.19	37	ePg	Pg	04 53 58.4	-1.3
PLH	Pulheim	0.22	187	i Pg	Pg	04 54 00.3	+0.3
PLH				eSg	Sg	04 54 03.5	+0.2
BD01	Bergheim Laure	0.29	209	⇑ePg	Pb	04 54 02.3	0.0
BD03	Millendorf	0.30	220	⇑ePg	Pg	04 54 02.0	+0.6
BD07	Roetschberg	0.30	203	⇑ePg	Pb	04 54 02.3	0.0
BNS	Bensberg	0.32	142	⇓ePg	Pb	04 54 02.8	0.0
BNS				eSg	Sb	04 54 07.5	-0.3
BA05	Sindorf	0.33	202	⇑ePg	Pb	04 54 03.0	+0.2
BKLB	Ruhr-Universit	0.34	49	Pg	Pg	04 54 01.9	-0.3
BUG	Bochum--Univer	0.34	49	⇑ePg	Pg	04 54 02.0	-0.2
BUG				eSg	Sg	04 54 06.6	-0.3
BULI	Ruhr-Universit	0.34	47	ePg	Pg	04 54 02.2	-0.1
BULI				eSg	Sg	04 54 07.0	-0.1
ENTS	Ennepetalsperr	0.35	86	ePg	Pg	04 54 02.4	+0.1
ENTS				eSg	Sg	04 54 06.7	-0.5
BTEZ	Ruhr-Universit	0.35	48	Pg	Pg	04 54 02.3	-0.1
HOBG	Hohbusch	0.38	128	⇓ePg	Pb	04 54 03.7	0.0
HOBG				⇓iSg	Sb	04 54 09.2	-0.3
	191nm,0.6s						
BZER	Hlnxe	0.40	1	ePg	Pg	04 54 03.7	+0.4
BZER				eSg	Sg	04 54 09.3	+0.5
HKB	Herkenbosch	0.44	266	bP	Pg	04 54 04.1	+0.2
HKB				dS	Sg	04 54 10.7	+0.9
WBS	Wahnbachtalspe	0.49	147	ePg	Pg	04 54 05.2	+0.2
WBS				eSg	Sg	04 54 12.2	+0.7
	58nm,0.3s						
BAVN	Auguste-Victor	0.55	17	ePg	Pb	04 54 06.4	-0.2
BAVN				eSg	Sb	04 54 14.2	0.0
GSH	Grosshau	0.57	212	ePg	Pg	04 54 06.6	+0.2
GSH				eSg	Sb	04 54 15.2	+0.3
	42nm,0.1s						
STB	Steinbach	0.62	181	⇑ePg	Pb	04 54 08.3	+0.4
TDN	Todenfeld	0.65	175	ePg	Pb	04 54 08.5	+0.2
TDN				eSg	Sg	04 54 17.1	+0.7
	37nm,0.3s						
KLL	Kalltalsperre	0.67	211	ePg	Pg	04 54 08.2	-0.1
DREG	Dreilaegerbach	0.68	216	⇑ePg	Pg	04 54 08.5	0.0
AHRW	Bad Neuenahr-A	0.69	168	⇑ePg	Pb	04 54 09.4	+0.4
AHRW				eSg	Sb	04 54 18.9	+0.5
HMES	Hamm, Michael-	0.70	51	eSg	Sg	04 54 17.8	-0.3
SORT	Sorpetalsperre	0.71	79	ePg	Pg	04 54 08.8	-0.3
SORT				eSg	Sg	04 54 17.6	-0.9
	52nm,0.1s						
OLFT	Oleftalsperre	0.78	201	eSg	Sb	04 54 21.5	+0.6
BOPT	Opiter	0.78	263	dP	Pg	04 54 10.2	-0.1
BOPT				dS	Sb	04 54 22.4	+1.5
	comp=E,82nm,0.2s						
BTNL	Ternell	0.78	216	bP	Pg	04 54 10.2	-0.2
BTNL				dS	Sg	04 54 21.4	+0.7
	comp=N,21nm,0.2s						
MEM	Membach	0.81	222	κP	Pg	04 54 10.9	-0.1
MEM				dS	Sg	04 54 22.1	+0.4
	comp=N,16nm,0.2s						
MEM	Membach	0.81	222	ePg	Pg	04 54 10.9	-0.1
MEM				eSg	Sb	04 54 22.4	+0.4
BEBN	Eben Emael	0.86	241	bP	Pg	04 54 11.9	0.0
BEBN				dS	Sb	04 54 24.3	+1.2
LAGB	Langenfeld Gru	0.87	170	ePg	Pb	04 54 12.6	+0.5
BHE	Schloss Buerre	0.89	167	ePg	Pb	04 54 12.8	+0.4
BHE				eSg	Sb	04 54 25.1	+0.9
	comp=N,35nm,0.1s						
HILG	Hillesheim	0.93	187	ePg	Pb	04 54 14.2	+1.0
KOE	Koeppel	0.97	145	⇑ePg	Pb	04 54 14.6	+0.8
KASTN	Kahler Asten	0.98	90	⇑ePg	Pb	04 54 14.2	+0.3
KASTN				eSg	Sg	04 54 26.5	-0.4
BHOU	Houvegnez	1.02	212	κP	Pg	04 54 14.8	-0.2
BHOU				dS	Sg	04 54 27.8	-0.4
	comp=E,44nm,0.1s						
BSTI	Sart Tilman	1.04	233	κP	Pg	04 54 15.2	0.0
LOH	Wallersheim-Lo	1.06	191	ePg	Pg	04 54 15.8	+0.1
LOH				eSg	Sb	04 54 30.3	+1.3
	comp=E,50nm,0.3s						
BGG	Burgeitz	1.06	163	⇑ePg	Pb	04 54 15.9	+0.7
BMOL	Mol	1.11	271	dP	Pb	04 54 16.5	+0.3
BMOL				dS	Sg	04 54 31.8	+0.5
	comp=N,7.2nm,0.1s						
NAST	IGS Nastaetten	1.21	148	⇑ePg	Pg	04 54 18.4	0.0
LKLB	Kalborn	1.22	203	dP	Pn	04 54 18.2	+0.4
LKLB				dS	Sb	04 54 33.8	+0.3
IBBN	Ibbenburen	1.23	27	ePg	Pg	04 54 19.0	+0.2
IBBN				eSg	Sn	04 54 35.8	+1.6
IBBE	Ibbenbueren Ea	1.23	28	ePn	Pg	04 54 18.8	-0.1
IBBE				ePg	Pg	04 54 18.8	-0.1
BCLA	Clavier	1.27	232	bP	Pn	04 54 19.3	+0.7
BCLA				dS	Sb	04 54 35.3	+0.2
	comp=N,12nm,0.1s						
ABH	Alteburg	1.41	162	ePn	Pn	04 54 21.4	+0.9
ABH				ePg	Pg	04 54 22.4	+0.1
ABH				eSg	Sn	04 54 39.2	+0.4
TNS	Taunus Mts	1.42	134	⇑ePn	Pn	04 54 21.4	+0.8
TNS				Pg	Pb	04 54 21.8	+0.3
TNS				eSg	Sg	04 54 40.9	-0.1
RCHB	Rochefort	1.49	225	κP	Pn	04 54 22.1	+0.6
RIVT	Riveris	1.51	182	ePn	Pn	04 54 23.0	+1.2
RIVT				eSg	Sn	04 54 42.1	+0.8
BMRD	Maredsous	1.61	236	κP	Pn	04 54 24.3	+1.0
WLF	Walferdange	1.62	196	dP	Pn	04 54 22.6	-0.7
WLF				dS	Sb	04 54 45.5	+0.4
	comp=N,12nm,0.4s						
WLF	Walferdange	1.62	196	eSg	Sb	04 54 46.2	+1.0
GIVF	Givet	1.71	230	ePn	Pn	04 54 26.0	+1.4
GIVF	Givet	1.71	230	ePg	Pg	04 54 28.2	+0.1
GIVF				eSn	Sn	04 54 47.2	+1.0
GIVF				eSg	Sg	04 54 49.9	-0.4
	comp=N,34nm,0.3s						
DOU	Dourbes	1.83	233	κP	Pn	04 54 27.0	+0.8
DOU				dS	Sn	04 54 49.1	0.0
	comp=N,7.9nm,0.2s						
GTTG	Gottingen	1.97	79	eSg	Sb	04 54 56.5	+1.1
UBBA	Unterbreizbach	2.02	100	eSg	Sb	04 54 56.8	+0.2
BAIF	Baives	2.05	237	ePn	Pn	04 54 30.7	+1.5
BAIF	Baives	2.05	237	ePg	Pg	04 54 34.7	+0.2
BAIF				eSn	Sn	04 54 55.4	+0.9
BAIF				eSg	Sg	04 54 59.9	-1.2
	comp=N,15nm,0.3s						
PAGF	Fort de Pagny	2.77	196	ePn	Pn	04 54 40.2	+1.1
PAGF	Fort de Pagny	2.77	196	ePg	Pg	04 54 48.7	+0.5
CDF	Champ du Feu	2.82	174	ePn	Pn	04 54 40.6	+0.7
CDF				eSn	Sn	04 55 14.4	+0.6
CDF				eSg	Sg	04 55 25.9	0.0
	comp=N,2.0nm,0.2s						
SAVF	Savonnieres en	2.84	204	ePn	Pn	04 54 40.8	+0.7
SAVF	Savonnieres en	2.84	204	ePg	Pg	04 54 49.7	+0.1
SAVF				eSn	Sn	04 55 13.9	-0.1
SAVF				eSg	Sg	04 55 26.3	0.0
	comp=N,6.9nm,0.3s						
MEZF	Maizieres J'vi	2.96	204	ePn	Pn	04 54 42.9	+1.2
MEZF	Maizieres J'vi	2.96	204	ePg	Pg	04 54 51.9	0.0
	baz=24						
MEZF				eSg	Sg	04 55 29.2	-1.1
	comp=N,1.4nm,0.2s						
HAU	Haudompre	3.23	186	ePn	Pn	04 54 47.2	+1.7
HAU	Haudompre	3.23	186	ePg	Pg	04 54 56.9	-0.3
HAU				eSn	Sn	04 55 23.9	+0.1
HAU				eSg	Sg	04 55 38.7	-0.3
	comp=N,4.4nm,0.3s						
SFTF	Sexfontaines	3.24	202	ePg	Pg	04 54 56.9	-0.4
SFTF				eSg	Sg	04 55 37.9	-1.3
	comp=N,3.0nm,0.3s						
HINF	Hinteralfeld	3.41	180	ePn	Pn	04 54 48.9	+1.0
CLL	Collm	3.86	86	eSg	Sg	04 55 57.0	-2.1
LOR	Lormes	4.42	208	ePn	Pn	04 55 02.8	+1.0
LOR	Lormes	4.42	208	ePg	Pg	04 55 18.5	-1.2
	baz=28						
LOR				eSn	Sn	04 55 51.6	-1.3
LOR				eSg	Sg	04 56 15.2	-1.7
	comp=N,1.6nm,0.3s						
CABF	La Chapelle	4.64	187	ePn	Pn	04 55 05.9	+1.0
CABF				eSn	Sn	04 55 57.3	-1.3
	comp=N,0.5nm,0.3s						
SSF	Saint Saulge	4.71	209	ePn	Pn	04 55 05.7	-0.1
SSF	Saint Saulge	4.71	209	ePg	Pg	04 55 23.4	-1.9
SSF				eSg	Sg	04 56 24.6	-1.6
	comp=N,1.4nm,0.3s						
SMF	Signal de Mont	4.99	205	ePn	Pn	04 55 09.8	+0.1
SMF				eSg	Sg	04 56 32.8	-2.5
	comp=N,1.0nm,0.2s						
AVF	Avril sur Loir	5.00	209	ePn	Pn	04 55 09.9	+0.2
AVF				eSn	Sn	04 56 05.6	-1.6
	comp=N,0.2nm,0.2s						
AVF				eSg	Sg	04 56 33.0	-2.5
	comp=N,0.7nm,0.3s						
LDF	La Druitiere	5.22	242	ePn	Pn	04 55 13.7	+0.9
LDF				eSn	Sn	04 56 10.8	-1.9
	comp=N,0.3nm,0.2s						
FLN	La Foliniere	5.33	245	ePn	Pn	04 55 15.0	+0.6
	baz=65						
FLN				eSn	Sn	04 56 13.8	-1.8
	comp=N,1.5nm,0.3s,baz=65						
BGF	Bois d'Agland	5.36	211	ePn	Pn	04 55 15.0	+0.2
BGF				eSn	Sn	04 56 13.9	-2.4
	comp=N,3.8nm,0.4s						
BGF				eSg	Sg	04 56 43.4	-3.9
	comp=N,2.2nm,0.3s						
GRR	Gorron	5.74	243	ePn	Pn	04 55 20.5	+0.5
TCF	Toulx Ste Croi	5.81	214	ePn	Pn	04 55 21.8	+0.8
MBDF	Montbardon	6.50	181	ePn	Pn	04 55 31.6	+1.1
MFF	Saint Martin d	6.53	228	ePn	Pn	04 55 31.0	+0.2
MFF				eSn	Sn	04 56 42.1	-2.9
	comp=N,0.3nm,0.2s						
QUIF	Quistinic	7.31	247	ePn	Pn	04 55 41.9	+0.5

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*KRNET **14** 05:01:35.5±0.1, 43°.36N×78°.31E, h13km, mb2.5*
*IASPEI **14** 05:01:41.9±0.9, 43°.05N±0°.03×78°.35E±0°.02, h18km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=168.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*NNC **14** 05:01:42.6±0.5, 43°.12N×78°.34E, h0km, mb2.6, mpv2.7, Error ellipse: s-maj=5.1km s-min=2.6km az=177.0*
*SOME **14** 05:01:42.9, 43°.13N×78°.33E, h10km*
ISC 14 05:01:42.3±0.8**, 43°.07N**±0°.03×**78°.34E**±0°.02**, h17**km±5km**,**
n28, σ1ˢ05/55**, 8C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.05	105	eP	Pg	05 01 45.6	0.0
	291nm,0.1s						
SATY				eS	Sg	05 01 47.6	-0.2
	626nm,0.1s						
SATY	Saty	0.05	105	P	Pg	05 01 45.6	0.0
	291nm,0.1s						
SATY				S	Sg	05 01 47.6	-0.2
	626nm,0.1s						
KPKS	Kokpek	0.47	33	eP	Pg	05 01 51.2	-0.6
	9.4nm,0.1s						
KPKS				eS	Sg	05 01 56.9	-1.3
	32nm,0.2s						
UZB	Uzynbulak	0.51	81	eP	Pg	05 01 52.6	+0.1
	4.9nm,0.1s						
UZB				eS	Sg	05 01 59.4	0.0
	31nm,0.1s						
UZB	Uzynbulak	0.51	81	P	Pg	05 01 52.6	+0.1
	4.9nm,0.1s						
UZB				S	Sg	05 01 59.4	0.0
	31nm,0.1s						
ANVS	Anan'yevo	0.57	240	⇓iP	Pg	05 01 49.9	-3.8
	baz=20						
ANVS				⇓iS	Sg	05 02 00.7	-0.6
	baz=20						
PRZ	Przheval'sk	0.59	175	⇑iP	Pg	05 01 52.1	-1.9
	baz=76						
PRZ				⇑iS	Sb	05 02 04.7	+2.2
	baz=76						
PDGK	Podgornoye	0.88	73	P	Pg	05 01 59.3	-0.2
	0.7nm,0.2s						
PDGK				S	Sg	05 02 10.9	-0.2
	3.0nm,0.2s						
PDGK	Podgornoye	0.88	73	⇑P	Pg	05 01 58.7	-0.7
	1.4nm,0.6s						
PDGK				⇑S	Sg	05 02 10.6	-0.5
	2.9nm,0.4s						
KOTS	Kotyrbulak	0.91	281	eP	Pg	05 01 59.9	-0.1
	5.7nm,0.1s						
KOTS				eS	Sg	05 02 12.1	+0.1
	23nm,0.2s						
KOTS	Kotyrbulak	0.91	281	P	Pg	05 01 59.9	-0.1
	5.7nm,0.1s						
KOTS				S	Sg	05 02 12.1	+0.1
	23nm,0.2s						
MNBS	Baschi	1.01	3	eP	Pb	05 02 01.5	+0.1
	4.3nm,0.1s						
MNBS				eS	Sn	05 02 14.9	-0.8
	16nm,0.2s						
MNBS	Baschi	1.01	3	P	Pb	05 02 01.5	+0.1
	4.3nm,0.1s						
MNBS				S	Sn	05 02 14.9	-0.8
	16nm,0.2s						
TNSS	Tian-Shan	1.02	268	eP	Pg	05 02 02.0	-0.1
	1.4nm,0.1s						
TNSS				eS	Sg	05 02 15.5	0.0
	4.6nm,0.3s						
TNSS	Tian-Shan	1.02	268	P	Pg	05 02 02.0	-0.1
	1.4nm,0.1s						
TNSS				S	Sg	05 02 15.5	0.0
	4.6nm,0.3s						
CHKK	Chushkaly	1.25	309	eP	Pn	05 02 05.4	+0.3
	1.4nm,0.1s						
CHKK				eS	Sb	05 02 21.6	+0.1
	7.8nm,0.3s						
CHKK	Chushkaly	1.25	309	P	Pn	05 02 05.4	+0.3
	1.4nm,0.1s						
CHKK				S	Sb	05 02 21.5	+0.1
	7.8nm,0.3s						
IZV	Izvestkoviy	1.26	269	eP	Pb	05 02 06.7	+0.9
	0.8nm,0.1s						
IZV				eS	Sn	05 02 23.7	+1.7
	4.5nm,0.2s						
IZV	Izvestkoviy	1.26	269	P	Pb	05 02 06.7	+0.9
	0.8nm,0.1s						
IZV				S	Sn	05 02 23.7	+1.7
	4.5nm,0.2s						
KDJ	Kajisay	1.27	223	⇑iP	Pn	05 02 03.6	-1.9
	baz=14						
KDJ				⇑iS	Sb	05 02 23.9	+1.9
	baz=14						
KTMS	Ketmen	1.52	75	eP	Pb	05 02 10.4	+0.3
	2.7nm,0.2s						
KTMS				eS	Sb	05 02 30.0	+0.8
	3.7nm,0.1s						
KTMS	Ketmen	1.52	75	P	Pb	05 02 10.5	+0.3
	2.7nm,0.2s						
KTMS				S	Sb	05 02 30.0	+0.8
	3.7nm,0.1s						
DJR	Jarkent	1.64	39	eP	Pb	05 02 12.6	+0.4
	1.1nm,0.1s						
DJR				eS	Sg	05 02 34.2	-1.1
	4.8nm,0.1s						
DJR	Jarkent	1.64	39	P	Pb	05 02 12.6	+0.4
	1.1nm,0.1s						
DJR				S	Sg	05 02 34.2	-1.1
	4.8nm,0.1s						
KUU	Kurty	1.67	300	eP	Pb	05 02 13.1	+0.5
	1.0nm,0.2s						
KUU				eS	Sg	05 02 34.9	-1.2
	7.0nm,0.3s						
KUU	Kurty	1.67	300	P	Pb	05 02 13.1	+0.5
	1.0nm,0.2s						
KUU				S	Sg	05 02 34.9	-1.2
	7.0nm,0.3s						
BOOM	Boomskoye usch	1.86	253	⇑iP	Pn	05 02 12.0	-1.5
	baz=44						
BOOM				⇑iS	Sn	05 02 38.4	+1.7
	baz=44						
TKM2	Tokmak 2	2.02	267	⇓Pg	Pb	05 02 19.7	+1.1
	0.6nm,0.3s						
TKM2				⇓Lg	Lg	05 02 47.5	
	1.8nm,0.5s						

WEL 14 05:03:15.7±1.1**, 32°S**±20°×**18°0E**±2°9**, h389**km±48km**,**
M4.1/15**, mB4.5**/6**, MLv4.4**/15**, Mw(mB)3.7**/6**, Error ellipse: s-maj=0.0km s-min=0.0km az=115.1, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.75	191	P	Pn	05 04 44.8	-0.2
MXZ				S	S	05 05 58.0	+0.4
WMGZ	Waiomatatini S	5.98	189	P	Pn	05 04 47.5	0.0
WMGZ				S	S	05 06 02.1	-0.2
HAZ	Te Kaha	6.03	194	P	Pn	05 04 47.9	-0.1
HAZ				S	S	05 06 05.2	+1.9
PKGZ	Pakihiroa	6.10	192	P	Pn	05 04 48.9	0.0
PUZ	Puketiti	6.25	190	P	Pn	05 04 49.8	-0.7
PUZ				S	S	05 06 07.0	-0.9
RUGZ	Raukumara Rang	6.25	194	P	Pn	05 04 50.4	-0.2
TWGZ	Tauwhareparae	6.40	192	P	Pn	05 04 53.5	+1.3
OPRZ	Ohinepanea	6.44	202	P	Pn	05 04 54.7	+2.1
MWZ	Matawai	6.64	195	P	Pn	05 04 50.4	-4.4
MWZ				S	S	05 06 16.9	+1.1
CNGZ	Carnagh Statio	6.66	190	P	P	05 04 55.9	0.0
URZ	Urewera	6.67	197	P	Pn	05 04 54.0	-1.1
URZ				S	S	05 06 19.5	+3.3
TKGZ	Te Karaka	6.68	192	P	P	05 04 55.7	-0.3
TKGZ				S	S	05 06 17.4	+0.9
TOZ	Tahuroa Road	6.73	209	P	P	05 04 58.8	+2.1
MKRZ	Makatiti	6.74	202	P	Pn	05 04 47.9	-8.2
MKRZ				S	S	05 06 13.1	-4.8
RAGZ	Rawiri	6.82	195	P	Pn	05 04 56.5	-0.4
RIGZ	Rimuhau	6.95	192	P	Pn	05 04 57.5	-0.8
RIGZ				S	S	05 06 23.0	+0.7
MUGZ	Murupara	6.96	199	P	Pn	05 04 58.1	-0.3
RTZ	Ruatahuna	7.04	197	P	Pn	05 04 58.5	-0.9
PRGZ	Paritu Road	7.14	191	P	P	05 05 01.1	-0.2
PRGZ				S	S	05 06 27.4	+1.2
MRHZ	Matea Rd	7.39	200	P	Pn	05 05 03.7	+0.3

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*IDC **14** 05:04:09.6±9.0, 50°.30N×179°.36E, h0km, mb2.9/2, mb1 3.8/4, mb1mx3.3/49, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=205.0km s-min=41.3km az=173.0*
*AEIC **14** 05:04:25±0.9, 51°.60N±0°.08×178°.48E±0°.08, h86km±6km, ML3.3, Error ellipse: s-maj=11.9km s-min=7.2km az=190.0*
*NEIC **14** 05:04:25.1±0.9, 51°.63N±0°.07×178°.55E±0°.05, h88km±7km, Error ellipse: s-maj=10.7km s-min=3.4km az=161.0*
ISC 14 05:04:25.0±1.8**, 51°.7N**±0°.3×**178°.50E**±0°.06**, h88**km**, n46,**
σ1ˢ25/45**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSE	Little Sitkin	0.22	11		Pn	05 04 38.4	+0.5
LSSA	Little Sitkin	0.23	2		Pn	05 04 38.4	+0.5
LSPA	Little Sitkin	0.25	10		Pn	05 04 38.4	+0.4
LSNW	Little Sitkin	0.26	2		Pn	05 04 38.3	+0.4
AMKA	Amchitka	0.60	124		Pn	05 04 39.8	-0.5
AMKA					Sn	05 04 50.9	-0.9
CETU	Semis' Tuman	0.67	67		Pn	05 04 41.6	+0.7
CESW	Semis' Southwe	0.69	74		Pn	05 04 41.4	+0.2
CEAP	Semis' Anvil P	0.73	66		Pn	05 04 42.1	+0.5
CERB	Semis' Cerberu	0.73	72		Sn	05 04 54.2	+0.1
CERAA	Semis' Rag'd T	0.76	75		Pn	05 04 42.2	+0.3
GALAA	Gareloi Lava P	1.70	87		Pn	05 04 53.3	+0.2
GAEA	Gareloi East	1.71	87		Pn	05 04 53.1	-0.2
TASE	Tanaga Southea	2.15	85		Pn	05 04 59.2	0.0
TAFP	Tanaga Falls P	2.19	84		Pn	05 04 59.4	-0.2
TAFP					Sn	05 05 26.0	-0.1
KIMD	Kanaga Island	2.65	87		Pn	05 05 05.6	-0.1
KICM	Kanaga Island	2.68	84		Pn	05 05 06.3	+0.2
KIKV	Kanaga Island	2.69	85		Pn	05 05 06.3	0.0
SMY	Shemya	2.89	292		Pn	05 05 10.6	+1.7
SMY					Sn	05 05 43.8	+1.1
ADK	Adak	2.99	85		Pn	05 05 09.8	-0.5
ADAG	Mount Adagdak	3.05	83		Pn	05 05 10.6	-0.5
GSTD	Great Sitkin T	3.33	82		Pn	05 05 14.6	-0.4
GSMY	Great Sitkin M	3.39	82		Pn	05 05 15.2	-0.4
GSTR	Great Sitkin T	3.39	81	Pn	Pn	05 05 15.6	-0.1
KOWE	Korovin West	4.52	79		Pn	05 05 31.6	+0.5
ATKA	Atka Island	4.54	81		Pn	05 05 30.9	-0.3
ATKA					Sn	05 06 23.9	+1.1
KOKL	Mount Kliuchef	4.55	79		Pn	05 05 31.7	+0.2
NIKH	Nikolski High	7.85	76		Pn	05 06 17.1	+0.9
OKSP	Okmok Steeple	8.21	74		Pn	05 06 22.8	+1.6
OKSO	Okmok South	8.30	73		Pn	05 06 24.5	+2.0
MAPS	Pakushin South	9.07	71		Pn	05 06 35.0	+2.1
MGOD	Makushin Gods	9.11	71		Pn	05 06 35.4	+1.8
MSW	Makushin Switc	9.18	70		Pn	05 06 36.1	+1.6
MREP	Makushin Rep't	9.19	71		Pn	05 06 36.6	+2.0
MNAT	Makushin Natee	9.24	71		Pn	05 06 37.4	+2.2
UNV	Unalaska Valle	9.34	71		Pn	05 06 37.6	+1.1
AKUT	Akutan	9.80	70	Pn	Pn	05 06 44.4	+1.5
PETK	Petropavlovsk-	12.77	284	Pn	Pn	05 07 25.7	+2.6
	0.5nm,0.3s,baz=87,slow=19,SNR=6.4						
PETK	Petropavlovsk-	12.77	284		Pn	05 07 22.0	-1.1
SDPT	Sand Point	13.01	66	Pn	Pn	05 07 24.2	-1.9
CNBA	Chernabura Isl	13.46	68	Pn	Pn	05 07 29.1	-3.0
KDAK	Kodiak Island	17.67	59	P	P	05 08 22.8	-2.0
	0.8nm,0.3s,baz=254,slow=7.4,SNR=12						
ILAR	Eielson Array	22.06	40	P	P	05 09 13.3	+1.1
	0.3nm,0.7s,baz=251,slow=10,SNR=3.5						
H11N2	WAKE ISLAND Hy	33.20	200	T	T	05 46 10.2	
	baz=11,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	33.20	200	T	T	05 46 11.8	
	baz=11,slow=76,SNR=4.7						
H11N1	WAKE ISLAND Hy	33.21	200	T	T	05 46 14.4	
	baz=11,slow=76,SNR=5.8						
YKA	Yellowknife Ar	36.22	46	P	P	05 11 18.3	-0.5
	0.1nm,0.5s,baz=283,slow=6.3,SNR=4.1						

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*NIED **14** 05:06:10.4, 29°.46N×130°.93E, h64km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.79; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-1.33; $M_{r\theta}$0.75; $M_{\theta\phi}$-0.96; $M_{\phi r}$1.38; Fault plane solution: $M_0$2.44000×10^{15} NP1:ϕ_s30.00000°, δ65.00000°, λ87.00000°. NP2:ϕ_s216.00000°, δ25.00000°, λ96.00000°.*
*JMA **14** 05:06:10.4±0.1, 29°.46N×130°.93E, h64km±3km, M3.7*
*NEIC **14** 05:06:11.2±1.4, 29°.40N±0°.06×130°.8E±0°.1, h39km±11km, mb4.5/8, Error ellipse: s-maj=16.7km s-min=9.4km az=88.0*
*IDC **14** 05:06:15.1±3.3, 29°.62N×130°.76E, h58km±28km, mb3.6/12, mb1 3.7/15, mb1mx3.6/39, mbtmp3.8/15, ML3.4/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/48, Error ellipse: s-maj=26.1km s-min=19.5km az=68.0*
ISC 14 05:06:11.0±1.2**, 29°.42N**±0°.04×**130°.98E**±0°.06**, h40**km±12km**,**
n63, σ0ˢ74/67**, mb4.4**/26**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	Yakushimahirau	0.92	334	P	Pn	05 06 26.6	-0.8
JYAK				eS	Sn	05 06 39.1	-0.3
JMTN	Minamitane	0.98	356	P	Pn	05 06 27.6	-0.7
JMTN				eS	Sn	05 06 41.7	+0.7
JNN	Nakanoshima	1.05	294	P	Pn	05 06 28.5	-0.7
JNN				eS	Sn	05 06 43.0	+0.3
JTN	Tanegashima 3	1.23	0	P	Pn	05 06 31.5	-0.3
JTN				eS	Sn	05 06 47.4	+0.1
JKC	Kuchinoerabu	1.24	327	P	Pn	05 06 31.2	-0.7
JZK	Kikaishima	1.41	219	P	Pn	05 06 35.1	+1.0
JZK				S	Sn	05 06 52.4	+1.0
JAM	Amami Oshima	1.56	231	P	Pn	05 06 36.5	+0.2
JAM				eS	Sn	05 06 55.5	+0.2
JTAJ	Takarajima	1.57	261	P	Pn	05 06 36.5	+0.1
JTSR	Tashiro 2	1.75	358	P	Pn	05 06 38.5	-0.3
JTSR				eS	Sn	05 06 59.2	-0.7
JAMN	Amaminishikomi	1.96	234	P	Pn	05 06 42.2	+0.4
JAMN				S	Sn	05 07 06.4	+1.2

JNAR	Kushima--Naru	2.12	7	P	Pn	05 06 44.6	+0.7
JNAR				eS	Sn	05 07 09.9	+0.9
JSU	Suzuyama	2.13	348	P	Pn	05 06 43.6	-0.5
JSU	Suzuyama	2.13	348	Pn	Pn	05 06 43.7	-0.4
JNKG	Nichinankitago	2.27	9	P	Pn	05 06 46.3	+0.4
JNKG				eS	Sn	05 07 12.5	-0.1
JTK	Tokunoshima	2.41	228	P	Pn	05 06 48.5	+0.6
JTK				eS	Sn	05 07 17.3	+1.1
JYRO	Yoronjima	3.26	224	P	Pn	05 06 59.8	+0.2
JYRO				S	Sn	05 07 37.2	0.0
JMZ	Minamidaito 2	3.59	176	eS	Sn	05 07 43.7	-1.6
JMZ	Minamidaito 2	3.59	176	Pn	Pn	05 07 05.3	+1.2
JMZ					Sn	05 07 43.9	-1.3
JNU	Nakatsue	3.70	359	P	Pn	05 07 06.4	+0.8
	3.3nm,0.3s,baz=302,slow=1.3,SNR=8.0						
JNU	Nakatsue	3.70	359		Pn	05 07 05.8	+0.1
JMN	Monobe	4.96	29		Pn	05 07 23.7	+0.7
JTU	Tsushima	5.27	346	Pn	Pn	05 07 26.9	-0.3
JHS	Saijyo	5.86	17		Pn	05 07 35.7	+0.4
JWT	Wachi	6.95	31		Pn	05 07 51.5	+1.3
INU	Inuyama	7.81	39	Pn	Pn	05 08 06.9	+4.7
KSRS	Korea Array	8.41	343	P	Pn	05 08 12.7	+2.4
	baz=161,slow=15,SNR=6.4						
KSRS				LR	LR	05 11 32.1	
	comp=Z,77nm,19.6s,baz=160,slow=39						
USRK	Ussuriysk Ar.	14.78	3	P	P	05 09 42.6	+0.1
	baz=180,slow=11,SNR=8.2						
ASAJ	Asahikawa	17.35	29	LR	LR	05 17 19.7	
	comp=Z,82nm,20.4s,baz=131,slow=38						
KLR	Kul'dur	19.80	1	P	Pn	05 10 38.1	-1.5
	0.3nm,0.3s,baz=194,slow=6.0,SNR=18						
KLR				LR	LR	05 17 25.0	
	comp=Z,57nm,18.8s,baz=252,slow=34						
GUMO	Guam	20.34	138	LR	LR	05 17 23.0	
	comp=Z,73nm,21.6s,baz=84,slow=32						
SONM	Songino Array	26.41	321	P	P	05 11 43.0	-0.9
	1.2nm,0.7s,baz=134,slow=10,SNR=5.3						
SONM	Songino Array	26.41	321	IAmb	IAmb	05 11 47.0	
	comp=Z,1.1nm,0.8s						
ODAN	Odare	38.36	277	eP	P	05 13 27.7	-0.9
	comp=Z,5.8nm,0.2s						
GUN	Gumba	39.41	279	eP	P	05 13 38.0	+0.5
	comp=Z,39nm,0.4s						
PKI	Pulchoki	39.90	279	eP	P	05 13 41.5	-0.1
	comp=Z,28nm,0.8s						
PKIN	Phulchoki	39.91	279	eP	P	05 13 41.3	-0.3
	comp=Z,16nm,0.6s						
KKN	Kakani	39.96	279	eP	P	05 13 42.3	+0.4
	comp=Z,28nm,0.7s						
DMN	Daman	40.15	279	eP	P	05 13 43.7	+0.1
	comp=Z,5.6nm,0.3s						
DANN	Dangsing	41.13	280	eP	P	05 13 52.0	+0.3
	comp=Z,41nm,0.7s						
ZALV	Zalesovo Beam	41.29	320	P	P	05 13 51.5	-0.8
	comp=Z,0.8nm,0.3s,baz=125,slow=7.6,SNR=1.7						
MK31	Makanchi Array	41.34	309	P	P	05 13 52.8	-0.1
MKAR	Makanchi Array	41.34	309	P	P	05 13 53.1	+0.3
	comp=Z,1.9nm,0.7s,baz=96,slow=10.0,SNR=24						
MKAR	Makanchi Array	41.34	309	P	P	05 13 52.6	-0.2
KOLN	Koldanda	41.41	280	eP	P	05 13 54.0	+0.1
	comp=Z,24nm,0.9s						
PYUN	Piuthan	41.85	280	eP	P	05 13 58.0	+0.5
	comp=Z,38nm,0.8s						
KURK	Kurchatov	44.28	314	P	P	05 14 16.6	0.0
KURK				IAmb	IAmb	05 14 17.7	
	comp=Z,2.7nm,0.7s						
KURBB	Kurchatov Arra	44.32	314	P	P	05 14 17.1	+0.2
	comp=Z,1.7nm,0.6s,baz=101,slow=8.9,SNR=12						
WRA	Warramunga Arr	49.18	176	P	P	05 14 58.5	+3.4
	comp=Z,0.5nm,0.6s,baz=354,slow=9.2,SNR=2.7						
KK31	Karatay Array	49.63	303	P	P	05 14 57.6	-0.9
KK31				IAmb	IAmb	05 15 00.7	
	comp=Z,5.6nm,0.8s						
KKAR	Karatay Array	49.63	303	P	P	05 14 58.3	-0.2
BRVK	Borovoye	49.66	316	P	P	05 14 58.8	+0.2
ASAR	Alice Springs	52.85	177	P	P	05 15 26.7	+4.0
	comp=Z,0.3nm,0.5s,baz=10,slow=14,SNR=4.3						
ABKAR	Akbulak array	56.29	312	P	P	05 15 47.5	0.0
ABKAR				IAmb	IAmb	05 15 49.1	
	comp=Z,2.9nm,0.8s						
RND	Reindeer	59.78	31	P	P	05 16 12.0	+0.3
RND				IAmb	IAmb	05 16 27.8	
	comp=Z,7.7nm,1.1s						
ILAR	Eielson Array	60.49	29	P	P	05 16 18.0	+1.5
	comp=Z,0.4nm,0.9s,baz=263,slow=5.4,SNR=3.1						
KBZ	Khabaz	69.04	309	P	P	05 17 13.4	+0.9
	comp=Z,6.0nm,0.8s,baz=104,slow=6.4,SNR=18						
KBZ				LR	LR	05 53 32.8	
	comp=Z,109nm,18.1s,baz=94,slow=41						
FINES	FINESS Array B	71.29	331	P	P	05 17 26.6	+0.7
	comp=Z,3.6nm,0.9s,baz=62,slow=4.5,SNR=5.2						
YKA	Yellowknife Ar	74.61	26	P	P	05 17 47.8	+2.1
	comp=Z,0.2nm,0.6s,baz=296,slow=5.4,SNR=4.2						
AKASG	Malin Array Be	74.69	320	P	P	05 17 45.6	-0.7
	comp=Z,0.4nm,0.3s,baz=58,slow=6.1,SNR=3.5						
BR131	Keskin Array S	76.99	308	P	P	05 18 00.8	+0.9
BR131				IAmb	IAmb	05 18 02.6	
	comp=Z,4.6nm,0.8s						
BRTR	Keskin Array B	76.99	308	P	P	05 18 01.6	+1.7
	comp=Z,2.6nm,0.7s,baz=98,slow=5.4,SNR=18						
BRTR	Keskin Array B	76.99	308	P	P	05 17 59.8	0.0
NOA	NORSAR Array B	77.52	334	P	P	05 18 03.0	+0.7
	comp=Z,1.1nm,0.7s,baz=50,slow=5.5,SNR=2.2						

*BUG **14** 05:13:06.7±0.0, 51°.26N×6°.94E, h6^{km}±6^{km}, MD2.2/7, ML2.5/5*

*LDG **14** 05:13:06.5±0.1, 51°.22N×6°.85E, h3^{km}, Md2.6/2, Ml2.4/12, Error ellipse: s-maj=1.3km s-min=0.9km az=133.0*

*BGR **14** 05:13:06.5±0.3, 51°.21N×6°.88E, h10^{km}, ML2.1/3, Error ellipse: s-maj=3.3km s-min=2.2km az=109.0*

*UCC **14** 05:13:06.3±0.9, 51°.24N×6°.84E, h10^{km}±2^{km}, ML1.5*

*BNS **14** 05:13:06.3±0.7, 51°.23N×6°.85E, h3^{km}±14^{km}, ML1.6*

BNS Felt IV EMS.

ISC 14 05:13:06.2±0.8**, 51°.22N**±0°.02×**6°.84E**±0°.02**, h15**^{km}±6^{km}**, n66,** σ1^{s}.**27**/110**, 8C-21D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAUG	Laupendahl	0.14	27	⇑ePg	Pg	05 13 08.9	-1.0
LAUG				eSg	Sg	05 13 11.0	-1.4
	420nm,0.1s						
HES	Velbert-Hesper	0.19	41	ePg	Pg	05 13 08.9	-1.7
PLH	Pulheim	0.22	183	i Pg	Pg	05 13 10.9	-0.1
PLH				eSg	Sg	05 13 14.0	-0.3
BNS	Bensberg	0.34	141	⇑ePg	Pg	05 13 13.5	+0.4
BNS				eSg	Sg	05 13 17.9	+0.2
	97nm,0.3s						
BKLB	Ruhr-Universit	0.35	51	Pg	Pg	05 13 12.5	-0.7
BUG	Bochum--Univer	0.35	51	ePg	Pg	05 13 12.6	-0.7
BUG				eSg	Sg	05 13 17.1	-1.0
BULI	Ruhr-Universit	0.35	49	ePg	Pg	05 13 12.9	-0.5
BULI				eSg	Sg	05 13 17.6	-0.6
BTEZ	Ruhr-Universit	0.36	51	Pg	Pg	05 13 12.8	-0.6
ENTS	Ennepetalsperr	0.36	87	ePg	Pg	05 13 12.8	-0.7
ENTS				eSg	Sg	05 13 17.3	-1.2
HOBG	Hohbusch	0.39	127	⇓ePg	Pg	05 13 14.3	+0.2
HOBG				i Sg	Sg	05 13 19.8	+0.3
	68nm,0.5s						
BZER	Hlnxe	0.40	3	eSg	Sg	05 13 19.9	+0.2
HKB	Herkenbosch	0.42	266	dP	Pg	05 13 14.8	+0.2
HKB				dS	Sg	05 13 20.9	+0.5
WBS	Wahnbachtalspe	0.50	146	eSg	Sg	05 13 22.4	-0.5
	26nm,0.3s						
BAVN	Auguste-Victor	0.55	19	ePg	Pg	05 13 17.2	+0.3
BAVN				eSg	Sg	05 13 24.4	+0.3
GSH	Grosshau	0.57	211	ePg	Pg	05 13 17.3	0.0
GSH				eSg	Sg	05 13 25.5	+0.6
	19nm,0.1s						
STB	Steinbach	0.63	180	ePg	Pg	05 13 18.9	+0.4
TDN	Todenfeld	0.65	174	eSg	Sg	05 13 27.4	-0.1
	22nm,0.2s						
KLL	Kalltalsperre	0.67	210	ePg	Pg	05 13 19.0	-0.1
DREG	Dreilaegerbach	0.68	215	⇑ePg	Pg	05 13 19.1	-0.3
AHRW	Bad Neuenahr-A	0.70	168	ePg	Pb	05 13 20.8	+0.7
AHRW				eSg	Sg	05 13 29.5	+0.5
HMES	Hamm, Michael-	0.70	52	eSg	Sg	05 13 28.1	-1.1
SORT	Sorpetalsperre	0.72	79	ePg	Pg	05 13 19.1	-1.1
SORT				eSg	Sg	05 13 28.2	-1.5
	38nm,0.2s						
BTNL	Ternell	0.78	215	bP	Pg	05 13 20.8	-0.5
BTNL				dS	Sg	05 13 30.8	-0.8
	comp=N,9.7nm,0.1s						
MEM	Membach	0.81	221	dP	Pg	05 13 21.5	-0.4
MEM				dS	Sg	05 13 32.5	0.0
	comp=N,7.9nm,0.2s						
MEM	Membach	0.81	221	ePg	Pg	05 13 21.6	-0.2
MEM				eSg	Sg	05 13 33.0	+0.5
BEBN	Eben Emael	0.85	240	dP	Pg	05 13 22.2	-0.4
BEBN				dS	Sg	05 13 34.9	+1.1
HILG	Hillesheim	0.94	186	ePg	Pg	05 13 24.9	+0.6
KOE	Koeppel	0.98	144	ePg	Pg	05 13 25.1	0.0
KASTN	Kahler Asten	0.99	91	ePg	Pg	05 13 24.7	-0.6
KASTN				eSg	Sg	05 13 37.1	-1.2
BHOU	Houvegnez	1.02	212	bP	Pg	05 13 25.5	-0.4
BHOU				dS	Sg	05 13 38.9	-0.3
	comp=E,23nm,0.1s						
BSTI	Sart Tilman	1.03	232	dP	Pg	05 13 25.4	-0.6
LOH	Wallersheim-Lo	1.06	191	ePg	Pg	05 13 26.3	-0.3
LOH				eSg	Sg	05 13 40.6	+0.1
	comp=E,24nm,0.3s						
BGG	Burgeitz	1.07	163	⇑ePg	Pg	05 13 26.5	-0.2
LKLB	Kalborn	1.22	203	dP	Pg	05 13 29.0	-0.6
LKLB				dS	Sg	05 13 43.5	-1.9
	comp=N,5.4nm,0.2s						
IBBN	Ibbenburen	1.23	27	ePg	Pg	05 13 29.4	-0.3
IBBN				eSg	Sn	05 13 46.3	+1.2
BCLA	Clavier	1.26	231	bP	Pn	05 13 29.7	+0.4
BCLA				dS	Sg	05 13 45.6	-1.3
	comp=E,5.6nm,0.1s						
ABH	Alteburg	1.42	161	ePg	Pn	05 13 32.0	+0.5
ABH				eSg	Sb	05 13 49.8	-0.4
TNS	Taunus Mts	1.43	134	ePg	Pn	05 13 32.7	+1.0
TNS				eSg	Sb	05 13 51.8	+1.1
RCHB	Rochefort	1.48	224	dP	Pn	05 13 31.7	-0.6
RCHB				dS	Sn	05 13 51.1	-0.3
RIVT	Riveris	1.52	182	ePn	Pn	05 13 34.2	+1.4
RIVT				ePg	Pb	05 13 34.8	+0.8
RIVT				eSg	Sn	05 13 53.1	+0.8
WLF	Walferdange	1.62	196	dS	Sn	05 13 54.7	-0.2
WLF	Walferdange	1.62	196	eSg	Sn	05 13 56.7	+1.8
GIVF	Givet	1.71	230	ePn	Pn	05 13 36.1	+0.7
GIVF	Givet	1.71	230	ePg	Pb	05 13 38.6	+1.4
GIVF				eSn	Sn	05 13 56.3	-0.6
GIVF				eSg	Sb	05 14 00.3	+1.8
	comp=E,13nm,0.3s						
DOU	Dourbes	1.82	233	bP	Pn	05 13 37.3	+0.3
DOU				dS	Sn	05 13 59.7	-0.1
	comp=N,2.7nm,0.2s						
BAIF	Baives	2.04	236	ePn	Pn	05 13 40.0	0.0
BAIF	Baives	2.04	236	ePg	Pb	05 13 44.4	+1.5
BAIF				eSn	Sn	05 14 04.3	-0.9
BAIF				eSg	Sb	05 14 10.5	+2.4
	comp=N,10nm,0.3s						
CLZ	Clausthal	2.29	73	eSg	Sg	05 14 18.6	-1.2
CDF	Champ du Feu	2.83	174	ePn	Pn	05 13 50.6	-0.3
CDF	Champ du Feu	2.83	174	ePg	Pb	05 13 59.0	+2.6
CDF				eSn	Sn	05 14 23.3	-1.5
CDF				eSg	Sg	05 14 35.4	-1.6
	comp=N,1.2nm,0.3s						
MEZF	Maizieres J'vi	2.96	204	ePg	Pb	05 14 01.2	+2.6
MEZF				eSg	Sg	05 14 39.4	-1.8
	comp=N,3.0nm,0.3s						
HAU	Haudompre	3.24	186	ePn	Pn	05 13 56.3	-0.2
HAU	Haudompre	3.24	186	ePg	Pb	05 14 06.5	+3.2
HAU				eSn	Sn	05 14 33.2	-1.6
HAU				eSg	Sg	05 14 48.1	-2.0
	comp=N,4.1nm,0.4s						
SFTF	Sexfontaines	3.24	202	ePg	Pb	05 14 06.3	+2.9
SFTF				eSn	Sn	05 14 33.0	-1.8
	baz=22						
SFTF				eSg	Sg	05 14 48.3	-1.9
	comp=N,1.6nm,0.2s						
LOR	Lormes	4.41	207	ePn	Pn	05 14 12.3	-0.3
LOR	Lormes	4.41	207	ePg	Pg	05 14 28.9	-1.7
	baz=27						
LOR				eSg	Sg	05 15 24.8	-3.0
	comp=N,0.7nm,0.2s						
CABF	La Chapelle	4.64	186	ePn	Pn	05 14 15.2	-0.7
CABF				eSn	Sn	05 15 06.7	-2.8
	comp=N,0.6nm,0.2s						
SSF	Saint Saulge	4.71	209	ePn	Pn	05 14 16.3	-0.3
SSF	Saint Saulge	4.71	209	ePg	Pg	05 14 33.6	-2.6
SSF				eSg	Sg	05 15 34.3	-2.8
	comp=N,0.6nm,0.2s						
SMF	Signal de Mont	4.99	204	ePn	Pn	05 14 19.3	-1.2
SMF				eSg	Sg	05 15 42.8	-3.4
	comp=N,0.5nm,0.2s						
AVF	Avril sur Loir	4.99	209	ePn	Pn	05 14 20.4	-0.2
FLN	La Foliniere	5.33	245	ePn	Pn	05 14 24.7	-0.4
FLN	La Foliniere	5.33	245	ePg	Pg	05 14 46.4	-1.7
FLN				eSn	Sn	05 15 23.3	-2.9
	comp=N,1.2nm,0.3s						
TCF	Toulx Ste Croi	5.81	214	ePn	Pn	05 14 31.5	-0.3
MFF	Saint Martin d	6.52	228	ePn	Pn	05 14 41.1	-0.5
VIVF	Saint-Julien-l	6.54	194	ePn	Pn	05 14 42.2	+0.4

*MOS **14** 05:21:38.9±0.9, 29°.31N×103°.16E, h24^{km}, mb5.3/76, MS4.5/6, Error ellipse: s-maj=5.5km s-min=3.8km az=117.7*

*NEIC **14** 05:21:38.8±1.7, 29°.35N±0°.06×103°.20E±0°.06, h10^{km}±1^{km}, mb5.3/172, Error ellipse: s-maj=11.5km s-min=7.4km az=141.0*

*GCMT **14** 05:21:39.8±0.3, 29°.20N±0°.03×103°.37E±0°.02, h24^{km}, MW4.9/75, Moment Tensor Solution. s32,c36; s75,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.88±.16; M$_{\theta\theta}$-0.66±.10; M$_{\phi\phi}$-2.23±.10; M$_{r\theta}$0.01±.15; M$_{\theta\phi}$0.72±.06; M$_{\phi r}$0.14±.12; Best double couple: M$_0$2.70000×10^{16} NP1:φ$_s$158.00000°, δ44.00000°, λ89.00000°. NP2: φ$_s$340.00000°, δ46.00000°, λ91.00000°. Principal axes: T 2.8840, Plg88.0000°, Azm285.0000°; N -0.3730, Plg1.0000°, Azm159.0000°; P -2.5160, Plg1.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **14** 05:21:40.0±0.0, 29°.30N×103°.20E, h20^{km}, mB5.1/31, mb5.0/49, ML5.1/24, Ms5.0/49, Ms7 4.7/65*

*IDC **14** 05:21:42.5±2.5, 29°.32N×103°.18E, h33^{km}±18^{km}, mb4.7/34, mb1 4.8/36, mb1mx4.7/46, mbtmp4.9/36, ML4.9/2, MS4.1/10, Ms1 4.1/10, ms1mx3.7/40, Error ellipse: s-maj=11.1km s-min=9.6km az=26.0*

*NOU **14** 05:21:48.1, 29°.08N×103°.24E, h64^{km}, mb5.3, Sichuan, China*

ISC 14 05:21:40.1±0.6**, 29°.35N**±0°.03×**103°.21E**±0°.03**, h18**^{km}±3^{km}**, n660,** σ1^{s}.**50**/676**, mb5.2**/215**, MS4.4**/16**, 26C-53D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	1.62	17	⇓iPg	Pg	05 22 10.1	-1.3
CD2				Sg	Sg	05 22 32.9	+0.4
CD2				smax	smax		
	comp=N,236μm,0.6s						
CD2				smax	smax		
	comp=E,114μm,0.5s						
GYA	Guiyang	4.20	133	⇑Pn	Pn	05 22 44.0	+0.6
GYA				Pg	Pb	05 22 53.4	-0.1
GYA				Sn	Sn	05 23 35.4	+3.3
GYA				Sg	Sg	05 23 53.1	-1.9
GYA				smax	smax		
	comp=N,5μm,0.8s						
GYA				smax	smax		
	comp=E,4μm,1.0s						
GYA				LR	LR		
	comp=N,8μm,4.3s						
GYA				LR	LR		
	comp=E,8μm,5.9s						
GYA				LR	LR		
	comp=Z,8μm,8.3s						
KMI	Kunming	4.23	186	⇓iPn	Pn	05 22 47.1	+3.2
KMI				Sg	Sg	05 23 58.9	+2.8
KMI				smax	smax		
	comp=N,920nm,0.9s						
KMI				smax	smax		
	comp=E,900nm,1.0s						
KMI				LR	LR		
	comp=N,9μm,8.5s						
KMI				LR	LR		
	comp=E,9μm,7.0s						
KMI				LR	LR		
	comp=Z,6μm,9.1s						
KMI	Kunming	4.23	186	P	Pn	05 22 46.8	+2.9
KMI	Kunming	4.23	186	Pn	Pn	05 22 46.8	+2.9
ENH	Enshi	5.53	79	Pn	Pn	05 23 02.5	+0.9
LZH	Lanzhou	6.74	4	ePn	Pn	05 23 23.3	+5.0
LZH				LR	LR		
	comp=Z,5μm,11.2s						
XAN	Xi'an	6.75	45	Pn	Pn	05 23 17.8	-0.5
XAN				Sn	Sn	05 24 33.3	-1.4
XAN				Sg	Sg	05 25 12.4	-4.1
XAN				smax	smax		
	comp=N,4μm,1.0s						
XAN				smax	smax		
	comp=E,4μm,1.0s						
XAN				LR	LR		
	comp=N,6μm,5.8s						
XAN				LR	LR		
	comp=E,8μm,6.3s						
XAN				LR	LR		
	comp=Z,8μm,7.9s						
SLVN	Son La	8.01	175	Pn	Pn	05 23 35.2	-0.5
CRAI	Chiangrai	9.44	196	P	Pn	05 23 58.3	+3.0
	10μm,0.8s						
WHN	Wuhan	9.73	80	⇑P	Pn	05 24 00.3	+1.0
WHN				pP		05 24 04.3	
WHN				S	Sn	05 25 49.9	+1.7
WHN				LR	LR		
	comp=Z,9μm,12.6s						
GTA	Gaotai	10.42	345	⇑P	Pn	05 24 12.0	+3.3
GTA				pP		05 24 15.4	
GTA				sP		05 24 18.3	
GTA				S	Sn	05 26 13.5	+8.4
GTA				SS	SnSn	05 26 27.3	+10
GTA				pmax	pmax		
	comp=Z,320nm,7.5s						
GTA				LR	LR		
	comp=Z,2μm,11.3s						
LSA	Lhasa	10.51	275	P	Pn	05 24 13.4	+3.0
LSA				pmax	pmax		
	comp=Z,50nm,0.9s						
LSA	Lhasa	10.51	275	P	Pn	05 24 11.7	+1.3
LSA	Lhasa	10.51	275	Pn	Pn	05 24 11.7	+1.3
SHL	Shillong	10.74	252	P	Pn	05 24 13.7	+0.4
SHL	Shillong	10.74	252	Pn	Pn	05 24 13.7	+0.4
CMMT	Chiang Mai	11.19	201	P	Pn	05 24 22.1	+2.9
	356nm19nm,1.0s						
CHTO	Chiang Mai	11.19	201	P	Pn	05 24 19.6	+0.3
CHTO	Chiang Mai	11.19	201	Pn	Pn	05 24 19.6	+0.3
NONG	Nongkai	11.24	180	P	Pn	05 24 22.7	+2.8
	10μm59nm,0.9s						
LAMP	Lampang	11.27	198	P	Pn	05 24 23.8	+3.5
	1μm132nm,0.8s						
TIY	Taiyuan	11.34	40	P	Pn	05 24 20.5	-0.8
CM09	Chiang Mai Arr	11.52	200	P	Pn	05 24 26.3	+2.5
	321nm43nm,0.8s						
CM31	Chiang Mai Arr	11.52	201		Pn	05 24 22.8	-1.1
CMAR	Chiang Mai Arr	11.52	201	Pn	Pn	05 24 26.1	+2.3
	1.5nm,0.3s,baz=13,slow=12,SNR=30						
CMAR				Lg	Lg	05 27 43.0	
	0.4nm,0.3s,baz=28,slow=30,SNR=3.2						
CMAR				LR	LR	05 29 26.6	
	comp=Z,626nm,18.2s,baz=54,slow=40						
CMAR	Chiang Mai Arr	11.52	201	P	Pn	05 24 25.8	+2.0
CMAR	Chiang Mai Arr	11.52	201		Pn	05 24 25.8	+2.0
CM02	Chiang Mai Arr	11.54	201	P	Pn	05 24 28.0	+3.9
	382nm57nm,0.9s						
CM01	Chiang Mai Arr	11.55	201	P	Pn	05 24 27.0	+2.8
	381nm56nm,0.9s						
CM04	Chiang Mai Arr	11.57	200	P	Pn	05 24 27.6	+3.1
	300nm44nm,0.9s						
CM13	Chiang Mai Arr	11.57	201	P	Pn	05 24 27.9	+3.5
	221nm22nm,0.7s						
CM05	Chiang Mai Arr	11.58	201	P	Pn	05 24 27.7	+3.1
	238nm38nm,1.0s						
UTTA	Uttaradit	11.81	192	P	Pn	05 24 30.2	+2.5
	686nm49nm,0.8s						
QIZ	Qiongzhong	11.92	148	P	Pn	05 24 29.6	+0.4
QIZ				S	Sn	05 26 44.3	+2.4
QIZ				LR	LR		
	comp=N,2μm,10.2s						
QIZ				LR	LR		
	comp=E,2μm,8.4s						
QIZ				LR	LR		
	comp=Z,3μm,9.3s						
SUKH	Sukhothai	12.26	196	P	Pn	05 24 37.9	+4.0
	46nm,0.5s						
PHIT	Phitsanulok	12.38	193	P	Pn	05 24 37.7	+2.3
	2μm191nm,0.8s						
BTO	Baotou	12.53	25	eP	Pn	05 24 37.5	-0.1
BTO				S	Sn	05 27 01.1	+4.3
HHC	Hu-ho-hao-te	13.35	29	eP	Pn	05 24 50.1	+1.4
HHC				S	Sn	05 27 20.0	+3.4
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,98nm,5.5s						
HHC				LR	LR		
	comp=N,5μm,10.0s						
HHC				LR	LR		
	comp=E,2μm,8.7s						
HHC				LR	LR		
	comp=Z,4μm,12.8s						
TIA	Tai'an	13.55	56	P	Pn	05 24 51.1	-0.3
TIA				pmax	pmax		
	comp=Z,25nm,0.9s						
TIA				pmax	pmax		
	comp=Z,240nm,3.7s						
TIA				LR	LR		
	comp=N,2μm,6.7s						
TIA				LR	LR		
	comp=E,3μm,11.3s						
TIA				LR	LR		
	comp=Z,4μm,11.3s						
NJ2	Nanjing	13.73	75	eP	Pn	05 24 52.8	-1.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
TAPN	Taplejung	13.80	265	eP	Pn	05 24 55.5	+0.4
	145nm,1.0s						
ODAN	Odare	14.18	264	eP	Pn	05 25 00.8	+0.4
	101nm,0.8s						
QZH	Quanzhou	14.38	104	P	Pn	05 25 05.6	+2.8
QZH				S	Sn	05 27 46.0	+4.2
QZH				LR	LR		
	comp=N,4μm,7.4s						
QZH				LR	LR		
	comp=E,2μm,7.3s						
QZH				LR	LR		
	comp=Z,5μm,9.1s						
RAMN	Ramite	14.85	265	eP	Pn	05 25 09.3	-0.2
	72nm,0.6s						
BJT	Baijiatuau	15.04	42	P	Pn	05 25 11.4	-0.3
BJT				pmax	pmax		
	comp=Z,43nm,0.9s						
BJT	Baijiatuau	15.04	42	Pn	Pn	05 25 11.4	-0.3
BJI	Beijing	15.06	42	P	Pn	05 25 11.8	-0.2
BJI				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI				LR	LR		
	comp=Z,2μm,11.2s						
BJI				LR	LR		
	comp=Z,2μm,9.8s						
BJI				LR	LR		
	comp=Z,630nm,11.8s						
GUN	Gumba	15.29	269	eP	Pn	05 25 15.6	+0.2
	comp=Z,44nm,0.5s						
PKI	Pulchoki	15.76	268	eP	Pn	05 25 20.7	-0.8
	comp=Z,115nm,0.8s						
PKIN	Phulchoki	15.77	268	eP	Pn	05 25 20.7	-0.9
	comp=Z,110nm,0.8s						
KKN	Kakani	15.83	269	eP	Pn	05 25 23.0	+0.6
	comp=Z,80nm,0.5s						
DMN	Daman	16.02	268	eP	Pn	05 25 25.0	+0.2
	comp=Z,342nm,1.5s						
GKN	Gorkha	16.36	270	eP	Pn	05 25 29.3	+0.2
	comp=Z,63nm,0.8s						
PHET	Kaeng Krachan	16.70	192	P	P	05 25 36.1	+0.6
SSLB	Suanglung	16.81	105	Pn	Pn	05 25 35.1	+0.5
SSLB				IAmb	IAmb	05 25 46.0	
	comp=Z,162nm,1.1s						
YHNB	Yeheng	16.84	102		Pn	05 25 35.9	+0.8
DANN	Dangsing	17.07	271	eP	Pn	05 25 36.0	-2.2
	comp=Z,80nm,0.8s						
NACB	Ninganchiao	17.20	103	Pn	Pn	05 25 39.5	-0.1
YULB	Yu-li	17.25	106		P	05 25 40.9	-0.7
KOLN	Koldanda	17.30	270	eP	Pn	05 25 40.3	-0.7
	comp=Z,86nm,0.9s						
PYUN	Piuthan	17.78	271	eP	Pn	05 25 46.2	-0.8
	comp=Z,174nm,0.8s						
DL2	Dalian	17.95	53	P	P	05 25 50.5	+1.3
DL2				S	S	05 29 12.4	-2.2

DL2				pmax	pmax		
	comp=Z,88nm,0.9s						
DL2				pmax	pmax		
	comp=Z,570nm,5.4s						
DL2				LR	LR		
	comp=Z,1µm,10.4s						
SONM	**Songino Array**	**18.62**	**7**	P	**Pn**	**05 25 58.3**	**+1.3**
	comp=Z,8.7nm,0.3s,baz=188,slow=11,SNR=146						
SONM				Lg	Lg	05 31 42.3	
	comp=Z,0.3nm,0.3s,baz=176,slow=26,SNR=4.1						
SONM				LR	LR	05 33 47.1	
	comp=Z,592nm,20.6s,baz=188,slow=39						
SONM	**Songino Array**	**18.62**	**7**	P	**Pn**	**05 25 57.7**	**+0.7**
SONM				pmax	pmax		
	comp=Z,44nm,0.8s						
SONM	**Songino Array**	**18.62**	**7**	P	**Pn**	**05 25 57.7**	**+0.7**
ULN	**Ulaanbaatar**	**18.72**	**8**	*c i*P	**Pn**	**05 25 59.4**	**+1.1**
ULN				pmax	pmax		
	comp=Z,25nm,0.8s						
ULN	**Ulaanbaatar**	**18.72**	**8**	P	**Pn**	**05 25 59.0**	**+0.7**
WMQ	**Urumqi**	**19.03**	**324**	P	**Pn**	**05 26 02.3**	**+0.4**
WMQ				pP	sP	05 26 07.1	-2.2
WMQ				sP	pP	05 26 10.8	+4.0
WMQ				PP	**PnPn**	**05 26 19.8**	**+5.3**
WMQ				S	**Sn**	**05 29 31.8**	**-2.7**
WMQ				pmax	pmax		
	comp=Z,54nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,10.9s						
WMQ				LR	LR		
	comp=Z,1µm,9.5s						
WMQ				LR	LR		
	comp=Z,600nm,17.3s						
WMQ	**Urumqi**	**19.03**	**324**	P	**Pn**	**05 26 01.3**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,66nm,1.2s						
WMQ	**Urumqi**	**19.03**	**324**	P	**Pn**	**05 26 01.3**	**-0.6**
SNY	**Shenyang**	**20.66**	**47**	⇑P	Pn	05 26 20.8	-0.4
SNY				S	**S**	**05 30 09.4**	**+0.5**
SNY				pmax	pmax		
	comp=Z,70nm,0.8s						
SNY				pmax	pmax		
	comp=Z,190nm,10.4s						
SNY				LR	LR		
	comp=Z,980nm,12.6s						
SNY				LR	LR		
	comp=Z,1µm,8.4s						
SNY				LR	LR		
	comp=Z,1µm,16.5s						
ZAK	**Zakamensk**	**21.00**	**0**	*e*P	**P**	**05 26 23.7**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,159nm,1.1s						
TJN	**Taejon**	**21.43**	**65**	⇑*e*P	**P**	**05 26 27.2**	**0.0**
KSAR	**Wonju Array Be**	**22.08**	**62**	P	**P**	**05 26 34.6**	**+0.5**
KSAR	**Wonju Array Be**	**22.08**	**62**	P	**P**	**05 26 34.6**	**+0.5**
KS19	**Wonju Array Si**	**22.08**	**62**	P	**P**	**05 26 34.5**	**+0.3**
KS19				IAmb	IAmb	05 26 41.0	
	comp=Z,82nm,1.0s						
KSRS	**Korea Array**	**22.11**	**62**	P	**P**	**05 26 35.5**	**+1.0**
	comp=Z,24nm,0.8s,baz=242,slow=9.4,SNR=63						
KSRS				PcP	**PcP**	**05 30 29.1**	**-2.4**
	comp=Z,1.4nm,0.5s,baz=243,slow=1.0,SNR=3.4						
TLY	**Talaya**	**22.31**	**1**	P	**P**	**05 26 39.1**	**+2.6**
	comp=Z,17nm,0.8s,baz=272,slow=23,SNR=3.1						
TLY				LR	LR	05 36 10.8	
	comp=Z,741nm,19.1s,baz=170,slow=39						
TLY	**Talaya**	**22.31**	**1**	*e*P	**P**	**05 26 39.2**	**+2.7**
TLY				pmax	pmax		
	comp=Z,171nm,1.5s						
TLY				MLR	MLR		
	comp=Z,3µm,10.0s						
TLY	**Talaya**	**22.31**	**1**	P	**P**	**05 26 38.7**	**+2.2**
MOY	**Mondy**	**22.35**	**356**	*e*P	**P**	**05 26 38.4**	**+1.3**
MOY				pmax	pmax		
	comp=Z,84nm,2.0s						
JTU	**Tsushima**	**22.78**	**70**	P	**P**	**05 26 41.2**	**-0.5**
JTU				IAmb	IAmb	05 26 49.2	
	comp=Z,172nm,1.4s						
CN2	**Changchun**	**22.86**	**45**	*e*P	**P**	**05 26 42.6**	**+0.2**
CN2				PP	**PnPn**	**05 27 11.6**	**+4.8**
CN2				S	**S**	**05 30 46.5**	**-4.6**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				LR	LR		
	comp=Z,970nm,12.0s						
IRK	**Irkutsk**	**22.88**	**2**	*e*P	**P**	**05 26 44.1**	**+1.5**
IRK				pmax	pmax		
	comp=Z,220nm,1.9s						
ZSN	**Zaisan**	**22.99**	**327**	*e*P	**P**	**05 26 43.3**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=326						
ZSN				*e*S	**S**	**05 30 55.4**	**+2.0**
	baz=326						
ZSN	**Zaisan**	**22.99**	**327**	*e*P	**P**	**05 26 43.2**	**-0.5**
ZSN				*e*S	**S**	**05 30 55.3**	**+1.9**
ZSN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHLS	**Shalkode**	**23.49**	**312**	*e*P	**P**	**05 26 45.2**	**-3.8**
	comp=Z,79nm,1.3s,baz=312						
SHLS				*e*S	**S**	**05 30 58.7**	**-3.3**
	baz=312						
SHLS	**Shalkode**	**23.49**	**312**	*e*P	**P**	**05 26 45.2**	**-3.8**
SHLS				*e*S	**S**	**05 30 58.6**	**-3.3**
SHLS				pmax	pmax		
	comp=Z,79nm,1.3s						
HIA	**Hailar**	**23.55**	**28**	*c i*P	**P**	**05 26 50.0**	**+0.6**
HIA				pmax	pmax		
	comp=Z,54nm,1.0s						
HIA	**Hailar**	**23.55**	**28**	P	**P**	**05 26 50.5**	**+1.1**
HIA				IAmb	IAmb	05 26 52.0	
	comp=Z,49nm,0.9s						
JSU	**Suzuyama**	**23.57**	**78**	P	**P**	**05 26 50.0**	**+0.3**
MK31	**Makanchi Array**	**23.85**	**323**	*c i*P	**P**	**05 26 52.5**	**+0.2**
MK31				pmax	pmax		
	comp=Z,78nm,0.7s						
MK31	**Makanchi Array**	**23.85**	**323**	P	**P**	**05 26 52.8**	**+0.5**
MK31				IAmb	IAmb	05 26 59.4	
	comp=Z,66nm,0.8s						
MKAR	**Makanchi Array**	**23.85**	**323**	P	**P**	**05 26 53.2**	**+0.9**
	comp=Z,71nm,0.7s,baz=127,slow=12,SNR=383						
MKAR				ScP	**ScP**	**05 34 11.0**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=188,slow=4.5,SNR=4.9						
MKAR	**Makanchi Array**	**23.85**	**323**	*ce*P	**P**	**05 26 52.9**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,49nm,0.5s						
MKAR	**Makanchi Array**	**23.85**	**323**	P	**P**	**05 26 52.7**	**+0.4**
CIT	**Chita**	**23.92**	**16**	*e*P	**P**	**05 26 54.4**	**+1.5**
CIT				*e*		05 26 59.4	
CIT				*e*		05 27 03.7	
CIT				*e*		05 27 36.3	
CIT				pmax	pmax		
	comp=Z,182nm,1.5s						
JNU	**Nakatsue**	**23.92**	**74**	P	**P**	**05 26 54.9**	**+1.7**
	comp=Z,39nm,0.6s,baz=261,slow=2.2,SNR=18						
JNU	**Nakatsue**	**23.92**	**74**	P	**P**	**05 26 54.1**	**+1.0**
JNU				IAmb	IAmb	05 27 01.2	
	comp=Z,131nm,1.0s						
MAKZ	**Makanchi**	**24.02**	**322**	P	**P**	**05 26 54.3**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,407nm,2.0s						
MAKZ	**Makanchi**	**24.02**	**322**	P	**P**	**05 26 54.2**	**+0.3**
KULM	**Kulim**	**24.05**	**186**	P	**P**	**05 26 53.9**	**-0.5**
KULM				IAmb	IAmb	05 26 59.2	
	comp=Z,80nm,1.4s						
KULM	**Kulim**	**24.05**	**186**	P	**P**	**05 26 54.0**	**-0.4**
SATY	**Saty**	**24.13**	**311**	*e*P	**P**	**05 26 55.0**	**-0.1**
	comp=Z,54nm,1.4s,baz=311						
SATY	**Saty**	**24.13**	**311**	*e*P	**P**	**05 26 55.0**	**-0.1**
SATY				pmax	pmax		
	comp=Z,54nm,1.4s						
KPKS	**Kokpek**	**24.14**	**312**	*e*P	**P**	**05 26 54.4**	**-0.8**
	comp=Z,46nm,1.6s,baz=312						
KPKS	**Kokpek**	**24.14**	**312**	*e*P	**P**	**05 26 54.3**	**-0.8**
KPKS				pmax	pmax		
	comp=Z,46nm,1.6s						
KSH	**Kashi**	**24.57**	**302**	P	**P**	**05 26 58.9**	**-0.2**
KSH				S	**S**	**05 31 21.3**	**+2.0**
KSH				sS	sS	05 31 28.6	-0.1
KSH				pmax	pmax		
	comp=Z,200nm,1.3s						
KSH				pmax	pmax		
	comp=Z,770nm,7.2s						
KSH				LR	LR		
	comp=Z,1µm,7.8s						
KSH				LR	LR		
	comp=Z,960nm,10.4s						
KSH				LR	LR		
	comp=Z,920nm,8.3s						
IPM	**Ipoh**	**24.82**	**185**	P	**P**	**05 26 59.5**	**-1.9**
IPM				IAmb	IAmb	05 27 08.7	
	comp=Z,50nm,0.9s						
IPM	**Ipoh**	**24.82**	**185**	P	**P**	**05 27 01.0**	**-0.4**
TDK	**Taldyqorghan**	**25.05**	**315**	*e*P	**P**	**05 27 02.7**	**-0.7**
	comp=Z,56nm,0.9s,baz=315						
TDK	**Taldyqorghan**	**25.05**	**315**	*e*P	**P**	**05 27 02.6**	**-0.7**
TDK				pmax	pmax		
	comp=Z,56nm,0.9s						
MDOK	**Medeo**	**25.08**	**310**	*e*P	**P**	**05 27 02.9**	**-0.9**
	baz=310						
MDOK	**Medeo**	**25.08**	**310**	*e*P	**P**	**05 27 02.8**	**-0.9**
TNSS	**Tian-Shan**	**25.09**	**310**	*e*P	**P**	**05 27 03.9**	**-0.3**
	baz=310						
TNSS	**Tian-Shan**	**25.09**	**310**	*e*P	**P**	**05 27 03.8**	**-0.3**
AAA	**Alma-Ata**	**25.18**	**310**	*e*P	**P**	**05 27 05.1**	**+0.5**
	comp=Z,73nm,1.3s,baz=310						
AAA				*e*S	**S**	**05 31 31.6**	**+2.5**
	baz=310						
AAA	**Alma-Ata**	**25.18**	**310**	*e*P	**P**	**05 27 05.0**	**+0.5**
AAA				*e*S	**S**	**05 31 31.5**	**+2.5**
AAA				pmax	pmax		
	comp=Z,73nm,1.3s						
ULHL	**Ulahol**	**25.26**	**308**	P	**P**	**05 27 08.1**	**+2.6**
	SNR=10						
CHKK	**Chushkaly**	**25.41**	**312**	*e*P	**P**	**05 27 06.7**	**+0.1**
	baz=312						
CHKK	**Chushkaly**	**25.41**	**312**	*e*P	**P**	**05 27 06.7**	**+0.1**
MTBS	**Maitube**	**25.48**	**310**	*e*P	**P**	**05 27 08.4**	**+1.2**
	baz=310						
MTBS	**Maitube**	**25.48**	**310**	*e*P	**P**	**05 27 08.4**	**+1.2**
HYB	**Hyderabad**	**25.50**	**248**	*i* P	**P**	**05 27 07.0**	**-0.6**
MLSI	**Meulaboh, Aceh**	**25.77**	**196**	P	**P**	**05 27 10.2**	**+0.2**
	comp=Z,90nm,0.9s						
KUU	**Kurty**	**25.85**	**311**	*e*P	**P**	**05 27 09.7**	**-0.9**
	comp=Z,22nm,0.9s,baz=311						
KUU	**Kurty**	**25.85**	**311**	*e*P	**P**	**05 27 09.7**	**-0.9**
KUU				pmax	pmax		
	comp=Z,22nm,0.9s						
MDJ	**Mudanjiang**	**25.85**	**47**	P	**P**	**05 27 10.8**	**+0.2**
MDJ				IAmb	IAmb	05 27 19.6	
	comp=Z,104nm,1.4s						
NIL	**Nilore**	**25.86**	**287**	P	**P**	**05 27 10.6**	**-0.2**
NIL				pmax	pmax		
	comp=Z,70nm,0.6s						
NIL	**Nilore**	**25.86**	**287**	P	**P**	**05 27 10.6**	**-0.2**
JHS	**Saijyo**	**25.88**	**70**	P	**P**	**05 27 10.3**	**-0.6**
JHS				IAmb	IAmb	05 27 19.2	
	comp=Z,59nm,0.8s						
TSI	**Tuntungan**	**26.09**	**191**	P	**P**	**05 27 12.6**	**-0.3**
	comp=Z,177nm,0.9s						
KCSI	**Kotacane, Aceh**	**26.20**	**192**	P	**P**	**05 27 13.0**	**-0.9**
	comp=Z,36nm,0.8s						
KKM	**Kota Kinabalu**	**26.23**	**150**	P	**P**	**05 27 14.3**	**0.0**
KKM				IAmb	IAmb	05 27 15.6	
	comp=Z,71nm,0.8s						
KBK	**Karagaybulak**	**26.30**	**308**	P	**P**	**05 27 16.7**	**+1.8**
	SNR=12						
JMN	**Monobe**	**26.45**	**73**	P	**P**	**05 27 17.8**	**+1.7**
JMN				IAmb	IAmb	05 27 24.7	
	comp=Z,68nm,0.8s						
UCH	**Uchtor**	**26.45**	**307**	P	**P**	**05 27 18.7**	**+2.1**
	SNR=7.1						
AAK	**Ala-Archa**	**26.61**	**308**	P	**P**	**05 27 19.1**	**+1.5**
	comp=Z,20nm,0.9s,baz=141,slow=7.7,SNR=23						
AAK				LR	LR	05 38 22.9	
	comp=Z,277nm,21.2s,baz=94,slow=38						
AAK	**Ala-Archa**	**26.61**	**308**	P	**P**	**05 27 19.2**	**+1.6**
	SNR=9.7						
AAK	**Ala-Archa**	**26.61**	**308**	*c i*P	**P**	**05 27 18.9**	**+1.3**
AAK				pmax	pmax		
	comp=Z,89nm,1.0s						
AAK	**Ala-Archa**	**26.61**	**308**	P	**P**	**05 27 17.8**	**+0.2**
PSI	**Prapat**	**26.72**	**190**	P	**P**	**05 27 19.6**	**+0.9**
	comp=Z,19nm,0.7s,baz=0.0,slow=6.4,SNR=9.9						
PSI				LR	LR	05 38 08.7	
	comp=Z,218nm,18.6s,baz=272,slow=37						
SGDS	**Sogindy**	**26.81**	**309**	*e*P	**P**	**05 27 19.0**	**-0.3**
	baz=309						
SGDS	**Sogindy**	**26.81**	**309**	*e*P	**P**	**05 27 19.0**	**-0.3**
USP	**Ospenovka**	**26.83**	**309**	P	**P**	**05 27 20.9**	**+1.4**
	SNR=20						
AML	**Almayashu**	**27.00**	**306**	P	**P**	**05 27 23.5**	**+2.1**
	SNR=8.2						
EKS2	**Erkin-Say**	**27.11**	**307**	P	**P**	**05 27 23.6**	**+1.5**
	SNR=21						
USA0B	**Ussuriysk Arra**	**27.23**	**49**	*ce*P	**P**	**05 27 23.0**	**0.0**
USA0B	**Ussuriysk Arra**	**27.23**	**49**	IAmb	IAmb	05 27 30.3	
	comp=Z,54nm,0.8s						
USRK	**Ussuriysk Ar.**	**27.23**	**49**	P	**P**	**05 27 23.2**	**+0.3**
	comp=Z,14nm,0.7s,baz=258,slow=6.0,SNR=24						
USRK	**Ussuriysk Ar.**	**27.23**	**49**	P	**P**	**05 27 22.8**	**-0.2**
SEM	**Semipalatinsk**	**27.24**	**327**	*e*P	**P**	**05 27 21.5**	**-1.8**
	comp=Z,5.8nm,1.1s,baz=327						
SEM	**Semipalatinsk**	**27.24**	**327**	*e*P	**P**	**05 27 21.4**	**-1.8**
SEM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
JWT	**Wachi**	**27.76**	**69**	P	**P**	**05 27 28.1**	**+0.3**
JWT				IAmb	IAmb	05 27 38.3	
	comp=Z,49nm,0.8s						
BTLS	**Baital**	**27.82**	**312**	*e*P	**P**	**05 27 26.9**	**-1.4**
	comp=Z,9.5nm,0.7s,baz=312						
BTLS	**Baital**	**27.82**	**312**	*e*P	**P**	**05 27 26.9**	**-1.4**
BTLS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZAA0	**Zalesovo Array**	**27.99**	**337**	IAmb	IAmb	05 27 30.8	
	comp=Z,40nm,1.1s						
ZALV	**Zalesovo Beam**	**27.99**	**337**	P	**P**	**05 27 29.6**	**0.0**
	comp=Z,18nm,0.7s,baz=140,slow=9.4,SNR=79						
ZALV				LR	LR	05 39 10.7	
	comp=Z,397nm,19.6s,baz=125,slow=37						
ZALV	**Zalesovo Beam**	**27.99**	**337**	P	**P**	**05 27 29.2**	**-0.5**
MYLDM	**Lahad Datu**	**28.06**	**146**	P	**P**	**05 27 31.4**	**+0.8**
SBUM	**Sibu**	**28.09**	**161**	P	**P**	**05 27 31.6**	**+0.7**
SBUM				IAmb	IAmb	05 27 33.1	
	comp=Z,62nm,0.8s						
KURBB	**Kurchatov Arra**	**28.21**	**326**	P	**P**	**05 27 31.7**	**+0.1**
	comp=Z,20nm,0.7s,baz=131,slow=9.7,SNR=127						
KURBB				PcP	**PcP**	**05 30 44.8**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=119,slow=2.1,SNR=4.5						
KURBB				ScP	**ScP**	**05 34 24.1**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=138,slow=2.5,SNR=6.7						
KURK	**Kurchatov**	**28.23**	**326**	*c i*P	**P**	**05 27 31.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,49nm,1.3s						
KURK	**Kurchatov**	**28.23**	**326**	P	**P**	**05 27 31.6**	**-0.2**
KURK				IAmb	IAmb	05 27 33.0	
	comp=Z,30nm,0.9s						
KSM	**Kuching**	**28.54**	**165**	P	**P**	**05 27 37.7**	**+2.9**
KSM	**Kuching**	**28.54**	**165**	P	**P**	**05 27 34.0**	**-0.9**
POO	**Poona**	**28.84**	**255**	*e*P	P	05 27 30.0	-7.7
DZA	**Taraz**	**28.89**	**307**	*e*P	**P**	**05 27 38.1**	**+0.1**
	comp=Z,9.7nm,0.6s,baz=306						
DZA	**Taraz**	**28.89**	**307**	*e*P	**P**	**05 27 38.0**	**+0.1**
DZA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BKNI	**Bangkinang**	**28.94**	**184**	P	**P**	**05 27 37.7**	**-0.7**
	comp=Z,13µmcomp=Z,125nm,0.5s						
INU	**Inuyama**	**29.09**	**69**	P	**P**	**05 27 39.6**	**0.0**
INU				IAmb	IAmb	05 27 51.2	
	comp=Z,42nm,0.8s						
KBL	**Kabul**	**29.36**	**289**	P	**P**	**05 27 42.1**	**-0.3**
KBL				pmax	pmax		
	comp=Z,20nm,1.0s						
KBL	**Kabul**	**29.36**	**289**	P	**P**	**05 27 42.1**	**-0.3**
JGF	**Kuroka**	**29.37**	**69**	IAmb	IAmb	05 27 47.4	
	comp=Z,41nm,0.7s						
KLR	**Kul'dur**	**29.42**	**40**	P	**P**	**05 27 43.0**	**+0.6**
	comp=Z,5.0nm,0.8s,baz=256,slow=9.6,SNR=19						
KLR				PcP	**PcP**	**05 30 48.0**	**0.0**
	comp=Z,4.1nm,0.7s,baz=239,slow=8.6,SNR=3.0						
KLR	**Kul'dur**	**29.42**	**40**	*de*P	**P**	**05 27 43.3**	**+0.8**
KLR				pmax	pmax		
	comp=Z,24nm,1.0s						
BOD	**Bodaibo**	**29.44**	**12**	*e*P	**P**	**05 27 43.5**	**+1.0**
BOD				pmax	pmax		
	comp=Z,19nm,1.3s						
KK31	**Karatay Array**	**29.53**	**307**	P	**P**	**05 27 43.3**	**-0.2**
KK31				pmax	pmax		
	comp=Z,44nm,1.3s						
KK31	**Karatay Array**	**29.53**	**307**	P	**P**	**05 27 43.3**	**-0.2**
KK31				IAmb	IAmb	05 27 45.8	
	comp=Z,44nm,1.2s						
KKAR	**Karatay Array**	**29.53**	**307**	P	**P**	**05 27 43.7**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,44nm,1.3s						
KKAR	**Karatay Array**	**29.53**	**307**	P	**P**	**05 27 43.6**	**+0.1**
KKAR	**Karatay Array**	**29.53**	**307**	P	**P**	**05 27 43.7**	**+0.1**
KKAR				IAmb	IAmb	05 27 45.8	
	comp=Z,44nm,1.2s						
IUG	**Iuzhnay**	**29.61**	**305**	*e*P	**P**	**05 27 44.5**	**+0.1**
	comp=Z,9.6nm,1.1s,baz=304						
IUG	**Iuzhnay**	**29.61**	**305**	*e*P	**P**	**05 27 44.5**	**+0.1**
IUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA	**Zeya**	**30.01**	**29**	*e*P	**P**	**05 27 49.3**	**+1.7**
ZEA				*e*S	**S**	**05 32 43.4**	**-1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				smax	smax		
	comp=E,100nm,5.2s						
ZEA				MLR	MLR		
	comp=N,800nm,11.0s						
ZEA				MLR	MLR		
	comp=E,400nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,12.0s						
MAJO	**Matsushiro**	**30.11**	**67**	⇓*e*P	**P**	**05 27 48.2**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAJO	**Matsushiro**	**30.11**	**67**	P	**P**	**05 27 49.8**	**+1.1**
MAT	**Matsushiro**	**30.11**	**67**	P	**P**	**05 27 50.0**	**+1.3**
MAT				S	**S**	**05 32 49.6**	**+2.9**
MJAR	**Matsushiro Arr**	**30.11**	**67**	P	**P**	**05 27 48.7**	**-0.1**
	comp=Z,7.0nm,0.7s,baz=261,slow=9.2,SNR=7.9						
MJAR				PcP	**PcP**	**05 30 50.8**	**+0.7**
	comp=Z,6.2nm,0.8s,baz=272,slow=1.2,SNR=4.2						
MJAR	**Matsushiro Arr**	**30.11**	**67**	P	**P**	**05 27 49.2**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MJAR	**Matsushiro Arr**	**30.11**	**67**	P	**P**	**05 27 49.2**	**+0.4**
SDSI	**Sungai Dareh**	**30.16**	**184**	P	**P**	**05 27 48.8**	**-0.5**
	comp=Z,2µmcomp=Z,16nm,0.5s						
PALK	**Pallekele**	**30.52**	**228**	⇑*e*P	**P**	**05 27 52.3**	**-0.3**
PALK				pmax	pmax		
	comp=Z,14nm,0.8s						
BRZS	**Berezniki**	**30.92**	**320**	*e*P	**P**	**05 27 55.3**	**-0.5**
	comp=Z,6.9nm,1.2s,baz=320						
BRZS	**Berezniki**	**30.92**	**320**	*e*P	**P**	**05 27 55.2**	**-0.5**
BRZS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MTKI	**Muara Teweh, K**	**32.13**	**158**	P	**P**	**05 28 07.8**	**+1.2**
JMM	**Marumori**	**32.26**	**65**	P	**P**	**05 28 06.8**	**-0.8**
TOLI2	**Tolitoli**	**32.70**	**146**	P	**P**	**05 28 11.0**	**-0.6**
TOLI2				IAmb	IAmb	05 28 19.5	
	comp=Z,33nm,0.7s						
LHSI	**Lahat**	**32.99**	**179**	P	**P**	**05 28 13.9**	**-0.2**
	comp=Z,74nm,1.0s						
MDSI	**Maura Dua**	**33.66**	**178**	P	**P**	**05 28 19.4**	**-0.6**
	comp=Z,1µmcomp=Z,36nm,0.9s						
BRVK	**Borovoye**	**33.79**	**324**	*c i*P	**P**	**05 28 20.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,15nm,1.1s						
BRVK	**Borovoye**	**33.79**	**324**	P	**P**	**05 28 21.1**	**+0.3**
MRSI	**Marisa**	**33.82**	**145**	P	**P**	**05 28 20.6**	**-0.8**
	comp=Z,25nm,0.8s						
KLSI		**33.88**	**177**	P	**P**	**05 28 22.1**	**+0.2**
	comp=Z,11nm,1.5s						
JCJ	**Chichijima**	**34.31**	**84**	P	**P**	**05 28 27.1**	**+1.4**
	comp=Z,42nm,0.5s,baz=281,slow=20,SNR=5.4						
JCJ	**Chichijima**	**34.31**	**84**	P	**P**	**05 28 25.3**	**-0.3**
BBKI	**Banjar Baru**	**34.48**	**159**	P	**P**	**05 28 27.9**	**+0.7**
	comp=Z,8µmcomp=Z,68nm,0.6s						
ASAJ	**Asahikawa**	**34.48**	**54**	P	**P**	**05 28 27.8**	**+0.9**
	comp=Z,4.5nm,0.3s,baz=298,slow=17,SNR=3.2						
ASAJ				LR	LR	05 42 59.0	
	comp=Z,116nm,19.0s,baz=232,slow=37						
JKA	**Kamikawa-asahi**	**34.48**	**54**	P	**P**	**05 28 27.8**	**+0.9**
JKA	**Kamikawa-asahi**	**34.48**	**54**	IAmb	IAmb	05 28 33.5	
	comp=Z,17nm,0.7s						
ERM	**Erimo**	**34.52**	**58**	P	**P**	**05 28 28.2**	**+0.9**
ERM				pmax	pmax		
	comp=Z,103nm,1.4s						
ERM	**Erimo**	**34.52**	**58**	P	**P**	**05 28 28.2**	**+0.9**
JEM	**Erimo**	**34.52**	**58**	P	**P**	**05 28 27.9**	**+0.6**
KBKI	**Kotabaru**	**34.76**	**157**	P	**P**	**05 28 29.0**	**-0.6**
	comp=Z,54nm,0.8s						
APSI	**Ampana**	**34.87**	**146**	P	**P**	**05 28 31.3**	**+0.7**
	comp=Z,603nmcomp=Z,60nm,1.5s						
YSS	**Yuzh-Sakhalins**	**35.27**	**49**	⇑*e*P	**P**	**05 28 35.2**	**+1.5**
YSS				pmax	pmax		
	comp=Z,48nm,1.7s						
LUWI	**Luwuk**	**35.54**	**145**	P	**P**	**05 28 35.1**	**-1.2**
	comp=Z,2µmcomp=Z,127nm,1.1s						
TTSI	**Tana Toraja**	**35.93**	**151**	P	**P**	**05 28 39.7**	**+0.1**
	comp=Z,1µmcomp=Z,47nm,0.9s						
LEM	**Lembang**	**36.22**	**173**	P	**P**	**05 28 43.5**	**+1.2**
	comp=Z,24nm,1.1s						
TYV	**Tymovskoe**	**36.44**	**43**	*e*P	**P**	**05 28 45.5**	**+1.8**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SPSI	**Sidrap Palu**	**36.74**	**152**	P	**P**	**05 28 46.5**	**0.0**
	comp=Z,656nmcomp=Z,52nm,0.9s						
KPJI	**Karang Pucung**	**36.88**	**171**	P	**P**	**05 28 49.2**	**+1.4**
	comp=Z,144nm,1.1s						
YAK	**Yakutsk**	**37.01**	**20**	P	**P**	**05 28 49.0**	**+0.6**
	comp=Z,12nm,0.4s,baz=39,slow=2.1,SNR=15						
YAK	**Yakutsk**	**37.01**	**20**	*e*P	**P**	**05 28 47.8**	**-0.5**
YAK				*e**PP	**sP**	**05 28 59.1**	**+2.2**
YAK				*e*		05 31 06.4	
YAK				*e*S	**S**	**05 34 28.7**	**-4.2**
YAK				*e*SS	**SnSn**	**05 37 02.4**	**-4.0**
YAK				pmax	pmax		
	comp=Z,49nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,100nm,4.7s						
YAK				pmax	pmax		
	comp=N,100nm,4.1s						
YAK				pmax	pmax		
	comp=E,212nm,5.2s						
YAK				smax	smax		
	comp=N,200nm,5.6s						
YAK				smax	smax		
	comp=E,120nm,6.1s						
YAK	**Yakutsk**	**37.01**	**20**	P	**P**	**05 28 47.9**	**-0.5**
YAK				IAmb	IAmb	05 28 49.6	
	comp=Z,67nm,1.0s						
BNSI	**Bone**	**37.27**	**151**	P	**P**	**05 28 50.9**	**-0.2**
	comp=Z,26nm,1.9s						
KAPI	**Kappang**	**37.68**	**152**	P	**P**	**05 28 53.8**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,26nm,0.7s						
KAPI	**Kappang**	**37.68**	**152**	P	**P**	**05 28 53.8**	**-0.8**
KAPI				IAmb	IAmb	05 28 55.3	
	comp=Z,26nm,0.7s						
PWJI	**Pagerwojo**	**38.07**	**166**	P	**P**	**05 28 57.5**	**-0.3**
	comp=Z,53nm,0.9s						
BKSI	**Bulukumba**	**38.11**	**152**	P	**P**	**05 28 57.8**	**-0.4**
	comp=Z,48nm,0.7s						
GEYT	**Alibeck**	**38.20**	**295**	P	**P**	**05 29 00.4**	**+1.5**
	comp=Z,28nm,0.8s,baz=134,slow=6.4,SNR=31						
GEYT	**Alibeck**	**38.20**	**295**	P	**P**	**05 28 59.7**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**38.20**	**295**	P	**P**	**05 28 59.4**	**+0.5**
GYA0B				IAmb	IAmb	05 29 01.4	
	comp=Z,45nm,1.0s						
ABKAR	**Akbulak array**	**38.29**	**314**	P	**P**	**05 28 59.3**	**-0.1**
ABKAR	**Akbulak array**	**38.29**	**314**	P	**P**	**05 28 59.8**	**+0.4**
SRBI	**Singaraja**	**38.97**	**161**	P	**P**	**05 29 04.8**	**-0.6**
	comp=Z,69nm,0.9s						
TWSI	**Taliwang, Sumb**	**40.09**	**159**	P	**P**	**05 29 13.5**	**-1.3**
	comp=Z,825nmcomp=Z,38nm,1.2s						
SVE	**Sverdlovsk**	**40.47**	**325**	⇑*e*P	**P**	**05 29 18.4**	**+1.0**
SVE				pmax	pmax		
	comp=Z,40nm,1.0s						
ARU	**Arti**	**41.36**	**324**	*c i*P	**P**	**05 29 24.5**	**-0.4**
ARU						05 31 00.1	
ARU						05 31 20.3	
ARU				S	**S**	**05 35 41.1**	**+2.6**
ARU				SS	**SS**	**05 38 34.0**	**-8.3**
ARU				pmax	pmax		
	comp=Z,34nm,1.0s						
ARU	**Arti**	**41.36**	**324**	P	**P**	**05 29 24.5**	**-0.4**
EDFI	**Ende, Flores**	**41.86**	**152**	P	**P**	**05 29 27.2**	**-2.2**
	comp=Z,16nm,1.5s						

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MMRI  Maumere           41.98 151   P      P      05 29 29.6  -0.8
MMRI  Maumere           41.98 151   P      P      05 29 29.3  -1.0
      comp=Z,111nm,1.1s
SOEI  Soe               43.86 149   P      P      05 29 45.6  -0.1
SOEI                                IAmb   IAmb   05 30 21.1
      comp=Z,44nm,1.0s
SOEI  Soe               43.86 149   P      P      05 29 43.7  -2.0
      comp=Z,930nmcomp=Z,44nm,1.0s
MA2   Magadan           43.98  33⇑eP     P      05 29 46.4  +0.4
MA2                                 pmax   pmax
      comp=Z,43nm,1.7s
MA2   Magadan           43.98  33   P      P      05 29 47.0  +0.9
MA2                                 IAmb   IAmb   05 29 52.4
      comp=Z,130nm,2.0s
BATI  Baumata           44.00 150   P      P      05 29 44.7  -2.0
      comp=Z,70nm,0.6s
TIXI  Tiksi             44.62  11   P      P      05 29 50.2  -0.7
TIXI                                pmax   pmax
      comp=Z,49nm,1.2s
TIXI  Tiksi             44.62  11   P      P      05 29 50.2  -0.7
TIXI                                IAmb   IAmb   05 29 51.8
      comp=Z,49nm,1.2s
PETK  Petropavlovsk-    45.99  43   P      P      05 30 02.8  +0.6
      comp=Z,5.6nm,0.7s,baz=246,slow=6.3,SNR=5.1
SEY   Seymchan          45.99  29⇓eP     P      05 30 02.8  +0.8
AKT   Akhty             46.09 301  eP      P      05 30 03.4  +0.1
AKT                                e              05 31 37.3
AKT                                e              05 31 52.1
AKT                                 pmax   pmax
      comp=Z,13nm,0.7s
PET   Petropavlovsk     46.54  43  eP      P      05 30 06.2  -0.3
PET                                eS      S      05 36 49.2  -4.9
PET                                               05 40 11.3
PET                                 pmax   pmax
      comp=Z,12nm,0.6s
PET                                 MLR    MLR
      comp=Z,400nm,16.0s
BELG  Belogornoye       46.55 316deP     P      05 30 06.6  +0.1
BELG                                pmax   pmax
      comp=Z,10.0nm,1.0s
KIRV  Kirov             46.72 325⇓eP     P      05 30 07.5  -0.3
GROC  Groznyy           47.43 303  eP      P      05 30 14.1  +0.5
GROC                               e              05 31 43.8
GROC                               eS      S      05 37 08.2  +1.1
GROC                                pmax   pmax
      comp=Z,24nm,1.0s
UMR   Umm Al-Rimmam     47.92 285  eP             05 30 17.3
KBD   Kabd              48.03 284  eP             05 30 18.2
MIB   Mutribah          48.17 285  eP             05 30 19.4
RDF   Al-Radifah        48.21 284  eP             05 30 19.8
GNI   Garni             48.46 299deP     P      05 30 23.2  +1.4
GNI                                 pmax   pmax
      comp=Z,13nm,1.0s
RST   Umm Al-Ruwaisa    48.54 285  eP             05 30 21.0
ZEI   Tsey              48.85 303  eP      P      05 30 24.3  -0.5
ZEI                                 pmax   pmax
      comp=Z,10.0nm,1.0s
AKH   Akhalkalaki       49.27 301  ⇓P      P      05 30 28.7  +0.7
AKH   Akhalkalaki       49.27 301   P      P      05 30 29.0  +1.0
AKH                                 pmax   pmax
      comp=Z,49nm,1.1s
AKH   Akhalkalaki       49.27 301   P      P      05 30 29.0  +1.0
AKH                                 IAmb   IAmb   05 30 30.3
      comp=Z,49nm,1.1s
GOF   Gofitskoye        49.32 306⇑eP     P      05 30 28.3  +0.2
GOF                                 pmax   pmax
      comp=Z,40nm,1.1s
KBZ   Khabaz            49.51 304   P      P      05 30 29.1  -0.4
      comp=Z,2.5nm,0.9s,baz=143,slow=3.1,SNR=5.2
KBZ   Khabaz            49.51 304⇓eP     P      05 30 29.5   0.0
KBZ                                 pmax   pmax
      comp=Z,8.0nm,1.0s
KIV   Kislovodsk        49.64 304  eP      P      05 30 30.9  +0.2
KIV                                 pmax   pmax
      comp=Z,91nm,1.0s
KIV                                 MLR    MLR
      comp=Z,297nm,17.0s
KIV   Kislovodsk        49.64 304   P      P      05 30 30.9  +0.2
KIV                                 IAmb   IAmb   05 30 32.8
      comp=Z,46nm,1.2s
VRH   Novokhopyorsk     50.12 314  eP      P      05 30 33.4  -0.7
VRH                                 pmax   pmax
      comp=Z,30nm,1.1s
RAYN  Ar Rayn           51.56 278   P      P      05 30 44.7  -0.8
RAYN                                pmax   pmax
      comp=Z,8.0nm,1.1s
RAYN  Ar Rayn           51.56 278   P      P      05 30 44.7  -0.8
VORD  Divnogorie        51.65 314  eP      P      05 30 44.6  -1.0
VORD                                pmax   pmax
      comp=Z,10.0nm,1.0s
SOC   Sochi             51.82 304  eP      P      05 30 46.5  -0.5
SOC                                e              05 32 42.9
SOC                                ePPP    PPP    05 33 43.6
SOC                                eS      S      05 38 09.9  +1.4
SOC                                eSS     SS     05 41 44.4  -0.5
SOC                                eSSS    SSS    05 43 17.5
SOC                                 pmax   pmax
      comp=Z,16nm,0.8s
SOC                                 MLR    MLR
      comp=Z,149nm,11.0s
LPSR  Galich'ya Gora    51.87 316  eP      P      05 30 47.0  -0.2
LPSR                                pmax   pmax
      comp=Z,30nm,0.8s
FITZ  Fitzroy Crossi    51.90 153   P      P      05 30 47.5  -0.3
KLMR  Klimovskoe        52.07 326  eP      P      05 30 44.4  -4.2
KLMR                               e              05 32 42.6
KLMR                                pmax   pmax
      comp=Z,84nm,1.2s
KLMR  Klimovskoe        52.07 326  eP      P      05 30 44.5  -4.2
KLMR                                AMP           05 30 49.4
      comp=Z,84nm,1.2s
KLMR                               ePP     PP     05 32 42.6  -4.0
MOS   Moscow            52.68 320  eP      P      05 30 51.9  -1.3
MOS                                 pmax   pmax
      comp=Z,84nm,1.0s
PSA00 Pilbara Seismi    53.11 161   P      P      05 30 56.3  -0.3
PSA00 Pilbara Seismi    53.11 161   P      P      05 30 56.9  +0.2
PSA00                               IAmb   IAmb   05 31 01.6
      comp=Z,37nm,0.8s
TMCR  Tamitsa           53.20 330  eP      P      05 30 56.1  -0.8
OBN   Obninsk           53.27 319⇓iP     P      05 30 57.6  +0.1
OBN                                 *SP    sP     05 31 06.0  -0.2
OBN                                e              05 31 11.0
OBN                                e              05 32 03.8
OBN                                               05 32 57.0
OBN                                 pmax   pmax
      comp=Z,55nm,1.7s
OBN                                 MLR    MLR
      comp=Z,219nm,14.0s
GAZ   Gaziantep         54.76 297   IAmb   IAmb   05 31 10.1
      comp=Z,20nm,0.9s
APA   Apatity           55.53 334⇑iP     P      05 31 09.4  -4.4
APA                                 pmax   pmax
      comp=Z,12nm,0.8s
PUL   Pulkovo           56.59 325⇑eP     P      05 31 20.6  -0.9
PUL                                 pmax   pmax
      comp=Z,54nm,0.8s
BR131 Keskin Array S    56.95 300deP     P      05 31 23.9  -0.6
BRTR  Keskin Array B    56.95 300   P      P      05 31 23.9  -0.6
      comp=Z,6.0nm,0.9s,baz=103,slow=5.5,SNR=26
BRTR  Keskin Array B    56.95 300 i P      P      05 31 24.0  -0.6
BRTR                                pmax   pmax
      comp=Z,6.0nm,0.9s
BRTR  Keskin Array B    56.95 300   P      P      05 31 23.4  -1.1
PMG   Port Moresby      57.24 125deP     P      05 31 27.1  +0.4
PMG                                 pmax   pmax
      comp=Z,32nm,1.3s
WB0   Warramunga Arr    57.35 145   IAmb   IAmb   05 31 38.5
      comp=Z,35nm,0.8s
WRAB  Tennant Creek     57.47 145c iP     P      05 31 27.5  -0.7
WRAB                                pmax   pmax
      comp=Z,41nm,0.9s
WRA   Warramunga Arr    57.47 145   P      P      05 31 27.9  -0.2
      comp=Z,34nm,0.6s,baz=336,slow=7.7,SNR=162
WRA   Warramunga Arr    57.47 145 i P      P      05 31 28.0  -0.2
WRA                                 pmax   pmax
      comp=Z,34nm,0.6s
WRA   Warramunga Arr    57.47 145   P      P      05 31 26.5  -1.7
COEN  Coen              57.81 133   P      P      05 31 30.0  -0.7
COEN                                IAmb   IAmb   05 31 31.6
      comp=Z,16nm,0.8s
AKASG Malin Array Be    58.03 314   P      P      05 31 30.7  -1.1
      comp=Z,1.3nm,0.4s,baz=72,slow=6.7,SNR=11
AKASG                               PcP    PcP    05 32 23.2  -0.4
      comp=Z,1.9nm,0.5s,baz=69,slow=5.4,SNR=6.5
AKASG                               PP     PP     05 33 33.4  -6.8
      comp=Z,0.7nm,0.4s,baz=66,slow=7.4,SNR=4.0
AKASG Malin Array Be    58.03 314 i P      P      05 31 31.1  -0.7
AKASG                               pmax   pmax
      comp=Z,3.0nm,0.5s
AKASG Malin Array Be    58.03 314   P      P      05 31 31.1  -0.7
AKBB  Malin Array Si    58.03 314⇓iP     P      05 31 31.1  -0.7
VSU   Vasula            58.52 323  eP      P      05 31 34.8  -0.3
ARA0  ARCESS Array S    58.54 336  eP      P      05 31 35.6  +0.5
ARCES ARCESS Array B    58.54 336   P      P      05 31 35.5  +0.3
      comp=Z,9.5nm,0.7s,baz=88,slow=7.7,SNR=21
ARCES                               PcP    PcP    05 32 24.9  -0.4
      comp=Z,6.9nm,0.7s,baz=92,slow=4.7,SNR=5.2
ARCES                               LR     LR     05 59 32.1
      comp=Z,186nm,20.1s,baz=275,slow=39
ARCES ARCESS Array B    58.54 336   P      P      05 31 34.7  -0.4
ARCES                               pmax   pmax
      comp=Z,18nm,1.1s
ARCES ARCESS Array B    58.54 336   P      P      05 31 34.7  -0.4
FINES FINESS Array B    58.59 327   P      P      05 31 35.2  -0.4
      comp=Z,5.8nm,0.5s,baz=94,slow=6.6,SNR=32
ATD   Arta Tunnel       58.67 266   P      P      05 31 37.3  +0.4
ATD                                 IAmb   IAmb   05 31 38.7
      comp=Z,32nm,1.0s
IDID  Didziasalis       58.88 320  eP      P      05 31 37.6  -0.1
NACGM Naroch            58.91 319 i P      P      05 31 37.7  -0.1
NACGM                             i P      P      05 31 37.7  -0.1
NACGM                             i P      P      05 31 37.7  -0.1
NACGM                             i pP     pP     05 31 51.3  +7.2
NACGM                             i sP     sP     05 32 03.9  +17
NACGM                             i PP     PP     05 33 49.1  +1.2
NACGM                             i PPP    PPP    05 35 10.9
NACGM                             i S      S      05 39 45.9  +3.0
NACGM                             i sS     sS     05 40 06.6  +14
NACGM                             i SS     SS     05 43 44.4  +8.4
NACGM                             i SSS    SSS    05 46 13.3
NACGM                             i LQ     LQ     05 51 45.9
NACGM                             i LR     LR     05 55 23.4
SORM  Soroca            59.02 311  ⇓P      P      05 31 37.3  -1.4
SORM  Soroca            59.02 311  ⇓P      P      05 31 37.3  -1.4
HAMF  Hammerfest        59.16 338  eP      P      05 31 38.9  -0.5
IIGN  Ignalina          59.17 320  eP      P      05 31 39.8  +0.2
ISAL  Salakas           59.19 320  eP      P      05 31 40.0  +0.2
KTK1  Kautokeino        59.36 336  eP      P      05 31 41.6  +0.8
MORW  Morawa            59.37 167   P      P      05 31 41.9  +0.6
TPGR  Topolog           59.62 307  ⇓P      P      05 31 43.0   0.0
TIRR  Tirgusor          59.71 307  ⇓P      P      05 31 43.1  -0.5
TIRR  Tirgusor          59.71 307  ⇓P      P      05 31 43.1  -0.5
CFR   Carcaliu          59.75 308  ⇓P      P      05 31 41.6  -2.2
CFR   Carcaliu          59.75 308  ⇓P      P      05 31 41.6  -2.2
HARR  Harsova           60.00 307  ⇓P      P      05 31 45.2  -0.4
HARR  Harsova           60.00 307  ⇓P      P      05 31 45.2  -0.4
PABE  Paberze           60.41 320  eP      P      05 31 48.4  +0.2
ASAR  Alice Springs     60.42 147   P      P      05 31 48.6   0.0
      comp=Z,26nm,0.8s,baz=330,slow=6.5,SNR=113
ASAR  Alice Springs     60.42 147   P      P      05 31 48.5  -0.2
TESR  Tescani           60.48 309  ⇓P      P      05 31 48.4  -0.5
VRI   Vrincioaia        60.56 309  ⇓P      P      05 31 49.7  +0.2
VRI   Vrincioaia        60.56 309  ⇓P      P      05 31 49.7  +0.2
PLOR  Plostina          60.62 309  ⇓P      P      05 31 50.6  +0.7
PLOR  Plostina          60.62 309  ⇓P      P      05 31 50.6  +0.7
BISRR Bisoca            60.65 308  ⇓P      P      05 31 51.1  +0.9
TRO   Tromso            60.84 336  eP      P      05 31 50.1  -0.8
SPA0  Spitsbergen Ar    60.85 346   P      P      05 31 51.5  +0.5
SPA0  Spitsbergen Ar    60.85 346  eP      P      05 31 51.1  +0.2
ISR   Istrita           60.86 308  ⇓P      P      05 31 52.2  +0.6
ISR   Istrita           60.86 308  ⇓P      P      05 31 52.2  +0.6
NEHR  Nehoiu            60.96 308  ⇓P      P      05 31 56.0  +3.8
HSPB  Hornsund (broa    61.12 345  eP      P      05 31 53.1  +0.4
OZUR                    61.15 309  ⇓P      P      05 31 51.6  -2.0
MLR   Muntele Rosu      61.19 308  ⇓P      P      05 31 54.1  +0.3
MLR   Muntele Rosu      61.19 308  ⇓P      P      05 31 54.1  +0.3
MLR   Muntele Rosu      61.19 308   P      P      05 31 54.2  +0.4
MLR                                 IAmb   IAmb   05 31 59.8
      comp=Z,15nm,1.1s
BURAR Bucovina Array    61.19 311  ⇓P      P      05 31 53.7  -0.1
BURAR Bucovina Array    61.19 311  ⇓P      P      05 31 53.7  -0.1
BURAR Bucovina Array    61.19 311   P      P      05 31 53.1  -0.7
BURAR                                      PcP    05 32 37.0  +0.5
BUR08 Bucovina Ar. S    61.19 311   P      P      05 31 53.4  -0.5
DOPR  Dopca             61.45 309  ⇓P      P      05 31 55.5   0.0
LVV   L'vov             61.47 314  eP      P      05 31 55.0  -0.5
VOIR                    61.81 309  ⇑P      P      05 31 57.5  -0.5
VOIR                    61.81 309  ⇑P      P      05 31 57.5  -0.5
STEI  Steigen           62.41 335  eP      P      05 32 01.7  +0.2
FAUS  Fauske            62.49 334  eP      P      05 32 02.4  +0.4
KOLS  Kolonicke sedl    62.79 313  eP      P      05 32 05.6  +1.2
KOLS  Kolonicke sedl    62.79 313  eP      P      05 32 05.6  +1.2
UZH   Uzhgorod          62.85 313  eP      P      05 32 04.6  -0.2
UZH                                e              05 32 11.3
UZH                                e              05 32 43.7
UPP   Uppsala           62.94 326  eP      P      05 32 05.7  +0.5
LOF   Lofoten           63.00 335  eP      P      05 32 04.6  -0.8
MOR8  Moi Rana          63.05 333  eP      P      05 32 05.1  -0.7
NWAO  Narrogin (SRO)    63.35 167   P      P      05 32 07.7  -0.5
NWAO                                pmax   pmax
      comp=Z,24nm,0.8s
NWAO  Narrogin (SRO)    63.35 167   P      P      05 32 07.7  -0.5
NWAO                                IAmb   IAmb   05 32 13.3
      comp=Z,24nm,0.8s
KONS  Konsvik           63.50 333  eP      P      05 32 08.3  -0.5
HERR  Herculane         63.75 309  ⇓P      P      05 32 11.2  +0.3
VTS   Vitosha           63.82 306  ⇓P      P      05 32 10.2  -1.4
VTS   Vitosha           63.82 306  ⇓P      P      05 32 10.2  -1.4
OJC   Ojcow             64.02 315   IAmb   IAmb   05 32 13.3
      comp=Z,40nm,1.7s
BZS   Buzias            64.09 309  ⇓P      P      05 32 12.6  -0.5
BZS   Buzias            64.09 309  ⇓P      P      05 32 12.6  -0.5
MDVR  Moldovita         64.26 309  ⇓P      P      05 32 14.1  -0.2
FORT  Forrest           64.31 156   P      P      05 32 13.9  -0.6
CTAO  Charters Tower    64.33 135   P      P      05 32 14.8  -0.1
CTAO                                pmax   pmax
      comp=Z,29nm,0.9s
CTAO  Charters Tower    64.33 135   P      P      05 32 14.8  -0.1
CTAO                                IAmb   IAmb   05 32 15.9
      comp=Z,29nm,0.9s
NSS   Namsos            64.44 331  eP      P      05 32 14.8  -0.2
ANM   Nome              64.50  29   P      P      05 32 16.5  +1.1
ANM                                 pmax   pmax
      comp=Z,21nm,1.0s
ANM   Nome              64.50  29   P      P      05 32 16.5  +1.1
ANM                                 IAmb   IAmb   05 32 23.3
      comp=Z,21nm,1.0s
VYHS  Vyhne             65.10 313  eP      P      05 32 19.6   0.0
VYHS                                pmax   pmax
      comp=Z,7.0nm,0.9s
VYHS  Vyhne             65.10 313  eP      P      05 32 19.6   0.0
FRGS  Fruska Gora       65.44 309  eP      P      05 32 21.0  -0.9
TBLU  Trondheim         65.51 330  eP      P      05 32 21.6  -0.4
MORC  Moravsky Berou    65.54 315  ⇓P      P      05 32 22.6  +0.1
MORC  Moravsky Berou    65.54 315  eP      P      05 32 22.4  -0.1
MORC  Moravsky Berou    65.54 315  ⇓P      P      05 32 22.6  +0.1
DIVS  Divibare          65.64 308  eP      P      05 32 22.6  -0.8
DIVS  Divibare          65.64 308   P      P      05 32 22.5  -0.8
NC602 NORSAR Array S    65.66 327  eP      P      05 32 22.0  -1.0
A21K  Barrow            65.67  20   P      P      05 32 23.2  +0.3
      baz=290
NB2   NORSAR Subarra    65.72 328   P      P      05 32 22.4  -1.1
      comp=Z,8.0nm,0.5s,baz=73,slow=6.9
NB2   NORSAR Subarra    65.72 328   P      P      05 32 22.4  -1.1
      baz=73,slow=6.9
NOA   NORSAR Array B    65.72 328   P      P      05 32 22.9  -0.5
      comp=Z,11nm,0.6s,baz=73,slow=6.7,SNR=39
NOA                                 LR     LR     06 01 18.7
      comp=Z,100nm,18.7s,baz=90,slow=36
JAVC  Velka Javorina    65.73 314  eP      P      05 32 25.0  +1.2
CSKK  Cskako            65.80 312  eP      P      05 32 23.7  -0.5
NC204 NORSAR Array S    65.86 328   P      P      05 32 24.0  -0.4
MORH  Mrgy, Hungar      65.90 311  eP      P      05 32 25.0  +0.2
MORH  Mrgy, Hungar      65.90 311  eP      P      05 32 24.2  -0.6
SJES  Sjenica           65.91 307  eP      P      05 32 24.8  -0.3
NAO01 NORSAR Array S    65.93 328   P      P      05 32 24.1  -0.7
BBLS  Lazi&#263;i       66.12 308  eP      P      05 32 25.9  -0.5
DPC   Dobruska-Polom    66.12 316  eP      P      05 32 26.9  +0.6
DPC   Dobruska-Polom    66.12 316  eP      P      05 32 26.9  +0.6
CHVC  Chvalec           66.21 316  eP      P      05 32 26.6  -0.2
CHVC                               ex      x      05 32 35.9
VRAC  Vranov            66.27 314  ⇓P      P      05 32 26.6  -0.6
VRAC  Vranov            66.27 314  eP      P      05 32 27.3  +0.1
VRAC  Vranov            66.27 314  ⇓P      P      05 32 26.6  -0.6
OSL   Oslo              66.28 327  eP      P      05 32 27.5  +0.5
MPLH  Magyarpolny       66.33 312  eP      P      05 32 27.0  -0.6
DOMB  Dombas            66.40 329  eP      P      05 32 27.5  -0.3
KRUC  Moravsky          66.47 314  eP      P      05 32 27.9  -0.6
UPM   Unac-Piva         66.67 308  eP      P      05 32 29.6  -0.5
PDG   Podgorica         66.68 307  ⇓P      P      05 32 29.6  -0.3
PDG   Podgorica         66.68 307  eP      P      05 32 29.1  -0.8
PDG   Podgorica         66.68 307   P      P      05 32 29.4  -0.4
SOP   Sopron            66.80 313  eP      P      05 32 30.7  +0.1
DRME  Dracevica, Mon    66.81 306  eP      P      05 32 29.9  -0.8
MOL   Molde             66.90 330  eP      P      05 32 31.5  +0.6
KONO  Kongsberg         66.91 327  eP      P      05 32 31.3  +0.2
BRY   Bratogost         67.03 307  eP      P      05 32 31.1  -1.2
CONA  Conrad Observa    67.17 313  eP      P      05 32 33.1  +0.1
      comp=Z,9.9nm,1.1s
SKAR  Skarslia          67.19 328  eP      P      05 32 33.3  +0.4
TREB  Trebinje          67.22 307  eP      P      05 32 33.6  +0.3
AKN   Aaknes            67.27 330  eP      P      05 32 33.5  +0.2
PRU   Pruhonice         67.32 316  eP      P      05 32 34.5  +0.7
PRU   Pruhonice         67.32 316  eP      P      05 32 34.5  +0.7
BRG   Berggiesshubel    67.40 317  eP      P      05 32 34.2  -0.1
BRG                                 Amp           05 32 37.1
      comp=Z,9.5nm,1.6s
BRG   Berggiesshubel    67.40 317  eP      P      05 32 34.2  -0.1
BRG                                 pmax   pmax
      comp=Z,10.0nm,1.6s
BRG   Berggiesshubel    67.40 317  eP      P      05 32 34.2  -0.1
BRG                                 Amp           05 32 37.1
      comp=Z,9.5nm,1.6s
ARSA  Arzberg           67.61 313  eP      P      05 32 35.6  -0.2
      comp=Z,6.5nm,0.8s
STON  Ston              67.62 308   P      P      05 32 36.1  +0.3
RICI  Ricice            67.80 308   P      P      05 32 34.9  -2.1
CLL   Collm             67.81 317  eP      P      05 32 37.0  +0.1
CLL   Collm             67.81 317  eP      P      05 32 37.0  +0.1
HOMB  Homborsund        67.91 325  e              05 30 25.9
GOLS  Golise            67.95 311  eP      P      05 32 37.8  -0.2
HYA   Hoyanger          67.99 329  eP      P      05 32 37.4  -0.4
PERS  Pernice           68.07 312  eP      P      05 32 38.1  -0.6
SOKA  Soboth            68.11 312  eP      P      05 32 38.8  -0.2
      comp=Z,7.9nm,1.1s
KIJV  Kijevo            68.12 309   P      P      05 32 38.7  -0.3
CRES  Cresnjev          68.13 311  eP      P      05 32 38.3  -0.7
KHC   Kasperske Hory    68.20 315⇑eP     P      05 32 40.0  +0.5
KHC                                 pmax   pmax
      comp=Z,8.0nm,1.3s
KHC   Kasperske Hory    68.20 315  eP      P      05 32 39.5   0.0
MOA   Molln             68.21 314 i P      P      05 32 39.8  +0.3
      comp=Z,10nm,1.0s,SNR=8.3
GEC2  GERESS Array S    68.22 315   P      P      05 32 39.4  -0.3
GERES GERESS Array B    68.22 315   P      P      05 32 40.1  +0.5
      comp=Z,2.5nm,0.4s,baz=68,slow=5.4,SNR=16
GERES GERESS Array B    68.22 315   P      P      05 32 39.3  -0.3
ODD1  Odda              68.23 327  eP      P      05 32 39.9  +0.4
HVAR  Hvar              68.37 308   P      P      05 32 39.3  -1.3
DAG   Danmarks Havn     68.38 348 i P      P      05 32 39.0  -1.1
DAG                                 pmax   pmax
      comp=Z,12nm,1.0s
DAG   Danmarks Havn     68.38 348 i P      P      05 32 39.0  -1.1
      comp=Z,12nm,1.0s
DAG   Danmarks Havn     68.38 348 i P      P      05 32 39.0  -1.1
DAG                                 IAmb   IAmb   05 32 41.4
      comp=Z,12nm,1.0s
OBKA  Obir              68.49 312  eP      P      05 32 41.6  +0.3
      comp=Z,5.3nm,0.7s
BLS5  Blasjo            68.49 327  eP      P      05 32 41.5  +0.4
SNART Snartemo          68.52 326  eP      P      05 32 41.4  +0.2
IMAR  Indian Mountai    68.63  25   P      P      05 32 42.0  +0.2
MORI  Morici            68.64 309   P      P      05 32 40.7  -1.5
LJU   Ljubljana         68.66 312  eP      P      05 32 42.0  -0.4
BER   Bergen            68.67 328  eP      P      05 32 41.8  -0.3
ASK   Askoy             68.69 328  eP      P      05 32 41.7  -0.5
ZIRJ  Zirje             68.76 309   P      P      05 32 41.5  -1.4
CEY   Cerknica          68.83 311  eP      P      05 32 43.1  -0.4
TTA   Tatalina          68.96  29   P      P      05 32 44.9  +0.9
TTA                                 pmax   pmax
      comp=Z,13nm,1.1s
TTA   Tatalina          68.96  29   P      P      05 32 44.9  +0.9
MYKA  Terra Mystica     69.03 312  eP      P      05 32 45.6  +0.9
      comp=Z,2.6nm,0.5s
KBA   Koelnbreinsper    69.06 313  eP      P      05 32 45.0   0.0
      comp=Z,9.6nm,1.0s
BBOO  Buckleboo         69.23 151   P      P      05 32 45.2  -0.6
COLD  Coldfoot          69.38  23   P      P      05 32 46.7  +0.3
      baz=297
GRF   Grafenberg Arr    69.44 316  eP      P      05 32 48.0  +0.9
      comp=Z,9.3nm,1.0s,baz=69,slow=5.5
TIP   Timpagrande       69.59 304  ⇓P      P      05 32 47.5  -0.7
ABTA  Abfaltersbach     69.71 313  eP      P      05 32 48.0  -1.0
      comp=Z,2.9nm,0.6s
KMBO  Kilima Mbogo      69.75 257   P      P      05 32 50.2  +0.3
      comp=Z,28nm,0.8s,baz=48,slow=9.7,SNR=51
KMBO  Kilima Mbogo      69.75 257 i P      P      05 32 50.5  +0.6
KMBO                                pmax   pmax
      comp=Z,29nm,0.8s
WATA  Walderalm         70.09 314  eP      P      05 32 51.5  +0.1
      comp=Z,10nm,1.1s
MLY   Manley            70.18  26   P      P      05 32 51.9  +0.5
      baz=297,SNR=16
DBG   Daneborg          70.22 346 i P      P      05 32 50.3  -1.2
DBG                                 IAmb   IAmb   05 32 52.7
      comp=Z,36nm,1.1s
SQTA  Sankt Quirin      70.36 314 i P      P      05 32 52.6  -0.4
      comp=Z,10nm,0.6s,SNR=8.0
MOTA  Moosalm           70.39 314 i P      P      05 32 52.6  -0.5
      comp=Z,8.7nm,0.7s,SNR=7.1
BPAW  Bear Paw Mtn.     70.50  27   P      P      05 32 53.8  +0.4
RETA  Reutte            70.55 314  eP      P      05 32 52.7  -1.4
      comp=Z,3.7nm,0.6s
I23K  Minto, Yukon-K    70.64  25   P      P      05 32 54.6  +0.4
      baz=298,SNR=10
I23K  Minto, Yukon-K    70.64  25   IAmb   IAmb   05 32 56.1
      comp=Z,15nm,0.8s
FETA  Feichten          70.74 314 i P      P      05 32 55.1  -0.3
      comp=Z,17nm,1.0s,SNR=18
NRCA  Norcia            70.78 309   P      P      05 32 55.2  -0.4
STKA  Stephens Creek    70.98 146   P      P      05 32 56.2  -0.4
      comp=Z,5.8nm,0.7s,baz=331,slow=8.5,SNR=10
STKA  Stephens Creek    70.98 146   P      P      05 32 56.6   0.0
STKA                                pmax   pmax
      comp=Z,3.0nm,1.2s
STKA  Stephens Creek    70.98 146   P      P      05 32 56.6   0.0
NEA2  Nenana            71.01  26   P      P      05 32 56.9  +0.4
      baz=298,SNR=17
TRF   Thorofare Moun    71.08  27   IAmb   IAmb   05 33 04.3
      comp=Z,20nm,1.2s
DAVA  Damuels           71.18 314  eP      P      05 32 59.6  +1.6
      comp=Z,4.0nm,0.8s
BMAR  Burnt Mountain    71.19  22   P      P      05 32 56.7  -0.8
EIDS  Eidsvold          71.22 135   IAmb   IAmb   05 33 03.4
      comp=Z,56nm,1.6s
TCOL  CIGO, UAF Yank    71.33  25   P      P      05 32 58.4  +0.1
      baz=299,SNR=5.2
COLA  College           71.34  25c iP     P      05 32 58.6  +0.2
COLA                                pmax   pmax
      comp=Z,45nm,1.1s
COLA  College           71.34  25   P      P      05 32 59.2  +0.9
POKR  Poker Plat Res    71.37  25   P      P      05 32 59.2  +0.6
      baz=300,SNR=24
RSO   Redoubt South     71.42  30   P      P      05 32 59.5  +0.3
FYU   Fort Yukon        71.42  23   IAmb   IAmb   05 33 05.1
      comp=Z,40nm,1.3s
MCK   McKinley          71.48  27   P      P      05 32 59.8  +0.4
      baz=299
RND   Reindeer          71.67  27   IAmb   IAmb   05 33 05.3
      comp=Z,41nm,1.2s
BFO   Black Forest      71.72 316   P      P      05 33 00.8  -0.3
BFO                                 pmax   pmax
      comp=Z,46nm,1.8s
BFO   Black Forest      71.72 316   P      P      05 33 00.8  -0.3
BFO                                 IAmb   IAmb   05 33 09.9
      comp=Z,46nm,1.8s
IL31                    71.75  25   IAmb   IAmb   05 33 01.4
      comp=Z,22nm,1.3s
ILAR  Eielson Array     71.75  25   P      P      05 33 00.1  -0.9
      comp=Z,16nm,1.2s,baz=287,slow=5.5,SNR=40
ILAR  Eielson Array     71.75  25   P      P      05 32 59.9  -1.0
TUE   Stuetta           71.83 313   IAmb   IAmb   05 33 12.9
      comp=Z,14nm,0.7s
HDA   Harding Lake      71.91  25   P      P      05 33 01.4  -0.5
      baz=300,SNR=6.7
HDA   Harding Lake      71.91  25   IAmb   IAmb   05 33 06.7
      comp=Z,28nm,1.4s
RC01  Rabbit Creek A    72.43  29   P      P      05 33 04.9  -0.2
      baz=299,SNR=5.5
GHO   Glory Hole Cre    72.44  28   P      P      05 33 05.1  -0.1
GHO                                 IAmb   IAmb   05 33 13.5
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	comp=Z,36nm,1.1s						
WLF	Walferdange	72.48	317	dP	P	05 33 05.4	-0.2
WLF	Walferdange	72.48	317	IAmb	IAmb	05 33 07.7	
	comp=Z,27nm,1.0s						
BCLA	Clavier	72.66	318	dP	P	05 33 05.9	-0.8
BCLA				dPcP	PcP	05 33 23.7	-0.4
SML	Sawmill	72.67	28	P	P	05 33 06.6	+0.1
KDAK	Kodiak Island	72.72	33	P	P	05 33 07.3	+0.5
	comp=Z,27nm,1.0s,baz=342,slow=13,SNR=3.8						
KNK	Knik Glacier	72.81	29	IAmb	IAmb	05 33 15.4	
	comp=Z,29nm,0.8s						
RIDG	Independent Ri	73.04	26	IAmb	IAmb	05 33 13.3	
	comp=Z,33nm,1.0s						
SENIN	Lac Senin/Sane	73.17	314	P	P	05 33 09.9	-0.1
SENIN				IAmb	IAmb	05 33 27.8	
	comp=Z,28nm,1.6s						
PAX	Paxson	73.22	26	P	P	05 33 10.1	+0.3
PAX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PAX	Paxson	73.22	26	P	P	05 33 10.1	+0.3
SCRK	Sand Creek	73.24	25	P	P	05 33 09.6	-0.3
	baz=303,SNR=20						
DOT	Dot Lake	73.39	25	IAmb	IAmb	05 33 18.6	
	comp=Z,30nm,1.5s						
M24K	Tolsona, Glenn	73.39	27	P	P	05 33 11.5	+0.6
	baz=302,SNR=8.5						
MENT	Mentasta	73.91	26	IAmb	IAmb	05 33 36.5	
	comp=Z,22nm,1.3s						
K27K	Chicken	73.91	25	P	P	05 33 14.0	+0.2
	baz=304						
K27K	Chicken	73.91	25	IAmb	IAmb	05 33 19.7	
	comp=Z,32nm,1.1s						
INK	Inuvik	74.06	19	P	P	05 33 13.8	-0.7
INK				pmax	pmax		
	comp=Z,32nm,0.9s						
INK	Inuvik	74.06	19	P	P	05 33 13.8	-0.7
INK				IAmb	IAmb	05 33 15.8	
	comp=Z,32nm,0.8s						
TULEG	Thule	74.25	358	iP	P	05 33 15.4	-0.1
TULEG				IAmb	IAmb	05 33 16.6	
	comp=Z,25nm,0.7s						
N25K	Chitina, Valde	74.29	27	P	P	05 33 16.9	+0.8
	baz=303,SNR=9.7						
N25K	Chitina, Valde	74.29	27	IAmb	IAmb	05 33 22.3	
	comp=Z,32nm,1.1s						
EPYK	Eagle Plains	74.34	21	P	P	05 33 16.1	-0.2
	baz=308						
EPYK	Eagle Plains	74.34	21	IAmb	IAmb	05 33 21.0	
	comp=Z,31nm,1.1s						
BCAR	Beaver Creek A	74.57	25	P	P	05 33 18.4	+0.8
GLB	Gilahina Butte	74.70	27	IAmb	IAmb	05 33 20.2	
	comp=Z,28nm,1.1s						
SUMG	Summit	75.01	349	P	P	05 33 20.3	-0.2
SUMG				pmax	pmax		
	comp=Z,23nm,0.7s						
SUMG	Summit	75.01	349	P	P	05 33 20.3	-0.2
SUMG				IAmb	IAmb	05 33 21.8	
	comp=Z,23nm,0.7s						
SUMG	Summit	75.01	349	iP	P	05 33 20.4	0.0
SUMG	Summit	75.01	349	iP	P	05 33 20.5	0.0
MCARA	McCarthy VSAT	75.04	27	IAmb	IAmb	05 33 26.4	
	comp=Z,44nm,1.2s						
MBAR	Mbarara	75.06	261	P	P	05 33 22.2	+0.7
MBAR				pmax	pmax		
	comp=Z,36nm,1.4s						
MBAR	Mbarara	75.06	261	P	P	05 33 22.2	+0.7
MBAR				IAmb	IAmb	05 33 23.2	
	comp=Z,36nm,1.4s						
BALM	Baldy	75.51	27	P	P	05 33 23.6	+0.4
BALM				IAmb	IAmb	05 33 31.3	
	comp=Z,29nm,1.0s						
RES	Resolute Bay	75.55	5	IAmb	IAmb	05 33 24.8	
	comp=Z,30nm,0.9s						
C36M	Paulatuk	75.77	16	P	P	05 33 24.4	0.0
	baz=319						
BARN	Barnard Glacie	75.77	27	IAmb	IAmb	05 33 39.1	
	comp=Z,19nm,1.0s						
CTGM	Chitina Glacie	75.96	27	IAmb	IAmb	05 33 32.0	
	comp=Z,35nm,1.1s						
SANVU	Saraoutou	76.11	117	P	P	05 33 28.1	+1.0
KEST	Kesra	76.37	303	P	P	05 33 28.1	-0.5
	comp=Z,1.3nm,0.4s,baz=216,slow=3.5,SNR=5.6						
KEST	Kesra	76.37	303	P	P	05 33 27.6	-0.9
UPNV	Upernavik	77.16	354	iP	P	05 33 32.6	+0.4
UPNV				IAmb	IAmb	05 33 33.5	
	comp=Z,22nm,0.7s						
HYT	Haines Junctio	77.53	26	P	P	05 33 33.8	-0.9
HYT				IAmb	IAmb	05 33 40.6	
	comp=Z,33nm,1.3s						
ICESG	Greenland Ices	78.15	347	iP	P	05 33 38.2	-0.1
SFJD	Kangerlussuaq	81.92	350	P	P	05 33 58.1	-0.1
SFJD				pmax	pmax		
	comp=Z,98nm,1.5s						
SFJD	Kangerlussuaq	81.92	350	P	P	05 33 58.0	-0.1
SFJD	Kangerlussuaq	81.92	350	iP	P	05 33 57.6	-0.6
SFJD	Kangerlussuaq	81.92	350	iP	P	05 33 57.7	-0.6
SESP	Santiago Espad	83.52	310	P		05 34 08.3	
YKA	Yellowknife Ar	83.59	17	P	P	05 34 07.2	+0.3
	comp=Z,15nm,0.9s,baz=328,slow=4.5,SNR=98						
YKA				PKKPbc	PKKPbc	05 52 22.4	-3.0
	comp=Z,0.6nm,0.8s,baz=139,slow=2.9,SNR=7.6						
ESDC	Sonseca Array	83.62	312	P	P	05 34 08.4	+0.7
	comp=Z,3.6nm,0.8s,baz=46,slow=6.1,SNR=23						
ESDC	Sonseca Array	83.62	312	P	P	05 34 08.3	+0.6
PBRG	Braganca	84.20	315	eP	P	05 34 10.9	+0.3
MVO	Moncorvo	84.74	315	eP	P	05 34 14.5	+1.2
	comp=Z,45nm,1.7s						
LSZ	Lusaka	84.83	249	P	P	05 34 14.2	0.0
LSZ				pmax	pmax		
	comp=Z,49nm,1.2s						
LSZ	Lusaka	84.83	249	P	P	05 34 14.2	0.0
PCAB	Cabril	85.04	316	eP	P	05 34 16.2	+1.4
	comp=Z,67nm,2.0s						
PGAV	Gavieira, Arco	85.04	316	eP	P	05 34 16.3	+1.4
HORN	Hornachuelos	85.47	311	P		05 34 17.8	
MTE	Manteigas	85.50	314	eP	P	05 34 18.1	+0.9
PVIS	Viseu	85.53	315	eP	P	05 34 18.8	+1.5
PCBR	Castelo Branco	85.77	314	eP	P	05 34 19.3	+0.9
FIGM	Figuig	85.81	305	P		05 34 19.2	
PMRV	Marv??o	85.95	313	eP	P	05 34 20.3	+0.9
	comp=Z,46nm,1.8s						
PALE	Palemas	86.03	308	P		05 34 19.8	
COI	Coimbra	86.15	314	eP	P	05 34 21.7	+1.4
AKLM	AKL	86.37	308	P		05 34 22.1	
PESTR	Estremoz	86.40	313	eP	P	05 34 22.3	+0.7
PBAR	Barrancos	86.45	312	eP	P	05 34 22.5	+0.7
	comp=Z,28nm,1.9s						
PMTG	Montargil	86.69	313	eP	P	05 34 23.7	+0.7
	comp=Z,30nm,1.7s						
PSBE	So Bento	86.79	314	eP	P	05 34 24.8	+1.3
EVO	Evora	86.87	313	eP	P	05 34 24.7	+0.8
	comp=Z,30nm,0.9s						
CHEFC	Chefchaouen	87.05	309	P		05 34 25.3	
PBEJ	Beja	87.06	312	eP	P	05 34 26.4	+1.6
	comp=Z,10nm,1.3s						
PVAQ	Vaqueiros	87.33	312	eP	P	05 34 27.0	+0.9
MESJ	Messejana	87.40	312	eP	P	05 34 27.1	+0.6
MESJ				AMb	AMB	05 34 28.6	
	comp=Z,48nm,0.7s						
MESJ	Messejana	87.40	312	eP	P	05 34 27.0	+0.6
MESJ				pmax	pmax		
	comp=Z,49nm,0.7s						
MESJ	Messejana	87.40	312	eP	P	05 34 27.5	+1.0
	comp=Z,47nm,1.1s						
PCVE	Castro Verde	87.41	312	eP	P	05 34 27.6	+1.1
	comp=Z,30nm,2.9s						
PNCL	Nicolau / Gran	87.44	313	eP	P	05 34 27.7	+1.1
	comp=Z,32nm,1.4s						
RSA	Sarsar	87.50	309	P		05 34 28.0	
MDT	Midelt	87.82	307	P		05 34 29.3	
MORF	Marmelete	87.99	312	eP	P	05 34 30.8	+1.4
NLWA	Neilton Lookou	92.64	30	IAmb	IAmb	05 34 53.9	
	comp=Z,24nm,1.4s						
B05A	Bryant	92.72	28	P	P	05 34 50.7	-0.4
	baz=322						
TOA0	Torodi Ar. Sit	93.42	287	IAmb	IAmb	05 34 55.8	
	comp=Z,21nm,1.4s						
TORD	Torodi Ar. Bea	93.42	287	P	P	05 34 55.1	+0.2
	comp=Z,5.3nm,0.9s,baz=50,slow=4.1,SNR=14						
TORD	Torodi Ar. Bea	93.42	287	P	P	05 34 53.2	-1.7
FFC	Flin Flon	93.50	14	P	P	05 34 55.0	+0.4
FFC				pmax	pmax		
	comp=Z,14nm,1.2s						
FFC	Flin Flon	93.50	14	P	P	05 34 55.0	+0.4
FFC				IAmb	IAmb	05 34 60.0	
	comp=Z,14nm,1.2s						
B08A	Colville Reser	93.76	27	IAmb	IAmb	05 34 58.1	
	comp=Z,11nm,1.1s						
E04D	Cinebar	93.85	30	P	P	05 34 55.6	-0.8
	baz=321						
BOSA	Boshof	94.14	240	P	P	05 34 56.9	-1.2
	comp=Z,3.2nm,0.6s,baz=138,slow=4.2,SNR=4.0						
NEW	Newport	94.69	26	P	P	05 35 01.2	+0.9
NEW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEW	Newport	94.69	26	P	P	05 35 00.2	-0.1
	baz=326						
NEW	Newport	94.69	26	P	P	05 35 01.2	+0.9
E07A	Sunnyside	95.00	28	IAmb	IAmb	05 35 08.1	
	comp=Z,8.6nm,0.9s						
G05D	Wamic, OR	95.43	30	P	P	05 35 03.6	-0.1
	baz=322						
MSO	Missoula	97.08	25	P	P	05 35 10.9	-0.4
	baz=328						
ULM	Lac du Bonnet	98.96	12	LR	LR	06 23 16.7	
	comp=Z,171nm,19.7s,baz=243,slow=37						
BOZ	Bozeman (W)	98.96	24	P	P	05 35 19.2	-0.6
	baz=330						
LSQQ	Lebel-sur-Quev	101.94	0	P	Pdif	05 35 32.6	-0.2
	baz=360						
BW06	Boulder Array	102.16	24	P	Pdif	05 35 33.3	-0.9
	baz=331						
PDAR	Pinedale Array	102.16	24	PKKPbc	PKKPbc	05 51 35.5	-2.0
	comp=Z,0.7nm,1.0s,baz=98,slow=5.5,SNR=3.7						
NVAR	Mina Array Bea	102.21	32	P	Pdif	05 35 34.5	0.0
	comp=Z,0.2nm,0.5s,baz=280,slow=9.9,SNR=3.1						
NVAR				PKKPbc	PKKPbc	05 51 35.4	-1.7
	comp=Z,0.5nm,0.7s,baz=150,slow=3.8,SNR=4.2						
M61A	Granite Spring	109.64	358	P	PKiKP	05 40 10.1	+0.2
	baz=2.8						
ANMO	Albuquerque	110.19	26	P	PKiKP	05 40 11.8	+0.4
	baz=333						
SSPA	Standing Stone	110.36	1	P	PKiKP	05 40 11.6	+0.3
	baz=359						
Q59A	Harwood	112.14	360	P	PKiKP	05 40 15.0	+0.3
	baz=0.2						
TXAR	Lajitas Array	116.25	26	PKP	PKPdf	05 40 23.1	+0.1
	comp=Z,0.9nm,0.8s,baz=300,slow=1.0,SNR=8.4						
TXAR				PKKPbc	PKKPbc	05 50 51.7	-0.4
	comp=Z,1.5nm,0.7s,baz=148,slow=5.2,SNR=3.8						
JCT	Junction City	116.59	22	PKIKP	PKPdf	05 40 23.0	-0.5
JCT	Junction City	116.59	22	PKPdf	PKPdf	05 40 23.0	-0.5
NVL	N'lazarevskaya	117.84	202	ePKIKP	PKiKP	05 40 26.1	+1.6
NVL				pmax	pmax		
	comp=Z,12nm,0.9s						
SNAA	Sanae	122.61	201	PKPdf	PKPdf	05 40 32.9	-0.9
VNA2	Neumayer--Watz	124.16	202	PKPdf	PKPdf	05 40 36.0	-0.7
	baz=57,slow=1.9						
VNA1	Neumayer--Stat	124.49	202	PKPdf	PKPdf	05 40 36.4	-0.9
VNA3	Neumayer Olymp	124.84	201	PKPdf	PKPdf	05 40 36.9	-1.1
BELA	Belgrano 2	127.84	190	PKPdf	PKPdf	05 40 42.8	-0.8
SDV	Santo Domingo	141.53	350		PKPpre	05 41 05.4	
SDV	Santo Domingo	141.53	350	eP	PKPdf	05 41 04.1	-7.1
OCAC	Ocana	142.48	354	eP	PKPdf	05 41 08.0	-4.9
UREC	San Jos de Ur	143.09	358	eP	PKPbc	05 41 10.3	-0.2
PAMC	Pamplona, Colo	143.31	353	eP	PKPab	05 41 10.8	+0.2
ZARC	Zaragoza, Cauc	143.32	357	eP	PKPbc	05 41 11.1	-0.1
BRRC	Barranca, Sant	143.63	355	eP	PKPab	05 41 10.8	-0.5
DBBC	Dabeiba	143.84	359	eP	PKPbc	05 41 12.9	+0.2
BARC	Barichara	144.10	354	eP	PKPab	05 41 11.9	-1.3
TAMC	Tame, Arauca	144.10	352	eP	PKPab	05 41 13.2	+0.2
PTBC	PUERTO BERRIO,	144.25	356	eP	PKPab	05 41 13.0	-0.6
SOLC	Bahia Solano	144.62	1	eP	PKPab	05 41 15.0	+0.1
HELC	Santa Helena	144.64	358	eP	PKPbc	05 41 16.0	+0.4
RUSC	La Rusia	144.78	354	eP	PKPab	05 41 15.9	-0.2
CBOC	Ciudad Bolivar	144.98	359	eP	PKPab	05 41 16.3	-0.1
SPBC	San Pablo de B	145.10	355	eP	PKPbc	05 41 16.4	-0.3
NORC	Norcasia	145.24	357	eP	PKPbc	05 41 16.4	-0.8
ROSC	El Rosal	145.92	356	PKPbc	PKPab	05 41 20.6	+0.4
	comp=Z,65nm,0.6s,baz=117,slow=6.8,SNR=30						
ROSC	El Rosal	145.92	356	eP	PKPab	05 41 20.4	+0.2
PLMC	San Jos del P	145.94	359	eP	PKPdf	05 41 19.0	+0.2
CHIC	Chingaza	146.09	355	eP	PKPdf	05 41 19.2	-0.3
TOLC	Tolima	146.23	357	eP	PKPdf	05 41 20.1	+0.5
ANIL	Santa Ana	146.32	358	eP	PKPdf	05 41 18.2	-1.6
PTGC	Puerto Gaitan,	146.34	352	eP	PKPdf	05 41 19.4	0.0
VILC	Villavicencio,	146.60	354	eP	PKPbc	05 41 20.9	-0.6
YOTC	Yotoco, Valle	146.85	359	eP	PKPdf	05 41 20.1	-0.3
ORTC	Ortega, Tolima	146.90	357	eP	PKPdf	05 41 19.6	-0.8
MARP	Paez Belalcaza	147.98	358	eP	PKPdf	05 41 22.9	+0.4
GUVC	San Jose del G	148.03	352	eP	PKPdf	05 41 22.9	+0.6
PCON	Cinco Dias	148.50	359	eP	PKPbc	05 41 27.5	+0.3
MACC	Macarena, Meta	148.56	354	eP	PKPdf	05 41 24.4	+1.3
BBAC	Balboa, Cauca	148.80	1	eP	PKPbc	05 41 26.7	-0.8
BDFB	Brasilia	150.22	291	PKPbc	PKPbc	05 41 30.1	-0.7
	comp=Z,11nm,1.0s,baz=41,slow=4.6,SNR=10						
BDFB	Brasilia	150.22	291	PKIKP	PKPbc	05 41 28.5	-2.3
BDFB	Brasilia	150.22	291		PKPbc	05 41 28.5	-2.3
OTAV	Otavalo	150.53	3	PKIKP	PKPdf	05 41 27.5	+0.7
OTAV	Otavalo	150.53	3	PKPdf	PKPdf	05 41 27.5	+0.7
OTAV	Otavalo	150.53	3	eP	PKPdf	05 41 27.4	+0.7
RPN	Rapa Nui	151.29	94	PKPbc	PKiKP	05 41 34.3	+0.9
	comp=Z,112nm,0.8s,baz=278,slow=2.9,SNR=7.9						
RPN	Rapa Nui	151.29	94		PKiKP	05 41 34.9	+1.5
SAML	Samuel	156.02	325	PKIKP	PKPdf	05 41 29.7	-4.4
SAML	Samuel	156.02	325	PKPdf	PKPdf	05 41 29.7	-4.4
CPUP	Villa Florida	162.53	275	PKP	PKPdf	05 41 40.5	-0.8
	comp=Z,3.1nm,1.1s,baz=44,slow=4.7,SNR=3.1						
CPUP				PKPab	PKPab	05 42 29.0	-0.4
	comp=Z,2.8nm,0.6s,baz=68,slow=5.8,SNR=7.1						
PLCA	Paso Flores	167.55	203	PKP	PKPdf	05 41 45.2	0.0
	comp=Z,5.5nm,1.1s,baz=138,slow=7.3,SNR=3.0						
PLCA				PKPab	PKPab	05 42 49.5	-1.5
	comp=Z,5.8nm,0.9s,baz=153,slow=6.3,SNR=8.1						
GO01	Chusmiza	168.14	323		PKPdf	05 41 46.6	-0.2

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*INMG **14** 05:26:35.7±1.9, 38.°42N×9.°45W, h18^{km}±6^{km}, ML1.2, Error ellipse: s-maj=9.3km s-min=3.6km az=97.0*

MDD 14 05:26:35.8±0.9**, 38.°41N×9.°39W, h18**^{km}±6^{km}**, mbLg1.8**/2**, Error ellipse: s-maj=9.1km s-min=4.3km az=76.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	0.55	9	Pg	Pg	05 26 45.9	-0.9
	5.6nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	05 26 53.7	
	22nm,0.2s,SNR=7.9						
PMAFR	Mafra	0.55	9	ePg	Pg	05 26 46.0	-0.9
PMAFR				eSg	Sg	05 26 53.2	-1.1
PMAFR				A	A	05 26 53.9	
	26nm,0.2s						
PNCL	Nicolau / Gran	0.74	113	Pg	Pg	05 26 50.7	+0.4
PNCL				Lg	Lg	05 27 00.6	
	3.9nm,0.4s						
PNCL	Nicolau / Gran	0.74	113	eP	Pg	05 26 50.7	+0.4
PNCL				eS	Sg	05 27 00.6	+0.5
PNCL				A	A	05 27 02.1	
	3.9nm,0.4s						
PTEO	Sao Teotonio	1.01	148	Pg	Pb	05 26 54.6	-0.1
PTEO				Lg	Lg	05 27 07.5	
	0.9nm,0.1s						
PTEO	Sao Teotonio	1.01	148	eP	Pb	05 26 54.6	-0.1
PTEO				eS	Sb	05 27 07.5	-0.2
PTEO				A	A	05 27 08.2	
	1.9nm,0.1s						
MESJ	Messejana	1.08	121	Lg	Lg	05 27 08.9	
	2.0nm,0.3s						
MESJ	Messejana	1.08	121	eS	Sb	05 27 08.9	-0.9
MESJ				A	A	05 27 12.1	
	2.0nm,0.3s						
EVO	Evora	1.09	83	Lg	Lg	05 27 10.7	
	2.0nm,0.6s						
EVO	Evora	1.09	83	eS	Sn	05 27 10.7	-0.1
EVO				A	A	05 27 15.6	
	2.0nm,0.6s						
PMTG	Montargil	1.12	54	Lg	Lg	05 27 10.9	
	1.8nm,0.4s						
PMTG	Montargil	1.12	54	eS	Sb	05 27 10.9	-0.1
PMTG				A	A	05 27 11.8	
	1.8nm,0.4s						
MORF	Marmelete	1.25	152	Pg	Pn	05 26 57.6	-0.8
MORF				Lg	Lg	05 27 13.2	
	4.1nm,0.1s						
MORF	Marmelete	1.25	152	eP	Pn	05 26 57.6	-0.8
MORF				eS	Sb	05 27 13.2	-1.3
MORF				A	A	05 27 15.4	
	4.1nm,0.1s						
PBEJ	Beja	1.26	107	Lg	Lg	05 27 13.6	
PBEJ	Beja	1.26	107	eS	Sb	05 27 13.6	-1.3
PCVE	Castro Verde	1.32	126	Lg	Lg	05 27 15.1	
	0.9nm,0.2s						
PCVE	Castro Verde	1.32	126	eS	Sn	05 27 15.1	-1.3
PCVE				A	A	05 27 19.2	
	0.9nm,0.2s						
PFVI	Vila Bisbo	1.35	161	Lg	Lg	05 27 15.7	
	1.4nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	1.35	161	eP	Pn	05 26 58.7	-1.0
PFVI				eS	Sn	05 27 15.1	-2.1
PFVI				A	A	05 27 19.7	
	4.8nm,0.5s						
PESTR	Estremoz	1.48	71	eS	Sn	05 27 19.4	-1.1
PESTR				A	A	05 27 24.2	
	1.2nm,0.6s						
PVAQ	Vaqueiros	1.66	127	Pn	Pn	05 27 03.7	-0.3
PVAQ				Sn	Sn	05 27 24.2	-0.7
	0.9nm,0.2s						
PVAQ	Vaqueiros	1.66	127	ePn	Pn	05 27 03.7	-0.3
PVAQ				eSn	Sn	05 27 24.2	-0.7
PVAQ				A	A	05 27 28.4	
	0.9nm,0.2s						
PMRV	Marv??o	1.86	56	Pn	Pn	05 27 05.0	-1.8
PMRV				Sn	Sn	05 27 26.4	-3.5
	1.5nm,0.8s						
PMRV	Marv??o	1.86	56	ePn	Pn	05 27 05.0	-1.8
PMRV				eSn	Sn	05 27 26.4	-3.5
PBAR	Barrancos	1.86	96	Sn	Sn	05 27 28.4	-1.5
	1.5nm,0.4s						
PBAR	Barrancos	1.86	96	eSn	Sn	05 27 28.4	-1.5
EMIN	Mina Concepcio	2.24	106	Sn	Sn	05 27 36.7	-2.5
	0.3nm,0.2s,SNR=7.9						
ECAB	El Cabril	3.14	95	Pn	Pn	05 27 23.7	-0.8
	0.1nm,0.1s,SNR=7.9						
ECAB				Sn	Sn	05 27 58.5	-3.1
	0.2nm,0.2s,SNR=7.9						

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*NOU **14** 05:29:25.2, 21.°71S×174.°25W, h64^{km}, mb4.8, Tonga Islands*

*IDC **14** 05:29:29.3±4.0, 22.°05S×175.°00W, h76^{km}±32^{km}, mb4.2/16, mb1 4.4/19, mb1mx4.3/33, mbtmp4.5/19, MS4.3/22, Ms1 4.3/22, ms1mx4.2/32, Error ellipse: s-maj=26.7km s-min=17.4km az=124.0*

*BJI **14** 05:29:35.0±0.0, 22.°20S×175.°80W, h100^{km}, mB5.7/18, mb5.1/23*

*NEIC **14** 05:29:40.4±2.8, 22.°09S±0.°07×175.°9W±0.°1, h147^{km}±5^{km}, mb4.6/78, Error ellipse: s-maj=16.3km s-min=9.5km az=71.0*

*GCMT **14** 05:29:46.4±0.5, 21.°89S±0.°04×175.°28W±0.°03, h163^{km}±3^{km}, MW5.1/60, Moment Tensor Solution. s23,c26; s60,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.39±.23; $M_{\theta\theta}$0.05±.41; $M_{\phi\phi}$3.34±.32; $M_{r\theta}$0.86±.26; $M_{\theta\phi}$5.59±.33; $M_{\phi r}$1.58±.18; Best double couple: $M_0$6.02600×10^{16} NP1:ϕ_s81.00000°, δ67.00000°, λ-11.00000°. NP2:ϕ_s176.00000°, δ80.00000°, λ-156.00000°. Principal axes: T 7.8040, Plg9.0000°, Azm307.0000°; N -3.5600, Plg65.0000°, Azm197.0000°; P -4.2470, Plg24.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 05:29:34.8±0.4**, 22.°14S**±0.°07×**175.°57W**±0.°08**, h100**^{km}**, n251,** σ1.^{s}93/228**, mb4.7**/64**, 6C-22D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.10	61	P	Pn	05 30 35.3	-27
MSVF	Nonsavu	7.43	305	P	Pn	05 31 22.0	+1.4
	3.4nm,0.3s,baz=128,slow=13,SNR=51						
MSVF				LR	LR	05 34 03.6	
	comp=Z,7µm,19.1s,baz=111,slow=35						
MSVF	Nonsavu	7.43	305	Pn	Pn	05 31 22.5	+1.9
MSVF	Nonsavu	7.43	305	P	Pn	05 31 22.4	+1.8
AFI	Afiamalu	8.94	24	P	Pn	05 31 20.3	-21
RAR	Rarotonga	14.72	89	P	Pn	05 32 32.8	-25
	2.1nm,0.3s,baz=254,slow=6.8,SNR=14						
RAR				S	Sn	05 34 57.6	-43
	1.9nm,0.3s,baz=85,slow=18,SNR=4.6						
RAR				LR	LR	05 39 02.5	
	comp=Z,732nm,18.4s,baz=256,slow=40						
RAR	Rarotonga	14.72	89	P	Pn	05 32 33.9	-24
OUZ	Omahuta	16.11	214	Pn	Pn	05 33 15.2	-0.2
OUZ				IAmb	IAmb	05 33 39.5	
	comp=Z,29nm,1.3s						
DZM	Mont Dzumac	16.67	267	P	P	05 33 26.2	+3.1
	comp=Z,0.6nm,0.3s,baz=87,slow=18,SNR=7.2						
DZM				LR	LR	05 38 14.6	
	comp=Z,584nm,19.8s,baz=116,slow=31						
DZM	Mont Dzumac	16.67	267	eP	P	05 33 27.8	+4.7
	comp=Z,89nm,1.3s						
DZM				eLR	LR	05 37 31.0	
	comp=Z,2µm,21.9s						
DZM	Mont Dzumac	16.67	267		Pn	05 33 21.7	-0.8
DZM				IAmb	IAmb	05 33 39.0	
	comp=Z,30nm,0.9s						
DZM	Mont Dzumac	16.67	267	P	P	05 33 29.9	+6.8
URZ	Urewera	17.26	200	P	P	05 33 28.9	-0.5
	comp=Z,1.4nm,0.3s,baz=330,slow=1.9,SNR=8.5						
URZ				S	Sn	05 36 26.7	-15
	comp=Z,0.6nm,0.3s,baz=180,slow=20,SNR=3.2						
URZ	Urewera	17.26	200	P	Pn	05 33 30.4	+1.0
URZ				IAmb	IAmb	05 33 43.5	
	comp=Z,16nm,0.7s						
SANVU	Saraoutou	17.60	289		P	05 33 32.6	-0.8
SANVU				IAmb	IAmb	05 33 39.1	
	comp=Z,333nm,1.2s						
BKZ	Black Stump Fm	18.28	200		P	05 33 39.6	-1.1
BFZ	Birch Farm	19.74	199	P	P	05 33 58.0	+1.4
MSWZ	Moikau Station	20.72	200	P	Pn	05 34 09.4	-1.0
MSWZ					S	05 37 52.6	-0.2
SNZO	South Karori	20.80	201	P	Pn	05 34 10.4	-0.9
SNZO					S	05 37 52.2	-2.2
PLWZ	Palliser	20.86	200	P	P	05 34 09.0	+0.4
TUWZ	Tuamarina	21.17	202	P	P	05 34 09.8	-2.1
QRZ	Quartz Range	21.18	206	P	P	05 34 14.0	+2.0
QRZ				IAmb	IAmb	05 34 20.1	
	comp=Z,73nm,1.5s						
NNZ	Nelson	21.18	204	P	P	05 34 14.3	+2.3
NNZ				IAmb	IAmb	05 34 23.2	
	comp=Z,44nm,1.2s						
THZ	Tophouse	21.83	204	P	P	05 34 18.0	-1.0
THZ				IAmb	IAmb	05 34 43.4	
	comp=Z,15nm,0.9s						
THZ					S	05 38 11.4	-3.1
KHZ	Kahutara	22.18	202	P	P	05 34 20.3	-2.3
KHZ				IAmb	IAmb	05 34 43.9	
	comp=Z,59nm,1.4s						
LTZ	Lake Taylor	22.95	203	P	P	05 34 32.5	+1.9
LTZ				IAmb	IAmb	05 34 45.3	
	comp=Z,24nm,1.0s						
TBI	Tubuai	24.11	98	eS	S	05 38 34.5	-17
	comp=Z,447nm,25.2s						
TBI				eLQ	LQ	05 38 58.1	
	comp=Z,1µm,30.8s						
TBI				eLR	LR	05 40 04.0	
	comp=Z,2µm,28.5s,baz=265						
TBI	Tubuai	24.11	98	eT	T	05 58 24.9	
	comp=Z,8.2nm,0.3s						
RPZ	Rata Peaks	24.21	204	P	P	05 34 41.8	-0.2
	comp=Z,9.9nm,0.9s,baz=109,slow=7.3,SNR=3.5						
RPZ	Rata Peaks	24.21	204	P	P	05 34 42.1	+0.1
RPZ				IAmb	IAmb	05 34 55.2	
	comp=Z,45nm,1.3s						
FOZ	Fox Glacier	24.54	206	P	P	05 34 46.0	+1.0
FOZ				IAmb	IAmb	05 34 53.6	
	comp=Z,32nm,0.8s						
PAE	Paea	24.83	84	eP	P	05 34 34.9	-13
	comp=Z,13nm,1.2s						
PAE	Paea	24.83	84	eT	T	05 59 14.6	
	comp=Z,16nm,0.3s						
PPT2	Papeete2	24.85	84	eP	P	05 34 35.2	-13
	comp=Z,44nm,1.1s						
PPT2				eS	S	05 38 46.3	-18
	comp=Z,401nm,25.8s						
PPT2				eLQ	LQ	05 39 23.1	
	comp=Z,1µm,26.8s						
PPT2				eLR	LR	05 40 23.3	
	comp=Z,2µm,26.5s,baz=252						
PPT2	Papeete2	24.85	84	eT	T	05 59 16.9	
	comp=Z,14nm,0.4s						
PPT	Papeete	24.86	84	LR	LR	05 41 39.3	

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        comp=Z,507nm,21.2s,baz=262,slow=30
TIAR  Tiarei             25.07  84 eP     P       05 34 37.4  -13
        comp=Z,18nm,1.2s
TVO   Taravao            25.10  85 eP     P       05 34 37.8  -13
        comp=Z,14nm,1.1s
TVO   Taravao            25.10  85 eT     T       05 59 35.2
        comp=Z,3.5nm,0.5s
ODZ   Otahua Downs       25.50 203 P      P       05 34 56.2 +2.5
WKZ   Wanaka             25.94 206 P      P       05 34 58.3 +0.6
HNR   Honiara            26.68 294 LR     LR      05 45 00.5
        comp=Z,442nm,18.3s,baz=138,slow=34
MLZ   Mavora Lakes       26.74 206 P      P       05 35 04.8 -0.1
MLZ                                IAmb   IAmb    05 35 17.6
        comp=Z,32nm,1.2s
DCZ   Deep Cove          27.22 207 P      P       05 35 10.2 +1.0
RMQ   Roma               32.73 255 P      P       05 35 59.1 +1.0
        baz=34,SNR=4.6
CTAO  Charters Tower     35.61 266 P      P       05 36 23.8 +0.7
CTAO                               IAmb   IAmb    05 36 25.3
        comp=Z,14nm,0.7s
CMSA  Cobar Meteorol     35.65 246 P      P       05 36 24.5 +1.2
        baz=37,SNR=9.5
RKT   Rikitea            37.41  99 eLR    LR      05 46 08.9
        comp=Z,1µm,29.8s
MTSU  Mount Surprise     37.79 269 P      P       05 36 41.1 -0.5
        baz=39,SNR=5.4
STKA  Stephens Creek     39.16 246 P      P       05 36 54.3 +1.4
        comp=Z,4.1nm,0.7s,baz=50,slow=11,SNR=3.8
STKA                               LR     LR      05 52 51.9
        comp=Z,692nm,18.0s,baz=77,slow=35
STKA  Stephens Creek     39.16 246 P      P       05 36 54.0 +1.1
HTT   Hallett            41.51 244 P      P       05 37 13.6 +1.3
        baz=43,SNR=3.6
BBOO  Buckleboo          43.88 245 P      P       05 37 33.8 +2.3
        baz=45,SNR=5.7
BBOO  Buckleboo          43.88 245 P      P       05 37 32.1 +0.7
BBOO                               IAmb   IAmb    05 37 33.1
        comp=Z,16nm,1.2s
AS31  Alice Springs      46.37 258 P      P       05 37 50.8 -0.6
ASAR  Alice Springs      46.37 258 P      P       05 37 51.6 +0.3
        comp=Z,16nm,0.8s,baz=91,slow=8.1,SNR=92
ASAR                               PcP    PcP     05 39 24.0 -0.9
        comp=Z,3.3nm,0.9s,baz=102,slow=4.2,SNR=3.5
ASAR                               LR     LR      05 57 16.3
        comp=Z,729nm,18.5s,baz=98,slow=36
ASAR  Alice Springs      46.37 258 P      P       05 37 51.2 -0.1
WR0   Warramunga Arr     46.44 263 P      P       05 37 48.5 -3.4
WR0                                IAmb   IAmb    05 37 56.6
        comp=Z,8.3nm,0.8s
WB0   Warramunga Arr     46.62 263 P      P       05 37 52.5 -0.7
WB0                                IAmb   IAmb    05 37 57.9
        comp=Z,18nm,0.8s
WB2   Warramunga Arr     46.62 263 P      P       05 37 51.9 -1.4
WB2                                IAmb   IAmb    05 37 58.5
        comp=Z,20nm,0.8s
WRA   Warramunga Arr     46.63 263 P      P       05 37 52.5 -0.9
        comp=Z,16nm,0.8s,baz=98,slow=8.0,SNR=21
WRA                                PcP    PcP     05 39 25.3 -0.5
        comp=Z,3.6nm,0.9s,baz=97,slow=3.5,SNR=3.9
WRA   Warramunga Arr     46.63 263 P      P       05 37 51.5 -1.9
KDU   Kakadu             50.25 272 P      P       05 38 21.2  0.0
        baz=51,SNR=5.0
FORT  Forrest            50.75 248 P      P       05 38 24.5 -0.3
        baz=52,SNR=23
MTN   Manton Dam         51.45 271 P      P       05 38 30.3 +0.2
        baz=52,SNR=3.5
MTN   Manton Dam         51.45 271 P      P       05 38 29.3 -0.8
FITZ  Fitzroy Crossi     55.06 263 P      P       05 38 56.8 +0.2
        baz=56,SNR=13
FITZ  Fitzroy Crossi     55.06 263 P      P       05 38 56.4 -0.2
FITZ                               IAmb   IAmb    05 38 57.7
        comp=Z,19nm,1.1s
SIJI  Sorong             55.84 285 LR     LR      06 02 48.4
        comp=Z,439nm,19.5s,baz=102,slow=36
SWI   Sorong             55.85 285 P      P       05 39 01.6 -0.7
        comp=Z,62nm,1.0s
VNDA  Vanda              56.50 186 P      P       05 39 07.5 +1.5
        comp=Z,1.8nm,0.8s,baz=13,slow=7.8,SNR=6.7
VNDA                               LR     LR      06 02 01.9
        comp=Z,120nm,19.2s,baz=9.0,slow=34
VNDA  Vanda              56.50 186 P      P       05 39 07.8 +1.8
VNDA                               IAmb   IAmb    05 39 16.0
        comp=Z,11nm,1.3s
SOEI  Soe                58.81 272 P      P       05 39 22.7 -0.6
        comp=Z,56nm,1.1s
BATI  Baumata            59.22 271 LR     LR      06 05 04.7
        comp=Z,726nm,19.4s,baz=131,slow=36
KLBR  Kellerberrin       59.43 246 P      P       05 39 27.5 +0.3
        baz=61,SNR=6.8
MEEK  Meekatharra        59.53 251 P      P       05 39 27.3 -0.7
        baz=61,SNR=3.3
MORW  Morawa             61.31 248 P      P       05 39 39.7 -0.4
        baz=62,SNR=5.3
MORW  Morawa             61.31 248 P      P       05 39 39.2 -0.9
EDFI  Ende, Flores       61.54 272 P      P       05 39 41.0 -1.0
        comp=Z,7.5nm,0.9s
MPSI  Mapaga             66.64 280 P      P       05 40 13.6 -1.6
        comp=Z,11nm,0.7s
QSPA  South Pole Qui     67.94 180 P      P       05 40 23.5 +0.8
MJAR  Matsushiro Arr     72.87 323 P      P       05 40 50.2 -2.7
        comp=Z,3.6nm,0.7s,baz=158,slow=5.7,SNR=7.8
LEM   Lembang            75.27 269 LR     LR      06 14 44.7
        comp=Z,234nm,19.6s,baz=178,slow=36
ASAJ  Asahikawa          76.25 330 LR     LR      06 09 08.2
        comp=Z,217nm,21.1s,baz=141,slow=31
PETK  Petropavlovsk-     78.44 344 P      P       05 41 21.4 -2.9
        comp=Z,13nm,0.9s,baz=136,slow=9.3,SNR=9.4
PETK                               LR     LR      06 11 42.8
        comp=Z,94nm,19.8s,baz=150,slow=32
CMB   Columbia Colle     79.16  41        P       05 41 29.7 +1.0
CMB                                IAmb   IAmb    05 41 34.7
        comp=Z,7.9nm,1.0s
MDSI  Maura Dua          79.30 269 P      P       05 41 28.1 -1.8
        comp=Z,19nm,0.9s
AFDM  Forest Hills D     79.38  40        P       05 41 30.8 +1.0
ORV   Oroville           79.46  40        P       05 41 33.4 +3.2
ORV                                IAmb   IAmb    05 41 38.8
        comp=Z,12nm,1.5s
WDC   Whiskeytown Da     79.52  38        P       05 41 32.2 +1.7
WDC                                IAmb   IAmb    05 41 37.0
        comp=Z,17nm,1.4s
KSRS  Korea Array        79.61 318 P      P       05 41 29.6 -1.3
        comp=Z,1.8nm,0.9s,baz=155,slow=6.3,SNR=5.6
KSRS                               LR     LR      06 10 42.1
        comp=Z,149nm,20.2s,baz=136,slow=31
KSAR  Wonju Array Be     79.63 318 P      P       05 41 29.9 -1.2
MDPB  Devils Postpil     79.72  42 P      P       05 41 34.2 +2.3
OMMB  Old Mammoth Mi     79.75  42        P       05 41 35.2 +3.0
OMMB                               IAmb   IAmb    05 41 45.3
        comp=Z,11nm,1.4s
PIX   Pinacate           79.92  50 P      P       05 41 33.4 +0.6
WAKR  Walker             80.03  41 P      P       05 41 31.6 -2.0
WAKR                               IAmb   IAmb    05 41 40.2
        comp=Z,11nm,1.0s
YBH   Yreka Blue Hor     80.18  37 P      P       05 41 29.7 -4.5
        comp=Z,1.6nm,0.9s,baz=271,slow=6.2,SNR=4.1
PNTR  Pine Nut           80.30  41        P       05 41 35.3 +0.3
PNTR                               IAmb   IAmb    05 41 41.5
        comp=Z,11nm,0.9s
BEKR  Beckworth          80.33  40 P      P       05 41 35.8 +0.7
BEKR                               IAmb   IAmb    05 41 41.4
        comp=Z,12nm,1.4s
VCNR  Virginia City      80.40  41 P      P       05 41 36.7 +1.1
LHV   Little Huntoon     80.45  42 P      P       05 41 37.3 +1.8
LHV                                IAmb   IAmb    05 41 42.3
        comp=Z,11nm,1.1s
RYN   Ryan               80.67  42 P      P       05 41 35.2 -1.8
NVAR  Mina Array Bea     80.69  42 P      P       05 41 31.9 -5.2
        comp=Z,0.7nm,0.7s,baz=218,slow=9.6,SNR=6.0
NVAR                               LR     LR      06 10 01.8
        comp=Z,229nm,19.6s,baz=213,slow=30
NVAR  Mina Array Bea     80.69  42 P      P       05 41 32.2 -4.9
NV11  Mina Array Sit     80.78  42        P       05 41 38.8 +1.3
NV11                               IAmb   IAmb    05 41 49.9
        comp=Z,9.8nm,1.1s
MAW   Mawson             80.79 199 LR     LR      06 17 35.9
        comp=Z,230nm,18.4s,baz=74,slow=36
PAHR  Pah Rah Range      80.82  40        P       05 41 40.0 +2.4
TPNV  Topopah Spring     81.10  44        P       05 41 43.2 +4.0
TPH   Tonopah            81.15  43 P      P       05 41 42.0 +2.4
SHPR  Sheep Range        81.55  45        P       05 41 44.7 +3.1
USRK  Ussuriysk Ar.      81.59 325 P      P       05 41 41.6 +0.2
        comp=Z,6.4nm,0.9s,baz=90,slow=3.0,SNR=11
USRK  Ussuriysk Ar.      81.59 325 P      P       05 41 41.0 -0.4
W13A  Hualapai Mount     81.60  47 P      P       05 41 44.2 +2.2
MOD   Modoc Plateau      81.66  38 P      P       05 41 42.3 +0.2
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MOD                                IAmb   IAmb    05 41 48.4
        comp=Z,8.3nm,1.0s
NJ2   Nanjing            82.66 309 eP     P       05 41 49.4 +2.1
NJ2                                pmax   pmax
        comp=Z,4.0nm,0.5s
X16A  Lo Mia Camp, P     82.90  49 IAmb   IAmb    05 41 55.6
        comp=Z,6.7nm,1.0s
KNB   Kanab              83.39  46        P       05 41 52.3 +1.0
U15A  North Rim          83.42  46 P      P       05 41 52.1 +0.7
U15A                               IAmb   IAmb    05 41 58.6
        comp=Z,11nm,1.1s
SZCU  Shurtz Canyon      83.53  45 P      P       05 41 54.2 +2.2
ELK   Elko               83.97  42        P       05 41 55.8 +1.6
X18A  Snowflake          84.00  49 P      P       05 41 54.2 -0.2
D05A  Enumclaw           84.18  33 P      P       05 41 57.4 +2.6
MTPU  Mount Pierson      84.38  45 P      P       05 41 55.6 -0.9
G08A  Pilot Rock         84.56  36 P      P       05 41 51.2 -5.7
G08A                               IAmb   IAmb    05 42 03.6
        comp=Z,12nm,1.0s
MVU   Marysvale          84.61  45 P      P       05 41 59.3 +1.8
MSU   Marysvale          84.64  45 P      P       05 41 58.7 +1.1
E07A  Sunnyside          84.88  35        P       05 41 54.7 -3.7
E07A                               IAmb   IAmb    05 42 05.3
        comp=Z,10nm,0.9s
HAWA  Hanford            84.95  35        P       05 41 60.0 +1.3
HAWA                               IAmb   IAmb    05 42 05.6
        comp=Z,14nm,1.2s
CN2   Changchun          84.98 321 eP     P       05 41 58.0 -0.8
CN2                                pmax   pmax
        comp=Z,20nm,1.6s
KLR   Kul'dur            85.09 328 P      P       05 41 58.0 -1.3
        comp=Z,3.3nm,0.9s,baz=109,slow=2.2,SNR=8.9
MFID  Camas Ranch        85.19  39        P       05 42 00.5 +0.4
MFID                               IAmb   IAmb    05 42 06.6
        comp=Z,9.7nm,1.2s
TX31  Lajitas Ar. Si     86.05  56        P       05 42 05.4 +0.7
TX32  Lajitas Array      86.05  56 P      P       05 42 06.8 +2.1
TXAR  Lajitas Array      86.05  56 P      P       05 42 05.2 +0.5
        comp=Z,4.2nm,1.0s,baz=216,slow=6.2,SNR=10
TXAR                               LR     LR      06 15 15.8
        comp=Z,108nm,18.0s,baz=0.0,slow=32
TXAR  Lajitas Array      86.05  56        P       05 42 07.3 +2.6
P17A  Butcher Ranch,     86.10  45 P      P       05 42 06.9 +2.1
BNM   Barren Site        86.17  51        P       05 42 08.2 +2.9
PLCA  Paso Flores        86.51 133 LR     LR      06 14 14.7
        comp=Z,128nm,19.5s,baz=242,slow=31
TCUT  Toone Canyon       86.57  43        P       05 42 09.1 +2.0
GDL2  Guadalupe Moun     86.88  53 P      P       05 42 09.0 +0.4
SEY   Seymchan           88.49 346 P      P       05 42 12.5 -2.9
        comp=Z,6.4nm,0.9s,baz=156,slow=5.7,SNR=12
PDAR  Pinedale Array     88.62  42 P      P       05 42 11.4 -5.4
        comp=Z,0.5nm,0.8s,baz=144,slow=2.8,SNR=3.5
PDAR                               LR     LR      06 16 14.5
        comp=Z,136nm,19.4s,baz=315,slow=32
BCAR  Beaver Creek A     89.01  15 P      P       05 42 13.8 -4.2
ILAR  Eielson Array      89.42  12 P      P       05 42 15.7 -4.1
        comp=Z,1.7nm,1.0s,baz=228,slow=5.7,SNR=6.7
ILAR  Eielson Array      89.42  12 P      P       05 42 15.1 -4.7
MLSI  Meulaboh, Aceh     89.76 275 P      P       05 42 22.3 -0.3
        comp=Z,93nm,1.3s
PRP   Porcupine Dome     90.35  12 IAmb   IAmb    05 42 34.8
        comp=Z,12nm,1.2s
XAN   Xi'an              90.92 306 P      P       05 42 27.9 +0.3
XAN                                pmax   pmax
        comp=Z,23nm,1.1s
XAN                                pmax   pmax
        comp=Z,280nm,4.9s
PHIT  Phitsanulok        91.00 288 P      P       05 42 31.0 +2.7
UTTA  Uttaradit          91.10 289 P      P       05 42 31.9 +3.2
SUKH  Sukhothai          91.81 288 P      P       05 42 34.3 +2.3
KMI   Kunming            92.10 296⇓eP     P       05 42 35.0 +1.5
KMI                                pmax   pmax
        comp=Z,15nm,0.9s
KMI                                pmax   pmax
        comp=Z,190nm,4.3s
KMI                                LR     LR
        comp=Z,320nm,4.2s
KMI                                LR     LR
        comp=Z,580nm,4.4s
KMI                                LR     LR
        comp=Z,330nm,4.7s
HHC   Hu-ho-hao-te       92.11 313 eP     P       05 42 34.3 +1.3
HHC                                pmax   pmax
        comp=Z,12nm,1.0s
HHC                                pmax   pmax
        comp=Z,160nm,5.5s
LAMP  Lampang            92.20 289 P      P       05 42 35.0 +1.2
CM04  Chiang Mai Arr     92.73 289 P      P       05 42 38.6 +2.3
CM09  Chiang Mai Arr     92.74 289 P      P       05 42 39.0 +2.7
CM01  Chiang Mai Arr     92.76 289 P      P       05 42 39.0 +2.6
CM05  Chiang Mai Arr     92.76 289 P      P       05 42 38.8 +2.3
CM02  Chiang Mai Arr     92.77 289 P      P       05 42 39.0 +2.6
CMAR  Chiang Mai Arr     92.78 289 P      P       05 42 37.6 +1.1
        comp=Z,7.6nm,1.0s,baz=122,slow=3.0,SNR=32
CMAR                               LR     LR      06 22 14.4
        comp=Z,53nm,18.6s,baz=178,slow=34
CMAR  Chiang Mai Arr     92.78 289 P      P       05 42 36.8 +0.3
CM15  Chiang Mai Arr     92.80 289 P      P       05 42 39.2 +2.6
CM13  Chiang Mai Arr     92.80 289 P      P       05 42 38.8 +2.2
CMMT  Chiang Mai         92.91 289 P      P       05 42 38.0 +0.9
CHTO  Chiang Mai         92.92 289 P      P       05 42 37.7 +0.6
K31A  O'Neill            95.55  46        P       05 42 49.0 +0.3
LZH   Lanzhou            95.56 307 eP     P       05 42 47.8 -1.2
LZH                                pmax   pmax
        comp=Z,15nm,1.3s
LZH                                pmax   pmax
        comp=Z,53nm,4.1s
YKA   Yellowknife Ar     97.06  24 P      P       05 42 50.5 -4.4
        comp=Z,0.8nm,0.9s,baz=228,slow=4.0,SNR=9.3
YKA                                LR     LR      06 19 22.9
        comp=Z,87nm,21.1s,baz=0.0,slow=31
SONM  Songino Array      98.47 318 LR     LR      06 22 47.2
        comp=Z,76nm,21.5s,baz=97,slow=32
ZALV  Zalesovo Beam     113.18 321 PKiKP  PKiKP   05 47 58.0 -2.2
        comp=Z,0.4nm,0.5s,baz=119,slow=1.8,SNR=4.0
MKAR  Makanchi Array    113.96 313 PKP    PKiKP   05 47 59.7 -2.3
        comp=Z,0.6nm,0.7s,baz=140,slow=0.9,SNR=5.4
KSH   Kashi             117.67 304 PKP    PKiKP   05 48 14.3 +4.8
KSH                                sPKP           05 48 49.1
ARU   Arti              127.83 325 PKP    PKPdf   05 48 26.9 -1.4
        comp=Z,0.6nm,0.3s,baz=42,slow=1.6,SNR=4.7
AKTO  Aktyubinsk        129.79 318 PKP    PKPdf   05 48 30.2 -2.0
        comp=Z,1.1nm,0.7s,baz=40,slow=2.8,SNR=4.4
KBZ   Khabaz            141.66 313 PKP    PKPdf   05 48 55.2 +0.8
        comp=Z,2.1nm,0.9s,baz=25,slow=1.8,SNR=4.1
NACGM Naroch            143.23 338 i PKP  PKPab   05 48 52.0 -0.8
NACGM                              i PKP  PKPab   05 48 52.0 -0.8
NACGM                              i PKP  PKPab   05 48 52.0 -0.8
NACGM                              i pPKP PKiKP   05 49 03.6 +3.4
NACGM                              i sPKP         05 49 44.0
NACGM                              i PKS  PKSdf   05 52 28.5 -3.8
NACGM                              i PPP  PPP     05 52 53.6
NACGM                              i SKS  SKSdf   05 56 27.6  +30
NACGM                              i PS           06 01 48.4
NACGM                              i SKKS SKKSdf  06 04 50.0  -25
NACGM                              i SSS  SSS     06 13 05.1
SUW   Suwalki           145.15 341 ePKP   PKPbc   05 48 58.0 -2.0
AKASG Malin Array Be    145.53 332 PKPbc  PKPdf   05 48 58.8 -2.2
        comp=Z,20nm,0.8s,baz=39,slow=4.3,SNR=55
SORM  Soroca            147.77 329 ⇓P     PKPdf   05 49 06.2 +1.4
OJC   Ojcow             149.48 340 ePKP   PKPbc   05 49 10.8 -1.4
BURAR Bucovina Array    149.58 332 ⇓P     PKPbc   05 49 11.7 -1.0
BRTR  Keskin Array B    149.61 312 PKPbc  PKPbc   05 49 11.7 -1.3
        comp=Z,8.2nm,0.8s,baz=133,slow=3.3,SNR=44
BRTR  Keskin Array B    149.61 312        PKPbc   05 49 11.4 -1.6
BIZ   Bicaz             149.68 330 ⇓P     PKPbc   05 49 11.7 -1.1
KOLS  Kolonicke sedl    149.73 336 ePKP   PKPbc   05 49 12.2 -0.6
TESR  Tescani           149.74 329 ⇓P     PKPab   05 49 28.4  +10
IBBN  Ibbenburen        149.77 356 ePKPdf PKPbc   05 49 11.7 -1.1
        baz=14,slow=2.0
KSP   Ksiaz             149.88 345 ePKP   PKPbc   05 49 11.6 -1.6
CFR   Carcaliu          149.91 325 ⇓P     PKPbc   05 49 12.2 -1.2
TPGR  Topolog           149.98 325 ⇓P     PKPbc   05 49 12.7 -0.9
CLZ   Clausthal         149.99 353 ePKPdf PKPdf   05 49 11.4 +3.0
        baz=14,slow=2.0
NIE   Niedzica          150.01 339 ePKP   PKPdf   05 49 11.2 +2.7
CRVS  Cervenica-Dubn    150.05 337 ePKP   PKPbc   05 49 12.9 -0.7
ANTO  Ankara            150.12 313 ⇓P     PKPab   05 49 27.4 +7.0
CLL   Collm             150.13 349 i PKPdf PKPdf  05 49 10.9 +2.3
        comp=Z,23nm,1.2s
CLL                                i PKPbc PKiKP  05 49 16.3 +1.8
        comp=Z,14nm,1.0s
CLL                                i PKPab PKPab  05 49 21.2 +1.3
        comp=Z,33nm,1.4s
```

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CLL   Collm             150.13 349 ePKPdf PKPdf   05 49 11.4 +2.8
        baz=14,slow=2.0
VRI   Vrincioaia        150.16 328 ⇓P     PKPbc   05 49 12.6 -1.4
OSTC  Ostas             150.17 345⇑ePKP   PKPbc   05 49 12.1 -1.8
PLOR  Plostina          150.21 328 ⇓P     PKPbc   05 49 12.3 -1.8
TIRR  Tirgusor          150.24 324 ⇓P     PKPab   05 49 18.4 -2.2
DPC   Dobruska-Polom    150.33 345⇑ePKP   PKPbc   05 49 12.7 -1.6
HARR  Harsova           150.35 325 ⇓P     PKPbc   05 49 13.7 -0.7
BRG   Berggiesshubel    150.37 348 ePKP   PKPbc   05 49 12.2 -2.0
BRG                                 Amp           05 49 13.6
        comp=Z,15nm,1.1s
BRG                                ex     x       05 49 24.8
BRG                                 Amp           05 49 26.6
        comp=Z,47nm,1.5s
BRG                                ex     x       05 49 34.8
BRG                                 Amp           05 49 36.5
        comp=Z,26nm,1.4s
BRG   Berggiesshubel    150.37 348 ePKP   PKPbc   05 49 12.2 -2.0
BRG                                 Amp           05 49 13.6
        comp=Z,15nm,1.1s
BRG                                ex     x       05 49 24.8
BRG                                 Amp           05 49 26.6
        comp=Z,47nm,1.5s
BRG                                ex     x       05 49 34.8
BRG                                 Amp           05 49 36.5
        comp=Z,26nm,1.4s
BRG   Berggiesshubel    150.37 348 ePKPdf PKPbc   05 49 12.3 -2.0
        baz=14,slow=2.0
BRG                                ePKPab PKPab   05 49 24.2 +3.3
        baz=8.8,slow=2.9
BISRR Bisoca            150.39 327 ⇓P     PKPbc   05 49 14.2 -0.4
NEUB  Neuenburg         150.42 351 ePKPab PKPab   05 49 24.3 +3.2
        baz=8.8,slow=2.9
FBE   Freiberg          150.43 349 ePKPdf PKPbc   05 49 12.6 -1.8
        baz=14,slow=2.0
KRLC  Kraliky           150.47 344⇑ePKP   PKPbc   05 49 12.9 -1.7
LANS  Liptovska Anna    150.52 340 ePKP   PKPbc   05 49 14.4 -0.4
MORC  Moravsky Berou    150.53 343 ePKP   PKPbc   05 49 12.9 -1.9
MANR  Mangalia          150.56 323 ⇓P     PKPbc   05 49 14.3 -0.6
PVCC  Panska Ves        150.57 347⇑ePKP   PKPbc   05 49 13.3 -1.5
DOPR  Dopca             150.73 329 ⇓P     PKPbc   05 49 14.3 -1.1
ISR   Istrita           150.78 327 ⇓P     PKPbc   05 49 14.0 -1.5
MLR   Muntele Rosu      150.81 328 ⇓P     PKPbc   05 49 14.2 -1.5
KASTN Kahler Asten      150.82 355 ePKPdf PKPdf   05 49 13.0 +3.3
        baz=14,slow=2.0
KASTN                              ePKPab PKPab   05 49 24.9 +2.1
        baz=8.8,slow=2.9
MOX   Moxa              150.99 351 ePKPdf PKPdf   05 49 13.3 +3.3
        baz=14,slow=2.0
PLN   Plauen            151.06 350 ePKPdf PKPbc   05 49 13.9 -2.0
        baz=14,slow=2.0
PLN                                ePKPab PKPab   05 49 25.7 +1.9
        baz=8.8,slow=2.9
TANN  Tannenbergstha    151.08 349 ePKPdf PKPdf   05 49 13.7 +3.6
        baz=14,slow=2.0
TANN                               ePKPab PKPab   05 49 26.0 +2.1
        baz=8.8,slow=2.9
PRU   Pruhonice         151.08 346⇑ePKP   PKPbc   05 49 14.1 -1.9
GUNZ  Gunzen            151.15 349 ePKPdf PKPdf   05 49 13.8 +3.6
        baz=14,slow=2.0
GUNZ                               ePKPab PKPab   05 49 26.2 +2.0
        baz=8.8,slow=2.9
WERN  Wernitzgruen      151.22 349 ePKPdf PKPdf   05 49 14.0 +3.6
        baz=14,slow=2.0
WERN                               ePKPab PKPab   05 49 26.3 +1.8
        baz=8.8,slow=2.9
VRAC  Vranov            151.22 343 ePKP   PKPbc   05 49 14.3 -2.1
VOIR                    151.28 329 ⇓P     PKPbc   05 49 15.3 -1.4
VYHS  Vyhne             151.29 340 ePKP   PKPbc   05 49 15.0 -1.6
JAVC  Velka Javorina    151.32 342 ePKP   PKPbc   05 49 15.3 -1.4
KRUC  Moravsky          151.50 343 ePKP   PKPbc   05 49 14.6 -2.4
ARR   Arges             151.53 329 ⇓P     PKPbc   05 49 16.9 -0.4
ROTZ  Rotzenmuhle       151.75 349 ePKPab PKPab   05 49 27.4 +0.7
        baz=8.8,slow=2.9
KHC   Kasperske Hory    152.10 347⇑ePKP   PKPbc   05 49 16.1 -2.3
KHC                                ePKPAB PKPab   05 49 29.0 +0.8
WET   Wettzell          152.22 348 ePKPab PKPab   05 49 30.0 +1.3
        baz=8.8,slow=2.9
GERES GERESS Array B    152.34 347 PKPbc  PKPbc   05 49 17.3 -1.7
        comp=Z,2.5nm,1.0s,baz=321,slow=1.9,SNR=7.2
GZR   Gura Zlata        152.37 331 ⇓P     PKPbc   05 49 17.4 -1.7
CONA  Conrad Observa    152.68 343 eP     PKPdf   05 49 14.4 +1.7
        comp=Z,12nm,1.6s
BZS   Buzias            152.69 333 ⇓P     PKPbc   05 49 18.2 -1.6
HERR  Herculane         152.93 331 ⇓P     PKPbc   05 49 18.6 -1.7
MOA   Molln             153.16 345 eP     PKPdf   05 49 15.6 +2.3
        comp=Z,5.0nm,0.9s
ARSA  Arzberg           153.39 343 eP     PKPdf   05 49 16.1 +2.5
        comp=Z,6.8nm,1.1s
SOKA  Soboth            154.05 343 eP     PKPdf   05 49 16.8 +2.1
        comp=Z,9.6nm,1.1s
KBA   Koelnbreinsper    154.09 346 eP     PKPdf   05 49 15.5 +0.7
        comp=Z,5.9nm,1.1s
RETA  Reutte            154.20 350 eP     PKPdf   05 49 17.0 +2.2
        comp=Z,7.4nm,1.0s
WATA  Walderalm         154.21 349 eP     PKPdf   05 49 15.5 +0.5
        comp=Z,5.6nm,1.0s
MOTA  Moosalm           154.28 350 eP     PKPdf   05 49 16.3 +1.2
        comp=Z,12nm,1.3s
OBKA  Obir              154.33 344 eP     PKPdf   05 49 13.3 -1.8
        comp=Z,4.0nm,0.8s
SQTA  Sankt Quirin      154.38 349 eP     PKPdf   05 49 15.9 +0.7
        comp=Z,8.0nm,0.9s
DAVA  Damuels           154.53 351 eP     PKPdf   05 49 17.5 +2.1
        comp=Z,14nm,1.3s
ABTA  Abfaltersbach     154.59 347 eP     PKPdf   05 49 12.6 -2.8
        comp=Z,4.7nm,1.0s
FETA  Feichten          154.66 350 eP     PKPdf   05 49 16.0 +0.4
        comp=Z,11nm,1.6s
DBIC  Dimbokro          162.20 148 PKP    PKPdf   05 49 21.0 -4.4
        comp=Z,2.6nm,0.8s,baz=117,slow=4.5,SNR=3.7
TORD  Torodi Ar. Bea    170.69 163 PKP    PKPdf   05 49 28.8 -3.1
        comp=Z,1.5nm,1.0s,baz=280,slow=2.6,SNR=4.0
```

NNC ***14*** *06:00:51.9±1.7,37°.47N×71°.54E,h108km±38km,mb3.4, mpv4.1,Error ellipse: s-maj=14.0km s-min=10.6km az=9.0*

IDC ***14*** *06:00:53.8±8.2,37°.59N×71°.79E,h136km±61km,mb3.2/1, mb1 3.1/6,mb1mx2.9/51,mbtmp3.7/6,Error ellipse: s-maj=71.5km s-min=44.9km az=177.0*

ISC 14 06:00:49.8±2.4,**37°.4N**±0°.2×**71°.6E**±0°.1,**h109**km,**n17, σ1s.09**/22,**2C-5D,Afghanistan-Tajikistan border region**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time     Res
                                   Op     ISC      h  m  s    ISC
AML   Almayashu          5.03  18  P      Pn      06 02 04.2 +0.9
        SNR=28
UCH   Uchtor             5.35  24  P      Pn      06 02 08.5 +0.7
        SNR=7.1
EKS2  Erkin-Say          5.55  17  P      Pn      06 02 11.3 +1.2
        SNR=14
AAK   Ala-Archa          5.72  22  P      Pn      06 02 13.7 +1.3
        6.2nm,0.3s,baz=190,slow=4.4,SNR=80
AAK                                S      Sn      06 03 15.6 -1.2
        0.5nm,0.3s,baz=348,slow=20,SNR=5.8
AAK   Ala-Archa          5.72  22  P      Pn      06 02 13.6 +1.1
        SNR=26
AAK   Ala-Archa          5.72  22 ⇑P      Pn      06 02 13.1 +0.6
        11nm,0.5s
AAK                               ⇓S      Sn      06 03 17.5 +0.7
        10nm,0.5s
KK31  Karatay Array      5.79 352 ⇓P      Pn      06 02 14.2 +0.9
        7.5nm,0.2s,baz=176,slow=13,SNR=257
KK31                              ⇓S      Sn      06 03 18.4  0.0
        3.7nm,0.3s,baz=176,slow=20,SNR=8.5
CHMS  Chumysh            6.13  22  P      Pn      06 02 18.8 +1.0
        SNR=6.1
TKM2  Tokmak 2           6.34  28  P      Pn      06 02 21.7 +0.8
        SNR=12
TKM2  Tokmak 2           6.34  28 ⇓P      Pn      06 02 21.4 +0.5
        8.7nm,0.6s
TKM2                              ⇓S      Sn      06 03 32.2 +0.2
        4.8nm,0.8s
MK31  Makanchi Array    12.31  37  P      Pn      06 03 43.7 +2.4
        0.1nm,0.1s,baz=213,slow=10,SNR=4.6
MKAR  Makanchi Array    12.31  37  P      Pn      06 03 39.5 -1.8
        0.1nm,0.3s,baz=224,slow=12,SNR=4.3
KURBB Kurchatov Arra    14.15  18  P      Pn      06 04 04.7 -0.4
        0.1nm,0.3s,baz=207,slow=11,SNR=3.4
AB31  Akbulak array     14.58 328 ⇑P      Pn      06 04 10.6 -0.1
        0.6nm,0.5s,baz=139,slow=13,SNR=20
AB31                               S      Sn      06 06 50.4 -1.0
        1.1nm,0.8s,baz=138,slow=23,SNR=4.5
AKTO  Aktyubinsk        16.29 328  P      Pn      06 04 32.9 +0.9
        0.2nm,0.3s,baz=170,slow=12,SNR=3.4
ZALV  Zalesovo Beam     18.93  25  P      P       06 05 01.2 -0.8
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	0.6nm,0.3s,baz=208,slow=9.7,SNR=6.4						
SONM	Songino Array	27.46	57	P	P	06 06 25.0	-0.6
	0.5nm,0.8s,baz=265,slow=7.6,SNR=3.7						

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*NEIC **14** 06:31:04.5±1.8, 17°.97S±0°.08×178°.5W±0°.1, h588^{km}±8^{km}, mb4.3/61, Error ellipse: s-maj=14.9km s-min=11.0km az=81.0*

*IDC **14** 06:31:06.1±1.3, 17°.86S×178°.59W, h600^{km}±10^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.5/40, mbtmp4.6/15, Error ellipse: s-maj=38.7km s-min=12.2km az=150.0*

ISC 14 06:31:03.8±0.6**, 18°.0S**±0°.1×**178°.41W**±0°.09**, h579**^{km}**, n82,** σ**0^{s}.99**/72**, mb4.3**/42**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.38	274	P	P	06 32 25.5	+1.8
	37nm,0.3s,baz=137,slow=3.7,SNR=199						
MSVF				S	S	06 33 32.8	+4.1
	baz=130,slow=24,SNR=7.3						
AFI	Afiamalu	7.56	58	P	P	06 32 58.0	-0.4
NIUE	Niue	8.12	99	P	P	06 33 03.7	+0.2
SANVU	Saraoutou	14.01	278	P	P	06 34 04.1	+0.9
DZM	Mont Dzumac	14.80	252	P	P	06 34 12.6	+1.8
	1.2nm,0.3s,baz=92,slow=18,SNR=14						
DZM	Mont Dzumac	14.80	252	P	P	06 34 10.5	-0.2
KNTN	Kanton	16.49	24	P	P	06 34 25.0	-1.7
EIDS	Eidsvold	29.23	250	P	P	06 36 19.2	-0.9
EIDS				IAmb	IAmb	06 36 20.2	
	comp=Z,8.8nm,0.8s						
MLZ	Mavora Lakes	29.51	199	P	P	06 36 22.3	+0.1
MLZ				IAmb	IAmb	06 36 26.3	
	comp=Z,10nm,1.2s						
ARMA	Armidale	29.89	240	P	P	06 36 25.9	0.0
ARMA				IAmb	IAmb	06 36 27.4	
	comp=Z,8.1nm,0.8s						
CTA	Charters Tower	33.43	261	P	P	06 36 55.5	-0.5
	comp=Z,8.1nm,0.6s,baz=100,slow=10,SNR=22						
CTAO	Charters Tower	33.43	261	P	P	06 36 55.5	-0.5
CAN	Canberra	33.65	233	P	P	06 36 57.1	-0.6
PMG	Port Moresby	34.47	280	P	P	06 37 04.7	0.0
	comp=Z,13nm,0.3s,baz=65,slow=8.5,SNR=5.8						
COEN	Coen	37.10	271	P	P	06 37 25.9	-0.5
TOO	Toolangi	37.11	231	P	P	06 37 26.4	+0.1
STKA	Stephens Creek	38.59	241	P	P	06 37 38.8	+0.5
	comp=Z,11nm,0.7s,baz=95,slow=12,SNR=14						
STKA	Stephens Creek	38.59	241	P	P	06 37 38.3	+0.1
BBOO	Buckleboo	43.36	241	P	P	06 38 15.6	-0.4
BBOO				IAmb	IAmb	06 38 16.0	
	comp=Z,9.9nm,0.7s						
HMH	Humu'ula Sheep	43.62	32	P	P	06 38 19.0	+0.5
WR0	Warramunga Arr	44.42	260	P	P	06 38 22.9	-1.5
WR0				IAmb	IAmb	06 38 23.9	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	44.58	260	P	P	06 38 24.5	-1.1
WB0				IAmb	IAmb	06 38 25.2	
	comp=Z,8.9nm,0.8s						
WB2	Warramunga Arr	44.60	260	P	P	06 38 24.6	-1.2
WB2				IAmb	IAmb	06 38 25.4	
	comp=Z,9.0nm,0.7s						
WRA	Warramunga Arr	44.61	260	P	P	06 38 24.9	-1.0
	comp=Z,5.1nm,0.5s,baz=95,slow=7.0,SNR=62						
AS31	Alice Springs	44.76	254	P	P	06 38 26.4	-0.6
AS31				IAmb	IAmb	06 38 27.4	
	comp=Z,10nm,0.7s						
ASAR	Alice Springs	44.77	254	P	P	06 38 26.6	-0.5
	comp=Z,40nm,0.6s,baz=88,slow=8.5,SNR=365						
ASAR	Alice Springs	44.77	254	P	P	06 38 25.6	-1.5
MTN	Manton Dam	48.79	269	P	P	06 38 56.3	-1.1
FORT	Forrest	49.97	245	P	P	06 39 04.5	-1.3
SIJI	Sorong	52.25	283	P	P	06 39 22.4	-0.1
	comp=Z,21nm,0.6s,baz=240,slow=20,SNR=4.3						
FITZ	Fitzroy Crossi	53.01	261	P	P	06 39 27.5	-0.4
	comp=Z,1.9nm,0.7s,baz=105,slow=5.8,SNR=6.9						
FITZ	Fitzroy Crossi	53.01	261	P	P	06 39 26.9	-0.9
PSA00	Pilbara Seismi	57.88	255	P	P	06 40 00.4	-1.2
PSA00				IAmb	IAmb	06 40 01.3	
	comp=Z,8.0nm,0.7s						
ADK	Adak	69.60	1	P	P	06 41 15.2	-0.1
UGM	Wanagama	69.64	268	P	P	06 41 15.7	-0.8
PETK	Petropavlovsk-	73.77	345	P	P	06 41 39.2	-0.3
	comp=Z,2.8nm,0.7s,baz=120,slow=8.5,SNR=4.2						
SAO	San Andreas Ge	76.49	44	P	P	06 41 56.4	+1.3
SAO				IAmb	IAmb	06 41 56.8	
	comp=Z,8.7nm,0.8s						
PMPB	Monarch Peak	76.61	45	P	P	06 41 57.0	+1.2
PMPB				IAmb	IAmb	06 42 14.8	
	comp=Z,20nm,1.2s						
CMB	Columbia Colle	77.91	43	P	P	06 42 02.6	-0.1
OMMB	Old Mammoth Mi	78.58	44	P	P	06 42 07.6	+0.9
SLBS	Sierra La Lagu	78.61	60	P	P	06 42 07.9	+1.1
WAKR	Walker	78.79	43	P	P	06 42 08.8	+1.2
BEKR	Beckworth	78.96	42	P	P	06 42 08.8	+0.3
HUMO	Hull Mountain	78.97	38	P	P	06 42 08.8	+0.5
PNTR	Pine Nut	79.01	43	P	P	06 42 09.6	+0.7
PNTR				IAmb	IAmb	06 42 10.4	
	comp=Z,8.4nm,0.9s						
NVAR	Mina Array Bea	79.49	44	P	P	06 42 12.2	+0.8
	comp=Z,2.6nm,0.7s,baz=224,slow=8.8,SNR=24						
NVAR	Mina Array Bea	79.49	44	P	P	06 42 11.7	+0.3
PAHR	Pah Rah Range	79.49	42	P	P	06 42 11.4	+0.2
NV11	Mina Array Sit	79.59	44	P	P	06 42 12.4	+0.6
MOD	Modoc Plateau	80.15	40	IAmb	IAmb	06 42 16.1	
	comp=Z,5.1nm,0.7s						
K05A	Summer Lake	80.27	39	P	P	06 42 16.4	+1.0
K05A				IAmb	IAmb	06 42 17.1	
	comp=Z,16nm,1.1s						
PINE	Pine Mountain	80.86	38	P	P	06 42 19.6	+1.2
PINE				IAmb	IAmb	06 42 20.1	
	comp=Z,8.2nm,0.9s						
PRN	Pahroc Range	81.14	46	IAmb	IAmb	06 42 21.4	
	comp=Z,4.8nm,0.8s						
NLWA	Neilton Lookou	81.39	34	P	P	06 42 21.7	+0.9
WVOR	Wild Horse Val	81.48	40	IAmb	IAmb	06 42 23.0	
	comp=Z,8.4nm,1.1s						
TUC	Tucson	81.76	52	P	P	06 42 24.4	+1.3
I07A	Izee	81.88	39	IAmb	IAmb	06 42 25.0	
	comp=Z,5.4nm,0.8s						
X16A	Lo Mia Camp, P	82.24	50	P	P	06 42 26.7	+1.1
CCUT	Cedar City	82.37	47	P	P	06 42 26.7	+0.4
KNB	Kanab	82.49	47	P	P	06 42 26.9	+0.1
PSUT	Pine Spring	82.52	46	P	P	06 42 27.3	+0.3
TTA	Tatalina	82.56	10	P	P	06 42 26.1	-0.3
U15A	North Rim	82.58	48	P	P	06 42 28.1	+0.7
U15A				IAmb	IAmb	06 42 29.4	
	comp=Z,8.1nm,0.8s						
GHO	Glory Hole Cre	82.89	14	P	P	06 42 27.4	-0.7
GHO				IAmb	IAmb	06 42 28.2	
	comp=Z,8.9nm,0.7s						
SCM	Sheep Creek Mo	83.31	14	P	P	06 42 29.5	-0.7
N25K	Chitina, Valde	83.79	16	P	P	06 42 32.5	0.0
N25K				IAmb	IAmb	06 42 32.9	
	comp=Z,8.1nm,0.8s						
GLB	Gilahina Butte	83.85	16	P	P	06 42 32.1	-0.7
GLB				IAmb	IAmb	06 42 33.0	
	comp=Z,5.6nm,0.8s						
TRF	Thorofare Moun	84.10	12	IAmb	IAmb	06 42 34.8	
	comp=Z,9.7nm,0.9s						
F10A	Beach Ranch, E	84.27	38	IAmb	IAmb	06 42 36.1	
	comp=Z,7.7nm,1.0s						
B08A	Colville Reser	84.41	35	IAmb	IAmb	06 42 36.2	
	comp=Z,4.7nm,0.9s						
HLID	Hailey	84.70	41	P	P	06 42 38.3	+0.7
ILAR	Eielson Array	85.97	13	P	P	06 42 41.7	-1.3
	comp=Z,0.9nm,0.4s,baz=221,slow=5.0,SNR=21						
TX32	Lajitas Array	86.04	58	IAmb	IAmb	06 42 46.7	
	comp=Z,10nm,1.1s						
TXAR	Lajitas Array	86.04	58	P	P	06 42 45.6	+1.4
	comp=Z,3.7nm,0.8s,baz=216,slow=6.5,SNR=34						
BW06	Boulder Array	87.42	43	IAmb	IAmb	06 42 51.4	
	comp=Z,2.4nm,0.8s						
PDAR	Pinedale Array	87.42	43	P	P	06 42 50.9	+0.3
	comp=Z,1.8nm,0.6s,baz=224,slow=3.0,SNR=20						
SDCO	Great Sand Dun	88.02	49	IAmb	IAmb	06 43 19.6	
	comp=Z,7.8nm,1.1s						
BMAR	Burnt Mountain	88.75	12	P	P	06 42 54.8	-1.2
ABTX	Abilene, Hawle	90.48	56	IAmb	IAmb	06 43 05.4	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	94.41	25	P	P	06 43 21.7	-0.4
	comp=Z,0.5nm,0.7s,baz=236,slow=4.2,SNR=8.8						
CLL	Collm	145.55	347	*e*PKPbc	PKPbc	06 49 38.0	0.0
GERES	GERESS Array B	147.70	345	PKPbc	PKPbc	06 49 44.0	-0.1
	comp=Z,1.6nm,0.7s,baz=20,slow=4.3,SNR=7.4						

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*IDC **14** 06:35:43.0±2.1, 0°.48N×127°.49E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.4/41, mbtmp3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/31, Error ellipse: s-maj=168.9km s-min=25.7km az=66.0*

DJA 14 06:35:48.6±0.4**, 0°N**±4°×**12°7E**±°**, h10**^{km}**, M3.4**/6**, MLv3.4**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.03	43	P	Pg	06 36 08.3	-0.1
TNTI				S	Sg	06 36 21.8	0.0
SANI	Sanana	2.16	198	P	Pn	06 36 25.0	+0.4
KAPI	Kappang	8.52	234	LR	LR	06 42 55.9	
	comp=Z,51nm,18.3s,baz=294,slow=46						
WRA	Warramunga Arr	21.20	160	P	P	06 40 31.9	-2.8
	0.6nm,0.3s,baz=341,slow=11,SNR=8.1						
ASAR	Alice Springs	24.56	164	P	P	06 41 07.2	-1.7
	1.6nm,0.8s,baz=341,slow=10,SNR=8.6						
MKAR	Makanchi Array	60.58	327	P	P	06 45 55.9	-3.6
	0.3nm,0.4s,baz=119,slow=7.6,SNR=7.1						

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*IDC **14** 06:39:30.4±2.8, 37°.91N×145°.02E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.4/49, mbtmp3.6/4, ML2.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=71.7km s-min=33.9km az=66.0*

*JMA **14** 06:39:35.7±0.2, 38°.07N×144°.52E, h42^{km}, M3.8*

*NIED **14** 06:39:35.7, 38°.07N×144°.53E, h42^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.05; $M_{\theta\theta}$1.15; $M_{\phi\phi}$1.91; $M_{r\theta}$1.45; $M_{\theta\phi}$0.85; $M_{\phi r}$2.17; Fault plane solution: $M_0$3.79000×10^{14} NP1: ϕ_s213.00000°, δ67.00000°, λ-90.00000°. NP2: ϕ_s33.00000°, δ23.00000°, λ-91.00000°.*

ISC 14 06:39:35.6±1.4**, 38°.11N**±0°.07×**144°.71E**±0°.08**, h35**^{km}**, n21,** σ**1^{s}.82**/33**, mb3.7**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.57	276	P	Pn	06 40 13.9	-0.7
JIKH				S	Sn	06 40 42.2	-2.4
OFUJ	Ofunato	2.58	293	P	Pn	06 40 14.6	-0.1
OFUJ				S	Sn	06 40 43.5	-1.3
JKMT	Kesennumamotoy	2.64	286	P	Pn	06 40 15.3	-0.3
JKMT				S	Sn	06 40 44.8	-1.5
JIO	Ouri	2.67	278	P	Pn	06 40 15.9	-0.1
JIO				S	Sn	06 40 45.3	-1.8
MIYJ	Miyakonagasawa	2.69	304	P	Pn	06 40 16.0	-0.4
MIYJ				*e*S	Sn	06 40 46.6	-1.1
JMK	Ichinoseki	2.87	288	P	Pn	06 40 19.0	+0.3
JMK				*e*S	Sn	06 40 51.0	-1.0
JOM	Ohasama	3.00	298	P	Pn	06 40 21.4	+0.8
JOM				S	Sn	06 40 54.8	-0.5
JYK	Kaneyama	3.51	285	P	Pn	06 40 28.2	+0.6
JYK				*e*S	Sn	06 41 08.2	+0.3
JFT	Otama	3.52	262	*e*S	Sn	06 41 06.5	-1.5
JOT	Ohata	4.32	320	P	Pn	06 40 40.2	+1.5
JCH	Churui	4.62	348	P	Pn	06 40 42.9	+0.1
JRY	Ryogami san	5.09	248	P	Pn	06 40 48.6	-0.8
JRY				*e*S	Sn	06 41 43.0	-4.0
NEM2	Nemuro 2	5.31	8	P	Pn	06 40 50.6	-1.7
NEM2				*e*S	Sn	06 41 46.7	-5.5
MJAR	Matsushiro Arr	5.41	255	Pn	Pn	06 40 54.7	+0.9
	0.3nm,0.3s,baz=80,slow=16,SNR=6.5						
MJAR				Sn	Sn	06 41 54.5	-0.4
	0.1nm,0.3s,baz=78,slow=38,SNR=3.3						
JOSM	Okushiri--Mats	5.65	316	P	Pn	06 40 58.1	+1.2
JTKR	Abashiri--Toko	5.89	354	P	Pn	06 41 00.6	+0.4
JTKR				*e*S	Sn	06 42 03.2	-3.2
JHR	Hokuryu	6.07	339	P	Pn	06 41 04.4	+1.7
JHR				*e*S	Sn	06 42 11.8	+0.9
KSRS	Korea Array	13.30	272	LR	LR	06 47 39.5	
	comp=Z,22nm,18.1s,baz=65,slow=36						
MKAR	Makanchi Array	45.78	302	P	P	06 47 55.9	+2.3
	0.3nm,0.6s,baz=86,slow=9.4,SNR=2.0						
KURBB	Kurchatov Arra	47.41	308	P	P	06 48 08.6	+2.2
	0.8nm,0.5s,baz=81,slow=8.0,SNR=5.8						
WRA	Warramunga Arr	58.56	191	P	P	06 49 27.8	-0.9
	0.4nm,0.6s,baz=19,slow=3.3,SNR=4.6						

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*IDC **14** 06:47:09.3±1.2, 28°.97S×13°.03W, h0^{km}, mb4.1/6, mb1 4.1/6, mb1mx3.8/32, mbtmp4.1/6, MS3.7/7, Ms1 3.7/7, ms1mx3.4/26, Error ellipse: s-maj=40.0km s-min=21.1km az=2.0*

ISC 14 06:47:10.8±1.2**, 29°.0S**±0°.3×**13°.0W**±0°.1**, h11**^{km}**, n14,** σ**0^{s}.40**/8**, mb4.1**/6**, MS3.7**/7**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09W1	TRISTAN DA CUN	8.12	176	T	T	06 57 39.8	
	SNR=7.1						
RCBR	Riachuelo	31.59	312	LR	LR	07 03 12.1	
	comp=Z,106nm,19.2s,baz=116,slow=30						
BOSA	Boshof	33.46	99	P	P	06 53 49.9	-0.2
	1.9nm,0.8s,baz=270,slow=7.1,SNR=3.3						
BOSA				LR	LR	07 04 55.2	
	comp=Z,152nm,19.2s,baz=230,slow=32						
BDFB	Brasilia	34.84	285	P	P	06 54 01.9	-0.3
	2.6nm,0.5s,baz=111,slow=6.9,SNR=6.5						
BDFB				LR	LR	07 05 39.2	
	comp=Z,114nm,19.4s,baz=150,slow=32						
DBIC	Dimbokro	36.30	14	P	P	06 54 14.6	0.0
	3.7nm,0.9s,baz=175,slow=9.5,SNR=4.4						
MATP	Matopo	38.52	87	P	P	06 54 33.4	-0.2
	3.3nm,0.9s,baz=292,slow=9.2,SNR=4.1						
CPUP	Villa Florida	39.16	263	LR	LR	07 07 58.0	
	comp=Z,116nm,20.0s,baz=87,slow=32						
TORD	Torodi Ar. Bea	44.23	21	P	P	06 55 20.1	-0.1
	1.7nm,0.8s,baz=194,slow=8.2,SNR=7.7						
SIV	San Ignacio	45.94	276	P	P	06 55 34.1	0.0
	0.7nm,0.7s,baz=135,slow=16,SNR=2.7						
LVC	Limon Verde	50.33	264	LR	LR	07 14 50.6	
	comp=Z,54nm,19.6s,baz=141,slow=33						
MAW	Mawson	58.20	154	LR	LR	07 17 29.3	
	comp=Z,101nm,18.9s,baz=241,slow=31						
ROSC	El Rosal	67.72	289	LR	LR	07 25 51.9	
	comp=Z,78nm,18.7s,baz=140,slow=34						
SEY	Seymchan	144.73	12	PKP	PKPdf	07 06 47.7	+0.8
	0.8nm,0.3s,baz=234,slow=3.3,SNR=4.6						
KLR	Kul'dur	146.43	43	PKPbc	PKPab	07 06 52.7	+0.2
	2.9nm,0.9s,baz=297,slow=7.3,SNR=4.1						

IDC 14 06:49:23.6±1.8**, 4°.25S**×**145°.51E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.5**/37**, mbtmp3.6**/4**, ML3.7**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/27**, Error ellipse: s-maj=121.0km s-min=26.4km az=124.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.02	214	P	Pn	06 53 47.6	-0.3
	0.2nm,0.3s,baz=40,slow=10,SNR=8.1						
ASAR	Alice Springs	22.32	209	P	P	06 54 22.8	-0.3
	0.4nm,0.5s,baz=42,slow=7.4,SNR=8.5						
FITZ	Fitzroy Crossi	23.82	233	P	P	06 54 38.2	-0.3
	3.2nm,0.5s,baz=54,slow=9.1,SNR=17						
FITZ				LR	LR	07 03 46.3	
	comp=Z,60nm,18.6s,baz=244,slow=36						
ILAR	Eielson Array	84.47	23	P	P	07 01 58.3	+0.2
	0.4nm,0.7s,baz=234,slow=6.9,SNR=3.2						

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*IDC **14** 07:08:15.1±0.8, 55°.60S×35°.32W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.1/19, mbtmp4.2/7, MS3.2/2, Ms1 3.1/2, ms1mx2.8/17, Error ellipse: s-maj=31.3km s-min=19.5km az=55.0*

*NEIC **14** 07:08:18.1±1.4, 55°.6S±0°.1×35°.4W±0°.3, h15^{km}±2^{km}, mb4.5/10, Error ellipse: s-maj=26.2km s-min=16.2km az=55.0*

ISC 14 07:08:17.3±0.7**, 55°.5S**±0°.1×**35°.4W**±0°.2**, h10**^{km}**, n31,** σ**1^{s}.27**/24**, mb4.5**/10**, South Georgia Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	16.90	225	LR	LR	07 17 10.2	
	comp=Z,89nm,20.0s,baz=68,slow=32						
VNA3	Neumayer Olymp	19.30	155	P	Pn	07 12 46.2	+3.1
VNA2	Neumayer--Watz	19.67	153	P	Pn	07 12 49.5	+2.1
	baz=308,slow=12						
SNAA	Sanae	21.30	152	P	P	07 13 04.3	+0.6
SNAA	Sanae	21.30	152	P	P	07 13 01.3	-2.5
	1.9nm,0.6s,baz=305,slow=9.4,SNR=14						
SNAA	Sanae	21.30	152	P	P	07 13 03.2	-0.5
PLCA	Paso Flores	27.37	288	LR	LR	07 25 22.4	
	comp=Z,35nm,19.2s,baz=137,slow=37						
CPUP	Villa Florida	33.21	322	P	P	07 14 54.5	+0.3
	2.4nm,0.7s,baz=144,slow=8.0,SNR=6.3						
CPUP	Villa Florida	33.21	322	P	P	07 14 54.1	-0.1
QSPA	South Pole Qui	34.79	180	P	P	07 15 06.3	-1.4
	5.9nm,0.8s,baz=288,slow=2.0,SNR=8.1						
QSPA	South Pole Qui	34.79	180	P	P	07 15 06.9	-0.8
QSPA				IAmb	IAmb	07 15 13.8	
	comp=Z,8.6nm,0.9s						
AC04	Llanos de Chal	37.38	302	P	P	07 15 31.2	+1.2
GO02	Mina Guanaco	39.26	306	P	P	07 15 46.6	+0.3
GO02				IAmb	IAmb	07 15 58.9	
	comp=Z,14nm,1.4s						
LVC	Limon Verde	41.16	309	P	P	07 16 03.7	+1.6
	comp=Z,5.2nm,0.8s,baz=255,slow=23,SNR=3.6						
SIV	San Ignacio	44.06	323	P	P	07 16 24.8	-0.5
	comp=Z,1.5nm,0.6s,baz=185,slow=9.6,SNR=7.0						
MNMC	Minye Minye	44.52	311	P	P	07 16 29.6	+0.3
MNMC				IAmb	IAmb	07 16 35.5	
	comp=Z,9.3nm,1.1s						
H10S2	ASCENSION HYDR	49.20	28	T	T	08 09 41.8	
	baz=195,slow=74,SNR=23						
H10S3	ASCENSION HYDR	49.20	27	T	T	08 09 42.0	
	baz=25,slow=74,SNR=41						
H10N3	ASCENSION HYDR	50.31	27	T	T	08 11 05.1	
	baz=195,slow=75,SNR=50						
H10N1	ASCENSION HYDR	50.31	27	T	T	08 11 05.7	
	baz=195,slow=75,SNR=36						
H10N2	ASCENSION HYDR	50.33	27	T	T	08 11 06.3	
	baz=195,slow=75,SNR=48						
BOSA	Boshof	50.42	84	P	P	07 17 14.3	-0.6
	comp=Z,3.0nm,0.7s,baz=200,slow=7.2,SNR=6.3						
BOSA	Boshof	50.42	84	P	P	07 17 14.3	-0.6
BOSA				IAmb	IAmb	07 17 25.1	
	comp=Z,8.8nm,1.2s						
LBTB	Lobatse	53.39	81	P	P	07 17 37.1	0.0
TOA0	Torodi Ar. Sit	75.11	37	P	P	07 20 00.2	+0.8
TOA0				IAmb	IAmb	07 20 00.9	
	comp=Z,3.0nm,0.7s						
TORD	Torodi Ar. Bea	75.11	37	P	P	07 19 59.9	+0.6
	comp=Z,3.1nm,0.7s,baz=203,slow=6.4,SNR=16						
TORD	Torodi Ar. Bea	75.11	37	P	P	07 20 00.1	+0.7
YKA	Yellowknife Ar	132.74	322	PKP	PKPdf	07 27 29.4	-1.4
	comp=Z,0.2nm,0.5s,baz=118,slow=3.7,SNR=5.2						
ILAR	Eielson Array	146.32	314	PKPbc	PKPdf	07 27 55.0	-0.5
	comp=Z,2.9nm,0.7s,baz=125,slow=2.1,SNR=27						
ILAR	Eielson Array	146.32	314		PKPdf	07 27 54.8	-0.6
ZALV	Zalesovo Beam	146.34	67	PKPbc	PKPdf	07 27 54.8	-1.0
	comp=Z,0.7nm,0.5s,baz=242,slow=7.9,SNR=4.0						

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*IDC **14** 07:19:21.6±13.0, 24°.55N×125°.11E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/33, mbtmp3.4/4, Error ellipse: s-maj=352.4km s-min=44.5km az=6.0*

*JMA **14** 07:19:37.8±0.1, 25°.65N×125°.30E, h90^{km}±5^{km}, M3.6*

ISC 14 07:19:38.0±0.9**, 25°.6N**±0°.1×**125°.33E**±0°.09**, h92**^{km}±15^{km}**, n21,** σ**0^{s}.49**/32**, mb3.2**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.70	186	P	Pn	07 19 55.0	+0.3
JIKM				S	Sn	07 20 07.2	+0.1
JIRB	Irabujima	0.81	190	P	Pn	07 19 55.7	0.0
JIRB				S	Sn	07 20 08.4	-0.6
JOGS	Gusukube	0.86	175	P	Pn	07 19 56.6	+0.2
JOGS				S	Sn	07 20 10.2	+0.2
JMJ2	Miyako jima3	0.88	180	P	Pn	07 19 56.7	+0.2
JMJ2				S	Sn	07 20 10.4	+0.1
JTJ	Tarama	1.13	210	P	Pn	07 19 59.6	+0.2
JTJ				S	Sn	07 20 15.0	-0.4
JISG	Ishigakijimahi	1.39	222	P	Pn	07 20 02.6	+0.2
JISG				S	Sn	07 20 20.2	-0.6
JKE	Kume jima 2	1.49	62	P	Pn	07 20 03.9	+0.3
JIJ	Ishigaki jima	1.65	221	P	Pn	07 20 05.5	-0.3
JIJ				S	Sn	07 20 25.3	-1.6
JKRS	Kuro-shima	1.83	221	P	Pn	07 20 08.0	-0.1
JKRS				S	Sn	07 20 30.6	-0.3
IRIF	Iriomote-Funau	1.94	229	P	Pn	07 20 09.5	0.0
IRIF				S	Sn	07 20 33.1	-0.3
JAGN	Aguni-jima	1.97	60	P	Pn	07 20 10.2	+0.3
JAGN				S	Sn	07 20 34.3	+0.2
HATJ	Hateruma jima	2.09	222	P	Pn	07 20 11.6	+0.2
HATJ				S	Sn	07 20 36.6	-0.3
JJT3	Tamagusuku3	2.27	76	P	Pn	07 20 13.7	-0.1
YOJ	Yonaguni jima	2.40	242	P	Pn	07 20 16.1	+0.5
YOJ				*e*S	Sn	07 20 44.3	0.0
JNTH	Nagotoyohara	2.58	69	P	Pn	07 20 17.6	-0.3
JOW	Kunigami	2.91	65	P	Pn	07 20 21.9	-0.4
JYRO	Yoronjima	3.13	63	P	Pn	07 20 24.3	-1.0
MKAR	Makanchi Array	40.02	313	P	P	07 27 03.7	-0.2
	0.1nm,0.4s,baz=101,slow=9.6,SNR=4.1						
ZALV	Zalesovo Beam	41.18	324	P	P	07 27 13.0	-0.3
	0.7nm,0.4s,baz=109,slow=7.8,SNR=3.6						
ILAR	Eielson Array	66.20	28	P	P	07 30 17.9	+2.3
	0.2nm,0.6s,baz=294,slow=9.7,SNR=4.9						
YKA	Yellowknife Ar	80.16	24	P	P	07 31 38.7	+0.8
	0.3nm,0.8s,baz=315,slow=4.3,SNR=5.2						

IDC 14 07:37:16.2±3.6**, 5°.75S**×**142°.48E, h0**^{km}**, mb3.6**/2**, mb1 3.6**/4**, mb1mx3.4**/23**, mbtmp3.5**/4**, ML3.2**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.5**/19**, Error ellipse: s-maj=94.4km s-min=34.1km az=100.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.18	209	Pn	Pn	07 41 06.7	+1.5
	0.1nm,0.3s,baz=31,slow=10,SNR=5.0						
ASAR	Alice Springs	19.64	204	P	Pn	07 41 47.3	-0.7
	0.1nm,0.3s,baz=33,slow=9.9,SNR=5.1						
FITZ	Fitzroy Crossi	20.52	232	P	P	07 41 55.1	-1.1
	1.8nm,0.4s,baz=50,slow=7.9,SNR=16						
DZM	Mont Dzumac	28.29	127	LR	LR	07 54 35.3	
	comp=Z,52nm,18.9s,baz=218,slow=37						
MKAR	Makanchi Array	74.48	322	P	P	07 48 56.7	+0.1
	0.4nm,0.8s,baz=99,slow=7.7,SNR=3.7						

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*NEIC **14** 07:47:52.2±1.3, 15°.56N±0°.05×92°.21W±0°.07, h202^{km}±5^{km}, Error ellipse: s-maj=9.4km s-min=6.8km az=71.0*

*MEX **14** 07:47:53.4±1.0, 15°.51N×92°.21W, h206^{km}±7^{km}, MD4.1*

ISC 14 07:47:50.6±1.9**, 15°.48N**±0°.07×**92°.22W**±0°.06**, h212**^{km}±12^{km}**, n19,** σ**1^{s}.54**/32**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.57	184	*e*P	Pn	07 48 20.2	+0.8
THIG				*e*S	S	07 48 41.5	-0.4
THIG		0.57	184		Pn	07 48 20.2	+0.8
THIG					S	07 48 41.5	-0.4
HUEH	Huehuetenango	0.71	103		Pn	07 48 20.4	+0.1
CCIG	Comitan	0.80	6	*e*P	Pn	07 48 21.4	+0.7
CCIG				*i* S	S	07 48 42.4	-1.8
CCIG	Comitan	0.80	6		Pn	07 48 21.4	+0.7
CCIG					S	07 48 42.4	-1.8
PCIG		0.99	283	*i* P	Pn	07 48 22.3	+0.8
PCIG				*e*S	S	07 48 44.5	-0.9
PCIG		0.99	283		Pn	07 48 22.3	+0.8
PCIG					S	07 48 44.5	-0.9
RTAL	Retalhuleu	1.07	152	Pn	Pn	07 48 23.4	+1.2
RTAL					S	07 48 46.8	+0.2
TGIG		1.56	326	*i* P	Pn	07 48 27.2	+1.3
TGIG				*i* S	S	07 48 52.8	-0.6
TGIG		1.56	326		Pn	07 48 27.2	+1.3
TGIG					S	07 48 52.8	-0.6
PETF	Flores	2.67	57		Pn	07 48 37.8	+0.6
ESQI	Esquipulas	2.93	108		Pn	07 48 39.3	-0.9
MTO3	Montecristo	2.96	111		Pn	07 48 42.1	+1.4
CMIG	Matias Romero	3.02	302	*e*P	Pn	07 48 42.4	+1.3
CMIG				*i* S	S	07 49 19.8	-0.6
CMIG	Matias Romero	3.02	302		Pn	07 48 42.4	+1.3
CMIG					S	07 49 19.8	-0.6
HUIG	Huatulco	3.76	275	*e*P	Pn	07 48 50.6	+0.8
HUIG				*i* S	S	07 49 32.7	-3.4
HUIG	Huatulco	3.76	275		Pn	07 48 50.6	+0.8
HUIG					S	07 49 32.7	-3.4
TEIG	Tepich	6.03	38	Pn	Pn	07 49 19.0	+0.5
TLIG	Tlapa	6.43	290	Pn	Pn	07 49 27.9	+4.2

*IDC **14** 08:01:22.1±1.1, 9°.45S×112°.85E, h0^{km}, mb4.3/9, mb1 4.4/10, mb1mx4.2/30, mbtmp4.3/10, ML4.0/1, MS3.4/13, Ms1 3.4/13, ms1mx3.2/39, Error ellipse: s-maj=52.6km s-min=15.3km az=52.0*

*NEIC **14** 08:01:28.5±2.1, 9°.56S±0°.09×112°.92E±0°.03, h45^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=13.3km s-min=3.8km az=191.0*

*DJA **14** 08:01:30.0±0.8, 10°S±5°×11°3E±°, h30^{km}±13^{km}, M4.6/19, mb4.7/3, mB5.5/1, MLv4.6/19, Mw(mB)5.0/1*

ISC 14 08:01:29.8±1.0**, 9°.53S**±0°.07×**112°.86E**±0°.05**, h57**^{km}±10^{km}**, n60,** σ**1^s.14**/60**, mb4.3**/13**, MS3.4**/9**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.37**	**25**	P	**Pn**	**08 01 51.7**	**-0.9**
GMJI				S	**Sn**	**08 02 08.7**	**-1.1**
JAGI	**Jajag, Banyuwa**	**1.65**	**51**	Pn	**Pn**	**08 01 55.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**1.65**	**51**	P	**Pn**	**08 01 57.0**	**+0.6**
JAGI				S	**Sn**	**08 02 16.3**	**-0.3**
PWJI	**Pagerwojo**	**1.82**	**325**	P	**Pn**	**08 01 58.3**	**-0.5**
PWJI				S	**Sn**	**08 02 21.0**	**+0.2**
BLJI	**Banyuglugur**	**1.91**	**22**	P	**Pn**	**08 02 00.7**	**+0.7**
BLJI				S	**Sn**	**08 02 23.9**	**+1.0**
ABJI	**Asem Bagus**	**2.19**	**38**	P	**Pn**	**08 02 05.3**	**+1.5**
ABJI				S	**Sn**	**08 02 30.6**	**+0.9**
DNP	**Denpasar**	**2.47**	**70**	P	**Pn**	**08 02 08.1**	**+0.5**
DNP				S	**Sn**	**08 02 38.5**	**+1.9**
WOJI	**Wonogiri, Jawa**	**2.55**	**311**	P	**Pn**	**08 02 08.5**	**-0.2**
WOJI				S	**Sn**	**08 02 39.4**	**+0.9**
NGJI	**Ngawi**	**2.55**	**327**	P	**Pn**	**08 02 10.5**	**+1.8**
NGJI				S	**Sn**	**08 02 40.5**	**+1.9**
GRJI	**Gresik**	**2.62**	**352**	P	**Pn**	**08 02 08.9**	**-0.8**
KMMI	**Kalianget**	**2.69**	**24**	P	**Pn**	**08 02 11.6**	**+1.0**
SRBI	**Singaraja**	**2.73**	**59**	P	**Pn**	**08 02 11.9**	**+0.8**
UGM	**Wanagama**	**2.81**	**305**	Pn	**Pn**	**08 02 12.6**	**+0.2**
UGM	**Wanagama**	**2.81**	**305**	P	**Pn**	**08 02 14.1**	**+1.8**
TBJI	**Tambak Boyo**	**2.87**	**339**	P	**Pn**	**08 02 14.1**	**+1.0**
SMRI	**Semarang**	**3.44**	**316**		**Pn**	**08 02 22.4**	**+1.6**
TWSI	**Taliwang, Sumb**	**4.05**	**79**	P	**Pn**	**08 02 29.2**	**0.0**
KPJI	**Karang Pucung**	**4.46**	**299**	P	**Pn**	**08 02 36.0**	**+1.2**
PLAI	**Plampang**	**4.90**	**82**	P	**Pn**	**08 02 40.8**	**-0.1**
CISI	**Cisompet, Garu**	**5.36**	**291**	Pn	**Pn**	**08 02 46.7**	**-0.7**
CISI	**Cisompet, Garu**	**5.36**	**291**	P	**Pn**	**08 02 46.6**	**-0.7**
	0.8nm5µm102nm,0.6s						
LEM	**Lembang**	**5.84**	**297**	LR	LR	08 05 23.3	
	comp=Z,134nm,18.5s,baz=153,slow=42						
XMIS	**Christmas Isla**	**7.17**	**262**	Pn	**Pn**	**08 03 08.8**	**-3.2**
KAPI	**Kappang**	**8.17**	**57**	LR	LR	08 06 59.1	
	comp=Z,149nm,19.6s,baz=246,slow=41						
EDFI	**Ende, Flores**	**8.75**	**86**	P	**Pn**	**08 03 34.4**	**+0.6**
MNAI	**Manna**	**11.09**	**297**	Pn	**Pn**	**08 04 05.2**	**-0.5**
KSI	**Kapahiang**	**11.75**	**299**	P	**Pn**	**08 04 14.9**	**+0.1**
GIRL	**Giralia**	**13.11**	**174**	Pn	**Pn**	**08 04 34.2**	**+1.0**
FITZ	**Fitzroy Crossi**	**15.04**	**126**	Pn	**Pn**	**08 04 54.9**	**-4.1**
	0.5nm,0.3s,baz=306,slow=8.4,SNR=28						
FITZ				Sn	Sn	08 07 31.2	-13
	0.4nm,0.3s,baz=96,slow=18,SNR=5.1						
FITZ				LR	LR	08 10 35.3	
	comp=Z,78nm,21.8s,baz=300,slow=37						
MTN	**Manton Dam**	**18.22**	**102**	P	**P**	**08 05 37.3**	**-1.1**
MTN				IAmb	IAmb	08 05 55.9	
	comp=Z,25nm,1.1s						
PSI	**Prapat**	**18.52**	**311**	LR	LR	08 14 06.4	
	comp=Z,90nm,18.3s,baz=89,slow=42						
FAKI	**Fak Fak**	**20.35**	**72**	P	**P**	**08 06 01.2**	**-0.5**
FAKI				IAmb	IAmb	08 06 04.7	
	comp=Z,16nm,0.8s						
WB0	**Warramunga Arr**	**23.16**	**118**	P	**P**	**08 06 30.6**	**-1.0**
WRA	**Warramunga Arr**	**23.18**	**119**	P	**P**	**08 06 30.9**	**-0.9**
	comp=Z,4.7nm,0.8s,baz=292,slow=11,SNR=21						
WRA				LR	LR	08 15 59.3	
	comp=Z,81nm,19.9s,baz=300,slow=38						
WB2	**Warramunga Arr**	**23.19**	**119**	P	**P**	**08 06 31.3**	**-0.5**
WB2				IAmb	IAmb	08 06 46.3	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**23.36**	**119**	P	**P**	**08 06 32.9**	**-0.6**
WR0				IAmb	IAmb	08 06 50.3	
	comp=Z,18nm,1.2s						
NWAO	**Narrogin (SRO)**	**23.64**	**171**	LR	LR	08 16 52.1	
	comp=Z,132nm,18.6s,baz=171,slow=39						
AS31	**Alice Springs**	**24.53**	**128**	P	**P**	**08 06 44.5**	**+0.2**
ASAR	**Alice Springs**	**24.53**	**128**	P	**P**	**08 06 44.8**	**+0.5**
	comp=Z,12nm,0.7s,baz=304,slow=9.0,SNR=137						
ASAR				PcP	**PcP**	**08 10 21.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=316,slow=2.9,SNR=4.2						
ASAR				LR	LR	08 16 22.1	
	comp=Z,48nm,19.8s,baz=310,slow=37						
ASAR	**Alice Springs**	**24.53**	**128**	P	**P**	**08 06 44.5**	**+0.2**
FORT	**Forrest**	**25.45**	**148**	P	**P**	**08 06 53.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**31.01**	**334**	P	**P**	**08 07 42.1**	**0.0**
	comp=Z,1.5nm,0.6s,baz=169,slow=7.8,SNR=7.8						
CMAR				LR	LR	08 21 24.5	
	comp=Z,80nm,18.3s,baz=190,slow=39						
STKA	**Stephens Creek**	**34.69**	**134**	P	**P**	**08 08 15.0**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=304,slow=8.7,SNR=15						
STKA				LR	LR	08 22 34.6	
	comp=Z,99nm,21.8s,baz=293,slow=37						
STKA	**Stephens Creek**	**34.69**	**134**	P	**P**	**08 08 15.4**	**+1.3**
EIDS	**Eidsvold**	**39.54**	**118**	P	**P**	**08 08 57.5**	**+2.0**
EIDS				IAmb	IAmb	08 08 58.1	
	comp=Z,4.5nm,0.8s						
KSRS	**Korea Array**	**48.82**	**16**	LR	LR	08 31 48.1	
	comp=Z,12nm,18.1s,baz=305,slow=38						
MJAR	**Matsushiro Arr**	**51.65**	**26**	P	**P**	**08 10 29.6**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=195,slow=7.8,SNR=5.6						
SONM	**Songino Array**	**57.39**	**355**	P	**P**	**08 11 12.5**	**0.0**
	comp=Z,2.8nm,0.8s,baz=174,slow=9.2,SNR=19						
SONM	**Songino Array**	**57.39**	**355**	P	**P**	**08 11 12.0**	**-0.4**
MK31	**Makanchi Array**	**62.35**	**337**	P	**P**	**08 11 46.1**	**-0.3**
MK31				IAmb	IAmb	08 11 47.1	
	comp=Z,1.4nm,0.9s						
MKAR	**Makanchi Array**	**62.35**	**337**	P	**P**	**08 11 46.1**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=150,slow=7.2,SNR=30						
AAK	**Ala-Archa**	**62.63**	**329**	LR	LR	08 44 26.3	
	comp=Z,52nm,18.4s,baz=118,slow=41						
ZALV	**Zalesovo Beam**	**67.54**	**342**	P	**P**	**08 12 18.9**	**-1.0**
	comp=Z,2.1nm,0.7s,baz=134,slow=4.8,SNR=5.2						
VNDA	**Vanda**	**72.47**	**170**	LR	LR	08 42 12.9	
	comp=Z,44nm,19.6s,baz=324,slow=34						
AB02	**Akbulak array**	**74.61**	**327**	P	**P**	**08 13 03.0**	**+0.3**
AB04	**Akbulak array**	**74.61**	**327**	P	**P**	**08 13 03.0**	**+0.3**
ARU	**Arti**	**79.45**	**333**	LR	LR	08 55 18.7	
	comp=Z,105nm,19.9s,baz=282,slow=41						
BRTR	**Keskin Array B**	**87.85**	**311**	P	**P**	**08 14 12.9**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=157,slow=7.6,SNR=5.2						
YKA	**Yellowknife Ar**	**117.08**	**23**	PKP	**PKiKP**	**08 20 08.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=352,slow=1.2,SNR=8.0						
CPUP	**Villa Florida**	**143.11**	**195**	PKP	PKPbc	08 20 56.3	+1.3
	comp=Z,0.9nm,0.9s,baz=112,slow=5.4,SNR=2.8						

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*NEIC **14** 08:33:41.0±2.5, 18°.37S±0°.04×168°.19E±0°.09, h10^{km}±5^{km}, mb4.5/20, Error ellipse: s-maj=13.0km s-min=4.9km az=79.0*

*NOU **14** 08:33:42.6, 18°.35S×168°.33E, h40^{km}, MLv4.6, Vanuatu Islands*

*IDC **14** 08:33:44.8±4.7, 18°.63S×168°.41E, h45^{km}±50^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.9/35, mbtmp4.2/12, ML3.6/1, MS3.7/12, Ms1 3.6/12, ms1mx3.4/33, Error ellipse: s-maj=40.4km s-min=25.5km az=155.0*

ISC 14 08:33:43.7±0.5**, 18°.37S**±0°.05×**168°.22E**±0°.08**, h29**^{km}**, n58,** σ**1^s.36**/49**, mb4.4**/20**, MS3.6**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.64**	**357**	P	**Pb**	**08 33 56.2**	**-0.2**
LIFNC	**LIFOU**	**2.57**	**201**	P	**Pn**	**08 34 21.5**	**-1.9**
SANVU	**Saraoutou**	**3.06**	**341**		**Pn**	**08 34 28.4**	**-1.8**
SANVU	**Saraoutou**	**3.06**	**341**	P	**Pn**	**08 34 28.8**	**-1.4**
MARNC	**Mare, Loyalty**	**3.10**	**183**	P	**Pn**	**08 34 29.1**	**-1.6**
YATNC	**Mamie plateau,**	**3.88**	**199**	P	**Pn**	**08 34 40.9**	**-0.5**
DZM	**Mont Dzumac**	**4.04**	**204**	P	**Pn**	**08 34 43.2**	**-0.7**
	4.5nm,0.3s,baz=56,slow=12,SNR=51						
DZM				S	**Sn**	**08 35 26.6**	**-3.7**
	17nm,0.3s,baz=305,slow=22,SNR=13						
DZM				LR	LR	08 36 14.5	
	comp=Z,684nm,19.1s,baz=62,slow=39						
DZM	**Mont Dzumac**	**4.04**	**204**	*e*Pn	**Pn**	**08 34 43.1**	**-0.7**
	25nm,0.2s						
DZM				*e*Sn	Sn	08 35 20.6	-10
	81nm,0.3s						
DZM				*e*LR	LR	08 35 28.0	
	comp=Z,895nm,24.2s						
DZM	**Mont Dzumac**	**4.04**	**204**		**Pn**	**08 34 42.2**	**-1.6**
NOUC	**Port Laguerre**	**4.13**	**206**	P	**Pn**	**08 34 44.0**	**-0.9**
OUENC	**Ouen Island, N**	**4.23**	**198**	P	**Pn**	**08 34 45.9**	**-0.4**
KOUNC	**Koumac, New Ca**	**4.30**	**239**	P	**Pn**	**08 34 46.9**	**-0.3**
MSVF	**Nonsavu**	**9.37**	**88**	LR	LR	08 38 58.9	
	comp=Z,899nm,19.5s,baz=307,slow=34						
MSVF	**Nonsavu**	**9.37**	**88**	Pn	**Pn**	**08 35 55.8**	**-1.2**
HNR	**Honiara**	**11.97**	**317**	LR	LR	08 40 39.6	
	comp=Z,210nm,19.0s,baz=152,slow=34						
EIDS	**Eidsvold**	**17.36**	**243**		**Pn**	**08 37 43.8**	**-0.2**
OUZ	**Omahuta**	**17.45**	**165**		**P**	**08 37 47.9**	**+1.9**
CTA	**Charters Tower**	**20.81**	**262**	P	**P**	**08 38 24.2**	**+1.2**
	5.4nm,0.8s,baz=86,slow=14,SNR=8.8						
CTAO	**Charters Tower**	**20.81**	**262**	P	**P**	**08 38 23.0**	**0.0**
CTAO				IAmb	IAmb	08 38 51.1	
	comp=Z,9.1nm,1.0s						
URZ	**Urewera**	**21.29**	**160**	LR	LR	08 45 48.3	
	comp=Z,312nm,18.1s,baz=31,slow=34						
TUWZ	**Tuamarina**	**23.50**	**169**	P	**P**	**08 38 53.3**	**+2.1**
SNZO	**South Karori**	**23.53**	**168**	P	**P**	**08 38 53.7**	**+2.3**
THZ	**Tophouse**	**23.66**	**171**	P	**P**	**08 38 55.1**	**+2.4**
THZ				IAmb	IAmb	08 39 17.9	
	comp=Z,10nm,0.9s						
KHZ	**Kahutara**	**24.40**	**170**	P	**P**	**08 38 59.9**	**+0.4**
KHZ				IAmb	IAmb	08 39 12.3	
	comp=Z,42nm,1.5s						
LTZ	**Lake Taylor**	**24.58**	**173**	P	**P**	**08 39 02.3**	**+1.0**
LTZ				IAmb	IAmb	08 39 03.4	
	comp=Z,9.8nm,0.8s						
RPZ	**Rata Peaks**	**25.38**	**175**	LR	LR	08 47 52.9	
	comp=Z,153nm,20.0s,baz=348,slow=34						
STKA	**Stephens Creek**	**27.52**	**236**	P	**P**	**08 39 28.8**	**+0.9**
	comp=Z,4.0nm,0.9s,baz=80,slow=8.7,SNR=6.6						
STKA				LR	LR	08 49 04.4	
	comp=Z,98nm,20.8s,baz=34,slow=33						
JAY	**Jayapura**	**31.23**	**297**	LR	LR	08 51 21.7	
	comp=Z,68nm,18.3s,baz=26,slow=34						
WR0	**Warramunga Arr**	**31.82**	**262**	P	**P**	**08 40 03.6**	**-2.7**
WR0				IAmb	IAmb	08 40 05.3	
	comp=Z,6.1nm,1.1s						
WB0	**Warramunga Arr**	**31.97**	**262**	P	**P**	**08 40 06.4**	**-1.1**
WB0				IAmb	IAmb	08 40 11.4	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**32.01**	**262**	P	**P**	**08 40 06.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=100,slow=8.6,SNR=5.5						
BBOO	**Buckleboo**	**32.23**	**237**	P	**P**	**08 40 08.6**	**-1.0**
BBOO				IAmb	IAmb	08 40 14.4	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**32.41**	**255**	P	**P**	**08 40 11.1**	**-0.3**
ASAR	**Alice Springs**	**32.41**	**255**	P	**P**	**08 40 10.7**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=86,slow=8.7,SNR=28						
ASAR				LR	LR	08 53 08.7	
	comp=Z,174nm,18.6s,baz=96,slow=36						
ASAR	**Alice Springs**	**32.41**	**255**	P	**P**	**08 40 10.5**	**-0.9**
FORT	**Forrest**	**38.36**	**243**	P	**P**	**08 41 03.0**	**+0.6**
FORT				IAmb	IAmb	08 41 03.3	
	comp=Z,11nm,0.7s						
TBI	**Tubuai**	**39.75**	**105**	*e*LR	LR	08 52 21.0	
	comp=Z,80nm,24.8s						
PPT2	**Papeete2**	**40.09**	**96**	*e*LR	LR	08 52 33.1	
	comp=Z,109nm,24.8s						
FITZ	**Fitzroy Crossi**	**40.38**	**263**	P	**P**	**08 41 18.2**	**-1.1**
FITZ				IAmb	IAmb	08 41 32.1	
	comp=Z,12nm,1.0s						
NWAO	**Narrogin (SRO)**	**47.76**	**242**	P	**P**	**08 42 18.2**	**-0.2**
NWAO	**Narrogin (SRO)**	**47.76**	**242**	P	**P**	**08 42 18.2**	**-0.2**
NWAO				IAmb	IAmb	08 42 31.7	
	comp=Z,16nm,1.1s						
VNDA	**Vanda**	**59.27**	**182**	LR	LR	09 05 51.0	
	comp=Z,27nm,18.3s,baz=286,slow=33						
VNDA	**Vanda**	**59.27**	**182**	P	**P**	**08 43 44.0**	**+1.9**
VNDA				IAmb	IAmb	08 44 00.5	
	comp=Z,5.4nm,1.4s						
ASAJ	**Asahikawa**	**66.45**	**340**	LR	LR	09 10 10.7	
	comp=Z,42nm,20.8s,baz=178,slow=33						
USRK	**Ussuriysk Ar.**	**70.53**	**333**	P	**P**	**08 44 57.4**	**+1.6**
	comp=Z,4.2nm,0.8s,baz=154,slow=4.7,SNR=7.3						
USRK	**Ussuriysk Ar.**	**70.53**	**333**	P	**P**	**08 44 56.6**	**+0.8**
QSPA	**South Pole Qui**	**71.68**	**180**	P	**P**	**08 45 03.0**	**+0.3**
PETK	**Petropavlovsk-**	**71.76**	**353**	P	**P**	**08 45 03.5**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=108,slow=8.0,SNR=7.0						
KLR	**Kul'dur**	**74.69**	**336**	P	**P**	**08 45 21.4**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=149,slow=2.7,SNR=5.3						
CMAR	**Chiang Mai Arr**	**77.27**	**294**	P	**P**	**08 45 37.4**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=135,slow=4.6,SNR=7.1						
BELA	**Belgrano 2**	**83.04**	**175**	P	**P**	**08 46 06.1**	**+0.1**
SONM	**Songino Array**	**85.95**	**323**	P	**P**	**08 46 22.5**	**+1.2**
	comp=Z,2.8nm,1.0s,baz=142,slow=6.0,SNR=9.7						
NVAR	**Mina Array Bea**	**88.95**	**49**	P	**P**	**08 46 35.7**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=232,slow=8.9,SNR=6.1						
NVAR				LR	LR	09 23 44.8	
	comp=Z,41nm,18.2s,baz=340,slow=34						
ILAR	**Eielson Array**	**89.69**	**18**	P	**P**	**08 46 36.6**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=246,slow=4.8,SNR=12						
I07A	**Izee**	**90.50**	**43**	P	**P**	**08 46 43.5**	**+0.5**
I07A				IAmb	IAmb	08 46 54.6	
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**97.20**	**62**	LR	LR	09 24 28.8	
	comp=Z,32nm,18.9s,baz=0.0,slow=31						
YKA	**Yellowknife Ar**	**100.34**	**27**	P	**Pdif**	**08 47 27.3**	**0.0**
	comp=Z,0.2nm,0.6s,baz=245,slow=4.0,SNR=4.9						
ARCES	**ARCESS Array B**	**123.98**	**345**	PKP	**PKPdf**	**08 52 37.2**	**-1.4**
	comp=Z,5.4nm,1.0s,baz=44,slow=3.0,SNR=1.6						

IDC 14 08:38:12.8±2.3**, 6°.35S**×**129°.70E, h0**^{km}**, mb3.7**/1**, mb1 3.5**/3**, mb1mx3.3**/41**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse: s-maj=150.0km s-min=31.8km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.24**	**162**	Pn	Pn	08 41 37.8	+1.8
	0.2nm,0.3s,baz=344,slow=14,SNR=6.4						
WRA				Sn	Sn	08 43 58.2	-17
	0.1nm,0.3s,baz=332,slow=23,SNR=3.5						
ASAR	**Alice Springs**	**17.69**	**167**	P	Pn	08 42 19.5	-1.3
	0.1nm,0.3s,baz=351,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**67.52**	**327**	P	P	08 49 11.0	+0.1
	0.3nm,0.4s,baz=118,slow=7.2,SNR=5.6						

NNC 14 08:53:32.0±2.2**, 53°.56N**×**87°.90E, h0**^{km}**, mb3.9, mpv3.5, 7C-3D, Error ellipse: s-maj=17.8km s-min=7.8km az=58.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.87**	**283**	⇑P	Pn	08 54 04.5	-0.8
	3.7nm,0.4s						
ZAA0				⇓S	Sb	08 54 30.4	-0.5
	18nm,0.5s						
KURBB	**Kurchatov Arra**	**6.48**	**247**	⇑Pn	Pn	08 55 09.7	+1.2
	9.9nm,0.6s						
KURBB				⇓Sn	Sn	08 56 25.1	+2.0
	14nm,0.7s						
KURBB				⇑Lg	Lg	08 56 56.1	
	34nm,0.6s						
MK31	**Makanchi Array**	**7.67**	**210**	Pn	Pn	08 55 25.3	+0.4
	1.2nm,0.5s,baz=28,slow=11,SNR=49						
MK31				⇑Sn	Sn	08 56 51.9	-0.5
	1.5nm,0.5s,baz=30,slow=27,SNR=4.3						
MK31				⇓Lg	Lg	08 57 34.9	
	6.7nm,0.7s,baz=38,slow=30,SNR=7.1						
MAKZ	**Makanchi**	**7.75**	**212**	⇑Pn	Pn	08 55 28.0	+1.9
	2.1nm,0.6s						
MAKZ				⇑Sn	Sn	08 56 55.1	+0.6
	6.1nm,1.1s						
MAKZ				⇑Lg	Lg	08 57 39.8	
	6.7nm,0.8s						

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*IDC **14** 08:59:20.5±2.2, 22°.80S×174°.46W, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.7/30, mbtmp3.9/4, ML4.8/1, MS2.7/2, Ms1 2.7/2, ms1mx2.5/27, Error ellipse: s-maj=71.5km s-min=46.2km az=168.0*

ISC 14 08:59:25.9±2.3**, 22°.7S**±0°.3×**174°.5W**±0°.3**, h35**^{km}**, n8,** σ**0^s.73**/6**, mb3.9**/3**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.56**	**304**	Pn	**Pn**	**09 01 27.4**	**-0.1**
	0.4nm,0.3s,baz=132,slow=12,SNR=5.8						
RAR	**Rarotonga**	**13.76**	**87**	LR	LR	09 06 53.7	
	comp=Z,23nm,19.4s,baz=186,slow=33						
PPT	**Papeete**	**23.95**	**82**	LR	LR	09 13 29.1	
	comp=Z,25nm,18.7s,baz=272,slow=36						
CTA	**Charters Tower**	**36.55**	**267**	P	**P**	**09 06 28.5**	**-0.1**
	1.2nm,0.5s,baz=96,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**47.21**	**258**	P	**P**	**09 07 55.3**	**-0.4**
	1.0nm,0.8s,baz=97,slow=7.1,SNR=10						
WRA	**Warramunga Arr**	**47.54**	**263**	P	**P**	**09 07 58.8**	**+0.6**
	1.1nm,0.9s,baz=96,slow=8.6,SNR=5.4						
MKAR	**Makanchi Array**	**115.08**	**312**	PKP	**PKPdf**	**09 18 02.5**	**-0.8**
	0.1nm,0.6s,baz=108,slow=3.2,SNR=2.3						
BRTR	**Keskin Array B**	**150.73**	**312**	PKPbc	**PKiKP**	**09 19 16.2**	**+0.7**
	0.7nm,0.7s,baz=145,slow=5.3,SNR=3.7						

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*IDC **14** 09:19:04.6±2.4, 25°.36S×67°.26W, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.7/36, mbtmp3.7/6, ML3.4/1, MS2.2/1, Ms1 2.2/1, ms1mx2.1/32, Error ellipse: s-maj=73.7km s-min=32.5km az=5.0*

ISC 14 09:19:09.5±1.8**, 25°.4S**±0°.3×**67°.2W**±0°.2**, h35**^{km}**, n8,** σ**0^s.64**/7**, mb3.9**/4**, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.15**	**330**	LR	LR	09 21 04.4	
	comp=Z,43nm,20.9s,baz=328,slow=38						
SIV	**San Ignacio**	**10.94**	**33**	Pn	**Pn**	**09 21 43.5**	**-0.2**
	0.3nm,0.3s,baz=246,slow=5.4,SNR=3.7						
BDFB	**Brasilia**	**20.38**	**65**	P	**P**	**09 23 43.9**	**+0.3**
	1.1nm,0.4s,baz=246,slow=12,SNR=3.7						
TXAR	**Lajitas Array**	**64.67**	**325**	P	**P**	**09 29 44.3**	**+0.2**
	0.2nm,0.4s,baz=153,slow=8.1,SNR=4.7						
ANMO	**Albuquerque**	**70.57**	**327**	P	**P**	**09 30 22.1**	**+0.8**
	0.9nm,0.7s,baz=96,slow=6.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**77.23**	**69**	P	**P**	**09 31 00.7**	**+0.2**
	0.5nm,0.4s,baz=255,slow=5.8,SNR=0.9						
YKA	**Yellowknife Ar**	**95.33**	**340**	P	**P**	**09 32 28.9**	**-0.5**
	0.3nm,0.5s,baz=130,slow=5.7,SNR=8.8						
MKAR	**Makanchi Array**	**147.67**	**41**	PKPbc	**PKiKP**	**09 38 51.6**	**-0.7**
	0.4nm,0.6s,baz=274,slow=3.4,SNR=5.0						

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*IDC **14** 09:23:27.8±3.0, 16°.87S×14°.34W, h0^{km}, mb4.1/6, mb1 4.1/6, mb1mx3.8/42, mbtmp4.1/6, MS3.9/18, Ms1 3.9/18, ms1mx3.8/29, Error ellipse: s-maj=123.3km s-min=22.3km az=141.0*

*NEIC **14** 09:23:28.7±1.8, 16°.7S±0°.1×14°.49W±0°.05, h10^{km}±1^{km}, mb4.6/18, Error ellipse: s-maj=24.1km s-min=6.5km az=164.0*

*GCMT **14** 09:23:30.7±0.3, 17°.05S±0°.05×14°.26W±0°.03, h19^{km}±1^{km}, MW4.8/78, Moment Tensor Solution. s13,c14; s78,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.09±.18; M$_{\theta\theta}$0.66±.11; M$_{\phi\phi}$1.43±.11; M$_{r\theta}$-0.95±.32; M$_{\theta\phi}$-0.69±.07; M$_{\phi r}$-0.39±.24; Best double couple: M$_0$2.15700×10^{16} NP1:ϕ_s348.00000°, δ46.00000°, λ-61.00000°. NP2: ϕ_s129.00000°, δ51.00000°, λ-117.00000°. Principal axes: T 1.8410, Plg3.0000°, Azm238.0000°; N 0.6330, Plg20.0000°, Azm147.0000°; P -2.4730, Plg70.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 09:23:28.8±0.7**, 16°.7S**±0°.1×**14°.5W**±0°.1**, h10**^{km}**, n42,** σ**1^s.17**/29**, mb4.6**/13**, MS4.0**/18**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**23.59**	**295**	LR	LR	09 36 08.7	
	comp=Z,132nm,19.1s,baz=106,slow=32						
RCBR	**Riachuelo**	**23.59**	**295**	P	**P**	**09 28 40.6**	**+0.6**
LIC	**Lamto**	**24.63**	**23**	*e*P	**P**	**09 28 50.5**	**+0.8**
	31nm,1.1s						
KIC	**Kosan Boka**	**24.86**	**24**	*e*P	**P**	**09 28 51.5**	**-0.3**
	75nm,1.5s						
TIC	**Toumodi**	**25.02**	**23**	*e*P	**P**	**09 28 55.2**	**+2.0**
DBIC	**Dimbokro**	**25.11**	**23**	P	**P**	**09 28 55.5**	**+1.6**
	6.6nm,0.9s,baz=181,slow=12,SNR=5.9						
DBIC				LR	LR	09 36 24.4	
	comp=Z,247nm,19.5s,baz=180,slow=31						
DBIC	**Dimbokro**	**25.11**	**23**	P	**P**	**09 28 52.0**	**-2.0**
TSUM	**Tsumeb**	**30.59**	**100**	LR	LR	09 39 33.1	
	comp=Z,152nm,21.3s,baz=320,slow=32						
SPB	**Sao Paulo**	**31.63**	**252**	P	**P**	**09 29 51.6**	**-0.6**
BDFB	**Brasilia**	**32.20**	**267**	LR	LR	09 40 32.7	
	comp=Z,290nm,20.4s,baz=100,slow=32						
KOWA	**Kowa**	**32.68**	**19**	P	**P**	**09 30 02.7**	**+1.2**
	1.0nm,0.4s,baz=192,slow=6.4,SNR=5.4						
KOWA				LR	LR	09 41 17.9	
	comp=Z,251nm,18.1s,baz=194,slow=33						
KOWA	**Kowa**	**32.68**	**19**	P	**P**	**09 30 02.4**	**+0.9**
KOWA				IAmb	IAmb	09 30 11.0	
	comp=Z,9.3nm,1.2s						
TOA0	**Torodi Ar. Sit**	**33.70**	**29**	P	**P**	**09 30 10.5**	**+0.1**
TOA0				IAmb	IAmb	09 30 11.2	
	comp=Z,5.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**33.70**	**29**	P	**P**	**09 30 11.0**	**+0.6**
	comp=Z,4.3nm,0.6s,baz=213,slow=8.7,SNR=19						
TORD				LR	LR	09 41 43.2	
	comp=Z,374nm,19.5s,baz=205,slow=32						
TORD	**Torodi Ar. Bea**	**33.70**	**29**	P	**P**	**09 30 10.8**	**+0.4**
BOSA	**Boshof**	**38.37**	**115**	LR	LR	09 43 30.7	
	comp=Z,120nm,21.2s,baz=274,slow=32						
CPUP	**Villa Florida**	**40.83**	**249**	P	**P**	**09 31 11.6**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=67,slow=7.7,SNR=3.9						
CPUP				LR	LR	09 46 41.7	
	comp=Z,173nm,18.2s,baz=76,slow=34						
SIV	**San Ignacio**	**44.63**	**264**	P	**P**	**09 31 43.6**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=127,slow=10,SNR=2.3						
MNMC	**Minye Minye**	**52.31**	**259**	P	**P**	**09 32 42.9**	**+1.4**
PATCX	**Punta Patache**	**52.66**	**256**	P	**P**	**09 32 44.3**	**+0.6**
LCO	**Las Campanas**	**52.80**	**246**	P	**P**	**09 32 46.1**	**+1.2**
LCO				IAmb	IAmb	09 32 52.4	
	comp=Z,9.0nm,0.9s						
KMBO	**Kilima Mbogo**	**53.21**	**79**	LR	LR	09 53 30.5	
	comp=Z,124nm,19.0s,baz=110,slow=34						
PLCA	**Paso Flores**	**53.68**	**231**	LR	LR	09 53 58.9	
	comp=Z,224nm,18.5s,baz=98,slow=34						
SNAA	**Sanae**	**55.39**	**176**	P	**P**	**09 33 02.2**	**-0.6**
SNAA				IAmb	IAmb	09 33 25.1	
	comp=Z,9.0nm,1.4s						
KEST	**Kesra**	**56.83**	**23**	LR	LR	09 56 45.5	
	comp=Z,135nm,18.1s,baz=310,slow=35						
ESDC	**Sonseca Array**	**56.94**	**10**	LR	LR	09 56 01.5	
	comp=Z,105nm,18.6s,baz=310,slow=34						
SDV	**Santo Domingo**	**61.07**	**290**	P	**P**	**09 33 42.0**	**-1.7**
SDV				IAmb	IAmb	09 33 58.5	
	comp=Z,5.9nm,0.9s						
CBYP	**Canovanas**	**61.35**	**302**	P	**P**	**09 33 44.7**	**-0.6**
GCPR	**Guaynabo City**	**61.55**	**302**	P	**P**	**09 33 46.0**	**-0.6**
ROSC	**El Rosal**	**62.88**	**285**	LR	LR	10 00 15.7	
	comp=Z,158nm,18.4s,baz=162,slow=35						
BANI	**BANI**	**65.11**	**300**	P	**P**	**09 34 07.9**	**-2.4**
PDG	**Podgorica**	**66.55**	**27**	P	**P**	**09 34 18.4**	**-0.6**
GERES	**GERESS Array B**	**69.91**	**19**	LR	LR	10 03 38.4	
	comp=Z,111nm,18.6s,baz=272,slow=34						
BRTR	**Keskin Array B**	**71.85**	**37**	P	**P**	**09 34 53.6**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=210,slow=8.3,SNR=5.5						
BRTR				LR	LR	10 08 60.0	
	comp=Z,18nm,18.3s,baz=156,slow=38						
BRTR	**Keskin Array B**	**71.85**	**37**	P	**P**	**09 34 53.3**	**+1.1**
MLR	**Muntele Rosu**	**71.94**	**29**	P	**P**	**09 34 52.7**	**+0.2**
MLR				IAmb	IAmb	09 34 54.0	
	comp=Z,8.9nm,1.4s						
QSPA	**South Pole Qui**	**73.47**	**180**	P	**P**	**09 35 01.2**	**-0.2**
AKASG	**Malin Array Be**	**77.29**	**27**	LR	LR	10 11 15.7	
	comp=Z,62nm,18.5s,baz=295,slow=37						
AKASG	**Malin Array Be**	**77.29**	**27**	P	**P**	**09 35 23.1**	**-0.1**
NOA	**NORSAR Array B**	**80.17**	**12**	LR	LR	10 14 59.7	
	comp=Z,33nm,18.8s,baz=265,slow=38						
SADO	**Sadowa**	**84.74**	**320**	LR	LR	10 05 26.3	
	comp=Z,30nm,21.9s,baz=100,slow=30						
W45A	**Hickory Valley**	**87.51**	**308**	P	**P**	**09 36 16.6**	**-0.5**

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*IDC **14** 09:23:47.2±1.4, 53°.70N×164°.62W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/45, mbtmp3.6/9, ML3.1/3, Error ellipse: s-maj=32.4km s-min=19.0km az=172.0*

*NEIC **14** 09:23:49.8±1.2, 53°.69N±0°.06×164°.75W±0°.05, h24^{km}±8^{km}, Error ellipse: s-maj=9.4km s-min=2.3km az=153.0*

*AEIC **14** 09:23:50±1.9, 53°.75N±0°.07×164°.82W±0°.08, h58^{km}±4^{km}, ML3.9, mb3.7/1(NEIC), Error ellipse: s-maj=10.6km s-min=5.1km az=151.0*

ISC 14 09:23:48.4±1.7,53°.62N±0°.07×164°.68W±0°.04,h15^{km}±9^{km}, n59,σ1^{s}33/64,mb3.5/5,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.79	311		Pg	09 24 04.3	+0.5
AKSA					Sg	09 24 15.1	+0.9
AKUT	Akutan	0.82	309		Pg	09 24 04.9	+0.5
AKUT					Sg	09 24 15.5	+0.2
WESP	Westdahl Peak	0.87	358		Pg	09 24 05.7	+0.3
WESP					Sn	09 24 17.9	-0.9
AKBBA	Akutan Broad B	0.88	303		Pg	09 24 05.7	+0.3
AKBBA					Sn	09 24 17.9	-1.0
AKMO	Akutan Morgan	0.92	301		Pb	09 24 06.3	+0.2
AKMO					Sg	09 24 18.5	+0.4
AKLV	Akutan Long Va	0.93	306		Pb	09 24 06.2	0.0
AKLV					Sb	09 24 18.0	-0.4
AKRB	Akutan Reef Bi	0.96	302		Pb	09 24 07.0	+0.1
AKRB					Sg	09 24 20.2	+0.5
AKGG	Akutan Green G	0.97	307		Pb	09 24 07.0	+0.1
WEBT	Westdahl Beart	0.97	358		Pb	09 24 07.3	+0.3
UNV	Unalaska Valle	1.10	282		Pb	09 24 08.4	-0.8
UNV	Unalaska Valle	1.10	282		Sb	09 24 22.9	-0.5
SSLS	Shishaldin Sou	1.16	20		Pn	09 24 09.7	-0.6
SSBA	Shishaldin	1.20	16		Pn	09 24 10.5	-0.2
SSLW	Shishaldin Wes	1.20	16		Pn	09 24 10.3	-0.4
MNAT	Makushin Natee	1.22	283		Pn	09 24 10.4	-0.6
MNAT					Sb	09 24 26.2	-0.5
MREP	Makushin Rep't	1.24	280		Pn	09 24 10.8	-0.5
SSLN	Shishaldin Nor	1.26	18		Pn	09 24 11.4	-0.1
MSW	Makushin Switc	1.28	284		Pn	09 24 11.3	-0.6
MGOD	Makushin Gods	1.31	278		Pn	09 24 11.8	-0.6
MGOD					Sn	09 24 28.5	-1.1
MAPS	Pakushin South	1.35	279		Pn	09 24 12.3	-0.6
MAPS					Sn	09 24 29.2	-1.4
FALS	False Pass	1.44	30		Pn	09 24 13.1	-0.9
OKFG	Magazine Ridge	1.94	265		Pn	09 24 21.4	+0.5
DT1	Dutton Round H	2.05	42		Pn	09 24 23.3	+1.0
OKSO	Okmok South	2.10	264		Pn	09 24 23.1	+0.1
OKSP	Okmok Steeple	2.19	262		Pn	09 24 24.4	0.0
HAG	Hague Volcano	2.35	43		Pn	09 24 27.7	+1.2
PS4A	Pavlof South-4	2.39	43		Pn	09 24 28.5	+1.5
NIKH	Nikolski High	2.59	257		Pn	09 24 29.5	-0.3
SDPT	Sand Point	3.00	53		Pn	09 24 37.0	+1.5
CNBA	Chernabura Isl	3.22	66		Pn	09 24 37.7	-0.7
ATKA	Atka Island	5.93	260		Pn	09 25 16.4	+0.7
GSMY	Great Sitkin M	7.07	262		Pn	09 25 33.6	+2.2
OHAK	Old Harbor	7.42	56	Pn	Pn	09 25 36.7	+0.7
KDAK	Kodiak Island	8.00	54	Pn	Pn	09 25 45.3	+1.3
	0.3nm,0.3s,baz=190,slow=6.1,SNR=5.3						
KDAK				Sn	Sn	09 27 10.5	-3.7
	baz=53,slow=20,SNR=1.9						
KDAK	Kodiak Island	8.00	54	Pn	Pn	09 25 42.5	-1.5
BRLK	Bradley Lake	9.76	45		Pn	09 26 06.6	-1.5
SUA	Susitna One	10.83	38	Pn	Pn	09 26 24.4	+1.5
PMR	Palmer	11.52	40	Pn	Pn	09 26 31.6	-0.5
SCM	Sheep Creek Mo	12.36	41	Pn	Pn	09 26 42.3	-1.4
KLU	Klutina	12.75	44		Pn	09 26 47.9	-1.2
M24K	Tolsona, Glenn	12.96	42	Pn	Pn	09 26 50.7	-1.3
MESA	MESA	14.00	53		Sn	09 29 43.8	+2.5
ILAR	Eielson Array	14.35	32	Pn	Pn	09 27 08.6	-2.2
	0.0nm,0.3s,baz=216,slow=13,SNR=2.7						
TABL	Table Mountain	14.46	52	Pn	Pn	09 27 10.2	-2.4
DLBC	Dease Lake	19.80	62	P	P	09 28 17.7	-0.4
	0.0nm,0.3s,baz=225,slow=2.9,SNR=2.9						
INK	Inuvik	20.74	33	P	P	09 28 26.9	-1.2
	1.1nm,0.5s,baz=242,slow=8.7,SNR=3.0						
INK	Inuvik	20.74	33	P	P	09 28 23.3	-4.8
INK				IAmb	IAmb	09 28 33.7	
	comp=Z,3.1nm,0.8s						
PETK	Petropavlovsk-	22.29	284	P	P	09 28 44.4	-0.5
	comp=Z,1.8nm,0.7s,baz=88,slow=13,SNR=8.7						
YKA	Yellowknife Ar	27.27	51	P	P	09 29 32.6	+0.8
	comp=Z,0.6nm,0.6s,baz=276,slow=8.9,SNR=13						
NVAR	Mina Array Bea	34.92	97	P	P	09 30 40.4	+0.7
	comp=Z,0.5nm,0.6s,baz=298,slow=10,SNR=4.4						
AHID	Auburn Hatcher	36.50	85		S	09 36 36.7	+2.0
H11N2	WAKE ISLAND Hy	40.27	224	T	T	10 14 11.9	
	baz=25,slow=76,SNR=55						
H11N3	WAKE ISLAND Hy	40.27	224	T	T	10 14 12.4	
	baz=25,slow=76,SNR=58						
H11N1	WAKE ISLAND Hy	40.28	224	T	T	10 14 11.6	
	baz=25,slow=76,SNR=36						
H11S1	WAKE ISLAND Hy	41.44	223	T	T	10 15 38.7	
	baz=25,slow=76,SNR=37						
H11S2	WAKE ISLAND Hy	41.46	223	T	T	10 15 38.4	
	baz=25,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	41.46	223	T	T	10 15 39.9	
	baz=25,slow=76,SNR=46						
TXAR	Lajitas Array	49.94	94	P	P	09 32 42.2	+0.5
	comp=Z,1.0nm,0.6s,baz=305,slow=5.9,SNR=14						
SONM	Songino Array	53.05	303	P	P	09 33 07.3	+2.6
	comp=Z,0.2nm,0.3s,baz=72,slow=4.7,SNR=1.9						

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*NEIC **14** 09:26:49.9±1.5,3°.7S±0°.1×80°.2W±0°.2,h106^{km}±19^{km}, Error ellipse: s-maj=26.3km s-min=14.7km az=82.0*

*ARE **14** 09:26:49±2.3,3°.65S±0°.07×80°.2W±0°.2,h84^{km}±9^{km},ML4.6, mb3.7/2(NEIC),Error ellipse: s-maj=25.3km s-min=8.5km az=104.0*

*IGQ **14** 09:26:51±0.3,4°S±2°×8°0W±°,h38^{km}*

ISC 14 09:26:48.5±1.0,3°.74S±0°.05×80°.23W±0°.06,h74^{km}±8^{km}, n69,σ2^{s}00/79,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	Arenillas	0.25	40	P	Pn	09 27 00.0	+0.1
ARNL				S	Sn	09 27 06.0	-2.2
ACH2	Ecuador-Machal	0.63	42	P	Pn	09 27 03.0	0.0
MCRA	Macar, Loja	0.68	156	P	Pn	09 27 06.0	+2.4
MCRA				S	Sn	09 27 15.0	+0.2
ISPG	Isla Puna-Puer	0.77	5	P	Pn	09 27 07.0	+2.4
ISPG				S	Sn	09 27 19.0	+2.5
GONZ	Gonzanam	0.97	121	P	Pn	09 27 09.0	+1.8
GONZ				S	Sn	09 27 21.0	-0.2
MORR	Playas El Morr	1.10	354	P	Pn	09 27 10.0	+1.6
MORR				S	Sn	09 27 24.0	+0.7
ACUE	Ecuador-Cuenca	1.52	57	P	Pn	09 27 15.0	+0.9
ACUE				S	Sn	09 27 33.0	-0.4
MILO	Milagro-Astudi	1.60	25	P	Pn	09 27 17.0	+2.1
GYE3	Ecuador-Guayaq	1.61	12	P	Pn	09 27 15.0	-0.1
GYE3				S	Sn	09 27 36.0	+0.9
AGUAY	Guayaquil	1.70	9	P	Pn	09 27 17.0	+0.8
AMIL	Milagro (Trans	1.72	22	P	Pn	09 27 17.0	+0.5
BOSC	San Juan Bosco	1.83	71	P	Pn	09 27 20.0	+1.9
BOSC				S	Sn	09 27 41.0	+0.4
LOJ1	Universidad t	1.88	98	P	Pn	09 27 09.0	-10
LOJ1				S	Pn	09 27 22.0	+3.2
PPLP	Puerto Lpez	2.25	346	P	Pn	09 27 25.0	+1.4
PPLP				S	Sn	09 27 50.0	-0.5
IGUA	Igualata	2.74	35	P	Pn	09 27 32.0	+1.2
BMAS	Trigal station	2.83	38	P	Pn	09 27 33.0	+1.2
ARRY	Arrayan	2.84	39	P	Pn	09 27 33.0	+1.1
PAT1	Patacocha	2.85	39	P	Pn	09 27 34.0	+1.8
RETU	Refugio	2.89	38	P	Pn	09 27 34.0	+1.3
JUI6	Juive	2.90	37	P	Pn	09 27 35.0	+2.4
POND	Pondoa	2.91	38	P	Pn	09 27 34.0	+1.1
BULB	Ulba Tungurahu	2.92	39	P	Pn	09 27 35.0	+1.9
RUN5	Runtun	2.93	38	P	Pn	09 27 35.0	+1.9
PECV	Mancha de Ca P	2.95	4	P	Pn	09 27 35.0	+1.9
SAGO	Sagoatoa	3.01	31	P	Pn	09 27 36.0	+1.6
PIS1	Pisayambo	3.24	35	P	Pn	09 27 39.0	+1.5
CAB1	Cabo Pasado-Ma	3.34	357	P	Pn	09 27 41.0	+2.6
CABP	Cabo Pasado	3.34	357	P	Pn	09 27 41.0	+2.6
ILLI	Illinizas Sur	3.36	27	P	Pn	09 27 41.0	+1.9
PIAT	Ana Tenorio	3.36	36	P	Pn	09 27 40.0	+1.0
FLFR	Flavio Alfaro	3.38	7	P	Pn	09 27 40.0	+1.0
VCES	Cotopaxi	3.45	32	P	Pn	09 27 44.0	+3.6
BMOR	Cotopaxi Volca	3.48	31	P	Pn	09 27 43.0	+2.3
CAMI	Rancho Maria	3.50	30	P	Pn	09 27 44.0	+3.0
BNAS	Cotopaxi Volca	3.52	30	P	Pn	09 27 43.0	+1.8
BREF	Cotopaxi Volca	3.54	30	P	Pn	09 27 45.0	+3.4
TAMB	Tambo	3.55	32	P	Pn	09 27 44.0	+2.2
BTAM	Cotopaxi Volca	3.55	31	P	Pn	09 27 44.0	+2.2
VC1	Cotopaxi 1	3.58	31	P	Pn	09 27 44.0	+1.9
PITA	Cotopaxi Volc	3.64	30	P	Pn	09 27 45.0	+2.1
ARDO	Archidona, Ten	3.65	42	P	Pn	09 27 43.0	+0.3
MAG1	Magdalena	3.67	7	P	Pn	09 27 45.0	+2.0
ANTM	Antisana-La Mi	3.76	32	P	Pn	09 27 48.0	+3.4
ANTG	Antisana-Guama	3.77	32	P	Pn	09 27 47.0	+2.2
ANTS	Antisana-Sarah	3.82	33	P	Pn	09 27 47.0	+1.5
GGPT	Toaza - Volcan	3.85	25	P	Pn	09 27 48.0	+2.3
ANTI	Antisana	3.87	32	P	Pn	09 27 47.0	+0.9
GGPC	Guagua Pichinc	3.90	25	P	Pn	09 27 49.0	+2.5
TERV	Terraza Guagua	3.90	25	P	Pn	09 27 48.0	+1.5
PINO	Pino	3.91	25	P	Pn	09 27 49.0	+2.3
YANA	Yana	3.96	25	P	Pn	09 27 50.0	+2.7
BV15	Puerto Quito-O	4.00	15	P	Pn	09 27 47.0	-0.4
PULU	Pululahua	4.12	25	P	Pn	09 27 51.0	+1.6
PAC1	Pacto, Paraso	4.23	20	P	Pn	09 27 51.0	+0.3
OTAV	Otavalo	4.33	24		Pn	09 27 54.7	+2.3
OTAV				Sn	Sn	09 28 39.0	-2.9
OTAV	Otavalo	4.33	24	P	Pn	09 27 54.0	+1.6
CUSE	Cuicocha Este	4.42	25	P	Pn	09 27 56.0	+2.5
CUSW	Cuicocha Oeste	4.42	25	P	Pn	09 27 56.0	+2.5
CUIC	Cuicocha-Domo	4.43	25	P	Pn	09 27 55.0	+1.4
URCU	Urcuqui	4.60	25	P	Pn	09 27 58.0	+2.1
YAHU	Yahuarcocha	4.62	28	P	Pn	09 27 58.0	+1.8
CHL1	Volc¡n Chiles	5.05	27	P	Pn	09 28 05.0	+2.8
CHMA	Chilma	5.06	25	P	Pn	09 28 05.0	+2.9
ECEN	Cerro Negro	5.07	27	P	Pn	09 28 05.0	+2.6
CHL2	Volc¡n Chiles	5.07	27	P	Pn	09 28 06.0	+3.5
NNA	Nana	8.85	158	Pn	Pn	09 28 55.4	+1.6
SAML	Samuel	17.71	108	P	Pn	09 30 49.3	-1.0
SAML				IAmb	IAmb	09 31 18.0	
	comp=Z,8.3nm,1.4s						
PB16	IPOC Station P	17.90	145	P	P	09 30 51.0	-1.9
PB16				IAmb	IAmb	09 30 54.9	
	comp=Z,4.4nm,1.2s						
TXAR	Lajitas Array	39.84	327	P	P	09 34 13.0	-1.9

IDC 14 09:40:19.7±4.9,4°.54S×152°.45E,h0^{km},mb3.4/4, mb1 3.7/4,mb1mx3.4/35,mbtmp3.5/4,Error ellipse: s-maj=140.5km s-min=33.7km az=108.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	228	P	P	09 45 31.3	+1.2
	0.5nm,0.4s,baz=51,slow=9.6,SNR=7.6						
ASAR	Alice Springs	26.11	221	P	P	09 45 54.6	-1.0
	0.2nm,0.7s,baz=58,slow=9.5,SNR=3.2						
FITZ	Fitzroy Crossi	29.48	241	P	P	09 46 25.8	+0.1
	1.1nm,0.4s,baz=54,slow=8.7,SNR=3.0						
MKAR	Makanchi Array	79.89	319	P	P	09 52 30.6	0.0
	0.1nm,0.3s,baz=114,slow=7.5,SNR=3.1						

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*ISN **14** 09:48:03.0±0.3,32°.85N×47°.04E,h23^{km}±2^{km},ML4.3*

*TEH **14** 09:48:03.7,32°.84N×46°.93E,h15^{km},ML4.5*

*MOS **14** 09:48:05.7±1.0,32°.96N×47°.00E,h36^{km},mb4.5/28,Error ellipse: s-maj=7.1km s-min=5.0km az=93.1*

*IDC **14** 09:48:06.4±3.2,32°.84N×46°.91E,h33^{km}±24^{km},mb4.0/22, mb1 4.1/30,mb1mx4.0/52,mbtmp4.2/30,ML3.3/4,MS3.6/6, Ms1 3.6/6,ms1mx3.1/45,Error ellipse: s-maj=16.0km s-min=12.0km az=168.0*

*NEIC **14** 09:48:06.4±2.6,32°.80N±0°.08×46°.94E±0°.06,h42^{km}±5^{km}, Error ellipse: s-maj=11.7km s-min=7.5km az=184.0*

*DSN **14** 09:48:09.0±2.0,32°.33N×47°.17E,h10^{km},mb4.8/1,Error ellipse: s-maj=23.2km s-min=18.1km az=21.0*

ISC 14 09:48:04.4±0.3,32°.78N±0°.03×46°.92E±0°.03,h22^{km},n287, σ1^{s}51/294,mb4.3/64,MS3.8/5,25C-9D,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.90	292	*e*Pg	Pb	09 48 21.0	-0.2
IBDR				*e*Sg	Sn	09 48 34.0	+0.1
IBDR				AML	AML	09 48 38.4	
	comp=E,7μm,0.5s						
IBDR				AML	AML	09 48 43.5	
	comp=N,8μm,0.9s						
IKFM	Kafar-mosalman	1.08	46	*e*Pg	Pn	09 48 23.3	-0.8
IKFM				*e*		09 48 43.1	
	comp=Z,99nm,0.4s						
IKMR	Kamar-syah	1.43	59	*e*Pg	Pb	09 48 29.9	-0.4
IKMR				*e*Sg	Sb	09 48 49.9	+1.9
IKMR				*e*		09 48 54.1	
	comp=Z,99nm,0.4s						
KCHF	Cheshme Sefid,	1.50	4	*e*Pg	Pn	09 48 30.5	+0.4
KCHF				*e*		09 48 54.3	
	comp=Z,99nm,0.4s						
IGHG	Ghaleghazi	1.57	349	*e*Pg	Pb	09 48 32.8	-0.2
IGHG				*e*		09 48 59.5	
	comp=Z,99nm,0.9s						
KER	Kermanshah	1.61	6	*e*Pg	Pb	09 48 33.1	-0.4
SHGR	Shooshtar-Gavs	1.72	112	*e*Pg	Pb	09 48 36.1	+0.8
IBZA	Bozab	1.86	25	*e*Pg	Pb	09 48 36.8	-1.0
IBZA				*e*		09 49 11.5	
	comp=Z,99nm,0.9s						
NSR	Nassriya	1.88	201	*e*Pn	Pn	09 48 36.6	+1.4
NSR				*e*Sn	Sb	09 49 01.0	-0.1
NSR				AML	AML	09 49 11.1	
	comp=E,2μm,0.6s						
IDHR	Dehrash	1.97	347	*e*Pn	Pb	09 48 38.0	-1.6
IDHR				*e*		09 49 08.2	
	comp=Z,99nm,0.3s						
AHWZ	Ahwaz	2.06	134	*e*Pn	Pb	09 48 39.9	-1.1
ILIN	Lien	2.14	1	*e*Pn	Pn	09 48 40.2	+1.3
ILIN				*e*		09 49 19.6	
	comp=Z,99nm,1.0s						
BHD	Baghdad	2.19	284	*e*Pn	Pn	09 48 41.0	+1.6
BHD				*e*Sn	Sb	09 49 09.0	-1.0
BHD				AML	AML	09 49 21.6	
	comp=E,4μm,0.4s						
AMIS	Naft Sefid	2.29	118	*e*Pn	Pb	09 48 43.3	-1.7
AMIS				*e*		09 49 41.8	
	comp=Z,99nm,0.6s						
IALM	Almabolaq	2.32	26	*e*Pn	Pn	09 48 43.3	+1.8
HSRG	Sareghieh	2.70	24	*e*Pn	Pn	09 48 49.2	+2.4
HSRG				*e*		09 49 36.2	
	comp=Z,99nm,0.6s						
KHMZ	Khomeyn	2.72	69	*e*Pn	Pn	09 48 49.0	+2.1
MIB	Mutribah	2.99	173	*e*P		09 48 52.8	
RST	Umm Al-Ruwaisa	3.27	179	*e*P		09 48 56.4	
UMR	Umm Al-Rimmam	3.29	168	*e*P		09 48 56.8	
IPIR	Pirpir	3.35	91	*e*Pn	Pn	09 48 58.0	+2.4
IPIR				*e*		09 49 51.7	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	3.38	97	*e*Pn	Pn	09 48 57.8	+1.8
SHK1				*e*		09 50 07.0	
	comp=Z,99nm,0.8s						
ABEH	Behbahan	3.58	127	*e*Pn	Pn	09 49 01.1	+2.6
IRAZ	Razeghan	3.62	43	*e*Pn	Pn	09 49 01.7	+2.4
KBD	Kabd	3.65	169	*e*P		09 49 01.7	
KBD				IAML		09 49 54.3	
	comp=Z,1μm,0.8s						
QABG	Abgarm-Qazvin	3.66	36	*e*Pn	Pn	09 49 00.6	+0.7
RDF	Al-Radifah	3.88	172	*e*P		09 49 05.2	
QAM	Ghamsar	3.91	74	*e*Pn	Pn	09 49 05.6	+2.3
IKLH	Kolahrood	3.95	81	*e*Pn	Pn	09 49 05.6	+1.7
IKLH				*e*		09 50 32.5	
	comp=Z,99nm,1.0s						
IQOM	Qom	4.02	58	*e*Pn	Pn	09 49 06.0	+1.1
GHVR	GHOM	4.02	64	*e*Pn	Pn	09 49 06.2	+1.5
MAHB	Mahabad	4.10	346	*e*Pn	Pn	09 49 07.0	+1.1
QRN	Al-Qurain	4.11	168	*e*P		09 49 07.9	
ZNJK	Zanjan	4.14	20	*e*Pn	Pn	09 49 08.7	+2.1
IMHD	Mahdasht	4.25	46	*e*Pn	Pn	09 49 09.0	+1.2
IGAR	Gharneh	4.34	94	*e*Pn	Pn	09 49 10.6	+1.4
IGAR				*e*		09 50 31.2	
	comp=Z,99nm,0.7s						
KLNJ	Kolanjah	4.35	113	*e*Pn	Pn	09 49 10.9	+1.5
KLNJ				*e*		09 50 31.3	
	comp=Z,99nm,0.7s						
IHSB	Hasanabad	4.48	53	*e*Pn	Pn	09 49 13.1	+2.0
IGZV	Ghazvin	4.51	36	*e*Pn	Pn	09 49 12.9	+1.3
KRSH	Karshahi	4.52	73	*e*Pn	Pn	09 49 13.3	+1.6
IHSH	Hashtrud	4.53	3	*e*Pn	Pn	09 49 13.6	-12
IZEF	Zefreh	4.55	87	*e*Pn	Pn	09 49 13.5	+1.3
IVRN	Varamin	4.57	60	*e*Pn	Pn	09 49 13.6	+1.4
CHTH	Charan	4.67	47	*e*Pn	Pn	09 49 15.1	+1.3
IRAM	Ramesheh	4.72	100	*e*Pn	Pn	09 49 15.3	+0.8
QALM	Alamut, Qazvin	4.77	39	*e*Pn	Pn	09 49 16.0	+0.9
NASN	Na'in	4.96	88	*e*Pn	Pn	09 49 20.2	+2.4
DAMV	Damavand	5.06	54	*e*Pn	Pn	09 49 20.5	+1.4
IDMV	Damavand	5.07	55	*e*Pn	Pn	09 49 20.5	+1.1
ISRB	Sarab	5.07	7	*e*Pn	Pn	09 49 20.4	+1.1
AHBU	AHRAM	5.42	135	*e*Pn	Pn	09 49 27.5	+3.7
IHRS	Heris	5.53	1	*e*Pn	Pn	09 49 27.5	+1.9
IFIR	Firoozkooh	5.61	58	*e*Pn	Pn	09 49 27.7	+0.9
ILAS	Lasjerd	5.64	61	*e*Pn	Pn	09 49 28.8	+1.7
IPRN	Peran	5.65	51	*e*Pn	Pn	09 49 29.5	+2.4
ANAR	Anarak	5.74	84	*e*Pn	Pn	09 49 28.7	+0.4
ISAD	Sadrabad	5.79	97	*e*Pn	Pn	09 49 30.4	+1.2
IMRD	Marand	6.00	351	*e*Pn	Pn	09 49 32.8	+0.8
GRMI	Germi	6.07	7	*e*Pn	Pn	09 49 34.7	+1.8
ISHM	Shahmirzad	6.08	58	*e*Pn	Pn	09 49 33.5	+0.4
ICHK	Chekchek	6.35	93	*e*Pn	Pn	09 49 38.3	+1.5
GEVA	Gevas	6.36	331		Pn	09 49 36.5	-0.4
IANJ	Anjilo	6.39	63	*e*Pn	Pn	09 49 37.4	0.0
VANB	Van	6.48	335	*e*Pn	Pn	09 49 39.5	+1.0
IMEH	Mehriz	6.67	100	*e*Pn	Pn	09 49 41.7	+0.4
MARD	Mardin	6.77	314		Pn	09 49 41.6	-0.9
IGLO	Ghaloghah	6.80	55	*e*Pn	Pn	09 49 44.1	+1.1
IBAF	Bafgh	7.42	97	*e*Pn	Pn	09 49 52.6	+1.1
GNI	Garni	7.56	347	Pn	Pn	09 49 57.8	+4.4
	comp=Z,0.8nm,0.3s,baz=195,slow=10,SNR=3.7						
GNI				Lg	Lg	09 52 05.6	
	comp=Z,0.7nm,0.3s,baz=54,slow=19,SNR=1.3						
GNI				LR	LR	09 53 21.9	
	comp=Z,123nm,19.5s,baz=170,slow=42						
GNI	Garni	7.56	347	Pn	Pn	09 49 52.4	-1.1
TPRV	Parvadeh(Tabas	8.21	86	*e*Pn	Pn	09 50 03.3	+1.0
TKDS	Koohdasht(Taba	8.59	82	*e*Pn	Pn	09 50 08.1	+0.6
DMNI	Dmanisi	8.81	346	P	Pn	09 50 13.6	+3.1
KZRT	Kazreti	8.82	348	P	Pn	09 50 11.9	+1.3
KRBR	Kerman	8.86	106	*e*Pn	Pn	09 50 14.7	+3.3
KOPT	Kop Dagi	8.89	326	Pn	Pn	09 50 10.6	-1.1
BTNK	Botanikuri	9.05	350	P	Pn	09 50 16.2	+2.6
GAZ	Gaziantep	9.09	302	Pn	Pn	09 50 14.1	-0.3
RAYN	Ar Rayn	9.30	188	P	Pn	09 50 16.1	-1.1
RAYN	Ar Rayn	9.30	188	P	Pn	09 50 15.8	-1.5
RAYN	Ar Rayn	9.30	188	Pn	Pn	09 50 15.8	-1.5
SBZV	Sabzevar	9.52	65	*e*Pn	Pn	09 50 21.6	+1.3
MMAI	Mount Meron Ar	9.69	275	Lg	Lg	09 53 15.2	
	comp=Z,2.3nm,0.3s,baz=102,slow=26,SNR=3.8						
ITEG	Tejag	9.95	86	*e*Pn	Pn	09 50 26.6	+0.4
ISFR	Sfrayin	10.04	62	*e*Pn	Pn	09 50 28.5	+0.9
GROC	Groznyy	10.45	355	*e*P	Pn	09 50 33.0	+0.3
GROC				pmax	pmax		
	comp=Z,14nm,0.6s						
SHME	Shamm	10.46	127	P	Pn	09 50 33.0	-0.1
SHME				S	Sn	09 52 25.8	-3.9
GEYT	Alibeck	10.48	58	Pn	Pn	09 50 35.8	+2.4
	baz=246,slow=14,SNR=5.5						
GEYT	Alibeck	10.48	58		Pn	09 50 33.3	-0.1
GYA0B	ALIBECK ARRAY	10.48	58	Pn	Pn	09 50 33.3	-0.1
EIL	Elat	10.71	256	Pn	Pn	09 50 38.6	+2.2
	comp=Z,0.4nm,0.3s,baz=23,slow=7.7,SNR=2.4						
EIL				Lg	Lg	09 53 43.7	
	comp=Z,0.6nm,0.3s,baz=49,slow=6.9,SNR=4.0						
IMON	Monand	10.71	84	*e*Pn	Pn	09 50 38.3	+1.6
MSFE	Esma-Masafi	10.95	130	P	Pn	09 50 41.5	+1.7
ASUD	Al Ashush, Dub	10.97	136	P	Pn	09 50 42.1	+2.1
FAQ	Al Faqa, Dubai	11.04	134	P	Pn	09 50 43.1	+2.1
SHRT	Shahrakht	11.23	82	*e*Pn	Pn	09 50 46.6	+2.9
UOSS	Minazif	11.27	131	P	Pn	09 50 43.5	-0.6
UOSS	Minazif	11.27	131		Pn	09 50 44.3	+0.2
HATD	Hatta, Dubai	11.31	132	P	Pn	09 50 45.8	+1.1
HATD				S	Sn	09 52 46.3	-4.1
KBZ	Khabaz	11.38	345	Pn	Pn	09 50 48.1	+2.6
	comp=Z,0.1nm,0.3s,baz=149,slow=9.7,SNR=4.8						
KBZ				LR	LR	09 55 45.1	
	comp=Z,119nm,21.5s,baz=136,slow=40						
KIV	Kislovodsk	11.64	345	*e*P	Pn	09 50 51.1	+1.9
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV				MLR	MLR		
	comp=Z,112nm,11.0s						
KIV	Kislovodsk	11.64	345	Pn	Pn	09 50 47.2	-2.0
SOC	Sochi	12.18	334	*e*P	Pn	09 50 54.0	-2.5
SOC				*e*		09 53 07.8	
SOC				MLR	MLR		
	comp=Z,132nm,9.0s						
BRTR	Keskin Array B	12.76	307	Pn	Pn	09 51 07.4	+2.8
	comp=Z,0.1nm,0.3s,baz=306,slow=37,SNR=3.2						
BRTR	Keskin Array B	12.76	307		Pn	09 51 04.0	-0.5
WSAR	Wadi Sarin	14.03	130	Pn	Pn	09 51 21.9	0.0
	comp=Z,2.8nm,0.3s,baz=309,slow=10.0,SNR=18						
IDI	Anoyia	18.43	284	P	Pn	09 52 20.2	+1.8
	comp=Z,0.5nm,0.3s,baz=65,slow=17,SNR=2.8						
KBL	Kabul	18.50	78	P	P	09 52 18.5	-0.7
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBL	Kabul	18.50	78	P	P	09 52 18.5	-0.7
VRH	Novokhopyorsk	18.80	350	*e*P	P	09 52 20.6	-1.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HARR	Harsova	18.95	314	⇑P	P	09 52 19.7	-4.1
HARR	Harsova	18.95	314	⇑P	P	09 52 19.7	-4.1
VORD	Divnogorie	19.02	345	*e*P	P	09 52 24.1	-0.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CFR	Carcaliu	19.09	316	⇓P	P	09 52 23.0	-2.4
CFR	Carcaliu	19.09	316	⇓P	P	09 52 23.0	-2.4
ABKAR	Akbulak array	19.12	27	P	P	09 52 25.4	-0.3
ABKAR	Akbulak array	19.12	27	P	P	09 52 24.6	-1.2
AKTO	Aktyubinsk	19.46	22	P	P	09 52 29.2	-0.2
	comp=Z,1.1nm,0.3s,baz=223,slow=5.8,SNR=18						
VRI	Vrincioaia	20.30	316	⇑P	Pn	09 52 39.8	-0.8
VRI	Vrincioaia	20.30	316	⇑P	Pn	09 52 39.8	-0.9
NEHR	Nehoiu	20.32	314	⇑P	Pn	09 52 40.4	-0.6
PLOR	Plostina	20.34	316	⇑P	Pn	09 52 40.4	-0.7
PLOR	Plostina	20.34	316	⇑P	Pn	09 52 40.4	-0.7
IUG	Iuzhnay	20.54	56	*e*P	P	09 52 41.0	-0.4
	baz=57						
IUG	Iuzhnay	20.54	56	*e*P	P	09 52 40.9	-0.4
MLR	Muntele Rosu	20.56	314	P	Pn	09 52 43.7	-0.2
	comp=Z,6.0nm,0.8s,baz=258,slow=4.7,SNR=5.7						
MLR	Muntele Rosu	20.56	314	⇑P	Pn	09 52 42.8	-1.1
MLR	Muntele Rosu	20.56	314	⇑P	Pn	09 52 42.8	-1.1
LPSR	Galich'ya Gora	20.64	346	*e*P	P	09 52 40.6	-1.6
LPSR				pmax	pmax		
	comp=Z,70nm,0.8s						
TESR	Tescani	20.70	317	⇑P	P	09 52 43.3	+0.3
SORM	Soroca	20.77	323	⇓P	P	09 52 42.5	-1.2
SORM	Soroca	20.77	323	⇓P	P	09 52 42.5	-1.2
ITM	Ithomi	20.93	289	P	P	09 52 45.4	-0.1
ITM				IAmb	IAmb	09 52 53.7	
	comp=Z,19nm,0.8s						
OZUR		20.97	315	⇑P	P	09 52 46.0	0.0
VOIR		21.08	313	⇑P	P	09 52 48.5	+1.3
VOIR		21.08	313	⇑P	P	09 52 48.5	+1.3
DOPR	Dopca	21.14	315	⇑P	P	09 52 48.3	+0.5
KK31	Karatay Array	21.20	54	P	P	09 52 46.2	-2.3
KK31				pmax	pmax		
	comp=Z,11nm,1.0s						
KK31	Karatay Array	21.20	54	P	P	09 52 46.2	-2.3
KKAR	Karatay Array	21.20	54	P	P	09 52 45.6	-2.8
KKAR				pmax	pmax		
	comp=Z,11nm,1.0s						
KKAR	Karatay Array	21.20	54	P	P	09 52 45.6	-2.8
KKAR	Karatay Array	21.20	54	P	P	09 52 47.0	-1.5
ARR	Arges	21.31	313	⇑P	P	09 52 50.5	+1.0
DZA	Taraz	21.69	55	*e*P	P	09 52 53.2	-0.5
	baz=56						
DZA	Taraz	21.69	55	*e*P	P	09 52 53.2	-0.5
LOT	Lotru	21.88	312	⇑P	P	09 52 55.8	0.0
NIL	Nilore	22.03	81	P	P	09 52 57.2	-0.2
NIL				pmax	pmax		
	comp=Z,19nm,0.7s						
NIL	Nilore	22.03	81	P	P	09 52 57.2	-0.2
NIL				IAmb	IAmb	09 53 00.5	
	comp=Z,19nm,0.7s						
BURAR	Bucovina Array	22.13	318	⇑P	P	09 52 59.0	+0.5
BURAR	Bucovina Array	22.13	318	⇑P	P	09 52 59.0	+0.5
BURAR	Bucovina Array	22.13	318	P	P	09 52 57.9	-0.6
AKASG	Malin Array Be	22.15	329	P	P	09 52 57.1	-1.4
	comp=Z,4.2nm,0.6s,baz=137,slow=9.8,SNR=21						
AKASG	Malin Array Be	22.15	329	P	P	09 52 56.8	-1.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	22.15	329	P	P	09 52 56.8	-1.7
AKBB	Malin Array Si	22.15	329	P	P	09 52 57.9	-0.6
AKBB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKBB	Malin Array Si	22.15	329	P	P	09 52 57.9	-0.6
BUR08	Bucovina Ar. S	22.16	318	P	P	09 52 58.1	-0.6
GZR	Gura Zlata	22.48	311	⇓P	P	09 53 02.0	-0.2
HERR	Herculane	22.50	310	⇓P	P	09 53 02.0	-0.3
MDVR	Moldovita	22.92	309	⇑P	P	09 53 06.4	-0.4
OBN	Obninsk	23.49	345	⇓*e*P	P	09 53 12.2	-0.1
OBN				*e**SP	pP	09 53 19.3	+0.4
OBN				PPP	PPP	09 53 42.0	

OBN				SSS	SSS	09 58 20.0	
OBN				pmax	pmax		
	comp=Z,43nm,1.7s						
OBN				MLR	MLR		
	comp=Z,214nm,18.0s						
OBN	Obninsk	23.49	345	P	P	09 53 11.8	-0.5
DIVS	Divibare	23.82	306	P	P	09 53 12.3	-3.5
AAK	Ala-Archa	23.84	58	P	P	09 53 16.6	+0.5
	comp=Z,1.8nm,0.5s,baz=196,slow=7.9,SNR=5.5						
AAK	Ala-Archa	23.84	58	ceP	P	09 53 15.8	-0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AAK	Ala-Archa	23.84	58	P	P	09 53 14.5	-1.6
PDG	Podgorica	23.85	302	⇓P	P	09 53 16.6	+0.6
PDG	Podgorica	23.85	302	P	P	09 53 13.4	-2.5
PDG				IAmb	IAmb	09 53 39.9	
	comp=Z,11nm,1.2s						
MOS	Moscow	23.86	347	eP	P	09 53 22.5	+6.6
MOS				pmax	pmax		
	comp=Z,72nm,0.8s						
SGDS	Sogindy	24.16	56	eP	P	09 53 18.2	-0.8
	baz=56						
SGDS	Sogindy	24.16	56	eP	P	09 53 18.2	-0.8
BTLS	Baital	24.28	52	eP	P	09 53 20.0	0.0
	baz=52						
BTLS	Baital	24.28	52	eP	P	09 53 19.9	0.0
KOLS	Kolonicke sedl	24.50	318	eP	P	09 53 24.0	+2.1
KOLS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KOLS	Kolonicke sedl	24.50	318	eP	P	09 53 24.0	+2.1
CRVS	Cervenica-Dubn	24.94	318	eP	P	09 53 27.3	+1.4
CRVS				pmax	pmax		
	comp=Z,12nm,0.9s						
CRVS	Cervenica-Dubn	24.94	318	eP	P	09 53 27.3	+1.4
ARU	Arti	24.99	15	P	P	09 53 26.1	-0.1
	comp=Z,1.2nm,0.3s,baz=228,slow=7.2,SNR=6.0						
ARU	Arti	24.99	15	d iP	P	09 53 26.2	-0.1
ARU						09 53 55.9	
ARU				S	S	09 57 47.5	-1.2
ARU				pmax	pmax		
	comp=Z,26nm,2.3s						
ARU	Arti	24.99	15	P	P	09 53 25.9	-0.4
ARU				IAmb	IAmb	09 53 31.4	
	comp=Z,24nm,1.4s						
TIP	Timpagrande	25.16	293	P	P	09 53 28.5	+0.4
TIP				IAmb	IAmb	09 53 32.8	
	comp=Z,6.4nm,0.8s						
KECS	Kecovo	25.29	316	eP	P	09 53 30.3	+1.2
KECS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KECS	Kecovo	25.29	316	eP	P	09 53 30.3	+1.2
PSZ	Piszkesteto	25.38	315	⇑P	P	09 53 31.2	+1.2
PSZ	Piszkesteto	25.38	315	eP	P	09 53 31.3	+1.3
PSZ	Piszkesteto	25.38	315	⇑P	P	09 53 31.2	+1.2
PSZ	Piszkesteto	25.38	315	P	P	09 53 27.6	-2.4
PSZ				IAmb	IAmb	09 53 34.5	
	comp=Z,8.5nm,0.9s						
MORH	Mrgy, Hungar	25.46	310	eP	P	09 53 33.0	+2.4
KUU	Kurty	25.48	56	eP	P	09 53 31.0	+0.2
	baz=56						
KUU	Kurty	25.48	56	eP	P	09 53 31.0	+0.2
BRZS	Berezniki	25.67	40	eP	P	09 53 32.3	-0.2
	comp=Z,3.4nm,0.6s,baz=41						
BRZS	Berezniki	25.67	40	eP	P	09 53 32.3	-0.2
BRZS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MDOK	Medeo	25.79	58	eP	P	09 53 33.7	-0.1
	baz=58						
MDOK	Medeo	25.79	58	eP	P	09 53 33.7	-0.1
KIRV	Kirov	25.87	3	P	P	09 53 33.6	-0.5
	comp=Z,18nm,0.4s,baz=144,slow=2.2,SNR=3.6						
CHKK	Chushkaly	25.92	56	eP	P	09 53 35.2	+0.3
	baz=57						
CHKK	Chushkaly	25.92	56	eP	P	09 53 35.1	+0.3
CSKK	Cskako	26.14	312	eP	P	09 53 40.0	+3.2
LANS	Liptovska Anna	26.20	317	eP	P	09 53 38.6	+1.2
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	Liptovska Anna	26.20	317	eP	P	09 53 38.6	+1.2
VYHS	Vyhne	26.27	315	eP	P	09 53 41.5	+3.5
VYHS	Vyhne	26.27	315	eP	P	09 53 41.5	+3.5
NACGM	Naroch	26.28	333	i P	P	09 53 37.3	-0.7
NACGM				i P	P	09 53 37.3	-0.7
NACGM				i P	P	09 53 37.3	-0.7
NACGM				i PP	PnPn	09 54 17.8	+0.6
NACGM				i PPP	PPP	09 54 32.0	
NACGM				i S	S	09 58 09.6	+0.5
NACGM				i SS	SnSn	09 59 02.8	-6.6
NACGM				i SSS	SSS	09 59 27.3	
NACGM				i LQ	LQ	10 01 48.4	
NACGM				i LR	LR	10 03 03.4	
BRVK	Borovoye	26.31	33	i P	P	09 53 38.1	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	26.34	33	P	P	09 53 39.0	+0.5
	comp=Z,1.7nm,0.5s,baz=206,slow=16,SNR=8.5						
BVAR	Borovoye Array	26.34	33	P	P	09 53 39.0	+0.5
OJC	Ojcow	26.55	319	P	P	09 53 40.7	+0.3
OJC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OJC	Ojcow	26.55	319	P	P	09 53 40.7	+0.3
OJC				IAmb	IAmb	09 53 47.5	
	comp=Z,7.9nm,0.7s						
IDID	Didziasalis	26.61	334	eP	P	09 53 41.3	+0.4
SATY	Saty	26.73	58	eP	P	09 53 43.4	+0.9
	comp=Z,9.8nm,1.0s,baz=59						
SATY	Saty	26.73	58	eP	P	09 53 43.3	+0.9
SATY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
IIGN	Ignalina	26.83	333	eP	P	09 53 43.6	+0.7
KPKS	Kokpek	27.02	58	eP	P	09 53 45.3	+0.3
	comp=Z,2.9nm,0.7s,baz=58						
KPKS	Kokpek	27.02	58	eP	P	09 53 45.2	+0.3
KPKS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ISAL	Salakas	27.03	334	eP	P	09 53 45.2	+0.5
SUW	Suwalki	27.12	329	P	P	09 53 45.4	-0.1
SUW				pmax	pmax		
	comp=Z,21nm,0.7s						
SUW	Suwalki	27.12	329	P	P	09 53 45.4	-0.1
SHLS	Shalkode	27.51	58	eP	P	09 53 52.5	+3.1
	baz=59						
SHLS	Shalkode	27.51	58	eP	P	09 53 52.4	+3.1
KLMR	Klimovskoe	28.50	352	eP	P	09 53 55.3	-2.5
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	28.50	352	eP	P	09 53 55.3	-2.5
KLMR				AMP		09 54 01.3	
	comp=Z,14nm,1.1s						
VSU	Vasula	29.08	338	eP	P	09 54 03.1	+0.2
KBA	Koelnbreinsper	29.19	309	eP	P	09 54 05.0	+0.7
	comp=Z,1.3nm,0.5s						
KURBB	Kurchatov Arra	29.27	43	P	P	09 54 06.0	+1.3
	comp=Z,2.9nm,0.6s,baz=248,slow=9.2,SNR=12						
KURK	Kurchatov	29.36	43	ceP	P	09 54 04.4	-1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	29.36	43	P	P	09 54 04.8	-0.7
KURK				IAmb	IAmb	09 54 28.9	
	comp=Z,6.5nm,0.8s						
GERES	GERESS Array B	29.53	313	P	P	09 54 08.0	+0.7
	comp=Z,0.4nm,0.6s,baz=106,slow=10,SNR=3.1						
GERES	GERESS Array B	29.53	313	P	P	09 54 08.0	+0.7
MK31	Makanchi Array	30.29	52	P	P	09 54 14.4	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	30.29	52	P	P	09 54 14.4	+0.5
MKAR	Makanchi Array	30.29	52	P	P	09 54 14.7	+0.8
	comp=Z,2.1nm,0.6s,baz=248,slow=7.3,SNR=34						
MKAR				PcP	PcP	09 57 13.0	-0.9
	comp=Z,0.6nm,0.6s,baz=256,slow=5.8,SNR=3.5						
MKAR	Makanchi Array	30.29	52	i P	P	09 54 14.6	+0.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	30.29	52	P	P	09 54 14.4	+0.5
WATA	Walderalm	30.42	309	eP	P	09 54 15.5	+0.3
	comp=Z,0.2nm,0.1s						
SQTA	Sankt Quirin	30.63	309	eP	P	09 54 16.8	-0.2
	comp=Z,2.7nm,0.4s						
MOTA	Moosalm	30.73	309	eP	P	09 54 17.7	-0.2
	comp=Z,1.3nm,0.3s						
FETA	Feichten	30.89	308	eP	P	09 54 20.1	+0.7
	comp=Z,0.5nm,0.3s						
DAVA	Damuels	31.52	308	eP	P	09 54 24.8	-0.1
BSD	Bornholm Skovb	31.63	325	i P	P	09 54 24.7	-0.8
BSD				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BSD	Bornholm Skovb	31.63	325	i P	P	09 54 24.7	-0.8
	comp=Z,2.3nm,0.3s						
BSD	Bornholm Skovb	31.63	325	i P	P	09 54 24.8	-0.8
BSD				IAmb	IAmb	09 54 25.7	
	comp=Z,2.3nm,0.3s						
FINES	FINESS Array B	31.70	341	P	P	09 54 25.9	-0.2
	comp=Z,6.8nm,0.4s,baz=145,slow=9.9,SNR=62						
FINES	FINESS Array B	31.70	341	P	P	09 54 25.6	-0.5
TMCR	Tamitsa	31.89	353	eP	P	09 54 27.8	+0.1
TMCR				pmax	pmax		
	comp=Z,15nm,0.6s						
ZAA0	Zalesovo Array	34.15	40	P	P	09 54 47.9	+0.3
ZAA0				IAmb	IAmb	09 54 50.2	
	comp=Z,7.0nm,0.8s						
ZALV	Zalesovo Beam	34.15	40	P	P	09 54 47.6	0.0
	comp=Z,4.9nm,0.3s,baz=258,slow=11,SNR=27						
ZALV				PcP	PcP	09 57 23.9	-0.4
	comp=Z,0.6nm,0.4s,baz=242,slow=3.1,SNR=3.6						
ZALV	Zalesovo Beam	34.15	40	i P	P	09 54 47.7	+0.1
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZALV	Zalesovo Beam	34.15	40	P	P	09 54 47.4	-0.2
KONO	Kongsberg	36.45	329	ceP	P	09 55 10.5	+3.2
KONO				pmax	pmax		
	comp=Z,35nm,1.7s						
NB2	NORSAR Subarra	36.52	331	P	P	09 55 07.0	-1.0
	comp=Z,2.0nm,0.5s,baz=126,slow=9.3						
NOA	NORSAR Array B	36.52	331	P	P	09 55 07.3	-0.7
	comp=Z,1.6nm,0.6s,baz=124,slow=8.6,SNR=6.8						
ARCES	ARCESS Array B	38.72	348	P	P	09 55 26.4	0.0
	comp=Z,1.3nm,0.3s,baz=165,slow=9.3,SNR=36						
ARCES				PcP	PcP	09 57 38.0	+0.3
	comp=Z,3.9nm,0.8s,baz=145,slow=2.2,SNR=4.4						
ARCES				LR	LR	10 14 22.3	
	comp=Z,185nm,18.0s,baz=180,slow=41						
EKR8	Eskdalemuir Ar	41.27	318	P	P	09 55 48.2	+0.4
TOA0	Torodi Ar. Sit	45.59	255	P	P	09 56 22.7	-0.4
TOA0				IAmb	IAmb	09 56 30.1	
	comp=Z,5.2nm,1.2s						
TORD	Torodi Ar. Bea	45.59	255	P	P	09 56 23.1	+0.1
	comp=Z,1.3nm,0.4s,baz=67,slow=7.6,SNR=16						
TORD				LR	LR	10 17 13.4	
	comp=Z,62nm,18.5s,baz=0.0,slow=38						
LZH	Lanzhou	46.50	69	eP	P	09 56 30.6	+0.4
LZH				pP	pP	09 56 35.3	-1.9
LZH				sP	sP	09 56 38.5	-1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
SONM	Songino Array	46.65	53	P	P	09 56 32.0	+0.8
	comp=Z,0.3nm,0.4s,baz=287,slow=8.4,SNR=4.3						
SONM				PcP	PcP	09 58 05.0	+0.2
	comp=Z,1.1nm,0.9s,baz=256,slow=3.9,SNR=6.3						
ULN	Ulaanbaatar	47.09	53	ceP	P	09 56 35.4	+0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	47.09	53	P	P	09 56 35.2	+0.5
ULN				IAmb	IAmb	09 56 39.7	
	comp=Z,3.1nm,0.7s						
SPB2	Spitsbergen Ar	47.40	352	P	P	09 56 36.4	-0.1
SPA3	Spitsbergen Ar	47.41	352	P	P	09 56 36.6	0.0
CMAR	Chiang Mai Arr	48.58	94	P	P	09 56 46.7	+0.3
	comp=Z,1.0nm,0.3s,baz=298,slow=8.2,SNR=6.1						
CMAR				PcP	PcP	09 58 12.1	+0.1
	comp=Z,1.0nm,0.5s,baz=292,slow=5.7,SNR=3.2						
CMAR				PP	PP	09 58 39.7	+0.4
	comp=Z,0.6nm,0.3s,baz=287,slow=9.1,SNR=4.5						
KOWA	Kowa	49.59	261	P	P	09 56 54.7	+0.5
KOWA				IAmb	IAmb	09 56 55.2	
	comp=Z,4.4nm,0.7s						
BOD	Bodaibo	50.90	39	eP	P	09 57 03.2	-0.3
BOD				pmax	pmax		
	comp=Z,7.0nm,2.1s						
DBIC	Dimbokro	54.56	253	LR	LR	10 23 40.7	
	comp=Z,83nm,19.3s,baz=21,slow=39						
TIXI	Tiksi	56.74	22	P	P	09 57 46.9	+0.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TIXI	Tiksi	56.74	22	P	P	09 57 46.9	+0.9
TIXI				IAmb	IAmb	09 58 00.1	
	comp=Z,6.2nm,1.4s						
KULM	Kulim	56.93	107	P	P	09 57 47.5	-0.6
PSI	Prapat	57.03	110	LR	LR	10 23 42.1	
	comp=Z,84nm,19.6s,baz=268,slow=37						
SUMG	Summit	57.71	339	P	P	09 57 54.2	+0.9
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SUMG	Summit	57.71	339	P	P	09 57 54.2	+0.9
KLR	Kul'dur	62.83	47	i P	P	09 58 29.3	+1.1
KLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BOSA	Boshof	64.43	201	P	P	09 58 40.9	+1.9
	comp=Z,2.8nm,0.8s,baz=26,slow=13,SNR=3.2						
KSRS	Korea Array	64.46	61	P	P	09 58 38.9	-0.3
	comp=Z,2.1nm,0.6s,baz=284,slow=6.9,SNR=8.5						
USRK	Ussuriysk Ar.	64.76	52	P	P	09 58 40.1	-0.9
	comp=Z,2.4nm,0.7s,baz=284,slow=6.1,SNR=7.4						
USRK	Ussuriysk Ar.	64.76	52	P	P	09 58 40.3	-0.7
USRK	Ussuriysk Ar.	64.76	52	P	P	09 58 40.3	-0.7
C36M	Paulatuk	77.96	357	P	P	09 59 59.7	-0.6
C36M				IAmb	IAmb	10 00 03.6	
	comp=Z,7.6nm,1.2s						
IMAR	Indian Mountai	80.27	8	P	P	10 00 13.5	+0.4
EPYK	Eagle Plains	81.13	1	P	P	10 00 17.9	+0.2
EPYK				IAmb	IAmb	10 00 18.4	
	comp=Z,5.4nm,1.0s						
ILAR	Eielson Array	82.17	6	P	P	10 00 22.8	-0.4
	comp=Z,1.1nm,0.7s,baz=321,slow=4.2,SNR=17						
ILAR	Eielson Array	82.17	6	P	P	10 00 23.6	+0.4
ILAR	Eielson Array	82.17	6	P	P	10 00 23.6	+0.4
CCB	Clear Creek Bu	82.21	6	P	P	10 00 23.1	-0.2
CCB				IAmb	IAmb	10 00 51.1	
	comp=Z,4.5nm,1.2s						
FCC	Fort Churchill	83.19	341	P	P	10 00 29.2	+0.7
FCC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FCC	Fort Churchill	83.19	341	P	P	10 00 29.2	+0.7
FCC				IAmb	IAmb	10 00 30.6	
	comp=Z,5.1nm,1.3s						
PPLA	Purkeypile	83.43	9	P	P	10 00 29.7	-0.2
YKA	Yellowknife Ar	83.90	351	P	P	10 00 31.9	-0.1
	comp=Z,0.9nm,0.8s,baz=22,slow=5.1,SNR=16						
YKA	Yellowknife Ar	83.90	351	P	P	10 00 32.0	-0.1
BCAR	Beaver Creek A	84.23	4	P	P	10 00 34.6	+0.7
BALM	Baldy	86.22	5	P	P	10 00 44.7	+0.8
KDAK	Kodiak Island	88.30	10	P	P	10 00 53.6	-0.3
	comp=Z,25nm,1.2s,baz=27,slow=6.8,SNR=3.3						
DLBC	Dease Lake	89.10	358	P	P	10 00 58.9	+1.1
	comp=Z,2.8nm,1.0s,baz=333,slow=2.3,SNR=5.7						

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*IDC **14** 09:51:08.1±6.5, 13°.35S×167°.08E, h156^{km}±63^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.4/39, mbtmp3.9/8, MS3.5/1, Ms1 3.5/1, ms1mx2.5/29, Error ellipse: s-maj=53.1km s-min=26.8km az=156.0*

ISC 14 09:51:07.6±1.2, **13°.3S**±0°.1×**167°.1E**±0°.2, **h150**^{km}, **n10, σ1^{s}54**/10, **mb3.6**/7, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.72	184	P	Pn	09 53 12.6	+1.9
	0.3nm,0.3s,baz=316,slow=21,SNR=11						
DZM				S	Sn	09 54 45.4	-2.2
	0.3nm,0.3s,baz=150,slow=20,SNR=3.6						
CTA	Charters Tower	21.05	249	P	P	09 55 40.5	+0.6
	2.1nm,0.8s,baz=88,slow=12,SNR=3.8						
STKA	Stephens Creek	29.79	227	P	P	09 57 01.5	+1.2
	2.2nm,0.7s,baz=55,slow=9.7,SNR=4.6						
WRA	Warramunga Arr	32.02	254	P	P	09 57 19.6	-0.5
	0.3nm,0.4s,baz=85,slow=9.5,SNR=6.6						
ASAR	Alice Springs	33.03	247	P	P	09 57 28.4	-0.5
	0.6nm,0.6s,baz=75,slow=9.6,SNR=14						
NWAO	Narrogin (SRO)	49.33	238	P	P	09 59 40.0	-1.7
	4.7nm,0.5s,baz=100,slow=7.0,SNR=4.0						
LEM	Lembang	58.80	270	LR	LR	10 27 10.0	
	comp=Z,38nm,18.4s,baz=213,slow=37						
ILAR	Eielson Array	85.25	18	P	P	10 03 25.6	-1.3
	0.2nm,0.7s,baz=240,slow=5.7,SNR=4.6						
MKAR	Makanchi Array	96.07	317	P	P	10 04 18.6	+0.6
	0.3nm,0.5s,baz=122,slow=4.3,SNR=4.3						
ARCES	ARCESS Array B	118.86	346	PKP	PKiKP	10 09 38.7	+1.0
	4.9nm,1.1s,baz=57,slow=3.3,SNR=4.6						

LJU 14 09:52:10.9, 46°.39N×15°.07E, h0^{km}**, ML0.5, Confirmed Rockburst, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PERS	Pernice	0.25	7	ePg	Pg	09 52 15.3	-0.3
PERS				eSg	Sg	09 52 19.1	+0.2
PERS				IAML		09 52 20.2	
	comp=Z,7.4nm,0.2s						
PDKS	Podkum	0.33	189	ePg	Pg	09 52 17.3	+0.1

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*IDC **14** 10:08:40.4±2.1, 7°.05S×129°.52E, h121^{km}±22^{km}, mb3.7/5, mb1 3.8/9, mb1mx3.5/32, mbtmp4.2/9, Error ellipse: s-maj=20.2km s-min=16.5km az=67.0*

*NEIC **14** 10:08:41.0±2.3, 6°.94S±0°.07×129°.69E±0°.07, h140^{km}±13^{km}, mb4.1/3, Error ellipse: s-maj=12.7km s-min=6.7km az=134.0*

ISC 14 10:08:40.9±0.6, **6°.98S**±0°.06×**129°.64E**±0°.06, **h139**^{km}, **n23, σ1^{s}56**/24, **mb3.9**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.93	121		Pn	10 09 14.2	-0.3
SAUI				Sn	Sn	10 09 40.4	+0.2
FAKI	Fak Fak	4.79	33		Pn	10 09 50.4	-1.0
SOEI	Soe	5.99	242	Pn	Pn	10 10 08.5	+1.0
SOEI					Sn	10 11 15.5	+0.4
MTN	Manton Dam	6.01	166		Pn	10 10 07.4	-0.3
SIJI	Sorong	6.28	15	P	Pn	10 10 11.8	+0.5
	4.0nm,0.3s,baz=203,slow=22,SNR=22						
SIJI				S	Sn	10 11 20.6	-1.3
	5.5nm,0.3s,baz=106,slow=24,SNR=6.4						
BATI	Baumata	6.73	241	P	Pn	10 10 16.2	-1.1
	16nm,0.3s,baz=69,slow=5.9,SNR=7.0						
BATI				S	Sn	10 11 29.8	-2.9
	17nm,0.3s,baz=110,slow=23,SNR=11						
FITZ	Fitzroy Crossi	11.72	199	P	Pn	10 11 20.9	-3.0
	0.8nm,0.3s,baz=27,slow=9.3,SNR=20						
FITZ				S	Sn	10 13 21.6	-12
	1.9nm,0.3s,baz=252,slow=20,SNR=4.4						
WB0	Warramunga Arr	13.53	161		Pn	10 11 44.4	-2.9
WB2	Warramunga Arr	13.68	161		Pn	10 11 45.6	-3.6
WR0	Warramunga Arr	13.76	160	Pn	Pn	10 11 47.5	-2.7
COEN	Coen	15.00	119	Pn	Pn	10 12 03.5	-2.4
AS31	Alice Springs	17.09	167	P	P	10 12 31.6	+0.6
AS31				IAmb	IAmb	10 12 36.1	
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	17.09	167	P	P	10 12 31.5	+0.4
	comp=Z,0.8nm,0.3s,baz=343,slow=9.3,SNR=64						
ASAR				S	S	10 15 32.9	-9.4
	comp=Z,0.7nm,0.3s,baz=351,slow=27,SNR=8.3						
ASAR	Alice Springs	17.09	167	P	P	10 12 31.6	+0.6
PSA00	Pilbara Seismi	17.33	212	P	P	10 12 35.6	+2.0
PSA00				IAmb	IAmb	10 12 36.4	
	comp=Z,19nm,0.5s						
PSA00	Pilbara Seismi	17.33	212	P	P	10 12 35.4	+1.8
PSA00				IAmb	IAmb	10 12 49.9	
	comp=Z,5.1nm,0.6s						
CTA	Charters Tower	20.73	131	P	P	10 13 12.8	+2.3
	comp=Z,1.6nm,0.5s,baz=326,slow=14,SNR=4.2						
STKA	Stephens Creek	27.17	157	P	P	10 14 11.7	+0.3
	comp=Z,1.5nm,0.4s,baz=330,slow=16,SNR=3.7						
STKA	Stephens Creek	27.17	157	P	P	10 14 12.3	+0.9
CMAR	Chiang Mai Arr	39.44	310	P	P	10 15 56.9	-0.9
	comp=Z,1.2nm,0.5s,baz=132,slow=7.0,SNR=6.6						
MKAR	Makanchi Array	68.01	327	P	P	10 19 27.8	+2.7
	comp=Z,1.7nm,0.4s,baz=119,slow=8.0,SNR=20						
ZALV	Zalesovo Beam	71.40	334	P	P	10 19 47.2	+1.5
	comp=Z,0.6nm,0.4s,baz=141,slow=3.0,SNR=2.4						
ABKAR	Akbulak array	82.27	322	P	P	10 20 46.7	-0.1

DJA 14 10:12:00.4±0.7, **8°S**±12°×**12°0E**±°, **h161**^{km}±8^{km}, **M3.7**/7, **MLv3.7**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	1.44	154	P	Pn	10 12 31.2	+1.0
PLAI	Plampang	1.91	256	P	Pn	10 12 35.6	+0.4
PLAI				S	Sn	10 13 02.5	+0.5
BASI	Baing, Sumba	2.05	154	P	Pn	10 12 36.2	-0.6
EDFI	Ende, Flores	2.05	101	P	Pn	10 12 36.8	-0.1
EDFI				S	Sn	10 13 04.7	-0.4
TWSI	Taliwang, Sumb	2.76	262	P	Pn	10 12 44.8	-0.5
TWSI				S	Sn	10 13 19.9	-0.1
BATI	Baumata	4.36	115	P	Pn	10 13 05.4	-0.3
SOEI	Soe	4.76	107	P	Pn	10 13 12.0	+1.0

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*IDC **14** 10:35:19.9±2.6, 9°.48S×112°.73E, h0^{km}, mb4.0/5, mb1 4.0/6, mb1mx3.7/54, mbtmp3.9/6, ML3.9/1, MS3.0/2, Ms1 3.1/2, ms1mx2.6/38, Error ellipse: s-maj=155.6km s-min=20.3km az=54.0*

*DJA **14** 10:35:25.5±0.6, 10°S±7°×11°3E±°, h10^{km}, M4.2/16, mb4.4/2, mB5.3/1, MLv4.1/16, Mw(mB)4.8/1*

ISC 14 10:35:26.1±0.9, **9°.6S**±0°.1×**112°.91E**±0°.06, **h36**^{km}, **n21, σ1^{s}86**/20, **mb4.1**/5, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	Gumukmas	1.38	23	P	Pn	10 35 49.4	+0.7
JAGI	Jajag, Banyuwa	1.63	49	P	Pn	10 35 52.1	-0.2
PWJI	Pagerwojo	1.87	324	P	Pn	10 35 55.5	0.0
ABJI	Asem Bagus	2.18	37	P	Pn	10 36 02.3	+2.5
DNP	Denpasar	2.43	69	P	Pn	10 36 04.4	+1.1
NGJI	Ngawi	2.60	326	P	Pn	10 36 07.1	+1.5
GRJI	Gresik	2.66	351	P	Pn	10 36 08.6	+2.3
KMMI	Kalianget	2.70	23	P	Pn	10 36 09.2	+2.3
SRBI	Singaraja	2.70	58	P	Pn	10 36 08.9	+1.9
UGM	Wanagama	2.87	304	P	Pn	10 36 11.2	+1.9
TWSI	Taliwang, Sumb	4.01	79	P	Pn	10 36 27.3	+2.4
KPJI	Karang Pucung	4.51	299	P	Pn	10 36 34.7	+2.8
PLAI	Plampang	4.86	82	P	Pn	10 36 39.1	+2.4
CISI	Cisompet, Garu	5.41	291	P	Pn	10 36 44.6	+0.3
	0.3nm3µm45nm,0.7s						
FITZ	Fitzroy Crossi	14.99	126	Pn	Pn	10 38 53.7	-1.7
	0.4nm,0.3s,baz=327,slow=8.0,SNR=7.7						
FITZ				Sn	Sn	10 41 28.6	-12
	0.1nm,0.3s,baz=335,slow=19,SNR=2.9						
FITZ				LR	LR	10 43 47.2	
	comp=Z,31nm,19.9s,baz=326,slow=33						
ASAR	Alice Springs	24.48	128	P	P	10 40 42.6	+0.6
	3.7nm,0.6s,baz=304,slow=8.9,SNR=72						
CMAR	Chiang Mai Arr	31.06	334	LR	LR	10 54 42.2	
	comp=Z,39nm,18.3s,baz=135,slow=38						
STKA	Stephens Creek	34.64	134	P	P	10 42 13.3	+1.2
	1.6nm,0.6s,baz=297,slow=9.0,SNR=4.8						
SONM	Songino Array	57.42	355	P	P	10 45 10.4	-0.8
	0.6nm,0.7s,baz=172,slow=8.6,SNR=3.6						
MKAR	Makanchi Array	62.39	337	P	P	10 45 43.4	-1.8
	0.6nm,0.5s,baz=151,slow=7.4,SNR=9.9						
ZALV	Zalesovo Beam	67.58	342	P	P	10 46 17.1	-1.6
	0.9nm,0.6s,baz=154,slow=5.5,SNR=3.6						

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*SOME **14** 10:36:28.4, 40°.92N×70°.13E, h15^{km}*

*NNC **14** 10:36:30.3±2.7, 40°.91N×70°.29E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=24.1km s-min=10.8km az=14.0*

*KRNET **14** 10:36:31.7±0.1, 41°.15N×70°.27E, mb2.8*

ISC 14 10:36:33.0±1.2, **41°.09N**±0°.04×**70°.24E**±0°.06, **h10**^{km}, **n14, σ1^{s}49**/26, **14C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.81	57	⇓iP	Pg	10 36 45.8	-2.8
	baz=65						
TRKS				⇓iS	Sg	10 36 57.0	-2.1
	baz=65						
IUG	Iuzhnay	1.07	352	eP	Pg	10 36 52.4	-1.2
	4.9nm,0.2s						
IUG				eS	Sn	10 37 10.2	+1.0
	86nm,0.7s						
BTK	Batken	1.12	157	⇓iP	Pb	10 36 54.2	-0.3
	baz=59						
BTK				⇓iS	Sn	10 37 10.4	+0.1
	baz=59						
KK31	Karatay Array	2.02	6	Pn	Pn	10 37 08.2	+1.1
	1.9nm,0.3s,baz=192,slow=17,SNR=34						
KK31				Sn	Sg	10 37 37.1	-0.9
	7.7nm,0.7s,baz=192,slow=29,SNR=7.8						
ARSB	Arslanbob	2.08	83	⇓iP	Pn	10 37 09.5	+1.4
	baz=84						

ARSB				⇓*i*S	Sb	10 37 37.3	+0.4
	baz=84						
MNAS	Manas	2.19	50	⇑*i*P	Pn	10 37 10.9	+1.3
	baz=51						
MNAS				⇑*i*S	Sb	10 37 39.1	-1.0
	baz=51						
MRKS	Merke	2.77	52	*e*P	Pb	10 37 22.4	-0.4
	7.9nm,0.5s						
MRKS				*e*S	Sg	10 38 00.7	-1.4
	5.6nm,0.6s						
AML	Almayashu	2.79	67	⇑*i*P	Pn	10 37 19.3	+1.2
	baz=68						
AML				⇑*i*S	Sn	10 37 53.8	+1.8
	baz=68						
EKS2	Erkin-Say	3.07	58	⇑*e*P	Pn	10 37 23.0	+1.3
	baz=59						
EKS2				⇑*i*S	Sn	10 38 00.6	+2.1
	baz=59						
ARLS	Aral	3.16	75	⇑*e*P	Pn	10 37 24.4	+1.4
	baz=76						
ARLS				⇑*i*S	Sn	10 38 03.1	+2.3
	baz=76						
UCH	Uchtor	3.40	69	⇑*i*P	Pn	10 37 27.8	+1.4
	baz=70						
UCH				⇑*i*S	Sn	10 38 08.4	+1.4
	baz=70						
AAK	Ala-Archa	3.53	63	⇓*i*P	Pn	10 37 29.6	+1.6
	baz=63						
AAK				⇓*i*S	Sn	10 38 11.3	+1.4
	baz=63						
AAK	Ala-Archa	3.53	63	⇑Pg	Pb	10 37 35.6	-0.1
	1.2nm,0.6s						
AAK				⇑Lg	Lg	10 38 23.5	
	3.0nm,0.6s						
TKM2	Tokmak 2	4.39	64	⇑Pg	Pb	10 37 51.4	+1.1
	1.5nm,0.8s						
TKM2				⇑Lg	Lg	10 38 52.1	
	2.9nm,0.6s						

NEIC ***14*** *10:44:33.9±2.4, 40°.26N±0°.04×124°.62W±0°.06, h14^{km}±5^{km}, Error ellipse: s-maj=7.2km s-min=5.4km az=95.0*

IDC ***14*** *10:44:33.2±1.2, 40°.41N×124°.41W, h0^{km}, mb3.6/5, mb1 4.0/11, mb1mx3.7/44, mbtmp3.7/11, ML4.3/4, MS3.2/9, Ms1 3.1/9, ms1mx2.9/46, Error ellipse: s-maj=14.8km s-min=10.4km az=86.0*

NEIC ***14*** *10:44:34.9, 40°.32N×124°.62W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.11; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$0.74; $M_{r\theta}$0.45; $M_{\theta\phi}$-3.01; $M_{\phi r}$-0.74; Fault plane solution: $M_0$3.23000×10^{15} NP1:ϕ_s188.38000°, δ80.55000°, λ12.09000°. NP2:ϕ_s96.37000°, δ78.07000°, λ170.34000°. Principal axes: T 3.2922, Plg15.0000°, Azm53.0000°; N -0.1191, Plg75.0000°, Azm226.0000°; P -3.1731, Plg2.0000°, Azm322.0000°;*

NCEDC ***14*** *10:44:35.0±2.7, 40°.32N±0°.04×124°.61W±0°.06, h17^{km}±5^{km}, Mwr4.3/9, mb4.4/9(NEIC), ML3.6/70(NEIC) Error ellipse: s-maj=7.3km s-min=5.4km az=102.0*

ANF ***14*** *10:44:38.1±0.5, 40°.41N×124°.38W, h48^{km}±15^{km}, ML3.9/18, Error ellipse: s-maj=7.1km s-min=2.7km az=71.0*

ISC 14 10:44:33.8±1.7**, 40°.38N**±0°.03×**124°.51W**±0°.06**, h10**^{km}±11^{km}**, n178, σ1^{s}.59**/185**, mb4.3**/8**, MS3.2**/3**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCRM	Chalk Rock	0.53	85		Pn	10 44 47.2	-0.3
JCC	Jacoby Creek,	0.57	40	Pg	Pn	10 44 47.2	-0.7
JCC				Sg	Sn	10 44 56.1	-1.3
JCC				IAML		10 44 56.8	
	comp=N,3μm,1.0s						
JCC				IAML		10 45 03.0	
	comp=E,2μm,0.8s						
KMRM	Mail Ridge	0.63	104		Pn	10 44 48.8	-0.1
KMRM				Sg	Sn	10 44 59.5	+0.4
KHMM	Horse Mountain	0.77	50	Pg	Pn	10 44 50.6	-0.3
KHMM				Sg	Sn	10 45 02.7	+0.1
KBSM	Bell Springs	0.84	123		Pg	10 44 50.9	+0.8
KCPM	Cahto Peak	0.99	134		Pb	10 44 52.5	-0.7
KOMM	Orleans Mounta	1.20	41		Pg	10 44 56.7	-0.2
KRMB	Red Mountain	1.23	22		Pn	10 44 56.5	-0.7
KRMB				IAML		10 45 12.9	
	comp=N,1μm,0.6s						
O02D	Mt. Diablo Mer	1.33	98	P	Pb	10 44 58.6	-0.3
	baz=276,SNR=358						
O02D				S	Sn	10 45 15.1	-1.3
	baz=276						
GNAM	Navarro Ridge	1.36	150		Pn	10 44 57.0	-1.9
N02D	Trinity Center	1.49	66	P	Pb	10 45 00.8	-0.9
	baz=246,SNR=1000						
N02D				S	Sn	10 45 17.7	-2.7
	baz=246						
WDC	Whiskeytown Da	1.51	82		Pn	10 45 00.8	-0.2
WDC	Whiskeytown Da	1.51	82		Pb	10 45 01.0	-1.0
WDC				IAML		10 45 35.1	
	comp=E,647nm,0.8s						
WDC				IAML		10 45 35.5	
	comp=N,888nm,1.1s						
GASB	Alder Springs	1.56	117		Pn	10 45 00.8	-0.9
M02C	Callahan	1.61	51	P	Pn	10 45 02.4	0.0
	baz=232,SNR=1000						
M02C				S	Sn	10 45 21.5	-1.7
	baz=232						
HOPS	Hopland Field	1.77	141		Pn	10 45 03.1	-1.5
HOPS	Hopland Field	1.77	141		Pn	10 45 03.3	-1.3
HOPS				IAML		10 45 50.9	
	comp=N,516nm,1.1s						
HOPS				IAML		10 46 02.0	
	comp=E,526nm,1.1s						
LTCM	Tuscan Springs	1.83	95		Pn	10 45 05.5	+0.2
KBO	Bosley Butte	1.84	7	Pn	Pn	10 45 06.5	+0.9
L02E	Cave Junction	1.90	21	P	Pn	10 45 06.1	-0.2
	baz=203,SNR=69						
L02E				S	Sn	10 45 29.4	-0.9
	baz=203						
YBH	Yreka Blue Hor	1.91	45	Pn	Pn	10 45 06.8	+0.2
	comp=E,113nm,0.3s,baz=272,slow=10,SNR=3253						
YBH				Lg	Lg	10 45 30.5	
	comp=E,25nm,0.3s,baz=311,slow=13,SNR=4.0						
YBH	Yreka Blue Hor	1.91	45		Pn	10 45 07.0	+0.4
YBH				IAML		10 45 34.9	
	comp=E,375nm,0.5s						
GPMM	Pine Mountain	1.95	141		Pn	10 45 05.9	-1.2
LGBM	Gray Butte	2.00	61		Pb	10 45 08.9	-1.6
GSGM	Seigler Mounta	2.05	137		Pn	10 45 07.9	-0.5
GDXM	Geysers	2.06	139		Pn	10 45 07.6	-0.9
O03E	Paynes Creek	2.07	92	P	Pn	10 45 08.5	-0.3
	baz=272,SNR=75						
O03E				S	Sn	10 45 33.1	-1.5
	baz=272						
GCRM	Castle Rock Sp	2.12	139		Pn	10 45 08.5	-0.9
FTR	Fort Ross	2.13	150		Pn	10 45 07.6	-1.9
LHEM	Herd Peak	2.13	54		Pb	10 45 10.8	-1.9
MNRC	McLaughlin Min	2.19	133		Pn	10 45 10.2	-0.1
LMEM	Manzanita Entr	2.25	85		Pn	10 45 12.1	+0.8
LCMM	Colby Mountain	2.30	95		Pn	10 45 12.4	+0.4
HATC	Hat Creek Radi	2.36	78		Pn	10 45 13.8	+1.1
SUTB	Sutter Butte	2.39	118		Pn	10 45 11.7	-1.4
K02D	Willamette Mer	2.40	15	P	Pn	10 45 13.1	-0.1
	baz=197,SNR=16						
K02D				S	Sn	10 45 40.7	-1.9
	baz=197						
M04C	Macdoel	2.45	54	P	Pn	10 45 15.1	+1.0
	baz=236,SNR=274						
ORV	Oroville	2.45	109		Pn	10 45 13.3	-0.6
ORV	Oroville	2.45	109		Pn	10 45 14.2	+0.3
ORV				IAML		10 45 46.2	
	comp=N,151nm,1.0s						
ORV				IAML		10 45 46.5	
	comp=E,124nm,0.6s						
L04D	Klamath Falls	2.47	41	P	Pb	10 45 15.9	-2.5
	baz=223,SNR=303						
L04D				S	Sb	10 45 45.6	-3.4
	baz=223						
KEBM	Edson Butte	2.49	3		Pn	10 45 15.0	+0.5
KEBM				IAML		10 45 59.1	
	comp=E,266nm,1.3s						
KEBM				IAML		10 46 00.8	
	comp=N,216nm,0.9s						
HUMO	Hull Mountain	2.51	27		Pn	10 45 14.9	+0.2
HUMO	Hull Mountain	2.51	27	Pn	Pn	10 45 14.8	0.0
HUMO	Hull Mountain	2.51	27	IAML		10 45 49.4	
	comp=E,214nm,0.5s						
MCCM	Marconi Confer	2.57	150		Pn	10 45 13.5	-1.9
MCCM	Marconi Confer	2.57	150	Pn	Pn	10 45 12.9	-2.6
MCCM	Marconi Confer	2.57	150	IAML		10 45 45.6	
	comp=E,184nm,0.8s						
CVS	Carmenet Viney	2.58	141		Pn	10 45 14.2	-1.4
J01E	Myrtle Point	2.81	9	P	Pn	10 45 20.1	+1.3
	baz=190						
J01E				S	Sn	10 45 50.9	-1.8
	baz=190						
FARB	Farallon Islan	2.93	156		Pn	10 45 17.6	-2.8
K04D	Chiloquin, OR	3.05	42	P	Pn	10 45 23.5	+1.3
	baz=224,SNR=89						
BL67	Building 67, L	3.06	144		Pn	10 45 21.1	-1.2
VAK	Adit at Lawren	3.06	144		Pn	10 45 20.8	-1.4
BKS	Berkeley--Byer	3.06	144		Pn	10 45 20.5	-1.8
AFDM	Forest Hills D	3.08	117	Pn	Pn	10 45 22.8	+0.2
CMCM	Mills College	3.17	144		Pn	10 45 22.5	-1.2
BEKR	Beckworth	3.22	98		Pn	10 45 25.6	+1.0
BEKR				IAML		10 46 07.3	
	comp=E,172nm,0.8s						
BEKR				IAML		10 46 09.5	
	comp=N,187nm,0.9s						
J04D	Umpqua Nationa	3.37	31	P	Pn	10 45 27.8	+1.1
	baz=214,SNR=33						
J04D				S	Sn	10 46 06.0	-0.9
	baz=214						
I03D	Drain, OR	3.42	14	P	Pn	10 45 28.0	+0.8
	baz=196,SNR=76						
I03D				S	Sn	10 46 05.1	-2.8
	baz=196						
JRSC	Jasper Ridge	3.46	149		Pn	10 45 26.0	-1.8
MOD	Modoc Plateau	3.52	63	Pn	Pn	10 45 28.9	+0.2
MOD				IAML		10 46 52.0	
	comp=E,74nm,1.1s						
K05A	Summer Lake	3.58	48	Pn	Pn	10 45 30.6	+1.0
K05A				IAML		10 46 52.7	
	comp=N,112nm,2.3s						
K05A				IAML		10 46 56.3	
	comp=E,80nm,1.3s						
RUBR	Rubicon Trail	3.61	110		Pn	10 45 32.1	+2.1
I04A	Tendick Farm,	3.75	24	P	Pn	10 45 32.7	+1.0
	baz=206,SNR=24						
I04A				S	Sn	10 46 14.8	-1.2
	baz=206						
I02D	Swisshome	3.75	7	P	Pn	10 45 32.9	+1.1
	baz=189,SNR=16						
I02D				S	Sn	10 46 13.3	-2.7
	baz=189						
MHC	Mount Hamilton	3.77	143		Pn	10 45 31.0	-1.2
J05D	Fort Rock, OR	3.79	39	P	Pn	10 45 34.0	+1.5
	baz=222,SNR=82						
VCNR	Virginia City	3.89	105		Pn	10 45 35.3	+1.4
VCNR				IAML		10 46 55.5	
	comp=N,91nm,1.4s						
CMB	Columbia Colle	3.97	125	Pn	Pn	10 45 34.9	+0.1
PAHR	Pah Rah Range	3.99	98	Pn	Pn	10 45 36.7	+1.5
PAHR				IAML		10 46 37.7	
	comp=E,63nm,1.2s						
PAHR				IAML		10 47 01.0	
	comp=N,59nm,2.1s						
PNTR	Pine Nut	4.00	107	Pn	Pn	10 45 36.7	+1.3
HCOM	Corn Cob Canyo	4.12	147		Pn	10 45 34.7	-2.1
HFEM	San Felipe	4.17	143		Pn	10 45 36.2	-1.4
PINE	Pine Mountain	4.32	37	Pn	Pn	10 45 41.5	+1.8
PINE				IAML		10 46 50.2	
	comp=N,39nm,1.1s						
PINE				IAML		10 46 50.6	
	comp=E,47nm,2.5s						
SAO	San Andreas Ge	4.34	145	Pn	Pn	10 45 38.4	-1.4
H04D	Lebanon	4.34	17	P	Pn	10 45 41.4	+1.6
	baz=199						
H04D				S	Sn	10 46 29.8	-0.6
	baz=199						
WAKR	Walker	4.35	114		Pn	10 45 41.5	+1.3
WAKR				IAML		10 46 57.4	
	comp=E,48nm,1.0s						
BJCM	Johnson Can.	4.54	146		Pn	10 45 40.4	-2.2
I05D	Terrebonne, OR	4.60	30	P	Pn	10 45 44.9	+1.5
	baz=212						
I05D				S	Sn	10 46 36.4	-0.6
	baz=212						
HAST	Hastings Reser	4.61	149		Pn	10 45 41.2	-2.5
H04A	Detroit Lake	4.63	21	Pn	Pn	10 45 46.0	+2.2
H04A				IAML		10 46 41.1	
	comp=N,62nm,0.6s						
H04A				IAML		10 46 41.1	
	comp=E,72nm,0.5s						
WVOR	Wild Horse Val	4.87	63	Pn	Pn	10 45 47.1	-0.1
RYN	Ryan	4.95	109		Pn	10 45 49.3	+0.9
RYN				IAML		10 47 35.9	
	comp=E,33nm,2.5s						
MDPB	Devils Postpil	5.04	121		Pn	10 45 52.5	+2.7
MDPB				IAML		10 47 24.9	
	comp=N,26nm,0.9s						
MDPB				IAML		10 47 40.0	
	comp=E,27nm,1.3s						
PMPB	Monarch Peak	5.08	144	Pn	Pn	10 45 49.2	-0.9
PMPB				IAML		10 46 54.4	
	comp=E,45nm,0.8s						
PMPB				IAML		10 47 04.5	
	comp=N,52nm,1.1s						
PAPM	Alder Peak	5.11	150		Pn	10 45 48.4	-2.1
LHV	Little Huntoon	5.12	113		Pn	10 45 52.6	+2.1
NVAR	Mina Array Bea	5.19	110	Pn	Pn	10 45 52.6	+1.0
	comp=N,2.1nm,0.3s,baz=287,slow=14,SNR=51						
NVAR				Lg	Lg	10 47 10.8	
	comp=N,0.7nm,0.3s,baz=309,slow=36,SNR=3.4						
NVAR				LR	LR	10 48 29.1	
	comp=N,123nm,19.6s,baz=242,slow=45						
NVAR	Mina Array Bea	5.19	110	Pn	Pn	10 45 53.1	+1.4
I07A	Izee	5.24	43	Pn	Pn	10 45 54.6	+2.3
I07A				IAML		10 46 60.0	
	comp=E,22nm,4.9s						
NV11	Mina Array Sit	5.29	110	Pn	Pn	10 45 54.2	+1.2
NV11				IAML		10 47 44.5	
	comp=N,27nm,2.2s						
NV11				IAML		10 48 15.8	
	comp=E,24nm,3.1s						
G05D	Wamic, OR	5.39	25	P	Pn	10 45 55.7	+1.3
	baz=207						
VOG	Valley Oaks Go	5.71	134	P	Pn	10 45 59.6	+0.8
	baz=316						
PAGB	Antelope Grade	5.73	143		Pn	10 45 57.8	-1.3
TPH	Tonopah	6.11	110		Pn	10 46 05.3	+1.0
SMMC	Simmler	6.19	143	P	Pn	10 46 04.1	-1.2
	baz=325						
SMMC				S	Sn	10 47 15.6	-0.6
	baz=325						
E03A	Lebam	6.20	6	Pn	Pn	10 46 06.8	+1.5
G08A	Pilot Rock	6.38	38	Pn	Pn	10 46 12.1	+4.2
PKM	Mcpherson Peak	6.63	144	P	Pn	10 46 09.9	-1.6
	baz=326						
PKM				S	Sn	10 47 24.6	-2.6
	baz=326						
LON	Longmire	6.66	16		Pn	10 46 13.3	+1.6
ISA	Isabella, Lake	6.70	133	P	Pn	10 46 14.0	+1.6
	baz=316,SNR=76						
ISA	Isabella, Lake	6.70	133	Pn	Pn	10 46 14.3	+2.0
ARVC	Arvin	6.91	138	P	Pn	10 46 15.0	-0.1
	baz=320,SNR=37						
BMO	Blue Mountains	6.94	48	Pn	Pn	10 46 16.7	+1.1
HAWA	Hanford	7.01	29	Pn	Pn	10 46 19.7	+3.1
ELK	Elko	7.07	84	Pn	Pn	10 46 18.6	+1.1
	comp=E,0.2nm,0.3s,baz=286,slow=13,SNR=10						
ELK				LR	LR	10 48 57.9	
	comp=E,134nm,19.4s,baz=262,slow=38						
ELK	Elko	7.07	84	Pn	Pn	10 46 18.8	+1.3
MFID	Camas Ranch	7.15	62	Pn	Pn	10 46 20.0	+1.4
E08A	Dider Farm, El	7.28	31		Pn	10 46 21.8	+1.7
LRMC	Laurel Mtn Rad	7.28	130	P	Pn	10 46 21.1	+0.7
	baz=314,SNR=12						
OSI	Osito Audit: C	7.37	140	P	Pn	10 46 22.8	+1.3
	baz=322,SNR=5.9						
LTY	Liberty	7.41	21		Pn	10 46 24.5	+2.4
EDW2	Edwards Air Fo	7.54	135	P	Pn	10 46 25.1	+1.2
	baz=318,SNR=24						
E09A	Wood Farm, Sta	7.68	35	Pn	Pn	10 46 27.5	+1.8
F10A	Beach Ranch, E	7.71	41		Pn	10 46 30.5	+4.2
GSC	Goldstone, Bar	7.93	127	P	Pn	10 46 30.9	+1.7
	baz=311,SNR=21						
PASC	Pasadena Art C	7.99	139	Pn	Pn	10 46 31.3	+1.3
MWC	Mount Wilson	8.01	138		Pn	10 46 31.1	+0.6
RRX	Edison Barstow	8.11	130	P	Pn	10 46 33.1	+1.5
	baz=314,SNR=5.9						
HLID	Hailey	8.16	64	P	Pn	10 46 35.5	+3.0
	baz=250,SNR=27						
HLID	Hailey	8.16	64	Pn	Pn	10 46 36.8	+4.3
BFSC	Mount Baldy Ra	8.21	136	P	Pn	10 46 33.9	+0.8
	baz=320,SNR=14						
HEC	Hector,Ludlow	8.53	128	P	Pn	10 46 39.0	+1.5
	baz=312,SNR=33						
BBRC	Big Bear Solar	8.59	133	P	Pn	10 46 38.7	+0.3
	baz=317						
B08A	Colville Reser	8.79	23	Pn	Pn	10 46 43.0	+2.1
DUG	Dugway, Tooele	8.94	87	P	Pn	10 46 44.5	+1.4
	baz=275,SNR=9.3						
DUG	Dugway, Tooele	8.94	87	Pn	Pn	10 46 45.6	+2.4
MURC	Murrieta	8.94	137	P	Pn	10 46 43.7	+0.6
	baz=321,SNR=7.0						
GMRC	Granite Mounta	8.97	126	P	Pn	10 46 45.3	+1.7
	baz=311						
BELC	Belle Mtn. Jos	9.31	131	P	Pn	10 46 49.1	+1.0
	baz=315,SNR=18						
PFO	Pinyon Flats O	9.33	134	Pn	Pn	10 46 49.7	+1.1
	comp=E,3.2nm,0.3s,baz=321,slow=10,SNR=28						
PFO				LR	LR	10 50 35.6	
	comp=E,79nm,18.9s,baz=324,slow=39						
PFO	Pinyon Flats O	9.33	134	P	Pn	10 46 49.3	+0.8
	baz=318,SNR=11						
PFO	Pinyon Flats O	9.33	134	Pn	Pn	10 46 49.6	+1.1
NEW	Newport	9.49	31	Pn	Pn	10 46 53.9	+3.4
	comp=E,0.7nm,0.3s,baz=218,slow=13,SNR=11						
NEW				LR	LR	10 50 57.8	
	comp=E,121nm,19.5s,baz=225,slow=41						
IRM	Iron Mountain	9.71	127	P	Pn	10 46 54.5	+0.9
	baz=312						
BC3	Big Chuckawall	9.87	130	P	Pn	10 46 56.3	+0.4
	baz=315,SNR=6.6						
MONP2	Monument Peak	9.90	137	P	Pn	10 46 57.2	+0.9
	baz=321,SNR=7.0						
MSO	Missoula	10.01	46	P	Pn	10 47 01.5	+3.8
	baz=234,SNR=37						
MSO	Missoula	10.01	46	Pn	Pn	10 47 01.8	+4.1
GLA	Glamis	10.67	130	Pn	Pn	10 47 07.5	+0.8
BOZ	Bozeman (W)	10.77	57	P	Pn	10 47 08.3	+0.1
	baz=246,SNR=5.6						
ESJX	Sierra Juarez	10.84	138	Pn	Pn	10 47 09.6	+0.4
HRY	Holter Researc	11.16	51	Pn	Pn	10 47 16.2	+2.7
BW06	Boulder Array	11.45	73	P	Pn	10 47 17.9	+0.3
	baz=263,SNR=5.9						
PDAR	Pinedale Array	11.45	73	Pn	Pn	10 47 21.9	+4.3
	comp=E,0.3nm,0.3s,baz=273,slow=8.7,SNR=18						
PDAR				LR	LR	10 51 57.3	
	comp=E,84nm,21.8s,baz=270,slow=39						
EGMT	Eagleton	13.04	49	Pn	Pn	10 47 41.5	+2.4
SDCO	Great Sand Dun	15.00	94	P	P	10 48 08.6	-3.0
	baz=286,SNR=8.4						
ANMO	Albuquerque	15.28	105	Pn	Pn	10 48 11.3	+1.5
	comp=E,0.1nm,0.3s,baz=318,slow=6.9,SNR=4.1						
ANMO				LR	LR	10 54 13.7	
	comp=E,102nm,21.4s,baz=296,slow=38						
RSSD	Black Hills	15.61	69	Pn	Pn	10 48 15.2	+1.2
KSCO	Kaye Shedlock’	16.89	88	P	Pn	10 48 28.3	-2.1
	baz=281						
TXAR	Lajitas Array	20.30	116	P	Pn	10 49 11.9	0.0
	comp=E,0.8nm,0.9s,baz=302,slow=8.6,SNR=6.2						
FFC	Flin Flon	20.77	39	P	P	10 49 15.2	+0.4
FFC				IAmb	IAmb	10 49 16.1	
	comp=Z,8.0nm,0.8s						
ECSD	EROS Data Cent	20.94	72	P	P	10 49 13.6	-3.1
	baz=270						
ECSD	EROS Data Cent	20.94	72	P	P	10 49 14.3	-2.3
KSU1	Kansas State U	21.46	84	P	P	10 49 25.2	+2.9
	baz=282,SNR=5.4						
AGMN	Agassiz Nation	21.87	59	P	P	10 49 26.8	+0.2
	baz=259						
ULM	Lac du Bonnet	22.30	54	P	P	10 49 29.6	-1.5
	comp=Z,3.9nm,0.7s,baz=260,slow=10.0,SNR=9.6						
ULM				LR	LR	10 57 40.1	
	comp=Z,46nm,21.0s,baz=330,slow=35						
ULM	Lac du Bonnet	22.30	54	P	P	10 49 32.0	+0.8
ULM				IAmb	IAmb	10 49 33.7	
	comp=Z,35nm,1.6s						
YKA	Yellowknife Ar	22.93	12	P	P	10 49 39.2	+1.4
	comp=Z,0.6nm,0.7s,baz=198,slow=11,SNR=7.8						
YKA				LR	LR	10 59 18.5	
	comp=Z,75nm,18.0s,baz=0.0,slow=39						
YKA	Yellowknife Ar	22.93	12	P	P	10 49 39.2	+1.4
B35A	Bob, Littlefor	23.28	60	P	P	10 49 41.7	+0.2
B35A				IAmb	IAmb	10 49 58.6	
	comp=Z,23nm,1.4s						
FCC	Fort Churchill	26.61	36	P	P	10 50 10.8	-1.3
FCC				IAmb	IAmb	10 50 17.3	
	comp=Z,3.6nm,0.6s						
ILAR	Eielson Array	27.65	339	P	P	10 50 23.3	+1.9
	comp=Z,0.7nm,1.0s,baz=174,slow=9.2,SNR=4.8						
TTA	Tatalina	29.33	331	P	P	10 50 38.1	+1.7
TTA				IAmb	IAmb	10 51 40.2	
	comp=Z,31nm,1.9s						
WVNY	West Valley, N	34.18	71	P	P	10 51 19.7	+0.5
M56A	Emporium	34.69	73	P	P	10 51 24.1	+0.4
TRQ	Mont Tremblant	36.32	64	P	P	10 51 38.8	+1.1
PETK	Petropavlovsk-	52.25	312	P	P	10 53 45.2	+0.3
	comp=Z,4.6nm,1.0s,baz=84,slow=9.1,SNR=1.9						
PETK	Petropavlovsk-	52.25	312	P	P	10 53 45.2	+0.3
H11N3	WAKE ISLAND Hy	61.37	272	T	T	12 01 30.5	
	baz=53,slow=75,SNR=47						
H11N2	WAKE ISLAND Hy	61.37	272	T	T	12 01 28.5	
	baz=53,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	61.38	272	T	T	12 01 27.4	
	baz=53,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	62.23	271	T	T	12 02 33.3	
	baz=54,slow=75,SNR=34						
H11S2	WAKE ISLAND Hy	62.24	271	T	T	12 02 37.0	
	baz=54,slow=75,SNR=31						
H11S3	WAKE ISLAND Hy	62.25	271	T	T	12 02 36.1	
	baz=54,slow=75,SNR=27						
ZALV	Zalesovo Beam	82.71	343	LR	LR	11 40 18.5	
	comp=Z,38nm,18.6s,baz=284,slow=40						
HHC	Hu-ho-hao-te	84.43	321	*e*P	P	10 57 07.1	+0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
WMQ	Urumqi	91.29	337	*e*P	P	10 57 41.0	+1.4

NEIC ***14*** *10:44:54.7±1.2, 19°.2N±0°.1×145°.3E±0°.1, h267^{km}±9^{km}, mb4.1/29, Error ellipse: s-maj=16.6km s-min=15.3km az=69.0*

IDC ***14*** *10:44:55.8±4.6, 18°.97N×145°.31E, h297^{km}±45^{km}, mb3.4/18, mb1 3.5/19, mb1mx3.3/52, mbtmp4.0/19, Error ellipse: s-maj=19.8km s-min=16.8km az=120.0*

ISC 14 10:44:51.0±0.6**, 18°.88N**±0°.08×**145°.2E**±0°.1**, h250**^{km}**, n57, σ0^{s}.99**/56**, mb3.9**/29**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.27	184	S	S	10 47 11.1	-2.2
	10nm,0.3s,baz=17,slow=19,SNR=3.7						
GUMO	Guam	5.27	184	Pn	Pn	10 46 18.4	+8.2
JCJ	Chichijima	8.64	342	Pn	Pn	10 46 51.7	-0.6
PATS	Pohnpei	17.48	132		Pn	10 48 41.6	+1.1
JMN	Monobe	17.93	328	P	P	10 48 40.4	-2.4
JMN				IAmb	IAmb	10 48 59.1	
	comp=Z,24nm,1.3s						
JGF	Kuroka	18.05	339	P	P	10 48 44.2	+0.1
JGF				IAmb	IAmb	10 48 46.7	
	comp=Z,7.7nm,0.7s						
MJAR	Matsushiro Arr	18.65	342	P	P	10 48 50.0	-0.5
	comp=Z,0.1nm,0.3s,baz=171,slow=11,SNR=4.3						
MJAR	Matsushiro Arr	18.65	342	P	P	10 48 49.9	-0.6
JMM	Marumori	19.31	349	P	P	10 48 56.9	-0.6
JSD	Sado	20.03	344	P	P	10 49 05.9	+0.6
JTM	Tenmabayashi	22.12	352	P	P	10 49 27.0	+1.0
KSRS	Korea Array	23.91	324	P	P	10 49 42.9	+0.7
	comp=Z,0.5nm,0.6s,baz=140,slow=8.7,SNR=4.3						
ASAJ	Asahikawa	25.26	356	P	P	10 49 55.7	+1.4
	comp=Z,6.0nm,0.7s,baz=194,slow=13,SNR=8.0						
JKA	Kamikawa-asahi	25.26	356	P	P	10 49 55.8	+1.5
KLR	Kul'dur	32.17	343	P	P	10 50 54.3	-1.1
	comp=Z,0.9nm,0.4s,baz=236,slow=5.4,SNR=5.2						
PETK	Petropavlovsk-	35.51	13	P	P	10 51 24.6	+0.6
	comp=Z,1.4nm,0.7s,baz=208,slow=8.9,SNR=5.7						
SONM	Songino Array	42.72	321	P	P	10 52 24.5	+0.7
	comp=Z,0.7nm,0.5s,baz=135,slow=10,SNR=6.7						
SONM	Songino Array	42.72	321	P	P	10 52 24.4	+0.7
ASAR	Alice Springs	43.70	195	P	P	10 52 33.0	+1.3
	comp=Z,0.2nm,0.3s,baz=21,slow=6.2,SNR=7.1						
SEY	Seymchan	44.29	5	P	P	10 52 36.0	+0.1
	comp=Z,1.5nm,0.6s,baz=138,slow=9.9,SNR=5.4						
UNV	Unalaska Valle	50.76	35	P	P	10 53 24.9	-0.7

AKUT	**Akutan**	**51.28**	**35**	P	**P**	**10 53 29.0**	**-0.4**
SDPT	**Sand Point**	**54.58**	**35**	P	**P**	**10 53 53.6**	**+0.2**
ZALV	**Zalesovo Beam**	**57.60**	**323**	P	**P**	**10 54 14.6**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=120,slow=10,SNR=2.6						
MK31	**Makanchi Array**	**58.01**	**314**	P	**P**	**10 54 19.0**	**+1.2**
MKAR	**Makanchi Array**	**58.01**	**314**	P	**P**	**10 54 18.8**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=88,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	**58.01**	**314**	P	**P**	**10 54 19.0**	**+1.1**
MAKZ	**Makanchi**	**58.23**	**314**	P	**P**	**10 54 20.6**	**+1.3**
MAKZ				IAmb	IAmb	10 54 21.8	
	comp=Z,2.0nm,0.6s						
TTA	**Tatalina**	**59.30**	**27**	P	**P**	**10 54 25.7**	**-0.7**
TTA				IAmb	IAmb	10 54 37.4	
	comp=Z,6.2nm,1.4s						
KURK	**Kurchatov**	**60.84**	**318**	P	**P**	**10 54 37.3**	**+0.4**
KURK				IAmb	IAmb	10 54 39.3	
	comp=Z,2.0nm,0.9s						
KURBB	**Kurchatov Arra**	**60.88**	**318**	P	**P**	**10 54 37.1**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=94,slow=7.4,SNR=9.2						
SKT	**Skwentna**	**61.00**	**29**	P	**P**	**10 54 37.3**	**-0.6**
PMR	**Palmer**	**62.02**	**30**	P	**P**	**10 54 43.9**	**-0.7**
ILAR	**Eielson Array**	**63.68**	**26**	P	**P**	**10 54 54.0**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=255,slow=5.3,SNR=19						
ILAR	**Eielson Array**	**63.68**	**26**	P	**P**	**10 54 54.4**	**-1.2**
BMAR	**Burnt Mountain**	**65.13**	**24**	P	**P**	**10 55 03.6**	**-1.3**
BCAR	**Beaver Creek A**	**65.64**	**29**	P	**P**	**10 55 08.1**	**-0.2**
EGAK	**Eagle**	**66.11**	**27**	P	**P**	**10 55 11.5**	**+0.3**
KKAR	**Karatay Array**	**66.31**	**310**	P	**P**	**10 55 13.9**	**+1.1**
HYT	**Haines Junctio**	**67.51**	**31**	P	**P**	**10 55 20.5**	**+0.3**
HYT				IAmb	IAmb	10 55 21.8	
	comp=Z,6.6nm,1.0s						
EPYK	**Eagle Plains**	**68.08**	**25**	P	**P**	**10 55 23.9**	**+0.3**
EPYK				IAmb	IAmb	10 55 34.2	
	comp=Z,4.3nm,1.5s						
INK	**Inuvik**	**69.38**	**23**	P	**P**	**10 55 30.8**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=248,slow=3.4,SNR=4.6						
C36M	**Paulatuk**	**72.75**	**22**	P	**P**	**10 55 51.3**	**-0.3**
C36M				IAmb	IAmb	10 55 52.0	
	comp=Z,6.7nm,1.1s						
AKTO	**Aktyubinsk**	**73.93**	**318**	P	**P**	**10 55 59.1**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=70,slow=6.4,SNR=3.6						
EUNU	**Eureka**	**77.61**	**8**	P	**P**	**10 56 19.7**	**+0.5**
EUNU				IAmb	IAmb	10 56 20.2	
	comp=Z,2.6nm,0.7s						
YKA	**Yellowknife Ar**	**78.04**	**28**	P	**P**	**10 56 21.4**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=292,slow=4.5,SNR=28						
LTY	**Liberty**	**79.09**	**44**	P	**P**	**10 56 27.9**	**0.0**
LTY				IAmb	IAmb	10 56 34.6	
	comp=Z,8.5nm,1.4s						
RES	**Resolute Bay**	**79.36**	**14**	P	**P**	**10 56 29.0**	**+0.4**
K05A	**Summer Lake**	**80.20**	**48**	P	**P**	**10 56 34.8**	**+0.7**
K05A				IAmb	IAmb	10 56 51.8	
	comp=Z,5.8nm,1.3s						
E09A	**Wood Farm, Sta**	**80.96**	**44**	P	**P**	**10 56 38.5**	**+0.7**
E09A				IAmb	IAmb	10 56 38.6	
	comp=Z,1.8nm,0.7s						
ARCES	**ARCESS Array B**	**82.18**	**342**	P	**P**	**10 56 43.0**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=56,slow=3.1,SNR=4.2						
NVAR	**Mina Array Bea**	**83.38**	**52**	P	**P**	**10 56 51.1**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=268,slow=5.6,SNR=21						
BOZ	**Bozeman (W)**	**85.54**	**43**	P	**P**	**10 57 01.1**	**-0.2**
BOZ				IAmb	IAmb	10 57 02.5	
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**86.53**	**335**	P	**P**	**10 57 03.6**	**-1.9**
	comp=Z,2.6nm,0.8s,baz=69,slow=2.7,SNR=12						
FINES	**FINESS Array B**	**86.53**	**335**	P	**P**	**10 57 04.8**	**-0.8**
PDAR	**Pinedale Array**	**88.02**	**45**	P	**P**	**10 57 10.6**	**-2.9**
	comp=Z,0.2nm,0.4s,baz=190,slow=0.9,SNR=3.7						
FCC	**Fort Churchill**	**88.70**	**27**	P	**P**	**10 57 15.7**	**-0.2**

IDC ***14*** *11:23:54.7±1.9, 3°.56S×129°.84E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.7/38, mbtmp4.0/5, Error ellipse: s-maj=111.1km s-min=28.7km az=68.0*

DJA ***14*** *11:23:58.4±0.3, 4°S±3°×12°9E±°, h10^{km}, M3.8/9, mb3.9/1, MLv3.8/9*

ISC 14 11:24:00.8±0.9**, 3°.78S**±0°.07×**129°.36E**±0°.06**, h35**^{km}**, n11, σ1^s.40**/14**, mb3.9**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.61**	**315**	P	**Pn**	**11 24 11.0**	**-1.9**
MSAI				S	**Sn**	**11 24 19.0**	**-2.5**
BNDI	**Bandanaira**	**0.92**	**144**	P	**Pn**	**11 24 16.2**	**-1.1**
BNDI				S	**Sn**	**11 24 28.6**	**-0.7**
NLAI	**Namlea**	**2.32**	**283**	P	**Pn**	**11 24 38.8**	**+2.3**
FAKI	**Fak Fak**	**3.01**	**74**	P	**Pn**	**11 24 46.6**	**+0.6**
SWI	**Sorong**	**3.46**	**33**	P	**Pn**	**11 24 52.8**	**+0.6**
SANI	**Sanana**	**3.78**	**297**	P	**Pn**	**11 24 55.8**	**-0.8**
SANI				S	**Sn**	**11 25 40.9**	**+1.0**
ASAR	**Alice Springs**	**20.26**	**168**	P	**P**	**11 28 33.1**	**-0.3**
	2.5nm,0.8s,baz=344,slow=10.0,SNR=46						
CMAR	**Chiang Mai Arr**	**37.23**	**307**	P	**P**	**11 31 10.3**	**+1.0**
	0.6nm,0.6s,baz=134,slow=6.5,SNR=4.2						
MKAR	**Makanchi Array**	**65.20**	**326**	P	**P**	**11 34 38.6**	**-0.1**
	1.5nm,0.5s,baz=114,slow=8.3,SNR=26						
ZALV	**Zalesovo Beam**	**68.43**	**334**	P	**P**	**11 34 58.2**	**-0.8**
	0.7nm,0.4s,baz=111,slow=6.5,SNR=5.2						
AKTO	**Aktyubinsk**	**81.15**	**322**	P	**P**	**11 36 13.2**	**+0.5**
	0.7nm,0.6s,baz=135,slow=8.6,SNR=4.7						

HEL 14 11:33:58.2±0.3**, 61°.02N**×**28°.18E, h0**^{km}**, Explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.57**	**213**	*e*P	Pg	11 34 08.4	-0.6
VJF				*e*S	Sg	11 34 16.0	-0.4
FIA1	**FINESS Array S**	**1.10**	**294**	*e*P	Pg	11 34 17.7	-1.6
FIA1				*e*S	Sg	11 34 32.3	-1.2
PVF	**Pernaja**	**1.23**	**248**	*e*S	Sg	11 34 36.0	-1.6
KAF	**Kangasniemi**	**1.42**	**322**	*e*P	Pn	11 34 23.7	-1.5
KAF				*e*S	Sg	11 34 41.8	-2.0
NUR	**Nurmijrvi**	**1.81**	**255**	*e*P	Pn	11 34 29.8	-0.7
KEF	**Keuruu**	**1.96**	**308**	*e*P	Pn	11 34 33.0	+0.3
MEF	**Metsahovi**	**2.03**	**248**	*e*P	Pn	11 34 33.1	-0.4

EST 14 11:34:11.7±0.1**, 59°.31N**×**27°.58E, h0**^{km}**, ML1.3**(HEL)**, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.83**	**280**	*e*SB	Sg	11 34 38.3	+0.1
VSU	**Vasula**	**0.95**	**208**	*e*P	Pg	11 34 28.9	-1.1
VJF	**Virojoki**	**1.24**	**359**	*e*P	Pg	11 34 33.9	-1.4
VJF				*e*SB	Sg	11 34 50.1	-1.2
PVF	**Pernaja**	**1.51**	**326**	*e*S	Sg	11 34 58.0	-2.3
MEF	**Metsahovi**	**1.85**	**301**	*e*PG	Pn	11 34 45.0	+0.4
MEF				*e*SG	Sn	11 35 09.1	+0.4
MEF				MSG		11 35 10.1	
	comp=Z,1.4nm,0.1s						
NUR	**Nurmijrvi**	**1.91**	**311**	*e*PG	Pn	11 34 45.8	+0.4
NUR				*e*SG	Sn	11 35 10.4	+0.4
MTSE	**Matsula**	**2.04**	**255**	*e*PG	Pn	11 34 48.0	+0.8
MTSE				*e*SG	Sb	11 35 14.7	-0.6
FIA0	**FINESS Array S**	**2.27**	**341**	*e*PB	Pn	11 34 51.3	+0.9
FIA0				*e*SG	Sb	11 35 21.6	-0.4
FIA0				MSG		11 35 23.1	
	comp=Z,0.7nm,0.1s						
FIA1	**FINESS Array S**	**2.27**	**342**	*e*PB	Pn	11 34 51.4	+1.0
FIA1				*e*SG	Sb	11 35 21.6	-0.4
FIA1				MSG		11 35 23.0	
	comp=Z,1.2nm,0.1s						
KAF	**Kangasniemi**	**2.88**	**348**	*e*SG	Sb	11 35 40.0	+0.2

KRNET 14 11:39:20.8±0.1**, 42°.24N**×**76°.16E, h30**^{km}**, mb2.1, 12C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.06**	**84**	⇑*i*P	Pb	11 39 25.7	-0.5
	baz=84						
ULHL				⇑*i*S	Sb	11 39 29.2	-0.8
	baz=84						
BOOM	**Boomskoye usch**	**0.30**	**327**	⇓*i*P	Pb	11 39 28.8	+0.4
	baz=97						
BOOM				⇓*i*S	Sn	11 39 38.1	+3.2
	baz=97						
KDJ	**Kajisay**	**0.77**	**98**	⇑*i*P	Pn	11 39 25.9	-10
	baz=2.0						
KDJ				⇑*i*S	Sb	11 39 32.3	-14
	baz=2.0						
TKM2	**Tokmak 2**	**0.80**	**329**	⇓*i*P	Pn	11 39 36.1	-0.1
	baz=29						
TKM2				⇓*i*S	Sb	11 39 47.0	+0.1
	baz=29						
KBK	**Karagaybulak**	**0.99**	**295**	⇑*e*P	Pb	11 39 39.4	-0.1
	baz=95						
KBK				⇑*i*S	Sb	11 39 52.9	+0.6
	baz=95						
UCH	**Uchtor**	**1.22**	**270**	⇓*i*P	Pb	11 39 43.3	-0.3
	baz=70						
UCH				⇓*i*S	Sb	11 39 59.5	+0.3
	baz=70						
ANVS	**Anan'yevo**	**1.24**	**63**	⇑*i*P	Pn	11 39 34.5	-7.8
	baz=52						
ANVS				⇑*i*S	Sn	11 39 47.1	-11
	baz=52						
ARLS	**Aral**	**1.42**	**255**	⇑*i*P	Pb	11 39 47.1	+0.4
	baz=59						
ARLS				⇑*i*S	Sb	11 40 10.2	+5.7
	baz=59						
AML	**Almayashu**	**1.83**	**267**	⇑*i*P	Pb	11 39 52.5	-1.4
	baz=67						
AML				⇑*i*S	Sb	11 40 16.2	-0.4
	baz=67						

IDC ***14*** *11:55:39.0±3.2, 9°.40S×112°.87E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.5/42, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=172.7km s-min=24.8km az=52.0*

DJA ***14*** *11:55:46.6±0.8, 9°S±4°×11°3E±°, h13^{km}±6^{km}, M3.8/14, MLv3.8/14*

ISC 14 11:55:45.1±1.0**, 9°.55S**±0°.08×**112°.84E**±0°.05**, h36**^{km}**, n17, σ2^s.10**/21**, mb3.8**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.40**	**25**	P	**Pn**	**11 56 08.7**	**+0.6**
GMJI				S	**Sn**	**11 56 25.2**	**-0.2**
JAGI	**Jajag, Banyuwa**	**1.69**	**51**	P	**Pn**	**11 56 12.7**	**+0.6**
JAGI				S	**Sn**	**11 56 33.3**	**+0.9**
PWJI	**Pagerwojo**	**1.83**	**326**	P	**Pn**	**11 56 15.0**	**+1.0**
PWJI				S	**Sn**	**11 56 37.0**	**+1.1**
ABJI	**Asem Bagus**	**2.22**	**39**	P	**Pn**	**11 56 22.3**	**+2.8**
ABJI				S	**Sn**	**11 56 47.0**	**+1.3**
DNP	**Denpasar**	**2.50**	**70**	P	**Pn**	**11 56 25.5**	**+2.3**
NGJI	**Ngawi**	**2.56**	**328**	P	**Pn**	**11 56 26.9**	**+2.9**
GRJI	**Gresik**	**2.64**	**352**	P	**Pn**	**11 56 26.1**	**+0.9**
KMMI	**Kalianget**	**2.72**	**24**	P	**Pn**	**11 56 27.7**	**+1.4**
SRBI	**Singaraja**	**2.76**	**58**	P	**Pn**	**11 56 29.2**	**+2.3**
UGM	**Wanagama**	**2.80**	**305**	P	**Pn**	**11 56 29.2**	**+1.7**
TWSI	**Taliwang, Sumb**	**4.08**	**79**	P	**Pn**	**11 56 48.4**	**+3.4**
CMJI	**Cimerak**	**4.68**	**292**	P	**Pn**	**11 56 57.5**	**+4.3**
PLAI	**Plampang**	**4.93**	**82**	P	**Pn**	**11 56 58.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**15.05**	**126**	Pn	**Pn**	**11 59 13.7**	**-1.6**
	0.1nm,0.3s,baz=308,slow=12,SNR=3.5						
ASAR	**Alice Springs**	**24.54**	**127**	P	**P**	**12 01 01.4**	**-0.2**
	1.9nm,0.7s,baz=304,slow=8.9,SNR=37						
SONM	**Songino Array**	**57.41**	**355**	P	**P**	**12 05 28.6**	**-1.6**
	0.2nm,0.4s,baz=180,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**62.36**	**337**	P	**P**	**12 06 02.5**	**-1.5**
	0.6nm,0.4s,baz=149,slow=7.2,SNR=13						

IDC ***14*** *12:02:20.9±2.8, 35°.04N×135°.57E, h12^{km}±18^{km}, mb3.4/6, mb1 3.5/11, mb1mx3.4/47, mbtmp3.4/11, ML3.0/5, MS3.1/4, Ms1 3.1/4, ms1mx2.8/25, Error ellipse: s-maj=20.3km s-min=13.0km az=159.0*

NIED ***14*** *12:02:21.6, 35°.03N×135°.53E, h15^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.41; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-4.83; $M_{r\theta}$-1.03; $M_{\theta\phi}$-1.03; $M_{\phi r}$1.34; Fault plane solution: $M_0$5.03000×10^{14} NP1: ϕ_s355.00000°, δ54.00000°, λ70.00000°. NP2: ϕ_s207.00000°, δ41.00000°, λ115.00000°.*

JMA ***14*** *12:02:21.6, 35°.03N×135°.53E, h15^{km}, M3.9 Broadband fault plane solution: P waves. NP1:ϕ_s216.00000°, δ41.00000°, λ128.00000°. NP2:ϕ_s350.00000°, δ59.00000°, λ62.00000°. Principal axes: T Plg64.0000°, Azm211.0000°; N Plg24.0000°, Azm6.0000°; P Plg10.0000°, Azm100.0000°;*

JMA Felt III J1.

ISC 14 12:02:21.5±0.9**, 35°.02N**±0°.03×**135°.53E**±0°.03**, h15**^{km}±6^{km}**, n22, σ0^s.87**/34**, mb3.5**/6**, 2C-7D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.28**	**337**	⇓P	**Pg**	**12 02 27.5**	**0.0**
JWT				S	**Sg**	**12 02 31.3**	**-0.2**
JHE	**Heguri**	**0.39**	**161**	⇓P	**Pg**	**12 02 29.4**	**+0.1**
JHE				S	**Sg**	**12 02 34.9**	**+0.3**
JKS	**Kasai**	**0.57**	**266**	⇓P	**Pg**	**12 02 32.4**	**-0.2**
JKS				S	**Sg**	**12 02 40.0**	**-0.2**
JKY	**Yasaka**	**0.70**	**330**	⇓P	**Pg**	**12 02 34.7**	**-0.5**
JKY				S	**Sg**	**12 02 43.9**	**-0.5**
JAWN	**Awajishima-nag**	**0.75**	**224**	⇑P	**Pg**	**12 02 35.7**	**-0.3**
JAWN				S	**Sg**	**12 02 45.8**	**0.0**
TSUJ	**Tsu 2**	**0.79**	**113**	⇓P	**Pg**	**12 02 36.2**	**-0.6**
JWY	**Kouya**	**0.80**	**177**	⇑P	**Pg**	**12 02 36.6**	**-0.5**
JWY				S	**Sg**	**12 02 47.3**	**-0.3**
JKSM	**Kasumi**	**0.91**	**309**	⇓P	**Pg**	**12 02 38.3**	**-0.8**
JKSM				S	**Sg**	**12 02 50.1**	**-0.9**
JKN2	**Miekihoku**	**0.99**	**142**	⇓P	**Pb**	**12 02 39.9**	**-0.4**
JKN2				S	**Sb**	**12 02 53.0**	**-0.2**
MAT	**Matsushiro**	**2.65**	**54**	P	**Pn**	**12 03 04.3**	**+0.6**
MAT				*e*S	**Sn**	**12 03 37.7**	**+2.1**
MJAR	**Matsushiro Arr**	**2.65**	**54**	Pn	**Pn**	**12 03 04.8**	**+1.1**
	0.9nm,0.3s,baz=243,slow=14,SNR=34						
MJAR				Pg	**Pg**	**12 03 10.7**	**-1.6**
	4.6nm,0.3s,baz=232,slow=16,SNR=60						
MJAR				Lg	Lg	12 03 42.4	
	2.1nm,0.3s,baz=233,slow=33,SNR=6.1						
MJAR				LR	LR	12 04 28.1	
	comp=Z,85nm,20.3s,baz=240,slow=48						
JHJ	**Hachijo jima 2**	**4.00**	**117**	Pn	**Pn**	**12 03 22.6**	**+0.3**
	4.5nm,0.3s,baz=63,slow=17,SNR=1.2						
JHJ				Sn	**Sn**	**12 04 08.7**	**-0.3**
	8.2nm,0.3s,baz=90,slow=20,SNR=4.1						
JHJ				LR	LR	12 05 09.9	
	comp=Z,82nm,19.4s,baz=302,slow=42						
JNU	**Nakatsue**	**4.30**	**245**	Pn	**Pn**	**12 03 27.1**	**+0.7**
	1.4nm,0.3s,baz=56,slow=4.4,SNR=10						
JNU				Sn	**Sn**	**12 04 14.9**	**-1.5**
	0.9nm,0.3s,baz=68,slow=19,SNR=2.1						
JNU				Lg	Lg	12 04 36.5	
	1.9nm,0.3s,baz=187,slow=18,SNR=4.0						
KSRS	**Korea Array**	**6.61**	**294**	Pn	**Pn**	**12 03 59.5**	**+1.4**
	0.2nm,0.3s,baz=112,slow=14,SNR=3.8						
KLR	**Kul'dur**	**14.47**	**350**	Pn	**Pn**	**12 05 47.5**	**+1.8**
	0.1nm,0.3s,baz=211,slow=18,SNR=3.0						
SONM	**Songino Array**	**25.16**	**309**	P	**P**	**12 07 46.9**	**+0.7**
	0.8nm,0.7s,baz=117,slow=9.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**39.83**	**314**	P	**P**	**12 09 53.4**	**-0.6**
	0.4nm,0.4s,baz=120,slow=8.7,SNR=1.8						
ZALV				PcP	**PcP**	**12 11 59.1**	**-0.6**
	0.6nm,0.4s,baz=123,slow=5.3,SNR=3.3						
MKAR	**Makanchi Array**	**41.19**	**303**	P	**P**	**12 10 04.8**	**-0.6**
	0.4nm,0.8s,baz=94,slow=8.7,SNR=3.2						
MKAR				LR	LR	12 26 10.7	
	comp=Z,78nm,19.1s,baz=318,slow=35						
ILAR	**Eielson Array**	**53.71**	**31**	P	**P**	**12 11 41.8**	**-0.8**
	0.2nm,0.6s,baz=258,slow=5.5,SNR=5.5						
ASAR	**Alice Springs**	**58.39**	**182**	P	**P**	**12 12 16.7**	**+0.3**
	0.6nm,0.6s,baz=10,slow=13,SNR=8.5						
GEYT	**Alibeck**	**60.59**	**298**	LR	LR	12 39 05.3	
	comp=Z,63nm,20.9s,baz=335,slow=36						
YKA	**Yellowknife Ar**	**67.88**	**28**	P	**P**	**12 13 18.3**	**-0.6**
	0.5nm,1.0s,baz=305,slow=5.9,SNR=2.6						

MOS ***14*** *12:09:34.4±0.8, 48°.97N×142°.07E, h573^{km}, mb4.9/126, Error ellipse: s-maj=5.7km s-min=4.2km az=96.8*

SKHL ***14*** *12:09:34.4±0.2, 48°.83N×142°.37E, h597^{km}±6^{km}, mb5.9/4, msh5.8/7*

BJI ***14*** *12:09:34.6±0.0, 48°.76N×142°.09E, h590^{km}, mB5.0/42, mb5.1/71*

NEIC ***14*** *12:09:35.5±1.5, 48°.93N±0°.09×142°.0E±0°.1, h577^{km}±5^{km}, mb5.0/572, Error ellipse: s-maj=13.2km s-min=11.6km az=145.0*

IDC ***14*** *12:09:36.2±0.4, 48°.91N×142°.10E, h586^{km}±4^{km}, mb4.1/31, mb1 4.3/41, mb1mx4.3/46, mbtmp5.2/41, Error ellipse: s-maj=7.4km s-min=5.6km az=164.0*

GCMT ***14*** *12:09:37.5±0.3, 48°.94N±0°.04×141°.97E±0°.03, h591^{km}±2^{km}, MW5.3/72, Moment Tensor Solution. s72, c97; Duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.62±.03; $M_{\theta\theta}$-0.28±.06; $M_{\phi\phi}$0.89±.04; $M_{r\theta}$-0.54±.05; $M_{\theta\phi}$0.20±.04; $M_{\phi r}$-0.05±.05; Best double couple: $M_0$0.98100×10^{17} NP1:ϕ_s159.00000°, δ50.00000°, λ-140.00000°. NP2:ϕ_s40.00000°, δ60.00000°, λ-47.00000°. Principal axes: T 0.9430, Plg6.0000°, Azm102.0000°; N 0.0760, Plg36.0000°, Azm196.0000°; P -1.0180, Plg53.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 14 12:09:35.5±0.3**, 48°.86N**±0°.03×**142°.11E**±0°.03**, h585**^{km}±3^{km}**, h584**^{km}**:pP-P, n1503, σ1^s.11**/1666**, mb5.0**/437**, 63C-66D, Fault plane solution: NP1:**ϕ_s38.19918°**,** δ61.56708°**,** λ-23.78432°. **NP2:**ϕ_s140.05032°**,** δ69.22816°**,** λ-149.38748°. **Principal axes:** T Plg4.9278°**,** Azm267.6988°**;** N Plg53.5803°**,** Azm170.9878°**;** P Plg35.9761°**,** Azm1.2872°**; Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGL	**Uglegorsk**	**0.23**	**353**	*e*P	**P**	**12 10 45.7**	**+1.8**
UGL				AMB	AMB	12 10 46.4	
	8µm,0.9s						
UGL				*e*S	**S**	**12 11 41.3**	**+1.1**
UGL				A	A	12 11 42.9	
	15µm,2.0s						
UGL				A	A	12 11 42.9	
	7µm,2.0s						
UGL				A	A	12 11 43.0	
	4µm,0.8s						
UGL				A	A	12 11 43.0	
	4µm,0.8s						
UGL	**Uglegorsk**	**0.23**	**353**	⇓*i*P	**P**	**12 10 45.8**	**+1.8**
UGL				*e*S	**S**	**12 11 41.9**	**+1.7**
UGL				pmax	pmax		
	comp=Z,8µm,0.9s						
UGL				smax	smax		
	comp=N,4µm,1.3s						
UGL				smax	smax		
	comp=E,4µm,0.8s						
KHLM	**Kholmsk**	**1.80**	**181**	*e*P	**P**	**12 10 49.1**	**+1.5**
KHLM				AMB	AMB	12 10 49.7	
	comp=E,9µm,0.9s						
KHLM				*e*S	**S**	**12 11 48.1**	**+1.8**
KHLM				A	A	12 12 24.3	
	comp=E,330nm,0.2s						
KHLM				A	A	12 12 24.3	
	comp=E,440nm,0.2s						
YSS	**Yuzh-Sakhalins**	**1.95**	**167**	*e*P	**P**	**12 10 49.5**	**+1.3**
YSS				AMB	AMB	12 10 49.7	
	comp=E,11µm,0.5s						
YSS				*e*S	**S**	**12 11 48.1**	**+0.7**
YSS				A	A	12 11 48.7	
	comp=E,3µm,0.6s						
YSS				A	A	12 11 48.7	
	comp=E,3µm,0.6s						
YSS	**Yuzh-Sakhalins**	**1.95**	**167**	⇓*i*P	**P**	**12 10 49.5**	**+1.3**
YSS				*i* S	**S**	**12 11 48.0**	**+0.7**
YSS				pmax	pmax		
	comp=E,5µm,1.0s						
YSS				pmax	pmax		
	comp=Z,12µm,1.0s						
YSS				smax	smax		
	comp=N,2µm,2.0s						
YSS				smax	smax		
	comp=N,3µm,0.7s						
YSS	**Yuzh-Sakhalins**	**1.95**	**167**	P	**P**	**12 10 49.0**	**+0.8**
YSS				S	**S**	**12 11 47.9**	**+0.5**
TYV	**Tymovskoe**	**2.04**	**10**	*e*P	**P**	**12 10 50.0**	**+1.7**
TYV				AMB	AMB	12 10 50.9	
	comp=N,3µm,2.0s						
TYV				AMB	AMB	12 10 51.1	
	comp=N,1µm,0.8s						
TYV				*e*S	**S**	**12 11 49.6**	**+1.5**
TYV				A	A	12 11 51.3	
	comp=N,12µm,5.0s						
TYV				A	A	12 11 51.3	
	comp=N,3µm,5.0s						
TYV	**Tymovskoe**	**2.04**	**10**	*e*P	**P**	**12 10 50.4**	**+2.1**
TYV				*e*S	**S**	**12 11 49.7**	**+1.6**
TYV				pmax	pmax		
	comp=Z,3µm,1.7s						
TYV				pmax	pmax		
	comp=Z,1µm,0.8s						
TYV				smax	smax		
	comp=N,10µm,2.7s						
TYV				smax	smax		
	comp=N,1µm,1.4s						
GRNR	**Gornyy**	**4.15**	**300**	⇑*i*P	**P**	**12 11 02.1**	**+1.4**
GRNR				*e*S	**S**	**12 12 12.1**	**+1.5**
GRNR				pmax	pmax		
	comp=E,190nm,1.0s						
GRNR				pmax	pmax		
	comp=N,130nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,560nm,1.1s						
GRNR				smax	smax		
	comp=N,190nm,1.1s						
GRNR				MLR	MLR		
	comp=N,350nm,10.0s						
GRNR				MLR	MLR		
	comp=Z,360nm,13.0s						
NKL	**Nikolayevsk**	**4.39**	**349**	*e*P	**P**	**12 11 00.1**	**-2.3**
NKL				*e*S	**S**	**12 12 09.4**	**-4.3**
NKL				pmax	pmax		
	comp=E,51nm,0.8s						
NKL				pmax	pmax		
	comp=N,4.0nm,0.5s						
NKL				pmax	pmax		
	comp=Z,461nm,0.8s						
NKL				smax	smax		
	comp=E,96nm,1.5s						
NKL				smax	smax		
	comp=N,13nm,2.2s						
OKH	**Okha**	**4.73**	**6**	*e*P	**P**	**12 11 07.4**	**+2.5**
OKH				AMB	AMB	12 11 08.0	
	comp=N,123nm,0.5s						
OKH				*e*S	**S**	**12 12 21.2**	**+2.8**
OKH				A	A	12 12 23.2	
	comp=N,400nm,1.0s						
OKH				A	A	12 12 23.2	
	comp=N,440nm,1.0s						
OKH				A	A	12 12 24.2	
	comp=N,2µm,3.0s						
OKH				A	A	12 12 24.2	
	comp=N,3µm,3.0s						
OKH	**Okha**	**4.73**	**6**	*de*P	P	12 11 10.8	+5.9
OKH				*i* S	**S**	**12 12 20.8**	**+2.4**
OKH				smax	smax		
	comp=E,800nm,6.5s						
OKH				smax	smax		
	comp=N,400nm,13.0s						
ASAJ	**Asahikawa**	**4.75**	**176**	P	**P**	**12 11 04.8**	**-0.7**
	comp=N,217nm,0.3s,baz=329,slow=6.3,SNR=1927						
ASAJ				S	**S**	**12 12 17.1**	**-1.8**
	baz=67,slow=33,SNR=13						
JKA	**Kamikawa-asahi**	**4.75**	**176**		**P**	**12 11 04.4**	**-1.1**
KUR	**Kuril'sk**	**5.35**	**130**	*e*P	**P**	**12 11 09.0**	**-1.2**
KUR				AMB	AMB	12 11 15.9	
	comp=N,300nm,0.8s						
KUR				*e*S	**S**	**12 12 24.3**	**-3.4**
KUR				A	A	12 12 26.2	
	comp=N,2µm,1.0s						
KUR				A	A	12 12 26.2	
	comp=N,900nm,1.0s						
KUR	**Kuril'sk**	**5.35**	**130**	⇑*i*P	**P**	**12 11 09.5**	**-0.7**
KUR				*i* S	**S**	**12 12 25.7**	**-2.0**
KUR				pmax	pmax		
	comp=Z,182nm,0.6s						
KUR				pmax	pmax		
	comp=N,44nm,0.3s						
KUR				smax	smax		
	comp=N,2µm,1.1s						
KUR				smax	smax		
	comp=E,2µm,1.8s						
TEY	**Ternei**	**5.37**	**227**	*e*P	**P**	**12 11 10.6**	**+0.2**
TEY				AMB	AMB	12 11 12.1	
	comp=E,500nm,0.8s						
TEY				*e*S	**S**	**12 12 27.7**	**-0.3**
TEY				A	A	12 12 27.8	
	comp=E,4µm,0.7s						
TEY				A	A	12 12 27.8	
	comp=E,6µm,0.7s						

TEY				A	A	12 12 29.9	
	comp=E,700nm,0.8s						
TEY				A	A	12 12 29.9	
	comp=E,300nm,0.8s						
TEY	**Ternei**	**5.37**	**227**	⇓*i*P	**P**	**12 11 10.7**	**+0.3**
TEY				*i* S	**S**	**12 12 24.4**	**-3.6**
TEY				pmax	pmax		
	comp=N,500nm,1.5s						
TEY				pmax	pmax		
	comp=Z,900nm,1.4s						
TEY				pmax	pmax		
	comp=E,220nm,1.4s						
TEY				pmax	pmax		
	comp=Z,450nm,1.4s						
TEY				pmax	pmax		
	comp=N,180nm,1.5s						
TEY				smax	smax		
	comp=N,4µm,5.3s						
TEY				smax	smax		
	comp=E,6µm,7.9s						
YUK	**Yuzh-Kuril'sk**	**5.47**	**150**	*e*P	**P**	**12 11 10.3**	**-1.0**
YUK				AMB	AMB	12 11 11.4	
	comp=E,7µm,0.8s						
YUK				*e*S	**S**	**12 12 28.0**	**-1.6**
YUK				A	A	12 12 29.3	
	comp=E,11µm,2.0s						
YUK				A	A	12 12 29.3	
	comp=E,22µm,2.0s						
YUK				A	A	12 12 31.3	
	comp=E,5µm,0.8s						
YUK				A	A	12 12 31.3	
	comp=E,10µm,0.8s						
YUK	**Yuzh-Kuril'sk**	**5.47**	**150**	*c i*P	**P**	**12 11 09.4**	**-1.9**
YUK				*i* S	**S**	**12 12 25.3**	**-4.3**
YUK				pmax	pmax		
	comp=N,452nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2µm,0.5s						
YUK				pmax	pmax		
	comp=E,509nm,0.4s						
YUK				pmax	pmax		
	comp=Z,4µm,1.2s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK				smax	smax		
	comp=N,9µm,1.0s						
GRPR	**Tuman**	**5.48**	**151**	⇓*i*P	**P**	**12 11 09.9**	**-1.5**
GRPR				*i* S	**S**	**12 12 26.3**	**-3.5**
GRPR				pmax	pmax		
	comp=N,585nm,0.4s						
GRPR				pmax	pmax		
	comp=E,301nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,1µm,0.4s						
GRPR				pmax	pmax		
	comp=Z,2µm,1.1s						
GRPR				smax	smax		
	comp=N,8µm,1.0s						
GRPR				smax	smax		
	comp=E,6µm,1.5s						
GLVR	**Golovnino**	**5.64**	**154**	*e*P	**P**	**12 11 09.9**	**-2.8**
GLVR				*e*S	**S**	**12 12 28.1**	**-4.0**
GLVR				pmax	pmax		
	comp=Z,2µm,0.5s						
GLVR				pmax	pmax		
	comp=N,353nm,0.4s						
GLVR				pmax	pmax		
	comp=E,181nm,0.3s						
GLVR				smax	smax		
	comp=E,14µm,1.6s						
GLVR				smax	smax		
	comp=N,8µm,1.9s						
JEW	**Eniwo**	**6.03**	**185**		**P**	**12 11 15.3**	**-0.9**
NMR	**Nemuro--Hokkai**	**6.04**	**154**	⇑*i*P	**P**	**12 11 12.9**	**-3.2**
NMR				*i* S	**S**	**12 12 30.0**	**-8.4**
KLR	**Kul'dur**	**6.82**	**277**	P	**P**	**12 11 24.4**	**+1.3**
	comp=N,37nm,0.3s,baz=81,slow=8.9,SNR=1744						
KLR				S	**S**	**12 12 52.8**	**+1.5**
	baz=336,slow=19,SNR=1.3						
ERM	**Erimo**	**6.88**	**173**	*ce*P	**P**	**12 11 22.0**	**-1.8**
ERM				pmax	pmax		
	comp=Z,4µm,1.3s						
ERM	**Erimo**	**6.88**	**173**		**P**	**12 11 22.0**	**-1.8**
EKMR	**Ekimchan**	**7.16**	**310**	*e*P	**P**	**12 11 27.0**	**+0.9**
EKMR				AMB	AMB	12 11 29.0	
	comp=Z,290nm,0.5s						
EKMR				*e*S	**S**	**12 12 57.0**	**+0.1**
JTM	**Tenmabayashi**	**8.10**	**186**		**P**	**12 11 33.2**	**-2.1**
USA0B	**Ussuriysk Arra**	**8.39**	**240**	*c i*P	**P**	**12 11 37.4**	**-0.6**
USA0B	**Ussuriysk Arra**	**8.39**	**240**		**P**	**12 11 37.1**	**-0.9**
USRK	**Ussuriysk Ar.**	**8.39**	**240**	P	**P**	**12 11 37.4**	**-0.6**
	baz=55,slow=9.3,SNR=252						
USRK				S	**S**	**12 13 15.3**	**-3.1**
	baz=50,slow=18,SNR=5.8						
USRK	**Ussuriysk Ar.**	**8.39**	**240**		**S**	**12 13 16.3**	**-2.1**
SKR	**Severo-Kuril’s**	**9.25**	**73**	*e*P	**P**	**12 11 45.7**	**-0.5**
SKR				AMB	AMB	12 11 46.9	
	comp=Z,450nm,1.0s						
SKR				*e*S	**S**	**12 13 27.8**	**-5.9**
SKR				A	A	12 13 33.4	
	comp=Z,300nm,0.9s						
SKR				A	A	12 13 33.4	
	comp=Z,300nm,0.9s						
SKR	**Severo-Kuril’s**	**9.25**	**73**	*c i*P	**P**	**12 11 45.6**	**-0.6**
SKR				*e*S	**S**	**12 13 31.3**	**-2.4**
SKR				pmax	pmax		
	comp=Z,1µm,2.2s						
SKR				pmax	pmax		
	comp=Z,400nm,5.8s						
SKR				pmax	pmax		
	comp=Z,383nm,0.6s						
MDJ	**Mudanjiang**	**9.58**	**248**	P	**P**	**12 11 49.1**	**-0.6**
PAU	**Pauzhetka**	**9.79**	**69**	*e*P	**P**	**12 11 50.5**	**-1.1**
PAU				AMB	AMB	12 11 51.9	
	comp=Z,2µm,2.0s						
PAU				AMB	AMB	12 11 52.2	
	comp=Z,1µm,0.8s						
PAU				*e*S	**S**	**12 13 38.0**	**-5.5**
PAU				A	A	12 13 44.3	
	comp=Z,2µm,4.0s						
PAU				A	A	12 13 44.3	
	comp=Z,700nm,4.0s						
PAU				A	A	12 13 45.3	
	comp=Z,900nm,1.0s						
PAU				A	A	12 13 45.3	
	comp=Z,230nm,1.0s						
MSHR	**Mys Shultsa**	**9.90**	**235**	*ce*P	**P**	**12 11 52.1**	**-0.8**
MSHR				pmax	pmax		
	comp=Z,99nm,1.3s						
BMKR	**Bomnak**	**10.09**	**311**	*e*P	**P**	**12 11 54.0**	**-0.5**
BMKR				AMB	AMB	12 11 54.8	
	comp=Z,130nm,0.5s						
BMKR				*e*S	**S**	**12 13 48.0**	**-0.9**
BMKR				A	A	12 13 48.3	
	comp=Z,100nm,1.0s						
BMKR				A	A	12 13 48.3	
	comp=Z,100nm,1.0s						
ZEA	**Zeya**	**10.51**	**303**	*c i*P	**P**	**12 11 58.4**	**-0.3**
ZEA				*e*S	**S**	**12 13 51.7**	**-4.9**
ZEA				pmax	pmax		
	comp=N,90nm,0.9s						
ZEA				pmax	pmax		
	comp=E,80nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.0s						
ZEA				pmax	pmax		
	comp=N,200nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,300nm,1.7s						
ZEA				smax	smax		
	comp=N,20nm,1.2s						
ZEA				smax	smax		
	comp=Z,500nm,2.7s						
ZEA				smax	smax		
	comp=N,1µm,3.7s						
ZEA				smax	smax		
	comp=E,1µm,3.2s						
ZEA				MLR	MLR		
	comp=E,200nm,4.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,4.0s						
PEA0B	**Petropavlovsk-**	**10.71**	**61**	*ce*P	**P**	**12 12 00.7**	**-0.1**
PEA0B	**Petropavlovsk-**	**10.71**	**61**		**P**	**12 12 00.4**	**-0.4**
PETK	**Petropavlovsk-**	**10.71**	**61**	P	**P**	**12 12 00.5**	**-0.3**
	comp=Z,5.5nm,0.3s,baz=228,slow=8.3,SNR=95						
PETK				S	**S**	**12 14 00.0**	**-0.3**
	baz=234,slow=16,SNR=3.5						
PETK				ScP	**ScP**	**12 19 42.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=180,slow=1.0,SNR=4.4						
KROS	**Kirovskiy**	**10.93**	**306**	*e*P	**P**	**12 12 03.2**	**+0.2**
KROS				AMB	AMB	12 12 04.1	
	comp=Z,130nm,0.6s						
JMM	**Marumori**	**11.03**	**185**	P	**P**	**12 12 03.5**	**-0.8**
JSD	**Sado**	**11.17**	**196**		**P**	**12 12 04.6**	**-1.1**
PET	**Petropavlovsk**	**11.24**	**62**	*e*P	**P**	**12 12 04.2**	**-1.9**
PET				AMB	AMB	12 12 07.5	
	comp=Z,1µm,1.0s						
PET	**Petropavlovsk**	**11.24**	**62**	*e*P	**P**	**12 12 05.1**	**-1.0**
PET				*e*S	**S**	**12 14 07.9**	**-2.1**
PET				pmax	pmax		
	comp=Z,1µm,2.0s						
PET				pmax	pmax		
	comp=Z,400nm,11.5s						
PET				pmax	pmax		
	comp=Z,428nm,1.3s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
PET	**Petropavlovsk**	**11.24**	**62**	P	**P**	**12 12 05.7**	**-0.3**
MA2	**Magadan**	**11.86**	**22**	*ce*P	**P**	**12 12 12.3**	**-0.1**
MA2				pmax	pmax		
	comp=Z,318nm,1.0s						
MA2	**Magadan**	**11.86**	**22**	P	**P**	**12 12 12.0**	**-0.4**
CN2	**Changchun**	**12.57**	**253**	*e*P	**P**	**12 12 17.8**	**-2.1**
CN2				*e*S	**S**	**12 14 28.8**	**-6.4**
CN2				pmax	pmax		
	comp=Z,320nm,0.9s						
MJB9	**Matsu-Tunnel**	**12.63**	**195**	P	**P**	**12 12 19.6**	**-1.1**
MAJO	**Matsushiro**	**12.63**	**195**	*d i*P	**P**	**12 12 19.8**	**-0.9**
MAJO	**Matsushiro**	**12.63**	**195**		**P**	**12 12 19.8**	**-0.9**
MAT	**Matsushiro**	**12.63**	**195**	P	**P**	**12 12 19.6**	**-1.1**
MAT				S	**S**	**12 14 34.7**	**-1.9**
MJAR	**Matsushiro Arr**	**12.63**	**195**	P	**P**	**12 12 20.3**	**-0.3**
	comp=Z,3.4nm,0.3s,baz=3.7,slow=11,SNR=862						
MJAR				S	**S**	**12 14 34.3**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=25,slow=6.7,SNR=2.8						
MJAR				ScP	**ScP**	**12 19 45.1**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=350,slow=1.0,SNR=12						
MJAR	**Matsushiro Arr**	**12.63**	**195**	P	**P**	**12 12 19.6**	**-1.1**
JYT	**Yasato**	**12.70**	**187**	P	**P**	**12 12 19.5**	**-1.8**
JGF	**Kuroka**	**13.70**	**197**	P	**P**	**12 12 30.4**	**-1.2**
INU	**Inuyama**	**14.01**	**197**	P	**P**	**12 12 33.0**	**-1.7**
JWT	**Wachi**	**14.44**	**203**	P	**P**	**12 12 37.4**	**-1.4**
JSG	**Sagara**	**14.47**	**193**	P	**P**	**12 12 39.1**	**0.0**
HIA	**Hailar**	**14.66**	**280**	P	**P**	**12 12 39.5**	**-1.3**
HIA	**Hailar**	**14.66**	**280**	P	**P**	**12 12 39.5**	**-1.3**
YAK	**Yakutsk**	**14.93**	**337**	P	**P**	**12 12 41.7**	**-1.3**
	comp=Z,3.6nm,0.3s,baz=117,slow=1.7,SNR=75						
YAK				S	**S**	**12 15 13.6**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=204,slow=23,SNR=19						
YAK	**Yakutsk**	**14.93**	**337**	*d i*P	**P**	**12 12 41.3**	**-1.6**
YAK				*e*S	**S**	**12 15 14.4**	**-1.9**
YAK				pmax	pmax		
	comp=Z,274nm,1.1s						
YAK				pmax	pmax		
	comp=N,75nm,1.2s						
YAK				pmax	pmax		
	comp=E,35nm,1.1s						
YAK				smax	smax		
	comp=N,696nm,1.5s						
YAK				smax	smax		
	comp=E,1µm,1.9s						
YAK	**Yakutsk**	**14.93**	**337**	P	**P**	**12 12 41.6**	**-1.3**
YAK					**S**	**12 15 14.0**	**-2.3**
SEY	**Seymchan**	**15.21**	**18**	P	**P**	**12 12 45.9**	**+0.3**
	comp=E,8.7nm,0.3s,baz=206,slow=7.0,SNR=190						
SEY				S	**S**	**12 15 22.2**	**+1.2**
	baz=114,slow=20,SNR=1.4						
KS19	**Wonju Array Si**	**15.36**	**228**	P	**P**	**12 12 48.2**	**+0.8**
JHS	**Saijyo**	**15.36**	**209**	P	**P**	**12 12 47.7**	**+0.1**
KSRS	**Korea Array**	**15.37**	**227**	P	**P**	**12 12 48.2**	**+0.7**
	comp=E,2.3nm,0.3s,baz=38,slow=10,SNR=118						
KSRS				PcP	**PcP**	**12 17 10.8**	**+0.8**
	comp=E,0.1nm,0.3s,baz=32,slow=1.5,SNR=6.9						
KSRS				ScP	**ScP**	**12 19 49.9**	**+0.6**
	comp=E,0.4nm,0.3s,baz=29,slow=1.5,SNR=16						
KSAR	**Wonju Array Be**	**15.39**	**227**	P	**P**	**12 12 47.6**	**-0.2**
KSAR	**Wonju Array Be**	**15.39**	**227**	P	**P**	**12 12 47.6**	**-0.2**
JHJ	**Hachijo jima 2**	**15.82**	**187**	P	**P**	**12 12 52.7**	**+0.8**
	comp=E,14nm,0.3s,baz=111,slow=22,SNR=15						
JHJ2	**Mitsune**	**15.82**	**187**	P	**P**	**12 12 52.6**	**+0.7**
INCN	**Inchon**	**15.99**	**230**	P	**P**	**12 12 54.2**	**+0.8**
INCN				pmax	pmax		
	comp=Z,272nm,0.9s						
INCN	**Inchon**	**15.99**	**230**	P	**P**	**12 12 54.2**	**+0.8**
JMN	**Monobe**	**16.31**	**205**	P	**P**	**12 12 57.6**	**+1.2**
JMN				IAmb	IAmb	12 12 58.6	
	comp=Z,104nm,1.3s						
TJN	**Taejon**	**16.49**	**226**	*ce*P	**P**	**12 12 58.9**	**+0.9**
DL2	**Dalian**	**17.75**	**244**	P	**P**	**12 13 09.1**	**-0.3**
DL2				sP	**sP**	**12 15 28.5**	**-4.2**
DL2				S	**S**	**12 16 02.3**	**-1.0**
DL2				pmax	pmax		
	comp=Z,150nm,0.8s						
DL2				pmax	pmax		
	comp=Z,640nm,4.4s						
JNU	**Nakatsue**	**17.83**	**212**	P	**P**	**12 13 10.8**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=327,slow=3.8,SNR=12						
JNU	**Nakatsue**	**17.83**	**212**	P	**P**	**12 13 11.0**	**+0.8**
JNU				IAmb	IAmb	12 13 17.1	
	comp=Z,72nm,1.5s						
CIT	**Chita**	**18.41**	**291**	*e*P	**P**	**12 13 16.2**	**+0.9**
CIT				*e*S	**S**	**12 16 14.0**	**+0.3**
CIT				pmax	pmax		
	comp=Z,324nm,2.2s						
BOD	**Bodaibo**	**18.90**	**309**	*e*P	**P**	**12 13 19.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,64nm,1.0s						
BJI	**Beijing**	**20.43**	**254**	P	**P**	**12 13 34.5**	**+0.9**
BJI				sP	**sP**	**12 15 56.4**	**-6.0**
BJI				S	**S**	**12 16 43.8**	**-2.1**
BJI				ScS	**ScS**	**12 23 43.9**	**0.0**
BJI				pmax	pmax		
	comp=Z,86nm,1.1s						
BJT	**Baijiatuau**	**20.44**	**254**	P	**P**	**12 13 35.1**	**+1.4**
BJT				pmax	pmax		
	comp=Z,108nm,1.1s						
BJT	**Baijiatuau**	**20.44**	**254**	P	**P**	**12 13 35.1**	**+1.4**
JCJ	**Chichijima**	**21.73**	**180**	P	**P**	**12 13 45.5**	**+0.1**
	comp=Z,61nm,0.8s,baz=97,slow=24,SNR=6.6						
HHC	**Hu-ho-hao-te**	**22.97**	**261**	⇑*i*P	**P**	**12 13 57.0**	**+0.6**
HHC				sP	sP	12 16 34.6	+4.1
HHC				S	**S**	**12 17 26.3**	**0.0**
HHC				pmax	pmax		
	comp=Z,56nm,1.0s						
ULN	**Ulaanbaatar**	**23.20**	**281**	*ce*P	**P**	**12 13 58.9**	**+0.5**
ULN				pmax	pmax		
	comp=Z,68nm,1.4s						
ULN	**Ulaanbaatar**	**23.20**	**281**	P	**P**	**12 13 59.1**	**+0.7**
SONM	**Songino Array**	**23.63**	**281**	P	**P**	**12 14 02.9**	**+0.7**
	comp=Z,7.4nm,0.4s,baz=77,slow=8.8,SNR=89						
SONM				PcP	**PcP**	**12 17 26.0**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=27,slow=1.0,SNR=11						
SONM				S	**S**	**12 17 34.5**	**-2.0**
	comp=Z,3.0nm,1.1s,baz=86,slow=7.7,SNR=1.5						
SONM				ScP	**ScP**	**12 20 08.3**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=130,slow=2.8,SNR=5.7						
SONM	**Songino Array**	**23.63**	**281**	P	**P**	**12 14 02.3**	**+0.1**
SONM				pmax	pmax		
	comp=Z,47nm,1.2s						
SONM	**Songino Array**	**23.63**	**281**	P	**P**	**12 14 02.3**	**+0.1**
TIXI	**Tiksi**	**23.68**	**350**	*ce*P	**P**	**12 14 01.6**	**-0.5**
TIXI	**Tiksi**	**23.68**	**350**	P	**P**	**12 14 01.7**	**-0.4**
TIXI				IAmb	IAmb	12 14 02.7	
	comp=Z,49nm,1.1s						
AMKA	**Amchitka**	**23.82**	**70**	P	**P**	**12 14 04.4**	**+0.8**
BTO	**Baotou**	**24.10**	**262**	*e*P	**P**	**12 14 07.0**	**+0.5**
TIY	**Taiyuan**	**24.15**	**254**	*e*P	**P**	**12 14 07.9**	**+1.0**
TIY				pmax	pmax		
	comp=Z,71nm,1.1s						
NJ2	**Nanjing**	**24.24**	**235**	*e*P	**P**	**12 14 08.1**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TLY	**Talaya**	**24.56**	**291**	P	**P**	**12 14 11.4**	**+1.2**
	comp=Z,11nm,0.5s,baz=104,slow=1.6,SNR=14						
TLY	**Talaya**	**24.56**	**291**	*c i*P	**P**	**12 14 11.3**	**+1.1**
TLY				*e*		12 16 49.7	
TLY				*e*S	**S**	**12 17 53.3**	**+2.5**
TLY				pmax	pmax		
	comp=Z,41nm,0.7s						
TLY	**Talaya**	**24.56**	**291**	P	**P**	**12 14 10.9**	**+0.6**
TLY				IAmb	IAmb	12 14 12.5	
	comp=Z,23nm,0.8s						
ZAK	**Zakamensk**	**25.01**	**288**	*e*P	**P**	**12 14 15.1**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,47nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,11nm,1.0s						
MOY	**Mondy**	**26.19**	**292**	*e*P	**P**	**12 14 25.6**	**+0.9**
MOY				pmax	pmax		
	comp=Z,45nm,1.7s						
ADK	**Adak**	**26.20**	**68**	P	**P**	**12 14 24.5**	**-0.2**
ADK				pmax	pmax		
	comp=Z,77nm,1.1s						
ADK	**Adak**	**26.20**	**68**	P	**P**	**12 14 24.5**	**-0.2**
WHN	**Wuhan**	**27.88**	**239**	⇑P	**P**	**12 14 39.4**	**-0.2**
WHN				pmax	pmax		
	comp=Z,96nm,0.9s						
XAN	**Xi'an**	**28.68**	**251**	P	**P**	**12 14 46.4**	**-0.2**
XAN				pmax	pmax		
	comp=Z,31nm,1.2s						
XAN				pmax	pmax		
	comp=Z,350nm,4.6s						
LZH	**Lanzhou**	**30.64**	**260**	⇑P	**P**	**12 15 04.5**	**+0.9**
LZH				S	**S**	**12 19 28.6**	**+2.8**
LZH				pmax	pmax		
	comp=Z,84nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
ENH	**Enshi**	**30.92**	**245**	P	**P**	**12 15 05.6**	**-0.3**
GTA	**Gaotai**	**31.43**	**269**	⇑P	**P**	**12 15 11.3**	**+1.1**
GTA				S	**S**	**12 19 38.6**	**+0.9**
GTA				ScS	**ScS**	**12 24 32.6**	**+0.1**
GTA				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA				pmax	pmax		
	comp=Z,81nm,6.4s						
ANM	**Nome**	**31.70**	**41**	P	**P**	**12 15 12.4**	**+0.4**
ANM				pmax	pmax		
	comp=Z,50nm,1.0s						
ANM	**Nome**	**31.70**	**41**	P	**P**	**12 15 12.4**	**+0.4**
ANM				IAmb	IAmb	12 15 13.6	
	comp=Z,50nm,1.0s						
RDOG	**Red Dog Mine**	**33.04**	**34**	P	**P**	**12 15 23.3**	**0.0**
CD2	**Chengdu**	**34.01**	**252**	⇑*i*P	**P**	**12 15 32.1**	**+0.2**
CD2				sP	sP	12 18 13.6	-1.8
CD2				S	**S**	**12 20 17.8**	**+1.0**
CD2				pmax	pmax		
	comp=Z,100nm,1.1s						
CD2				pmax	pmax		
	comp=Z,280nm,5.3s						
DGZ	**Jazzator, Alta**	**35.02**	**293**	*c i*P	**P**	**12 15 41.7**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,12nm,0.6s						
ZAA0	**Zalesovo Array**	**35.25**	**300**	P	**P**	**12 15 42.1**	**+0.2**
ZALV	**Zalesovo Beam**	**35.25**	**300**	P	**P**	**12 15 42.2**	**+0.3**
	comp=Z,6.7nm,0.4s,baz=69,slow=7.1,SNR=25						
ZALV				PcP	**PcP**	**12 17 55.8**	**+0.2**
	comp=Z,14nm,0.7s,baz=71,slow=2.6,SNR=19						
ZALV				S	**S**	**12 20 32.7**	**-2.1**
	comp=Z,0.8nm,0.5s,baz=104,slow=6.1,SNR=1.4						
ZALV				ScP	**ScP**	**12 20 46.0**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=100,slow=3.3,SNR=4.4						
GYA	**Guiyang**	**35.41**	**244**	⇑P	**P**	**12 15 43.6**	**-0.1**
GYA				PcP	**PcP**	**12 17 57.3**	**+0.7**
GYA				S	**S**	**12 20 34.6**	**-3.3**
GYA				pmax	pmax		
	comp=Z,38nm,0.5s						
A21K	**Barrow**	**35.60**	**29**	P	**P**	**12 15 44.9**	**+0.4**
	baz=264,SNR=119						
A21K				S	**S**	**12 20 37.6**	**-1.7**
	baz=264						
A21K	**Barrow**	**35.60**	**29**	P	**P**	**12 15 44.9**	**+0.4**
TTA	**Tatalina**	**35.90**	**43**	P	**P**	**12 15 47.2**	**0.0**
TTA				pmax	pmax		
	comp=Z,57nm,1.1s						
TTA	**Tatalina**	**35.90**	**43**	P	**P**	**12 15 47.2**	**0.0**
TTA				IAmb	IAmb	12 15 48.4	
	comp=Z,57nm,1.1s						
IMAR	**Indian Mountai**	**36.58**	**38**	P	**P**	**12 15 50.6**	**-2.0**
WMQ	**Urumqi**	**37.23**	**283**	*e*P	**P**	**12 15 58.5**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,6.1s						
WMQ	**Urumqi**	**37.23**	**283**	P	**P**	**12 16 00.0**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,16nm,0.6s						
WMQ	**Urumqi**	**37.23**	**283**	P	**P**	**12 15 60.0**	**+1.7**
WMQ				IAmb	IAmb	12 16 01.5	
	comp=Z,16nm,0.6s						
ZSN	**Zaisan**	**37.44**	**290**	*e*P	**P**	**12 16 00.2**	**+0.3**
	baz=290						
ZSN	**Zaisan**	**37.44**	**290**	*e*P	**P**	**12 16 00.2**	**+0.3**
PPLA	**Purkeypile**	**37.63**	**43**	P	**P**	**12 16 02.4**	**+1.0**
PPLA				IAmb	IAmb	12 16 06.5	
	comp=Z,47nm,1.0s						
RSO	**Redoubt South**	**37.83**	**47**	P	**P**	**12 16 04.0**	**+0.8**
COLD	**Coldfoot**	**37.89**	**36**	P	**P**	**12 16 03.5**	**+0.3**
	baz=276,SNR=89						
COLD				S	**S**	**12 21 10.9**	**-2.4**
	baz=276						
COLD	**Coldfoot**	**37.89**	**36**	P	**P**	**12 16 03.5**	**+0.3**
MLY	**Manley**	**37.93**	**40**	P	**P**	**12 16 04.0**	**+0.3**
	baz=278,SNR=22						
MLY				S	**S**	**12 21 14.3**	**0.0**
	baz=278						
BPAW	**Bear Paw Mtn.**	**37.97**	**41**	P	**P**	**12 16 04.4**	**+0.5**
BPAW				IAmb	IAmb	12 16 05.4	
	comp=Z,44nm,1.0s						
KTH	**Kantishna Hill**	**38.09**	**42**	P	**P**	**12 16 05.5**	**+0.5**
SKT	**Skwentna**	**38.10**	**45**	P	**P**	**12 16 05.2**	**+0.1**
OHAK	**Old Harbor**	**38.36**	**52**	P	**P**	**12 16 06.9**	**-0.3**
TRF	**Thorofare Moun**	**38.38**	**42**	P	**P**	**12 16 07.9**	**+0.3**
TRF				IAmb	IAmb	12 16 08.9	
	comp=Z,80nm,1.2s						
I23K	**Minto, Yukon-K**	**38.49**	**39**	P	**P**	**12 16 08.7**	**+0.6**
	baz=279,SNR=40						
I23K				S	**S**	**12 21 21.3**	**-1.0**
	baz=279						
I23K	**Minto, Yukon-K**	**38.49**	**39**	P	**P**	**12 16 08.8**	**+0.6**
I23K				IAmb	IAmb	12 16 09.3	
	comp=Z,49nm,0.8s						
KDAK	**Kodiak Island**	**38.57**	**51**	P	**P**	**12 16 08.4**	**-0.5**
	comp=Z,21nm,0.6s,baz=318,slow=2.6,SNR=23						
KDAK				PcP	**PcP**	**12 18 05.7**	**-0.1**
	comp=Z,28nm,1.0s,baz=308,slow=5.6,SNR=4.0						
SUA	**Susitna One**	**38.57**	**45**	P	**P**	**12 16 08.9**	**-0.1**
SUA				IAmb	IAmb	12 16 09.7	
	comp=Z,49nm,1.0s						
CUT	**Chulitna**	**38.59**	**44**	P	**P**	**12 16 08.9**	**-0.1**
	baz=282,SNR=8.7						
BWN	**Browne**	**38.61**	**41**	P	**P**	**12 16 10.4**	**+1.2**
NEA2	**Nenana**	**38.71**	**40**	P	**P**	**12 16 10.3**	**+0.3**
	baz=280,SNR=65						
NEA2				S	**S**	**12 21 24.0**	**-1.5**
	baz=280						
KMI	**Kunming**	**38.75**	**247**	⇓*i*P	**P**	**12 16 11.6**	**+0.5**
KMI				pmax	pmax		
	comp=Z,32nm,0.9s						
KMI				pmax	pmax		
	comp=Z,280nm,4.8s						
KMI	**Kunming**	**38.75**	**247**	P	**P**	**12 16 11.7**	**+0.6**
KMI				pmax	pmax		
	comp=Z,44nm,1.2s						
KMI	**Kunming**	**38.75**	**247**	P	**P**	**12 16 11.7**	**+0.6**
KMI				IAmb	IAmb	12 16 12.3	
	comp=Z,44nm,1.2s						
CNPM	**China Poot**	**38.79**	**48**	P	**P**	**12 16 10.7**	**0.0**
CNPM				IAmb	IAmb	12 16 12.1	
	comp=Z,33nm,0.7s						
MCK	**McKinley**	**38.92**	**41**	P	**P**	**12 16 11.7**	**0.0**
	baz=281,SNR=26						
MCK				S	**S**	**12 21 25.2**	**-3.5**
	baz=281						
MDM	**Murphy Dome**	**39.00**	**39**	P	**P**	**12 16 12.5**	**+0.3**
RND	**Reindeer**	**39.03**	**42**	P	**P**	**12 16 12.5**	**-0.1**
RND				pmax	pmax		
	comp=Z,77nm,1.3s						
RND	**Reindeer**	**39.03**	**42**	P	**P**	**12 16 12.5**	**-0.1**
RND				IAmb	IAmb	12 16 13.3	
	comp=Z,77nm,1.3s						
RC01	**Rabbit Creek A**	**39.13**	**46**	P	**P**	**12 16 13.0**	**-0.4**
	baz=284,SNR=7.0						
RC01				S	**S**	**12 21 28.7**	**-3.1**
	baz=284						

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WRH    Wood River Hil   39.15  40   P       P       12 16 13.7 +0.3
TCOL   CIGO, UAF Yank   39.17  39   P       P       12 16 14.1 +0.6
       baz=281,SNR=39
TCOL                                S       S       12 21 30.3 -1.9
       baz=281
TCOL   CIGO, UAF Yank   39.17  39   P       P       12 16 14.2 +0.6
COLA   College          39.17  39d iP       P       12 16 14.1 +0.5
COLA                                pmax    pmax
       comp=Z,132nm,1.0s
COLA   College          39.17  39   P       P       12 16 14.2 +0.7
CCB    Clear Creek Bu   39.23  40   P       P       12 16 14.2 +0.1
CCB                                 IAmb    IAmb    12 16 16.0
       comp=Z,49nm,1.1s
O22K   Cooper Landing   39.29  47   P       P       12 16 14.2 -0.4
       baz=285
O22K   Cooper Landing   39.29  47   P       P       12 16 14.6  0.0
PMR    Palmer           39.30  45   P       P       12 16 14.8 +0.2
PMR                                 pmax    pmax
       comp=Z,54nm,1.0s
PMR    Palmer           39.30  45   P       P       12 16 14.8 +0.2
PMR                                 IAmb    IAmb    12 16 16.1
       comp=Z,54nm,1.0s
POKR   Poker Plat Res   39.30  39   P       P       12 16 15.1 +0.5
       baz=281,SNR=23
POKR                                S       S       12 21 32.8 -1.3
       baz=281
POKR   Poker Plat Res   39.30  39   P       P       12 16 15.2 +0.5
POKR                                IAmb    IAmb    12 16 16.9
       comp=Z,51nm,1.1s
MK31   Makanchi Array   39.31 290   P       P       12 16 15.6 +0.5
MK31                                pmax    pmax
       comp=Z,12nm,0.5s
MK31   Makanchi Array   39.31 290   P       P       12 16 15.6 +0.5
MKAR   Makanchi Array   39.31 290   P       P       12 16 15.7 +0.6
       comp=Z,7.0nm,0.4s,baz=68,slow=6.1,SNR=164
MKAR                                pP      pP      12 17 54.8 -0.4
       comp=Z,5.5nm,1.0s,baz=67,slow=9.5,SNR=3.3
MKAR                                PcP     PcP     12 18 08.0 -0.4
       comp=Z,2.7nm,0.4s,baz=58,slow=3.0,SNR=8.1
MKAR                                ScP     ScP     12 21 01.8  0.0
       comp=Z,1.5nm,0.5s,baz=53,slow=5.2,SNR=4.5
MKAR                                S       S       12 21 35.4 +0.5
       comp=Z,0.7nm,0.6s,baz=42,slow=4.5,SNR=1.4
MKAR   Makanchi Array   39.31 290   P       P       12 16 15.6 +0.5
GHO    Glory Hole Cre   39.35  44   P       P       12 16 15.4 +0.1
MAKZ   Makanchi         39.50 291   P       P       12 16 17.2 +0.6
MAKZ                                pmax    pmax
       comp=Z,9.0nm,0.5s
MAKZ   Makanchi         39.50 291   P       P       12 16 17.2 +0.6
SEW    Seward           39.52  47   P       P       12 16 16.4  0.0
SEW                                 IAmb    IAmb    12 16 17.1
       comp=Z,64nm,1.0s
IL31                    39.60  39   P       P       12 16 16.8 -0.2
IL31                                IAmb    IAmb    12 16 17.9
       comp=Z,43nm,0.8s
ILAR   Eielson Array    39.60  39   P       P       12 16 16.8 -0.3
       comp=Z,39nm,0.8s,baz=295,slow=8.4,SNR=310
ILAR                                PcP     PcP     12 18 08.1 -1.0
       comp=Z,3.8nm,0.6s,baz=276,slow=2.9,SNR=5.6
ILAR                                ScP     ScP     12 21 01.7 -0.8
       comp=Z,3.2nm,1.1s,baz=287,slow=5.3,SNR=5.4
ILAR                                S       S       12 21 35.9 -2.5
       comp=Z,2.4nm,1.0s,baz=265,slow=12,SNR=8.6
ILAR   Eielson Array    39.60  39   P       P       12 16 16.0 -1.1
SML    Sawmill          39.62  44   P       P       12 16 17.5 +0.2
HDA    Harding Lake     39.65  40   P       P       12 16 16.9 -0.5
       baz=282,SNR=45
HDA    Harding Lake     39.65  40   P       P       12 16 16.9 -0.5
KNK    Knik Glacier     39.65  45   P       P       12 16 17.8 +0.2
KURK   Kurchatov        39.91 298   P       P       12 16 21.0 +1.3
KURK                                *PP     pP      12 18 01.9 +1.6
KURK                                                12 18 10.9
KURK                                S       S       12 21 44.3 +0.9
KURK   Kurchatov        39.91 298   P       P       12 16 19.6 -0.1
FYU    Fort Yukon       39.92  37   P       P       12 16 20.6 +1.0
KURBB  Kurchatov Arra   40.00 297   P       P       12 16 20.9 +0.5
       comp=Z,29nm,0.4s,baz=73,slow=8.7,SNR=126
KURBB                               pP      pP      12 18 01.9 +0.8
       comp=Z,9.0nm,1.2s,baz=72,slow=9.0,SNR=2.5
KURBB                               PcP     PcP     12 18 10.9 +0.3
       comp=Z,17nm,0.9s,baz=63,slow=3.9,SNR=8.9
KURBB                               ScP     ScP     12 21 03.9 -0.4
       comp=Z,1.9nm,0.5s,baz=75,slow=3.8,SNR=4.3
KURBB                               S       S       12 21 44.2 -0.4
       comp=Z,6.0nm,1.1s,baz=72,slow=15,SNR=10.0
PRP    Porcupine Dome   40.01  38   P       P       12 16 21.1 +0.6
SCM    Sheep Creek Mo   40.07  44   P       P       12 16 21.4 +0.4
SCM                                 pmax    pmax
       comp=Z,42nm,0.7s
SCM    Sheep Creek Mo   40.07  44   P       P       12 16 21.4 +0.4
SCM                                 IAmb    IAmb    12 16 21.8
       comp=Z,42nm,0.7s
GLI    Glacier Island   40.43  45   P       P       12 16 24.0 +0.3
GLI                                 IAmb    IAmb    12 16 24.7
       comp=Z,55nm,0.9s
M24K   Tolsona, Glenn   40.53  43   P       P       12 16 25.5 +1.0
       baz=285,SNR=6.9
M24K   Tolsona, Glenn   40.53  43   P       P       12 16 25.6 +1.0
PAX    Paxson           40.62  42   P       P       12 16 24.9 -0.4
PAX                                 pmax    pmax
       comp=Z,18nm,0.9s
PAX    Paxson           40.62  42   P       P       12 16 24.9 -0.4
RIDG   Independent Ri   40.70  41   P       P       12 16 25.3 -0.6
RIDG                                IAmb    IAmb    12 16 26.3
       comp=Z,62nm,1.0s
KLU    Klutina          40.81  44   P       P       12 16 27.4 +0.5
SLVN   Son La           40.94 242   P       P       12 16 29.0 +0.6
SLVN                                IAmb    IAmb    12 16 30.1
       comp=Z,30nm,0.9s
SCRK   Sand Creek       41.01  40   P       P       12 16 27.8 -0.6
       baz=285,SNR=59
SCRK                                S       S       12 21 55.6 -3.5
       baz=285
DOT    Dot Lake         41.06  41   P       P       12 16 28.1 -0.6
DOT                                 IAmb    IAmb    12 16 29.2
       comp=Z,44nm,1.0s
N25K   Chitina, Valde   41.38  44   P       P       12 16 32.2 +0.8
       baz=287,SNR=12
N25K                                S       S       12 22 04.7 +0.2
       baz=287
N25K   Chitina, Valde   41.38  44   P       P       12 16 32.3 +1.0
N25K                                IAmb    IAmb    12 16 32.8
       comp=Z,29nm,0.7s
MENT   Mentasta         41.40  42   P       P       12 16 32.0 +0.6
MENT                                IAmb    IAmb    12 16 33.3
       comp=Z,32nm,0.9s
L26K   Log Cabin Wild   41.54  42   P       P       12 16 32.8 +0.4
       baz=286,SNR=32
GLB    Gilahina Butte   41.79  44   P       P       12 16 35.5 +1.0
K27K   Chicken          41.80  40   P       P       12 16 35.0 +0.5
       baz=286,SNR=60
K27K                                S       S       12 22 09.1 -1.2
       baz=286
K27K   Chicken          41.80  40   P       P       12 16 35.1 +0.5
EGAK   Eagle            41.98  39   P       P       12 16 35.9 +0.1
VRDI   Verde Repeater   42.02  44   P       P       12 16 37.4 +0.9
VRDI                                IAmb    IAmb    12 16 38.4
       comp=Z,56nm,1.0s
MCARA  McCarthy VSAT    42.17  44   P       P       12 16 38.8 +1.4
MCARA                               IAmb    IAmb    12 16 39.3
       comp=Z,55nm,0.8s
BCAR   Beaver Creek A   42.21  41   P       P       12 16 36.6 -1.1
CRQM   Cirque           42.32  45   P       P       12 16 39.8 +0.9
TGL    Tana Glacier     42.46  45   P       P       12 16 40.9 +1.1
TGL                                 IAmb    IAmb    12 16 41.7
       comp=Z,62nm,0.9s
TDK    Taldyqorghan     42.55 290  eP       P       12 16 41.7 +1.1
       comp=Z,21nm,1.0s,baz=290
TDK                                eS       S       12 22 23.0 +1.6
       baz=290
TDK    Taldyqorghan     42.55 290  eP       P       12 16 41.7 +1.1
TDK                                eS       S       12 22 23.0 +1.6
TDK                                 pmax    pmax
       comp=Z,21nm,1.0s
BALM   Baldy            42.59  44   P       P       12 16 41.8 +0.9
BALM                                IAmb    IAmb    12 16 42.7
       comp=Z,48nm,1.0s
ISLE   Juniper Island   42.74  45   P       P       12 16 42.7 +0.6
ISLE                                IAmb    IAmb    12 16 43.5
       comp=Z,50nm,1.0s
SHLS   Shalkode         42.79 287  eP       P       12 16 41.4 -1.4
       baz=287
SHLS                               eS       S       12 22 22.5 -2.8
       baz=287
SHLS   Shalkode         42.79 287  eP       P       12 16 41.3 -1.4
SHLS                               eS       S       12 22 22.4 -2.8
BARN   Barnard Glacie   42.90  44   P       P       12 16 44.4 +1.1
BARN                                IAmb    IAmb    12 16 44.8
       comp=Z,36nm,0.7s
LSA    Lhasa            42.94 263   P       P       12 16 46.0 +1.6
LSA                                 pmax    pmax
       comp=Z,13nm,0.7s
LSA    Lhasa            42.94 263   P       P       12 16 46.0 +1.6
UZB    Uzynbulak        43.08 287  eS       S       12 22 29.3  0.0
       baz=287
CTGM   Chitina Glacie   43.08  44   P       P       12 16 45.7 +1.0
YAH    Yahtse           43.10  45   P       P       12 16 46.1 +1.2
YAH                                 IAmb    IAmb    12 16 46.9
       comp=Z,50nm,1.0s
KPKS   Kokpek           43.13 288  eP       P       12 16 45.8 +0.5
       comp=Z,5.5nm,0.8s,baz=288
KPKS                               eS       S       12 22 30.9 +1.0
       baz=288
KPKS   Kokpek           43.13 288  eP       P       12 16 45.7 +0.5
KPKS                               eS       S       12 22 30.9 +1.0
KPKS                                pmax    pmax
       comp=Z,6.0nm,0.8s
EPYK   Eagle Plains     43.28  36   P       P       12 16 46.9 +0.9
       baz=288,SNR=81
EPYK                                S       S       12 22 29.6 -1.7
       baz=288
EPYK   Eagle Plains     43.28  36   P       P       12 16 47.0 +0.9
SATY   Saty             43.51 287  eP       P       12 16 48.8 +0.4
       baz=288
SATY                               eS       S       12 22 36.4 +1.0
       baz=288
SATY   Saty             43.51 287  eP       P       12 16 48.7 +0.4
SATY                               eS       S       12 22 36.4 +1.0
BVAR   Borovoye Array   43.65 304   P       P       12 16 49.7 +0.7
       comp=Z,3.7nm,0.3s,baz=329,slow=42,SNR=63
BVAR                                S       S       12 22 36.5 -0.5
       comp=Z,4.5nm,1.1s,baz=248,slow=26,SNR=8.4
BRZS   Berezniki        43.68 299  eP       P       12 16 49.0 -0.4
       comp=Z,11nm,0.9s,baz=299
BRZS   Berezniki        43.68 299  eP       P       12 16 48.9 -0.4
BRZS                                pmax    pmax
       comp=Z,11nm,0.9s
BRVK   Borovoye         43.70 304ceP        P       12 16 50.1 +0.7
BRVK                                pmax    pmax
       comp=Z,61nm,1.0s
BRVK   Borovoye         43.70 304   P       P       12 16 50.1 +0.7
BRVK                                IAmb    IAmb    12 16 51.2
       comp=Z,49nm,0.9s
INK    Inuvik           43.85  32   P       P       12 16 51.0 +0.7
       comp=Z,49nm,0.4s,baz=302,slow=11,SNR=223
INK                                 PcP     PcP     12 18 23.4 +0.2
       comp=Z,12nm,0.9s,baz=223,slow=3.1,SNR=3.6
INK                                 ScP     ScP     12 21 19.6 +0.2
       comp=Z,5.7nm,1.0s,baz=90,slow=1.0,SNR=3.2
INK                                 S       S       12 22 38.1 -1.1
       comp=Z,2.5nm,0.9s,baz=60,slow=32,SNR=7.6
INK    Inuvik           43.85  32   P       P       12 16 50.8 +0.5
NONG   Nongkai          43.95 240   P       P       12 16 53.0 +1.2
       comp=Z,36nm,1.1s
CHKK   Chushkaly        43.99 289  eP       P       12 16 51.9 -0.1
       baz=289
CHKK   Chushkaly        43.99 289  eP       P       12 16 51.8 -0.1
MDOK   Medeo            44.31 288  eP       P       12 16 55.0 +0.4
       baz=288
MDOK   Medeo            44.31 288  eP       P       12 16 54.9 +0.4
AAA    Alma-Ata         44.37 288  eP       P       12 16 54.7 -0.1
       comp=Z,7.0nm,0.4s,baz=288
AAA    Alma-Ata         44.37 288  eP       P       12 16 54.7 -0.1
AAA                                 pmax    pmax
       comp=Z,7.0nm,0.4s
KUU    Kurty            44.38 290  eP       P       12 16 54.4 -0.5
       comp=Z,6.1nm,0.6s,baz=290
KUU    Kurty            44.38 290  eP       P       12 16 54.3 -0.5
KUU                                 pmax    pmax
       comp=Z,6.0nm,0.6s
MTBS   Maitube          44.72 289  eP       P       12 16 58.5 +1.0
       baz=289
MTBS   Maitube          44.72 289  eP       P       12 16 58.5 +1.0
HYT    Haines Junctio   44.88  43   P       P       12 17 00.3 +1.8
BTLS   Baital           45.21 292  eP       P       12 17 00.8 -0.4
       baz=292
BTLS   Baital           45.21 292  eP       P       12 17 00.7 -0.4
SHL    Shillong         45.26 258   P       P       12 17 02.1 +0.1
SHL                                 pmax    pmax
       comp=Z,51nm,1.0s
SHL    Shillong         45.26 258   P       P       12 17 02.1 +0.1
SHL                                 IAmb    IAmb    12 17 02.9
       comp=Z,52nm,1.0s
ULHL   Ulahol           45.30 288   P       P       12 17 03.2 +1.1
       SNR=12
TKM2   Tokmak 2         45.34 289   P       P       12 17 03.7 +1.2
       SNR=6.9
LAMP   Lampang          45.63 244   P       P       12 17 05.0 +0.3
       comp=Z,35nm,0.8s
SGDS   Sogindy          45.67 290  eP       P       12 17 05.0 +0.3
       comp=Z,6.3nm,0.8s,baz=290
SGDS   Sogindy          45.67 290  eP       P       12 17 05.0 +0.3
SGDS                                pmax    pmax
       comp=Z,6.0nm,0.8s
UTTA   Uttaradit        45.70 242   P       P       12 17 06.9 +1.8
       comp=Z,21nm,1.2s
CMMT   Chiang Mai       45.81 245   P       P       12 17 06.6 +0.5
       comp=Z,14nm,1.2s
CHTO   Chiang Mai       45.81 245   P       P       12 17 06.6 +0.5
CHTO                                pmax    pmax
       comp=Z,31nm,1.1s
CHTO   Chiang Mai       45.81 245   P       P       12 17 06.6 +0.5
USP    Ospenovka        45.85 290   P       P       12 17 07.3 +1.2
       SNR=9.7
KBK    Karagaybulak     45.89 289   P       P       12 17 07.8 +1.2
       SNR=9.1
CMAR   Chiang Mai Arr   46.09 244   P       P       12 17 08.9 +0.8
       comp=Z,7.5nm,1.0s,baz=28,slow=6.0,SNR=8.0
CMAR                                PcP     PcP     12 18 33.3 +1.3
       comp=Z,4.6nm,0.8s,baz=15,slow=2.8,SNR=14
CMAR                                pP      pP      12 18 54.6 +1.7
       comp=Z,2.3nm,0.8s,baz=32,slow=7.6,SNR=2.9
CMAR                                ScP     ScP     12 21 29.9 +0.3
       comp=Z,0.9nm,0.5s,baz=14,slow=4.0,SNR=6.4
CMAR   Chiang Mai Arr   46.09 244   P       P       12 17 08.8 +0.6
CM02   Chiang Mai Arr   46.11 244   P       P       12 17 09.8 +1.5
       comp=Z,108nmcomp=Z,11nm,1.2s
CM01   Chiang Mai Arr   46.11 244   P       P       12 17 09.8 +1.5
       comp=Z,12nm,1.2s
CM04   Chiang Mai Arr   46.11 244   P       P       12 17 09.0 +0.7
       comp=Z,108nmcomp=Z,10nm,1.2s
WHY    Whitehorse       46.13  43   P       P       12 17 09.4 +1.4
WHY                                 IAmb    IAmb    12 17 10.6
       comp=Z,51nm,1.1s
AAK    Ala-Archa        46.18 289   P       P       12 17 10.2 +1.4
       SNR=5.7
AAK    Ala-Archa        46.18 289ceP        P       12 17 09.3 +0.5
AAK                                 pmax    pmax
       comp=Z,21nm,0.8s
AAK    Ala-Archa        46.18 289   P       P       12 17 09.8 +1.1
PHIT   Phitsanulok      46.21 242   P       P       12 17 11.2 +2.1
       comp=Z,68nm,0.9s
CHAI   Chaiyaphum       46.34 239   P       P       12 17 10.5 +0.5
       comp=Z,44nm,1.1s
PBKT   Sadao Pong       46.38 241   P       P       12 17 09.8 -0.5
SKAG   Skagway          46.43  44   P       P       12 17 12.1 +2.0
SUKH   Sukhothai        46.44 243   P       P       12 17 12.5 +1.7
       comp=Z,18nm,1.2s
EKS2   Erkin-Say        46.62 289   P       P       12 17 13.1 +1.1
       SNR=16
C36M   Paulatuk         46.65  29   P       P       12 17 12.2 +0.6
       baz=295,SNR=144
C36M   Paulatuk         46.65  29   P       P       12 17 12.2 +0.6
MHMT   Maesarieng       46.91 245   P       P       12 17 17.2 +2.9
       comp=Z,982nmcomp=Z,27nm,1.6s
AML    Almayashu        46.96 289   P       P       12 17 15.6 +0.7
       SNR=8.7
KSH    Kashi            46.96 285   P       P       12 17 18.8 +4.2
KSH                                 pP      pP      12 19 05.8 +5.9
KSH                                 S       S       12 23 26.5 +2.8
KSH                                 sS      sS      12 26 39.6 +5.2
KSH                                 pmax    pmax
       comp=Z,12nm,0.7s
KSH                                 pmax    pmax
       comp=Z,470nm,6.1s
BESE   Bessie Mountai   47.04  45   P       P       12 17 16.4 +1.6
BESE                                IAmb    IAmb    12 17 17.3
       comp=Z,66nm,1.0s
SVE    Sverdlovsk       47.07 312c iP       P       12 17 15.7 +0.7
SVE                                eS       S       12 23 23.9 -0.6
SVE                                 pmax    pmax
       comp=Z,111nm,1.0s
JIS    Juneau Island    47.39  46   P       P       12 17 19.3 +2.0
JIS                                 IAmb    IAmb    12 17 20.2
       comp=Z,86nm,1.2s
SIT    Sitka            47.50  47   P       P       12 17 20.3 +2.1
SIT                                 pmax    pmax
       comp=Z,87nm,1.1s
SIT    Sitka            47.50  47   P       P       12 17 20.3 +2.1
SRAK   Srakaew          47.84 237   P       P       12 17 20.4 -0.9
       comp=Z,315nm,1.1s
UTHA   Uthaitani        48.07 241   P       P       12 17 24.8 +1.9
ARU    Arti             48.27 312d iP       P       12 17 24.1 +0.2
ARU                                                 12 18 38.4
ARU                                 *PP     pP      12 19 10.7 +0.6
ARU                                                 12 19 23.5
ARU                                 *SP     sP      12 20 16.0 +1.5
ARU                                 S       S       12 23 42.6 +1.6
ARU                                 pmax    pmax
       comp=Z,125nm,1.0s
ARU    Arti             48.27 312   P       P       12 17 22.9 -1.0
KK31   Karatay Array    48.40 292   P       P       12 17 25.7 +0.5
KK31                                pmax    pmax
       comp=Z,12nm,0.9s
KK31   Karatay Array    48.40 292   P       P       12 17 25.7 +0.5
KKAR   Karatay Array    48.40 292   P       P       12 17 25.3 +0.2
KKAR   Karatay Array    48.40 292   P       P       12 17 25.7 +0.5
KKAR   Karatay Array    48.40 292   P       P       12 17 25.3 +0.2
EUNU   Eureka           48.44  10   P       P       12 17 25.2 +0.3
SPA0   Spitsbergen Ar   49.07 347  eP       P       12 17 29.4 -0.1
KBS    Kingsbay         49.13 349ceP        P       12 17 30.2 +0.3
KBS                                 pmax    pmax
       comp=Z,53nm,1.3s
IUG    Iuzhnay          49.22 291  eP       P       12 17 32.3 +0.9
       comp=Z,7.1nm,0.9s,baz=291
IUG    Iuzhnay          49.22 291  eP       P       12 17 32.2 +0.9
IUG                                 pmax    pmax
       comp=Z,7.0nm,0.9s
WRAK   Wrangell Islan   49.25  47   P       P       12 17 33.1 +2.0
WRAK                                IAmb    IAmb    12 17 34.2
       comp=Z,43nm,1.0s
DLBC   Dease Lake       49.34  44   P       P       12 17 34.0 +2.2
       comp=Z,40nm,0.8s,baz=289,slow=5.3,SNR=85
DLBC   Dease Lake       49.34  44   P       P       12 17 34.1 +2.2
DLBC                                IAmb    IAmb    12 17 35.1
       comp=Z,86nm,1.2s
HSPB   Hornsund (broa   50.04 346  eP       P       12 17 37.3 +0.7
JOHN   Johnston Islan   50.55 112   P       P       12 17 42.5 +1.4
SMPI   Sarmi            50.73 184   P       P       12 17 44.7 +2.3
       comp=Z,23nm,1.3s
DIB    Dawson Inlet,    50.83  51   P       P       12 17 44.4 +1.7
DIB                                 IAmb    IAmb    12 17 45.6
       comp=Z,50nm,1.0s
RES    Resolute Bay     51.08  17   P       P       12 17 44.0 -0.1
       comp=Z,56nm,0.8s,baz=298,slow=7.0,SNR=210
RES                                 PcP     PcP     12 18 50.1 +0.7
       comp=Z,12nm,0.8s,baz=330,slow=7.0,SNR=5.4
RES    Resolute Bay     51.08  17   P       P       12 17 44.1 -0.1
RES                                 IAmb    IAmb    12 17 45.1
       comp=Z,88nm,1.1s
ABKAR  Akbulak array    51.23 304   P       P       12 17 46.2 +0.5
ABKAR                               IAmb    IAmb    12 17 47.2
       comp=Z,48nm,1.0s
ABKAR  Akbulak array    51.23 304   P       P       12 17 45.9 +0.3
KIRV   Kirov            51.44 318d iP       P       12 17 47.2 +0.2
LVZ    Lovozero         51.68 333ceP        P       12 17 48.4 -0.3
LVZ                                 pmax    pmax
       comp=Z,63nm,1.7s
NIL    Nilore           52.20 280   P       P       12 17 54.1 +1.2
NIL                                 pmax    pmax
       comp=Z,19nm,0.9s
NIL    Nilore           52.20 280   P       P       12 17 54.1 +1.2
APA    Apatity          52.26 333⇓iP        P       12 17 51.7 -1.0
APA                                i                12 18 52.9
APA                                i S      S       12 24 30.0 -4.3
APA                                 pmax    pmax
       comp=Z,26nm,1.0s
APA                                 MLR     MLR
       comp=Z,1µm,17.0s
TMCR   Tamitsa          52.80 328  eP       P       12 17 54.7 -1.9
TMCR                                pmax    pmax
       comp=Z,82nm,1.1s
ARA0   ARCESS Array S   53.21 337  eP       P       12 18 00.3 +0.8
ARCES  ARCESS Array B   53.21 337   P       P       12 17 59.6 +0.1
       comp=Z,25nm,0.9s,baz=35,slow=7.2,SNR=36
ARCES                               PcP     PcP     12 18 57.9 +0.3
       comp=Z,5.2nm,0.8s,baz=51,slow=5.9,SNR=4.1
ARCES  ARCESS Array B   53.21 337   P       P       12 18 00.2 +0.7
ARCES                               pmax    pmax
       comp=Z,39nm,1.2s
ARCES  ARCESS Array B   53.21 337   P       P       12 18 00.2 +0.7
TULEG  Thule            53.33   9   P       P       12 17 58.4 -1.8
TULEG                               IAmb    IAmb    12 18 00.8
       comp=Z,112nm,1.1s
TULEG  Thule            53.33   9⇓iP        P       12 17 59.7 -0.5
TULEG                               IAmb    IAmb    12 18 00.6
       comp=Z,103nm,1.1s
YKA    Yellowknife Ar   53.52  34   P       P       12 18 01.9 +0.1
       comp=Z,25nm,0.8s,baz=306,slow=6.2,SNR=320
YKA                                 PcP     PcP     12 18 59.1 +0.2
       comp=Z,7.0nm,0.9s,baz=319,slow=3.0,SNR=9.4
YKA                                 PP      PP      12 20 09.5 -1.0
       comp=Z,2.3nm,0.8s,baz=301,slow=7.4,SNR=3.9
YKA                                 ScP     ScP     12 22 01.3 +0.4
       comp=Z,3.9nm,0.9s,baz=311,slow=4.1,SNR=7.2
YKA                                 S       S       12 24 51.4 +0.3
       comp=Z,3.4nm,1.2s,baz=303,slow=12,SNR=5.6
DAG    Danmarks Havn    54.05 355⇓iP        P       12 18 05.0 -0.3
DAG                                 pmax    pmax
       comp=Z,73nm,1.0s
DAG    Danmarks Havn    54.05 355⇓iP        P       12 18 05.0 -0.3
       comp=Z,73nm,1.0s
DAG    Danmarks Havn    54.05 355⇓iP        P       12 18 05.0 -0.3
DAG                                 IAmb    IAmb    12 18 06.0
       comp=Z,73nm,1.0s
KTK1   Kautokeino       54.16 337  eP       P       12 18 06.8 +0.6
KLMR   Klimovskoe       54.25 324  eP       P       12 18 05.8 -1.1
KLMR                               e*PP     pP      12 19 57.9 +0.9
KLMR                                pmax    pmax
       comp=Z,97nm,1.3s
KLMR   Klimovskoe       54.25 324  eP       P       12 18 05.9 -1.0
KLMR                                AMP             12 18 08.1
       comp=Z,97nm,1.3s
KLMR                               epP      pP      12 19 57.9 +0.9
OPA    Opana            54.26  98   P       P       12 18 09.6 +2.0
OPA                                 pmax    pmax
       comp=Z,101nm,0.9s
OPA    Opana            54.26  98   P       P       12 18 09.6 +2.0
OPA                                 IAmb    IAmb    12 18 10.1
       comp=Z,101nm,0.9s
KBL    Kabul            54.37 284   P       P       12 18 07.7 -0.7
KBL                                 pmax    pmax
       comp=Z,19nm,1.2s
KBL    Kabul            54.37 284   P       P       12 18 07.7 -0.7
TRO    Tromso           54.77 339  eP       P       12 18 10.7 +0.3
BELG   Belogornoye      55.83 312d iP       P       12 18 18.1 +0.1
BELG                                pmax    pmax
       comp=Z,19nm,1.0s
DBG    Daneborg         56.55 354  i P      P       12 18 22.2 -0.4
STEI   Steigen          56.95 339  eP       P       12 18 25.2 -0.2
LOF    Lofoten          57.19 340  eP       P       12 18 31.1 +4.1
POHA   Pohakuloa        57.25  97   P       P       12 18 30.0 +1.4
POHA                                IAmb    IAmb    12 18 30.5
       comp=Z,97nm,0.8s
FAUS   Fauske           57.36 338  eP       P       12 18 27.9 -0.4
UPNV   Upernavik        57.99   6  i P      P       12 18 32.2 -0.3
UPNV                                IAmb    IAmb    12 18 33.0
       comp=Z,88nm,1.1s
PGC    Sidney           58.12  51   P       P       12 18 34.6 +1.0
MOS    Moscow           58.28 320  eP       P       12 18 33.1 -1.5
MOS                                e*PP     pP      12 20 27.2 +0.2
MOS                                eS       S       12 25 50.3 -2.2
MOS                                 pmax    pmax
       comp=Z,71nm,1.0s
A04D   Lummi Island     58.46  51   P       P       12 18 37.1 +1.1
       baz=310,SNR=6.9
MOR8   Moi Rana         58.52 338  eP       P       12 18 35.0 -1.2
NLWA   Neilton Lookou   58.70  52   P       P       12 18 38.7 +1.0
FIA1   FINESS Array S   58.72 330   P       P       12 18 37.2 -0.2
FINES  FINESS Array B   58.72 330   P       P       12 18 37.3 -0.1
       comp=Z,17nm,0.5s,baz=46,slow=7.8,SNR=108
FINES                               PcP     PcP     12 19 19.2 -0.2
       comp=Z,11nm,0.8s,baz=73,slow=6.4,SNR=4.7
FINES                               pP      pP      12 20 31.2 +1.1
       comp=Z,12nm,1.0s,baz=57,slow=7.0,SNR=4.5
FINES                               ScP     ScP     12 22 22.5 -1.4
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	comp=Z,6.5nm,0.9s,baz=64,slow=4.8,SNR=3.3						
HRA	**Herat**	**58.79**	**288**	P	**P**	**12 18 39.5**	**+0.8**
SUMG	**Summit**	**58.87**	**0**	⇓iP	**P**	**12 18 39.6**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,270nm,1.0s						
SUMG	**Summit**	**58.87**	**0**	P	**P**	**12 18 39.6**	**+0.8**
SUMG				IAmb	IAmb	12 18 40.7	
	comp=Z,88nm,0.9s						
SUMG	**Summit**	**58.87**	**0**	⇓iP	**P**	**12 18 39.6**	**+0.8**
	comp=Z,266nm,1.0s						
SUMG	**Summit**	**58.87**	**0**	⇓iP	**P**	**12 18 39.6**	**+0.8**
SUMG				IAmb	IAmb	12 18 40.0	
	comp=Z,266nm,1.0s						
D03D	**Eldon**	**59.02**	**52**	P	**P**	**12 18 41.0**	**+1.2**
	baz=310,SNR=13						
GEYT	**Alibeck**	**59.05**	**294**	P	**P**	**12 18 41.0**	**+0.8**
	comp=Z,2.7nm,0.3s,baz=5.7,slow=1.5,SNR=9.2						
GEYT				pP	**pP**	**12 20 33.8**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=46,slow=8.9,SNR=2.4						
GEYT	**Alibeck**	**59.05**	**294**	P	**P**	**12 18 40.8**	**+0.6**
B05A	**Bryant**	**59.06**	**51**	P	**P**	**12 18 41.1**	**+1.1**
	baz=310,SNR=22						
OBN	**Obninsk**	**59.14**	**320**	ceP	**P**	**12 18 39.9**	**-0.5**
OBN				i		12 19 21.1	
OBN				e*PP	**pP**	**12 20 34.4**	**+1.1**
OBN				S	S	12 26 13.0	+10
OBN				pmax	pmax		
	comp=Z,79nm,1.2s						
B06A	**Marblemount**	**59.21**	**50**	P	**P**	**12 18 41.9**	**+0.9**
B06A				IAmb	IAmb	12 18 42.9	
	comp=Z,78nm,1.0s						
E03A	**Lebam**	**59.41**	**53**	P	**P**	**12 18 44.0**	**+1.7**
E03A				IAmb	IAmb	12 18 45.0	
	comp=Z,86nm,1.0s						
D04E	**Lakebay**	**59.41**	**52**	P	**P**	**12 18 44.3**	**+2.0**
	baz=310,SNR=6.4						
NUUG	**Nuugaatsiaq**	**59.42**	**6**	i P	**P**	**12 18 41.6**	**-0.3**
VRH	**Novokhopyorsk**	**59.42**	**314**	eP	**P**	**12 18 41.0**	**-1.3**
VRH				e*PP	**pP**	**12 20 34.2**	**-1.2**
VRH				pmax	pmax		
	comp=Z,60nm,1.0s						
LPSR	**Galich'ya Gora**	**59.79**	**317**	eP	**P**	**12 18 43.9**	**-0.8**
LPSR				e*PP	**pP**	**12 20 37.9**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
D05A	**Enumclaw**	**59.81**	**52**	P	**P**	**12 18 46.9**	**+1.9**
C06D	**Leavenworth**	**59.90**	**51**	P	**P**	**12 18 46.6**	**+1.0**
	baz=311						
E04D	**Cinebar**	**59.92**	**53**	P	**P**	**12 18 47.4**	**+1.6**
	baz=311,SNR=7.9						
F04D	**Rainier, OR**	**60.00**	**53**	P	**P**	**12 18 47.7**	**+1.4**
	baz=311						
LON	**Longmire**	**60.19**	**52**	P	**P**	**12 18 48.7**	**+1.0**
LON				pmax	pmax		
	comp=Z,18nm,1.2s						
LON	**Longmire**	**60.19**	**52**	P	**P**	**12 18 48.6**	**+1.0**
B08A	**Colville Reser**	**60.40**	**49**	P	**P**	**12 18 49.7**	**+0.8**
SCO	**Scoresbysund**	**60.41**	**354**	⇓iP	**P**	**12 18 48.5**	**0.0**
SCO				pmax	pmax		
	comp=Z,82nm,1.3s						
SCO	**Scoresbysund**	**60.41**	**354**	⇓iP	**P**	**12 18 48.5**	**0.0**
	comp=Z,82nm,1.3s						
SCO	**Scoresbysund**	**60.41**	**354**	⇓iP	**P**	**12 18 48.5**	**0.0**
SCO				IAmb	IAmb	12 18 50.6	
	comp=Z,82nm,1.3s						
G03D	**McMinnville, O**	**60.43**	**54**	P	**P**	**12 18 50.9**	**+1.7**
	baz=311						
LTY	**Liberty**	**60.45**	**51**	P	**P**	**12 18 50.1**	**+0.8**
NSS	**Namsos**	**60.47**	**338**	eP	**P**	**12 18 48.2**	**-0.8**
VSU	**Vasula**	**60.66**	**327**	eP	**P**	**12 18 50.6**	**+0.3**
COR	**Corvallis**	**60.82**	**55**	P	**P**	**12 18 54.0**	**+2.3**
COR				pmax	pmax		
	comp=Z,103nm,1.1s						
COR	**Corvallis**	**60.82**	**55**	P	**P**	**12 18 54.0**	**+2.3**
COR				IAmb	IAmb	12 18 55.0	
	comp=Z,103nm,1.1s						
F05D	**White Salmon**	**60.95**	**53**	P	**P**	**12 18 53.9**	**+1.4**
	baz=312						
H04D	**Lebanon**	**61.17**	**54**	P	**P**	**12 18 55.8**	**+1.9**
	baz=312,SNR=8.6						
C09A	**Chrisman Ranch**	**61.30**	**49**	P	**P**	**12 18 55.6**	**+0.8**
C09A				IAmb	IAmb	12 18 56.7	
	comp=Z,72nm,1.2s						
E07A	**Sunnyside**	**61.33**	**51**	P	**P**	**12 18 56.3**	**+1.2**
H04A	**Detroit Lake**	**61.35**	**54**	P	**P**	**12 18 56.7**	**+1.5**
H04A				IAmb	IAmb	12 18 57.6	
	comp=Z,78nm,1.2s						
I03D	**Drain, OR**	**61.38**	**55**	P	**P**	**12 18 57.4**	**+2.1**
	baz=312,SNR=14						
KEBM	**Edson Butte**	**61.39**	**57**	P	**P**	**12 18 57.9**	**+2.4**
J01E	**Myrtle Point**	**61.42**	**56**	P	**P**	**12 18 57.6**	**+2.0**
	baz=312,SNR=8.0						
G05D	**Wamic, OR**	**61.45**	**53**	P	**P**	**12 18 57.4**	**+1.6**
	baz=312,SNR=9.6						
NEW	**Newport**	**61.56**	**48**	P	**P**	**12 18 56.9**	**+0.4**
	comp=Z,20nm,1.0s,baz=312,slow=5.6,SNR=38						
NEW				PcP	**PcP**	**12 19 32.4**	**+1.1**
	comp=Z,6.2nm,0.9s,baz=39,slow=5.1,SNR=5.5						
NEW	**Newport**	**61.56**	**48**	P	**P**	**12 18 57.2**	**+0.7**
	baz=313,SNR=21						
NEW	**Newport**	**61.56**	**48**	P	**P**	**12 18 56.9**	**+0.4**
HAWA	**Hanford**	**61.61**	**51**	P	**P**	**12 18 57.2**	**+0.4**
E08A	**Dider Farm, El**	**61.78**	**51**	P	**P**	**12 18 59.0**	**+1.1**
I04A	**Tendick Farm,**	**61.83**	**55**	P	**P**	**12 18 59.5**	**+1.2**
	baz=312,SNR=18						
ILULI	**Ilulissat**	**61.85**	**5**	P	**P**	**12 18 57.0**	**-0.9**
ILULI				pmax	pmax		
	comp=Z,52nm,0.9s						
ILULI	**Ilulissat**	**61.85**	**5**	P	**P**	**12 18 57.0**	**-0.9**
ILULI				IAmb	IAmb	12 18 58.4	
	comp=Z,52nm,0.9s						
K02D	**Willamette Mer**	**61.87**	**56**	P	**P**	**12 19 00.3**	**+1.6**
	baz=312,SNR=9.4						
TBLU	**Trondheim**	**61.95**	**338**	eP	**P**	**12 18 56.6**	**-2.1**
I05D	**Terrebonne, OR**	**62.04**	**54**	P	**P**	**12 19 01.0**	**+1.3**
	baz=312,SNR=11						
E09A	**Wood Farm, Sta**	**62.23**	**50**	P	**P**	**12 19 02.0**	**+1.2**
E09A				IAmb	IAmb	12 19 03.0	
	comp=Z,63nm,1.1s						
L02E	**Cave Junction**	**62.27**	**57**	P	**P**	**12 19 02.9**	**+1.7**
	baz=312,SNR=5.3						
HUMO	**Hull Mountain**	**62.32**	**56**	P	**P**	**12 19 03.4**	**+1.8**
J04D	**Umpqua Nationa**	**62.36**	**55**	P	**P**	**12 19 03.7**	**+1.7**
	baz=312,SNR=12						
ICESG	**Greenland Ices**	**62.37**	**1**	i P	**P**	**12 19 02.0**	**+0.3**
ICESG				IAmb	IAmb	12 19 03.1	
	comp=Z,152nm,1.2s						
WALA	**Waterton Lakes**	**62.57**	**46**	P	**P**	**12 19 04.0**	**+0.8**
WALA				IAmb	IAmb	12 19 05.1	
	comp=Z,61nm,1.1s						
PINE	**Pine Mountain**	**62.62**	**54**	P	**P**	**12 19 05.3**	**+1.7**
PINE				IAmb	IAmb	12 19 06.5	
	comp=Z,62nm,0.8s						
UPP	**Uppsala**	**62.64**	**332**	eP	**P**	**12 19 03.2**	**0.0**
G08A	**Pilot Rock**	**62.65**	**52**	P	**P**	**12 19 04.9**	**+1.2**
GROC	**Groznyy**	**62.67**	**305**	eP	**P**	**12 19 03.4**	**-0.3**
GROC				e		12 19 35.9	
GROC				e		12 21 34.2	
GROC				pmax	pmax		
	comp=Z,21nm,0.5s						
AKT	**Akhty**	**62.77**	**303**	eP	**P**	**12 19 05.2**	**+0.7**
AKT				e		12 19 36.0	
AKT				e*PP	**pP**	**12 21 00.4**	**+1.0**
AKT				e		12 21 33.1	
AKT				pmax	pmax		
	comp=Z,58nm,1.3s						
J05D	**Fort Rock, OR**	**62.80**	**55**	P	**P**	**12 19 06.4**	**+1.6**
	baz=313,SNR=29						
GOF	**Gofitskoye**	**62.88**	**308**	⇑eP	**P**	**12 19 05.6**	**+0.6**
GOF				eS	**S**	**12 26 51.5**	**+1.7**
GOF				pmax	pmax		
	comp=Z,163nm,1.1s						
GOF				smax	smax		
	comp=N,51nm,1.4s						
GOF				smax	smax		
	comp=E,116nm,1.7s						
L04D	**Klamath Falls**	**62.94**	**56**	P	**P**	**12 19 07.1**	**+1.4**
	baz=313,SNR=16						
K04D	**Chiloquin, OR**	**62.97**	**55**	P	**P**	**12 19 07.4**	**+1.6**
	baz=313,SNR=7.0						
IDID	**Didziasalis**	**62.98**	**325**	eP	**P**	**12 19 05.8**	**+0.3**
ISAL	**Salakas**	**63.02**	**325**	eP	**P**	**12 19 06.3**	**+0.6**
YBH	**Yreka Blue Hor**	**63.04**	**57**	P	**P**	**12 19 08.1**	**+1.8**
YBH				pmax	pmax		
	comp=Z,30nm,1.2s						
YBH	**Yreka Blue Hor**	**63.04**	**57**	P	**P**	**12 19 08.1**	**+1.8**
KHMM	**Horse Mountain**	**63.05**	**58**	P	**P**	**12 19 08.5**	**+2.0**
F10A	**Beach Ranch, E**	**63.07**	**50**	P	**P**	**12 19 07.5**	**+1.1**
IIGN	**Ignalina**	**63.15**	**325**	eP	**P**	**12 19 06.9**	**+0.3**
I07A	**Izee**	**63.18**	**53**	P	**P**	**12 19 08.6**	**+1.5**
M02C	**Callahan**	**63.19**	**57**	P	**P**	**12 19 09.0**	**+1.8**
	baz=313,SNR=15						
MOL	**Molde**	**63.20**	**338**	eP	**P**	**12 19 07.4**	**+0.7**
NACGM	**Naroch**	**63.27**	**324**	i P	**P**	**12 19 07.1**	**-0.2**
NACGM				i P	**P**	**12 19 07.1**	**-0.2**
NACGM				i P	**P**	**12 19 07.1**	**-0.2**
NACGM				i pP	**pP**	**12 21 04.3**	**+1.7**
NACGM				i PP	**PP**	**12 21 42.4**	**+6.3**
NACGM				i sP	sP	12 22 13.1	+8.8
NACGM				i S	**S**	**12 26 50.2**	**-3.9**
NACGM				i sS	sS	12 29 57.2	-23
NACGM				i SS	**SS**	**12 31 10.8**	**-3.4**
NACGM				i SSS	SSS	12 34 40.1	
DOMB	**Dombas**	**63.27**	**337**	eP	**P**	**12 19 07.5**	**+0.2**
FCC	**Fort Churchill**	**63.30**	**29**	P	**P**	**12 19 07.4**	**0.0**
FCC				pmax	pmax		
	comp=Z,102nm,1.1s						
FCC	**Fort Churchill**	**63.30**	**29**	P	**P**	**12 19 07.4**	**0.0**
NC303	**NORSAR Array S**	**63.35**	**336**	P	**P**	**12 19 07.7**	**0.0**
NC405	**NORSAR Array S**	**63.35**	**336**	P	**P**	**12 19 07.7**	**-0.1**
K05A	**Summer Lake**	**63.36**	**55**	P	**P**	**12 19 10.3**	**+1.8**
K05A				IAmb	IAmb	12 19 11.3	
	comp=Z,70nm,1.0s						
NC204	**NORSAR Array S**	**63.47**	**336**	P	**P**	**12 19 08.6**	**0.0**
M04C	**Macdoel**	**63.49**	**56**	P	**P**	**12 19 10.7**	**+1.6**
	baz=313,SNR=29						
KMRM	**Mail Ridge**	**63.51**	**59**	P	**P**	**12 19 11.6**	**+2.4**
NB201	**NORSAR Array S**	**63.52**	**336**	P	**P**	**12 19 08.8**	**-0.1**
NB201				IAmb	IAmb	12 19 26.7	
	comp=Z,117nm,1.4s						
NB201	**NORSAR Array S**	**63.52**	**336**	eP	**P**	**12 19 08.7**	**-0.1**
NB2	**NORSAR Subarra**	**63.55**	**336**	P	**P**	**12 19 08.8**	**-0.3**
	comp=Z,5.3nm,0.5s,baz=32,slow=6.5						
NB2	**NORSAR Subarra**	**63.55**	**336**	P	**P**	**12 19 08.8**	**-0.3**
	baz=32,slow=6.5						
NOA	**NORSAR Array B**	**63.55**	**336**	P	**P**	**12 19 08.8**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=92,slow=10,SNR=60						
NOA				PcP	**PcP**	**12 19 38.8**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=28,slow=4.1,SNR=4.4						
N02D	**Trinity Center**	**63.56**	**57**	P	**P**	**12 19 11.3**	**+1.7**
	baz=313,SNR=20						
FFC	**Flin Flon**	**63.63**	**36**	P	**P**	**12 19 09.8**	**+0.2**
FFC				pmax	pmax		
	comp=Z,139nm,1.2s						
FFC	**Flin Flon**	**63.63**	**36**	P	**P**	**12 19 09.8**	**+0.2**
NCK	**Nalchik**	**63.65**	**307**	i P	**P**	**12 19 11.2**	**+1.2**
NCK				pmax	pmax		
	comp=Z,54nm,0.7s						
BMO	**Blue Mountains**	**63.80**	**51**	P	**P**	**12 19 12.2**	**+1.1**
BMO				pmax	pmax		
	comp=Z,40nm,1.1s						
BMO	**Blue Mountains**	**63.80**	**51**	P	**P**	**12 19 12.2**	**+1.1**
BMO				IAmb	IAmb	12 19 13.3	
	comp=Z,40nm,1.1s						
KIV	**Kislovodsk**	**63.82**	**307**	⇑P	**P**	**12 19 09.6**	**-1.5**
KIV	**Kislovodsk**	**63.82**	**307**	eP	**P**	**12 19 12.1**	**+0.9**
KIV				pmax	pmax		
	comp=Z,233nm,1.1s						
KIV	**Kislovodsk**	**63.82**	**307**	P	**P**	**12 19 12.0**	**+0.9**
KIV				IAmb	IAmb	12 19 14.0	
	comp=Z,74nm,1.0s						
KBZ	**Khabaz**	**63.86**	**307**	P	**P**	**12 19 12.3**	**+1.0**
	comp=Z,31nm,0.9s,baz=45,slow=3.1,SNR=57						
KBZ	**Khabaz**	**63.86**	**307**	d iP	**P**	**12 19 12.1**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,51nm,1.0s						
WDC	**Whiskeytown Da**	**63.92**	**58**	P	**P**	**12 19 13.0**	**+1.3**
WDC				pmax	pmax		
	comp=Z,28nm,1.3s						
WDC	**Whiskeytown Da**	**63.92**	**58**	P	**P**	**12 19 13.0**	**+1.3**
KCPM	**Cahto Peak**	**63.94**	**59**	P	**P**	**12 19 13.9**	**+1.9**
ZEI	**Tsey**	**63.97**	**306**	eP	**P**	**12 19 11.6**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,24nm,0.9s						
O02D	**Mt. Diablo Mer**	**64.06**	**58**	P	**P**	**12 19 14.5**	**+1.8**
	baz=313,SNR=19						
SFJD	**Kangerlussuaq**	**64.07**	**6**	P	**P**	**12 19 12.1**	**-0.1**
SFJD				pmax	pmax		
	comp=Z,75nm,1.1s						
SFJD	**Kangerlussuaq**	**64.07**	**6**	P	**P**	**12 19 12.1**	**-0.1**
SFJD				IAmb	IAmb	12 19 13.3	
	comp=Z,75nm,1.1s						
SFJD	**Kangerlussuaq**	**64.07**	**6**	i P	**P**	**12 19 12.2**	**0.0**
	comp=Z,5.8nm,1.1s						
SFJD	**Kangerlussuaq**	**64.07**	**6**	i P	**P**	**12 19 12.3**	**0.0**
SFJD				IAmb	IAmb	12 19 13.2	
	comp=Z,5.8nm,1.1s						
MSO	**Missoula**	**64.11**	**48**	P	**P**	**12 19 13.7**	**+0.7**
	baz=315,SNR=35						
MSO	**Missoula**	**64.11**	**48**	P	**P**	**12 19 13.8**	**+0.8**
MSO				IAmb	IAmb	12 19 15.1	
	comp=Z,84nm,1.4s						
MOD	**Modoc Plateau**	**64.25**	**55**	P	**P**	**12 19 15.2**	**+1.2**
O03E	**Paynes Creek**	**64.53**	**57**	P	**P**	**12 19 16.4**	**+0.7**
	baz=314,SNR=24						
SKAR	**Skarslia**	**64.62**	**337**	eP	**P**	**12 19 16.4**	**+0.5**
HOPS	**Hopland Field**	**64.70**	**59**	P	**P**	**12 19 18.2**	**+1.5**
HYA	**Hoyanger**	**64.74**	**338**	eP	**P**	**12 19 16.8**	**+0.3**
WVOR	**Wild Horse Val**	**64.78**	**54**	P	**P**	**12 19 18.6**	**+1.3**
WVOR				pmax	pmax		
	comp=Z,44nm,1.1s						
WVOR	**Wild Horse Val**	**64.78**	**54**	P	**P**	**12 19 18.6**	**+1.3**
WVOR				IAmb	IAmb	12 19 19.7	
	comp=Z,44nm,1.1s						
GDXM	**Geysers**	**64.99**	**59**	P	**P**	**12 19 20.8**	**+2.2**
ORV	**Oroville**	**65.20**	**58**	P	**P**	**12 19 20.4**	**+0.5**
ORV				pmax	pmax		
	comp=Z,23nm,1.2s						
ORV	**Oroville**	**65.20**	**58**	P	**P**	**12 19 20.4**	**+0.5**
HRY	**Holter Researc**	**65.22**	**47**	P	**P**	**12 19 21.1**	**+1.2**
EGMT	**Eagleton**	**65.26**	**45**	P	**P**	**12 19 21.0**	**+0.9**
	baz=316,SNR=29						
EGMT	**Eagleton**	**65.26**	**45**	P	**P**	**12 19 21.1**	**+0.9**
SUW	**Suwalki**	**65.32**	**325**	eP	**P**	**12 19 19.8**	**-0.5**
SUW	**Suwalki**	**65.32**	**325**	eP	**P**	**12 19 19.9**	**-0.3**
SUW	**Suwalki**	**65.32**	**325**	P	**P**	**12 19 20.1**	**-0.2**
SUW				pmax	pmax		
	comp=Z,89nm,1.3s						
SUW	**Suwalki**	**65.32**	**325**	P	**P**	**12 19 20.1**	**-0.2**
SUW				IAmb	IAmb	12 19 20.9	
	comp=Z,89nm,1.3s						
GNI	**Garni**	**65.33**	**303**	d iP	**P**	**12 19 22.4**	**+1.5**
GNI				pmax	pmax		
	comp=Z,55nm,1.5s						
GNI	**Garni**	**65.33**	**303**	P	**P**	**12 19 22.7**	**+1.8**
GNI				IAmb	IAmb	12 19 23.9	
	comp=Z,67nm,1.4s						
AKASG	**Malin Array Be**	**65.41**	**320**	P	**P**	**12 19 20.4**	**-0.4**
	comp=Z,6.2nm,0.5s,baz=39,slow=6.7,SNR=54						
AKASG				pP	**pP**	**12 21 17.5**	**+0.2**
	comp=Z,9.7nm,1.0s,baz=39,slow=7.7,SNR=3.0						
AKASG	**Malin Array Be**	**65.41**	**320**	P	**P**	**12 19 20.5**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,22nm,1.2s						
AKASG	**Malin Array Be**	**65.41**	**320**	P	**P**	**12 19 20.5**	**-0.3**
AKBB	**Malin Array Si**	**65.41**	**320**	P	**P**	**12 19 20.5**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,67nm,1.2s						
AKBB	**Malin Array Si**	**65.41**	**320**	P	**P**	**12 19 20.5**	**-0.4**
AKBB				IAmb	IAmb	12 19 21.7	
	comp=Z,67nm,1.2s						
LRM	**Limekiln Ridge**	**65.56**	**48**	P	**P**	**12 19 23.4**	**+1.2**
MFID	**Camas Ranch**	**65.57**	**52**	P	**P**	**12 19 23.4**	**+1.2**
MFID				IAmb	IAmb	12 19 24.5	
	comp=Z,62nm,1.0s						
ASK	**Askoy**	**65.58**	**338**	eP	**P**	**12 19 22.2**	**+0.5**
SOC	**Sochi**	**65.62**	**309**	eP	**P**	**12 19 20.8**	**-1.5**
SOC				e*PP	**pP**	**12 21 21.0**	**+2.3**
SOC				e		12 21 59.3	
SOC				ePPP	PPP	12 23 44.6	
SOC				eS	**S**	**12 27 22.3**	**-0.3**
SOC				pmax	pmax		
	comp=Z,24nm,1.0s						
BEKR	**Beckworth**	**65.62**	**57**	P	**P**	**12 19 23.7**	**+1.0**
BER	**Bergen**	**65.63**	**338**	eP	**P**	**12 19 22.7**	**+0.6**
ODD1	**Odda**	**65.71**	**337**	eP	**P**	**12 19 22.9**	**+0.2**
DLMT	**Dillon**	**65.81**	**48**	P	**P**	**12 19 24.9**	**+1.2**
ANN	**Anapa**	**65.91**	**311**	eP	**P**	**12 19 22.8**	**-1.3**
ANN				e*PP	**pP**	**12 21 20.4**	**-0.3**
ANN				eS	**S**	**12 27 24.0**	**-2.0**
ANN				pmax	pmax		
	comp=Z,64nm,1.6s						
AFDM	**Forest Hills D**	**65.92**	**58**	P	**P**	**12 19 25.3**	**+0.9**
MCMT	**McKenzie Canyo**	**66.07**	**49**	P	**P**	**12 19 26.5**	**+1.0**
BOZ	**Bozeman (W)**	**66.12**	**47**	P	**P**	**12 19 26.8**	**+1.1**
BOZ				pmax	pmax		
	comp=Z,30nm,0.8s						
BOZ	**Bozeman (W)**	**66.12**	**47**	P	**P**	**12 19 26.6**	**+0.9**
	baz=316,SNR=47						
BOZ	**Bozeman (W)**	**66.12**	**47**	P	**P**	**12 19 26.8**	**+1.1**
BOZ				IAmb	IAmb	12 19 27.3	
	comp=Z,30nm,0.8s						
BCYI	**Bear Canyon**	**66.17**	**49**	P	**P**	**12 19 26.2**	**+0.2**
HLID	**Hailey**	**66.19**	**51**	P	**P**	**12 19 27.4**	**+1.3**
	baz=316,SNR=22						
HLID	**Hailey**	**66.19**	**51**	P	**P**	**12 19 27.4**	**+1.3**
PAHR	**Pah Rah Range**	**66.27**	**56**	P	**P**	**12 19 27.8**	**+1.2**
PAHR				IAmb	IAmb	12 19 28.8	
	comp=Z,48nm,1.0s						
RUBR	**Rubicon Trail**	**66.30**	**57**	P	**P**	**12 19 28.5**	**+1.5**
VCNR	**Virginia City**	**66.41**	**57**	P	**P**	**12 19 28.9**	**+1.3**
PNTR	**Pine Nut**	**66.58**	**57**	P	**P**	**12 19 30.0**	**+1.3**
QLMT	**Earthquake Lak**	**66.77**	**48**	P	**P**	**12 19 30.9**	**+1.2**
YHL	**Hebgen Lake**	**66.88**	**48**	P	**P**	**12 19 31.8**	**+1.3**
CMB	**Columbia Colle**	**66.88**	**58**	P	**P**	**12 19 31.4**	**+1.1**
CMB				pmax	pmax		
	comp=Z,36nm,1.1s						
CMB	**Columbia Colle**	**66.88**	**58**	P	**P**	**12 19 31.4**	**+1.1**
CMB				IAmb	IAmb	12 19 32.6	
	comp=Z,36nm,1.1s						
YHB	**Horse Butte**	**66.94**	**48**	P	**P**	**12 19 32.2**	**+1.4**
WAKR	**Walker**	**67.08**	**57**	P	**P**	**12 19 33.3**	**+1.5**
YMR	**Madison River**	**67.12**	**48**	P	**P**	**12 19 33.3**	**+1.4**
SAO	**San Andreas Ge**	**67.17**	**60**	P	**P**	**12 19 33.4**	**+1.3**
SAO				pmax	pmax		
	comp=Z,19nm,1.1s						
SAO	**San Andreas Ge**	**67.17**	**60**	P	**P**	**12 19 33.4**	**+1.3**
YNE	**Yellowstone No**	**67.33**	**47**	P	**P**	**12 19 34.4**	**+1.1**
BSD	**Bornholm Skovb**	**67.35**	**330**	i P	**P**	**12 19 32.8**	**+0.1**
BSD	**Bornholm Skovb**	**67.35**	**330**	i P	**P**	**12 19 32.8**	**+0.1**
BSD	**Bornholm Skovb**	**67.35**	**330**	i P	**P**	**12 19 32.8**	**+0.1**
DGMT	**Dagmar**	**67.43**	**41**	P	**P**	**12 19 33.9**	**+0.5**
	baz=319,SNR=21						
DGMT	**Dagmar**	**67.43**	**41**	P	**P**	**12 19 34.0**	**+0.5**
SIM	**Simferopol'**	**67.43**	**313**	P	**P**	**12 19 33.4**	**-0.1**
SIM				pmax	pmax		
	comp=Z,29nm,0.9s						
YMP	**Mirror Lake Pl**	**67.46**	**47**	P	**P**	**12 19 35.5**	**+1.5**
LKWY	**Lake**	**67.47**	**48**	P	**P**	**12 19 36.5**	**+2.4**
LKWY				pmax	pmax		
	comp=Z,31nm,1.0s						
LKWY	**Lake**	**67.47**	**48**	P	**P**	**12 19 36.5**	**+2.4**
YPP	**Pitchstone Pla**	**67.48**	**48**	P	**P**	**12 19 36.4**	**+2.2**
RYN	**Ryan**	**67.50**	**57**	P	**P**	**12 19 35.5**	**+1.2**
H17A	**Grant Village**	**67.51**	**48**	P	**P**	**12 19 36.9**	**+2.6**
	baz=317,SNR=64						
H17A	**Grant Village**	**67.51**	**48**	P	**P**	**12 19 37.1**	**+2.8**
GEVA	**Gevas**	**67.55**	**303**	P	**P**	**12 19 36.2**	**+1.6**
RLMT	**Red Lodge**	**67.61**	**47**	P	**P**	**12 19 36.0**	**+1.2**
	baz=318,SNR=38						
RLMT	**Red Lodge**	**67.61**	**47**	P	**P**	**12 19 36.1**	**+1.2**
FLWY	**Flagg Ranch**	**67.67**	**48**	P	**P**	**12 19 37.2**	**+1.9**
FLWY				IAmb	IAmb	12 19 38.5	
	comp=Z,31nm,0.9s						
SORM	**Soroca**	**67.71**	**319**	⇑P	**P**	**12 19 35.1**	**-0.1**
KOPT	**Kop Dagi**	**67.74**	**306**	P	**P**	**12 19 38.1**	**+2.3**
NVAR	**Mina Array Bea**	**67.77**	**57**	P	**P**	**12 19 37.3**	**+1.3**
	comp=Z,26nm,0.8s,baz=294,slow=5.5,SNR=180						
NVAR				pP	**pP**	**12 21 33.0**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=296,slow=6.6,SNR=2.0						
NVAR	**Mina Array Bea**	**67.77**	**57**	P	**P**	**12 19 37.2**	**+1.2**
ELK	**Elko**	**67.77**	**53**	P	**P**	**12 19 37.4**	**+1.4**
ELK				pmax	pmax		
	comp=Z,32nm,1.2s						
ELK	**Elko**	**67.77**	**53**	P	**P**	**12 19 37.4**	**+1.4**
LHV	**Little Huntoon**	**67.78**	**57**	P	**P**	**12 19 37.4**	**+1.7**
LHV				IAmb	IAmb	12 19 38.8	
	comp=Z,81nm,1.1s						
NV11	**Mina Array Sit**	**67.85**	**57**	P	**P**	**12 19 37.2**	**+0.9**
LAO	**LASA Array**	**67.87**	**44**	P	**P**	**12 19 37.0**	**+0.8**
	baz=319,SNR=24						
LAO	**LASA Array**	**67.87**	**44**	P	**P**	**12 19 36.8**	**+0.6**
LAO				IAmb	IAmb	12 19 38.2	
	comp=Z,54nm,1.1s						
MOOW	**Moose Ponds**	**67.89**	**48**	P	**P**	**12 19 38.1**	**+1.5**
MOOW				IAmb	IAmb	12 19 39.5	
	comp=Z,50nm,1.1s						
MDPB	**Devils Postpil**	**67.90**	**58**	P	**P**	**12 19 38.0**	**+1.1**
BEL	**Belsk**	**67.93**	**325**	eP	**P**	**12 19 37.4**	**+1.1**
PMPB	**Monarch Peak**	**67.93**	**60**	P	**P**	**12 19 38.8**	**+2.0**
PMPB				IAmb	IAmb	12 19 47.1	
	comp=Z,51nm,1.4s						
OMMB	**Old Mammoth Mi**	**67.96**	**58**	P	**P**	**12 19 38.4**	**+1.2**
MLAC	**Mammoth, Mammo**	**68.04**	**58**	P	**P**	**12 19 39.3**	**+1.7**
	baz=316,SNR=10						
LOHW	**Long Hollow**	**68.06**	**48**	P	**P**	**12 19 39.2**	**+1.5**
LOHW				IAmb	IAmb	12 19 40.5	
	comp=Z,49nm,1.2s						
GKP	**Gorka Klasztor**	**68.07**	**328**	eP	**P**	**12 19 38.1**	**+1.0**
ECR	**Eagle Creek**	**68.09**	**49**	P	**P**	**12 19 39.4**	**+1.5**
REDW	**Red Top Meadow**	**68.12**	**49**	P	**P**	**12 19 39.6**	**+1.5**
REDW				IAmb	IAmb	12 19 40.8	
	comp=Z,44nm,1.2s						
LVV	**L'vov**	**68.24**	**322**	eP	**P**	**12 19 38.5**	**+0.2**
HVU	**Hansel Valley**	**68.31**	**51**	P	**P**	**12 19 40.4**	**+1.3**
HVU				pmax	pmax		
	comp=Z,43nm,1.5s						
HVU	**Hansel Valley**	**68.31**	**51**	P	**P**	**12 19 40.4**	**+1.3**
AHID	**Auburn Hatcher**	**68.44**	**49**	P	**P**	**12 19 40.0**	**0.0**
PAGB	**Antelope Grade**	**68.59**	**60**	P	**P**	**12 19 42.0**	**+1.3**
PAGB				IAmb	IAmb	12 19 43.1	
	comp=Z,62nm,1.2s						
TPH	**Tonopah**	**68.61**	**56**	P	**P**	**12 19 42.3**	**+1.2**
TPH				pmax	pmax		
	comp=Z,167nm,1.1s						
TPH	**Tonopah**	**68.61**	**56**	P	**P**	**12 19 42.3**	**+1.2**
VOG	**Valley Oaks Go**	**68.66**	**59**	P	**P**	**12 19 41.6**	**+0.6**
	baz=316						
TIN	**Tinemaha, Big**	**68.79**	**58**	P	**P**	**12 19 43.7**	**+1.7**
	baz=316						
BGU	**Big Grassy Mou**	**68.80**	**52**	P	**P**	**12 19 43.3**	**+1.3**
SPUT	**South Promonto**	**68.82**	**51**	P	**P**	**12 19 44.2**	**+2.0**
KWP	**Kalwaria Pacla**	**68.92**	**323**	eP	**P**	**12 19 43.3**	**+0.9**
KWP	**Kalwaria Pacla**	**68.92**	**323**	P	**P**	**12 19 43.1**	**+0.7**
KWP				pmax	pmax		
	comp=Z,95nm,1.1s						
KWP	**Kalwaria Pacla**	**68.92**	**323**	P	**P**	**12 19 43.1**	**+0.7**
SMMC	**Simmler**	**69.03**	**60**	P	**P**	**12 19 44.8**	**+1.4**
	baz=316,SNR=13						
VES	**Vestal, Richgr**	**69.17**	**59**	P	**P**	**12 19 44.4**	**+0.3**
	baz=316,SNR=19						
BW06	**Boulder Array**	**69.20**	**48**	P	**P**	**12 19 45.2**	**+0.7**
	baz=318,SNR=93						
BW06	**Boulder Array**	**69.20**	**48**	P	**P**	**12 19 45.3**	**+0.7**
PD31	**Pinedale Array**	**69.20**	**48**	P	**P**	**12 19 45.3**	**+0.7**
PD31				IAmb	IAmb	12 19 46.2	
	comp=Z,64nm,0.9s						
PDAR	**Pinedale Array**	**69.20**	**48**	P	**P**	**12 19 45.2**	**+0.7**
	comp=Z,56nm,0.7s,baz=346,slow=1.6,SNR=450						
PDAR				PKPPKP	**P'P'df**	**12 47 42.0**	**-6.9**
	comp=Z,0.8nm,1.0s,baz=116,slow=3.4,SNR=5.6						
PDAR	**Pinedale Array**	**69.20**	**48**	P	**P**	**12 19 44.0**	**-0.6**
GRAC	**Grapevine Rang**	**69.31**	**57**	P	**P**	**12 19 46.6**	**+1.6**
	baz=316						
R11A	**Troy Canyon, C**	**69.31**	**55**	P	**P**	**12 19 46.1**	**+0.9**
	baz=317,SNR=13						
R11A	**Troy Canyon, C**	**69.31**	**55**	P	**P**	**12 19 46.2**	**+0.9**
PKM	**Mcpherson Peak**	**69.44**	**60**	P	**P**	**12 19 47.3**	**+1.3**
	baz=316,SNR=16						
DUG	**Dugway, Tooele**	**69.44**	**52**	P	**P**	**12 19 47.2**	**+1.3**
DUG				pmax	pmax		
	comp=Z,44nm,1.1s						
DUG	**Dugway, Tooele**	**69.44**	**52**	P	**P**	**12 19 47.1**	**+1.2**
	baz=317,SNR=30						
DUG	**Dugway, Tooele**	**69.44**	**52**	P	**P**	**12 19 47.1**	**+1.2**
DUG				IAmb	IAmb	12 19 48.4	
	comp=Z,44nm,1.1s						
BUR08	**Bucovina Ar. S**	**69.45**	**320**	P	**P**	**12 19 46.0**	**+0.3**
ULM	**Lac du Bonnet**	**69.46**	**36**	P	**P**	**12 19 45.2**	**-0.5**
	comp=Z,27nm,0.5s,baz=336,slow=6.6,SNR=62						
ULM	**Lac du Bonnet**	**69.46**	**36**	P	**P**	**12 19 45.1**	**-0.5**
ULM				pmax	pmax		
	comp=Z,64nm,1.1s						

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ULM   Lac du Bonnet    69.46  36    P      P      12 19 45.1 -0.5
ULM                                 IAmb   IAmb   12 19 46.2
      comp=Z,64nm,1.1s
BURAR Bucovina Array   69.47 320  ⇑P      P      12 19 45.9 +0.1
BURAR Bucovina Array   69.47 320    P      P      12 19 45.5 -0.3
TCUT  Toone Canyon     69.49  51    P      P      12 19 47.6 +1.3
MARD  Mardin           69.53 303    P      P      12 19 48.0 +1.6
MARD                                IAmb   IAmb   12 19 48.8
      comp=Z,37nm,1.0s
OJC   Ojcow            69.59 325   eP      P      12 19 47.1 +0.7
OJC   Ojcow            69.59 325    P      P      12 19 46.9 +0.4
OJC                                 pmax   pmax
      comp=Z,66nm,1.1s
OJC   Ojcow            69.59 325    P      P      12 19 46.9 +0.4
OJC                                 IAmb   IAmb   12 19 48.2
      comp=Z,66nm,1.1s
CTU   Camp Tracy       69.63  51    P      P      12 19 48.2 +1.1
ISA   Isabella, Lake   69.64  59    P      P      12 19 47.2 +0.1
ISA                                 pmax   pmax
      comp=Z,19nm,1.2s
ISA   Isabella, Lake   69.64  59    P      P      12 19 47.0 -0.1
      baz=316,SNR=9.2
ISA   Isabella, Lake   69.64  59    P      P      12 19 47.2 +0.1
KOLS  Kolonicke sedl   69.65 322   eP      P      12 19 47.3 +0.5
KOLS                                pmax   pmax
      comp=Z,27nm,1.3s
KOLS  Kolonicke sedl   69.65 322   eP      P      12 19 47.3 +0.5
KOLS                               ePP     PP     12 22 30.4 -0.3
BZK   Bozkurt          69.69 311  ⇑P      P      12 19 46.7 -0.4
TESR  Tescani          69.70 318  ⇓P      P      12 19 47.5 +0.4
TLCR                   69.75 316  ⇓P      P      12 19 47.9 +0.5
BSEG  Bad Segeberg     69.80 332   eP      P      12 19 48.1 +0.5
      comp=Z,30nm,1.0s,baz=31,slow=5.8
SBC   Santa Barbara    69.81  61    P      P      12 19 49.3 +1.3
      baz=316
ARVC  Arvin            69.83  60    P      P      12 19 48.4 +0.3
      baz=316,SNR=5.8
JLU   Jordanelle       69.85  51    P      P      12 19 49.6 +1.2
MDND  Maddock          69.87  39    P      P      12 19 48.4 +0.3
      baz=322,SNR=15
MDND  Maddock          69.87  39    P      P      12 19 48.5 +0.3
UZH   Uzhgorod         69.88 322   eP      P      12 19 47.3 -0.8
UZH                                e*PP    pP     12 21 47.8 +1.2
RUE   Ruedersdorf      69.91 329   eP      P      12 19 48.7 +0.5
      comp=Z,116nm,1.4s,baz=31,slow=5.8
MPMC  Manual Prospec   69.92  58    P      P      12 19 49.8 +1.0
      baz=316,SNR=32
TPNV  Topopah Spring   69.96  57    P      P      12 19 50.3 +1.2
TPNV                                pmax   pmax
      comp=Z,47nm,1.1s
TPNV  Topopah Spring   69.96  57    P      P      12 19 50.2 +1.1
      baz=317,SNR=32
TPNV  Topopah Spring   69.96  57    P      P      12 19 50.3 +1.2
TPNV                                IAmb   IAmb   12 19 51.3
      comp=Z,47nm,1.1s
FURC  Furnace Creek,   69.97  57    P      P      12 19 50.1 +1.2
      baz=317,SNR=44
CRVS  Cervenica-Dubn   70.00 323   eP      P      12 19 49.7 +0.8
CRVS                                pmax   pmax
      comp=Z,77nm,1.5s
CRVS  Cervenica-Dubn   70.00 323   eP      P      12 19 49.7 +0.8
NLU   North Lily Min   70.01  52    P      P      12 19 50.5 +1.2
NIE   Niedzica         70.05 324   eP      P      12 19 50.4 +1.2
CFR   Carcaliu         70.06 317  ⇓P      P      12 19 49.3 +0.1
PSUT  Pine Spring      70.11  54    P      P      12 19 51.2 +1.3
VRI   Vrincioaia       70.16 318  ⇑P      P      12 19 49.7 -0.2
SCZ2  Santa Cruz Isl   70.18  61    P      P      12 19 51.5 +1.3
      baz=316
TPGR  Topolog          70.18 316  ⇑P      P      12 19 49.6 -0.4
MPU   Maple Canyon     70.19  52    P      P      12 19 51.6 +1.2
PLOR  Plostina         70.21 318  ⇑P      P      12 19 50.9 +0.7
LRMC  Laurel Mtn Rad   70.22  59    P      P      12 19 51.4 +0.8
      baz=317,SNR=17
OSI   Osito Audit: C   70.26  60    P      P      12 19 51.8 +1.1
      baz=316
OSI   Osito Audit: C   70.26  60    P      P      12 19 52.3 +1.6
OSI                                 IAmb   IAmb   12 19 52.9
      comp=Z,30nm,0.8s
PRN   Pahroc Range     70.29  56    P      P      12 19 52.4 +1.4
KSP   Ksiaz            70.39 327   eP      P      12 19 51.7 +0.6
OZUR                   70.40 319  ⇑P      P      12 19 52.0 +0.6
E28A  Huff             70.41  41    P      P      12 19 51.7 +0.3
E28A                                IAmb   IAmb   12 19 52.8
      comp=Z,71nm,1.4s
BISRR Bisoca           70.42 318  ⇑P      P      12 19 51.7 +0.2
EDW2  Edwards Air Fo   70.48  59    P      P      12 19 52.9 +0.9
      baz=317,SNR=21
TIRR  Tirgusor         70.49 316  ⇑P      P      12 19 51.8 +0.1
TIRR  Tirgusor         70.49 316    P      P      12 19 52.1 +0.3
TIRR                                pmax   pmax
      comp=Z,70nm,1.1s
TIRR  Tirgusor         70.49 316    P      P      12 19 52.1 +0.3
TIRR                                IAmb   IAmb   12 19 53.3
      comp=Z,70nm,1.1s
ILGA  Ilgaz            70.51 310    P      P      12 19 54.2 +1.9
ILGA                                IAmb   IAmb   12 19 55.1
      comp=Z,90nm,1.3s
HARR  Harsova          70.53 316  ⇑P      P      12 19 52.5 +0.5
LANS  Liptovska Anna   70.58 324   eP      P      12 19 54.0 +1.6
LANS                                pmax   pmax
      comp=Z,36nm,1.4s
LANS  Liptovska Anna   70.58 324   eP      P      12 19 54.0 +1.6
TLBR  Topalu           70.59 316  ⇑P      P      12 19 53.3 +0.9
OSTC  Ostas            70.65 327   eP      P      12 19 53.7 +1.0
DOPR  Dopca            70.67 319  ⇑P      P      12 19 54.4 +1.5
CHVC  Chvalec          70.69 327   eP      P      12 19 53.5 +0.6
CHVC                               ex      x      12 20 10.8
SHOC  Shoshone, Teco   70.71  57    P      P      12 19 54.4 +1.1
      baz=317
KECS  Kecovo           70.72 323   eP      P      12 19 53.6 +0.5
KECS  Kecovo           70.72 323   eP      P      12 19 53.6 +0.5
DECC  Green Verdugo    70.74  60    P      P      12 19 54.3 +0.8
      baz=317
UPC   Upice            70.77 327   eP      P      12 19 54.0 +0.6
UPC   Upice            70.77 327   eP      P      12 19 54.0 +0.6
K22A  Casper           70.77  47    P      P      12 19 53.9 +0.2
      baz=320,SNR=15
K22A  Casper           70.77  47    P      P      12 19 54.0 +0.2
SNCC  San Nicolas Is   70.78  61    P      P      12 19 54.6 +0.9
      baz=316
DPC   Dobruska-Polom   70.78 327   eP      P      12 19 53.8 +0.3
DPC                                e              12 20 04.2
DPC   Dobruska-Polom   70.78 327   eP      P      12 19 53.8 +0.3
DPC                                ex      x      12 20 04.2
MLR   Muntele Rosu     70.80 318  ⇓P      P      12 19 54.5 +0.8
MLR   Muntele Rosu     70.80 318    P      P      12 19 54.6 +0.8
MLR                                 pmax   pmax
      comp=Z,37nm,1.2s
MLR   Muntele Rosu     70.80 318    P      P      12 19 54.6 +0.8
MORC  Moravsky Berou   70.81 326  ⇓P      P      12 19 54.2 +0.6
MORC  Moravsky Berou   70.81 326   eP      P      12 19 54.2 +0.6
MORC  Moravsky Berou   70.81 326    P      P      12 19 54.3 +0.6
MORC                                pmax   pmax
      comp=Z,49nm,1.1s
MORC  Moravsky Berou   70.81 326    P      P      12 19 54.3 +0.7
MORC                                IAmb   IAmb   12 19 55.5
      comp=Z,49nm,1.1s
RSSD  Black Hills      70.82  44    P      P      12 19 54.4 +0.4
RSSD                                pmax   pmax
      comp=Z,92nm,1.2s
RSSD  Black Hills      70.82  44    P      P      12 19 54.5 +0.4
      baz=320
RSSD  Black Hills      70.82  44    P      P      12 19 54.4 +0.4
ISR   Istrita          70.83 317  ⇑P      P      12 19 55.2 +1.4
RDMU  Red Mountain     70.83  50    P      P      12 19 55.4 +1.2
KRLC  Kraliky          70.84 326   eP      P      12 19 54.7 +0.8
KRLC  Kraliky          70.84 326   eP      P      12 19 54.7 +0.8
GSC   Goldstone, Bar   70.85  58    P      P      12 19 55.2 +1.0
GSC                                 pmax   pmax
      comp=Z,31nm,1.2s
GSC   Goldstone, Bar   70.85  58    P      P      12 19 55.2 +1.0
      baz=317,SNR=17
GSC   Goldstone, Bar   70.85  58    P      P      12 19 55.2 +1.0
CJR   Cluj-Napoca      70.86 320  ⇓P      P      12 19 55.1 +1.1
FLTG  Flechtingen      70.88 331   eP      P      12 19 53.9  0.0
      comp=Z,60nm,1.2s,baz=31,slow=5.8
SHPR  Sheep Range      70.88  56    P      P      12 19 56.0 +1.5
PASC  Pasadena Art C   70.88  60    P      P      12 19 55.1 +0.8
MWC   Mount Wilson     70.92  60    P      P      12 19 55.7 +0.9
MWC                                 pmax   pmax
      comp=Z,54nm,1.3s
MWC   Mount Wilson     70.92  60    P      P      12 19 55.7 +0.9
MWC                                 IAmb   IAmb   12 19 56.7
      comp=Z,54nm,1.2s
TMUT  Trail Mountain   70.94  52    P      P      12 19 56.2 +1.2
MVU   Marysvale        71.00  53    P      P      12 19 57.0 +1.8
ICOR  Ion Corvin       71.03 316  ⇑P      P      12 19 55.7 +0.8
AGMN  Agassiz Nation   71.03  37    P      P      12 19 54.3 -0.6
      baz=324,SNR=20
AGMN  Agassiz Nation   71.03  37    P      P      12 19 54.4 -0.6
AGMN                                IAmb   IAmb   12 19 55.4
      comp=Z,43nm,1.1s
RRX   Edison Barstow   71.05  59    P      P      12 19 56.4 +1.1
      baz=317
P17A  Butcher Ranch,   71.05  51    P      P      12 19 56.7 +1.2
CCUT  Cedar City       71.09  54    P      P      12 19 57.1 +1.3
NRDL  Niedersach Rie   71.10 331   eP      P      12 19 55.6 +0.5
      comp=Z,34nm,1.1s,baz=31,slow=5.8
BFSC  Mount Baldy Ra   71.14  59    P      P      12 19 56.7 +0.8
      baz=317,SNR=16
FMP   Fort Macarthur   71.15  60    P      P      12 19 56.4 +0.5
      baz=317
CLL   Collm            71.16 329 ⇓iP      P      12 19 55.6  0.0
      comp=Z,61nm,1.0s
CLL                                epP     pP     12 21 56.0 +1.4
CLL                                i PP    PP     12 22 44.0 +0.7
CLL   Collm            71.16 329 ⇓iP      P      12 19 55.6  0.0
CLL                                e*PP    pP     12 21 56.0 +1.4
CLL                                 pmax   pmax
      comp=Z,61nm,1.0s
CLL   Collm            71.16 329    P      P      12 19 55.2 -0.3
CLL                                 IAmb   IAmb   12 19 56.6
      comp=Z,66nm,1.0s
CLL   Collm            71.16 329   eP      P      12 19 55.7  0.0
      comp=Z,61nm,1.1s,baz=31,slow=5.8
RWWY  Rawlins          71.17  48    P      P      12 19 56.6 +0.4
RWWY                                IAmb   IAmb   12 19 57.7
      comp=Z,63nm,1.1s
DRGR                   71.17 321  ⇑P      P      12 19 56.8 +0.9
BRG   Berggiesshubel   71.20 328   i P     P      12 19 56.0 +0.1
BRG                                 Amp           12 19 57.2
      comp=Z,26nm,1.2s
BRG                                ex      x      12 20 04.9
BRG                                 Amp           12 20 06.3
      comp=Z,7.9nm,1.0s
BRG                                 PP     PP     12 22 39.5 -4.1
BRG                                 Amp           12 22 46.9
      comp=Z,16nm,1.5s
BRG   Berggiesshubel   71.20 328   i P     P      12 19 55.9 +0.1
BRG                                               12 22 39.5
BRG                                 pmax   pmax
      comp=Z,26nm,1.2s
BRG                                 pmax   pmax
      comp=Z,8.0nm,1.0s
BRG                                 pmax   pmax
      comp=Z,16nm,1.5s
BRG   Berggiesshubel   71.20 328   i P     P      12 19 56.0 +0.1
BRG                                 Amp           12 19 57.2
      comp=Z,26nm,1.2s
BRG                                ex      x      12 20 04.9
BRG                                 Amp           12 20 06.3
      comp=Z,7.9nm,1.0s
BRG                                 PP     PP     12 22 39.5 -4.1
BRG                                 Amp           12 22 46.9
      comp=Z,16nm,1.5s
BRG   Berggiesshubel   71.20 328   eP      P      12 19 56.1 +0.3
      comp=Z,26nm,1.2s,baz=31,slow=5.8
SZCU  Shurtz Canyon    71.21  54    P      P      12 19 57.5 +1.1
ASSE  Asse, Remlinge   71.23 331   eP      P      12 19 56.3 +0.4
      comp=Z,45nm,1.3s,baz=31,slow=5.8
VOIR                   71.24 319  ⇓P      P      12 19 56.7 +0.4
FBE   Freiberg         71.36 329   eP      P      12 19 57.2 +0.5
      comp=Z,45nm,1.1s,baz=31,slow=5.8
MTPU  Mount Pierson    71.36  53    P      P      12 19 59.4 +1.9
VYHS  Vyhne            71.36 324   eP      P      12 19 57.8 +0.9
VYHS                                pmax   pmax
      comp=Z,125nm,2.0s
VYHS  Vyhne            71.36 324   eP      P      12 19 57.8 +0.9
PSZ   Piszkesteto      71.41 323  ⇑P      P      12 19 58.6 +1.3
PSZ   Piszkesteto      71.41 323    P      P      12 19 58.1 +0.8
PSZ                                 pmax   pmax
      comp=Z,40nm,1.1s
PSZ   Piszkesteto      71.41 323    P      P      12 19 58.1 +0.8
PSZ                                 IAmb   IAmb   12 19 59.4
      comp=Z,40nm,1.1s
SRU   San Rafael Swe   71.44  52    P      P      12 19 58.6 +0.9
SRU                                 pmax   pmax
      comp=Z,40nm,1.1s
SRU   San Rafael Swe   71.44  52    P      P      12 19 58.6 +0.9
HEC   Hector,Ludlow    71.45  58    P      P      12 19 58.9 +1.2
      baz=317,SNR=29
ARR   Arges            71.47 319  ⇑P      P      12 19 58.7 +1.0
D32A  Dogwood Acres,   71.50  38    P      P      12 19 57.3 -0.4
D32A                                IAmb   IAmb   12 19 58.1
      comp=Z,63nm,1.0s
JAVC  Velka Javorina   71.51 325   eP      P      12 19 59.4 +1.6
BBRC  Big Bear Solar   71.54  59    P      P      12 19 59.3 +0.9
      baz=317,SNR=7.2
SCI2  San Clemente I   71.54  61    P      P      12 19 58.8 +0.6
      baz=317
BR131 Keskin Array S   71.54 310   i P     P      12 19 59.0 +0.7
BRTR  Keskin Array B   71.54 310    P      P      12 19 59.0 +0.7
      comp=Z,1.4nm,0.3s,baz=250,slow=23,SNR=17
BRTR                                pP     pP     12 21 59.1 +1.6
      comp=Z,1.0nm,0.7s,baz=47,slow=6.8,SNR=3.9
VRAC  Vranov           71.55 326  ⇑P      P      12 19 59.3 +1.4
VRAC  Vranov           71.55 326   eP      P      12 19 58.7 +0.8
LCMT  Little Creek M   71.56  55    P      P      12 19 59.7 +1.4
CLZ   Clausthal        71.57 331   eP      P      12 19 58.7 +0.6
      comp=Z,93nm,1.4s,baz=31,slow=5.8
NEUB  Neuenburg        71.65 330   eP      P      12 19 58.7 +0.2
      comp=Z,66nm,1.1s,baz=31,slow=5.8
PRU   Pruhonice        71.73 327   eP      P      12 19 59.7 +0.8
PRU   Pruhonice        71.73 327   eP      P      12 19 59.7 +0.8
PKCU  Pink Cliffs      71.74  54    P      P      12 20 01.7 +2.0
KNB   Kanab            71.78  54    P      P      12 20 01.3 +1.6
KNB                                 pmax   pmax
      comp=Z,42nm,1.2s
KNB   Kanab            71.78  54    P      P      12 20 01.3 +1.6
LOT   Lotru            71.78 319  ⇑P      P      12 19 60.0 +0.5
B35A  Bob, Littlefor   71.81  36    P      P      12 19 59.1 -0.4
B35A                                IAmb   IAmb   12 20 00.1
      comp=Z,88nm,1.2s
KRUC  Moravsky         71.82 326   eP      P      12 20 00.1 +0.6
O20A  White River Ci   71.83  49    P      P      12 20 00.6 +0.6
      baz=319,SNR=55
O20A  White River Ci   71.83  49    P      P      12 20 00.7 +0.6
MURC  Murrieta         71.86  60    P      P      12 20 00.7 +0.6
      baz=317,SNR=9.5
GMRC  Granite Mounta   71.86  58    P      P      12 20 01.3 +1.1
      baz=318,SNR=20
SMOL  Smolenice        71.89 325   eP      P      12 20 01.4 +1.5
SMOL                                pmax   pmax
      comp=Z,18nm,1.1s
SMOL  Smolenice        71.89 325   eP      P      12 20 01.4 +1.5
GTTG  Gottingen        71.96 331   eP      P      12 20 00.6 +0.4
      comp=Z,58nm,1.3s,baz=31,slow=5.8
IBBN  Ibbenburen       71.99 333   eP      P      12 20 00.7 +0.3
      comp=Z,42nm,0.9s,baz=31,slow=5.8
SIRR  Siria            72.03 321  ⇑P      P      12 20 00.9 +0.1
MODS  Modra-Piesok     72.06 325   eP      P      12 20 01.4 +0.5
MODS                                pmax   pmax
      comp=Z,48nm,1.2s
MODS  Modra-Piesok     72.06 325   eP      P      12 20 01.4 +0.5
TANN  Tannenbergstha   72.09 329   eP      P      12 20 01.4 +0.3
      comp=Z,19nm,1.3s,baz=31,slow=5.8
SRO   Srobarova        72.12 324   eP      P      12 20 02.4 +1.2
SRO   Srobarova        72.12 324   eP      P      12 20 02.4 +1.2
PLN   Plauen           72.14 329   eP      P      12 20 01.7 +0.4
      comp=Z,29nm,1.2s,baz=31,slow=5.8
PBCC  Pribram          72.17 328   eP      P      12 20 01.8 +0.2
GUNZ  Gunzen           72.18 329   eP      P      12 20 02.1 +0.5
      comp=Z,26nm,1.1s,baz=31,slow=5.8
MOX   Moxa             72.19 329   eP      P      12 20 01.9 +0.3
      comp=Z,65nm,1.7s,baz=31,slow=5.8
COPA  Copaceanca       72.19 318  ⇑P      P      12 20 02.1 +0.4
MDUB  Mudurnu          72.20 312    P      P      12 20 03.1 +1.1
WERN  Wernitzgruen     72.23 329   eP      P      12 20 02.5 +0.5
      comp=Z,35nm,1.2s,baz=31,slow=5.8
BELC  Belle Mtn. Jos   72.25  59    P      P      12 20 03.0 +0.6
      baz=318,SNR=5.7
NKC   Novy Kostel      72.25 329   eP      P      12 20 02.6 +0.6
NKC   Novy Kostel      72.25 329   eP      P      12 20 02.6 +0.6
GZR   Gura Zlata       72.25 320  ⇑P      P      12 20 01.9 -0.3
ZST   Bratislava       72.27 325   eP      P      12 20 03.6 +1.5
ZST                                 pmax   pmax
      comp=Z,147nm,1.5s
ZST   Bratislava       72.27 325   eP      P      12 20 03.6 +1.5
PFO   Pinyon Flats O   72.27  59    P      P      12 20 03.4 +0.8
PFO   Pinyon Flats O   72.27  59    P      P      12 20 03.3 +0.8
      baz=317,SNR=15
PFO   Pinyon Flats O   72.27  59    P      P      12 20 03.4 +0.8
TPFO  Pinon Flats      72.28  59    P      P      12 20 03.2 +0.6
      baz=317,SNR=18
PHWY  Pilot Hill       72.31  47    P      P      12 20 03.2 +0.3
N23A  Red Feather La   72.39  48    P      P      12 20 04.1 +0.8
      baz=320,SNR=21
N23A  Red Feather La   72.39  48    P      P      12 20 04.2 +0.8
N23A                                IAmb   IAmb   12 20 05.3
      comp=Z,36nm,1.0s
109C  Camp Elliot, M   72.43  60    P      P      12 20 04.1 +0.8
      baz=317
109C  Camp Elliot, M   72.43  60    P      P      12 20 04.5 +1.2
109C                                IAmb   IAmb   12 20 05.2
      comp=Z,48nm,1.3s
NEE2  Needles Airpor   72.46  57    P      P      12 20 04.1 +0.6
      baz=318
U15A  North Rim        72.50  55    P      P      12 20 05.5 +1.5
U15A                                IAmb   IAmb   12 20 06.7
      comp=Z,50nm,1.0s
AS31  Alice Springs    72.56 188    P      P      12 20 05.2 +1.1
ASAR  Alice Springs    72.56 188    P      P      12 20 05.0 +0.9
      comp=Z,9.6nm,0.8s,baz=3.1,slow=5.7,SNR=71
ASAR                                pP     pP     12 22 04.7 +0.8
      comp=Z,11nm,0.9s,baz=6.1,slow=5.4,SNR=15
ASAR                                PKPPKP P'P'df 12 47 36.3 -2.4
      comp=Z,0.9nm,0.9s,baz=147,slow=3.3,SNR=5.3
ASAR  Alice Springs    72.56 188    P      P      12 20 04.7 +0.6
BZS   Buzias           72.56 321  ⇓P      P      12 20 04.2 +0.4
IRM   Iron Mountain    72.61  58    P      P      12 20 05.5 +1.1
      baz=318,SNR=25
W13A  Hualapai Mount   72.62  56    P      P      12 20 05.6 +0.9
PV23  Carpenter Ridg   72.71  51    P      P      12 20 06.3 +1.1
ROTZ  Rotzenmuhle      72.73 329   eP      P      12 20 05.3 +0.5
      comp=Z,181nm,2.6s,baz=31,slow=5.8
KASTN Kahler Asten     72.75 332   eP      P      12 20 05.1 +0.3
      comp=Z,33nm,1.2s,baz=31,slow=5.8
PV10  Paradox Valley   72.75  51    P      P      12 20 07.0 +1.6
PV22  Blue Mesa, Par   72.76  51    P      P      12 20 06.5 +1.1
PV14  Lion Creek, Pa   72.76  51    P      P      12 20 06.5 +1.1
KHC   Kasperske Hory   72.79 327   eP      P      12 20 05.5 +0.4
KHC                                e              12 22 07.0
KHC   Kasperske Hory   72.79 327   eP      P      12 20 05.5 +0.4
KHC                                epP     pP     12 22 07.0 +2.1
KHC                                ex      x      12 22 34.5
KHC   Kasperske Hory   72.79 327    P      P      12 20 05.8 +0.7
PV04  Paradox Valley   72.81  51    P      P      12 20 06.7 +1.1
PV04                                IAmb   IAmb   12 20 07.8
      comp=Z,72nm,1.0s
BC3   Big Chuckawall   72.81  58    P      P      12 20 06.5 +0.8
      baz=318,SNR=9.0
HERR  Herculane        72.82 320  ⇑P      P      12 20 05.1 -0.2
PV20  West Nyswonger   72.82  51    P      P      12 20 06.8 +1.1
PV20                                IAmb   IAmb   12 20 07.8
      comp=Z,72nm,1.0s
MONP2 Monument Peak    72.82  60    P      P      12 20 06.6 +0.8
      baz=318,SNR=11
PV19  Morning Glory    72.83  51    P      P      12 20 06.9 +1.1
BAR   Barrett          72.83  60    P      P      12 20 06.5 +0.9
SUSD  Miller           72.84  41    P      P      12 20 05.6 +0.1
      baz=323,SNR=7.6
SUSD  Miller           72.84  41    P      P      12 20 05.6 +0.1
F33A  5 Mile Ranch,    72.84  39    P      P      12 20 05.3 -0.2
F33A                                IAmb   IAmb   12 20 06.3
      comp=Z,49nm,1.0s
PV16  Nyswonger Mesa   72.86  51    P      P      12 20 07.0 +1.0
PV16                                IAmb   IAmb   12 20 08.2
      comp=Z,71nm,1.1s
PV17  East Wray Mesa   72.87  51    P      P      12 20 07.1 +1.1
BUG   Bochum--Univer   72.89 332   eP      P      12 20 06.0 +0.4
      comp=Z,46nm,1.1s,baz=31,slow=5.8
PV11  David Mesa, Pa   72.90  51    P      P      12 20 07.3 +1.1
PV07  Paradox Valley   72.91  51    P      P      12 20 07.2 +0.9
PV07                                IAmb   IAmb   12 20 08.2
      comp=Z,44nm,1.0s
PV18  Skein Mesa, Pa   72.92  51    P      P      12 20 07.7 +1.4
PV18                                IAmb   IAmb   12 20 08.4
      comp=Z,52nm,1.0s
PV12  Saucer Basin,    72.92  51    P      P      12 20 07.2 +0.9
PV12                                IAmb   IAmb   12 20 08.5
      comp=Z,39nm,1.0s
PV03  Paradox Valley   72.94  51    P      P      12 20 07.4 +0.9
PV03                                IAmb   IAmb   12 20 08.5
      comp=Z,57nm,1.2s
TKX   Tecate           72.95  60    P      P      12 20 06.4 +0.1
CONA  Conrad Observa   72.96 325   i P     P      12 20 07.3 +1.1
      comp=Z,34nm,1.2s,SNR=15
GEC2  GERESS Array S   72.98 327    P      P      12 20 06.7 +0.4
GEC2  GERESS Array S   72.98 327   eP      P      12 20 06.7 +0.4
      comp=Z,29nm,1.2s,baz=31,slow=5.8
GERES GERESS Array B   72.98 327    P      P      12 20 06.5 +0.2
      comp=Z,2.8nm,0.3s,baz=37,slow=5.7,SNR=27
EYMN  Ely              73.00  34    P      P      12 20 05.8 -0.5
      baz=326,SNR=11
EYMN  Ely              73.00  34    P      P      12 20 05.9 -0.4
EYMN                                IAmb   IAmb   12 20 06.8
      comp=Z,58nm,1.0s
WET   Wettzell         73.02 328   eP      P      12 20 07.3 +0.9
      comp=Z,67nm,1.4s,baz=31,slow=5.8
PV13  Radium Mtn., P   73.03  51    P      P      12 20 07.9 +0.9
PV13                                IAmb   IAmb   12 20 09.1
      comp=Z,52nm,1.0s
PV02  Paradox Valley   73.04  51    P      P      12 20 08.3 +1.3
PDMCI Parker Dam,Lak   73.06  57    P      P      12 20 07.7 +0.8
      baz=318,SNR=14
PV15  Paradox Valley   73.06  51    P      P      12 20 08.2 +1.0
CBX   Cerro Bola       73.11  60    P      P      12 20 08.6 +1.3
GRA1  Grafenberg Arr   73.13 329    P      P      12 20 07.8 +0.8
GRA1                                IAmb   IAmb   12 20 08.9
      comp=Z,67nm,1.1s
GRF   Grafenberg Arr   73.13 329    P      P      12 20 07.8 +0.8
GRF                                 pmax   pmax
      comp=Z,67nm,1.1s
GRF   Grafenberg Arr   73.13 329   eP      P      12 20 07.8 +0.8
      comp=Z,94nm,1.3s,baz=31,slow=5.8
SWSC  Sam W. Stewart   73.14  59    P      P      12 20 08.1 +0.8
      baz=318,SNR=6.9
IKP   In-Ko-Pah, Jac   73.18  60    P      P      12 20 08.7 +1.0
      baz=318,SNR=13
PV01  Paradox Valley   73.18  51    P      P      12 20 08.8 +1.0
SMCO  Snowmass         73.19  49    P      P      12 20 09.2 +1.1
SMCO                                IAmb   IAmb   12 20 10.1
      comp=Z,62nm,1.2s
MDVR  Moldovita        73.19 320  ⇑P      P      12 20 07.6  0.0
RMX   La Rumorosa      73.23  60    P      P      12 20 10.0 +1.9
MORH  Mrgy, Hungar     73.30 323   eP      P      12 20 07.9 -0.1
ISCO  Idaho Springs    73.39  48    P      P      12 20 10.2 +1.1
ISCO                                pmax   pmax
      comp=Z,29nm,1.2s
ISCO  Idaho Springs    73.39  48    P      P      12 20 09.9 +0.8
      baz=321,SNR=22
ISCO  Idaho Springs    73.39  48    P      P      12 20 10.2 +1.1
TNS   Taunus Mts       73.59 331   eP      P      12 20 10.1 +0.4
      comp=Z,32nm,1.1s,baz=31,slow=5.8
GLA   Glamis           73.61  59    P      P      12 20 11.8 +1.7
GLA                                 pmax   pmax
      comp=Z,41nm,1.1s
GLA   Glamis           73.61  59    P      P      12 20 11.2 +1.1
      baz=318,SNR=6.9
GLA   Glamis           73.61  59    P      P      12 20 11.8 +1.7
GLA                                 IAmb   IAmb   12 20 12.5
      comp=Z,40nm,1.1s
MOA   Molln            73.62 326   eP      P      12 20 10.5 +0.6
      comp=Z,8.3nm,0.8s
ARSA  Arzberg          73.65 325   i P     P      12 20 11.1 +1.0
      comp=Z,20nm,1.1s,SNR=12
WUAZ  Wupatki          73.67  55    P      P      12 20 12.1 +1.5
      baz=319,SNR=14
WUAZ  Wupatki          73.67  55    P      P      12 20 11.7 +1.1
FRGS  Fruska Gora      73.69 321 ⇓iP      P      12 20 10.5 +0.2
AHRW  Bad Neuenahr-A   73.74 332   eP      P      12 20 10.9 +0.4
      comp=Z,61nm,1.3s,baz=31,slow=5.8
ESJX  Sierra Juarez    73.75  60    P      P      12 20 11.3 +0.3
ESJX                                IAmb   IAmb   12 20 12.3
      comp=Z,35nm,1.0s
MVCO  Mesa Verde       73.92  52    P      P      12 20 12.9 +0.9
      baz=320,SNR=33
MVCO  Mesa Verde       73.92  52    P      P      12 20 13.1 +1.1
MVCO                                IAmb   IAmb   12 20 14.1
      comp=Z,60nm,1.1s
F36A  Milaca           73.94  37    P      P      12 20 10.9 -0.8
BTNL  Ternell          73.99 333   dP      P      12 20 11.9  0.0
      comp=Z,27nm,1.6s
MEM   Membach          74.01 333   dP      P      12 20 12.0  0.0
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E38A	The Farm, Brul	74.09	35	P	P	12 20 12.2	-0.3
BSTI	Sart Tilman	74.17	333	dP	P	12 20 13.6	+0.8
Q24A	Divide	74.26	48	P	P	12 20 14.5	+0.4
	baz=321,SNR=9.8						
Q24A	Divide	74.26	48	P	P	12 20 15.0	+1.0
VTS	Vitosha	74.27	318	⇑P	P	12 20 14.6	+0.8
BISS	Bistriski jare	74.30	325	iP	P	12 20 14.2	+0.5
SOKA	Soboth	74.31	325	iP	P	12 20 14.4	+0.6
	comp=Z,32nm,1.1s,SNR=16						
GROS	Grobnik	74.32	325	eP	P	12 20 14.2	+0.3
ALN	Alexandroupoli	74.35	315	P	P	12 20 14.8	+0.7
ALN				pmax	pmax		
	comp=Z,39nm,1.2s						
ALN	Alexandroupoli	74.35	315	P	P	12 20 14.8	+0.7
S22A	4UR Ranch, Cre	74.36	50	P	P	12 20 15.6	+1.0
	baz=320,SNR=39						
S22A	4UR Ranch, Cre	74.36	50	P	P	12 20 15.8	+1.2
S22A				IAmb	IAmb	12 20 17.1	
	comp=Z,45nm,1.1s						
K31A	O'Neill	74.38	42	P	P	12 20 14.6	+0.4
BCLA	Clavier	74.39	333	dP	P	12 20 12.9	-1.2
ECSD	EROS Data Cent	74.41	40	P	P	12 20 14.1	-0.3
	baz=324,SNR=36						
ECSD	EROS Data Cent	74.41	40	P	P	12 20 13.5	-0.9
ECSD				IAmb	IAmb	12 20 15.3	
	comp=Z,72nm,1.2s						
FUR	Furstenfeldbru	74.42	328	eP	P	12 20 15.2	+0.9
	comp=Z,81nm,1.2s,baz=31,slow=5.8						
X16A	Lo Mia Camp, P	74.46	55	P	P	12 20 16.3	+1.2
DIVS	Divibare	74.47	321	⇓iP	P	12 20 14.9	+0.1
DIVS	Divibare	74.47	321	P	P	12 20 14.6	-0.3
BGES	Gesves	74.48	333	dP	P	12 20 14.5	-0.1
STU	Stuttgart	74.60	330	eP	P	12 20 15.7	+0.4
	comp=Z,57nm,1.2s,baz=31,slow=5.8						
KBA	Koelnbreinsper	74.60	326	iP	P	12 20 16.7	+1.1
	comp=Z,28nm,0.5s,SNR=27						
OBKA	Obir	74.64	325	eP	P	12 20 16.3	+0.5
	comp=Z,16nm,1.0s,SNR=6.5						
BMRD	Maredsous	74.65	333	dP	P	12 20 15.5	0.0
	comp=Z,38nm,1.6s						
SPX	San Pedro Mart	74.74	60	P	P	12 20 18.3	+1.5
SPMN	Marine on St.	74.75	37	P	P	12 20 15.8	-0.4
	baz=326,SNR=8.3						
SPMN	Marine on St.	74.75	37	P	P	12 20 15.9	-0.4
D41A	Chassel	74.82	33	P	P	12 20 16.6	0.0
W18A	Petrified Fore	74.85	54	P	P	12 20 18.7	+1.5
	baz=320						
CRES	Cresnjev	74.87	324	⇓iP	P	12 20 17.0	+0.1
MYKA	Terra Mystica	74.87	326	iP	P	12 20 17.2	+0.2
	comp=Z,22nm,0.9s,SNR=7.5						
DOU	Dourbes	74.89	333	dP	P	12 20 17.2	+0.3
	comp=Z,26nm,0.0s						
BBLS	Lazići	74.91	321	⇓iP	P	12 20 17.7	+0.5
WATA	Walderalm	75.02	328	iP	P	12 20 18.6	+0.7
	comp=Z,27nm,0.4s,SNR=16						
MANT	Manisa	75.03	312	P	P	12 20 18.9	+0.7
SDCO	Great Sand Dun	75.03	49	P	P	12 20 19.0	+0.7
	baz=321,SNR=34						
SDCO	Great Sand Dun	75.03	49	P	P	12 20 19.1	+0.7
LJU	Ljubljana	75.04	325	eP	P	12 20 17.7	-0.1
WTTA	Wattenberg	75.06	328	eP	P	12 20 19.1	+1.0
	comp=Z,26nm,0.5s						
GBAS	Gorenja Brezov	75.16	325	eP	P	12 20 18.3	-0.3
SJES	Sjenica	75.16	320	⇓iP	P	12 20 19.2	+0.5
RETA	Reutte	75.18	328	iP	P	12 20 19.3	+0.7
	comp=Z,39nm,1.3s,SNR=11						
MOTA	Moosalm	75.18	328	iP	P	12 20 19.5	+0.7
	comp=Z,96nm,1.4s,SNR=17						
ZOU	Zoufplan	75.18	326	P	P	12 20 18.6	-0.3
X18A	Snowflake	75.18	54	P	P	12 20 20.5	+1.4
ABTA	Abfaltersbach	75.19	327	iP	P	12 20 18.8	+0.1
	comp=Z,21nm,1.2s,SNR=6.6						
SQTA	Sankt Quirin	75.25	328	iP	P	12 20 19.9	+0.7
	comp=Z,58nm,1.2s,SNR=16						
BFO	Black Forest	75.27	330	P	P	12 20 19.2	+0.1
BFO				pmax	pmax		
	comp=Z,36nm,1.2s						
BFO	Black Forest	75.27	330	P	P	12 20 19.2	+0.1
BFO	Black Forest	75.27	330	eP	P	12 20 19.4	+0.3
	comp=Z,45nm,1.2s,baz=31,slow=5.8						
CEY	Cerknica	75.33	325	⇓iP	P	12 20 19.2	-0.3
KSCO	Kaye Shedlock’	75.46	47	P	P	12 20 20.6	+0.1
	baz=322,SNR=7.3						
KSCO	Kaye Shedlock’	75.46	47	P	P	12 20 20.8	+0.3
KSCO				IAmb	IAmb	12 20 21.9	
	comp=Z,55nm,1.3s						
STIP	Stip	75.47	318	iP	P	12 20 19.7	-0.6
I37A	Lemond, Waseca	75.52	38	P	P	12 20 20.6	+0.1
STAL	STALIGIAL	75.53	326	P	P	12 20 19.8	-0.8
214A	Organ Pipe Nat	75.56	58	P	P	12 20 22.1	+1.2
	baz=319,SNR=16						
214A	Organ Pipe Nat	75.56	58	P	P	12 20 22.2	+1.2
FETA	Feichten	75.59	328	iP	P	12 20 21.7	+0.6
	comp=Z,36nm,1.2s,SNR=9.2						
VAY	Valandovo	75.60	317	iP	P	12 20 21.8	+0.8
TRI	Trieste	75.61	325	P	P	12 20 20.3	-0.7
TRI				pmax	pmax		
	comp=Z,23nm,1.1s						
TRI	Trieste	75.61	325	P	P	12 20 20.3	-0.7
BGNE	Belgrade	75.62	42	P	P	12 20 21.1	-0.1
	baz=324,SNR=12						
BGNE	Belgrade	75.62	42	P	P	12 20 21.3	+0.1
DAVA	Damuels	75.65	329	iP	P	12 20 21.8	+0.4
	comp=Z,45nm,1.1s,SNR=9.8						
RIY	Rijeka	75.66	325	⇓iP	P	12 20 20.8	-0.5
UPM	Unac-Piva	75.66	321	⇓iP	P	12 20 21.2	-0.4
G40A	Rib Lake	75.73	35	P	P	12 20 21.6	-0.1
G40A				IAmb	IAmb	12 20 22.5	
	comp=Z,67nm,0.9s						
ECH	Echery	75.75	331	P	P	12 20 21.2	-0.6
ECH				pmax	pmax		
	comp=Z,38nm,1.1s						
ECH	Echery	75.75	331	P	P	12 20 21.2	-0.6
L34A	Svendsen Farm,	75.95	41	P	P	12 20 22.8	-0.2
L34A				IAmb	IAmb	12 20 24.0	
	comp=Z,64nm,1.1s						
E43A	Lone Tree Farm	75.97	33	P	P	12 20 22.7	-0.3
E43A				IAmb	IAmb	12 20 23.4	
	comp=Z,69nm,1.2s						
MATQ	Matagami	75.98	25	P	P	12 20 22.2	-0.8
	baz=334,SNR=12						
KIJV	Kijevo	76.02	323	P	P	12 20 23.0	-0.3
T25A	Trinidad	76.05	49	P	P	12 20 24.3	+0.5
	baz=322,SNR=37						
T25A	Trinidad	76.05	49	P	P	12 20 24.4	+0.5
T25A				IAmb	IAmb	12 20 25.5	
	comp=Z,55nm,1.0s						
CTI	Castel Tesino	76.09	327	P	P	12 20 23.5	-0.3
CTI				pmax	pmax		
	comp=Z,17nm,0.9s						
CTI	Castel Tesino	76.09	327	P	P	12 20 23.4	-0.3
PDG	Podgorica	76.14	320	⇓P	P	12 20 23.8	-0.2
PDG	Podgorica	76.14	320	⇓iP	P	12 20 24.0	0.0
PDG	Podgorica	76.14	320	P	P	12 20 24.0	0.0
PDG				IAmb	IAmb	12 20 25.1	
	comp=Z,54nm,1.1s						
TREB	Trebinje	76.29	321	eP	P	12 20 23.9	-0.9
DRME	Dracevica, Mon	76.38	320	⇓iP	P	12 20 25.4	+0.1
MORI	Morici	76.41	323	P	P	12 20 25.0	-0.4
TUC	Tucson	76.41	56	P	P	12 20 27.0	+1.2
TUC				pmax	pmax		
	comp=Z,21nm,1.3s						
TUC	Tucson	76.41	56	P	P	12 20 26.8	+1.1
	baz=320						
TUC	Tucson	76.41	56	P	P	12 20 27.0	+1.2
STON	Ston	76.43	321	⇓iP	P	12 20 24.5	-1.0
HCY	Herceg Novi	76.45	321	⇓iP	P	12 20 25.0	-0.7
N33A	J Bar K, Exete	76.47	42	P	P	12 20 25.4	-0.4
N33A				IAmb	IAmb	12 20 26.3	
	comp=Z,44nm,0.9s						
TUE	Stuetta	76.54	329	P	P	12 20 26.7	+0.3
OHR	Ohrid	76.56	318	iP	P	12 20 23.5	-2.8
DUGI	Dugi Otok	76.56	324	P	P	12 20 25.8	-0.4
FNA	Florina	76.57	318	P	P	12 20 26.8	+0.3
FNA				pmax	pmax		
	comp=Z,20nm,1.0s						
FNA	Florina	76.57	318	P	P	12 20 26.8	+0.3
ZIRJ	Zirje	76.61	323	P	P	12 20 26.2	-0.3
HVAR	Hvar	76.69	322	P	P	12 20 26.2	-0.7
ANMO	Albuquerque	76.71	52	P	P	12 20 28.9	+1.4
ANMO				pmax	pmax		
	comp=Z,36nm,1.3s						
ANMO	Albuquerque	76.71	52	P	P	12 20 28.8	+1.3
	baz=321						
ANMO	Albuquerque	76.71	52	P	P	12 20 28.9	+1.4
I40A	Norwalk	76.73	36	P	P	12 20 26.9	-0.3
I40A				IAmb	IAmb	12 20 27.9	
	comp=Z,59nm,1.1s						
LSQQ	Lebel-sur-Quev	76.80	25	P	P	12 20 26.9	-0.5
	baz=335						
RAYN	Ar Rayn	76.81	291	P	P	12 20 28.2	+0.2
RAYN				pmax	pmax		
	comp=Z,27nm,1.1s						
RAYN	Ar Rayn	76.81	291	P	P	12 20 28.2	+0.2
SALO	Salr	76.87	327	P	P	12 20 28.1	+0.1
K38A	Parkersburg	76.91	38	P	P	12 20 27.9	-0.2
E46A	Sault Ste Mari	76.92	31	P	P	12 20 27.2	-0.9
E46A				IAmb	IAmb	12 20 28.2	
	comp=Z,59nm,1.4s						
CBKS	Cedar Bluff	76.98	45	P	P	12 20 28.4	-0.3
CBKS				pmax	pmax		
	comp=Z,63nm,1.2s						
CBKS	Cedar Bluff	76.98	45	P	P	12 20 28.3	-0.3
	baz=324,SNR=12						
CBKS	Cedar Bluff	76.98	45	P	P	12 20 28.4	-0.3
CBKS				IAmb	IAmb	12 20 29.4	
	comp=Z,63nm,1.1s						
LENM	Lemitar	77.04	53	P	P	12 20 31.5	+2.2
Y22D	IRIS PASSCAL I	77.14	53	P	P	12 20 32.1	+2.4
Y22D				IAmb	IAmb	12 20 32.7	
	comp=Z,37nm,0.9s						
N35A	Tabor	77.17	41	P	P	12 20 30.0	+0.3
BNM	Barren Site	77.24	52	P	P	12 20 31.9	+1.5
SENIN	Lac Senin/Sane	77.33	330	P	P	12 20 31.1	+0.5
SCIA	State Center	77.34	39	P	P	12 20 30.2	-0.4
	baz=326,SNR=5.4						
SCIA	State Center	77.34	39	P	P	12 20 30.8	+0.3
SCIA				IAmb	IAmb	12 20 31.6	
	comp=Z,61nm,1.0s						
I42A	Draeger Farm,	77.39	35	P	P	12 20 30.6	-0.1
I42A				IAmb	IAmb	12 20 31.6	
	comp=Z,51nm,0.9s						
CLF	Chambon-Foret	77.43	334	P	P	12 20 31.4	+0.5
CLF				IAmb	IAmb	12 20 32.0	
	comp=Z,60nm,1.2s						
VLDQ	Val d'Or	77.52	26	P	P	12 20 30.3	-1.1
JFWS	Jewell Farm	77.70	37	P	P	12 20 31.5	-0.9
	baz=328						
R32A	Long Quarter,	77.77	45	P	P	12 20 32.5	-0.5
ZCCA	Zocca	77.80	326	P	P	12 20 34.2	+1.2
ZCCA				IAmb	IAmb	12 20 45.9	
	comp=Z,54nm,1.2s						
121A	Cookes Peak, D	77.87	54	P	P	12 20 35.2	+1.4
	baz=321,SNR=26						
121A	Cookes Peak, D	77.87	54	P	P	12 20 35.5	+1.7
319A	Douglas	77.95	56	P	P	12 20 35.6	+1.5
L40A	Anamosa	78.03	38	P	P	12 20 33.3	-0.9
L40A				IAmb	IAmb	12 20 34.4	
	comp=Z,50nm,1.0s						
GLMI	Grayling	78.15	32	P	P	12 20 34.3	-0.5
	baz=331						
SGRT	San Giovanni R	78.16	322	P	P	12 20 34.5	-0.5
SGRT				IAmb	IAmb	12 20 35.9	
	comp=Z,66nm,1.2s						
KSU1	Kansas State U	78.18	43	P	P	12 20 34.5	-0.6
	baz=325,SNR=10						
KSU1	Kansas State U	78.18	43	P	P	12 20 34.6	-0.5
KSU1				IAmb	IAmb	12 20 35.6	
	comp=Z,50nm,0.8s						
N38A	Joes South For	78.26	40	P	P	12 20 35.6	+0.1
NRCA	Norcia	78.29	324	P	P	12 20 36.2	+0.5
NRCA				IAmb	IAmb	12 20 38.3	
	comp=Z,87nm,1.2s						
OSSC	Osservatorio P	78.41	326	P	P	12 20 36.4	+0.1
SCTE	Santa Cesarea	78.42	319	P	P	12 20 36.6	+0.3
SCTE				IAmb	IAmb	12 20 37.3	
	comp=Z,68nm,0.9s						
AQU	L'Aquila	78.59	324	P	P	12 20 38.4	+1.1
AQU				pmax	pmax		
	comp=Z,55nm,1.0s						
AQU	L'Aquila	78.59	324	P	P	12 20 38.4	+1.1
AQU				IAmb	IAmb	12 20 39.1	
	comp=Z,55nm,1.0s						
K43A	Burlington	78.62	35	P	P	12 20 37.1	-0.2
K43A				IAmb	IAmb	12 20 37.8	
	comp=Z,108nm,1.4s						
INTR	Introdacqua	78.68	323	P	P	12 20 37.4	-0.4
INTR				IAmb	IAmb	12 20 39.5	
	comp=Z,46nm,1.1s						
BNI	Bardonecchia	78.69	330	P	P	12 20 37.7	-0.2
BNI				pmax	pmax		
	comp=Z,18nm,1.1s						
BNI	Bardonecchia	78.69	330	P	P	12 20 37.7	-0.2
MATE	Matera	78.69	321	⇑P	P	12 20 37.7	0.0
L42A	Oliver, Polo	78.69	37	P	P	12 20 36.7	-1.1
HSIG		78.82	59	P	P	12 20 39.7	+1.0
KAN08	Anthony NE Sta	79.08	45	P	P	12 20 40.5	+0.5
KAN10	Anthony SW Sta	79.11	45	P	P	12 20 40.7	+0.6
AMTX	Amarillo	79.18	49	P	P	12 20 41.3	+0.6
	baz=323						
AMTX	Amarillo	79.18	49	P	P	12 20 41.4	+0.8
AMTX				IAmb	IAmb	12 20 42.5	
	comp=Z,52nm,0.9s						
SSB	Saint Sauveur	79.19	331	P	P	12 20 39.9	-0.5
SSB				pmax	pmax		
	comp=Z,32nm,1.1s						
SSB	Saint Sauveur	79.19	331	P	P	12 20 39.9	-0.5
L44A	Lake County Fo	79.23	35	P	P	12 20 40.0	-0.6
	baz=329						
ITM	Ithomi	79.25	315	P	P	12 20 40.6	-0.2
ITM				IAmb	IAmb	12 20 41.2	
	comp=Z,62nm,1.1s						
D56A	ZEC Mazanza, M	79.25	25	P	P	12 20 40.2	-0.4
	baz=336						
U32A	Winter Ranch,	79.28	46	P	P	12 20 42.0	+0.9
U32A				IAmb	IAmb	12 20 42.9	
	comp=Z,63nm,1.1s						
ALGO	Algonquin Park	79.29	27	P	P	12 20 39.8	-1.0
	baz=334,SNR=7.6						
KAN14	Manchester OK	79.31	45	P	P	12 20 41.7	+0.5
N41A	Harden Midland	79.31	38	P	P	12 20 40.6	-0.5
N41A				IAmb	IAmb	12 20 41.7	
	comp=Z,84nm,1.2s						
MSTX	Muleshoe	79.36	50	P	P	12 20 41.8	+0.2
	baz=323,SNR=15						
MSTX	Muleshoe	79.36	50	P	P	12 20 40.9	-0.7
E55A	Montcerf-Lytto	79.43	26	P	P	12 20 40.8	-0.7
	baz=336						
J47A	Sunmer	79.46	33	P	P	12 20 41.9	+0.1
J47A				IAmb	IAmb	12 20 42.3	
	comp=Z,50nm,1.0s						
LATQ	La Tuque	79.47	23	P	P	12 20 41.2	-0.5
	baz=338						
LATQ	La Tuque	79.47	23	P	P	12 20 41.6	-0.2
KAN13	South Haven SW	79.49	45	P	P	12 20 42.5	+0.4
HQIL	Hanson Quary C	79.58	36	P	P	12 20 42.6	+0.2
HQIL				IAmb	IAmb	12 20 43.2	
	comp=Z,91nm,1.2s						
E56A	St. Veronique	79.63	25	P	P	12 20 42.2	-0.4
	baz=336						
CROK	Carrier	79.66	45	P	P	12 20 43.6	+0.6
D58A	Chemin du LacG	79.71	23	P	P	12 20 42.3	-0.8
	baz=338,SNR=6.9						
G54A	Lake Saint Pet	79.78	28	P	P	12 20 42.6	-0.9
	baz=334,SNR=6.3						
MNTX	Cornudas Mount	79.80	53	P	P	12 20 45.0	+1.2
	baz=322,SNR=30						
MNTX	Cornudas Mount	79.80	53	P	P	12 20 45.0	+1.2
P40A	Paris	79.81	40	P	P	12 20 43.8	+0.1
P40A				IAmb	IAmb	12 20 44.8	
	comp=Z,85nm,1.1s						
M44A	Midewin, Midew	79.86	36	P	P	12 20 43.6	-0.3
M44A				IAmb	IAmb	12 20 44.6	
	comp=Z,98nm,1.1s						
TIP	Timpagrande	79.90	320	P	P	12 20 44.6	+0.3
TIP				IAmb	IAmb	12 20 45.8	
	comp=Z,86nm,1.3s						
GDL2	Guadalupe Moun	79.94	52	P	P	12 20 42.6	-2.1
L46A	Eue Claire	79.98	34	P	P	12 20 44.8	+0.2
L46A				IAmb	IAmb	12 20 45.5	
	comp=Z,99nm,1.2s						
T35A	Sooner Cattle	80.01	44	P	P	12 20 45.4	+0.6
TRQ	Mont Tremblant	80.06	25	P	P	12 20 44.5	-0.5
D59A	Saint-Raymond	80.06	23	P	P	12 20 44.0	-0.9
	baz=338,SNR=5.6						
HDIL	Hopedale	80.07	37	P	P	12 20 44.5	-0.5
	baz=329,SNR=11						
HDIL	Hopedale	80.07	37	P	P	12 20 44.8	-0.2
E58A	La Victoria	80.27	24	P	P	12 20 45.4	-0.6
	baz=337,SNR=8.1						
I51A	Listowel	80.27	30	P	P	12 20 45.9	-0.1
	baz=333,SNR=7.5						
D61A	St Aubert, Com	80.30	22	P	P	12 20 45.7	-0.4
	baz=339,SNR=6.4						
H53A	Bobcaygeon	80.37	28	P	P	12 20 45.6	-0.9
	baz=334,SNR=8.4						
STKA	Stephens Creek	80.37	180	P	P	12 20 47.6	+1.2
	comp=Z,3.6nm,0.8s,baz=2.3,slow=6.9,SNR=5.6						
STKA				pP	pP	12 22 50.5	+0.9
	comp=Z,6.7nm,0.9s,baz=340,slow=4.3,SNR=6.0						
STKA	Stephens Creek	80.37	180	IAmb	IAmb	12 20 48.4	
	comp=Z,1.4nm,1.0s						
E59A	St. Maurice	80.38	23	P	P	12 20 46.0	-0.4
	baz=338						
D60A	Saint Jean D’O	80.38	22	P	P	12 20 45.7	-0.8
	baz=339,SNR=10						
F57A	Harrington	80.40	25	P	P	12 20 45.8	-0.9
	baz=336						
BCOK	Bluff Creek, N	80.53	45	P	P	12 20 48.7	+1.2
QUOK	Quay	80.53	45	P	P	12 20 48.5	+1.0
QUOK				IAmb	IAmb	12 20 49.1	
	comp=Z,79nm,1.0s						
K50A	Casco	80.64	32	P	P	12 20 48.1	+0.1
K50A				IAmb	IAmb	12 20 48.8	
	comp=Z,48nm,1.1s						
OK031	S. Brethren Rd	80.65	45	P	P	12 20 48.8	+0.7
OK030	Cody Creek RV	80.69	45	P	P	12 20 49.3	+1.0
OK030				IAmb	IAmb	12 20 50.1	
	comp=Z,87nm,1.1s						
AAM	Ann Arbor	80.69	33	P	P	12 20 48.7	+0.5
AAM				pmax	pmax		
	comp=Z,51nm,1.0s						
AAM	Ann Arbor	80.69	33	P	P	12 20 47.9	-0.4
	baz=332						
AAM	Ann Arbor	80.69	33	P	P	12 20 48.7	+0.5
AAM				IAmb	IAmb	12 20 49.3	
	comp=Z,50nm,1.0s						
WMOK	Wichita Mounta	80.72	47	P	P	12 20 49.1	+0.6
WMOK				pmax	pmax		
	comp=Z,31nm,1.1s						
WMOK	Wichita Mounta	80.72	47	P	P	12 20 49.0	+0.5
	baz=324,SNR=25						
WMOK	Wichita Mounta	80.72	47	P	P	12 20 49.1	+0.6
OK025	Westminster Rd	80.72	45	P	P	12 20 49.3	+0.8
DELO	Deloro Mine	80.72	28	P	P	12 20 47.7	-0.6
DELO				IAmb	IAmb	12 20 48.8	
	comp=Z,40nm,1.0s						
L48A	N Adams	80.73	33	P	P	12 20 48.5	0.0
O44A	Mansfield	80.75	37	P	P	12 20 48.3	-0.3
O44A				IAmb	IAmb	12 20 49.1	
	comp=Z,56nm,0.9s						
R40A	Maddies Statio	80.75	40	P	P	12 20 48.4	-0.2
R40A				IAmb	IAmb	12 20 49.5	
	comp=Z,60nm,1.2s						
E60A	Ste Agathe de	80.76	23	P	P	12 20 47.7	-0.8
	baz=338,SNR=7.6						
P43A	Skaggs, Pawnee	80.76	38	P	P	12 20 48.2	-0.4
P43A				IAmb	IAmb	12 20 49.4	
	comp=Z,54nm,1.0s						
OKCFA	Oklahoma City	80.80	46	P	P	12 20 50.2	+1.3
S39A	Bolivar	80.80	41	P	P	12 20 48.3	-0.6
S39A				IAmb	IAmb	12 20 49.4	
	comp=Z,38nm,0.9s						
F59A	Saint Guilaume	80.89	24	P	P	12 20 48.9	-0.2
	baz=338						
E61A	Lac Etchemin	80.94	22	P	P	12 20 48.9	-0.5
	baz=339						
D63A	Stockholm	80.94	20	P	P	12 20 49.2	-0.2
	baz=340						
FNO	Franklin	80.95	46	P	P	12 20 51.1	+1.3
G57A	Newington	80.97	26	P	P	12 20 48.8	-0.7
	baz=336,SNR=13						
F60A	Warwick	81.00	23	P	P	12 20 49.0	-0.7
	baz=338						
SFIN	Lafayette	81.09	36	P	P	12 20 49.7	-0.5
	baz=330,SNR=5.4						
SFIN	Lafayette	81.09	36	P	P	12 20 50.1	-0.2
SFIN				IAmb	IAmb	12 20 51.1	
	comp=Z,66nm,1.1s						
TUL1	Leonard	81.17	44	P	P	12 20 51.2	+0.4
	baz=326,SNR=12						
TUL1	Leonard	81.17	44	P	P	12 20 51.4	+0.6
BATG	Bathurst New B	81.17	19	P	P	12 20 51.1	+0.5
BATG				IAmb	IAmb	12 20 52.0	
	comp=Z,58nm,0.9s						
G58A	Ormstown	81.19	25	P	P	12 20 50.1	-0.5
	baz=337,SNR=12						
N47A	Urbana	81.19	35	P	P	12 20 50.4	-0.4
F61A	St Evariste	81.24	23	P	P	12 20 50.9	-0.1
	baz=339,SNR=18						
W35A	Tecumseh	81.29	45	P	P	12 20 52.0	+0.6
PQI	Presque Isle	81.31	20	P	P	12 20 51.2	-0.1
U38A	Gravette	81.37	43	P	P	12 20 51.8	0.0
U38A				IAmb	IAmb	12 20 52.3	
	comp=Z,29nm,0.8s						
CCM	Cathedral Cave	81.39	40	P	P	12 20 52.1	+0.2
CCM				pmax	pmax		
	comp=Z,42nm,1.0s						
CCM	Cathedral Cave	81.39	40	P	P	12 20 51.7	-0.1
	baz=328						
CCM	Cathedral Cave	81.39	40	P	P	12 20 52.1	+0.2
CCM				IAmb	IAmb	12 20 52.8	
	comp=Z,42nm,1.0s						
E63A	Oxbow	81.45	21	P	P	12 20 51.3	-0.7
	baz=340,SNR=8.5						
E63A	Oxbow	81.45	21	P	P	12 20 51.4	-0.7
E63A				IAmb	IAmb	12 20 52.6	
	comp=Z,37nm,1.0s						
G59A	Clarenceville	81.49	24	P	P	12 20 51.7	-0.5
	baz=338,SNR=7.9						
J54A	Appleton	81.52	29	P	P	12 20 52.4	0.0
J54A				IAmb	IAmb	12 20 53.0	
	comp=Z,55nm,0.9s						
LONY	Lake Ozonia	81.52	26	P	P	12 20 51.6	-0.8
	baz=337						
LONY	Lake Ozonia	81.52	26	P	P	12 20 51.7	-0.8
MOQ	Mont Orford	81.53	24	P	P	12 20 52.4	-0.1
E64A	Bridgewater	81.59	20	P	P	12 20 52.3	-0.4
	baz=341,SNR=13						
Q44A	Meyer Farm, Va	81.59	38	P	P	12 20 53.1	+0.2
Q44A				IAmb	IAmb	12 20 53.8	
	comp=Z,81nm,1.2s						
FRNY	Flat Rock	81.61	25	P	P	12 20 52.3	-0.6
HHAR	Hobbs	81.70	43	P	P	12 20 53.7	+0.2
HHAR				IAmb	IAmb	12 20 54.5	
	comp=Z,46nm,1.3s						
P46A	Rosedale	81.70	36	P	P	12 20 53.5	0.0
M50A	Fremont	81.70	33	P	P	12 20 53.1	-0.2
M50A				IAmb	IAmb	12 20 54.1	
	comp=Z,35nm,0.8s						
G60A	Masonville	81.70	24	P	P	12 20 53.1	-0.3
	baz=338,SNR=6.7						
MGMO	Mountain Grove	81.71	41	P	P	12 20 53.5	-0.1
N49A	Columbus Grove	81.71	34	P	P	12 20 53.4	-0.1
G61A	St-Isidore-de-	81.75	23	P	P	12 20 53.6	+0.1
	baz=338,SNR=12						
H59A	Cadyville	81.75	25	P	P	12 20 53.0	-0.6
	baz=337,SNR=9.3						
J55A	Hilton	81.79	28	P	P	12 20 53.2	-0.6
J55A				IAmb	IAmb	12 20 54.1	
	comp=Z,78nm,1.1s						
FVM	French Village	81.79	39	P	P	12 20 53.7	-0.3
FVM				pmax	pmax		
	comp=Z,44nm,1.3s						
FVM	French Village	81.79	39	P	P	12 20 53.7	-0.3
FVM				IAmb	IAmb	12 20 54.9	
	comp=Z,44nm,1.2s						
H58A	Gabriels	81.82	25	P	P	12 20 53.3	-0.7
	baz=337,SNR=16						
I57A	Carthage	81.83	27	P	P	12 20 53.2	-0.9
	baz=336,SNR=6.5						
F64A	Sherman	81.99	21	P	P	12 20 54.6	-0.2
	baz=340,SNR=9.3						
F64A	Sherman	81.99	21	P	P	12 20 54.7	-0.1
F64A				IAmb	IAmb	12 20 55.6	
	comp=Z,36nm,0.9s						
ABTX	Abilene, Hawle	82.00	49	P	P	12 20 55.7	+0.5
	baz=324,SNR=24						
ABTX	Abilene, Hawle	82.00	49	P	P	12 20 55.8	+0.6
ABTX				IAmb	IAmb	12 20 56.8	
	comp=Z,61nm,1.1s						
G62A	West of Eustis	82.06	23	P	P	12 20 55.2	0.0
	baz=339,SNR=6.6						
G62A	West of Eustis	82.06	23	P	P	12 20 55.3	+0.1
J56A	Wolcott	82.08	28	P	P	12 20 54.4	-0.8

	baz=335,SNR=6.3						
J56A	Wolcott	82.08	28	P	P	12 20 54.5	-0.8
J56A				IAmb	IAmb	12 20 55.5	
	comp=Z,55nm,0.9s						
H60A	Morristown	82.10	24	P	P	12 20 55.2	-0.2
	baz=338,SNR=7.4						
OLIL	Olney	82.11	37	P	P	12 20 55.5	0.0
OLIL				IAmb	IAmb	12 20 56.7	
	comp=Z,71nm,1.4s						
ERPA	Erie	82.12	30	P	P	12 20 55.3	-0.3
	baz=334,SNR=6.7						
ERPA	Erie	82.12	30	P	P	12 20 55.4	-0.1
ERPA				IAmb	IAmb	12 20 56.2	
	comp=Z,74nm,1.0s						
U40A	Yellville	82.12	42	P	P	12 20 55.7	0.0
	baz=327,SNR=28						
U40A	Yellville	82.12	42	P	P	12 20 55.7	0.0
M52A	Chesterland	82.17	31	P	P	12 20 56.0	+0.2
L53A	Girard	82.18	30	P	P	12 20 55.6	-0.2
	baz=334,SNR=17						
NCB	Newcomb	82.22	26	P	P	12 20 55.7	-0.3
NCB				IAmb	IAmb	12 20 56.6	
	comp=Z,45nm,1.3s						
O49A	Covington	82.30	34	P	P	12 20 56.3	-0.2
O49A				IAmb	IAmb	12 20 57.2	
	comp=Z,45nm,1.1s						
VT1	Waterbury	82.30	24	P	P	12 20 56.9	+0.5
VT1				IAmb	IAmb	12 20 57.5	
	comp=Z,52nm,1.0s						
WVNY	West Valley, N	82.31	29	P	P	12 20 56.1	-0.4
PKME	Peaks-Kenny Pk	82.33	22	P	P	12 20 56.5	0.0
	baz=340,SNR=7.1						
PKME	Peaks-Kenny Pk	82.33	22	P	P	12 20 56.8	+0.3
PKME				IAmb	IAmb	12 20 57.5	
	comp=Z,51nm,1.2s						
H61A	Lyndonville	82.33	24	P	P	12 20 56.8	+0.2
	baz=338,SNR=20						
N51A	Ashland	82.37	32	P	P	12 20 56.5	-0.3
N51A				IAmb	IAmb	12 20 57.5	
	comp=Z,56nm,0.9s						
G63A	Kingsbury	82.39	22	P	P	12 20 56.8	0.0
	baz=340,SNR=5.7						
K56A	Middlesex	82.46	28	P	P	12 20 56.7	-0.6
	baz=335,SNR=9.6						
G64A	Maxfield	82.47	21	P	P	12 20 57.3	+0.1
	baz=340,SNR=13						
ALLY	Alegheny Colle	82.49	31	P	P	12 20 57.3	-0.1
M53A	WI Miller and	82.49	31	P	P	12 20 57.3	-0.1
	baz=333,SNR=17						
M53A	WI Miller and	82.49	31	P	P	12 20 57.5	0.0
H62A	Milan	82.50	23	P	P	12 20 57.5	+0.1
	baz=339,SNR=13						
H62A	Milan	82.50	23	P	P	12 20 57.6	+0.2
H62A				IAmb	IAmb	12 20 58.6	
	comp=Z,69nm,0.9s						
SIUC	Southern Illin	82.52	39	P	P	12 20 57.6	0.0
P48A	Milroy	82.53	35	P	P	12 20 57.3	-0.3
S44A	Carbondale	82.53	39	P	P	12 20 57.8	+0.1
TX31	Lajitas Ar. Si	82.57	53	P	P	12 20 59.1	+1.0
TX32	Lajitas Array	82.57	53	P	P	12 20 59.0	+0.9
TX32				IAmb	IAmb	12 21 00.4	
	comp=Z,53nm,1.1s						
TXAR	Lajitas Array	82.57	53	P	P	12 20 59.2	+1.0
	comp=Z,26nm,0.8s,baz=288,slow=3.9,SNR=243						
TXAR				PKKPbc	PKKPbc	12 39 17.7	+1.4
	comp=Z,0.4nm,0.8s,baz=132,slow=3.8,SNR=3.9						
TXAR	Lajitas Array	82.57	53	P	P	12 20 58.4	+0.3
TXAR	Lajitas Array	82.57	53	P	P	12 20 58.4	+0.3
VSL	Villasalto	82.59	325	P	P	12 20 58.1	+0.1
Z35A	Perchaven, San	82.60	47	P	P	12 20 58.5	+0.4
I60A	Shoreham	82.60	25	P	P	12 20 57.7	-0.2
	baz=338,SNR=7.0						
J59A	Piesco	82.61	26	P	P	12 20 57.4	-0.5
	baz=337,SNR=11						
J59A	Piesco	82.61	26	P	P	12 20 57.5	-0.5
J59A				IAmb	IAmb	12 20 58.5	
	comp=Z,44nm,1.0s						
LBNH	Lisbon	82.61	24	P	P	12 20 58.1	+0.2
	baz=338						
W39A	Magazine	82.67	43	P	P	12 20 58.2	-0.2
	baz=327,SNR=8.3						
W39A	Magazine	82.67	43	P	P	12 20 59.0	+0.5
W39A				IAmb	IAmb	12 20 59.9	
	comp=Z,45nm,1.2s						
K57A	Scipio Center	82.68	28	P	P	12 20 57.5	-0.8
	baz=336						
H63A	New Sharon	82.71	23	P	P	12 20 58.5	+0.1
	baz=339,SNR=5.2						
P49A	Miami Univ. Ec	82.73	35	P	P	12 20 58.3	-0.3
	baz=331,SNR=9.8						
P49A	Miami Univ. Ec	82.73	35	P	P	12 20 58.5	-0.1
P49A				IAmb	IAmb	12 20 59.4	
	comp=Z,76nm,1.1s						
ACSO	Alum Creek Sta	82.75	33	P	P	12 20 58.6	-0.1
	baz=332,SNR=14						
ACSO	Alum Creek Sta	82.75	33	P	P	12 20 58.7	-0.1
ACSO				IAmb	IAmb	12 20 59.6	
	comp=Z,66nm,0.9s						
M54A	Oil Creek Stat	82.77	30	P	P	12 20 58.5	-0.4
	baz=334,SNR=9.8						
M54A	Oil Creek Stat	82.77	30	P	P	12 20 58.5	-0.4
M54A				IAmb	IAmb	12 20 59.5	
	comp=Z,68nm,1.1s						
LMN	Caledonia Moun	82.80	19	P	P	12 20 59.0	+0.2
LMN				IAmb	IAmb	12 21 00.0	
	comp=Z,58nm,0.9s						
G65A	Princeton	82.80	21	P	P	12 20 58.7	-0.2
	baz=341,SNR=7.0						
G65A	Princeton	82.80	21	P	P	12 20 59.0	+0.2
G65A				IAmb	IAmb	12 21 00.1	
	comp=Z,51nm,1.1s						
PBMO	Poplar Bluff	82.81	40	P	P	12 20 59.2	+0.2
PBMO				IAmb	IAmb	12 21 00.3	
	comp=Z,78nm,1.1s						
I61A	Oroboro, Fairl	82.82	24	P	P	12 20 59.2	+0.3
	baz=338,SNR=8.6						
FCAR	Ozark Folk Cen	82.83	42	P	P	12 20 59.1	-0.1
FCAR				IAmb	IAmb	12 21 00.1	
	comp=Z,56nm,1.0s						
L56A	Greenwood	82.89	29	P	P	12 20 58.9	-0.5
	baz=335,SNR=10						
L56A	Greenwood	82.89	29	P	P	12 20 59.0	-0.5
L56A				IAmb	IAmb	12 20 59.8	
	comp=Z,67nm,1.1s						
WVL	Waterville	82.89	22	P	P	12 20 59.6	+0.3
WVL				IAmb	IAmb	12 21 00.3	
	comp=Z,34nm,1.0s						
K58A	Earlville	82.91	27	P	P	12 20 59.0	-0.5
	baz=336,SNR=17						
K58A	Earlville	82.91	27	P	P	12 20 59.2	-0.3
ACCN	Adirondack Com	82.92	25	P	P	12 20 59.3	-0.2
ACCN				IAmb	IAmb	12 21 00.3	
	comp=Z,45nm,1.1s						
H64A	Troy	82.93	22	P	P	12 20 59.5	0.0
	baz=340,SNR=6.6						
USIN	University of	82.94	37	P	P	12 21 00.2	+0.5
USIN				IAmb	IAmb	12 21 00.8	
	comp=Z,48nm,0.9s						
N53A	Lisbon	83.00	31	P	P	12 20 60.0	0.0
HNH	Hanover	83.01	24	P	P	12 21 00.5	+0.6
GGN	Saint George	83.05	20	P	P	12 21 00.1	0.0
GGN				IAmb	IAmb	12 21 01.0	
	comp=Z,47nm,0.9s						
LCAR	Lake Charles	83.10	41	P	P	12 21 00.7	+0.2
LCAR				IAmb	IAmb	12 21 01.9	
	comp=Z,42nm,1.1s						
I62A	Tamworth	83.11	24	P	P	12 21 00.7	+0.3
	baz=339						
I62A	Tamworth	83.11	24	P	P	12 21 01.1	+0.7
I62A				IAmb	IAmb	12 21 01.9	
	comp=Z,52nm,1.3s						
H65A	Eastbrook	83.12	21	P	P	12 21 00.4	0.0
	baz=340,SNR=7.0						
J60A	Lant Hill Farm	83.12	25	P	P	12 21 00.2	-0.3
	baz=337						
K59A	Cooperstown	83.14	26	P	P	12 21 00.1	-0.5
	baz=337,SNR=12						
I63A	Otisfield	83.14	23	P	P	12 21 01.1	+0.5
	baz=339,SNR=14						
I63A	Otisfield	83.14	23	P	P	12 21 01.3	+0.7
N54A	Moraine State	83.15	31	P	P	12 21 00.6	-0.1
	baz=334,SNR=12						
N54A	Moraine State	83.15	31	P	P	12 21 00.7	-0.1
PARMO	Parma	83.20	40	P	P	12 21 01.7	+0.7
L57A	Andrews Acres	83.24	28	P	P	12 21 00.2	-0.9
	baz=336,SNR=6.6						
H66A	Whiting	83.25	21	P	P	12 21 01.0	-0.1
	baz=341						
WCI	Wyandotte Cave	83.26	36	P	P	12 21 01.4	+0.1
WCI				pmax	pmax		
	comp=Z,42nm,0.9s						
WCI	Wyandotte Cave	83.26	36	P	P	12 21 01.4	+0.1
	baz=330						
WCI	Wyandotte Cave	83.26	36	P	P	12 21 01.4	+0.1
WCI				IAmb	IAmb	12 21 02.4	
	comp=Z,42nm,0.8s						
WHAR	Wooly Hollow	83.26	42	P	P	12 21 01.6	+0.3
J61A	Chester	83.27	25	P	P	12 21 01.3	0.0
	baz=338						
O52A	Adamsville	83.27	32	P	P	12 21 01.1	-0.2
O52A				IAmb	IAmb	12 21 02.1	
	comp=Z,64nm,0.9s						
M56A	Emporium	83.28	29	P	P	12 21 00.9	-0.6
	baz=335,SNR=7.7						
M56A	Emporium	83.28	29	P	P	12 21 00.8	-0.6
M56A				IAmb	IAmb	12 21 01.4	
	comp=Z,33nm,0.9s						
EMMW	East Machias	83.29	21	P	P	12 21 01.6	+0.3
EMMW				IAmb	IAmb	12 21 02.3	
	comp=Z,32nm,1.0s						
MIAR	Mount Ida	83.31	43	P	P	12 21 02.2	+0.6
MIAR				pmax	pmax		
	comp=Z,39nm,1.0s						
MIAR	Mount Ida	83.31	43	P	P	12 21 02.2	+0.6
	baz=327,SNR=18						
MIAR	Mount Ida	83.31	43	P	P	12 21 02.2	+0.6
MIAR				IAmb	IAmb	12 21 03.3	
	comp=Z,39nm,0.9s						
BINY	Binghamton	83.32	27	P	P	12 21 01.1	-0.5
	baz=336,SNR=7.2						
BINY	Binghamton	83.32	27	P	P	12 21 01.2	-0.3
BINY				IAmb	IAmb	12 21 02.1	
	comp=Z,33nm,0.9s						
T45A	Paducah	83.36	39	P	P	12 21 02.5	+0.8
O53A	New Philadelph	83.37	32	P	P	12 21 01.6	-0.2
	baz=333,SNR=9.9						
O53A	New Philadelph	83.37	32	P	P	12 21 01.8	0.0
O53A				IAmb	IAmb	12 21 02.8	
	comp=Z,58nm,0.9s						
HPIG		83.38	56	P	P	12 21 03.3	+0.9
HPIG				IAmb	IAmb	12 21 04.4	
	comp=Z,36nm,1.0s						
W41B	Gary Mavity, V	83.38	42	P	P	12 21 02.0	+0.1
	baz=328,SNR=24						
W41B	Gary Mavity, V	83.38	42	P	P	12 21 02.2	+0.2
W41B				IAmb	IAmb	12 21 03.2	
	comp=Z,65nm,1.0s						
P51A	Williamsport	83.39	34	P	P	12 21 01.6	-0.3
P51A				IAmb	IAmb	12 21 02.4	
	comp=Z,43nm,0.9s						
FFD	Franklin Falls	83.40	24	P	P	12 21 02.8	+0.9
FFD				IAmb	IAmb	12 21 03.3	
	comp=Z,34nm,0.9s						
I64A	Boothbay	83.50	22	P	P	12 21 02.3	0.0
	baz=340						
L58A	Harry Jones Me	83.50	27	P	P	12 21 02.1	-0.4
	baz=336,SNR=8.8						
HICK	Hickman	83.52	39	P	P	12 21 03.1	+0.5
K60A	Five Rivers En	83.56	26	P	P	12 21 02.2	-0.4
	baz=337						
J62A	Henniker	83.58	24	P	P	12 21 03.2	+0.4
	baz=338,SNR=6.2						
P52A	Corning	83.59	33	P	P	12 21 02.2	-0.7
	baz=333,SNR=5.7						
P52A	Corning	83.59	33	P	P	12 21 02.7	-0.2
P52A				IAmb	IAmb	12 21 03.5	
	comp=Z,53nm,1.1s						
WHTX	Lake Whitney,	83.59	47	P	P	12 21 03.6	+0.6
	baz=325,SNR=10						
WHTX	Lake Whitney,	83.59	47	P	P	12 21 03.8	+0.7
WHTX				IAmb	IAmb	12 21 04.8	
	comp=Z,43nm,1.0s						
L59A	Walton	83.61	27	P	P	12 21 02.5	-0.5
	baz=336,SNR=13						
L59A	Walton	83.61	27	P	P	12 21 02.1	-1.0
R49A	Shelbyville	83.64	36	P	P	12 21 03.8	+0.6
R49A				IAmb	IAmb	12 21 05.6	
	comp=Z,41nm,1.3s						
JCT	Junction City	83.66	50	P	P	12 21 03.9	+0.4
JCT				pmax	pmax		
	comp=Z,64nm,1.4s						
JCT	Junction City	83.66	50	P	P	12 21 03.7	+0.2
	baz=324,SNR=13						
JCT	Junction City	83.66	50	P	P	12 21 03.9	+0.4
JCT				IAmb	IAmb	12 21 05.0	
	comp=Z,64nm,1.4s						
UALR	University of	83.67	42	P	P	12 21 03.9	+0.5
GNAR	Gosnell	83.68	40	P	P	12 21 03.8	+0.4
Q51A	Peebles	83.68	34	P	P	12 21 03.4	0.0
K61A	Williamstown	83.69	25	P	P	12 21 03.3	-0.1
	baz=338						
X40A	Basin Creek Fa	83.69	43	P	P	12 21 04.1	+0.6
	baz=327,SNR=22						
X40A	Basin Creek Fa	83.69	43	P	P	12 21 04.4	+0.9
X40A				IAmb	IAmb	12 21 05.2	
	comp=Z,60nm,1.0s						
O54A	Avella	83.72	31	P	P	12 21 04.0	+0.5
O54A				IAmb	IAmb	12 21 04.7	
	comp=Z,39nm,0.8s						
GLAT	Glass	83.73	39	P	P	12 21 05.1	+1.4
J63A	Strafford	83.73	24	P	P	12 21 03.8	+0.3
	baz=339						
Z38A	Mt. Pleasant	83.73	45	P	P	12 21 04.5	+0.8
M57A	Sunshine Farm,	83.75	29	P	P	12 21 03.4	-0.3
	baz=335,SNR=9.4						
M57A	Sunshine Farm,	83.75	29	P	P	12 21 03.5	-0.1
HBAR	Harrisburg	83.75	41	P	P	12 21 05.1	+1.4
N56A	West Decatur	83.76	30	P	P	12 21 03.6	-0.1
	baz=335,SNR=5.4						
GBN	Guysborough	83.88	16	P	P	12 21 05.2	+1.1
M58A	Price’s Panora	83.93	28	P	P	12 21 04.2	-0.4
	baz=336,SNR=8.3						
R50A	Paris	83.97	35	P	P	12 21 05.0	+0.2
R50A				IAmb	IAmb	12 21 06.0	
	comp=Z,73nm,1.4s						
KSPA	Keystone Colle	83.97	28	P	P	12 21 04.7	-0.1
KSPA				IAmb	IAmb	12 21 04.8	
	comp=Z,25nm,0.9s						
P53A	Whipple	83.98	32	P	P	12 21 04.8	-0.1
P53A				IAmb	IAmb	12 21 05.9	
	comp=Z,51nm,1.1s						
K62A	Royalston	83.98	25	P	P	12 21 04.8	0.0
	baz=338						
L60A	Shokan	84.04	26	P	P	12 21 04.8	-0.3
	baz=337,SNR=9.4						
L61A	Hillsdale 1, H	84.05	26	P	P	12 21 04.9	-0.3
	baz=337,SNR=5.6						
L61B	Northampton	84.06	25	P	P	12 21 04.4	-0.7
	baz=338						
M59A	Waymart	84.09	27	P	P	12 21 04.8	-0.6
	baz=336,SNR=5.3						
Q52A	Bidwell	84.13	33	P	P	12 21 05.4	-0.2
Q52A				IAmb	IAmb	12 21 06.4	
	comp=Z,38nm,0.9s						
SSPA	Standing Stone	84.14	29	P	P	12 21 05.3	-0.3
	baz=335						
SSPA	Standing Stone	84.14	29	P	P	12 21 05.4	-0.3
SSPA				IAmb	IAmb	12 21 06.5	
	comp=Z,43nm,1.1s						
N57A	Milroy	84.14	29	P	P	12 21 05.3	-0.3
	baz=335,SNR=9.3						
K63A	Dunstable	84.16	24	P	P	12 21 05.9	+0.3
	baz=339						
WLAR	White Oak Lake	84.24	43	P	P	12 21 07.5	+1.3
O56A	Blue Knob Stat	84.25	30	P	P	12 21 05.9	-0.3
	baz=335,SNR=8.8						
O56A	Blue Knob Stat	84.25	30	P	P	12 21 06.2	0.0
O56A				IAmb	IAmb	12 21 07.2	
	comp=Z,43nm,0.9s						
HRV	Adam Dziewonsk	84.32	24	P	P	12 21 07.0	+0.6
HRV				pmax	pmax		
	comp=Z,61nm,1.2s						
HRV	Adam Dziewonsk	84.32	24	P	P	12 21 06.6	+0.1
	baz=339						
HRV	Adam Dziewonsk	84.32	24	P	P	12 21 07.0	+0.6
HRV				IAmb	IAmb	12 21 07.7	
	comp=Z,61nm,1.1s						
N58A	Sunbury	84.33	29	P	P	12 21 05.9	-0.6
	baz=336,SNR=7.4						
N58A	Sunbury	84.33	29	P	P	12 21 06.5	0.0
N58A				IAmb	IAmb	12 21 07.2	
	comp=Z,46nm,1.0s						
MCWV	Mont Chateau	84.37	31	P	P	12 21 07.1	+0.3
	baz=334						
MCWV	Mont Chateau	84.37	31	P	P	12 21 07.5	+0.7
MCWV				IAmb	IAmb	12 21 08.3	
	comp=Z,45nm,1.4s						
237A	Washetta, Mont	84.38	46	P	P	12 21 08.0	+1.1
237A				IAmb	IAmb	12 21 08.8	
	comp=Z,51nm,1.1s						
L62A	Suffield	84.45	25	P	P	12 21 06.8	-0.2
	baz=338						
WVT	Waverly	84.45	39	P	P	12 21 07.5	+0.3
WVT				pmax	pmax		
	comp=Z,47nm,1.2s						
WVT	Waverly	84.45	39	P	P	12 21 07.4	+0.3
	baz=330						
WVT	Waverly	84.45	39	P	P	12 21 07.5	+0.3
WVT				IAmb	IAmb	12 21 08.5	
	comp=Z,47nm,1.1s						
Q53A	Leroy	84.49	33	P	P	12 21 07.4	+0.1
	baz=333,SNR=17						
WES	Weston	84.50	24	P	P	12 21 07.9	+0.6
WES				pmax	pmax		
	comp=Z,52nm,1.0s						
WES	Weston	84.50	24	P	P	12 21 07.9	+0.6
WES				IAmb	IAmb	12 21 08.5	
	comp=Z,52nm,1.0s						
435B	Jarrell	84.52	48	P	P	12 21 07.7	+0.1
	baz=325						
435B	Jarrell	84.52	48	P	P	12 21 08.5	+0.9
M60A	Port Jervis	84.53	27	P	P	12 21 07.0	-0.5
	baz=337						
X43A	Marvell	84.53	41	P	P	12 21 08.2	+0.5
	baz=328						
X43A	Marvell	84.53	41	P	P	12 21 08.4	+0.8
N59A	State Game Lan	84.56	28	P	P	12 21 07.2	-0.5
	baz=336,SNR=8.4						
N59A	State Game Lan	84.56	28	P	P	12 21 07.8	+0.2
N59A				IAmb	IAmb	12 21 08.7	
	comp=Z,57nm,1.1s						
O57A	Amberson	84.61	29	P	P	12 21 07.6	-0.3
	baz=335,SNR=10						
Q54A	Coxs Mills	84.63	32	P	P	12 21 08.3	+0.3
W45A	Hickory Valley	84.72	40	P	P	12 21 09.0	+0.5
Z41A	Richland Creek	84.74	44	P	P	12 21 09.5	+0.9
	baz=327						
Z41A	Richland Creek	84.74	44	P	P	12 21 10.2	+1.6
Z41A				IAmb	IAmb	12 21 10.8	
	comp=Z,64nm,1.2s						
M61A	Granite Spring	84.80	26	P	P	12 21 08.3	-0.5
	baz=337						
N60A	Cedar Hill Far	84.81	27	P	P	12 21 08.2	-0.6
	baz=337						
R53A	Hurricane	84.81	33	P	P	12 21 09.3	+0.4
R53A				IAmb	IAmb	12 21 10.2	
	comp=Z,36nm,1.1s						
S51A	Beattyville	84.81	35	P	P	12 21 08.3	-0.6
S51A				IAmb	IAmb	12 21 09.9	
	comp=Z,43nm,1.1s						
TRNY	Table Rock, Ra	84.82	27	P	P	12 21 08.9	0.0
P56A	Dayton Farm, R	84.85	31	P	P	12 21 09.2	+0.1
	baz=334,SNR=18						
T50A	Nancy	84.88	36	P	P	12 21 09.2	-0.1
T50A				IAmb	IAmb	12 21 10.3	
	comp=Z,47nm,0.9s						
PAGS	Pennsylvania G	84.89	29	P	P	12 21 09.0	-0.2
PAGS				IAmb	IAmb	12 21 09.8	
	comp=Z,60nm,1.2s						
L63A	North Scituate	84.90	25	P	P	12 21 09.0	-0.2
	baz=339						
O58A	Lewisberry	84.92	29	P	P	12 21 09.0	-0.4
	baz=336,SNR=5.2						
M62A	Hamden	84.93	26	P	P	12 21 09.0	-0.4
	baz=338						
U49A	Red Boiling Sp	84.95	37	P	P	12 21 09.8	+0.1
U49A				IAmb	IAmb	12 21 10.8	
	comp=Z,41nm,1.1s						
LUPA	Lehigh Univers	84.97	28	P	P	12 21 09.7	0.0
LUPA				IAmb	IAmb	12 21 10.4	
	comp=Z,45nm,1.4s						
PAL	Palisades	85.04	27	P	P	12 21 09.6	-0.4
	baz=337						
L64A	Middleborough	85.04	24	P	P	12 21 10.1	+0.1
	baz=339						
CLTN	Cedars of Leba	85.09	37	P	P	12 21 10.6	+0.3
CLTN				IAmb	IAmb	12 21 11.6	
	comp=Z,24nm,0.9s						
NATX	Nacogdoches	85.12	46	P	P	12 21 11.8	+1.2
	baz=327,SNR=14						
NATX	Nacogdoches	85.12	46	P	P	12 21 12.0	+1.4
P57A	Homestead Farm	85.14	30	P	P	12 21 10.3	-0.2
	baz=335						
P57A	Homestead Farm	85.14	30	P	P	12 21 10.3	-0.2
Q56A	Snyder Ridge,	85.15	31	P	P	12 21 10.6	+0.1
	baz=334						
Q56A	Snyder Ridge,	85.15	31	P	P	12 21 11.0	+0.5
Q56A				IAmb	IAmb	12 21 11.8	
	comp=Z,54nm,1.4s						
N61A	South Mountain	85.16	27	P	P	12 21 10.6	+0.1
	baz=337						
OXF	Oxford	85.17	40	P	P	12 21 11.2	+0.5
OXF				pmax	pmax		
	comp=Z,124nm,1.3s						
OXF	Oxford	85.17	40	P	P	12 21 10.8	0.0
	baz=329,SNR=11						
OXF	Oxford	85.17	40	P	P	12 21 11.2	+0.5
V48A	Smith Brothers	85.20	38	P	P	12 21 10.9	+0.1
V48A				IAmb	IAmb	12 21 11.9	
	comp=Z,44nm,1.1s						
M63A	Gales Ferry	85.21	25	P	P	12 21 10.3	-0.4
	baz=338						
MVL	Millersville	85.21	29	P	P	12 21 11.1	+0.3
O60A	Telford	85.22	28	P	P	12 21 10.5	-0.3
	baz=336						
N62A	Caumsett State	85.24	26	P	P	12 21 10.3	-0.6
	baz=338						
R54A	Victor	85.29	33	P	P	12 21 10.9	-0.3
	baz=333,SNR=6.6						
M64A	Tiverton	85.30	24	P	P	12 21 10.4	-0.8
	baz=339						
PLAL	Pickwick Lake	85.34	39	P	P	12 21 11.4	-0.1
PLAL				IAmb	IAmb	12 21 12.5	
	comp=Z,40nm,1.0s						
P58A	Pank, Wackersv	85.37	30	P	P	12 21 11.3	-0.3
	baz=335,SNR=7.4						
Q57A	Strasburg	85.41	31	P	P	12 21 11.8	0.0
	baz=335						
R55A	Marlinton	85.50	32	P	P	12 21 12.4	0.0
	baz=334,SNR=5.6						
R55A	Marlinton	85.50	32	P	P	12 21 12.3	0.0
R55A				IAmb	IAmb	12 21 13.6	
	comp=Z,53nm,1.2s						
S54A	Dingess, Beckl	85.51	33	P	P	12 21 12.4	+0.1
	baz=333						
S54A	Dingess, Beckl	85.51	33	P	P	12 21 12.9	+0.5
S54A				IAmb	IAmb	12 21 13.6	
	comp=Z,49nm,1.2s						
P59A	Jarrettsville	85.54	29	P	P	12 21 12.1	-0.2
	baz=336						
SDMD	Soldier’s Deli	85.59	29	P	P	12 21 12.8	+0.1
833A	Chaparral WMA,	85.61	51	P	P	12 21 13.8	+0.9
	baz=325,SNR=7.8						
833A	Chaparral WMA,	85.61	51	P	P	12 21 14.3	+1.4
833A				IAmb	IAmb	12 21 15.1	
	comp=Z,46nm,1.0s						
P60A	Greenville	85.61	28	P	P	12 21 12.2	-0.5
	baz=336						
P60A	Greenville	85.61	28	P	P	12 21 12.4	-0.3
P60A				IAmb	IAmb	12 21 13.4	
	comp=Z,23nm,0.8s						
PBRG	Braganca	85.64	337	*e*P	P	12 21 12.4	-0.5
Y45A	Yeager Farm, C	85.67	41	P	P	12 21 13.7	+0.6
Q58A	Fox Den Farm,	85.74	30	P	P	12 21 13.3	0.0
	baz=335						
TZTN	Tazewell	85.79	35	P	P	12 21 13.8	+0.1
	baz=332,SNR=6.2						
TZTN	Tazewell	85.79	35	P	P	12 21 13.8	+0.1
143A	Socs Landing,	85.83	43	P	P	12 21 15.6	+1.7
KEST	Kesra	85.89	323	P	P	12 21 14.2	0.0
	comp=Z,15nm,0.9s,baz=303,slow=3.1,SNR=9.6						
KEST	Kesra	85.89	323	P	P	12 21 14.4	+0.2
KEST				IAmb	IAmb	12 21 15.1	
	comp=Z,24nm,1.1s						
SWET	Sewanee	86.02	38	P	P	12 21 14.5	-0.3
SWET				IAmb	IAmb	12 21 15.6	
	comp=Z,50nm,1.1s						
R57A	Stanardsville	86.04	31	P	P	12 21 15.0	+0.2

	baz=335,SNR=7.5						
V51A	Loudon	86.13	36	P	P	12 21 15.3	+0.1
V51A				IAmb	IAmb	12 21 15.9	
	comp=Z,29nm,1.1s						
Q59A	Harwood	86.15	29	P	P	12 21 15.6	+0.3
	baz=336						
R58A	Rapidan	86.22	31	P	P	12 21 15.6	-0.1
	baz=335						
X48A	Hartselle	86.22	39	P	P	12 21 15.5	-0.2
X48A				IAmb	IAmb	12 21 16.6	
	comp=Z,43nm,1.1s						
S56A	Natural Bridge	86.24	32	P	P	12 21 15.6	-0.2
	baz=334						
W50A	Signal Mountai	86.28	37	P	P	12 21 16.2	+0.2
W50A				IAmb	IAmb	12 21 17.0	
	comp=Z,28nm,1.1s						
Q60A	Greensboro	86.28	29	P	P	12 21 15.0	-0.9
	baz=336						
POLO	Lamas de Olo	86.31	338	eP	P	12 21 15.8	-0.3
MVO	Moncorvo	86.31	337	eP	P	12 21 15.3	-0.8
BLA	Blacksburg	86.35	33	P	P	12 21 16.3	-0.1
	baz=334						
CPCT	Cooper Cave	86.37	36	P	P	12 21 16.5	0.0
CPCT				IAmb	IAmb	12 21 17.6	
	comp=Z,49nm,1.0s						
S57A	Dark Hollow, R	86.38	31	P	P	12 21 16.4	-0.1
	baz=334						
S57A	Dark Hollow, R	86.38	31	P	P	12 21 17.0	+0.6
S57A				IAmb	IAmb	12 21 17.9	
	comp=Z,51nm,1.3s						
U54A	Nelsons Funny	86.46	34	P	P	12 21 16.9	-0.1
	baz=333						
U54A	Nelsons Funny	86.46	34	P	P	12 21 17.1	+0.2
U54A				IAmb	IAmb	12 21 18.2	
	comp=Z,39nm,1.1s						
TKL	Tuckaleechee C	86.48	36	P	P	12 21 17.0	+0.1
TKL				pmax	pmax		
	comp=Z,41nm,1.3s						
TKL	Tuckaleechee C	86.48	36	P	P	12 21 17.0	+0.1
TKL				IAmb	IAmb	12 21 18.1	
	comp=Z,41nm,1.2s						
342A	Flagon Creek P	86.53	44	P	P	12 21 18.8	+1.5
342A				IAmb	IAmb	12 21 19.9	
	comp=Z,46nm,1.1s						
R58B	Mineral	86.56	31	P	P	12 21 17.3	0.0
	baz=335						
R58B	Mineral	86.56	31	P	P	12 21 17.6	+0.4
R58B				IAmb	IAmb	12 21 18.5	
	comp=Z,29nm,1.1s						
R59A	King George, V	86.60	30	P	P	12 21 17.4	0.0
	baz=336						
VBMS	Vicksburg	86.64	42	P	P	12 21 19.0	+1.3
	baz=328,SNR=5.3						
VBMS	Vicksburg	86.64	42	P	P	12 21 19.5	+1.8
T56A	Rocky Mt	86.66	33	P	P	12 21 17.8	0.0
	baz=334						
441A	DeRidder	86.66	45	P	P	12 21 20.5	+2.7
FPAL	Fort Paine	86.73	38	P	P	12 21 18.6	+0.4
FPAL				IAmb	IAmb	12 21 19.2	
	comp=Z,54nm,1.3s						
S58A	Poland Farm, P	86.82	31	P	P	12 21 18.4	-0.1
	baz=335						
V53A	Saluda	86.84	35	P	P	12 21 19.1	+0.4
V53A				IAmb	IAmb	12 21 19.8	
	comp=Z,35nm,1.2s						
Z47A	Carrollton	86.87	40	P	P	12 21 19.3	+0.5
Z47A				IAmb	IAmb	12 21 20.2	
	comp=Z,48nm,1.1s						
ESBB	Sonseca Array	86.87	334	P	P	12 21 18.8	+0.1
ESDC	Sonseca Array	86.88	334	P	P	12 21 18.8	0.0
	comp=Z,13nm,0.8s,baz=17,slow=3.8,SNR=61						
ESDC				PP	PP	12 24 47.8	-3.9
	comp=Z,1.8nm,1.0s,baz=14,slow=6.6,SNR=2.9						
ESDC	Sonseca Array	86.88	334	P	P	12 21 18.7	-0.1
W52A	Murphy	86.92	36	P	P	12 21 19.7	+0.6
W52A				IAmb	IAmb	12 21 20.4	
	comp=Z,42nm,1.3s						
146A	Union	86.93	41	P	P	12 21 20.2	+1.1
S59A	Mechanicsville	86.94	30	P	P	12 21 19.1	+0.1
	baz=335,SNR=5.9						
T57A	Hurt	86.96	32	P	P	12 21 19.0	-0.1
	baz=334						
Y49A	Blount Mountai	87.00	39	P	P	12 21 19.5	+0.1
Y49A				IAmb	IAmb	12 21 20.0	
	comp=Z,28nm,0.9s						
X51A	Calhoun	87.01	37	P	P	12 21 19.9	+0.5
X51A				IAmb	IAmb	12 21 20.1	
	comp=Z,47nm,1.1s						
PAB	San Pablo	87.10	335	P	P	12 21 19.9	0.0
PAB				pmax	pmax		
	comp=Z,13nm,0.9s						
PAB	San Pablo	87.10	335	P	P	12 21 19.9	0.0
U56A	King	87.14	33	P	P	12 21 20.2	+0.2
	baz=334						
U56A	King	87.14	33	P	P	12 21 19.8	-0.3
U56A				IAmb	IAmb	12 21 21.4	
	comp=Z,45nm,1.2s						
344A	Westbrook Farm	87.19	43	P	P	12 21 22.3	+1.9
S60A	Water View	87.20	30	P	P	12 21 20.3	+0.1
	baz=336						
T58A	Grand View Acr	87.25	31	P	P	12 21 20.3	-0.3
	baz=335						
U57A	Blanch	87.44	32	P	P	12 21 21.4	0.0
	baz=334						
LRAL	Lakeview Retre	87.47	39	P	P	12 21 21.4	-0.1
	baz=330,SNR=7.0						
LRAL	Lakeview Retre	87.47	39	P	P	12 21 21.5	-0.1
LRAL				IAmb	IAmb	12 21 22.6	
	comp=Z,30nm,1.2s						
T59A	Double "B" Far	87.57	31	P	P	12 21 22.0	+0.1
	baz=335						
V56A	Mocksville	87.58	33	P	P	12 21 22.2	+0.1
	baz=334,SNR=7.5						
U58A	Oxford	87.75	32	P	P	12 21 22.8	-0.1
	baz=335						
V57A	Coltrane Farms	87.77	33	P	P	12 21 22.9	-0.1
	baz=334,SNR=6.2						
KMSC	Kings Mountain	87.86	34	P	P	12 21 23.4	0.0
	baz=333,SNR=7.8						
KMSC	Kings Mountain	87.86	34	P	P	12 21 23.6	+0.1
KMSC				IAmb	IAmb	12 21 24.5	
	comp=Z,27nm,0.8s						
Y52A	Lilburn	87.94	37	P	P	12 21 24.7	+0.9
Y52A				IAmb	IAmb	12 21 25.4	
	comp=Z,33nm,0.9s						
Z51A	Franklin	87.97	38	P	P	12 21 24.1	+0.1
U59A	Littleton	88.05	31	P	P	12 21 24.2	0.0
	baz=335						
V58A	Windy Hill, Pi	88.09	32	P	P	12 21 24.5	0.0
	baz=334						
W56A	Indian Trail	88.15	34	P	P	12 21 24.5	-0.2
	baz=334						
U60A	Pendleton	88.15	31	P	P	12 21 24.7	0.0
	baz=336						
W57A	Gilead	88.35	33	P	P	12 21 25.7	+0.1
	baz=334,SNR=5.8						
W57A	Gilead	88.35	33	P	P	12 21 25.8	+0.2
ZAIG	Zacatecas	88.38	57	P	P	12 21 27.6	+1.1
ZAIG				IAmb	IAmb	12 21 28.7	
	comp=Z,18nm,1.1s						
V59A	Middlesex	88.42	32	P	P	12 21 26.1	+0.2
	baz=335						
U61A	Possum Corner	88.52	30	P	P	12 21 26.6	+0.2
	baz=336						
X56A	White Oak	88.56	34	P	P	12 21 26.7	+0.1
	baz=333,SNR=7.2						
GOGA	Godfrey	88.58	37	P	P	12 21 27.6	+0.9
GOGA				pmax	pmax		
	comp=Z,38nm,1.1s						
GOGA	Godfrey	88.58	37	P	P	12 21 27.0	+0.3
	baz=332,SNR=5.9						
GOGA	Godfrey	88.58	37	P	P	12 21 27.6	+0.9
250A	Grady	88.69	39	P	P	12 21 28.0	+0.7
152A	Waverly Hall	88.73	38	P	P	12 21 27.7	+0.2
152A				IAmb	IAmb	12 21 28.6	
	comp=Z,22nm,1.1s						
W58A	Raeford	88.74	33	P	P	12 21 27.6	+0.1
	baz=334						
V60A	Jim Taylor Roa	88.76	31	P	P	12 21 27.4	-0.1
	baz=335						
W59A	Clinton	88.89	32	P	P	12 21 28.1	0.0
	baz=335						
X57A	Johnson Farm,	88.93	34	P	P	12 21 28.1	-0.3
	baz=334						
BRAL	Brewton	89.06	40	P	P	12 21 29.0	0.0
	baz=330						
X58A	Rowland	89.12	33	P	P	12 21 29.2	0.0
	baz=334						
X58A	Rowland	89.12	33	P	P	12 21 29.4	+0.2
PBAR	Barrancos	89.12	336	eP	P	12 21 28.9	-0.3
W60A	Pink Hill	89.25	32	P	P	12 21 30.1	+0.3
	baz=335						
X59A	McDuffie Farm,	89.37	33	P	P	12 21 30.3	-0.1
	baz=335						
W61A	Ground Anchor	89.38	31	P	P	12 21 30.5	+0.1
	baz=336						
154A	Montrose	89.42	37	P	P	12 21 31.7	+1.0
Z56A	Williston	89.47	35	P	P	12 21 30.5	-0.4
	baz=333						
Y58A	Scranton	89.58	34	P	P	12 21 31.4	+0.1
	baz=334						
X60A	Albert Glenn T	89.58	32	P	P	12 21 31.1	-0.2
	baz=335						
352A	Blakely	89.68	39	P	P	12 21 32.9	+1.0
Z57A	Bowman	89.74	35	P	P	12 21 32.3	+0.1
	baz=334						
Y59A	Loris	89.80	33	P	P	12 21 32.4	0.0
	baz=335						
Y60A	Bolivia	90.02	33	P	P	12 21 33.0	-0.4
	baz=335						
Z58A	St. Stephen	90.04	34	P	P	12 21 33.9	+0.4
	baz=334						
TORD	Torodi Ar. Bea	109.03	319	PP	PP	12 27 33.4	-5.2
	comp=Z,6.9nm,1.2s,baz=23,slow=8.0,SNR=4.1						
SDV	Santo Domingo	115.70	36	PKPdf	PKPdf	12 27 11.9	-0.6
DBIC	Dimbokro	117.60	322	PKP	PKPdf	12 27 15.2	-0.8
	comp=Z,3.0nm,0.5s,baz=318,slow=1.7,SNR=12						
DBIC				PP	PP	12 28 34.9	-3.3
	comp=Z,2.7nm,1.0s,baz=337,slow=13,SNR=3.1						
TIC	Toumodi	117.69	322	ePKIKP	PKPdf	12 27 14.7	-1.5
KIC	Kosan Boka	117.84	322	ePKIKP	PKPdf	12 27 15.0	-1.5
	comp=Z,9.7nm,0.7s						
LIC	Lamto	118.08	322	ePKIKP	PKPdf	12 27 15.1	-1.8
	comp=Z,8.9nm,0.5s						
LBTB	Lobatse	125.68	272	PKIKP	PKiKP	12 27 31.7	0.0
LBTB	Lobatse	125.68	272	PKPdf	PKiKP	12 27 31.7	0.0
VNDA	Vanda	126.70	175	PKP	PKiKP	12 27 31.8	-0.3
	comp=Z,2.4nm,0.9s,baz=299,slow=8.3,SNR=5.4						
VNDA	Vanda	126.70	175		PKiKP	12 27 32.0	0.0
MAW	Mawson	130.26	210	SKPbc	SKPab	12 30 08.5	+0.5
	comp=Z,18nm,0.9s,baz=11,slow=3.9,SNR=7.0						
MALB	Monte Alegre	131.11	22	eP	PKPdf	12 27 42.0	+0.2
ITTB	Itaituba	133.13	25	eP	PKPdf	12 27 46.1	+0.5
ETMB	Extrema	134.44	41	eP	PKPdf	12 27 48.2	+0.2
NPGB	Novo Progresso	135.79	25	eP	PKPdf	12 27 50.4	-0.2
PB08	IPOC Station P	141.95	52		PKPdf	12 28 00.3	-1.7
PTLB	Pontes e Lacer	142.41	35	eP	PKPdf	12 28 00.3	-2.1
PB07	IPOC Station P	142.86	55		PKPdf	12 28 01.9	-1.4
SDBA	SAO DESIDERIO	143.20	11	eP	PKPab	12 28 01.4	-0.6
PB09	IPOC Station P	143.26	54		PKPdf	12 28 04.1	+0.1
PB06	IPOC Station P	143.82	55		PKPdf	12 28 05.0	0.0
PB10	IPOC Station P	143.93	57		PKPbc	12 28 02.9	-1.5
LVC	Limon Verde	144.10	54	PKP	PKPdf	12 28 06.9	+1.2
	comp=Z,41nm,0.8s,baz=297,slow=4.5,SNR=33						
LVC				SKPbc	SKPbc	12 30 48.7	-1.1
	comp=Z,9.3nm,1.1s,baz=219,slow=4.2,SNR=3.5						
LVC	Limon Verde	144.10	54		PKPdf	12 28 06.6	+0.9
LVC	Limon Verde	144.10	54	eP	PKPbc	12 28 03.9	-1.5
PB14	IPOC Station P	144.89	58	PKPdf	PKPbc	12 28 07.6	0.0
ARAG	Araguaiana, MT	145.03	24	eP	PKPdf	12 28 07.4	+0.4
GO02	Mina Guanaco	145.76	58	PKPdf	PKPbc	12 28 09.8	-0.4
BDFB	Brasilia	145.85	18	PKPbc	PKPdf	12 28 09.2	+0.6
	comp=Z,32nm,0.8s,baz=310,slow=2.6,SNR=23						
BDFB	Brasilia	145.85	18	PKIKP	PKPdf	12 28 09.4	+0.9
BDFB	Brasilia	145.85	18	PKPdf	PKPdf	12 28 09.4	+0.9
PP1B	Ponte de Pedra	145.90	30	eP	PKPdf	12 28 08.8	+0.3
AC01	Pan de Azucar	145.96	60		PKPdf	12 28 09.0	+0.7
AC04	Llanos de Chal	147.23	63	PKPdf	PKPbc	12 28 12.8	-0.9
AC04				PKPbc	PKiKP	12 28 14.7	-0.6
GO03	Copiap	147.27	61		PKPbc	12 28 14.5	+0.6
AC02	Maricunga	147.32	59	PKPdf	PKPdf	12 28 12.3	+1.1
AC02				PKPbc	PKiKP	12 28 16.0	-0.2
LCO	Las Campanas	148.05	64	PKP2	PKiKP	12 28 16.8	-0.6
LCO	Las Campanas	148.05	64		PKiKP	12 28 16.8	-0.6
IPMB	Ipameri, GO	148.09	19	eP	PKPdf	12 28 11.4	-0.7
AC05	El Transito	148.17	63	PKPdf	PKPdf	12 28 13.5	+1.4
AC05				PKPbc	PKiKP	12 28 17.1	-0.3
NVL	N'lazarevskaya	148.20	209⇑	iPKHKP	PKPpre	12 28 13.6	
NVL				eSS	SS	12 50 12.7	+1.7
NVL				pmax	pmax		
	comp=Z,34nm,0.9s						
AQDB	Aquidauana	148.29	33	eP	PKPdf	12 28 12.6	+0.3
GO04	Tololo Observa	148.83	65		PKPbc	12 28 17.9	-0.1
CO01	Juntas del Tor	149.11	64		PKiKP	12 28 19.3	-0.2
CO03	El Pedregal	149.38	66		PKPbc	12 28 19.0	0.0
ROC1	El Roble	150.66	70		PKPbc	12 28 22.0	-0.2
MT02	Curacav	150.77	70		PKiKP	12 28 22.4	-0.1
VA03	San Esteban	150.80	69		PKiKP	12 28 22.7	0.0
BELA	Belgrano 2	150.84	181		PKPbc	12 28 20.3	-0.7
PEL	Peldehue	150.97	69	PKIKP	PKiKP	12 28 23.0	0.0
PEL	Peldehue	150.97	69		PKiKP	12 28 23.0	0.0
ZON	Zonda	151.09	65	PKIKP	PKiKP	12 28 23.4	+0.1
ZON	Zonda	151.09	65	PKPdf	PKPdf	12 28 17.4	+0.9
ZON				PKPbc	PKiKP	12 28 23.4	+0.1
BO02	Sierra Bellavi	152.00	72		PKiKP	12 28 25.6	+0.5
SNAA	Sanae	152.05	203	PKPdf	PKPbc	12 28 23.2	-0.7
SNAA	Sanae	152.05	203	PKIKP	PKPbc	12 28 23.9	0.0
SNAA	Sanae	152.05	203		PKPbc	12 28 23.9	0.0
BI02	San Fabin de	152.85	76	PKPdf	PKPdf	12 28 18.8	-0.2
CPUP	Villa Florida	152.90	41	PKP	PKPdf	12 28 20.1	+1.0
	comp=Z,4.2nm,1.0s,baz=4.9,slow=4.9,SNR=4.5						
CPUP				PKPbc	PKPbc	12 28 26.8	-0.2
	comp=Z,4.7nm,0.8s,baz=23,slow=2.3,SNR=6.6						
CPUP				PKPab	PKPab	12 28 41.7	+0.5
	comp=Z,19nm,0.9s,baz=356,slow=4.9,SNR=18						
CPUP	Villa Florida	152.90	41	PKPdf	PKPdf	12 28 20.1	+1.0
CPUP				PKPbc	PKiKP	12 28 27.4	+0.4
CPUP				PKPab	PKPab	12 28 41.4	+0.3
VNA2	Neumayer--Watz	153.66	202	PKPdf	PKPbc	12 28 27.3	0.0
	baz=89,slow=2.3						
LC01	Cunco	153.75	81		PKPbc	12 28 28.2	-0.2
LC01				PKPab	PKPab	12 28 44.3	-0.3
PARB	Paraibuna	153.81	16	eP	PKPdf	12 28 20.0	-0.6
VNA3	Neumayer Olymp	153.99	200	PKPdf	PKPbc	12 28 27.3	-0.7
VNA1	Neumayer--Stat	154.06	202	PKPdf	PKiKP	12 28 28.1	+0.1
PLCA	Paso Flores	155.59	83	PKPbc	PKPdf	12 28 32.1	+10
	comp=Z,3.8nm,0.9s,baz=310,slow=2.6,SNR=5.8						
PLCA				PKPab	PKPab	12 28 53.5	+0.9
	comp=Z,6.8nm,0.9s,baz=32,slow=8.7,SNR=3.3						
PLCA	Paso Flores	155.59	83	PKPab	PKPab	12 28 53.7	+1.1

JMA 14 12:10:16.7, 40.°05N×140.°55E, h9^{km}±1^{km}, M0.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAH	Hinai	0.15	25	P	Pg	12 10 20.1	+0.1
JAH				S	Sg	12 10 22.5	+0.2
JKZ	Kuzumaki	0.60	96	eS	Sg	12 10 36.0	-0.3

LJU 14 12:56:46.0, 45.°78N×15.°86E, h0^{km}, ML0.9, Suspected explosion

VIE 14 12:56:26.1±0.2, 47.°49N×14.°92E, h0^{km}, mb1.4/2, ml1.4/6, Error ellipse: s-maj=2.8km s-min=1.5km az=46.0 4 km SSE of Erzberg Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSA	Arzberg	0.47	120	i Pg	Pg	12 56 35.3	+0.2
	1.1nm,0.1s						
ARSA				eSg	Sg	12 56 42.3	+1.1
	1.9nm,0.1s						
MOA	Molln	0.57	310	i Pg	Pg	12 56 36.8	-0.2
	0.5nm,0.1s						
MOA				eSg	Sg	12 56 45.4	+0.9
	2.2nm,0.2s						
CONA	Conrad Observa	0.78	55	ePg	Pg	12 56 41.0	+0.1
	0.3nm,0.1s						
CONA				Sg	Sg	12 56 51.3	+0.3
	1.8nm,0.3s						
SOKA	Soboth	0.81	175	ePg	Pg	12 56 41.0	-0.6
	0.4nm,0.1s						
SOKA				eSg	Sg	12 56 52.9	+0.9
	0.5nm,0.2s						
KBA	Koelnbreinsper	1.15	250	Pg	Pg	12 56 47.7	-0.3
	1.0nm,0.3s						
KBA				Sg	Sn	12 57 06.1	0.0
	2.1nm,0.3s						
GOLS	Golise	1.55	162	ePg	Pn	12 56 51.3	-3.6
GOLS				IAML		12 56 56.5	
	comp=Z,30nm,0.4s						
LEGS	Legarje	1.56	170	ePg	Pn	12 56 54.6	-0.4
GCIS	Gornji Cirnik	1.69	163	i Pg	Pn	12 56 49.6	-7.2
GCIS				IAML		12 57 01.4	
	comp=Z,50nm,0.4s						
CRES	Cresnjev	1.70	167	ePg	Pn	12 56 52.1	-4.9
CRES				IAML		12 57 02.1	
	comp=Z,16nm,0.3s						
KRUC	Moravsky	1.86	31	ePN	Pn	12 56 59.0	-0.2
KRUC				eSG	Sn	12 57 21.4	-2.0

IDC 14 14:08:19.1±3.4, 22.°66N×11.°97W, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.4/39, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=102.5km s-min=36.4km az=84.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.07	124	Pn	Pn	14 12 05.6	-1.0
	0.1nm,0.3s,baz=309,slow=13,SNR=3.0						
TORD				Sn	Sn	14 14 56.8	-8.8
	0.1nm,0.3s,baz=319,slow=16,SNR=1.2						
DBIC	Dimbokro	17.31	156	P	Pn	14 12 22.6	+0.3
	0.6nm,0.3s,baz=329,slow=11,SNR=7.8						
I48TN	KESRA INFRASON	22.67	50	i		16 31 30.0	
	baz=240,slow=317,SNR=1.2						
GERES	GERESS Array B	33.12	32	P	P	14 14 56.7	-0.2
	0.6nm,0.5s,baz=209,slow=7.9,SNR=3.0						
MKAR	Makanchi Array	76.63	45	P	P	14 20 11.6	-0.2
	0.1nm,0.5s,baz=279,slow=5.8,SNR=2.0						
ASAR	Alice Springs	148.65	99	PKPbc	PKPbc	14 28 08.8	-0.1
	0.4nm,0.7s,baz=280,slow=2.3,SNR=6.0						

DNK 14 14:18:45.5±2.3, 58.°31N×6.°44E, h0^{km}±31^{km}, ML1.6, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	Snartemo	0.41	85	e	Pg	14 18 51.6	-1.7
	baz=266,slow=16						
SNART				i P	Pb	14 18 51.9	-3.7
SNART				i S	Sg	14 18 58.4	-0.3
HOMB	Homborsund	1.09	91	e	Pg	14 19 04.0	-2.5
	baz=268,slow=16						
HOMB				i P	Pb	14 19 04.7	-2.6
HOMB				i S	Sg	14 19 20.7	+0.1
HOMB				IAML		14 19 24.1	
	comp=Z,4.7nm,0.4s						

BER 14 14:19:28.6±0.8, 58.°29N×6.°38E, h0^{km}, ML1.7, 1C, Explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	Snartemo	0.44	83⇑	iP	Pg	14 19 36.2	-0.8
SNART				eS	Sg	14 19 41.9	-0.9
SNART				IAML		14 19 45.2	
	comp=Z,118nm,0.8s						
SNART	Snartemo	0.44	83	e	Pg	14 19 35.7	-1.3
	baz=262,slow=12						
SNART				i P	Pb	14 19 36.1	-3.1
SNART				i S	Sg	14 19 42.2	-0.6
SNART				IAML		14 19 49.7	
	comp=Z,21nm,0.3s						
KMY	Karmoy	1.10	328	eP	Pg	14 19 48.2	-1.4
KMY				eS	Sg	14 20 02.4	-1.5
KMY				IAML		14 20 06.1	
	comp=Z,25nm,0.9s						
HOMB	Homborsund	1.12	90	eP	Pg	14 19 49.0	-1.2
HOMB				eS	Sg	14 20 03.8	-0.9
HOMB				IAML		14 20 06.1	
	comp=Z,24nm,0.3s						
HOMB	Homborsund	1.12	90	e	Pg	14 19 48.8	-1.3
	baz=282,slow=16						
HOMB				i P	Pb	14 19 49.0	-1.8
HOMB				eS	Sg	14 20 03.1	-1.6
HOMB				IAML		14 20 06.7	
	comp=Z,22nm,0.3s						
BLS5	Blasjo	1.14	2	eP	Pg	14 19 48.6	-1.9
BLS5				eS	Sg	14 20 04.2	-1.0
BLS5				IAML		14 20 08.5	
	comp=Z,11nm,0.3s						
ODD1	Odda	1.64	4	eP	Pn	14 19 57.3	-1.4
ODD1				eS	Sn	14 20 17.8	-2.7
ODD1				IAML		14 20 20.1	
	comp=Z,9.9nm,0.3s						
HYA	Hoyanger	2.89	358	eP	Pn	14 20 14.2	-1.7
HYA				IAML		14 21 02.0	
	comp=Z,6.6nm,0.8s						

IDC 14 14:29:05.1±1.1, 5.°42N×126.°50E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.7/32, mbtmp4.0/7, ML4.0/1, MS2.6/1, Ms1 2.8/1, ms1mx2.2/39, Error ellipse: s-maj=83.6km s-min=18.2km az=69.0

MAN 14 14:29:13.6, 5.°49N×126.°72E, h9^{km}, MS3.4

ISC 14 14:29:08.3±0.7, 5.°25N±0.°07×126.°8E±0.°1, h10^{km}, n15, σ2.^{s}12/20, mb3.8/6, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.36	309	eP	Pb	14 29 34.3	+0.5
DDMP				eS	Sn	14 29 51.9	+0.5
MATI	Mati	1.76	343	eP	Pb	14 29 41.1	+0.4
MATI				eS	Sg	14 30 04.9	-0.2
KCP	Kidapawan	2.42	316⇓	eP	Pb	14 29 51.8	-0.2
SKMP	Bagumbayan, Su	2.55	300	eP	Pn	14 29 51.4	+1.6
SKMP				eS	Sn	14 30 22.7	+1.8
BUKP	Musuan	3.12	327	eP	Pn	14 29 59.4	+1.8
BUKP				eS	Sn	14 30 36.2	+1.3
CGP	Cagayan de Oro	3.80	327⇓	eP	Pg	14 30 23.4	+2.3
CGP				eS	Sb	14 31 00.2	-1.3
BUTP	Butuan	3.87	343	eP	Pn	14 30 10.7	+2.8
SIJI	Sorong	7.55	143	Pn	Pn	14 31 01.5	+2.9
	2.3nm,0.3s,baz=320,slow=17,SNR=7.9						
FITZ	Fitzroy Crossi	23.22	183	P	P	14 34 15.4	-0.3
	3.3nm,1.1s,baz=1.7,slow=10,SNR=3.7						
ASAR	Alice Springs	29.57	167	P	P	14 35 13.2	-0.4
	0.2nm,0.5s,baz=346,slow=7.0,SNR=9.1						
CMAR	Chiang Mai Arr	30.17	298	LR	LR	14 46 29.1	
	comp=Z,11nm,21.9s,baz=135,slow=35						
STKA	Stephens Creek	39.53	160	P	P	14 36 40.5	+1.1
	1.8nm,0.7s,baz=344,slow=9.7,SNR=4.8						
MKAR	Makanchi Array	56.35	325	P	P	14 38 46.7	-2.9
	0.4nm,0.4s,baz=118,slow=7.5,SNR=11						
MKAR				PcP	PcP	14 39 44.1	-2.7
	0.4nm,0.6s,baz=108,slow=4.0,SNR=3.9						
ARCES	ARCESS Array B	89.05	340	P	P	14 41 59.6	-3.7
	3.2nm,0.9s,baz=80,slow=7.4,SNR=2.3						
FINES	FINESS Array B	90.52	332	P	P	14 42 07.0	-3.3
	2.0nm,0.9s,baz=48,slow=2.1,SNR=4.2						

IDC 14 14:49:50.5±2.0, 52.°27N×170.°75W, h0^{km}, mb3.4/5, mb1 3.7/8, mb1mx3.5/55, mbtmp3.6/8, ML3.1/3, Error ellipse: s-maj=49.5km s-min=20.2km az=179.0

AEIC 14 14:49:53±0.6, 51.°7N±0.°2×170.°7W±0.°1, h53^{km}±10^{km}, ML2.9, Error ellipse: s-maj=27.4km s-min=8.5km az=157.0

NEIC 14 14:49:54.2±0.5, 52.°1N±0.°4×170.°9W±0.°2, h80^{km}±29^{km}, Error ellipse: s-maj=53.6km s-min=8.0km az=166.0

ISC 14 14:49:54.5±1.5, 52.°1N±0.°2×170.°88W±0.°08, h35^{km}, n19, σ0.^{s}78/19, mb3.5/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.53	53		Pn	14 50 19.3	0.0
KOFP	Korovin Flat P	1.99	277		Pn	14 50 26.5	+0.8
ATKA	Atka Island	2.05	275		Pn	14 50 26.2	-0.2
MAPS	Pakushin South	2.95	52		Pn	14 50 38.8	0.0
MSW	Makushin Switc	3.08	52		Pn	14 50 40.8	+0.1
MNAT	Makushin Natee	3.12	53		Pn	14 50 41.2	+0.1
UNV	Unalaska Valle	3.18	55		Pn	14 50 42.1	0.0
GSMY	Great Sitkin M	3.19	271		Pn	14 50 42.4	+0.2
GSTD	Great Sitkin T	3.25	272		Pn	14 50 43.2	+0.2
ADK	Adak	3.59	269		Pn	14 50 47.4	-0.3
AMKA	Amchitka	6.14	267	Pn	Pn	14 51 21.5	-1.2
KDAK	Kodiak Island	11.95	54	Pn	Pn	14 52 42.0	-0.2
	0.3nm,0.3s,baz=7.1,slow=8.1,SNR=3.0						
ILAR	Eielson Array	17.72	35	P	Pn	14 53 57.0	-1.1

	0.1nm,0.3s,baz=232,slow=10,SNR=5.2						
PETK	Petropavlovsk-	19.04	286	P	Pn	14 54 14.0	-0.3
	0.1nm,0.3s,baz=85,slow=14,SNR=4.5						
SEY	Seymchan	22.19	314	P	P	14 54 49.1	+1.8
	1.4nm,0.8s,baz=90,slow=15,SNR=4.4						
INK	Inuvik	24.10	34	P	P	14 55 06.4	0.0
	1.6nm,0.7s,baz=239,slow=4.7,SNR=4.1						
YKA	Yellowknife Ar	31.13	48	P	P	14 56 08.2	-1.1
	0.2nm,0.5s,baz=267,slow=6.3,SNR=5.5						
TXAR	Lajitas Array	53.69	88	P	P	14 59 14.1	+1.3
	0.5nm,0.9s,baz=297,slow=4.0,SNR=2.4						
MKAR	Makanchi Array	63.32	313	P	P	15 00 19.4	-0.2
	0.4nm,0.8s,baz=27,slow=3.9,SNR=3.4						

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*IDC **14** 15:02:18.9±0.8, 56°.53S×150°.50W, h0^{km}, mb4.3/6, mb1 4.4/6, mb1mx4.2/21, mbtmp4.3/6, MS3.7/7, Ms1 3.6/7, ms1mx3.4/15, Error ellipse: s-maj=30.7km s-min=21.8km az=12.0*

*NEIC **14** 15:02:21.1±1.6, 56°.4S±0°.2×150°.6W±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=35.8km s-min=4.6km az=344.0*

ISC 14 15:02:20.9±0.7**, 56°.8S**±0°.2×**150°.6W**±0°.1**, h10^{km}, n51, σ1^{s}47**/29**, mb4.4**/9**, MS3.7**/10**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.43	201	P	P	15 08 00.8	+3.5
	4.2nm,1.1s,baz=69,slow=8.9,SNR=4.6						
VNDA				LR	LR	15 15 39.2	
	comp=Z,158nm,20.5s,baz=98,slow=30						
VNDA	Vanda	26.43	201	P	P	15 08 05.0	+7.7
VNDA				IAmb	IAmb	15 08 05.6	
	comp=Z,4.4nm,1.1s						
URZ	Urewera	28.22	297	LR	LR	15 17 10.4	
	comp=Z,76nm,19.1s,baz=34,slow=32						
TBI	Tubuai	33.37	2	*e*LR	LR	15 17 42.7	
	comp=Z,157nm,28.2s						
QSPA	South Pole Qui	33.40	180	P	P	15 08 59.1	-0.2
	comp=Z,6.9nm,1.1s,baz=93,slow=2.9,SNR=11						
QSPA	South Pole Qui	33.40	180	P	P	15 08 59.5	+0.2
QSPA				IAmb	IAmb	15 09 02.9	
	comp=Z,16nm,1.3s						
PPT2	Papeete2	39.10	2	*e*LR	LR	15 20 18.7	
	comp=Z,179nm,27.5s						
PPT	Papeete	39.12	2	LR	LR	15 21 08.8	
	comp=Z,117nm,20.6s,baz=198,slow=29						
TAOE	Nuku Hiva Isla	48.47	14	*e*LR	LR	15 24 52.2	
	comp=Z,177nm,24.1s						
VNA3	Neumayer Olymp	49.35	164	P	P	15 11 07.5	-2.3
SNAA	Sanae	49.88	167	P	P	15 11 12.2	-1.6
VNA2	Neumayer--Watz	49.97	165	P	P	15 11 12.7	-1.7
	baz=214,slow=7.3						
VNA1	Neumayer--Stat	50.09	165	P	P	15 11 11.7	-3.7
STKA	Stephens Creek	52.01	268	P	P	15 11 31.5	+1.2
	comp=Z,2.0nm,0.8s,baz=168,slow=1.2,SNR=4.1						
STKA	Stephens Creek	52.01	268	P	P	15 11 32.1	+1.8
PLCA	Paso Flores	52.05	108	P	P	15 11 31.4	+0.9
	comp=Z,3.6nm,0.9s,baz=219,slow=9.1,SNR=6.6						
PLCA	Paso Flores	52.05	108	P	P	15 11 31.7	+1.1
PLCA				IAmb	IAmb	15 11 32.1	
	comp=Z,7.5nm,1.1s						
H03S2	Juan Fernandez	52.63	96	T	T	16 08 31.2	
	baz=219,slow=74,SNR=47						
H03S1	Juan Fernandez	52.64	96	T	T	16 08 30.6	
	baz=219,slow=74,SNR=35						
H03S3	Juan Fernandez	52.65	96	T	T	16 08 32.1	
	baz=219,slow=74,SNR=32						
H03N3	Juan Fernandez	52.92	96	T	T	16 08 51.6	
	baz=222,slow=72,SNR=120						
H03N2	Juan Fernandez	52.93	96	T	T	16 08 51.8	
	baz=222,slow=72,SNR=196						
H03N1	Juan Fernandez	52.94	96	T	T	16 08 52.2	
	baz=222,slow=72,SNR=131						
MAW	Mawson	53.51	195	LR	LR	15 31 11.3	
	comp=Z,80nm,21.6s,baz=236,slow=32						
ASAR	Alice Springs	62.65	268	P	P	15 12 44.6	-0.9
	comp=Z,2.5nm,0.9s,baz=137,slow=6.6,SNR=36						
ASAR	Alice Springs	62.65	268	P	P	15 12 44.5	-1.0
AS31	Alice Springs	62.65	268	P	P	15 12 44.9	-0.7
AC02	Maricunga	63.39	99	P	P	15 12 51.3	+0.3
AC02				IAmb	IAmb	15 12 51.8	
	comp=Z,4.2nm,0.8s						
H01W1	Cape Leeuwin H	64.30	245	T	T	16 22 57.3	
	baz=141,slow=76,SNR=14						
H01W2	Cape Leeuwin H	64.30	245	T	T	16 22 55.4	
	baz=141,slow=76,SNR=14						
H01W3	Cape Leeuwin H	64.31	245	T	T	16 23 02.6	
	baz=141,slow=76,SNR=13						
LVC	Limon Verde	66.87	96	P	P	15 13 14.6	+1.1
MNMC	Minye Minye	69.30	93	P	P	15 13 29.5	+0.9
PB16	IPOC Station P	69.99	93	P	P	15 13 34.2	+0.9
PB16				IAmb	IAmb	15 13 34.9	
	comp=Z,2.8nm,0.7s						
CPUP	Villa Florida	70.11	108	P	P	15 13 32.8	-0.4
	comp=Z,4.1nm,0.8s,baz=229,slow=9.3,SNR=8.1						
CPUP	Villa Florida	70.11	108	P	P	15 13 34.0	+0.7
CPUP				IAmb	IAmb	15 13 41.9	
	comp=Z,10nm,1.4s						
SAML	Samuel	81.16	93	P	P	15 14 37.1	+0.4
SAML				IAmb	IAmb	15 14 37.3	
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	94.48	40	LR	LR	15 48 42.8	
	comp=Z,31nm,20.4s,baz=0.0,slow=30						
BOSA	Boshof	94.90	176	LR	LR	15 54 47.3	
	comp=Z,27nm,19.0s,baz=174,slow=33						
NVAR	Mina Array Bea	98.67	25	LR	LR	15 52 07.3	
	comp=Z,40nm,18.0s,baz=242,slow=30						
H10N3	ASCENSION HYDR	106.26	134	T	T	17 16 01.0	
	baz=203,slow=75,SNR=12						
H10N1	ASCENSION HYDR	106.26	134	T	T	17 16 01.2	
	baz=203,slow=75,SNR=11						
H10N2	ASCENSION HYDR	106.28	134	T	T	17 16 01.4	
	baz=203,slow=75,SNR=12						
ILAR	Eielson Array	121.23	2	PKP	PKPdf	15 21 12.1	-0.4
	comp=Z,1.4nm,0.9s,baz=217,slow=2.5,SNR=11						
ILAR	Eielson Array	121.23	2		PKiKP	15 21 12.4	-0.2
KLR	Kul'dur	123.58	310	PKP	PKiKP	15 21 17.5	-0.2
	comp=Z,0.6nm,0.5s,baz=251,slow=2.6,SNR=3.9						
MKAR	Makanchi Array	146.60	276	PKPbc	PKPbc	15 22 01.1	-0.7
	comp=Z,4.4nm,0.8s,baz=119,slow=4.6,SNR=48						
ZALV	Zalesovo Beam	149.10	289	PKPbc	PKPbc	15 22 06.2	-1.9
	comp=Z,1.5nm,0.6s,baz=111,slow=3.8,SNR=8.9						
ZALV	Zalesovo Beam	149.10	289		PKPbc	15 22 07.1	-1.0
ESDC	Sonseca Array	152.34	114	PKPbc	PKPbc	15 22 15.0	-1.3
	comp=Z,0.7nm,0.8s,baz=243,slow=1.4,SNR=5.6						
ESDC	Sonseca Array	152.34	114	PKPbc	PKiKP	15 22 16.5	-0.1

ATH 14 15:06:51.1, 40°.46N×21°.78E, h4^{km}±34^{km}, ML0.0, Error ellipse: s-maj=35.2km s-min=1.9km az=89.0, Suspected Mining explosion., Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.15	184	P	Pg	15 06 54.1	+0.1
FNA	Florina	0.45	317	P	Pg	15 06 59.5	-0.3
PENT	Pentalofos	0.56	242	P	Pg	15 07 01.6	-0.2
NEST	Nestorio	0.56	266	P	Pg	15 07 01.6	-0.2
KPRO	Kipourio	0.60	213	P	Pg	15 07 02.3	-0.2

SKO 14 15:07:01.0, 41°.70N×22°.23E, h0^{km}, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIP	Stip	0.03	260	*i* Pg	Pg	15 07 03.8	+2.2
STIP				*i* Sg	Sg	15 07 06.4	+4.4
STIP				*e*Lg	Lg	15 07 06.6	
	comp=N,23nm,0.1s						
VAY	Valandovo	0.46	146	*i* Pg	Pg	15 07 09.3	-0.4
VAY				*i* Sg	Sg	15 07 15.1	-0.5
VAY				*e*Lg	Lg	15 07 16.0	
	comp=N,8.0nm,0.4s						
KNT	Kendrikon	0.74	137	*i* Pg	Pg	15 07 14.3	-0.7
KNT				*i* Sg	Sg	15 07 24.4	-0.1

IDC 14 15:16:04.0±5.2**, 16°.95S×14°.20W, h0^{km}, mb3.9**/3**, mb1 3.8**/3**, mb1mx3.6**/29**, mbtmp3.9**/3**, MS3.7**/11**, Ms1 3.7**/11**, ms1mx3.5**/24**, Error ellipse: s-maj=392.9km s-min=45.9km az=106.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	25.22	22	P	P	15 21 32.0	+0.2
	2.7nm,0.7s,baz=172,slow=11,SNR=4.4						
DBIC				LR	LR	15 28 59.5	
	comp=Z,168nm,19.1s,baz=180,slow=31						
BDFB	Brasilia	32.46	267	LR	LR	15 33 10.6	
	comp=Z,108nm,20.5s,baz=121,slow=32						
TORD	Torodi Ar. Bea	33.78	29	P	P	15 22 47.2	-0.6
	2.0nm,0.7s,baz=210,slow=9.3,SNR=6.7						
TORD				LR	LR	15 34 28.5	
	comp=Z,209nm,18.5s,baz=190,slow=33						
BOSA	Boshof	38.02	115	LR	LR	15 37 27.1	
	comp=Z,58nm,18.0s,baz=173,slow=34						
CPUP	Villa Florida	41.01	249	LR	LR	15 39 45.0	
	comp=Z,89nm,18.5s,baz=76,slow=35						
PLCA	Paso Flores	53.75	232	LR	LR	15 46 36.2	
	comp=Z,114nm,18.6s,baz=132,slow=34						
ESDC	Sonseca Array	57.14	9	LR	LR	15 47 20.8	
	comp=Z,100nm,19.0s,baz=345,slow=33						
BRTR	Keskin Array B	71.88	37	P	P	15 27 29.5	+0.3
	0.4nm,0.8s,baz=207,slow=8.1,SNR=3.3						
AKASG	Malin Array Be	77.39	27	LR	LR	16 02 37.0	
	comp=Z,44nm,18.0s,baz=295,slow=36						
NOA	NORSAR Array B	80.35	12	LR	LR	16 02 40.2	
	comp=Z,15nm,18.3s,baz=230,slow=35						
VNDA	Vanda	85.69	179	LR	LR	16 02 13.3	
	comp=Z,52nm,19.7s,baz=181,slow=32						
GEYT	Alibeck	86.99	49	LR	LR	16 05 39.1	
	comp=Z,58nm,19.4s,baz=275,slow=34						
ASAR	Alice Springs	129.00	141	PKP	PKPdf	15 35 14.3	-0.4
	0.2nm,0.6s,baz=208,slow=0.4,SNR=5.0						

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*IDC **14** 15:21:38.4±2.2, 49°.87N×157°.80E, h0^{km}, mb4.1/1, mb1 3.9/4, mb1mx3.3/55, mbtmp3.8/4, ML3.1/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/28, Error ellipse: s-maj=64.0km s-min=25.8km az=104.0*

*MOS **14** 15:21:44.6±0.9, 50°.22N×156°.86E, h49^{km}, mb4.2/1, Error ellipse: s-maj=19.9km s-min=4.8km az=77.6*

*KRSC **14** 15:21:44.6±2.4, 50°.36N×156°.98E, h50^{km}±20^{km}, ML4.3*

ISC 14 15:21:45.4±1.1**, 50°.23N**±0°.08×**156°.97E**±0°.06**, h51^{km}, n56, σ1^{s}43**/67**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.71	310	⇓*i*PN	Pn	15 21 58.1	-1.1
SKR				*e*S	Sn	15 22 06.7	-2.6
SKR				pmax	pmax		
	comp=Z,368nm,0.5s						
SKR				smax	smax		
	comp=N,8µm,0.4s						
SKR				smax	smax		
	comp=E,12µm,0.4s						
SKR	Severo-Kuril's	0.71	310	*e*P	Pn	15 21 58.1	-1.1
SKR				*e*S	Sn	15 22 07.0	-2.3
PAU	Pauzhetka	1.24	356	PN	Pn	15 22 05.9	-0.5
PAU				S	Sn	15 22 20.7	-1.3
PAU	Pauzhetka	1.24	356	*e*P	Pn	15 22 05.9	-0.5
PAU				*e*S	Sn	15 22 20.7	-1.3
KDTR	Khodutka, Kamc	1.73	24	PN	Pn	15 22 13.0	0.0
KDTR				S	Sn	15 22 32.8	-1.1
KDTR	Khodutka, Kamc	1.73	24	*e*P	Pn	15 22 13.0	0.0
KDTR				*e*S	Sn	15 22 32.8	-1.1
MIPR	Malaya Ipel'ka	2.05	356	PN	Pn	15 22 17.2	-0.2
MIPR	Malaya Ipel'ka	2.05	356	*e*P	Pn	15 22 17.2	-0.2
ASAK	Asacha	2.23	15	PN	Pn	15 22 20.3	+0.3
ASAK	Asacha	2.23	15	*e*P	Pn	15 22 20.3	+0.3
MTVR	Mutnovka	2.38	18	PN	Pn	15 22 22.7	+0.6
MTVR				S	Sn	15 22 50.3	+0.2
MTVR	Mutnovka	2.38	18	*e*P	Pn	15 22 22.7	+0.6
MTVR				*e*S	Sn	15 22 50.3	+0.2
RUS	Russkaya	2.41	23	PN	Pn	15 22 22.4	+0.1
RUS				S	Sn	15 22 49.5	-1.0
RUS	Russkaya	2.41	23	*e*P	Pn	15 22 22.4	+0.1
RUS				*e*S	Sn	15 22 49.5	-1.0
GRL	Gorelyy	2.42	16	PN	Pn	15 22 23.4	+0.7
GRL	Gorelyy	2.42	16	*e*P	Pn	15 22 23.4	+0.7
APC	Apacha	2.70	2	PN	Pn	15 22 27.0	+0.7
APC				S	Sn	15 22 57.5	-0.2
APC	Apacha	2.70	2	*e*P	Pn	15 22 27.0	+0.7
APC				*e*S	Sn	15 22 57.5	-0.2
KRMR	Karymshinskiy	2.70	15	PN	Pn	15 22 27.7	+1.4
KRMR	Karymshinskiy	2.70	15	*e*P	Pn	15 22 27.7	+1.4
PETK	Petropavlovsk-	2.92	9	Pn	Pn	15 22 30.2	+0.9
	comp=E,2.3nm,0.3s,baz=172,slow=13,SNR=58						
PETK				Sn	Sn	15 23 12.0	+8.9
	comp=E,1.5nm,0.3s,baz=163,slow=10,SNR=4.0						
PET	Petropavlovsk	2.99	20	PN	Pn	15 22 31.3	+1.1
PET				S	Sn	15 23 05.5	+0.8
PET	Petropavlovsk	2.99	20	*e*P	Pn	15 22 31.3	+1.1
PET				*e*S	Sn	15 23 05.5	+0.8
DALK	Dalny	3.02	21	PN	Pn	15 22 31.3	+0.7
DALK	Dalny	3.02	21	*e*P	Pn	15 22 31.3	+0.7
UGLR	Uglovaya	3.20	20	PN	Pn	15 22 34.8	+1.6
UGLR	Uglovaya	3.20	20	*e*P	Pn	15 22 34.8	+1.6
AVH	Avacha	3.23	19	PN	Pn	15 22 35.6	+1.9
AVH	Avacha	3.23	19	*e*P	Pn	15 22 35.6	+1.9
KOK	Koryaka	3.24	18	PN	Pn	15 22 36.2	+2.5
KOK	Koryaka	3.24	18	*e*P	Pn	15 22 36.2	+2.5
SMAR	Somma	3.24	20	PN	Pn	15 22 35.5	+1.6
SMAR	Somma	3.24	20	*e*P	Pn	15 22 35.5	+1.6
KRER	Koryakskii	3.27	19	PN	Pn	15 22 36.1	+1.8
KRER	Koryakskii	3.27	19	*e*P	Pn	15 22 36.1	+1.8
NLC	Nalytchevo	3.29	26	PN	Pn	15 22 34.7	+0.3
NLC				S	Sn	15 23 11.0	-1.3
NLC	Nalytchevo	3.29	26	*e*P	Pn	15 22 34.7	+0.3
NLC				*e*S	Sn	15 23 11.0	-1.3
KRX	Arik	3.30	18	PN	Pn	15 22 36.8	+2.1
KRX	Arik	3.30	18	*e*P	Pn	15 22 36.8	+2.1
SPN	Mys Shipunski	3.44	32	PN	Pn	15 22 37.0	+0.5
SPN				S	Sn	15 23 15.3	-0.7
SPN	Mys Shipunski	3.44	32	*e*P	Pn	15 22 37.0	+0.5
SPN				*e*S	Sn	15 23 15.3	-0.7
GNL	Ganaly	3.52	9	PN	Pn	15 22 38.6	+0.9
GNL	Ganaly	3.52	9	*e*P	Pn	15 22 38.6	+0.9
BKI	Bering	7.39	44	*e*S	Sn	15 24 47.2	-5.8
KUR	Kuril'sk	7.91	234	*e*PN	Pn	15 23 40.5	+2.8
TYV	Tymovskoe	9.14	279	*e*PN	Pn	15 23 55.6	+1.1
ASAJ	Asahikawa	11.53	243	Pn	Pn	15 24 27.2	+0.1
	comp=E,0.3nm,0.3s,baz=89,slow=12,SNR=6.2						
MJAR	Matsushiro Arr	19.24	232	P	Pn	15 26 07.7	+0.9
	comp=E,0.1nm,0.3s,baz=34,slow=9.0,SNR=4.0						
MJAR				LR	LR	15 33 12.1	
	comp=E,23nm,19.5s,baz=290,slow=36						
H11N2	WAKE ISLAND Hy	31.44	162	T	T	16 01 37.0	
	baz=348,slow=76,SNR=9.6						
H11N1	WAKE ISLAND Hy	31.46	162	T	T	16 01 39.9	
	baz=348,slow=76,SNR=7.9						
H11N3	WAKE ISLAND Hy	31.46	162	T	T	16 01 41.6	
	baz=348,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	32.59	163	T	T	16 03 02.2	
	baz=348,slow=76,SNR=25						
H11S3	WAKE ISLAND Hy	32.61	163	T	T	16 03 02.4	
	baz=348,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	32.61	163	T	T	16 03 01.8	
	baz=348,slow=76,SNR=18						
PDAR	Pinedale Array	60.66	57	LR	LR	15 57 20.6	
	comp=E,22nm,19.0s,baz=65,slow=36						
ASAR	Alice Springs	76.36	202	P	P	15 33 28.4	-0.6
	comp=E,0.5nm,0.8s,baz=14,slow=5.3,SNR=8.0						

NNC 14 15:38:00.4±1.6**, 36°.44N×71°.07E, h113^{km}**±29^{km}**, mb3.2, mpv3.7, 5C, Error ellipse: s-maj=15.4km s-min=11.7km az=55.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.67	356	P	Pn	15 39 36.3	+0.5
	2.4nm,0.2s,baz=176,slow=12,SNR=96						
KK31				S	Sn	15 40 51.0	+0.6
	6.6nm,0.5s,baz=180,slow=20,SNR=12						
AAK	Ala-Archa	6.74	22	⇑P	Pn	15 39 36.8	0.0
	2.5nm,0.6s						
AAK				⇑S	Sn	15 40 52.8	+0.7
	4.4nm,1.1s						
TKM2	Tokmak 2	7.36	27	⇑P	Pn	15 39 44.7	-0.5
	1.6nm,0.5s						
AB31	Akbulak array	15.17	331	⇑P	Pn	15 41 28.2	-0.2
	0.6nm,0.6s,baz=164,slow=9.0,SNR=21						
AB31				S	Sn	15 44 15.7	-0.3
	0.6nm,0.5s,baz=154,slow=23,SNR=5.0						
AKTO	Aktyubinsk	16.86	330	⇑P	P	15 41 49.8	+0.2
	4.9nm,1.0s						

IDC 14 15:46:32.5±5.0**, 9°.94S×112°.19E, h0^{km}, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.5**/21**, mbtmp3.6**/3**, Error ellipse: s-maj=319.8km s-min=26.9km az=50.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	24.82	126	P	P	15 51 56.7	0.0
	1.1nm,0.7s,baz=302,slow=8.7,SNR=18						
MKAR	Makanchi Array	62.47	337	P	P	15 56 57.9	+0.2
	0.3nm,0.3s,baz=151,slow=7.3,SNR=8.6						
ZALV	Zalesovo Beam	67.74	343	P	P	15 57 31.5	-0.2
	0.3nm,0.4s,baz=157,slow=6.6,SNR=2.4						

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*DNK **14** 15:57:28.4±3.2, 80°.32N×1°.04W, h77^{km}±208^{km}, ML2.1*

BER 14 15:57:29.7±2.4**, 79°.95N×1°.11W, h10^{km}, ML1.4, ML2.1**(DNK)**, Confirmed Earthquake, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	2.61	107	*i* P	Pn	15 58 10.5	-1.3
KBS				*i* S	Sn	15 58 39.6	-4.0
KBS				IAML		15 58 48.7	
	comp=Z,4.0nm,0.4s						
KBS	Kingsbay	2.61	107	*i* P	Pn	15 58 10.5	-1.3
KBS				*i* S	Sn	15 58 39.6	-4.0
KBS				IAML		15 58 48.7	
	comp=Z,4.0nm,0.4s						
DAG	Danmarks Havn	4.75	237	IAML		15 59 24.2	
	comp=Z,1.1nm,0.3s						
DAG				*e*	Pn	15 58 37.6	-3.6
	baz=45,slow=14						
DAG				*i* P	Pn	15 58 38.2	-3.0
DAG				*i* S	Sn	15 59 29.4	-6.8
DAG	Danmarks Havn	4.75	237	IAML		15 59 24.2	
	comp=Z,1.1nm,0.3s						
DAG				*e*	Pn	15 58 37.6	-3.6
	baz=45,slow=14						
DAG				*i* P	Pn	15 58 38.2	-3.0
DAG				*i* S	Sn	15 59 29.4	-6.8
DBG	Daneborg	7.04	227	*i* P	Pn	15 59 11.4	-1.2
DBG				*i* S	Sn	16 00 24.8	-7.7
DBG				IAML		16 00 29.0	
	comp=Z,0.6nm,0.4s						
DBG	Daneborg	7.04	227	*i* P	Pn	15 59 11.4	-1.2
DBG				*i* S	Sn	16 00 24.8	-7.7
DBG				IAML		16 00 29.0	
	comp=Z,0.6nm,0.4s						

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*IDC **14** 16:06:24.1±0.8, 54°.44N×117°.20W, h0^{km}, mb1 3.6/7, mb1mx3.4/40, mbtmp3.4/7, ML3.6/6, Error ellipse: s-maj=14.6km s-min=7.6km az=79.0*

*PGC **14** 16:06:25.2±0.3, 54°.35N×117°.38W, h1^{km}, ML3.8/8, 169km Nne of Jasper, Alberta Alberta, Canada*

ISC 14 16:06:22.9±0.6**, 54°.61N**±0°.03×**116°.90W**±0°.03**, h10^{km}, n34, σ2^{s}44**/58**, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBC4	NorthernBC 4	2.42	298	Pn	Pn	16 07 04.7	+2.2
NBC4				Sn	Sn	16 07 32.9	+0.8
NBC4				Sg	Sb	16 07 36.1	-0.2
EDM	Edmonton	2.52	122	Pn	Pb	16 07 08.1	-0.1
EDM				Sn	Sb	16 07 40.0	+0.8
EDM				Sg	Sg	16 07 46.2	+2.5
MNB	Mounoet Dainar	2.57	201	Pn	Pn	16 07 04.0	-0.8
MNB				Sg	Sn	16 07 34.3	-1.9
BLBC	Blue River	2.93	210	Pn	Pn	16 07 07.1	-2.7
BLBC				Sg	Sn	16 07 44.3	-0.7
BMBC	Bull Mountain	3.32	298	Pn	Pn	16 07 16.0	+1.1
BMBC				Pg	Pb	16 07 22.7	+0.8
BMBC				Sn	Sn	16 07 54.2	-0.3
SLEB	Sale Mountain	3.53	193	Pn	Pn	16 07 17.1	-0.9
SLEB				Sg	Sn	16 08 03.6	+3.9
FSB	Fort Saint Jam	4.33	271	Pn	Pn	16 07 28.0	-0.7
FSB				Pg	Pb	16 07 37.6	-1.4
FSB				Sg	Sb	16 08 30.9	-0.4
NBC5	NorthernBC 5	4.36	314	Pn	Pn	16 07 31.2	+2.0
NBC5				Sn	Sn	16 08 20.9	+0.7
LLLB	Lillooet	5.02	219	Pg	Pb	16 07 49.2	-1.7
LLLB				Sg	Sb	16 08 49.5	-1.8
NBC3	NorthernBC 3	5.45	339	Sg	Sg	16 09 18.3	+0.8
FNBB	Fort Nelson	5.45	324	Pn	Pn	16 07 46.4	+2.3
FNBB				Sn	Sn	16 08 46.8	-0.1
PNT	Penticton	5.56	199	Pn	Pn	16 07 43.0	-2.6
PNT				Sg	Sb	16 09 05.1	-1.5
WSLR	Whistler	5.81	222	Pg	Pb	16 08 02.4	-1.9
WSLR				Sg	Sb	16 09 12.6	-1.2
WALA	Waterton Lakes	5.86	160	Pn	Pn	16 07 51.1	+1.2
WALA				Sn	Sn	16 08 53.7	-3.4
HOPB	Hope	5.92	210	Sg	Sb	16 09 16.4	-0.8
NBC2	NorthernBC 2	6.01	332	Pn	Pn	16 07 54.3	+2.5
NBC2				Sn	Sn	16 09 00.9	+0.3
NBC2				Sg	Sg	16 09 35.2	-0.4
NBC1	NorthernBC 1	6.31	326	Sg	Sg	16 09 43.2	-2.0
NEW	Newport	6.35	181	Pn	Pn	16 07 55.6	-1.0
	0.7nm,0.3s,baz=4.3,slow=14,SNR=4.2						
NEW				Pg	Pb	16 08 14.5	+0.9
	2.5nm,0.3s,baz=349,slow=14,SNR=11						
NEW				Lg	Lg	16 09 32.7	
	2.1nm,0.3s,baz=252,slow=20,SNR=3.3						
B08A	Colville Reser	6.44	195	Pn	Pn	16 07 56.3	-1.4
B08A				Sg	Sb	16 09 34.7	+2.7
A05A	Maple Falls	6.47	212	Sg	Sb	16 09 34.1	+1.3
SHB	Sechelt	6.60	223	Sg	Sb	16 09 39.0	+2.3
MBW	Mount Baker	6.61	210	Pg	Pb	16 08 18.1	+0.1
MBW				Sg	Sb	16 09 39.0	+2.1
B06A	Marblemount	6.73	207	Sg	Sb	16 09 42.0	+1.7
TXB	Texada	6.76	226	Sg	Sb	16 09 43.1	+2.0
RPW	Rockport	6.80	207	Sg	Sb	16 09 44.6	+2.1
C09A	Chrisman Ranch	6.87	188	Sg	Sb	16 09 49.5	+5.1
BBB	Bella Bella	7.13	255	Lg	Lg	16 09 57.3	
	2.1nm,0.3s,baz=330,slow=20,SNR=2.0						
BBB	Bella Bella	7.13	255	Sg	Sb	16 09 56.7	+5.0
YKA	Yellowknife Ar	8.00	8	Pn	Pn	16 08 21.9	+2.9
	0.5nm,0.3s,baz=184,slow=13,SNR=13						
YKA				Sn	Sn	16 09 50.0	+0.5
	2.2nm,0.3s,baz=105,slow=14,SNR=8.1						
YKA				Lg	Lg	16 10 38.3	
	3.9nm,0.3s,baz=186,slow=28,SNR=13						
DLBC	Dease Lake	8.21	303	Pn	Pn	16 08 22.5	+0.5
	0.3nm,0.3s,baz=127,slow=15,SNR=3.0						
DLBC				Lg	Lg	16 10 38.0	
	1.2nm,0.3s,baz=257,slow=17,SNR=3.2						
PDAR	Pinedale Array	12.79	155	Pn	Pn	16 09 26.6	+1.6
	0.1nm,0.3s,baz=353,slow=14,SNR=3.1						
ULM	Lac du Bonnet	13.53	100	Pn	Pn	16 09 35.5	+0.7
	0.1nm,0.3s,baz=298,slow=12,SNR=2.2						
ULM				Sn	Sn	16 11 56.7	-8.4
	0.4nm,0.3s,baz=54,slow=22,SNR=3.0						
ULM				Lg	Lg	16 13 27.1	
	0.3nm,0.3s,baz=204,slow=20,SNR=2.0						
INK	Inuvik	15.78	337	Pn	Pn	16 10 05.2	+0.2
	0.4nm,0.3s,baz=133,slow=8.7,SNR=4.7						
INK				Sn	Sn	16 12 52.5	-7.1
	0.2nm,0.3s,baz=343,slow=20,SNR=2.9						
ILAR	Eielson Array	18.04	316	P	P	16 10 37.0	+3.2
	0.0nm,0.3s,baz=123,slow=11,SNR=8.3						

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*IDC **14** 16:31:09.8±2.2, 5°.99S×147°.29E, h90^{km}±19^{km}, mb3.9/8, mb1 4.1/12, mb1mx3.8/32, mbtmp4.3/12, MS3.1/4, Ms1 3.1/4, ms1mx2.8/25, Error ellipse: s-maj=23.7km s-min=14.0km az=101.0*

*NEIC **14** 16:31:11.9±2.4, 6°.13S±0°.07×147°.2E±0°.1, h103^{km}±8^{km}, mb4.4/16, Error ellipse: s-maj=14.9km s-min=9.7km az=99.0*

*NOU **14** 16:31:12.7, 6°.25S×147°.05E, h87^{km}, mb4.6, Eastern New Guinea Reg., P.N.G.*

ISC 14 16:31:09.4±0.7**, 5°.98S**±0°.07×**147°.16E**±0°.08**, h78^{km}, n57, σ1^{s}21**/56**, mb4.3**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.40	180	P	Pn	16 31 58.9	-1.3
	56nm,0.3s,baz=2.1,slow=5.5,SNR=190						
PMG	Port Moresby	3.40	180		Pn	16 31 59.0	-1.3
PMG				Sn	Sn	16 32 42.6	+3.1
PMG	Port Moresby	3.40	180	P	Pn	16 31 59.3	-0.9
MANU	Manus Island	3.92	3	Pn	Pn	16 32 11.6	+4.3
RABL	Rabaul	5.29	71	Pn	Pn	16 32 28.0	+2.0

JAY	Jayapura	7.30	298	P	Pn	16 32 56.8	+3.2
	1.0nm,0.3s,baz=153,slow=11,SNR=1.6						
COEN	Coen	8.84	206	Pn	Pn	16 33 14.2	-0.3
MTSU	Mount Surprise	12.39	193	P	Pn	16 33 59.2	-3.8
	baz=12,SNR=24						
HNR	Honiara	13.12	106	LR	LR	16 38 38.8	
	comp=Z,42nm,19.2s,baz=183,slow=34						
CTA	Charters Tower	14.05	184	P	Pn	16 34 26.2	+1.3
	0.9nm,0.3s,baz=353,slow=14,SNR=17						
CTAO	Charters Tower	14.05	184	P	Pn	16 34 26.8	+1.8
KDU	Kakadu	15.94	244	P	Pn	16 34 48.0	-1.3
	baz=16,SNR=11						
QIS	Mount Isa	16.24	206	P	Pn	16 34 51.3	-1.6
	baz=16,SNR=10						
SIJI	Sorong	16.65	287	P	P	16 34 59.8	+0.5
	0.6nm,0.3s,baz=162,slow=20,SNR=1.6						
MTN	Manton Dam	17.21	246	P	Pn	16 35 04.2	-0.7
	baz=17,SNR=6.8						
MTN	Manton Dam	17.21	246	P	P	16 35 06.0	+0.6
MTN				IAmb	IAmb	16 35 13.0	
	comp=Z,32nm,1.2s						
WRAB	Tennant Creek	18.64	221	P	P	16 35 20.4	-0.7
WRAB				IAmb	IAmb	16 35 23.4	
	comp=Z,18nm,1.0s						
EIDS	Eidsvold	19.64	169	P	P	16 35 32.3	+0.3
	baz=20,SNR=8.4						
EIDS	Eidsvold	19.64	169	P	P	16 35 32.0	+0.1
RMQ	Roma	20.45	176	P	P	16 35 41.4	+0.7
	baz=20,SNR=4.8						
QLP	Quilpie	20.68	187	P	P	16 35 43.6	+0.5
	baz=21,SNR=7.2						
AS31	Alice Springs	21.72	215	P	P	16 35 54.2	-0.3
AS31				IAmb	IAmb	16 35 59.2	
	comp=Z,5.5nm,0.3s						
ASAR	Alice Springs	21.72	215	P	P	16 35 54.2	-0.2
	comp=Z,5.9nm,0.5s,baz=52,slow=8.8,SNR=389						
ASAR				S	S	16 39 50.5	-0.2
	comp=Z,1.0nm,0.9s,baz=35,slow=23,SNR=4.8						
ASAR				LR	LR	16 45 23.8	
	comp=Z,70nm,19.7s,baz=34,slow=39						
SOEI	Soe	22.98	259		P	16 36 10.0	+2.1
SOEI				IAmb	IAmb	16 36 14.7	
	comp=Z,30nm,1.4s						
BATI	Baumata	23.63	258	P	P	16 36 14.6	+0.7
	comp=Z,5.8nm,0.4s,baz=358,slow=1.9,SNR=4.6						
FITZ	Fitzroy Crossi	24.21	238	P	P	16 36 19.0	0.0
	baz=24,SNR=92						
FITZ	Fitzroy Crossi	24.21	238	P	P	16 36 19.4	+0.4
	comp=Z,38nm,0.7s,baz=59,slow=7.0,SNR=164						
FITZ				LR	LR	16 45 46.3	
	comp=Z,54nm,20.9s,baz=54,slow=36						
FITZ	Fitzroy Crossi	24.21	238	P	P	16 36 19.2	+0.2
ARMA	Armidale	24.67	171	P	P	16 36 23.2	+0.1
	baz=25,SNR=16						
ARMA	Armidale	24.67	171	P	P	16 36 23.5	+0.3
ARMA				IAmb	IAmb	16 36 24.9	
	comp=Z,15nm,0.7s						
CMSA	Cobar Meteorol	25.46	183	P	P	16 36 30.5	+0.3
	baz=25,SNR=10						
STKA	Stephens Creek	26.28	191	P	P	16 36 37.1	-0.5
	comp=Z,4.9nm,0.5s,baz=359,slow=8.2,SNR=15						
STKA	Stephens Creek	26.28	191	P	P	16 36 37.4	-0.3
HTT	Hallett	28.36	195	P	P	16 36 55.6	-0.7
	baz=28,SNR=5.0						
BBOO	Buckleboo	28.63	200	P	P	16 36 58.2	-0.5
	baz=28,SNR=6.1						
BBOO	Buckleboo	28.63	200	P	P	16 36 58.0	-0.7
BBOO				IAmb	IAmb	16 37 06.0	
	comp=Z,13nm,1.2s						
FORT	Forrest	30.50	214	P	P	16 37 15.2	0.0
PSA00	Pilbara Seismi	30.64	237	P	P	16 37 17.3	+0.7
PSA00				IAmb	IAmb	16 37 18.4	
	comp=Z,8.0nm,0.6s						
MEEK	Meekatharra	34.09	230	P	P	16 37 47.2	+0.5
	baz=34,SNR=23						
MORW	Morawa	37.30	228	P	P	16 38 14.8	+0.6
	baz=37,SNR=5.4						
MORW	Morawa	37.30	228	P	P	16 38 14.7	+0.5
KLBR	Kellerberrin	37.49	224	P	P	16 38 15.7	-0.1
	baz=37,SNR=8.0						
BLDU	Ballidu	37.66	226	P	P	16 38 17.5	+0.3
	baz=38,SNR=6.3						
NWAO	Narrogin (SRO)	38.65	222	P	P	16 38 25.7	+0.2
	baz=39,SNR=3.9						
NWAO	Narrogin (SRO)	38.65	222	P	P	16 38 25.8	+0.2
MUN	Mundaring	38.79	224	P	P	16 38 27.0	+0.3
	baz=39,SNR=3.9						
KSRS	Korea Array	46.79	339	LR	LR	16 56 53.3	
	comp=Z,18nm,20.4s,baz=32,slow=33						
VNDA	Vanda	71.92	177	P	P	16 42 23.9	+0.1
	comp=Z,1.0nm,0.8s,baz=344,slow=6.1,SNR=3.5						
MKAR	Makanchi Array	77.58	320	P	P	16 42 56.6	-0.5
	comp=Z,0.2nm,0.4s,baz=95,slow=8.5,SNR=5.7						
MKAR	Makanchi Array	77.58	320	P	P	16 42 56.5	-0.7
ZALV	Zalesovo Beam	79.08	328	P	P	16 43 03.5	-1.7
	comp=Z,0.4nm,0.3s,baz=97,slow=7.4,SNR=2.6						
QSPA	South Pole Qui	83.98	180	P	P	16 43 30.6	-0.5
QSPA				IAmb	IAmb	16 43 31.2	
	comp=Z,2.0nm,0.7s						
CCB	Clear Creek Bu	84.99	23	P	P	16 43 34.5	-1.4
IL31		85.40	23	P	P	16 43 36.0	-1.9
ILAR	Eielson Array	85.40	23	P	P	16 43 36.0	-1.9
	comp=Z,1.5nm,0.6s,baz=248,slow=4.8,SNR=28						
TORD	Torodi Ar. Bea	145.24	284	PKPbc	PKPbc	16 50 38.1	-1.0
	comp=Z,1.7nm,0.6s,baz=68,slow=4.0,SNR=9.4						
TORD	Torodi Ar. Bea	145.24	284		PKPbc	16 50 38.4	-0.7

IDC 14 16:54:21.1±5.2, 11°.37S×114°.79E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=321.4km s-min=29.7km az=48.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	21.92	126	P	P	16 59 16.4	+0.2
	0.3nm,0.7s,baz=302,slow=8.8,SNR=8.8						
MKAR	Makanchi Array	64.79	336	P	P	17 05 02.2	+0.6
	0.2nm,0.6s,baz=149,slow=6.3,SNR=4.3						
ZALV	Zalesovo Beam	69.87	342	P	P	17 05 33.0	-0.5
	0.6nm,0.5s,baz=165,slow=6.0,SNR=3.7						

IDC 14 17:47:30.2±1.4, 50°.35N×149°.69E, h496km±18km, mb2.9/9, mb1 3.0/13, mb1mx2.8/44, mbtmp3.7/13, Error ellipse: s-maj=22.6km s-min=13.9km az=133.0

ISC 14 17:47:30.3±0.8, 50°.3N±0°.1×149°.8E±0°.1, h500km, n13, σ0s.58/13, mb3.4/9, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.68	57	P	P	17 49 02.7	-0.7
	0.1nm,0.3s,baz=159,slow=3.4,SNR=7.7						
ASAJ	Asahikawa	7.87	221	P	P	17 49 24.7	-0.7
	0.4nm,0.3s,baz=52,slow=6.3,SNR=6.0						
KLR	Kul'dur	11.70	272	P	P	17 50 06.2	+0.7
	0.2nm,0.3s,baz=77,slow=11,SNR=5.8						
SEY	Seymchan	12.75	5	P	P	17 50 16.9	+0.5
	0.1nm,0.3s,baz=222,slow=18,SNR=7.5						
ILAR	Eielson Array	35.27	42	P	P	17 53 42.0	0.0
	1.0nm,0.5s,baz=261,slow=6.9,SNR=21						
INK	Inuvik	39.91	34	P	P	17 54 19.9	0.0
	1.5nm,0.5s,baz=319,slow=6.7,SNR=7.6						
YKA	Yellowknife Ar	49.44	37	P	P	17 55 33.2	-0.1
	0.7nm,0.6s,baz=307,slow=6.5,SNR=12						
FINES	FINESS Array B	59.87	332	P	P	17 56 46.2	-0.5
	0.6nm,0.4s,baz=39,slow=9.0,SNR=6.3						
NOA	NORSAR Array B	64.13	339	P	P	17 57 14.2	-0.3
	0.9nm,0.7s,baz=29,slow=7.0,SNR=1.6						
PDAR	Pinedale Array	64.43	53	P	P	17 57 17.3	+0.3
	0.3nm,0.5s,baz=340,slow=3.1,SNR=4.2						
AKASG	Malin Array Be	67.36	324	P	P	17 57 34.1	-0.7
	0.4nm,0.4s,baz=36,slow=6.7,SNR=2.3						
ASAR	Alice Springs	74.97	195	P	P	17 58 20.4	+0.6
	0.3nm,0.6s,baz=9.0,slow=4.9,SNR=11						
TXAR	Lajitas Array	77.63	59	P	P	17 58 35.4	+0.7
	0.2nm,0.5s,baz=339,slow=4.0,SNR=2.2						

IDC 14 18:51:05.7±0.6, 6°.70N×72°.91W, h164km±6km, mb3.4/8, mb1 3.7/12, mb1mx3.4/41, mbtmp4.0/12, Error ellipse: s-maj=15.4km s-min=7.0km az=133.0

RSNC 14 18:51:06.2±1.4, 6°.84N×73°.13W, h160km±6km, ML4.2, Mw4.2, Fault plane solution: NP1:φs28.00000°, δ67.00000°, λ-162.00000°.

NEIC 14 18:51:06.2±2.1, 6°.72N±0°.09×72°.91W±0°.10, h167km±5km, mb4.0/12, Error ellipse: s-maj=15.9km s-min=10.5km az=130.0

VAO 14 18:51:07.3±0.8, 6°.85N×73°.02W, h175km±9km, mb4.1

ISC 14 18:51:05.5±0.6, 6°.82N±0°.03×73°.10W±0°.03, h164km±5km, n97, σ1s.78/137, mb3.9/13, 10C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	200	⇓iP	Pn	18 51 27.5	-0.5
BARC				i		18 51 45.6	
	comp=Z,2µm,0.4s						
PAMC	Pamplona, Colo	0.65	38	⇓eP	Pn	18 51 30.4	+0.5
PAMC				eS	Sn	18 51 47.5	-1.1
PAMC				i		18 51 49.9	
	comp=Z,4µm,0.6s						
BRRC	Barranca, Sant	0.67	295	⇑eP	Pn	18 51 29.5	+0.1
BRRC				eS	Sn	18 51 46.6	-1.2
BRRC				i		18 51 47.7	
	comp=Z,3µm,0.2s						
RUSC	La Rusia	0.93	179	eP	Pn	18 51 31.4	-0.4
RUSC				⇑eS	Sn	18 51 50.6	-1.2
RUSC				i		18 51 52.4	
	comp=Z,1µm,0.5s						
TAMC	Tame, Arauca	1.35	106	⇓eP	Pn	18 51 35.6	+0.8
TAMC				⇓iP	Pn	18 51 35.6	+0.8
TAMC				eS	Sn	18 51 57.3	-0.1
TAMC				i		18 51 58.6	
	comp=Z,910nm,0.7s						
PTBC	PUERTO BERRIO,	1.38	258	eP	Pn	18 51 34.3	-0.7
PTBC				eS	Sn	18 51 56.6	-1.1
PTBC				i		18 52 00.9	
	comp=Z,2µm,0.4s						
OCAC	Ocana	1.42	351	eP	Pn	18 51 35.6	0.0
OCAC				eS	Sn	18 51 58.6	-0.3
OCAC				i		18 52 03.2	
	comp=Z,2µm,0.2s						
SPBC	San Pablo de B	1.52	220	eP	Pn	18 51 36.3	-0.2
SPBC				eS	Sn	18 51 58.5	-1.8
SPBC				i		18 52 05.4	
	comp=Z,2µm,0.4s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	18 51 40.0	-0.1
ZARC				eS	Sn	18 52 05.8	-1.1
ZARC				i		18 52 10.9	
	comp=Z,3µm,0.6s						
NORC	Norcasia	2.16	235	eP	Pn	18 51 43.2	-0.3
NORC				eS	Sn	18 52 11.8	-1.0
NORC				i		18 52 15.0	
	comp=Z,1µm,0.4s						
SMLC	San Martn de	2.19	334	eP	Pn	18 51 43.8	+0.1
SMLC				eS	Sn	18 52 12.8	-0.5
SMLC				i		18 52 22.0	
	comp=Z,1µm,0.2s						
CHIC	Chingaza	2.27	196	⇑eP	Pn	18 51 45.0	-0.1
CHIC				eS	Sn	18 52 16.1	+0.4
CHIC				i		18 52 20.4	
	comp=Z,698nm,0.4s						
ROSC	El Rosal	2.32	212	P	Pn	18 51 47.1	+1.4
	comp=Z,268nm,0.3s,baz=295,slow=8.5,SNR=147						
ROSC				S	Sn	18 52 16.7	+0.1
	comp=Z,460nm,0.3s,baz=229,slow=24,SNR=14						
ROSC	El Rosal	2.32	212	Pn	Pn	18 51 46.8	+1.1
ROSC	El Rosal	2.32	212	⇑eP	Pn	18 51 46.9	+1.2
ROSC				eS	Sn	18 52 17.6	+1.0
ROSC				i		18 52 22.3	
	comp=Z,1µm,0.4s						
HELC	Santa Helena	2.50	256	eP	Pn	18 51 48.0	+0.3
HELC				eS	Sn	18 52 19.4	-0.9
HELC				i		18 52 24.5	
	comp=Z,680nm,0.3s						
UREC	San Jos de Ur	2.59	291	eP	Pn	18 51 47.4	-1.0
UREC				eS	Sn	18 52 19.8	-1.9
UREC				i		18 52 26.1	
	comp=Z,930nm,0.2s						
VILC	Villavicencio,	2.76	192	eP	Pn	18 51 50.3	-0.4
VILC				eS	Sn	18 52 24.4	-1.3
VILC				i		18 52 34.4	
	comp=Z,1µm,0.4s						
PTGC	Puerto Gaitan,	2.78	160	⇑eP	Pn	18 51 50.3	-0.5
PTGC				eS	Sn	18 52 23.6	-2.3
PTGC				i		18 52 26.1	
	comp=Z,727nm,0.4s						
RREF	El Recreo	2.94	230	eP	Pn	18 51 53.6	+0.1
RREF				eS	Sn	18 52 31.0	+0.5
RREF				i		18 52 52.5	
	comp=Z,397nm,0.5s						
CBOC	Ciudad Bolivar	3.05	252	eP	Pn	18 51 54.5	+0.2
CBOC				eS	Sn	18 52 30.2	-1.9
CBOC				i		18 52 38.5	
	comp=Z,329nm,0.6s						
DBBC	Dabeiba	3.10	274	⇓eP	Pn	18 51 55.0	+0.2
TOLC	Tolima	3.14	225	eP	Pn	18 51 56.2	+0.6
TOLC				eS	Sn	18 52 35.1	+0.8
TOLC				i		18 52 38.9	
	comp=Z,2µm,0.4s						
SDV	Santo Domingo	3.19	50	P	Pn	18 51 57.0	+1.0
	comp=Z,201nm,0.3s,baz=196,slow=11,SNR=501						
SDV				S	Sn	18 52 34.4	-0.9
	comp=Z,127nm,0.3s,baz=262,slow=16,SNR=23						
SDV	Santo Domingo	3.19	50	Pn	Pn	18 51 56.6	+0.7
SDV				Sn	Sn	18 52 33.6	-1.6
SDV	Santo Domingo	3.19	50	eP	Pn	18 51 56.8	+0.7
SDV				eS	Sn	18 52 33.9	-1.4
SDV				i		18 52 36.3	
	comp=Z,357nm,0.4s						
SDV	Santo Domingo	3.19	50	eP	Pn	18 51 56.7	+0.7
MOTC	Monteria, Cord	3.20	308	eP	Pn	18 51 54.7	-1.3
MOTC				eS	Sn	18 52 33.4	-1.8
MOTC				i		18 52 48.5	
	comp=Z,616nm,0.5s						
ARGC	Ariguani, Magd	3.22	339	⇑eP	Pn	18 51 57.6	+1.3
ARGC				eS	Sn	18 52 35.0	-0.8
ARGC				i		18 52 49.9	
	comp=Z,392nm,0.4s						
ANIL	Santa Ana	3.26	225	eP	Pn	18 51 57.9	+0.8
ANIL				eS	Sn	18 52 37.9	+0.8
ANIL				i		18 52 42.6	
	comp=Z,191nm,0.3s						
ORTC	Ortega, Tolima	3.60	217	eP	Pn	18 52 01.5	+0.3
ORTC				eS	Sn	18 52 44.4	0.0
ORTC				i		18 52 54.8	
	comp=Z,326nm,0.3s						
CVALL	Valledupar, Ce	3.66	358	eP	Pn	18 52 01.4	-0.6
CVALL				eS	Sn	18 52 44.5	-1.5
CVALL				i		18 52 51.4	
	comp=Z,424nm,0.4s						
SJCC	San Jacinto, C	3.68	326	eP	Pn	18 52 01.3	-0.9
SJCC				eS	Sn	18 52 42.7	-3.6
SJCC				i		18 52 47.3	
	comp=Z,521nm,0.4s						
PLMC	San Jos del P	3.70	239	eP	Pn	18 52 02.6	+0.2
PLMC				eS	Sn	18 52 45.1	-1.5
PLMC				i		18 52 51.6	
	comp=Z,341nm,0.5s						
GUVC	San Jose del G	4.28	174	eP	Pn	18 52 08.8	-1.0
GUVC				eS	Sn	18 52 58.1	-1.9
GUVC				i		18 53 02.6	
	comp=Z,410nm,0.8s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	18 52 09.6	-0.6
YOTC				eS	Sn	18 52 58.0	-2.5
SMRC	Santa Marta, M	4.45	346	eP	Pn	18 52 12.1	-0.1
SMRC				eS	Sn	18 53 00.8	-3.3
SMRC				i		18 53 05.9	
	comp=Z,256nm,0.1s						
CAPC	Capurgana	4.58	293	eP	Pn	18 52 11.1	-2.7
CAPC				⇑eS	Sn	18 53 01.2	-5.9
CAPC				i		18 53 05.4	
	comp=Z,297nm,0.7s						
MACC	Macarena, Meta	4.71	189	⇑eP	Pn	18 52 13.8	-1.6
MACC				eS	Sn	18 53 05.0	-5.1
MACC				i		18 53 11.4	
	comp=Z,123nm,0.3s						
BETC	Betania	4.73	210	eP	Pn	18 52 15.0	-0.8
BETC				eS	Sn	18 53 03.3	-7.5
MALC	Bahia Malaga	5.06	237	eP	Pn	18 52 21.5	+1.4
MALC				eS	Sn	18 53 17.1	-1.3
GARC	Garzon, Huila	5.19	208	eP	Pn	18 52 20.9	-1.1
GARC				⇑eS	Sn	18 53 18.4	-3.4
BBAC	Balboa, Cauca	6.31	221	eP	Pn	18 52 37.5	+0.7
BBAC				eS	Sn	18 53 45.2	-3.2
BBAC				i		18 53 56.8	
	comp=Z,42nm,0.4s						
BCIP	Isla Barro Col	7.07	290	Pn	Pn	18 52 45.3	-1.3
OTAV	Otavalo	8.45	219	Pn	Pn	18 53 05.1	-0.2
OTAV	Otavalo	8.45	219	eP	Pn	18 53 07.8	+2.5
PCRV	Puerto La Cruz	9.01	68	P	Pn	18 53 11.4	-0.9
	comp=Z,3.4nm,0.3s,baz=256,slow=3.5,SNR=14						
PCRV				S	Sn	18 54 49.6	-3.0
	comp=Z,1.2nm,0.3s,baz=321,slow=23,SNR=2.2						
PLCV	Puerto La Cruz	9.04	68		Sn	18 54 49.6	-3.9
YHJ	Yallahs	11.49	344	i P	P	18 53 49.4	-2.5
PCJ	Portland Cotta	11.55	340	⇑iP	P	18 53 58.1	+5.6
STH	Stony Hill	11.76	342	i P	Pn	18 53 51.2	+2.9
STH				i S	Sn	18 55 48.8	-10
BANI	BANI	11.80	13	Pn	Pn	18 53 50.5	+1.4
BNJ	Bonny Gate	12.03	342	i P	Pn	18 53 54.9	+3.0
MTDJ	Mount Denham	12.13	340	Pn	Pn	18 53 55.9	+2.6
BBJ	Bamboo Saint A	12.19	341	i P	P	18 53 58.0	-1.6
BBJ				i S	Sn	18 55 54.8	-14
SDDR	Presa de Saban	12.21	8	P	Pn	18 53 54.6	+0.3
JTS	Las Juntas de	12.22	287	P	P	18 53 58.5	-1.5
	comp=Z,0.6nm,0.3s,baz=87,slow=12,SNR=2.0						
JTS	Las Juntas de	12.22	287	Pn	P	18 53 57.3	-2.7
ATAH	Atahualpa	14.84	201	P	P	18 54 29.4	-0.1
	comp=Z,1.2nm,0.3s,baz=27,slow=10,SNR=5.9						
ETMB	Extrema	17.90	157	eP	Pn	18 55 03.0	-1.4
SAML	Samuel	18.52	148		Pn	18 55 09.4	-2.4
SAML	Samuel	18.52	148	eP	Pn	18 55 09.9	-1.9
ITTB	Itaituba	20.59	122	eP	Pn	18 55 33.3	-3.1
MALB	Monte Alegre	20.68	114	eP	P	18 55 33.5	+0.6
MCPB	Macapa, AP	22.17	108	eP	P	18 55 49.1	+0.5
NPGB	Novo Progresso	22.43	128	eP	P	18 55 51.7	+0.7
VILB	Vilhena	23.46	147	eP	P	18 56 01.2	+0.8
SIV	San Ignacio	25.61	152	P	P	18 56 18.3	-1.5
	comp=Z,1.0nm,0.7s,baz=325,slow=11,SNR=5.5						
PTLB	Pontes e Lacer	26.10	148	eP	P	18 56 24.0	-0.2
ARAG	Araguaiana, MT	30.75	137	eP	P	18 57 05.5	-0.1
PEXB	Peixe	31.01	127	eP	P	18 57 08.3	+0.4
SDBA	SAO DESIDERIO	33.92	124	eP	P	18 57 32.5	-0.8
PCMB	Pacaembu	35.46	143	eP	P	18 57 46.2	-0.1
TRCB	Terra Rica	35.60	146	eP	P	18 57 49.0	+1.4
TX32	Lajitas Array	36.48	312	P	P	18 57 57.0	+1.9
TX32				IAmb	IAmb	18 57 58.1	
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	36.48	312	P	P	18 57 57.2	+2.1
	comp=Z,0.8nm,0.4s,baz=124,slow=9.0,SNR=17						
TXAR				PcP	PcP	19 00 17.8	+2.3
	comp=Z,0.4nm,0.9s,baz=150,slow=6.2,SNR=3.4						
TXAR	Lajitas Array	36.48	312	P	P	18 57 56.8	+1.7
TX31	Lajitas Ar. Si	36.48	312	P	P	18 57 57.1	+2.0
TX31				IAmb	IAmb	18 57 58.1	
	comp=Z,6.3nm,0.8s						
MNTX	Cornudas Mount	38.99	314	P	P	18 58 17.9	+1.9
MNTX				IAmb	IAmb	18 58 19.9	
	comp=Z,2.0nm,0.8s						
TUC	Tucson	43.26	311	P	P	18 58 51.8	+0.7
X16A	Lo Mia Camp, P	44.74	313	P	P	18 59 03.9	+1.0
PV13	Radium Mtn., P	44.92	319	P	P	18 59 06.9	+2.7
PV13				IAmb	IAmb	18 59 07.3	
	comp=Z,3.4nm,0.6s						
RSSD	Black Hills	45.95	329	P	P	18 59 14.7	+2.5
U15A	North Rim	46.33	315	P	P	18 59 18.3	+2.8
U15A				IAmb	IAmb	18 59 34.3	
	comp=Z,4.6nm,1.4s						
LCMT	Little Creek M	47.29	315	P	P	18 59 25.6	+2.9
ULM	Lac du Bonnet	47.29	340	P	P	18 59 22.9	+0.6
	comp=Z,1.4nm,0.4s,baz=75,slow=5.5,SNR=3.0						
ULM	Lac du Bonnet	47.29	340	IAmb	IAmb	18 59 36.4	
	comp=Z,3.8nm,1.1s						
MSU	Marysvale	47.32	318	P	P	18 59 25.1	+2.1
NVAR	Mina Array Bea	51.50	315	P	P	18 59 57.1	+2.4
	comp=Z,0.9nm,0.7s,baz=129,slow=9.2,SNR=3.9						
YBH	Yreka Blue Hor	55.95	317	P	P	19 00 27.5	+0.6
	comp=Z,0.9nm,0.5s,baz=90,slow=6.1,SNR=1.8						
YKA	Yellowknife Ar	63.27	340	P	P	19 01 17.4	+1.0
	comp=Z,1.4nm,0.7s,baz=127,slow=7.6,SNR=31						
TORD	Torodi Ar. Bea	73.71	78	P	P	19 02 21.2	-0.9
	comp=Z,0.2nm,0.5s,baz=290,slow=8.7,SNR=1.2						
TORD	Torodi Ar. Bea	73.71	78	IAmb	IAmb	19 02 31.0	
	comp=Z,1.0nm,1.1s						
ILAR	Eielson Array	76.97	335	P	P	19 02 41.2	+1.5
	comp=Z,0.4nm,0.8s,baz=126,slow=4.9,SNR=3.5						
MKAR	Makanchi Array	122.31	20	PKP	PKiKP	19 09 41.6	+0.2
	comp=Z,0.1nm,0.4s,baz=324,slow=2.2,SNR=2.2						
ASAR	Alice Springs	149.13	234	PKP	PKPdf	19 10 30.1	-0.9
	comp=Z,0.3nm,0.9s,baz=121,slow=2.2,SNR=11						
ASAR				PKPbc	PKiKP	19 10 35.6	-1.0
	comp=Z,1.2nm,0.5s,baz=116,slow=3.6,SNR=29						
ASAR				PKPab	PKPab	19 10 38.5	-1.6
	comp=Z,0.5nm,0.4s,baz=116,slow=3.5,SNR=4.3						
CMAR	Chiang Mai Arr	153.68	17	PKPbc	PKiKP	19 10 46.7	+0.7
	comp=Z,0.3nm,0.5s,baz=327,slow=2.8,SNR=2.1						

JMA 14 19:29:56.6±0.2, 24°.45N×122°.83E, h90km±2km, M1.7

TAP 14 19:29:57.0, 24°.45N×122°.86E, h84km, ML2.9, C

ISC 14 19:29:57.2±1.4, 24°.44N±0°.05×122°.84E±0°.03, h84km±8km, n75, σ0s.88/113, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.09	81	P	Pn	19 30 09.5	+0.4
JYNG				eS	Sn	19 30 18.7	+0.7
YOJ	Yonaguni jima	0.15	81	P	Pn	19 30 09.7	+0.4
YOJ				eS	Sn	19 30 18.7	+0.5
YOJ	Yonaguni jima	0.15	81	eP	Pn	19 30 09.2	-0.1
	baz=82						
YOJ				eS	Sn	19 30 18.0	-0.2
	baz=82						
IRIF	Iriomote-Funau	0.81	97	P	Pn	19 30 14.7	+0.3
IRIF				eS	Sn	19 30 27.4	+0.2
TWC	Suao	0.92	281	P	Pn	19 30 15.5	-0.1
	baz=285						
TWC				eS	Sn	19 30 27.5	-1.8
	baz=285						
ENAH	Nanao	0.94	271	eP	Pn	19 30 16.3	+0.5
	baz=274						
ENAH				eS	Sn	19 30 30.5	+0.8
	baz=274						
HATJ	Hateruma jima	0.96	113	S	Sn	19 30 31.1	+1.1
ENA	Nanau	1.00	270	eP	Pn	19 30 16.6	0.0
	baz=269						
ENA				eS	Sn	19 30 30.9	-0.1
	baz=269						
TIPB	Shuangxi	1.07	300	eP	Pn	19 30 17.1	-0.3
	baz=299						
TIPB				eS	Sn	19 30 30.9	-1.5
	baz=299						
JKRS	Kuro-shima	1.08	100	P	Pn	19 30 18.1	+0.6
JKRS				S	Sn	19 30 33.4	+0.8
WFSB	Wu-fen Shan	1.15	303	eP	Pn	19 30 18.4	+0.1
	baz=295						
NACB	Ninganchiao	1.17	257	P	Pn	19 30 18.1	-0.5
	baz=256						
NACB				eS	Sn	19 30 33.3	-1.2
	baz=256						
ENTT	Nioudou	1.18	280	eP	Pn	19 30 19.4	+0.7
	baz=285						
ENTT				eS	Sn	19 30 34.8	0.0
	baz=285						
JIJ	Ishigaki jima	1.19	93	P	Pn	19 30 18.8	+0.1
JIJ				S	Sn	19 30 34.3	-0.6
TWD	Chiawan	1.19	253	P	Pn	19 30 18.2	-0.6
	baz=252						
TWD				eS	Sn	19 30 34.0	-1.0
	baz=252						
NDT	Datong Townshi	1.22	278	eP	Pn	19 30 20.7	+1.5
	baz=281						
NDT				eS	Sn	19 30 36.0	+0.2
	baz=281						
ETLH	Xiulin Townshi	1.26	260	eP	Pn	19 30 19.3	-0.5
	baz=252						
ETLH				eS	Sn	19 30 35.9	-0.9
	baz=252						
NWLT	Wulai	1.27	286	eP	Pn	19 30 20.1	+0.3
	baz=284						
NWLT				eS	Sn	19 30 36.0	-0.7
	baz=284						
NNSB	Datong	1.33	270	eP	Pn	19 30 20.6	0.0
	baz=261						
JISG	Ishigakijimahi	1.34	83	P	Pn	19 30 20.7	0.0
JISG				S	Sn	19 30 37.7	-0.7
TATO	Taipei	1.34	294	eP	Pn	19 30 21.0	+0.3
	baz=292						
YM01	YM01	1.36	302	eP	Pn	19 30 20.7	-0.2
	baz=293						
YM01				eS	Sn	19 30 38.7	-0.1
	baz=293						
YHNB	Yeheng	1.36	280	eP	Pn	19 30 21.1	+0.2
	baz=279						

YHNB				eS	Sn	19 30 38.9	0.0
	baz=279						
YM11	YM11	1.36	302	eP	Pn	19 30 20.6	-0.5
	baz=292						
YM10	YM10	1.37	302	eP	Pn	19 30 20.8	-0.3
	baz=293						
YM10				eS	Sn	19 30 38.7	-0.3
	baz=293						
YM05	YM05	1.37	302	eP	Pn	19 30 21.2	+0.1
	baz=294						
YM05				eS	Sn	19 30 38.3	-0.8
	baz=294						
NSK	Sanguang	1.37	280	eP	Pn	19 30 22.3	+1.1
	baz=279						
NSK				eS	Sn	19 30 38.4	-0.8
	baz=279						
YM04	YM04	1.39	301	eP	Pn	19 30 21.0	-0.3
	baz=293						
YM04				eS	Sn	19 30 38.1	-1.3
	baz=293						
TWY	Chenhua	1.41	307	eP	Pn	19 30 21.3	-0.1
	baz=298						
ESL	Shilin	1.43	245	eP	Pn	19 30 21.2	-0.6
	baz=244						
WHF	Hehuan Shan	1.47	259	P	Pn	19 30 22.6	-0.1
	baz=250						
WHF				eS	Sn	19 30 41.2	-0.7
	baz=250						
FUSS	Fushou	1.47	263	P	Pn	19 30 23.0	+0.4
	baz=262						
FUSS				eS	Sn	19 30 41.0	-0.7
	baz=262						
EGFH	Guangfu	1.50	240	eP	Pn	19 30 22.3	-0.5
	baz=234						
EGFH				eS	Sn	19 30 41.7	-0.3
	baz=234						
TWT	Tachien	1.53	264	eP	Pn	19 30 24.2	+0.9
	baz=262						
TWT				eS	Sn	19 30 42.7	-0.3
	baz=262						
TDCB	Techi	1.55	264	P	Pn	19 30 24.0	+0.5
	baz=262						
TDCB				eS	Sn	19 30 42.5	-0.7
	baz=262						
CHGB	Renai	1.57	257	eP	Pn	19 30 24.0	+0.2
	baz=249						
CHGB				eS	Sn	19 30 43.7	-0.2
	baz=249						
HGSD	Ruisui	1.60	234	eP	Pn	19 30 23.2	-0.8
	baz=234						
HGSD				eS	Sn	19 30 43.4	-0.9
	baz=234						
LIOB	Emei	1.68	278	eP	Pn	19 30 25.7	+0.7
	baz=276						
NSTT	Nanjuang	1.69	277	eP	Pn	19 30 27.6	+2.4
	baz=275						
JTJ	Tarama	1.71	83	P	Pn	19 30 24.4	-0.9
JTJ				S	Sn	19 30 46.2	-0.5
WHP	Taichung City	1.74	265	eP	Pn	19 30 26.9	+1.1
	baz=259						
YULB	Yu-li	1.76	234	eP	Pn	19 30 25.6	-0.5
	baz=243						
YULB				eS	Sn	19 30 46.4	-1.6
	baz=243						
EYUL	Yuli	1.77	232	eP	Pn	19 30 26.2	0.0
	baz=227						
TWF1	Yuli	1.78	233	P	Pn	19 30 25.9	-0.5
	baz=228						
DPDB	Guoxing	1.80	257	eP	Pn	19 30 27.6	+1.0
	baz=253						
SSLB	Suanglung	1.84	250	eP	Pn	19 30 27.0	-0.2
	baz=249						
SMLT	Sun Moon Lake	1.86	253	eP	Pn	19 30 27.9	+0.5
	baz=252						
FULB	Fuli	1.88	229	eP	Pn	19 30 26.8	-0.9
	baz=229						
TYC	Yuchr	1.89	254	eP	Pn	19 30 27.9	+0.2
	baz=247						
WHYT	Xinyi Township	1.96	248	eP	Pn	19 30 30.1	+1.3
	baz=244						
YUS	Yu-Shan	1.97	242	eP	Pn	19 30 29.4	+0.1
	baz=235						
WJS	Zhushan	2.03	253	eP	Pn	19 30 31.2	+1.6
	baz=250						
WJS				eS	Sn	19 30 56.2	+1.9
	baz=250						
EDH	Donghe	2.03	224	eP	Pn	19 30 28.4	-1.3
	baz=229						
WNT1	Nantou City	2.04	256	eP	Pn	19 30 31.3	+1.5
	baz=254						
ALS	Alishan	2.08	244	eP	Pn	19 30 31.5	+0.9
	baz=237						
ALS				eS	Sn	19 30 56.2	+0.3
	baz=237						
ELDTW	Lidau	2.08	234	eP	Pn	19 30 30.0	-0.5
	baz=227						
CHN5	Tsauling	2.15	248	P	Pn	19 30 33.0	+1.6
	baz=239						
CHN5				eS	Sn	19 30 59.3	+2.0
	baz=239						
JIRB	Irabujima	2.15	79	S	Sn	19 30 56.9	-0.4
LDUT	Ludao	2.16	216	eP	Pn	19 30 32.0	+0.6
	baz=211						
LONT	Longtian	2.19	226	eP	Pn	19 30 30.8	-1.0
	baz=234						
WGK	Gukeng	2.21	251	eP	Pn	19 30 33.3	+1.2
	baz=249						
WDLH	Douliu	2.23	251	eP	Pn	19 30 34.0	+1.6
	baz=250						
TWGBT	Beinan	2.28	225	eP	Pn	19 30 32.5	-0.5
	baz=233						
TWGBT				eS	Sn	19 30 59.1	-1.3
	baz=233						
TWG	Pinlang	2.29	226	eP	Pn	19 30 31.9	-1.2
	baz=232						
STYT	Tauyuan	2.29	237	eP	Pn	19 30 34.6	+1.4
	baz=236						
STYT				eS	Sn	19 31 00.8	+0.1
	baz=236						
CHN4	Tsaushan	2.33	243	eP	Pn	19 30 35.0	+1.4
	baz=235						
CHN4				eS	Sn	19 31 02.3	+0.9
	baz=235						
WTP	Ta-pu	2.36	240	eP	Pn	19 30 35.2	+1.1
	baz=239						
TWK	Hsinying	2.45	242	eP	Pn	19 30 36.5	+1.2
	baz=241						
SGST	Jiashian	2.47	237	eP	Pn	19 30 35.6	+0.1
	baz=236						
SLGT	Liugui	2.47	235	eP	Pn	19 30 37.0	+1.4
	baz=234						
SSD	Sandimen	2.64	231	eP	Pn	19 30 39.6	+1.9
	baz=228						
SCST	Cishan	2.65	235	eP	Pn	19 30 38.3	+0.4
	baz=244						
TSMG	Majia	2.65	230	eP	Pn	19 30 37.2	-0.8
	baz=226						
MASBT	Mashibuluo	2.72	229	eP	Pn	19 30 39.4	+0.5
	baz=224						
EAST	Anshuo	2.75	222	eP	Pn	19 30 38.6	-0.7
	baz=227						

IDC ***14*** *19:49:07.5±1.0, 27°.21N×143°.51E, h0^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.8/32, mbtmp3.8/11, ML3.5/3, Error ellipse: s-maj=23.9km s-min=17.1km az=152.0*
JMA ***14*** *19:49:09.3±0.1, 27°.28N×143°.62E, h69^{km}, M4.2*
ISC 14 19:49:13.0±0.9**, 27°.37N**±0°.08×**143°.46E**±0°.10**, h35**^{km}**, n24,** σ**1^{s}03**/28**, mb3.6**/8**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.17	257	P	Pn	19 49 32.1	-0.7
CBIJ				eS	Sn	19 49 48.6	+1.1
JCJ	Chichijima	1.17	257	Pn	Pn	19 49 32.2	-0.7
	125nm,0.3s,baz=102,slow=24,SNR=121						
JCJ				Sn	Sn	19 49 47.6	+0.1
	110nm,0.3s,baz=289,slow=22,SNR=5.1						
JHH2	Haha-jima-NKT2	1.36	238	P	Pn	19 49 33.8	-1.7
JHJ	Hachijo jima 2	6.56	332	Pn	Pn	19 50 46.7	-0.2
	3.8nm,0.3s,baz=173,slow=24,SNR=1.6						
JHJ				Sn	Sn	19 51 58.2	-2.2
	7.7nm,0.3s,baz=66,slow=22,SNR=1.4						
JMKN	Mikurajimanish	7.31	334	P	Pn	19 50 57.3	+0.1
JMKN				eS	Sn	19 52 19.2	+0.2
BSO1	Boso 1	7.57	344	P	Pn	19 51 00.0	-0.3
BSO3	Boso 3	7.83	342	P	Pn	19 51 04.5	+0.3
BSO4	Boso 4	8.06	341	P	Pn	19 51 07.8	+0.4
JOD2	Odawara 2	8.71	336	P	Pn	19 51 16.9	+0.4
JHU	Hanno	9.18	338	P	Pn	19 51 23.3	+0.4
JRY	Ryogami san	9.46	337	P	Pn	19 51 27.1	+0.4
JHO	Hitachi	9.54	346	P	Pn	19 51 27.5	-0.3
JAG	Ashikaga	9.65	340	P	Pn	19 51 29.1	-0.3
MJAR	Matsushiro Arr	10.18	335	Pn	Pn	19 51 37.5	+1.0
	0.3nm,0.3s,baz=148,slow=12,SNR=18						
MAT	Matsushiro	10.18	335	P	Pn	19 51 37.5	+0.9
ASAJ	Asahikawa	16.73	358	Pn	P	19 53 04.2	-2.3
	0.3nm,0.3s,baz=82,slow=32,SNR=2.0						
KLR	Kul'dur	23.63	341	P	P	19 54 21.6	+0.8
	0.7nm,0.6s,baz=164,slow=16,SNR=4.7						
CMAR	Chiang Mai Arr	41.77	267	P	P	19 56 59.5	+0.3
	0.3nm,0.6s,baz=66,slow=5.6,SNR=2.6						
MKAR	Makanchi Array	51.18	309	P	P	19 58 12.7	0.0
	0.2nm,0.3s,baz=89,slow=10,SNR=6.9						
ASAR	Alice Springs	51.57	191	P	P	19 58 13.7	-2.0
	0.2nm,0.4s,baz=14,slow=15,SNR=6.7						
ILAR	Eielson Array	56.93	29	P	P	19 58 54.4	0.0
	1.1nm,0.9s,baz=244,slow=6.4,SNR=7.3						
YKA	Yellowknife Ar	71.36	29	P	P	20 00 30.2	+1.2
	0.4nm,0.6s,baz=293,slow=5.0,SNR=7.3						
FINES	FINESS Array B	78.20	334	P	P	20 01 09.7	+1.2
	3.9nm,1.1s,baz=350,slow=2.3,SNR=3.7						
NVAR	Mina Array Bea	79.46	52	P	P	20 01 17.2	+0.9
	0.5nm,0.6s,baz=295,slow=6.5,SNR=3.9						

IDC ***14*** *21:29:03.1±3.9, 37°.50N×72°.16E, h110^{km}±28^{km}, mb3.5/11, mb1 3.5/18, mb1mx3.3/55, mbtmp3.9/18, Error ellipse: s-maj=40.0km s-min=18.6km az=146.0*
NEIC ***14*** *21:29:05.8±2.0, 37°.66N±0°.05×72°.17E±0°.07, h134^{km}±8^{km}, mb4.0/12, Error ellipse: s-maj=8.5km s-min=6.2km az=55.0*
NNC ***14*** *21:29:06.5±0.9, 37°.80N×71°.83E, h143^{km}±17^{km}, mb3.3, mpv4.0, Error ellipse: s-maj=9.0km s-min=5.4km az=5.0*
ISC 14 21:29:04.6±0.5**, 37°.63N**±0°.04×**72°.08E**±0°.05**, h130**^{km}**, n99,** σ**2^{s}01**/113**, mb3.8**/14**, 10C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.80	182	P	Pn	21 30 04.4	+2.6
CEP				S	Sn	21 30 49.0	+2.9
KBL	Kabul	3.94	220		Pn	21 30 06.0	+2.2
KBL				Sn	Sn	21 30 51.8	+2.2
NIL	Nilore	4.08	166	Pn	Pn	21 30 07.5	+2.0
NIL				Sn	Sn	21 30 52.2	-0.4
TAS	Tashkent	4.28	331	Pn	Pn	21 30 09.1	+1.1
AML	Almayashu	4.67	15	P	Pn	21 30 14.8	+1.2
	SNR=84						
THW	Thamme Wali	4.83	183	P	Pn	21 30 16.6	+1.2
UCH	Uchtor	4.96	21	P	Pn	21 30 18.8	+1.2
	SNR=35						
EKS2	Erkin-Say	5.20	14	P	Pn	21 30 22.0	+1.6
	SNR=134						
AAK	Ala-Archa	5.34	20	P	Pn	21 30 23.8	+1.6
	14nm,0.3s,baz=160,slow=5.3,SNR=209						
AAK				S	Sn	21 31 22.8	0.0
	6.7nm,0.3s,baz=295,slow=14,SNR=11						
AAK	Ala-Archa	5.34	20	P	Pn	21 30 24.1	+1.8
	SNR=55						
AAK	Ala-Archa	5.34	20	⇑P	Pn	21 30 23.9	+1.6
	14nm,0.3s						
AAK				⇓S	Sn	21 31 23.4	+0.6
	119nm,0.8s						
AAK	Ala-Archa	5.34	20		Pn	21 30 23.5	+1.2
AAK				Sn	Sn	21 31 22.5	-0.4
KBK	Karagaybulak	5.48	23	P	Pn	21 30 24.9	+0.6
	SNR=14						
FRU1	Bishkek	5.53	20	Pn	Pn	21 30 25.9	+1.1
FRU1				Sn	Sn	21 31 29.1	+1.7
KK31	Karatay Array	5.60	348	⇑P	Pn	21 30 26.0	+0.3
	5.4nm,0.3s,baz=167,slow=13,SNR=240						
KK31				S	Sn	21 31 26.3	-2.7
	13nm,0.3s,baz=156,slow=20,SNR=12						
KK31	Karatay Array	5.60	348		Pn	21 30 26.8	+1.1
KK31				Sn	Sn	21 31 26.0	-3.0
KKAR	Karatay Array	5.60	348		Pn	21 30 26.8	+1.1
KKAR	Karatay Array	5.60	348		Pn	21 30 26.7	+1.1
KKAR				Sn	Sn	21 31 26.0	-3.0
ULHL	Ulahol	5.61	33	P	Pn	21 30 26.6	+0.6
	SNR=25						
CHMS	Chumysh	5.74	20	P	Pn	21 30 29.1	+1.5
	SNR=25						
USP	Ospenovka	5.93	17	P	Pn	21 30 31.2	+1.1
	SNR=14						
TKM2	Tokmak 2	5.93	26	P	Pn	21 30 32.5	+2.2
	SNR=15						
TKM2	Tokmak 2	5.93	26	⇑P	Pn	21 30 31.5	+1.1
	3.3nm,0.5s						
TKM2				⇑S	Sn	21 31 38.4	+1.2
	16nm,0.7s						
KST	Kastek	6.17	27	Lg	Lg	21 31 40.8	
	15nm,0.4s						
DGS	Degeres	6.28	25	P	Pn	21 30 36.6	+1.8
	6.6nm,0.3s						
DHRM	DHARAMSHALA	6.38	146	eP	Pn	21 30 35.7	-0.8
DHRM				eS	Sn	21 31 43.1	-5.1
DHRM				IAML		21 31 43.8	
	comp=N,329nm,0.4s						
DHRM				IAML		21 31 44.0	
	comp=E,413nm,0.5s						
IZV	Izvestkoviy	6.42	31	P	Pn	21 30 38.3	+1.5
	comp=E,4.1nm,0.4s						
MTBS	Maitube	6.42	30	P	Pn	21 30 38.0	+1.3
	comp=E,8.1nm,0.3s						
TNSS	Tian-Shan	6.56	33	P	Pn	21 30 39.6	+0.6
	comp=E,3.1nm,0.2s						
KRBS	Karabastau	6.65	23	P	Pn	21 30 40.6	+0.7
	comp=E,3.9nm,0.4s						
MDOK	Medeo	6.70	33	⇑P	Pn	21 30 42.4	+1.8
	comp=E,1.9nm,0.4s						
MDOK	Medeo	6.70	33	Pg	Pn	21 30 42.7	+2.0
	comp=E,2.9nm,0.2s						
KOTS	Kotyrbulak	6.79	33	P	Pn	21 30 43.2	+1.4
	comp=E,14nm,0.3s						
KTBS	Karatobe	7.01	28	P	Pn	21 30 46.1	+1.4
	comp=E,2.4nm,0.5s						
KUU	Kurty	7.04	26	Lg	Lg	21 32 02.5	
	comp=E,10nm,0.4s						
SATY	Saty	7.26	40	P	Pn	21 30 50.6	+2.4
	comp=E,3.0nm,0.6s						
BTLS	Baital	7.55	11	P	Pn	21 30 52.8	+0.8
	comp=E,3.1nm,0.2s						
UZB	Uzynbulak	7.64	42	P	Pn	21 30 54.3	+1.0
	comp=E,3.6nm,0.2s						
SMLA	Simla	7.72	146	eP	Pn	21 30 52.9	-1.4
SMLA				eS	Sn	21 32 11.8	-8.5
SMLA				IAML		21 32 12.5	
	comp=N,162nm,0.5s						
SMLA				IAML		21 32 12.6	
	comp=E,142nm,0.4s						
ARXS	Arharly	7.89	32	P	Pn	21 30 56.7	+0.2
	comp=E,5.0nm,0.3s						
SHLS	Shalkode	7.89	43	P	Pn	21 31 01.9	+5.3
	comp=E,6.6nm,0.3s						
PDGK	Podgornoye	8.02	42	⇑P	Pn	21 30 58.5	+0.2
	comp=E,2.6nm,0.6s						
MNBS	Baschi	8.03	35	P	Pn	21 31 00.9	+2.4
	comp=E,1.6nm,0.4s						
HRA	Herat	8.60	251		Pn	21 31 07.8	+1.5
DDI	Dehra Dun	8.81	144	eP	Pn	21 31 07.6	-1.4
DDI				eS	Sn	21 32 37.4	-9.3
DDI				IAML		21 32 37.8	
	comp=E,58nm,0.4s						
DDI				IAML		21 32 37.9	
	comp=N,116nm,0.3s						
KAPS	Kapalarasan	9.40	33	P	Pn	21 31 18.2	+1.4
	comp=N,1.3nm,0.2s						
GEYT	Alibeck	11.06	276	P	Pn	21 31 37.2	-1.8
	comp=N,0.9nm,0.3s,baz=115,slow=10.0,SNR=12						
GEYT				S	Sn	21 33 34.5	-6.5
	comp=N,4.0nm,0.3s,baz=127,slow=18,SNR=5.5						
GEYT	Alibeck	11.06	276		Pn	21 31 37.4	-1.7
GYA0B	ALIBECK ARRAY	11.06	276	⇑P	Pn	21 31 37.3	-1.7
GYA0B				⇓S	Sn	21 33 37.8	-3.1
GYA0B	ALIBECK ARRAY	11.06	276	Pn	Pn	21 31 37.6	-1.5
MAKZ	Makanchi	11.74	35	⇓P	Pn	21 31 48.4	+0.4
	comp=N,2.6nm,1.0s						
MAKZ	Makanchi	11.74	35		Pn	21 31 46.7	-1.2
MK31	Makanchi Array	11.87	36	⇓P	Pn	21 31 51.9	+2.2
	comp=N,1.1nm,0.5s,baz=224,slow=16,SNR=6.2						
MK31	Makanchi Array	11.87	36		Pn	21 31 49.8	+0.1
MKAR	Makanchi Array	11.87	36	P	Pn	21 31 50.1	+0.4
	comp=N,0.1nm,0.3s,baz=223,slow=15,SNR=5.9						
KURBB	Kurchatov Arra	13.79	17	P	Pn	21 32 15.1	+0.8
	comp=N,0.0nm,0.3s,baz=206,slow=10,SNR=2.1						
KURBB	Kurchatov Arra	13.79	17	⇓P	Pn	21 32 15.6	+1.2
	comp=N,2.8nm,0.8s						
KURK	Kurchatov	13.89	18	P	P	21 32 19.8	+0.1
AB31	Akbulak array	14.57	327	⇑P	Pn	21 32 22.0	-2.3
	comp=N,1.0nm,0.3s,baz=156,slow=8.3,SNR=63						
AB31				S	Sn	21 35 00.6	-4.7
	comp=N,1.6nm,0.3s,baz=143,slow=22,SNR=9.6						
ABKAR	Akbulak array	14.57	327	Pn	Pn	21 32 24.6	+0.3
ABKAR	Akbulak array	14.57	327	Pn	Pn	21 32 23.8	-0.5
BVAR	Borovoye Array	15.45	356	P	Pn	21 32 36.5	+1.2
	comp=N,0.5nm,0.3s,baz=161,slow=9.4,SNR=12						
BRVK	Borovoye	15.48	356	⇑P	Pn	21 32 36.4	+0.6
	comp=N,2.3nm,0.9s						
BRVK	Borovoye	15.48	356		P	21 32 38.2	+0.9
AKTO	Aktyubinsk	16.28	326	P	P	21 32 47.7	+1.6
	comp=N,1.0nm,0.3s,baz=129,slow=8.8,SNR=18						
AKTO				S	Sn	21 35 35.6	-11
	comp=N,0.4nm,0.3s,baz=162,slow=20,SNR=3.4						
AKTO	Aktyubinsk	16.28	326	⇓P	Pn	21 32 43.8	-1.8
	comp=N,3.5nm,0.9s						
AKTO				⇑S	Sn	21 35 41.3	-5.3
	comp=N,3.3nm,0.5s						
LSA	Lhasa	17.71	111		P	21 33 02.0	-0.6
LSA				IAmb	IAmb	21 33 07.6	
	comp=Z,5.0nm,0.7s						
UOSS	Minazif	18.51	231	P	P	21 33 10.6	-0.3
UOSS				IAmb	IAmb	21 33 12.6	
	comp=Z,12nm,1.2s						
ZAA0	Zalesovo Array	18.54	24	P	P	21 33 11.6	+0.8
ZALV	Zalesovo Beam	18.54	24	P	P	21 33 11.9	+1.1
	comp=Z,0.4nm,0.3s,baz=220,slow=9.7,SNR=14						
ZALV	Zalesovo Beam	18.54	24	P	P	21 33 11.8	+1.0
TEZP	TEZPUR	20.65	116	eP	P	21 33 34.8	+0.8
SHL	Shillong	20.66	120	P	P	21 33 31.6	-2.7
SHL				IAmb	IAmb	21 33 35.6	
	comp=Z,12nm,1.1s						
ARU	Arti	20.88	339	P	P	21 33 36.3	+0.2
	comp=Z,0.4nm,0.4s,baz=198,slow=19,SNR=3.8						
ARU	Arti	20.88	339	P	P	21 33 36.1	0.0
ARU				IAmb	IAmb	21 33 52.3	
	comp=Z,7.1nm,1.4s						
ZIRO	ZIRO	20.88	112	eP	P	21 33 37.6	+0.9
GNI	Garni	21.40	285	P	P	21 33 43.8	+1.7
GNI				IAmb	IAmb	21 33 53.2	
	comp=Z,10nm,0.9s						
MOKO	MOKOCHONG	22.06	114	eP	P	21 33 48.6	-0.5
KOHI	KOHIMA	22.13	116	eP	P	21 33 50.5	+0.7
BELG	Belogornoye	22.59	319	P	P	21 33 55.0	+1.1
	comp=Z,3.2nm,0.6s,baz=114,slow=18,SNR=2.0						
KBZ	Khabaz	22.89	295	P	P	21 33 58.3	+1.4
	comp=Z,0.2nm,0.3s,baz=88,slow=11,SNR=1.6						
KIV	Kislovodsk	23.06	295	P	P	21 34 00.5	+1.8
KIV				IAmb	IAmb	21 34 18.1	
	comp=Z,2.5nm,0.7s						
BRTR	Keskin Array B	29.93	286	P	P	21 35 03.5	+3.0
	comp=Z,0.7nm,0.5s,baz=102,slow=7.2,SNR=6.8						
BRTR	Keskin Array B	29.93	286	P	P	21 35 02.4	+2.0
AKASG	Malin Array Be	32.94	307	P	P	21 35 28.3	+1.9
	comp=Z,0.4nm,0.4s,baz=110,slow=8.0,SNR=3.3						
MLR	Muntele Rosu	35.00	298		P	21 35 48.4	+3.9
BURAR	Bucovina Array	35.42	302	P	P	21 35 49.6	+1.6
BUR08	Bucovina Ar. S	35.43	302	P	P	21 35 49.7	+1.6
FIA1	FINESS Array S	37.05	325	P	P	21 36 03.4	+1.8
FINES	FINESS Array B	37.05	325	P	P	21 36 03.6	+2.1
	comp=Z,1.5nm,0.7s,baz=118,slow=9.5,SNR=11						
FINES	FINESS Array B	37.05	325	P	P	21 36 03.2	+1.7
ARCES	ARCESS Array B	40.45	337	P	P	21 36 28.5	-1.3
	comp=Z,2.9nm,1.0s,baz=110,slow=7.8,SNR=1.5						
NOA	NORSAR Array B	44.01	322	P	P	21 37 00.4	+1.6
	comp=Z,0.3nm,0.7s,baz=100,slow=6.9,SNR=1.2						
ESDC	Sonseca Array	57.70	298	P	P	21 38 43.1	+1.5
	comp=Z,0.6nm,0.7s,baz=55,slow=6.4,SNR=4.4						
TOA0	Torodi Ar. Sit	66.61	269	P	P	21 39 41.8	+0.6
TOA0				IAmb	IAmb	21 39 45.6	
	comp=Z,2.7nm,1.1s						
TORD	Torodi Ar. Bea	66.61	269	P	P	21 39 41.8	+0.5
	comp=Z,1.1nm,0.5s,baz=50,slow=5.7,SNR=8.9						
TORD	Torodi Ar. Bea	66.61	269	P	P	21 39 41.8	+0.5
KOWA	Kowa	70.37	273	P	P	21 40 05.7	+1.1
	comp=Z,1.7nm,0.7s,baz=54,slow=5.4,SNR=6.1						
YKA	Yellowknife Ar	80.08	3	P	P	21 41 00.6	+1.2
	comp=Z,0.4nm,0.5s,baz=359,slow=5.2,SNR=6.4						

IDC ***14*** *21:57:46.7±1.4, 22°.19S×70°.41W, h43^{km}±7^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.5/26, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=37.3km s-min=9.0km az=24.0*
NEIC ***14*** *21:57:48.6±2.1, 22°.41S±0°.03×70°.33W±0°.06, h64^{km}±6^{km}, Error ellipse: s-maj=8.6km s-min=4.8km az=92.0*
GUC ***14*** *21:57:49.2±0.7, 22°.40S×70°.21W, h72^{km}±2^{km}, ML4.3*
ISC 14 21:57:49.0±0.7**, 22°.41S**±0°.03×**70°.32W**±0°.05**, h65**^{km}±5^{km}**, n60,** σ**1^{s}26**/86**, mb4.2**/4**, 3C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB04	IPOC Station P	0.18	65	⇓iP	Pn	21 57 60.0	+0.8
PB04				i S	Sn	21 58 07.3	+0.8
PB04				IAML		21 58 08.2	
	comp=E,31µm,0.4s						
PB04	IPOC Station P	0.18	65	Pn	Pn	21 57 59.9	+0.8
PB04				Sn	Sn	21 58 07.5	+1.0
PB05	IPOC Station P	0.46	166	eP	Pn	21 58 01.6	+0.5
PB05				i S	Sn	21 58 10.3	+0.4
PB05				IAML		21 58 11.0	
	comp=E,35µm,0.1s						
PB03	IPOC Station P	0.64	56	eP	Pn	21 58 02.9	-0.1
PB03				i S	Sn	21 58 12.6	-0.7
PB03				IAML		21 58 13.7	
	comp=E,26µm,0.2s						
PB06	IPOC Station P	0.75	113	eP	Pn	21 58 03.8	-0.6
PB06				i S	Sn	21 58 14.7	-1.0
PB06				IAML		21 58 16.3	
	comp=N,42µm,0.2s						
PB06	IPOC Station P	0.75	113	Pn	Pn	21 58 04.1	-0.3
PB06					Sn	21 58 14.6	-1.0
PB07	IPOC Station P	0.79	31	eP	Pn	21 58 04.4	-0.4
PB07				i S	Sn	21 58 16.1	-0.4
PB07				IAML		21 58 18.2	
	comp=N,16µm,0.3s						
PB07	IPOC Station P	0.79	31	Pn	Pn	21 58 04.6	-0.2
PB07				Sn	Sn	21 58 15.9	-0.5
PB15	IPOC Station P	1.12	136	eP	Pn	21 58 08.7	-0.3
PB15				i S	Sn	21 58 22.6	-1.2
PB10	IPOC Station P	1.12	191	eP	Pn	21 58 09.1	+0.2
PB10				i S	Sn	21 58 23.5	0.0
PB10	IPOC Station P	1.12	191	Pn	Pn	21 58 09.0	+0.2
PB10				Sn	Sn	21 58 23.4	-0.1
PB02	IPOC Station P	1.15	20	eP	Pn	21 58 08.6	-0.7
PB02				i S	Sn	21 58 23.7	-0.8
PB02				IAML		21 58 25.8	
	comp=E,23µm,0.3s						
PB09	IPOC Station P	1.17	59	eP	Pn	21 58 09.3	-0.4
PB09				i S	Sn	21 58 24.5	-0.6
PB09				IAML		21 58 25.9	
	comp=E,9µm,0.2s						
PB09	IPOC Station P	1.17	59	Pn	Pn	21 58 10.0	+0.4
PB09				Sn	Sn	21 58 24.7	-0.4
LVC	Limon Verde	1.32	99	P	Pn	21 58 12.4	+0.7
	comp=E,119nm,0.3s,baz=300,slow=4.2,SNR=34						
LVC				LR	LR	21 58 24.1	
	comp=E,35nm,20.9s,baz=216,slow=26						
LVC				S	Sn	21 58 28.7	-0.1
	comp=E,487nm,0.3s,baz=248,slow=13,SNR=57						
LVC	Limon Verde	1.32	99	⇓iP	Pn	21 58 12.5	+0.7
LVC				i S	Sn	21 58 27.6	-1.2
LVC	Limon Verde	1.32	99		Pn	21 58 12.2	+0.5
LVC				Sn	Sn	21 58 28.4	-0.4
PATCX	Punta Patache	1.59	6	eP	Pn	21 58 14.7	-0.4
PATCX				i S	Sn	21 58 34.0	-0.7
PATCX				IAML		21 58 36.1	
	comp=E,3µm,0.4s						
PATCX	Punta Patache	1.59	6	Pn	Pn	21 58 14.9	-0.2
PATCX				Sn	Sn	21 58 34.3	-0.5
TA01	Diego Aracena	1.84	4	eP	Pn	21 58 17.7	-0.7
TA01				i S	Sn	21 58 39.6	-1.0
TA01	Diego Aracena	1.84	4	Pn	Pn	21 58 18.0	-0.4
TA01				Sn	Sn	21 58 39.6	-1.0
TA02	Huaiquique	2.14	5	⇑iP	Pn	21 58 21.8	-0.6
TA02				i S	Sn	21 58 47.1	-0.7
TA02				IAML		21 58 54.2	

	comp=N,2µm,0.1s						
HMBC	Humberstone	2.16	11	*e*P	Pn	21 58 22.6	-0.2
HMBC				IAML		21 58 50.8	
	comp=E,1µm,0.5s						
PB14	IPOC Station P	2.21	182	Pn	Pn	21 58 23.1	-0.6
PB08	IPOC Station P	2.51	26	*e*P	Pn	21 58 27.5	-0.2
PB08				IAML		21 59 05.5	
	comp=E,613nm,0.5s						
PB08	IPOC Station P	2.51	26	Pn	Pn	21 58 28.4	+0.7
PSGC	Pisagua	2.80	4	*e*P	Pn	21 58 30.9	-0.7
PSGC				*i* S	Sn	21 59 02.7	-1.6
PSGCX	Pisagua	2.80	4	Pn	Pn	21 58 31.0	-0.6
GO02	Mina Guanaco	2.82	166	⇑*i*P	Pn	21 58 32.1	+0.1
GO02				IAML		21 59 07.3	
	comp=E,809nm,0.1s						
GO02	Mina Guanaco	2.82	166	Pn	Pn	21 58 32.3	+0.3
GO01	Chusmiza	2.92	21	*e*P	Pn	21 58 33.0	-0.6
GO01				IAML		21 59 10.9	
	comp=E,1µm,0.3s						
GO01	Chusmiza	2.92	21	Pn	Pn	21 58 33.9	+0.4
MNMC	Minye Minye	3.33	12	*e*P	Pn	21 58 38.8	-0.2
MNMC				IAML		21 59 36.8	
	comp=E,1µm,0.7s						
MNMC	Minye Minye	3.33	12	Pn	Pn	21 58 38.7	-0.2
AC01	Pan de Azucar	3.73	184	⇑*i*P	Pn	21 58 42.6	-1.5
AC01	Pan de Azucar	3.73	184	Pn	Pn	21 58 42.7	-1.4
AP01	Chacalluta	4.02	360	Pn	Pn	21 58 47.6	-0.5
PB16	IPOC Station P	4.12	11	*e*P	Pn	21 58 50.1	0.0
PB16	IPOC Station P	4.12	11		Pn	21 58 49.9	-0.2
AC02	Maricunga	4.54	166	Pn	Pn	21 58 56.2	+0.6
GO03	Copiap	5.16	179	Pn	Pn	21 59 01.8	-2.0
AC04	Llanos de Chal	5.81	187		Pn	21 59 09.0	-3.5
AC05	El Transito	6.40	180		Pn	21 59 18.9	-1.9
LCO	Las Campanas	6.58	183		Pn	21 59 20.5	-2.9
CO01	Juntas del Tor	7.54	178		Pn	21 59 34.6	-1.9
GO04	Tololo Observa	7.74	183		Pn	21 59 35.9	-3.3
CO03	El Pedregal	8.40	182	Pn	Pn	21 59 44.7	-3.4
CO02	Combarbal	8.78	184	Pn	Pn	21 59 49.6	-3.7
ZON	Zonda	9.22	171	Pn	Pn	21 59 58.3	-0.9
SIV	San Ignacio	10.82	55	P	Pn	22 00 18.1	-3.0
	comp=E,1.4nm,0.3s,baz=249,slow=9.2,SNR=19						
BO02	Sierra Bellavi	12.35	182	Pn	Pn	22 00 43.0	+1.0
BI02	San Fabin de	14.23	183	Pn	Pn	22 01 07.0	-0.3
SAML	Samuel	15.04	28		Pn	22 01 19.0	+1.2
PLCA	Paso Flores	18.27	181	P	Pn	22 01 58.4	+0.4
	comp=E,0.1nm,0.3s,baz=355,slow=9.7,SNR=2.5						
PLCA	Paso Flores	18.27	181		Pn	22 01 57.5	-0.5
PLCA				IAmb	IAmb	22 02 13.2	
	comp=Z,4.4nm,1.1s						
QSPA	South Pole Qui	67.78	180	P	P	22 08 40.9	+1.1
QSPA				IAmb	IAmb	22 08 41.6	
	comp=Z,6.1nm,1.4s						
TOA0	Torodi Ar. Sit	78.89	71	P	P	22 09 44.9	-0.9
TOA0				IAmb	IAmb	22 10 04.8	
	comp=Z,1.7nm,0.6s						
TORD	Torodi Ar. Bea	78.89	71	P	P	22 09 44.7	-1.1
	comp=Z,0.3nm,0.5s,baz=255,slow=5.4,SNR=4.1						
TORD				pP	PcP	22 09 58.2	+3.9
	comp=Z,0.4nm,0.3s,baz=253,slow=5.5,SNR=2.7						
TORD				sP	pP	22 10 03.4	-0.7
	comp=Z,1.6nm,0.6s,baz=251,slow=5.6,SNR=6.0						
TORD	Torodi Ar. Bea	78.89	71	P	P	22 09 44.5	-1.3
YKA	Yellowknife Ar	91.61	341	P	P	22 10 48.6	+0.3
	comp=Z,0.2nm,0.6s,baz=130,slow=5.1,SNR=5.9						
YKA				sP	pwP	22 11 06.9	+0.7
	comp=Z,0.1nm,0.5s,baz=142,slow=4.1,SNR=2.3						

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*IDC **14** 22:08:26.4±0.9, 1°.01N×96°.97E, h0^{km}, mb4.2/11, mb1 4.2/13, mb1mx3.9/38, mbtmp4.1/13, ML3.5/1, MS3.3/3, Ms1 3.4/3, ms1mx2.9/40, Error ellipse: s-maj=28.5km s-min=17.4km az=55.0*

*DJA **14** 22:08:29.7±1.6, 1°N±4°×9°7E±1°1, h27^{km}±9^{km}, M4.5/12, mb4.6/4, mB5.1/3, MLv4.5/12, Mw(mB)4.4/3*

*NEIC **14** 22:08:30.4±1.1, 1°.03N±0°.07×97°.11E±0°.07, h26^{km}±4^{km}, mb4.4/26, Error ellipse: s-maj=10.4km s-min=9.2km az=207.0*

ISC 14 22:08:30.6±0.6**, 1°.08N**±0°.06×**97°.12E**±0°.07**, h25**^{km}**, n102, σ1**^{s}**42**/97**, mb4.4**/31**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.51	64		Pn	22 08 41.6	-0.8
GSI					Sb	22 08 48.5	+0.3
GSI	Gunungsitoli	0.51	64	P	Pn	22 08 42.1	-0.3
TPTI		2.17	2	P	Pn	22 09 04.0	-1.2
TPTI				S	Sn	22 09 28.4	-2.8
RPSI	Rantau Prapat	2.42	48		Pn	22 09 09.4	+0.8
MNSI	Mandailing Nat	2.48	97	P	Pn	22 09 10.0	+0.6
PSI	Prapat	2.49	47	Pn	Pn	22 09 09.4	-0.3
	8.9nm,0.3s,baz=180,slow=4.2,SNR=28						
PSI				LR	LR	22 09 58.6	
	comp=Z,372nm,18.8s,baz=270,slow=36						
KCSI	Kotacane, Aceh	2.51	15	P	Pn	22 09 09.9	-0.1
TSI	Tuntungan	2.81	31	P	Pn	22 09 15.0	+1.0
BKNI	Bangkinang	3.99	101	Pn	Pn	22 09 29.8	-0.5
BKNI	Bangkinang	3.99	101	P	Pn	22 09 32.1	+1.8
LHMI	Lhok Sumawe	4.12	358	Pn	Pn	22 09 32.5	+0.3
SDSI	Sungai Dareh	4.75	115	P	Pn	22 09 41.5	+0.8
IPM	Ipoh	5.16	49	Pn	Pn	22 09 47.1	+0.7
KULM	Kulim	5.47	40	Pn	Pn	22 09 50.8	+0.1
KSI	Kapahiang	7.21	131	P	Pn	22 10 17.3	+2.6
	0.3nm2µm42nm,0.8s						
MNAI	Manna	7.95	133	Pn	Pn	22 10 23.2	-1.5
KLSI		9.52	127	P	Pn	22 10 45.9	-0.4
SBUM	Sibu	15.16	85	Pn	Pn	22 12 04.0	+0.7
CHAI	Chaiyaphum	15.49	18	P	P	22 12 13.7	+1.8
	14nm,1.0s						
PHIT	Phitsanulok	16.34	11	P	P	22 12 23.4	+2.2
	48nm,0.9s						
SUKH	Sukhothai	16.49	8	P	P	22 12 24.0	+1.1
	18nm,0.6s						
UTTA	Uttaradit	16.90	11	P	P	22 12 29.7	+2.2
	11nm,1.0s						
CM05	Chiang Mai Arr	17.31	6	P	P	22 12 36.0	+4.0
	3.7nm,0.9s						
CM04	Chiang Mai Arr	17.31	6	P	P	22 12 35.0	+3.0
	5.5nm,1.0s						
CM13	Chiang Mai Arr	17.32	6	P	P	22 12 35.5	+3.4
	4.1nm,0.8s						
CM01	Chiang Mai Arr	17.33	6	P	P	22 12 38.0	+5.8
	6.5nm,0.9s						
CM02	Chiang Mai Arr	17.34	6	P	P	22 12 35.8	+3.4
	4.1nm,0.9s						
CM09	Chiang Mai Arr	17.35	6	P	P	22 12 35.0	+2.5
	7.0nm,0.8s						
CM15	Chiang Mai Arr	17.36	6	P	P	22 12 35.5	+2.9
	5.6nm,0.9s						
CM31	Chiang Mai Arr	17.36	6	P	P	22 12 36.0	+3.4
CM31	Chiang Mai Arr	17.36	6		Pn	22 12 31.6	+0.2
CMAR	Chiang Mai Arr	17.36	6	Pn	Pn	22 12 29.9	-1.5
	baz=193,slow=10,SNR=11						
CMAR				LR	LR	22 19 02.2	
	comp=Z,74nm,18.5s,baz=248,slow=36						
CMAR	Chiang Mai Arr	17.36	6	P	P	22 12 31.8	-0.9
CHTO	Chiang Mai	17.71	6	Pn	Pn	22 12 35.1	-0.7
KKM	Kota Kinabalu	19.68	75	P	P	22 12 57.8	-0.4
KKM				IAmb	IAmb	22 13 04.8	
	comp=Z,33nm,1.2s						
SLVN	Son La	21.19	18	P	P	22 13 14.2	-0.4
SLVN				IAmb	IAmb	22 13 18.9	
	comp=Z,12nm,0.7s						
SAIH	SAIHA	21.66	350	*e*P	P	22 13 19.3	-0.3
SAIH				IAmb	IAmb	22 13 20.4	
	comp=Z,16nm,0.8s						
TOLI2	Tolitoli	23.66	90	P	P	22 13 39.6	-0.9
KMI	Kunming	24.51	12	P	P	22 13 48.9	+0.4
KOHI	KOHIMA	24.67	353	*e*P	P	22 13 49.1	-0.7
KOHI				IAmb	IAmb	22 13 58.8	
	comp=Z,9.6nm,0.8s						
SHL	Shillong	24.86	349	*e*P	P	22 13 51.8	+0.2
SHL				IAmb	IAmb	22 13 54.2	
	comp=Z,16nm,0.9s						
SHL	Shillong	24.86	349	P	P	22 13 51.3	-0.3
BOK	Bokaro	25.07	335	*e*P	P	22 13 54.8	+1.5
BOK				IAmb	IAmb	22 13 57.1	
	comp=Z,12nm,0.6s						
TEZP	TEZPUR	25.73	351	*e*P	P	22 13 60.0	+0.8
TEZP				IAmb	IAmb	22 14 06.2	
	comp=Z,4.6nm,0.8s						
H08S2	Diego Garcia H	26.04	250	T	T	22 40 56.7	
	baz=71,slow=76,SNR=2829						
H08S3	Diego Garcia H	26.05	250	T	T	22 40 57.3	
	baz=71,slow=76,SNR=2546						
H08S1	Diego Carcia H	26.06	250	T	T	22 40 58.4	
	baz=71,slow=76,SNR=3195						
ZIRO	ZIRO	26.48	353	*e*P	P	22 14 06.6	+0.3
LSA	Lhasa	29.02	349	P	P	22 14 29.8	+0.4
ENH	Enshi	31.32	21	P	P	22 14 47.5	-1.7
FITZ	Fitzroy Crossi	33.92	126	P	P	22 15 11.3	-0.7
	comp=Z,2.9nm,1.0s,baz=300,slow=16,SNR=1.8						
FITZ	Fitzroy Crossi	33.92	126	P	P	22 15 10.7	-1.3
FITZ				IAmb	IAmb	22 15 17.0	
	comp=Z,12nm,1.4s						
SMLA	Simla	35.36	330	⇑*e*P	P	22 15 25.5	+1.2
SMLA				IAmb	IAmb	22 15 27.3	
	comp=Z,2.9nm,0.8s						
DHRM	DHARAMSHALA	36.70	330	*e*P	P	22 15 36.6	+0.6
DHRM				IAmb	IAmb	22 15 43.6	
	comp=Z,7.0nm,0.5s						
H01W3	Cape Leeuwin H	39.17	158	T	T	22 57 16.3	
	baz=333,slow=76,SNR=80						
H01W2	Cape Leeuwin H	39.18	158	T	T	22 57 20.9	
	baz=333,slow=76,SNR=76						
H01W1	Cape Leeuwin H	39.18	158	T	T	22 57 21.7	
	baz=333,slow=76,SNR=82						
NIL	Nilore	39.38	328	P	P	22 15 58.0	-0.3
NIL				IAmb	IAmb	22 16 00.1	
	comp=Z,5.2nm,0.9s						
BJT	Baijiatuau	42.46	22	P	P	22 16 24.1	+0.5
BJT				IAmb	IAmb	22 16 25.1	
	comp=Z,5.9nm,0.9s						
WMQ	Urumqi	43.38	350	P	P	22 16 32.0	+0.9
WMQ				IAmb	IAmb	22 16 33.5	
	comp=Z,14nm,1.4s						
ASAR	Alice Springs	43.39	127	P	P	22 16 31.4	-0.1
	comp=Z,0.9nm,0.6s,baz=296,slow=8.1,SNR=10.0						
ASAR	Alice Springs	43.39	127	P	P	22 16 31.2	-0.3
SHLS	Shalkode	44.77	342	*e*P	P	22 16 41.2	-1.2
	baz=343						
SATY	Saty	45.02	341	*e*P	P	22 16 45.4	+1.0
	comp=Z,2.0nm,0.8s,baz=341						
KPKS	Kokpek	45.30	341	*e*P	P	22 16 47.6	+1.1
	baz=342						
TNSS	Tian-Shan	45.51	339	*e*P	P	22 16 49.5	+0.9
	baz=340						
MDOK	Medeo	45.58	339	*e*P	P	22 16 49.7	+0.8
	baz=340						
KSAR	Wonju Array Be	45.96	34	P	P	22 16 51.6	-0.2
KSRS	Korea Array	45.99	35	P	P	22 16 51.4	-0.6
	comp=Z,5.8nm,0.8s,baz=219,slow=9.1,SNR=13						
SONM	Songino Array	47.26	9	P	P	22 17 02.4	+0.4
	comp=Z,1.3nm,0.4s,baz=194,slow=8.7,SNR=8.1						
SONM				PcP	PcP	22 18 32.5	-0.4
	comp=Z,0.8nm,0.8s,baz=200,slow=3.8,SNR=2.1						
SONM	Songino Array	47.26	9	P	P	22 17 02.2	+0.2
MK31	Makanchi Array	47.34	346	P	P	22 17 03.0	+0.6
MKAR	Makanchi Array	47.34	346	P	P	22 17 03.1	+0.7
	comp=Z,2.7nm,0.7s,baz=161,slow=8.4,SNR=35						
MKAR	Makanchi Array	47.34	346	P	P	22 17 02.4	0.0
ZSN	Zaisan	47.40	349	*e*P	P	22 17 04.2	+1.3
	baz=349						
MAKZ	Makanchi	47.43	346	P	P	22 17 03.7	+0.6
MAKZ				IAmb	IAmb	22 17 04.9	
	comp=Z,2.0nm,0.7s						
IUG	Iuzhnay	47.59	333	*e*P	P	22 17 05.2	+0.7
	comp=Z,2.7nm,0.8s,baz=333						
DZA	Taraz	47.60	334	*e*P	P	22 17 05.2	+0.7
	comp=Z,2.1nm,0.8s,baz=335						
KKAR	Karatay Array	48.13	334	P	P	22 17 08.8	+0.2
KKAR	Karatay Array	48.13	334	P	P	22 17 08.5	-0.1
KKAR				IAmb	IAmb	22 17 17.4	
	comp=Z,3.5nm,0.9s						
SEM	Semipalatinsk	51.20	346	*e*P	P	22 17 32.1	-0.1
	baz=347						
KURK	Kurchatov	51.89	345	P	P	22 17 37.4	+0.4
USRK	Ussuriysk Ar.	52.92	31	P	P	22 17 45.3	+0.6
	comp=Z,6.1nm,0.9s,baz=246,slow=6.3,SNR=7.8						
USRK	Ussuriysk Ar.	52.92	31	P	P	22 17 45.2	+0.5
STKA	Stephens Creek	53.34	132	P	P	22 17 49.9	+1.8
	comp=Z,1.6nm,0.6s,baz=298,slow=5.7,SNR=4.1						
STKA	Stephens Creek	53.34	132	P	P	22 17 48.6	+0.5
ZAA0	Zalesovo Array	53.66	351	P	P	22 17 50.4	+0.3
ZAA0				IAmb	IAmb	22 17 51.4	
	comp=Z,6.2nm,0.8s						
ZALV	Zalesovo Beam	53.66	351	P	P	22 17 50.7	+0.7
	comp=Z,8.5nm,0.9s,baz=178,slow=6.0,SNR=26						
ZALV				LR	LR	22 43 40.6	
	comp=Z,59nm,18.7s,baz=326,slow=39						
ZALV	Zalesovo Beam	53.66	351	P	P	22 17 50.2	+0.1
BRVK	Borovoye	56.40	341	P	P	22 18 09.9	+0.1
BRVK				IAmb	IAmb	22 18 10.6	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	57.58	332		P	22 18 18.0	-0.3
ABKAR	Akbulak array	57.58	332		P	22 18 18.2	-0.1
ABKAR				IAmb	IAmb	22 18 25.8	
	comp=Z,4.0nm,0.8s						
EIDS	Eidsvold	58.39	121	P	P	22 18 25.2	+0.7
KBZ	Khabaz	64.11	319	P	P	22 19 02.5	-0.3
	comp=Z,1.4nm,0.8s,baz=116,slow=7.4,SNR=4.2						
YAK	Yakutsk	65.56	16	P	P	22 19 11.5	-0.4
BRTR	Keskin Array B	69.13	312	P	P	22 19 33.4	-1.8
	comp=Z,0.5nm,0.7s,baz=133,slow=7.3,SNR=4.2						
TIXI	Tiksi	73.32	10	P	P	22 19 58.8	-0.9
TIXI				IAmb	IAmb	22 19 59.9	
	comp=Z,2.7nm,0.8s						
BURAR	Bucovina Array	77.06	319	P	P	22 20 21.7	-0.2
FINES	FINESS Array B	80.07	333	P	P	22 20 38.2	+0.2
	comp=Z,2.8nm,0.9s,baz=238,slow=11,SNR=3.4						
TXAR	Lajitas Array	143.81	32	PKP	PKPbc	22 28 03.0	+0.8
	comp=Z,0.1nm,0.5s,baz=224,slow=3.5,SNR=3.5						
TXAR	Lajitas Array	143.81	32		PKPbc	22 28 03.3	+1.1
CPUP	Villa Florida	144.86	222	PKP	PKPab	22 28 03.5	-1.9
	comp=Z,0.8nm,0.4s,baz=149,slow=5.9,SNR=1.7						

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*IDC **14** 22:09:51.9±6.4, 16°.86S×14°.77W, h0^{km}, mb4.2/5, mb1 4.1/5, mb1mx3.9/24, mbtmp4.2/5, MS3.6/8, Ms1 3.6/8, ms1mx3.2/34, Error ellipse: s-maj=143.2km s-min=59.1km az=63.0*

ISC 14 22:09:52.5±5.8**, 17°.0S**±0°.5×**14°.9W**±0°.8**, h10**^{km}**, n19, σ0**^{s}**85**/8**, mb4.3**/7**, MS3.6**/8**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	8.00	1	T	T	22 19 45.7	
	baz=178,slow=74,SNR=24						
H10S3	ASCENSION HYDR	8.01	1	T	T	22 19 46.3	
	baz=42,slow=74,SNR=34						
H10N1	ASCENSION HYDR	9.12	2	T	T	22 21 12.7	
	baz=181						
H10N3	ASCENSION HYDR	9.12	2	T	T	22 21 08.7	
	baz=181,slow=74,SNR=14						
H10N2	ASCENSION HYDR	9.13	2	T	T	22 21 10.0	
	baz=181,slow=74,SNR=3.5						
LIC	Lamto	25.05	24	*e*P	P	22 15 18.3	+1.2
	3.1nm,0.3s						
KIC	Kosan Boka	25.28	24	*e*P	P	22 15 19.9	+0.6
	12nm,0.8s						
TIC	Toumodi	25.43	23	*e*P	P	22 15 21.5	+0.8
DBIC	Dimbokro	25.52	24	P	P	22 15 20.9	-0.6
	5.1nm,0.8s,baz=184,slow=14,SNR=10						
DBIC				LR	LR	22 22 39.8	
	comp=Z,100nm,20.3s,baz=176,slow=30						
BDFB	Brasilia	31.84	268	LR	LR	22 26 47.7	
	comp=Z,143nm,21.6s,baz=102,slow=32						
TORD	Torodi Ar. Bea	34.13	30	P	P	22 16 37.1	-0.8
	6.0nm,0.8s,baz=213,slow=9.1,SNR=22						
TORD				LR	LR	22 28 20.6	
	comp=Z,129nm,18.3s,baz=250,slow=33						
CPUP	Villa Florida	40.40	249	LR	LR	22 33 34.2	
	comp=Z,57nm,18.8s,baz=45,slow=35						
PLCA	Paso Flores	53.22	232	LR	LR	22 39 18.4	
	comp=Z,63nm,20.2s,baz=126,slow=33						
KMBO	Kilima Mbogo	53.61	79	P	P	22 19 14.8	0.0
	3.4nm,1.0s,baz=43,slow=2.6,SNR=4.5						
ROSC	El Rosal	62.61	285	LR	LR	22 47 22.5	
	comp=Z,68nm,18.0s,baz=110,slow=36						
ATD	Arta Tunnel	63.68	68	LR	LR	22 45 37.0	
	comp=Z,24nm,20.9s,baz=272,slow=34						
BRTR	Keskin Array B	72.30	37	P	P	22 21 19.1	+0.5
	0.8nm,0.8s,baz=221,slow=7.4,SNR=5.1						
AKASG	Malin Array Be	77.72	27	P	P	22 21 49.0	-0.4
	0.8nm,0.5s,baz=227,slow=5.5,SNR=2.5						
GEYT	Alibeck	87.50	49	LR	LR	22 59 51.3	
	comp=Z,26nm,18.4s,baz=300,slow=34						

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*IDC **14** 22:34:09.5±1.2, 28°.74N×51°.93E, h0^{km}, mb3.6/11, mb1 3.7/15, mb1mx3.5/46, mbtmp3.6/15, ML3.3/4, MS3.6/3, Ms1 3.6/3, ms1mx2.8/53, Error ellipse: s-maj=26.1km s-min=19.6km az=160.0*

*TEH **14** 22:34:10.7, 28°.72N×51°.86E, h8^{km}, ML3.7*

*OMAN **14** 22:34:17.6±0.6, 28°.33N×52°.00E, h10^{km}, mb5.1/5, ml3.7/9, Error ellipse: s-maj=60.5km s-min=9.6km az=263.0*

*DSN **14** 22:34:18.5±1.4, 28°.44N×52°.26E, h10^{km}, ML3.7/8, Error ellipse: s-maj=32.0km s-min=12.1km az=33.0*

ISC 14 22:34:12.0±0.6**, 28°.75N**±0°.05×**51°.89E**±0°.05**, h15**^{km}**, n103, σ1**^{s}**68**/121**, mb3.6**/12**, MS3.7**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AHBU	AHRAM	0.53	283	*e*Pg	Pg	22 34 21.3	-1.3
KAZ1	Kazerun	0.90	346	*e*Pg	Pb	22 34 27.8	-1.6
KAZ1				*e*		22 34 56.8	
	comp=Z,99nm,0.4s						
SHI	Shiraz	1.04	31	*e*Pg	Pb	22 34 31.1	-0.8
JHRM	Jahrom	1.50	99	*e*Pg	Pn	22 34 40.6	+2.0
JHRM				*e*		22 35 12.0	
	comp=Z,99nm,0.6s						
LMD1	Lamerd	1.80	141	*e*Pn	Pb	22 34 44.6	-0.1
LMD1				*e*		22 35 19.4	
	comp=Z,99nm,0.8s						
KLNJ	Kolanjah	2.27	354	*e*Pn	Pn	22 34 50.6	+1.3
ABEH	Behbahan	2.33	323	*e*Pn	Pb	22 34 52.6	-1.2
LAR1	LAR	2.44	116	*e*Pn	Pn	22 34 52.9	+1.4
LAR1				*e*		22 35 42.7	
	comp=Z,99nm,0.6s						
IRAM	Ramesheh	3.08	8	*e*Pn	Pn	22 35 01.8	+1.4
ISAD	Sadrabad	3.52	26	*e*Pn	Pn	22 35 08.4	+2.0
IMEH	Mehriz	3.54	41	*e*Pn	Pn	22 35 09.1	+2.5
IGAR	Gharneh	3.65	2	*e*Pn	Pn	22 35 10.1	+2.0
AMIS	Naft Sefid	3.68	323	*e*Pn	Pn	22 35 09.8	+1.4
KBD	Kabd	3.70	278	*e*P		22 35 09.5	
UMR	Umm Al-Rimmam	3.74	283	*e*P		22 35 10.6	
IPIR	Pirpir	4.01	348	*e*Pn	Pn	22 35 14.1	+0.8
BNDS	Bandar-Abbas	4.02	109	*e*Pn	Pn	22 35 15.0	+1.8
GENO	Geno	4.02	109	*e*Pn	Pn	22 35 15.1	+1.9
ICHK	Chekchek	4.11	31	*e*Pn	Pn	22 35 16.6	+2.1
MIB	Mutribah	4.11	286	*e*P		22 35 15.7	
NASN	Na'in	4.11	11	*e*Pn	Pn	22 35 17.2	+2.5
IZEF	Zefreh	4.15	5	*e*Pn	Pn	22 35 16.8	+1.7
IBAF	Bafgh	4.26	47	*e*Pn	Pn	22 35 19.3	+2.8
SHGR	Shooshtar-Gavs	4.28	322	*e*Pn	Pn	22 35 18.7	+2.1
KHGB	Koh Gabri	4.31	67	*e*Pn	Pn	22 35 19.3	+2.0
KHGB				*e*		22 36 46.5	
	comp=Z,99nm,0.7s						
YZKH	Yazd	4.31	32	*e*Pn	Pn	22 35 19.8	+2.6
NGRK	Negar Kerman	4.33	77	*e*Pn	Pn	22 35 19.7	+2.1
NGRK				*e*		22 36 18.8	
	comp=Z,99nm,0.4s						
RST	Umm Al-Ruwaisa	4.34	281	*e*P		22 35 19.0	
KRBR	Kerman	4.43	73	*e*Pn	Pn	22 35 21.3	+2.4
TVBK	TV Kerman	4.43	73	*e*Pn	Pn	22 35 21.4	+2.4
IKLH	Kolahrood	4.56	357	*e*Pn	Pn	22 35 21.7	+0.9
SHME	Shamm	4.64	124	P	Pn	22 35 22.9	+1.3
SHME	Shamm	4.64	124	*e*Pn	Pn	22 35 22.8	+1.3
SHME	Shamm	4.64	124	P	Pn	22 35 23.9	+2.3
SHME				S	Sn	22 36 14.9	-0.3
SLWR	Sila	4.66	182	*e*Pn	Pn	22 35 22.8	+0.9
ANAR	Anarak	4.70	19	*e*Pn	Pn	22 35 24.6	+2.0
BANOM	Banah	4.83	125	*e*Pn	Pn	22 35 24.2	0.0
BANOM	Banah	4.83	125	P	Pn	22 35 24.8	+0.6
BANOM				S	Sn	22 36 19.3	-0.7
AJN	Ajban	5.01	146	*e*Pn	Pn	22 35 29.2	+2.6
NAZ	Nazwa, Dubai	5.04	137	P	Pn	22 35 27.9	+0.8
NAZ	Nazwa, Dubai	5.04	137	*e*Pn	Pn	22 35 28.4	+1.3
NAZ	Nazwa, Dubai	5.04	137	P	Pn	22 35 28.3	+1.3
NAZ				S	Sn	22 36 25.3	+0.2
CHMN	Cheshme madani	5.06	76	*e*Pn	Pn	22 35 31.2	+3.5
MASF	Masafi	5.08	130	P	Pn	22 35 29.6	+1.9
MASF				S	Sn	22 36 25.5	-0.7
MSFE	Esma-Masafi	5.09	131	P	Pn	22 35 28.3	+0.5
MSFE				S	Sn	22 36 23.7	-2.6
MSFE	Esma-Masafi	5.09	131	*e*Pn	Pn	22 35 28.9	+1.1
ASUD	Al Ashush, Dub	5.13	142	*e*Pn	Pn	22 35 30.7	+2.3
ASUD	Al Ashush, Dub	5.13	142	P	Pn	22 35 30.5	+2.1
	SNR=20						
ASUD				S	Sn	22 36 29.7	+2.4
FAQ	Al Faqa, Dubai	5.18	139	P	Pn	22 35 31.5	+2.4
FAQ	Al Faqa, Dubai	5.18	139	*e*Pn	Pn	22 35 30.3	+1.2
FAQ	Al Faqa, Dubai	5.18	139	P	Pn	22 35 31.5	+2.4
FAQ				S	Sn	22 36 28.6	0.0
KHNJ	Kahnooj	5.19	97	*e*Pn	Pn	22 35 31.3	+2.1
MDH	Madha	5.22	130	P	Pn	22 35 30.0	+0.4
MDH	Madha	5.22	130	*e*Pn	Pn	22 35 30.7	+1.0
MDH	Madha	5.22	130	P	Pn	22 35 30.6	+1.0
MDH				S	Sn	22 36 28.3	-1.3
KHMZ	Khomeyn	5.24	342	*e*Pn	Pn	22 35 32.3	+2.2
MZWR	Madinat Zayed	5.28	160	*e*Pn	Pn	22 35 32.0	+1.6
MZWR	Madinat Zayed	5.28	160	P	Pn	22 35 30.3	-0.1
UOSS	Minazif	5.40	134	P	Pn	22 35 33.4	+1.3
UOSS	Minazif	5.40	134	*e*Pn	Pn	22 35 32.9	+0.8
UOSS	Minazif	5.40	134	P	Pn	22 35 33.5	+1.3
UOSS				S	Sn	22 36 32.9	-1.2
HATD	Hatta, Dubai	5.45	135	P	Pn	22 35 34.0	+1.3
HATD	Hatta, Dubai	5.45	135	*e*Pn	Pn	22 35 34.3	+1.6
HATD	Hatta, Dubai	5.45	135	P	Pn	22 35 34.8	+2.1
HATD				S	Sn	22 36 34.9	-0.2
ASHO	Ashiyiah	5.50	136	P	Pn	22 35 34.3	+0.7
ASHO	Ashiyiah	5.50	136	P	Pn	22 35 34.2	+0.7
	SNR=7.1						
ASHO				S	Sn	22 36 36.4	-0.2
ALNE	Al Ain	5.82	143	P	Pn	22 35 38.2	+0.4
ALNE	Al Ain	5.82	143	*e*Pn	Pn	22 35 38.3	+0.5
ALNE	Al Ain	5.82	143	P	Pn	22 35 39.2	+1.3
ALNE				S	Sn	22 36 46.0	+1.7
TPRV	Parvadeh(Tabas	5.93	43	*e*Pn	Pn	22 35 41.9	+2.5
IQOM	Qom	6.12	354	*e*Pn	Pn	22 35 42.7	+0.6
SOHO	SOHO	6.20	137	P	Pn	22 35 43.5	+0.5
SOHO	SOHO	6.20	137	*e*Pn	Pn	22 35 44.5	+1.4
SOHO	SOHO	6.20	137	P	Pn	22 35 44.0	+0.9
SOHO				S	Sn	22 36 53.7	0.0
IVRN	Varamin	6.23	359	*e*Pn	Pn	22 35 44.0	+0.5
TNSJ	Nastanj	6.58	37	*e*Pn	Pn	22 35 50.1	+1.7
TKDS	Koohdasht(Taba	6.60	41	*e*Pn	Pn	22 35 50.8	+2.1
UMZA	Um Al Zommool	6.70	153	*e*Pn	Pn	22 35 50.9	+1.1
UMZA	Um Al Zommool	6.70	153	P	Pn	22 35 51.0	+1.2
UMZA				S	Sn	22 37 03.3	-2.6
ARQ	Araqi	6.81	141	P	Pn	22 35 52.5	+1.0
	SNR=11						
ARQ				S	Sn	22 37 07.6	-1.2
IALM	Almabolaq	6.87	333	*e*Pn	Pn	22 35 53.7	+1.3
HOQ	Hoqain	7.08	135	P	Pn	22 35 55.8	+0.6
HOQ				S	Sn	22 37 13.5	-2.0
ITEG	Tejag	7.20	53	*e*Pn	Pn	22 35 58.7	+1.7
IDHR	Dehrash	7.56	323	*e*Pn	Pn	22 36 03.1	+1.2
BSY	Bisya	7.66	140	P	Pn	22 36 03.9	+0.8
	SNR=6.2						
BSY				S	Sn	22 37 28.2	-1.5
SMDO	Samad	7.93	134	P	Pn	22 36 07.5	+0.6
SMDO				S	Sn	22 37 33.9	-2.5
WSAR	Wadi Sarin	8.18	131	Pn	Pn	22 36 09.8	-0.5
	comp=Z,0.8nm,0.3s,baz=312,slow=5.7,SNR=15						
WSAR				Sn	Sn	22 37 36.5	-6.0
	comp=Z,0.6nm,0.3s,baz=32,slow=5.0,SNR=1.6						
JMDO	Jabal Madar	8.47	137	P	Pn	22 36 16.2	+1.9
SBZV	Sabzevar	9.02	31	*e*Pn	Pn	22 36 24.0	+2.1
MHTO	MHTO	9.49	143	P	Pn	22 36 28.9	+0.7
	SNR=15						
MHTO				S	Sn	22 38 10.7	-4.1
MMAI	Mount Meron Ar	14.78	291	Pn	Pn	22 37 41.7	+1.1
	comp=Z,0.2nm,0.3s,baz=108,slow=17,SNR=1.9						
KBZ	Khabaz	16.60	337	Pn	P	22 38 06.2	-0.3
	comp=Z,0.0nm,0.3s,baz=111,slow=8.6,SNR=3.0						
BRTR	Keskin Array B	18.61	311	P	P	22 38 29.1	+0.1
	comp=Z,0.1nm,0.3s,baz=122,slow=12,SNR=6.1						
AKTO	Aktyubinsk	22.15	10	P	P	22 39 07.8	+0.7
	comp=Z,0.6nm,0.5s,baz=213,slow=16,SNR=2.4						
AKTO				LR	LR	22 50 06.6	
	comp=Z,75nm,20.8s,baz=311,slow=43						
MLR	Muntele Rosu	26.43	316	P	P	22 39 51.4	+3.2
	comp=Z,2.2nm,0.9s,baz=55,slow=17,SNR=4.4						
AKASG	Malin Array Be	27.80	328	P	P	22 39 59.4	-1.0
	comp=Z,0.8nm,0.5s,baz=102,slow=6.2,SNR=2.3						
BVAR	Borovoye Array	27.83	24	P	P	22 39 59.9	-0.8
	comp=Z,0.2nm,0.6s,baz=202,slow=13,SNR=3.7						
KURBB	Kurchatov Arra	29.68	35	P	P	22 40 15.8	-1.3
	comp=Z,0.4nm,0.7s,baz=236,slow=9.0,SNR=1.6						
MKAR	Makanchi Array	29.77	44	P	P	22 40 17.7	-0.3
	comp=Z,0.4nm,0.7s,baz=236,slow=8.6,SNR=4.6						

ZALV	**Zalesovo Beam**	**34.76**	**34**	P	**P**	**22 41 01.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=254,slow=10,SNR=2.6						
FINES	**FINESS Array B**	**36.92**	**340**	P	**P**	**22 41 19.8**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=140,slow=9.8,SNR=17						
HFS	**Hagfors**	**40.57**	**332**	LR	LR	23 02 27.4	
	comp=Z,191nm,21.6s,baz=36,slow=42						
NOA	**NORSAR Array B**	**42.09**	**332**	P	**P**	**22 42 03.7**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=122,slow=8.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**49.02**	**262**	P	**P**	**22 42 58.4**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=53,slow=8.1,SNR=6.3						
DBIC	**Dimbokro**	**57.76**	**259**	P	**P**	**22 44 02.9**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=34,slow=10,SNR=4.5						
KLR	**Kul'dur**	**62.44**	**47**	LR	LR	23 14 42.2	
	comp=Z,49nm,18.3s,baz=324,slow=39						
ILAR	**Eielson Array**	**85.64**	**8**	P	**P**	**22 46 49.2**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=342,slow=5.7,SNR=1.5						

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*IDC **14** 22:42:18.2±1.5, 41.°41N×117.°21W, h0^{km}, mb2.4/1, mb1 2.9/3, mb1mx2.9/37, mbtmp2.4/3, ML2.9/2, Error ellipse: s-maj=13.2km s-min=8.3km az=166.0*

*NEIC **14** 22:42:20.8±1.5, 41.°20N±0.°05×117.°23W±0.°05, h0^{km}±2^{km}, ML2.5/50, Error ellipse: s-maj=8.1km s-min=6.4km az=162.0*

ISC 14 22:42:19.6±1.0**, 41.°23N**±0.°04×**117.°28W**±0.°04**, h0^{km}, n28, σ1.^{s}63**/29**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WVOR	**Wild Horse Val**	**1.57**	**320**		**Pg**	**22 42 50.5**	**+0.7**
WVOR				IAML		22 43 22.7	
	41nm,1.1s						
ELK	**Elko**	**1.62**	**107**	Pg	**Pn**	**22 42 49.1**	**-0.6**
	4.9nm,0.3s,baz=290,slow=10,SNR=68						
ELK				Lg	Lg	22 43 09.4	
	5.1nm,0.3s,baz=253,slow=9.8,SNR=12						
ELK	**Elko**	**1.62**	**107**	Pn	**Pn**	**22 42 49.0**	**-0.7**
PAHR	**Pah Rah Range**	**2.21**	**227**		**Pn**	**22 42 58.9**	**+1.2**
PAHR				IAML		22 43 44.9	
	comp=E,20nm,1.2s						
MOD	**Modoc Plateau**	**2.37**	**288**	Pn	**Pn**	**22 43 01.5**	**+1.6**
MOD				IAML		22 43 43.1	
	comp=E,24nm,1.0s						
MOD				IAML		22 43 50.1	
	comp=N,24nm,0.8s						
MFID	**Camas Ranch**	**2.44**	**26**	Pn	**Pn**	**22 43 01.7**	**+1.0**
MFID				IAML		22 43 42.7	
	comp=N,36nm,1.1s						
MFID				IAML		22 43 51.1	
	comp=N,29nm,0.8s						
VCNR	**Virginia City**	**2.65**	**224**	Pn	**Pn**	**22 43 04.5**	**+0.7**
BEKR	**Beckworth**	**2.71**	**241**		**Pn**	**22 43 05.3**	**+0.7**
RYN	**Ryan**	**2.77**	**201**		**Pn**	**22 43 06.4**	**+1.1**
RYN				IAML		22 43 55.6	
	comp=E,16nm,1.1s						
RYN				IAML		22 43 58.9	
	comp=N,18nm,1.1s						
PNTR	**Pine Nut**	**2.78**	**221**		**Pn**	**22 43 06.7**	**+1.1**
PNTR				IAML		22 43 59.4	
	comp=E,28nm,1.2s						
PNTR				IAML		22 44 04.8	
	comp=N,19nm,1.0s						
NV11	**Mina Array Sit**	**2.87**	**194**		**Pn**	**22 43 08.2**	**+1.4**
NV11				IAML		22 44 14.1	
	comp=E,13nm,4.9s						
NVAR	**Mina Array Bea**	**2.90**	**196**	Pn	**Pn**	**22 43 08.7**	**+1.4**
	comp=E,0.7nm,0.3s,baz=16,slow=13,SNR=18						
NVAR				Lg	Lg	22 43 55.6	
	comp=E,2.6nm,0.3s,baz=12,slow=22,SNR=2.0						
K05A	**Summer Lake**	**3.08**	**300**		**Pb**	**22 43 13.2**	**-2.2**
LHV	**Little Huntoon**	**3.12**	**198**		**Pn**	**22 43 11.9**	**+1.9**
LHV				IAML		22 44 08.3	
	comp=N,21nm,1.0s						
LHV				IAML		22 44 18.6	
	comp=E,21nm,1.0s						
HLID	**Hailey**	**3.15**	**41**	Pn	**Pn**	**22 43 11.5**	**+0.8**
HLID				IAML		22 44 02.9	
	comp=E,9.6nm,0.7s						
R11A	**Troy Canyon, C**	**3.16**	**155**		**Pn**	**22 43 11.8**	**+1.0**
WAKR	**Walker**	**3.19**	**212**		**Pn**	**22 43 11.1**	**-0.1**
WAKR				IAML		22 44 16.3	
	comp=N,9.5nm,4.4s						
WAKR				IAML		22 44 17.6	
	comp=E,9.3nm,3.6s						
BGU	**Big Grassy Mou**	**3.23**	**94**		**Pn**	**22 43 11.8**	**+0.1**
I07A	**Izee**	**3.29**	**331**		**Pn**	**22 43 14.8**	**+2.3**
I07A				IAML		22 44 17.1	
	comp=E,16nm,4.0s						
I07A				IAML		22 44 37.9	
	comp=N,12nm,4.5s						
HVU	**Hansel Valley**	**3.43**	**79**	Pn	**Pn**	**22 43 14.6**	**+0.2**
DUG	**Dugway, Tooele**	**3.55**	**105**		**Pn**	**22 43 18.7**	**+2.6**
DUG				IAML		22 44 14.9	
	comp=N,11nm,1.0s						
DUG				IAML		22 44 32.3	
	comp=N,13nm,4.5s						
BMO	**Blue Mountains**	**3.62**	**360**		**Pn**	**22 43 20.3**	**+3.2**
BMO				IAML		22 44 21.4	
	comp=N,11nm,4.8s						
BMO				IAML		22 44 26.3	
	comp=N,8.6nm,4.9s						
SPUT	**South Promonto**	**3.64**	**87**		**Pn**	**22 43 18.3**	**+0.9**
PSUT	**Pine Spring**	**3.77**	**134**		**Pn**	**22 43 20.9**	**+1.8**
PRN	**Pahroc Range**	**4.19**	**155**		**Pn**	**22 43 26.9**	**+2.0**
TPNV	**Topopah Spring**	**4.35**	**169**		**Pn**	**22 43 28.8**	**+1.8**
PDAR	**Pinedale Array**	**5.96**	**72**	Pn	**Pn**	**22 43 49.0**	**-0.2**
	comp=N,0.1nm,0.3s,baz=257,slow=12,SNR=1.2						
PDAR				Pg	**Pb**	**22 44 05.5**	**+1.1**
	comp=N,0.1nm,0.3s,baz=253,slow=15,SNR=3.8						
YKA	**Yellowknife Ar**	**21.36**	**3**	P	**P**	**22 47 04.9**	**-3.3**
	comp=N,0.1nm,0.6s,baz=186,slow=9.9,SNR=1.9						

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*NNC **14** 22:56:32.5±0.8, 42.°56N×81.°89E, h0^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=7.0km s-min=2.9km az=147.0*

*SOME **14** 22:56:35.0, 42.°43N×81.°58E, h10^{km}*

ISC 14 22:56:32.2±2.6**, 42.°43N**±0.°09×**81.°72E**±0.°08**, h9^{km}**±13^{km}**, n18, σ2.^{s}19**/38**, 4C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.43**	**316**	*e*P	**Pb**	**22 57 00.7**	**+1.6**
	3.8nm,0.2s						
KTMS				*e*S	**Sg**	**22 57 19.4**	**+1.2**
	15nm,0.2s						
SHLS	**Shalkode**	**1.81**	**294**	*e*P	**Pn**	**22 57 02.2**	**-1.6**
	9.4nm,0.1s						
SHLS				*e*S	**Sn**	**22 57 22.1**	**-4.8**
	27nm,0.2s						
PDGK	**Podgornoye**	**1.87**	**300**	⇓P	**Pn**	**22 57 06.7**	**+2.2**
	1.0nm,0.3s						
PDGK				⇓S	**Sg**	**22 57 32.6**	**+0.2**
	6.6nm,0.5s						
UZB	**Uzynbulak**	**2.11**	**291**	*e*P	**Pg**	**22 57 12.9**	**+0.2**
	2.0nm,0.1s						
UZB				*e*S	**Sg**	**22 57 40.1**	**+0.1**
	10nm,0.2s						
DJR	**Jarkent**	**2.37**	**324**	*e*P	**Pb**	**22 57 16.6**	**+1.5**
	1.2nm,0.2s						
DJR				*e*S	**Sb**	**22 57 46.7**	**+2.3**
	4.1nm,0.2s						
KPKS	**Kokpek**	**2.46**	**296**	*e*P	**Pb**	**22 57 18.8**	**+2.2**
	4.1nm,0.2s						
KPKS				*e*S	**Sg**	**22 57 50.4**	**-0.8**
	23nm,0.2s						
SATY	**Saty**	**2.52**	**286**	*e*P	**Pg**	**22 57 20.8**	**+0.2**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**22 57 53.3**	**+0.1**
	6.6nm,0.2s						
ZHN	**Zhinishke**	**2.53**	**288**	*e*P	**Pg**	**22 57 20.2**	**-0.4**
	87nm,0.3s						
ZHN				*e*S	**Sg**	**22 57 52.9**	**-0.5**
	2.6nm,0.2s						
MNBS	**Baschi**	**2.93**	**305**	*e*P	**Pb**	**22 57 26.9**	**+2.2**
	1.2nm,0.2s						
MNBS				*e*S	**Sg**	**22 58 04.2**	**-2.2**
	7.2nm,0.2s						
KAPS	**Kapalarasan**	**3.33**	**330**	*e*P	**Pb**	**22 57 35.0**	**+3.5**
	1.0nm,0.3s						
KAPS				*e*S	**Sg**	**22 58 17.9**	**-1.2**
	1.9nm,0.4s						
ARXS	**Arharly**	**3.35**	**303**	*e*P	**Pb**	**22 57 34.6**	**+2.7**
	4.4nm,0.6s						
ARXS				*e*S	**Sg**	**22 58 17.6**	**-2.4**
	3.1nm,0.2s						
KOTS	**Kotyrbulak**	**3.48**	**285**	*e*P	**Pb**	**22 57 36.5**	**+2.3**
	2.6nm,0.3s						
KOTS				*e*S	**Sg**	**22 58 20.6**	**-3.5**
	4.9nm,0.3s						
TNSS	**Tian-Shan**	**3.57**	**281**	*e*P	**Pb**	**22 57 38.0**	**+2.3**
	1.1nm,0.1s						
TNSS				*e*S	**Sg**	**22 58 23.5**	**-3.4**
	1.3nm,0.4s						
CHKK	**Chushkaly**	**3.75**	**294**	*e*P	**Pg**	**22 57 42.4**	**-1.5**
	0.7nm,0.1s						
CHKK				*e*S	**Sg**	**22 58 31.3**	**-1.2**
	3.0nm,0.2s						
IZV	**Izvestkoviy**	**3.81**	**281**	*e*P	**Pb**	**22 57 42.9**	**+3.2**
	1.4nm,0.2s						
IZV				*e*S	**Sg**	**22 58 31.4**	**-3.2**
	4.8nm,0.5s						
KTBS	**Karatobe**	**3.91**	**291**	*e*P	**Pb**	**22 57 45.1**	**+3.9**
	0.8nm,0.2s						
KTBS				*e*S	**Sg**	**22 58 35.6**	**-2.1**
	2.4nm,0.5s						
MAKZ	**Makanchi**	**4.38**	**2**	⇑Pn	**Pn**	**22 57 38.4**	**-0.5**
MAKZ				⇑Pg	**Pb**	**22 57 50.3**	**+0.9**
	0.7nm,0.8s						
MAKZ				⇓Sn	**Sn**	**22 58 30.2**	**+0.1**
	1.3nm,0.9s						
MAKZ				⇓Lg	Lg	22 58 47.5	
	1.2nm,0.8s						
MK31	**Makanchi Array**	**4.38**	**5**	⇓Pn	**Pn**	**22 57 38.1**	**-0.8**
	0.1nm,0.3s,baz=156,slow=14,SNR=6.7						
MK31				⇑Pg	**Pb**	**22 57 49.7**	**+0.3**
	0.1nm,0.4s,baz=182,slow=23,SNR=2.6						
MK31				⇓Sn	**Sn**	**22 58 29.6**	**-0.5**
	0.1nm,0.3s,baz=187,slow=24,SNR=5.0						
MK31				⇑Lg	Lg	22 58 46.4	
	0.8nm,0.6s,baz=189,slow=28,SNR=4.7						

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*IDC **14** 22:59:20.3±2.4, 31.°78N×95.°88E, h0^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/46, mbtmp3.6/10, ML3.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/39, Error ellipse: s-maj=56.1km s-min=35.8km az=22.0*

ISC 14 22:59:26.3±2.3**, 31.°9N**±0.°3×**95.°8E**±0.°2**, h35^{km}, n11, σ0.^{s}55**/11**, mb3.6**/7**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**17.84**	**24**	P	**Pn**	**23 03 31.8**	**-0.1**
	0.1nm,0.3s,baz=215,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**18.11**	**329**	P	**Pn**	**23 03 34.4**	**-0.5**
	0.1nm,0.3s,baz=137,slow=13,SNR=4.5						
MKAR				PcP	**PcP**	**23 08 07.4**	**-0.2**
	0.0nm,0.3s,baz=116,slow=3.4,SNR=5.7						
AAK	**Ala-Archa**	**19.97**	**308**	P	**Pn**	**23 03 57.6**	**0.0**
	0.3nm,0.3s,baz=169,slow=10,SNR=2.6						
KURBB	**Kurchatov Arra**	**22.64**	**331**	P	**P**	**23 04 24.4**	**+0.3**
	0.7nm,0.6s,baz=139,slow=11,SNR=5.5						
ZALV	**Zalesovo Beam**	**23.38**	**344**	P	**P**	**23 04 32.3**	**+0.7**
	0.3nm,0.5s,baz=156,slow=9.0,SNR=1.5						
BVAR	**Borovoye Array**	**27.94**	**326**	P	**P**	**23 05 14.2**	**+1.0**
	0.2nm,0.5s,baz=94,slow=8.8,SNR=3.0						
GUMO	**Guam**	**48.38**	**101**	LR	LR	23 29 35.8	
	comp=Z,28nm,20.1s,baz=102,slow=38						
FINES	**FINESS Array B**	**52.90**	**326**	P	**P**	**23 08 38.0**	**-0.5**
	3.4nm,1.0s,baz=92,slow=9.9,SNR=2.2						
ARCES	**ARCESS Array B**	**53.59**	**336**	P	**P**	**23 08 43.1**	**-0.4**
	7.3nm,1.2s,baz=102,slow=8.4,SNR=2.0						
ILAR	**Eielson Array**	**72.07**	**24**	P	**P**	**23 10 46.4**	**-0.1**
	0.5nm,0.8s,baz=295,slow=3.4,SNR=4.1						
YKA	**Yellowknife Ar**	**82.80**	**14**	P	**P**	**23 11 46.9**	**+0.3**
	0.4nm,0.7s,baz=337,slow=4.8,SNR=5.9						

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*NEIC **14** 23:00:50.9±2.0, 6.°56S±0.°07×129.°88E±0.°08, h176^{km}±8^{km}, mb4.1/16, Error ellipse: s-maj=12.5km s-min=8.9km az=54.0*

*IDC **14** 23:00:59.7±7.8, 6.°76S×130.°09E, h268^{km}±83^{km}, mb3.6/3, mb1 3.6/4, mb1mx2.9/39, mbtmp4.2/4, Error ellipse: s-maj=148.9km s-min=22.8km az=69.0*

ISC 14 23:00:52.5±0.6**, 6.°65S**±0.°07×**129.°90E**±0.°09**, h200^{km}, n26, σ2.^{s}02**/27**, mb4.2**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.92**	**134**		**Pn**	**23 01 27.0**	**-3.2**
FAKI	**Fak Fak**	**4.38**	**32**	Pn	**Pn**	**23 01 54.8**	**-4.3**
MTN	**Manton Dam**	**6.28**	**169**		**Pn**	**23 02 20.2**	**-3.2**
SOEI	**Soe**	**6.37**	**241**		**Pn**	**23 02 21.9**	**-2.9**
FITZ	**Fitzroy Crossi**	**12.12**	**200**	Pn	**Pn**	**23 03 36.7**	**-2.2**
COEN	**Coen**	**14.94**	**120**	P	**Pn**	**23 04 14.6**	**+0.4**
COEN				IAmb	IAmb	23 04 17.0	
	comp=Z,6.2nm,0.9s						
AS31	**Alice Springs**	**17.36**	**168**	P	**P**	**23 04 42.3**	**+0.9**
ASAR	**Alice Springs**	**17.36**	**168**	P	**P**	**23 04 42.2**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=344,slow=11,SNR=36						
ASAR				S	**S**	**23 07 47.6**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=354,slow=26,SNR=2.1						
PSA00	**Pilbara Seismi**	**17.74**	**212**		**P**	**23 04 45.5**	**-0.1**
PSA00				IAmb	IAmb	23 05 01.0	
	comp=Z,10nm,1.1s						
CTAO	**Charters Tower**	**20.75**	**132**	P	**P**	**23 05 19.3**	**+1.3**
CTAO				IAmb	IAmb	23 05 26.1	
	comp=Z,4.9nm,0.9s						
CISI	**Cisompet, Garu**	**21.93**	**266**	P	**P**	**23 05 29.9**	**-0.4**
BBOO	**Buckleboo**	**26.66**	**168**	P	**P**	**23 06 15.0**	**+2.1**
BBOO				IAmb	IAmb	23 06 17.4	
	comp=Z,6.9nm,1.1s						
STKA	**Stephens Creek**	**27.38**	**158**	P	**P**	**23 06 19.8**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=322,slow=9.7,SNR=6.6						
STKA	**Stephens Creek**	**27.38**	**158**	P	**P**	**23 06 19.9**	**+0.6**
ARMA	**Armidale**	**31.24**	**142**	P	**P**	**23 06 55.1**	**+1.5**
CAN	**Canberra**	**33.51**	**151**	P	**P**	**23 07 15.2**	**+2.0**
CAN				IAmb	IAmb	23 07 16.4	
	comp=Z,8.5nm,0.9s						
JKA	**Kamikawa-asahi**	**51.81**	**12**	P	**P**	**23 09 38.3**	**-1.7**
JKA				IAmb	IAmb	23 09 44.6	
	comp=Z,7.4nm,1.0s						
BKZ	**Black Stump Fm**	**52.92**	**135**	P	**P**	**23 09 50.0**	**+1.6**
BKZ				IAmb	IAmb	23 10 07.8	
	comp=Z,5.6nm,1.0s						
SONM	**Songino Array**	**58.08**	**342**	P	**P**	**23 10 25.3**	**+0.4**
MK31	**Makanchi Array**	**67.88**	**327**	P	**P**	**23 11 30.1**	**+0.7**
MK31				IAmb	IAmb	23 11 31.5	
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**23 11 30.8**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=121,slow=8.1,SNR=50						
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**23 11 30.1**	**+0.8**
MAKZ	**Makanchi**	**68.06**	**327**	P	**P**	**23 11 31.4**	**+0.9**
MAKZ				IAmb	IAmb	23 11 32.4	
	comp=Z,1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**72.16**	**328**	P	**P**	**23 11 56.3**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=131,slow=4.9,SNR=5.4						
RAYN	**Ar Rayn**	**87.51**	**294**	P	**P**	**23 13 19.5**	**+1.2**
OHAK	**Old Harbor**	**88.47**	**32**	P	**P**	**23 13 23.3**	**+1.4**

JMA 14 23:02:19.1±0.2**, 37.°65N**×**144.°40E, h55^{km}, M3.9, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.41**	**287**	P	Pn	23 02 57.2	+1.1
JIKH				S	Sn	23 03 25.3	+0.9
JIO	**Ouri**	**2.54**	**289**	P	Pn	23 02 59.0	+1.2
JIO				S	Sn	23 03 28.8	+1.3
OFUJ	**Ofunato**	**2.58**	**304**	P	Pn	23 02 59.5	+1.1
OFUJ				*e*S	Sn	23 03 29.7	+1.2
JKMT	**Kesennumamotoy**	**2.58**	**298**	P	Pn	23 02 59.5	+1.1
JKMT				*e*S	Sn	23 03 29.5	+1.0
JMK	**Ichinoseki**	**2.82**	**298**	P	Pn	23 03 03.1	+1.4
JMK				*e*S	Sn	23 03 35.8	+1.4
JOM	**Ohasama**	**3.04**	**308**	P	Pn	23 03 06.3	+1.6
JOM				S	Sn	23 03 41.9	+2.0
JFT	**Otama**	**3.23**	**269**	P	Pn	23 03 09.1	+1.8
JYK	**Kaneyama**	**3.42**	**293**	P	Pn	23 03 12.0	+2.1
JYK				*e*S	Sn	23 03 51.6	+2.3
JANG	**Nango**	**3.53**	**321**	P	Pn	23 03 12.4	+1.0
JANG				*e*S	Sn	23 03 51.5	-0.3
BSO1	**Boso 1**	**4.08**	**224**	P	Pn	23 03 17.3	-1.1
BSO1				*e*S	Sn	23 04 05.1	+0.6
JOT	**Ohata**	**4.54**	**326**	P	Pn	23 03 26.4	+1.2
JRY	**Ryogami san**	**4.70**	**251**	P	Pn	23 03 28.0	+0.5
JRY				*e*S	Sn	23 04 19.2	-1.6
MAT	**Matsushiro**	**5.07**	**259**	P	Pn	23 03 34.9	+2.3
MAT				*e*S	Sn	23 04 30.9	+1.0
NEM2	**Nemuro 2**	**5.80**	**10**	P	Pn	23 03 39.4	-3.1
NEM2				*e*S	Sn	23 04 42.2	-5.4
JTKR	**Abashiri--Toko**	**6.33**	**357**	P	Pn	23 03 49.4	-0.3
JTKR				*e*S	Sn	23 04 56.7	-3.8

IDC 14 23:07:10.3±8.0**, 6.°57S**×**130.°58E, h313^{km}**±88^{km}**, mb3.3**/2**, mb1 3.3**/3**, mb1mx2.7**/40**, mbtmp3.9**/3**, Error ellipse: s-maj=151.3km s-min=25.0km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**17.30**	**170**	P	P	23 10 51.1	-0.7
	0.3nm,0.3s,baz=354,slow=11,SNR=7.1						
ASAR				S	S	23 13 55.0	-0.7
	0.1nm,0.3s,baz=355,slow=28,SNR=2.3						
STKA	**Stephens Creek**	**27.20**	**159**	P	P	23 12 27.4	+1.3
	0.9nm,0.3s,baz=354,slow=10,SNR=1.9						
MKAR	**Makanchi Array**	**68.18**	**326**	P	P	23 17 37.2	-0.2
	0.4nm,0.4s,baz=121,slow=6.9,SNR=6.6						

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*SOME **14** 23:12:59.0, 39.°17N×71.°68E, h20^{km}*

*KRNET **14** 23:13:01.6±0.1, 39.°08N×71.°16E, h14^{km}, mb4.1*

*IDC **14** 23:13:02.0±1.4, 38.°94N×71.°26E, h0^{km}, mb3.6/7, mb1 3.8/14, mb1mx3.5/48, mbtmp3.7/14, ML3.0/6, Error ellipse: s-maj=22.6km s-min=12.7km az=155.0*

*NNC **14** 23:13:04.1±1.7, 38.°68N×70.°91E, h119^{km}±27^{km}, mb3.5, mpv4.2, Error ellipse: s-maj=15.1km s-min=7.8km az=19.0*

ISC 14 23:13:04.2±1.0**, 39.°15N**±0.°06×**71.°23E**±0.°03**, h10^{km}, n60, σ2.^{s}54**/85**, mb3.6**/7**, 31C-13D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.56**	**53**	⇓*i*P	**Pg**	**23 13 14.1**	**-1.0**
	baz=51						
DRK				⇓*i*S	**Sg**	**23 13 23.4**	**+0.9**
	baz=51						
BTK	**Batken**	**0.96**	**341**	⇑*i*P	**Pg**	**23 13 20.8**	**-1.9**
	baz=45						
BTK				⇑*i*S	**Sg**	**23 13 35.3**	**0.0**
	baz=45						
OHH	**Osh**	**1.82**	**41**	⇓*i*P	**Pn**	**23 13 37.0**	**+1.2**
	baz=40						
OHH				⇓*i*S	**Sg**	**23 14 03.2**	**+0.3**
	baz=40						
SFK	**Sufi-Kurgan**	**1.96**	**63**	⇑*i*P	**Pn**	**23 13 39.2**	**+1.4**
	baz=62						
SFK				⇑*i*S	**Sg**	**23 14 06.3**	**-1.0**
	baz=62						
TRKS	**Terek-Say**	**2.38**	**358**	⇑*i*P	**Pn**	**23 13 43.9**	**+0.4**
	baz=0.0						
TRKS				⇑*i*S	**Sn**	**23 14 14.9**	**+2.1**
	baz=0.0						
ARSB	**Arslanbob**	**2.56**	**31**	⇑*i*P	**Pn**	**23 13 47.4**	**+1.5**
	baz=31						
ARSB				⇑*i*S	**Sb**	**23 14 21.1**	**-0.7**
	baz=31						
IUG	**Iuzhnay**	**3.13**	**344**	*e*P	**Pb**	**23 13 58.0**	**-2.1**
	84nm,0.2s						
IUG				*e*S	**Sb**	**23 14 40.5**	**+2.2**
	819nm,0.4s						
CHM	**Chimkent**	**3.40**	**339**	*e*P	**Pb**	**23 14 02.2**	**-2.4**
	12nm,0.7s						
CHM				*e*S	**Sb**	**23 14 47.0**	**+1.1**
	390nm,0.5s						
MNAS	**Manas**	**3.47**	**16**	⇑*i*P	**Pn**	**23 14 00.2**	**+1.7**
	baz=16						
MNAS				⇑*i*S	**Sn**	**23 14 43.3**	**+3.6**
	baz=16						
AML	**Almayashu**	**3.52**	**31**	⇑*i*P	**Pn**	**23 14 00.8**	**+1.4**
	baz=32						
AML				⇑*i*S	**Sn**	**23 14 44.3**	**+3.0**
	baz=32						
AML	**Almayashu**	**3.52**	**31**	P	**Pb**	**23 14 04.8**	**-2.1**
	SNR=52						
ARLS	**Aral**	**3.59**	**40**	⇑*e*P	**Pn**	**23 14 01.8**	**+1.6**
	baz=40						
ARLS				⇑*i*S	**Sn**	**23 14 46.7**	**+4.0**
	baz=40						
DZA	**Taraz**	**3.74**	**1**	*e*P	**Pb**	**23 14 07.6**	**-2.8**
	124nm,0.4s						
DZA				*e*S	**Sb**	**23 14 56.8**	**+1.0**
	331nm,0.2s						
MRKS	**Merke**	**3.90**	**22**	*e*P	**Pn**	**23 14 08.6**	**+4.3**
	39nm,0.4s						
MRKS				*e*S	**Sb**	**23 14 58.4**	**-2.0**
	40nm,0.4s						
UCH	**Uchtor**	**3.96**	**38**	⇑*i*P	**Pn**	**23 14 07.4**	**+1.9**
	baz=38						
UCH				⇑*i*S	**Sn**	**23 14 55.0**	**+2.7**
	baz=38						
UCH	**Uchtor**	**3.96**	**38**	P	Pn	23 14 10.5	+5.0
	SNR=78						
KK31	**Karatay Array**	**3.99**	**352**	P	**Pn**	**23 14 08.3**	**+2.9**
	6.5nm,0.3s,baz=170,slow=12,SNR=190						
KK31				⇓S	**Sb**	**23 15 01.5**	**-1.4**
	41nm,0.5s,baz=170,slow=21,SNR=9.2						
EKS2	**Erkin-Say**	**4.01**	**28**	⇑*e*P	**Pn**	**23 14 07.9**	**+2.1**
	baz=28						
EKS2				⇑*i*S	**Sn**	**23 14 55.9**	**+3.0**
	baz=28						
EKS2	**Erkin-Say**	**4.01**	**28**	P	**Pb**	**23 14 12.0**	**-2.9**
	SNR=23						
AAK	**Ala-Archa**	**4.28**	**34**	Pn	Pn	23 14 14.6	+5.1
	23nm,0.3s,baz=199,slow=6.6,SNR=460						
AAK				Sn	**Sb**	**23 15 09.3**	**-2.0**
	4.2nm,0.3s,baz=145,slow=22,SNR=8.9						
AAK	**Ala-Archa**	**4.28**	**34**	⇑*i*P	**Pn**	**23 14 12.2**	**+2.7**
	baz=34						
AAK				⇑*e*S	**Sn**	**23 15 02.6**	**+3.0**
	baz=34						
AAK	**Ala-Archa**	**4.28**	**34**	P	Pn	23 14 14.7	+5.2
	SNR=121						
AAK	**Ala-Archa**	**4.28**	**34**	⇓P	Pn	23 14 14.5	+4.9
	37nm,0.5s						
AAK				⇑S	**Sb**	**23 15 09.1**	**-2.2**
	88nm,0.9s						
KBK	**Karagaybulak**	**4.50**	**38**	⇑*e*P	**Pn**	**23 14 15.3**	**+2.7**
	baz=38						
KBK				⇑*i*S	**Sn**	**23 15 08.1**	**+3.0**
	baz=38						
KBK	**Karagaybulak**	**4.50**	**38**	P	Pn	23 14 18.5	+5.9
	SNR=54						
CHMS	**Chumysh**	**4.68**	**34**	P	Pn	23 14 20.0	+5.0
	SNR=75						
USP	**Ospenovka**	**4.80**	**30**	P	**Pn**	**23 14 21.3**	**+4.7**
	SNR=11						
ULHL	**Ulahol**	**4.91**	**49**	⇑*i*P	**Pn**	**23 14 20.3**	**+2.0**
	baz=49						
ULHL				⇑*i*S	**Sn**	**23 15 18.2**	**+2.9**
	baz=49						
ULHL	**Ulahol**	**4.91**	**49**	P	**Pn**	**23 14 22.5**	**+4.2**
	SNR=41						
TKM2	**Tokmak 2**	**5.01**	**40**	⇓*i*P	**Pn**	**23 14 21.5**	**+1.8**
	baz=40						
TKM2				⇓*i*S	**Sn**	**23 15 19.5**	**+1.7**
	baz=40						
TKM2	**Tokmak 2**	**5.01**	**40**	P	**Pn**	**23 14 24.3**	**+4.6**
	SNR=50						
TKM2	**Tokmak 2**	**5.01**	**40**	⇓P	**Pn**	**23 14 24.3**	**+4.6**
	16nm,0.4s						
TKM2				⇑S	**Sb**	**23 15 26.9**	**-5.7**
	30nm,0.8s						
KST	**Kastek**	**5.29**	**41**	*e*P	Pb	23 14 31.7	-5.1
	9.5nm,0.2s						
KST				*e*S	**Sb**	**23 15 38.2**	**-2.1**
	19nm,0.4s						
DGS	**Degeres**	**5.34**	**39**	*e*P	**Pb**	**23 14 33.6**	**-4.1**
	20nm,0.3s						
DGS				*e*S	**Sb**	**23 15 41.7**	**0.0**
	46nm,0.5s						
MTBS	**Maitube**	**5.59**	**43**	*e*P	Pb	23 14 36.3	-5.6
	4.0nm,0.1s						
MTBS				*e*S	**Sb**	**23 15 46.6**	**-2.5**
	14nm,0.3s						
IZV	**Izvestkoviy**	**5.63**	**45**	*e*P	**Pb**	**23 14 39.1**	**-3.5**
	14nm,0.9s						
IZV				*e*S	**Sb**	**23 15 51.3**	**+1.2**
	26nm,0.5s						
KRBS	**Karabastau**	**5.64**	**35**	*e*P	**Pb**	**23 14 39.5**	**-3.3**
	14nm,0.3s						
KRBS				*e*S	**Sb**	**23 15 52.0**	**+1.6**
	12nm,0.4s						
TNSS	**Tian-Shan**	**5.81**	**46**	*e*P	**Pb**	**23 14 41.8**	**-4.1**
	6.0nm,0.3s						
TNSS				*e*S	**Sb**	**23 15 55.3**	**-0.4**
	15nm,0.4s						

MDOK	Medeo	5.95	46	*e*P	Pb	23 14 43.3	-4.8
	9.8nm,0.3s						
MDOK				*e*S	Sb	23 15 58.2	-1.2
	17nm,0.5s						
MDOK	Medeo	5.95	46	⇓P	Pn	23 14 37.2	+4.7
	11nm,0.5s						
KOTS	Kotyrbulak	6.03	46	*e*P	Pb	23 14 45.9	-3.6
	26nm,0.2s						
KOTS				*e*S	Sb	23 16 02.9	+1.1
	69nm,0.5s						
PDGK	Podgornoye	7.50	54	⇓P	Pn	23 14 58.2	+4.5
	4.7nm,0.7s						
MAKZ	Makanchi	10.98	42	⇓P	Pn	23 15 45.1	+3.9
	1.6nm,0.8s						
MK31	Makanchi Array	11.13	43	⇓P	Pn	23 15 46.7	+3.3
	0.8nm,0.6s,baz=225,slow=13,SNR=13						
MKAR	Makanchi Array	11.13	43	Pn	Pn	23 15 45.6	+2.1
	0.2nm,0.3s,baz=227,slow=14,SNR=17						
KURBB	Kurchatov Arra	12.58	22	Pn	Pn	23 16 03.2	+0.1
	0.1nm,0.3s,baz=216,slow=13,SNR=4.5						
AB31	Akbulak array	12.93	325	⇑P	Pn	23 16 06.9	-1.1
	1.2nm,0.3s,baz=136,slow=14,SNR=108						
AB31				⇑S	Sn	23 18 30.9	-0.9
	7.3nm,0.7s,baz=154,slow=20,SNR=11						
BVAR	Borovoye Array	13.89	358	Pn	Pn	23 16 20.8	-0.3
	0.2nm,0.3s,baz=168,slow=17,SNR=5.9						
BRVK	Borovoye	13.93	358	⇑P	Pn	23 16 22.1	+0.6
	2.0nm,0.8s						
AKTO	Aktyubinsk	14.65	325	Pn	Pn	23 16 29.9	-1.5
	0.5nm,0.3s,baz=135,slow=14,SNR=6.8						
AKTO				Sn	Sn	23 19 10.1	-3.5
	0.5nm,0.3s,baz=77,slow=11,SNR=4.7						
AKTO	Aktyubinsk	14.65	325	⇑P	Pn	23 16 27.9	-3.5
	7.4nm,0.9s						
AKTO				⇑S	Sn	23 19 12.4	-1.3
	8.9nm,0.8s						
ZALV	Zalesovo Beam	17.46	28	P	Pn	23 17 07.0	-0.6
	0.9nm,0.3s,baz=208,slow=11,SNR=18						
ARU	Arti	19.21	338	P	P	23 17 28.1	0.0
	0.0nm,0.3s,baz=131,slow=20,SNR=2.4						
KBZ	Khabaz	21.67	291	P	P	23 17 54.3	-0.6
	1.0nm,0.8s,baz=55,slow=2.1,SNR=2.5						
SONM	Songino Array	26.76	60	P	P	23 18 45.1	+0.9
	0.5nm,0.6s,baz=258,slow=9.9,SNR=4.7						
BRTR	Keskin Array B	28.90	283	P	P	23 19 05.1	+1.7
	0.5nm,0.8s,baz=95,slow=7.0,SNR=2.8						
FINES	FINESS Array B	35.42	324	P	P	23 20 00.5	+0.4
	1.6nm,0.9s,baz=116,slow=8.5,SNR=5.1						
TORD	Torodi Ar. Bea	65.98	268	P	P	23 23 51.4	+0.4
	0.7nm,0.7s,baz=48,slow=5.4,SNR=2.2						
ILAR	Eielson Array	72.19	16	P	P	23 24 29.4	+0.6
	0.5nm,0.9s,baz=331,slow=5.4,SNR=4.6						
YKA	Yellowknife Ar	78.60	3	P	P	23 25 05.5	-0.1
	0.5nm,0.7s,baz=355,slow=5.4,SNR=9.3						

IDC 14 23:27:13.3±23.0**, 4°.95S**×**150°.52E, h359**^{km}±207^{km}**, mb3.1**/4**, mb1 3.2**/4**, mb1mx2.9**/29**, mbtmp3.7**/4**, Error ellipse: s-maj=173.6km s-min=55.8km az=87.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	24.55	219	P	P	23 32 02.4	+0.3
	0.4nm,0.4s,baz=54,slow=9.0,SNR=8.6						
FITZ	Fitzroy Crossi	27.61	240	P	P	23 32 28.6	-0.7
	3.3nm,0.9s,baz=69,slow=6.8,SNR=2.8						
MKAR	Makanchi Array	78.96	319	P	P	23 38 39.1	+1.0
	0.3nm,0.5s,baz=97,slow=6.6,SNR=6.4						
ZALV	Zalesovo Beam	80.03	327	P	P	23 38 42.2	-1.4
	0.4nm,0.4s,baz=101,slow=7.5,SNR=2.4						
TORD	Torodi Ar. Bea	148.19	287	PKPbc	PKPbc	23 46 17.6	-0.8
	0.9nm,0.8s,baz=75,slow=2.4,SNR=2.5						

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*IDC **14** 23:31:13.6±1.5, 43°.79N×105°.49W, h0^{km}, mb3.8/1, mb1 3.6/6, mb1mx3.4/42, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=41.4km s-min=8.1km az=148.0*

*NEIC **14** 23:31:14.8±1.3, 43°.77N±0°.04×105°.30W±0°.06, h0^{km}±2^{km}, ML3.2/72, Error ellipse: s-maj=7.8km s-min=6.5km az=309.0*

ISC 14 23:31:14.0±1.0**, 43°.79N**±0°.05×**105°.26W**±0°.06**, h0**^{km}**, n44, σ0^{s}.95**/44**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	69	Pg	Pb	23 31 33.1	-0.3
K22A	Casper	1.47	219		Pn	23 31 40.0	-1.9
K22A				IAML		23 32 06.0	
	comp=E,313nm,0.6s						
PHWY	Pilot Hill	2.49	183		Pn	23 31 56.2	+0.1
PHWY				IAML		23 32 36.9	
	comp=E,94nm,0.6s						
RWWY	Rawlins	2.55	215		Pn	23 31 57.6	+0.8
RWWY				IAML		23 32 33.3	
	comp=E,130nm,0.7s						
N23A	Red Feather La	2.94	190	Pn	Pn	23 32 02.8	+0.6
N23A				IAML		23 32 45.5	
	comp=E,81nm,0.6s						
LAO	LASA Array	2.98	347	Pn	Pn	23 32 03.0	+0.4
RLMT	Red Lodge	3.16	296		Pn	23 32 05.3	0.0
RLMT				IAML		23 32 56.5	
	comp=E,43nm,0.3s						
RLMT				IAML		23 33 02.6	
	comp=E,66nm,0.4s						
BW06	Boulder Array	3.30	253		Pn	23 32 07.3	+0.1
BW06				IAML		23 32 55.1	
	comp=E,44nm,0.4s						
BW06				IAML		23 32 58.3	
	comp=E,52nm,0.6s						
PD31	Pinedale Array	3.30	253		Pn	23 32 07.1	-0.1
PDAR	Pinedale Array	3.30	253	Pn	Pn	23 32 07.1	-0.1
	comp=E,3.0nm,0.3s,baz=74,slow=17,SNR=66						
PDAR				Lg	Lg	23 32 51.1	
	comp=E,18nm,0.3s,baz=76,slow=32,SNR=29						
PDAR	Pinedale Array	3.30	253	Pn	Pn	23 32 06.8	-0.4
YNE	Yellowstone No	3.62	291		Pn	23 32 11.7	+0.2
YMP	Mirror Lake Pl	3.64	287		Pn	23 32 12.3	+0.4
OGNE	Ogallala	3.71	139	Pn	Pn	23 32 13.9	+1.2
LKWY	Lake	3.78	284		Pn	23 32 15.1	+1.4
LKWY				IAML		23 32 40.8	
	comp=E,41nm,0.5s						
H17A	Grant Village	3.88	281		Pn	23 32 16.8	+1.7
H17A				IAML		23 33 19.3	
	comp=N,28nm,0.6s						
H17A				IAML		23 33 19.5	
	comp=E,26nm,0.6s						
LOHW	Long Hollow	3.88	269		Pn	23 32 16.4	+1.2
FLWY	Flagg Ranch	3.94	276		Pn	23 32 16.3	+0.3
FLWY				IAML		23 33 24.0	
	comp=E,24nm,2.4s						
FLWY				IAML		23 33 30.5	
	comp=E,23nm,2.2s						
MOOW	Moose Ponds	3.98	271	Pn	Pn	23 32 17.6	+1.2
ISCO	Idaho Springs	4.00	184		Pn	23 32 17.5	+0.7
YPP	Pitchstone Pla	4.03	279		Pn	23 32 17.4	+0.1
REDW	Red Top Meadow	4.09	266		Pn	23 32 18.8	+0.8
REDW				IAML		23 33 34.9	
	comp=E,34nm,0.7s						
YHH	Holmes Hill	4.14	286		Pn	23 32 19.9	+1.1
YMR	Madison River	4.19	284		Pn	23 32 21.2	+1.7
E28A	Huff	4.26	48		Pn	23 32 21.2	+1.0
O20A	White River Ci	4.28	212	Pn	Pn	23 32 20.8	+0.3
O20A				IAML		23 33 45.7	
	comp=N,29nm,0.8s						
YHB	Horse Butte	4.37	285		Pn	23 32 22.2	+0.4
YHL	Hebgen Lake	4.38	286		Pn	23 32 21.6	-0.5
AHID	Auburn Hatcher	4.39	258		Pn	23 32 23.6	+1.6
AHID				IAML		23 33 34.7	
	comp=E,26nm,0.7s						
RDMU	Red Mountain	4.54	226		Pn	23 32 24.4	+0.2
QLMT	Earthquake Lak	4.55	285		Pn	23 32 25.8	+1.5
DGMT	Dagmar	4.74	9		Pn	23 32 28.6	+1.8
SMCO	Snowmass	4.79	196	Pn	Pn	23 32 28.9	+1.1
SMCO				IAML		23 33 48.0	
	comp=E,16nm,0.7s						
SMCO				IAML		23 33 52.4	
	comp=E,21nm,0.4s						
Q24A	Divide	4.82	179		Pn	23 32 28.4	+0.2
Q24A				IAML		23 33 51.5	
	comp=E,19nm,0.6s						
BOZ	Bozeman (W)	4.89	294		Pn	23 32 29.2	+0.3
BOZ				IAML		23 33 47.8	
	comp=E,16nm,0.7s						
BOZ				IAML		23 33 49.7	
	comp=E,11nm,0.6s						
HWUT	Hardware Ranch	5.13	247		Pn	23 32 32.3	-0.1
HWUT				IAML		23 34 08.2	
	comp=E,18nm,0.8s						
KSCO	Kaye Shedlock’	5.17	157		Pn	23 32 33.6	+0.8
EGMT	Eagleton	5.27	325	Pn	Pn	23 32 34.1	0.0
TCUT	Toone Canyon	5.28	242		Pn	23 32 36.1	+1.8
ELK	Elko	8.00	251	Pn	Pn	23 33 12.8	+1.0
	comp=E,0.5nm,0.3s,baz=67,slow=9.9,SNR=8.9						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	23 33 25.3	-1.1
	comp=E,0.8nm,0.3s,baz=232,slow=11,SNR=12						
ULM				Lg	Lg	23 35 54.8	
	comp=E,0.2nm,0.3s,baz=306,slow=19,SNR=1.5						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	23 33 55.3	-0.3
	comp=E,0.1nm,0.3s,baz=51,slow=11,SNR=4.9						
YKA	Yellowknife Ar	19.52	347	P	P	23 35 42.5	-0.1
	comp=E,0.1nm,0.3s,baz=162,slow=11,SNR=5.2						
MKAR	Makanchi Array	89.55	355	P	P	23 44 12.5	-0.6
	comp=E,0.3nm,0.7s,baz=24,slow=4.7,SNR=4.1						

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*INMG **14** 23:35:39.6±1.1, 34°.70N×4°.48W, h31^{km}±10^{km}, ML2.1, Error ellipse: s-maj=3.3km s-min=2.8km az=118.0*

*SFS **14** 23:35:39.0, 34°.87N×4°.37W, ML2.0, ZERKAT (MARRUECOS)*

*IGIL **14** 23:35:39.4, 34°.78N×4°.39W, h16^{km}*

*MDD **14** 23:35:39.1±1.4, 34°.65N×4°.42W, h68^{km}±10^{km}, mb2.7/9, Error ellipse: s-maj=14.0km s-min=6.8km az=3.0, PRXIMO*

ISC 14 23:35:37.5±1.4**, 34°.65N**±0°.05×**4°.48W**±0°.04**, h74**^{km}±11^{km}**, n33, σ1^{s}.50**/61**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVLZ	Peæn de	0.55	16	P	Pn	23 35 51.2	+0.2
PVLZ				S	Sn	23 36 01.2	+0.2
PVLZ	Peæn de	0.55	16	*e*P	Pn	23 35 51.2	+0.2
PVLZ				*e*S	Sn	23 36 01.2	+0.2
IFR	Ifrane	1.25	206	*e*P	Pn	23 36 00.1	+0.6
IFR				*i* S	Sn	23 36 15.4	-0.6
EMEL	Melilla	1.41	62	P	Pn	23 36 02.5	+1.1
	12nm,0.1s,SNR=4.0						
EMEL				S	Sn	23 36 18.5	-0.9
	26nm,0.2s,SNR=7.9						
MELI	Melilla	1.43	63	S	Sn	23 36 18.4	-1.2
	24nm,0.3s,SNR=7.9						
ECEU	Ceuta	1.45	330	S	Sn	23 36 20.9	+0.7
	2.9nm,0.2s,SNR=7.9						
EALB	Alboran	1.75	42	P	Pn	23 36 05.2	-0.7
	0.4nm,0.0s,SNR=7.5						
EALB				S	Sn	23 36 25.3	-2.1
	6.9nm,0.2s						
ELGU	Los Guajares,	2.32	17	P	Pn	23 36 13.3	-0.3
	0.6nm,0.1s,SNR=7.9						
ELGU				S	Sn	23 36 39.6	-1.6
	3.2nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	2.48	7	P	Pn	23 36 16.4	+0.6
	0.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	23 36 43.8	-1.2
	4.9nm,0.4s,SNR=7.9						
EBER	Berja	2.59	29	P	Pn	23 36 17.2	-0.1
	0.3nm,0.2s,SNR=7.1						
EBER				S	Sn	23 36 46.8	-1.1
	4.7nm,0.4s						
EQUE	Quentar	2.69	18	P	Pn	23 36 19.3	+0.7
	0.1nm,0.0s,SNR=7.9						
EQUE				S	Sn	23 36 47.9	-2.3
	3.2nm,0.5s,SNR=7.9						
ENIJ	Nijar	2.97	38	S	Sn	23 36 54.7	-2.1
	3.4nm,0.3s,SNR=7.9						
EQES	Quesada	3.35	19	P	Pn	23 36 29.9	+2.3
	0.2nm,0.1s,SNR=12						
EQES				S	Sn	23 37 07.2	+0.9
	3.1nm,0.4s,SNR=7.9						
ECAB	El Cabril	3.50	348	S	Sn	23 37 09.2	-0.7
	0.7nm,0.3s,SNR=7.9						
EADA	Adamuz	3.51	359	P	Pn	23 36 31.4	+1.7
	0.4nm,0.3s,SNR=7.9						
EADA				S	Sn	23 37 10.1	-0.1
	0.6nm,0.3s,SNR=7.9						
EGRO	El Granado	3.77	321	P	Pn	23 36 34.3	+1.1
	0.7nm,0.1s,SNR=7.9						
EGRO				S	Sn	23 37 14.1	-2.2
	1.0nm,0.2s,SNR=7.9						
PVAQ	Vaqueiros	3.80	317	P	Pn	23 36 35.1	+1.5
PVAQ				S	Sn	23 37 15.9	-1.2
	2.5nm,0.7s						
PVAQ	Vaqueiros	3.80	317	*e*Pn	Pn	23 36 35.1	+1.5
PVAQ				*e*Sn	Sn	23 37 15.9	-1.2
PVAQ				A	A	23 37 25.6	
	2.5nm,0.7s						
SESP	Santiago Espad	3.80	24	P	Pn	23 36 36.0	+2.2
	0.3nm,0.1s,SNR=4.0						
SESP				S	Sn	23 37 18.8	+1.4
	1.4nm,0.3s,SNR=7.9						
PBDV	Barranco-do-Ve	3.81	314	P	Pn	23 36 34.6	+0.8
PBDV				S	Sn	23 37 15.7	-1.8
	3.2nm,0.5s						
PBDV	Barranco-do-Ve	3.81	314	*e*Pn	Pn	23 36 34.6	+0.8
PBDV				*e*Sn	Sn	23 37 15.7	-1.8
PBDV				A	A	23 37 32.1	
	3.2nm,0.5s						
PBAR	Barrancos	4.08	330	P	Pn	23 36 39.5	+2.1
PBAR				S	Sn	23 37 22.2	-1.7
	1.9nm,0.9s						
PBAR	Barrancos	4.08	330	*e*Pn	Pn	23 36 39.5	+2.1
PBAR				*e*Sn	Sn	23 37 22.2	-1.7
PBAR				A	A	23 37 23.6	
	1.9nm,0.9s						
PCVE	Castro Verde	4.14	317	P	Pn	23 36 39.7	+1.4
PCVE				S	Sn	23 37 24.3	-1.2
	3.0nm,0.5s						
PCVE	Castro Verde	4.14	317	*e*Pn	Pn	23 36 39.7	+1.4
PCVE				*e*Sn	Sn	23 37 24.3	-1.2
PCVE				A	A	23 37 25.5	
	3.0nm,0.5s						
MORF	Marmelete	4.30	309	P	Pn	23 36 41.8	+1.3
MORF				S	Sn	23 37 27.8	-1.6
	2.6nm,0.3s						
MORF	Marmelete	4.30	309	*e*Pn	Pn	23 36 41.8	+1.3
MORF				*e*Sn	Sn	23 37 27.8	-1.6
MORF				A	A	23 37 35.1	
	2.6nm,0.3s						
PFVI	Vila Bisbo	4.31	306	*e*Pn	Pn	23 36 42.5	+1.9
PFVI				*e*Sn	Sn	23 37 27.1	-2.5
MESJ	Messejana	4.39	318	*e*P	Pn	23 36 43.0	+1.4
MESJ	Messejana	4.39	318	P	Pn	23 36 43.0	+1.4
MESJ				S	Sn	23 37 30.2	-1.3
MESJ	Messejana	4.39	318	*e*Pn	Pn	23 36 43.1	+1.4
MESJ				*e*Sn	Sn	23 37 30.2	-1.3
PNCL	Nicolau / Gran	4.76	318	P	Pn	23 36 48.0	+1.4
PNCL				S	Sn	23 37 37.9	-2.5
PNCL	Nicolau / Gran	4.76	318	*e*Pn	Pn	23 36 48.0	+1.4
PNCL				*e*Sn	Sn	23 37 37.9	-2.5

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*IDC **14** 23:38:17.6±8.8, 16°.76S×174°.50W, h146^{km}±81^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/30, mbtmp4.1/10, Error ellipse: s-maj=44.1km s-min=23.4km az=145.0*

*NOU **14** 23:38:59.6, 13°.99S×172°.16W, h95^{km}, MLv2.5, Samoa Islands*

ISC 14 23:38:19.7±0.9**, 16°.8S**±0°.2×**174°.4W**±0°.2**, h172**^{km}**, n13, σ1^{s}.21**/14**, mb4.0**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.79	41	P	Pn	23 39 15.5	-2.5
DZM	Mont Dzumac	18.86	251	P	P	23 42 26.0	-1.0
	0.2nm,0.3s,baz=112,slow=19,SNR=3.3						
URZ	Urewera	22.67	198	P	P	23 43 06.2	-0.2
	3.8nm,0.3s,baz=332,slow=12,SNR=2.6						
STKA	Stephens Creek	42.56	241	P	P	23 45 58.5	-0.2
	5.4nm,0.7s,baz=87,slow=9.5,SNR=11						
ASAR	Alice Springs	48.83	253	P	P	23 46 46.8	-1.2
	12nm,0.7s,baz=87,slow=8.5,SNR=115						
ASAR				PcP	PcP	23 48 10.4	+0.3
	0.7nm,0.6s,baz=98,slow=5.1,SNR=2.2						
PETK	Petropavlovsk-	73.67	343	P	P	23 49 34.7	+0.4
	2.0nm,0.4s,baz=192,slow=5.6,SNR=2.6						
NVAR	Mina Array Bea	75.96	42	P	P	23 49 50.0	+2.0
	0.7nm,0.8s,baz=226,slow=10,SNR=5.3						
PDAR	Pinedale Array	83.90	42	P	P	23 50 31.7	+1.2
	0.5nm,0.8s,baz=200,slow=3.9,SNR=4.0						
ILAR	Eielson Array	83.98	11	P	P	23 50 30.4	+0.3
	0.5nm,0.6s,baz=233,slow=6.1,SNR=12						
YKA	Yellowknife Ar	91.73	24	P	P	23 51 07.7	+0.5
	0.1nm,0.6s,baz=253,slow=4.1,SNR=3.7						
CMAR	Chiang Mai Arr	92.19	289	P	P	23 51 11.6	+1.2
	0.4nm,0.3s,baz=106,slow=2.9,SNR=4.7						
BRTR	Keskin Array B	146.63	319	PKPbc	PKPbc	23 57 41.6	+0.1
	0.8nm,0.6s,baz=126,slow=2.5,SNR=8.9						
GERES	GERESS Array B	147.36	350	PKPbc	PKPbc	23 57 43.0	-0.2
	0.3nm,0.5s,baz=19,slow=6.2,SNR=2.2						

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*BJI **15** 00:09:24.1±0.0, 0°.19S×120°.16E, h67^{km}, mB5.2/40, mb5.2/70, Ms4.6/26, Ms7 4.2/26*

*IDC **15** 00:09:27.0±0.4, 0°.13N×120°.07E, h56^{km}±3^{km}, mb4.5/23, mb1 4.6/27, mb1mx4.5/37, mbtmp4.8/27, MS3.8/27, Ms1 3.8/27, ms1mx3.7/34, Error ellipse: s-maj=13.4km s-min=8.5km az=73.0*

*MOS **15** 00:09:26.0±0.9, 0°.17N×120°.05E, h64^{km}, mb5.5/64, Error ellipse: s-maj=9.6km s-min=4.3km az=118.3*

*GCMT **15** 00:09:27.7±0.2, 0°.19N±0°.01×119°.88E±0°.02, h28^{km}±1^{km}, MW5.1/93, Moment Tensor Solution. s50,c61; s93,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.16±.14; $M_{\theta\theta}$-0.25±.09; $M_{\phi\phi}$2.41±.11; $M_{r\theta}$-4.06±.31; $M_{\theta\phi}$1.06±.07; $M_{\phi r}$-3.08±.24; Best double couple: $M_0$5.68500×10^{16} NP1:ϕ_s174.00000°, δ19.00000°, λ-143.00000°. NP2: ϕ_s49.00000°, δ79.00000°, λ-75.00000°. Principal axes: T 5.5760, Plg32.0000°, Azm126.0000°; N 0.2220, Plg15.0000°, Azm226.0000°; P -5.7950, Plg54.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 00:09:27.7±1.6, 0°.14N±0°.05×119°.97E±0°.06, h62^{km}±1^{km}, mb5.2/94 Error ellipse: s-maj=8.7km s-min=7.3km az=122.0*

*DJA **15** 00:09:28.3±0.2, 0°N±2°×12°0E±°, h62^{km}±2^{km}, M4.9/58, mb5.0/58, mB5.4/26, MLv5.2/20, Mw(mB)4.8/26, MwMwp5.0/2, Mwp5.3/2*

*NOU **15** 00:09:29.0, 0°.12N×119°.98E, h72^{km}, mb5.2, Minahassa Peninsula, Sulawesi*

*KLM **15** 00:09:30, 0°.06N×119°.99E, h69^{km}, mb5.1*

ISC 15 00:09:27.3±0.3**, 0°.13N**±0°.04×**120°.02E**±0°.04**, h59**^{km}±2^{km}**, h59**^{km}**:pP-P, n428, σ1^{s}.29**/461**, mb5.2**/157**, MS3.8**/31**, 63C-28D, Fault plane solution: NP1:**ϕ_s61.35402°**,** δ82.23021°**,** λ-69.81471°. **NP2:**ϕ_s171.54430°**,** δ21.57068°**,** λ-158.42468°. **Principal axes:** T Plg34.1934°**,** Azm134.1976°**;** N Plg19.9920°**,** Azm238.5086°**;** P Plg48.8666°**,** Azm353.1260°**; Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	1.24	38		Pn	00 09 48.5	0.0
TOLI2					Sn	00 10 05.2	+0.9
APSI	Ampana	1.93	122	P	Pn	00 09 58.5	+0.7
MRSI	Marisa	1.96	80	P	Pn	00 09 59.8	+1.7
SGKI	Sangatta, Kali	2.50	255	P	Pn	00 10 03.9	-1.6
LUWI	Luwuk	2.99	113	Pn	Pn	00 10 14.8	+2.5
LUWI	Luwuk	2.99	113	P	Pn	00 10 14.7	+2.5
GTOI	Gorontalo	3.04	80	P	Pn	00 10 13.8	+0.9
TTSI	Tana Toraja	3.16	184	P	Pn	00 10 16.6	+2.1
BKB	Balikpapan	3.41	246	Pn	Pn	00 10 16.3	-1.7
BKB	Balikpapan	3.41	246	P	Pn	00 10 17.1	-0.9
KMSI	Cibinong	3.99	84	P	Pn	00 10 28.6	+2.7
SPSI	Sidrap Palu	4.07	183	P	Pn	00 10 28.5	+1.4
BNSI	Bone	4.50	179	P	Pn	00 10 34.8	+1.9
KAPI	Kappang	5.11	183	P	Pn	00 10 42.4	+1.0
	5.4nm,0.3s,baz=350,slow=11,SNR=44						
KAPI				LR	LR	00 12 54.3	
	comp=Z,3μm,20.5s,baz=356,slow=40						
KAPI	Kappang	5.11	183	Pn	Pn	00 10 42.9	+1.6
MTKI	Muara Teweh, K	5.23	258	P	Pn	00 10 43.1	+0.2
	3.6nm287nm,0.6s						
MYLDM	Lahad Datu	5.24	343	Pn	Pn	00 10 44.0	+0.9
BKSI	Bulukumba	5.41	179	P	Pn	00 10 46.6	+1.1
	0.9nm2μm316nm,0.9s						
SPMM	Sapulut	5.77	322	P	Pn	00 10 50.0	-0.4
BBKI	Banjar Baru	6.28	235	P	Pn	00 10 58.0	+0.6
	0.7nm122nm,1.2s						
SANI	Sanana	6.35	110	P	Pn	00 10 58.1	-0.2
	0.5nm2μm140nm,0.8s						
KKM	Kota Kinabalu	7.00	327	Pn	Pn	00 11 06.6	-0.6
SKMP	Bagumbayan, Su	7.79	35	*e*P	Pn	00 11 16.8	-1.3
SKMP				*e*S	Sn	00 12 36.7	-8.3
NLAI	Namlea	7.83	115	P	Pn	00 11 21.0	+2.4
	0.7nm3μm145nm,0.8s						
SBUM	Sibu	8.13	287	Pn	Pn	00 11 22.0	-0.7
SBUM	Sibu	8.13	287	P	Pn	00 11 23.0	+0.3
PAGZ	Pagadian	8.37	24	*e*P	Pn	00 11 23.6	-2.4
PAGZ				*e*S	Sn	00 12 55.9	-3.3
KCP	Kidapawan	8.51	36	⇓*e*P	Pn	00 11 38.0	+10
DAV	Davao City (W)	8.85	39	LR	LR	00 15 35.6	
	comp=Z,680nm,19.6s,baz=176,slow=42						
EDFI	Ende, Flores	8.97	169	P	Pn	00 11 35.8	+1.4
	13nm,0.9s						
MSAI	Masohi	9.55	111	P	Pn	00 11 45.9	+3.7
	962nm27nm,1.0s						
KSM	Kuching	9.80	278	P	Pn	00 11 46.0	+0.5
BATI	Baumata	10.89	161	P	Pn	00 12 02.4	+2.0
	2.8nm,0.3s,baz=231,slow=5.2,SNR=7.7						
BATI				LR	LR	00 16 57.8	
	comp=Z,2μm,21.3s,baz=6.5,slow=42						
BATI	Baumata	10.89	161	P	Pn	00 12 04.0	+3.5
	52nm,1.0s						
SWI	Sorong	11.29	95	P	Pn	00 12 06.9	+1.0
	84nm,1.4s						
SIJI	Sorong	11.29	95	P	Pn	00 12 06.5	+0.5
	2.5nm,0.3s,baz=255,slow=9.7,SNR=11						
FAKI	Fak Fak	12.60	104		Pn	00 12 23.5	-0.3
FAKI	Fak Fak	12.60	104	P	Pn	00 12 22.8	-1.0
	47nm,1.0s						
KPJI	Karang Pucung	13.31	236	P	Pn	00 12 35.8	+2.3
	66nm,1.2s						
TGY	Tagaytay City	13.91	4	P	Pn	00 12 44.4	+2.7
	60nm,0.3s,baz=208,slow=15,SNR=1.7						
PPBI	Pangkal Pinang	14.06	261	P	Pn	00 12 41.9	-1.7
	7μm112nm,0.4s						
LEM	Lembang	14.17	241	P	Pn	00 12 47.3	+2.1
	5.0nm,0.3s,baz=141,slow=23,SNR=1.8						
LEM				LR	LR	00 20 12.5	
	comp=Z,263nm,18.6s,baz=36,slow=45						
CISI	Cisompet, Garu	14.36	238		Pn	00 12 48.1	+0.5
CBJI	Citeko	14.66	243	P	P	00 12 54.9	-1.4
	78nm,1.2s						
PMBI	Palembang	15.54	259	Pn	Pn	00 13 03.4	+0.5
PMBI				IAmb	IAmb	00 13 25.4	
	comp=Z,234nm,1.1s						
CGJI	Cibinong	15.78	245	P	Pn	00 13 06.1	+0.2
	comp=Z,1μmcomp=Z,97nm,1.3s						
KLSI		16.00	252	P	Pn	00 13 08.5	-0.2
	comp=Z,21nm,1.2s						
LHSI	Lahat	16.94	256	P	P	00 13 21.2	-0.5
	comp=Z,69nm,1.1s						
MTN	Manton Dam	16.96	140	P	Pn	00 13 21.6	+0.9
	baz=17,SNR=6.3						
MTN	Manton Dam	16.96	140	P	P	00 13 22.9	+1.0
MTN				IAmb	IAmb	00 13 25.2	
	comp=Z,468nm,1.9s						
KDU	Kakadu	17.74	136	P	P	00 13 30.9	+0.5
	baz=18,SNR=11						
XMIS	Christmas Isla	17.75	233		Pn	00 13 30.4	-0.1
SDSI	Sungai Dareh	18.62	267	P	Pn	00 13 40.5	-0.5
	comp=Z,917nmcomp=Z,47nm,1.3s						
FITZ	Fitzroy Crossi	18.94	163	P	P	00 13 44.2	+0.6
	baz=19,SNR=14						
FITZ	Fitzroy Crossi	18.94	163	P	P	00 13 44.2	+0.6
	comp=Z,0.4nm,0.3s,baz=360,slow=11,SNR=19						
FITZ				LR	LR	00 22 06.4	
	comp=Z,371nm,19.8s,baz=340,slow=40						
FITZ	Fitzroy Crossi	18.94	163	P	P	00 13 43.6	+0.1
BKNI	Bangkinang	18.98	271	P	P	00 13 43.8	-0.3
IPM	Ipoh	19.46	283	P	P	00 13 49.5	+0.1
IPM	Ipoh	19.46	283	P	Pn	00 13 51.0	0.0
PDSI	Padang	19.58	267	P	Pn	00 13 51.6	-0.9
	comp=Z,3μmcomp=Z,32nm,1.6s						
KULM	Kulim	20.01	285	P	P	00 13 55.2	-0.1
KULM	Kulim	20.01	285	P	P	00 13 56.0	+0.7
MNSI	Mandailing Nat	20.45	272	P	P	00 14 00.2	+0.1
	comp=Z,907nmcomp=Z,57nm,1.0s						
RPSI	Rantau Prapat	21.24	277	P	P	00 14 09.0	+0.4
PSI	Prapat	21.25	277	P	P	00 14 09.0	+0.1
	comp=Z,34nm,0.9s,baz=1.5,slow=1.4,SNR=18						
PSI				LR	LR	00 23 16.8	

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       comp=Z,327nm,20.8s,baz=90,slow=39
QIZ    Qiongzhong       21.27 333   P      P       00 14 09.3 +0.4
QIZ                                 S      S       00 18 03.6 +1.4
QIZ                                 LR     LR
       comp=Z,260nm,15.7s
QIZ                                 LR     LR
       comp=Z,220nm,16.3s
QIZ                                 LR     LR
       comp=Z,470nm,24.1s
PSA00  Pilbara Seismi   21.57 180   P      P       00 14 11.5  -0.5
TRTT   Trang            21.66 291   P      P       00 14 14.4 +1.3
       comp=Z,99nm,1.2s
GSI    Gunungsitoli     22.47 273   P      P       00 14 20.9  -0.9
GSI    Gunungsitoli     22.47 273   P      P       00 14 21.4  -0.5
       comp=Z,59nm,1.0s
KCSI   Kotacane, Aceh   22.48 279   P      P       00 14 22.7 +0.7
       comp=Z,3µmcomp=Z,36nm,0.9s
SRAK   Srakaew          22.51 309   P      P       00 14 18.2  -4.1
       comp=Z,4µmcomp=Z,251nm,1.0s
TPTI                    23.03 278   P      P       00 14 28.2 +0.5
       comp=Z,17nm,1.1s
LHMI   Lhok Sumawe      23.59 283   P      P       00 14 32.6  -0.4
CHAI   Chaiyaphum       23.71 312   P      P       00 14 34.4 +0.3
       comp=Z,1µmcomp=Z,148nm,0.9s
NONG   Nongkai          24.35 318   P      P       00 14 39.0  -0.8
       comp=Z,23µmcomp=Z,83nm,1.5s
WRAB   Tennant Creek    24.39 146   P      P       00 14 40.0  -0.2
WRAB                                pmax   pmax
       comp=Z,117nm,1.3s
WRAB   Tennant Creek    24.39 146   P      P       00 14 40.0  -0.2
WRAB                                IAmb   IAmb    00 14 40.9
       comp=Z,117nm,1.2s
YHNB   Yeheng           24.43   3   P      P       00 14 41.2 +0.6
YHNB                                IAmb   IAmb    00 15 15.8
       comp=Z,191nm,1.9s
UTHA   Uthaitani        25.45 308   P      P       00 14 51.2 +1.3
       comp=Z,582nmcomp=Z,65nm,1.0s
PHIT   Phitsanulok      25.69 312   P      P       00 14 53.5 +1.4
       comp=Z,117nm,1.1s
UTTA   Uttaradit        25.94 313   P      P       00 14 54.9 +0.5
       comp=Z,582nmcomp=Z,71nm,0.9s
SLVN   Son La           26.30 324   P      P       00 14 58.2 +0.6
MEEK   Meekatharra      26.64 183   P      P       00 15 00.0  -0.6
       baz=27,SNR=7.4
COEN   Coen             26.86 122   P      P       00 15 02.5  -0.2
LAMP   Lampang          27.11 314   P      P       00 15 06.4 +1.5
       comp=Z,29nm,1.1s
AS31   Alice Springs    27.23 151   P      P       00 15 05.5  -0.4
ASAR   Alice Springs    27.23 151   P      P       00 15 05.8  -0.2
       comp=Z,8.1nm,0.7s,baz=331,slow=7.8,SNR=90
ASAR                                PcP    PcP     00 18 24.6  -0.3
       comp=Z,0.5nm,0.4s,baz=359,slow=2.3,SNR=4.2
ASAR                                S      S       00 19 42.2 +1.3
       comp=Z,2.0nm,1.0s,baz=334,slow=16,SNR=4.6
ASAR                                ScP    ScP     00 21 58.9  -1.6
       comp=Z,0.9nm,0.9s,baz=349,slow=2.0,SNR=4.3
ASAR                                LR     LR      00 26 24.6
       comp=Z,243nm,21.9s,baz=324,slow=37
ASAR   Alice Springs    27.23 151   P      P       00 15 05.6  -0.3
MANU   Manus Island     27.43  95   P      P       00 15 08.5 +0.7
MANU                                IAmb   IAmb    00 15 09.1
       comp=Z,65nm,1.4s
CM36   Chiang Mai Arr   27.50 313   P      P       00 15 09.0 +0.6
CM04   Chiang Mai Arr   27.51 312   P      P       00 15 09.7 +1.2
       comp=Z,151nmcomp=Z,18nm,1.1s
CM09   Chiang Mai Arr   27.53 313   P      P       00 15 09.9 +1.3
       comp=Z,175nmcomp=Z,16nm,1.0s
CM05   Chiang Mai Arr   27.54 312   P      P       00 15 09.8 +1.1
       comp=Z,126nmcomp=Z,15nm,1.1s
CM01   Chiang Mai Arr   27.54 312   P      P       00 15 10.0 +1.3
       comp=Z,166nmcomp=Z,17nm,1.1s
CM02   Chiang Mai Arr   27.56 312   P      P       00 15 10.0 +1.1
       comp=Z,144nmcomp=Z,17nm,1.0s
CM35   Chiang Mai Arr   27.56 313   P      P       00 15 09.0 +0.1
CM31   Chiang Mai Arr   27.57 312   P      P       00 15 10.6 +1.5
       comp=Z,409nm,1.1s
CM31   Chiang Mai Arr   27.57 312   P      P       00 15 08.5  -0.5
CMAR   Chiang Mai Arr   27.57 312   P      P       00 15 09.9 +0.8
       comp=Z,11nm,0.9s,baz=136,slow=7.1,SNR=51
CMAR                                LR     LR      00 29 06.4
       comp=Z,179nm,18.4s,baz=170,slow=43
CMAR   Chiang Mai Arr   27.57 312ceP       P       00 15 09.8 +0.7
CMAR                                pmax   pmax
       comp=Z,11nm,0.9s
CMAR   Chiang Mai Arr   27.57 312   P      P       00 15 08.8  -0.2
CM13   Chiang Mai Arr   27.58 312   P      P       00 15 10.1 +1.0
       comp=Z,147nmcomp=Z,18nm,1.0s
CM15   Chiang Mai Arr   27.59 312   P      P       00 15 10.2 +1.1
       comp=Z,19nm,0.9s
CM34   Chiang Mai Arr   27.67 313   P      P       00 15 11.0 +1.1
CM32   Chiang Mai Arr   27.77 313   P      P       00 15 12.0 +1.2
CMMT   Chiang Mai       27.80 313   P      P       00 15 11.8 +0.7
       comp=Z,337nmcomp=Z,17nm,1.3s
CHTO   Chiang Mai       27.80 313   P      P       00 15 11.4 +0.4
CHTO                                pmax   pmax
       comp=Z,59nm,1.4s
CHTO   Chiang Mai       27.80 313   P      P       00 15 11.4 +0.4
CHTO                                IAmb   IAmb    00 15 13.1
       comp=Z,59nm,1.4s
CM33   Chiang Mai Arr   27.80 313   P      P       00 15 11.0  -0.1
GUMO   Guam             28.02  60   LR     LR      00 25 52.4
       comp=Z,59nm,20.4s,baz=196,slow=35
QIS    Mount Isa        28.11 138   P      P       00 15 13.2  -0.6
       baz=28,SNR=12
MHMT   Maesarieng       28.16 311   P      P       00 15 15.0 +0.8
PMG    Port Moresby     28.63 110   P      P       00 15 17.2  -1.3
       comp=Z,8.3nm,0.3s,baz=321,slow=3.0,SNR=7.8
PMG    Port Moresby     28.63 110ceP       P       00 15 17.9  -0.6
PMG                                 pmax   pmax
       comp=Z,61nm,2.5s
PMG    Port Moresby     28.63 110   P      P       00 15 18.1  -0.4
PMG    Port Moresby     28.63 110   P      P       00 15 18.7 +0.2
GYA    Guiyang          29.17 335 ⇑P       P       00 15 24.4 +1.1
GYA                                 pP     sP      00 15 46.4 +1.6
GYA                                 S      S       00 20 10.0  -1.6
GYA                                 pmax   pmax
       comp=Z,13nm,1.1s
KMI    Kunming          29.94 327 ⇑P       P       00 15 31.8 +1.5
KMI                                 pP     pP      00 15 46.5 +1.9
KMI                                 sP     sP      00 15 54.8 +3.4
KMI                                 S      S       00 20 26.3 +2.3
KMI                                 pmax   pmax
       comp=Z,45nm,1.1s
KMI                                 pmax   pmax
       comp=Z,85nm,3.5s
KMI                                 LR     LR
       comp=Z,280nm,20.8s
KMI                                 LR     LR
       comp=Z,170nm,23.3s
KMI                                 LR     LR
       comp=Z,450nm,28.5s
KMI    Kunming          29.94 327   P      P       00 15 31.6 +1.3
KMI                                 pmax   pmax
       comp=Z,76nm,1.3s
KMI    Kunming          29.94 327   P      P       00 15 31.6 +1.3
KMI                                 IAmb   IAmb    00 15 33.1
       comp=Z,76nm,1.3s
MTSU   Mount Surprise   30.00 128   P      P       00 15 31.3 +0.6
       baz=30,SNR=12
WHN    Wuhan            30.73 350 ⇑P       P       00 15 39.1 +2.3
KMBL   Kambalda         31.37 177   P      P       00 15 42.6   0.0
       baz=32,SNR=5.5
ENH    Enshi            31.61 342   P      P       00 15 45.3 +0.7
ENH                                 IAmb   IAmb    00 15 46.7
       comp=Z,41nm,0.8s
FORT   Forrest          31.67 167   P      P       00 15 45.0  -0.1
       baz=32,SNR=9.7
FORT   Forrest          31.67 167   P      P       00 15 45.1  -0.1
FORT                                IAmb   IAmb    00 15 45.9
       comp=Z,40nm,0.8s
NJ2    Nanjing          31.77 358  eP      P       00 15 47.0 +1.0
NJ2                                 pmax   pmax
       comp=Z,16nm,0.6s
RABL   Rabaul           32.41  98   P      P       00 15 51.5  -0.4
RABL   Rabaul           32.41  98   P      P       00 15 52.9 +1.0
CTAO   Charters Tower   32.62 130   P      P       00 15 54.1 +0.5
CTAO                                pmax   pmax
       comp=Z,74nm,1.1s
CTAO   Charters Tower   32.62 130   P      P       00 15 54.1 +0.5
CTAO                                IAmb   IAmb    00 15 55.5
       comp=Z,74nm,1.1s
NWAO   Narrogin (SRO)   32.98 184   P      P       00 15 56.6  -0.1
       comp=Z,13nm,0.8s,baz=357,slow=9.0,SNR=4.0
CD2    Chengdu          34.28 335⇑iP       P       00 16 08.8 +0.7
CD2                                 S      S       00 21 32.1 +0.9
CD2                                 pmax   pmax
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       comp=Z,70nm,0.9s
CD2                                 pmax   pmax
       comp=Z,300nm,4.7s
CD2                                 LR     LR
       comp=Z,540nm,17.5s
CD2                                 LR     LR
       comp=Z,430nm,24.7s
CD2                                 LR     LR
       comp=Z,630nm,22.8s
XAN    Xi'an            35.30 344   P      P       00 16 16.9 +0.1
XAN                                 pP     pP      00 16 31.8 +0.2
XAN                                 pmax   pmax
       comp=Z,17nm,1.0s
XAN                                 pmax   pmax
       comp=Z,190nm,3.8s
JMN    Monobe           35.87  20   P      P       00 16 22.1 +0.4
TIA    Tai'an           36.00 356   P      P       00 16 23.8 +1.1
TIA                                 pmax   pmax
       comp=Z,16nm,0.9s
BBOO   Buckleboo        36.09 157   P      P       00 16 23.2  -0.3
       baz=36,SNR=19
BBOO   Buckleboo        36.09 157   P      P       00 16 23.2  -0.3
BBOO                                IAmb   IAmb    00 16 24.2
       comp=Z,52nm,1.0s
SHL    Shillong         37.11 315   P      P       00 16 32.6 +0.1
SHL                                 pmax   pmax
       comp=Z,68nm,1.0s
SHL    Shillong         37.11 315   P      P       00 16 32.6 +0.1
JWT    Wachi            37.81  21   P      P       00 16 37.4  -0.6
JWT                                 IAmb   IAmb    00 17 09.0
       comp=Z,39nm,1.2s
STKA   Stephens Creek   37.82 149   P      P       00 16 38.5 +0.3
       baz=38,SNR=13
STKA   Stephens Creek   37.82 149   P      P       00 16 38.5 +0.3
       comp=Z,35nm,0.8s,baz=317,slow=8.5,SNR=59
STKA                                LR     LR      00 32 31.5
       comp=Z,224nm,21.5s,baz=335,slow=37
STKA   Stephens Creek   37.82 149   P      P       00 16 38.1  -0.1
STKA                                pmax   pmax
       comp=Z,13nm,1.0s
STKA   Stephens Creek   37.82 149   P      P       00 16 38.1  -0.1
HTT    Hallett          37.82 154   P      P       00 16 38.8 +0.6
       baz=38,SNR=38
KSAR   Wonju Array Be   37.84  10   P      P       00 16 38.5 +0.2
KSAR   Wonju Array Be   37.84  10   P      P       00 16 38.5 +0.2
KSRS   Korea Array      37.85  10   P      P       00 16 38.6 +0.3
       comp=Z,7.3nm,0.9s,baz=199,slow=6.5,SNR=14
KSRS                                pP     pP      00 16 53.5 +0.1
       comp=Z,5.2nm,0.9s,baz=218,slow=5.7,SNR=5.4
KSRS                                LR     LR      00 34 18.5
       comp=Z,50nm,19.0s,baz=184,slow=39
TIY    Taiyuan          38.05 350  eP      P       00 16 41.4 +1.3
TIY                                 pmax   pmax
       comp=Z,28nm,0.6s
RMQ    Roma             38.30 136   P      P       00 16 41.5  -0.9
       baz=38,SNR=8.0
DL2    Dalian           38.62   2   P      P       00 16 45.1 +0.3
DL2                                 pmax   pmax
       comp=Z,40nm,1.0s
DL2                                 LR     LR
       comp=Z,670nm,21.9s
DL2                                 LR     LR
       comp=Z,610nm,20.4s
DL2                                 LR     LR
       comp=Z,260nm,22.3s
LZH    Lanzhou          38.81 339 ⇓P       P       00 16 47.9 +1.2
LZH                                 pP     pP      00 17 02.8 +1.2
LZH                                 sP     sP      00 17 13.1 +4.7
LZH                                 PP     PnPn    00 18 18.8  -0.5
LZH                                 pmax   pmax
       comp=Z,38nm,1.2s
LZH                                 pmax   pmax
       comp=Z,190nm,4.9s
LZH                                 LR     LR
       comp=Z,330nm,14.1s
LZH                                 LR     LR
       comp=Z,340nm,14.3s
LZH                                 LR     LR
       comp=Z,330nm,16.8s
EIDS   Eidsvold         39.29 133   P      P       00 16 49.5  -1.1
       baz=39,SNR=3.3
EIDS   Eidsvold         39.29 133   P      P       00 16 49.9  -0.8
CMSA   Cobar Meteorol   39.79 145   P      P       00 16 55.6 +0.9
       baz=40,SNR=8.7
BJT    Baijiatuau       39.86 355   P      P       00 16 56.2 +1.1
BJT                                 pmax   pmax
       comp=Z,25nm,0.8s
BJT    Baijiatuau       39.86 355   P      P       00 16 56.2 +1.1
BJT                                 IAmb   IAmb    00 16 56.8
       comp=Z,25nm,0.8s
BJI    Beijing          39.88 355   P      P       00 16 56.3 +1.0
BJI                                 pP     sP      00 17 16.6  -0.6
BJI                                 sP     pP      00 17 19.3 +9.0
BJI                                 sS     sS      00 23 26.3 +4.9
BJI                                 pmax   pmax
       comp=Z,41nm,1.0s
BJI                                 pmax   pmax
       comp=Z,120nm,3.9s
BJI                                 LR     LR
       comp=Z,220nm,4.3s
BJI                                 LR     LR
       comp=Z,280nm,4.1s
MAT    Matsushiro       39.97  23   P      P       00 16 54.6  -1.6
MAT                                eS      S       00 22 55.8  -1.7
MJAR   Matsushiro Arr   39.97  23   P      P       00 16 55.0  -1.1
       comp=Z,6.8nm,0.8s,baz=194,slow=9.0,SNR=12
MJAR                                pP     pP      00 17 09.5  -1.8
       comp=Z,8.1nm,0.9s,baz=195,slow=7.2,SNR=5.1
MJAR                                ScP    ScP     00 22 44.4  -0.4
       comp=Z,1.3nm,0.5s,baz=192,slow=3.9,SNR=4.7
MJAR                                LR     LR      00 35 06.2
       comp=Z,68nm,19.1s,baz=205,slow=38
MJAR   Matsushiro Arr   39.97  23   P      P       00 16 54.8  -1.4
MJAR                                pmax   pmax
       comp=Z,7.0nm,1.3s
MJAR   Matsushiro Arr   39.97  23   P      P       00 16 54.8  -1.4
LSA    Lhasa            40.27 319   P      P       00 17 00.4 +1.2
LSA                                 pmax   pmax
       comp=Z,160nm,1.1s
LSA    Lhasa            40.27 319   P      P       00 17 00.5 +1.2
LSA                                 pmax   pmax
       comp=Z,131nm,1.6s
LSA    Lhasa            40.27 319   P      P       00 17 00.5 +1.2
HNR    Honiara          40.87 105   LR     LR      00 36 15.0
       comp=Z,66nm,18.1s,baz=266,slow=39
ODAN   Odare            41.12 313  eP      P       00 17 07.3 +1.2
       comp=Z,334nm,1.2s
TAPN   Taplejung        41.17 314  eP      P       00 17 07.7 +1.2
       comp=Z,253nm,1.2s
HHC    Hu-ho-hao-te     41.25 350  eP      P       00 17 07.3 +0.5
HHC                                 pP     pP      00 17 22.6 +0.7
HHC                                 sP     sP      00 17 29.8 +1.1
HHC                                 pmax   pmax
       comp=Z,31nm,1.0s
HHC                                 pmax   pmax
       comp=Z,98nm,5.3s
JSD    Sado             41.30  22   P      P       00 17 06.7  -0.3
BTO    Baotou           41.30 348  eP      P       00 17 09.0 +1.8
BTO                                 S      S       00 23 22.6 +5.3
RAMN   Ramite           41.75 312  eP      P       00 17 12.7 +1.5
       comp=Z,436nm,1.1s
ARPS   Mount Arapiles   41.92 153   P      P       00 17 12.9 +0.8
       baz=42,SNR=9.5
ARMA   Armidale         42.73 138   P      P       00 17 18.5  -0.6
       baz=43,SNR=7.1
ARMA   Armidale         42.73 138   P      P       00 17 20.1 +1.1
ARMA                                IAmb   IAmb    00 17 22.2
       comp=Z,77nm,1.3s
GUN    Gumba            42.82 313  eP      P       00 17 21.2 +1.2
       comp=Z,492nm,1.0s
PKI    Pulchoki         42.98 312  eP      P       00 17 22.1 +0.8
       comp=Z,248nm,1.1s
PKIN   Phulchoki        42.99 312  eP      P       00 17 21.9 +0.6
       comp=Z,154nm,1.0s
KKN    Kakani           43.19 312  eP      P       00 17 23.8 +0.9
       comp=Z,287nm,1.1s
DMN    Daman            43.22 312  eP      P       00 17 24.3 +1.1
       comp=Z,268nm,1.0s
GTA    Gaotai           43.24 337 ⇓P       P       00 17 24.3 +1.3
GTA                                 pP     pP      00 17 40.1 +2.0
GTA                                 sP     sP      00 17 46.8 +1.9
GTA                                 PcP    PcP     00 19 12.3 +0.9
GTA                                 PcS    PcS     00 23 00.3  -3.7
GTA                                 pmax   pmax
       comp=Z,33nm,1.2s
GTA                                 pmax   pmax
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       comp=Z,270nm,7.6s
GTA                                 LR     LR
       comp=Z,120nm,15.6s
GTA                                 LR     LR
       comp=Z,140nm,16.4s
GTA                                 LR     LR
       comp=Z,260nm,16.4s
YNG    Young            43.35 145   P      P       00 17 24.4 +0.5
       baz=43,SNR=11
CN2    Changchun        43.75   6  eP      P       00 17 29.8 +2.9
HYB    Hyderabad        44.27 295  i P     P       00 17 31.0  -0.5
CAN    Canberra         44.43 146   P      P       00 17 33.7 +1.1
CAN                                 pmax   pmax
       comp=Z,124nm,0.9s
CAN    Canberra         44.43 146   P      P       00 17 33.6 +1.1
DANN   Dangsing         44.62 312  eP      P       00 17 35.2 +0.7
       comp=Z,289nm,0.9s
CNB    Canberra Magne   44.64 145   P      P       00 17 34.1  -0.1
       baz=45,SNR=6.3
JTM    Tenmabayashi     44.76  23   P      P       00 17 34.8  -0.2
JTM                                 IAmb   IAmb    00 17 58.2
       comp=Z,72nm,1.4s
MDJ    Mudanjiang       45.11  10   P      P       00 17 37.8 +0.1
MDJ                                 IAmb   IAmb    00 17 39.6
       comp=Z,61nm,1.3s
USRK   Ussuriysk Ar.    45.16  12   P      P       00 17 38.2 +0.1
       comp=Z,2.4nm,0.6s,baz=220,slow=7.7,SNR=6.6
USRK                                LR     LR      00 36 49.2
       comp=Z,57nm,20.4s,baz=170,slow=36
TEY    Ternei           47.07  16  eP      P       00 17 47.6  -5.5
ASAJ   Asahikawa        48.20  22   P      P       00 18 01.8   0.0
       comp=Z,8.1nm,0.6s,baz=246,slow=10,SNR=5.4
ASAJ                                pP     pP      00 18 16.4  -0.9
       comp=Z,9.9nm,0.8s,baz=238,slow=16,SNR=3.0
ASAJ   Asahikawa        48.20  22   P      P       00 18 01.9   0.0
ASAJ                                pmax   pmax
       comp=Z,43nm,1.5s
JKA    Kamikawa-asahi   48.20  22   P      P       00 18 01.9   0.0
JKA                                 IAmb   IAmb    00 18 22.2
       comp=Z,43nm,1.5s
ULN    Ulaanbaatar      48.87 348ceP       P       00 18 08.1 +0.9
ULN                                 pmax   pmax
       comp=Z,44nm,1.1s
ULN    Ulaanbaatar      48.87 348   P      P       00 18 07.7 +0.5
ULN                                 IAmb   IAmb    00 18 09.4
       comp=Z,45nm,1.1s
POO    Poona            48.87 295  eP      P       00 18 07.0  -0.5
HIA    Hailar           48.95 360   P      P       00 18 08.2 +0.6
HIA                                 pmax   pmax
       comp=Z,42nm,1.9s
HIA    Hailar           48.95 360   P      P       00 18 08.2 +0.6
HIA                                 IAmb   IAmb    00 18 09.5
       comp=Z,42nm,1.9s
SONM   Songino Array    48.97 348   P      P       00 18 08.8 +0.9
       comp=Z,12nm,0.9s,baz=167,slow=8.8,SNR=49
SONM                                LR     LR      00 40 31.6
       comp=Z,158nm,19.4s,baz=182,slow=38
SONM   Songino Array    48.97 348   P      P       00 18 08.4 +0.4
SANVU  Saraoutou        49.10 111   P      P       00 18 09.6 +0.4
KLR    Kul'dur          49.95  10ceP       P       00 18 14.6  -0.6
KLR                                 pmax   pmax
       comp=Z,6.0nm,1.4s
DZM    Mont Dzumac      50.32 119  eP      P       00 18 18.8 +0.2
       comp=Z,107nm,1.2s
DZM    Mont Dzumac      50.32 119  eLR     LR      00 32 30.6
       comp=Z,415nm,36.2s
DZM    Mont Dzumac      50.32 119   P      P       00 18 19.1 +0.5
DZM                                 IAmb   IAmb    00 18 20.7
       comp=Z,45nm,1.1s
ZAK    Zakamensk        52.06 346  eP      P       00 18 30.6  -0.6
ZAK                                 pmax   pmax
       comp=Z,12nm,1.3s
ZAK                                 pmax   pmax
       comp=Z,5.0nm,1.3s
WMQ    Urumqi           52.18 331   P      P       00 18 33.9 +1.8
WMQ                                 pP     pP      00 18 51.5 +3.9
WMQ                                 sP     sP      00 18 58.8 +4.5
WMQ                                 pmax   pmax
       comp=Z,47nm,1.1s
WMQ                                 pmax   pmax
       comp=Z,420nm,5.9s
WMQ    Urumqi           52.18 331   P      P       00 18 33.2 +1.1
WMQ                                 pmax   pmax
       comp=Z,44nm,1.0s
WMQ    Urumqi           52.18 331   P      P       00 18 33.2 +1.1
WMQ                                 IAmb   IAmb    00 18 34.6
       comp=Z,44nm,1.0s
TLY    Talaya           53.20 347  eP      P       00 18 40.2 +0.8
TLY                                 pmax   pmax
       comp=Z,104nm,1.6s
TLY                                 MLR    MLR
       comp=Z,227nm,10.0s
TLY    Talaya           53.20 347   P      P       00 18 39.6 +0.2
TLY                                 IAmb   IAmb    00 18 41.9
       comp=Z,34nm,1.2s
ZEA    Zeya             53.77   5  eP      P       00 18 44.3 +0.8
ZEA                                 pmax   pmax
       comp=Z,10.0nm,1.1s
MOY    Mondy            53.81 345  eP      P       00 18 45.3 +1.3
MOY                                 pmax   pmax
       comp=Z,41nm,1.5s
NIL    Nilore           55.07 312   P      P       00 18 53.2  -0.2
NIL                                 pmax   pmax
       comp=Z,22nm,0.8s
NIL    Nilore           55.07 312   P      P       00 18 53.2  -0.2
NIL                                 IAmb   IAmb    00 18 54.2
       comp=Z,22nm,0.8s
SHLS   Shalkode         56.12 325  eP      P       00 18 58.6  -2.3
       comp=Z,37nm,1.1s,baz=325
SHLS   Shalkode         56.12 325  eP      P       00 18 58.6  -2.3
SHLS                                pmax   pmax
       comp=Z,37nm,1.1s
KSH    Kashi            56.12 320   P      P       00 19 02.4 +1.4
KSH                                 pP     pP      00 19 19.8 +3.1
KSH                                 S      S       00 26 45.8  -0.1
KSH                                 pmax   pmax
       comp=Z,90nm,1.0s
KSH                                 pmax   pmax
       comp=Z,420nm,6.8s
KSH                                 LR     LR
       comp=Z,590nm,6.6s
KSH                                 LR     LR
       comp=Z,550nm,7.3s
KSH                                 LR     LR
       comp=Z,450nm,6.9s
ZSN    Zaisan           56.18 332  eP      P       00 18 59.9  -1.3
       comp=Z,16nm,1.2s,baz=332
ZSN    Zaisan           56.18 332  eP      P       00 18 59.8  -1.3
ZSN                                 pmax   pmax
       comp=Z,16nm,1.2s
PDGK   Podgornoye       56.21 325  i P     P       00 19 01.9 +0.4
PDGK                                pmax   pmax
       comp=Z,48nm,1.0s
SATY   Saty             56.67 324  eP      P       00 19 04.1  -0.7
       comp=Z,27nm,0.9s,baz=324
SATY   Saty             56.67 324  eP      P       00 19 04.1  -0.7
SATY                                pmax   pmax
       comp=Z,27nm,0.9s
DGZ    Jazzator, Alta   56.72 335d iP      P       00 19 06.1 +1.0
DGZ                                 pmax   pmax
       comp=Z,38nm,1.0s
KPKS   Kokpek           56.76 325  eP      P       00 19 04.5  -1.0
       comp=Z,28nm,0.9s,baz=325
KPKS   Kokpek           56.76 325  eP      P       00 19 04.4  -1.0
KPKS                                pmax   pmax
       comp=Z,28nm,0.9s
MK31   Makanchi Array   56.97 330  i P     P       00 19 07.5 +0.7
MK31                                pmax   pmax
       comp=Z,46nm,1.0s
MK31   Makanchi Array   56.97 330   P      P       00 19 07.4 +0.6
MK31                                IAmb   IAmb    00 19 08.8
       comp=Z,28nm,1.1s
MKAR   Makanchi Array   56.97 330   P      P       00 19 07.7 +0.9
       comp=Z,7.2nm,0.3s,baz=128,slow=8.4,SNR=276
MKAR                                pP     pP      00 19 23.6 +1.1
       comp=Z,6.0nm,0.7s,baz=128,slow=7.9,SNR=5.4
MKAR                                LR     LR      00 46 06.2
       comp=Z,65nm,18.9s,baz=117,slow=39
MKAR   Makanchi Array   56.97 330   P      P       00 19 07.2 +0.5
MAKZ   Makanchi         57.14 330   P      P       00 19 08.4 +0.5
MAKZ                                pmax   pmax
       comp=Z,30nm,1.2s
MAKZ   Makanchi         57.14 330   P      P       00 19 08.4 +0.5
MAKZ                                IAmb   IAmb    00 19 09.9
       comp=Z,30nm,1.2s
ULHL   Ulahol           57.48 322   P      P       00 19 11.8 +1.1
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	SNR=20						
TNSS	**Tian-Shan**	**57.51**	**324**	*e*P	**P**	**00 19 10.8**	**-0.4**
	baz=324						
TNSS	**Tian-Shan**	**57.51**	**324**	*e*P	**P**	**00 19 10.7**	**-0.4**
MDOK	**Medeo**	**57.53**	**324**	*e*P	**P**	**00 19 10.2**	**-0.8**
	baz=324						
MDOK	**Medeo**	**57.53**	**324**	*e*P	**P**	**00 19 10.1**	**-0.8**
AAA	**Alma-Ata**	**57.63**	**324**	*e*P	**P**	**00 19 11.4**	**-0.2**
	comp=Z,31nm,1.2s,baz=324						
AAA	**Alma-Ata**	**57.63**	**324**	*e*P	**P**	**00 19 11.3**	**-0.2**
AAA				pmax	pmax		
	comp=Z,31nm,1.2s						
BOD	**Bodaibo**	**57.72**	**356**	*e*P	**P**	**00 19 12.3**	**+0.6**
BOD				pmax	pmax		
	comp=Z,43nm,1.7s						
TDK	**Taldyqorghan**	**57.86**	**326**	*e*P	**P**	**00 19 12.6**	**-0.5**
	comp=Z,50nm,1.1s,baz=326						
TDK	**Taldyqorghan**	**57.86**	**326**	*e*P	**P**	**00 19 12.5**	**-0.5**
TDK				pmax	pmax		
	comp=Z,50nm,1.1s						
MTBS	**Maitube**	**57.88**	**323**	*e*P	**P**	**00 19 13.3**	**0.0**
	baz=323						
MTBS	**Maitube**	**57.88**	**323**	*e*P	**P**	**00 19 13.2**	**0.0**
CHKK	**Chushkaly**	**57.97**	**324**	*e*P	**P**	**00 19 13.5**	**-0.3**
	baz=324						
CHKK	**Chushkaly**	**57.97**	**324**	*e*P	**P**	**00 19 13.5**	**-0.3**
TKM2	**Tokmak 2**	**58.25**	**323**	P	**P**	**00 19 17.1**	**+1.0**
	SNR=40						
TKM2	**Tokmak 2**	**58.25**	**323**	*i* P	**P**	**00 19 16.5**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,42nm,1.0s						
KUU	**Kurty**	**58.37**	**324**	*e*P	**P**	**00 19 15.9**	**-0.8**
	comp=Z,81nm,1.0s,baz=324						
KUU	**Kurty**	**58.37**	**324**	*e*P	**P**	**00 19 15.8**	**-0.8**
KUU				pmax	pmax		
	comp=Z,81nm,1.0s						
KBK	**Karagaybulak**	**58.50**	**322**	P	**P**	**00 19 19.3**	**+1.5**
	SNR=35						
UCH	**Uchtor**	**58.53**	**322**	P	**P**	**00 19 19.8**	**+1.5**
	SNR=16						
KBL	**Kabul**	**58.60**	**311**	P	**P**	**00 19 18.7**	**+0.1**
KBL				pmax	pmax		
	comp=Z,84nm,1.1s						
KBL	**Kabul**	**58.60**	**311**	P	**P**	**00 19 18.7**	**+0.1**
AAK	**Ala-Archa**	**58.77**	**322**	P	**P**	**00 19 21.0**	**+1.4**
	SNR=32						
AAK	**Ala-Archa**	**58.77**	**322**	*ce*P	**P**	**00 19 20.9**	**+1.2**
AAK				pmax	pmax		
	comp=Z,69nm,1.0s						
AAK	**Ala-Archa**	**58.77**	**322**	P	**P**	**00 19 20.8**	**+1.2**
FRU1	**Bishkek**	**58.78**	**322**	P	**P**	**00 19 20.1**	**+0.5**
FRU1				pmax	pmax		
	comp=Z,40nm,1.6s						
FRU1	**Bishkek**	**58.78**	**322**	P	**P**	**00 19 20.1**	**+0.5**
FRU1				IAmb	IAmb	00 19 22.0	
	comp=Z,40nm,1.6s						
CHMS	**Chumysh**	**58.81**	**322**	P	**P**	**00 19 20.6**	**+0.8**
	SNR=12						
AML	**Almayashu**	**58.99**	**321**	P	**P**	**00 19 22.8**	**+1.3**
	SNR=25						
USP	**Ospenovka**	**59.11**	**323**	P	**P**	**00 19 22.7**	**+0.8**
	SNR=28						
SGDS	**Sogindy**	**59.14**	**323**	*e*P	**P**	**00 19 20.8**	**-1.3**
	comp=Z,11nm,1.2s,baz=323						
SGDS	**Sogindy**	**59.14**	**323**	*e*P	**P**	**00 19 20.7**	**-1.3**
SGDS				pmax	pmax		
	comp=Z,11nm,1.2s						
EKS2	**Erkin-Say**	**59.23**	**322**	P	**P**	**00 19 24.1**	**+1.3**
	SNR=37						
BTLS	**Baital**	**60.38**	**324**	*e*P	**P**	**00 19 29.1**	**-1.4**
	comp=Z,11nm,1.3s,baz=324						
BTLS	**Baital**	**60.38**	**324**	*e*P	**P**	**00 19 29.0**	**-1.4**
BTLS				pmax	pmax		
	comp=Z,11nm,1.3s						
SEM	**Semipalatinsk**	**60.43**	**332**	*e*P	**P**	**00 19 29.2**	**-1.8**
	comp=Z,6.4nm,1.1s,baz=332						
SEM	**Semipalatinsk**	**60.43**	**332**	*e*P	**P**	**00 19 29.1**	**-1.8**
SEM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DZA	**Taraz**	**60.88**	**321**	*e*P	**P**	**00 19 33.0**	**-0.9**
	comp=Z,12nm,1.3s,baz=321						
DZA	**Taraz**	**60.88**	**321**	*e*P	**P**	**00 19 33.0**	**-0.9**
DZA				pmax	pmax		
	comp=Z,11nm,1.3s						
ZAA0	**Zalesovo Array**	**61.00**	**337**	P	**P**	**00 19 34.1**	**-0.4**
ZAA0				IAmb	IAmb	00 19 35.3	
	comp=Z,36nm,1.1s						
ZALV	**Zalesovo Beam**	**61.00**	**337**	P	**P**	**00 19 34.2**	**-0.3**
	comp=Z,15nm,0.8s,baz=123,slow=5.5,SNR=63						
ZALV				pP	**pP**	**00 19 49.0**	**-1.4**
	comp=Z,5.5nm,0.7s,baz=133,slow=6.4,SNR=6.3						
ZALV				LR	LR	00 46 59.9	
	comp=Z,43nm,20.6s,baz=138,slow=37						
ZALV	**Zalesovo Beam**	**61.00**	**337**	P	**P**	**00 19 34.1**	**-0.4**
IUG	**Iuzhnay**	**61.34**	**320**	*e*P	**P**	**00 19 36.2**	**-1.0**
	comp=Z,18nm,1.1s,baz=319						
IUG	**Iuzhnay**	**61.34**	**320**	*e*P	**P**	**00 19 36.1**	**-1.1**
IUG				pmax	pmax		
	comp=Z,18nm,1.1s						
PETK	**Petropavlovsk-**	**61.39**	**25**	P	**P**	**00 19 36.4**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=202,slow=6.1,SNR=2.3						
PETK	**Petropavlovsk-**	**61.39**	**25**	P	**P**	**00 19 37.9**	**+0.8**
PETK	**Petropavlovsk-**	**61.39**	**25**	P	**P**	**00 19 37.9**	**+0.8**
KURK	**Kurchatov**	**61.41**	**331**	*ce*P	**P**	**00 19 37.7**	**+0.5**
KURK				pmax	pmax		
	comp=Z,53nm,1.0s						
KURK	**Kurchatov**	**61.41**	**331**	P	**P**	**00 19 37.8**	**+0.5**
TAS	**Tashkent**	**61.43**	**318**	P	**P**	**00 19 38.1**	**+0.5**
TAS				pmax	pmax		
	comp=Z,77nm,1.2s						
TAS	**Tashkent**	**61.43**	**318**	P	**P**	**00 19 38.1**	**+0.5**
KK31	**Karatay Array**	**61.50**	**321**	P	**P**	**00 19 38.5**	**+0.4**
KK31				pmax	pmax		
	comp=Z,22nm,1.2s						
KK31	**Karatay Array**	**61.50**	**321**	P	**P**	**00 19 38.5**	**+0.4**
KK31				IAmb	IAmb	00 19 40.4	
	comp=Z,22nm,1.2s						
KKAR	**Karatay Array**	**61.50**	**321**	P	**P**	**00 19 38.2**	**+0.1**
KKAR				pmax	pmax		
	comp=Z,22nm,1.2s						
KKAR	**Karatay Array**	**61.50**	**321**	P	**P**	**00 19 38.2**	**+0.1**
KKAR	**Karatay Array**	**61.50**	**321**	P	**P**	**00 19 38.5**	**+0.3**
KKAR				IAmb	IAmb	00 19 40.4	
	comp=Z,22nm,1.2s						
YAK	**Yakutsk**	**62.18**	**5**	*e*P	**P**	**00 19 42.5**	**+0.3**
YAK				pmax	pmax		
	comp=Z,37nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK	**Yakutsk**	**62.18**	**5**	P	**P**	**00 19 42.2**	**0.0**
QRZ	**Quartz Range**	**62.59**	**137**	P	**P**	**00 19 46.2**	**+0.7**
RPZ	**Rata Peaks**	**62.97**	**141**	P	**P**	**00 19 48.5**	**+0.6**
THZ	**Tophouse**	**63.26**	**138**	P	**P**	**00 19 50.8**	**+0.8**
HRA	**Herat**	**63.75**	**309**	P	**P**	**00 19 53.1**	**-0.5**
TUWZ	**Tuamarina**	**63.81**	**137**	P	**P**	**00 19 53.1**	**-0.4**
MA2	**Magadan**	**63.94**	**17**	*i* P	**P**	**00 19 53.5**	**-0.5**
BRZS	**Berezniki**	**63.95**	**328**	*e*P	**P**	**00 19 53.0**	**-1.3**
	comp=N,22nm,1.2s,baz=328						
BRZS	**Berezniki**	**63.95**	**328**	*e*P	**P**	**00 19 53.0**	**-1.3**
BRZS				pmax	pmax		
	comp=Z,22nm,1.2s						
KHZ	**Kahutara**	**63.98**	**138**	P	**P**	**00 19 54.6**	**0.0**
BKZ	**Black Stump Fm**	**64.66**	**134**	P	**P**	**00 19 58.6**	**-0.6**
BKZ				IAmb	IAmb	00 20 00.8	
	comp=Z,30nm,1.3s						
BRVK	**Borovoye**	**66.93**	**330**	*ce*P	**P**	**00 20 13.7**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,31nm,1.1s						
BRVK	**Borovoye**	**66.93**	**330**	P	**P**	**00 20 13.5**	**+0.1**
BRVK				IAmb	IAmb	00 20 15.0	
	comp=Z,29nm,1.1s						
SEY	**Seymchan**	**67.15**	**15**	P	**P**	**00 20 15.3**	**+0.7**
	comp=Z,3.3nm,0.5s,baz=200,slow=1.8,SNR=7.1						
SEY	**Seymchan**	**67.15**	**15**	⇑*i*P	**P**	**00 20 15.5**	**+0.9**
GEYT	**Alibeck**	**68.05**	**311**	P	**P**	**00 20 21.7**	**+0.8**
	comp=Z,17nm,1.0s,baz=155,slow=4.9,SNR=36						
GEYT				pP	**pP**	**00 20 37.6**	**+0.6**
	comp=Z,8.2nm,0.9s,baz=186,slow=9.2,SNR=5.4						
GEYT				LR	LR	00 54 02.9	
	comp=Z,54nm,18.4s,baz=235,slow=39						
GEYT	**Alibeck**	**68.05**	**311**	P	**P**	**00 20 21.4**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**68.05**	**311**	P	**P**	**00 20 21.6**	**+0.7**
GYA0B				IAmb	IAmb	00 20 22.9	
	comp=Z,39nm,1.1s						
ABKAR	**Akbulak array**	**70.82**	**323**	P	**P**	**00 20 38.0**	**+0.3**
ABKAR	**Akbulak array**	**70.82**	**323**	P	**P**	**00 20 37.8**	**+0.1**
ABKAR				IAmb	IAmb	00 20 39.2	
	comp=Z,29nm,1.1s						
TIXI	**Tiksi**	**71.64**	**3**	*ce*P	**P**	**00 20 41.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,122nm,1.3s						
TIXI	**Tiksi**	**71.64**	**3**	P	**P**	**00 20 41.2**	**-0.9**
TIXI				IAmb	IAmb	00 20 42.3	
	comp=Z,25nm,1.1s						
SVE	**Sverdlovsk**	**73.63**	**330**	*c i*P	**P**	**00 20 54.6**	**+0.3**
SVE				pmax	pmax		
	comp=Z,53nm,1.2s						
QRN	**Al-Qurain**	**74.28**	**300**	*e*P		00 20 56.6	
ARU	**Arti**	**74.50**	**330**	*c i*P	**P**	**00 20 59.5**	**+0.1**
ARU				*PP	**pP**	**00 21 15.0**	**-0.7**
ARU				S	**S**	**00 30 33.8**	**+3.9**
ARU				pmax	pmax		
	comp=Z,35nm,1.1s						
ARU	**Arti**	**74.50**	**330**	P	**P**	**00 20 58.9**	**-0.4**
ARU				IAmb	IAmb	00 21 00.2	
	comp=Z,34nm,1.1s						
RDF	**Al-Radifah**	**74.62**	**300**	*e*P		00 20 58.3	
MIB	**Mutribah**	**74.94**	**301**	*e*P		00 21 00.8	
RST	**Umm Al-Ruwaisa**	**75.19**	**300**	*e*P		00 21 02.3	
ATKA	**Atka Island**	**75.28**	**35**	P	**P**	**00 21 03.5**	**-0.4**
RAYN	**Ar Rayn**	**75.76**	**294**	P	**P**	**00 21 06.5**	**-0.9**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAYN	**Ar Rayn**	**75.76**	**294**	P	**P**	**00 21 06.5**	**-0.9**
AKT	**Akhty**	**76.70**	**313**	*e*P	**P**	**00 21 13.1**	**+0.6**
AKT				*e*		00 21 24.0	
AKT				pmax	pmax		
	comp=Z,37nm,1.0s						
MAW	**Mawson**	**78.12**	**199**	P	**P**	**00 21 20.7**	**+1.1**
	comp=Z,4.2nm,0.8s,baz=22,slow=5.4,SNR=2.1						
MAW				pP	**pP**	**00 21 35.5**	**-0.6**
	comp=Z,9.5nm,0.8s,baz=57,slow=9.9,SNR=4.7						
MAW				LR	LR	00 54 05.7	
	comp=Z,45nm,18.0s,baz=63,slow=34						
GROC	**Groznyy**	**78.44**	**314**	*e*P	**P**	**00 21 22.3**	**+0.3**
GROC				*e*		00 21 30.5	
GROC				*e**PP	**pP**	**00 21 39.1**	**+0.7**
GROC				*e**SP	**sP**	**00 21 45.5**	**+0.6**
GROC				*e*S	**S**	**00 31 14.4**	**+0.8**
GROC				pmax	pmax		
	comp=Z,43nm,1.1s						
GNI	**Garni**	**78.68**	**311**	*ce*P	**P**	**00 21 24.9**	**+1.3**
GNI				pmax	pmax		
	comp=Z,37nm,1.7s						
GNI	**Garni**	**78.68**	**311**	P	**P**	**00 21 23.3**	**-0.3**
BELG	**Belogornoye**	**79.22**	**324**	*d i*P	**P**	**00 21 25.4**	**-0.6**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GEVA	**Gevas**	**79.69**	**309**	P	**P**	**00 21 29.3**	**+0.1**
GEVA				IAmb	IAmb	00 21 30.9	
	comp=Z,49nm,1.1s						
ZEI	**Tsey**	**79.74**	**313**	*e*P	**P**	**00 21 28.1**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,35nm,1.3s						
AKH	**Akhalkalaki**	**79.82**	**312**	P	**P**	**00 21 30.4**	**+0.6**
AKH				pmax	pmax		
	comp=Z,225nm,1.2s						
AKH	**Akhalkalaki**	**79.82**	**312**	P	**P**	**00 21 30.4**	**+0.6**
KIRV	**Kirov**	**79.87**	**330**	*ce*P	**P**	**00 21 28.5**	**-0.9**
NCK	**Nalchik**	**80.07**	**314**	⇑*e*P	**P**	**00 21 31.4**	**+0.5**
NCK				pmax	pmax		
	comp=Z,16nm,1.0s						
KBZ	**Khabaz**	**80.61**	**314**	P	**P**	**00 21 34.0**	**+0.3**
	comp=Z,10nm,0.9s,baz=122,slow=2.6,SNR=24						
KBZ				LR	LR	01 07 34.9	
	comp=Z,46nm,18.7s,baz=71,slow=43						
KBZ	**Khabaz**	**80.61**	**314**	*ce*P	**P**	**00 21 33.6**	**-0.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GOF	**Gofitskoye**	**80.72**	**316**	⇑*e*P	**P**	**00 21 34.6**	**+0.3**
GOF				pmax	pmax		
	comp=Z,36nm,1.2s						
KIV	**Kislovodsk**	**80.80**	**314**	*e*P	**P**	**00 21 35.5**	**+0.6**
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV	**Kislovodsk**	**80.80**	**314**	P	**P**	**00 21 34.0**	**-0.9**
VNDA	**Vanda**	**80.80**	**172**	P	**P**	**00 21 33.9**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=303,slow=5.8,SNR=15						
VNDA				LR	LR	00 56 15.9	
	comp=Z,102nm,22.0s,baz=324,slow=35						
VNDA	**Vanda**	**80.80**	**172**	P	**P**	**00 21 33.8**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	**80.80**	**172**	P	**P**	**00 21 33.8**	**-0.3**
MARD	**Mardin**	**81.36**	**308**	P	**P**	**00 21 38.2**	**+0.1**
MARD				IAmb	IAmb	00 21 39.4	
	comp=Z,21nm,0.9s						
KOPT	**Kop Dagi**	**81.89**	**310**	P	**P**	**00 21 41.5**	**+0.5**
KOPT				IAmb	IAmb	00 21 44.2	
	comp=Z,45nm,1.3s						
VRH	**Novokhopyorsk**	**82.57**	**322**	*e*P	**P**	**00 21 42.2**	**-1.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMBO	**Kilima Mbogo**	**82.77**	**269**	P	**P**	**00 21 45.9**	**-0.2**
	comp=Z,8.5nm,1.0s,baz=30,slow=5.3,SNR=12						
KMBO				pP	**pP**	**00 22 02.0**	**-0.5**
	comp=Z,4.2nm,1.0s,baz=61,slow=11,SNR=3.4						
KMBO				LR	LR	00 55 16.1	
	comp=Z,37nm,21.3s,baz=312,slow=33						
SOC	**Sochi**	**82.88**	**314**	*e*P	**P**	**00 21 42.8**	**-2.9**
SOC				*e*		00 24 54.5	
SOC				*e*S	**S**	**00 31 54.6**	**-5.3**
SOC				*e*SSS	SSS	00 40 53.1	
SOC				pmax	pmax		
	comp=Z,17nm,1.0s						
VORD	**Divnogorie**	**84.05**	**321**	*e*P	**P**	**00 21 50.4**	**-1.1**
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
GAZ	**Gaziantep**	**84.18**	**307**	P	**P**	**00 21 52.9**	**+0.2**
GAZ				IAmb	IAmb	00 21 54.4	
	comp=Z,31nm,1.0s						
LPSR	**Galich'ya Gora**	**84.48**	**323**	*e*P	**P**	**00 21 53.0**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,30nm,1.2s						
ANN	**Anapa**	**84.64**	**315**	*e*P	**P**	**00 21 51.5**	**-3.1**
ANN				*e**PP	**pP**	**00 22 08.2**	**-3.0**
ANN				*e*		00 25 10.0	
ANN				*e*S	**S**	**00 32 09.1**	**-8.4**
ANN				pmax	pmax		
	comp=Z,45nm,1.1s						
TOKA	**Tokat**	**84.98**	**310**	P	**P**	**00 21 56.9**	**+0.3**
TOKA				IAmb	IAmb	00 21 58.3	
	comp=Z,24nm,1.1s						
KLMR	**Klimovskoe**	**85.25**	**331**	*e*P	**P**	**00 21 54.7**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,41nm,1.5s						
KLMR	**Klimovskoe**	**85.25**	**331**	*e*P	**P**	**00 21 54.7**	**-2.7**
KLMR				AMP		00 21 58.3	
	comp=Z,41nm,1.5s						
MOS	**Moscow**	**85.60**	**326**	*e*P	**P**	**00 21 57.5**	**-1.7**
MOS				pmax	pmax		
	comp=Z,43nm,1.3s						
OBN	**Obninsk**	**86.14**	**325**	*i* P	**P**	**00 21 59.6**	**-2.3**
OBN				pmax	pmax		
	comp=Z,19nm,1.2s						
OBN	**Obninsk**	**86.14**	**325**	P	**P**	**00 22 01.1**	**-0.7**
SIM	**Simferopol'**	**87.00**	**315**	*e*P	**P**	**00 22 05.3**	**-1.1**
SIM				pmax	pmax		
	comp=Z,33nm,0.8s						
ILGA	**Ilgaz**	**87.12**	**311**	P	**P**	**00 22 06.9**	**-0.5**
ILGA				IAmb	IAmb	00 22 08.4	
	comp=Z,28nm,1.1s						
BR131	**Keskin Array S**	**87.13**	**310**	P	**P**	**00 22 06.5**	**-0.8**
BR131				pmax	pmax		
	comp=Z,31nm,1.1s						
BR131	**Keskin Array S**	**87.13**	**310**	P	**P**	**00 22 06.5**	**-0.8**
BR131				IAmb	IAmb	00 22 07.8	
	comp=Z,31nm,1.1s						
BRTR	**Keskin Array B**	**87.13**	**310**	P	**P**	**00 22 06.5**	**-0.8**
	comp=Z,16nm,1.1s,baz=121,slow=4.8,SNR=58						
BRTR				pP	**pP**	**00 22 22.4**	**-1.6**
	comp=Z,5.2nm,0.8s,baz=117,slow=4.7,SNR=7.0						
BRTR				LR	LR	01 11 58.8	
	comp=Z,30nm,18.5s,baz=107,slow=43						
TTA	**Tatalina**	**87.13**	**27**	P	**P**	**00 22 06.4**	**-0.3**
TTA				pmax	pmax		
	comp=Z,34nm,1.8s						
TTA	**Tatalina**	**87.13**	**27**	P	**P**	**00 22 06.4**	**-0.3**
TTA				IAmb	IAmb	00 22 21.2	
	comp=Z,34nm,1.8s						
CSS	**Mathiatis**	**87.21**	**305**	P	**P**	**00 22 07.1**	**-0.6**
A21K	**Barrow**	**87.75**	**19**		**P**	**00 22 09.9**	**+0.6**
IMAR	**Indian Mountai**	**88.34**	**24**	P	**P**	**00 22 13.3**	**+1.0**
MBAR	**Mbarara**	**89.28**	**269**	*ce*P	**P**	**00 22 19.4**	**+1.3**
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MBAR	**Mbarara**	**89.28**	**269**	P	**P**	**00 22 18.0**	**-0.1**
MBAR				IAmb	IAmb	00 22 36.6	
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**90.06**	**180**	P	**P**	**00 22 20.6**	**0.0**
AKASG	**Malin Array Be**	**90.41**	**321**	P	**P**	**00 22 21.1**	**-1.1**
	comp=Z,3.9nm,1.0s,baz=80,slow=3.9,SNR=15						
AKASG				pP	**pP**	**00 22 38.3**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=72,slow=4.4,SNR=3.8						
AKASG				LR	LR	01 08 32.7	
	comp=Z,61nm,18.3s,baz=285,slow=39						
AKASG	**Malin Array Be**	**90.41**	**321**	P	**P**	**00 22 21.2**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
AKASG	**Malin Array Be**	**90.41**	**321**	P	**P**	**00 22 21.2**	**-1.1**
AKBB	**Malin Array Si**	**90.41**	**321**	*ce*P	**P**	**00 22 22.3**	**0.0**
PPT2	**Papeete2**	**90.43**	**107**	*e*LR	LR	00 51 29.3	
	comp=Z,285nm,40.0s						
SORM	**Soroca**	**91.02**	**318**	⇑P	**P**	**00 22 24.0**	**-1.2**
ILAR	**Eielson Array**	**91.21**	**25**	P	**P**	**00 22 24.7**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=261,slow=5.4,SNR=2.1						
ILAR				LR	LR	01 04 09.2	
	comp=Z,18nm,20.8s,baz=298,slow=36						
CFR	**Carcaliu**	**91.24**	**315**	⇑P	**P**	**00 22 25.8**	**-0.5**
ARCES	**ARCESS Array B**	**91.47**	**339**	LR	LR	01 07 22.8	
	comp=Z,68nm,18.6s,baz=285,slow=38						
FINES	**FINESS Array B**	**91.78**	**331**	P	**P**	**00 22 30.5**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=76,slow=5.9,SNR=3.8						
VRI	**Vrincioaia**	**92.21**	**316**	⇑P	**P**	**00 22 31.0**	**+0.2**
TESR	**Tescani**	**92.23**	**316**	⇑P	**P**	**00 22 30.4**	**-0.6**
PLOR	**Plostina**	**92.26**	**316**	⇑P	**P**	**00 22 30.8**	**-0.3**
MLR	**Muntele Rosu**	**92.77**	**315**	⇓P	**P**	**00 22 33.5**	**-0.1**
MLR	**Muntele Rosu**	**92.77**	**315**	P	**P**	**00 22 32.0**	**-1.6**
MLR	**Muntele Rosu**	**92.77**	**315**	P	**P**	**00 22 32.0**	**-1.6**
ALN	**Alexandroupoli**	**92.93**	**311**	P	**P**	**00 22 33.1**	**-1.1**
ALN				pmax	pmax		
	comp=Z,12nm,1.2s						
ALN	**Alexandroupoli**	**92.93**	**311**	P	**P**	**00 22 33.1**	**-1.1**
ALN				IAmb	IAmb	00 22 34.5	
	comp=Z,12nm,1.2s						
DOPR	**Dopca**	**93.14**	**316**	⇑P	**P**	**00 22 35.7**	**+0.6**
BURAR	**Bucovina Array**	**93.15**	**318**	⇑P	**P**	**00 22 35.3**	**0.0**
BURAR	**Bucovina Array**	**93.15**	**318**	P	**P**	**00 22 34.7**	**-0.5**
ARR	**Arges**	**93.70**	**315**	⇓P	**P**	**00 22 37.4**	**-0.4**
BMR	**Baia Mare**	**94.31**	**318**	⇓P	**P**	**00 22 40.7**	**+0.3**
DEV	**Deva**	**94.87**	**316**	⇑P	**P**	**00 22 43.2**	**+0.2**
VTS	**Vitosha**	**94.91**	**313**	⇓P	**P**	**00 22 42.2**	**-1.3**
DRGR		**94.92**	**317**	⇑P	**P**	**00 22 43.1**	**-0.2**
KOLS	**Kolonicke sedl**	**95.00**	**319**	*e*P	**P**	**00 22 45.0**	**+1.4**
KOLS	**Kolonicke sedl**	**95.00**	**319**	*e*P	**P**	**00 22 45.0**	**+1.4**
GZR	**Gura Zlata**	**95.00**	**315**	⇓P	**P**	**00 22 42.7**	**-1.1**
CRVS	**Cervenica-Dubn**	**95.54**	**319**	*e*P	**P**	**00 22 45.8**	**-0.3**
CRVS	**Cervenica-Dubn**	**95.54**	**319**	*e*P	**P**	**00 22 45.8**	**-0.3**
LIT	**Litokhoron**	**95.68**	**310**	P	**P**	**00 22 44.8**	**-2.2**
LIT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LIT	**Litokhoron**	**95.68**	**310**	P	**P**	**00 22 44.8**	**-2.2**
LIT				IAmb	IAmb	00 22 45.8	
	comp=Z,9.0nm,1.0s						
BZS	**Buzias**	**95.79**	**316**	⇓P	**P**	**00 22 46.6**	**-0.6**
MDVR	**Moldovita**	**95.81**	**315**	⇑P	**P**	**00 22 47.0**	**-0.5**
DIVS	**Divibare**	**97.12**	**314**	P	**P**	**00 22 52.0**	**-1.4**
DIVS				IAmb	IAmb	00 22 54.0	
	comp=Z,8.2nm,1.4s						
PDG	**Podgorica**	**97.86**	**313**	⇑P	**P**	**00 22 55.3**	**-1.4**
NOA	**NORSAR Array B**	**98.91**	**332**	LR	LR	01 13 03.0	
	comp=Z,38nm,18.1s,baz=250,slow=39						
CLL	**Collm**	**100.48**	**322**	*e*Pdif	**Pdif**	**00 23 09.0**	**+0.8**
CLL				*e*PP	**PP**	**00 27 17.0**	**+1.8**
CLL	**Collm**	**100.48**	**322**	*e*P	**Pdif**	**00 23 09.0**	**+0.8**
YKA	**Yellowknife Ar**	**105.48**	**23**	PKiKP	**PKiKP**	**00 27 43.2**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=331,slow=1.2,SNR=5.0						
NVAR	**Mina Array Bea**	**114.28**	**47**	PKiKP	**PKiKP**	**00 28 01.2**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=245,slow=1.9,SNR=2.8						
NVAR				pPKiKP	**pPKiKP**	**00 28 17.6**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=247,slow=2.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**117.49**	**285**	PKP	**PKiKP**	**00 28 08.6**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=109,slow=2.0,SNR=1.6						
TORD				pPKP	**pPKPdf**	**00 28 22.9**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=60,slow=1.7,SNR=4.4						
PDAR	**Pinedale Array**	**118.43**	**40**	PKP	**PKPdf**	**00 28 08.5**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=98,slow=3.0,SNR=3.6						
PDAR				pPKP	**pPKPdf**	**00 28 24.5**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=33,slow=2.3,SNR=4.4						
ULM	**Lac du Bonnet**	**121.22**	**26**	PKP	**PKPdf**	**00 28 11.9**	**-1.7**
	comp=Z,1.2nm,0.6s,baz=263,slow=4.4,SNR=3.0						
ULM	**Lac du Bonnet**	**121.22**	**26**	PKIKP	**PKPdf**	**00 28 12.0**	**-1.7**
S39A	**Bolivar**	**131.41**	**36**	PKPdf	**PKPdf**	**00 28 33.5**	**-0.1**
MT02	**Curacav**	**145.41**	**163**		**PKPbc**	**00 28 58.9**	**-0.3**
ROC1	**El Roble**	**145.71**	**163**		**PKPdf**	**00 28 59.9**	**-0.3**
VA03	**San Esteban**	**146.04**	**164**		**PKPdf**	**00 29 00.8**	**+0.2**
ZON	**Zonda**	**147.69**	**166**	PKP2	**PKPbc**	**00 29 05.9**	**-0.1**
ZON	**Zonda**	**147.69**	**166**		**PKPbc**	**00 29 05.8**	**-0.1**
CO03	**El Pedregal**	**147.81**	**163**		**PKPbc**	**00 29 05.8**	**-0.6**
CO01	**Juntas del Tor**	**148.79**	**163**		**PKPbc**	**00 29 09.5**	**+0.3**
LCO	**Las Campanas**	**149.51**	**161**	PKP2	**PKPbc**	**00 29 11.0**	**-0.1**
LCO	**Las Campanas**	**149.51**	**161**		**PKPbc**	**00 29 11.0**	**-0.1**
AC05	**El Transito**	**149.80**	**162**		**PKPbc**	**00 29 11.5**	**-0.1**
AC02	**Maricunga**	**152.03**	**162**		**PKPbc**	**00 29 17.2**	**-0.1**
CPUP	**Villa Florida**	**153.82**	**185**	PKPbc	**PKPbc**	**00 29 19.2**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=162,slow=3.2,SNR=3.4						
CPUP				PKPab	**PKPab**	**00 29 33.2**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=155,slow=4.4,SNR=4.6						

IDC ***15*** *01:32:58.7±0.8, 22°.60N×92°.48E, h0^{km}, mb4.2/17, mb1 4.3/18, mb1mx4.1/45, mbtmp4.2/18, ML4.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/32 Error ellipse: s-maj=26.5km s-min=15.1km az=50.0*

NDI ***15*** *01:33:01.0±3.4, 22°.62N×92°.52E, h10^{km}, mb4.6, ML4.0, mb4.3(NEIC)*

NEIC ***15*** *01:33:04.6±1.6, 22°.62N±0°.09×92°.6E±0°.1, h50^{km}±8^{km}, mb4.3/17, Error ellipse: s-maj=15.6km s-min=10.1km az=53.0*

BJI ***15*** *01:33:12.6±0.0, 23°.53N×92°.46E, h55^{km}, mB4.9/16, mb4.4/30, ML4.0/2, Ms4.0/5, Ms7 4.0/4*

ISC 15 01:33:03.7±0.5**, 22°.56N**±0°.06×**92°.49E**±0°.04**, h41**^{km}**, n90, σ1**^{s}**53**/103**, mb4.3**/25**, MS3.8**/3**, 1C-1D, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**0.46**	**99**	*e*P	**Pn**	**01 33 10.1**	**-4.1**
SAIH				*e*S	**Sn**	**01 33 15.9**	**-5.6**
SAIH				IAML		01 33 17.3	
	comp=N,11µm,0.4s						
SAIH				IAML		01 33 18.4	
	comp=E,9µm,0.3s						
SAIH				IAmb	IAmb	01 33 20.6	
	comp=Z,5µm,0.7s						
SHL	**Shillong**	**3.04**	**350**	*e*P	**Pn**	**01 33 49.2**	**-0.3**
SHL				IAmb	IAmb	01 33 54.2	
	comp=Z,31nm,0.4s						
SHL				*e*S	**Sn**	**01 34 22.8**	**-2.0**
SHL	**Shillong**	**3.04**	**350**		**Pn**	**01 33 49.0**	**-0.5**
SHL				Sn	**Sn**	**01 34 25.1**	**+0.3**
KOHI	**KOHIMA**	**3.47**	**25**	*e*P	**Pn**	**01 33 55.3**	**0.0**
KOHI				IAmb	IAmb	01 33 57.2	
	comp=Z,40nm,0.5s						
KOHI				*e*S	**Sn**	**01 34 35.5**	**+0.2**
KOHI				IAML		01 34 40.0	
	comp=E,385nm,0.5s						
KOHI				IAML		01 34 40.5	
	comp=N,412nm,0.5s						
GUWA	**GUWAHATI**	**3.69**	**349**	*e*P	**Pn**	**01 33 57.9**	**-0.3**
GUWA				IAmb	IAmb	01 34 09.4	
	comp=Z,34nm,0.4s						
GUWA				*e*S	**Sn**	**01 34 37.7**	**-2.7**
TEZP	**TEZPUR**	**4.04**	**4**	*e*P	**Pn**	**01 34 01.1**	**-2.0**
TEZP				IAmb	IAmb	01 34 05.6	
	comp=Z,64nm,0.3s						
MOKO	**MOKOCHONG**	**4.17**	**26**	*e*P	**Pn**	**01 34 06.3**	**+1.4**
MOKO				IAmb	IAmb	01 34 08.6	
	comp=Z,3µm,0.3s						
MOKO				*e*S	**Sn**	**01 34 53.2**	**+0.6**
MOKO				IAML		01 34 57.5	
	comp=E,335nm,0.6s						

MOKO				IAML		01 34 57.5	
	comp=N,459nm,0.5s						
ZIRO	ZIRO	5.09	14	eP	Pn	01 34 16.3	-1.3
ZIRO				IAmb	IAmb	01 34 20.1	
	comp=Z,182nm,0.3s						
ZIRO				eS	Sn	01 35 13.8	-1.5
ZIRO				IAML		01 35 18.7	
	comp=E,509nm,0.4s						
ZIRO				IAML		01 35 19.8	
	comp=N,552nm,0.5s						
LKP	Lekhapani	5.64	32	eP	Pn	01 34 26.4	+1.3
LKP				IAmb	IAmb	01 34 32.0	
	comp=Z,114nm,0.4s						
BOK	Bokaro	6.20	283	eP	Pn	01 34 32.9	+0.1
BOK				IAmb	IAmb	01 34 35.0	
	comp=Z,20nm,0.4s						
BOK				eS	Sn	01 35 41.0	-1.4
BOK				IAML		01 35 45.2	
	comp=E,129nm,0.5s						
BOK				IAML		01 35 45.7	
	comp=N,398nm,0.4s						
ODAN	Odare	6.31	314	ePn	Pn	01 34 34.2	-0.3
ODAN				eSn	Sn	01 35 44.3	-1.1
	comp=N,278nm,0.5s						
TAPN	Taplejung	6.45	319	ePn	Pn	01 34 36.9	+0.5
TAPN				eSn	Sn	01 35 48.1	-0.7
	comp=N,256nm,0.5s						
RAMN	Ramite	6.91	310	ePn	Pn	01 34 42.5	-0.2
RAMN				eSn	Sn	01 35 57.8	-2.4
	comp=N,105nm,0.3s						
CHTO	Chiang Mai	7.10	121	Pn	Pn	01 34 45.0	-0.1
CM33	Chiang Mai Arr	7.10	121	P	Pn	01 34 45.0	-0.1
CMMT	Chiang Mai	7.10	121	P	Pn	01 34 46.9	+1.7
CM32	Chiang Mai Arr	7.11	122	P	Pn	01 34 47.0	+1.7
LSA	Lhasa	7.21	351	Pn	Pn	01 34 47.1	+0.1
CM34	Chiang Mai Arr	7.24	119	P	Pn	01 34 48.0	+0.9
CM13	Chiang Mai Arr	7.29	123	P	Pn	01 34 48.8	+1.0
CMAR	Chiang Mai Arr	7.29	123	Pn	Pn	01 34 48.3	+0.5
	comp=N,0.9nm,0.3s,baz=298,slow=13,SNR=27						
CMAR				LR	LR	01 38 20.7	
	comp=N,80nm,21.1s,baz=358,slow=44						
CMAR	Chiang Mai Arr	7.29	123		Pn	01 34 47.2	-0.6
CM02	Chiang Mai Arr	7.31	123	P	Pn	01 34 49.0	+1.0
CM01	Chiang Mai Arr	7.33	123	P	Pn	01 34 49.5	+1.3
CM05	Chiang Mai Arr	7.33	123	P	Pn	01 34 49.2	+0.9
CM35	Chiang Mai Arr	7.34	121	P	Pn	01 34 50.2	+1.8
CM09	Chiang Mai Arr	7.34	123	P	Pn	01 34 49.8	+1.4
CM04	Chiang Mai Arr	7.36	123	P	Pn	01 34 49.0	+0.4
CM36	Chiang Mai Arr	7.38	122	P	Pn	01 34 50.0	+1.0
GUN	Gumba	8.01	313	ePn	Pn	01 34 57.9	0.0
GUN				eSn	Sn	01 36 24.6	-2.8
	comp=N,262nm,0.7s						
PKI	Pulchoki	8.13	309	ePn	Pn	01 34 58.6	-0.9
PKI				eSn	Sn	01 36 28.1	-2.2
	comp=N,79nm,0.5s						
PKIN	Phulchoki	8.14	309	ePn	Pn	01 34 58.9	-0.7
PKIN				eSn	Sn	01 36 28.3	-2.2
	comp=N,107nm,0.3s						
KKN	Kakani	8.35	310	ePn	Pn	01 35 02.1	-0.3
KKN				eSn	Sn	01 36 32.8	-2.8
DMN	Daman	8.37	308	ePn	Pn	01 35 02.5	-0.2
DMN				eSn	Sn	01 36 33.3	-2.8
	comp=N,88nm,0.5s						
SUKH	Sukhothai	8.40	126	P	Pn	01 35 03.6	+0.7
PHIT	Phitsanulok	9.17	124	P	Pn	01 35 17.0	+3.5
UTHA	Uthaitani	9.58	135	P	Pn	01 35 19.0	-0.1
KMI	Kunming	9.72	73	⇑P	Pn	01 35 33.3	+12
KMI				pmax	pmax		
	comp=N,9.0nm,1.2s						
DANN	Dangsing	9.77	308	ePn	Pn	01 35 20.1	-1.8
DANN	Dangsing	9.77	308	ePn	Pn	01 35 20.1	-1.8
DANN				eSn	Sn	01 37 05.2	-5.3
	comp=N,79nm,0.4s						
BHPL	Bhopal	13.90	276	eP	Pn	01 36 17.6	-0.7
BHPL				IAmb	IAmb	01 36 31.6	
	comp=Z,16nm,0.7s						
SMLA	Simla	16.11	305	eP	Pn	01 36 45.1	-2.1
LZH	Lanzhou	16.70	34	⇓P	P	01 36 58.3	+1.6
LZH				pP	pP	01 37 06.0	-0.9
LZH				sP	sP	01 37 16.3	+4.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,4.8s						
DHRM	DHARAMSHALA	17.30	307	eP	Pn	01 36 59.9	-2.5
DHRM				IAmb	IAmb	01 37 10.7	
	comp=Z,11nm,0.6s						
GTA	Gaotai	17.91	19	eP	P	01 37 11.0	+0.9
GTA				pP	sP	01 37 23.8	-1.7
GTA				sP	pP	01 37 28.8	+8.6
XAN	Xi'an	18.41	48	P	P	01 37 13.0	-2.5
XAN				pP	Pn	01 37 20.1	+4.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NIL	Nilore	20.21	307	P	P	01 37 35.2	0.0
PSI	Prapat	20.61	161	P	Pn	01 37 42.8	+0.6
	comp=Z,4.6nm,0.6s,baz=0.7,slow=5.3,SNR=5.5						
WMQ	Urumqi	21.57	351	eP	P	01 37 51.0	+1.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.3s						
WMQ	Urumqi	21.57	351	P	P	01 37 48.9	-0.9
WMQ				IAmb	IAmb	01 37 51.4	
	comp=Z,15nm,0.8s						
BTO	Baotou	23.30	35	eP	P	01 38 08.1	0.0
KBL	Kabul	23.74	305	P	P	01 38 12.2	-0.3
KBL				IAmb	IAmb	01 38 16.0	
	comp=Z,5.2nm,0.5s						
HHC	Hu-ho-hao-te	24.31	37	eP	P	01 38 19.9	+2.3
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
HHC				LR	LR		
	comp=Z,250nm,12.6s						
HHC				LR	LR		
	comp=Z,470nm,13.9s						
AAK	Ala-Archa	25.01	327	P	P	01 38 25.9	+1.9
	comp=Z,5.9nm,0.9s,baz=169,slow=5.8,SNR=19						
AAK	Ala-Archa	25.01	327	P	P	01 38 23.4	-0.5
FRU1	Bishkek	25.07	328	P	P	01 38 23.9	-0.5
MKAR	Makanchi Array	25.54	344	P	P	01 38 29.6	+1.0
	comp=Z,8.5nm,0.7s,baz=156,slow=10.0,SNR=130						
MKAR	Makanchi Array	25.54	344	P	P	01 38 29.1	+0.5
MK31	Makanchi Array	25.54	344	P	P	01 38 28.8	+0.3
MK31				IAmb	IAmb	01 38 30.5	
	comp=Z,6.2nm,0.8s						
MAKZ	Makanchi	25.64	343	P	P	01 38 29.7	+0.3
MAKZ				IAmb	IAmb	01 38 32.3	
	comp=Z,7.5nm,0.7s						
SONM	Songino Array	27.57	20	P	P	01 38 48.1	+1.2
	comp=Z,1.4nm,0.7s,baz=195,slow=8.7,SNR=13						
SONM	Songino Array	27.57	20	P	P	01 38 46.6	-0.3
KURK	Kurchatov	30.12	342	P	P	01 39 09.7	+0.4
ZAA0	Zalesovo Array	31.87	351	P	P	01 39 25.1	+0.3
ZAA0				IAmb	IAmb	01 39 26.5	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	31.87	351	P	P	01 39 25.8	+1.0
	comp=Z,4.4nm,0.8s,baz=174,slow=7.9,SNR=22						
ZALV	Zalesovo Beam	31.87	351	P	P	01 39 24.7	-0.1
BRVK	Borovoye	34.84	336	P	P	01 39 51.6	+0.9
ABKAR	Akbulak array	36.99	324	P	P	01 40 09.3	+0.2
ABKAR	Akbulak array	36.99	324	P	P	01 40 09.4	+0.2
ABKAR				IAmb	IAmb	01 40 10.8	
	comp=Z,3.5nm,0.6s						
JHS	Saijyo	37.45	62	P	P	01 40 10.7	-2.6
MJAR	Matsushiro Arr	41.76	60	LR	LR	02 01 19.9	
	comp=Z,28nm,18.5s,baz=295,slow=41						
RAYN	Ar Rayn	43.10	281	P	P	01 41 00.8	+0.5
JCJ	Chichijima	45.09	74	P	P	01 41 16.2	+0.1
	comp=Z,76nm,0.7s,baz=291,slow=8.6,SNR=2.8						
JCJ	Chichijima	45.09	74	P	P	01 41 15.9	-0.2
KBZ	Khabaz	45.80	310	LR	LR	02 06 08.2	
	comp=Z,111nm,19.3s,baz=12,slow=44						
BRTR	Keskin Array B	52.30	303	P	P	01 42 12.5	+1.0
	comp=Z,0.5nm,0.8s,baz=126,slow=12,SNR=3.7						
AKASG	Malin Array Be	56.02	317	P	P	01 42 37.5	-0.7
	comp=Z,1.5nm,0.5s,baz=80,slow=6.2,SNR=4.7						
FINES	FINESS Array B	59.18	329	P	P	01 43 00.4	+0.1
	comp=Z,1.3nm,0.5s,baz=112,slow=7.8,SNR=11						
ARCES	ARCESS Array B	61.04	338	P	P	01 43 13.8	+1.0
	comp=Z,3.8nm,0.8s,baz=100,slow=6.5,SNR=6.6						
AS31	Alice Springs	61.09	136	P	P	01 43 13.9	0.0
AS31				IAmb	IAmb	01 43 15.5	
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	61.10	136	P	P	01 43 14.9	+1.0
	comp=Z,6.3nm,0.7s,baz=316,slow=6.8,SNR=70						
ASAR	Alice Springs	61.10	136	P	P	01 43 13.4	-0.5
GERES	GERESS Array B	66.10	315	P	P	01 43 47.8	+1.0
	comp=Z,1.3nm,0.5s,baz=80,slow=6.6,SNR=15						
NB2	NORSAR Subarra	66.33	328	P	P	01 43 47.5	-0.4
	comp=Z,3.7nm,0.7s,baz=85,slow=6.5						
NOA	NORSAR Array B	66.33	328	P	P	01 43 47.9	0.0
	comp=Z,1.1nm,0.6s,baz=87,slow=6.3,SNR=4.5						
ESDC	Sonseca Array	80.66	309	P	P	01 45 13.3	+0.7
	comp=Z,1.1nm,1.0s,baz=64,slow=5.2,SNR=4.2						
ILAR	Eielson Array	81.78	22	P	P	01 45 18.1	0.0
	comp=Z,0.7nm,0.6s,baz=298,slow=4.8,SNR=7.0						
INK	Inuvik	83.37	16	P	P	01 45 27.0	+0.8
	comp=Z,4.7nm,0.6s,baz=333,slow=3.5,SNR=6.5						
TORD	Torodi Ar. Bea	85.77	282	P	P	01 45 40.4	+1.0
	comp=Z,1.1nm,0.8s,baz=68,slow=5.1,SNR=4.0						
YKA	Yellowknife Ar	92.53	12	P	P	01 46 10.7	+0.3
	comp=Z,0.6nm,0.7s,baz=333,slow=3.7,SNR=6.1						

NIED **15** *01:34:15.7, 40°.87N×143°.30E, h51^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.16; M$_{\theta\theta}$1.28; M$_{\phi\phi}$-3.44; M$_{r\theta}$2.71; M$_{\theta\phi}$-0.77; M$_{\phi r}$2.83; Fault plane solution: M$_0$4.99000×10^{15} NP1:ϕ_s38.00000°, δ75.00000°, λ115.00000°. NP2:ϕ_s157.00000°, δ29.00000°, λ32.00000°.*

JMA **15** *01:34:15.6±0.1, 40°.87N×143°.30E, h51^{km}, M4.4*

MOS **15** *01:34:15.9±1.0, 40°.96N×143°.15E, h35^{km}, mb4.8/25, Error ellipse: s-maj=8.1km s-min=5.3km az=102.4*

BJI **15** *01:34:15.1±0.0, 40°.84N×142°.99E, h25^{km}, mB4.9/32, mb4.5/53, Ms4.0/14, Ms7 3.8/14*

NEIC **15** *01:34:17.9±1.4, 40°.93N±0°.05×143°.08E±0°.09, h35^{km}±2^{km}, mb4.5/23, Error ellipse: s-maj=11.2km s-min=8.0km az=103.0*

IDC **15** *01:34:20.0±2.3, 40°.94N×143°.14E, h54^{km}±19^{km}, mb3.8/21, mb1 4.0/26, mb1mx3.9/50, mbtmp4.1/26, ML3.3/5, MS3.7/18, Ms1 3.7/18, ms1mx3.5/33, Error ellipse: s-maj=20.2km s-min=14.3km az=149.0*

ISC 15 01:34:16.8±1.1**, 40°.95N**±0°.03×**143°.29E**±0°.04**, h29**^{km}±7^{km}**, n187, σ1^s.36**/198**, mb4.5**/58**, MS4.1**/15**, 21C-13D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	1.06	355	ceP	Pn	01 34 35.3	-0.4
ERM				pmax	pmax		
	comp=Z,718nm,1.3s						
ERM	Erimo	1.06	355		Pn	01 34 35.4	-0.2
JEM	Erimo	1.06	355	⇑P	Pn	01 34 35.6	-0.1
JEM				eS	Sb	01 34 50.9	+0.7
JTHR	Tokachihiroo	1.34	0	P	Pn	01 34 39.5	+0.1
JTHR				eS	Sn	01 34 56.9	+0.7
JNBK	Urakawa-nobuka	1.38	343	⇑P	Pn	01 34 40.3	+0.2
JNBK				eS	Sb	01 35 00.4	+1.1
JKEN	Kujiedanarisaw	1.42	239	P	Pn	01 34 38.7	-1.8
JANG	Nango	1.47	247	P	Pn	01 34 39.9	-1.3
JTH	Tanohata	1.49	227	P	Pn	01 34 40.0	-1.5
JTH				eS	Sn	01 34 57.9	-2.0
JCH	Churui	1.66	2	P	Pn	01 34 44.1	+0.2
JCH				S	Sn	01 35 04.8	+0.6
JTM	Tenmabayashi	1.69	265	Pn	Pn	01 34 44.1	-0.2
JOT	Ohata	1.74	285	⇑P	Pn	01 34 44.8	-0.2
JOT				eS	Sn	01 35 07.1	+0.9
JKB	Kayabe	1.94	300	P	Pn	01 34 47.7	+0.1
JOM	Ohasama	2.13	227	P	Pn	01 34 49.8	-0.5
JOM				eS	Sn	01 35 16.5	+0.8
JAK	Akkeshi	2.29	27	P	Pn	01 34 52.3	-0.3
JAK				S	Sn	01 35 19.8	0.0
JEW	Eniwo	2.33	325	P	Pn	01 34 54.6	+1.5
JEW				eS	Sb	01 35 25.6	-0.8
JEW	Eniwo	2.33	325	Pn	Pn	01 34 52.0	-1.1
JAR	Ashorobuto	2.37	9	⇑P	Pn	01 34 53.1	-0.5
JAR				S	Sn	01 35 21.1	-0.6
JOMM	Oshimamatsumae	2.54	284	P	Pn	01 34 56.9	+1.0
JOMM				eS	Sn	01 35 29.5	+3.7
JMK	Ichinoseki	2.56	219	P	Pn	01 34 55.8	-0.4
JKK2	Kamakawa 2	2.94	352	P	Pn	01 35 02.2	+0.7
JHR	Hokuryu	3.02	338	P	Pn	01 35 04.6	+2.1
NMR	Nemuro--Hokkai	3.02	36	⇑iP	Pn	01 35 02.1	-0.4
NMR				i S	Sn	01 35 35.3	-2.4
NEM2	Nemuro 2	3.02	36	P	Pn	01 35 01.7	-0.9
NEM2				S	Sn	01 35 34.9	-2.9
JYK	Kaneyama	3.03	229	P	Pn	01 35 02.5	-0.3
JTKR	Abashiri--Toko	3.05	8	⇑P	Pn	01 35 03.1	+0.1
JTKR				eS	Sn	01 35 38.7	+0.3
JOSM	Okushiri--Mats	3.08	293	P	Pn	01 35 03.4	+0.1
JKA	Kamikawa-asahi	3.20	351		Pn	01 35 05.3	+0.2
ASAJ	Asahikawa	3.20	351	P	Pn	01 35 07.7	+2.7
	comp=Z,5.7nm,0.3s,baz=210,slow=9.5,SNR=17						
ASAJ				S	Sn	01 35 35.0	-7.2
	comp=Z,15nm,0.3s,baz=251,slow=8.3,SNR=9.9						
GLVR	Golovnino	3.24	30	i P	Pn	01 35 06.0	+0.5
GLVR				i S	Sn	01 35 42.1	-1.0
GLVR				pmax	pmax		
	comp=N,136nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,283nm,0.4s						
GLVR				pmax	pmax		
	comp=E,60nm,0.1s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR				smax	smax		
	comp=N,1μm,0.4s						
GRPR	Tuman	3.55	30	eP	Pn	01 35 10.3	+0.5
GRPR				pmax	pmax		
	comp=Z,400nm,0.3s						
GRPR				pmax	pmax		
	comp=N,120nm,0.1s						
GRPR				pmax	pmax		
	comp=E,115nm,0.1s						
YUK	Yuzh-Kuril'sk	3.62	31	d iP	Pn	01 35 11.4	+0.6
YUK				i S	Sn	01 35 50.3	-2.2
YUK				pmax	pmax		
	comp=Z,365nm,0.3s						
YUK				pmax	pmax		
	comp=E,189nm,0.4s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,817nm,0.5s						
YUK				MLR	MLR		
	comp=Z,547nm,16.0s						
YUK				MLR	MLR		
	comp=N,735nm,15.0s						
JMM	Marumori	3.64	213		Pn	01 35 09.7	-1.4
JSD	Sado	4.86	235		Pn	01 35 25.8	-2.0
KUR	Kuril'sk	5.43	37	eP	Pn	01 35 36.1	+0.4
KUR				eS	Sn	01 36 35.9	-1.3
KUR				pmax	pmax		
	comp=Z,181nm,0.4s						
KUR				pmax	pmax		
	comp=E,75nm,0.2s						
KUR				smax	smax		
	comp=E,847nm,1.3s						
KUR				smax	smax		
	comp=N,682nm,0.7s						
KUR				smax	smax		
	comp=N,399nm,0.6s						
KUR				smax	smax		
	comp=E,120nm,0.4s						
KUR				MLR	MLR		
	comp=Z,883nm,14.0s						
MJAR	Matsushiro Arr	5.93	224	P	Pn	01 35 43.4	+0.8
	comp=Z,0.2nm,0.3s,baz=30,slow=12,SNR=13						
MJAR				LR	LR	01 38 19.4	
	comp=Z,490nm,19.5s,baz=50,slow=41						
MJAR	Matsushiro Arr	5.93	224	Pn	Pn	01 35 40.6	-2.0
MAJO	Matsushiro	5.93	224	i P	Pn	01 35 40.3	-2.3
MAJO	Matsushiro	5.93	224	Pn	Pn	01 35 40.8	-1.8
MAT	Matsushiro	5.93	224	P	Pn	01 35 43.3	+0.7
MAT				eS	Sn	01 36 52.4	+2.9
YSS	Yuzh-Sakhalins	6.01	357	eP	Pn	01 35 45.7	+2.1
YSS				eS	Sn	01 36 51.5	+0.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=N,300nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
TEY	Ternei	6.38	312	⇑eP	Pn	01 35 45.9	-2.7
TEY				pmax	pmax		
	comp=Z,20nm,1.3s						
JHJ	Hachijo jima 2	8.31	201	LR	LR	01 39 58.3	
	comp=Z,207nm,19.3s,baz=54,slow=41						
USA0B	Ussuriysk Arra	8.94	295	i P	Pn	01 36 25.8	+1.9
USA0B	Ussuriysk Arra	8.94	295	Pn	Pn	01 36 21.0	-2.9
USRK	Ussuriysk Ar.	8.94	295	P	Pn	01 36 26.4	+2.5
	baz=102,slow=13,SNR=22						
USRK				LR	LR	01 39 58.0	
	comp=Z,612nm,18.4s,baz=86,slow=38						
USRK	Ussuriysk Ar.	8.94	295	Pn	Pn	01 36 20.9	-3.0
MDJ	Mudanjiang	10.71	295	Pn	Pn	01 36 50.8	+2.7
KLR	Kul'dur	11.61	319	P	Pn	01 37 01.4	+1.1
	comp=Z,0.1nm,0.3s,baz=119,slow=13,SNR=12						
KLR				LR	LR	01 41 51.3	
	comp=Z,296nm,19.1s,baz=157,slow=39						
KLR	Kul'dur	11.61	319	ceP	Pn	01 36 59.8	-0.5
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSRS	Korea Array	12.42	259	P	Pn	01 37 13.0	+1.6
	comp=Z,0.3nm,0.3s,baz=65,slow=14,SNR=2.9						
KSRS				LR	LR	01 41 38.9	
	comp=Z,406nm,19.1s,baz=64,slow=36						
JNU	Nakatsue	12.62	236	LR	LR	01 42 00.3	
	comp=Z,182nm,21.7s,baz=50,slow=37						
CN2	Changchun	13.49	288	eP	Pn	01 37 25.9	-0.2
CN2				eS	Sn	01 39 52.5	-2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,280nm,14.0s						
CN2				LR	LR		
	comp=Z,330nm,14.0s						
CN2				LR	LR		
	comp=Z,340nm,17.0s						
PETK	Petropavlovsk-	15.59	34	LR	LR	01 44 46.2	
	comp=Z,98nm,18.7s,baz=220,slow=40						
ZEA	Zeya	16.73	325	eP	Pn	01 38 06.6	-2.2
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=E,200nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
HIA	Hailar	18.52	305	P	P	01 38 29.4	-1.3
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	Hailar	18.52	305	P	P	01 38 29.4	-1.3
TIA	Tai'an	20.96	265	P	P	01 38 56.4	-0.9
TIA				pmax	pmax		
	comp=Z,23nm,0.7s						
NJ2	Nanjing	21.50	253	eP	P	01 39 01.4	-1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
YAK	Yakutsk	22.65	343	eP	P	01 39 11.5	-3.7
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
SEY	Seymchan	22.67	11	P	P	01 39 12.6	-2.8
	comp=E,4.4nm,0.5s,baz=194,slow=10,SNR=10						
HHC	Hu-ho-hao-te	23.91	280	eP	P	01 39 27.6	-0.5
HHC				pmax	pmax		
	comp=E,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=E,190nm,5.5s						
HHC				LR	LR		
	comp=E,250nm,12.7s						
HHC				LR	LR		
	comp=E,290nm,12.2s						
HHC				LR	LR		
	comp=E,380nm,12.8s						
BOD	Bodaibo	25.16	322	eP	P	01 39 38.1	-1.1
BOD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WHN	Wuhan	25.57	255	⇓P	P	01 39 48.1	+4.9
ULN	Ulaanbaatar	26.61	297	P	P	01 39 51.7	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	Ulaanbaatar	26.61	297	P	P	01 39 51.7	-0.9
SONM	Songino Array	27.05	297	P	P	01 39 56.5	-0.1
	comp=Z,3.1nm,0.5s,baz=84,slow=8.0,SNR=14						
SONM	Songino Array	27.05	297	P	P	01 39 55.7	-0.9
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	27.05	297	P	P	01 39 55.7	-0.9
XAN	Xi'an	28.00	267	P	P	01 40 06.0	+0.9
XAN				pP	sP	01 40 16.9	+0.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,95nm,6.2s						
TLY	Talaya	29.07	305	eP	P	01 40 18.9	+4.6
TLY				pmax	pmax		
	comp=Z,36nm,1.4s						
TLY				MLR	MLR		
	comp=Z,559nm,16.0s						
ZAK	Zakamensk	29.19	302	eP	P	01 40 14.7	-0.9
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
H11N2	WAKE ISLAND Hy	29.20	129	T	T	02 10 45.8	
	baz=322,slow=74						
H11N1	WAKE ISLAND Hy	29.21	129	T	T	02 10 49.4	
	baz=322,slow=74						
H11N3	WAKE ISLAND Hy	29.22	129	T	T	02 10 53.8	
	baz=322,slow=74						
H11S1	WAKE ISLAND Hy	30.05	131	T	T	02 11 56.7	
	baz=324,slow=76						
H11S3	WAKE ISLAND Hy	30.06	131	T	T	02 12 02.3	
	baz=324,slow=76						
H11S2	WAKE ISLAND Hy	30.07	131	T	T	02 11 56.4	
	baz=324,slow=76						
LZH	Lanzhou	31.05	274	eP	P	01 40 32.1	-0.2
LZH				pP	pwP	01 40 43.3	+0.6
LZH				sP	sP	01 40 47.5	+3.8
LZH				ePP	PnPn	01 41 33.0	-0.8
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,5.2s						
GTA	Gaotai	33.00	282	⇓P	P	01 40 49.1	-0.2
GTA				pP	pP	01 40 58.8	+1.5
GTA				sP	sP	01 41 02.8	+2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,200nm,6.0s						
GTA				LR	LR		
	comp=Z,130nm,15.3s						
GTA				LR	LR		
	comp=Z,330nm,18.5s						
GTA				LR	LR		
	comp=Z,310nm,17.8s						
GYA	Guiyang	33.46	256	⇓P	P	01 40 52.5	-0.9
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
GYA				LR	LR		
	comp=Z,250nm,14.1s						
KMI	Kunming	37.12	258	⇓P	P	01 41 24.8	-0.2
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
DGZ	Jazzator, Alta	39.41	302	i P	P	01 41 44.2	+0.2
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZAA0	Zalesovo Array	40.47	309	P	P	01 41 52.5	0.0
ZAA0				IAmb	IAmb	01 41 58.2	
	comp=Z,4.9nm,0.7s						
ZALV	Zalesovo Beam	40.47	309	P	P	01 41 52.1	-0.3
	comp=Z,5.9nm,0.6s,baz=87,slow=8.1,SNR=21						
ZALV				PcP	PcP	01 43 54.9	+0.2
	comp=Z,1.7nm,0.7s,baz=113,slow=3.7,SNR=4.3						
ZALV	Zalesovo Beam	40.47	309	P	P	01 41 52.3	-0.2
WMQ	Urumqi	40.51	293	eP	P	01 41 53.8	+0.8
A21K	Barrow	42.29	25	P	P	01 42 08.0	+0.9
A21K				IAmb	IAmb	01 42 18.5	
	comp=Z,11nm,0.8s						
IMAR	Indian Mountai	42.55	33	P	P	01 42 09.6	+0.2
MK31	Makanchi Array	43.39	299	P	P	01 42 16.0	-0.4
MK31				pmax	pmax		

	comp=Z,4.0nm,0.7s						
MK31	Makanchi Array	43.39	299	P	P	01 42 16.0	-0.4
MKAR	Makanchi Array	43.39	299	P	P	01 42 15.9	-0.6
	comp=Z,4.9nm,0.8s,baz=82,slow=9.4,SNR=31						
MKAR				LR	LR	02 01 31.6	
	comp=Z,162nm,18.2s,baz=86,slow=38						
MKAR	Makanchi Array	43.39	299	*ce*P	P	01 42 15.8	-0.7
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	43.39	299	P	P	01 42 16.1	-0.4
MAKZ	Makanchi	43.59	299	P	P	01 42 17.7	-0.4
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	Makanchi	43.59	299	P	P	01 42 17.7	-0.4
CMAR	Chiang Mai Arr	43.98	253	P	P	01 42 21.3	-0.2
	comp=Z,1.4nm,0.4s,baz=45,slow=6.3,SNR=6.7						
CMAR				LR	LR	02 02 33.5	
	comp=Z,40nm,19.0s,baz=128,slow=39						
CMAR	Chiang Mai Arr	43.98	253	*i* P	P	01 42 22.0	+0.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURK	Kurchatov	44.76	305	*ce*P	P	01 42 26.2	-1.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	Kurchatov	44.76	305	P	P	01 42 27.1	-0.3
ILAR	Eielson Array	45.42	34	P	P	01 42 33.6	+1.2
	comp=Z,1.2nm,0.8s,baz=257,slow=5.7,SNR=11						
BMAR	Burnt Mountain	46.21	31	P	P	01 42 40.8	+2.1
BCAR	Beaver Creek A	47.85	36	P	P	01 42 53.0	+1.5
BRVK	Borovoye	49.14	310	*ce*P	P	01 43 00.6	-0.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	49.14	310	P	P	01 43 01.6	+0.1
BRVK				IAmb	IAmb	01 43 09.6	
	comp=Z,5.4nm,0.9s						
AAK	Ala-Archa	50.00	296	P	P	01 43 08.3	-0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	Ala-Archa	50.00	296	P	P	01 43 08.2	-0.1
AAK				IAmb	IAmb	01 43 25.4	
	comp=Z,2.5nm,0.7s						
KSH	Kashi	50.23	292	P	P	01 43 15.8	+5.6
KSH				sP	sP	01 43 27.4	+5.5
KSH				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,260nm,6.0s						
INK	Inuvik	50.24	29	P	P	01 43 11.1	+1.4
	comp=Z,2.4nm,0.6s,baz=304,slow=8.6,SNR=5.9						
INK	Inuvik	50.24	29	IAmb	IAmb	01 43 22.8	
	comp=Z,4.7nm,0.8s						
HNR	Honiara	52.44	159	LR	LR	02 02 32.3	
	comp=Z,42nm,20.9s,baz=296,slow=32						
SVE	Sverdlovsk	53.22	317	⇑*e*P	P	01 43 32.8	+0.7
SVE				pmax	pmax		
	comp=Z,18nm,0.8s						
ARU	Arti	54.44	317	*c i*P	P	01 43 40.8	-0.2
ARU						01 44 37.7	
ARU						01 45 44.9	
ARU				S	S	01 51 19.3	+1.9
ARU				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU	Arti	54.44	317	P	P	01 43 40.6	-0.4
EUNU	Eureka	56.09	9	P	P	01 43 53.2	+0.6
EUNU				IAmb	IAmb	01 44 11.8	
	comp=Z,2.9nm,0.8s						
ABKAR	Akbulak array	56.58	309		P	01 43 56.7	+0.3
ABKAR	Akbulak array	56.58	309	P	P	01 43 56.6	+0.1
ABKAR				IAmb	IAmb	01 43 57.3	
	comp=Z,6.1nm,0.8s						
KBL	Kabul	57.43	289	P	P	01 44 01.9	-1.1
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	Kabul	57.43	289		P	01 44 01.9	-1.1
KBL				IAmb	IAmb	01 44 20.8	
	comp=Z,4.2nm,0.8s						
KIRV	Kirov	58.03	322	*ce*P	P	01 44 06.8	+0.3
RES	Resolute Bay	58.44	15	P	P	01 44 09.6	+0.4
	comp=Z,2.9nm,0.8s,baz=309,slow=7.7,SNR=8.7						
RES	Resolute Bay	58.44	15	P	P	01 44 09.6	+0.4
RES				IAmb	IAmb	01 44 21.4	
	comp=Z,3.4nm,0.9s						
YKA	Yellowknife Ar	59.70	32	P	P	01 44 19.1	+1.0
	comp=Z,0.2nm,0.4s,baz=301,slow=7.2,SNR=5.4						
ARCES	ARCESS Array B	60.85	339	P	P	01 44 25.6	-0.2
	comp=Z,1.9nm,0.8s,baz=43,slow=5.5,SNR=4.2						
ARCES				LR	LR	02 16 12.7	
	comp=Z,136nm,18.2s,baz=280,slow=41						
ARCES	ARCESS Array B	60.85	339	P	P	01 44 25.7	-0.2
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BELG	Belogornoye	61.95	316	*i* P	P	01 44 33.0	-0.5
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GEYT	Alibeck	63.25	298	P	P	01 44 42.3	-0.2
	comp=Z,3.6nm,0.7s,baz=23,slow=4.2,SNR=7.6						
GEYT				LR	LR	02 16 10.9	
	comp=Z,62nm,18.1s,baz=80,slow=40						
GEYT	Alibeck	63.25	298	P	P	01 44 42.4	-0.2
ASAR	Alice Springs	64.88	190	P	P	01 44 52.9	-0.2
	comp=Z,0.8nm,0.7s,baz=8.7,slow=10,SNR=4.2						
ASAR	Alice Springs	64.88	190	P	P	01 44 53.0	-0.2
VRH	Novokhopyorsk	65.67	317	*e*P	P	01 44 55.9	-2.1
VRH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
OBN	Obninsk	65.84	323	*i* P	P	01 44 58.2	-0.9
OBN				*i*		01 45 29.2	
OBN				*i*		01 47 22.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FINES	FINESS Array B	66.03	332	P	P	01 44 60.0	-0.2
	comp=Z,3.3nm,0.5s,baz=54,slow=7.4,SNR=26						
FINES				LR	LR	02 19 55.8	
	comp=Z,219nm,18.6s,baz=62,slow=42						
FINES	FINESS Array B	66.03	332	P	P	01 45 00.0	-0.2
LPSR	Galich'ya Gora	66.24	320	*e*P	P	01 45 00.9	-0.8
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SUMG	Summit	66.76	1	*i* P	P	01 45 06.3	+1.1
SUMG				pmax	pmax		
	comp=Z,21nm,0.8s						
SUMG	Summit	66.76	1	*i* P	P	01 45 06.3	+1.1
	comp=Z,21nm,0.8s						
SUMG	Summit	66.76	1	IAmb	IAmb	01 45 07.2	
	comp=Z,21nm,0.8s						
SUMG	Summit	66.76	1	*i* P	P	01 45 06.3	+1.1
ZEI	Tsey	69.45	309	*e*P	P	01 45 21.2	-1.2
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV	Kislovodsk	69.45	311	*e*P	P	01 45 23.2	+1.0
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV	Kislovodsk	69.45	311	P	P	01 45 23.2	+1.0
KBZ	Khabaz	69.47	310	P	P	01 45 23.1	+0.9
	comp=Z,6.2nm,0.9s,baz=38,slow=4.1,SNR=15						
KBZ	Khabaz	69.47	310	*ce*P	P	01 45 22.0	-0.1
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LRM	Limekiln Ridge	70.35	46	P	P	01 45 26.7	-1.2
BOZ	Bozeman (W)	70.94	46	P	P	01 45 32.8	+1.4
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	70.94	46	P	P	01 45 32.8	+1.4
BOZ				IAmb	IAmb	01 45 44.2	
	comp=Z,4.2nm,0.8s						
NB2	NORSAR Subarra	71.13	338	P	P	01 45 31.0	-1.1
	comp=Z,7.9nm,0.9s,baz=39,slow=6.2						
NOA	NORSAR Array B	71.13	338	P	P	01 45 31.9	-0.2
	comp=Z,1.5nm,0.7s,baz=39,slow=6.0,SNR=5.4						
NOA				LR	LR	02 20 39.7	
	comp=Z,56nm,20.5s,baz=275,slow=39						
NVAR	Mina Array Bea	71.51	55	P	P	01 45 36.4	+1.3
	comp=Z,0.3nm,0.8s,baz=286,slow=6.5,SNR=2.2						
AKASG	Malin Array Be	72.09	322	P	P	01 45 37.7	-0.3
	comp=Z,3.1nm,0.5s,baz=44,slow=6.0,SNR=11						
AKASG				LR	LR	02 19 54.5	
	comp=Z,99nm,18.1s,baz=10.0,slow=38						
AKASG	Malin Array Be	72.09	322	P	P	01 45 38.2	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	72.09	322	P	P	01 45 38.2	+0.2
FRB	Frobisher Bay	72.62	14	P	P	01 45 40.9	0.0
	comp=Z,3.3nm,0.6s,baz=347,slow=6.0,SNR=11						
PDAR	Pinedale Array	73.90	47	P	P	01 45 50.0	+0.8
	comp=Z,0.3nm,0.6s,baz=266,slow=2.9,SNR=4.5						
PDAR				LR	LR	02 18 24.9	
	comp=Z,28nm,19.1s,baz=14,slow=36						
SORM	Soroca	74.28	321	⇓P	P	01 45 50.5	-0.5
SORM	Soroca	74.28	321	⇓P	P	01 45 50.5	-0.5
MARD	Mardin	74.73	306	P	P	01 45 55.5	+1.5
BUR08	Bucovina Ar. S	76.12	322	P	P	01 46 02.2	+0.5
BUR08				IAmb	IAmb	01 46 03.2	
	comp=Z,3.2nm,0.8s						
BURAR	Bucovina Array	76.13	322	⇓P	P	01 46 02.1	+0.3
BURAR	Bucovina Array	76.13	322	⇓P	P	01 46 02.1	+0.3
BURAR	Bucovina Array	76.13	322	P	P	01 46 01.6	-0.1
BIZ	Bicaz	76.20	321	⇑P	P	01 46 03.1	+1.0
TESR	Tescani	76.25	321	⇓P	P	01 46 02.6	+0.2
KOLS	Kolonicke sedl	76.50	324	*e*P	P	01 46 04.3	+0.5
KOLS	Kolonicke sedl	76.50	324	*e*P	P	01 46 04.2	+0.5
PLOR	Plostina	76.72	320	⇑P	P	01 46 04.7	-0.4
PLOR	Plostina	76.72	320	⇑P	P	01 46 04.7	-0.4
BRTR	Keskin Array B	77.34	312	P	P	01 46 08.9	+0.1
	comp=Z,0.4nm,0.7s,baz=68,slow=5.4,SNR=2.8						
BRTR				LR	LR	02 26 08.4	
	comp=Z,33nm,18.4s,baz=2.5,slow=40						
VOIR		77.80	321	⇓P	P	01 46 12.2	+1.0
VOIR		77.80	321	⇓P	P	01 46 12.2	+1.0
ARR	Arges	78.05	321	⇓P	P	01 46 13.7	+1.2
VYHS	Vyhne	78.32	326	*e*P	P	01 46 13.3	-0.6
VYHS	Vyhne	78.32	326	*e*P	P	01 46 13.3	-0.6
CLL	Collm	78.41	331	*i* P	P	01 46 14.5	+0.2
	comp=Z,8.0nm,1.0s						
CLL				*e*(PcP)	PcP	01 46 22.0	-1.5
CLL	Collm	78.41	331	*i* P	P	01 46 14.5	+0.2
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PRU	Pruhonice	78.89	329	*e*P	P	01 46 17.4	+0.4
PRU	Pruhonice	78.89	329	*e*P	P	01 46 17.4	+0.4
KHC	Kasperske Hory	79.95	329	*e*P	P	01 46 23.2	+0.3
KHC				*e*		01 46 34.8	
KHC	Kasperske Hory	79.95	329	*e*P	P	01 46 23.2	+0.3
KHC				*e*pP	pwP	01 46 34.8	+0.6
GERES	GERESS Array B	80.13	329	P	P	01 46 24.0	+0.1
	comp=Z,0.4nm,0.5s,baz=31,slow=6.2,SNR=4.2						
VTS	Vitosha	80.76	320	⇑P	P	01 46 28.1	+0.6
VTS	Vitosha	80.76	320	⇑P	P	01 46 28.1	+0.6
CPRX	Cap Rock	83.85	51	P	P	01 46 45.1	+1.3
PPT	Papeete	85.13	118	LR	LR	02 19 07.3	
	comp=Z,88nm,19.3s,baz=358,slow=32						
TXAR	Lajitas Array	86.60	54	P	P	01 46 58.7	+1.1
	comp=Z,0.2nm,0.6s,baz=298,slow=2.7,SNR=3.7						
SNAA	Sanae	144.92	198	PKPdf	PKPbc	01 53 48.8	-0.3
VNA2	Neumayer--Watz	146.49	197	PKPdf	PKPbc	01 53 53.6	-0.2

IDC ***15*** *02:18:37.6±6.9, 17°.79S×13°.71W, h0^{km}, mb4.0/5, mb1 4.0/5, mb1mx3.8/22, mbtmp4.0/5, MS4.1/21, Ms1 4.1/21, ms1mx4.0/27, Error ellipse: s-maj=301.3km s-min=109.1km az=99.0*

GCMT ***15*** *02:18:51.0±0.2, 16°.52S±0°.03×14°.35W±0°.02, h17^{km}±1^{km}, MW5.0/96, Moment Tensor Solution. s31,c32; s96,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.68±.16; $M_{\theta\theta}$0.28±.10; $M_{\phi\phi}$2.40±.11; $M_{r\theta}$2.61±.35; $M_{\theta\phi}$0.22±.07; $M_{\phi r}$0.24±.26; Best double couple: $M_0$3.36900×10^{16} NP1:ϕ_s349.00000°, δ41.00000°, λ-135.00000°. NP2: ϕ_s222.00000°, δ62.00000°, λ-59.00000°. Principal axes: T 2.5340, Plg12.0000°, Azm290.0000°; N 1.6640, Plg27.0000°, Azm26.0000°; P -4.2030, Plg60.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 15 02:18:39.7±6.5**, 17°.9S**±0°.7×**1°3W**±°**, h10^{km}, n24,** σ0^{s}.**91**/8**, mb4.3**/7**, MS4.1**/21**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIC	Lamto	25.33	20	*e*P	P	02 24 07.9	+1.0
	5.3nm,0.4s						
KIC	Kosan Boka	25.55	20	*e*P	P	02 24 08.8	-0.1
	25nm,1.3s						
TIC	Toumodi	25.73	19	*e*P	P	02 24 10.6	0.0
DBIC	Dimbokro	25.80	20	P	P	02 24 10.7	-0.5
	2.7nm,0.6s,baz=202,slow=7.5,SNR=7.2						
DBIC				LR	LR	02 31 40.9	
	comp=Z,330nm,21.1s,baz=182,slow=30						
BDFB	Brasilia	33.25	269	LR	LR	02 35 48.6	
	comp=Z,766nm,20.9s,baz=111,slow=31						
TORD	Torodi Ar. Bea	34.23	27	P	P	02 25 26.4	+0.5
	6.0nm,0.9s,baz=213,slow=8.5,SNR=14						
TORD				LR	LR	02 36 40.3	
	comp=Z,534nm,21.6s,baz=200,slow=32						
CPUP	Villa Florida	41.45	250	LR	LR	02 41 03.1	
	comp=Z,292nm,19.6s,baz=86,slow=33						
KMBO	Kilima Mbogo	52.38	77	LR	LR	02 47 51.6	
	comp=Z,256nm,20.6s,baz=283,slow=33						
PLCA	Paso Flores	53.82	232	LR	LR	02 48 19.4	
	comp=Z,375nm,20.1s,baz=74,slow=33						
KEST	Kesra	57.50	22	P	P	02 28 28.1	-1.2
	2.1nm,0.6s,baz=225,slow=4.7,SNR=4.0						
KEST				LR	LR	02 52 40.1	
	comp=Z,152nm,18.7s,baz=256,slow=36						
ESDC	Sonseca Array	57.93	9	LR	LR	02 50 14.0	
	comp=Z,152nm,19.8s,baz=0.0,slow=33						
ROSC	El Rosal	64.24	285	LR	LR	02 55 13.2	
	comp=Z,376nm,20.7s,baz=156,slow=34						
MAW	Mawson	68.34	156	LR	LR	02 52 59.0	
	comp=Z,128nm,21.9s,baz=242,slow=30						
GERES	GERESS Array B	70.67	19	LR	LR	03 00 27.4	
	comp=Z,167nm,18.4s,baz=260,slow=36						
BRTR	Keskin Array B	72.14	36	P	P	02 30 04.3	-0.5
	0.4nm,0.8s,baz=234,slow=5.2,SNR=2.5						
BRTR				LR	LR	03 03 00.5	
	comp=Z,25nm,18.1s,baz=231,slow=37						
QSPA	South Pole Qui	72.28	180	LR	LR	02 57 31.8	
	comp=Z,71nm,18.4s,baz=211,slow=32						
AKASG	Malin Array Be	77.86	26	P	P	02 30 38.4	+1.1
	0.2nm,0.3s,baz=225,slow=6.0,SNR=1.7						
AKASG				LR	LR	03 07 10.4	
	comp=Z,86nm,18.0s,baz=265,slow=37						
KBZ	Khabaz	80.02	38	LR	LR	03 06 28.6	
	comp=Z,45nm,19.0s,baz=294,slow=36						
NOA	NORSAR Array B	81.10	12	LR	LR	03 08 02.0	
	comp=Z,54nm,18.4s,baz=170,slow=37						
VNDA	Vanda	84.74	179	LR	LR	03 04 11.9	
	comp=Z,87nm,21.1s,baz=180,slow=32						
FINES	FINESS Array B	85.09	18	LR	LR	03 08 42.7	
	comp=Z,89nm,18.4s,baz=262,slow=35						
GEYT	Alibeck	86.99	49	LR	LR	03 07 38.6	
	comp=Z,91nm,21.9s,baz=285,slow=34						
ARCES	ARCESS Array B	91.44	13	LR	LR	03 15 19.8	
	comp=Z,73nm,18.7s,baz=230,slow=37						
ARU	Arti	95.14	32	LR	LR	03 20 23.3	
	comp=Z,58nm,18.9s,baz=255,slow=39						

SJA ***15*** *03:06:37.4±0.6, 24°.24S×67°.16W, h191^{km}±5^{km}, ML4.1, MW3.8*

NEIC ***15*** *03:06:37.8±1.9, 24°.25S±0°.06×67°.29W±0°.06, h205^{km}±10^{km}, Error ellipse: s-maj=9.5km s-min=7.4km az=210.0*

VAO ***15*** *03:06:37.0±1.5, 24°.39S×67°.61W, h236^{km}±12^{km}, mb4.1*

GUC ***15*** *03:06:39.3±0.6, 24°.21S×67°.48W, h215^{km}±7^{km}, ML4.1*

IDC ***15*** *03:06:40.9±1.3, 23°.75S×67°.08W, h197^{km}±15^{km}, mb3.6/1, mb1 3.4/6, mb1mx3.2/28, mbtmp3.9/6, Error ellipse: s-maj=26.6km s-min=17.3km az=163.0*

ISC 15 03:06:37.5±0.7**, 24°.26S**±0°.04×**67°.21W**±0°.04**, h193^{km}**±7^{km}**, n88,** σ1^{s}.**17**/126**, 11C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.62	107	⇓*i*P	Pn	03 07 11.6	-0.2
SLA				*i* S	S	03 07 37.1	-1.3
SLA	San Lorenzo	1.62	107	*e*P	Pn	03 07 11.9	+0.1
SLA				*e*S	S	03 07 37.4	-1.0
LVC	Limon Verde	2.26	316	P	Pn	03 07 20.1	+1.4
	24nm,0.3s,baz=147,slow=10,SNR=411						
LVC				S	S	03 07 50.3	-0.4
	92nm,0.3s,baz=16,slow=22,SNR=64						
LVC	Limon Verde	2.26	316	*e*P	Pn	03 07 19.7	+1.0
LVC				*e*S	S	03 07 50.2	-0.4
LVC	Limon Verde	2.26	316	Pn	Pn	03 07 19.7	+1.0
LVC				Sn	S	03 07 50.2	-0.4
LVC	Limon Verde	2.26	316	*e*P	Pn	03 07 19.5	+0.9
LVC				*e*S	S	03 07 50.4	-0.2
LVC	Limon Verde	2.26	316	*e*P	Pn	03 07 19.6	+0.9
PB15	IPOC Station P	2.32	296	⇑*i*P	Pn	03 07 20.4	+1.2
PB15				*i* S	S	03 07 51.3	-0.2
PB15	IPOC Station P	2.32	296		Pn	03 07 20.2	+1.1
PB15	IPOC Station P	2.32	296	*e*P	Pn	03 07 20.4	+1.2
PB15				*e*S	S	03 07 51.5	0.0
GO02	Mina Guanaco	2.35	247	⇑*i*P	Pn	03 07 20.8	+1.2
GO02				*i* S	S	03 07 53.0	+0.8
GO02				IAML		03 07 54.4	
	comp=N,871nm,0.4s						
GO02	Mina Guanaco	2.35	247	Pn	Pn	03 07 20.7	+1.2
GO02				Sn	S	03 07 53.0	+0.8
YJA	Yavi	2.59	37	*e*P	Pn	03 07 22.9	+0.5
YJA				*e*S	S	03 07 56.6	-0.7
PB06	IPOC Station P	2.66	305	⇑*i*P	Pn	03 07 24.0	+1.0
PB06				*i* S	S	03 07 57.5	-0.8
PB06	IPOC Station P	2.66	305		Pn	03 07 23.7	+0.7
PB06				Sn	S	03 07 57.6	-0.8
PB06	IPOC Station P	2.66	305	*e*P	Pn	03 07 24.0	+1.0
PB06				*e*S	S	03 07 57.8	-0.6
PB06				IAML		03 08 00.4	
	comp=Z,772nm,0.3s						
PB14	IPOC Station P	2.94	262	⇑*i*P	Pn	03 07 27.0	+0.7
PB14				*e*S	S	03 08 03.1	-1.2
PB14				IAML		03 08 06.9	
	comp=E,112nm,0.3s						
PB14	IPOC Station P	2.94	262		Pn	03 07 27.0	+0.7
PB14				Sn	S	03 08 03.6	-0.7
PB14	IPOC Station P	2.94	262	*e*P	Pn	03 07 27.4	+1.1
PB14				*e*S	S	03 08 03.8	-0.5
AHML	Horco Molle	3.04	147	*e*P	Pn	03 07 27.4	+0.2
AHML				*e*S	S	03 08 05.4	-0.7
PB05	IPOC Station P	3.08	296	⇑*i*P	Pn	03 07 28.5	+0.6
PB05				*i* S	S	03 08 05.1	-2.0
PB05				IAML		03 08 07.8	
	comp=E,364nm,0.3s						
PB05	IPOC Station P	3.08	296	*e*P	Pn	03 07 28.6	+0.7
PB05				*e*S	S	03 08 06.5	-0.6
PB05				IAML		03 08 12.2	
	comp=Z,206nm,0.3s						
PB09	IPOC Station P	3.08	322	⇑*i*P	Pn	03 07 29.1	+1.2
PB09				*i* S	S	03 08 06.9	-0.4
PB09				IAML		03 08 11.3	
	comp=E,556nm,0.6s						
PB09	IPOC Station P	3.08	322		Pn	03 07 29.1	+1.2
PB09				Sn	S	03 08 06.5	-0.7
PB09	IPOC Station P	3.08	322	*e*P	Pn	03 07 29.3	+1.3
PB09				*e*S	S	03 08 07.3	0.0
PB09				IAML		03 08 07.8	
	comp=Z,415nm,0.8s						
AC02	Maricunga	3.10	214	⇑*i*P	Pn	03 07 29.8	+1.4
AC02				*i* S	S	03 08 09.4	+1.2
AC02	Maricunga	3.10	214		Pn	03 07 29.7	+1.4
PB10	IPOC Station P	3.15	283	*e*P	Pn	03 07 29.2	+0.7
PB10				*e*S	S	03 08 06.1	-2.2
PB10				IAML		03 08 13.1	
	comp=E,184nm,0.4s						
PB10	IPOC Station P	3.15	283	Pn	Pn	03 07 28.8	+0.2
PB10	IPOC Station P	3.15	283	*e*P	Pn	03 07 29.6	+1.0
PB10				*e*S	S	03 08 08.5	+0.1
PB03	IPOC Station P	3.21	313	⇑*i*P	Pn	03 07 29.9	+0.5
PB03				*e*S	S	03 08 08.5	-1.5
PB03	IPOC Station P	3.21	313	*e*P	Pn	03 07 30.0	+0.5
PB03				*e*S	S	03 08 08.3	-1.7
PB03				IAML		03 08 10.3	
	comp=Z,636nm,0.1s						
PB04	IPOC Station P	3.31	305	⇑*i*P	Pn	03 07 31.2	+0.5
PB04				*e*S	S	03 08 10.4	-1.9
PB04	IPOC Station P	3.31	305		Pn	03 07 30.8	+0.1
PB04	IPOC Station P	3.31	305	*e*P	Pn	03 07 31.5	+0.8
PB04				*e*S	S	03 08 11.6	-0.6
PB04				IAML		03 08 14.0	
	comp=Z,526nm,0.1s						
PB07	IPOC Station P	3.52	315	⇑*i*P	Pn	03 07 33.6	+0.3
PB07				*i* S	S	03 08 14.4	-2.5
PB07	IPOC Station P	3.52	315		Pn	03 07 33.5	+0.2
PB07	IPOC Station P	3.52	315	*e*S	S	03 08 15.4	-1.6
PB07				IAML		03 08 16.6	
	comp=Z,411nm,0.1s						
AC01	Pan de Azucar	3.60	238	Pn	Pn	03 07 34.1	0.0
GO03	Copiap	4.30	219	*i* S	S	03 08 31.8	-2.4
GO03	Copiap	4.30	219	Pn	Pn	03 07 42.5	-0.3
GO03	Copiap	4.30	219	*e*P	Pn	03 07 43.1	+0.3
GO03				*e*S	S	03 08 32.8	-1.4
CYA	Choya	4.36	163	*e*P	Pn	03 07 44.3	+0.8
CYA				*e*S	S	03 08 34.6	-0.9
PATCX	Punta Patache	4.37	321	⇑*i*P	Pn	03 07 43.7	0.0
PATCX				*e*S	S	03 08 33.0	-2.8
PATCX	Punta Patache	4.37	321		Pn	03 07 43.8	0.0
PB08	IPOC Station P	4.47	336	*e*P	Pn	03 07 46.0	+0.5
PB08				*e*S	S	03 08 36.9	-1.8
PB08	IPOC Station P	4.47	336		Pn	03 07 45.7	+0.3
TA01	Diego Aracena	4.59	323	Pn	Pn	03 07 46.2	-0.2
GO01	Chusmiza	4.92	338		Pn	03 07 51.1	-0.1
AC04	Llanos de Chal	5.25	221	Pn	Pn	03 07 54.0	-0.9
AC05	El Transito	5.33	210		Pn	03 07 55.6	-0.4
PSGCX	Pisagua	5.37	329	Pn	Pn	03 07 55.5	-1.0
MNMC	Minye Minye	5.56	336		Pn	03 07 58.8	-0.5
LCO	Las Campanas	5.67	213	Pn	Pn	03 07 59.7	-1.0
APLL	PUNTA DE LOS L	6.15	175	*e*P	Pn	03 08 06.6	0.0
CO01	Juntas del Tor	6.25	204	Pn	Pn	03 08 08.2	0.0
CO01					S	03 09 18.9	-0.9
PB16	IPOC Station P	6.27	340	Pn	Pn	03 08 08.5	-0.2
ACCO	Cerro Coronel	6.52	194	*e*P	Pn	03 08 13.2	+1.5
ACCO				*e*S	S	03 09 28.7	+2.5
AP01	Chacalluta	6.54	333	Pn	Pn	03 08 12.4	+0.7
TCA	Tanti	7.42	162	*e*P	Pn	03 08 23.3	0.0
TCA				*e*S	S	03 09 43.2	-4.0
CO02	Combarbal	7.69	205	Pn	Pn	03 08 26.1	-0.7
CPUP	Villa Florida	9.18	105	P	Pn	03 08 50.2	+4.1
	comp=Z,0.2nm,0.3s,baz=274,slow=14,SNR=3.1						
CPUP	Villa Florida	9.18	105		Pn	03 08 47.4	+1.3
SIV	San Ignacio	10.04	36	P	Pn	03 08 55.2	-2.3
	comp=Z,0.7nm,0.3s,baz=245,slow=10.0,SNR=13						
SIV				S	S	03 10 40.5	-10
	baz=229,slow=22,SNR=1.7						
TRCB	Terra Rica	13.45	87	*e*P	P	03 09 44.6	+0.8
PLCA	Paso Flores	16.67	189	P	Pn	03 10 28.2	+8.1
	comp=Z,0.2nm,0.3s,baz=25,slow=9.9,SNR=7.0						
PLCA	Paso Flores	16.67	189	P	Pn	03 10 19.4	-0.7
PLCA				IAmb	IAmb	03 10 31.0	
	comp=Z,3.1nm,1.0s						
ARAG	Araguaiana, MT	16.77	62	*e*P	Pn	03 10 21.9	+0.4
LL01	San Ignacio de	18.58	192	P	P	03 10 40.1	+0.2
LL01				IAmb	IAmb	03 10 47.0	
	comp=Z,7.6nm,0.6s						
VAO	Valinhos	18.59	90	*e*P	P	03 10 40.0	-0.3
IPMB	Ipameri, GO	18.78	74	*e*P	P	03 10 42.5	+0.1
SNDB	Serra Nova Dou	19.41	54	*e*P	P	03 10 48.5	-0.8
BDFB	Brasilia	19.96	68	P	P	03 10 54.8	-0.4
	comp=Z,0.7nm,0.3s,baz=237,slow=9.4,SNR=14						
BDFB	Brasilia	19.96	68	P	P	03 10 54.5	-0.7
JANB	Januaria	23.39	71	*e*P	P	03 11 28.8	-0.4
SDBA	SAO DESIDERIO	24.19	65	*e*P	P	03 11 36.1	-0.4
SMTB	Santa Maria do	24.20	54	*e*P	P	03 11 37.1	+0.6
PRPB	Parauapebas	24.54	46	*e*P	P	03 11 38.6	-1.1
NAN01	Guarapari, ES	26.04	81	*e*P	P	03 11 51.8	-1.4
TOA0	Torodi Ar. Sit	76.84	69	P	P	03 18 08.4	-0.1
TORD	Torodi Ar. Bea	76.84	69	P	P	03 18 09.6	+1.1
	comp=Z,1.0nm,0.9s,baz=238,slow=4.9,SNR=2.6						
TORD	Torodi Ar. Bea	76.84	69	P	P	03 18 07.0	-1.5
ASAR	Alice Springs	128.15	205	PKP	PKiKP	03 25 23.7	+1.6
	comp=Z,0.2nm,0.5s,baz=130,slow=2.7,SNR=4.0						
ASAR	Alice Springs	128.15	205		PKPdf	03 25 20.5	-0.9
KSH	Kashi	145.50	55	PKPbc	PKiKP	03 25 58.0	+1.1
MKAR	Makanchi Array	146.84	40	PKPbc	PKiKP	03 25 59.1	-0.2
	comp=Z,0.3nm,0.7s,baz=302,slow=3.8,SNR=4.4						
MKAR	Makanchi Array	146.84	40		PKPab	03 25 57.4	-1.3
LZH	Lanzhou	165.91	31	⇓PKP	PKPdf	03 26 19.8	+0.1
LZH				pPKP	pPKPdf	03 27 09.4	-2.0
LZH				PKP	PKPab	03 27 23.5	+3.0
LZH				sPKP		03 27 28.9	

DDA ***15*** *03:15:43.5, 36°.97N×26°.67E, h7^{km}±3^{km}, ML2.2*

ISK ***15*** *03:15:44.3, 37°.00N×26°.68E, h13^{km}, ML2.3/11*

ATH ***15*** *03:15:44.7, 36°.98N×26°.69E, h32^{km}±9^{km}, ML2.6/3, Error ellipse: s-maj=9.0km s-min=1.3km az=79.0*

THE ***15*** *03:15:44.8, 37°.00N×26°.70E, h3^{km}±5^{km}, ML2.5/4, Error ellipse: s-maj=5.5km s-min=0.8km az=144.0*

ISC 15 03:15:44.4±1.0**, 37°.00N**±0°.02×**26°.67E**±0°.02**, h15^{km}**±8^{km}**, n42,** σ0^{s}.**45**/62**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	Kos Island	0.35	135	P	Pg	03 15 51.6	+0.1
KOSK				S	Sb	03 15 57.2	-0.4
	1µm,0.3s						
KOSK	Kos Island	0.35	135	PG	Pg	03 15 51.4	-0.1
KOSK				SG	Sb	03 15 57.4	-0.2
BODT	Bodrum	0.51	83	P	Pg	03 15 54.4	-0.2
BODT				S	Sg	03 16 01.3	-0.2
BODT	Bodrum	0.51	83	PG	Pg	03 15 54.6	0.0
BODT				SG	Sb	03 16 02.2	-0.2
NISR	Nisiros	0.53	136	P	Pb	03 15 55.3	-0.1
NISR				S	Sg	03 16 02.3	+0.3
NISR				AML	AML	03 16 04.9	
	comp=E,1533µm,0.2s						
NISR				AML	AML	03 16 07.2	
	comp=N,790µm,0.3s						
NISR	Nisiros	0.53	136	P	Pb	03 15 55.3	-0.1
NISR				S	Sb	03 16 02.6	-0.3
	comp=N,708nm,0.5s						
BDRM	Kayabasi	0.62	84	*i* P	Pn	03 15 58.4	-0.3
BDRM				*i* P	Pb	03 15 58.5	+1.6
BDRM				*i* S	Sg	03 16 04.5	-0.4
BDRM				*i* S	Sb	03 16 04.7	-0.8
DDIM	Aydin, Didim	0.64	44	*i* P	Pb	03 15 57.6	+0.2
DDIM				IAML		03 16 14.0	
	comp=N,146nm,0.4s						
SMG	Samos	0.72	10	P	Pg	03 15 58.6	+0.1
SMG				S	Sg	03 16 07.9	-0.1
SMG				AML	AML	03 16 13.4	
	comp=E,917µm,0.4s						
SMG				AML	AML	03 16 14.8	
	comp=N,836µm,0.3s						
SMG	Samos	0.72	10	P	Pg	03 15 58.6	+0.1
SMG				S	Sb	03 16 09.4	+0.9
	comp=N,435nm,0.3s						
DATC	Datca-Mugla	0.83	106	PG	Pg	03 16 00.4	-0.1
GCAM	G?zelcaml?	0.83	32	PG	Pb	03 16 00.9	+0.3
GCAM				SG	Sn	03 16 13.3	-0.3
GCAM	G?zelcaml?	0.83	32	*i* P	Pg	03 15 59.8	-0.8
GCAM				*i* S	Sn	03 16 12.8	-0.8
GCAM				IAML		03 16 15.0	
	comp=N,132nm,0.4s						
GCAM				IAML		03 16 17.0	
	comp=E,136nm,0.5s						
APE	Apeiranthos	0.92	275	P	Pn	03 16 02.7	-0.2
APE				S	Sb	03 16 14.1	0.0
APE				AML	AML	03 16 17.4	
	comp=N,1035µm,0.4s						
APE				AML	AML	03 16 19.5	
	comp=E,680µm,0.1s						
APE	Apeiranthos	0.92	275	P	Pn	03 16 02.9	+0.1
APE				S	Sn	03 16 16.3	+0.5
	comp=E,435nm,0.3s						
APE	Apeiranthos	0.92	275	PG	Pg	03 16 02.4	+0.2
MLSB	Milas	0.93	71	PG	Pg	03 16 02.5	0.0
DGB	zmir	1.07	9	*i* P	Pg	03 16 05.2	+0.1
DGB				*i* S	Sn	03 16 19.8	+0.4
DGB				IAML		03 16 22.0	
	comp=N,42nm,0.7s						
THR8	Santorini-Mono	1.13	239	P	Pb	03 16 04.7	-0.9
THR8	Santorini-Mono	1.13	239	P	Pb	03 16 05.5	-0.1
SNT1	Gialos, Santor	1.16	240	P	Pg	03 16 07.5	+0.7
SANT	Santorini	1.16	238	P	Pb	03 16 06.5	+0.3
SANT	Santorini	1.16	238	PN	Pg	03 16 06.8	0.0
THR3	Thira Island,	1.18	241	P	Pn	03 16 06.4	0.0
THR3	Thira Island,	1.18	241	P	Pn	03 16 06.4	0.0
THR6	Thira Island,	1.21	238	P	Pb	03 16 07.2	+0.2
ZEYE	Izmir, Urla-Ze	1.25	354	*i* P	Pn	03 16 07.1	-0.2
ZEYE				*i* S	Sb	03 16 22.9	-0.6
ZEYE				IAML		03 16 30.0	
	comp=N,54nm,0.3s						
ZEYE				IAML		03 16 34.0	
	comp=E,26nm,0.2s						
TURN	Turunc	1.28	100	PN	Pb	03 16 08.5	+0.3
TURN				SN	Sg	03 16 26.6	+0.9
TURN	Turunc	1.28	100	*i* P	Pb	03 16 08.1	0.0
TURN				*i* S	Sb	03 16 24.0	-0.4
TURN				IAML		03 16 29.0	
	comp=N,42nm,0.5s						
TURN				IAML		03 16 29.0	
	comp=E,32nm,0.4s						
YER	Yerkesik	1.29	83	P	Pg	03 16 09.4	0.0
YER				S	Sg	03 16 26.2	0.0
YER	Yerkesik	1.29	83	PN	Pb	03 16 08.8	+0.3
TNSA	Tinos	1.32	295	P	Pn	03 16 08.1	-0.2
MULA	Mugla, Merkez-	1.34	78	*i* P	Pg	03 16 10.7	+0.4
URLA	Izmir	1.36	357	PN	Pb	03 16 09.9	+0.2
URLA	Izmir	1.36	357	*i* P	Pn	03 16 09.0	0.0
ARG	Arkhangelos	1.41	123	P	Pn	03 16 09.6	+0.1
ARG	Arkhangelos	1.41	123	PN	Pb	03 16 10.2	-0.1
KARP	Karpathos	1.50	165	P	Pn	03 16 10.5	-0.3
DALY	Dalyan (Mula)	1.60	96	PN	Pb	03 16 13.0	-0.6
DALY	Dalyan (Mula)	1.60	96	*i* P	Pb	03 16 13.7	0.0
FETY	Fethiye	1.97	100	PN	Pn	03 16 18.3	+1.1
SIGR	SIGRI	2.30	344	P	Pb	03 16 25.1	-0.6

NEIC ***15*** *03:21:30.0±1.4, 18°.21N±0°.05×100°.72W±0°.05, h55^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=6.1km az=206.0*

IDC ***15*** *03:21:31.9±3.1, 18°.13N×100°.71W, h62^{km}±26^{km}, mb4.1/14, mb1 4.4/17, mb1mx4.2/30, mbtmp4.4/17, ML4.0/3, MS3.7/17, Ms1 3.7/17, ms1mx3.5/31, Error ellipse: s-maj=34.8km s-min=13.5km az=50.0*

MEX ***15*** *03:21:31.7±0.7, 18°.20N×100°.72W, h57^{km}±8^{km}, MD4.6*

ISC 15 03:21:30.5±0.7**, 18°.21N**±0°.04×**100°.71W**±0°.04**, h54**^{km}±6^{km}**,**
n490, σ1^{s}.32/446**, mb4.6**/101**, MS3.7**/14**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.35	78	*i* P	Pn	03 21 40.2	-0.3
ARIG				*e*S	Sn	03 21 47.5	-0.3
ARIG	Puente Sto Nin	0.35	78		Pn	03 21 40.2	-0.3
ARIG					Sn	03 21 47.5	-0.3
ZIIG	Zihuatanejo	0.94	230	*i* P	Pn	03 21 47.4	-0.1
ZIIG				*i* S	Sn	03 21 59.4	-0.7
ZIIG	Zihuatanejo	0.94	230		Pn	03 21 47.4	-0.1
ZIIG					Sn	03 21 59.4	-0.7
MEIG	Mezcala	1.07	105	*i* P	Pn	03 21 49.3	-0.2
MEIG				*i* S	Sn	03 22 03.7	+0.2
MEIG	Mezcala	1.07	105		Pn	03 21 49.3	-0.2
MEIG					Sn	03 22 03.7	+0.2
CAIG	El Cayaco	1.23	160	*e*P	Pn	03 21 50.7	-0.8
CAIG				*e*S	Sn	03 22 06.1	-1.0
CAIG	El Cayaco	1.23	160		Pn	03 21 50.7	-0.8
CAIG					Sn	03 22 06.1	-1.0
MOIG	Morelia	1.53	343	Pn	Pn	03 21 56.8	+1.0
MOIG				Sn	Sn	03 22 13.9	-0.8
UNM	Universidad Na	1.83	52	Pn	Pn	03 22 00.4	+0.6
UNM				Sn	Sn	03 22 23.4	+1.3
CRIG	Cruz Grande	2.10	134	*e*P	Pn	03 22 02.9	-0.4
CRIG				*i* S	Sn	03 22 28.4	+0.1
TLIG	Tlapa	2.14	107	*e*P	Pn	03 22 04.7	+0.7
TLIG				*i* S	Sn	03 22 28.5	-0.9
TLIG	Tlapa	2.14	107	Pn	Pn	03 22 04.8	+0.7
TLIG				Sn	Sn	03 22 29.5	0.0
ZAIG	Zacatecas	4.86	339	Pn	Pn	03 22 42.0	+0.6
CMIG	Matias Romero	5.67	100	P	Pn	03 22 53.6	+1.4
	3.9nm,0.3s,baz=262,slow=12,SNR=55						
CMIG				S	Sn	03 23 50.9	-5.1
	5.3nm,0.3s,baz=289,slow=12,SNR=6.2						
CMIG				LR	LR	03 25 12.6	
	comp=Z,464nm,20.9s,baz=280,slow=39						
CCIG	Comitan	8.41	102		Pn	03 23 30.1	+0.1
HPIG		9.82	333		Pn	03 23 50.2	+1.0
HPIG				Sn	Sn	03 25 37.8	-0.3
833A	Chaparral WMA,	10.14	7	P	Pn	03 23 53.3	-0.1
	baz=187,SNR=8.7						
833A	Chaparral WMA,	10.14	7	Pn	Pn	03 23 53.8	+0.4
LPIG	La Paz	10.70	305	LR	LR	03 27 46.2	
	comp=Z,236nm,21.4s,baz=148,slow=35						
TXAR	Lajitas Array	11.40	347	P	Pn	03 24 13.6	+2.8
	0.3nm,0.3s,baz=161,slow=15,SNR=36						
TXAR				LR	LR	03 29 27.0	
	comp=Z,242nm,21.0s,baz=0.0,slow=41						
TXAR	Lajitas Array	11.40	347	Pn	Pn	03 24 11.4	+0.6
TX31	Lajitas Ar. Si	11.40	347	Pn	Pn	03 24 11.6	+0.8
TX32	Lajitas Array	11.40	347	Pn	Pn	03 24 14.4	+3.6
JCT	Junction City	12.24	4	P	Pn	03 24 22.3	0.0
	baz=184,SNR=9.9						
JCT	Junction City	12.24	4	Pn	Pn	03 24 23.7	+1.5
HKT	Hockley	12.51	20	Pn	Pn	03 24 25.7	0.0
435B	Jarrell	12.84	12	P	Pn	03 24 30.6	+0.4
	baz=193						
435B	Jarrell	12.84	12		Pn	03 24 29.6	-0.7
WHTX	Lake Whitney,	14.04	11	P	Pn	03 24 46.7	+0.2
	baz=193,SNR=5.8						
WHTX	Lake Whitney,	14.04	11	Pn	Pn	03 24 47.0	+0.4
MNTX	Cornudas Mount	14.08	343	P	Pn	03 24 48.4	+1.2
	baz=161,SNR=54						
MNTX	Cornudas Mount	14.08	343		Pn	03 24 48.1	+0.9
441A	DeRidder	14.23	27	Pn	Pn	03 24 49.2	0.0
HSIG		14.27	321	Pn	Pn	03 24 49.9	+0.2
GDL2	Guadalupe Moun	14.32	347	Pn	Pn	03 24 52.0	+1.6
ABTX	Abilene, Hawle	14.39	4	P	Pn	03 24 51.3	0.0
	baz=184,SNR=46						
ABTX	Abilene, Hawle	14.39	4	Pn	Pn	03 24 51.8	+0.5
237A	Washetta, Mont	14.43	17	Pn	Pn	03 24 51.2	-0.6
NATX	Nacogdoches	14.56	21	P	Pn	03 24 53.3	-0.2
	baz=203,SNR=15						
NATX	Nacogdoches	14.56	21		Pn	03 24 54.1	+0.6
342A	Flagon Creek P	15.15	29		Pn	03 25 00.8	-0.4
319A	Douglas	15.23	331	Pn	Pn	03 25 02.9	+0.5
319A				IAmb	IAmb	03 25 10.6	
	comp=Z,57nm,0.8s						
Z35A	Perchaven, San	15.38	11	Pn	Pn	03 25 03.7	-0.4
Z35A				IAmb	IAmb	03 25 08.4	
	comp=Z,81nm,1.1s						
121A	Cookes Peak, D	15.62	337	P	Pn	03 25 07.9	+0.5
	baz=154,SNR=17						
121A	Cookes Peak, D	15.62	337	Pn	Pn	03 25 07.9	+0.5
121A				IAmb	IAmb	03 25 20.9	
	comp=Z,41nm,1.1s						
MSTX	Muleshoe	15.80	354	P	Pn	03 25 10.0	+0.3
	baz=173,SNR=111						
MSTX	Muleshoe	15.80	354	Pn	Pn	03 25 10.1	+0.4
Z38A	Mt. Pleasant	15.85	18		Pn	03 25 09.0	-1.0
344A	Westbrook Farm	15.98	33		Pn	03 25 11.6	-0.2
344A				IAmb	IAmb	03 25 15.7	
	comp=Z,66nm,1.0s						
WMOK	Wichita Mounta	16.55	6	P	Pn	03 25 17.4	-1.6
	baz=186,SNR=19						
WMOK	Wichita Mounta	16.55	6		Pn	03 25 17.9	-1.1
Z41A	Richland Creek	16.58	24	P	Pn	03 25 18.8	-0.6
	baz=207,SNR=30						
Z41A	Richland Creek	16.58	24	P	Pn	03 25 19.0	-0.4
AMTX	Amarillo	16.63	357	P	Pn	03 25 20.1	0.0
	baz=177						
AMTX	Amarillo	16.63	357		Pn	03 25 20.4	+0.3
AMTX				IAmb	IAmb	03 25 21.2	
	comp=Z,89nm,1.0s						
143A	Socs Landing,	16.69	28	Pn	Pn	03 25 20.0	-0.7
VBMS	Vicksburg	16.71	31	P	Pn	03 25 19.9	-1.0
	baz=216,SNR=7.3						
VBMS	Vicksburg	16.71	31	Pn	Pn	03 25 20.2	-0.7
TUC	Tucson	16.72	329	P	P	03 25 23.1	+0.3
	baz=145						
TUC	Tucson	16.72	329	Pn	Pn	03 25 21.5	+0.3
BNM	Barren Site	16.73	343	Pn	Pn	03 25 21.7	+0.2
Y22D	IRIS PASSCAL I	16.75	342	P	P	03 25 23.8	+0.7
	baz=159						
WLAR	White Oak Lake	16.85	22	Pn	Pn	03 25 21.4	-1.3
WLAR				IAmb	IAmb	03 25 25.3	
	comp=Z,76nm,1.0s						
X37A	Clayton	17.00	15	Pn	Pn	03 25 25.3	+0.8
JTS	Las Juntas de	17.17	115	P	P	03 25 31.9	+4.1
	comp=Z,0.4nm,0.3s,baz=304,slow=17,SNR=1.6						
JTS	Las Juntas de	17.17	115	Pn	Pn	03 25 27.2	+0.4
W35A	Tecumseh	17.22	11	P	Pn	03 25 26.2	-1.1
FNO	Franklin	17.23	9	P	Pn	03 25 26.4	-1.1
OKCFA	Oklahoma City	17.38	9	Pn	Pn	03 25 28.6	-0.7
OKCFA				IAmb	IAmb	03 25 32.7	
	comp=Z,42nm,0.9s						
ANMO	Albuquerque	17.44	344	P	P	03 25 32.6	+1.8
	comp=Z,0.5nm,0.3s,baz=149,slow=13,SNR=50						
ANMO	Albuquerque	17.44	344	P	P	03 25 32.4	+1.6
	baz=162						
ANMO	Albuquerque	17.44	344		Pn	03 25 30.8	+0.6
ANMO				IAmb	IAmb	03 25 35.8	
	comp=Z,37nm,0.9s						
MIAR	Mount Ida	17.47	20	P	Pn	03 25 28.7	-1.7
	baz=203,SNR=23						
MIAR	Mount Ida	17.47	20	Pn	Pn	03 25 29.5	-0.9
MIAR				IAmb	IAmb	03 25 32.8	
	comp=Z,42nm,1.1s						
214A	Organ Pipe Nat	17.52	324	P	P	03 25 33.8	+2.3
	baz=139,SNR=8.1						
214A	Organ Pipe Nat	17.52	324		Pn	03 25 31.8	+0.8
OK025	Westminster Rd	17.56	9	Pn	Pn	03 25 30.7	-0.9
OK025				IAmb	IAmb	03 25 31.9	
	comp=Z,63nm,0.8s						
CCAR	Cane Creek	17.57	25	P	Pn	03 25 31.6	0.0
CCAR				IAmb	IAmb	03 25 37.1	
	comp=Z,70nm,1.0s						
BCOK	Bluff Creek, N	17.60	8	P	Pn	03 25 31.0	-1.0
BCOK				IAmb	IAmb	03 25 31.9	
	comp=Z,74nm,0.8s						
X40A	Basin Creek Fa	17.67	22	P	Pn	03 25 31.8	-1.1
	baz=205,SNR=6.5						
X40A	Basin Creek Fa	17.67	22	P	Pn	03 25 31.7	-1.1
146A	Union	17.79	34	P	Pn	03 25 33.6	-0.7
146A				IAmb	IAmb	03 25 37.6	
	comp=Z,45nm,0.8s						
OK030	Cody Creek RV	17.99	10	P	P	03 25 35.7	-1.0
OK031	S. Brethren Rd	18.00	10	P	P	03 25 36.6	-0.2
W39A	Magazine	18.00	19	P	P	03 25 36.6	-0.2
	baz=202,SNR=22						
W39A	Magazine	18.00	19	P	P	03 25 36.7	-0.1
W39A				IAmb	IAmb	03 25 39.6	
	comp=Z,52nm,0.8s						
TUL1	Leonard	18.16	13	P	P	03 25 37.8	-0.7
	baz=195,SNR=31						
TUL1	Leonard	18.16	13	P	P	03 25 38.0	-0.6
U32A	Winter Ranch,	18.16	4	P	P	03 25 38.4	-0.2
U32A				IAmb	IAmb	03 25 39.3	
	comp=Z,32nm,0.8s						
X18A	Snowflake	18.22	335		P	03 25 39.5	+0.1
QUOK	Quay	18.24	10	P	P	03 25 37.7	-1.7
QUOK				IAmb	IAmb	03 25 40.5	
	comp=Z,76nm,0.9s						
CROK	Carrier	18.39	7	P	P	03 25 40.4	-0.7
X43A	Marvell	18.46	26	P	P	03 25 42.2	+0.4
	baz=211,SNR=8.2						
X43A	Marvell	18.46	26	P	P	03 25 42.4	+0.6
W41B	Gary Mavity, V	18.50	22	P	P	03 25 41.5	-0.7
	baz=206,SNR=16						
W41B	Gary Mavity, V	18.50	22	P	P	03 25 41.9	-0.3
W41B				IAmb	IAmb	03 25 49.3	
	comp=Z,34nm,1.1s						
Y45A	Yeager Farm, C	18.52	30		P	03 25 42.5	+0.1
Y45A				IAmb	IAmb	03 25 44.8	
	comp=Z,64nm,0.9s						
WHAR	Wooly Hollow	18.59	22		P	03 25 43.3	0.0
WHAR				IAmb	IAmb	03 25 43.8	
	comp=Z,30nm,0.8s						
W18A	Petrified Fore	18.66	336	P	Pn	03 25 45.7	+0.6
	baz=152,SNR=12						
W18A	Petrified Fore	18.66	336	P	P	03 25 44.7	+0.5
Z47A	Carrollton	18.75	35	P	P	03 25 45.7	+0.7
Z47A				IAmb	IAmb	03 25 50.6	
	comp=Z,34nm,0.9s						
X16A	Lo Mia Camp, P	18.77	331	P	P	03 25 45.9	+0.4
KAN14	Manchester OK	18.83	7	P	P	03 25 45.4	-0.5
KAN13	South Haven SW	18.95	8	P	P	03 25 46.4	-0.8
HHAR	Hobbs	18.97	17	P	P	03 25 46.8	-0.7
KAN10	Anthony SW Sta	18.98	6	P	P	03 25 47.7	+0.1
T35A	Sooner Cattle	19.00	10	P	P	03 25 46.5	-1.3
U38A	Gravette	19.00	16	P	P	03 25 46.9	-0.8
U38A				IAmb	IAmb	03 25 50.6	
	comp=Z,30nm,1.1s						
KAN08	Anthony NE Sta	19.10	7	P	P	03 25 48.5	-0.3
OXF	Oxford	19.11	30	P	P	03 25 48.5	-0.5
	baz=214,SNR=5.7						
OXF	Oxford	19.11	30	P	P	03 25 49.5	+0.6
OXF				IAmb	IAmb	03 25 56.2	
	comp=Z,69nm,1.1s						
T25A	Trinidad	19.14	351	P	P	03 25 49.9	+0.4
	baz=169,SNR=21						
T25A	Trinidad	19.14	351	P	P	03 25 50.2	+0.7
T25A				IAmb	IAmb	03 25 55.2	
	comp=Z,48nm,0.9s						
KAN12	Harper NE Stat	19.17	7	P	P	03 25 49.2	-0.4
FCAR	Ozark Folk Cen	19.18	22	P	P	03 25 49.5	-0.2
LRAL	Lakeview Retre	19.23	37	P	P	03 25 48.8	-1.4
	baz=223						
LRAL	Lakeview Retre	19.23	37	P	P	03 25 49.2	-1.0
U40A	Yellville	19.36	19	P	P	03 25 51.0	-0.8
	baz=203,SNR=56						
U40A	Yellville	19.36	19	P	P	03 25 51.4	-0.4
ESJX	Sierra Juarez	19.44	318	P	P	03 25 53.2	+0.4
352A	Blakely	19.45	44		P	03 25 53.2	+0.4
352A				IAmb	IAmb	03 25 53.8	
	comp=Z,65nm,1.1s						
GLA	Glamis	19.47	322	P	P	03 25 54.7	+1.7
	baz=136						
GLA	Glamis	19.47	322	P	P	03 25 53.6	+0.6
LCCY	Blossom Villag	19.57	82	P	P	03 25 53.9	-0.2
LPAR	Lepanto	19.63	26	P	P	03 25 54.2	-0.4
LPAR				IAmb	IAmb	03 25 54.7	
	comp=Z,45nm,1.0s						
WUAZ	Wupatki	19.66	333	P	Pn	03 25 58.3	+1.3
	baz=148,SNR=89						
WUAZ	Wupatki	19.66	333	P	P	03 25 54.5	-0.7
W45A	Hickory Valley	19.75	29	P	P	03 25 55.5	-0.4
SDCO	Great Sand Dun	19.91	349	P	P	03 25 58.5	+0.5
	baz=166,SNR=35						
SDCO	Great Sand Dun	19.91	349	P	P	03 25 57.3	-0.7
IKP	In-Ko-Pah, Jac	19.97	319	P	P	03 25 58.8	+0.3
	baz=132						
SWSC	Sam W. Stewart	19.98	320	P	Pn	03 26 00.4	-0.1
	baz=134,SNR=5.7						
PDMCI	Parker Dam,Lak	20.02	326	P	Pn	03 26 01.1	+0.1
	baz=140						
MVCO	Mesa Verde	20.13	342	P	P	03 26 01.7	+1.4
	baz=158,SNR=25						
MVCO	Mesa Verde	20.13	342	P	P	03 25 59.8	-0.6
MVCO				IAmb	IAmb	03 26 07.8	
	comp=Z,27nm,0.8s						
PLAL	Pickwick Lake	20.14	31	P	P	03 25 59.8	-0.3
PLAL				IAmb	IAmb	03 26 03.2	
	comp=Z,47nm,0.8s						
Y49A	Blount Mountai	20.16	37	P	P	03 25 59.4	-1.0
Y49A				IAmb	IAmb	03 26 03.1	
	comp=Z,25nm,0.9s						
S22A	4UR Ranch, Cre	20.19	346	P	P	03 26 02.3	+1.2
	baz=163,SNR=38						
S22A	4UR Ranch, Cre	20.19	346	P	P	03 26 00.5	-0.5
S22A				IAmb	IAmb	03 26 09.0	
	comp=Z,26nm,1.0s						
R32A	Long Quarter,	20.22	5	P	P	03 26 00.2	-0.8
R32A				IAmb	IAmb	03 26 00.9	
	comp=Z,30nm,0.7s						
X48A	Hartselle	20.25	34	P	P	03 26 01.1	-0.4
X48A				IAmb	IAmb	03 26 04.0	
	comp=Z,30nm,1.1s						
BC3	Big Chuckawall	20.27	322	P	P	03 26 03.4	+1.6
	baz=136,SNR=11						
MGMO	Mountain Grove	20.28	20	P	P	03 26 01.1	-0.7
MGMO				IAmb	IAmb	03 26 02.1	
	comp=Z,52nm,0.9s						
HALT	Halls	20.30	27	P	P	03 26 01.3	-0.6
MONP2	Monument Peak	20.33	319	P	P	03 26 04.1	+1.6
	baz=132,SNR=8.1						
TIGA	Tifton	20.33	46	P	P	03 26 01.0	-1.3
	baz=234						
TIGA	Tifton	20.33	46	P	P	03 26 02.0	-0.3
TIGA				IAmb	IAmb	03 26 02.4	
	comp=Z,42nm,1.1s						
152A	Waverly Hall	20.35	42	P	P	03 26 02.2	-0.4
IRM	Iron Mountain	20.46	324	P	Pn	03 26 06.2	0.0
	baz=137,SNR=25						
S39A	Bolivar	20.46	17	P	P	03 26 02.6	-1.0
S39A				IAmb	IAmb	03 26 07.5	
	comp=Z,27nm,0.8s						
W13A	Hualapai Mount	20.50	328	P	P	03 26 03.4	-0.9
CBKS	Cedar Bluff	20.55	2	P	P	03 26 03.6	-1.0
	baz=183,SNR=12						
CBKS	Cedar Bluff	20.55	2	P	P	03 26 04.2	-0.5
CBKS				IAmb	IAmb	03 26 09.0	
	comp=Z,45nm,1.1s						
T42A	Van Buren	20.57	22	P	P	03 26 04.4	-0.5
T42A				IAmb	IAmb	03 26 09.0	
	comp=Z,19nm,0.8s						
PBMO	Poplar Bluff	20.60	24	P	P	03 26 04.3	-0.8
PBMO				IAmb	IAmb	03 26 05.3	
	comp=Z,55nm,1.1s						
NEE2	Needles Airpor	20.62	326	P	P	03 26 07.7	+2.2
	baz=140						
GLAT	Glass	20.63	27	P	P	03 26 04.7	-0.7
109C	Camp Elliot, M	20.75	318	P	P	03 26 08.7	+1.9
	baz=131						
PARMO	Parma	20.77	26	P	P	03 26 06.3	-0.6
PARMO				IAmb	IAmb	03 26 11.8	
	comp=Z,35nm,0.7s						
KSCO	Kaye Shedlock’	20.80	356	P	P	03 26 06.9	-0.5
	baz=175,SNR=21						
KSCO	Kaye Shedlock’	20.80	356	P	P	03 26 06.9	-0.5
TPFO	Pinon Flats	20.83	320	P	P	03 26 10.1	+2.2
	baz=134,SNR=5.5						
BELC	Belle Mtn. Jos	20.83	322	P	P	03 26 08.6	+0.7
	baz=135,SNR=6.9						
PFO	Pinyon Flats O	20.84	320	P	Pn	03 26 10.5	-0.4
	comp=Z,4.5nm,0.7s,baz=132,slow=9.5,SNR=8.8						
PFO	Pinyon Flats O	20.84	320	P	P	03 26 09.4	+1.5
	baz=134,SNR=8.4						
PFO	Pinyon Flats O	20.84	320	P	P	03 26 07.1	-0.8
HICK	Hickman	20.88	27	P	P	03 26 07.9	-0.3
PV01	Paradox Valley	21.01	342	P	P	03 26 09.1	-0.7
PV13	Radium Mtn., P	21.10	342	P	P	03 26 10.0	-0.8
PV13				IAmb	IAmb	03 26 13.0	
	comp=Z,24nm,0.9s						
KSU1	Kansas State U	21.12	9	P	P	03 26 08.8	-2.0
	baz=191,SNR=14						
KSU1	Kansas State U	21.12	9	P	P	03 26 09.6	-1.2
PV02	Paradox Valley	21.12	342	P	P	03 26 10.4	-0.7
PV02				IAmb	IAmb	03 26 18.0	
	comp=Z,25nm,0.8s						
WVT	Waverly	21.17	30	P	P	03 26 09.9	-1.4
	baz=216						
WVT	Waverly	21.17	30	P	P	03 26 11.0	-0.4
PV15	Paradox Valley	21.18	343	P	P	03 26 10.9	-0.8
PV03	Paradox Valley	21.20	342	P	P	03 26 11.2	-0.7
PV03				IAmb	IAmb	03 26 13.9	
	comp=Z,21nm,0.9s						
GMRC	Granite Mounta	21.21	324	P	P	03 26 12.8	+0.9
	baz=137,SNR=6.7						
PV18	Skein Mesa, Pa	21.21	342	P	P	03 26 11.2	-0.7
PV18				IAmb	IAmb	03 26 14.0	
	comp=Z,20nm,0.9s						
PV12	Saucer Basin,	21.25	342	P	P	03 26 11.7	-0.7
PV12				IAmb	IAmb	03 26 14.7	
	comp=Z,31nm,0.9s						
PV11	David Mesa, Pa	21.25	342	P	P	03 26 11.7	-0.7
PV11				IAmb	IAmb	03 26 19.2	
	comp=Z,19nm,0.7s						
PV17	East Wray Mesa	21.26	342	P	P	03 26 11.3	-1.1
PV17				IAmb	IAmb	03 26 19.8	
	comp=Z,32nm,1.1s						
PV16	Nyswonger Mesa	21.27	342	P	P	03 26 11.6	-1.0
MURC	Murrieta	21.28	319	P	P	03 26 13.7	+1.2
	baz=132						
PV19	Morning Glory	21.29	342	P	P	03 26 11.8	-1.0
PV07	Paradox Valley	21.31	343	P	P	03 26 12.0	-1.1
PV07				IAmb	IAmb	03 26 15.6	
	comp=Z,34nm,1.0s						
PV20	West Nyswonger	21.32	342	P	P	03 26 11.9	-1.2
R40A	Maddies Statio	21.32	19	P	P	03 26 11.8	-1.1
R40A				IAmb	IAmb	03 26 14.3	
	comp=Z,33nm,0.8s						
PV04	Paradox Valley	21.35	342	P	P	03 26 12.3	-1.1
PV04				IAmb	IAmb	03 26 15.6	
	comp=Z,28nm,0.9s						
V48A	Smith Brothers	21.36	32	P	P	03 26 12.8	-0.6
PV14	Lion Creek, Pa	21.36	342	P	P	03 26 12.5	-1.1
PV10	Paradox Valley	21.37	342	P	P	03 26 11.6	-2.1
PV10				IAmb	IAmb	03 26 16.4	
	comp=Z,32nm,0.9s						
PV23	Carpenter Ridg	21.43	342	P	P	03 26 13.2	-1.1
PV23				IAmb	IAmb	03 26 16.4	
	comp=Z,28nm,0.9s						
CCM	Cathedral Cave	21.44	21	P	P	03 26 12.5	-1.7
	baz=205						
CCM	Cathedral Cave	21.44	21	P	P	03 26 13.0	-1.1
PV22	Blue Mesa, Par	21.44	342	P	P	03 26 13.4	-1.1
PV22				IAmb	IAmb	03 26 16.7	
	comp=Z,26nm,0.9s						
T45A	Paducah	21.54	27	P	P	03 26 14.6	-0.6
KNB	Kanab	21.55	333	P	P	03 26 14.6	-1.0
SMCO	Snowmass	21.59	347	P	P	03 26 15.0	-1.2
SMCO				IAmb	IAmb	03 26 22.6	
	comp=Z,22nm,1.1s						
GOGA	Godfrey	21.63	42	P	P	03 26 15.4	-0.9

	baz=230						
GOGA	Godfrey	21.63	42	P	P	03 26 15.7	-0.6
FVM	French Village	21.66	22	P	P	03 26 15.1	-1.4
FVM				IAmb	IAmb	03 26 17.6	
	comp=Z,34nm,0.8s						
PKCU	Pink Cliffs	21.70	334	P	P	03 26 16.1	-1.2
LCMT	Little Creek M	21.74	332	P	P	03 26 16.6	-1.0
S44A	Carbondale	21.86	25	P	P	03 26 17.3	-1.3
S44A				IAmb	IAmb	03 26 20.9	
	comp=Z,33nm,0.7s						
CLTN	Cedars of Leba	21.88	33	P	P	03 26 18.2	-0.8
SIUC	Southern Illin	21.89	25	P	P	03 26 17.6	-1.4
SIUC				IAmb	IAmb	03 26 21.1	
	comp=Z,35nm,0.8s						
ISCO	Idaho Springs	21.93	350	P	P	03 26 19.6	-0.2
	baz=167,SNR=22						
ISCO	Idaho Springs	21.93	350	P	P	03 26 18.5	-1.3
BFSC	Mount Baldy Ra	21.99	320	P	P	03 26 21.6	+1.3
	baz=132						
SZCU	Shurtz Canyon	22.16	333	P	P	03 26 20.9	-1.2
MTPU	Mount Pierson	22.16	335	P	P	03 26 20.9	-1.4
GSC	Goldstone, Bar	22.23	323	P	P	03 26 23.5	+0.7
	baz=136,SNR=5.3						
GSC	Goldstone, Bar	22.23	323	P	P	03 26 21.7	-1.0
P38A	Dawn	22.23	15	P	P	03 26 21.1	-1.5
P38A				IAmb	IAmb	03 26 22.6	
	comp=Z,18nm,0.7s						
CCUT	Cedar City	22.24	333	P	P	03 26 21.8	-1.2
SHPR	Sheep Range	22.24	328	P	P	03 26 21.8	-1.2
SLM	Saint Louis	22.31	22	P	P	03 26 21.8	-1.7
SHOC	Shoshone, Teco	22.37	325	P	P	03 26 25.1	+1.0
	baz=138						
W52A	Murphy	22.48	38	P	P	03 26 23.4	-2.0
W52A				IAmb	IAmb	03 26 26.2	
	comp=Z,13nm,0.7s						
SRU	San Rafael Swe	22.51	340	P	P	03 26 24.7	-1.1
P40A	Paris	22.54	18	P	P	03 26 24.1	-1.8
MSU	Marysvale	22.57	336	P	P	03 26 25.4	-1.2
MVU	Marysvale	22.57	336	P	P	03 26 25.4	-1.2
N33A	J Bar K, Exete	22.63	6	P	P	03 26 26.0	-0.9
EDW2	Edwards Air Fo	22.63	321	P	P	03 26 27.3	+0.3
	baz=133,SNR=5.4						
OGNE	Ogallala	22.69	357	P	P	03 26 26.7	-1.0
	baz=177,SNR=11						
OGNE	Ogallala	22.69	357	P	P	03 26 26.6	-1.0
OGNE				IAmb	IAmb	03 26 30.6	
	comp=Z,45nm,1.0s						
V51A	Loudon	22.74	36	P	P	03 26 26.9	-1.2
V51A				IAmb	IAmb	03 26 28.8	
	comp=Z,13nm,0.8s						
USIN	University of	22.75	27	P	P	03 26 26.9	-1.3
O20A	White River Ci	22.80	345	P	P	03 26 29.6	+0.6
	baz=161,SNR=24						
O20A	White River Ci	22.80	345	P	P	03 26 27.9	-1.0
O20A				IAmb	IAmb	03 26 32.4	
	comp=Z,35nm,1.1s						
157A	Early Branch	22.84	47	P	P	03 26 27.1	-2.1
	baz=236						
LRMC	Laurel Mtn Rad	22.86	322	P	P	03 26 30.9	+1.3
	baz=134						
PRN	Pahroc Range	22.90	330	P	P	03 26 28.9	-1.0
TMUT	Trail Mountain	22.91	339	P	P	03 26 28.9	-1.2
P17A	Butcher Ranch,	22.91	340	P	P	03 26 28.9	-1.1
HODGE	Hodges	22.93	42	P	P	03 26 28.8	-1.3
TKL	Tuckaleechee C	22.96	37	P	P	03 26 27.6	-2.8
	comp=Z,7.2nm,0.7s,baz=195,slow=10,SNR=14						
TKL	Tuckaleechee C	22.96	37	P	P	03 26 28.4	-2.0
Z56A	Williston	22.96	45	P	P	03 26 28.0	-2.4
	baz=234						
N35A	Tabor	22.99	10	P	P	03 26 29.2	-1.5
Q44A	Meyer Farm, Va	23.00	24	P	P	03 26 29.1	-1.5
BG3	Lake Jocassee	23.01	40	IAmb	IAmb	03 26 31.5	
	comp=Z,20nm,1.1s						
N23A	Red Feather La	23.05	350	P	P	03 26 31.9	+0.4
	baz=167,SNR=49						
SCZ2	Santa Cruz Isl	23.09	317	P	P	03 26 33.2	+1.5
	baz=128						
FURC	Furnace Creek,	23.11	325	P	P	03 26 32.9	+1.1
	baz=138						
TPNV	Topopah Spring	23.14	327	P	P	03 26 34.2	+1.9
	baz=140,SNR=23						
TPNV	Topopah Spring	23.14	327	IAmb	IAmb	03 26 36.6	
	comp=Z,17nm,0.9s						
MPMC	Manual Prospec	23.16	323	P	P	03 26 33.9	+1.3
	baz=136,SNR=11						
OLIL	Olney	23.21	26	IAmb	IAmb	03 26 32.3	
	comp=Z,38nm,1.1s						
BGNE	Belgrade	23.23	5	P	P	03 26 32.3	-0.7
	baz=186						
BGNE	Belgrade	23.23	5	P	P	03 26 32.5	-0.5
Y56A	Pelion	23.28	44	P	P	03 26 32.3	-1.3
	baz=233						
T50A	Nancy	23.37	33	IAmb	IAmb	03 26 33.2	
	comp=Z,13nm,0.8s						
PHWY	Pilot Hill	23.37	351	IAmb	IAmb	03 26 36.2	
	comp=Z,48nm,1.1s						
Z57A	Bowman	23.40	46	P	P	03 26 33.3	-1.4
	baz=235						
SBC	Santa Barbara	23.42	317	P	P	03 26 35.5	+0.7
	baz=129						
ISA	Isabella, Lake	23.45	321	P	P	03 26 37.1	+1.9
	baz=133,SNR=6.5						
P43A	Skaggs, Pawnee	23.45	22	IAmb	IAmb	03 26 48.7	
	comp=Z,14nm,0.8s						
V53A	Saluda	23.53	39	IAmb	IAmb	03 26 37.5	
	comp=Z,16nm,0.8s						
PAULI	Pauline	23.59	42	P	P	03 26 36.7	+0.3
PAULI				IAmb	IAmb	03 26 37.9	
	comp=Z,20nm,1.0s						
WCI	Wyandotte Cave	23.59	29	P	P	03 26 35.0	-1.4
	baz=216						
WCI	Wyandotte Cave	23.59	29	P	P	03 26 35.6	-0.8
WCI				IAmb	IAmb	03 26 35.7	
	comp=Z,25nm,1.0s						
NHSC	New Hope	23.66	47	P	P	03 26 35.8	-1.2
	baz=236						
NHSC	New Hope	23.66	47	P	P	03 26 37.3	+0.3
TZTN	Tazewell	23.72	36	P	P	03 26 37.0	-0.7
	baz=224						
TZTN	Tazewell	23.72	36	IAmb	IAmb	03 26 38.5	
	comp=Z,18nm,1.1s						
CWC	Cottonwood Cre	23.76	323	P	P	03 26 39.6	+1.3
	baz=135						
PKM	Mcpherson Peak	23.76	318	P	P	03 26 39.4	+1.1
	baz=130						
X56A	White Oak	23.89	43	P	P	03 26 38.0	-1.2
	baz=232						
R11A	Troy Canyon, C	23.90	330	P	P	03 26 40.6	+1.1
	baz=143,SNR=8.0						
Y57A	Sumter	24.03	45	P	P	03 26 38.7	-1.8
	baz=234						
Y57A	Sumter	24.03	45	IAmb	IAmb	03 26 39.8	
	comp=Z,36nm,0.9s						
KMSC	Kings Mountain	24.10	42	P	P	03 26 40.4	-0.7
	baz=230,SNR=5.3						
KMSC	Kings Mountain	24.10	42	IAmb	IAmb	03 26 41.8	
	comp=Z,18nm,0.9s						
SMMC	Simmler	24.15	319	P	P	03 26 44.2	+2.5
	baz=130						
GTBY	Guantanamo Bay	24.25	82	P	P	03 26 42.7	+0.1
BLO	Bloomington	24.25	28	IAmb	IAmb	03 26 42.6	
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	24.27	337	P	P	03 26 43.8	+0.9
	baz=151,SNR=16						
DUG	Dugway, Tooele	24.27	337	IAmb	IAmb	03 26 46.2	
	comp=Z,16nm,0.9s						
HDIL	Hopedale	24.35	21	P	P	03 26 41.5	-1.8
	baz=207,SNR=29						
K31A	O'Neill	24.39	3	IAmb	IAmb	03 26 47.3	
	comp=Z,42nm,1.1s						
SCIA	State Center	24.47	14	P	P	03 26 42.7	-1.7
	baz=197,SNR=12						
X57A	Johnson Farm,	24.49	45	P	P	03 26 42.6	-2.1
	baz=234						
S51A	Beattyville	24.49	34	IAmb	IAmb	03 26 47.0	
	comp=Z,15nm,0.9s						
U54A	Nelsons Funny	24.70	39	P	P	03 26 45.2	-1.5
	baz=227						
U54A	Nelsons Funny	24.70	39	IAmb	IAmb	03 26 46.9	
	comp=Z,18nm,0.7s						
K22A	Casper	24.86	350	P	P	03 26 47.4	-0.8
	baz=167,SNR=29						
W57A	Gilead	24.96	43	P	P	03 26 47.0	-2.0
	baz=233						
W57A	Gilead	24.96	43	IAmb	IAmb	03 26 49.4	
	comp=Z,20nm,0.8s						
SFIN	Lafayette	25.02	25	P	P	03 26 47.8	-1.7
	baz=212,SNR=12						
V56A	Mocksville	25.05	42	P	P	03 26 48.0	-1.7
	baz=231						
X58A	Rowland	25.05	45	P	P	03 26 48.2	-1.5
	baz=235						
X58A	Rowland	25.05	45	IAmb	IAmb	03 26 50.2	
	comp=Z,32nm,0.9s						
Y59A	Loris	25.05	47	P	P	03 26 48.5	-1.2
	baz=236						
NV11	Mina Array Sit	25.25	326	IAmb	IAmb	03 26 56.5	
	comp=Z,17nm,1.1s						
NVAR	Mina Array Bea	25.33	326	P	P	03 26 54.7	+2.2
	comp=Z,19nm,0.9s,baz=150,slow=9.3,SNR=96						
NVAR				PcP	PcP	03 30 25.2	+0.9
	comp=Z,1.5nm,1.0s,baz=119,slow=1.1,SNR=4.1						
NVAR				LR	LR	03 38 04.9	
	comp=Z,135nm,20.5s,baz=174,slow=39						
NVAR	Mina Array Bea	25.33	326	P	P	03 26 52.7	+0.2
P49A	Miami Univ. Ec	25.37	30	P	P	03 26 50.8	-1.9
	baz=218,SNR=6.5						
P49A	Miami Univ. Ec	25.37	30	IAmb	IAmb	03 26 51.8	
	comp=Z,24nm,0.8s						
W58A	Raeford	25.39	44	P	P	03 26 50.7	-2.1
	baz=234						
U56A	King	25.46	41	P	P	03 26 51.3	-2.2
	baz=230						
V57A	Coltrane Farms	25.55	42	P	P	03 26 53.0	-1.4
	baz=232,SNR=6.1						
BW06	Boulder Array	25.61	345	P	P	03 26 54.5	-0.5
	baz=160,SNR=23						
BW06	Boulder Array	25.61	345	IAmb	IAmb	03 26 58.0	
	comp=Z,17nm,0.9s						
PD31	Pinedale Array	25.61	345	IAmb	IAmb	03 26 58.0	
	comp=Z,16nm,0.9s						
PDAR	Pinedale Array	25.61	345	P	P	03 26 55.4	+0.3
	comp=Z,12nm,0.7s,baz=142,slow=11,SNR=61						
PDAR				PcP	PcP	03 30 24.6	-0.3
	comp=Z,0.4nm,0.7s,baz=159,slow=2.8,SNR=3.5						
PDAR				LR	LR	03 37 42.3	
	comp=Z,193nm,22.0s,baz=178,slow=38						
PDAR	Pinedale Array	25.61	345	P	P	03 26 54.0	-1.0
Q51A	Peebles	25.65	32	IAmb	IAmb	03 26 54.5	
	comp=Z,23nm,0.9s						
ECSD	EROS Data Cent	25.68	7	P	P	03 26 54.1	-1.4
	baz=189,SNR=28						
ECSD	EROS Data Cent	25.68	7	IAmb	IAmb	03 26 57.2	
	comp=Z,22nm,0.8s						
ELK	Elko	25.70	334	P	P	03 26 56.7	+0.8
	comp=Z,1.7nm,0.9s,baz=163,slow=7.3,SNR=6.3						
S54A	Dingess, Beckl	25.87	37	P	P	03 26 55.4	-1.9
	baz=226						
V58A	Windy Hill, Pi	25.92	43	P	P	03 26 56.1	-1.6
	baz=233,SNR=5.8						
V58A	Windy Hill, Pi	25.92	43	IAmb	IAmb	03 26 57.4	
	comp=Z,26nm,0.8s						
RSSD	Black Hills	25.99	355	P	P	03 26 58.1	-0.3
	baz=173						
RSSD	Black Hills	25.99	355	P	P	03 26 58.6	+0.1
BLA	Blacksburg	26.00	39	P	P	03 26 56.0	-2.4
	baz=229,SNR=6.0						
BLA	Blacksburg	26.00	39	IAmb	IAmb	03 26 58.2	
	comp=Z,41nm,1.1s						
O49A	Covington	26.07	29	IAmb	IAmb	03 26 58.2	
	comp=Z,29nm,0.8s						
T56A	Rocky Mt	26.11	40	P	P	03 26 58.0	-1.5
	baz=230						
P51A	Williamsport	26.14	32	IAmb	IAmb	03 26 58.9	
	comp=Z,21nm,0.8s						
Q52A	Bidwell	26.17	34	IAmb	IAmb	03 27 00.3	
	comp=Z,27nm,1.1s						
U57A	Blanch	26.17	42	P	P	03 26 58.3	-1.6
	baz=232						
JFWS	Jewell Farm	26.18	18	P	P	03 26 57.6	-2.3
	baz=203,SNR=8.0						
W60A	Pink Hill	26.43	46	P	P	03 27 00.6	-1.7
	baz=236						
V59A	Middlesex	26.48	44	P	P	03 27 01.3	-1.4
	baz=234						
Q53A	Leroy	26.49	35	P	P	03 27 01.6	-1.2
	baz=224						
REDW	Red Top Meadow	26.50	343	IAmb	IAmb	03 27 08.9	
	comp=Z,15nm,1.1s						
T57A	Hurt	26.57	41	P	P	03 27 02.1	-1.5
	baz=231						
U58A	Oxford	26.65	43	P	P	03 27 02.5	-1.7
	baz=233						
LOHW	Long Hollow	26.67	344	IAmb	IAmb	03 27 09.2	
	comp=Z,19nm,0.8s						
N49A	Columbus Grove	26.72	29	IAmb	IAmb	03 27 04.2	
	comp=Z,27nm,0.8s						
L46A	Eue Claire	26.73	24	IAmb	IAmb	03 27 07.3	
	comp=Z,36nm,1.1s						
P52A	Corning	26.73	33	P	P	03 27 02.9	-2.1
	baz=222						
ACSO	Alum Creek Sta	26.75	31	P	P	03 27 03.0	-2.2
	baz=220						
ACSO	Alum Creek Sta	26.75	31	IAmb	IAmb	03 27 05.8	
	comp=Z,13nm,0.8s						
RUBR	Rubicon Trail	26.77	325	IAmb	IAmb	03 27 09.0	
	comp=Z,16nm,0.8s						
S56A	Natural Bridge	26.82	39	P	P	03 27 04.2	-1.6
	baz=229						
MOOW	Moose Ponds	26.83	344	IAmb	IAmb	03 27 10.9	
	comp=Z,13nm,0.8s						
R55A	Marlinton	26.89	38	P	P	03 27 04.4	-2.1
	baz=228						
T58A	Grand View Acr	26.99	42	P	P	03 27 05.5	-1.8
	baz=232						
U59A	Littleton	27.12	44	P	P	03 27 06.2	-2.2
	baz=234						
FLWY	Flagg Ranch	27.13	344	IAmb	IAmb	03 27 14.2	
	comp=Z,12nm,0.8s						
V60A	Jim Taylor Roa	27.13	45	P	P	03 27 06.3	-2.2
	baz=236						
S57A	Dark Hollow, R	27.24	40	P	P	03 27 07.9	-1.7
	baz=230						
S57A	Dark Hollow, R	27.24	40	IAmb	IAmb	03 27 08.8	
	comp=Z,13nm,0.8s						
O52A	Adamsville	27.24	33	IAmb	IAmb	03 27 08.3	
	comp=Z,26nm,0.9s						
R56A	Bull Pasture M	27.39	38	P	P	03 27 09.4	-1.5
	baz=228						
L48A	N Adams	27.43	27	IAmb	IAmb	03 27 10.1	
	comp=Z,33nm,1.1s						
U60A	Pendleton	27.60	44	P	P	03 27 11.2	-1.5
	baz=235						
T59A	Double "B" Far	27.63	43	P	P	03 27 11.3	-1.7
	baz=234						
O53A	New Philadelph	27.66	33	P	P	03 27 11.4	-1.9
	baz=223						
SPMN	Marine on St.	27.73	12	P	P	03 27 11.8	-2.0
	baz=196,SNR=7.3						
SPMN	Marine on St.	27.73	12	IAmb	IAmb	03 27 14.6	
	comp=Z,15nm,0.7s						
RLMT	Red Lodge	27.77	347	P	P	03 27 14.4	-0.1
	baz=162,SNR=6.8						
HLID	Hailey	27.80	338	P	P	03 27 14.8	+0.2
	baz=151,SNR=5.3						
R58A	Rapidan	28.16	40	P	P	03 27 16.1	-1.7
	baz=231						
F36A	Milaca	28.21	11	IAmb	IAmb	03 27 17.1	
	comp=Z,12nm,0.7s						
S59A	Mechanicsville	28.27	42	P	P	03 27 16.6	-2.2
	baz=233						
J47A	Sunmer	28.34	25	IAmb	IAmb	03 27 18.4	
	comp=Z,24nm,1.1s						
Q57A	Strasburg	28.39	38	P	P	03 27 18.0	-1.8
	baz=229						
R59A	King George, V	28.65	41	P	P	03 27 20.3	-1.8
	baz=232						
LAO	LASA Array	28.76	352	P	P	03 27 22.2	-0.9
	baz=169,SNR=6.1						
LAO	LASA Array	28.76	352	IAmb	IAmb	03 27 23.4	
	comp=Z,13nm,0.9s						
BOZ	Bozeman (W)	28.78	344	P	P	03 27 23.0	-0.3
	baz=158,SNR=6.0						
M53A	WI Miller and	28.81	32	P	P	03 27 21.9	-1.6
	baz=222						
ROSC	El Rosal	29.01	114	LR	LR	03 40 36.4	
	comp=Z,60nm,19.2s,baz=254,slow=40						
M54A	Oil Creek Stat	29.38	33	P	P	03 27 26.6	-2.0
	baz=224						
L53A	Girard	29.40	32	P	P	03 27 26.6	-2.1
	baz=222						
O57A	Amberson	29.61	37	P	P	03 27 27.9	-2.7
	baz=229						
N56A	West Decatur	29.71	36	P	P	03 27 30.1	-1.4
	baz=227						
GLMI	Grayling	29.76	23	P	P	03 27 30.3	-1.6
	baz=212						
YBH	Yreka Blue Hor	30.05	326	P	P	03 27 34.1	-0.4
	comp=Z,0.8nm,0.5s,baz=125,slow=12,SNR=2.0						
M56A	Emporium	30.16	35	P	P	03 27 32.8	-2.7
	baz=226						
AGMN	Agassiz Nation	30.27	6	P	P	03 27 34.6	-1.8
	baz=189,SNR=13						
AGMN	Agassiz Nation	30.27	6	IAmb	IAmb	03 27 36.0	
	comp=Z,22nm,0.9s						
DGMT	Dagmar	30.32	355	P	P	03 27 36.2	-0.6
	baz=173						
DGMT	Dagmar	30.32	355	IAmb	IAmb	03 27 38.2	
	comp=Z,18nm,1.0s						
I51A	Listowel	30.43	29	P	P	03 27 35.5	-2.4
	baz=219						
P60A	Greenville	30.54	40	P	P	03 27 37.6	-1.2
	baz=232						
MSO	Missoula	30.55	342	P	P	03 27 38.5	-0.6
	baz=155						
WVNY	West Valley, N	30.58	33	IAmb	IAmb	03 27 38.1	
	comp=Z,14nm,0.8s						
B35A	Bob, Littlefor	30.61	9	IAmb	IAmb	03 27 38.3	
	comp=Z,18nm,0.8s						
M57A	Sunshine Farm,	30.64	36	P	P	03 27 37.6	-2.1
	baz=228						
F10A	Beach Ranch, E	30.89	337	IAmb	IAmb	03 27 43.7	
	comp=Z,16nm,0.8s						
P61A	Hammonton	30.98	41	P	P	03 27 41.3	-1.4
	baz=234						
G08A	Pilot Rock	30.99	335	IAmb	IAmb	03 27 44.1	
	comp=Z,8.6nm,0.9s						
L57A	Andrews Acres	31.24	36	P	P	03 27 42.8	-2.2
	baz=228						
K56A	Middlesex	31.46	34	P	P	03 27 45.5	-1.4
	baz=226						
N60A	Cedar Hill Far	31.52	39	P	P	03 27 45.1	-2.3
	baz=232						
I03D	Drain, OR	31.77	328	P	P	03 27 48.1	-1.5
	baz=136						
L58A	Harry Jones Me	31.83	36	P	P	03 27 48.7	-1.5
	baz=229						
BINY	Binghamton	31.85	36	P	P	03 27 48.9	-1.5
	baz=229						
SADO	Sadowa	32.04	30	LR	LR	03 43 48.3	
	comp=Z,98nm,19.7s,baz=226,slow=42						
H53A	Bobcaygeon	32.16	30	P	P	03 27 50.3	-2.8
	baz=222,SNR=6.5						
ULM	Lac du Bonnet	32.20	6	P	P	03 27 51.4	-1.9
	comp=Z,27nm,0.8s,baz=190,slow=9.2,SNR=49						
ULM				LR	LR	03 42 00.3	
	comp=Z,96nm,18.8s,baz=169,slow=38						
K58A	Earlville	32.41	36	P	P	03 27 53.1	-2.2
	baz=229						
WALA	Waterton Lakes	32.58	344	IAmb	IAmb	03 27 57.9	
	comp=Z,8.8nm,0.8s						
M61A	Granite Spring	32.58	39	P	P	03 27 55.2	-1.5
	baz=233						
G54A	Lake Saint Pet	33.01	30	P	P	03 27 58.1	-2.4
	baz=222						
LTY	Liberty	33.28	335	IAmb	IAmb	03 28 04.1	
	comp=Z,6.2nm,0.8s						
LON	Longmire	33.35	333	IAmb	IAmb	03 28 11.1	
	comp=Z,8.0nm,1.1s						
MTP	Monte Pirata	33.38	85	P	P	03 28 04.4	+0.5
ALGO	Algonquin Park	33.44	29	P	P	03 28 01.9	-2.3
	baz=222						
M63A	Gales Ferry	33.69	41	P	P	03 28 05.3	-1.1
	baz=235						
L63A	North Scituate	34.22	40	P	P	03 28 08.6	-2.4
	baz=235						
LONY	Lake Ozonia	34.22	34	P	P	03 28 08.6	-2.4
	baz=228						
G57A	Newington	34.34	33	P	P	03 28 10.2	-1.7
	baz=227						
I60A	Shoreham	34.42	36	P	P	03 28 11.1	-1.6
	baz=231						
D03D	Eldon	34.51	333	P	P	03 28 12.7	-0.8
	baz=140						
H59A	Cadyville	34.72	35	P	P	03 28 13.7	-1.6
	baz=229						
E55A	Montcerf-Lytto	34.75	30	P	P	03 28 13.2	-2.3
	baz=224						
G58A	Ormstown	34.85	34	P	P	03 28 14.4	-2.0
	baz=228						
F57A	Harrington	34.97	32	P	P	03 28 15.7	-1.8
	baz=227						
H60A	Morristown	35.21	36	P	P	03 28 17.9	-1.7
	baz=231						
G59A	Clarenceville	35.27	35	P	P	03 28 18.4	-1.7
	baz=229						
A04D	Lummi Island	35.28	335	P	P	03 28 20.0	0.0
	baz=142						
E56A	St. Veronique	35.31	31	P	P	03 28 18.7	-1.6
	baz=225						
G60A	Masonville	35.75	35	P	P	03 28 22.2	-2.0
	baz=230						
D56A	ZEC Mazanza, M	35.80	31	P	P	03 28 21.9	-2.6
	baz=225,SNR=9.9						
E58A	La Victoria	36.08	33	P	P	03 28 24.2	-2.7
	baz=228						
H62A	Milan	36.08	37	P	P	03 28 24.1	-3.0
	baz=233						
LSQQ	Lebel-sur-Quev	36.26	27	P	P	03 28 26.5	-2.0
	baz=220						
FFC	Flin Flon	36.46	359	P	P	03 28 29.1	-1.0
FFC				IAmb	IAmb	03 28 29.6	
	comp=Z,12nm,0.9s						
F60A	Warwick	36.51	34	P	P	03 28 28.4	-2.2
	baz=230						
MATQ	Matagami	36.53	25	P	P	03 28 28.4	-2.3
	baz=219,SNR=9.9						
I64A	Boothbay	36.58	39	P	P	03 28 28.6	-2.6
	baz=235						
D58A	Chemin du LacG	36.76	32	P	P	03 28 30.6	-2.2
	baz=228						
G62A	West of Eustis	36.82	36	P	P	03 28 31.3	-2.1
	baz=233						
LATQ	La Tuque	37.01	32	P	P	03 28 32.7	-2.1
	baz=228						
LATQ	La Tuque	37.01	32	IAmb	IAmb	03 28 33.6	
	comp=Z,4.8nm,0.8s						
E60A	Ste Agathe de	37.03	34	P	P	03 28 33.1	-2.0
	baz=230						
D59A	Saint-Raymond	37.24	33	P	P	03 28 35.3	-1.5
	baz=229						
PKME	Peaks-Kenny Pk	37.55	37	P	P	03 28 37.7	-1.8
	baz=234						
E61A	Lac Etchemin	37.59	35	P	P	03 28 38.6	-1.3
	baz=232						
D60A	Saint Jean D’O	37.66	34	P	P	03 28 38.4	-2.0
	baz=230						
D61A	St Aubert, Com	38.23	34	P	P	03 28 43.5	-1.6
	baz=231						
F64A	Sherman	38.44	37	P	P	03 28 45.4	-1.6
	baz=235						
H66A	Whiting	38.45	39	P	P	03 28 46.1	-1.0
	baz=237						
G65A	Princeton	38.52	38	P	P	03 28 45.8	-1.9
	baz=236						
E63A	Oxbow	38.73	36	P	P	03 28 47.4	-2.0
	baz=234						
E64A	Bridgewater	39.06	37	P	P	03 28 50.2	-2.0
	baz=235						
D63A	Stockholm	39.26	36	P	P	03 28 52.1	-1.7
	baz=234						
FCC	Fort Churchill	40.79	5	P	P	03 29 05.2	-1.0
YKA	Yellowknife Ar	45.29	351	P	P	03 29 41.3	-1.3
	comp=Z,6.4nm,0.7s,baz=155,slow=7.8,SNR=84						
YKA				PcP	PcP	03 31 22.3	+0.8
	comp=Z,1.2nm,1.0s,baz=151,slow=4.0,SNR=9.1						
YKA				LR	LR	03 50 00.9	
	comp=Z,182nm,19.5s,baz=0.0,slow=38						
EPYK	Eagle Plains	53.55	343	P	P	03 30 45.0	-0.6
	baz=136						
K27K	Chicken	53.63	339	P	P	03 30 46.7	+0.6
	baz=129						
EGAK	Eagle	53.80	340	P	P	03 30 48.0	+0.7
EGAK				IAmb	IAmb	03 30 49.1	
	comp=Z,6.8nm,0.8s						
INK	Inuvik	54.17	346	P	P	03 30 50.1	+0.1
SCRK	Sand Creek	54.27	338	P	P	03 30 51.2	+0.3
	baz=127						
ILAR	Eielson Array	55.76	338	P	P	03 31 02.1	+0.6
	comp=Z,5.3nm,1.1s,baz=144,slow=5.3,SNR=22						
MCK	McKinley	55.95	336	P	P	03 31 03.1	+0.1
	baz=121						

I23K	**Minto, Yukon-K**	56.85	338	P	P	03 31 09.3	+0.1
	baz=122						
MLY	**Manley**	57.29	337	P	P	03 31 12.4	0.0
	baz=120						
COLD	**Coldfoot**	58.23	340	P	P	03 31 19.0	0.0
	baz=122,SNR=5.2						
COLD	**Coldfoot**	58.23	340	P	P	03 31 19.9	+0.9
COLD				IAmb	IAmb	03 31 21.0	
	comp=Z,5.1nm,0.8s						
TULEG	**Thule**	60.59	8	*i* P	P	03 31 34.0	-1.1
TULEG				*i*		03 32 03.4	
CPUP	**Villa Florida**	61.12	135	P	P	03 31 38.9	-0.5
	comp=Z,2.9nm,0.8s,baz=315,slow=5.9,SNR=6.5						
CPUP				LR	LR	03 56 00.9	
	comp=Z,30nm,19.2s,baz=16,slow=34						
CPUP	**Villa Florida**	61.12	135	P	P	03 31 39.8	+0.3
BDFB	**Brasilia**	61.85	120	P	P	03 31 44.5	-0.2
	comp=Z,3.2nm,0.9s,baz=249,slow=8.7,SNR=4.4						
BDFB	**Brasilia**	61.85	120	P	P	03 31 44.7	0.0
A21K	**Barrow**	62.24	342	P	P	03 31 46.1	-0.2
	baz=117						
A21K	**Barrow**	62.24	342	P	P	03 31 46.3	0.0
A21K				IAmb	IAmb	03 31 47.4	
	comp=Z,8.6nm,0.8s						
ICESG	**Greenland Ices**	62.94	21	*i* P	P	03 31 50.2	-1.2
ICESG				IAmb	IAmb	03 31 51.0	
	comp=Z,24nm,0.7s						
SUMG	**Summit**	64.57	17	P	P	03 32 01.9	-0.3
SUMG				IAmb	IAmb	03 32 03.9	
	comp=Z,11nm,0.9s						
SUMG	**Summit**	64.57	17	*i* P	P	03 32 01.5	-0.6
	comp=Z,31nm,0.9s						
SUMG	**Summit**	64.57	17	*i* P	P	03 32 01.6	-0.6
SUMG				IAmb	IAmb	03 32 03.7	
	comp=Z,31nm,0.9s						
PLCA	**Paso Flores**	65.00	155	P	P	03 32 05.7	+0.7
	comp=Z,4.5nm,1.1s,baz=175,slow=23,SNR=4.0						
PLCA				LR	LR	03 53 44.5	
	comp=Z,43nm,21.9s,baz=338,slow=30						
PLCA	**Paso Flores**	65.00	155	P	P	03 32 05.5	+0.5
PLCA				IAmb	IAmb	03 32 06.7	
	comp=Z,7.0nm,1.1s						
DAG	**Danmarks Havn**	70.58	14	*i* P	P	03 32 38.3	-1.2
	comp=Z,11nm,0.8s						
DAG	**Danmarks Havn**	70.58	14	*i* P	P	03 32 38.3	-1.2
DAG				IAmb	IAmb	03 32 39.1	
	comp=Z,11nm,0.8s						
PVIS	**Viseu**	80.43	50	*e*P	P	03 33 38.1	+1.4
PCBR	**Castelo Branco**	80.97	51	*e*P	P	03 33 40.5	+1.0
	comp=Z,40nm,1.8s						
PMRV	**Marv??o**	81.15	51	*e*P	P	03 33 42.3	+1.8
PETK	**Petropavlovsk-**	82.38	323	P	P	03 33 48.4	+1.7
	comp=Z,5.0nm,1.0s,baz=78,slow=12,SNR=4.9						
ESDC	**Sonseca Array**	83.61	50	P	P	03 33 54.6	+1.2
	comp=Z,3.0nm,0.9s,baz=301,slow=5.1,SNR=11						
TIXI	**Tiksi**	84.30	346	P	P	03 33 56.6	+0.5
TIXI				IAmb	IAmb	03 33 57.6	
	comp=Z,4.9nm,0.9s						
NB2	**NORSAR Subarra**	84.34	27	P	P	03 33 58.2	+1.5
	comp=Z,11nm,1.0s,baz=298,slow=5.1						
NOA	**NORSAR Array B**	84.34	27	P	P	03 33 58.0	+1.3
	comp=Z,4.6nm,0.8s,baz=301,slow=5.0,SNR=9.4						
NOA				LR	LR	04 12 13.3	
	comp=Z,33nm,18.1s,baz=295,slow=36						
ARCES	**ARCESS Array B**	84.65	17	P	P	03 33 59.0	+1.0
	comp=Z,6.8nm,0.6s,baz=318,slow=5.1,SNR=27						
ARCES				LR	LR	04 11 19.4	
	comp=Z,46nm,19.4s,baz=230,slow=35						
PMSA	**Palmer Station**	87.36	165	LR	LR	04 07 12.1	
	comp=Z,50nm,18.3s,baz=217,slow=31						
FINES	**FINESS Array B**	90.06	23	LR	LR	04 16 56.2	
	comp=Z,104nm,18.0s,baz=279,slow=37						
GERES	**GERESS Array B**	91.51	37	P	P	03 34 32.7	+1.3
	comp=Z,0.3nm,0.6s,baz=352,slow=2.0,SNR=3.9						
GERES				LR	LR	04 20 02.3	
	comp=Z,54nm,19.3s,baz=291,slow=38						
VYHS	**Vyhne**	94.58	35	*e*P	P	03 34 46.3	+0.8
AKASG	**Malin Array Be**	98.53	30	LR	LR	04 21 57.0	
	comp=Z,94nm,18.6s,baz=295,slow=37						
LZH	**Lanzhou**	121.21	337	*e*PKP	PKPdf	03 40 14.6	-3.5
LZH				pPKP	pPKPdf	03 40 30.3	-4.1
LZH				sPKP		03 40 40.3	
ASAR	**Alice Springs**	128.95	254	PKP	PKPdf	03 40 32.8	-0.2
	comp=Z,1.2nm,0.8s,baz=110,slow=2.7,SNR=8.7						
CMAR	**Chiang Mai Arr**	138.76	331	PKP	PKPdf	03 40 52.1	+0.6
	comp=Z,0.7nm,0.3s,baz=351,slow=2.7,SNR=6.2						

IDC ***15*** *03:41:45.8±1.3, 3°.82S×126°.10E, h0^{km}, mb4.1/5, mb1 4.3/8, mb1mx3.9/31, mbtmp4.3/8, ML4.0/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/39, Error ellipse: s-maj=27.2km s-min=21.8km az=27.0*

DJA ***15*** *03:41:49.3±1.9, 4°S±2°×12°6E±°, h30^{km}±21^{km}, M4.7/24, mb4.9/15, mB5.2/6, MLv4.6/24, Mw(mB)4.6/6*

NEIC ***15*** *03:41:50.5±1.3, 3°.75S±0°.07×126°.19E±0°.04, h47^{km}±14^{km}, mb4.3/5, Error ellipse: s-maj=9.7km s-min=6.0km az=192.0*

ISC 15 03:41:49.8±0.6**, 3°.81S**±0°.05×**126°.16E**±0°.04**, h35^{km}, n46, σ1§24**/53**, mb4.3**/6**, Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	**Namlea**	1.09	59	P	Pn	03 42 08.9	+0.2
NLAI				S	Sn	03 42 21.8	-0.8
SANI	**Sanana**	1.76	354	P	Pn	03 42 17.4	-0.4
SANI				S	Sn	03 42 39.0	0.0
MSAI	**Masohi**	2.80	81	P	Pn	03 42 32.0	-0.1
MSAI				S	Sn	03 43 04.4	-0.3
BNDI	**Bandanaira**	3.80	101	P	Pn	03 42 45.8	-0.1
LUWI	**Luwuk**	4.37	309	Pn	Pn	03 42 54.1	+0.4
LUWI				Sn	Sn	03 43 43.7	+0.4
LUWI	**Luwuk**	4.37	309	P	Pn	03 42 53.3	-0.4
TNTI	**Ternate**	4.71	15	Pn	Pn	03 42 59.5	+1.1
TNTI	**Ternate**	4.71	15	P	Pn	03 42 57.8	-0.6
KMSI	**Cibinong**	4.87	333	P	Pn	03 43 00.1	-0.6
APSI	**Ampana**	5.35	302	P	Pn	03 43 07.0	-0.2
	1.0nm4μm208nm,0.5s						
SWI	**Sorong**	5.88	60	P	Pn	03 43 14.1	-0.3
	0.5nm154nm,0.6s						
SIJI	**Sorong**	5.88	60	Pn	Pn	03 43 15.7	+1.2
	8.0nm,0.3s,baz=247,slow=14,SNR=21						
SIJI				Sn	Sn	03 44 20.6	-0.1
	3.8nm,0.3s,baz=48,slow=22,SNR=8.6						
SIJI				LR	LR	03 46 26.7	
	comp=Z,298nm,21.1s,baz=211,slow=47						
MRSI	**Marisa**	6.00	315	P	Pn	03 43 15.7	-0.4
	0.5nm2μm150nm,0.7s						
FAKI	**Fak Fak**	6.14	82	Pn	Pn	03 43 17.8	-0.3
FAKI					Sn	03 44 26.6	-0.6
FAKI	**Fak Fak**	6.14	82	P	Pn	03 43 19.0	+0.9
	0.2nm56nm,0.8s						
MMRI	**Maumere**	6.18	219		Pn	03 43 18.7	0.0
MMRI	**Maumere**	6.18	219	P	Pn	03 43 19.3	+0.7
	0.4nm87nm,0.6s						
SOEI	**Soe**	6.20	198	Pn	Pn	03 43 23.1	+4.1
SOEI	**Soe**	6.20	198	P	Pn	03 43 19.6	+0.6
	0.3nm84nm,0.8s						
BKSI	**Bulukumba**	6.21	256	P	Pn	03 43 19.3	+0.3
	0.2nm52nm,0.8s						
TTSI	**Tana Toraja**	6.38	277	P	Pn	03 43 21.4	0.0
	0.2nm44nm,0.7s						
SPSI	**Sidrap Palu**	6.38	268	P	Pn	03 43 21.5	+0.1
	0.2nm25nm,0.6s						
KAPI	**Kappang**	6.50	259	Pn	Pn	03 43 23.2	+0.1
	4.6nm,0.3s,baz=65,slow=14,SNR=6.4						
KAPI				Sn	Sn	03 44 37.3	+1.2
	1.8nm,0.3s,baz=266,slow=21,SNR=9.0						
KAPI				LR	LR	03 46 35.8	
	comp=Z,71nm,19.9s,baz=78,slow=45						
KAPI	**Kappang**	6.50	259	Pn	Pn	03 43 23.8	+0.7
KAPI					Sn	03 44 37.2	+1.2
BATI	**Baumata**	6.82	201	Pn	Pn	03 43 31.2	+3.8
	18nm,0.3s,baz=58,slow=1.6,SNR=8.7						
BATI	**Baumata**	6.82	201	P	Pn	03 43 28.2	+0.7
	0.2nm56nm,0.7s						
TOLI2	**Tolitoli**	7.27	312	Pn	Pn	03 43 35.0	+1.4
MPSI	**Mapaga**	7.50	303	P	Pn	03 43 36.4	-0.3
MTN	**Manton Dam**	10.23	152	Pn	Pn	03 44 14.5	+0.2
FITZ	**Fitzroy Crossi**	14.21	182	Pn	Pn	03 45 07.2	-1.4
	0.3nm,0.3s,baz=3.0,slow=11,SNR=9.0						
FITZ				Sn	Sn	03 47 35.2	-10
	0.1nm,0.3s,baz=317,slow=19,SNR=2.6						
FITZ				LR	LR	03 50 55.0	
	comp=Z,55nm,18.9s,baz=6.5,slow=39						
FITZ	**Fitzroy Crossi**	14.21	182	Pn	Pn	03 45 06.9	-1.7
JAY	**Jayapura**	14.58	85	LR	LR	03 51 34.1	
	comp=Z,93nm,19.4s,baz=282,slow=40						
STKI	**Sintang**	15.17	284	P	Pn	03 45 20.2	-1.5
COEN	**Coen**	19.58	122	P	P	03 46 14.7	-0.4
COEN				IAmb	IAmb	03 46 17.9	
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	21.11	160	P	P	03 46 31.9	+0.4
ASAR	**Alice Springs**	21.11	160	P	P	03 46 33.1	+1.6
	comp=Z,20nm,0.8s,baz=342,slow=11,SNR=127						
ASAR				S	S	03 50 20.7	-4.1
	comp=Z,0.6nm,1.0s,baz=331,slow=23,SNR=2.6						
ASAR	**Alice Springs**	21.11	160	P	P	03 46 32.0	+0.4
PMG	**Port Moresby**	21.58	106	P	P	03 46 37.7	+1.1
	comp=Z,5.4nm,0.3s,baz=304,slow=15,SNR=2.0						
PMG				LR	LR	03 55 56.8	
	comp=Z,46nm,18.2s,baz=191,slow=39						
PMG	**Port Moresby**	21.58	106	P	P	03 46 36.3	-0.3
PMG				IAmb	IAmb	03 46 38.9	
	comp=Z,12nm,1.0s						
CTA	**Charters Tower**	25.40	131	P	P	03 47 16.3	+2.0
	comp=Z,0.6nm,0.4s,baz=328,slow=9.5,SNR=1.7						
BBOO	**Buckleboo**	30.30	163	P	P	03 47 57.6	-0.3
BBOO				IAmb	IAmb	03 48 15.3	
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	31.46	154	P	P	03 48 08.6	+0.4
	comp=Z,2.5nm,0.5s,baz=326,slow=9.3,SNR=6.1						
HNR	**Honiara**	34.00	101	P	P	03 48 30.4	-0.3
CMAR	**Chiang Mai Arr**	34.77	310	LR	LR	04 03 20.2	
	comp=Z,32nm,18.6s,baz=182,slow=37						
MKAR	**Makanchi Array**	63.50	328	P	P	03 52 17.4	+0.8
	comp=Z,0.8nm,1.0s,baz=116,slow=8.2,SNR=3.9						
MKAR	**Makanchi Array**	63.50	328	P	P	03 52 16.6	+0.1

DJA 15 03:42:10.2±2.8**, 7°S**±9°×**12°1E**±1°3**, h28^{km}**±27^{km}**, M3.1**/5**, MLv3.1**/5**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	1.20	330	P	Pn	03 42 31.4	+0.2
BSSI				S	Sb	03 42 47.7	+0.1
BSSI	**Bau Bau, Buton**	1.20	330	P	Sb	03 42 48.9	+1.3
EDFI	**Ende, Flores**	1.66	159	P	Pn	03 42 37.8	+0.3
EDFI				S	Sn	03 42 58.2	+0.3
EDFI	**Ende, Flores**	1.66	159	P	Sn	03 42 58.6	+0.7
BKSI	**Bulukumba**	2.10	332	P	Pn	03 42 43.1	-0.4
BNSI	**Bone**	2.94	340	P	Pn	03 42 58.0	+2.9

JMA ***15*** *04:31:41.8±0.1, 24°.46N×122°.41E, h79^{km}±2^{km}, M3.1*

TAP ***15*** *04:31:41.9, 24°.50N×122°.43E, h81^{km}, ML3.7, B*

ISC 15 04:31:41.6±1.2**, 24°.52N**±0°.03×**122°.43E**±0°.02**, h84^{km}**±6^{km}**, n128, σ1§12**/227**, 27C-33D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.48	98	P	Pn	04 31 55.6	+0.1
JYNG				S	Sn	04 32 05.1	-0.7
TWC	**Suao**	0.53	280	⇑*i*P	Pn	04 31 55.9	0.0
	baz=284						
TWC				S	Sn	04 32 05.7	-0.9
	baz=284						
YOJ	**Yonaguni jima**	0.54	96	P	Pn	04 31 55.9	0.0
YOJ				S	Sn	04 32 06.1	-0.5
YOJ	**Yonaguni jima**	0.54	96	⇑P	Pn	04 31 56.2	+0.2
	baz=94						
YOJ				S	Sn	04 32 06.2	-0.4
	baz=94						
ENAH	**Nanao**	0.57	263	⇓P	Pn	04 31 56.7	+0.5
	baz=260						
ENAH				*e*S	Sn	04 32 07.9	+0.8
	baz=260						
TWB1	**Santiao Chiao**	0.63	321	*e*P	Pn	04 31 57.0	+0.2
	baz=322						
TWB1				S	Sn	04 32 07.8	-0.3
	baz=322						
ENA	**Nanau**	0.63	262	⇓P	Pn	04 31 57.1	+0.3
	baz=261						
ENA				*e*S	Sn	04 32 08.5	+0.3
	baz=261						
NTC	**Toucheng**	0.64	302	⇓P	Pn	04 31 57.2	+0.3
	baz=302						
NTC				*e*S	Sn	04 32 07.9	-0.3
	baz=302						
ILA	**Ilan**	0.66	292	*e*S	Sn	04 32 09.0	+0.3
	baz=293						
TIPB	**Shuangxi**	0.71	310	⇓*i*P	Pn	04 31 57.8	+0.2
	baz=314						
TIPB				*e*S	Sn	04 32 09.5	-0.1
	baz=314						
TWE	**Neicheng**	0.72	286	⇓P	Pn	04 31 58.4	+0.7
	baz=287						
ENTT	**Nioudou**	0.79	279	⇓P	Pn	04 31 59.4	+0.9
	baz=283						
ENTT				*e*S	Sn	04 32 11.2	0.0
	baz=283						
NWF	**Wu-fen Shan**	0.80	313	⇑P	Pn	04 31 59.2	+0.5
	baz=307						
NWF				S	Sn	04 32 11.3	-0.2
	baz=307						
WFSB	**Wu-fen Shan**	0.80	313	⇓P	Pn	04 31 59.3	+0.7
	baz=307						
WFSB				S	Sn	04 32 11.4	+0.1
	baz=307						
NACB	**Ninganchiao**	0.83	246	⇓P	Pn	04 31 58.7	-0.3
	baz=241						
NACB				*e*S	Sn	04 32 11.2	-0.7
	baz=241						
NDT	**Datong Townshi**	0.84	276	P	Pn	04 31 59.8	+0.8
	baz=280						
NDT				*e*S	Sn	04 32 12.4	+0.5
	baz=280						
TWD	**Chiawan**	0.88	240	⇑*i*P	Pn	04 31 59.1	-0.3
	baz=235						
TWD				S	Sn	04 32 11.7	-1.0
	baz=235						
NWLT	**Wulai**	0.88	287	⇓P	Pn	04 32 00.1	+0.7
	baz=291						
NWLT				*e*S	Sn	04 32 12.9	0.0
	baz=291						
TWA	**Mucha**	0.89	301	⇓*i*P	Pn	04 31 60.0	+0.4
	baz=302						
TWA				S	Sn	04 32 12.7	-0.5
	baz=302						
ETLH	**Xiulin Townshi**	0.92	250	⇑P	Pn	04 32 00.0	+0.1
	baz=251						
ETLH				*e*S	Sn	04 32 13.3	-0.4
	baz=251						
HWA	**Hwalien**	0.92	234	*e*S	Sn	04 32 13.9	+0.2
	baz=229						
NHDH	**Xindian Distri**	0.93	298	*e*P	Pn	04 32 00.6	+0.6
	baz=299						
NHDH				S	Sn	04 32 13.3	-0.5
	baz=299						
NNSB	**Datong**	0.95	265	⇑*e*P	Pn	04 32 00.6	+0.2
	baz=259						
NNSB				*e*S	Sn	04 32 15.0	+0.5
	baz=259						
NNSH	**Datong**	0.95	265	⇓P	Pn	04 32 01.2	+0.7
	baz=260						
NNSH				*e*S	Sn	04 32 14.4	-0.1
	baz=260						
NNS	**Nan Shan**	0.96	265	⇓P	Pn	04 32 01.0	+0.4
	baz=259						
NNS				*e*S	Sn	04 32 14.5	-0.3
	baz=259						
TATO	**Taipei**	0.97	298	*e*S	Sn	04 32 13.7	-0.8
	baz=299						
YHNB	**Yeheng**	0.97	279	⇓P	Pn	04 32 01.1	+0.5
	baz=280						
YHNB				*e*S	Sn	04 32 14.9	+0.1
	baz=280						
TAP	**Taipei**	0.98	302	⇓*e*P	Pn	04 32 01.4	+0.7
	baz=302						
TAP				*e*S	Sn	04 32 15.1	+0.2
	baz=302						
NSK	**Sanguang**	0.98	279	⇑P	Pn	04 32 01.4	+0.6
	baz=280						
NSK				*e*S	Sn	04 32 15.0	-0.1
	baz=280						
YM01	**YM01**	1.00	309	⇓*i*P	Pn	04 32 01.2	+0.4
	baz=301						
YM01				*e*S	Sn	04 32 15.1	-0.2
	baz=301						
YM11	**YM11**	1.01	310	⇓*i*P	Pn	04 32 01.5	+0.5
	baz=302						
YM11				*e*S	Sn	04 32 15.3	-0.3
	baz=302						
YM08	**YM08**	1.01	311	⇑P	Pn	04 32 01.0	+0.1
	baz=304						
YM08				*e*S	Sn	04 32 14.3	-1.2
	baz=304						
YM10	**YM10**	1.01	309	⇑*i*P	Pn	04 32 01.3	+0.3
	baz=301						
YM10				*e*S	Sn	04 32 15.1	-0.5
	baz=301						
YM05	**YM05**	1.01	310	⇓P	Pn	04 32 01.4	+0.3
	baz=302						
YM05				*e*S	Sn	04 32 14.9	-0.7
	baz=302						
YM04	**YM04**	1.03	308	⇑P	Pn	04 32 01.4	+0.2
	baz=301						
YM04				S	Sn	04 32 15.5	-0.4
	baz=301						
YM03	**YM03**	1.04	309	⇓P	Pn	04 32 00.7	-0.7
	baz=301						
YM03				*e*S	Sn	04 32 16.7	+0.5
	baz=301						
TWS1	**Kuangyinshan**	1.08	302	⇓P	Pn	04 32 02.4	+0.6
	baz=303						
TWS1				*e*S	Sn	04 32 17.3	+0.3
	baz=303						
FUSS	**Fushou**	1.11	256	⇑P	Pn	04 32 03.1	+0.6
	baz=257						
FUSS				*e*S	Sn	04 32 18.1	0.0
	baz=257						
WHF	**Hehuan Shan**	1.12	251	⇓P	Pn	04 32 02.8	0.0
	baz=252						
WHF				*e*S	Sn	04 32 18.0	-0.6
	baz=252						
NTY	**Taoyuan**	1.13	295	*e*S	Sn	04 32 18.5	+0.4
	baz=301						
ESL	**Shilin**	1.15	232	*e*P	Pn	04 32 02.7	+0.1
	baz=227						
ESL				*e*S	Sn	04 32 17.0	-1.4
	baz=227						
TWT	**Tachien**	1.17	257	*e*P	Pn	04 32 03.9	+0.9
	baz=255						
TWT				*e*S	Sn	04 32 19.4	+0.2
	baz=255						
TDCB	**Techi**	1.19	257	⇑*i*P	Pn	04 32 04.0	+0.8
	baz=256						
TDCB				*e*S	Sn	04 32 19.1	-0.4
	baz=256						
IRIF	**Iriomote-Funau**	1.20	99	P	Pn	04 32 03.4	+0.2
IRIF				S	Sn	04 32 19.2	-0.4
NCU	**National Centr**	1.21	292	*e*S	Sn	04 32 21.4	+1.5
	baz=292						
NCUH	**Zhongli**	1.21	292	*e*S	Sn	04 32 20.7	+0.8
	baz=292						
CHGB	**Renai**	1.23	248	⇓P	Pn	04 32 04.2	+0.4
	baz=243						
CHGB				S	Sn	04 32 20.1	-0.5
	baz=243						
EGFH	**Guangfu**	1.25	227	*e*S	Sn	04 32 19.7	-0.8
	baz=223						
LIOB	**Emei**	1.29	276	*e*P	Pn	04 32 05.4	+1.0
	baz=276						
LIOB				*e*S	Sn	04 32 21.9	+0.3
	baz=276						
NSTT	**Nanjuang**	1.30	275	*e*P	Pn	04 32 06.2	+1.7
	baz=276						
NSTT				*e*S	Sn	04 32 22.5	+0.7
	baz=276						
HSN1	**Hsinchu**	1.31	282	*e*S	Sn	04 32 22.8	+0.9
	baz=282						
SBCB	**Hsinchu**	1.34	282	*e*S	Sn	04 32 22.9	+0.3
	baz=282						
HATJ	**Hateruma jima**	1.34	110	P	Pn	04 32 05.6	+0.6
HATJ				*e*S	Sn	04 32 22.8	+0.2
WHP	**Taichung City**	1.37	260	P	Pn	04 32 07.0	+1.5
	baz=259						
WHP				S	Sn	04 32 24.5	+1.0
	baz=259						
HGSD	**Ruisui**	1.37	222	⇓*e*P	Pn	04 32 05.2	-0.2
	baz=221						
HGSD				*e*S	Sn	04 32 22.5	-0.9
	baz=221						
EHY	**Hungye**	1.43	225	⇑P	Pn	04 32 05.3	-0.8
	baz=226						
EHY				*e*S	Sn	04 32 22.8	-1.8
	baz=226						
WPL	**Puli Township**	1.43	250	*e*P	Pn	04 32 06.9	+0.7
	baz=247						
WPL				*e*S	Sn	04 32 25.0	+0.2
	baz=247						
DPDB	**Guoxing**	1.45	251	*e*P	Pn	04 32 07.3	+0.8
	baz=249						
DPDB				*e*S	Sn	04 32 25.5	+0.2
	baz=249						
JKRS	**Kuro-shima**	1.47	101	P	Pn	04 32 07.3	+0.7
JKRS				S	Sn	04 32 25.7	+0.1
NMLH	**Miaoli**	1.49	271	*e*S	Sn	04 32 26.6	+0.5
	baz=271						
TWQ1	**Liyutan**	1.52	264	*e*S	Sn	04 32 27.4	+0.7
	baz=264						
NSY	**Sanyi**	1.52	266	*e*S	Sn	04 32 27.9	+1.1
	baz=267						
YULB	**Yu-li**	1.52	223	⇑*e*P	Pn	04 32 06.6	-0.8
	baz=232						
YULB				*e*S	Sn	04 32 24.6	-2.3
	baz=232						
SSLB	**Suanglung**	1.53	242	*e*P	Pn	04 32 07.9	+0.4
	baz=239						
SSLB				*e*S	Sn	04 32 27.2	+0.2
	baz=239						
SMLT	**Sun Moon Lake**	1.53	246	*e*P	Pn	04 32 08.6	+1.0
	baz=242						
SMLT				*e*S	Sn	04 32 28.1	+1.0
	baz=242						
EYUL	**Yuli**	1.55	221	*e*P	Pn	04 32 09.1	+1.5
	baz=231						
EYUL				*e*S	Sn	04 32 27.0	-0.3
	baz=231						
TWF1	**Yuli**	1.56	222	⇑P	Pn	04 32 07.1	-0.7
	baz=230						
TWF1				*e*S	Sn	04 32 26.2	-1.4
	baz=230						
JIJ	**Ishigaki jima**	1.57	95	P	Pn	04 32 08.2	+0.3
JIJ				S	Sn	04 32 27.4	-0.5
WDJ	**Dajia District**	1.64	264	*e*S	Sn	04 32 30.3	+0.9
	baz=265						
TCU	**Taichung**	1.64	257	*e*P	Pn	04 32 09.8	+0.9
	baz=269						
TCU				*e*S	Sn	04 32 30.1	+0.6
	baz=269						
WWF	**Wufeng**	1.65	254	*e*S	Sn	04 32 31.3	+1.6
	baz=266						
FULB	**Fuli**	1.68	218	⇑*e*P	Pn	04 32 09.4	+0.1
	baz=212						
FULB				*e*S	Sn	04 32 28.8	-1.6
	baz=212						
YUS	**Yu-Shan**	1.69	233	P	Pn	04 32 10.3	+0.3
	baz=228						
YUS				*e*S	Sn	04 32 30.4	-1.1
	baz=228						
WJS	**Zhushan**	1.70	246	*e*P	Pn	04 32 11.3	+1.7
	baz=260						
WJS				*e*S	Sn	04 32 32.7	+1.8
	baz=260						
WNT	**Mingjian**	1.71	248	⇓*e*P	Pn	04 32 11.1	+1.3
	baz=260						
WNT				*e*S	Sn	04 32 33.1	+1.9
	baz=260						
CHKT	**Chengkung**	1.72	215	*e*P	Pn	04 32 09.7	-0.2
	baz=209						
JISG	**Ishigakijimahi**	1.72	87	P	Pn	04 32 10.2	+0.4
JISG				S	Sn	04 32 31.0	-0.3
WCHH	**Zhanghua**	1.76	256	*e*S	Sn	04 32 33.1	+0.8
	baz=267						
ALS	**Alishan**	1.79	236	⇑*e*P	Pn	04 32 12.1	+1.0
	baz=230						
ALS				*e*S	Sn	04 32 33.8	+0.3
	baz=230						
CHN5	**Tsauling**	1.84	240	⇑P	Pn	04 32 13.2	+1.6
	baz=234						
CHN5				*e*S	Sn	04 32 36.2	+1.8
	baz=234						
ELDTW	**Lidau**	1.85	225	⇑*e*P	Pn	04 32 12.1	+0.4
	baz=222						
ELDTW				*e*S	Sn	04 32 33.0	-1.5
	baz=222						
EDH	**Donghe**	1.85	214	⇑P	Pn	04 32 11.3	-0.3
	baz=210						
EDH				*e*S	Sn	04 32 31.8	-2.7

	baz=210						
WDLH	**Douliu**	1.91	245	⇓*e*P	**Pn**	**04 32 13.8**	**+1.4**
	baz=258						
WDLH				*e*S	**Sn**	**04 32 38.6**	**+2.7**
	baz=258						
LONT	**Longtian**	2.00	217	⇓*e*P	**Pn**	**04 32 12.8**	**-0.8**
	baz=225						
LONT				*e*S	**Sn**	**04 32 36.8**	**-1.2**
	baz=225						
LDUT	**Ludao**	2.04	206	*e*P	**Pn**	**04 32 15.3**	**+1.2**
	baz=203						
LDUT				*e*S	**Sn**	**04 32 35.9**	**-2.9**
	baz=203						
WTK	**Tuku**	2.04	246	*e*P	**Pn**	**04 32 15.1**	**+1.0**
	baz=258						
WTK				*e*S	**Sn**	**04 32 39.5**	**+0.7**
	baz=258						
STYT	**Tauyuan**	2.04	229	⇓*e*P	**Pn**	**04 32 15.9**	**+1.7**
	baz=230						
STYT				*e*S	**Sn**	**04 32 39.5**	**+0.5**
	baz=230						
CHN4	**Tsaushan**	2.04	236	⇑*e*P	**Pn**	**04 32 15.6**	**+1.5**
	baz=237						
CHN4				*e*S	**Sn**	**04 32 40.6**	**+1.7**
	baz=237						
JTJ	**Tarama**	2.08	86	*e*S	**Sn**	**04 32 40.6**	**+0.9**
WTP	**Ta-pu**	2.09	233	⇓P	**Pn**	**04 32 16.1**	**+1.3**
	baz=234						
WTP				*e*S	**Sn**	**04 32 41.3**	**+1.1**
	baz=234						
CHY	**Chiayi**	2.10	241	*e*S	**Sn**	**04 32 40.5**	**+0.3**
	baz=254						
TWGBT	**Beinan**	2.10	216	⇓*e*P	**Pn**	**04 32 14.4**	**-0.5**
	baz=224						
TWGBT				*e*S	**Sn**	**04 32 38.2**	**-2.0**
	baz=224						
TWG	**Pinlang**	2.10	217	⇓*e*P	**Pn**	**04 32 14.3**	**-0.6**
	baz=224						
TWG				*e*S	**Sn**	**04 32 38.6**	**-1.8**
	baz=224						
TWK	**Hsinying**	2.17	235	⇑P	**Pn**	**04 32 17.4**	**+1.5**
	baz=236						
TWK				*e*S	**Sn**	**04 32 42.9**	**+0.9**
	baz=236						
CHN1	**Nanshi**	2.19	233	P	**Pn**	**04 32 17.3**	**+1.2**
	baz=234						
CHN1				*e*S	**Sn**	**04 32 44.2**	**+1.8**
	baz=234						
SNST	**Tainan City**	2.19	234	*e*P	**Pn**	**04 32 18.1**	**+2.0**
	baz=235						
SNST				*e*S	**Sn**	**04 32 43.3**	**+0.8**
	baz=235						
SGST	**Jiashian**	2.21	230	⇓*e*P	**Pn**	**04 32 16.9**	**+0.5**
	baz=241						
SGST				*e*S	**Sn**	**04 32 43.4**	**+0.3**
	baz=241						
SLGT	**Liugui**	2.23	227	⇑*e*P	**Pn**	**04 32 18.4**	**+1.8**
	baz=239						
SLGT				*e*S	**Sn**	**04 32 45.4**	**+1.9**
	baz=239						
ICHU	**Yijhu**	2.28	240	*e*P	**Pn**	**04 32 18.3**	**+1.0**
	baz=241						
CHN8	**Yiju**	2.34	240	*e*S	**Sn**	**04 32 48.8**	**+2.8**
	baz=241						
SCST	**Cishan**	2.41	228	*e*P	**Pn**	**04 32 18.9**	**-0.1**
	baz=238						
SCST				*e*S	**Sn**	**04 32 49.0**	**+1.4**
	baz=238						
SSD	**Sandimen**	2.41	223	⇓*e*P	**Pn**	**04 32 21.1**	**+2.0**
	baz=224						
TSMG	**Majia**	2.44	223	⇑P	**Pn**	**04 32 20.9**	**+1.5**
	baz=224						
TSMG				*e*S	**Sn**	**04 32 49.0**	**+0.6**
	baz=224						
MASBT	**Mashibuluo**	2.51	221	⇑P	**Pn**	**04 32 21.5**	**+1.1**
	baz=222						
MASBT				*e*S	**Sn**	**04 32 49.9**	**-0.3**
	baz=222						
JIRB	**Irabujima**	2.52	82	S	**Sn**	**04 32 50.5**	**+0.2**
EAST	**Anshuo**	2.57	215	⇓*e*P	**Pn**	**04 32 21.3**	**0.0**
	baz=210						
EAST				*e*S	**Sn**	**04 32 49.8**	**-2.0**
	baz=210						
JIKM	**Ikemajima**	2.60	81	S	**Sn**	**04 32 53.0**	**+0.8**
LAY	**Lan-yu**	2.60	198	*e*P	**Pn**	**04 32 21.5**	**0.0**
	baz=196						
LAY				*e*S	**Sn**	**04 32 50.6**	**-1.7**
	baz=196						
PTTC	**Pingtan**	2.60	293	*e*P	**Pn**	**04 32 21.6**	**0.0**
	baz=292						
PTTC				*e*S	**Sn**	**04 32 50.6**	**-1.7**
	baz=292						
JMJ	**Miyako jima 2**	2.62	83	*e*S	**Sn**	**04 32 54.0**	**+1.1**
	baz=83						
JMJ2	**Miyako jima3**	2.65	85	*e*S	**Sn**	**04 32 53.8**	**+0.3**
SSPT	**Xinbi**	2.65	220	⇓*e*P	**Pn**	**04 32 25.2**	**+3.0**
	baz=222						
SSPT				*e*S	**Sn**	**04 32 54.3**	**+0.8**
	baz=222						
SCZT	**Fangliau**	2.71	218	⇑*e*P	**Pn**	**04 32 25.0**	**+2.0**
	baz=232						
SCZT				*e*S	**Sn**	**04 32 58.0**	**+3.1**
	baz=232						
SLIU	**Shizi**	2.74	213	P	**Pn**	**04 32 23.7**	**+0.2**
	baz=214						
SLIU				*e*S	**Sn**	**04 32 53.4**	**-2.3**
	baz=214						
VWUC	**VWUC**	2.75	280	*e*P	**Pn**	**04 32 23.4**	**-0.1**
	baz=272						
VWUC				*e*S	**Sn**	**04 32 53.6**	**-2.2**
	baz=272						
MATB	**Ma-tsu**	2.77	306	*e*P	**Pn**	**04 32 24.1**	**+0.3**
	baz=305						
MATB				*e*S	**Sn**	**04 32 55.9**	**-0.5**
	baz=305						
PNG	**Penghu**	2.79	251	*e*P	**Pn**	**04 32 24.5**	**+0.3**
	baz=251						
PHUB	**P'eng-hu**	2.80	250	P	**Pn**	**04 32 23.9**	**-0.3**
	baz=250						
PHUB				*e*S	**Sn**	**04 32 54.5**	**-2.5**
	baz=250						
MSUT	**Lienchiang**	2.80	306	*e*P	**Pn**	**04 32 24.4**	**+0.2**
	baz=306						
MSUT				*e*S	**Sn**	**04 32 55.8**	**-1.3**
	baz=306						
WDGT	**Dungji**	2.83	244	*e*P	**Pn**	**04 32 24.9**	**+0.3**
	baz=245						
VCHM	**Qimei**	3.04	245	*e*P	**Pn**	**04 32 28.0**	**+0.6**
	baz=237						
VCHM				*e*S	**Sn**	**04 33 02.2**	**-0.7**
	baz=237						
PTMZ	**Houxiangcun**	3.05	280	*e*P	**Pn**	**04 32 27.7**	**+0.1**
	baz=272						
PTMZ				*e*S	**Sn**	**04 33 00.5**	**-2.7**
	baz=272						
XPSS	**Dashiqiu**	3.13	320	*e*P	**Pn**	**04 32 28.2**	**-0.6**
	baz=320						
LYJJ	**Jianjiangzhen**	3.15	311	⇑*e*P	**Pn**	**04 32 29.0**	**+0.1**
	baz=310						
LYJJ				*e*S	**Sn**	**04 33 05.0**	**-0.4**
	baz=310						
MHZQ	**Yeshan**	3.45	298	*e*P	**Pn**	**04 32 33.3**	**+0.2**
	baz=297						
MHZQ				*e*S	**Sn**	**04 33 11.1**	**-1.8**
	baz=297						
KNM	**Kinmen**	3.64	269	*e*P	**Pn**	**04 32 38.2**	**+2.6**
	baz=269						
KNM				*e*S	**Sn**	**04 33 16.6**	**-0.9**
	baz=269						
KNMB	**Chin-men Tao**	3.68	270	*e*P	**Pn**	**04 32 35.9**	**-0.3**
	baz=270						
KNMB				*e*S	**Sn**	**04 33 14.4**	**-4.0**
	baz=270						
AXDP	**Jialang**	4.07	276	*e*P	**Pn**	**04 32 42.1**	**+0.7**
	baz=267						
AXDP				*e*S	**Sn**	**04 33 23.8**	**-4.2**
	baz=267						

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*SOME **15** 04:58:31.2, 39°.08N×72°.92E, h15^{km}, MS3.0*

*MOS **15** 04:58:32.7±0.9, 38°.15N×72°.93E, h131^{km}, mb4.2/10, Error ellipse: s-maj=9.6km s-min=4.3km az=78.4*

*IDC **15** 04:58:33.3±2.4, 38°.10N×72°.93E, h119^{km}±20^{km}, mb3.7/19, mb1 3.9/24, mb1mx3.7/45, mbtmp4.2/24, MS3.5/4, Ms1 3.5/4, ms1mx2.9/36, Error ellipse: s-maj=16.5km s-min=12.9km az=180.0*

*NEIC **15** 04:58:33.8±1.3, 38°.22N±0°.05×72°.92E±0°.09, h129^{km}±9^{km}, mb4.4/9, Error ellipse: s-maj=10.6km s-min=7.5km az=99.0*

*BJI **15** 04:58:33.0±0.0, 38°.34N×72°.84E, h137^{km}, mB4.7/15, mb4.4/22*

*NNC **15** 04:58:35.8±2.1, 38°.34N×72°.61E, h143^{km}±29^{km}, mb3.5, mpv4.2, Error ellipse: s-maj=20.2km s-min=12.4km az=3.0*

ISC 15 04:58:33.5±0.4**, 38°.14N**±0°.04×**72°.96E**±0°.04**, h127^{km}, n156,** σ1^{s}.68/175**, mb4.0**/24**, 7C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	2.73	59	P	**Pn**	**04 59 13.6**	**-2.9**
KSH				S	**Sn**	**04 59 44.9**	**-4.8**
KSH				smax	smax		
	comp=N,2µm,0.6s						
KSH				smax	smax		
	comp=E,1µm,0.6s						
AML	**Almayashu**	4.03	8	P	**Pn**	**04 59 34.4**	**+0.5**
	SNR=136						
UCH	**Uchtor**	4.25	16	P	**Pn**	**04 59 38.0**	**+1.0**
	SNR=136						
CEP	**Cherat**	4.39	192	P	**Pn**	**04 59 38.8**	**+0.3**
CEP				S	**Sn**	**05 00 27.0**	**-2.0**
NIL	**Nilore**	4.49	177	PN	**Pn**	**04 59 40.7**	**+1.0**
NIL						05 00 32.3	
NIL	**Nilore**	4.49	177		**Pn**	**04 59 40.7**	**+1.0**
NIL				Sn	**Sn**	**05 00 32.3**	**+1.2**
EKS2	**Erkin-Say**	4.56	8	P	**Pn**	**04 59 41.9**	**+1.2**
	SNR=63						
MRKS	**Merke**	4.61	2	*e*P	**Pn**	**04 59 42.0**	**+0.7**
	178nm,0.4s						
MRKS				*e*S	**Sn**	**05 00 32.3**	**-1.7**
	305nm,0.4s						
MRKS	**Merke**	4.61	2	*e*PN	**Pn**	**04 59 42.0**	**+0.7**
AAK	**Ala-Archa**	4.64	14	P	**Pn**	**04 59 42.9**	**+1.1**
	26nm,0.3s,baz=181,slow=6.0,SNR=246						
AAK				S	**Sn**	**05 00 35.8**	**+0.8**
	28nm,0.3s,baz=213,slow=16,SNR=26						
AAK				LR	LR	05 01 28.9	
	comp=Z,112nm,18.2s,baz=302,slow=38						
AAK	**Ala-Archa**	4.64	14	P	**Pn**	**04 59 43.2**	**+1.4**
	SNR=111						
AAK	**Ala-Archa**	4.64	14	⇓P	**Pn**	**04 59 43.3**	**+1.4**
	51nm,0.6s						
AAK				⇓S	**Sn**	**05 00 35.6**	**+0.6**
	340nm,0.8s						
AAK	**Ala-Archa**	4.64	14	*i* PN	**Pn**	**04 59 43.0**	**+1.1**
AAK				pmax	pmax		
	comp=Z,51nm,0.5s						
AAK	**Ala-Archa**	4.64	14		**Pn**	**04 59 43.0**	**+1.1**
AAK				Sn	**Sn**	**05 00 33.3**	**-1.7**
KBK	**Karagaybulak**	4.76	18	P	**Pn**	**04 59 44.9**	**+1.5**
	SNR=24						
KBL	**Kabul**	4.79	223	PN	**Pn**	**04 59 44.3**	**+0.5**
KBL						05 00 38.2	
KBL	**Kabul**	4.79	223	Pn	**Pn**	**04 59 44.3**	**+0.5**
KBL				Sn	**Sn**	**05 00 38.2**	**-0.4**
ULHL	**Ulahol**	4.81	30	P	**Pn**	**04 59 45.3**	**+1.2**
	SNR=23						
FRU1	**Bishkek**	4.84	15		**Pn**	**04 59 44.4**	**0.0**
FRU1					**Sn**	**05 00 37.3**	**-2.2**
CHM	**Chimkent**	4.90	329	*e*P	**Pn**	**04 59 45.1**	**-0.1**
	comp=Z,6.5nm,0.7s						
CHM				*e*S	**Sn**	**05 00 37.6**	**-3.4**
	comp=Z,1µm,0.3s						
CHM	**Chimkent**	4.90	329	*e*PN	**Pn**	**04 59 45.1**	**-0.1**
DZA	**Taraz**	4.91	346	*e*P	**Pn**	**04 59 45.6**	**+0.3**
	comp=Z,148nm,0.1s						
DZA				*e*S	**Sn**	**05 00 38.4**	**-2.7**
	comp=Z,625nm,0.3s						
DZA	**Taraz**	4.91	346	*e*P	**Pn**	**04 59 44.8**	**-0.5**
	baz=345						
DZA				*e*S	**Sn**	**05 00 37.5**	**-3.6**
	baz=345						
DZA	**Taraz**	4.91	346	*e*PN	**Pn**	**04 59 45.6**	**+0.3**
CHMS	**Chumysh**	5.04	15	P	**Pn**	**04 59 48.5**	**+1.4**
	SNR=48						
TKM2	**Tokmak 2**	5.18	22	P	**Pn**	**04 59 50.3**	**+1.2**
	SNR=22						
TKM2	**Tokmak 2**	5.18	22	⇑P	**Pn**	**04 59 50.1**	**+0.9**
	comp=Z,12nm,0.5s						
TKM2				⇓S	**Sn**	**05 00 50.2**	**+2.3**
	comp=Z,53nm,0.7s						
TKM2	**Tokmak 2**	5.18	22	*i* PN	**Pn**	**04 59 50.0**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,12nm,0.5s						
USP	**Ospenovka**	5.25	12	P	**Pn**	**04 59 50.8**	**+0.9**
	SNR=8.1						
KK31	**Karatay Array**	5.30	340	⇓P	**Pn**	**04 59 50.2**	**-0.2**
	comp=Z,14nm,0.3s,baz=162,slow=13,SNR=344						
KK31				S	**Sn**	**05 00 46.7**	**-3.7**
	comp=Z,172nm,0.3s,baz=175,slow=24,SNR=32						
KK31	**Karatay Array**	5.30	340	PN	**Pn**	**04 59 50.1**	**-0.4**
KK31	**Karatay Array**	5.30	340	Pn	**Pn**	**04 59 50.1**	**-0.4**
KK31				Sn	**Sn**	**05 00 46.8**	**-3.7**
KKAR	**Karatay Array**	5.30	340	Pn	**Pn**	**04 59 49.9**	**-0.6**
KKAR				Sn	**Sn**	**05 00 46.8**	**-3.7**
KKAR	**Karatay Array**	5.30	340		**Pn**	**04 59 50.0**	**-0.6**
KST	**Kastek**	5.41	24	*e*P	**Pn**	**04 59 53.3**	**+1.3**
	comp=Z,48nm,0.5s						
KST				*e*S	**Sn**	**05 00 51.7**	**-1.5**
	comp=Z,102nm,0.8s						
KST	**Kastek**	5.41	24	*e*PN	**Pn**	**04 59 53.3**	**+1.3**
THW	**Thamme Wali**	5.42	191	P	**Pn**	**04 59 51.5**	**-0.8**
SGDS	**Sogindy**	5.46	13	*e*P	**Pn**	**04 59 52.9**	**+0.2**
	comp=Z,7.9nm,0.8s,baz=14						
SGDS	**Sogindy**	5.46	13	*e*PN	**Pn**	**04 59 52.8**	**+0.2**
SGDS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MTBS	**Maitube**	5.64	27	*e*P	**Pn**	**04 59 56.3**	**+1.1**
	baz=29						
MTBS	**Maitube**	5.64	27	*e*PN	**Pn**	**04 59 56.2**	**+1.1**
TNSS	**Tian-Shan**	5.76	31	*e*P	**Pn**	**04 59 57.4**	**+0.4**
	baz=33						
TNSS	**Tian-Shan**	5.76	31	*e*PN	**Pn**	**04 59 57.4**	**+0.4**
MDOK	**Medeo**	5.90	30	*e*P	**Pn**	**04 59 59.4**	**+0.6**
	baz=32						
MDOK	**Medeo**	5.90	30	⇓P	**Pn**	**04 59 59.9**	**+1.2**
	comp=Z,12nm,0.6s						
MDOK	**Medeo**	5.90	30	*e*PN	**Pn**	**04 59 59.3**	**+0.6**
THN	**Thein Dam**	6.12	158	*e*P	**Pn**	**05 00 02.5**	**+0.9**
THN				*e*S	**Sn**	**05 01 06.5**	**-3.9**
SARP	**Sargodha**	6.21	182	P	**Pn**	**05 00 02.1**	**-0.7**
KUU	**Kurty**	6.29	23	*e*P	**Pn**	**05 00 03.4**	**-0.4**
	comp=Z,6.6nm,0.8s,baz=24						
KUU	**Kurty**	6.29	23	*e*PN	**Pn**	**05 00 03.4**	**-0.4**
KUU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SATY	**Saty**	6.43	38	*e*P	**Pn**	**05 00 05.7**	**-0.1**
	baz=41						
SATY	**Saty**	6.43	38	*e*PN	**Pn**	**05 00 05.7**	**-0.1**
CHKK	**Chushkaly**	6.47	27	*e*P	**Pn**	**05 00 06.0**	**-0.3**
	baz=28						
CHKK	**Chushkaly**	6.47	27	*e*PN	**Pn**	**05 00 05.9**	**-0.3**
DHRM	**DHARAMSHALA**	6.48	154	*e*P	**Pn**	**05 00 06.4**	**-0.3**
DHRM				*e*S	**Sn**	**05 01 14.7**	**-4.7**
DHRM				IAML		05 01 21.7	
	comp=N,909nm,0.4s						
KPKS	**Kokpek**	6.87	37	*e*P	**Pn**	**05 00 11.9**	**+0.3**
	baz=39						
KPKS	**Kokpek**	6.87	37	*e*PN	**Pn**	**05 00 11.9**	**+0.3**
SHLS	**Shalkode**	7.04	43	*e*P	**Pn**	**05 00 17.7**	**+3.6**
	comp=N,6.2nm,0.8s,baz=46						
SHLS	**Shalkode**	7.04	43	*e*PN	**Pn**	**05 00 17.6**	**+3.6**
SHLS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BHK	**Bhakra**	7.28	156	*e*P	**Pn**	**05 00 18.0**	**+0.7**
BHK				*e*P	**Pn**	**05 00 18.0**	**+0.7**
BHK				*e*S	**Sn**	**05 01 37.2**	**-1.3**
SMLA	**Simla**	7.80	152	*e*P	**Pn**	**05 00 23.6**	**-0.6**
SMLA				*e*S	Sn	05 01 42.6	-8.5
SMLA				IAML		05 01 45.5	
	comp=E,312nm,0.4s						
SMLA				IAML		05 01 46.8	
	comp=N,485nm,0.4s						
TDK	**Taldyqorghan**	7.98	29	*e*P	**Pn**	**05 00 26.6**	**0.0**
	comp=N,15nm,0.9s,baz=30						
TDK	**Taldyqorghan**	7.98	29	*e*PN	**Pn**	**05 00 26.5**	**0.0**
TDK				pmax	pmax		
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	10.92	35	P	**Pn**	**05 01 06.5**	**+0.4**
MAKZ	**Makanchi**	10.92	35	Pn	**Pn**	**05 01 06.5**	**+0.4**
MK31	**Makanchi Array**	11.05	36	*i* P	**Pn**	**05 01 08.4**	**+0.6**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	**Makanchi Array**	11.05	36		**Pn**	**05 01 07.9**	**+0.1**
MKAR	**Makanchi Array**	11.05	36	P	**Pn**	**05 01 08.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=214,slow=14,SNR=37						
MKAR	**Makanchi Array**	11.05	36	*i* P	**Pn**	**05 01 08.5**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	11.05	36	Pn	**Pn**	**05 01 07.5**	**-0.3**
GEYT	**Alibeck**	11.71	274	P	Pn	05 01 11.5	-5.2
	comp=Z,2.1nm,0.3s,baz=110,slow=13,SNR=10						
GEYT				S	Sn	05 03 13.1	-13
	comp=Z,1.7nm,0.3s,baz=83,slow=17,SNR=2.3						
GEYT	**Alibeck**	11.71	274		**Pn**	**05 01 12.1**	**-4.5**
BRZS	**Berezniki**	11.84	359	*e*P	**Pn**	**05 01 17.5**	**-0.8**
	baz=359						
BRZS	**Berezniki**	11.84	359	*e*P	**Pn**	**05 01 17.4**	**-0.8**
WMQ	**Urumqi**	12.49	58	*e*P	**Pn**	**05 01 28.3**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,45nm,6.5s						
ZSN	**Zaisan**	12.75	39	*e*P	**Pn**	**05 01 32.5**	**+2.3**
	baz=40						
ZSN	**Zaisan**	12.75	39	*e*P	**Pn**	**05 01 32.4**	**+2.3**
PYUN	**Piuthan**	13.06	137	*e*P	**Pn**	**05 01 31.3**	**-3.2**
	comp=Z,96nm,0.5s						
KURBB	**Kurchatov Arra**	13.10	16	P	**Pn**	**05 01 32.3**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=206,slow=12,SNR=17						
KURK	**Kurchatov**	13.20	16	*ce*P	**Pn**	**05 01 32.8**	**-3.1**
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	**Kurchatov**	13.20	16	Pn	**Pn**	**05 01 33.5**	**-2.4**
DANN	**Dangsing**	13.29	134	*e*P	**Pn**	**05 01 33.8**	**-3.7**
	comp=Z,33nm,0.4s						
KOLN	**Koldanda**	13.65	136	*e*P	**Pn**	**05 01 38.9**	**-3.2**
	comp=Z,25nm,0.5s						
GKN	**Gorkha**	14.06	133	*e*P	**Pn**	**05 01 43.2**	**-4.0**
	comp=Z,27nm,0.4s						
AB31	**Akbulak array**	14.54	324	P	**Pn**	**05 01 50.4**	**-2.6**
	comp=Z,11nm,0.6s,baz=131,slow=12,SNR=151						
ABKAR	**Akbulak array**	14.54	324	Pn	**Pn**	**05 01 50.9**	**-2.1**
ABKAR	**Akbulak array**	14.54	324		**Pn**	**05 01 49.8**	**-3.2**
KKN	**Kakani**	14.59	131	*e*P	**Pn**	**05 01 50.8**	**-3.3**
	comp=Z,18nm,0.4s						
DMN	**Daman**	14.63	132	*e*P	**Pn**	**05 01 51.0**	**-3.5**
	comp=Z,13nm,0.4s						
PKIN	**Phulchoki**	14.82	132	*e*P	**Pn**	**05 01 54.4**	**-2.6**
	comp=Z,9.7nm,0.3s						
PKI	**Pulchoki**	14.83	132	*e*P	**Pn**	**05 01 54.6**	**-2.6**
GUN	**Gumba**	14.87	130	*e*P	**Pn**	**05 01 54.7**	**-2.9**
	comp=Z,20nm,0.5s						
BVAR	**Borovoye Array**	14.99	354	P	**Pn**	**05 01 56.1**	**-2.6**
	comp=Z,1.2nm,0.3s,baz=158,slow=16,SNR=9.4						
BVAR				S	Sn	05 04 33.5	-11
	comp=Z,0.7nm,0.3s,baz=162,slow=20,SNR=5.7						
BRVK	**Borovoye**	15.04	354	*ce*P	**Pn**	**05 01 58.1**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,33nm,1.0s						
BRVK	**Borovoye**	15.04	354	Pn	**Pn**	**05 01 58.2**	**-1.0**
DGZ	**Jazzator, Alta**	15.53	37	*i* P	**Pn**	**05 02 04.6**	**-1.0**
RAMN	**Ramite**	16.00	130	*e*P	**Pn**	**05 02 08.7**	**-3.0**
	comp=Z,16nm,0.4s						
AKTO	**Aktyubinsk**	16.26	324	P	**Pn**	**05 02 13.0**	**-1.4**
	comp=Z,5.1nm,0.3s,baz=114,slow=9.9,SNR=74						
AKTO				S	Sn	05 05 00.8	-14
	comp=Z,0.9nm,0.3s,baz=26,slow=22,SNR=8.9						
AKTO				LR	LR	05 08 51.5	
	comp=Z,138nm,18.1s,baz=294,slow=38						
AKTO	**Aktyubinsk**	16.26	324	P	**Pn**	**05 02 13.0**	**-1.4**
TAPN	**Taplejung**	16.40	127	*e*P	**Pn**	**05 02 14.5**	**-2.1**
	comp=Z,14nm,0.5s						
ODAN	**Odare**	16.55	129	*e*P	**Pn**	**05 02 17.1**	**-1.3**
ZAA0	**Zalesovo Array**	17.78	23	⇑P	**P**	**05 02 32.3**	**+0.5**
	comp=Z,2.8nm,0.7s						
ZAA0	**Zalesovo Array**	17.78	23		**P**	**05 02 31.6**	**-0.2**
ZAA0				IAmb	IAmb	05 02 33.2	
	comp=Z,14nm,0.7s						
ZALV	**Zalesovo Beam**	17.78	23	P	**Pn**	**05 02 32.5**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=210,slow=12,SNR=75						
ZALV	**Zalesovo Beam**	17.78	23	P	**P**	**05 02 31.3**	**-0.4**
WSAR	**Wadi Sarin**	19.26	224	P	**P**	**05 02 49.0**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=53,slow=13,SNR=2.3						
SHL	**Shillong**	20.34	123	P	**P**	**05 03 00.3**	**+0.4**
SHL				pmax	pmax		
	comp=Z,20nm,1.1s						
SHL	**Shillong**	20.34	123	P	**P**	**05 03 00.3**	**+0.4**
SHL				IAmb	IAmb	05 03 02.2	
	comp=Z,20nm,1.1s						
ARU	**Arti**	20.66	337	P	**P**	**05 03 03.4**	**+0.5**
	comp=Z,5.7nm,0.4s,baz=146,slow=6.8,SNR=27						
ARU	**Arti**	20.66	337	*d i*P	**P**	**05 03 03.5**	**+0.5**
ARU						05 03 31.4	
ARU				S	**S**	**05 06 46.8**	**+0.2**
ARU				SS	**sS**	**05 07 30.2**	**+2.9**
ARU				pmax	pmax		
	comp=Z,11nm,0.6s						
ARU	**Arti**	20.66	337	P	**P**	**05 03 02.4**	**-0.5**
ARU				IAmb	IAmb	05 03 04.3	
	comp=Z,22nm,0.8s						
GTA	**Gaotai**	20.95	78	*e*P	Pn	05 03 09.9	-0.4
GTA				pP	pP	05 03 36.3	+5.5
GTA				sP	sP	05 03 51.4	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HYB	**Hyderabad**	21.22	165	*i* P	**P**	**05 03 11.5**	**+2.2**
HYB				*e*S	Sn	05 07 10.0	-4.0
BELG	**Belogornoye**	22.67	317	P	**P**	**05 03 23.8**	**-0.1**
	comp=Z,16nm,0.6s,baz=116,slow=4.4,SNR=6.3						
BELG	**Belogornoye**	22.67	317	*i* P	**P**	**05 03 24.3**	**+0.4**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	**Kislovodsk**	23.48	294	*e*P	**P**	**05 03 31.3**	**-0.4**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH	**Lanzhou**	24.66	85	⇓P	**P**	**05 03 42.8**	**+0.3**
LZH				pP	pP	05 04 11.3	+0.8
LZH				sP	sP	05 04 27.6	+1.6
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.6s						
ZAK	**Zakamensk**	24.74	51	*e*P	**P**	**05 03 44.7**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	**Talaya**	25.38	48	LR	LR	05 14 44.7	
	comp=Z,59nm,18.6s,baz=319,slow=38						
KIRV	**Kirov**	25.51	331	*ce*P	**P**	**05 03 52.6**	**+2.9**
SONM	**Songino Array**	26.13	57	P	**P**	**05 03 56.9**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=260,slow=11,SNR=7.1						
SONM	**Songino Array**	26.13	57	P	**P**	**05 03 55.8**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	26.13	57	P	**P**	**05 03 55.8**	**+0.1**
HHC	**Hu-ho-hao-te**	29.75	73	*e*P	**P**	**05 04 30.3**	**+2.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
CMAR	**Chiang Mai Arr**	29.96	124	P	**P**	**05 04 30.6**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=312,slow=8.3,SNR=1.5						
CMAR	**Chiang Mai Arr**	29.96	124	P	**P**	**05 04 30.1**	**+0.3**
BRTR	**Keskin Array B**	30.46	285	P	**P**	**05 04 35.0**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=98,slow=8.9,SNR=2.8						
AKASG	**Malin Array Be**	33.18	307	P	**P**	**05 04 58.0**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=80,slow=7.7,SNR=1.4						
AKASG	**Malin Array Be**	33.18	307	P	**P**	**05 04 58.0**	**+0.2**
FINES	**FINESS Array B**	37.03	324	P	**P**	**05 05 31.2**	**+0.7**
	comp=Z,3.6nm,0.4s,baz=116,slow=9.9,SNR=42						
FINES	**FINESS Array B**	37.03	324	P	**P**	**05 05 30.5**	**-0.1**
ARCES	**ARCESS Array B**	40.25	336	P	**P**	**05 05 58.2**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=112,slow=9.6,SNR=18						
ARCES	**ARCESS Array B**	40.25	336	P	**P**	**05 05 56.9**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARCES	**ARCESS Array B**	40.25	336	P	**P**	**05 05 56.9**	**-0.5**
KLR	**Kul'dur**	42.92	55	P	**P**	**05 06 21.1**	**+1.8**
	comp=Z,0.9nm,0.7s,baz=228,slow=7.7,SNR=2.5						
KLR	**Kul'dur**	42.92	55	*ce*P	**P**	**05 06 20.7**	**+1.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,1.9s						
GERES	**GERESS Array B**	43.28	304	P	**P**	**05 06 23.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=82,slow=7.0,SNR=2.3						
TIXI	**Tiksi**	43.67	22	*ce*P	**P**	**05 06 25.3**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,47nm,0.8s						
TIXI	**Tiksi**	43.67	22	P	**P**	**05 06 24.8**	**-0.2**
NB2	**NORSAR Subarra**	44.03	322	P	**P**	**05 06 28.3**	**+0.1**

	comp=Z,2.4nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.03	322	P	P	05 06 28.3	+0.1
	comp=Z,2.1nm,0.4s,baz=93,slow=7.7,SNR=11						
ESDC	Sonseca Array	58.08	298	P	P	05 08 14.2	+0.7
	comp=Z,0.3nm,0.5s,baz=48,slow=7.0,SNR=5.3						
TORD	Torodi Ar. Bea	67.31	269	P	P	05 09 15.6	+0.6
	comp=Z,0.8nm,0.4s,baz=46,slow=5.9,SNR=12						
COLD	Coldfoot	69.97	16	P	P	05 09 30.5	-0.1
COLD				IAmb	IAmb	05 09 33.1	
	comp=Z,4.6nm,0.8s						
INK	Inuvik	72.03	10	P	P	05 09 44.0	+1.1
	comp=Z,4.2nm,0.5s,baz=339,slow=5.9,SNR=22						
INK	Inuvik	72.03	10	P	P	05 09 43.1	+0.1
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	Inuvik	72.03	10	P	P	05 09 43.1	+0.1
INK				IAmb	IAmb	05 09 45.3	
	comp=Z,4.2nm,0.6s						
ILAR	Eielson Array	72.77	17	P	P	05 09 48.2	+0.8
	comp=Z,1.7nm,0.9s,baz=315,slow=5.0,SNR=14						
ILAR	Eielson Array	72.77	17	P	P	05 09 47.8	+0.3
DBIC	Dimbokro	76.33	268	P	P	05 10 09.3	+0.5
	comp=Z,2.1nm,1.0s,baz=4.7,slow=6.8,SNR=3.8						
YKA	Yellowknife Ar	79.53	4	P	P	05 10 26.9	+1.2
	comp=Z,2.1nm,0.7s,baz=355,slow=5.3,SNR=32						
ASAR	Alice Springs	83.94	126	P	P	05 10 48.9	-0.5
	comp=Z,0.4nm,0.7s,baz=337,slow=4.3,SNR=3.2						
CTA	Charters Tower	89.82	116	LR	LR	05 54 34.6	
	comp=Z,143nm,21.9s,baz=138,slow=37						
STKA	Stephens Creek	94.52	127	P	P	05 11 38.9	-0.6
	comp=Z,0.9nm,0.3s,baz=333,slow=4.5,SNR=3.5						
STKA	Stephens Creek	94.52	127	P	P	05 11 38.0	-1.4
STKA	Stephens Creek	94.52	127	P	P	05 11 38.0	-1.4

SJA ***15*** *05:19:44.4±0.8, 33°.64S×71°.25W, h77^{km}±3^{km}, ML4.2, MW4.3*

NEIC ***15*** *05:19:45.3±2.3, 33°.63S±0°.04×71°.3W±0°.1, h73^{km}±5^{km}, Error ellipse: s-maj=16.9km s-min=5.6km az=97.0*

IDC ***15*** *05:19:46.3±0.5, 33°.60S×71°.02W, h77^{km}±3^{km}, mb3.8/11, mb1 3.9/14, mb1mx3.8/26, mbtmp4.1/14, MS2.9/2, Ms1 2.9/2, ms1mx2.7/17, Error ellipse: s-maj=15.6km s-min=13.4km az=85.0*

GUC ***15*** *05:19:46.0±0.6, 33°.64S×71°.12W, h80^{km}±1^{km}, ML4.9*

ISC 15 05:19:45.5±0.4**, 33°.64S**±0°.03×**71°.20W**±0°.04**, h77**^{km}±3^{km}**, n107, σ1^{s}.34**/139**, mb4.2**/12**, 3C-13D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MT09	Talagante	0.23	128	⇓iP	Pn	05 19 57.1	-0.1
MT09				iS	Sn	05 20 05.5	-0.4
MT09				IAML		05 20 06.8	
	comp=N,62μm,0.3s						
VA05	Santo Domingo	0.34	267	⇑iP	Pn	05 19 58.5	+0.8
VA05				iS	Sn	05 20 08.0	+1.2
VA05				IAML		05 20 08.6	
	comp=E,141μm,0.4s						
MT02	Curacav	0.38	8	⇓iP	Pn	05 19 58.7	+0.6
MT02				iS	Sn	05 20 07.7	+0.5
MT02	Curacav	0.38	8		Pn	05 19 58.4	+0.3
MT02				Sn	Sn	05 20 07.5	+0.3
MT05	Renca	0.46	58	⇓iP	Pn	05 19 58.8	+0.1
MT05				eS	Sn	05 20 08.3	-0.1
MT05	Renca	0.46	58	Pn	Pn	05 19 58.8	+0.1
MT05				Sn	Sn	05 20 08.3	-0.1
FSR	Penalolen	0.59	74	⇓iP	Pn	05 20 00.5	+0.6
FSR				iS	Sn	05 20 09.7	-0.8
MT03	Universidad Ad	0.60	76	⇓iP	Pn	05 19 59.6	-0.4
MT03				iS	Sn	05 20 10.0	-0.7
MT03				IAML		05 20 10.5	
	comp=N,145μm,0.2s						
PEL	Peldehue	0.66	41	eP	Pn	05 19 59.9	-0.7
PEL				iS	Sn	05 20 11.4	-0.2
PEL				IAML		05 20 13.0	
	comp=E,34μm,0.6s						
PEL	Peldehue	0.66	41	Pn	Pn	05 20 00.3	-0.3
PEL				Sn	Sn	05 20 11.5	-0.2
PEL	Peldehue	0.66	41	eP	Pn	05 20 00.5	0.0
PEL				eS	Sn	05 20 12.3	+0.7
ROC1	El Roble	0.68	13		Pn	05 20 00.8	-0.2
ROC1				Sn	Sn	05 20 13.3	+0.8
ROC1	El Roble	0.68	13	eP	Pn	05 20 01.4	+0.4
ROC1				eS	Sn	05 20 13.4	+1.0
ROCH	El Roble	0.68	14	⇓iP	Pn	05 20 01.3	+0.3
ROCH				iS	Sn	05 20 13.3	+0.8
ROCH				IAML		05 20 14.7	
	comp=N,34μm,0.3s						
LMEL	Las Melosas	0.86	104	⇑iP	Pn	05 20 02.8	-0.1
LMEL				iS	Sn	05 20 15.4	-0.4
LMEL				IAML		05 20 17.2	
	comp=N,43μm,0.2s						
VA03	San Esteban	1.03	32	⇓iP	Pn	05 20 04.9	0.0
VA03				iS	Sn	05 20 19.1	-0.1
VA03	San Esteban	1.03	32		Pn	05 20 04.6	-0.2
VA03				Sn	Sn	05 20 19.1	-0.1
BO03	Pichilemu	1.06	216	⇓iP	Pn	05 20 05.9	+0.8
BO03				iS	Sn	05 20 20.2	+0.4
BO02	Sierra Bellavi	1.20	163	⇑iP	Pn	05 20 07.5	+0.5
BO02				iS	Sn	05 20 23.4	+0.2
BO02				IAML		05 20 24.4	
	comp=N,56μm,0.5s						
BO02	Sierra Bellavi	1.20	163	Pn	Pn	05 20 07.4	+0.4
BO02				Sn	Sn	05 20 23.3	+0.2
AAGR	Agrelo	2.06	75	eP	Pn	05 20 19.7	+1.5
AAGR				eS	Sn	05 20 29.6	-14
AAGR				IAML		05 21 03.5	
	comp=Z,869nm,0.9s						
ARCO	CERRO ARCO	2.06	68	eP	Pn	05 20 19.8	+1.5
ARCO				eS	Sn	05 20 45.5	+2.2
ARCO				IAML		05 20 52.8	
	comp=Z,1μm,0.6s						
AUSP	Uspallata	2.08	48	eP	Pn	05 20 20.4	+1.8
ASAL	Salagasta	2.25	63	eP	Pn	05 20 22.2	+1.6
ASAL				eS	Sn	05 20 54.5	+6.9
ASAL				IAML		05 20 56.2	
	comp=Z,820nm,0.9s						
CO02	Combarbal	2.43	4	⇓iP	Pn	05 20 23.6	+0.4
CO02				iS	Sn	05 20 52.7	+0.5
CO02				IAML		05 20 54.9	
	comp=E,9μm,0.4s						
CO02	Combarbal	2.43	4		Pn	05 20 23.7	+0.5
RFA	San Rafael	2.53	117	eP	Pn	05 20 25.2	+0.7
RFA				IAML		05 21 10.0	
	comp=Z,473nm,0.6s						
EDS3	Malargue	2.59	146	eP	Pn	05 20 27.3	+1.8
EDS3				eS	Sn	05 20 38.5	-18
CO03	El Pedregal	2.82	9	⇓iP	Pn	05 20 29.4	+0.9
CO03				iS	Sn	05 21 01.6	+0.1
CO03	El Pedregal	2.82	9	Pn	Pn	05 20 28.9	+0.4
RTCV	Cerro Valdivia	2.86	52	eP	Pn	05 20 30.2	+1.2
RTCV				IAML		05 21 28.1	
	comp=Z,553nm,1.5s						
ZON	Zonda	2.98	46	Pn	Pn	05 20 31.7	+1.1
ZON	Zonda	2.98	46	eP	Pn	05 20 31.8	+1.1
ZON				IAML		05 21 37.5	
	comp=Z,517nm,0.6s						
BI02	San Fabin de	3.02	181	⇓iP	Pn	05 20 32.4	+1.3
BI02				iS	Sn	05 21 07.2	+1.0
BI02	San Fabin de	3.02	181	Pn	Pn	05 20 32.4	+1.3
SJA	San Juan	3.07	47	eP	Pn	05 20 20.6	-11
SJA				IAML		05 20 50.4	
	comp=Z,773nm,0.9s						
RTLL	Cerro Villicun	3.26	46	eP	Pn	05 20 35.5	+1.1
RTLL				eS	Sn	05 21 13.3	+1.2
RTLL				IAML		05 21 16.8	
	comp=Z,733nm,0.9s						
GO04	Tololo Observa	3.47	6	⇓iP	Pn	05 20 37.6	+0.1
GO04				iS	Sn	05 21 17.5	0.0
GO04	Tololo Observa	3.47	6	Pn	Pn	05 20 37.5	+0.1
GO04	Tololo Observa	3.47	6	eS	Sn	05 21 18.0	+0.5
BI03	Tigo	3.53	204	⇓iP	Pn	05 20 37.2	-0.8
BI03				iS	Sn	05 21 17.5	-1.1
BI03	Tigo	3.53	204		Pn	05 20 37.0	-1.0
ACCO	Cerro Coronel	3.54	31	eP	Pn	05 20 39.5	+1.1
ACCO				IAML		05 21 52.5	
	comp=Z,370nm,0.4s						
CO01	Juntas del Tor	3.77	15		Pn	05 20 42.2	+0.7
LAJA	Laja	3.84	198	eP	Pn	05 20 42.1	-0.1
ACHE	Chepes	4.56	58	eP	Pn	05 20 52.1	-0.2
ACHE				eS	Sn	05 21 43.4	-0.7
LCO	Las Campanas	4.63	5	Pn	Pn	05 20 52.6	-0.7
AC05	El Transito	4.85	10		Pn	05 20 56.2	0.0
LC01	Cunco	5.28	186	Pn	Pn	05 21 01.4	-0.4
AC04	Llanos de Chal	5.42	1	Pn	Pn	05 21 03.3	-0.4
VCA	Vinchina	5.52	29	eP	Pn	05 21 05.7	+0.4
VCA				eS	Sn	05 21 52.2	-15
VCA				IAML		05 22 48.2	
	comp=Z,320nm,0.6s						
TCA	Tanti	6.04	69	eP	Pn	05 21 10.8	-1.5
GO03	Copiap	6.08	8	Pn	Pn	05 21 11.5	-1.4
H03S1	Juan Fernandez	6.42	266	P	Pn	05 21 18.2	+1.0
	baz=53,slow=17,SNR=36						
H03S1				S	Sn	05 22 17.4	-11
	baz=242,slow=74,SNR=7.9						
H03S1				T	T	05 27 35.6	
	baz=86,slow=75,SNR=204						
H03S3	Juan Fernandez	6.42	266	P	Pn	05 21 18.4	+1.2
	baz=53,slow=17,SNR=25						
H03S3				S	Sn	05 22 17.7	-11
	baz=242,slow=74,SNR=9.8						
H03S3				T	T	05 27 39.0	
	baz=86,slow=75,SNR=179						
H03S2	Juan Fernandez	6.44	266	P	Pn	05 21 18.3	+0.9
	baz=53,slow=17,SNR=32						
H03S2				S	Sn	05 22 17.5	-12
	baz=242,slow=74,SNR=12						
H03S2				T	T	05 27 32.1	
	baz=86,slow=75,SNR=333						
H03N1	Juan Fernandez	6.44	270	P	Pn	05 21 20.1	+2.7
	baz=253,slow=74,SNR=8.2						
H03N1				T	T	05 28 25.5	
	baz=86,slow=73,SNR=41						
H03N3	Juan Fernandez	6.45	269	P	Pn	05 21 20.0	+2.4
H03N3				T	T	05 28 23.6	
	baz=86,slow=73,SNR=48						
H03N2	Juan Fernandez	6.46	270	P	Pn	05 21 20.2	+2.6
	baz=8.7,slow=74,SNR=24						
H03N2				T	T	05 28 25.3	
	baz=86,slow=73,SNR=61						
AC02	Maricunga	7.01	15		Pn	05 21 24.4	-1.6
PLCA	Paso Flores	7.10	176	P	Pn	05 21 27.5	+0.8
	comp=Z,4.5nm,0.3s,baz=340,slow=11,SNR=226						
PLCA	Paso Flores	7.10	176	Pn	Pn	05 21 26.5	-0.2
AC01	Pan de Azucar	7.48	4	Pn	Pn	05 21 28.3	-3.7
GO02	Mina Guanaco	8.56	10	Pn	Pn	05 21 43.2	-3.8
LL01	San Ignacio de	8.78	186		Pn	05 21 47.5	-2.1
PB14	IPOC Station P	9.01	5	Pn	Pn	05 21 48.3	-4.8
GO07	Milladeo Hill,	9.66	191		Pn	05 21 57.5	-4.0
PB15	IPOC Station P	10.50	9		Pn	05 22 08.7	-4.6
LVC	Limon Verde	11.17	11	P	Pn	05 22 16.8	-5.8
	comp=Z,0.6nm,0.3s,baz=220,slow=8.9,SNR=2.6						
PB09	IPOC Station P	11.92	9	Pn	Pn	05 22 29.4	-3.3
CPUP	Villa Florida	14.05	62	P	Pn	05 22 58.2	-2.6
	comp=Z,0.2nm,0.3s,baz=243,slow=8.6,SNR=3.5						
CPUP				LR	LR	05 28 36.6	
	comp=Z,73nm,18.7s,baz=240,slow=38						
MNMC	Minye Minye	14.52	6	Pn	Pn	05 23 08.3	+1.0
PB16	IPOC Station P	15.31	6	P	Pn	05 23 19.2	+1.4
PB16				IAmb	IAmb	05 23 19.8	
	comp=Z,10nm,0.7s						
SIV	San Ignacio	19.81	30	P	P	05 24 09.2	-0.7
	comp=Z,1.9nm,0.3s,baz=209,slow=8.2,SNR=52						
EFI	East Falkland	20.40	156	P	P	05 24 15.1	-0.9
EFI				IAmb	IAmb	05 24 18.6	
	comp=Z,22nm,0.7s						
USHA	Ushuaia	21.28	176	P	P	05 24 25.6	+0.3
	comp=Z,13nm,0.3s,baz=307,slow=0.7,SNR=1.3						
NNA	Nana	22.16	345	LR	LR	05 32 13.7	
	comp=Z,15nm,18.8s,baz=178,slow=34						
SAML	Samuel	25.66	19	P	P	05 25 07.8	-0.3
BDFB	Brasilia	27.56	55	P	P	05 25 25.5	+0.1
	comp=Z,1.5nm,0.6s,baz=155,slow=22,SNR=2.5						
BDFB				pP	pP	05 25 42.1	-1.4
	comp=Z,5.4nm,0.7s,baz=263,slow=7.0,SNR=6.8						
BDFB	Brasilia	27.56	55	P	P	05 25 24.1	-1.3
BDFB				IAmb	IAmb	05 25 42.7	
	comp=Z,7.6nm,0.9s						
PMSA	Palmer Station	31.47	174	P	P	05 25 56.9	-2.5
VNA3	Neumayer Olymp	49.43	158	P	P	05 28 28.4	+1.2
VNA2	Neumayer--Watz	50.08	157	P	P	05 28 33.2	+1.1
	baz=281,slow=7.7						
SNAA	Sanae	51.66	158	P	P	05 28 45.0	+0.9
SNAA	Sanae	51.66	158	P	P	05 28 44.6	+0.5
	comp=Z,3.5nm,0.6s,baz=274,slow=8.7,SNR=33						
SNAA				sP	sP	05 29 13.0	+0.7
	comp=Z,2.6nm,0.7s,baz=294,slow=6.3,SNR=3.2						
SNAA	Sanae	51.66	158	P	P	05 28 44.4	+0.4
SNAA				IAmb	IAmb	05 28 45.4	
	comp=Z,3.2nm,0.8s						
QSPA	South Pole Qui	56.60	180	P	P	05 29 21.6	+1.5
	comp=Z,12nm,0.8s,baz=144,slow=2.6,SNR=25						
QSPA	South Pole Qui	56.60	180	P	P	05 29 22.1	+2.0
TXAR	Lajitas Array	69.76	330	P	P	05 30 49.4	+1.9
	comp=Z,0.3nm,0.6s,baz=148,slow=8.8,SNR=4.6						
TXAR				pP	pP	05 31 09.0	+1.2
	comp=Z,1.9nm,0.6s,baz=153,slow=8.6,SNR=20						
TXAR				sP	sP	05 31 17.8	+1.4
	comp=Z,1.2nm,0.6s,baz=158,slow=9.1,SNR=7.5						
WVT	Waverly	71.13	346	P	P	05 30 56.3	+0.8
WVT				IAmb	IAmb	05 31 16.1	
	comp=Z,6.2nm,0.8s						
MAW	Mawson	73.33	163	P	P	05 31 09.0	+0.7
	comp=Z,2.5nm,0.8s,baz=205,slow=24,SNR=1.4						
DBIC	Dimbokro	74.40	71	P	P	05 31 15.5	0.0
	comp=Z,2.2nm,0.8s,baz=325,slow=2.8,SNR=3.8						
DBIC				pP	pP	05 31 37.1	+1.1
	comp=Z,1.3nm,0.6s,baz=212,slow=9.1,SNR=2.2						
DBIC				sP	sP	05 31 44.1	-0.3
	comp=Z,2.7nm,0.8s,baz=253,slow=7.9,SNR=3.3						
TORD	Torodi Ar. Bea	83.43	70	P	P	05 32 04.6	-0.2
	comp=Z,1.3nm,0.8s,baz=241,slow=3.5,SNR=4.1						
TORD				pP	pP	05 32 24.9	-0.8
	comp=Z,2.1nm,0.9s,baz=250,slow=4.4,SNR=4.2						
PDAR	Pinedale Array	83.76	333	P	P	05 32 06.9	+0.8
	comp=Z,0.2nm,0.6s,baz=173,slow=8.2,SNR=2.0						
PDAR				pP	pP	05 32 27.9	+0.9
	comp=Z,0.7nm,0.8s,baz=140,slow=7.1,SNR=4.7						
NVAR	Mina Array Bea	83.99	325	P	P	05 32 07.9	+0.5
	comp=Z,0.3nm,0.7s,baz=142,slow=4.6,SNR=2.3						
NVAR				pP	pP	05 32 29.8	+1.5
	comp=Z,1.6nm,0.8s,baz=154,slow=6.0,SNR=9.7						
NVAR				sP	sP	05 32 37.7	+1.0
	comp=Z,1.0nm,0.7s,baz=158,slow=4.4,SNR=5.3						
ULM	Lac du Bonnet	86.33	344	P	P	05 32 19.0	+0.5
	comp=Z,0.8nm,0.4s,baz=208,slow=12,SNR=3.1						
ULM	Lac du Bonnet	86.33	344	IAmb	IAmb	05 32 34.9	
	comp=Z,1.0nm,0.8s						
H08S1	Diego Carcia H	126.40	133	PKP	PKiKP	05 38 40.5	+0.2
	baz=272,slow=16,SNR=14						
H08S2	Diego Garcia H	126.41	133	PKP	PKiKP	05 38 40.5	+0.2
	baz=272,slow=16,SNR=23						
H08S3	Diego Garcia H	126.42	133	PKP	PKiKP	05 38 40.5	+0.2
	baz=272,slow=16,SNR=12						
H11S2	WAKE ISLAND Hy	126.47	269	T	T	07 57 50.4	
	baz=118,slow=75,SNR=76						
H11S1	WAKE ISLAND Hy	126.48	269	T	T	07 57 51.7	
	baz=118,slow=75,SNR=64						
H11S3	WAKE ISLAND Hy	126.49	269	T	T	07 57 51.9	
	baz=118,slow=75,SNR=51						
ZALV	Zalesovo Beam	153.55	33	PKPbc	PKiKP	05 39 35.2	+0.5
	comp=Z,2.8nm,0.6s,baz=292,slow=2.5,SNR=14						
ZALV				pPKPbc	sPKPdf	05 39 57.3	+0.4
	comp=Z,2.1nm,0.6s,baz=309,slow=3.1,SNR=4.9						
MKAR	Makanchi Array	156.00	49	PKPab	PKPab	05 39 57.6	-0.5
	comp=Z,0.4nm,0.7s,baz=299,slow=4.2,SNR=5.3						
MKAR				pPKPab	pPKPab	05 40 18.3	-1.1
	comp=Z,1.0nm,0.7s,baz=306,slow=4.3,SNR=7.3						
BJI	Beijing	171.30	319	PKP	PKPdf	05 39 37.3	-7.5
LZH	Lanzhou	175.25	58	ePKP	PKPdf	05 39 43.9	-2.8
LZH				pPKP	pPKPdf	05 40 07.3	-1.4
LZH				sPKP		05 40 17.0	
LZH				PKP	PKPab	05 41 22.5	-0.8

SNET ***15*** *05:20:12.7±0.9, 13°.22N×90°.27W, h15^{km}±7^{km}, ML3.7*

UCR ***15*** *05:20:12.9±0.9, 13°.23N×90°.26W, h15^{km}±7^{km}, ML3.7*

GCG ***15*** *05:20:15.0±0.3, 13°.37N×90°.53W, h11^{km}±8^{km}, MD3.4*

ISC 15 05:20:11.4±2.7**, 13°.2N**±0°.1×**90°.30W**±0°.07**, h11**^{km}±12^{km}**, n26, σ0^{s}.57**/38**, 4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.91	46	⇓iP	Pg	05 20 29.2	+0.2
CEVE				eS	Sb	05 20 41.8	+0.2
CEVE				IAML		05 20 43.4	
	comp=Z,4μm,0.2s						
CEVE	Cerro Verde	0.91	46	⇓iP	Pg	05 20 29.2	+0.2
CEVE				eS	Sb	05 20 41.8	+0.2
CEVE				IAML		05 20 43.4	
	comp=Z,4μm,0.2s						
SBLS	San Blas	0.92	46	eP	Pg	05 20 29.3	+0.1
SBLS	San Blas	0.92	46	eP	Pg	05 20 29.3	+0.1
JAYA	Jayaque - finc	0.95	61	⇓iP	Pb	05 20 29.4	-0.5
JAYA				eS	Sb	05 20 42.3	-0.2
JAYA				IAML		05 20 48.4	
	comp=Z,2μm,0.2s						
JAYA	Jayaque - finc	0.95	61	⇓iP	Pb	05 20 29.4	-0.5
JAYA				eS	Sb	05 20 42.3	-0.2
JAYA				IAML		05 20 48.4	
	comp=Z,2μm,0.2s						
SNJE	San Jose	0.95	45	iP	Pb	05 20 29.8	-0.3
SNJE	San Jose	0.95	45	iP	Pb	05 20 29.8	-0.3
CEDA	San Andres	1.07	55	eP	Pb	05 20 31.3	-0.7
CEDA				eS	Sg	05 20 46.1	+0.2
CEDA				IAML		05 20 56.8	
	comp=Z,2μm,0.4s						
CEDA	San Andres	1.07	55	eP	Pb	05 20 31.3	-0.7
CEDA				eS	Sg	05 20 46.1	+0.2
CEDA				IAML		05 20 56.8	
	comp=Z,2μm,0.4s						
BOQS	Boqueron	1.13	61	eP	Pb	05 20 32.5	-0.6
BOQS	Boqueron	1.13	61	eP	Pb	05 20 32.5	-0.6
TACO	Tacachico	1.20	50	eP	Pn	05 20 33.2	-0.9
TACO				eS	Sb	05 20 48.6	-1.1
TACO	Tacachico	1.20	50	eP	Pn	05 20 33.2	-0.9
TACO				eS	Sb	05 20 48.6	-1.1
PCG	Pacaya	1.23	346	eP	Pn	05 20 34.4	-0.3
LBRS	Las Brisas	1.34	66	eP	Pn	05 20 35.8	-0.3
LBRS	Las Brisas	1.34	66	eP	Pn	05 20 35.8	-0.3
FUG	Fuego 3	1.35	337	eP	Pn	05 20 35.5	-0.9
NBG	Las Nubes	1.39	358	eP	Pn	05 20 37.7	+0.7
NBG				eS	Sb	05 20 55.3	0.0
PAVA	Las Pavas	1.42	68	eP	Pn	05 20 37.4	+0.2
PAVA	Las Pavas	1.42	68	eP	Pn	05 20 37.4	+0.2
TECA	Tecapa	1.77	80	eP	Pn	05 20 42.8	+0.6
TECA	Tecapa	1.77	80	eP	Pn	05 20 42.8	+0.6
MRL	Marmol	1.97	18	eP	Pb	05 20 47.6	+0.2
MRL				eS	Sb	05 21 13.1	+1.0
LCND	La Caada	2.35	87	eP	Pn	05 20 49.9	0.0
LCND				eS	Sn	05 21 19.4	+0.7
LCND				IAML		05 21 24.9	
	comp=Z,313nm,0.5s						
LCND	La Caada	2.35	87	eP	Pn	05 20 49.9	0.0
LCND				eS	Sn	05 21 19.4	+0.7
LCND				IAML		05 21 24.9	
	comp=Z,313nm,0.5s						

IDC ***15*** *05:48:56.1±0.5, 2°.87S×129°.74E, h0^{km}, mb4.4/15, mb1 4.5/19, mb1mx4.4/28, mbtmp4.4/19, ML4.4/4, MS3.8/9, Ms1 3.8/9, ms1mx3.4/38, Error ellipse: s-maj=18.3km s-min=12.8km az=79.0*

NEIC ***15*** *05:48:59.9±2.0, 2°.95S±0°.06×129°.63E±0°.06, h23^{km}±4^{km}, mb4.7/31, Error ellipse: s-maj=10.1km s-min=8.5km az=46.0*

BJI ***15*** *05:49:00.9±0.0, 3°.17S×129°.33E, h35^{km}, mB5.0/23, mb4.6/35, Ms4.4/3, Ms7 4.1/3*

DJA ***15*** *05:49:01.2±0.5, 3°S±2°×13°0E±°, h33^{km}±5^{km}, M4.8/20, mB5.4/13, mb4.8/20, MLv4.8/13, Mw(mB)4.8/13*

ISC 15 05:49:00.4±0.3**, 2°.95S**±0°.04×**129°.71E**±0°.04**, h28**^{km}**, n121, σ1^{s}.30**/118**, mb4.7**/43**, MS3.7**/7**, 2C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.87	243	P	Pb	05 49 17.1	+0.2
BNDI	Bandanaira	1.57	173	P	Pb	05 49 28.9	0.0
FAKI	Fak Fak	2.54	89	Pn	Pn	05 49 40.9	+1.0
FAKI	Fak Fak	2.54	89	P	Pn	05 49 41.3	+1.5
SIJI	Sorong	2.59	37	Pn	Pn	05 49 40.2	-0.3
	259nm,0.3s,baz=261,slow=14,SNR=215						
SIJI				Sn	Sn	05 50 09.5	-1.6
	178nm,0.3s,baz=310,slow=3.2,SNR=12						
SIJI				LR	LR	05 51 05.5	
	comp=Z,3μm,22.0s,baz=190,slow=52						
SWI	Sorong	2.59	37	P	Pn	05 49 40.0	-0.5
SWI				S	Sn	05 50 10.9	-0.2
NLAI	Namlea	2.62	264	P	Pn	05 49 42.3	+1.4
SANI	Sanana	3.82	283	P	Pn	05 49 56.2	-1.2
SANI				S	Sn	05 50 42.6	+1.1
TNTI	Ternate	4.38	328	Pn	Pn	05 50 05.4	+0.3
TNTI				Sn	Sn	05 50 54.6	-0.5
TNTI	Ternate	4.38	328	P	Pn	05 50 04.1	-1.0
RKPI	Ransiki, Papua	4.69	72	P	Pn	05 50 10.6	+1.2
KMSI	Cibinong	6.71	301	P	Pn	05 50 37.1	-0.1
	1.5nm132nm,0.5s						
LUWI	Luwuk	7.18	285		Pn	05 50 42.7	-1.0
LUWI	Luwuk	7.18	285	P	Pn	05 50 42.9	-0.8
	0.9nm2μm142nm,0.6s						
GTOI	Gorontalo	7.58	298	P	Pn	05 50 51.3	+2.1
	0.5nm748nm44nm,0.7s						
APSI	Ampana	8.30	284	P	Pn	05 50 58.7	-0.4
	0.7nm2μm175nm,0.5s						
MRSI	Marisa	8.48	294	P	Pn	05 51 00.5	-0.9
	0.5nm2μm156nm,0.6s						
BATI	Baumata	9.38	219	Pn	Pn	05 51 19.1	+5.2
	3.7nm,0.3s,baz=119,slow=10,SNR=9.2						
BATI				LR	LR	05 54 58.4	
	comp=Z,2μm,21.3s,baz=51,slow=38						
BATI	Baumata	9.38	219	P	Pn	05 51 21.7	+7.9
BNSI	Bone	9.69	261	P	Pn	05 51 28.3	+10
TOLI2	Tolitoli	9.79	294	Pn	Pn	05 51 18.4	-1.1
EDFI	Ende, Flores	9.83	234	P	Pn	05 51 21.6	+1.4
	434nm26nm,0.8s						
BKSI	Bulukumba	9.84	256	P	Pn	05 51 21.1	+0.9
	1μm32nm,0.9s						
TTSI	Tana Toraja	9.87	269	P	Pn	05 51 33.9	+13
MTN	Manton Dam	9.93	172	Pn	Pn	05 51 22.1	+0.8
SPSI	Sidrap Palu	9.97	264	P	Pn	05 51 22.8	+0.9
	2μm52nm,0.9s						
KAPI	Kappang	10.14	258	Pn	Pn	05 51 25.7	+1.5
	3.2nm,0.3s,baz=82,slow=10,SNR=9.8						
KAPI				LR	LR	05 56 10.9	
	comp=Z,724nm,20.6s,baz=70,slow=43						
MPSI	Mapaga	10.34	288	P	Pn	05 51 24.6	-2.3
	46nm,0.8s						
GENI	Genyem	10.46	88	P	Pn	05 51 29.7	+1.1
	4μm142nm,1.3s						
JAY	Jayapura	10.99	88	Pn	Pn	05 51 34.4	-1.6
	1.2nm,0.3s,baz=242,slow=9.3,SNR=2.8						
TWSI	Taliwang, Sumb	13.99	245	P	P	05 52 32.0	+7.4
MTKI	Muara Teweh, K	14.94	277	P	Pn	05 52 29.1	-0.7
	6μm68nm,0.5s						
FITZ	Fitzroy Crossi	15.57	195	Pn	Pn	05 52 36.4	-1.7
	0.9nm,0.3s,baz=39,slow=9.5,SNR=22						
FITZ	Fitzroy Crossi	15.57	195	Pn	Pn	05 52 36.7	-1.4
COEN	Coen	17.22	130		Pn	05 52 59.7	+0.6
PWJI	Pagerwojo	18.51	253	P	Pn	05 53 15.6	+0.6
	50nm,0.7s						
PSAD1	Pilbara Seismi	20.75	207	P	P	05 53 37.8	-1.3
PSAA2	Pilbara Seismi	20.84	207	P	P	05 53 38.7	-1.3
PSAA2				IAmb	IAmb	05 53 43.1	
	comp=Z,20nm,0.6s						
PSA00	Pilbara Seismi	20.84	207	P	P	05 53 38.6	-1.5
PSA00				IAmb	IAmb	05 53 43.2	
	comp=Z,20nm,0.6s						
AS31	Alice Springs	20.99	169		P	05 53 42.1	+0.4
AS31				IAmb	IAmb	05 53 43.0	
	comp=Z,24nm,0.6s						
ASAR	Alice Springs	20.99	169	P	P	05 53 41.6	-0.1
	comp=Z,66nm,0.7s,baz=348,slow=11,SNR=421						
ASAR				S	S	05 57 31.6	-2.7
	comp=Z,3.1nm,0.8s,baz=350,slow=20,SNR=5.7						
ASAR				PcP	PcP	05 57 48.5	-0.1
	comp=Z,3.2nm,0.5s,baz=355,slow=1.4,SNR=4.7						
ASAR	Alice Springs	20.99	169	P	P	05 53 42.0	+0.2
KPJI	Karang Pucung	21.14	257	P	P	05 53 42.2	-1.2
	comp=Z,42nm,0.6s						
CISI	Cisompet, Garu	22.27	257	P	P	05 53 54.6	-1.0
CTA	Charters Tower	23.47	138	P	P	05 54 08.5	+0.6
	comp=Z,12nm,0.9s,baz=317,slow=12,SNR=14						
CTAO	Charters Tower	23.47	138	P	P	05 54 09.0	+1.0
CTAO				IAmb	IAmb	05 54 27.5	
	comp=Z,17nm,0.9s						
LHSI	Lahat	26.15	267	P	P	05 54 33.7	+1.1
	comp=Z,70nm,0.7s						
FORT	Forrest	27.72	183	P	P	05 54 45.6	-0.9
FORT				IAmb	IAmb	05 55 04.0	
	comp=Z,19nm,0.8s						
SDSI	Sungai Dareh	28.33	273	P	P	05 54 52.6	+0.4
	comp=Z,16nm,1.4s						

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MORW  Morawa              29.04 205   P        P        05 54 56.9 -1.5
MORW                                  IAmb     IAmb     05 55 26.0
      comp=Z,24nm,1.4s
PDSI  Padang              29.30 273   P        P        05 55 00.7 -0.1
      comp=Z,12nm,0.6s
BBOO  Buckleboo           30.29 169   P        P        05 55 09.2 -0.2
BBOO                                  IAmb     IAmb     05 55 18.4
      comp=Z,12nm,1.0s
MNSI  Mandailing Nat      30.34 277   P        P        05 55 10.4 +0.3
      comp=Z,19nm,0.5s
STKA  Stephens Creek      30.87 160   P        P        05 55 14.6  0.0
      comp=Z,4.1nm,0.8s,baz=345,slow=8.1,SNR=6.7
STKA                                  LR       LR       06 09 54.0
      comp=Z,158nm,18.3s,baz=329,slow=41
STKA  Stephens Creek      30.87 160   P        P        05 55 14.5  0.0
RPSI  Rantau Prapat       31.28 280   P        P        05 55 17.9 -0.4
PSI   Prapat              31.30 280   P        P        05 55 17.9 -0.7
      comp=Z,6.3nm,0.7s,baz=180,slow=5.9,SNR=4.7
NWAO  Narrogin (SRO)      32.03 200   P        P        05 55 22.5 -2.2
      comp=Z,5.4nm,0.8s,baz=23,slow=12,SNR=2.4
NWAO  Narrogin (SRO)      32.03 200   P        P        05 55 23.6 -1.0
NWAO  Narrogin (SRO)      32.03 200   IAmb     IAmb     05 55 23.6
      comp=Z,36nm,1.4s
KHON  Khomkaen            32.76 307   P        P        05 55 32.6 +1.3
CHAI  Chaiyaphum          33.20 305   P        P        05 55 36.0 +0.8
      comp=Z,19nm,0.8s
ARMA  Armidale            34.30 145   P        P        05 55 46.5 +1.9
ARMA                                  IAmb     IAmb     05 55 54.5
      comp=Z,19nm,1.2s
UTTA  Uttaradit           35.34 307   P        P        05 55 55.0 +1.3
      comp=Z,12nm,0.7s
SUKH  Sukhothai           35.95 305   P        P        05 56 01.0 +2.1
      comp=Z,12nm,0.8s
NJ2   Nanjing             36.31 344  eP        P        05 56 03.9 +2.2
NJ2                                   pmax     pmax
      comp=Z,11nm,0.6s
PAYA  Payao               36.77 308   P        P        05 56 16.2  +10
CM36  Chiang Mai Arr      36.93 306   P        P        05 56 08.7 +1.4
CM02  Chiang Mai Arr      37.00 306   P        P        05 56 12.0 +4.1
      comp=Z,7.8nm,1.1s
CMAR  Chiang Mai Arr      37.02 306   P        P        05 56 07.9 -0.2
      comp=Z,2.6nm,0.3s,baz=139,slow=8.2,SNR=16
CM34  Chiang Mai Arr      37.06 307   P        P        05 56 09.0 +0.6
CMMT  Chiang Mai          37.20 307   P        P        05 56 10.6 +0.9
      comp=Z,7.6nm,0.9s
CM33  Chiang Mai Arr      37.20 307   P        P        05 56 10.0 +0.4
CHTO  Chiang Mai          37.20 307   P        P        05 56 11.0 +1.4
CHTO                                  IAmb     IAmb     05 56 11.2
      comp=Z,10nm,0.8s
TOO   Toolangi            37.38 159   P        P        05 56 11.4 +0.5
TOO                                   IAmb     IAmb     05 56 17.9
      comp=Z,30nm,1.5s
KMI   Kunming             38.26 318 ⇑P        P        05 56 21.8 +3.1
KMI                                   pmax     pmax
      comp=Z,10.0nm,1.4s
MJAR  Matsushiro Arr      40.08  11   P        P        05 56 31.6 -2.0
      comp=Z,1.9nm,0.5s,baz=187,slow=8.9,SNR=4.9
MAT   Matsushiro          40.09  11   P        P        05 56 25.6 -8.0
KSRS  Korea Array         40.24 358   LR       LR       06 11 51.5
      comp=Z,109nm,19.9s,baz=179,slow=34
XAN   Xi'an               41.68 334   P        P        05 56 49.8 +3.0
XAN                                   pmax     pmax
      comp=Z,6.0nm,0.6s
LZH   Lanzhou             45.74 330  eP        P        05 57 22.8 +3.2
LZH                                   pP       pP       05 57 28.5 +0.4
LZH                                   sP       sP       05 57 33.0 +1.6
LZH                                   pmax     pmax
      comp=Z,23nm,1.3s
LZH                                   pmax     pmax
      comp=Z,87nm,5.9s
HHC   Hu-ho-hao-te        46.64 341  eP        P        05 57 27.8 +1.3
HHC                                   pmax     pmax
      comp=Z,9.0nm,1.0s
HHC                                   pmax     pmax
      comp=Z,85nm,5.4s
USRK  Ussuriysk Ar.       46.98   2   P        P        05 57 28.5 -0.5
      comp=Z,1.6nm,0.6s,baz=176,slow=7.1,SNR=4.2
GTA   Gaotai              50.33 330 ⇑P        P        05 57 54.6 -0.4
GTA                                   pP       pP       05 58 04.0 +0.4
GTA                                   sP       sP       05 58 07.8 +0.9
GTA                                   pmax     pmax
      comp=Z,4.0nm,1.2s
GTA                                   pmax     pmax
      comp=Z,160nm,6.9s
GTA                                   LR       LR
      comp=Z,140nm,16.4s
GTA                                   LR       LR
      comp=Z,210nm,17.8s
GTA                                   LR       LR
      comp=Z,170nm,16.7s
LBZ   Lake Benmore        54.53 145   P        P        05 58 26.9 +1.0
SONM  Songino Array       54.54 341   P        P        05 58 26.2 +0.1
      comp=Z,0.6nm,0.6s,baz=149,slow=7.0,SNR=5.4
SONM                                  PcP      PcP      05 59 29.3 +0.2
      comp=Z,0.9nm,0.8s,baz=160,slow=4.2,SNR=1.3
SONM  Songino Array       54.54 341   P        P        05 58 26.3 +0.2
TLY   Talaya              58.77 341   LR       LR       06 28 43.8
      comp=Z,58nm,18.2s,baz=146,slow=41
WMQ   Urumqi              59.88 326  eP        P        05 59 05.4 +1.5
WMQ                                   pmax     pmax
      comp=Z,16nm,1.1s
WMQ                                   pmax     pmax
      comp=Z,120nm,7.1s
PEA0B Petropavlovsk-      60.60  19   P        P        05 59 09.9 +1.4
PETK  Petropavlovsk-      60.60  19   P        P        05 59 07.2 -1.4
      comp=Z,3.7nm,0.7s,baz=170,slow=3.6,SNR=8.5
PETK                                  LR       LR       06 21 09.6
      comp=Z,56nm,21.7s,baz=198,slow=32
PETK  Petropavlovsk-      60.60  19   P        P        05 59 09.8 +1.2
MK31  Makanchi Array      64.71 326   P        P        05 59 36.2 +0.1
MK31                                  IAmb     IAmb     05 59 43.9
      comp=Z,5.2nm,0.9s
MKAR  Makanchi Array      64.71 326   P        P        05 59 35.7 -0.4
      comp=Z,1.4nm,0.4s,baz=114,slow=8.1,SNR=26
MKAR  Makanchi Array      64.71 326   P        P        05 59 35.9 -0.2
KSH   Kashi               64.88 316   P        P        05 59 40.5 +3.0
KSH                                   pmax     pmax
      comp=Z,7.0nm,0.7s
KSH                                   pmax     pmax
      comp=Z,710nm,7.1s
MAKZ  Makanchi            64.90 326   P        P        05 59 37.4 +0.1
MAKZ                                  IAmb     IAmb     05 59 44.9
      comp=Z,5.6nm,0.8s
ZALV  Zalesovo Beam       67.85 333   P        P        05 59 55.2 -0.8
      comp=Z,2.4nm,0.6s,baz=108,slow=4.8,SNR=7.9
ZALV  Zalesovo Beam       67.85 333   P        P        05 59 55.9 -0.1
KURK  Kurchatov           68.94 328   P        P        06 00 02.7 -0.2
KKAR  Karatay Array       70.14 318   P        P        06 00 09.3 -1.2
TIXI  Tiksi               74.47 360   P        P        06 00 35.4 -0.3
BRVK  Borovoye            74.58 327   P        P        06 00 34.4 -2.4
BRVK                                  IAmb     IAmb     06 00 45.4
      comp=Z,9.4nm,1.2s
VNDA  Vanda               76.47 173   P        P        06 00 47.2  0.0
      comp=Z,1.6nm,0.6s,baz=320,slow=5.1,SNR=12
VNDA  Vanda               76.47 173   P        P        06 00 47.3 +0.1
MAW   Mawson              78.59 201   P        P        06 00 59.5 +0.3
      comp=Z,2.4nm,0.5s,baz=71,slow=6.9,SNR=2.0
MAW                                   LR       LR       06 33 42.7
      comp=Z,50nm,19.6s,baz=55,slow=34
MAW   Mawson              78.59 201   P        P        06 01 00.1 +0.9
ABKAR Akbulak array       79.18 321   P        P        06 01 02.7 -0.1
PPT   Papeete             80.27 107   LR       LR       06 34 44.0
      comp=Z,22nm,19.9s,baz=288,slow=34
TTA   Tatalina            85.51  26   P        P        06 01 37.3 +1.6
TTA                                   IAmb     IAmb     06 02 01.1
      comp=Z,7.4nm,1.2s
RAYN  Ar Rayn             85.86 294   P        P        06 01 38.9 +0.7
PPLA  Purkeypile          87.20  27   P        P        06 01 45.5 +1.4
ILAR  Eielson Array       89.83  25   P        P        06 01 55.5 -0.8
      comp=Z,0.3nm,0.6s,baz=237,slow=4.0,SNR=5.6
ARCES ARCESS Array B      97.70 340   P        P        06 02 30.7 -1.7
      comp=Z,1.8nm,0.9s,baz=102,slow=3.9,SNR=1.3
ARCES ARCESS Array B      97.70 340   P        P        06 02 31.6 -0.8
TXAR  Lajitas Array      123.04  57   PKP      PKiKP    06 07 55.8 +0.5
      comp=Z,0.2nm,0.7s,baz=230,slow=1.8,SNR=2.0
TXAR                                  PKKPbc   PKKPbc   06 17 46.9  0.0
      comp=Z,0.2nm,0.5s,baz=131,slow=6.8,SNR=5.3
TORD  Torodi Ar. Bea     127.64 284   PKP      PKiKP    06 08 05.3 +0.6
      comp=Z,0.6nm,0.7s,baz=98,slow=3.2,SNR=1.8
PLCA  Paso Flores        132.74 159   PKP      PKiKP    06 08 14.8 +0.3
      comp=Z,2.1nm,0.7s,baz=266,slow=2.7,SNR=5.1
PLCA  Paso Flores        132.74 159            PKPdf    06 08 10.1 -3.2
CPUP  Villa Florida      150.10 167   PKPbc    PKiKP    06 08 50.5 +0.2
      comp=Z,5.5nm,0.6s,baz=198,slow=1.6,SNR=29
CPUP  Villa Florida      150.10 167            PKiKP    06 08 50.0 -0.3
```

IDC 15 06:21:29.1±65.0, 5°.81N×91°.32E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/58, mbtmp3.6/4, Error ellipse: s-maj=1210.0km s-min=125.9km az=2.0, Off west coast of northern Sumatera

```
Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
H08S3 Diego Garcia H      23.05 235    T        T       06 50 56.9
      baz=52,slow=75,SNR=7.1
H08S2 Diego Garcia H      23.05 235    T        T       06 51 02.3
      baz=52,slow=75,SNR=4.7
H08S1 Diego Carcia H      23.06 235    T        T       06 50 59.7
      baz=52,slow=75,SNR=6.9
MKAR  Makanchi Array      41.57 351    P        P       06 29 18.4 -0.1
      0.4nm,0.6s,baz=151,slow=6.6,SNR=4.2
SONM  Songino Array       43.82  15    P        P       06 29 36.8 -0.2
      0.6nm,0.6s,baz=199,slow=8.3,SNR=6.1
KURBB Kurchatov Arra      45.93 349    P        P       06 29 53.0 -0.5
      0.9nm,0.9s,baz=172,slow=7.5,SNR=2.1
ZALV  Zalesovo Beam       48.28 355    P        P       06 30 12.1 +0.2
      1.0nm,0.6s,baz=163,slow=7.2,SNR=6.0
```

IDC 15 06:30:59.9±2.8, 53°.99N×86°.69E, h0km, mb1 2.7/2, mb1mx2.6/38, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=23.5km s-min=14.5km az=57.0, Southwestern Siberia

```
Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
I46RU ZALESOVO INFRA       1.10 269   i                 06 38 30.0
      baz=86,slow=327,SNR=1.4
ZALV  Zalesovo Beam        1.10 269    Pg       Pg      06 31 21.1 +0.1
      0.4nm,0.3s,baz=85,slow=18,SNR=12
ZALV                                   Lg       Lg      06 31 36.1
      2.4nm,0.3s,baz=86,slow=28,SNR=8.7
KURBB Kurchatov Arra       6.03 239    Pn       Pn      06 32 31.5 +1.3
      0.1nm,0.3s,baz=57,slow=14,SNR=4.6
KURBB                                  Lg       Lg      06 34 09.1
      0.0nm,0.3s,baz=68,slow=32,SNR=4.1
MKAR  Makanchi Array       7.73 203    Pn       Pn      06 32 54.3 +0.7
      0.1nm,0.3s,baz=23,slow=12,SNR=6.2
MKAR                                   Lg       Lg      06 35 04.6
      0.0nm,0.3s,baz=17,slow=32,SNR=4.6
```

NEIC ***15*** *07:10:27.8±2.2, 64°.60N±0°.07×17°.5W±0°.1, h7km±5km, Error ellipse: s-maj=10.6km s-min=8.5km az=188.0*

REY ***15*** *07:10:28.0, 64°.61N×17°.44W, h11km*

IDC ***15*** *07:10:29.1±0.7, 64°.32N×17°.92W, h0km, mb3.8/13, mb1 4.1/15, mb1mx3.8/43, mbtmp3.8/15, ML3.5/2, MS3.7/6, Ms1 3.7/6, ms1mx3.2/52, Error ellipse: s-maj=25.3km s-min=10.3km az=20.0*

MOS ***15*** *07:10:30.2±1.2, 64°.18N×18°.04W, h19km, mb4.5/18, Error ellipse: s-maj=16.1km s-min=10.7km az=100.9*

ISC 15 07:10:28.9±0.4, 64°.61N±0°.02×17°.46W±0°.02, h10km, n130, σ2°.13/116, mb4.3/41, MS3.8/4, 8C-8D, Iceland

```
Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
IDYN  Dyngjuhals           0.19  13    P        Pg      07 10 31.9 -1.0
      baz=10.0
IDYN                                   S        Sg      07 10 34.9 -0.8
      baz=10.0
IHAM  Hamarinn             0.20 230    P        Pg      07 10 32.0 -1.1
      baz=231
IHAM                                   S        Sg      07 10 35.9 -0.3
      baz=231
IURH  Urdarhals            0.25  33    P        Pg      07 10 32.9 -1.1
      baz=31
IKVE  Kverkfjoll           0.34  78    P        Pg      07 10 34.5 -1.3
      baz=78
IKVE                                   S        Sg      07 10 39.5 -0.8
      baz=78
IVOT  Vottur               0.36 160    P        Pg      07 10 35.0 -1.1
      baz=162
ISKR  Skrokkalda           0.40 263    P        Pg      07 10 35.7 -1.1
      baz=263
IJOK  Jokulheimar          0.44 228    P        Pg      07 10 36.3 -1.3
      baz=229
IJOK                                   S        Sg      07 10 43.2 -0.2
      baz=229
THOR  Thorvaldshraun       0.47  46    P        Pg      07 10 36.5 -1.5
      baz=45
THOR                                   S        Sg      07 10 43.0 -1.2
      baz=45
IKRE  Kreppuhraun          0.49  69    P        Pg      07 10 36.7 -1.8
      baz=69
IKRE                                   S        Sg      07 10 43.9 -1.2
      baz=69
IASK  Askja                0.56  38    P        Pg      07 10 38.0 -1.8
      baz=37
IASK                                   S        Sg      07 10 46.5 -0.7
      baz=37
IIEY  Innrieyrar           0.59 209    P        Pg      07 10 38.9 -1.5
      baz=210
IIEY                                   S        Sg      07 10 47.6 -0.5
      baz=210
IMKO  Mokollar             0.61  52    P        Pg      07 10 38.7 -1.9
      baz=52
IKSK  Karasker             0.62 136    P        Pg      07 10 38.7 -2.3
      baz=137
IKAL  Kalfafell            0.67 188    P        Pg      07 10 40.3 -1.6
      baz=189
IKAL                                   S        Sg      07 10 50.2 -0.4
      baz=189
ISVA  Svartarkot           0.73   7    P        Pg      07 10 40.9 -2.1
      baz=6.1
IVSH  V-Sauoahnukur        0.77  74    P        Pg      07 10 41.3 -2.4
      baz=74
IVSH                                   S        Sg      07 10 52.5 -1.3
      baz=74
IFAG  Fagurholsmyri        0.82 154    P        Pg      07 10 42.5 -2.1
      baz=155
IFAG                                   S        Sg      07 10 53.3 -1.9
      baz=155
IADA  Aoalbol              0.91  62    P        Pg      07 10 43.5 -2.8
      baz=62
IADA                                   S        Sg      07 10 56.2 -1.8
      baz=62
ISNB  Snabyli              1.02 211    P        Pg      07 10 46.0 -2.4
      baz=211
ISNB                                   S        Sg      07 11 00.3 -1.2
      baz=211
IMEL  Melhnausar           1.02  19    P        Pg      07 10 45.5 -3.0
      baz=19
IREN  Reynihlio            1.07  12    P        Pg      07 10 46.4 -3.0
      baz=12
IRJU  Rjupnafell           1.13 209    P        Pb      07 10 48.0 -2.4
      baz=209
IFED  Fedgar               1.14 240    P        Pb      07 10 48.1 -2.4
      baz=240
IGRS  Grimsstaoir          1.18  28    P        Pb      07 10 48.2 -3.1
      baz=28
IMJO  Mjoaskard            1.18 236    P        Pb      07 10 48.8 -2.5
      baz=236
IGYG  Gygjarholskot        1.24 256    P        Pn      07 10 49.5 -2.7
      baz=256
IHVO  Lagu-Hvolar          1.25 210    P        Pn      07 10 50.0 -2.3
      baz=210
BORG  Borgarnes            1.67 276    Pg       Pn      07 10 56.4 -1.7
      14nm,0.3s,baz=96,slow=12,SNR=54
BORG                                   Lg       Lg      07 11 17.6
      28nm,0.3s,baz=53,slow=20,SNR=3.5
BORG  Borgarnes            1.67 276    P        Pn      07 10 56.8 -1.3
BORG                                                    07 11 20.0
BORG  Borgarnes            1.67 276    Pn       Pn      07 10 56.8 -1.3
BORG                                   Sn       Sg      07 11 20.0 -2.4
SCO   Scoresbysund         6.14 346   e         Pn      07 11 53.9 -5.6
      baz=172,slow=6.5
SCO                                   i P       Pn      07 12 00.0 +0.5
SCO                                   i S       Sn      07 13 15.2 +5.5
EKA   Eskdalemuir Ar      11.71 136    Pn       Pn      07 13 16.1 +0.4
      baz=319,slow=13,SNR=2.6
ESK   Eskdalemuir         11.71 136    P        Pn      07 13 17.3 +1.6
ESK   Eskdalemuir         11.71 136    Pn       Pn      07 13 17.3 +1.6
DAG   Danmarks Havn       12.23 359   i P       Pn      07 13 30.2 +7.4
DAG   Danmarks Havn       12.23 359   i P       Pn      07 13 30.2 +7.4
DAG   Danmarks Havn       12.23 359   i P       Pn      07 13 30.2 +7.5
KBS   Kingsbay            16.69  19    P        Pn      07 14 21.8 -0.6
KBS                                    pmax     pmax
      comp=Z,56nm,1.5s
KBS   Kingsbay            16.69  19             Pn      07 14 21.8 -0.6
KBS                                    IAmb     IAmb    07 14 39.9
      comp=Z,56nm,1.5s
SPITS Spitsbergen Ar      16.91  23    LR       LR      07 19 23.5
      comp=Z,87nm,18.8s,baz=255,slow=31
ARCES ARCESS Array B      17.14  54    LR       LR      07 19 40.4
      comp=Z,136nm,18.4s,baz=265,slow=32
FINES FINESS Array B      19.70  79    P        Pn      07 15 02.7 +3.4
      comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=2.3
TULEG Thule               19.91 327    P        Pn      07 14 59.7 -2.0
CLL   Collm               20.67 116   eP        Pn      07 15 14.0 +3.2
LVZ   Lovozero            20.71  58    P        P       07 15 05.8 -3.1
LVZ                                    pmax     pmax
      comp=Z,44nm,1.5s
LVZ   Lovozero            20.71  58    P        P       07 15 05.8 -3.1
LVZ                                    IAmb     IAmb    07 15 21.2
      comp=Z,44nm,1.5s
FRB   Frobisher Bay       21.78 291    P        P       07 15 21.3 +0.9
      comp=Z,2.8nm,1.1s,baz=72,slow=8.9,SNR=3.8
KHC   Kasperske Hory      22.63 118⇓eP        P       07 15 37.8 +8.1
KHC                                    pmax     pmax
      comp=Z,54nm,2.5s
KHC   Kasperske Hory      22.63 118   eP        P       07 15 32.2 +2.5
DPC   Dobruska-Polom      22.72 113   eP        P       07 15 34.2 +3.6
DPC   Dobruska-Polom      22.72 113   eP        P       07 15 34.2 +3.6
GERES GERESS Array B      22.91 119    P        P       07 15 34.5 +1.8
      comp=Z,1.5nm,0.9s,baz=326,slow=8.5,SNR=3.9
GERES GERESS Array B      22.91 119    P        P       07 15 32.6 -0.1
TMCR  Tamitsa             23.36  66   eP        P       07 15 40.6 +3.7
TMCR                                   pmax     pmax
      comp=Z,12nm,0.7s
MORC  Moravsky Berou      23.66 112    P        P       07 15 39.5 -0.6
MORC                                   pmax     pmax
      comp=Z,7.0nm,1.4s
MORC  Moravsky Berou      23.66 112    P        P       07 15 39.5 -0.6
EUNU  Eureka              23.73 336    P        P       07 15 38.5 -2.1
OJC   Ojcow               24.23 109    P        P       07 15 43.1 -2.4
OJC                                    pmax     pmax
      comp=Z,16nm,1.5s
OJC   Ojcow               24.23 109    P        P       07 15 43.1 -2.4
OJC                                    IAmb     IAmb    07 16 08.9
      comp=Z,16nm,1.5s
VYHS  Vyhne               25.20 112   eP        P       07 16 01.3 +7.0
VYHS  Vyhne               25.20 112   eP        P       07 16 01.3 +7.0
KLMR  Klimovskoe          25.61  72   eP        P       07 16 03.4 +5.6
KLMR                                   pmax     pmax
      comp=Z,28nm,1.5s
KLMR  Klimovskoe          25.61  72   eP        P       07 16 03.5 +5.6
KLMR                                   AMP              07 16 05.2
      comp=Z,28nm,1.5s
KWP   Kalwaria Pacla      25.88 106    P        P       07 15 59.5 -0.9
KWP                                    pmax     pmax
      comp=Z,19nm,1.1s
KWP   Kalwaria Pacla      25.88 106    P        P       07 15 59.5 -0.9
PSZ   Piszkesteto         26.08 112    P        P       07 16 00.2 -2.2
PSZ                                    pmax     pmax
      comp=Z,11nm,1.2s
PSZ   Piszkesteto         26.08 112    P        P       07 16 00.2 -2.2
PSZ                                    IAmb     IAmb    07 16 09.5
      comp=Z,11nm,1.2s
ESDC  Sonseca Array       26.20 156    P        P       07 16 03.8 +0.4
      comp=Z,0.5nm,0.4s,baz=350,slow=8.8,SNR=2.2
KOLS  Kolonicke sedl      26.24 108   eP        P       07 16 07.7 +4.0
KOLS  Kolonicke sedl      26.24 108   eP        P       07 16 07.7 +4.0
PESTR Estremoz            26.43 163    P        P       07 16 04.0 -1.5
PESTR                                  IAmb     IAmb    07 16 18.2
      comp=Z,16nm,1.4s
UZH   Uzhgorod            26.49 108   eP        P       07 16 06.7 +0.8
UZH                                   i                 07 16 13.4
ROSA  Rosais              26.70 199    P        P       07 16 07.3 -0.6
AKASG Malin Array Be      27.82  97    P        P       07 16 21.0 +3.2
      comp=Z,0.2nm,0.3s,baz=326,slow=9.6,SNR=2.6
OBN   Obninsk             27.87  84   i P       P       07 16 22.7 +4.5
OBN                                    pmax     pmax
      comp=Z,13nm,1.0s
KIRV  Kirov               30.99  69    LR       LR      07 29 20.1
      comp=Z,177nm,18.7s,baz=311,slow=36
KIRV  Kirov               30.99  69⇓eP        P       07 16 52.0 +6.2
BELG  Belogornoye         34.48  79⇓eP        P       07 17 22.1 +5.7
BELG                                   pmax     pmax
      comp=Z,3.0nm,1.1s
BRTR  Keskin Array B      38.45 105    P        P       07 17 53.3 +2.7
      comp=Z,1.7nm,1.1s,baz=312,slow=7.3,SNR=2.4
BRTR  Keskin Array B      38.45 105ceP        P       07 17 58.5 +7.9
BRTR                                   pmax     pmax
      comp=Z,2.0nm,1.1s
BRTR  Keskin Array B      38.45 105    P        P       07 17 50.5 -0.2
KIV   Kislovodsk          38.82  92   eP        P       07 17 58.8 +5.1
KIV                                    pmax     pmax
      comp=Z,18nm,1.1s
KBZ   Khabaz              39.10  92⇓eP        P       07 18 02.9 +7.1
KBZ                                    pmax     pmax
      comp=Z,5.0nm,1.0s
YKA   Yellowknife Ar      39.26 313    P        P       07 17 58.4 +1.4
      comp=Z,2.2nm,1.1s,baz=44,slow=8.0,SNR=8.4
YKA                                    PcP      PcP     07 20 08.7 +3.1
      comp=Z,1.1nm,1.1s,baz=50,slow=3.9,SNR=4.2
A21K  Barrow              41.49 341    P        P       07 18 15.1 -0.2
A21K                                   IAmb     IAmb    07 18 23.8
      comp=Z,23nm,1.4s
ABKAR Akbulak array       41.99  73    P        P       07 18 19.2 -0.5
TIXI  Tiksi               42.08  15⇓iP        P       07 18 25.7 +5.6
TIXI  Tiksi               42.08  15    P        P       07 18 21.4 +1.3
TIXI                                   IAmb     IAmb    07 18 28.4
      comp=Z,14nm,1.4s
GNI   Garni               42.81  94⇑eP        P       07 18 35.4 +8.7
GNI                                    pmax     pmax
      comp=Z,9.0nm,1.0s
BRVK  Borovoye            43.14  62⇓eP        P       07 18 35.4 +6.4
BRVK                                   pmax     pmax
      comp=Z,14nm,2.9s
F36A  Milaca              44.11 283    P        P       07 18 37.1 +0.2
S58A  Poland Farm, P      44.23 263    P        P       07 18 37.6 -0.3
S58A                                   IAmb     IAmb    07 19 03.5
      comp=Z,8.4nm,1.0s
IL31                      45.74 332    P        P       07 18 48.3 -1.2
ILAR  Eielson Array       45.74 332    P        P       07 18 53.4 +3.7
      comp=Z,3.8nm,1.1s,baz=21,slow=5.6,SNR=13
ILAR  Eielson Array       45.74 332    P        P       07 18 49.7 +0.1
ILAR  Eielson Array       45.74 332    P        P       07 18 49.7 +0.1
COLA  College             45.84 333⇓eP        P       07 18 56.4 +6.0
IMAR  Indian Mountai      45.91 337    P        P       07 18 51.2 +0.2
U56A  King                46.30 264    P        P       07 18 53.1 -1.3
ZAA0  Zalesovo Array      47.66  51    P        P       07 19 03.7 -1.0
ZAA0                                   IAmb     IAmb    07 19 17.2
      comp=Z,3.0nm,1.2s
ZALV  Zalesovo Beam       47.66  51    P        P       07 19 08.7 +4.0
      comp=Z,0.5nm,0.5s,baz=324,slow=7.3,SNR=4.2
ZALV  Zalesovo Beam       47.66  51   i P       P       07 19 10.6 +5.9
ZALV  Zalesovo Beam       47.66  51    P        P       07 19 04.8 +0.1
KURK  Kurchatov           48.13  58⇑eP        P       07 19 12.8 +4.4
KURK                                   pmax     pmax
      comp=Z,7.0nm,1.1s
KURK  Kurchatov           48.13  58    P        P       07 19 06.9 -1.5
KURK                                   IAmb     IAmb    07 19 15.3
      comp=Z,5.0nm,1.0s
TIGA  Tifton              51.87 264    P        P       07 19 35.8 -1.3
DGZ   Jazzator, Alta      52.10  53⇓eP        P       07 19 45.0 +6.2
DGZ                                    pmax     pmax
      comp=Z,6.0nm,1.5s
MK31  Makanchi Array      52.74  58⇑eP        P       07 19 48.4 +5.0
MK31  Makanchi Array      52.74  58    P        P       07 19 42.5 -0.9
MK31                                   IAmb     IAmb    07 19 50.5
      comp=Z,5.8nm,1.5s
MKAR  Makanchi Array      52.74  58    P        P       07 19 47.1 +3.7
      comp=Z,1.0nm,1.0s,baz=317,slow=5.9,SNR=7.2
MKAR  Makanchi Array      52.74  58ceP        P       07 19 49.2 +5.8
MKAR                                   pmax     pmax
      comp=Z,1.0nm,1.0s
MKAR  Makanchi Array      52.74  58    P        P       07 19 42.9 -0.5
TORD  Torodi Ar. Bea      53.08 156    P        P       07 19 46.1  0.0
      comp=Z,0.8nm,0.7s,baz=340,slow=8.2,SNR=1.9
BW06  Boulder Array       53.21 293    P        P       07 19 45.9 -1.3
BW06                                   IAmb     IAmb    07 19 53.1
      comp=Z,4.3nm,1.2s
PD31  Pinedale Array      53.21 293    P        P       07 19 46.0 -1.2
PDAR  Pinedale Array      53.21 293    P        P       07 19 48.3 +1.1
      comp=Z,1.6nm,0.9s,baz=54,slow=7.4,SNR=8.7
PDAR  Pinedale Array      53.21 293    P        P       07 19 47.1 -0.1
AAK   Ala-Archa           53.27  67⇑eP        P       07 19 53.3 +5.8
AAK                                    pmax     pmax
      comp=Z,20nm,1.6s
KSH   Kashi               56.51  68    P        P       07 20 10.8 -0.1
KSH                                    sP       sP      07 20 16.8 +0.7
KSH                                    S        S       07 27 59.6 -2.4
KSH                                    sS       sS      07 28 07.8 -0.4
KSH                                    pmax     pmax
```

	comp=Z,13nm,1.4s						
KSH				pmax	pmax		
	comp=Z,460nm,5.7s						
KSH				LR	LR		
	comp=N,670nm,5.8s						
KSH				LR	LR		
	comp=E,540nm,6.2s						
KSH				LR	LR		
	comp=Z,420nm,6.8s						
WMQ	Urumqi	57.25	56	eP	P	07 20 18.0	+1.9
ANMO	Albuquerque	58.62	286	⇑eP	P	07 20 31.9	+6.0
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ULN	Ulaanbaatar	59.83	40	⇑eP	P	07 20 39.5	+5.4
ULN				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TXAR	Lajitas Array	62.31	280	P	P	07 20 52.4	+1.3
	comp=Z,0.7nm,1.0s,baz=76,slow=4.7,SNR=3.4						
TXAR				LR	LR	07 45 54.0	
	comp=Z,45nm,18.9s,baz=0.0,slow=34						
PCRV	Puerto La Cruz	63.45	234	LR	LR	07 44 25.8	
	comp=Z,126nm,20.0s,slow=32						
PFO	Pinyon Flats O	63.84	293	LR	LR	07 48 51.0	
	comp=Z,66nm,18.7s,baz=44,slow=36						
GTA	Gaotai	65.32	49	eP	P	07 21 10.8	-0.1
GTA				pP	sP	07 21 15.0	-1.1
GTA				sP	pP	07 21 17.9	+3.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	67.55	40	eP	P	07 21 24.6	-0.4
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.0s						
LZH	Lanzhou	69.66	48	eP	P	07 21 34.3	-4.0
LZH				pP	pP	07 21 36.8	-5.3
LZH				sP	sP	07 21 38.3	-5.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,8.1s						
NJ2	Nanjing	77.77	37	eP	P	07 22 24.3	-1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	84.15	59	P	P	07 23 03.3	+3.3
	comp=Z,1.4nm,0.3s,baz=315,slow=7.2,SNR=5.2						

REY ***15*** *07:11:58.2, 64°.61N×17°.39W, h2^{km}*
IDC ***15*** *07:11:59.7±0.8, 64°.45N×17°.64W, h0^{km}, mb3.7/13, mb1 4.0/15, mb1mx3.8/43, mbtmp3.8/15, ML3.6/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/51, Error ellipse: s-maj=26.1km s-min=10.8km az=15.0*
NEIC ***15*** *07:12:00.8±1.3, 64°.6N±0°.1×17°.4W±0°.2, h7^{km}±4^{km}, mb4.4/12, Error ellipse: s-maj=16.9km s-min=10.3km az=173.0*
ISC 15 07:12:00.2±0.4**, 64°.60N**±0°.02×**17°.38W**±0°.02**, h10^{km}, n69,** σ**2^{s}00**/86**, mb3.9**/18**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.19	1	P	Pg	07 12 02.4	-1.9
	baz=2.7						
IDYN				S	Sg	07 12 05.3	-1.8
	baz=2.7						
IHAM	Hamarinn	0.23	237	P	Pg	07 12 03.2	-1.8
	baz=236						
IURH	Urdarhals	0.24	24	P	Pg	07 12 03.2	-2.0
	baz=26						
IURH				S	Sg	07 12 07.4	-1.1
	baz=26						
IKVE	Kverkfjoll	0.31	76	P	Pg	07 12 04.8	-1.6
	baz=77						
IKVE				S	Sg	07 12 09.7	-1.0
	baz=77						
IVOT	Vottur	0.34	166	P	Pg	07 12 05.4	-1.7
	baz=165						
ISKR	Skrokkalda	0.44	265	P	Pg	07 12 06.7	-2.2
	baz=264						
THOR	Thorvaldshraun	0.45	42	P	Pg	07 12 06.8	-2.1
	baz=43						
THOR				S	Sg	07 12 13.4	-1.5
	baz=43						
IKRE	Kreppuhraun	0.46	67	P	Pg	07 12 07.0	-2.3
	baz=67						
IKRE				S	Sb	07 12 14.4	-3.0
	baz=67						
IJOK	Jokulheimar	0.47	232	P	Pg	07 12 07.0	-2.4
	baz=232						
IJOK				S	Sg	07 12 14.1	-1.5
	baz=232						
IASK	Askja	0.55	34	P	Pg	07 12 08.6	-2.3
	baz=35						
IMKO	Mokollar	0.58	49	P	Pg	07 12 09.1	-2.5
	baz=50						
IMKO				S	Sb	07 12 18.7	-2.2
	baz=50						
IKSK	Karasker	0.59	138	P	Pg	07 12 08.9	-2.8
	baz=138						
IKSK				S	Sg	07 12 18.3	-1.2
	baz=138						
IIEY	Innrieyrar	0.61	213	P	Pg	07 12 09.4	-2.5
	baz=212						
IIEY				S	Sg	07 12 18.1	-1.8
	baz=212						
IKAL	Kalfafell	0.67	192	S	Sg	07 12 20.8	-1.2
	baz=191						
IKAL				P	Pg	07 12 10.6	-2.6
	baz=191						
IVSH	V-Sauoahnukur	0.74	73	P	Pg	07 12 11.8	-2.7
	baz=74						
IVSH				S	Sb	07 12 22.9	-2.4
	baz=74						
ISVA	Svartarkot	0.74	4	P	Pg	07 12 11.6	-2.9
	baz=4.3						
ISVA				S	Sg	07 12 22.0	-2.1
	baz=4.3						
IFAG	Fagurholsmyri	0.80	156	P	Pg	07 12 12.9	-2.7
	baz=156						
IADA	Aoalbol	0.88	61	P	Pg	07 12 13.8	-3.2
	baz=61						
IMEL	Melhnausar	1.02	17	P	Pg	07 12 16.1	-3.6
	baz=17						
IMEL				S	Sg	07 12 31.1	-1.8
	baz=17						
ISNB	Snabyli	1.03	213	P	Pg	07 12 16.6	-3.4
	baz=212						
IREN	Reynihlio	1.07	11	P	Pg	07 12 16.9	-3.8
	baz=11						
IREN				S	Sg	07 12 32.8	-1.7
	baz=11						
IKVO	Krokottuvotn	1.13	10	P	Pb	07 12 17.9	-4.0
	baz=11						
IRJU	Rjupnafell	1.14	210	P	Pb	07 12 18.6	-3.4
	baz=210						
IRJU				S	Sb	07 12 35.0	-1.9
	baz=210						
IFED	Fedgar	1.16	241	P	Pn	07 12 18.9	-3.7
	baz=241						
IGRS	Grimsstaoir	1.17	26	S	Sb	07 12 35.8	-1.8
	baz=27						
IGRS				P	Pb	07 12 18.7	-3.7
	baz=27						
IMJO	Mjoaskard	1.21	237	P	Pn	07 12 19.7	-3.5
	baz=237						
BORG	Borgarnes	1.71	277	Pg	Pn	07 12 28.5	-1.5
	30nm,0.3s,baz=104,slow=14,SNR=3.3						
BORG				Lg	Lg	07 12 49.9	
	6.9nm,0.3s,baz=64,slow=15,SNR=1.4						
BORG	Borgarnes	1.71	277		Pn	07 12 28.7	-1.3
BORG				Sn	Sn	07 12 52.2	+0.4
SCO	Scoresbysund	6.16	346	Pn	Pn	07 13 31.3	+0.3
EKA	Eskdalemuir Ar	11.68	136	Pn	Pn	07 14 46.4	-0.3
	baz=326,slow=14,SNR=3.8						
FINES	FINESS Array B	19.66	79	P	Pn	07 16 31.7	+1.5
	0.2nm,0.3s,baz=264,slow=12,SNR=2.0						
TULEG	Thule	19.93	327	P	P	07 16 30.7	-1.0
CLL	Collm	20.63	116	eP	Pn	07 16 41.0	-0.7
BRG	Berggiesshubel	21.34	115	eP	P	07 16 48.3	+1.2
BRG				Amp		07 16 49.8	
	comp=Z,20nm,1.4s						
BRG				ex	x	07 16 57.4	
BRG				Amp		07 16 60.0	
	comp=Z,11nm,1.4s						
BRG	Berggiesshubel	21.34	115	eP	P	07 16 48.3	+1.2
BRG				Amp		07 16 49.8	
	comp=Z,20nm,1.4s						
BRG				ex	x	07 16 57.4	
BRG				Amp		07 16 60.0	
	comp=Z,11nm,1.4s						
FRB	Frobisher Bay	21.82	291	P	P	07 16 53.5	+1.4
	comp=Z,2.9nm,1.0s,baz=72,slow=12,SNR=4.3						
GERES	GERESS Array B	22.88	119	P	P	07 17 05.3	+1.6
	comp=Z,1.0nm,0.9s,baz=319,slow=10,SNR=1.9						
GERES				LR	LR	07 25 46.8	
	comp=Z,132nm,19.4s,baz=302,slow=36						
GERES	GERESS Array B	22.88	119	P	P	07 17 02.6	-1.1
EUNU	Eureka	23.75	336	P	P	07 17 12.4	+0.3
EUNU				IAmb	IAmb	07 17 16.6	
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	38.41	105	P	P	07 19 23.4	+1.7
	comp=Z,1.3nm,1.0s,baz=322,slow=7.8,SNR=4.5						
BRTR	Keskin Array B	38.41	105	P	P	07 19 22.9	+1.2
YKA	Yellowknife Ar	39.29	313	P	P	07 19 29.6	+1.0
	comp=Z,1.6nm,1.0s,baz=46,slow=8.5,SNR=11						
INK	Inuvik	39.92	329	P	P	07 19 35.1	+1.3
	comp=Z,2.4nm,1.0s,baz=27,slow=7.9,SNR=4.0						
ABKAR	Akbulak array	41.96	73	P	P	07 19 51.6	+0.9
TIXI	Tiksi	42.08	15	P	P	07 19 52.5	+1.1
TIXI				IAmb	IAmb	07 19 56.3	
	comp=Z,12nm,1.4s						
BMAR	Burnt Mountain	42.98	333	P	P	07 19 59.9	+1.0
DAWY	Dawson	44.78	328	P	P	07 20 14.9	+1.4
IL31		45.77	333	P	P	07 20 22.7	+1.6
ILAR	Eielson Array	45.77	333	P	P	07 20 23.2	+2.0
	comp=Z,2.1nm,1.0s,baz=24,slow=5.3,SNR=7.7						
ILAR				PcP	PcP	07 21 59.8	+1.2
	comp=Z,1.4nm,1.0s,baz=352,slow=2.9,SNR=5.0						
ILAR	Eielson Array	45.77	333	P	P	07 20 22.2	+1.1
IMAR	Indian Mountai	45.94	337	P	P	07 20 24.0	+1.5
BCAR	Beaver Creek A	46.19	329	P	P	07 20 26.3	+1.7
ZALV	Zalesovo Beam	47.63	51	P	P	07 20 37.8	+2.0
	comp=Z,0.3nm,0.3s,baz=339,slow=7.7,SNR=1.9						
ZALV	Zalesovo Beam	47.63	51	P	P	07 20 36.4	+0.5
KURK	Kurchatov	48.10	58	P	P	07 20 41.0	+1.4
KURK				IAmb	IAmb	07 20 42.4	
	comp=Z,3.6nm,1.1s						
MKAR	Makanchi Array	52.71	58	P	P	07 21 16.1	+1.6
	comp=Z,0.5nm,0.9s,baz=311,slow=5.6,SNR=3.6						
PHWY	Pilot Hill	52.84	289	P	P	07 21 16.5	+0.6
PHWY				IAmb	IAmb	07 21 19.1	
	comp=Z,5.5nm,1.1s						
TORD	Torodi Ar. Bea	53.06	157	P	P	07 21 17.3	-0.1
	comp=Z,1.7nm,1.1s,baz=343,slow=9.0,SNR=3.8						
PD31	Pinedale Array	53.25	293	P	P	07 21 19.6	+0.8
PD31				IAmb	IAmb	07 21 21.6	
	comp=Z,5.3nm,1.2s						
PDAR	Pinedale Array	53.25	293	P	P	07 21 19.4	+0.6
	comp=Z,2.9nm,0.9s,baz=53,slow=5.8,SNR=13						
PDAR	Pinedale Array	53.25	293	P	P	07 21 19.8	+0.9
RDMU	Red Mountain	55.11	292	P	P	07 21 33.8	+1.4
SRU	San Rafael Swe	56.74	292	P	P	07 21 45.7	+1.7
SONM	Songino Array	59.65	40	P	P	07 22 06.1	+1.9
	comp=Z,0.5nm,0.8s,baz=349,slow=6.0,SNR=3.5						
NVAR	Mina Array Bea	60.38	297	P	P	07 22 11.5	+2.0
	comp=Z,0.5nm,0.8s,baz=46,slow=5.2,SNR=3.8						
SHPR	Sheep Range	60.83	294	P	P	07 22 13.7	+1.2
X16A	Lo Mia Camp, P	61.16	290	P	P	07 22 16.6	+1.9
X16A				IAmb	IAmb	07 22 19.0	
	comp=Z,3.2nm,1.1s						
TXAR	Lajitas Array	62.35	280	P	P	07 22 23.3	+0.6
	comp=Z,1.1nm,0.9s,baz=52,slow=4.8,SNR=7.3						
TXAR	Lajitas Array	62.35	280	P	P	07 22 23.7	+1.0

IDC ***15*** *07:15:12.6±1.0, 16°.70S×14°.36W, h0^{km}, mb4.1/9, mb1 4.1/9, mb1mx3.9/35, mbtmp4.1/9, MS3.9/15, Ms1 3.9/15, ms1mx3.7/31, Error ellipse: s-maj=27.9km s-min=22.0km az=145.0*
NEIC ***15*** *07:15:13.9±0.8, 16°.71S±0°.08×14°.4W±0°.1, h10^{km}±1^{km}, mb4.8/23, Error ellipse: s-maj=23.5km s-min=4.6km az=125.0*
GCMT ***15*** *07:15:15.9±0.3, 16°.18S±0°.03×14°.26W±0°.02, h19^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s14,c14; s72,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.77±.15; $M_{\theta\theta}$-1.15±.12; $M_{\phi\phi}$1.92±.13; $M_{r\theta}$2.61±.46; $M_{\theta\phi}$0.21±.09; $M_{\phi r}$-0.57±.19; Best double couple: $M_0$2.88200×10^{16} NP1:ϕ_s210.00000°, δ39.00000°, λ-17.00000°. NP2: ϕ_s314.00000°, δ80.00000°, λ-127.00000°. Principal axes: T 2.1350, Plg25.0000°, Azm72.0000°; N 1.4960, Plg37.0000°, Azm321.0000°; P -3.6300, Plg43.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 07:15:14.2±0.6**, 16°.72S**±0°.10×**14°.4W**±0°.1**, h10^{km}, n51,** σ**0^{s}92**/37**, mb4.6**/18**, MS3.9**/15**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.71	358	T	T	07 25 05.9	
	baz=176,slow=74,SNR=64						
H10S3	ASCENSION HYDR	7.72	358	T	T	07 25 06.3	
	baz=44,slow=74,SNR=98						
ASCN	Ascension	8.73	0	Pn	Pn	07 17 20.0	-0.7
H10N1	ASCENSION HYDR	8.82	359	T	T	07 26 25.3	
	baz=180,slow=79,SNR=7.3						
H10N3	ASCENSION HYDR	8.82	359	T	T	07 26 28.5	
	baz=180,slow=79,SNR=21						
H10N2	ASCENSION HYDR	8.84	359	T	T	07 26 29.2	
	baz=180,slow=79,SNR=9.5						
RCBR	Riachuelo	23.67	295	P	P	07 20 26.4	+0.1
	20nm,0.9s,baz=96,slow=11,SNR=5.0						
RCBR				LR	LR	07 28 10.7	
	comp=Z,195nm,18.5s,baz=139,slow=33						
RCBR	Riachuelo	23.67	295	P	P	07 20 26.7	+0.4
RCBR				IAmb	IAmb	07 20 27.7	
	comp=Z,22nm,0.9s						
LIC	Lamto	24.61	23	ePKP2	P	07 20 38.1	+3.2
	comp=Z,6.7nm,0.5s						
KIC	Kosan Boka	24.84	23	ePKP2	P	07 20 38.0	+1.0
	comp=Z,14nm,0.9s						
TIC	Toumodi	25.00	23	ePKP2	P	07 20 39.5	+1.1
DBIC	Dimbokro	25.08	23	P	P	07 20 38.7	-0.4
	comp=Z,4.8nm,0.8s,baz=188,slow=12,SNR=5.1						
DBIC				LR	LR	07 28 07.4	
	comp=Z,154nm,19.7s,baz=182,slow=31						
DBIC	Dimbokro	25.08	23	P	P	07 20 39.0	-0.2
DBIC				IAmb	IAmb	07 20 45.0	
	comp=Z,18nm,1.2s						
TSUM	Tsumeb	30.50	100	P	P	07 21 27.3	-0.6
	comp=Z,0.7nm,0.3s,baz=261,slow=8.7,SNR=3.9						
TSUM				LR	LR	07 31 08.3	
	comp=Z,257nm,21.6s,baz=299,slow=31						
BDFB	Brasilia	32.28	267	LR	LR	07 32 06.2	
	comp=Z,406nm,21.9s,baz=112,slow=31						
KOWA	Kowa	32.66	19	P	P	07 21 45.4	-1.3
TOA0	Torodi Ar. Sit	33.67	29	P	P	07 21 55.0	-0.5
TOA0				IAmb	IAmb	07 22 00.0	
	comp=Z,7.4nm,0.9s						
TORD	Torodi Ar. Bea	33.67	29	P	P	07 21 54.9	-0.6
	comp=Z,4.0nm,0.6s,baz=212,slow=8.6,SNR=15						
TORD				LR	LR	07 33 36.3	
	comp=Z,269nm,18.0s,baz=215,slow=33						
TORD	Torodi Ar. Bea	33.67	29	P	P	07 21 54.4	-1.1
BOSA	Boshof	38.29	115	LR	LR	07 35 36.4	
	comp=Z,205nm,19.3s,baz=258,slow=32						
CPUP	Villa Florida	40.91	249	LR	LR	07 38 52.9	
	comp=Z,190nm,18.2s,baz=88,slow=35						
SIV	San Ignacio	44.71	264	P	P	07 23 28.1	+0.1
	comp=Z,1.2nm,0.8s,baz=105,slow=6.0,SNR=5.6						
SAML	Samuel	48.09	273	P	P	07 23 54.5	0.0
SAML				IAmb	IAmb	07 23 56.4	
	comp=Z,8.4nm,1.2s						
ZON	Zonda	51.21	243	P	P	07 24 18.1	-0.1
AC02	Maricunga	51.48	249	P	P	07 24 19.6	-1.3
AC02				IAmb	IAmb	07 24 22.0	
	comp=Z,8.9nm,1.1s						
CO01	Juntas del Tor	52.36	245	P	P	07 24 26.6	-0.5
CO01				IAmb	IAmb	07 24 28.8	
	comp=Z,15nm,0.8s						
MNMC	Minye Minye	52.40	259	P	P	07 24 27.4	-0.1
GO03	Copiap	52.46	248	P	P	07 24 26.4	-1.2
GO03				IAmb	IAmb	07 24 30.4	
	comp=Z,11nm,1.0s						
AC05	El Transito	52.50	246	P	P	07 24 28.6	+0.7
AC01	Pan de Azucar	52.81	250	P	P	07 24 29.2	-1.0
LCO	Las Campanas	52.87	246		P	07 24 31.0	+0.1
GO04	Tololo Observa	52.98	245	P	P	07 24 31.4	-0.2
BO02	Sierra Bellavi	53.20	239	P	P	07 24 32.8	-0.3
BO02				IAmb	IAmb	07 24 33.1	
	comp=Z,14nm,0.9s						
PLCA	Paso Flores	53.74	232	LR	LR	07 45 44.7	
	comp=Z,211nm,18.4s,baz=140,slow=34						
SNAA	Sanae	55.37	176	P	P	07 24 48.3	+0.1
	comp=Z,2.1nm,1.1s,baz=342,slow=6.2,SNR=3.7						
SNAA	Sanae	55.37	176	P	P	07 24 47.7	-0.5
KEST	Kesra	56.81	23	P	P	07 24 59.2	+0.3
	comp=Z,3.6nm,0.9s,baz=208,slow=8.0,SNR=4.1						
KEST				LR	LR	07 47 32.3	
	comp=Z,127nm,18.2s,baz=232,slow=34						
KEST	Kesra	56.81	23	P	P	07 25 00.4	+1.5
KEST				IAmb	IAmb	07 25 14.4	
	comp=Z,19nm,1.4s						
SDV	Santo Domingo	61.16	290	P	P	07 25 30.2	+0.5
BELA	Belgrano 2	62.00	185	P	P	07 25 34.1	-0.1
EIL	Elat	66.26	46	LR	LR	07 52 02.8	
	comp=Z,48nm,20.5s,baz=235,slow=33						
BR131	Keskin Array S	71.81	37	P	P	07 26 36.8	-0.5
BRTR	Keskin Array B	71.81	37	P	P	07 26 37.8	+0.4
	comp=Z,1.2nm,0.9s,baz=225,slow=10.0,SNR=4.9						
BRTR				LR	LR	07 58 03.8	
	comp=Z,36nm,18.6s,baz=296,slow=36						
BRTR	Keskin Array B	71.81	37	P	P	07 26 36.8	-0.5
QSPA	South Pole Qui	73.46	180	P	P	07 26 47.6	+0.9
QSPA				IAmb	IAmb	07 26 48.1	
	comp=Z,10nm,1.2s						
AKASG	Malin Array Be	77.26	27	P	P	07 27 07.8	-0.7
	comp=Z,0.6nm,0.5s,baz=224,slow=6.0,SNR=2.0						
AKASG	Malin Array Be	77.26	27	P	P	07 27 07.3	-1.2
NOA	NORSAR Array B	80.16	12	LR	LR	08 04 47.8	
	comp=Z,29nm,18.3s,baz=250,slow=37						
VNDA	Vanda	85.93	179	LR	LR	08 01 13.8	
	comp=Z,50nm,19.6s,baz=190,slow=32						
GEYT	Alibeck	86.98	49	LR	LR	08 05 09.4	
	comp=Z,38nm,19.6s,baz=190,slow=34						
ULM	Lac du Bonnet	97.36	320	LR	LR	08 04 33.4	
	comp=Z,47nm,20.6s,baz=96,slow=30						

NOU 15 07:28:20.0, 4°.98S×146°.84E, h43^{km}, mb4.5, Eastern New Guinea Reg., P.N.G., Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.41	176	P	Pn	07 29 24.0	-0.4
DVP	Devils Point	24.42	123	P	P	07 33 34.6	-0.2
	250µm,1.0s						

NNC ***15*** *07:31:07.7±2.9, 54°.18N×86°.46E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=22.3km s-min=19.2km az=168.0, Suspected Mining explosion.*
IDC ***15*** *07:31:09.2±2.6, 54°.18N×86°.30E, h0^{km}, mb1 3.0/2, mb1mx2.8/60, mbtmp3.0/2, ML2.4/2, Error ellipse: s-maj=20.6km s-min=13.6km az=52.0*
ISC 15 07:31:08.3±4.7**, 54°.3N**±0°.2×**86°.3E**±0°.2**, h0^{km}, n7,** σ**1^{s}00**/9**, 6C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.93	250	i		07 38 00.0	
	baz=73,slow=324,SNR=3.5						
ZALV	Zalesovo Beam	0.93	250	Pg	Pg	07 31 25.6	-0.6
	2.1nm,0.3s,baz=78,slow=18,SNR=26						
ZALV				Lg	Lg	07 31 39.3	
	0.7nm,0.3s,baz=79,slow=37,SNR=6.1						
KURK	Kurchatov	5.89	236	⇓Pn	Pn	07 32 36.4	-0.3
	2.0nm,1.1s						
KURK				⇑Sn	Sn	07 33 45.6	+0.7
	0.7nm,0.7s						
KURK				⇓Lg	Lg	07 34 18.0	
	2.9nm,0.9s						
KURBB	Kurchatov Arra	6.00	236	Pn	Pn	07 32 39.2	+1.1
	0.0nm,0.3s,baz=54,slow=14,SNR=17						
KURBB				Lg	Lg	07 34 17.4	
	0.0nm,0.3s,baz=47,slow=33,SNR=4.1						
KURBB	Kurchatov Arra	6.00	236	⇑Pn	Pn	07 32 37.3	-0.8
	4.4nm,0.9s						
KURBB				⇑Sn	Sn	07 33 48.5	+1.1
	2.3nm,0.8s						
KURBB				⇑Lg	Lg	07 34 19.8	
	11nm,1.4s						
MK31	Makanchi Array	7.91	200	⇑Pn	Pn	07 33 05.1	+0.6
	0.3nm,0.5s,baz=25,slow=15,SNR=8.2						
MK31				⇓Sn	Sn	07 34 33.5	-1.2
	0.4nm,0.7s						
MK31				⇑Lg	Lg	07 35 16.5	
	7.8nm,1.4s,baz=30,slow=31,SNR=4.0						
MKAR	Makanchi Array	7.91	200	Pn	Pn	07 33 05.2	+0.6
	0.1nm,0.3s,baz=24,slow=14,SNR=6.6						
MKAR				Lg	Lg	07 35 17.5	
	0.0nm,0.3s,baz=23,slow=30,SNR=8.0						

NEIC ***15*** *07:36:31.1±0.8, 36°.319N±0°.009×97°.54W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=0.5km az=57.0*
TUL ***15*** *07:36:31.2±1.0, 36°.33N±0°.01×97°.52W±0°.02, h7^{km}±5^{km}, ML3.3, mb_Lg3.0/74(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=57.0*
ANF ***15*** *07:36:31.3±1.0, 36°.37N×97°.52W, h12^{km}±7^{km}, ML3.6/7, Error ellipse: s-maj=4.6km s-min=2.8km az=156.0*
ISC 15 07:36:31.0±1.1**, 36°.32N**±0°.02×**97°.55W**±0°.02**, h6^{km}**±11^{km}**, n71,** σ**0^{s}80**/53**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.40	298	Pg	Pg	07 36 39.1	+0.4
CROK				Sg	Sg	07 36 45.0	+1.0
BCOK	Bluff Creek, N	0.66	185		Pg	07 36 44.0	+0.2
OK031	S. Brethren Rd	0.68	122		Pg	07 36 44.0	0.0
OK031				Sg	Sg	07 36 53.0	+0.1
QUOK	Quay	0.69	102	Pg	Pg	07 36 44.1	-0.2
QUOK				Sg	Sg	07 36 53.1	-0.2
KAN13	South Haven SW	0.69	4		Pg	07 36 44.3	-0.1
KAN13				Sg	Sg	07 36 53.6	+0.2
KAN14	Manchester OK	0.72	332		Pg	07 36 44.9	+0.1
KAN14				Sg	Sg	07 36 54.6	+0.4
OK030	Cody Creek RV	0.73	122		Pg	07 36 45.0	0.0
OK025	Westminster Rd	0.76	167		Pg	07 36 45.6	+0.1
OK025				Sg	Sg	07 36 56.1	+0.8
OKCFA	Oklahoma City	0.91	175		Pg	07 36 48.3	-0.1
OKCFA				Sg	Sg	07 37 00.6	+0.5
KAN10	Anthony SW Sta	0.92	331		Pg	07 36 48.4	-0.2
OKCSW	OKLAHOMA CITY	0.92	175		Pg	07 36 48.6	0.0
KAN08	Anthony NE Sta	0.97	339		Pg	07 36 49.4	-0.2
KAN08				Sg	Sg	07 37 02.4	+0.2
T35A	Sooner Cattle	1.02	54		Pg	07 36 50.0	-0.6
T35B	Sooner Cattle	1.02	54	P		07 36 50.1	
	baz=234						
T35B				S		07 37 03.3	
	baz=234						
KAN12	Harper NE Stat	1.04	340		Pg	07 36 50.9	-0.1
KAN12				Sg	Sg	07 37 04.7	+0.1
FNO	Franklin	1.07	174		Pg	07 36 51.2	-0.3
FNO				Sg	Sg	07 37 05.6	+0.3
U32A	Winter Ranch,	1.18	273		Pg	07 36 53.1	-0.5
U32A	Winter Ranch,	1.18	273	P		07 36 53.2	
	baz=92						
W35A	Tecumseh	1.29	155		Pn	07 36 54.6	-0.9
W35A				Sg	Sb	07 37 12.1	-0.4
TUL1	Leonard	1.48	106	P	Pn	07 36 57.6	-0.7
	baz=287						
TUL1				S	Sb	07 37 17.5	-0.5
	baz=287						
TUL1	Leonard	1.48	106		Pn	07 36 57.5	-0.7
TUL1	Leonard	1.48	106	P		07 36 57.6	
	baz=287						
TUL1				S		07 37 17.3	
	baz=287						
WMOK	Wichita Mounta	1.87	213	P	Pn	07 37 04.4	+0.8
	baz=32						
WMOK				S	Sb	07 37 30.3	+0.9
	baz=32						
WMOK	Wichita Mounta	1.87	213	Pn	Pn	07 37 04.5	+0.8
WMOK	Wichita Mounta	1.87	213	P		07 37 04.3	
	baz=32						
R32A	Long Quarter,	2.30	336		Pn	07 37 09.9	+0.4
R32A	Long Quarter,	2.30	336	P		07 37 09.7	
	baz=155						
X37A	Clayton	2.48	134	Pn	Pn	07 37 12.7	+0.7
X37A				IAmb_Lg		07 37 53.9	
	comp=Z,46nm,0.8s						

X37A	**Clayton**	**2.48**	**134**	P		07 37 12.6	
	baz=315						
KSU1	**Kansas State U**	**2.87**	**15**	Pb	**Pb**	**07 37 21.9**	**-0.8**
	baz=195						
KSU1	**Kansas State U**	**2.87**	**15**		**Pn**	**07 37 18.4**	**+1.0**
KSU1				IAmb_Lg		07 38 09.6	
	comp=Z,37nm,0.9s						
KSU1	**Kansas State U**	**2.87**	**15**	P		07 37 18.2	
	baz=195						
HHAR	**Hobbs**	**2.91**	**90**	Pn	**Pn**	**07 37 19.7**	**+1.7**
HHAR				IAmb_Lg		07 38 11.1	
	comp=Z,36nm,0.7s						
Z35A	**Perchaven, San**	**2.99**	**175**	P		07 37 19.7	
	baz=356						
Z35A				S		07 37 57.2	
	baz=356						
CBKS	**Cedar Bluff**	**3.04**	**326**		**Pn**	**07 37 19.7**	**-0.1**
CBKS	**Cedar Bluff**	**3.04**	**326**	P		07 37 19.6	
	baz=144						
W39A	**Magazine**	**3.26**	**109**		**Pn**	**07 37 24.7**	**+2.1**
W39A				IAmb_Lg		07 38 20.9	
	comp=Z,55nm,0.7s						
S39A	**Bolivar**	**3.65**	**67**	P		07 37 28.5	
	baz=249						
AMTX	**Amarillo**	**3.66**	**248**	Pb	**Pb**	**07 37 36.0**	**-0.2**
	baz=66						
AMTX				Sb	**Sg**	**07 38 25.6**	**-3.0**
	baz=66						
AMTX	**Amarillo**	**3.66**	**248**	IAmb_Lg		07 38 31.2	
	comp=Z,60nm,0.8s						
MIAR	**Mount Ida**	**3.69**	**117**	P	**Pn**	**07 37 29.5**	**+0.8**
	baz=300						
MIAR	**Mount Ida**	**3.69**	**117**	Pn	**Pn**	**07 37 29.1**	**+0.4**
MIAR	**Mount Ida**	**3.69**	**117**	P		07 37 29.4	
	baz=300						
Z38A	**Mt. Pleasant**	**3.71**	**145**	IAmb_Lg		07 38 36.3	
	comp=Z,50nm,0.9s						
U40A	**Yellville**	**3.79**	**88**	Pn	**Pn**	**07 37 31.1**	**+1.2**
WHTX	**Lake Whitney,**	**4.32**	**179**	P	**Pn**	**07 37 37.8**	**+0.5**
	baz=359						
WHTX	**Lake Whitney,**	**4.32**	**179**	P		07 37 37.7	
	baz=359						
MGMO	**Mountain Grove**	**4.32**	**77**	IAmb_Lg		07 38 47.2	
	comp=Z,28nm,0.8s						
WHAR	**Wooly Hollow**	**4.39**	**102**		**Pn**	**07 37 39.4**	**+1.1**
WHAR				IAmb_Lg		07 38 57.9	
	comp=Z,23nm,0.7s						
W41B	**Gary Mavity, V**	**4.46**	**103**		**Pn**	**07 37 39.7**	**+0.6**
WLAR	**White Oak Lake**	**4.49**	**125**	Pn	**Pn**	**07 37 39.7**	**+0.1**
237A	**Washetta, Mont**	**4.54**	**161**	IAmb_Lg		07 39 05.5	
	comp=Z,22nm,1.0s						
237A	**Washetta, Mont**	**4.54**	**161**	P		07 37 40.3	
	baz=342						
P38A	**Dawn**	**4.58**	**43**	IAmb_Lg		07 39 06.8	
	comp=Z,23nm,0.8s						
N35A	**Tabor**	**4.77**	**18**	IAmb_Lg		07 39 05.6	
	comp=Z,58nm,0.8s						
MSTX	**Muleshoe**	**4.88**	**243**	S	**Sn**	**07 38 42.5**	**+0.4**
	baz=60						
T42A	**Van Buren**	**5.23**	**80**	IAmb_Lg		07 39 29.0	
	comp=Z,23nm,0.8s						
P40A	**Paris**	**5.40**	**52**	IAmb_Lg		07 39 25.0	
	comp=Z,29nm,0.8s						
435B	**Jarrell**	**5.52**	**180**	P	**Pn**	**07 37 54.1**	**+0.2**
	baz=0.5						
435B	**Jarrell**	**5.52**	**180**	IAmb_Lg		07 39 39.5	
	comp=Z,23nm,0.9s						
435B	**Jarrell**	**5.52**	**180**	P		07 37 54.0	
	baz=0.5						
T25A	**Trinidad**	**5.58**	**280**	IAmb_Lg		07 39 33.4	
	comp=Z,18nm,0.8s						
N38A	**Joes South For**	**5.60**	**36**	IAmb_Lg		07 39 40.9	
	comp=Z,32nm,0.9s						
PBMO	**Poplar Bluff**	**5.75**	**83**	IAmb_Lg		07 39 35.3	
	comp=Z,39nm,0.8s						
OGNE	**Ogallala**	**5.80**	**324**	IAmb_Lg		07 39 44.4	
	comp=Z,30nm,0.7s						
LPAR	**Lepanto**	**5.92**	**95**	IAmb_Lg		07 39 54.9	
	comp=Z,30nm,1.0s						
FVM	**French Village**	**5.92**	**72**	IAmb_Lg		07 39 38.2	
	comp=Z,29nm,0.9s						
JCT	**Junction City**	**6.12**	**199**	IAmb_Lg		07 39 54.8	
	comp=Z,33nm,1.1s						
143A	**Socs Landing,**	**6.22**	**124**	IAmb_Lg		07 40 04.8	
	comp=Z,14nm,0.8s						
SLM	**Saint Louis**	**6.25**	**66**	IAmb_Lg		07 39 49.6	
	comp=Z,36nm,0.8s						
SCIA	**State Center**	**6.51**	**30**	IAmb_Lg		07 40 00.4	
	comp=Z,24nm,0.8s						
S44A	**Carbondale**	**6.77**	**76**	IAmb_Lg		07 40 10.3	
	comp=Z,33nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.15**	**60**	IAmb_Lg		07 40 18.3	
	comp=Z,33nm,0.8s						
K38A	**Parkersburg**	**7.32**	**29**	IAmb_Lg		07 40 26.7	
	comp=Z,24nm,0.9s						
ECSD	**EROS Data Cent**	**7.44**	**5**	P	**Pn**	**07 38 19.2**	**-0.9**
	baz=186						
L40A	**Anamosa**	**7.55**	**39**	IAmb_Lg		07 40 48.6	
	comp=Z,12nm,0.8s						
HDIL	**Hopedale**	**7.73**	**54**	IAmb_Lg		07 40 42.4	
	comp=Z,29nm,0.7s						
N23A	**Red Feather La**	**8.01**	**307**	IAmb_Lg		07 40 56.7	
	comp=Z,12nm,0.8s						
USIN	**University of**	**8.06**	**75**	IAmb_Lg		07 40 54.1	
	comp=Z,30nm,1.0s						
O44A	**Mansfield**	**8.10**	**59**	IAmb_Lg		07 40 44.9	
	comp=Z,19nm,0.7s						
JFWS	**Jewell Farm**	**8.66**	**38**	IAmb_Lg		07 41 04.9	
	comp=Z,11nm,0.7s						
SFIN	**Lafayette**	**9.15**	**61**	IAmb_Lg		07 41 27.9	
	comp=Z,16nm,0.8s						
WCI	**Wyandotte Cave**	**9.17**	**75**	IAmb_Lg		07 41 19.3	
	comp=Z,9.3nm,0.7s						
K22A	**Casper**	**9.38**	**315**	IAmb_Lg		07 41 44.5	
	comp=Z,8.6nm,0.8s						
W50A	**Signal Mountai**	**10.01**	**93**	IAmb_Lg		07 42 01.9	
	comp=Z,9.7nm,1.0s						

IDC 15 07:37:52.7±3.1**,53°.49N**×**87°.60E,h0**^{km}**,mb1 2.7**/2**,mb1mx2.6**/52**,mbtmp2.7**/2**,ML2.6**/2**,Error ellipse: s-maj=28.1km s-min=16.0km az=58.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.72**	**287**	*i*		07 49 02.6	
	baz=101,slow=334,SNR=0.7						
ZALV	**Zalesovo Beam**	**1.72**	**287**	Pg	Pn	07 38 23.8	0.0
	1.5nm,0.3s,baz=109,slow=14,SNR=7.9						
ZALV				Lg	Lg	07 38 46.6	
	1.6nm,0.3s,baz=104,slow=24,SNR=6.7						
KURBB	**Kurchatov Arra**	**6.29**	**246**	Pn	Pn	07 39 27.6	+1.0
	0.1nm,0.3s,baz=58,slow=12,SNR=6.6						
KURBB				Sn	Sn	07 40 34.2	-4.9
	0.0nm,0.3s,baz=300,slow=25,SNR=1.4						
KURBB				Lg	Lg	07 41 11.5	
	0.0nm,0.3s,baz=64,slow=34,SNR=4.8						
MKAR	**Makanchi Array**	**7.52**	**209**	Pn	Pn	07 39 44.6	+1.0
	0.1nm,0.3s,baz=32,slow=14,SNR=5.2						
MKAR				Lg	Lg	07 41 49.5	
	baz=29,slow=27,SNR=2.9						

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*NOU **15** 07:44:59.8, 43°.66S×172°.55E, h8^{km}, MLv3.8, South Island, New Zealand*

WEL 15 07:44:59.9,44°S±1°×**17°2E**±°**,h11**^{km}±2^{km}**,M3.7**/43**,ML3.8**/16**,MLv3.7**/43**,Error ellipse: s-maj=0.0km s-min=0.0km az=132.5,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.17**	**105**	P	Pb	07 45 04.9	-0.1
MQZ				S	Sg	07 45 07.5	+1.4
RACZ	**Rakaia**	**0.22**	**253**	P	Pb	07 45 06.2	+0.3
RACZ				S	Sg	07 45 09.8	+2.2
AKCZ	**Akaroa Harbour**	**0.41**	**121**	P	Pb	07 45 09.6	+0.5
AKCZ				S	Sb	07 45 16.0	+0.6
OXZ	**Oxford**	**0.44**	**320**	P	Pb	07 45 09.2	-0.5
OXZ				S	Sg	07 45 15.0	+0.7
OKCZ	**Okains Bay**	**0.46**	**98**	P	Pb	07 45 10.6	+0.6
OKCZ				S	Sb	07 45 17.7	+0.8
WACZ	**Wakanui South**	**0.51**	**237**	P	Pb	07 45 12.0	+1.1
AMCZ	**Amberley**	**0.51**	**19**	P	Pb	07 45 11.3	+0.5
MHCZ	**Mount Hutt**	**0.64**	**281**	P	Pb	07 45 13.7	+0.6
GVZ	**Greta Valley S**	**0.82**	**33**	P	Pb	07 45 16.4	+0.2
LTZ	**Lake Taylor**	**0.89**	**352**	P	Pb	07 45 17.7	+0.4
LTZ				S	Sb	07 45 29.5	+0.3
ARCZ	**Arundel**	**0.95**	**252**	P	Pn	07 45 19.3	+0.1
RPZ	**Rata Peaks**	**1.00**	**267**	P	Pn	07 45 20.0	+0.1
RPZ				S	Sn	07 45 33.8	-0.2
INZ	**Inchbonnie**	**1.18**	**322**	P	Pb	07 45 21.9	-0.4
INZ				S	Sn	07 45 39.0	+0.6
TMZ	**Timaru**	**1.25**	**234**	P	Pg	07 45 23.8	-0.2
WVZ	**Waitaha Valley**	**1.37**	**295**	P	Pb	07 45 25.3	-0.1
KHZ	**Kahutara**	**1.49**	**34**	P	Pn	07 45 26.0	-0.5
KHZ				S	Sn	07 45 45.5	-0.4
GCSZ	**Gaunt Creek Bo**	**1.57**	**282**	P	Pb	07 45 28.7	-0.2
LBZ	**Lake Benmore**	**1.77**	**245**	P	Pn	07 45 31.2	+0.6
LBZ				S	Sg	07 45 58.0	+1.1
ODZ	**Otahua Downs**	**1.88**	**222**	P	Pn	07 45 32.4	+0.4
ODZ				S	Sg	07 46 01.8	+1.4
FOZ	**Fox Glacier**	**1.90**	**273**	P	Pb	07 45 33.7	-0.9
THZ	**Tophouse**	**1.93**	**11**	P	Pn	07 45 32.3	-0.4
DSZ	**Denniston Nort**	**1.97**	**346**	P	Pn	07 45 33.2	0.0
DSZ				S	Sn	07 45 57.0	-0.9
BSWZ	**Blackbirch Sta**	**2.22**	**29**	P	Pn	07 45 36.4	-0.2
TUWZ	**Tuamarina**	**2.50**	**27**	P	Pn	07 45 38.1	-2.3
NNZ	**Nelson**	**2.54**	**16**	P	Pn	07 45 41.2	+0.2
HHSZ	**Highcliff Hill**	**2.58**	**210**	P	Pn	07 45 43.8	+2.2
JCZ	**Jackson Bay**	**2.67**	**260**	P	Pn	07 45 43.6	+0.8
EAZ	**Earnscleugh**	**2.73**	**234**	P	Pn	07 45 44.0	+0.4
TCW	**Tory Channel**	**2.81**	**30**	P	Pn	07 45 44.5	-0.1
QRZ	**Quartz Range**	**2.83**	**2**	P	Pn	07 45 45.0	-0.1
BHW	**Baring Head**	**2.89**	**40**	P	Pn	07 45 44.5	-1.3
WEL	**Wellington**	**2.94**	**37**	P	Pn	07 45 45.7	-0.9
PLWZ	**Palliser**	**2.95**	**46**	P	Pn	07 45 45.3	-1.4
TUZ	**Tuapeka**	**3.04**	**220**	P	Pn	07 45 49.5	+1.6
MSWZ	**Moikau Station**	**3.06**	**44**	P	Pn	07 45 47.2	-1.1
DUWZ	**D'Urville Isla**	**3.07**	**22**	P	Pn	07 45 50.0	+1.7
PAWZ	**Paruwai Farm**	**3.18**	**45**	P	Pn	07 45 48.6	-1.3
CAW	**Cannon Point**	**3.21**	**38**	P	Pn	07 45 48.9	-1.4
TRWZ	**Traveller**	**3.30**	**48**	P	Pn	07 45 50.4	-1.1
KIW	**Kapiti Island**	**3.35**	**34**	P	Pn	07 45 51.4	-0.8
MSZ	**Milford Sound**	**3.39**	**251**	P	Pn	07 45 53.2	+0.5
OGWZ	**Otaki Gorge**	**3.50**	**37**	P	Pn	07 45 52.9	-1.3
MLZ	**Mavora Lakes**	**3.52**	**240**	P	Pn	07 45 55.0	+0.4
HOWZ	**Holdsworth Sta**	**3.59**	**41**	P	Pb	07 46 00.5	-2.8
SYZ	**Scrubby Hill**	**3.70**	**218**	P	Pn	07 45 58.3	+1.3
MRZ	**Mangatainoka R**	**3.80**	**39**	P	Pn	07 45 57.0	-1.5
WHZ	**Wether Hill Ro**	**3.89**	**234**	P	Pn	07 45 58.9	-0.7
PRWZ	**Pori Road**	**4.07**	**42**	P	Pn	07 46 01.1	-1.0
BFZ	**Birch Farm**	**4.11**	**45**	P	Pn	07 46 01.1	-1.6
ANWZ	**Angora Road**	**4.39**	**45**	P	Pn	07 46 05.3	-1.2
APZ	**The Paps**	**4.46**	**223**	P	Pn	07 46 08.3	+0.9
PREZ	**Palmer Road**	**4.51**	**17**	P	Pn	07 46 09.4	+1.3
KHEZ	**Kahui Hut**	**4.52**	**16**	P	Pn	07 46 10.4	+2.0
NEZ	**North Egmont**	**4.56**	**16**	P	Pn	07 46 11.1	+2.2
PKE	**Pukeiti**	**4.62**	**15**	P	Pn	07 46 11.1	+1.5
PNHZ	**Pukenui**	**4.69**	**38**	P	Pn	07 46 07.9	-2.7
PYZ	**Puysegur Point**	**4.79**	**236**	P	Pn	07 46 13.4	+1.5
VRZ	**Vera Road**	**4.86**	**22**	P	Pn	07 46 14.1	+1.1
WNVZ	**Wahianoa**	**4.94**	**30**	P	Pn	07 46 14.9	+0.7
BHHZ	**Black Hill Sta**	**4.98**	**34**	P	Pn	07 46 14.5	-0.1
TUVZ	**Tukino**	**5.01**	**30**	P	Pn	07 46 17.3	+2.1
NGZ	**Ngauruhoe**	**5.08**	**29**	P	Pn	07 46 17.3	+1.3
OTVZ	**Oturere**	**5.11**	**30**	P	Pn	07 46 17.0	+0.4
WTVZ	**West Tongariro**	**5.13**	**29**	P	Pn	07 46 18.1	+1.4
ETVZ	**East Tongariro**	**5.15**	**30**	P	Pn	07 46 17.5	+0.5
KWHZ	**Kaweka Forest**	**5.19**	**37**	P	Pn	07 46 16.6	-0.9
BKZ	**Black Stump Fm**	**5.43**	**36**	P	Pn	07 46 19.2	-1.6
HIZ	**Hauiti**	**5.46**	**20**	P	Pn	07 46 21.8	+0.6
MTHZ	**Maungataniwha**	**5.84**	**36**	P	Pn	07 46 26.2	-0.3
TARZ	**Mount Tarawera**	**6.24**	**31**	P	Pn	07 46 31.8	-0.1
MWZ	**Matawai**	**6.57**	**38**	P	Pn	07 46 33.4	-3.1
RUGZ	**Raukumara Rang**	**6.94**	**37**	P	Pn	07 46 39.7	-2.0

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*ANF **15** 07:47:28.0±0.7, 36°.75N×97°.91W, h2^{km}±4^{km}, ML3.8/7, Error ellipse: s-maj=2.5km s-min=1.9km az=80.0*

*TUL **15** 07:47:28.1±1.5, 36°.72N±0°.01×97°.87W±0°.01, h6^{km}±7^{km}, ML3.0, mb_Lg3.1/82(NEIC), Error ellipse: s-maj=1.9km s-min=1.2km az=126.0*

*NEIC **15** 07:47:28.4±1.1, 36°.702N±0°.010×97°.86W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.3km s-min=1.2km az=68.0*

ISC 15 07:47:28.2±1.1**,36°.70N**±0°.02×**97°.87W**±0°.03**,h3**^{km}±11^{km}**,n69,**σ**0**^{s}**.48**/45**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.22**	**205**	Pg	**Pg**	**07 47 32.8**	**+0.4**
CROK				Sg	**Sg**	**07 47 36.1**	**+0.9**
KAN14	**Manchester OK**	**0.27**	**344**		**Pg**	**07 47 33.4**	**0.0**
KAN14				Sg	**Sg**	**07 47 37.2**	**+0.3**
KAN13	**South Haven SW**	**0.44**	**45**		**Pg**	**07 47 36.8**	**+0.1**
KAN13				Sg	**Sg**	**07 47 43.0**	**+0.5**
KAN10	**Anthony SW Sta**	**0.46**	**337**		**Pg**	**07 47 36.9**	**-0.2**
KAN08	**Anthony NE Sta**	**0.53**	**351**		**Pg**	**07 47 38.2**	**-0.2**
KAN08				Sg	**Sg**	**07 47 45.6**	**+0.2**
U32A	**Winter Ranch,**	**0.97**	**251**		**Pg**	**07 47 46.1**	**-0.7**
U32A	**Winter Ranch,**	**0.97**	**251**	P		07 47 46.3	
	baz=69						
U32A				S		07 47 59.8	
	baz=69						
BCOK	**Bluff Creek, N**	**1.06**	**169**		**Pg**	**07 47 48.2**	**-0.4**
BCOK				IAmb_Lg		07 48 01.8	
	comp=Z,128nm,0.9s						
BCOK				Sg	**Sg**	**07 48 02.6**	**+0.3**
QUOK	**Quay**	**1.07**	**119**	Pg	**Pg**	**07 47 48.6**	**-0.2**
QUOK				Sg	**Sg**	**07 48 02.8**	**+0.1**
T35A	**Sooner Cattle**	**1.11**	**78**		**Pg**	**07 47 49.0**	**-0.6**
T35A				Sg	**Sg**	**07 48 03.8**	**-0.1**
T35B	**Sooner Cattle**	**1.11**	**78**	P		07 47 49.1	
	baz=260						
T35B				S		07 48 04.0	
	baz=260						
OK031	**S. Brethren Rd**	**1.12**	**132**		**Pg**	**07 47 49.3**	**-0.4**
OK031				Sg	**Sg**	**07 48 04.4**	**+0.3**
OK030	**Cody Creek RV**	**1.17**	**131**		**Pg**	**07 47 50.1**	**-0.5**
OK030				Sg	**Sg**	**07 48 05.9**	**+0.2**
OK025	**Westminster Rd**	**1.20**	**159**		**Pg**	**07 47 50.8**	**-0.4**
OKCFA	**Oklahoma City**	**1.33**	**165**		**Pn**	**07 47 52.9**	**-0.8**
OKCSW	**OKLAHOMA CITY**	**1.34**	**165**		**Pn**	**07 47 53.4**	**-0.5**
FNO	**Franklin**	**1.49**	**165**		**Pn**	**07 47 56.1**	**+0.2**
W35A	**Tecumseh**	**1.74**	**152**		**Pn**	**07 47 59.8**	**+0.4**
R32A	**Long Quarter,**	**1.84**	**339**	Pn	**Pn**	**07 48 01.1**	**+0.2**
R32A	**Long Quarter,**	**1.84**	**339**	P		07 48 01.2	
	baz=158						
R32A				S		07 48 25.7	
	baz=158						
TUL1	**Leonard**	**1.85**	**115**	P	**Pb**	**07 48 02.0**	**-0.8**
	baz=296						
TUL1				S	**Sb**	**07 48 26.8**	**+0.4**
	baz=296						
TUL1	**Leonard**	**1.85**	**115**		**Pb**	**07 48 02.1**	**-0.7**
TUL1	**Leonard**	**1.85**	**115**	P		07 48 02.0	
	baz=296						
TUL1				S		07 48 26.3	
	baz=296						
WMOK	**Wichita Mounta**	**2.09**	**201**	P	**Pn**	**07 48 04.4**	**+0.1**
	baz=20						
WMOK				S	**Sb**	**07 48 32.9**	**-0.4**
	baz=20						
WMOK	**Wichita Mounta**	**2.09**	**201**	Pn	**Pn**	**07 48 04.6**	**+0.3**
WMOK	**Wichita Mounta**	**2.09**	**201**	P		07 48 04.3	
	baz=20						
CBKS	**Cedar Bluff**	**2.58**	**326**	Sb	**Sb**	**07 48 47.5**	**+0.1**
	baz=144						
KSU1	**Kansas State U**	**2.59**	**22**	Pb	**Pb**	**07 48 14.6**	**-0.8**
	baz=203						
KSU1				S	**Sn**	**07 48 43.9**	**+0.7**
	baz=203						
KSU1	**Kansas State U**	**2.59**	**22**		**Pn**	**07 48 11.1**	**-0.1**
KSU1				IAmb_Lg		07 48 54.2	
	comp=Z,50nm,0.8s						
KSU1	**Kansas State U**	**2.59**	**22**	P		07 48 11.4	
	baz=203						
U38A	**Gravette**	**2.82**	**94**		**Pn**	**07 48 15.0**	**+0.8**
X37A	**Clayton**	**2.93**	**135**		**Pn**	**07 48 16.0**	**+0.3**
X37A	**Clayton**	**2.93**	**135**	P		07 48 16.0	
	baz=317						
HHAR	**Hobbs**	**3.19**	**96**	Pn	**Pn**	**07 48 20.0**	**+0.6**
AMTX	**Amarillo**	**3.59**	**241**	Pb	**Pb**	**07 48 32.6**	**+0.1**
	baz=58						
AMTX	**Amarillo**	**3.59**	**241**	IAmb_Lg		07 49 27.5	
	comp=Z,45nm,0.8s						
S39A	**Bolivar**	**3.76**	**73**		**Pn**	**07 48 27.5**	**+0.3**
S39A	**Bolivar**	**3.76**	**73**	P		07 48 27.3	
	baz=256						
U40A	**Yellville**	**4.05**	**93**	Pb	**Pb**	**07 48 40.7**	**+0.4**
	baz=277						
U40A	**Yellville**	**4.05**	**93**		**Pn**	**07 48 31.7**	**+0.5**
U40A				IAmb_Lg		07 49 42.2	
	comp=Z,33nm,0.7s						
MIAR	**Mount Ida**	**4.10**	**120**	IAmb_Lg		07 49 46.1	
	comp=Z,25nm,0.7s						
MIAR	**Mount Ida**	**4.10**	**120**	P		07 48 31.9	
	baz=303						
Z38A	**Mt. Pleasant**	**4.17**	**145**	IAmb_Lg		07 49 47.7	
	comp=Z,52nm,0.9s						
ABTX	**Abilene, Hawle**	**4.32**	**200**	IAmb_Lg		07 49 45.8	
	comp=Z,29nm,1.2s						
P38A	**Dawn**	**4.50**	**48**	IAmb_Lg		07 49 52.4	
	comp=Z,30nm,0.9s						
MGMO	**Mountain Grove**	**4.51**	**83**	IAmb_Lg		07 49 52.1	
	comp=Z,26nm,0.8s						
X40A	**Basin Creek Fa**	**4.66**	**117**	IAmb_Lg		07 49 59.7	
	comp=Z,40nm,0.8s						
BGNE	**Belgrade**	**4.71**	**357**	P	**Pn**	**07 48 39.9**	**-0.4**
	baz=177						
BGNE	**Belgrade**	**4.71**	**357**	P		07 48 39.9	
	baz=177						
WHAR	**Wooly Hollow**	**4.74**	**106**	IAmb_Lg		07 50 09.8	
	comp=Z,31nm,0.8s						
W41B	**Gary Mavity, V**	**4.81**	**107**	IAmb_Lg		07 50 09.5	
	comp=Z,34nm,0.8s						
W41B	**Gary Mavity, V**	**4.81**	**107**	S		07 49 36.5	
	baz=290						
UALR	**University of**	**4.89**	**112**	IAmb_Lg		07 50 04.9	
	comp=Z,38nm,0.8s						
WLAR	**White Oak Lake**	**4.92**	**126**	IAmb_Lg		07 50 06.5	
	comp=Z,21nm,0.8s						
237A	**Washetta, Mont**	**4.99**	**159**	IAmb_Lg		07 50 19.2	
	comp=Z,23nm,0.8s						
T25A	**Trinidad**	**5.26**	**277**	IAmb_Lg		07 50 18.8	
	comp=Z,27nm,0.9s						
OGNE	**Ogallala**	**5.34**	**324**	IAmb_Lg		07 50 28.3	
	comp=Z,26nm,0.7s						
Z41A	**Richland Creek**	**5.39**	**128**	IAmb_Lg		07 50 34.7	
	comp=Z,30nm,0.7s						
Z41A	**Richland Creek**	**5.39**	**128**	S		07 49 50.0	
	baz=311						
Z41A				S		07 49 50.0	
	baz=311						
T42A	**Van Buren**	**5.44**	**85**	IAmb_Lg		07 50 33.9	
	comp=Z,19nm,1.0s						
N38A	**Joes South For**	**5.46**	**40**	IAmb_Lg		07 50 27.2	
	comp=Z,35nm,0.8s						
435B	**Jarrell**	**5.91**	**178**	IAmb_Lg		07 50 44.2	
	comp=Z,24nm,0.9s						
PBMO	**Poplar Bluff**	**5.97**	**87**	IAmb_Lg		07 50 49.6	
	comp=Z,24nm,0.7s						
FVM	**French Village**	**6.07**	**76**	IAmb_Lg		07 50 41.4	
	comp=Z,21nm,0.9s						
SCIA	**State Center**	**6.33**	**33**	IAmb_Lg		07 51 02.9	
	comp=Z,34nm,0.8s						
SLM	**Saint Louis**	**6.36**	**70**	IAmb_Lg		07 50 48.0	
	comp=Z,19nm,0.9s						
JCT	**Junction City**	**6.41**	**195**	IAmb_Lg		07 50 57.2	
	comp=Z,20nm,0.9s						
143A	**Socs Landing,**	**6.65**	**125**	IAmb_Lg		07 51 11.9	
	comp=Z,18nm,0.9s						
N41A	**Harden Midland**	**6.79**	**52**	IAmb_Lg		07 51 04.0	
	comp=Z,29nm,0.8s						
S44A	**Carbondale**	**6.95**	**79**	IAmb_Lg		07 51 14.1	
	comp=Z,25nm,0.9s						
SIUC	**Southern Illin**	**6.98**	**79**	IAmb_Lg		07 51 22.0	
	comp=Z,19nm,0.7s						
ECSD	**EROS Data Cent**	**7.09**	**7**	P	**Pn**	**07 49 12.2**	**-0.7**
	baz=188						
K38A	**Parkersburg**	**7.12**	**32**	IAmb_Lg		07 51 25.7	
	comp=Z,31nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.34**	**70**	IAmb_Lg		07 51 25.7	
	comp=Z,27nm,0.9s						
T45A	**Paducah**	**7.40**	**85**	IAmb_Lg		07 51 24.7	
	comp=Z,17nm,0.8s						
L40A	**Anamosa**	**7.43**	**42**	IAmb_Lg		07 51 22.6	
	comp=Z,24nm,0.8s						
N23A	**Red Feather La**	**7.57**	**306**	IAmb_Lg		07 51 45.9	
	comp=Z,22nm,0.8s						
HDIL	**Hopedale**	**7.74**	**58**	IAmb_Lg		07 51 43.7	
	comp=Z,26nm,0.7s						
O44A	**Mansfield**	**8.14**	**62**	IAmb_Lg		07 51 59.8	
	comp=Z,14nm,0.8s						
L42A	**Oliver, Polo**	**8.27**	**48**	IAmb_Lg		07 51 52.2	
	comp=Z,19nm,0.7s						
JFWS	**Jewell Farm**	**8.54**	**41**	IAmb_Lg		07 52 03.7	
	comp=Z,17nm,0.7s						

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*IDC **15** 07:47:50.8±2.8, 53°.63N×87°.99E, h0^{km}, mb1 2.9/2, mb1mx2.8/30, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=23.2km s-min=15.9km az=61.0*

*NNC **15** 07:47:53.5±5.5, 53°.58N×87°.55E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=52.3km s-min=37.5km az=169.0, Suspected Mining explosion.*

ISC 15 07:47:52.9±3.7**,53°.6N**±0°.1×**87°.6E**±0°.2**,h0**^{km}**,n7,**σ**1**^{s}**.52**/11**,6C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**282**	*i*		08 00 31.3	
	baz=94,slow=328,SNR=2.7						
ZALV	**Zalesovo Beam**	**1.69**	**282**	Pn	**Pb**	**07 48 24.4**	**-0.4**
	1.6nm,0.3s,baz=98,slow=14,SNR=25						
ZALV				Lg	Lg	07 48 51.0	
	2.6nm,0.3s,baz=100,slow=24,SNR=11						
KURK	**Kurchatov**	**6.26**	**246**	⇑Pn	**Pn**	**07 49 26.2**	**-0.3**
	1.2nm,0.9s						
KURK				⇑Sn	**Sn**	**07 50 36.0**	**-2.7**
	0.6nm,0.7s						
KURK				⇑Lg	Lg	07 51 14.5	
	3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**6.36**	**245**	Pn	**Pn**	**07 49 28.9**	**+1.1**
	0.1nm,0.3s,baz=62,slow=14,SNR=6.9						
KURBB				Sn	**Sn**	**07 50 43.1**	**+2.1**
	0.0nm,0.3s,baz=58,slow=21,SNR=2.1						
KURBB				Lg	Lg	07 51 17.9	
	0.0nm,0.3s,baz=63,slow=30,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.36**	**245**	⇓Pn	**Pn**	**07 49 27.6**	**-0.2**
	2.7nm,0.9s						
KURBB				⇑Sn	**Sn**	**07 50 42.9**	**+1.8**
	2.6nm,0.6s						
KURBB				⇓Lg	Lg	07 51 17.4	
	3.5nm,0.7s						
MK31	**Makanchi Array**	**7.66**	**209**	Pn	**Pn**	**07 49 46.4**	**+0.7**
	0.3nm,0.5s,baz=28,slow=13,SNR=9.0						
MK31				⇑Sn	**Sn**	**07 51 12.1**	**-1.0**
	0.1nm,0.4s,baz=37,slow=20,SNR=4.9						
MK31				⇑Lg	Lg	07 51 54.0	
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**7.66**	**209**	Pn	**Pn**	**07 49 46.2**	**+0.6**
	0.1nm,0.3s,baz=29,slow=13,SNR=8.7						
MKAR				Sn	**Sn**	**07 51 12.5**	**-0.6**
	0.1nm,0.3s,baz=37,slow=20,SNR=4.3						
MKAR				Lg	Lg	07 51 55.0	
	0.1nm,0.3s,baz=33,slow=29,SNR=4.3						

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*IDC **15** 07:59:56.5±2.4, 54°.13N×86°.45E, h0^{km}, mb1 3.1/2, mb1mx2.9/43, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=18.8km s-min=11.7km az=59.0*

*NNC **15** 07:59:57.5±2.8, 53°.91N×86°.68E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=21.0km s-min=18.0km az=0.0, Suspected Mining explosion.*

ISC 15 07:59:56.4±4.4**,54°.1N**±0°.2×**86°.5E**±0°.2**,h0**^{km}**,n7,**σ**1**^{s}**.57**/11**,2C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**262**	*i*		08 07 00.0	
	baz=78,slow=331,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.01**	**262**	Pg	**Pg**	**08 00 14.3**	**-1.4**
	1.3nm,0.3s,baz=80,slow=17,SNR=17						
ZALV				Lg	Lg	08 00 29.2	
	2.3nm,0.3s,baz=78,slow=30,SNR=21						
KURK	**Kurchatov**	**5.90**	**238**	⇓Pn	**Pn**	**08 01 25.3**	**+0.4**
	0.9nm,0.6s						
KURK				⇓Sn	**Sn**	**08 02 36.0**	**+2.8**
	1.3nm,0.6s						
KURK				⇑Lg	Lg	08 03 04.5	
	9.3nm,1.5s						
KURBB	**Kurchatov Arra**	**6.00**	**238**	Pn	**Pn**	**08 01 27.2**	**+0.8**
	0.1nm,0.3s,baz=55,slow=14,SNR=11						
KURBB				Sn	**Sn**	**08 02 34.4**	**-1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=316,slow=51,SNR=0.7						
KURBB				Lg	Lg	08 03 07.6	
	0.0nm,0.3s,baz=56,slow=34,SNR=6.2						
KURBB	Kurchatov Arra	6.00	238	Pn	Pn	08 01 27.2	+0.8
	2.0nm,0.6s						
KURBB				Sn	Sn	08 02 36.8	+1.1
	2.7nm,0.7s						
KURBB				Lg	Lg	08 03 06.9	
	8.9nm,0.9s						
MK31	Makanchi Array	7.80	202	Pn	Pn	08 01 51.4	+0.4
	0.9nm,0.8s,baz=27,slow=14,SNR=10						
MK31				Sn	Sn	08 03 18.2	-1.7
	0.4nm,0.6s						
MK31				⇑Lg	Lg	08 04 02.4	
	0.3nm,0.4s,baz=28,slow=30,SNR=5.6						
MKAR	Makanchi Array	7.80	202	Pn	Pn	08 01 52.5	+1.5
	0.2nm,0.3s,baz=25,slow=14,SNR=11						
MKAR				Sn	Sn	08 03 19.8	-0.1
	0.1nm,0.3s,baz=31,slow=25,SNR=6.3						
MKAR				Lg	Lg	08 04 03.7	
	0.1nm,0.3s,baz=19,slow=31,SNR=7.8						

IDC ***15*** *08:02:28.4±1.0, 27°.14N×143°.56E, h0^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.8/40, mbtmp3.8/13, ML3.3/1, Error ellipse: s-maj=23.4km s-min=19.6km az=163.0*

NEIC ***15*** *08:02:30.9±1.3, 27°.26N±0°.10×143°.5E±0°.1, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=18.7km s-min=14.6km az=127.0*

ISC 15 08:02:34.2±0.7**, 27°.23N**±0°.10×**143°.44E**±0°.09**, h35^{km}, n36, σ0^{s}.90**/36**, mb4.0**/18**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	1.12	264	Pn	Pn	08 02 52.5	-1.0
	212nm,0.3s,baz=82,slow=12,SNR=113						
JCJ				Sn	Sn	08 03 08.0	+0.3
	94nm,0.3s,baz=268,slow=21,SNR=6.5						
MJAR	Matsushiro Arr	10.29	336	Pn	Pn	08 04 58.0	-1.4
	0.3nm,0.3s,baz=148,slow=12,SNR=12						
MJAR	Matsushiro Arr	10.29	336	Pn	Pn	08 04 58.7	-0.8
MAJO	Matsushiro	10.30	336	Pn	Pn	08 04 58.2	-1.2
MAT	Matsushiro	10.30	336	P	Pn	08 04 57.8	-1.6
JMM	Marumori	10.84	349	Pn	Pn	08 05 01.8	-5.0
KSRS	Korea Array	16.59	312	Pn	P	08 06 27.9	+1.7
	baz=118,slow=13,SNR=4.6						
USRK	Ussuriysk Ar.	19.29	334	P	P	08 06 56.5	+0.6
	baz=146,slow=12,SNR=1.8						
KLR	Kul'dur	23.76	341	P	P	08 07 43.6	+0.5
	0.5nm,0.3s,baz=122,slow=11,SNR=4.0						
SONM	Songino Array	35.40	316	P	P	08 09 26.2	-0.6
MTN	Manton Dam	41.58	198	P	P	08 10 19.5	+0.7
FITZ	Fitzroy Crossi	48.25	203	P	P	08 11 13.1	+1.3
ZAA0	Zalesovo Array	50.12	319	P	P	08 11 26.6	+0.8
ZAA0				IAmb	IAmb	08 11 27.1	
	comp=Z,2.4nm,1.0s						
ZALV	Zalesovo Beam	50.12	319	P	P	08 11 26.6	+0.8
MK31	Makanchi Array	51.25	310	P	P	08 11 34.7	+0.2
MK31				IAmb	IAmb	08 11 36.8	
	comp=Z,1.6nm,1.3s						
MKAR	Makanchi Array	51.25	310	P	P	08 11 34.9	+0.4
	comp=Z,0.6nm,0.9s,baz=108,slow=6.9,SNR=4.0						
MKAR	Makanchi Array	51.25	310	P	P	08 11 35.2	+0.7
AS31	Alice Springs	51.42	191	P	P	08 11 34.5	-1.4
ASAR	Alice Springs	51.43	191	P	P	08 11 34.6	-1.3
	comp=Z,0.3nm,0.6s,baz=11,slow=5.2,SNR=8.4						
ASAR	Alice Springs	51.43	191	P	P	08 11 34.9	-1.0
KURBB	Kurchatov Arra	53.75	314	P	P	08 11 53.0	+0.2
	comp=Z,1.1nm,0.5s,baz=90,slow=7.9,SNR=9.4						
COLD	Coldfoot	56.07	25	P	P	08 12 09.7	+0.3
COLD				IAmb	IAmb	08 12 10.8	
	comp=Z,2.8nm,1.0s						
MDM	Murphy Dome	56.51	28	P	P	08 12 12.9	+0.3
ILAR	Eielson Array	57.06	29	P	P	08 12 15.4	-1.1
	comp=Z,1.0nm,0.9s,baz=271,slow=5.4,SNR=6.7						
BVAR	Borovoye Array	58.70	317	P	P	08 12 29.8	+1.6
	comp=Z,0.5nm,0.5s,baz=104,slow=9.1,SNR=5.5						
KK31	Karatay Array	59.91	306	P	P	08 12 36.9	+0.1
KK31				IAmb	IAmb	08 12 46.3	
	comp=Z,3.2nm,1.1s						
KKAR	Karatay Array	59.91	306	P	P	08 12 36.8	0.0
DAWY	Dawson	60.29	30	P	P	08 12 39.2	+0.2
DAWY				IAmb	IAmb	08 12 40.7	
	comp=Z,3.2nm,1.2s						
INK	Inuvik	62.45	25	P	P	08 12 53.0	-0.4
	comp=Z,0.6nm,0.3s,baz=267,slow=7.0,SNR=3.3						
ABKAR	Akbulak array	65.80	314	P	P	08 13 15.9	+0.1
ABKAR	Akbulak array	65.80	314	P	P	08 13 16.9	+1.1
ABKAR				IAmb	IAmb	08 13 32.6	
	comp=Z,1.3nm,0.8s						
EUNU	Eureka	69.61	8	P	P	08 13 40.0	+0.6
EUNU				IAmb	IAmb	08 13 58.4	
	comp=Z,3.7nm,1.4s						
YKA	Yellowknife Ar	71.49	29	P	P	08 13 50.6	-0.4
	comp=Z,0.9nm,0.8s,baz=295,slow=5.2,SNR=9.8						
FINES	FINESS Array B	78.32	334	P	P	08 14 30.4	0.0
	comp=Z,2.9nm,0.9s,baz=39,slow=7.3,SNR=2.3						
NVAR	Mina Array Bea	79.56	52	P	P	08 14 38.2	+0.2
	comp=Z,0.3nm,0.4s,baz=297,slow=6.0,SNR=5.3						
TXAR	Lajitas Array	94.63	54	P	P	08 15 51.8	-0.2
	comp=Z,0.2nm,0.5s,baz=328,slow=3.2,SNR=4.2						

IDC 15 08:12:10.8±3.5**, 54°.49N**×**87°.04E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/44**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=32.3km s-min=20.1km az=49.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.41	248	*i*		08 21 12.8	
	baz=66,slow=340,SNR=1.4						
ZALV	Zalesovo Beam	1.41	248	Pg	Pn	08 12 35.7	-2.0
	0.8nm,0.3s,baz=66,slow=17,SNR=6.9						
ZALV				Lg	Lg	08 12 55.7	
	0.8nm,0.3s,baz=70,slow=27,SNR=3.6						
KURBB	Kurchatov Arra	6.47	237	Pn	Pn	08 13 48.2	+1.0
	0.1nm,0.3s,baz=53,slow=14,SNR=6.1						
MKAR	Makanchi Array	8.27	203	Pn	Pn	08 14 13.1	+1.1
	0.1nm,0.3s,baz=22,slow=12,SNR=5.8						

IDC ***15*** *08:21:06.2±3.0, 54°.43N×87°.02E, h0^{km}, mb1 2.9/2, mb1mx2.8/39, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=25.7km s-min=17.3km az=63.0*

NNC ***15*** *08:21:09.6±5.5, 54°.42N×86°.71E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=44.6km s-min=38.1km az=108.0, Suspected Mining explosion.*

ISC 15 08:21:07.3±5.0**, 54°.5N**±0°.2×**86°.8E**±0°.2**, h0^{km}, n7, σ1^{s}.50**/8**, 6C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.28	245	*i*		08 29 50.0	
	baz=71,slow=332,SNR=3.3						
ZALV	Zalesovo Beam	1.28	245	Pg	Pg	08 21 30.4	-1.4
	1.6nm,0.3s,baz=72,slow=17,SNR=15						
ZALV				Lg	Lg	08 21 49.9	
	1.3nm,0.3s,baz=70,slow=27,SNR=8.7						
KURK	Kurchatov	6.26	236	⇑Pn	Pn	08 22 41.9	+1.2
	1.2nm,1.0s						
KURK				⇑Lg	Lg	08 24 27.8	
	5.5nm,1.1s						
KURBB	Kurchatov Arra	6.36	236	Pn	Pn	08 22 42.7	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=9.7						
KURBB				Lg	Lg	08 24 30.5	
	0.0nm,0.3s,baz=53,slow=31,SNR=4.7						
KURBB	Kurchatov Arra	6.36	236	⇑Pn	Pn	08 22 43.2	+1.1
	1.8nm,0.8s,baz=56,slow=14						
KURBB				⇑Sn	Sn	08 23 56.1	+0.7
	2.6nm,0.8s						
KURBB				⇓Lg	Lg	08 24 29.4	
	9.0nm,1.0s,baz=90,slow=19						
MK31	Makanchi Array	8.23	202	⇑Sn	Sn	08 24 43.7	+2.1
	0.9nm,0.8s						
MK31				⇑Lg	Lg	08 25 21.8	
	2.5nm,0.9s,baz=29,slow=32,SNR=4.2						
MKAR	Makanchi Array	8.23	202	Pn	Pn	08 23 07.7	-0.1
	0.1nm,0.3s,baz=22,slow=7.8,SNR=4.0						
MKAR				Sn	Sn	08 24 40.3	-1.2
	0.1nm,0.3s,baz=29,slow=25,SNR=2.8						
MKAR				Lg	Lg	08 25 28.1	
	0.1nm,0.3s,baz=28,slow=29,SNR=9.0						

REY ***15*** *08:57:15.6, 64°.67N×17°.37W, h8^{km}*

NEIC ***15*** *08:57:17.4±2.0, 64°.5N±0°.1×17°.6W±0°.2, h7^{km}±4^{km}, mb4.3/9, Error ellipse: s-maj=18.6km s-min=9.7km az=186.0*

IDC ***15*** *08:57:17.3±0.9, 64°.58N×17°.61W, h0^{km}, mb3.6/10, mb1 3.9/10, mb1mx3.6/49, mbtmp3.6/10, MS3.6/3, Ms1 3.6/3, ms1mx2.9/43, Error ellipse: s-maj=29.2km s-min=11.2km az=10.0*

ISC 15 08:57:17.4±0.5**, 64°.66N**±0°.02×**17°.36W**±0°.02**, h10^{km}, n57, σ2^{s}.40**/68**, mb3.8**/15**, MS3.6**/3**, Iceland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.13	360	P	Pg	08 57 18.3	-2.3
	baz=1.5						
IDYN				S	Sg	08 57 20.9	-1.9
	baz=1.5						
IURH	Urdarhals	0.19	30	P	Pg	08 57 19.4	-2.0
	baz=32						
IURH				S	Sg	08 57 22.2	-2.0
	baz=32						
IHAM	Hamarinn	0.27	228	P	Pg	08 57 21.0	-1.9
	baz=226						
IHAM				S	Sg	08 57 25.0	-1.5
	baz=226						
IKVE	Kverkfjoll	0.30	86	P	Pg	08 57 21.7	-1.7
	baz=88						
IKVE				S	Sg	08 57 26.1	-1.4
	baz=88						
THOR	Thorvaldshraun	0.41	46	P	Pg	08 57 23.2	-2.2
	baz=48						
THOR				S	Sg	08 57 29.5	-1.2
	baz=48						
IKRE	Kreppuhraun	0.44	73	P	Pg	08 57 23.7	-2.3
	baz=74						
IKRE				S	Sg	08 57 30.0	-1.9
	baz=74						
ISKR	Skrokkalda	0.45	258	P	Pg	08 57 24.1	-2.1
	baz=256						
IASK	Askja	0.50	37	P	Pg	08 57 24.7	-2.5
	baz=38						
IASK				S	Sg	08 57 31.9	-1.8
	baz=38						
IJOK	Jokulheimar	0.51	228	P	Pg	08 57 24.9	-2.4
	baz=226						
IJOK				S	Sg	08 57 32.2	-1.7
	baz=226						
IMKO	Mokollar	0.54	53	P	Pg	08 57 25.6	-2.4
	baz=54						
IMKO				S	Sg	08 57 33.9	-1.2
	baz=54						
IKSK	Karasker	0.63	142	P	Pg	08 57 26.7	-2.9
	baz=142						
IKSK				S	Sg	08 57 35.9	-2.0
	baz=142						
IIEY	Innrieyrar	0.65	211	P	Pg	08 57 27.4	-2.6
	baz=210						
IIEY				S	Sg	08 57 36.5	-2.2
	baz=210						
ISVA	Svartarkot	0.68	4	P	Pg	08 57 27.6	-3.0
	baz=4.3						
ISVA				S	Sg	08 57 36.9	-2.7
	baz=4.3						
IVSH	V-Sauoahnukur	0.72	77	P	Pg	08 57 28.4	-2.9
	baz=78						
IVSH				S	Sg	08 57 38.4	-2.3
	baz=78						
IKAL	Kalfafell	0.73	191	P	Pg	08 57 28.7	-2.7
	baz=191						
IKAL				S	Sb	08 57 39.9	-2.2
	baz=191						
IFAG	Fagurholsmyri	0.84	158	P	Pg	08 57 30.8	-2.8
	baz=158						
IFAG				S	Sg	08 57 43.0	-1.6
	baz=158						
IADA	Aoalbol	0.85	64	P	Pg	08 57 30.4	-3.3
	baz=65						
IMEL	Melhnausar	0.96	18	P	Pg	08 57 32.4	-3.5
	baz=18						
IREN	Reynihlio	1.01	11	P	Pg	08 57 33.2	-3.7
	baz=11						
ISNB	Snabyli	1.08	211	P	Pg	08 57 35.2	-2.9
	baz=211						
IKVO	Krokottuvotn	1.08	11	P	Pg	08 57 34.5	-3.7
	baz=11						
IGRS	Grimsstaoir	1.12	27	P	Pb	08 57 35.1	-3.7
	baz=28						
IRJU	Rjupnafell	1.19	209	P	Pb	08 57 36.9	-3.2
	baz=209						
IFED	Fedgar	1.20	239	P	Pb	08 57 36.8	-3.3
	baz=238						
ISKI	Skildingahlsh	1.23	6	P	Pn	08 57 36.6	-3.9
	baz=6.7						
IGHA	Grjothals	1.23	14	P	Pn	08 57 36.6	-4.0
	baz=14						
BORG	Borgarnes	1.71	275	Pg	Pb	08 57 46.1	-2.7
	16nm,0.3s,baz=99,slow=7.3,SNR=31						
BORG				Lg	Lg	08 58 08.4	
	12nm,0.3s,baz=122,slow=9.9,SNR=3.9						
BORG	Borgarnes	1.71	275	Pn	Pn	08 57 44.9	-2.3
BORG				Sn	Sb	08 58 07.7	-2.6
SCO	Scoresbysund	6.11	345	Pn	Pn	08 58 47.9	+0.3
SCO	Scoresbysund	6.11	345	*e*	Pn	08 58 43.1	-4.4
	baz=158,slow=9.3						
SCO				*i* P	Pn	08 58 49.0	+1.4
SCO				*i* S	Sn	09 00 01.1	+3.8
SCO				IAML		09 00 14.7	
	comp=Z,1.4nm,0.4s						
NC204	NORSAR Array S	13.17	92	Pn	Pn	09 00 23.3	-1.0
SPA0	Spitsbergen Ar	16.85	23	Pn	Pn	09 01 02.6	-10
GERES	GERESS Array B	22.90	119	P	P	09 02 23.1	+2.0
	comp=Z,0.6nm,0.7s,baz=323,slow=8.4,SNR=4.0						
GERES	GERESS Array B	22.90	119	P	P	09 02 21.8	+0.7
VRAC	Vranov	23.64	114	LR	LR	09 12 13.5	
	comp=Z,131nm,20.7s,baz=318,slow=38						
EUNU	Eureka	23.70	336	P	P	09 02 30.4	+1.6
EUNU				IAmb	IAmb	09 02 34.0	
	comp=Z,13nm,1.4s						
BRTR	Keskin Array B	38.42	105	P	P	09 04 42.3	+3.4
	comp=Z,0.7nm,0.8s,baz=352,slow=8.7,SNR=3.0						
BRTR	Keskin Array B	38.42	105	P	P	09 04 40.0	+1.1
KBZ	Khabaz	39.06	93	P	P	09 04 47.0	+3.0
	comp=Z,1.7nm,0.8s,baz=18,slow=7.2,SNR=4.2						
YKA	Yellowknife Ar	39.26	313	P	P	09 04 47.1	+1.6
	comp=Z,0.8nm,1.0s,baz=46,slow=8.3,SNR=6.1						
ABKAR	Akbulak array	41.94	73	P	P	09 05 10.7	+2.9
ABKAR	Akbulak array	41.94	73	P	P	09 05 10.0	+2.3
ABKAR				IAmb	IAmb	09 05 12.0	
	comp=Z,4.8nm,1.4s						
TIXI	Tiksi	42.02	15	P	P	09 05 09.4	+1.2
TIXI				IAmb	IAmb	09 05 13.8	
	comp=Z,6.9nm,1.1s						
BRVK	Borovoye	43.09	62	P	P	09 05 18.7	+1.6
BRVK				IAmb	IAmb	09 05 23.8	
	comp=Z,4.8nm,1.2s						
ILAR	Eielson Array	45.72	332	P	P	09 05 40.2	+2.2
	comp=Z,2.0nm,1.2s,baz=20,slow=7.0,SNR=5.7						
ZALV	Zalesovo Beam	47.59	51	LR	LR	09 27 55.5	
	comp=Z,55nm,18.2s,baz=6.0,slow=38						
KURK	Kurchatov	48.07	58	P	P	09 05 57.4	+0.9
KURK				IAmb	IAmb	09 06 00.7	
	comp=Z,3.5nm,1.1s						
KURBB	Kurchatov Arra	48.11	58	P	P	09 05 58.6	+1.8
	comp=Z,2.0nm,0.9s,baz=321,slow=7.6,SNR=6.4						
KK31	Karatay Array	51.23	70	P	P	09 06 22.1	+1.4
KK31				IAmb	IAmb	09 06 23.3	
	comp=Z,4.3nm,1.4s						
KKAR	Karatay Array	51.23	70	P	P	09 06 22.3	+1.6
MK31	Makanchi Array	52.68	58	P	P	09 06 32.4	+0.9
MKAR	Makanchi Array	52.68	58	P	P	09 06 33.4	+1.9
	comp=Z,1.1nm,1.0s,baz=308,slow=6.0,SNR=4.9						
MKAR	Makanchi Array	52.68	58	P	P	09 06 32.1	+0.6
TORD	Torodi Ar. Bea	53.11	157	P	P	09 06 35.2	+0.3
	comp=Z,0.9nm,0.8s,baz=340,slow=8.1,SNR=3.1						
PDAR	Pinedale Array	53.23	293	P	P	09 06 37.0	+1.1
	comp=Z,0.9nm,0.9s,baz=54,slow=7.7,SNR=6.0						
SONM	Songino Array	59.61	40	P	P	09 07 22.5	+1.4
	comp=Z,0.5nm,0.8s,baz=350,slow=7.7,SNR=3.6						
SIV	San Ignacio	87.01	222	LR	LR	09 43 58.7	
	comp=Z,38nm,18.2s,baz=280,slow=32						

IDC ***15*** *09:01:01.3±2.4, 30°.85N×131°.33E, h0^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.5/47, mbtmp3.7/8, ML3.0/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/40, Error ellipse: s-maj=46.2km s-min=37.4km az=114.0*

JMA ***15*** *09:01:08.6±0.1, 31°.15N×131°.54E, h38^{km}±1^{km}, M3.3*

JMA Felt I J1.

ISC 15 09:01:07.5±1.5**, 31°.16N**±0°.04×**131°.52E**±0°.08**, h30^{km}**±11^{km}**, n23, σ1^{s}.06**/29**, mb3.7**/6**, 6C, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.42	330	⇑P	Pn	09 01 18.3	+0.7
JNAR				S	Sn	09 01 25.5	+1.1
JTSR	Tashiro 2	0.51	271	P	Pn	09 01 19.5	+0.7
JTSR				S	Sn	09 01 27.5	+0.9
JNKG	Nichinankitago	0.52	346	⇑P	Pn	09 01 19.6	+0.7
JNKG				S	Sn	09 01 27.6	+0.9
JTN	Tanegashima 3	0.68	223	⇑P	Pn	09 01 22.3	+1.1
JTN				S	Sn	09 01 32.3	+1.5
JTZ	Takazaki	0.83	334	⇑P	Pn	09 01 24.1	+0.9
JTZ				*e*S	Sn	09 01 35.4	+1.0
JMTN	Minamitane	0.93	215	P	Pn	09 01 25.6	+1.1
JMTN				*e*S	Sn	09 01 38.3	+1.5
JSU	Suzuyama	0.97	291	⇑P	Pn	09 01 26.3	+1.1
JSU				*e*S	Sn	09 01 39.7	+1.6
JTSN	Tsuno	1.08	359	P	Pb	09 01 27.5	-0.2
JTSN				S	Sn	09 01 41.7	+1.0
JZO	Okuchi	1.26	322	⇑P	Pb	09 01 30.2	-0.4
JYAK	Yakushimahirau	1.26	224	P	Pb	09 01 30.4	-0.3
JYAK				*e*S	Sb	09 01 46.4	-0.2
JKC	Kuchinoerabu	1.33	239	P	Pb	09 01 31.1	-0.8
JNU	Nakatsue	2.03	345	Pn	Pn	09 01 41.2	+1.4
	4.1nm,0.3s,baz=166,slow=4.2,SNR=19						
JNU				Sn	Sb	09 02 08.8	+0.1
	5.0nm,0.3s,baz=231,slow=17,SNR=5.7						
KSRS	Korea Array	6.95	336	LR	LR	09 05 58.7	
	comp=Z,88nm,19.2s,baz=130,slow=42						
KLR	Kul'dur	18.05	0	P	P	09 05 17.4	+1.2
	0.2nm,0.3s,baz=187,slow=11,SNR=5.4						
SONM	Songino Array	25.39	318	P	P	09 06 31.7	-0.6
	1.5nm,0.8s,baz=137,slow=9.2,SNR=9.0						
SONM				LR	LR	09 17 28.6	
	comp=Z,76nm,18.3s,baz=146,slow=39						
H11N2	WAKE ISLAND Hy	33.77	101	T	T	09 43 46.4	
	baz=296						
H11N1	WAKE ISLAND Hy	33.78	101	T	T	09 43 45.1	
	baz=296						
H11N3	WAKE ISLAND Hy	33.79	101	T	T	09 43 46.2	
	baz=296						
MKAR	Makanchi Array	40.65	307	P	P	09 08 43.5	-1.5
	0.3nm,0.5s,baz=81,slow=8.9,SNR=4.4						
KURBB	Kurchatov Arra	43.48	312	P	P	09 09 06.9	-1.0
	1.6nm,0.7s,baz=98,slow=8.9,SNR=10.0						
FINES	FINESS Array B	70.01	330	P	P	09 12 15.0	-1.1
	3.4nm,1.0s,baz=59,slow=6.8,SNR=5.4						
YKA	Yellowknife Ar	72.85	26	P	P	09 12 33.8	+0.6
	0.2nm,1.0s,baz=306,slow=5.5,SNR=1.4						
BRTR	Keskin Array B	76.29	308	P	P	09 12 52.8	-0.9
	0.5nm,0.6s,baz=72,slow=4.7,SNR=4.2						

IDC ***15*** *09:03:14.1±1.1, 20°.52N×122°.15E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/41, mbtmp3.8/8, MS3.4/2, Ms1 3.4/2, ms1mx2.7/41, Error ellipse: s-maj=46.4km s-min=22.2km az=63.0*

JMA ***15*** *09:03:19.5±0.6, 20°.70N×121°.87E, h100^{km}, M3.7*

ISC 15 09:03:20.0±0.8**, 20°.54N**±0°.06×**122°.1E**±0°.1**, h40^{km}, n26, σ0^{s}.72**/25**, mb3.7**/8**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CVP	Callao Caves	2.83	185	⇑*e*P	Pn	09 04 02.6	-0.2
CVP				*i* S	Sn	09 04 36.0	+0.4
HATJ	Hateruma jima	3.85	24	P	Pn	09 04 17.5	+0.7
HATJ				*e*S	Sn	09 05 01.2	+0.4
YOJ	Yonaguni jima	4.00	12	P	Pn	09 04 18.5	-0.3
IRIF	Iriomote-Funau	4.08	22	P	Pn	09 04 19.7	-0.2
IRIF				S	Sn	09 05 06.5	+0.1
JKRS	Kuro-shima	4.10	26	P	Pn	09 04 21.1	+1.0
JKRS				*e*S	Sn	09 05 07.1	+0.3
JIJ	Ishigaki jima	4.26	26	P	Pn	09 04 22.6	+0.2
JIJ				S	Sn	09 05 09.7	-1.2
JISG	Ishigakijimahi	4.53	27	P	Pn	09 04 25.9	-0.2
JISG				*e*S	Sn	09 05 15.8	-1.7
JTJ	Tarama	4.75	30	P	Pn	09 04 29.9	+0.8
JTJ				*e*S	Sn	09 05 22.0	-1.0
JIRB	Irabujima	5.14	33	P	Pn	09 04 35.2	+0.7
JOGS	Gusukube	5.21	36	P	Pn	09 04 36.6	+1.2
JCJ	Chichijima	19.52	67	LR	LR	09 14 24.6	
	comp=Z,168nm,18.5s,baz=128,slow=34						
KLR	Kul'dur	29.66	13	LR	LR	09 20 40.4	
	comp=Z,40nm,19.1s,baz=331,slow=35						
SONM	Songino Array	30.04	339	P	P	09 09 25.1	-0.2
	0.5nm,0.5s,baz=140,slow=7.6,SNR=8.1						
MKAR	Makanchi Array	41.55	318	P	P	09 11 04.2	+0.5
	1.2nm,0.4s,baz=114,slow=9.2,SNR=18						
H11N1	WAKE ISLAND Hy	42.00	83	T	T	09 56 13.9	
	baz=283,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	42.00	83	T	T	09 56 12.5	
	baz=283,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	42.01	85	T	T	09 56 06.1	
	baz=281,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	42.01	83	T	T	09 56 15.6	
	baz=283,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	42.02	85	T	T	09 56 13.7	
	baz=281,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	42.03	85	T	T	09 56 16.6	
	baz=281,slow=75,SNR=20						
ZALV	Zalesovo Beam	43.75	329	P	P	09 11 21.1	-0.3
	3.1nm,0.6s,baz=113,slow=7.9,SNR=16						
ASAR	Alice Springs	45.43	165	P	P	09 11 34.4	-0.7
	0.3nm,0.4s,baz=344,slow=6.8,SNR=16						
KURBB	Kurchatov Arra	45.44	322	P	P	09 11 34.9	0.0
	0.9nm,0.6s,baz=115,slow=8.0,SNR=4.1						
ILAR	Eielson Array	72.07	27	P	P	09 14 39.5	-0.3
	0.2nm,0.7s,baz=291,slow=5.1,SNR=1.9						
BRTR	Keskin Array B	76.00	307	P	P	09 15 03.9	+0.5
	0.6nm,0.8s,baz=12,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	86.00	23	P	P	09 15 56.5	+0.5
	0.3nm,0.5s,baz=322,slow=3.7,SNR=9.4						

IDC 15 09:18:06.9±652.0**, 19°.70S**×**177°.62W, h0^{km}, Error ellipse: s-maj=323.6km s-min=194.8km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I22FR	PORTLAGUERRE I	14.72	258	*i*		10 50 45.0	
	baz=88,slow=304,SNR=3.2						
I59US	HAWAII INFRASO	44.48	30	*i*		13 50 00.0	
	baz=216,slow=330,SNR=0.7						

MAN 15 09:31:27.7, 14°.72N×**122°.01E, h8^{km}, mb4.2, ML3.0, MS2.7, 3C, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POLP	Polilio Island	0.07	274	*e*P	Pg	09 31 31.1	+1.4
POLP				*e*S	Sg	09 31 34.2	+3.1
LQP	Lukban	0.76	217	⇑*e*P	Pg	09 31 42.4	0.0
LQP				*e*S	Sb	09 31 53.2	-0.7
JCNP	Jose Panganiba	0.79	123	*e*P	Pg	09 31 42.1	-0.9
JCNP				*e*S	Sg	09 31 53.5	+0.3
GQP	Guinayangan	0.92	153	⇑*i*P	Pb	09 31 45.7	-0.1
GQP				*i* S	Sb	09 31 58.0	-0.2
BALP	Baler	1.10	337	*e*P	Pb	09 31 48.9	0.0
BALP				*e*S	Sn	09 32 04.2	-0.6
TGY	Tagaytay City	1.21	240	⇑*e*P	Pb	09 31 49.7	-1.2
TGY				*e*S	Sn	09 32 07.5	-0.2
BOAC	Boac	1.27	187	*e*P	Pn	09 31 50.7	-1.1
BOAC				*e*S	Sn	09 32 09.9	+1.0
MACP	Maragondon, Ca	1.33	250	*e*P	Pn	09 31 51.1	-1.6
MACP				*e*S	Sb	09 32 09.8	-0.5
SMPP	San Manuel, Pa	1.92	318	*e*P	Pn	09 32 00.3	-0.4
SMPP				*e*S	Sn	09 32 25.7	+0.7
CAUP	Cauayan	2.22	355	*e*P	Pn	09 32 05.3	+0.5
OTRP	Odiongan	2.35	180	*e*P	Pb	09 32 08.9	-1.4
OTRP				*e*S	Sn	09 32 29.6	-6.0

IDC 15 09:48:08.2±2.5**, 53°.76N**×**86°.90E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/39**, mbtmp2.8**/2**, ML2.6**/2**, 1C-3D, Error ellipse: s-maj=23.2km s-min=14.1km az=67.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.25	280	*i*		09 56 40.0	
	baz=97,slow=327,SNR=3.1						
ZALV	Zalesovo Beam	1.25	280	Pg	Pg	09 48 31.8	-0.4
	1.5nm,0.3s,baz=98,slow=14,SNR=13						
ZALV				Lg	Lg	09 48 48.7	
	1.5nm,0.3s,baz=100,slow=26,SNR=9.8						
KURBB	Kurchatov Arra	6.03	242	Pn	Pn	09 49 39.5	+0.9
	0.1nm,0.3s,baz=58,slow=14,SNR=2.2						
KURBB				Lg	Lg	09 51 18.8	
	0.0nm,0.3s,baz=64,slow=33,SNR=1.9						
MK31	Makanchi Array	7.57	205	⇓Pg	Pg	09 50 43.4	+10
	0.2nm,0.1s,baz=105,slow=17,SNR=56						
MK31				⇓Lg	Lg	09 51 10.7	
	0.3nm,0.2s,baz=100,slow=28,SNR=11						
MKAR	Makanchi Array	7.57	205	Pn	Pn	09 50 01.0	+1.2
	0.2nm,0.3s,baz=24,slow=13,SNR=14						
MKAR				Lg	Lg	09 52 09.0	
	baz=24,slow=20,SNR=1.0						
MAKZ	Makanchi	7.64	206	⇑Pg	Pg	09 50 46.6	+12
	0.9nm,0.3s						
MAKZ				⇓Lg	Lg	09 51 15.8	
	0.9nm,0.3s						

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*IDC **15** 09:59:46.2±3.5, 65.°24N×34.°77E, h0^{km}, mb1 3.3/4, mb1mx3.0/43, mbtmp3.3/4, ML2.4/4, Error ellipse: s-maj=42.0km s-min=11.7km az=97.0*

*HEL **15** 10:00:02.9±0.1, 64.°78N×30.°65E, h0^{km}, ML2.2, Explosion*

ISC 15 10:00:02.5±1.6**, 64.°90N**±0.°04×**31.°20E**±0.°09**, h0^{km}, n22, σ1.^{s}47**/33**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.26	335	PG	Pg	10 00 26.0	-0.5
	baz=170						
KU6				MSG		10 00 41.8	
	comp=Z,9.7nm,0.2s						
MSF	Maaselka	1.36	319	PG	Pg	10 00 26.4	-2.1
MSF				SN	Sn	10 00 49.0	+1.5
JOF	Joensuu	1.99	179	PB	Pn	10 00 36.0	-1.4
JOF				SG	Sb	10 01 04.1	-0.7
OUL	Oulu	2.26	277	PG	Pn	10 00 39.4	-1.7
OUL				SG	Sn	10 01 07.9	-1.7
RNF	Rovaniemi	2.75	311	PB	Pn	10 00 48.6	+0.9
RNF				SG	Sb	10 01 25.0	-1.5
OUF	Merijarvi	2.84	262	PB	Pn	10 00 47.6	-1.4
	baz=76						
OUF				MSG		10 01 19.1	
	comp=Z,17nm,0.2s						
OUF				SG	Sn	10 01 23.1	-0.7
OBF0	Syolatti, Pyha	3.02	265	PG	Pn	10 00 52.9	+1.4
OBF0				SG	Sn	10 01 31.1	+2.9
TOF	Tornio	3.10	296	PB	Pn	10 00 53.9	+1.3
TOF				MSG		10 01 29.4	
	comp=Z,6.6nm,0.2s						
TOF				SG	Sn	10 01 32.4	+2.1
SUF	Sumiainen	3.13	228	PB	Pn	10 00 52.5	-0.5
SUF				MSG		10 01 27.6	
	comp=Z,9.7nm,0.2s						
SUF				SG	Sn	10 01 32.5	+1.5
SGF	Sodankyl	3.18	325	PB	Pn	10 00 55.5	+1.8
SGF				SG	Sb	10 01 38.4	-0.7
KAF	Kangasniemi	3.55	220	PG	Pn	10 01 01.6	+2.8
PAJU	Pajala	3.94	306	PN	Pn	10 01 04.9	+0.8
PAJU				SG	Sb	10 02 01.9	+1.1
KEF	Keuruu	3.94	229	PB	Pn	10 01 05.1	+0.9
FIA0	FINESS Array S	4.17	216	PN	Pn	10 01 05.1	-2.2
	baz=27						
FIA0				SG	Sb	10 02 07.5	-0.1
FINES	FINESS Array B	4.17	216	Pn	Pn	10 01 07.4	+0.1
	comp=Z,0.3nm,0.3s,baz=43,slow=13,SNR=11						
FINES				Sn	Sb	10 02 07.9	+0.3
	comp=Z,0.9nm,0.3s,baz=47,slow=27,SNR=9.0						
VAF	Ylistaro	4.20	248	PB	Pn	10 01 08.4	+0.8
BURU	Burvik	4.22	270	PN	Pn	10 01 06.9	-1.1
UMAU	Umeaa	4.68	262	PN	Pn	10 01 13.6	-0.6
VJF	Virojoki	4.69	203	SG	Sb	10 02 24.1	+1.8
ARCES	ARCESS Array B	5.15	337	Pn	Pn	10 01 08.4	-12
	baz=118,slow=13,SNR=24						
ARCES				Pg	Pb	10 01 23.2	-10
	baz=149,slow=13,SNR=30						
ARCES				Lg	Lg	10 02 41.6	
	baz=155,slow=33,SNR=7.1						
HFS	Hagfors	9.38	247	Pn	Pn	10 02 18.8	0.0
	comp=Z,0.1nm,0.3s,baz=58,slow=12,SNR=1.8						
NOA	NORSAR Array B	9.87	256	Pn	Pn	10 02 26.1	+0.7
	comp=Z,0.0nm,0.3s,baz=56,slow=13,SNR=1.5						

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*NNC **15** 10:12:16.6±0.5, 49.°99N×78.°70E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=13.9km s-min=2.0km az=73.0, Suspected Mining explosion.*

*IDC **15** 10:12:18.1±1.1, 50.°09N×78.°70E, h0^{km}, mb1 2.9/2, mb1mx2.7/62, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=16.5km s-min=6.2km az=68.0*

ISC 15 10:12:16.0±2.2**, 50.°02N**±0.°05×**78.°3E**±0.°2**, h0^{km}, n17, σ0.^{s}88**/29**, 15C-9D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.58	13	⇑P	Pb	10 12 28.5	-0.6
KUR07				⇑S	Sb	10 12 37.4	-0.5
KUR06	Kurchatov Arra	0.60	13	⇓P	Pb	10 12 28.7	-0.7
KUR06				⇑S	Sb	10 12 37.9	-0.6
KUR15	Kurchatov Arra	0.62	15	⇑P	Pg	10 12 28.8	+0.8
KUR15				⇓S	Sb	10 12 38.1	-1.0
KUR16	Kurchatov Arra	0.62	11	⇑P	Pb	10 12 29.3	-0.5
KUR16				⇓S	Sb	10 12 38.2	-0.9
KURBB	Kurchatov Arra	0.62	13	Pg	Pg	10 12 28.7	+0.7
	2.1nm,0.3s,baz=167,slow=18,SNR=31						
KURBB				Lg	Lg	10 12 37.2	
	5.1nm,0.3s,baz=178,slow=32,SNR=40						
KURBB	Kurchatov Arra	0.62	13	⇑P	Pb	10 12 29.0	-0.7
	11nm,0.3s						
KURBB				⇑S	Sb	10 12 38.2	-0.9
	65nm,0.5s						
KUR17	Kurchatov Arra	0.63	9	⇑P	Pb	10 12 29.6	-0.2
KUR17				⇓S	Sb	10 12 38.6	-0.5
KUR14	Kurchatov Arra	0.63	17	⇑P	Pg	10 12 28.6	+0.6
KUR14				⇑S	Sb	10 12 37.8	-1.4
KUR05	Kurchatov Arra	0.65	13	⇓P	Pb	10 12 29.4	-0.7
KUR05				⇑S	Sb	10 12 38.5	-1.2
KUR04	Kurchatov Arra	0.67	13	⇓P	Pb	10 12 29.8	-0.6
KUR04				⇓S	Sb	10 12 39.5	-0.8
KURK	Kurchatov	0.73	16	⇑P	Pg	10 12 30.4	+0.4
	4.1nm,0.3s						
KURK				⇑S	Sb	10 12 40.8	-1.3
	14nm,0.5s						
MAKZ	Makanchi	4.03	141	⇑Pg	Pb	10 13 26.8	-1.0
	1.0nm,0.5s						
MAKZ				⇓Lg	Lg	10 14 17.7	
	5.6nm,0.5s						
MK31	Makanchi Array	4.17	139	⇓Pn	Pn	10 13 21.3	+0.4
	0.2nm,0.3s,baz=323,slow=10,SNR=53						
MK31				⇑Pg	Pb	10 13 29.0	-1.2
	0.8nm,0.4s,baz=321,slow=14,SNR=24						
MK31				Lg	Lg	10 14 23.6	
	6.2nm,0.5s,baz=328,slow=26,SNR=18						
MKAR	Makanchi Array	4.17	139	Pn	Pn	10 13 21.3	+0.4
	0.3nm,0.3s,baz=323,slow=11,SNR=31						
MKAR				Pg	Pb	10 13 29.4	-0.9
	0.7nm,0.3s,baz=318,slow=16,SNR=13						
MKAR				Sn	Sn	10 14 11.8	+1.4
	0.5nm,0.3s,baz=336,slow=27,SNR=5.1						
MKAR				Lg	Lg	10 14 23.8	
	2.2nm,0.3s,baz=328,slow=26,SNR=8.3						
I46RU	ZALESOVO INFRA	5.63	43	*i*		10 46 00.0	
	baz=223,slow=321,SNR=1.2						
ZALV	Zalesovo Beam	5.63	43	Pn	Pn	10 13 41.1	+0.3
	0.8nm,0.3s,baz=234,slow=14,SNR=6.5						
ZALV				Sn	Sn	10 14 47.2	+1.1
	0.1nm,0.3s,baz=227,slow=25,SNR=2.0						
ZALV				Lg	Lg	10 15 07.5	
	0.3nm,0.3s,baz=249,slow=27,SNR=2.8						
AAK	Ala-Archa	7.84	201	Lg	Lg	10 16 22.7	
	0.1nm,0.3s,baz=221,slow=19,SNR=2.7						

IDC 15 10:17:31.7±757.0**, 20.°86S**×**176.°79W, h0^{km}, Error ellipse: s-maj=391.9km s-min=201.9km az=147.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I22FR	PORTLAGUERRE I	15.28	262	*i*		11 53 30.0	
	baz=89,slow=298,SNR=3.0						
I59US	HAWAII INFRASO	45.11	28	*i*		14 53 00.0	
	baz=211,slow=291,SNR=0.1						

IDC 15 10:18:44.7±2.9**, 54.°52N**×**86.°93E, h0^{km}, mb1 3.2**/2**, mb1mx2.9**/64**, mbtmp3.2**/2**, ML2.8**/2**, Error ellipse: s-maj=24.7km s-min=16.9km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.36	246	*i*		10 27 50.0	
	baz=65,slow=338,SNR=0.8						
ZALV	Zalesovo Beam	1.36	246	Pg	Pg	10 19 08.9	-1.9
	1.4nm,0.3s,baz=63,slow=17,SNR=11						
ZALV				Lg	Lg	10 19 27.9	
	1.8nm,0.3s,baz=62,slow=28,SNR=10						
KURBB	Kurchatov Arra	6.44	236	Pn	Pn	10 20 21.7	+1.0
	0.2nm,0.3s,baz=52,slow=14,SNR=10						
KURBB				Lg	Lg	10 22 09.9	
	0.0nm,0.3s,baz=47,slow=30,SNR=1.3						
MKAR	Makanchi Array	8.28	203	Pn	Pn	10 20 47.2	+1.2
	0.2nm,0.3s,baz=24,slow=13,SNR=9.6						
MKAR				Sn	Sn	10 22 18.7	-1.5
	0.1nm,0.3s,baz=26,slow=27,SNR=5.2						
MKAR				Lg	Lg	10 23 10.0	
	0.1nm,0.3s,baz=25,slow=30,SNR=8.9						

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*NOU **15** 10:24:34.1, 8.°29S×123.°89E, h132^{km}, mb3.8, Flores Region, Indonesia*

DJA 15 10:24:42.2±0.8**, 8°S**±6°×**12°4E**±°**, h89^{km}**±9^{km}**, M3.0**/6**, MLv3.0**/6**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.42	159	P	Pn	10 25 07.3	+0.3
MMRI	Maumere	1.52	262	P	Pn	10 25 08.4	+0.2
BATI	Baumata	1.78	183	P	Pn	10 25 11.8	+0.3
EDFI	Ende, Flores	2.07	261	P	Pn	10 25 15.3	-0.1
BASI	Baing, Sumba	3.61	240	P	Pn	10 25 36.3	+0.3
BASI				S	Sn	10 26 17.8	+0.1
BSSI	Bau Bau, Buton	3.95	305	P	Pn	10 25 40.7	0.0

NOU 15 11:00:11.1, 7.°98S×**129.°22E, h192^{km}, mb3.5, Banda Sea, Banda Sea**

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*NOU **15** 11:31:46.3, 20.°99S×178.°51W, h589^{km}, mb4.6, Fiji Islands Region*

*IDC **15** 11:31:47.1±1.2, 20.°98S×178.°73W, h574^{km}±12^{km}, mb4.0/18, mb1 4.1/20, mb1mx4.0/29, mbtmp4.8/20, Error ellipse: s-maj=13.7km s-min=11.1km az=104.0*

*NEIC **15** 11:31:47.4±2.2, 20.°98S±0.°10×178.°8W±0.°1, h576^{km}±6^{km}, mb4.6/132, Error ellipse: s-maj=15.5km s-min=13.0km az=126.0*

ISC 15 11:31:46.9±0.3**, 20.°98S**±0.°05×**178.°59W**±0.°06**, h579^{km}, n455, σ1.^{s}49**/478**, mb4.6**/84**, 27C-28D, Fault plane solution: NP1:**φ$_s$245.47095°**,**δ88.40707°**,**λ64.43443°. **NP2:**φ$_s$152.14528°**,**δ25.61181°**,**λ176.31291°. **Principal axes:** T Plg41.0932°, Azm131.5863°**;** N Plg25.5550°, Azm246.2328°**;** P Plg38.1682°, Azm358.3091°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.52	315	P	P	11 33 15.5	+0.6
	27nm,0.3s,baz=147,slow=12,SNR=140						
MSVF	Nonsavu	4.52	315	P	P	11 33 15.0	+0.1
MSVF	Nonsavu	4.52	315	P	P	11 33 15.6	+0.7
RIZ	Raoul Island	8.25	176	P	P	11 33 46.3	-1.5
GLKZ	Green Lake	8.27	176	P	P	11 33 46.5	-1.5
GLKZ				S	S	11 35 26.0	-1.4
NIUE	Niue	8.36	78	P	P	11 33 49.9	+0.8
NIUE	Niue	8.36	78	P	P	11 33 49.8	+0.8
AFI	Afiamalu	9.57	44	P	P	11 33 59.2	-1.9
AFI					S	11 35 45.0	-6.4
AFI	Afiamalu	9.57	44	P	P	11 33 59.3	-1.9
MARNC	Mare, Loyalty	12.49	265	P	P	11 34 30.0	-0.5
LIFNC	LIFOU	13.25	268	P	P	11 34 38.3	0.0
YATNC	Mamie plateau,	13.55	263	P	P	11 34 41.7	+0.2
DZM	Mont Dzumac	13.97	263	P	P	11 34 43.5	-2.3
	0.3nm,0.3s,baz=29,slow=14,SNR=3.0						
DZM	Mont Dzumac	13.97	263	P	P	11 34 44.8	-1.0
DZM	Mont Dzumac	13.97	263	P	P	11 34 46.1	+0.3
SANVU	Saraoutou	14.57	290	P	P	11 34 50.7	-0.9
SANVU	Saraoutou	14.57	290	P	P	11 34 51.1	-0.5
OUZ	Omahuta	15.76	204	P	P	11 35 03.4	+0.6
OUZ	Omahuta	15.76	204	P	P	11 35 03.9	+1.1
WCZ	Waipu Caves	16.14	201	P	P	11 35 07.7	+1.4
RUGZ	Raukumara Rang	17.23	190	P	P	11 35 14.5	-1.9
RUGZ				S	S	11 38 04.8	-2.1
TGRZ	Tauranga	17.28	194	P	P	11 35 17.6	+1.0
OPRZ	Ohinepanea	17.33	193	P	P	11 35 17.1	0.0
TWGZ	Tauwhareparae	17.40	189	P	P	11 35 17.5	-0.3
TWGZ				S	S	11 38 08.4	-0.9
MARZ	Manawahe	17.44	193	P	P	11 35 18.6	+0.5
TOZ	Tahuroa Road	17.46	196	P	P	11 35 19.2	+1.0
KMRZ	Kaimai	17.46	195	P	P	11 35 19.5	+1.1
LIRZ	Lichensteins R	17.52	193	P	P	11 35 20.0	+1.2
KARZ	Kaharoa	17.56	194	P	P	11 35 21.2	+1.9
OMRZ	Omania	17.62	193	P	P	11 35 21.2	+1.4
URZ	Urewera	17.62	191	P	P	11 35 16.8	-2.9
	5.0nm,0.3s,baz=270,slow=1.7,SNR=42						
URZ				S	S	11 38 12.2	-0.6
	1.4nm,0.3s,baz=235,slow=18,SNR=9.5						
URZ	Urewera	17.62	191	P	P	11 35 16.3	-3.4
URZ				S	S	11 38 10.2	-2.6
MWZ	Matawai	17.62	190	P	P	11 35 17.3	-2.5
MWZ				S	S	11 38 10.3	-2.7
NGRZ	Ngongotaha	17.65	194	P	P	11 35 21.9	+1.8
CNGZ	Carnagh Statio	17.66	188	P	P	11 35 19.2	-0.9
CNGZ				S	S	11 38 16.9	+3.3
TKGZ	Te Karaka	17.67	189	P	P	11 35 19.2	-1.0
RAGZ	Rawiri	17.80	190	P	P	11 35 20.0	-1.4
RAGZ				S	S	11 38 15.3	-0.6
RRRZ	Republican Roa	17.81	193	P	P	11 35 21.7	+0.2
MUGZ	Murupara	17.89	192	P	P	11 35 20.2	-2.0
GRRZ	Galatos Road	17.91	194	P	P	11 35 24.1	+1.6
RTZ	Ruatahuna	17.99	191	P	P	11 35 21.0	-2.2
PRRZ	Plateau Road	17.99	193	P	P	11 35 22.1	-1.1
SNGZ	Shannon Statio	18.09	190	P	P	11 35 23.0	-1.1
RAHZ	Arahi	18.26	191	P	P	11 35 24.7	-1.0
RAHZ				S	S	11 38 23.9	+0.5
MRHZ	Matea Rd	18.31	192	P	P	11 35 23.8	-2.2
MHGZ	Mahia Peninsul	18.36	189	P	P	11 35 26.3	-0.2
HIZ	Hauiti	18.37	197	P	P	11 35 27.6	+1.0
HIZ	Hauiti	18.37	197	P	P	11 35 29.1	+2.6
NMHZ	Naumai	18.49	191	P	P	11 35 26.1	-1.7
NMHZ				S	S	11 38 29.3	+2.2
RITZ	Rihia Road	18.57	194	P	P	11 35 27.8	-0.6
RITZ				S	S	11 38 29.6	+1.4
KATZ	Kakaramea	18.60	194	P	P	11 35 29.8	+1.0
BKZ	Black Stump Fm	18.61	192	P	P	11 35 25.9	-3.0
BKZ				IAmb	IAmb	11 35 34.7	
	comp=Z,25nm,0.9s						
BKZ	Black Stump Fm	18.61	192	P	P	11 35 25.7	-3.1
BKZ				S	S	11 38 30.2	+1.1
ARHZ	Aropaoanui	18.62	191	P	P	11 35 26.5	-2.3
ETVZ	East Tongariro	18.75	194	P	P	11 35 28.8	-1.4
TWVZ	Taurewa	18.75	195	P	P	11 35 29.3	-0.8
WTVZ	West Tongariro	18.76	194	P	P	11 35 29.8	-0.5
OTVZ	Oturere	18.79	194	P	P	11 35 28.5	-2.0
NGZ	Ngauruhoe	18.81	194	P	P	11 35 30.5	-0.3
MCHZ	McNeill Hill	18.85	191	P	P	11 35 29.0	-1.9
KWHZ	Kaweka Forest	18.88	192	P	P	11 35 28.1	-3.2
KWHZ				S	S	11 38 30.8	-2.6
TUVZ	Tukino	18.89	194	P	P	11 35 31.1	-0.4
FWVZ	Far West T-bar	18.90	194	P	P	11 35 31.5	-0.1
WNVZ	Wahianoa	18.96	194	P	P	11 35 30.0	-2.1
WNVZ				S	S	11 38 51.4	+17
MOVZ	Moawhango	19.00	194	P	P	11 35 30.7	-1.7
BHHZ	Black Hill Sta	19.01	193	P	P	11 35 30.0	-2.5
BHHZ				S	S	11 38 36.4	+0.9
KAHZ	Kahuranaki	19.15	191	P	P	11 35 33.2	-0.5
KAHZ				S	S	11 38 39.3	+1.6
KNTN	Kanton	19.29	21	P	P	11 35 34.6	-0.7
KNTN	Kanton	19.29	21	P	P	11 35 35.6	+0.3
	comp=Z,84nm,0.8s						
BFZ	Birch Farm	20.13	191	P	P	11 35 40.3	-2.2
SNZO	South Karori	21.05	194	P	P	11 35 48.9	-1.8
QRZ	Quartz Range	21.18	199	P	P	11 35 51.5	-0.4
NNZ	Nelson	21.30	197	P	P	11 35 51.5	-1.5
THZ	Tophouse	21.93	197	P	P	11 35 57.7	-1.1
RPZ	Rata Peaks	24.26	198	P	P	11 36 18.2	-1.2
	comp=Z,24nm,0.5s,baz=304,slow=2.5,SNR=18						
EIDS	Eidsvold	28.19	255	P	P	11 36 53.9	-0.3
ARMA	Armidale	28.36	245	P	P	11 36 56.0	+0.3
ARMA				IAmb	IAmb	11 36 56.6	
	comp=Z,17nm,0.7s						
CAN	Canberra	31.79	236	P	P	11 37 25.1	+0.1
CAN				IAmb	IAmb	11 37 32.9	
	comp=Z,42nm,1.4s						
CTAO	Charters Tower	32.89	265	P	P	11 37 34.3	-0.2
CTAO				IAmb	IAmb	11 37 35.1	
	comp=Z,22nm,0.9s						
PMG	Port Moresby	34.91	284	P	P	11 37 51.0	-0.4
PMG	Port Moresby	34.91	284	P	P	11 37 51.3	-0.2
	comp=Z,119nm,0.9s						
TOO	Toolangi	35.17	234	P	P	11 37 53.0	-0.3
TOO				IAmb	IAmb	11 37 54.0	
	comp=Z,16nm,0.8s						
COEN	Coen	37.06	275	P	P	11 38 09.2	0.0
COEN				IAmb	IAmb	11 38 10.1	
	comp=Z,28nm,0.9s						
STKA	Stephens Creek	37.08	245	P	P	11 38 08.9	-0.2
	comp=Z,9.8nm,0.5s,baz=95,slow=10,SNR=34						
STKA				ScP	ScP	11 43 08.5	+2.0
	comp=Z,3.0nm,0.7s,baz=101,slow=3.5,SNR=5.2						
STKA	Stephens Creek	37.08	245	P	P	11 38 08.7	-0.4
MCQ	Macquarie Isla	37.55	201	P	P	11 38 13.7	+1.3
MCQ	Macquarie Isla	37.55	201	P	P	11 38 12.0	-0.4
MANU	Manus Island	38.14	295	P	P	11 38 17.7	-0.3
BBOO	Buckleboo	41.84	244	P	P	11 38 46.4	-0.8
BBOO				IAmb	IAmb	11 38 47.1	
	comp=Z,18nm,0.7s						
JAY	Jayapura	43.67	289	P	P	11 39 01.8	0.0
	comp=Z,74nm,0.7s,baz=150,slow=3.6,SNR=17						
JAY	Jayapura	43.67	289	P	P	11 39 01.7	0.0
	comp=Z,59nm,0.9s						
AS31	Alice Springs	43.87	257	P	P	11 39 02.7	-0.5
ASAR	Alice Springs	43.87	257	P	P	11 39 02.5	-0.8
	comp=Z,12nm,0.5s,baz=91,slow=8.4,SNR=306						
ASAR				PcP	PcP	11 40 35.2	-1.3
	comp=Z,1.7nm,0.7s,baz=102,slow=3.9,SNR=5.4						
ASAR				ScP	ScP	11 43 35.5	+2.0
	comp=Z,0.9nm,0.8s,baz=108,slow=4.6,SNR=4.3						
ASAR				S	S	11 44 49.8	-3.5
	comp=Z,5.2nm,0.8s,baz=96,slow=16,SNR=25						
GENI	Genyem	44.11	289	P	P	11 39 04.6	-0.5
	comp=Z,95nm,0.9s						
FORT	Forrest	48.60	247	P	P	11 39 37.7	-1.1
FORT				IAmb	IAmb	11 39 38.3	
	comp=Z,18nm,0.6s						
FAKI	Fak Fak	51.07	284	P	P	11 39 57.0	-0.1
FAKI				IAmb	IAmb	11 40 17.5	
	comp=Z,23nm,1.2s						
FITZ	Fitzroy Crossi	52.42	263	P	P	11 40 06.7	+0.1
SIJI	Sorong	52.83	286	P	P	11 40 09.7	0.0
	comp=Z,61nm,0.8s,baz=80,slow=6.5,SNR=17						
SWI	Sorong	52.84	286	P	P	11 40 10.0	+0.3
	comp=Z,1μmcomp=Z,98nm,0.9s						
PSA00	Pilbara Seismi	57.02	257	P	P	11 40 38.2	-0.6
PSA00				IAmb	IAmb	11 40 38.7	
	comp=Z,13nm,0.8s						
PSA00	Pilbara Seismi	57.02	257	P	P	11 40 37.1	-1.7
PSA00				IAmb	IAmb	11 41 05.7	
	comp=Z,8.0nm,0.7s						
VNDA	Vanda	57.39	185	P	P	11 40 42.0	+1.7
	comp=Z,5.5nm,0.6s,baz=358,slow=6.9,SNR=48						
VNDA	Vanda	57.39	185	P	P	11 40 42.0	+1.7
EDFI	Ende, Flores	58.69	272	P	P	11 40 49.8	-0.5
	comp=Z,11nm,0.9s						
MORW	Morawa	59.13	248	P	P	11 40 52.1	-0.9
MORW				IAmb	IAmb	11 40 52.8	
	comp=Z,31nm,1.4s						
GIRL	Giralia	61.89	255	P	P	11 41 11.4	+0.2
CASY	Casey	63.30	205	P	P	11 41 19.7	+0.3
CASY				IAmb	IAmb	11 41 20.1	
	comp=Z,17nm,0.8s						
MPSI	Mapaga	63.66	281	P	P	11 41 23.6	+0.9
	comp=Z,13nm,0.9s						
QSPA	South Pole Qui	69.09	180	P	P	11 41 56.6	+1.1
MJAR	Matsushiro Arr	70.27	324	P	P	11 42 01.6	-1.2
	comp=Z,4.4nm,0.7s,baz=158,slow=6.4,SNR=8.9						
MJAR	Matsushiro Arr	70.27	324	IAmb	IAmb	11 42 03.4	
	comp=Z,2.6nm,0.9s						
MJB9	Matsu-Tunnel	70.27	324	P	P	11 42 02.6	-0.2
CISI	Cisompet, Garu	72.05	269		pP	11 44 05.8	-5.6
ADK	Adak	72.56	1	P	P	11 42 15.8	+0.2
PEA0B	Petropavlovsk-	76.59	346	P	P	11 42 38.1	-0.1
PETK	Petropavlovsk-	76.59	346	P	P	11 42 38.3	+0.1
	comp=Z,11nm,0.9s,baz=215,slow=0.9,SNR=14						
PETK	Petropavlovsk-	76.59	346	P	P	11 42 38.5	+0.3
PETK					PcP	11 42 38.8	-8.0
KSRS	Korea Array	76.88	319	P	P	11 42 41.1	+0.9
	comp=Z,1.5nm,0.8s,baz=129,slow=9.8,SNR=5.0						
USA0B	Ussuriysk Arra	79.05	326	P	P	11 42 53.1	+1.5
USA0B				IAmb	IAmb	11 42 53.9	
	comp=Z,21nm,1.1s						
USRK	Ussuriysk Ar.	79.05	326	P	P	11 42 53.0	+1.3
	comp=Z,13nm,1.0s,baz=148,slow=3.3,SNR=12						
USRK	Ussuriysk Ar.	79.05	326	P	P	11 42 52.6	+1.0
USRK					PcP	11 42 52.8	-4.9
BELA	Belgrano 2	79.16	173	P	P	11 42 51.9	+0.1
KCPM	Cahto Peak	79.21	40	P	P	11 42 55.6	+2.8
KCPM				IAmb	IAmb	11 42 56.2	
	comp=Z,29nm,1.0s						
ARVC	Arvin	79.52	46	P	P	11 42 56.7	+2.3
	baz=235						
VES	Vestal, Richgr	79.76	45	P	P	11 42 57.6	+2.0
	baz=235						
NJ2	Nanjing	79.76	310	*e*P	P	11 42 57.0	+1.3
NJ2				pmax	pmax		
	comp=Z,19nm,0.8s						
MURC	Murrieta	79.78	48	P	P	11 42 57.9	+2.1
	baz=236						
BFSC	Mount Baldy Ra	79.82	47	P	P	11 42 58.2	+2.1
	baz=236						
MONP2	Monument Peak	79.94	49	P	P	11 42 58.9	+2.0
	baz=237,SNR=5.7						
EDW2	Edwards Air Fo	79.95	47	P	P	11 42 58.7	+2.0
	baz=236,SNR=6.2						
O02D	Mt. Diablo Mer	80.00	40	P	P	11 42 59.3	+2.5
	baz=232						
IKP	In-Ko-Pah, Jac	80.03	49	P	P	11 42 59.4	+2.2
	baz=237						
ISA	Isabella, Lake	80.06	46	P	P	11 42 59.3	+2.0
	baz=235						
ISA	Isabella, Lake	80.06	46	P	P	11 42 59.3	+2.0
CMB	Columbia Colle	80.19	43	P	P	11 42 60.0	+2.1
PFO	Pinyon Flats O	80.30	48	P	P	11 43 00.5	+1.8
	baz=237						
PFO	Pinyon Flats O	80.30	48	P	P	11 43 00.9	+2.3
TPFO	Pinon Flats	80.30	48	P	P	11 43 00.5	+1.8
	baz=237						
AFDM	Forest Hills D	80.36	42	P	P	11 43 00.8	+2.1
WDC	Whiskeytown Da	80.39	40	P	P	11 43 01.3	+2.5
WDC				IAmb	IAmb	11 43 02.1	
	comp=Z,18nm,1.1s						
ORV	Oroville	80.40	41	P	P	11 43 00.2	+1.3
SWSC	Sam W. Stewart	80.41	49	P	P	11 43 01.3	+2.3
	baz=237						
LRMC	Laurel Mtn Rad	80.49	46	P	P	11 43 01.7	+2.1
	baz=236						
N02D	Trinity Center	80.54	39	P	P	11 43 02.0	+2.4
	baz=232,SNR=6.0						
MDJ	Mudanjiang	80.59	325	P	P	11 43 01.0	+1.3
MDJ				IAmb	IAmb	11 43 01.4	
	comp=Z,16nm,1.0s						
O03E	Paynes Creek	80.66	40	P	P	11 43 02.2	+1.8
	baz=232,SNR=9.7						
M02C	Callahan	80.71	39	P	P	11 43 03.1	+2.6
	baz=232,SNR=8.0						
CWC	Cottonwood Cre	80.77	45	P	P	11 43 03.1	+2.1
	baz=236						
MDPB	Devils Postpil	80.79	44	P	P	11 43 03.5	+2.3
OMMB	Old Mammoth Mi	80.83	44	P	P	11 43 03.8	+2.2
BELC	Belle Mtn. Jos	80.84	48	P	P	11 43 03.4	+2.0
	baz=237,SNR=5.2						

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MAW   Mawson           80.93 200  P        P       11 43 01.1  -0.1
            comp=Z,8.1nm,1.0s,baz=142,slow=6.7,SNR=6.2
MAW   Mawson           80.93 200  P        P       11 43 01.6  +0.5
MPMC  Manual Prospec   80.95  46  P        P       11 43 04.0  +1.9
            baz=236,SNR=8.1
GSC   Goldstone, Bar   80.99  47  P        P       11 43 03.9  +1.8
            baz=236,SNR=5.9
GSC   Goldstone, Bar   80.99  47  P        P       11 43 02.9  +0.7
YBH   Yreka Blue Hor   81.01  39  P        P       11 43 02.7  +0.6
YBH                               IAmb     IAmb    11 43 06.0
            comp=Z,30nm,1.5s
BC3   Big Chuckawall   81.03  49  P        P       11 43 04.6  +2.1
            baz=238
HEC   Hector,Ludlow    81.05  47  P        P       11 43 04.3  +1.9
            baz=237,SNR=6.7
K02D  Willamette Mer   81.06  38  P        P       11 43 04.5  +2.2
            baz=231
WAKR  Walker           81.07  43  P        P       11 43 03.9  +1.3
WAKR                              IAmb     IAmb    11 43 05.9
            comp=Z,16nm,1.2s
GLA   Glamis           81.16  50  P        P       11 43 05.6  +2.6
            baz=238
GLA   Glamis           81.16  50  P        P       11 43 03.1  +0.2
GLA                               IAmb     IAmb    11 43 06.5
            comp=Z,10nm,0.8s
J01E  Myrtle Point     81.20  37  P        P       11 43 05.1  +2.2
            baz=230
BEKR  Beckworth        81.29  41  P        P       11 43 04.0  +0.3
PNTR  Pine Nut         81.31  42  P        P       11 43 05.5  +1.7
PNTR                              IAmb     IAmb    11 43 06.9
            comp=Z,18nm,0.8s
VCNR  Virginia City    81.39  42  P        P       11 43 06.6  +2.3
GMRC  Granite Mounta   81.50  48  P        P       11 43 06.7  +1.9
            baz=237
IRM   Iron Mountain    81.52  49  P        P       11 43 07.0  +2.2
            baz=238
LHV   Little Huntoon   81.52  44  P        P       11 43 06.2  +1.6
LHV                               IAmb     IAmb    11 43 07.5
            comp=Z,9.5nm,1.0s
L04D  Klamath Falls    81.55  39  P        P       11 43 07.0  +2.1
            baz=232
M04C  Macdoel          81.55  39  P        P       11 43 06.9  +2.0
            baz=232
FURC  Furnace Creek,   81.59  46  P        P       11 43 06.8  +1.8
            baz=236,SNR=5.3
RYN   Ryan             81.72  43  P        P       11 43 08.0  +2.1
NVAR  Mina Array Bea   81.75  44  P        P       11 43 07.9  +1.8
            comp=Z,4.8nm,0.7s,baz=223,slow=8.4,SNR=46
NVAR  Mina Array Bea   81.75  44  P        P       11 43 07.7  +1.5
NVAR                                       PcP     11 43 08.1  -1.9
PAHR  Pah Rah Range    81.80  42  P        P       11 43 08.4  +2.1
PAHR                              IAmb     IAmb    11 43 09.2
            comp=Z,12nm,1.1s
NV11  Mina Array Sit   81.85  44  P        P       11 43 08.2  +1.7
NV11                              IAmb     IAmb    11 43 09.3
            comp=Z,12nm,1.2s
214A  Organ Pipe Nat   82.04  52  P        P       11 43 09.9  +2.4
            baz=239
TPH   Tonopah          82.25  44  P        P       11 43 09.2  +0.6
TPNV  Topopah Spring   82.27  46  P        P       11 43 10.7  +2.0
            baz=237,SNR=8.8
TPNV  Topopah Spring   82.27  46  P        P       11 43 10.9  +2.2
TPNV                              IAmb     IAmb    11 43 11.5
            comp=Z,8.6nm,0.8s
J04D  Umpqua Nationa   82.29  38  P        P       11 43 10.9  +2.2
            baz=232
PDMCI Parker Dam,Lak   82.30  49  P        P       11 43 11.0  +2.3
            baz=238
CN2   Changchun        82.34 323 eP        P       11 43 09.3  +0.6
CN2                               pmax     pmax
            comp=Z,10.0nm,1.2s
I04A  Tendick Farm,    82.46  37  P        P       11 43 11.7  +2.4
            baz=232
MOD   Modoc Plateau    82.54  40  P        P       11 43 12.1  +2.2
MOD                               IAmb     IAmb    11 43 12.8
            comp=Z,8.7nm,0.8s
K05A  Summer Lake      82.68  39  P        P       11 43 13.2  +2.5
K05A                              IAmb     IAmb    11 43 14.0
            comp=Z,28nm,1.0s
H04D  Lebanon          82.73  37  P        P       11 43 12.7  +2.1
            baz=231
SHPR  Sheep Range      82.76  47  P        P       11 43 13.6  +2.4
J05D  Fort Rock, OR    82.82  38  P        P       11 43 13.6  +2.3
            baz=232,SNR=17
G03D  McMinnville, O   82.87  36  P        P       11 43 13.5  +2.2
            baz=231
W13A  Hualapai Mount   82.90  48  P        P       11 43 13.2  +1.2
H04A  Detroit Lake     83.14  37  P        P       11 43 14.7  +1.9
H04A                              IAmb     IAmb    11 43 15.2
            comp=Z,27nm,1.2s
PINE  Pine Mountain    83.30  38  P        P       11 43 16.1  +2.4
PINE                              IAmb     IAmb    11 43 17.1
            comp=Z,26nm,0.9s
HOM   Homer            83.32  13  P        P       11 43 15.9  +2.8
            baz=205
PRN   Pahroc Range     83.32  46  P        P       11 43 16.4  +2.5
I05D  Terrebonne, OR   83.40  37  P        P       11 43 16.1  +2.0
            baz=232
R11A  Troy Canyon, C   83.48  45  P        P       11 43 16.3  +1.5
            baz=237
TUC   Tucson           83.71  52  P        P       11 43 18.5  +2.6
            baz=240
TUC   Tucson           83.71  52  P        P       11 43 16.2  +0.4
WVOR  Wild Horse Val   83.85  40  P        P       11 43 18.6  +2.2
WVOR                              IAmb     IAmb    11 43 19.4
            comp=Z,8.3nm,1.1s
E04D  Cinebar          84.10  35  P        P       11 43 19.4  +2.1
            baz=231
X16A  Lo Mia Camp, P   84.28  50  P        P       11 43 21.4  +2.6
I07A  Izee             84.30  38  P        P       11 43 19.1  +0.5
I07A                              IAmb     IAmb    11 43 21.6
            comp=Z,11nm,1.0s
LCMT  Little Creek M   84.34  47  P        P       11 43 21.2  +2.3
319A  Douglas          84.38  54  P        P       11 43 22.0  +2.8
319A                              IAmb     IAmb    11 43 23.0
            comp=Z,12nm,1.0s
CAPN  Captain Cook N   84.43  13  P        P       11 43 21.2  +2.6
            baz=206
D03D  Eldon            84.44  34  P        P       11 43 21.3  +2.3
            baz=231
CCUT  Cedar City       84.54  46  P        P       11 43 21.0  +0.9
KNB   Kanab            84.63  47  P        P       11 43 22.4  +1.9
U15A  North Rim        84.69  48  P        P       11 43 23.0  +2.1
U15A                              IAmb     IAmb    11 43 24.0
            comp=Z,8.9nm,0.8s
PSUT  Pine Spring      84.72  45  P        P       11 43 22.8  +1.9
WUAZ  Wupatki          84.87  49  P        P       11 43 24.0  +2.3
            baz=240
WUAZ  Wupatki          84.87  49  P        P       11 43 23.9  +2.3
ELK   Elko             85.01  43  P        P       11 43 24.0  +1.7
PKCU  Pink Cliffs      85.20  47  P        P       11 43 24.6  +1.2
G08A  Pilot Rock       85.33  38  P        P       11 43 24.6  +1.0
G08A                              IAmb     IAmb    11 43 26.4
            comp=Z,10nm,1.0s
X18A  Snowflake        85.40  50  P        P       11 43 26.3  +2.0
B05A  Bryant           85.42  34  P        P       11 43 26.1  +2.4
            baz=231
TTA   Tatalina         85.51  10  P        P       11 43 24.8  +0.9
TTA                               IAmb     IAmb    11 43 26.4
            comp=Z,9.5nm,1.1s
E07A  Sunnyside        85.58  36  P        P       11 43 26.8  +2.2
E07A                              IAmb     IAmb    11 43 27.5
            comp=Z,13nm,0.9s
MTPU  Mount Pierson    85.59  47  P        P       11 43 28.1  +2.8
HAWA  Hanford          85.66  37  P        P       11 43 26.8  +1.9
HAWA                              IAmb     IAmb    11 43 27.9
            comp=Z,14nm,0.9s
MVU   Marysvale        85.81  46  P        P       11 43 27.6  +1.4
GHO   Glory Hole Cre   85.81  14  P        P       11 43 25.0  -0.4
MSU   Marysvale        85.83  46  P        P       11 43 28.8  +2.5
ENH   Enshi            85.85 304  P        P       11 43 27.3  +1.0
ENH                               IAmb     IAmb    11 43 28.0
            comp=Z,18nm,0.8s
BMO   Blue Mountains   86.03  39  P        P       11 43 28.6  +1.7
121A  Cookes Peak, D   86.04  53  P        P       11 43 29.8  +2.5
            baz=242
CUT   Chulitna         86.09  13  P        P       11 43 27.1  +0.6
            baz=206
MFID  Camas Ranch      86.11  40  P        P       11 43 29.4  +2.1
MFID                              IAmb     IAmb    11 43 30.0
            comp=Z,5.7nm,0.9s
E09A  Wood Farm, Sta   86.51  37  P        P       11 43 30.9  +1.9
E09A                              IAmb     IAmb    11 43 31.5
            comp=Z,20nm,1.2s
N25K  Chitina, Valde   86.69  16  P        P       11 43 30.3  +0.8
            baz=212
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F10A  Beach Ranch, E   86.72  38  P        P       11 43 31.3  +1.2
F10A                              IAmb     IAmb    11 43 32.3
            comp=Z,22nm,0.9s
TMUT  Trail Mountain   86.88  46  P        P       11 43 33.8  +2.5
BARN  Barnard Glacie   87.00  17  P        P       11 43 32.5  +1.3
TRF   Thorofare Moun   87.03  12  P        P       11 43 31.2   0.0
HLID  Hailey           87.05  41  P        P       11 43 33.9  +2.1
            baz=237
HLID  Hailey           87.05  41  P        P       11 43 32.4  +0.6
HLID                              IAmb     IAmb    11 43 34.8
            comp=Z,7.4nm,1.0s
HVU   Hansel Valley    87.13  43  P        P       11 43 33.5  +1.3
SRU   San Rafael Swe   87.25  46  P        P       11 43 34.8  +2.0
RND   Reindeer         87.28  13  P        P       11 43 32.4  +0.2
P17A  Butcher Ranch,   87.29  46  P        P       11 43 35.8  +2.7
LENM  Lemitar          87.40  52           pP      11 45 38.3  +0.2
MNTX  Cornudas Mount   87.48  55  P        P       11 43 35.7  +1.8
            baz=244
MNTX  Cornudas Mount   87.48  55  P        P       11 43 36.2  +2.4
MNTX                              IAmb     IAmb    11 43 37.0
            comp=Z,5.7nm,0.9s
MCK   McKinley         87.56  13  P        P       11 43 33.7  +0.2
            baz=208
TCUT  Toone Canyon     87.67  44  P        P       11 43 37.0  +2.1
VNA3  Neumayer Olymp   87.70 176  P        P       11 43 34.0  -0.3
TX31  Lajitas Ar. Si   87.78  58  P        P       11 43 38.0  +2.6
TX32  Lajitas Array    87.78  58  P        P       11 43 36.4  +0.9
TX32                              IAmb     IAmb    11 43 38.9
            comp=Z,7.9nm,1.1s
TXAR  Lajitas Array    87.78  58  P        P       11 43 37.9  +2.5
            comp=Z,3.7nm,0.8s,baz=219,slow=5.9,SNR=44
TXAR  Lajitas Array    87.78  58  P        P       11 43 36.7  +1.2
XAN   Xi'an            87.98 308  P        P       11 43 37.0  +0.8
XAN                               pmax     pmax
            comp=Z,14nm,1.2s
XAN                               pmax     pmax
            comp=Z,230nm,3.8s
BCYI  Bear Canyon      88.06  41  P        P       11 43 38.8  +2.2
NEW   Newport          88.08  36  P        P       11 43 37.6  +1.3
            baz=235
NEW   Newport          88.08  36  P        P       11 43 37.7  +1.3
ANMO  Albuquerque      88.13  51  P        P       11 43 38.5  +1.3
            baz=243
ANMO  Albuquerque      88.13  51  P        P       11 43 38.9  +1.8
ANMO                              IAmb     IAmb    11 43 39.8
            comp=Z,7.1nm,1.2s
VNA2  Neumayer--Watz   88.14 177  P        P       11 43 36.0  -0.3
            baz=193,slow=3.9
L26K  Log Cabin Wild   88.21  15  P        P       11 43 36.3  -0.3
            baz=213
NEA2  Nenana           88.30  12  P        P       11 43 36.7  -0.2
            baz=208
VNA1  Neumayer--Stat   88.37 177  P        P       11 43 37.5  +0.2
MLY   Manley           88.37  11  P        P       11 43 36.9  -0.4
            baz=206
WRH   Wood River Hil   88.39  13  P        P       11 43 37.6  +0.3
GDL2  Guadalupe Moun   88.47  55  P        P       11 43 39.5  +0.8
HDA   Harding Lake     88.57  13  P        P       11 43 37.8  -0.3
            baz=210
HDA   Harding Lake     88.57  13  P        P       11 43 38.3  +0.1
HDA                               IAmb     IAmb    11 43 39.1
            comp=Z,9.3nm,0.7s
CCB   Clear Creek Bu   88.60  13  P        P       11 43 38.1  -0.2
MCMT  McKenzie Canyo   88.67  40  P        P       11 43 40.3  +0.8
I23K  Minto, Yukon-K   88.73  12  P        P       11 43 38.7  -0.2
            baz=207
SUKH  Sukhothai        88.78 289  P        P       11 43 42.0  +1.8
TCOL  CIGO, UAF Yank   88.79  13  P        P       11 43 39.1   0.0
            baz=209
TCOL  CIGO, UAF Yank   88.79  13  P        P       11 43 39.3  +0.2
MDM   Murphy Dome      88.79  12  P        P       11 43 38.7  -0.5
COLA  College          88.79  13  P        P       11 43 39.3  +0.2
SCRK  Sand Creek       88.86  15  P        P       11 43 40.3  +0.6
            baz=212
CLNB  Carlsbad         88.87  55  P        P       11 43 42.0  +1.5
IL31                   88.90  13  P        P       11 43 39.4  -0.3
IL31                              IAmb     IAmb    11 43 40.5
            comp=Z,13nm,1.1s
ILAR  Eielson Array    88.90  13  P        P       11 43 39.4  -0.3
            comp=Z,8.9nm,1.0s,baz=218,slow=4.8,SNR=40
ILAR  Eielson Array    88.90  13  P        P       11 43 39.0  -0.7
MSO   Missoula         89.08  38  P        P       11 43 41.1   0.0
            baz=238
POKR  Poker Plat Res   89.09  13  P        P       11 43 40.3  -0.2
            baz=209
S22A  4UR Ranch, Cre   89.15  49  P        P       11 43 43.3  +1.4
            baz=243
S22A  4UR Ranch, Cre   89.15  49  P        P       11 43 43.9  +2.0
REDW  Red Top Meadow   89.16  42  P        P       11 43 43.3  +1.6
REDW                              IAmb     IAmb    11 43 44.4
            comp=Z,11nm,1.1s
O20A  White River Ci   89.29  46  P        P       11 43 44.0  +1.6
            baz=242
HHC   Hu-ho-hao-te     89.29 315 eP        P       11 43 46.0  +3.8
HHC                               pmax     pmax
            comp=Z,7.0nm,1.0s
HHC                               pmax     pmax
            comp=Z,30nm,5.2s
PLCA  Paso Flores      89.35 134  P        P       11 43 44.5  +1.9
            comp=Z,3.1nm,0.9s,baz=16,slow=1.9,SNR=4.0
K27K  Chicken          89.36  15  P        P       11 43 43.1  +1.2
            baz=214
K27K  Chicken          89.36  15  P        P       11 43 41.8  -0.1
K27K                              IAmb     IAmb    11 43 44.7
            comp=Z,12nm,1.1s
LOHW  Long Hollow      89.44  42  P        P       11 43 44.9  +1.9
LOHW                              IAmb     IAmb    11 43 45.1
            comp=Z,3.5nm,0.8s
FLWY  Flagg Ranch      89.61  42  P        P       11 43 46.2  +2.4
FLWY                              IAmb     IAmb    11 43 46.9
            comp=Z,14nm,1.1s
CM36  Chiang Mai Arr   89.64 290  P        P       11 43 46.0  +1.8
CM35  Chiang Mai Arr   89.65 290  P        P       11 43 45.0  +0.8
BW06  Boulder Array    89.69  43  P        P       11 43 45.2  +1.0
            baz=241
BW06  Boulder Array    89.69  43  P        P       11 43 45.5  +1.4
BW06                              IAmb     IAmb    11 43 46.1
            comp=Z,4.9nm,0.8s
PD31  Pinedale Array   89.69  43  P        P       11 43 45.5  +1.2
PD31                              IAmb     IAmb    11 43 46.1
            comp=Z,4.4nm,0.8s
PDAR  Pinedale Array   89.69  43  P        P       11 43 45.4  +1.2
            comp=Z,3.6nm,0.7s,baz=211,slow=3.2,SNR=37
PDAR  Pinedale Array   89.69  43  P        P       11 43 44.4  +0.2
CM04  Chiang Mai Arr   89.70 290  P        P       11 43 46.6  +2.2
YHL   Hebgen Lake      89.70  41  P        P       11 43 47.0  +2.7
CM09  Chiang Mai Arr   89.70 290  P        P       11 43 46.8  +2.2
CM34  Chiang Mai Arr   89.72 290  P        P       11 43 46.0  +1.4
CM01  Chiang Mai Arr   89.72 290  P        P       11 43 46.0  +1.4
CM05  Chiang Mai Arr   89.73 290  P        P       11 43 46.7  +2.1
CM02  Chiang Mai Arr   89.74 290  P        P       11 43 46.9  +2.2
YMR   Madison River    89.74  41  P        P       11 43 44.8  +0.4
CMAR  Chiang Mai Arr   89.75 290  P        P       11 43 46.1  +1.3
            comp=Z,7.3nm,0.9s,baz=121,slow=3.0,SNR=35
CMAR                              PP       PP      11 47 28.6  +0.6
            comp=Z,0.5nm,0.4s,baz=136,slow=5.9,SNR=5.7
CMAR  Chiang Mai Arr   89.75 290  P        P       11 43 45.1  +0.4
CM15  Chiang Mai Arr   89.77 290  P        P       11 43 47.0  +2.2
CM13  Chiang Mai Arr   89.77 290  P        P       11 43 46.0  +1.2
BOZ   Bozeman (W)      89.81  40  P        P       11 43 46.4  +1.8
            baz=239
PRP   Porcupine Dome   89.84  13  P        P       11 43 45.7  +1.5
PRP                               IAmb     IAmb    11 43 45.9
            comp=Z,14nm,1.4s
H17A  Grant Village    89.85  42  P        P       11 43 47.5  +2.6
            baz=240
CMMT  Chiang Mai       89.88 290  P        P       11 43 46.8  +1.4
CM33  Chiang Mai Arr   89.88 290  P        P       11 43 46.0  +0.7
CHTO  Chiang Mai       89.89 290  P        P       11 43 46.5  +1.2
CHTO                              IAmb     IAmb    11 43 47.4
            comp=Z,7.5nm,0.9s
LKWY  Lake             90.04  42           pP      11 45 51.5  +0.5
DAWY  Dawson           90.07  16  P        P       11 43 46.0  +0.8
DAWY                              IAmb     IAmb    11 43 46.9
            comp=Z,13nm,1.0s
SDCO  Great Sand Dun   90.08  49  P        P       11 43 47.8  +1.6
            baz=243
EGAK  Eagle            90.21  15  P        P       11 43 46.6  +0.9
EGAK                              IAmb     IAmb    11 43 47.3
            comp=Z,15nm,1.1s
MSTX  Muleshoe         90.44  54  P        P       11 43 48.9  +1.1
            baz=245
COLD  Coldfoot         90.45  11  P        P       11 43 47.8  +1.0
            baz=206
COLD  Coldfoot         90.45  11  P        P       11 43 48.0  +1.2
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COLD                              IAmb     IAmb    11 43 48.8
            comp=Z,9.1nm,1.0s
YNE   Yellowstone No   90.50  41  P        P       11 43 50.2  +2.3
T25A  Trinidad         90.59  50  P        P       11 43 50.2  +1.7
            baz=244
BI02  San Fabin de     90.69 130  P        P       11 43 50.3  +1.3
BI02                              IAmb     IAmb    11 43 51.5
            comp=Z,13nm,1.1s
ISCO  Idaho Springs    90.93  47  P        P       11 43 51.5  +1.4
            baz=243
RLMT  Red Lodge        91.02  41  P        P       11 43 52.4  +2.1
            baz=241
N23A  Red Feather La   91.19  46  P        P       11 43 53.0  +1.8
            baz=243
JCT   Junction City    91.31  58  P        P       11 43 52.4  +0.7
            baz=246
EPYK  Eagle Plains     92.59  16  P        P       11 43 57.5  +0.8
            baz=219
LZH   Lanzhou          92.62 308 ⇓P        P       11 43 58.9  +1.1
LZH                               pP       pP      11 46 04.3  +1.5
LZH                               sP       sP      11 47 00.8  +0.7
LZH                               PP       PP      11 47 52.3  +2.1
LZH                               pmax     pmax
            comp=Z,20nm,1.4s
LZH                               pmax     pmax
            comp=Z,130nm,6.3s
A21K  Barrow           93.31   7  P        P       11 44 00.5  +0.7
            baz=201
JTS   Las Juntas de    96.98  82  P        P       11 44 15.5  -2.3
YKA   Yellowknife Ar   97.18  25  P        P       11 44 18.0  +0.5
            comp=Z,0.6nm,0.7s,baz=241,slow=4.2,SNR=10
S54A  Dingess, Beckl  108.12  56  P        PKiKP   11 49 10.9  +1.1
            baz=257
MKAR  Makanchi Array  111.12 313  PKiKP    PKiKP   11 49 13.9  -1.3
            comp=Z,1.7nm,0.9s,baz=205,slow=0.3,SNR=9.1
KURK  Kurchatov       113.97 317           PKiKP   11 49 19.0  -1.5
KURBB Kurchatov Arra  114.02 317  PKiKP    PKPdf   11 49 19.0  -1.6
            comp=Z,1.4nm,1.0s,baz=108,slow=1.8,SNR=5.8
BVAR  Borovoye Array  119.08 320  PKP      PKPdf   11 49 29.2  -1.1
            comp=Z,0.8nm,0.3s,baz=310,slow=48,SNR=8.0
SPITS Spitsbergen Ar  122.30 356  PKP      PKPdf   11 49 34.4  -1.4
            comp=Z,10nm,0.9s,baz=77,slow=3.8,SNR=6.3
ARU   Arti            125.28 325  PKP      PKPdf   11 49 41.8  -0.2
            comp=Z,1.2nm,0.3s,baz=353,slow=3.3,SNR=6.3
ABKAR Akbulak array   126.05 316  PKPdf    PKPdf   11 49 42.8  -0.9
AKTO  Aktyubinsk      127.05 318  PKP      PKiKP   11 49 46.0  -0.2
            comp=Z,2.9nm,0.9s,baz=357,slow=3.7,SNR=7.7
ARCES ARCESS Array B  129.29 349  PKP      PKPdf   11 49 49.0  -0.3
            comp=Z,1.0nm,0.5s,baz=36,slow=1.4,SNR=17
KLMR  Klimovskoe      132.09 336 ePKPdf    PKPdf   11 49 53.0  -1.8
KLMR                              AMP              11 50 07.3
            comp=Z,15nm,1.5s
KLMR                             ePP       PP      11 52 24.3  -1.1
BELG  Belogornoye     132.65 323  PKP      PKiKP   11 49 56.9  -0.5
            comp=Z,16nm,0.9s,baz=63,slow=3.2,SNR=7.4
FINES FINESS Array B  136.07 343  PKP      PKiKP   11 50 03.7  -0.4
            comp=Z,2.7nm,0.8s,baz=90,slow=2.8,SNR=6.7
FINES                             SKPbc    SKPbc   11 52 41.2  +0.8
            comp=Z,6.6nm,0.8s,baz=91,slow=7.6,SNR=10
NOA   NORSAR Array B  139.38 353  PKhKP    PKPpre  11 50 01.9
            comp=Z,1.1nm,0.8s,baz=16,slow=4.8,SNR=3.6
NOA                               SKPbc    SKiKP   11 52 51.5  -1.1
            comp=Z,3.0nm,0.9s,baz=15,slow=4.3,SNR=4.2
HFS   Hagfors         139.92 350  PKhKP    PKPpre  11 50 02.1
            comp=Z,2.2nm,0.3s,baz=74,slow=2.9,SNR=18
KOPT  Kop Dagi        141.72 309  PKPdf    PKPdf   11 50 11.6  -2.0
SUW   Suwalki         143.08 339 ePKP      PKPbc   11 50 13.4   0.0
SUW   Suwalki         143.08 339           PKPpre  11 50 13.2
AKASG Malin Array Be  143.16 330  PKhKP    PKPpre  11 50 12.7
            comp=Z,7.7nm,0.3s,baz=44,slow=4.5,SNR=34
AKASG                             SKPbc    SKiKP   11 53 00.3  -0.3
            comp=Z,0.5nm,0.3s,baz=42,slow=3.5,SNR=8.7
AKBB  Malin Array Si  143.16 330           PKPpre  11 50 12.8
SORM  Soroca          145.32 328 ⇓P        PKPbc   11 50 20.0  -0.4
EKA   Eskdalemuir Ar  145.52   5  PKPbc    PKPbc   11 50 20.9   0.0
            comp=Z,1.4nm,0.3s,baz=354,slow=3.1,SNR=5.7
BEL   Belsk           145.70 339 ePKP      PKPbc   11 50 21.9  +0.5
ILGA  Ilgaz           146.12 314           PKPbc   11 50 22.9  -0.4
BSEG  Bad Segeberg    146.40 350 ePKPbc    PKPbc   11 50 23.7  +0.4
            baz=18,slow=2.5
BR131 Keskin Array S  146.74 311  PKPdf    PKPdf   11 50 23.4  +1.3
BRTR  Keskin Array B  146.74 311  PKPbc    PKPbc   11 50 24.6  -0.4
            comp=Z,4.0nm,0.8s,baz=130,slow=4.8,SNR=19
KWP   Kalwaria Pacla  146.78 334 ePKP      PKPab   11 50 27.6   0.0
KWP   Kalwaria Pacla  146.78 334           PKPbc   11 50 24.3  -0.2
TLCR                  146.96 323 ⇑P        PKPbc   11 50 25.1   0.0
BUR08 Bucovina Ar. S  147.18 330           PKiKP   11 50 27.0  -0.5
BURAR Bucovina Array  147.20 330 ⇑P        PKPbc   11 50 26.4  +0.6
BURAR Bucovina Array  147.20 330           PKPbc   11 50 26.3  +0.5
BIZ   Bicaz           147.25 328 ⇓P        PKPbc   11 50 26.6  +0.8
CFR   Carcaliu        147.35 324 ⇓P        PKPbc   11 50 26.1   0.0
TPGR  Topolog         147.39 323 ⇓P        PKPbc   11 50 26.7  +0.4
OJC   Ojcow           147.40 338 ePKP      PKPbc   11 50 26.6  +0.5
KOLS  Kolonicke sedl  147.50 334 ePKP      PKPbc   11 50 27.1  +0.7
MMAI  Mount Meron Ar  147.56 299  PKPbc    PKPbc   11 50 27.9  +0.7
            comp=Z,12nm,0.7s,baz=81,slow=5.2,SNR=12
TIRR  Tirgusor        147.64 323 ⇑P        PKPbc   11 50 26.3  -0.5
VRI   Vrincioaia      147.66 326 ⇑P        PKPbc   11 50 25.7  -1.3
PLOR  Plostina        147.71 326 ⇑P        PKPbc   11 50 25.9  -1.2
HARR  Harsova         147.76 323 ⇑P        PKPbc   11 50 27.8  +0.7
FLTG  Flechtingen     147.79 349 ePKPbc    PKPbc   11 50 27.1  +0.1
            baz=18,slow=2.5
CRVS  Cervenica-Dubn  147.85 335 ePKP      PKPbc   11 50 28.0  +0.7
NIE   Niedzica        147.88 337 ePKP      PKiKP   11 50 28.6  -0.2
KSP   Ksiaz           147.98 342 ePKP      PKiKP   11 50 28.6  -0.3
OSTC  Ostas           148.25 342⇑ePKP      PKPbc   11 50 28.7  +0.4
DOPR  Dopca           148.28 327 ⇓P        PKiKP   11 50 29.3  -0.4
MLR   Muntele Rosu    148.32 326  PKPbc    PKPbc   11 50 28.4  -0.4
            comp=Z,10.0nm,0.8s,baz=314,slow=0.6,SNR=8.2
MLR   Muntele Rosu    148.32 326 ⇑P        PKPbc   11 50 27.9  -0.8
MLR   Muntele Rosu    148.32 326  PKPdf    PKPbc   11 50 27.1  -1.6
CLL   Collm           148.40 346 i PKPbc   PKPbc   11 50 28.8  +0.2
            comp=Z,20nm,1.0s
CLL                              i PKPab   PKPab   11 50 34.4  +0.3
            comp=Z,10.0nm,0.9s
CLL   Collm           148.40 346           PKPbc   11 50 28.6   0.0
CLL   Collm           148.40 346 ePKPbc    PKPbc   11 50 29.0  +0.5
            baz=18,slow=2.5
DPC   Dobruska-Polom  148.41 342⇑ePKP      PKPbc   11 50 29.2  +0.5
DPC                              ePKPAB    PKPab   11 50 34.6  +0.3
LANS  Liptovska Anna  148.41 337 ePKP      PKiKP   11 50 30.2  +0.3
LANS                             e                 11 50 35.8
CLZ   Clausthal       148.41 349 ePKPbc    PKiKP   11 50 29.3  -0.4
            baz=18,slow=2.5
MORC  Moravsky Berou  148.53 340 ⇓P        PKiKP   11 50 29.7  -0.5
MORC  Moravsky Berou  148.53 340  PKPbc    PKPbc   11 50 27.6  -1.5
MORC                                       PKPab   11 50 35.5  +0.7
EIL   Elat            148.56 293  PKPbc    PKPbc   11 50 28.7  -1.0
            comp=Z,8.8nm,1.0s,baz=99,slow=20,SNR=4.6
KECS  Kecovo          148.57 335 ePKP      PKiKP   11 50 30.2   0.0
KECS                             e                 11 50 35.7
BRG   Berggiesshubel  148.58 345 ePKP      PKPbc   11 50 29.4  +0.4
BRG                               Amp              11 50 31.4
            comp=Z,47nm,1.7s
BRG   Berggiesshubel  148.58 345 ePKP      PKPbc   11 50 29.4  +0.4
BRG                               Amp              11 50 31.4
            comp=Z,47nm,1.7s
BRG   Berggiesshubel  148.58 345 ePKPbc    PKPbc   11 50 29.5  +0.4
            baz=18,slow=2.5
FBE   Freiberg        148.67 345 ePKPbc    PKiKP   11 50 29.9  -0.4
            baz=18,slow=2.5
PVCC  Panska Ves      148.73 344⇑ePKP      PKiKP   11 50 30.0  -0.4
GTTG  Gottingen       148.77 350 ePKPbc    PKiKP   11 50 30.1  -0.4
            baz=18,slow=2.5
VOIR                  148.81 327 ⇓P        PKPbc   11 50 29.5  -0.4
LEF   Lefka           149.00 304 ⇓P        PKPbc   11 50 29.9  -0.7
ARR   Arges           149.07 327 ⇑P        PKiKP   11 50 31.8  +0.4
VYHS  Vyhne           149.19 337 ePKP      PKiKP   11 50 31.2  -0.3
VYHS                             e                 11 50 38.3
PRU   Pruhonice       149.23 343⇑ePKP      PKPbc   11 50 31.0  +0.3
VRAC  Vranov          149.25 340 ePKP      PKPbc   11 50 31.0  +0.3
VRAC                             e                 11 50 38.4
PSZ   Piszkesteto     149.26 335           PKPbc   11 50 30.4  -0.6
JAVC  Velka Javorina  149.29 339 ePKP      PKiKP   11 50 32.3  +0.6
JAVC                             e                 11 50 39.7
MOX   Moxa            149.32 347 ePKPbc    PKPbc   11 50 31.2  +0.4
            baz=18,slow=2.5
KASTN Kahler Asten    149.34 351 ePKPbc    PKiKP   11 50 31.4  -0.3
            baz=18,slow=2.5
TANN  Tannenbergstha  149.35 346 ePKPbc    PKPbc   11 50 31.4  +0.4
            baz=18,slow=2.5
PLN   Plauen          149.35 346 ePKPbc    PKiKP   11 50 31.4  -0.3
            baz=18,slow=2.5
GUNZ  Gunzen          149.43 346 ePKPbc    PKiKP   11 50 31.8  -0.2
            baz=18,slow=2.5
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WERN	Wernitzgruen	149.49	346	ePKPbc	PKiKP	11 50 31.9	-0.2
	baz=18,slow=2.5						
KRUC	Moravsky	149.53	340	ePKP	PKPbc	11 50 31.5	+0.1
KRUC				e		11 50 39.4	
NKC	Novy Kostel	149.53	346	⇑ePKP	PKPbc	11 50 31.4	0.0
SIRR	Siria	149.83	331	⇓P	PKPbc	11 50 32.4	+0.2
MODS	Modra-Piesok	149.84	339	ePKP	PKPbc	11 50 32.4	+0.2
MODS				e		11 50 41.2	
GZR	Gura Zlata	149.97	329	⇓P	PKPbc	11 50 32.6	0.0
ROTZ	Rotzenmuhle	150.02	346	ePKPbc	PKiKP	11 50 32.9	-0.2
	baz=18,slow=2.5						
MEM	Membach	150.21	354	dPKPbc	PKiKP	11 50 33.4	-0.1
BTNL	Ternell	150.22	354	dPKPbc	PKiKP	11 50 33.3	-0.2
KHC	Kasperske Hory	150.27	344	⇑ePKP	PKPbc	11 50 33.1	-0.1
KHC				ePKPAB	PKPab	11 50 41.1	-0.9
KHC	Kasperske Hory	150.27	344		PKiKP	11 50 33.7	-0.1
KHC					PKPab	11 50 42.7	+0.6
BZS	Buzias	150.35	331	⇑P	PKiKP	11 50 33.8	-0.2
GEC2	GERESS Array S	150.50	343		PKiKP	11 50 34.2	-0.1
GEC2	GERESS Array S	150.50	343	ePKPbc	PKPbc	11 50 33.9	+0.2
	baz=18,slow=2.5						
GERES	GERESS Array B	150.50	343	PKPbc	PKPbc	11 50 34.0	+0.2
	comp=Z,5.2nm,0.8s,baz=48,slow=2.0,SNR=22						
GERES	GERESS Array B	150.50	343		PKPbc	11 50 33.3	-0.5
HERR	Herculane	150.52	329	⇓P	PKPbc	11 50 33.9	0.0
CONA	Conrad Observa	150.69	340	eP	PKPbc	11 50 33.9	-0.3
	comp=Z,5.4nm,0.7s						
MDVR	Moldovita	150.93	329	⇓P	PKPbc	11 50 35.0	+0.1
MOA	Molln	151.25	342	i P	PKPbc	11 50 35.5	0.0
	comp=Z,1.7nm,0.6s						
STU	Stuttgart	151.57	349	ePKPbc	PKiKP	11 50 36.6	+0.2
	baz=18,slow=2.5						
VTS	Vitosha	151.70	325	⇓P	PKPbc	11 50 36.7	-0.1
SOKA	Soboth	152.06	340	eP	PKPbc	11 50 36.9	-0.4
	comp=Z,3.2nm,0.7s						
KBA	Koelnbreinsper	152.21	342	eP	PKPbc	11 50 37.4	-0.4
	comp=Z,6.4nm,0.9s						
DIVS	Divibare	152.25	330		PKPbc	11 50 37.8	-0.1
WATA	Walderalm	152.44	345	eP	PKiKP	11 50 38.6	+0.2
	comp=Z,1.6nm,0.3s						
WTTA	Wattenberg	152.49	345	eP	PKPbc	11 50 38.3	-0.2
	comp=Z,2.7nm,0.4s						
MOTA	Moosalm	152.54	346	eP	PKPbc	11 50 38.5	0.0
	comp=Z,3.0nm,0.5s						
SQTA	Sankt Quirin	152.64	345	eP	PKiKP	11 50 38.8	0.0
	comp=Z,2.9nm,0.6s						
ABTA	Abfaltersbach	152.75	343	eP	PKPbc	11 50 38.4	-0.4
	comp=Z,5.1nm,0.7s						
DAVA	Damuels	152.87	347	eP	PKPbc	11 50 38.4	-0.8
	comp=Z,0.6nm,0.1s						
FETA	Feichten	152.94	346	eP	PKiKP	11 50 39.5	0.0
	comp=Z,2.2nm,0.7s						
DAVOX	Davos/Dischmat	153.35	347	PKPbc	PKPbc	11 50 40.2	-0.1
	comp=Z,6.2nm,0.9s,baz=359,slow=8.8,SNR=5.3						
PDG	Podgorica	153.87	329	⇓P	PKPbc	11 50 40.4	-0.8
ESDC	Sonseca Array	160.80	13	PKPab	PKPab	11 51 28.6	+1.0
	comp=Z,4.2nm,1.1s,baz=349,slow=4.5,SNR=6.9						
TORD	Torodi Ar. Bea	172.21	182	PKP	PKPdf	11 50 49.5	-1.2
	comp=Z,1.3nm,1.0s,baz=359,slow=1.5,SNR=3.9						
TORD				PKPab	PKPab	11 52 18.1	-0.4
	comp=Z,1.9nm,0.9s,baz=178,slow=3.4,SNR=5.0						

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*UPP **15** 11:40:36.6±2.7, 62°.79N×27°.80E, h0^{km}, ML1.9, Suspected explosion*

*HEL **15** 11:40:38.9±0.1, 63°.10N×27°.75E, h0^{km}, ML2.0, Explosion*

*IDC **15** 11:40:39.0±1.5, 63°.10N×27°.69E, h0^{km}, mb1 3.1/3, mb1mx2.9/39, mbtmp3.1/3, ML2.1/3, Error ellipse: s-maj=20.2km s-min=6.1km az=101.0*

ISC 15 11:40:37.9±0.9**, 63°.03N**±0°.03×**27°.76E**±0°.04**, h0^{km}, n36, σ1^{s}30**/55**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUF	Sumiainen	0.80	248	PG	Pg	11 40 53.4	+0.1
	baz=66						
SUF				SG	Sg	11 41 04.8	+1.2
KAF	Kangasniemi	1.14	217	PG	Pb	11 41 00.2	-0.3
KAF				SN	Sn	11 41 16.8	-0.7
KEF	Keuruu	1.59	238	PG	Pb	11 41 08.0	-0.2
KEF				MSG		11 41 27.6	
	comp=Z,6.0nm,0.2s						
KEF				SN	Sg	11 41 29.4	+0.4
JOF	Joensuu	1.63	92	PG	Pn	11 41 08.0	+0.2
	baz=274						
JOF				SG	Sn	11 41 29.2	-0.2
FIA0	FINESS Array S	1.78	207	PG	Pg	11 41 11.6	-0.4
	baz=24						
FIA0				SG	Sg	11 41 35.8	+0.8
FINES	FINESS Array B	1.78	207	Pg	Pg	11 41 11.8	-0.2
	comp=Z,0.8nm,0.3s,baz=22,slow=16,SNR=28						
FINES				Lg	Lg	11 41 36.4	
	comp=Z,2.2nm,0.3s,baz=24,slow=29,SNR=38						
OUF	Merijarvi	1.90	316	PG	Pn	11 41 11.2	-0.3
	baz=131						
OUF				MSG		11 41 34.1	
	comp=Z,13nm,0.2s						
OUF				SG	Sn	11 41 36.1	-0.1
OBF0	Syolatti, Pyha	2.15	315	PB	Pn	11 41 15.6	+0.7
OBF0				SG	Sb	11 41 45.0	+0.3
OUL	Oulu	2.22	339	PB	Pn	11 41 16.3	+0.4
OUL				SB	Sn	11 41 43.8	-0.2
VAF	Ylistaro	2.32	273	PG	Pn	11 41 19.2	+1.9
VAF				MSG		11 41 47.3	
	comp=Z,13nm,0.2s						
VAF				SG	Sb	11 41 49.5	-0.2
VJF	Virojoki	2.50	182	PB	Pb	11 41 22.8	-0.9
VJF				MSG		11 41 54.8	
	comp=Z,6.1nm,0.2s						
VJF				SG	Sb	11 41 55.5	+0.5
PVF	Pernaja	2.65	201	PG	Pg	11 41 28.2	-0.5
PVF				MSG		11 41 59.0	
	comp=Z,3.8nm,0.2s						
NUR	Nurmijrvi	2.93	212	PG	Pb	11 41 31.1	+0.1
NUR				SG	Sg	11 42 09.9	-2.1
MSF	Maaselka	2.94	10	PN	Pn	11 41 26.4	+0.5
MSF				SN	Sn	11 42 02.0	+0.1
KU6	Riekki	3.14	16	PN	Pn	11 41 29.1	+0.5
	baz=203						
KU6				SN	Sn	11 42 07.7	+0.8
KU6				MSG		11 42 09.3	
	comp=Z,3.2nm,0.2s						
BURU	Burvik	3.23	302	P	Pn	11 41 30.0	+0.2
BURU				S	Sn	11 42 11.1	+2.2
BURU	Burvik	3.23	302	PN	Pn	11 41 30.0	+0.2
BURU				SN	Sn	11 42 09.6	+0.7
MEF	Metsahovi	3.25	211	PG	Pb	11 41 35.8	-0.6
UMAU	Umeaa	3.29	288	P	Pn	11 41 30.7	+0.1
UMAU				S	Sn	11 42 12.2	+1.8
UMAU	Umeaa	3.29	288	PN	Pn	11 41 30.9	+0.2
	baz=96						
TOF	Tornio	3.40	336	PN	Pn	11 41 33.0	+0.9
ODEU	Stanfors	3.42	297	P	Pn	11 41 32.8	+0.3
SJUU	Sjulsmark	3.66	316	P	Pn	11 41 36.2	+0.5
RNF	Rovaniemi	3.67	349	PB	Pn	11 41 38.7	+2.9
RNF				SN	Sn	11 42 20.6	+0.8
LILU	Lilltraesk	4.14	307	P	Pn	11 41 42.8	+0.5
HARU	Harads	4.29	320	P	Pn	11 41 44.7	+0.3
PAJU	Pajala	4.46	336	P	Pn	11 41 47.4	+0.6
PAJU	Pajala	4.46	336	PN	Pn	11 41 47.4	+0.6
PAJU				SN	Sn	11 42 38.5	-0.9
VRF	Varrio	4.80	8	PN	Pn	11 41 53.6	+2.2
SALU	Saltoluokta	5.84	322	P	Pn	11 42 06.1	+0.4
RATU	Laukkuluspa	5.89	328	P	Pn	11 42 07.2	+0.8
NIKU	Nikkaluokta	6.06	327	P	Pn	11 42 08.6	0.0
KOVU	Salmi	6.08	332	P	Pn	11 42 10.0	+1.0
ARCES	ARCESS Array B	6.59	353	Pn	Pn	11 42 14.8	-1.2
	baz=168,slow=14,SNR=6.4						
ARCES				Sn	Sn	11 43 25.8	-6.0
	baz=175,slow=24,SNR=1.5						
ARCES				Lg	Lg	11 43 55.9	
	baz=171,slow=25,SNR=1.3						
HFS	Hagfors	7.31	253	Pn	Pn	11 42 26.7	+0.9
	comp=Z,0.1nm,0.3s,baz=69,slow=12,SNR=5.8						
HFS				Lg	Lg	11 44 26.5	
	comp=Z,0.5nm,0.3s,baz=292,slow=24,SNR=1.6						
NOA	NORSAR Array B	8.03	263	Pn	Pn	11 42 32.8	-2.9
	comp=Z,0.0nm,0.3s,baz=69,slow=20,SNR=1.7						

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*IDC **15** 12:11:41.4±0.8, 44°.78N×44°.89E, h0^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.4/42, mbtmp3.6/8, ML3.6/3, MS3.6/1, Ms1 3.6/1, ms1mx2.4/42, Error ellipse: s-maj=27.7km s-min=7.2km az=145.0*

*MOS **15** 12:11:42.3±0.0, 45°.00N×44°.75E, h10^{km}, MPVA4.7*

*MOS **15** 12:11:42.7±0.8, 45°.02N×44°.80E, h7^{km}, mb4.4/1, Error ellipse: s-maj=6.3km s-min=3.8km az=84.8*

MOS Felt (III) at Levokumskoye.

*NORS **15** 12:11:43.6±0.0, 44°.93N×44°.71E, h10^{km}, MPVA4.7, FELT I=III MSK at Levokumskoe*

ISC 15 12:11:45.3±1.0**, 44°.98N**±0°.03×**44°.76E**±0°.02**, h19^{km}**±3^{km}**, n109, σ1^{s}30**/194**, mb3.4**/4**, 7C-3D, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOF	Gofitskoye	1.22	274	ePg	Pn	12 12 07.4	0.0
GOF				eSg	Sn	12 12 24.8	+1.4
GOF	Gofitskoye	1.22	274	ePG	Pn	12 12 07.4	0.0
GOF				eS	Sn	12 12 24.8	+1.4
TRKR	Terskaya	1.25	181	ePg	Pn	12 12 07.9	+0.1
TRKR				eSg	Sg	12 12 25.7	-0.2
TRKR	Terskaya	1.25	181	ePG	Pn	12 12 07.9	+0.1
TRKR				eS	Sg	12 12 25.7	-0.2
PRTR	Priterechnaya	1.27	196	ePg	Pn	12 12 08.5	+0.4
PRTR				eSg	Sg	12 12 26.8	+0.3
PRTR	Priterechnaya	1.27	196	⇑iPG	Pn	12 12 08.6	+0.6
PRTR				eS	Sg	12 12 26.3	-0.2
ALER	Alexandrovskoy	1.33	261	ePg	Pn	12 12 09.6	+0.7
ALER				eSg	Sg	12 12 28.1	-0.2
ALER	Alexandrovskoy	1.33	261	ePG	Pn	12 12 09.6	+0.7
ALER				eS	Sg	12 12 28.1	-0.2
PYA1	Pyatigorsk	1.50	233	ePg	Pn	12 12 11.4	+0.1
PYA1				eSg	Sb	12 12 30.9	-0.3
PYA1	Pyatigorsk	1.50	233	ePG	Pn	12 12 11.4	+0.1
PYA1				eS	Sb	12 12 31.0	-0.3
KBTC	Kuba-Taba	1.51	220	ePg	Pn	12 12 12.0	+0.6
KBTC				eSg	Sb	12 12 32.4	+0.9
KBTC	Kuba-Taba	1.51	220	ePG	Pn	12 12 12.1	+0.7
KBTC				eS	Sb	12 12 32.5	+0.9
BTKR	Batakoyurt	1.61	186	ePg	Pn	12 12 13.6	+0.8
BTKR				eSg	Sg	12 12 36.0	-1.3
BTKR	Batakoyurt	1.61	186	ePN	Pn	12 12 13.9	+1.1
BTKR				eS	Sg	12 12 36.0	-1.3
STDR	Stavd-Durt	1.68	198	ePg	Pn	12 12 15.0	+1.3
STDR				eSg	Sb	12 12 37.4	+0.9
STDR	Stavd-Durt	1.68	198	ePN	Pb	12 12 15.9	+0.2
STDR				eS	Sg	12 12 39.3	-0.3
BEYR	Belyy Ugol+	1.69	236	ePg	Pn	12 12 14.7	+0.8
BEYR				eSg	Sb	12 12 37.1	+0.4
BEYR	Belyy Ugol+	1.69	236	ePN	Pn	12 12 14.7	+0.8
BEYR				eS	Sb	12 12 37.1	+0.4
NCK	Nalchik	1.70	210	ePg	Pn	12 12 15.0	+1.1
NCK				eSg	Sb	12 12 37.2	+0.2
NCK	Nalchik	1.70	210	ePN	Pb	12 12 15.6	-0.4
NCK				eS	Sb	12 12 37.5	+0.5
KIV0	Kislovodsk Arr	1.80	236	ePg	Pn	12 12 14.7	-0.7
KIV0				eSg	Sb	12 12 39.5	-0.3
KVAR	Kislovodsk Arr	1.80	236	Pn	Pn	12 12 14.7	-0.7
	baz=98,slow=20,SNR=103						
KVAR				Lg	Lg	12 12 38.5	
	baz=177,slow=12,SNR=19						
KIV	Kislovodsk	1.80	236	ePg	Pn	12 12 14.5	-0.9
KIV				eSg	Sb	12 12 39.4	-0.6
KIV	Kislovodsk	1.80	236	ePN	Pn	12 12 14.7	-0.7
LSNR	Lesken	1.83	202	ePg	Pn	12 12 16.4	+0.7
LSNR				eSg	Sb	12 12 42.0	+1.3
LSNR	Lesken	1.83	202	cePN	Pb	12 12 18.2	+0.1
ARNR	Ardon	1.83	191	ePg	Pn	12 12 15.9	+0.2
ARNR				eSg	Sb	12 12 41.9	+1.3
ARNR	Ardon	1.83	191	ePN	Pn	12 12 15.9	+0.2
ARNR				eS	Sb	12 12 41.9	+1.3
KBZ	Khabaz	1.83	228	Pn	Pn	12 12 14.9	-0.8
	96nm,0.3s,baz=14,slow=3.0,SNR=262						
KBZ				Lg	Lg	12 12 39.4	
	108nm,0.3s,baz=254,slow=21,SNR=35						
KMGR	Komgaron	1.92	178	ePg	Pn	12 12 17.3	+0.3
KMGR				eSg	Sb	12 12 43.3	0.0
KMGR	Komgaron	1.92	178	ePN	Pb	12 12 19.1	-0.6
KMGR				eS	Sg	12 12 45.6	-1.5
GROC	Groznyy	1.92	157	ePg	Pn	12 12 18.1	+1.1
GROC				eSg	Sb	12 12 43.9	+0.6
GROC	Groznyy	1.92	157	⇓ePN	Pn	12 12 17.0	0.0
GROC				eS	Sg	12 12 46.6	-0.7
GROC				pmax	pmax		
	comp=Z,289nm,0.4s						
GROC				smax	smax		
	comp=Z,359nm,0.5s						
VLKR	Vladikavkaz	1.93	182	ePg	Pn	12 12 18.1	+0.9
VLKR				eSg	Sb	12 12 43.7	+0.1
VLKR	Vladikavkaz	1.93	182	ePN	Pn	12 12 18.1	+0.9
KORR	Kora	1.96	195	ePg	Pb	12 12 20.5	+0.2
KORR				eSg	Sb	12 12 43.2	-1.1
KORR	Kora	1.96	195	ePN	Pb	12 12 19.5	-0.8
KORR				eS	Sg	12 12 46.6	-1.6
NVNR	Nevinnomyssk	2.02	261	ePg	Pn	12 12 19.0	+0.6
NVNR				eSg	Sn	12 12 44.9	+1.8
NVNR	Nevinnomyssk	2.02	261	ePN	Pn	12 12 18.4	0.0
LACR	Lac	2.17	189	ePg	Pn	12 12 19.5	-1.1
LACR				eSg	Sb	12 12 49.6	-1.1
LACR	Lac	2.17	189	dePN	Pn	12 12 19.3	-1.3
DIGR	Digorskoe uzhe	2.24	203	ePn	Pn	12 12 20.4	-1.2
DIGR				eSn	Sb	12 12 50.8	-2.0
DIGR	Digorskoe uzhe	2.24	203	ePN	Pn	12 12 20.4	-1.2
DIGR				eS	Sb	12 12 50.8	-2.0
DVE	Vedeno	2.25	153	ePn	Pn	12 12 21.0	-0.5
DVE				eSn	Sb	12 12 52.4	-0.3
DVE	Vedeno	2.25	153	ePN	Pn	12 12 21.1	-0.5
DVE				eS	Sb	12 12 52.0	-0.7
ZEI	Tsey	2.27	196	ePn	Pn	12 12 20.8	-1.2
ZEI				eSn	Sb	12 12 51.6	-2.1
ZEI	Tsey	2.27	196	ePN	Pn	12 12 20.8	-1.2
ZEI				eS	Sb	12 12 51.6	-2.1
DLMR	Dylym	2.33	144	ePn	Pn	12 12 22.6	-0.1
DLMR				eSn	Sn	12 12 53.3	+2.4
DLMR	Dylym	2.33	144	ePN	Pn	12 12 22.6	-0.1
DLMR				eS	Sn	12 12 53.3	+2.4
DBC	Dubki	2.46	142	ePn	Pn	12 12 24.1	-0.4
DBC				eSn	Sn	12 12 53.2	-0.9
DBC	Dubki	2.46	142	cePN	Pn	12 12 24.0	-0.4
DBC				eS	Sn	12 12 55.3	+1.2
DBC				pmax	pmax		
	comp=Z,60nm,0.5s						
DBC				smax	smax		
	comp=Z,98nm,0.4s						
BTLR	Botlikh	2.54	155	ePn	Pn	12 12 25.0	-0.6
BTLR				eSn	Sn	12 12 58.3	+2.3
BTLR	Botlikh	2.54	155	ePN	Pb	12 12 28.5	-1.8
BTLR				eS	Sb	12 13 00.9	-0.4
KRNR	Karanay	2.65	143	i Pn	Pn	12 12 26.7	-0.4
KRNR				eSn	Sn	12 12 58.3	-0.5
KRNR	Karanay	2.65	143	⇑iPN	Pn	12 12 26.7	-0.4
KRNR				eS	Sn	12 12 58.3	-0.5
KANR	Karaman	2.65	131	ePn	Pn	12 12 27.4	+0.4
KANR				eSn	Sn	12 13 00.7	+2.1
KANR	Karaman	2.65	131	ePN	Pn	12 12 27.4	+0.4
KANR				eS	Sn	12 13 00.7	+2.1
AHMR	Akhmetovskaya	2.78	254	ePn	Pn	12 12 29.3	+0.5
AHMR				eSn	Sn	12 13 02.9	+1.1
MAK	Makhachkala	2.83	135	ePn	Pn	12 12 31.2	+1.8
MAK				eSn	Sn	12 13 05.9	+3.0
MAK	Makhachkala	2.83	135	ePN	Pg	12 12 39.7	+0.2
MAK				pmax	pmax		
	comp=Z,407nm,0.4s						
MAK				MLR	MLR		
	comp=Z,357nm,2.0s						
ARKR	Arakani	2.87	145	ePn	Pn	12 12 29.6	-0.5
ARKR				eSn	Sn	12 13 07.7	+3.5
ARKR	Arakani	2.87	145	ePN	Pn	12 12 29.6	-0.5
ARKR				eS	Sn	12 13 07.7	+3.5
ARXR	Arkhyz	2.88	242	ePn	Pb	12 12 36.2	+0.1
ARXR				eSn	Sb	12 13 12.8	+1.9
ARXR	Arkhyz	2.88	242	ePN	Pn	12 12 31.4	+1.2
ARXR				eS	Sn	12 13 05.3	+0.9
LABN	Labinsk	2.89	265	ePn	Pn	12 12 31.1	+0.8
LABN				eSn	Sn	12 13 06.8	+2.2
LABN	Labinsk	2.89	265	ePN	Pn	12 12 31.1	+0.8
LABN				eS	Sn	12 13 06.8	+2.2
GNBR	Gunib	3.04	148	ePn	Pn	12 12 33.1	+0.7
GNBR				eSn	Sn	12 13 10.2	+1.9
GNBR	Gunib	3.04	148	ePN	Pn	12 12 33.1	+0.7
GNBR				eS	Sn	12 13 10.2	+1.9
ERBR	Yeremizino-Bor	3.10	285	ePn	Pn	12 12 33.7	+0.4
ERBR				eSn	Sn	12 13 10.2	+0.4
ERBR	Yeremizino-Bor	3.10	285	ePN	Pn	12 12 33.7	+0.4
ERBR				eS	Sn	12 13 10.2	+0.4
SGKR	Sergokala	3.28	139	ePn	Pn	12 12 35.8	+0.1
SGKR				eSn	Sn	12 13 16.1	+1.9
SGKR	Sergokala	3.28	139	ePN	Pn	12 12 35.8	+0.1
SGKR				eS	Sn	12 13 16.1	+1.9
LGD	Lagodekhi	3.32	161	ePn	Pn	12 12 37.1	+0.9
LGD				eSn	Sn	12 13 18.2	+3.0
LGD	Lagodekhi	3.32	161	ePN	Pn	12 12 37.1	+0.9
LGD				eS	Sn	12 13 18.2	+3.0
GUZR	Guzeripl'	3.46	255	ePn	Pn	12 12 37.9	-0.4
GUZR				eSn	Sn	12 13 19.6	+0.8
GUZR	Guzeripl'	3.46	255	ePN	Pn	12 12 37.9	-0.4
GUZR				eS	Sn	12 13 19.6	+0.8
RPOR	Krasnaya Polya	3.47	250	ePn	Pn	12 12 38.5	+0.2
RPOR				eSn	Sn	12 13 19.9	+1.0
RPOR	Krasnaya Polya	3.47	250	ePN	Pn	12 12 38.5	+0.2
RPOR				eS	Sn	12 13 19.9	+1.0
URKR	Urkarakh	3.50	142	ePn	Pn	12 12 39.4	+0.6
URKR				eSn	Sn	12 13 20.7	+0.9
URKR	Urkarakh	3.50	142	ePN	Pn	12 12 39.4	+0.6
URKR				eS	Sn	12 13 20.7	+0.9
VSLR	Vesyoloye	3.72	248	ePn	Pn	12 12 42.4	+0.7
VSLR				eSn	Sn	12 13 25.8	+0.8
VSLR	Vesyoloye	3.72	248	ePN	Pn	12 12 42.4	+0.7
VSLR				eS	Sn	12 13 25.8	+0.8
SOC	Sochi	3.88	251	ePn	Pn	12 12 44.5	+0.6
SOC				eSn	Sn	12 13 30.7	+1.8
SOC	Sochi	3.88	251	ePN	Pn	12 12 41.8	-2.1
SOC				e		12 13 28.6	
SOC				i SS	Sb	12 13 41.2	+1.5
SOC				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,218nm,8.0s						
LZRR	Lazarevskoye	3.99	257	ePn	Pn	12 12 46.1	+0.7
LZRR				eSn	Sn	12 13 32.8	+1.1
LZRR	Lazarevskoye	3.99	257	ePN	Pn	12 12 46.1	+0.7
LZRR				eS	Sn	12 13 32.8	+1.1
AKT	Akhty	4.11	147	ePn	Pn	12 12 48.4	+1.1
AKT				eSn	Sn	12 13 37.3	+2.4
AKT	Akhty	4.11	147	ePN	Pn	12 12 48.5	+1.3
AKT				e		12 12 57.7	
AKT				eS	Sn	12 13 38.6	+3.7
AKT				e		12 13 51.7	
AKT				e		12 14 03.0	
AKT				pmax	pmax		
	comp=Z,46nm,0.5s						
AKT				smax	smax		
	comp=E,54nm,0.4s						
AKT				smax	smax		
	comp=N,168nm,0.5s						
AKT				smax	smax		
	comp=N,129nm,0.5s						
AKT				MLR	MLR		
	comp=Z,87nm,2.0s						
TPSR	Tuapse	4.15	259	ePn	Pn	12 12 48.4	+0.8
TPSR				eSn	Sn	12 13 36.0	+0.5
TPSR	Tuapse	4.15	259	ePN	Pn	12 12 48.4	+0.8
TPSR				eS	Sn	12 13 36.0	+0.5
GNI	Garni	4.82	180	Lg	Lg	12 14 09.3	
	comp=Z,1.1nm,0.3s,baz=135,slow=22,SNR=1.3						
SIM	Simferopol'	7.55	274	eP	Pn	12 13 40.1	+5.8
SIM				pmax	pmax		
	comp=Z,41nm,1.3s						
BELG	Belogornoye	7.66	13	Pn	Pn	12 13 37.0	+1.2
	comp=Z,1.0nm,0.3s,baz=162,slow=5.2,SNR=4.2						
BELG				Sn	Sn	12 15 02.9	+1.0
	comp=Z,1.2nm,0.3s,baz=27,slow=24,SNR=1.8						
BELG	Belogornoye	7.66	13	P	Pn	12 13 37.0	+1.2
AKTO	Aktyubinsk	10.46	54	Pn	Pn	12 14 10.1	-4.1
	comp=Z,0.3nm,0.3s,baz=247,slow=6.4,SNR=6.0						
AKTO				Sn	Sn	12 16 05.2	-5.7
	comp=Z,0.6nm,0.3s,baz=89,slow=21,SNR=2.3						
AKTO	Aktyubinsk	10.46	54	⇓Pg	Pn	12 14 22.7	+8.5
	comp=Z,4.1nm,0.6s						
AKTO				⇑Lg	Lg	12 16 09.9	
	comp=Z,7.4nm,0.6s						
AB31	Akbulak array	11.19	62	⇑Pg	Pn	12 14 27.3	+3.1
	comp=Z,0.6nm,0.4s,baz=251,slow=11,SNR=8.4						
AB31				⇑Lg	Lg	12 16 23.2	
	comp=Z,1.6nm,0.5s,baz=248,slow=22,SNR=2.8						
MNK	Minsk	14.45	317	i P	Pn	12 15 06.4	-2.3
	comp=E,4.0nm,1.4s						
MNK				i P	Pn	12 15 06.4	-2.3
	comp=N,28nm,1.2s						
MNK				i P	Pn	12 15 06.4	-2.3
	comp=Z,5.0nm,0.6s						
MNK				i PP	P	12 15 14.3	-1.0
MNK				i PPP	PPP	12 15 22.0	
MNK				i S	Sn	12 17 46.6	-1.6
MNK				i SS	SnSn	12 18 01.3	+0.7
MNK				i SSS	SSS	12 18 13.9	
MNK				i LQ	LQ	12 19 20.6	
MNK				i PcP	PcP	12 20 21.5	-1.7
MNK				i LR	LR	12 20 26.6	
MNK				i LRM	MLR	12 21 47.7	
	comp=Z,89nm,9.3s						
MNK				i LRM	MLR	12 21 52.2	
	comp=N,105nm,15.7s						
MNK				i LRM	MLR	12 21 52.5	
	comp=E,17nm,11.2s						
KLMR	Klimovskoe	16.21	351	eP	Pn	12 15 32.9	+1.2
KLMR				pmax	pmax		
	comp=Z,22nm,1.6s						
KLMR	Klimovskoe	16.21	351	ePn	Pn	12 15 32.9	+1.2
KLMR				AMP		12 15 37.9	
	comp=Z,22nm,1.6s						
BVAR	Borovoye Array	18.57	55	P	P	12 16 00.6	-0.3
	comp=Z,0.3nm,0.3s,baz=297,slow=7.9,SNR=4.4						
FINES	FINESS Array B	19.80	333	P	P	12 16 15.6	+1.3
	comp=Z,0.3nm,0.3s,baz=140,slow=13,SNR=5.2						
FINES	FINESS Array B	19.80	333	i P	Pn	12 16 16.5	+0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	23.24	64	P	P	12 16 50.6	-0.6
	comp=Z,0.4nm,0.7s,baz=271,slow=11,SNR=6.5						
KURK	Kurchatov	23.30	64	P	P	12 16 50.6	-1.2
HFS	Hagfors	23.91	320	P	P	12 16 59.2	+1.5
	comp=Z,2.8nm,0.5s,baz=133,slow=10,SNR=2.6						
MKAR	Makanchi Array	26.03	73	P	P	12 17 17.1	-0.1
	comp=Z,0.1nm,0.6s,baz=280,slow=8.2,SNR=2.4						
ARCES	ARCESS Array B	26.48	345	P	P	12 17 21.7	+0.8
	comp=Z,1.4nm,0.8s,baz=145,slow=11,SNR=1.1						
USRK	Ussuriysk Ar.	59.06	57	LR	LR	12 47 40.5	
	comp=Z,58nm,21.2s,baz=156,slow=36						

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*DJA **15** 12:17:20.7±0.4, 7°S±5°×14°8E±°, h57^{km}±5^{km}, M4.8/11, mB4.9/2, mb4.5/11, MLv5.0/2, Mw(mB)4.2/2*

*NEIC **15** 12:17:22.6±1.0, 6°.78S±0°.03×147°.94E±0°.08, h67^{km}±7^{km}, mb4.4/18, Error ellipse: s-maj=11.9km s-min=4.2km az=75.0*

*IDC **15** 12:17:22.1±1.9, 6°.74S×148°.01E, h61^{km}±17^{km}, mb3.9/11, mb1 4.1/15, mb1mx3.9/33, mbtmp4.3/15, MS3.5/8, Ms1 3.5/8, ms1mx3.3/25, Error ellipse: s-maj=19.3km s-min=11.6km az=116.0*

*NOU **15** 12:17:24.2, 6°.75S×147°.90E, h73^{km}, mb4.6, Eastern New Guinea Reg., P.N.G.*

ISC 15 12:17:22.5±0.5**, 6°.77S**±0°.05×**147°.92E**±0°.07**, h67^{km}, n61, σ1^{s}08**/54**, mb4.4**/17**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.73	196	P	Pn	12 18 04.2	+0.1
	56nm,0.3s,baz=8.3,slow=5.9,SNR=124						
PMG				S	Sn	12 18 37.2	+1.2
	43nm,0.3s,baz=56,slow=8.9,SNR=7.5						
PMG				LR	LR	12 19 23.0	
	comp=Z,983nm,18.5s,baz=83,slow=44						
PMG	Port Moresby	2.73	196	Pn	Pn	12 18 03.9	-0.2
PMG	Port Moresby	2.73	196	P	Pn	12 18 05.3	+1.2
MANU	Manus Island	4.72	353		Sn	12 19 25.4	+0.6
RABL	Rabaul	4.94	59	Pn	Pn	12 18 34.0	-0.3
RABL	Rabaul	4.94	59	P	Pn	12 18 35.7	+1.4
COEN	Coen	8.54	213	Pn	Pn	12 19 23.7	+0.2
HNR	Honiara	12.20	103	P	Pn	12 20 12.6	-1.0
	7.8nm,0.3s,baz=126,slow=6.3,SNR=7.0						
HNR	Honiara	12.20	103	Pn	Pn	12 20 13.8	+0.2
HNR	Honiara	12.20	103	P	Pn	12 20 16.3	+2.7
	158nm,0.9s						
CTA	Charters Tower	13.34	187	P	Pn	12 20 30.4	+1.4

	0.3nm,0.3s,baz=16,slow=14,SNR=5.3						
CTAO	**Charters Tower**	**13.34**	**187**	Pn	**Pn**	**12 20 29.1**	**0.0**
MTN	**Manton Dam**	**17.60**	**249**		**P**	**12 21 23.4**	**-0.2**
MTN				IAmb	IAmb	12 21 29.5	
	comp=Z,26nm,1.1s						
SIJI	**Sorong**	**17.61**	**289**	P	**P**	**12 21 23.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=194,slow=21,SNR=1.7						
WRAB	**Tennant Creek**	**18.57**	**224**		**Pn**	**12 21 34.2**	**-1.0**
EIDS	**Eidsvold**	**18.75**	**171**	P	**Pn**	**12 21 36.1**	**-1.2**
KOUNC	**Koumac, New Ca**	**20.96**	**132**	P	Pn	12 22 02.1	-1.4
AS31	**Alice Springs**	**21.53**	**217**	P	**P**	**12 22 06.5**	**+0.1**
ASAR	**Alice Springs**	**21.54**	**217**	P	**P**	**12 22 06.8**	**+0.3**
	comp=Z,4.8nm,0.5s,baz=54,slow=9.0,SNR=107						
ASAR				S	**S**	**12 26 03.7**	**+2.0**
	comp=Z,3.5nm,0.9s,baz=34,slow=23,SNR=8.7						
ASAR				LR	LR	12 31 09.7	
	comp=Z,182nm,18.5s,baz=48,slow=38						
ASAR	**Alice Springs**	**21.54**	**217**	P	**P**	**12 22 06.3**	**-0.1**
DZM	**Mont Dzumac**	**23.48**	**132**	P	**P**	**12 22 26.2**	**-0.4**
	comp=Z,12nm,1.1s,baz=6.0,slow=12,SNR=5.6						
DZM	**Mont Dzumac**	**23.48**	**132**	*e*P	**P**	**12 22 25.5**	**-1.1**
	comp=Z,32nm,1.2s						
DZM				*e*LR	LR	12 28 20.3	
	comp=Z,414nm,23.9s						
DZM	**Mont Dzumac**	**23.48**	**132**	P	**P**	**12 22 25.6**	**-1.1**
DZM				IAmb	IAmb	12 22 27.9	
	comp=Z,20nm,1.3s						
DZM	**Mont Dzumac**	**23.48**	**132**	P	**P**	**12 22 26.7**	**+0.1**
SOEI	**Soe**	**23.59**	**261**	P	**P**	**12 22 28.8**	**+1.1**
SOEI				IAmb	IAmb	12 22 58.3	
	comp=Z,19nm,0.8s						
ARMA	**Armidale**	**23.79**	**172**	P	**P**	**12 22 29.1**	**-0.2**
ARMA				IAmb	IAmb	12 22 32.3	
	comp=Z,21nm,0.9s						
YATNC	**Mamie plateau,**	**23.80**	**132**	P	**P**	**12 22 30.3**	**+0.9**
	comp=Z,37nm,2.4s						
FITZ	**Fitzroy Crossi**	**24.46**	**241**	P	**P**	**12 22 35.8**	**+0.3**
	comp=Z,15nm,0.4s,baz=56,slow=7.9,SNR=91						
FITZ	**Fitzroy Crossi**	**24.46**	**241**	P	**P**	**12 22 36.1**	**+0.7**
MMRI	**Maumere**	**25.52**	**264**	P	**P**	**12 22 44.8**	**-0.3**
STKA	**Stephens Creek**	**25.67**	**192**	P	**P**	**12 22 46.4**	**+0.1**
	comp=Z,7.9nm,0.8s,baz=0.6,slow=9.9,SNR=14						
STKA	**Stephens Creek**	**25.67**	**192**	P	**P**	**12 22 46.4**	**+0.1**
BBOO	**Buckleboo**	**28.16**	**202**	P	**P**	**12 23 07.8**	**-0.8**
BBOO				IAmb	IAmb	12 23 14.0	
	comp=Z,12nm,1.4s						
CAN	**Canberra**	**28.44**	**178**	P	**P**	**12 23 10.6**	**-0.5**
CAN				IAmb	IAmb	12 23 38.9	
	comp=Z,14nm,1.1s						
FORT	**Forrest**	**30.29**	**215**	P	**P**	**12 23 24.6**	**-2.9**
PSA00	**Pilbara Seismi**	**30.86**	**239**	P	**P**	**12 23 31.9**	**-0.8**
PSA00				IAmb	IAmb	12 23 41.2	
	comp=Z,8.7nm,0.8s						
MORW	**Morawa**	**37.36**	**230**	P	**P**	**12 24 29.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**38.59**	**223**	P	**P**	**12 24 39.5**	**+0.2**
TUWZ	**Tuamarina**	**41.56**	**150**	P	**P**	**12 25 03.6**	**0.0**
MSWZ	**Moikau Station**	**42.21**	**149**	P	**P**	**12 25 08.3**	**-0.6**
MJAR	**Matsushiro Arr**	**44.03**	**349**	LR	LR	12 42 14.1	
	comp=Z,19nm,20.9s,baz=295,slow=34						
KSRS	**Korea Array**	**47.79**	**338**	LR	LR	12 43 08.0	
	comp=Z,47nm,20.9s,baz=154,slow=32						
ASAJ	**Asahikawa**	**50.87**	**355**	LR	LR	12 44 24.1	
	comp=Z,38nm,20.4s,baz=176,slow=32						
PBKT	**Sadao Pong**	**51.90**	**297**		pP	12 26 42.1	0.0
CMAR	**Chiang Mai Arr**	**54.41**	**298**	P	**P**	**12 26 45.4**	**+2.1**
	comp=Z,0.6nm,0.3s,baz=127,slow=6.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	**54.41**	**298**	P	**P**	**12 26 43.3**	**0.0**
PETK	**Petropavlovsk-**	**60.22**	**7**	P	**P**	**12 27 23.0**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=237,slow=12,SNR=2.6						
PETK				LR	LR	12 49 51.7	
	comp=Z,40nm,21.9s,baz=198,slow=32						
PPT2	**Papeete2**	**61.80**	**106**	*e*LR	LR	12 46 05.0	
	comp=Z,62nm,25.8s						
SONM	**Songino Array**	**65.51**	**331**	P	**P**	**12 28 01.1**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=132,slow=2.1,SNR=2.6						
VNDA	**Vanda**	**71.10**	**177**	P	**P**	**12 28 34.2**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=323,slow=7.4,SNR=12						
VNDA	**Vanda**	**71.10**	**177**	IAmb	IAmb	12 28 35.0	
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**78.67**	**320**	P	**P**	**12 29 17.1**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=107,slow=6.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**80.14**	**328**	P	**P**	**12 29 24.0**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=133,slow=8.1,SNR=1.7						
AAK	**Ala-Archa**	**82.53**	**314**	LR	LR	13 08 49.3	
	comp=Z,49nm,20.9s,baz=346,slow=37						
QSPA	**South Pole Qui**	**83.21**	**180**	P	**P**	**12 29 42.3**	**+0.8**
ILAR	**Eielson Array**	**85.82**	**23**	P	**P**	**12 29 52.4**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=254,slow=4.6,SNR=7.5						
NVAR	**Mina Array Bea**	**97.11**	**52**	LR	LR	13 10 24.1	
	comp=Z,28nm,18.5s,baz=322,slow=33						
GERES	**GERESS Array B**	**123.05**	**326**	PKP	**PKiKP**	**12 36 12.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=93,slow=2.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**146.16**	**283**	PKPbc	**PKiKP**	**12 36 57.4**	**-2.1**
	comp=Z,1.9nm,0.7s,baz=61,slow=3.4,SNR=9.3						
BDFB	**Brasilia**	**152.71**	**145**	PKPbc	**PKiKP**	**12 37 13.1**	**0.0**
	comp=Z,3.4nm,0.6s,baz=255,slow=6.6,SNR=4.6						
DBIC	**Dimbokro**	**152.96**	**271**	PKPbc	**PKiKP**	**12 37 14.0**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=207,slow=4.9,SNR=3.3						

ASRS 15 12:28:32.1±0.2**, 52°N**±1°×**95°.9E**±0°.9**, h5^{km}, MLh3.6**/12**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDJR	**Todzha**	**0.67**	**9**	Pg	Pb	12 28 46.5	+0.1
TDJR				Sg	Sb	12 28 56.2	+0.1
KZLR	**Kyzyl**	**0.91**	**269**	Pg	Pb	12 28 50.2	-0.2
KZLR				Sg	Sg	12 29 01.9	+0.5
KNGR	**Kungurtug, Tuv**	**1.52**	**138**	Pg	Pn	12 29 00.1	+0.2
KNGR				Sg	Sn	12 29 18.5	-1.6
ERNS	**Erzin**	**1.55**	**198**	Sg	Sn	12 29 20.1	-0.9
ARDR	**Aradan**	**1.75**	**300**	Pg	Pb	12 29 05.1	+0.4
ARDR				Sg	Sg	12 29 27.9	-0.4
BLRR	**Bol'shaya Rech**	**2.50**	**303**	Pg	Pb	12 29 18.0	+0.4
BLRR				Sg	Sg	12 29 50.8	-1.7
DJOS	**Djoyskaya Sosn**	**2.97**	**293**	Pg	Pg	12 29 28.6	-0.4
DJOS				Sg	Sg	12 30 05.8	-1.7
CERR	**Cheremushki**	**2.98**	**294**	Pg	Pb	12 29 27.0	+1.3
CERR				Sg	Sg	12 30 05.2	-2.7
DJO	**Djoy, Khakassi**	**3.07**	**292**	Pg	Pb	12 29 28.4	+1.2
DJO				Sg	Sg	12 30 08.9	-1.8
MOY	**Mondy**	**3.16**	**89**	Pg	Pb	12 29 28.7	0.0
MOY				Sg	Sb	12 30 10.3	+2.7
ORY	**Orie**	**3.31**	**352**	Pg	Pb	12 29 31.6	+0.4
ORY				Sg	Sb	12 30 13.6	+1.8
KTRR	**Kuturchin**	**3.37**	**343**	Pg	Pb	12 29 33.4	+1.2
KTRR				Sg	Sg	12 30 18.0	-2.1
ABNR	**Abakan**	**3.38**	**308**	Pg	Pg	12 29 35.0	-1.7
ABNR				Sg	Sg	12 30 18.8	-1.6
TBTR	**Tabat**	**3.41**	**293**	Pg	Pb	12 29 34.7	+1.8
TBTR				Sg	Sg	12 30 19.7	-1.7
TEL	**Teeli**	**3.65**	**261**	Pg	Pb	12 29 39.0	+1.9
TEL				Sg	Sb	12 30 23.5	+1.8
VEH	**Verkhnyaya Baz**	**3.75**	**296**	Sg	Sg	12 30 30.6	-1.7
SHRR	**Shira**	**4.43**	**311**	Sg	Sg	12 30 51.0	-3.3
LUZB	**Luzhba, Kemero**	**4.68**	**297**	Sg	Sg	12 30 58.8	-3.6
TLY	**Talaya**	**4.80**	**88**	Sg	Sg	12 31 02.3	-4.0
ZAK	**Zakamensk**	**4.84**	**103**	Pg	Pg	12 30 01.3	-3.4
ZAK				Sg	Sg	12 31 05.2	-2.2
TASR	**Tashtagol**	**5.04**	**285**	Sg	Sg	12 31 12.9	-1.1
CUR	**Chagan-Uzun**	**5.06**	**254**	Pg	Pg	12 30 05.8	-3.1
CUR				Sg	Sb	12 31 07.7	+5.4
ARTR	**Artybash**	**5.37**	**274**	Pg	Pb	12 30 09.6	+3.3
ARTR				Sg	Sg	12 31 23.7	-0.5
CHBI	**Chibit, Altay**	**5.50**	**258**	Pg	Pb	12 30 08.4	-0.2
CHBI				Sg	Sg	12 31 27.7	-0.8
DGZ	**Jazzator, Alta**	**5.76**	**253**	Pg	Pb	12 30 17.3	+4.2
DGZ				Sg	Sg	12 31 34.8	-2.2

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*IDC **15** 12:33:52.8±2.0, 60°.43N×149°.95W, h74^{km}±31^{km}, mb3.3/3, mb1 3.5/6, mb1mx3.2/39, mbtmp3.6/6, MS2.7/1, Ms1 2.8/1, ms1mx2.6/25, Error ellipse: s-maj=51.5km s-min=17.2km az=122.0*

*ANF **15** 12:33:53.7±0.3, 60°.60N×150°.16W, h37^{km}±7^{km}, ML4.0/16, Error ellipse: s-maj=4.3km s-min=3.0km az=137.0*

*AEIC **15** 12:33:53±1.2, 60°.61N±0°.02×150°.23W±0°.05, h43^{km}±6^{km}, ML3.6, ML3.8/84(NEIC), Error ellipse: s-maj=4.0km s-min=2.6km az=124.0*

*NEIC **15** 12:33:53.0±1.4, 60°.63N±0°.03×150°.25W±0°.07, h49^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=78.0*

ISC 15 12:33:52.5±0.9**, 60°.59N**±0°.03×**150°.21W**±0°.03**, h48**^{km}±6^{km}**, n134, σ0^{s}.98**/133**, mb3.7**/3**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLKM	**Skilak Lake**	**0.08**	**184**		**Pn**	**12 34 00.2**	**+0.1**
SLKM					**Sn**	**12 34 05.6**	**+0.1**
O22K	**Cooper Landing**	**0.27**	**114**	P	**Pn**	**12 34 01.6**	**+0.5**
	baz=291,SNR=176						
O22K				S	**Sn**	**12 34 06.4**	**-0.8**
	baz=291						
O22K	**Cooper Landing**	**0.27**	**114**		**Pn**	**12 34 01.7**	**+0.5**
O22K	**Cooper Landing**	**0.27**	**114**	IAML		12 34 08.9	
	comp=N,12μm,0.4s						
O22K				IAML		12 34 09.6	
	comp=E,17μm,0.5s						
CAPN	**Captain Cook N**	**0.50**	**291**	P	**Pn**	**12 34 04.2**	**+0.6**
	baz=113,SNR=12						
CAPN				S	**Sn**	**12 34 13.5**	**+2.0**
	baz=113						
CAPN	**Captain Cook N**	**0.50**	**291**		**Pn**	**12 34 04.3**	**+0.7**
CAPN					**Sn**	**12 34 12.3**	**+0.8**
RC01	**Rabbit Creek A**	**0.55**	**25**	P	**Pn**	**12 34 04.1**	**-0.2**
	baz=204,SNR=126						
RC01				S	**Sn**	**12 34 12.1**	**-0.6**
	baz=204						
RC01	**Rabbit Creek A**	**0.55**	**25**		**Pn**	**12 34 04.1**	**-0.2**
RC01					**Sn**	**12 34 12.3**	**-0.4**
FIS	**Fire Island**	**0.56**	**360**		**Pn**	**12 34 04.5**	**+0.2**
SEW	**Seward**	**0.62**	**142**		**Pn**	**12 34 05.7**	**+0.6**
SEW					**Sn**	**12 34 15.3**	**+1.2**
BRSE	**Bradley Lake S**	**0.89**	**198**		**Pn**	**12 34 09.5**	**+0.7**
BRLK	**Bradley Lake**	**0.90**	**202**		**Pn**	**12 34 09.6**	**+0.8**
BRLK					**Sn**	**12 34 22.7**	**+2.0**
BRLK	**Bradley Lake**	**0.90**	**202**	IAML		12 34 24.8	
	comp=E,3μm,0.2s						
BRLK				IAML		12 34 24.9	
	comp=N,2μm,0.1s						
SUA	**Susitna One**	**0.91**	**344**		**Pn**	**12 34 08.4**	**-0.7**
PWL	**Port Wells**	**0.96**	**73**		**Pn**	**12 34 10.2**	**+0.6**
SPCG	**Spurr Capps Gl**	**1.13**	**309**		**Pn**	**12 34 11.5**	**-0.5**
PMR	**Palmer**	**1.13**	**27**		**Pn**	**12 34 12.0**	**0.0**
PMR					**Sn**	**12 34 26.8**	**+0.4**
PMR	**Palmer**	**1.13**	**27**	IAML		12 34 27.6	
	comp=N,1μm,0.4s						
SPCN	**Chakachatna No**	**1.16**	**304**		**Pn**	**12 34 12.0**	**-0.3**
SPCP	**Crater Peak Br**	**1.17**	**306**		**Pn**	**12 34 12.2**	**-0.4**
SPCP					**Sn**	**12 34 27.2**	**-0.2**
HOM	**Homer**	**1.18**	**218**	P	**Pn**	**12 34 13.7**	**+1.1**
	baz=38,SNR=5.6						
HOM				S	**Sn**	**12 34 29.6**	**+2.1**
	baz=38						
CNPM	**China Poot**	**1.19**	**206**		**Pn**	**12 34 13.6**	**+0.9**
CNPM	**China Poot**	**1.19**	**206**	IAML		12 34 33.0	
	comp=E,2μm,0.4s						
CNPM				IAML		12 34 34.0	
	comp=N,2μm,0.4s						
KNK	**Knik Glacier**	**1.19**	**45**		**Pn**	**12 34 13.2**	**+0.5**
KNK	**Knik Glacier**	**1.19**	**45**	IAML		12 34 30.3	
	comp=N,2μm,0.4s						
STLK	**Strandline Lak**	**1.21**	**320**		**Pn**	**12 34 12.7**	**-0.3**
RDSO	**Redoubt South**	**1.26**	**265**		**Pn**	**12 34 13.9**	**+0.1**
RDSO					**Sn**	**12 34 29.8**	**+0.1**
RSO	**Redoubt South**	**1.27**	**265**		**Pn**	**12 34 13.8**	**-0.2**
RED	**Redoubt Volcan**	**1.28**	**263**		**Pn**	**12 34 14.0**	**-0.1**
GHO	**Glory Hole Cre**	**1.34**	**27**		**Pn**	**12 34 15.1**	**+0.3**
GHO	**Glory Hole Cre**	**1.34**	**27**	IAML		12 34 34.5	
	comp=N,2μm,0.4s						
NCT	**North Crescent**	**1.34**	**270**		**Pn**	**12 34 14.9**	**-0.1**
NCT					**Sn**	**12 34 31.6**	**0.0**
IVE	**Iliamna Volcan**	**1.51**	**249**		**Pn**	**12 34 17.5**	**+0.3**
SML	**Sawmill**	**1.52**	**36**		**Pn**	**12 34 17.6**	**+0.3**
SML	**Sawmill**	**1.52**	**36**	IAML		12 34 42.0	
	comp=N,773nm,0.4s						
SML				IAML		12 34 42.7	
	comp=E,823nm,0.5s						
SKT	**Skwentna**	**1.53**	**336**		**Pn**	**12 34 17.5**	**0.0**
SKT					**Sn**	**12 34 36.9**	**+0.7**
GLI	**Glacier Island**	**1.56**	**78**		**Pn**	**12 34 17.4**	**-0.3**
GLI	**Glacier Island**	**1.56**	**78**	IAML		12 34 42.4	
	comp=N,1μm,0.5s						
ILS	**Iliamna Low So**	**1.56**	**247**		**Pn**	**12 34 18.2**	**+0.4**
CUT	**Chulitna**	**1.82**	**359**	P	**Pn**	**12 34 22.4**	**+1.1**
	baz=179,SNR=23						
CUT				S	**Sn**	**12 34 45.3**	**+2.2**
	baz=179						
CUT	**Chulitna**	**1.82**	**359**		**Pn**	**12 34 22.6**	**+1.3**
FID	**Port Fidalgo**	**1.84**	**83**		**Pn**	**12 34 21.0**	**-0.6**
SCM	**Sheep Creek Mo**	**1.87**	**47**		**Pn**	**12 34 22.7**	**+0.6**
SCM	**Sheep Creek Mo**	**1.87**	**47**	IAML		12 34 52.9	
	comp=E,640nm,0.7s						
SCM				IAML		12 34 56.8	
	comp=N,859nm,0.8s						
EYAK	**Cordova Ski Ar**	**2.20**	**89**	Pn	**Pn**	**12 34 27.5**	**+0.9**
DIV	**Divide**	**2.24**	**74**		**Pn**	**12 34 27.4**	**+0.3**
KLU	**Klutina**	**2.27**	**65**		**Pn**	**12 34 28.2**	**+0.5**
KLU					**Sn**	**12 34 54.5**	**+0.1**
KLU	**Klutina**	**2.27**	**65**	IAML		12 35 04.6	
	comp=E,529nm,0.4s						
WAT6	**Susitna Watana**	**2.32**	**30**		**Pn**	**12 34 28.5**	**+0.2**
WAT7	**Susitna Watana**	**2.34**	**15**		**Pn**	**12 34 29.4**	**+0.8**
WAT1	**Susitna Watana**	**2.38**	**19**		**Pn**	**12 34 30.0**	**+0.9**
HUR	**Hurricane**	**2.41**	**6**		**Pn**	**12 34 32.1**	**+2.6**
M24K	**Tolsona, Glenn**	**2.47**	**50**	P	**Pn**	**12 34 31.3**	**+1.0**
	baz=233,SNR=37						
M24K	**Tolsona, Glenn**	**2.47**	**50**		**Pn**	**12 34 31.3**	**+1.0**
PPLA	**Purkeypile**	**2.50**	**339**		**Pn**	**12 34 31.4**	**+0.6**
WAT2	**Susitna Watana**	**2.50**	**17**		**Pn**	**12 34 31.8**	**+1.0**
PS11	**TAPS Pump St11**	**2.73**	**55**		**Pn**	**12 34 34.9**	**+1.1**
BMRM	**Bremner River**	**2.77**	**80**		**Pn**	**12 34 34.3**	**-0.2**
TRF	**Thorofare Moun**	**2.87**	**359**		**Pn**	**12 34 37.1**	**+1.2**
TRF	**Thorofare Moun**	**2.87**	**359**	IAML		12 35 17.7	
	comp=N,391nm,0.5s						
TRF				IAML		12 35 26.2	
	comp=E,346nm,0.9s						
RND	**Reindeer**	**2.90**	**12**		**Pn**	**12 34 37.2**	**+1.0**
N25K	**Chitina, Valde**	**2.91**	**67**	P	**Pn**	**12 34 36.8**	**+0.5**
	baz=252,SNR=13						
N25K				S	**Sn**	**12 35 10.0**	**-0.1**
	baz=252						
N25K	**Chitina, Valde**	**2.91**	**67**		**Pn**	**12 34 36.9**	**+0.6**
N25K	**Chitina, Valde**	**2.91**	**67**	IAML		12 35 22.3	
	comp=N,350nm,0.7s						
KTH	**Kantishna Hill**	**2.99**	**354**		**Pn**	**12 34 39.5**	**+2.1**
KTH				IAML		12 35 18.0	
	comp=E,350nm,0.7s						
KTH				IAML		12 35 19.9	
	comp=N,295nm,1.2s						
KDAK	**Kodiak Island**	**3.07**	**204**	P	**Pn**	**12 34 38.6**	**+0.2**
	comp=N,7.8nm,0.3s,baz=57,slow=8.7,SNR=33						
KDAK				S	**Sn**	**12 35 12.4**	**-1.5**
	comp=N,10nm,0.3s,baz=223,slow=18,SNR=1.9						
KDAK	**Kodiak Island**	**3.07**	**204**	Pn	**Pn**	**12 34 38.0**	**-0.5**
MCK	**McKinley**	**3.21**	**10**	P	**Pn**	**12 34 41.8**	**+1.4**
	baz=191,SNR=36						
MCK	**McKinley**	**3.21**	**10**		**Pn**	**12 34 42.1**	**+1.8**
GLB	**Gilahina Butte**	**3.23**	**72**		**Pn**	**12 34 41.0**	**+0.3**
GLB	**Gilahina Butte**	**3.23**	**72**	IAML		12 35 29.3	
	comp=E,237nm,0.6s						
PAX	**Paxson**	**3.28**	**41**		**Pn**	**12 34 41.8**	**+0.4**
VRDI	**Verde Repeater**	**3.36**	**76**		**Pn**	**12 34 42.7**	**0.0**
VRDI	**Verde Repeater**	**3.36**	**76**	IAML		12 35 34.6	
	comp=N,214nm,0.7s						
CHUM	**Lake Minchumin**	**3.45**	**344**		**Pn**	**12 34 44.6**	**+1.0**
BPAW	**Bear Paw Mtn.**	**3.54**	**354**		**Pn**	**12 34 46.4**	**+1.5**
BPAW	**Bear Paw Mtn.**	**3.54**	**354**	IAML		12 35 30.3	
	comp=E,130nm,0.4s						
BPAW				IAML		12 35 30.8	
	comp=N,146nm,0.6s						
MCARA	**McCarthy VSAT**	**3.59**	**74**		**Pn**	**12 34 46.0**	**+0.4**
TT01	**Tatalina**	**3.61**	**313**		**Pn**	**12 34 45.8**	**-0.1**
BWN	**Browne**	**3.61**	**5**		**Pn**	**12 34 47.2**	**+1.4**
BWN				IAML		12 35 45.7	
	comp=E,202nm,1.0s						
TTA	**Tatalina**	**3.62**	**313**		**Pn**	**12 34 46.4**	**+0.3**
TGL	**Tana Glacier**	**3.63**	**84**	Pn	**Pn**	**12 34 47.5**	**+1.2**
TGL				IAML		12 35 49.4	
	comp=E,184nm,0.6s						
TGL				IAML		12 35 54.2	
	comp=N,200nm,0.8s						
OHAK	**Old Harbor**	**3.74**	**207**		**Pn**	**12 34 47.3**	**-0.2**
PTPK	**Patty Peak**	**3.83**	**78**		**Pn**	**12 34 49.5**	**+0.4**
KIAG	**Kiagna River**	**3.87**	**82**		**Pn**	**12 34 49.6**	**0.0**
BALM	**Baldy**	**3.88**	**80**		**Pn**	**12 34 49.7**	**+0.1**
BALM	**Baldy**	**3.88**	**80**	IAML		12 35 54.7	
	comp=N,138nm,0.6s						
MENT	**Mentasta**	**3.88**	**50**		**Pn**	**12 34 50.1**	**+0.5**
MENT				IAML		12 35 57.2	
	comp=E,160nm,0.6s						
WRH	**Wood River Hil**	**4.02**	**13**		**Pn**	**12 34 52.7**	**+1.3**
RIDG	**Independent Ri**	**4.04**	**36**		**Pn**	**12 34 52.7**	**+0.9**
RIDG				IAML		12 35 56.6	
	comp=E,119nm,0.5s						
RIDG				IAML		12 36 02.5	
	comp=N,137nm,0.7s						
L26K	**Log Cabin Wild**	**4.07**	**50**	P	**Pn**	**12 34 53.2**	**+1.0**
	baz=236,SNR=7.2						
L26K	**Log Cabin Wild**	**4.07**	**50**		**Pn**	**12 34 53.4**	**+1.2**
HDA	**Harding Lake**	**4.12**	**20**	P	**Pn**	**12 34 54.2**	**+1.3**
	baz=203,SNR=32						
HDA	**Harding Lake**	**4.12**	**20**		**Pn**	**12 34 54.3**	**+1.5**
HDA				IAML		12 35 53.0	
	comp=N,132nm,0.6s						
HDA				IAML		12 35 56.0	
	comp=E,84nm,0.5s						
YAH	**Yahtse**	**4.20**	**89**	Pn	**Pn**	**12 34 55.8**	**+1.7**
YAH				IAML		12 35 39.1	
	comp=N,99nm,4.7s						
YAH				IAML		12 36 27.4	
	comp=E,88nm,3.1s						
DOT	**Dot Lake**	**4.21**	**41**		**Pn**	**12 34 54.8**	**+0.6**
BARN	**Barnard Glacie**	**4.21**	**80**	Pn	**Pn**	**12 34 55.2**	**+0.9**
BARN				IAML		12 36 04.0	
	comp=E,106nm,0.7s						
BARN				IAML		12 36 05.6	
	comp=N,113nm,0.9s						
CCB	**Clear Creek Bu**	**4.22**	**14**		**Pn**	**12 34 55.2**	**+1.0**
TCOL	**CIGO, UAF Yank**	**4.43**	**13**	P	**Pn**	**12 34 58.1**	**+1.0**
	baz=195,SNR=33						
TCOL	**CIGO, UAF Yank**	**4.43**	**13**		**Pn**	**12 34 58.5**	**+1.4**
COLA	**College**	**4.43**	**13**		**Pn**	**12 34 58.1**	**+1.0**
MLY	**Manley**	**4.46**	**357**	P	**Pn**	**12 34 58.7**	**+1.1**
	baz=177,SNR=20						
MLY				S	**Sn**	**12 35 50.8**	**+2.6**
	baz=177						
IL31		**4.47**	**19**		**Pn**	**12 34 58.6**	**+1.1**
ILAR	**Eielson Array**	**4.47**	**19**	P	**Pn**	**12 34 58.7**	**+1.1**
	comp=N,7.0nm,0.3s,baz=192,slow=13,SNR=263						
ILAR				S	Sn	12 35 57.7	+10
	comp=N,5.0nm,0.3s,baz=211,slow=22,SNR=14						
ILAR				LR	LR	12 37 03.6	
	comp=N,82nm,18.7s,baz=292,slow=42						
ILAR	**Eielson Array**	**4.47**	**19**	Pn	**Pn**	**12 34 57.9**	**+0.3**
SCRK	**Sand Creek**	**4.47**	**38**	P	**Pn**	**12 34 58.0**	**+0.3**
	baz=223,SNR=12						
MDM	**Murphy Dome**	**4.48**	**11**		**Pn**	**12 34 58.7**	**+0.9**
MDM	**Murphy Dome**	**4.48**	**11**	IAML		12 36 09.6	
	comp=E,60nm,0.8s						
TABL	**Table Mountain**	**4.49**	**88**	Pn	**Pn**	**12 34 59.8**	**+1.7**
TABL				IAML		12 36 08.2	
	comp=E,67nm,2.1s						
TABL				IAML		12 37 00.2	
	comp=N,72nm,3.2s						
I23K	**Minto, Yukon-K**	**4.59**	**4**	P	**Pn**	**12 35 00.2**	**+0.9**
	baz=185,SNR=34						
I23K	**Minto, Yukon-K**	**4.59**	**4**		**Pn**	**12 35 00.5**	**+1.2**
I23K	**Minto, Yukon-K**	**4.59**	**4**	IAML		12 35 56.8	
	comp=N,51nm,0.9s						
YUK2	**White River**	**4.69**	**71**		**Pn**	**12 35 01.4**	**+0.6**
BC03		**4.70**	**54**		**Pn**	**12 35 01.9**	**+1.1**
POKR	**Poker Plat Res**	**4.72**	**14**	P	**Pn**	**12 35 02.1**	**+1.0**
	baz=197,SNR=12						
POKR	**Poker Plat Res**	**4.72**	**14**		**Pn**	**12 35 02.3**	**+1.2**
POKR	**Poker Plat Res**	**4.72**	**14**	IAML		12 36 20.0	
	comp=E,46nm,0.9s						
BVCY	**Beaver Creek**	**4.84**	**64**		**Pn**	**12 35 03.9**	**+1.2**
YUK3	**Moose Creek**	**4.87**	**72**		**Pn**	**12 35 04.1**	**+0.8**
K27K	**Chicken**	**5.13**	**44**	P	**Pn**	**12 35 07.6**	**+0.9**
	baz=231						
PRP	**Porcupine Dome**	**5.38**	**21**		**Pn**	**12 35 11.5**	**+1.2**
PRP	**Porcupine Dome**	**5.38**	**21**	IAML		12 36 23.5	
	comp=E,39nm,0.8s						
PRP				IAML		12 36 41.4	
	comp=N,33nm,1.7s						
IM03		**5.64**	**345**		**Pn**	**12 35 14.7**	**+1.1**
EGAK	**Eagle**	**5.91**	**41**		**Pn**	**12 35 17.9**	**+0.4**
DAWY	**Dawson**	**6.12**	**51**	Pn	**Pn**	**12 35 21.0**	**+0.7**
HYT	**Haines Junctio**	**6.24**	**82**	Pn	**Pn**	**12 35 23.1**	**+1.0**
COLD	**Coldfoot**	**6.66**	**0**	P	**Pn**	**12 35 28.5**	**+0.8**
	baz=180,SNR=7.3						
COLD	**Coldfoot**	**6.66**	**0**	Pn	**Pn**	**12 35 28.3**	**+0.6**
WHY	**Whitehorse**	**7.54**	**83**	Pn	**Pn**	**12 35 40.0**	**+0.2**
YKA	**Yellowknife Ar**	**16.94**	**68**	P	**Pn**	**12 37 45.5**	**-0.2**
	comp=N,0.3nm,0.3s,baz=277,slow=9.3,SNR=35						
SONM	**Songino Array**	**55.55**	**307**	P	**P**	**12 43 23.0**	**+0.4**
	comp=N,0.5nm,0.6s,baz=54,slow=6.1,SNR=2.3						
SONM	**Songino Array**	**55.55**	**307**	P	**P**	**12 43 23.0**	**+0.4**
ZALV	**Zalesovo Beam**	**57.70**	**325**	P	**P**	**12 43 35.7**	**-1.9**
	comp=N,0.7nm,0.6s,baz=18,slow=5.3,SNR=3.9						
MKAR	**Makanchi Array**	**64.82**	**323**	P	**P**	**12 44 23.8**	**-2.0**
	comp=N,0.2nm,0.4s,baz=32,slow=7.5,SNR=2.5						

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*NEIC **15** 12:50:32.7±1.9, 21°.62S±0°.10×170°.5E±0°.1, h148^{km}±7^{km}, mb4.6/32, Error ellipse: s-maj=17.7km s-min=13.5km az=72.0*

*NOU **15** 12:50:33.0, 21°.58S×170°.50E, h141^{km}, mb4.6, Southeast of Loyalty Islands*

*IDC **15** 12:50:34.2±1.9, 21°.65S×170°.48E, h155^{km}±15^{km}, mb3.9/8, mb1 4.0/12, mb1mx3.8/26, mbtmp4.4/12, MS3.0/2, Ms1 3.0/2, ms1mx2.6/27, Error ellipse: s-maj=18.9km s-min=15.7km az=22.0*

ISC 15 12:50:33.1±0.5**, 21°.62S**±0°.06×**170°.50E**±0°.07**, h150**^{km}**, n105, σ1^{s}.07**/105**, mb4.5**/16**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.30**	**273**	P	**Pn**	**12 51 11.0**	**-0.8**
PINNC	**Pines Island,**	**3.00**	**250**	P	**Pn**	**12 51 20.2**	**-0.2**
LIFNC	**LIFOU**	**3.15**	**285**	P	**Pn**	**12 51 20.6**	**-1.8**
YATNC	**Mamie plateau,**	**3.38**	**262**	P	**Pn**	**12 51 23.9**	**-1.4**
OUENC	**Ouen Island, N**	**3.48**	**256**	P	**Pn**	**12 51 26.6**	**-0.1**
DZM	**Mont Dzumac**	**3.79**	**262**	P	**Pn**	**12 51 30.7**	**-0.1**
	5.3nm,0.3s,baz=108,slow=4.7,SNR=128						
DZM				S	**Sn**	**12 52 17.0**	**+1.5**
	14nm,0.3s,baz=1.5,slow=24,SNR=8.6						
DZM				LR	LR	12 52 51.2	
	comp=Z,125nm,20.9s,baz=193,slow=36						
DZM	**Mont Dzumac**	**3.79**	**262**	Pn	**Pn**	**12 51 30.3**	**-0.5**
DZM	**Mont Dzumac**	**3.79**	**262**	P	**Pn**	**12 51 30.8**	**0.0**
NOUC	**Port Laguerre**	**3.93**	**262**	P	**Pn**	**12 51 32.4**	**0.0**
DVP	**Devils Point**	**4.44**	**330**	P	**Pn**	**12 51 39.2**	**0.0**
KOUNC	**Koumac, New Ca**	**5.90**	**279**	P	**Pn**	**12 51 59.4**	**+1.0**
SANVU	**Saraoutou**	**6.89**	**332**	Pn	**Pn**	**12 52 11.2**	**-0.5**
SANVU	**Saraoutou**	**6.89**	**332**	P	**Pn**	**12 52 11.1**	**-0.5**
NFK	**Norfolk Island**	**7.75**	**197**	P	**Pn**	**12 52 23.4**	**+0.3**
MSVF	**Nonsavu**	**8.10**	**63**	P	**Pn**	**12 52 29.6**	**+1.7**
	0.4nm,0.3s,baz=277,slow=21,SNR=2.6						
OUZ	**Omahuta**	**13.82**	**169**	P	**Pn**	**12 53 43.1**	**+0.4**
HNR	**Honiara**	**15.80**	**318**	P	**P**	**12 54 09.6**	**+1.3**
	6.5nm,0.3s,baz=276,slow=3.5,SNR=5.6						
HIZ	**Hauiti**	**17.25**	**168**	P	**P**	**12 54 23.6**	**-0.4**
HIZ				IAmb	IAmb	12 54 28.8	
	comp=Z,47nm,1.0s						
URZ	**Urewera**	**17.54**	**162**	P	**Pn**	**12 54 28.7**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=326,slow=3.9,SNR=13						
URZ	**Urewera**	**17.54**	**162**	P	**Pn**	**12 54 28.7**	**+0.4**
MWZ	**Matawai**	**17.73**	**162**	P	**Pn**	**12 54 31.6**	**+1.0**
RTZ	**Ruatahuna**	**17.84**	**163**	P	**P**	**12 54 24.4**	**-6.1**
ETVZ	**East Tongariro**	**18.02**	**167**	P	**Pn**	**12 54 36.1**	**+1.9**
OTVZ	**Oturere**	**18.04**	**167**	P	**Pn**	**12 54 36.6**	**+2.1**
RAHZ	**Arahi**	**18.15**	**163**	P	**P**	**12 54 34.9**	**+1.0**
EIDS	**Eidsvold**	**18.19**	**254**	P	**Pn**	**12 54 36.2**	**-0.1**
EIDS				IAmb	IAmb	12 54 38.3	
	comp=Z,15nm,0.8s						
BKZ	**Black Stump Fm**	**18.23**	**165**	P	**P**	**12 54 35.8**	**+0.9**
BKZ				IAmb	IAmb	12 54 39.4	
	comp=Z,18nm,0.9s						
BKZ	**Black Stump Fm**	**18.23**	**165**	P	**P**	**12 54 36.3**	**+1.4**
KNZ	**Kokohu**	**18.41**	**162**	P	**P**	**12 54 37.6**	**+0.9**
BHHZ	**Black Hill Sta**	**18.44**	**166**	P	**Pn**	**12 54 38.8**	**-0.3**
KWHZ	**Kaweka Forest**	**18.46**	**165**	P	**Pn**	**12 54 39.1**	**-0.2**
KRHZ	**Kereru**	**18.66**	**166**	P	**P**	**12 54 40.8**	**+1.3**
KAHZ	**Kahuranaki**	**18.92**	**165**	P	**P**	**12 54 43.0**	**+0.6**
TSZ	**Takapari Road**	**18.96**	**167**	P	**P**	**12 54 43.9**	**+1.1**

ARMA	Armidale	19.07	239	P	Pn	12 54 46.2	-0.3
QRZ	Quartz Range	19.23	175	P	Pn	12 54 48.3	+0.1
QRZ				IAmb	IAmb	12 54 51.7	
	comp=Z,34nm,1.1s						
DVHZ	Dannevirke	19.24	167	P	P	12 54 46.4	+0.7
ANWZ	Angora Road	19.46	166	P	P	12 54 48.5	+0.4
BFZ	Birch Farm	19.62	167	P	P	12 54 49.3	-0.6
SNZO	South Karori	19.95	171	P	P	12 54 52.4	-1.0
TUWZ	Tuamarina	19.97	172	P	P	12 54 54.5	+0.9
BHW	Baring Head	20.07	170	P	P	12 54 55.9	+1.2
MSWZ	Moikau Station	20.14	170	P	P	12 54 55.2	-0.3
THZ	Tophouse	20.19	175	P	P	12 54 56.7	+0.7
THZ				IAmb	IAmb	12 54 57.7	
	comp=Z,20nm,0.8s						
PLWZ	Palliser	20.29	170	P	P	12 54 56.1	-1.1
KHZ	Kahutara	20.89	174	P	P	12 55 04.0	+0.5
LTZ	Lake Taylor	21.16	176	P	P	12 55 07.5	+1.1
LTZ				IAmb	IAmb	12 55 08.0	
	comp=Z,40nm,1.4s						
RPZ	Rata Peaks	22.04	179	P	P	12 55 16.2	+0.6
	comp=Z,21nm,0.9s,baz=49,slow=5.5,SNR=2.5						
RPZ	Rata Peaks	22.04	179	IAmb	IAmb	12 55 38.2	
	comp=Z,51nm,1.3s						
CTA	Charters Tower	22.70	269	P	P	12 55 22.8	+0.6
	comp=Z,6.6nm,0.7s,baz=89,slow=10,SNR=19						
CTAO	Charters Tower	22.70	269	P	P	12 55 22.1	-0.1
LBZ	Lake Benmore	22.71	181	P	P	12 55 21.2	-0.8
LBZ				IAmb	IAmb	12 55 24.4	
	comp=Z,18nm,0.8s						
CAN	Canberra	23.25	229	P	P	12 55 27.7	+0.5
CAN				IAmb	IAmb	12 55 28.1	
	comp=Z,48nm,1.5s						
MLZ	Mavora Lakes	23.77	184	P	P	12 55 30.6	-1.1
MLZ				IAmb	IAmb	12 55 55.4	
	comp=Z,25nm,1.2s						
PMG	Port Moresby	25.51	295	P	P	12 55 48.3	+0.5
	comp=Z,12nm,0.8s,baz=97,slow=6.9,SNR=13						
PMG	Port Moresby	25.51	295	P	P	12 55 48.6	+0.8
PMG				IAmb	IAmb	12 55 49.3	
	comp=Z,15nm,0.9s						
PMG	Port Moresby	25.51	295	P	P	12 55 49.5	+1.7
COEN	Coen	27.08	282	P	P	12 56 00.9	-1.1
STKA	Stephens Creek	27.68	242	P	P	12 56 08.2	+1.0
	comp=Z,1.3nm,0.7s,baz=95,slow=5.0,SNR=5.1						
STKA	Stephens Creek	27.68	242	P	P	12 56 07.6	+0.5
AS31	Alice Springs	33.78	259	P	P	12 57 00.2	-0.7
ASAR	Alice Springs	33.78	259	P	P	12 57 00.5	-0.4
	comp=Z,4.7nm,0.8s,baz=97,slow=9.4,SNR=76						
ASAR				PcP	PcP	12 59 36.4	-0.4
	comp=Z,0.7nm,0.8s,baz=127,slow=2.4,SNR=4.1						
ASAR	Alice Springs	33.78	259	P	P	12 57 00.2	-0.7
PPT	Papeete	37.76	91	LR	LR	13 08 29.3	
	comp=Z,33nm,21.6s,baz=265,slow=28						
MTN	Manton Dam	38.51	277	P	P	12 57 40.6	-0.5
FORT	Forrest	38.97	247	P	P	12 57 43.9	-0.9
FAKI	Fak Fak	41.55	291	P	P	12 58 05.7	-0.5
FITZ	Fitzroy Crossi	42.23	267	P	P	12 58 12.2	+0.6
FITZ				IAmb	IAmb	12 58 12.7	
	comp=Z,10nm,0.8s						
PSA00	Pilbara Seismi	46.92	260	P	P	12 58 48.1	-0.8
PSA00				IAmb	IAmb	12 59 06.4	
	comp=Z,13nm,1.2s						
SANI	Sanana	47.45	288	P	P	12 58 51.8	-1.3
TOLI2	Tolitoli	53.52	288	P	P	12 59 36.1	-2.6
TOLI2				IAmb	IAmb	12 59 39.5	
	comp=Z,9.5nm,0.7s						
VNDA	Vanda	56.11	182	P	P	12 59 56.4	+0.1
	comp=Z,1.1nm,0.7s,baz=1.3,slow=6.7,SNR=5.9						
VNDA	Vanda	56.11	182	P	P	12 59 56.3	+0.1
CASY	Casey	58.44	204	P	P	13 00 12.2	-0.6
KSM	Kuching	63.06	283	P	P	13 00 45.0	+0.1
QSPA	South Pole Qui	68.45	180	P	P	13 01 18.4	-0.3
QSPA				IAmb	IAmb	13 01 19.4	
	comp=Z,13nm,1.1s						
MAW	Mawson	76.68	202	P	P	13 02 08.2	+1.0
BELA	Belgrano 2	79.64	175	P	P	13 02 21.6	-1.7
CMAR	Chiang Mai Arr	80.55	294	P	P	13 02 30.9	+1.7
	comp=Z,1.3nm,0.6s,baz=137,slow=4.2,SNR=10.0						
SNAA	Sanae	86.84	182	P	P	13 02 59.3	-1.1
VNA3	Neumayer Olymp	87.39	180	P	P	13 03 01.7	-1.2
VNA2	Neumayer--Watz	87.70	181	P	P	13 03 03.6	-0.8
	baz=182,slow=4.4						
SONM	Songino Array	89.82	323	P	P	13 03 15.5	+0.7
	comp=Z,1.7nm,0.8s,baz=115,slow=6.4,SNR=7.9						
SONM	Songino Array	89.82	323	P	P	13 03 15.2	+0.4
ARCES	ARCESS Array B	127.66	345	PKP	PKPdf	13 09 18.9	-0.9
	comp=Z,4.8nm,1.1s,baz=64,slow=2.1,SNR=5.4						
KRLC	Kraliky	144.85	330	*e*PKP	PKPab	13 09 51.5	-0.1
DPC	Dobruska-Polom	144.87	331	*e*PKP	PKPab	13 09 51.2	-0.5
VYHS	Vyhne	144.91	327	*e*PKP	PKPdf	13 09 52.3	0.0
JAVC	Velka Javorina	145.26	328	*e*PKP	PKPab	13 09 54.3	+1.1
BRG	Berggiesshubel	145.51	334	*e*PKP	PKPbc	13 09 53.6	0.0
BRG				Amp		13 09 54.2	
	comp=Z,7.9nm,0.9s						
BRG	Berggiesshubel	145.51	334	*e*PKP	PKPbc	13 09 53.6	0.0
BRG				Amp		13 09 54.2	
	comp=Z,7.9nm,0.9s						
CLL	Collm	145.56	335	*e*PKPbc	PKPab	13 09 54.0	-0.1
	comp=Z,10.0nm,0.9s						
SMOL	Smolenice	145.61	328	*e*PKP	PKPab	13 09 55.3	+0.8
KRUC	Moravsky	145.74	329	*e*PKP	PKPbc	13 09 54.5	+0.2
MODS	Modra-Piesok	145.78	328	*e*PKP	PKPab	13 09 54.8	-0.3
KHC	Kasperske Hory	146.98	332	*e*PKP	PKPbc	13 09 57.6	-0.4
GERES	GERESS Array B	147.13	331	PKPbc	PKPbc	13 09 58.5	0.0
	comp=Z,2.6nm,0.7s,baz=33,slow=3.2,SNR=16						
KBA	Koelnbreinsper	148.59	329	*e*P	PKPbc	13 10 01.6	-0.9
	comp=Z,1.5nm,0.4s						
MYKA	Terra Mystica	148.77	329	*e*P	PKPbc	13 10 02.1	-0.8
	comp=Z,4.5nm,0.9s						
ABTA	Abfaltersbach	149.22	330	*e*P	PKPbc	13 10 02.9	-1.1
	comp=Z,3.8nm,0.8s						
WTTA	Wattenberg	149.24	331	*e*P	PKPbc	13 10 03.7	-0.5
	comp=Z,2.4nm,0.4s						
MOTA	Moosalm	149.41	332	*e*P	PKPbc	13 10 03.8	-0.7
	comp=Z,6.5nm,0.8s						
SQTA	Sankt Quirin	149.46	332	*e*P	PKPbc	13 10 04.2	-0.5
	comp=Z,6.2nm,0.6s						
FETA	Feichten	149.82	332	*e*P	PKPbc	13 10 05.3	-0.3
	comp=Z,6.1nm,1.1s						
DAVOX	Davos/Dischmat	150.38	333	PKPbc	PKPbc	13 10 06.9	-0.1
	comp=Z,4.7nm,0.4s,baz=164,slow=1.0,SNR=9.8						

ISK 15 12:51:46.3, 37°.16N × 28°.24E, h1^{km}, ML1.6/4, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.05	129	PG	Pg	12 51 47.4	+0.2
TURN	Turunc	0.39	179	PG	Pb	12 51 55.2	-0.8
TURN				SG	Sb	12 52 01.6	-0.8
MLSB	Milas	0.39	290	PG	Pb	12 51 55.1	-1.0
DALY	Dalyan (Mula)	0.48	136	PG	Pb	12 51 56.8	-0.7
BODT	Bodrum	0.75	262	PG	Pb	12 52 01.9	-0.2

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*IDC **15** 12:51:50.8±1.6, 0°.30N × 126°.08E, h0^{km}, mb3.8/4, mb1 3.8/4, mb1mx3.5/41, mbtmp3.8/4, Error ellipse: s-maj=227.0km s-min=24.2km az=69.0*

*DJA **15** 12:51:57.2±1.4, 0°N±5° × 12°6E±°, h25^{km}±13^{km}, M3.5/6, MLv3.5/6*

ISC 15 12:51:57.0±1.0**, 0°.12N**±0°.08×**126°.08E**±0°.06**, h44^{km}, n10, σ1^{s}.66**/11**, mb3.9**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.45	63	P	Pn	12 52 22.1	+1.4
KMSI	Cibinong	2.14	282	P	Pn	12 52 30.1	-0.2
KMSI				S	Sn	12 52 55.4	-0.3
SANI	Sanana	2.16	182	P	Pn	12 52 30.5	0.0
GTOI	Gorontalo	3.11	280	P	Pn	12 52 46.4	+2.9
NLAI	Namlea	3.49	163	P	Pn	12 52 49.8	+1.0
APSI	Ampana	4.54	257	P	Pn	12 53 04.6	+1.3
ASAR	Alice Springs	24.84	163	P	P	12 57 16.6	+1.2
	0.7nm,0.5s,baz=343,slow=9.8,SNR=19						
SONM	Songino Array	50.51	343	P	P	13 00 48.8	-2.2
	0.6nm,0.6s,baz=152,slow=8.6,SNR=4.6						
MKAR	Makanchi Array	60.16	327	P	P	13 01 58.8	-1.5
	0.8nm,0.5s,baz=127,slow=7.5,SNR=19						
ZALV	Zalesovo Beam	63.51	334	P	P	13 02 23.6	+0.9
	0.4nm,0.3s,baz=123,slow=5.3,SNR=1.5						

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*REY **15** 12:52:57.2, 64°.66N × 17°.46W, h5^{km}*

*IDC **15** 12:52:57.4±0.9, 64°.60N × 17°.63W, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.5/36, mbtmp3.7/7, MS3.0/1, Ms1 3.0/1, ms1mx2.5/44, Error ellipse: s-maj=28.4km s-min=12.5km az=14.0*

ISC 15 12:52:57.3±0.6**, 64°.65N**±0°.02×**17°.37W**±0°.03**, h10^{km}, n36, σ1^{s}.71**/52**, mb3.7**/7**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.14	1	P	Pg	12 53 00.1	-0.4
	baz=16						
IDYN				S	Sg	12 53 02.8	0.0
	baz=16						
IURH	Urdarhals	0.19	30	P	Pg	12 53 01.4	-0.1
	baz=40						
IURH				S	Sg	12 53 04.4	+0.1
	baz=40						
IHAM	Hamarinn	0.26	228	P	Pg	12 53 01.8	-0.9
	baz=221						
IHAM				S	Sg	12 53 05.6	-0.6
	baz=221						
IKVE	Kverkfjoll	0.30	85	P	Pb	12 53 03.7	-1.2
	baz=87						
THOR	Thorvaldshraun	0.41	47	P	Pb	12 53 05.1	-1.6
	baz=50						
THOR				S	Sb	12 53 11.6	-1.4
	baz=50						
IKRE	Kreppuhraun	0.45	73	P	Pb	12 53 05.8	-1.5
	baz=75						
IKRE				S	Sb	12 53 12.4	-1.6
	baz=75						
ISKR	Skrokkalda	0.45	258	P	Pg	12 53 04.8	-1.3
	baz=256						
IJOK	Jokulheimar	0.50	228	P	Pg	12 53 06.0	-1.1
	baz=224						
IJOK				S	Sg	12 53 12.8	-0.9
	baz=224						
IASK	Askja	0.51	38	P	Pb	12 53 06.5	-1.8
	baz=41						
IASK				S	Sb	12 53 13.7	-2.1
	baz=41						
IMKO	Mokollar	0.55	53	P	Pb	12 53 07.6	-1.5
	baz=56						
IMKO				S	Sb	12 53 16.1	-0.9
	baz=56						
IKSK	Karasker	0.63	141	P	Pg	12 53 08.6	-1.0
	baz=139						
IKSK				S	Sb	12 53 18.1	-1.3
	baz=139						
IIEY	Innrieyrar	0.65	210	P	Pg	12 53 08.9	-1.0
	baz=207						
IIEY				S	Sg	12 53 17.6	-0.7
	baz=207						
ISVA	Svartarkot	0.69	4	P	Pg	12 53 09.3	-1.3
	baz=7.1						
ISVA				S	Sb	12 53 19.1	-1.9
	baz=7.1						
IKAL	Kalfafell	0.72	191	P	Pg	12 53 10.4	-0.8
	baz=188						
IKAL				S	Sg	12 53 20.0	-0.6
	baz=188						
IVSH	V-Sauoahnukur	0.72	77	P	Pb	12 53 10.4	-1.6
	baz=78						
IVSH				S	Sb	12 53 21.1	-0.9
	baz=78						
IFAG	Fagurholsmyri	0.84	158	P	Pb	12 53 12.8	-1.3
	baz=156						
IFAG				S	Sb	12 53 24.7	-0.6
	baz=156						
IADA	Aoalbol	0.85	64	P	Pg	12 53 12.4	-1.3
	baz=65						
IADA				S	Sb	12 53 24.4	-1.2
	baz=65						
IMEL	Melhnausar	0.97	18	P	Pg	12 53 14.1	-1.8
	baz=20						
IMEL				S	Sb	12 53 27.8	-1.3
	baz=20						
IREN	Reynihlio	1.02	11	P	Pg	12 53 14.9	-2.0
	baz=13						
ISNB	Snabyli	1.07	211	P	Pg	12 53 16.1	-1.9
	baz=210						
IKVO	Krokottuvotn	1.08	11	P	Pg	12 53 16.1	-2.1
	baz=13						
IGRS	Grimsstaoir	1.12	28	P	Pb	12 53 16.8	-2.0
	baz=29						
IRJU	Rjupnafell	1.19	209	P	Pb	12 53 18.1	-1.8
	baz=208						
IFED	Fedgar	1.19	239	P	Pb	12 53 18.1	-1.9
	baz=238						
ISKI	Skildingahlsh	1.23	7	P	Pn	12 53 18.3	-2.3
	baz=8.3						
IGHA	Grjothals	1.23	14	P	Pn	12 53 18.2	-2.4
	baz=15						
BORG	Borgarnes	1.70	275	Pg	Pn	12 53 25.3	-1.7
	7.1nm,0.3s,baz=90,slow=6.9,SNR=29						
BORG				Lg	Lg	12 53 49.2	
	14nm,0.3s,baz=210,slow=22,SNR=7.7						
SCO	Scoresbysund	6.11	345	*e*	Pn	12 54 24.0	-3.5
	baz=163,slow=8.6						
SCO				*i* P	Pn	12 54 28.0	+0.5
SCO				*e*S	Sn	12 55 42.7	+5.4
SCO				IAML		12 55 49.5	
	comp=Z,1.5nm,0.5s						
BRTR	Keskin Array B	38.42	105	P	P	13 00 22.8	+3.9
	comp=Z,0.5nm,0.7s,baz=323,slow=6.5,SNR=3.2						
YKA	Yellowknife Ar	39.26	313	P	P	13 00 25.9	+0.5
	comp=Z,0.6nm,1.0s,baz=47,slow=8.9,SNR=5.4						
GNI	Garni	42.78	94	LR	LR	13 21 09.9	
	comp=Z,20nm,18.7s,baz=332,slow=40						
ILAR	Eielson Array	45.72	332	P	P	13 01 20.9	+2.9
	comp=Z,1.3nm,1.1s,baz=33,slow=6.2,SNR=6.2						
MKAR	Makanchi Array	52.69	58	P	P	13 02 12.7	+1.3
	comp=Z,1.0nm,0.9s,baz=336,slow=3.2,SNR=5.0						
TORD	Torodi Ar. Bea	53.11	157	P	P	13 02 15.3	+0.5
	comp=Z,0.3nm,0.3s,baz=338,slow=9.5,SNR=3.7						
PDAR	Pinedale Array	53.23	293	P	P	13 02 16.2	+0.4
	comp=Z,1.6nm,1.0s,baz=56,slow=7.9,SNR=7.2						
DBIC	Dimbokro	58.56	165	P	P	13 02 55.9	+2.0
	comp=Z,1.0nm,0.5s,baz=11,slow=9.8,SNR=3.6						

BUC 15 12:53:50.1±0.4**, 45°.75N×26°.66E, h85^{km}**±3^{km}**, ml3.3**/15**, 46C-44D, Error ellipse: s-maj=2.2km s-min=1.8km az=24.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	Plostina	0.10	355	⇑P	Pn	12 54 02.6	+0.3
PLOR				⇑S	Sn	12 54 11.6	+0.2
PLOR	Plostina	0.10	355	⇑P	Pn	12 54 02.6	+0.3
PLOR				⇑S	Sn	12 54 11.6	+0.2
VRI	Vrincioaia	0.13	21	⇑P	Pn	12 54 02.7	+0.4
VRI				⇑S	Sn	12 54 11.7	+0.3
VRI	Vrincioaia	0.13	21	⇑P	Pn	12 54 02.7	+0.4
VRI				⇑S	Sn	12 54 11.7	+0.3
BISRR	Bisoca	0.20	171	⇓P	Pn	12 54 02.8	+0.1
BISRR	Bisoca	0.20	171	⇓P	Pn	12 54 02.8	+0.1
PETR	Petresti	0.40	93	⇑S	Sn	12 54 15.1	+1.5
PETR	Petresti	0.40	93	⇑S	Sn	12 54 15.1	+1.5
MLR	Muntele Rosu	0.57	243	⇓P	Pn	12 54 05.8	+0.7
MLR				⇓S	Sn	12 54 16.4	+0.2
MLR	Muntele Rosu	0.57	243	⇓P	Pn	12 54 05.8	+0.7
MLR				⇓S	Sn	12 54 16.4	+0.2
ISR	Istrita	0.64	188	⇑P	Pn	12 54 05.9	+0.3
ISR				⇑S	Sn	12 54 18.3	+1.1
ISR	Istrita	0.64	188	⇑P	Pn	12 54 05.9	+0.3
ISR				⇑S	Sn	12 54 18.3	+1.1
TUDR		0.72	102	⇑P	Pn	12 54 06.5	+0.1
TUDR				⇑S	Sn	12 54 18.9	+0.4
TUDR		0.72	102	⇑P	Pn	12 54 06.5	+0.1
TUDR				⇑S	Sn	12 54 18.9	+0.4
TESR	Tescani	0.76	359	⇓P	Pn	12 54 07.0	+0.1
TESR				⇓S	Sn	12 54 18.6	-0.7
TESR	Tescani	0.76	359	⇓P	Pn	12 54 07.0	+0.1
TESR				⇓S	Sn	12 54 18.6	-0.7
VARL	Varlezi	0.84	79	⇓P	Pn	12 54 08.5	+0.8
VARL				⇓S	Sn	12 54 21.2	+0.4
VARL	Varlezi	0.84	79	⇓P	Pn	12 54 08.5	+0.8
VARL				⇓S	Sn	12 54 21.2	+0.4
BIR	Birlad	0.85	52	⇓P	Pn	12 54 07.6	-0.2
BIR				⇑S	Sn	12 54 21.4	+0.5
BIR	Birlad	0.85	52	⇓P	Pn	12 54 07.6	-0.2
BIR				⇑S	Sn	12 54 21.4	+0.5
SCHL	Schela	0.86	106	⇑P	Pn	12 54 07.4	-0.4
SCHL				⇓S	Sn	12 54 21.1	+0.1
SCHL	Schela	0.86	106	⇑P	Pn	12 54 07.4	-0.4
SCHL				⇓S	Sn	12 54 21.1	+0.1
DOPR	Dopca	0.92	284	⇓P	Pn	12 54 08.9	+0.3
DOPR				⇓S	Sn	12 54 21.8	-0.6
DOPR	Dopca	0.92	284	⇓P	Pn	12 54 08.9	+0.3
DOPR				⇓S	Sn	12 54 21.8	-0.6
SULR		1.11	195	⇑P	Pn	12 54 11.7	+0.9
SULR				⇓S	Sn	12 54 27.9	+1.7
SULR		1.11	195	⇑P	Pn	12 54 11.7	+0.9
SULR				⇓S	Sn	12 54 27.9	+1.7
GIUM	Giurgiulesti	1.12	103	⇓P	Pn	12 54 12.0	+1.2
GIUM				⇑S	Sn	12 54 26.9	+0.5
GIUM	Giurgiulesti	1.12	103	⇓P	Pn	12 54 12.0	+1.2
GIUM				⇑S	Sn	12 54 26.9	+0.5
VOIR		1.18	255	⇓P	Pn	12 54 11.9	+0.3
VOIR				⇑S	Sn	12 54 28.1	+0.3
VOIR		1.18	255	⇓P	Pn	12 54 11.9	+0.3
VOIR				⇑S	Sn	12 54 28.1	+0.3
CFR	Carcaliu	1.18	118	⇑P	Pn	12 54 12.0	+0.3
CFR				⇓S	Sn	12 54 27.6	-0.2
CFR	Carcaliu	1.18	118	⇑P	Pn	12 54 12.0	+0.3
CFR				⇓S	Sn	12 54 27.6	-0.2
AMRR	Amara	1.23	157	⇓P	Pn	12 54 12.1	-0.2
AMRR				⇑S	Sn	12 54 29.1	+0.2
AMRR	Amara	1.23	157	⇓P	Pn	12 54 12.1	-0.2
AMRR				⇑S	Sn	12 54 29.1	+0.2
BIZ	Bicaz	1.25	342	⇑P	Pn	12 54 12.8	+0.3
BIZ				⇓S	Sn	12 54 29.2	-0.2
BIZ	Bicaz	1.25	342	⇑P	Pn	12 54 12.8	+0.3
BIZ				⇓S	Sn	12 54 29.2	-0.2
HARR	Harsova	1.39	139	⇑P	Pn	12 54 14.9	+0.7
HARR	Harsova	1.39	139	⇑P	Pn	12 54 14.9	+0.7
BUC1	Bucharest	1.47	198	⇓S	Sn	12 54 34.4	+0.2
BUC1	Bucharest	1.47	198	⇓S	Sn	12 54 34.4	+0.2
TPGR	Topolog	1.53	125	⇑P	Pn	12 54 16.6	+0.6
TPGR				⇓S	Sn	12 54 35.4	-0.2
TPGR	Topolog	1.53	125	⇑P	Pn	12 54 16.6	+0.6
TPGR				⇓S	Sn	12 54 35.4	-0.2
TLBR	Topalu	1.55	140	⇑S	Sn	12 54 36.1	0.0
TLBR	Topalu	1.55	140	⇑S	Sn	12 54 36.1	0.0
HUMR	Humele	1.71	225	⇑S	Sn	12 54 39.4	-0.3
HUMR	Humele	1.71	225	⇑S	Sn	12 54 39.4	-0.3
TIRR	Tirgusor	1.79	136	⇑S	Sn	12 54 40.8	-0.7
TIRR	Tirgusor	1.79	136	⇑S	Sn	12 54 40.8	-0.7
ICOR	Ion Corvin	1.82	153	⇑S	Sn	12 54 42.1	-0.2
ICOR	Ion Corvin	1.82	153	⇑S	Sn	12 54 42.1	-0.2
MFTR	Murfatlar	2.01	141	⇓P	Pn	12 54 22.3	+0.1
MFTR				⇓S	Sn	12 54 46.8	+0.1
MFTR	Murfatlar	2.01	141	⇓P	Pn	12 54 22.3	+0.1
MFTR				⇓S	Sn	12 54 46.8	+0.1
MANR	Mangalia	2.37	144	⇓S	Sn	12 54 56.0	+0.7
MANR	Mangalia	2.37	144	⇓S	Sn	12 54 56.0	+0.7

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*IDC **15** 13:08:25.4±2.6, 55°.59S × 28°.44W, h0^{km}, mb4.0/2, mb1 4.1/2, mb1mx3.7/24, mbtmp4.0/2, MS3.2/3, Ms1 3.2/3, ms1mx3.0/16, Error ellipse: s-maj=95.7km s-min=54.3km az=177.0*

*NEIC **15** 13:08:31.7±2.6, 55°.1S±0°.1 × 28°.9W±0°.2, h35^{km}±2^{km}, mb4.6/16, Error ellipse: s-maj=23.4km s-min=19.4km az=178.0*

ISC 15 13:08:32.3±0.7**, 55°.1S**±0°.1×**29°.0W**±0°.1**, h35^{km}, n25, σ1^{s}.63**/24**, mb4.5**/10**, MS3.1**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFI	East Falkland	17.64	269	Pn	Pn	13 12 32.8	-2.2
EFI				IAmb	IAmb	13 12 48.1	
	comp=Z,93nm,1.4s						
VNA1	Neumayer--Stat	18.08	158	P	P	13 12 45.3	+4.9
VNA3	Neumayer Olymp	18.25	160	P	Pn	13 12 42.9	+0.5
PMSA	Palmer Station	19.82	227	P	P	13 12 58.5	-1.0
SNAA	Sanae	20.04	156	P	P	13 12 58.9	-3.1
SNAA	Sanae	20.04	156	P	P	13 12 59.4	-2.6
PLCA	Paso Flores	30.84	280	LR	LR	13 26 47.5	
	comp=Z,39nm,19.5s,baz=167,slow=35						
PLCA	Paso Flores	30.84	280	P	P	13 14 46.1	+1.1
LC01	Cunco	32.84	281	P	P	13 15 01.9	-0.6
LC01				IAmb	IAmb	13 15 10.6	
	comp=Z,9.3nm,1.1s						
QSPA	South Pole Qui	35.18	180	P	P	13 15 23.1	+0.5
CPUP	Villa Florida	35.41	313	P	P	13 15 25.8	+1.0
	comp=Z,1.0nm,0.6s,baz=131,slow=9.3,SNR=1.8						
CPUP				LR	LR	13 31 12.5	
	comp=Z,21nm,18.5s,baz=164,slow=38						
MT02	Curacav	36.53	289	P	P	13 15 34.2	-0.1
ROC1	El Roble	36.68	289	P	P	13 15 35.7	-0.1
LVC	Limon Verde	43.94	301	P	P	13 16 35.8	-0.4
LVC				IAmb	IAmb	13 16 38.7	
	comp=Z,4.3nm,0.7s						
PB08	IPOC Station P	46.16	303	P	P	13 16 53.5	-0.3
PB08				IAmb	IAmb	13 16 59.7	
	comp=Z,7.3nm,1.0s						
GO01	Chusmiza	46.58	303	P	P	13 16 58.0	+0.8
GO01				IAmb	IAmb	13 17 00.2	
	comp=Z,6.0nm,0.7s						
BOSA	Boshof	46.72	78	P	P	13 16 56.0	-1.9
BOSA				IAmb	IAmb	13 17 09.0	
	comp=Z,14nm,1.4s						
PSGCX	Pisagua	47.09	302	P	P	13 17 01.4	+0.6
MNMC	Minye Minye	47.23	303	P	P	13 17 02.7	+0.6
MNMC				IAmb	IAmb	13 17 09.3	
	comp=Z,6.9nm,0.8s						
VNDA	Vanda	47.50	183	P	P	13 17 03.7	+0.5
VNDA				IAmb	IAmb	13 17 09.8	
	comp=Z,7.7nm,1.5s						
TOA0	Torodi Ar. Sit	72.72	31	P	P	13 19 57.1	+0.5
TOA0				IAmb	IAmb	13 20 12.8	
	comp=Z,5.4nm,1.3s						
TORD	Torodi Ar. Bea	72.72	31	P	P	13 19 57.1	+0.6
	comp=Z,0.9nm,0.5s,baz=201,slow=6.0,SNR=5.0						
TORD				LR	LR	13 44 43.4	
	comp=Z,32nm,21.9s,baz=345,slow=30						
YKA	Yellowknife Ar	134.78	319	PKP	PKPdf	13 27 46.3	+0.6
	comp=Z,0.4nm,0.7s,baz=121,slow=3.0,SNR=7.5						
INK	Inuvik	144.42	322	PKPbc	PKPab	13 28 01.7	+0.3
	comp=Z,1.4nm,0.7s,baz=82,slow=4.6,SNR=4.6						
ILAR	Eielson Array	148.72	313	PKPbc	PKPbc	13 28 14.3	0.0
	comp=Z,3.5nm,0.7s,baz=126,slow=1.6,SNR=26						

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*IDC **15** 13:14:58.0±3.9, 33°.36N × 24°.94E, h0^{km}, mb4.2/5, mb1 3.9/10, mb1mx3.7/47, mbtmp3.9/10, ML4.0/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/45, Error ellipse: s-maj=72.4km s-min=24.8km az=35.0*

*ISK **15** 13:15:00.3, 33°.29N × 24°.56E, h140^{km}±2^{km}, ML3.5/12*

*THE **15** 13:15:03.8, 33°.46N × 24°.87E, h0^{km}±5^{km}, ML2.9/4, Error ellipse: s-maj=13.5km s-min=1.0km az=188.0*

*HLW **15** 13:15:04.7, 33°.06N × 25°.14E, h25^{km}±23^{km}, Md4.0, Ml3.9*

*ATH **15** 13:15:08.4, 33°.97N × 25°.05E, h73^{km}±25^{km}, ML2.9/6, Error ellipse: s-maj=30.1km s-min=3.6km az=355.0*

ISC 15 13:14:58.9±2.0**, 33°.28N**±0°.05×**25°.01E**±0°.04**, h15^{km}**±13^{km}**, n70, σ2^{s}.25**/81**, mb4.1**/5**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	1.74	334	P	Pb	13 15 30.7	+0.2
GVD				AML	AML	13 15 55.5	
	comp=N,901μm,0.4s						
GVD				AML	AML	13 15 58.7	
	comp=E,730μm,0.5s						
GVD	Gavdhos	1.74	334	P	Pb	13 15 30.6	+0.2
GVD	Gavdhos	1.74	334	PN	Pb	13 15 30.8	+0.3
GVD				SN	Sg	13 15 53.1	-1.8
SIVA	Sivas	1.75	355	P	Pb	13 15 30.7	+0.1
SIVA				S	Sn	13 15 45.8	-4.8
SIVA				AML	AML	13 15 54.7	
	comp=N,565μm,0.4s						
SIVA				AML	AML	13 16 00.5	
	comp=E,615μm,0.6s						
SIVA	Sivas	1.75	355	P	Pb	13 15 31.0	+0.4
SIVA				S	Sb	13 15 52.7	+0.4
	comp=E,302nm,0.5s						
SLUM	Salum	1.79	174	P	Pn	13 15 30.2	+1.0
	baz=177						
SLUM				AMP		13 15 01.4	
	baz=177						
SLUM				S	Sn	13 15 48.1	-3.4
	baz=177						
NPS	Neapolis	2.04	14	P	Pb	13 15 35.5	-0.2
NPS				AML	AML	13 16 05.2	

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      comp=N,318µm,0.5s
NPS                                AML    AML    13 16 05.7
      comp=E,437µm,0.6s
NPS   Neapolis            2.04  14 P      Pb     13 15 36.9 +1.2
ZKR   Zakros              2.09  28 P      Pb     13 15 37.5 +1.1
ZKR                                S      Sn     13 15 56.5 -2.6
ZKR                                AML    AML    13 16 10.5
      comp=E,746µm,0.6s
ZKR                                AML    AML    13 16 10.6
      comp=N,238µm,0.6s
ZKR   Zakros              2.09  28 P      Pb     13 15 37.6 +1.1
ZKR                                S      Sg     13 16 04.7 -1.4
      comp=N,248nm,0.7s
ZKR   Zakros              2.09  28 PN     Pb     13 15 38.1 +1.6
STIA  Sitia Lasithi       2.12  25 P      Pb     13 15 37.8 +0.8
VAM   Vamos               2.23 343 P      Pb     13 15 38.6 -0.3
VAM   Vamos               2.23 343 P      Pb     13 15 38.2 -0.7
VAM                                S      Sb     13 16 04.8 -1.5
      comp=N,158nm,0.8s
IMMV  Iera Moni Meta      2.34 339 P      Pb     13 15 39.7 -1.0
IMMV                               AML    AML    13 16 09.0
      comp=N,440µm,0.5s
IMMV                               AML    AML    13 16 10.0
      comp=E,728µm,0.8s
IMMV  Iera Moni Meta      2.34 339 P      Pb     13 15 39.5 -1.3
IMMV                               S      Sb     13 16 07.0 -2.5
      comp=E,292nm,0.6s
IMMV  Iera Moni Meta      2.34 339 PN     Pn     13 15 38.3 +1.5
IMMV                               SN     Sn     13 16 05.9 +0.6
KARP  Karpathos           2.88  38 P      Pb     13 15 49.2 -0.7
KARP                               AML    AML    13 16 24.3
      comp=E,639µm,0.4s
KARP                               AML    AML    13 16 25.5
      comp=N,535µm,0.3s
KARP  Karpathos           2.88  38 P      Pb     13 15 49.3 -0.7
KARP                               S      Sb     13 16 23.0 -2.0
KARP  Karpathos           2.88  38 PN     Pb     13 15 49.7 -0.3
SANT  Santorini           3.11   7 PN     Pn     13 15 50.3 +2.9
THR3  Thira Island,       3.14   6 P      Pn     13 15 50.3 +2.5
THR5  Thira Island,       3.15   5 P      Pn     13 15 50.6 +2.7
KTHA  Kythira Island      3.38 332 P      Pn     13 15 54.3 +3.2
KTHA                               S      Sn     13 16 30.3 -0.6
KTHR  Kythira             3.41 332 P      Pn     13 15 54.6 +3.1
APE   Apeiranthos         3.81   6 PN     Pn     13 15 59.2 +2.2
KOSK  Kos Island          3.83  24 PN     Pn     13 16 00.9 +3.7
VLI   Veliai              3.83 334 P      Pn     13 15 59.5 +2.2
ARG   Arkhangelos         3.90  40 PN     Pn     13 16 03.1 +4.9
SWA2                      4.04 174 P      Pn     13 16 00.4 +0.3
      baz=175
BODT  Bodrum              4.22  26 PN     Pn     13 16 06.3 +3.6
TURN  Turunc              4.39  36 PN     Pn     13 16 09.3 +4.4
DALY  Dalyan (Mula)       4.63  39 PN     Pn     13 16 12.7 +4.5
YER   Yerkesik            4.69  34 PN     Pn     13 16 13.2 +4.0
FETY  Fethiye             4.74  44 PN     Pn     13 16 14.5 +4.8
VILL  Villia              5.07 345 P      Pn     13 16 15.8 +1.4
KLV   Kalavryta, Ach      5.30 335 P      Pn     13 16 19.1 +1.6
DRO   Drossia             5.39 331 P      Pn     13 16 20.9 +2.2
AXS   Araxos              5.73 330 P      Pn     13 16 25.8 +2.4
ANX   Ano Chora           5.87 336 P      Pn     13 16 26.9 +1.5
HNAT  Natroun             6.01 126 P      Pn     13 16 27.7 +0.5
      baz=124
AGG   Agios Georgios      6.13 340 P      Pn     13 16 31.1 +2.2
RYAN  Fayoum              6.15 131 P      Pn     13 16 30.4 +1.2
      baz=130
EVR   Evrytania           6.20 336 P      Pn     13 16 33.5 +3.6
GLL   Jalalah             6.81 121 P      Pn     13 16 39.5 +1.3
      baz=120
HHAG  Hagoal              6.89 117 P      Pn     13 16 40.4 +1.0
      baz=115
NBNS  Bani Suef           7.11 129 P      Pn     13 16 43.4 +1.0
      baz=128
SUZ   Suez                7.50 115 P      Pn     13 16 49.2 +1.5
      baz=114
MMAI  Mount Meron Ar      8.72  89 Pn     Pn     13 17 04.8 +0.3
      comp=N,2.1nm,0.3s,baz=268,slow=12,SNR=10
MMAI                               Sn     Sn     13 18 34.8 -7.8
      comp=N,1.0nm,0.3s,baz=321,slow=37,SNR=1.6
TR2   Tor 2               8.93 121 P      Pn     13 17 07.9 +0.5
      baz=120
EIL   Elat                9.22 110 Pn     Pn     13 17 12.1 +0.8
      comp=N,0.5nm,0.3s,baz=314,slow=2.9,SNR=12
EIL                                Sn     Sn     13 18 48.9 -5.8
      comp=N,0.8nm,0.3s,baz=264,slow=23,SNR=2.2
HBST  Basata              9.25 113 P      Pn     13 17 13.6 +1.9
      baz=112
HDHB  Dhahab              9.41 116 P      Pn     13 17 15.8 +1.9
      baz=115
BRTR  Keskin Array B      9.47  45 Pn     Pn     13 17 18.2 +3.4
      comp=N,0.1nm,0.3s,baz=212,slow=17,SNR=3.9
DBRK  Dubrovnik          10.83 332 ePn    Pn     13 17 30.6 -2.7
DBRK                               Sn     Sn     13 19 21.7  -12
STON  Ston               11.17 331 ePn    Pn     13 17 35.7 -2.3
HVAR  Hvar               11.95 328 ePn    Pn     13 17 46.6 -2.0
HVAR                               Sn     Sn     13 19 49.1  -13
KIJV  Kijevo             12.64 330 ePn    Pn     13 17 55.4 -2.7
KIJV                               Sn     Sn     13 20 05.6  -13
ZIRJ  Zirje              12.69 327 ePn    Pn     13 17 56.1 -2.6
ZIRJ                               Sn     Sn     13 20 06.3  -13
MORI  Morici             12.83 328 ePn    Pn     13 17 58.0 -2.6
MORI                               Sn     Sn     13 20 10.0  -13
DUGI  Dugi Otok          13.22 327 ePn    Pn     13 18 04.5 -1.4
DUGI                               Sn     Sn     13 20 19.8  -13
AKASG Malin Array Be     17.69   9 P      Pn     13 19 05.0 +0.5
      comp=N,1.2nm,0.3s,baz=202,slow=10,SNR=12
GERES GERESS Array B     17.71 335 P      Pn     13 19 05.1 +0.2
      comp=N,0.2nm,0.3s,baz=153,slow=13,SNR=4.2
KHC   Kasperske Hory     17.99 335 eP     P      13 19 10.5 +1.7
DPC   Dobruska-Polom     18.23 342 eP     P      13 19 13.5 +2.1
BELG  Belogornoye        25.12  34 P      P      13 20 22.1 -0.8
      comp=N,6.2nm,0.6s,baz=169,slow=10,SNR=3.0
BELG                               LR     LR     13 31 09.4
      comp=N,57nm,18.1s,baz=111,slow=39
HFS   Hagfors            27.88 348 P      P      13 20 48.3 +0.5
      comp=N,2.1nm,0.6s,baz=128,slow=9.3,SNR=6.3
ARCES ARCESS Array B     36.31   0 P      P      13 22 01.6  0.0
      comp=N,2.3nm,0.9s,baz=169,slow=7.4,SNR=11
MKAR  Makanchi Array     44.94  55 P      P      13 23 15.9 +2.8
      comp=N,0.8nm,0.5s,baz=265,slow=7.7,SNR=19
ZALV  Zalesovo Beam      46.41  45 P      P      13 23 26.8 +2.2
      comp=N,1.2nm,0.3s,baz=266,slow=8.5,SNR=8.9
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*IDC **15** 13:18:30.8±2.4, 9°.31S×113°.03E, h0^{km}, mb4.1/6, mb1 4.2/7, mb1mx3.9/32, mbtmp4.1/7, MS3.0/6, Ms1 3.0/6, ms1mx2.9/28, Error ellipse: s-maj=153.1km s-min=18.2km az=53.0*

*NEIC **15** 13:18:35.9±2.7, 9°.6S±0°.1×112°.89E±0°.07, h49^{km}±10^{km}, mb4.2/7, Error ellipse: s-maj=15.2km s-min=9.6km az=182.0*

*DJA **15** 13:18:36.1±0.4, 9°S±5°×11°3E±°, h10^{km}, M4.5/16, mb4.9/4, mB5.1/2, MLv4.3/16, Mw(mB)4.5/2*

ISC 15 13:18:35.0±0.7**, 9°.68S**±0°.08×**112°.84E**±0°.05**, h36**^{km}**, n49,** $\sigma 1^{s}.76$/43**, mb4.2**/9**, MS3.0**/4**, South of Jawa**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC         h  m  s    ISC
GMJI  Gumukmas            1.52  23 P      Pn     13 18 58.9 -0.7
JAGI  Jajag, Banyuwa      1.77  47        Pn     13 19 03.4 +0.4
JAGI  Jajag, Banyuwa      1.77  47 P      Pn     13 19 03.3 +0.3
JAGI                               S      Sn     13 19 24.5 +0.2
PWJI  Pagerwojo           1.93 328 P      Pn     13 19 05.9 +0.6
PWJI                               S      Sn     13 19 28.1 -0.3
ABJI  Asem Bagus          2.32  37 P      Pn     13 19 13.0 +2.3
NGJI  Ngawi               2.67 329 P      Pn     13 19 20.9 +5.5
GRJI  Gresik              2.77 353 P      Pn     13 19 20.1 +3.3
SRBI  Singaraja           2.83  56 P      Pn     13 19 19.7 +2.0
KMMI  Kalianget           2.84  23 P      Pn     13 19 19.8 +2.0
UGM   Wanagama            2.88 307        Pn     13 19 20.3 +1.9
UGM   Wanagama            2.88 307 P      Pn     13 19 20.0 +1.6
SMRI  Semarang            3.52 318        Pn     13 19 27.4 +0.2
TWSI  Taliwang, Sumb      4.10  77 P      Pn     13 19 36.8 +1.6
KPJI  Karang Pucung       4.51 301 P      Pn     13 19 43.6 +2.9
CMJI  Cimerak             4.73 293 P      Pn     13 19 44.6 +0.9
PLAI  Plampang            4.95  81 P      Pn     13 19 49.8 +3.0
CISI  Cisompet, Garu      5.39 293        Pn     13 19 56.1 +3.1
CISI  Cisompet, Garu      5.39 293 P      Pn     13 19 55.9 +2.9
      1.2nm2µm126nm,0.7s
LEM   Lembang             5.89 298 LR     LR     13 22 16.8
      comp=Z,78nm,21.0s,baz=190,slow=38
XMIS  Christmas Isla      7.12 263 Pn     Pn     13 20 16.9 +0.3
CGJI  Cibinong            7.70 293 P      Pn     13 20 27.6 +3.0
      0.2nm952nm42nm,0.5s
KAPI  Kappang             8.28  56 LR     LR     13 24 06.2
      comp=Z,84nm,18.5s,baz=226,slow=42
KAPI  Kappang             8.28  56 Pn     Pn     13 20 27.0 -5.5
MNAI  Manna              11.13 298 Pn     Pn     13 21 13.4 +1.6
KSI   Kapahiang          11.80 300 P      Pn     13 21 22.0 +1.1
FITZ  Fitzroy Crossi     14.98 125 Pn     Pn     13 22 02.8 -1.3
      baz=314,slow=9.7
FITZ                               Sn     Sn     13 24 38.4  -11
      0.1nm,0.3s,baz=119,slow=10,SNR=1.7
FITZ  Fitzroy Crossi     14.98 125        Pn     13 22 03.3 -0.8
KULM  Kulim              19.20 320 P      P      13 22 52.5 -3.4
KULM                               IAmb   IAmb   13 23 02.7
      comp=Z,28nm,1.4s
ASAR  Alice Springs      24.46 127 P      P      13 23 52.5 +1.7
      comp=Z,5.3nm,0.7s,baz=304,slow=8.8,SNR=81
ASAR                               LR     LR     13 35 05.6
      comp=Z,32nm,18.3s,baz=344,slow=41
ASAR  Alice Springs      24.46 127 P      P      13 23 52.1 +1.3
AS31  Alice Springs      24.46 127 P      P      13 23 52.8 +2.0
FORT  Forrest            25.34 148 P      P      13 23 59.7 +1.2
CMAR  Chiang Mai Arr     31.14 334 P      P      13 24 50.2 -0.3
      comp=Z,0.8nm,0.4s,baz=167,slow=7.5,SNR=6.1
CMAR                               LR     LR     13 38 03.0
      comp=Z,41nm,20.1s,baz=197,slow=38
BBOO  Buckleboo          31.45 140 P      P      13 24 52.3 -0.8
BBOO                               IAmb   IAmb   13 25 00.2
      comp=Z,7.5nm,1.1s
STKA  Stephens Creek     34.60 134 P      P      13 25 23.2 +2.5
      comp=Z,2.8nm,0.8s,baz=306,slow=12,SNR=5.7
STKA                               LR     LR     13 40 26.1
      comp=Z,55nm,19.6s,baz=228,slow=38
STKA  Stephens Creek     34.60 134 P      P      13 25 20.7  0.0
STKA                               IAmb   IAmb   13 25 39.0
      comp=Z,1.6nm,1.4s
H08S2 Diego Garcia H     39.92 270 T      T      14 08 28.8
      baz=105,slow=74
H08S3 Diego Garcia H     39.93 270 T      T      14 08 22.8
      baz=105
H08S1 Diego Carcia H     39.94 270 T      T      14 08 23.0
      baz=105,slow=74
KSRS  Korea Array        48.97  16 LR     LR     13 48 45.2
      comp=Z,6.2nm,19.0s,baz=335,slow=37
SONM  Songino Array      57.54 355 P      P      13 28 20.2 -0.7
      comp=Z,1.5nm,0.6s,baz=178,slow=9.5,SNR=8.3
MK31  Makanchi Array     62.48 337 P      P      13 28 53.6 -1.1
MK31                               IAmb   IAmb   13 28 58.1
      comp=Z,2.0nm,1.1s
MKAR  Makanchi Array     62.48 337 P      P      13 28 53.9 -0.8
      comp=Z,1.0nm,0.5s,baz=150,slow=7.0,SNR=23
MKAR  Makanchi Array     62.48 337 P      P      13 28 53.2 -1.5
ZALV  Zalesovo Beam      67.68 343 P      P      13 29 27.4 -0.9
      comp=Z,1.5nm,0.7s,baz=158,slow=4.2,SNR=7.5
ZALV  Zalesovo Beam      67.68 343 P      P      13 29 26.6 -1.6
ABKAR Akbulak array      74.72 327 P      P      13 30 10.7 -0.3
ABKAR                              IAmb   IAmb   13 30 13.0
      comp=Z,3.4nm,0.8s
ABKAR Akbulak array      74.72 327 P      P      13 30 10.6 -0.3
YKA   Yellowknife Ar    117.23  23 PKP    PKiKP  13 37 16.7 +0.7
      comp=Z,0.2nm,0.7s,baz=279,slow=1.7,SNR=4.1
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*ANF **15** 13:22:51.4±0.2, 46°.48N×122°.42W, h24^{km}±2^{km}, ML2.6/6, Error ellipse: s-maj=2.2km s-min=1.5km az=78.0*

*NEIC **15** 13:22:51.4±1.0, 46°.50N±0°.02×122°.40W±0°.03, h23^{km}±7^{km}, Error ellipse: s-maj=3.3km s-min=3.2km az=179.0*

*SEA **15** 13:22:52.3±0.7, 46°.49N±0°.02×122°.41W±0°.03, h20^{km}±5^{km}, Md2.6/17, ML2.0/10(NEIC), Error ellipse: s-maj=3.4km s-min=2.6km az=176.0*

ISC 15 13:22:51.7±0.9**, 46°.51N**±0°.02×**122°.41W**±0°.02**, h19**^{km}±2^{km}**, n74,** $\sigma 0^{s}.43$/82**, Washington**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC         h  m  s    ISC
E04D  Cinebar             0.12 296 P      Pg     13 22 56.2 +0.6
      baz=121,SNR=358
E04D                               S      Sg     13 22 59.1 +0.8
      baz=121
E04D  Cinebar             0.12 296        Pg     13 22 56.3 +0.6
E04D                                      Sg     13 22 59.2 +0.8
ERK   Elk Rock            0.21 166        Pb     13 22 56.8 +0.3
B201  Coldwater, Mou      0.23 153        Pb     13 22 57.0 +0.1
LCW   Lucas Creek         0.26 310        Pg     13 22 58.1 +0.5
JRO   Jston Ridge Ob      0.27 149        Pn     13 23 01.0 +0.1
STD   Studebaker Rid      0.30 154        Pg     13 22 58.2 -0.1
STD                                       Sb     13 23 02.7 -0.3
STD   Studebaker Rid      0.30 154        Pg     13 22 58.2 -0.1
FL2   Flat Top 2          0.31 172        Pg     13 22 58.5 -0.1
B202  Windy Ridge, M      0.32 144        Pg     13 22 58.5 -0.3
VALT  Mount Saint He      0.33 152        Pg     13 22 59.0 +0.1
SHW   Mount Saint He      0.34 159        Pg     13 22 58.9 -0.1
B203  Quarry, Mount       0.34 171        Pg     13 22 58.7 -0.3
B203                                      Sg     13 23 03.7 -0.3
SWF2  Southwest Flan      0.35 157        Pg     13 22 59.2 -0.1
ESD   East Dome           0.36 149        Pg     13 22 59.6 +0.2
HSR   South Ridge         0.37 154        Pg     13 22 59.6  0.0
JLK   June Lake           0.40 153        Pg     13 22 59.9 -0.2
RVW   Rose Valley         0.42 213        Pg     13 23 00.1 -0.4
LVP   Lakeview Peak       0.44 180        Pg     13 23 00.5 -0.2
CDFW  Cedar Flats         0.46 147        Pg     13 23 01.0 -0.2
LON   Longmire            0.48  59        Pg     13 23 01.2 -0.4
LON                                       Sg     13 23 08.3 +0.1
LON   Longmire            0.48  59        Pg     13 23 01.4 -0.1
LON   Longmire            0.48  59 IAML          13 23 08.8
      comp=E,102nm,0.4s
LON                                IAML          13 23 08.8
      comp=N,95nm,0.5s
B941  Kapowsin            0.50  15        Pb     13 23 01.6 -0.4
MTMW  Mount Mitchell      0.50 164        Pg     13 23 01.5 -0.4
REMR  Mount Rainier-      0.50  51        Pg     13 23 02.0  0.0
GHW   Garrison Hill       0.55  10        Pb     13 23 02.3 -0.4
BMW   Boistfort Moun      0.56 267        Pb     13 23 02.7 -0.3
OBSR  Observation Ro      0.57  46        Pb     13 23 03.2  0.0
RCM   Mount Rainier-      0.57  55        Pb     13 23 03.1 -0.2
F04D  Rainier, OR         0.59 225 P      Pb     13 23 03.0 -0.4
      baz=45,SNR=14
F04D                               S      Sb     13 23 11.5 +0.1
      baz=45
F04D  Rainier, OR         0.59 225        Pb     13 23 03.0 -0.4
RCS   Mount Rainier-      0.60  52        Pb     13 23 03.5 -0.2
B023  Clatskanie          0.61 230        Pb     13 23 03.0 -0.6
WPW   White Pass          0.63  72        Pb     13 23 03.8 -0.4
PANH  Panhandle Gap,      0.64  56        Pb     13 23 04.0 -0.3
FMW   Mount Fremont       0.67  50        Pb     13 23 04.6 -0.2
ASR   Mount Adams--S      0.67 122        Pb     13 23 04.4 -0.4
D04E  Lakebay             0.72 340 P      Pb     13 23 05.8 +0.2
      baz=160,SNR=9.3
D04E                               Sn     Sn     13 23 17.3 -0.1
      baz=160
D05A  Enumclaw            0.74  23        Pb     13 23 06.1  0.0
GULW  Guler Mountain      0.81 135        Pb     13 23 06.8 -0.5
GSM   Grass Mountain      0.82  31        Pb     13 23 07.2 -0.2
NLO   Nicolai Mounta      0.83 240        Pb     13 23 07.4 -0.2
B019  Raymond             0.87 280        Pb     13 23 08.2  0.0
F05D  White Salmon        0.91 133 P      Pb     13 23 08.5 -0.4
      baz=313,SNR=10
F05D                               S      Sb     13 23 20.8 +0.2
      baz=313
F05D  White Salmon        0.91 133        Pb     13 23 08.7 -0.2
B017  Montesano           0.93 302        Pb     13 23 09.3 +0.1
RATT  Rattlesnake La      1.01  24        Pb     13 23 10.2 -0.5
ON2   Olympics--Nort      1.01 292        Pb     13 23 10.6 -0.1
SMW   South Mountain      1.03 322        Pg     13 23 11.9 +0.1
GMW   Gold Mountain       1.07 346        Pb     13 23 11.0 -0.8
GNW   Green Mountain      1.10 345        Pn     13 23 11.2 -0.9
NAC   Naches              1.12  78        Pb     13 23 13.0 +0.5
D03D  Eldon               1.13 336 P      Pn     13 23 11.9 -0.6
      baz=156,SNR=17
D03D                               S      Sb     13 23 27.4 +0.4
      baz=156
D03D  Eldon               1.13 336        Pn     13 23 12.1 -0.5
KMOR  Kings Mountain      1.15 221        Pn     13 23 11.8 -1.1
VLL   Laurance Lake       1.16 154        Pn     13 23 13.0 -0.1
HDW   Hoodsport           1.23 339        Pn     13 23 13.3 -0.6
C04A  Brinnon             1.27 343        Pn     13 23 14.4 -0.1
TDH   Tom, Dick, Har      1.29 160        Pn     13 23 14.6 -0.3
TRW   Toppenish Ridg      1.31  99        Pb     13 23 16.3 +0.5
EBG   Ellensburg          1.33  72        Pb     13 23 16.6 +0.4
B013  Quilcene            1.35 346        Pn     13 23 15.4 -0.2
B013  Quilcene            1.35 346        Pn     13 23 15.3 -0.2
LTY   Liberty             1.41  57        Pb     13 23 17.3 -0.2
LTY                                IAML          13 23 27.0
      comp=N,11nm,5.0s
LTY                                IAML          13 23 47.5
      comp=E,12nm,4.2s
G03D  McMinnville, O      1.42 205 Pb     Pn     13 23 16.7 +0.1
      baz=25
G03D                               Sb     Sn     13 23 35.1 +0.3
      baz=25
G05D  Wamic, OR           1.48 148 Sb     Sb     13 23 37.5 +0.5
      baz=329
WRW   Wenatchee Ridg      1.71  37        Pb     13 23 22.4 -0.3
C06D  Leavenworth         1.76  36 Sb     Sb     13 23 46.0 +1.0
      baz=216
H04A  Detroit Lake        1.83 175        Pn     13 23 23.0 +0.8
H04A  Detroit Lake        1.83 175 IAML          13 23 48.6
      comp=E,24nm,0.3s
H04A                               IAML          13 23 49.3
      comp=N,30nm,0.3s
H04D  Lebanon             2.00 187 Sb     Sb     13 23 51.4 -0.4
      baz=6.6
COR   Corvallis           2.02 198 Pn     Pn     13 23 25.8 +1.0
B926  Mesachie Lake       2.59 334        Pg     13 23 40.8 -0.6
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*IDC **15** 13:54:06.7±1.1, 27°.19N×103°.34E, h0^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.6/55, mbtmp3.6/10, MS3.5/8, Ms1 3.5/8, ms1mx3.2/53, Error ellipse: s-maj=31.9km s-min=20.7km az=66.0*

ISC 15 13:54:08.8±0.7**, 27°.22N**±0°.04×**103°.07E**±0°.06**, h10**^{km}**, n19,** $\sigma 1^{s}.72$/25**, mb3.7**/8**, MS3.3**/7**, 2C, Yunnan**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC         h  m  s    ISC
KMI   Kunming             2.10 188 ⇑Pg    Pn     13 54 43.8 -0.5
KMI                                Sg     Sn     13 55 12.0 +1.3
KMI                                smax   smax
      comp=N,450nm,1.0s
KMI                                smax   smax
      comp=E,400nm,1.5s
KMI                                LR     LR
      comp=N,2µm,6.2s
KMI                                LR     LR
      comp=E,5µm,7.7s
KMI                                LR     LR
      comp=Z,1µm,5.0s
GYA   Guiyang             3.30 102 ⇑Pn    Pn     13 55 00.4 -0.2
GYA                                Pg     Pg     13 55 12.0  0.0
GYA                                Sn     Sn     13 55 41.6 +1.6
GYA                                Sg     Sg     13 55 57.3 +2.5
GYA                                smax   smax
      comp=N,110nm,1.1s
GYA                                smax   smax
      comp=E,110nm,1.0s
GYA                                LR     LR
      comp=Z,440nm,4.5s
CD2   Chengdu             3.73   9 Pn     Pn     13 55 06.6 +0.1
CD2                                Pg     Pg     13 55 18.6 -1.6
CD2                                Sn     Sn     13 55 52.6 +2.1
CD2                                Sg     Sg     13 56 12.4 +3.8
CD2                                smax   smax
      comp=N,350nm,1.1s
CD2                                smax   smax
      comp=E,390nm,1.0s
XAN   Xi'an               8.46  35 Pn     Pn     13 56 10.4 -1.1
XAN                                Pg     Pg     13 56 51.3 +0.5
XAN                                Sn     Sn     13 57 43.8 -3.3
XAN                                Sg     Sg     13 58 41.8 +1.4
XAN                                smax   smax
      comp=N,77nm,1.1s
XAN                                smax   smax
      comp=E,79nm,1.0s
XAN                                LR     LR
      comp=N,810nm,8.7s
XAN                                LR     LR
      comp=E,670nm,7.1s
XAN                                LR     LR
      comp=Z,660nm,6.8s
CMAR  Chiang Mai Arr      9.51 204 Pn     Pn     13 56 27.5 +1.6
      baz=16,slow=13,SNR=7.6
CMAR                               Pg            13 57 07.3
      comp=Z,0.1nm,0.3s,baz=2.2,slow=17,SNR=5.0
CMAR                               Lg     Lg     13 59 19.8
      baz=33,slow=32,SNR=4.3
CMAR                               LR     LR     14 00 13.6
      comp=Z,141nm,18.1s,baz=35,slow=38
WMQ   Urumqi             20.70 327 eP     P      13 58 49.5 +0.3
SONM  Songino Array      20.75   6 P      P      13 58 50.0 +0.3
      comp=Z,0.2nm,0.4s,baz=186,slow=11,SNR=3.9
KSRS  Korea Array        23.29  58 P      P      13 59 14.2 -2.5
      comp=Z,0.8nm,0.6s,baz=244,slow=10,SNR=1.9
KSRS                               LR     LR     14 07 54.8
      comp=Z,52nm,18.7s,baz=284,slow=36
MKAR  Makanchi Array     25.50 326 P      P      13 59 37.9 +0.7
      comp=Z,1.0nm,0.6s,baz=128,slow=9.0,SNR=9.5
MKAR                               LR     LR     14 10 55.9
      comp=Z,96nm,20.7s,baz=140,slow=39
AAK   Ala-Archa          27.86 311 LR     LR     14 12 19.9
      comp=Z,369nm,19.2s,baz=124,slow=39
ZALV  Zalesovo Beam      29.90 338 P      P      14 00 17.8 +1.3
      comp=Z,0.3nm,0.3s,baz=165,slow=6.0,SNR=1.9
ZALV                               LR     LR     14 12 59.2
      comp=Z,69nm,20.9s,baz=49,slow=38
KURBB Kurchatov Arra     29.92 328 P      P      14 00 17.3 +0.6
      comp=Z,1.0nm,0.8s,baz=139,slow=9.5,SNR=8.5
MJAR  Matsushiro Arr     31.11  64 LR     LR     14 13 32.7
      comp=Z,82nm,18.2s,baz=270,slow=38
KLR   Kul'dur            31.16  37 LR     LR     14 14 46.8
      comp=Z,52nm,18.5s,baz=214,slow=40
ASAR  Alice Springs      58.70 147 P      P      14 04 04.9 -1.9
      comp=Z,0.5nm,0.8s,baz=331,slow=7.1,SNR=7.8
AKASG Malin Array Be     59.42 315 P      P      14 04 12.6 +1.1
      comp=Z,0.6nm,0.3s,baz=70,slow=8.0,SNR=1.6
ARCES ARCESS Array B     60.44 337 P      P      14 04 17.0 -1.2
      comp=Z,3.9nm,1.0s,baz=83,slow=7.6,SNR=1.9
YKA   Yellowknife Ar     85.66  17 P      P      14 06 46.5 -0.9
      comp=Z,0.3nm,0.7s,baz=336,slow=4.1,SNR=3.7
TORD  Torodi Ar. Bea     93.91 287 LR     LR     14 56 10.2
      comp=Z,69nm,18.4s,baz=335,slow=40
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*BJI **15** 14:01:50.5±0.0, 4°.70S×102°.90E, h72^{km}, mB5.2/42, mb5.3/68, Ms4.6/19, Ms7 4.3/20*

*MOS **15** 14:01:50.6±1.0, 4°.49S×102°.97E, h58^{km}, mb5.6/59, Error ellipse: s-maj=8.1km s-min=4.4km az=110.8*

*DJA **15** 14:01:51.9±0.3, 5°S±3°×10°3E±°, h86^{km}±3^{km}, M5.0/39, mb5.4/39, mB5.4/30, MLv5.5/25, Mw(mB)4.9/30, MwMwp4.5/4, Mwp4.9/4*

*NEIC **15** 14:01:52.0±1.8, 4°.76S±0°.05×102°.79E±0°.08, h64^{km}±4^{km}, mb5.2/57, Error ellipse: s-maj=11.2km s-min=7.2km az=82.0*

*NOU **15** 14:01:52.7, 4°.88S×102°.81E, h56^{km}, mb5.2, Southern Sumatra, Indonesia*

*IDC **15** 14:01:54.0±1.2, 4°.58S×102°.96E, h76^{km}±9^{km}, mb4.8/43, mb1 4.8/46, mb1mx4.7/56, mbtmp5.1/46, MS3.8/27, Ms1 3.8/27, ms1mx3.7/41, Error ellipse: s-maj=12.2km s-min=7.9km az=41.0*

*KLM **15** 14:01:54, 4°.84S×102°.80E, h56^{km}, mb4.9*

*GCMT **15** 14:01:55.0±0.3, 4°.85S±0°.02×102°.88E±0°.02, h58^{km}±2^{km}, MW4.9/91, Moment Tensor Solution. s35,c40; s91,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.69±.14; $M_{\theta\theta}$-0.65±.12; $M_{\phi\phi}$-1.04±.12; $M_{r\theta}$1.69±.07; $M_{\theta\phi}$-2.38±.08; $M_{\phi r}$0.57±.08; Best double couple: $M_0$3.21100×10^{16} NP1:ϕ_s187.00000°, δ40.00000°, λ34.00000°. NP2: ϕ_s71.00000°, δ69.00000°, λ125.00000°. Principal axes: T 2.7230, Plg52.0000°, Azm23.0000°; N 0.9770, Plg33.0000°, Azm236.0000°; P -3.6990, Plg17.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 14:01:52.7±0.5**, 4°.73S**±0°.04×**102°.81E**±0°.04**, h69**^{km}±3^{km}**, h69**^{km}**:pP-P, n635,** $\sigma 1^{s}.25$/663**, mb5.2**/157**, 44C-31D, Southern Sumatera**

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Code  Station Name         Δ°  AZ°    Phase ID          Time      Res
                                  Op     ISC         h  m  s    ISC
MNAI  Manna               0.40  22        Pn     14 02 04.3 -0.2
MNAI  Manna               0.40  22 P      Pn     14 02 05.0 +0.5
MNAI                               S      Sn     14 02 13.8 +0.7
KSI   Kapahiang           1.09 349 P      Pn     14 02 13.7 +1.3
LHSI  Lahat               1.15  39 P      Pn     14 02 14.3 +1.3
LWLI  Liwa                1.28 103 P      Pn     14 02 14.9  0.0
KASI  Kota Agung          1.86 115 P      Pn     14 02 22.3 -0.2
KLSI                      1.92  89 P      Pn     14 02 24.0 +0.8
BLSI  Bandar Lampung      2.51 105 P      Pn     14 02 31.7 +0.4
PMBI  Palembang           2.66  48        Pn     14 02 34.3 +1.0
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PMBI	Palembang	2.66	48	P	Pn	14 02 33.9	+0.7
KRJI	Kerinci	2.94	333	P	Pn	14 02 40.1	+2.8
JMBI	JAMBI	3.19	15	P	Pn	14 02 42.7	+2.2
CGJI	Cibinong	3.43	123	P	Pn	14 02 43.2	-0.6
SDSI	Sungai Dareh	4.01	340	P	Pn	14 02 53.4	+1.6
TNG	Tangerang	4.08	111	P	Pn	14 02 54.0	+1.3
TNG				P	Pn	14 02 54.0	+1.3
PPBI	Pangkal Pinang	4.19	53	P	Pn	14 02 55.7	+1.5
DBJI	Dramaga	4.32	115	P	Pn	14 02 57.0	+1.0
SKJI	Sukabumi	4.36	121	P	Pn	14 02 55.9	-0.7
PDSI	Padang	4.46	328	P	Pn	14 02 58.7	+0.9
TPI	Tanjungpandan	5.22	68	P	Pn	14 03 09.4	+1.1
	1.2nm1µm100nm,0.6s						
LEM	Lembang	5.22	114	P	Pn	14 03 09.9	+1.4
	100nm,0.3s,baz=220,slow=1.3,SNR=80						
LEM				S	Sn	14 04 10.0	+2.5
	baz=24,slow=20,SNR=1.5						
LEM				LR	LR	14 05 40.8	
	comp=Z,1µm,18.9s,baz=279,slow=44						
LEM	Lembang	5.22	114	P	Pn	14 03 10.1	+1.7
	3.3nm2µm11µm1µm,0.9s						
BKNI	Bangkinang	5.32	341	Pn	Pn	14 03 10.7	+1.0
BKNI	Bangkinang	5.32	341	P	Pn	14 03 11.6	+1.9
	5.7nm2µm724nm,0.8s						
CISI	Cisompet, Garu	5.72	120	Pn	Pn	14 03 13.9	-1.3
CISI	Cisompet, Garu	5.72	120	P	Pn	14 03 14.4	-0.8
	9.8nm2µm28µm2µm,0.7s						
XMI	Christmas Isla	6.36	153	P	Pn	14 03 18.0	-5.9
MNSI	Mandailing Nat	6.36	329	P	Pn	14 03 23.8	-0.1
	1.7nm3µm237nm,0.8s						
XMIS	Christmas Isla	6.37	154	Pn	Pn	14 03 17.4	-6.7
XMIS	Christmas Isla	6.37	154	P	Pn	14 03 17.9	-6.2
CMJI	Cimerak	6.38	119	P	Pn	14 03 23.1	-1.0
	1.8nm6µm462nm,0.7s						
MYKOM	Kota Tinggi	6.56	9	Pn	Pn	14 03 29.4	+2.8
KPJI	Karang Pucung	6.62	113	P	Pn	14 03 28.7	+1.3
	1.5nm5µm321nm,0.8s						
SMRI	Semarang	7.94	107	Pn	Pn	14 03 46.8	+1.3
SMRI	Semarang	7.94	107	P	Pn	14 03 46.9	+1.4
	8µm623nm,0.9s						
GSI	Gunungsitoli	7.95	319	Pn	Pn	14 03 45.1	-0.5
GSI	Gunungsitoli	7.95	319	P	Pn	14 03 45.0	-0.7
	5µm308nm,0.4s						
UGM	Wanagama	8.30	113	Pn	Pn	14 03 49.2	-1.2
UGM	Wanagama	8.30	113	P	Pn	14 03 50.5	+0.1
	496nm,1.2s						
PSI	Prapat	8.43	333	P	Pn	14 03 50.7	-1.5
	3.1nm,0.3s,baz=181,slow=3.5,SNR=10.0						
PSI				LR	LR	14 07 31.6	
	comp=Z,1µm,21.9s,baz=91,slow=41						
IPM	Ipoh	9.32	349		Pn	14 04 07.2	+2.8
IPM	Ipoh	9.32	349	P	Pn	14 04 09.0	+4.6
COCO	West Island	9.48	218	P	Pn	14 04 05.8	-0.7
COCO	West Island	9.48	218		Pn	14 04 05.8	-0.7
PWJI	Pagerwojo	9.52	111	P	Pn	14 04 06.9	-0.2
	2µm234nm,0.7s						
KSM	Kuching	9.70	51	Pn	Pn	14 04 12.0	+2.3
KSM	Kuching	9.70	51	P	Pn	14 04 10.0	+0.4
TPTI		9.72	325	P	Pn	14 04 08.7	-1.2
	599nm27nm,0.6s						
GRJI	Gresik	9.87	103	P	Pn	14 04 14.9	+3.1
	2µm311nm,0.8s						
MLSI	Meulaboh, Aceh	10.99	324	P	Pn	14 04 25.5	-1.7
	4µm397nm,0.7s						
KMMI	Kalianget	11.34	102	P	Pn	14 04 33.5	+1.5
	185nm,1.0s						
ABJI	Asem Bagus	11.76	106	P	Pn	14 04 39.5	+1.8
	6µm773nm,0.7s						
SBUM	Sibu	11.80	53	P	Pn	14 04 40.0	+1.7
JAGI	Jajag, Banyuwa	11.87	109	Pn	Pn	14 04 38.2	-1.0
JAGI	Jajag, Banyuwa	11.87	109	P	Pn	14 04 38.4	-0.8
	9µm798nm,0.8s						
SRBI	Singaraja	12.77	106	P	Pn	14 04 51.4	-0.1
	3µm302nm,0.7s						
TRTT	Trang	12.86	346	P	Pn	14 04 57.0	+4.3
	68nm,0.9s						
DNP	Denpasar	12.93	108	P	Pn	14 04 50.8	-2.8
	21µm679nm,0.5s						
TWSI	Taliwang, Sumb	14.53	107	P	Pn	14 05 09.5	-5.4
PLAI	Plampang	15.41	106	P	Pn	14 05 21.7	-4.5
	3µm286nm,0.5s						
SPMM	Sapulut	16.55	56	P	P	14 05 44.0	+1.9
KAPI	Kappang	16.89	92	P	Pn	14 05 42.1	-2.6
	1.6nm,0.3s,baz=268,slow=12,SNR=1.7						
KAPI	Kappang	16.89	92	P	Pn	14 05 44.5	-0.3
KAPI				pmax	pmax		
	comp=Z,78nm,1.2s						
KAPI	Kappang	16.89	92	P	Pn	14 05 44.5	-0.3
SPSI	Sidrap Palu	16.93	88	P	Pn	14 05 45.9	+0.6
	comp=Z,1µmcomp=Z,87nm,1.0s						
TTSI	Tana Toraja	17.06	85	P	P	14 05 50.6	+3.0
	comp=Z,992nmcomp=Z,79nm,0.8s						
KKM	Kota Kinabalu	17.14	51		Pn	14 05 49.0	+1.0
BNSI	Bone	17.25	90	P	Pn	14 05 49.8	+0.6
	comp=Z,2µmcomp=Z,135nm,1.5s						
BKSI	Bulukumba	17.26	93	P	Pn	14 05 49.7	+0.3
	comp=Z,918nmcomp=Z,121nm,0.6s						
DLV	T Lat	17.50	19		Pn	14 05 51.2	-1.3
PATY	Pattaya	17.64	354	P	P	14 05 55.9	+1.8
	comp=Z,66nm,0.7s						
MPSI	Mapaga	17.80	74	P	P	14 05 56.9	+1.0
	comp=Z,453nmcomp=Z,34nm,1.0s						
BASI	Baing, Sumba	18.44	108	P	P	14 05 58.8	-4.1
	comp=Z,3µmcomp=Z,277nm,0.7s						
MYLDM	Lahad Datu	18.51	58		P	14 06 05.0	+1.4
SRAK	Srakaew	18.63	358	P	P	14 06 06.0	+1.0
	comp=Z,5µmcomp=Z,488nm,0.8s						
TOLI2	Tolitoli	18.87	73	P	P	14 06 08.6	+0.9
EDFI	Ende, Flores	19.17	103	P	P	14 06 08.5	-2.5
	comp=Z,742nmcomp=Z,53nm,0.7s						
APSI	Ampana	19.20	79	P	P	14 06 12.8	+1.6
	comp=Z,684nmcomp=Z,80nm,1.0s						
MMRI	Maumere	19.68	102	P	P	14 06 14.9	-1.6
MMRI				IAmb	IAmb	14 06 23.5	
	comp=Z,130nm,0.7s						
MMRI	Maumere	19.68	102	P	P	14 06 15.3	-1.2
	comp=Z,2µmcomp=Z,184nm,0.6s						
MRSI	Marisa	19.80	75	P	P	14 06 18.3	+0.5
	comp=Z,1µmcomp=Z,110nm,0.6s						
UTHA	Uthaitani	20.43	351	P	P	14 06 24.4	-0.2
	comp=Z,832nmcomp=Z,112nm,1.0s						
CHAI	Chaiyaphum	20.51	358	P	P	14 06 26.1	+0.7
	comp=Z,749nmcomp=Z,80nm,0.8s						
GIRL	Giralia	20.96	149	P	Pn	14 06 32.4	-1.1
	baz=21,SNR=6.0						
BATI	Baumata	21.38	106	P	P	14 06 33.2	-1.7
	comp=Z,113nm,0.4s,baz=314,slow=4.6,SNR=19						
BATI				S	S	14 10 16.6	-12
	comp=Z,44nm,0.5s,baz=310,slow=17,SNR=3.6						
BATI	Baumata	21.38	106	P	P	14 06 32.4	-2.4
	comp=Z,2µmcomp=Z,179nm,0.6s						
SOEI	Soe	21.86	104	P	P	14 06 37.6	-2.5
SOEI	Soe	21.86	104	P	P	14 06 37.9	-2.2
	comp=Z,2µmcomp=Z,212nm,0.7s						
PHIT	Phitsanulok	21.91	354	P	P	14 06 41.1	+0.8
	comp=Z,4µmcomp=Z,488nm,0.9s						
SUKH	Sukhothai	22.29	352	P	P	14 06 44.9	+0.4
	comp=Z,108nm,0.9s						
UTTA	Uttaradit	22.44	354	P	P	14 06 46.7	+0.6
	comp=Z,61nm,0.9s						
MHMT	Maesarieng	23.26	348	P	P	14 06 53.9	-0.5
	comp=Z,1µmcomp=Z,46nm,0.9s						
CM04	Chiang Mai Arr	23.29	351	P	P	14 06 54.0	-0.8
	comp=Z,587nmcomp=Z,55nm,1.1s						
CM05	Chiang Mai Arr	23.30	351	P	P	14 06 54.0	-0.8
	comp=Z,360nmcomp=Z,44nm,1.1s						
CM01	Chiang Mai Arr	23.31	351	P	P	14 06 54.4	-0.6
	comp=Z,570nmcomp=Z,57nm,1.1s						
CM13	Chiang Mai Arr	23.32	351	P	P	14 06 54.2	-0.8
	comp=Z,382nmcomp=Z,38nm,1.0s						
CM31	Chiang Mai Arr	23.35	351	P	P	14 06 54.0	-1.4
CM31				IAmb	IAmb	14 06 56.3	
	comp=Z,95nm,1.2s						
CMAR	Chiang Mai Arr	23.35	351	P	P	14 06 54.2	-1.1
	comp=Z,28nm,0.8s,baz=184,slow=8.4,SNR=185						
CMAR				PcP	PcP	14 10 41.5	+1.0
	comp=Z,8.1nm,0.8s,baz=205,slow=3.3,SNR=16						
CMAR				ScP	ScP	14 14 12.4	-0.3
	comp=Z,3.0nm,0.8s,baz=206,slow=3.5,SNR=13						
CMAR				LR	LR	14 15 33.6	
	comp=Z,204nm,20.7s,baz=210,slow=35						
CMAR	Chiang Mai Arr	23.35	351	*i* P	P	14 06 54.7	-0.6
CMAR				pmax	pmax		
	comp=Z,29nm,0.8s						
CMAR	Chiang Mai Arr	23.35	351	P	P	14 06 54.8	-0.6
CMAR					PcP	14 10 42.2	+1.7
CM36	Chiang Mai Arr	23.39	351	P	P	14 06 54.0	-1.7
CM32	Chiang Mai Arr	23.56	351	P	P	14 06 56.0	-1.2
CMMT	Chiang Mai	23.70	351	P	P	14 06 57.6	-0.9
	comp=Z,28nm,1.1s						
CHTO	Chiang Mai	23.70	351	P	P	14 06 57.8	-0.7
CHTO					PcP	14 10 42.0	+0.8
CM33	Chiang Mai Arr	23.70	351	P	P	14 06 57.0	-1.5
CM34	Chiang Mai Arr	23.71	351	P	P	14 06 57.0	-1.6
QIZ	Qiongzhong	24.60	16	P	P	14 07 08.3	+1.6
QIZ				LR	LR		
	comp=Z,210nm,4.5s						
QIZ				LR	LR		
	comp=Z,350nm,7.7s						
QIZ				LR	LR		
	comp=Z,290nm,15.1s						
PALK	Pallekele	25.07	298	P	P	14 07 12.8	+1.7
	comp=Z,11nm,1.1s,baz=210,slow=8.6,SNR=3.8						
SLVN	Son La	25.92	2	P	P	14 07 19.2	+0.5
SLVN				IAmb	IAmb	14 07 20.3	
	comp=Z,45nm,0.9s						
TGY	Tagaytay City	25.95	44	P	P	14 07 18.1	-1.0
	comp=Z,99nm,0.3s,baz=250,slow=3.2,SNR=4.8						
FITZ	Fitzroy Crossi	25.98	123	P	P	14 07 19.1	-0.1
	baz=26,SNR=53						
FITZ	Fitzroy Crossi	25.98	123	P	P	14 07 18.9	-0.3
	comp=Z,60nm,0.9s,baz=324,slow=7.2,SNR=35						
FITZ	Fitzroy Crossi	25.98	123	P	P	14 07 19.1	-0.1
FITZ				IAmb	IAmb	14 07 23.2	
	comp=Z,104nm,1.1s						
MEEK	Meekatharra	26.51	147	P	P	14 07 24.8	+0.8
	baz=27,SNR=8.2						
SIJI	Sorong	28.68	83	P	P	14 07 42.8	-0.7
	comp=Z,6.0nm,0.6s,baz=153,slow=22,SNR=4.9						
MTN	Manton Dam	29.11	108	P	P	14 07 46.1	-1.2
	baz=29,SNR=24						
MTN	Manton Dam	29.11	108	P	P	14 07 46.3	-1.0
MTN				IAmb	IAmb	14 08 03.9	
	comp=Z,89nm,1.4s						
FAKI	Fak Fak	29.43	88	P	P	14 07 50.7	+0.6
KMI	Kunming	29.67	360	⇑P	P	14 07 53.6	+1.2
KMI				pmax	pmax		
	comp=Z,40nm,1.0s						
KMI				LR	LR		
	comp=Z,370nm,13.8s						
KMI				LR	LR		
	comp=Z,260nm,12.6s						
KMI				LR	LR		
	comp=Z,360nm,14.2s						
MUN	Mundaring	29.88	157	P	P	14 07 55.2	+1.3
	baz=30,SNR=5.0						
H08S2	Diego Garcia H	30.27	263	T	T	14 39 54.1	
	baz=86,slow=76						
H08S3	Diego Garcia H	30.28	263	T	T	14 39 54.0	
	baz=86,slow=76						
H08S1	Diego Carcia H	30.29	263	T	T	14 39 47.9	
	baz=86,slow=76						
KDU	Kakadu	30.35	107	P	P	14 07 56.9	-1.3
	baz=30,SNR=5.5						
NWAO	Narrogin (SRO)	31.12	156	P	P	14 08 05.7	+0.8
	baz=31,SNR=7.0						
NWAO	Narrogin (SRO)	31.12	156	P	P	14 08 05.0	+0.1
	comp=Z,9.8nm,0.7s,baz=328,slow=7.4,SNR=7.4						
NWAO	Narrogin (SRO)	31.12	156	P	P	14 08 04.4	-0.5
NWAO				pmax	pmax		
	comp=Z,16nm,1.0s						
NWAO	Narrogin (SRO)	31.12	156	P	P	14 08 04.4	-0.5
GYA	Guiyang	31.23	7	⇓P	P	14 08 06.3	+0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
H01W3	Cape Leeuwin H	31.79	162	T	T	14 41 33.5	
	baz=340,slow=74						
H01W2	Cape Leeuwin H	31.80	162	T	T	14 41 36.2	
	baz=340,slow=74						
H01W1	Cape Leeuwin H	31.80	162	T	T	14 41 49.2	
	baz=340						
KMBL	Kambalda	31.99	148	P	P	14 08 13.3	+0.7
	baz=32,SNR=19						
HYB	Hyderabad	32.52	313	*i* P	P	14 08 18.0	+0.6
WRAB	Tennant Creek	34.22	119	⇓*i*P	P	14 08 31.6	-0.6
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s						
WRAB	Tennant Creek	34.22	119	P	P	14 08 29.7	-2.5
WRAB				IAmb	IAmb	14 08 35.9	
	comp=Z,25nm,0.9s						
ODAN	Odare	34.77	335	*e*P	P	14 08 37.0	0.0
TAPN	Taplejung	35.07	336	*e*P	P	14 08 39.9	+0.3
	comp=Z,187nm,1.1s						
FORT	Forrest	35.17	140	P	P	14 08 41.0	+0.9
	baz=35,SNR=16						
FORT	Forrest	35.17	140	P	P	14 08 40.7	+0.5
FORT				IAmb	IAmb	14 08 42.2	
	comp=Z,32nm,0.7s						
RAMN	Ramite	35.18	334	*e*P	P	14 08 41.2	+0.7
	comp=Z,22nm,0.4s						
ENH	Enshi	35.38	10	P	P	14 08 40.7	-1.3
ENH				IAmb	IAmb	14 08 42.1	
	comp=Z,17nm,0.5s						
ASAR	Alice Springs	35.40	125	P	P	14 08 42.1	-0.2
	comp=Z,6.5nm,0.3s,baz=296,slow=7.9,SNR=211						
ASAR				PcP	PcP	14 11 11.1	0.0
	comp=Z,7.0nm,0.8s,baz=296,slow=3.4,SNR=5.7						
ASAR				S	S	14 14 09.5	-2.8
	comp=Z,9.9nm,0.9s,baz=293,slow=16,SNR=18						
ASAR				ScP	ScP	14 14 50.9	-0.2
	comp=Z,4.5nm,1.0s,baz=316,slow=3.9,SNR=5.9						
ASAR				LR	LR	14 25 07.6	
	comp=Z,111nm,19.3s,baz=293,slow=39						
ASAR	Alice Springs	35.40	125	P	P	14 08 42.6	+0.3
ASAR				PcP	PcP	14 11 12.0	+0.9
AS31	Alice Springs	35.40	125	P	P	14 08 42.4	+0.1
CD2	Chengdu	35.45	1	⇓*i*P	P	14 08 42.0	-0.6
CD2				S	S	14 14 17.4	+4.6
CD2				pmax	pmax		
	comp=Z,100nm,0.8s						
CD2				pmax	pmax		
	comp=Z,300nm,5.1s						
CD2				LR	LR		
	comp=Z,570nm,16.3s						
CD2				LR	LR		
	comp=Z,670nm,22.9s						
CD2				LR	LR		
	comp=Z,690nm,16.9s						
LSA	Lhasa	36.01	343	P	P	14 08 47.9	0.0
LSA				pmax	pmax		
	comp=Z,130nm,1.0s						
LSA	Lhasa	36.01	343	*i* P	P	14 08 48.0	0.0
	SNR=16						
LSA	Lhasa	36.01	343	P	P	14 08 48.2	+0.3
LSA				pmax	pmax		
	comp=Z,31nm,1.0s						
LSA	Lhasa	36.01	343	P	P	14 08 48.2	+0.3
LSA				IAmb	IAmb	14 08 49.1	
	comp=Z,31nm,1.0s						
PKI	Pulchoki	36.24	333	*e*P	P	14 08 49.7	0.0
PKIN	Phulchoki	36.25	333	*e*P	P	14 08 49.7	0.0
GUN	Gumba	36.33	334	*e*P	P	14 08 50.9	+0.4
DMN	Daman	36.41	333	*e*P	P	14 08 51.6	+0.5
KKN	Kakani	36.48	333	*e*P	P	14 08 51.8	+0.1
	comp=Z,48nm,0.4s						
POO	Poona	36.72	310	*e*P	P	14 08 55.0	+1.4
WHN	Wuhan	36.77	17	⇑P	P	14 08 54.6	+0.8
DANN	Dangsing	37.66	332	*e*P	P	14 09 02.1	+0.4
	comp=Z,159nm,0.5s						
XAN	Xi'an	38.99	8	P	P	14 09 11.8	-0.7
XAN				pP	pP	14 09 27.8	-1.6
XAN				pmax	pmax		
	comp=Z,59nm,0.9s						
XAN				pmax	pmax		
	comp=Z,200nm,6.0s						
QIS	Mount Isa	39.07	117	P	P	14 09 13.1	-0.2
	baz=39,SNR=13						
NJ2	Nanjing	39.64	22	*e*P	P	14 09 19.4	+1.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
LZH	Lanzhou	40.61	1	*e*P	P	14 09 27.8	+1.7
LZH				pP	pP	14 09 42.5	-0.6
LZH				sP	sP	14 09 51.0	0.0
LZH				PcP	PcP	14 11 27.8	+0.8
LZH				ScS	ScS	14 19 22.8	-2.6
LZH				pmax	pmax		
	comp=Z,39nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,5.1s						
LZH				LR	LR		
	comp=Z,400nm,14.1s						
LZH				LR	LR		
	comp=Z,320nm,12.5s						
LZH				LR	LR		
	comp=Z,330nm,16.8s						
COEN	Coen	40.81	106	P	P	14 09 28.6	+0.7
BBOO	Buckleboo	41.75	136	P	P	14 09 35.8	+0.4
	baz=42,SNR=31						
BBOO	Buckleboo	41.75	136	P	P	14 09 35.7	+0.4
BBOO				IAmb	IAmb	14 09 36.8	
	comp=Z,31nm,0.8s						
MTSU	Mount Surprise	42.69	112	P	P	14 09 43.2	0.0
	baz=43,SNR=26						
TIA	Tai'an	42.88	17	P	P	14 09 43.3	-1.1
TIA				pmax	pmax		
	comp=Z,15nm,0.8s						
TIY	Taiyuan	43.16	11	*e*P	P	14 09 46.6	-0.2
TIY				pmax	pmax		
	comp=Z,43nm,0.6s						
GTA	Gaotai	44.01	357	⇑P	P	14 09 53.3	-0.3
GTA				pP	pP	14 10 09.0	-1.8
GTA				sP	sP	14 10 16.3	-2.3
GTA				PcP	PcP	14 11 38.5	+0.3
GTA				ScP	ScP	14 15 21.3	-2.9
GTA				PcS	PcS	14 15 32.3	+0.9
GTA				pmax	pmax		
	comp=Z,26nm,0.9s						
GTA				pmax	pmax		
	comp=Z,160nm,6.7s						
GTA				LR	LR		
	comp=Z,410nm,14.2s						
GTA				LR	LR		
	comp=Z,210nm,15.6s						
GTA				LR	LR		
	comp=Z,350nm,19.3s						
HTT	Hallett	44.10	135	P	P	14 09 55.4	+1.1
	baz=44,SNR=28						
PMG	Port Moresby	44.24	99	P	P	14 09 57.2	+1.5
JSU	Suzuyama	44.64	34	P	P	14 09 56.6	-2.1
CTAO	Charters Tower	44.92	114	P	P	14 10 00.9	-0.2
CTAO				pmax	pmax		
	comp=Z,37nm,0.9s						
CTAO	Charters Tower	44.92	114	P	P	14 10 00.9	-0.2
CTAO				IAmb	IAmb	14 10 02.4	
	comp=Z,37nm,0.9s						
QLP	Quilpie	45.12	123	P	P	14 10 03.6	+1.1
	baz=45,SNR=5.9						
STKA	Stephens Creek	45.26	131	P	P	14 10 04.5	+0.8
	baz=45,SNR=56						
STKA	Stephens Creek	45.26	131	P	P	14 10 04.0	+0.4
	comp=Z,33nm,0.7s,baz=301,slow=7.6,SNR=102						
STKA				S	S	14 16 37.1	-1.9
	comp=Z,2.6nm,0.8s,baz=101,slow=14,SNR=4.1						
STKA				LR	LR	14 28 57.4	
	comp=Z,68nm,21.6s,baz=317,slow=36						
STKA	Stephens Creek	45.26	131	*d i*P	P	14 10 04.4	+0.8
STKA	Stephens Creek	45.26	131	P	P	14 10 04.6	+1.0
BTO	Baotou	45.60	8	*e*P	P	14 10 10.3	+4.1
BTO				S	S	14 16 48.5	+4.8
HHC	Hu-ho-hao-te	46.06	9	⇑*i*P	P	14 10 10.3	+0.4
HHC				sP	sP	14 10 32.9	-2.1
HHC				pmax	pmax		
	comp=Z,44nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,5.3s						
JNU	Nakatsue	46.10	33	P	P	14 10 08.8	-1.4
	comp=Z,26nm,0.8s,baz=115,slow=1.8,SNR=7.5						
JNU	Nakatsue	46.10	33	P	P	14 10 09.3	-0.9
JNU				IAmb	IAmb	14 11 07.4	
	comp=Z,86nm,1.4s						
BJT	Baijiatuau	46.19	14	P	P	14 10 10.7	0.0
BJT				pmax	pmax		
	comp=Z,30nm,0.9s						
BJT	Baijiatuau	46.19	14	P	P	14 10 10.7	0.0
BJT				IAmb	IAmb	14 10 11.5	
	comp=Z,30nm,0.9s						
TJN	Taejon	46.91	27	⇓*e*P	P	14 10 15.0	-1.4
NIL	Nilore	47.31	326	P	P	14 10 19.9	+0.2
NIL				pmax	pmax		
	comp=Z,56nm,0.6s						
NIL	Nilore	47.31	326	P	P	14 10 19.9	+0.2
ARPS	Mount Arapiles	47.90	137	P	P	14 10 26.2	+2.0
	baz=48,SNR=7.8						
KSAR	Wonju Array Be	48.02	27	P	P	14 10 24.5	-0.5
KSAR	Wonju Array Be	48.02	27	P	P	14 10 24.5	-0.5
KSRS	Korea Array	48.05	27	P	P	14 10 24.1	-1.1
	comp=Z,11nm,0.9s,baz=239,slow=7.3,SNR=26						
KSRS				PcP	PcP	14 11 51.6	-0.6
	comp=Z,6.4nm,0.9s,baz=206,slow=3.5,SNR=9.5						
KSRS				ScP	ScP	14 15 38.3	-2.5
	comp=Z,1.3nm,0.7s,baz=222,slow=3.8,SNR=3.7						
KSRS				LR	LR	14 32 13.7	
	comp=Z,24nm,19.0s,baz=201,slow=38						
KS19	Wonju Array Si	48.06	27	P	P	14 10 24.6	-0.8
KS19				IAmb	IAmb	14 10 43.5	
	comp=Z,37nm,1.2s						
CMSA	Cobar Meteorol	48.23	129	P	P	14 10 27.7	+0.9
	baz=48,SNR=35						
JHS	Saijyo	48.73	33	P	P	14 10 30.3	-0.3
JHS				IAmb	IAmb	14 10 32.1	
	comp=Z,34nm,0.7s						
RMQ	Roma	48.90	121	P	P	14 10 33.3	+1.2
	baz=49,SNR=5.5						
WMQ	Urumqi	50.21	346	P	P	14 10 42.8	+1.0
WMQ				pP	pP	14 11 00.5	+1.2
WMQ				sP	sP	14 11 08.8	+1.7
WMQ				pmax	pmax		
	comp=Z,130nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,410nm,7.5s						
WMQ	Urumqi	50.21	346	P	P	14 10 43.0	+1.2
WMQ				pmax	pmax		
	comp=Z,148nm,1.2s						
WMQ	Urumqi	50.21	346	P	P	14 10 43.0	+1.2
KBL	Kabul	50.38	323	P	P	14 10 43.2	-0.2
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
KBL	Kabul	50.38	323	P	P	14 10 43.1	-0.2
KSH	Kashi	50.50	333	P	P	14 10 43.1	-1.0
KSH				sP	sP	14 11 06.8	-2.6
KSH				S	S	14 17 55.3	+2.1
KSH				sS	sS	14 18 23.3	+0.7
KSH				pmax	pmax		
	comp=Z,74nm,0.7s						
KSH				pmax	pmax		
	comp=Z,540nm,6.9s						
KSH				LR	LR		
	comp=Z,830nm,6.4s						
KSH				LR	LR		
	comp=Z,960nm,6.9s						
KSH				LR	LR		
	comp=Z,410nm,7.8s						
EIDS	Eidsvold	50.58	119	P	P	14 10 44.8	0.0
	baz=51,SNR=8.0						
EIDS	Eidsvold	50.58	119	P	P	14 10 45.0	+0.2
EIDS				IAmb	IAmb	14 11 03.8	
	comp=Z,64nm,1.9s						
WSAR	Wadi Sarin	51.29	305	LR	LR	14 29 57.4	
	comp=Z,113nm,21.3s,baz=133,slow=33						
YNG	Young	51.44	131	P	P	14 10 51.2	0.0
	baz=52,SNR=5.4						
SHAO	Shalim	51.73	297	P	P	14 10 56.2	+2.6
SHLS	Shalkode	52.13	338	*e*P	P	14 10 55.5	-0.8
	comp=Z,42nm,0.8s,baz=338						
SHLS	Shalkode	52.13	338	*e*P	P	14 10 55.5	-0.8
SHLS				pmax	pmax		
	comp=Z,42nm,0.8s						
CAN	Canberra	52.32	132	P	P	14 10 58.4	+0.7
CAN				pmax	pmax		
	comp=Z,101nm,1.9s						
CAN	Canberra	52.32	132	P	P	14 10 58.4	+0.7
SONM	Songino Array	52.44	3	P	P	14 10 58.5	+0.1
	comp=Z,48nm,0.7s,baz=184,slow=9.1,SNR=229						
SONM				PcP	PcP	14 12 07.6	-0.7
	comp=Z,17nm,0.8s,baz=179,slow=4.1,SNR=6.3						
SONM				ScP	ScP	14 15 57.3	-2.3
	comp=Z,1.7nm,0.9s,baz=176,slow=3.7,SNR=5.5						
SONM				LR	LR	14 36 00.4	
	comp=Z,83nm,20.6s,baz=186,slow=39						
SONM	Songino Array	52.44	3	P	P	14 10 59.0	+0.6
SONM						14 12 08.8	
SONM				pmax	pmax		
	comp=Z,42nm,0.8s						
SONM	Songino Array	52.44	3	P	P	14 10 59.0	+0.6
SONM					PcP	14 12 08.8	+0.5
CN2	Changchun	52.44	21	*e*P	P	14 10 56.8	-1.6
CN2				PcP	PcP	14 12 07.8	-0.5

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CN2                                  pmax    pmax
      comp=Z,40nm,0.9s
SATY  Saty               52.45 338  eP      P        14 10 58.6   0.0
      comp=Z,12nm,0.6s,baz=337
SATY  Saty               52.45 338  eP      P        14 10 58.5   0.0
SATY                                 pmax    pmax
      comp=Z,12nm,0.6s
ULN   Ulaanbaatar        52.50   4c iP      P        14 10 58.8  -0.1
ULN                                  pmax    pmax
      comp=Z,41nm,1.0s
ULN   Ulaanbaatar        52.50   4   P      P        14 10 59.1  +0.2
ULN                                  IAmb    IAmb    14 11 00.2
      comp=Z,47nm,1.1s
ARMA  Armidale           52.55 125   P      P        14 10 59.3  -0.3
      baz=53,SNR=4.6
KPKS  Kokpek             52.69 338  eP      P        14 11 00.1  -0.3
      comp=Z,24nm,0.8s,baz=338
KPKS  Kokpek             52.69 338  eP      P        14 11 00.0  -0.3
KPKS                                 pmax    pmax
      comp=Z,24nm,0.8s
MAJO  Matsushiro         52.72  36⇓eP      P        14 10 58.9  -1.7
MAJO                                 pmax    pmax
      comp=Z,37nm,1.0s
MAJO  Matsushiro         52.72  36   P      P        14 10 57.9  -2.7
MAJO                                 IAmb    IAmb    14 10 59.5
      comp=Z,28nm,0.9s
MAT   Matsushiro         52.72  36   P      P        14 10 58.4  -2.2
MJAR  Matsushiro Arr     52.72  36   P      P        14 10 58.6  -2.0
      comp=Z,26nm,0.8s,baz=214,slow=7.5,SNR=42
MJAR                                 PcP     PcP     14 12 09.2  -0.3
      comp=Z,1.8nm,0.8s,baz=201,slow=3.9,SNR=4.4
MJAR  Matsushiro Arr     52.72  36   P      P        14 10 58.6  -2.0
MJAR                                 pmax    pmax
      comp=Z,14nm,0.8s
MJAR  Matsushiro Arr     52.72  36   P      P        14 10 58.6  -2.0
MDOK  Medeo              53.06 337  eP      P        14 11 02.5  -0.6
      baz=336
MDOK  Medeo              53.06 337  eP      P        14 11 02.5  -0.6
AAA   Alma-Ata           53.15 336  eP      P        14 11 03.5  -0.2
      comp=Z,19nm,0.6s,baz=336
AAA   Alma-Ata           53.15 336  eP      P        14 11 03.5  -0.2
AAA                                  pmax    pmax
      comp=Z,19nm,0.6s
MTBS  Maitube            53.28 336  eP      P        14 11 04.3  -0.4
      baz=336
MTBS  Maitube            53.28 336  eP      P        14 11 04.3  -0.4
UCH   Uchtor             53.35 334   P      P        14 11 05.9  +0.2
      SNR=9.8
SOHO  SOHO               53.41 305   P      P        14 11 07.6  +1.8
TKM2  Tokmak 2           53.45 335   P      P        14 11 06.3  +0.2
      SNR=28
TKM2  Tokmak 2           53.45 335  i P     P        14 11 06.1   0.0
TKM2                                 pmax    pmax
      comp=Z,44nm,0.5s
KBK   Karagaybulak       53.51 335   P      P        14 11 07.2  +0.7
      SNR=19
AML   Almayashu          53.63 333   P      P        14 11 08.0  +0.3
      SNR=14
MSHR  Mys Shultsa        53.66  26⇑eP      P        14 11 05.2  -2.1
CHKK  Chushkaly          53.66 337  eP      P        14 11 06.3  -1.2
      baz=337
CHKK  Chushkaly          53.66 337  eP      P        14 11 06.2  -1.2
AAK   Ala-Archa          53.69 334   P      P        14 11 07.9  +0.1
      comp=Z,8.0nm,0.7s,baz=152,slow=5.9,SNR=19
AAK                                  PcP     PcP     14 12 13.6  +0.4
      baz=152,slow=8.0
AAK   Ala-Archa          53.69 334   P      P        14 11 08.0  +0.3
      SNR=6.3
AAK   Ala-Archa          53.69 334  i P     P        14 11 08.0  +0.3
      SNR=6.4
AAK   Ala-Archa          53.69 334   P      P        14 11 08.2  +0.5
AAK                                  pmax    pmax
      comp=Z,13nm,0.8s
AAK   Ala-Archa          53.69 334   P      P        14 11 08.2  +0.5
AAK                                  IAmb    IAmb    14 12 15.5
      comp=Z,13nm,0.8s
CHMS  Chumysh            53.87 335   P      P        14 11 08.6  -0.3
      SNR=9.2
KUU   Kurty              53.95 337  eP      P        14 11 08.7  -0.9
      comp=Z,39nm,0.7s,baz=336
KUU   Kurty              53.95 337  eP      P        14 11 08.6  -0.9
KUU                                  pmax    pmax
      comp=Z,39nm,0.7s
ALNE  Al Ain             54.02 304   P      P        14 11 12.6  +2.3
EKS2  Erkin-Say          54.02 334   P      P        14 11 10.7  +0.6
      SNR=28
UOSS  Minazif            54.04 305   P      P        14 11 12.1  +1.6
ASHO  Ashiyiah           54.04 305  i P     P        14 11 12.3  +1.8
      SNR=7.1
TDK   Taldyqorghan       54.11 339  eP      P        14 11 09.9  -0.8
      comp=Z,52nm,1.0s,baz=339
TDK   Taldyqorghan       54.11 339  eP      P        14 11 09.8  -0.8
TDK                                  pmax    pmax
      comp=Z,52nm,1.0s
MDH   Madha              54.12 306   P      P        14 11 11.1  +0.1
USP   Ospenovka          54.19 335   P      P        14 11 11.3   0.0
      SNR=10
MSFE  Esma-Masafi        54.26 306   P      P        14 11 14.6  +2.5
SGDS  Sogindy            54.29 335  eP      P        14 11 11.2  -0.8
      baz=335
SGDS  Sogindy            54.29 335  eP      P        14 11 11.2  -0.8
ZSN   Zaisan             54.31 345  eP      P        14 11 12.1   0.0
      comp=Z,34nm,0.8s,baz=345
ZSN   Zaisan             54.31 345  eP      P        14 11 12.0   0.0
ZSN                                  pmax    pmax
      comp=Z,34nm,0.8s
MOO   Moorlands          54.39 140   P      P        14 11 14.4  +1.7
      baz=54,SNR=26
MK31  Makanchi Array     54.42 343c iP      P        14 11 12.3  -0.5
MK31  Makanchi Array     54.42 343   P      P        14 11 12.8   0.0
MKAR  Makanchi Array     54.42 343   P      P        14 11 12.5  -0.3
      comp=Z,51nm,0.6s,baz=147,slow=8.2,SNR=552
MKAR                                 S       S       14 18 44.5  -1.8
      comp=Z,1.3nm,1.0s,baz=160,slow=15,SNR=4.4
MKAR                                 LR      LR      14 36 13.0
      comp=Z,104nm,21.9s,baz=158,slow=38
MKAR  Makanchi Array     54.42 343   P      P        14 11 12.3  -0.5
FAQ   Al Faqa, Dubai     54.45 305  i P     P        14 11 15.3  +1.9
      SNR=9.1
NAZ   Nazwa, Dubai       54.50 305   P      P        14 11 15.9  +2.2
MAKZ  Makanchi           54.53 343   P      P        14 11 13.1  -0.5
MAKZ                                 pmax    pmax
      comp=Z,24nm,0.9s
MAKZ  Makanchi           54.53 343   P      P        14 11 13.1  -0.5
MAKZ                                 IAmb    IAmb    14 11 14.1
      comp=Z,24nm,0.9s
ASUD  Al Ashush, Dub     54.61 305   P      P        14 11 17.4  +2.8
ZAK   Zakamensk          54.89   0  eP      P        14 11 15.5  -0.8
ZAK                                 e                14 12 16.0
ZAK                                  pmax    pmax
      comp=Z,16nm,1.0s
ZAK                                  pmax    pmax
      comp=Z,8.0nm,1.1s
DZA   Taraz              55.31 332  eP      P        14 11 18.4  -0.9
      comp=Z,7.3nm,0.7s,baz=332
DZA   Taraz              55.31 332  eP      P        14 11 18.4  -0.9
DZA                                  pmax    pmax
      comp=Z,7.0nm,0.7s
USA0B Ussuriysk Arra     55.32  25   P      P        14 11 18.7  -0.7
USA0B                                pmax    pmax
      comp=Z,47nm,0.8s
USA0B Ussuriysk Arra     55.32  25   P      P        14 11 18.7  -0.7
USRK  Ussuriysk Ar.      55.32  25   P      P        14 11 18.6  -0.8
      comp=Z,36nm,0.7s,baz=219,slow=6.2,SNR=81
USRK                                 LR      LR      14 35 45.7
      comp=Z,77nm,18.3s,baz=216,slow=37
USRK  Ussuriysk Ar.      55.32  25   P      P        14 11 18.9  -0.4
USRK  Ussuriysk Ar.      55.32  25   P      P        14 11 18.9  -0.4
DGZ   Jazzator, Alta     55.83 348c iP      P        14 11 23.2  +0.1
DGZ                                  pmax    pmax
      comp=Z,115nm,0.9s
TLY   Talaya             56.20   1  eP      P        14 11 26.3  +0.8
TLY                                  pmax    pmax
      comp=Z,52nm,0.8s
TLY                                  MLR     MLR
      comp=Z,268nm,8.0s
MOY   Mondy              56.20 359  eP      P        14 11 25.7  +0.1
MOY                                  pmax    pmax
      comp=Z,40nm,2.0s
HNR   Honiara            56.85  98   LR     LR       14 38 26.2
      comp=Z,44nm,18.9s,baz=44,slow=39
SEM   Semipalatinsk      58.26 343  eP      P        14 11 39.2  -1.2
      comp=Z,14nm,0.5s,baz=343
SEM   Semipalatinsk      58.26 343  eP      P        14 11 39.2  -1.2
SEM                                  pmax    pmax
      comp=Z,14nm,0.5s
KURBB Kurchatov Arra     58.96 342   P      P        14 11 44.6  -0.3
      comp=Z,38nm,0.8s,baz=162,slow=6.6,SNR=140
KURBB                                PcP     PcP     14 12 33.8  +0.4
      comp=Z,10nm,0.6s,baz=155,slow=3.6,SNR=11
KURBB                                S       S       14 19 43.4  -2.7
      comp=Z,1.8nm,1.0s,baz=145,slow=14,SNR=5.7
KURK  Kurchatov          59.02 342c iP      P        14 11 44.8  -0.5
KURK                                 pmax    pmax
      comp=Z,78nm,0.9s
KURK  Kurchatov          59.02 342   P      P        14 11 45.1  -0.2
KURK                                         PcP     14 12 34.2  +0.7
ERM   Erimo              59.24  34⇓eP      P        14 11 46.7  -0.3
ERM                                  pmax    pmax
      comp=Z,29nm,0.8s
GEYT  Alibeck            59.32 320   P      P        14 11 47.8   0.0
      comp=Z,19nm,0.8s,baz=142,slow=7.5,SNR=26
GEYT                                 LR      LR      14 38 46.7
      comp=Z,93nm,21.2s,baz=20,slow=37
GEYT  Alibeck            59.32 320   P      P        14 11 48.1  +0.4
GYA0B ALIBECK ARRAY      59.32 320   P      P        14 11 48.0  +0.3
GYA0B                                IAmb    IAmb    14 11 49.2
      comp=Z,21nm,0.9s
KLR   Kul'dur            59.34  22   P      P        14 11 46.5  -1.0
      comp=Z,18nm,0.8s,baz=239,slow=5.1,SNR=66
KLR   Kul'dur            59.34  22c iP      P        14 11 46.1  -1.5
KLR                                  pmax    pmax
      comp=Z,34nm,0.9s
ASAJ  Asahikawa          60.34  32   P      P        14 11 53.7  -0.8
      comp=Z,32nm,0.7s,baz=236,slow=8.7,SNR=56
ASAJ  Asahikawa          60.34  32   P      P        14 11 53.9  -0.7
ASAJ                                 pmax    pmax
      comp=Z,33nm,0.6s
JKA   Kamikawa-asahi     60.35  32   P      P        14 11 53.9  -0.7
ZAA0  Zalesovo Array     60.38 348   P      P        14 11 54.3  -0.3
ZALV  Zalesovo Beam      60.38 348   P      P        14 11 54.1  -0.5
      comp=Z,43nm,0.4s,baz=160,slow=4.7,SNR=272
ZALV                                 S       S       14 19 59.8  -4.2
      comp=Z,1.3nm,0.7s,baz=123,slow=18,SNR=4.5
ZALV                                 LR      LR      14 41 20.9
      comp=Z,110nm,18.5s,baz=118,slow=39
ZALV  Zalesovo Beam      60.38 348  i P     P        14 11 53.7  -0.9
ZALV                                 pmax    pmax
      comp=Z,44nm,0.4s
BRZS  Berezniki          60.40 338  eP      P        14 11 53.8  -1.1
      comp=Z,4.3nm,0.7s,baz=338
BRZS  Berezniki          60.40 338  eP      P        14 11 53.7  -1.1
BRZS                                 pmax    pmax
      comp=Z,4.0nm,0.7s
ZEA   Zeya               61.76  16  eP      P        14 12 03.7  -0.3
ZEA                                  pmax    pmax
      comp=E,20nm,0.7s
ZEA                                  pmax    pmax
      comp=N,30nm,0.9s
ZEA                                  pmax    pmax
      comp=Z,60nm,0.8s
YUK   Yuzh-Kuril'sk      62.06  34d iP      P        14 12 05.7  -0.5
QRN   Al-Qurain          62.34 306  eP               14 12 09.6
GRNR  Gornyy             62.37  23⇑iP      P        14 12 07.4  -0.7
GRNR                                 pmax    pmax
      comp=N,5.0nm,1.2s
GRNR                                 pmax    pmax
      comp=Z,10.0nm,1.1s
YSS   Yuzh-Sakhalins     62.37  30  eP      P        14 12 06.9  -1.3
YSS                                 e                14 12 46.7
YSS                                  pmax    pmax
      comp=Z,80nm,0.9s
RAYN  Ar Rayn            62.50 299  i P     P        14 12 11.3  +1.6
      SNR=10.0
KBD   Kabd               62.69 306  eP               14 12 12.1
RDF   Al-Radifah         62.71 306  eP               14 12 12.0
UMR   Umm Al-Rimmam      62.82 307  eP               14 12 13.0
BOD   Bodaibo            63.00   7  eP      P        14 12 11.4  -0.7
BOD                                  pmax    pmax
      comp=Z,31nm,1.5s
MIB   Mutribah           63.22 307  eP               14 12 15.4
RST   Umm Al-Ruwaisa     63.38 306  eP               14 12 16.3
BVAR  Borovoye Array     63.71 339   P      P        14 12 15.9  -1.0
      comp=Z,18nm,0.6s,baz=62,slow=9.9,SNR=97
BRVK  Borovoye           63.77 339c iP      P        14 12 16.6  -0.8
BRVK                                 pmax    pmax
      comp=Z,20nm,0.6s
BRVK  Borovoye           63.77 339   P      P        14 12 16.8  -0.6
BRVK                                 IAmb    IAmb    14 12 17.5
      comp=Z,27nm,0.6s
DZM   Mont Dzumac        63.83 112  eP      P        14 12 21.5  +3.0
      comp=Z,15nm,0.9s
DZM   Mont Dzumac        63.83 112  eLR     LR       14 31 30.1
      comp=Z,194nm,29.5s
KUR   Kuril'sk           63.93  34⇑eP      P        14 12 18.0  -0.5
TYV   Tymovskoe          65.07  27  eP      P        14 12 26.1  +0.3
TYV                                  pmax    pmax
      comp=Z,14nm,1.7s
ABKAR Akbulak array      65.37 331   P      P        14 12 27.3  -0.5
ABKAR Akbulak array      65.37 331   IAmb   IAmb     14 12 28.5
      comp=Z,76nm,1.4s
KMBO  Kilima Mbogo       65.55 271   P      P        14 12 31.1  +1.0
      comp=Z,2.6nm,0.5s,baz=74,slow=9.1,SNR=7.2
AKTO  Aktyubinsk         67.08 331   P      P        14 12 38.2  -0.6
      comp=Z,6.6nm,0.7s,baz=125,slow=6.2,SNR=20
AKT   Akhty              68.00 318  eP      P        14 12 45.8  +0.9
AKT                                 e                14 13 11.9
AKT                                  pmax    pmax
      comp=Z,48nm,1.0s
MAW   Mawson             68.38 195   P      P        14 12 47.2  +0.6
      baz=68,SNR=14
MAW   Mawson             68.38 195   LR     LR       14 36 20.4
      comp=Z,115nm,20.9s,baz=50,slow=30
GNI   Garni              69.42 316   P      P        14 12 54.4  +0.5
      comp=Z,14nm,0.8s,baz=287,slow=11,SNR=2.3
GNI   Garni              69.42 316⇑eP      P        14 12 54.9  +1.0
GNI                                  pmax    pmax
      comp=Z,20nm,0.9s
YAK   Yakutsk            69.70  13  eP      P        14 12 52.6  -2.3
YAK                                 e*PP    pP       14 13 10.9  -2.3
YAK                                 e                14 13 24.3
YAK                                 eS      S        14 21 56.5  -1.6
YAK                                 e*SS    pS       14 22 20.5  -0.2
YAK                                  pmax    pmax
      comp=Z,86nm,1.0s
YAK                                  pmax    pmax
      comp=E,19nm,1.1s
YAK                                  pmax    pmax
      comp=N,28nm,1.1s
YAK                                  smax    smax
      comp=E,198nm,4.0s
YAK                                  smax    smax
      comp=N,53nm,3.0s
GROC  Groznyy            70.06 319  eP      P        14 12 56.6  -0.9
GROC                                e*PP    pP       14 13 13.3  -2.5
GROC                                e                14 13 17.9
GROC                                 pmax    pmax
      comp=Z,57nm,1.0s
SVE   Sverdlovsk         70.26 337⇓eP      P        14 12 58.4  -0.1
SVE                                  pmax    pmax
      comp=Z,64nm,1.1s
ARU   Arti               70.82 336   P      P        14 13 01.5  -0.3
      comp=Z,5.9nm,0.5s,baz=131,slow=3.4,SNR=33
ARU   Arti               70.82 336c iP      P        14 13 01.5  -0.3
ARU                                                  14 15 34.7
ARU                                  S       S       14 22 14.4  +3.0
ARU                                  SS      SS      14 26 44.9  -0.3
ARU                                  pmax    pmax
      comp=Z,49nm,1.1s
ZEI   Tsey               71.12 318  eP      P        14 13 04.8  +0.5
ZEI                                  pmax    pmax
      comp=Z,9.0nm,0.5s
NCK   Nalchik            71.63 319⇓eP      P        14 13 08.2  +1.1
NCK                                  pmax    pmax
      comp=Z,24nm,1.0s
KBZ   Khabaz             72.19 319   P      P        14 13 10.8  +0.5
      comp=Z,21nm,0.8s,baz=129,slow=5.4,SNR=45
KBZ   Khabaz             72.19 319⇑eP      P        14 13 11.2  +0.9
KBZ                                  pmax    pmax
      comp=Z,35nm,1.0s
KIV   Kislovodsk         72.42 319   P      P        14 13 13.0  +1.1
KIV   Kislovodsk         72.42 319  eP      P        14 13 12.7  +0.8
KIV                                  pmax    pmax
      comp=Z,55nm,1.0s
GOF   Gofitskoye         72.67 320⇑eP      P        14 13 13.9  +0.7
GOF                                  pmax    pmax
      comp=Z,61nm,1.4s
EIL   Elat               73.34 303   P      P        14 13 18.9  +1.3
      baz=125,slow=5.1
EIL                                  LR      LR      14 43 35.8
      comp=Z,48nm,21.5s,baz=106,slow=34
BELG  Belogornoye        73.50 328⇓iP      P        14 13 17.8  -0.1
BELG                                 pmax    pmax
      comp=Z,6.0nm,1.0s
MATP  Matopo             73.67 250   LR     LR       14 40 22.2
      comp=Z,32nm,18.6s,baz=69,slow=31
PEA0B Petropavlovsk-     73.73  31⇑eP      P        14 13 18.3  -1.0
PETK  Petropavlovsk-     73.73  31   P      P        14 13 18.3  -1.0
      comp=Z,7.4nm,0.9s,baz=184,slow=4.2,SNR=4.5
PETK                                 LR      LR      14 46 16.6
      comp=Z,19nm,20.0s,baz=253,slow=36
PETK  Petropavlovsk-     73.73  31   P      P        14 13 18.1  -1.2
MMAI  Mount Meron Ar     73.90 306   P      P        14 13 22.8  +2.0
      comp=Z,14nm,0.6s,baz=91,slow=8.6,SNR=8.0
PET   Petropavlovsk      74.17  31  eP      P        14 13 20.3  -1.5
PET                                  pmax    pmax
      comp=Z,35nm,1.0s
SOC   Sochi              74.24 318  eP      P        14 13 21.0  -1.5
SOC                                 e                14 16 08.5
SOC                                 ePPP    PPP      14 17 51.5
SOC                                 eS      S        14 22 48.9  -2.1
SOC                                 eSS     SS       14 27 41.3  +3.2
SOC                                  pmax    pmax
      comp=Z,16nm,0.6s
SOC                                  MLR     MLR
      comp=Z,104nm,14.0s
MA2   Magadan            74.39  23⇓eP      P        14 13 21.9  -1.1
MA2                                  pmax    pmax
      comp=Z,4.0nm,0.4s
BKZ   Black Stump Fm     74.39 129   P      P        14 13 23.7  +0.2
BKZ                                  IAmb    IAmb    14 14 02.3
      comp=Z,22nm,1.0s
KIRV  Kirov              76.02 334   P      P        14 13 32.7  +0.4
      comp=Z,43nm,0.9s,baz=125,slow=3.9,SNR=12
VRH   Novokhopyorsk      76.14 325  eP      P        14 13 32.6  -0.6
VRH                                  pmax    pmax
      comp=Z,50nm,0.7s
LBTB  Lobatse            76.43 246   LR     LR       14 40 10.8
      comp=Z,96nm,20.8s,baz=94,slow=30
BOSA  Boshof             76.83 242   P      P        14 13 39.5  +1.7
      comp=Z,6.3nm,0.7s,baz=74,slow=4.1,SNR=11
SEY   Seymchan           77.12  21   P      P        14 13 37.9  -0.6
      comp=Z,13nm,0.7s,baz=232,slow=4.7,SNR=49
SEY   Seymchan           77.12  21⇓iP      P        14 13 38.1  -0.4
BRTR  Keskin Array B     77.22 312   P      P        14 13 39.9  +0.1
      comp=Z,15nm,0.8s,baz=132,slow=7.2,SNR=78
BRTR                                 LR      LR      14 49 32.3
      comp=Z,42nm,21.2s,baz=128,slow=37
BRTR  Keskin Array B     77.22 312   P      P        14 13 40.1  +0.3
BRTR  Keskin Array B     77.22 312   P      P        14 13 40.1  +0.3
VORD  Divnogorie         77.43 325  eP      P        14 13 39.2  -1.3
VORD                                 pmax    pmax
      comp=Z,20nm,1.0s
BZK   Bozkurt            77.63 315 ⇓P       P        14 13 42.6  +0.8
TIXI  Tiksi              78.12   8⇓iP      P        14 13 42.1  -1.8
TIXI  Tiksi              78.12   8   P      P        14 13 42.3  -1.6
TIXI                                 IAmb    IAmb    14 13 43.2
      comp=Z,66nm,2.0s
LPSR  Galich'ya Gora     78.30 326  eP      P        14 13 45.1  -0.2
LPSR                                 pmax    pmax
      comp=Z,40nm,1.0s
SIM   Simferopol'        78.49 318  eP      P        14 13 46.5   0.0
SIM                                  pmax    pmax
      comp=Z,42nm,0.8s
VNDA  Vanda              78.96 169   P      P        14 13 49.2  +0.7
      comp=Z,1.4nm,0.6s,baz=323,slow=5.9,SNR=9.4
VNDA                                 LR      LR      14 44 01.4
      comp=Z,67nm,21.0s,baz=304,slow=32
MOS   Moscow             80.27 329  eP      P        14 13 55.5  -0.4
MOS                                  pmax    pmax
      comp=Z,54nm,0.7s
OBN   Obninsk            80.58 328   P      P        14 13 57.1  -0.4
      comp=Z,6.8nm,0.3s,baz=140,slow=8.4,SNR=5.4
OBN   Obninsk            80.58 328  i P     P        14 13 57.5  -0.1
OBN                                  pmax    pmax
      comp=Z,27nm,0.9s
SUR   Sutherland         80.73 238   LR     LR       14 42 27.6
      comp=Z,21nm,19.4s,baz=172,slow=30
KLMR  Klimovskoe         81.49 334  eP      P        14 14 01.3  -1.0
KLMR                                 pmax    pmax
      comp=Z,58nm,1.3s
KLMR  Klimovskoe         81.49 334  eP      P        14 14 01.3  -1.0
KLMR                                 AMP             14 14 04.5
      comp=Z,58nm,1.3s
MFTR  Murfatlar          82.17 316 ⇑P       P        14 14 07.9  +1.6
TIRR  Tirgusor           82.25 316 ⇑P       P        14 14 08.2  +1.5
MILM  Milestii Mici      82.60 318 ⇓P       P        14 14 08.9  +0.5
CFR   Carcaliu           82.62 317 ⇓P       P        14 14 09.7  +1.1
HARR  Harsova            82.64 316 ⇑P       P        14 14 09.9  +1.2
SORM  Soroca             83.22 319 ⇑P       P        14 14 12.1  +0.5
AKASG Malin Array Be     83.34 322   P      P        14 14 11.8  -0.3
      comp=Z,7.4nm,0.5s,baz=89,slow=4.7,SNR=21
AKASG                                LR      LR      14 55 12.7
      comp=Z,58nm,19.9s,baz=325,slow=38
AKASG Malin Array Be     83.34 322   P      P        14 14 11.9  -0.3
AKASG                                pmax    pmax
      comp=Z,5.0nm,0.9s
AKASG Malin Array Be     83.34 322   P      P        14 14 11.9  -0.3
TMCR  Tamitsa            83.54 336  eP      P        14 14 11.6  -1.3
TMCR                                 pmax    pmax
      comp=Z,43nm,1.2s
VRI   Vrincioaia         83.74 317 ⇑P       P        14 14 16.2  +1.7
PLOR  Plostina           83.79 317 ⇓P       P        14 14 16.1  +1.4
TESR  Tescani            83.95 318 ⇓P       P        14 14 16.9  +1.5
TSUM  Tsumeb             83.96 251   LR     LR       14 46 02.0
      comp=Z,27nm,20.9s,baz=137,slow=32
MLR   Muntele Rosu       84.19 316   P      P        14 14 17.9  +1.0
      comp=Z,24nm,0.9s,baz=119,slow=3.4,SNR=15
MLR   Muntele Rosu       84.19 316 ⇑P       P        14 14 18.3  +1.4
BIZ   Bicaz              84.41 318 ⇑P       P        14 14 19.0  +1.3
PRAR  RASCA              84.42 318 ⇓P       P        14 14 18.8  +1.0
DOPR  Dopca              84.68 317 ⇓P       P        14 14 20.4  +1.2
ARR   Arges              85.07 316 ⇑P       P        14 14 22.7  +1.5
MNK   Minsk              85.14 326  i P     P        14 14 21.1  -0.1
      comp=E,5.0nm,1.4s
MNK                                 i P     P        14 14 21.1  -0.1
      comp=N,23nm,1.4s
MNK                                 i P     P        14 14 21.1  -0.1
      comp=Z,24nm,0.7s
MNK                                 i PcP   PcP      14 14 24.0  -0.3
MNK                                 i pP    pP       14 14 38.0  -2.2
MNK                                 i PP    PP       14 17 38.6  -0.8
MNK                                 i PPP   PPP      14 19 31.8
MNK                                 i S     S        14 24 39.5  -5.9
MNK                                 i SS    SS       14 30 21.8  +1.2
MNK                                 i SSS   SSS      14 33 52.9
MNK                                 i LQ    LQ       14 46 55.6
MNK                                 i LR    LR       14 53 24.4
MNK                                 i LRM   MLR      14 55 01.4
      comp=Z,248nm,23.0s
MNK                                 i LRM   MLR      14 55 15.1
      comp=E,24nm,12.2s
MNK                                 i LRM   MLR      14 55 24.4
      comp=N,221nm,15.3s
MNK   Minsk              85.14 326  eP      P        14 14 22.0  +0.8
MNK                                 e                14 14 44.0
BURAR Bucovina Array     85.14 318 ⇓P       P        14 14 23.3  +1.7
BURAR Bucovina Array     85.14 318   P      P        14 14 23.4  +1.8
BUR08 Bucovina Ar. S     85.16 318   IAmb   IAmb     14 14 24.4
      comp=Z,22nm,1.0s
PUL   Pulkovo            85.35 331⇑eP      P        14 14 23.0  +0.9
PUL                                  pmax    pmax
      comp=Z,38nm,0.5s
VTS   Vitosha            85.53 313 ⇑P       P        14 14 24.5  +0.8
NACGM Naroch             85.86 326  i P     P        14 14 25.1  +0.3
NACGM                               i P     P        14 14 25.1  +0.3
NACGM                               i P     P        14 14 25.1  +0.3
NACGM                               i Pb    PcP      14 14 27.1  -0.3
      comp=Z,37nm,0.9s
NACGM                               i pP    pP       14 14 35.6  -8.1
NACGM                               i PP    PP       14 17 45.0  -0.2
NACGM                               i PPP   PPP      14 19 38.7
NACGM                               i S     S        14 24 44.6  -7.9
NACGM                               i sS    sS       14 25 23.6  -1.1
NACGM                               i SS    SS       14 30 05.1   -26
NACGM                               i SSS   SSS      14 34 55.8
IDID  Didziasalis        85.99 326  eP      P        14 14 26.8  +1.4
IIGN  Ignalina           86.28 326  eP      P        14 14 28.1  +1.2
LVZ   Lovozero           86.30 339⇓eP      P        14 14 26.4  -0.4
LVZ                                  pmax    pmax
      comp=Z,39nm,1.2s
GZR   Gura Zlata         86.36 316 ⇑P       P        14 14 29.5  +1.8
LVV   L'vov              86.37 320  eP      P        14 14 28.0  +0.5
ISAL  Salakas            86.39 326  eP      P        14 14 28.7  +1.3
HERR  Herculane          86.52 315 ⇑P       P        14 14 29.7  +1.4
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APA   Apatity            86.62 339⇓iP     P      14 14 26.5 -1.8
APA                                pmax   pmax
      comp=Z,9.0nm,1.3s
APA                                MLR    MLR
      comp=Z,1µm,22.0s
VSU   Vasula             86.76 329 eP     P      14 14 30.1 +0.9
VSU   Vasula             86.76 329⇓eP     P      14 14 29.9 +0.8
VSU                                pmax   pmax
      comp=Z,113nm,1.0s
MDVR  Moldovita          87.00 315 ⇑P     P      14 14 32.1 +1.4
KWP   Kalwaria Pacla     87.18 320 eP     P      14 14 32.5 +1.1
BZS   Buzias             87.20 316 ⇓P     P      14 14 32.8 +1.2
UZH   Uzhgorod           87.27 319 eP     P      14 14 37.4 +5.6
SIRR  Siria              87.28 317 ⇓P     P      14 14 33.6 +1.6
KOLS  Kolonicke sedl     87.33 319 eP     P      14 14 33.9 +1.7
KOLS                               pmax   pmax
      comp=Z,41nm,1.0s
KOLS  Kolonicke sedl     87.33 319 eP     P      14 14 33.9 +1.7
PABE  Paberze            87.57 326 eP     P      14 14 33.9 +0.8
SUW   Suwalki            87.72 324 eP     P      14 14 34.4 +0.5
SUW   Suwalki            87.72 324 eP     P      14 14 34.6 +0.7
FINES FINESS Array B     87.81 332  P     P      14 14 34.6 +0.4
      comp=Z,15nm,0.8s,baz=116,slow=5.4,SNR=53
FINES                              LR     LR     14 57 02.1
      comp=Z,84nm,18.0s,baz=274,slow=38
CRVS  Cervenica-Dubn     87.85 319 eP     P      14 14 36.4 +1.7
CRVS  Cervenica-Dubn     87.85 319 eP     P      14 14 36.3 +1.6
SJES  Sjenica            88.00 314⇑iP     P      14 14 36.9 +1.3
DIVS  Divibare           88.11 314⇑iP     P      14 14 37.3 +1.2
FRGS  Fruska Gora        88.39 315 eP     P      14 14 38.1 +0.8
PDG   Podgorica          88.41 313 ⇓P     P      14 14 38.6 +1.2
PDG   Podgorica          88.41 313⇑iP     P      14 14 37.8 +0.4
DRME  Dracevica, Mon     88.42 312⇑iP     P      14 14 37.9 +0.4
BBLS  Lazi&#263;i        88.49 314⇑iP     P      14 14 39.3 +1.4
NIE   Niedzica           88.69 320 eP     P      14 14 40.4 +1.7
PSZ   Piszkesteto        88.73 318 ⇑P     P      14 14 40.0 +1.0
PSZ   Piszkesteto        88.73 318 eP     P      14 14 40.0 +1.0
UPM   Unac-Piva          88.76 313⇑iP     P      14 14 39.8 +0.5
HAPS  Han Pijesak,Bl     88.85 314 eP     P      14 14 38.8 -0.8
HCY   Herceg Novi        88.97 313⇑iP     P      14 14 40.8 +0.7
BRY   Bratogost          88.99 313⇑iP     P      14 14 40.9 +0.5
TREB  Trebinje           89.11 313 eP     P      14 14 40.8 +0.1
OJC   Ojcow              89.13 320 eP     P      14 14 41.9 +1.3
LANS  Liptovska Anna     89.19 319 eP     P      14 14 42.5 +1.5
LANS  Liptovska Anna     89.19 319 eP     P      14 14 42.5 +1.5
MORH  Mrgy, Hungar       89.34 316 eP     P      14 14 43.3 +1.6
MORH  Mrgy, Hungar       89.34 316⇑iP     P      14 14 42.8 +1.1
VYHS  Vyhne              89.51 319 eP     P      14 14 43.6 +1.1
VYHS                               pmax   pmax
      comp=Z,21nm,1.4s
VYHS  Vyhne              89.51 319 eP     P      14 14 43.6 +1.1
STON  Ston               89.60 313⇑iP     P      14 14 43.2 +0.2
CSKK  Cskako             89.75 317 eP     P      14 14 45.3 +1.7
TIP   Timpagrande        89.89 309 ⇓P     P      14 14 46.9 +2.3
TIH   Tihany             89.94 317 eP     P      14 14 45.9 +1.4
ARCES ARCESS Array B     89.98 340  P     P      14 14 44.4 +0.2
      comp=Z,14nm,0.8s,baz=106,slow=5.0,SNR=43
ARCES                              LR     LR     15 02 16.1
      comp=Z,87nm,19.7s,baz=235,slow=40
ARCES ARCESS Array B     89.98 340  P     P      14 14 44.2  0.0
BLY   Banja Luka         90.19 315 eP     P      14 14 47.2 +1.5
MPLH  Magyarpolny        90.22 317 eP     P      14 14 47.4 +1.6
JAVC  Velka Javorina     90.32 319 eP     P      14 14 48.1 +1.8
EGYH  Egyhazaskeszo      90.38 317 eP     P      14 14 44.5 -2.1
SNAA  Sanae              90.42 198⇓eP     P      14 14 49.4 +3.0
SNAA                               pmax   pmax
      comp=Z,12nm,3.3s
SMOL  Smolenice          90.44 318 eP     P      14 14 48.5 +1.7
SMOL                               pmax   pmax
      comp=Z,5.0nm,1.2s
SMOL  Smolenice          90.44 318 eP     P      14 14 48.5 +1.7
MORC  Moravsky Berou     90.52 320 ⇑P     P      14 14 48.4 +1.2
MORC  Moravsky Berou     90.52 320 eP     P      14 14 48.4 +1.2
MODS  Modra-Piesok       90.53 318 eP     P      14 14 48.2 +0.9
MODS                               pmax   pmax
      comp=Z,23nm,1.4s
MODS  Modra-Piesok       90.53 318 eP     P      14 14 48.2 +0.9
ZST   Bratislava         90.62 318 eP     P      14 14 49.2 +1.5
ZST   Bratislava         90.62 318 eP     P      14 14 49.2 +1.5
BEHE  Becsehely          90.66 316⇑iP     P      14 14 52.0 +4.1
KOGS  Kog                91.02 316 i P    P      14 14 50.8 +1.2
KRLC  Kraliky            91.04 320 eP     P      14 14 50.9 +1.3
KRLC  Kraliky            91.04 320 eP     P      14 14 50.9 +1.3
DPC   Dobruska-Polom     91.36 320 eP     P      14 14 52.3 +1.2
DPC   Dobruska-Polom     91.36 320 eP     P      14 14 52.3 +1.2
GOLS  Golise             91.41 316 i P    P      14 14 53.0 +1.6
KSP   Ksiaz              91.43 321 eP     P      14 14 53.3 +1.9
CHVC  Chvalec            91.55 320 eP     P      14 14 53.1 +1.1
ARSA  Arzberg            91.59 317 eP     P      14 14 53.0 +0.8
      comp=Z,9.6nm,1.1s
SOKA  Soboth             91.88 316 eP     P      14 14 53.8 +0.2
      comp=Z,11nm,0.9s
VNDS  Vrh nad Dolski     92.06 316 i P    P      14 14 55.8 +1.4
OBKA  Obir               92.19 316 eP     P      14 14 55.5 +0.4
      comp=Z,9.4nm,1.4s
PRU   Pruhonice          92.47 320 eP     P      14 14 56.8 +0.6
PRU   Pruhonice          92.47 320 eP     P      14 14 56.8 +0.6
MYKA  Terra Mystica      92.83 316 eP     P      14 14 58.8 +0.7
      comp=Z,3.8nm,0.8s
GERES GERESS Array B     92.93 319  P     P      14 14 59.1 +0.6
      comp=Z,2.1nm,0.7s,baz=81,slow=4.2,SNR=14
GERES                              LR     LR     15 05 17.5
      comp=Z,106nm,18.4s,baz=326,slow=41
GERES GERESS Array B     92.93 319  P     P      14 14 58.8 +0.3
KHC   Kasperske Hory     93.03 319⇓eP     P      14 14 59.4 +0.6
KHC                                pmax   pmax
      comp=Z,16nm,1.5s
KHC   Kasperske Hory     93.03 319 eP     P      14 14 59.5 +0.6
ABTA  Abfaltersbach      93.61 316 eP     P      14 15 01.5 -0.2
      comp=Z,6.4nm,1.2s
HFS   Hagfors            93.62 330  P     P      14 15 01.6 +0.3
      comp=Z,4.2nm,0.7s,baz=187,slow=2.5,SNR=7.2
SPITS Spitsbergen Ar     93.86 348  P     P      14 15 01.0 -1.1
      comp=Z,5.7nm,0.5s,baz=108,slow=8.1,SNR=26
SPITS Spitsbergen Ar     93.86 348  P     P      14 15 01.0 -1.1
WTTA  Wattenberg         94.23 317 eP     P      14 15 04.1 -0.5
      comp=Z,3.6nm,0.8s
WATA  Walderalm          94.28 317 eP     P      14 15 04.6 -0.2
      comp=Z,2.9nm,0.6s
MOTA  Moosalm            94.60 317 eP     P      14 15 06.4 +0.2
      comp=Z,7.7nm,1.4s
FETA  Feichten           94.84 317 eP     P      14 15 07.2 -0.2
      comp=Z,5.2nm,1.3s
NB2   NORSAR Subarra     94.88 331  P     P      14 15 07.1  0.0
      comp=Z,1.4nm,0.8s,baz=91,slow=4.6
NOA   NORSAR Array B     94.88 331  P     P      14 15 06.3 -0.7
      comp=Z,4.6nm,0.6s,baz=95,slow=4.9,SNR=5.4
NOA                                LR     LR     15 01 39.2
      comp=Z,28nm,19.1s,baz=350,slow=38
DAVA  Damuels            95.43 317 eP     P      14 15 10.1  0.0
      comp=Z,4.1nm,0.9s
ILAR  Eielson Array     102.84  24  P     Pdif   14 15 41.8 -0.9
      comp=Z,0.2nm,0.6s,baz=298,slow=5.3,SNR=4.3
TBI   Tubuai            104.28 115 eLR    LR     14 50 14.3
      comp=Z,139nm,30.8s
PPT2  Papeete2          105.26 110 eLR    LR     14 50 42.7
      comp=Z,67nm,23.0s
EPYK  Eagle Plains      106.18  21  P     PKiKP  14 20 09.2 +0.3
      baz=297
YKA   Yellowknife Ar    116.11  18  PKP   PKiKP  14 20 26.7 -1.0
      comp=Z,2.7nm,1.0s,baz=330,slow=1.8,SNR=20
NEW   Newport           124.86  32  PKP   PKPdf  14 20 45.2 +0.1
      comp=Z,3.2nm,0.8s,baz=354,slow=3.5,SNR=4.6
NEW   Newport           124.86  32  P     PKiKP  14 20 46.2 +0.9
      baz=309
L04D  Klamath Falls     125.26  40  P     PKiKP  14 20 46.7 +0.2
      baz=300
M02C  Callahan          125.31  41  P     PKiKP  14 20 47.3 +0.8
      baz=299
J05D  Fort Rock, OR     125.39  39  P     PKiKP  14 20 47.3 +0.6
      baz=302
N02D  Trinity Center    125.61  42  P     PKiKP  14 20 47.8 +0.7
      baz=299
MSO   Missoula          127.44  31  P     PKPdf  14 20 50.4 +0.3
      baz=311
EGMT  Eagleton          128.65  28  P     PKiKP  14 20 53.3 +0.3
      baz=317
HLID  Hailey            129.28  35  P     PKiKP  14 20 55.6 +1.1
      baz=309
BOZ   Bozeman (W)       129.45  31  P     PKiKP  14 20 55.2 +0.4
      baz=313
NVAR  Mina Array Bea    129.83  42  PKP   PKiKP  14 20 55.8 -0.1
      comp=Z,1.5nm,0.6s,baz=307,slow=1.7,SNR=12
NVAR                                SKPbc SKPab  14 24 11.3 +0.1
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      comp=Z,3.9nm,0.7s,baz=273,slow=4.2,SNR=25
NVAR  Mina Array Bea    129.83  42  PKPdf PKiKP  14 20 56.6 +0.8
CWC   Cottonwood Cre    131.00  44  P     PKiKP  14 20 58.5 +0.3
      baz=300
MPMC  Manual Prospec    131.60  44  P     PKiKP  14 20 59.2 -0.3
      baz=300
R11A  Troy Canyon, C    131.67  41  P     PKiKP  14 20 59.8 +0.2
      baz=304
ULM   Lac du Bonnet     131.98  16  PKP   PKPdf  14 20 57.5 -1.0
      comp=Z,6.4nm,0.7s,baz=340,slow=2.5,SNR=12
ULM                                 SKPbc SKPbc  14 24 16.1 -2.7
      comp=Z,7.4nm,0.8s,baz=335,slow=4.4,SNR=11
GSC   Goldstone, Bar    132.46  45  P     PKiKP  14 21 01.6 +0.5
      baz=301
PDAR  Pinedale Array    132.48  32  PKP   PKPdf  14 20 59.0 -1.0
      comp=Z,1.1nm,0.8s,baz=211,slow=0.5,SNR=5.7
PDAR                                SKPbc SKPbc  14 24 19.4 -1.7
      comp=Z,4.7nm,0.9s,baz=358,slow=0.7,SNR=22
MDND  Maddock           132.93  21  P     PKiKP  14 21 01.3 -0.2
      baz=329
GMRC  Granite Mounta    133.54  45  P     PKiKP  14 21 03.4 +0.1
      baz=301
K22A  Casper            134.13  30  P     PKPdf  14 21 03.5 +0.5
      baz=317
RSSD  Black Hills       134.21  27  P     PKiKP  14 21 04.1 -0.4
      baz=321
PLCA  Paso Flores       134.35 187  SKPbc SKPbc  14 24 26.5 -0.8
      comp=Z,3.2nm,1.1s,baz=120,slow=7.6,SNR=3.6
PLCA  Paso Flores       134.35 187 eP     PKPdf  14 21 03.8 +0.4
O20A  White River Ci    135.01  34  P     PKPdf  14 21 05.0 +0.3
      baz=314
WUAZ  Wupatki           136.05  41  P     PKiKP  14 21 08.0 -0.5
      baz=306
D61A  St Aubert, Com    137.26 353  P     PKPdf  14 21 08.7 +0.3
      baz=10
LATQ  La Tuque          137.34 356  P     PKPdf  14 21 08.7 +0.1
      baz=6.6
VAS01 Vassouras-RJ      137.45 230 eP     PKPdf  14 21 09.7 +0.1
ECSD  EROS Data Cent    137.54  21  P     PKPdf  14 21 09.8 +0.7
      baz=331
CNLB  Canela            137.74 215 eP     PKPdf  14 21 09.6 -0.4
D56A  ZEC Mazanza, M    137.79 358  P     PKPdf  14 21 09.8 +0.3
      baz=3.8
E61A  Lac Etchemin      138.05 353  P     PKPdf  14 21 10.5 +0.5
      baz=10
E56A  St. Veronique     138.30 358  P     PKPdf  14 21 10.7 +0.3
      baz=3.4
ITAB  Concordia         140.05 216 eP     PKPdf  14 21 14.9 +0.7
SFIN  Lafayette         143.40  13  P     PKPbc  14 21 16.7 -0.4
      baz=343
CPUP  Villa Florida     143.62 211  PKP   PKPdf  14 21 19.5 -1.1
      comp=Z,3.3nm,0.9s,baz=109,slow=3.6,SNR=4.8
N58A  Sunbury           144.04 359  P     PKPbc  14 21 19.0 +0.1
      baz=1.0
WMOK  Wichita Mounta    144.06  31  P     PKPab  14 21 18.5 -0.2
      baz=322
N57A  Milroy            144.13   0  P     PKPab  14 21 18.9 +0.2
      baz=360
SSPA  Standing Stone    144.25   1  PKPdf PKPdf  14 21 20.7 -0.6
ACSO  Alum Creek Sta    144.27   8  P     PKPab  14 21 19.3  0.0
      baz=350
CCM   Cathedral Cave    144.44  19  P     PKPab  14 21 19.3 -0.6
      baz=336
O53A  New Philadelph    144.45   5  P     PKPab  14 21 19.4 -0.5
      baz=353
TUL1  Leonard           144.55  27  P     PKPab  14 21 20.1 -0.3
      baz=327
O59A  Robesonia         144.56 359  P     PKPab  14 21 20.1 -0.3
      baz=1.9
O56A  Blue Knob Stat    144.60   2  P     PKPab  14 21 20.3 -0.3
      baz=358
O56A  Blue Knob Stat    144.60   2        PKPab  14 21 20.5  0.0
P48A  Milroy            144.63  11  PKPdf PKPab  14 21 20.1 -0.6
O57A  Amberson          144.67   1  P     PKPab  14 21 20.5 -0.2
      baz=359
W35A  Tecumseh          144.68  29        PKPab  14 21 21.0  0.0
P49A  Miami Univ. Ec    144.69  10  P     PKPab  14 21 19.9 -0.9
      baz=347
BDFB  Brasilia          144.73 234  PKP   PKPdf  14 21 23.8 +0.9
      comp=Z,12nm,0.4s,baz=104,slow=2.5,SNR=19
BDFB  Brasilia          144.73 234  PKPdf PKPdf  14 21 24.0 +1.1
O58A  Lewisberry        144.76 360  P     PKPab  14 21 20.4 -0.7
      baz=0.6
FVM   French Village    144.77  18  PKIKP PKPab  14 21 20.5 -0.7
FVM   French Village    144.77  18        PKPab  14 21 20.5 -0.7
MVL   Millersville      144.88 359        PKPab  14 21 21.6 +0.1
MGMO  Mountain Grove    144.90  21        PKPbc  14 21 21.0 -0.7
P52A  Corning           144.97   7  P     PKPbc  14 21 20.7 -1.1
      baz=352
TX31  Lajitas Ar. Si    144.97  43        PKPdf  14 21 22.9  0.0
TX32  Lajitas Array     144.97  43        PKPdf  14 21 23.0  0.0
TXAR  Lajitas Array     144.98  43  PKP   PKPab  14 21 22.7 +0.3
      comp=Z,26nm,0.7s,baz=278,slow=1.3,SNR=268
TXAR  Lajitas Array     144.98  43        PKPdf  14 21 23.1 +0.1
P60A  Greenville        145.05 358  P     PKPbc  14 21 21.3 -0.8
      baz=2.9
MCWV  Mont Chateau      145.15   4  P     PKPbc  14 21 22.1 -0.3
      baz=356
ABTX  Abilene, Hawle    145.21  34  P     PKPbc  14 21 22.8 -0.1
      baz=318
P59A  Jarrettsville     145.27 359  P     PKPbc  14 21 22.4 -0.4
      baz=1.5
P56A  Dayton Farm, R    145.35   2  P     PKPbc  14 21 22.5 -0.5
      baz=357
U40A  Yellville         145.39  23  P     PKPdf  14 21 22.5 -0.9
      baz=332
P57A  Homestead Farm    145.39   1  P     PKPdf  14 21 22.6 -0.6
      baz=359
P58A  Pank, Wackersv    145.40   0  P     PKPdf  14 21 22.6 -0.6
      baz=360
WCI   Wyandotte Cave    145.64  13  PKIKP PKPdf  14 21 23.9 +0.2
WCI   Wyandotte Cave    145.64  13  P     PKPdf  14 21 23.6 -0.1
      baz=344
WCI   Wyandotte Cave    145.64  13  PKPdf PKPdf  14 21 23.9 +0.2
Q56A  Snyder Ridge,     145.80   3  P     PKPdf  14 21 24.0  0.0
      baz=357
Q53A  Leroy             145.80   6  P     PKPdf  14 21 24.0  0.0
      baz=352
Q57A  Strasburg         145.83   2  P     PKPdf  14 21 24.2 +0.2
      baz=358
Q58A  Fox Den Farm,     145.94   1  P     PKPdf  14 21 24.3 +0.1
      baz=359
W39A  Magazine          146.02  25  P     PKPbc  14 21 25.2 -0.1
      baz=330
R56A  Bull Pasture M    146.42   3  P     PKPdf  14 21 25.8 +0.6
      baz=356
R55A  Marlinton         146.50   4  P     PKPbc  14 21 26.9 +0.2
      baz=355
R54A  Victor            146.52   5  P     PKPdf  14 21 25.6 +0.3
      baz=353
R57A  Stanardsville     146.56   2  P     PKPbc  14 21 26.7 -0.1
      baz=358
R58A  Rapidan           146.58   1  P     PKPbc  14 21 26.3 -0.6
      baz=359
W41B  Gary Mavity, V    146.66  23  P     PKPdf  14 21 26.4 +0.9
      baz=332
MIAR  Mount Ida         146.67  25  P     PKPbc  14 21 26.7 -0.6
      baz=329
JCT   Junction City     146.68  37  P     PKPbc  14 21 27.3 -0.1
      baz=316
S54A  Dingess, Beckl    146.87   6  P     PKPbc  14 21 27.3 -0.5
      baz=353
WHTX  Lake Whitney,     146.89  33  P     PKPbc  14 21 27.6 -0.4
      baz=321
R58B  Mineral           146.91   1  P     PKPbc  14 21 27.4 -0.4
      baz=359
X40A  Basin Creek Fa    147.03  24  P     PKPbc  14 21 28.5 +0.2
      baz=331
S57A  Dark Hollow, R    147.08   3  P     PKPbc  14 21 28.2 -0.1
      baz=357
S56A  Natural Bridge    147.13   3  P     PKPbc  14 21 28.1 -0.4
      baz=356
WVT   Waverly           147.25  16  PKP2  PKPbc  14 21 28.9  0.0
WVT   Waverly           147.25  16  P     PKPbc  14 21 28.4 -0.4
      baz=340
WVT   Waverly           147.25  16        PKPbc  14 21 28.9  0.0
S58A  Poland Farm, P    147.26   1  P     PKPbc  14 21 28.5 -0.3
      baz=359
435B  Jarrell           147.75  34  P     PKPbc  14 21 30.4  0.0
      baz=320
T56A  Rocky Mt          147.75   4  P     PKPbc  14 21 29.4 -0.8
      baz=355
X43A  Marvell           147.75  21  P     PKPbc  14 21 30.0 -0.2
      baz=334
TZTN  Tazewell          147.80  10  P     PKPbc  14 21 29.8 -0.5
      baz=348
TZTN  Tazewell          147.80  10        PKPbc  14 21 30.0 -0.4
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T57A  Hurt              147.83   3  P     PKPbc  14 21 30.2 -0.2
      baz=356
T59A  Double "B" Far    147.91   1  P     PKPbc  14 21 30.5 -0.1
      baz=360
T58A  Grand View Acr    147.91   2  P     PKPbc  14 21 30.6  0.0
      baz=358
U54A  Nelsons Funny     148.07   7  P     PKPbc  14 21 30.4 -0.8
      baz=351
Z41A  Richland Creek    148.10  25  P     PKPbc  14 21 31.2  0.0
      baz=330
OXF   Oxford            148.27  19  P     PKPbc  14 21 30.9 -0.7
      baz=336
U57A  Blanch            148.39   3  P     PKPbc  14 21 31.4 -0.4
      baz=356
U56A  King              148.40   5  P     PKPbc  14 21 31.4 -0.6
      baz=354
833A  Chaparral WMA,    148.45  40  P     PKPbc  14 21 32.5 +0.2
      baz=314
U58A  Oxford            148.46   2  P     PKPbc  14 21 32.0 -0.1
      baz=358
U59A  Littleton         148.52   1  P     PKPbc  14 21 32.2  0.0
      baz=359
V57A  Coltrane Farms    148.90   4  P     PKPbc  14 21 32.6 -0.6
      baz=355
V56A  Mocksville        148.92   5  P     PKPbc  14 21 32.9 -0.4
      baz=354
V58A  Windy Hill, Pi    149.03   3  P     PKPbc  14 21 33.6  0.0
      baz=356
V61A  Roper             149.08 359  P     PKPbc  14 21 34.3 +0.6
      baz=1.4
V59A  Middlesex         149.10   2  P     PKPbc  14 21 33.7  0.0
      baz=358
V60A  Jim Taylor Roa    149.11   0  P     PKPbc  14 21 33.9 +0.2
      baz=0.0
KMSC  Kings Mountain    149.49   7  P     PKPbc  14 21 34.2 -0.5
      baz=352
W56A  Indian Trail      149.58   5  P     PKPbc  14 21 34.4 -0.6
      baz=354
W57A  Gilead            149.61   5  P     PKPbc  14 21 34.6 -0.4
      baz=355
W58A  Raeford           149.80   3  P     PKPbc  14 21 35.4  0.0
      baz=356
W60A  Pink Hill         149.82   1  P     PKPbc  14 21 35.9 +0.4
      baz=359
VBMS  Vicksburg         149.94  23  P     PKPbc  14 21 36.0 +0.1
      baz=333
X56A  White Oak         150.17   6  P     PKPbc  14 21 36.0 -0.4
      baz=352
X59A  McDuffie Farm,    150.28   2  P     PKPbc  14 21 36.5 -0.1
      baz=357
X60A  Albert Glenn T    150.29   1  P     PKPbc  14 21 36.7 +0.1
      baz=359
LRAL  Lakeview Retre    150.39  17  P     PKPbc  14 21 36.3 -0.6
      baz=340
GOGA  Godfrey           150.87  11  P     PKPbc  14 21 37.9 -0.2
      baz=347
Z57A  Bowman            151.39   6  P     PKPbc  14 21 39.1 -0.1
      baz=353
Z58A  St. Stephen       151.43   5  P     PKPbc  14 21 39.2 -0.2
      baz=355
MCPB  Macapa, AP        154.38 259 eP     PKPdf  14 21 39.2 +1.1
CZSB  Cruzeiro do Su    166.84 200 eP     PKPdf  14 21 50.2 -1.4
```

IDC 15 14:04:13.0±999.0**, 50°.82N**×**49°.66E, h0^{km}, Error ellipse: s-maj=1082.0km s-min=116.7km az=89.0, Western Kazakhstan**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
I31KZ AKTYUBINSK INF     5.35  91   i                14 41 30.0
      baz=278,slow=323,SNR=3.6
I46RU ZALESOVO INFRA    21.55  68   i                16 13 20.0
      baz=274,slow=333,SNR=1.1
I34MN SONGINO INFRAS    36.35  72   i                17 46 40.0
      baz=293,slow=334,SNR=0.6
```

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*IDC **15** 14:11:01.9±1.2, 55°.13N×163°.98E, h0^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.2/61, mbtmp3.2/5, ML2.3/1, MS4.0/1, Ms1 4.0/1, ms1mx2.7/26, Error ellipse: s-maj=71.6km s-min=20.1km az=145.0*

*KRSC **15** 14:11:03.2±0.8, 55°.05N×163°.94E, h46^{km}±27^{km}, ML3.8*

ISC 15 14:11:04.9±2.6**, 55°.12N**±0°.05×**163°.96E**±0°.05**, h20^{km}**±8^{km}**, n35, σ0^{s}97**/43**, mb3.1**/4**, Off east coast of Kamchatka Peninsula**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
BKI   Bering             1.16  85  eP     Pn         14 11 25.7 -0.2
BKI                                eS     Sb         14 11 40.6 -0.2
KBTR  Krutoberegovo      1.27 330  eP     Pn         14 11 25.5 -1.9
KBG   Krutoberegovo      1.34 329  eP     Pn         14 11 26.6 -1.8
SMKR  Semkarok           2.03 317  eP     Pn         14 11 37.9 -0.1
SMKR                               eS     Sn         14 12 03.7 +0.9
TUMD  Tumrok D           2.04 274  eP     Pn         14 11 37.3 -0.8
KZV   Kizimen            2.10 271  eP     Pn         14 11 38.5 -0.6
KZV                                eS     Sn         14 12 02.8 -1.9
BDR   Baidarnaya         2.12 314  eP     Pn         14 11 39.2 -0.1
TUMR  Tumrok             2.19 276  eP     Pn         14 11 40.3 +0.1
SRKR  Sorokina           2.20 316  eP     Pn         14 11 40.2 -0.1
SRKR                                S     Sn         14 12 08.2 +1.3
KMNR  Kamenistaya        2.21 288  eP     Pn         14 11 40.9 +0.4
KMNR                               eS     Sn         14 12 08.7 +1.4
KRSR  Krestovskiy        2.21 301   P     Pn         14 11 40.1 -0.4
KLY   Klyuchi            2.22 304  eP     Pn         14 11 38.8 -1.7
KLY                                eS     Sn         14 12 05.3 -2.0
SRDR  Sredinnyy          2.68 298  eP     Pn         14 11 47.7 +0.8
SPN   Mys Shipunski      3.08 230  eP     Pn         14 11 50.7 -1.6
ESO   Esso               3.10 287  eP     Pn         14 11 52.9 +0.3
NLC   Nalytchevo         3.34 236  eS     Sn         14 12 34.7 -0.2
SMAR  Somma              3.55 241  eP     Pn         14 11 59.0  0.0
KRER  Koryakskii         3.56 241  eP     Pn         14 11 59.4 +0.3
UGLR  Uglovaya           3.57 240  eP     Pn         14 11 59.6 +0.4
KRX   Arik               3.58 243  eP     Pn         14 11 59.3  0.0
AVH   Avacha             3.58 241  eP     Pn         14 11 59.6 +0.3
KOK   Koryaka            3.62 242  eP     Pn         14 12 00.1 +0.3
DALK  Dalny              3.71 238  eP     Pn         14 12 00.5 -0.5
DALK                               eS     Sn         14 12 42.0 -2.0
PET   Petropavlovsk      3.76 238  eP     Pn         14 12 00.6 -1.1
GNL   Ganaly             3.79 250  eP     Pn         14 12 03.0 +0.8
KRMR  Karymshinskiy      4.13 239  eP     Pn         14 12 08.0 +1.2
KRMR                               eS     Sn         14 12 53.3 -1.2
PETK  Petropavlovsk-     4.20 244   Pn    Pn         14 12 07.7  0.0
      0.8nm,0.3s,baz=63,slow=17,SNR=44
PETK                                Sn    Sn         14 12 55.5 -0.6
      0.6nm,0.3s,baz=8.2,slow=23,SNR=5.3
RUS   Russkaya           4.20 232  eP     Pn         14 12 07.5 -0.2
MTVR  Mutnovka           4.32 235   P     Pn         14 12 09.8 +0.3
GRL   Gorelyy            4.33 236  eP     Pn         14 12 09.9 +0.3
USRK  Ussuriysk Ar.     23.19 255   P     P          14 16 10.4 +0.4
      0.6nm,0.6s,baz=90,slow=16,SNR=1.5
ILAR  Eielson Array     25.77  48   P     P          14 16 33.5 -0.4
      0.2nm,0.7s,baz=268,slow=9.1,SNR=5.1
YKA   Yellowknife Ar    40.12  45   P     P          14 18 38.6 -0.1
      0.1nm,0.5s,baz=300,slow=7.8,SNR=1.8
ARU   Arti              53.42 318   LR    LR         14 45 24.0
      comp=Z,150nm,20.9s,baz=155,slow=39
ASAR  Alice Springs     82.58 208   P     P          14 23 26.6 +0.4
      0.4nm,0.5s,baz=18,slow=4.6,SNR=13
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*NOU **15** 14:28:39.6, 37°.90S×176°.35E, h228^{km}, MLv3.5, North Island, New Zealand*

WEL 15 14:28:44.1, 38°S±3°×**17°6E**±°**, h200^{km}**±6^{km}**, M2.8**/78**, MLv2.8**/78**, Error ellipse: s-maj=0.0km s-min=0.0km az=66.3, North Island**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
KARZ  Kaharoa            0.16  24   P     Pn         14 29 09.6 -0.9
GRRZ  Galatos Road       0.19 193   P     Pn         14 29 10.0 -0.5
HRRZ  Handcock Road      0.24 157   P     Pn         14 29 10.0 -0.6
RRRZ  Republican Roa     0.33 122   P     Pn         14 29 10.1 -0.7
WPRZ  Whakapapatarin     0.35 180   P     Pn         14 29 10.4 -0.4
PRRZ  Plateau Road       0.38 152   P     Pn         14 29 10.2 -0.6
KUTZ  Kaahu Road         0.42 219   P     Pn         14 29 10.7 -0.3
ALRZ  Allen Road         0.42 161   P     Pn         14 29 10.6 -0.5
MARZ  Manawahe           0.44  66   P     Pn         14 29 10.5 -0.6
OPRZ  Ohinepanea         0.44  44   P     Pn         14 29 10.1 -1.0
TLZ   Tolley Road        0.52 251   P     Pn         14 29 11.2 -0.2
MUGZ  Murupara           0.57 123   P     Pn         14 29 10.6 -0.9
WATZ  Wairara            0.64 212   P     Pn         14 29 11.8 -0.1
TOZ   Tahuroa Road       0.68 309   P     Pn         14 29 11.7 -0.4
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MRHZ	Matea Rd	0.70	163	P	Pn	14 29 11.8	-0.4
HATZ	Hinemaiaia	0.73	184	P	Pn	14 29 12.0	-0.3
URZ	Urewera	0.75	98	P	Pn	14 29 11.4	-1.0
RATZ	Rangitukua	0.77	203	P	Pn	14 29 12.4	-0.1
RTZ	Ruatahuna	0.79	125	P	Pn	14 29 12.2	-0.5
RITZ	Rihia Road	0.85	196	P	Pn	14 29 13.4	+0.4
MTHZ	Maungataniwha	0.87	142	P	Pn	14 29 13.0	-0.2
KATZ	Kakaramea	0.89	204	P	Pn	14 29 13.8	+0.4
KRVZ	Karewarewa	1.01	204	P	Pn	14 29 14.3	+0.1
BKZ	Black Stump Fm	1.03	166	P	Pn	14 29 14.2	0.0
ETVZ	East Tongariro	1.03	200	P	Pn	14 29 14.5	+0.2
RAGZ	Rawiri	1.04	109	P	Pn	14 29 14.2	0.0
RAHZ	Arahi	1.04	136	P	Pn	14 29 14.7	+0.4
WTVZ	West Tongariro	1.05	205	P	Pn	14 29 14.6	+0.2
TWVZ	Taurewa	1.07	212	P	Pn	14 29 14.8	+0.3
OTVZ	Oturere	1.07	201	P	Pn	14 29 15.1	+0.5
HIZ	Hauiti	1.09	251	P	Pn	14 29 15.0	+0.5
MWZ	Matawai	1.09	99	P	Pn	14 29 14.4	-0.2
NGZ	Ngauruhoe	1.10	203	P	Pn	14 29 15.2	+0.4
SNGZ	Shannon Statio	1.11	124	P	Pn	14 29 15.2	+0.5
FWVZ	Far West T-bar	1.19	203	P	Pn	14 29 16.0	+0.5
RUGZ	Raukumara Rang	1.21	81	P	Pn	14 29 14.3	-1.3
TRVZ	Turoa	1.23	203	P	Pn	14 29 16.4	+0.6
WHHZ	Waihua	1.24	138	P	Pn	14 29 16.3	+0.7
WNVZ	Wahianoa	1.24	201	P	Pn	14 29 16.3	+0.4
KWHZ	Kaweka Forest	1.27	171	P	Pn	14 29 16.5	+0.5
ARHZ	Aropaoanui	1.28	150	P	Pn	14 29 16.8	+0.9
MOVZ	Moawhango	1.28	194	P	Pn	14 29 16.1	+0.1
PKVZ	Pokaka	1.29	209	P	Pn	14 29 16.7	+0.5
BHHZ	Black Hill Sta	1.33	183	P	Pn	14 29 16.6	+0.2
MTVZ	Mangateitei	1.33	204	P	Pn	14 29 17.1	+0.7
HAZ	Te Kaha	1.34	73	P	Pn	14 29 15.6	-0.9
MCHZ	McNeill Hill	1.34	162	P	Pn	14 29 17.6	+1.1
TKGZ	Te Karaka	1.35	102	P	Pn	14 29 17.1	+0.5
RIGZ	Rimuhau	1.37	114	P	Pn	14 29 17.2	+0.5
TWGZ	Tauwhareparae	1.43	91	P	Pn	14 29 17.9	+0.6
VRZ	Vera Road	1.46	228	P	Pn	14 29 18.6	+1.2
KNZ	Kokohu	1.46	126	P	Pn	14 29 18.0	+0.6
KRHZ	Kereru	1.49	174	P	Pn	14 29 18.3	+0.6
PKGZ	Pakihiroa	1.54	80	P	Pn	14 29 18.2	-0.1
PRGZ	Paritu Road	1.55	120	P	Pn	14 29 19.0	+0.7
ETAZ	East Tamaki Re	1.56	321	P	Pn	14 29 18.9	+0.5
WIAZ	Waiheke Island	1.59	329	P	Pn	14 29 19.3	+0.6
AWAZ	Awhitu Peninsu	1.63	312	P	Pn	14 29 19.6	+0.6
CNGZ	Carnagh Statio	1.64	102	P	Pn	14 29 20.3	+1.2
CKHZ	Cape Kidnapper	1.65	155	P	Pn	14 29 20.4	+1.2
MHGZ	Mahia Peninsul	1.69	126	P	Pn	14 29 20.6	+1.0
MBAZ	Motutapu North	1.72	324	P	Pn	14 29 20.6	+0.7
KAHZ	Kahuranaki	1.72	161	P	Pn	14 29 21.1	+1.2
PNHZ	Pukenui	1.75	179	P	Pn	14 29 20.7	+0.6
WTAZ	Waiatarua	1.76	314	P	Pn	14 29 21.3	+0.9
WMGZ	Waiomatatini S	1.81	80	P	Pn	14 29 21.2	+0.5
WAZ	Wanganui	1.83	210	P	Pn	14 29 22.1	+1.1
LREZ	Lake Rotokare	1.89	226	P	Pn	14 29 23.4	+1.9
TSZ	Takapari Road	1.90	185	P	Pn	14 29 22.2	+0.6
WPHZ	Waipukurau	1.91	174	P	Pn	14 29 22.5	+0.8
PXZ	Pawanui	1.94	164	P	Pn	14 29 23.1	+1.1
NEZ	North Egmont	1.96	235	P	Pn	14 29 24.5	+2.2
PREZ	Palmer Road	1.96	232	P	Pn	14 29 24.5	+2.3
PKE	Pukeiti	1.99	238	P	Pn	14 29 24.6	+2.0
KHEZ	Kahui Hut	2.02	235	P	Pn	14 29 25.2	+2.2
DVHZ	Dannevirke	2.13	180	P	Pn	14 29 24.5	+0.5
PRHZ	Porangahau	2.13	170	P	Pn	14 29 24.9	+0.9
POWZ	Post Office Ro	2.25	188	P	Pn	14 29 25.8	+0.5
ANWZ	Angora Road	2.31	174	P	Pn	14 29 26.9	+1.1
PRWZ	Pori Road	2.39	184	P	Pn	14 29 27.6	+0.8
BFZ	Birch Farm	2.52	179	P	Pn	14 29 28.7	+0.6
MRZ	Mangatainoka R	2.53	190	P	Pn	14 29 28.8	+0.4
TIWZ	Tintock	2.62	185	P	Pn	14 29 29.9	+0.6
CPWZ	Castlepoint	2.74	179	P	Pn	14 29 31.9	+1.2
OGWZ	Otaki Gorge	2.76	196	P	Pn	14 29 31.4	+0.5
HOWZ	Holdsworth Sta	2.78	190	P	Pn	14 29 31.3	+0.2
KIW	Kapiti Island	2.86	199	P	Pn	14 29 32.4	+0.3
TMWZ	Te Maipa	2.95	184	P	Pn	14 29 33.5	+0.3
MTW	Mount Morrison	3.03	189	P	Pn	14 29 34.2	0.0
CAW	Cannon Point	3.06	196	P	Pn	14 29 34.7	+0.3
DUWZ	D'Urville Isla	3.15	213	P	Pn	14 29 35.9	+0.3
TRWZ	Traveller	3.25	186	P	Pn	14 29 36.9	+0.2
PAWZ	Paruwai Farm	3.26	190	P	Pn	14 29 36.9	0.0
WEL	Wellington	3.30	199	P	Pn	14 29 37.3	+0.1
MSWZ	Moikau Station	3.32	192	P	Pn	14 29 37.5	-0.1
TCW	Tory Channel	3.37	205	P	Pn	14 29 38.5	+0.4
BHW	Baring Head	3.39	197	P	Pn	14 29 38.3	-0.1
PLWZ	Palliser	3.47	191	P	Pn	14 29 39.2	-0.2
TUWZ	Tuamarina	3.68	207	P	Pn	14 29 42.0	+0.1
NNZ	Nelson	3.73	214	P	Pn	14 29 42.6	+0.1
QRZ	Quartz Range	3.87	225	P	Pn	14 29 44.0	-0.3
BSWZ	Blackbirch Sta	3.96	206	P	Pn	14 29 45.7	+0.4
THZ	Tophouse	4.38	214	P	Pn	14 29 50.5	-0.2
KHZ	Kahutara	4.70	204	P	Pn	14 29 54.8	+0.2
GVZ	Greta Valley S	5.36	205	P	Pn	14 30 02.8	-0.2
MQZ	McQueen's Vall	6.14	205	P	Pn	14 30 11.8	-1.3
TMZ	Timaru	7.33	210	P	Pn	14 30 28.4	-0.1

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*IDC **15** 14:32:08.1±2.3, 1°.40S×136°.97E, h49^{km}±28^{km}, mb3.3/5, mb1 3.6/9, mb1mx3.4/40, mbtmp3.7/9, ML2.8/4, MS2.9/1, Ms1 2.9/1, ms1mx2.4/16, Error ellipse: s-maj=24.1km s-min=18.3km az=25.0*

ISC 15 14:32:06.8±0.8, **1°.4S**±0°.2×**136°.92E**±0°.09, **h32**^{km}**, n9,** σ**1^s.51**/10, **mb3.5**/5, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.94	106	P	Pn	14 33 06.2	+1.1
	0.6nm,0.3s,baz=4.4,slow=13,SNR=1.7						
JAY				S	Sn	14 33 50.3	0.0
	1.5nm,0.3s,baz=56,slow=21,SNR=1.6						
SIJI	Sorong	5.68	276	P	Pn	14 33 30.2	+1.2
	1.1nm,0.3s,baz=173,slow=16,SNR=1.9						
PMG	Port Moresby	12.91	128	P	Pn	14 35 09.6	+1.5
	0.3nm,0.3s,baz=326,slow=7.3,SNR=2.2						
PMG				S	Sn	14 37 28.4	-2.4
	0.7nm,0.3s,baz=318,slow=23,SNR=5.9						
PMG				LR	LR	14 41 03.0	
	comp=Z,56nm,20.9s,baz=276,slow=42						
FITZ	Fitzroy Crossi	19.93	213	P	Pn	14 36 37.0	-1.0
	0.1nm,0.3s,baz=25,slow=14,SNR=2.4						
ASAR	Alice Springs	22.30	187	P	P	14 37 02.6	+0.9
	3.3nm,0.5s,baz=13,slow=12,SNR=93						
STKA	Stephens Creek	30.61	172	P	P	14 38 16.8	-1.2
	1.5nm,1.0s,baz=345,slow=16,SNR=2.3						
CMAR	Chiang Mai Arr	42.25	300	P	P	14 39 55.9	-1.6
	0.3nm,0.5s,baz=123,slow=7.6,SNR=2.0						
MKAR	Makanchi Array	67.69	323	P	P	14 43 00.5	-0.6
	0.2nm,0.6s,baz=102,slow=8.3,SNR=5.0						
BVAR	Borovoye Array	77.24	325	P	P	14 43 58.0	+0.2
	0.2nm,0.4s,baz=123,slow=5.3,SNR=2.7						

IDC 15 14:35:16.9±508.0, **52°.61N×33°.41E, h0**^{km}**, Error ellipse: s-maj=187.5km s-min=99.3km az=28.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	4.68	27	i		15 03 50.0	
	baz=211,slow=316,SNR=2.5						
I26DE	FREYUNG INFRAS	13.02	261	i		15 59 30.0	
	baz=70,slow=334,SNR=1.2						
I31KZ	AKTYUBINSK INF	15.47	88	i		16 12 20.0	
	baz=291,slow=314,SNR=0.8						

VIE 15 14:37:31.3±0.4, **47°.36N×11°.51E, h10**^{km}**, ml0.0**/3, **Error ellipse: s-maj=5.9km s-min=1.4km az=14.0 9 km N of Hall in Tirol, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATA	Walderalm	0.05	119	ePg	Pg	14 37 33.6	+0.2
	0.6nm,0.1s						
WATA				eSg	Sg	14 37 35.6	+0.6
	1.6nm,0.1s						
WTTA	Wattenberg	0.13	139	ePg	Pg	14 37 34.5	+0.1
	0.4nm,0.1s						
WTTA				eSg	Sg	14 37 37.0	+0.3
	0.2nm,0.1s						
MOTA	Moosalm	0.28	267	eSg	Sg	14 37 41.3	+0.5
	0.3nm,0.1s						

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*BNS **15** 14:37:34.7±0.3, 51°.75N×7°.29E, h1^{km}, ML1.7*
*LDG **15** 14:37:36.0±0.9, 51°.63N×7°.33E, h1^{km}, Md1.6/2, Ml2.4/2, Error ellipse: s-maj=16.6km s-min=7.8km az=16.0, Suspected Mining induced.*
*BGR **15** 14:37:36.5±0.3, 51°.73N×7°.13E, h1^{km}, ML2.0/3, Error ellipse: s-maj=4.4km s-min=3.3km az=103.0*

BUG 15 14:37:34.8±0.0, **51°.76N×7°.17E, h1**^{km}±2^{km}**, MD1.9**/7, **ML2.5**/4, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAVN	Auguste-Victor	0.04	234	Pg	Pg	14 37 35.9	+0.4
BAVN				Sg	Sg	14 37 36.6	+0.6
BZER	Hlnxe	0.23	233	eSg	Sg	14 37 44.1	+1.8
BULI	Ruhr-Universit	0.31	170	Pg	Pg	14 37 41.7	+1.0
BULI				Sg	Sg	14 37 46.2	+1.4
BKLB	Ruhr-Universit	0.33	169	Pg	Pg	14 37 42.0	+1.0
BUG	Bochum--Univer	0.33	169	Pg	Pg	14 37 42.0	+1.0
BUG				Sg	Sg	14 37 46.7	+1.5
HMES	Hamm, Michael-	0.36	106	eSg	Sg	14 37 47.8	+1.4
LAUG	Laupendahl	0.43	199	ePg	Pg	14 37 43.5	+0.5
ENTS	Ennepetalsperr	0.54	164	ePg	Pg	14 37 46.0	+0.8
ENTS				eSg	Sg	14 37 53.2	+1.0
SORT	Sorpetalsperre	0.65	129	ePg	Pb	14 37 48.3	-0.6
SORT				eSg	Sb	14 37 58.1	-0.3
	15nm,0.4s						
IBBN	Ibbenburen	0.66	33	eSg	Sb	14 38 00.2	+1.5
HOBG	Hohbusch	0.78	172	ePg	Pg	14 37 49.5	-0.3
HOBG				eSg	Sg	14 38 00.5	+0.5
	27nm,0.2s						
PLH	Pulheim	0.79	196	eSg	Sg	14 37 59.1	-1.0
WBS	Wahnbachtalspe	0.96	176	eSg	Sg	14 38 05.7	+0.2
	36nm,0.3s						
KASTN	Kahler Asten	0.96	125	ePg	Pb	14 37 54.0	-0.2
KASTN				eSg	Sb	14 38 07.6	+0.2
TDN	Todenfeld	1.20	187	ePg	Pg	14 37 57.1	-0.6
TDN				eSg	Sg	14 38 12.6	-0.6
	28nm,0.3s						
AHRW	Bad Neuenahr-A	1.22	183	ePg	Pn	14 37 58.9	-0.1
AHRW				eSg	Sn	14 38 15.6	-0.6
KLL	Kalltalsperre	1.24	206	ePg	Pg	14 37 57.3	-1.2
DREG	Dreilaegerbach	1.25	209	ePg	Pg	14 37 58.2	-0.4
HGN	Heimansgroeve	1.27	218	ePg	Pg	14 37 58.7	-0.3
HGN				eSg	Sg	14 38 15.0	-0.4
MEM	Membach	1.36	213	ePg	Pg	14 38 00.5	-0.5
MEM				eSg	Sg	14 38 17.9	-0.7
BHE	Schloss Buerre	1.41	180	eSg	Sg	14 38 18.6	-1.4
	33nm,0.2s						
BGG	Burgeitz	1.56	176	ePg	Pn	14 38 01.9	-1.8
LOH	Wallersheim-Lo	1.63	194	eSg	Sn	14 38 23.5	-2.8
	12nm,0.2s						
TNS	Taunus Mts	1.74	152	ePn	Pb	14 38 07.5	-0.1
TNS				eSg	Sb	14 38 29.8	0.0
ABH	Alteburg	1.90	173	ePn	Pb	14 38 10.1	0.0
ABH				eSg	Sb	14 38 34.1	-0.2
GIVF	Givet	2.23	223	ePn	Pn	14 38 12.0	-0.8
GIVF	Givet	2.23	223	ePg	Pg	14 38 16.8	-0.6
GIVF				eSn	Sn	14 38 38.3	-2.6
GIVF				eSg	Sb	14 38 44.7	+0.8
	4.5nm,0.3s						
BAIF	Baives	2.53	229	ePn	Pn	14 38 16.2	-0.8
BAIF	Baives	2.53	229	ePg	Pg	14 38 22.8	-0.5
BAIF				eSn	Sn	14 38 45.9	-2.6
BAIF				eSg	Sg	14 38 55.7	-0.4
	2.4nm,0.3s						

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*IDC **15** 14:42:44.7±1.4, 20°.46S×67°.12W, h193^{km}±20^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.2/22, mbtmp3.6/5, Error ellipse: s-maj=40.1km s-min=20.5km az=149.0*
*GUC **15** 14:42:47.2±0.7, 20°.42S×67°.58W, h222^{km}±7^{km}, ML3.2*

ISC 15 14:42:45.6±1.1, **20°.42S**±0°.06×**67°.4W**±0°.1, **h201**^{km}±11^{km}**, n16,** σ**1^s.25**/26, **mb3.3**/3, **2C-7D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	1.71	279	⇓iP	Pn	14 43 22.7	+0.9
PB08				i S	S	14 43 50.3	+1.0
PB08				IAML		14 44 02.0	
	comp=E,31nm,0.3s						
PB09	IPOC Station P	2.23	232	⇓iP	Pn	14 43 28.1	+1.2
PB09				IAML		14 44 02.5	
	comp=N,45nm,0.7s						
HMBC	Humberstone	2.38	273	⇑iP	Pn	14 43 28.1	-0.3
HMBC				i S	S	14 43 59.9	-1.1
MNMC	Minye Minye	2.47	301	⇓iP	Pn	14 43 30.1	+0.5
MNMC				eS	S	14 44 03.6	+0.5
MNMC				IAML		14 44 10.5	
	comp=N,109nm,0.1s						
PB02	IPOC Station P	2.54	249	⇓iP	Pn	14 43 30.3	+0.1
LVC	Limon Verde	2.62	213	P	Pn	14 43 32.6	+1.3
	comp=N,1.6nm,0.3s,baz=52,slow=8.6,SNR=22						
LVC				S	S	14 44 07.1	+0.7
	comp=N,3.9nm,0.3s,baz=98,slow=23,SNR=13						
PB07	IPOC Station P	2.70	241	⇓iP	Pn	14 43 32.1	+0.1
PB07				i S	S	14 44 06.5	-1.1
PB07				IAML		14 44 08.8	
	comp=E,64nm,0.4s						
PSGC	Pisagua	2.73	287	⇓iP	Pn	14 43 31.9	-0.4
PSGC				i S	S	14 44 06.2	-1.8
PSGC				IAML		14 44 12.3	
	comp=N,53nm,0.4s						
PB03	IPOC Station P	2.76	234	⇓iP	Pn	14 43 33.1	+0.3
PB03				eS	S	14 44 08.4	-0.5
PB03				IAML		14 44 09.6	
	comp=E,84nm,0.5s						
PB16	IPOC Station P	2.90	315	⇑iP	Pn	14 43 36.5	+1.7
PB16				eS	S	14 44 13.8	+1.3
PB04	IPOC Station P	3.23	233	eP	Pn	14 43 38.9	+0.7
PB04				i S	S	14 44 17.3	-1.4
PB05	IPOC Station P	3.59	227	eP	Pn	14 43 43.0	+0.5
PB05				eS	S	14 44 25.1	-1.4
SIV	San Ignacio	7.42	55	P	Pn	14 44 28.1	-3.3
	comp=E,0.7nm,0.3s,baz=250,slow=8.0,SNR=10						
TXAR	Lajitas Array	60.60	324	P	P	14 52 35.9	+0.6
	comp=E,0.2nm,0.8s,baz=133,slow=10.0,SNR=2.0						
TORD	Torodi Ar. Bea	75.62	70	P	P	14 54 08.0	-1.0
	comp=E,1.4nm,0.5s,baz=252,slow=5.6,SNR=10.0						
YKA	Yellowknife Ar	90.66	340	P	P	14 55 25.7	+0.9
	comp=E,0.2nm,0.5s,baz=137,slow=5.2,SNR=5.9						

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*JMA **15** 15:07:17.4, 38°.53N×141°.72E, h54^{km}±1^{km}, M3.5*
JMA Felt I J1.
*NIED **15** 15:07:17.4, 38°.53N×141°.72E, h54^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.05; M$_{\theta\theta}$-0.08; M$_{\phi\phi}$-0.97; M$_{r\theta}$0.93; M$_{\theta\phi}$0.09; M$_{\phi r}$1.39; Fault plane solution: M$_0$1.94000×10^{14} NP1:φ$_s$26.00000°, δ76.00000°, λ103.00000°. NP2:φ$_s$162.00000°, δ20.00000°, λ48.00000°.*
*IDC **15** 15:07:19.7±1.7, 39°.30N×140°.16E, h0^{km}, mb3.3/3, mb1 3.3/6, mb1mx3.2/47, mbtmp3.2/6, ML2.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/17 Error ellipse: s-maj=36.4km s-min=21.8km az=86.0*

ISC 15 15:07:15.8±1.4, **38°.54N**±0°.05×**141°.84E**±0°.09, **h56**^{km}±7^{km}**, n20,** σ**1^s.60**/29, **mb3.3**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.37	232	P	Pn	15 07 26.8	+0.7
JIKH				S	Sn	15 07 33.3	-0.2
JIO	Ouri	0.39	258	P	Pn	15 07 26.9	+0.6
JIO				S	Sn	15 07 33.3	-0.6
JKMT	Kesennumamotoy	0.40	314	P	Pn	15 07 27.3	+1.0
JKMT				i S	Sn	15 07 34.0	+0.1
OFUJ	Ofunato	0.56	346	P	Pn	15 07 29.4	+1.3
OFUJ				eS	Sn	15 07 37.7	+0.6
JMK	Ichinoseki	0.64	311	P	Pn	15 07 29.9	+0.9
JMK				S	Sn	15 07 38.6	0.0
JOU	Okura	0.94	260	P	Pn	15 07 33.1	+0.3
JOU				S	Sn	15 07 44.9	-0.5
JOM	Ohasama	1.03	336	P	Pn	15 07 35.2	+1.2
JOM				eS	Sn	15 07 48.5	+1.0
JMM	Marumori	1.06	231	P	Pn	15 07 34.5	+0.1
JMM				eS	Sn	15 07 47.4	-0.9
JYK	Kaneyama	1.22	289	P	Pn	15 07 37.1	+0.6
JRG	Rokugo	1.27	313	P	Pn	15 07 38.1	+0.8
JFK	Kawauchi	1.39	213	P	Pn	15 07 39.6	+0.6
JFK				S	Sn	15 07 55.9	-0.4
JYS	Shirataka	1.43	258	P	Pn	15 07 40.0	+0.6
JYS				S	Sn	15 07 57.3	+0.2
MJAR	Matsushiro Arr	3.50	236	Pn	Pn	15 08 10.2	+2.5
	0.2nm,0.3s,baz=36,slow=12,SNR=14						
MAT	Matsushiro	3.50	237	P	Pn	15 08 09.9	+2.1
MAT				eS	Sn	15 08 52.8	+4.8
ASAJ	Asahikawa	5.61	6	Pn	Pn	15 08 37.9	+1.5
	0.5nm,0.3s,baz=192,slow=12,SNR=7.0						
ASAJ				Sn	Sn	15 09 39.2	-0.3
	0.5nm,0.3s,baz=22,slow=19,SNR=1.6						
USRK	Ussuriysk Ar.	9.31	311	Pn	Pn	15 09 14.9	-12
	baz=122,slow=13,SNR=2.1						
USRK				Sn	Sn	15 10 43.1	-27
	baz=146,slow=42,SNR=3.4						
SONM	Songino Array	27.26	301	P	P	15 12 50.5	-4.1
	0.2nm,0.4s,baz=107,slow=8.0,SNR=2.2						
TLY	Talaya	29.62	309	LR	LR	15 24 43.8	
	comp=Z,33nm,19.9s,baz=306,slow=37						
MKAR	Makanchi Array	43.62	301	P	P	15 15 14.6	+0.2
	0.4nm,0.7s,baz=82,slow=7.9,SNR=5.8						
ASAR	Alice Springs	62.32	188	P	P	15 17 47.6	+15
	0.4nm,0.9s,baz=16,slow=4.8,SNR=4.8						

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*IASPEI **15** 15:18:12.0±0.8, 47°.35N±0°.02×11°.52E±0°.02, h10^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.6km az=26.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*VIE **15** 15:18:11.3±0.1, 47°.35N×11°.53E, h11^{km}, mb1.7/5, ml2.4/19, Error ellipse: s-maj=1.4km s-min=0.8km az=172.0 8 km NNE of Hall in Tirol*
*BGR **15** 15:18:12.5±0.2, 47°.37N×11°.54E, h10^{km}, ML2.5/9, Error ellipse: s-maj=3.3km s-min=2.2km az=179.0*
*ROM **15** 15:18:13.1±0.6, 47°.29N±0°.04×11°.54E±0°.03, h8^{km}±2^{km}, ML2.2/5, Error ellipse: s-maj=4.6km s-min=2.1km az=5.0*

ISC 15 15:18:12.1±0.8, **47°.36N**±0°.02×**11°.53E**±0°.02, **h10**^{km}±5^{km}**, n51,** σ**1^s.10**/96, **1D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATA	Walderalm	0.04	128	ePg	Pg	15 18 13.8	-0.4
	327nm,0.1s,SNR=815						
WATA				eSg	Sg	15 18 15.8	+0.2
	264nm,0.1s						
WTTA	Wattenberg	0.12	143	ePg	Pg	15 18 14.6	-0.5
	76nm,0.1s,SNR=273						
WTTA				eSg	Sg	15 18 17.1	-0.1
	173nm,0.2s						
WTTA	Wattenberg	0.12	143	ePg	Pg	15 18 14.7	-0.4
WTTA				eSg	Sg	15 18 17.3	+0.1
WTTA	Wattenberg	0.12	143	P	Pg	15 18 14.7	-0.4
WTTA				S	Sg	15 18 17.3	+0.1
SQTA	Sankt Quirin	0.26	238	ePg	Pg	15 18 16.6	-0.9
	26nm,0.1s,SNR=45						
SQTA				eSg	Sg	15 18 21.0	0.0
	254nm,0.2s						
MOTA	Moosalm	0.29	267	ePg	Pg	15 18 17.0	-1.0
	1.8nm,0.1s,SNR=37						
MOTA				eSg	Sg	15 18 22.1	+0.1
	29nm,0.1s						
PART	Garmisch-Parte	0.32	296	ePg	Pg	15 18 17.8	-0.6
PART				eSg	Sg	15 18 22.8	+0.1
ZUGS	Zugspitze, Sch	0.38	279	ePg	Pg	15 18 19.3	-0.4
ZUGS				eSg	Sg	15 18 24.5	-0.3
ROSI	Rosskopf	0.44	191	P	Pg	15 18 20.3	-0.5
ROSI				S	Sg	15 18 26.4	-0.1
ROSI				AML	AML		
	comp=N,384µm,1.0s						
ROSI				AML	AML		
	comp=E,355µm,0.8s						
RETA	Reutte	0.54	284	ePg	Pg	15 18 21.9	-0.7
	comp=E,1.2nm,0.2s						
RETA				eSg	Sg	15 18 29.6	-0.2
	comp=E,4.0nm,0.1s,SNR=5.8						
RISI	Rein	0.55	138	⇓P	Pg	15 18 22.3	-0.6
RISI				S	Sg	15 18 29.9	-0.4
RISI				AML	AML		
	comp=E,356µm,1.5s						
RISI				AML	AML		
	comp=N,1024µm,1.4s						
BE1	Monatshausen	0.59	339	ePg	Pg	15 18 23.5	-0.1
BE1				eSg	Sg	15 18 32.4	+1.0
FETA	Feichten	0.64	239	ePg	Pg	15 18 23.4	-1.2
	SNR=7.3						
FETA				eSg	Sg	15 18 32.6	-0.5
	comp=N,1.3nm,0.1s,SNR=8.2						
ABSI	Aberstueckl	0.65	193	P	Pg	15 18 24.2	-0.5
ABSI				S	Sg	15 18 33.2	+0.1
ABSI				AML	AML		
	comp=E,190µm,0.7s						
ABSI				AML	AML		
	comp=N,300µm,0.5s						
FUR	Furstenfeldbru	0.83	348	ePg	Pb	15 18 29.7	+1.1
FUR				eSg	Sg	15 18 39.5	+0.7
OBER	Oberstdorf	0.84	274	ePg	Pg	15 18 28.7	+0.3
OBER				eSg	Sg	15 18 40.4	+1.0
KOSI	Kohlern	0.90	187	P	Pb	15 18 30.5	+0.5
APPI	Appiano	0.91	193	P	Pg	15 18 28.9	-0.7
APPI				S	Sg	15 18 40.9	-0.4
APPI				AML	AML		
	comp=N,114µm,1.1s						
APPI				AML	AML		
	comp=E,122µm,0.7s						
ABTA	Abfaltersbach	0.91	132	ePg	Pg	15 18 29.1	-0.5
	comp=E,1.3nm,0.2s						
ABTA				eSg	Sg	15 18 40.2	-1.2
	comp=E,4.8nm,0.2s						
RJOB	Jochberg	0.94	66	ePg	Pn	15 18 31.6	+0.2
RJOB				eSg	Sb	15 18 44.2	+1.2
MOSI	Grossmontoni	1.00	223	P	Pg	15 18 31.4	0.0
MOSI				S	Sg	15 18 43.4	-1.0
UBR	Ueberruh	1.02	289	ePg	Pg	15 18 31.6	-0.1
UBR				eSg	Sg	15 18 45.2	+0.3
KW1	Garching a.d.	1.05	43	eSg	Sb	15 18 47.3	+1.1
DAVA	Damuels	1.13	267	ePg	Pb	15 18 32.8	-1.0
	comp=E,1.1nm,0.1s,SNR=7.9						
DAVA				eSg	Sg	15 18 48.3	-0.1
	comp=E,31nm,0.2s,SNR=6.9						
DAVA	Damuels	1.13	267	ePg	Pn	15 18 34.9	+0.7
DAVA				eSg	Sn	15 18 49.6	-0.2
KBA	Koelnbreinsper	1.27	102	ePn	Pn	15 18 35.0	-1.1
	comp=E,0.8nm,0.1s						
KBA				eSn	Sn	15 18 54.0	+0.8
KBA	Koelnbreinsper	1.27	102	ePg	Pg	15 18 37.9	+1.5
KBA				eSg	Sb	15 18 51.8	-0.8
CTI	Castel Tesino	1.31	176	P	Pn	15 18 36.0	-0.6
CTI				S	Sb	15 18 53.8	-0.1
STAL	STALIGIAL	1.36	143	P	Pg	15 18 38.8	+0.5
STAL				S	Sg	15 18 56.0	0.0
MABI	Malga Bissina	1.48	209	P	Pg	15 18 40.6	0.0
NORI	Noerdlinger Ri	1.49	336	ePn	Pn	15 18 39.8	+0.8
NORI				eSg	Sb	15 18 59.5	+0.5
GRC2	Grafenberg Arr	1.51	356	ePn	Pn	15 18 37.7	-1.7
GRC2				ePg	Pb	15 18 40.0	-0.3
GRC2				eSg	Sb	15 19 00.1	+0.5
GRC3	Grafenberg Arr	1.53	1	ePn	Pn	15 18 37.9	-1.7
GRC3				ePg	Pb	15 18 40.2	-0.4
GRC3				eSg	Sn	15 19 00.4	+0.8
MYKA	Terra Mystica	1.62	116	ePg	Pb	15 18 42.4	+0.3
	comp=E,0.1nm,0.1s						
MYKA				eSn	Sn	15 19 01.7	0.0
	comp=E,15nm,0.5s						
WALHA	Wallhausen, DE	1.68	284	eSg	Sb	15 19 05.7	+1.3
MAGA	Magasa	1.70	202	P	Pb	15 18 43.8	+0.2
MAGA				AML	AML		
	comp=E,155µm,0.4s						
MAGA				AML	AML		
	comp=N,106µm,0.4s						
GRC4	Grafenberg Arr	1.73	360	ePg	Pb	15 18 44.1	+0.1
GRC4				eSg	Sb	15 19 06.3	+0.5
MOA	Molln	1.91	74	ePn	Pn	15 18 44.4	-0.4
	comp=N,5.3nm,0.4s						
MOA				eSn	Sn	15 19 08.9	-0.1
	comp=N,0.4nm,0.1s,SNR=4.8						
MOA	Molln	1.91	74	ePn	Pn	15 18 45.5	+0.7
MOA				eSg	Sb	15 19 12.4	+1.3
WET	Wettzell	2.00	26	ePn	Pn	15 18 44.8	-1.2
WET				eSn	Sn	15 19 09.6	-1.6
WET				eSg	Sb	15 19 14.5	+0.9
GEC2	GERESS Array S	2.08	44	ePg	Pb	15 18 50.1	+0.1
GEC2				eSn	Sn	15 19 13.0	-0.2

GEC2				*e*Sg	Sb	15 19 17.3	+1.4
OBKA	Obir	2.23	111	*e*Pn	Pn	15 18 49.1	-0.2
	comp=N,0.3nm,0.2s						
OBKA				*e*Sn	Sn	15 19 17.4	+0.3
	comp=N,1.5nm,0.3s						
OBKA	Obir	2.23	111	*e*Sg	Sb	15 19 22.0	+1.6
GRF	Grafenberg Arr	2.34	355	*e*Pg	Pb	15 18 56.0	+1.6
GRF				*e*Sg	Sg	15 19 26.1	-1.3
BFO	Black Forest	2.37	295	*e*Sg	Sb	15 19 26.7	+2.5
ROTZ	Rotzenmuhle	2.45	10	*e*Pg	Pb	15 18 57.4	+1.1
ROTZ				*e*Sn	Sn	15 19 19.4	-2.8
ROTZ				*e*Sg	Sb	15 19 28.6	+2.1
SOKA	Soboth	2.49	105	*e*Pn	Pn	15 18 52.0	-0.8
	comp=N,0.1nm,0.1s						
SOKA				*e*Sn	Sn	15 19 22.8	-0.5
	comp=N,0.1nm,0.1s						
CONA	Conrad Observa	2.98	77	*e*Sn	Sn	15 19 34.6	-0.8
	comp=N,0.1nm,0.1s						
KRUC	Moravsky	3.67	61	*e*SG	Sb	15 20 06.0	+4.4
VRAC	Vranov	3.90	58	*e*SG	Sg	15 20 14.4	-2.8
CLL	Collm	4.07	13	*e*Sg	Sg	15 20 19.0	-3.7

IDC ***15*** *15:42:59.6±1.0, 8°.64S×81°.17W, h0^{km}, mb4.0/11, mb1 4.3/13, mb1mx4.2/31, mbtmp4.1/13, ML4.1/2, MS3.3/3, Ms1 3.2/3, ms1mx2.9/20, Error ellipse: s-maj=35.5km s-min=18.1km az=34.0*

NEIC ***15*** *15:43:04.8±2.1, 8°.60S±0°.08×80°.93W±0°.09, h34^{km}±2^{km}, mb4.5/32, Error ellipse: s-maj=14.0km s-min=9.7km az=57.0*

VAO ***15*** *15:43:09.9±0.7, 8°.27S×80°.30W, h10^{km}, mb4.4*

ISC 15 15:43:04.5±3.1, **8°.60S**±0°.07×**81°.00W**±0°.08, **h28**^{km}±22^{km}, **n76**, σ**1^{s}.77**/78, **mb4.5**/20, **Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.96	61	Pn	Pn	15 43 50.7	+0.6
	30nm,0.3s,baz=74,slow=2.4,SNR=188						
ATAH				Sn	Sn	15 44 26.2	+1.2
	41nm,0.3s,baz=124,slow=18,SNR=8.2						
NNA	Nana	5.30	130	Pn	Pn	15 44 21.1	-0.9
	8.3nm,0.3s,baz=307,slow=9.2,SNR=6.3						
NNA				Sn	Sn	15 45 18.5	-3.7
	12nm,0.3s,baz=143,slow=21,SNR=12						
NNA				LR	LR	15 46 33.0	
	comp=Z,79nm,21.8s,baz=338,slow=40						
NNA	Nana	5.30	130		Pn	15 44 20.2	-1.8
CZSB	Cruzeiro do Su	8.26	85	*e*P	Pn	15 44 58.8	-3.8
OTAV	Otavalo	9.14	16		Pn	15 45 13.8	-1.2
OTAV	Otavalo	9.14	16	*e*P	Pn	15 45 13.9	-1.1
PAYG	Puerto Ayora	12.14	310	Pn	Pn	15 45 57.0	+1.2
ETMB	Extrema	14.65	96	*e*P	Pn	15 46 28.4	-1.6
PB16	IPOC Station P	14.78	132	P	P	15 46 39.5	+1.4
ROSC	El Rosal	14.92	27	LR	LR	15 52 29.3	
	comp=Z,154nm,18.5s,baz=106,slow=38						
ROSC	El Rosal	14.92	27	Pn	Pn	15 46 35.9	+1.8
PSGCX	Pisagua	15.19	137	P	Pn	15 46 39.1	+1.8
PB08	IPOC Station P	16.22	136	Pn	Pn	15 46 47.6	-3.3
PB09	IPOC Station P	17.33	141	P	Pn	15 46 59.4	-5.4
SAML	Samuel	17.61	92	P	Pn	15 47 02.4	-5.7
SAML	Samuel	17.61	92	*e*P	Pn	15 47 08.4	+0.2
LVC	Limon Verde	18.14	142	*e*P	P	15 47 20.0	+5.0
GO02	Mina Guanaco	19.74	148	P	Pn	15 47 35.3	+1.2
SDV	Santo Domingo	20.21	31	P	P	15 47 38.8	+1.2
	8.2nm,0.7s,baz=225,slow=12,SNR=5.1						
SDV	Santo Domingo	20.21	31	P	P	15 47 39.2	+1.6
SDV				IAmb	IAmb	15 47 43.7	
	comp=Z,10.0nm,0.9s						
SDV	Santo Domingo	20.21	31	*e*P	Pn	15 47 40.2	+0.6
SIV	San Ignacio	20.80	113	P	P	15 47 44.5	+0.7
	comp=Z,3.0nm,0.8s,baz=299,slow=11,SNR=10						
VILB	Vilhena	20.88	104	*e*P	P	15 47 46.1	+1.3
MACA	Manacapuru-AM	20.91	76	*e*P	P	15 47 44.6	-0.4
PTLB	Pontes e Lacer	22.43	110	*e*P	P	15 48 03.1	+1.8
H03N2	Juan Fernandez	24.80	176	T	T	16 14 60.0	
	baz=357,slow=75						
H03N1	Juan Fernandez	24.80	176	T	T	16 15 04.0	
	baz=357,slow=75						
H03N3	Juan Fernandez	24.81	176	T	T	16 15 08.0	
	baz=357,slow=75						
ITTB	Itaituba	25.45	82	*e*P	P	15 48 30.7	+0.4
NPGB	Novo Progresso	25.45	88	*e*P	P	15 48 30.6	+0.2
SNDB	Serra Nova Dou	29.41	99	*e*P	P	15 49 08.8	+2.9
MCPB	Macapa, AP	29.97	76	*e*P	P	15 49 13.5	+2.6
BDFB	Brasilia	32.97	105	LR	LR	16 03 29.9	
	comp=Z,104nm,19.4s,baz=69,slow=37						
IPMB	Ipameri, GO	33.20	110	*e*P	P	15 49 42.5	+3.2
TXAR	Lajitas Array	43.58	331	P	P	15 51 06.0	-0.4
	comp=Z,0.7nm,0.8s,baz=142,slow=9.0,SNR=6.5						
TXAR				PcP	PcP	15 52 53.0	-0.8
	comp=Z,0.5nm,0.7s,baz=148,slow=5.3,SNR=6.0						
MNTX	Cornudas Mount	46.36	331	P	P	15 51 28.6	+0.2
CCM	Cathedral Cave	47.39	349	P	P	15 51 35.3	-1.0
CCM				IAmb	IAmb	15 51 36.8	
	comp=Z,6.9nm,0.8s						
SPX	San Pedro Mart	51.42	322	P	P	15 52 08.2	+0.5
SPX				IAmb	IAmb	15 52 30.1	
	comp=Z,7.0nm,1.2s						
SDCO	Great Sand Dun	51.48	335	P	P	15 52 07.8	-0.1
SDCO				IAmb	IAmb	15 52 09.1	
	comp=Z,2.8nm,0.9s						
PV16	Nyswonger Mesa	53.43	333	P	P	15 52 18.2	-4.1
PV16				IAmb	IAmb	15 52 30.8	
	comp=Z,4.0nm,0.6s						
HWUT	Hardware Ranch	57.29	333	P	P	15 52 49.8	-0.3
HWUT				IAmb	IAmb	15 52 50.8	
	comp=Z,5.6nm,0.8s						
HWUT				PcP	PcP	15 53 43.6	-0.5
BW06	Boulder Array	57.37	335	P	P	15 52 49.2	-1.5
BW06				IAmb	IAmb	15 52 56.3	
	comp=Z,9.0nm,1.6s						
PD31	Pinedale Array	57.37	335	P	P	15 52 50.0	-0.7
PD31				IAmb	IAmb	15 52 56.3	
	comp=Z,8.2nm,1.6s						
PDAR	Pinedale Array	57.37	335	P	P	15 52 49.7	-1.0
	comp=Z,0.8nm,0.4s,baz=129,slow=11,SNR=12						
PDAR				PcP	PcP	15 53 43.5	-0.9
	comp=Z,0.7nm,0.7s,baz=146,slow=5.0,SNR=4.0						
PDAR	Pinedale Array	57.37	335	P	P	15 52 49.3	-1.4
PDAR				PcP	PcP	15 53 43.2	-1.3
HVU	Hansel Valley	57.98	332	P	P	15 52 54.2	-0.7
NVAR	Mina Array Bea	58.27	326	P	P	15 52 57.1	0.0
	comp=Z,0.6nm,0.6s,baz=139,slow=5.8,SNR=6.4						
NVAR				PcP	PcP	15 53 47.8	-0.3
	comp=Z,0.7nm,0.6s,baz=134,slow=4.7,SNR=6.3						
NVAR	Mina Array Bea	58.27	326	P	P	15 52 56.4	-0.6
NVAR				PcP	PcP	15 53 48.0	-0.1
ELK	Elko	58.36	330	P	P	15 52 57.6	0.0
ELK				IAmb	IAmb	15 52 58.8	
	comp=Z,3.8nm,1.0s						
RLMT	Red Lodge	59.22	337	P	P	15 53 03.2	-0.3
YMR	Madison River	59.52	336	P	P	15 53 06.4	+0.8
YHL	Hebgen Lake	59.76	336	P	P	15 53 07.5	+0.1
ULM	Lac du Bonnet	60.02	349	P	P	15 53 06.7	-1.9
	comp=Z,1.6nm,0.8s,baz=120,slow=4.2,SNR=4.9						
HLID	Hailey	60.13	333	P	P	15 53 10.3	+0.6
HLID				IAmb	IAmb	15 53 10.8	
	comp=Z,2.6nm,0.7s						
BCYI	Bear Canyon	60.26	334	P	P	15 53 11.9	+1.2
ORV	Oroville	60.84	325	P	P	15 53 15.2	+0.7
ORV				IAmb	IAmb	15 53 16.0	
	comp=Z,4.4nm,1.0s						
HRY	Holter Researc	61.54	336	P	P	15 53 17.2	-2.0
MOD	Modoc Plateau	61.81	328	P	P	15 53 21.1	-0.1
MOD				IAmb	IAmb	15 53 22.2	
	comp=Z,4.9nm,0.8s						
BELA	Belgrano 2	73.18	171	P	P	15 54 33.3	+1.0
YKA	Yellowknife Ar	75.47	345	P	P	15 54 44.6	-1.2
	comp=Z,0.9nm,0.8s,baz=138,slow=6.7,SNR=13						
DBIC	Dimbokro	77.40	81	P	P	15 54 58.6	+0.8
	comp=Z,3.4nm,0.9s,baz=15,slow=1.9,SNR=5.7						
DBIC	Dimbokro	77.40	81	P	P	15 54 57.8	+0.1
DBIC				IAmb	IAmb	15 55 02.5	
	comp=Z,6.4nm,1.0s						
SNAA	Sanae	78.17	162	P	P	15 55 01.6	+0.6
SNAA				IAmb	IAmb	15 55 12.7	
	comp=Z,3.2nm,1.0s						
QSPA	South Pole Qui	81.51	180	P	P	15 55 20.2	+0.9
TGL	Tana Glacier	84.27	334	P	P	15 55 32.7	-0.9
TORD	Torodi Ar. Bea	84.90	76	P	P	15 55 37.8	+0.2
	comp=Z,1.8nm,0.9s,baz=271,slow=4.3,SNR=4.6						
TORD	Torodi Ar. Bea	84.90	76	P	P	15 55 37.5	-0.1
INK	Inuvik	85.08	343	P	P	15 55 36.7	-0.6
	comp=Z,1.6nm,0.5s,baz=119,slow=4.1,SNR=4.8						
INK	Inuvik	85.08	343	IAmb	IAmb	15 55 39.7	
	comp=Z,9.2nm,1.5s						
GLI	Glacier Island	86.19	333	P	P	15 55 42.5	-0.5
ILAR	Eielson Array	87.77	337	P	P	15 55 50.0	-0.6
	comp=Z,1.8nm,0.8s,baz=148,slow=4.5,SNR=19						
MDM	Murphy Dome	88.37	337	P	P	15 55 53.2	-0.3
ASAR	Alice Springs	133.18	226	PKP	PKPdf	16 02 18.0	-0.6
	comp=Z,0.7nm,0.8s,baz=111,slow=2.1,SNR=14						
ASAR	Alice Springs	133.18	226		PKPdf	16 02 17.3	-1.4
ZALV	Zalesovo Beam	133.36	11	PKP	PKPdf	16 02 17.8	-0.2
	comp=Z,0.6nm,0.6s,baz=207,slow=3.0,SNR=3.7						
CMAR	Chiang Mai Arr	170.20	0	PKP	PKPdf	16 03 10.0	-0.8
	comp=Z,0.3nm,0.4s,baz=218,slow=1.0,SNR=4.5						
CMAR				PKPab	PKPab	16 04 25.5	-0.7
	comp=Z,0.5nm,0.8s,baz=350,slow=4.7,SNR=2.0						

MOS ***15*** *15:44:50.9±1.0, 43°.78N×147°.38E, h55^{km}, mb4.3/11, Error ellipse: s-maj=8.0km s-min=6.8km az=47.4*

MOS Felt (IV) at Malokuril'skoye.

SKHL ***15*** *15:44:52.6±0.3, 43°.85N×147°.35E, h66^{km}±1^{km}, mb4.8/16*

SKHL Felt (II-III) at Malokuril'skoye.

JMA ***15*** *15:44:52.1±0.2, 43°.74N×147°.26E, h29^{km}, M4.4*

JMA Felt II J1.

NIED ***15*** *15:44:52.2, 43°.74N×147°.26E, h29^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.14; M$_{\theta\theta}$0.53; M$_{\phi\phi}$-0.40; M$_{r\theta}$0.26; M$_{\theta\phi}$-0.69; M$_{\phi r}$-1.61; Fault plane solution: M$_{0}$1.83000×10^{15} NP1: ϕ_{s}346.00000°, δ88.00000°, λ-63.00000°. NP2: ϕ_{s}79.00000°, δ27.00000°, λ-176.00000°.*

NEIC ***15*** *15:44:54.2±2.3, 43°.83N±0°.09×147°.32E±0°.10, h70^{km}±7^{km}, mb4.8/52 Error ellipse: s-maj=13.3km s-min=10.4km az=184.0*

IDC ***15*** *15:44:54.8±2.2, 43°.96N×147°.23E, h74^{km}±19^{km}, mb3.6/15, mb1 3.9/22, mb1mx3.7/49, mbtmp4.0/22, MS3.1/9, Ms1 3.1/9, ms1mx3.0/32, Error ellipse: s-maj=21.6km s-min=12.2km az=156.0*

ISC 15 15:44:51.7±1.0, **43°.81N**±0°.05×**147°.36E**±0°.05, **h47**^{km}±9^{km}, **n192**, σ**1^{s}.32**/206, **mb4.5**/47, **6C-10D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.10	282	*i* P	Pn	15 45 10.0	-0.7
YUK				AMB	AMB	15 45 12.0	
	2μm,0.4s						
YUK				*i* S	Sn	15 45 23.3	-1.5
YUK				A	A	15 45 25.0	
	5μm,0.5s						
YUK				A	A	15 45 25.0	
	10μm,0.5s						
YUK	Yuzh-Kuril'sk	1.10	282	c *i*PN	Pn	15 45 10.7	0.0
YUK				*i* S	Sn	15 45 22.9	-1.9
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=N,344nm,0.1s						
YUK				pmax	pmax		
	comp=E,339nm,0.1s						
YUK				smax	smax		
	comp=N,5μm,0.1s						
YUK				smax	smax		
	comp=E,10μm,0.8s						
GRPR	Tuman	1.16	280	*i* P	Pn	15 45 11.5	0.0
GRPR				AMB	AMB	15 45 12.0	
	comp=E,630nm,0.3s						
GRPR				*e*S	Sn	15 45 25.5	-0.7
GRPR				A	A	15 45 27.0	
	comp=E,9μm,0.3s						
GRPR				A	A	15 45 27.0	
	comp=E,13μm,0.3s						
GRPR	Tuman	1.16	280	c *i*PN	Pn	15 45 11.4	0.0
GRPR				*e*S	Sn	15 45 24.4	-1.8
GRPR				pmax	pmax		
	comp=Z,628nm,0.3s						
GRPR				pmax	pmax		
	comp=N,165nm,0.2s						
GRPR				pmax	pmax		
	comp=E,39nm,0.1s						
GRPR				smax	smax		
	comp=N,9μm,0.2s						
GRPR				smax	smax		
	comp=E,13μm,0.2s						
NEM2	Nemuro 2	1.25	250	P	Pn	15 45 12.8	+0.1
NEM2				*e*S	Sn	15 45 27.7	-0.8
NMR	Nemuro--Hokkai	1.26	250	*i* P	Pn	15 45 13.0	+0.1
NMR				*i* S	Sn	15 45 27.7	-1.0
NMR	Nemuro--Hokkai	1.26	250	⇑ *i*PN	Pn	15 45 12.9	+0.1
NMR				*i* S	Sn	15 45 27.5	-1.2
GLVR	Golovnino	1.33	268	*i* P	Pn	15 45 14.0	+0.2
GLVR				AMB	AMB	15 45 15.0	
	comp=E,2μm,0.5s						
GLVR				*i* S	Sn	15 45 30.0	-0.4
GLVR				A	A	15 45 32.0	
	comp=E,18μm,0.5s						
GLVR				A	A	15 45 32.0	
	comp=E,8μm,0.5s						
GLVR	Golovnino	1.33	268	⇓ *i*PN	Pn	15 45 14.4	+0.6
GLVR				*i* S	Sn	15 45 30.4	0.0
GLVR				pmax	pmax		
	comp=E,232nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.1s						
GLVR				smax	smax		
	comp=N,18μm,0.2s						
GLVR				smax	smax		
	comp=E,8μm,0.5s						
KUR	Kuril'sk	1.47	14	*i* P	Pn	15 45 16.3	+0.6
KUR				AMB	AMB	15 45 17.0	
	comp=E,412nm,0.2s						
KUR				*e*S	Sn	15 45 34.0	+0.3
KUR				A	A	15 45 35.0	
	comp=E,2μm,0.2s						
KUR				A	A	15 45 35.0	
	comp=E,3μm,0.2s						
KUR	Kuril'sk	1.47	14	d *i*PN	Pn	15 45 17.0	+1.3
KUR				*i* S	Sn	15 45 34.4	+0.7
KUR				pmax	pmax		
	comp=N,114nm,0.2s						
KUR				pmax	pmax		
	comp=E,57nm,0.2s						
KUR				pmax	pmax		
	comp=Z,414nm,0.2s						
KUR				smax	smax		
	comp=N,4μm,1.4s						
KUR				smax	smax		
	comp=N,2μm,0.2s						
KUR				smax	smax		
	comp=E,3μm,0.2s						
RUSJ	Misakicho	1.55	282	⇓ *e*PN	Pn	15 45 17.9	+1.1
RUSJ				*i* S	Sn	15 45 36.8	+1.1
JRA	Rausu	1.62	275	P	Pn	15 45 18.6	+0.8
JRA				*e*S	Sn	15 45 37.6	+0.1
JNSB	Nemuroshibetsu	1.71	270	P	Pn	15 45 19.8	+0.9
JNSB				*e*S	Sn	15 45 39.5	0.0
JKHN	Kushirohamanak	1.76	246	P	Pn	15 45 20.1	+0.5
JKHN				*e*S	Sn	15 45 40.1	-0.7
JNK	Nakash	1.93	264	P	Pn	15 45 22.5	+0.5
JNK				*e*S	Sn	15 45 44.6	-0.4
JAK	Akkeshi	2.10	248	P	Pn	15 45 24.6	+0.3
JTKR	Abashiri--Toko	2.50	275	P	Pn	15 45 31.0	+1.2
JTKR				*e*S	Sn	15 46 02.0	+3.0
JAR	Ashorobuto	2.66	260	P	Pn	15 45 33.3	+1.3
JAR				*e*S	Sn	15 46 03.4	+0.4
JOB	Onbets	2.73	252	P	Pn	15 45 33.8	+0.9
JMP	Maruseppu	2.90	275	P	Pn	15 45 36.7	+1.4
JCH	Churui	3.16	249	P	Pn	15 45 39.3	+0.5
JKK2	Kamakawa 2	3.34	273	P	Pn	15 45 43.7	+2.4
JKA	Kamikawa-asahi	3.45	277	*e*P	Pn	15 45 45.2	+2.4
JKA	Kamikawa-asahi	3.45	277		Pn	15 45 45.0	+2.2
JKA	Kamikawa-asahi	3.45	277		Sn	15 46 25.4	+3.0
ASAJ	Asahikawa	3.45	277	P	Pn	15 45 45.1	+2.3
	comp=E,12nm,0.3s,baz=119,slow=12,SNR=72						
ASAJ				S	Sn	15 46 25.4	+2.9
	comp=E,10nm,0.3s,baz=77,slow=14,SNR=2.6						
ASAJ				LR	LR	15 47 06.6	
	comp=E,314nm,18.8s,baz=8.5,slow=39						
ASAJ	Asahikawa	3.45	277	P	Pn	15 45 45.5	+2.6
JFR	Furan	3.53	261	P	Pn	15 45 46.2	+2.3
JFR				*e*S	Sn	15 46 25.7	+1.3
JEM	Erimo	3.57	241		Pn	15 45 47.1	+2.7
ERM	Erimo	3.57	241	d *e*PN	Pn	15 45 47.4	+2.9
ERM	Erimo	3.57	241		Pn	15 45 47.2	+2.7
JEW	Eniwo	4.42	259		Pn	15 45 58.5	+2.3
YSS	Yuzh-Sakhalins	4.52	316	*e*P	Pn	15 45 57.8	+0.4
YSS				AMB	AMB	15 45 59.0	
	comp=E,20nm,0.7s						
YSS				*e*S	Sn	15 46 47.0	-1.6
YSS				A	A	15 46 47.6	
	comp=E,20nm,0.6s						
YSS	Yuzh-Sakhalins	4.52	316	*e*PN	Pn	15 45 57.8	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
JTM	Tenmabayashi	5.56	239		Pn	15 46 12.8	+1.0
UGL	Uglegorsk	6.41	327	*e*P	Pn	15 46 24.2	+0.8
UGL				AMB	AMB	15 46 31.1	
	comp=Z,28nm,0.9s						
TYV	Tymovskoe	7.74	337	*e*P	Pn	15 46 43.9	+2.2
TYV				AMB	AMB	15 46 52.0	
	comp=Z,30nm,0.7s						
TYV				*e*S	Sn	15 48 05.9	-2.0
JMM	Marumori	7.75	222	Pn	Pn	15 46 41.0	-0.7
TEY	Ternei	7.80	283	*e*P	Pn	15 46 44.9	+2.5
TEY				AMB	AMB	15 46 48.4	
	comp=Z,21nm,0.8s						
TEY	Ternei	7.80	283	*e*PN	Pn	15 46 44.1	+1.7
JSD	Sado	8.98	233	Pn	Pn	15 46 59.8	+1.2
SKR	Severo-Kuril's	9.09	38	*e*P	Pn	15 47 01.8	+1.7
SKR				AMB	AMB	15 47 05.3	
	comp=Z,30nm,0.6s						
SKR	Severo-Kuril's	9.09	38	⇑ *e*PN	Pn	15 47 01.8	+1.7
JYT	Yasato	9.35	218	Pn	Pn	15 47 02.2	-1.6
PAU	Pauzhetka	9.96	36	*e*P	Pn	15 47 12.8	+0.8
PAU				AMB	AMB	15 47 14.3	
	comp=Z,70nm,0.6s						
PAU	Pauzhetka	9.96	36	P	Pn	15 47 13.3	+1.3
MAJO	Matsushiro	10.08	227	⇓ *e*PN	Pn	15 47 14.2	+0.4
MAJO	Matsushiro	10.08	227	Pn	Pn	15 47 14.3	+0.6
MAT	Matsushiro	10.08	227	P	Pn	15 47 13.7	-0.1
MAT				*e*S	Sn	15 49 05.7	+0.3
MJAR	Matsushiro Arr	10.08	227	P	Pn	15 47 13.6	-0.2
	comp=Z,0.1nm,0.3s,baz=31,slow=13,SNR=6.7						
MJAR				LR	LR	15 51 18.9	
	comp=Z,110nm,19.7s,baz=45,slow=38						
KDTR	Khodutka, Kamc	10.76	38	*e*P	Pn	15 47 21.2	-1.7
USA0B	Ussuriysk Arra	11.08	277	⇓ *e*PN	Pn	15 47 30.3	+2.9
USA0B	Ussuriysk Arra	11.08	277	Pn	Pn	15 47 29.1	+1.8
USRK	Ussuriysk Ar.	11.08	277	P	Pn	15 47 27.2	-0.2
	baz=90,slow=14,SNR=6.5						
USRK				LR	LR	15 51 32.0	
	comp=Z,91nm,20.2s,baz=90,slow=36						
USRK	Ussuriysk Ar.	11.08	277	PN	Pn	15 47 30.6	+3.2
USRK	Ussuriysk Ar.	11.08	277		Pn	15 47 30.6	+3.2
JGF	Kuroka	11.24	227	Pn	Pn	15 47 30.8	+1.2
MTVR	Mutnovka	11.28	36	*e*P	Pn	15 47 30.3	+0.1
GRL	Gorelyy	11.29	35	*e*P	Pn	15 47 31.1	+0.8
RUS	Russkaya	11.39	37	*e*P	Pn	15 47 30.9	-0.6
PEA0B	Petropavlovsk-	11.55	33	⇓ *e*PN	Pn	15 47 35.5	+1.8
PEA0B	Petropavlovsk-	11.55	33	Pn	Pn	15 47 34.6	+0.9
PETK	Petropavlovsk-	11.55	33	P	Pn	15 47 34.7	+1.0
	comp=Z,0.7nm,0.3s,baz=184,slow=5.9,SNR=33						
PETK				LR	LR	15 52 33.7	
	comp=Z,49nm,18.6s,baz=226,slow=40						
PETK	Petropavlovsk-	11.55	33	PN	Pn	15 47 34.4	+0.6
PETK	Petropavlovsk-	11.55	33	Pn	Pn	15 47 34.4	+0.6
PET	Petropavlovsk	11.87	35	*e*P	Pn	15 47 38.7	+0.6
PET	Petropavlovsk	11.87	35	Pn	Pn	15 47 34.9	-3.2
DALK	Dalny	11.92	35	P	Pn	15 47 39.0	+0.2
KLR	Kul'dur	12.03	302	P	Pn	15 47 40.4	+0.1
	comp=Z,0.1nm,0.3s,baz=123,slow=13,SNR=3.6						
KLR				LR	LR	15 51 35.0	
	comp=Z,48nm,18.2s,baz=149,slow=34						
KLR	Kul'dur	12.03	302	*e*P	Pn	15 47 42.0	+1.6
KLR	Kul'dur	12.03	302	⇑ *e*PN	Pn	15 47 43.2	+2.8
KOK	Koryaka	12.06	34	*e*P	Pn	15 47 41.9	+1.1
UGLR	Uglovaya	12.08	35	P	Pn	15 47 42.3	+1.3
AVH	Avacha	12.08	34	*e*P	Pn	15 47 43.0	+1.9
SMAR	Somma	12.11	35	*e*P	Pn	15 47 42.6	+1.0
KRER	Koryakskii	12.12	34	*e*P	Pn	15 47 42.5	+0.8
KRX	Arik	12.12	34	P	Pn	15 47 42.8	+1.2
SPN	Mys Shipunski	12.51	38	*e*P	Pn	15 47 45.0	-1.9
EKMR	Ekimchan	13.29	319	*e*P	Pn	15 47 58.5	+0.9
EKMR				AMB	AMB	15 48 01.5	
	comp=Z,12nm,1.0s						
KSRS	Korea Array	16.05	253	P	Pn	15 48 34.0	0.0
	comp=Z,0.1nm,0.3s,baz=67,slow=12,SNR=7.0						
KSRS				LR	LR	15 54 40.1	
	comp=Z,27nm,19.2s,baz=55,slow=36						
BMKR	Bomnak	16.23	319	*e*P	Pn	15 48 35.0	-1.1
BMKR				AMB	AMB	15 48 39.0	
	comp=Z,8.0nm,1.0s						
JNU	Nakatsue	16.71	236	LR	LR	15 55 58.7	
	comp=Z,99nm,18.4s,baz=46,slow=40						
KROS	Kirovskiy	16.99	316	*e*P	Pn	15 48 44.0	-1.8
KROS				AMB	AMB	15 48 48.1	
	comp=Z,11nm,1.0s						
JCJ	Chichijima	17.20	196	P	P	15 48 49.8	+0.3
	comp=Z,2.4nm,0.3s,baz=336,slow=20,SNR=2.2						
SEY	Seymchan	19.38	7	P	P	15 49 10.8	-2.4
	comp=Z,0.4nm,0.3s,baz=174,slow=7.9,SNR=7.4						
SEY	Seymchan	19.38	7	*e*P	Pn	15 49 14.5	-0.2
SEY	Seymchan	19.38	7	⇓ *e*P	Pn	15 49 14.5	-0.2
ULN	Ulaanbaatar	28.14	293	*e*P	P	15 50 42.5	+3.2
ULN	Ulaanbaatar	28.14	293	⇑ *e*P	P	15 50 42.5	+3.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	28.59	293	P	P	15 50 42.0	-1.2
	comp=Z,0.2nm,0.3s,baz=93,slow=7.5,SNR=2.9						
SONM	Songino Array	28.59	293	P	P	15 50 42.0	-1.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.5s						
H11N2	WAKE ISLAND Hy	29.05	140	T	T	16 21 28.5	
	baz=330,slow=75						
H11N1	WAKE ISLAND Hy	29.06	140	T	T	16 21 33.5	
	baz=330,slow=75						
H11N3	WAKE ISLAND Hy	29.07	140	T	T	16 21 28.1	
	baz=330,slow=75						
H11S1	WAKE ISLAND Hy	30.02	141	T	T	16 22 47.5	
	baz=331,slow=76						
H11S3	WAKE ISLAND Hy	30.02	141	T	T	16 22 42.3	
	baz=331,slow=76						
H11S2	WAKE ISLAND Hy	30.04	141	T	T	16 22 42.8	
	baz=331,slow=76						
TTA	Tatalina	37.29	39	P	P	15 51 57.6	-1.2
TTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TTA	Tatalina	37.29	39	P	P	15 51 57.6	-1.2
TTA				IAmb	IAmb	15 52 01.0	
	comp=Z,7.3nm,1.3s						
A21K	Barrow	38.43	25	P	P	15 52 06.7	-1.5
A21K				IAmb	IAmb	15 52 08.9	
	comp=Z,19nm,1.2s						
OHAK	Old Harbor	38.78	48	P	P	15 52 10.8	-0.5
PPLA	Purkeypile	39.04	39	P	P	15 52 15.0	+1.4
KDAK	Kodiak Island	39.10	47	P	P	15 52 14.1	+0.2
	comp=Z,19nm,0.8s,baz=206,slow=3.3,SNR=4.3						
KDAK	Kodiak Island	39.10	47	P	P	15 52 14.1	+0.2
KDAK				pmax	pmax		
	comp=Z,159nm,1.6s						
KTH	Kantishna Hill	39.61	38	P	P	15 52 18.3	0.0
KTH				IAmb	IAmb	15 52 20.5	
	comp=Z,14nm,0.9s						
CNPM	China Poot	39.64	45	P	P	15 52 19.3	+0.8
SUA	Susitna One	39.75	41	P	P	15 52 21.4	+1.9
SUA				IAmb	IAmb	15 53 00.4	
	comp=Z,20nm,1.5s						
BRLK	Bradley Lake	39.79	44	P	P	15 52 19.1	-0.7
COLD	Coldfoot	40.02	32	P	P	15 52 21.5	0.0
I23K	Minto, Yukon-K	40.29	36	P	P	15 52 23.9	+0.2
I23K				IAmb	IAmb	15 52 26.6	
	comp=Z,15nm,1.6s						
SEW	Seward	40.48	44	P	P	15 52 25.4	+0.1
RND	Reindeer	40.54	38	P	P	15 52 26.6	+0.6
RND				pmax	pmax		
	comp=Z,26nm,1.6s						
RND	Reindeer	40.54	38	P	P	15 52 26.6	+0.6
RND				IAmb	IAmb	15 52 30.3	
	comp=Z,26nm,1.6s						
GHO	Glory Hole Cre	40.60	41	P	P	15 52 27.1	+0.6
GHO				IAmb	IAmb	15 52 37.6	
	comp=Z,54nm,1.6s						
MDM	Murphy Dome	40.77	36	P	P	15 52 28.6	+0.8
MDM				IAmb	IAmb	15 52 29.2	
	comp=Z,10nm,1.3s						

WRH	**Wood River Hil**	40.84	37	P	P	15 52 28.8	+0.5
SML	**Sawmill**	40.88	41	P	P	15 52 29.8	+1.0
SML				IAmb	IAmb	15 52 30.8	
	comp=Z,33nm,0.9s						
COLA	**College**	40.94	36	⇓*e*P	P	15 52 30.2	+1.2
COLA				pmax	pmax		
	comp=Z,14nm,1.1s						
CCB	**Clear Creek Bu**	40.96	36	P	P	15 52 29.8	+0.5
CCB				IAmb	IAmb	15 52 54.9	
	comp=Z,13nm,1.6s						
POKR	**Poker Plat Res**	41.11	36	P	P	15 52 31.9	+1.4
POKR				IAmb	IAmb	15 52 32.7	
	comp=Z,16nm,1.1s						
HDA	**Harding Lake**	41.34	37	P	P	15 52 32.7	+0.3
SCM	**Sheep Creek Mo**	41.35	41	P	P	15 52 33.6	+1.0
SCM				pmax	pmax		
	comp=Z,74nm,1.5s						
SCM	**Sheep Creek Mo**	41.35	41	P	P	15 52 33.6	+1.0
IL31		41.35	36	P	P	15 52 33.2	+0.8
ILAR	**Eielson Array**	41.35	36	P	P	15 52 32.8	+0.2
	comp=Z,4.0nm,1.0s,baz=260,slow=7.2,SNR=17						
ILAR	**Eielson Array**	41.35	36	P	P	15 52 33.0	+0.5
ILAR	**Eielson Array**	41.35	36	P	P	15 52 33.0	+0.5
IL18	**Eielson Array**	41.40	36	P	P	15 52 33.4	+0.5
M24K	**Tolsona, Glenn**	41.86	40	P	P	15 52 38.3	+1.4
PRP	**Porcupine Dome**	41.89	35	P	P	15 52 37.3	+0.2
FYU	**Fort Yukon**	41.97	34	P	P	15 52 39.0	+1.5
FYU				IAmb	IAmb	15 52 39.1	
	comp=Z,9.4nm,1.0s						
KLU	**Klutina**	42.05	41	P	P	15 52 39.1	+0.7
KLU				IAmb	IAmb	15 52 58.6	
	comp=Z,63nm,1.7s						
EYAK	**Cordova Ski Ar**	42.26	43	P	P	15 52 41.0	+1.0
DOT	**Dot Lake**	42.66	38	P	P	15 52 42.9	-0.4
DOT				IAmb	IAmb	15 53 06.5	
	comp=Z,16nm,1.6s						
MCARA	**McCarthy VSAT**	43.45	41	P	P	15 52 52.1	+2.5
K27K	**Chicken**	43.49	37	P	P	15 52 51.0	+1.0
K27K				IAmb	IAmb	15 52 51.9	
	comp=Z,11nm,0.9s						
TGL	**Tana Glacier**	43.65	42	P	P	15 52 52.6	+1.2
EGAK	**Eagle**	43.80	36	P	P	15 52 52.8	+0.5
EGAK				IAmb	IAmb	15 53 11.1	
	comp=Z,19nm,1.6s						
BALM	**Baldy**	43.83	41	P	P	15 52 53.9	+1.1
BALM				IAmb	IAmb	15 53 30.5	
	comp=Z,28nm,1.2s						
BARN	**Barnard Glacie**	44.15	41	P	P	15 52 57.1	+1.6
BARN				IAmb	IAmb	15 53 04.1	
	comp=Z,38nm,1.6s						
CTGM	**Chitina Glacie**	44.33	41	P	P	15 52 58.1	+1.2
CTGM				IAmb	IAmb	15 53 34.8	
	comp=Z,32nm,1.3s						
TABL	**Table Mountain**	44.52	42	P	P	15 52 59.0	+0.5
DAWY	**Dawson**	44.66	37	P	P	15 53 00.1	+0.8
DAWY				IAmb	IAmb	15 53 25.1	
	comp=Z,12nm,1.6s						
MK31	**Makanchi Array**	44.69	298	P	P	15 52 59.0	-0.8
MK31				pmax	pmax		
	comp=Z,2.0nm,1.4s						
MK31	**Makanchi Array**	44.69	298	P	P	15 52 59.0	-0.8
MKAR	**Makanchi Array**	44.69	298	P	P	15 52 59.0	-0.8
	comp=Z,0.2nm,0.2s,baz=66,slow=2.8,SNR=10						
MKAR	**Makanchi Array**	44.69	298	P	P	15 52 59.0	-0.8
MAKZ	**Makanchi**	44.89	298	P	P	15 53 01.1	-0.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MAKZ	**Makanchi**	44.89	298	P	P	15 53 01.1	-0.2
KURK	**Kurchatov**	45.62	304	*e*P	P	15 53 08.4	+1.4
KURK	**Kurchatov**	45.62	304	⇓*e*P	P	15 53 08.4	+1.4
KURK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
HYT	**Haines Junctio**	46.18	41	P	P	15 53 13.8	+2.3
HYT				IAmb	IAmb	15 53 15.0	
	comp=Z,16nm,1.0s						
INK	**Inuvik**	46.27	30	P	P	15 53 11.8	-0.1
	comp=Z,1.7nm,0.3s,baz=306,slow=12,SNR=7.8						
INK	**Inuvik**	46.27	30	P	P	15 53 12.2	+0.3
INK						15 54 47.6	
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	46.27	30	P	P	15 53 12.2	+0.3
INK				PcP	PcP	15 54 47.6	+1.1
CMAR	**Chiang Mai Arr**	47.69	254	P	P	15 53 23.9	+0.3
	comp=Z,0.5nm,0.3s,baz=45,slow=7.2,SNR=6.1						
CMAR				LR	LR	16 15 23.3	
	comp=Z,25nm,18.0s,baz=114,slow=38						
CMAR	**Chiang Mai Arr**	47.69	254	*i* P	P	15 53 24.2	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EUNU	**Eureka**	52.77	10	P	P	15 54 00.2	-1.2
YKA	**Yellowknife Ar**	55.67	34	P	P	15 54 22.9	+0.4
	comp=Z,1.4nm,0.7s,baz=301,slow=6.3,SNR=23						
YKA	**Yellowknife Ar**	55.67	34	*i* P	P	15 54 23.1	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AB06	**Akbulak array**	57.13	309	P	P	15 54 32.3	-0.8
AB05	**Akbulak array**	57.13	309	P	P	15 54 32.4	-0.8
AB02	**Akbulak array**	57.14	309	P	P	15 54 32.8	-0.5
ABKAR	**Akbulak array**	57.14	309	P	P	15 54 32.5	-0.7
SUMG	**Summit**	63.84	2	P	P	15 55 18.4	-0.7
SUMG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SUMG	**Summit**	63.84	2	P	P	15 55 18.4	-0.7
FIA1	**FINESS Array S**	64.89	333	P	P	15 55 26.5	+1.0
FIA1				IAmb	IAmb	15 55 53.2	
	comp=Z,15nm,1.2s						
FINES	**FINESS Array B**	64.89	333	P	P	15 55 23.5	-2.1
	comp=Z,1.7nm,0.7s,baz=24,slow=7.6,SNR=1.7						
FINES	**FINESS Array B**	64.89	333	P	P	15 55 25.9	+0.3
FINES	**FINESS Array B**	64.89	333	P	P	15 55 25.9	+0.3
BOZ	**Bozeman (W)**	66.79	49	P	P	15 55 39.4	+1.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	**Bozeman (W)**	66.79	49	P	P	15 55 39.4	+1.1
LHV	**Little Huntoon**	67.41	58	P	P	15 55 43.0	+0.9
LHV				IAmb	IAmb	15 55 45.4	
	comp=Z,16nm,1.6s						
NVAR	**Mina Array Bea**	67.42	58	P	P	15 55 43.0	+0.6
	comp=Z,1.5nm,0.7s,baz=302,slow=7.4,SNR=13						
YHB	**Horse Butte**	67.56	49	P	P	15 55 44.7	+1.4
ASAR	**Alice Springs**	68.27	193	P	P	15 55 48.0	+0.4
	comp=Z,0.5nm,0.9s,baz=8.1,slow=7.1,SNR=4.3						
ASAR	**Alice Springs**	68.27	193	P	P	15 55 48.0	+0.4
EIDS	**Eidsvold**	68.92	176	P	P	15 55 51.0	-0.5
EIDS				IAmb	IAmb	15 56 09.6	
	comp=Z,28nm,1.6s						
NOA	**NORSAR Array B**	69.60	339	P	P	15 55 53.4	-2.0
	comp=Z,1.2nm,1.0s,baz=41,slow=4.1,SNR=2.0						
NOA				LR	LR	16 33 09.4	
	comp=Z,29nm,18.8s,baz=250,slow=42						
PDAR	**Pinedale Array**	69.76	50	P	P	15 55 57.0	+0.1
	comp=Z,1.2nm,0.8s,baz=284,slow=3.6,SNR=7.7						
PDAR	**Pinedale Array**	69.76	50	P	P	15 55 57.6	+0.6
NC602	**NORSAR Array S**	69.77	339	P	P	15 55 57.8	+1.4
KBZ	**Khabaz**	69.87	312	P	P	15 55 57.4	0.0
	comp=Z,1.4nm,0.8s,baz=58,slow=18,SNR=3.7						
AKASG	**Malin Array Be**	71.62	324	P	P	15 56 06.0	-1.9
	comp=Z,0.2nm,0.3s,baz=43,slow=6.0,SNR=2.2						
AKASG	**Malin Array Be**	71.62	324	P	P	15 56 06.0	-1.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BRTR	**Keskin Array B**	77.61	314	P	P	15 56 42.7	-0.3
	comp=Z,0.5nm,0.8s,baz=100,slow=7.5,SNR=2.5						
TXAR	**Lajitas Array**	82.49	56	P	P	15 57 10.2	+0.8
	comp=Z,1.5nm,0.9s,baz=305,slow=3.2,SNR=8.6						
TXAR	**Lajitas Array**	82.49	56	P	P	15 57 09.4	0.0
H03N2	**Juan Fernandez**	142.81	90	T	T	18 43 25.2	
	baz=304,slow=77						
H03N3	**Juan Fernandez**	142.83	90	T	T	18 43 26.1	
	baz=304,slow=77						
H03N1	**Juan Fernandez**	142.83	90	T	T	18 43 26.3	
	baz=304,slow=77						

TAP 15 15:48:11.0,23.°84N×121.°58E,h23km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	**Shilin**	0.14	258	*i* P	Pb	15 48 15.8	+0.1
	baz=264						
ESL				*i* S	Sb	15 48 19.2	+0.3
	baz=264						
TWD	**Chiawan**	0.24	3	*i* P	Pb	15 48 17.3	+0.3
	baz=356						
TWD				S	Sb	15 48 21.8	+0.8
	baz=356						
NACB	**Ninganchiao**	0.33	2	P	Pb	15 48 18.7	+0.3
	baz=354						
NACB				S	Sb	15 48 24.0	+0.6
	baz=354						
ETLH	**Xiulin Townshi**	0.37	346	P	Pb	15 48 19.3	+0.2
	baz=347						
ETLH				S	Sb	15 48 25.0	+0.3
	baz=347						
HGSD	**Ruisui**	0.38	202	P	Pb	15 48 19.5	+0.4
	baz=210						
HGSD				*e*S	Sb	15 48 26.0	+1.4
	baz=210						
EHY	**Hungye**	0.41	215	P	Pb	15 48 20.1	+0.4
	baz=219						
EHY				*i* S	Sb	15 48 25.4	-0.1
	baz=219						
WHF	**Hehuan Shan**	0.42	316	*i* P	Pb	15 48 19.7	-0.3
	baz=317						
WHF				*i* S	Sb	15 48 26.3	+0.1
	baz=317						
CHGB	**Renai**	0.43	300	P	Pb	15 48 20.3	+0.2
	baz=307						
CHGB				S	Sb	15 48 26.9	+0.6
	baz=307						
FUSS	**Fushou**	0.51	323	P	Pb	15 48 21.4	-0.1
	baz=322						
FUSS				S	Sb	15 48 28.9	+0.3
	baz=322						
YULB	**Yu-li**	0.52	210	P	Pb	15 48 20.8	-0.7
	baz=219						
YULB				S	Sb	15 48 28.8	+0.2
	baz=219						
EYUL	**Yuli**	0.55	206	*e*P	Pb	15 48 21.3	-0.7
	baz=218						
TWF1	**Yuli**	0.55	208	*e*S	Sb	15 48 30.5	+0.9
	baz=219						
SSLB	**Suanglung**	0.58	265	P	Pb	15 48 22.6	+0.1
	baz=265						
SSLB				*e*S	Sb	15 48 30.7	+0.4
	baz=265						
ENA	**Nanau**	0.60	14	P	Pb	15 48 23.2	+0.2
	baz=9.0						
ENA				*e*S	Sn	15 48 32.5	-0.7
	baz=9.0						
NNSB	**Datong**	0.61	343	P	Pb	15 48 23.1	-0.1
	baz=343						
NNSB				S	Sb	15 48 31.4	0.0
	baz=343						
NNSH	**Datong**	0.61	343	*i* P	Pb	15 48 23.0	-0.1
	baz=342						
NNSH				*i* S	Sb	15 48 31.2	-0.2
	baz=342						
NNS	**Nan Shan**	0.62	342	*i* P	Pb	15 48 23.2	-0.2
	baz=343						
NNS				*i* S	Sb	15 48 31.8	0.0
	baz=343						
SMLT	**Sun Moon Lake**	0.62	274	P	Pb	15 48 23.4	0.0
	baz=274						
SMLT				S	Sb	15 48 32.5	+0.8
	baz=274						
DPDB	**Guoxing**	0.63	288	*e*P	Pb	15 48 23.7	+0.3
	baz=295						
TYC	**Yuchr**	0.67	275	*e*P	Pb	15 48 24.1	+0.2
	baz=268						
WHP	**Taichung City**	0.72	307	P	Pn	15 48 25.5	-0.5
	baz=307						
NDT	**Datong Townshi**	0.76	355	*e*P	Pb	15 48 25.7	+0.1
	baz=356						
NDT				*e*S	Sb	15 48 36.0	+0.5
	baz=356						
YHNB	**Yeheng**	0.84	347	*e*P	Pn	15 48 27.6	0.0
	baz=348						
CHN5	**Tsauling**	0.86	254	*e*P	Pn	15 48 28.4	+0.5
	baz=243						
CHN5				S	Sn	15 48 41.0	+1.2
	baz=243						

JMA 15 15:48:53.8±0.1,24.°42N×123.°65E,h10km±1km,M0.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	0.11	139	P	Pg	15 48 56.5	-0.1
IRIF				S	Sg	15 48 58.5	0.0
JKRS	**Kuro-shima**	0.38	119	P	Pg	15 49 01.3	+0.1
JKRS				S	Sg	15 49 07.0	+0.8
HATJ	**Hateruma jima**	0.39	159	P	Pg	15 49 01.4	-0.1
HATJ				*e*S	Sg	15 49 06.5	-0.1
JIJ	**Ishigaki jima**	0.45	97	P	Pg	15 49 02.5	-0.2
JIJ				S	Sg	15 49 08.8	+0.1
JISG	**Ishigakijimahi**	0.62	74	P	Pg	15 49 06.1	+0.2
JTJ	**Tarama**	0.98	77	P	Pg	15 49 12.5	-0.2
JTJ				S	Sb	15 49 26.3	+0.3

JMA ***15*** *15:55:19.3±0.1,23.°73N×121.°74E,h37km±3km,M2.6*
TAP ***15*** *15:55:20.2,23.°76N×121.°72E,h42km,ML3.2,B*

ISC 15 15:55:20.6±1.0,23.°75N±0.°02×121.°75E±0.°02,h33km±6km, n105,σ1.s00/192,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	0.26	330	*i* P	Pn	15 55 28.0	-0.2
	baz=340						
HWA				S	Sb	15 55 34.2	+1.5
	baz=340						
ESL	**Shilin**	0.29	282	*i* P	Pn	15 55 28.1	-0.6
	baz=282						
ESL				*i* S	Sn	15 55 33.6	-0.4
	baz=282						
EGFH	**Guangfu**	0.31	254	*i* P	Pn	15 55 28.6	-0.2
	baz=261						
EGFH				*i* S	Sn	15 55 34.7	+0.5
	baz=261						
TWD	**Chiawan**	0.35	337	*i* P	Pb	15 55 28.9	-0.2
	baz=345						
TWD				S	Sn	15 55 35.5	0.0
	baz=345						
HGSD	**Ruisui**	0.40	229	P	Pb	15 55 29.7	+0.1
	baz=223						
HGSD				S	Sn	15 55 37.9	+1.4
	baz=223						
NACB	**Ninganchiao**	0.44	341	P	Pb	15 55 29.8	-0.5
	baz=348						
NACB				S	Sb	15 55 37.3	+0.3
	baz=348						
EHY	**Hungye**	0.46	238	*i* P	Pb	15 55 30.0	-0.6
	baz=246						
EHY				*i* S	Sb	15 55 36.9	-0.6
	baz=246						
ETLH	**Xiulin Townshi**	0.51	332	P	Pn	15 55 31.0	-0.8
	baz=324						
ETLH				S	Sn	15 55 38.3	-1.2
	baz=324						
YULB	**Yu-li**	0.55	229	P	Pn	15 55 31.1	-1.0
	baz=237						
YULB				S	Sn	15 55 38.9	-1.3
	baz=237						
EYUL	**Yuli**	0.56	224	P	Pn	15 55 31.6	-0.7
	baz=233						
EYUL				S	Sn	15 55 40.7	+0.1
	baz=233						
TWF1	**Yuli**	0.57	226	*i* P	Pn	15 55 31.5	-1.0
	baz=235						
TWF1				S	Sn	15 55 39.8	-1.1
	baz=235						
WHF	**Hehuan Shan**	0.59	312	*i* P	Pn	15 55 31.9	-1.3
	baz=306						
WHF				*i* S	Sn	15 55 40.5	-1.4
	baz=306						
CHGB	**Renai**	0.61	300	P	Pn	15 55 32.4	-0.8
	baz=301						
CHGB				S	Sn	15 55 40.8	-1.2
	baz=301						
ENA	**Nanau**	0.67	359	*i* P	Pn	15 55 33.1	-0.8
	baz=2.0						
ENA				*i* S	Sn	15 55 42.6	-0.7
	baz=2.0						
FUSS	**Fushou**	0.68	317	P	Pn	15 55 33.5	-0.7
	baz=326						
FUSS				*e*S	Sn	15 55 42.6	-1.1
	baz=326						
FULB	**Fuli**	0.69	217	*i* P	Pn	15 55 33.6	-0.6
	baz=228						
FULB				*i* S	Sb	15 55 45.1	+1.4
	baz=228						
ENAH	**Nanao**	0.70	5	*i* P	Pn	15 55 34.0	-0.2
	baz=6.0						
ENAH				S	Sn	15 55 43.6	-0.2
	baz=6.0						
TWT	**Tachien**	0.72	314	*i* P	Pn	15 55 34.3	-0.5
	baz=314						
TWT				S	Sn	15 55 43.8	-1.0
	baz=314						
SSLB	**Suanglung**	0.73	273	P	Pn	15 55 33.8	-0.9
	baz=273						
SSLB				S	Sn	15 55 43.5	-1.3
	baz=273						
TDCB	**Techi**	0.73	313	P	Pn	15 55 34.4	-0.5
	baz=314						
TDCB				S	Sn	15 55 43.8	-1.3
	baz=314						
CHKT	**Chengkung**	0.74	208	*i* P	Pn	15 55 33.8	-1.0
	baz=197						
CHKT				*i* S	Sn	15 55 43.8	-1.1
	baz=197						
NNSB	**Datong**	0.75	334	P	Pn	15 55 34.5	-0.6
	baz=335						
NNSB				S	Sn	15 55 44.2	-1.3
	baz=335						
NNSH	**Datong**	0.75	334	*i* P	Pn	15 55 34.5	-0.6
	baz=334						
NNSH				*i* S	Sn	15 55 44.3	-1.1
	baz=334						
NNS	**Nan Shan**	0.77	333	*i* P	Pn	15 55 34.8	-0.5
	baz=335						
NNS				*i* S	Sn	15 55 44.8	-1.0
	baz=335						
WPL	**Puli Township**	0.77	290	P	Pn	15 55 34.5	-0.7
	baz=291						
WPL				S	Sn	15 55 44.4	-1.3
	baz=291						
SMLT	**Sun Moon Lake**	0.79	280	*i* P	Pn	15 55 35.1	-0.5
	baz=284						
SMLT				S	Sn	15 55 45.6	-0.7
	baz=284						
DPDB	**Guoxing**	0.80	291	P	Pn	15 55 35.2	-0.6
	baz=292						
DPDB				S	Sn	15 55 45.8	-0.8
	baz=292						
WHYT	**Xinyi Township**	0.82	266	*i* P	Pn	15 55 35.9	-0.1
	baz=262						
WHYT				*i* S	Sn	15 55 46.9	-0.2
	baz=262						
TYC	**Yuchr**	0.83	281	*i* P	Pn	15 55 35.6	-0.4
	baz=285						
TYC				*i* S	Sn	15 55 46.8	-0.4
	baz=285						
TWC	**Suao**	0.86	6	*i* P	Pn	15 55 36.3	-0.1
	baz=8.0						
TWC				*i* S	Sn	15 55 46.8	-1.0
	baz=8.0						
NDT	**Datong Townshi**	0.87	346	*i* P	Pn	15 55 36.5	-0.2
	baz=338						
NDT				*e*S	Sn	15 55 46.0	-2.3
	baz=338						
ELDTW	**Lidau**	0.88	230	*i* P	Pn	15 55 35.6	-1.2
	baz=229						
ELDTW				S	Sn	15 55 47.3	-1.2
	baz=229						
EDH	**Donghe**	0.88	208	P	Pn	15 55 35.6	-1.1
	baz=200						
EDH				S	Sn	15 55 47.0	-1.4
	baz=200						
ALS	**Alishan**	0.90	255	*i* P	Pn	15 55 37.1	-0.2
	baz=261						
ALS				S	Sn	15 55 49.8	+0.5
	baz=261						
ENTT	**Nioudou**	0.90	349	*e*P	Pn	15 55 36.9	-0.1
	baz=351						
ENTT				*e*S	Sn	15 55 45.9	-3.1
	baz=351						
WHP	**Taichung City**	0.90	306	*i* P	Pn	15 55 37.4	+0.3
	baz=311						
WHP				*i* S	Sn	15 55 48.6	-0.5
	baz=311						
WJS	**Zhushan**	0.94	274	*i* P	Pn	15 55 37.9	+0.4
	baz=275						
WJS				S	Sn	15 55 50.7	+0.8
	baz=275						
TWE	**Neicheng**	0.97	356	*i* P	Pn	15 55 38.2	+0.3
	baz=347						
TWE				S	Sn	15 55 50.7	+0.1
	baz=347						
YHNB	**Yeheng**	0.97	340	P	Pn	15 55 37.8	-0.3
	baz=340						
WNT	**Mingjian**	0.98	278	*i* P	Pn	15 55 38.6	+0.5
	baz=278						
WNT				*i* S	Sn	15 55 51.7	+0.7
	baz=278						
NSK	**Sanguang**	0.99	339	*i* P	Pn	15 55 38.1	-0.1
	baz=340						
NSK				*e*S	Sn	15 55 47.5	-3.6
	baz=340						
CHN5	**Tsauling**	0.99	261	*i* P	Pn	15 55 38.6	+0.2
	baz=261						
CHN5				*i* S	Sn	15 55 52.2	+0.8
	baz=261						
WWF	**Wufeng**	1.00	287	P	Pn	15 55 39.4	+0.9
	baz=290						
WWF				S	Sb	15 55 53.2	+0.7
	baz=290						
LONT	**Longtian**	1.02	214	P	Pn	15 55 37.0	-1.6
	baz=213						
LONT				S	Sn	15 55 50.9	-0.9
	baz=213						
NWLT	**Wulai**	1.04	348	*i* P	Pn	15 55 39.0	0.0
	baz=342						
NWLT				*i* S	Sn	15 55 51.8	-0.8
	baz=342						
TCU	**Taichung**	1.06	292	P	Pn	15 55 38.2	-1.0
	baz=293						
TCU				*i* S	Sn	15 55 53.8	+1.0
	baz=293						
TWQ1	**Liyutan**	1.07	304	*i* P	Pn	15 55 39.8	+0.4
	baz=304						
TWQ1				*i* S	Sn	15 55 53.5	+0.3
	baz=304						
STYT	**Tauyuan**	1.08	237	*i* P	Pn	15 55 39.6	0.0
	baz=231						
STYT				*i* S	Sn	15 55 53.8	+0.3
	baz=231						
WGK	**Gukeng**	1.09	267	*i* P	Pn	15 55 40.3	+0.7
	baz=267						
WGK				*i* S	Sb	15 55 55.3	+0.4
	baz=267						
NTC	**Toucheng**	1.10	4	P	Pn	15 55 41.2	+1.4
	baz=5.0						
NTC				S	Sn	15 55 55.1	+1.3
	baz=5.0						
LDUT	**Ludao**	1.10	194	P	Pn	15 55 38.1	-1.8
	baz=184						
LDUT				S	Sn	15 55 52.4	-1.6
	baz=184						
NSTT	**Nanjuang**	1.11	322	*i* P	Pn	15 55 41.0	+1.0
	baz=310						
NSTT				*i* S	Sn	15 55 54.3	+0.2
	baz=310						
WDLH	**Douliu**	1.11	267	*i* P	Pn	15 55 40.2	+0.3
	baz=267						
WDLH				*i* S	Sn	15 55 55.5	+1.4
	baz=267						
LIOB	**Emei**	1.11	323	*i* P	Pn	15 55 40.9	+0.9
	baz=311						
LIOB				*i* S	Sn	15 55 55.0	+0.8
	baz=311						
TWGBT	**Beinan**	1.11	214	P	Pn	15 55 38.5	-1.5
	baz=213						
TWGBT				S	Sn	15 55 52.4	-1.8
	baz=213						
NSY	**Sanyi**	1.12	306	P	Pn	15 55 40.7	+0.6
	baz=307						
NSY				S	Sn	15 55 53.7	-0.6
	baz=307						
CHN4	**Tsaushan**	1.13	250	*i* P	Pn	15 55 40.8	+0.6
	baz=250						
CHN4				*i* S	Sn	15 55 56.2	+1.5
	baz=250						
WCHH	**Zhanghua**	1.14	287	*i* P	Pn	15 55 40.7	+0.4
	baz=288						
WCHH				*i* S	Sn	15 55 56.0	+1.2
	baz=288						
WTP	**Ta-pu**	1.16	244	*i* P	Pn	15 55 41.2	+0.6
	baz=244						

WTP				*i*S	Sb	15 55 57.1	+0.2
	baz=244						
NMLH	Miaoli	1.17	312	*i*P	Pn	15 55 41.2	+0.4
	baz=312						
NMLH				S	Sn	15 55 57.0	+1.3
	baz=312						
WDJ	Dajia District	1.17	301	*i*P	Pn	15 55 40.8	0.0
	baz=301						
WDJ				*i*S	Sn	15 55 57.0	+1.4
	baz=301						
CHN2	Minshiung	1.19	260	*e*S	Sb	15 55 59.0	+1.3
	baz=260						
TIPB	Shuangxi	1.22	3	*i*P	Pn	15 55 42.1	+0.7
	baz=354						
TIPB				*i*S	Sn	15 55 58.1	+1.4
	baz=354						
NHDH	Xindian Distri	1.22	350	*e*P	Pn	15 55 41.3	-0.2
	baz=351						
NHDH				*e*S	Sn	15 55 57.1	+0.2
	baz=351						
TWA	Mucha	1.23	353	*i*P	Pn	15 55 42.1	+0.5
	baz=347						
TWA				S	Sn	15 55 57.8	+0.6
	baz=347						
CHY	Chiayi	1.24	258	P	Pn	15 55 42.1	+0.4
	baz=259						
CHY				S	Sn	15 55 57.4	+0.1
	baz=259						
WTK	Tuku	1.25	267	P	Pn	15 55 42.8	+1.0
	baz=268						
WTK				S	Sn	15 55 59.2	+1.8
	baz=268						
TWK	Hsinying	1.25	248	*i*P	Pn	15 55 42.9	+0.9
	baz=247						
TWK				*i*S	Sn	15 55 58.6	+0.8
	baz=247						
CHN1	Nanshi	1.25	243	*i*P	Pn	15 55 42.7	+0.7
	baz=243						
CHN1				*i*S	Sn	15 55 59.1	+1.4
	baz=243						
SGST	Jiashian	1.26	238	*i*P	Pn	15 55 42.0	0.0
	baz=238						
SGST				*i*S	Sn	15 55 59.4	+1.5
	baz=238						
SLGT	Liugui	1.26	233	*i*P	Pn	15 55 42.8	+0.8
	baz=222						
SLGT				*i*S	Sn	15 55 59.7	+1.8
	baz=222						
SNST	Tainan City	1.27	245	*i*P	Pn	15 55 42.6	+0.6
	baz=245						
SNST				S	Sn	15 55 59.8	+1.9
	baz=245						
TWB1	Santiao Chiao	1.27	10	*e*P	Pn	15 55 42.1	0.0
	baz=10.0						
RLNB	Erlin	1.28	276	P	Pn	15 55 43.0	+0.7
	baz=277						
RLNB				S	Sb	15 56 00.2	-0.1
	baz=277						
JYNG	Yonagunijimaku	1.30	57	*e*S	Sn	15 55 59.3	+0.6
NWF	Wu-fen Shan	1.31	1	P	Pn	15 55 43.5	+0.7
	baz=350						
NWF				S	Sn	15 56 00.9	+1.6
	baz=350						
WFSB	Wu-fen Shan	1.31	1	P	Pn	15 55 43.3	+0.6
	baz=349						
YOJ	Yonaguni jima	1.35	58	*e*P	Pn	15 55 44.5	+1.2
	baz=58						
ECL	Taimali	1.36	213	*i*P	Pn	15 55 41.7	-1.6
	baz=211						
ECL				S	Sn	15 55 58.6	-1.7
	baz=211						
TWS1	Kuangyinshan	1.38	347	*e*P	Pn	15 55 43.8	+0.2
	baz=347						
YM01	YM01	1.40	353	P	Pn	15 55 43.4	-0.5
	baz=353						
ICHU	Yijhu	1.40	254	*e*P	Pn	15 55 44.0	+0.1
	baz=254						
ICHU				S	Sn	15 56 02.5	+1.2
	baz=254						
WSF	Szhu	1.40	266	P	Pn	15 55 44.4	+0.5
	baz=254						
WSF				S	Sn	15 56 02.8	+1.5
	baz=254						
YM10	YM10	1.41	353	P	Pn	15 55 44.1	0.0
	baz=352						
YM04	YM04	1.41	352	P	Pn	15 55 44.1	0.0
	baz=352						
YM05	YM05	1.42	353	P	Pn	15 55 43.9	-0.3
	baz=353						
YM11	YM11	1.42	354	P	Pn	15 55 44.2	0.0
	baz=353						
YM03	YM03	1.43	352	*e*P	Pn	15 55 45.5	+1.0
	baz=353						
SSD	Sandimen	1.44	226	*i*P	Pn	15 55 45.3	+0.9
	baz=225						
SSD				S	Sn	15 56 03.4	+1.3
	baz=225						
YM08	YM08	1.44	354	P	Pn	15 55 44.1	-0.4
	baz=341						
SCST	Cishan	1.44	233	P	Pn	15 55 44.3	-0.2
	baz=246						
SCST				*e*S	Sb	15 56 04.5	-0.4
	baz=246						
ANP	Anpu	1.44	352	*e*P	Pn	15 55 43.6	-1.0
	baz=352						
TSMG	Majia	1.46	224	P	Pn	15 55 45.7	+1.0
	baz=224						
TSMG				*i*S	Sn	15 56 04.0	+1.3
	baz=224						
CHN8	Yiju	1.47	254	S	Sn	15 56 03.7	+0.8
	baz=254						
MASBT	Mashibuluo	1.53	222	P	Pn	15 55 46.1	+0.4
	baz=222						
MASBT				S	Sn	15 56 06.6	+2.1
	baz=222						
EAST	Anshuo	1.60	211	*i*P	Pn	15 55 45.9	-0.7
	baz=210						
EAST				*e*S	Sn	15 56 05.0	-1.2
	baz=210						
SSPT	Xinbi	1.67	221	P	Pn	15 55 49.4	+1.8
	baz=220						
SSPT				*e*S	Sn	15 56 09.6	+1.8
	baz=220						
SCZT	Fangliau	1.72	217	*i*P	Pn	15 55 49.6	+1.3
	baz=216						
SCZT				*i*S	Sn	15 56 11.6	+2.4
	baz=216						
SLIU	Shizi	1.76	210	P	Pn	15 55 49.0	+0.1
	baz=210						
IRIF	Iriomote-Funau	1.90	72	P	Pn	15 55 51.7	+0.9
IRIF				*e*S	Sn	15 56 14.4	+0.8
HATJ	Hateruma jima	1.91	80	*e*S	Sn	15 56 14.4	+0.7
JKRS	Kuro-shima	2.12	76	P	Pn	15 55 54.1	+0.3
JKRS				S	Sn	15 56 20.3	+1.2
JIJ	Ishigaki jima	2.27	74	P	Pn	15 55 56.1	+0.2
JIJ				S	Sn	15 56 22.6	-0.2
JISG	Ishigakijimahi	2.48	70	P	Pn	15 55 59.1	+0.3
JISG				S	Sn	15 56 27.2	-0.8
JTJ	Tarama	2.84	71	P	Pn	15 56 04.0	+0.3
JTJ				*e*S	Sn	15 56 36.6	-0.1

IDC ***15*** *16:22:35.1±1.6, 38°.28N×145°.02E, h0^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, ML2.5/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/26, Error ellipse: s-maj=37.2km s-min=31.7km az=138.0*

JMA ***15*** *16:22:39.5±0.2, 38°.46N×144°.60E, h43^{km}, M3.9*

NIED ***15*** *16:22:39.5, 38°.46N×144°.60E, h43^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.31; M$_{\theta\theta}$0.01; M$_{\phi\phi}$2.29; M$_{r\theta}$0.01; M$_{\theta\phi}$0.78; M$_{\phi r}$2.29; Fault plane solution: M$_0$3.34000×10^{14} NP1: φ$_s$185.00000°, δ67.00000°, λ-100.00000°. NP2: φ$_s$30.00000°, δ25.00000°, λ-67.00000°.*

ISC 15 16:22:39.9±1.2, **38°.49N**±0°.06×**144°.75E**±0°.08, **h35**^{km}, **n28, σ1^{s}.83**/36, **mb3.5**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.48	285	P	Pn	16 23 17.4	-0.4
OFUJ				*e*S	Sn	16 23 45.4	-1.4
MIYJ	Miyakonagasawa	2.53	296	P	Pn	16 23 17.9	-0.5
MIYJ				*e*S	Sn	16 23 46.5	-1.5
JKMT	Kesennumamotoy	2.59	278	P	Pn	16 23 18.6	-0.6
JKMT				*e*S	Sn	16 23 47.7	-1.7
JIKH	Ishinomakikobu	2.59	267	P	Pn	16 23 18.5	-0.7
JIKH				*e*S	Sn	16 23 47.3	-2.2
JMK	Ichinoseki	2.80	281	P	Pn	16 23 22.1	-0.1
JMK				*e*S	Sn	16 23 53.3	-1.4
JOM	Ohasama	2.87	291	P	Pn	16 23 23.1	0.0
JOM				*e*S	Sn	16 23 55.2	-1.2
JANG	Nango	3.13	308	P	Pn	16 23 26.1	-0.7
JANG				*e*S	Sn	16 24 02.3	-0.6
JYK	Kaneyama	3.46	278	P	Pn	16 23 31.6	+0.3
JYK				*e*S	Sn	16 24 09.8	-1.3
JFT	Otama	3.62	256	P	Pn	16 23 33.7	+0.2
JFT				*e*S	Sn	16 24 14.2	-0.8
JOT	Ohata	4.05	317	*e*S	Sn	16 24 23.1	-2.5
JCH	Churui	4.25	346	P	Pn	16 23 41.1	-1.0
JKB	Kayabe	4.43	321	P	Pn	16 23 45.8	+1.3
NEM2	Nemuro 2	4.93	8	P	Pn	16 23 48.7	-2.7
JRY	Ryogami san	5.28	244	P	Pn	16 23 55.7	-0.6
JRY				*e*S	Sn	16 24 51.9	-4.0
JOSM	Okushiri--Mats	5.40	313	P	Pn	16 23 59.4	+1.6
JTKR	Abashiri--Toko	5.51	354	P	Pn	16 23 58.5	-0.9
JTKR				*e*S	Sn	16 24 57.9	-3.6
MJAR	Matsushiro Arr	5.55	251	Pn	Pn	16 24 00.8	+0.7
	0.3nm,0.3s,baz=84,slow=15,SNR=11						
MJAR				Sn	Sn	16 25 01.7	-0.9
	baz=89,slow=32,SNR=1.5						
MAT	Matsushiro	5.55	252	P	Pn	16 24 00.8	+0.7
MAT				*e*S	Sn	16 25 03.1	+0.4
JOD2	Odawara 2	5.57	236	*e*S	Sn	16 24 58.3	-4.7
USRK	Ussuriysk Ar.	11.16	305	Pn	Pn	16 25 20.2	+3.4
	baz=118,slow=16,SNR=2.2						
KSRS	Korea Array	13.32	271	LR	LR	16 30 01.3	
	comp=Z,18nm,21.2s,baz=130,slow=33						
H11N2	WAKE ISLAND Hy	26.79	128	T	T	16 56 06.0	
	baz=320,slow=75,SNR=6.1						
H11N1	WAKE ISLAND Hy	26.79	128	T	T	16 56 02.4	
	baz=320,slow=75,SNR=3.0						
H11N3	WAKE ISLAND Hy	26.80	128	T	T	16 56 10.5	
	baz=320,slow=75,SNR=4.6						
SIJI	Sorong	41.09	201	LR	LR	16 49 29.2	
	comp=Z,28nm,18.7s,baz=148,slow=39						
MKAR	Makanchi Array	45.60	301	P	P	16 30 58.9	+2.3
	0.6nm,0.9s,baz=70,slow=9.3,SNR=3.6						
ILAR	Eielson Array	46.84	33	P	P	16 31 06.8	+0.9
	0.5nm,0.9s,baz=257,slow=6.4,SNR=4.3						
ASAR	Alice Springs	62.66	191	P	P	16 33 00.3	-0.6
	0.3nm,0.9s,baz=8.2,slow=6.3,SNR=2.1						

VAO ***15*** *16:32:10.9±0.4, 27°.32S×66°.56W, h10^{km}, mb5.0*

NEIC ***15*** *16:32:18.7±2.0, 27°.88S±0°.05×66°.64W±0°.08, h150^{km}±5^{km}, mb4.7/30, Md4.5(SJA), Error ellipse: s-maj=10.7km s-min=6.5km az=117.0*

IDC ***15*** *16:32:19.9±1.7, 27°.79S×66°.57W, h158^{km}±14^{km}, mb4.4/16, mb1 4.4/20, mb1mx4.2/32, mbtmp4.8/20, Error ellipse: s-maj=14.2km s-min=10.7km az=90.0*

SJA ***15*** *16:32:19.0±0.7, 27°.91S×66°.70W, h183^{km}±3^{km}, ML4.6, MW4.5*

GUC ***15*** *16:32:20.7±0.5, 27°.93S×66°.95W, h197^{km}±6^{km}, ML5.3*

ISC 15 16:32:19.5±0.5, **27°.86S**±0°.03×**66°.79W**±0°.03, **h161**^{km}±4^{km}, **n200, σ1^{s}.52**/253, **mb4.7**/26, **9C-4D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	1.04	124	⇓*i*P	Pn	16 32 47.7	+1.9
CYA				*i*S	Sn	16 33 06.6	+0.6
CYA	Choya	1.04	124	*e*P	Pn	16 32 47.6	+1.9
CYA				*e*S	Sn	16 33 07.4	+1.5
VCA	Vinchina	1.53	235	⇑*i*P	Pn	16 32 52.6	+2.2
VCA				*i*S	Sn	16 33 17.7	+3.5
VCA				IAML		16 33 21.4	
	comp=E,18μm,0.6s						
VCA	Vinchina	1.53	235	*e*P	Pn	16 32 52.5	+2.2
VCA				*e*S	Sn	16 33 17.8	+3.7
VCA				IAML		16 33 20.1	
	comp=Z,8μm,0.7s						
ACLC	CERRO LA CRUZ	1.57	185	*e*P	Pn	16 32 52.6	+1.8
ACLC				*e*S	Sn	16 33 16.8	+1.7
ACLC				IAML		16 33 18.4	
	comp=Z,2μm,1.2s						
AHML	Horco Molle	1.68	51	*e*P	Pn	16 32 53.2	+1.4
AHML				*e*S	Sn	16 33 17.8	+1.1
FSA	Cafayete	1.88	23	*e*P	Pn	16 32 56.5	+2.3
FSA				*e*S	Sn	16 33 23.2	+2.2
AC02	Maricunga	2.32	296	⇓*i*P	Pn	16 33 01.9	+2.4
AC02				*i*S	Sn	16 33 33.4	+3.0
AC02	Maricunga	2.32	296		Pn	16 33 02.0	+2.5
AC02				Sn	Sn	16 33 33.3	+2.9
APLL	PUNTA DE LOS L	2.54	175	*e*P	Pn	16 33 02.6	+1.0
AVFE	Valle Fertil	2.85	192	*e*P	Pn	16 33 06.0	+0.5
AVFE				*e*S	Sn	16 33 41.5	+0.2
AVFE				IAML		16 33 45.4	
	comp=Z,1μm,0.4s						
GO03	Copiap	3.07	274	⇑*i*P	Pn	16 33 09.4	+1.2
GO03				*i*S	Sn	16 33 46.0	0.0
GO03				IAML		16 33 47.3	
	comp=N,5μm,0.6s						
GO03	Copiap	3.07	274		Pn	16 33 09.4	+1.2
GO03				Sn	Sn	16 33 46.0	0.0
GO03	Copiap	3.07	274	*e*P	Pn	16 33 09.6	+1.4
GO03				*e*S	Sn	16 33 46.1	+0.1
ACDV	Cuesta del Vie	3.08	221	*e*P	Pn	16 33 10.0	+1.5
ACDV				*e*S	Sn	16 33 47.3	+0.8
ACDV				IAML		16 33 49.4	
	comp=Z,889nm,0.8s						
AC05	El Transito	3.23	252	⇑*i*P	Pn	16 33 11.9	+1.6
AC05				*i*S	Sn	16 33 49.9	+0.2
AC05				IAML		16 33 52.2	
	comp=N,4μm,0.5s						
AC05	El Transito	3.23	252		Pn	16 33 11.8	+1.6
AC05				Sn	Sn	16 33 51.0	+1.4
AROD	Rodeo	3.29	225	*e*P	Pn	16 33 12.6	+1.4
AROD				*e*S	Sn	16 33 53.1	+1.6
SLA	San Lorenzo	3.33	20	*e*P	Pn	16 33 13.8	+2.2
SLA				*e*S	Sn	16 33 55.3	+3.2
ACCO	Cerro Coronel	3.37	216	*e*P	Pn	16 33 13.3	+1.0
ACCO				*e*S	Sn	16 33 55.2	+1.9
ACCO				IAML		16 33 56.8	
	comp=Z,911nm,0.5s						
CO01	Juntas del Tor	3.59	233	⇑*i*P	Pn	16 33 17.0	+2.0
CO01				*i*S	Sn	16 33 58.7	+0.6
CO01	Juntas del Tor	3.59	233		Pn	16 33 16.9	+2.0
LCO	Las Campanas	3.63	251	Pn	Pn	16 33 16.3	+0.8
LCO				Sn	Sn	16 33 59.2	+0.1
GO02	Mina Guanaco	3.68	316	⇓*i*P	Pn	16 33 18.6	+2.4
GO02				*e*S	Sn	16 34 02.3	+2.1
GO02	Mina Guanaco	3.68	316		Pn	16 33 18.6	+2.4
RTLL	Cerro Villicun	3.76	203	⇑*i*P	Pn	16 33 17.3	+0.4
RTLL				*i*S	Sn	16 34 00.7	-1.1
RTLL	Cerro Villicun	3.76	203	*e*P	Pn	16 33 17.8	+0.9
RTLL				*e*S	Sn	16 34 01.2	-0.6
RTLL				IAML		16 34 05.6	
	comp=Z,1μm,0.5s						
AC01	Pan de Azucar	3.81	296	*e*P	Pn	16 33 18.4	+0.8
AC01				*i*S	Sn	16 34 00.8	-1.9
AC01	Pan de Azucar	3.81	296		Pn	16 33 18.3	+0.8
AC04	Llanos de Chal	3.81	264	⇑*i*P	Pn	16 33 17.6	0.0
AC04				*i*S	Sn	16 34 00.9	-1.8
AC04	Llanos de Chal	3.81	264		Pn	16 33 17.7	+0.2
AZAP	Zapla	3.94	24	*e*P	Pn	16 33 21.0	+1.5
AZAP				IAML		16 34 21.1	
	comp=Z,463nm,2.0s						
TCA	Tanti	3.96	152	⇓*i*P	Pn	16 33 19.1	-0.4
TCA				*i*S	Sn	16 34 04.2	-2.2
TCA	Tanti	3.96	152	*e*P	Pn	16 33 19.8	+0.3
TCA				*e*S	Sn	16 34 04.5	-1.9
TCA				IAML		16 34 05.3	
	comp=Z,831nm,0.5s						
ZON	Zonda	4.03	204	Pn	Pn	16 33 20.9	+0.5
ZON	Zonda	4.03	204	*e*P	Pn	16 33 20.9	+0.5
ZON				*e*S	Sn	16 34 07.0	-0.9
ZON				IAML		16 34 08.7	
	comp=Z,428nm,0.8s						
GO04	Tololo Observa	4.20	236	⇑*i*P	Pn	16 33 23.1	+0.2
GO04				*i*S	Sn	16 34 12.4	+0.1
GO04	Tololo Observa	4.20	236	Pn	Pn	16 33 23.1	+0.2
RTCV	Cerro Valdivia	4.27	200	*e*P	Pn	16 33 23.8	+0.3
RTCV				*e*S	Sn	16 34 12.9	-0.7
RTCV				IAML		16 34 24.4	
	comp=Z,566nm,0.8s						
ASTB	Santa Barbara	4.42	29	*e*P	Pn	16 33 27.3	+1.6
RTLS	Leoncito	4.49	208	*e*P	Pn	16 33 27.2	+0.6
RTLS				*e*S	Sn	16 34 19.5	+0.4
RTLS				IAML		16 34 30.5	
	comp=Z,381nm,0.7s						
CO03	El Pedregal	4.52	228	⇑*i*P	Pn	16 33 27.1	+0.2
CO03				*e*S	Sn	16 34 11.8	-7.7
CO03	El Pedregal	4.52	228		Pn	16 33 27.1	+0.2
PB14	IPOC Station P	4.57	314		Pn	16 33 28.8	+1.0
PB14	IPOC Station P	4.57	314	*e*P	Pn	16 33 29.2	+1.3
PB14				*e*S	Sn	16 34 21.6	+0.5
PB14				IAML		16 34 23.1	
	comp=Z,315nm,0.7s						
HJA	Humahuaca	4.79	15	*e*P	Pn	16 33 32.9	+2.1
HJA				*e*S	Sn	16 34 28.9	+2.5
CO02	Combarbal	4.96	227		Pn	16 33 32.1	-0.5
ASAL	Salagasta	5.04	200	*e*P	Pn	16 33 33.7	0.0
ASAL				*e*S	Sn	16 34 31.1	-0.6
ASAL				IAML		16 34 33.7	
	comp=Z,498nm,1.0s						
ARCO	CERRO ARCO	5.30	200	*e*P	Pn	16 33 37.3	+0.2
ARCO				IAML		16 34 40.8	
	comp=Z,497nm,0.9s						
AAGR	Agrelo	5.50	198	*e*P	Pn	16 33 40.1	+0.4
AAGR				*e*S	Sn	16 34 40.8	-1.8
AAGR				IAML		16 35 07.5	
	comp=Z,436nm,0.7s						
PB10	IPOC Station P	5.50	321		Pn	16 33 40.4	+0.7
PB10	IPOC Station P	5.50	321	*e*P	Pn	16 33 40.5	+0.7
LVC	Limon Verde	5.57	339	P	Pn	16 33 42.0	+1.1
	comp=Z,32nm,0.3s,baz=150,slow=7.7,SNR=184						
LVC				S	Sn	16 34 42.6	-2.1
	comp=Z,45nm,0.3s,baz=192,slow=20,SNR=32						
YJA	Yavi	5.78	12	*e*P	Pn	16 33 46.4	+2.6
PB05	IPOC Station P	5.87	327	*e*P	Pn	16 33 45.5	+0.8
PB05				*e*S	Sn	16 34 50.0	-1.4
VA03	San Esteban	5.87	213		Pn	16 33 44.6	-0.1
PEL	Peldehue	6.25	212	Pn	Pn	16 33 48.8	-0.8
PEL	Peldehue	6.25	212	*e*P	Pn	16 33 49.4	-0.2
PEL				*e*S	Sn	16 34 59.3	-1.0
ROC1	El Roble	6.27	215		Pn	16 33 48.4	-1.7
PB04	IPOC Station P	6.29	330		Pn	16 33 50.1	-0.3
PB04	IPOC Station P	6.29	330	*e*P	Pn	16 33 50.4	0.0
PB04				IAML		16 35 07.3	
	comp=Z,109nm,0.8s						
PB09	IPOC Station P	6.43	339		Pn	16 33 52.8	+0.6
PB09	IPOC Station P	6.43	339	*e*P	Pn	16 33 53.0	+0.7
MT05	Renca	6.48	211		Pn	16 33 51.6	-1.0
MT02	Curacav	6.56	214		Pn	16 33 51.9	-1.8
PB07	IPOC Station P	6.72	335		Pn	16 33 55.6	-0.5
RFA	San Rafael	7.04	191	*e*P	Pn	16 33 58.8	-1.2
RFA				IAML		16 35 16.2	
	comp=Z,155nm,0.5s						
PATCX	Punta Patache	7.65	336		Pn	16 34 06.7	-1.6
BO02	Sierra Bellavi	7.71	205	Pn	Pn	16 34 07.5	-1.4
TA01	Diego Aracena	7.89	336	Pn	Pn	16 34 09.5	-2.0
PB08	IPOC Station P	7.98	344		Pn	16 34 11.9	-1.1
EDS3	Malargue	8.20	195	*e*P	Pn	16 34 15.1	-0.4
GO01	Chusmiza	8.45	344		Pn	16 34 18.3	-1.0
CPUP	Villa Florida	8.56	82	P	Pn	16 34 18.4	-1.9
	comp=Z,2.8nm,0.3s,baz=267,slow=12,SNR=78						
CPUP	Villa Florida	8.56	82	Pn	Pn	16 34 17.9	-2.5
PSGCX	Pisagua	8.77	339	Pn	Pn	16 34 20.1	-3.1
MNMC	Minye Minye	9.06	343		Pn	16 34 24.9	-2.4
BI02	San Fabin de	9.56	202	Pn	Pn	16 34 31.3	-2.3
PB16	IPOC Station P	9.80	345	Pn	Pn	16 34 36.2	-1.1
AP01	Chacalluta	9.99	340	Pn	Pn	16 34 39.1	-0.1
LC01	Cunco	11.80	200		Pn	16 35 00.4	-2.4
VA04	Juan Fernndez	11.85	238	Pn	Pn	16 35 02.1	-1.3
CPSB	Cacapava Do Su	11.94	105	*e*P	Pn	16 35 01.3	-3.4
PLTB	Pedras Altas	12.09	112	*e*P	Pn	16 35 02.9	-3.7
SIV	San Ignacio	12.94	25	P	Pn	16 35 16.1	-1.5
	comp=Z,2.8nm,0.3s,baz=222,slow=14,SNR=128						
PLCA	Paso Flores	13.21	193	P	Pn	16 35 21.3	+0.4
	comp=Z,1.0nm,0.3s,baz=3.2,slow=11,SNR=8.9						
PLCA	Paso Flores	13.21	193	Pn	Pn	16 35 21.4	+0.5
PLCA	Paso Flores	13.21	193	*e*P	P	16 35 26.4	+1.3
CNLB	Canela	14.08	100	*e*P	Pn	16 35 30.1	-1.8
LL01	San Ignacio de	15.19	196	P	Pn	16 35 44.2	-1.4
LL01				IAmb	IAmb	16 35 51.0	
	comp=Z,33nm,0.9s						
VILB	Vilhena	16.06	24	*e*P	Pn	16 35 50.8	-5.6
FRTB	Fartura	16.17	78	*e*P	Pn	16 35 55.9	-1.9
GO07	Milladeo Hill,	16.21	198	P	Pn	16 35 56.8	-1.3
ITRB	Iturama	17.07	65	*e*P	P	16 36 05.4	-2.5
BB19B	Bebedouro	17.93	72	*e*P	P	16 36 16.7	-0.6
SPB	Sao Paulo	17.95	81	P	P	16 36 15.0	-2.3
SPB				IAmb	IAmb	16 36 18.3	
	comp=Z,28nm,1.0s						
SPB	Sao Paulo	17.95	81	*e*P	P	16 36 17.3	-0.1
ETMB	Extrema	17.96	2	*e*P	P	16 36 14.2	-3.3
ARAG	Araguaiana, MT	18.41	52	*e*P	P	16 36 20.7	-1.7
VAO	Valinhos	18.54	79	*e*P	P	16 36 23.5	-0.4
SAML	Samuel	19.11	11	P	P	16 36 29.3	-0.9
SAML				IAmb	IAmb	16 36 31.8	
	comp=Z,46nm,0.6s						
SAML	Samuel	19.11	11	*e*P	P	16 36 28.8	-1.4
IPMB	Ipameri, GO	19.71	64	*e*P	P	16 36 35.9	-0.7
ESAR	Angra dos Reis	20.74	82	*e*P	P	16 36 47.7	+0.2
CZSB	Cruzeiro do Su	20.79	343	*e*P	P	16 36 47.5	-0.6
BSCB	Bom Sucesso	21.16	76	*e*P	P	16 36 51.5	-0.6
BDFB	Brasilia	21.22	59	P	P	16 36 50.8	-2.1
	comp=Z,13nm,0.3s,baz=229,slow=11,SNR=27						
BDFB	Brasilia	21.22	59		P	16 36 51.1	-1.7
BDFB				IAmb	IAmb	16 36 52.8	
	comp=Z,23nm,0.8s						
SNDB	Serra Nova Dou	21.45	46	*e*P	P	16 36 52.7	-2.5
CAM01	Campos-RJ	23.56	81	*e*P	P	16 37 18.9	+3.6
EFI	East Falkland	24.68	167	P	P	16 37 25.3	+0.1
MACA	Manacapuru-AM	25.24	14	*e*P	P	16 37 30.8	+0.1
RIB01	Linhares ES	25.60	76	*e*P	P	16 37 37.3	+3.4
TMAB	Tom-Au,PA,Br	31.01	38	*e*P	P	16 38 21.7	-0.2
MDP	Montagnes des	35.50	25	P	P	16 39 00.5	-0.4
	comp=Z,31nm,0.7s,baz=209,slow=9.8,SNR=29						
RCBR	Riachuelo	36.60	59	P	P	16 39 10.8	+0.5
	comp=Z,22nm,1.0s,baz=210,slow=9.4,SNR=5.3						
RCBR	Riachuelo	36.60	59	P	P	16 39 10.1	-0.2
RCBR				IAmb	IAmb	16 39 11.8	
	comp=Z,20nm,0.9s						
SDV	Santo Domingo	36.72	354	P	P	16 39 10.3	-1.1
SDV				IAmb	IAmb	16 39 21.3	
	comp=Z,8.1nm,0.5s						
PMSA	Palmer Station	36.97	178	P	P	16 39 14.4	+1.7
	comp=Z,18nm,0.8s,baz=339,slow=14,SNR=2.5						
PMSA	Palmer Station	36.97	178	P	P	16 39 14.9	+2.2
FDF	Fort de France	42.69	8	P	P	16 39 59.5	-1.1
BANI	BANI	46.11	355	P	P	16 40 27.7	0.0
TEIG	Tepich	52.13	334	P	P	16 41 14.1	+0.9
TEIG				IAmb	IAmb	16 41 45.2	
	comp=Z,38nm,1.4s						
BELA	Belgrano 2	52.21	172	P	P	16 41 14.0	+0.8
BELA				PcP	PcP	16 42 23.2	+0.7
VNA3	Neumayer Olymp	53.46	160	P	P	16 41 23.1	+0.6
VNA1	Neumayer--Stat	53.68	159	P	P	16 41 25.5	+1.5
VNA2	Neumayer--Watz	54.04	160	P	P	16 41 27.6	+0.9
	baz=288,slow=7.6						
SNAA	Sanae	55.67	160	P	P	16 41 39.0	+0.6
SNAA	Sanae	55.67	160	P	P	16 41 38.8	+0.3
	comp=Z,18nm,0.5s,baz=283,slow=8.4,SNR=80						
SNAA	Sanae	55.67	160	P	P	16 41 38.9	+0.4
SNAA				IAmb	IAmb	16 41 39.9	
	comp=Z,50nm,1.3s						
SNAA				PcP	PcP	16 42 36.3	+0.4
QSPA	South Pole Qui	62.36	180	P	P	16 42 25.4	+0.7
QSPA				PcP	pP	16 43 03.2	+0.3
TX31	Lajitas Ar. Si	66.93	325	P	P	16 42 56.3	+1.6
TX31				IAmb	IAmb	16 43 21.6	
	comp=Z,10.0nm,1.4s						
TX32	Lajitas Array	66.93	325	P	P	16 42 56.3	+1.6
TXAR	Lajitas Array	66.93	325	P	P	16 42 55.7	+1.0
	comp=Z,0.5nm,0.6s,baz=144,slow=7.8,SNR=6.6						
TXAR	Lajitas Array	66.93	325	P	P	16 42 56.0	+1.3
LIC	Lamto	68.50	70	*e*PKP1	P	16 43 04.5	-0.2
	comp=Z,5.9nm,0.5s						
TIC	Toumodi	68.74	70	*e*PKP1	P	16 43 05.3	-0.9
KIC	Kosan Boka	68.81	70	*e*PKP1	P	16 43 05.3	-1.4
	comp=Z,9.0nm,0.5s						
DBIC	Dimbokro	68.89	70	P	P	16 43 05.8	-1.3
	comp=Z,4.5nm,0.4s,baz=213,slow=5.9,SNR=16						
DBIC	Dimbokro	68.89	70	P	P	16 43 06.2	-1.0
DBIC				IAmb	IAmb	16 43 08.9	
	comp=Z,5.6nm,0.8s						
S39A	Bolivar	69.80	338	P	P	16 43 12.3	+0.1
S39A				IAmb	IAmb	16 43 13.6	
	comp=Z,7.5nm,0.9s						
VNDA	Vanda	70.95	190	P	P	16 43 20.5	+1.8
	comp=Z,3.9nm,0.8s,baz=140,slow=5.5,SNR=15						

VNDA	Vanda	70.95	190	P	P	16 43 19.8	+1.1
SUR	Sutherland	73.79	118	P	P	16 43 37.5	+0.9
	comp=Z,7.1nm,0.5s,baz=230,slow=6.6,SNR=16						
KOWA	Kowa	73.93	64	P	P	16 43 36.2	-1.1
BGNE	Belgrade	74.79	336	P	P	16 43 41.9	+0.2
TSUM	Tsumeb	76.46	105	P	P	16 43 51.5	-0.5
	comp=Z,2.4nm,0.7s,baz=236,slow=6.6,SNR=7.6						
MAW	Mawson	77.71	162	P	P	16 43 58.9	+1.0
	comp=Z,19nm,0.7s,baz=208,slow=6.1,SNR=23						
MAW	Mawson	77.71	162	P	P	16 43 58.7	+0.8
TOA0	Torodi Ar. Sit	77.80	68	P	P	16 43 58.7	-0.5
TOA0				IAmb	IAmb	16 44 01.8	
	comp=Z,9.2nm,0.5s						
TORD	Torodi Ar. Bea	77.80	68	P	P	16 43 58.4	-0.9
	comp=Z,6.8nm,0.5s,baz=258,slow=5.1,SNR=24						
TORD	Torodi Ar. Bea	77.80	68	IAmb	IAmb	16 44 01.8	
	comp=Z,6.3nm,0.5s						
BOSA	Boshof	78.83	116	P	P	16 44 04.8	-0.2
	comp=Z,14nm,0.7s,baz=254,slow=4.0,SNR=34						
PDAR	Pinedale Array	80.55	330	P	P	16 44 14.8	+0.9
	comp=Z,0.6nm,0.5s,baz=125,slow=7.8,SNR=8.9						
PDAR				pP	pP	16 44 54.0	-0.7
	comp=Z,0.6nm,0.7s,baz=119,slow=7.5,SNR=1.9						
LBTB	Lobatse	80.67	113	P	P	16 44 15.1	+0.1
	comp=Z,11nm,0.5s,baz=246,slow=7.0,SNR=29						
LBTB	Lobatse	80.67	113	P	P	16 44 14.9	-0.1
LBTB				IAmb	IAmb	16 44 15.8	
	comp=Z,24nm,1.0s						
NVAR	Mina Array Bea	81.66	322	P	P	16 44 20.9	+1.0
	comp=Z,0.3nm,0.5s,baz=150,slow=7.3,SNR=2.8						
YNE	Yellowstone No	82.53	331	P	P	16 44 25.6	+1.4
YHH	Holmes Hill	82.72	330	P	P	16 44 26.9	+1.6
HLID	Hailey	83.42	327	P	P	16 44 29.9	+1.1
LSZ	Lusaka	87.27	106	P	P	16 44 50.4	+1.9
LSZ				IAmb	IAmb	16 44 50.9	
	comp=Z,9.7nm,0.9s						
ESDC	Sonseca Array	89.05	43	P	P	16 44 58.0	+1.8
	comp=Z,0.5nm,0.5s,baz=253,slow=4.7,SNR=1.9						
YKA	Yellowknife Ar	97.80	340	P	P	16 45 35.4	-0.4
	comp=Z,0.4nm,0.8s,baz=135,slow=4.8,SNR=5.1						
YKA				PKKPbc	PKKPbc	17 02 09.9	-2.5
	comp=Z,0.1nm,0.4s,baz=336,slow=2.9,SNR=3.7						
ARCES	ARCESS Array B	116.59	23	PKP	PKPdf	16 50 43.1	-0.3
	comp=Z,1.8nm,1.0s,baz=243,slow=4.0,SNR=1.1						
ARCES				PKKPbc	PKKPbc	17 01 12.5	-0.9
	comp=Z,1.6nm,0.8s,baz=84,slow=3.7,SNR=3.7						
ASAR	Alice Springs	125.02	203	PKP	PKPdf	16 51 00.8	-0.3
	comp=Z,4.3nm,0.6s,baz=134,slow=1.7,SNR=120						
ASAR				pPKP	pPKPdf	16 51 44.5	+0.5
	comp=Z,0.6nm,0.7s,baz=138,slow=1.8,SNR=2.0						
FITZ	Fitzroy Crossi	132.76	196	PKP	PKiKP	16 51 17.0	-0.1
	comp=Z,3.8nm,0.7s,baz=202,slow=6.7,SNR=13						
PETK	Petropavlovsk-	138.74	320	PKP	PKiKP	16 51 27.1	-1.0
	comp=Z,6.3nm,1.0s,baz=82,slow=3.4,SNR=4.8						
BVAR	Borovoye Array	139.70	39	PKP	PKPdf	16 51 28.4	+0.7
	comp=Z,0.3nm,0.5s,baz=353,slow=11,SNR=5.0						
LEM	Lembang	145.10	170	PKPbc	PKPdf	16 51 40.1	+1.4
	comp=Z,74nm,0.6s,baz=246,slow=3.0,SNR=26						
USP	Ospenovka	145.30	53	P	PKPab	16 51 39.2	+0.8
	SNR=6.1						
SGDS	Sogindy	145.34	53	*e*PKP	PKPab	16 51 38.7	+0.1
	baz=53						
AAK	Ala-Archa	145.43	54	PKPbc	PKPab	16 51 39.8	+0.7
	comp=Z,22nm,0.8s,baz=225,slow=2.1,SNR=65						
AAK	Ala-Archa	145.43	54	P	PKPab	16 51 40.2	+1.1
	SNR=18						
AAK	Ala-Archa	145.43	54		PKPab	16 51 40.2	+1.1
UCH	Uchtor	145.53	55	P	PKPab	16 51 40.9	+1.0
	SNR=16						
CHMS	Chumysh	145.54	54	P	PKPab	16 51 40.0	+0.6
	SNR=13						
KBK	Karagaybulak	145.75	54	P	PKPab	16 51 41.2	+0.9
	SNR=7.0						
TKM2	Tokmak 2	146.16	54	P	PKPab	16 51 41.4	-0.5
	SNR=5.0						
KUU	Kurty	146.43	52	*e*PKP	PKPdf	16 51 40.4	+0.6
	baz=52						
HYB	Hyderabad	146.47	101	*i* PKP	PKPbc	16 51 42.5	+0.2
SIJI	Sorong	146.59	214	PKPbc	PKPbc	16 51 43.0	+0.3
	comp=Z,15nm,0.6s,baz=61,slow=5.2,SNR=9.7						
ZALV	Zalesovo Beam	146.65	31	PKPbc	PKPbc	16 51 40.9	-0.8
	comp=Z,6.4nm,0.4s,baz=300,slow=3.3,SNR=25						
ZALV				SKPbc	SKiKP	16 55 05.3	0.0
	comp=Z,0.7nm,0.6s,baz=310,slow=2.6,SNR=1.5						
ZALV	Zalesovo Beam	146.65	31		PKPdf	16 51 40.6	+0.8
KAPI	Kappang	146.72	192	PKPbc	PKPab	16 51 44.1	-0.4
	comp=Z,10nm,0.4s,baz=237,slow=3.7,SNR=5.6						
CHKK	Chushkaly	146.89	52	*e*PKP	PKPdf	16 51 41.1	+0.5
	baz=52						
TNSS	Tian-Shan	147.09	53	*e*PKP	PKPdf	16 51 41.5	+0.1
	baz=53						
KSH	Kashi	147.12	60	PKPbc	PKPbc	16 51 42.9	-0.8
KSH				sPKP		16 53 37.4	
TDK	Taldyqorghan	147.50	49	*e*PKP	PKPdf	16 51 42.4	+0.8
	baz=49						
DHRM	DHARAMSHALA	147.85	73	*e*P	PKPdf	16 51 43.1	+0.3
SMLA	Simla	148.54	75	*e*x	PKPbc	16 51 48.2	+0.8
MKAR	Makanchi Array	149.27	44	PKP	PKPdf	16 51 44.7	+0.3
	comp=Z,3.2nm,0.7s,baz=248,slow=1.6,SNR=4.8						
MKAR				PKPbc	PKPbc	16 51 49.4	+0.5
	comp=Z,7.7nm,0.7s,baz=300,slow=2.5,SNR=40						
MKAR				pPKP	pPKPdf	16 52 26.1	-1.2
	comp=Z,1.1nm,0.5s,baz=289,slow=2.0,SNR=1.4						
RPSI	Rantau Prapat	151.50	149		PKPbc	16 51 55.3	+0.2
PSI	Prapat	151.59	149	PKPbc	PKPbc	16 51 55.3	-0.2
	comp=Z,9.5nm,0.5s,baz=181,slow=2.1,SNR=11						
PSI				PKPab	PKPab	16 52 04.8	+0.3
	comp=Z,5.3nm,0.4s,baz=180,slow=9.9,SNR=7.5						
WMQ	Urumqi	154.04	45	*e*P	PKPdf	16 51 51.9	+0.2
WMQ				pmax	pmax		
	comp=Z,53nm,7.3s						
SONM	Songino Array	159.36	13	PKP	PKPdf	16 51 59.5	+1.0
	comp=Z,1.2nm,1.0s,baz=23,slow=0.4,SNR=5.1						
SONM				PKPab	PKPab	16 52 36.1	-0.8
	comp=Z,0.5nm,0.6s,baz=319,slow=3.7,SNR=2.5						
CMAR	Chiang Mai Arr	163.90	122	PKP	PKPdf	16 52 04.9	+1.0
	comp=Z,0.3nm,0.5s,baz=230,slow=2.2,SNR=4.5						
CMAR				PKPab	PKPab	16 52 57.2	-0.3
	comp=Z,0.9nm,0.6s,baz=247,slow=3.7,SNR=5.3						
GTA	Gaotai	163.98	41	*e*PKP	PKPdf	16 52 05.0	+1.4
HHC	Hu-ho-hao-te	166.97	6	*e*P	PKPdf	16 52 04.0	-2.0
LZH	Lanzhou	168.58	42	⇑PKP	PKPdf	16 52 05.1	-2.2
LZH				pPKP	pPKPdf	16 52 46.0	-4.5
LZH				sPKP		16 53 01.8	
LZH				PKP	PKPab	16 53 17.3	-0.6
NJ2	Nanjing	173.57	312	*e*P	PKPdf	16 52 10.4	+0.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.9s						

NEIC ***15*** *16:46:04.8±1.8, 18°.6S±0°.1×177°.7W±0°.1, h624^{km}±8^{km}, mb4.5/25, Error ellipse: s-maj=20.8km s-min=9.4km az=143.0*

IDC ***15*** *16:46:06.5±1.6, 18°.58S×177°.82W, h641^{km}±13^{km}, mb3.2/12, mb1 3.4/14, mb1mx3.2/35, mbtmp4.2/14, Error ellipse: s-maj=39.0km s-min=12.6km az=151.0*

ISC 15 16:46:06.6±0.6**, 18°.5S**±0°.1×**177°.75W**±0°.09**, h650**^{km}**, n51, σ1^{s}.23**/51**, mb4.2**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.08	281	P	P	16 47 33.8	-2.6
	6.1nm,0.3s,baz=128,slow=8.4,SNR=45						
MSVF				S	S	16 48 48.4	-1.1
	baz=150,slow=18,SNR=1.4						
MSVF	Nonsavu	4.08	281	P	P	16 47 34.3	-2.1
AFI	Afiamalu	7.36	52	P	P	16 47 57.7	-4.5
AFI				S	S	16 49 31.7	-4.9
NIUE	Niue	7.43	95	P	P	16 47 58.4	-4.2
FUNA	Funafuti	10.39	343	P	P	16 48 29.8	-0.5
SANVU	Saraoutou	14.72	280	P	P	16 49 10.4	0.0
DZM	Mont Dzumac	15.24	254	P	P	16 49 14.8	-0.4
	0.8nm,0.3s,baz=38,slow=14,SNR=16						
DZM	Mont Dzumac	15.24	254	IAmb	IAmb	16 49 18.3	
	comp=Z,4.1nm,1.0s						
KNTN	Kanton	16.75	21	P	P	16 49 28.1	-0.9
KNTN				IAmb	IAmb	16 49 28.6	
	comp=Z,28nm,0.8s						
OUZ	Omahuta	18.30	203	P	P	16 49 43.1	+0.3
OUZ				IAmb	IAmb	16 49 48.6	
	comp=Z,29nm,1.4s						
HIZ	Hauiti	20.91	196	P	P	16 50 06.4	+0.1
HIZ				IAmb	IAmb	16 50 13.4	
	comp=Z,18nm,1.2s						
QRZ	Quartz Range	23.73	199	P	P	16 50 29.1	-2.0
THZ	Tophouse	24.48	197	P	P	16 50 35.5	-2.4
THZ				IAmb	IAmb	16 50 44.6	
	comp=Z,7.8nm,0.9s						
WHZ	Wether Hill Ro	29.74	200	P	P	16 51 22.8	-0.6
ARMA	Armidale	30.18	241	P	P	16 51 27.6	+0.2
ARMA				IAmb	IAmb	16 51 34.0	
	comp=Z,25nm,1.6s						
CAN	Canberra	33.83	234	P	P	16 51 58.0	-0.1
CTA	Charters Tower	33.97	261	P	P	16 51 59.1	-0.3
	comp=Z,4.8nm,0.4s,baz=91,slow=10,SNR=18						
CTAO	Charters Tower	33.97	261	P	P	16 51 59.4	0.0
CTAO				IAmb	IAmb	16 52 00.1	
	comp=Z,8.8nm,0.8s						
PMG	Port Moresby	35.19	280	P	P	16 52 10.2	+0.7
	comp=Z,7.0nm,0.8s,baz=102,slow=5.6,SNR=6.8						
PMG	Port Moresby	35.19	280	P	P	16 52 10.0	+0.5
PMG				IAmb	IAmb	16 52 11.9	
	comp=Z,9.5nm,0.9s						
COEN	Coen	37.74	271	P	P	16 52 31.2	+0.9
COEN				IAmb	IAmb	16 52 31.8	
	comp=Z,9.3nm,0.7s						
STKA	Stephens Creek	38.88	242	P	P	16 52 39.1	-0.1
	comp=Z,1.6nm,0.7s,baz=89,slow=7.8,SNR=3.9						
STKA	Stephens Creek	38.88	242	P	P	16 52 39.2	0.0
BBOO	Buckleboo	43.65	242	P	P	16 53 16.3	-0.3
JAY	Jayapura	43.69	286	P	P	16 53 18.1	+1.0
	comp=Z,8.8nm,0.6s,baz=135,slow=7.1,SNR=2.0						
WRAB	Tennant Creek	45.13	260	P	P	16 53 27.6	-0.4
AS31	Alice Springs	45.23	255	P	P	16 53 28.7	-0.1
ASAR	Alice Springs	45.23	255	P	P	16 53 28.6	-0.3
	comp=Z,2.9nm,0.5s,baz=87,slow=8.4,SNR=76						
ASAR				S	S	16 59 23.7	-0.2
	comp=Z,0.5nm,0.7s,baz=92,slow=16,SNR=4.7						
ASAR	Alice Springs	45.23	255	P	P	16 53 28.2	-0.6
MTN	Manton Dam	49.41	269	P	P	16 53 59.7	-0.2
MTN				IAmb	IAmb	16 54 12.4	
	comp=Z,48nm,1.6s						
FORT	Forrest	50.31	245	P	P	16 54 05.6	-0.6
FORT				IAmb	IAmb	16 54 17.5	
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	53.55	261	P	P	16 54 29.7	+0.3
	comp=Z,2.2nm,0.7s,baz=127,slow=6.2,SNR=2.7						
FITZ	Fitzroy Crossi	53.55	261	P	P	16 54 29.9	+0.4
SOEI	Soe	56.70	270	P	P	16 54 53.2	+1.8
SOEI				IAmb	IAmb	16 55 04.7	
	comp=Z,15nm,1.1s						
JSD	Sado	69.82	324	P	P	16 56 13.2	-0.8
ADK	Adak	70.13	1	P	P	16 56 16.3	+0.7
SBUM	Sibu	71.92	279	P	P	16 56 26.2	-0.7
SBUM				IAmb	IAmb	16 56 37.2	
	comp=Z,16nm,1.3s						
PEA0B	Petropavlovsk-	74.45	345	P	P	16 56 41.5	+1.1
PEA0B				IAmb	IAmb	16 56 42.1	
	comp=Z,30nm,1.2s						
PETK	Petropavlovsk-	74.45	345	P	P	16 56 41.0	+0.7
	comp=Z,3.9nm,0.8s,baz=121,slow=8.8,SNR=9.4						
PETK	Petropavlovsk-	74.45	345	P	P	16 56 41.6	+1.3
OHAK	Old Harbor	78.20	13	P	P	16 57 01.5	+0.8
NVAR	Mina Array Bea	79.45	43	P	P	16 57 09.4	+1.4
	comp=Z,0.5nm,0.6s,baz=218,slow=7.7,SNR=5.3						
NVAR	Mina Array Bea	79.45	43	P	P	16 57 09.6	+1.6
TXAR	Lajitas Array	85.81	57	P	P	16 57 42.1	+2.3
	comp=Z,0.6nm,0.7s,baz=222,slow=7.2,SNR=6.9						
ILAR	Eielson Array	86.36	13	P	P	16 57 41.5	+0.1
	comp=Z,0.5nm,0.4s,baz=226,slow=4.9,SNR=17						
PDAR	Pinedale Array	87.38	43	P	P	16 57 47.5	+0.5
	comp=Z,0.4nm,0.7s,baz=193,slow=3.7,SNR=4.8						
YKA	Yellowknife Ar	94.64	25	P	P	16 58 19.8	+0.2
	comp=Z,0.3nm,0.7s,baz=243,slow=4.1,SNR=3.2						
ARCES	ARCESS Array B	127.05	350	PKP	PKPdf	17 03 58.6	+0.7
	comp=Z,3.4nm,1.1s,baz=8.5,slow=2.5,SNR=6.0						
FINES	FINESS Array B	133.97	344	PKP	PKiKP	17 04 12.5	-0.1
	comp=Z,4.2nm,1.0s,baz=56,slow=3.9,SNR=2.1						
BRTR	Keskin Array B	145.67	315	PKPbc	PKPbc	17 04 35.7	+0.7
	comp=Z,0.7nm,0.8s,baz=48,slow=1.8,SNR=3.7						
GERES	GERESS Array B	148.38	346	PKPbc	PKPbc	17 04 42.1	+0.4
	comp=Z,1.0nm,0.8s,baz=2.7,slow=4.2,SNR=4.7						

DJA ***15*** *16:57:10.8±1.4, 5°N±9°×9°4E±1°1, h47^{km}±68^{km}, M4.7/8, mb4.7/6, mB4.9/3, MLv4.7/8, Mw(mB)4.2/3*

BJI ***15*** *16:57:15.3±0.0, 5°.02N×94°.36E, h44^{km}, mB5.0/23, mb4.6/44, Ms4.6/3, Ms7 4.5/2*

IDC ***15*** *16:57:18.1±2.3, 5°.29N×94°.36E, h41^{km}±20^{km}, mb4.1/17, mb1 4.2/20, mb1mx4.0/39, mbtmp4.3/20, ML4.5/3, MS3.3/12, Ms1 3.3/12, ms1mx3.2/31, Error ellipse: s-maj=21.5km s-min=12.7km az=49.0*

NEIC ***15*** *16:57:18.1±1.6, 5°.20N±0°.08×94°.34E±0°.08, h44^{km}±6^{km}, mb4.7/62, Error ellipse: s-maj=12.9km s-min=9.7km az=218.0*

KLM ***15*** *16:57:19, 5°.17N×94°.32E, h72^{km}, mb4.5*

ISC 15 16:57:18.8±0.7**, 5°.21N**±0°.05×**94°.31E**±0°.05**, h51**^{km}±6^{km}**, n174, σ1^{s}.39**/177**, mb4.6**/66**, MS3.4**/8**, 2C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.02	74	P	Pn	16 57 35.6	-1.2
MLSI	Meulaboh, Aceh	2.29	114	P	Pn	16 57 54.2	+0.1
MLSI				S	Sn	16 58 27.9	+6.8
LHMI	Lhok Sumawe	2.62	89	Pn	Pn	16 57 58.5	-0.2
LHMI	Lhok Sumawe	2.62	89	P	Pn	16 57 58.7	0.0
TPTI		3.45	124	P	Pn	16 58 09.6	-0.5
PKDT	Phuket	4.80	56	P	Pn	16 58 28.3	-0.3
	3.1nm19µm342nm,0.5s						
GSI	Gunungsitoli	5.07	140	Pn	Pn	16 58 31.4	-0.9
GSI	Gunungsitoli	5.07	140	P	Pn	16 58 31.0	-1.3
	0.5nm52nm,0.6s						
PSI	Prapat	5.18	117	P	Pn	16 58 35.0	+1.0
	6.4nm,0.3s,baz=360,slow=3.1,SNR=30						
PSI				S	Sn	16 59 32.3	-0.4
	3.0nm,0.3s,baz=360,slow=19,SNR=1.0						
PSI				LR	LR	17 00 52.2	
	comp=Z,305nm,18.6s,baz=91,slow=41						
RPSI	Rantau Prapat	5.24	118		Sn	16 59 32.3	-1.4
TRTT	Trang	5.95	64	P	Pn	16 58 43.6	-0.8
KULM	Kulim	6.31	89	Pn	Pn	16 58 48.7	-0.7
KULM	Kulim	6.31	89	P	Pn	16 58 49.0	-0.4
IPM	Ipoh	6.73	96	Pn	Pn	16 58 54.4	-0.7
IPM	Ipoh	6.73	96	P	Pn	16 58 55.0	-0.1
MNSI	Mandailing Nat	6.85	130	P	Pn	16 58 56.1	-0.6
BKNI	Bangkinang	8.29	126	Pn	Pn	16 59 15.5	-0.9
MNAI	Manna	12.84	138		Pn	17 00 17.2	-1.6
CHAI	Chaiyaphum	13.02	35	P	P	17 00 33.3	+3.1
SUKH	Sukhothai	13.26	23	P	P	17 00 33.4	+0.5
	31nm,0.7s						
MHMT	Maesarieng	13.36	15	P	P	17 00 33.4	-0.6
	29nm,0.7s						
PALK	Pallekele	13.68	279	P	Pn	17 00 31.1	+0.8
	1.1nm,0.3s,baz=205,slow=14,SNR=8.7						
PALK				S	Sn	17 02 48.1	-13
	2.2nm,0.3s,baz=291,slow=18,SNR=15						
PALK				LR	LR	17 05 15.4	
	comp=Z,191nm,20.8s,baz=206,slow=35						
PALK	Pallekele	13.68	279		Pn	17 00 30.8	+0.4
KHON	Khomkaen	13.86	36	P	P	17 00 40.4	+1.0
	42nm,0.6s						
CM05	Chiang Mai Arr	13.87	19	P	Pn	17 00 35.0	+2.2
	142nm14nm,0.7s						
UTTA	Uttaradit	13.87	26	P	P	17 00 39.8	+0.1
	333nm36nm,0.6s						
CM13	Chiang Mai Arr	13.88	18	P	Pn	17 00 36.0	+3.1
	150nm15nm,0.7s						
CM04	Chiang Mai Arr	13.88	19	P	Pn	17 00 36.0	+3.1
	285nm31nm,0.6s						
CM01	Chiang Mai Arr	13.89	19	P	Pn	17 00 36.2	+3.2
	267nm28nm,0.6s						
CM02	Chiang Mai Arr	13.90	19	P	Pn	17 00 36.4	+3.1
	168nm16nm,0.7s						
CM15	Chiang Mai Arr	13.91	19	P	P	17 00 37.0	-3.2
	22nm,0.5s						
CM31	Chiang Mai Arr	13.92	19	P	Pn	17 00 36.0	+2.5
	10µm719nm,0.6s						
CM31	Chiang Mai Arr	13.92	19	P	Pn	17 00 36.2	+2.7
CMAR	Chiang Mai Arr	13.92	19	P	Pn	17 00 33.1	-0.4
	3.1nm,0.3s,baz=207,slow=15,SNR=82						
CMAR				LR	LR	17 05 38.9	
	comp=Z,74nm,19.2s,baz=235,slow=36						
CMAR				ScP	ScP	17 09 23.9	+1.7
	0.1nm,0.3s,baz=224,slow=2.5,SNR=5.9						
CMAR	Chiang Mai Arr	13.92	19	P	Pn	17 00 35.3	+1.8
CM09	Chiang Mai Arr	13.92	19	P	Pn	17 00 36.0	+2.5
	304nm30nm,0.6s						
CM32	Chiang Mai Arr	14.07	18	P	P	17 00 39.2	-2.7
CM35	Chiang Mai Arr	14.20	19	P	Pn	17 00 40.0	+2.8
LAMP	Lampang	14.21	21	P	P	17 00 43.0	-0.5
	48nm,0.7s						
CHTO	Chiang Mai	14.26	18	Pn	P	17 00 41.0	-3.0
CMMT	Chiang Mai	14.26	18	P	P	17 00 41.3	-2.7
	15nm,0.7s						
CM33	Chiang Mai Arr	14.26	18	P	P	17 00 41.0	-3.0
CM34	Chiang Mai Arr	14.36	19	P	P	17 00 43.0	-2.1
NONG	Nongkai	15.42	33	P	P	17 00 57.2	+0.4
	20nm,1.6s						
DLV	T Lat	15.52	64	P	P	17 00 58.0	-0.2
KSM	Kuching	16.39	103	P	P	17 01 07.7	0.0
KSM				IAmb	IAmb	17 01 32.9	
	comp=Z,91nm,1.8s						
KSM	Kuching	16.39	103	P	Pn	17 01 05.0	-0.6
COCO	West Island	17.47	172		P	17 01 19.3	-0.2
LEM	Lembang	17.87	132	LR	LR	17 09 38.3	
	comp=Z,88nm,18.6s,baz=322,slow=41						
CISI	Cisompet, Garu	18.50	133	P	P	17 01 29.3	-1.8
SLVN	Son La	18.53	29	P	P	17 01 31.0	-0.3
XMIS	Christmas Isla	19.25	144	P	P	17 01 37.6	-1.6
XMIS				IAmb	IAmb	17 01 56.0	
	comp=Z,112nm,1.8s						
QIZ	Qiongzhong	20.45	46	P	P	17 01 52.3	+0.1
QIZ				IAmb	IAmb	17 01 52.9	
	comp=Z,57nm,1.5s						
KMI	Kunming	21.39	21	⇓P	P	17 02 03.3	+0.8
KMI				pP	pwP	17 02 15.9	-0.7
KMI				sP	sP	17 02 21.1	+1.4
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
KMI	Kunming	21.39	21	P	P	17 02 03.9	+1.4
KMI				IAmb	IAmb	17 02 05.0	
	comp=Z,13nm,0.5s						
KKM	Kota Kinabalu	21.81	87	P	P	17 02 08.7	+1.6
KKM				IAmb	IAmb	17 02 13.9	
	comp=Z,27nm,1.1s						
ODAN	Odare	22.52	344	*e*P	P	17 02 12.4	-2.3
	comp=Z,20nm,0.5s						
RAMN	Ramite	22.84	342	*e*P	P	17 02 16.4	-1.6
	comp=Z,23nm,0.5s						
TAPN	Taplejung	22.90	345	*e*P	P	17 02 17.2	-1.5
	comp=Z,12nm,0.4s						
PKI	Pulchoki	23.80	340	*e*P	P	17 02 25.9	-1.5
	comp=Z,13nm,0.4s						
PKIN	Phulchoki	23.81	340	*e*P	P	17 02 25.8	-1.6
	comp=Z,12nm,0.4s						
DMN	Daman	23.94	340	*e*P	P	17 02 27.6	-1.0
GUN	Gumba	23.96	341	*e*P	P	17 02 27.3	-1.6
	comp=Z,25nm,0.5s						
JAGI	Jajag, Banyuwa	24.00	124	P	P	17 02 30.1	+1.0
JAGI				IAmb	IAmb	17 03 06.5	
	comp=Z,54nm,1.5s						
KKN	Kakani	24.04	340	*e*P	P	17 02 27.8	-1.8
	comp=Z,15nm,0.5s						
MYLDM	Lahad Datu	24.09	89	P	P	17 02 30.0	+0.2
MYLDM				IAmb	IAmb	17 03 00.7	
	comp=Z,34nm,1.4s						
GYA	Guiyang	24.20	28	⇑P	P	17 02 30.6	-0.3
GYA				pmax	pmax		
	comp=Z,22nm,0.7s						
LSA	Lhasa	24.54	353	P	P	17 02 33.3	-1.1
LSA				pmax	pmax		
	comp=Z,73nm,0.5s						
LSA	Lhasa	24.54	353	P	P	17 02 34.0	-0.4
LSA				IAmb	IAmb	17 02 36.2	
	comp=Z,17nm,0.5s						
DANN	Dangsing	25.10	338	*e*P	P	17 02 39.0	-0.3
	comp=Z,46nm,0.5s						
H08S2	Diego Garcia H	25.24	240	T	T	17 28 41.4	
	baz=60,slow=76,SNR=442						
H08S3	Diego Garcia H	25.24	240	T	T	17 28 51.6	
	baz=60,slow=76,SNR=482						
H08S1	Diego Carcia H	25.25	240	T	T	17 28 49.4	
	baz=60,slow=76,SNR=236						
TOLI2	Tolitoli	26.73	98	P	P	17 02 55.4	+1.5
TOLI2				IAmb	IAmb	17 03 33.0	
	comp=Z,35nm,1.8s						
KAPI	Kappang	27.36	111	LR	LR	17 13 49.2	
	comp=Z,39nm,18.3s,baz=297,slow=36						
KAPI	Kappang	27.36	111	P	P	17 02 59.7	+0.2
KAPI				IAmb	IAmb	17 03 35.0	
	comp=Z,35nm,1.2s						
ENH	Enshi	28.74	28	P	P	17 03 09.6	-2.0
ENH				IAmb	IAmb	17 03 12.6	
	comp=Z,37nm,1.7s						
XAN	Xi'an	31.73	23	P	P	17 03 36.3	-1.8
XAN				pP	pP	17 03 48.3	-2.1
XAN				pmax	pmax		
	comp=Z,21nm,0.6s						
XAN				pmax	pmax		
	comp=Z,190nm,5.4s						
LZH	Lanzhou	31.95	15	*e*P	P	17 03 43.5	+3.4
LZH				pP	pwP	17 03 55.6	-0.4
LZH				sP	sP	17 04 00.8	+2.6
LZH				*e*PP	PP	17 04 51.4	-1.7
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,5.0s						
GTA	Gaotai	34.41	8	⇑P	P	17 04 00.4	-1.1
GTA				pP	pP	17 04 13.0	-0.9
GTA				sP	pwP	17 04 17.8	+0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	Nilore	34.41	328	P	P	17 04 01.0	-0.4
NIL				IAmb	IAmb	17 04 18.3	
	comp=Z,6.3nm,0.8s						
NJ2	Nanjing	35.22	38	*e*P	P	17 04 09.4	+1.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KSH	Kashi	37.96	337	P	P	17 04 33.5	+1.7
KSH				pP	pwP	17 04 46.0	-1.0
KSH				S	S	17 10 21.9	+1.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,550nm,7.1s						
KSH				LR	LR		
	comp=Z,760nm,6.3s						
KSH				LR	LR		
	comp=Z,780nm,6.6s						
KSH				LR	LR		
	comp=Z,930nm,6.4s						
FITZ	Fitzroy Crossi	38.62	128	P	P	17 04 36.0	-1.5
	baz=39,SNR=3.4						
FITZ	Fitzroy Crossi	38.62	128	P	P	17 04 36.6	-0.8
	comp=Z,4.1nm,0.8s,baz=306,slow=7.8,SNR=9.5						
FITZ				PcP	PcP	17 06 49.8	+0.7
	comp=Z,1.8nm,0.9s,baz=3.0,slow=4.3,SNR=1.8						
FITZ	Fitzroy Crossi	38.62	128	P	P	17 04 36.9	-0.5
HHC	Hu-ho-hao-te	38.71	21	*e*P	P	17 04 39.3	+1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,57nm,5.1s						
FAKI	Fak Fak	38.75	101	P	P	17 04 37.7	-1.0
FAKI				IAmb	IAmb	17 04 51.5	
	comp=Z,28nm,1.2s						
WMQ	Urumqi	38.89	352	*e*P	P	17 04 40.8	+1.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,62nm,6.7s						
MTN	Manton Dam	40.74	116	P	P	17 04 53.8	-1.4
	baz=41,SNR=10						
MTN	Manton Dam	40.74	116	P	P	17 04 53.9	-1.4
AAK	Ala-Archa	41.21	338	P	P	17 05 00.3	+1.4
KDU	Kakadu	41.88	115	P	P	17 05 02.9	-1.6
	baz=42,SNR=5.8						
MK31	Makanchi Array	42.71	348	P	P	17 05 10.6	-0.2
MK31				IAmb	IAmb	17 05 11.6	
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	42.71	348	P	P	17 05 10.8	-0.1
	comp=Z,14nm,0.5s,baz=168,slow=7.7,SNR=144						
MKAR				PcP	PcP	17 07 02.6	+0.7
	comp=Z,0.4nm,0.4s,baz=194,slow=4.0,SNR=2.1						
JSU	Suzuyama	42.79	48	P	P	17 05 11.1	-0.7
MAKZ	Makanchi	42.79	348	P	P	17 05 11.5	0.0
KK31	Karatay Array	43.21	334	P	P	17 05 15.3	+0.3
KKAR	Karatay Array	43.21	334	P	P	17 05 15.4	+0.4
KKAR	Karatay Array	43.21	334	P	P	17 05 15.5	+0.5
SONM	Songino Array	43.71	12	P	P	17 05 17.9	-1.2
	comp=Z,2.0nm,0.5s,baz=189,slow=8.8,SNR=25						
SONM				pP	pP	17 05 29.9	-1.9

	comp=Z,4.9nm,1.1s,baz=210,slow=6.2,SNR=9.5						
SONM				PcP	**PcP**	**17 07 05.7**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=191,slow=4.1,SNR=10						
SONM				LR	LR	17 23 41.6	
	comp=Z,44nm,19.3s,baz=180,slow=36						
SONM	**Songino Array**	**43.71**	**12**	P	**P**	**17 05 17.5**	**-1.6**
SONM				PcP	**PcP**	**17 07 05.1**	**-0.2**
ULN	**Ulaanbaatar**	**43.88**	**12**	P	**P**	**17 05 19.2**	**-1.3**
ULN				PcP	**PcP**	**17 07 06.6**	**+0.6**
H01W3	**Cape Leeuwin H**	**44.04**	**156**	T	T	17 53 13.0	
	baz=329						
H01W2	**Cape Leeuwin H**	**44.05**	**156**	T	T	17 53 08.9	
	baz=329						
H01W1	**Cape Leeuwin H**	**44.05**	**156**	T	T	17 53 07.9	
	baz=329						
KSRS	**Korea Array**	**44.38**	**39**	P	**P**	**17 05 22.7**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=224,slow=9.0,SNR=5.2						
KSRS				LR	LR	17 26 24.8	
	comp=Z,51nm,18.6s,baz=232,slow=40						
GEYT	**Alibeck**	**46.31**	**320**	P	**P**	**17 05 40.3**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=122,slow=11,SNR=3.7						
GEYT	**Alibeck**	**46.31**	**320**	P	**P**	**17 05 41.0**	**+1.2**
GYA0B	**ALIBECK ARRAY**	**46.31**	**320**	P	**P**	**17 05 40.8**	**+1.1**
GYA0B				IAmb	IAmb	17 06 09.2	
	comp=Z,4.2nm,0.7s						
JMN	**Monobe**	**46.39**	**47**	P	**P**	**17 05 41.4**	**+1.0**
WRAB	**Tennant Creek**	**46.62**	**124**	P	**P**	**17 05 42.2**	**-0.2**
WRAB				IAmb	IAmb	17 05 43.4	
	comp=Z,9.7nm,0.7s						
KURK	**Kurchatov**	**47.22**	**346**	P	**P**	**17 05 46.7**	**+0.1**
KURK				IAmb	IAmb	17 05 47.9	
	comp=Z,9.3nm,0.7s						
ASAR	**Alice Springs**	**48.11**	**128**	P	**P**	**17 05 54.0**	**0.0**
	comp=Z,1.5nm,0.4s,baz=301,slow=7.7,SNR=35						
ASAR				PcP	**PcP**	**17 07 21.5**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=309,slow=2.9,SNR=2.7						
ASAR				LR	LR	17 27 41.8	
	comp=Z,18nm,20.5s,baz=356,slow=38						
ASAR	**Alice Springs**	**48.11**	**128**	P	**P**	**17 05 54.2**	**+0.2**
ASAR				PcP	**PcP**	**17 07 21.4**	**+0.3**
AS31	**Alice Springs**	**48.11**	**128**	P	**P**	**17 05 54.0**	**0.0**
ZAA0	**Zalesovo Array**	**49.20**	**353**	P	**P**	**17 06 01.7**	**-0.1**
ZAA0				IAmb	IAmb	17 06 02.2	
	comp=Z,9.2nm,0.7s						
ZALV	**Zalesovo Beam**	**49.20**	**353**	P	**P**	**17 06 01.5**	**-0.3**
	comp=Z,7.9nm,0.4s,baz=180,slow=7.1,SNR=58						
ZALV				LR	LR	17 32 02.9	
	comp=Z,51nm,18.9s,baz=278,slow=42						
ZALV	**Zalesovo Beam**	**49.20**	**353**	P	**P**	**17 06 01.7**	**-0.1**
JGF	**Kuroka**	**49.80**	**47**	P	**P**	**17 06 06.4**	**-0.4**
RAYN	**Ar Rayn**	**50.37**	**296**	P	**P**	**17 06 13.4**	**+2.1**
MJAR	**Matsushiro Arr**	**50.84**	**46**	LR	LR	17 31 03.8	
	comp=Z,37nm,18.9s,baz=260,slow=40						
USRK	**Ussuriysk Ar.**	**50.98**	**34**	P	**P**	**17 06 15.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=237,slow=11,SNR=6.5						
USRK	**Ussuriysk Ar.**	**50.98**	**34**	P	**P**	**17 06 16.3**	**+0.8**
BRVK	**Borovoye**	**51.61**	**342**	P	**P**	**17 06 19.7**	**-0.3**
BRVK				IAmb	IAmb	17 06 20.5	
	comp=Z,4.7nm,0.6s						
COEN	**Coen**	**52.09**	**112**	P	**P**	**17 06 22.9**	**-1.3**
COEN				IAmb	IAmb	17 06 37.8	
	comp=Z,9.5nm,1.2s						
ABKAR	**Akbulak array**	**52.65**	**332**	P	**P**	**17 06 27.9**	**+0.1**
ABKAR				IAmb	IAmb	17 06 44.4	
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**52.65**	**332**	P	**P**	**17 06 27.7**	**-0.1**
JMM	**Marumori**	**53.28**	**46**	P	**P**	**17 06 31.9**	**-0.7**
BBOO	**Buckleboo**	**54.75**	**137**	P	**P**	**17 06 43.5**	**+0.1**
BBOO				IAmb	IAmb	17 06 51.3	
	comp=Z,15nm,1.4s						
QLP	**Quilpie**	**57.72**	**126**	P	**P**	**17 07 04.9**	**+0.1**
	baz=58,SNR=5.3						
STKA	**Stephens Creek**	**58.17**	**133**	P	**P**	**17 07 08.1**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=192,slow=4.6,SNR=3.9						
STKA	**Stephens Creek**	**58.17**	**133**	P	**P**	**17 07 07.4**	**-0.4**
ARU	**Arti**	**58.40**	**338**	P	**P**	**17 07 08.5**	**-0.5**
ARU				IAmb	IAmb	17 07 24.8	
	comp=Z,15nm,1.2s						
RABL	**Rabaul**	**58.53**	**98**	P	**P**	**17 07 11.0**	**+0.3**
KBZ	**Khabaz**	**59.17**	**319**	P	**P**	**17 07 15.6**	**+1.0**
	comp=Z,2.1nm,1.0s,baz=309,slow=10,SNR=2.7						
CMSA	**Cobar Meteorol**	**61.06**	**130**	P	**P**	**17 07 28.6**	**+0.8**
	baz=61,SNR=18						
YAK	**Yakutsk**	**62.45**	**18**	P	**P**	**17 07 35.1**	**-1.4**
YAK				IAmb	IAmb	17 07 49.5	
	comp=Z,5.6nm,0.8s						
BRTR	**Keskin Array B**	**64.30**	**312**	P	**P**	**17 07 49.0**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=128,slow=7.6,SNR=10						
TIXI	**Tiksi**	**69.80**	**11**	P	**P**	**17 08 22.4**	**-1.1**
TIXI				IAmb	IAmb	17 08 22.7	
	comp=Z,4.3nm,0.7s						
PETK	**Petropavlovsk-**	**70.06**	**35**	LR	LR	17 42 37.2	
	comp=Z,23nm,18.4s,baz=297,slow=39						
AKASG	**Malin Array Be**	**70.34**	**322**	P	**P**	**17 08 25.8**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=91,slow=5.7,SNR=12						
AKASG	**Malin Array Be**	**70.34**	**322**	P	**P**	**17 08 26.3**	**-0.9**
AKBB	**Malin Array Si**	**70.34**	**322**	P	**P**	**17 08 26.0**	**-1.2**
AKBB				IAmb	IAmb	17 09 03.9	
	comp=Z,12nm,1.8s						
BURAR	**Bucovina Array**	**72.13**	**318**	P	**P**	**17 08 38.7**	**+0.5**
BUR08	**Bucovina Ar. S**	**72.15**	**318**	P	**P**	**17 08 39.2**	**+0.9**
AGG	**Agios Georgios**	**72.75**	**309**	P	**P**	**17 08 39.8**	**-2.2**
AGG				IAmb	IAmb	17 08 50.6	
	comp=Z,23nm,1.5s						
BOSA	**Boshof**	**74.34**	**239**	P	**P**	**17 08 52.8**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=102,slow=5.9,SNR=4.1						
BOSA				LR	LR	17 38 09.9	
	comp=Z,23nm,18.4s,baz=43,slow=33						
FIA1	**FINESS Array S**	**75.13**	**333**	P	**P**	**17 08 54.8**	**-0.6**
FINES	**FINESS Array B**	**75.13**	**333**	P	**P**	**17 08 54.8**	**-0.6**
	comp=Z,4.9nm,1.0s,baz=107,slow=5.8,SNR=11						
FINES	**FINESS Array B**	**75.13**	**333**	P	**P**	**17 08 55.0**	**-0.4**
OJC	**Ojcow**	**76.12**	**320**	P	**P**	**17 09 02.0**	**+0.7**
OJC				IAmb	IAmb	17 09 02.7	
	comp=Z,5.4nm,0.6s						
ARCES	**ARCESS Array B**	**77.81**	**340**	P	**P**	**17 09 10.4**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=103,slow=6.4,SNR=15						
ARCES	**ARCESS Array B**	**77.81**	**340**	P	**P**	**17 09 11.1**	**+0.6**
SOKA	**Soboth**	**78.87**	**316**	*e*P	**P**	**17 09 17.7**	**+0.8**
	comp=Z,4.8nm,1.0s						
GEC2	**GERESS Array S**	**79.92**	**319**	P	**P**	**17 09 23.2**	**+0.7**
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**17 09 23.4**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=102,slow=5.1,SNR=22						
GERES				pP	**pP**	**17 09 37.1**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=96,slow=5.5,SNR=5.1						
GERES	**GERESS Array B**	**79.92**	**319**	P	**P**	**17 09 22.9**	**+0.4**
ZOU	**Zoufplan**	**80.28**	**316**	P	**P**	**17 09 24.9**	**+0.2**
ZOU				IAmb	IAmb	17 09 31.4	
	comp=Z,11nm,1.4s						
ABTA	**Abfaltersbach**	**80.61**	**316**	*e*P	**P**	**17 09 25.9**	**-0.5**
	comp=Z,3.2nm,0.6s						
WTTA	**Wattenberg**	**81.23**	**317**	*e*P	**P**	**17 09 28.9**	**-0.8**
	comp=Z,2.5nm,0.5s						
SQTA	**Sankt Quirin**	**81.52**	**317**	*e*P	**P**	**17 09 30.7**	**-0.5**
	comp=Z,5.2nm,0.5s						
MOTA	**Moosalm**	**81.59**	**317**	*e*P	**P**	**17 09 30.8**	**-0.9**
	comp=Z,9.1nm,1.3s						
RETA	**Reutte**	**81.83**	**317**	*e*P	**P**	**17 09 33.2**	**+0.4**
	comp=Z,4.8nm,0.5s						
NC204	**NORSAR Array S**	**82.36**	**331**	P	**P**	**17 09 35.0**	**-0.2**
SPA0	**Spitsbergen Ar**	**82.46**	**348**	P	**P**	**17 09 36.1**	**+0.7**
MSSA	**Maissana**	**82.67**	**314**	P	**P**	**17 09 37.1**	**-0.1**
SENIN	**Lac Senin/Sane**	**84.20**	**316**	P	**P**	**17 09 46.5**	**+1.3**
SENIN				IAmb	IAmb	17 10 05.6	
	comp=Z,7.8nm,1.1s						
QRZ	**Quartz Range**	**84.52**	**132**	P	**P**	**17 09 47.1**	**+0.5**
OXZ	**Oxford**	**84.67**	**134**	P	**P**	**17 09 49.0**	**+1.6**
ILAR	**Eielson Array**	**97.13**	**22**	P	**P**	**17 10 45.1**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=297,slow=3.1,SNR=1.8						
NVAR	**Mina Array Bea**	**127.08**	**32**	PKP	**PKiKP**	**17 16 19.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=292,slow=0.5,SNR=2.6						
PDAR	**Pinedale Array**	**127.56**	**22**	PKP	**PKPdf**	**17 16 19.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=117,slow=1.7,SNR=3.2						
TXAR	**Lajitas Array**	**141.55**	**26**	PKhKP	PKPpre	17 16 38.9	
	comp=Z,0.3nm,0.4s,baz=267,slow=0.9,SNR=8.1						

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*IDC **15** 17:28:50.2±2.9, 38°02N×144°22E, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.3/25, mbtmp3.4/4, ML2.5/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/28, Error ellipse: s-maj=75.1km s-min=32.5km az=59.0*

*JMA **15** 17:28:55.0±0.2, 38°05N×143°81E, h41^{km}, M3.6*

ISC 15 17:28:55.4±1.3, **38°00N**±0°06×**143°93E**±0°09, **h35**^{km}, **n23**, σ**1^{s}58**/27, **mb3.4**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.97**	**280**	P	**Pn**	**17 29 25.3**	**-0.9**
JIKH				*e*S	**Sn**	**17 29 47.7**	**-2.0**
OFUJ	**Ofunato**	**2.08**	**302**	P	**Pn**	**17 29 27.0**	**-0.8**
OFUJ				*e*S	**Sn**	**17 29 50.4**	**-2.0**
JIO	**Ouri**	**2.08**	**284**	P	**Pn**	**17 29 27.3**	**-0.5**
JIO				S	**Sn**	**17 29 50.4**	**-2.1**
JKMT	**Kesennumamotoy**	**2.09**	**294**	P	**Pn**	**17 29 27.0**	**-1.0**
JMK	**Ichinoseki**	**2.33**	**295**	P	**Pn**	**17 29 30.8**	**-0.4**
JMK				*e*S	**Sn**	**17 29 57.3**	**-1.3**
JOM	**Ohasama**	**2.53**	**306**	P	**Pn**	**17 29 33.6**	**-0.5**
JFT	**Otama**	**2.88**	**262**	P	**Pn**	**17 29 39.3**	**+0.4**
JFT				*e*S	**Sn**	**17 30 11.8**	**-0.6**
JYK	**Kaneyama**	**2.95**	**289**	*e*S	**Sn**	**17 30 13.4**	**-0.5**
JANG	**Nango**	**3.02**	**322**	P	**Pn**	**17 29 41.2**	**+0.4**
JAG	**Ashikaga**	**3.90**	**248**	P	**Pn**	**17 29 53.1**	**+0.3**
BSO1	**Boso 1**	**4.10**	**216**	P	**Pn**	**17 29 53.7**	**-1.4**
JRY	**Ryogami san**	**4.48**	**245**	P	**Pn**	**17 30 00.6**	**-0.3**
JRY				*e*S	**Sn**	**17 30 48.4**	**-3.4**
JCH	**Churui**	**4.63**	**355**	P	**Pn**	**17 30 01.1**	**-1.8**
JOD2	**Odawara 2**	**4.75**	**236**	*e*S	**Sn**	**17 30 54.3**	**-4.1**
MJAR	**Matsushiro Arr**	**4.79**	**254**	Pn	**Pn**	**17 30 06.6**	**+1.5**
	0.2nm,0.3s,baz=89,slow=14,SNR=4.4						
MJAR				Sn	**Sn**	**17 30 59.8**	**+0.5**
	0.1nm,0.3s,baz=24,slow=6.6,SNR=2.0						
MAT	**Matsushiro**	**4.79**	**254**	P	**Pn**	**17 30 06.2**	**+1.1**
MAT				*e*S	**Sn**	**17 30 58.6**	**-0.7**
KSRS	**Korea Array**	**12.69**	**272**	LR	LR	17 36 00.0	
	comp=Z,18nm,18.4s,baz=85,slow=33						
H11N2	**WAKE ISLAND Hy**	**27.00**	**126**	T	T	18 02 52.7	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**27.01**	**126**	T	T	18 02 49.5	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**27.02**	**126**	T	T	18 02 45.2	
	baz=317						
SONM	**Songino Array**	**28.94**	**302**	P	**P**	**17 34 52.4**	**+1.1**
	0.2nm,0.5s,baz=101,slow=7.5,SNR=2.2						
MKAR	**Makanchi Array**	**45.31**	**302**	P	**P**	**17 37 11.4**	**+1.6**
	0.4nm,0.7s,baz=90,slow=7.5,SNR=3.2						
ASAR	**Alice Springs**	**62.05**	**190**	P	**P**	**17 39 12.9**	**+0.5**
	0.4nm,0.6s,baz=4.2,slow=6.6,SNR=9.7						

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*SOME **15** 17:31:36.5, 42°40N×70°95E, h0^{km}*

*NNC **15** 17:31:39.5±0.5, 42°61N×71°01E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=5.3km s-min=2.7km az=161.0*

*KRNET **15** 17:31:39.9±0.1, 42°31N×71°13E, h15^{km}, mb2.5*

ISC 15 17:31:36.0±1.4, **42°47N**±0°03×**70°97E**±0°03, **h6**^{km}±13^{km}, **n24**, σ**1^{s}03**/43, **22C-6D**, **Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.71**	**332**	⇑P	**Pb**	**17 31 51.6**	**+0.6**
	0.5nm,0.2s,baz=148,slow=14,SNR=214						
KK31				⇑S	**Sb**	**17 32 01.3**	**+0.2**
	3.8nm,0.2s,baz=142,slow=27,SNR=4.9						
TRKS	**Terek-Say**	**0.95**	**172**	⇓*i*P	**Pn**	**17 31 56.2**	**+0.1**
	baz=78						
TRKS				⇓*i*S	**Sb**	**17 32 08.1**	**+0.2**
	baz=78						
BRLS	**Borolday**	**1.00**	**304**	*e*P	**Pb**	**17 31 55.7**	**-0.1**
	22nm,0.2s						
BRLS				*e*S	**Sb**	**17 32 09.5**	**+0.2**
	37nm,0.2s						
MNAS	**Manas**	**1.14**	**89**	⇓*i*P	**Pn**	**17 31 59.5**	**+0.8**
	baz=79						
MNAS				⇓*i*S	**Sn**	**17 32 14.2**	**-0.5**
	baz=79						
MRKS	**Merke**	**1.69**	**80**	*e*P	**Pg**	**17 32 09.5**	**+1.0**
	2.4nm,0.1s						
MRKS				*e*S	**Sg**	**17 32 32.6**	**+2.3**
	20nm,0.3s						
MRKS	**Merke**	**1.69**	**80**	P	**Pg**	**17 32 09.5**	**+1.0**
	2.4nm,0.1s						
MRKS				S	**Sg**	**17 32 32.6**	**+2.3**
	20nm,0.3s						
ARSB	**Arslanbob**	**1.89**	**127**	⇑*i*P	**Pg**	**17 32 11.9**	**-0.4**
	baz=25						
ARSB				⇑*i*S	**Sb**	**17 32 35.1**	**0.0**
	baz=25						
AML	**Almayashu**	**2.05**	**99**	⇑*i*P	**Pg**	**17 32 15.4**	**0.0**
	baz=94						
AML				⇑*i*S	**Sg**	**17 32 41.4**	**-0.6**
	baz=94						
EKS2	**Erkin-Say**	**2.09**	**84**	⇑*e*P	**Pg**	**17 32 16.7**	**+0.7**
	baz=79						
EKS2				⇑*i*S	**Sg**	**17 32 43.5**	**+0.5**
	baz=79						
OHH	**Osh**	**2.38**	**144**	⇑*i*P	**Pb**	**17 32 19.4**	**+0.1**
	baz=44						
OHH				⇑*i*S	**Sb**	**17 32 48.3**	**-0.7**
	baz=44						
BTK	**Batken**	**2.41**	**183**	⇑*i*P	**Pb**	**17 32 20.3**	**+0.4**
	baz=86						
BTK				⇑*i*S	**Sb**	**17 32 50.2**	**+0.2**
	baz=86						
ARLS	**Aral**	**2.57**	**103**	⇓*i*P	**Pb**	**17 32 22.8**	**+0.2**
	baz=0.0						
ARLS				⇓*i*S	**Sb**	**17 32 54.0**	**-0.6**
	baz=0.0						
AAK	**Ala-Archa**	**2.61**	**85**	⇑*e*P	**Pg**	**17 32 24.3**	**-1.8**
	baz=81						
AAK				⇑*i*S	**Sb**	**17 32 56.0**	**+0.2**
	baz=81						
AAK	**Ala-Archa**	**2.61**	**85**	⇑Pg	**Pg**	**17 32 26.1**	**0.0**
	1.0nm,0.6s						
AAK				⇑Lg	Lg	17 33 00.7	
	4.8nm,0.7s						
UCH	**Uchtor**	**2.64**	**94**	⇑*e*P	**Pb**	**17 32 24.7**	**+0.7**
	baz=91						
UCH				⇑*i*S	**Sb**	**17 32 57.2**	**+0.3**
	baz=91						
USP	**Ospenovka**	**2.72**	**72**	⇑*i*P	**Pg**	**17 32 26.3**	**-1.8**
	baz=68						
USP				⇑*i*S	**Sb**	**17 32 59.8**	**+1.1**
	baz=68						
SGDS	**Sogindy**	**2.86**	**69**	Pg	**Pg**	**17 32 29.9**	**-1.0**
	2.4nm,0.8s						
SGDS				Lg	Lg	17 33 07.8	
	2.8nm,0.2s						
KBK	**Karagaybulak**	**2.95**	**85**	⇑*i*P	**Pb**	**17 32 29.1**	**0.0**
	baz=82						
KBK				⇑*i*S	**Sb**	**17 33 05.0**	**-0.5**
	baz=82						
DGS	**Degeres**	**3.62**	**76**	*e*P	**Pg**	**17 32 43.7**	**-1.6**
	1.1nm,0.4s						
DGS				*e*S	**Sg**	**17 33 31.0**	**-1.2**
	3.2nm,0.5s						
DGS	**Degeres**	**3.62**	**76**	Pg	**Pg**	**17 32 43.7**	**-1.6**
	1.1nm,0.4s						
DGS				Lg	Lg	17 33 31.0	
	3.2nm,0.5s						
KRBS	**Karabastau**	**3.66**	**69**	*e*P	**Pg**	**17 32 45.0**	**-1.1**
	0.6nm,0.3s						
KRBS				*e*S	**Sg**	**17 33 33.4**	**-0.1**
	1.4nm,0.2s						
KRBS	**Karabastau**	**3.66**	**69**	Pg	**Pg**	**17 32 45.0**	**-1.1**
	0.6nm,0.3s						
KRBS				Lg	Lg	17 33 33.4	
	1.4nm,0.2s						
KTBS	**Karatobe**	**4.37**	**72**	*e*P	**Pg**	**17 32 57.8**	**-1.9**
	0.6nm,0.2s						
KTBS				*e*S	**Sg**	**17 33 55.9**	**-0.4**
	3.6nm,0.5s						
KTBS	**Karatobe**	**4.37**	**72**	Pg	**Pg**	**17 32 57.8**	**-1.9**
	0.6nm,0.2s						
KTBS				Lg	Lg	17 33 55.8	
	3.6nm,0.5s						

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*HEL **15** 18:01:11.3±0.2, 67°16N×19°73E, h0^{km}, ML2.5, Explosion*

*UPP **15** 18:01:18.9±0.2, 67°07N×20°91E, h0^{km}, ML2.0, Explosion*

*NAO **15** 18:01:19.9±1.0, 67°06N×21°19E, ML2.6*

*IDC **15** 18:01:20.2±0.9, 67°07N×21°06E, h0^{km}, mb1 3.4/5, mb1mx3.1/39, mbtmp3.4/5, ML2.0/4, Error ellipse: s-maj=9.6km s-min=4.0km az=150.0*

*BER **15** 18:01:21.9±2.8, 67°04N×20°87E, h0^{km}, ML2.6(NAO), Suspected explosion*

ISC 15 18:01:18.9±0.7, **67°08N**±0°03×**20°90E**±0°03, **h0**^{km}, **n42**, σ**1^{s}35**/62, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.57**	**48**	P	**Pg**	**18 01 29.9**	**0.0**
PAJU	**Pajala**	**0.87**	**93**	P	**Pg**	**18 01 35.0**	**-0.6**
PAJU				S	**Sg**	**18 01 46.8**	**0.0**
PAJU	**Pajala**	**0.87**	**93**	PG	**Pg**	**18 01 34.9**	**-0.7**
	baz=277						
PAJU				SB	**Sn**	**18 01 52.6**	**+0.8**
RATU	**Laukkuluspa**	**0.90**	**327**	P	**Pg**	**18 01 36.0**	**-0.2**
KUA	**Kurravaara**	**0.91**	**346**	P	**Pg**	**18 01 35.8**	**-0.5**
SALU	**Saltoluokta**	**0.98**	**289**	P	**Pg**	**18 01 37.5**	**-0.2**
SALU				S	**Sg**	**18 01 51.1**	**+0.7**
LANU	**Lannavaara**	**1.06**	**23**	P	**Pg**	**18 01 38.6**	**-0.6**
LANU	**Lannavaara**	**1.06**	**23**	PN	**Pg**	**18 01 35.7**	**-3.5**
NIKU	**Nikkaluokta**	**1.07**	**319**	P	**Pg**	**18 01 39.0**	**-0.4**
KOVU	**Salmi**	**1.18**	**347**	P	**Pg**	**18 01 40.9**	**-0.7**
TOF	**Tornio**	**1.70**	**125**	PG	**Pn**	**18 01 49.5**	**-0.2**
TOF				MSG		18 02 14.5	
	comp=Z,30nm,0.2s						
TOF				SG	**Sg**	**18 02 18.0**	**+4.6**
KIF	**Kilpisjarvi**	**1.94**	**359**	Pn	**Pb**	**18 01 55.0**	**-0.1**
KIF				Sn	**Sg**	**18 02 21.2**	**+0.2**
KIF	**Kilpisjarvi**	**1.94**	**359**	*e*P	**Pb**	**18 01 54.9**	**-0.2**
KIF	**Kilpisjarvi**	**1.94**	**359**	Pn	**Pb**	**18 01 55.0**	**-0.1**
KIF				Sn	**Sg**	**18 02 21.2**	**+0.2**
RNF	**Rovaniemi**	**2.08**	**101**	PG	**Pn**	**18 01 55.7**	**+0.7**
RNF				SN	**Sb**	**18 02 24.3**	**+0.6**
I37NO	**I37NO**	**2.18**	**338**	*i*		18 18 04.5	
	baz=155,slow=324,SNR=4.1						
SGF	**Sodankyl**	**2.22**	**78**	PG	**Pn**	**18 01 57.7**	**+0.8**
	baz=263						
SGF				SN	**Sb**	**18 02 27.6**	**-0.1**
BURU	**Burvik**	**2.51**	**175**	PG	**Pn**	**18 02 01.9**	**+0.9**
OUL	**Oulu**	**2.85**	**132**	PB	**Pn**	**18 02 07.2**	**+1.6**
ARA0	**ARCESS Array S**	**3.00**	**33**	Pn	**Pn**	**18 02 08.1**	**+0.4**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**18 02 44.9**	**+0.5**
	baz=217,slow=28						
ARA0	**ARCESS Array S**	**3.00**	**33**	*e*P	**Pn**	**18 02 08.1**	**+0.4**
ARA0	**ARCESS Array S**	**3.00**	**33**	Pn	**Pn**	**18 02 08.1**	**+0.4**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**18 02 44.9**	**+0.5**
	baz=217,slow=28						
ARCES	**ARCESS Array B**	**3.00**	**33**	Pn	**Pn**	**18 02 08.0**	**+0.2**
	baz=209,slow=14,SNR=34						
ARCES				Sn	**Sn**	**18 02 44.7**	**+0.4**
	baz=216,slow=24,SNR=13						
OUF	**Merijarvi**	**3.15**	**148**	PB	**Pn**	**18 02 10.6**	**+0.9**
UMAU	**Umeaa**	**3.21**	**182**	PG	**Pn**	**18 02 11.1**	**+0.6**
UMAU				SG	**Sb**	**18 02 53.4**	**-2.9**
VRF	**Varrio**	**3.43**	**75**	PB	**Pn**	**18 02 15.4**	**+1.9**
	baz=263						
VRF				SG	**Sg**	**18 03 07.8**	**-1.2**
MSF	**Maaselka**	**3.47**	**106**	PB	**Pn**	**18 02 15.6**	**+1.5**
	baz=292						
KU6	**Riekki**	**3.75**	**102**	PN	**Pn**	**18 02 18.6**	**+0.7**
HUSU	**Husum**	**3.82**	**191**	PG	**Pn**	**18 02 20.2**	**+1.3**
HUSU				SB	**Sn**	**18 03 06.1**	**+1.7**
VAF	**Ylistaro**	**4.12**	**169**	PB	**Pn**	**18 02 24.2**	**+1.2**
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 02 30.5**	**-0.6**
	baz=272,slow=10						
APA0				Sn	**Sn**	**18 03 25.0**	**-1.3**
	baz=266,slow=37						
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 02 30.5**	**-0.6**
	baz=272,slow=10						
APA0				Sn	**Sn**	**18 03 25.0**	**-1.3**
	baz=266,slow=37						
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	**Pn**	**18 02 50.9**	**+0.8**
	baz=345,slow=14						
FIA0				Sn	**Sn**	**18 03 59.2**	**-1.1**
	baz=337,slow=22						
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	**Pn**	**18 02 50.9**	**+0.8**
	baz=345,slow=14						
FIA0				Sn	**Sn**	**18 03 59.2**	**-1.1**
	baz=337,slow=22						
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**18 02 50.9**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=8.3						
FINES				Sn	**Sn**	**18 03 59.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=342,slow=22,SNR=1.1						
FINES				Lg	Lg	18 04 30.2	
	comp=Z,0.2nm,0.3s,baz=345,slow=26,SNR=2.3						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**18 03 08.7**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=27,slow=16,SNR=1.6						
NOA				Sn	**Sn**	**18 04 27.4**	**-5.1**
	comp=Z,0.0nm,0.3s,baz=47,slow=22,SNR=1.2						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**18 03 11.0**	**+0.5**
	baz=38,slow=11						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**18 03 11.0**	**+0.5**
	baz=38,slow=11						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 03 11.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=2.0						
HFS				Sn	**Sn**	**18 04 37.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=35,slow=28,SNR=2.6						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 03 11.5**	**-0.3**
	baz=23,slow=14						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**18 03 11.5**	**-0.3**
	baz=23,slow=14						
SPITS	**Spitsbergen Ar**	**11.23**	**355**	Pn	**Pn**	**18 04 01.7**	**+1.2**
	baz=160,slow=13,SNR=1.2						

IDC 15 18:27:16.5±10.0, **22°28S**×**76°86W**, **h0**^{km}, **mb3.7**/2, **mb1 3.9**/2, **mb1mx3.6**/23, **mbtmp3.7**/2, **Error ellipse: s-maj=488.8km s-min=75.9km az=27.0**, **Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N1	**Juan Fernandez**	**11.26**	**189**	T	T	18 40 17.0	
	baz=7.0						
H03N2	**Juan Fernandez**	**11.26**	**189**	T	T	18 40 17.0	
	baz=7.0,slow=74						
H03N3	**Juan Fernandez**	**11.28**	**189**	T	T	18 40 14.9	
	baz=7.0,slow=74						
TORD	**Torodi Ar. Bea**	**84.61**	**74**	P	P	18 39 52.7	+0.2
	0.5nm,0.5s,baz=246,slow=5.7,SNR=2.4						
YKA	**Yellowknife Ar**	**89.65**	**343**	P	P	18 40 15.8	+0.1
	0.4nm,0.9s,baz=136,slow=5.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**145.47**	**19**	PKPbc	PKPbc	18 46 55.5	-0.8
	0.6nm,0.5s,baz=333,slow=3.5,SNR=4.3						
MKAR	**Makanchi Array**	**150.30**	**30**	PKPbc	PKPbc	18 47 08.9	-0.8
	0.5nm,0.9s,baz=314,slow=2.7,SNR=4.2						

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*IDC **15** 18:33:10.0±0.9, 23°84N×121°86E, h0^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.5/41, mbtmp3.6/9, MS3.2/3, Ms1 3.2/3, ms1mx2.8/31, Error ellipse: s-maj=30.4km s-min=20.1km az=70.0*

*JMA **15** 18:33:12.8±0.1, 23°80N×121°62E, h21^{km}±2^{km}, M3.3*

*ASIES **15** 18:33:13.5, 23°87N×121°56E, h20^{km}, MW3.8*

*TAP **15** 18:33:13.9, 23°85N×121°58E, h23^{km}, ML4.3, C*

ISC 15 18:33:13.6±0.6, **23°83N**±0°01×**121°63E**±0°02, **h21**^{km}±1^{km}, **n176**, σ**0^{s}97**/294, **mb3.5**/9, **2C-37D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.15**	**350**	⇑*i*P	**Pb**	**18 33 19.1**	**-0.5**
	baz=25						
HWA				*e*S	**Sb**	**18 33 23.2**	**-0.4**
	baz=25						
ESL	**Shilin**	**0.18**	**265**	⇓*i*P	**Pb**	**18 33 18.8**	**-0.6**
	baz=263						
ESL				*i* S	**Sb**	**18 33 22.1**	**-1.4**
	baz=263						
EGFH	**Guangfu**	**0.25**	**229**	⇓*i*P	**Pb**	**18 33 19.9**	**+0.2**
	baz=228						
EGFH				*e*S	**Sb**	**18 33 24.4**	**+0.5**
	baz=228						
TWD	**Chiawan**	**0.25**	**352**	⇑*i*P	**Pb**	**18 33 19.9**	**+0.2**
	baz=356						
TWD				*e*S	**Sb**	**18 33 24.9**	**+1.0**
	baz=356						
NACB	**Ninganchiao**	**0.34**	**354**	⇓*i*P	**Pb**	**18 33 21.2**	**+0.3**
	baz=355						
NACB				*i* S	**Sb**	**18 33 26.5**	**+0.6**
	baz=355						
HGSD	**Ruisui**	**0.39**	**209**	⇓*i*P	**Pb**	**18 33 22.6**	**+1.0**
	baz=210						
HGSD				S	**Sn**	**18 33 30.1**	**-0.7**
	baz=210						
ETLH	**Xiulin Townshi**	**0.40**	**340**	⇓*i*P	**Pb**	**18 33 21.9**	**0.0**
	baz=346						
ETLH				S	**Sb**	**18 33 27.8**	**+0.3**
	baz=346						
EHY	**Hungye**	**0.43**	**221**	⇓*i*P	**Pb**	**18 33 22.0**	**-0.4**
	baz=220						
EHY				*e*S	**Sb**	**18 33 28.6**	**+0.2**
	baz=220						

WHF	**Hehuan Shan** baz=316	0.46	313	⇓*i*P	Pb	18 33 22.7	-0.5
WHF	baz=316			*i* S	Sb	18 33 28.8	-0.9
CHGB	**Renai** baz=306	0.48	299	⇓*i*P	Pb	18 33 23.2	-0.2
CHGB	baz=306			S	Sb	18 33 30.3	+0.3
YULB	**Yu-li** baz=210	0.53	215	⇓*i*P	Pb	18 33 23.5	-0.8
YULB	baz=210			*e*S	Sb	18 33 30.4	-1.2
FUSS	**Fushou** baz=322	0.55	320	⇓*i*P	Pb	18 33 24.4	-0.3
FUSS	baz=322			*e*S	Sb	18 33 32.0	-0.2
EYUL	**Yuli** baz=219	0.56	211	*e*P	Pb	18 33 24.4	-0.4
EYUL	baz=219			*e*S	Sb	18 33 33.5	+1.0
TWF1	**Yuli** baz=218	0.57	213	⇓*i*P	Pb	18 33 24.1	-0.8
TWF1	baz=218			*e*S	Sb	18 33 33.2	+0.5
TWT	**Tachien** baz=308	0.59	315	⇓*i*P	Pb	18 33 25.3	-0.2
TWT	baz=308			*e*S	Sb	18 33 33.6	+0.1
ENA	**Nanau** baz=9.0	0.60	10	⇓*i*P	Pb	18 33 25.5	0.0
ENA	baz=9.0			*e*S	Sb	18 33 34.5	+0.8
TDCB	**Techi** baz=311	0.60	314	⇓*i*P	Pb	18 33 25.3	-0.3
TDCB	baz=311			*e*S	Sb	18 33 32.9	-1.0
SSLB	**Suanglung** baz=264	0.62	266	⇓*i*P	Pb	18 33 25.2	-0.7
SSLB	baz=264			S	Sb	18 33 32.7	-1.5
ENAH	**Nanao** baz=22	0.64	15	*e*P	Pb	18 33 26.4	+0.2
ENAH	baz=22			*e*S	Sn	18 33 36.8	-0.2
NNSB	**Datong** baz=343	0.64	339	⇓*i*P	Pb	18 33 25.8	-0.4
NNSB	baz=343			S	Sb	18 33 33.9	-0.9
NNSH	**Datong** baz=342	0.64	339	⇓*i*P	Pb	18 33 25.9	-0.3
NNSH	baz=342			*e*S	Sb	18 33 33.8	-0.9
WPL	**Puli Township** baz=286	0.64	286	⇓*i*P	Pb	18 33 25.8	-0.4
WPL	baz=286			*e*S	Sb	18 33 34.5	-0.4
NNS	**Nan Shan** baz=343	0.65	339	⇓*i*P	Pb	18 33 26.0	-0.4
NNS	baz=343			S	Sb	18 33 34.6	-0.5
SMLT	**Sun Moon Lake** baz=273	0.67	275	⇓*i*P	Pb	18 33 26.4	-0.4
SMLT	baz=273			*e*S	Sb	18 33 35.0	-0.8
DPDB	**Guoxing** baz=287	0.68	287	⇓*i*P	Pb	18 33 26.5	-0.3
DPDB	baz=287			*e*S	Sb	18 33 34.9	-0.9
FULB	**Fuli** baz=213	0.70	206	P	Pb	18 33 27.2	0.0
FULB	baz=213			*e*S	Sn	18 33 38.5	-0.1
YUS	**Yu-Shan** baz=238	0.71	241	⇓*i*P	Pb	18 33 27.3	-0.3
YUS	baz=238			*i* S	Sb	18 33 36.2	-0.9
TYC	**Yuchr** baz=282	0.71	276	⇓*i*P	Pb	18 33 26.9	-0.4
TYC	baz=282			*e*S	Sb	18 33 36.6	-0.1
WHYT	**Xinyi Township** baz=253	0.73	259	P	Pb	18 33 27.3	-0.3
WHYT	baz=253			*i* S	Sb	18 33 36.7	-0.4
WHP	**Taichung City** baz=306	0.77	305	⇓*i*P	Pb	18 33 28.1	-0.2
WHP	baz=306			*e*S	Sb	18 33 38.0	-0.4
CHKT	**Chengkung** baz=207	0.77	199	P	Pb	18 33 28.3	0.0
CHKT	baz=207			*e*S	Sn	18 33 39.9	-0.3
NDT	**Datong Townshi** baz=356	0.78	352	*e*P	Pb	18 33 28.1	-0.3
NDT	baz=356			*e*S	Sb	18 33 38.1	-0.4
TWC	**Suao** baz=12	0.80	14	*e*P	Pb	18 33 28.8	0.0
TWC	baz=12			*e*S	Sb	18 33 39.7	+0.5
ENTT	**Nioudou** baz=360	0.81	356	*e*P	Pb	18 33 28.7	-0.3
ENTT	baz=360			*e*S	Sb	18 33 39.0	-0.4
ALS	**Alishan** baz=244	0.82	247	⇓*i*P	Pb	18 33 29.3	0.0
ALS	baz=244			*e*S	Sb	18 33 39.8	-0.4
WJS	**Zhushan** baz=269	0.83	270	⇓*i*P	Pn	18 33 29.8	-0.3
WJS	baz=269			S	Sn	18 33 41.7	+0.1
ELDTW	**Lidau** baz=210	0.85	222	P	Pb	18 33 28.4	-1.3
ELDTW	baz=210			*e*S	Sb	18 33 39.5	-1.3
YHNB	**Yeheng** baz=347	0.87	344	⇓*i*P	Pb	18 33 29.8	-0.2
YHNB	baz=347			*e*S	Sb	18 33 40.6	-0.6
WNT	**Mingjian** baz=271	0.87	273	⇓*i*P	Pn	18 33 30.5	-0.1
WNT	baz=271			*e*S	Sn	18 33 42.5	-0.2
WNT1	**Nantou City** baz=273	0.88	275	⇓*i*P	Pn	18 33 30.7	0.0
WNT1	baz=273			*e*S	Sn	18 33 43.1	+0.3
NSK	**Sanguang** baz=346	0.88	344	⇓*i*P	Pb	18 33 29.8	-0.4
NSK	baz=346			*e*S	Sb	18 33 41.6	+0.1
WWF	**Wufeng** baz=286	0.88	284	*e*P	Pb	18 33 30.2	+0.1
WWF	baz=286			*e*S	Sn	18 33 43.8	+0.9
TWE	**Neicheng** baz=7.0	0.89	2	P	Pb	18 33 29.9	-0.4
TWE	baz=7.0			*e*S	Sb	18 33 41.8	+0.1
CHN5	**Tsauling** baz=243	0.91	255	⇓*i*P	Pb	18 33 30.9	+0.3
CHN5	baz=243			*e*S	Sn	18 33 43.8	+0.1
EDH	**Donghe** baz=210	0.91	199	*e*P	Pb	18 33 29.9	-0.8
EDH	baz=210			*e*S	Sn	18 33 43.9	+0.3
TCU	**Taichung** baz=290	0.93	290	P	Pn	18 33 31.7	+0.2
TCU	baz=290			*e*S	Sn	18 33 44.5	+0.4
ILA	**Ilan** baz=1.0	0.94	6	*e*P	Pb	18 33 31.2	+0.1
ILA	baz=1.0			*e*S	Sn	18 33 44.8	+0.5
TWQ1	**Liyutan** baz=303	0.94	303	⇓*i*P	Pn	18 33 31.7	+0.1
TWQ1	baz=303			*e*S	Sn	18 33 44.1	-0.3
NWLT	**Wulai** baz=356	0.95	353	P	Pb	18 33 31.1	-0.3
NWLT	baz=356			*e*S	Sb	18 33 43.6	+0.1
NSTT	**Nanjuang** baz=319	0.98	324	P	Pb	18 33 32.0	+0.1
NSTT	baz=319			*e*S	Sn	18 33 45.6	+0.1
LIOB	**Emei** baz=320	0.99	325	⇓*i*P	Pn	18 33 32.2	-0.1
LIOB	baz=320			*e*S	Sn	18 33 46.6	+1.0
NSY	**Sanyi** baz=306	0.99	306	⇓*i*P	Pn	18 33 32.7	+0.5
NSY	baz=306			S	Sn	18 33 46.1	+0.5
WGK	**Gukeng** baz=259	0.99	262	⇓*i*P	Pn	18 33 32.2	-0.1
WGK	baz=259			*e*S	Sn	18 33 46.1	+0.4
WDLH	**Douliu** baz=260	1.01	262	*e*P	Pn	18 33 32.9	+0.3
WDLH	baz=260			*e*S	Sn	18 33 47.2	+1.0
WCHH	**Zhanghua** baz=283	1.01	284	P	Pn	18 33 32.9	+0.3
WCHH	baz=283			*e*S	Sn	18 33 47.1	+0.9
LONT	**Longtian** baz=204	1.03	207	*e*P	Pb	18 33 31.0	-1.8
LONT	baz=204			*e*S	Sn	18 33 46.6	-0.1
NTC	**Toucheng** baz=359	1.03	10	*e*P	Pn	18 33 33.7	+0.8
NTC	baz=359			*e*S	Sn	18 33 48.0	+1.2
NMLH	**Miaoli** baz=312	1.04	313	*e*P	Pn	18 33 33.4	+0.4
NMLH	baz=312			*e*S	Sn	18 33 46.8	-0.1
WDJ	**Dajia District** baz=299	1.04	300	⇓*i*P	Pn	18 33 33.4	+0.4
WDJ	baz=299			*e*S	Sn	18 33 48.2	+1.2
STYT	**Tauyuan** baz=220	1.04	231	⇓*i*P	Pb	18 33 32.6	-0.4
STYT	baz=220			*e*S	Sb	18 33 46.2	0.0
CHN4	**Tsaushan** baz=232	1.07	244	P	Pb	18 33 33.8	+0.4
CHN4	baz=232			*e*S	Sn	18 33 48.2	+0.6
HSN1	**Hsinchu** baz=337	1.10	329	*e*P	Pb	18 33 35.0	+1.1
HSN1	baz=337			*e*S	Sn	18 33 49.4	+1.1
WTP	**Ta-pu** baz=235	1.10	238	P	Pb	18 33 34.3	+0.3
WTP	baz=235			*e*S	Sn	18 33 48.6	+0.1
CHN2	**Minshiung** baz=252	1.10	255	*e*P	Pb	18 33 34.2	+0.3
CHN2	baz=252			*e*S	Sn	18 33 49.2	+0.8
SBCB	**Hsinchu** baz=312	1.12	328	P	Pb	18 33 35.3	+1.0
SBCB	baz=312			S	Sn	18 33 50.6	+1.6
TWGBT	**Beinan** baz=205	1.13	207	P	Pn	18 33 31.9	-2.4
TWGBT	baz=205			*e*S	Sb	18 33 48.3	-0.4
NHDH	**Xindian Distri** baz=356	1.13	355	*e*P	Pn	18 33 34.2	0.0
NHDH	baz=356			*e*S	Sb	18 33 48.2	-0.5
HSN	**Hsinchu** baz=314	1.14	328	*e*P	Pb	18 33 35.5	+0.9
HSN	baz=314			*e*S	Sn	18 33 51.2	+1.8
TWA	**Mucha** baz=360	1.15	358	P	Pn	18 33 34.4	-0.1
TWA	baz=360			*e*S	Sn	18 33 50.7	+1.2
TATO	**Taipei** baz=355	1.15	353	P	Pn	18 33 34.3	-0.1
TATO	baz=355			*e*S	Sn	18 33 49.4	-0.2
WTK	**Tuku** baz=261	1.15	263	P	Pb	18 33 35.0	+0.3
WTK	baz=261			*e*S	Sn	18 33 50.8	+1.3
TIPB	**Shuangxi** baz=359	1.15	9	P	Pn	18 33 34.2	-0.3
TIPB	baz=359			*e*S	Sb	18 33 48.3	-1.0
CHY	**Chiayi** baz=251	1.16	254	P	Pb	18 33 35.1	+0.2
CHY	baz=251			S	Sn	18 33 51.0	+1.2
TTN	**Taitung** baz=199	1.16	203	*e*P	Pb	18 33 35.9	+0.9
LDUT	**Ludao** baz=175	1.16	187	*e*P	Pn	18 33 33.1	-1.6
LDUT	baz=175			*e*S	Sn	18 33 50.6	+0.7
RLNB	**Erlin** baz=272	1.17	273	P	Pb	18 33 35.1	+0.1
RLNB	baz=272			S	Sn	18 33 51.1	+1.1
BACT	**New Taipei Cit** baz=6.0	1.17	352	*e*P	Pn	18 33 34.4	-0.4
BACT	baz=6.0			*e*S	Sn	18 33 51.6	+1.4
TWK	**Hsinying** baz=239	1.19	242	*e*P	Pb	18 33 35.7	+0.2
TWK	baz=239			*e*S	Sn	18 33 52.4	+1.7
CHN1	**Nanshi** baz=235	1.20	238	*e*P	Pb	18 33 36.1	+0.4
CHN1	baz=235			*e*S	Sn	18 33 51.9	+1.0
NCUH	**Zhongli** baz=340	1.20	340	P	Pb	18 33 35.8	+0.1
NCUH	baz=340			*e*S	Sn	18 33 53.0	+2.0
NTY	**Taoyuan** baz=347	1.20	345	P	Pb	18 33 35.5	-0.2
NTY	baz=347			*e*S	Sn	18 33 53.1	+2.2
NCU	**National Centr** baz=341	1.20	340	P	Pb	18 33 36.0	+0.3
NCU	baz=341			*e*S	Sn	18 33 52.7	+1.8
SNST	**Tainan City** baz=237	1.21	240	P	Pb	18 33 35.8	+0.1
SNST	baz=237			*e*S	Sn	18 33 52.0	+1.0
TAP1	**Taipei** baz=356	1.21	355	*e*P	Pb	18 33 36.5	+0.7
TAP1	baz=356			*e*S	Sb	18 33 50.0	-0.9
TAP	**Taipei** baz=356	1.21	355	*e*P	Pn	18 33 35.4	+0.1
TAP	baz=356			*e*S	Sn	18 33 51.8	+0.8
TWB1	**Santiao Chiao** baz=3.0	1.22	15	*e*P	Pb	18 33 35.9	0.0
TWB1	baz=3.0			*e*S	Sn	18 33 54.0	+2.7
SGST	**Jiashian** baz=229	1.22	232	P	Pn	18 33 35.1	-0.3
SGST	baz=229			S	Sn	18 33 51.5	+0.2
SLGT	**Liugui** baz=215	1.23	228	*e*P	Pb	18 33 36.2	0.0
SLGT	baz=215			*e*S	Sn	18 33 51.8	+0.1
NWF	**Wu-fen Shan** baz=8.0	1.24	6	*e*P	Pn	18 33 36.0	+0.2
NWF	baz=8.0			*e*S	Sn	18 33 52.0	0.0
WFSB	**Wu-fen Shan** baz=8.0	1.24	6	*e*P	Pn	18 33 35.8	+0.1
WFSB	baz=8.0			*e*S	Sb	18 33 51.5	-0.4
WLGB	**Puzi** baz=251	1.27	254	*e*P	Pn	18 33 35.2	-0.9
WLGB	baz=251			*e*S	Sb	18 33 53.2	+0.5
TWS1	**Kuangyinshan** baz=6.0	1.28	351	*e*P	Pn	18 33 36.2	-0.1
TWS1	baz=6.0			*e*S	Sb	18 33 54.9	+2.0
WMLT	**Mailiao** baz=267	1.29	269	*e*P	Pb	18 33 37.2	0.0
WMLT	baz=267			*e*S	Sb	18 33 56.2	+3.0
WSF	**Szhu** baz=259	1.31	262	P	Pb	18 33 37.3	-0.1
WSF	baz=259			*e*S	Sb	18 33 54.8	+1.1
YM01	**YM01** baz=358	1.31	358	*e*P	Pn	18 33 36.5	-0.3
YM01	baz=358			*e*S	Sn	18 33 53.1	-0.6
TNOU	**National Taiwa** baz=7.0	1.32	6	*e*P	Pb	18 33 37.4	-0.2
TNOU	baz=7.0			*e*S	Sb	18 33 53.9	-0.2
YM04	**YM04** baz=357	1.32	356	P	Pn	18 33 36.3	-0.6
YM04	baz=357			*e*S	Sn	18 33 52.0	-1.9
YM10	**YM10** baz=358	1.32	357	P	Pn	18 33 36.5	-0.4
YM10	baz=358			*e*S	Sn	18 33 53.7	-0.2
ICHU	**Yijhu** baz=247	1.33	250	P	Pb	18 33 37.9	+0.1
ICHU	baz=247			*e*S	Sb	18 33 56.1	+1.8
YM05	**YM05** baz=358	1.33	357	*i* P	Pn	18 33 36.6	-0.5
YM05	baz=358			*e*S	Sn	18 33 54.2	0.0
YM11	**YM11** baz=360	1.33	358	*e*P	Pn	18 33 36.9	-0.2
NTST	**Danshui** baz=7.0	1.34	353	P	Pn	18 33 36.9	-0.2
NTST	baz=7.0			*e*S	Sb	18 33 55.9	+1.2
YM03	**YM03** baz=358	1.34	356	*e*P	Pn	18 33 36.8	-0.5
JYNG	**Yonagunijimaku**	1.35	63	P	Pn	18 33 37.4	+0.2
JYNG				*e*S	Sn	18 33 54.4	-0.1
YM08	**YM08**	1.35	358	P	Pn	18 33 36.4	-0.9
ANP	**Anpu** baz=358	1.35	356	P	Pb	18 33 38.3	0.0
ECL	**Taimali** baz=193	1.38	207	P	Pn	18 33 37.1	-0.5
ECL	baz=193			*e*S	Sn	18 33 52.4	-2.9
CHN3	**Shinhua** baz=234	1.39	237	*e*P	Pb	18 33 39.6	+0.8
CHN3	baz=234			*e*S	Sb	18 33 59.0	+3.0
CHN8	**Yiju** baz=247	1.39	250	P	Pb	18 33 38.6	-0.2
CHN8	baz=247			S	Sb	18 33 57.3	+1.1
SCST	**Cishan** baz=239	1.41	228	P	Pb	18 33 40.0	+0.8
SCST	baz=239			S	Sb	18 33 59.6	+3.0
YOJ	**Yonaguni jima**	1.41	63	P	Pb	18 33 38.6	-0.6
YOJ				*e*S	Sb	18 33 56.3	-0.4
YOJ	**Yonaguni jima** baz=65	1.41	63	*e*P	Pn	18 33 38.3	+0.3
YOJ	baz=65			*e*S	Sn	18 33 56.1	+0.2
SSD	**Sandimen** baz=218	1.42	221	*i* P	Pn	18 33 38.2	0.0
SSD	baz=218			*e*S	Sb	18 33 57.4	+0.4
TWY	**Chenhua** baz=360	1.44	359	P	Pb	18 33 39.4	-0.3
TWY	baz=360			*e*S	Sb	18 33 58.5	+0.9
TSMG	**Majia** baz=218	1.44	219	P	Pb	18 33 40.5	+0.7
TSMG	baz=218			*e*S	Sb	18 33 59.8	+2.2
SCLT	**Jiali** baz=241	1.47	244	*e*P	Pb	18 33 39.9	-0.4
SCLT	baz=241			*e*S	Sb	18 33 59.8	+1.3
TWM1	**Shoushan** baz=239	1.50	228	*e*P	Pb	18 33 41.7	+1.0
SGLT	**Jiouru** baz=210	1.52	224	*e*P	Pb	18 33 42.9	+1.8
SGLT	baz=210			*e*S	Sb	18 34 04.1	+4.2
MASBT	**Mashibuluo** baz=217	1.52	217	*e*P	Pn	18 33 39.5	-0.1
MASBT	baz=217			*e*S	Sb	18 34 01.2	+1.2
TSPT	**Pingtung City** baz=209	1.55	222	*e*P	Pb	18 33 41.9	+0.2
TSPT	baz=209			*e*S	Sb	18 34 05.1	+4.3
SNJT	**Kaohsiung City** baz=225	1.60	228	*e*P	Pb	18 33 42.1	-0.4
SNJT	baz=225			*e*S	Sb	18 34 06.5	+4.2
EAST	**Anshuo** baz=196	1.61	207	*e*P	Pn	18 33 41.0	+0.1
EAST	baz=196			*e*S	Sn	18 34 00.3	-0.8
TAW	**Tawu** baz=190	1.62	205	*e*P	Pn	18 33 41.3	+0.4
SSPT	**Xinbi** baz=214	1.66	216	*e*P	Pn	18 33 42.3	+0.8
SCZT	**Fangliau** baz=213	1.73	213	*e*P	Pn	18 33 42.8	+0.4
SCZT	baz=213			*e*S	Sb	18 34 05.8	-0.1
SLIU	**Shizi** baz=192	1.78	206	*e*P	Pb	18 33 45.3	-0.2
LAY	**Lan-yu** baz=171	1.79	182	*e*P	Pn	18 33 41.4	-1.9
PCYT	**Pengchaiyu** baz=358	1.83	12	*e*P	Pb	18 33 46.1	-0.4
WLCH	**Liuqiu** baz=216	1.87	218	*e*P	Pb	18 33 46.9	-0.2
TWP	**Hsiaoliuchiu** baz=216	1.89	219	*e*P	Pb	18 33 46.8	-0.5
WDGT	**Dungji** baz=251	1.90	253	*e*P	Pn	18 33 44.8	0.0
PHUB	**P'eng-hu** baz=259	1.92	261	*e*P	Pn	18 33 45.2	+0.2
PNG	**Penghu** baz=261	1.92	263	*e*P	Pn	18 33 45.2	+0.1
IRIF	**Iriomote-Funau**	1.98	75	P	Pn	18 33 46.5	+0.6
IRIF				S	Sn	18 34 10.7	+0.5
HEN	**Hengchun** baz=193	2.00	205	*e*P	Pb	18 33 48.5	-0.7
HATJ	**Hateruma jima**	2.00	83	P	Pn	18 33 46.5	+0.3
HATJ				S	Sn	18 34 11.5	+0.9
TWK1	**Hengchun** baz=191	2.03	202	*e*P	Pn	18 33 47.4	+0.8
TWKBT	**Hengchun** baz=191	2.03	202	*e*P	Pn	18 33 47.6	+1.0
TSEB	**Hengchuen, Pin** baz=188	2.04	199	*e*P	Pn	18 33 47.6	+0.9
VCHM	**Qimei** baz=252	2.11	253	*e*P	Pn	18 33 46.9	-0.9
JKRS	**Kuro-shima**	2.21	79	P	Pn	18 33 49.9	+0.8
JKRS				*e*S	Sn	18 34 17.5	+1.7
VWUC	**VWUC** baz=300	2.30	301	*e*P	Pn	18 33 48.9	-1.4
JIJ	**Ishigaki jima**	2.35	76	P	Pn	18 33 51.3	+0.2
JIJ				S	Sn	18 34 19.1	-0.3
PTTC	**Pingtan** baz=313	2.37	315	*e*P	Pn	18 33 50.7	-0.6
JISG	**Ishigakijimahi**	2.56	72	P	Pn	18 33 54.1	+0.2
JISG				S	Sn	18 34 24.6	+0.2
PTMZ	**Houxiangcun** baz=297	2.59	298	*e*P	Pn	18 33 53.5	-0.8
MATB	**Ma-tsu** baz=324	2.77	327	*e*P	Pn	18 33 55.9	-0.9
MSUT	**Lienchiang** baz=324	2.80	327	*e*P	Pn	18 33 55.5	-1.6
JTJ	**Tarama**	2.92	73	P	Pn	18 33 59.4	+0.6
JTJ				*e*S	Sn	18 34 34.0	+0.8
KNM	**Kinmen** baz=280	2.98	282	*e*P	Pn	18 34 00.6	+1.0
QZH	**Quanzhou**	2.98	292	Pn	Pn	18 33 59.0	-0.7
QZH				Sn	Sn	18 34 32.3	-2.6
QZH	comp=N,310nm,0.3s			smax	smax		
QZH	comp=E,190nm,0.4s			smax	smax		

KNMB	Chin-men Tao	3.03	283	*e*P	Pn	18 33 59.7	-0.6
	baz=282						
LYJJ	Jianjiangzhen	3.19	328	*e*P	Pn	18 34 01.6	-1.0
	baz=326						
MHZQ	Yeshan	3.27	314	*e*P	Pn	18 34 02.8	-0.8
	baz=313						
JIRB	Irabujima	3.38	72	P	Pn	18 34 06.1	+0.9
JIRB				*e*S	Sn	18 34 46.2	+1.5
JIKM	Ikemajima	3.47	71	*e*S	Sn	18 34 49.0	+2.1
JMJ	Miyako jima 2	3.48	73	*e*P	Pn	18 34 05.9	-0.7
	baz=74						
JMJ2	Miyako jima3	3.49	74	P	Pn	18 34 08.5	+1.8
JMJ2				*e*S	Sn	18 34 49.2	+1.8
AXDP	Jialang	3.50	288	*e*P	Pn	18 34 06.2	-0.6
	baz=288						
KSRS	Korea Array	14.61	20	LR	LR	18 42 50.6	
	comp=E,63nm,18.3s,baz=160,slow=40						
JCJ	Chichijima	18.84	76	LR	LR	18 44 30.1	
	comp=E,92nm,18.2s,baz=126,slow=36						
CMAR	Chiang Mai Arr	21.82	260	P	P	18 38 06.7	+2.0
	comp=E,0.8nm,0.8s,baz=56,slow=7.7,SNR=6.6						
SONM	Songino Array	26.85	337	P	P	18 38 53.4	+0.6
	comp=E,0.4nm,0.6s,baz=165,slow=9.7,SNR=3.9						
SONM				LR	LR	18 49 26.0	
	comp=E,58nm,19.5s,baz=52,slow=36						
MKAR	Makanchi Array	38.87	316	P	P	18 40 38.2	+0.7
	comp=E,0.7nm,0.8s,baz=98,slow=10,SNR=10						
ZALV	Zalesovo Beam	40.76	327	P	P	18 40 52.4	-0.7
	comp=E,0.3nm,0.3s,baz=109,slow=7.8,SNR=3.0						
H11N1	WAKE ISLAND Hy	42.10	87	T	T	19 26 28.2	
	baz=283,slow=75,SNR=9.2						
H11N2	WAKE ISLAND Hy	42.10	86	T	T	19 26 07.5	
	baz=283,slow=75,SNR=10.0						
H11N3	WAKE ISLAND Hy	42.12	87	T	T	19 26 21.0	
	baz=283,slow=75,SNR=7.6						
H11S3	WAKE ISLAND Hy	42.22	88	T	T	19 26 15.8	
	baz=284,slow=74,SNR=39						
H11S1	WAKE ISLAND Hy	42.23	88	T	T	19 26 16.5	
	baz=284,slow=74,SNR=17						
H11S2	WAKE ISLAND Hy	42.24	88	T	T	19 26 13.6	
	baz=284,slow=74,SNR=12						
ASAR	Alice Springs	48.70	165	P	P	18 41 55.8	-0.9
	comp=E,0.2nm,0.3s,baz=339,slow=6.9,SNR=11						
STKA	Stephens Creek	58.59	160	P	P	18 43 08.2	-0.8
	comp=E,1.3nm,0.6s,baz=347,slow=8.7,SNR=4.4						
ILAR	Eielson Array	69.34	27	P	P	18 44 18.6	-0.7
	comp=E,0.2nm,0.5s,baz=274,slow=5.5,SNR=1.6						
INK	Inuvik	73.39	22	P	P	18 44 43.6	-0.2
	comp=E,0.7nm,0.4s,baz=263,slow=2.9,SNR=2.2						
YKA	Yellowknife Ar	83.13	23	P	P	18 45 36.9	-0.9
	comp=E,0.2nm,0.5s,baz=316,slow=4.3,SNR=5.5						

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*IDC **15** 18:38:45.5±1.2, 45°.39N×137°.09E, h346^{km}±14^{km}, mb3.0/7, mb1 2.9/12, mb1mx2.8/41, mbtmp3.6/12, Error ellipse: s-maj=21.1km s-min=17.6km az=38.0*

*JMA **15** 18:38:46.2±0.5, 45°.21N×137°.09E, h334^{km}, M3.0*

ISC 15 18:38:44.4±0.7**, 45°.25N**±0°.08×**137°.21E**±0°.07**, h339**^{km}**, n27, σ2**^{s}**.15**/31**, mb3.4**/7**, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRBN	Rebuntou	2.72	85	P	Pn	18 39 42.5	+2.2
JSK	Shakotan	3.02	128	P	Pn	18 39 45.2	+2.2
JWK2	Keihoku	3.31	87	P	Pn	18 39 48.9	+3.2
JSH	Shimam	3.31	141	P	Pn	18 39 47.6	+1.7
JSS	Shosan	3.41	103	P	Pn	18 39 49.7	+3.0
JOSM	Okushiri--Mats	3.57	152	P	Pn	18 39 50.3	+1.9
USRK	Ussuriysk Ar.	3.87	256	P	Pn	18 39 52.7	+1.3
	baz=64,slow=11,SNR=12						
ASAJ	Asahikawa	4.00	105	P	Pn	18 39 55.5	+2.7
	2.5nm,0.3s,baz=278,slow=6.0,SNR=31						
ASAJ	Asahikawa	4.00	105	P	Pn	18 39 55.4	+2.7
JKK2	Kamakawa 2	4.19	107	P	Pn	18 39 57.3	+2.6
JKB	Kayabe	4.36	139	P	Pn	18 39 59.0	+2.5
JBT2	Biratori 2	4.46	122	P	Pn	18 40 00.1	+2.5
JBT2				*e*S	S	18 40 58.3	+1.6
JOT	Ohata	4.77	143	P	Pn	18 40 03.1	+2.1
JTKR	Abashiri--Toko	4.95	103	P	Pn	18 40 05.1	+2.2
JCH	Churui	5.16	119	P	Pn	18 40 05.6	+0.3
JCH				*e*S	S	18 41 07.5	-3.2
KLR	Kul'dur	5.45	319	P	Pn	18 40 08.4	+0.1
	0.1nm,0.3s,baz=142,slow=14,SNR=4.8						
NEM2	Nemuro 2	6.40	104	P	Pn	18 40 19.7	+0.2
NEM2				*e*S	S	18 41 32.5	-4.0
JMK	Ichinoseki	6.96	153	P	Pn	18 40 26.8	+0.7
JMK				*e*S	S	18 41 45.6	-3.1
MJAR	Matsushiro Arr	8.73	175	P	Pn	18 40 49.5	+2.3
	0.1nm,0.3s,baz=351,slow=9.9,SNR=2.0						
KSRS	Korea Array	10.46	225	P	P	18 41 09.8	+0.4
	0.2nm,0.3s,baz=42,slow=11,SNR=5.4						
SONM	Songino Array	21.29	288	P	P	18 43 03.9	-1.0
	1.1nm,0.9s,baz=92,slow=10,SNR=6.0						
ZALV	Zalesovo Beam	34.34	304	P	P	18 44 59.1	-0.7
	0.9nm,0.5s,baz=92,slow=8.1,SNR=6.5						
MKAR	Makanchi Array	37.51	293	P	P	18 45 26.1	-0.6
	0.6nm,1.0s,baz=84,slow=11,SNR=5.7						
INK	Inuvik	48.66	30	P	P	18 46 54.6	-0.1
	0.8nm,0.3s,baz=292,slow=7.9,SNR=2.4						
FINES	FINESS Array B	60.11	329	P	P	18 48 15.4	-0.9
	4.1nm,1.0s,baz=41,slow=6.3,SNR=7.5						
AKASG	Malin Array Be	65.95	319	P	P	18 48 54.1	-0.5
	0.5nm,0.5s,baz=44,slow=6.5,SNR=2.4						
ASAR	Alice Springs	68.65	183	P	P	18 49 13.3	+1.6
	0.4nm,1.1s,baz=356,slow=6.5,SNR=1.4						

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*IDC **15** 18:47:20.6±0.9, 37°.01N×97°.74W, h0^{km}, mb3.4/2, mb1 3.8/6, mb1mx3.6/34, mbtmp3.5/6, ML3.9/3, Error ellipse: s-maj=13.1km s-min=11.7km az=112.0*

*TUL **15** 18:47:20.8±1.4, 36°.95N±0°.02×97°.62W±0°.02, h5^{km}±6^{km}, ML3.6, mb_Lg3.5/126(NEIC), Error ellipse: s-maj=3.1km s-min=2.2km az=209.0*

*ANF **15** 18:47:20.6±0.2, 36°.95N×97°.70W, h5^{km}, ML4.4/18, Error ellipse: s-maj=3.0km s-min=2.2km az=31.0*

*NEIC **15** 18:47:21.1±1.0, 36°.94N±0°.01×97°.60W±0°.02, h5^{km}±6^{km}, Error ellipse: s-maj=3.1km s-min=0.8km az=47.0*

ISC 15 18:47:20.9±0.9**, 36°.94N**±0°.02×**97°.60W**±0°.02**, h9**^{km}±6^{km}**, n168, σ1**^{s}**.14**/168**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.12	53		Pg	18 47 23.9	+0.2
KAN13				Sg	Sg	18 47 26.0	+0.3
KAN14	Manchester OK	0.29	274		Pg	18 47 26.5	-0.2
KAN14				Sg	Sg	18 47 30.5	-0.1
KS21	Milan North St	0.35	352		Pg	18 47 27.8	-0.1
KS21				Sg	Sg	18 47 32.7	+0.2
KAN08	Anthony NE Sta	0.41	314		Pg	18 47 28.9	-0.1
KAN08				Sg	Sg	18 47 34.6	+0.1
KAN10	Anthony SW Sta	0.44	295		Pg	18 47 29.3	-0.1
KAN10				Sg	Sg	18 47 35.2	0.0
KAN12	Harper NE Stat	0.48	318		Pg	18 47 30.1	-0.1
KAN12				Sg	Sg	18 47 36.5	-0.1
CROK	Carrier	0.53	216	Pg	Pg	18 47 31.3	+0.1
CROK				Sg	Sg	18 47 38.7	+0.5
T35A	Sooner Cattle	0.87	91	Pg	Pg	18 47 37.6	0.0
T35A				Sg	Sg	18 47 49.2	+0.2
T35B	Sooner Cattle	0.87	91	P		18 47 37.5	
	baz=273,SNR=242						
T35B				S		18 47 49.3	
	baz=273						
QUOK	Quay	1.05	137	Pg	Pg	18 47 41.0	-0.1
QUOK				Sg	Sg	18 47 54.8	+0.1
OK029	Liberty Lake	1.15	174		Pg	18 47 42.6	-0.3
OK029				Sg	Sg	18 47 58.1	+0.3
OK031	S. Brethren Rd	1.16	148		Pg	18 47 42.9	-0.2
OK031				Sg	Sg	18 47 58.4	+0.2
OK030	Cody Creek RV	1.20	147		Pg	18 47 43.7	-0.3
OK030				Sg	Sg	18 47 59.9	+0.3
U32A	Winter Ranch,	1.26	244		Pg	18 47 44.2	-0.8
U32A	Winter Ranch,	1.26	244	P		18 47 44.0	
	baz=62						
U32A				S		18 48 01.0	
	baz=62						
BCOK	Bluff Creek, N	1.28	180		Pn	18 47 44.9	-0.1
OK025	Westminster Rd	1.37	171		Pn	18 47 46.6	+0.3
OKCFA	Oklahoma City	1.52	175		Pn	18 47 49.1	+0.7
OKCSW	OKLAHOMA CITY	1.54	175		Pn	18 47 49.3	+0.8
FNO	Franklin	1.69	174		Pn	18 47 51.5	+1.0
R32A	Long Quarter,	1.72	330	Pn	Pb	18 47 52.1	-0.7
R32A	Long Quarter,	1.72	330	P		18 47 52.0	
	baz=149,SNR=11						
R32A				S		18 48 14.9	
	baz=149						
TUL1	Leonard	1.78	125	P	Pn	18 47 53.4	+1.5
	baz=306,SNR=85						
TUL1				S	Sb	18 48 17.2	+1.0
	baz=306						
TUL1	Leonard	1.78	125		Pn	18 47 52.7	+0.8
TUL1				IAmb_Lg		18 48 18.2	
	comp=Z,425nm,0.7s						
TUL1	Leonard	1.78	125	P		18 47 53.4	
	baz=306,SNR=126						
TUL1				S		18 48 17.1	
	baz=306						
W35A	Tecumseh	1.88	162		Pn	18 47 54.0	+0.9
KSU1	Kansas State U	2.29	20	P	Pn	18 47 59.3	+0.3
	baz=201,SNR=58						
KSU1	Kansas State U	2.29	20	Pn	Pn	18 48 00.2	+1.2
KSU1				IAmb_Lg		18 48 37.5	
	comp=Z,166nm,0.7s						
KSU1	Kansas State U	2.29	20	P		18 47 59.5	
	baz=201,SNR=57						
WMOK	Wichita Mounta	2.40	204	P	Pn	18 47 60.0	-0.4
	baz=23,SNR=136						
WMOK				Sb	Sb	18 48 34.7	+0.7
	baz=23						
WMOK	Wichita Mounta	2.40	204	Pn	Pn	18 48 00.9	+0.5
WMOK				IAmb_Lg		18 48 35.0	
	comp=Z,132nm,0.7s						
WMOK	Wichita Mounta	2.40	204	P		18 48 01.1	
	baz=23,SNR=97						
CBKS	Cedar Bluff	2.52	319	P	Pn	18 48 01.4	-0.7
	baz=137						
CBKS				Sb	Sb	18 48 37.5	-0.1
	baz=137						
CBKS	Cedar Bluff	2.52	319	Pn	Pn	18 48 03.0	+0.9
CBKS	Cedar Bluff	2.52	319	P		18 48 02.7	
	baz=137,SNR=47						
U38A	Gravette	2.63	100		Pn	18 48 04.8	+1.2
U38A	Gravette	2.63	100	P		18 48 05.4	
	baz=282,SNR=20						
X37A	Clayton	2.96	142		Pn	18 48 09.6	+1.5
X37A				IAmb_Lg		18 48 58.7	
	comp=Z,179nm,0.9s						
X37A	Clayton	2.96	142	P		18 48 09.3	
	baz=323						
HHAR	Hobbs	3.02	101		Pn	18 48 10.4	+1.5
S39A	Bolivar	3.49	76	Pn	Pn	18 48 16.4	+1.1
S39A				IAmb_Lg		18 49 19.8	
	comp=Z,95nm,0.7s						
S39A	Bolivar	3.49	76	P		18 48 16.4	
	baz=259,SNR=19						
W39A	Magazine	3.55	118	P	Pn	18 48 17.7	+1.6
	baz=301,SNR=8.7						
W39A				Sb	Sg	18 49 12.3	-2.5
	baz=301						
W39A	Magazine	3.55	118		Pn	18 48 17.5	+1.4
W39A				IAmb_Lg		18 49 18.5	
	comp=Z,201nm,0.8s						
W39A	Magazine	3.55	118	P		18 48 17.8	
	baz=301						
Z35A	Perchaven, San	3.61	175		Pn	18 48 16.2	-0.8
Z35A				IAmb_Lg		18 49 18.0	
	comp=Z,94nm,0.9s						
Z35A	Perchaven, San	3.61	175	P		18 48 17.7	
	baz=355						
N33A	J Bar K, Exete	3.80	2	Pn	Pn	18 48 20.3	+0.7
U40A	Yellville	3.86	97	P	Pn	18 48 21.8	+1.3
	baz=280,SNR=28						
U40A	Yellville	3.86	97	Pn	Pn	18 48 21.6	+1.2
U40A	Yellville	3.86	97	P		18 48 21.7	
	baz=280,SNR=40						
U40A				P		18 48 21.7	
	baz=280,SNR=40						
AMTX	Amarillo	3.90	239	P	Pn	18 48 20.9	-0.2
	baz=57						
AMTX	Amarillo	3.90	239	Pn	Pn	18 48 22.7	+1.7
AMTX				IAmb_Lg		18 49 25.6	
	comp=Z,119nm,0.8s						
MIAR	Mount Ida	4.05	125	P	Pn	18 48 24.5	+1.4
	baz=308,SNR=18						
MIAR				Sb	Sb	18 49 26.9	+5.4
	baz=308						
MIAR	Mount Ida	4.05	125	Pn	Pn	18 48 24.6	+1.5
MIAR				IAmb_Lg		18 49 35.5	
	comp=Z,104nm,0.7s						
P38A	Dawn	4.17	49		Pn	18 48 26.2	+1.5
P38A				IAmb_Lg		18 49 36.2	
	comp=Z,158nm,0.8s						
N35A	Tabor	4.20	21		Pn	18 48 26.2	+1.0
N35A	Tabor	4.20	21	P		18 48 26.4	
	baz=202						
Z38A	Mt. Pleasant	4.25	149	Pn	Pn	18 48 26.9	+1.0
MGMO	Mountain Grove	4.27	86		Pn	18 48 27.7	+1.6
MGMO				IAmb_Lg		18 49 36.2	
	comp=Z,104nm,0.8s						
R40A	Maddies Statio	4.44	71		Pn	18 48 29.5	+1.1
R40A				IAmb_Lg		18 49 48.5	
	comp=Z,149nm,1.0s						
KSCO	Kaye Shedlock'	4.48	299	P	Pn	18 48 28.3	-0.8
	baz=116						
KSCO	Kaye Shedlock'	4.48	299		Pn	18 48 29.4	+0.4
KSCO				IAmb_Lg		18 49 46.3	
	comp=Z,88nm,0.8s						
KSCO	Kaye Shedlock'	4.48	299	P		18 48 29.9	
	baz=116						
BGNE	Belgrade	4.48	355	P	Pn	18 48 29.5	+0.5
	baz=174						
BGNE				S	Sn	18 49 21.2	-0.1
	baz=174						
BGNE	Belgrade	4.48	355		Pn	18 48 29.9	+0.8
BGNE	Belgrade	4.48	355	P		18 48 30.2	
	baz=174,SNR=20						
FCAR	Ozark Folk Cen	4.54	102		Pn	18 48 30.8	+1.0
FCAR				IAmb_Lg		18 49 42.5	
	comp=Z,99nm,0.8s						
X40A	Basin Creek Fa	4.58	121	P	Pn	18 48 31.9	+1.5
	baz=304,SNR=12						
X40A				Sb	Sg	18 49 44.2	-3.9
	baz=304						
X40A	Basin Creek Fa	4.58	121		Pn	18 48 31.9	+1.5
X40A				IAmb_Lg		18 49 51.3	
	comp=Z,87nm,0.8s						
X40A	Basin Creek Fa	4.58	121	P		18 48 32.1	
	baz=304,SNR=14						
X40A				P		18 48 32.1	
	baz=304,SNR=14						
WHAR	Wooly Hollow	4.60	109		Pn	18 48 31.3	+0.6
WHAR				IAmb_Lg		18 49 48.3	
	comp=Z,148nm,0.8s						
ABTX	Abilene, Hawle	4.62	202	P	Pn	18 48 31.2	+0.2
	baz=20						
ABTX				S	Sn	18 49 25.0	+0.3
	baz=20						
ABTX	Abilene, Hawle	4.62	202		Pn	18 48 31.7	+0.7
ABTX	Abilene, Hawle	4.62	202	P		18 48 31.4	
	baz=20,SNR=7.1						
W41B	Gary Mavity, V	4.68	111	P	Pn	18 48 33.1	+1.4
	baz=294,SNR=8.6						
W41B				Sb	Sg	18 49 46.6	-4.5
	baz=294						
W41B	Gary Mavity, V	4.68	111		Pn	18 48 32.8	+1.1
W41B				IAmb_Lg		18 49 46.8	
	comp=Z,82nm,0.8s						
W41B	Gary Mavity, V	4.68	111	P		18 48 33.2	
	baz=294,SNR=15						
WLAR	White Oak Lake	4.90	130		Pn	18 48 36.3	+1.6
WLAR				IAmb_Lg		18 50 06.3	
	comp=Z,82nm,0.9s						
WHTX	Lake Whitney,	4.94	179	P	Pn	18 48 35.9	+0.6
	baz=358						
WHTX				S	Sn	18 49 32.3	-0.3
	baz=358						
WHTX	Lake Whitney,	4.94	179		Pn	18 48 35.8	+0.6
WHTX	Lake Whitney,	4.94	179	P		18 48 35.9	
	baz=358,SNR=11						
P40A	Paris	5.08	58		Pn	18 48 38.0	+0.8
P40A				IAmb_Lg		18 50 07.8	
	comp=Z,98nm,0.8s						
L34A	Svendsen Farm,	5.11	10		Pn	18 48 38.1	+0.4
N38A	Joes South For	5.14	40		Pn	18 48 38.3	+0.3
237A	Washetta, Mont	5.14	163	Pn	Pn	18 48 38.5	+0.4
237A				IAmb_Lg		18 50 17.8	
	comp=Z,65nm,0.9s						
237A	Washetta, Mont	5.14	163	P		18 48 38.8	
	baz=344						
MSTX	Muleshoe	5.16	236	P	Pn	18 48 37.9	-0.5
	baz=53						
MSTX	Muleshoe	5.16	236		Pn	18 48 38.7	+0.2
CCM	Cathedral Cave	5.17	76	P	Pn	18 48 39.6	+1.1
	baz=260						
CCM	Cathedral Cave	5.17	76		Pn	18 48 39.0	+0.5
CCM				IAmb_Lg		18 50 09.5	
	comp=Z,84nm,0.7s						
T42A	Van Buren	5.21	87		Pn	18 48 40.4	+1.4
T42A				IAmb_Lg		18 50 16.7	
	comp=Z,59nm,0.7s						
LCAR	Lake Charles	5.26	98		Pn	18 48 40.4	+0.7
LCAR				IAmb_Lg		18 50 08.6	
	comp=Z,58nm,0.9s						
OGNE	Ogallala	5.29	321	P	Pn	18 48 38.2	-1.9
	baz=138						
OGNE	Ogallala	5.29	321		Pn	18 48 41.1	+0.9
OGNE				IAmb_Lg		18 50 12.3	
	comp=Z,79nm,0.7s						
Z41A	Richland Creek	5.38	132	S	Sn	18 49 44.3	+0.9
	baz=315						
Z41A	Richland Creek	5.38	132	Pn	Pn	18 48 41.8	+0.5
Z41A				IAmb_Lg		18 50 25.7	
	comp=Z,68nm,0.7s						
T25A	Trinidad	5.45	274	P	Pn	18 48 42.3	-0.3
	baz=90						
T25A	Trinidad	5.45	274		Pn	18 48 42.7	+0.2
T25A				IAmb_Lg		18 50 23.0	
	comp=Z,71nm,0.9s						
CCAR	Cane Creek	5.63	121	Pn	Pn	18 48 46.1	+1.3
CCAR				IAmb_Lg		18 50 31.5	
	comp=Z,64nm,1.0s						
NATX	Nacogdoches	5.71	154	Pn	Pn	18 48 46.1	+0.2
NATX				IAmb_Lg		18 50 38.9	
	comp=Z,61nm,0.8s						
K31A	O'Neill	5.75	351	Pn	Pn	18 48 47.7	+1.3
PBMO	Poplar Bluff	5.75	89	Pn	Pn	18 48 47.5	+1.0
PBMO				IAmb_Lg		18 50 29.2	
	comp=Z,119nm,0.8s						
HBAR	Harrisburg	5.78	102	Pn	Pn	18 48 48.2	+1.4
FVM	French Village	5.80	77	Pn	Pn	18 48 48.3	+1.2
FVM				IAmb_Lg		18 50 28.6	
	comp=Z,113nm,0.9s						
X43A	Marvell	5.97	112	IAmb_Lg		18 50 38.6	
	comp=Z,69nm,0.8s						
SCIA	State Center	6.01	33	Pn	Pn	18 48 48.9	-1.1
LPAR	Lepanto	6.04	101	Pn	Pn	18 48 51.5	+1.0
LPAR				IAmb_Lg		18 50 47.3	
	comp=Z,87nm,0.8s						
SLM	Saint Louis	6.07	72	Pn	Pn	18 48 52.2	+1.4
SLM				IAmb_Lg		18 50 31.2	
	comp=Z,75nm,0.8s						
435B	Jarrell	6.14	180	P	Pn	18 48 51.9	+0.1
	baz=360						
435B	Jarrell	6.14	180		Pn	18 48 51.9	+0.1
435B				IAmb_Lg		18 50 50.2	
	comp=Z,93nm,0.8s						
GNAR	Gosnell	6.19	97	Pn	Pn	18 48 53.2	+0.8
GNAR				IAmb_Lg		18 50 40.9	
	comp=Z,112nm,0.8s						
PEBM	Pemiscott Bayo	6.28	95	Pn	Pn	18 48 55.2	+1.5
Q24A	Divide	6.30	291	P	Pn	18 48 53.5	-0.8
	baz=106						
Q24A	Divide	6.30	291		Pn	18 48 54.5	+0.2
SDCO	Great Sand Dun	6.35	280	P	Pn	18 48 55.8	+0.9
	baz=95						
SDCO	Great Sand Dun	6.35	280		Pn	18 48 55.8	+0.9
SDCO	Great Sand Dun	6.35	280	P		18 48 56.1	
	baz=95,SNR=9.9						
CPRX	Cap Rock	6.45	235	Pn	Pn	18 48 56.1	-0.1
N41A	Harden Midland	6.47	52	Pn	Pn	18 48 57.7	+1.4
HENM	Henderson Moun	6.52	90	Pn	Pn	18 48 56.7	-0.3
LNXT	Lenox	6.58	95	Pn	Pn	18 48 57.5	-0.4
143A	Socs Landing,	6.62	128	IAmb_Lg		18 51 08.7	
	comp=Z,43nm,0.8s						
S44A	Carbondale	6.69	81	Pn	Pn	18 48 59.8	+0.4
JCT	Junction City	6.70	197	P	Pn	18 48 59.5	0.0
	baz=15						
JCT	Junction City	6.70	197	Pn	Pn	18 48 59.6	0.0
JCT				IAmb_Lg		18 51 05.1	
	comp=Z,82nm,1.1s						
JCT	Junction City	6.70	197	P		18 48 59.6	
	baz=15,SNR=5.2						
GLAT	Glass	6.72	93	Pn	Pn	18 49 01.0	+1.3
SIUC	Southern Illin	6.72	81	Pn	Pn	18 49 01.1	+1.3
HICK	Hickman	6.73	91	Pn	Pn	18 49 00.7	+0.8
HALT	Halls	6.74	96	Pn	Pn	18 49 00.6	+0.6
HALT				IAmb_Lg		18 51 14.0	
	comp=Z,57nm,0.8s						
ECSD	EROS Data Cent	6.83	6	P	Pn	18 49 00.8	-0.4
	baz=187,SNR=8.1						
ECSD	EROS Data Cent	6.83	6		Pn	18 49 00.8	-0.4
ECSD	EROS Data Cent	6.83	6	P		18 49 02.1	
	baz=187,SNR=14						
P43A	Skaggs, Pawnee	6.90	65		Pn	18 49 03.0	+0.8
ISCO	Idaho Springs	6.91	297	P	Pn	18 49 02.0	-0.7
	baz=112						
ISCO	Idaho Springs	6.91	297		Pn	18 49 03.0	+0.3
W45A	Hickory Valley	7.04	102	Pn	Pn	18 49 04.6	+0.4
W45A				IAmb_Lg		18 51 11.8	
	comp=Z,66nm,0.8s						
Q44A	Meyer Farm, Va	7.06	71	Pn	Pn	18 49 05.7	+1.3
342A	Flagon Creek P	7.06	140	IAmb_Lg		18 51 13.9	
	comp=Z,47nm,1.2s						
OXF	Oxford	7.09	108	P	Pn	18 49 06.1	+1.4
	baz=292						
OXF	Oxford	7.09	108		Pn	18 49 05.5	+0.7
OXF				IAmb_Lg		18 51 17.2	
	comp=Z,86nm,1.1s						
L40A	Anamosa	7.10	42	Pn	Pn	18 49 05.1	+0.1
T45A	Paducah	7.17	87	Pn	Pn	18 49 05.5	-0.4
Y45A	Yeager Farm, C	7.26	113	IAmb_Lg		18 51 23.4	
	comp=Z,46nm,0.8s						
S22A	4UR Ranch, Cre	7.40	279		Pn	18 49 09.2	-0.1
HDIL	Hopedale	7.43	58	P	Pn	18 49 11.2	+1.7
	baz=244						
HDIL	Hopedale	7.43	58		Pn	18 49 08.9	-0.5
ANMO	Albuquerque	7.46	257	Lg	Lg	18 51 12.5	
	comp=Z,2.2nm,0.3s,baz=62,slow=14,SNR=7.5						
ANMO	Albuquerque	7.46	257	Pn	Pn	18 49 10.1	+0.1
PHWY	Pilot Hill	7.50	308		Pn	18 49 11.6	+0.9
SUSD	Miller	7.57	353	Pn	Pn	18 49 11.9	+0.5
SUSD				IAmb_Lg		18 51 28.6	
	comp=Z,61nm,0.8s						
N23A	Red Feather La	7.61	304	P	Pn	18 49 12.9	+0.6
	baz=119						
N23A	Red Feather La	7.61	304		Pn	18 49 13.6	+1.4
N23A				IAmb_Lg		18 51 22.1	
	comp=Z,64nm,0.7s						
SMCO	Snowmass	7.73	290		Pn	18 49 14.3	+0.4
I37A	Lemond, Waseca	7.76	23		Pn	18 49 15.3	+1.4
I37A				IAmb_Lg		18 51 37.7	
	comp=Z,50nm,0.8s						
O44A	Mansfield	7.84	63	IAmb_Lg		18 51 28.9	
	comp=Z,64nm,0.8s						
BNM	Barren Site	7.87	252		Pn	18 49 16.6	+0.8
WVT	Waverly	7.91	93	P	Pn	18 49 16.8	+0.8
	baz=279						
WVT	Waverly	7.91	93		Pn	18 49 16.9	+0.9
L42A	Oliver, Polo	7.95	48	IAmb_Lg		18 51 48.9	
	comp=Z,67nm,0.8s						
PLAL	Pickwick Lake	7.96	101	Pn	Pn	18 49 16.1	-0.8
JFWS	Jewell Farm	8.21	41	IAmb_Lg		18 51 46.9	
	comp=Z,60nm,0.8s						
MNTX	Cornudas Mount	8.29	233	P	Pn	18 49 22.1	+0.7
	baz=48,SNR=6.6						
MNTX	Cornudas Mount	8.29	233		Pn	18 49 21.0	-0.3
MNTX	Cornudas Mount	8.29	233	P		18 49 22.7	
	baz=48,SNR=6.3						
RSSD	Black Hills	8.69	328	IAmb_Lg		18 52 06.9	
	comp=Z,29nm,0.7s						
I40A	Norwalk	8.75	35	IAmb_Lg		18 52 00.8	
	comp=Z,45nm,0.9s						
RWWY	Rawlins	8.83	305	IAmb_Lg		18 52 18.9	
	comp=Z,32nm,1.0s						
SFIN	Lafayette	8.90	64	IAmb_Lg		18 52 02.0	
	comp=Z,63nm,0.7s						
K22A	Casper	8.93	312	Pn	Pn	18 49 31.3	+1.2
K22A				IAmb_Lg		18 52 11.6	
	comp=Z,55nm,1.0s						
X48A	Hartselle	8.94	103	IAmb_Lg		18 52 09.7	
	comp=Z,31nm,1.2s						
BLO	Bloomington	9.02	72	IAmb_Lg		18 52 09.5	
	comp=Z,53nm,0.7s						
WCI	Wyandotte Cave	9.07	78	IAmb_Lg		18 52 22.3	
	comp=Z,48nm,0.9s						
CLTN	Cedars of Leba	9.11	92	IAmb_Lg		18 52 12.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,31nm,0.9s						
TX31	Lajitas Ar. Si	9.13	216		Pn	18 49 32.5	-0.4
TX32	Lajitas Array	9.13	216		Pn	18 49 32.5	-0.4
TXAR	Lajitas Array	9.13	216	Pn	Pn	18 49 32.0	-0.9
	comp=Z,0.3nm,0.3s,baz=38,slow=10,SNR=10.0						
TXAR				Lg	Lg	18 52 03.0	
	comp=Z,0.4nm,0.3s,baz=33,slow=34,SNR=2.2						
TXAR	Lajitas Array	9.13	216		Pn	18 49 31.7	-1.2
K43A	Burlington	9.16	48	IAmb_Lg		18 52 19.9	
	comp=Z,65nm,0.8s						
121A	Cookes Peak, D	9.46	245	IAmb_Lg		18 52 45.6	
	comp=Z,32nm,1.1s						
U49A	Red Boiling Sp	9.50	89	IAmb_Lg		18 52 22.4	
	comp=Z,42nm,1.1s						
I42A	Draeger Farm,	9.59	41	IAmb_Lg		18 52 29.6	
	comp=Z,43nm,1.1s						
P48A	Milroy	9.91	72	IAmb_Lg		18 52 43.3	
	comp=Z,57nm,0.9s						
R49A	Shelbyville	9.95	78	IAmb_Lg		18 52 38.4	
	comp=Z,37nm,0.9s						
PDAR	Pinedale Array	10.88	306	Pn	Pn	18 49 56.0	-0.9
	comp=Z,0.1nm,0.3s,baz=124,slow=13,SNR=6.9						
PDAR				Lg	Lg	18 52 54.0	
	comp=Z,0.7nm,0.3s,baz=107,slow=33,SNR=2.2						
PDAR	Pinedale Array	10.88	306		Pn	18 49 55.9	-1.0
S51A	Beattyville	11.18	82		Pn	18 50 02.6	+1.7
TKL	Tuckaleechee C	11.23	92	Pn	Pn	18 50 02.0	+0.4
	comp=Z,0.4nm,0.3s,baz=259,slow=10,SNR=4.3						
TKL				Lg	Lg	18 53 12.0	
	comp=Z,1.2nm,0.3s,baz=2.5,slow=18,SNR=8.6						
ULM	Lac du Bonnet	13.36	5	Pn	Pn	18 50 26.3	-4.4
	comp=Z,0.2nm,0.3s,baz=186,slow=16,SNR=2.1						
ULM				Sn	Sn	18 52 48.0	-11
	comp=Z,0.5nm,0.3s,baz=276,slow=18,SNR=3.4						
ULM				Lg	Lg	18 54 09.6	
	comp=Z,0.3nm,0.3s,baz=304,slow=15,SNR=3.1						
YKA	Yellowknife Ar	27.66	343	P	P	18 53 10.1	+1.4
	comp=Z,0.1nm,0.6s,baz=143,slow=8.8,SNR=3.1						
ILAR	Eielson Array	40.13	330	P	P	18 54 57.5	+0.8
	comp=Z,0.7nm,0.7s,baz=112,slow=6.7,SNR=8.2						
ILAR	Eielson Array	40.13	330	P	P	18 54 57.1	+0.4

DJA ***15*** *19:02:14.7±1.5, 4°N±16°×12°7E±°, h38^{km}±12^{km}, M4.0/6, mb3.9/3, MLv4.0/6*

IDC ***15*** *19:02:16.8±3.9, 3°.64N×126°.60E, h42^{km}±39^{km}, mb3.7/15, mb1 3.8/16, mb1mx3.6/55, mbtmp4.0/16, ML4.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=32.5km s-min=14.8km az=74.0*

NEIC ***15*** *19:02:17.2±1.0, 3°.63N±0°.09×126°.65E±0°.09, h51^{km}±9^{km}, mb4.6/8, Error ellipse: s-maj=15.4km s-min=9.7km az=223.0*

ISC 15 19:02:16.0±0.5**, 3°.73N**±0°.07×**126°.86E**±0°.07**, h35^{km}, n39, σ1ˢ.15**/40**, mb4.1**/18**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.33	268	P	Pn	19 02 38.2	+0.2
SGSI				S	Sn	19 02 56.8	+2.3
TNTI	Ternate	2.98	170	Pn	Pn	19 03 00.9	+0.2
TNTI	Ternate	2.98	170	P	Pn	19 03 01.8	+1.0
GTOI	Gorontalo	4.92	231	P	Pn	19 03 29.2	+1.8
	0.1nm10nm,1.4s						
CGP	Cagayan de Oro	5.17	336	⇓eP	Pn	19 03 36.6	+5.8
SANI	Sanana	5.80	189	P	Pn	19 03 40.7	+1.1
	0.1nm6.2nm,1.0s						
MRSI	Marisa	5.88	237	P	Pn	19 03 42.1	+1.5
LUWI	Luwuk	6.25	221	Pn	Pn	19 03 43.7	-2.1
SIJI	Sorong	6.34	136	P	Pn	19 03 49.0	+1.9
	4.9nm,0.3s,baz=337,slow=22,SNR=18						
SIJI				S	Sn	19 04 57.5	-0.9
	baz=214,slow=21,SNR=1.1						
TOLI2	Tolitoli	6.60	247	Pn	Pn	19 03 49.8	-0.8
MYLDM	Lahad Datu	8.46	280	Pn	Pn	19 04 14.2	-1.8
FAKI	Fak Fak	8.52	141	Pn	Pn	19 04 18.8	+1.8
KAPI	Kappang	11.21	219	LR	LR	19 09 41.5	
	comp=Z,51nm,18.6s,baz=38,slow=40						
FITZ	Fitzroy Crossi	21.72	183	P	P	19 07 03.8	-0.4
	2.2nm,0.9s,baz=16,slow=13,SNR=2.1						
ASAR	Alice Springs	28.08	166	P	P	19 08 03.8	-0.7
	0.4nm,0.5s,baz=343,slow=9.6,SNR=11						
ASAR				PcP	PcP	19 11 18.9	+0.3
	0.4nm,0.4s,baz=350,slow=2.1,SNR=9.5						
CMAR	Chiang Mai Arr	30.98	300	P	P	19 08 29.9	-0.4
	0.5nm,0.6s,baz=114,slow=6.6,SNR=4.9						
CMAR	Chiang Mai Arr	30.98	300	P	P	19 08 28.7	-1.6
KSRS	Korea Array	33.58	2	P	P	19 08 54.2	+1.4
	2.3nm,0.8s,baz=180,slow=10.0,SNR=7.6						
STKA	Stephens Creek	38.08	159	P	P	19 09 31.9	+0.5
	1.9nm,0.6s,baz=336,slow=8.3,SNR=8.9						
STKA	Stephens Creek	38.08	159	P	P	19 09 31.5	+0.1
USRK	Ussuriysk Ar.	40.56	6	P	P	19 09 52.9	+0.9
	1.6nm,0.6s,baz=196,slow=10.0,SNR=1.7						
LSA	Lhasa	42.54	311	P	P	19 10 08.5	-0.5
LSA				IAmb	IAmb	19 10 10.0	
	comp=Z,2.8nm,0.5s						
SONM	Songino Array	47.34	341	P	P	19 10 46.4	-0.1
	comp=Z,0.5nm,0.6s,baz=151,slow=8.9,SNR=4.2						
SONM				PcP	PcP	19 12 16.7	-0.4
	comp=Z,0.3nm,0.6s,baz=132,slow=2.1,SNR=2.3						
SONM	Songino Array	47.34	341	P	P	19 10 46.3	-0.3
TLY	Talaya	51.57	342	LR	LR	19 36 26.0	
	comp=Z,34nm,18.7s,baz=296,slow=40						
PETK	Petropavlovsk-	55.38	22	P	P	19 11 48.2	+1.7
	comp=Z,1.8nm,0.5s,baz=185,slow=2.8,SNR=10						
PETK	Petropavlovsk-	55.38	22	P	P	19 11 47.7	+1.1
MKAR	Makanchi Array	57.63	325	P	P	19 12 02.1	-0.6
	comp=Z,1.6nm,0.5s,baz=119,slow=6.9,SNR=14						
YAK	Yakutsk	58.21	2	P	P	19 12 06.8	+0.4
ZALV	Zalesovo Beam	60.65	333	P	P	19 12 21.9	-1.5
	comp=Z,0.4nm,0.4s,baz=111,slow=6.8,SNR=2.2						
KURBB	Kurchatov Arra	61.81	327	P	P	19 12 30.6	-0.7
	comp=Z,2.2nm,0.6s,baz=129,slow=6.3,SNR=28						
KURK	Kurchatov	61.81	327	P	P	19 12 30.6	-0.7
KURK				IAmb	IAmb	19 12 33.3	
	comp=Z,4.3nm,0.7s						
BVAR	Borovoye Array	67.39	327	P	P	19 13 06.5	-1.2
	comp=Z,0.3nm,0.4s,baz=104,slow=6.1,SNR=2.6						
AKTO	Aktyubinsk	73.74	322	P	P	19 13 47.0	+0.5
	comp=Z,1.1nm,0.6s,baz=109,slow=11,SNR=4.2						
ARU	Arti	75.01	328	P	P	19 13 53.0	-0.8
	comp=Z,0.7nm,0.5s,baz=158,slow=11,SNR=4.9						
ARU	Arti	75.01	328	P	P	19 13 52.9	-0.9
ARU				IAmb	IAmb	19 13 56.8	
	comp=Z,8.6nm,1.5s						
INK	Inuvik	90.12	22	P	P	19 15 12.5	+0.5
INK				IAmb	IAmb	19 15 15.7	
	comp=Z,2.7nm,0.6s						
ARCES	ARCESS Array B	90.50	340	P	P	19 15 12.8	-1.1
	comp=Z,5.4nm,1.1s,baz=79,slow=6.3,SNR=7.0						
ARCES	ARCESS Array B	90.50	340	P	P	19 15 13.2	-0.7

NNC ***15*** *19:08:22.4±6.5, 37°.33N×69°.69E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=59.2km s-min=42.0km az=179.0*

IDC ***15*** *19:08:22.0±2.2, 37°.47N×69°.71E, h0^{km}, mb3.8/1, mb1 3.6/7, mb1mx3.2/50, mbtmp3.5/7, ML2.9/5, MS3.4/3, Ms1 3.4/3, ms1mx2.6/57, Error ellipse: s-maj=28.4km s-min=23.8km az=68.0*

ISC 15 19:08:21.7±2.2**, 37°.5N**±0°.1×**69°.4E**±0°.2**, h10^{km}, n13, σ2ˢ.11**/11**, MS3.5**/3**, 6C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.69	8	Pn	Pn	19 09 46.2	-0.1
	0.3nm,0.4s,baz=189,slow=14,SNR=7.5						
KK31				⇑Pg	Pg	19 10 10.9	+0.1
	2.9nm,0.7s,baz=189,slow=17,SNR=5.4						
KK31				⇑Lg	Lg	19 11 31.0	
	7.0nm,0.7s,baz=185,slow=27,SNR=3.9						
AAK	Ala-Archa	6.48	36	Pn	Pn	19 09 58.6	+1.3
	1.0nm,0.3s,baz=228,slow=16,SNR=17						
AAK				Lg	Lg	19 11 43.9	
	0.2nm,0.3s,baz=242,slow=13,SNR=2.8						
AAK	Ala-Archa	6.48	36	⇑Pn	Pn	19 10 00.1	+2.8
	7.2nm,0.8s						
AAK				⇑Lg	Lg	19 11 44.6	
	22nm,1.1s						
TKM2	Tokmak 2	7.23	39	⇑Pn	Pn	19 10 08.9	+1.3
	7.5nm,0.9s						
TKM2				⇑Lg	Lg	19 12 07.4	
	17nm,1.4s						
MKAR	Makanchi Array	13.34	42	Pn	Pn	19 11 30.1	-1.0
	0.0nm,0.3s,baz=231,slow=14,SNR=12						
KURBB	Kurchatov Arra	14.68	24	Pn	Pn	19 11 45.9	-3.5
	0.0nm,0.3s,baz=215,slow=13,SNR=1.8						
AKTO	Aktyubinsk	15.31	331	Pn	Pn	19 11 57.6	-0.1
	0.2nm,0.3s,baz=138,slow=11,SNR=8.0						
BVAR	Borovoye Array	15.57	2	Pn	Pn	19 11 58.0	-3.2
	baz=162,slow=12,SNR=1.4						
ZALV	Zalesovo Beam	19.62	28	P	Pn	19 12 52.1	+0.6
	0.1nm,0.3s,baz=218,slow=11,SNR=7.3						
BRTR	Keskin Array B	27.92	286	LR	LR	19 30 23.8	
	comp=Z,37nm,18.2s,baz=304,slow=47						
CMAR	Chiang Mai Arr	32.05	118	P	P	19 14 48.6	-0.2
	0.4nm,0.3s,baz=306,slow=11,SNR=4.8						
MA2	Magadan	54.40	38	LR	LR	19 42 01.2	
	comp=Z,39nm,19.1s,baz=214,slow=37						
DAV	Davao City (W)	59.10	106	LR	LR	19 44 49.4	
	comp=Z,50nm,20.0s,baz=265,slow=37						

PGC 15 19:18:31.1, 54°.33N×117°.45W, h5^{km}, ML3.7/9**, 166km Nne of Jasper, Alberta Alberta, Canada, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNB	Mounoet Dainar	2.21	195	P	Pn	19 19 09.1	+0.5
MNB				S	Sn	19 19 35.0	-1.4
NBC4	NorthernBC 4	2.29	308	Pn	Pn	19 19 09.6	0.0
NBC4				Sg	Sb	19 19 41.0	-0.7
BLBC	Blue River	2.53	206	Pn	Pn	19 19 13.0	-0.1
BLBC				Pg	Pb	19 19 16.2	-0.9
BLBC				Sg	Sb	19 19 49.9	+1.2
EDM	Edmonton	2.68	113	Pn	Pn	19 19 13.6	-1.3
EDM				Sn	Sn	19 19 45.6	-2.1
BMBC	Bull Mountain	3.18	305	Pn	Pn	19 19 21.4	-0.5
BMBC				Pg	Pb	19 19 28.8	+0.6
BMBC				Sn	Sn	19 19 59.5	-0.7
BMBC				Sg	Sg	19 20 10.6	-2.7
SLEB	Sale Mountain	3.20	188	Pn	Pn	19 19 22.5	+0.3
SLEB				Sg	Sb	19 20 08.6	+0.8
FSB	Fort Saint Jam	4.02	275	Pn	Pn	19 19 32.6	-0.7
FSB				Sg	Sg	19 20 36.2	-3.9
NBC5	NorthernBC 5	4.34	320	Pn	Pn	19 19 37.0	-0.9
NBC5				Pg	Pb	19 19 48.6	+0.7
NBC5				Sn	Sn	19 20 26.3	-2.5
LLLB	Lillooet	4.61	218	Pg	Pb	19 19 54.5	+2.1
LLLB				Sg	Sg	19 20 54.8	-4.2
PNT	Penticton	5.20	196	Pg	Pb	19 20 05.6	+3.1
PNT				Sg	Sb	19 21 11.4	+6.2
WSLR	Whistler	5.39	221	Pg	Pb	19 20 08.2	+2.5
WSLR				Sg	Sg	19 21 18.3	-5.7
FNBB	Fort Nelson	5.50	328	Pn	Pn	19 19 51.9	-1.7
FNBB				Sn	Sn	19 20 52.4	-4.9
FNBB				Sg	Sg	19 21 22.2	-5.5
HOPB	Hope	5.53	208	Sg	Sg	19 21 22.0	-6.5
NBC3	NorthernBC 3	5.60	343	Sg	Sg	19 21 24.4	-6.3
WALA	Waterton Lakes	5.72	156	Pn	Pn	19 19 56.4	-0.4
WALA				Sn	Sn	19 20 59.2	-3.6
NBC2	NorthernBC 2	6.11	335	Sn	Sn	19 21 08.6	-3.6
NBC2				Sg	Sg	19 21 41.9	-5.2
BIB	Bowen Island	6.12	219	Sg	Sg	19 21 41.1	-6.4
MBW	Mount Baker	6.21	208	Sg	Sg	19 21 44.3	-6.1
B06A	Marblemount	6.34	205	Sg	Sg	19 21 47.2	-7.4
RPW	Rockport	6.42	205	Sg	Sg	19 21 49.0	-8.0

NNC ***15*** *19:20:45.5±3.3, 38°.76N×70°.62E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=26.6km s-min=19.5km az=6.0*

IDC ***15*** *19:20:46.2±1.4, 38°.88N×70°.99E, h0^{km}, mb3.7/9, mb1 3.8/16, mb1mx3.6/51, mbtmp3.7/16, ML3.0/6, MS3.2/3, Ms1 3.2/3, ms1mx2.6/48, Error ellipse: s-maj=21.3km s-min=11.5km az=158.0*

KRNET ***15*** *19:20:48.5±0.1, 39°.02N×70°.96E, mb3.7*

SOME ***15*** *19:20:49.3, 39°.22N×71°.12E, h20^{km}*

ISC 15 19:20:46.5±0.7**, 38°.74N**±0°.05×**70°.82E**±0°.04**, h10^{km}, n55, σ2ˢ.39**/70**, mb3.8**/8**, 15C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	1.06	45	⇑iP	Pg	19 21 03.7	-3.3
	baz=55						
DRK				⇑iS	Sg	19 21 15.3	-5.5
	baz=55						
BTK	Batken	1.32	360	⇑iP	Pn	19 21 07.9	-3.2
	baz=54						
BTK				⇑iS	Sb	19 21 22.7	-5.7
	baz=54						
OHH	Osh	2.34	40	⇓iP	Pn	19 21 26.2	+1.1
	baz=43						
OHH				⇓iS	Sn	19 21 53.4	-0.6
	baz=43						
SFK	Sufi-Kurgan	2.44	58	⇑iP	Pn	19 21 28.2	+1.6
	baz=62						
SFK				⇑iS	Sn	19 21 56.5	-0.1
	baz=62						
TRKS	Terek-Say	2.80	5	⇓iP	Pn	19 21 31.4	-0.1
	baz=4.0						
TRKS				⇓iS	Sn	19 22 02.8	-2.6
	baz=4.0						
ARSB	Arslanbob	3.07	32	⇑iP	Pn	19 21 35.8	+0.6
	baz=33						
ARSB				⇑iS	Sn	19 22 10.7	-1.4
	baz=33						
CHM	Chimkent	3.70	346	eP	Pn	19 21 48.3	+4.6
	36nm,0.2s						
CHM				eS	Sn	19 22 30.9	+3.6
	262nm,0.4s						
MNAS	Manas	3.96	18	⇓iP	Pn	19 21 48.7	+1.3
	baz=18						
MNAS				⇓iS	Sn	19 22 31.6	-2.4
	baz=18						
AML	Almayashu	4.04	32	P	Pn	19 21 50.2	+1.5
	SNR=49						
DZA	Taraz	4.17	5	eP	Pn	19 21 54.5	+4.3
	27nm,0.1s						
DZA				eS	Sn	19 22 41.0	+2.0
	397nm,0.3s						
KK31	Karatay Array	4.37	357	⇑P	Pn	19 21 53.8	+0.9
	4.9nm,0.3s,baz=179,slow=13,SNR=302						
KK31				⇓S	Sn	19 22 45.5	+1.6
	11nm,0.3s,baz=184,slow=22,SNR=4.2						
MRKS	Merke	4.40	24	eP	Pn	19 21 58.9	+5.5
	28nm,0.3s						
MRKS				eS	Sn	19 22 48.8	+4.0
	53nm,0.4s						
UCH	Uchtor	4.48	38	P	Pn	19 21 56.5	+1.7
	SNR=53						
EKS2	Erkin-Say	4.52	29	P	Pn	19 21 56.9	+1.8
	SNR=27						
AAK	Ala-Archa	4.79	34	Pn	Pn	19 22 01.0	+2.1
	11nm,0.3s,baz=203,slow=7.6,SNR=187						
AAK				Sn	Sn	19 22 55.4	+0.8
	4.1nm,0.3s,baz=111,slow=8.3,SNR=3.6						
AAK				Lg	Lg	19 23 12.4	
	7.0nm,0.3s,baz=337,slow=19,SNR=6.3						
AAK	Ala-Archa	4.79	34	P	Pn	19 22 00.8	+1.9
	SNR=47						
AAK	Ala-Archa	4.79	34	⇑P	Pn	19 22 00.5	+1.6
	24nm,0.5s						
AAK				⇓S	Sn	19 22 59.0	+4.4
	44nm,0.7s						
KBK	Karagaybulak	5.01	37	P	Pn	19 22 04.6	+2.7
	SNR=14						
CHMS	Chumysh	5.19	34	P	Pn	19 22 06.1	+1.8
	SNR=18						
USP	Ospenovka	5.31	30	P	Pn	19 22 07.0	+1.1
	SNR=74						
ULHL	Ulahol	5.42	48	P	Pn	19 22 08.8	+1.2
	SNR=9.2						
TKM2	Tokmak 2	5.53	39	P	Pn	19 22 10.9	+1.8
	SNR=26						
TKM2	Tokmak 2	5.53	39	⇑P	Pn	19 22 10.5	+1.4
	18nm,0.6s						
TKM2				⇑S	Sn	19 23 14.5	+1.7
	18nm,0.6s						
KST	Kastek	5.80	41	eP	Pb	19 22 27.8	-0.1
	7.7nm,0.3s						
KST				eS	Sb	19 23 38.4	+0.9
	19nm,0.5s						
DGS	Degeres	5.85	38	eP	Pb	19 22 28.9	+0.2
	9.8nm,0.4s						
DGS				eS	Sb	19 23 40.4	+1.5
	13nm,0.4s						
IZV	Izvestkoviy	6.14	44	eP	Pb	19 22 35.8	+2.2
	6.6nm,0.6s						
IZV				eS	Sb	19 23 52.7	+5.5
	14nm,0.5s						
TNSS	Tian-Shan	6.32	45	eP	Pb	19 22 38.9	+2.0
	7.8nm,0.6s						
TNSS				eS	Sb	19 23 57.6	+4.9
	8.8nm,0.6s						
MDOK	Medeo	6.46	45	⇑P	Pn	19 22 23.8	+2.0
	12nm,0.8s						
GEYT	Alibeck	10.02	269	Pn	Pn	19 23 10.2	-0.3
	0.3nm,0.3s,baz=89,slow=10,SNR=1.9						
MK31	Makanchi Array	11.64	43	P	Pn	19 23 33.0	+0.3
	3.8nm,0.7s,baz=237,slow=9.7,SNR=47						
MKAR	Makanchi Array	11.64	43	Pn	Pn	19 23 33.4	+0.7
	0.4nm,0.3s,baz=231,slow=14,SNR=56						
MKAR				Lg	Lg	19 26 41.8	
	0.1nm,0.3s,baz=238,slow=27,SNR=3.2						
KURBB	Kurchatov Arra	13.08	22	Pn	Pn	19 23 48.7	-3.5
	0.1nm,0.3s,baz=212,slow=13,SNR=5.5						
KURBB				Lg	Lg	19 27 27.0	
	0.0nm,0.3s,baz=213,slow=30,SNR=4.6						
AB31	Akbulak array	13.09	327	⇑P	Pn	19 23 49.5	-2.9
	1.6nm,0.5s,baz=133,slow=13,SNR=78						
BVAR	Borovoye Array	14.29	359	Pn	Pn	19 24 05.6	-3.3
	0.2nm,0.3s,baz=165,slow=14,SNR=5.7						
BVAR				Sn	Sn	19 26 33.4	-14
	0.1nm,0.3s,baz=164,slow=22,SNR=1.7						
AKTO	Aktyubinsk	14.80	326	Pn	Pn	19 24 13.4	-2.4
	0.4nm,0.3s,baz=137,slow=12,SNR=8.5						
AKTO				Sn	Sn	19 26 51.2	-8.6
	0.1nm,0.3s,baz=156,slow=20,SNR=2.7						
AKTO				LR	LR	19 29 59.7	
	comp=Z,91nm,18.9s,baz=299,slow=38						
AKTO	Aktyubinsk	14.80	326	⇑P	Pn	19 24 13.6	-2.2
	3.5nm,0.7s						
DANN	Dangsing	14.94	130	eP	Pn	19 24 17.1	-1.0
	13nm,0.5s						
KKN	Kakani	16.27	128	eP	Pn	19 24 33.1	-2.2
	7.7nm,0.5s						
PKIN	Phulchoki	16.49	128	eP	Pn	19 24 37.4	-0.9
	9.0nm,0.5s						
PKI	Pulchoki	16.51	128	eP	Pn	19 24 37.2	-1.3
	7.0nm,0.4s						
GUN	Gumba	16.56	126	eP	Pn	19 24 37.6	-1.6
	5.9nm,0.3s						
RAMN	Ramite	17.69	127	eP	Pn	19 24 52.3	-0.9
	6.9nm,0.3s						
ZALV	Zalesovo Beam	17.97	28	P	Pn	19 24 53.4	-2.8
	0.4nm,0.3s,baz=224,slow=13,SNR=8.7						
TAPN	Taplejung	18.12	124	eP	Pn	19 24 57.7	-0.9
	5.8nm,0.7s						
ODAN	Odare	18.25	126	eP	P	19 24 59.8	-0.5
	12nm,0.7s						
ARU	Arti	19.48	339	P	P	19 25 12.1	-1.3
	0.0nm,0.3s,baz=171,slow=14,SNR=3.2						
GNI	Garni	20.17	282	P	Pn	19 25 24.8	+1.6
	1.6nm,0.6s,baz=127,slow=10,SNR=2.1						
GNI				LR	LR	19 34 31.8	
	comp=Z,56nm,18.6s,baz=34,slow=41						
BELG	Belogornoye	21.10	318	P	P	19 25 31.5	+0.6
	7.4nm,0.9s,baz=135,slow=11,SNR=4.1						
BELG				LR	LR	19 33 32.6	
	comp=Z,58nm,20.5s,baz=144,slow=36						
KBZ	Khabaz	21.53	292	P	P	19 25 38.1	+2.4
	1.0nm,0.7s,baz=101,slow=10,SNR=1.9						
KVAR	Kislovodsk Arr	21.70	293	P	P	19 25 40.7	+3.1
	2.3nm,0.7s,baz=129,slow=15,SNR=1.8						
SONM	Songino Array	27.24	59	P	P	19 26 30.3	-0.5
	0.4nm,0.6s,baz=266,slow=9.7,SNR=4.3						
FINES	FINESS Array B	35.57	324	P	P	19 27 42.5	-1.1
	3.8nm,1.0s,baz=106,slow=10,SNR=2.0						
KLR	Kul'dur	43.97	56	P	P	19 28 52.6	-1.0
	0.8nm,0.5s,baz=264,slow=8.0,SNR=6.0						
TORD	Torodi Ar. Bea	65.65	268	P	P	19 31 34.2	+3.0
	0.5nm,0.6s,baz=48,slow=7.0,SNR=2.3						
YKA	Yellowknife Ar	79.02	3	P	P	19 32 49.3	-1.0
	0.3nm,0.7s,baz=1.3,slow=4.9,SNR=4.8						

IDC 15 20:10:40.6±5.1**, 39°.05N×109°.64E, h0^{km}, mb3.0**/2**, mb1 3.3**/3**, mb1mx2.9**/44**, mbtmp3.1**/3**, Error ellipse: s-maj=112.7km s-min=23.4km az=88.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	9.09	346	Pn	Pn	20 12 53.0	-0.2
	baz=165,slow=12,SNR=3.7						
SONM				Sn	Sn	20 14 39.1	+2.8
	baz=169,slow=23,SNR=6.7						
SONM				Lg	Lg	20 15 28.9	
	baz=161,slow=29,SNR=4.3						
MKAR	Makanchi Array	21.39	300	P	P	20 15 29.8	0.0
	0.4nm,0.9s,baz=99,slow=8.9,SNR=2.3						
CMAR	Chiang Mai Arr	22.52	207	P	P	20 15 42.0	0.0
	0.4nm,0.3s,baz=14,slow=8.7,SNR=7.2						

NEIC ***15*** *20:11:30.6±1.4, 44°.42N±0°.04×114°.15W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=7.6km s-min=3.0km az=185.0*

IDC ***15*** *20:11:31.1±0.8, 44°.42N×114°.45W, h0^{km}, mb1 3.3/4, mb1mx3.2/44, mbtmp3.0/4, ML3.3/4, Error ellipse: s-maj=12.5km s-min=6.6km az=81.0*

BUT ***15*** *20:11:31.3±1.6, 44°.44N±0°.05×114°.12W±0°.07, h13^{km}±7^{km}, Md3.5, ML3.1/82(NEIC), Error ellipse: s-maj=7.1km s-min=6.5km az=143.0*

ANF ***15*** *20:11:31.5±1.1, 44°.42N×114°.11W, h14^{km}±12^{km}, ML3.5/6, Error ellipse: s-maj=7.8km s-min=3.1km az=167.0*

ISC 15 20:11:30.7±0.8**, 44°.43N**±0°.03×**114°.12W**±0°.03**, h6^{km}, n58, σ0ˢ.73**/65**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCYI	Bear Canyon	0.53	102		Pg	20 11 41.3	+0.4
HLID	Hailey	0.89	194	P	Pb	20 11 48.4	-0.3
	baz=14						
HLID				S	Sb	20 12 01.4	+0.6
	baz=14						
HLID	Hailey	0.89	194	Pg	Pb	20 11 48.3	-0.3
HLID				IAML		20 12 05.9	
	720nm,0.4s						
HLID				IAML		20 12 06.4	
	1µm,0.3s						
MCMT	McKenzie Canyo	0.99	66	Pg	Pg	20 11 49.8	0.0
DLMT	Dillon	1.43	49		Pb	20 11 57.8	-0.1
MFID	Camas Ranch	1.59	231		Pb	20 12 00.7	+0.1
QLMT	Earthquake Lak	1.96	77	Pn	Pn	20 12 05.0	+0.2
YHB	Horse Butte	2.12	80	Pn	Pn	20 12 08.0	+1.2
YHB				IAML		20 12 41.7	
	comp=E,141nm,0.6s						
YHB				IAML		20 12 43.5	
	comp=N,132nm,0.8s						
BOZ	Bozeman (W)	2.12	56	P	Pn	20 12 07.4	+0.6
	baz=238						
BOZ				Sb	Sb	20 12 37.4	+1.1
	baz=238						
BOZ	Bozeman (W)	2.12	56	Pn	Pn	20 12 07.3	+0.4
YHL	Hebgen Lake	2.14	78	Pn	Pn	20 12 08.5	+1.2
YHL				IAML		20 12 40.9	
	comp=N,227nm,0.8s						
YMR	Madison River	2.27	83	Pn	Pn	20 12 10.0	+1.0
BMO	Blue Mountains	2.31	282	Pn	Pn	20 12 09.9	+0.5
BMO				IAML		20 12 47.6	
	comp=N,91nm,0.3s						
IMW	Indian Meadow	2.35	102	Pn	Pb	20 12 11.8	-1.8
IMW				IAML		20 12 45.0	
	comp=N,152nm,0.6s						
IMW				IAML		20 12 46.9	
	comp=N,101nm,0.5s						
YHH	Holmes Hill	2.37	80	Pn	Pn	20 12 11.8	+1.4
YHH				IAML		20 12 47.6	
	comp=E,196nm,0.5s						
YHH				IAML		20 12 48.1	
	comp=N,161nm,0.6s						
YPP	Pitchstone Pla	2.39	93	Pn	Pn	20 12 10.6	0.0
YPP				IAML		20 12 45.7	
	comp=N,61nm,0.7s						
YPP				IAML		20 12 49.2	
	comp=E,71nm,0.5s						
MSO	Missoula	2.41	3	P	Pn	20 12 10.7	0.0
	baz=183						
MSO				S	Sn	20 12 40.6	0.0
	baz=183						
MSO	Missoula	2.41	3	Pn	Pn	20 12 10.6	-0.2
MSO				IAML		20 12 48.7	
	comp=E,130nm,0.5s						
MSO				IAML		20 12 49.6	
	comp=E,152nm,0.5s						

ECR	**Eagle Creek**	**2.42**	**124**	Pn	**Pn**	**20 12 11.8**	**+0.8**
FLWY	**Flagg Ranch**	**2.48**	**97**	Pn	**Pn**	**20 12 11.1**	**-0.8**
MOOW	**Moose Ponds**	**2.53**	**104**		**Pn**	**20 12 11.8**	**-0.7**
H17A	**Grant Village**	**2.54**	**89**	Pn	**Pn**	**20 12 11.8**	**-0.9**
REDW	**Red Top Meadow**	**2.59**	**113**		**Pn**	**20 12 12.9**	**-0.5**
REDW				IAML		20 12 54.7	
	comp=E,49nm,0.8s						
REDW				IAML		20 13 04.7	
	comp=E,51nm,0.7s						
SNOW	**Snow King Moun**	**2.62**	**110**	Pn	**Pn**	**20 12 13.8**	**+0.1**
SNOW				IAML		20 12 59.9	
	comp=E,60nm,0.7s						
LOHW	**Long Hollow**	**2.67**	**107**	Pn	**Pn**	**20 12 14.3**	**-0.1**
LKWY	**Lake**	**2.67**	**86**	Pn	**Pn**	**20 12 14.3**	**-0.2**
F10A	**Beach Ranch, E**	**2.69**	**306**		**Pn**	**20 12 15.8**	**+1.3**
AHID	**Auburn Hatcher**	**2.75**	**126**	Pn	**Pn**	**20 12 15.9**	**+0.4**
AHID				IAML		20 13 00.4	
	comp=N,110nm,0.3s						
AHID				IAML		20 13 01.2	
	comp=E,96nm,0.2s						
HRY	**Holter Researc**	**2.79**	**34**	Pn	**Pn**	**20 12 15.8**	**-0.2**
HVU	**Hansel Valley**	**2.82**	**159**	Pn	**Pn**	**20 12 16.9**	**+0.4**
YMP	**Mirror Lake Pl**	**2.85**	**82**	Pn	**Pn**	**20 12 16.8**	**-0.2**
YMP				IAML		20 13 09.6	
	comp=E,55nm,0.4s						
YMP				IAML		20 13 11.7	
	comp=N,38nm,0.6s						
YNE	**Yellowstone No**	**2.99**	**77**	Pn	**Pn**	**20 12 18.8**	**0.0**
YNE				IAML		20 13 08.1	
	comp=E,72nm,0.5s						
JTMT	**Jette**	**3.32**	**358**	Pn	**Pn**	**20 12 22.8**	**-0.6**
JTMT				IAML		20 13 20.3	
	comp=N,37nm,0.5s						
JTMT				IAML		20 13 22.2	
	comp=E,50nm,0.5s						
SPUT	**South Promonto**	**3.35**	**158**	Pn	**Pn**	**20 12 24.4**	**+0.6**
SPUT				IAML		20 13 17.6	
	comp=N,33nm,0.5s						
HWUT	**Hardware Ranch**	**3.38**	**145**	Pn	**Pn**	**20 12 23.5**	**-0.7**
HWUT				IAML		20 13 25.6	
	comp=N,27nm,0.9s						
HWUT				IAML		20 13 27.5	
	comp=N,26nm,0.8s						
E09A	**Wood Farm, Sta**	**3.52**	**308**	Pn	**Pn**	**20 12 25.3**	**-0.5**
E09A				IAML		20 13 28.1	
	comp=E,25nm,1.1s						
RLMT	**Red Lodge**	**3.53**	**77**	Pb	**Pb**	**20 12 33.9**	**+0.2**
	baz=260						
RLMT	**Red Lodge**	**3.53**	**77**	Pn	**Pn**	**20 12 26.7**	**+0.5**
RLMT				IAML		20 13 25.2	
	comp=E,60nm,0.3s						
RLMT				IAML		20 13 27.8	
	comp=E,65nm,0.5s						
BGU	**Big Grassy Mou**	**3.59**	**167**	Pn	**Pn**	**20 12 27.4**	**+0.4**
BGU				IAML		20 13 28.8	
	comp=E,26nm,0.7s						
BW06	**Boulder Array**	**3.71**	**115**	Pn	**Pn**	**20 12 29.3**	**+0.5**
PD31	**Pinedale Array**	**3.71**	**115**	Pn	**Pn**	**20 12 29.0**	**+0.3**
PDAR	**Pinedale Array**	**3.71**	**115**	Pn	**Pb**	**20 12 35.6**	**-1.1**
	comp=E,0.3nm,0.3s,baz=302,slow=17,SNR=8.2						
PDAR				Sn	**Sb**	**20 13 23.2**	**+1.2**
	baz=297,slow=12,SNR=1.1						
PDAR	**Pinedale Array**	**3.71**	**115**	Pn	**Pn**	**20 12 28.1**	**-0.6**
ELK	**Elko**	**3.77**	**193**	Pn	**Pn**	**20 12 32.0**	**+2.4**
	comp=E,1.5nm,0.3s,baz=355,slow=16,SNR=7.8						
ELK				Pg	**Pb**	**20 12 36.9**	**-0.9**
	comp=E,1.6nm,0.3s,baz=353,slow=16,SNR=24						
ELK				Lg	Lg	20 13 26.7	
	comp=E,4.2nm,0.3s,baz=188,slow=9.5,SNR=8.4						
ELK	**Elko**	**3.77**	**193**	Pn	**Pn**	**20 12 29.4**	**-0.2**
WVOR	**Wild Horse Val**	**3.84**	**240**	Pn	**Pn**	**20 12 30.1**	**-0.4**
WVOR				IAML		20 13 41.9	
	comp=E,18nm,1.1s						
WVOR				IAML		20 13 44.1	
	comp=E,23nm,1.0s						
I07A	**Izee**	**3.88**	**267**	Pn	**Pn**	**20 12 30.2**	**-0.8**
I07A				IAML		20 13 43.2	
	comp=N,20nm,4.9s						
DUG	**Dugway, Tooele**	**4.34**	**167**	Pn	**Pn**	**20 12 37.2**	**-0.1**
DUG				IAML		20 13 56.7	
	comp=N,14nm,0.9s						
DUG				IAML		20 13 56.8	
	comp=N,21nm,0.9s						
NEW	**Newport**	**4.36**	**333**	Pn	**Pn**	**20 12 38.2**	**+0.6**
	comp=N,1.0nm,0.3s,baz=135,slow=13,SNR=11						
NEW				Sn	**Sn**	**20 13 27.7**	**-1.0**
	comp=N,1.5nm,0.3s,baz=252,slow=20,SNR=6.6						
NEW				Lg	Lg	20 13 47.5	
	comp=N,5.8nm,0.3s,baz=64,slow=15,SNR=12						
NEW	**Newport**	**4.36**	**333**	P	**Pn**	**20 12 38.1**	**+0.6**
	baz=150						
NEW				S	**Sn**	**20 13 29.0**	**+0.3**
	baz=150						
NEW	**Newport**	**4.36**	**333**	Pn	**Pn**	**20 12 38.1**	**+0.6**
NEW				IAML		20 13 56.5	
	comp=N,39nm,1.0s						
NEW				IAML		20 14 38.9	
	comp=N,32nm,0.4s						
WALA	**Waterton Lakes**	**4.64**	**2**	Pn	**Pn**	**20 12 41.3**	**-0.1**
WALA				IAML		20 14 11.3	
	comp=N,28nm,0.4s						
EGMT	**Eagleton**	**4.71**	**39**	S	**Sn**	**20 13 37.4**	**+0.2**
	baz=222						
EGMT	**Eagleton**	**4.71**	**39**	Pn	**Pn**	**20 12 42.5**	**+0.3**
MOD	**Modoc Plateau**	**5.17**	**243**	Pn	**Pn**	**20 12 48.7**	**-0.1**
MOD				IAML		20 14 08.4	
	comp=N,9.9nm,4.5s						
MOD				IAML		20 14 19.3	
	comp=E,17nm,4.6s						
K05A	**Summer Lake**	**5.20**	**253**	Pn	**Pn**	**20 12 48.7**	**-0.5**
NVAR	**Mina Array Bea**	**6.76**	**209**	Pg	**Pb**	**20 13 28.1**	**-0.7**
	comp=E,0.2nm,0.3s,baz=31,slow=16,SNR=5.4						
NVAR				Lg	Lg	20 15 03.9	
	comp=E,0.4nm,0.3s,baz=26,slow=33,SNR=4.1						
YKA	**Yellowknife Ar**	**18.10**	**359**	P	**Pn**	**20 15 42.1**	**-0.4**
	comp=E,0.1nm,0.3s,baz=171,slow=12,SNR=4.3						

IDC 15 20:14:48.3±17.0**, 16°.72N×149°.61E, h0^{km}, mb3.6**/5**,**
mb1 3.7/5**, mb1mx3.4**/41**, mbtmp3.6**/5**, Error ellipse:**
s-maj=375.6km s-min=86.2km az=128.0, Mariana
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**47.01**	**321**	P	P	20 23 21.4	-0.1
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.9						
CMAR	**Chiang Mai Arr**	**48.20**	**280**	P	P	20 23 30.8	-0.2
	0.3nm,0.4s,baz=74,slow=6.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**61.84**	**323**	P	P	20 25 08.4	-0.8
	0.7nm,0.6s,baz=90,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**62.51**	**314**	P	P	20 25 14.3	+0.5
	0.3nm,0.7s,baz=103,slow=6.5,SNR=2.1						
KURBB	**Kurchatov Arra**	**65.27**	**318**	P	P	20 25 32.1	+0.2
	1.6nm,0.7s,baz=94,slow=7.2,SNR=11						

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*IDC **15** 20:29:12.4±0.5, 26°.14S×11°.53W, h0^{km}, mb4.6/20,*
mb1 4.7/20, mb1mx4.6/27, mbtmp4.6/20, MS4.2/25,
Ms1 4.2/25, ms1mx4.2/32, Error ellipse: s-maj=17.4km
s-min=14.4km az=131.0
*MOS **15** 20:29:12.5±1.1, 26°.16S×11°.58W, h10^{km}, mb5.3/14, Error*
ellipse: s-maj=13.7km s-min=8.5km az=49.5
*NEIC **15** 20:29:13.4±1.4, 26°.11S±0°.08×11°.5W±0°.1, h10^{km}±1^{km},*
mb5.2/66, Error ellipse: s-maj=15.6km s-min=13.7km
az=244.0
*GCMT **15** 20:29:17.4±0.2, 26°.06S±0°.02×11°.43W±0°.02, h12^{km},*
MW5.0/124, Moment Tensor Solution. s39,c41;
s124,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M$_{rr}$4.18±.08; M$_{\theta\theta}$-1.46±.09; M$_{\phi\phi}$-2.72±.08; M$_{r\theta}$-1.23±.37;
M$_{\theta\phi}$-0.90±.08; M$_{\phi r}$0.66±.44; Best double couple:
M$_0$3.86100×10^{16} NP1:φ$_s$221.00000°, δ47.00000°,
λ110.00000°. NP2:φ$_s$14.00000°, δ47.00000°, λ70.00000°.
Principal axes: T 4.5320, Plg76.0000°, Azm208.0000°; N
-1.3410, Plg14.0000°, Azm27.0000°; P -3.1900,
Plg0.0000°, Azm117.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
ISC 15 20:29:13.7±0.3**, 26°.11S**±0°.07×**11°.52W**±0°.06**, h10^{km}, n294,**
σ**1^{s}.26**/289**, mb5.0**/64**, MS4.4**/32**, 29C-13D, Southern**
Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**11.45**	**29**	P	**Pn**	**20 31 55.4**	**-2.0**
SHEL	**Horse Pasture**	**11.45**	**29**	Pn	**Pn**	**20 31 55.4**	**-2.0**
ALF01	**Guarapari-ES**	**27.33**	**275**	*e*P	**P**	**20 35 00.3**	**+1.5**
TSUM	**Tsumeb**	**27.69**	**82**	P	**P**	**20 35 01.6**	**-0.7**
	6.5nm,0.9s,baz=246,slow=7.8,SNR=10						
TSUM				LR	LR	20 44 02.3	
	comp=Z,493nm,21.4s,baz=223,slow=32						
TSUM	**Tsumeb**	**27.69**	**82**	P	**P**	**20 35 00.9**	**-1.4**
CAM01	**Campos-RJ**	**27.83**	**272**	*e*P	**P**	**20 35 05.0**	**+1.6**
BSFB	**Barra de Sao F**	**28.00**	**279**	*e*P	**P**	**20 35 05.4**	**+0.4**
DUB01	**Friburgo-RJ**	**28.41**	**272**	*e*P	**P**	**20 35 09.0**	**+0.3**
SUR	**Sutherland**	**28.83**	**110**	P	**P**	**20 35 13.1**	**+0.6**
	8.6nm,0.8s,baz=259,slow=10,SNR=2.7						
SUR				LR	LR	20 44 32.4	
	comp=Z,936nm,18.4s,baz=270,slow=32						
GDU01	**Guandu, BA**	**29.04**	**290**	*e*P	**P**	**20 35 16.6**	**+2.4**
VAS01	**Vassouras-RJ**	**29.32**	**271**	*e*P	**P**	**20 35 16.8**	**0.0**
ESAR	**Angra dos Reis**	**30.05**	**269**	*e*P	**P**	**20 35 24.2**	**+1.0**
RCBR	**Riachuelo**	**30.80**	**307**	P	**P**	**20 35 27.2**	**-2.7**
RCBR				pmax	pmax		
	comp=Z,44nm,1.3s						
RCBR	**Riachuelo**	**30.80**	**307**	P	**P**	**20 35 27.2**	**-2.7**
RCBR				IAmb	IAmb	20 35 28.1	
	comp=Z,44nm,1.2s						
BSCB	**Bom Sucesso**	**30.85**	**272**	*e*P	**P**	**20 35 30.8**	**+0.5**
PARB	**Paraibuna**	**31.05**	**268**	*e*P	**P**	**20 35 33.2**	**+1.1**
JANB	**Januaria**	**32.52**	**283**	*e*P	**P**	**20 35 45.5**	**+0.5**
BOSA	**Boshof**	**32.68**	**103**	P	**P**	**20 35 46.0**	**-0.4**
	comp=Z,18nm,0.8s,baz=278,slow=7.1,SNR=23						
BOSA				LR	LR	20 47 22.3	
	comp=Z,814nm,18.1s,baz=262,slow=33						
BOSA	**Boshof**	**32.68**	**103**	P	**P**	**20 35 45.3**	**-1.1**
BOSA				IAmb	IAmb	20 35 48.7	
	comp=Z,22nm,0.8s						
LIC	**Lamto**	**32.75**	**12**	*e*P	**P**	**20 35 47.2**	**+0.3**
	comp=Z,46nm,0.8s						
KIC	**Kosan Boka**	**32.94**	**12**	*e*P	**P**	**20 35 48.7**	**+0.1**
	comp=Z,26nm,0.8s						
TIC	**Toumodi**	**33.17**	**12**	*e*P	**P**	**20 35 50.6**	**0.0**
DBIC	**Dimbokro**	**33.22**	**12**	P	**P**	**20 35 51.0**	**0.0**
	comp=Z,11nm,0.7s,baz=169,slow=10,SNR=22						
DBIC				LR	LR	20 46 07.8	
	comp=Z,254nm,19.4s,baz=191,slow=30						
DBIC	**Dimbokro**	**33.22**	**12**	P	**P**	**20 35 51.2**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,19nm,1.0s						
DBIC	**Dimbokro**	**33.22**	**12**	P	**P**	**20 35 51.2**	**+0.2**
DBIC				IAmb	IAmb	20 36 03.9	
	comp=Z,19nm,0.9s						
LBTB	**Lobatse**	**33.43**	**96**	P	**P**	**20 35 52.3**	**-0.7**
LBTB				pmax	pmax		
	comp=Z,26nm,1.1s						
LBTB	**Lobatse**	**33.43**	**96**	P	**P**	**20 35 52.3**	**-0.7**
LBTB				IAmb	IAmb	20 35 53.3	
	comp=Z,26nm,1.1s						
BB19B	**Bebedouro**	**34.20**	**271**	*e*P	**P**	**20 36 00.6**	**+0.9**
SDBA	**SAO DESIDERIO**	**34.21**	**287**	*e*P	**P**	**20 36 01.0**	**+1.1**
SDBA	**SAO DESIDERIO**	**34.21**	**287**	*e*P	**P**	**20 36 00.8**	**+0.9**
CNLB	**Canela**	**34.85**	**256**	*e*P	**P**	**20 36 05.7**	**+0.4**
IPMB	**Ipameri, GO**	**34.86**	**276**	*e*P	**P**	**20 36 04.8**	**-0.6**
IPMB	**Ipameri, GO**	**34.86**	**276**	*e*P	**P**	**20 36 05.0**	**-0.4**
BDFB	**Brasilia**	**35.54**	**280**	P	**P**	**20 36 11.2**	**-0.3**
	comp=Z,5.1nm,0.5s,baz=101,slow=9.6,SNR=7.4						
BDFB				LR	LR	20 48 51.0	
	comp=Z,796nm,18.5s,baz=123,slow=33						
BDFB	**Brasilia**	**35.54**	**280**	P	**P**	**20 36 11.1**	**-0.3**
BDFB				pmax	pmax		
	comp=Z,69nm,1.9s						
BDFB	**Brasilia**	**35.54**	**280**	P	**P**	**20 36 11.1**	**-0.3**
BDFB				IAmb	IAmb	20 36 12.8	
	comp=Z,68nm,1.9s						
ITAB	**Concordia**	**36.19**	**259**	*e*P	**P**	**20 36 18.6**	**+1.9**
ITAB	**Concordia**	**36.19**	**259**	*e*P	**P**	**20 36 18.8**	**+2.0**
ITRB	**Iturama**	**36.24**	**272**	*e*P	**P**	**20 36 17.8**	**+0.6**
ITRB	**Iturama**	**36.24**	**272**	*e*P	**P**	**20 36 18.0**	**+0.8**
PCMB	**Pacaembu**	**36.52**	**268**	*e*P	**P**	**20 36 20.8**	**+1.2**
PCMB	**Pacaembu**	**36.52**	**268**	*e*P	**P**	**20 36 21.1**	**+1.5**
PTGB	**Pitanga**	**36.54**	**263**	*e*P	**P**	**20 36 20.9**	**+1.0**
PTGB	**Pitanga**	**36.54**	**263**	*e*P	**P**	**20 36 21.1**	**+1.3**
CPSB	**Cacapava Do Su**	**37.02**	**253**	*e*P	**P**	**20 36 25.3**	**+1.5**
CPSB	**Cacapava Do Su**	**37.02**	**253**	*e*P	**P**	**20 36 25.2**	**+1.5**
PLTB	**Pedras Altas**	**37.09**	**251**	*e*P	**P**	**20 36 25.3**	**+1.0**
PLTB	**Pedras Altas**	**37.09**	**251**	*e*P	**P**	**20 36 25.7**	**+1.4**
PEXB	**Peixe**	**37.29**	**285**	*e*P	**P**	**20 36 26.5**	**+0.3**
PEXB	**Peixe**	**37.29**	**285**	*e*P	**P**	**20 36 26.7**	**+0.4**
SMTB	**Santa Maria do**	**38.26**	**290**	*e*P	**P**	**20 36 35.2**	**+0.8**
LSZ	**Lusaka**	**38.54**	**82**	P	**P**	**20 36 37.5**	**+0.6**
LSZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LSZ	**Lusaka**	**38.54**	**82**	P	**P**	**20 36 37.5**	**+0.6**
ARAG	**Araguaiana, MT**	**38.89**	**277**	*e*P	**P**	**20 36 40.9**	**+1.2**
ARAG	**Araguaiana, MT**	**38.89**	**277**	*e*P	**P**	**20 36 39.8**	**0.0**
CPUP	**Villa Florida**	**40.92**	**259**	P	**P**	**20 36 56.9**	**+0.4**
	comp=Z,8.1nm,0.9s,baz=107,slow=8.8,SNR=11						
CPUP				LR	LR	20 50 47.2	
	comp=Z,294nm,21.1s,baz=94,slow=32						
CPUP	**Villa Florida**	**40.92**	**259**	P	**P**	**20 36 56.5**	**0.0**
CPUP				pmax	pmax		
	comp=Z,63nm,1.7s						
CPUP	**Villa Florida**	**40.92**	**259**	P	**P**	**20 36 56.5**	**0.0**
CPUP				IAmb	IAmb	20 36 59.8	
	comp=Z,63nm,1.7s						
PP1B	**Ponte de Pedra**	**40.97**	**273**	*e*P	**P**	**20 36 59.0**	**+2.0**
KOWA	**Kowa**	**41.02**	**11**	P	**P**	**20 36 57.5**	**+0.3**
KOWA				IAmb	IAmb	20 37 10.5	
	comp=Z,24nm,0.9s						
TOA0	**Torodi Ar. Sit**	**41.09**	**20**	P	**P**	**20 36 57.4**	**-0.4**
TORD	**Torodi Ar. Bea**	**41.09**	**20**	P	**P**	**20 36 57.8**	**0.0**
	comp=Z,12nm,0.9s,baz=190,slow=8.9,SNR=34						
TORD				LR	LR	20 50 57.5	
	comp=Z,489nm,19.3s,baz=205,slow=32						
TORD	**Torodi Ar. Bea**	**41.09**	**20**	P	**P**	**20 36 57.3**	**-0.5**
PRPB	**Parauapebas**	**41.55**	**292**	*e*P	**P**	**20 37 01.8**	**0.0**
TMAB	**Tom-Au,PA,Br**	**42.31**	**298**	*e*P	**P**	**20 37 10.6**	**+2.6**
VNA1	**Neumayer--Stat**	**44.61**	**178**	P	**P**	**20 37 27.2**	**+1.4**
VNA2	**Neumayer--Watz**	**44.91**	**178**	P	**P**	**20 37 28.6**	**+0.4**
	baz=347,slow=10						
VNA2				S	S	20 44 23.2	+17
	baz=356,slow=10						
VNA3	**Neumayer Olymp**	**45.18**	**179**	P	**P**	**20 37 30.6**	**+0.2**
VNA3				S	S	20 44 24.9	+15
PTLB	**Pontes e Lacer**	**45.54**	**274**	*e*P	**P**	**20 37 35.4**	**+1.5**
PTLB	**Pontes e Lacer**	**45.54**	**274**	*e*P	**P**	**20 37 37.4**	**+3.5**
NPGB	**Novo Progresso**	**45.81**	**287**	*e*P	**P**	**20 37 36.4**	**+0.3**
NPGB	**Novo Progresso**	**45.81**	**287**	*e*P	**P**	**20 37 36.7**	**+0.6**
SNAA	**Sanae**	**45.86**	**176**	P	**P**	**20 37 36.2**	**+0.4**
SNAA	**Sanae**	**45.86**	**176**	P	**P**	**20 37 36.1**	**+0.2**
	comp=Z,7.6nm,1.0s,baz=337,slow=8.6,SNR=10						
SNAA	**Sanae**	**45.86**	**176**	⇓*i*P	**P**	**20 37 36.0**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,11nm,1.1s						
SNAA	**Sanae**	**45.86**	**176**	P	**P**	**20 37 36.3**	**+0.4**
MCPB	**Macapa, AP**	**46.68**	**297**	*e*P	**P**	**20 37 43.7**	**+0.8**
MCPB	**Macapa, AP**	**46.68**	**297**	*e*P	**P**	**20 37 43.2**	**+0.3**
VILB	**Vilhena**	**47.45**	**276**	*e*P	**P**	**20 37 48.2**	**-0.7**
MBAR	**Mbarara**	**47.94**	**65**	⇓*e*P	**P**	**20 37 55.3**	**+2.4**
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZON	**Zonda**	**49.89**	**250**	P	**P**	**20 38 07.4**	**-0.3**
ZON				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZON	**Zonda**	**49.89**	**250**	P	**P**	**20 38 07.4**	**-0.3**
PLCA	**Paso Flores**	**50.49**	**238**	P	**P**	**20 38 12.4**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=117,slow=7.7,SNR=8.3						
PLCA				LR	LR	20 59 18.0	
	comp=Z,182nm,18.2s,baz=120,slow=36						
PLCA	**Paso Flores**	**50.49**	**238**	P	**P**	**20 38 12.2**	**+0.1**
PLCA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PLCA	**Paso Flores**	**50.49**	**238**	P	**P**	**20 38 12.2**	**+0.1**
PLCA	**Paso Flores**	**50.49**	**238**	*e*P	**P**	**20 38 12.9**	**+0.7**
BO02	**Sierra Bellavi**	**51.18**	**245**	P	**P**	**20 38 16.5**	**-0.8**
BO02				IAmb	IAmb	20 38 18.8	
	comp=Z,36nm,0.8s						
VA03	**San Esteban**	**51.27**	**248**	P	**P**	**20 38 17.6**	**-0.5**
VA03				IAmb	IAmb	20 38 20.1	
	comp=Z,70nm,1.8s						
PEL	**Peldehue**	**51.33**	**247**	P	**P**	**20 38 17.9**	**-0.6**
PEL				pmax	pmax		
	comp=Z,21nm,1.0s						
PEL	**Peldehue**	**51.33**	**247**	P	**P**	**20 38 17.9**	**-0.6**
PEL				IAmb	IAmb	20 38 19.9	
	comp=Z,21nm,1.0s						
TAM	**Tamanrasset**	**51.34**	**20**	P	**P**	**20 38 18.6**	**0.0**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TAM	**Tamanrasset**	**51.34**	**20**	P	**P**	**20 38 18.6**	**0.0**
CO01	**Juntas del Tor**	**51.36**	**251**	P	**P**	**20 38 20.1**	**+1.1**
CO01				IAmb	IAmb	20 38 23.1	
	comp=Z,19nm,0.9s						
CO03	**El Pedregal**	**51.71**	**250**	P	**P**	**20 38 20.8**	**-0.6**
AC05	**El Transito**	**51.74**	**253**	P	**P**	**20 38 22.0**	**+0.3**
AC05				IAmb	IAmb	20 38 23.9	
	comp=Z,22nm,0.9s						
SAML	**Samuel**	**51.78**	**279**	P	**P**	**20 38 22.8**	**+0.8**
SAML				pmax	pmax		
	comp=Z,17nm,1.2s						
SAML	**Samuel**	**51.78**	**279**	P	**P**	**20 38 22.8**	**+0.8**
SAML	**Samuel**	**51.78**	**279**	*e*P	**P**	**20 38 23.3**	**+1.3**
SAML	**Samuel**	**51.78**	**279**	*e*P	**P**	**20 38 23.3**	**+1.3**
CO02	**Combarbal**	**51.91**	**250**	P	**P**	**20 38 22.2**	**-0.7**
CO02				IAmb	IAmb	20 38 24.3	
	comp=Z,31nm,1.0s						
GO04	**Tololo Observa**	**51.92**	**251**	P	**P**	**20 38 22.7**	**-0.6**
GO04				IAmb	IAmb	20 38 24.8	
	comp=Z,43nm,0.9s						
GO03	**Copiap**	**51.97**	**254**	P	**P**	**20 38 22.6**	**-0.8**
GO03				IAmb	IAmb	20 38 25.3	
	comp=Z,22nm,0.9s						
GO02	**Mina Guanaco**	**51.97**	**258**	P	**P**	**20 38 23.2**	**-0.5**
LVC	**Limon Verde**	**52.04**	**261**	P	**P**	**20 38 24.0**	**-0.3**
LVC				pmax	pmax		
	comp=Z,217nm,1.8s						
LVC	**Limon Verde**	**52.04**	**261**	P	**P**	**20 38 24.0**	**-0.3**
LVC	**Limon Verde**	**52.04**	**261**	*e*P	**P**	**20 38 24.1**	**-0.3**
LVC	**Limon Verde**	**52.04**	**261**	*e*P	**P**	**20 38 24.1**	**-0.3**
LCO	**Las Campanas**	**52.07**	**252**	P	**P**	**20 38 23.9**	**-0.4**
LCO				pmax	pmax		
	comp=Z,19nm,0.9s						
LCO	**Las Campanas**	**52.07**	**252**	P	**P**	**20 38 23.9**	**-0.4**
LCO				IAmb	IAmb	20 38 26.0	
	comp=Z,19nm,0.9s						
MACA	**Manacapuru-AM**	**52.33**	**287**	*e*P	**P**	**20 38 27.7**	**+1.6**
PB09	**IPOC Station P**	**52.56**	**262**	P	**P**	**20 38 28.1**	**+0.2**
AC01	**Pan de Azucar**	**52.62**	**256**	P	**P**	**20 38 27.8**	**-0.3**
AC01				IAmb	IAmb	20 38 30.1	
	comp=Z,38nm,1.0s						
PB14	**IPOC Station P**	**52.82**	**258**	P	**P**	**20 38 29.5**	**-0.5**
PB14				IAmb	IAmb	20 38 32.8	
	comp=Z,56nm,1.2s						
BELA	**Belgrano 2**	**52.94**	**186**	P	**P**	**20 38 29.4**	**-0.4**
PB08	**IPOC Station P**	**52.98**	**264**	P	**P**	**20 38 30.2**	**-1.1**
PB08				IAmb	IAmb	20 38 33.1	
	comp=Z,40nm,1.0s						
KMBO	**Kilima Mbogo**	**53.06**	**70**	P	**P**	**20 38 34.1**	**+2.3**
	comp=Z,1.1nm,0.7s,baz=62,slow=6.3,SNR=4.1						
KMBO				LR	LR	20 59 13.4	
	comp=Z,415nm,19.9s,baz=280,slow=34						
PB07	**IPOC Station P**	**53.16**	**262**	P	**P**	**20 38 32.4**	**0.0**
GO01	**Chusmiza**	**53.16**	**264**	P	**P**	**20 38 32.0**	**-0.8**
GO01				IAmb	IAmb	20 38 35.0	
	comp=Z,52nm,1.4s						
MNMC	**Minye Minye**	**53.69**	**265**	P	**P**	**20 38 35.0**	**-1.4**
PB16	**IPOC Station P**	**53.87**	**266**	P	**P**	**20 38 37.7**	**-0.4**
PSGCX	**Pisagua**	**54.01**	**264**	P	**P**	**20 38 38.4**	**-0.2**
PSGCX				IAmb	IAmb	20 38 39.9	
	comp=Z,14nm,1.0s						
ETMB	**Extrema**	**54.10**	**277**	*e*P	**P**	**20 38 39.7**	**+0.5**
ETMB	**Extrema**	**54.10**	**277**	*e*P	**P**	**20 38 40.0**	**+0.8**
MAW	**Mawson**	**60.20**	**155**	LR	LR	20 59 39.0	
	comp=Z,316nm,20.1s,baz=241,slow=30						
CZSB	**Cruzeiro do Su**	**60.79**	**276**	*e*P	**P**	**20 39 26.2**	**-0.2**
NNA	**Nana**	**62.76**	**270**	⇓*e*P	**P**	**20 39 37.0**	**-2.7**
NNA				pmax	pmax		
	comp=Z,52nm,1.5s						
KEST	**Kesra**	**64.59**	**19**	P	**P**	**20 39 52.8**	**+1.5**
	comp=Z,5.8nm,0.9s,baz=199,slow=2.9,SNR=4.7						
KEST				LR	LR	21 06 34.1	
	comp=Z,380nm,18.0s,baz=176,slow=35						
KEST	**Kesra**	**64.59**	**19**	P	**P**	**20 39 51.0**	**-0.3**
KEST				IAmb	IAmb	20 40 12.7	
	comp=Z,16nm,1.1s						
ESDC	**Sonseca Array**	**65.82**	**6**	P	**P**	**20 39 59.8**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=183,slow=7.0,SNR=16						
ESDC				LR	LR	21 06 55.8	
	comp=Z,113nm,20.1s,baz=20,slow=34						
MTE	**Manteigas**	**66.27**	**3**	*e*P	**P**	**20 40 03.6**	**+1.5**
MVO	**Moncorvo**	**67.06**	**4**	*e*P	**P**	**20 40 08.3**	**+1.2**
SDV	**Santo Domingo**	**67.11**	**293**	P	**P**	**20 40 08.2**	**0.0**
SDV	**Santo Domingo**	**67.11**	**293**	*e*P	**P**	**20 40 08.8**	**+0.7**
SDV	**Santo Domingo**	**67.11**	**293**	*e*P	**P**	**20 40 09.0**	**+0.9**
SDV	**Santo Domingo**	**67.11**	**293**	*e*P	**P**	**20 40 09.6**	**+1.4**
PCAB	**Cabril**	**67.56**	**3**	*e*P	**P**	**20 40 10.9**	**+0.7**
RUSC	**La Rusia**	**67.58**	**289**	*e*P	**P**	**20 40 07.8**	**-3.7**
PAMC	**Pamplona, Colo**	**68.01**	**290**	*e*P	**P**	**20 40 14.4**	**+0.2**
BARC	**Barichara**	**68.03**	**289**	*e*P	**P**	**20 40 14.4**	**+0.4**
ROSC	**El Rosal**	**68.11**	**287**	LR	LR	21 09 00.2	
	comp=Z,885nm,18.3s,baz=108,slow=35						
MARP	**Paez Belalcaza**	**68.53**	**284**	*e*P	**P**	**20 40 17.1**	**-0.1**
TOLC	**Tolima**	**68.84**	**286**	*e*P	**P**	**20 40 16.9**	**-2.4**
OCAC	**Ocana**	**69.00**	**291**	*e*P	**P**	**20 40 16.3**	**-3.7**
RREF	**El Recreo**	**69.02**	**287**	*e*P	**P**	**20 40 20.0**	**-0.7**
PTBC	**PUERTO BERRIO,**	**69.08**	**289**	*e*P	**P**	**20 40 17.7**	**-2.7**
OTAV	**Otavalo**	**69.48**	**281**	*e*P	P	20 40 13.2	-10
OTAV	**Otavalo**	**69.48**	**281**	*e*P	**P**	**20 40 23.2**	**-0.2**
HELC	**Santa Helena**	**69.82**	**288**	*e*P	**P**	**20 40 24.0**	**-1.4**
ZARC	**Zaragoza, Cauc**	**69.92**	**289**	*e*P	**P**	**20 40 23.7**	**-1.8**
CBOC	**Ciudad Bolivar**	**70.07**	**287**	*e*P	**P**	**20 40 26.1**	**-0.5**
SJCC	**San Jacinto, C**	**71.43**	**291**	*e*P	**P**	**20 40 34.7**	**-0.1**
RAYN	**Ar Rayn**	**74.01**	**53**	P	**P**	**20 40 51.7**	**+1.8**
RAYN				pmax	pmax		
	comp=Z,12nm,1.3s						
RAYN	**Ar Rayn**	**74.01**	**53**	P	**P**	**20 40 51.7**	**+1.8**
MANT	**Manisa**	**74.42**	**32**	P	**P**	**20 40 52.4**	**+0.2**
MANT				IAmb	IAmb	20 40 54.7	
	comp=Z,33nm,0.8s						
DAVOX	**Davos/Dischmat**	**75.09**	**15**	LR	LR	21 11 10.2	
	comp=Z,187nm,21.6s,baz=228,slow=34						
STAL	**STALIGIAL**	**75.31**	**17**	P	**P**	**20 40 56.9**	**0.0**
DIVS	**Divibare**	**75.60**	**23**	P	**P**	**20 40 58.6**	**-0.1**
VNDA	**Vanda**	**76.53**	**179**	P	**P**	**20 41 04.8**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=159,slow=2.2,SNR=7.5						
VNDA				LR	LR	21 10 50.4	
	comp=Z,254nm,20.6s,baz=178,slow=33						
VNDA	**Vanda**	**76.53**	**179**	P	**P**	**20 41 04.5**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,25nm,1.7s						
VNDA	**Vanda**	**76.53**	**179**	P	**P**	**20 41 04.5**	**+0.9**
VNDA				IAmb	IAmb	20 41 06.7	
	comp=Z,25nm,1.7s						
MDVR	**Moldovita**	**76.80**	**24**	⇑P	**P**	**20 41 06.1**	**+0.6**
MORH	**Mrgy, Hungar**	**77.01**	**21**	*e*P	**P**	**20 41 06.3**	**-0.2**
HERR	**Herculane**	**77.14**	**24**	⇑P	**P**	**20 41 07.3**	**-0.1**
BZS	**Buzias**	**77.49**	**23**	⇑P	**P**	**20 41 09.5**	**+0.2**
BZS	**Buzias**	**77.49**	**23**	⇑P	**P**	**20 41 09.5**	**+0.2**
GZR	**Gura Zlata**	**77.72**	**24**	⇑P	**P**	**20 41 10.8**	**+0.2**
GZR	**Gura Zlata**	**77.72**	**24**	⇑P	**P**	**20 41 10.8**	**+0.2**
BR131	**Keskin Array S**	**77.86**	**34**	P	**P**	**20 41 12.4**	**+0.7**
BR131				pmax	pmax		
	comp=Z,38nm,1.5s						
BR131	**Keskin Array S**	**77.86**	**34**	P	**P**	**20 41 12.4**	**+0.7**
BR131				IAmb	IAmb	20 41 15.7	
	comp=Z,38nm,1.4s						
BRTR	**Keskin Array B**	**77.86**	**34**	P	**P**	**20 41 13.2**	**+1.5**
	comp=Z,8.5nm,1.0s,baz=192,slow=5.7,SNR=31						
BRTR				LR	LR	21 15 56.8	
	comp=Z,18nm,20.4s,baz=277,slow=36						
BRTR	**Keskin Array B**	**77.86**	**34**	P	**P**	**20 41 12.6**	**+0.9**
BRTR	**Keskin Array B**	**77.86**	**34**	P	**P**	**20 41 12.6**	**+0.9**
GERES	**GERESS Array B**	**77.95**	**17**	P	**P**	**20 41 11.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=184,slow=4.0,SNR=12						
GERES				LR	LR	21 13 09.5	
	comp=Z,139nm,20.9s,baz=256,slow=34						
GERES	**GERESS Array B**	**77.95**	**17**	P	**P**	**20 41 11.3**	**-0.6**
KHC	**Kasperske Hory**	**78.19**	**17**	⇓*e*P	**P**	**20 41 16.1**	**+3.0**
KHC				pmax	pmax		
	comp=Z,31nm,2.0s						
KHC	**Kasperske Hory**	**78.19**	**17**	*e*P	**P**	**20 41 12.8**	**-0.3**
KHC				*e*x	x	20 41 42.4	
KHC				*e*PP	**PP**	**20 44 08.0**	**-2.2**
BUD	**Budapest**	**78.25**	**21**	*e*P	**P**	**20 41 14.8**	**+1.4**
ARR	**Arges**	**78.39**	**25**	⇑P	**P**	**20 41 15.1**	**+0.8**
VOIR		**78.61**	**25**	⇑P	**P**	**20 41 15.3**	**-0.2**
VOIR		**78.61**	**25**	⇑P	**P**	**20 41 15.3**	**-0.2**
ILGA	**Ilgaz**	**78.91**	**33**	P	**P**	**20 41 16.6**	**-0.9**
ILGA				IAmb	IAmb	20 41 40.5	

	comp=Z,59nm,1.7s						
PSZ	Piszkesteto	78.92	21	⇑P	P	20 41 17.4	+0.2
PSZ	Piszkesteto	78.92	21	eP	P	20 41 17.0	-0.2
PSZ	Piszkesteto	78.92	21	P	P	20 41 16.7	-0.5
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	78.92	21	P	P	20 41 16.6	-0.5
MLR	Muntele Rosu	79.00	26	⇑P	P	20 41 18.0	+0.2
MLR	Muntele Rosu	79.00	26	⇑P	P	20 41 18.0	+0.2
MLR	Muntele Rosu	79.00	26	P	P	20 41 17.8	0.0
MLR				IAmb	IAmb	20 41 20.6	
	comp=Z,16nm,1.0s						
VYHS	Vyhne	79.09	20	eP	P	20 41 18.3	+0.2
VYHS				pmax	pmax		
	comp=Z,12nm,1.0s						
VYHS	Vyhne	79.09	20	eP	P	20 41 18.3	+0.2
DOPR	Dopca	79.18	25	⇑P	P	20 41 18.9	+0.3
BISRR	Bisoca	79.35	26	⇑P	P	20 41 20.4	+0.8
OZUR		79.44	25	⇑P	P	20 41 20.6	+0.6
VRI	Vrincioaia	79.62	26	⇓P	P	20 41 21.0	0.0
VRI	Vrincioaia	79.62	26	⇓P	P	20 41 21.0	0.0
BZK	Bozkurt	79.73	33	⇓P	P	20 41 07.6	-14
JTS	Las Juntas de	79.94	287	LR	LR	21 16 02.3	
	comp=Z,242nm,19.8s,baz=178,slow=35						
JTS	Las Juntas de	79.94	287	⇑eP	P	20 41 23.2	-0.3
JTS				pmax	pmax		
	comp=Z,51nm,3.2s						
MARD	Mardin	79.97	40	P	P	20 41 22.7	-0.6
DPC	Dobruska-Polom	80.03	18	eP	P	20 41 23.4	+0.2
DPC	Dobruska-Polom	80.03	18	eP	P	20 41 23.4	+0.2
DIKM	Dikmen	80.12	34	⇑P	P	20 41 25.3	+1.5
OSTC	Ostas	80.18	18	eP	P	20 41 24.1	+0.1
BIZ	Bicaz	80.26	25	⇑P	P	20 41 25.3	+0.8
CRVS	Cervenica-Dubn	80.28	21	eP	P	20 41 25.7	+1.1
CRVS				pmax	pmax		
	comp=Z,23nm,1.4s						
CRVS	Cervenica-Dubn	80.28	21	eP	P	20 41 25.7	+1.1
BURAR	Bucovina Array	80.49	24	P	P	20 41 26.2	+0.4
KOLS	Kolonicke sedl	80.58	22	eP	P	20 41 28.5	+2.4
KOLS	Kolonicke sedl	80.58	22	eP	P	20 41 28.5	+2.4
KOPT	Kop Dagi	81.69	38	P	P	20 41 34.3	+1.7
KOPT				IAmb	IAmb	20 41 35.8	
	comp=Z,20nm,0.9s						
KTUT	Trabzon	81.97	37	⇑P	P	20 41 36.0	+2.3
SORM	Soroca	82.11	26	⇑P	P	20 41 33.8	-0.4
SORM	Soroca	82.11	26	⇑P	P	20 41 33.8	-0.4
UOSS	Minazif	82.78	58	P	P	20 41 38.5	+0.2
ANN	Anapa	83.52	33	eP	P	20 41 38.4	-3.2
ANN				e*PP	pP	20 41 43.3	-0.5
ANN				eS	S	20 51 57.6	-5.7
ANN				pmax	pmax		
	comp=Z,52nm,1.0s						
GNI	Garni	84.17	40	⇓eP	P	20 41 47.4	+2.1
GNI				pmax	pmax		
	comp=Z,26nm,1.5s						
GNI	Garni	84.17	40	P	P	20 41 44.7	-0.7
GNI				IAmb	IAmb	20 42 03.3	
	comp=Z,33nm,1.4s						
AKASG	Malin Array Be	84.53	25	P	P	20 41 46.8	+0.2
	comp=Z,7.5nm,0.8s,baz=219,slow=4.8,SNR=28						
AKASG				LR	LR	21 19 41.2	
	comp=Z,55nm,18.2s,baz=310,slow=36						
AKASG	Malin Array Be	84.53	25	P	P	20 41 46.3	-0.3
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	84.53	25	P	P	20 41 46.3	-0.3
AKBB	Malin Array Si	84.53	25	P	P	20 41 46.4	-0.2
AKBB				pmax	pmax		
	comp=Z,12nm,1.1s						
AKBB	Malin Array Si	84.53	25	P	P	20 41 46.4	-0.2
AKBB				IAmb	IAmb	20 41 47.5	
	comp=Z,12nm,1.1s						
KBZ	Khabaz	85.54	36	P	P	20 41 52.4	+0.5
	comp=Z,2.5nm,0.9s,baz=74,slow=3.0,SNR=5.2						
KBZ				LR	LR	21 22 03.1	
	comp=Z,26nm,18.1s,baz=308,slow=37						
KBZ	Khabaz	85.54	36	⇓eP	P	20 41 52.6	+0.7
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.8s						
KIV	Kislovodsk	85.58	36	⇑P	P	20 41 54.0	+1.7
KIV	Kislovodsk	85.58	36	eP	P	20 41 53.1	+0.8
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KIV	Kislovodsk	85.58	36	P	P	20 41 52.5	+0.2
NCK	Nalchik	85.76	37	⇓eP	P	20 41 54.7	+1.7
NCK				pmax	pmax		
	comp=Z,12nm,0.8s						
GOF	Gofitskoye	86.52	35	⇑eP	P	20 42 04.0	+7.3
NACGM	Naroch	87.13	21	i P	P	20 42 00.6	+1.1
NACGM				i P	P	20 42 00.6	+1.1
NACGM				i P	P	20 42 00.6	+1.1
NACGM				i PP	PP	20 45 34.3	+11
NACGM				i PPP	PPP	20 47 31.8	
NACGM				i S	S	20 52 28.5	-10
NACGM				i PS		20 54 46.2	
NACGM				i SS	SS	20 58 31.8	+9.1
NACGM				i SSS	SSS	21 02 30.0	
NACGM				i LQ	LQ	21 17 27.4	
NACGM				i LR	LR	21 23 35.0	
MNK	Minsk	87.16	22	i P	P	20 41 59.1	-0.5
	comp=E,2.0nm,0.9s						
MNK				i P	P	20 41 59.1	-0.5
	comp=N,31nm,1.9s						
MNK				i P	P	20 41 59.1	-0.5
	comp=Z,14nm,0.9s						
MNK				i PP	PP	20 45 22.9	-0.8
MNK				i PPP	PPP	20 47 17.8	
MNK				i S	S	20 52 26.0	-13
MNK				i SS	SS	20 58 25.6	+2.4
MNK				i SSS	SSS	21 01 58.7	
MNK				i LQ	LQ	21 15 27.2	
MNK				i LR	LR	21 21 00.9	
MNK				i LRM	MLR	21 22 20.8	
	comp=N,127nm,12.2s						
MNK				i LRM	MLR	21 22 22.7	
	comp=E,16nm,9.3s						
MNK				i LRM	MLR	21 22 27.9	
	comp=Z,109nm,10.0s						
Y59A	Loris	87.47	310	P	P	20 42 02.3	+0.7
TEIG	Tepich	87.53	294	P	P	20 42 01.4	-0.8
NB2	NORSAR Subarra	88.78	11	P	P	20 42 08.6	+1.3
	comp=Z,5.1nm,1.0s,baz=198,slow=4.6						
NOA	NORSAR Array B	88.78	11	P	P	20 42 08.8	+1.5
	comp=Z,3.5nm,0.9s,baz=199,slow=4.6,SNR=6.8						
NOA				LR	LR	21 20 44.7	
	comp=Z,74nm,20.0s,baz=235,slow=35						
W57A	Gilead	88.88	310	P	P	20 42 08.0	-0.3
BIRD	Birdtown, Kers	88.93	310	P	P	20 42 09.6	+1.1
JSC	Jenkinsville	89.29	309	P	P	20 42 11.7	+1.5
JSC				pmax	pmax		
	comp=Z,35nm,1.8s						
JSC	Jenkinsville	89.29	309	P	P	20 42 11.7	+1.5
JSC				IAmb	IAmb	20 42 14.2	
	comp=Z,35nm,1.8s						
KMSC	Kings Mountain	89.80	310	P	P	20 42 13.5	+0.9
LPSR	Galich'ya Gora	89.87	28	eP	P	20 42 13.1	+0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRH	Novokhopyorsk	90.10	30	eP	P	20 42 13.7	+0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OBN	Obninsk	90.76	25	i P	P	20 42 17.1	+0.6
OBN				i		20 42 23.2	
OBN				pmax	pmax		
	comp=Z,38nm,1.4s						
GEYT	Alibeck	91.18	48	P	P	20 42 20.4	+1.4
	comp=Z,4.3nm,0.9s,baz=221,slow=29,SNR=8.6						
GEYT				LR	LR	21 22 40.8	
	comp=Z,82nm,20.9s,baz=215,slow=35						
GEYT	Alibeck	91.18	48	P	P	20 42 17.2	-1.8
MOS	Moscow	91.63	25	eP	P	20 42 20.5	-0.1
HRA	Herat	92.19	53	P	P	20 42 22.6	-1.4
FINES	FINESS Array B	92.38	17	P	P	20 42 25.4	+1.5
	comp=Z,8.1nm,0.9s,baz=209,slow=3.4,SNR=9.4						
FINES				LR	LR	21 24 50.6	
	comp=Z,182nm,18.0s,baz=237,slow=36						
FINES	FINESS Array B	92.38	17	P	P	20 42 24.7	+0.7
T50A	Nancy	93.20	310	P	P	20 42 28.0	-0.3
T50A				IAmb	IAmb	20 42 30.1	
	comp=Z,5.9nm,0.8s						
BELG	Belogornoye	93.63	32	⇑eP	P	20 42 30.3	+0.4
BELG				pmax	pmax		
	comp=Z,25nm,5.6s						
SFJD	Kangerlussuaq	97.37	346	LR	LR	21 17 42.4	
	comp=Z,188nm,19.0s,baz=135,slow=30						
ARCES	ARCESS Array B	99.05	12	LR	LR	21 25 48.4	
	comp=Z,94nm,19.9s,baz=250,slow=34						
WMQ	Urumqi	113.97	51	ePKP	PKiKP	20 47 52.3	-0.7
CMAR	Chiang Mai Arr	115.86	81	PKP	PKPdf	20 47 57.1	-0.1
	comp=Z,0.5nm,0.3s,baz=242,slow=3.1,SNR=6.5						
CMAR	Chiang Mai Arr	115.86	81		PKPdf	20 47 56.1	-1.2
TBI	Tubuai	116.17	223	eLR	LR	21 23 03.1	
	comp=Z,104nm,28.5s						
NVAR	Mina Array Bea	118.35	301	PKP	PKiKP	20 48 02.2	+0.4
	comp=Z,0.3nm,0.5s,baz=153,slow=2.4,SNR=4.2						
YKA	Yellowknife Ar	118.83	329	PKP	PKPdf	20 48 01.3	-0.3
	comp=Z,0.6nm,0.6s,baz=94,slow=2.2,SNR=11						
ASAR	Alice Springs	120.27	143	PKP	PKPdf	20 48 05.1	-0.7
	comp=Z,1.2nm,0.8s,baz=200,slow=1.8,SNR=12						
ASAR	Alice Springs	120.27	143		PKPdf	20 48 04.3	-1.6
PPT2	Papeete2	120.42	228	eLR	LR	21 25 01.3	
	comp=Z,77nm,23.5s						
GTA	Gaotai	122.02	58	⇑PKP	PKiKP	20 48 09.1	+0.2
CD2	Chengdu	123.63	69	PKP	PKPdf	20 48 10.3	-1.7
LZH	Lanzhou	124.66	63	ePKP	PKPdf	20 48 13.5	-0.4
LZH				sPKP		20 48 18.1	
LZH				LR	LR		
	comp=Z,85nm,17.8s						
LZH				LR	LR		
	comp=Z,92nm,18.0s						
QIZ	Qiongzhong	125.78	85	PKP	PKPdf	20 48 14.8	-1.5
QIZ				SS	SS	21 07 09.5	-0.7
QIZ				LR	LR		
	comp=Z,110nm,5.3s						
QIZ				LR	LR		
	comp=Z,190nm,15.2s						
QIZ				LR	LR		
	comp=Z,170nm,15.1s						
SONM	Songino Array	127.38	49	PKP	PKPdf	20 48 18.9	+0.2
	comp=Z,1.5nm,0.9s,baz=251,slow=1.3,SNR=10						
SONM	Songino Array	127.38	49		PKPdf	20 48 18.0	-0.7
ULN	Ulaanbaatar	127.82	48	⇓iPKIKP	PKiKP	20 48 20.2	0.0
TIXI	Tiksi	129.39	15	⇓ePKIKP	PKPdf	20 48 18.9	-2.8
BTO	Baotou	129.94	58	ePKP	PKiKP	20 48 24.8	+0.2
HHC	Hu-ho-hao-te	131.11	58	ePKP	PKiKP	20 48 27.1	+0.1
IL31		132.04	336		PKPdf	20 48 26.6	-0.3
ILAR	Eielson Array	132.04	336	PKP	PKPdf	20 48 27.2	+0.3
	comp=Z,1.5nm,0.8s,baz=318,slow=0.9,SNR=18						
ILAR	Eielson Array	132.04	336	PKPdf	PKPdf	20 48 26.6	-0.3
DZM	Mont Dzumac	132.06	177	eLR	LR	21 30 25.8	
	comp=Z,205nm,24.5s						
YAK	Yakutsk	135.76	25	⇑ePKIKP	PKiKP	20 48 35.0	-0.5
NJ2	Nanjing	136.53	70	ePKP	PKPdf	20 48 35.3	-1.0
SEY	Seymchan	141.67	12	⇑iPKIKP	PKPdf	20 48 45.3	+0.6
KLR	Kul'dur	143.41	41	⇓iPKIKP	PKPdf	20 48 47.2	-1.1
HNR	Honiara	143.71	166	PKP	PKPbc	20 48 47.9	+0.7
	comp=Z,81nm,0.8s,baz=208,slow=4.7,SNR=9.8						
MDJ	Mudanjiang	143.73	49		PKPbc	20 48 46.4	-0.1
KSRS	Korea Array	143.97	62	PKP	PKPbc	20 48 47.4	-0.1
	comp=Z,1.6nm,0.8s,baz=262,slow=2.2,SNR=5.8						
GRNR	Gornyy	145.29	36	⇑iPKIKP	PKPbc	20 48 50.8	-0.5
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,110nm,13.0s						
USRK	Ussuriysk Ar.	145.49	49	PKPbc	PKPab	20 48 52.2	-0.1
	comp=E,11nm,1.0s,baz=274,slow=3.6,SNR=12						
USRK	Ussuriysk Ar.	145.49	49	PKPdf	PKPdf	20 48 51.5	-0.6
YSS	Yuzh-Sakhalins	150.90	38	ePKIKP	PKPdf	20 49 00.2	-0.6
PETK	Petropavlovsk-	151.85	14	PKPbc	PKPbc	20 49 08.0	-0.5
	comp=E,5.0nm,0.7s,baz=60,slow=2.2,SNR=10						
PETK	Petropavlovsk-	151.85	14	PKIKP	PKPbc	20 49 08.0	-0.5
MAJO	Matsushiro	152.23	61	⇑ePKIKP	PKPdf	20 49 05.0	+1.8
MAT	Matsushiro	152.23	61	PKP	PKPbc	20 49 09.4	-0.5
MJAR	Matsushiro Arr	152.24	61	PKPbc	PKPbc	20 49 09.6	-0.3
	comp=E,5.3nm,0.7s,baz=268,slow=2.1,SNR=14						
MJAR	Matsushiro Arr	152.24	61	PKIKP	PKPbc	20 49 08.9	-1.0
MJAR	Matsushiro Arr	152.24	61		PKPbc	20 49 08.9	-1.0

*NEIC **15** 21:05:25.0±1.4, 43°.83N±0°.06×105°.28W±0°.07, h0^{km}±2^{km}, ML3.2/50, Error ellipse: s-maj=9.6km s-min=8.3km az=351.0*

*IDC **15** 21:05:26.7±2.7, 43°.80N×105°.78W, h0^{km}, mb1 3.3/3, mb1mx3.1/47, mbtmp2.8/3, ML3.1/3, Error ellipse: s-maj=42.5km s-min=18.8km az=144.0*

ISC 15 21:05:24.8±1.1**, 43°.83N**±0°.05×**105°.32W**±0°.06**, h0**^{km}**, n31,** σ**1ˢ.09**/32**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	72	Pg	Pg	21 05 43.3	-0.1
K22A	Casper	1.48	217	Pn	Pn	21 05 50.0	-2.8
K22A				IAML		21 06 13.2	
	comp=E,408nm,1.0s						
PHWY	Pilot Hill	2.53	182	Pn	Pn	21 06 07.3	-0.2
PHWY				IAML		21 06 44.8	
	comp=E,67nm,1.3s						
PHWY				IAML		21 06 45.2	
	comp=E,61nm,0.7s						
RWWY	Rawlins	2.56	214	Pn	Pn	21 06 07.9	+0.2
LAO	LASA Array	2.93	348		Pn	21 06 11.7	-0.9
LAO				IAML		21 07 14.8	
	comp=E,102nm,0.8s						
N23A	Red Feather La	2.97	189	Pn	Pn	21 06 13.1	-0.4
N23A				IAML		21 07 05.7	
	comp=E,73nm,0.9s						
N23A				IAML		21 07 06.5	
	comp=N,75nm,1.1s						
RLMT	Red Lodge	3.11	296	Pn	Pn	21 06 15.7	+0.4
RLMT				IAML		21 07 31.6	
	comp=N,36nm,1.4s						
RLMT				IAML		21 07 47.7	
	comp=N,39nm,1.6s						
BW06	Boulder Array	3.27	252	Pn	Pn	21 06 19.0	+1.4
BW06				IAML		21 07 09.6	
	comp=N,36nm,0.8s						
BW06				IAML		21 07 09.7	
	comp=N,37nm,0.9s						
PD31	Pinedale Array	3.27	252	Pn	Pn	21 06 18.4	+0.8
PDAR	Pinedale Array	3.27	252	Pn	Pn	21 06 17.9	+0.3
	comp=N,1.2nm,0.3s,baz=74,slow=15,SNR=27						
PDAR				Pg	Pb	21 06 22.9	-1.0
	comp=N,1.4nm,0.3s,baz=72,slow=20,SNR=24						
PDAR				Lg	Lg	21 06 59.2	
	comp=N,4.0nm,0.3s,baz=72,slow=32,SNR=3.2						
YNE	Yellowstone No	3.56	291	Pn	Pn	21 06 21.9	+0.3
YMP	Mirror Lake Pl	3.59	286		Pn	21 06 21.7	-0.3
GCMT	Greycliff	3.66	304	Pn	Pn	21 06 22.3	-0.6
OGNE	Ogallala	3.77	139	Pn	Pn	21 06 24.4	+0.1
H17A	Grant Village	3.83	280		Pn	21 06 26.0	+0.8
LOHW	Long Hollow	3.84	269		Pn	21 06 26.9	+1.5
LOHW				IAML		21 07 31.9	
	comp=N,21nm,0.8s						
FLWY	Flagg Ranch	3.90	276	Pn	Pn	21 06 26.8	+0.7
FLWY				IAML		21 07 35.4	
	comp=N,52nm,1.2s						
FLWY				IAML		21 07 42.3	
	comp=N,44nm,1.4s						
MOOW	Moose Ponds	3.93	271		Pn	21 06 28.0	+1.3
SNOW	Snow King Moun	3.96	267		Pn	21 06 27.8	+0.7
SNOW				IAML		21 07 35.3	
	comp=N,44nm,1.0s						
SNOW				IAML		21 07 54.5	
	comp=N,41nm,1.2s						
YPP	Pitchstone Pla	3.98	278		Pn	21 06 28.0	+0.6
ISCO	Idaho Springs	4.04	183	Pn	Pn	21 06 29.4	+1.3
ISCO				IAML		21 07 33.0	
	comp=N,27nm,1.1s						
REDW	Red Top Meadow	4.05	265		Pn	21 06 29.6	+1.3
IMW	Indian Meadow	4.07	273		Pn	21 06 30.3	+1.7
IMW				IAML		21 07 45.6	
	comp=N,26nm,0.9s						
IMW				IAML		21 08 03.1	
	comp=N,21nm,1.0s						
YHH	Holmes Hill	4.08	285		Pn	21 06 27.2	-1.6
O20A	White River Ci	4.29	212	Pn	Pn	21 06 31.4	-0.2
YHB	Horse Butte	4.32	284		Pn	21 06 30.3	-1.6
YHL	Hebgen Lake	4.33	286		Pn	21 06 32.5	+0.4
AHID	Auburn Hatcher	4.36	258		Pn	21 06 32.5	+0.1
AHID				IAML		21 07 46.3	
	comp=E,38nm,1.5s						
AHID				IAML		21 07 50.5	
	comp=N,38nm,1.3s						
ECR	Eagle Creek	4.48	262	Pn	Pn	21 06 33.9	-0.2
NVAR	Mina Array Bea	11.18	246	Pn	Pn	21 08 07.4	+1.3
	comp=N,0.1nm,0.3s,baz=72,slow=14,SNR=2.0						
YKA	Yellowknife Ar	19.47	347	P	Pn	21 09 55.3	+1.3
	comp=N,0.0nm,0.3s,baz=152,slow=11,SNR=4.0						

*IDC **15** 21:12:08.1±2.0, 5°.96N×72°.01W, h152^{km}±13^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.1/40, mbtmp3.7/4, Error ellipse: s-maj=43.6km s-min=15.4km az=129.0*

*RSNC **15** 21:12:10.5±1.5, 6°.80N×73°.11W, h145^{km}±6^{km}, ML3.5, Mw3.7*

ISC 15 21:12:09.4±0.9**, 6°.84N**±0°.03×**73°.09W**±0°.03**, h152**^{km}±6^{km}**, n38,** σ**1ˢ.32**/66**, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	200	⇑iP	Pn	21 12 30.4	0.0
BARC				eS	Sn	21 12 44.8	-1.6
BARC				i		21 12 46.1	
	comp=Z,1µm,0.3s						
PAMC	Pamplona, Colo	0.63	38	⇑eP	Pn	21 12 33.2	+0.9
PAMC				eS	Sn	21 12 50.2	+0.4
PAMC				i		21 12 52.5	
	comp=Z,1µm,0.6s						
BRRC	Barranca, Sant	0.67	293	⇑iP	Pn	21 12 32.3	+0.4
BRRC				eS	Sn	21 12 49.1	0.0
BRRC				i		21 12 52.3	
	comp=Z,405nm,0.3s						
RUSC	La Rusia	0.94	179	eP	Pn	21 12 34.3	-0.2
RUSC				eS	Sn	21 12 52.1	-1.5
RUSC				i		21 12 53.6	
	comp=Z,258nm,0.2s						
TAMC	Tame, Arauca	1.35	107	⇓iP	Pn	21 12 38.7	+1.0
TAMC				eS	Sn	21 12 58.9	-0.5
TAMC				i		21 13 00.7	
	comp=Z,172nm,0.6s						
PTBC	PUERTO BERRIO,	1.39	258	eP	Pn	21 12 36.9	-1.0
PTBC				eS	Sn	21 12 58.6	-1.2
PTBC				i		21 13 00.4	
	comp=Z,620nm,0.1s						
OCAC	Ocana	1.41	351	eP	Pn	21 12 38.6	+0.3
OCAC				eS	Sn	21 13 00.5	0.0
OCAC				i		21 13 05.5	
	comp=Z,513nm,0.3s						
SPBC	San Pablo de B	1.53	220	eP	Pn	21 12 39.3	-0.3
SPBC				eS	Sn	21 13 01.7	-0.9
SPBC				i		21 13 05.8	
	comp=Z,268nm,0.2s						
ZARC	Zaragoza, Cauc	1.87	290	eP	Pn	21 12 43.7	+0.6
ZARC				eS	Sn	21 13 08.1	-0.9
ZARC				i		21 13 17.2	
	comp=Z,449nm,0.5s						
NORC	Norcasia	2.17	234	eP	Pn	21 12 46.4	-0.4
NORC				eS	Sn	21 13 13.9	-1.6
NORC				i		21 13 20.9	
	comp=Z,194nm,0.2s						
SMLC	San Martn de	2.18	334	eP	Pn	21 12 46.6	-0.1
SMLC				eS	Sn	21 13 15.7	+0.2
SMLC				i		21 13 21.6	
	comp=Z,284nm,0.1s						
CHIC	Chingaza	2.29	196	eP	Pn	21 12 47.8	-0.6
CHIC				eS	Sn	21 13 17.7	-0.9
CHIC				i		21 13 24.4	
	comp=Z,88nm,0.3s						
ROSC	El Rosal	2.33	212	P	Pn	21 12 50.1	+1.1
	comp=Z,14nm,0.3s,baz=105,slow=19,SNR=17						
ROSC				S	Sn	21 13 18.8	-0.6
	comp=Z,26nm,0.3s,baz=139,slow=20,SNR=9.2						
ROSC	El Rosal	2.33	212	eP	Pn	21 12 50.1	+1.1
ROSC				eS	Sn	21 13 20.8	+1.3
ROSC				i		21 13 28.1	
	comp=Z,127nm,0.4s						
HELC	Santa Helena	2.50	255	eP	Pn	21 12 50.9	-0.1
HELC				eS	Sn	21 13 22.1	-1.0
HELC				i		21 13 29.4	
	comp=Z,190nm,0.3s						
UREC	San Jos de Ur	2.58	291	eP	Pn	21 12 51.0	-0.7
UREC				i		21 13 24.3	
	comp=Z,231nm,0.4s						
VILC	Villavicencio,	2.77	192	eP	Pn	21 12 54.0	-0.2
VILC				eS	Sn	21 13 28.5	-0.3
VILC				i		21 13 38.4	
	comp=Z,146nm,0.4s						
PTGC	Puerto Gaitan,	2.79	160	eP	Pn	21 12 53.6	-0.7
PTGC				eS	Sn	21 13 26.2	-2.7
PTGC				i		21 13 29.3	
	comp=Z,179nm,0.2s						
RREF	El Recreo	2.96	229	eP	Pn	21 12 57.3	+0.4
RREF				eS	Sn	21 13 35.4	+1.9
RREF				i		21 13 44.6	
	comp=Z,102nm,0.3s						
CBOC	Ciudad Bolivar	3.06	252	eP	Pn	21 12 58.5	+0.7
CBOC				eS	Sn	21 13 35.2	+0.1
CBOC				i		21 13 39.0	
	comp=Z,50nm,0.4s						
TOLC	Tolima	3.15	225	eP	Pn	21 13 00.1	+1.1
TOLC				eS	Sn	21 13 36.1	-1.4
TOLC				i		21 13 46.3	
	comp=Z,198nm,0.5s						
SDV	Santo Domingo	3.17	50	P	Pn	21 13 00.0	+0.8
	comp=Z,14nm,0.3s,baz=224,slow=2.8,SNR=56						
SDV				S	Sn	21 13 37.4	-0.4
	comp=Z,24nm,0.3s,baz=220,slow=18,SNR=20						
SDV	Santo Domingo	3.17	50	eP	Pn	21 12 60.0	+0.8
SDV				eS	Sn	21 13 35.7	-2.1
SDV				i		21 13 41.9	
	comp=Z,86nm,0.5s						
MOTC	Monteria, Cord	3.19	307	eP	Pn	21 12 58.2	-1.1
MOTC				eS	Sn	21 13 36.6	-1.3
MOTC				i		21 13 37.6	
	comp=Z,141nm,0.2s						
ARGC	Ariguani, Magd	3.21	339	eP	Pn	21 13 01.0	+1.5
ARGC				eS	Sn	21 13 38.7	+0.3
ARGC				i		21 13 44.5	
	comp=Z,66nm,0.4s						
ANIL	Santa Ana	3.27	225	eP	Pn	21 13 01.8	+1.2
ANIL				eS	Sn	21 13 40.7	+0.4
ORTC	Ortega, Tolima	3.62	216	eP	Pn	21 13 05.4	+0.6
ORTC				i		21 13 53.7	
	comp=Z,71nm,0.5s						
SJCC	San Jacinto, C	3.67	326	eP	Pn	21 13 04.7	-0.8
SJCC				eS	Sn	21 13 46.0	-3.1
SJCC				i		21 13 50.4	
	comp=Z,134nm,0.5s						
PLMC	San Jos del P	3.71	239	eP	Pn	21 13 06.6	+0.6
PLMC				eS	Sn	21 13 46.8	-3.2
PLMC				i		21 13 51.7	
	comp=Z,43nm,0.2s						
GUVC	San Jose del G	4.29	174	eP	Pn	21 13 11.9	-1.6
GUVC				eS	Sn	21 14 01.0	-2.6
GUVC				i		21 14 07.8	
	comp=Z,89nm,0.1s						
YOTC	Yotoco, Valle	4.30	229	eP	Pn	21 13 13.4	-0.4
YOTC				eS	Sn	21 14 06.2	+2.3
SMRC	Santa Marta, M	4.44	346	eP	Pn	21 13 14.3	-1.1
SMRC				eS	Sn	21 14 03.6	-3.4
SMRC				i		21 14 07.5	
	comp=Z,25nm,0.2s						
MARP	Paez Belalcaza	4.89	216	eP	Pn	21 13 21.1	-0.5
MARP				eS	Sn	21 14 08.6	-9.4
PDAR	Pinedale Array	48.08	324	P	P	21 20 42.1	+8.2
	comp=Z,0.6nm,0.6s,baz=116,slow=12,SNR=5.9						
NVAR	Mina Array Bea	51.49	315	P	P	21 21 09.3	+10
	comp=Z,0.2nm,0.3s,baz=96,slow=6.4,SNR=2.2						
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	21 30 45.6	-0.9
	comp=Z,0.1nm,0.5s,baz=286,slow=2.6,SNR=2.1						
SONM	Songino Array	125.56	0	PKP	PKPdf	21 30 53.7	+0.7
	comp=Z,0.2nm,0.5s,baz=20,slow=4.6,SNR=1.5						
ASAR	Alice Springs	149.14	234	PKPbc	PKPdf	21 31 39.2	+2.9
	comp=Z,0.6nm,0.6s,baz=111,slow=3.3,SNR=9.4						

*PRU **15** 21:22:24.6±0.0, 50°.14N×19°.13E, h0^{km}*

*VIE **15** 21:22:24.9±0.4, 50°.25N×19°.04E, h0^{km}, mb2.2/4, ml2.5/5, Error ellipse: s-maj=4.5km s-min=2.4km az=165.0 4 km E of Katowice Suspected Mining induced.*

ISC 15 21:22:25.4±0.8**, 50°.13N**±0°.03×**19°.06E**±0°.02**, h0**^{km}**, n38,** σ**1ˢ.21**/67**, 4C-6D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.48	79	ePg	Pg	21 22 34.9	+0.3
OJC				eSg	Sg	21 22 41.4	+0.6
OKC	Ostrava-Krasne	0.66	244	ePG	Pb	21 22 38.7	-1.1
OKC				eSG	Sg	21 22 47.5	+0.9
	comp=Z,60nm,0.3s						
LANS	Liptovska Anna	1.01	165	ePG	Pg	21 22 44.5	-0.3

LANS				*e*SG	Sg	21 22 58.7	+0.8
LANS				*e*LG	Lg	21 23 02.9	
MORC	**Moravsky Berou**	**1.04**	**251**	⇑P	**Pb**	**21 22 46.1**	**-0.2**
MORC				⇓S	**Sb**	**21 23 00.3**	**-0.4**
MORC	**Moravsky Berou**	**1.04**	**251**	*e*PG	**Pg**	**21 22 45.6**	**+0.2**
MORC				*e*SG	**Sg**	**21 22 59.3**	**+0.4**
NIE	**Niedzica**	**1.07**	**131**	*e*Pg	**Pg**	**21 22 45.5**	**-0.4**
NIE				*e*Sg	**Sg**	**21 23 00.0**	**+0.3**
KRLC	**Kraliky**	**1.47**	**269**	*e*PG	**Pn**	**21 22 52.9**	**-0.3**
KRLC				*e*SG	**Sb**	**21 23 12.6**	**-0.3**
	comp=Z,25nm,0.3s						
VYHS	**Vyhne**	**1.64**	**185**	*e*PN	**Pn**	**21 22 54.8**	**-0.7**
VYHS				*e*SN	**Sn**	**21 23 17.2**	**-0.2**
DPC	**Dobruska-Polom**	**1.77**	**278**	*e*PG	**Pn**	**21 22 57.7**	**+0.3**
DPC				*e*SG	**Sg**	**21 23 21.7**	**-0.7**
	comp=Z,49nm,0.6s						
VRAC	**Vranov**	**1.80**	**244**	⇓P	**Pb**	**21 22 58.8**	**-0.4**
VRAC				⇑S	**Sb**	**21 23 21.6**	**-0.8**
VRAC	**Vranov**	**1.80**	**244**	*e*PN	**Pn**	**21 22 58.1**	**+0.4**
VRAC				*e*SG	**Sg**	**21 23 22.5**	**-0.7**
OSTC	**Ostas**	**1.88**	**284**	*e*PG	**Pn**	**21 22 58.9**	**+0.2**
OSTC				*e*SG	**Sg**	**21 23 25.7**	**+0.1**
	comp=Z,23nm,0.6s						
KECS	**Kecovo**	**1.89**	**150**	*e*SN	**Sn**	**21 23 23.6**	**+0.1**
KECS				*e*LG	Lg	21 23 27.9	
KSP	**Ksiaz**	**1.91**	**293**	*e*Pg	**Pg**	**21 23 03.2**	**+1.3**
KSP				*e*Sg	**Sg**	**21 23 28.3**	**+1.6**
SMOL	**Smolenice**	**1.94**	**214**	*e*PN	**Pn**	**21 22 59.7**	**+0.1**
SMOL				*e*SN	**Sn**	**21 23 23.9**	**-0.7**
CHVC	**Chvalec**	**1.98**	**285**	*e*PG	**Pb**	**21 23 01.6**	**-0.7**
CHVC				*e*SG	**Sg**	**21 23 29.0**	**0.0**
	comp=Z,17nm,0.8s						
CRVS	**Cervenica-Dubn**	**1.99**	**127**	*e*PN	**Pb**	**21 23 02.3**	**-0.1**
CRVS				*e*SN	**Sb**	**21 23 28.3**	**+0.6**
CRVS				*e*LG	Lg	21 23 31.1	
UPC	**Upice**	**1.99**	**282**	*e*PG	**Pn**	**21 23 01.2**	**+0.9**
UPC				*e*SG	**Sg**	**21 23 30.0**	**+0.6**
	comp=Z,18nm,0.7s						
KRUC	**Moravsky**	**2.04**	**239**	*e*PN	**Pb**	**21 23 02.0**	**-1.3**
KRUC				*e*SG	**Sb**	**21 23 29.2**	**0.0**
MODS	**Modra-Piesok**	**2.11**	**214**	*e*PN	**Pn**	**21 23 00.7**	**-1.3**
MODS				*e*SN	**Sn**	**21 23 28.8**	**-0.1**
PSZ	**Piszkesteto**	**2.28**	**166**	⇓P	**Pn**	**21 23 03.9**	**-0.4**
PSZ				⇓S	**Sn**	**21 23 30.8**	**-2.4**
KOLS	**Kolonicke sedl**	**2.41**	**119**	*e*PN	**Pb**	**21 23 09.0**	**-0.6**
KOLS				*e*SN	**Sn**	**21 23 36.8**	**+0.6**
PVCC	**Panska Ves**	**2.91**	**280**	*e*SG	**Sg**	**21 23 59.1**	**+0.3**
	comp=Z,36nm,0.7s						
PRU	**Pruhonice**	**2.92**	**269**	*e*PG	**Pb**	**21 23 19.0**	**+0.7**
PRU				*e*SG	**Sg**	**21 23 57.8**	**-1.3**
	comp=Z,17nm,0.9s						
PRA	**Prague**	**2.98**	**271**	*e*SG	**Sg**	**21 24 00.8**	**-0.4**
	comp=Z,16nm,1.1s						
CONA	**Conrad Observa**	**3.05**	**225**	*e*Pn	**Pn**	**21 23 15.6**	**+0.7**
	0.2nm,0.2s						
CONA				*e*Sg	**Sg**	**21 24 08.4**	**+5.1**
	3.9nm,0.4s						
PBCC	**Pribram**	**3.31**	**264**	*e*SG	**Sg**	**21 24 10.9**	**-0.7**
BRG	**Berggiesshubel**	**3.35**	**285**	Pg	**Pg**	**21 23 30.9**	**+1.3**
BRG				Sg	**Sg**	**21 24 12.0**	**-1.1**
BRG				Amp		21 24 17.5	
	comp=Z,9.9nm,0.6s						
BRG	**Berggiesshubel**	**3.35**	**285**	Pg	**Pg**	**21 23 30.9**	**+1.3**
BRG				Sg	**Sg**	**21 24 12.0**	**-1.1**
BRG				Amp		21 24 17.5	
	comp=Z,9.9nm,0.6s						
KHC	**Kasperske Hory**	**3.70**	**256**	*e*PN	**Pn**	**21 23 23.6**	**-0.3**
KHC				*e*PG	**Pg**	**21 23 36.0**	**-0.3**
KHC				*e*SN	**Sn**	**21 24 08.0**	**-0.2**
KHC				*e*SG	**Sg**	**21 24 23.3**	**-1.0**
	comp=Z,9.9nm,0.5s						
ARSA	**Arzberg**	**3.71**	**220**	*e*Sg	**Sg**	**21 24 30.2**	**+5.5**
	comp=Z,0.6nm,0.3s						
CLL	**Collm**	**4.03**	**289**	*e*Sg	**Sg**	**21 24 36.0**	**+1.3**
DRGR		**4.13**	**143**	⇑P	**Pn**	**21 23 29.1**	**-0.6**
NKC	**Novy Kostel**	**4.25**	**274**	*e*SG	**Sg**	**21 24 40.7**	**-1.3**
BURAR	**Bucovina Array**	**4.78**	**119**	⇑P	**Pn**	**21 23 38.8**	**+0.1**
BZS	**Buzias**	**4.83**	**158**	⇓P	**Pn**	**21 23 39.1**	**-0.2**
KBA	**Koelnbreinsper**	**4.87**	**233**	*e*Pn	**Pn**	**21 23 40.0**	**0.0**
	comp=Z,0.1nm,0.1s						
KBA				*e*Sn	**Sn**	**21 24 36.6**	**-0.6**
	comp=Z,1.0nm,0.5s						
GZR	**Gura Zlata**	**5.36**	**151**	⇓P	**Pn**	**21 23 46.9**	**+0.3**

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*IDC **15** 21:45:59.2±0.8, 6°.81N×73°.03W, h159^{km}±15^{km}, mb3.0/2, mb1 3.5/4, mb1mx3.1/36, mbtmp3.6/4, Error ellipse: s-maj=47.3km s-min=7.9km az=132.0*

*RSNC **15** 21:46:00.8±1.1, 6°.83N×73°.17W, h145^{km}±4^{km}, ML3.5, Mw3.8, Fault plane solution: NP1:ϕ$_s$0.00000°, δ11.00000°, λ118.00000°.*

ISC 15 21:45:59.3±0.9**, 6°.85N**±0°.03×**73°.13W**±0°.03**, h155**^{km}±6^{km}**, n39,** σ1§**55**/72**, 6C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**191**	⇑*e*P	**Pn**	**21 46 20.6**	**-0.1**
BARC				*e*S	**Sn**	**21 46 35.3**	**-1.7**
BARC				*i*		21 46 37.9	
	comp=Z,384nm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**294**	⇑*e*P	**Pn**	**21 46 22.3**	**+0.4**
BRRC				*e*S	**Sn**	**21 46 38.2**	**-1.0**
BRRC				*i*		21 46 43.3	
	comp=Z,345nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**41**	⇓*e*P	**Pn**	**21 46 23.4**	**+0.7**
PAMC				*e*S	**Sn**	**21 46 40.6**	**+0.2**
PAMC				*i*		21 46 42.7	
	comp=Z,884nm,0.5s						
RUSC	**La Rusia**	**0.95**	**177**	⇑*e*P	**Pn**	**21 46 24.5**	**-0.3**
RUSC				*e*S	**Sn**	**21 46 43.1**	**-1.1**
RUSC				*i*		21 46 45.0	
	comp=Z,373nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	⇑*e*P	**Pn**	**21 46 26.9**	**-0.9**
PTBC				*e*S	**Sn**	**21 46 47.8**	**-1.8**
PTBC				*i*		21 46 55.3	
	comp=Z,384nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇓*i*P	**Pn**	**21 46 29.0**	**+0.8**
TAMC				*e*S	**Sn**	**21 46 50.3**	**0.0**
OCAC	**Ocana**	**1.40**	**352**	*e*P	**Pn**	**21 46 28.8**	**+0.4**
OCAC				*e*S	**Sn**	**21 46 50.5**	**-0.3**
OCAC				*i*		21 46 55.8	
	comp=Z,247nm,0.5s						
SPBC	**San Pablo de B**	**1.51**	**218**	*e*P	**Pn**	**21 46 29.3**	**-0.2**
SPBC				*e*S	**Sn**	**21 46 51.6**	**-1.0**
SPBC				*i*		21 46 54.2	
	comp=Z,507nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	**Pn**	**21 46 32.8**	**-0.1**
ZARC				*e*S	**Sn**	**21 46 58.1**	**-0.5**
ZARC				*i*		21 47 04.1	
	comp=Z,230nm,0.4s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**21 46 36.3**	**-0.2**
NORC				*e*S	**Sn**	**21 47 04.1**	**-1.0**
NORC				*i*		21 47 09.3	
	comp=Z,220nm,0.3s						
SMLC	**San Martn de**	**2.15**	**334**	*e*P	**Pn**	**21 46 37.0**	**+0.4**
SMLC				*e*S	**Sn**	**21 47 04.8**	**-0.5**
SMLC				*i*		21 47 09.0	
	comp=Z,482nm,0.1s						
CHIC	**Chingaza**	**2.28**	**195**	⇑*e*P	**Pn**	**21 46 38.4**	**-0.1**
CHIC				*e*S	**Sn**	**21 47 07.5**	**-1.2**
CHIC				*i*		21 47 11.6	
	comp=Z,203nm,0.6s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**21 46 40.0**	**+1.2**
	comp=Z,89nm,0.3s,baz=114,slow=19,SNR=79						
ROSC				S	**Sn**	**21 47 10.2**	**+0.9**
	comp=Z,69nm,0.3s,baz=122,slow=20,SNR=9.0						
ROSC	**El Rosal**	**2.32**	**211**	⇑*e*P	**Pn**	**21 46 40.2**	**+1.3**
ROSC				*e*S	**Sn**	**21 47 09.1**	**-0.3**
ROSC				*i*		21 47 18.8	
	comp=Z,275nm,0.4s						
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**21 46 41.6**	**+1.0**
HELC				*e*S	**Sn**	**21 47 11.5**	**-1.1**
HELC				*i*		21 47 18.2	
	comp=Z,134nm,0.4s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**21 46 40.3**	**-1.0**
UREC				*e*S	**Sn**	**21 47 11.1**	**-2.5**
UREC				*i*		21 47 23.6	
	comp=Z,148nm,0.3s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**21 46 44.0**	**-0.2**
VILC				*e*S	**Sn**	**21 47 18.7**	**-0.2**
VILC				*i*		21 47 21.3	
	comp=Z,276nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**	*e*P	**Pn**	**21 46 43.8**	**-0.7**
PTGC				*e*S	**Sn**	**21 47 16.9**	**-2.6**
PTGC				*i*		21 47 22.0	
	comp=Z,216nm,0.3s						
RREF	**El Recreo**	**2.93**	**229**	*e*P	**Pn**	**21 46 48.0**	**+1.4**
RREF				*e*S	**Sn**	**21 47 26.0**	**+2.9**
RREF				*i*		21 47 32.7	
	comp=Z,192nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.02**	**251**	*e*P	**Pn**	**21 46 48.3**	**+0.9**
CBOC				*e*S	**Sn**	**21 47 23.7**	**-0.8**
CBOC				*i*		21 47 41.4	
	comp=Z,50nm,0.6s						
DBBC	**Dabeiba**	**3.06**	**273**	*e*P	**Pn**	**21 46 47.9**	**+0.2**
DBBC				*e*S	**Sn**	**21 47 24.0**	**-1.2**
TOLC	**Tolima**	**3.13**	**224**	*e*P	**Pn**	**21 46 49.5**	**+0.7**
TOLC				*e*S	**Sn**	**21 47 27.2**	**0.0**
MOTC	**Monteria, Cord**	**3.16**	**308**	*e*P	**Pn**	**21 46 47.6**	**-1.3**
MOTC				*e*S	**Sn**	**21 47 26.1**	**-1.3**
MOTC				*i*		21 47 42.6	
	comp=Z,41nm,0.4s						
ARGC	**Ariguani, Magd**	**3.19**	**340**	*e*P	**Pn**	**21 46 50.0**	**+0.7**
ARGC				*e*S	**Sn**	**21 47 29.4**	**+1.2**
ARGC				*i*		21 47 42.5	
	comp=Z,64nm,0.3s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**21 46 50.2**	**+0.6**
	comp=Z,6.6nm,0.3s,baz=239,slow=12,SNR=23						
SDV				S	**Sn**	**21 47 27.5**	**-1.1**
	comp=Z,38nm,0.3s,baz=270,slow=20,SNR=47						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**21 46 50.0**	**+0.4**
SDV				*e*S	**Sn**	**21 47 27.3**	**-1.3**
SDV				*i*		21 47 30.7	
	comp=Z,77nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**224**	*e*P	**Pn**	**21 46 50.7**	**+0.3**
ANIL				*e*S	**Sn**	**21 47 29.8**	**-0.1**
ANIL				*i*		21 47 37.4	
	comp=Z,42nm,0.3s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**21 46 54.6**	**+0.1**
ORTC				*i*		21 47 41.9	
	comp=Z,98nm,0.4s						
CVALL	**Valledupar, Ce**	**3.64**	**358**	*e*S	**Sn**	**21 47 37.8**	**-0.7**
CVALL				*i*		21 47 45.8	
	comp=Z,111nm,0.6s						
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P	**Pn**	**21 46 54.7**	**-0.5**
SJCC				*e*S	**Sn**	**21 47 35.3**	**-3.3**
SJCC				*i*		21 47 40.3	
	comp=Z,48nm,0.7s						
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	**Pn**	**21 46 55.6**	**0.0**
PLMC				*e*S	**Sn**	**21 47 38.7**	**-0.7**
PLMC				*i*		21 47 44.6	
	comp=Z,62nm,0.7s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**21 47 03.2**	**-0.2**
YOTC				*e*S	**Sn**	**21 47 56.3**	**+2.9**
GUVC	**San Jose del G**	**4.30**	**173**	*e*P	**Pn**	**21 47 03.0**	**-0.7**
GUVC				*e*S	**Sn**	**21 47 51.4**	**-2.4**
GUVC				*i*		21 47 56.8	
	comp=Z,127nm,0.3s						
SMRC	**Santa Marta, M**	**4.42**	**346**	*e*P	**Pn**	**21 47 04.4**	**-0.9**
SMRC				*e*S	**Sn**	**21 47 52.1**	**-4.6**
SMRC				*i*		21 47 57.0	
	comp=Z,58nm,0.3s						
MACC	**Macarena, Meta**	**4.72**	**189**	*e*S	**Sn**	**21 47 58.0**	**-5.7**
MARP	**Paez Belalcaza**	**4.87**	**215**	*e*P	**Pn**	**21 47 10.8**	**-0.6**
MARP				*e*S	**Sn**	**21 48 03.9**	**-3.8**
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**21 52 49.3**	**0.0**
	comp=Z,0.3nm,0.5s,baz=119,slow=9.4,SNR=4.2						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**21 56 11.3**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=128,slow=7.8,SNR=5.5						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**22 05 28.9**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=113,slow=4.2,SNR=5.0						

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*DJA **15** 22:38:21.6±0.3, 1°S±3°×12°7E±°, h10^{km}, M4.5/10, mb5.1/2, mB5.6/1, MLv4.2/10, Mw(mB)5.1/1*

*NEIC **15** 22:38:24.1±1.3, 1°.14S±0°.06×127°.13E±0°.07, h39^{km}±7^{km}, mb4.4/40, Error ellipse: s-maj=9.8km s-min=9.0km az=83.0*

*IDC **15** 22:38:25.1±2.5, 1°.19S×127°.12E, h52^{km}±25^{km}, mb3.9/17, mb1 4.0/20, mb1mx3.8/49, mbtmp4.2/20, ML4.1/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/41, Error ellipse: s-maj=17.1km s-min=13.4km az=81.0*

ISC 15 22:38:23.6±0.4**, 1°.19S**±0°.04×**127°.12E**±0°.05**, h34**^{km}**, n114,** σ**1§16**/119**, mb4.4**/44**, MS3.2**/4**, 1C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.41**	**233**	P	**Pn**	**22 38 45.9**	**-1.0**
SANI				S	**Sn**	**22 39 04.1**	**-0.3**
TNTI	**Ternate**	**1.97**	**7**	Pn	**Pn**	**22 38 53.7**	**-0.9**
TNTI	**Ternate**	**1.97**	**7**	P	**Pn**	**22 38 53.6**	**-0.9**
NLAI	**Namlea**	**2.03**	**180**	P	**Pn**	**22 38 55.6**	**+0.2**
NLAI				S	**Sn**	**22 39 21.6**	**+1.9**
MSAI	**Masohi**	**2.80**	**140**	P	**Pn**	**22 39 08.4**	**+2.4**
MSAI				S	**Sb**	**22 39 43.2**	**-3.8**
SWI	**Sorong**	**4.16**	**86**	P	**Pn**	**22 39 26.6**	**+2.0**
SIJI	**Sorong**	**4.16**	**86**	P	**Pn**	**22 39 25.9**	**+1.1**
	12nm,0.3s,baz=243,slow=5.9,SNR=14						
SIJI				S	**Sn**	**22 40 14.2**	**+2.0**
	baz=203,slow=20,SNR=1.2						
SIJI				LR	LR	22 41 36.3	
	comp=Z,114nm,20.9s,baz=50,slow=46						
LUWI	**Luwuk**	**4.35**	**272**		**Pn**	**22 39 27.4**	**+0.1**
GTOI	**Gorontalo**	**4.49**	**294**	P	**Pn**	**22 39 32.8**	**+3.6**
FAKI	**Fak Fak**	**5.41**	**109**	Pn	**Pn**	**22 39 41.5**	**-0.3**
FAKI	**Fak Fak**	**5.41**	**109**	P	**Pn**	**22 39 41.7**	**-0.2**
APSI	**Ampana**	**5.47**	**273**	P	**Pn**	**22 39 43.8**	**+1.0**
	1.2nm5µm197nm,0.4s						
TOLI2	**Tolitoli**	**6.73**	**290**	Pn	**Pn**	**22 40 01.2**	**+1.1**
KAPI	**Kappang**	**8.28**	**243**	P	**Pn**	**22 40 23.6**	**+2.3**
	7.7nm,0.3s,baz=52,slow=6.9,SNR=9.8						
KAPI				S	**Sn**	**22 41 49.7**	**-4.0**
	0.8nm,0.3s,baz=145,slow=21,SNR=1.3						
KAPI	**Kappang**	**8.28**	**243**	Pn	**Pn**	**22 40 22.6**	**+1.3**
MMRI	**Maumere**	**8.85**	**213**	Pn	**Pn**	**22 40 30.5**	**+1.3**
SOEI	**Soe**	**8.97**	**198**	Pn	**Pn**	**22 40 32.3**	**+1.4**
MYLDM	**Lahad Datu**	**10.68**	**306**	Pn	**Pn**	**22 40 53.8**	**-0.5**
MTN	**Manton Dam**	**12.24**	**161**	Pn	**Pn**	**22 41 15.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**16.86**	**185**	P	**Pn**	**22 42 16.3**	**-0.8**
	0.2nm,0.3s,baz=35,slow=14,SNR=6.9						
FITZ	**Fitzroy Crossi**	**16.86**	**185**	Pn	**P**	**22 42 18.1**	**-0.8**
WRAB	**Tennant Creek**	**19.93**	**160**	P	**P**	**22 42 51.0**	**-1.7**
WRAB				IAmb	IAmb	22 43 09.0	
	comp=Z,17nm,0.9s						
WC3	**Warramunga Arr**	**19.96**	**160**	P	**P**	**22 42 51.7**	**-1.3**
WC3				IAmb	IAmb	22 42 52.9	
	comp=Z,14nm,0.8s						
CISI	**Cisompet, Garu**	**20.25**	**251**	P	**P**	**22 42 57.0**	**+0.7**
CISI				IAmb	IAmb	22 43 13.8	
	comp=Z,22nm,0.8s						
COEN	**Coen**	**20.33**	**129**	P	**P**	**22 42 57.8**	**+0.7**
PSAB2	**Pilbara Seismi**	**21.44**	**199**	P	**P**	**22 43 08.5**	**-0.5**
PSAB2				IAmb	IAmb	22 43 09.4	
	comp=Z,11nm,0.7s						
PSA00	**Pilbara Seismi**	**21.46**	**199**	P	**P**	**22 43 09.3**	**+0.1**
PSA00				IAmb	IAmb	22 43 09.7	
	comp=Z,10nm,0.7s						
PMG	**Port Moresby**	**21.55**	**113**	LR	LR	22 53 46.1	
	comp=Z,16nm,21.6s,baz=70,slow=43						
AS31	**Alice Springs**	**23.29**	**164**	P	**P**	**22 43 27.7**	**-0.8**
ASAR	**Alice Springs**	**23.29**	**164**	P	**P**	**22 43 27.4**	**-1.2**
	comp=Z,9.0nm,0.7s,baz=346,slow=11,SNR=86						
CTA	**Charters Tower**	**26.52**	**136**	P	**P**	**22 43 59.1**	**+0.9**
	comp=Z,9.8nm,1.0s,baz=317,slow=13,SNR=7.7						
CTAO	**Charters Tower**	**26.52**	**136**	P	**P**	**22 43 59.0**	**+0.8**
CTAO				IAmb	IAmb	22 44 02.8	
	comp=Z,10nm,0.9s						
FORT	**Forrest**	**29.44**	**178**	P	**P**	**22 44 24.6**	**+0.4**
LHMI	**Lhok Sumawe**	**30.80**	**282**	P	**P**	**22 44 37.4**	**+0.9**
BBOO	**Buckleboo**	**32.56**	**166**	P	**P**	**22 44 51.2**	**-0.5**
BBOO				IAmb	IAmb	22 45 10.4	
	comp=Z,9.2nm,1.1s						
SSE	**Sheshan**	**32.60**	**351**	P	**P**	**22 44 52.1**	**+0.1**
STKA	**Stephens Creek**	**33.44**	**157**	P	**P**	**22 44 59.2**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=318,slow=12,SNR=6.6						
STKA				LR	LR	22 58 48.1	
	comp=Z,63nm,19.0s,baz=16,slow=37						
STKA	**Stephens Creek**	**33.44**	**157**	P	**P**	**22 44 59.4**	**-0.1**
ARMA	**Armidale**	**37.23**	**144**	P	**P**	**22 45 33.4**	**+1.2**
ARMA				IAmb	IAmb	22 45 45.1	
	comp=Z,6.4nm,0.9s						
KSRS	**Korea Array**	**38.46**	**1**	P	**P**	**22 45 42.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=178,slow=9.3,SNR=1.6						
MJAR	**Matsushiro Arr**	**38.93**	**14**	P	**P**	**22 45 44.5**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=209,slow=12,SNR=1.8						
MJAR				LR	LR	23 00 49.3	
	comp=Z,26nm,20.0s,baz=340,slow=34						
XAN	**Xi'an**	**38.99**	**336**	P	**P**	**22 45 47.3**	**+0.4**
XAN				pP	pP	22 45 56.3	+0.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CAN	**Canberra**	**39.60**	**151**	P	**P**	**22 45 52.6**	**+0.7**
TOO	**Toolangi**	**39.97**	**157**	P	**P**	**22 45 56.5**	**+1.5**
TOO				IAmb	IAmb	22 45 59.5	
	comp=Z,11nm,1.1s						
LZH	**Lanzhou**	**42.96**	**332**	*e*P	**P**	**22 46 21.4**	**+1.7**
LZH				pP	pP	22 46 28.3	-0.2
LZH				sP	sP	22 46 30.8	-2.5
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,6.1s						
USA0B	**Ussuriysk Arra**	**45.40**	**5**	P	**P**	**22 46 38.4**	**-0.5**
USA0B				IAmb	IAmb	22 46 39.2	
	comp=Z,3.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**45.40**	**5**	P	**P**	**22 46 38.6**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=178,slow=6.5,SNR=9.7						
TAPN	**Taplejung**	**47.34**	**310**	*e*P	**P**	**22 46 56.0**	**+1.2**
	comp=Z,13nm,0.8s						
ODAN	**Odare**	**47.34**	**309**	*e*P	**P**	**22 46 56.4**	**+1.7**
	comp=Z,14nm,0.8s						
GTA	**Gaotai**	**47.53**	**331**	⇑P	**P**	**22 46 57.3**	**+1.4**
GTA				pP	pP	22 47 05.8	+1.0
GTA				sP	pwP	22 47 09.9	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,130nm,6.4s						
GTA				LR	LR		
	comp=N,91nm,16.0s						
GTA				LR	LR		
	comp=E,260nm,16.0s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
RAMN	**Ramite**	**48.00**	**309**	*e*P	**P**	**22 47 01.8**	**+1.9**
	comp=Z,18nm,0.5s						
GUN	**Gumba**	**49.02**	**309**	*e*P	**P**	**22 47 08.9**	**+1.0**
	comp=Z,18nm,0.5s						
PKI	**Pulchoki**	**49.23**	**309**	*e*P	**P**	**22 47 10.1**	**+0.7**
PKIN	**Phulchoki**	**49.24**	**309**	*e*P	**P**	**22 47 10.0**	**+0.6**
KKN	**Kakani**	**49.43**	**309**	*e*P	**P**	**22 47 11.7**	**+0.9**
	comp=Z,8.7nm,0.6s						
KLR	**Kul'dur**	**50.38**	**4**	P	**P**	**22 47 16.9**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=155,slow=7.4,SNR=4.8						
DANN	**Dangsing**	**50.88**	**309**	*e*P	**P**	**22 47 22.9**	**+1.0**
	comp=Z,50nm,0.6s						
HYB	**Hyderabad**	**51.28**	**293**	*i* P	**P**	**22 47 25.0**	**+0.3**
ULN	**Ulaanbaatar**	**51.90**	**343**	P	**P**	**22 47 28.9**	**-0.1**
ULN				IAmb	IAmb	22 47 38.4	
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**52.06**	**342**	P	**P**	**22 47 30.6**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=148,slow=7.9,SNR=13						
SONM	**Songino Array**	**52.06**	**342**	P	**P**	**22 47 28.5**	**-1.7**
WMQ	**Urumqi**	**56.99**	**327**	*e*P	**P**	**22 48 08.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,62nm,6.3s						
PETK	**Petropavlovsk-**	**59.84**	**21**	P	**P**	**22 48 25.0**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=231,slow=5.0,SNR=2.4						
PETK	**Petropavlovsk-**	**59.84**	**21**	P	**P**	**22 48 25.6**	**0.0**
MK31	**Makanchi Array**	**61.82**	**327**	P	**P**	**22 48 39.4**	**+0.1**
MK31				IAmb	IAmb	22 48 51.5	
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**61.82**	**327**	P	**P**	**22 48 39.5**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=118,slow=7.5,SNR=35						
KSH	**Kashi**	**61.83**	**317**	P	**P**	**22 48 42.3**	**+2.7**
KSH				pP	sP	22 48 52.9	-0.1
KSH				S	**S**	**22 57 03.8**	**+2.8**
KSH				sS	sS	22 57 21.3	+3.0
KSH				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,590nm,6.0s						
KSH				LR	LR		
	comp=N,550nm,6.1s						
KSH				LR	LR		
	comp=E,960nm,6.9s						
KSH				LR	LR		
	comp=Z,910nm,6.8s						
MAKZ	**Makanchi**	**62.00**	**327**	P	**P**	**22 48 40.7**	**+0.2**
MAKZ				IAmb	IAmb	22 48 52.7	
	comp=Z,3.1nm,0.6s						
AAK	**Ala-Archa**	**64.28**	**319**	P	**P**	**22 48 56.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=78,slow=20,SNR=2.1						
AAK	**Ala-Archa**	**64.28**	**319**	P	**P**	**22 48 55.8**	**-0.1**
KBL	**Kabul**	**64.86**	**309**	P	**P**	**22 48 59.9**	**0.0**
KBL				IAmb	IAmb	22 49 18.5	
	comp=Z,2.5nm,0.8s						
ZAA0	**Zalesovo Array**	**65.14**	**334**	P	**P**	**22 49 01.0**	**0.0**
ZALV	**Zalesovo Beam**	**65.14**	**334**	P	**P**	**22 48 59.8**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=131,slow=6.1,SNR=4.3						
ZALV	**Zalesovo Beam**	**65.14**	**334**	P	**P**	**22 49 00.1**	**-0.8**
KURBB	**Kurchatov Arra**	**66.09**	**328**	P	**P**	**22 49 06.5**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=129,slow=6.1,SNR=19						
KURK	**Kurchatov**	**66.09**	**329**	P	**P**	**22 49 07.2**	**0.0**
SEY	**Seymchan**	**66.72**	**12**	P	**P**	**22 49 11.2**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=334,slow=24,SNR=3.4						
KK06	**Karatay Array**	**67.10**	**318**	P	**P**	**22 49 13.1**	**-0.8**
KK05	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 12.9**	**-1.0**
KK02	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 13.4**	**-0.5**
KK31	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 13.9**	**0.0**
KK31				IAmb	IAmb	22 49 23.7	
	comp=Z,2.6nm,0.9s						
KKAR	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 14.3**	**+0.4**
KKAR	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 14.1**	**+0.2**
KKAR				IAmb	IAmb	22 49 23.7	
	comp=Z,2.6nm,0.9s						
KK07	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 14.0**	**+0.1**
KK01	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 13.0**	**-0.9**
KK04	**Karatay Array**	**67.11**	**318**	P	**P**	**22 49 14.3**	**+0.3**
KK03	**Karatay Array**	**67.12**	**318**	P	**P**	**22 49 13.3**	**-0.6**
KK09	**Karatay Array**	**67.12**	**318**	P	**P**	**22 49 13.9**	**-0.1**
KK08	**Karatay Array**	**67.13**	**318**	P	**P**	**22 49 13.4**	**-0.6**
BVAR	**Borovoye Array**	**71.65**	**328**	P	**P**	**22 49 40.6**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=343,slow=25,SNR=4.0						
BRVK	**Borovoye**	**71.72**	**328**	P	**P**	**22 49 41.1**	**-1.1**
BRVK				IAmb	IAmb	22 49 51.5	
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**72.73**	**1**	P	**P**	**22 49 47.2**	**-0.6**
UOSS	**Minazif**	**73.25**	**296**	P	**P**	**22 49 51.1**	**-0.8**
UOSS				IAmb	IAmb	22 49 56.3	
	comp=Z,3.3nm,0.8s						
SOCY	**Socotra**	**73.78**	**283**	P	**P**	**22 49 54.2**	**-1.1**
AB06	**Akbulak array**	**76.19**	**322**	P	**P**	**22 50 08.0**	**-0.3**
AB07	**Akbulak array**	**76.19**	**322**	P	**P**	**22 50 08.5**	**+0.1**
AB02	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 08.1**	**-0.3**
AB03	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 08.3**	**-0.2**
AB01	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 07.6**	**-0.9**
AB31	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 07.8**	**-0.6**
ABKAR	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 08.3**	**-0.2**
ABKAR	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 07.9**	**-0.5**
AB08	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 08.0**	**-0.5**
AB04	**Akbulak array**	**76.20**	**322**	P	**P**	**22 50 07.6**	**-0.9**
AB05	**Akbulak array**	**76.21**	**322**	P	**P**	**22 50 08.2**	**-0.3**
AB09	**Akbulak array**	**76.22**	**322**	P	**P**	**22 50 08.0**	**-0.6**
ARU	**Arti**	**79.29**	**328**	P	**P**	**22 50 23.6**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=90,slow=9.0,SNR=4.7						
SDPT	**Sand Point**	**81.05**	**33**	P	**P**	**22 50 34.9**	**-0.1**
TTA	**Tatalina**	**85.09**	**27**	P	**P**	**22 50 55.8**	**-0.1**
KDAK	**Kodiak Island**	**85.83**	**32**	P	**P**	**22 50 59.5**	**-0.1**
KDAK				IAmb	IAmb	22 51 07.2	
	comp=Z,1.0nm,0.4s						
QSPA	**South Pole Qui**	**88.75**	**180**	P	**P**	**22 51 13.9**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=319,slow=0.5,SNR=2.7						
QSPA	**South Pole Qui**	**88.75**	**180**	P	**P**	**22 51 14.1**	**+0.4**
K27K	**Chicken**	**91.42**	**26**	P	**P**	**22 51 26.4**	**+0.4**
K27K				IAmb	IAmb	22 51 38.1	
	comp=Z,1.8nm,1.1s						
CPUP	**Villa Florida**	**152.30**	**171**	PKPbc	**PKPbc**	**22 58 15.8**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=240,slow=2.2,SNR=3.7						

IDC 15 22:42:49.4±6.0**, 14°.21S**×**173°.17W, h0**^{km}**, mb3.7**/3**, mb1 4.1**/3**, mb1mx3.6**/40**, mbtmp3.7**/3**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx3.0**/27**, Error ellipse: s-maj=239.7km s-min=78.9km az=159.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.14**	**246**	LR	LR	22 47 50.3	

	comp=Z,267nm,18.3s,baz=314,slow=33						
PPT	Papeete	22.93	102	LR	LR	22 55 03.6	
	comp=Z,32nm,18.2s,baz=190,slow=32						
URZ	Urewera	25.46	198	LR	LR	22 56 19.4	
	comp=Z,116nm,21.4s,baz=31,slow=32						
H11S2	WAKE ISLAND Hy	38.07	328	T	T	23 30 51.1	
	baz=146,slow=76,SNR=6.2						
H11S3	WAKE ISLAND Hy	38.08	328	T	T	23 30 49.9	
	baz=146,slow=76,SNR=8.1						
H11S1	WAKE ISLAND Hy	38.09	328	T	T	23 30 51.3	
	baz=146,slow=76,SNR=6.4						
NVAR	Mina Array Bea	73.30	42	P	P	22 54 23.2	0.0
	0.2nm,0.5s,baz=228,slow=8.1,SNR=2.4						
PDAR	Pinedale Array	81.24	42	LR	LR	23 26 20.6	
	comp=Z,27nm,20.3s,baz=322,slow=32						
ILAR	Eielson Array	81.24	11	P	P	22 55 06.8	0.0
	0.6nm,0.7s,baz=225,slow=6.5,SNR=6.3						
YKA	Yellowknife Ar	88.92	23	P	P	22 55 45.4	0.0
	0.5nm,0.8s,baz=248,slow=4.3,SNR=6.2						
GERES	GERESS Array B	145.00	352	PKPbc	PKPab	23 02 27.3	-0.8
	0.2nm,0.3s,baz=38,slow=5.0,SNR=3.7						
BRTR	Keskin Array B	145.37	322	PKPbc	PKPbc	23 02 28.8	-0.8
	0.6nm,0.7s,baz=42,slow=2.3,SNR=4.6						

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*NEIC **15** 22:43:47.2±2.4, 6°.64S±0°.08×129°.76E±0°.07, h150km±10km, mb4.1/12, Error ellipse: s-maj=12.9km s-min=7.7km az=212.0*

*IDC **15** 22:43:47.1±4.9, 6°.78S×129°.57E, h145km±52km, mb3.8/3, mb1 3.7/7, mb1mx3.4/39, mbtmp4.3/7, Error ellipse: s-maj=41.2km s-min=18.3km az=34.0*

ISC 15 22:43:47.2±0.7**, 6°.76S**±0°.07×**129°.70E**±0°.06**, h150**km**, n25, σ1s.97**/32**, mb4.2**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.00	128		Pn	22 44 24.7	+2.3
SAUI				Sn	Sn	22 44 48.6	-0.8
FAKI	Fak Fak	4.58	34		Pn	22 44 53.1	-2.1
SOEI	Soe	6.15	241	Pn	Pn	22 45 18.2	+2.1
SOEI				Sn	Sn	22 46 28.2	+2.7
MTN	Manton Dam	6.21	167		Pn	22 45 18.9	+2.1
MTN				Sn	Sn	22 46 25.6	-1.4
BATI	Baumata	6.88	240	P	Pn	22 45 22.9	-2.9
	2.0nm,0.3s,baz=55,slow=15,SNR=1.7						
BATI				S	Sn	22 46 40.7	-2.4
	8.7nm,0.3s,baz=121,slow=9.9,SNR=3.7						
FITZ	Fitzroy Crossi	11.95	199	P	Pn	22 46 33.0	+0.1
	0.8nm,0.3s,baz=32,slow=12,SNR=17						
FITZ				S	Sn	22 48 40.4	-4.7
	2.3nm,0.3s,baz=52,slow=22,SNR=7.3						
FITZ	Fitzroy Crossi	11.95	199		Pn	22 46 34.1	+1.2
WRAB	Tennant Creek	13.86	161	Pn	Pn	22 46 58.6	+1.2
COEN	Coen	15.06	119		Pn	22 47 13.2	+0.7
COEN				IAmb	IAmb	22 47 15.9	
	comp=Z,7.3nm,0.9s						
AS31	Alice Springs	17.29	167	P	Pn	22 47 41.4	+1.6
AS31					S	22 50 52.7	+1.2
ASAR	Alice Springs	17.29	167	P	Pn	22 47 40.8	+1.1
	comp=Z,0.6nm,0.3s,baz=345,slow=9.6,SNR=18						
ASAR				S	S	22 50 46.2	-5.3
	comp=Z,0.3nm,0.3s,baz=342,slow=15,SNR=3.4						
PMG	Port Moresby	17.48	100	P	Pn	22 47 42.6	+0.5
	baz=269,slow=5.6,SNR=4.9						
PSA00	Pilbara Seismi	17.54	212		Pn	22 47 44.7	+2.0
CTA	Charters Tower	20.82	131	P	P	22 48 18.6	+1.4
	comp=Z,4.4nm,0.7s,baz=301,slow=11,SNR=3.9						
CTAO	Charters Tower	20.82	131	P	P	22 48 16.2	-1.0
CTAO				IAmb	IAmb	22 48 21.2	
	comp=Z,6.0nm,0.8s						
CISI	Cisompet, Garu	21.73	267	P	P	22 48 27.6	+0.6
BBOO	Buckleboo	26.59	168	P	P	22 49 12.4	+0.8
BBOO				IAmb	IAmb	22 49 26.3	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	27.35	158	P	P	22 49 17.6	-0.7
	comp=Z,0.9nm,0.4s,baz=331,slow=12,SNR=3.6						
EIDS	Eidsvold	27.57	135	P	P	22 49 20.5	+0.1
EIDS				IAmb	IAmb	22 49 34.9	
	comp=Z,2.7nm,0.9s						
KULM	Kulim	31.37	292	P	P	22 49 53.8	-0.3
MK31	Makanchi Array	67.86	327	P	P	22 54 30.2	+0.8
MK31				IAmb	IAmb	22 54 30.5	
	comp=Z,2.4nm,0.6s						
MKAR	Makanchi Array	67.86	327	P	P	22 54 29.7	+0.3
	comp=Z,4.3nm,0.5s,baz=123,slow=7.9,SNR=66						
MKAR	Makanchi Array	67.86	327	P	P	22 54 29.5	+0.2
MAKZ	Makanchi	68.04	327	P	P	22 54 31.2	+0.7
MAKZ				IAmb	IAmb	22 54 31.4	
	comp=Z,3.3nm,0.6s						
KURK	Kurchatov	72.16	329	P	P	22 54 54.7	-0.8
KURK				IAmb	IAmb	22 54 56.2	
	comp=Z,4.1nm,1.2s						

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*NEIC **16** 00:02:48.1±3.0, 23°.38S±0°.08×177°.3W±0°.1, h201km±3km, mb4.5/57, Error ellipse: s-maj=15.5km s-min=10.2km az=116.0*

*NOU **16** 00:02:50.5, 23°.48S×176°.82W, h230km, mb4.5, South of Fiji Islands*

*IDC **16** 00:02:57.2±3.3, 23°.33S×177°.68W, h272km±29km, mb3.6/7, mb1 4.0/8, mb1mx3.6/32, mbtmp4.3/8, Error ellipse: s-maj=27.7km s-min=16.0km az=135.0*

ISC 16 00:02:48.0±0.4**, 23°.32S**±0°.06×**177°.24W**±0°.07**, h200**km**, n113, σ1s.70**/111**, mb4.5**/31**, 9C-4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.94	186	Pn	Pn	00 04 14.4	-0.1
RAO					Sn	00 05 23.7	+0.7
MSVF	Nonsavu	7.09	321	P	Pn	00 04 36.6	+7.1
	17nm,0.3s,baz=100,slow=22,SNR=103						
MSVF	Nonsavu	7.09	321	Pn	Pn	00 04 35.5	+6.0
MSVF	Nonsavu	7.09	321	P	Pn	00 04 36.8	+7.2
NIUE	Niue	8.02	60	Pn	Pn	00 04 43.3	+1.7
NIUE					Sn	00 06 11.5	-0.6
NIUE	Niue	8.02	60	P	Pn	00 04 41.0	-0.6
AFI	Afiamalu	10.69	30	Pn	Pn	00 05 16.3	-0.1
AFI	Afiamalu	10.69	30	P	Pn	00 05 18.4	+2.0
OUZ	Omahuta	14.29	212	P	P	00 06 05.0	+2.0
YATNC	Mamie plateau,	14.70	272	P	P	00 06 12.4	+4.8
DZM	Mont Dzumac	15.11	272	P	P	00 06 16.4	+4.1
	0.7nm,0.3s,baz=77,slow=19,SNR=18						
DZM	Mont Dzumac	15.11	272	P	P	00 06 15.2	+3.0
DZM				IAmb	IAmb	00 06 19.0	
	comp=Z,15nm,0.7s						
DZM	Mont Dzumac	15.11	272	P	P	00 06 16.8	+4.5
URZ	Urewera	15.66	197	P	Pn	00 06 16.7	-1.4
	comp=Z,2.2nm,0.3s,baz=271,slow=3.0,SNR=11						
URZ				S	S	00 08 56.1	-16
	comp=Z,1.3nm,0.3s,baz=237,slow=21,SNR=2.1						
HIZ	Hauiti	16.58	202	P	Pn	00 06 29.1	-0.1
HIZ				IAmb	IAmb	00 06 34.2	
	comp=Z,24nm,1.2s						
SANVU	Saraoutou	16.62	295		Pn	00 06 29.7	-0.2
BFZ	Birch Farm	18.16	196	P	P	00 06 43.5	-2.0
BFZ				IAmb	IAmb	00 06 46.9	
	comp=Z,25nm,1.0s						
MSWZ	Moikau Station	19.11	197	P	P	00 06 54.5	-1.4
BHW	Baring Head	19.21	198	P	P	00 06 54.5	-2.3
PLWZ	Palliser	19.25	197	P	P	00 06 56.6	-0.7
QRZ	Quartz Range	19.46	204	P	P	00 06 59.5	0.0
QRZ				IAmb	IAmb	00 07 09.4	
	comp=Z,9.9nm,0.8s						
KHZ	Kahutara	20.54	200	P	P	00 07 10.8	-0.1
KHZ				IAmb	IAmb	00 07 18.0	
	comp=Z,14nm,1.0s						
KNTN	Kanton	21.11	15	P	P	00 07 17.2	-0.1
KNTN				IAmb	IAmb	00 07 21.4	
	comp=Z,13nm,1.1s						
LTZ	Lake Taylor	21.28	202	P	P	00 07 19.3	+0.5
LTZ				IAmb	IAmb	00 07 23.0	
	comp=Z,23nm,1.1s						
OXZ	Oxford	21.84	201	P	P	00 07 22.9	-1.6
MQZ	McQueen's Vall	21.98	200	P	P	00 07 25.4	-0.5
RPZ	Rata Peaks	22.52	203	P	P	00 07 30.9	0.0
RPZ				IAmb	IAmb	00 07 49.8	
	comp=Z,15nm,0.9s						
LBZ	Lake Benmore	23.41	203	P	P	00 07 36.6	-2.4
LBZ				IAmb	IAmb	00 07 45.4	
	comp=Z,18nm,1.1s						
ODZ	Otahua Downs	23.82	202	P	P	00 07 41.3	-1.4
WKZ	Wanaka	24.22	204	P	P	00 07 46.7	+0.4
MLZ	Mavora Lakes	25.02	205	P	P	00 07 51.3	-2.3
MLZ				IAmb	IAmb	00 07 53.1	
	comp=Z,7.6nm,0.8s						
ARMA	Armidale	28.59	249	P	P	00 08 26.2	+0.4
EIDS	Eidsvold	28.90	259	P	P	00 08 28.8	+0.4
CTAO	Charters Tower	34.01	268	P	P	00 09 14.1	+1.0
STKA	Stephens Creek	37.28	248	P	P	00 09 40.0	-0.9
	comp=Z,2.3nm,0.6s,baz=81,slow=8.9,SNR=9.0						
STKA	Stephens Creek	37.28	248	P	P	00 09 40.6	-0.3
COEN	Coen	38.54	277	P	P	00 09 52.2	+0.7
BBOO	Buckleboo	41.99	246	P	P	00 10 18.2	-1.6
AS31	Alice Springs	44.62	259	P	P	00 10 40.2	-0.7
ASAR	Alice Springs	44.62	259	P	P	00 10 40.0	-0.9
	comp=Z,2.3nm,0.5s,baz=99,slow=7.4,SNR=38						
ASAR				PcP	PcP	00 12 20.4	+0.2
	comp=Z,1.0nm,0.6s,baz=112,slow=3.5,SNR=7.9						
WR0	Warramunga Arr	44.78	265	P	P	00 10 41.2	-0.9
WC3	Warramunga Arr	44.94	265	P	P	00 10 42.6	-0.8
WB2	Warramunga Arr	44.96	265	P	P	00 10 42.9	-0.7
WB2				IAmb	IAmb	00 10 43.1	
	comp=Z,11nm,0.4s						
WB0	Warramunga Arr	44.96	265	P	P	00 10 42.8	-0.8
WB0				IAmb	IAmb	00 10 43.4	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	44.97	265	P	P	00 10 42.5	-1.1
	comp=Z,5.6nm,0.4s,baz=96,slow=8.4,SNR=56						
FORT	Forrest	48.88	249	P	P	00 11 11.7	-2.1
FORT				IAmb	IAmb	00 11 13.8	
	comp=Z,11nm,0.7s						
MTN	Manton Dam	49.94	273	P	P	00 11 20.6	-1.4
MTN				IAmb	IAmb	00 11 21.3	
	comp=Z,22nm,1.1s						
FAKI	Fak Fak	52.86	285	P	P	00 11 43.6	0.0
FAKI				IAmb	IAmb	00 11 49.0	
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	53.40	264	P	P	00 11 47.5	0.0
VNDA	Vanda	55.18	185	P	P	00 12 02.0	+2.5
	comp=Z,1.0nm,1.0s,baz=349,slow=7.7,SNR=2.3						
VNDA				PcP	PcP	00 12 58.9	+1.0
	comp=Z,1.1nm,0.9s,baz=31,slow=10.0,SNR=2.3						
VNDA	Vanda	55.18	185	IAmb	IAmb	00 12 02.3	
	comp=Z,1.4nm,1.1s						
SOEI	Soe	57.32	273	P	P	00 12 15.2	-0.5
PSAD2	Pilbara Seismi	57.64	258	P	P	00 12 15.8	-1.9
PSAC2	Pilbara Seismi	57.71	258	P	P	00 12 15.9	-2.3
PSAC2				IAmb	IAmb	00 12 33.6	
	comp=Z,9.0nm,1.1s						
PSAB3	Pilbara Seismi	57.74	258	P	P	00 12 16.5	-1.9
PSAB3				IAmb	IAmb	00 12 30.8	
	comp=Z,13nm,1.1s						
PSAA3	Pilbara Seismi	57.75	258	P	P	00 12 17.1	-1.4
PSAA3				IAmb	IAmb	00 12 26.3	
	comp=Z,7.8nm,1.1s						
PSAB2	Pilbara Seismi	57.75	258	P	P	00 12 16.9	-1.6
PSAB2				IAmb	IAmb	00 12 20.7	
	comp=Z,9.7nm,1.1s						
PSA00	Pilbara Seismi	57.76	258	P	P	00 12 17.1	-1.4
PSA00				IAmb	IAmb	00 12 19.4	
	comp=Z,10nm,1.1s						
QSPA	South Pole Qui	66.77	180	P	P	00 13 19.6	+1.8
H06S1	SOCORRO T	77.01	63	T	T	01 38 08.2	
	SNR=35						
NVAR	Mina Array Bea	82.59	43	P	P	00 14 52.1	+3.1
	comp=Z,1.6nm,0.6s,baz=225,slow=7.7,SNR=16						
H03N2	Juan Fernandez	83.99	124	T	T	01 47 51.9	
	baz=243,slow=74,SNR=4.9						
H03N3	Juan Fernandez	83.99	124	T	T	01 47 43.2	
	baz=264,slow=74,SNR=5.0						
SNAA	Sanae	85.19	178	P	P	00 15 01.9	+0.4
SNAA	Sanae	85.19	178	P	P	00 15 01.7	+0.2
VNA3	Neumayer Olymp	85.30	176	P	P	00 15 02.4	+0.4
VNA2	Neumayer--Watz	85.75	177	P	P	00 15 05.0	+0.8
	baz=199,slow=4.0						
PV17	East Wray Mesa	88.57	47	P	P	00 15 19.4	+0.9
PV17				IAmb	IAmb	00 15 34.9	
	comp=Z,5.7nm,0.7s						
PV14	Lion Creek, Pa	88.58	47	P	P	00 15 21.4	+2.9
PV18	Skein Mesa, Pa	88.59	47	P	P	00 15 18.3	-0.3
PV18				IAmb	IAmb	00 15 36.4	
	comp=Z,5.6nm,0.9s						
PV20	West Nyswonger	88.60	47	P	P	00 15 18.9	+0.3
PV20				IAmb	IAmb	00 15 36.1	
	comp=Z,6.5nm,0.7s						
PV13	Radium Mtn., P	88.61	47	P	P	00 15 16.3	-2.4
PV13				IAmb	IAmb	00 15 32.6	
	comp=Z,6.9nm,1.0s						
N25K	Chitina, Valde	88.61	15	P	P	00 15 20.4	+2.5
N25K				IAmb	IAmb	00 15 20.9	
	comp=Z,6.5nm,0.7s						
PV16	Nyswonger Mesa	88.62	47	P	P	00 15 19.7	+1.0
PV16				IAmb	IAmb	00 15 24.5	
	comp=Z,4.9nm,0.7s						
PV23	Carpenter Ridg	88.63	47	P	P	00 15 21.4	+2.6
PV11	David Mesa, Pa	88.64	47	P	P	00 15 18.2	-0.5
GLB	Gilahina Butte	88.65	15	P	P	00 15 19.6	+1.6
PV04	Paradox Valley	88.67	47	P	P	00 15 19.5	+0.6
BALM	Baldy	88.67	16	P	P	00 15 19.9	+1.6
BALM				IAmb	IAmb	00 15 25.3	
	comp=Z,11nm,1.2s						
PV02	Paradox Valley	88.69	47	P	P	00 15 15.7	-3.4
PV02				IAmb	IAmb	00 15 17.8	
	comp=Z,5.1nm,0.6s						
PV12	Saucer Basin,	88.70	47	P	P	00 15 18.9	-0.2
PV01	Paradox Valley	88.76	47	P	P	00 15 17.3	-2.1
BARN	Barnard Glacie	88.87	16	P	P	00 15 18.1	-1.1
CTGM	Chitina Glacie	88.87	17	P	P	00 15 17.7	-1.5
CTGM				IAmb	IAmb	00 15 22.2	
	comp=Z,7.3nm,0.9s						
PDAR	Pinedale Array	90.53	43	P	P	00 15 29.3	+1.8
	comp=Z,1.4nm,0.8s,baz=200,slow=3.0,SNR=7.9						
ILAR	Eielson Array	90.89	13	P	P	00 15 29.4	+1.1
	comp=Z,0.4nm,0.4s,baz=226,slow=5.6,SNR=10						
MKAR	Makanchi Array	113.62	312	PKiKP	PKiKP	00 21 00.8	-1.6
	comp=Z,0.3nm,0.5s,baz=103,slow=2.5,SNR=5.7						
ARCES	ARCESS Array B	131.80	349	PKP	PKPdf	00 21 35.5	-1.1
	comp=Z,2.8nm,1.0s,baz=48,slow=1.4,SNR=7.7						
FINES	FINESS Array B	138.66	343	PKhKP	PKPpre	00 21 40.5	
	comp=Z,2.4nm,0.9s,baz=0.0,slow=3.8,SNR=5.6						
FINES				PKP	PKiKP	00 21 51.5	-0.2
	comp=Z,1.6nm,0.5s,baz=86,slow=3.4,SNR=15						
AKASG	Malin Array Be	145.80	330	PKPbc	PKPdf	00 22 03.1	+0.6
	comp=Z,3.6nm,0.3s,baz=43,slow=4.2,SNR=45						
DIKM	Dikmen	147.31	312	⇑P	PKPbc	00 22 09.4	+1.3
SORM	Soroca	147.95	327	⇑P	PKPbc	00 22 09.9	+0.4
BRTR	Keskin Array B	149.20	309	PKPbc	PKPbc	00 22 13.3	+0.1
	comp=Z,2.1nm,0.6s,baz=148,slow=5.2,SNR=19						
VASR	Vaslui	149.22	325	⇓P	PKiKP	00 22 13.8	-0.1
BURAR	Bucovina Array	149.84	329	⇓P	PKiKP	00 22 16.7	+1.5
BIZ	Bicaz	149.88	327	⇑P	PKiKP	00 22 15.6	+0.3
CFR	Carcaliu	149.96	323	⇑P	PKiKP	00 22 15.7	+0.3
TPGR	Topolog	150.00	322	⇑P	PKiKP	00 22 16.2	+0.6
DOPR	Dopca	150.91	326	⇓P	PKiKP	00 22 18.2	+0.8
CLL	Collm	150.95	347	*i* PKPbc	PKiKP	00 22 17.7	+0.4
	comp=Z,7.0nm,0.6s						
CLL				*e*PKPab	PKPab	00 22 24.0	-0.8
DRGR		151.60	330	⇑P	PKiKP	00 22 19.5	+0.7
ARR	Arges	151.71	326	⇑P	PKiKP	00 22 20.4	+1.2
GZR	Gura Zlata	152.61	328	⇑P	PKPab	00 22 27.5	-4.6
BZS	Buzias	152.99	330	⇑P	PKPbc	00 22 21.4	-0.1
GERES	GERESS Array B	153.09	344	PKPbc	PKPbc	00 22 22.2	+0.4
	comp=Z,0.4nm,0.5s,baz=90,slow=1.3,SNR=4.5						
HERR	Herculane	153.16	328	⇓P	PKPbc	00 22 22.4	+0.4
CONA	Conrad Observa	153.31	340	*e*P	PKPdf	00 22 13.8	-0.8
	comp=Z,1.4nm,0.6s						
MOA	Molln	153.85	342	*e*P	PKPdf	00 22 12.6	-2.7
	comp=Z,9.4nm,1.5s						
WATA	Walderalm	155.01	346	*e*P	PKPdf	00 22 13.5	-3.6
	comp=Z,4.6nm,1.1s						
MOTA	Moosalm	155.11	346	*e*P	PKPdf	00 22 12.2	-5.0
	comp=Z,10nm,1.5s						
SQTA	Sankt Quirin	155.20	346	*e*P	PKPdf	00 22 12.5	-4.8
	comp=Z,8.0nm,1.5s						
DAVA	Damuels	155.41	348	*e*P	PKPdf	00 22 15.4	-2.2
	comp=Z,12nm,1.5s						
TORD	Torodi Ar. Bea	169.84	174	PKP	PKPdf	00 22 32.3	-0.1
	comp=Z,0.3nm,0.5s,baz=201,slow=33,SNR=3.6						
TORD				PKPab	PKPab	00 23 47.2	-0.5
	comp=Z,1.2nm,0.6s,baz=179,slow=4.4,SNR=4.9						

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*IDC **16** 00:32:21.0±1.2, 8°.32S×110°.53E, h0km, mb3.8/7, mb1 3.8/9, mb1mx3.7/36, mbtmp3.8/9, ML3.5/2, MS3.1/2, Ms1 3.2/2, ms1mx2.7/24, Error ellipse: s-maj=51.6km s-min=18.5km az=48.0*

*DJA **16** 00:32:25.5±0.8, 9°S±6°×11°0E±°, h10km, M4.0/7, MLv4.0/7*

*NEIC **16** 00:32:26.0±0.9, 9°.10S±0°.08×109°.78E±0°.06, h54km±7km, mb4.2/11, Error ellipse: s-maj=11.0km s-min=9.1km az=163.0*

ISC 16 00:32:24.3±0.6**, 9°.16S**±0°.06×**109°.79E**±0°.05**, h35**km**, n42, σ1s.56**/45**, mb4.2**/14**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	Wanagama	1.43	30		Pn	00 32 47.1	-0.8
UGM	Wanagama	1.43	30	P	Pn	00 32 46.9	-1.0
UGM				S	Sn	00 33 02.5	-3.0
KPJI	Karang Pucung	2.00	335	P	Pn	00 32 57.8	+2.1
KPJI				S	Sn	00 33 22.2	+2.7
SMRI	Semarang	2.19	17		Pn	00 32 59.4	+1.1
SMRI	Semarang	2.19	17	P	Pn	00 33 00.4	+2.1
SMRI				S	Sn	00 33 26.9	+2.7
PWJI	Pagerwojo	2.29	61	P	Pn	00 32 59.6	0.0
PWJI				S	Sn	00 33 25.5	-1.1
NGJI	Ngawi	2.43	43	P	Pn	00 33 04.7	+3.2
CISI	Cisompet, Garu	2.52	309	Pn	Pn	00 33 03.7	+0.9
CISI	Cisompet, Garu	2.52	309	P	Pn	00 33 03.7	+0.9
LEM	Lembang	3.16	317	Pn	Pn	00 33 14.6	+2.8
	9.1nm,0.3s,baz=57,slow=12,SNR=7.4						
LEM				Sn	Sn	00 33 46.6	-1.8
	9.4nm,0.3s,baz=30,slow=17,SNR=3.5						
LEM				Lg	Lg	00 33 55.5	
	20nm,0.3s,baz=265,slow=11,SNR=5.6						
LEM				LR	LR	00 34 43.0	
	comp=Z,156nm,20.9s,baz=166,slow=44						
XMIS	Christmas Isla	4.29	252	Pn	Pn	00 33 27.8	+0.7
JAGI	Jajag, Banyuwa	4.36	81	Pn	Pn	00 33 29.8	+1.6
MNAI	Manna	8.29	305	Pn	Pn	00 34 22.5	+0.3
GIRL	Giralia	14.07	163	Pn	Pn	00 35 40.8	-0.5
FITZ	Fitzroy Crossi	17.77	122	P	Pn	00 36 28.3	-0.8
	0.1nm,0.3s,baz=200,slow=15,SNR=1.5						
MTN	Manton Dam	21.27	102	P	P	00 37 11.2	+3.4
WB0	Warramunga Arr	26.02	117	P	P	00 37 54.4	0.0
WB0				IAmb	IAmb	00 37 56.5	
	comp=Z,17nm,1.5s						
WB2	Warramunga Arr	26.04	117	P	P	00 37 55.1	+0.6
WB2				IAmb	IAmb	00 37 59.2	
	comp=Z,9.7nm,1.2s						
WC3	Warramunga Arr	26.06	117	P	P	00 37 55.2	+0.4
WC3				IAmb	IAmb	00 38 42.3	
	comp=Z,15nm,1.6s						
WR0	Warramunga Arr	26.21	117	P	P	00 37 57.5	+1.4
WR0				IAmb	IAmb	00 38 20.7	
	comp=Z,8.0nm,1.2s						
ASAR	Alice Springs	27.20	125	P	P	00 38 06.3	+1.3
	comp=Z,0.7nm,0.7s,baz=308,slow=10.0,SNR=7.0						
CMAR	Chiang Mai Arr	29.45	339	LR	LR	00 51 16.0	
	comp=Z,54nm,18.2s,baz=174,slow=39						
STKA	Stephens Creek	37.15	132	P	P	00 39 33.6	+1.6
	comp=Z,2.2nm,0.7s,baz=280,slow=11,SNR=4.4						
KSRS	Korea Array	49.38	19	P	P	00 41 03.2	-7.3
	comp=Z,0.6nm,0.4s,baz=197,slow=3.7,SNR=1.9						
SONM	Songino Array	56.82	357	P	P	00 42 03.3	-2.1
	comp=Z,0.2nm,0.4s,baz=167,slow=6.8,SNR=2.4						
ULN	Ulaanbaatar	56.82	358	P	P	00 42 03.8	-1.5
ULN				IAmb	IAmb	00 42 17.1	
	comp=Z,5.9nm,1.4s						
CASY	Casey	57.04	180	P	P	00 42 06.3	-0.2
MK31	Makanchi Array	60.86	339	P	P	00 42 32.2	-1.1
MK31				IAmb	IAmb	00 42 58.5	
	comp=Z,3.0nm,1.4s						
MKAR	Makanchi Array	60.86	339	P	P	00 42 32.1	-1.2
	comp=Z,0.5nm,0.5s,baz=149,slow=7.2,SNR=9.1						
ZALV	Zalesovo Beam	66.32	344	P	P	00 43 07.0	-2.2
	comp=Z,0.8nm,0.3s,baz=148,slow=6.0,SNR=4.1						
AB07	Akbulak array	72.66	328	P	P	00 43 47.3	-1.1
AB06	Akbulak array	72.67	328	P	P	00 43 47.9	-0.6
AB03	Akbulak array	72.67	328	P	P	00 43 47.6	-0.8
AB08	Akbulak array	72.67	328	P	P	00 43 47.6	-0.8
AB01	Akbulak array	72.68	328	P	P	00 43 47.5	-1.0
AB31	Akbulak array	72.68	328	P	P	00 43 47.8	-0.7
AB31				IAmb	IAmb	00 44 07.1	
	comp=Z,2.5nm,1.1s						
ABKAR	Akbulak array	72.68	328	P	P	00 43 48.1	-0.4
AB02	Akbulak array	72.68	328	P	P	00 43 47.8	-0.7
AB04	Akbulak array	72.68	328	P	P	00 43 48.0	-0.6
AB05	Akbulak array	72.69	328	P	P	00 43 47.9	-0.7
AB09	Akbulak array	72.69	328	P	P	00 43 47.9	-0.7
BRTR	Keskin Array B	85.32	311	P	P	00 44 58.8	+0.6
	comp=Z,0.4nm,0.7s,baz=145,slow=4.5,SNR=2.8						

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*HEL **16** 00:44:01.4, 67°.76N×20°.08E, h0km, ML2.1, Explosion*

*IDC **16** 00:44:02.8±1.6, 67°.84N×20°.67E, h0km, mb1 3.4/2, mb1mx2.9/35, mbtmp3.3/2, ML2.0/2, Error ellipse: s-maj=24.5km s-min=8.3km az=119.0*

*UPP **16** 00:44:02.6±0.0, 67°.82N×20°.20E, h0km, ML2.1, Explosion*

*BER **16** 00:44:02.8±3.0, 67°.82N×19°.87E, h0km, ML1.7, ML2.3(NAO), Suspected explosion*

*NAO **16** 00:44:05.4±1.7, 67°.96N×20°.68E, ML2.3*

ISC 16 00:44:02.5±1.1**, 67°.80N**±0°.04×**20°.22E**±0°.03**, h0**km**, n65, σ0s.37**/16**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.16	16	P	Pg	00 44 05.7	+0.2
KUA				S	Sg	00 44 07.6	+0.1
KUA	Kurravaara	0.16	16	*i* S	Sg	00 44 07.6	-2.4
KUA	Kurravaara	0.16	16	*i* P	Pg	00 44 05.7	-2.8
RATU	Laukkuluspa	0.24	275	P	Pg	00 44 07.2	+0.1
RATU	Laukkuluspa	0.24	275	*i* P	Pg	00 44 07.2	-3.7
KOVU	Salmi	0.42	357	P	Pg	00 44 10.4	-0.2
KOVU	Salmi	0.42	357	*i* P	Pg	00 44 10.4	-3.1
NIKU	Nikkaluokta	0.46	279	P	Pg	00 44 11.1	-0.1
NIKU	Nikkaluokta	0.46	279	*i* P	Pg	00 44 11.1	-3.9
DUNU	Dundret	0.70	169	P	Pg	00 44 16.0	+0.2
DUNU	Dundret	0.70	169	*i* P	Pg	00 44 16.0	-4.2
LANU	Lannavaara	0.71	69	P	Pg	00 44 16.1	0.0
LANU	Lannavaara	0.71	69	*e*S	Sg	00 44 25.5	-2.8
LANU	Lannavaara	0.71	69	*e*P	Pg	00 44 15.8	-3.6
MASU	Masugnsbyn	0.76	116	P	Pg	00 44 17.2	+0.1
MASU	Masugnsbyn	0.76	116	*i* P	Pg	00 44 17.2	-3.8
SALU	Saltoluokta	0.78	238	P	Pg	00 44 17.4	-0.1
SALU	Saltoluokta	0.78	238	*i* P	Pg	00 44 17.4	-4.3
KIF	Kilpisjarvi	1.23	10	Lg	Lg	00 44 42.1	
KIF	Kilpisjarvi	1.23	10	Sg	Sg	00 44 42.1	-2.1
KIF	Kilpisjarvi	1.23	10	*e*S	Sg	00 44 41.7	-2.6
KIF	Kilpisjarvi	1.23	10	Pg	Pg	00 44 25.4	-3.5
KIF	Kilpisjarvi	1.23	10	*e*P	Pg	00 44 25.2	-3.7
	baz=192						
KIF	Kilpisjarvi	1.23	10	MSG		00 44 41.3	
	comp=Z,20nm,0.2s						
KIF	Kilpisjarvi	1.23	10	Pg	Pg	00 44 25.4	-3.5
PAJU	Pajala	1.36	124	P	Pg	00 44 27.9	-0.7
PAJU	Pajala	1.36	124	*e*S	Sg	00 44 44.3	-6.1
PAJU	Pajala	1.36	124	*e*P	Pg	00 44 25.9	-6.7
N2IH	Innhavet	1.63	278	*e*P	Pn	00 44 31.7	-0.7
KTK1	Kautokeino	1.65	41	Sn	Sn	00 44 53.7	-3.7
KTK1	Kautokeino	1.65	41	IAML		00 44 57.2	
	comp=Z,15nm,0.3s						
KTK1	Kautokeino	1.65	41	*e*P	Pn	00 44 32.5	-3.4
KTK1	Kautokeino	1.65	41	*e*S	Sn	00 44 53.6	-3.8
KTK1	Kautokeino	1.65	41	Pn	Pn	00 44 32.6	-3.3
HARU	Harads	1.67	169	P	Pn	00 44 33.4	+0.4
HARU	Harads	1.67	169	*e*P	Pn	00 44 33.4	-3.8
FAUS	Fauske	1.94	260	*e*P	Pn	00 44 37.0	+0.4
TOF	Tornio	2.37	135	*e*SB	Sn	00 45 14.4	-1.9
TOF	Tornio	2.37	135	*e*PB	Pn	00 44 44.2	-2.2
	baz=313						
TOF	Tornio	2.37	135	MSG		00 45 11.6	
	comp=Z,10.0nm,0.2s						
SGF	Sodankyl	2.44	96	*e*SG	Sn	00 45 18.4	+0.8
SGF	Sodankyl	2.44	96	*e*P	Pn	00 44 44.4	-2.7
	baz=280						
RNF	Rovaniemi	2.55	115	*e*SB	Sn	00 45 20.3	-0.4
RNF	Rovaniemi	2.55	115	*e*P	Pn	00 44 46.8	-2.1
ARCES	ARCESS Array B	2.60	46	Pg	Pn	00 44 46.2	+0.5
	baz=225,slow=15,SNR=46						
ARCES				Lg	Lg	00 45 19.7	
	baz=229,slow=24,SNR=18						
ARA0	ARCESS Array S	2.60	46	Lg	Lg	00 45 20.1	
	baz=227,slow=22						
ARA0	ARCESS Array S	2.60	46	Sn	Sn	00 45 16.5	-4.4
	baz=220,slow=16						
ARA0	ARCESS Array S	2.60	46	*e*SG	Sn	00 45 22.9	+2.0
ARA0	ARCESS Array S	2.60	46	Pn	Pn	00 44 46.3	-2.7
	baz=237,slow=14						
ARA0	ARCESS Array S	2.60	46	*e*P	Pn	00 44 47.0	-2.0
	baz=230						

ARA0	**ARCESS Array S**	**2.60**	**46**	Pn	Pn	00 44 46.3	-2.7
	baz=237,slow=14						
ARA0	**ARCESS Array S**	**2.60**	**46**	Sn	Sn	00 45 16.5	-4.4
	baz=220,slow=16						
BURU	**Burvik**	**3.27**	**171**	*e*P	Pn	00 44 57.2	-1.9
OUL	**Oulu**	**3.55**	**138**	*e*SG	Sb	00 45 53.4	-0.7
OUL	**Oulu**	**3.55**	**138**	*e*PB	Pn	00 45 02.8	0.0
VRF	**Varrio**	**3.57**	**87**	*e*SB	Sb	00 45 49.5	-4.0
MSF	**Maaselka**	**3.96**	**115**	*e*P	Pn	00 45 06.1	-2.2
	baz=299						
KU6	**Riekki**	**4.20**	**111**	*e*P	Pn	00 45 09.0	-2.5
APA0	**Apatity Array**	**4.87**	**86**	Lg	Lg	00 46 31.1	
	baz=281,slow=28						
APA0	**Apatity Array**	**4.87**	**86**	Sn	Sn	00 46 12.4	-4.8
	baz=279,slow=28						
APA0	**Apatity Array**	**4.87**	**86**	Pn	Pn	00 45 16.6	-3.7
	baz=261,slow=12						
APA0	**Apatity Array**	**4.87**	**86**	Pn	Pn	00 45 16.6	-3.7
	baz=261,slow=12						
APA0	**Apatity Array**	**4.87**	**86**	Sn	Sn	00 46 12.4	-4.8
	baz=279,slow=28						
FINES	**FINESS Array B**	**6.86**	**156**	Pn	**Pn**	**00 45 43.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=332,slow=16,SNR=3.4						
FINES				Lg	Lg	00 47 38.1	
	comp=Z,0.3nm,0.3s,baz=347,slow=24,SNR=4.2						
NOA	**NORSAR Array B**	**7.82**	**214**	Pn	**Pn**	**00 45 57.4**	**0.0**
	comp=Z,0.0nm,0.3s,baz=52,slow=14,SNR=1.2						
NOA				Lg	Lg	00 48 07.9	
	comp=Z,0.0nm,0.3s,baz=19,slow=10,SNR=1.3						

UPP 16 00:44:06.2±0.1**, 67.°84N×20.°24E, h0**^{km}**, ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**17**	P	Pg	00 44 08.8	+0.3
KUA				S	Sg	00 44 10.7	+0.6
RATU	**Laukkuluspa**	**0.25**	**266**	P	Pg	00 44 11.1	+0.2
KOVU	**Salmi**	**0.39**	**355**	P	Pg	00 44 13.7	+0.1
NIKU	**Nikkaluokta**	**0.46**	**274**	P	Pg	00 44 15.1	+0.2
PAJU	**Pajala**	**1.38**	**125**	P	Pg	00 44 31.9	-0.6

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*NEIC **16** 01:43:44.2±1.3, 17.°7N±0.°1×148.°1E±0.°1, h35^{km}±7^{km}, mb4.1/9, Error ellipse: s-maj=18.8km s-min=16.1km az=84.0*

*IDC **16** 01:43:48.9±4.4, 17.°48N×148.°04E, h82^{km}±41^{km}, mb3.4/11, mb1 3.7/12, mb1mx3.6/33, mbtmp3.8/12, ML4.2/1, Error ellipse: s-maj=25.7km s-min=23.5km az=61.0*

ISC 16 01:43:44.1±0.7**, 17.°55N**±0.°10×**148.°1E**±0.°1**, h35**^{km}**, n22, σ1.^{s}30**/22**, mb3.9**/14**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.02**	**219**	P	**Pn**	**01 44 59.8**	**+2.8**
	9.2nm,0.3s,baz=47,slow=16,SNR=2.0						
GUMO				S	**Sn**	**01 45 51.0**	**-2.8**
	11nm,0.3s,baz=174,slow=17,SNR=1.6						
MJAR	**Matsushiro Arr**	**20.84**	**337**	P	Pn	01 48 25.3	-0.1
	0.8nm,0.3s,baz=308,slow=42,SNR=1.3						
KWAJ	**Kwajalein Atol**	**20.88**	**112**	P	**P**	**01 48 23.4**	**0.0**
KSRS	**Korea Array**	**26.60**	**322**	P	**P**	**01 49 21.9**	**+2.8**
	0.6nm,0.4s,baz=32,slow=38,SNR=1.5						
ASAR	**Alice Springs**	**43.25**	**199**	P	**P**	**01 51 41.8**	**-0.5**
	0.5nm,0.8s,baz=16,slow=6.9,SNR=3.6						
SONM	**Songino Array**	**45.46**	**321**	P	**P**	**01 51 59.4**	**-0.6**
	0.8nm,0.6s,baz=115,slow=7.7,SNR=5.3						
CMAR	**Chiang Mai Arr**	**46.64**	**279**	P	**P**	**01 52 09.3**	**-0.2**
	1.1nm,0.3s,baz=71,slow=6.7,SNR=7.3						
ZAA0	**Zalesovo Array**	**60.31**	**323**	P	**P**	**01 53 48.6**	**-0.6**
ZALV	**Zalesovo Beam**	**60.31**	**323**	P	**P**	**01 53 48.3**	**-0.9**
	2.0nm,0.8s,baz=96,slow=6.6,SNR=7.4						
MK31	**Makanchi Array**	**60.90**	**314**	P	**P**	**01 53 52.4**	**-1.0**
MKAR	**Makanchi Array**	**60.90**	**314**	P	**P**	**01 53 53.6**	**+0.2**
	0.4nm,0.5s,baz=88,slow=7.8,SNR=9.9						
MAKZ	**Makanchi**	**61.11**	**314**	P	**P**	**01 53 55.2**	**+0.3**
KURK	**Kurchatov**	**63.64**	**318**	P	**P**	**01 54 11.5**	**-0.1**
ILAR	**Eielson Array**	**63.67**	**26**	P	**P**	**01 54 10.5**	**-1.1**
	1.2nm,1.0s,baz=242,slow=3.8,SNR=4.3						
BRVK	**Borovoye**	**68.87**	**321**	P	**P**	**01 54 45.2**	**0.0**
KK31	**Karatay Array**	**69.25**	**310**	P	**P**	**01 54 47.6**	**-0.2**
KK31				IAmb	IAmb	01 55 01.9	
	comp=Z,1.5nm,0.8s						
KKAR	**Karatay Array**	**69.25**	**310**	P	**P**	**01 54 47.6**	**-0.2**
KKAR				IAmb	IAmb	01 55 01.9	
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**75.72**	**317**	P	**P**	**01 55 26.1**	**-0.1**
ABKAR				IAmb	IAmb	01 55 37.3	
	comp=Z,2.3nm,0.8s						
YKA	**Yellowknife Ar**	**77.92**	**28**	P	**P**	**01 55 38.0**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=286,slow=5.1,SNR=8.9						
NVAR	**Mina Array Bea**	**82.04**	**52**	P	**P**	**01 56 02.4**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=264,slow=5.4,SNR=6.9						
PDAR	**Pinedale Array**	**86.98**	**46**	P	**P**	**01 56 27.0**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=208,slow=5.9,SNR=1.8						
FINES	**FINESS Array B**	**88.86**	**336**	P	**P**	**01 56 33.0**	**-1.5**
	comp=Z,7.4nm,1.1s,baz=327,slow=34,SNR=2.4						

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*BJI **16** 02:24:31.5±0.0, 24.°11N×126.°83E, h7^{km}, mB4.8/31, mb4.4/48, Ms4.3/35, Ms7 4.0/27*

*IDC **16** 02:24:33.7±0.7, 24.°34N×126.°76E, h0^{km}, mb4.3/25, mb1 4.4/29, mb1mx4.3/44, mbtmp4.3/29, ML5.1/2, MS3.6/17, Ms1 3.6/17, ms1mx3.4/37, Error ellipse: s-maj=17.3km s-min=13.2km az=114.0*

*NEIC **16** 02:24:33.9±2.0, 24.°15N±0.°08×126.°80E±0.°07, h10^{km}±1^{km}, mb4.5/38, Error ellipse: s-maj=14.0km s-min=9.9km az=151.0*

*JMA **16** 02:24:36.7±0.2, 24.°35N×126.°72E, h84^{km}, M4.5*

*NIED **16** 02:24:36.8, 24.°35N×126.°73E, h84^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.12; $M_{\theta\theta}$1.00; $M_{\phi\phi}$-0.88; $M_{r\theta}$0.04; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.26; Fault plane solution: $M_0$1.03000×10^{16} NP1:ϕ_s37.00000°, δ78.00000°, λ-168.00000°. NP2:ϕ_s305.00000°, δ78.00000°, λ-12.00000°.*

*MOS **16** 02:24:36.5±1.0, 24.°33N×126.°81E, h30^{km}, mb4.6/12 Error ellipse: s-maj=13.5km s-min=7.6km az=99.7*

ISC 16 02:24:35.0±2.3**, 24.°17N**±0.°05×**126.°82E**±0.°04**, h13**^{km}±14^{km}**, n171, σ2.^{s}22**/193**, mb4.5**/69**, MS3.8**/23**, 10C-9D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.42**	**295**	P	**Pn**	**02 24 59.6**	**-0.8**
JOGS				S	**Sb**	**02 25 16.1**	**-3.1**
JMJ2	**Miyako jima3**	**1.47**	**293**	P	**Pn**	**02 25 00.2**	**-1.0**
JMJ2				S	**Sn**	**02 25 17.4**	**-2.9**
JIKM	**Ikemajima**	**1.62**	**298**	P	**Pn**	**02 25 02.7**	**-0.4**
JIKM				*e*S	**Sn**	**02 25 21.0**	**-2.8**
JIRB	**Irabujima**	**1.64**	**294**	P	**Pn**	**02 25 02.5**	**-0.9**
JIRB				S	**Sn**	**02 25 21.7**	**-2.6**
JTJ	**Tarama**	**1.99**	**284**	P	**Pn**	**02 25 07.5**	**-0.7**
JTJ				S	**Sn**	**02 25 30.3**	**-2.6**
JKE	**Kume jima 2**	**2.15**	**359**	P	**Pn**	**02 25 08.9**	**-1.6**
JKE				*e*S	**Sn**	**02 25 33.0**	**-4.0**
JJT3	**Tamagusuku3**	**2.15**	**24**	P	**Pn**	**02 25 09.7**	**-0.9**
JJT3				S	**Sn**	**02 25 34.1**	**-3.0**
JISG	**Ishigakijimahi**	**2.33**	**281**	P	**Pn**	**02 25 12.2**	**-0.7**
JISG				S	**Sn**	**02 25 38.4**	**-2.9**
JAGN	**Aguni-jima**	**2.44**	**9**	P	**Pn**	**02 25 13.2**	**-1.3**
JAGN				*e*S	**Sn**	**02 25 41.1**	**-3.1**
JIJ	**Ishigaki jima**	**2.45**	**275**	P	**Pn**	**02 25 13.7**	**-0.9**
JIJ				S	**Sn**	**02 25 40.2**	**-4.2**
JKRS	**Kuro-shima**	**2.57**	**272**	P	**Pn**	**02 25 15.8**	**-0.4**
JKRS				S	**Sn**	**02 25 45.2**	**-2.0**
JNTH	**Nagotoyohara**	**2.58**	**25**	P	**Pn**	**02 25 15.0**	**-1.4**
JNTH				S	**Sn**	**02 25 44.6**	**-3.1**
HATJ	**Hateruma jima**	**2.76**	**268**	P	**Pn**	**02 25 17.9**	**-0.9**
IRIF	**Iriomote-Funau**	**2.82**	**274**	P	**Pn**	**02 25 18.8**	**-0.9**
IRIF				S	**Sn**	**02 25 50.6**	**-3.0**
JOW	**Kunigami**	**2.96**	**26**	P	**Pn**	**02 25 21.2**	**-0.5**
JIH	**Iheya**	**3.04**	**20**	P	**Pn**	**02 25 21.5**	**-1.2**
JIH				S	**Sn**	**02 25 55.2**	**-3.7**
JYRO	**Yoronjima**	**3.21**	**27**	P	**Pn**	**02 25 24.2**	**-0.8**
JYRO				*e*S	**Sn**	**02 25 58.7**	**-4.3**
YOJ	**Yonaguni jima**	**3.49**	**276**	P	**Pn**	**02 25 28.1**	**-0.7**
YOJ	**Yonaguni jima**	**3.49**	**276**	Pn	**Pn**	**02 25 26.0**	**-2.9**
JYNG	**Yonagunijimaku**	**3.54**	**275**	P	**Pn**	**02 25 29.0**	**-0.7**
JOKE	**Okinoerabujima**	**3.55**	**26**	P	**Pn**	**02 25 28.6**	**-1.2**
JTK	**Tokunoshima**	**4.08**	**28**	P	**Pn**	**02 25 35.8**	**-1.3**
JTK				S	**Sn**	**02 26 21.9**	**-2.8**
JMZ	**Minamidaito 2**	**4.32**	**67**	P	**Pn**	**02 25 38.6**	**-1.7**
JMZ				S	**Sn**	**02 26 24.0**	**-6.5**
JMZ	**Minamidaito 2**	**4.32**	**67**	Pn	**Pn**	**02 25 37.9**	**-2.4**
JKDJ	**Kitadaitoujima**	**4.43**	**65**	P	**Pn**	**02 25 40.0**	**-1.9**
JKDJ				*e*S	**Sn**	**02 26 27.7**	**-5.6**
JAMN	**Amaminishikomi**	**4.58**	**27**	P	**Pn**	**02 25 42.6**	**-1.3**
JAMN				S	**Sn**	**02 26 31.9**	**-5.0**
NACB	**Ninganchiao**	**4.77**	**271**	Pn	**Pn**	**02 25 44.6**	**-1.9**
JAM	**Amami Oshima**	**4.91**	**30**	P	**Pn**	**02 25 46.9**	**-1.6**
JAM				S	**Sn**	**02 26 39.1**	**-6.0**
TATO	**Taipei**	**4.92**	**281**	Pn	**Pn**	**02 25 47.4**	**-1.2**
YHNB	**Yeheng**	**4.99**	**277**		**Pn**	**02 25 48.8**	**-0.8**
JZK	**Kikaishima**	**5.01**	**34**	P	**Pn**	**02 25 49.0**	**-0.8**
JZK				*e*S	**Sn**	**02 26 45.6**	**-1.9**
YULB	**Yu-li**	**5.12**	**262**	Pn	**Pn**	**02 25 49.0**	**-2.3**
SSLB	**Suanglung**	**5.38**	**267**	Pn	**Pn**	**02 25 52.9**	**-2.0**
JTAJ	**Takarajima**	**5.41**	**23**	P	**Pn**	**02 25 53.6**	**-1.6**
JTAJ				*e*S	**Sn**	**02 26 55.1**	**-2.2**
TWG	**Pinlang**	**5.44**	**257**		**Pn**	**02 25 53.0**	**-2.8**
QZH	**Quanzhou**	**7.53**	**278**	*e*P	**Pn**	**02 26 23.0**	**-1.4**
QZH				*e*S	**Sn**	**02 27 45.5**	**-4.2**
QZH				LR	LR		
	comp=N,1µm,14.7s						
KNMB	**Chin-men Tao**	**7.70**	**274**	Pn	**Pn**	**02 26 25.1**	**-1.6**
JSU	**Suzuyama**	**7.99**	**23**	Pn	**Pn**	**02 26 29.2**	**-1.5**
JNU	**Nakatsue**	**9.61**	**21**	Pn	**Pn**	**02 26 51.9**	**-1.1**
	14nm,0.3s,baz=203,slow=3.6,SNR=57						
JNU				Sn	**Sn**	**02 28 38.5**	**-2.3**
	2.4nm,0.3s,baz=276,slow=2.7,SNR=2.1						
NJ2	**Nanjing**	**10.54**	**320**	*e*P	**Pn**	**02 27 07.3**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
NJ2				LR	LR		
	comp=N,1µm,15.2s						
NJ2				LR	LR		
	comp=E,890nm,12.8s						
NJ2				LR	LR		
	comp=Z,900nm,9.5s						
KSRS	**Korea Array**	**13.28**	**4**	Pn	**Pn**	**02 27 41.7**	**-1.4**
	0.2nm,0.3s,baz=186,slow=13,SNR=10						
KSRS				LR	LR	02 32 54.6	
	comp=Z,229nm,18.4s,baz=189,slow=38						
JWT	**Wachi**	**13.35**	**32**	Pn	**Pn**	**02 27 42.3**	**-1.8**
JCJ	**Chichijima**	**14.16**	**75**	Pn	**Pn**	**02 27 57.4**	**+2.1**
	13nm,0.3s,baz=272,slow=18,SNR=1.9						
DL2	**Dalian**	**15.34**	**345**	P	**Pn**	**02 28 14.1**	**+3.0**
DL2				*e*S	**Sn**	**02 31 10.0**	**+9.1**
DL2				pmax	pmax		
	comp=Z,24nm,0.8s						
DL2				LR	LR		
	comp=N,650nm,16.9s						
DL2				LR	LR		
	comp=E,710nm,14.8s						
DL2				LR	LR		
	comp=Z,600nm,16.2s						
MJAR	**Matsushiro Arr**	**15.76**	**36**	Pn	**Pn**	**02 28 16.1**	**-0.4**
	0.1nm,0.3s,baz=233,slow=13,SNR=1.8						
MJAR				LR	LR	02 34 41.2	
	comp=Z,80nm,19.8s,baz=235,slow=39						
QIZ	**Qiongzhong**	**16.59**	**255**	P	**Pn**	**02 28 24.1**	**-3.2**
QIZ				S	**Sn**	**02 31 29.8**	**-1.7**
QIZ				LR	LR		
	comp=N,170nm,6.0s						
QIZ				LR	LR		
	comp=E,230nm,8.8s						
QIZ				LR	LR		
	comp=Z,270nm,11.5s						
BJT	**Baijiatuau**	**18.18**	**333**	Pn	**Pn**	**02 28 44.5**	**-2.4**
BJT				IAmb	IAmb	02 28 49.3	
	comp=Z,15nm,0.8s						
BJI	**Beijing**	**18.19**	**333**	P	**Pn**	**02 28 48.3**	**+1.2**
BJI				pmax	pmax		
	comp=Z,20nm,0.6s						
BJI				LR	LR		
	comp=Z,360nm,11.9s						
BJI				LR	LR		
	comp=Z,450nm,20.9s						
GYA	**Guiyang**	**18.36**	**281**	⇑P	**P**	**02 28 51.4**	**+1.9**
GYA				S	**Sn**	**02 32 19.3**	**+4.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.5s						
GYA				LR	LR		
	comp=Z,320nm,8.3s						
GYA				LR	LR		
	comp=Z,380nm,10.0s						
GYA				LR	LR		
	comp=Z,590nm,14.5s						
CN2	**Changchun**	**19.62**	**357**	*e*P	**P**	**02 29 02.4**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GUMO	**Guam**	**20.04**	**118**	LR	LR	02 37 46.4	
	comp=Z,73nm,18.2s,baz=138,slow=39						
USA0B	**Ussuriysk Arra**	**20.43**	**11**	P	**P**	**02 29 10.6**	**-1.3**
USA0B				IAmb	IAmb	02 29 17.8	
	comp=Z,21nm,0.9s						
USRK	**Ussuriysk Ar.**	**20.43**	**11**	P	**P**	**02 29 09.3**	**-2.5**
	comp=Z,6.1nm,0.7s,baz=192,slow=10,SNR=16						
HHC	**Hu-ho-hao-te**	**20.98**	**326**	*e*P	**P**	**02 29 18.5**	**+0.6**
HHC				S	**S**	**02 33 06.3**	**-5.1**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,6.7s						
HHC				LR	LR		
	comp=Z,540nm,14.3s						
HHC				LR	LR		
	comp=Z,470nm,13.8s						
SLVN	**Son La**	**21.32**	**267**	P	**P**	**02 29 21.1**	**-0.6**
CD2	**Chengdu**	**21.50**	**293**	⇑*i*P	**P**	**02 29 23.4**	**-0.2**
CD2				S	**S**	**02 33 17.9**	**-4.0**
CD2				SS	**SnSn**	**02 33 52.0**	**+6.7**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,210nm,5.1s						
CD2				LR	LR		
	comp=Z,650nm,14.1s						
CD2				LR	LR		
	comp=Z,650nm,11.0s						
CD2				LR	LR		
	comp=Z,830nm,13.1s						
BTO	**Baotou**	**21.62**	**323**	*e*P	**P**	**02 29 27.6**	**+2.8**
KMI	**Kunming**	**21.90**	**278**	⇑P	**P**	**02 29 30.3**	**+2.1**
KMI				pP	pwP	02 29 34.3	-1.5
KMI				sP	sP	02 29 36.3	+4.8
KMI				S	**S**	**02 33 25.5**	**-4.6**
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI				pmax	pmax		
	comp=Z,260nm,3.5s						
KMI				LR	LR		
	comp=Z,400nm,17.3s						
KMI				LR	LR		
	comp=Z,410nm,17.8s						
KMI	**Kunming**	**21.90**	**278**	P	**P**	**02 29 27.9**	**-0.3**
JEW	**Eniwo**	**22.20**	**29**	P	**P**	**02 29 30.2**	**-0.8**
ERM	**Erimo**	**22.39**	**33**	P	**P**	**02 29 31.3**	**-1.6**
NONG	**Nongkai**	**22.89**	**259**	P	**P**	**02 29 42.3**	**+3.9**
	comp=Z,36nm,1.1s						
LZH	**Lanzhou**	**23.09**	**306**	*e*P	**P**	**02 29 37.0**	**-3.6**
LZH				pP	pP	02 29 41.0	-2.4
LZH				sP	sP	02 29 43.3	-0.7
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,92nm,4.3s						
TOLI2	**Tolitoli**	**23.65**	**195**	P	**P**	**02 29 43.2**	**-3.0**
TOLI2				IAmb	IAmb	02 29 59.3	
	comp=Z,28nm,1.3s						
ASAJ	**Asahikawa**	**23.73**	**29**	P	**P**	**02 29 45.4**	**-1.2**
	comp=Z,8.2nm,0.4s,baz=217,slow=12,SNR=8.1						
JKA	**Kamikawa-asahi**	**23.73**	**29**	P	**P**	**02 29 45.7**	**-1.0**
JKA				IAmb	IAmb	02 29 57.8	
	comp=Z,17nm,0.7s						
CHAI	**Chaiyaphum**	**24.71**	**255**	P	**P**	**02 29 57.0**	**+1.0**
	comp=Z,582nmcomp=Z,68nm,0.8s						
SIJI	**Sorong**	**25.26**	**170**	LR	LR	02 37 57.5	
	comp=Z,158nm,21.6s,baz=90,slow=32						
KLR	**Kul'dur**	**25.32**	**8**	P	**P**	**02 29 59.2**	**-2.0**
	comp=Z,6.6nm,0.8s,baz=214,slow=6.1,SNR=21						
KLR				LR	LR	02 40 29.1	
	comp=Z,84nm,21.2s,baz=183,slow=38						
KLR	**Kul'dur**	**25.32**	**8**	⇓*e*P	**P**	**02 30 00.3**	**-0.9**
KLR				pmax	pmax		
	comp=Z,23nm,1.3s						
SRAK	**Srakaew**	**25.46**	**251**	P	**P**	**02 30 01.4**	**-1.3**
	comp=Z,184nm,0.9s						
HIA	**Hailar**	**25.66**	**349**	P	**P**	**02 30 03.4**	**-1.0**
YSS	**Yuzh-Sakhalins**	**26.07**	**25**	⇓*e*P	**P**	**02 30 10.5**	**+2.4**
YSS				pmax	pmax		
	comp=Z,108nm,1.2s						
YSS	**Yuzh-Sakhalins**	**26.07**	**25**	P	**P**	**02 30 08.1**	**0.0**
CM35	**Chiang Mai Arr**	**26.30**	**263**	P	**P**	**02 30 12.0**	**+1.5**
CM36	**Chiang Mai Arr**	**26.40**	**263**	P	**P**	**02 30 13.0**	**+1.6**
CM33	**Chiang Mai Arr**	**26.45**	**264**	P	**P**	**02 30 13.0**	**+1.2**
CHTO	**Chiang Mai**	**26.45**	**264**	P	**P**	**02 30 11.6**	**-0.2**
CHTO				IAmb	IAmb	02 30 13.6	
	comp=Z,6.1nm,0.8s						
CM04	**Chiang Mai Arr**	**26.54**	**263**	P	**P**	**02 30 15.8**	**+3.1**
	comp=Z,4.2nm,1.0s						
CM01	**Chiang Mai Arr**	**26.55**	**263**	P	**P**	**02 30 16.4**	**+3.7**
CMAR	**Chiang Mai Arr**	**26.56**	**263**	P	**P**	**02 30 12.8**	**0.0**
	comp=Z,2.0nm,0.3s,baz=57,slow=8.0,SNR=13						
CMAR				LR	LR	02 39 48.6	
	comp=Z,180nm,19.0s,baz=164,slow=34						
CMAR	**Chiang Mai Arr**	**26.56**	**263**	*i* P	**P**	**02 30 14.3**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BKB	**Balikpapan**	**27.05**	**202**	P	P	02 30 11.3	-5.9
GTA	**Gaotai**	**27.39**	**310**	*e*P	**P**	**02 30 20.4**	**+0.1**
GTA				pP	sP	02 30 25.0	+1.2
GTA				sP	pwP	02 30 27.5	-2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,5.5s						
GTA				LR	LR		
	comp=Z,610nm,16.4s						
GTA				LR	LR		
	comp=Z,440nm,15.3s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GRNR	**Gornyy**	**27.58**	**13**	⇑*i*P	**P**	**02 30 22.1**	**+0.5**
GRNR				pmax	pmax		
	comp=N,3.0nm,0.6s						
GRNR				pmax	pmax		
	comp=E,3.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,160nm,16.0s						
GRNR				MLR	MLR		
	comp=E,50nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,210nm,20.0s						
ULN	**Ulaanbaatar**	**28.39**	**331**	⇓*e*P	**P**	**02 30 27.9**	**-1.2**
ULN				pmax	pmax		
	comp=Z,22nm,1.3s						
ULN	**Ulaanbaatar**	**28.39**	**331**	P	**P**	**02 30 28.9**	**-0.2**
SONM	**Songino Array**	**28.65**	**331**	P	**P**	**02 30 30.2**	**-1.3**
	comp=Z,3.6nm,0.5s,baz=144,slow=10,SNR=26						
SONM				LR	LR	02 43 28.4	
	comp=Z,239nm,21.3s,baz=128,slow=40						
TYV	**Tymovskoe**	**29.34**	**21**	*e*P	P	02 30 44.6	+7.4
TYV				pmax	pmax		
	comp=Z,400nm,4.4s						
TYV				pmax	pmax		
	comp=Z,39nm,1.0s						
JAY	**Jayapura**	**29.76**	**151**	LR	LR	02 40 13.6	
	comp=Z,101nm,20.7s,baz=6.0,slow=31						
KAPI	**Kappang**	**29.81**	**194**	LR	LR	02 42 21.6	
	comp=Z,64nm,19.4s,baz=11,slow=36						
BBKI	**Banjar Baru**	**29.83**	**205**	P	**P**	**02 30 43.7**	**+1.7**
IPM	**Ipoh**	**31.63**	**236**	P	**P**	**02 30 56.0**	**-1.9**
TLY	**Talaya**	**32.72**	**333**	LR	LR	02 45 56.2	
	comp=Z,186nm,18.1s,baz=168,slow=39						
PSI	**Prapat**	**34.30**	**236**	P	**P**	**02 31 23.1**	**+1.7**
	comp=Z,3.7nm,0.5s,baz=183,slow=0.4,SNR=5.0						
TAPN	**Taplejung**	**35.27**	**284**	*e*P	**P**	**02 31 31.1**	**+1.2**
	comp=Z,27nm,0.8s						
ODAN	**Odare**	**35.59**	**283**	*e*P	**P**	**02 31 34.0**	**+1.4**
	comp=Z,49nm,0.8s						
RAMN	**Ramite**	**36.28**	**283**	*e*P	**P**	**02 31 39.0**	**+0.4**
	comp=Z,24nm,0.8s						
GSI	**Gunungsitoli**	**36.30**	**236**	P	**P**	**02 31 36.1**	**-2.4**
GUN	**Gumba**	**36.85**	**285**	*e*P	**P**	**02 31 44.4**	**+0.9**
	comp=Z,29nm,0.8s						
PETK	**Petropavlovsk-**	**37.12**	**31**	P	**P**	**02 31 46.1**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=203,slow=14,SNR=2.0						
PETK				LR	LR	02 46 49.4	
	comp=Z,74nm,21.3s,baz=198,slow=36						
PKI	**Pulchoki**	**37.29**	**284**	*e*P	**P**	**02 31 47.7**	**+0.5**
	comp=Z,13nm,0.7s						
PKIN	**Phulchoki**	**37.30**	**284**	*e*P	**P**	**02 31 47.6**	**+0.3**
	comp=Z,8.9nm,0.5s						
KKN	**Kakani**	**37.39**	**285**	*e*P	**P**	**02 31 48.7**	**+0.8**
	comp=Z,25nm,0.8s						
WMQ	**Urumqi**	**37.46**	**311**	*e*P	**P**	**02 31 48.8**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,440nm,5.9s						
WMQ				LR	LR		
	comp=Z,280nm,16.3s						
PET	**Petropavlovsk**	**37.52**	**32**	*e*P	P	02 31 53.9	+5.5
PET				pmax	pmax		
	comp=Z,20nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
DMN	**Daman**	**37.56**	**284**	*e*P	**P**	**02 31 50.2**	**+0.8**
	comp=Z,15nm,0.6s						
YAK	**Yakutsk**	**37.90**	**2**	P	**P**	**02 31 51.2**	**-0.2**
	comp=Z,14nm,0.5s,baz=346,slow=4.2,SNR=4.0						
YAK				LR	LR	02 47 49.5	
	comp=Z,83nm,21.0s,baz=256,slow=37						
YAK	**Yakutsk**	**37.90**	**2**	*e*P	**P**	**02 31 50.9**	**-0.6**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK	**Yakutsk**	**37.90**	**2**	P	**P**	**02 31 50.6**	**-0.8**
GKN	**Gorkha**	**37.94**	**285**	*e*P	**P**	**02 31 53.0**	**+0.4**
	comp=N,12nm,0.6s						
DANN	**Dangsing**	**38.69**	**286**	*e*P	**P**	**02 31 59.7**	**+0.7**
	comp=N,20nm,0.6s						
KOLN	**Koldanda**	**38.88**	**285**	*e*P	**P**	**02 32 01.3**	**+0.8**
	comp=N,39nm,1.1s						
DGZ	**Jazzator, Alta**	**39.83**	**320**	⇑*e*P	**P**	**02 32 08.5**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**42.00**	**314**	⇓*e*P	**P**	**02 32 25.6**	**-0.2**
MK31	**Makanchi Array**	**42.00**	**314**	P	**P**	**02 32 25.7**	**-0.2**
MKAR	**Makanchi Array**	**42.00**	**314**	P	**P**	**02 32 24.9**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=98,slow=11,SNR=38						
MKAR	**Makanchi Array**	**42.00**	**314**	*ce*P	**P**	**02 32 26.3**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MAKZ	**Makanchi**	**42.21**	**314**	P	**P**	**02 32 27.5**	**-0.1**
SEY	**Seymchan**	**42.36**	**17**	P	**P**	**02 32 28.2**	**-0.3**
	comp=Z,14nm,0.7s,baz=220,slow=6.2,SNR=25						
SEY	**Seymchan**	**42.36**	**17**	⇓*e*P	**P**	**02 32 29.1**	**+0.6**
ZAA0	**Zalesovo Array**	**43.15**	**325**	P	**P**	**02 32 34.5**	**-0.5**
ZAA0				IAmb	IAmb	02 32 43.7	
	comp=Z,3.1nm,0.7s						
ZALV	**Zalesovo Beam**	**43.15**	**325**	P	**P**	**02 32 33.6**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=113,slow=9.2,SNR=7.4						
ZALV				LR	LR	02 51 12.6	
	comp=Z,147nm,20.0s,baz=98,slow=37						
WRAB	**Tennant Creek**	**44.44**	**170**	⇓*e*P	**P**	**02 32 47.7**	**+1.9**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**44.45**	**170**	P	**P**	**02 32 47.2**	**+1.4**
	comp=Z,3.2nm,0.6s,baz=353,slow=8.8,SNR=15						
WB2	**Warramunga Arr**	**44.45**	**170**	P	**P**	**02 32 43.6**	**-2.2**
WB2				IAmb	IAmb	02 32 59.8	
	comp=Z,14nm,1.1s						
KSH	**Kashi**	**45.24**	**302**	P	**P**	**02 32 53.3**	**+1.1**
KSH				pP	pwP	02 32 57.5	-4.5
KSH				S	**S**	**02 39 36.0**	**+3.8**
KSH				pmax	pmax		
	comp=Z,15nm,1.5s						
KSH				pmax	pmax		
	comp=Z,620nm,6.1s						
KURK	**Kurchatov**	**45.47**	**318**	P	**P**	**02 32 53.1**	**-0.6**
KURK	**Kurchatov**	**45.47**	**318**	P	**P**	**02 32 53.5**	**-0.2**
KURK				IAmb	IAmb	02 32 54.9	
	comp=Z,6.3nm,1.0s						
KURBB	**Kurchatov Arra**	**45.50**	**318**	P	**P**	**02 32 53.1**	**-0.8**

	comp=Z,1.7nm,0.3s,baz=108,slow=9.1,SNR=25						
AAK	Ala-Archa	46.63	307	⇓eP	P	02 33 03.8	+0.6
AAK				pmax	pmax		
	comp=Z,29nm,3.5s						
NIL	Nilore	47.39	294	P	P	02 33 08.6	-0.4
NIL				IAmb	IAmb	02 33 11.6	
	comp=Z,3.9nm,0.8s						
TIXI	Tiksi	47.53	1	⇓eP	P	02 33 08.8	-0.7
TIXI				pmax	pmax		
	comp=Z,79nm,2.5s						
TIXI	Tiksi	47.53	1	P	P	02 33 09.0	-0.5
ASAR	Alice Springs	48.04	171	P	P	02 33 16.3	+2.2
	comp=Z,1.4nm,0.7s,baz=358,slow=7.6,SNR=11						
ASAR				LR	LR	02 52 41.3	
	comp=Z,50nm,21.8s,baz=356,slow=35						
KK31	Karatay Array	49.59	307	P	P	02 33 25.7	-0.2
KKAR	Karatay Array	49.59	307	P	P	02 33 25.7	-0.2
KBL	Kabul	50.81	296	P	P	02 33 36.1	+0.5
KBL				IAmb	IAmb	02 33 37.3	
	comp=Z,4.2nm,0.8s						
BRVK	Borovoye	51.05	320	⇓eP	P	02 33 36.2	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	51.05	320	P	P	02 33 36.9	+0.1
BRVK				IAmb	IAmb	02 33 52.8	
	comp=Z,5.8nm,1.1s						
SVE	Sverdlovsk	57.12	323	eP	P	02 34 28.4	+7.4
SVE				pmax	pmax		
	comp=Z,14nm,1.3s						
ABKAR	Akbulak array	57.14	314	P	P	02 34 20.8	-0.5
ABKAR				IAmb	IAmb	02 34 31.9	
	comp=Z,4.1nm,0.9s						
STKA	Stephens Creek	57.49	165	LR	LR	02 58 00.7	
	comp=Z,24nm,21.8s,baz=24,slow=35						
ARU	Arti	58.23	323	c iP	P	02 34 37.9	+9.1
ARU						02 36 41.2	
ARU				S	PnS	02 42 49.1	+7.4
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
ARU	Arti	58.23	323	P	P	02 34 27.9	-0.9
GEYT	Alibeck	59.23	301	P	P	02 34 37.8	+1.6
	comp=Z,2.5nm,0.7s,baz=236,slow=1.1,SNR=6.0						
KIRV	Kirov	63.18	325	⇑eP	P	02 35 03.2	+0.8
BELG	Belogornoye	64.75	318	⇑eP	P	02 35 15.1	+2.3
BELG				pmax	pmax		
	comp=Z,4.0nm,2.8s						
RND	Reindeer	66.16	29	P	P	02 35 21.6	-0.4
MDM	Murphy Dome	66.26	28	P	P	02 35 23.3	+0.8
ILAR	Eielson Array	66.85	28	P	P	02 35 25.6	-0.7
	comp=Z,0.6nm,0.7s,baz=256,slow=4.6,SNR=8.2						
KBZ	Khabaz	69.48	310	P	P	02 35 42.9	-0.2
	comp=Z,3.7nm,0.9s,baz=316,slow=16,SNR=3.6						
KIV	Kislovodsk	69.57	310	eP	P	02 35 44.6	+0.8
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,153nm,17.0s						
EPYK	Eagle Plains	70.66	25	P	P	02 35 50.0	0.0
ARCES	ARCESS Array B	71.45	339	P	P	02 35 54.9	+0.2
	comp=Z,5.4nm,1.1s,baz=32,slow=4.8,SNR=5.1						
RAYN	Ar Rayn	73.25	289	P	P	02 36 06.3	0.0
RAYN				IAmb	IAmb	02 36 13.7	
	comp=Z,5.9nm,1.4s						
FIA1	FINESS Array S	74.02	331	P	P	02 36 10.2	+0.1
FINES	FINESS Array B	74.03	331	P	P	02 36 10.1	0.0
	comp=Z,4.9nm,0.9s,baz=74,slow=6.9,SNR=9.7						
AKASG	Malin Array Be	76.27	320	P	P	02 36 24.0	+0.8
	comp=Z,1.1nm,0.5s,baz=57,slow=6.9,SNR=7.1						
AKASG				LR	LR	03 09 46.7	
	comp=Z,93nm,18.0s,baz=300,slow=36						
BR131	Keskin Array S	77.29	308	P	P	02 36 29.2	-0.2
BR131				IAmb	IAmb	02 36 43.6	
	comp=Z,4.5nm,0.8s						
BRTR	Keskin Array B	77.29	308	P	P	02 36 30.4	+1.0
	comp=Z,0.9nm,0.8s,baz=99,slow=8.0,SNR=4.0						
BRTR	Keskin Array B	77.29	308	ceP	P	02 36 31.7	+2.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RES	Resolute Bay	77.80	10	P	P	02 36 31.4	0.0
RES				IAmb	IAmb	02 36 42.3	
	comp=Z,4.3nm,0.8s						
NB2	NORSAR Subarra	80.59	334	P	P	02 36 44.3	-2.7
	comp=Z,3.5nm,0.9s,baz=54,slow=5.6						
NOA	NORSAR Array B	80.59	334	P	P	02 36 46.4	-0.5
	comp=Z,1.8nm,0.9s,baz=55,slow=5.9,SNR=2.0						
NOA				LR	LR	03 16 17.5	
	comp=Z,127nm,18.1s,baz=355,slow=39						
YKA	Yellowknife Ar	80.93	24	P	P	02 36 49.3	+0.6
	comp=Z,1.3nm,0.8s,baz=302,slow=4.7,SNR=16						
YKA	Yellowknife Ar	80.93	24	i P	P	02 36 49.2	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
UZH	Uzhgorod	81.22	319	eP	P	02 36 50.6	+0.1
UZH				e		02 37 01.4	
GERES	GERESS Array B	86.06	322	P	P	02 37 16.0	+0.5
	comp=Z,0.6nm,0.7s,baz=52,slow=5.5,SNR=3.5						
FFC	Flin Flon	91.00	26	P	P	02 37 39.0	+0.3
NVAR	Mina Array Bea	92.86	46	P	P	02 37 49.2	+1.2
	comp=Z,0.5nm,0.8s,baz=286,slow=6.1,SNR=4.2						

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*MEX **16** 02:24:43.9±1.3, 14.°40N×92.°06W, h66^{km}±14^{km}, MD3.6*
*GCG **16** 02:24:49.6±0.7, 14.°02N×91.°73W, h13^{km}±635^{km}, MD3.5*
ISC 16 02:24:43.8±2.3**, 14.°4N**±0.°1×**92.°2W**±0.°1**, h35**^{km}**, n6,**
σ**1^{s}49**/10**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.54	352	eP	Pn	02 24 56.0	+0.9
THIG				i S	Sn	02 25 05.3	+2.3
FUG	Fuego 3	1.30	86	eS	Sn	02 25 21.1	-0.9
PCG	Pacaya	1.53	89	eS	Sn	02 25 28.1	+0.4
PCIG		1.66	323	i P	Pn	02 25 10.1	-0.4
PCIG				i S	Sn	02 25 30.3	-0.3
IXG	Ixpaco	1.70	96	eP	Pn	02 25 12.4	+1.2
IXG				eS	Sn	02 25 30.0	-1.8
CCIG	Comitan	1.91	1	i P	Pn	02 25 13.4	-0.5
CCIG				i S	Sn	02 25 35.1	-1.8

IDC 16 02:31:25.1±1.9**, 31.°02N×95.°25E, h0**^{km}**, mb3.3**/3**,**
mb1 3.3/5**, mb1mx3.2**/40**, mbtmp3.2**/5**, ML3.1**/2**, MS3.2**/1**,**
Ms1 3.2/1**, ms1mx2.8**/19**, Error ellipse: s-maj=74.6km**
s-min=27.6km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	18.66	331	P	P	02 35 44.3	-0.2
	0.0nm,0.3s,baz=144,slow=10,SNR=2.2						
SONM	Songino Array	18.84	24	P	P	02 35 46.7	+0.1
	0.1nm,0.3s,baz=216,slow=8.8,SNR=1.9						
KURBB	Kurchatov Arra	23.21	332	P	P	02 36 34.0	+0.4
	0.2nm,0.3s,baz=142,slow=11,SNR=4.2						
ZALV	Zalesovo Beam	24.12	345	P	P	02 36 42.0	-0.4
	0.3nm,0.3s,baz=156,slow=7.4,SNR=1.7						
KSRS	Korea Array	27.67	68	LR	LR	02 49 07.3	
	comp=Z,55nm,20.5s,baz=270,slow=38						
ASAR	Alice Springs	65.80	141	P	P	02 42 12.3	0.0
	0.3nm,0.6s,baz=329,slow=6.6,SNR=2.0						

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*ISK **16** 02:32:25.9, 35.°26N×31.°35E, h23^{km}, ML2.7/19*
*NIC **16** 02:32:26.9±0.0, 35.°36N×31.°43E, h19^{km}, Ml2.8/4*
*DDA **16** 02:32:38.9, 36.°06N×31.°80E, h22^{km}±1^{km}, ML2.1*
ISC 16 02:32:27.3±1.2**, 35.°39N**±0.°03×**31.°47E**±0.°04**, h30**^{km}±12^{km}**,**
n39, σ**1^{s}79**/59**, 1C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	0.80	117	⇓P	Pb	02 32 42.2	-0.5
AKMS				S	Sn	02 32 54.9	+1.4
AKMS				AML	AML	02 32 57.0	
	1.2nm,0.2s						
AKMS				AML	AML	02 32 57.0	
	1.2nm,0.2s						
AKMS				AML	AML	02 32 58.2	
	1.8nm,0.2s						
AKMS				AML	AML	02 32 58.2	
	1.8nm,0.2s						
GAZI	Gazipasa	1.09	39	PN	Pb	02 32 48.6	+1.0
GAZI				SN	Sn	02 33 05.3	+4.7
GAZI	Gazipasa	1.09	39	i P	Pb	02 32 48.5	+0.9
GAZI				i S	Sb	02 32 57.4	-4.0
NATA	Nata	1.09	124	P	Pn	02 32 46.9	+0.4
NATA				S	Sn	02 33 02.7	+2.1
NATA				AML	AML	02 33 07.9	
	1.9nm,0.5s						
NATA				AML	AML	02 33 07.9	
	1.9nm,0.5s						
NATA				AML	AML	02 33 14.0	
	1.5nm,0.6s						
NATA				AML	AML	02 33 14.0	
	1.5nm,0.6s						
LEF	Lefka	1.19	103	PN	Pn	02 32 48.4	+0.5
LEF				SN	Sb	02 33 04.8	+0.4
LEF	Lefka	1.19	103	i P	Pn	02 32 48.7	+0.7
LEF				i S	Sn	02 32 59.6	-3.5
AKDN	Akdeniz- Kıbrı	1.23	94	PN	Pb	02 32 49.9	0.0
ALAN	Alanya-ANTALYA	1.25	21	PN	Pb	02 32 51.1	+0.8
SZAC	Souni	1.32	118	⇓P	Pn	02 32 50.3	+0.6
SZAC				S	Sb	02 33 08.4	+0.3
SZAC				AML	AML	02 33 16.9	
	0.6nm,0.9s						
SZAC				AML	AML	02 33 16.9	
	0.6nm,0.9s						
SZAC				AML	AML	02 33 18.6	
	0.5nm,0.6s						
SZAC				AML	AML	02 33 18.6	
	0.5nm,0.6s						
KEPZ	Antalya-Kepez	1.51	4	i P	Pb	02 32 55.1	+0.3
KEPZ				i S	Sn	02 33 10.4	-0.6
TEKE	Tekeli-Mersin	1.53	60	PN	Pb	02 32 54.8	-0.3
TEKE				SN	Sb	02 33 15.9	+1.8
ASGA	Asgata	1.58	112	P	Pn	02 32 54.2	+1.0
ASGA				S	Sb	02 33 15.1	-0.3
ASGA				AML	AML	02 33 24.3	
	0.3nm,0.8s						
ASGA				AML	AML	02 33 24.3	
	0.3nm,0.8s						
ASGA				AML	AML	02 33 24.6	
	0.3nm,0.5s						
ASGA				AML	AML	02 33 24.6	
	0.3nm,0.5s						
CSS	Mathiatis	1.58	105	PN	Pn	02 32 54.4	+1.1
CSS	Mathiatis	1.58	105	⇑P	Pn	02 32 54.6	+1.3
CSS				S	Sb	02 33 16.0	+0.4
ERMK	Ermenek	1.71	43	i P	Pb	02 33 00.0	+1.8
ERMK				i S	Sn	02 33 14.2	-2.0
BERE	Bereket-Mersin	1.71	56	PN	Pb	02 32 57.5	-0.8
AKAS	Kas	1.73	300	PN	Pn	02 32 55.3	-0.2
MVOU	Mavrovouni	1.81	101	P	Pn	02 32 57.3	+0.9
MVOU				S	Sb	02 33 21.1	-1.0
ELL	Elmali	1.85	317	PN	Pn	02 32 57.9	+0.8
AKKU	Akkuyu-Mersin	1.86	65	PN	Pb	02 32 59.6	-1.0
GULN	MERSIN_Gulnar	1.86	64	i P	Pb	02 33 00.9	+0.3
GULN				i S	Sn	02 33 15.2	-4.4
TEVE	Tevekalti-Mers	1.91	56	PN	Pb	02 33 00.5	-1.1
IKL	Isikli	1.99	64	PN	Pb	02 33 01.5	-1.3
SEDI	Konya, Seydise	2.07	6	i P	Pb	02 33 04.9	+0.6
SEDI				i S	Sn	02 33 25.4	+0.5
KKBE	Karaman, Kazim	2.18	33	i P	Pb	02 33 05.8	-0.3
KKBE				i S	Sn	02 33 26.5	-1.1
EREN	Erenkoy	2.21	86	PN	Pn	02 33 03.9	+2.0
FETY	Fethiye	2.30	303	PN	Pn	02 33 03.8	+0.6
OSC2	CSNet OBS 4	2.40	164	S	Sn	02 33 34.7	+1.7
KIZK	Mersin	2.43	63	PN	Pn	02 33 07.3	+2.4
KIZK	Mersin	2.43	63	i P	Pb	02 33 08.9	-1.4
KIZK				i S	Sn	02 33 28.9	-4.7
KIZK				IAML		02 34 11.0	
	comp=Z,33nm,1.4s						
KIZK				IAML		02 34 15.0	
	comp=E,23nm,1.2s						
KIZK				IAML		02 34 17.0	
	comp=N,17nm,1.5s						
KMER	Konya-Meram	2.48	17	i P	Pb	02 33 11.7	+0.5
KMER				i S	Sn	02 33 35.4	+0.3
KMER				IAML		02 33 53.0	
	comp=E,15nm,0.5s						
KONT	Konya--Tatoy	2.65	15	PN	Pn	02 33 10.6	+2.6
DALY	Dalyan (Mula)	2.69	303	PN	Pn	02 33 08.8	+0.3
YVAC	Isparta, Yalva	2.88	356	i P	Pb	02 33 16.8	-1.3
YVAC				i S	Sn	02 33 44.9	0.0
KERG	Konya-Eregli	2.94	46	i P	Pb	02 33 17.9	-1.3
KERG				i S	Sn	02 33 42.8	-3.8
TURN	Turunc	2.96	299	PN	Pn	02 33 12.8	+0.7
KARP	Karpathos	3.52	274	PN	Pn	02 33 19.7	-0.3
CMRD	Camardi-Nigde	3.63	50	PN	Pn	02 33 24.6	+3.0
BODT	Bodrum	3.75	298	PN	Pn	02 33 23.8	+0.6

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*NEIC **16** 02:44:46.9±2.8, 52.°61N±0.°04×168.°10W±0.°05, h10^{km}±1^{km},*
mb4.4/80, ML4.7(AEIC), Error ellipse: s-maj=7.9km
s-min=4.8km az=157.0
*IDC **16** 02:44:52.0±0.8, 53.°14N×168.°47W, h57^{km}±5^{km}, mb3.8/18,*
mb1 4.1/20, mb1mx3.9/41, mbtmp4.1/20, MS3.5/17,
Ms1 3.5/17, ms1mx3.3/35, Error ellipse: s-maj=18.7km
s-min=11.8km az=172.0
*AEIC **16** 02:44:51±2.9, 52.°74N±0.°03×168.°14W±0.°06, h12^{km}±2^{km},*
Error ellipse: s-maj=5.9km s-min=3.0km az=115.0
ISC 16 02:44:52.2±0.7**, 52.°91N**±0.°08×**168.°28W**±0.°04**, h57**^{km}±4^{km}**,**
n192, σ**1^{s}32**/196**, mb4.4**/40**, MS3.7**/18**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKSP	Okmok Steeple	0.34	359		Pn	02 45 02.1	-0.2
NIKH	Nikolski High	0.35	280	Pg	Pn	02 45 01.8	-0.5
OKSO	Okmok South	0.45	9		Pn	02 45 03.4	+0.1
OKSO					Sn	02 45 12.6	+1.1
OKFG	Magazine Ridge	0.55	24		Pn	02 45 04.5	+0.1
OKFG					Sn	02 45 14.4	+1.2
MAPS	Pakushin South	1.20	41		Pn	02 45 13.1	+0.3
MAPS					Sn	02 45 29.8	+1.7
MGOD	Makushin Gods	1.22	43		Pn	02 45 13.1	+0.1
MGOD					Sn	02 45 30.1	+1.5
MREP	Makushin Rep't	1.28	45		Pn	02 45 14.3	+0.4
MSW	Makushin Switc	1.34	41		Pn	02 45 15.2	+0.6
MSW					Sn	02 45 33.5	+2.0
MNAT	Makushin Natee	1.36	44		Pn	02 45 15.6	+0.7
MNAT					Sn	02 45 33.7	+1.8
UNV	Unalaska Valle	1.42	48	Pn	Pn	02 45 16.3	+0.7
UNV				Sn	Sn	02 45 34.4	+1.2
MTBL	Makushin Table	1.43	42		Pn	02 45 16.9	+1.0
AKRB	Akutan Reef Bi	1.80	46		Pn	02 45 22.1	+1.3
AKMO	Akutan Morgan	1.80	48		Pn	02 45 22.1	+1.3
AKMO					Sn	02 45 46.7	+4.3
AKBBA	Akutan Broad B	1.84	49		Pn	02 45 22.6	+1.3
AKBBA					Sn	02 45 47.4	+4.0
AKLV	Akutan Long Va	1.87	47		Pn	02 45 22.9	+1.1
AKGG	Akutan Green G	1.88	46		Pn	02 45 23.1	+1.3
AKGG					Sn	02 45 48.3	+3.9
AKUT	Akutan	1.93	50	Pn	Pn	02 45 23.8	+1.2
AKSA	Akutan Strait	1.97	51		Pn	02 45 24.3	+1.2
AKSA					Sn	02 45 48.8	+2.1
WESP	Westdahl Peak	2.64	52		Pn	02 45 33.7	+1.3
WESP					Sn	02 46 04.8	+1.6
WEBT	Westdahl Beart	2.69	50		Pn	02 45 34.3	+1.4
WTUG	Tugumak	3.01	48		Pn	02 45 38.4	+1.0
SSBA	Shishaldin	3.09	51		Pn	02 45 39.6	+1.2
SSLW	Shishaldin Wes	3.09	51		Pn	02 45 40.0	+1.5
SSLS	Shishaldin Sou	3.11	53		Pn	02 45 40.7	+2.0
SSLN	Shishaldin Nor	3.17	51		Pn	02 45 41.1	+1.5
FALS	False Pass	3.47	54		Pn	02 45 45.3	+1.7
KOSE	Korovin Southe	3.56	263		Pn	02 45 47.4	+2.5
KOFP	Korovin Flat P	3.60	262		Pn	02 45 47.1	+1.6
ATKA	Atka Island	3.68	261		Pn	02 45 47.1	+0.6
ATKA	Atka Island	3.68	261		Sn	02 46 32.5	+3.9
DT1	Dutton Round H	4.17	56		Pn	02 45 54.5	+1.3
SPIA	Saint Paul Isl	4.42	346		Pn	02 45 57.5	+0.9
GSTR	Great Sitkin T	4.82	263	Pn	Pn	02 46 02.8	+0.6
GSMY	Great Sitkin M	4.83	263		Pn	02 46 03.8	+1.5
GSTD	Great Sitkin T	4.88	263		Pn	02 46 05.2	+2.2
SDPT	Sand Point	5.20	59	Pn	Pn	02 46 06.5	-0.7
ADK	Adak	5.25	262	Pn	Pn	02 46 08.6	+0.7
CNBA	Chernabura Isl	5.49	66	Pn	Pn	02 46 11.8	+0.6
CHGN	Chignik	6.66	55		Pn	02 46 27.9	+0.7
AMKA	Amchitka	7.79	264	Pn	Pn	02 46 42.7	-0.1
SII	Sitkinak Islan	8.93	60	Pn	Pn	02 46 57.6	-0.8
OHAK	Old Harbor	9.62	57		Pn	02 47 06.1	-1.5
KDAK	Kodiak Island	10.17	55	P	Pn	02 47 12.9	-2.4
	3.0nm,0.3s,baz=254,slow=5.2,SNR=21						
KDAK				LR	LR	02 51 56.4	
	comp=Z,84nm,19.0s,baz=264,slow=42						
KDAK	Kodiak Island	10.17	55		Pn	02 47 14.9	-0.4
GAMB	Gambell	11.04	352	Pn	Pn	02 47 28.1	+1.1
RSO	Redoubt South	11.38	42		Pn	02 47 33.1	+1.1
ANM	Nome	11.78	6	Pn	Pn	02 47 37.7	+0.5
TTA	Tatalina	11.95	28	Pn	Pn	02 47 40.9	+1.4
SEW	Seward	12.61	48	Pn	Pn	02 47 49.0	+0.4
O22K	Cooper Landing	12.67	46		Pn	02 47 48.3	-1.0
SUA	Susitna One	12.76	41		Pn	02 47 49.5	-1.1
SKT	Skwentna	12.76	38		Pn	02 47 51.6	+1.1
PMR	Palmer	13.48	42		Pn	02 48 00.1	-0.2
GHO	Glory Hole Cre	13.66	42		Pn	02 48 02.6	-0.2
KNK	Knik Glacier	13.66	44		Pn	02 48 02.0	-0.9
SML	Sawmill	13.91	42	Pn	Pn	02 48 06.6	+0.3
KTH	Kantishna Hill	13.98	34	Pn	Pn	02 48 08.4	+1.2
TRF	Thorofare Moun	14.13	35	Pn	Pn	02 48 09.6	+0.3
BPAW	Bear Paw Mtn.	14.33	32	Pn	Pn	02 48 13.5	+1.7
SCM	Sheep Creek Mo	14.34	43		Pn	02 48 10.8	-1.1
RND	Reindeer	14.61	36		Pn	02 48 15.8	+0.3
BWN	Browne	14.88	33		Pn	02 48 19.4	+0.6
M24K	Tolsona, Glenn	14.95	43	Pn	Pn	02 48 18.6	-1.2
N25K	Chitina, Valde	15.40	46		Pn	02 48 24.1	-1.6
N25K				IAmb	IAmb	02 48 29.4	
	comp=Z,45nm,1.3s						
WRH	Wood River Hil	15.53	34	Pn	Pn	02 48 26.4	-0.9
WRH				IAmb	IAmb	02 48 35.0	
	comp=Z,25nm,1.2s						
I23K	Minto, Yukon-K	15.57	31		Pn	02 48 28.0	+0.4
I23K				IAmb	IAmb	02 48 47.1	
	comp=Z,59nm,1.4s						
PAX	Paxson	15.65	41		Pn	02 48 27.7	-1.2
GLB	Gilahina Butte	15.69	47	Pn	Pn	02 48 28.7	-0.6
GLB				IAmb	IAmb	02 48 37.6	
	comp=Z,19nm,0.6s						
CCB	Clear Creek Bu	15.74	34		Pn	02 48 29.2	-0.7
CCB				IAmb	IAmb	02 48 37.7	
	comp=Z,35nm,1.5s						
CRQM	Cirque	15.76	50		Pn	02 48 29.2	-1.2
CRQM				IAmb	IAmb	02 48 43.8	
	comp=Z,26nm,0.7s						
VRDI	Verde Repeater	15.77	48		Pn	02 48 29.2	-1.3
VRDI				IAmb	IAmb	02 48 33.0	
	comp=Z,27nm,1.2s						
MDM	Murphy Dome	15.80	32	Pn	Pn	02 48 30.1	-0.6
TCOL	CIGO, UAF Yank	15.86	33		Pn	02 48 31.2	-0.2
TCOL				IAmb	IAmb	02 48 35.5	
	comp=Z,29nm,1.2s						
COLA	College	15.87	33		Pn	02 48 31.2	-0.3
COLA				IAmb	IAmb	02 48 35.5	
	comp=Z,32nm,1.3s						
HDA	Harding Lake	15.89	35		Pn	02 48 31.6	-0.2
TGL	Tana Glacier	15.90	50		Pn	02 48 32.0	-0.1
TGL				IAmb	IAmb	02 48 51.2	
	comp=Z,48nm,1.0s						
MCARA	McCarthy VSAT	16.02	48		Pn	02 48 32.4	-1.2
MCARA				IAmb	IAmb	02 48 39.9	
	comp=Z,46nm,1.1s						
ISLE	Juniper Island	16.08	51	Pn	Pn	02 48 33.5	-1.0
ISLE				IAmb	IAmb	02 48 40.0	
	comp=Z,48nm,1.0s						
IL31		16.13	34	Pn	Pn	02 48 34.1	-0.7
IL31				IAmb	IAmb	02 48 42.9	
	comp=Z,32nm,1.4s						
ILAR	Eielson Array	16.13	34	P	Pn	02 48 32.1	-2.7
	comp=Z,0.6nm,0.3s,baz=230,slow=12,SNR=55						
ILAR				LR	LR	02 54 59.0	
	comp=Z,161nm,19.6s,baz=240,slow=38						
ILAR				ScP	ScP	02 56 55.3	-1.0
	comp=Z,0.0nm,0.3s,baz=310,slow=3.5,SNR=7.1						
POKR	Poker Plat Res	16.16	33		Pn	02 48 34.8	-0.4
POKR				IAmb	IAmb	02 48 43.4	
	comp=Z,24nm,1.1s						
BALM	Baldy	16.21	50		Pn	02 48 34.7	-1.4
BALM				IAmb	IAmb	02 48 44.7	
	comp=Z,18nm,0.7s						
RIDG	Independent Ri	16.29	39	Pn	Pn	02 48 37.2	+0.3
YAH	Yahtse	16.30	52	Pn	Pn	02 48 35.8	-1.5
DOT	Dot Lake	16.54	40		Pn	02 48 39.5	-0.6
TABL	Table Mountain	16.61	52	Pn	Pn	02 48 40.0	-1.1
CTGM	Chitina Glacie	16.66	50	Pn	Pn	02 48 40.4	-1.3
CTGM				IAmb	IAmb	02 48 59.3	
	comp=Z,21nm,0.9s						
COLD	Coldfoot	16.84	25		Pn	02 48 43.8	+0.1
PRP	Porcupine Dome	17.04	33	Pn	Pn	02 48 45.1	-1.3
PRP				IAmb	IAmb	02 48 56.4	
	comp=Z,29nm,1.4s						
K27K	Chicken	17.50	40		Pn	02 48 50.4	-1.5
FYU	Fort Yukon	17.78	31	Pn	Pn	02 48 55.5	+0.3
FYU				IAmb	IAmb	02 49 13.7	
	comp=Z,34nm,1.2s						
EGAK	Eagle	18.20	39	Pn	P	02 48 59.0	-1.1
HYT	Haines Junctio	18.44	52	P	Pn	02 49 03.8	+0.3
DAWY	Dawson	18.58	42		P	02 49 04.2	-0.1
SKAG	Skagway	19.32	57	P	P	02 49 12.9	+0.7
WHY	Whitehorse	19.68	54	P	P	02 49 17.3	+0.9
WHY				IAmb	IAmb	02 49 31.4	
	comp=Z,35nm,1.1s						
PEA0B	Petropavlovsk-	20.36	284	P	P	02 49 25.1	+1.3
PETK	Petropavlovsk-	20.36	284	P	P	02 49 21.4	-2.3
	comp=Z,3.0nm,0.7s,baz=86,slow=14,SNR=4.3						
PETK				pP	pP	02 49 35.9	-0.3
	comp=Z,5.7nm,0.6s,baz=86,slow=14,SNR=3.8						
DLBC	Dease Lake	22.04	60	P	P	02 49 41.9	+0.1
	comp=Z,1.8nm,0.5s,baz=79,slow=17,SNR=2.1						
DLBC	Dease Lake	22.04	60	P	P	02 49 42.3	+0.6
DLBC				IAmb	IAmb	02 49 59.9	
	comp=Z,22nm,0.9s						
INK	Inuvik	22.52	34	P	P	02 49 44.1	-2.7
	comp=Z,11nm,0.7s,baz=261,slow=4.6,SNR=30						
SEY	Seymchan	22.80	312	P	P	02 49 46.1	-3.6
	comp=Z,1.1nm,0.2s,baz=124,slow=18,SNR=1.8						
C36M	Paulatuk	26.10	34	P	P	02 50 20.4	+0.3
YKA	Yellowknife Ar	29.38	50	P	P	02 50 48.9	-0.6
	comp=Z,0.6nm,0.4s,baz=275,slow=7.2,SNR=16						
YKA				PcP	PcP	02 53 53.8	-0.2
	comp=Z,0.6nm,0.6s,baz=295,slow=0.9,SNR=5.9						
YKA				pPcP		02 54 10.2	
	comp=Z,2.4nm,0.8s,baz=290,slow=1.6,SNR=13						
YKA				ScP	ScP	02 57 30.6	-0.1
	comp=Z,0.5nm,0.7s,baz=289,slow=2.5,SNR=6.9						
YKA				LR	LR	03 03 51.6	
	comp=Z,170nm,19.0s,baz=0.0,slow=39						
NEW	Newport	32.24	77	P	P	02 51 16.0	+1.1
PAHR	Pah Rah Range	35.56	92	P	P	02 51 44.7	+0.8
PAHR				IAmb	IAmb	02 51 50.5	
	comp=Z,12nm,1.4s						
PNTR	Pine Nut	35.82	93	P	P	02 51 47.5	+1.3
PNTR				IAmb	IAmb	02 51 54.1	
	comp=Z,6.5nm,0.7s						
MCMT	McKenzie Canyo	36.52	80	P	P	02 51 53.1	+0.9
EGMT	Eagleton	36.67	73	P	P	02 51 54.3	+1.1
NVAR	Mina Array Bea	37.02	93	P	P	02 51 57.7	+1.3
	comp=Z,2.6nm,0.9s,baz=305,slow=8.0,SNR=9.7						
NVAR				PcP	PcP	02 54 16.6	+0.4
	comp=Z,1.0nm,0.5s,baz=292,slow=3.0,SNR=7.0						
YHH	Holmes Hill	37.73	79	P	P	02 52 02.5	0.0
YHH				IAmb	IAmb	02 52 21.3	
	comp=Z,4.2nm,0.7s						
TPH	Tonopah	37.90	92	P	P	02 52 03.9	0.0
H11N2	WAKE ISLAND Hy	38.30	220	T	T	03 33 04.2	
	baz=24,slow=76,SNR=1229						
H11N3	WAKE ISLAND Hy	38.30	220	T	T	03 33 04.8	
	baz=24,slow=76,SNR=1149						
H11N1	WAKE ISLAND Hy	38.31	220	T	T	03 33 05.6	
	baz=24,slow=76,SNR=901						
R11A	Troy Canyon, C	38.71	90	P	P	02 52 10.0	-0.7
TPNV	Topopah Spring	39.22	93	P	P	02 52 14.1	-0.7
TPNV				IAmb	IAmb	02 52 21.0	
	comp=Z,10nm,1.4s						
DUG	Dugway, Tooele	39.24	86	P	P	02 52 15.5	+0.5
H11S1	WAKE ISLAND Hy	39.48	219	T	T	03 34 30.9	
	baz=23,slow=76,SNR=1414						
H11S2	WAKE ISLAND Hy	39.50	219	T	T	03 34 32.0	
	baz=23,slow=76,SNR=1745						
H11S3	WAKE ISLAND Hy	39.50	219	T	T	03 34 34.5	
	baz=23,slow=76,SNR=1343						
PRN	Pahroc Range	39.64	91	P	P	02 52 18.6	+0.2
PSUT	Pine Spring	39.65	89	P	P	02 52 18.7	+0.2
PSUT				IAmb	IAmb	02 52 22.2	
	comp=Z,8.7nm,1.4s						
PD31	Pinedale Array	39.65	80	P	P	02 52 19.5	+0.9
PDAR	Pinedale Array	39.65	80	P	P	02 52 18.6	+0.1
	comp=Z,0.6nm,0.5s,baz=282,slow=4.8,SNR=8.1						
PDAR				LR	LR	03 05 51.7	
	comp=Z,40nm,21.0s,baz=340,slow=32						
GSC	Goldstone, Bar	39.97	95	P	P	02 52 21.1	+0.1
FCC	Fort Churchill	40.08	51	P	P	02 52 21.4	-0.1
FCC				IAmb	IAmb	02 52 37.0	
	comp=Z,9.8nm,0.9s						
MJAR	Matsushiro Arr	40.38	268	LR	LR	03 07 05.1	

	comp=Z,35nm,21.9s,baz=70,slow=33						
LCMT	Little Creek M	40.99	90	P	P	02 52 29.6	+0.1
W13A	Hualapai Mount	41.88	93	P	P	02 52 36.9	+0.1
U15A	North Rim	41.95	90	P	P	02 52 37.9	+0.3
U15A				IAmb	IAmb	02 52 39.6	
	comp=Z,4.1nm,0.6s						
O20A	White River Ci	42.03	83	P	P	02 52 38.2	+0.2
O20A				IAmb	IAmb	02 52 42.5	
	comp=Z,8.3nm,1.1s						
PV01	Paradox Valley	43.09	85	P	P	02 52 47.0	+0.3
PV01				IAmb	IAmb	02 53 05.5	
	comp=Z,4.5nm,0.8s						
WUAZ	Wupatki	43.12	90	P	P	02 52 47.5	+0.6
WUAZ				IAmb	IAmb	02 52 49.1	
	comp=Z,5.0nm,0.7s						
ULM	Lac du Bonnet	43.31	63	PcP	PcP	02 54 34.7	-1.2
	comp=Z,1.9nm,0.5s,baz=308,slow=2.9,SNR=4.1						
X16A	Lo Mia Camp, P	43.81	92	P	P	02 52 52.9	+0.3
TUC	Tucson	45.66	93	P	P	02 53 07.3	+0.2
TUC				IAmb	IAmb	02 53 13.7	
	comp=Z,4.8nm,1.1s						
KSRS	Korea Array	46.00	277	LR	LR	03 10 17.3	
	comp=Z,25nm,20.1s,baz=48,slow=33						
BNM	Barren Site	46.91	88	P	P	02 53 17.9	+0.8
MNTX	Cornudas Mount	49.36	89	P	P	02 53 35.9	+0.2
MNTX				IAmb	IAmb	02 53 37.6	
	comp=Z,3.2nm,0.6s						
SUMG	Summit	50.06	18	P	P	02 53 44.3	+3.3
SUMG				IAmb	IAmb	02 53 59.1	
	comp=Z,4.9nm,0.9s						
ULN	Ulaanbaatar	51.23	301	P	P	02 53 51.5	+1.7
ULN				IAmb	IAmb	02 53 51.6	
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	51.59	301	P	P	02 53 51.0	-1.5
	comp=Z,0.7nm,0.6s,baz=66,slow=4.6,SNR=6.3						
SONM				PcP	PcP	02 55 05.1	-0.5
	comp=Z,3.7nm,0.7s,baz=86,slow=2.5,SNR=14						
SONM				ScP	ScP	02 58 56.6	-0.6
	comp=Z,0.6nm,0.6s,baz=30,slow=4.0,SNR=4.4						
P40A	Paris	51.98	72	P	P	02 53 55.9	+0.6
TX31	Lajitas Ar. Si	52.08	90		P	02 53 56.3	0.0
TX32	Lajitas Array	52.08	90	P	P	02 53 56.6	+0.3
TXAR	Lajitas Array	52.08	90	P	P	02 53 57.0	+0.7
	comp=Z,5.3nm,0.6s,baz=304,slow=5.5,SNR=94						
S39A	Bolivar	52.47	75	P	P	02 53 59.9	+0.9
S39A				IAmb	IAmb	02 54 02.9	
	comp=Z,4.4nm,0.7s						
HHC	Hu-ho-hao-te	53.34	291	*e*P	P	02 54 06.9	+1.4
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.7s						
U40A	Yellville	53.65	76	P	P	02 54 08.6	+0.8
ARCES	ARCESS Array B	57.45	354	PcP	PcP	02 55 26.2	-1.3
	comp=Z,4.3nm,0.9s,baz=320,slow=3.2,SNR=5.3						
ARCES				LR	LR	03 20 49.6	
	comp=Z,35nm,18.3s,baz=250,slow=38						
ZAA0	Zalesovo Array	57.47	318	P	P	02 54 36.5	+1.7
ZAA0				IAmb	IAmb	02 54 53.0	
	comp=Z,3.5nm,1.3s						
ZALV	Zalesovo Beam	57.47	318	LR	LR	03 20 18.4	
	comp=Z,92nm,18.6s,baz=56,slow=37						
SSLB	Suanglung	59.87	270	P	P	02 54 51.2	-0.8
LZH	Lanzhou	61.00	292	*e*P	P	02 55 01.0	+1.3
LZH				pP	pP	02 55 15.3	+0.2
LZH				sP	sP	02 55 22.8	+1.3
LZH				*e*PP	PP	02 57 17.5	+3.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,58nm,7.9s						
KURK	Kurchatov	62.40	319	P	P	02 55 11.3	+2.6
KURK				IAmb	IAmb	02 55 31.0	
	comp=Z,3.5nm,1.4s						
WMQ	Urumqi	63.71	308	*e*P	P	02 55 19.8	+2.2
MKAR	Makanchi Array	63.91	314	P	P	02 55 15.9	-2.9
	comp=Z,0.2nm,0.3s,baz=49,slow=5.6,SNR=6.5						
MKAR				LR	LR	03 24 30.7	
	comp=Z,48nm,18.1s,baz=1.5,slow=37						
TLIG	Tlapa	63.96	95	P	P	02 55 19.7	+0.1
FINES	FINESS Array B	65.42	352	P	P	02 55 26.2	-2.0
	comp=Z,2.2nm,0.8s,baz=358,slow=9.7,SNR=5.6						
FINES				pP	pP	02 55 42.0	-1.7
	comp=Z,2.6nm,0.8s,baz=5.2,slow=4.2,SNR=1.5						
FINES				LR	LR	03 25 29.7	
	comp=Z,48nm,18.3s,baz=26,slow=37						
TAOE	Nuku Hiva Isla	66.04	149	*e*LR	LR	03 15 27.8	
	comp=Z,225nm,24.4s						
TAOE	Nuku Hiva Isla	66.04	149	*e*T	T	04 06 58.5	
	comp=Z,58nm,0.2s						
NOA	NORSAR Array B	66.39	0	P	P	02 55 33.0	-1.6
	comp=Z,0.5nm,0.7s,baz=2.0,slow=7.1,SNR=1.4						
NOA				pP	pP	02 55 48.5	-1.7
	comp=Z,0.7nm,0.8s,baz=4.0,slow=7.1,SNR=1.5						
DAV	Davao City (W)	70.10	255	LR	LR	03 21 50.9	
	comp=Z,45nm,20.9s,baz=110,slow=32						
ABKAR	Akbulak array	70.32	329	P	P	02 55 59.6	+0.3
AAK	Ala-Archa	70.57	316	P	P	02 56 02.9	+1.8
AAK				IAmb	IAmb	02 56 22.6	
	comp=Z,2.8nm,1.2s						
PPT	Papeete	72.03	161	LR	LR	03 21 08.7	
	comp=Z,49nm,20.8s,baz=37,slow=30						
PPT2	Papeete2	72.06	161	*e*LR	LR	03 18 05.5	
	comp=Z,96nm,24.2s						
AKASG	Malin Array Be	75.71	349	LR	LR	03 35 42.2	
	comp=Z,46nm,18.1s,baz=295,slow=40						
CM31	Chiang Mai Arr	77.14	283	P	P	02 56 38.6	-1.1
CMAR	Chiang Mai Arr	77.14	283	P	P	02 56 39.2	-0.5
	comp=Z,6.9nm,0.7s,baz=24,slow=6.7,SNR=26						
CMAR				LR	LR	03 34 29.9	
	comp=Z,15nm,18.1s,baz=15,slow=39						
TBI	Tubuai	77.69	162	*e*LR	LR	03 20 34.0	
	comp=Z,178nm,35.5s						
TBI	Tubuai	77.69	162	*e*T	T	04 21 21.0	
	comp=Z,8.4nm,0.3s						
DZM	Mont Dzumac	77.84	204	*e*P	P	02 56 48.0	+4.6
	comp=Z,27nm,1.6s						
GERES	GERESS Array B	78.60	359	P	P	02 56 46.7	-0.8
	comp=Z,0.2nm,0.4s,baz=354,slow=8.0,SNR=2.2						
VYHS	Vyhne	78.79	355	*e*P	P	02 56 46.1	-2.3
GEYT	Alibeck	80.98	325	LR	LR	03 35 10.1	
	comp=Z,40nm,19.3s,baz=350,slow=37						
SEUS	St. Eustatius	85.11	67	P	P	02 57 22.6	+0.6
BR131	Keskin Array S	85.80	343	P	P	02 57 27.1	+1.7
BR131				IAmb	IAmb	02 57 39.1	
	comp=Z,3.1nm,1.2s						
BRTR	Keskin Array B	85.80	343	P	P	02 57 24.1	-1.2
	comp=Z,1.3nm,0.8s,baz=29,slow=4.2,SNR=9.4						
BRTR				pP	pP	02 57 41.1	-0.2
	comp=Z,0.8nm,0.7s,baz=29,slow=1.8,SNR=3.5						
BRTR				LR	LR	03 43 44.6	
	comp=Z,11nm,18.6s,baz=4.5,slow=41						
ESDC	Sonseca Array	86.79	12	P	P	02 57 28.8	-1.3
	comp=Z,0.8nm,0.7s,baz=348,slow=4.7,SNR=8.4						
WB2	Warramunga Arr	87.86	232	P	P	02 57 34.5	-0.7
WRA	Warramunga Arr	87.86	232	P	P	02 57 34.1	-1.2
	comp=Z,4.2nm,0.7s,baz=34,slow=6.9,SNR=17						
OTAV	Otavalo	89.71	90	P	P	02 57 44.8	+0.1
OTAV				IAmb	IAmb	02 57 46.9	
	comp=Z,2.5nm,1.0s						
AS31	Alice Springs	91.25	231	P	P	02 57 50.7	-0.4
AS31				IAmb	IAmb	02 57 51.2	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	91.25	231	P	P	02 57 50.5	-0.6
	comp=Z,3.4nm,0.8s,baz=28,slow=5.1,SNR=28						
ASAR				pP	pP	02 58 06.6	-0.2
	comp=Z,1.9nm,0.9s,baz=38,slow=4.1,SNR=4.5						
STKA	Stephens Creek	95.04	221	LR	LR	03 34 50.7	
	comp=Z,51nm,20.1s,baz=25,slow=32						
VNDA	Vanda	131.49	188	PKP	PKPdf	03 03 56.2	-0.2
	comp=Z,0.9nm,0.8s,baz=41,slow=3.2,SNR=3.3						
TSUM	Tsumeb	146.05	350		PKPdf	03 04 25.7	+0.8
BELA	Belgrano 2	150.02	162	PKPbc	PKPbc	03 04 33.5	-1.0
MAW	Mawson	151.72	219	PKPbc	PKPbc	03 04 38.2	-0.4
	comp=Z,3.8nm,0.6s,baz=118,slow=3.1,SNR=9.5						
BOSA	Boshof	153.74	332	PKPbc	PKPbc	03 04 43.5	-1.0
	comp=Z,1.4nm,0.4s,baz=66,slow=2.9,SNR=1.9						

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*ISN **16** 02:45:27.5±1.2, 32°.61N×47°.77E, h14km±7km, ML3.3*
*TEH **16** 02:45:28.6, 32°.60N×47°.71E, h8km, ML3.6*
*IDC **16** 02:45:30.4±7.0, 33°.09N×47°.60E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/34, mbtmp3.6/8, ML2.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/30, Error ellipse: s-maj=139.1km s-min=25.8km az=6.0*

ISC 16 02:45:28.9±0.6, 32°.58N±0°.04×47°.67E±0°.04, h10km, n73, σ1s.35/74, mb4.2/13, 11C, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.96	9	*e*Pg	Pg	02 45 46.9	-0.4
IKFM				*e*		02 46 05.2	
	comp=Z,99nm,0.5s						
IKMR	Kamar-syah	1.11	32	*e*Pg	Pb	02 45 49.1	-1.1
IKMR				*e*		02 46 10.8	
	comp=Z,99nm,0.7s						
AHWZ	Ahwaz	1.49	146	*e*Pg	Pg	02 45 57.7	+0.2
IBDR	Badra	1.56	290	*e*Pg	Pn	02 45 57.0	+0.3
IBDR				*e*Sg	Sg	02 46 19.0	-0.1
IBDR				AML	AML	02 46 24.6	
	comp=E,318nm,0.8s						
IBDR				AML	AML	02 46 29.7	
	comp=N,348nm,0.7s						
AMIS	Naft Sefid	1.64	123	*e*Pg	Pb	02 45 59.6	+0.3
AMIS				*e*		02 46 36.4	
	comp=Z,99nm,0.4s						
KCHF	Cheshme Sefid,	1.78	343	*e*Pn	Pn	02 46 00.8	+1.0
KCHF				*e*		02 46 28.5	
	comp=Z,99nm,0.4s						
KER	Kermanshah	1.86	346	*e*Pn	Pn	02 46 02.3	+1.3
IBZA	Bozab	1.90	5	*e*		02 46 34.8	
	comp=Z,99nm,0.8s						
IBZA				*e*Pg	Pb	02 46 04.0	+0.2
IGHG	Ghaleghazi	1.98	333	*e*Pn	Pn	02 46 04.5	+1.8
IGHG				*e*		02 46 48.1	
	comp=Z,99nm,0.8s						
NSR	Nassriya	2.03	220	*e*Pn	Pn	02 46 04.0	+0.8
NSR				*e*Sn	Sn	02 46 29.0	+0.4
KHMZ	Khomeyn	2.24	58	*e*Pn	Pn	02 46 08.4	+2.1
IDHR	Dehrash	2.38	334	*e*		02 46 55.8	
	comp=Z,99nm,0.5s						
IDHR				*e*Pn	Pn	02 46 09.1	+1.0
HSRG	Sareghieh	2.71	11	*e*Pn	Pn	02 46 14.8	+2.0
HSRG				*e*		02 47 02.2	
	comp=Z,99nm,0.9s						
IPIR	Pirpir	2.72	87	*e*Pn	Pn	02 46 14.5	+1.6
IPIR				*e*		02 46 25.3	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	2.73	94	*e*Pn	Pn	02 46 14.1	+1.1
SHK1				*e*		02 46 56.3	
	comp=Z,99nm,0.5s						
MIB	Mutribah	2.78	186	*e*P		02 46 15.8	
ASAO	Ashtian	2.78	44	*e*Pn	Pn	02 46 16.1	+2.4
BHD	Baghdad	2.85	285	*e*Pn	Pn	02 46 15.0	+0.5
BHD				*e*Sn	Sn	02 46 51.0	+2.1
BHD				AML	AML	02 46 56.5	
	comp=E,212nm,0.4s						
UMR	Umm Al-Rimmam	3.01	179	*e*P		02 46 18.4	
RST	Umm Al-Ruwaisa	3.12	191	*e*P		02 46 20.3	
IKLH	Kolahrood	3.37	76	*e*Pn	Pn	02 46 23.4	+1.6
IKLH				*e*		02 47 23.3	
	comp=Z,99nm,0.8s						
QAM	Ghamsar	3.37	68	*e*Pn	Pn	02 46 23.6	+1.8
IRAZ	Razeghan	3.39	33	*e*Pn	Pn	02 46 23.6	+1.6
QABG	Abgarm-Qazvin	3.50	26	*e*Pn	Pn	02 46 24.2	+0.5
GHVR	GHOM	3.57	57	*e*Pn	Pn	02 46 25.8	+1.3
IQOM	Qom	3.62	50	*e*Pn	Pn	02 46 26.1	+0.8
RDF	Al-Radifah	3.64	182	*e*P		02 46 28.2	
KLNJ	Kolanjah	3.69	114	*e*Pn	Pn	02 46 26.9	+0.6
KLNJ				*e*		02 47 42.4	
	comp=Z,99nm,0.6s						
IGAR	Gharneh	3.70	91	*e*Pn	Pn	02 46 27.1	+0.8
IGAR				*e*		02 47 14.2	
	comp=Z,99nm,0.2s						
QRN	Al-Qurain	3.82	177	*e*P		02 46 30.0	
IZEF	Zefreh	3.94	84	*e*Pn	Pn	02 46 31.1	+1.5
KRSH	Karshahi	3.99	68	*e*Pn	Pn	02 46 31.6	+1.3
IRAM	Ramesheh	4.07	100	*e*Pn	Pn	02 46 32.2	+0.8
IVRN	Varamin	4.15	53	*e*Pn	Pn	02 46 33.9	+1.5
NASN	Na'in	4.34	86	*e*Pn	Pn	02 46 36.3	+1.1
CHTH	Charan	4.39	40	*e*Pn	Pn	02 46 38.3	+2.5
MAHB	Mahabad	4.48	339	*e*Pn	Pn	02 46 38.6	+1.6
QALM	Alamut, Qazvin	4.56	32	*e*Pn	Pn	02 46 39.8	+1.6
IDMV	Damavand	4.70	49	*e*Pn	Pn	02 46 41.1	+1.0
AHBU	AHRAM	4.84	139	*e*Pn	Pn	02 46 42.5	+0.7
ANAR	Anarak	5.13	82	*e*Pn	Pn	02 46 47.1	+1.1
IFIR	Firoozkooh	5.21	53	*e*Pn	Pn	02 46 48.0	+0.9
ILAS	Lasjerd	5.21	56	*e*Pn	Pn	02 46 47.7	+0.6
IPRN	Peran	5.32	45	*e*Pn	Pn	02 46 50.1	+1.6
ICHK	Chekchek	5.71	92	*e*Pn	Pn	02 46 54.3	+0.4
IHRS	Heris	5.75	355	*e*Pn	Pn	02 46 56.3	+1.7
IANJ	Anjilo	5.93	59	*e*Pn	Pn	02 46 57.0	0.0
IGLO	Ghaloghah	6.42	51	*e*Pn	Pn	02 47 05.6	+2.0
TPRV	Parvadeh(Tabas	7.60	84	*e*Pn	Pn	02 47 20.7	+0.9
TNSJ	Nastanj	7.61	77	*e*Pn	Pn	02 47 20.8	+0.8
TKDS	Koohdasht(Taba	8.00	80	*e*Pn	Pn	02 47 26.0	+0.7
GEYT	Alibeck	10.07	55	LR	LR	02 51 34.4	
	comp=Z,47nm,20.3s,baz=15,slow=37						
BRTR	Keskin Array B	13.39	306	Pn	Pn	02 48 39.3	+0.2
	comp=Z,0.0nm,0.3s,baz=118,slow=13,SNR=5.4						
VRI	Vrincioaia	20.88	316	⇑P	P	02 50 12.2	+1.0
NEHR	Nehoiu	20.91	314	⇑P	P	02 50 13.4	+1.9
MLR	Muntele Rosu	21.16	314	⇑P	P	02 50 18.8	+4.5
SORM	Soroca	21.32	322	⇑P	P	02 50 13.5	-2.3
VOIR		21.68	313	⇑P	P	02 50 20.9	+1.0
DOPR	Dopca	21.74	314	⇑P	P	02 50 21.6	+1.3
AKASG	Malin Array Be	22.65	329	P	P	02 50 28.2	-1.8
	comp=Z,0.2nm,0.3s,baz=136,slow=8.9,SNR=2.6						
BURAR	Bucovina Array	22.70	318	⇑P	P	02 50 32.9	+2.1
GZR	Gura Zlata	23.09	311	⇑P	P	02 50 33.5	-1.3
HERR	Herculane	23.12	309	⇑P	P	02 50 34.8	-0.2
MDVR	Moldovita	23.54	309	⇑P	P	02 50 39.7	+0.4
DRGR		23.76	314	⇑P	P	02 50 41.5	+0.1
BVAR	Borovoye Array	26.17	32	P	P	02 51 03.3	-0.1
	comp=Z,0.4nm,0.6s,baz=287,slow=5.9,SNR=5.1						
KURBB	Kurchatov Arra	28.98	42	P	P	02 51 28.6	+0.1
	comp=Z,0.3nm,0.3s,baz=244,slow=9.9,SNR=2.3						
KBA	Koelnbreinsper	29.81	309	*e*P	P	02 51 36.4	+0.3
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	29.92	51	P	P	02 51 37.1	+0.2
	comp=Z,0.7nm,0.7s,baz=245,slow=8.0,SNR=7.5						
GERES	GERESS Array B	30.14	313	P	P	02 51 39.3	+0.4
	comp=Z,0.1nm,0.2s,baz=123,slow=3.6,SNR=1.4						
WTTA	Wattenberg	30.98	309	*e*P	P	02 51 45.4	-1.1
	comp=Z,3.5nm,1.0s						
SQTA	Sankt Quirin	31.25	309	*e*P	P	02 51 48.2	-0.5
	comp=Z,2.1nm,0.6s						
MOTA	Moosalm	31.35	309	*e*P	P	02 51 48.9	-0.8
	comp=Z,2.4nm,0.6s						
FETA	Feichten	31.52	308	*e*P	P	02 51 50.8	-0.4
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	32.10	341	P	P	02 51 54.4	-1.5
	comp=Z,4.5nm,0.9s,baz=146,slow=10,SNR=1.9						
DAVA	Damuels	32.14	308	*e*P	P	02 51 55.8	-0.9
	comp=Z,3.1nm,0.5s						
ARCES	ARCESS Array B	39.05	348	P	P	02 52 53.9	-1.6
	comp=Z,2.6nm,1.0s,baz=165,slow=7.5,SNR=1.5						
GUMO	Guam	88.72	75	LR	LR	03 41 30.8	
	comp=Z,58nm,21.9s,baz=48,slow=38						

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*ATH **16** 03:16:56.2, 38°.10N×20°.41E, h15km, ML2.9/9, Error ellipse: s-maj=1.6km s-min=0.7km az=247.0*
*THE **16** 03:16:56.7, 38°.11N×20°.45E, h13km, ML3.2/12, Error ellipse: s-maj=1.0km s-min=0.4km az=242.0*
*PDG **16** 03:16:59.2±0.2, 38°.45N×20°.14E, h9km±4km, ML3.5/13, Error ellipse: s-maj=5.0km s-min=3.1km az=90.0*

ISC 16 03:16:55.1±0.9, 38°.09N±0°.03×20°.34E±0°.03, h18km±2km, n87, σ1s.16/136, 4C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.12	3	P	Pg	03 16 59.9	+0.9
KEF3				S	Sg	03 17 02.4	+0.7
KEF3	Kipouria, Keph	0.12	3	P	Pg	03 16 59.9	+0.9
KEF3				S	Sg	03 17 02.5	+0.9
	66μm,0.1s						
LXRA	Lixouri, Kepha	0.14	34	P	Pg	03 16 59.7	+0.4
LXRA				S	Sg	03 17 02.2	+0.3
LXR1	Lixouri, Cepha	0.14	34	P	Pg	03 16 59.7	+0.5
LXR1				S	Sg	03 17 02.1	+0.1
	36μm,0.1s						
ARGA	Argostoli. Kep	0.14	51	P	Pb	03 16 59.3	+1.2
DMLN	Damoulianata-K	0.15	10	P	Pg	03 17 00.2	+0.7
DMLN				S	Sg	03 17 03.3	+0.9
	31μm,0.2s						
KEF4	Livadi, Kephal	0.18	21	P	Pb	03 17 00.3	+0.9
KEF4				S	Sb	03 17 03.4	+1.3
KEF4	Livadi, Kephal	0.18	21	P	Pb	03 17 00.3	+0.9
KEF4				S	Sg	03 17 03.6	+0.5
PSDA	Pessada-Kefalo	0.19	82	P	Pb	03 16 59.7	+0.1
PSDA				S	Sb	03 17 02.2	-0.4
KEF5	Kardakata, Kep	0.21	28	P	Pg	03 17 00.5	+0.2
KEF5				S	Sb	03 17 03.7	+0.2
KEF5	Kardakata, Kep	0.21	28	P	Pg	03 17 00.5	+0.2
KEF5				S	Sb	03 17 03.6	+0.1
VLS	Valsamata	0.21	66	P	Pg	03 16 60.0	-0.4
VLS				S	Sg	03 17 02.7	-1.2
VLS				AML	AML	03 17 02.9	
VLS				AML	AML	03 17 02.9	
VLS	Valsamata	0.21	66	P	Pg	03 17 00.0	-0.4
VLS				S	Sg	03 17 02.8	-1.2
	63μm,0.1s						
VLMS	Volimes, Zakyn	0.33	130	P	Pg	03 17 02.3	0.0
VLMS				S	Sg	03 17 06.9	-0.2
VLMS				AML	AML	03 17 07.3	
	comp=E,12418μm,0.2s						
VLMS				AML	AML	03 17 12.9	
	comp=N,14730μm,0.3s						
VLMS	Volimes, Zakyn	0.33	130	P	Pg	03 17 02.3	0.0
VLMS				S	Sg	03 17 07.1	0.0
	comp=N,9μm,0.4s						
VSK1	VASILIKIADES	0.36	29	P	Pg	03 17 02.9	0.0
FSK	Fiskardo	0.41	25	P	Pg	03 17 03.5	-0.2
FSK				S	Sg	03 17 09.0	-0.4
FSK				AML	AML	03 17 11.1	
	comp=E,7133μm,0.4s						
FSK				AML	AML	03 17 12.7	
	comp=N,6056μm,0.5s						
FSK	Fiskardo	0.41	25	P	Pg	03 17 03.4	-0.2
FSK				S	Sg	03 17 09.1	-0.2
	comp=N,3μm,0.4s						
EVGI	Lefkada island	0.59	25	P	Pg	03 17 06.4	-0.5
EVGI				S	Sg	03 17 15.0	+0.3
DRAG	Dragano-Lefkad	0.62	17	P	Pb	03 17 07.6	+0.2
NYDR	Nydri-Lefkada	0.68	24	P	Pb	03 17 07.8	-0.7
VTN	Vitineika	0.69	104	P	Pb	03 17 08.6	0.0
LKD2	Lefkada island	0.74	19	P	Pb	03 17 09.2	-0.4
LKD2				S	Sg	03 17 20.6	+1.0
	comp=N,925nm,0.4s						
TSLK	Tsoukalades, L	0.78	18	P	Pb	03 17 10.1	0.0
AXS	Araxos	0.82	82	P	Pb	03 17 10.5	-0.3
AXS	Araxos	0.82	82	P	Pb	03 17 10.3	-0.6
PDO	Prodromos	0.84	52	P	Pb	03 17 10.6	-0.4
PDO				S	Sb	03 17 22.0	0.0
PDO				AML	AML	03 17 30.3	
	comp=E,2736μm,0.3s						
PDO				AML	AML	03 17 30.4	
	comp=N,4960μm,0.4s						
PDO	Prodromos	0.84	52	P	Pb	03 17 10.7	-0.4
PDO				S	Sb	03 17 23.2	+1.2
	comp=N,3μm,0.3s						
RLS	Riolos of Patr	0.89	92	P	Pb	03 17 11.6	-0.4
RLS				S	Sb	03 17 23.6	+0.1
RLS				AML	AML	03 17 33.4	
	comp=N,576μm,0.5s						
RLS				AML	AML	03 17 36.2	
	comp=E,474μm,0.4s						
RLS	Riolos of Patr	0.89	92	P	Pb	03 17 11.4	-0.6
RLS				S	Sb	03 17 24.9	+1.4
DRO	Drossia	1.09	97	P	Pb	03 17 15.6	+0.2
DRO				S	Sb	03 17 29.1	-0.2
DRO				AML	AML	03 17 37.1	
	comp=N,1296μm,0.7s						
DRO				AML	AML	03 17 37.2	
	comp=E,301μm,0.3s						
DRO	Drossia	1.09	97	P	Pb	03 17 15.4	-0.1
DRO				S	Sb	03 17 30.4	+1.1
	comp=E,438nm,0.5s						
AMT	Artemida-Makis	1.22	117	P	Pb	03 17 18.9	+1.2
AMT	Artemida-Makis	1.22	117	P	Pb	03 17 18.6	+1.0
AMT				S	Sn	03 17 34.5	+1.2
	comp=E,460nm,0.5s						
ANX	Ano Chora	1.34	67	P	Pn	03 17 19.6	+0.6
ANX				S	Sn	03 17 36.7	+0.3
ANX				AML	AML	03 17 44.0	
	comp=N,1390μm,0.5s						
ANX				AML	AML	03 17 44.7	
	comp=E,1034μm,0.4s						
ANX	Ano Chora	1.34	67	P	Pn	03 17 19.6	+0.6
SERG	Sergoula	1.39	76	P	Pn	03 17 20.0	+0.4
SERG	Sergoula	1.39	76	P	Pn	03 17 19.9	+0.3
TRIZ	Trizonia	1.39	78	P	Pn	03 17 19.9	+0.3
TRIZ				S	Sn	03 17 38.0	+0.5
	comp=E,228nm,0.6s						
EVR	Evrytania	1.42	54	P	Pn	03 17 20.9	+0.8
EVR				S	Sb	03 17 39.6	+0.7
EVR				AML	AML	03 17 52.3	
	comp=N,273μm,0.5s						
EVR				AML	AML	03 17 52.5	
	comp=E,237μm,0.6s						
EVR	Evrytania	1.42	54	P	Pn	03 17 20.7	+0.6
KLV	Kalavryta, Ach	1.43	91	P	Pn	03 17 20.7	+0.5
KLV	Kalavryta, Ach	1.43	91	P	Pn	03 17 20.4	+0.2
IGT	Igoumenitsa	1.44	360	P	Pb	03 17 22.0	+0.5
IGT				S	Sg	03 17 41.7	-0.1
	comp=E,205nm,0.5s						
KALE	Kalithea	1.45	77	P	Pn	03 17 20.8	+0.3
ITM	Ithomi	1.55	125	P	Pb	03 17 23.6	+0.3
ITM	Ithomi	1.55	125	P	Pb	03 17 23.6	+0.3
JAN	Janina	1.62	14	P	Pb	03 17 25.0	+0.5
PYL	PYLOS	1.63	136	P	Pb	03 17 24.8	+0.1
KEK	Kerkira	1.68	346	P	Pb	03 17 25.7	+0.2
KEK				S	Sb	03 17 47.5	+1.3
KEK				AML	AML	03 18 02.0	
	comp=N,275μm,0.5s						
KEK				AML	AML	03 18 02.5	
	comp=E,268μm,0.4s						
OHR	Ohrid	3.04	7	*i* Pn	Pn	03 17 45.6	+3.2
STIP	Stip	3.87	21	*i* Pn	Pn	03 17 57.7	+4.0
ULC	Ulcinj	3.96	348	⇓*i*Pn	Pn	03 17 56.3	+1.3
ULC				*i* Sn	Sn	03 18 39.7	-1.3
DRME	Dracevica, Mon	4.19	348	*e*Pn	Pn	03 17 59.4	+1.3
DRME	Dracevica, Mon	4.19	348	⇑*i*Pn	Pn	03 17 59.4	+1.3
DRME				*i* Sn	Sn	03 18 45.1	-1.4
BUM	Brajici-Budva	4.35	346	⇓*i*Pn	Pn	03 18 01.7	+1.3
BUM				*i* Sn	Sn	03 18 49.1	-1.6
PDG	Podgorica	4.42	349	*e*Pn	Pn	03 18 02.5	+1.3
TTG	Podgorica	4.42	349	⇓*i*Pn	Pn	03 18 02.5	+1.3
TTG				*i* Sn	Sn	03 18 50.6	-1.5
PVY	Plav	4.51	356	*e*Pn	Pn	03 18 03.9	+1.3
PVY				*i* Sn	Sn	03 18 52.8	-1.9
HCY	Herceg Novi	4.58	343	*e*Pn	Pn	03 18 03.7	+0.3
HCY	Herceg Novi	4.58	343	⇓*i*Pn	Pn	03 18 04.2	+0.8
HCY				*i* Sn	Sn	03 18 54.5	-1.6
CEME	Cevo	4.58	347	⇓*i*Pn	Pn	03 18 04.5	+0.9
CEME				*i* Sn	Sn	03 18 54.6	-1.8
IVA	Berane	4.79	356	⇑*i*Pn	Pn	03 18 07.8	+1.4
IVA				*i* Sn	Sn	03 18 59.6	-1.9
NKME	Niksic	4.79	348	⇑*i*Pn	Pn	03 18 07.7	+1.3
NKME				*i* Sn	Sn	03 18 59.6	-1.9
KOME	Kolasin	4.80	353	⇓*i*Pn	Pn	03 18 07.8	+1.2
KOME				*i* Sn	Sn	03 18 59.7	-2.0
NKY	Niksic	4.83	348	*e*Pn	Pn	03 18 08.2	+1.2
NKY				*i* Sn	Sn	03 19 00.5	-2.0
TREB	Trebinje	4.87	342	*e*Pn	Pn	03 18 07.4	0.0
DBRK	Dubrovnik	4.87	341	*e*Pn	Pn	03 18 08.5	+1.0
DBRK				Sn	Sn	03 19 01.1	-2.4
BRY	Bratogost	5.00	345	*e*Pn	Pn	03 18 09.7	+0.3
BRY	Bratogost	5.00	345	*e*Pn	Pn	03 18 10.5	+1.1
BRY				*i* Sn	Sn	03 19 04.5	-2.3
SJES	Sjenica	5.17	357	*e*Pn	Pn	03 18 13.0	+1.2
STON	Ston	5.18	338	*e*Pn	Pn	03 18 12.8	+1.1
STON				Sn	Sn	03 19 08.9	-2.1
STON	Ston	5.18	338	*e*Pn	Pn	03 18 12.1	+0.4
UPM	Unac-Piva	5.22	348	*e*Pn	Pn	03 18 13.8	+1.2
UPM	Unac-Piva	5.22	348	⇑*i*Pn	Pn	03 18 13.7	+1.2
UPM				*i* Sn	Sn	03 19 09.9	-2.5
MAKA	Makarska	5.78	335	*e*Pn	Pn	03 18 20.9	+1.1
MAKA				Sn	Sn	03 19 23.4	-2.2
HVAR	Hvar	5.88	331	*e*Pn	Pn	03 18 22.5	+1.1
RICI	Ricice	5.92	337	*e*Pn	Pn	03 18 23.0	+1.0
RICI				Sn	Sn	03 19 27.2	-2.1
DIVS	Divibare	6.01	358	*e*Pn	Pn	03 18 23.4	+0.2
HAPS	Han Pijesak,Bl	6.08	351	*e*Pn	Pn	03 18 22.8	-1.4
KIJV	Kijevo	6.62	335	*e*Pn	Pn	03 18 32.6	+1.2
KIJV				Sn	Sn	03 19 44.5	-1.9
MORI	Morici	6.75	330	*e*Pn	Pn	03 18 34.9	+1.6
MORI				Sn	Sn	03 19 48.3	-1.4
BLY	Banja Luka	7.06	341	*e*Pn	Pn	03 18 34.6	-3.0
DUGI	Dugi Otok	7.12	328	*e*Pn	Pn	03 18 39.7	+1.4

NVLJ	Novalja	7.67	329	*e*Pn	Pn	03 18 47.1	+1.3
CRES	Cresnjev	8.54	336	*e*Pn	Pn	03 18 58.9	+1.0
CEY	Cerknica	8.82	332	*e*Pn	Pn	03 19 03.0	+1.3

IDC 16 03:19:49.0±2.4, 0°.89N×126°.47E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/36, mbtmp3.3/3, Error ellipse: s-maj=211.8km s-min=28.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.09	160	P	P	03 24 45.0	-1.1
	0.5nm,0.5s,baz=338,slow=11,SNR=4.7						
ASAR	Alice Springs	25.46	164	P	P	03 25 19.7	+0.7
	0.3nm,0.5s,baz=346,slow=9.5,SNR=6.3						
MKAR	Makanchi Array	59.74	326	P	P	03 29 55.7	-0.1
	0.2nm,0.6s,baz=120,slow=8.5,SNR=2.5						

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*NEIC **16** 03:26:23.9±2.3, 19°.0S±0°.1×175°.50W±0°.10, h205km±7km, mb4.4/10, Error ellipse: s-maj=18.1km s-min=11.5km az=150.0*

*IDC **16** 03:26:31.4±3.8, 19°.24S×175°.73W, h263km±29km, mb4.0/4, mb1 4.0/7, mb1mx3.5/31, mbtmp4.6/7, Error ellipse: s-maj=35.7km s-min=22.4km az=70.0*

ISC 16 03:26:24.0±0.8, 19°.6S±0°.2×175°.40W±0°.09, h200km, n21, σ1s.60/20, mb4.3/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.19	85	Pn	Pn	03 27 42.0	+1.0
MSVF	Nonsavu	6.47	285	P	Pn	03 28 00.7	+3.1
	1.1nm,0.3s,baz=116,slow=16,SNR=13						
MSVF	Nonsavu	6.47	285		Pn	03 28 01.1	+3.5
AFI	Afiamalu	6.62	32	Pn	Pn	03 27 50.4	-9.1
DZM	Mont Dzumac	17.15	259	P	Pn	03 30 13.1	+0.8
	0.5nm,0.3s,baz=77,slow=19,SNR=10						
DZM	Mont Dzumac	17.15	259	P	Pn	03 30 11.7	-0.6
URZ	Urewera	19.72	198	P	Pn	03 30 44.1	+1.8
	2.3nm,0.3s,baz=18,slow=3.2,SNR=13						
CTAO	Charters Tower	36.02	263	P	P	03 33 05.9	-0.5
CTAO				IAmb	IAmb	03 33 07.4	
	comp=Z,13nm,0.8s						
PMG	Port Moresby	37.55	280	P	P	03 33 18.0	-1.4
	comp=Z,6.3nm,0.3s,baz=91,slow=3.6,SNR=5.8						
PMG	Port Moresby	37.55	280	IAmb	IAmb	03 33 19.1	
	comp=Z,14nm,1.0s						
STKA	Stephens Creek	40.38	244	P	P	03 33 42.4	-0.3
	comp=Z,2.3nm,0.7s,baz=85,slow=11,SNR=5.1						
AS31	Alice Springs	47.11	256	P	P	03 34 35.9	-0.5
AS31				IAmb	IAmb	03 34 37.3	
	comp=Z,5.9nm,1.2s						
ASAR	Alice Springs	47.11	256	P	P	03 34 36.1	-0.2
	comp=Z,13nm,0.7s,baz=93,slow=8.1,SNR=163						
ASAR				PcP	PcP	03 36 04.8	-0.2
	comp=Z,1.2nm,0.7s,baz=119,slow=3.6,SNR=5.3						
WB0	Warramunga Arr	47.13	261	P	P	03 34 35.4	-1.2
WB0				IAmb	IAmb	03 34 36.1	
	comp=Z,8.6nm,0.7s						
WB2	Warramunga Arr	47.14	261	P	P	03 34 35.4	-1.3
WB2				IAmb	IAmb	03 34 36.2	
	comp=Z,8.1nm,0.7s						
WRA	Warramunga Arr	47.15	261	P	P	03 34 35.9	-0.8
	comp=Z,3.0nm,0.3s,baz=95,slow=5.7,SNR=43						
SOEI	Soe	58.93	270	P	P	03 36 01.5	-1.4
TCRU	Three Creeks R	82.60	45	P	P	03 38 26.1	+1.0
BR131	Keskin Array S	147.97	315	PKPbc	PKPdf	03 45 42.4	-0.4
BRTR	Keskin Array B	147.97	315	PKPbc	PKPbc	03 45 44.2	-1.9
	comp=Z,1.0nm,0.7s,baz=126,slow=2.0,SNR=8.9						
GERES	GERESS Array B	149.90	348	PKPbc	PKPbc	03 45 48.9	-1.7
	comp=Z,0.2nm,0.6s,baz=358,slow=2.4,SNR=3.8						

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*TUL **16** 03:58:19.4±1.2, 35°.82N±0°.02×97°.44W±0°.05, h6km±7km, ML2.9, mb_Lg3.1/84(NEIC), Error ellipse: s-maj=5.7km s-min=2.7km az=114.0*

*NEIC **16** 03:58:19.6±1.1, 35°.83N±0°.04×97°.44W±0°.05, h6km±1km, Error ellipse: s-maj=6.6km s-min=5.4km az=49.0*

*ANF **16** 03:58:20.6±1.7, 35°.78N×97°.44W, h14km±12km, ML3.7/8, Error ellipse: s-maj=7.5km s-min=4.0km az=169.0*

ISC 16 03:58:19.5±1.0, 35°.84N±0°.03×97°.42W±0°.03, h6km±10km, n97, σ0s.93/82, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCOK	Bluff Creek, N	0.24	221	Pg	Pg	03 58 23.9	-0.3
BCOK				Sg	Sg	03 58 27.2	-0.1
OK025	Westminster Rd	0.26	166	Pg	Pg	03 58 24.7	0.0
OK001	Jones High Sch	0.29	159	Pg	Pg	03 58 25.3	0.0
OK001				Sg	Sg	03 58 29.7	+0.5
OKCFA	Oklahoma City	0.42	184	Pg	Pg	03 58 27.4	-0.3
OKCFA				Sg	Sg	03 58 33.4	+0.1
OKCSW	OKLAHOMA CITY	0.43	182	Pg	Pg	03 58 27.6	-0.2
OKCSW				Sg	Sg	03 58 33.7	+0.2
OK031	S. Brethren Rd	0.48	76	Pg	Pg	03 58 29.4	+0.5
OK031				Sg	Sg	03 58 36.4	+1.1
OK030	Cody Creek RV	0.52	80	Pg	Pg	03 58 30.1	+0.5
FNO	Franklin	0.58	179		Pg	03 58 30.3	-0.4
QUOK	Quay	0.67	60	Pg	Pg	03 58 32.8	+0.5
CROK	Carrier	0.81	326	Pg	Pg	03 58 35.0	-0.1
W35A	Tecumseh	0.81	147		Pg	03 58 34.6	-0.6
KAN13	South Haven SW	1.17	358		Pg	03 58 41.8	-0.2
KAN14	Manchester OK	1.20	339		Pb	03 58 42.1	-0.6
T35A	Sooner Cattle	1.30	34	Pn	Pn	03 58 43.9	-0.4
T35B	Sooner Cattle	1.30	34	P		03 58 43.9	
	baz=214,SNR=76						
T35B				S		03 59 01.7	
	baz=214						
TUL1	Leonard	1.32	86	P	Pn	03 58 43.6	-1.0
	baz=266						
TUL1				S	Sb	03 59 02.0	0.0
	baz=266						
TUL1	Leonard	1.32	86		Pn	03 58 43.6	-1.0
TUL1				IAmb_Lg		03 59 05.0	
	comp=Z,124nm,0.9s						
TUL1	Leonard	1.32	86	P		03 58 43.5	
	baz=266,SNR=200						
TUL1				S		03 59 01.9	
	baz=266						
U32A	Winter Ranch,	1.39	293		Pn	03 58 44.8	-0.7
U32A	Winter Ranch,	1.39	293	P		03 58 44.7	
	baz=114						
U32A				S		03 59 04.3	
	baz=114						
KAN10	Anthony SW Sta	1.40	337		Pn	03 58 45.1	-0.4
KAN08	Anthony NE Sta	1.46	342		Pn	03 58 46.5	+0.1
KAN12	Harper NE Stat	1.53	342		Pn	03 58 47.6	+0.2
WMOK	Wichita Mounta	1.56	226	P	Pn	03 58 47.3	-0.6
	baz=45						
WMOK				S	Sn	03 59 07.7	-0.7
	baz=45						
WMOK	Wichita Mounta	1.56	226	Pn	Pn	03 58 47.2	-0.6
WMOK	Wichita Mounta	1.56	226	P		03 58 47.3	
	baz=45						
WMOK				S		03 59 07.7	
	baz=45						
X37A	Clayton	2.09	126	Pn	Pn	03 58 55.8	+0.8
X37A	Clayton	2.09	126	P		03 58 55.4	
	baz=307						
X37A				S		03 59 23.5	
	baz=307						
Z35A	Perchaven, San	2.50	177	Pn	Pn	03 59 01.3	+0.5
Z35A	Perchaven, San	2.50	177	P		03 59 01.2	
	baz=356,SNR=10						
R32A	Long Quarter,	2.78	339	Pn	Pn	03 59 06.6	+2.0
HHAR	Hobbs	2.85	80	Pn	Pn	03 59 06.3	+0.7
W39A	Magazine	3.03	101	P	Pn	03 59 08.7	+0.7
	baz=283						
W39A	Magazine	3.03	101	Pn	Pn	03 59 08.5	+0.4
W39A				IAmb_Lg		04 00 00.1	
	comp=Z,55nm,0.8s						
W39A	Magazine	3.03	101	P		03 59 08.3	
	baz=283,SNR=36						
Z38A	Mt. Pleasant	3.26	141	Pn	Pn	03 59 10.6	-0.6
Z38A	Mt. Pleasant	3.26	141	P		03 59 11.4	
	baz=322						
KSU1	Kansas State U	3.32	11	Pn	Pn	03 59 12.9	+0.9
KSU1				IAmb_Lg		04 00 11.7	
	comp=Z,61nm,0.8s						
MIAR	Mount Ida	3.40	111	P	Pn	03 59 14.2	+1.1
	baz=293						
MIAR				S	Sn	03 59 55.1	+1.4
	baz=293						
MIAR	Mount Ida	3.40	111	Pn	Pn	03 59 14.2	+1.1
MIAR	Mount Ida	3.40	111	P		03 59 14.3	
	baz=293,SNR=27						
MIAR				S		03 59 55.1	
	baz=293						
CBKS	Cedar Bluff	3.50	329	P	Pn	03 59 15.5	+0.9
	baz=148						
CBKS				Sb	Sg	04 00 10.1	-1.8
	baz=148						
CBKS	Cedar Bluff	3.50	329	Pn	Pn	03 59 15.2	+0.7
AMTX	Amarillo	3.61	256	Pb	Pb	03 59 22.6	-1.3
	baz=74						
AMTX	Amarillo	3.61	256	Pn	Pn	03 59 17.4	+1.3
AMTX				IAmb_Lg		04 00 18.5	
	comp=Z,36nm,0.8s						
ABTX	Abilene, Hawle	3.70	211	IAmb_Lg		04 00 20.9	
	comp=Z,40nm,0.9s						
U40A	Yellville	3.73	81	P	Pn	03 59 18.4	+0.7
	baz=263						
U40A	Yellville	3.73	81	Pn	Pn	03 59 18.4	+0.7
U40A	Yellville	3.73	81	P		03 59 18.3	
	baz=263,SNR=8.1						
U40A				P		03 59 18.3	
	baz=263,SNR=8.1						
S39A	Bolivar	3.77	59	Pn	Pn	03 59 18.7	+0.4
S39A				IAmb_Lg		04 00 19.0	
	comp=Z,49nm,1.0s						
S39A	Bolivar	3.77	59	P		03 59 18.6	
	baz=242,SNR=26						
WHTX	Lake Whitney,	3.84	180	Pn	Pn	03 59 19.3	+0.2
X40A	Basin Creek Fa	3.99	108	Pn	Pn	03 59 22.0	+0.8
X40A				IAmb_Lg		04 00 26.6	
	comp=Z,44nm,0.7s						
237A	Washetta, Mont	4.05	160	Pn	Pn	03 59 21.5	-0.6
WLAR	White Oak Lake	4.14	120	IAmb_Lg		04 00 42.2	
	comp=Z,39nm,0.8s						
WHAR	Wooly Hollow	4.22	96	Pn	Pn	03 59 25.1	+0.8
WHAR				IAmb_Lg		04 00 34.5	
	comp=Z,39nm,0.9s						
W41B	Gary Mavity, V	4.27	97	P	Pn	03 59 25.7	+0.6
	baz=280						
W41B				Sb	Sg	04 00 32.6	-4.0
	baz=280						
W41B	Gary Mavity, V	4.27	97	Pn	Pn	03 59 25.4	+0.4
W41B				IAmb_Lg		04 00 35.4	
	comp=Z,49nm,0.8s						
W41B	Gary Mavity, V	4.27	97	P		03 59 25.4	
	baz=280,SNR=25						
UALR	University of	4.28	103	IAmb_Lg		04 00 44.8	
	comp=Z,32nm,0.7s						
FCAR	Ozark Folk Cen	4.30	88	Pn	Pn	03 59 26.0	+0.5
MGMO	Mountain Grove	4.35	71	Pn	Pn	03 59 27.1	+0.9
MGMO				IAmb_Lg		04 00 37.4	
	comp=Z,48nm,0.8s						
Z41A	Richland Creek	4.60	123	IAmb_Lg		04 00 54.8	
	comp=Z,30nm,0.8s						
MSTX	Muleshoe	4.78	249	Pn	Pn	03 59 32.8	+0.7
R40A	Maddies Statio	4.79	58	Pn	Pn	03 59 32.5	+0.3
R40A				IAmb_Lg		04 00 51.0	
	comp=Z,34nm,0.7s						
R40A	Maddies Statio	4.79	58	P		03 59 32.7	
	baz=241,SNR=12						
P38A	Dawn	4.88	38	IAmb_Lg		04 00 53.8	
	comp=Z,25nm,0.8s						
N33A	J Bar K, Exete	4.89	360	IAmb_Lg		04 01 08.9	
	comp=Z,27nm,0.8s						
CCAR	Cane Creek	5.02	111	IAmb_Lg		04 01 08.6	
	comp=Z,34nm,0.8s						
435B	Jarrell	5.04	182	IAmb_Lg		04 01 03.7	
	comp=Z,56nm,1.1s						
LCAR	Lake Charles	5.09	86	Pn	Pn	03 59 34.5	-1.7
N35A	Tabor	5.21	15	Pn	Pn	03 59 38.1	+0.2
KSCO	Kaye Shedlock'	5.22	309	IAmb_Lg		04 01 17.1	
	comp=Z,24nm,0.8s						
T42A	Van Buren	5.24	75	Pn	Pn	03 59 38.3	-0.1
T42A				IAmb_Lg		04 01 03.0	
	comp=Z,23nm,1.0s						
CCM	Cathedral Cave	5.42	64	Pn	Pn	03 59 40.2	-0.7
X43A	Marvell	5.51	102	IAmb_Lg		04 01 20.9	
	comp=Z,34nm,1.0s						
P40A	Paris	5.63	48	Pn	Pn	03 59 43.7	0.0
P40A				IAmb_Lg		04 01 22.5	
	comp=Z,36nm,0.8s						
JCT	Junction City	5.71	201	Pn	Pn	03 59 44.0	-0.8
JCT				IAmb_Lg		04 01 28.9	
	comp=Z,38nm,0.7s						
PBMO	Poplar Bluff	5.72	79	IAmb_Lg		04 01 19.3	
	comp=Z,28nm,0.8s						
T25A	Trinidad	5.78	285	Pn	Pn	03 59 45.9	-0.1
T25A				IAmb_Lg		04 01 33.8	
	comp=Z,30nm,0.9s						
143A	Socs Landing,	5.88	120	IAmb_Lg		04 01 26.0	
	comp=Z,22nm,0.9s						
N38A	Joes South For	5.94	32	Pn	Pn	03 59 48.5	+0.5
FVM	French Village	6.00	67	Pn	Pn	03 59 49.3	+0.5
FVM				IAmb_Lg		04 01 36.8	
	comp=Z,28nm,0.9s						
L34A	Svendsen Farm,	6.17	7	Pn	Pn	03 59 51.5	+0.2
L34A					LR	04 01 37.9	
OGNE	Ogallala	6.25	326	Pn	Pn	03 59 53.5	+1.1
OGNE					LR	04 01 41.0	
GLAT	Glass	6.60	84	IAmb_Lg		04 01 57.8	
	comp=Z,38nm,0.8s						
HICK	Hickman	6.66	82	IAmb_Lg		04 02 06.9	
	comp=Z,40nm,0.8s						
OXF	Oxford	6.69	99	IAmb_Lg		04 01 55.3	
	comp=Z,26nm,0.9s						
W45A	Hickory Valley	6.75	93	IAmb_Lg		04 02 05.5	
	comp=Z,21nm,0.7s						
SDCO	Great Sand Dun	6.76	289	Pn	Pn	03 59 59.8	+0.2
Y45A	Yeager Farm, C	6.77	105	IAmb_Lg		04 02 14.3	
	comp=Z,24nm,1.1s						
S44A	Carbondale	6.81	72	Pn	Pn	03 59 59.9	-0.1
S44A				IAmb_Lg		04 02 03.8	
	comp=Z,27nm,0.7s						
K31A	O'Neill	6.86	352	Pn	Pn	04 00 00.7	+0.1
K31A				IAmb_Lg		04 02 10.4	
	comp=Z,25nm,1.0s						
Q24A	Divide	6.90	299	IAmb_Lg		04 02 07.6	
	comp=Z,18nm,0.9s						
N41A	Harden Midland	7.09	45	Pn	Pn	04 00 03.6	-0.2
T45A	Paducah	7.17	78	IAmb_Lg		04 02 08.9	
	comp=Z,37nm,0.7s						
ISCO	Idaho Springs	7.60	304	Pn	Pn	04 00 11.7	+0.6
BNM	Barren Site	7.74	260	Pg	Pb	04 00 37.7	+3.3
MNTX	Cornudas Mount	7.81	240	Pn	Pn	04 00 14.1	+0.4
MNTX					LR	04 02 22.2	
ECSD	EROS Data Cent	7.91	4	Pn	Pn	04 00 13.7	-1.3
ECSD					LR	04 02 31.2	
HDIL	Hopedale	7.94	51	Pn	Pn	04 00 15.9	+0.4
HDIL					LR	04 02 30.6	
OLIL	Olney	7.97	66	IAmb_Lg		04 02 54.2	
	comp=Z,29nm,1.0s						
LENM	Lemitar	8.02	261	Pn	Pn	04 00 16.4	-0.4
O44A	Mansfield	8.28	56	IAmb_Lg		04 02 43.9	
	comp=Z,29nm,0.7s						
PHWY	Pilot Hill	8.33	313	Pn	Pn	04 00 21.4	+0.4
TX31	Lajitas Ar. Si	8.36	221	Pn	Pn	04 00 21.7	+0.4
N23A	Red Feather La	8.38	310	IAmb_Lg		04 03 09.9	
	comp=Z,20nm,0.8s						
SFIN	Lafayette	9.31	58	IAmb_Lg		04 03 12.9	
	comp=Z,16nm,0.8s						
K22A	Casper	9.80	317	IAmb_Lg		04 03 55.9	
	comp=Z,14nm,1.1s						
W50A	Signal Mountai	9.89	90	IAmb_Lg		04 03 36.3	
	comp=Z,10nm,0.9s						

IDC 16 03:58:41.8±2.2, 17°.26S×178°.93W, h610km±20km, mb2.9/5, mb1 3.2/6, mb1mx2.9/44, mbtmp3.7/6, Error ellipse: s-maj=111.4km s-min=21.4km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.92	260	P	P	04 00 01.4	0.0
	1.4nm,0.3s,baz=257,slow=23,SNR=8.4						
WRA	Warramunga Arr	44.26	259	P	P	04 05 59.0	-0.2
	0.6nm,0.5s,baz=94,slow=7.5,SNR=5.5						
ASAR	Alice Springs	44.49	254	P	P	04 06 00.9	0.0
	2.9nm,0.7s,baz=87,slow=8.7,SNR=29						
ILAR	Eielson Array	85.37	13	P	P	04 10 15.4	0.0
	0.1nm,0.5s,baz=220,slow=4.9,SNR=7.3						
TXAR	Lajitas Array	86.08	58	P	P	04 10 19.8	+0.1
	0.7nm,1.0s,baz=223,slow=7.0,SNR=5.8						
PDAR	Pinedale Array	87.23	44	P	P	04 10 24.8	-0.2
	0.3nm,0.6s,baz=234,slow=5.1,SNR=3.5						

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*VAO **16** 04:04:40.1±0.4, 22°.16S×69°.07W, h109km, mb3.9*

*GUC **16** 04:04:43.3±0.6, 22°.36S×68°.71W, h100km±3km, ML3.6*

ISC 16 04:04:42.9±0.8, 22°.33S±0°.05×68°.69W±0°.07, h105km±8km, n30, σ1s.17/40, 5C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.34	217	*e*P	Pn	04 04 59.0	+0.1
LVC				*e*S	Sn	04 05 10.1	-0.6
LVC	Limon Verde	0.34	217	*e*P	Pn	04 04 58.5	-0.4
LVC				*e*S	Sn	04 05 10.3	-0.4
PB09	IPOC Station P	0.74	316	⇑*i*P	Pn	04 05 02.2	+0.8
PB09				*e*S	Sn	04 05 16.0	+0.7
PB09				IAML		04 05 18.4	
	comp=N,2μm,0.5s						
PB03	IPOC Station P	1.03	286	⇑*i*P	Pn	04 05 04.7	+0.4
PB03				*i* S	Sn	04 05 20.8	+0.5
PB03				IAML		04 05 21.8	
	comp=N,2μm,0.2s						
PB07	IPOC Station P	1.27	298	⇑*i*P	Pn	04 05 07.5	+0.6
PB07				*i* S	Sn	04 05 25.7	+0.7
PB07				IAML		04 05 26.3	
	comp=N,3μm,0.3s						
PB04	IPOC Station P	1.35	270	⇑*i*P	Pn	04 05 08.2	+0.3
PB04				*i* S	Sn	04 05 27.3	+0.5
PB04				IAML		04 05 31.5	
	comp=E,1μm,0.3s						
PB05	IPOC Station P	1.49	249	⇑*i*P	Pn	04 05 09.7	+0.2
PB05				*e*S	Sn	04 05 30.0	+0.3
PB05				IAML		04 05 34.5	
	comp=N,703nm,0.2s						
PATCX	Punta Patache	2.03	318	*i* P	Pn	04 05 16.5	+0.2
PATCX				*i* S	Sn	04 05 42.3	+0.7
PATCX				IAML		04 05 47.9	
	comp=N,1μm,0.3s						
PB10	IPOC Station P	2.08	235	*e*P	Pn	04 05 17.6	+0.8
PB10				IAML		04 05 57.4	
	comp=E,312nm,0.3s						
PB08	IPOC Station P	2.23	349	⇓*e*P	Pn	04 05 20.4	+1.4
PB08				*i* S	Sn	04 05 49.1	+2.6
TA01	Diego Aracena	2.24	321	*e*P	Pn	04 05 18.7	-0.2
TA01				*e*S	Sn	04 05 46.8	+0.4
TA01				IAML		04 05 52.7	
	comp=E,696nm,0.4s						
HMBC	Humberstone	2.33	331	⇓*e*P	Pn	04 05 20.0	-0.2
HMBC				IAML		04 05 53.7	
	comp=N,462nm,0.3s						
GO01	Chusmiza	2.69	350	*e*P	Pn	04 05 26.4	+1.1
GO02	Mina Guanaco	2.94	196	*e*P	Pn	04 05 28.4	+0.1
PSGC	Pisagua	3.04	334	*e*P	Pn	04 05 28.2	-1.2
PTLB	Pontes e Lacer	11.34	54	*e*P	Pn	04 07 20.0	-1.7
AQDB	Aquidauana	12.24	84	*e*P	Pn	04 07 35.4	+1.7
VILB	Vilhena	12.34	42	*e*P	Pn	04 07 33.8	-1.3
CPSB	Cacapava Do Su	15.84	124	*e*P	Pn	04 08 21.3	+1.4
PCMB	Pacaembu	16.18	91	*e*P	P	04 08 26.8	+1.3
ARAG	Araguaiana, MT	17.26	70	*e*P	P	04 08 37.3	0.0
ITRB	Iturama	17.31	85	*e*P	P	04 08 39.5	+1.6
SNDB	Serra Nova Dou	19.53	61	*e*P	P	04 09 00.7	-1.6
IPMB	Ipameri, GO	19.70	81	*e*P	P	04 09 04.0	-0.1
NPGB	Novo Progresso	19.91	42	*e*P	P	04 09 03.7	-2.6
ITTB	Itaituba	21.83	37	*e*P	P	04 09 25.1	-1.7
MAN01	Angra dos Reis	22.83	96	*e*P	P	04 09 38.5	+1.3
JANB	Januaria	24.18	77	*e*P	P	04 09 48.2	-1.4
SMTB	Santa Maria do	24.29	60	*e*P	P	04 09 50.5	-0.2
PRPB	Parauapebas	24.29	51	*e*P	P	04 09 48.9	-1.8

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*IDC **16** 04:22:12.4±1.6, 58°.59S×148°.90E, h0km, mb4.0/5, mb1 4.0/6, mb1mx3.9/28, mbtmp3.9/6, ML3.4/1, MS3.7/8, Ms1 3.7/8, ms1mx3.5/15, Error ellipse: s-maj=108.9km s-min=18.4km az=82.0*

ISC 16 04:22:14.0±1.1, 58°.6S±0°.1×148°.7E±0°.6, h10km, n23, σ0s.94/14, mb3.9/5, MS3.7/8, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	19.52	171	P	P	04 26 39.9	-1.1
	0.1nm,0.3s,baz=338,slow=8.5,SNR=8.3						
RPZ	Rata Peaks	20.33	53	LR	LR	04 33 04.0	
	comp=Z,250nm,20.1s,baz=204,slow=32						
URZ	Urewera	27.41	55	LR	LR	04 38 02.6	
	comp=Z,222nm,18.7s,baz=211,slow=35						
QSPA	South Pole Qui	31.49	180	P	P	04 28 35.4	-0.2
	2.0nm,0.9s,baz=323,slow=3.1,SNR=4.8						
ASAR	Alice Springs	36.46	337	P	P	04 29 17.7	-1.3
	0.7nm,0.8s,baz=171,slow=9.6,SNR=5.5						
ASAR				LR	LR	04 41 17.1	
	comp=Z,50nm,21.8s,baz=168,slow=31						
MAW	Mawson	36.71	220	LR	LR	04 44 19.2	
	comp=Z,249nm,18.7s,baz=61,slow=36						
CTA	Charters Tower	38.51	356	P	P	04 29 36.5	+0.2
	0.7nm,0.3s,baz=158,slow=6.1,SNR=3.1						
CTA				LR	LR	04 43 23.7	
	comp=Z,249nm,21.3s,baz=154,slow=33						
WRA	Warramunga Arr	40.00	339	P	P	04 29 47.5	-1.2
	1.7nm,1.0s,baz=167,slow=7.0,SNR=3.9						
SNAA	Sanae	48.49	192	P	P	04 30 56.4	+0.2
SNAA	Sanae	48.49	192	P	P	04 30 55.8	-0.4
	3.9nm,0.9s,baz=201,slow=11,SNR=20						
VNA3	Neumayer Olymp	49.55	189	P	P	04 31 04.5	+0.3
VNA2	Neumayer--Watz	49.66	190	P	P	04 31 05.4	+0.4
	baz=159,slow=5.7						
VNA1	Neumayer--Stat	50.00	190	P	P	04 31 07.7	0.0
PPT	Papeete	60.54	75	LR	LR	04 52 44.4	
	comp=Z,33nm,21.3s,baz=238,slow=30						
H03S1	Juan Fernandez	79.73	141	T	T	06 02 33.6	
	baz=201,slow=74,SNR=17						
H03S2	Juan Fernandez	79.73	141	T	T	06 02 32.3	
	baz=201,slow=74,SNR=16						
H03S3	Juan Fernandez	79.74	141	T	T	06 02 32.0	
	baz=201,slow=74,SNR=18						
BOSA	Boshof	81.23	228	LR	LR	05 06 18.1	
	comp=Z,35nm,21.0s,baz=152,slow=32						
CMAR	Chiang Mai Arr	86.95	314	LR	LR	05 15 16.0	
	comp=Z,32nm,18.0s,baz=182,slow=37						
YKA	Yellowknife Ar	141.55	48	PKP	PKPdf	04 41 44.1	+0.4
	0.1nm,0.3s,baz=193,slow=2.8,SNR=4.1						
AKASG	Malin Array Be	145.20	284	PKPbc	PKPab	04 41 50.6	+0.4
	0.6nm,0.5s,baz=74,slow=3.0,SNR=4.7						
FINES	FINESS Array B	151.97	301	PKPbc	PKiKP	04 42 09.7	+1.7
	9.6nm,1.1s,baz=60,slow=3.4,SNR=3.2						
GERES	GERESS Array B	152.13	269	PKPbc	PKiKP	04 42 10.1	+1.2
	0.6nm,0.7s,baz=90,slow=2.9,SNR=4.2						

IDC 16 04:22:31.7±18.0, 16°.50S×13°.39W, h0km, mb3.8/3, mb1 3.7/3, mb1mx3.5/26, mbtmp3.8/3, MS3.5/6, Ms1 3.4/6, ms1mx3.2/24, Error ellipse: s-maj=646.1km s-min=142.8km az=89.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10S2	ASCENSION HYDR	7.59	351	T	T	04 32 16.7	
	baz=178,slow=74,SNR=6.2						
H10S3	ASCENSION HYDR	7.60	350	T	T	04 32 17.7	
	baz=42,slow=74,SNR=10						
DBIC	Dimbokro	24.52	21	P	P	04 27 53.1	+0.1
	1.0nm,0.5s,baz=219,slow=6.5,SNR=1.5						
TORD	Torodi Ar. Bea	33.01	28	P	P	04 29 08.7	-0.1
	2.7nm,0.8s,baz=215,slow=8.5,SNR=7.7						
BDFB	Brasilia	33.26	267	LR	LR	04 39 19.0	
	comp=Z,106nm,21.1s,baz=146,slow=30						
BOSA	Boshof	37.51	116	LR	LR	04 43 17.9	
	comp=Z,59nm,18.3s,baz=282,slow=33						
CPUP	Villa Florida	41.89	249	LR	LR	04 45 48.9	
	comp=Z,29nm,19.0s,baz=58,slow=33						
PLCA	Paso Flores	54.63	232	LR	LR	04 53 15.9	
	comp=Z,42nm,19.0s,baz=161,slow=34						
ROSC	El Rosal	63.84	284	LR	LR	04 58 55.2	
	comp=Z,44nm,19.7s,baz=156,slow=34						
BRTR	Keskin Array B	71.05	37	P	P	04 33 51.9	+0.1
	0.9nm,1.1s,baz=218,slow=5.6,SNR=2.7						
TKL	Tuckaleechee C	84.35	310	LR	LR	05 03 24.7	
	comp=Z,26nm,20.4s,baz=74,slow=29						

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*TAP **16** 04:22:52.9, 24°.76N×122°.40E, h8km, ML3.0, C*

*JMA **16** 04:22:54.2±0.1, 24°.72N×122°.39E, h16km±2km, M2.2*

ISC 16 04:22:53.6±1.0, 24°.74N±0°.03×122°.40E±0°.02, h11km±9km, n44, σ0s.44/79, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao** baz=303	**0.46**	**306**	*e*P	**Pg**	**04 23 02.6**	**0.0**
TWB1	baz=303			*e*S	**Sg**	**04 23 09.2**	**+0.6**
TWC	**Suao** baz=252	**0.51**	**255**	*i* P	**Pg**	**04 23 03.5**	**-0.1**
TWC	baz=252			*e*S	**Sb**	**04 23 12.2**	**+0.1**
NTC	**Toucheng** baz=280	**0.53**	**283**	*e*P	**Pg**	**04 23 04.1**	**+0.2**
NTC	baz=280			*e*S	**Sb**	**04 23 12.8**	**+0.4**
TIPB	**Shuangxi** baz=291	**0.57**	**294**	*e*P	**Pg**	**04 23 04.7**	**0.0**
TIPB	baz=291			*e*S	**Sb**	**04 23 13.6**	**0.0**
JYNG	**Yonagunijimaku**	**0.58**	**120**	P	**Pb**	**04 23 05.3**	**-0.4**
JYNG				*e*S	**Sg**	**04 23 13.0**	**+0.5**
ILA	**Ilan** baz=270	**0.59**	**273**	*e*S	**Sb**	**04 23 14.1**	**-0.2**
ENAH	**Nanao** baz=239	**0.61**	**242**	*e*P	**Pb**	**04 23 06.0**	**-0.2**
ENAH	baz=239			*e*S	**Sb**	**04 23 15.8**	**+1.1**
YOJ	**Yonaguni jima**	**0.63**	**116**	P	**Pg**	**04 23 06.1**	**+0.3**
YOJ				S	**Sg**	**04 23 14.2**	**+0.2**
YOJ	**Yonaguni jima** baz=117	**0.63**	**116**	*e*P	**Pg**	**04 23 06.1**	**+0.3**
YOJ	baz=117			*e*S	**Sb**	**04 23 15.2**	**-0.1**
NWF	**Wu-fen Shan** baz=298	**0.65**	**301**	*e*P	**Pb**	**04 23 06.8**	**-0.1**
NWF	baz=298			*e*S	**Sb**	**04 23 15.9**	**-0.1**
WFSB	**Wu-fen Shan** baz=298	**0.65**	**301**	*e*P	**Pb**	**04 23 06.7**	**-0.2**
WFSB	baz=298			*e*S	**Sb**	**04 23 16.0**	**0.0**
TWE	**Neicheng** baz=266	**0.66**	**268**	*i* P	**Pg**	**04 23 06.2**	**-0.2**
TWE	baz=266			*e*S	**Sb**	**04 23 16.7**	**+0.3**
ENA	**Nanau** baz=240	**0.67**	**243**	*e*P	**Pg**	**04 23 06.8**	**+0.2**
ENA	baz=240			*e*S	**Sb**	**04 23 17.3**	**+0.7**
ENTT	**Nioudou** baz=260	**0.76**	**263**	*e*P	**Pb**	**04 23 08.7**	**-0.2**
ENTT	baz=260			*e*S	**Sb**	**04 23 19.2**	**0.0**
TWA	**Mucha** baz=286	**0.77**	**288**	*e*S	**Sb**	**04 23 20.5**	**+0.9**
NWLT	**Wulai** baz=271	**0.81**	**273**	P	**Pb**	**04 23 09.5**	**-0.2**
NWLT	baz=271			*e*S	**Sb**	**04 23 21.2**	**+0.5**
NDT	**Datong Townshi** baz=258	**0.81**	**260**	P	**Pg**	**04 23 09.4**	**0.0**
NDT	baz=258			S	**Sb**	**04 23 21.3**	**+0.6**
YM01	**YM01** baz=297	**0.85**	**299**	*e*P	**Pb**	**04 23 10.2**	**-0.2**
YM01	baz=297			*e*S	**Sb**	**04 23 22.0**	**+0.2**
YM08	**YM08** baz=300	**0.86**	**302**	*e*S	**Sb**	**04 23 21.7**	**-0.2**
YM10	**YM10** baz=297	**0.86**	**299**	*e*P	**Pg**	**04 23 10.0**	**-0.3**
YM10	baz=297			*e*S	**Sg**	**04 23 21.6**	**0.0**
YM05	**YM05** baz=297	**0.86**	**299**	*e*P	**Pg**	**04 23 10.2**	**-0.1**
YM05	baz=297			*e*S	**Sb**	**04 23 22.1**	**-0.1**
TWY	**Chenhua** baz=305	**0.90**	**307**	*e*S	**Sb**	**04 23 23.3**	**+0.2**
NACB	**Ninganchiao** baz=231	**0.92**	**232**	*e*P	**Pg**	**04 23 10.8**	**-0.6**
NACB	baz=231			*e*S	**Sb**	**04 23 24.2**	**+0.4**
YHNB	**Yeheng** baz=264	**0.93**	**266**	P	**Pb**	**04 23 11.6**	**-0.2**
YHNB	baz=264			*e*S	**Sb**	**04 23 24.5**	**+0.4**
NSK	**Sanguang** baz=264	**0.94**	**266**	*e*P	**Pg**	**04 23 11.2**	**-0.7**
NSK	baz=264			*e*S	**Sb**	**04 23 25.0**	**+0.4**
NNS	**Nan Shan** baz=250	**0.98**	**252**	*e*P	**Pg**	**04 23 12.0**	**-0.5**
NNS	baz=250			*e*S	**Sn**	**04 23 26.7**	**-0.5**
TWD	**Chiawan** baz=226	**0.98**	**228**	*e*S	**Sn**	**04 23 26.5**	**-0.6**
ETLH	**Xiulin Townshi** baz=236	**0.99**	**238**	*e*P	**Pg**	**04 23 12.6**	**-0.1**
ETLH	baz=236			*e*S	**Sb**	**04 23 26.4**	**+0.6**
FUSS	**Fushou** baz=243	**1.16**	**245**	*e*P	**Pg**	**04 23 15.9**	**0.0**
FUSS	baz=243			*e*S	**Sn**	**04 23 32.3**	**+0.5**
WHF	**Hehuan Shan** baz=238	**1.19**	**240**	*e*P	**Pb**	**04 23 16.1**	**-0.3**
WHF	baz=238			*e*S	**Sn**	**04 23 32.4**	**-0.4**
TWT	**Tachien** baz=245	**1.21**	**247**	*e*P	**Pn**	**04 23 15.6**	**-1.0**
TWT	baz=245			*e*S	**Sn**	**04 23 34.4**	**+1.3**
TDCB	**Techi** baz=245	**1.23**	**247**	*e*P	**Pn**	**04 23 16.5**	**-0.3**
TDCB	baz=245			*e*S	**Sn**	**04 23 33.6**	**+0.2**
LIOB	**Emei** baz=264	**1.26**	**266**	*e*P	**Pn**	**04 23 17.0**	**-0.1**
LIOB	baz=264			*e*S	**Sg**	**04 23 34.3**	**+0.1**
IRIF	**Iriomote-Funau**	**1.28**	**108**	P	**Pn**	**04 23 17.3**	**-0.1**
IRIF				S	**Sb**	**04 23 34.1**	**-0.1**
CHGB	**Renai** baz=237	**1.30**	**239**	*e*P	**Pb**	**04 23 18.0**	**-0.2**
CHGB	baz=237			*e*S	**Sg**	**04 23 35.9**	**+0.2**
WHP	**Taichung City** baz=249	**1.40**	**251**	*e*S	**Sg**	**04 23 38.2**	**-0.4**
HATJ	**Hateruma jima**	**1.46**	**118**	*e*S	**Sb**	**04 23 39.3**	**+0.1**
VWDT	**VWDT** baz=228	**1.51**	**230**	*e*P	**Pb**	**04 23 21.5**	**0.0**
VWDT	baz=228			*e*S	**Sg**	**04 23 41.5**	**-0.7**
JKRS	**Kuro-shima**	**1.55**	**108**	*e*S	**Sn**	**04 23 41.5**	**+0.2**
SMLT	**Sun Moon Lake** baz=237	**1.61**	**238**	*e*P	**Pn**	**04 23 22.5**	**+0.5**
SMLT	baz=237			*e*S	**Sb**	**04 23 43.9**	**+0.1**
TYC	**Yuchr** baz=238	**1.63**	**240**	*e*P	**Pn**	**04 23 22.4**	**+0.2**
TYC	baz=238			*e*S	**Sb**	**04 23 44.4**	**+0.1**
JIJ	**Ishigaki jima**	**1.64**	**103**	P	**Pb**	**04 23 23.0**	**-0.8**
JIJ				S	**Sn**	**04 23 43.5**	**+0.2**
ALS	**Alishan** baz=229	**1.90**	**230**	*e*S	**Sb**	**04 23 51.2**	**-1.1**
CHN5	**Tsauling** baz=233	**1.94**	**234**	*e*P	**Pn**	**04 23 27.2**	**+0.7**
CHN5	baz=233			*e*S	**Sn**	**04 23 51.5**	**+0.7**

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*NIC **16** 04:24:47.2±0.0, 36°.92N×30°.38E, h104^{km}±2^{km}, Ml3.5/4*
*ISK **16** 04:24:47.2, 37°.11N×30°.35E, h83^{km}, ML3.3/40*
*DDA **16** 04:24:48.1, 37°.08N×30°.41E, h46^{km}±1^{km}, MW3.3*
*IDC **16** 04:24:49.0±8.3, 37°.03N×30°.65E, h84^{km}±54^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.1/40, mbtmp3.7/4, ML3.7/1, MS3.0/1, Ms1 3.1/1, ms1mx2.4/25, Error ellipse: s-maj=62.3km s-min=42.5km az=20.0*
*THE **16** 04:24:49.5, 36°.95N×30°.12E, h0^{km}±6^{km}, ML3.1/2, Error ellipse: s-maj=16.1km s-min=1.6km az=79.0*
*HLW **16** 04:24:50.0, 36°.73N×29°.82E, h10^{km}±17^{km}, Md4.0*
ISC 16 04:24:47.0±0.9**, 37°.13N**±0°.03×**30°.40E**±0°.02**, h80**^{km}±5^{km}**, n137, σ2^{s}.28**/168**, mb3.7**/3**, 4C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUCA	**Burdur, Bucak-**	**0.23**	**32**	*i* P	**Pn**	**04 24 59.9**	**+0.9**
BUCA				*i* S	**Sn**	**04 25 03.3**	**-4.6**
ANTB	**Antalya**	**0.30**	**139**	PG	**Pn**	**04 25 00.0**	**+0.7**
ANTB				SG	**Sn**	**04 25 10.1**	**+1.8**
BCK	**Bucak**	**0.36**	**24**	PG	**Pn**	**04 25 01.0**	**+1.2**
BCK				SG	**Sn**	**04 25 11.1**	**+1.9**
KEMT	**Kemer-ANTALYA**	**0.54**	**167**	PG	**Pn**	**04 25 01.9**	**+0.9**
ELL	**Elmali**	**0.55**	**226**	PG	**Pn**	**04 25 02.6**	**+1.3**
ELL	**Elmali**	**0.55**	**226**	P	**Pn**	**04 25 02.7**	**+1.4**
ELL				S	**Sn**	**04 25 15.4**	**+3.5**
BRDR	**BURDUR-Merkez**	**0.63**	**334**	*i* P	**Pn**	**04 25 03.2**	**+1.2**
BRDR				*i* S	**Sn**	**04 25 08.1**	**-5.1**
GOLH	**Golhisar**	**0.68**	**279**	*i* P	**Pn**	**04 25 04.2**	**+1.6**
GOLH				*i* S	**Sn**	**04 25 12.8**	**-1.3**
ISP	**Isparta**	**0.70**	**8**	PG	**Pn**	**04 25 04.0**	**+1.2**
ISP				SG	**Sn**	**04 25 16.2**	**+1.7**
BASM	**Basmaki-Afyon**	**0.84**	**341**	PG	**Pn**	**04 25 05.4**	**+1.2**
CAEL	**Denizli, Camel**	**0.87**	**270**	*i* P	**Pn**	**04 25 06.2**	**+1.6**
CAEL				*i* S	**Sn**	**04 25 16.3**	**-1.4**
BAGO	**Egridir - ISPA**	**0.91**	**19**	*i* P	**Pn**	**04 25 06.7**	**+1.5**
BAGO				*i* S	**Sn**	**04 25 14.1**	**-4.5**
DEMR	**Demre-Antalya**	**0.97**	**204**	PG	**Pn**	**04 25 06.3**	**+0.6**
KEPZ	**Antalya-Kepez**	**0.99**	**103**	*i* P	**Pn**	**04 25 07.2**	**+1.3**
KEPZ				*i* S	**Sn**	**04 25 17.0**	**-3.1**
AKAS	**Kas**	**1.10**	**216**	PG	**Pn**	**04 25 07.8**	**+0.4**
AKAS	**Kas**	**1.10**	**216**	*i* P	**Pn**	**04 25 07.8**	**+0.4**
AKAS				*i* S	**Sn**	**04 25 19.0**	**-3.6**
SEDI	**Konya, Seydise**	**1.12**	**73**	*i* P	**Pn**	**04 25 09.5**	**+1.9**
SEDI				*i* S	**Sn**	**04 25 20.6**	**-2.5**
KZIL	**AFYON_Kizioren**	**1.15**	**350**	*i* P	**Pn**	**04 25 09.4**	**+1.4**
KZIL				*i* S	**Sn**	**04 25 20.1**	**-3.5**
FETY	**Fethiye**	**1.17**	**245**	PN	**Pn**	**04 25 08.7**	**+0.6**
FETY	**Fethiye**	**1.17**	**245**	*i* P	**Pn**	**04 25 08.9**	**+0.8**
FETY				*i* S	**Sn**	**04 25 18.0**	**-5.9**
KSL	**Kastellorizon**	**1.18**	**214**	P	**Pn**	**04 25 08.5**	**+0.3**
KSL	**Kastellorizon**	**1.18**	**214**	⇓P	**Pn**	**04 25 08.6**	**+0.5**
KSL				S	**Sn**	**04 25 25.0**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.23**	**286**	*i* P	**Pn**	**04 25 11.1**	**+2.1**
TAVA				*i* S	**Sn**	**04 25 21.8**	**-3.7**
YVAC	**Isparta, Yalva**	**1.32**	**30**	*i* P	**Pn**	**04 25 12.0**	**+1.9**
YVAC				*i* S	**Sn**	**04 25 23.4**	**-4.0**
KHL	**Karahalli**	**1.38**	**330**	PN	**Pn**	**04 25 12.0**	**+1.2**
DOGA	**KONYA_Doganhis**	**1.40**	**45**	*i* P	**Pn**	**04 25 13.4**	**+2.3**
DOGA				*i* S	**Sn**	**04 25 23.4**	**-5.9**
ALAN	**Alanya-ANTALYA**	**1.43**	**113**	PN	**Pn**	**04 25 12.7**	**+1.4**
SHUT	**Suhut-Afyon**	**1.43**	**5**	PN	**Pn**	**04 25 13.4**	**+1.9**
DALY	**Dalyan (Mula)**	**1.44**	**258**	PN	**Pn**	**04 25 12.4**	**+1.1**
DALY	**Dalyan (Mula)**	**1.44**	**258**	*i* P	**Pn**	**04 25 12.5**	**+1.1**
DALY				*i* S	**Sn**	**04 25 26.4**	**-3.4**
KHAL	**Karahalli**	**1.44**	**330**	*i* P	**Pn**	**04 25 12.8**	**+1.2**
KHAL				*i* S	**Sn**	**04 25 25.2**	**-4.9**
AFYO	**Afyonkarahisar**	**1.66**	**357**	*i* P	**Pn**	**04 25 16.8**	**+2.3**
AFYO				*i* S	**Sn**	**04 25 30.0**	**-5.2**
MULA	**Mugla, Merkez-**	**1.67**	**275**	*i* P	**Pn**	**04 25 15.9**	**+1.4**
MULA				*i* S	**Sn**	**04 25 30.1**	**-5.4**
KMER	**Konya-Meram**	**1.69**	**67**	*i* P	**Pn**	**04 25 17.0**	**+2.1**
KMER				*i* S	**Sn**	**04 25 31.7**	**-4.3**
YER	**Yerkesik**	**1.69**	**271**	P	**Pn**	**04 25 16.3**	**+1.4**
YER				S	**Sn**	**04 25 36.9**	**+0.9**
YER	**Yerkesik**	**1.69**	**271**	PN	**Pn**	**04 25 16.3**	**+1.4**
KONT	**Konya--Tatoy**	**1.76**	**62**	PN	**Pn**	**04 25 17.9**	**+2.2**
KONT	**Konya--Tatoy**	**1.76**	**62**	*i* P	**Pn**	**04 25 17.8**	**+2.1**
KONT				*i* S	**Sn**	**04 25 31.3**	**-6.1**
TURN	**Turunc**	**1.77**	**259**	PN	**Pn**	**04 25 16.7**	**+1.0**
TURN	**Turunc**	**1.77**	**259**	*i* P	**Pn**	**04 25 15.9**	**+0.3**
GAZI	**Gazipasa**	**1.78**	**120**	PN	**Pn**	**04 25 17.6**	**+1.7**
GAZI	**Gazipasa**	**1.78**	**120**	*i* P	**Pn**	**04 25 16.6**	**+0.7**
GAZI				*i* S	**Sn**	**04 25 35.3**	**-2.6**
MRSB	**Marmaris-Mugla**	**1.81**	**258**	PN	**Pn**	**04 25 17.2**	**+0.8**
LADK	**Ladik-KONYA**	**1.89**	**55**	PN	**Pn**	**04 25 19.3**	**+1.8**
USAK	**Uak-Merkez**	**1.93**	**326**	*i* P	**Pn**	**04 25 19.5**	**+1.6**
KDHN	**Kadinhani**	**1.94**	**44**	*i* P	**Pn**	**04 25 19.6**	**+1.5**
KDHN				*i* S	**Sn**	**04 25 37.1**	**-4.9**
KULA	**Kula-Manisa**	**1.95**	**316**	PN	**Pn**	**04 25 19.5**	**+1.2**
MANT	**Manisa**	**2.00**	**314**	*i* P	**Pn**	**04 25 19.9**	**+0.9**
KKBE	**Karaman, Kazim**	**2.03**	**87**	*i* P	**Pn**	**04 25 21.3**	**+2.0**
ARG	**Arkhangelos**	**2.04**	**244**	P	**Pn**	**04 25 19.2**	**-0.2**
ARG	195nm,0.3s			S	**Sn**	**04 25 43.8**	**-0.4**
ARG	**Arkhangelos**	**2.04**	**244**	PN	**Pn**	**04 25 20.2**	**+0.8**
ARG	**Arkhangelos**	**2.04**	**244**	P	**Pn**	**04 25 19.5**	**+0.1**
ARG				S	**Sn**	**04 25 44.4**	**+0.2**
GEDZ	**Gediz**	**2.07**	**338**	PN	**Pn**	**04 25 21.5**	**+1.7**
ERMK	**Ermenek**	**2.07**	**103**	*i* P	**Pn**	**04 25 22.4**	**+2.4**
GDZ	**Gediz**	**2.09**	**340**	*i* P	**Pn**	**04 25 21.9**	**+1.7**
MLSB	**Milas**	**2.10**	**275**	PN	**Pn**	**04 25 21.3**	**+1.1**
SHAP	**Saphane-Kutahy**	**2.11**	**334**	PN	**Pn**	**04 25 22.1**	**+1.7**
AUKIR	**Kırka- Seyitga**	**2.15**	**3**	*i* P	**Pn**	**04 25 23.4**	**+2.4**
DATC	**Datca-Mugla**	**2.23**	**261**	PN	**Pn**	**04 25 22.9**	**+1.0**
SIMA	**Simav-Kutahya**	**2.25**	**331**	PN	**Pn**	**04 25 23.9**	**+1.6**
ALIN	**Konya, Altinte**	**2.29**	**58**	*i* P	**Pn**	**04 25 24.5**	**+1.8**
CIFT	**Cifteler, Eski**	**2.29**	**13**	PN	**Pn**	**04 25 24.8**	**+2.0**
CIFT	**Cifteler, Eski**	**2.29**	**13**	*i* P	**Pn**	**04 25 24.9**	**+2.0**
DEMI	**Demirci**	**2.33**	**326**	*i* P	**Pn**	**04 25 24.9**	**+1.6**
TEKE	**Tekeli-Mersin**	**2.39**	**113**	PN	**Pn**	**04 25 26.6**	**+2.5**
BERE	**Bereket-Mersin**	**2.40**	**108**	PN	**Pn**	**04 25 26.8**	**+2.5**
ANDZ	**Kutahya, Merke**	**2.41**	**351**	*i* P	**Pn**	**04 25 26.4**	**+2.0**
SGAZ	**Eskisehir, Sey**	**2.42**	**8**	*i* P	**Pn**	**04 25 26.6**	**+2.0**
TVSB	**Tavsanli**	**2.43**	**343**	PN	**Pn**	**04 25 26.5**	**+1.8**
CHBY	**Cihanbeyli**	**2.45**	**53**	PN	**Pn**	**04 25 26.8**	**+1.9**
BODT	**Bodrum**	**2.47**	**269**	P	**Pn**	**04 25 26.0**	**+0.8**
BODT	**Bodrum**	**2.47**	**269**	PN	**Pn**	**04 25 26.0**	**+0.8**
AUSIV	**SIVRIHISAR**	**2.48**	**21**	PN	**Pn**	**04 25 27.2**	**+1.9**
AUSIV	**SIVRIHISAR**	**2.48**	**21**	*i* P	**Pn**	**04 25 27.8**	**+2.5**
SVRH	**Sivrihisar-ESK**	**2.48**	**20**	PN	**Pn**	**04 25 27.2**	**+1.9**
TEVE	**Tevekalti-Mers**	**2.54**	**105**	PN	**Pn**	**04 25 28.7**	**+2.6**
GCAM	**G?zelcaml?**	**2.59**	**284**	PN	**Pn**	**04 25 27.2**	**+0.5**
AKMS	**Akamas**	**2.62**	**143**	P	**Pn**	**04 25 27.2**	**0.0**
AKMS				S	**Sn**	**04 25 57.2**	**-0.9**
AKMS	0.5nm,0.3s			AML	AML	04 26 00.9	
AKMS	0.5nm,0.3s			AML	AML	04 26 00.9	
AKMS	0.7nm,0.2s			AML	AML	04 26 05.4	
AKMS	0.7nm,0.2s			AML	AML	04 26 05.4	
SULT	**Sultanhani-AKS**	**2.69**	**66**	PN	**Pn**	**04 25 30.9**	**+2.7**
AKKU	**Akkuyu-Mersin**	**2.71**	**110**	PN	**Pn**	**04 25 30.7**	**+2.3**
BORA	**Eskisehir**	**2.75**	**1**	PN	**Pn**	**04 25 30.8**	**+1.8**
BORA	**Eskisehir**	**2.75**	**1**	*i* P	**Pn**	**04 25 31.0**	**+2.0**
AKDN	**Akdeniz- Kıbrı**	**2.76**	**131**	PN	**Pn**	**04 25 31.1**	**+2.0**
KOSK	**Kos Island**	**2.77**	**263**	PN	**Pn**	**04 25 31.2**	**+2.1**
IKL	**Isikli**	**2.78**	**108**	PN	**Pn**	**04 25 32.1**	**+2.8**
LEF	**Lefka**	**2.84**	**134**	⇓P	**Pn**	**04 25 27.0**	**-3.2**
LEF				⇓S	**Sn**	**04 26 00.3**	**-3.1**
LEF	**Lefka**	**2.84**	**134**	PN	**Pn**	**04 25 30.6**	**+0.5**
KKUL	**Konya-Kulu**	**2.84**	**43**	*i* P	**Pn**	**04 25 30.1**	**-0.2**
AUMIH	**MIHALICIK**	**2.86**	**17**	PN	**Pn**	**04 25 32.8**	**+2.2**
AUMIH	**MIHALICIK**	**2.86**	**17**	*i* P	Pn	04 25 36.8	+6.2
DURS	**Dursunbey**	**2.90**	**329**	*i* P	**Pn**	**04 25 32.8**	**+1.8**
SRCK	**Saricakaya, Es**	**2.92**	**3**	PN	**Pn**	**04 25 33.5**	**+2.4**
SRCK	**Saricakaya, Es**	**2.92**	**3**	*i* P	**Pn**	**04 25 30.9**	**-0.2**
SILI	**Silifke-Mersin**	**2.93**	**104**	PN	**Pn**	**04 25 33.8**	**+2.5**
NATA	**Nata**	**2.93**	**142**	⇑P	**Pn**	**04 25 31.1**	**-0.2**
KERG	**Konya-Eregli**	**2.98**	**83**	*i* P	**Pn**	**04 25 35.3**	**+3.2**
KARP	**Karpathos**	**3.06**	**240**	P	**Pn**	**04 25 33.1**	**0.0**
KARP	310nm,0.2s			S	**Sn**	**04 26 07.5**	**-1.1**
KARP	**Karpathos**	**3.06**	**240**	PN	**Pn**	**04 25 34.2**	**+1.1**
KARP	**Karpathos**	**3.06**	**240**	P	**Pn**	**04 25 33.3**	**+0.3**
KARP				S	**Sn**	**04 26 08.5**	**-0.1**
KARP	0.3nm,0.2s			AML	AML	04 26 08.9	
KARP	0.3nm,0.2s			AML	AML	04 26 08.9	
KARP	0.4nm,0.2s			AML	AML	04 26 10.6	
KARP	0.4nm,0.2s			AML	AML	04 26 10.6	
BILE	**Bilecik/Merkez**	**3.06**	**352**	*i* P	**Pn**	**04 25 35.1**	**+2.0**
AKSY	**AKSARAY - Alti**	**3.06**	**59**	*i* P	Pn	04 25 41.1	+7.9
KIZK	**Mersin**	**3.07**	**101**	PN	**Pn**	**04 25 35.8**	**+2.6**
SZAC	**Souni**	**3.11**	**139**	P	**Pn**	**04 25 33.7**	**-0.1**
SZAC	0.4nm,0.5s			AML	AML	04 26 08.5	
SZAC	0.3nm,0.4s			AML	AML	04 26 09.8	
ATHAL	**Athalassa**	**3.13**	**128**	S	**Sn**	**04 26 10.5**	**+0.1**
CSS	**Mathiatis**	**3.21**	**131**	P	**Pn**	**04 25 34.7**	**-0.4**
BBAL	**Bala**	**3.22**	**41**	*i* P	Pn	04 25 41.0	+5.5
IGD	**Bursa**	**3.27**	**344**	*i* P	**Pn**	**04 25 37.8**	**+1.9**
ASGA	**Asgata**	**3.28**	**135**	⇓P	**Pn**	**04 25 36.4**	**+0.3**
ASGA	0.2nm,0.3s			AML	AML	04 26 15.5	
GEYV	**SAKARYA_Geyve**	**3.35**	**359**	*i* P	**Pn**	**04 25 39.3**	**+2.3**
MVOU	**Mavrovouni**	**3.36**	**128**	P	**Pn**	**04 25 37.2**	**0.0**
KIRS	**Kırehir-Merke**	**3.42**	**53**	*i* P	**Pn**	**04 25 37.8**	**-0.3**
BTAS	**Taskesti**	**3.47**	**8**	*i* P	**Pn**	**04 25 41.3**	**+2.6**
BRTR	**Keskin Array B** 5.9nm,0.3s,baz=219,slow=16,SNR=232	**3.63**	**43**	P	**Pn**	**04 25 42.7**	**+1.7**
BRTR	5.8nm,0.3s,baz=214,slow=27,SNR=29			S	**Sn**	**04 26 23.9**	**+1.2**
OSC1	**CSNet OBS 1**	**3.69**	**169**	P	**Pn**	**04 25 40.2**	**-1.4**
SAHE	**Sakarya_HENDEK**	**3.74**	**5**	*i* P	**Pn**	**04 25 44.9**	**+2.6**
KAYN	**Sakarya, Kayna**	**3.83**	**359**	*i* P	**Pn**	**04 25 44.5**	**+0.9**
APE	**Apeiranthos**	**3.90**	**271**	⇑P	**Pn**	**04 25 43.8**	**-0.6**
APE				⇓S	**Sn**	**04 26 28.6**	**-0.5**
YIGI	**Dzce**	**3.92**	**12**	*i* P	**Pn**	**04 25 47.7**	**+3.0**
DELI	**KIRIKKALE**	**3.98**	**43**	*i* P	**Pn**	**04 25 47.4**	**+1.8**
CDAG	**Cicekdag**	**3.99**	**50**	*i* P	**Pn**	**04 25 46.2**	**+0.4**
OSC2	**CSNet OBS 4**	**4.32**	**159**	P	**Pn**	**04 25 49.1**	**-1.1**
KOT	**Kottamia** baz=165	**7.28**	**170**	P	**Pn**	**04 26 30.8**	**+0.1**
HHAG	**Hagoal** baz=163	**7.29**	**168**	S	**Sn**	**04 27 44.6**	**-7.6**
HNAT	**Natroun** baz=174	**7.48**	**179**	P	**Pn**	**04 26 32.3**	**-1.0**
HNAT	baz=174			S	Sn	04 27 46.4	-10
TIRR	**Tirgusor**	**7.48**	**349**	⇑P	**Pn**	**04 26 36.2**	**+3.0**
SUZ	**Suez** baz=159	**7.54**	**164**	P	**Pn**	**04 26 35.1**	**+0.9**
HSAF	**As Saff** baz=167	**7.55**	**172**	P	**Pn**	**04 26 32.5**	**-1.9**
GLL	**Jalalah** baz=166	**7.61**	**171**	P	**Pn**	**04 26 34.5**	**-0.6**
TPGR	**Topolog**	**7.87**	**350**	⇓P	**Pn**	**04 26 41.0**	**+2.5**
CFR	**Carcaliu**	**8.22**	**349**	⇑P	**Pn**	**04 26 46.0**	**+2.7**
VRI	**Vrincioaia**	**9.15**	**344**	⇓P	**Pn**	**04 26 58.8**	**+2.7**
VOIR		**9.22**	**336**	⇓P	**Pn**	**04 26 60.0**	**+2.8**
HFRF	**Wahat Farafira** baz=189	**10.11**	**191**	P	**Pn**	**04 27 06.9**	**-2.3**
FINES	**FINESS Array B** 2.7nm,0.9s,baz=152,slow=12,SNR=1.2	**24.49**	**355**	P	**P**	**04 29 60.0**	**+1.7**
ESDC	**Sonseca Array** comp=Z,33nm,19.1s,baz=355,slow=34	**26.96**	**286**	LR	LR	04 40 26.0	
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=272,slow=7.7,SNR=9.3	**39.14**	**59**	P	**P**	**04 32 07.7**	**+1.1**
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=260,slow=8.6,SNR=2.4	**40.56**	**48**	P	**P**	**04 32 19.1**	**+0.9**

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*IDC **16** 04:33:13.2±0.8, 28°.34N×142°.89E, h0^{km}, mb3.8/11, mb1 4.0/14, mb1mx3.8/39, mbtmp3.8/14, ML3.3/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/32, Error ellipse: s-maj=25.8km s-min=13.9km az=94.0*
*NEIC **16** 04:33:17.4±2.1, 28°.38N±0°.06×142°.8E±0°.1, h32^{km}±6^{km}, mb4.3/17, Error ellipse: s-maj=16.5km s-min=9.2km az=97.0*
ISC 16 04:33:18.2±0.7**, 28°.39N**±0°.07×**142°.8E**±0°.1**, h35**^{km}**, n42, σ0^{s}.97**/41**, mb4.1**/16**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima** 24nm,0.3s,baz=3.9,slow=21,SNR=12	**1.39**	**202**	Pn	**Pn**	**04 33 40.3**	**-0.8**
JCJ	95nm,0.3s,baz=306,slow=23,SNR=14			Sn	**Sn**	**04 33 59.6**	**+1.3**
MJAR	**Matsushiro Arr** 0.4nm,0.3s,baz=133,slow=16,SNR=8.6	**8.99**	**336**	Pn	**Pn**	**04 35 24.9**	**-0.6**
MAJO	**Matsushiro**	**8.99**	**336**	Pn	**Pn**	**04 35 25.0**	**-0.5**
MAT	**Matsushiro**	**8.99**	**336**	P	**Pn**	**04 35 25.0**	**-0.5**
MJB9	**Matsu-Tunnel**	**8.99**	**336**		**Pn**	**04 35 26.5**	**+1.0**
JMN	**Monobe**	**9.29**	**307**	Pn	**Pn**	**04 35 29.4**	**-0.2**
JMM	**Marumori**	**9.59**	**351**	Pn	**Pn**	**04 35 32.6**	**-1.1**
KSRS	**Korea Array** 0.3nm,0.3s,baz=108,slow=14,SNR=2.3	**15.37**	**310**	Pn	**P**	**04 36 55.2**	**-1.5**
KSRS	comp=Z,38nm,18.3s,baz=120,slow=33			LR	LR	04 41 42.8	
KS19	**Wonju Array Si**	**15.44**	**310**	Pn	**Pn**	**04 36 53.8**	**+0.5**
KS19	comp=Z,50nm,1.5s			IAmb	IAmb	04 37 47.2	
ASAJ	**Asahikawa** comp=Z,34nm,21.0s,baz=237,slow=43	**15.69**	**360**	LR	LR	04 44 25.7	
USA0B	**Ussuriysk Arra**	**17.98**	**334**		**P**	**04 37 25.7**	**+0.2**
USA0B	comp=Z,32nm,1.9s			IAmb	IAmb	04 37 49.1	
USRK	**Ussuriysk Ar.** baz=146,slow=10,SNR=4.8	**17.98**	**334**	P	**P**	**04 37 27.0**	**+1.5**
MDJ	**Mudanjiang**	**19.30**	**331**	P	**Pn**	**04 37 41.4**	**+0.2**
KLR	**Kul'dur** comp=Z,1.2nm,0.4s,baz=150,slow=9.9,SNR=7.9	**22.46**	**341**	P	**P**	**04 38 16.0**	**+1.9**
H11N2	**WAKE ISLAND Hy** baz=297,slow=75,SNR=6.6	**23.63**	**106**	T	T	05 03 08.7	
H11N1	**WAKE ISLAND Hy** baz=297,slow=75,SNR=7.2	**23.64**	**106**	T	T	05 03 07.6	
H11N3	**WAKE ISLAND Hy** baz=297,slow=75,SNR=5.8	**23.65**	**106**	T	T	05 03 08.8	
HIA	**Hailar**	**27.30**	**326**	P	**P**	**04 38 58.3**	**-1.2**
HIA	comp=Z,6.6nm,1.0s			IAmb	IAmb	04 39 05.2	
ENH	**Enshi**	**29.01**	**282**	P	**P**	**04 39 13.8**	**-1.2**
ENH	comp=Z,5.2nm,0.7s			IAmb	IAmb	04 39 18.1	
ULN	**Ulaanbaatar**	**33.75**	**315**	P	**P**	**04 39 56.5**	**-0.1**
SONM	**Songino Array** comp=Z,1.4nm,0.7s,baz=112,slow=8.0,SNR=8.3	**34.15**	**315**	P	**P**	**04 40 01.2**	**+1.2**
LSA	**Lhasa**	**44.83**	**285**	P	**P**	**04 41 28.8**	**-0.8**
LSA	comp=Z,3.0nm,0.8s			IAmb	IAmb	04 42 19.8	
WB2	**Warramunga Arr**	**48.74**	**191**	P	**P**	**04 42 00.0**	**+0.5**
WRA	**Warramunga Arr** comp=Z,2.6nm,0.6s,baz=13,slow=8.6,SNR=13	**48.74**	**191**	P	**P**	**04 42 00.1**	**+0.6**
ZAA0	**Zalesovo Array**	**48.85**	**318**	P	**P**	**04 41 59.5**	**-0.6**
ZAA0	comp=Z,2.4nm,0.8s			IAmb	IAmb	04 43 37.4	
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.4s,baz=102,slow=7.2,SNR=5.7	**48.85**	**318**	P	**P**	**04 42 01.9**	**+1.8**
ZALV	comp=Z,0.8nm,0.6s,baz=104,slow=4.6,SNR=2.2			PcP	**PcP**	**04 43 24.8**	**+0.5**
MK31	**Makanchi Array**	**50.05**	**309**	P	**P**	**04 42 09.0**	**-0.5**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.7s,baz=81,slow=11,SNR=9.9	**50.05**	**309**	P	**P**	**04 42 10.2**	**+0.8**
MKAR	comp=Z,0.2nm,0.6s,baz=60,slow=5.7,SNR=1.3			PcP	**PcP**	**04 43 28.7**	**-0.2**
KURK	**Kurchatov**	**52.45**	**314**	P	**P**	**04 42 27.6**	**+0.3**
ASAR	**Alice Springs** comp=Z,0.4nm,0.4s,baz=8.0,slow=6.7,SNR=6.6	**52.46**	**190**	P	**P**	**04 42 27.1**	**-0.5**
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=267,slow=7.2,SNR=2.6	**56.33**	**29**	P	**P**	**04 42 56.2**	**+0.9**
KK31	**Karatay Array**	**58.75**	**305**	P	**P**	**04 43 13.0**	**+0.3**
KKAR	**Karatay Array**	**58.75**	**305**	P	**P**	**04 43 12.9**	**+0.2**
ABKAR	**Akbulak array**	**64.56**	**314**	P	**P**	**04 43 51.6**	**-0.1**
ABKAR	comp=Z,1.9nm,0.9s			IAmb	IAmb	04 44 17.2	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.5s,baz=295,slow=5.6,SNR=4.0	**70.76**	**29**	P	**P**	**04 44 30.9**	**+0.3**
KHMM	**Horse Mountain**	**74.48**	**52**	P	**P**	**04 44 51.3**	**-2.1**
KMRM	**Mail Ridge**	**74.77**	**52**	P	**P**	**04 44 54.2**	**-0.7**
FINES	**FINESS Array B** comp=Z,3.3nm,1.0s,baz=85,slow=4.0,SNR=4.6	**77.01**	**334**	P	**P**	**04 45 07.5**	**+0.3**
NVAR	**Mina Array Bea** comp=Z,0.1nm,0.4s,baz=291,slow=6.2,SNR=4.1	**79.32**	**52**	P	**P**	**04 45 21.1**	**+0.4**
YMP	**Mirror Lake Pl**	**81.52**	**44**	P	**P**	**04 45 30.4**	**-2.1**
RAYN	**Ar Rayn**	**85.09**	**294**	P	**P**	**04 45 51.9**	**+1.0**
BRTR	**Keskin Array B** comp=Z,0.5nm,0.7s,baz=118,slow=4.1,SNR=4.5	**85.49**	**313**	P	**P**	**04 45 52.8**	**-0.1**

IDC 16 04:46:49.8±3.1**, 23°.77N×142°.73E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.4**/34**, mbtmp3.6**/3**, Error ellipse: s-maj=368.2km s-min=30.7km az=109.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=13,slow=8.6,SNR=8.4	**44.21**	**191**	P	P	04 55 00.9	0.0
ASAR	**Alice Springs** 0.3nm,0.5s,baz=14,slow=7.6,SNR=5.2	**47.93**	**191**	P	P	04 55 29.9	-0.3
ILAR	**Eielson Array** 0.3nm,0.7s,baz=278,slow=6.8,SNR=2.4	**60.40**	**28**	P	P	04 57 00.6	0.0

IDC ***16*** *05:15:00.0±1.1, 24°.83N×141°.27E, h175km±11km, mb3.5/7, mb1 3.6/9, mb1mx3.3/35, mbtmp3.9/9, Error ellipse: s-maj=26.0km s-min=12.8km az=97.0*

ISC 16 05:14:60.0±0.7**, 24°.79N**±0°.10×**141°.3E**±0°.2**, h175**km**, n10,** σ**0.s78**/13**, mb3.5**/8**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.44	20	P	Pn	05 15 42.7	+1.0
	80nm,0.3s,baz=112,slow=5.4,SNR=23						
JCJ				S	Sn	05 16 13.5	-0.7
	134nm,0.3s,baz=273,slow=23,SNR=26						
KSRS	Korea Array	16.99	321	P	Pn	05 18 48.4	+1.1
	0.4nm,0.3s,baz=134,slow=12,SNR=4.5						
WRA	Warramunga Arr	44.97	189	P	P	05 22 58.1	+0.3
	15nm,0.3s,baz=7.8,slow=8.6,SNR=121						
WRA				PcP	PcP	05 24 36.4	+0.4
	0.8nm,0.4s,baz=360,slow=3.2,SNR=5.7						
ASAR	Alice Springs	48.70	189	P	P	05 23 26.6	-0.2
	0.5nm,0.5s,baz=3.2,slow=5.4,SNR=15						
ASAR				PcP	PcP	05 24 49.8	+0.6
	0.6nm,0.4s,baz=10,slow=3.0,SNR=7.8						
MKAR	Makanchi Array	51.32	311	P	P	05 23 46.1	-0.1
	0.5nm,0.4s,baz=85,slow=9.4,SNR=11						
STKA	Stephens Creek	56.35	180	P	P	05 24 22.6	-0.2
	3.2nm,0.5s,baz=348,slow=6.6,SNR=9.4						
ILAR	Eielson Array	60.13	28	P	P	05 24 48.4	-0.3
	0.8nm,0.8s,baz=266,slow=6.2,SNR=7.5						
YKA	Yellowknife Ar	74.56	28	P	P	05 26 18.9	-0.3
	0.5nm,0.7s,baz=294,slow=5.3,SNR=7.7						
FINES	FINESS Array B	79.63	334	P	P	05 26 46.0	-1.5
	3.5nm,0.9s,baz=88,slow=7.1,SNR=1.8						
NVAR	Mina Array Bea	82.60	51	P	P	05 27 04.5	+0.4
	0.5nm,0.6s,baz=297,slow=5.6,SNR=6.5						

KRSC ***16*** *05:47:37.9±2.2, 52°.40N×161°.03E, h59km±23km, ML4.2*

MOS ***16*** *05:47:41.8±0.9, 52°.56N×160°.83E, h46km, mb3.8/1, Error ellipse: s-maj=8.6km s-min=5.3km az=106.8*

IDC ***16*** *05:47:44.9±3.5, 52°.71N×160°.61E, h49km±30km, mb3.6/14, mb1 3.7/15, mb1mx3.5/47, mbtmp3.8/15, ML3.4/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/49, Error ellipse: s-maj=27.4km s-min=22.7km az=113.0*

ISC 16 05:47:38.6±1.9**, 52°.48N**±0°.06×**160°.96E**±0°.05**, h12**km±10km**, n80,** σ**1.s42**/87**, mb4.0**/14**, MS3.0**/3**, 1C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.84	318	PN	Pg	05 47 54.6	-0.3
SPN				S	Sg	05 48 05.5	-0.4
SPN	Mys Shipunski	0.84	318	*e*P	Pg	05 47 54.6	-0.3
SPN				*e*S	Sg	05 48 05.5	-0.4
NLC	Nalytchevo	1.20	306	PN	Pn	05 48 00.3	-0.9
NLC	Nalytchevo	1.20	306	*e*P	Pn	05 48 00.3	-0.9
DALK	Dalny	1.45	293	PN	Pn	05 48 04.6	-0.1
DALK	Dalny	1.45	293	*e*P	Pn	05 48 04.6	-0.1
UGLR	Uglovaya	1.49	300	PN	Pn	05 48 05.3	0.0
UGLR	Uglovaya	1.49	300	*e*P	Pn	05 48 05.3	0.0
RUS	Russkaya	1.50	269	PN	Pn	05 48 05.6	+0.3
RUS				S	Sn	05 48 24.5	-0.2
RUS	Russkaya	1.50	269	*e*P	Pn	05 48 05.6	+0.3
RUS				*e*S	Sn	05 48 24.5	-0.2
PET	Petropavlovsk	1.50	292	⇑*i*PN	Pn	05 48 05.7	+0.3
PET				*e*S	Sn	05 48 24.6	-0.4
PET				pmax	pmax		
	comp=Z,1µm,0.5s						
PET				smax	smax		
	comp=N,1µm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.6s						
PET	Petropavlovsk	1.50	292	*e*P	Pn	05 48 05.6	+0.2
PET				*e*S	Sn	05 48 24.5	-0.4
SMAR	Somma	1.52	302	PN	Pn	05 48 05.5	-0.4
SMAR	Somma	1.52	302	*e*P	Pn	05 48 05.5	-0.4
AVH	Avacha	1.56	301	PN	Pn	05 48 06.5	+0.2
AVH	Avacha	1.56	301	*e*P	Pn	05 48 06.5	+0.2
KRER	Koryakskii	1.57	303	PN	Pn	05 48 06.6	0.0
KRER	Koryakskii	1.57	303	*e*P	Pn	05 48 06.6	0.0
KOK	Koryaka	1.62	301	PN	Pn	05 48 07.2	0.0
KOK	Koryaka	1.62	301	*e*P	Pn	05 48 07.2	0.0
KRX	Arik	1.65	303	PN	Pn	05 48 07.4	-0.2
KRX	Arik	1.65	303	*e*P	Pn	05 48 07.4	-0.2
MTVR	Mutnovka	1.70	271	PN	Pn	05 48 08.8	+0.6
MTVR	Mutnovka	1.70	271	*e*P	Pn	05 48 08.8	+0.6
KRMR	Karymshinskiy	1.76	283	PN	Pn	05 48 09.6	+0.7
KRMR	Karymshinskiy	1.76	283	*e*P	Pn	05 48 09.6	+0.7
GRL	Gorelyy	1.76	274	PN	Pn	05 48 10.3	+1.2
GRL	Gorelyy	1.76	274	*e*P	Pn	05 48 10.3	+1.2
KDTR	Khodutka, Kamc	1.90	250	PN	Pn	05 48 11.0	+0.2
KDTR				S	Sn	05 48 33.1	-1.5
KDTR	Khodutka, Kamc	1.90	250	*e*P	Pn	05 48 11.0	+0.2
KDTR				*e*S	Sn	05 48 33.1	-1.5
PETK	Petropavlovsk-	2.08	289	P	Pn	05 48 13.8	+0.5
	comp=E,28nm,0.3s,baz=99,slow=18,SNR=415						
PETK				S	Sn	05 48 40.8	+1.7
	comp=E,26nm,0.3s,baz=97,slow=16,SNR=5.9						
PETK				LR	LR	05 48 44.9	
	comp=E,127nm,19.0s,baz=130,slow=33						
GNL	Ganaly	2.19	305	PN	Pn	05 48 16.4	+1.4
GNL	Ganaly	2.19	305	*e*P	Pn	05 48 16.4	+1.4
APC	Apacha	2.35	282	PN	Pn	05 48 18.9	+1.8
APC	Apacha	2.35	282	*e*P	Pn	05 48 18.9	+1.8
KZV	Kizimen	2.67	352	PN	Pn	05 48 22.6	+1.0
KZV	Kizimen	2.67	352	*e*P	Pn	05 48 22.6	+1.0
TUMD	Tumrok D	2.75	353	*e*P	Pn	05 48 23.2	+0.6
PAU	Pauzhetka	2.76	250	PN	Pn	05 48 23.7	+1.1
PAU	Pauzhetka	2.76	250	*e*P	Pn	05 48 23.7	+1.1
TUMR	Tumrok	2.85	351	PN	Pn	05 48 23.2	-0.9
TUMR	Tumrok	2.85	351	*e*P	Pn	05 48 25.6	+1.5
KMNR	Kamenistaya	3.31	353	PN	Pn	05 48 32.8	+2.4
KMNR	Kamenistaya	3.31	353	*e*P	Pn	05 48 32.8	+2.4
SKR	Severo-Kuril’s	3.51	241	*e*S	Sn	05 49 12.9	-1.6
ESO	Esso	3.70	340	PN	Pn	05 48 38.4	+2.8
ESO	Esso	3.70	340	*e*P	Pn	05 48 38.4	+2.8
KBTR	Krutoberegovo	3.89	16	PN	Pn	05 48 39.5	+1.2
KBTR	Krutoberegovo	3.89	16	*e*P	Pn	05 48 39.5	+1.2
SRDR	Sredinnyy	3.92	350	PN	Pn	05 48 40.0	+1.4
SRDR	Sredinnyy	3.92	350	*e*P	Pn	05 48 40.0	+1.4
KBG	Krutoberegovo	3.92	14	PN	Pn	05 48 41.9	+3.3
KBG	Krutoberegovo	3.92	14	*e*P	Pn	05 48 41.9	+3.3
BKI	Bering	4.04	45	PN	Pn	05 48 40.7	+0.5
BKI	Bering	4.04	45	*e*P	Pn	05 48 40.7	+0.5
BKI				*e*S	Sn	05 49 23.0	-4.3
BDR	Baidarnaya	4.10	2	PN	Pn	05 48 43.4	+2.2
BDR	Baidarnaya	4.10	2	*e*P	Pn	05 48 43.4	+2.2
SMKR	Semkarok	4.12	4	PN	Pn	05 48 43.8	+2.3
SMKR	Semkarok	4.12	4	*e*P	Pn	05 48 43.8	+2.3
SRKR	Sorokina	4.19	2	PN	Pn	05 48 42.8	+0.4
SRKR	Sorokina	4.19	2	*e*P	Pn	05 48 42.8	+0.4
MA2	Magadan	9.11	325	LR	LR	05 53 55.7	
	comp=E,86nm,18.0s,baz=162,slow=42						
KLR	Kul'dur	18.66	272	P	Pn	05 51 56.8	+0.2
	comp=E,0.1nm,0.3s,baz=26,slow=6.9,SNR=3.6						
KLR				LR	LR	05 59 10.4	
	comp=E,40nm,21.9s,baz=74,slow=37						
USRK	Ussuriysk Ar.	20.85	258	LR	LR	06 00 45.0	
	comp=E,57nm,19.3s,baz=47,slow=38						
MJAR	Matsushiro Arr	22.59	234	P	P	05 52 40.6	+1.7
	comp=E,1.4nm,0.5s,baz=20,slow=11,SNR=4.3						
MJAR				LR	LR	06 01 41.0	
	comp=E,34nm,18.2s,baz=230,slow=37						
JCJ	Chichijima	28.99	216	LR	LR	06 05 32.9	
	comp=E,40nm,19.2s,baz=334,slow=37						
SONM	Songino Array	34.56	285	P	P	05 54 26.2	-0.8
	comp=E,0.2nm,0.4s,baz=63,slow=7.2,SNR=2.2						
KURK	Kurchatov	48.51	303	P	P	05 56 18.9	-2.1
KURBB	Kurchatov Arra	48.61	303	P	P	05 56 18.9	-2.9
	comp=E,0.8nm,0.4s,baz=57,slow=7.3,SNR=7.0						
MKAR	Makanchi Array	48.90	297	P	P	05 56 21.9	-2.2
	comp=E,0.4nm,0.5s,baz=55,slow=6.4,SNR=8.6						
BVAR	Borovoye Array	51.18	309	P	P	05 56 38.9	-2.4
	comp=E,0.8nm,0.5s,baz=42,slow=16,SNR=7.7						
ARCES	ARCESS Array B	54.03	342	P	P	05 57 01.5	-0.7
	comp=E,2.7nm,0.9s,baz=32,slow=10.0,SNR=6.2						
CMAR	Chiang Mai Arr	58.57	259	P	P	05 57 36.8	+1.5
	comp=E,1.9nm,0.3s,baz=34,slow=7.1,SNR=5.3						
FINES	FINESS Array B	60.89	337	P	P	05 57 50.7	+0.1
	comp=E,1.9nm,0.6s,baz=28,slow=8.6,SNR=8.7						
NOA	NORSAR Array B	64.28	344	P	P	05 58 12.5	-0.8
	comp=E,0.9nm,0.8s,baz=5.3,slow=4.8,SNR=1.7						
AKASG	Malin Array Be	69.41	330	P	P	05 58 45.9	-0.1
	comp=E,0.8nm,0.4s,baz=30,slow=6.5,SNR=4.1						
KBZ	Khabaz	70.34	317	P	P	05 58 52.2	+0.4
	comp=E,2.7nm,0.9s,baz=104,slow=8.3,SNR=5.5						
TXAR	Lajitas Array	70.39	67	P	P	05 58 53.9	+1.3
	comp=E,0.1nm,0.5s,baz=305,slow=5.1,SNR=6.1						
BRTR	Keskin Array B	77.43	321	P	P	05 59 33.9	+0.2
	comp=E,0.4nm,0.6s,baz=150,slow=2.7,SNR=3.5						
ASAR	Alice Springs	79.42	205	P	P	05 59 45.9	+1.4
	comp=E,0.2nm,0.5s,baz=19,slow=5.8,SNR=4.5						

MEX ***16*** *05:52:33.9±0.8, 13°.92N×93°.67W, h10km±44km, MD4.0*

GCG ***16*** *05:53:03.7±0.5, 14°.21N×91°.39W, h0km±338km, MD2.8*

ISC 16 05:52:36.3±4.8**, 14°.1N**±0°.1×**93°.5W**±0°.1**, h27**km±26km**, n16,** σ**1.s56**/23**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.45	55	*e*P	Pn	05 53 00.0	-0.8
THIG				*e*S	Sb	05 53 20.6	0.0
PCIG		1.64	9	*e*P	Pn	05 53 02.0	-1.4
PCIG				*i* S	Sn	05 53 23.6	0.0
CCIG	Comitan	2.55	31	*i* P	Pn	05 53 16.0	-0.2
CCIG				*i* S	Sn	05 53 47.6	+1.1
FUG	Fuego 3	2.60	82	*e*P	Pn	05 53 16.7	-0.2
FUG				*e*S	Sn	05 53 47.1	-0.5
FUG	Fuego 3	2.60	82	*e*P	Pn	05 53 16.7	-0.2
FUG	Fuego 3	2.60	82	*e*P	Sn	05 53 43.8	-3.8
TGIG		2.71	8	*i* P	Pn	05 53 18.2	+0.1
TGIG				*e*S	Sn	05 53 51.4	+1.3
PCG	Pacaya	2.82	83	*e*P	Pn	05 53 20.0	+0.1
PCG				*e*S	Sn	05 53 53.7	+0.6
PCG	Pacaya	2.82	83	*e*P	Pn	05 53 20.0	+0.1
PCG	Pacaya	2.82	83	*e*P	Sn	05 53 50.9	-2.3
IXG	Ixpaco	2.96	88	*e*P	Pn	05 53 22.5	+0.6
IXG				*e*S	Sn	05 53 56.1	-0.6
IXG	Ixpaco	2.96	88	*e*P	Pn	05 53 22.5	+0.6
IXG	Ixpaco	2.96	88	*e*P	Sn	05 53 55.7	-0.9
NBG	Las Nubes	3.09	80	*e*P	Pn	05 53 25.4	+1.7
NBG	Las Nubes	3.09	80	*e*P	Pn	05 53 25.4	+1.7
NBG	Las Nubes	3.09	80	*e*S	Sn	05 54 03.5	+3.5

KRSC ***16*** *05:56:54.9±0.8, 56°.02N×160°.86E, h169km±7km, ML3.6*

IDC ***16*** *05:56:56.3±3.0, 56°.14N×160°.55E, h162km±41km, mb3.3/6, mb1 3.5/7, mb1mx3.1/59, mbtmp3.7/7, Error ellipse: s-maj=41.8km s-min=22.7km az=1.0*

ISC 16 05:56:56.2±0.7**, 56°.00N**±0°.04×**160°.82E**±0°.05**, h166**km±5km**, n42,** σ**0.s86**/64**, mb3.5**/6**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZWR	Bezymyannyi-We	0.18	258	P	Pn	05 57 18.7	0.0
BZMR	Bezymyannaya	0.20	250	P	Pn	05 57 18.4	-0.3
BZMR				S	Sn	05 57 36.4	+0.6
KRSR	Krestovskiy	0.26	327	P	Pn	05 57 18.0	-0.7
KRSR				S	Sn	05 57 35.5	-0.5
KIRR	Kirishev	0.27	260	P	Pn	05 57 18.2	-0.6
KIRR				S	Sn	05 57 35.6	-0.5
KLY	Klyuchi	0.32	344	P	Pn	05 57 18.4	-0.3
KLY				S	Sn	05 57 36.1	0.0
KMNR	Kamenistaya	0.41	233	P	Pn	05 57 19.0	-0.2
KMNR				S	Sn	05 57 37.8	+1.1
KOZ	Kozyrevsk	0.53	276	P	Pn	05 57 19.1	-0.5
KOZ				S	Sn	05 57 37.5	0.0
BDR	Baidarnaya	0.61	21	P	Pn	05 57 19.9	-0.1
BDR				S	Sn	05 57 39.1	+0.7
SRKR	Sorokina	0.68	17	P	Pn	05 57 20.2	-0.2
SRKR				S	Sn	05 57 39.6	+0.5
SMKR	Semkarok	0.69	32	P	Pn	05 57 20.8	+0.4
SMKR				S	Sn	05 57 39.8	+0.7
SRDR	Sredinnyy	0.69	298	P	Pn	05 57 19.7	-0.8
SRDR				S	Sn	05 57 38.4	-0.7
TUMR	Tumrok	0.81	208	P	Pn	05 57 21.9	+0.5
TUMR				S	Sn	05 57 41.7	+1.1
TUMD	Tumrok D	0.84	197	P	Pn	05 57 21.3	-0.1
TUMD				S	Sn	05 57 40.8	+0.2
KZV	Kizimen	0.94	199	P	Pn	05 57 22.3	0.0
KBG	Krutoberegovo	1.09	76	P	Pn	05 57 23.2	0.0
KBG				S	Sn	05 57 44.4	+0.5
KBTR	Krutoberegovo	1.14	79	P	Pn	05 57 23.5	-0.1
KBTR				S	Sn	05 57 44.7	-0.1
ESO	Esso	1.19	267	P	Pn	05 57 23.9	-0.2
ESO				S	Sn	05 57 46.3	+0.7
GNL	Ganaly	2.85	217	P	Pn	05 57 42.9	+0.4
GNL				S	Sn	05 58 18.9	+0.6
KRX	Arik	2.93	206	P	Pn	05 57 44.2	+0.7
SPN	Mys Shipunski	2.95	189	P	Pn	05 57 42.1	-1.5
SPN				S	Sn	05 58 17.0	-3.3
KRER	Koryakskii	2.96	205	P	Pn	05 57 45.3	+1.4
NLC	Nalytchevo	2.96	197	S	Sn	05 58 20.5	-0.1
SMAR	Somma	2.98	204	P	Pn	05 57 45.4	+1.2
KOK	Koryaka	3.00	206	P	Pn	05 57 45.5	+1.2
AVH	Avacha	3.00	205	P	Pn	05 57 45.5	+1.2
UGLR	Uglovaya	3.03	203	P	Pn	05 57 45.6	+0.9
BKI	Bering	3.03	103	P	Pn	05 57 44.6	+0.1
BKI				S	Sn	05 58 21.5	-0.6
PALN	Palana	3.13	352	P	Pn	05 57 45.5	-0.2
DALK	Dalny	3.21	203	P	Pn	05 57 47.1	+0.3
DALK				S	Sn	05 58 25.8	-0.3
PETK	Petropavlovsk-	3.42	213	P	Pn	05 57 50.0	+0.5
	1.3nm,0.3s,baz=54,slow=16,SNR=14						
OSSR	Ossora	3.47	19	P	Pn	05 57 50.3	+0.3
KRMR	Karymshinskiy	3.54	207	P	Pn	05 57 51.7	+0.7
KRMR				S	Sn	05 58 34.5	+0.8
APC	Apacha	3.75	216	P	Pn	05 57 54.7	+1.1
GRL	Gorelyy	3.81	206	P	Pn	05 57 55.5	+0.9
RUS	Russkaya	3.82	202	P	Pn	05 57 54.3	-0.3
RUS				S	Sn	05 58 38.0	-2.0
MTVR	Mutnovka	3.85	205	P	Pn	05 57 56.2	+1.1
MTVR				S	Sn	05 58 41.2	+0.3
ILAR	Eielson Array	26.53	49	P	P	06 02 18.1	+0.2
	0.4nm,0.5s,baz=262,slow=7.2,SNR=11						
YKA	Yellowknife Ar	40.77	45	P	P	06 04 21.3	+0.9
	0.5nm,0.5s,baz=307,slow=7.1,SNR=9.1						
SPITS	Spitsbergen Ar	44.33	350	P	P	06 04 48.6	-0.4
	3.7nm,0.6s,baz=54,slow=7.3,SNR=36						
MKAR	Makanchi Array	47.32	294	P	P	06 05 11.3	-1.5
	0.2nm,0.4s,baz=55,slow=6.9,SNR=4.3						
FRB	Frobisher Bay	54.67	24	P	P	06 06 06.3	-0.9
	1.4nm,0.3s,baz=326,slow=8.2,SNR=19						
TXAR	Lajitas Array	69.14	68	P	P	06 07 46.0	+1.5
	0.5nm,0.6s,baz=287,slow=5.4,SNR=8.6						

REY ***16*** *06:02:26.8, 64°.66N×17°.48W, h10km*

IDC ***16*** *06:02:27.1±0.7, 64°.57N×17°.66W, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/42, mbtmp3.8/12, ML4.1/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/52, Error ellipse: s-maj=24.0km s-min=10.5km az=21.0*

ISC 16 06:02:27.4±0.5**, 64°.66N**±0°.02×**17°.44W**±0°.03**, h10**km**, n44,** σ**1.s91**/57**, mb3.6**/11**, MS3.1**/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.14	13	P	Pg	06 02 29.8	-0.8
	baz=21						
IDYN				S	Sg	06 02 32.6	-0.2
	baz=21						
IURH	Urdarhals	0.20	38	P	Pg	06 02 31.2	-0.5
	baz=42						
IHAM	Hamarinn	0.24	223	P	Pg	06 02 31.4	-1.0
	baz=219						
IHAM				S	Sg	06 02 35.2	-0.7
	baz=219						
ISKR	Skrokkalda	0.42	257	P	Pg	06 02 34.3	-1.4
	baz=256						
ISKR				S	Sb	06 02 40.7	-2.7
	baz=256						
THOR	Thorvaldshraun	0.43	49	P	Pb	06 02 35.0	-2.0
	baz=52						
THOR				S	Sb	06 02 41.7	-1.9
	baz=52						
IKRE	Kreppuhraun	0.47	74	P	Pb	06 02 35.5	-2.2
	baz=75						
IJOK	Jokulheimar	0.48	225	P	Pg	06 02 35.5	-1.3
	baz=223						
IASK	Askja	0.52	40	P	Pb	06 02 36.3	-2.3
	baz=42						
IASK				S	Sb	06 02 43.5	-2.7
	baz=42						
IMKO	Mokollar	0.57	55	P	Pb	06 02 37.3	-2.1
	baz=57						
IMKO				S	Sb	06 02 46.1	-1.6
	baz=57						
IIEY	Innrieyrar	0.64	208	P	Pg	06 02 38.3	-1.5
	baz=206						
IIEY				S	Sg	06 02 47.2	-0.9
	baz=206						
IKSK	Karasker	0.65	140	P	Pg	06 02 38.6	-1.4
	baz=139						
ISVA	Svartarkot	0.69	6	P	Pg	06 02 38.9	-1.7
	baz=8.0						
ISVA				S	Sb	06 02 48.7	-2.2
	baz=8.0						
IKAL	Kalfafell	0.72	189	P	Pg	06 02 39.9	-1.4
	baz=187						
IKAL				S	Sg	06 02 49.9	-0.7
	baz=187						
IVSH	V-Sauoahnukur	0.75	78	P	Pg	06 02 40.3	-1.5
	baz=78						
IVSH				S	Sb	06 02 50.7	-2.1
	baz=78						
IFAG	Fagurholsmyri	0.86	156	P	Pg	06 02 42.2	-1.6
	baz=155						
IFAG				S	Sb	06 02 54.4	-1.5
	baz=155						
IADA	Aoalbol	0.88	65	P	Pg	06 02 42.2	-2.0
	baz=66						
IADA				S	Sg	06 02 54.2	-1.4
	baz=66						
IHVE	Hveravellir	0.94	284	P	Pg	06 02 42.6	-2.8
	baz=284						
IMEL	Melhnausar	0.97	20	P	Pg	06 02 43.8	-2.3
	baz=21						
IMEL				S	Sb	06 02 57.4	-1.8
	baz=21						
IREN	Reynihlio	1.02	13	P	Pg	06 02 44.5	-2.4
	baz=14						
ISNB	Snabyli	1.06	210	S	Sb	06 03 00.3	-1.4
	baz=209						
ISNB				P	Pg	06 02 45.4	-2.4
	baz=209						
IKVO	Krokottuvotn	1.09	12	P	Pg	06 02 45.6	-2.7
	baz=13						
IGRS	Grimsstaoir	1.13	29	P	Pb	06 02 46.4	-2.5
	baz=30						
IFED	Fedgar	1.17	238	P	Pb	06 02 47.2	-2.5
	baz=237						
IRJU	Rjupnafell	1.18	208	P	Pb	06 02 47.5	-2.3
	baz=207						
IMJO	Mjoaskard	1.22	234	P	Pn	06 02 48.0	-2.5
	baz=234						
ISKI	Skildingahlsh	1.23	8	P	Pn	06 02 47.9	-2.7
	baz=8.8						
IGHA	Grjothals	1.23	15	P	Pn	06 02 48.1	-2.6
	baz=16						
BORG	Borgarnes	1.67	275	Pg	Pn	06 02 54.5	-2.1
	34nm,0.3s,baz=98,slow=8.6,SNR=83						
BORG				Lg	Lg	06 03 18.7	
	23nm,0.3s,baz=72,slow=23,SNR=18						
SCO	Scoresbysund	6.10	346	*e*	Pn	06 03 52.2	-5.2
	baz=173,slow=7.4						
SCO				*i* P	Pn	06 03 58.2	+0.8
SCO				IAML		06 04 55.5	
	comp=Z,1.2nm,0.5s						
SCO				*i* S	Sn	06 05 11.2	+4.1
EKA	Eskdalemuir Ar	11.73	136	Pn	Pn	06 05 14.6	0.0
	baz=324,slow=13,SNR=7.4						
ARCES	ARCESS Array B	17.10	55	LR	LR	06 11 39.1	
	comp=Z,49nm,18.9s,baz=255,slow=32						
FRB	Frobisher Bay	21.77	291	P	P	06 07 20.4	+1.6
	comp=Z,3.0nm,1.0s,baz=59,slow=12,SNR=4.1						
GERES	GERESS Array B	22.93	119	P	P	06 07 33.2	+1.8
	comp=Z,1.5nm,1.0s,baz=314,slow=6.7,SNR=5.2						
VRAC	Vranov	23.67	114	LR	LR	06 17 37.0	
	comp=Z,110nm,21.7s,baz=308,slow=38						
ESDC	Sonseca Array	26.24	156	P	P	06 08 03.8	+1.5
	comp=Z,0.9nm,0.8s,baz=356,slow=9.4,SNR=4.9						
ESDC				LR	LR	06 17 33.2	
	comp=Z,63nm,18.5s,baz=245,slow=35						
RES	Resolute Bay	26.49	324	LR	LR	06 18 42.5	
	comp=Z,40nm,19.1s,baz=52,slow=37						
BRTR	Keskin Array B	38.45	105	P	P	06 09 52.5	+3.3
	comp=Z,1.0nm,1.0s,baz=321,slow=7.3,SNR=2.9						
BRTR				LR	LR	06 25 33.3	
	comp=Z,7.3nm,18.8s,baz=323,slow=36						
YKA	Yellowknife Ar	39.24	313	P	P	06 09 56.2	+0.9
	comp=Z,1.7nm,1.1s,baz=44,slow=8.5,SNR=9.4						
YKA				PcP	PcP	06 12 05.9	+2.0
	comp=Z,0.1nm,0.4s,baz=33,slow=4.2,SNR=3.8						
ILAR	Eielson Array	45.70	332	P	P	06 10 49.5	+1.7
	comp=Z,1.3nm,1.0s,baz=24,slow=5.7,SNR=7.7						
ILAR				PcP	PcP	06 12 26.9	+1.4
	comp=Z,0.7nm,0.9s,baz=0.0,slow=2.3,SNR=4.2						
MKAR	Makanchi Array	52.71	58	P	P	06 11 43.0	+1.4
	comp=Z,0.6nm,0.8s,baz=348,slow=5.1,SNR=6.0						
TORD	Torodi Ar. Bea	53.12	156	P	P	06 11 44.7	-0.3
	comp=Z,1.3nm,0.9s,baz=341,slow=7.4,SNR=3.9						
PDAR	Pinedale Array	53.20	293	P	P	06 11 45.8	+0.1
	comp=Z,2.0nm,0.9s,baz=54,slow=7.5,SNR=12						
DBIC	Dimbokro	58.58	165	P	P	06 12 25.2	+1.1
	comp=Z,3.5nm,0.9s,baz=343,slow=7.8,SNR=3.7						
TXAR	Lajitas Array	62.31	280	P	P	06 12 50.3	+0.7
	comp=Z,0.8nm,1.0s,baz=104,slow=5.3,SNR=4.7						

NEIC ***16*** *06:22:50.9±2.6, 14°.62N±0°.03×92°.64W±0°.04, h58km±15km, Error ellipse: s-maj=6.5km s-min=2.5km az=134.0*

MEX ***16*** *06:22:50.2±0.5, 14°.50N×92°.59W, h63km±14km, MD4.5*

IDC ***16*** *06:22:51.3±1.0, 14°.85N×92°.14W, h70km±7km, mb3.6/6, mb1 4.0/8, mb1mx3.6/41, mbtmp3.9/8, MS3.2/4, Ms1 3.2/4, ms1mx2.8/31, Error ellipse: s-maj=42.1km s-min=15.7km az=51.0*

GCG ***16*** *06:22:53.4±0.6, 14°.57N×92°.39W, h84km±40km, MD4.5*

UCR ***16*** *06:22:53.3±1.1, 14°.58N×92°.40W, h55km±13km, ML4.0, mb4.2(NEIC)*

SNET ***16*** *06:22:53.3±1.0, 14°.58N×92°.39W, h57km±10km, ML4.3*

ISC 16 06:22:50.7±0.7**, 14°.57N**±0°.05×**92°.62W**±0°.04**, h63**km±6km**, n102,** σ**1.s13**/128**, mb3.9**/6**, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.48	45	*e*P	Pn	06 23 01.6	-1.1
THIG		0.48	45		Pn	06 23 01.6	-1.1
RTAL	Retalhuleu	0.90	93	*e*P	Pn	06 23 07.1	-0.4
RTAL				*e*S	Sn	06 23 17.6	-2.3
RTAL	Retalhuleu	0.90	93		Pn	06 23 07.0	-0.5
RTAL				Sn	Sn	06 23 19.3	-0.6
PCIG		1.27	333	*i* P	Pn	06 23 11.7	-0.7
PCIG				*e*S	Sn	06 23 27.5	-1.2
PCIG		1.27	333		Pn	06 23 11.7	-0.7
PCIG					Sn	06 23 27.5	-1.2
HUEH	Huehuetenango	1.31	55	⇑*e*P	Pn	06 23 13.5	+0.4
HUEH				*e*S	Sn	06 23 30.3	+0.4
HUEH				IAML		06 23 35.7	
	comp=Z,13µm,0.3s						
HUEH	Huehuetenango	1.31	55		Pn	06 23 13.7	+0.5
HUEH				Sn	Sn	06 23 31.6	+1.6
FUG	Fuego 3	1.72	94	*e*P	Pn	06 23 19.4	+0.8
FUG				*e*S	Sn	06 23 40.4	+0.7
CCIG	Comitan	1.77	15	*i* P	Pn	06 23 20.3	+1.0
CCIG				*i* S	Sn	06 23 42.6	+1.7
CCIG	Comitan	1.77	15		Pn	06 23 20.2	+1.0
CCIG				Sn	Sn	06 23 40.1	-0.7
PCG	Pacaya	1.96	95	*e*P	Pn	06 23 23.1	+1.3
PCG				*e*S	Sn	06 23 46.0	+0.5
IXG	Ixpaco	2.15	100	*e*P	Pn	06 23 24.3	0.0
IXG	Ixpaco	2.15	100	*e*P	Pn	06 23 24.3	0.0
IXG	Ixpaco	2.15	100	*e*P	Pn	06 23 25.4	+1.1
NBG	Las Nubes	2.20	89	*e*P	Pn	06 23 26.8	+1.6
TGBT	Tuxtla Gutierr	2.25	348	*e*P	Pn	06 23 24.8	-0.7
TGBT				*i* S	Sn	06 23 51.4	-0.7
TGBT	Tuxtla Gutierr	2.25	348		Pn	06 23 24.8	-0.7
TGBT					Sn	06 23 51.4	-0.7
TGIG		2.25	348	*e*P	Pn	06 23 24.7	-1.0
TGIG				*i* S	Sn	06 23 52.0	-0.5
TGIG		2.25	348		Pn	06 23 24.7	-1.0
TGIG					Sn	06 23 52.0	-0.5
MRL	Marmol	2.88	79	*e*P	Pn	06 23 34.5	0.0
MRL	Marmol	2.88	79	*e*P	Pn	06 23 34.5	0.0
MRL	Marmol	2.88	79	*e*P	Pn	06 23 35.4	+0.9
RTR	El Retiro	2.96	103	*e*P	Pn	06 23 35.5	+0.1
RTR	El Retiro	2.96	103	*e*P	Pn	06 23 35.5	+0.1
SBLS	San Blas	2.99	104	*e*P	Pn	06 23 36.4	+0.4
SBLS	San Blas	2.99	104	*e*P	Pn	06 23 36.4	+0.4

CEVE	Cerro Verde	3.00	104	*e*P	Pn	06 23 37.2	+1.2
CEVE				*e*S	Sn	06 24 10.1	-0.7
CEVE				IAML		06 24 21.9	
	comp=Z,2μm,0.5s						
CEVE	Cerro Verde	3.00	104	*e*P	Pn	06 23 37.2	+1.2
CEVE				*e*S	Sn	06 24 10.1	-0.7
CEVE				IAML		06 24 21.9	
	comp=Z,2μm,0.5s						
SNJE	San Jose	3.00	103	*e*P	Pn	06 23 36.8	+0.8
SNJE				*e*S	Sn	06 24 10.1	-0.9
SNJE	San Jose	3.00	103	*e*P	Pn	06 23 36.8	+0.8
SNJE				*e*S	Sn	06 24 10.1	-0.9
ESQI	Esquipulas	3.17	90	*e*P	Pn	06 23 38.2	-0.1
ESQI	Esquipulas	3.17	90	Pn	Pn	06 23 38.0	-0.3
JAYA	Jayaque - finc	3.21	106	*e*P	Pn	06 23 39.1	+0.3
JAYA				*e*S	Sn	06 24 13.7	-2.2
JAYA				IAML		06 24 23.2	
	comp=Z,842nm,0.3s						
JAYA	Jayaque - finc	3.21	106	*e*P	Pn	06 23 39.1	+0.3
JAYA				*e*S	Sn	06 24 13.7	-2.2
JAYA				IAML		06 24 23.2	
	comp=Z,842nm,0.3s						
CEDA	San Andres	3.22	103	*e*P	Pn	06 23 39.3	+0.4
CEDA	San Andres	3.22	103	*e*P	Pn	06 23 39.3	+0.4
TACO	Tacachico	3.22	100	*e*P	Pn	06 23 38.5	-0.4
TACO	Tacachico	3.22	100	*e*P	Pn	06 23 38.5	-0.4
PMON	Piamonte	3.31	104	*e*P	Pn	06 23 40.5	+0.3
PMON	Piamonte	3.31	104	*e*P	Pn	06 23 40.5	+0.3
CMIG	Matias Romero	3.33	319	P	Pn	06 23 41.0	+0.7
	comp=Z,12nm,0.3s,baz=142,slow=15,SNR=104						
CMIG				S	Sn	06 24 20.0	+1.4
	comp=Z,64nm,0.3s,baz=67,slow=21,SNR=9.3						
CMIG				LR	LR	06 25 20.6	
	comp=Z,79nm,20.7s,baz=194,slow=43						
CMIG	Matias Romero	3.33	319	*e*P	Pn	06 23 40.0	-0.3
CMIG				*i* S	Sn	06 24 18.8	+0.2
CMIG	Matias Romero	3.33	319		Pn	06 23 40.0	-0.3
CMIG					Sn	06 24 18.8	+0.2
BOQS	Boqueron	3.34	104	*e*P	Pn	06 23 41.9	+1.2
BOQS	Boqueron	3.34	104	*e*P	Pn	06 23 41.9	+1.2
PETF	Flores	3.53	48	*e*P	Pn	06 23 42.8	-0.3
PETF	Flores	3.53	48	Pn	Pn	06 23 43.0	-0.2
LBRS	Las Brisas	3.56	103	*e*P	Pn	06 23 43.6	-0.1
LBRS	Las Brisas	3.56	103	*e*P	Pn	06 23 43.6	-0.1
HUIG	Huatulco	3.58	290	*e*P	Pn	06 23 42.1	-1.6
HUIG	Huatulco	3.58	290		Pn	06 23 42.1	-1.6
PAVA	Las Pavas	3.67	103	*e*P	Pn	06 23 44.9	-0.2
PAVA				IAML		06 24 48.2	
	comp=Z,168nm,0.4s						
PAVA	Las Pavas	3.67	103	*e*P	Pn	06 23 44.9	-0.2
PAVA				IAML		06 24 48.2	
	comp=Z,168nm,0.4s						
TECA	Tecapa	4.13	104	*e*P	Pn	06 23 52.1	+0.6
TECA	Tecapa	4.13	104	*e*P	Pn	06 23 52.1	+0.6
SCIG	Sabancuy	4.59	17	*e*P	Pn	06 23 56.1	-1.4
SCIG	Sabancuy	4.59	17		Pn	06 23 56.1	-1.4
PEIG	Puerto Escondi	4.60	289	*e*P	Pn	06 23 56.8	-0.9
VHO	Vista Hermosa	4.68	303	*e*P	Pn	06 23 59.4	+0.3
VHO				*e*S	Sn	06 24 51.6	-0.5
LCND	La Caada	4.76	105	*e*P	Pn	06 24 00.1	+0.2
LCND				IAML		06 25 02.7	
	comp=Z,161nm,0.4s						
LCND	La Caada	4.76	105	*e*P	Pn	06 24 00.1	+0.2
LCND				IAML		06 25 02.7	
	comp=Z,161nm,0.4s						
TGUH	Tegucigalpa,Un	5.21	95	Pn	Pn	06 24 06.8	+0.7
YOIG	Yosondua	5.26	296	*e*P	Pn	06 24 06.3	-0.8
TOIG	Toxpalan	5.53	310	*e*P	Pn	06 24 11.7	+1.2
PNIG	Pinotepa	5.61	290	*e*P	Pn	06 24 11.5	-0.2
PNIG	Pinotepa	5.61	290		Pn	06 24 11.5	-0.2
TXIG	Tlaxiaco	5.63	299	*e*P	Pn	06 24 12.5	+0.4
CRIN	San Cristobal	5.72	108		Pn	06 24 13.4	+0.2
HLIG	Huajuapan de L	5.95	304	*e*P	Pn	06 24 15.9	-0.5
TLIG	Tlapa	6.45	298	Pn	Pn	06 24 25.2	+2.0
TEIG	Tepich	6.99	36	Pn	Pn	06 24 28.7	-1.8
ACON	Acoyapa	7.69	109	Pn	Pn	06 24 42.7	+2.6
JTS	Las Juntas de	8.61	119	P	Pn	06 24 53.3	+0.6
	comp=Z,3.3nm,0.3s,baz=9.1,slow=19,SNR=13						
JTS	Las Juntas de	8.61	119	Pn	Pn	06 24 54.6	+2.0
FSCY	Frank Sound, G	11.91	65	Pn	Pn	06 25 37.5	-0.3
MTDJ	Mount Denham	14.92	74	Pn	Pn	06 26 18.6	+0.4
553A	Crawfordville	17.28	25		Pn	06 26 47.5	-0.3
BRAL	Brewton	17.30	16		P	06 26 49.5	+0.9
BRAL				IAmb	IAmb	06 26 50.1	
	comp=Z,32nm,0.8s						
TXAR	Lajitas Array	17.90	327	P	Pn	06 26 57.2	+1.8
	comp=Z,0.1nm,0.3s,baz=151,slow=11,SNR=23						
TX31	Lajitas Ar. Si	17.90	327	P	P	06 26 55.7	+0.3
TX31				IAmb	IAmb	06 27 00.5	
	comp=Z,21nm,1.2s						
TX32	Lajitas Array	17.90	327	P	P	06 26 56.7	+1.3
WHTX	Lake Whitney,	17.90	347	P	P	06 26 54.2	-1.0
352A	Blakely	18.25	21	P	P	06 26 58.2	-0.9
352A				IAmb	IAmb	06 27 02.2	
	comp=Z,44nm,1.4s						
250A	Grady	18.28	17	P	P	06 26 59.5	+0.1
250A				IAmb	IAmb	06 27 01.0	
	comp=Z,21nm,1.0s						
152A	Waverly Hall	19.41	20	P	P	06 27 10.9	-0.9
152A				IAmb	IAmb	06 27 29.0	
	comp=Z,12nm,1.0s						
MIAR	Mount Ida	19.91	358	P	P	06 27 16.6	-0.7
X43A	Marvell	19.93	4	P	Pn	06 27 19.6	0.0
Y49A	Blount Mountai	20.01	15	P	P	06 27 17.4	-1.0
Y49A				IAmb	IAmb	06 27 25.1	
	comp=Z,7.0nm,1.1s						
OXF	Oxford	20.07	8	P	P	06 27 19.8	+0.9
OXF				IAmb	IAmb	06 27 23.6	
	comp=Z,18nm,0.9s						
X37A	Clayton	20.09	353	P	P	06 27 18.5	-0.7
X37A				IAmb	IAmb	06 27 24.3	
	comp=Z,14nm,1.0s						
GOGA	Godfrey	20.52	22	P	P	06 27 22.3	-1.6
GOGA				IAmb	IAmb	06 27 27.9	
	comp=Z,7.3nm,0.8s						
MNTX	Cornudas Mount	20.67	328	P	P	06 27 24.9	-0.7
TKL	Tuckaleechee C	22.45	19	P	P	06 27 40.4	-4.3
	comp=Z,2.9nm,0.6s,baz=181,slow=8.1,SNR=7.2						
TKL				LR	LR	06 36 17.5	
	comp=Z,24nm,18.8s,baz=232,slow=37						
NVAR	Mina Array Bea	32.86	321	P	P	06 29 20.8	+1.9
	comp=Z,0.8nm,0.5s,baz=133,slow=8.8,SNR=9.1						
NVAR				pP	pP	06 29 35.9	+1.7
	comp=Z,1.4nm,0.7s,baz=138,slow=8.8,SNR=6.2						
SIV	San Ignacio	43.51	133	P	P	06 30 46.7	-1.7
	comp=Z,1.3nm,0.7s,baz=335,slow=7.1,SNR=7.8						
SIV				pP	pP	06 31 04.8	+0.5
	comp=Z,3.3nm,0.7s,baz=313,slow=8.8,SNR=11						
YKA	Yellowknife Ar	50.34	347	P	P	06 31 38.8	-2.2
	comp=Z,0.7nm,0.7s,baz=145,slow=7.8,SNR=14						
YKA				pP	pP	06 31 56.5	-0.7
	comp=Z,0.4nm,0.5s,baz=147,slow=7.9,SNR=4.2						
INK	Inuvik	59.73	344	P	P	06 32 46.9	-1.7
	comp=Z,1.9nm,0.5s,baz=104,slow=5.7,SNR=9.1						
ILAR	Eielson Array	62.09	337	P	P	06 33 03.9	-0.8
	comp=Z,0.7nm,0.6s,baz=129,slow=5.4,SNR=11						
ILAR				pP	pP	06 33 22.8	+1.5
	comp=Z,0.5nm,0.7s,baz=130,slow=5.2,SNR=3.9						
BORG	Borgarnes	68.96	26	LR	LR	07 01 31.2	
	comp=Z,43nm,21.4s,baz=141,slow=34						
MDT	Midelt	80.61	59	LR	LR	07 06 40.2	
	comp=Z,45nm,18.2s,baz=348,slow=33						
LZH	Lanzhou	127.27	343	*e*PKP	PKiKP	06 41 53.5	+4.1
LZH				pPKP	PKPdf	06 41 56.8	+7.9
LZH				sPKP		06 41 58.1	

IDC 16 06:27:51.1±3.1, 53°.57N×87°.95E, h0^{km}, mb1 2.6/2, mb1mx2.6/36, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=29.0km s-min=19.2km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.90	283	*i*		06 40 30.0	
	baz=97,slow=334,SNR=1.4						
ZALV	Zalesovo Beam	1.90	283	Pn	Pn	06 28 24.4	-0.4
	1.5nm,0.3s,baz=103,slow=17,SNR=11						
ZALV				Lg	Lg	06 28 51.5	
	2.5nm,0.3s,baz=105,slow=25,SNR=7.2						
KURBB	Kurchatov Arra	6.51	247	Pn	Pn	06 29 28.8	+0.7
	0.0nm,0.3s,baz=65,slow=15,SNR=5.2						
KURBB				Lg	Lg	06 31 16.6	
	0.0nm,0.3s,baz=57,slow=31,SNR=4.8						
MKAR	Makanchi Array	7.69	210	Pn	Pn	06 29 45.5	+1.1
	0.0nm,0.3s,baz=30,slow=15,SNR=1.9						

IDC 16 06:29:53.7±2.6, 54°.15N×86°.53E, h0^{km}, mb1 2.9/2, mb1mx2.9/36, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=21.2km s-min=12.9km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.03	259	*i*		06 35 50.0	
	baz=80,slow=330,SNR=2.2						
ZALV	Zalesovo Beam	1.03	259	Pg	Pg	06 30 12.0	-1.4
	0.8nm,0.3s,baz=76,slow=16,SNR=4.2						
ZALV				Lg	Lg	06 30 28.1	
	2.2nm,0.3s,baz=77,slow=30,SNR=12						
KURBB	Kurchatov Arra	6.04	237	Pn	Pn	06 31 24.7	+0.5
	0.1nm,0.3s,baz=54,slow=13,SNR=8.3						
KURBB				Lg	Lg	06 33 05.9	
	0.0nm,0.3s,baz=54,slow=30,SNR=2.3						
MKAR	Makanchi Array	7.84	202	Pn	Pn	06 31 50.2	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=7.3						
MKAR				Lg	Lg	06 34 03.4	
	0.0nm,0.3s,baz=22,slow=31,SNR=3.9						

IDC 16 06:33:40.2±2.2, 2°.36N×100°.90W, h0^{km}, mb3.7/5, mb1 4.1/5, mb1mx3.8/29, mbtmp3.7/5, MS3.5/12, Ms1 3.5/12, ms1mx3.3/29, Error ellipse: s-maj=207.8km s-min=28.5km az=71.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	15.78	22	LR	LR	06 42 11.1	
	comp=Z,324nm,19.1s,baz=194,slow=32						
JTS	Las Juntas de	17.68	63	LR	LR	06 42 50.5	
	comp=Z,118nm,19.2s,baz=314,slow=31						
LPIG	La Paz	23.45	338	LR	LR	06 45 53.8	
	comp=Z,89nm,20.3s,baz=180,slow=31						
ATAH	Atahualpa	24.36	113	LR	LR	06 46 47.9	
	comp=Z,19nm,18.6s,baz=315,slow=32						
TXAR	Lajitas Array	26.95	355	P	P	06 39 24.4	+0.8
	0.6nm,0.9s,baz=184,slow=12,SNR=4.1						
TXAR				LR	LR	06 49 08.1	
	comp=Z,238nm,18.9s,baz=0.0,slow=34						
NNA	Nana	27.83	121	LR	LR	06 48 30.2	
	comp=Z,30nm,18.7s,baz=290,slow=32						
RPN	Rapa Nui	30.43	195	LR	LR	06 48 52.7	
	comp=Z,137nm,21.9s,baz=346,slow=30						
PDAR	Pinedale Array	40.97	350	P	P	06 41 23.1	-2.0
	0.6nm,0.7s,baz=140,slow=7.2,SNR=6.0						
PDAR				LR	LR	06 56 21.4	
	comp=Z,40nm,20.6s,baz=140,slow=33						
H03N2	Juan Fernandez	41.21	152	T	T	07 25 42.4	
	baz=326,slow=78,SNR=11						
H03N1	Juan Fernandez	41.22	152	T	T	07 25 37.4	
	baz=326,slow=78,SNR=12						
H03N3	Juan Fernandez	41.22	152	T	T	07 25 38.1	
	baz=326,slow=78,SNR=9.7						
PLCA	Paso Flores	51.05	150	P	P	06 42 44.2	-0.2
	1.3nm,0.8s,baz=307,slow=7.0,SNR=3.3						
PLCA				LR	LR	06 59 17.2	
	comp=Z,56nm,18.3s,baz=326,slow=30						
YKA	Yellowknife Ar	60.86	353	P	P	06 43 54.8	+0.6
	1.3nm,1.1s,baz=163,slow=6.0,SNR=8.0						
YKA				LR	LR	07 08 12.0	
	comp=Z,56nm,21.1s,baz=0.0,slow=34						
ILAR	Eielson Array	70.46	341	P	P	06 44 56.6	+0.4
	1.1nm,1.0s,baz=164,slow=4.6,SNR=6.4						
NOA	NORSAR Array B	98.47	27	LR	LR	07 30 11.9	
	comp=Z,28nm,18.2s,baz=245,slow=34						
ARCES	ARCESS Array B	99.80	17	LR	LR	07 34 20.9	
	comp=Z,42nm,18.1s,baz=240,slow=36						

IDC 16 06:33:55.9±8.2, 19°.46S×175°.59W, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.7/27, mbtmp3.8/3, Error ellipse: s-maj=356.1km s-min=38.9km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.97	255	P	P	06 42 29.4	+0.3
	1.2nm,0.6s,baz=92,slow=7.7,SNR=17						
WRA	Warramunga Arr	47.00	261	P	P	06 42 28.6	-0.7
	1.3nm,0.7s,baz=99,slow=7.4,SNR=6.5						
ILAR	Eielson Array	86.81	12	P	P	06 46 41.8	0.0
	0.8nm,1.1s,baz=221,slow=6.2,SNR=5.2						

IDC 16 07:13:15.0±0.7, 17°.92S×167°.70E, h0^{km}, mb4.4/15, mb1 4.6/16, mb1mx4.4/25, mbtmp4.4/16, ML3.5/1, MS4.1/25, Ms1 4.1/25, ms1mx4.1/33, Error ellipse: s-maj=20.7km s-min=16.9km az=122.0

NEIC 16 07:13:16.4±2.3, 17°.85S±0°.06×167°.62E±0°.09, h8^{km}±2^{km}, mb5.0/47, Ms_20 4.8/28, Error ellipse: s-maj=11.9km s-min=8.0km az=95.0

NOU 16 07:13:17.9, 18°.00S×167°.68E, h0^{km}, mb4.8, Vanuatu Islands

BJI 16 07:13:18.5±0.0, 17°.40S×167°.62E, h10^{km}, mB5.2/23, mb4.8/32, Ms5.0/10, Ms7 4.6/10

GCMT 16 07:13:22.4±0.2, 17°.88S±0°.02×167°.48E±0°.01, h17^{km}, MW5.1/107, Moment Tensor Solution. s57,c79; s107,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.39±.15; M$_{\theta\theta}$0.15±.09; M$_{\phi\phi}$-3.54±.11; M$_{r\theta}$2.99±.36; M$_{\theta\phi}$0.58±.07; M$_{\phi r}$-4.33±.34; Best double couple: M$_0$6.32400×10^{16} NP1:ϕ_s9.00000°,δ20.00000°, λ127.00000°. NP2:ϕ_s150.00000°,δ74.00000°,λ78.00000°. Principal axes: T 6.4600, Plg59.0000°, Azm43.0000°; N -0.2750, Plg12.0000°, Azm154.0000°; P -6.1880, Plg28.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 16 07:13:16.9±0.3, 17°.88S±0°.04×167°.62E±0°.05, h10^{km}, n176, σ1^{s}.71/159, mb5.0/44, MS4.4/44, 1C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.56	74	P	Pb	07 13 28.6	-0.2
SANVU	Saraoutou	2.45	351	Pn	Pn	07 13 55.1	-1.9
LIFNC	LIFOU	2.91	187	P	Pn	07 14 04.5	+1.3
MARNC	Mare, Loyalty	3.60	174	P	Pn	07 14 14.4	+1.6
KOUNC	Koumac, New Ca	4.12	229	P	Pn	07 14 19.4	-0.6
YATNC	Mamie plateau,	4.21	189	P	Pn	07 14 21.4	+0.1
DZM	Mont Dzumac	4.31	195	Pn	Pn	07 14 20.3	-2.4
	2.9nm,0.3s,baz=68,slow=10,SNR=37						
DZM				LR	LR	07 15 00.7	
	comp=Z,955nm,21.9s,baz=37,slow=25						
DZM				Sn	Sn	07 15 10.5	-2.7
	34nm,0.3s,baz=323,slow=21,SNR=8.6						
DZM	Mont Dzumac	4.31	195	*e*Pn	Pn	07 14 20.7	-2.0
	48nm,0.3s						
DZM				*e*Sn	Sn	07 15 07.3	-5.9
	206nm,0.3s						
DZM				*e*LR	LR	07 15 18.0	
	comp=Z,2μm,25.6s						
DZM	Mont Dzumac	4.31	195	Pn	Pn	07 14 21.6	-1.1
DZM	Mont Dzumac	4.31	195	P	Pn	07 14 21.8	-0.9
NOUC	Port Laguerre	4.38	196	P	Pn	07 14 22.2	-1.3
OUENC	Ouen Island, N	4.58	189	P	Pn	07 14 25.9	-0.3
PINNC	Pines Island,	4.71	182	P	Pn	07 14 29.3	+1.2
MSVF	Nonsavu	9.93	91	Pn	Pn	07 15 42.1	+2.1
	0.3nm,0.3s,baz=211,slow=9.8,SNR=14						
MSVF				LR	LR	07 18 45.7	
	comp=Z,4μm,20.9s,baz=240,slow=34						
MSVF	Nonsavu	9.93	91	Pn	Pn	07 15 40.9	+1.0
MSVF	Nonsavu	9.93	91	P	Pn	07 15 42.3	+2.4
HNR	Honiara	11.23	317	LR	LR	07 19 32.4	
	comp=Z,932nm,21.2s,baz=151,slow=33						
HNR	Honiara	11.23	317	Pn	Pn	07 15 58.7	+1.1
EIDS	Eidsvold	17.08	241	P	P	07 17 17.4	-0.3
	baz=17,SNR=4.7						
EIDS	Eidsvold	17.08	241		P	07 17 17.6	0.0
OUZ	Omahuta	18.07	164	P	P	07 17 29.9	+1.3
RMQ	Roma	19.44	241	P	Pn	07 17 44.8	-0.1
	baz=19,SNR=32						
TARA	Tarawa	19.81	16	P	P	07 17 47.7	-0.1
AFI	Afiamalu	20.20	82		P	07 17 52.5	+0.4
AFI				IAmb	IAmb	07 18 13.0	
	comp=Z,64nm,1.1s						
AFI	Afiamalu	20.20	82	P	Pn	07 17 53.7	-0.3
CTA	Charters Tower	20.32	260	P	P	07 17 54.6	+1.1
	comp=Z,30nm,1.1s,baz=82,slow=12,SNR=14						
CTA				LR	LR	07 24 46.9	
	comp=Z,1μm,20.3s,baz=77,slow=34						
CTAO	Charters Tower	20.32	260	P	P	07 17 54.5	+1.1
CTAO				IAmb	IAmb	07 18 00.1	
	comp=Z,107nm,1.3s						
HIZ	Hauiti	21.51	164	P	P	07 18 07.7	+1.7
HIZ				IAmb	IAmb	07 18 21.3	
	comp=Z,87nm,1.1s						
PMG	Port Moresby	21.58	290	P	P	07 18 08.2	+1.3
	comp=Z,6.3nm,0.7s,baz=96,slow=12,SNR=9.3						
PMG				LR	LR	07 25 30.7	
	comp=Z,1μm,18.5s,baz=98,slow=34						
PMG	Port Moresby	21.58	290	P	P	07 18 08.0	+1.1
PMG	Port Moresby	21.58	290	P	P	07 18 09.3	+2.3
URZ	Urewera	21.94	160	P	P	07 18 10.5	-0.1
	comp=Z,21nm,1.0s,baz=355,slow=7.8,SNR=7.5						
URZ	Urewera	21.94	160	P	P	07 18 12.3	+1.7
MTSU	Mount Surprise	22.16	266	P	P	07 18 11.7	-1.6
	baz=22,SNR=6.5						
BKZ	Black Stump Fm	22.57	162	P	P	07 18 18.2	+0.7
QLP	Quilpie	23.29	244	P	P	07 18 25.6	+0.6
	baz=23,SNR=6.5						
CNB	Canberra Magne	23.77	219	P	P	07 18 31.3	+1.6
	baz=24,SNR=4.9						
COEN	Coen	23.82	276	P	P	07 18 28.7	-1.7
CAN	Canberra	23.99	220	P	P	07 18 32.8	+0.9
CMSA	Cobar Meteorol	24.06	231	P	P	07 18 32.9	+0.5
	baz=24,SNR=26						
RPZ	Rata Peaks	25.92	174	LR	LR	07 28 58.2	
	comp=Z,2μm,18.2s,baz=350,slow=36						
STKA	Stephens Creek	27.33	234	P	P	07 19 03.3	+1.2
	baz=27,SNR=13						
STKA	Stephens Creek	27.33	234	P	P	07 19 02.5	+0.5
	comp=Z,14nm,0.9s,baz=63,slow=7.2,SNR=19						
STKA				LR	LR	07 29 47.1	
	comp=Z,765nm,18.2s,baz=60,slow=36						
STKA	Stephens Creek	27.33	234	P	P	07 19 02.6	+0.5
RAR	Rarotonga	30.87	102	LR	LR	07 31 03.0	
	comp=Z,217nm,18.3s,baz=174,slow=35						
WRA	Warramunga Arr	31.53	261	P	P	07 19 38.1	-1.4
	comp=Z,5.0nm,1.0s,baz=93,slow=8.8,SNR=6.6						
AS31	Alice Springs	32.00	254	P	P	07 19 43.5	-0.1
ASAR	Alice Springs	32.00	254	P	P	07 19 43.0	-0.7
	comp=Z,3.3nm,0.5s,baz=82,slow=8.1,SNR=41						
ASAR				LR	LR	07 32 08.7	
	comp=Z,1μm,19.7s,baz=90,slow=35						
BBOO	Buckleboo	32.02	236	P	P	07 19 44.0	+0.3
BBOO				IAmb	IAmb	07 19 45.2	
	comp=Z,22nm,1.1s						
KNRA	Kununurra	37.23	267	IAMs_20	IAMs_20	07 38 24.8	
	comp=Z,1μm,20.0s						
FORT	Forrest	38.07	243	P	P	07 20 36.0	+0.1
	baz=38,SNR=9.5						
FORT	Forrest	38.07	243	P	P	07 20 36.0	+0.1
FORT				IAMs_20	IAMs_20	07 35 25.2	
	comp=Z,1μm,18.0s						
FITZ	Fitzroy Crossi	39.87	263	P	P	07 20 51.9	+0.8
	baz=40,SNR=7.9						
FITZ	Fitzroy Crossi	39.87	263	P	P	07 20 51.2	+0.1
FITZ				IAmb	IAmb	07 20 56.6	
	comp=Z,40nm,1.1s						
TBI	Tubuai	40.43	105	*e*S	S	07 27 18.0	+14
	comp=Z,251nm,27.5s						
TBI				*e*LQ	LQ	07 30 39.5	
	comp=Z,1μm,26.2s						
TBI				*e*LR	LR	07 32 22.5	
	comp=Z,421nm,27.5s						
PPT2	Papeete2	40.70	96	*e*S	S	07 27 20.0	+11
	comp=Z,163nm,21.8s						
PPT2				*e*LQ	LQ	07 30 47.1	
	comp=Z,821nm,28.0s						
PPT2				*e*LR	LR	07 32 32.7	
	comp=Z,742nm,26.0s,baz=260						
PPT	Papeete	40.70	96	LR	LR	07 33 26.0	
	comp=Z,408nm,20.2s,baz=255,slow=30						
SANI	Sanana	43.77	286	P	P	07 21 24.7	+1.6
	comp=Z,27nm,1.0s						
PSAD2	Pilbara Seismi	44.88	257	IAMs_20	IAMs_20	07 33 52.4	
	comp=Z,845nm,21.0s						
PSAC2	Pilbara Seismi	44.94	257	IAMs_20	IAMs_20	07 40 01.2	
	comp=Z,865nm,18.0s						
PSAA1	Pilbara Seismi	45.00	257	IAMs_20	IAMs_20	07 37 57.6	
	comp=Z,2μm,18.0s						
MEEK	Meekatharra	45.96	250	P	P	07 21 41.4	+1.0
	baz=46,SNR=5.2						
NWAO	Narrogin (SRO)	47.49	242	P	P	07 21 52.0	-0.4
MORW	Morawa	48.28	247	IAMs_20	IAMs_20	07 41 45.5	
	comp=Z,1μm,20.0s						
TWSI	Taliwang, Sumb	50.07	274	P	P	07 22 13.6	+1.2
	comp=Z,26nm,1.4s						
MPSI	Mapaga	50.30	286	P	P	07 22 16.5	+2.4
	comp=Z,37nm,1.3s						
TAOE	Nuku Hiva Isla	51.46	87	*e*S	S	07 29 54.9	+11
	comp=Z,374nm,25.8s						
TAOE				*e*LR	LR	07 37 31.2	
	comp=Z,879nm,26.1s						
RKT	Rikitea	53.74	106	*e*S	S	07 30 27.4	+13
	comp=Z,337nm,29.0s						
RKT				*e*LR	LR	07 38 35.0	
	comp=Z,393nm,29.2s						
VNDA	Vanda	59.74	181	P	P	07 23 21.8	+0.3
	comp=Z,1.3nm,1.0s,baz=1.8,slow=11,SNR=3.3						
VNDA				LR	LR	07 47 38.5	
	comp=Z,188nm,18.1s,baz=12,slow=35						
VNDA	Vanda	59.74	181	P	P	07 23 22.3	+0.8
MJAR	Matsushiro Arr	60.85	333	P	P	07 23 29.3	-0.3
	comp=Z,3.2nm,1.0s,baz=160,slow=7.8,SNR=5.0						
MJAR				LR	LR	07 51 49.9	
	comp=Z,55nm,18.2s,baz=195,slow=38						
JNU	Nakatsue	61.68	325	LR	LR	07 48 11.6	
	comp=Z,67nm,20.3s,baz=160,slow=34						
KSRS	Korea Array	66.53	326	LR	LR	07 53 06.4	
	comp=Z,126nm,18.4s,baz=144,slow=36						
NJ2	Nanjing	68.17	317	*e*P	P	07 24 18.8	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PEA0B	Petropavlovsk-	71.21	354	P	P	07 24 37.2	+1.3
PETK	Petropavlovsk-	71.21	354	P	P	07 24 36.7	+0.8
	comp=Z,16nm,1.1s,baz=104,slow=11,SNR=5.8						
PETK				LR	LR	07 52 34.0	
	comp=Z,178nm,19.1s,baz=156,slow=33						
QSPA	South Pole Qui	72.17	180	P	P	07 24 41.0	-0.8
KLR	Kul'dur	74.01	336	P	P	07 24 54.0	+1.4
	comp=Z,4.9nm,1.2s,baz=115,slow=5.2,SNR=6.0						
KLR				LR	LR	07 57 49.3	
	comp=Z,62nm,18.5s,baz=145,slow=36						
KMI	Kunming	76.26	302	⇑P	P	07 25 10.4	+4.0
KMI				pmax	pmax		
	comp=Z,16nm,1.8s						
CMAR	Chiang Mai Arr	76.55	295	P	P	07 25 07.6	-0.3
	comp=Z,1.0nm,0.4s,baz=125,slow=4.6,SNR=1.5						
CMAR				LR	LR	08 00 38.9	
	comp=Z,33nm,18.1s,baz=164,slow=37						
CD2	Chengdu	78.20	308	*e*P	P	07 25 17.0	0.0
CD2				S	S	07 35 12.3	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,160nm,5.5s						
CD2				LR	LR		
	comp=Z,390nm,16.7s						
CD2				LR	LR		
	comp=Z,370nm,16.1s						
HHC	Hu-ho-hao-te	78.20	320	*e*P	P	07 25 18.4	+1.6
HHC				PP	PP	07 28 14.4	+0.6
HHC				S	S	07 35 12.4	+0.6
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,140nm,6.7s						
HHC				LR	LR		
	comp=Z,270nm,16.7s						
HHC				LR	LR		
	comp=Z,230nm,16.8s						
MAW	Mawson	79.11	202	LR	LR	07 54 41.0	
	comp=Z,137nm,21.9s,baz=62,slow=31						
MAW	Mawson	79.11	202	P	P	07 25 22.2	+0.9
LZH	Lanzhou	80.68	313	*e*P	P	07 25 32.6	+2.0
LZH				pP	PcP	07 25 37.1	-0.2
LZH				sP	pwP	07 25 41.0	+3.2
LZH				SKS	S	07 35 45.8	+7.3
LZH				SS	SS	07 40 55.0	+3.1
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
LZH				pmax	pmax		
	comp=Z,98nm,5.5s						

LZH				LR	LR		
	comp=Z,250nm,15.2s						
LZH				LR	LR		
	comp=Z,260nm,16.3s						
LZH				LR	LR		
	comp=Z,280nm,16.3s						
BELA	**Belgrano 2**	**83.57**	**175**	P	**P**	**07 25 44.8**	**-0.1**
ULN	**Ulaanbaatar**	**84.87**	**324**	P	**P**	**07 25 52.3**	**+0.2**
ULN				IAmb	IAmb	07 26 06.3	
	comp=Z,17nm,1.3s						
GTA	**Gaotai**	**85.08**	**314**	P	**P**	**07 25 55.6**	**+2.3**
GTA				pP	pwP	07 26 03.1	+2.6
GTA				sP	PcP	07 26 07.0	+10
GTA				S	**S**	**07 36 23.4**	**+0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,120nm,7.6s						
GTA				LR	LR		
	comp=Z,170nm,16.7s						
GTA				LR	LR		
	comp=Z,190nm,18.5s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
YAK	**Yakutsk**	**85.13**	**343**	P	**P**	**07 25 53.4**	**+0.7**
SONM	**Songino Array**	**85.22**	**324**	P	**P**	**07 25 55.0**	**+1.2**
	comp=Z,4.9nm,1.1s,baz=137,slow=5.7,SNR=15						
SONM				LR	LR	08 02 59.7	
	comp=Z,96nm,19.3s,baz=114,slow=35						
SYO	**Syowa Base**	**85.80**	**197**	⇓*e*PP	PP	07 29 15.4	+0.4
O02D	**Mt. Diablo Mer**	**86.65**	**46**	P	**P**	**07 26 01.5**	**+0.5**
	baz=243						
AFDM	**Forest Hills D**	**87.38**	**48**	P	**P**	**07 26 04.1**	**-0.4**
CMB	**Columbia Colle**	**87.41**	**49**	P	**P**	**07 26 03.6**	**-1.1**
ISA	**Isabella, Lake**	**87.83**	**52**	P	**P**	**07 26 06.6**	**-0.2**
	baz=246						
ISA	**Isabella, Lake**	**87.83**	**52**	P	**P**	**07 26 06.0**	**-0.8**
ISA				IAmb	IAmb	07 26 07.5	
	comp=Z,14nm,1.2s						
EDW2	**Edwards Air Fo**	**87.88**	**52**	P	**P**	**07 26 06.6**	**-0.5**
	baz=246						
MURC	**Murrieta**	**87.98**	**54**	P	**P**	**07 26 07.2**	**-0.4**
	baz=247						
MDPB	**Devils Postpil**	**88.18**	**50**	P	**P**	**07 26 08.1**	**-0.6**
MDPB				IAmb	IAmb	07 26 09.3	
	comp=Z,13nm,1.3s						
OMMB	**Old Mammoth Mi**	**88.23**	**50**		**P**	**07 26 08.5**	**-0.5**
OMMB				IAmb	IAmb	07 26 09.6	
	comp=Z,13nm,1.5s						
WAKR	**Walker**	**88.28**	**49**	P	**P**	**07 26 08.3**	**-0.8**
MONP2	**Monument Peak**	**88.31**	**55**	P	**P**	**07 26 08.8**	**-0.6**
	baz=248						
LRMC	**Laurel Mtn Rad**	**88.35**	**52**	P	**P**	**07 26 08.7**	**-0.6**
	baz=247						
CWC	**Cottonwood Cre**	**88.43**	**51**	P	**P**	**07 26 09.2**	**-0.6**
	baz=246						
MPMC	**Manual Prospec**	**88.72**	**51**	P	**P**	**07 26 10.5**	**-0.7**
	baz=247						
TLY	**Talaya**	**88.78**	**326**	LR	LR	08 07 28.1	
	comp=Z,29nm,18.2s,baz=118,slow=37						
SWSC	**Sam W. Stewart**	**88.81**	**55**	P	**P**	**07 26 11.4**	**0.0**
	baz=248						
LHV	**Little Huntoon**	**88.85**	**49**	P	**P**	**07 26 11.1**	**-0.3**
LHV				IAmb	IAmb	07 26 12.7	
	comp=Z,12nm,1.3s						
GSC	**Goldstone, Bar**	**88.94**	**52**	P	**P**	**07 26 11.8**	**-0.3**
	baz=247						
UABX	**UABC, Campus M**	**88.98**	**55**	IAMs_20	IAMs_20	07 53 27.5	
	comp=Z,684nm,22.0s						
RYN	**Ryan**	**88.99**	**49**	P	**P**	**07 26 11.3**	**-1.0**
RYN				IAmb	IAmb	07 26 13.1	
	comp=Z,16nm,1.4s						
CPBX	**Cerro Prieto**	**89.00**	**56**	IAMs_20	IAMs_20	07 56 05.4	
	comp=Z,374nm,18.0s						
BELC	**Belle Mtn. Jos**	**89.06**	**54**	P	**P**	**07 26 12.7**	**-0.1**
	baz=248						
NVAR	**Mina Array Bea**	**89.06**	**49**	P	**P**	**07 26 12.4**	**-0.3**
	comp=Z,2.8nm,1.0s,baz=228,slow=7.6,SNR=15						
NVAR				LR	LR	08 00 44.6	
	comp=Z,123nm,19.2s,baz=244,slow=32						
J05D	**Fort Rock, OR**	**89.07**	**44**	P	**P**	**07 26 13.0**	**+0.4**
	baz=244						
NV11	**Mina Array Sit**	**89.17**	**49**		**P**	**07 26 12.1**	**-1.1**
NV11				IAmb	IAmb	07 26 13.0	
	comp=Z,9.6nm,1.3s						
GRAC	**Grapevine Rang**	**89.18**	**51**	P	**P**	**07 26 12.4**	**-0.7**
	baz=247						
FURC	**Furnace Creek,**	**89.34**	**51**	P	**P**	**07 26 13.9**	**+0.1**
	baz=247						
BC3	**Big Chuckawall**	**89.35**	**54**	P	**P**	**07 26 13.9**	**-0.1**
	baz=248						
ILAR	**Eielson Array**	**89.40**	**18**	P	**P**	**07 26 11.4**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=235,slow=5.1,SNR=8.7						
ILAR				LR	LR	08 02 20.1	
	comp=Z,131nm,19.9s,baz=252,slow=33						
SHOC	**Shoshone, Teco**	**89.57**	**52**	P	**P**	**07 26 14.7**	**-0.2**
	baz=248						
GLA	**Glamis**	**89.61**	**55**	P	**P**	**07 26 13.6**	**-1.6**
GLA				IAmb	IAmb	07 26 15.7	
	comp=Z,8.1nm,1.0s						
GMRC	**Granite Mounta**	**89.61**	**53**	P	**P**	**07 26 14.7**	**-0.6**
	baz=248						
TPH	**Tonopah**	**89.70**	**50**	P	**P**	**07 26 14.3**	**-1.5**
IRM	**Iron Mountain**	**89.77**	**54**	P	**P**	**07 26 16.1**	**+0.2**
	baz=248						
TPNV	**Topopah Spring**	**89.98**	**51**	P	**P**	**07 26 17.0**	**0.0**
	baz=248						
SNAA	**Sanae**	**90.44**	**183**	P	**P**	**07 26 17.7**	**-0.8**
SNAA	**Sanae**	**90.44**	**183**	P	**P**	**07 26 17.5**	**-1.0**
PDMCI	**Parker Dam,Lak**	**90.60**	**54**	P	**P**	**07 26 20.3**	**+0.5**
	baz=249						
SHPR	**Sheep Range**	**90.63**	**52**	P	**P**	**07 26 19.5**	**-0.6**
SHPR				IAmb	IAmb	07 26 21.0	
	comp=Z,9.1nm,1.3s						
214A	**Organ Pipe Nat**	**90.81**	**57**	P	**P**	**07 26 20.7**	**-0.1**
	baz=249						
214A	**Organ Pipe Nat**	**90.81**	**57**	P	**P**	**07 26 19.8**	**-1.1**
214A				IAmb	IAmb	07 26 21.8	
	comp=Z,13nm,1.3s						
R11A	**Troy Canyon, C**	**91.00**	**50**	P	**P**	**07 26 20.7**	**-1.1**
	baz=248						
R11A	**Troy Canyon, C**	**91.00**	**50**	P	**P**	**07 26 20.1**	**-1.7**
R11A				IAmb	IAmb	07 26 21.6	
	comp=Z,8.2nm,1.4s						
PRN	**Pahroc Range**	**91.04**	**51**	P	**P**	**07 26 21.1**	**-0.9**
PRN				IAmb	IAmb	07 26 22.9	
	comp=Z,12nm,1.1s						
W13A	**Hualapai Mount**	**91.08**	**53**		**P**	**07 26 20.5**	**-1.8**
W13A				IAmb	IAmb	07 26 23.0	
	comp=Z,10.0nm,1.2s						
VNA3	**Neumayer Olymp**	**91.09**	**181**	P	**P**	**07 26 20.4**	**-1.1**
VNA2	**Neumayer--Watz**	**91.36**	**182**	P	**P**	**07 26 22.3**	**-0.4**
	baz=197,slow=5.4						
VNA1	**Neumayer--Stat**	**91.66**	**181**	P	**P**	**07 26 22.9**	**-1.1**
TUC	**Tucson**	**92.55**	**57**	P	**P**	**07 26 29.3**	**+0.4**
	baz=250						
TUC	**Tucson**	**92.55**	**57**	P	**P**	**07 26 27.5**	**-1.5**
TUC				IAmb	IAmb	07 26 29.9	
	comp=Z,7.0nm,1.1s						
SZCU	**Shurtz Canyon**	**92.57**	**51**	P	**P**	**07 26 29.1**	**0.0**
X16A	**Lo Mia Camp, P**	**92.73**	**55**	P	**P**	**07 26 29.4**	**-0.5**
X16A				IAmb	IAmb	07 26 30.9	
	comp=Z,6.6nm,1.1s						
U15A	**North Rim**	**92.76**	**53**	P	**P**	**07 26 28.1**	**-2.0**
U15A				IAmb	IAmb	07 26 31.1	
	comp=Z,6.3nm,1.1s						
WUAZ	**Wupatki**	**93.15**	**54**	P	**P**	**07 26 32.1**	**+0.3**
	baz=250						
WUAZ	**Wupatki**	**93.15**	**54**	P	**P**	**07 26 30.6**	**-1.2**
WUAZ				IAmb	IAmb	07 26 32.6	
	comp=Z,10nm,1.2s						
319A	**Douglas**	**93.45**	**58**		**P**	**07 26 32.3**	**-0.9**
WMQ	**Urumqi**	**95.16**	**314**	*e*P	**P**	**07 26 41.3**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,12nm,1.3s						
ANMO	**Albuquerque**	**96.80**	**56**	LR	LR	08 05 55.7	
	comp=Z,71nm,18.4s,baz=266,slow=33						
PDAR	**Pinedale Array**	**96.82**	**47**	LR	LR	08 05 07.2	
	comp=Z,43nm,18.2s,baz=302,slow=32						
TXAR	**Lajitas Array**	**97.47**	**62**	P	**P**	**07 26 50.7**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=229,slow=5.8,SNR=5.8						
TXAR				LR	LR	08 05 02.4	
	comp=Z,114nm,18.1s,baz=0.0,slow=32						
LL01	**San Ignacio de**	**98.48**	**140**	IAMs_20	IAMs_20	08 15 10.8	
	comp=Z,230nm,21.0s						
YKA	**Yellowknife Ar**	**100.17**	**27**	P	**Pdif**	**07 27 01.5**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=256,slow=4.3,SNR=4.4						
ZON	**Zonda**	**106.99**	**132**	IAMs_20	IAMs_20	08 26 11.6	
	comp=Z,480nm,21.0s						
ESPN	**Las Esperanzas**	**110.67**	**83**	IAMs_20	IAMs_20	08 20 07.4	
	comp=Z,148nm,18.0s						
SAML	**Samuel**	**123.19**	**114**	IAMs_20	IAMs_20	08 23 06.6	
	comp=Z,166nm,22.0s						
ARCES	**ARCESS Array B**	**123.37**	**345**	PKP	**PKPdf**	**07 32 11.8**	**-1.9**
	comp=Z,3.6nm,1.0s,baz=22,slow=1.3,SNR=4.9						
SPB	**Sao Paulo**	**126.42**	**139**	IAMs_20	IAMs_20	08 12 47.6	
	comp=Z,226nm,20.0s						
MNK	**Minsk**	**132.20**	**329**	*i* PKP	**PKPdf**	**07 32 26.7**	**-4.2**
	comp=E,5.0nm,0.8s						
MNK				*i* PKP	**PKPdf**	**07 32 26.7**	**-4.2**
	comp=N,58nm,0.8s						
MNK				*i* PKP	**PKPdf**	**07 32 26.7**	**-4.2**
	comp=Z,8.0nm,0.6s						
MNK				*i* PP	**PP**	**07 34 48.7**	**-4.2**
MNK				*i* PKS	**PKSdf**	**07 36 03.2**	**-3.9**
MNK				*i* PPP	PPP	07 37 38.4	
MNK				*i* SKS	**SKSdf**	**07 39 36.9**	**-5.4**
MNK				*i* PS	**PS**	**07 45 02.9**	**-6.1**
MNK				*i* SS	**SS**	**07 52 24.8**	**-5.7**
MNK				*i* SSS	SSS	07 56 34.9	
MNK				*i* LR	LR	08 28 17.4	
MNK				*i* LRM	MLR	08 30 01.6	
	comp=N,188nm,14.5s						
MNK				*i* LRM	MLR	08 30 04.5	
	comp=E,5.0nm,7.2s						
MNK				*i* LRM	MLR	08 30 13.9	
	comp=Z,44nm,8.0s						
SOKA	**Soboth**	**143.45**	**328**	*e*P	**PKPdf**	**07 32 50.7**	**-1.3**
	comp=Z,5.2nm,1.4s						
KBA	**Koelnbreinsper**	**144.01**	**330**	*e*P	PKPbc	07 32 51.0	+0.1
	comp=Z,16nm,1.4s						
MYKA	**Terra Mystica**	**144.18**	**329**	*e*P	PKPbc	07 32 51.7	+0.3
	comp=Z,6.8nm,1.0s						
ABTA	**Abfaltersbach**	**144.65**	**330**	*e*P	**PKPab**	**07 32 52.2**	**-0.5**
	comp=Z,12nm,1.2s						
WATA	**Walderalm**	**144.65**	**331**	*e*P	**PKPdf**	**07 32 53.9**	**-0.3**
	comp=Z,11nm,1.3s						
WTTA	**Wattenberg**	**144.68**	**331**	*e*P	**PKPab**	**07 32 52.6**	**-0.2**
	comp=Z,4.0nm,0.8s						
MOTA	**Moosalm**	**144.86**	**332**	*e*P	PKPbc	07 32 53.8	+0.2
	comp=Z,21nm,1.2s						
RETA	**Reutte**	**144.90**	**332**	*e*P	PKPbc	07 32 53.6	+0.1
	comp=Z,18nm,1.5s						
SQTA	**Sankt Quirin**	**144.90**	**332**	*e*P	**PKPdf**	**07 32 54.6**	**+0.1**
	comp=Z,18nm,1.1s						
BFO	**Black Forest**	**145.26**	**336**		**PKPdf**	**07 32 55.3**	**+0.3**
FETA	**Feichten**	**145.27**	**332**	*e*P	**PKPdf**	**07 32 55.6**	**+0.3**
	comp=Z,21nm,1.1s						
DAVA	**Damuels**	**145.44**	**333**	*e*P	**PKPab**	**07 32 55.7**	**+0.1**
	comp=Z,17nm,1.1s						
CTI	**Castel Tesino**	**145.56**	**330**		**PKPab**	**07 32 56.1**	**+0.1**
TUE	**Stuetta**	**146.30**	**333**		**PKPab**	**07 32 58.9**	**0.0**
TIP	**Timpagrande**	**146.98**	**316**		**PKPdf**	**07 32 57.9**	**-0.4**
NRCA	**Norcia**	**147.04**	**324**		**PKPbc**	**07 33 00.6**	**+0.3**
BNI	**Bardonecchia**	**148.57**	**334**		**PKiKP**	**07 33 05.3**	**-0.7**

NNC ***16*** *07:41:45.6±20.0, 55°.56N×84°.19E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=156.3km s-min=95.1km az=14.0*

IDC 16 07:41:43.8±2.8**, 53°.61N×87°.81E, h0^{km}, mb1 3.2**/2**, mb1mx3.0**/49**, mbtmp3.2**/2**, ML2.7**/2**, 7C-4D, Error ellipse: s-maj=25.0km s-min=15.3km az=66.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**282**	*i*		07 54 00.0	
	baz=98,slow=332,SNR=8.0						
ZAA0	**Zalesovo Array**	**1.81**	**282**	⇑Pn	Pn	07 42 12.5	-3.7
	1.3nm,0.6s,baz=332,slow=15						
ZAA0				⇓Sn	Sn	07 42 40.2	+0.5
	9.3nm,0.6s						
ZALV	**Zalesovo Beam**	**1.81**	**282**	Pn	Pn	07 42 16.2	0.0
	2.1nm,0.3s,baz=102,slow=15,SNR=24						
ZALV				Lg	Lg	07 42 40.6	
	3.7nm,0.3s,baz=96,slow=24,SNR=10.0						
KURK	**Kurchatov**	**6.35**	**247**	⇓Pn	Pn	07 43 19.4	+0.8
	27nm,3.6s						
KURK				⇑Sn	Sn	07 44 24.2	-7.6
	2.7nm,0.9s						
KURK				⇑Lg	Lg	07 45 01.2	
	8.2nm,0.7s						
KURBB	**Kurchatov Arra**	**6.45**	**246**	Pn	Pn	07 43 20.4	+0.5
	0.1nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Lg	Lg	07 45 07.8	
	0.1nm,0.3s,baz=66,slow=33,SNR=4.8						
KURBB	**Kurchatov Arra**	**6.45**	**246**	⇑Pn	Pn	07 43 20.7	+0.7
	2.2nm,0.6s,baz=63,slow=14						
KURBB				⇑Sn	Sn	07 44 22.3	-12
	5.7nm,0.8s						
KURBB				⇓Lg	Lg	07 45 02.4	
	14nm,0.8s						
MK31	**Makanchi Array**	**7.68**	**210**	⇓Pn	Pn	07 43 37.0	+0.1
	0.8nm,0.7s,baz=28,slow=14,SNR=13						
MK31				⇑Sn	Sn	07 45 01.4	-3.2
	0.5nm,0.5s,baz=25,slow=19						
MK31				⇑Lg	Lg	07 45 39.8	
	3.2nm,0.8s						
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn	07 43 38.4	+1.4
	0.1nm,0.3s,baz=27,slow=13,SNR=7.5						
MKAR				Sn	Sn	07 45 04.2	-0.4
	0.1nm,0.3s,baz=30,slow=27,SNR=6.9						
MKAR				Lg	Lg	07 45 46.1	
	0.0nm,0.3s,baz=31,slow=26,SNR=4.0						

NEIC ***16*** *07:45:06.3±1.1, 26°.18N±0°.08×124°.82E±0°.08, h179^{km}±6^{km}, mb4.5/37, Error ellipse: s-maj=13.2km s-min=9.4km az=145.0*

BJI ***16*** *07:45:06.0±0.0, 26°.20N×124°.80E, h171^{km}, mB4.8/28, mb4.6/47*

MOS ***16*** *07:45:06.0±1.2, 26°.16N×124°.80E, h197^{km}, mb4.5/18, Error ellipse: s-maj=10.8km s-min=6.4km az=111.9*

JMA ***16*** *07:45:07.4±0.2, 26°.32N×124°.71E, h163^{km}, M4.4*

IDC ***16*** *07:45:08.8±0.8, 26°.24N×124°.76E, h201^{km}±6^{km}, mb3.9/27, mb1 4.0/30, mb1mx3.8/51, mbtmp4.3/30, MS3.7/4, Ms1 3.7/4, ms1mx2.9/45, Error ellipse: s-maj=11.6km s-min=8.3km az=64.0*

ISC 16 07:45:07.5±0.5**, 26°.16N**±0°.04×**124°.85E**±0°.04**, h194**^{km}±4^{km}**, h194**^{km}**:pP-P, n178,** σ1^{s}.**80**/215**, mb4.4**/78**, 9C-3D, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**1.28**	**164**	P	**Pn**	**07 45 38.2**	**-0.6**
JIKM				S	**Sn**	**07 46 01.0**	**-2.0**
JIRB	**Irabujima**	**1.35**	**168**	P	**Pn**	**07 45 38.7**	**-0.7**
JIRB				S	**Sn**	**07 46 01.4**	**-2.7**
JMJ2	**Miyako jima3**	**1.47**	**163**	P	**Pn**	**07 45 40.3**	**-0.2**
JMJ2				S	**Sn**	**07 46 04.1**	**-1.9**
JOGS	**Gusukube**	**1.48**	**160**	P	**Pn**	**07 45 40.6**	**+0.1**
JOGS				*e*S	**Sn**	**07 46 04.4**	**-1.7**
JTJ	**Tarama**	**1.51**	**185**	P	**Pn**	**07 45 40.1**	**-0.7**
JTJ				S	**Sn**	**07 46 03.5**	**-3.2**
JISG	**Ishigakijimahi**	**1.64**	**198**	P	**Pn**	**07 45 41.0**	**-1.0**
JISG				S	**Sn**	**07 46 05.3**	**-3.4**
JKE	**Kume jima 2**	**1.75**	**84**	P	**Pn**	**07 45 42.4**	**-0.6**
JKE				*e*S	**Sn**	**07 46 09.3**	**-1.2**
JIJ	**Ishigaki jima**	**1.90**	**200**	P	**Pn**	**07 45 43.2**	**-1.4**
JIJ				S	**Sn**	**07 46 09.1**	**-4.2**
JKRS	**Kuro-shima**	**2.06**	**202**	P	**Pn**	**07 45 45.0**	**-1.2**
JKRS				S	**Sn**	**07 46 12.6**	**-3.7**
IRIF	**Iriomote-Funau**	**2.08**	**210**	P	**Pn**	**07 45 45.0**	**-1.4**
IRIF				S	**Sn**	**07 46 13.1**	**-3.6**
JAGN	**Aguni-jima**	**2.19**	**78**	P	**Pn**	**07 45 46.9**	**-0.6**
JAGN				S	**Sn**	**07 46 16.2**	**-2.5**
HATJ	**Hateruma jima**	**2.29**	**205**	P	**Pn**	**07 45 47.5**	**-1.3**
HATJ				S	**Sn**	**07 46 16.8**	**-4.1**
YOJ	**Yonaguni jima**	**2.37**	**225**	P	**Pn**	**07 45 48.7**	**-0.9**
YOJ				S	**Sn**	**07 46 20.9**	**-1.5**
YOJ	**Yonaguni jima**	**2.37**	**225**	P	**Pn**	**07 45 47.3**	**-2.3**
YOJ						07 46 19.2	
YOJ	**Yonaguni jima**	**2.37**	**225**	Pn	**Pn**	**07 45 47.3**	**-2.3**
YOJ				Sn	**Sn**	**07 46 19.2**	**-3.2**
JYNG	**Yonagunijimaku**	**2.42**	**226**	P	**Pn**	**07 45 49.4**	**-0.8**
JJT3	**Tamagusuku3**	**2.63**	**90**	P	**Pn**	**07 45 52.6**	**0.0**
JJT3				S	**Sn**	**07 46 25.4**	**-2.3**
JNTH	**Nagotoyohara**	**2.87**	**82**	P	**Pn**	**07 45 54.7**	**-0.6**
JNTH				S	**Sn**	**07 46 28.6**	**-3.9**
JIH	**Iheya**	**2.92**	**72**	P	**Pn**	**07 45 55.1**	**-0.8**
JIH				*e*S	**Sn**	**07 46 30.2**	**-3.5**
JOW	**Kunigami**	**3.14**	**77**	P	**Pn**	**07 45 57.6**	**-0.9**
JOW				*e*S	**Sn**	**07 46 34.0**	**-4.4**
JYRO	**Yoronjima**	**3.34**	**74**	P	**Pn**	**07 45 59.8**	**-1.1**
JYRO				S	**Sn**	**07 46 38.2**	**-4.4**
YHNB	**Yeheng**	**3.48**	**246**		**Pn**	**07 46 01.2**	**-1.5**
JOKE	**Okinoerabujima**	**3.54**	**69**	P	**Pn**	**07 46 02.0**	**-1.3**
JOKE				*e*S	**Sn**	**07 46 43.0**	**-4.0**
NACB	**Ninganchiao**	**3.55**	**237**	Pn	**Pn**	**07 46 02.0**	**-1.5**
JTK	**Tokunoshima**	**4.00**	**65**	P	**Pn**	**07 46 07.5**	**-1.6**
JTK				*e*S	**Sn**	**07 46 53.0**	**-4.4**
YULB	**Yu-li**	**4.24**	**230**	Pn	**Pn**	**07 46 10.2**	**-2.0**
SSLB	**Suanglung**	**4.25**	**237**		**Pn**	**07 46 12.2**	**-0.1**
JAMN	**Amaminishikomi**	**4.38**	**61**	P	**Pn**	**07 46 11.8**	**-2.0**
TWG	**Pinlang**	**4.78**	**227**		**Pn**	**07 46 16.9**	**-2.2**
JAM	**Amami Oshima**	**4.79**	**61**	P	**Pn**	**07 46 17.0**	**-2.1**
JTAJ	**Takarajima**	**4.88**	**51**	P	**Pn**	**07 46 18.9**	**-1.3**
JMZ	**Minamidaito 2**	**5.74**	**92**	Pn	**Pn**	**07 46 30.2**	**-1.1**
NJ2	**Nanjing**	**7.88**	**320**	*e*P	**Pn**	**07 46 58.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JNU	**Nakatsue**	**8.70**	**36**	P	**Pn**	**07 47 11.1**	**+1.2**
	0.6nm,0.3s,baz=185,slow=19,SNR=5.3						
JNU	**Nakatsue**	**8.70**	**36**	Pn	**Pn**	**07 47 10.3**	**+0.4**
JMN	**Monobe**	**10.87**	**44**	Pn	**Pn**	**07 47 34.7**	**-3.4**
KSRS	**Korea Array**	**11.56**	**12**	P	**Pn**	**07 47 48.3**	**+1.4**
	2.5nm,0.3s,baz=197,slow=12,SNR=16						
DL2	**Dalian**	**13.00**	**349**	P	**P**	**07 48 10.8**	**+2.3**
DL2				pmax	pmax		
	comp=Z,38nm,0.7s						
MJAR	**Matsushiro Arr**	**15.39**	**45**	P	**P**	**07 48 40.7**	**+5.6**
	comp=Z,0.0nm,0.3s,baz=226,slow=9.3,SNR=2.1						
XAN	**Xi'an**	**15.86**	**303**	P	**Pn**	**07 48 41.5**	**+1.0**
XAN				pmax	pmax		
	comp=Z,39nm,0.7s						
XAN				pmax	pmax		
	comp=Z,230nm,6.1s						
GYA	**Guiyang**	**16.32**	**275**	⇑P	**Pn**	**07 48 48.6**	**+2.5**
GYA				pmax	pmax		
	comp=Z,11nm,1.0s						
CN2	**Changchun**	**17.61**	**1**	*e*P	**Pn**	**07 49 01.3**	**+0.1**
CN2				pmax	pmax		
	comp=Z,60nm,0.8s						
HHC	**Hu-ho-hao-te**	**18.34**	**326**	*e*P	**Pn**	**07 49 09.5**	**-0.4**
HHC				S	**S**	**07 52 30.8**	**+3.9**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.4s						
USRK	**Ussuriysk Ar.**	**18.91**	**16**	P	**P**	**07 49 13.9**	**+0.4**
	baz=201,slow=10,SNR=5.5						
BTO	**Baotou**	**18.96**	**323**	*e*P	**Pn**	**07 49 17.0**	**-0.2**
BTO				S	**S**	**07 52 41.8**	**+2.6**
CD2	**Chengdu**	**19.12**	**289**	⇑*i*P	**P**	**07 49 14.1**	**-1.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI	**Kunming**	**19.96**	**272**	P	**P**	**07 49 26.3**	**+1.0**
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
LZH	**Lanzhou**	**20.49**	**304**	⇓P	**P**	**07 49 31.3**	**+0.5**
LZH				pP	pP	07 49 59.8	-3.5
LZH				sP	sP	07 50 19.1	-8.8
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.5s						
ASAJ	**Asahikawa**	**22.97**	**34**	P	**P**	**07 49 54.9**	**-0.1**
	comp=Z,2.7nm,0.4s,baz=254,slow=7.4,SNR=2.0						
KLR	**Kul'dur**	**23.65**	**11**	P	**P**	**07 50 01.2**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=226,slow=6.0,SNR=16						
KLR	**Kul'dur**	**23.65**	**11**	*ce*P	**P**	**07 50 00.5**	**-0.6**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA	**Gaotai**	**24.76**	**308**	⇓P	**P**	**07 50 11.0**	**-0.5**
GTA				pP	pP	07 50 52.3	+2.7
GTA				sP	sP	07 51 11.9	-1.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,97nm,5.1s						
GTA				LR	LR		
	comp=Z,140nm,14.5s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
GTA				LR	LR		
	comp=Z,170nm,16.0s						
CHTO	**Chiang Mai**	**25.00**	**258**	P	**P**	**07 50 14.5**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**25.00**	**258**	P	**P**	**07 50 14.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**25.13**	**258**	P	**P**	**07 50 14.2**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=57,slow=7.9,SNR=9.3						
ULN	**Ulaanbaatar**	**25.80**	**332**	*ce*P	**P**	**07 50 18.5**	**-2.3**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
ULN	**Ulaanbaatar**	**25.80**	**332**	P	**P**	**07 50 20.0**	**-0.7**
ULN				IAmb	IAmb	07 50 24.9	
	comp=Z,10nm,0.8s						
SONM	**Songino Array**	**26.06**	**331**	P	**P**	**07 50 23.1**	**0.0**
	comp=Z,4.5nm,0.5s,baz=153,slow=11,SNR=19						
SONM				PcP	**PcP**	**07 53 47.0**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=154,slow=4.5,SNR=4.1						
FAKI	**Fak Fak**	**29.78**	**165**	P	**P**	**07 50 55.9**	**-0.4**
LSA	**Lhasa**	**29.93**	**285**	P	**P**	**07 50 59.1**	**+1.1**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSA	**Lhasa**	**29.93**	**285**	P	**P**	**07 50 59.1**	**+1.1**
LSA				IAmb	IAmb	07 51 00.8	
	comp=Z,7.3nm,0.7s						
MOY	**Mondy**	**31.25**	**331**	*e*P	**P**	**07 51 09.0**	**0.0**
TAPN	**Taplejung**	**33.11**	**281**	*e*P	**P**	**07 51 26.8**	**+1.1**
	comp=Z,18nm,0.4s						
ODAN	**Odare**	**33.45**	**280**	*e*P	**P**	**07 51 29.3**	**+0.7**
	comp=Z,26nm,0.4s						
RAMN	**Ramite**	**34.14**	**280**	*e*P	**P**	**07 51 35.2**	**+0.6**
	comp=Z,12nm,0.5s						
GUN	**Gumba**	**34.66**	**282**	*e*P	**P**	**07 51 39.9**	**+0.7**
	comp=Z,23nm,0.5s						
WMQ	**Urumqi**	**34.82**	**310**	*e*P	**P**	**07 51 41.8**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.9s						
WMQ				LR	LR		
	comp=Z,210nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,170nm,29.1s						
PKI	**Pulchoki**	**35.12**	**281**	*e*P	**P**	**07 51 43.1**	**+0.1**
	comp=Z,45nm,0.8s						
PKIN	**Phulchoki**	**35.13**	**281**	*e*P	**P**	**07 51 43.3**	**+0.3**
	comp=Z,22nm,0.4s						
KKN	**Kakani**	**35.20**	**282**	*e*P	**P**	**07 51 44.1**	**+0.5**
	comp=Z,48nm,0.7s						
DMN	**Daman**	**35.38**	**281**	*e*P	**P**	**07 51 45.4**	**+0.2**
	comp=Z,31nm,0.8s						
GKN	**Gorkha**	**35.74**	**282**	*e*P	**P**	**07 51 48.4**	**+0.2**
YAK	**Yakutsk**	**36.02**	**4**	*i* P	**P**	**07 51 48.4**	**-1.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PETK	**Petropavlovsk-**	**36.39**	**33**	P	**P**	**07 51 53.1**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=224,slow=4.1,SNR=4.2						
DANN	**Dangsing**	**36.48**	**283**	*e*P	**P**	**07 51 55.4**	**+0.9**
	comp=Z,52nm,0.6s						
KOLN	**Koldanda**	**36.68**	**282**	*e*P	**P**	**07 51 56.8**	**+0.6**
	comp=Z,20nm,0.7s						
MTN	**Manton Dam**	**39.24**	**170**	P	**P**	**07 52 17.8**	**+0.5**
MK31	**Makanchi Array**	**39.34**	**313**	P	**P**	**07 52 17.6**	**-0.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**39.34**	**313**	P	**P**	**07 52 17.6**	**-0.3**
MKAR	**Makanchi Array**	**39.34**	**313**	P	**P**	**07 52 17.6**	**-0.4**
	comp=Z,2.8nm,0.5s,baz=98,slow=9.8,SNR=27						
MKAR				PcP	**PcP**	**07 54 23.0**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=85,slow=4.8,SNR=8.6						
MAKZ	**Makanchi**	**39.55**	**313**	P	**P**	**07 52 19.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**39.55**	**313**	P	**P**	**07 52 19.4**	**-0.2**
ZAA0	**Zalesovo Array**	**40.50**	**324**	P	**P**	**07 52 26.5**	**-0.8**
ZAA0				IAmb	IAmb	07 52 28.2	
	comp=Z,8.1nm,0.6s						
ZALV	**Zalesovo Beam**	**40.50**	**324**	P	**P**	**07 52 26.4**	**-0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.3nm,0.4s,baz=115,slow=8.6,SNR=24						
ZALV				pP	pP	07 53 08.6	+0.1
	comp=Z,2.6nm,0.6s,baz=110,slow=8.3,SNR=2.6						
ZALV				ScP	ScP	07 57 55.6	-1.2
	comp=Z,1.3nm,0.6s,baz=109,slow=3.5,SNR=5.2						
PMG	Port Moresby	41.47	146	*ce*P	P	07 52 35.5	-0.1
PMG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PMG	Port Moresby	41.47	146	P	P	07 52 36.1	+0.4
KSH	Kashi	42.69	301	P	P	07 52 49.3	+3.9
KSH				S	S	07 59 00.9	+6.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,450nm,4.9s						
KURK	Kurchatov	42.81	317	P	P	07 52 45.2	-0.8
KURK				*PP	pP	07 53 28.6	+0.9
KURK	Kurchatov	42.81	317	P	P	07 52 45.3	-0.8
KURK				IAmb	IAmb	07 52 47.0	
	comp=Z,9.2nm,0.8s						
KURBB	Kurchatov Arra	42.83	317	P	P	07 52 45.2	-1.1
	comp=Z,7.7nm,0.7s,baz=107,slow=8.4,SNR=40						
KURBB				pP	pP	07 53 28.6	+0.7
	comp=Z,0.7nm,0.7s,baz=108,slow=8.7,SNR=1.0						
FITZ	Fitzroy Crossi	43.99	179	P	P	07 52 56.6	+0.7
FITZ				IAmb	IAmb	07 52 57.4	
	comp=Z,9.4nm,0.6s						
AAK	Ala-Archa	44.03	305	*i* P	P	07 52 53.5	-2.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NIL	Nilore	44.97	292	P	P	07 53 03.5	-0.1
NIL				pmax	pmax		
	comp=Z,17nm,0.6s						
NIL	Nilore	44.97	292	P	P	07 53 03.5	-0.1
NIL				IAmb	IAmb	07 53 04.8	
	comp=Z,17nm,0.6s						
WB0	Warramunga Arr	46.58	168	P	P	07 53 17.0	+0.9
WB0				IAmb	IAmb	07 53 17.4	
	comp=Z,8.1nm,0.5s						
WRAB	Tennant Creek	46.73	168	*ce*P	P	07 53 14.7	-2.6
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WRA	Warramunga Arr	46.74	168	P	P	07 53 18.4	+1.0
	comp=Z,8.4nm,0.6s,baz=349,slow=8.6,SNR=57						
WB2	Warramunga Arr	46.74	168	P	P	07 53 18.4	+1.0
WB2				IAmb	IAmb	07 53 19.2	
	comp=Z,10nm,0.7s						
WR0	Warramunga Arr	46.79	167	P	P	07 53 18.3	+0.5
WR0				IAmb	IAmb	07 53 19.5	
	comp=Z,8.8nm,0.7s						
KK05	Karatay Array	46.97	306	P	P	07 53 20.5	+1.5
KK09	Karatay Array	46.99	306	P	P	07 53 20.8	+1.6
PSAC1	Pilbara Seismi	47.66	186	P	P	07 53 25.0	+0.5
PSAC1				IAmb	IAmb	07 53 35.6	
	comp=Z,15nm,1.2s						
PSAC2	Pilbara Seismi	47.68	186	P	P	07 53 25.0	+0.4
PSAC2				IAmb	IAmb	07 53 48.6	
	comp=Z,28nm,1.4s						
PSA00	Pilbara Seismi	47.69	186	P	P	07 53 25.2	+0.5
PSAA1	Pilbara Seismi	47.70	186	P	P	07 53 25.0	+0.3
PSAA1				IAmb	IAmb	07 53 42.2	
	comp=Z,25nm,1.5s						
BVAR	Borovoye Array	48.32	319	P	P	07 53 29.1	-0.1
	comp=Z,1.3nm,0.3s,baz=42,slow=18,SNR=16						
BVAR				PcP	PcP	07 54 53.0	+0.2
	comp=Z,1.2nm,0.6s,baz=101,slow=4.6,SNR=6.7						
KBL	Kabul	48.37	294	P	P	07 53 31.7	+1.6
KBL				pmax	pmax		
	comp=Z,25nm,0.6s						
KBL	Kabul	48.37	294	P	P	07 53 31.7	+1.6
BRVK	Borovoye	48.39	319	*ce*P	P	07 53 28.0	-1.8
BRVK				pmax	pmax		
	comp=Z,18nm,2.5s						
BRVK	Borovoye	48.39	319	P	P	07 53 30.0	+0.3
AS31	Alice Springs	50.30	169	P	P	07 53 46.2	+1.7
ASAR	Alice Springs	50.30	169	P	P	07 53 46.0	+1.5
	comp=Z,4.9nm,0.6s,baz=355,slow=14,SNR=91						
ASAR	Alice Springs	50.30	169	P	P	07 53 46.0	+1.5
SVE	Sverdlovsk	54.47	323	*e*P	P	07 54 15.2	+0.4
SVE				pmax	pmax		
	comp=Z,21nm,0.6s						
ABKAR	Akbulak array	54.48	313	P	P	07 54 15.4	+0.4
ABKAR				IAmb	IAmb	07 54 16.6	
	comp=Z,7.8nm,0.8s						
ARU	Arti	55.58	322	P	P	07 54 22.6	-0.2
	comp=Z,2.4nm,0.2s,baz=119,slow=4.2,SNR=15						
ARU	Arti	55.58	322	*d i*P	P	07 54 22.1	-0.6
ARU						07 55 18.2	
ARU						07 56 26.2	
ARU				S	S	08 01 56.6	+3.7
ARU				SS	SS	08 05 37.8	-2.7
ARU				pmax	pmax		
	comp=Z,17nm,0.9s						
ARU	Arti	55.58	322	P	P	07 54 22.5	-0.2
ARU				IAmb	IAmb	07 54 23.3	
	comp=Z,13nm,0.9s						
AKTO	Aktyubinsk	55.73	315	P	P	07 54 23.7	-0.2
	comp=Z,3.3nm,0.8s,baz=98,slow=6.9,SNR=9.5						
AKTO				LR	LR	08 19 52.7	
	comp=Z,95nm,18.7s,baz=76,slow=38						
GEYT	Alibeck	56.70	300	P	P	07 54 31.1	+0.1
	comp=Z,3.2nm,0.4s,baz=79,slow=4.8,SNR=6.4						
GEYT				LR	LR	08 21 28.6	
	comp=Z,45nm,18.6s,baz=20,slow=38						
STKA	Stephens Creek	59.88	164	P	P	07 54 53.1	+0.3
	comp=Z,1.3nm,0.5s,baz=343,slow=6.8,SNR=5.6						
KIRV	Kirov	60.54	324	P	P	07 54 57.2	+0.2
	comp=Z,28nm,0.5s,baz=44,slow=2.5,SNR=7.0						
KIRV	Kirov	60.54	324	*ce*P	P	07 54 55.1	-1.9
BELG	Belogornoye	62.08	317	*i* P	P	07 55 05.7	-1.8
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DZM	Mont Dzumac	62.63	136	P	P	07 55 13.1	+1.5
	comp=Z,2.2nm,0.5s,baz=201,slow=8.2,SNR=11						
KLMR	Klimovskoe	65.29	328	*e*P	P	07 55 26.5	-1.8
KLMR				pmax	pmax		
	comp=Z,20nm,1.2s						
KLMR	Klimovskoe	65.29	328	*e*P	P	07 55 26.6	-1.8
KLMR				AMP		07 55 28.7	
	comp=Z,20nm,1.2s						
RND	Reindeer	65.31	30	P	P	07 55 28.8	+0.2
RND				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RND	Reindeer	65.31	30	P	P	07 55 28.8	+0.2
RND				IAmb	IAmb	07 55 29.7	
	comp=Z,8.4nm,0.8s						
MDM	Murphy Dome	65.34	28	P	P	07 55 29.6	+1.0
MDM				IAmb	IAmb	07 55 30.6	
	comp=Z,15nm,1.3s						
TMCR	Tamitsa	65.42	331	*e*P	P	07 55 26.3	-2.8
TMCR				pmax	pmax		
	comp=Z,37nm,0.4s						
COLA	College	65.51	28	*i* P	P	07 55 29.8	+0.1
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	65.93	28	P	P	07 55 31.9	-0.5
	comp=Z,0.7nm,0.6s,baz=262,slow=5.0,SNR=14						
KBZ	Khabaz	66.85	309	P	P	07 55 38.7	+0.1
	comp=Z,8.6nm,0.8s,baz=104,slow=4.2,SNR=15						
KBZ				LR	LR	08 30 26.7	
	comp=Z,77nm,18.6s,baz=64,slow=41						
KBZ	Khabaz	66.85	309	*ce*P	P	07 55 35.1	-3.5
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	66.94	309	*e*P	P	07 55 37.6	-1.7
KIV				pmax	pmax		
	comp=Z,62nm,1.1s						
KIV				MLR	MLR		
	comp=Z,208nm,17.0s						
KIV	Kislovodsk	66.94	309	P	P	07 55 39.1	-0.2
ARCES	ARCESS Array B	68.96	338	P	P	07 55 51.1	-0.2
	comp=Z,1.2nm,0.4s,baz=66,slow=7.8,SNR=29						
RAYN	Ar Rayn	70.95	287	P	P	07 56 04.3	0.0
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAYN	Ar Rayn	70.95	287	P	P	07 56 04.3	0.0
FINES	FINESS Array B	71.42	330	P	P	07 56 05.5	-0.9
	comp=Z,4.5nm,0.6s,baz=59,slow=6.0,SNR=18						
MNK	Minsk	72.99	323	*i* P	P	07 56 06.8	-9.0
	comp=E,4.0nm,0.9s						
MNK				*i* P	P	07 56 06.8	-9.0
	comp=N,25nm,0.9s						
MNK				*i* P	P	07 56 06.8	-9.0
	comp=Z,14nm,1.0s						
MNK				*i* PcP	PcP	07 56 22.4	-9.2
MNK				*i* pP	pP	07 56 47.7	-14
MNK				*i* PP	PP	07 58 56.0	-4.6
MNK				*i* PPP	PPP	08 00 41.1	
MNK				*i* S	S	08 05 19.1	-7.4
MNK				*i* sS	pS	08 06 32.3	+11
MNK				*i* SS	SS	08 10 05.9	-4.7
MNK				*i* SSS	SSS	08 13 20.8	
MNK				*i* LRM	MLR	08 30 59.2	
	comp=E,12nm,14.1s						
MNK				*i* LRM	MLR	08 30 59.2	
	comp=N,276nm,23.5s						
MNK				*i* LRM	MLR	08 31 07.1	
	comp=Z,75nm,10.5s						
AKASG	Malin Array Be	73.60	319	P	P	07 56 18.8	-0.7
	comp=Z,4.7nm,0.5s,baz=59,slow=6.4,SNR=20						
BR131	Keskin Array S	74.67	307	P	P	07 56 26.0	0.0
BR131				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BR131	Keskin Array S	74.67	307	P	P	07 56 26.0	0.0
BR131				IAmb	IAmb	07 56 26.9	
	comp=Z,8.4nm,0.6s						
BRTR	Keskin Array B	74.67	307	P	P	07 56 26.2	+0.2
	comp=Z,4.4nm,0.5s,baz=118,slow=2.5,SNR=29						
BRTR				pP	pP	07 57 12.8	+0.5
	comp=Z,1.8nm,1.1s,baz=108,slow=4.7,SNR=3.1						
BRTR				LR	LR	08 33 15.5	
	comp=Z,24nm,19.9s,baz=56,slow=39						
DAG	Danmarks Havn	74.92	352	*i* P	P	07 56 25.5	-1.0
DAG	Danmarks Havn	74.92	352	*i* P	P	07 56 25.5	-1.0
DAG	Danmarks Havn	74.92	352	*i* P	P	07 56 25.6	-1.0
MLR	Muntele Rosu	77.66	315	P	P	07 56 43.3	+0.5
MLR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MLR	Muntele Rosu	77.66	315	P	P	07 56 43.3	+0.5
MLR				IAmb	IAmb	07 56 43.9	
	comp=Z,4.0nm,0.6s						
NB201	NORSAR Array S	77.98	333	P	P	07 56 44.1	0.0
NB2	NORSAR Subarra	78.02	333	P	P	07 56 43.8	-0.5
	comp=Z,1.9nm,0.7s,baz=53,slow=6.2						
NOA	NORSAR Array B	78.02	333	P	P	07 56 43.2	-1.1
	comp=Z,2.1nm,0.8s,baz=55,slow=5.5,SNR=6.1						
KOLS	Kolonicke sedl	78.43	319	*e*P	P	07 56 46.9	+0.1
KOLS	Kolonicke sedl	78.43	319	*e*P	P	07 56 46.9	+0.1
ELL	Elmali	78.52	305	P	P	07 56 47.5	-0.2
ELL				pmax	pmax		
	comp=Z,35nm,0.6s						
ELL	Elmali	78.52	305	P	P	07 56 47.5	-0.2
UZH	Uzhgorod	78.56	319	*e*P	P	07 56 45.3	-2.1
UZH				*e*		07 56 56.6	
OJC	Ojcow	79.28	321	P	P	07 56 51.2	-0.2
OJC				pmax	pmax		
	comp=Z,28nm,1.3s						
OJC	Ojcow	79.28	321	P	P	07 56 51.2	-0.2
YKA	Yellowknife Ar	79.85	24	P	P	07 56 53.9	-0.3
	comp=Z,1.8nm,0.7s,baz=310,slow=4.4,SNR=25						
YKA				pP	pP	07 57 44.5	+3.5
	comp=Z,0.5nm,0.6s,baz=304,slow=4.8,SNR=2.8						
VYHS	Vyhne	80.65	320	*e*P	P	07 56 59.5	+0.7
SUMG	Summit	80.87	355	*i* P	P	07 57 00.3	+0.4
SUMG				pmax	pmax		
	comp=Z,32nm,0.9s						
SUMG	Summit	80.87	355	P	P	07 57 00.1	+0.2
SUMG	Summit	80.87	355	*i* P	P	07 57 00.3	+0.4
	comp=Z,32nm,0.9s						
SUMG	Summit	80.87	355	*i* P	P	07 57 00.3	+0.4
SUMG				IAmb	IAmb	07 57 01.1	
	comp=Z,32nm,0.9s						
CLL	Collm	82.45	324	*e*P	P	07 57 08.0	-0.1
CLL	Collm	82.45	324	*e*P	P	07 57 08.0	-0.1
GERES	GERESS Array B	83.40	322	P	P	07 57 13.1	-0.1
	comp=Z,0.9nm,0.6s,baz=56,slow=5.0,SNR=7.8						
ITM	Ithomi	84.08	308	P	P	07 57 15.9	-0.9
ICESG	Greenland Ices	84.36	354	*i* P	P	07 57 17.6	-0.3
ICESG				IAmb	IAmb	07 57 18.6	
	comp=Z,8.6nm,0.6s						
LTY	Liberty	86.14	38	P	P	07 57 28.6	+1.7
WALA	Waterton Lakes	88.65	34	P	P	07 57 39.3	+0.5
FCC	Fort Churchill	89.44	19	P	P	07 57 42.0	-0.1
FCC				pmax	pmax		
	comp=Z,9.0nm,1.5s						
FCC	Fort Churchill	89.44	19	P	P	07 57 42.0	-0.1
FCC				IAmb	IAmb	07 57 42.7	
	comp=Z,9.1nm,1.4s						
NVAR	Mina Array Bea	92.72	45	P	P	07 57 58.8	+0.7
	comp=Z,0.3nm,0.6s,baz=311,slow=5.7,SNR=4.4						
PDAR	Pinedale Array	95.08	37	P	P	07 58 09.8	+1.0
	comp=Z,0.3nm,0.5s,baz=55,slow=1.9,SNR=6.7						

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*JMA **16** 07:48:07.8±0.1, 24°.82N×125°.37E, h50^{km}±1^{km}, M3.9*
JMA Felt II J1.
*NIED **16** 07:48:07.9, 24°.82N×125°.38E, h50^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.06; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-0.56; $M_{r\theta}$-0.58; $M_{\theta\phi}$-0.79; $M_{\phi r}$0.19; Fault plane solution: $M_0$1.36000×10^{15} NP1: ϕ_s248.00000°, δ57.00000°, λ121.00000°. NP2: ϕ_s20.00000°, δ45.00000°, λ52.00000°.*
*NEIC **16** 07:48:11.5±1.2, 24°.2N±0°.1×125°.12E±0°.04, h107^{km}±12^{km}, mb4.3/8 Error ellipse: s-maj=17.5km s-min=4.6km az=187.0*
*IDC **16** 07:48:21.6±4.4, 25°.71N×125°.05E, h122^{km}±41^{km}, mb3.7/20, mb1 3.8/22, mb1mx3.6/53, mbtmp4.0/22, MS3.4/1, Ms1 3.4/1, ms1mx2.6/45, Error ellipse: s-maj=20.3km s-min=13.2km az=64.0*

ISC 16 07:48:07.9±0.8, 24°.75N±0°.09×125°.37E±0°.06, h46^{km}±5^{km}, n49, σ1^{s}41/55, mb4.1/23, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.03	67	P	Pn	07 48 15.4	+0.3
JOGS				S	Sn	07 48 21.1	+1.0
JMJ2	Miyako jima3	0.04	262	P	Pn	07 48 15.5	+0.4
JMJ2				S	Sn	07 48 21.1	+1.0
JIRB	Irabujima	0.20	294	P	Pn	07 48 15.8	0.0
JIRB				S	Sn	07 48 21.6	+0.2
JIKM	Ikemajima	0.21	327	P	Pn	07 48 15.8	-0.1
JIKM				S	Sn	07 48 21.7	+0.2
JTJ	Tarama	0.62	260	P	Pn	07 48 21.1	+0.7
JTJ				S	Sn	07 48 30.4	+1.0
JISG	Ishigakijimahi	0.98	261	P	Pn	07 48 25.4	+0.1
JISG				*e*S	Sn	07 48 39.0	+1.0
JIJ	Ishigaki jima	1.18	251	P	Pn	07 48 28.7	+0.7
JIJ				*e*S	Sn	07 48 43.7	+0.7
JKRS	Kuro-shima	1.34	248	P	Pn	07 48 31.4	+1.2
JKRS				*e*S	Sn	07 48 48.4	+1.6
IRIF	Iriomote-Funau	1.55	255	P	Pn	07 48 33.5	+0.4
IRIF				*e*S	Sn	07 48 53.2	+1.2
HATJ	Hateruma jima	1.58	245	P	Pn	07 48 35.6	+2.1
HATJ				*e*S	Sn	07 48 56.0	+3.2
YOJ	Yonaguni jima	2.17	263	Pn	Pn	07 48 42.2	+0.6
YOJ				Sn	Sn	07 49 09.4	+2.2
NACB	Ninganchiao	3.49	261	Pn	Pn	07 49 00.3	+0.6
NACB				Sn	Sn	07 49 38.1	-1.7
TATO	Taipei	3.54	275	Pn	Pn	07 49 02.6	+2.3
YHNB	Yeheng	3.63	270		Pn	07 49 04.2	+2.4
YULB	Yu-li	3.96	251	Pn	Pn	07 49 05.4	-0.8
SSLB	Suanglung	4.14	258	Pn	Pn	07 49 09.3	+0.6
TWG	Pinlang	4.38	245	Pn	Pn	07 49 10.1	-1.9
JNU	Nakatsue	9.64	29	Pn	Pn	07 50 35.9	+12
KSRS	Korea Array	12.85	9	P	Pn	07 51 07.8	-0.2
	baz=196,slow=12,SNR=2.0						
MJAR	Matsushiro Arr	16.11	40	P	P	07 51 54.0	0.0
	0.1nm,0.3s,baz=286,slow=11,SNR=2.1						
JMM	Marumori	18.53	41	P	Pn	07 52 24.4	+3.2
JMM				IAmb	IAmb	07 52 53.4	
	comp=Z,109nm,1.5s						
SLVN	Son La	20.04	265	P	P	07 52 33.6	-3.8
USRK	Ussuriysk Ar.	20.14	14	LR	LR	07 59 32.2	
	comp=Z,111nm,18.7s,baz=183,slow=35						
JTM	Tenmabayashi	20.68	36	P	Pn	07 52 47.6	+0.8
GUMO	Guam	21.47	118	P	P	07 52 51.0	-1.7
PETK	Petropavlovsk-	37.31	32	P	P	07 55 15.9	+0.3
	comp=Z,3.8nm,0.9s,baz=216,slow=6.6,SNR=1.5						
MK31	Makanchi Array	40.65	314	P	P	07 55 43.0	-0.6
MKAR	Makanchi Array	40.65	314	P	P	07 55 42.9	-0.7
	comp=Z,1.8nm,0.5s,baz=99,slow=9.9,SNR=14						
MAKZ	Makanchi	40.86	314	P	P	07 55 44.1	-1.2
MAKZ				IAmb	IAmb	07 55 45.3	
	comp=Z,2.7nm,0.7s						
ZALV	Zalesovo Beam	41.91	325	P	P	07 55 51.9	-1.9
	comp=Z,1.7nm,0.4s,baz=104,slow=8.9,SNR=5.7						
KURK	Kurchatov	44.16	318	P	P	07 56 11.1	-0.9
KURK				IAmb	IAmb	07 56 12.2	
	comp=Z,2.2nm,0.8s						
KURBB	Kurchatov Arra	44.19	318	P	P	07 56 10.9	-1.4
	comp=Z,0.6nm,0.7s,baz=109,slow=8.9,SNR=7.4						
WRA	Warramunga Arr	45.27	168	P	P	07 56 34.3	+13
	comp=Z,3.1nm,0.8s,baz=350,slow=8.3,SNR=11						
ASAR	Alice Springs	48.83	170	P	P	07 57 02.8	+14
	comp=Z,0.8nm,0.5s,baz=356,slow=8.1,SNR=8.1						
BVAR	Borovoye Array	49.69	320	P	P	07 56 55.3	+0.1
	comp=Z,0.4nm,0.5s,baz=95,slow=10,SNR=3.5						
ABKAR	Akbulak array	55.79	314	P	P	07 57 39.5	-0.8
ABKAR				IAmb	IAmb	07 57 41.5	
	comp=Z,2.4nm,0.9s						
GEYT	Alibeck	57.80	300	P	P	07 57 55.8	+1.0
	comp=Z,2.9nm,0.7s,baz=79,slow=7.7,SNR=3.7						
STKA	Stephens Creek	58.40	164	P	P	07 58 11.5	+13
	comp=Z,0.8nm,0.6s,baz=254,slow=7.4,SNR=2.9						
BELG	Belogornoye	63.44	318	P	P	07 58 31.4	-1.4
	comp=Z,4.8nm,0.5s,baz=288,slow=20,SNR=3.1						
ILAR	Eielson Array	66.95	28	P	P	07 58 57.5	+2.0
	comp=Z,0.6nm,0.6s,baz=295,slow=9.2,SNR=17						
KBZ	Khabaz	68.09	309	P	P	07 59 03.6	+0.6
	comp=Z,2.1nm,0.7s,baz=88,slow=5.7,SNR=5.3						
ARCES	ARCESS Array B	70.43	338	P	P	07 59 15.9	-1.1
	comp=Z,4.8nm,1.1s,baz=45,slow=5.3,SNR=3.7						
FINES	FINESS Array B	72.87	330	P	P	07 59 30.7	-1.1
	comp=Z,1.6nm,0.6s,baz=74,slow=4.9,SNR=1.5						
AKASG	Malin Array Be	74.97	319	P	P	07 59 42.9	-1.4
	comp=Z,1.2nm,0.4s,baz=68,slow=5.8,SNR=4.1						
BRTR	Keskin Array B	75.89	307	P	P	07 59 50.4	+0.4
	comp=Z,2.8nm,0.9s,baz=97,slow=6.3,SNR=13						
NOA	NORSAR Array B	79.48	333	P	P	08 00 09.5	+0.1
	comp=Z,1.2nm,1.0s,baz=53,slow=8.1,SNR=1.7						
YKA	Yellowknife Ar	80.94	24	P	P	08 00 17.6	+0.4
	comp=Z,0.5nm,0.6s,baz=304,slow=4.9,SNR=6.3						
GERES	GERESS Array B	84.79	322	P	P	08 00 36.8	-0.8
	comp=Z,0.4nm,0.6s,baz=72,slow=4.3,SNR=3.9						
NVAR	Mina Array Bea	93.38	45	P	P	08 01 20.6	+1.8
	comp=Z,0.2nm,0.6s,baz=258,slow=4.5,SNR=2.4						

IDC 16 07:49:01.8±3.6, 54°.27N×87°.26E, h0^{km}, mb1 2.8/2, mb1mx2.7/47, mbtmp2.8/2, ML2.4/1, Error ellipse: s-maj=33.3km s-min=21.6km az=43.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	258	*i*		07 58 43.7	
	baz=77,slow=327,SNR=4.8						
ZALV	Zalesovo Beam	1.47	258	Pg	Pn	07 49 28.2	-1.4
	1.4nm,0.3s,baz=78,slow=16,SNR=11						
ZALV				Lg	Lg	07 49 48.6	
	1.4nm,0.3s,baz=83,slow=27,SNR=6.3						
KURBB	Kurchatov Arra	6.47	239	Pn	Pn	07 50 38.8	+0.6
	0.1nm,0.3s,baz=51,slow=14,SNR=5.0						
MKAR	Makanchi Array	8.13	205	Pn	Pn	07 51 02.3	+1.3
	baz=24,slow=16,SNR=1.3						

NNC 16 07:51:54.9±2.1, 41°.25N×78°.73E, h0^{km}, mb3.2, mpv3.0, 1C-3D, Error ellipse: s-maj=14.6km s-min=8.9km az=157.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	1.82	353	P	Pn	07 52 27.8	+0.2
	0.9nm,0.3s						
SATY				S	Sb	07 52 52.8	+0.2
	7.6nm,0.2s						
UZB	Uzynbulak	1.91	7	Pg	Pb	07 52 29.9	-0.8
	1.1nm,0.5s						
UZB				Lg	Lg	07 52 56.3	
	1.8nm,0.3s						
IZV	Izvestkoviy	2.38	319	Pg	Pb	07 52 38.9	+0.2
	3.1nm,0.1s						
IZV				Lg	Lg	07 53 12.3	
	3.6nm,0.1s						
KTMS	Ketmen	2.50	28	Pg	Pb	07 52 39.8	-1.0
	0.8nm,0.3s						
KTMS				Lg	Lg	07 53 13.2	
	1.0nm,0.2s						
KST	Kastek	2.72	312	Pg	Pb	07 52 44.9	+0.3
	3.2nm,0.3s						
KST				Lg	Lg	07 53 23.0	
	2.6nm,0.4s						
MNBS	Baschi	2.83	355	Pg	Pb	07 52 46.1	-0.4
	3.1nm,0.2s						
MNBS				Lg	Lg	07 53 23.9	
	5.3nm,0.2s						
TKM2	Tokmak 2	2.86	307	⇓Pg	Pg	07 52 48.7	-1.1
	5.5nm,0.5s						
TKM2				⇑Lg	Lg	07 53 17.8	
	0.8nm,0.2s						
KTBS	Karatobe	2.88	329	Pg	Pb	07 52 47.8	+0.5
	3.4nm,0.2s						
KTBS				Lg	Lg	07 53 28.3	
	5.5nm,0.4s						
DGS	Degeres	2.96	313	Pg	Pb	07 52 49.8	+1.2
	3.6nm,0.3s						
DGS				Lg	Lg	07 53 31.1	
	7.5nm,0.5s						
ARXS	Arharly	3.03	348	Pg	Pb	07 52 50.2	+0.4
	7.1nm,0.3s						
ARXS				Lg	Lg	07 53 31.9	
	5.8nm,0.5s						
KUU	Kurty	3.17	327	Pg	Pb	07 52 52.3	+0.1
	2.4nm,0.1s						
KUU				Lg	Lg	07 53 34.9	
	3.6nm,0.3s						
DJR	Jarkent	3.17	14	Pg	Pb	07 52 52.0	-0.2
	1.3nm,0.4s						
DJR				Lg	Lg	07 53 34.8	
	3.0nm,0.2s						
KRBS	Karabastau	3.33	318	Pg	Pb	07 52 55.2	+0.5
	1.8nm,0.2s						
KRBS				Lg	Lg	07 53 39.9	
	2.6nm,0.2s						
AAK	Ala-Archa	3.45	295	⇓Pg	Pb	07 52 58.1	+1.1
	1.1nm,0.8s						
AAK				⇓Lg	Lg	07 53 36.5	
	3.6nm,0.9s						
KAPS	Kapalarasan	4.06	6	Pg	Pb	07 53 07.9	+0.7
	0.3nm,0.4s						
KAPS				Lg	Lg	07 54 00.2	
	0.9nm,0.4s						

KRNET 16 07:52:49.5±0.1, 41°.66N×78°.00E, h16^{km}, mb2.7, 12C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	0.77	308	⇑*i*P	Pg	07 53 04.2	-0.4
	baz=8.0						
KDJ				⇑*i*S	Sg	07 53 14.5	-0.3
	baz=8.0						
PRZ	Przheval'sk	0.88	20	⇑*i*P	Pg	07 53 06.6	0.0
	baz=20						
PRZ				⇑*i*S	Sg	07 53 18.9	+0.7
	baz=20						
ANVS	Anan'yevo	1.15	348	⇓*i*P	Pn	07 53 11.3	+0.1
	baz=48						
ANVS				⇓*i*S	Sg	07 53 26.8	0.0
	baz=48						
ULHL	Ulahol	1.43	295	⇑*i*P	Pn	07 53 15.4	+0.3
	baz=95						
ULHL				⇑*i*S	Sg	07 53 35.9	+0.1
	baz=95						
BOOM	Boomskoye usch	1.74	299	⇑*i*P	Pb	07 53 21.6	+0.4
	baz=99						
BOOM				⇑*i*S	Sg	07 53 45.0	-0.6
	baz=99						
TKM2	Tokmak 2	2.18	306	⇑*i*P	Pb	07 53 27.3	-1.4
	baz=6.0						
TKM2				⇑*i*S	Sb	07 53 56.9	+1.3
	baz=6.0						
KBK	Karagaybulak	2.48	295	⇑*i*P	Pb	07 53 32.1	-1.6
	baz=95						
KBK				⇑*i*S	Sb	07 54 04.3	+0.3
	baz=95						
UCH	Uchtor	2.66	284	⇓*i*P	Pb	07 53 34.6	-2.4
	baz=83						
UCH				⇓*i*S	Sb	07 54 09.3	-0.3
	baz=83						

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*KRNET **16** 07:53:25.9±0.1, 43°.32N×77°.88E, h17^{km}, mb2.8*
*NNC **16** 07:53:25.9±0.6, 43°.31N×77°.87E, h0^{km}, mb3.0, mpv3.0,*

Error ellipse: s-maj=8.2km s-min=3.6km az=164.0

*SOME **16** 07:53:26.3, 43°.32N×77°.87E, h20km*

ISC 16 07:53:25.6±0.9**, 43°.31N**±0°.02×**77°.88E**±0°.01**, h15**km±7km**,**
n62, σ0s.86/122**, 22C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram baz=52	0.27	50	eP	Pg	07 53 31.4	-0.1
KURS	baz=52			eS	Sg	07 53 35.3	-0.2
KURS	Kuram 12nm,0.1s	0.27	50	eP	Pg	07 53 31.4	-0.1
KURS	45nm,0.2s			eS	Sg	07 53 35.4	-0.2
KURS	Kuram 12nm,0.1s	0.27	50	P	Pg	07 53 31.4	-0.1
KURS	45nm,0.2s			S	Sg	07 53 35.4	-0.2
SATY	Saty baz=24	0.46	123	eP	Pg	07 53 35.1	+0.2
SATY	baz=24			eS	Sg	07 53 41.9	+0.8
SATY	Saty 73nm,0.1s	0.46	123	eP	Pg	07 53 35.0	+0.2
SATY	215nm,0.1s			eS	Sg	07 53 41.8	+0.8
SATY	Saty 73nm,0.1s	0.46	123	P	Pg	07 53 35.0	+0.2
SATY	215nm,0.1s			S	Sg	07 53 41.8	+0.8
ANVS	Anan'yevo baz=96	0.55	197	⇓iP	Pg	07 53 36.8	+0.2
ANVS	baz=96			⇓iS	Sb	07 53 44.9	0.0
KOTS	Kotyrbulak baz=61	0.57	262	eP	Pb	07 53 37.3	0.0
KOTS	baz=61			eS	Sb	07 53 45.2	-0.1
KOTS	Kotyrbulak 12nm,0.2s	0.57	262	eP	Pb	07 53 37.3	0.0
KOTS	132nm,0.3s			eS	Sb	07 53 45.2	-0.1
KPKS	Kokpek baz=76	0.60	75	eP	Pg	07 53 37.5	0.0
KPKS	baz=76			eS	Sg	07 53 45.5	0.0
KPKS	Kokpek 26nm,0.1s	0.60	75	eP	Pg	07 53 37.5	0.0
KPKS	96nm,0.2s			eS	Sg	07 53 45.6	0.0
MDOK	Medeo baz=56	0.63	256	eP	Pg	07 53 37.9	0.0
MDOK	baz=56			eS	Sg	07 53 46.4	+0.1
MDOK	Medeo 2.7nm,0.2s	0.63	256	eP	Pg	07 53 37.9	0.0
MDOK	19nm,0.3s			eS	Sg	07 53 46.4	+0.1
MDOK	Medeo 1.6nm,0.5s	0.63	256	⇓P	Pg	07 53 37.3	-0.6
MDOK	5.1nm,0.3s			⇑S	Sg	07 53 45.7	-0.5
MDOK	Medeo 2.7nm,0.2s	0.63	256	Pg	Pg	07 53 37.9	0.0
MDOK	19nm,0.3s			Lg	Lg	07 53 46.4	
TNSS	Tian-Shan baz=48	0.74	248	eP	Pg	07 53 39.8	-0.3
TNSS	baz=48			eS	Sg	07 53 49.8	-0.1
TNSS	Tian-Shan 8.6nm,0.2s	0.74	248	eP	Pg	07 53 39.8	-0.3
TNSS	13nm,0.2s			eS	Sg	07 53 49.7	-0.1
TNSS	Tian-Shan 8.6nm,0.2s	0.74	248	P	Pg	07 53 39.8	-0.3
TNSS	13nm,0.2s			S	Sg	07 53 49.7	-0.1
UZB	Uzynbulak baz=1.0	0.85	101	eP	Pb	07 53 41.9	-0.3
UZB	baz=1.0			eS	Sb	07 53 52.8	-0.6
UZB	Uzynbulak 8.5nm,0.1s	0.85	101	eP	Pb	07 53 41.9	-0.3
UZB	34nm,0.1s			eS	Sb	07 53 52.8	-0.6
UZB	Uzynbulak 15nm,0.1s	0.85	101	P	Pb	07 53 41.8	-0.3
UZB	39nm,0.3s			S	Sb	07 53 52.8	-0.6
MNBS	Baschi 11nm,0.2s	0.85	26	eP	Pb	07 53 42.1	-0.1
MNBS	25nm,0.2s			eS	Sb	07 53 53.4	-0.1
MNBS	Baschi 11nm,0.2s	0.85	26	P	Pb	07 53 42.1	-0.1
MNBS	25nm,0.2s			S	Sb	07 53 53.4	-0.1
ARXS	Arharly 5.4nm,0.1s	0.90	358	eP	Pb	07 53 42.6	-0.4
ARXS	42nm,0.3s			eS	Sb	07 53 54.2	-0.6
ARXS	Arharly 5.4nm,0.1s	0.90	358	P	Pb	07 53 42.6	-0.4
ARXS	42nm,0.3s			S	Sb	07 53 54.2	-0.6
PRZ	Przheval'sk baz=55	0.91	155	⇑iP	Pg	07 53 43.9	+0.6
PRZ	baz=55			⇑iS	Sg	07 53 56.0	+0.7
KTBS	Karatobe baz=95	0.96	295	eP	Pg	07 53 44.4	+0.2
KTBS	baz=95			eS	Sg	07 53 57.1	+0.3
KTBS	Karatobe 3.0nm,0.2s	0.96	295	eP	Pg	07 53 44.4	+0.2
KTBS	31nm,0.6s			eS	Sg	07 53 57.0	+0.3
KTBS	Karatobe 3.0nm,0.2s	0.96	295	P	Pg	07 53 44.4	+0.2
KTBS	31nm,0.6s			S	Sg	07 53 57.0	+0.3
IZV	Izvestkoviy baz=53	0.97	254	eP	Pg	07 53 44.6	+0.2
IZV	baz=53			eS	Sn	07 53 57.8	-0.7
IZV	Izvestkoviy 6.2nm,0.2s	0.97	254	eP	Pg	07 53 44.5	+0.2
IZV	14nm,0.3s			eS	Sn	07 53 57.7	-0.7
IZV	Izvestkoviy 6.2nm,0.2s	0.97	254	P	Pg	07 53 44.6	+0.2
IZV	14nm,0.3s			S	Sn	07 53 57.7	-0.7
KUU	Kurty 1.1nm,0.1s	1.26	298	eP	Pg	07 53 50.7	+0.8
KUU	16nm,0.2s			eS	Sg	07 54 08.0	+1.6
KUU	Kurty 1.1nm,0.1s	1.26	298	P	Pg	07 53 50.7	+0.8
KUU	16nm,0.2s			S	Sg	07 54 08.0	+1.6
KDJ	Kajisay baz=3.0	1.29	204	⇑iP	Pg	07 53 50.6	+0.1
KDJ	baz=3.0			⇑iS	Sg	07 54 08.1	+0.8
KST	Kastek baz=59	1.43	260	eP	Pb	07 53 52.4	+0.4
KST	baz=59			eS	Sg	07 54 11.2	-0.5
KST	Kastek 3.3nm,0.3s	1.43	260	eP	Pb	07 53 52.4	+0.4
KST	10.0nm,0.5s			eS	Sg	07 54 11.2	-0.5
KST	Kastek 3.3nm,0.3s	1.43	260	P	Pb	07 53 52.4	+0.4
KST	10.0nm,0.5s			S	Sg	07 54 11.2	-0.5
DGS	Degeres baz=68	1.54	268	eP	Pb	07 53 54.3	+0.4
DGS	baz=68			eS	Sg	07 54 14.4	-0.9
DGS	Degeres 4.2nm,0.2s	1.54	268	eP	Pb	07 53 54.3	+0.4
DGS	13nm,0.4s			eS	Sg	07 54 14.4	-0.9
DGS	Degeres 4.2nm,0.2s	1.54	268	P	Pb	07 53 54.3	+0.4
DGS	13nm,0.4s			S	Sg	07 54 14.4	-0.9
ULHL	Ulahol baz=29	1.61	229	⇑iP	Pb	07 53 55.4	+0.2
ULHL	baz=29			⇑iS	Sg	07 54 16.8	-0.7
BOOM	Boomskoye usch baz=40	1.65	241	⇑iP	Pb	07 53 55.7	0.0
BOOM	baz=40			⇑iS	Sg	07 54 17.8	-0.8
KRBS	Karabastau baz=84	1.65	284	eP	Pg	07 53 57.4	+0.1
KRBS	baz=84			eS	Sg	07 54 19.5	+0.8
KRBS	Karabastau 2.0nm,0.4s	1.65	284	eP	Pg	07 53 57.4	+0.1
KRBS	20nm,0.3s			eS	Sg	07 54 19.5	+0.8
KRBS	Karabastau 2.0nm,0.4s	1.65	284	P	Pg	07 53 57.4	+0.1
KRBS	20nm,0.3s			S	Sg	07 54 19.5	+0.8
DJR	Jarkent 3.4nm,0.2s	1.72	53	eP	Pb	07 53 57.9	+1.0
DJR	8.9nm,0.4s			eS	Sg	07 54 20.6	-0.2
DJR	Jarkent 3.4nm,0.2s	1.72	53	P	Pb	07 53 57.9	+1.0
DJR	8.9nm,0.4s			S	Sg	07 54 20.7	-0.2
TKM2	Tokmak 2 baz=57	1.72	258	⇑eP	Pb	07 53 57.6	+0.6
TKM2	baz=57			⇑iS	Sg	07 54 19.8	-1.2
TKM2	Tokmak 2 1.5nm,0.3s	1.72	258	⇑P	Pg	07 53 59.1	+0.5
TKM2	5.6nm,0.5s			⇑S	Sg	07 54 19.7	-1.2
KTMS	Ketmen baz=85	1.81	85	eP	Pb	07 53 59.5	+1.0
KTMS	baz=85			eS	Sg	07 54 23.0	-0.8
KTMS	Ketmen 6.0nm,0.2s	1.81	85	eP	Pb	07 53 59.5	+1.0
KTMS	32nm,0.4s			eS	Sg	07 54 23.0	-0.8
KTMS	Ketmen 6.0nm,0.2s	1.81	85	P	Pb	07 53 59.5	+1.0
KTMS	32nm,0.4s			S	Sg	07 54 23.0	-0.8
KAPS	Kapalarasan 2.0nm,0.3s	2.24	28	eP	Pb	07 54 07.2	+1.5
KAPS	3.8nm,0.3s			eS	Sg	07 54 36.1	-1.4
KAPS	Kapalarasan 2.0nm,0.3s	2.24	28	Pg	Pb	07 54 07.2	+1.5
KAPS	3.8nm,0.3s			Lg	Lg	07 54 36.1	
KBK	Karagaybulak baz=54	2.25	254	⇓iP	Pb	07 54 05.8	-0.2
KBK	baz=54			⇓iS	Sb	07 54 35.0	+1.3
CHMS	Chumysh baz=63	2.31	263	⇑iP	Pb	07 54 06.8	-0.2
CHMS	baz=63			⇑iS	Sb	07 54 36.2	+0.8
USP	Ospenovka baz=70	2.47	270	⇑iP	Pb	07 54 09.0	-0.7
USP	baz=70			⇑iS	Sb	07 54 40.3	+0.4
AAK	Ala-Archa baz=56	2.58	256	⇑iP	Pb	07 54 10.5	-1.1
AAK	baz=56			⇑iS	Sb	07 54 42.9	-0.2
AAK	Ala-Archa 1.9nm,0.8s	2.58	256	⇑Pn	Pg	07 54 19.4	+4.5
AAK	4.7nm,0.8s			⇓Sn	Sb	07 54 45.6	+2.5
UCH	Uchtor baz=47	2.71	248	⇑iP	Pb	07 54 12.5	-1.5
UCH	baz=47			⇑iS	Sb	07 54 46.4	-0.7
EKS2	Erkin-Say baz=59	3.08	259	⇓iP	Pb	07 54 17.4	-2.8
EKS2	baz=59			⇓iS	Sb	07 54 54.8	-2.8

IDC 16 07:54:53.5±3.2**, 54°.02N×86°.74E, h0**km**, mb1 2.5**/2**,**
mb1mx2.5/43**, mbtmp2.5**/2**, ML1.9**/1**, Error ellipse:**
s-maj=26.5km s-min=15.4km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=87,slow=334,SNR=2.7	1.14	267	i		08 02 40.0	
ZALV	Zalesovo Beam 0.4nm,0.3s,baz=85,slow=15,SNR=3.6	1.14	267	Pg	Pg	07 55 14.4	-0.8
ZALV	0.7nm,0.3s,baz=84,slow=28,SNR=7.3			Lg	Lg	07 55 30.5	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=55,slow=13,SNR=3.4	6.07	239	Pn	Pn	07 56 26.1	+1.6
MKAR	Makanchi Array baz=24,slow=14,SNR=1.1	7.77	203	Pn	Pn	07 56 48.3	+0.5

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*IDC **16** 07:55:16.2±4.7, 6°.65S×155°.16E, h62km±41km, mb3.7/8,*
mb1 4.0/11, mb1mx3.7/37, mbtmp4.0/11, ML3.3/3, MS3.2/4,
Ms1 3.1/4, ms1mx2.8/32, Error ellipse: s-maj=25.9km
s-min=24.9km az=178.0

ISC 16 07:55:15.4±0.7**, 6°.6S**±0°.1×**155°.2E**±0°.1**, h56**km**, n19,**
σ0s.50/14**, mb3.8**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara comp=Z,178nm,19.1s,baz=318,slow=36	5.45	121	LR	LR	07 58 32.8	
PMG	Port Moresby 3.2nm,0.3s,baz=64,slow=5.2,SNR=6.2	8.44	250	P	Pn	07 57 15.4	+0.4
JAY	Jayapura comp=Z,61nm,20.9s,baz=134,slow=33	15.03	285	LR	LR	08 03 29.1	
CTA	Charters Tower 0.2nm,0.3s,baz=37,slow=14,SNR=5.3	15.95	212	P	Pn	07 58 56.5	+0.2
DZM	Mont Dzumac 0.3nm,0.3s,baz=306,slow=11,SNR=7.2	18.79	146	P	Pn	07 59 31.5	+0.1
DZM	comp=Z,89nm,21.4s,baz=170,slow=31			LR	LR	08 05 06.4	
WRA	Warramunga Arr 1.3nm,0.6s,baz=58,slow=9.7,SNR=12	24.20	235	P	P	08 00 26.4	-0.5
WRA	0.6nm,0.5s,baz=63,slow=2.2,SNR=8.2			PcP	PcP	08 04 06.8	+0.2
ASAR	Alice Springs 1.1nm,0.6s,baz=59,slow=8.9,SNR=21	26.57	228	P	P	08 00 47.8	-0.7
H11S3	WAKE ISLAND Hy baz=203,slow=76,SNR=40	27.42	24	T	T	08 29 24.8	
H11S2	WAKE ISLAND Hy baz=203,slow=76,SNR=30	27.42	24	T	T	08 29 23.1	
H11S1	WAKE ISLAND Hy baz=203,slow=76,SNR=19	27.44	24	T	T	08 29 23.6	
STKA	Stephens Creek comp=Z,51nm,18.9s,baz=24,slow=34	28.15	205	LR	LR	08 11 15.1	
CMAR	Chiang Mai Arr 3.9nm,0.6s,baz=122,slow=5.5,SNR=17	60.83	295	P	P	08 05 22.9	+0.5
SONM	Songino Array 0.9nm,0.9s,baz=145,slow=8.0,SNR=2.9	69.16	327	P	P	08 06 15.9	-0.3
ILAR	Eielson Array 0.4nm,0.3s,baz=252,slow=5.4,SNR=13	82.97	21	P	P	08 07 33.6	-0.5
MKAR	Makanchi Array 0.5nm,0.8s,baz=94,slow=5.1,SNR=4.8	83.28	319	P	P	08 07 36.1	-0.1
NVAR	Mina Array Bea 0.4nm,0.7s,baz=256,slow=5.5,SNR=2.8	91.33	52	P	P	08 08 16.4	+0.7
YKA	Yellowknife Ar 0.9nm,0.8s,baz=266,slow=4.2,SNR=11	95.92	28	P	P	08 08 36.1	+0.3
BDFB	Brasilia 2.7nm,0.7s,baz=246,slow=5.5,SNR=3.8	148.07	134	PKPbc	PKPbc	08 14 55.7	-0.3
TORD	Torodi Ar. Bea 1.0nm,0.6s,baz=40,slow=2.7,SNR=5.0	153.14	286	PKPbc	PKPbc	08 15 07.3	-0.7

PRU 16 07:56:39.2±0.0**, 50°.12N×19°.10E, h0**km**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.46	77	ePg	Pg	07 56 48.5	+0.4
OJC				eSg	Sg	07 56 54.1	+0.1
OKC	Ostrava-Krasne comp=Z,4.2nm,0.4s	0.68	246	eSG	Sg	07 57 01.9	+1.0
LANS	Liptovska Anna	1.00	166	ePG	Pg	07 56 57.6	-0.7
LANS				eSG	Sg	07 57 10.8	-0.5
LANS				eLG	Lg	07 57 14.2	
KRLC	Kraliky	1.49	269	eSG	Sg	07 57 26.3	-0.9
VYHS	Vyhne	1.64	186	ePG	Pn	07 57 07.9	-1.4
VYHS				eSG	Sn	07 57 29.6	-1.4
DPC	Dobruska-Polom	1.80	278	ePG	Pn	07 57 11.8	+0.3
DPC				eSG	Sb	07 57 36.1	0.0
OSTC	Ostas	1.90	284	eSG	Sg	07 57 40.4	+0.2
CHVC	Chvalec	2.01	285	eSG	Sg	07 57 44.1	+0.5

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*NNC **16** 07:58:31.1±5.5, 54°.21N×86°.70E, h0km, mb2.9, mpv2.8,*
Error ellipse: s-maj=42.6km s-min=15.7km az=75.0,
Suspected Mining explosion.

IDC 16 07:58:27.9±2.7**, 54°.41N×87°.01E, h0**km**, mb1 3.2**/2**,**
mb1mx3.0/40**, mbtmp3.2**/2**, ML2.9**/2**, 3C-1D, Error ellipse:**
s-maj=23.2km s-min=17.7km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=70,slow=333,SNR=0.9	1.37	251	i		08 07 10.0	
ZAA0	Zalesovo Array 0.4nm,0.3s,baz=72,slow=15	1.37	251	⇑P	Pg	07 58 52.4	-1.6
ZAA0	25nm,1.4s,baz=77,slow=26			⇓S	Sg	07 59 11.0	-0.7
ZALV	Zalesovo Beam 2.7nm,0.3s,baz=67,slow=16,SNR=19	1.37	251	Pg	Pg	07 58 51.7	-2.3
ZALV	2.3nm,0.3s,baz=73,slow=26,SNR=9.7			Lg	Lg	07 59 11.9	
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=54,slow=14,SNR=13	6.41	237	Pn	Pn	08 00 04.2	+0.7
KURBB	0.0nm,0.3s,baz=55,slow=23,SNR=3.6			Sn	Sn	08 01 16.8	-0.6
KURBB	0.0nm,0.3s,baz=47,slow=31,SNR=7.4			Lg	Lg	08 01 51.4	
KURBB	Kurchatov Arra 1.7nm,0.5s,baz=54,slow=14	6.41	237	Pn	Pn	08 00 05.3	+1.8
KURBB	3.5nm,0.6s			⇑Sn	Sn	08 01 12.1	-5.2
KURBB	20nm,1.2s			⇑Lg	Lg	08 01 50.3	
MK31	Makanchi Array 0.5nm,0.6s,baz=25,slow=12,SNR=7.2	8.19	203	Pn	Pn	08 00 30.0	+2.1
MKAR	Makanchi Array 0.2nm,0.3s,baz=26,slow=13,SNR=11	8.19	203	Pn	Pn	08 00 29.4	+1.4
MKAR	0.0nm,0.3s,baz=32,slow=30,SNR=7.4			Lg	Lg	08 02 46.8	

IDC 16 08:00:23.7±294.0**, 53°.41N×101°.95E, h0**km**, Error ellipse:**
s-maj=142.1km s-min=93.0km az=173.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS baz=335,slow=340,SNR=1.4	6.29	151	i		08 37 30.0	
I46RU	ZALESOVO INFRA baz=82,slow=340,SNR=0.8	10.18	280	i		08 56 30.0	
I45RU	USSURIYSK INFR baz=302,slow=332,SNR=1.3	21.67	103	i		10 13 30.0	
I31KZ	AKTYUBINSK INF baz=66,slow=340,SNR=0.8	26.94	282	i		10 49 00.0	

IDC 16 08:25:16.2±2.5**, 53°.64N×87°.06E, h0**km**, mb1 2.9**/2**,**
mb1mx2.8/43**, mbtmp2.9**/2**, ML2.2**/2**, Error ellipse:**
s-maj=23.6km s-min=14.9km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam 0.6nm,0.3s,baz=103,slow=17,SNR=22	1.37	284	Pg	Pg	08 25 40.8	-1.6
ZALV	1.0nm,0.3s,baz=106,slow=26,SNR=15			Lg	Lg	08 26 00.2	
I46RU	ZALESOVO INFRA baz=102,slow=332,SNR=2.8	1.37	284	i		08 34 10.0	
KURBB	Kurchatov Arra 0.0nm,0.3s,baz=59,slow=14,SNR=7.2	6.06	244	Pn	Pn	08 26 47.7	+0.7
KURBB	0.0nm,0.3s,baz=52,slow=32,SNR=5.1			Lg	Lg	08 28 28.9	
MKAR	Makanchi Array 0.1nm,0.3s,baz=20,slow=12,SNR=6.9	7.50	206	Pn	Pn	08 27 08.3	+1.4
MKAR	0.0nm,0.3s,baz=28,slow=29,SNR=9.9			Lg	Lg	08 29 13.4	

IDC 16 08:41:57.1±3.0**, 53°.60N×87°.99E, h0**km**, mb1 3.3**/2**,**
mb1mx3.0/40**, mbtmp3.3**/2**, ML3.1**/2**, Error ellipse:**
s-maj=29.4km s-min=17.4km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=98,slow=332,SNR=2.4	1.91	282	i		08 54 38.7	
ZALV	Zalesovo Beam 2.9nm,0.3s,baz=99,slow=14,SNR=35	1.91	282	Pn	Pn	08 42 31.1	+0.2
ZALV	2.5nm,0.3s,baz=105,slow=26,SNR=9.1			Lg	Lg	08 42 57.4	
KURBB	Kurchatov Arra 0.3nm,0.3s,baz=62,slow=14,SNR=12	6.54	247	Pn	Pn	08 43 35.1	+0.6
KURBB	0.1nm,0.3s,baz=53,slow=13,SNR=2.7			Lg	Lg	08 45 25.4	
MKAR	Makanchi Array 0.4nm,0.3s,baz=27,slow=13,SNR=19	7.73	210	Pn	Pn	08 43 52.0	+1.1
MKAR	0.1nm,0.3s,baz=31,slow=25,SNR=3.2			Lg	Lg	08 46 01.0	

IDC 16 08:48:52.0±2.4**, 53°.72N×86°.88E, h0**km**, mb1 2.8**/2**,**
mb1mx2.7/40**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse:**
s-maj=22.1km s-min=13.3km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=99,slow=337,SNR=0.8	1.24	281	i		08 57 30.0	
ZALV	Zalesovo Beam 1.2nm,0.3s,baz=98,slow=18,SNR=28	1.24	281	Pg	Pg	08 49 14.8	-1.0
ZALV	2.1nm,0.3s,baz=101,slow=31,SNR=15			Lg	Lg	08 49 32.3	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=57,slow=13,SNR=3.0	6.00	242	Pn	Pn	08 50 23.6	+1.6
KURBB	0.1nm,0.3s,baz=63,slow=32,SNR=2.6			Lg	Lg	08 52 02.3	
MKAR	Makanchi Array 0.1nm,0.3s,baz=24,slow=14,SNR=15	7.53	205	Pn	Pn	08 50 44.2	+1.2
MKAR	0.0nm,0.3s,baz=18,slow=24,SNR=2.0			Lg	Lg	08 52 49.8	

NNC 16 09:00:51.5±3.0**, 54°.41N×86°.18E, h0**km**, mb3.5, mpv2.8,**
5C, Error ellipse: s-maj=16.7km s-min=12.5km az=56.0,
Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array 0.5nm,0.3s,baz=61,slow=17	0.92	241	⇑P	Pg	09 01 08.7	-0.4
ZAA0	1.5nm,0.3s,baz=59,slow=28			⇑S	Sb	09 01 22.2	-0.9
KURK	Kurchatov 4.5nm,1.6s	5.91	234	⇑Pn	Pn	09 02 22.6	+2.4
KURBB	Kurchatov Arra 0.8nm,0.3s	6.01	234	⇑Pn	Pn	09 02 24.4	+2.7
MK31	Makanchi Array 0.2nm,0.2s,baz=27,slow=13,SNR=79	8.01	200	⇑Pn	Pn	09 02 50.8	+1.7

IDC 16 09:02:05.8±3.5**, 54°.09N×87°.55E, h0**km**, mb1 2.5**/2**,**
mb1mx2.5/45**, mbtmp2.5**/2**, ML1.9**/1**, Error ellipse:**
s-maj=28.5km s-min=19.2km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=83,slow=327,SNR=1.9	1.62	266	i		09 12 40.0	
ZALV	Zalesovo Beam 2.2nm,0.3s,baz=83,slow=18,SNR=6.4	1.62	266	Pg	Pn	09 02 35.2	-0.4

ZALV				Lg	Lg	09 02 57.8	
	3.0nm,0.3s,baz=83,slow=23,SNR=7.7						
KURBB	Kurchatov Arra	6.52	241	Pn	Pn	09 03 42.7	-0.3
	0.0nm,0.3s,baz=46,slow=14,SNR=2.3						
KURBB				Lg	Lg	09 05 31.9	
	baz=48,slow=28,SNR=2.4						
MKAR	Makanchi Array	8.04	207	Pn	Pn	09 04 05.7	+1.9
	baz=23,slow=11,SNR=1.4						
MKAR				Lg	Lg	09 06 17.9	
	baz=24,slow=29,SNR=2.1						

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*NNC **16** 09:12:41.5±2.8, 53°.31N×90°.24E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=27.5km s-min=15.2km az=87.0, Suspected Mining explosion.*

IDC 16 09:12:33.1±3.4**, 53°.63N×90°.90E, h0km, mb1 3.2**/3**, mb1mx3.1**/57**, mbtmp3.2**/3**, ML2.7**/3**, 2C-3D, Error ellipse: s-maj=33.2km s-min=24.0km az=30.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.62	277	*i*		09 35 50.0	
	baz=90,slow=338,SNR=4.1						
ZAA0	Zalesovo Array	3.62	277	⇓Pn	Pb	09 13 34.8	-3.1
	1.4nm,0.7s,baz=97,slow=15						
ZAA0				⇓Lg	Lg	09 14 25.2	
	6.3nm,0.9s,baz=99,slow=29						
ZALV	Zalesovo Beam	3.62	277	Pn	Pn	09 13 32.3	+1.9
	1.1nm,0.3s,baz=92,slow=11,SNR=12						
ZALV				Lg	Lg	09 14 25.6	
	1.6nm,0.3s,baz=90,slow=24,SNR=8.8						
KURK	Kurchatov	8.10	254	⇑Pn	Pn	09 14 34.5	+2.8
	8.1nm,2.2s						
KURBB	Kurchatov Arra	8.19	253	Pn	Pn	09 14 32.8	-0.2
	0.1nm,0.3s,baz=67,slow=15,SNR=10						
KURBB				Sn	Sn	09 16 05.4	-0.7
	0.1nm,0.3s,baz=67,slow=26,SNR=5.7						
KURBB				Lg	Lg	09 16 52.4	
	0.0nm,0.3s,baz=72,slow=35,SNR=6.7						
KURBB	Kurchatov Arra	8.19	253	⇓Pn	Pn	09 14 33.4	+0.4
	1.0nm,0.3s,baz=66,slow=15						
MK31	Makanchi Array	8.79	222	⇑Pn	Pn	09 14 42.3	+1.0
	0.7nm,0.6s,baz=38,slow=13,SNR=9.9						
MKAR	Makanchi Array	8.79	222	Pn	Pn	09 14 41.8	+0.4
	0.2nm,0.3s,baz=40,slow=14,SNR=12						
MKAR				Lg	Lg	09 17 11.2	
	0.1nm,0.3s,baz=41,slow=27,SNR=5.5						

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*ECX **16** 09:14:25.8±0.8, 28°.08N×112°.15W, h20km±19km, MD2.7*

*MEX **16** 09:14:27.7±0.9, 28°.01N×112°.16W, h10km, MD3.8*

ISC 16 09:14:25.3±1.9**, 28°.01N**±0°.08×**112°.1W**±0°.1**, h10**km±16km**, n8, σ1s.06**/15**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.71	193	*i* P	Pg	09 14 39.2	+0.2
SRIG				*e*S	Sb	09 14 49.4	-0.1
SRIG	Santa Rosalia	0.71	193	*e*P	Pg	09 14 39.0	0.0
SRIG				*i* S	Sb	09 14 49.5	+0.1
GUYB	Guaymas	1.06	96	*e*P	Pb	09 14 45.4	-0.4
GUYB				*e*S	Sn	09 15 00.6	-0.5
GUYB	Guaymas	1.06	96	*e*P	Pb	09 14 45.5	-0.4
GUYB				*e*S	Sn	09 15 00.7	-0.5
HSIG		1.41	44	*e*P	Pn	09 14 49.9	-1.1
HSIG				*i* S	Sn	09 15 09.6	0.0
HSIG		1.41	44	*e*P	Pn	09 14 50.0	-1.1
HSIG				*e*S	Sn	09 15 08.2	-1.5
NZIG	Nacozari, Sono	3.22	42	*e*P	Pn	09 15 17.1	+1.0
CGIG		4.28	56	*i* P	Pn	09 15 32.5	+1.9
CGIG				*i* S	Sn	09 16 22.4	+1.7

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*IDC **16** 09:14:23.5±2.8, 4°.42S×144°.66E, h68km±28km, mb3.7/7, mb1 3.9/10, mb1mx3.6/40, mbtmp4.1/10, ML3.4/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/36, Error ellipse: s-maj=25.6km s-min=17.6km az=66.0*

*NEIC **16** 09:14:24.1±1.5, 4°.40S±0°.06×144°.6E±0°.1, h76km±10km, mb4.2/12, Error ellipse: s-maj=19.4km s-min=2.4km az=62.0*

ISC 16 09:14:26.7±0.8**, 4°.49S**±0°.08×**144°.58E**±0°.10**, h100km, n40, σ1s.55**/37**, mb3.9**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	4.34	297	P	Pn	09 15 27.4	-3.1
	1.7nm,0.3s,baz=182,slow=22,SNR=1.9						
JAY				LR	LR	09 17 31.9	
	comp=Z,158nm,18.7s,baz=318,slow=43						
PMG	Port Moresby	5.52	153	P	Pn	09 15 44.6	-1.9
	8.7nm,0.3s,baz=31,slow=5.5,SNR=24						
PMG				S	Sn	09 16 45.9	-2.7
	9.3nm,0.3s,baz=310,slow=22,SNR=11						
PMG				LR	LR	09 18 27.9	
	comp=Z,215nm,21.7s,baz=17,slow=44						
PMG	Port Moresby	5.52	153		Pn	09 15 44.5	-1.9
PMG					Sn	09 16 46.9	-1.7
PMG	Port Moresby	5.52	153	P	Pn	09 15 44.7	-1.8
COEN	Coen	9.51	188	Pn	Pn	09 16 41.2	+0.4
FAKI	Fak Fak	12.41	277	Pn	Pn	09 17 19.0	-0.8
SIJI	Sorong	13.78	285	LR	LR	09 23 52.2	
	comp=Z,79nm,19.2s,baz=298,slow=41						
MTN	Manton Dam	15.67	237	Pn	Pn	09 18 00.2	-1.8
WB0	Warramunga Arr	18.15	212	P	P	09 18 30.5	-0.8
WB0				IAmb	IAmb	09 18 35.5	
	comp=Z,18nm,1.3s						
WR0	Warramunga Arr	18.23	212	P	P	09 18 32.4	+0.2
WR0				IAmb	IAmb	09 18 35.1	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	18.32	212	P	P	09 18 33.5	+0.4
WB2				IAmb	IAmb	09 18 40.1	
	comp=Z,17nm,1.1s						
WC3	Warramunga Arr	18.32	212		Pn	09 18 34.2	-0.1
WC3				IAmb	IAmb	09 18 39.6	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	18.32	212	P	P	09 18 33.2	0.0
	comp=Z,0.6nm,0.3s,baz=37,slow=12,SNR=23						
WRA				LR	LR	09 26 42.6	
	comp=Z,80nm,18.6s,baz=45,slow=40						
AS31	Alice Springs	21.67	207	P	P	09 19 10.5	+1.1
ASAR	Alice Springs	21.68	207	P	P	09 19 10.4	+0.9
	comp=Z,3.7nm,0.7s,baz=34,slow=9.6,SNR=32						
ASAR				LR	LR	09 28 04.7	
	comp=Z,64nm,20.0s,baz=0.0,slow=38						
EIDS	Eidsvold	21.68	164	P	P	09 19 11.1	+1.6
EIDS				IAmb	IAmb	09 19 23.2	
	comp=Z,11nm,1.2s						
FITZ	Fitzroy Crossi	22.94	232	P	P	09 19 22.1	-0.5
	comp=Z,7.7nm,0.7s,baz=59,slow=7.3,SNR=33						
FITZ				LR	LR	09 29 13.1	
	comp=Z,128nm,19.1s,baz=54,slow=39						
FITZ	Fitzroy Crossi	22.94	232	P	P	09 19 22.5	-0.1
FITZ				IAmb	IAmb	09 19 27.1	
	comp=Z,8.2nm,0.8s						
KAPI	Kappang	24.75	268	LR	LR	09 30 46.9	
	comp=Z,28nm,20.9s,baz=60,slow=40						
STKA	Stephens Creek	27.39	186	P	P	09 20 04.2	+1.3
	comp=Z,1.9nm,0.7s,baz=334,slow=9.4,SNR=5.1						
STKA				LR	LR	09 33 00.8	
	comp=Z,45nm,18.8s,baz=24,slow=41						
STKA	Stephens Creek	27.39	186	P	P	09 20 04.6	+1.8
DZM	Mont Dzumac	27.46	132	LR	LR	09 30 10.6	
	comp=Z,54nm,18.6s,baz=330,slow=34						
MRHZ	Matea Rd	44.76	144	P	P	09 22 29.6	-0.8
RUGZ	Raukumara Rang	44.95	142	P	P	09 22 34.6	+2.7
BHHZ	Black Hill Sta	45.00	145	P	P	09 22 34.5	+2.3
MTHZ	Maungataniwha	45.02	144	P	P	09 22 32.3	-0.1
BKZ	Black Stump Fm	45.03	144	P	P	09 22 32.6	+0.1
BKZ	Black Stump Fm	45.03	144	P	P	09 22 32.8	+0.3
KWHZ	Kaweka Forest	45.16	145	P	P	09 22 35.0	+1.5
WMGZ	Waiomatatini S	45.31	142	P	P	09 22 49.4	+15
TSZ	Takapari Road	45.33	146	P	P	09 22 39.8	+5.0
KAHZ	Kahuranaki	45.67	145	P	P	09 22 39.4	+1.9
PRHZ	Porangahau	45.85	146	P	P	09 22 42.8	+3.9
SONM	Songino Array	61.93	332	P	P	09 24 36.9	+1.0
	comp=Z,0.7nm,0.6s,baz=148,slow=8.5,SNR=2.0						
MKAR	Makanchi Array	74.81	321	P	P	09 25 57.3	+1.2
	comp=Z,0.5nm,0.6s,baz=91,slow=8.4,SNR=5.0						
ZALV	Zalesovo Beam	76.46	328	P	P	09 26 05.3	-0.1
	comp=Z,1.1nm,0.7s,baz=118,slow=5.9,SNR=4.4						
CCB	Clear Creek Bu	84.64	24	P	P	09 26 48.8	0.0
IL31		85.06	24	P	P	09 26 50.5	-0.3
ILAR	Eielson Array	85.06	24	P	P	09 26 50.4	-0.6
	comp=Z,1.8nm,0.9s,baz=253,slow=4.9,SNR=15						
IL18	Eielson Array	85.09	24	P	P	09 26 50.8	-0.4

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*IDC **16** 09:15:39.3±14.0, 15°.65N×90°.37W, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.6/26, mbtmp3.4/3, Error ellipse: s-maj=277.2km s-min=103.0km az=2.0*

*GCG **16** 09:15:47.0±0.5, 15°.92N×91°.56W, h77km±77km, MD3.9*

ISC 16 09:15:50.8±1.0**, 15°.89N**±0°.10×**91°.5W**±0°.1**, h35km, n7, σ1s.86**/11**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.56	157	*e*P	Pn	09 16 14.4	-1.7
FUG				*e*S	Sn	09 16 36.0	+0.9
NBG	Las Nubes	1.68	140	*e*P	Pn	09 16 16.8	-1.2
NBG				*e*S	Sn	09 16 40.2	+1.7
PCG	Pacaya	1.70	151	*e*P	Pn	09 16 17.3	-1.0
PCG				*e*S	Sn	09 16 40.1	+1.1
MRL	Marmol	1.89	115	*e*P	Pn	09 16 19.6	-1.2
MRL				*e*S	Sn	09 16 45.3	+1.7
TXAR	Lajitas Array	17.47	322	P	P	09 19 55.0	+2.3
	baz=142,slow=9.7,SNR=2.8						
NVAR	Mina Array Bea	32.57	319	P	P	09 22 20.4	+1.3
	0.7nm,0.7s,baz=132,slow=9.7,SNR=6.8						
YKA	Yellowknife Ar	49.32	346	P	P	09 24 33.6	-2.5
	0.2nm,0.6s,baz=143,slow=8.2,SNR=7.5						

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*JMA **16** 09:52:10.4±0.1, 24°.42N×122°.86E, h95km±2km, M2.0*

*TAP **16** 09:52:11.0, 24°.42N×122°.84E, h89km±1km, ML3.1, C*

ISC 16 09:52:10.8±1.4**, 24°.47N**±0°.05×**122°.88E**±0°.03**, h92**km±8km**, n67, σ0s.74**/118**, 2C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.07	107	P	Pn	09 52 23.8	+0.2
JYNG				S	Sn	09 52 33.5	+0.3
YOJ	Yonaguni jima	0.12	94	P	Pn	09 52 23.9	+0.2
YOJ				S	Sn	09 52 33.5	+0.1
YOJ	Yonaguni jima	0.12	94	*i* P	Pn	09 52 24.0	+0.3
	baz=71						
YOJ				S	Sn	09 52 33.7	+0.3
	baz=71						
IRIF	Iriomote-Funau	0.79	100	P	Pn	09 52 28.4	+0.1
IRIF				S	Sn	09 52 41.4	-0.1
HATJ	Hateruma jima	0.94	116	*e*S	Sn	09 52 44.2	-0.1
TWC	Suao	0.94	279	*e*P	Pn	09 52 29.7	-0.3
	baz=281						
TWC				*e*S	Sn	09 52 43.2	-1.1
	baz=281						
TWB1	Santiao Chiao	0.97	304	*e*P	Pn	09 52 30.4	+0.2
	baz=307						
NTC	Toucheng	1.02	292	*e*P	Pn	09 52 31.6	+0.7
	baz=295						
NTC				*e*S	Sn	09 52 45.4	-0.5
	baz=295						
ENA	Nanau	1.03	268	*e*P	Pn	09 52 31.4	+0.4
	baz=270						
ENA				*e*S	Sn	09 52 46.7	+0.5
	baz=270						
JKRS	Kuro-shima	1.06	102	P	Pn	09 52 31.9	+0.6
JKRS				S	Sn	09 52 47.4	+0.7
TIPB	Shuangxi	1.08	298	P	Pn	09 52 31.3	-0.2
	baz=300						
TIPB				*e*S	Sn	09 52 46.1	-1.0
	baz=300						
TWE	Neicheng	1.13	283	*i* P	Pn	09 52 32.3	+0.2
	baz=285						
TWE				*e*S	Sn	09 52 47.5	-0.6
	baz=285						
JIJ	Ishigaki jima	1.16	95	P	Pn	09 52 32.5	+0.1
JIJ				S	Sn	09 52 47.9	-0.9
NWF	Wu-fen Shan	1.16	301	*e*P	Pn	09 52 32.9	+0.3
	baz=304						
NWF				*e*S	Sn	09 52 49.2	+0.3
	baz=304						
WFSB	Wu-fen Shan	1.16	301	*e*P	Pn	09 52 32.9	+0.4
	baz=304						
WFSB				*e*S	Sn	09 52 48.5	-0.3
	baz=304						
ENTT	Nioudou	1.21	278	P	Pn	09 52 33.6	+0.7
	baz=280						
ENTT				*e*S	Sn	09 52 49.9	+0.2
	baz=280						
NACB	Ninganchiao	1.21	256	*i* P	Pn	09 52 32.7	-0.3
	baz=257						
NACB				S	Sn	09 52 49.0	-0.7
	baz=257						
TWD	Chiawan	1.23	252	P	Pn	09 52 33.0	-0.3
	baz=253						
TWD				*e*S	Sn	09 52 49.3	-1.0
	baz=253						
NDT	Datong Townshi	1.25	276	*e*P	Pn	09 52 34.0	+0.4
	baz=278						
NDT				*e*S	Sn	09 52 50.7	0.0
	baz=278						
TWA	Mucha	1.28	294	*e*P	Pn	09 52 34.2	+0.3
	baz=296						
TWA				*e*S	Sn	09 52 51.2	-0.1
	baz=296						
NWLT	Wulai	1.29	284	P	Pn	09 52 34.4	+0.4
	baz=286						
NWLT				S	Sn	09 52 50.9	-0.6
	baz=286						
ETLH	Xiulin Townshi	1.30	259	*i* P	Pn	09 52 34.0	-0.2
	baz=260						
ETLH				S	Sn	09 52 51.1	-0.8
	baz=260						
JISG	Ishigakijimahi	1.31	85	P	Pn	09 52 34.0	-0.3
JISG				S	Sn	09 52 51.1	-0.9
NNSB	Datong	1.36	269	*e*P	Pn	09 52 35.1	+0.1
	baz=270						
NNSB				*e*S	Sn	09 52 53.0	-0.3
	baz=270						
NNSH	Datong	1.36	269	*e*P	Pn	09 52 35.0	0.0
	baz=270						
NNSH				*e*S	Sn	09 52 52.9	-0.4
	baz=270						
YM01	YM01	1.36	300	*e*P	Pn	09 52 35.6	+0.6
	baz=302						
NNS	Nan Shan	1.37	269	*e*P	Pn	09 52 35.3	+0.2
	baz=270						
NNS				*e*S	Sn	09 52 52.7	-0.8
	baz=270						
YM05	YM05	1.38	300	*e*P	Pn	09 52 35.5	+0.4
	baz=302						
YM10	YM10	1.38	300	*e*P	Pn	09 52 35.6	+0.5
	baz=302						
YHNB	Yeheng	1.38	279	P	Pn	09 52 35.7	+0.5
	baz=280						
YHNB				S	Sn	09 52 53.7	+0.1
	baz=280						
YM04	YM04	1.39	299	*e*P	Pn	09 52 35.7	+0.3
	baz=301						
YM04				*e*S	Sn	09 52 53.4	-0.5
	baz=301						
NSK	Sanguang	1.40	279	P	Pn	09 52 35.8	+0.4
	baz=280						
NSK				*e*S	Sn	09 52 54.0	0.0
	baz=280						
ESL	Shilin	1.47	244	P	Pn	09 52 35.9	-0.3
	baz=244						
ESL				*e*S	Sn	09 52 55.5	0.0
	baz=244						
FUSS	Fushou	1.50	262	P	Pn	09 52 37.2	+0.2
	baz=263						
FUSS				*e*S	Sn	09 52 56.7	0.0
	baz=263						
WHF	Hehuan Shan	1.50	258	*e*P	Pn	09 52 37.0	-0.1
	baz=259						
WHF				*e*S	Sn	09 52 56.7	-0.3
	baz=259						
EGFH	Guangfu	1.55	239	*e*P	Pn	09 52 37.1	-0.1
	baz=239						
TWT	Tachien	1.57	262	*e*P	Pn	09 52 38.7	+1.1
	baz=263						
TWT				*e*S	Sn	09 52 58.4	+0.5
	baz=263						
TDCB	Techi	1.58	262	*i* P	Pn	09 52 38.5	+0.7
	baz=263						
TDCB				S	Sn	09 52 57.9	-0.4
	baz=263						
CHGB	Renai	1.61	256	⇑*i*P	Pn	09 52 38.5	+0.3
	baz=256						
CHGB				S	Sn	09 52 59.0	+0.1
	baz=256						
HGSD	Ruisui	1.65	234	*i* P	Pn	09 52 38.2	-0.3
	baz=234						
HGSD				S	Sn	09 52 58.7	-0.8
	baz=234						
JTJ	Tarama	1.67	84	P	Pn	09 52 39.0	+0.2
JTJ				S	Sn	09 52 59.9	-0.1
LIOB	Emei	1.70	276	*i* P	Pn	09 52 39.9	+0.7
	baz=277						
LIOB				*e*S	Sn	09 53 00.9	0.0
	baz=277						
NSTT	Nanjuang	1.71	276	*e*P	Pn	09 52 39.5	+0.1
	baz=277						
NSTT				*e*S	Sn	09 53 01.3	+0.2
	baz=277						
EHY	Hungye	1.72	236	⇓*i*P	Pn	09 52 39.0	-0.3
	baz=236						
EHY				S	Sn	09 52 59.8	-1.3
	baz=236						
WHP	Taichung City	1.77	264	*i* P	Pn	09 52 41.5	+1.3
	baz=265						
WHP				S	Sn	09 53 02.8	+0.3
	baz=265						
YULB	Yu-li	1.80	234	⇑*i*P	Pn	09 52 40.2	-0.3
	baz=234						
YULB				S	Sn	09 53 02.0	-1.1
	baz=234						
EYUL	Yuli	1.81	232	*e*P	Pn	09 52 41.0	+0.4
	baz=232						
EYUL				*e*S	Sn	09 53 03.3	0.0
	baz=232						
TWF1	Yuli	1.82	233	P	Pn	09 52 40.7	0.0
	baz=232						
TWF1				*e*S	Sn	09 53 02.9	-0.7
	baz=232						
SSLB	Suanglung	1.88	249	P	Pn	09 52 42.0	+0.4
	baz=249						
SMLT	Sun Moon Lake	1.90	252	*e*P	Pn	09 52 42.7	+0.9
	baz=253						
FULB	Fuli	1.92	229	P	Pn	09 52 41.6	-0.5
	baz=229						
FULB				*e*S	Sn	09 53 05.4	-0.6
	baz=229						
TYC	Yuchr	1.93	253	*e*P	Pn	09 52 43.0	+0.9
	baz=254						
YUS	Yu-Shan	2.01	241	*e*P	Pn	09 52 44.2	+0.5
	baz=241						
YUS				*e*S	Sn	09 53 08.5	-0.2
	baz=241						
WJS	Zhushan	2.07	252	*e*P	Pn	09 52 45.8	+1.8
	baz=252						
EDH	Donghe	2.07	224	*e*P	Pn	09 52 43.5	-0.6
	baz=224						
EDH				*e*S	Sn	09 53 07.5	-1.9
	baz=224						
ALS	Alishan	2.12	244	P	Pn	09 52 46.1	+1.2
	baz=243						
ALS				*e*S	Sn	09 53 12.0	+1.0
	baz=243						
ELDTW	Lidau	2.13	234	P	Pn	09 52 44.7	-0.1
	baz=233						
ELDTW				*e*S	Sn	09 53 10.2	-0.7
	baz=233						
CHN5	Tsauling	2.19	247	*e*P	Pn	09 52 47.3	+1.6
	baz=247						
CHN5				*e*S	Sn	09 53 12.7	+0.4
	baz=247						
TWGBT	Beinan	2.33	225	*e*P	Pn	09 52 47.2	-0.2
	baz=225						
TWG	Pinlang	2.33	226	*e*P	Pn	09 52 47.1	-0.4
	baz=225						
STYT	Tauyuan	2.34	237	*e*P	Pn	09 52 48.8	+1.3
	baz=236						
CHN4	Tsaushan	2.37	242	*e*P	Pn	09 52 49.6	+1.7
	baz=242						
WTK	Tuku	2.40	252	*e*P	Pn	09 52 48.3	-0.1
	baz=251						
WTP	Ta-pu	2.40	240	*e*P	Pn	09 52 50.0	+1.5
	baz=240						
TWK	Hsinying	2.49	242	*e*P	Pn	09 52 51.3	+1.7
	baz=241						
TWK				*e*S	Sn	09 53 20.4	+1.0
	baz=241						
MASBT	Mashibuluo	2.77	228	*e*P	Pn	09 52 54.3	+1.1
	baz=228						
MASBT				*e*S	Sn	09 53 26.7	+0.8
	baz=228						
VWUC	VWUC	3.16	280	*e*P	Pn	09 52 58.0	-0.4
	baz=280						
VWUC				*e*S	Sn	09 53 31.9	-3.3
	baz=280						

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*BER **16** 09:55:33.7±2.1, 72°.58N×2°.74E, h10km, ML2.2, Confirmed Earthquake*

*IDC **16** 09:55:33.6±1.1, 72°.50N×4°.16E, h0km, mb3.3/5, mb1 3.6/9, mb1mx3.4/46, mbtmp3.4/9, ML2.8/4, MS3.1/8, Ms1 3.1/8, ms1mx2.8/39, Error ellipse: s-maj=26.2km s-min=16.4km az=62.0*

ISC 16 09:55:34.6±0.9**, 72°.52N**±0°.07×**4°.17E**±0°.10**, h10km, n41, σ1s.69**/44**, mb3.2**/5**, MS3.2**/6**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	4.66	58	*e*P	Pn	09 56 46.0	+1.1
N2VI	Vinje	5.39	137	*e*P	Pn	09 56 57.6	+2.7
N2VI				*e*S	Sn	09 57 55.4	-1.6
N2VI				IAML		09 57 58.1	
	comp=Z,7.3nm,0.7s						
HSPB	Hornsund (broa	5.40	28	*e*P	Pn	09 56 54.0	-1.0
LOF	Lofoten	5.42	140	*e*P	Pn	09 56 56.4	+1.1
LOF				IAML		09 57 53.9	
	comp=Z,6.4nm,0.7s						
LOF				*e*S	Sn	09 57 56.3	-1.4
N2SV	S¸rv¥gen	5.53	143	*e*P	Pn	09 56 57.6	+0.8
N2SV				IAML		09 57 56.9	
	comp=Z,4.3nm,1.0s						
N2SV				*e*S	Sn	09 57 58.0	-2.3
TRO	Tromso	5.60	114	*e*P	Pn	09 57 00.1	+2.3
TRO				*e*S	Sn	09 58 01.7	-0.4
TRO				IAML		09 58 04.3	
	comp=Z,5.0nm,0.6s						
STEI	Steigen	5.94	135	*e*P	Pn	09 57 03.7	+1.3
STEI				*e*S	Sn	09 58 08.7	-1.7
STEI				IAML		09 58 13.2	
	comp=Z,4.8nm,0.4s						
N2IH	Innhavet	6.06	133	*e*P	Pn	09 57 06.2	+2.2
N2IH				*e*S	Sn	09 58 12.4	-1.0
N2IH				IAML		09 58 20.6	
	comp=Z,6.4nm,0.5s						
FAUS	Fauske	6.41	138	*e*P	Pn	09 57 10.9	+2.0
FAUS				*e*S	Sn	09 58 21.1	-0.9
FAUS				IAML		09 58 26.0	
	comp=Z,3.3nm,0.4s						
NBB28	Valnes	6.42	141	*e*P	Pn	09 57 10.0	+1.1
NBB28				*e*S	Sn	09 58 19.1	-3.0
NBB28				IAML		09 58 27.3	
	comp=Z,3.3nm,0.6s						
HAMF	Hammerfest	6.45	98	*e*P	Pn	09 57 10.1	+0.6
HAMF				IAML		09 58 21.3	
	comp=Z,5.4nm,0.7s						
SPA0	Spitsbergen Ar	6.45	23	*e*P	Pn	09 57 09.2	-0.3
SPITS	Spitsbergen Ar	6.45	23	Pn	Pn	09 57 08.7	-0.8
	baz=208,slow=15,SNR=16						
NBB05	Inndyr	6.47	143	*e*P	Pn	09 57 10.8	+1.0
NBB05				*e*S	Sn	09 58 19.8	-3.7
NBB30	Finnes	6.48	145	*e*P	Pn	09 57 10.5	+0.7
NBB30				*e*		09 58 08.2	
NBB30				*e*S	Sn	09 58 22.3	-1.4
NBB30				IAML		09 58 27.5	
	comp=Z,7.3nm,0.6s						
KIF	Kilpisjarvi	6.51	115	*e*P	Pn	09 57 11.9	+1.6
NBB17	Glomfjord B¥r	6.66	145	*e*P	Pn	09 57 13.5	+1.2
NBB17				*e*S	Sn	09 58 26.4	-1.7
KBS	Kingsbay	6.71	13	*e*P	Pn	09 57 10.5	-2.4
NBB40	Tonnes	6.78	149	*e*P	Pn	09 57 14.2	+0.3
KONS	Konsvik	6.81	148	*e*P	Pn	09 57 14.9	+0.5
KONS				IAML		09 58 33.5	
	comp=Z,3.6nm,0.5s						
HOPEN	Hopen	6.83	45	*e*P	Pn	09 57 16.7	+2.1
SALU	Saltoluokta	7.12	129	*e*P	Pn	09 57 20.2	+1.6
DBG	Daneborg	7.17	296	*e*P	Pn	09 57 10.9	-8.5
DBG				*e*S	Sn	09 58 21.3	-19
KTK1	Kautokeino	7.19	110	*i*	Pn	09 57 22.9	+3.2
KTK1				*e*		09 57 32.0	
MOR8	Moi Rana	7.33	145	*e*P	Pn	09 57 22.9	+1.4

MOR8				IAML		09 58 48.1	
	comp=Z,3.5nm,0.4s						
DAG	Danmarks Havn	7.36	316	eP	Pn	09 57 13.4	-8.4
DAG				eS	Sn	09 58 25.3	-20
ARA0	ARCESS Array S	7.54	103	eP	Pn	09 57 27.6	+3.2
ARCES	ARCESS Array B	7.54	103	Pn	Pn	09 57 24.3	-0.2
	baz=310,slow=11,SNR=15						
ARCES				LR	LR	09 59 30.6	
	comp=Z,32nm,21.1s,baz=280,slow=31						
NOA	NORSAR Array B	11.85	163	Pn	Pn	09 58 23.9	+0.5
	comp=Z,0.0nm,0.3s,baz=352,slow=13,SNR=1.7						
NOA				LR	LR	10 03 06.3	
	comp=Z,49nm,19.2s,baz=285,slow=38						
FINES	FINESS Array B	13.90	132	Pn	Pn	09 58 51.1	-0.3
	comp=Z,0.1nm,0.3s,baz=339,slow=15,SNR=4.8						
GERES	GERESS Array B	24.15	164	P	P	10 00 50.2	-0.3
	comp=Z,0.5nm,0.7s,baz=335,slow=8.6,SNR=1.7						
AKASG	Malin Array Be	24.53	140	P	P	10 00 54.7	+0.9
	comp=Z,0.9nm,0.5s,baz=344,slow=9.9,SNR=5.5						
RES	Resolute Bay	25.00	322	LR	LR	10 10 21.3	
	comp=Z,43nm,19.3s,baz=136,slow=36						
DAVOX	Davos/Dischmat	25.96	171	LR	LR	10 12 24.3	
	comp=Z,88nm,18.3s,baz=358,slow=39						
MLR	Muntele Rosu	28.96	147	LR	LR	10 13 26.6	
	comp=Z,78nm,21.6s,baz=314,slow=37						
ESDC	Sonseca Array	33.17	192	P	P	10 02 12.9	+1.9
	comp=Z,1.4nm,1.1s,baz=354,slow=8.0,SNR=2.5						
KBZ	Khabaz	34.16	126	LR	LR	10 16 22.5	
	comp=Z,42nm,19.4s,baz=9.0,slow=37						
ZALV	Zalesovo Beam	37.07	75	LR	LR	10 22 23.9	
	comp=Z,41nm,18.0s,baz=166,slow=43						
GNI	Garni	37.98	126	LR	LR	10 18 52.2	
	comp=Z,33nm,19.1s,baz=349,slow=37						
YKA	Yellowknife Ar	39.04	320	P	P	10 03 00.8	0.0
	comp=Z,0.1nm,0.6s,baz=24,slow=9.6,SNR=1.9						
ILAR	Eielson Array	41.59	342	P	P	10 03 22.2	+0.4
	comp=Z,0.3nm,0.8s,baz=17,slow=6.6,SNR=4.3						

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*IDC **16** 10:00:13.2±1.3, 41°.09S×174°.33E, h48^{km}±12^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.6/22, mbtmp3.9/4, ML3.4/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/22, Error ellipse: s-maj=31.7km s-min=9.0km az=132.0*

*NOU **16** 10:00:15.4, 41°.14S×174°.41E, h77^{km}, MLv4.1, Cook Strait, New Zealand*

*NEIC **16** 10:00:15.9±1.6, 41°.11S±0°.06×174°.40E±0°.06, h76^{km}±2^{km}, mb4.5/3, Error ellipse: s-maj=9.1km s-min=6.2km az=158.0*

*WEL **16** 10:00:16.8, 41°S±1°×17°4E±°, h62^{km}±2^{km}, M4.0/11, ML4.4/11, MLv4.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=110.9*

ISC 16 10:00:16.1±0.7, 41°.11S±0°.03×174°.36E±0°.03, h78^{km}±5^{km}, n173, σ1§17/185, mb4.2/5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCW	Tory Channel	0.12	212	P	Pn	10 00 27.0	-0.4
TCW				S	Sn	10 00 34.1	-1.7
SNZO	South Karori	0.33	128		Pn	10 00 28.3	0.0
TUWZ	Tuamarina	0.45	224		Pn	10 00 29.0	-0.2
TUWZ	Tuamarina	0.45	224	P	Pn	10 00 29.0	-0.2
TUWZ				S	Sn	10 00 37.5	-1.4
DUWZ	D'Urville Isla	0.45	313	P	Pn	10 00 28.2	-1.1
DUWZ				S	Sn	10 00 36.3	-2.7
KIW	Kapiti Island	0.48	59	P	Pn	10 00 29.5	-0.1
KIW				S	Sn	10 00 38.4	-1.1
BHW	Baring Head	0.49	128		Pn	10 00 29.7	+0.2
BHW	Baring Head	0.49	128	P	Pn	10 00 29.7	+0.2
BHW				S	Sn	10 00 39.1	-0.4
CAW	Cannon Point	0.53	90	P	Pn	10 00 30.1	+0.1
CAW				S	Sn	10 00 39.5	-0.7
CMWZ	Cape Campbell	0.65	190		Pn	10 00 31.3	+0.2
CMWZ	Cape Campbell	0.65	190	P	Pn	10 00 32.3	+1.1
CMWZ				S	Sn	10 00 43.6	+1.4
OGWZ	Otaki Gorge	0.68	65	P	Pn	10 00 31.5	+0.1
OGWZ				S	Sn	10 00 42.4	-0.3
BSWZ	Blackbirch Sta	0.71	211		Pn	10 00 32.0	+0.3
BSWZ	Blackbirch Sta	0.71	211	P	Pn	10 00 32.2	+0.5
MSWZ	Moikau Station	0.74	115		Pn	10 00 32.4	+0.4
MSWZ	Moikau Station	0.74	115	P	Pn	10 00 32.5	+0.4
MSWZ				S	Sn	10 00 43.6	-0.3
NNZ	Nelson	0.75	261		Pn	10 00 31.7	-0.4
NNZ	Nelson	0.75	261	P	Pn	10 00 31.7	-0.4
PLWZ	Palliser	0.81	125		Pn	10 00 33.4	+0.5
PLWZ	Palliser	0.81	125	P	Pn	10 00 33.4	+0.5
PLWZ				S	Sn	10 00 45.4	-0.1
PAWZ	Paruwai Farm	0.85	109	P	Pn	10 00 33.7	+0.4
PAWZ				S	Sn	10 00 45.7	-0.4
MTW	Mount Morrison	0.86	94	P	Pn	10 00 33.6	+0.2
HOWZ	Holdsworth Sta	0.90	77	P	Pn	10 00 34.0	+0.1
MRZ	Mangatainoka R	1.03	65	P	Pn	10 00 35.2	-0.2
TRWZ	Traveller	1.04	107	P	Pn	10 00 36.0	+0.4
TMWZ	Te Maipa	1.16	90	P	Pn	10 00 37.2	+0.2
OHWZ	Ohakea	1.16	39	P	Pn	10 00 37.4	+0.4
TIWZ	Tintock	1.20	74	P	Pn	10 00 37.5	0.0
THZ	Tophouse	1.27	239		Pn	10 00 38.4	-0.1
THZ	Tophouse	1.27	239	P	Pn	10 00 38.4	-0.1
POWZ	Post Office Ro	1.29	57	P	Pn	10 00 38.2	-0.4
PRWZ	Pori Road	1.34	66	P	Pn	10 00 39.2	-0.1
CPWZ	Castlepoint	1.41	82	P	Pn	10 00 40.6	+0.5
QRZ	Quartz Range	1.42	281		Pn	10 00 39.6	-0.6
QRZ	Quartz Range	1.42	281	P	Pn	10 00 39.7	-0.6
WAZ	Wanganui	1.44	20	P	Pn	10 00 41.3	+0.7
KHZ	Kahutara	1.44	205		Pn	10 00 41.4	+0.8
KHZ	Kahutara	1.44	205	P	Pn	10 00 41.4	+0.8
BFZ	Birch Farm	1.49	74	Pn	Pn	10 00 40.9	-0.4
BFZ	Birch Farm	1.49	74	P	Pn	10 00 40.9	-0.4
DVHZ	Dannevirke	1.59	60	P	Pn	10 00 41.8	-0.8
TSZ	Takapari Road	1.61	50	P	Pn	10 00 42.2	-0.6
LREZ	Lake Rotokare	1.65	1	P	Pn	10 00 44.3	+1.0
ANWZ	Angora Road	1.73	69	P	Pn	10 00 43.8	-0.6
NMEZ	Namu Road	1.73	348	P	Pn	10 00 44.8	+0.4
PREZ	Palmer Road	1.77	355	P	Pn	10 00 45.8	+0.8
KHEZ	Kahui Hut	1.83	352	P	Pn	10 00 46.3	+0.5
PNHZ	Pukenui	1.84	50	P	Pn	10 00 45.1	-0.8
NEZ	North Egmont	1.85	354	P	Pn	10 00 46.4	+0.4
NBEZ	Newall Road No	1.88	348	P	Pn	10 00 46.7	+0.4
WPHZ	Waipukurau	1.90	57	P	Pn	10 00 45.8	-0.8
MTVZ	Mangateitei	1.92	27	P	Pn	10 00 47.3	+0.3
DREZ	Durham Road	1.92	356	P	Pn	10 00 47.7	+0.7
PRHZ	Porangahau	1.92	65	P	Pn	10 00 46.2	-0.8
PKE	Pukeiti	1.93	351	P	Pn	10 00 47.6	+0.5
PKVZ	Pokaka	1.97	23	P	Pn	10 00 48.0	+0.4
MOVZ	Moawhango	2.01	33	P	Pn	10 00 47.6	-0.5
VRZ	Vera Road	2.01	9	P	Pn	10 00 48.7	+0.7
WNVZ	Wahianoa	2.02	28	P	Pn	10 00 48.6	+0.2
DSZ	Denniston Nort	2.02	251	P	Pn	10 00 48.1	-0.3
TRVZ	Turoa	2.02	27	P	Pn	10 00 48.9	+0.4
MHEZ	Mangahewa	2.03	359	P	Pn	10 00 49.5	+1.1
DRZ	Dome Shelter	2.05	27	P	Pn	10 00 49.4	+0.4
WHVZ	Whangaehu Hut	2.05	28	P	Pn	10 00 49.3	+0.4
FWVZ	Far West T-bar	2.06	27	P	Pn	10 00 49.3	+0.3
BHHZ	Black Hill Sta	2.08	39	P	Pn	10 00 48.6	-0.4
TUVZ	Tukino	2.09	29	P	Pn	10 00 49.7	+0.3
GVZ	Greta Valley S	2.10	208	P	Pn	10 00 49.6	+0.2
KRHZ	Kereru	2.12	47	P	Pn	10 00 48.6	-1.1
NGZ	Ngauruhoe	2.15	27	P	Pn	10 00 50.6	+0.4
OTVZ	Oturere	2.19	28	P	Pn	10 00 50.9	+0.3
PXZ	Pawanui	2.19	61	P	Pn	10 00 49.4	-1.0
TWVZ	Taurewa	2.20	22	P	Pn	10 00 50.9	+0.2
WTVZ	West Tongariro	2.20	26	P	Pn	10 00 51.0	+0.2
ETVZ	East Tongariro	2.23	28	P	Pn	10 00 51.3	+0.2
KRVZ	Karewarewa	2.24	26	P	Pn	10 00 51.4	+0.1
LTZ	Lake Taylor	2.29	222		Pn	10 00 51.8	0.0
LTZ	Lake Taylor	2.29	222	P	Pn	10 00 51.9	+0.1
KWHZ	Kaweka Forest	2.31	44	P	Pn	10 00 51.1	-1.1
KAHZ	Kahuranaki	2.33	56	P	Pn	10 00 51.2	-1.1
KATZ	Kakaramea	2.37	26	P	Pn	10 00 53.5	+0.6
MCHZ	McNeill Hill	2.44	48	P	Pn	10 00 52.9	-1.0
RATZ	Rangitukua	2.49	26	P	Pn	10 00 56.6	+2.0
CKHZ	Cape Kidnapper	2.53	56	P	Pn	10 00 53.7	-1.4
BKZ	Black Stump Fm	2.54	41	Pn	Pn	10 00 54.0	-1.2
BKZ	Black Stump Fm	2.54	41	P	Pn	10 00 54.1	-1.2
HATZ	Hinemaiaia	2.58	32	P	Pn	10 00 54.8	-1.0
WATZ	Wairara	2.62	24	P	Pn	10 00 58.2	+1.8
HIZ	Hauiti	2.62	9		Pn	10 00 56.8	+0.5
HIZ	Hauiti	2.62	9	P	Pn	10 00 56.8	+0.5
INZ	Inchbonnie	2.71	232	P	Pn	10 00 57.2	-0.2
ARHZ	Aropaoanui	2.73	48	P	Pn	10 00 56.4	-1.4
NMHZ	Naumai	2.75	44	P	Pn	10 00 57.1	-1.1
MRHZ	Matea Rd	2.77	35	P	Pn	10 00 56.9	-1.5
OKCZ	Okains Bay	2.79	200	P	Pn	10 00 58.4	-0.1
OXZ	Oxford	2.81	217		Pn	10 00 57.8	-1.1
OXZ	Oxford	2.81	217	P	Pn	10 00 57.7	-1.1
MQZ	McQueen's Vall	2.89	205	Pn	Pn	10 00 58.8	-1.1
MQZ	McQueen's Vall	2.89	205	P	Pn	10 00 58.5	-1.3
TLZ	Tolley Road	2.92	18	P	Pn	10 01 00.6	+0.2
WPRZ	Whakapapatarin	2.94	29	P	Pn	10 00 59.8	-0.8
MTHZ	Maungataniwha	2.95	41	P	Pn	10 00 59.3	-1.5
AKCZ	Akaroa Harbour	2.96	201	P	Pn	10 01 00.4	-0.5
ALRZ	Allen Road	2.97	32	P	Pn	10 00 59.7	-1.3
WHHZ	Waihua	3.00	48	P	Pn	10 00 59.8	-1.5
RAHZ	Arahi	3.03	45	P	Pn	10 00 59.4	-2.5
PRRZ	Plateau Road	3.04	32	P	Pn	10 01 00.6	-1.4
RACZ	Rakaia	3.09	211	P	Pn	10 01 01.3	-1.3
RTZ	Ruatahuna	3.20	40	P	Pn	10 01 02.6	-1.7
MUGZ	Murupara	3.22	36	P	Pn	10 01 02.3	-2.1
SNGZ	Shannon Statio	3.26	46	P	Pn	10 01 02.8	-2.2
KNZ	Kokohu	3.29	52	P	Pn	10 01 02.7	-2.6
TARZ	Mount Tarawera	3.31	31	P	Pn	10 01 05.1	-0.7
WVZ	Waitaha Valley	3.34	233	P	Pn	10 01 05.5	-0.4
MHGZ	Mahia Peninsul	3.35	55	P	Pn	10 01 04.0	-2.1
WACZ	Wakanui South	3.39	213	P	Pn	10 01 05.6	-1.1
PRGZ	Paritu Road	3.48	52	P	Pn	10 01 05.4	-2.5
TOZ	Tahuroa Road	3.49	15	P	Pn	10 01 08.1	+0.1
RAGZ	Rawiri	3.51	43	P	Pn	10 01 06.0	-2.5
RIGZ	Rimuhau	3.55	49	P	Pn	10 01 06.4	-2.6
URZ	Urewera	3.55	38	P	Pn	10 01 06.3	-2.6
	4.5nm,0.3s,baz=230,slow=5.4,SNR=39						
URZ				S	Sn	10 01 46.9	-2.8
	38nm,0.3s,baz=86,slow=17,SNR=24						
URZ	Urewera	3.55	38	P	Pn	10 01 06.3	-2.6
RPZ	Rata Peaks	3.57	222	P	Pn	10 01 08.0	-1.2
	2.8nm,0.3s,baz=282,slow=2.7,SNR=15						
RPZ				S	Sn	10 01 46.5	-3.8
	7.9nm,0.3s,baz=236,slow=4.0,SNR=4.6						
RPZ	Rata Peaks	3.57	222		Pn	10 01 08.9	-0.3
RPZ	Rata Peaks	3.57	222	P	Pn	10 01 08.4	-0.8
ARCZ	Arundel	3.69	219	P	Pn	10 01 10.0	-0.7
MWZ	Matawai	3.69	42	P	Pn	10 01 08.1	-2.8
GCSZ	Gaunt Creek Bo	3.72	232	P	Pn	10 01 11.0	-0.2
TKGZ	Te Karaka	3.79	46	P	Pn	10 01 09.2	-2.8
CNGZ	Carnagh Statio	3.96	50	P	Pn	10 01 11.5	-2.9
AWAZ	Awhitu Peninsu	4.05	3	P	Pn	10 01 16.2	+0.5
TWGZ	Tauwhareparae	4.05	45	P	Pn	10 01 13.3	-2.4
RUGZ	Raukumara Rang	4.05	40	P	Pn	10 01 13.3	-2.6
TMZ	Timaru	4.10	216	P	Pn	10 01 15.5	-0.8
FOZ	Fox Glacier	4.15	233	Pn	Pn	10 01 16.7	-0.2
FOZ	Fox Glacier	4.15	233	P	Pn	10 01 16.8	-0.2
ETAZ	East Tamaki Re	4.17	6	P	Pn	10 01 17.9	+0.5
WTAZ	Waiatarua	4.17	2	P	Pn	10 01 18.3	+0.9
HAZ	Te Kaha	4.27	39	P	Pn	10 01 15.7	-2.9
RVAZ	Riverhead Bore	4.34	2	P	Pn	10 01 20.1	+0.5
WIAZ	Waiheke Island	4.35	8	P	Pn	10 01 20.6	+0.8
MBAZ	Motutapu North	4.35	6	P	Pn	10 01 20.5	+0.7
KUZ	Kuaotunu	4.49	14	P	Pn	10 01 21.5	-0.2
LBZ	Lake Benmore	4.49	222	Pn	Pn	10 01 21.9	+0.2
LBZ	Lake Benmore	4.49	222	P	Pn	10 01 20.8	-0.9
ABAZ	Army Bay	4.52	5	P	Pn	10 01 22.8	+0.7
MXZ	Matakaoa Point	4.68	42	P	Pn	10 01 21.6	-2.7
ODZ	Otahua Downs	4.78	213	Pn	Pn	10 01 25.2	-0.5
ODZ	Otahua Downs	4.78	213	P	Pn	10 01 24.2	-1.5
JCZ	Jackson Bay	5.07	232	P	Pn	10 01 28.5	-1.2
WCZ	Waipu Caves	5.16	360	P	Pn	10 01 31.5	+0.6
WKZ	Wanaka	5.40	225	Pn	Pn	10 01 33.5	-0.6
WKZ	Wanaka	5.40	225	P	Pn	10 01 33.6	-0.6
OUZ	Omahuta	5.91	354	Pn	Pn	10 01 41.6	+0.5
OUZ	Omahuta	5.91	354	P	Pn	10 01 41.3	+0.2
MLZ	Mavora Lakes	6.24	225	Pn	Pn	10 01 46.9	+1.4
WHZ	Wether Hill Ro	6.68	222	Pn	Pn	10 01 54.6	+3.1
CTZ	Chatham Island	7.17	114	P	Pn	10 01 57.7	-0.6
RAR	Rarotonga	29.54	56	LR	LR	10 19 50.7	
	comp=Z,12nm,18.2s,baz=201,slow=40						
BBOO	Buckleboo	31.50	273	P	P	10 06 30.6	0.0
BBOO				IAmb	IAmb	10 06 48.6	
	comp=Z,20nm,1.5s						
AS31	Alice Springs	37.94	285	P	P	10 07 26.3	+0.1
AS31				IAmb	IAmb	10 07 35.0	
	comp=Z,1.8nm,1.4s						
ASAR	Alice Springs	37.94	285	P	P	10 07 26.3	+0.1
	comp=Z,1.3nm,0.5s,baz=129,slow=7.6,SNR=39						
COEN	Coen	38.32	306	P	P	10 07 30.7	+1.4
COEN				IAmb	IAmb	10 07 32.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	39.96	290	P	P	10 07 43.1	+0.1
	comp=Z,1.1nm,0.4s,baz=126,slow=8.3,SNR=21						
YKA	Yellowknife Ar	117.78	30	PKP	PKPdf	10 18 52.0	-0.3
	comp=Z,0.1nm,0.6s,baz=169,slow=1.5,SNR=4.6						
MKAR	Makanchi Array	119.65	308	PKP	PKPdf	10 18 56.1	-0.3
	comp=Z,0.2nm,0.7s,baz=123,slow=5.3,SNR=2.5						
LIC	Lamto	145.26	181	ePKP2	PKPdf	10 19 46.3	+1.1
	comp=Z,10nm,0.5s						
KIC	Kosan Boka	145.39	182	ePKP2	PKPab	10 19 47.3	+1.6
	comp=Z,9.4nm,0.7s						
TIC	Toumodi	145.68	181	ePKP2	PKPab	10 19 48.0	+1.3
DBIC	Dimbokro	145.70	181	PKPbc	PKPab	10 19 48.0	+1.2
	comp=Z,1.7nm,0.6s,baz=160,slow=5.5,SNR=4.7						
ARCES	ARCESS Array B	147.20	340	PKPbc	PKPbc	10 19 48.5	-0.7
	comp=Z,3.0nm,0.8s,baz=70,slow=1.2,SNR=19						
BRTR	Keskin Array B	150.23	280	PKPbc	PKPbc	10 19 57.6	-0.5
	comp=Z,0.5nm,0.4s,baz=147,slow=4.5,SNR=2.6						
TORD	Torodi Ar. Bea	151.41	195	PKPbc	PKiKP	10 20 02.4	+0.6
	comp=Z,0.7nm,0.7s,baz=132,slow=2.6,SNR=4.5						

IDC 16 10:31:14.5±25.0, 18°.36N×146°.73E, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.5/62, mbtmp4.2/3, Error ellipse: s-maj=798.3km s-min=129.6km az=2.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	59.40	314	P	P	10 41 18.9	-0.1
	0.4nm,0.6s,baz=94,slow=8.7,SNR=5.1						
ARCES	ARCESS Array B	83.11	342	P	P	10 43 42.3	+0.4
	6.0nm,1.0s,baz=41,slow=6.0,SNR=4.1						
FINES	FINESS Array B	87.60	336	P	P	10 44 04.1	-0.4
	3.7nm,0.9s,baz=62,slow=5.2,SNR=5.6						

IDC 16 10:33:07.7±3.0, 9°.66S×149°.49E, h0^{km}, mb3.0/1, mb1 3.7/3, mb1mx3.3/39, mbtmp3.5/3, ML2.5/2, Error ellipse: s-maj=52.4km s-min=40.5km az=8.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.31	276	Pn	Pn	10 33 46.2	-0.8
	17nm,0.3s,baz=98,slow=8.6,SNR=28						
PMG				Sn	Sb	10 34 18.5	-0.8
	38nm,0.3s,baz=312,slow=23,SNR=20						
WRA	Warramunga Arr	17.84	233	P	Pn	10 37 17.5	-0.1
	0.1nm,0.3s,baz=58,slow=11,SNR=5.9						
ASAR	Alice Springs	20.39	225	P	P	10 37 45.7	-0.6
	0.7nm,0.8s,baz=59,slow=11,SNR=8.1						
TORD	Torodi Ar. Bea	148.25	279	PKPbc	PKPbc	10 52 57.0	+0.1
	0.3nm,0.4s,baz=66,slow=2.3,SNR=3.7						

RHSSO 16 10:37:26.8±0.3, 44°.05N×18°.27E, h7^{km}±4^{km}, ML1.8/6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAPS	Han Pijesak,Bl	0.49	86	ePg	Pg	10 37 35.6	-0.7
HAPS				eSg	Sg	10 37 43.9	+1.2
BBLS	Lazići	0.84	102	ePg	Pg	10 37 41.7	-1.2
BBLS				eSg	Sg	10 37 53.7	-0.1
UPM	Unac-Piva	0.96	151	ePg	Pg	10 37 43.5	-1.8
UPM				eSg	Sg	10 37 57.7	-0.2
RICI	Ricice	0.99	236	ePg	Pg	10 37 42.0	-3.9
RICI				Sg	Sg	10 37 55.5	-3.3
BLY	Banja Luka	1.04	312	ePg	Pg	10 37 46.4	-0.5
BLY				eSg	Sg	10 37 59.6	-0.8
BRY	Bratogost	1.17	170	ePg	Pg	10 37 47.7	-1.5
BRY				eSg	Sg	10 38 04.1	-0.2
DIVS	Divibare	1.24	87	ePg	Pg	10 37 49.3	-1.3
DIVS				eSg	Sg	10 38 06.2	-0.5
STON	Ston	1.25	200	ePg	Pn	10 37 49.5	-1.2
STON				eSg	Sg	10 38 06.6	-0.4
KIJV	Kijevo	1.35	269	ePg	Pn	10 37 47.9	-4.2
KIJV				Sg	Sb	10 38 05.6	-4.3
MORI	Morici	1.86	265	ePg	Pn	10 37 57.3	-1.8
DRME	Dracevica, Mon	1.98	160	ePn	Pn	10 38 01.1	+0.3
DRME				eSn	Sn	10 38 26.0	+0.2

BUC 16 10:38:46.6±0.2, 45°.86N×26°.81E, h9^{km}±1^{km}, ml2.1/16, 44C-32D, Error ellipse: s-maj=1.6km s-min=1.4km az=22.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.06	274	⇑P	Pg	10 38 47.3	-1.3
VRI				⇓S	Sg	10 38 49.3	-0.7
VRI	Vrincioaia	0.06	274	⇑P	Pg	10 38 47.3	-1.3
VRI				⇓S	Sg	10 38 49.3	-0.7
PLOR	Plostina	0.11	264	⇑P	Pg	10 38 48.5	-0.9
PLOR				⇓S	Sg	10 38 51.4	+0.2
PLOR	Plostina	0.11	264	⇑P	Pg	10 38 48.5	-0.9
PLOR				⇓S	Sg	10 38 51.4	+0.2
ODBI	Odobesti	0.20	120	⇑P	Pg	10 38 50.0	-0.7
ODBI				⇑S	Sg	10 38 54.5	+1.0
ODBI	Odobesti	0.20	120	⇑P	Pg	10 38 50.0	-0.7
ODBI				⇑S	Sg	10 38 54.5	+1.0
BISRR	Bisoca	0.32	193	⇑P	Pg	10 38 52.0	-1.0
BISRR				⇓S	Sg	10 38 58.0	+0.7
BISRR	Bisoca	0.32	193	⇑P	Pg	10 38 52.0	-1.0
BISRR				⇓S	Sg	10 38 58.0	+0.7
PETR	Petresti	0.33	115	⇓P	Pg	10 38 53.2	+0.1
PETR				⇑S	Sg	10 38 58.5	+1.1
PETR	Petresti	0.33	115	⇓P	Pg	10 38 53.2	+0.1
PETR				⇑S	Sg	10 38 58.5	+1.1
GRER		0.50	166	⇓P	Pg	10 38 56.5	+0.3
GRER				⇑S	Sg	10 39 03.1	+0.3
GRER		0.50	166	⇓P	Pg	10 38 56.5	+0.3
GRER				⇑S	Sg	10 39 03.1	+0.3
NEHR	Nehoiu	0.57	220	⇓P	Pg	10 38 57.6	0.0
NEHR				⇑S	Sg	10 39 05.4	+0.4
NEHR	Nehoiu	0.57	220	⇓P	Pg	10 38 57.6	0.0
NEHR				⇑S	Sg	10 39 05.4	+0.4
TESR	Tescani	0.66	350	⇑P	Pb	10 39 00.2	-0.1
TESR				⇑S	Sg	10 39 08.3	+0.3
TESR	Tescani	0.66	350	⇑P	Pb	10 39 00.2	-0.1
TESR				⇑S	Sg	10 39 08.3	+0.3
TUDR		0.66	114	⇓S	Sb	10 39 09.6	0.0
TUDR		0.66	114	⇓S	Sb	10 39 09.6	0.0
MLR	Muntele Rosu	0.71	239	⇓P	Pg	10 39 00.5	+0.1
MLR				⇑S	Sb	10 39 11.3	0.0
MLR	Muntele Rosu	0.71	239	⇓P	Pg	10 39 00.5	+0.1
MLR				⇑S	Sb	10 39 11.3	0.0
OZUR		0.75	288	⇓P	Pb	10 39 01.8	-0.1
OZUR				⇑S	Sb	10 39 13.2	+0.9
OZUR		0.75	288	⇓P	Pb	10 39 01.8	-0.1
OZUR				⇑S	Sb	10 39 13.2	+0.9
ISR	Istrita	0.77	194	⇓P	Pb	10 39 01.8	-0.4
ISR				⇑S	Sb	10 39 12.4	-0.3
ISR	Istrita	0.77	194	⇓P	Pb	10 39 01.8	-0.4
ISR				⇑S	Sb	10 39 12.4	-0.3
DOPR	Dopca	1.00	277	⇑P	Pb	10 39 06.4	+0.3
DOPR				⇓S	Sn	10 39 20.3	-0.8
DOPR	Dopca	1.00	277	⇑P	Pb	10 39 06.4	+0.3
DOPR				⇓S	Sn	10 39 20.3	-0.8
VASR	Vaslui	1.03	41	⇓P	Pg	10 39 06.0	-0.5
VASR				⇑S	Sb	10 39 21.1	+0.7
VASR	Vaslui	1.03	41	⇓P	Pg	10 39 06.0	-0.5
VASR				⇑S	Sb	10 39 21.1	+0.7
BIZ	Bicaz	1.18	336	⇓P	Pn	10 39 09.9	+0.5
BIZ				⇑S	Sn	10 39 25.5	-0.2
BIZ	Bicaz	1.18	336	⇓P	Pn	10 39 09.9	+0.5
BIZ				⇑S	Sn	10 39 25.5	-0.2
VOIR		1.31	252	⇓P	Pn	10 39 10.8	-0.4
VOIR				⇑S	Sn	10 39 29.1	+0.4
VOIR		1.31	252	⇓P	Pn	10 39 10.8	-0.4
VOIR				⇑S	Sn	10 39 29.1	+0.4
TPGR	Topolog	1.52	131	⇑P	Pn	10 39 13.5	-0.4
TPGR				⇑S	Sn	10 39 33.8	-0.1
TPGR	Topolog	1.52	131	⇑P	Pn	10 39 13.5	-0.4
TPGR				⇑S	Sn	10 39 33.8	-0.1
TLCR		1.56	115	⇓S	Sb	10 39 36.2	+0.6
TLCR		1.56	115	⇓S	Sb	10 39 36.2	+0.6
ARR	Arges	1.61	253	⇓S	Sb	10 39 36.9	0.0
ARR	Arges	1.61	253	⇓S	Sb	10 39 36.9	0.0
MILM	Milestii Mici	1.74	52	⇑P	Pn	10 39 16.4	-0.6
MILM				⇑S	Sn	10 39 40.1	+0.7
MILM	Milestii Mici	1.74	52	⇑P	Pn	10 39 16.4	-0.6
MILM				⇑S	Sn	10 39 40.1	+0.7
TIRR	Tirgusor	1.81	141	⇑S	Sb	10 39 42.1	-0.5
TIRR	Tirgusor	1.81	141	⇑S	Sb	10 39 42.1	-0.5

IDC 16 10:39:49.9±2.9, 53°.72N×88°.16E, h0^{km}, mb1 2.9/2, mb1mx2.7/55, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=23.8km s-min=16.7km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.99	278	*i*		10 53 20.0	
	baz=92,slow=335,SNR=4.4						
ZALV	Zalesovo Beam	1.99	278	Pn	Pn	10 40 24.6	-0.1
	1.5nm,0.3s,baz=93,slow=12,SNR=30						
ZALV				Lg	Lg	10 40 53.4	
	7.7nm,0.3s,baz=97,slow=24,SNR=31						
KURBB	Kurchatov Arra	6.68	246	Pn	Pn	10 41 29.3	+0.1
	0.1nm,0.3s,baz=62,slow=14,SNR=8.3						
KURBB				Sn	Sn	10 42 44.9	-1.1
	0.0nm,0.3s,baz=65,slow=33,SNR=3.1						
KURBB				Lg	Lg	10 43 20.5	
	0.0nm,0.3s,baz=65,slow=35,SNR=1.2						
MKAR	Makanchi Array	7.89	211	Pn	Pn	10 41 47.4	+1.7
	0.1nm,0.3s,baz=33,slow=14,SNR=6.1						
MKAR				Sn	Sn	10 43 15.6	-0.1
	0.1nm,0.3s,baz=30,slow=26,SNR=4.8						
MKAR				Lg	Lg	10 43 59.0	
	0.0nm,0.3s,baz=30,slow=29,SNR=2.7						

IDC 16 10:42:30.5±3.2, 53°.80N×88°.15E, h0^{km}, mb1 3.0/2, mb1mx2.8/48, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=26.8km s-min=17.5km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.98	276	*i*		10 56 05.0	
	baz=93,slow=336,SNR=5.3						
ZALV	Zalesovo Beam	1.98	276	Pn	Pn	10 43 05.5	+0.3
	2.0nm,0.3s,baz=95,slow=15,SNR=13						
ZALV				Lg	Lg	10 43 33.1	
	3.1nm,0.3s,baz=96,slow=23,SNR=10						
KURBB	Kurchatov Arra	6.71	246	Pn	Pn	10 44 10.4	+0.2
	0.1nm,0.3s,baz=65,slow=15,SNR=5.5						
KURBB				Lg	Lg	10 46 03.2	
	0.0nm,0.3s,baz=60,slow=30,SNR=5.0						
MKAR	Makanchi Array	7.95	210	Pn	Pn	10 44 28.4	+1.2
	0.1nm,0.3s,baz=27,slow=13,SNR=1.6						
MKAR				Sn	Sn	10 45 58.0	+0.2
	0.1nm,0.3s,baz=32,slow=27,SNR=4.2						
MKAR				Lg	Lg	10 46 43.3	
	0.0nm,0.3s,baz=25,slow=29,SNR=3.0						

NNC 16 10:51:43.5±1.8, 42°.73N×70°.86E, h0^{km}, mpv1.1, 12C-7D, Error ellipse: s-maj=189.5km s-min=9.3km az=55.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK06	Karatay Array	0.44	326	⇓P	Pg	10 51 51.6	-0.4
KK06				⇑S	Sg	10 51 57.5	-0.2
KK07	Karatay Array	0.45	323	⇓P	Pg	10 51 51.9	-0.2
KK07				⇑S	Sg	10 51 57.7	-0.2
KK02	Karatay Array	0.45	325	⇑P	Pg	10 51 51.9	-0.3
KK02				⇑S	Sg	10 51 57.9	-0.2
KK31	Karatay Array	0.45	325	P	Pg	10 51 52.0	-0.3
	0.3nm,0.3s,baz=114,slow=16,SNR=9.6						
KK31				⇑S	Sg	10 51 57.8	-0.3
	0.7nm,0.2s						
KK01	Karatay Array	0.46	325	⇓P	Pg	10 51 51.9	-0.4
KK01				⇓S	Sg	10 51 58.1	-0.1
KK03	Karatay Array	0.46	325	⇑P	Pg	10 51 51.9	-0.4
KK03				⇓S	Sg	10 51 58.1	-0.1
KK05	Karatay Array	0.46	327	⇑P	Pg	10 51 51.8	-0.6
KK05				⇑S	Sg	10 51 57.8	-0.5
KK04	Karatay Array	0.46	325	⇑P	Pg	10 51 51.9	-0.4
KK04				⇓S	Sg	10 51 58.1	-0.3

KK08	Karatay Array	0.47	324	⇑P	Pg	10 51 52.1	-0.4
KK08				⇓S	Sg	10 51 58.4	-0.1
KK09	Karatay Array	0.47	326	⇑P	Pg	10 51 52.1	-0.5
KK09				⇑S	Sg	10 51 58.4	-0.4

KRNET 16 10:52:00.9±0.1, 42°.10N×72°.25E, h35^{km}, mb1.6, 8C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.43	26	⇑iP	Pn	10 52 12.5	+1.8
	baz=26						
MNAS				⇑iS	Sn	10 52 21.4	+3.9
	baz=26						
ARSB	Arslanbob	0.95	145	⇑iP	Pn	10 52 19.4	+1.5
	baz=45						
ARSB				⇑iS	Sn	10 52 32.2	+1.8
	baz=45						
TRKS	Terek-Say	1.01	236	⇑iP	Pn	10 52 20.2	+1.4
	baz=32						
TRKS				⇑iS	Sn	10 52 34.2	+2.4
	baz=32						
ARLS	Aral	1.56	98	⇑iP	Pn	10 52 27.4	+1.0
	baz=98						
ARLS				⇑iS	Sn	10 52 47.0	+1.5
	baz=98						

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*IDC **16** 10:58:54.8±3.0, 8°.04S×118°.32E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.5/36, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=260.1km s-min=27.4km az=51.0*

*DJA **16** 10:58:57.9±0.2, 8°S±3°×11°8E±°, h10^{km}, M4.2/15, mb4.4/1, mB5.0/1, MLv4.1/15, Mw(mB)4.4/1*

ISC 16 10:58:57.1±0.9, 8°.23S±0°.06×118°.20E±0°.04, h10^{km}, n17, σ0^{s}.99/19, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.73	215	P	Pb	10 59 12.0	+0.1
PLAI				S	Sb	10 59 22.0	0.0
TWSI	Taliwang, Sumb	1.40	249	P	Pb	10 59 23.5	+0.2
TWSI				S	Sg	10 59 42.1	-0.1
SRBI	Singaraja	2.96	273	P	Pn	10 59 44.2	0.0
BASI	Baing, Sumba	3.07	130	P	Pn	10 59 46.7	+1.0
BSSI	Bau Bau, Buton	3.07	48	P	Pn	10 59 46.1	+0.3
BKSI	Bulukumba	3.46	34	P	Pn	10 59 51.7	+0.6
EDFI	Ende, Flores	3.49	99	P	Pn	10 59 52.7	+1.1
JAGI	Jajag, Banyuwa	4.01	266	P	Pn	10 59 59.0	+0.3
MMRI	Maumere	4.01	96	P	Pn	10 59 59.4	+0.7
BNSI	Bone	4.25	27	P	Pn	11 00 03.2	+1.3
KMMI	Kalianget	4.36	285	P	Pn	11 00 04.9	+1.5
SPSI	Sidrap Palu	4.51	20	P	Pn	11 00 05.9	+0.4
GMJI	Gumukmas	4.71	269	P	Pn	11 00 09.9	+1.7
TTSI	Tana Toraja	5.39	17	P	Pn	11 00 19.2	+1.5
WRA	Warramunga Arr	19.49	128	P	P	11 03 23.6	-0.9
	0.3nm,0.3s,baz=302,slow=12,SNR=14						
ASAR	Alice Springs	21.50	137	P	P	11 03 46.4	+0.1
	2.4nm,0.6s,baz=314,slow=8.7,SNR=24						
MKAR	Makanchi Array	63.41	333	P	P	11 09 25.5	-1.5
	0.2nm,0.4s,baz=140,slow=7.1,SNR=4.2						

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*IDC **16** 11:01:55.8±6.8, 5°.01S×151°.70E, h68^{km}±53^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.5/36, mbtmp4.2/5, ML2.7/1, Error ellipse: s-maj=55.4km s-min=26.3km az=0.0*

*NEIC **16** 11:01:58.0±1.4, 5°.13S±0°.07×151°.68E±0°.08, h91^{km}±12^{km}, mb4.1/8, Error ellipse: s-maj=11.5km s-min=10.0km az=63.0*

ISC 16 11:01:58.3±0.9, 5°.1S±0°.1×151°.7E±0°.1, h100^{km}, n16, σ0^{s}.97/19, mb3.9/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.03	25		Pn	11 02 17.6	-1.6
RABL				Sn	Sn	11 02 35.0	+0.2
PMG	Port Moresby	6.21	227	P	Pn	11 03 26.8	-0.7
	10nm,0.3s,baz=54,slow=12,SNR=23						
PMG				S	Sn	11 04 36.5	-0.6
	5.8nm,0.3s,baz=101,slow=20,SNR=9.6						
PMG	Port Moresby	6.21	227		Pn	11 03 26.2	-1.3
PMG				Sn	Sn	11 04 35.6	-1.5
MTN	Manton Dam	21.72	248		P	11 06 42.8	+1.1
DZM	Mont Dzumac	22.05	141	P	P	11 06 45.9	+0.7
	2.6nm,0.6s,baz=252,slow=9.1,SNR=7.8						
DZM	Mont Dzumac	22.05	141	P	P	11 06 46.0	+0.8
WB0	Warramunga Arr	22.28	228	P	P	11 06 47.7	+0.2
WB0				IAmb	IAmb	11 06 51.6	
	comp=Z,6.5nm,0.9s						
WR0	Warramunga Arr	22.29	227	P	P	11 06 47.0	-0.6
WR0				IAmb	IAmb	11 07 07.4	
	comp=Z,4.4nm,0.6s						
WB2	Warramunga Arr	22.42	227	P	P	11 06 49.0	+0.1
WB2				IAmb	IAmb	11 06 51.7	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	22.43	227	P	P	11 06 49.2	+0.1
	comp=Z,3.6nm,0.5s,baz=51,slow=10,SNR=23						
AS31	Alice Springs	25.19	221	P	P	11 07 15.8	+1.1
ASAR	Alice Springs	25.19	221	P	P	11 07 16.4	+1.6
	comp=Z,3.7nm,0.7s,baz=55,slow=8.8,SNR=28						
FITZ	Fitzroy Crossi	28.56	241	P	P	11 07 45.9	+0.8
	comp=Z,2.2nm,0.6s,baz=42,slow=8.4,SNR=8.1						
FITZ	Fitzroy Crossi	28.56	241	P	P	11 07 44.8	-0.2
FITZ				IAmb	IAmb	11 07 56.1	
	comp=Z,7.8nm,1.2s						
MSVF	Nonsavu	28.62	118	P	P	11 07 45.0	-0.6
TORD	Torodi Ar. Bea	149.39	287	PKPbc	PKiKP	11 21 37.7	-0.2
	comp=Z,0.4nm,0.4s,baz=95,slow=2.7,SNR=2.8						

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*IDC **16** 11:26:38.9±1.3, 37°.47N×141°.76E, h0^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.5/45, mbtmp3.7/9, ML3.4/3, MS2.9/5, Ms1 3.0/5, ms1mx2.6/37, Error ellipse: s-maj=29.9km s-min=22.9km az=82.0*

*JMA **16** 11:26:48.3, 37°.18N×141°.19E, h62^{km}±1^{km}, M3.9*

JMA Felt II J1.

*NIED **16** 11:26:48.4, 37°.18N×141°.19E, h62^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.40; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-0.87; $M_{r\theta}$0.70; $M_{\theta\phi}$1.29; $M_{\phi r}$-3.89; Fault plane solution: $M_0$4.16000×10^{14} NP1: ϕ_s173.00000°, δ85.00000°, λ105.00000°. NP2: ϕ_s282.00000°, δ16.00000°, λ20.00000°.*

ISC 16 11:26:47.0±1.1, 37°.16N±0°.04×141°.37E±0°.08, h58^{km}±8^{km}, n35, σ1^{s}.23/36, mb3.5/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.44	297	P	Pn	11 26 58.7	+0.4
JFK				S	Sn	11 27 06.1	-0.4
ONAJ	Iwakimizuishiy	0.46	263	P	Pn	11 26 58.8	+0.3
ONAJ				S	Sn	11 27 06.5	-0.3
JFFD	Fukushimafurud	0.65	264	P	Pn	11 27 00.7	+0.2
JFFD				S	Sn	11 27 09.7	-0.7
JMST	Minamisoumatoc	0.68	326	P	Pn	11 27 01.4	+0.5
JMST				S	Sn	11 27 11.0	0.0
JMM	Marumori	0.84	327	P	Pn	11 27 03.4	+0.5
JMM				S	Sn	11 27 14.4	-0.1
JHO	Hitachi	0.84	230	P	Pn	11 27 03.1	+0.1
JHO				S	Sn	11 27 13.9	-0.8
JFT	Otama	0.90	294	P	Pn	11 27 04.0	+0.4
JFT				S	Sn	11 27 15.3	-0.6
JIO	Ouri	1.29	359	P	Pn	11 27 10.0	+1.2
JIO				S	Sn	11 27 25.9	+0.8
JOU	Okura	1.32	335	P	Pn	11 27 10.3	+1.0
JFY	Yanaizu	1.35	281	P	Pn	11 27 09.4	-0.2
JFY				S	Sn	11 27 25.0	-1.6
JYS	Shirataka	1.48	316	P	Pn	11 27 11.8	+0.4
JYS				eS	Sn	11 27 29.6	-0.1
JAG	Ashikaga	1.70	245	P	Pn	11 27 14.4	0.0
JAG				S	Sn	11 27 34.1	-1.0
MJAR	Matsushiro Arr	2.61	257	Pn	Pn	11 27 27.2	+0.5
	1.9nm,0.3s,baz=68,slow=12,SNR=58						
MJAR				Sn	Sn	11 27 59.5	+2.3
	1.9nm,0.3s,baz=216,slow=49,SNR=3.1						
MJAR				LR	LR	11 28 45.9	
	comp=Z,82nm,21.3s,baz=345,slow=43						
MAT	Matsushiro	2.61	257	P	Pn	11 27 27.7	+0.9
MAT				S	Sn	11 27 59.2	+1.9
JHJ	Hachijo jima 2	4.24	198	Pn	Pn	11 27 50.0	+1.0
	30nm,0.3s,baz=318,slow=22,SNR=12						
JHJ				Sn	Sn	11 28 36.7	-0.5
	49nm,0.3s,baz=95,slow=23,SNR=7.3						
ASAJ	Asahikawa	7.01	7	Pn	Pn	11 28 21.7	-5.2
	0.5nm,0.3s,baz=166,slow=12,SNR=1.8						
KSRS	Korea Array	10.71	276	Pn	Pn	11 29 19.9	+2.3
	0.1nm,0.3s,baz=85,slow=15,SNR=5.2						
KSRS				LR	LR	11 32 59.5	
	comp=Z,33nm,18.6s,baz=75,slow=34						
PETK	Petropavlovsk-	19.59	30	LR	LR	11 37 32.9	
	comp=Z,24nm,21.9s,baz=237,slow=34						
SONM	Songino Array	27.68	304	P	P	11 32 28.3	-1.2
	0.9nm,0.4s,baz=108,slow=9.3,SNR=2.5						
H11N2	WAKE ISLAND Hy	28.25	121	T	T	12 02 53.8	
	baz=314,slow=75,SNR=53						
H11N1	WAKE ISLAND Hy	28.25	121	T	T	12 02 47.1	
	baz=314,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	28.26	121	T	T	12 02 30.3	
	baz=314,slow=75,SNR=54						
H11S1	WAKE ISLAND Hy	28.96	123	T	T	12 03 37.1	
	baz=315,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	28.96	123	T	T	12 03 37.3	
	baz=315,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	28.98	123	T	T	12 03 40.7	
	baz=315,slow=76,SNR=24						
CMAR	Chiang Mai Arr	41.49	255	LR	LR	11 53 10.6	
	comp=Z,27nm,20.5s,baz=156,slow=38						
ZALV	Zalesovo Beam	41.80	312	P	P	11 34 29.9	-0.7
	1.8nm,0.7s,baz=93,slow=6.8,SNR=6.5						
MKAR	Makanchi Array	44.02	302	P	P	11 34 48.9	+0.2
	0.4nm,0.4s,baz=94,slow=9.2,SNR=3.7						
ILAR	Eielson Array	49.41	32	P	P	11 35 27.1	-3.4
	0.2nm,0.7s,baz=260,slow=10.0,SNR=2.1						
WRA	Warramunga Arr	57.18	188	P	P	11 36 29.1	+1.1
	0.3nm,0.8s,baz=2.9,slow=7.5,SNR=2.0						
ASAR	Alice Springs	60.91	188	P	P	11 36 56.5	+2.7
	0.1nm,0.3s,baz=17,slow=9.7,SNR=1.2						
ULM	Lac du Bonnet	79.42	33	LR	LR	12 16 50.2	
	comp=Z,40nm,18.7s,baz=152,slow=38						
H03N2	Juan Fernandez	147.07	96	T	T	14 31 27.1	
	baz=291,slow=76,SNR=10						
H03N3	Juan Fernandez	147.09	96	T	T	14 31 28.2	
	baz=291,slow=76,SNR=14						
H03N1	Juan Fernandez	147.09	96	T	T	14 31 28.3	
	baz=291,slow=76,SNR=12						

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*VAO **16** 11:39:16.6±0.4, 3°.46S×79°.89W, h10^{km}, mb5.6*

*ARE **16** 11:39:19±2.4, 3°.43S±0°.05×80°.36W±0°.08, h72^{km}±4^{km}, Error ellipse: s-maj=11.9km s-min=7.3km az=84.0*

*IGQ **16** 11:39:21±0.3, 3°S±2°×8°0W±°, h39^{km}*

*IDC **16** 11:39:22.1±0.6, 3°.37S×80°.00W, h66^{km}±5^{km}, mb4.3/18, mb1 4.5/22, mb1mx4.4/30, mbtmp4.7/22, MS4.1/17, Ms1 4.1/17, ms1mx3.9/23, Error ellipse: s-maj=15.5km s-min=7.6km az=63.0*

*BJI **16** 11:39:23.0±0.0, 3°.30S×79°.90W, h68^{km}, mB5.5/3, Ms5.5/3, Ms7 5.2/3*

*NEIC **16** 11:39:23.5±2.1, 3°.38S±0°.05×79°.97W±0°.04, h79^{km}±4^{km}, mb5.1/315, ML5.2(ARE), Error ellipse: s-maj=7.6km s-min=5.5km az=148.0*

*GCMT **16** 11:39:23.5±0.2, 3°.35S±0°.01×80°.03W±0°.02, h86^{km}±2^{km}, MW5.2/86, Moment Tensor Solution. s71,c96; s86,c117; Duration: 1^{s}.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.29±.20; $M_{\theta\theta}$5.70±.20; $M_{\phi\phi}$-3.41±.21; $M_{r\theta}$0.57±.18; $M_{\theta\phi}$-6.36±.18; $M_{\phi r}$2.68±.19; Best double couple: $M_0$8.47100×10^{16} NP1: ϕ_s255.00000°, δ70.00000°, λ-164.00000°. NP2: ϕ_s159.00000°, δ75.00000°, λ-21.00000°. Principal axes: T 9.0150, Plg4.0000°, Azm208.0000°; N -1.0890, Plg64.0000°, Azm306.0000°; P -7.9260, Plg25.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 11:39:21.8±0.4, 3°.40S±0°.03×80°.11W±0°.04, h68^{km}±3^{km}, h69^{km}:pP-P, n732, σ1^{s}.34/717, mb5.1/157, 1C-1D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	Arenillas	0.15	165	P	Pn	11 39 29.0	-3.0
ARNL				S	Sn	11 39 35.0	-4.4
ACH2	Ecuador-Machal	0.33	65	P	Pn	11 39 30.0	-3.0
ACH2				S	Sn	11 39 38.0	-3.2
ISPG	Isla Puna-Puer	0.44	352	P	Pn	11 39 32.0	-2.0
ISPG				S	Sn	11 39 43.0	+0.2
MORR	Playas El Morr	0.79	343	P	Pn	11 39 36.0	-1.7
MORR				S	Sn	11 39 47.0	-2.4
MCRA	Macar, Loja	0.97	171	P	Pn	11 39 38.0	-1.9
MCRA				S	Sn	11 39 50.0	-3.4
GONZ	Gonzanam	1.09	139	P	Pn	11 39 41.0	-0.8
GONZ				S	Sn	11 39 55.0	-1.6
MILO	Milagro-Astudi	1.25	26	P	Pn	11 39 43.0	-0.4
MILO				S	Sn	11 40 01.0	+1.5
ACUE	Ecuador-Cuenca	1.25	67	P	Pn	11 39 43.0	-0.7
ACUE				S	Sn	11 40 00.0	0.0
GYE3	Ecuador-Guayaq	1.26	9	P	Pn	11 39 41.0	-2.5
GYE3				S	Sn	11 39 57.0	-2.8
COHC	Cochancay	1.26	42	P	Pn	11 39 42.0	-1.6
COHC				S	Sn	11 39 58.0	-1.9
AGUAY	Guayaquil	1.35	7	P	Pn	11 39 42.0	-2.7
AGUAY				S	Sn	11 39 58.0	-3.9
AMIL	Milagro (Trans	1.36	22	P	Pn	11 39 43.0	-1.9
BOSC	San Juan Bosco	1.63	81	P	Pn	11 39 49.0	+0.4
BOSC				S	Sn	11 40 10.0	+1.2
LOJ1	Universidad t	1.84	109	P	Pn	11 39 41.0	-10
LOJ1				S	Sn	11 39 56.0	-18
PPLP	Puerto Lpez	1.96	340	P	Pn	11 39 50.0	-3.0
PPLP				S	Sn	11 40 12.0	-4.7
ARIO	Riobamba	2.23	39	P	Pn	11 39 55.0	-2.0
IGUA	Igualata	2.40	38	P	Pn	11 39 58.0	-1.4
BMAS	Trigal station	2.49	41	P	Pn	11 40 00.0	-0.4
ARRY	Arrayan	2.50	41	P	Pn	11 40 00.0	-0.6
BIL2	Estacion Bilba	2.51	40	P	Pn	11 40 01.0	+0.4
PAT1	Patacocha	2.52	42	P	Pn	11 40 00.0	-0.9
RETU	Refugio	2.55	41	P	Pn	11 40 01.0	-0.4
JUI6	Juive	2.56	40	P	Pn	11 40 00.0	-1.3
POND	Pondoa	2.57	40	P	Pn	11 40 01.0	-0.5
BULB	Ulba Tungurahu	2.59	41	P	Pn	11 40 01.0	-0.7
RUN5	Runtun	2.59	40	P	Pn	11 40 02.0	+0.2
BRUN	Tungurahua Vol	2.60	41	P	Pn	11 40 01.0	-0.8
SAGO	Sagoatoa	2.66	33	P	Pn	11 40 03.0	+0.1
PUYO	Puyo, Santa Ro	2.82	48	P	Pn	11 40 04.0	-0.6
APUY	Puyo	2.86	48	P	Pn	11 40 05.0	-0.2
PIS1	Pisayambo	2.89	36	P	Pn	11 40 06.0	0.0
ILLI	Illinizas Sur	3.00	27	P	Pn	11 40 07.0	-0.5
CAB1	Cabo Pasado-Ma	3.02	354	P	Pn	11 40 06.0	-1.2
CABP	Cabo Pasado	3.02	354	P	Pn	11 40 06.0	-1.2
PIAT	Ana Tenorio	3.02	38	P	Pn	11 40 07.0	-0.6
FLFR	Flavio Alfaro	3.04	5	P	Pn	11 40 06.0	-1.6
JAMA	Jama	3.12	358	P	Pn	11 40 07.0	-1.8
BMOR	Cotopaxi Volca	3.12	32	P	Pn	11 40 09.0	-0.2
CAMI	Rancho Maria	3.15	31	P	Pn	11 40 10.0	+0.6
BNAS	Cotopaxi Volca	3.16	31	P	Pn	11 40 10.0	+0.3
BREF	Cotopaxi Volca	3.19	32	P	Pn	11 40 11.0	+0.9
BTAM	Cotopaxi Volca	3.20	32	P	Pn	11 40 10.0	-0.3
TAMB	Tambo	3.20	33	P	Pn	11 40 10.0	-0.3
VC1	Cotopaxi 1	3.23	32	P	Pn	11 40 11.0	+0.4
ASDO	Santo Domingo	3.27	17	P	Pn	11 40 08.0	-2.8
PITA	Cotopaxi Volc	3.28	31	P	Pn	11 40 11.0	-0.3
ARDO	Archidona, Ten	3.32	44	P	Pn	11 40 11.0	-0.5
MAG1	Magdalena	3.33	6	P	Pn	11 40 10.0	-1.5
ANTM	Antisana-La Mi	3.41	33	P	Pn	11 40 13.0	-0.1
ANTG	Antisana-Guama	3.42	33	P	Pn	11 40 13.0	-0.3
ANTS	Antisana-Sarah	3.48	34	P	Pn	11 40 14.0	0.0
GGPT	Toaza - Volcan	3.49	25	P	Pn	11 40 14.0	-0.1
ANTI	Antisana	3.52	34	P	Pn	11 40 14.0	-0.6
GGPC	Guagua Pichinc	3.54	25	P	Pn	11 40 15.0	+0.1
TERV	Terraza Guagua	3.54	25	P	Pn	11 40 15.0	+0.1
PINO	Pino	3.56	25	P	Pn	11 40 15.0	-0.1
YANA	Yana	3.61	25	P	Pn	11 40 16.0	+0.3
APR2	Miler	3.64	18	P	Pn	11 40 14.0	-1.8
BV15	Puerto Quito-O	3.65	14	P	Pn	11 40 13.0	-2.9
PULU	Pululahua	3.76	25	P	Pn	11 40 18.0	+0.2
PAC1	Pacto, Paraso	3.88	20	P	Pn	11 40 18.0	-1.1
OTAV	Otavalo	3.98	25	Pn	Pn	11 40 20.7	-0.1
OTAV				Sn	Sn	11 41 08.6	+2.2
OTAV	Otavalo	3.98	25	eP	Pn	11 40 20.8	0.0
OTAV	Otavalo	3.98	25	P	Pn	11 40 20.0	-0.8
CAYA	Cayambe	4.05	32	P	Pn	11 40 22.0	+0.2
CUSE	Cuicocha Este	4.06	25	P	Pn	11 40 22.0	+0.1
CUSW	Cuicocha Oeste	4.06	26	P	Pn	11 40 22.0	+0.1
CUIC	Cuicocha-Domo	4.08	25	P	Pn	11 40 22.0	-0.1
ATAH	Atahualpa	4.08	155	P	Pn	11 40 22.6	+0.5
	40nm,0.3s,baz=3.2,slow=7.7,SNR=168						
ATAH				S	Sn	11 41 09.8	+0.9
	99nm,0.3s,baz=136,slow=22,SNR=7.2						
ATAH				LR	LR	11 42 10.3	
	comp=Z,4μm,19.5s,baz=324,slow=41						
COTA	Cotacachi	4.11	25	P	Pn	11 40 23.0	+0.3
LAV4	Lava4-Reventad	4.12	37	P	Pn	11 40 22.0	-0.5
IMBA	Imbabura, San	4.12	28	P	Pn	11 40 23.0	+0.3
URCU	Urcuqui	4.24	26	P	Pn	11 40 25.0	+0.7
YAHU	Yahuarcocha	4.26	29	P	Pn	11 40 25.0	+0.4
LNGL	El Angel-Carch	4.62	27	P	Pn	11 40 30.0	+0.4
CHL1	Volc¡n Chiles	4.69	27	P	Pn	11 40 30.0	-0.7
TULM	Tulcn-Chalpat	4.70	30	P	Pn	11 40 31.0	+0.3
CHMA	Chilma	4.70	26	P	Pn	11 40 30.0	-0.6
ECEN	Cerro Negro	4.71	27	P	Pn	11 40 30.0	-0.9
CHL2	Volc¡n Chiles	4.71	28	P	Pn	11 40 31.0	+0.1
ATUL	Tulcn	4.78	30	P	Pn	11 40 31.0	-0.6
CMBC	Cumbal	4.88	28	eP	Pn	11 40 34.3	+1.2
TUMC	Tumaco	5.37	15	eP	Pn	11 40 37.4	-2.1
PTLC	Puerto Leguiza	6.38	56	eP	Pn	11 40 47.4	-5.9
PCON	Cinco Dias	6.79	33	eP	Pn	11 41 00.6	+1.2
GARC	Garzon, Huila	7.22	40	eP	Pn	11 41 03.1	-1.8
MARP	Paez Belalcaza	7.46	34	eP	Pn	11 41 07.9	-0.4
BETC	Betania	7.63	38	eP	Pn	11 41 07.6	-2.9
MALC	Bahia Malaga	7.87	21	eP	Pn	11 41 10.7	-2.9
YOTC	Yotoco, Valle	8.24	27	eP	Pn	11 41 11.3	-7.6
MACC	Macarena, Meta	8.34	49	eP	Pn	11 41 17.8	-2.2
CZSB	Cruzeiro do Su	8.53	121	eP	Pn	11 41 20.3	-2.4
ORTC	Ortega, Tolima	8.74	34	eP	Pn	11 41 22.6	-2.9
PLMC	San Jos del P	9.09	25	eP	Pn	11 41 22.4	-8.0
NNA	Nana	9.12	159	P	Pn	11 41 30.7	-0.1
	11nm,0.3s,baz=310,slow=11,SNR=17						
NNA				S	Sn	11 43 11.1	-0.9
	18nm,0.3s,baz=56,slow=23,SNR=6.2						
NNA	Nana	9.12	159	Pn	Pn	11 41 30.5	-0.3
NNA				Sn	Sn	11 43 13.2	+1.3
ANIL	Santa Ana	9.14	31	eP	Pn	11 41 24.2	-7.0
TOLC	Tolima	9.27	31	eP	Pn	11 41 28.5	-4.5
RREF	El Recreo	9.52	30	eP	Pn	11 41 34.7	-2.0
VILC	Villavicencio,	9.84	41	eP	Pn	11 41 40.4	-0.2
SOLC	Bahia Solano	9.94	16	eP	Pn	11 41 40.0	-1.9
ROSC	El Rosal	10.02	35	P	Pn	11 41 42.7	-0.7
	3.5nm,0.3s,baz=29,slow=12,SNR=5.9						
ROSC				LR	LR	11 46 09.0	
	comp=Z,4μm,18.9s,baz=227,slow=41						
ROSC	El Rosal	10.02	35	Pn	Pn	11 41 41.7	-1.7
ROSC	El Rosal	10.02	35	eP	Pn	11 41 38.7	-4.7
CBOC	Ciudad Bolivar	10.07	24	eP	Pn	11 41 39.7	-4.2
CHIC	Chingaza	10.21	39	eP	Pn	11 41 45.1	-0.9
PAYG	Puerto Ayora	10.53	285	Pn	Pn	11 41 51.3	+1.3
SPBC	San Pablo de B	10.83	34	eP	Pn	11 41 57.3	+3.2
RUSC	La Rusia	11.60	37	eP	Pn	11 42 04.3	-0.6
ZARC	Zaragoza, Cauc	12.02	26	eP	Pn	11 42 12.3	+1.9
BCIP	Isla Barro Col	12.49	1	Pn	Pn	11 42 17.2	+0.5
PAMC	Pamplona, Colo	12.98	35	eP	Pn	11 42 20.4	-3.5
OCAC	Ocana	13.40	30	eP	Pn	11 42 30.1	+0.8
HDC	Heredia	13.90	343		Pn	11 42 37.2	+1.4
JTS	Las Juntas de	14.44	341	P	Pn	11 42 44.1	+1.4
	0.8nm,0.3s,baz=202,slow=5.8,SNR=36						
JTS				LR	LR	11 47 20.7	
	comp=Z,983nm,19.7s,baz=218,slow=33						
JTS	Las Juntas de	14.44	341	Pn	Pn	11 42 44.7	+2.0
SDV	Santo Domingo	15.44	38	P	Pn	11 42 52.9	-2.9
	1.4nm,0.3s,baz=239,slow=12,SNR=10.0						
SDV	Santo Domingo	15.44	38	Pn	Pn	11 42 52.2	-3.6
SDV				IAmb	IAmb	11 42 59.9	
	comp=Z,156nm,0.8s						
SDV	Santo Domingo	15.44	38	eP	Pn	11 42 51.7	-4.0
SDV	Santo Domingo	15.44	38	eP	Pn	11 42 52.4	-3.4
SMRC	Santa Marta, M	15.61	22	eP	Pn	11 42 57.7	-0.2
ESPN	Las Esperanzas	16.05	345		Pn	11 43 03.9	+0.6
ESPN				IAmb	IAmb	11 43 09.2	
	comp=Z,127nm,1.1s						
ACON	Acoyapa	16.08	342	P	P	11 43 05.0	-0.9
CRIN	San Cristobal	17.42	337	P	P	11 43 21.4	+0.5
SAML	Samuel	17.70	109	P	Pn	11 43 19.1	-4.7
SAML	Samuel	17.70	109	eP	Pn	11 43 20.2	-3.6
PB16	IPOC Station P	18.11	146		Pn	11 43 30.0	+0.6
PB16				IAmb	IAmb	11 43 33.6	
	comp=Z,163nm,0.8s						
MNMC	Minye Minye	18.70	147	P	Pn	11 43 36.2	0.0
MNMC				IAmb	IAmb	11 43 38.4	
	comp=Z,162nm,1.0s						
TGUH	Tegucigalpa,Un	18.75	338		Pn	11 43 36.8	+0.2
PSGCX	Pisagua	18.82	150	P	Pn	11 43 37.2	-0.2
PSGCX				IAmb	IAmb	11 43 40.3	
	comp=Z,139nm,1.3s						
GO01	Chusmiza	19.36	147	P	Pn	11 43 43.6	-0.6
GO01				IAmb	IAmb	11 43 50.8	
	comp=Z,97nm,0.8s						
MACA	Manacapuru-AM	19.39	90	eP	P	11 43 41.1	-1.3
TA01	Diego Aracena	19.61	151	P	P	11 43 44.6	-0.1
TA01				IAmb	IAmb	11 43 49.8	
	comp=Z,99nm,0.9s						
PB08	IPOC Station P	19.77	148	P	P	11 43 47.6	+0.7
PB08				IAmb	IAmb	11 43 54.2	
	comp=Z,71nm,0.9s						
PATCX	Punta Patache	19.84	152	P	P	11 43 48.3	+1.0
PATCX				IAmb	IAmb	11 43 52.8	
	comp=Z,116nm,0.9s						
ESQI	Esquipulas	20.06	333	P	Pn	11 43 51.7	-0.4
ESQI				IAmb	IAmb	11 44 23.9	
	comp=Z,138nm,1.1s						
PCRV	Puerto La Cruz	20.48	49	P	P	11 43 53.6	-0.6
	comp=Z,22nm,0.5s,baz=286,slow=2.8,SNR=9.3						
PLCV	Puerto La Cruz	20.50	49	P	P	11 43 53.6	-0.9
PB07	IPOC Station P	20.74	152	P	Pn	11 43 59.0	-1.2
PB07				IAmb	IAmb	11 44 03.7	
	comp=Z,143nm,1.0s						
PB09	IPOC Station P	21.11	151	P	P	11 44 02.6	+1.5
PB04	IPOC Station P	21.15	154	P	P	11 44 02.3	+0.8
MTDJ	Mount Denham	21.64	7	P	P	11 44 08.0	+1.3
VILB	Vilhena	21.85	117	eP	P	11 44 09.0	+0.1
LVC	Limon Verde	21.96	151	P	P	11 44 11.3	+0.9
	comp=Z,47nm,1.0s,baz=323,slow=8.3,SNR=35						
LVC	Limon Verde	21.96	151	P	P	11 44 12.1	+1.6
LVC				IAmb	IAmb	11 44 18.8	
	comp=Z,64nm,0.9s						
PB10	IPOC Station P	22.02	156	P	P	11 44 11.7	+1.0
PB10				IAmb	IAmb	11 44 13.3	
	comp=Z,96nm,1.1s						
PETF	Flores	22.38	335	P	P	11 44 16.2	+1.6
SIV	San Ignacio	22.52	125	P	P	11 44 15.6	-0.5
	comp=Z,40nm,0.6s,baz=309,slow=9.1,SNR=94						
FSCY	Frank Sound, G	22.60	357	P	P	11 44 17.2	+0.3
LCCY	Blossom Villag	22.93	0	P	P	11 44 21.2	+0.9
LGNH	Logne	23.00	18	P	P	11 44 21.4	+0.4
CBCY	The Bluff, Cay	23.00	1	P	P	11 44 21.6	+0.6
PB14	IPOC Station P	23.08	157	P	P	11 44 23.4	+1.3
GTBY	Guantanamo Bay	23.70	12	P	P	11 44 29.2	+1.7
PTLB	Pontes e Lacer	23.86	121	eP	P	11 44 29.0	-0.1
SDDR	Presa de Saban	23.88	21	P	P	11 44 29.3	0.0
SDDR				IAmb	IAmb	11 44 45.4	
	comp=Z,110nm,1.2s						
GO02	Mina Guanaco	23.88	156	P	P	11 44 30.9	+1.4
GO02				IAmb	IAmb	11 44 33.1	
	comp=Z,49nm,0.8s						
ITTB	Itaituba	24.33	93	eP	P	11 44 32.7	-0.7
AC01	Pan de Azucar	24.39	159	P	P	11 44 34.9	+1.2
AC01				IAmb	IAmb	11 44 37.4	
	comp=Z,87nm,1.0s						
TEIG	Tepich	24.82	341	P	P	11 44 38.9	+1.2
CRPR	Cabo Rojo, PR	24.84	31	P	P	11 44 38.4	+0.5
CRPR				IAmb	IAmb	11 44 45.0	
	comp=Z,75nm,0.9s						
MLPR	Magueyes Islan	24.84	31	P	P	11 44 38.0	+0.1
MLPR				IAmb	IAmb	11 44 39.5	
	comp=Z,66nm,0.8s						
NPGB	Novo Progresso	24.90	99	eP	P	11 44 37.7	-1.0
MPR	Mayaguez	24.99	30	P	P	11 44 40.4	+1.0
ICMP	Isla Caja de M	25.04	32	P	P	11 44 39.6	-0.1
OBIP	Obispado Ponce	25.12	32	P	P	11 44 41.0	+0.4
OBIP				IAmb	IAmb	11 44 43.5	
	comp=Z,103nm,0.8s						
AGPR	Aguadilla, PR	25.22	30	P	P	11 44 42.9	+1.4
AOPR	Arecibo Observ	25.30	31	P	P	11 44 42.9	+0.7
IGPR	InterUniversit	25.33	33	P	P	11 44 42.7	+0.3
SJG	San Juan	25.42	32	P	P	11 44 44.2	+0.9
	comp=Z,260nm,1.0s,baz=218,slow=4.8,SNR=42						
SJG	San Juan	25.42	32	P	P	11 44 43.9	+0.7
EMPR	Esperanza - Ma	25.53	31	P	P	11 44 44.4	+0.2
AC02	Maricunga	25.56	157	P	P	11 44 47.2	+2.2

AC02				IAmb	IAmb	11 44 50.3	
	comp=Z,53nm,0.9s						
HUMP	Col San Antoni	25.61	33	P	P	11 44 45.4	+0.5
GCPR	Guaynabo City	25.62	32	P	P	11 44 45.4	+0.3
CBYP	Canovanas	25.71	33	P	P	11 44 46.7	+0.8
MTP	Monte Pirata	25.73	33	P	P	11 44 47.6	+1.5
GO03	Copiap	25.84	160	P	P	11 44 47.7	+0.7
GO03				IAmb	IAmb	11 44 49.5	
	comp=Z,52nm,1.0s						
MALB	Monte Alegre	25.86	87	*e*P	P	11 44 47.3	0.0
CDVI	St. Croix	25.90	35	P	P	11 44 46.7	-0.8
CUPR	Culebra, Puert	26.05	34	P	P	11 44 48.6	-0.4
AC04	Llanos de Chal	26.12	162	P	P	11 44 50.1	+0.6
GRTK	Grand Turk	26.27	19	P	P	11 44 51.8	+0.9
SKI	Saint Kitts	26.80	39	P	P	11 44 57.3	+1.5
AC05	El Transito	26.97	161	P	P	11 44 58.6	+1.3
AC05				IAmb	IAmb	11 45 00.0	
	comp=Z,74nm,1.4s						
LCO	Las Campanas	26.99	162	P	P	11 44 59.2	+1.6
GO04	Tololo Observa	28.04	163	P	P	11 45 08.6	+1.5
GO04				IAmb	IAmb	11 45 09.4	
	comp=Z,41nm,0.9s						
CO01	Juntas del Tor	28.08	161	P	P	11 45 09.2	+1.8
AGUA	GUANDACOL	28.19	158	*i* P	P	11 45 10.3	+2.2
MCPB	Macapa, AP	28.19	84	*e*P	P	11 45 08.1	-0.2
CYA	Choya	28.38	153	*i* P	P	11 45 11.4	+1.6
AROD	Rodeo	28.46	160	*i* P	P	11 45 13.4	+2.6
PP1B	Ponte de Pedra	28.47	122	*e*P	P	11 45 10.7	0.0
ACDV	Cuesta del Vie	28.58	160	*i* P	P	11 45 14.4	+2.7
CO03	El Pedregal	28.70	163	P	P	11 45 13.8	+1.2
MDP	Montagnes des	28.71	73	P	P	11 45 12.7	-0.1
	comp=Z,17nm,0.6s,baz=252,slow=8.7,SNR=13						
ACLC	CERRO LA CRUZ	28.73	156	*i* P	P	11 45 14.8	+1.7
CO02	Combarbal	28.95	164	P	P	11 45 15.8	+0.9
CO02				IAmb	IAmb	11 45 17.5	
	comp=Z,91nm,1.4s						
ACCO	Cerro Coronel	28.98	160	*i* P	P	11 45 17.7	+2.3
AVFE	Valle Fertil	29.63	158	*i* P	P	11 45 22.2	+1.3
APLL	PUNTA DE LOS L	29.76	156	*i* P	P	11 45 23.9	+1.9
SNDB	Serra Nova Dou	29.77	108	*e*P	P	11 45 21.9	-0.3
RTLL	Cerro Villicun	29.86	160	*i* P	P	11 45 24.5	+1.6
ZON	Zonda	29.99	160	P	P	11 45 26.3	+2.2
ZON				IAmb	IAmb	11 45 27.0	
	comp=Z,73nm,1.6s						
RTLS	Leoncito	30.02	161	*i* P	P	11 45 26.7	+2.1
PRPB	Parauapebas	30.31	96	*e*P	P	11 45 26.3	-0.8
RTCV	Cerro Valdivia	30.33	160	*i* P	P	11 45 29.1	+2.1
AUSP	Uspallata	30.39	162	*i* P	P	11 45 30.4	+2.6
ARAG	Araguaiana, MT	30.41	116	*e*P	P	11 45 27.6	-0.2
VA03	San Esteban	30.55	164	P	P	11 45 30.5	+1.5
VA03				IAmb	IAmb	11 45 32.0	
	comp=Z,33nm,0.8s						
ROC1	El Roble	30.63	165	P	P	11 45 30.6	+0.8
MT02	Curacav	30.86	165	P	P	11 45 33.3	+1.6
MT02				IAmb	IAmb	11 45 55.6	
	comp=Z,60nm,1.6s						
PEL	Peldehue	30.87	164	P	P	11 45 33.8	+2.0
ASAL	Salagasta	30.90	161	*i* P	P	11 45 34.7	+2.6
MT05	Renca	31.09	165	P	P	11 45 35.4	+1.7
ARCO	CERRO ARCO	31.10	162	*i* P	P	11 45 36.4	+2.5
AAGR	Agrelo	31.36	162	*i* P	P	11 45 38.7	+2.5
DWPF	Disney Wildern	31.36	358	P	P	11 45 36.2	+0.2
	baz=177						
TCA	Tanti	31.39	154	*i* P	P	11 45 37.6	+1.1
CPUP	Villa Florida	31.57	138	P	P	11 45 38.1	+0.2
	comp=Z,13nm,0.8s,baz=321,slow=9.8,SNR=31						
CPUP				LR	LR	12 00 31.3	
	comp=Z,507nm,21.1s,baz=312,slow=40						
CPUP	Villa Florida	31.57	138	P	P	11 45 38.3	+0.3
CPUP	Villa Florida	31.57	138	*e*P	P	11 45 37.3	-0.6
MRA	San Martin	31.87	157	*i* P	P	11 45 42.0	+1.3
BO02	Sierra Bellavi	32.41	166	P	P	11 45 46.3	+1.0
BO02				IAmb	IAmb	11 45 52.6	
	comp=Z,18nm,0.8s						
SMTB	Santa Maria do	32.77	101	*e*P	P	11 45 48.5	-0.2
TRCB	Terra Rica	32.85	128	*e*P	P	11 45 49.0	-0.4
ITRB	Iturama	33.24	121	*e*P	P	11 45 52.4	-0.4
PCMB	Pacaembu	33.35	125	*e*P	P	11 45 52.8	-0.9
BDFB	Brasilia	33.84	113	P	P	11 45 58.1	+0.1
	comp=Z,22nm,0.9s,baz=270,slow=8.7,SNR=22						
BDFB				LR	LR	12 01 01.3	
	comp=Z,545nm,21.5s,baz=296,slow=38						
BDFB	Brasilia	33.84	113	P	P	11 45 57.9	-0.2
BDFB				IAmb	IAmb	11 45 59.2	
	comp=Z,26nm,0.9s						
BI02	San Fabin de	34.08	167	P	P	11 46 00.9	+1.1
PTGB	Pitanga	34.33	131	*e*P	P	11 46 02.2	0.0
IPMB	Ipameri, GO	34.44	117	*e*P	P	11 46 02.5	-0.6
BB19B	Bebedouro	35.38	122	*e*P	P	11 46 10.4	-0.8
FRTB	Fartura	35.57	127	*e*P	P	11 46 12.0	-0.8
250A	Grady	35.67	351	P	P	11 46 14.1	+0.6
ITAB	Concordia	35.73	134	*e*P	P	11 46 14.1	0.0
ROSB	Rosrio	35.93	90	*e*P	P	11 46 15.7	-0.3
154A	Montrose	35.93	356	P	P	11 46 15.8	+0.1
SDBA	SAO DESIDERIO	35.95	106	*e*P	P	11 46 15.8	-0.4
344A	Westbrook Farm	36.11	344	P	P	11 46 18.5	+1.3
344A				IAmb	IAmb	11 46 19.5	
	comp=Z,28nm,0.8s						
LC01	Cunco	36.12	169	P	P	11 46 18.3	+1.0
LC01				IAmb	IAmb	11 46 38.4	
	comp=Z,22nm,0.8s						
152A	Waverly Hall	36.14	353	P	P	11 46 17.2	-0.3
152A				IAmb	IAmb	11 46 18.1	
	comp=Z,22nm,0.8s						
HKT	Hockley	36.42	337	P	P	11 46 21.2	+1.3
HKT				IAmb	IAmb	11 46 40.9	
	comp=Z,58nm,1.9s						
342A	Flagon Creek P	36.49	342	P	P	11 46 22.1	+1.6
GOGA	Godfrey	36.75	355	P	P	11 46 22.2	-0.5
	baz=174,SNR=7.1						
GOGA	Godfrey	36.75	355	P	P	11 46 22.0	-0.7
GOGA				IAmb	IAmb	11 46 23.3	
	comp=Z,14nm,0.8s						
LRAL	Lakeview Retre	36.82	350	P	P	11 46 23.0	-0.3
	baz=168,SNR=8.0						
LRAL	Lakeview Retre	36.82	350	P	P	11 46 22.7	-0.6
LRAL				IAmb	IAmb	11 46 24.1	
	comp=Z,17nm,0.8s						
CPSB	Cacapava Do Su	36.83	140	*e*P	P	11 46 23.9	+0.4
146A	Union	36.84	347	P	P	11 46 22.4	-1.0
146A				IAmb	IAmb	11 46 44.8	
	comp=Z,42nm,1.2s						
Z51A	Franklin	36.84	353	P	P	11 46 23.1	-0.3
Z51A				IAmb	IAmb	11 46 24.1	
	comp=Z,20nm,0.8s						
JANB	Januaria	37.11	111	*e*P	P	11 46 25.4	-0.7
Z47A	Carrollton	37.18	349	P	P	11 46 26.7	+0.4
Z47A				IAmb	IAmb	11 46 27.0	
	comp=Z,25nm,0.7s						
Y59A	Loris	37.21	2	P	P	11 46 26.7	+0.2
	baz=182						
SPB	Sao Paulo	37.41	125	P	P	11 46 27.1	-1.4
SPB	Sao Paulo	37.41	125	*e*P	P	11 46 27.6	-0.9
143A	Socs Landing,	37.47	344	P	P	11 46 29.7	+0.9
143A				IAmb	IAmb	11 47 03.8	
	comp=Z,19nm,1.0s						
HODGE	Hodges	37.49	357	P	P	11 46 28.6	-0.4
HODGE				IAmb	IAmb	11 46 47.6	
	comp=Z,31nm,1.3s						
JSC	Jenkinsville	37.50	358	P	P	11 46 28.9	-0.1
VAO	Valinhos	37.52	124	*e*P	P	11 46 28.4	-1.1
Y49A	Blount Mountai	37.54	351	P	P	11 46 29.0	-0.4
NATX	Nacogdoches	37.61	339	P	P	11 46 31.1	+1.1
PLTB	Pedras Altas	37.64	142	*e*P	P	11 46 30.9	+0.6
X56A	White Oak	37.70	359	P	P	11 46 30.5	-0.2
	baz=178,SNR=5.1						
PET01	Itanhaem-SP	37.86	126	*e*P	P	11 46 31.5	-0.7
CNLB	Canela	37.87	136	*e*P	P	11 46 32.2	-0.2
PAULI	Pauline	38.06	358	P	P	11 46 33.8	0.0
PAULI				IAmb	IAmb	11 46 52.4	
	comp=Z,53nm,1.4s						
FPAL	Fort Paine	38.10	353	P	P	11 46 33.5	-0.6
FPAL				IAmb	IAmb	11 46 34.0	
	comp=Z,14nm,0.7s						
Y45A	Yeager Farm, C	38.12	347	P	P	11 46 34.7	+0.4
PLCA	Paso Flores	38.15	168	P	P	11 46 35.2	+0.6
	comp=Z,4.5nm,0.8s,baz=342,slow=10,SNR=14						
PLCA				PcP	PcP	11 48 49.4	+1.2
	comp=Z,1.5nm,0.8s,baz=359,slow=4.6,SNR=5.9						
PLCA	Paso Flores	38.15	168	P	P	11 46 35.6	+1.1
PLCA	Paso Flores	38.15	168	*e*P	P	11 46 36.4	+1.9
X48A	Hartselle	38.22	351	P	P	11 46 34.6	-0.5
W58A	Raeford	38.23	1	P	P	11 46 34.5	-0.6
	baz=181						
237A	Washetta, Mont	38.24	338	P	P	11 46 36.9	+1.5
237A				IAmb	IAmb	11 46 56.2	
	comp=Z,41nm,1.0s						
BG3	Lake Jocassee	38.29	356	P	P	11 46 35.7	0.0
BG3				IAmb	IAmb	11 46 36.7	
	comp=Z,16nm,0.9s						
W56A	Indian Trail	38.34	359	P	P	11 46 35.5	-0.6
	baz=179						
W57A	Gilead	38.35	0	P	P	11 46 35.8	-0.4
	baz=180						
W57A	Gilead	38.35	0	P	P	11 46 36.0	-0.2
W57A				IAmb	IAmb	11 46 36.6	
	comp=Z,20nm,0.9s						
KMSC	Kings Mountain	38.36	358	P	P	11 46 36.0	-0.2
	baz=178,SNR=5.4						
KMSC	Kings Mountain	38.36	358	P	P	11 46 36.0	-0.2
KMSC				IAmb	IAmb	11 46 37.1	
	comp=Z,28nm,1.0s						
W52A	Murphy	38.46	355	P	P	11 46 37.1	-0.1
BSCB	Bom Sucesso	38.56	120	*e*P	P	11 46 37.1	-1.2
JCT	Junction City	38.59	332	P	P	11 46 39.9	+1.5
JCT				IAmb	IAmb	11 47 02.7	
	comp=Z,29nm,1.2s						
W50A	Signal Mountai	38.71	353	P	P	11 46 39.1	-0.2
OXF	Oxford	38.72	348	P	P	11 46 38.9	-0.4
CCAR	Cane Creek	38.72	344	P	P	11 46 40.2	+0.9
CCAR				IAmb	IAmb	11 46 41.0	
	comp=Z,28nm,0.9s						
PARB	Paraibuna	38.78	124	*e*P	P	11 46 39.4	-0.7
SWET	Sewanee	38.80	352	P	P	11 46 39.3	-0.7
CPCT	Cooper Cave	38.87	354	P	P	11 46 40.1	-0.4
CPCT				IAmb	IAmb	11 46 41.3	
	comp=Z,31nm,0.7s						
WHTX	Lake Whitney,	38.87	336	P	P	11 46 42.0	+1.3
	baz=152,SNR=9.2						
WHTX	Lake Whitney,	38.87	336	P	P	11 46 41.9	+1.3
WHTX				IAmb	IAmb	11 47 01.4	
	comp=Z,41nm,1.1s						
WLAR	White Oak Lake	38.88	343	P	P	11 46 41.6	+1.0
WLAR				IAmb	IAmb	11 46 43.6	
	comp=Z,32nm,0.9s						
PLAL	Pickwick Lake	38.91	350	P	P	11 46 39.7	-1.1
V53A	Saluda	38.95	356	P	P	11 46 40.9	-0.4
V53A				IAmb	IAmb	11 46 60.0	
	comp=Z,29nm,1.4s						
V59A	Middlesex	39.00	2	P	P	11 46 41.4	-0.2
	baz=183						
V58A	Windy Hill, Pi	39.00	1	P	P	11 46 41.4	-0.3
	baz=181						
V58A	Windy Hill, Pi	39.00	1	P	P	11 46 41.2	-0.4
V58A				IAmb	IAmb	11 47 00.0	
	comp=Z,40nm,1.2s						
TKL	Tuckaleechee C	39.01	355	P	P	11 46 41.5	-0.2
V56A	Mocksville	39.01	359	P	P	11 46 41.8	+0.1
	baz=179						
V60A	Jim Taylor Roa	39.05	4	P	P	11 46 41.9	-0.1
	baz=184,SNR=5.1						
V60A	Jim Taylor Roa	39.05	4	P	P	11 46 42.3	+0.2
V55A	Taylorsville	39.06	359	P	P	11 46 42.5	+0.3
V55A				IAmb	IAmb	11 47 02.0	
	comp=Z,72nm,1.7s						
V57A	Coltrane Farms	39.09	0	P	P	11 46 42.2	-0.2
	baz=180						
Z38A	Mt. Pleasant	39.09	340	P	P	11 46 43.1	+0.7
Z38A				IAmb	IAmb	11 47 02.3	
	comp=Z,33nm,0.9s						
V61A	Roper	39.13	5	P	P	11 46 43.3	+0.7
	baz=185						
V51A	Loudon	39.20	355	P	P	11 46 42.9	-0.4
V51A				IAmb	IAmb	11 46 43.9	
	comp=Z,23nm,0.8s						
W45A	Hickory Valley	39.29	348	P	P	11 46 43.5	-0.6
W45A				IAmb	IAmb	11 46 44.4	
	comp=Z,38nm,0.9s						
LL01	San Ignacio de	39.41	171	P	P	11 46 44.8	-0.2
V48A	Smith Brothers	39.44	351	P	P	11 46 44.8	-0.5
V48A				IAmb	IAmb	11 46 45.8	
	comp=Z,19nm,0.8s						
U56A	King	39.55	360	P	P	11 46 46.2	+0.1
	baz=179						
U56A	King	39.55	360	P	P	11 46 46.5	+0.3
U56A				IAmb	IAmb	11 47 05.1	
	comp=Z,51nm,1.4s						
X40A	Basin Creek Fa	39.55	343	P	P	11 46 46.5	+0.3
	baz=160						
X40A	Basin Creek Fa	39.55	343	P	P	11 46 47.1	+0.9
U59A	Littleton	39.61	3	P	P	11 46 46.6	-0.1
	baz=183						
U59A	Littleton	39.61	3	P	P	11 46 47.2	+0.5
U59A				IAmb	IAmb	11 47 05.5	
	comp=Z,30nm,1.3s						
U58A	Oxford	39.62	2	P	P	11 46 46.2	-0.5
	baz=182						
TXAR	Lajitas Array	39.62	327	P	P	11 46 48.5	+1.4
	comp=Z,1.1nm,0.8s,baz=152,slow=9.2,SNR=13						
TXAR				pP	pP	11 47 05.0	+1.1
	comp=Z,2.8nm,0.9s,baz=134,slow=9.1,SNR=7.3						
TXAR				PcP	PcP	11 48 54.5	+1.4
	comp=Z,2.6nm,0.7s,baz=163,slow=6.4,SNR=8.1						
TXAR				LR	LR	12 01 35.7	
	comp=Z,147nm,21.8s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	39.62	327	P	P	11 46 48.2	+1.1
TX32	Lajitas Array	39.62	327	P	P	11 46 48.2	+1.1
U57A	Blanch	39.64	1	P	P	11 46 46.5	-0.4
	baz=181,SNR=7.7						
U61A	Possum Corner	39.68	5	P	P	11 46 46.6	-0.6
	baz=186						
UALR	University of	39.68	344	P	P	11 46 47.8	+0.5
UALR				IAmb	IAmb	11 46 48.5	
	comp=Z,22nm,0.8s						
CLTN	Cedars of Leba	39.72	352	P	P	11 46 47.0	-0.6
U54A	Nelsons Funny	39.75	358	P	P	11 46 47.8	-0.2
	baz=177						
U54A	Nelsons Funny	39.75	358	P	P	11 46 47.9	0.0
U60A	Pendleton	39.76	4	P	P	11 46 47.6	-0.3
	baz=184						
MIAR	Mount Ida	39.82	343	P	P	11 46 48.6	+0.1
	baz=158,SNR=7.4						
MIAR	Mount Ida	39.82	343	P	P	11 46 49.2	+0.8
TZTN	Tazewell	39.87	356	P	P	11 46 48.4	-0.5
	baz=174,SNR=6.9						
TZTN	Tazewell	39.87	356	P	P	11 46 47.9	-0.9
TZTN				IAmb	IAmb	11 46 49.4	
	comp=Z,24nm,0.9s						
Z35A	Perchaven, San	39.97	337	P	P	11 46 51.4	+1.7
WVT	Waverly	39.99	350	P	P	11 46 48.6	-1.3
	baz=168						
WVT	Waverly	39.99	350	P	P	11 46 48.5	-1.3
W41B	Gary Mavity, V	40.03	344	P	P	11 46 50.2	0.0
	baz=161,SNR=9.5						
W41B	Gary Mavity, V	40.03	344	P	P	11 46 50.4	+0.2
W41B				IAmb	IAmb	11 46 51.0	
	comp=Z,14nm,0.7s						
U49A	Red Boiling Sp	40.06	353	P	P	11 46 50.0	-0.4
U49A				IAmb	IAmb	11 46 50.6	
	comp=Z,15nm,0.7s						
WHAR	Wooly Hollow	40.15	344	P	P	11 46 51.7	+0.5
WHAR				IAmb	IAmb	11 46 52.3	
	comp=Z,27nm,0.8s						
T58A	Grand View Acr	40.17	2	P	P	11 46 50.8	-0.5
	baz=182						
T57A	Hurt	40.20	1	P	P	11 46 51.1	-0.5
	baz=181,SNR=7.0						
T57A	Hurt	40.20	1	P	P	11 46 51.2	-0.5
T57A				IAmb	IAmb	11 46 52.2	
	comp=Z,24nm,0.9s						
T56A	Rocky Mt	40.23	0	P	P	11 46 51.9	+0.1
	baz=180						
T59A	Double "B" Far	40.24	3	P	P	11 46 51.8	-0.1
	baz=184						
T59A	Double "B" Far	40.24	3	P	P	11 46 52.6	+0.8
T59A				IAmb	IAmb	11 47 10.0	
	comp=Z,44nm,1.4s						
ABTX	Abilene, Hawle	40.34	334	P	P	11 46 53.6	+0.7
	baz=149,SNR=8.8						
ABTX	Abilene, Hawle	40.34	334	P	P	11 46 54.3	+1.4
ABTX				IAmb	IAmb	11 47 20.1	
	comp=Z,20nm,0.9s						
BLA	Blacksburg	40.41	360	P	P	11 46 53.3	-0.1
	baz=179						
BLA	Blacksburg	40.41	360	IAmb	IAmb	11 47 12.2	
	comp=Z,76nm,1.6s						
T50A	Nancy	40.46	354	IAmb	IAmb	11 46 53.7	
	comp=Z,66nm,1.9s						
T60A	Surry	40.46	4	P	P	11 46 54.0	+0.4
	baz=185						
W39A	Magazine	40.49	343	P	P	11 46 55.0	+1.0
	baz=158,SNR=16						
W39A	Magazine	40.49	343	IAmb	IAmb	11 46 56.1	
	comp=Z,31nm,0.8s						
LCAR	Lake Charles	40.61	346	P	P	11 46 54.7	-0.2
LCAR				IAmb	IAmb	11 46 55.6	
	comp=Z,23nm,0.9s						
FCAR	Ozark Folk Cen	40.68	345	P	P	11 46 55.2	-0.4
S58A	Poland Farm, P	40.85	2	P	P	11 46 56.8	-0.2
	baz=183						
S56A	Natural Bridge	40.88	1	P	P	11 46 57.2	0.0
	baz=181						
S51A	Beattyville	40.96	356	IAmb	IAmb	11 46 58.1	
	comp=Z,23nm,0.8s						
S57A	Dark Hollow, R	40.97	1	P	P	11 46 57.5	-0.4
	baz=182						
S54A	Dingess, Beckl	41.01	359	P	P	11 46 58.1	-0.2
	baz=178						
S54A	Dingess, Beckl	41.01	359	IAmb	IAmb	11 47 16.8	
	comp=Z,43nm,1.1s						
S60A	Water View	41.03	4	P	P	11 46 58.8	+0.5
	baz=185						
DUB01	Friburgo-RJ	41.03	120	*e*P	P	11 46 58.3	-0.5
S59A	Mechanicsville	41.04	3	P	P	11 46 58.6	+0.1
	baz=184						
R58B	Mineral	41.21	3	P	P	11 46 59.8	-0.1
	baz=183,SNR=7.8						
R58B	Mineral	41.21	3	P	P	11 47 00.1	+0.2
R58B				IAmb	IAmb	11 47 18.9	
	comp=Z,46nm,1.3s						
GDU01	Guandu, BA	41.30	107	*e*P	P	11 47 00.4	-0.6
U40A	Yellville	41.31	344	P	P	11 47 01.2	+0.4
	baz=160,SNR=25						
U40A	Yellville	41.31	344	IAmb	IAmb	11 47 02.2	
	comp=Z,41nm,0.9s						
BSFB	Barra de Sao F	41.32	115	*e*P	P	11 46 59.8	-1.3
R54A	Victor	41.38	359	P	P	11 47 00.7	-0.6
	baz=178,SNR=7.1						
W35A	Tecumseh	41.46	339	P	P	11 47 01.2	-0.8
W35A					pP	11 47 19.7	+0.8
CBN	Corbin Frederi	41.48	3	P	P	11 47 01.6	-0.4
	baz=184						
R55A	Marlinton	41.48	360	P	P	11 47 02.3	+0.1
	baz=180,SNR=5.2						
R55A	Marlinton	41.48	360	IAmb	IAmb	11 47 21.1	
	comp=Z,38nm,1.2s						
R59A	King George, V	41.49	4	P	P	11 47 02.5	+0.4
	baz=184						
R57A	Stanardsville	41.52	2	P	P	11 47 02.6	+0.2
	baz=182						
R58A	Rapidan	41.54	2	P	P	11 47 02.8	+0.3
	baz=183,SNR=9.0						
HHAR	Hobbs	41.54	343	IAmb	IAmb	11 47 04.1	
	comp=Z,27nm,1.0s						
CAM01	Campos-RJ	41.56	119	*e*P	P	11 47 02.7	-0.4
R60A	Leonardtown, M	41.59	4	P	P	11 47 02.9	-0.1
	baz=185						
NAN01	Guarapari, ES	41.71	113	*e*P	P	11 47 03.3	-1.0
R49A	Shelbyville	41.75	354	IAmb	IAmb	11 47 04.2	
	comp=Z,22nm,0.8s						
S44A	Carbondale	41.76	349	IAmb	IAmb	11 47 04.7	
	comp=Z,25nm,0.9s						
TUL1	Leonard	41.77	341	P	P	11 47 05.3	+0.8
	baz=156,SNR=12						
TUL1	Leonard	41.77	341	P	P	11 47 05.9	+1.4
SIUC	Southern Illin	41.78	349	P	P	11 47 03.4	-1.1
SIUC				IAmb	IAmb	11 47 04.8	
	comp=Z,28nm,0.9s						
WMOK	Wichita Mounta	41.81	337	P	P	11 47 05.4	+0.5
	baz=151						
WMOK	Wichita Mounta	41.81	337	P	P	11 47 05.7	+0.8
WCI	Wyandotte Cave	41.82	353	P	P	11 47 04.0	-0.9
	baz=170						
WCI	Wyandotte Cave	41.82	353	P	P	11 47 03.8	-1.0
WCI				IAmb	IAmb	11 47 05.1	
	comp=Z,24nm,0.9s						
U38A	Gravette	41.82	343	P	P	11 47 05.5	+0.6
RIB01	Linhares ES	41.87	115	*e*P	P	11 47 05.2	-0.4
MGMO	Mountain Grove	41.91	345	P	P	11 47 05.1	-0.5
ALF01	Guarapari-ES	41.98	117	*e*P	P	11 47 06.0	-0.5
OK025	Westminster Rd	42.01	339	P	P	11 47 06.9	+0.4
Q53A	Leroy	42.07	358	P	P	11 47 06.6	-0.3
	baz=178,SNR=8.2						
BCOK	Bluff Creek, N	42.18	339	P	P	11 47 07.9	+0.1
Q59A	Harwood	42.18	4	P	P	11 47 07.7	-0.1
	baz=185						
Q58A	Fox Den Farm,	42.19	3	P	P	11 47 07.8	-0.1
	baz=183,SNR=5.7						
Q52A	Bidwell	42.20	357	IAmb	IAmb	11 47 27.0	
	comp=Z,38nm,1.2s						
Q56A	Snyder Ridge,	42.24	1	P	P	11 47 08.4	0.0
	baz=181						
Q56A	Snyder Ridge,	42.24	1	IAmb	IAmb	11 47 27.6	
	comp=Z,37nm,1.4s						
OK029	Liberty Lake	42.24	339	P	P	11 47 09.1	+0.7
Q57A	Strasburg	42.26	2	P	P	11 47 08.3	-0.2
	baz=182						
Q51A	Peebles	42.33	356	IAmb	IAmb	11 47 09.2	
	comp=Z,27nm,1.1s						
MNTX	Cornudas Mount	42.39	327	P	P	11 47 10.7	+1.1
	baz=141,SNR=17						
MNTX	Cornudas Mount	42.39	327	P	P	11 47 10.6	+0.9
CCM	Cathedral Cave	42.52	347	P	P	11 47 10.0	-0.6
	baz=163						
CCM	Cathedral Cave	42.52	347	P	P	11 47 09.8	-0.8
OLIL	Olney	42.57	351	P	P	11 47 09.9	-1.1
P53A	Whipple	42.70	359	IAmb	IAmb	11 47 30.3	
	comp=Z,59nm,1.5s						
P56A	Dayton Farm, R	42.71	1	P	P	11 47 12.6	+0.5
	baz=182,SNR=5.6						
P57A	Homestead Farm	42.72	2	P	P	11 47 12.8	+0.6
	baz=183						
P58A	Pank, Wackersv	42.76	3	P	P	11 47 13.0	+0.5
	baz=184						
P52A	Corning	42.87	358	P	P	11 47 12.5	-0.9
	baz=177,SNR=5.0						
P52A	Corning	42.87	358	P	P	11 47 12.6	-0.7
P52A				IAmb	IAmb	11 47 31.4	
	comp=Z,40nm,1.1s						
MSTX	Muleshoe	42.88	332	P	P	11 47 14.7	+1.0
	baz=145,SNR=20						
MSTX	Muleshoe	42.88	332	P	P	11 47 14.8	+1.0
Q44A	Meyer Farm, Va	42.89	350	IAmb	IAmb	11 47 13.4	
	comp=Z,34nm,0.8s						
T35A	Sooner Cattle	42.93	341	P	P	11 47 14.9	+0.9
P48A	Milroy	42.93	354	P	P	11 47 12.2	-1.7
P48A				IAmb	IAmb	11 47 13.7	
	comp=Z,62nm,1.6s						
P59A	Jarrettsville	42.94	4	P	P	11 47 14.1	+0.2
	baz=185						
P49A	Miami Univ. Ec	42.94	355	P	P	11 47 12.3	-1.6
	baz=173						
P49A	Miami Univ. Ec	42.94	355	P	P	11 47 12.3	-1.6
P49A				IAmb	IAmb	11 47 13.2	
	comp=Z,27nm,1.1s						
R40A	Maddies Statio	42.99	346	P	P	11 47 13.6	-0.8
CROK	Carrier	43.07	339	P	P	11 47 15.4	+0.3
AMTX	Amarillo	43.15	334	P	P	11 47 16.5	+0.7
P60A	Greenville	43.20	5	P	P	11 47 16.2	+0.2
	baz=186						
WUPA	West Chester U	43.32	5	P	P	11 47 17.1	+0.1
U32A	Winter Ranch,	43.34	338	IAmb	IAmb	11 47 35.5	
	comp=Z,37nm,0.8s						
O58A	Lewisberry	43.41	4	P	P	11 47 18.1	+0.4
	baz=184						
O53A	New Philadelph	43.45	359	P	P	11 47 17.8	-0.3
	baz=178						
O57A	Amberson	43.46	3	P	P	11 47 18.4	+0.2
	baz=183						
O56A	Blue Knob Stat	43.48	2	P	P	11 47 18.2	-0.2
	baz=182						
ACSO	Alum Creek Sta	43.50	357	P	P	11 47 17.2	-1.3
	baz=176,SNR=5.3						
ACSO	Alum Creek Sta	43.50	357	P	P	11 47 17.1	-1.3
ACSO				IAmb	IAmb	11 47 18.6	
	comp=Z,26nm,0.8s						
PAGS	Pennsylvania G	43.53	4	P	P	11 47 18.9	+0.3
PAGS				IAmb	IAmb	11 47 37.8	
	comp=Z,33nm,1.2s						
O59A	Robesonia	43.65	4	P	P	11 47 19.9	+0.2
	baz=185						
P43A	Skaggs, Pawnee	43.70	349	IAmb	IAmb	11 47 20.2	
	comp=Z,22nm,0.8s						
O60A	Telford	43.72	5	P	P	11 47 20.3	+0.1
	baz=186						

SSPA	Standing Stone	43.87	2	P	P	11 47 21.5	+0.1
	baz=183						
SSPA	Standing Stone	43.87	2	P	P	11 47 21.1	-0.3
LUPA	Lehigh Univers	44.00	5	P	P	11 47 23.8	+1.3
LUPA					pP	11 47 39.1	-0.4
N57A	Milroy	44.01	3	P	P	11 47 22.4	-0.2
	baz=183						
O44A	Mansfield	44.02	351	P	P	11 47 21.2	-1.4
O44A				IAmb	IAmb	11 47 22.3	
	comp=Z,17nm,0.7s						
SFIN	Lafayette	44.04	352	P	P	11 47 21.7	-1.1
	baz=170						
RCBR	Riachuelo	44.12	95	P	P	11 47 22.8	-1.2
RCBR				IAmb	IAmb	11 47 24.3	
	comp=Z,30nm,0.9s						
RCBR	Riachuelo	44.12	95	*e*P	P	11 47 23.6	-0.4
N56A	West Decatur	44.14	2	P	P	11 47 23.2	-0.4
	baz=182						
N58A	Sunbury	44.14	4	P	P	11 47 23.5	-0.1
	baz=185						
N58A	Sunbury	44.14	4	IAmb	IAmb	11 47 42.0	
	comp=Z,35nm,1.1s						
N54A	Moraine State	44.15	0	P	P	11 47 23.3	-0.4
	baz=180						
N51A	Ashland	44.16	358	IAmb	IAmb	11 47 23.5	
	comp=Z,25nm,0.9s						
N61A	South Mountain	44.26	6	P	P	11 47 24.6	+0.1
	baz=188						
N59A	State Game Lan	44.28	5	P	P	11 47 25.0	+0.2
	baz=186						
N59A	State Game Lan	44.28	5	IAmb	IAmb	11 47 26.3	
	comp=Z,20nm,0.8s						
N60A	Cedar Hill Far	44.30	5	P	P	11 47 25.1	+0.2
	baz=187						
121A	Cookes Peak, D	44.34	326	P	P	11 47 27.7	+2.1
	baz=138,SNR=5.4						
121A	Cookes Peak, D	44.34	326	pP	pP	11 47 46.5	+3.8
HDIL	Hopedale	44.55	350	P	P	11 47 25.2	-1.6
	baz=167,SNR=8.0						
PAL	Palisades	44.56	7	P	P	11 47 26.7	-0.1
	baz=189						
M57A	Sunshine Farm,	44.61	3	P	P	11 47 27.6	+0.3
	baz=184,SNR=5.5						
M53A	WI Miller and	44.63	359	P	P	11 47 27.0	-0.6
	baz=179						
TRNY	Table Rock, Ra	44.66	6	P	P	11 47 28.2	+0.4
TRNY				IAmb	IAmb	11 47 47.7	
	comp=Z,60nm,1.4s						
M50A	Fremont	44.67	357	IAmb	IAmb	11 47 27.9	
	comp=Z,41nm,0.8s						
M58A	Price’s Panora	44.69	4	P	P	11 47 28.2	+0.2
	baz=185						
M54A	Oil Creek Stat	44.70	0	P	P	11 47 27.8	-0.3
	baz=180						
M54A	Oil Creek Stat	44.70	0	IAmb	IAmb	11 47 46.2	
	comp=Z,39nm,1.2s						
M56A	Emporium	44.71	2	P	P	11 47 27.7	-0.4
	baz=182						
M56A	Emporium	44.71	2	P	P	11 47 27.9	-0.3
M56A				IAmb	IAmb	11 47 28.7	
	comp=Z,25nm,0.8s						
M60A	Port Jervis	44.80	6	P	P	11 47 28.6	-0.3
	baz=188						
KSPA	Keystone Colle	44.92	5	IAmb	IAmb	11 47 48.5	
	comp=Z,43nm,1.2s						
M59A	Waymart	44.93	5	P	P	11 47 30.0	+0.1
	baz=186						
KSU1	Kansas State U	44.95	342	P	P	11 47 30.9	+0.8
	baz=156,SNR=11						
M63A	Gales Ferry	45.20	9	P	P	11 47 32.7	+0.7
	baz=191						
M63A	Gales Ferry	45.20	9	P	P	11 47 33.0	+1.1
L57A	Andrews Acres	45.29	3	P	P	11 47 32.6	-0.1
	baz=184						
L56A	Greenwood	45.38	3	P	P	11 47 33.3	-0.2
	baz=183						
L56A	Greenwood	45.38	3	P	P	11 47 33.6	+0.1
ANMO	Albuquerque	45.48	329	P	P	11 47 36.7	+2.2
ANMO				IAmb	IAmb	11 47 42.2	
	comp=Z,28nm,1.1s						
L60A	Shokan	45.49	6	P	P	11 47 35.0	+0.6
	baz=188						
BINY	Binghamton	45.54	4	P	P	11 47 34.7	0.0
	baz=186						
BINY	Binghamton	45.54	4	P	P	11 47 35.7	+0.9
BINY				IAmb	IAmb	11 47 53.2	
	comp=Z,41nm,0.9s						
L61A	Hillsdale 1, H	45.77	7	P	P	11 47 36.7	+0.2
	baz=189						
L64A	Middleborough	45.91	10	P	P	11 47 38.1	+0.6
	baz=193						
TUC	Tucson	45.92	323	P	P	11 47 39.3	+1.3
TUC				pP	pP	11 47 57.4	+2.2
TUC				sP	sP	11 48 07.1	+4.1
K56A	Middlesex	45.96	3	P	P	11 47 38.0	0.0
	baz=184						
L42A	Oliver, Polo	46.02	350	P	P	11 47 37.1	-1.4
L42A				IAmb	IAmb	11 47 38.2	
	comp=Z,39nm,1.1s						
L42A				pP	pP	11 47 57.8	+2.1
K57A	Scipio Center	46.04	4	P	P	11 47 38.6	0.0
	baz=185						
K58A	Earlville	46.13	5	P	P	11 47 39.3	0.0
	baz=186						
K61A	Williamstown	46.28	7	P	P	11 47 40.9	+0.4
	baz=189						
N35A	Tabor	46.29	344	IAmb	IAmb	11 48 11.3	
	comp=Z,20nm,0.7s						
L40A	Anamosa	46.37	349	IAmb	IAmb	11 47 41.9	
	comp=Z,35nm,1.1s						
K62A	Royalston	46.41	8	P	P	11 47 42.7	+1.2
	baz=191						
K63A	Dunstable	46.53	9	P	P	11 47 43.2	+0.7
	baz=192						
J60A	Lant Hill Farm	46.82	7	P	P	11 47 45.6	+0.9
	baz=189						
214A	Organ Pipe Nat	46.92	321	pP	pP	11 48 06.2	+3.2
J59A	Piesco	46.93	6	P	P	11 47 45.7	+0.1
	baz=187						
ACCN	Adirondack Com	46.93	6	P	P	11 47 45.4	-0.3
JFWS	Jewell Farm	47.01	350	P	P	11 47 45.4	-0.9
	baz=166						
JFWS	Jewell Farm	47.01	350	P	P	11 47 45.2	-1.0
JFWS				IAmb	IAmb	11 47 46.1	
	comp=Z,20nm,0.8s						
JFWS				pP	pP	11 48 05.5	+2.0
J62A	Henniker	47.02	8	P	P	11 47 47.3	+1.0
	baz=191						
J61A	Chester	47.03	8	P	P	11 47 47.4	+1.1
	baz=190						
X18A	Snowflake	47.03	326	P	P	11 47 48.6	+1.9
KSCO	Kaye Shedlock’	47.04	336	pP	pP	11 48 04.4	+0.4
SDCO	Great Sand Dun	47.24	332	P	P	11 47 49.8	+1.3
	baz=144,SNR=18						
SDCO	Great Sand Dun	47.24	332	P	P	11 47 49.5	+1.0
K38A	Parkersburg	47.25	347	IAmb	IAmb	11 47 48.7	
	comp=Z,30nm,1.1s						
I59A	Olmsteadville	47.32	6	P	P	11 47 48.9	+0.3
	baz=188						
I60A	Shoreham	47.43	7	P	P	11 47 50.0	+0.6
	baz=189						
I61A	Oroboro, Fairl	47.65	8	P	P	11 47 52.2	+1.0
	baz=190						
X16A	Lo Mia Camp, P	47.80	325	P	P	11 47 54.6	+1.9
X16A				pP	pP	11 48 13.2	+3.2
S22A	4UR Ranch, Cre	47.87	331	P	P	11 47 55.0	+1.7
VT1	Waterbury	47.98	7	P	P	11 47 55.1	+1.4
VT1				pP	pP	11 48 12.0	+1.0
VT1				IAmb	IAmb	11 48 12.5	
	comp=Z,46nm,1.3s						
MVCO	Mesa Verde	48.27	329	P	P	11 47 57.3	+0.9
	baz=140						
G57A	Newington	48.51	5	P	P	11 47 57.4	-0.3
	baz=187						
WUAZ	Wupatki	48.55	326	P	P	11 48 01.3	+2.8
	baz=136,SNR=18						
WUAZ	Wupatki	48.55	326	P	P	11 48 00.7	+2.2
WUAZ				IAmb	IAmb	11 48 07.2	
	comp=Z,37nm,1.1s						
G60A	Masonville	48.78	7	P	P	11 48 00.6	+0.7
	baz=190						
K31A	O'Neill	48.83	342	P	P	11 48 01.0	+0.7
ISCO	Idaho Springs	48.97	334		pP	11 48 19.9	+0.7
PV01	Paradox Valley	49.02	330	P	P	11 48 02.5	+0.3
PV01				IAmb	IAmb	11 48 09.8	
	comp=Z,17nm,1.1s						
G61A	St-Isidore-de-	49.07	8	P	P	11 48 03.0	+0.9
	baz=191						
SMCO	Snowmass	49.08	332	P	P	11 48 00.9	-1.9
SMCO				IAmb	IAmb	11 48 29.6	
	comp=Z,26nm,1.4s						
G62A	West of Eustis	49.16	9	P	P	11 48 03.9	+1.1
	baz=192						
PV13	Radium Mtn., P	49.17	330	P	P	11 48 04.5	+1.2
G63A	Kingsbury	49.20	10	P	P	11 48 04.1	+1.0
	baz=194						
ECSD	EROS Data Cent	49.22	344	P	P	11 48 02.9	-0.4
	baz=158,SNR=11						
ECSD	EROS Data Cent	49.22	344	P	P	11 48 02.9	-0.4
ECSD				IAmb	IAmb	11 48 22.0	
	comp=Z,24nm,1.1s						
PV05	Paradox Valley	49.24	330	IAmb	IAmb	11 48 26.5	
	comp=Z,20nm,0.9s						
PV03	Paradox Valley	49.25	330	IAmb	IAmb	11 48 11.1	
	comp=Z,20nm,1.0s						
PV18	Skein Mesa, Pa	49.28	330	IAmb	IAmb	11 48 11.3	
	comp=Z,22nm,0.9s						
PV12	Saucer Basin,	49.28	330	IAmb	IAmb	11 48 30.9	
	comp=Z,32nm,1.0s						
PV07	Paradox Valley	49.30	330	IAmb	IAmb	11 48 31.0	
	comp=Z,18nm,0.9s						
PV17	East Wray Mesa	49.33	330	IAmb	IAmb	11 48 12.2	
	comp=Z,24nm,1.1s						
PV16	Nyswonger Mesa	49.33	330	IAmb	IAmb	11 48 12.4	
	comp=Z,34nm,1.3s						
PV04	Paradox Valley	49.39	330	IAmb	IAmb	11 48 12.3	
	comp=Z,27nm,1.3s						
PV14	Lion Creek, Pa	49.43	330	IAmb	IAmb	11 48 30.7	
	comp=Z,17nm,1.0s						
SPMN	Marine on St.	49.72	348	P	P	11 48 06.1	-0.9
	baz=163						
SPMN	Marine on St.	49.72	348	IAmb	IAmb	11 48 14.2	
	comp=Z,14nm,0.9s						
F61A	St Evariste	49.83	8	P	P	11 48 08.5	+0.7
	baz=192						
IRM	Iron Mountain	49.85	321	P	P	11 48 09.4	+1.2
	baz=131,SNR=5.5						
E56A	St. Veronique	49.94	5	P	P	11 48 08.2	-0.4
	baz=186						
F64A	Sherman	50.15	11		pP	11 48 29.1	+1.4
PFO	Pinyon Flats O	50.33	320	pP	pP	11 48 30.7	+1.3
O20A	White River Ci	50.43	332	P	P	11 48 13.3	+0.5
	baz=142						
O20A	White River Ci	50.43	332	pP	pP	11 48 34.1	+3.9
KNB	Kanab	50.44	326	P	P	11 48 13.4	+0.5
F36A	Milaca	50.48	348	P	P	11 48 11.8	-1.0
SUSD	Miller	50.54	343	P	P	11 48 13.4	+0.1
E63A	Oxbow	50.68	10	P	P	11 48 14.1	-0.1
	baz=195						
D58A	Chemin du LacG	50.69	6	P	P	11 48 14.3	0.0
	baz=189						
D60A	Saint Jean D’O	50.76	8	P	P	11 48 15.3	+0.5
	baz=192						
LATQ	La Tuque	50.98	6	P	P	11 48 16.7	+0.2
	baz=189						
LATQ	La Tuque	50.98	6	P	P	11 48 16.4	-0.1
LATQ				IAmb	IAmb	11 48 35.4	
	comp=Z,15nm,0.9s						
F33A	5 Mile Ranch,	51.10	345	P	P	11 48 17.1	-0.3
F33A				IAmb	IAmb	11 48 25.3	
	comp=Z,21nm,1.1s						
P17A	Butcher Ranch,	51.13	330	P	P	11 48 19.2	+1.2
D61A	St Aubert, Com	51.14	9	P	P	11 48 17.8	+0.1
	baz=192						
MVU	Marysvale	51.18	328	P	P	11 48 19.9	+1.4
D62A	Allapoint, All	51.21	10	P	P	11 48 18.8	+0.6
	baz=194						
D62A	Allapoint, All	51.21	10	P	P	11 48 17.9	-0.3
SHPR	Sheep Range	51.43	324	P	P	11 48 23.7	+3.4
GSC	Goldstone, Bar	51.63	321	P	P	11 48 22.6	+0.8
	baz=130						
GSC	Goldstone, Bar	51.63	321	P	P	11 48 23.3	+1.6
GSC				IAmb	IAmb	11 48 50.6	
	comp=Z,15nm,1.1s						
SHOC	Shoshone, Teco	51.69	322	P	P	11 48 23.3	+1.2
	baz=131,SNR=6.1						
RSSD	Black Hills	51.96	338	P	P	11 48 24.7	+0.5
MPU	Maple Canyon	52.00	329	P	P	11 48 24.6	0.0
PSUT	Pine Spring	52.09	326	P	P	11 48 26.3	+1.0
EYMN	Ely	52.10	350	P	P	11 48 24.9	0.0
	baz=165						
LRMC	Laurel Mtn Rad	52.29	321	P	P	11 48 28.1	+1.3
	baz=130						
JLU	Jordanelle	52.34	330	P	P	11 48 26.3	-0.8
FURC	Furnace Creek,	52.42	323	P	P	11 48 29.6	+2.2
	baz=131,SNR=5.1						
MPMC	Manual Prospec	52.54	322	P	P	11 48 30.2	+1.6
	baz=130						
DUG	Dugway, Tooele	52.74	329	P	P	11 48 31.9	+2.0
	baz=137,SNR=7.7						
DUG	Dugway, Tooele	52.74	329	P	P	11 48 31.7	+1.8
ISA	Isabella, Lake	52.91	321	P	P	11 48 31.2	+0.1
R11A	Troy Canyon, C	52.94	325	P	P	11 48 33.7	+2.2
	baz=133,SNR=6.3						
R11A	Troy Canyon, C	52.94	325	P	P	11 48 32.6	+1.2
E28A	Huff	52.99	342	P	P	11 48 32.2	+0.7
BW06	Boulder Array	53.12	333	P	P	11 48 35.1	+2.4
	baz=142,SNR=6.8						
BW06	Boulder Array	53.12	333	P	P	11 48 33.0	+0.2
PDAR	Pinedale Array	53.12	333	P	P	11 48 33.5	+0.7
	comp=Z,2.5nm,1.0s,baz=130,slow=8.9,SNR=8.1						
PDAR				pP	pP	11 48 50.4	+0.1
	comp=Z,6.8nm,0.8s,baz=134,slow=8.8,SNR=14						
PDAR				LR	LR	12 11 25.4	
	comp=Z,113nm,21.1s,baz=139,slow=36						
CWC	Cottonwood Cre	53.15	322	P	P	11 48 35.1	+2.0
	baz=130						
HWUT	Hardware Ranch	53.16	331	IAmb	IAmb	11 48 55.5	
	comp=Z,23nm,0.9s						
AGMN	Agassiz Nation	53.30	347	P	P	11 48 34.5	+0.8
	baz=160						
AHID	Auburn Hatcher	53.83	332	P	P	11 48 40.8	+2.9
AHID				pP	pP	11 48 56.3	+0.7
AHID				sP	sP	11 49 03.4	+0.1
MDND	Maddock	53.83	344	P	P	11 48 38.6	+1.0
REDW	Red Top Meadow	54.17	333	P	P	11 48 42.2	+1.8
REDW				IAmb	IAmb	11 49 02.4	
	comp=Z,22nm,1.1s						
OMMB	Old Mammoth Mi	54.47	322		pP	11 48 58.1	-2.3
OMMB				IAmb	IAmb	11 49 05.5	
	comp=Z,17nm,1.1s						
NV11	Mina Array Sit	54.49	324	IAmb	IAmb	11 49 07.7	
	comp=Z,15nm,1.1s						
MDPB	Devils Postpil	54.53	322	P	P	11 48 45.2	+2.0
NVAR	Mina Array Bea	54.57	323	P	P	11 48 45.0	+1.5
	comp=Z,4.6nm,0.7s,baz=134,slow=7.0,SNR=13						
NVAR				pP	pP	11 49 02.0	+0.9
	comp=Z,3.5nm,0.6s,baz=138,slow=7.2,SNR=7.0						
NVAR				LR	LR	12 11 25.6	
	comp=Z,130nm,19.5s,baz=118,slow=35						
LHV	Little Huntoon	54.58	323	P	P	11 48 45.4	+2.2
LHV				IAmb	IAmb	11 49 08.4	
	comp=Z,22nm,1.2s						
IMW	Indian Meadow	54.63	333		P	11 48 46.1	+2.2
RLMT	Red Lodge	54.87	335	P	P	11 48 47.3	+1.8
RLMT				IAmb	IAmb	11 48 56.3	
	comp=Z,17nm,0.8s						
LKWY	Lake	54.91	334	P	P	11 48 45.8	-0.1
LAO	LASA Array	54.95	338	P	P	11 48 47.0	+1.1
LAO				IAmb	IAmb	11 50 43.4	
	comp=Z,23nm,1.4s						
ULM	Lac du Bonnet	55.14	348	P	P	11 48 46.9	-0.2
	comp=Z,11nm,0.8s,baz=153,slow=9.0,SNR=15						
ULM	Lac du Bonnet	55.14	348	P	P	11 48 47.0	-0.1
ULM				IAmb	IAmb	11 49 10.1	
	comp=Z,28nm,1.1s						
YHL	Hebgen Lake	55.48	334	P	P	11 48 52.9	+2.9
DRLN	Deer Lake	55.99	18	pP	pP	11 49 09.4	-1.5
HLID	Hailey	56.02	330	P	P	11 48 56.6	+2.9
	baz=137,SNR=7.6						
HLID	Hailey	56.02	330	P	P	11 48 56.0	+2.2
BCYI	Bear Canyon	56.09	332	P	P	11 48 57.4	+3.1
MFID	Camas Ranch	56.62	329	P	P	11 49 00.7	+2.8
ORV	Oroville	57.21	323	P	P	11 49 03.6	+1.6
ORV				IAmb	IAmb	11 49 28.7	
	comp=Z,29nm,1.2s						
HRY	Holter Researc	57.22	335	P	P	11 49 03.5	+1.4
EGMT	Eagleton	57.41	337	P	P	11 49 05.0	+1.6
	baz=144						
EGMT	Eagleton	57.41	337	P	P	11 49 04.9	+1.5
EGMT				IAmb	IAmb	11 49 37.5	
	comp=Z,22nm,1.2s						
WVOR	Wild Horse Val	57.42	327	P	P	11 49 07.1	+3.5
WVOR				IAmb	IAmb	11 49 27.8	
	comp=Z,26nm,1.1s						
MSO	Missoula	58.23	333	P	P	11 49 10.6	+1.4
	baz=139,SNR=6.8						
MSO	Missoula	58.23	333	P	P	11 49 11.0	+1.8
MSO				IAmb	IAmb	11 49 31.9	
	comp=Z,15nm,1.1s						
F10A	Beach Ranch, E	59.15	331	P	P	11 49 19.3	+3.7
F10A				IAmb	IAmb	11 49 47.7	
	comp=Z,16nm,1.1s						
PINE	Pine Mountain	59.58	327	P	P	11 49 22.7	+3.9
PINE				IAmb	IAmb	11 49 43.7	
	comp=Z,20nm,0.8s						
WALA	Waterton Lakes	59.92	335	P	P	11 49 23.1	+2.2
WALA				IAmb	IAmb	11 49 45.5	
	comp=Z,19nm,1.0s						
E09A	Wood Farm, Sta	59.98	331	P	P	11 49 24.9	+3.8
E09A				IAmb	IAmb	11 49 44.7	
	comp=Z,18nm,1.1s						
FFC	Flin Flon	60.70	346	P	P	11 49 28.0	+2.1
FFC				IAmb	IAmb	11 49 45.1	
	comp=Z,20nm,1.5s						
NEW	Newport	60.74	333	P	P	11 49 27.7	+1.3
	comp=Z,5.7nm,1.1s,baz=152,slow=8.6,SNR=6.5						
NEW	Newport	60.74	333	P	P	11 49 28.5	+2.1
	baz=136						
I03D	Drain, OR	60.87	325	P	P	11 49 29.1	+1.9
	baz=128						
FCC	Fort Churchill	62.97	352	P	P	11 49 40.9	-0.1
PPT2	Papeete2	69.41	253	*e*S	S	11 59 24.4	-1.3
	comp=Z,64nm,24.2s						
PPT2	Papeete2	69.41	253	*e*LR	LR	12 11 39.5	
	comp=Z,465nm,28.2s,baz=72						
TBI	Tubuai	69.71	246	*e*LR	LR	12 11 45.4	
	comp=Z,252nm,28.5s						
YKA	Yellowknife Ar	70.75	344	P	P	11 50 30.5	+0.1
	comp=Z,2.4nm,0.9s,baz=138,slow=6.6,SNR=16						
YKA				pP	pP	11 50 47.4	-1.3
	comp=Z,5.1nm,1.0s,baz=137,slow=6.1,SNR=7.8						
YKA				LR	LR	12 24 37.2	
	comp=Z,78nm,18.4s,baz=0.0,slow=38						
LIC	Lamto	75.57	83	*e*P	P	11 51 00.0	+0.1
	comp=Z,128nm,1.1s						
TIC	Toumodi	75.61	82	*e*P	P	11 51 00.3	+0.2
DBIC	Dimbokro	75.78	82	P	P	11 51 01.6	+0.6
	comp=Z,35nm,0.8s,baz=240,slow=5.3,SNR=68						
DBIC				LR	LR	12 23 05.6	
	comp=Z,106nm,20.2s,baz=250,slow=35						
DBIC	Dimbokro	75.78	82	P	P	11 51 00.6	-0.5
KIC	Kosan Boka	75.86	83	*e*P	P	11 51 02.0	+0.4
	comp=Z,169nm,0.9s						
KOWA	Kowa	77.42	74	P	P	11 51 10.6	+0.3
ICESG	Greenland Ices	77.43	14	*i* P	P	11 51 10.0	+0.3
ICESG				*i*		11 51 26.2	
BELA	Belgrano 2	78.14	171	P	P	11 51 13.9	+0.9
RES	Resolute Bay	78.48	356	P	P	11 51 15.5	+0.6
RAR	Rarotonga	79.15	249	LR	LR	12 16 57.9	
	comp=Z,175nm,21.4s,baz=96,slow=28						
SUMG	Summit	80.30	12	P	P	11 51 25.6	+0.2
SUMG				IAmb	IAmb	11 51 45.9	
	comp=Z,22nm,1.0s						
SUMG	Summit	80.30	12	*i* P	P	11 51 25.9	+0.5
	comp=Z,18nm,0.9s						
SUMG				*i*		11 51 42.5	
SUMG	Summit	80.30	12	*i* P	P	11 51 25.9	+0.5
SUMG				IAmb	IAmb	11 51 27.1	
	comp=Z,18nm,0.9s						
SUMG				*i*		11 51 42.6	
EPYK	Eagle Plains	80.36	340	P	P	11 51 26.7	+1.3
	baz=122						
INK	Inuvik	80.42	342	P	P	11 51 25.8	+0.2
VNA3	Neumayer Olymp	80.56	162	P	P	11 51 27.5	+1.0
VNA1	Neumayer--Stat	80.83	161	P	P	11 51 29.1	+1.3
EGAK	Eagle	81.16	338	P	P	11 51 30.3	+0.7
K27K	Chicken	81.17	337	P	P	11 51 30.9	+1.2
	baz=117						
VNA2	Neumayer--Watz	81.19	161	P	P	11 51 30.5	+0.8
	baz=297,slow=5.6						
L26K	Log Cabin Wild	81.23	336	P	P	11 51 31.3	+1.2
	baz=115						
ESDC	Sonseca Array	81.55	49	P	P	11 51 32.4	+0.1
	comp=Z,1.9nm,0.8s,baz=273,slow=5.4,SNR=5.4						
SCRK	Sand Creek	81.90	336	P	P	11 51 33.8	+0.1
	baz=115						
PAX	Paxson	82.09	335	P	P	11 51 34.3	-0.4
SNAA	Sanae	82.79	162	P	P	11 51 38.9	+0.7
SNAA	Sanae	82.79	162	P	P	11 51 38.6	+0.4
SNAA				IAmb	IAmb	11 51 39.9	
	comp=Z,36nm,0.9s						
TOA0	Torodi Ar. Sit	82.80	76	P	P	11 51 38.9	-0.4
TOA0				IAmb	IAmb	11 51 40.4	
	comp=Z,39nm,1.4s						
TORD	Torodi Ar. Bea	82.80	76	P	P	11 51 39.2	0.0
	comp=Z,9.3nm,0.6s,baz=281,slow=5.8,SNR=42						
TORD				LR	LR	12 29 25.1	
	comp=Z,94nm,18.4s,baz=310,slow=36						
HDA	Harding Lake	83.26	336	P	P	11 51 40.9	+0.3
	baz=112						
HDA	Harding Lake	83.26	336	P	P	11 51 40.9	+0.3
ILAR	Eielson Array	83.37	337	P	P	11 51 41.5	+0.2
	comp=Z,4.3nm,1.0s,baz=147,slow=3.5,SNR=12						
ILAR				LR	LR	12 30 03.2	
	comp=Z,85nm,21.3s,baz=118,slow=36						
EUNU	Eureka	83.43	359	P	P	11 51 42.5	+1.1
EUNU				IAmb	IAmb	11 52 08.9	
	comp=Z,40nm,1.7s						
MDM	Murphy Dome	83.98	337	P	P	11 51 44.9	+0.5
NEA2	Nenana	84.18	336	P	P	11 51 45.8	+0.5
	baz=110						
I23K	Minto, Yukon-K	84.49	337	P	P	11 51 47.6	+0.8
	baz=110						
BPAW	Bear Paw Mtn.	84.80	335	P	P	11 51 50.9	+2.4
MLY	Manley	85.00	336	P	P	11 51 50.3	+0.7
	baz=109						
COLD	Coldfoot	85.53	338	P	P	11 51 53.5	+1.5
	baz=110						
COLD	Coldfoot	85.53	338	P	P	11 51 53.2	+1.2
QSPA	South Pole Qui	86.67	180	P	P	11 51 58.7	+0.8
DAG	Danmarks Havn	86.99	12	*i* P	P	11 51 59.2	+0.2
	comp=Z,5.1nm,1.1s						
DAG				*e*		11 52 18.1	
DAG	Danmarks Havn	86.99	12	*i* P	P	11 51 59.2	+0.2
DAG				IAmb	IAmb	11 52 01.2	
	comp=Z,5.1nm,1.1s						
DAG				*e*		11 52 18.2	
TAM	Tamanrasset	87.28	67	P	P	11 52 01.8	0.0
VNDA	Vanda	92.55	191	P	P	11 52 26.1	+0.9
	comp=Z,1.1nm,0.7s,baz=116,slow=3.8,SNR=7.5						
VNDA				LR	LR	12 24 55.6	
	comp=Z,78nm,21.9s,baz=131,slow=30						
VNDA	Vanda	92.55	191	P	P	11 52 25.3	+0.1
VNDA				IAmb	IAmb	11 52 28.0	
	comp=Z,18nm,1.9s						
NOA	NORSAR Array B	93.60	29	LR	LR	12 29 52.4	
	comp=Z,47nm,21.7s,baz=315,slow=32						
GERES	GERESS Array B	95.05	41	LR	LR	12 35 21.7	
	comp=Z,32nm,18.1s,baz=268,slow=35						
TSUM	Tsumeb	96.14	110	P	P	11 52 43.8	+0.8
VRAC	Vranov	96.94	41	LR	LR	12 40 35.4	
	comp=Z,19nm,18.3s,baz=282,slow=38						
SYO	Syowa Base	97.08	162⇑	*e*X	P	11 52 42.0	-3.9
MNK	Minsk	103.16	35	*i* P	Pdif	11 53 09.2	-4.2
	comp=E,3.0nm,0.8s						
MNK				*i* P	Pdif	11 53 09.2	-4.2
	comp=N,24nm,0.8s						
MNK				*i* P	Pdif	11 53 09.2	-4.2
	comp=Z,6.0nm,0.5s						
MNK				*i* pP	pPdif	11 53 28.6	-3.8
MNK				*i* PP	PP	11 57 24.0	-4.9
MNK				*i* PPP	PPP	11 59 34.9	
MNK				*i* S	SKSac	12 03 42.4	-4.7
MNK				*i* sS	SKKSac	12 04 17.5	-11
MNK				*i* SS	SS	12 12 01.5	-4.7
MNK				*i* SSS	SSS	12 15 56.5	
MNK				*i* LQ	LQ	12 33 49.5	
MNK				*i* LR	LR	12 36 40.8	
MNK				*i* LRM	MLR	12 39 49.7	
	comp=E,17nm,13.8s						
MNK				*i* LRM	MLR	12 39 53.0	
	comp=N,160nm,14.4s						
MNK				*i* LRM	MLR	12 39 56.9	
	comp=Z,45nm,8.5s						
DZM	Mont Dzumac	110.27	245	*e*LR	LR	12 30 35.1	
	comp=Z,107nm,25.1s						
KBZ	Khabaz	115.77	42	PKP	PKiKP	11 57 56.7	0.0

	comp=Z,2.1nm,0.7s,baz=193,slow=6.9,SNR=5.6						
ABKAR	Akbulak array	123.09	30	PKPdf	PKiKP	11 58 11.1	+0.2
RAYN	Ar Rayn	123.84	64	PKPdf	PKiKP	11 58 14.0	+0.8
STKA	Stephens Creek	127.09	225	PKP	PKPdf	11 58 18.5	-0.4
	comp=Z,4.8nm,1.1s,baz=248,slow=6.1,SNR=4.7						
ZAA0	Zalesovo Array	128.12	11	PKPdf	PKPdf	11 58 19.6	-0.5
ZALV	Zalesovo Beam	128.12	11	PKP	PKPdf	11 58 20.0	-0.2
	comp=Z,6.2nm,0.8s,baz=299,slow=1.5,SNR=23						
GEYT	Alibeck	128.67	42	PKP	PKPdf	11 58 21.6	-0.1
	comp=Z,6.1nm,0.7s,baz=256,slow=6.0,SNR=8.5						
CTA	Charters Tower	128.86	241	PKP	PKiKP	11 58 23.3	+0.1
	comp=Z,5.5nm,1.1s,baz=300,slow=3.0,SNR=3.2						
KURK	Kurchatov	129.56	17	PKPdf	PKiKP	11 58 23.5	-0.2
SEM	Semipalatinsk	130.31	16	ePKP	PKPdf	11 58 24.1	-0.6
	baz=16						
USRK	Ussuriysk Ar.	130.49	330	PKP	PKiKP	11 58 25.9	+0.1
	comp=Z,2.4nm,0.7s,baz=52,slow=3.3,SNR=4.9						
MJAR	Matsushiro Arr	131.74	318	PKP	PKPdf	11 58 27.4	-0.2
	comp=Z,2.2nm,0.8s,baz=98,slow=2.1,SNR=5.0						
BTLS	Baital	132.73	25	ePKP	PKPdf	11 58 29.1	-0.1
	baz=25						
MAKZ	Makanchi	134.05	17	PKPdf	PKPdf	11 58 31.1	-0.6
MK31	Makanchi Array	134.16	17		PKPdf	11 58 31.7	-0.2
MKAR	Makanchi Array	134.16	17	PKP	PKPdf	11 58 32.0	+0.2
	comp=Z,1.2nm,0.7s,baz=17,slow=3.0,SNR=14						
SGDS	Sogindy	134.26	26	ePKP	PKPdf	11 58 32.1	-0.1
	baz=26						
KUU	Kurty	134.61	24	ePKP	PKPdf	11 58 32.8	0.0
	baz=24						
AAK	Ala-Archa	134.85	27	PKPdf	PKiKP	11 58 34.7	-0.2
CHKK	Chushkaly	134.91	23	ePKP	PKPdf	11 58 33.2	-0.1
	baz=24						
ULN	Ulaanbaatar	135.28	353		PKPdf	11 58 34.6	+0.5
SONM	Songino Array	135.38	354	PKP	PKPdf	11 58 34.6	+0.3
	comp=Z,1.4nm,0.6s,baz=22,slow=1.6,SNR=4.3						
MDOK	Medeo	135.51	24	ePKiKP	PKPdf	11 58 35.4	+0.7
	baz=24						
TNSS	Tian-Shan	135.57	24	ePKiKP	PKPdf	11 58 36.0	+0.9
	baz=24						
KPKS	Kokpek	135.89	22	ePKiKP	PKPdf	11 58 36.0	+0.7
	baz=22						
SATY	Saty	136.13	23	ePKP	PKPdf	11 58 35.7	-0.1
	baz=23						
ASAR	Alice Springs	137.32	229	PKhKP	PKPpre	11 58 29.1	
	comp=Z,0.8nm,0.8s,baz=127,slow=3.7,SNR=7.9						
ASAR				PKP	PKPdf	11 58 38.7	+0.2
	comp=Z,4.3nm,1.0s,baz=117,slow=1.9,SNR=19						
KSRS	Korea Array	137.47	326	PKP	PKPdf	11 58 38.9	+0.7
	comp=Z,3.7nm,0.8s,baz=38,slow=1.3,SNR=8.7						
KSH	Kashi	138.01	28	PKP	PKPdf	11 58 38.0	-1.4
KSH				PP	PP	12 01 28.6	+1.6
WMQ	Urumqi	138.33	13	ePKP	PKPdf	11 58 40.5	+0.8
WRA	Warramunga Arr	138.98	234	PKhKP	PKPpre	11 58 33.8	
	comp=Z,0.4nm,0.5s,baz=115,slow=3.1,SNR=6.9						
WRA				PKP	PKPdf	11 58 41.6	0.0
	comp=Z,3.3nm,0.8s,baz=116,slow=1.4,SNR=17						
HHC	Hu-ho-hao-te	141.27	346	ePKP	PKPdf	11 58 43.3	-1.9
GTA	Gaotai	144.16	0	ePKP	PKPbc	11 58 49.1	+0.5
GTA				pPKP	pPKPdf	11 59 07.4	-2.8
GTA				sPKP		11 59 17.3	
GTA				LR	LR		
	comp=Z,130nm,18.9s						
GTA				LR	LR		
	comp=Z,140nm,17.8s						
NJ2	Nanjing	146.39	330	ePKPbc	PKPdf	11 58 54.1	-0.2
FITZ	Fitzroy Crossi	146.83	229	PKPbc	PKPbc	11 58 57.4	+0.1
	comp=Z,15nm,1.0s,baz=124,slow=2.6,SNR=12						
FITZ	Fitzroy Crossi	146.83	229	PKPdf	PKPdf	11 58 56.3	+0.9
LZH	Lanzhou	147.27	354	⇓PKPbc	PKPbc	11 58 59.0	+0.8
LZH				pPKP	pPKPab	11 59 20.3	+1.0
SIJI	Sorong	148.36	263	PKPbc	PKPbc	11 59 01.8	+0.2
	comp=Z,9.1nm,0.6s,baz=60,slow=7.3,SNR=5.4						
XAN	Xi'an	148.38	346	PKPbc	PKPbc	11 59 01.0	-0.1
XAN				pPKP	pPKPdf	11 59 12.5	-4.9
PSA00	Pilbara Seismi	148.41	217		PKPbc	11 59 01.5	0.0
DANN	Dangsing	150.82	30	eP	PKPdf	11 59 03.0	+1.0
	comp=Z,127nm,0.8s						
ENH	Enshi	151.78	342	PKPdf	PKPdf	11 59 01.9	-1.1
ENH					PKPbc	11 59 09.1	-0.4
ENH				PKPab	PKPab	11 59 17.3	-1.1
KKN	Kakani	152.02	28	eP	PKPdf	11 59 04.4	+0.7
	comp=Z,45nm,0.6s						
DMN	Daman	152.09	29	eP	PKPdf	11 59 04.0	+0.1
	comp=Z,23nm,0.6s						
GUN	Gumba	152.20	27	eP	PKPdf	11 59 04.4	+0.2
	comp=Z,39nm,0.8s						
PKIN	Phulchoki	152.26	29	eP	PKPdf	11 59 04.3	+0.1
	comp=Z,41nm,0.8s						
PKI	Pulchoki	152.27	29	eP	PKPdf	11 59 04.4	+0.2
	comp=Z,44nm,0.9s						
CD2	Chengdu	152.40	353	PKPbc	PKPdf	11 59 02.4	-1.6
SOEI	Soe	152.42	241	PKPdf	PKPdf	11 59 02.7	-1.8
SOEI				PKPab	PKPab	11 59 20.8	-1.0
LSA	Lhasa	152.56	17	PKPdf	PKPdf	11 59 02.5	-2.4
LSA					PKiKP	11 59 12.7	+0.7
LSA				PKPab	PKPab	11 59 21.4	-0.8
RAMN	Ramite	153.35	27	eP	PKPdf	11 59 06.0	+0.3
	comp=Z,50nm,0.7s						
TAPN	Taplejung	153.49	25	eP	PKPdf	11 59 06.4	+0.4
	comp=Z,12nm,0.6s						
HYB	Hyderabad	154.86	55	i PKP	PKPdf	11 59 08.0	+0.2
CMAR	Chiang Mai Arr	165.01	3	PKP	PKPdf	11 59 19.8	+0.7
	comp=Z,3.0nm,0.9s,baz=299,slow=1.8,SNR=20						
CMAR				PKPab	PKPab	12 00 15.0	-0.6
	comp=Z,1.5nm,0.8s,baz=343,slow=5.1,SNR=5.7						

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*SNET **16** 11:49:53.4±1.2, 14°.00N×91°.08W, h33^{km}±51^{km}, ML3.8*
*UCR **16** 11:49:54.0±1.2, 14°.01N×90°.92W, h97^{km}±29^{km}, ML3.7*
*GCG **16** 11:49:57.6±0.3, 14°.09N×90°.82W, h83^{km}±8^{km}, MD3.6*
ISC 16 11:49:54.3±3.3, **14°.00N**±0°.09×**90°.9W**±0°.1, **h112**^{km}±17^{km}, **n30**, σ**0^s.63**/41, **4D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.45	4	eP	Pn	11 50 11.2	-0.1
PCG	Pacaya	0.47	33	eP	Pn	11 50 11.6	0.0
NBG	Las Nubes	0.78	41	eP	Pn	11 50 14.4	+0.5
RTR	El Retiro	1.20	95	eP	Pn	11 50 17.6	-0.3
RTR	El Retiro	1.20	95	eP	Pn	11 50 17.6	-0.3
CEVE	Cerro Verde	1.23	98	eP	Pn	11 50 18.1	-0.3
CEVE				eS	Sn	11 50 37.2	+0.6
CEVE				IAML		11 50 45.2	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	1.23	98	eP	Pn	11 50 18.1	-0.3
CEVE				eS	Sn	11 50 37.2	+0.6
CEVE				IAML		11 50 45.2	
	comp=Z,2μm,0.4s						
SBLS	San Blas	1.23	97	eP	Pn	11 50 18.0	-0.3
SBLS				eS	Sn	11 50 37.0	+0.5
SBLS	San Blas	1.23	97	eP	Pn	11 50 18.0	-0.3
SBLS				eS	Sn	11 50 37.0	+0.5
SNJE	San Jose	1.24	96	eP	Pn	11 50 17.8	-0.7
SNJE				eS	Sn	11 50 37.9	+1.2
SNJE	San Jose	1.24	96	eP	Pn	11 50 17.8	-0.7
SNJE				eS	Sn	11 50 37.9	+1.2
UNIC	Universidad Ca	1.29	91	eP	Pn	11 50 18.1	-0.7
UNIC	Universidad Ca	1.29	91	eP	Pn	11 50 18.1	-0.7
JAYA	Jayaque - finc	1.43	104	eP	Pn	11 50 20.2	-0.3
JAYA				IAML		11 50 20.6	
	comp=Z,1μm,0.2s						
JAYA				eS	Sn	11 50 39.5	-1.0
JAYA	Jayaque - finc	1.43	104	eP	Pn	11 50 20.2	-0.3
JAYA				IAML		11 50 20.6	
	comp=Z,1μm,0.2s						
JAYA				eS	Sn	11 50 39.5	-1.0
TACO	Tacachico	1.48	91	⇓eP	Pn	11 50 20.4	-0.6
TACO				IAML		11 50 20.9	
	comp=Z,400nm,0.3s						
TACO	Tacachico	1.48	91	⇓eP	Pn	11 50 20.4	-0.6
TACO				IAML		11 50 20.9	
	comp=Z,400nm,0.3s						
PMON	Piamonte	1.54	100	eP	Pn	11 50 21.6	-0.3
PMON	Piamonte	1.54	100	eP	Pn	11 50 21.6	-0.3
BOQS	Boqueron	1.57	99	eP	Pn	11 50 22.1	-0.3
BOQS	Boqueron	1.57	99	eP	Pn	11 50 22.1	-0.3
MRL	Marmol	1.58	47	eP	Pn	11 50 22.4	-0.1
MRL				eS	Sn	11 50 43.0	-0.8
MRL	Marmol	1.58	47	eP	Pn	11 50 22.4	-0.1
MRL				eS	Sn	11 50 43.0	-0.8
MRL	Marmol	1.58	47	eP	Pn	11 50 23.7	+1.2
MRL				eS	Sn	11 50 44.1	+0.3
ESQI	Esquipulas	1.59	69	eP	Pn	11 50 22.1	-0.3
PAVA	Las Pavas	1.90	98	eP	Pn	11 50 26.2	-0.1
PAVA	Las Pavas	1.90	98	eP	Pn	11 50 26.2	-0.1
TECA	Tecapa	2.36	102	⇓eP	Pn	11 50 33.0	+0.8
TECA	Tecapa	2.36	102	⇓eP	Pn	11 50 33.0	+0.8
PETF	Flores	3.06	18	eP	Pn	11 50 41.0	-0.3

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*IDC **16** 11:56:33.2±1.9, 6°.99S×129°.40E, h180^{km}±21^{km}, mb3.3/3, mb1 3.7/8, mb1mx3.3/41, mbtmp4.2/8, Error ellipse: s-maj=29.4km s-min=16.5km az=83.0*
ISC 16 11:56:30.5±0.8, **7°.10S**±0°.06×**129°.44E**±0°.10, **h139**^{km}, **n8**, σ**2^s.56**/13, **mb3.7**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.45	16	P	Pn	11 58 05.0	+1.8
	1.3nm,0.3s,baz=251,slow=22,SNR=27						
SIJI				S	Sn	11 59 14.1	-1.5
	2.7nm,0.3s,baz=236,slow=22,SNR=13						
BATI	Baumata	6.50	241	P	Pn	11 58 07.6	+3.8
	11nm,0.3s,baz=259,slow=1.7,SNR=18						
BATI				S	Sn	11 59 14.2	-2.5
	4.2nm,0.3s,baz=275,slow=23,SNR=2.6						
FITZ	Fitzroy Crossi	11.55	198	P	Pn	11 59 13.2	+1.9
	0.5nm,0.3s,baz=34,slow=12,SNR=6.0						
FITZ				S	Sn	12 01 15.4	-3.3
	0.4nm,0.3s,baz=209,slow=8.2,SNR=1.6						
WRA	Warramunga Arr	13.63	160	P	Pn	11 59 39.4	+1.2
	0.5nm,0.3s,baz=341,slow=12,SNR=11						
WRA				S	Sn	12 02 06.7	-2.3
	0.6nm,0.3s,baz=333,slow=21,SNR=2.6						
ASAR	Alice Springs	17.02	166	P	Pn	12 00 22.6	+2.2
	2.9nm,0.3s,baz=338,slow=9.5,SNR=229						
ASAR				S	S	12 03 30.7	+0.2
	0.2nm,0.3s,baz=312,slow=33,SNR=4.4						
STKA	Stephens Creek	27.14	157	P	P	12 02 00.8	+0.1
	1.9nm,0.7s,baz=335,slow=5.0,SNR=3.1						
MKAR	Makanchi Array	68.00	327	P	P	12 07 12.3	-2.4
	0.5nm,0.4s,baz=115,slow=8.9,SNR=14						
KURBB	Kurchatov Arra	72.30	329	P	P	12 07 38.0	-2.8
	0.1nm,0.4s,baz=131,slow=5.1,SNR=2.5						

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*NEIC **16** 12:04:29.3±1.4, 18°.26S±0°.10×177°.9W±0°.1, h576^{km}±13^{km}, mb4.4/17, Error ellipse: s-maj=20.4km s-min=8.2km az=127.0*
*IDC **16** 12:04:30.9±1.6, 18°.40S×177°.85W, h594^{km}±18^{km}, mb3.4/7, mb1 3.5/9, mb1mx3.1/38, mbtmp4.3/9, Error ellipse: s-maj=25.8km s-min=20.7km az=5.0*
ISC 16 12:04:30.2±0.8, **18°.2S**±0°.1×**177°.77W**±0°.09, **h600**^{km}, **n31**, σ**1^s.12**/32, **mb4.3**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.01	276	P	P	12 05 55.3	-0.6
	2.4nm,0.3s,baz=97,slow=4.2,SNR=20						
MSVF	Nonsavu	4.01	276	P	P	12 05 56.0	+0.1
AFI	Afiamalu	7.16	54	P	P	12 06 20.2	-1.7
NIUE	Niue	7.48	98	P	P	12 06 23.1	-1.7
SANVU	Saraoutou	14.65	278	P	P	12 07 35.1	-0.2
DZM	Mont Dzumac	15.32	253	P	P	12 07 41.4	-0.1
	0.8nm,0.3s,baz=127,slow=16,SNR=14						
DZM	Mont Dzumac	15.32	253	P	P	12 07 38.8	-2.7
URZ	Urewera	20.49	192	P	P	12 08 26.8	-1.4
	4.2nm,0.4s,baz=256,slow=1.4,SNR=10						
URZ	Urewera	20.49	192	P	P	12 08 26.7	-1.5
THZ	Tophouse	24.81	197	P	P	12 09 05.8	-0.9
KHZ	Kahutara	25.26	195	P	P	12 09 10.2	-0.3
CTA	Charters Tower	34.01	261	P	P	12 10 25.2	-0.8
	3.9nm,0.6s,baz=93,slow=9.1,SNR=10						
CTAO	Charters Tower	34.01	261	P	P	12 10 25.9	-0.2
CTAO				IAmb	IAmb	12 10 40.0	
	comp=Z,18nm,1.4s						
PMG	Port Moresby	35.11	280	P	P	12 10 36.2	+1.0
	comp=Z,11nm,0.7s,baz=60,slow=8.1,SNR=8.8						
PMG	Port Moresby	35.11	280	P	P	12 10 35.0	-0.2
PMG				IAmb	IAmb	12 10 36.7	
	comp=Z,13nm,0.9s						
COEN	Coen	37.72	271	P	P	12 10 57.3	+0.7
COEN				IAmb	IAmb	12 10 57.9	
	comp=Z,7.1nm,0.8s						
STKA	Stephens Creek	39.03	242	P	P	12 11 08.1	+1.0
	comp=Z,2.4nm,0.5s,baz=80,slow=8.2,SNR=6.9						
STKA	Stephens Creek	39.03	242	P	P	12 11 08.1	+1.0
BBOO	Buckleboo	43.81	241	P	P	12 11 45.2	+0.7
BBOO				IAmb	IAmb	12 12 01.2	
	comp=Z,22nm,1.4s						
WR0	Warramunga Arr	44.99	260	P	P	12 11 53.2	-0.6
WB0	Warramunga Arr	45.15	260	P	P	12 11 55.0	0.0
WB0				IAmb	IAmb	12 11 55.2	
	comp=Z,5.1nm,0.5s						
WB2	Warramunga Arr	45.17	260	P	P	12 11 54.8	-0.4
WB2				IAmb	IAmb	12 11 55.5	
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	45.18	260	P	P	12 11 55.0	-0.3
	comp=Z,2.7nm,0.5s,baz=96,slow=6.9,SNR=80						
AS31	Alice Springs	45.30	254	P	P	12 11 56.5	+0.3
AS31				IAmb	IAmb	12 11 57.3	
	comp=Z,3.2nm,0.5s						
ASAR	Alice Springs	45.30	254	P	P	12 11 56.1	-0.1
	comp=Z,8.6nm,0.6s,baz=88,slow=8.5,SNR=84						
ASAR				S	S	12 17 53.5	-0.8
	comp=Z,0.7nm,0.8s,baz=90,slow=16,SNR=5.7						
KDU	Kakadu	48.16	269	P	P	12 12 17.6	-0.1
	baz=55,SNR=5.1						
MTN	Manton Dam	49.40	268	P	P	12 12 25.3	-1.5
FORT	Forrest	50.44	245	P	P	12 12 34.3	+0.1
FORT				IAmb	IAmb	12 13 01.3	
	comp=Z,23nm,1.1s						
FITZ	Fitzroy Crossi	53.59	261	P	P	12 12 57.3	+0.4
QSPA	South Pole Qui	71.87	180	P	P	12 14 55.9	+2.4
QSPA				IAmb	IAmb	12 15 05.7	
	comp=Z,12nm,1.4s						
TXAR	Lajitas Array	85.63	57	P	P	12 16 08.8	+1.9
	comp=Z,0.4nm,0.8s,baz=205,slow=5.5,SNR=4.9						

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*HEL **16** 12:12:56.9±0.4, 68°.45N×33°.02E, h0^{km}, ML2.0, Explosion*
*KOLA **16** 12:12:59.9, 68°.12N×32°.90E, h0^{km}, ML2.5, Murmansk region, Monchegorsk district,Murmansk region, Olenegorsk district*
*UPP **16** 12:13:01.5±2.8, 67°.95N×32°.63E, h0^{km}, ML1.6, Suspected explosion*
ISC 16 12:12:59.4±1.8, **68°.13N**±0°.08×**32°.89E**±0°.07, **h0**^{km}, **n18**, σ**0^s.87**/28, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	Apatity Array	0.53	176	P	Pg	12 13 09.1	-0.3
APA0				S	Sg	12 13 15.9	-0.4
APA	Apatity	0.60	161	P	Pg	12 13 10.4	-0.4
APA				S	Sg	12 13 18.0	-0.5
VRF	Varrio	1.30	254	PN	Pg	12 13 23.9	-0.3
VRF				MSG		12 13 40.7	
	comp=Z,19nm,0.2s						
VRF				SG	Sg	12 13 41.5	+0.6
KU6	Riekki	2.42	210	PN	Pn	12 13 41.7	+1.6
	baz=28						
KU6				MSG		12 14 17.0	
	comp=Z,4.7nm,0.2s						
SGF	Sodankyl	2.52	257	PB	Pn	12 13 42.2	+0.8
SGF				SB	Sb	12 14 16.6	-0.1
MSF	Maaselka	2.69	216	PB	Pb	12 13 48.8	+0.5
ARA0	ARCESS Array S	3.03	301	PG	Pn	12 13 49.6	+1.2
RNF	Rovaniemi	3.07	243	PN	Pn	12 13 49.8	+0.9
RNF				SN	Sn	12 14 27.2	+0.9
PAJU	Pajala	3.91	258	PN	Pn	12 14 01.0	+0.5
PAJU				SN	Sn	12 14 47.8	+0.7
TOF	Tornio	3.93	242	PN	Pn	12 14 00.8	0.0
TOF				SN	Sn	12 14 46.4	-1.1
LANU	Lannavaara	4.09	274	P	Pn	12 14 03.3	+0.3
LANU				S	Sn	12 14 50.4	-1.1
LANU	Lannavaara	4.09	274	PN	Pn	12 14 03.0	0.0
OUL	Oulu	4.14	226	PN	Pn	12 14 04.4	+0.8
KUA	Kurravaara	4.71	274	P	Pn	12 14 11.9	+0.3
KUA				S	Sn	12 15 06.7	-0.3
RATU	Laukkuluspa	5.01	273	P	Pn	12 14 16.0	+0.2
RATU				S	Sn	12 15 11.9	-2.4
HARU	Harads	5.04	253	P	Pn	12 14 15.3	-0.8
SJUU	Sjulsmark	5.17	245	P	Pn	12 14 17.0	-0.9
NIKU	Nikkaluokta	5.21	274	P	Pn	12 14 19.1	+0.6

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*NEIC **16** 13:05:27.5±1.9, 49°.40N±0°.04×66°.79W±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=9.2km s-min=5.5km az=43.0*
*OTT **16** 13:05:28.7±0.0, 49°.43N×66°.80W, h18^{km}, MN4.3/38*
OTT 37km northeast from Cap-Chat, Qc. Felt Lower St. Lawrence Seismic Zone, Qc. Felt at Ste-Anne-des-Monts, Port-Cartier, Sept-iles, Maliotenam, Baie-Trinita, Qc.
*IDC **16** 13:05:28.4±1.1, 49°.61N×67°.36W, h0^{km}, mb3.7/7, mb1 4.0/11, mb1mx3.8/36, mbtmp3.8/11, ML3.5/4, MS3.9/2, Ms1 3.8/2, ms1mx2.8/32, Error ellipse: s-maj=25.6km s-min=10.6km az=133.0*
*ANF **16** 13:05:31.2±0.7, 49°.20N×67°.13W, h10^{km}, ML4.6/27, Error ellipse: s-maj=7.0km s-min=3.8km az=43.0*
ISC 16 13:05:27.7±0.9, **49°.45N**±0°.04×**66°.81W**±0°.03, **h19**^{km}±2^{km}, **n205**, σ**1^s.35**/274, **mb4.1**/13, **1D**, **Gaspe Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ICQ	Pointe Anglais	0.31	284	⇓PG	Pb	13 05 35.4	+0.7
ICQ				SG	Sb	13 05 40.3	+0.9
ICQ				Trac		13 05 40.4	
	comp=Z,7μm,0.1s						
ICQ	Pointe Anglais	0.31	284	Pg	Pb	13 05 35.4	+0.7
ICQ				Sg	Sb	13 05 40.3	+0.9
SMQ	Clarke City	0.78	5	PG	Pb	13 05 43.1	+0.5
SMQ				SG	Sb	13 05 54.1	+1.3
SMQ				Trac		13 05 54.2	
	comp=Z,2μm,0.1s						
SMQ	Clarke City	0.78	5	Pg	Pb	13 05 43.1	+0.5
SMQ				Sg	Sb	13 05 54.1	+1.3
CNQ	Baie Comeau	0.84	261	PG	Pg	13 05 44.0	0.0
CNQ				SG	Sg	13 05 55.2	0.0
CNQ				Trac		13 05 55.4	
	comp=Z,2μm,0.1s						
CNQ	Baie Comeau	0.84	261	Pg	Pg	13 05 44.0	0.0
CNQ				Sg	Sg	13 05 55.2	0.0
MNQ	Manicouagan	1.67	311	PN	Pn	13 05 57.3	+1.4
MNQ				SN	Sb	13 06 19.0	+0.5
MNQ				Trac		13 06 21.1	
	comp=Z,1μm,0.1s						
MNQ	Manicouagan	1.67	311	Pn	Pn	13 05 57.3	+1.4
MNQ				Sn	Sb	13 06 19.0	+0.5
BATG	Bathurst New B	2.23	167	PN	Pn	13 06 04.8	+1.3
BATG				SN	Sn	13 06 30.9	+0.3
BATG				Trac		13 06 36.4	
	comp=Z,349nm,0.1s						
BATG				LG	Lg	13 06 37.1	
BATG	Bathurst New B	2.23	167	Pn	Pn	13 06 04.9	+1.4
BATG				Sn	Sn	13 06 31.0	+0.4
D63A	Stockholm	2.56	200	P	Pn	13 06 09.9	+1.7
	baz=20,SNR=18						
D63A				S	Sn	13 06 39.1	+0.3
	baz=20						
A21	Saint Andre	2.59	229	PN	Pn	13 06 09.5	+1.0
A21				SN	Sn	13 06 39.8	+0.4
A21				LG	Lg	13 06 47.9	
A21				Trac		13 06 50.6	
	comp=Z,1μm,0.2s						
A21	Saint Andre	2.59	229	Pn	Pn	13 06 09.5	+1.0
A21				Sn	Sn	13 06 39.8	+0.4
A64	Saint Simeon	2.61	233	PN	Pn	13 06 09.6	+0.8
A64				SN	Sn	13 06 40.3	+0.3
A64				LG	Lg	13 06 49.7	
A64				Trac		13 06 55.0	
	comp=Z,489nm,0.2s						
A64	Saint Simeon	2.61	233	Pn	Pn	13 06 09.6	+0.8
A64				Sn	Sn	13 06 40.3	+0.3
A61	Sainte Mathild	2.80	232	PN	Pn	13 06 11.9	+0.5
A61				SN	Sn	13 06 44.9	+0.3
A61				LG	Lg	13 06 56.1	
A61				Trac		13 06 56.3	
	comp=Z,854nm,0.3s						
A61	Sainte Mathild	2.80	232	Pn	Pn	13 06 11.9	+0.5
A61				Sn	Sn	13 06 44.9	+0.3
D62A	Allapoint, All	2.80	213	P	Pn	13 06 13.3	+1.9
	baz=32,SNR=23						
D62A	Allapoint, All	2.80	213		Pn	13 06 13.6	+2.1
D62A	Allapoint, All	2.80	213	P		13 06 13.2	
	baz=32,SNR=180						
D62A				P		13 06 13.2	
	baz=32,SNR=180						
PQI	Presque Isle	2.89	197		Pn	13 06 14.2	+1.5
A16	Riviere Ouelle	2.91	228	PN	Pn	13 06 13.7	+0.9
A16				SN	Sn	13 06 47.1	-0.1
A16				LG	Lg	13 06 58.5	
A16				Trac		13 07 02.2	
	comp=Z,588nm,0.3s						
A16	Riviere Ouelle	2.91	228	Pn	Pn	13 06 13.7	+0.9
A16				Sn	Sn	13 06 47.1	-0.1
LMQ	La Malbaie	3.02	232	PN	Pn	13 06 15.0	+0.6
LMQ				SN	Sn	13 06 49.5	-0.4
LMQ				Trac		13 06 59.4	
	comp=Z,428nm,0.2s						
LMQ				LG	Lg	13 07 03.2	
LMQ	La Malbaie	3.02	232	Pn	Pn	13 06 15.0	+0.6
LMQ				Sn	Sn	13 06 49.6	-0.3
E64A	Bridgewater	3.11	193	P	Pn	13 06 16.9	+1.3
	baz=13,SNR=8.6						
E64A				S	Sn	13 06 51.1	-1.1
	baz=13						
A54	Misere	3.12	232	PN	Pn	13 06 16.6	+0.8
A54				SN	Sn	13 06 52.0	-0.5
A54				Trac		13 07 04.6	
	comp=Z,319nm,0.2s						
A54				LG	Lg	13 07 05.5	
A54	Misere	3.12	232	Pn	Pn	13 06 16.6	+0.8
A54				Sn	Sn	13 06 52.0	-0.5
A11	Saint Roch-des	3.16	227	PN	Pn	13 06 17.3	+1.0
A11				SN	Sn	13 06 53.9	+0.4
A11				LG	Lg	13 07 07.4	
A11				Trac		13 07 10.5	
	comp=Z,563nm,0.3s						
A11	Saint Roch-des	3.16	227	Pn	Pn	13 06 17.3	+1.0
A11				Sn	Sn	13 06 53.9	+0.4
D61A	St Aubert, Com	3.18	226	PN	Pn	13 06 17.7	+1.0
D61A				SN	Sn	13 06 54.0	-0.1
D61A				LG	Lg	13 07 08.3	
D61A	St Aubert, Com	3.18	226	P	Pn	13 06 17.8	+1.0
	baz=44,SNR=43						
D61A	St Aubert, Com	3.18	226	Pn	Pn	13 06 17.6	+1.0
D61A				Sn	Sn	13 06 54.0	-0.1
E63A	Oxbow	3.21	200	P	Pn	13 06 18.6	+1.5
	baz=19,SNR=5.8						
E63A	Oxbow	3.21	200	Pn	Pn	13 06 18.6	+1.5
E63A	Oxbow	3.21	200	P		13 06 18.5	
	baz=20,SNR=238						
E63A				P		13 06 18.5	
	baz=20,SNR=238						
E63A				S		13 06 55.1	
	baz=20						
E63A				S		13 06 55.1	
	baz=20						
DMCQ	Dolbeau-Mistas	3.48	264	PN	Pn	13 06 20.9	+0.1
DMCQ				SN	Sn	13 07 00.8	-0.7
DMCQ				LG	Lg	13 07 18.7	
DMCQ				Trac		13 07 19.1	
	comp=Z,468nm,0.2s						
DMCQ	Dolbeau-Mistas	3.48	264	Pn	Pn	13 06 20.9	+0.1
DMCQ				Sn	Sn	13 07 00.8	-0.7
SVNB	Stilesville Qu	3.53	158	PN	Pn	13 06 21.9	+0.4
SVNB				SN	Sn	13 07 01.4	-1.3
SVNB				Trac		13 07 04.3	
	comp=Z,363nm,0.1s						
SVNB	Stilesville Qu	3.53	158	Pn	Pn	13 06 21.9	+0.4
SVNB				Sn	Sn	13 07 01.4	-1.3
HANN	Hanwell	3.57	180	PN	Pn	13 06 23.0	+1.1
HANN				SN	Sn	13 07 02.4	-1.1
HANN				LG	Lg	13 07 19.7	
HANN				Trac		13 07 24.7	
	comp=Z,83nm,0.1s						
HANN	Hanwell	3.57	180	Pn	Pn	13 06 23.0	+1.1
HANN				Sn	Sn	13 07 02.4	-1.1
HKNB	Havelock Quarr	3.60	164	PN	Pn	13 06 23.1	+0.6
HKNB				SN	Sn	13 07 03.1	-1.3
HKNB				LG	Lg	13 07 22.4	
HKNB				Trac		13 07 24.7	
	comp=Z,201nm,0.2s						
HKNB	Havelock Quarr	3.60	164	Pn	Pn	13 06 23.1	+0.6
HKNB				Sn	Sn	13 07 03.1	-1.3
SRNB	Snider Mountai	3.70	167	PN	Pn	13 06 24.4	+0.6
SRNB				SN	Sn	13 07 05.5	-1.4
SRNB				Trac		13 07 10.2	
	comp=Z,93nm,0.1s						
SRNB				LG	Lg	13 07 24.7	

SRNB	Snider Mountai	3.70	167	Pn	Pn	13 06 24.4	+0.6
SRNB				Sn	Sn	13 07 05.5	-1.4
F64A	Sherman	3.73	197	P	Pn	13 06 25.2	+1.0
	baz=16						
F64A				S	Sn	13 07 06.6	-1.0
	baz=16						
F64A	Sherman	3.73	197		Pn	13 06 25.2	+1.0
F64A	Sherman	3.73	197	P		13 06 25.4	
	baz=16,SNR=48						
F64A				P		13 06 25.4	
	baz=16,SNR=48						
D60A	Saint Jean D’O	3.74	229	PN	Pn	13 06 25.1	+0.7
D60A				SN	Sn	13 07 07.3	-0.5
D60A				LG	Lg	13 07 24.0	
D60A				Trac		13 07 27.8	
	comp=Z,354nm,0.3s						
D60A	Saint Jean D’O	3.74	229	P	Pn	13 06 24.9	+0.6
	baz=46,SNR=9.3						
D60A				S	Sn	13 07 07.2	-0.7
	baz=46						
D60A	Saint Jean D’O	3.74	229	Pn	Pn	13 06 25.1	+0.7
D60A				Sn	Sn	13 07 07.3	-0.5
ELNB	Elgin, New Bru	3.76	162	PN	Pn	13 06 25.1	+0.4
ELNB				SN	Sn	13 07 07.3	-1.1
ELNB				LG	Lg	13 07 25.8	
ELNB				Trac		13 07 30.1	
	comp=Z,66nm,0.3s						
ELNB	Elgin, New Bru	3.76	162	Pn	Pn	13 06 25.1	+0.4
ELNB				Sn	Sn	13 07 07.3	-1.1
LMN	Caledonia Moun	3.84	159	PN	Pn	13 06 25.9	+0.2
LMN				SN	Sn	13 07 09.3	-1.1
LMN				Trac		13 07 13.9	
	comp=Z,67nm,0.2s						
LMN				LG	Lg	13 07 28.2	
LMN	Caledonia Moun	3.84	159		Pn	13 06 25.6	-0.2
LMN				Sn	Sn	13 07 09.3	-1.1
E61A	Lac Etchemin	3.90	221	P	Pn	13 06 27.7	+1.1
	baz=38						
WCNB	Wards Creek	3.90	167	PN	Pn	13 06 27.3	+0.7
WCNB				SN	Sn	13 07 10.2	-1.6
WCNB				LG	Lg	13 07 32.8	
WCNB				Trac		13 07 34.4	
	comp=Z,196nm,0.3s						
QCQ	Quebec	4.01	230	PN	Pn	13 06 28.6	+0.6
QCQ				SN	Sn	13 07 14.1	-0.4
QCQ				Trac		13 07 41.4	
	comp=Z,192nm,0.3s						
F63A	Nahmakanta, Br	4.05	203	P	Pn	13 06 29.9	+1.2
	baz=22,SNR=5.2						
F63A				S	Sn	13 07 14.0	-1.6
	baz=22						
F63A	Nahmakanta, Br	4.05	203		Pn	13 06 30.1	+1.5
F63A	Nahmakanta, Br	4.05	203	P		13 06 29.8	
	baz=22,SNR=238						
F63A				P		13 06 29.8	
	baz=22,SNR=238						
D59A	Saint-Raymond	4.15	236	P	Pn	13 06 31.0	+1.0
	baz=52						
G65A	Princeton	4.28	187	P	Pn	13 06 32.6	+0.9
	baz=6.8,SNR=7.0						
G65A				S	Sn	13 07 19.7	-1.4
	baz=6.8						
G65A	Princeton	4.28	187	Pn	Pn	13 06 32.7	+1.0
G65A	Princeton	4.28	187	P		13 06 32.4	
	baz=6.7,SNR=239						
G65A				P		13 06 32.4	
	baz=6.7,SNR=239						
GGN	Saint George	4.33	180	PN	Pn	13 06 33.0	+0.6
GGN				SN	Sn	13 07 20.6	-1.7
GGN				LG	Lg	13 07 42.4	
GGN				Trac		13 07 44.4	
	comp=Z,111nm,0.2s						
GGN	Saint George	4.33	180		Pn	13 06 33.2	+0.8
E60A	Ste Agathe de	4.38	227	P	Pn	13 06 34.1	+0.9
	baz=44,SNR=10.0						
G64A	Maxfield	4.40	198	P	Pn	13 06 34.2	+0.8
	baz=17						
G64A				S	Sn	13 07 22.1	-2.0
	baz=17						
F61A	St Evariste	4.48	221	P	Pn	13 06 35.9	+1.4
	baz=38,SNR=10						
F61A				S	Sn	13 07 24.6	-1.4
	baz=38						
LATQ	La Tuque	4.48	245	S	Sn	13 07 24.3	-1.8
	baz=61						
LATQ	La Tuque	4.48	245	Pn	Pn	13 06 34.1	-0.4
PKME	Peaks-Kenny Pk	4.51	203	PN	Pn	13 06 36.2	+1.3
PKME				SN	Sn	13 07 25.4	-1.4
PKME				Trac		13 07 54.4	
	comp=Z,128nm,0.2s						
PKME	Peaks-Kenny Pk	4.51	203	P	Pn	13 06 36.1	+1.2
	baz=21,SNR=12						
PKME				S	Sn	13 07 25.4	-1.4
	baz=21						
PKME	Peaks-Kenny Pk	4.51	203		Pn	13 06 36.1	+1.2
PKME	Peaks-Kenny Pk	4.51	203	P		13 06 36.0	
	baz=21,SNR=277						
H66A	Whiting	4.68	184	P	Pn	13 06 37.8	+0.6
	baz=4.2						
H66A				S	Sn	13 07 28.8	-2.1
	baz=4.2						
D58A	Chemin du LacG	4.69	242	P	Pn	13 06 36.6	-0.8
	baz=58						
G63A	Kingsbury	4.74	205	P	Pn	13 06 39.1	+1.1
	baz=23,SNR=9.5						
G63A				S	Sn	13 07 30.6	-1.9
	baz=23						
EMMW	East Machias	4.76	186	Pn	Pn	13 06 38.8	+0.4
EMMW	East Machias	4.76	186	P		13 06 39.0	
	baz=5.2						
E59A	St. Maurice	4.85	234	S	Sn	13 07 32.7	-2.3
	baz=50						
H65A	Eastbrook	4.85	192	P	Pn	13 06 39.9	+0.3
	baz=11						
DPQ	Saint Jean	4.87	238	PN	Pn	13 06 39.8	0.0
DPQ				SN	Sn	13 07 33.0	-2.6
DPQ				LG	Lg	13 07 57.6	
DPQ				Trac		13 08 04.5	
	comp=Z,132nm,0.2s						
F60A	Warwick	4.92	227	P	Pn	13 06 40.5	0.0
	baz=43,SNR=5.4						
G62A	West of Eustis	4.93	212	P	Pn	13 06 41.6	+0.9
	baz=30,SNR=17						
G62A	West of Eustis	4.93	212	Pn	Pn	13 06 41.5	+0.7
G62A	West of Eustis	4.93	212	P		13 06 41.5	
	baz=30,SNR=183						
G62A				P		13 06 41.5	
	baz=30,SNR=183						
H64A	Troy	5.08	200	P	Pn	13 06 43.4	+0.6
	baz=18						
G61A	St-Isidore-de-	5.26	219	P	Pn	13 06 46.3	+1.1
	baz=36,SNR=16						
WVL	Waterville	5.26	203		Pn	13 06 46.0	+0.8
H63A	New Sharon	5.27	206	P	Pn	13 06 46.0	+0.7
	baz=24,SNR=6.4						
STUQ	Sainte-Ursule	5.27	236	PN	Pn	13 06 46.5	+1.1
STUQ				SN	Sn	13 07 43.5	-2.1
STUQ				LG	Lg	13 08 16.1	
STUQ				Trac		13 08 21.1	
	comp=Z,113nm,0.3s						
HAL	Halifax	5.29	154	PN	Pn	13 06 46.3	+0.7
HAL				SN	Sn	13 07 43.6	-2.3
HAL				Trac		13 07 48.0	
	comp=Z,69nm,0.1s						
HAL	Halifax	5.29	154	Pn	Pn	13 06 46.3	+0.7
E58A	La Victoria	5.33	237	P	Pn	13 06 46.1	-0.1
	baz=52,SNR=15						
GBN	Guysborough	5.41	136	PN	Pn	13 06 47.4	+0.2
GBN				SN	Sn	13 07 46.4	-2.4
GBN				Trac		13 08 17.3	
	comp=Z,79nm,0.4s						
GBN	Guysborough	5.41	136	Pn	Pn	13 06 46.8	-0.4
MOQ	Mont Orford	5.55	224	PN	Pn	13 06 49.8	+0.6
MOQ				SN	Sn	13 07 49.0	-3.5
MOQ				Trac		13 08 21.1	
	comp=Z,90nm,0.3s						
MOQ	Mont Orford	5.55	224		Pn	13 06 50.1	+0.8
H62A	Milan	5.71	213	P	Pn	13 06 51.8	+0.4
	baz=30						
H62A	Milan	5.71	213	Pn	Pn	13 06 52.0	+0.6
H62A	Milan	5.71	213	P		13 06 51.7	
	baz=30,SNR=16						
H62A				P		13 06 51.7	
	baz=30,SNR=16						
G60A	Masonville	5.75	223	P	Pn	13 06 52.6	+0.7
	baz=39,SNR=22						
D56A	ZEC Mazanza, M	5.83	249	P	Pn	13 06 51.0	-2.0
	baz=63						
I64A	Boothbay	5.86	200	P	Pn	13 06 54.2	+0.7
	baz=18						
I63A	Otisfield	5.99	207	P	Pn	13 06 55.6	+0.4
	baz=24,SNR=6.5						
I63A	Otisfield	5.99	207		Pn	13 06 55.6	+0.4
I63A	Otisfield	5.99	207	P		13 06 55.5	
	baz=24,SNR=20						
I63A				P		13 06 55.5	
	baz=24,SNR=20						
H61A	Lyndonville	6.03	217	P	Pn	13 06 56.0	+0.1
	baz=34						
MNTQ	Montreal, Queb	6.08	232	PN	Pn	13 06 56.5	+0.1
MNTQ				SN	Sn	13 08 01.8	-3.6
MNTQ				Trac		13 08 04.6	
	comp=Z,143nm,0.3s						
MNTQ				LG	Lg	13 08 35.9	
DRLN	Deer Lake	6.08	88	PN	Pn	13 06 56.3	-0.2
DRLN				SN	Sn	13 08 02.5	-3.0
DRLN				LG	Lg	13 08 37.4	
DRLN				Trac		13 08 39.9	
	comp=Z,223nm,0.4s						
DRLN	Deer Lake	6.08	88		Pn	13 06 56.5	0.0
TRQ	Mont Tremblant	6.13	241	PN	Pn	13 06 56.9	-0.4
TRQ				SN	Sn	13 08 04.3	-2.6
TRQ				Trac		13 08 40.8	
	comp=Z,172nm,0.5s						
TRQ	Mont Tremblant	6.13	241	Pn	Pn	13 06 56.4	-0.8
E56A	St. Veronique	6.24	245	P	Pn	13 06 56.8	-1.8
	baz=59						
LBNH	Lisbon	6.28	216	PN	Pn	13 06 59.5	+0.3
LBNH				SN	Sn	13 08 10.1	-0.4
LBNH				LG	Lg	13 08 45.2	
LBNH				Trac		13 08 56.3	
	comp=Z,431nm,1.1s						
LBNH	Lisbon	6.28	216	P	Pn	13 06 59.4	+0.2
	baz=32						
LBNH	Lisbon	6.28	216		Pn	13 06 59.4	+0.2
LBNH	Lisbon	6.28	216	P		13 06 59.5	
	baz=32,SNR=18						
NMSQ	Nemaska Statio	6.29	295	PN	Pn	13 06 59.1	-0.3
NMSQ				SN	Sn	13 08 07.9	-2.8
NMSQ				Trac		13 08 45.2	
	comp=Z,215nm,0.3s						
NMSQ				LG	Lg	13 08 47.3	
I62A	Tamworth	6.38	211	P	Pn	13 07 00.9	+0.3
	baz=28						
I62A	Tamworth	6.38	211	Pn	Pn	13 07 01.0	+0.3
I62A	Tamworth	6.38	211	P		13 07 01.1	
	baz=28,SNR=8.1						
I62A				P		13 07 01.1	
	baz=28,SNR=8.1						
F57A	Harrington	6.45	239	P	Pn	13 07 01.6	+0.1
	baz=53						
FRNY	Flat Rock	6.53	228		Pn	13 07 03.1	+0.5
FRNY	Flat Rock	6.53	228	P		13 07 03.2	
	baz=43,SNR=26						
G58A	Ormstown	6.54	232	P	Pn	13 07 02.8	0.0
	baz=46						
VT1	Waterbury	6.54	221		Pn	13 07 02.8	0.0
I61A	Oroboro, Fairl	6.65	216	P	Pn	13 07 04.4	+0.2
	baz=32						
LSQQ	Lebel-sur-Quev	6.67	271	PN	Pn	13 07 02.8	-1.8
LSQQ				Trac		13 09 04.7	
	comp=Z,67nm,0.2s						
GRQ	Grand Remous	6.70	248	PN	Pn	13 07 02.9	-2.2
GRQ				SN	Sn	13 08 16.6	-4.2
GRQ				Trac		13 09 06.7	
	comp=Z,138nm,0.3s						
H59A	Cadyville	6.72	227	P	Pn	13 07 05.4	+0.1
	baz=42						
J63A	Strafford	6.84	207	P	Pn	13 07 07.2	+0.3
	baz=24						
FFD	Franklin Falls	6.85	211	Pn	Pn	13 07 07.9	+0.9
HNH	Hanover	6.87	215		Pn	13 07 07.6	+0.3
VABQ	Val Des Bois	6.92	243	PN	Pn	13 07 07.0	-1.0
VABQ				SN	Sn	13 08 22.0	-4.1
VABQ				LG	Lg	13 09 03.0	
VABQ				Trac		13 09 11.4	
	comp=Z,135nm,0.3s						
MCVT	Middlebury Col	6.95	220	P		13 07 08.7	
	baz=36,SNR=13						
UNH	University of	6.95	205	P		13 07 08.9	
	baz=22,SNR=21						
MATQ	Matagami	7.05	277	PN	Pn	13 07 09.0	-0.8
MATQ				Trac		13 09 12.5	
	comp=Z,104nm,0.3s						
G57A	Newington	7.06	235	P	Pn	13 07 10.0	+0.2
	baz=49						
J62A	Henniker	7.12	211	P	Pn	13 07 11.2	+0.4
	baz=27						
H58A	Gabriels	7.12	228	P	Pn	13 07 10.8	-0.1
	baz=43,SNR=5.2						
ORIO	Orleans, Innes	7.13	239	PN	Pn	13 07 11.1	+0.3
ORIO				Trac		13 09 12.9	
	comp=Z,103nm,0.3s						
I60A	Shoreham	7.16	221	P	Pn	13 07 11.2	-0.1
	baz=36						
LONY	Lake Ozonia	7.18	231	P	Pn	13 07 11.1	-0.5
	baz=45						
LONY	Lake Ozonia	7.18	231		Pn	13 07 11.0	-0.5
J61A	Chester	7.28	215	P	Pn	13 07 12.6	-0.3
	baz=31						
J61A	Chester	7.28	215	P		13 07 13.0	
	baz=31						
J61A				P		13 07 13.0	
	baz=31						
I59A	Olmsteadville	7.46	223	P	Pn	13 07 15.1	-0.3
	baz=38						
NCB	Newcomb	7.48	226	PN	Pn	13 07 15.6	-0.1
NCB				SN	Sn	13 08 38.0	-2.1
NCB				Trac		13 09 25.6	
	comp=Z,0.7nm,0.3s						
NCB	Newcomb	7.48	226		Pn	13 07 15.8	+0.1
NCB	Newcomb	7.48	226	P		13 07 15.5	
	baz=40,SNR=43						
K63A	Dunstable	7.51	208	P	Pn	13 07 16.1	0.0
	baz=24						
K63A	Dunstable	7.51	208	Pn	Pn	13 07 16.1	0.0
HRV	Adam Dziewonsk	7.69	207	P	Pn	13 07 18.5	0.0
	baz=24						
HRV	Adam Dziewonsk	7.69	207	Pn	Pn	13 07 18.1	-0.5
HRV	Adam Dziewonsk	7.69	207	P		13 07 18.7	
	baz=24,SNR=5.5						
ACCN	Adirondack Com	7.69	221	Pn	Pn	13 07 17.8	-0.9
ACCN	Adirondack Com	7.69	221	P		13 07 18.6	
	baz=36						
J60A	Lant Hill Farm	7.71	219	P	Pn	13 07 18.4	-0.4
	baz=34						
K62A	Royalston	7.76	211	P	Pn	13 07 19.8	+0.3
	baz=27						
K62A	Royalston	7.76	211	Pn	Pn	13 07 20.0	+0.4
CRLO	Chalk River	7.90	248	PN	Pn	13 07 18.0	-3.4
CRLO				SN	Sn	13 08 46.1	-4.2
CRLO				Trac		13 09 41.3	
	comp=Z,104nm,0.4s						
J59A	Piesco	8.00	224	P	Pn	13 07 22.6	-0.2
	baz=39						
J59A	Piesco	8.00	224	Pn	Pn	13 07 23.1	+0.3
L64A	Middleborough	8.02	202	P	Pn	13 07 23.0	-0.1
	baz=19						
L61B	Northampton	8.10	212	P	Pn	13 07 24.1	-0.2
	baz=28						
I57A	Carthage	8.21	231	P	Pn	13 07 25.5	-0.1
	baz=45						
TRY	Troy	8.23	218		Pn	13 07 27.2	+1.1
L63A	North Scituate	8.29	206	P	Pn	13 07 27.2	+0.3
	baz=22						
J58A	Remsen	8.45	227	P	Pn	13 07 28.6	-0.4
	baz=41						
J58A	Remsen	8.45	227	Pn	Pn	13 07 29.1	+0.2
J58A	Remsen	8.45	227	P		13 07 29.0	
	baz=41,SNR=11						
J58A				P		13 07 29.0	
	baz=41,SNR=11						
M64A	Tiverton	8.48	203	P	Pn	13 07 29.3	0.0
	baz=20						
M64A	Tiverton	8.48	203	Pn	Pn	13 07 29.7	+0.4
UCCT	U. Connecticut	8.54	208	Pn	Pn	13 07 30.3	+0.1
EEO	Eldee	8.69	256	PN	Pn	13 07 29.5	-2.7
EEO				SN	Sn	13 09 04.7	-4.9
EEO				Trac		13 10 03.5	
	comp=Z,114nm,0.3s						
DELO	Deloro Mine	8.88	240	Pn	Pn	13 07 34.6	-0.3
K58A	Earlville	9.07	226	Pn	Pn	13 07 38.1	+0.6
L59A	Walton	9.25	221	Pn	Pn	13 07 41.2	+1.2
H53A	Bobcaygeon	9.40	243	P	Pn	13 07 40.3	-1.8
	baz=55						
K57A	Scipio Center	9.51	229	P	Pn	13 07 43.2	-0.4
	baz=42						
SJNN	Saint John's	9.56	96	PN	Pn	13 07 43.8	-0.3
SJNN				SN	Sn	13 09 24.9	-6.1
SJNN				Trac		13 09 44.4	
	comp=Z,387nm,1.2s						
SADO	Sadowa	9.62	246	Pn	Pn	13 07 43.3	-1.7
	1.3nm,0.3s,baz=64,slow=16,SNR=6.1						
SADO				Sn	Sn	13 09 24.9	-7.6
	5.1nm,0.3s,baz=122,slow=10.0,SNR=6.7						
SADO				Lg	Lg	13 10 18.8	
	6.0nm,0.3s,baz=148,slow=22,SNR=6.2						
SADO	Sadowa	9.62	246	PN	Pn	13 07 43.4	-1.7
SADO				Trac		13 10 31.4	
	comp=Z,217nm,0.9s						
SADO	Sadowa	9.62	246	Pn	Pn	13 07 44.1	-0.9
BINY	Binghamton	9.67	225	P	Pn	13 07 45.6	-0.1
	baz=38						
BINY	Binghamton	9.67	225	Pn	Pn	13 07 46.8	+1.1
L58A	Harry Jones Me	9.73	224	P	Pn	13 07 46.7	+0.1
	baz=37						
K56A	Middlesex	9.94	231	P	Pn	13 07 49.0	-0.5
	baz=44						
L57A	Andrews Acres	10.23	227	P	Pn	13 07 52.7	-0.6
	baz=40						
M54A	Oil Creek Stat	12.01	233		Pn	13 08 16.3	-1.4
N54A	Moraine State	12.57	233	P	Pn	13 08 24.4	-1.1
	baz=43						
N54A	Moraine State	12.57	233		Pn	13 08 24.3	-1.1
N53A	Lisbon	13.13	234		Pn	13 08 31.9	-1.1
FRB	Frobisher Bay	14.37	357	Pn	Pn	13 08 45.2	-4.5
	0.5nm,0.3s,baz=175,slow=14,SNR=9.1						
FRB				Sn	Sn	13 11 17.4	-11
	1.0nm,0.3s,baz=113,slow=20,SNR=4.8						
FRB				Lg	Lg	13 12 50.9	
	2.3nm,0.3s,baz=83,slow=16,SNR=6.0						
Q54A	Coxs Mills	14.49	229	Pn	Pn	13 08 51.0	-0.6
Q54A				P	P	13 08 56.1	-2.0
NRS	Narsarsuaq	16.81	38		Pn	13 09 20.6	-1.0
FCC	Fort Churchill	18.39	311	P	P	13 09 41.1	-0.1
TKL	Tuckaleechee C	18.54	228	P	Pn	13 09 44.8	+1.4
	0.2nm,0.3s,baz=107,slow=11,SNR=2.0						
TKL	Tuckaleechee C	18.54	228	IAmb	IAmb	13 09 58.6	
	comp=Z,18nm,1.4s						
ULM	Lac du Bonnet	18.71	284	P	P	13 09 43.2	-1.7
	comp=Z,0.7nm,0.3s,baz=77,slow=11,SNR=7.7						
ULM				S	Sn	13 12 58.1	-16
	comp=Z,0.4nm,0.3s,baz=327,slow=22,SNR=3.8						
ULM				Lg	Lg	13 14 58.4	
	comp=Z,0.4nm,0.3s,baz=348,slow=21,SNR=3.7						
ULM	Lac du Bonnet	18.71	284	IAmb	IAmb	13 09 48.2	
	comp=Z,13nm,1.4s						
R40A	Maddies Statio	21.37	248	P	P	13 10 13.4	-0.5
R40A				IAmb	IAmb	13 10 15.0	
	comp=Z,5.2nm,0.7s						
FFC	Flin Flon	22.09	297	P	P	13 10 21.3	-0.1
W39A	Magazine	24.34	244	P	P	13 10 45.4	+1.2
W39A				IAmb	IAmb	13 10 46.3	
	comp=Z,5.7nm,0.7s						
YKA	Yellowknife Ar	29.00	315	P	P	13 11 25.2	-0.6
	comp=Z,0.1nm,0.5s,baz=93,slow=10,SNR=4.4						
PDAR	Pinedale Array	30.06	274	P	P	13 11 35.0	-0.7
	comp=Z,0.6nm,0.7s,baz=67,slow=11,SNR=5.8						
PDAR				LR	LR	13 23 52.1	
	comp=Z,53nm,19.0s,baz=5.5,slow=37						
TX31	Lajitas Ar. Si	34.39	248	P	P	13 12 14.7	+1.1
TXAR	Lajitas Array	34.39	248	P	P	13 12 14.9	+1.3
	comp=Z,0.2nm,0.4s,baz=66,slow=7.2,SNR=14						
KNB	Kanab	35.22	267	P	P	13 12 21.6	+0.8
KNB				IAmb	IAmb	13 12 31.2	
	comp=Z,3.2nm,1.3s						
TPNV	Topopah Spring	37.49	270	P	P	13 12 42.0	+1.8
TPNV				IAmb	IAmb	13 12 51.1	
	comp=Z,3.2nm,1.2s						
NVAR	Mina Array Bea	37.99	273	P	P	13 12 45.4	+0.9
	comp=Z,0.9nm,0.7s,baz=60,slow=6.9,SNR=8.4						
RYN	Ryan	38.02	274	P	P	13 12 45.5	+0.8
RYN				IAmb	IAmb	13 12 46.5	
	comp=Z,2.1nm,0.6s						
YBH	Yreka Blue Hor	39.08	281	LR	LR	13 28 22.3	
	comp=Z,578nm,18.9s,baz=252,slow=36						
ILAR	Eielson Array	42.88	322	P	P	13 13 24.1	-0.3
	comp=Z,0.1nm,0.4s,baz=198,slow=6.8,SNR=1.9						
ARCES	ARCESS Array B	45.58	29	P	P	13 13 51.6	+5.8
	comp=Z,3.2nm,1.0s,baz=288,slow=5.9,SNR=9.3						
FINES	FINESS Array B	49.56	39	P	P	13 14 23.2	+6.3
	comp=Z,8.5nm,1.1s,baz=309,slow=8.8,SNR=3.5						
WMQ	Urumqi	84.47	18	*e*P	P	13 18 02.1	+3.1
HHC	Hu-ho-hao-te	90.07	1	*e*P	P	13 18 28.8	+2.6
HHC				pmax	pmax		
	comp=Z,14nm,1.3s						
HHC				pmax	pmax		
	comp=Z,230nm,7.7s						
WRA	Warramunga Arr	146.05	323	PKPbc	PKPbc	13 25 06.8	+0.5
	comp=Z,0.8nm,0.6s,baz=23,slow=2.9,SNR=6.7						
VNDA	Vanda	146.44	197	PKPbc	PKPab	13 25 07.6	+0.8
	comp=Z,0.7nm,0.8s,baz=101,slow=4.2,SNR=3.9						
ASAR	Alice Springs	149.56	320	PKPbc	PKPbc	13 25 16.4	+0.7
	comp=Z,0.9nm,0.4s,baz=40,slow=1.8,SNR=44						

TAP 16 13:11:58.2, 22°.47N × 120°.98E, h16km, ML1.6, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.13	349	P	Pb	13 12 02.2	-0.1
	baz=351						
ECL				S	Sb	13 12 05.5	+0.5
	baz=351						
TAW	Tawu	0.14	214	*e*P	Pb	13 12 02.6	+0.1
	baz=211						
TAW				*e*S	Sb	13 12 06.1	+0.8
	baz=211						
EAST	Anshuo	0.15	234	P	Pb	13 12 02.9	+0.1
	baz=231						
EAST				*e*S	Sb	13 12 05.9	+0.1
	baz=231						
SLIU	Shizi	0.31	213	*e*P	Pg	13 12 05.0	+0.3
	baz=213						
SLIU				S	Sb	13 12 09.8	-0.4
	baz=213						
TTN	Taitung	0.32	29	*e*P	Pb	13 12 05.7	+0.1
	baz=29						
TTN				*e*S	Sb	13 12 11.3	+0.8
	baz=29						
SCZT	Fangliau	0.35	253	*e*P	Pb	13 12 06.6	+0.6
	baz=252						
SCZT				*e*S	Sb	13 12 12.2	+0.8
	baz=252						
MASBT	Mashibuluo	0.35	293	P	Pb	13 12 06.6	+0.5
	baz=293						
MASBT				*e*S	Sb	13 12 11.7	+0.2
	baz=293						
TWGBT	Beinan	0.35	15	P	Pb	13 12 06.0	-0.2
	baz=14						
TWGBT				*e*S	Sb	13 12 12.0	+0.4
	baz=14						
TWG	Pinlang	0.36	14	*e*P	Pb	13 12 06.0	-0.3
	baz=14						
TWG				*e*S	Sb	13 12 12.0	+0.3
	baz=14						
TSMG	Majia	0.39	307	P	Pb	13 12 07.2	+0.4
	baz=306						
TSMG				S	Sb	13 12 12.5	0.0
	baz=306						
SSD	Sandimen	0.42	310	*e*P	Pb	13 12 07.7	+0.3
	baz=310						
SSD				*e*S	Sb	13 12 13.7	+0.1
	baz=310						
LONT	Longtian	0.45	18	*e*P	Pb	13 12 08.2	+0.3
	baz=17						
LONT				*e*S	Sn	13 12 16.2	-1.7
	baz=17						
TSPT	Pingtung City	0.49	294	*e*P	Pb	13 12 08.8	+0.3
	baz=294						
TSPT				*e*S	Sb	13 12 16.4	+0.9
	baz=294						
LDUT	Ludao	0.49	66	*e*P	Pb	13 12 09.0	+0.5
	baz=66						
LDUT				*e*S	Sb	13 12 16.6	+1.1
	baz=66						
SGLT	Jiouru	0.52	299	*e*P	Pb	13 12 09.4	+0.4
	baz=299						

SGLT				eS	Sg	13 12 14.9	-0.6
	baz=299						
TWK1	**Hengchun**	**0.55**	**197**	eP	Pb	13 12 09.6	0.0
	baz=196						
TWK1				eS	Sb	13 12 17.6	+0.3
	baz=196						
TWKBT	**Hengchun**	**0.55**	**196**	eP	Pb	13 12 09.7	+0.2
	baz=196						
TWKBT				eS	Sb	13 12 18.6	+1.3
	baz=196						
TWP	**Hsiaoliuchiu**	**0.59**	**258**	eP	Pg	13 12 09.8	0.0
	baz=257						
TWP				eS	Sn	13 12 20.0	-1.2
	baz=257						
SLGT	**Liugui**	**0.60**	**329**	eP	Pb	13 12 11.0	+0.5
	baz=329						
SCST	**Cishan**	**0.61**	**312**	eP	Pb	13 12 11.3	+0.8
	baz=312						
SCST				eS	Sn	13 12 20.8	-0.9
	baz=312						
LAY	**Lan-yu**	**0.68**	**129**	eP	Pg	13 12 10.8	-0.9
	baz=129						
LAY				eS	Sb	13 12 21.5	+0.5
	baz=129						
SGST	**Jiashian**	**0.71**	**329**	eP	Pg	13 12 11.2	-0.9
	baz=329						
SGST				eS	Sg	13 12 21.5	-0.1
	baz=329						
ELDTW	**Lidau**	**0.71**	**3**	eP	Pb	13 12 12.6	+0.2
	baz=3.0						
ELDTW				eS	Sn	13 12 23.5	-1.0
	baz=3.0						
STYT	**Tauyuan**	**0.72**	**343**	eS	Sn	13 12 23.5	-1.0
	baz=343						
FULB	**Fuli**	**0.78**	**22**	eP	Pb	13 12 13.4	-0.1
	baz=21						
FULB				eS	Sb	13 12 24.4	+0.6
	baz=21						
CHN1	**Nanshi**	**0.82**	**330**	eS	Sg	13 12 26.1	+0.9
	baz=329						
CHN3	**Shinhua**	**0.83**	**317**	eS	Sb	13 12 24.6	-0.6
	baz=316						
TWK	**Hsinying**	**0.91**	**330**	eP	Pb	13 12 15.4	-0.4
	baz=330						
TWK				eS	Sb	13 12 27.8	+0.1
	baz=330						

TAP 16 13:12:07.5,23°.23N×120°.73E,h28km,ML1.1,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.07**	**156**	eP	Pb	13 12 13.0	+0.5
	baz=150						
STYT				eS	Sb	13 12 16.5	+0.6
	baz=150						
STYT	**Tauyuan**	**0.07**	**156**	eP	Pb	13 12 13.1	+0.6
	baz=343						
WTP	**Ta-pu**	**0.10**	**280**	eP	Pb	13 12 12.8	+0.2
	baz=279						
WTP				S	Sb	13 12 16.8	+0.6
	baz=279						
CHN1	**Nanshi**	**0.19**	**257**	eP	Pn	13 12 13.9	-0.5
	baz=256						
CHN1				eS	Sb	13 12 18.2	+0.8
	baz=256						
CHN1	**Nanshi**	**0.19**	**257**	eP	Pb	13 12 13.7	+0.3
	baz=329						
SGST	**Jiashian**	**0.20**	**222**	eP	Pb	13 12 13.8	+0.3
	baz=220						
SGST				eS	Sb	13 12 18.1	+0.5
	baz=220						
SLGT	**Liugui**	**0.24**	**197**	eP	Pn	13 12 15.1	-0.2
	baz=197						
SLGT				eS	Sb	13 12 19.3	+0.8
	baz=197						
SLGT	**Liugui**	**0.24**	**197**	eS	Sb	13 12 19.2	+0.7
	baz=329						
ELDTW	**Lidau**	**0.27**	**98**	eP	Pb	13 12 14.6	+0.1
	baz=98						
ELDTW				eS	Sn	13 12 20.7	-0.2
	baz=98						
ALS	**Alishan**	**0.29**	**15**	eP	Pb	13 12 15.2	+0.3
	baz=16						
ALS				eS	Sb	13 12 20.7	+0.7
	baz=16						
CHN5	**Tsauling**	**0.37**	**353**	eP	Pb	13 12 16.4	+0.5
	baz=353						
CHN5				eS	Sb	13 12 22.4	+0.8
	baz=353						
WLGB	**Puzi**	**0.46**	**303**	eP	Pn	13 12 18.0	-0.2
	baz=302						
WLGB				eS	Sn	13 12 25.4	-0.1
	baz=302						
CHN8	**Yiju**	**0.49**	**284**	eP	Pb	13 12 17.4	-0.3
	baz=284						
CHN8				eS	Sn	13 12 26.2	+0.1
	baz=284						
FULB	**Fuli**	**0.52**	**93**	eP	Pb	13 12 18.1	-0.1
	baz=93						
FULB				eS	Sn	13 12 26.6	-0.4
	baz=93						
TWF1	**Yuli**	**0.54**	**77**	eP	Pn	13 12 18.9	-0.3
	baz=77						
TWF1				eS	Sn	13 12 27.5	0.0
	baz=77						

IDC 16 13:24:06.3±1.8,3°.38N×127°.54E,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.6/30,mbtmp3.7/5,Error ellipse: s-maj=99.9km s-min=24.2km az=68.0

ISC 16 13:24:13.5±1.5,**3°.0N**±0°.3×**127°.1E**±0°.7,**h35km,n6,**σ1s.**84**/6, **mb3.6**/5,**1C,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**4.44**	**333**⇑	eP	**Pn**	**13 25 20.3**	**+1.8**
FITZ	**Fitzroy Crossi**	**21.03**	**184**	P	**P**	**13 28 55.0**	**+0.6**
	2.8nm,1.0s,baz=0.0,slow=7.1,SNR=2.0						
WRA	**Warramunga Arr**	**23.90**	**163**	P	**P**	**13 29 24.1**	**-0.1**
	1.5nm,0.7s,baz=346,slow=11,SNR=13						
ASAR	**Alice Springs**	**27.34**	**166**	P	**P**	**13 29 55.4**	**0.0**
	0.4nm,0.5s,baz=346,slow=7.1,SNR=16						
STKA	**Stephens Creek**	**37.34**	**159**	P	**P**	**13 31 23.1**	**+0.4**
	1.5nm,0.7s,baz=351,slow=7.8,SNR=3.8						
MKAR	**Makanchi Array**	**58.35**	**325**	P	**P**	**13 34 02.7**	**-2.6**
	0.2nm,0.5s,baz=129,slow=6.7,SNR=5.0						

TUL 16 13:41:31.6±1.0,36°.49N±0°.04×99°.09W±0°.05,h8km±5km, ML3.1,mb_Lg3.0/69(NEIC),Error ellipse: s-maj=5.8km s-min=4.8km az=50.0

NEIC 16 13:41:32.3±1.1,36°.51N±0°.03×99°.04W±0°.05,h6km±4km, Error ellipse: s-maj=5.9km s-min=3.8km az=57.0

ANF 16 13:41:32.0±0.5,36°.50N×99°.08W,h0km,ML3.7/8,Error ellipse: s-maj=5.9km s-min=5.1km az=13.0

ISC 16 13:41:32.6±0.8,**36°.52N**±0°.03×**99°.02W**±0°.03,**h10km,n61,** σ1s.**22**/43,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.14**	**173**		**Pg**	**13 41 34.8**	**-1.0**
U32A				Sg	**Sg**	**13 41 37.1**	**-0.9**
CROK	**Carrier**	**0.84**	**91**		**Pg**	**13 41 48.2**	**-0.6**
KAN14	**Manchester OK**	**0.96**	**62**		**Pg**	**13 41 50.4**	**-0.6**
KAN10	**Anthony SW Sta**	**0.96**	**51**		**Pg**	**13 41 50.3**	**-0.7**
KAN08	**Anthony NE Sta**	**1.10**	**50**	Pg	**Pg**	**13 41 52.9**	**-0.9**
KAN13	**South Haven SW**	**1.33**	**68**		**Pn**	**13 41 57.0**	**-0.3**
BCOK	**Bluff Creek, N**	**1.43**	**127**		**Pn**	**13 41 58.3**	**-0.3**
BCOK				Sn	**Sn**	**13 42 18.1**	**+0.6**
OK029	**Liberty Lake**	**1.46**	**119**		**Pn**	**13 41 59.4**	**+0.4**
OK025	**Westminster Rd**	**1.65**	**124**		**Pn**	**13 42 02.0**	**+0.3**
WMOK	**Wichita Mounta**	**1.79**	**174**	P	**Pn**	**13 42 03.6**	**0.0**
	baz=354						
WMOK				S	**Sn**	**13 42 27.6**	**+1.3**
	baz=354						
WMOK	**Wichita Mounta**	**1.79**	**174**	Pn	**Pn**	**13 42 03.3**	**-0.3**
WMOK				IAmb_Lg		13 42 30.4	
	comp=Z,85nm,0.9s						
FNO	**Franklin**	**1.82**	**133**		**Pn**	**13 42 04.7**	**+0.7**
OK031	**S. Brethren Rd**	**1.85**	**107**		**Pn**	**13 42 05.2**	**+0.8**
QUOK	**Quay**	**1.90**	**100**		**Pn**	**13 42 06.2**	**+1.1**
OK030	**Cody Creek RV**	**1.90**	**107**		**Pn**	**13 42 06.0**	**+0.9**
R32A	**Long Quarter,**	**1.92**	**7**	Pn	**Pn**	**13 42 05.9**	**+0.5**
R32A				IAmb_Lg		13 42 38.5	
	comp=Z,74nm,0.9s						
T35A	**Sooner Cattle**	**2.06**	**78**	Pn	**Pn**	**13 42 07.4**	**+0.2**
W35A	**Tecumseh**	**2.21**	**127**	Pn	**Pn**	**13 42 09.8**	**+0.3**
CBKS	**Cedar Bluff**	**2.36**	**346**	P	**Pb**	**13 42 13.3**	**-1.9**
	baz=166						
CBKS				S	**Sb**	**13 42 44.5**	**-0.1**
	baz=166						
CBKS	**Cedar Bluff**	**2.36**	**346**	Pn	**Pn**	**13 42 12.0**	**+0.5**
CBKS				IAmb_Lg		13 42 50.9	
	comp=Z,48nm,0.7s						
AMTX	**Amarillo**	**2.71**	**234**	P	**Pn**	**13 42 16.9**	**+0.6**
	baz=52						
AMTX				Sb	**Sb**	**13 42 55.6**	**+1.1**
	baz=52						
AMTX	**Amarillo**	**2.71**	**234**	Pn	**Pn**	**13 42 16.7**	**+0.3**
AMTX				IAmb_Lg		13 42 57.0	
	comp=Z,46nm,0.7s						
KSU1	**Kansas State U**	**3.21**	**36**	P	**Pn**	**13 42 23.9**	**+0.8**
	baz=217						
KSU1				S	**Sn**	**13 43 03.4**	**+2.0**
	baz=217						
KSU1	**Kansas State U**	**3.21**	**36**		**Pn**	**13 42 23.8**	**+0.7**
KSU1				IAmb_Lg		13 43 14.5	
	comp=Z,30nm,0.8s						
X37A	**Clayton**	**3.54**	**122**		**Pn**	**13 42 28.0**	**+0.3**
X37A				IAmb_Lg		13 43 27.6	
	comp=Z,36nm,0.8s						
U38A	**Gravette**	**3.74**	**90**	IAmb_Lg		13 43 33.6	
	comp=Z,32nm,0.9s						
KSCO	**Kaye Shedlock’**	**3.79**	**312**	P	**Pn**	**13 42 31.6**	**+0.4**
	baz=130						
KSCO				S	**Sn**	**13 43 15.4**	**-0.5**
	baz=130						
KSCO	**Kaye Shedlock’**	**3.79**	**312**		**Pn**	**13 42 29.8**	**-1.4**
KSCO				IAmb_Lg		13 43 36.1	
	comp=Z,34nm,0.8s						
ABTX	**Abilene, Hawle**	**3.92**	**188**		**Pn**	**13 42 32.5**	**-0.4**
ABTX				IAmb_Lg		13 43 43.9	
	comp=Z,23nm,0.7s						
T25A	**Trinidad**	**4.37**	**280**	P	**Pn**	**13 42 39.4**	**+0.2**
	baz=96						
T25A				Sb	**Sb**	**13 43 47.1**	**+4.6**
	baz=96						
T25A	**Trinidad**	**4.37**	**280**		**Pn**	**13 42 39.1**	**-0.2**
T25A				IAmb_Lg		13 43 54.0	
	comp=Z,44nm,1.0s						
N33A	**J Bar K, Exete**	**4.39**	**16**	IAmb_Lg		13 43 56.7	
	comp=Z,31nm,0.7s						
W39A	**Magazine**	**4.45**	**106**	P	**Pn**	**13 42 42.7**	**+2.5**
	baz=289						
W39A	**Magazine**	**4.45**	**106**	IAmb_Lg		13 44 01.7	
	comp=Z,32nm,0.7s						
Z38A	**Mt. Pleasant**	**4.64**	**133**	IAmb_Lg		13 44 07.1	
	comp=Z,24nm,0.9s						
S39A	**Bolivar**	**4.70**	**74**	IAmb_Lg		13 44 05.0	
	comp=Z,19nm,0.7s						
MIAR	**Mount Ida**	**4.86**	**112**	S	**Sn**	**13 43 41.7**	**-0.3**
	baz=296						
MIAR	**Mount Ida**	**4.86**	**112**	IAmb_Lg		13 44 19.5	
	comp=Z,19nm,0.8s						
U40A	**Yellville**	**4.98**	**90**	IAmb_Lg		13 44 18.2	
	comp=Z,20nm,0.8s						
237A	**Washetta, Mont**	**5.23**	**149**	IAmb_Lg		13 44 21.4	
	comp=Z,29nm,0.9s						
P38A	**Dawn**	**5.33**	**53**	IAmb_Lg		13 44 32.9	
	comp=Z,22nm,0.7s						
Q24A	**Divide**	**5.43**	**299**	IAmb_Lg		13 44 24.7	
	comp=Z,36nm,0.7s						
X40A	**Basin Creek Fa**	**5.44**	**110**	P	**Pn**	**13 42 55.8**	**+2.1**
	baz=294						
X40A	**Basin Creek Fa**	**5.44**	**110**	IAmb_Lg		13 44 27.6	
	comp=Z,20nm,0.8s						
WHAR	**Wooly Hollow**	**5.60**	**101**	IAmb_Lg		13 44 34.4	
	comp=Z,28nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.61**	**94**	IAmb_Lg		13 44 35.8	
	comp=Z,17nm,0.8s						
W41B	**Gary Mavity, V**	**5.66**	**102**	P	**Pn**	**13 42 58.6**	**+1.8**
	baz=286						
W41B	**Gary Mavity, V**	**5.66**	**102**	IAmb_Lg		13 44 41.9	
	comp=Z,15nm,0.7s						
UALR	**University of**	**5.71**	**106**	IAmb_Lg		13 44 45.9	
	comp=Z,18nm,0.9s						
K31A	**O'Neill**	**6.10**	**2**	IAmb_Lg		13 44 49.3	
	comp=Z,29nm,0.8s						
ISCO	**Idaho Springs**	**6.14**	**304**		**Pn**	**13 43 03.1**	**-0.5**
ANMO	**Albuquerque**	**6.25**	**258**	IAmb_Lg		13 44 54.3	
	comp=Z,5.1nm,0.9s						
PBMO	**Poplar Bluff**	**6.91**	**85**	IAmb_Lg		13 45 22.6	
	comp=Z,16nm,0.8s						
N23A	**Red Feather La**	**6.96**	**311**	IAmb_Lg		13 45 22.4	
	comp=Z,22nm,0.9s						
SCIA	**State Center**	**7.02**	**38**	IAmb_Lg		13 45 27.7	
	comp=Z,22nm,0.8s						
MNTX	**Cornudas Mount**	**7.14**	**229**	IAmb_Lg		13 45 21.1	
	comp=Z,12nm,0.7s						
S44A	**Carbondale**	**7.89**	**79**	IAmb_Lg		13 45 48.4	
	comp=Z,12nm,0.8s						
SIUC	**Southern Illin**	**7.92**	**78**	IAmb_Lg		13 45 41.3	
	comp=Z,15nm,0.8s						
833A	**Chaparral WMA,**	**8.18**	**182**	IAmb_Lg		13 46 07.3	
	comp=Z,11nm,0.8s						
RSSD	**Black Hills**	**8.50**	**335**	IAmb_Lg		13 46 10.6	
	comp=Z,8.7nm,0.7s						
O44A	**Mansfield**	**9.05**	**63**	IAmb_Lg		13 46 18.0	
	comp=Z,16nm,0.7s						

IDC 16 13:54:02.0±461.0,**53°.48N×42°.92E,h0km,Error ellipse: s-maj=169.1km s-min=102.1km az=132.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.61**	**317**	*i*		14 23 00.0	
	baz=134,slow=331,SNR=1.8						
I31KZ	**AKTYUBINSK INF**	**9.83**	**102**	*i*		14 54 40.0	
	baz=297,slow=365,SNR=6.3						
I26DE	**FREYUNG INFRAS**	**18.82**	**268**	*i*		15 54 20.0	
	baz=66,slow=334,SNR=1.6						

IDC 16 13:54:09.8±0.5,31°.82S×57°.78E,h0km,mb4.3/20, mb1 4.3/20,mb1mx4.1/58,mbtmp4.3/20,MS3.9/29, Ms1 4.0/29,ms1mx3.9/41,Error ellipse: s-maj=18.0km s-min=15.6km az=59.0

NEIC 16 13:54:11.1±1.4,32°.0S±0°.1×57°.8E±0°.2,h10km±1km, mb4.8/26,Error ellipse: s-maj=24.0km s-min=17.8km az=273.0

GCMT 16 13:54:13.1±0.3,31°.80S±0°.02×57°.68E±0°.03,h13km, MW4.9/105,Moment Tensor Solution. s37,c39; s105,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.95±.16; $M_{\theta\theta}$2.34±.11; $M_{\phi\phi}$0.60±.10; $M_{r\theta}$-0.02±.24; $M_{\theta\phi}$0.52±.07; $M_{\phi r}$-0.01±.33; Best double couple: $M_0$2.71700×10^{16} NP1:ϕ_s255.00000°,δ45.00000°, λ-90.00000°. NP2:ϕ_s74.00000°,δ45.00000°,λ-90.00000°. Principal axes: T 2.4840, Plg0.0000°, Azm165.0000°; N 0.4650, Plg0.0000°, Azm75.0000°; P -2.9500, Plg90.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 16 13:54:11.1±0.4,**31°.95S**±0°.07×**57°.82E**±0°.10,**h10km,n82,** σ1s.**34**/64,**mb4.7**/39,**MS4.1**/30,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**15.17**	**196**	Pn	**Pn**	**13 57 44.2**	**-1.2**
CRZF				IAmb	IAmb	13 57 56.2	
	comp=Z,27nm,0.8s						
H08S1	**Diego Carcia H**	**27.77**	**33**	T	T	14 28 46.7	
	baz=207,slow=76,SNR=146						
H08S2	**Diego Garcia H**	**27.78**	**33**	T	T	14 28 49.3	
	baz=207,slow=76,SNR=68						
H08S3	**Diego Garcia H**	**27.79**	**33**	T	T	14 28 51.9	
	baz=207,slow=76,SNR=106						
DGAR	**Diego Garcia**	**27.96**	**32**	P	**P**	**14 00 00.8**	**-1.1**
BOSA	**Boshof**	**28.26**	**268**	P	**P**	**14 00 04.8**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=119,slow=10,SNR=1.6						
BOSA				LR	LR	14 09 35.1	
	comp=Z,172nm,19.5s,baz=112,slow=33						
MATP	**Matopo**	**28.61**	**286**	LR	LR	14 09 46.1	
	comp=Z,348nm,21.5s,baz=116,slow=33						
LBTB	**Lobatse**	**29.08**	**276**	LR	LR	14 09 51.1	
	comp=Z,186nm,20.2s,baz=114,slow=32						
MAW	**Mawson**	**35.81**	**177**	LR	LR	14 11 56.4	
	comp=Z,346nm,21.1s,baz=48,slow=30						
MAW	**Mawson**	**35.81**	**177**	P	**P**	**14 01 08.3**	**-1.9**
TSUM	**Tsumeb**	**38.24**	**279**	P	**P**	**14 01 31.1**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=120,slow=6.8,SNR=5.4						
ATD	**Arta Tunnel**	**45.55**	**339**	LR	LR	14 18 55.4	
	comp=Z,286nm,19.1s,baz=134,slow=33						
H01W2	**Cape Leeuwin H**	**46.57**	**110**	T	T	14 52 24.8	
	baz=256,slow=75,SNR=212						
H01W3	**Cape Leeuwin H**	**46.57**	**110**	T	T	14 52 24.5	
	baz=256,slow=75,SNR=196						
H01W1	**Cape Leeuwin H**	**46.59**	**110**	T	T	14 52 25.4	
	baz=256,slow=75,SNR=237						
MORW	**Morawa**	**49.72**	**103**	P	**P**	**14 03 03.2**	**-0.5**
MORW				IAmb	IAmb	14 03 06.1	
	comp=Z,23nm,1.3s						
SNAA	**Sanae**	**50.85**	**201**	P	**P**	**14 03 12.5**	**+0.9**
	comp=Z,3.0nm,1.0s,baz=96,slow=8.2,SNR=5.4						
SNAA	**Sanae**	**50.85**	**201**	P	**P**	**14 03 11.2**	**-0.4**
SNAA				IAmb	IAmb	14 03 15.9	
	comp=Z,10nm,1.3s						
HYB	**Hyderabad**	**52.96**	**25**	*i* P	**P**	**14 03 28.0**	**+0.1**
RAYN	**Ar Rayn**	**56.40**	**346**	P	**P**	**14 03 53.2**	**+0.5**
QSPA	**South Pole Qui**	**58.22**	**180**	P	**P**	**14 04 07.1**	**+1.8**
	comp=Z,6.5nm,0.9s,baz=248,slow=4.1,SNR=12						
QSPA	**South Pole Qui**	**58.22**	**180**	P	**P**	**14 04 06.7**	**+1.4**
QSPA				IAmb	IAmb	14 04 07.8	
	comp=Z,11nm,1.0s						
FORT	**Forrest**	**58.97**	**109**	P	P	14 04 05.8	-5.1
VNDA	**Vanda**	**62.02**	**166**	P	**P**	**14 04 33.0**	**+2.0**
	comp=Z,1.7nm,1.0s,baz=270,slow=6.3,SNR=5.1						
VNDA				LR	LR	14 29 35.0	
	comp=Z,289nm,19.2s,baz=242,slow=34						
KAPI	**Kappang**	**63.63**	**79**	LR	LR	14 27 13.7	
	comp=Z,26nm,21.3s,baz=234,slow=31						
CMAR	**Chiang Mai Arr**	**63.76**	**44**	P	**P**	**14 04 43.5**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=231,slow=7.2,SNR=13						
CMAR				LR	LR	14 29 33.4	
	comp=Z,70nm,18.3s,baz=236,slow=33						
BATI	**Baumata**	**64.20**	**86**	LR	LR	14 29 54.9	
	comp=Z,59nm,19.1s,baz=256,slow=33						
RAMN	**Ramite**	**64.68**	**28**	eP	**P**	**14 04 49.7**	**+0.2**
	comp=Z,15nm,0.9s						
DMN	**Daman**	**64.68**	**27**	eP	**P**	**14 04 49.3**	**-0.2**
	comp=Z,25nm,1.0s						
PKI	**Pulchoki**	**64.76**	**27**	eP	**P**	**14 04 51.0**	**+0.9**
	comp=Z,15nm,1.1s						
PKIN	**Phulchoki**	**64.76**	**27**	eP	**P**	**14 04 49.9**	**-0.2**
	comp=Z,12nm,1.0s						
DANN	**Dangsing**	**64.85**	**25**	eP	**P**	**14 04 49.8**	**-0.8**
	comp=Z,17nm,0.8s						
KKN	**Kakani**	**64.91**	**27**	eP	**P**	**14 04 50.9**	**-0.1**
	comp=Z,24nm,0.9s						
ODAN	**Odare**	**64.92**	**29**	eP	**P**	**14 04 51.1**	**0.0**
	comp=Z,11nm,0.7s						
SOEI	**Soe**	**64.94**	**86**	P	**P**	**14 04 50.2**	**-1.3**
GUN	**Gumba**	**65.25**	**27**	eP	**P**	**14 04 52.4**	**-0.9**
	comp=Z,24nm,0.9s						
TAPN	**Taplejung**	**65.49**	**29**	eP	**P**	**14 04 51.3**	**-3.5**
	comp=Z,35nm,1.4s						
ASAR	**Alice Springs**	**66.57**	**104**	P	**P**	**14 05 01.8**	**0.0**
	comp=Z,2.7nm,0.8s,baz=233,slow=6.0,SNR=23						
ASAR				LR	LR	14 30 13.0	
	comp=Z,51nm,20.4s,baz=193,slow=32						
AS31	**Alice Springs**	**66.57**	**104**	P	**P**	**14 05 02.2**	**+0.4**
NIL	**Nilore**	**66.85**	**14**	P	**P**	**14 05 02.0**	**-1.1**
NIL				IAmb	IAmb	14 05 11.3	
	comp=Z,5.6nm,1.0s						
KBL	**Kabul**	**66.98**	**10**	P	**P**	**14 05 03.7**	**-0.5**
KBL				IAmb	IAmb	14 05 11.4	
	comp=Z,6.5nm,1.1s						
MMAI	**Mount Meron Ar**	**68.00**	**340**	P	**P**	**14 05 10.9**	**+0.5**
	comp=Z,5.4nm,0.9s,baz=148,slow=7.9,SNR=4.2						
WRA	**Warramunga Arr**	**68.59**	**101**	P	**P**	**14 05 15.4**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=242,slow=5.4,SNR=12						
WB2	**Warramunga Arr**	**68.60**	**101**	P	**P**	**14 05 15.1**	**+0.5**
WB2				IAmb	IAmb	14 05 25.4	
	comp=Z,10nm,1.2s						
WRAB	**Tennant Creek**	**68.61**	**101**	P	**P**	**14 05 15.6**	**+1.0**
WRAB				IAmb	IAmb	14 05 18.5	
	comp=Z,7.7nm,1.0s						
WB0	**Warramunga Arr**	**68.72**	**101**	P	**P**	**14 05 18.0**	**+2.6**
WB0				IAmb	IAmb	14 05 19.0	
	comp=Z,15nm,1.3s						
STKA	**Stephens Creek**	**69.19**	**115**	P	**P**	**14 05 18.6**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=293,slow=10.0,SNR=3.6						
STKA				LR	LR	14 30 02.3	
	comp=Z,104nm,18.8s,baz=207,slow=31						
STKA	**Stephens Creek**	**69.19**	**115**	P	**P**	**14 05 20.2**	**+2.0**
GEYT	**Alibeck**	**69.52**	**0**	LR	LR	14 33 27.2	
	comp=Z,75nm,19.4s,baz=70,slow=34						
TORD	**Torodi Ar. Bea**	**69.97**	**301**	P	**P**	**14 05 22.7**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=122,slow=5.1,SNR=3.7						
TORD				LR	LR	14 36 51.5	
	comp=Z,254nm,18.2s,baz=120,slow=37						
DBIC	**Dimbokro**	**70.92**	**291**	P	**P**	**14 05 28.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=240,slow=5.3,SNR=3.6						
DBIC				LR	LR	14 33 20.5	
	comp=Z,135nm,21.5s,baz=110,slow=33						
GNI	**Garni**	**72.75**	**350**	LR	LR	14 34 42.2	
	comp=Z,164nm,21.3s,baz=210,slow=34						
BRTR	**Keskin Array B**	**74.76**	**341**	P	**P**	**14 05 49.8**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=148,slow=7.3,SNR=9.7						
BRTR				LR	LR	14 34 55.2	
	comp=Z,35nm,21.8s,baz=152,slow=33						
KK31	**Karatay Array**	**75.59**	**10**	P	**P**	**14 05 56.2**	**+0.4**
KK31				IAmb	IAmb	14 05 58.8	
	comp=Z,8.1nm,1.1s						
KKAR	**Karatay Array**	**75.59**	**10**	P	**P**	**14 05 56.5**	**+0.6**
KKAR				IAmb	IAmb	14 05 58.8	
	comp=Z,8.1nm,1.1s						
AAK	**Ala-Archa**	**75.79**	**13**	P	**P**	**14 05 57.1**	**0.0**
	comp=Z,2.4nm,0.9s,baz=231,slow=7.8,SNR=7.5						
AAK				LR	LR	14 35 57.7	
	comp=Z,127nm,21.2s,baz=195,slow=33						
AAK	**Ala-Archa**	**75.79**	**13**	P	**P**	**14 05 57.4**	**+0.2**
AAK				IAmb	IAmb	14 05 59.4	
	comp=Z,14nm,1.5s						
KBZ	**Khabaz**	**76.54**	**349**	LR	LR	14 39 51.7	
	comp=Z,105nm,18.1s,baz=164,slow=36						
ABKAR	**Akbulak array**	**80.86**	**1**	P	**P**	**14 06 22.9**	**-1.9**
KEST	**Kesra**	**81.24**	**322**	LR	LR	14 44 51.7	
	comp=Z,136nm,18.5s,baz=226,slow=38						
MAKZ	**Makanchi**	**81.37**	**17**	P	**P**	**14 06 28.6**	**+0.9**
MAKZ				IAmb	IAmb	14 06 31.8	
	comp=Z,5.8nm,0.9s						
MK31	**Makanchi Array**	**81.43**	**17**	P	**P**	**14 06 28.0**	**0.0**
MKAR	**Makanchi Array**	**81.43**	**17**	P	**P**	**14 06 28.1**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=208,slow=4.2,SNR=18						
MKAR				LR	LR	14 39 47.5	
	comp=Z,45nm,21.3s,baz=218,slow=34						
AKTO	**Aktyubinsk**	**82.02**	**0**	P	**P**	**14 06 31.1**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=160,slow=4.5,SNR=5.2						
AKTO				LR	LR	14 41 52.0	
	comp=Z,50nm,20.4s,baz=158,slow=35						
MLR	**Muntele Rosu**	**82.33**	**338**	P	**P**	**14 06 33.2**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=192,slow=10,SNR=3.9						
MLR	**Muntele Rosu**	**82.33**	**338**	P	**P**	**14 06 32.8**	**-0.1**
MLR				IAmb	IAmb	14 06 45.5	
	comp=Z,4.6nm,1.0s						
KURBB	**Kurchatov Arra**	**84.23**	**13**	P	**P**	**14 06 43.0**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=206,slow=5.8,SNR=28						
KURK	**Kurchatov**	**84.34**	**13**	P	**P**	**14 06 43.3**	**+0.4**
BRVK	**Borovoye**	**85.35**	**8**	P	**P**	**14 06 48.3**	**+0.4**
ARU	**Arti**	**88.03**	**0**	P	**P**	**14 07 00.4**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=151,slow=4.7,SNR=5.5						
ZAA0	**Zalesovo Array**	**88.68**	**16**	P	**P**	**14 07 04.0**	**-0.1**
ZALV	**Zalesovo Beam**	**88.68**	**16**	P	**P**	**14 07 03.2**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=210,slow=4.0,SNR=7.6						
ZALV				LR	LR	14 43 36.3	
	comp=Z,86nm,20.2s,baz=224,slow=34						
GERES	**GERESS Array B**	**89.55**	**333**	LR	LR	14 48 46.3	
	comp=Z,47nm,18.4s,baz=130,slow=37						
MNK	**Minsk**	**89.89**	**343**	*i* P	**P**	**14 07 09.9**	**+0.2**
	comp=E,5.0nm,1.1s						
MNK				*i* P	**P**	**14 07 09.9**	**+0.2**
	comp=N,18nm,0.9s						
MNK				*i* P	**P**	**14 07 09.9**	**+0.2**
	comp=Z,13nm,0.7s						
MNK				*i* PP	**PP**	**14 10 42.6**	**-0.4**
MNK				*i* PPP	PPP	14 12 39.8	
MNK				*i* S	**SKSac**	**14 17 37.5**	**-2.6**
MNK				*i* PS	**PnS**	**14 19 06.5**	**-2.4**
MNK				*i* SS	**SS**	**14 24 06.5**	**+6.2**
MNK				*i* SSS	SSS	14 27 35.8	
MNK				*i* LQ	LQ	14 41 50.6	
MNK				*i* LR	LR	14 47 21.4	
MNK				*i* LRM	MLR	14 48 46.8	
	comp=N,223nm,16.6s						
MNK				*i* LRM	MLR	14 48 51.1	

	comp=E,20nm,17.4s						
MNK				*i* LRM	MLR	14 48 54.0	
	comp=Z,36nm,7.2s						
SONM	Songino Array	90.58	30	LR	LR	14 44 48.3	
	comp=Z,117nm,20.8s,baz=271,slow=34						
ESDC	Sonseca Array	91.41	317	LR	LR	14 50 51.8	
	comp=Z,72nm,18.1s,baz=105,slow=37						
PLCA	Paso Flores	93.37	217	LR	LR	14 41 45.1	
	comp=Z,81nm,21.8s,baz=158,slow=31						
KSRS	Korea Array	95.08	49	LR	LR	14 48 49.1	
	comp=Z,25nm,19.8s,baz=225,slow=34						
CPUP	Villa Florida	95.27	235	LR	LR	14 43 35.0	
	comp=Z,51nm,18.3s,baz=194,slow=31						
NOA	NORSAR Array B	100.12	339	LR	LR	14 52 01.2	
	comp=Z,42nm,20.3s,baz=260,slow=35						
YKA	Yellowknife Ar	149.06	353	PKPbc	PKPbc	14 13 58.6	0.0
	comp=Z,4.3nm,0.8s,baz=15,slow=2.6,SNR=61						
ULM	Lac du Bonnet	153.25	321	PKPbc	PKPbc	14 14 07.7	-1.2
	comp=Z,2.8nm,0.8s,baz=58,slow=5.3,SNR=5.4						

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*WEL **16** 13:56:05.2±0.9,31°S±7°×17°8E±1°0,h33^{km},M4.8/9, mB5.2/9,ML5.1/3,MLv5.0/4,Mw(mB)4.5/9,Error ellipse: s-maj=0.0km s-min=0.0km az=123.0*

*IDC **16** 13:56:05.8±1.6,31°.14S×179°.71W,h332^{km}±18^{km},mb2.7/2, mb1 3.2/6,mb1mx3.1/25,mbtmp4.0/6,Error ellipse: s-maj=38.4km s-min=25.0km az=129.0*

ISC 16 13:56:04.0±1.1,**30°.85S**±0°.09×**178°.6E**±0°.1,**h200^{km},n32,** σ**2^s.66**/55,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.38	63	P	Pn	13 56 57.5	-0.7
GLKZ				S	Sn	13 57 39.2	-1.4
RIZ	Raoul Island	3.38	63	P	Pn	13 56 58.3	+0.1
RIZ				S	Sn	13 57 40.3	-0.3
RAO	Raoul Island	3.39	63	P	Pn	13 56 58.8	+0.5
	42nm,0.3s,baz=89,slow=21,SNR=1.6						
RAO				S	Sn	13 57 39.1	-1.6
	151nm,0.3s,baz=112,slow=21,SNR=4.3						
MXZ	Matakaoa Point	6.70	182	P	Pn	13 57 43.5	+3.3
MXZ				S	Sn	13 58 59.3	+2.7
URZ	Urewera	7.49	189	P	Pn	13 57 54.2	+3.7
	3.4nm,0.3s,baz=250,slow=2.5,SNR=3.3						
URZ				S	Sn	13 59 20.3	+5.0
	9.3nm,0.3s,baz=276,slow=23,SNR=11						
WHHZ	Waihua	8.28	188	P	Pn	13 58 05.3	+4.5
WHHZ				S	Sn	13 59 36.1	+2.1
NMHZ	Naumai	8.36	190	P	Pn	13 58 06.0	+4.1
NMHZ				S	Sn	13 59 40.7	+4.8
MCHZ	McNeill Hill	8.72	190	P	Pn	13 58 08.6	+2.1
MCHZ				S	Sn	13 59 49.8	+5.5
KWHZ	Kaweka Forest	8.74	191	P	Pn	13 58 08.9	+2.0
KWHZ				S	Sn	13 59 48.1	+3.1
CKHZ	Cape Kidnapper	8.88	188	P	Pn	13 58 10.5	+1.9
CKHZ				S	Sn	13 59 48.8	+0.7
KRHZ	Kereru	8.96	191	P	Pn	13 58 09.9	+0.2
KRHZ				S	Sn	13 59 51.4	+1.2
PNHZ	Pukenui	9.25	192	P	Pn	13 58 15.4	+1.9
PNHZ				S	Sn	13 59 58.6	+1.5
PXZ	Pawanui	9.27	188	P	Pn	13 58 14.4	+0.7
PXZ				S	Sn	13 59 57.7	+0.3
WPHZ	Waipukurau	9.36	190	P	Pn	13 58 17.2	+2.4
WPHZ				S	Sn	13 59 58.6	-1.0
WAZ	Wanganui	9.37	198	P	Pn	13 58 20.2	+5.3
WAZ				S	Sn	14 00 07.9	+8.2
TSZ	Takapari Road	9.44	193	P	Pn	13 58 18.0	+2.1
TSZ				S	Sn	14 00 01.9	+0.4
PRHZ	Porangahau	9.53	189	P	Pn	13 58 16.3	-0.7
DVHZ	Dannevirke	9.63	191	P	Pn	13 58 19.1	+0.7
DVHZ				S	Sn	14 00 05.5	-0.7
ANWZ	Angora Road	9.74	190	P	Pn	13 58 18.3	-1.5
ANWZ				S	Sn	14 00 06.2	-2.5
POWZ	Post Office Ro	9.80	193	P	Pn	13 58 23.1	+2.6
POWZ				S	Sn	14 00 08.2	-1.8
PRWZ	Pori Road	9.92	192	P	Pn	13 58 24.8	+2.7
PRWZ				S	Sn	14 00 11.9	-0.9
BFZ	Birch Farm	10.00	191	P	Pn	13 58 23.6	+0.6
BFZ				S	Sn	14 00 08.4	-6.2
MRZ	Mangatainoka R	10.09	193	P	Pn	13 58 24.1	-0.2
MRZ				S	Sn	14 00 12.6	-4.5
TIWZ	Tintock	10.15	192	P	Pn	13 58 26.1	+1.0
TIWZ				S	Sn	14 00 17.6	-0.7
HOWZ	Holdsworth Sta	10.34	193	P	Pn	13 58 27.0	-0.4
HOWZ				P	Sn	14 00 19.1	-3.7
KIW	Kapiti Island	10.43	196	P	Pn	13 58 29.7	+1.0
KIW				S	Sn	14 00 23.5	-1.5
TMWZ	Te Maipa	10.47	191	P	Pn	13 58 29.9	+0.7
TMWZ				S	Sn	14 00 20.4	-5.6
DZM	Mont Dzumac	13.98	306	P	P	13 59 26.2	+10
	0.2nm,0.3s,baz=144,slow=14,SNR=2.9						
RPZ	Rata Peaks	14.17	203	P	Pn	13 59 17.0	+1.0
	0.2nm,0.3s,baz=53,slow=19,SNR=1.1						
RPZ				S	S	14 01 48.2	-5.3
	1.1nm,0.3s,baz=132,slow=23,SNR=9.5						
ASAR	Alice Springs	40.19	269	P	P	14 03 22.3	+1.2
	0.2nm,0.7s,baz=104,slow=7.3,SNR=1.6						
WRA	Warramunga Arr	41.23	275	P	P	14 03 30.5	+0.9
	0.3nm,0.3s,baz=111,slow=8.1,SNR=13						
FINES	FINESS Array B	144.51	338	PKPbc	PKPbc	14 15 03.2	-12
	3.7nm,0.5s,baz=61,slow=4.2,SNR=39						

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*NEIC **16** 14:16:34.9±2.3,5°.4S±0°.1×147°.7E±0°.1,h110^{km}±14^{km}, mb4.2/10,Error ellipse: s-maj=16.9km s-min=14.1km az=121.0*

*IDC **16** 14:16:45.4±3.3,5°.54S×147°.53E,h209^{km}±37^{km},mb3.4/4, mb1 3.6/6,mb1mx3.2/29,mbtmp3.9/6,Error ellipse: s-maj=58.9km s-min=23.7km az=129.0*

ISC 16 14:16:44.9±1.2,**5°.5S**±0°.1×**147°.3E**±0°.2,**h200^{km},n19,** σ**1^s.21**/19,**mb4.0**/5,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.39	1	Pn	Pn	14 17 24.6	-15
PMG	Port Moresby	3.92	182	P	Pn	14 17 47.6	+1.8
	1.5nm,0.3s,baz=278,slow=5.1,SNR=6.0						
PMG				S	Sn	14 18 33.2	-0.5
	7.3nm,0.3s,baz=356,slow=13,SNR=13						
CTAO	Charters Tower	14.58	184	Pn	Pn	14 19 54.3	-7.7
MTN	Manton Dam	17.55	244	P	P	14 20 36.1	+0.1
MTN				IAmb	IAmb	14 20 37.1	
	comp=Z,20nm,1.1s						
WB0	Warramunga Arr	18.97	220	P	P	14 20 51.6	+0.2
WB0				IAmb	IAmb	14 20 56.3	
	comp=Z,9.8nm,1.1s						
WR0	Warramunga Arr	19.01	220	P	P	14 20 52.1	+0.2
WR0					Pn	14 20 52.2	-2.8
WR0				IAmb	IAmb	14 20 56.4	
	comp=Z,6.6nm,0.7s						
WRAB	Tennant Creek	19.11	220	P	P	14 20 51.6	-1.4
WRAB				IAmb	IAmb	14 20 58.5	
	comp=Z,7.7nm,0.7s						
WB2	Warramunga Arr	19.12	220	P	P	14 20 53.3	+0.2
WB2				IAmb	IAmb	14 20 54.3	
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	19.13	220	P	P	14 20 53.4	+0.3
	comp=Z,1.0nm,0.3s,baz=44,slow=11,SNR=32						
AS31	Alice Springs	22.22	214	P	P	14 21 26.0	+0.6
ASAR	Alice Springs	22.22	214	P	P	14 21 26.1	+0.6
	comp=Z,2.9nm,0.6s,baz=49,slow=8.4,SNR=82						
FITZ	Fitzroy Crossi	24.59	237	P	P	14 21 48.6	+1.7
	comp=Z,8.8nm,0.4s,baz=50,slow=12,SNR=49						
FITZ	Fitzroy Crossi	24.59	237	P	P	14 21 48.9	+1.9
STKA	Stephens Creek	26.82	191	P	P	14 22 05.8	-1.0
BBOO	Buckleboo	29.16	200	P	P	14 22 27.2	-0.3
BBOO				IAmb	IAmb	14 22 44.7	
	comp=Z,19nm,1.4s						
CAN	Canberra	29.76	177	P	P	14 22 33.0	+0.2
MKAR	Makanchi Array	77.26	320	P	P	14 28 17.6	+0.4
	comp=Z,0.1nm,0.5s,baz=116,slow=6.6,SNR=2.3						
ILAR	Eielson Array	84.87	23	P	P	14 28 56.0	-0.9
	comp=Z,0.4nm,0.9s,baz=250,slow=4.5,SNR=4.5						
TORD	Torodi Ar. Bea	145.23	285	PKPbc	PKPdf	14 35 59.1	-0.7
	comp=Z,0.5nm,0.6s,baz=65,slow=4.2,SNR=2.5						

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*IDC **16** 14:46:19.5±1.6,34°.29S×67°.76W,h0^{km},mb1 3.9/2, mb1mx3.6/30,mbtmp3.7/2,ML3.9/2,Error ellipse: s-maj=90.6km s-min=21.6km az=121.0*

*NEIC **16** 14:46:21.1±1.3,34°.81S±0°.08×66°.3W±0°.2,h12^{km}±8^{km}, mb3.9/1,Md4.1(SJA),Error ellipse: s-maj=23.7km s-min=11.8km az=92.0*

*SJA **16** 14:46:25.8±0.7,34°.62S×66°.77W,h56^{km}±7^{km},ML4.2, MW4.1*

ISC 16 14:46:27.0±1.0,**34°.68S**±0°.08×**66°.71W**±0°.05,**h49^{km}**±11^{km}, **n51,**σ**1^s.27**/58,**San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RFA	San Rafael	1.45	266	*e*P	Pn	14 46 51.0	+0.1
RFA				*e*S	Sn	14 47 08.8	0.0
RFA				IAML		14 47 12.1	
	comp=Z,2µm,0.6s						
SUCO	SUCO	2.02	49	*e*P	Pn	14 46 58.7	+0.1
SUCO				*e*S	Sn	14 47 24.4	+1.6
SUCO				IAML		14 47 30.6	
	comp=Z,1µm,0.4s						
LAMA	Las Malvinas	2.08	262	*e*P	Pn	14 47 01.4	+2.0
LAMA				*e*S	Sn	14 47 24.1	0.0
AAGR	Agrelo	2.38	311	*e*P	Pn	14 47 03.9	+0.2
AAGR				*e*S	Sn	14 47 31.3	-0.3
AAGR				IAML		14 47 51.5	
	comp=Z,1µm,0.5s						
PUMA	Malargue	2.39	249	*e*P	Pn	14 47 04.2	+0.5
PUMA				*e*S	Sn	14 47 31.9	0.0
MRA	San Martin	2.40	20	*e*P	Pn	14 47 04.2	+0.2
MRA				*e*S	Sn	14 47 32.8	+0.5
MRA				IAML		14 47 48.5	
	comp=Z,669nm,0.5s						
ARCO	CERRO ARCO	2.61	314	*e*P	Pn	14 47 07.5	+0.6
ARCO				IAML		14 47 52.4	
	comp=Z,1µm,0.4s						
ASAL	Salagasta	2.74	319	*e*P	Pn	14 47 08.8	+0.3
ASAL				IAML		14 48 08.5	
	comp=Z,625nm,0.5s						
RTCV	Cerro Valdivia	3.21	331	*e*P	Pn	14 47 14.6	-0.3
RTCV				IAML		14 48 11.0	
	comp=Z,388nm,0.4s						
AUSP	Uspallata	3.32	317	*e*P	Pn	14 47 17.2	+0.5
BO02	Sierra Bellavi	3.36	267		Pn	14 47 17.9	+0.8
ACHE	Chepes	3.51	1	*e*P	Pn	14 47 19.3	0.0
ACHE				*e*S	Sn	14 48 19.9	+20
ZON	Zonda	3.54	332		Pn	14 47 19.7	+0.1
ZON	Zonda	3.54	332	*e*P	Pn	14 47 19.6	+0.1
ZON				IAML		14 48 28.7	
	comp=Z,250nm,0.4s						
MT05	Renca	3.59	290		Pn	14 47 21.1	+0.9
RTLS	Leoncito	3.60	322	*e*P	Pn	14 47 21.0	+0.4
RTLS				IAML		14 48 27.2	
	comp=Z,372nm,1.4s						
PEL	Peldehue	3.65	294	Pn	Pn	14 47 22.6	+1.6
PEL	Peldehue	3.65	294	*e*P	Pn	14 47 22.1	+1.1
RTLL	Cerro Villicun	3.66	336	*e*P	Pn	14 47 21.1	-0.1
RTLL				IAML		14 48 22.4	
	comp=Z,374nm,0.9s						
VA03	San Esteban	3.73	300	Pn	Pn	14 47 24.2	+2.0
TCA	Tanti	3.78	29	*e*P	Pn	14 47 22.6	-0.3
TCA				IAML		14 48 32.9	
	comp=Z,461nm,0.6s						
PIL	Pilar	3.83	39	*e*P	Pn	14 47 25.8	+2.4
PIL				IAML		14 48 39.2	
	comp=Z,801nm,0.7s						
MT02	Curacav	3.95	290	Pn	Pn	14 47 25.2	+0.1
ROC1	El Roble	3.97	294	Pn	Pn	14 47 27.7	+2.1
ROC1	El Roble	3.97	294	*e*P	Pn	14 47 27.0	+1.4
AVFE	Valle Fertil	4.06	351	*e*P	Pn	14 47 27.1	+0.4
AVFE				IAML		14 48 34.1	
	comp=Z,274nm,0.5s						
APLL	PUNTA DE LOS L	4.28	2	*e*P	Pn	14 47 30.4	+0.7
APLL				IAML		14 48 52.8	
	comp=Z,150nm,0.6s						
ACCO	Cerro Coronel	4.54	333	*e*P	Pn	14 47 34.4	+0.9
ACCO				IAML		14 48 54.8	
	comp=Z,294nm,0.6s						
CANA	Caviahue	4.75	226	*e*P	Pn	14 47 37.1	+0.9
CANA				IAML		14 49 02.8	
	comp=Z,132nm,0.6s						
CO02	Combarbal	5.01	313		Pn	14 47 40.6	+0.9
AROD	Rodeo	5.08	332	*e*P	Pn	14 47 42.3	+1.4
CO03	El Pedregal	5.09	318	Pn	Pn	14 47 42.5	+1.6
ACLC	CERRO LA CRUZ	5.25	358	*e*P	Pn	14 47 43.4	+0.3
ACLC				IAML		14 49 18.6	
	comp=Z,152nm,0.5s						
CO01	Juntas del Tor	5.50	328		Pn	14 47 48.6	+2.1
GO04	Tololo Observa	5.67	321		Pn	14 47 49.8	+0.8
VCA	Vinchina	6.07	347	*e*P	Pn	14 47 55.3	+1.0
VCA				IAML		14 49 53.3	
	comp=Z,142nm,0.9s						
CYA	Choya	6.27	7	*e*P	Pn	14 47 56.4	-0.6
CYA				IAML		14 49 57.8	
	comp=Z,70nm,0.9s						
AC05	El Transito	6.57	332		Pn	14 48 02.2	+1.0
LCO	Las Campanas	6.60	328		Pn	14 48 01.7	0.0
PLCA	Paso Flores	6.76	206	Pn	Pn	14 48 02.5	-1.2
	comp=Z,0.3nm,0.3s,baz=21,slow=14,SNR=17						
PLCA				Lg	Lg	14 49 53.7	
	comp=Z,6.4nm,0.3s,baz=40,slow=10,SNR=6.9						
PLCA	Paso Flores	6.76	206		Pn	14 48 01.2	-2.5
AC01	Pan de Azucar	9.15	337	Pn	Pn	14 48 36.5	+0.1
GO02	Mina Guanaco	9.81	344		Pn	14 48 45.1	-0.6
PB14	IPOC Station P	10.53	341		Pn	14 48 55.6	+0.1
CPUP	Villa Florida	11.60	47	Pn	Pn	14 49 13.2	+3.3
	comp=Z,0.3nm,0.3s,baz=222,slow=10,SNR=5.9						
CPUP				Sn	Sn	14 51 30.9	+13
	comp=Z,1.3nm,0.3s,baz=173,slow=13,SNR=4.1						
CPUP				Lg	Lg	14 52 40.9	
	comp=Z,1.4nm,0.3s,baz=152,slow=14,SNR=5.0						
LVC	Limon Verde	12.18	350	Pn	Pn	14 49 16.9	-1.3
PB09	IPOC Station P	13.03	349	Pn	Pn	14 49 28.0	-1.7
PB07	IPOC Station P	13.21	347	Pn	Pn	14 49 28.1	-4.0
MNMC	Minye Minye	15.70	350	Pn	Pn	14 50 03.6	-1.7
MNMC				IAmb	IAmb	14 50 16.4	
	comp=Z,12nm,1.2s						
ZALV	Zalesovo Beam	152.26	37	PKPbc	PKPbc	15 06 17.7	+1.0
	comp=Z,2.5nm,0.5s,baz=308,slow=3.4,SNR=14						
MKAR	Makanchi Array	153.75	53	PKPbc	PKPbc	15 06 20.3	0.0
	comp=Z,0.4nm,0.9s,baz=299,slow=1.5,SNR=3.0						
MKAR				PKPab	sPKPdf	15 06 33.0	+0.3
	comp=Z,0.3nm,0.7s,baz=290,slow=5.5,SNR=3.7						

IDC 16 15:51:03.7±5.1,**2°.87N**×**122°.68E,h533^{km}**±99^{km},**mb2.6**/5, **mb1 2.9**/6,**mb1mx2.6**/32,**mbtmp3.8**/6,**Error ellipse: s-maj=141.0km s-min=18.0km az=82.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	13.02	176	P	P	15 53 53.0	0.0
	4.7nm,0.3s,baz=44,slow=4.0,SNR=8.8						
FITZ	Fitzroy Crossi	21.04	172	P	P	15 55 09.6	-0.5
	2.0nm,0.9s,baz=339,slow=8.6,SNR=2.0						
WRA	Warramunga Arr	25.39	154	P	P	15 55 48.9	-0.1
	0.2nm,0.4s,baz=335,slow=9.9,SNR=5.8						
ASAR	Alice Springs	28.55	158	P	P	15 56 16.9	+0.2
	0.3nm,0.7s,baz=333,slow=7.9,SNR=6.2						
KSRS	Korea Array	34.76	7	P	P	15 57 09.5	+0.1
	1.5nm,0.8s,baz=182,slow=7.8,SNR=3.2						
USRK	Ussuriysk Ar.	41.98	10	P	P	15 58 07.5	-0.5
	0.8nm,0.5s,baz=193,slow=5.9,SNR=6.5						

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*IDC **16** 16:11:35.0±3.0,5°.08S×129°.82E,h139^{km}±42^{km},mb3.1/1, mb1 3.5/5,mb1mx3.2/37,mbtmp3.8/5,Error ellipse: s-maj=76.0km s-min=20.0km az=86.0*

*DJA **16** 16:11:36.5±0.4,5°S±4°×13°0E±°,h169^{km}±6^{km},M4.0/11, mb4.1/3,MLv3.9/11*

ISC 16 16:11:34.8±0.9,**5°.15S**±0°.05×**130°.14E**±0°.08,**h150^{km},n12,** σ**3^s.80**/16,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.66	340	P	Pn	16 12 00.8	+3.7
BNDI				S	Sn	16 12 20.4	+6.3
MSAI	Masohi	2.16	326	P	Pn	16 12 13.7	+1.9
SAUI	Saumlaki	3.04	158	P	Pn	16 12 27.0	+4.2
FAKI	Fak Fak	3.06	44	P	Pn	16 12 24.6	+1.7
NLAI	Namlea	3.57	302	P	Pn	16 12 31.5	+2.0
SIJI	Sorong	4.40	15	P	Pn	16 12 40.8	+0.5
	7.1nm,0.3s,baz=152,slow=22,SNR=26						
SIJI				S	Sn	16 13 27.9	-3.4
	7.7nm,0.3s,baz=285,slow=23,SNR=20						
SWI	Sorong	4.40	15	P	Pn	16 12 40.8	+0.4
SANI	Sanana	5.16	306	P	Pn	16 12 50.7	+0.4
	0.1nm23nm,0.5s						
FITZ	Fitzroy Crossi	13.60	198	P	Pn	16 14 41.7	0.0
	0.1nm,0.3s,baz=28,slow=8.8,SNR=7.6						
FITZ				S	Sn	16 17 05.5	-6.9
	0.2nm,0.3s,baz=179,slow=9.3,SNR=2.3						
WRA	Warramunga Arr	15.26	165	P	Pn	16 15 03.5	+0.9
	0.4nm,0.3s,baz=348,slow=12,SNR=11						
WRA				S	Sn	16 17 45.8	-6.6
	0.3nm,0.3s,baz=334,slow=22,SNR=6.4						
ASAR	Alice Springs	18.77	169	P	Pn	16 15 45.8	+1.0
	0.7nm,0.3s,baz=347,slow=10,SNR=117						
MKAR	Makanchi Array	66.76	326	P	P	16 22 09.8	-0.3
	0.4nm,0.7s,baz=117,slow=6.9,SNR=4.4						

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*DNK **16** 16:31:03.2±2.8,51°.20N×15°.33E,h39^{km}±126^{km},ML1.9*

*PRU **16** 16:31:04.4±0.0,51°.51N×16°.13E,h0^{km}*

*VIE **16** 16:31:06.6±0.9,51°.36N×16°.25E,h0^{km},mb2.2/3,ml2.5/5, Error ellipse: s-maj=8.4km s-min=5.8km az=66.0 60 km WNW of Wroclaw Suspected Mining induced.*

ISC 16 16:31:02.9±0.9,**51°.57N**±0°.03×**16°.15E**±0°.03,**h0^{km},n26,** σ**0^s.77**/53,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	173	*e*Pg	Pg	16 31 17.2	+0.2
KSP				*e*Sg	Sg	16 31 26.4	-0.2
CHVC	Chvalec	0.99	184	*e*PG	Pg	16 31 21.8	0.0
CHVC				*e*SG	Sg	16 31 34.0	-0.6
	comp=Z,43nm,0.8s						
OSTC	Ostas	1.02	178	*e*PG	Pg	16 31 22.5	+0.1
OSTC				*e*SG	Sg	16 31 35.1	-0.5
	comp=Z,32nm,0.4s						
UPC	Upice	1.07	185	*e*PG	Pg	16 31 23.2	-0.2
UPC				*e*SG	Sg	16 31 36.7	-0.6
	comp=Z,40nm,0.2s						
DPC	Dobruska-Polom	1.23	175	*e*PG	Pg	16 31 25.9	-0.6
DPC				*e*SG	Sg	16 31 41.5	-0.9
	comp=Z,18nm,0.7s						
PVCC	Panska Ves	1.45	224	*e*PG	Pn	16 31 30.4	+0.1
PVCC				*e*SG	Sg	16 31 49.2	-0.2
	comp=Z,74nm,0.4s						
KRLC	Kraliky	1.55	165	*e*PG	Pn	16 31 31.4	-0.4
KRLC				*e*SG	Sg	16 31 52.1	-0.6
	comp=Z,21nm,0.5s						
BRG	Berggiesshubel	1.56	244	Pg	Pg	16 31 32.8	0.0
BRG				Sg	Sg	16 31 53.1	+0.2
BRG				Amp		16 31 53.9	
	comp=Z,36nm,0.4s						
BRG	Berggiesshubel	1.56	244	Pg	Pg	16 31 32.8	0.0
BRG				Sg	Sg	16 31 53.1	+0.2
BRG				Amp		16 31 53.9	
	comp=Z,36nm,0.4s						
PRU	Pruhonice	1.89	213	*e*PG	Pb	16 31 38.1	-0.1
PRU				*e*SG	Sb	16 32 02.1	-0.3
	comp=Z,25nm,0.3s						
CLL	Collm	1.99	264	*e*Pn	Pn	16 31 38.0	+0.2
CLL				*e*Pg	Pb	16 31 40.0	+0.1
CLL				*i*		16 31 43.4	
CLL				*e*Sg	Sb	16 32 06.0	+0.8
	comp=Z,24nm,0.7s						
MORC	Moravsky Berou	2.00	153	*e*PN	Pn	16 31 37.5	-0.5
MORC				*e*SG	Sb	16 32 05.2	-0.6
OKC	Ostrava-Krasne	2.15	143	*e*PG	Pb	16 31 43.4	+0.7
OKC				*e*SG	Sb	16 32 10.7	+0.8
	comp=Z,46nm,1.0s						
VRAC	Vranov	2.29	173	*e*PN	Pn	16 31 42.0	+0.1
VRAC				*e*SG	Sb	16 32 13.8	0.0
TREC	Trest	2.32	191	*e*PG	Pb	16 31 45.9	+0.3
TREC				*e*SG	Sb	16 32 15.8	+1.0
	comp=Z,15nm,0.4s						
PBCC	Pribram	2.34	217	*e*SG	Sg	16 32 16.8	-1.1
	comp=Z,6.8nm,0.3s						
KRUC	Moravsky	2.52	176	*e*PN	Pn	16 31 45.2	+0.1
KRUC				*e*SG	Sb	16 32 21.7	+1.2
NKC	Novy Kostel	2.70	242	*e*PG	Pg	16 31 53.8	-0.9
NKC				*e*SG	Sg	16 32 30.7	+1.0
	comp=Z,27nm,0.5s						
KHC	Kasperske Hory	2.95	215	*e*PN	Pn	16 31 51.6	+0.6
KHC				*e*PG	Pb	16 31 56.8	+0.5
KHC				*e*SN	Sn	16 32 25.5	-1.6
KHC				*e*SG	Sg	16 32 35.5	-2.1
	comp=Z,8.0nm,0.4s						
LANS	Liptovska Anna	3.22	138	*e*PG	Pg	16 32 05.7	+1.1
LANS				*e*SG	Sg	16 32 45.1	-1.3
MODS	Modra-Piesok	3.29	167	*e*PG	Pg	16 32 05.8	0.0
MODS				*e*		16 32 46.0	
BSD	Bornholm Skovb	3.62	349	*i* P	Pn	16 32 00.8	+0.6
BSD				*i* S	Sn	16 32 42.6	-1.0
BSD	Bornholm Skovb	3.62	349	*e*	Pn	16 32 00.2	0.0
	baz=187,slow=16						
BSD				*i* P	Pb	16 32 00.9	-6.9
BSD				*i* S	Sn	16 32 42.6	-1.0
CONA	Conrad Observa	3.66	183	*i* Pn	Pn	16 32 01.9	+1.2
	comp=Z,0.7nm,0.2s						
CONA				Sg	Sg	16 32 58.8	-1.5
	comp=Z,6.3nm,0.3s						
MOA	Molln	3.92	199	*i* Pn	Pn	16 32 04.8	+0.4
	comp=Z,0.9nm,0.2s						
MOA				*i* Sn	Sn	16 32 52.7	+1.5
	comp=Z,4.1nm,0.3s						
MOA				Sg	Sg	16 33 08.7	-0.2
	comp=Z,3.2nm,0.3s						
ARSA	Arzberg	4.35	186	Sg	Sg	16 33 22.4	-0.1
	comp=Z,3.2nm,0.4s						

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*IDC **16** 16:36:57.1±5.6,42°.47N×149°.28E,h0^{km},mb3.5/2, mb1 3.8/4,mb1mx3.3/49,mbtmp3.6/4,ML3.4/2,Error ellipse: s-maj=124.3km s-min=37.8km az=171.0*

*MOS **16** 16:37:19.9±0.7,44°.84N×147°.53E,h134^{km},mb4.0/1,Error ellipse: s-maj=48.9km s-min=13.9km az=48.5*

*SKHL **16** 16:37:20.7±0.3,44°.76N×147°.53E,h138^{km}±4^{km},mb4.4/4, msh5.2/4*

*JMA **16** 16:37:22.5±0.4,44°.69N×147°.36E,h125^{km}±5^{km},M3.1*

ISC 16 16:37:20.6±0.9,**44°.7N**±0°.1×**147°.6E**±0°.1,**h137^{km}**±7^{km},**n33,** σ**0^s.90**/47,**2C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.58	19	*e*P	Pn	16 37 40.6	-0.2
KUR				AMB	AMB	16 37 44.8	
	54nm,0.2s						
KUR				*i* S	Sn	16 37 55.8	-0.4
KUR				A	A	16 37 59.0	
	168nm,0.3s						
KUR				A	A	16 37 59.0	
	246nm,0.3s						
KUR	Kuril'sk	0.58	19	*e*PN	Pn	16 37 40.6	-0.2
KUR				*i* S	Sn	16 37 55.8	-0.4
KUR				pmax	pmax		
	comp=E,31µm,0.2s						
KUR				pmax	pmax		
	comp=Z,54µm,0.2s						
KUR				smax	smax		
	comp=E,107nm,0.4s						
KUR				smax	smax		
	comp=N,62nm,0.3s						
YUK	Yuzh-Kuril'sk	1.41	243	*i* P	Pn	16 37 48.8	+0.7
YUK				AMB	AMB	16 37 55.0	
	comp=N,220nm,0.4s						
YUK				*i* S	Sn	16 38 10.0	+1.0
YUK				A	A	16 38 13.0	
	comp=N,381nm,0.4s						
YUK				A	A	16 38 13.0	
	comp=N,398nm,0.4s						
YUK	Yuzh-Kuril'sk	1.41	243*c*	*i*PN	Pn	16 37 48.3	+0.2
YUK				*i* S	Sn	16 38 09.3	+0.3
YUK				pmax	pmax		
	comp=Z,219µm,0.4s						
YUK				pmax	pmax		
	comp=N,101µm,0.3s						
YUK				pmax	pmax		
	comp=E,155µm,0.4s						
YUK				smax	smax		
	comp=E,352nm,0.5s						
YUK				smax	smax		
	comp=N,281nm,0.4s						
GRPR	Tuman	1.48	243	*e*P	Pn	16 37 49.3	+0.4
GRPR				AMB	AMB	16 37 51.0	
	comp=N,185nm,0.3s						
GRPR				*i* S	Sn	16 38 11.0	+0.5
GRPR				A	A	16 38 16.0	
	comp=N,350nm,0.3s						
GRPR				A	A	16 38 16.0	
	comp=N,200nm,0.3s						

GRPR	Tuman	1.48	243	*e*PN	Pn	16 37 49.1	+0.2
GRPR				*i* S	Sn	16 38 11.5	+1.0
GRPR				pmax	pmax		
	comp=Z,185nm,0.3s						
GRPR				pmax	pmax		
	comp=N,67nm,0.1s						
GRPR				pmax	pmax		
	comp=E,32nm,0.1s						
GRPR				smax	smax		
	comp=E,200nm,0.3s						
GRPR				smax	smax		
	comp=N,350nm,0.1s						
GLVR	Golovnino	1.77	238	*e*P	Pn	16 37 53.3	+1.1
GLVR				AMB	AMB	16 37 59.0	
	comp=N,40nm,0.4s						
GLVR				*e*S	Sn	16 38 17.5	+1.2
GLVR				A	A	16 38 24.0	
	comp=N,495nm,0.4s						
GLVR				A	A	16 38 24.0	
	comp=N,354nm,0.4s						
GLVR	Golovnino	1.77	238	*e*PN	Pn	16 37 53.7	+1.5
GLVR				*e*S	Sn	16 38 18.0	+1.7
GLVR				pmax	pmax		
	comp=Z,80nm,0.2s						
GLVR				pmax	pmax		
	comp=N,31nm,0.1s						
GLVR				smax	smax		
	comp=N,495nm,0.4s						
GLVR				smax	smax		
	comp=E,354nm,0.3s						
RUSJ	Misakicho	1.78	252	*e*PN	Pn	16 37 51.9	-0.4
NEM2	Nemuro 2	1.88	226	P	Pn	16 37 53.6	+0.1
NEM2				*e*S	Sn	16 38 16.9	-1.7
NMR	Nemuro--Hokkai	1.89	226	*i* P	Pn	16 37 53.0	-0.5
NMR				*i* S	Sn	16 38 17.0	-1.7
NMR	Nemuro--Hokkai	1.89	226	⇑*i*PN	Pn	16 37 53.6	+0.1
NMR				*i* S	Sn	16 38 18.0	-0.7
JRA	Rausu	1.93	248	P	Pn	16 37 53.8	-0.2
JNSB	Nemuroshibetsu	2.08	245	P	Pn	16 37 56.1	+0.3
JNK	Nakash	2.35	243	P	Pn	16 37 59.3	+0.2
JKHN	Kushirohamanak	2.38	229	P	Pn	16 37 59.9	+0.3
JKHN				*e*S	Sn	16 38 28.8	-0.7
JAK	Akkeshi	2.69	232	P	Pn	16 38 03.9	+0.4
JAK				*e*S	Sn	16 38 34.8	-1.7
JTKR	Abashiri--Toko	2.74	256	P	Pn	16 38 03.5	-0.6
JAR	Ashorobuto	3.09	245	P	Pn	16 38 09.7	+1.1
JMP	Maruseppu	3.12	259	P	Pn	16 38 08.2	-0.7
JKK2	Kamakawa 2	3.58	259	P	Pn	16 38 14.8	-0.1
JKA	Kamikawa-asahi	3.63	263	*e*P	Pn	16 38 15.6	+0.1
ASAJ	Asahikawa	3.63	263	Pn	Pn	16 38 15.6	0.0
	comp=E,1.6nm,0.3s,baz=40,slow=5.2,SNR=24						
ASAJ	Asahikawa	3.63	263	PN	Pn	16 38 15.6	0.0
JCH	Churui	3.71	238	P	Pn	16 38 17.1	+0.5
JCH				*e*S	Sn	16 38 58.1	-1.9
JNBK	Urakawa-nobuka	4.27	237	P	Pn	16 38 23.8	-0.2
JKB	Kayabe	5.55	242	P	Pn	16 38 39.7	-1.3
PETK	Petropavlovsk-	10.72	35	Pn	Pn	16 39 49.3	-1.0
	comp=E,0.4nm,0.3s,baz=177,slow=10,SNR=7.1						
PETK	Petropavlovsk-	10.72	35	PN	Pn	16 39 49.3	-1.0
ILAR	Eielson Array	40.54	37	P	P	16 44 47.1	+1.2
	comp=E,0.5nm,0.8s,baz=266,slow=5.8,SNR=6.4						
ILAR	Eielson Array	40.54	37	P	P	16 44 47.1	+1.2
YKA	Yellowknife Ar	54.84	34	P	P	16 46 36.4	+0.3
	comp=E,0.4nm,0.6s,baz=302,slow=6.2,SNR=8.2						
YKA	Yellowknife Ar	54.84	34	P	P	16 46 36.4	+0.3

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*NEIC **16** 16:42:46.8±1.5, 13°.67N±0°.07×145°.4E±0°.1, h56km±12km, mb4.4/10, Error ellipse: s-maj=18.8km s-min=8.7km az=76.0*

*IDC **16** 16:42:48.1±0.9, 13°.62N×145°.19E, h47km±7km, mb3.1/6, mb1 3.4/6, mb1mx3.2/43, mbtmp3.3/6, MS2.7/2, Ms1 2.7/2, ms1mx2.3/19, Error ellipse: s-maj=18.2km s-min=15.4km az=168.0*

ISC 16 16:42:46.8±0.6**, 13°.60N**±0°.08×**145°.41E**±0°.08**, h45km, n25, σ1§10**/23**, mb3.5**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.53	269	P	Pn	16 42 58.7	+0.6
	812nm,0.3s,baz=215,slow=20,SNR=662						
GUMO				S	Sn	16 43 06.0	-0.1
	1µm,0.3s,baz=296,slow=20,SNR=17						
JCJ	Chichijima	13.76	348	LR	LR	16 49 48.8	
	comp=Z,28nm,20.6s,baz=133,slow=31						
PATS	Pohnpei	14.36	117	Pn	Pn	16 46 08.0	+0.5
MANU	Manus Island	15.66	173	Pn	Pn	16 46 25.5	+0.9
MANU				IAmb	IAmb	16 46 33.4	
	comp=Z,18nm,1.5s						
RABL	Rabaul	18.91	159	P	P	16 47 03.4	-0.4
RABL				IAmb	IAmb	16 47 17.2	
	comp=Z,13nm,0.7s						
H11N1	WAKE ISLAND Hy	21.45	71	T	T	17 10 29.4	
	baz=257,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	21.46	71	T	T	17 10 25.9	
	baz=257,slow=75,SNR=3.6						
H11N3	WAKE ISLAND Hy	21.47	71	T	T	17 10 28.5	
	baz=257,slow=75,SNR=5.0						
JGF	Kuroka	23.07	343	P	P	16 47 46.8	-1.7
JGF				IAmb	IAmb	16 48 03.5	
	comp=Z,24nm,1.4s						
MJAR	Matsushiro Arr	23.74	345	LR	LR	16 56 12.1	
	comp=Z,23nm,21.9s,baz=125,slow=34						
WR0	Warramunga Arr	35.02	198	P	P	16 49 35.4	+0.1
WR0				IAmb	IAmb	16 49 37.5	
	comp=Z,6.4nm,1.2s						
WRAB	Tennant Creek	35.05	198	P	P	16 49 35.4	-0.2
WB2	Warramunga Arr	35.06	198	P	P	16 49 35.0	-0.7
WB2				IAmb	IAmb	16 49 35.6	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	35.07	198	P	P	16 49 35.4	-0.3
	comp=Z,0.5nm,0.6s,baz=24,slow=9.5,SNR=5.9						
WRA				pP	pwP	16 49 49.9	-0.3
	comp=Z,0.3nm,0.5s,baz=22,slow=9.4,SNR=2.5						
WRA	Warramunga Arr	35.07	198	P	P	16 49 33.5	-2.2
SANVU	Saraoutou	36.02	142	P	P	16 49 44.2	+0.3
AS31	Alice Springs	38.71	197	P	P	16 50 04.2	-2.4
ASAR	Alice Springs	38.71	197	P	P	16 50 06.8	+0.2
	comp=Z,0.2nm,0.6s,baz=22,slow=12,SNR=13						
ASAR				pP	pwP	16 50 21.1	-0.8
	comp=Z,0.2nm,0.5s,baz=17,slow=14,SNR=2.6						
PETK	Petropavlovsk-	40.61	11	P	P	16 50 20.9	-1.2
CMAR	Chiang Mai Arr	44.83	283	P	P	16 50 57.7	+0.9
	comp=Z,0.2nm,0.5s,baz=75,slow=6.3,SNR=2.1						
BBOO	Buckleboo	47.01	191	P	P	16 51 12.9	-0.8
BBOO				IAmb	IAmb	16 51 31.6	
	comp=Z,14nm,1.2s						
MKAR	Makanchi Array	61.85	316	P	P	16 53 02.3	+0.9
	comp=Z,0.1nm,0.4s,baz=89,slow=9.1,SNR=5.1						
ILAR	Eielson Array	68.33	25	P	P	16 53 43.5	+0.3
	comp=Z,0.2nm,0.6s,baz=244,slow=5.9,SNR=5.8						
ILAR				pP	pwP	16 53 57.8	-1.0
	comp=Z,0.3nm,0.4s,baz=251,slow=5.5,SNR=3.0						
YKA	Yellowknife Ar	82.61	27	P	P	16 55 06.6	+1.7
	comp=Z,0.1nm,0.4s,baz=278,slow=8.7,SNR=2.3						
NOA	NORSAR Array B	97.22	339	P	Pdif	16 56 15.2	+0.5
	comp=Z,1.7nm,0.9s,baz=67,slow=4.6,SNR=1.4						

IDC 16 16:49:39.2±1.6**, 27°.98S**×**67°.76W, h0km, mb3.9**/2**, mb1 3.9**/2**, mb1mx3.5**/28**, mbtmp3.9**/2**, Error ellipse: s-maj=122.3km s-min=48.6km az=87.0, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	55.85	160	P	P	16 59 17.1	-1.0
	0.6nm,0.4s,baz=270,slow=12,SNR=1.7						
QSPA	South Pole Qui	62.24	180	P	P	17 00 03.5	+0.9
	0.7nm,0.5s,baz=138,slow=8.1,SNR=7.6						
ASAR	Alice Springs	124.56	204	PKP	PKPdf	17 08 40.2	-1.0
	0.2nm,0.5s,baz=137,slow=1.7,SNR=8.3						
WRA	Warramunga Arr	127.78	207	PKP	PKPdf	17 08 46.9	-0.5
	0.7nm,1.0s,baz=155,slow=2.0,SNR=6.0						
MKAR	Makanchi Array	149.96	43	PKPbc	PKPbc	17 09 31.8	+0.3
	0.1nm,0.6s,baz=279,slow=3.5,SNR=1.7						

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*IDC **16** 16:52:45.8±1.3, 33°.79S×56°.36E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, MS3.3/3, Ms1 3.2/3, ms1mx2.8/36, Error ellipse: s-maj=48.7km s-min=33.5km az=101.0*

ISC 16 16:52:47.1±1.3**, 33°.8S**±0°.2×**56°.3E**±0°.4**, h10km, n13, σ0§62**/7**, mb3.7**/4**, MS3.5**/3**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	26.95	273	LR	LR	17 08 12.7	
	comp=Z,25nm,18.5s,baz=4.5,slow=34						
H08S1	Diego Carcia H	29.99	34	T	T	17 30 06.0	
	baz=207,slow=76,SNR=20						
H08S2	Diego Garcia H	30.00	34	T	T	17 30 10.8	
	baz=207,slow=76,SNR=16						
H08S3	Diego Garcia H	30.01	34	T	T	17 30 06.1	
	baz=207,slow=76,SNR=21						
MAW	Mawson	34.12	175	LR	LR	17 10 04.9	
	comp=Z,80nm,18.8s,baz=248,slow=30						
QSPA	South Pole Qui	56.43	180	P	P	17 02 28.9	+0.3
	1.3nm,0.7s,baz=269,slow=3.2,SNR=8.1						
VNDA	Vanda	60.59	166	LR	LR	17 26 16.0	
	comp=Z,33nm,20.9s,baz=214,slow=33						
CMAR	Chiang Mai Arr	65.96	45	P	P	17 03 34.4	+0.7
	0.5nm,0.7s,baz=225,slow=7.3,SNR=5.9						
ASAR	Alice Springs	67.41	104	P	P	17 03 42.8	-0.3
	0.1nm,0.5s,baz=236,slow=5.7,SNR=5.6						
WRA	Warramunga Arr	69.55	101	P	P	17 03 56.2	-0.3
	0.3nm,0.6s,baz=255,slow=8.8,SNR=2.5						
INK	Inuvik	144.94	6	PKP	PKPab	17 12 21.8	-0.9
	1.2nm,0.8s,baz=19,slow=4.9,SNR=4.4						
ILAR	Eielson Array	145.89	17	PKPbc	PKPdf	17 12 25.2	0.0
	0.2nm,0.6s,baz=322,slow=4.5,SNR=2.4						
YKA	Yellowknife Ar	150.66	351	PKPbc	PKiKP	17 12 39.4	+0.2
	0.5nm,0.8s,baz=22,slow=2.2,SNR=5.4						

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*IDC **16** 16:56:16.7±1.5, 30°.29N×138°.58E, h434km±19km, mb2.8/5, mb1 2.9/9, mb1mx2.7/39, mbtmp3.5/9, Error ellipse: s-maj=50.9km s-min=14.4km az=92.0*

ISC 16 16:56:17.0±1.0**, 30°.3N**±0°.1×**138°.5E**±0°.3**, h440km, n9, σ0§73**/9**, mb3.1**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.99	20	P	P	16 57 22.6	-0.5
	14nm,0.3s,baz=296,slow=17,SNR=1.1						
MJAR	Matsushiro Arr	6.22	358	P	P	16 57 52.0	-1.1
	0.1nm,0.3s,baz=165,slow=11,SNR=2.6						
USRK	Ussuriysk Ar.	14.80	341	P	P	16 59 26.6	+0.5
	baz=161,slow=8.8,SNR=1.1						
KLR	Kul'dur	19.59	347	P	P	17 00 15.9	+1.0
	0.1nm,0.3s,baz=171,slow=9.1,SNR=5.0						
WRA	Warramunga Arr	50.13	185	P	P	17 04 30.4	-0.1
	0.6nm,0.5s,baz=0.8,slow=7.8,SNR=8.9						
ASAR	Alice Springs	53.85	185	P	P	17 04 57.3	-0.2
	0.2nm,0.4s,baz=358,slow=5.6,SNR=15						
INK	Inuvik	61.46	25	P	P	17 05 49.6	+0.7
	0.4nm,0.5s,baz=264,slow=4.4,SNR=1.7						
YKA	Yellowknife Ar	70.83	28	P	P	17 06 47.4	-0.2
	0.1nm,0.4s,baz=295,slow=6.1,SNR=2.5						
FINES	FINESS Array B	73.64	332	P	P	17 07 04.0	-0.1
	1.9nm,0.9s,baz=18,slow=6.3,SNR=1.1						

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*BJI **16** 17:15:46.3±0.0, 4°.74S×151°.72E, h167km, mB5.0/25, mb4.5/41*

*NOU **16** 17:15:46.8, 4°.52S×151°.77E, h171km, mb4.9, New Britain Region, P.N.G.*

*NEIC **16** 17:15:47.5±2.1, 4°.69S±0°.08×151°.81E±0°.07, h170km±5km, mb5.0/57, Error ellipse: s-maj=11.9km s-min=9.5km az=220.0*

*DJA **16** 17:15:47.5±0.4, 5°S±3°×15°2E±°, h169km±4km, M4.7/40, mB5.1/7, mb4.7/40, MLv4.9/3, Mw(mB)4.5/7*

*IDC **16** 17:15:47.5±0.6, 4°.73S×151°.84E, h168km±5km, mb4.2/16, mb1 4.3/20, mb1mx4.1/40, mbtmp4.7/20, MS3.2/5, Ms1 3.2/5, ms1mx2.8/28, Error ellipse: s-maj=13.5km s-min=10.0km az=68.0*

ISC 16 17:15:47.7±0.4**, 4°.75S**±0°.05×**151°.78E**±0°.05**, h167km**±3km**, h167km:pP-P, n198, σ1§21**/221**, mb4.7**/73**, 3C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.67	35		Pn	17 16 11.0	-0.8
RABL	Rabaul	0.67	35	P	Pn	17 16 11.1	-0.8
MANU	Manus Island	5.16	301		Pn	17 17 02.3	-1.2
PMG	Port Moresby	6.51	224	P	Pn	17 17 21.9	+0.5
	19nm,0.3s,baz=43,slow=6.4,SNR=57						
PMG				S	Sn	17 18 35.6	+0.6
	47nm,0.3s,baz=162,slow=22,SNR=15						
PMG				LR	LR	17 19 11.9	
	comp=Z,143nm,20.0s,baz=47,slow=31						
PMG	Port Moresby	6.51	224		Pn	17 17 21.7	+0.3
PMG	Port Moresby	6.51	224	P	Pn	17 17 22.0	+0.6
HNR	Honiara	9.34	120	P	Pn	17 17 57.3	-1.5
	2.5nm,0.3s,baz=231,slow=1.2,SNR=16						
HNR				LR	LR	17 21 22.0	
	comp=Z,93nm,18.9s,baz=61,slow=36						
HNR	Honiara	9.34	120		Pn	17 17 58.2	-0.7
HNR	Honiara	9.34	120	P	Pn	17 17 59.3	+0.5
JAY	Jayapura	11.27	281	P	Pn	17 18 23.3	-0.9
	0.5nm,0.3s,baz=84,slow=11,SNR=4.6						
JAY	Jayapura	11.27	281	P	P	17 18 28.9	-2.6
GENI	Genyem	11.78	280	P	Pn	17 18 31.3	+0.5
	55nm,1.3s						
COEN	Coen	12.48	222		Pn	17 18 42.0	+2.3
MTSU	Mount Surprise	15.18	208	P	P	17 19 15.8	+1.1
	baz=15,SNR=66						
CTA	Charters Tower	16.17	199	P	Pn	17 19 27.4	+1.6
	1.3nm,0.3s,baz=20,slow=13,SNR=11						
CTAO	Charters Tower	16.17	199	P	Pn	17 19 27.4	+1.6
CTAO				IAmb	IAmb	17 19 30.3	
	comp=Z,62nm,1.4s						
SANVU	Saraoutou	18.52	126	Pn	Pn	17 19 53.1	-0.5
SANVU				IAmb	IAmb	17 19 56.2	
	comp=Z,67nm,1.0s						
SANVU	Saraoutou	18.52	126	P	Pn	17 19 53.2	-0.5
GUMO	Guam	19.47	339	P	P	17 20 01.4	-0.4
FAKI	Fak Fak	19.57	275		P	17 20 03.6	+0.6
FAKI	Fak Fak	19.57	275	P	P	17 20 03.5	+0.6
	comp=Z,26nm,0.9s						
QIS	Mount Isa	19.68	216	P	P	17 20 04.4	+0.3
	baz=20,SNR=23						
EIDS	Eidsvold	20.52	182	P	P	17 20 13.5	+0.6
	baz=20,SNR=16						
EIDS	Eidsvold	20.52	182	P	P	17 20 13.3	+0.4
EIDS				IAmb	IAmb	17 20 16.0	
	comp=Z,28nm,0.8s						
KDU	Kakadu	20.64	246	P	P	17 20 13.8	-0.6
	baz=20,SNR=182						
KWAJ	Kwajalein Atol	20.75	50	P	P	17 20 16.0	+0.6
SIJI	Sorong	20.84	280	P	P	17 20 17.6	+1.0
	comp=Z,20nm,0.5s,baz=136,slow=5.8,SNR=22						
SWI	Sorong	20.85	280	P	P	17 20 17.8	+1.1
	comp=Z,37nm,0.8s						
RMQ	Roma	21.81	187	P	P	17 20 27.6	+0.9
	baz=22,SNR=18						
MTN	Manton Dam	21.92	247	P	P	17 20 27.1	-0.8
	baz=22,SNR=15						
MTN	Manton Dam	21.92	247	P	P	17 20 27.1	-0.8
MTN				IAmb	IAmb	17 20 29.3	
	comp=Z,64nm,1.1s						
DZM	Mont Dzumac	22.32	142	P	P	17 20 31.7	-0.2
	comp=Z,7.4nm,0.7s,baz=306,slow=11,SNR=12						
DZM	Mont Dzumac	22.32	142	P	P	17 20 31.4	-0.5
WB0	Warramunga Arr	22.58	227	P	P	17 20 33.4	-0.8
WB0				IAmb	IAmb	17 20 36.0	
	comp=Z,97nm,1.0s						
WB0					S	17 24 27.1	-2.1
WR0	Warramunga Arr	22.59	227	P	P	17 20 33.6	-0.7
WR0				IAmb	IAmb	17 20 35.7	
	comp=Z,69nm,0.8s						
WR0					S	17 24 28.8	-0.7
WRAB	Tennant Creek	22.71	227	P	P	17 20 35.1	-0.4
WRAB					S	17 24 29.0	-2.4
WB2	Warramunga Arr	22.72	227	P	P	17 20 35.2	-0.3
WB2					S	17 24 29.9	-1.6
WRA	Warramunga Arr	22.73	227	P	P	17 20 35.5	-0.2
	comp=Z,74nm,0.6s,baz=50,slow=10,SNR=263						
WRA				S	S	17 24 30.3	-1.3
	comp=Z,6.0nm,0.9s,baz=49,slow=15,SNR=8.8						
WRA	Warramunga Arr	22.73	227	P	P	17 20 34.2	-1.4
QLP	Quilpie	22.88	198	P	P	17 20 37.1	+0.2
	baz=23,SNR=36						
AS31	Alice Springs	25.51	221	P	P	17 21 00.5	-0.4
ASAR	Alice Springs	25.51	221	P	P	17 21 00.5	-0.5
	comp=Z,5.7nm,0.4s,baz=53,slow=9.2,SNR=182						
ASAR				pP	pP	17 21 36.0	+0.4
	comp=Z,9.7nm,0.8s,baz=48,slow=12,SNR=4.5						
ASAR				PcP	PcP	17 24 28.3	+0.2
	comp=Z,2.1nm,1.0s,baz=77,slow=2.1,SNR=4.4						
ASAR				S	S	17 25 14.3	-1.7
	comp=Z,1.5nm,0.9s,baz=49,slow=14,SNR=3.6						
ASAR				LR	LR	17 31 14.0	
	comp=Z,62nm,18.3s,baz=337,slow=36						
ASAR	Alice Springs	25.51	221	P	P	17 20 59.5	-1.4
ARMA	Armidale	25.54	180	P	P	17 21 02.2	+1.1
	baz=26,SNR=8.1						
ARMA	Armidale	25.54	180	P	P	17 21 01.2	+0.1
ARMA				IAmb	IAmb	17 21 03.4	
	comp=Z,28nm,1.1s						
SANI	Sanana	25.88	275	P	P	17 21 07.0	+2.7
CMSA	Cobar Meteorol	27.26	191	P	P	17 21 16.3	0.0
	baz=27,SNR=16						
MGCD	Mangrove Creek	28.32	181	P	P	17 21 27.0	+1.2
	baz=28,SNR=5.9						
BATI	Baumata	28.39	257	P	P	17 21 27.6	+0.9
	comp=Z,11nm,0.4s,baz=63,slow=2.9,SNR=7.2						
BATI				LR	LR	17 34 20.5	
	comp=Z,100nm,18.3s,baz=68,slow=39						
BATI	Baumata	28.39	257	P	P	17 21 25.3	-1.4
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	28.63	198	P	P	17 21 28.2	-0.4
	baz=29,SNR=4.8						
STKA	Stephens Creek	28.63	198	P	P	17 21 28.1	-0.4
	comp=Z,5.9nm,0.7s,baz=21,slow=8.0,SNR=16						
STKA	Stephens Creek	28.63	198	P	P	17 21 28.0	-0.6
FITZ	Fitzroy Crossi	28.80	240	P	P	17 21 29.3	-1.0
	baz=29,SNR=56						
FITZ	Fitzroy Crossi	28.80	240	P	P	17 21 29.2	-1.0
	comp=Z,5.9nm,0.3s,baz=64,slow=8.2,SNR=89						
FITZ				LR	LR	17 33 01.6	
	comp=Z,40nm,19.4s,baz=28,slow=36						
FITZ	Fitzroy Crossi	28.80	240	P	P	17 21 29.1	-1.1
FITZ				IAmb	IAmb	17 21 30.4	
	comp=Z,15nm,0.9s						
GTOI	Gorontalo	29.23	280	P	P	17 21 36.0	+1.9
	comp=Z,11nm,1.0s						
EDFI	Ende, Flores	30.14	261	P	P	17 21 42.2	-0.1
	comp=Z,6.1nm,0.8s						
APSI	Ampana	30.33	276	P	P	17 21 44.1	+0.3
	comp=Z,19nm,1.1s						
CNB	Canberra Magne	30.50	184	P	P	17 21 46.2	+1.0
	baz=30,SNR=13						
CAN	Canberra	30.53	184	P	P	17 21 46.2	+0.8
CAN				IAmb	IAmb	17 21 47.0	
	comp=Z,23nm,0.6s						
HTT	Hallett	30.95	201	P	P	17 21 48.9	-0.2
	baz=31,SNR=14						
BBOO	Buckleboo	31.55	206	P	P	17 21 53.7	-0.6
	baz=32,SNR=27						
BBOO	Buckleboo	31.55	206	P	P	17 21 53.6	-0.6
BBOO				IAmb	IAmb	17 21 54.6	
	comp=Z,36nm,0.8s						
KAPI	Kappang	31.91	268	P	P	17 21 59.8	+2.1
KAPI				IAmb	IAmb	17 22 00.6	
	comp=Z,25nm,1.2s						
MPSI	Mapaga	32.25	278	P	P	17 22 00.2	-0.4
	comp=Z,12nm,0.8s						
ARPS	Mount Arapiles	33.15	195	P	P	17 22 08.8	+0.6
	baz=33,SNR=8.2						
TOO	Toolangi	33.17	189	P	P	17 22 09.6	+1.1
TOO				IAmb	IAmb	17 22 13.2	
	comp=Z,80nm,1.8s						
PLAI	Plampang	34.00	261	P	P	17 22 13.2	-2.6
FORT	Forrest	34.20	218	P	P	17 22 16.6	-0.7
	baz=34,SNR=18						
FORT	Forrest	34.20	218	P	P	17 22 16.5	-0.8
FORT				IAmb	IAmb	17 22 17.4	
	comp=Z,45nm,0.7s						
TWSI	Taliwang, Sumb	34.87	262	P	P	17 22 20.7	-2.7
PSA00	Pilbara Seismi	35.19	239	P	P	17 22 25.4	-0.6
PSA00				IAmb	IAmb	17 22 26.0	
	comp=Z,26nm,1.1s						
OUZ	Omahuta	36.41	149	P	P	17 22 38.4	+2.2
OUZ				IAmb	IAmb	17 23 06.8	
	comp=Z,85nm,2.0s						
MEEK	Meekatharra	38.43	232	P	P	17 22 52.8	-0.6
	baz=38,SNR=71						
KMBL	Kambalda	38.59	223	P	P	17 22 53.9	-0.7
	baz=38,SNR=7.7						
GIRL	Giralia	40.41	240	P	P	17 23 07.9	-1.9
	baz=40,SNR=8.0						
GIRL	Giralia	40.41	240	P	P	17 23 10.2	+0.5
GIRL					sP	17 24 04.2	-0.4
QRZ	Quartz Range	40.47	156	P	P	17 23 11.0	+1.0
URZ	Urewera	40.55	149	P	P	17 23 10.8	+0.1
	comp=Z,4.6nm,0.4s,baz=142,slow=20,SNR=6.6						
URZ	Urewera	40.55	149	P	P	17 23 11.6	+1.0
URZ				IAmb	IAmb	17 23 42.6	
	comp=Z,26nm,1.3s						
UGM	Wanagama	41.11	263	P	P	17 23 14.9	-0.8
THZ	Tophouse	41.41	156	P	P	17 23 17.9	+0.2
THZ				IAmb	IAmb	17 24 47.1	
	comp=Z,76nm,1.5s						
TUWZ	Tuamarina	41.56	155	P	P	17 23 19.0	+0.2
MORW	Morawa	41.59	230	P	P	17 23 17.6	-1.8
	baz=42,SNR=4.4						
MORW	Morawa	41.59	230	P	P	17 23 18.1	-1.3
YHNB	Yeheng	41.59	316	P	P	17 23 18.7	-0.8
YHNB				IAmb	IAmb	17 24 49.4	
	comp=Z,158nm,1.8s						
KLBR	Kellerberrin	41.61	226	P	P	17 23 18.0	-1.5
	baz=42,SNR=5.8						
BSWZ	Blackbirch Sta	41.77	155	P	P	17 23 21.3	+0.7
BLDU	Ballidu	41.85	228	P	P	17 23 20.2	-1.2
	baz=42,SNR=17						
KSM	Kuching	41.89	277	P	P	17 23 22.1	+0.1
KSM				IAmb	IAmb	17 24 23.4	
	comp=Z,47nm,1.3s						
BHW	Baring Head	41.95	154	P	P	17 23 21.5	-0.5
BFZ	Birch Farm	41.99	152	P	P	17 23 22.6	+0.3
BFZ				IAmb	IAmb	17 23 22.8	
	comp=Z,42nm,1.0s						
LTZ	Lake Taylor	42.02	157	P	P	17 23 23.2	+0.6
LTZ				IAmb	IAmb	17 24 16.9	
	comp=Z,159nm,1.9s						
MSWZ	Moikau Station	42.12	153	P	P	17 23 23.3	-0.1
KHZ	Kahutara	42.21	156	P	P	17 23 23.4	-0.7
PLWZ	Palliser	42.24	154	P	P	17 23 23.9	-0.6
RPZ	Rata Peaks	42.37	159	P	P	17 23 26.0	+0.5
	comp=Z,15nm,0.8s,baz=306,slow=2.7,SNR=6.3						
RPZ	Rata Peaks	42.37	159	P	P	17 23 25.9	+0.5
WKZ	Wanaka	42.68	162	P	P	17 23 28.7	+0.7
NWAO	Narrogin (SRO)	42.70	225	P	P	17 23 27.7	-0.6
NWAO				IAmb	IAmb	17 24 28.7	
	comp=Z,48nm,1.6s						
DCZ	Deep Cove	42.72	164	P	P	17 23 28.7	+0.5
MLZ	Mavora Lakes	42.90	163	P	P	17 23 30.1	+0.3
MLZ				IAmb	IAmb	17 24 29.7	
	comp=Z,156nm,1.8s						
MUN	Mundaring	42.93	227	P	P	17 23 29.7	-0.4
	baz=43,SNR=4.5						
JHS	Saijyo	43.26	337	P	P	17 23 32.3	-0.4
WHZ	Wether Hill Ro	43.33	164	P	P	17 23 33.3	+0.2
TNG	Tangerang	44.94	266	P	P	17 23 47.3	+0.9
	comp=Z,1µm,0.4s						
CGJI	Cibinong	45.89	265	P	P	17 23 51.9	-1.9
	comp=Z,28nm,1.1s						
KASI	Kota Agung	47.09	267	P	P	17 24 01.1	-2.1
	comp=Z,27nm,1.1s						
NJ2	Nanjing	48.17	322	*e*P	P	17 24 11.6	+0.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SDSI	Sungai Dareh	50.42	273	P	P	17 24 27.5	-1.1
	comp=Z,15nm,0.8s						
USRK	Ussuriysk Ar.	51.88	342	pP	pP	17 25 18.4	+2.2
	comp=Z,3.1nm,0.7s,baz=167,slow=9.7,SNR=4.9						
MNSI	Mandailing Nat	52.44	275	P	P	17 24 42.4	-1.2
	comp=Z,16nm,1.1s						
ENH	Enshi	53.38	314	P	P	17 24 50.5	+0.2
ENH				IAmb	IAmb	17 24 51.6	
	comp=Z,29nm,1.3s						
ENH					pwP	17 25 30.6	0.0
GSI	Gunungsitoli	54.49	275	P	P	17 24 56.9	-1.6
GSI				IAmb	IAmb	17 24 57.5	
	comp=Z,25nm,1.2s						
GSI	Gunungsitoli	54.49	275	P	P	17 24 57.4	-1.2
	comp=Z,18nm,1.1s						
XAN	Xi'an	55.89	317	P	P	17 25 08.1	-0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KMI	Kunming	56.12	304	⇑P	P	17 25 12.4	+2.1
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						

LAMP	Lampang	56.34	296	P	P	17 25 13.4	+1.7
PAYA	Payao	56.40	297	P	P	17 25 13.0	+0.8
CM35	Chiang Mai Arr	56.82	296	P	P	17 25 16.0	+0.9
CM36	Chiang Mai Arr	56.82	296	P	P	17 25 16.0	+0.9
CM34	Chiang Mai Arr	56.88	296	P	P	17 25 16.0	+0.5
CM04	Chiang Mai Arr	56.88	295	P	P	17 25 17.2	+1.7
CM09	Chiang Mai Arr	56.89	296	P	P	17 25 17.3	+1.7
CM01	Chiang Mai Arr	56.91	295	P	P	17 25 17.0	+1.3
CM05	Chiang Mai Arr	56.92	295	P	P	17 25 17.4	+1.7
CM02	Chiang Mai Arr	56.93	295	P	P	17 25 17.4	+1.6
CM31	Chiang Mai Arr	56.94	295	P	P	17 25 17.5	+1.5
CM31	Chiang Mai Arr	56.94	295	P	P	17 25 16.8	+0.9
CM31				IAmb	IAmb	17 25 18.5	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	56.94	295	P	P	17 25 17.2	+1.3
	comp=Z,7.8nm,0.8s,baz=111,slow=5.3,SNR=52						
CMAR				pP	pwP	17 25 55.9	-0.8
	comp=Z,1.4nm,0.8s,baz=117,slow=5.6,SNR=2.8						
CMAR	Chiang Mai Arr	56.94	295	P	P	17 25 16.4	+0.5
CMAR					pwP	17 25 57.0	+0.3
CM15	Chiang Mai Arr	56.95	295	P	P	17 25 17.0	+1.0
CM13	Chiang Mai Arr	56.96	295	P	P	17 25 17.6	+1.6
CM33	Chiang Mai Arr	57.05	296	P	P	17 25 17.0	+0.3
CHTO	Chiang Mai	57.05	296	P	P	17 25 17.2	+0.5
CHTO				IAmb	IAmb	17 25 19.0	
	comp=Z,19nm,1.3s						
CM32	Chiang Mai Arr	57.09	296	P	P	17 25 18.0	+1.0
CD2	Chengdu	57.93	311	P	P	17 25 22.1	-0.7
HHC	Hu-ho-hao-te	58.42	325	eP	P	17 25 26.8	+0.8
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,6.4s						
LZH	Lanzhou	60.49	316	⇑P	P	17 25 42.4	+2.0
LZH				pP	pwP	17 26 21.1	-0.5
LZH				sP	sP	17 26 40.0	+3.5
LZH				PP	PP	17 28 01.3	+5.5
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
GTA	Gaotai	64.93	318	⇓P	P	17 26 10.6	+0.9
GTA				pP	pwP	17 26 51.3	-0.1
GTA				sP	sP	17 27 08.6	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,60nm,7.6s						
GTA				LR	LR		
	comp=Z,70nm,14.9s						
GTA				LR	LR		
	comp=Z,140nm,16.0s						
GTA				LR	LR		
	comp=Z,100nm,16.0s						
ULN	Ulaanbaatar	65.42	329	P	P	17 26 13.0	+0.4
SONM	Songino Array	65.74	328	P	P	17 26 15.1	+0.4
	comp=Z,3.1nm,0.5s,baz=135,slow=5.5,SNR=12						
SONM				pP	pwP	17 26 55.6	+1.8
	comp=Z,1.4nm,0.6s,baz=104,slow=6.3,SNR=3.4						
SONM	Songino Array	65.74	328	P	P	17 26 14.8	+0.1
SONM					pP	17 26 54.3	+0.5
LSA	Lhasa	67.37	305	P	P	17 26 26.0	+0.2
TAPN	Taplejung	69.51	301	eP	P	17 26 38.8	-0.1
	comp=Z,25nm,1.1s						
ODAN	Odare	69.64	301	eP	P	17 26 39.6	-0.1
	comp=Z,24nm,0.7s						
RAMN	Ramite	70.34	301	eP	P	17 26 43.5	-0.5
	comp=Z,16nm,1.0s						
GUN	Gumba	71.23	301	eP	P	17 26 49.3	-0.1
	comp=Z,40nm,1.1s						
PKI	Pulchoki	71.53	301	eP	P	17 26 50.7	-0.6
	comp=Z,36nm,1.2s						
PKIN	Phulchoki	71.55	301	eP	P	17 26 50.4	-0.8
	comp=Z,30nm,1.3s						
KKN	Kakani	71.70	301	eP	P	17 26 51.8	-0.3
	comp=Z,10nm,0.6s						
DMN	Daman	71.80	301	eP	P	17 26 52.7	-0.1
	comp=Z,38nm,1.0s						
GKN	Gorkha	72.31	301	eP	P	17 26 55.6	0.0
VNDA	Vanda	72.92	178	P	P	17 26 58.7	+0.6
	comp=Z,4.3nm,0.9s,baz=327,slow=6.6,SNR=13						
VNDA	Vanda	72.92	178	P	P	17 26 58.3	+0.2
DANN	Dangsing	73.15	301	eP	P	17 27 00.0	-0.8
	comp=Z,12nm,0.7s						
WMQ	Urumqi	75.02	318	eP	P	17 27 11.4	+0.4
WMQ				S	SKiKP	17 36 24.8	+6.7
ZSN	Zaisan	78.18	320	eP	P	17 27 28.1	-0.5
	comp=Z,2.1nm,1.1s,baz=320						
MK31	Makanchi Array	79.62	319	P	P	17 27 36.1	-0.4
MK31				pP	pP	17 28 18.0	+1.0
MKAR	Makanchi Array	79.62	319	P	P	17 27 36.6	+0.1
	comp=Z,2.9nm,0.8s,baz=98,slow=7.3,SNR=23						
MKAR				pP	pwP	17 28 18.1	-1.0
	comp=Z,0.6nm,0.8s,baz=103,slow=5.2,SNR=2.4						
MKAR	Makanchi Array	79.62	319	P	P	17 27 36.1	-0.4
MKAR					pP	17 28 17.3	+0.3
MAKZ	Makanchi	79.83	319	P	P	17 27 36.8	-0.8
ZAA0	Zalesovo Array	80.55	327	P	P	17 27 39.5	-1.7
ZALV	Zalesovo Beam	80.55	327	P	P	17 27 40.4	-0.9
	comp=Z,2.0nm,0.4s,baz=113,slow=6.5,SNR=14						
ZALV				pP	pP	17 28 22.7	+0.4
	comp=Z,0.9nm,0.6s,baz=94,slow=4.6,SNR=2.3						
ZALV	Zalesovo Beam	80.55	327	P	P	17 27 40.0	-1.3
ZALV				pP	pP	17 28 21.2	-1.1
KPKS	Kokpek	81.11	315	eP	P	17 27 44.2	-0.4
	comp=Z,2.3nm,1.2s,baz=315						
SATY	Saty	81.19	315	eP	P	17 27 44.5	-0.7
	comp=Z,1.8nm,1.2s,baz=314						
TDK	Taldyqorghan	81.70	317	eP	P	17 27 47.5	-0.1
	comp=Z,6.0nm,0.9s,baz=316						
SEM	Semipalatinsk	82.02	322	eP	P	17 27 47.5	-1.9
	baz=322						
KSH	Kashi	82.13	311	P	P	17 27 52.4	+2.3
KSH				S	S	17 37 53.8	+2.6
KSH				pmax	pmax		
	comp=Z,27nm,1.2s						
KSH				pmax	pmax		
	comp=Z,540nm,4.9s						
KSH				LR	LR		
	comp=Z,420nm,5.3s						
KSH				LR	LR		
	comp=Z,510nm,6.4s						
MDOK	Medeo	82.18	315	eP	P	17 27 49.4	-1.0
	baz=314						
TNSS	Tian-Shan	82.23	314	eP	P	17 27 51.0	+0.1
	baz=314						
ILAR	Eielson Array	82.50	22	P	P	17 27 49.4	-1.9
	comp=Z,0.7nm,0.6s,baz=254,slow=5.0,SNR=11						
ILAR	Eielson Array	82.50	22	P	P	17 27 49.3	-1.9
KUU	Kurty	82.86	315	eP	P	17 27 52.5	-1.1
	comp=Z,5.7nm,0.9s,baz=315						
KURK	Kurchatov	83.10	322	P	P	17 27 53.7	-0.9
NIL	Nilore	83.11	305	P	P	17 27 54.6	-0.6
NIL				IAmb	IAmb	17 27 55.9	
	comp=Z,26nm,1.3s						
CHMS	Chumysh	83.79	314	P	P	17 27 58.5	+0.1
	SNR=5.9						
UCH	Uchtor	83.79	313	P	P	17 28 00.2	+1.2
	SNR=8.8						
AAK	Ala-Archa	83.89	314	P	P	17 27 59.9	+0.8
	SNR=5.6						
AAK	Ala-Archa	83.89	314	P	P	17 27 59.3	+0.2
SGDS	Sogindy	83.97	314	eP	P	17 27 59.0	-0.4
	comp=Z,3.6nm,1.2s,baz=314						
USP	Ospenovka	84.02	314	P	P	17 27 59.7	+0.1
	SNR=11						
AML	Almayashu	84.37	313	P	P	17 28 02.6	+0.8
	SNR=23						
EKS2	Erkin-Say	84.42	314	P	P	17 28 02.3	+0.6
	SNR=15						
BTLS	Baital	84.71	316	eP	P	17 28 02.1	-0.9
	comp=Z,4.6nm,1.2s,baz=316						
QSPA	South Pole Qui	85.21	180	P	P	17 28 04.6	-0.6
QSPA				IAmb	IAmb	17 28 06.1	
	comp=Z,20nm,1.2s						
MAW	Mawson	85.23	203	P	P	17 28 05.0	0.0
	comp=Z,3.5nm,0.8s,baz=97,slow=6.0,SNR=4.6						
DZA	Taraz	86.23	313	eP	P	17 28 10.1	-0.5
	baz=313						
BRZS	Berezniki	86.63	321	eP	P	17 28 11.7	-0.7
	baz=320						
KKAR	Karatay Array	86.86	314	P	P	17 28 12.6	-1.0
IUG	Iuzhnay	87.05	313	eP	P	17 28 14.2	-0.5
	comp=Z,4.3nm,1.3s,baz=312						
SYO	Syowa Base	93.38	200	⇑ePcP	PcP	17 28 45.2	+1.3
GERES	GERESS Array B	123.48	328	PKP	PKPdf	17 34 24.8	-0.6
	comp=Z,0.8nm,0.6s,baz=88,slow=2.4,SNR=6.2						
TORD	Torodi Ar. Bea	149.32	288	PKPbc	PKPbc	17 35 16.9	-0.9
	comp=Z,12nm,0.9s,baz=48,slow=2.4,SNR=31						
TORD				pPKPbc	pPKPdf	17 35 59.2	+1.9
	comp=Z,2.4nm,0.7s,baz=70,slow=2.5,SNR=3.6						
TORD	Torodi Ar. Bea	149.32	288		PKPbc	17 35 16.6	-1.2
DBIC	Dimbokro	156.68	276	PKPab	PKPab	17 35 53.0	-1.1
	comp=Z,1.5nm,0.6s,baz=90,slow=3.4,SNR=4.0						

REY ***16*** *17:38:19.3, 64°.67N×17°.38W, h8*^{km}

IDC ***16*** *17:38:20.5±0.4, 64°.55N×17°.47W, h0*^{km}*, mb4.2/27, mb1 4.4/30, mb1mx4.2/51, mbtmp4.2/30, ML3.5/3, MS3.8/42, Ms1 3.8/42, ms1mx3.8/56, Error ellipse: s-maj=14.9km s-min=7.8km az=18.0*

BGR ***16*** *17:38:22.9±0.0, 64°.90N×16°.82W, h10*^{km}*, mb4.6, Ms3.8*

NEIC ***16*** *17:38:22.1±1.5, 64°.61N±0°.08×17°.3W±0°.1, h8*^{km}*±3*^{km}*, mb4.7/97, Error ellipse: s-maj=11.1km s-min=8.9km az=195.0*

GCMT ***16*** *17:38:24.1±0.4, 64°.55N±0°.02×17°.24W±0°.09, h12*^{km}*, MW4.7/91, Moment Tensor Solution. s16,c19; s91,c115; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-1.40±.05;* $M_{\theta\theta}$*1.32±.05;* $M_{\phi\phi}$*0.07±.05;* $M_{r\theta}$*0.38±.19;* $M_{\theta\phi}$*0.06±.04;* $M_{\phi r}$*-0.72±.24; Best double couple:* M_0*1.55700×10*^{16} *NP1:*ϕ_s*69.00000°, δ41.00000°, λ-123.00000°. NP2:* ϕ_s*290.00000°, δ57.00000°, λ-64.00000°. Principal axes: T 1.3740, Plg8.0000°, Azm2.0000°; N 0.3640, Plg21.0000°, Azm95.0000°; P -1.7400, Plg67.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 17:38:21.3±0.7**, 64°.64N**±0°.02×**17°.33W**±0°.02**, h6**^{km}±4^{km}**, n301,** σ**1**^{s}**80**/310**, mb4.6**/106**, MS3.8**/40**, 12C-7D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.15	354	P	Pg	17 38 22.1	-2.3
	baz=3.5						
IDYN				S	Sg	17 38 24.6	-1.9
	baz=3.5						
IURH	Urdarhals	0.20	23	P	Pg	17 38 23.2	-2.0
	baz=33						
IURH				S	Sg	17 38 25.9	-2.0
	baz=33						
ISKR	Skrokkalda	0.46	260	P	Pg	17 38 27.5	-2.8
	baz=256						
ISKR				S	Sg	17 38 33.2	-3.1
	baz=256						
IASK	Askja	0.50	35	P	Pg	17 38 28.6	-2.5
	baz=39						
IASK				S	Sg	17 38 35.5	-2.1
	baz=39						
IJOK	Jokulheimar	0.51	230	P	Pg	17 38 28.6	-2.4
	baz=226						
IJOK				S	Sg	17 38 35.8	-1.9
	baz=226						
IKSK	Karasker	0.61	142	P	Pg	17 38 30.6	-2.4
	baz=142						
IKSK				S	Sg	17 38 40.0	-0.9
	baz=142						
IIEY	Innrieyrar	0.65	213	P	Pg	17 38 31.2	-2.5
	baz=210						
IIEY				S	Sg	17 38 40.6	-1.6
	baz=210						
ISVA	Svartarkot	0.70	2	P	Pg	17 38 31.4	-3.4
	baz=4.6						
ISVA				S	Sg	17 38 41.1	-2.7
	baz=4.6						
IVSH	V-Sauoahnukur	0.71	76	P	Pg	17 38 32.1	-2.7
	baz=78						
IKAL	Kalfafell	0.71	193	S	Sg	17 38 42.6	-1.6
	baz=190						
IFAG	Fagurholsmyri	0.82	159	P	Pg	17 38 35.3	-1.7
	baz=158						
IFAG				S	Sg	17 38 46.6	-1.2
	baz=158						
IADA	Aoalbol	0.84	62	P	Pg	17 38 34.4	-3.0
	baz=65						
IMEL	Melhnausar	0.97	17	P	Pg	17 38 36.1	-3.9
	baz=18						
IREN	Reynihlio	1.03	10	P	Pg	17 38 36.7	-4.2
	baz=11						
ISNB	Snabyli	1.07	213	P	Pg	17 38 38.8	-3.1
	baz=211						
IKVO	Krokottuvotn	1.09	10	P	Pg	17 38 38.1	-4.2
	baz=11						
IGRS	Grimsstaoir	1.12	26	P	Pg	17 38 38.8	-4.0
	baz=28						
IRJU	Rjupnafell	1.19	210	P	Pg	17 38 40.4	-3.6
	baz=209						
IFED	Fedgar	1.20	240	P	Pg	17 38 40.6	-3.7
	baz=238						
IGHA	Grjothals	1.24	13	P	Pg	17 38 40.4	-4.7
	baz=14						
ISKI	Skildingahlsh	1.24	6	P	Pg	17 38 40.3	-4.8
	baz=6.9						
IMJO	Mjoaskard	1.25	236	P	Pg	17 38 41.2	-3.9
	baz=235						
BORG	Borgarnes	1.72	275	Pg	Pn	17 38 49.0	-2.7
	27nm,0.3s,baz=88,slow=8.1,SNR=52						
BORG				Lg	Lg	17 39 12.2	
	40nm,0.3s,baz=256,slow=23,SNR=6.1						
BORG	Borgarnes	1.72	275		Pn	17 38 47.0	-4.8
BORG				Sn	Sn	17 39 11.5	-2.5
SCO	Scoresbysund	6.13	345		Pn	17 39 50.8	-1.4
SCO				Sn	Sn	17 41 00.6	-1.9
SCO	Scoresbysund	6.13	345	e	Pn	17 39 48.4	-3.8
	baz=161,slow=9.3						
SCO				iP	Pn	17 39 52.0	-0.2
SCO				eS	Sn	17 41 02.9	+0.4
SCO				IAML		17 41 17.6	
	comp=Z,3.4nm,0.4s						
JMIC	Jan Mayen	7.19	24	LR	LR	17 42 25.9	
	comp=Z,1μm,18.7s,baz=250,slow=34						
SUMG	Summit	11.01	325	Pn	Pn	17 40 58.6	-0.8
SUMG	Summit	11.01	325	iP	Pn	17 40 59.0	-0.4
SUMG	Summit	11.01	325	iP	Pn	17 40 59.0	-0.4
EKB10	Eskdalemuir Ar	11.66	136	Pn	Pn	17 41 08.2	+0.1
EKB	Eskdalemuir	11.68	136	Pn	Pn	17 41 07.4	-0.9
EKA	Eskdalemuir Ar	11.69	136	Pn	Pn	17 41 07.2	-1.3
	baz=318,slow=13,SNR=20						
ESK	Eskdalemuir	11.69	136	Pn	Pn	17 41 07.0	-1.4
DAG	Danmarks Havn	12.20	359	iP	Pn	17 41 18.6	+3.3
DAG	Danmarks Havn	12.20	359	iP	Pn	17 41 18.7	+3.3
NC204	NORSAR Array S	13.15	92	Pn	Pn	17 41 28.3	-0.2
NOA	NORSAR Array B	13.46	92	Pn	Pn	17 41 29.3	-3.3
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=5.3						
NOA				LR	LR	17 47 07.5	
	comp=Z,141nm,20.0s,baz=295,slow=39						
SFJD	Kangerlussuaq	13.74	295	LR	LR	17 46 24.2	
	comp=Z,589nm,20.5s,baz=87,slow=35						
NC602	NORSAR Array S	13.74	93	Pn	Pn	17 41 38.9	+2.4
SPITS	Spitsbergen Ar	16.86	23	LR	LR	17 47 14.1	
	comp=Z,388nm,20.4s,baz=210,slow=32						
ARCES	ARCESS Array B	17.07	55	P	P	17 42 22.4	+0.3
	baz=283,slow=11,SNR=4.1						
ARCES				LR	LR	17 47 43.6	
	comp=Z,553nm,21.3s,baz=270,slow=33						
MEM	Membach	18.64	128	dPn	Pn	17 42 40.0	+0.3
BTNL	Ternell	18.70	128	dPn	Pn	17 42 40.9	+0.5
FLTG	Flechtingen	19.14	117	eP	Pn	17 42 45.8	+0.1
	comp=Z,17nm,1.1s,baz=326,slow=11						
CLZ	Clausthal	19.20	119	eP	Pn	17 42 46.4	0.0
	comp=Z,64nm,1.7s,baz=326,slow=11						
FIA1	FINESS Array S	19.64	79		Pn	17 42 53.6	+2.0
FINES	FINESS Array B	19.64	79	P	Pn	17 42 51.8	+0.2
	comp=Z,0.1nm,0.3s,baz=322,slow=8.8,SNR=5.3						
FINES				LR	LR	17 49 13.2	
	comp=Z,251nm,21.6s,baz=262,slow=33						
TULEG	Thule	19.91	327	P	Pn	17 42 57.9	+3.2
TULEG				IAmb	IAmb	17 43 00.9	
	comp=Z,55nm,1.7s						
NEUB	Neuenburg	20.23	118	eP	P	17 42 57.6	+0.8
	comp=Z,40nm,1.2s,baz=326,slow=11						
MOX	Moxa	20.63	119	eP	P	17 43 02.0	+0.9
	comp=Z,173nm,2.4s,baz=326,slow=11						
MOX				eL	L	17 51 14.5	
	comp=Z,476nm,21.7s						
CLL	Collm	20.63	116	iP	Pn	17 43 02.4	-0.9
	comp=Z,76nm,2.0s						
CLL				i		17 43 07.5	
	comp=Z,81nm,1.8s						
CLL				eS	S	17 46 44.0	-7.7
CLL				eSSS	SSS	17 47 24.0	
CLL	Collm	20.63	116	P	P	17 43 01.1	+0.1
CLL				IAmb	IAmb	17 43 09.8	
	comp=Z,84nm,1.8s						
CLL	Collm	20.63	116	eP	P	17 43 01.6	+0.5
	comp=Z,173nm,2.5s,baz=326,slow=11						
LVZ	Lovozero	20.64	58	P	Pn	17 43 05.1	+1.6
PLN	Plauen	20.96	118	eP	P	17 43 05.3	+0.5
	comp=Z,38nm,1.2s,baz=326,slow=11						
FBE	Freiberg	21.07	116	eP	P	17 43 06.4	+0.6
	comp=Z,39nm,1.1s,baz=326,slow=11						
ECH	Echery	21.08	130	P	P	17 43 06.3	+0.3
GUNZ	Gunzen	21.12	118	eP	P	17 43 07.0	+0.4
	comp=Z,97nm,2.1s,baz=326,slow=11						
TANN	Tannenbergstha	21.13	118	eP	P	17 43 07.0	+0.4
	comp=Z,26nm,1.3s,baz=326,slow=11						
WERN	Wernitzgruen	21.20	118	eP	P	17 43 08.0	+0.6
	comp=Z,29nm,1.2s,baz=326,slow=11						
GRA1	Grafenberg Arr	21.26	121	P	P	17 43 07.3	-0.7
GRF	Grafenberg Arr	21.26	121	eL	L	17 51 47.4	
	comp=Z,375nm,21.7s						
NKC	Novy Kostel	21.27	118	eP	P	17 43 09.9	+1.8
STU	Stuttgart	21.30	126	P	P	17 43 09.5	+1.1
STU				IAmb	IAmb	17 43 15.1	
	comp=Z,38nm,0.9s						
BRG	Berggiesshubel	21.34	115	eP	P	17 43 09.1	+0.3
BRG				Amp		17 43 13.2	
	comp=Z,36nm,1.2s						
BRG	Berggiesshubel	21.34	115	eP	P	17 43 09.1	+0.3
BRG				Amp		17 43 13.2	
	comp=Z,36nm,1.2s						
BRG	Berggiesshubel	21.34	115	eP	P	17 43 09.0	+0.3
	comp=Z,36nm,1.2s,baz=326,slow=11						
BFO	Black Forest	21.38	128	P	P	17 43 09.1	-0.1
BFO				IAmb	IAmb	17 43 32.0	
	comp=Z,45nm,1.4s						
BFO	Black Forest	21.38	128	eP	P	17 43 10.0	+0.8
	comp=Z,20nm,1.1s,baz=326,slow=11						
VSU	Vasula	21.50	86	eP	P	17 43 10.8	+0.4
FRB	Frobisher Bay	21.83	291	P	P	17 43 14.3	+0.4
	comp=Z,4.7nm,0.8s,baz=68,slow=10,SNR=12						
FRB				LR	LR	17 51 07.9	
	comp=Z,372nm,22.0s,baz=57,slow=35						
PVCC	Panska Ves	21.85	115	eP	P	17 43 20.6	+6.3
PRU	Pruhonice	22.27	116	eP	P	17 43 18.6	-0.2
KSP	Ksiaz	22.29	112	eP	P	17 43 19.2	+0.3
CHVC	Chvalec	22.39	113	eP	P	17 43 20.7	+0.6
UPC	Upice	22.44	113	eP	P	17 43 22.4	+1.8
UPC				epP	sP	17 43 26.2	+2.5
OSTC	Ostas	22.48	113	eP	P	17 43 22.9	+1.9
KHC	Kasperske Hory	22.60	119	eP	P	17 43 24.3	+2.0
KHC				ex	x	17 43 29.4	
KHC	Kasperske Hory	22.60	119	P	P	17 43 22.8	+0.5
DPC	Dobruska-Polom	22.68	113	eP	P	17 43 21.2	-2.0
DPC				epP	pP	17 43 25.1	-0.2
SENIN	Lac Senin/Sane	22.75	132	P	P	17 43 24.5	+0.3
SENIN				IAmb	IAmb	17 43 46.3	
	comp=Z,34nm,1.4s						
DAVA	Damuels	22.81	127	eP	P	17 43 28.4	+3.7
	comp=Z,18nm,1.5s						
GEC2	GERESS Array S	22.88	119	P	P	17 43 24.2	-1.2
GERES	GERESS Array B	22.88	119	P	P	17 43 26.4	+1.1
	comp=Z,3.1nm,0.8s,baz=325,slow=6.8,SNR=12						
GERES				LR	LR	17 53 06.3	
	comp=Z,292nm,18.7s,baz=319,slow=39						
SSB	Saint Sauveur	22.88	137	P	P	17 43 26.0	+0.6
RETA	Reutte	22.94	125	eP	P	17 43 28.2	+2.2
	comp=Z,13nm,1.3s						
ISAL	Salakas	23.02	93	eP	P	17 43 27.4	+0.7
KRLC	Kraliky	23.08	113	eP	P	17 43 27.8	+0.4
MOTA	Moosalm	23.18	125	eP	P	17 43 30.4	+1.8
	comp=Z,18nm,1.4s						
TREC	Trest	23.20	116	eP	P	17 43 29.9	+1.4
IIGN	Ignalina	23.20	93	eP	P	17 43 29.1	+0.5
DAVOX	Davos/Dischmat	23.24	127	P	P	17 43 29.8	+0.6
	comp=Z,5.4nm,0.8s,baz=304,slow=10,SNR=8.6						
DAVOX				LR	LR	17 53 02.0	
	comp=Z,262nm,18.6s,baz=76,slow=38						
SQTA	Sankt Quirin	23.33	125	eP	P	17 43 31.3	+1.3
	comp=Z,9.7nm,0.8s						
FETA	Feichten	23.33	126	eP	P	17 43 32.0	+1.9
	comp=Z,17nm,2.2s						
TUE	Stuetta	23.33	128	P	P	17 43 30.4	+0.2
WATA	Walderalm	23.36	124	eP	P	17 43 33.0	+2.6
	comp=Z,5.6nm,0.7s						
WTTA	Wattenberg	23.44	124	eP	P	17 43 33.9	+2.6
	comp=Z,20nm,1.4s						
IDID	Didziasalis	23.45	93	eP	P	17 43 31.4	+0.4
VRAC	Vranov	23.62	114	P	P	17 43 34.1	+1.3
	comp=Z,2.0nm,0.4s,baz=359,slow=11,SNR=5.6						
VRAC				LR	LR	17 52 14.9	
	comp=Z,295nm,20.9s,baz=330,slow=35						
VRAC	Vranov	23.62	114	eP	P	17 43 33.7	+1.0
MORC	Moravsky Berou	23.62	112	⇑P	P	17 43 24.9	-7.9
MORC	Moravsky Berou	23.62	112	eP	P	17 43 33.5	+0.7
MORC	Moravsky Berou	23.62	112	P	P	17 43 33.8	+1.0
MORC				IAmb	IAmb	17 43 45.5	
	comp=Z,52nm,1.9s						
EUNU	Eureka	23.72	336	P	P	17 43 35.3	+1.7
EUNU				IAmb	IAmb	17 43 40.6	
	comp=Z,16nm,0.8s						
BNI	Bardonecchia	23.73	134	P	P	17 43 35.3	+1.3
KRUC	Moravsky	23.74	115	eP	P	17 43 34.5	+0.6
NACGM	Naroch	23.74	93	iP	P	17 43 33.2	-0.7
NACGM				iP	P	17 43 33.2	-0.7
NACGM				iP	P	17 43 33.2	-0.7
NACGM				iPP	PnPn	17 43 57.4	-3.7
NACGM				iPPP	PPP	17 44 05.3	
NACGM				iS	S	17 47 42.0	-7.2
NACGM				iS	S	17 47 42.0	-7.2
NACGM				iSS	SnSn	17 48 25.0	-1.4
NACGM				iSSS	SSS	17 48 57.9	
NACGM				iLQ	LQ	17 50 45.8	
NACGM				iLR	LR	17 52 02.1	
MOA	Molln	23.91	119	eP	P	17 43 35.7	+0.1
	comp=Z,11nm,1.4s						
OJC	Ojcow	24.18	109	P	P	17 43 37.0	-1.1
ABTA	Abfaltersbach	24.20	123	eP	P	17 43 38.3	-0.1
	comp=Z,7.8nm,1.3s						
KBA	Koelnbreinsper	24.22	122	eP	P	17 43 38.4	-0.3
	comp=Z,9.8nm,1.1s						
JAVC	Velka Javorina	24.40	114	eP	P	17 43 44.3	+4.1
CONA	Conrad Observa	24.45	117	P	P	17 43 40.5	-0.2
	comp=Z,9.1nm,0.9s						
SALO	Salr	24.48	128	P	P	17 43 40.7	-0.2
MNK	Minsk	24.49	93	iP	P	17 43 38.3	-2.5
	comp=E,2.0nm,0.8s						
MNK				iP	P	17 43 38.3	-2.5
	comp=N,12nm,0.8s						
MNK				iP	P	17 43 38.3	-2.5
	comp=Z,17nm,0.8s						
MNK				iPP	PnPn	17 44 08.2	-3.0
MNK				iPPP	PPP	17 44 16.1	
MNK				iS	S	17 47 57.2	-3.9
MNK				iSS	SnSn	17 48 42.3	-2.3
MNK				iSSS	SSS	17 48 55.9	
MNK				iLQ	LQ	17 51 02.8	
MNK				iLR	LR	17 52 22.8	
MNK				iLRM	MLR	17 53 57.2	
	comp=Z,110nm,16.6s						
MNK				iLRM	MLR	17 54 01.9	
	comp=E,34nm,19.9s						
MNK				iLRM	MLR	17 54 03.0	
	comp=N,283nm,17.4s						
CTI	Castel Tesino	24.49	126	P	P	17 43 42.4	+1.3
CTI				IAmb	IAmb	17 43 45.2	
	comp=Z,14nm,0.8s						
ZOU	Zoufplan	24.53	123	P	P	17 43 42.0	+0.5
SMOL	Smolenice	24.58	114	eP	P	17 43 43.2	+1.4
STAL	STALIGIAL	24.68	124	P	P	17 43 43.9	+1.2
MYKA	Terra Mystica	24.71	122	eP	P	17 43 43.3	+0.3
	comp=Z,7.8nm,1.1s						
ARSA	Arzberg	24.89	119	eP	P	17 43 44.8	+0.2
	comp=Z,8.2nm,0.9s						
LANS	Liptovska Anna	24.89	111	eP	P	17 43 46.0	+1.5
COI	Coimbra	25.02	164	P	P	17 43 47.0	+1.3
OBKA	Obir	25.14	121	eP	P	17 43 46.4	-0.6
	comp=Z,12nm,1.4s						
VYHS	Vyhne	25.16	113	eP	P	17 43 48.1	+1.1
SOKA	Soboth	25.18	120	eP	P	17 43 48.4	+1.2
	comp=Z,6.9nm,1.0s						
KLMR	Klimovskoe	25.54	72	eP	P	17 43 51.6	+1.3
KLMR				AMP		17 43 55.4	
	comp=Z,23nm,1.3s						

MPLH	Magyarpolny	25.72	116	*e*P	P	17 43 58.9	+6.8
KECS	Kecovo	25.82	111	*e*P	P	17 43 54.1	+1.1
KWP	Kalwaria Pacla	25.83	106	*e*P	P	17 43 53.7	+0.6
KWP	Kalwaria Pacla	25.83	106	P	P	17 43 53.1	0.0
CSKK	Cskako	25.84	115	*e*P	P	17 43 56.8	+3.6
CRVS	Cervenica-Dubn	25.89	109	*e*P	P	17 43 55.5	+1.9
PSZ	Piszkesteto	26.04	112	⇑P	P	17 43 52.1	-3.0
PSZ	Piszkesteto	26.04	112	*e*P	P	17 43 57.1	+2.1
PSZ	Piszkesteto	26.04	112	P	P	17 43 55.0	-0.1
PSZ				IAmb	IAmb	17 44 03.2	
	comp=Z,30nm,1.3s						
KOLS	Kolonicke sedl	26.20	108	*e*P	P	17 43 57.6	+1.2
ESBB	Sonseca Array	26.20	156	P	P	17 43 57.1	+0.6
ESBB				IAmb	IAmb	17 44 36.4	
	comp=Z,47nm,1.9s						
ESDC	Sonseca Array	26.20	156	P	P	17 43 56.0	-0.5
	comp=Z,3.0nm,0.8s,baz=349,slow=9.5,SNR=12						
ESDC				LR	LR	17 54 07.3	
	comp=Z,342nm,18.1s,baz=325,slow=36						
ESDC	Sonseca Array	26.20	156	P	P	17 43 57.0	+0.5
PESTR	Estremoz	26.44	163	P	P	17 43 59.7	+1.0
PESTR				IAmb	IAmb	17 44 35.8	
	comp=Z,39nm,1.6s						
RES	Resolute Bay	26.53	324	LR	LR	17 53 13.1	
	comp=Z,207nm,19.0s,baz=174,slow=34						
RES	Resolute Bay	26.53	324	P	P	17 44 00.2	+1.1
OSSC	Osservatorio P	26.57	129	P	P	17 44 01.0	+1.3
AKASG	Malin Array Be	27.77	98	P	P	17 44 09.5	-0.9
	comp=Z,1.5nm,0.7s,baz=324,slow=9.6,SNR=7.6						
AKASG				LR	LR	17 55 07.2	
	comp=Z,256nm,20.1s,baz=305,slow=36						
OBN	Obninsk	27.81	84	LR	LR	17 54 45.6	
	comp=Z,54nm,21.7s,baz=344,slow=35						
BUR08	Bucovina Ar. S	28.42	106	P	P	17 44 17.4	+0.9
BZS	Buzias	28.60	113	⇓P	P	17 44 19.1	+1.1
DIVS	Divibare	29.23	117	P	P	17 44 24.2	+0.5
GZR	Gura Zlata	29.25	112	⇑P	P	17 44 23.8	+0.1
SORM	Soroca	29.35	102	⇑P	P	17 44 24.4	-0.1
BIZ	Bicaz	29.35	106	⇑P	P	17 44 23.4	-1.2
HERR	Herculane	29.53	113	⇑P	P	17 44 26.6	+0.4
TESR	Tescani	29.92	106	⇓P	P	17 44 28.7	-1.0
VOIR		30.13	109	⇑P	P	17 44 31.0	-0.6
PDG	Podgorica	30.38	119	⇑P	P	17 44 34.8	+1.1
PDG	Podgorica	30.38	119	P	P	17 44 32.5	-1.1
PDG				IAmb	IAmb	17 44 51.0	
	comp=Z,16nm,1.3s						
PLOR	Plostina	30.45	107	⇓P	P	17 44 34.3	0.0
MLR	Muntele Rosu	30.45	108	P	P	17 44 35.4	+0.9
	comp=Z,2.6nm,0.9s,baz=160,slow=22,SNR=3.2						
MLR				LR	LR	17 58 03.8	
	comp=Z,159nm,18.8s,baz=313,slow=39						
MLR	Muntele Rosu	30.45	108	P	P	17 44 35.0	+0.5
MLR				IAmb	IAmb	17 45 14.7	
	comp=Z,18nm,1.6s						
VRI	Vrincioaia	30.47	107	⇑P	P	17 44 34.0	-0.5
BISRR	Bisoca	30.72	107	⇑P	P	17 44 35.5	-1.3
KIRV	Kirov	30.92	69	P	P	17 44 39.2	+0.9
	comp=Z,8.1nm,0.7s,baz=254,slow=5.7,SNR=5.9						
KIRV				LR	LR	17 56 35.0	
	comp=Z,349nm,21.5s,baz=308,slow=35						
CFR	Carcaliu	31.61	106	⇑P	P	17 44 43.6	-0.9
HARR	Harsova	31.92	107	⇑P	P	17 44 47.2	-0.1
TIRR	Tirgusor	32.31	106	⇓P	P	17 44 49.9	-0.8
FNA	Florina	32.60	118	P	P	17 44 52.6	-0.8
FNA				IAmb	IAmb	17 44 58.4	
	comp=Z,9.4nm,1.0s						
MDT	Midelt	32.81	160	P	P	17 44 55.2	-0.1
	comp=Z,3.1nm,0.7s,baz=341,slow=5.5,SNR=4.2						
KEST	Kesra	33.09	138	P	P	17 44 56.1	-1.5
	comp=Z,2.0nm,0.8s,baz=301,slow=18,SNR=2.1						
KEST				LR	LR	17 58 56.6	
	comp=Z,192nm,18.5s,baz=296,slow=37						
PKME	Peaks-Kenny Pk	34.27	261	P	P	17 45 09.0	+1.2
ALN	Alexandroupoli	34.32	113	P	P	17 45 10.1	+1.8
ALN				IAmb	IAmb	17 45 14.1	
	comp=Z,10nm,1.1s						
BELG	Belogornoye	34.42	79	P	P	17 45 08.6	-0.4
	comp=Z,18nm,0.8s,baz=130,slow=1.4,SNR=8.1						
AGG	Agios Georgios	34.49	119	P	P	17 45 09.9	0.0
MOQ	Mont Orford	35.50	264	P	P	17 45 19.8	+1.3
ITM	Ithomi	35.96	121	P	P	17 45 22.5	0.0
ARU	Arti	36.02	66	P	P	17 45 23.7	+0.9
ARU				IAmb	IAmb	17 46 33.2	
	comp=Z,27nm,1.9s						
C36M	Paulatuk	36.89	326	P	P	17 45 30.9	+0.9
C36M				IAmb	IAmb	17 45 34.2	
	comp=Z,21nm,1.6s						
ILGA	Ilgaz	37.32	104	P	P	17 45 34.7	+0.4
ILGA				IAmb	IAmb	17 45 47.8	
	comp=Z,14nm,1.2s						
BR131	Keskin Array S	38.40	105	P	P	17 45 44.3	+1.0
BRTR	Keskin Array B	38.40	105	P	P	17 45 44.9	+1.5
	comp=Z,1.8nm,0.7s,baz=331,slow=5.8,SNR=13						
BRTR				LR	LR	18 02 58.9	
	comp=Z,36nm,18.9s,baz=308,slow=38						
BRTR	Keskin Array B	38.40	105	P	P	17 45 44.1	+0.8
KIV	Kislovodsk	38.77	93	P	P	17 45 46.2	-0.1
SADO	Sadowa	38.89	270	P	P	17 45 48.4	+1.2
	comp=Z,17nm,1.1s,baz=301,slow=6.6,SNR=3.2						
SADO	Sadowa	38.89	270	IAmb	IAmb	17 46 54.8	
	comp=Z,33nm,1.3s						
KBZ	Khabaz	39.04	93	P	P	17 45 50.2	+1.8
	comp=Z,7.2nm,0.9s,baz=322,slow=8.4,SNR=12						
KBZ				LR	LR	18 02 30.9	
	comp=Z,169nm,21.9s,baz=318,slow=37						
YKA	Yellowknife Ar	39.28	313	P	P	17 45 50.8	+0.5
	comp=Z,1.9nm,0.9s,baz=45,slow=8.9,SNR=14						
YKA				PcP	PcP	17 47 59.7	+1.0
	comp=Z,0.2nm,0.4s,baz=48,slow=3.9,SNR=6.3						
YKA				LR	LR	18 01 37.7	
	comp=Z,156nm,21.2s,baz=0.0,slow=36						
CPNY	Central Park	39.90	261	P	P	17 45 55.9	+0.3
INK	Inuvik	39.90	329	P	P	17 45 55.6	+0.3
	comp=Z,3.7nm,0.9s,baz=33,slow=12,SNR=7.2						
INK				PcP	PcP	17 48 01.5	+0.9
	comp=Z,3.4nm,1.1s,baz=134,slow=2.0,SNR=3.7						
INK	Inuvik	39.90	329	P	P	17 45 56.9	+1.6
FFC	Flin Flon	40.67	298	P	P	17 46 02.8	+0.9
FFC				IAmb	IAmb	17 46 10.0	
	comp=Z,36nm,2.0s						
ULM	Lac du Bonnet	41.68	289	LR	LR	18 02 22.4	
	comp=Z,125nm,20.2s,baz=83,slow=35						
ABKAR	Akbulak array	41.93	73	P	P	17 46 11.6	-0.7
ABKAR	Akbulak array	41.93	73	P	P	17 46 12.4	+0.1
ABKAR				IAmb	IAmb	17 46 28.1	
	comp=Z,8.3nm,1.4s						
TIXI	Tiksi	42.04	15	P	P	17 46 14.0	+1.1
TIXI				IAmb	IAmb	17 46 17.4	
	comp=Z,11nm,0.9s						
MARD	Mardin	43.43	100	P	P	17 46 25.2	+0.4
MARD				IAmb	IAmb	17 46 34.5	
	comp=Z,14nm,1.0s						
FYU	Fort Yukon	43.83	333	P	P	17 46 29.6	+2.1
N49A	Columbus Grove	44.18	271	P	P	17 46 31.4	+0.8
N49A				IAmb	IAmb	17 46 33.8	
	comp=Z,12nm,0.8s						
DAWY	Dawson	44.76	328	P	P	17 46 36.6	+1.6
IL31		45.74	333	P	P	17 46 44.4	+1.7
IL31				IAmb	IAmb	17 46 48.1	
	comp=Z,8.9nm,1.2s						
ILAR	Eielson Array	45.74	333	P	P	17 46 42.9	+0.2
	comp=Z,3.7nm,1.1s,baz=24,slow=6.1,SNR=16						
ILAR				PcP	PcP	17 48 21.2	+1.0
	comp=Z,2.2nm,0.9s,baz=345,slow=2.6,SNR=12						
ILAR				LR	LR	18 08 09.5	
	comp=Z,155nm,19.6s,baz=32,slow=39						
MDM	Murphy Dome	45.84	333	P	P	17 46 45.7	+2.2
MDM				IAmb	IAmb	17 46 49.8	
	comp=Z,15nm,1.3s						
BCAR	Beaver Creek A	46.17	329	P	P	17 46 48.1	+2.0
BRZS	Berezniki	46.43	63	*e*P	P	17 46 48.0	-0.4
	comp=Z,5.5nm,0.8s,baz=64						
WCI	Wyandotte Cave	47.32	271	P	P	17 46 55.9	+0.5
ZALV	Zalesovo Beam	47.59	52	P	P	17 46 57.6	+0.3
	comp=Z,1.5nm,0.7s,baz=316,slow=8.1,SNR=5.6						
ZALV				LR	LR	18 07 37.1	
	comp=Z,63nm,18.8s,baz=310,slow=37						
ZALV	Zalesovo Beam	47.59	52	P	P	17 46 57.2	-0.1
ZALV				PcP	PcP	17 48 27.2	+0.4
KURK	Kurchatov	48.06	58	P	P	17 47 00.4	-0.6
SEM	Semipalatinsk	48.91	57	*e*P	P	17 47 07.1	-0.7
	baz=58						
EGMT	Eagleton	48.95	297	P	P	17 47 09.0	+0.9
EGMT				PcP	PcP	17 48 32.7	+0.7
W50A	Signal Mountai	49.45	268	P	P	17 47 12.7	+0.8
W50A				IAmb	IAmb	17 47 14.8	
	comp=Z,11nm,1.0s						
GEYT	Alibeck	50.35	84	P	P	17 47 19.6	+0.8
	comp=Z,3.4nm,0.9s,baz=265,slow=13,SNR=5.8						
GEYT				LR	LR	18 11 03.8	
	comp=Z,96nm,18.3s,baz=225,slow=39						
GEYT	Alibeck	50.35	84	P	P	17 47 19.0	+0.2
S39A	Bolivar	50.79	277	P	P	17 47 22.4	+0.4
BTLS	Baital	51.01	66	*e*P	P	17 47 23.8	+0.2
	comp=Z,3.5nm,1.0s,baz=66						
KKAR	Karatay Array	51.22	70	P	P	17 47 25.8	+0.6
KKAR				IAmb	IAmb	17 47 41.8	
	comp=Z,23nm,2.0s						
DZA	Taraz	51.72	69	*e*P	P	17 47 29.3	+0.3
	baz=70						
IUG	Iuzhnay	51.82	71	*e*P	P	17 47 30.3	+0.5
	baz=72						
H17A	Grant Village	52.28	295	P	P	17 47 34.8	+1.3
MAKZ	Makanchi	52.55	59	P	P	17 47 35.9	+0.8
MAKZ				IAmb	IAmb	17 47 38.1	
	comp=Z,19nm,1.9s						
SGDS	Sogindy	52.57	66	*e*P	P	17 47 35.2	-0.1
	baz=67						
MK31	Makanchi Array	52.67	58	P	P	17 47 35.6	-0.4
MKAR	Makanchi Array	52.67	58	P	P	17 47 35.7	-0.3
	comp=Z,3.2nm,0.9s,baz=320,slow=5.2,SNR=26						
MKAR				LR	LR	18 10 50.4	
	comp=Z,79nm,19.0s,baz=332,slow=37						
MKAR	Makanchi Array	52.67	58	P	P	17 47 35.6	-0.4
TDK	Taldyqorghan	52.73	63	*e*P	P	17 47 37.1	+0.7
	baz=63						
KUU	Kurty	52.87	65	*e*P	P	17 47 38.0	+0.6
	comp=Z,11nm,0.9s,baz=65						
ZSN	Zaisan	53.05	56	*e*P	P	17 47 39.1	+0.4
	baz=57						
TOA0	Torodi Ar. Sit	53.09	157	P	P	17 47 38.4	-0.9
TORD	Torodi Ar. Bea	53.09	157	P	P	17 47 38.3	-1.0
	comp=Z,3.1nm,1.0s,baz=339,slow=8.3,SNR=7.8						
TORD				LR	LR	18 10 22.5	
	comp=Z,57nm,18.8s,baz=305,slow=36						
TORD	Torodi Ar. Bea	53.09	157	P	P	17 47 38.3	-1.0
AAK	Ala-Archa	53.20	67	P	P	17 47 40.5	+0.3
PD31	Pinedale Array	53.25	293	P	P	17 47 40.6	0.0
PDAR	Pinedale Array	53.25	293	P	P	17 47 40.8	+0.2
	comp=Z,4.0nm,0.8s,baz=58,slow=6.3,SNR=29						
PDAR				LR	LR	18 10 27.1	
	comp=Z,159nm,19.9s,baz=28,slow=36						
PDAR	Pinedale Array	53.25	293	P	P	17 47 40.4	-0.2
BW06	Boulder Array	53.26	293	P	P	17 47 40.6	0.0
BW06				IAmb	IAmb	17 47 43.0	
	comp=Z,5.3nm,0.8s						
MDOK	Medeo	53.76	65	*e*P	P	17 47 44.5	+0.3
	baz=65						
TNSS	Tian-Shan	53.83	65	*e*P	P	17 47 45.1	+0.1
	baz=66						
KPKS	Kokpek	54.14	63	*e*P	P	17 47 46.6	-0.2
	comp=Z,7.3nm,1.0s,baz=64						
SATY	Saty	54.38	64	*e*P	P	17 47 48.8	+0.1
	comp=Z,4.2nm,1.1s,baz=64						
HWUT	Hardware Ranch	55.03	294	P	P	17 47 54.6	+1.1
HWUT				IAmb	IAmb	17 47 57.1	
	comp=Z,8.0nm,0.9s						
TCUT	Toone Canyon	55.38	294	P	P	17 47 56.1	-0.1
SPUT	South Promonto	55.63	295	P	P	17 47 58.1	+0.3
KSH	Kashi	56.44	68	P	P	17 48 06.3	+2.7
KSH				pP	sP	17 48 09.3	+2.4
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,420nm,5.5s						
PV23	Carpenter Ridg	56.70	290	P	P	17 48 05.7	+0.1
PV23				IAmb	IAmb	17 48 08.8	
	comp=Z,7.6nm,0.9s						
PV04	Paradox Valley	56.71	290	P	P	17 48 05.8	+0.3
SRU	San Rafael Swe	56.75	292	P	P	17 48 05.9	+0.1
PV14	Lion Creek, Pa	56.77	290	P	P	17 48 04.9	-1.2
PV14				IAmb	IAmb	17 48 08.4	
	comp=Z,6.3nm,0.8s						
PV11	David Mesa, Pa	56.78	290	P	P	17 48 06.8	+0.7
PV16	Nyswonger Mesa	56.78	290	P	P	17 48 06.9	+0.7
PV16				IAmb	IAmb	17 48 16.8	
	comp=Z,6.6nm,1.0s						
PV01	Paradox Valley	56.80	290	P	P	17 48 07.1	+0.8
PV01				IAmb	IAmb	17 48 09.9	
	comp=Z,13nm,1.3s						
PV02	Paradox Valley	56.80	290	P	P	17 48 06.4	+0.1
PV02				IAmb	IAmb	17 48 09.4	
	comp=Z,9.3nm,0.9s						
PV03	Paradox Valley	56.80	290	P	P	17 48 06.6	+0.3
PV17	East Wray Mesa	56.83	290	P	P	17 48 07.5	+1.0
PV17				IAmb	IAmb	17 48 12.5	
	comp=Z,9.8nm,1.1s						
PV18	Skein Mesa, Pa	56.84	290	P	P	17 48 06.5	0.0
PV18				IAmb	IAmb	17 48 09.5	
	comp=Z,7.0nm,0.9s						
PV13	Radium Mtn., P	56.88	290	P	P	17 48 07.2	+0.4
PV05	Paradox Valley	57.06	290	P	P	17 48 08.0	-0.1
WMQ	Urumqi	57.18	56	*e*P	P	17 48 11.4	+2.7
WMQ				sP	sP	17 48 20.3	+8.3
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,360nm,4.7s						
WMQ				LR	LR		
	comp=N,340nm,29.0s						
WMQ				LR	LR		
	comp=E,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,1µm,29.2s						
MVU	Marysvale	57.94	293	P	P	17 48 16.3	+2.0
DBIC	Dimbokro	58.55	165	P	P	17 48 16.6	-1.8
	comp=Z,3.7nm,0.8s,baz=350,slow=8.9,SNR=8.6						
DBIC				LR	LR	18 14 05.7	
	comp=Z,93nm,18.8s,baz=342,slow=37						
DBIC	Dimbokro	58.55	165	P	P	17 48 17.4	-1.0
DBIC				IAmb	IAmb	17 48 29.0	
	comp=Z,7.2nm,1.1s						
TIC	Toumodi	58.55	166	*e*P	P	17 48 18.1	-0.4
KIC	Kosan Boka	58.87	165	*e*P	P	17 48 20.3	-0.4
	comp=Z,14nm,0.9s						
LIC	Lamto	58.97	166	*e*P	P	17 48 21.1	-0.3
	comp=Z,21nm,0.9s						
R11A	Troy Canyon, C	59.40	295	IAmb	IAmb	17 48 33.8	
	comp=Z,11nm,1.6s						
SONM	Songino Array	59.61	41	P	P	17 48 25.3	-0.4
	comp=Z,1.0nm,0.6s,baz=93,slow=30,SNR=8.2						
SONM				LR	LR	18 16 35.1	
	comp=Z,138nm,20.4s,baz=9.5,slow=38						
U15A	North Rim	59.77	292	IAmb	IAmb	17 48 35.2	
	comp=Z,7.2nm,1.2s						
ULN	Ulaanbaatar	59.77	40	P	P	17 48 27.8	+1.0
ULN				IAmb	IAmb	17 48 34.7	
	comp=Z,8.2nm,1.4s						
WUAZ	Wupatki	60.19	290	P	P	17 48 30.2	+0.3
NVAR	Mina Array Bea	60.38	298	P	P	17 48 31.9	+0.7
	comp=Z,0.8nm,0.8s,baz=64,slow=3.9,SNR=5.3						
NVAR				LR	LR	18 14 17.6	
	comp=Z,256nm,20.3s,baz=35,slow=36						
NIL	Nilore	60.39	74	P	P	17 48 30.2	-0.9
X16A	Lo Mia Camp, P	61.17	290	P	P	17 48 37.4	+0.8
X16A				IAmb	IAmb	17 48 45.9	
	comp=Z,5.1nm,1.1s						
TXAR	Lajitas Array	62.36	280	P	P	17 48 44.6	0.0
	comp=Z,1.2nm,0.9s,baz=35,slow=4.6,SNR=7.1						
TXAR				LR	LR	18 15 21.8	
	comp=Z,160nm,18.1s,baz=0.0,slow=36						
PETK	Petropavlovsk-	62.52	3	LR	LR	18 15 02.9	
	comp=Z,45nm,20.4s,baz=17,slow=35						
KLR	Kul'dur	63.94	22	LR	LR	18 17 37.4	
	comp=Z,63nm,19.4s,baz=344,slow=37						
GTA	Gaotai	65.26	49	⇓P	P	17 49 06.0	+2.4
GTA				pP	sP	17 49 10.9	+4.0
GTA				sP	pP	17 49 13.9	+7.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,81nm,4.7s						
GTA				LR	LR		
	comp=N,100nm,15.6s						
GTA				LR	LR		
	comp=E,170nm,16.4s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
HHC	Hu-ho-hao-te	67.48	40	*e*P	P	17 49 20.3	+2.5
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
HHC				LR	LR		
	comp=N,200nm,17.3s						
HHC				LR	LR		
	comp=E,290nm,17.8s						
HHC				LR	LR		
	comp=Z,200nm,17.6s						
USRK	Ussuriysk Ar.	68.86	23	LR	LR	18 19 41.0	
	comp=Z,55nm,18.2s,baz=340,slow=36						
DANN	Dangsing	69.31	68	*e*P	P	17 49 30.7	+1.1
	comp=Z,23nm,1.0s						
LZH	Lanzhou	69.59	48	*e*P	P	17 49 30.8	-0.3
LZH				pP	sP	17 49 35.6	+1.2
LZH				sP	pP	17 49 37.8	+4.3
LZH				PP	PP	17 52 03.8	-0.5
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,7.8s						
GKN	Gorkha	69.97	67	*e*P	P	17 49 35.4	+1.9
KKN	Kakani	70.41	67	*e*P	P	17 49 36.7	+0.4
	comp=Z,14nm,1.1s						
ASAJ	Asahikawa	70.44	15	LR	LR	18 21 23.7	
	comp=Z,39nm,19.2s,baz=357,slow=37						
DMN	Daman	70.50	67	*e*P	P	17 49 38.4	+1.5
GUN	Gumba	70.54	66	*e*P	P	17 49 38.8	+1.6
	comp=Z,24nm,1.1s						
PKIN	Phulchoki	70.64	67	*e*P	P	17 49 38.0	+0.2
	comp=Z,30nm,1.6s						
PKI	Pulchoki	70.66	67	*e*P	P	17 49 38.9	+1.0
	comp=Z,16nm,1.3s						
RAMN	Ramite	71.68	66	*e*P	P	17 49 44.4	+0.4
	comp=Z,7.9nm,0.8s						
TAPN	Taplejung	71.76	65	*e*P	P	17 49 44.5	0.0
	comp=Z,28nm,1.6s						
ROSC	El Rosal	71.98	241	LR	LR	18 17 36.2	
	comp=Z,59nm,21.5s,baz=236,slow=33						
ODAN	Odare	72.07	65	*e*P	P	17 49 46.1	-0.2
KSRS	Korea Array	74.64	28	LR	LR	18 24 12.7	
	comp=Z,52nm,21.0s,baz=348,slow=37						
MJAR	Matsushiro Arr	77.33	20	LR	LR	18 25 01.1	
	comp=Z,19nm,18.1s,baz=85,slow=36						
NJ2	Nanjing	77.71	37	*e*P	P	17 50 19.5	+0.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BDFB	Brasilia	83.40	210	LR	LR	18 21 58.5	
	comp=Z,84nm,18.5s,baz=325,slow=31						
CHTO	Chiang Mai	83.76	59	P	P	17 50 51.2	0.0
CHTO				IAmb	IAmb	17 50 53.7	
	comp=Z,7.4nm,1.2s						
CMAR	Chiang Mai Arr	84.08	59	P	P	17 50 52.5	-0.4
	comp=Z,1.5nm,0.9s,baz=320,slow=5.7,SNR=13						
CMAR				LR	LR	18 30 54.8	
	comp=Z,32nm,18.9s,baz=320,slow=38						
CMAR	Chiang Mai Arr	84.08	59	P	P	17 50 52.7	-0.1
CPUP	Villa Florida	95.86	215	LR	LR	18 30 43.4	
	comp=Z,69nm,18.6s,baz=41,slow=33						
BOSA	Boshof	98.70	143	LR	LR	18 38 43.8	
	comp=Z,85nm,18.8s,baz=348,slow=37						
ASAR	Alice Springs	134.94	39	PKP	PKPdf	17 57 40.5	-0.3
	comp=Z,0.7nm,0.8s,baz=329,slow=1.9,SNR=6.3						
STKA	Stephens Creek	144.70	32	PKP	PKPbc	17 57 57.6	+0.6
	comp=Z,2.2nm,0.8s,baz=22,slow=6.6,SNR=4.0						

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*IDC **16** 17:47:44.9±4.2, 5°.10S×151°.60E, h110^{km}±36^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.6/30, mbtmp4.0/10, Error ellipse: s-maj=36.0km s-min=22.7km az=118.0*

*NEIC **16** 17:47:45.7±2.2, 5°.12S±0°.08×151°.65E±0°.09, h121^{km}±8^{km}, mb4.5/21, Error ellipse: s-maj=13.5km s-min=11.4km az=113.0*

*NOU **16** 17:47:46.4, 4°.82S×151°.47E, h134^{km}, mb4.3, New Britain Region, P.N.G.*

ISC 16 17:47:47.0±0.5, **5°.11S**±0°.06×**151°.62E**±0°.07, **h129**^{km}**, n50,** σ**1^{s}.21**/50, **mb4.2**/18, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.06	31		Pn	17 48 09.1	-1.4
RABL	Rabaul	1.06	31	P	Pn	17 48 09.2	-1.3
MANU	Manus Island	5.22	306		Pn	17 49 04.3	+1.2
PMG	Port Moresby	6.14	226	P	Pn	17 49 14.7	-0.8
	2.5nm,0.3s,baz=52,slow=10,SNR=16						
PMG				S	Sn	17 50 21.9	-2.7
	19nm,0.3s,baz=67,slow=18,SNR=12						
PMG	Port Moresby	6.14	226		Pn	17 49 14.5	-1.0
PMG	Port Moresby	6.14	226	P	Pn	17 49 16.4	+0.9
HNR	Honiara	9.31	118	Pn	Pn	17 49 57.8	-0.4
SANVU	Saraoutou	18.44	125		pP	17 52 11.9	-2.1
SANVU	Saraoutou	18.44	125	P	Pn	17 51 54.9	+0.5
EIDS	Eidsvold	20.15	181	P	P	17 52 11.1	-0.2
EIDS				IAmb	IAmb	17 52 46.0	
	comp=Z,20nm,1.6s						
MTN	Manton Dam	21.63	248	P	P	17 52 28.0	+0.8
MTN				IAmb	IAmb	17 52 46.5	
	comp=Z,43nm,1.6s						
LIFNC	LIFOU	21.74	137	P	P	17 52 30.9	+2.6
NOUC	Port Laguerre	22.08	141	P	P	17 52 35.0	+3.2
DZM	Mont Dzumac	22.14	141	P	P	17 52 33.0	+0.5
DZM				IAmb	IAmb	17 52 40.7	
	comp=Z,20nm,1.4s						
DZM	Mont Dzumac	22.14	141	P	P	17 52 33.6	+1.0
WB0	Warramunga Arr	22.21	228	P	P	17 52 32.3	-0.9
WB0				IAmb	IAmb	17 52 54.4	
	comp=Z,10nm,1.2s						
WR0	Warramunga Arr	22.23	227	P	P	17 52 32.3	-1.0
WC3	Warramunga Arr	22.35	227	P	P	17 52 33.5	-1.1
WRAB	Tennant Creek	22.35	227	P	P	17 52 33.6	-1.0
WRAB				IAmb	IAmb	17 52 57.7	
	comp=Z,10nm,1.2s						
WB2	Warramunga Arr	22.35	227	P	P	17 52 33.3	-1.4
WRA	Warramunga Arr	22.36	227	P	P	17 52 33.6	-1.1
	comp=Z,0.9nm,0.3s,baz=54,slow=10.0,SNR=18						
WRA				PcP	PcP	17 56 26.1	+0.7
	comp=Z,0.8nm,1.0s,baz=50,slow=2.1,SNR=4.7						
YATNC	Mamie plateau,	22.42	140	P	P	17 52 36.2	+1.0
OUENC	Ouen Island, N	22.65	141	P	P	17 52 40.0	+2.6
AS31	Alice Springs	25.13	221	P	P	17 53 00.1	-0.2
ASAR	Alice Springs	25.13	221	P	P	17 53 00.2	0.0
	comp=Z,1.6nm,0.5s,baz=52,slow=9.1,SNR=41						
ASAR	Alice Springs	25.13	221	P	P	17 52 59.9	-0.4
ARMA	Armidale	25.17	180	P	P	17 53 01.9	+1.2
ARMA				IAmb	IAmb	17 53 34.5	
	comp=Z,17nm,1.4s						
FITZ	Fitzroy Crossi	28.48	241	P	P	17 53 29.3	-1.0
	comp=Z,1.7nm,0.3s,baz=47,slow=11,SNR=24						
FITZ	Fitzroy Crossi	28.48	241	IAmb	IAmb	17 53 31.3	
	comp=Z,11nm,1.4s						
PSAD2	Pilbara Seismi	34.77	239	P	P	17 54 24.6	-0.8
PSAD2				IAmb	IAmb	17 54 48.5	
	comp=Z,21nm,1.4s						
PSAC2	Pilbara Seismi	34.81	239	P	P	17 54 24.6	-1.0
PSAC2				IAmb	IAmb	17 54 52.4	
	comp=Z,16nm,1.3s						
PSAA3	Pilbara Seismi	34.85	239	P	P	17 54 26.8	+0.7
PSAA2	Pilbara Seismi	34.85	239	P	P	17 54 24.8	-1.3
PSAA2				IAmb	IAmb	17 54 44.6	
	comp=Z,21nm,1.4s						
PSA00	Pilbara Seismi	34.86	239	P	P	17 54 25.8	-0.3
PSAB3	Pilbara Seismi	34.86	239	P	P	17 54 25.5	-0.6
PSAA1	Pilbara Seismi	34.87	239	P	P	17 54 25.2	-1.0
PSAD3	Pilbara Seismi	34.94	239	P	P	17 54 24.8	-2.0
PSAD3				IAmb	IAmb	17 54 35.9	
	comp=Z,27nm,1.5s						
KSAR	Wonju Array Be	47.76	334	P	P	17 56 10.9	-0.3
CMAR	Chiang Mai Arr	56.94	296	P	P	17 57 20.4	+1.1
	comp=Z,0.2nm,0.5s,baz=118,slow=4.2,SNR=6.2						
CMAR	Chiang Mai Arr	56.94	296	P	P	17 57 19.9	+0.6
PETK	Petropavlovsk-	58.23	4	P	P	17 57 27.1	-0.6
SONM	Songino Array	65.96	328	P	P	17 58 19.8	+0.2
	comp=Z,1.0nm,0.4s,baz=150,slow=5.7,SNR=5.6						
SONM	Songino Array	65.96	328	P	P	17 58 20.1	+0.5
MKAR	Makanchi Array	79.79	319	P	P	17 59 41.4	+0.4
	comp=Z,0.3nm,0.5s,baz=91,slow=7.6,SNR=7.3						
ZALV	Zalesovo Beam	80.76	327	P	P	17 59 44.8	-1.2
	comp=Z,1.0nm,0.5s,baz=114,slow=6.7,SNR=6.7						
ILAR	Eielson Array	82.89	22	P	P	17 59 56.0	-1.0
	comp=Z,0.9nm,0.6s,baz=249,slow=5.3,SNR=14						
NVAR	Mina Array Bea	93.20	52	P	P	18 00 48.7	+1.3
	comp=Z,1.0nm,0.7s,baz=250,slow=7.3,SNR=6.4						
NVAR	Mina Array Bea	93.20	52	P	P	18 00 47.7	+0.3
GERES	GERESS Array B	123.69	328	PKP	PKiKP	18 06 29.9	-0.1
	comp=Z,0.6nm,0.5s,baz=90,slow=2.9,SNR=2.9						

TORD	**Torodi Ar. Bea**	**149.28**	**287**	PKPbc	**PKPbc**	**18 07 21.4**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=90,slow=2.3,SNR=12						

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*IDC **16** 18:39:15.2±8.8, 21°.87S×170°.58E, h58^{km}±61^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.2/35, mbtmp3.5/3, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/12, Error ellipse: s-maj=133.3km s-min=55.6km az=166.0*

*NOU **16** 18:40:02.9, 22°.21S×166°.89E, h0^{km}, MLv1.5, New Caledonia*

ISC 16 18:39:11.4±2.7**, 21°.6S**±0°.7×**170°.8E**±0°.3**, h35^{km}, n9, σ0^{s}.58**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YATNC	**Mamie plateau,**	**3.64**	**262**	P	**Pn**	**18 40 05.9**	**+0.6**
OUENC	**Ouen Island, N**	**3.74**	**257**	P	**Pn**	**18 40 07.2**	**+0.6**
DZM	**Mont Dzumac**	**4.06**	**263**	P	**Pn**	**18 40 11.4**	**+0.3**
	4.0nm,0.3s,baz=140,slow=13,SNR=59						
DZM				S	**Sn**	**18 40 56.9**	**-0.5**
	2.0nm,0.3s,baz=105,slow=16,SNR=3.8						
DZM	**Mont Dzumac**	**4.06**	**263**	P	**Pn**	**18 40 11.6**	**+0.5**
NOUC	**Port Laguerre**	**4.19**	**263**	P	**Pn**	**18 40 13.4**	**+0.6**
ASAR	**Alice Springs**	**34.04**	**259**	P	**P**	**18 45 51.9**	**-0.6**
	0.3nm,0.7s,baz=87,slow=9.0,SNR=8.0						
GUMO	**Guam**	**43.26**	**322**	LR	LR	19 01 38.9	
	comp=Z,75nm,21.8s,baz=330,slow=31						
CMAR	**Chiang Mai Arr**	**80.79**	**294**	P	**P**	**18 51 21.9**	**0.0**
	0.4nm,0.8s,baz=136,slow=5.7,SNR=4.3						
GERES	**GERESS Array B**	**147.26**	**332**	PKPbc	**PKPab**	**18 58 52.9**	**0.0**
	0.3nm,0.5s,baz=46,slow=4.2,SNR=1.5						

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*IDC **16** 18:43:36.9±2.6, 42°.92N×105°.12W, h0^{km}, mb3.2/2, mb1 3.6/4, mb1mx3.3/53, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=46.7km s-min=9.4km az=158.0*

*NEIC **16** 18:43:42.2±1.7, 43°.57N±0°.02×105°.32W±0°.07, h0^{km}±2^{km}, ML3.3/62, Error ellipse: s-maj=9.0km s-min=3.0km az=109.0*

ISC 16 18:43:41.8±1.0**, 43°.55N**±0°.05×**105°.29W**±0°.06**, h0^{km}, n63, σ1^{s}.11**/63**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.08**	**57**		**Pn**	**18 44 02.2**	**-2.2**
K22A	**Casper**	**1.27**	**226**		**Pg**	**18 44 03.8**	**-2.4**
PHWY	**Pilot Hill**	**2.25**	**183**		**Pn**	**18 44 20.5**	**0.0**
RWWY	**Rawlins**	**2.33**	**218**		**Pn**	**18 44 22.4**	**+0.7**
RWWY				IAML		18 44 55.3	
	215nm,0.9s						
RWWY				IAML		18 44 56.9	
	244nm,0.6s						
N23A	**Red Feather La**	**2.69**	**191**		**Pn**	**18 44 26.4**	**-0.2**
N23A				IAML		18 45 10.0	
	comp=E,99nm,0.8s						
N23A				IAML		18 45 10.0	
	comp=N,150nm,0.8s						
LAO	**LASA Array**	**3.21**	**348**		**Pn**	**18 44 33.5**	**-0.1**
LAO				IAML		18 45 31.0	
	comp=N,123nm,0.8s						
LAO				IAML		18 45 46.2	
	comp=N,110nm,0.9s						
BW06	**Boulder Array**	**3.22**	**257**		**Pn**	**18 44 32.4**	**-1.4**
BW06				IAML		18 45 25.1	
	comp=N,65nm,0.8s						
PD31	**Pinedale Array**	**3.22**	**257**		**Pn**	**18 44 33.0**	**-0.8**
PDAR	**Pinedale Array**	**3.22**	**257**	Pn	**Pn**	**18 44 32.8**	**-1.0**
	comp=N,3.5nm,0.3s,baz=80,slow=18,SNR=44						
PDAR				Lg	Lg	18 45 17.9	
	comp=N,7.6nm,0.3s,baz=90,slow=30,SNR=16						
PDAR	**Pinedale Array**	**3.22**	**257**		**Pn**	**18 44 33.0**	**-0.8**
RLMT	**Red Lodge**	**3.26**	**300**		**Pn**	**18 44 33.8**	**-0.6**
RLMT				IAML		18 45 29.0	
	comp=N,55nm,1.2s						
RLMT				IAML		18 45 30.5	
	comp=N,61nm,0.9s						
OGNE	**Ogallala**	**3.55**	**136**		**Pn**	**18 44 39.1**	**+0.9**
YNE	**Yellowstone No**	**3.69**	**295**		**Pn**	**18 44 40.2**	**-0.1**
YMP	**Mirror Lake Pl**	**3.70**	**291**	Pn	**Pn**	**18 44 41.3**	**+0.8**
ISCO	**Idaho Springs**	**3.75**	**184**		**Pn**	**18 44 41.3**	**+0.1**
LKWY	**Lake**	**3.82**	**287**		**Pn**	**18 44 43.4**	**+1.2**
LKWY				IAML		18 45 46.1	
	comp=N,54nm,1.8s						
LOHW	**Long Hollow**	**3.86**	**273**		**Pn**	**18 44 43.6**	**+0.9**
LOHW				IAML		18 45 54.6	
	comp=N,34nm,3.7s						
LOHW				IAML		18 46 01.2	
	comp=N,36nm,3.7s						
H17A	**Grant Village**	**3.91**	**284**		**Pn**	**18 44 43.7**	**+0.3**
H17A				IAML		18 45 46.6	
	comp=E,40nm,1.4s						
H17A				IAML		18 45 48.3	
	comp=N,45nm,2.1s						
MOOW	**Moose Ponds**	**3.96**	**275**		**Pn**	**18 44 44.1**	**+0.1**
REDW	**Red Top Meadow**	**4.05**	**269**		**Pn**	**18 44 45.9**	**+0.6**
REDW				IAML		18 45 59.5	
	comp=N,56nm,0.9s						
O20A	**White River Ci**	**4.06**	**214**		**Pn**	**18 44 46.2**	**+0.8**
O20A				IAML		18 46 28.2	
	comp=N,59nm,2.5s						
IMW	**Indian Meadow**	**4.11**	**277**		**Pn**	**18 44 47.1**	**+1.0**
IMW				IAML		18 45 58.4	
	comp=N,32nm,0.8s						
IMW				IAML		18 46 09.9	
	comp=N,29nm,0.9s						
YMR	**Madison River**	**4.24**	**287**		**Pn**	**18 44 46.8**	**-1.0**
AHID	**Auburn Hatcher**	**4.32**	**262**		**Pn**	**18 44 49.0**	**0.0**
AHID				IAML		18 46 19.8	
	comp=N,51nm,1.6s						
AHID				IAML		18 46 21.8	
	comp=E,31nm,1.1s						
RDMU	**Red Mountain**	**4.36**	**228**		**Pn**	**18 44 50.0**	**+0.6**
YHB	**Horse Butte**	**4.42**	**288**		**Pn**	**18 44 49.0**	**-1.3**
YHL	**Hebgen Lake**	**4.43**	**289**		**Pn**	**18 44 49.8**	**-0.8**
E28A	**Huff**	**4.45**	**45**		**Pn**	**18 44 50.7**	**+0.2**
ECR	**Eagle Creek**	**4.46**	**266**		**Pn**	**18 44 50.4**	**-0.5**
SMCO	**Snowmass**	**4.54**	**197**		**Pn**	**18 44 51.8**	**-0.4**
SMCO				IAML		18 46 08.5	
	comp=E,31nm,1.7s						
SMCO				IAML		18 46 13.5	
	comp=E,27nm,2.0s						
QLMT	**Earthquake Lak**	**4.60**	**288**		**Pn**	**18 44 52.5**	**-0.3**
K31A	**O'Neill**	**4.88**	**99**		**Pn**	**18 44 58.6**	**+2.1**
KSCO	**Kaye Shedlock'**	**4.95**	**155**		**Pn**	**18 44 55.3**	**-2.3**
DGMT	**Dagmar**	**4.99**	**8**		**Pn**	**18 44 57.9**	**-0.1**
HWUT	**Hardware Ranch**	**5.02**	**249**		**Pn**	**18 44 57.5**	**-1.1**
HWUT				IAML		18 46 34.3	
	comp=E,24nm,1.6s						
HWUT				IAML		18 46 45.9	
	comp=E,30nm,1.1s						
TCUT	**Toone Canyon**	**5.14**	**244**		**Pn**	**18 44 59.8**	**-0.5**
JLU	**Jordanelle**	**5.44**	**239**		**Pn**	**18 45 05.8**	**+1.4**
EGMT	**Eagleton**	**5.46**	**327**	Pn	**Pn**	**18 45 04.1**	**-0.4**
MCMT	**McKenzie Canyo**	**5.58**	**286**		**Pn**	**18 45 05.6**	**-0.7**
HRY	**Holter Researc**	**5.61**	**307**		**Pn**	**18 45 05.7**	**-0.9**
PV22	**Blue Mesa, Par**	**5.66**	**209**		**Pn**	**18 45 08.0**	**+0.6**
BGNE	**Belgrade**	**5.70**	**110**		**Pn**	**18 45 10.3**	**+2.6**
SPUT	**South Promonto**	**5.75**	**250**		**Pn**	**18 45 08.7**	**+0.2**
P17A	**Butcher Ranch,**	**5.77**	**227**		**Pn**	**18 45 09.7**	**+0.9**
HVU	**Hansel Valley**	**5.79**	**255**		**Pn**	**18 45 08.6**	**-0.6**
PV23	**Carpenter Ridg**	**5.81**	**210**		**Pn**	**18 45 09.6**	**0.0**
PV04	**Paradox Valley**	**5.83**	**209**		**Pn**	**18 45 10.3**	**+0.7**
PV12	**Saucer Basin,**	**5.86**	**208**		**Pn**	**18 45 11.1**	**+0.9**
PV14	**Lion Creek, Pa**	**5.89**	**210**		**Pn**	**18 45 11.0**	**+0.5**
PV20	**West Nyswonger**	**5.89**	**209**		**Pn**	**18 45 10.2**	**-0.4**
PV11	**David Mesa, Pa**	**5.90**	**209**		**Pn**	**18 45 11.2**	**+0.5**
PV16	**Nyswonger Mesa**	**5.90**	**209**		**Pn**	**18 45 11.7**	**+0.9**
SRU	**San Rafael Swe**	**5.93**	**223**		**Pn**	**18 45 10.7**	**-0.3**
PV03	**Paradox Valley**	**5.93**	**208**		**Pn**	**18 45 11.8**	**+0.7**
PV02	**Paradox Valley**	**5.94**	**207**		**Pn**	**18 45 12.4**	**+1.2**
PV17	**East Wray Mesa**	**5.95**	**209**		**Pn**	**18 45 11.8**	**+0.5**
TMUT	**Trail Mountain**	**6.15**	**228**		**Pn**	**18 45 14.3**	**+0.1**
PV05	**Paradox Valley**	**6.18**	**209**		**Pn**	**18 45 13.8**	**-0.7**
Q16A	**Castle Valley**	**6.40**	**226**		**Pn**	**18 45 17.3**	**-0.3**
DUG	**Dugway, Tooele**	**6.54**	**242**		**Pn**	**18 45 18.0**	**-1.3**
ULM	**Lac du Bonnet**	**9.30**	**41**	Pn	**Pn**	**18 45 54.4**	**-2.7**
	comp=E,0.8nm,0.3s,baz=229,slow=11,SNR=10						
ULM				Pg		18 46 31.4	
	comp=E,1.4nm,0.3s,baz=227,slow=16,SNR=8.6						
ULM				Lg	Lg	18 48 33.3	
	comp=E,0.0nm,0.3s,baz=127,slow=12,SNR=4.9						
YKA	**Yellowknife Ar**	**19.75**	**347**	P	**Pn**	**18 48 16.9**	**+2.5**
	comp=E,0.2nm,0.5s,baz=152,slow=9.0,SNR=4.1						
INK	**Inuvik**	**28.90**	**339**	P	**P**	**18 49 43.8**	**+1.8**
	comp=E,0.3nm,0.4s,baz=144,slow=4.6,SNR=1.5						

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*NOU **16** 18:49:53.8, 16°.35S×168°.70E, h103^{km}, MLv4.7, Vanuatu Islands*

*IDC **16** 18:50:24.7±4.0, 18°.42S×166°.63E, h0^{km}, mb3.8/4, mb1 3.9/6, mb1mx3.7/29, mbtmp3.7/6, ML3.2/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/35, Error ellipse: s-maj=73.7km s-min=31.3km az=74.0*

ISC 16 18:50:24.1±2.1**, 18°.3S**±0°.1×**167°.4E**±0°.2**, h35^{km}, n18, σ1^{s}.94**/12**, mb3.7**/4**, MS3.4**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.92**	**54**	P	Pn	18 50 19.8	-21
LIFNC	**LIFOU**	**2.50**	**183**	P	**Pn**	**18 51 01.3**	**-1.0**
MARNC	**Mare, Loyalty**	**3.25**	**170**	P	Pn	18 51 08.6	-4.0
KOUNC	**Koumac, New Ca**	**3.72**	**232**	P	**Pn**	**18 51 19.0**	**0.0**
YATNC	**Mamie plateau,**	**3.81**	**187**	P	**Pn**	**18 51 18.6**	**-1.6**
DZM	**Mont Dzumac**	**3.89**	**193**	Pn	**Pn**	**18 51 21.4**	**-0.2**
	1.2nm,0.3s,baz=335,slow=4.9,SNR=21						
DZM				Sn	**Sn**	**18 52 08.5**	**+2.4**
	8.6nm,0.3s,baz=168,slow=22,SNR=10						
NOUC	**Port Laguerre**	**3.96**	**195**	P	**Pn**	**18 51 22.5**	**+0.2**
OUENC	**Ouen Island, N**	**4.17**	**187**	P	**Pn**	**18 51 24.4**	**-0.8**
HNR	**Honiara**	**11.38**	**320**	LR	LR	18 56 34.2	
	comp=Z,59nm,20.8s,baz=151,slow=34						
CTA	**Charters Tower**	**20.06**	**261**	P	**P**	**18 54 51.2**	**-3.2**
	0.1nm,0.3s,baz=79,slow=12,SNR=2.0						
URZ	**Urewera**	**21.65**	**159**	LR	LR	19 02 16.2	
	comp=Z,106nm,21.2s,baz=31,slow=33						
STKA	**Stephens Creek**	**26.94**	**235**	P	**P**	**18 56 02.9**	**+0.6**
	3.8nm,1.1s,baz=90,slow=15,SNR=2.8						
WRA	**Warramunga Arr**	**31.26**	**262**	P	**P**	**18 56 40.6**	**-0.2**
	0.2nm,0.6s,baz=83,slow=6.7,SNR=1.4						
ASAR	**Alice Springs**	**31.69**	**254**	P	**P**	**18 56 42.6**	**-2.0**
	0.9nm,0.8s,baz=80,slow=8.9,SNR=8.1						
SIJI	**Sorong**	**39.46**	**292**	LR	LR	19 14 30.8	
	comp=Z,42nm,18.3s,baz=354,slow=37						
FITZ	**Fitzroy Crossi**	**39.62**	**263**	LR	LR	19 11 59.2	
	comp=Z,62nm,18.9s,baz=116,slow=33						
TGY	**Tagaytay City**	**55.97**	**302**	LR	LR	19 19 22.1	
	comp=Z,169nm,20.6s,baz=104,slow=31						
CMAR	**Chiang Mai Arr**	**76.52**	**295**	P	**P**	**19 02 14.1**	**+2.9**
	0.3nm,0.3s,baz=134,slow=4.9,SNR=4.4						

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*NOU **16** 19:07:17.4, 6°.69S×121°.54E, h160^{km}, mb4.4, Flores Sea*

*NEIC **16** 19:07:33.6±2.2, 8°.08S±0°.08×121°.99E±0°.08, h210^{km}±7^{km}, mb4.1/18, Error ellipse: s-maj=13.0km s-min=11.1km az=47.0*

*IDC **16** 19:07:33.2±1.0, 8°.16S×122°.09E, h205^{km}±10^{km}, mb3.3/5, mb1 3.5/9, mb1mx3.2/43, mbtmp4.0/9, Error ellipse: s-maj=35.7km s-min=9.9km az=57.0*

*DJA **16** 19:07:34.2±0.3, 8°S±3°×12°2E±°, h199^{km}±4^{km}, M4.2/16, mb4.4/5, mB4.8/2, MLv4.0/16, Mw(mB)4.0/2*

ISC 16 19:07:32.9±0.5**, 8°.19S**±0°.05×**121°.96E**±0°.06**, h200^{km}, n61, σ1^{s}.43**/66**, mb3.9**/9**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.52**	**148**		**Pn**	**19 08 02.6**	**+2.5**
MMRI	**Maumere**	**0.52**	**148**	P	**Pn**	**19 08 01.6**	**+1.5**
EDFI	**Ende, Flores**	**0.61**	**205**	P	**Pn**	**19 08 02.0**	**+1.3**
EDFI				S	**Sn**	**19 08 23.1**	**+0.9**
WSI	**Waingapu**	**2.20**	**228**	P	**Pn**	**19 08 14.0**	**+0.5**
BASI	**Baing, Sumba**	**2.43**	**214**	P	**Pn**	**19 08 16.5**	**+0.4**
BASI				S	**Sn**	**19 08 49.3**	**-0.5**
BSSI	**Bau Bau, Buton**	**2.50**	**324**	P	**Pn**	**19 08 19.0**	**+2.1**
BATI	**Baumata**	**2.62**	**140**	P	**Pn**	**19 08 20.1**	**+1.9**
	306nm,0.3s,baz=333,slow=1.9,SNR=627						
BATI				S	**Sn**	**19 08 53.0**	**-0.6**
	126nm,0.3s,baz=288,slow=22,SNR=9.6						
BATI	**Baumata**	**2.62**	**140**	P	**Pn**	**19 08 19.0**	**+0.8**
SOEI	**Soe**	**2.76**	**124**		**Pn**	**19 08 21.7**	**+1.7**
SOEI	**Soe**	**2.76**	**124**	P	**Pn**	**19 08 21.0**	**+1.1**
SOEI				S	**Sn**	**19 08 57.5**	**+0.9**
BKSI	**Bulukumba**	**3.38**	**327**	P	**Pn**	**19 08 29.6**	**+2.5**
PLAI	**Plampang**	**4.18**	**261**	P	**Pn**	**19 08 38.3**	**+1.3**
BNSI	**Bone**	**4.19**	**334**	P	**Pn**	**19 08 39.8**	**+2.7**
SPSI	**Sidrap Palu**	**4.73**	**332**	P	**Pn**	**19 08 46.0**	**+2.1**
TWSI	**Taliwang, Sumb**	**5.05**	**263**	P	**Pn**	**19 08 48.9**	**+0.9**
SRBI	**Singaraja**	**6.68**	**270**	P	**Pn**	**19 09 09.9**	**+0.9**
	0.2nm27nm,0.6s						
DNP	**Denpasar**	**6.69**	**265**	P	**Pn**	**19 09 10.2**	**+1.0**
LUWI	**Luwuk**	**7.15**	**7**	Pn	**Pn**	**19 09 13.8**	**-1.3**
SANI	**Sanana**	**7.30**	**34**	P	**Pn**	**19 09 20.3**	**+3.1**
	0.1nm9.7nm,1.0s						
JAGI	**Jajag, Banyuwa**	**7.73**	**267**	Pn	**Pn**	**19 09 22.6**	**-0.1**
BKB	**Balikpapan**	**8.53**	**324**	Pn	**Pn**	**19 09 31.7**	**-1.4**
SAUI	**Saumlaki**	**9.25**	**89**	Pn	**Pn**	**19 09 42.7**	**+0.2**
KNRA	**Kununurra**	**9.98**	**139**	Pn	**Pn**	**19 09 49.6**	**-2.4**
MTN	**Manton Dam**	**10.14**	**118**		**Pn**	**19 09 53.9**	**-0.1**
TNTI	**Ternate**	**10.41**	**31**	Pn	**Pn**	**19 09 54.9**	**-2.6**
FITZ	**Fitzroy Crossi**	**10.48**	**160**	P	**Pn**	**19 09 58.0**	**-0.4**
	0.7nm,0.3s,baz=4.2,slow=11,SNR=21						
FITZ				S	**Sn**	**19 11 52.2**	**-3.2**
	0.8nm,0.3s,baz=256,slow=12,SNR=8.7						
FITZ	**Fitzroy Crossi**	**10.48**	**160**	Pn	**Pn**	**19 09 58.0**	**-0.4**
UGM	**Wanagama**	**11.32**	**271**	Pn	**Pn**	**19 10 09.8**	**+0.5**
FAKI	**Fak Fak**	**11.50**	**63**	Pn	**Pn**	**19 10 12.9**	**+1.4**
PSA00	**Pilbara Seismi**	**13.46**	**188**		**P**	**19 10 40.8**	**+2.0**
CISI	**Cisompet, Garu**	**14.02**	**272**	Pn	**Pn**	**19 10 43.1**	**-0.3**
LEM	**Lembang**	**14.28**	**274**	P	**P**	**19 10 48.5**	**+0.3**
	3.6nm,0.3s,baz=93,slow=15,SNR=4.5						
GIRL	**Giralia**	**16.17**	**206**	P	**Pn**	**19 11 11.6**	**+2.2**
CGJI	**Cibinong**	**16.20**	**274**	P	**P**	**19 11 09.1**	**-0.1**
WB0	**Warramunga Arr**	**16.66**	**135**	P	**Pn**	**19 11 15.6**	**+0.3**
WB0				IAmb	IAmb	19 11 16.2	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**16.74**	**136**	P	**P**	**19 11 15.8**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=312,slow=13,SNR=20						
WRA				S	**S**	**19 14 18.1**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=305,slow=22,SNR=5.0						
WRA	**Warramunga Arr**	**16.74**	**136**	P	**P**	**19 11 15.2**	**+0.1**
WRAB	**Tennant Creek**	**16.74**	**135**	P	**P**	**19 11 15.8**	**+0.7**
WRAB				IAmb	IAmb	19 11 36.9	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**16.75**	**136**	P	**Pn**	**19 11 16.7**	**+0.4**
WB2				IAmb	IAmb	19 11 25.0	
	comp=Z,15nm,1.5s						
WR0	**Warramunga Arr**	**16.89**	**135**	P	**Pn**	**19 11 18.3**	**+0.2**
WR0				IAmb	IAmb	19 11 19.9	
	comp=Z,6.9nm,0.9s						
AS31	**Alice Springs**	**19.18**	**145**	P	**P**	**19 11 43.6**	**+1.9**
ASAR	**Alice Springs**	**19.18**	**145**	P	**P**	**19 11 42.0**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=334,slow=15,SNR=47						
ASAR				S	**S**	**19 15 07.0**	**-1.4**
	baz=322,slow=19,SNR=6.1						
ASAR	**Alice Springs**	**19.18**	**145**	P	**P**	**19 11 42.7**	**+1.1**
MORW	**Morawa**	**21.50**	**194**	P	**P**	**19 12 07.0**	**+0.8**
MORW				IAmb	IAmb	19 12 07.4	
	comp=Z,15nm,0.9s						
COEN	**Coen**	**21.59**	**107**	P	**P**	**19 12 07.8**	**+0.5**
COEN				IAmb	IAmb	19 12 28.5	
	comp=Z,2.8nm,0.7s						
FORT	**Forrest**	**23.19**	**167**	P	**P**	**19 12 23.4**	**+1.4**
NWAO	**Narrogin (SRO)**	**25.00**	**189**	P	**P**	**19 12 39.4**	**+0.9**
BBOO	**Buckleboo**	**27.77**	**154**	P	**P**	**19 13 03.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**34.88**	**320**	P	**P**	**19 14 05.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=155,slow=6.6,SNR=4.8						
USRK	**Ussuriysk Ar.**	**52.93**	**9**	P	**P**	**19 16 26.9**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=213,slow=9.4,SNR=4.5						
SONM	**Songino Array**	**57.46**	**348**	P	**P**	**19 17 01.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=161,slow=8.6,SNR=5.9						
SONM	**Songino Array**	**57.46**	**348**	IAmb	IAmb	19 17 02.3	
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**65.12**	**331**	P	**P**	**19 17 52.7**	**+0.4**
MKAR	**Makanchi Array**	**65.12**	**331**	P	**P**	**19 17 52.8**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=141,slow=7.3,SNR=21						
KURBB	**Kurchatov Arra**	**69.58**	**332**	P	**P**	**19 18 18.9**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=144,slow=5.4,SNR=4.7						
KURK	**Kurchatov**	**69.61**	**332**	P	**P**	**19 18 18.9**	**-1.4**
KURK	**Kurchatov**	**69.61**	**332**	IAmb	IAmb	19 18 26.5	
	comp=Z,4.2nm,1.5s						
VNDA	**Vanda**	**72.34**	**172**	P	**P**	**19 18 38.4**	**+2.0**
VNDA				IAmb	IAmb	19 18 42.9	
	comp=Z,3.7nm,1.1s						
ABKAR	**Akbulak array**	**78.61**	**324**	P	**P**	**19 19 10.1**	**-2.3**
ABKAR	**Akbulak array**	**78.61**	**324**	P	**P**	**19 19 10.9**	**-1.5**
ABKAR				IAmb	IAmb	19 19 30.7	
	comp=Z,0.7nm,0.9s						
ADK	**Adak**	**79.45**	**34**	P	**P**	**19 19 16.6**	**-0.3**

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*BJI **16** 19:12:14.6±0.0, 24°.38N×122°.03E, h32^{km}, mB4.7/43, mb4.5/60, ML4.6/9, Ms4.3/38, Ms7 4.1/38*

*MOS **16** 19:12:14.6±0.9, 24°.55N×122°.06E, h43^{km}, mb4.9/27, Error ellipse: s-maj=9.2km s-min=5.0km az=119.1*

*NEIC **16** 19:12:15.1±1.9, 24°.47N±0°.06×121°.97E±0°.03, h31^{km}±4^{km}, mb5.0/119, Mwr4.4/21, ML4.9(TAP), Error ellipse: s-maj=8.5km s-min=4.1km az=195.0*

*TAP **16** 19:12:15.6, 24°.43N×121°.95E, h31^{km}, ML4.9, B*

*JMA **16** 19:12:15.1±0.1, 24°.34N×121°.93E, h51^{km}±3^{km}, M4.7*

*NIED **16** 19:12:15.1, 24°.35N×121°.93E, h51^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}6.03; $M_{\theta\theta}$-1.48; $M_{\phi\phi}$-4.55; $M_{r\theta}$4.04; $M_{\theta\phi}$2.07; $M_{\phi r}$-1.39; Fault plane solution: $M_0$7.13000×10^{15} NP1: ϕ_s132.00000°, δ62.00000°, λ71.00000°. NP2: ϕ_s348.00000°, δ33.00000°, λ122.00000°.*

*NEIC **16** 19:12:15.1, 24°.47N×121°.97E, h34^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.94; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-4.85; $M_{r\theta}$1.72; $M_{\theta\phi}$1.34; $M_{\phi r}$0.52; Fault plane solution: $M_0$5.91000×10^{15} NP1: ϕ_s356.09000°, δ46.58000°, λ109.83000°. NP2: ϕ_s148.41000°, δ46.91000°, λ70.28000°. Principal axes: T 6.3907, Plg76.0000°, Azm343.0000°; N -1.1088, Plg14.0000°, Azm162.0000°; P -5.2819, Plg0.0000°, Azm252.0000°;*

*IDC **16** 19:12:20.7±3.0, 24°.53N×122°.14E, h85^{km}±28^{km}, mb4.1/27, mb1 4.1/30, mb1mx4.0/52, mbtmp4.4/30, MS3.8/18, Ms1 3.8/18, ms1mx3.5/42 Error ellipse: s-maj=14.8km s-min=10.7km az=64.0*

ISC 16 19:12:16.1±0.3**, 24°.45N**±0°.02×**122°.01E**±0°.02**, h35^{km}**±1^{km}**, n471, σ1^{s}.68**/608**, mb4.8**/119**, MS3.8**/21**, 28C-72D, Fault plane solution: NP1:**ϕ_s120.91356°**,** δ79.00565°**,** λ45.47935°. **NP2:**ϕ_s19.93840°**,** δ45.58011°**,** λ164.51309°. **Principal axes:** T Plg39.0329°**,** Azm351.2505°**;** N Plg43.4955°**,** Azm131.5358°**;** P Plg21.1038°**,** Azm243.0166°**; Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.18**	**271**	⇑*i*P	Pn	19 12 21.4	-2.2
	baz=281						
ENAH				*e*S	Sn	19 12 25.1	-4.7
	baz=281						
TWC	**Suao**	**0.22**	**318**	⇑*i*P	**Pn**	**19 12 22.2**	**-1.4**
	baz=336						
TWC				*i* S	**Sn**	**19 12 26.6**	**-3.0**
	baz=336						
ENA	**Nanau**	**0.25**	**266**	⇑*i*P	**Pn**	**19 12 22.0**	**-1.7**
	baz=270						
ENA				S	**Sn**	**19 12 26.6**	**-3.0**
	baz=270						
ILA	**Ilan**	**0.40**	**323**	P	**Pn**	**19 12 24.9**	**-0.3**
	baz=328						
ILA				S	**Sn**	**19 12 31.2**	**-0.5**
	baz=328						
TWE	**Neicheng**	**0.42**	**311**	⇑P	**Pn**	**19 12 24.8**	**-0.7**
	baz=320						
TWE				*i* S	**Sn**	**19 12 31.1**	**-1.0**
	baz=320						
NTC	**Toucheng**	**0.44**	**338**	P	**Pn**	**19 12 25.9**	**+0.1**
	baz=351						
ENTT	**Nioudou**	**0.45**	**296**	⇓*i*P	**Pn**	**19 12 25.1**	**-0.8**
	baz=302						
ENTT				*i* S	**Sn**	**19 12 31.6**	**-1.3**
	baz=302						
NACB	**Ninganchiao**	**0.47**	**235**	⇓P	**Pn**	**19 12 24.7**	**-1.5**
	baz=233						
NACB				S	**Sn**	**19 12 32.5**	**-0.7**
	baz=233						
NACB	**Ninganchiao**	**0.47**	**235**		**Pn**	**19 12 24.6**	**-1.6**
NACB					**Sn**	**19 12 32.2**	**-1.0**
NDT	**Datong Townshi**	**0.48**	**289**	⇓*i*P	**Pn**	**19 12 25.7**	**-0.7**
	baz=294						
NDT				*i* S	**Sn**	**19 12 32.8**	**-0.9**
	baz=294						
TWD	**Chiawan**	**0.53**	**226**	⇓*i*P	**Pn**	**19 12 25.7**	**-1.3**
	baz=231						
TWD				*i* S	**Sn**	**19 12 33.7**	**-1.0**
	baz=231						
ETLH	**Xiulin Townshi**	**0.54**	**244**	⇓P	**Pn**	**19 12 26.0**	**-1.3**
	baz=243						
ETLH				S	**Sn**	**19 12 34.6**	**-0.5**
	baz=243						
TIPB	**Shuangxi**	**0.55**	**342**	⇓P	**Pn**	**19 12 27.5**	**0.0**
	baz=351						
TIPB				*i* S	**Sn**	**19 12 35.5**	**+0.1**
	baz=351						
TWB1	**Santiao Chiao**	**0.56**	**358**	*e*P	**Pn**	**19 12 27.8**	**+0.1**
	baz=4.0						
TWB1				S	**Sn**	**19 12 36.0**	**+0.4**
	baz=4.0						
NWLT	**Wulai**	**0.57**	**306**	⇓*e*P	**Pn**	**19 12 26.9**	**-0.8**
	baz=311						
NWLT				S	**Sn**	**19 12 34.7**	**-1.2**
	baz=311						
NNSB	**Datong**	**0.57**	**268**	⇓P	**Pn**	**19 12 26.8**	**-1.0**
	baz=273						
NNSB				S	**Sn**	**19 12 34.2**	**-1.9**
	baz=273						
NNSH	**Datong**	**0.57**	**268**	⇓*i*P	**Pn**	**19 12 26.8**	**-1.1**
	baz=274						
NNSH				S	**Sn**	**19 12 34.8**	**-1.4**
	baz=274						
NNS	**Nan Shan**	**0.58**	**270**	⇓*i*P	**Pn**	**19 12 26.9**	**-1.1**
	baz=274						
NNS				S	**Sn**	**19 12 34.6**	**-1.8**
	baz=274						
HWA	**Hwalien**	**0.59**	**219**	⇓*e*P	**Pn**	**19 12 27.4**	**-0.7**
	baz=215						
HWA				S	**Sn**	**19 12 37.1**	**+0.6**
	baz=215						
YHNB	**Yeheng**	**0.62**	**291**	⇓P	**Pn**	**19 12 27.8**	**-0.7**
	baz=295						
YHNB				S	**Sn**	**19 12 36.2**	**-1.1**
	baz=295						
YHNB	**Yeheng**	**0.62**	**291**		**Pn**	**19 12 27.5**	**-1.0**
YHNB				Sn	**Sn**	**19 12 36.1**	**-1.1**
NSK	**Sanguang**	**0.64**	**291**	⇓*i*P	**Pn**	**19 12 28.0**	**-0.8**
	baz=295						
NSK				*i* S	**Sn**	**19 12 36.3**	**-1.3**
	baz=295						
NWF	**Wu-fen Shan**	**0.66**	**342**	*e*P	**Pn**	**19 12 29.6**	**+0.6**
	baz=340						
NWF				S	**Sn**	**19 12 39.1**	**+0.9**
	baz=340						
WFSB	**Wu-fen Shan**	**0.66**	**342**	⇑*e*P	**Pn**	**19 12 29.9**	**+0.9**
	baz=340						
WFSB				S	**Sn**	**19 12 38.9**	**+0.8**
	baz=340						
TWA	**Mucha**	**0.66**	**324**	⇓*i*P	**Pn**	**19 12 29.2**	**+0.2**
	baz=322						
TWA				*i* S	**Sn**	**19 12 38.5**	**+0.4**
	baz=322						
NHDH	**Xindian Distri**	**0.68**	**320**	⇓*e*P	**Pn**	**19 12 29.4**	**+0.2**
	baz=324						
TATO	**Taipei**	**0.71**	**318**	⇓P	**Pn**	**19 12 29.9**	**+0.3**
	baz=322						
TATO				S	**Sn**	**19 12 39.5**	**+0.2**
	baz=322						
TATO	**Taipei**	**0.71**	**318**		**Pn**	**19 12 29.9**	**+0.3**
TATO				Sn	**Sn**	**19 12 39.6**	**+0.3**
FUSS	**Fushou**	**0.73**	**254**	⇓P	**Pn**	**19 12 29.4**	**-0.6**
	baz=255						
FUSS				S	**Sn**	**19 12 39.4**	**-0.6**
	baz=255						
TNOU	**National Taiwa**	**0.73**	**343**	⇑*e*P	**Pn**	**19 12 28.4**	**-1.6**
	baz=357						
WHF	**Hehuan Shan**	**0.74**	**246**	⇓*i*P	**Pn**	**19 12 29.6**	**-0.9**
	baz=246						
WHF				S	**Sn**	**19 12 40.0**	**-0.8**
	baz=246						
TAP	**Taipei**	**0.75**	**322**	P	**Pn**	**19 12 30.9**	**+0.7**
	baz=326						
TAP				*i* S	**Sn**	**19 12 41.3**	**+1.0**
	baz=326						
BACT	**New Taipei Cit**	**0.76**	**317**	P	**Pn**	**19 12 30.8**	**+0.6**
	baz=321						
BACT				S	**Sn**	**19 12 41.6**	**+1.2**
	baz=321						
TWT	**Tachien**	**0.79**	**256**	⇓*i*P	**Pn**	**19 12 30.5**	**-0.3**
	baz=257						
TWT				S	**Sn**	**19 12 41.2**	**-0.2**

								baz=257
TDCB	Techi	0.80	256	⇓P	Pn	19 12 30.5	-0.4	baz=257
TDCB				S	Sn	19 12 41.3	-0.5	baz=257
YM01	YM01	0.81	330	⇑P	Pn	19 12 31.5	+0.5	baz=344
YM01				S	Sn	19 12 42.8	+1.1	baz=344
YM10	YM10	0.82	330	⇑P	Pn	19 12 31.7	+0.5	baz=344
YM10				S	Sn	19 12 43.8	+1.7	baz=344
ESL	Shilin	0.82	220	⇓*i*P	Pn	19 12 29.7	-1.4	baz=229
YM11	YM11	0.82	331	⇑P	Pn	19 12 32.1	+0.9	baz=345
YM11				S	Sn	19 12 43.2	+1.0	baz=345
YM05	YM05	0.82	331	⇑P	Pn	19 12 31.6	+0.4	baz=344
YM05				*e*S	Sn	19 12 43.3	+1.0	baz=344
YM04	YM04	0.83	329	⇑P	Pn	19 12 31.8	+0.5	baz=342
YM04				S	Sn	19 12 43.5	+1.2	baz=342
YM08	YM08	0.83	333	⇑P	Pn	19 12 31.6	+0.3	baz=346
YM08				*e*S	Sn	19 12 43.2	+0.7	baz=346
TWS1	Kuangyinshan	0.85	321	⇓P	Pn	19 12 32.2	+0.7	baz=333
TWS1				S	Sn	19 12 44.6	+1.9	baz=333
YM03	YM03	0.85	330	⇑P	Pn	19 12 32.0	+0.4	baz=343
YM03				S	Sn	19 12 44.4	+1.5	baz=343
JYNG	Yonagunijimaku	0.85	89	P	Pn	19 12 32.0	+0.5	
JYNG				S	Sn	19 12 45.3	+2.5	
NTY	Taoyuan	0.85	311	*e*P	Pn	19 12 32.2	+0.7	baz=324
NTY				*e*S	Sn	19 12 44.6	+1.8	baz=324
CHGB	Renai	0.85	244	⇓P	Pn	19 12 31.1	-0.7	baz=243
CHGB				S	Sn	19 12 43.6	+0.4	baz=243
ANP	Anpu	0.86	329	⇑P	Pn	19 12 32.1	+0.3	baz=342
ANP				*e*S	Sn	19 12 44.5	+1.2	baz=342
NTST	Danshui	0.88	325	⇑*e*P	Pn	19 12 32.7	+0.8	baz=336
NTST				S	Sn	19 12 45.6	+2.1	baz=336
TWY	Chenhua	0.91	336	*e*P	Pn	19 12 33.2	+0.9	baz=339
TWY				*e*S	Sn	19 12 47.1	+2.9	baz=339
YOJ	Yonaguni jima	0.91	89	P	Pn	19 12 32.8	+0.5	
YOJ				S	Sn	19 12 46.7	+2.4	
YOJ	Yonaguni jima	0.91	89	⇓P	Pn	19 12 32.8	+0.5	baz=76
YOJ				S	Sn	19 12 46.0	+1.7	baz=76
YOJ	Yonaguni jima	0.91	89		Pn	19 12 32.7	+0.3	
YOJ				Sn	Sn	19 12 46.0	+1.7	
NCU	National Centr	0.91	305	*e*P	Pn	19 12 33.1	+0.7	baz=308
NCU				S	Sn	19 12 46.5	+2.1	baz=308
NCUH	Zhongli	0.91	305	*e*P	Pn	19 12 33.1	+0.7	baz=307
NCUH				S	Sn	19 12 46.5	+2.1	baz=307
NSM	Shimen	0.92	336	*e*P	Pn	19 12 33.8	+1.3	baz=339
LIOB	Emei	0.93	283	⇓*i*P	Pn	19 12 33.2	+0.6	baz=285
LIOB				*e*S	Sn	19 12 45.6	+0.9	baz=285
NSTT	Nanjuang	0.94	282	⇓*i*P	Pn	19 12 33.3	+0.6	baz=283
NSTT				*i* S	Sn	19 12 45.7	+0.8	baz=283
EGFH	Guangfu	0.94	215	*e*P	Pn	19 12 31.5	-1.3	baz=200
HSN1	Hsinchu	0.96	290	⇓P	Pn	19 12 33.8	+0.7	baz=285
HSN1				S	Sn	19 12 47.3	+1.7	baz=285
WHP	Taichung City	0.98	260	⇓*i*P	Pn	19 12 33.7	+0.3	baz=261
WHP				*e*S	Sn	19 12 47.3	+1.0	baz=261
SBCB	Hsinchu	0.99	291	⇓P	Pn	19 12 34.1	+0.6	baz=307
SBCB				S	Sn	19 12 48.3	+1.9	baz=307
HSN	Hsinchu	1.01	291	P	Pn	19 12 34.2	+0.4	baz=295
HSN				*e*S	Sn	19 12 48.0	+1.2	baz=295
WPL	Puli Township	1.05	246	⇓P	Pn	19 12 34.3	-0.1	baz=236
DPDB	Guoxing	1.07	248	⇓P	Pn	19 12 34.8	+0.2	baz=240
HGSD	Ruisui	1.09	210	⇓*e*P	Pn	19 12 34.1	-0.7	baz=193
HGSD				S	Sn	19 12 51.4	+2.7	baz=193
NMLH	Miaoli	1.11	275	⇓*e*P	Pn	19 12 36.2	+1.0	baz=276
NMLH				*e*S	Sn	19 12 52.1	+2.8	baz=276
EHY	Hungye	1.13	214	⇓*e*P	Pn	19 12 33.6	-1.8	baz=212
TWQ1	Liyutan	1.13	265	P	Pn	19 12 36.6	+1.2	baz=266
TWQ1				S	Sn	19 12 52.0	+2.3	baz=266
NSY	Sanyi	1.14	269	⇓P	Pn	19 12 36.7	+1.2	baz=270
NSY				*e*S	Sn	19 12 52.3	+2.3	baz=270
SMLT	Sun Moon Lake	1.16	241	⇓*i*P	Pn	19 12 35.8	-0.1	baz=231
SMLT				*e*S	Sn	19 12 52.1	+1.6	baz=231
SSLB	Suanglung	1.17	236	⇓P	Pn	19 12 35.5	-0.5	baz=229
SSLB				S	Sn	19 12 51.3	+0.6	baz=229
SSLB	Suanglung	1.17	236	Pn	Pn	19 12 35.5	-0.5	
PCYT	Pengchaiyu	1.18	3	P	Pn	19 12 36.4	+0.3	baz=5.0
PCYT				S	Sn	19 12 52.2	+1.3	baz=5.0
TYC	Yuchr	1.18	243	⇓*i*P	Pn	19 12 36.2	+0.1	baz=243
TYC				S	Sn	19 12 52.0	+1.0	baz=243
YULB	Yu-li	1.23	212	⇓P	Pn	19 12 35.2	-1.6	baz=210
YULB	Yu-li	1.23	212		Pn	19 12 34.9	-2.0	
TCU	Taichung	1.25	257	⇓*e*P	Pn	19 12 38.1	+1.0	baz=256
WDJ	Dajia District	1.25	266	⇓*e*P	Pn	19 12 37.9	+0.8	baz=267
WDJ				*e*S	Sn	19 12 55.4	+2.7	baz=267
EYUL	Yuli	1.26	210	*e*P	Pn	19 12 37.5	+0.2	baz=222
WWF	Wufeng	1.26	252	⇓*e*P	Pn	19 12 38.3	+1.1	baz=268
WWF				S	Sn	19 12 55.9	+3.0	baz=268
TWF1	Yuli	1.27	211	*e*P	Pn	19 12 35.8	-1.5	baz=220
WHYT	Xinyi Township	1.29	235	*e*P	Pn	19 12 38.0	+0.3	baz=231
WHYT				*e*S	Sn	19 12 56.4	+2.6	baz=231
WJS	Zhushan	1.33	242	⇓P	Pn	19 12 39.2	+1.1	baz=229
WJS				*e*S	Sn	19 12 58.9	+4.4	baz=229
WNT1	Nantou City	1.33	246	⇓P	Pn	19 12 39.5	+1.4	baz=246
WNT1				*e*S	Sn	19 12 58.3	+3.8	baz=246
WNT	Mingjian	1.34	245	⇓*i*P	Pn	19 12 39.6	+1.4	baz=245
WNT				S	Sn	19 12 58.4	+3.6	baz=245
YUS	Yu-Shan	1.36	226	⇓*i*P	Pn	19 12 38.5	-0.4	baz=213
YUS				S	Sn	19 12 57.2	+1.2	baz=213
WCHH	Zhanghua	1.38	255	*e*P	Pn	19 12 39.3	+0.6	baz=254
FULB	Fuli	1.40	208	*e*P	Pn	19 12 38.6	-0.6	baz=193
ALS	Alishan	1.44	230	⇓P	Pn	19 12 40.3	+0.3	baz=220
ALS				*e*S	Sn	19 13 00.0	+2.2	baz=220
CHKT	Chengkung	1.46	204	*e*P	Pn	19 12 39.2	-0.8	baz=188
CHN5	Tsauling	1.48	236	⇓P	Pn	19 12 41.3	+1.0	baz=235
CHN5				*e*S	Sn	19 13 02.5	+4.0	baz=235
WGK	Gukeng	1.52	241	⇓*i*P	Pn	19 12 42.3	+1.5	baz=240
WGK				*e*S	Sn	19 13 03.2	+3.8	baz=240
WDLH	Douliu	1.54	241	⇓P	Pn	19 12 42.5	+1.5	baz=241
WDLH				S	Sn	19 13 03.7	+3.8	baz=241
ELDTW	Lidau	1.55	216	⇓P	Pn	19 12 40.1	-1.2	baz=205
IRIF	Iriomote-Funau	1.57	94	P	Pn	19 12 41.8	+0.4	
IRIF				*e*S	Sn	19 13 02.6	+2.1	
EDH	Donghe	1.60	204	*e*P	Pn	19 12 41.0	-0.8	baz=191
RLNB	Erlin	1.61	250	⇓P	Pn	19 12 42.6	+0.7	baz=265
RLNB				*e*S	Sn	19 13 02.8	+1.4	baz=265
WTK	Tuku	1.66	243	*e*P	Pn	19 12 43.9	+1.2	baz=243
WTK				S	Sn	19 13 06.0	+3.2	baz=243
CHN2	Minshiung	1.67	237	P	Pn	19 12 44.6	+1.8	baz=237
CHN2				*e*S	Sn	19 13 07.1	+4.0	baz=237
HATJ	Hateruma jima	1.68	103	P	Pn	19 12 44.2	+1.2	
HATJ				*e*S	Sn	19 13 05.2	+1.9	
CHN4	Tsaushan	1.69	230	⇓*e*P	Pn	19 12 44.5	+1.4	baz=230
CHN4				S	Sn	19 13 06.9	+3.3	baz=230
STYT	Tauyuan	1.72	222	⇓*i*P	Pn	19 12 44.1	+0.6	baz=214
STYT				*e*S	Sn	19 13 06.6	+2.4	baz=214
CHY	Chiayi	1.73	237	*e*P	Pn	19 12 45.0	+1.4	baz=237
CHY				*e*S	Sn	19 13 08.1	+3.6	baz=237
LONT	Longtian	1.73	208	*e*P	Pn	19 12 42.3	-1.4	baz=194
WTP	Ta-pu	1.75	227	⇓*i*P	Pn	19 12 44.9	+0.9	baz=214
WTP				*e*S	Sn	19 13 09.1	+4.1	baz=214
WMLT	Mailiao	1.75	249	*e*P	Pn	19 12 45.6	+1.6	baz=248
TWK	Hsinying	1.82	230	⇓*i*P	Pn	19 12 46.2	+1.3	baz=230
TWK				S	Sn	19 13 10.1	+3.2	baz=230
WSF	Szhu	1.82	244	⇓P	Pn	19 12 45.6	+0.7	baz=244
WSF				S	Sn	19 13 09.1	+2.4	baz=244
TWGBT	Beinan	1.83	208	*e*P	Pn	19 12 43.3	-1.7	baz=196
LDUT	Ludao	1.83	196	*e*P	Pn	19 12 43.3	-1.8	baz=182
TWG	Pinlang	1.83	208	*e*P	Pn	19 12 43.8	-1.3	baz=196
TWG	Pinlang	1.83	208		Pn	19 12 42.7	-2.3	
JKRS	Kuro-shima	1.83	96	P	Pn	19 12 46.2	+1.2	
JKRS				S	Sn	19 13 10.1	+3.1	
WLGB	Puzi	1.84	239	⇓P	Pn	19 12 45.3	+0.2	baz=239
WLGB				*e*S	Sn	19 13 09.4	+2.3	baz=239
SNST	Tainan City	1.85	229	⇓*e*P	Pn	19 12 46.0	+0.8	baz=229
SNST				*e*S	Sn	19 13 10.8	+3.5	baz=229
CHN1	Nanshi	1.85	228	⇓P	Pn	19 12 46.4	+1.1	baz=227
CHN1				*e*S	Sn	19 13 11.4	+3.9	baz=227
TTN	Taitung	1.86	205	*e*P	Pn	19 12 45.3	-0.1	baz=204
SGST	Jiashian	1.89	224	⇓*e*P	Pn	19 12 46.1	+0.3	baz=211
SLGT	Liugui	1.91	221	⇓P	Pn	19 12 47.4	+1.2	baz=220
ICHU	Yijhu	1.92	236	*e*P	Pn	19 12 47.6	+1.4	baz=222
ICHU				*e*S	Sn	19 13 12.9	+3.8	baz=222
JIJ	Ishigaki jima	1.94	92	P	Pn	19 12 47.5	+0.9	
JIJ				S	Sn	19 13 11.1	+1.3	
CHN8	Yiju	1.98	237	P	Pn	19 12 48.4	+1.3	baz=223
CHN8				S	Sn	19 13 13.8	+3.2	baz=223
CHN3	Shinhua	2.03	228	P	Pn	19 12 49.5	+1.8	baz=228
CHN3				*e*S	Sn	19 13 16.5	+4.5	baz=228
ECL	Taimali	2.08	208	*e*P	Pn	19 12 46.9	-1.5	baz=198
SCST	Cishan	2.08	222	*e*P	Pn	19 12 49.4	+0.9	baz=221
SCLT	Jiali	2.09	233	P	Pn	19 12 50.0	+1.4	baz=219
SCLT				*e*S	Sn	19 13 17.0	+3.6	baz=219
JISG	Ishigakijimahi	2.10	86	P	Pn	19 12 49.4	+0.7	
JISG				S	Sn	19 13 15.3	+1.7	
SSD	Sandimen	2.11	217	*e*P	Pn	19 12 49.3	+0.4	baz=217
SSD				S	Sn	19 13 16.5	+2.6	baz=217
TSMG	Majia	2.14	216	⇓P	Pn	19 12 50.2	+1.0	baz=215
TAI1	Yung-k'ang	2.15	230	*e*P	Pn	19 12 50.5	+1.1	baz=229
TWM1	Shoushan	2.17	222	*e*P	Pn	19 12 52.1	+2.3	baz=221
SGLT	Jiouru	2.21	219	*e*P	Pn	19 12 52.7	+2.5	baz=219
MASBT	Mashibuluo	2.22	215	*e*P	Pn	19 12 51.0	+0.6	baz=215
MASBT				*e*S	Sn	19 13 19.5	+2.9	baz=215
TSPT	Pingtung City	2.24	219	*e*P	Pn	19 12 51.7	+1.0	baz=218
SNJT	Kaohsiung City	2.28	223	*e*P	Pn	19 12 52.6	+1.4	baz=222
PTTC	Pingtan	2.29	298	*e*P	Pn	19 12 50.8	-0.5	baz=298
PTTC				*e*S	Sn	19 13 16.6	-1.7	baz=298
EAST	Anshuo	2.31	208	*e*P	Pn	19 12 51.9	+0.2	baz=199
TAW	Tawu	2.32	206	*e*P	Pn	19 12 51.8	+0.1	baz=195
SSPT	Xinbi	2.36	214	*e*P	Pn	19 12 54.4	+2.1	baz=201
VWUC	VWUC	2.39	284	⇓*e*P	Pn	19 12 52.2	-0.5	baz=283
VWUC				*e*S	Sn	19 13 19.2	-1.6	baz=283
PNG	Penghu	2.41	249	⇓P	Pn	19 12 52.5	-0.4	baz=248
PHUB	P'eng-hu	2.42	248	⇓P	Pn	19 12 52.5	-0.6	baz=247
PHUB				*e*S	Sn	19 13 21.4	0.0	baz=247
SCZT	Fangliau	2.43	212	*e*P	Pn	19 12 54.4	+1.2	baz=212
SCZT				*e*S	Sn	19 13 25.3	+3.6	baz=212
LAY	Lan-yu	2.43	190	*e*P	Pn	19 12 51.0	-2.4	baz=174
WDGT	Dungji	2.45	242	*e*P	Pn	19 12 53.6	0.0	baz=241
JTJ	Tarama	2.46	85	P	Pn	19 12 55.2	+1.6	
JTJ				S	Sn	19 13 24.9	+2.5	
SLIU	Shizi	2.48	207	*e*P	Pn	19 12 54.1	+0.1	baz=198
MATB	Ma-tsu	2.53	313	*e*P	Pn	19 12 54.5	-0.1	baz=311
MSUT	Lienchiang	2.55	313	*e*P	Pn	19 12 54.4	-0.6	baz=311
WLCH	Liuqiu	2.57	216	*e*P	Pn	19 12 57.9	+2.8	baz=216
TWP	Hsiaoliuchiu	2.58	216	*e*P	Pn	19 12 58.0	+2.7	baz=216
VCHM	Qimei	2.67	243	*e*P	Pn	19 12 55.8	-0.6	baz=242
PTMZ	Houxiangcun	2.69	283	⇓*e*P	Pn	19 12 56.2	-0.6	baz=283
PTMZ				*e*S	Sn	19 13 26.1	-2.1	baz=283
HEN	Hengchun	2.70	206	*e*P	Pn	19 12 58.8	+1.9	baz=194
TWK1	Hengchun	2.73	204	*e*P	Pn	19 12 57.5	+0.2	baz=192
TWKBT	Hengchun	2.73	204	*e*P	Pn	19 12 57.6	+0.3	baz=192
TSEB	Hengchuen, Pin	2.73	202	*e*P	Pn	19 12 59.5	+2.1	baz=191
JIRB	Irabujima	2.90	82	P	Pn	19 13 01.2	+1.5	
JIRB				S	Sn	19 13 35.8	+2.4	
LYJJ	Jianjiangzhen	2.92	316	*e*P	Pn	19 13 00.0	0.0	baz=316
LYJJ				*e*S	Sn	19 13 32.9	-1.0	baz=316
XPSS	Dashiqiu	2.97	327	*e*P	Pn	19 13 00.8	+0.2	baz=326
XPSS				*e*S	Sn	19 13 34.4	-0.7	baz=326
JIKM	Ikemajima	2.98	80	P	Pn	19 13 02.9	+2.1	
JIKM				S	Sn	19 13 38.6	+3.2	
JMJ	Miyako jima 2	3.01	82	*e*P	Pn	19 13 04.0	+2.8	baz=87
JMJ2	Miyako jima3	3.03	84	P	Pn	19 13 03.6	+2.0	
JMJ2				S	Sn	19 13 39.2	+2.5	
JOGS	Gusukube	3.11	84	P	Pn	19 13 04.6	+2.0	
JOGS				S	Sn	19 13 41.5	+3.0	
QZH	Quanzhou	3.15	280	⇓*i*Pn	Pn	19 13 02.4	-0.7	
QZH				Sn	Sn	19 13 35.3	-4.2	
QZH				smax	smax			comp=N,2µm,0.7s
QZH				smax	smax			comp=E,520nm,0.8s
QZH				LR	LR			comp=Z,2µm,14.4s
MHZQ	Yeshan	3.16	302	*e*P	Pn	19 13 03.0	-0.3	baz=300
KNM	Kinmen	3.26	270	⇓*e*P	Pn	19 13 05.5	+0.8	baz=268
KNMB	Chin-men Tao	3.30	271	⇓*e*P	Pn	19 13 04.4	-0.9	baz=268
KNMB	Chin-men Tao	3.30	271	Pn	Pn	19 13 04.3	-0.9	
AXDP	Jialang	3.70	278	⇓*e*P	Pn	19 13 10.3	-0.5	baz=274
JOW	Kunigami	6.13	66	Pn	Pn	19 13 43.8	-0.4	
VDOS	Pratas Island	6.14	234	*e*P	Pn	19 13 45.9	+1.7	baz=235
SSE	Sheshan	6.67	354	Pn	Pn	19 13 51.3	-0.1	
GZH	Guangzhou	8.05	262	Pn	Pn	19 14 07.9	-2.6	
GZH				Sn	Sn	19 15 29.9	-10	
GZH				smax	smax			comp=N,250nm,1.2s
GZH				smax	smax			comp=E,140nm,1.0s
NJ2	Nanjing	8.07	341	*e*P	Pn	19 14 09.3	-1.5	
NJ2				S	Sn	19 15 36.5	-4.3	
NJ2				pmax	pmax			comp=Z,41nm,0.5s
NJ2				smax	smax			comp=N,200nm,1.0s
NJ2				smax	smax			comp=E,170nm,0.9s
JMZ	Minamidaito 2	8.46	79	Pn	Pn	19 14 18.9	+2.9	
WHN	Wuhan	9.12	313	P	Pn	19 14 30.0	+4.9	
WHN				S	Sn	19 16 11.1	+4.6	
WHN				LR	LR			comp=N,2µm,3.8s
WHN				LR	LR			comp=E,2µm,3.6s
WHN				LR	LR			comp=Z,2µm,4.6s
JNU	Nakatsue	11.62	40	P	Pn	19 15 03.1	+3.7	0.3nm,0.3s,baz=22,slow=6.8,SNR=3.5
QIZ	Qiongzhong	12.52	247	P	Pn	19 15 10.8	-1.0	
QIZ				S	Sn	19 17 29.8	-0.3	
QIZ				LR	LR			comp=N,440nm,14.9s
QIZ				LR	LR			comp=E,520nm,20.6s
QIZ				LR	LR			comp=Z,450nm,19.2s
KSAR	Wonju Array Be	13.90	20	P	Pn	19 15 34.4	+3.9	
KSAR	Wonju Array Be	13.90	20	P	Pn	19 15 34.4	+3.9	
KSRS	Korea Array	13.92	20	P	Pn	19 15 34.0	+3.3	0.4nm,0.3s,baz=201,slow=11,SNR=25
KSRS				LR	LR	19 21 33.7		comp=Z,368nm,18.9s,baz=198,slow=40
KS19	Wonju Array Si	13.95	20	P	Pn	19 15 33.8	+2.6	
GYA	Guiyang	14.01	281	⇓P	Pn	19 15 33.1	+0.9	
GYA				S	Sn	19 18 13.3	+6.8	
GYA				pmax	pmax			comp=Z,9.0nm,0.7s
GYA				pmax	pmax			comp=Z,110nm,5.6s
GYA				LR	LR			comp=Z,950nm,14.9s
JHS	Saijyo	14.26	40	P	Pn	19 15 39.1	+3.6	
DL2	Dalian	14.42	359	P	P	19 15 46.8	+2.8	
DL2				*e*S	S	19 18 31.9	-3.3	
DL2				pmax	pmax			comp=Z,51nm,0.8s
DL2				LR	LR			comp=N,640nm,17.1s
DL2				LR	LR			comp=E,520nm,15.3s
DL2				LR	LR			comp=Z,550nm,16.1s
XAN	Xi'an	14.88	313	P	P	19 15 47.9	-1.3	
XAN				pP	Pn	19 15 55.3	+11	
XAN				PP	PnPn	19 15 58.9	+6.8	
XAN				pmax	pmax			comp=Z,9.0nm,0.9s
XAN				pmax	pmax			comp=Z,160nm,4.5s
XAN				LR	LR			comp=Z,840nm,5.9s
XAN				LR	LR			comp=Z,640nm,6.1s
XAN				LR	LR			comp=Z,830nm,19.6s
TIY	Taiyuan	15.55	331	*e*P	P	19 15 59.9	+3.3	
TIY				pmax	pmax			comp=Z,34nm,0.5s
TIY				pmax	pmax			comp=Z,230nm,3.6s
TIY				LR	LR			comp=N,260nm,5.2s
TIY				LR	LR			comp=E,340nm,4.9s
TIY				LR	LR			comp=Z,390nm,13.4s
JWT	Wachi	15.84	44		Pn	19 15 58.0	+1.6	
JWT				IAmb	IAmb	19 16 09.9		comp=Z,146nm,1.8s
BJT	Baijiatuau	16.29	344	P	P	19 16 04.6	-0.1	

BJT				pmax	pmax		
	comp=Z,24nm,1.4s						
BJT	Baijiatuau	16.29	344	P	P	19 16 04.6	-0.1
BJI	Beijing	16.31	344	P	P	19 16 05.1	+0.2
BJI				pmax	pmax		
	comp=Z,12nm,1.7s						
BJI				pmax	pmax		
	comp=Z,160nm,3.0s						
BJI				LR	LR		
	comp=Z,340nm,14.3s						
BJI				LR	LR		
	comp=Z,220nm,15.7s						
BJI				LR	LR		
	comp=Z,250nm,24.0s						
CD2	Chengdu	17.39	296	P	Pn	19 16 15.9	-0.2
CD2				S	Sn	19 19 25.9	-2.8
CD2				sS	S	19 19 39.4	+3.2
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,230nm,4.9s						
CD2				LR	LR		
	comp=Z,680nm,7.5s						
CD2				LR	LR		
	comp=Z,860nm,18.0s						
CD2				LR	LR		
	comp=Z,1µm,12.2s						
KMI	Kunming	17.52	276	⇑P	P	19 16 17.8	-0.9
KMI				S	Sn	19 19 32.3	+0.4
KMI				sS	S	19 19 44.6	+5.5
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,33nm,3.5s						
KMI				LR	LR		
	comp=Z,210nm,13.5s						
KMI				LR	LR		
	comp=Z,780nm,14.7s						
KMI				LR	LR		
	comp=Z,780nm,14.3s						
MJAR	Matsushiro Arr	18.41	45	P	P	19 16 27.7	-0.6
	comp=Z,0.0nm,0.3s,baz=243,slow=8.7,SNR=5.3						
MJAR				LR	LR	19 24 03.1	
	comp=Z,260nm,21.2s,baz=195,slow=38						
MJAR	Matsushiro Arr	18.41	45	P	P	19 16 27.6	-0.6
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MJAR	Matsushiro Arr	18.41	45	P	P	19 16 27.6	-0.6
HHC	Hu-ho-hao-te	18.55	334	*e*P	Pn	19 16 32.8	+2.6
HHC				sP	sP	19 16 45.1	+1.4
HHC				S	Sn	19 19 57.8	+1.3
HHC				SS	SnSn	19 20 17.1	+6.4
HHC				pmax	pmax		
	comp=Z,40nm,1.2s						
HHC				pmax	pmax		
	comp=Z,320nm,4.0s						
HHC				LR	LR		
	comp=Z,510nm,11.1s						
HHC				LR	LR		
	comp=Z,260nm,10.5s						
HHC				LR	LR		
	comp=Z,400nm,12.7s						
BTO	Baotou	18.99	331	*e*P	Pn	19 16 36.9	+1.3
BTO				S	Sn	19 20 06.8	-0.4
LZH	Lanzhou	19.48	311	*e*P	Pn	19 16 42.9	+1.4
LZH				pP	pP	19 16 51.4	+2.0
LZH				sP	sP	19 16 56.0	+1.8
LZH				*e*PP	PnPn	19 17 00.5	+5.3
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,85nm,4.9s						
LZH				LR	LR		
	comp=Z,460nm,12.5s						
LZH				LR	LR		
	comp=Z,500nm,12.5s						
LZH				LR	LR		
	comp=Z,580nm,14.1s						
CN2	Changchun	19.51	7	*e*P	Pn	19 16 41.4	-0.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,430nm,13.0s						
CN2				LR	LR		
	comp=Z,310nm,13.0s						
CN2				LR	LR		
	comp=Z,530nm,15.0s						
MDJ	Mudanjiang	21.05	15		P	19 16 58.1	+1.2
USA0B	Ussuriysk Arra	21.33	20	P	P	19 16 58.7	-1.2
USA0B				pmax	pmax		
	comp=Z,32nm,1.4s						
USA0B	Ussuriysk Arra	21.33	20	P	P	19 16 58.7	-1.2
USRK	Ussuriysk Ar.	21.33	20	P	P	19 16 59.7	-0.2
	comp=Z,3.1nm,0.6s,baz=206,slow=8.9,SNR=10						
USRK				LR	LR	19 25 09.4	
	comp=Z,142nm,19.9s,baz=181,slow=36						
USRK	Ussuriysk Ar.	21.33	20	P	P	19 16 59.5	-0.4
USRK	Ussuriysk Ar.	21.33	20	P	P	19 16 59.5	-0.4
CHTO	Chiang Mai	22.15	260	P	P	19 17 10.0	+1.0
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CHTO	Chiang Mai	22.15	260	P	P	19 17 09.9	+1.0
CM31	Chiang Mai Arr	22.27	259	P	P	19 17 09.4	-0.8
CMAR	Chiang Mai Arr	22.27	259	P	P	19 17 12.2	+1.9
	comp=Z,2.1nm,0.8s,baz=58,slow=8.4,SNR=16						
CMAR				PcP	PcP	19 21 05.1	-0.5
	comp=Z,0.5nm,0.7s,baz=16,slow=2.3,SNR=4.1						
CMAR				LR	LR	19 26 24.9	
	comp=Z,319nm,19.4s,baz=108,slow=38						
CMAR	Chiang Mai Arr	22.27	259	P	P	19 17 09.8	-0.4
JTM	Tenmabayashi	22.80	40	P	P	19 17 12.3	-3.3
SBUM	Sibu	23.82	205	P	P	19 17 25.4	-0.6
SBUM				IAmb	IAmb	19 17 27.7	
	comp=Z,114nm,2.0s						
GTA	Gaotai	23.94	314	⇑P	P	19 17 27.0	-0.1
GTA				pP	pP	19 17 38.9	+1.8
GTA				sP	sP	19 17 42.1	+0.7
GTA				PcP	PcP	19 21 08.6	-0.3
GTA				pmax	pmax		
	comp=Z,11nm,1.4s						
GTA				pmax	pmax		
	comp=Z,180nm,5.8s						
GTA				LR	LR		
	comp=Z,140nm,14.5s						
GTA				LR	LR		
	comp=Z,240nm,15.6s						
GTA				LR	LR		
	comp=Z,310nm,15.3s						
ERM	Erimo	24.79	40	P	P	19 17 33.7	-0.9
ERM				pmax	pmax		
	comp=Z,169nm,1.8s						
ERM	Erimo	24.79	40	P	P	19 17 33.7	-0.9
HIA	Hailar	24.84	356	P	P	19 17 34.7	-0.3
HIA				pmax	pmax		
	comp=Z,16nm,1.0s						
HIA	Hailar	24.84	356	P	P	19 17 34.7	-0.3
ASAJ	Asahikawa	25.84	36	P	P	19 17 41.7	-2.4
	comp=Z,2.2nm,0.3s,baz=242,slow=11,SNR=9.6						
ASAJ	Asahikawa	25.84	36	P	P	19 17 41.9	-2.2
ASAJ				pmax	pmax		
	comp=Z,63nm,1.7s						
JKA	Kamikawa-asahi	25.84	36	P	P	19 17 41.9	-2.3
JKA				IAmb	IAmb	19 18 20.6	
	comp=Z,63nm,1.7s						
KLR	Kul'dur	25.89	15	P	P	19 17 43.2	-1.4
	comp=Z,5.2nm,0.6s,baz=200,slow=9.4,SNR=17						
KLR				PcP	PcP	19 21 11.8	-1.1
	comp=Z,1.6nm,0.5s,baz=188,slow=2.0,SNR=8.6						
KLR	Kul'dur	25.89	15	*ce*P	P	19 17 43.0	-1.5
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	26.21	337	*ce*P	P	19 17 46.6	-1.1
ULN				pmax	pmax		
	comp=Z,33nm,1.7s						
ULN	Ulaanbaatar	26.21	337	P	P	19 17 47.6	-0.1
SONM	Songino Array	26.43	336	P	P	19 17 49.5	-0.1
	comp=Z,16nm,0.9s,baz=151,slow=7.2,SNR=54						
SONM				PcP	PcP	19 21 13.2	-1.1
	comp=Z,0.8nm,0.9s,baz=146,slow=1.1,SNR=4.1						
SONM				LR	LR	19 29 36.2	
	comp=Z,374nm,19.0s,baz=137,slow=39						
SONM	Songino Array	26.43	336	P	P	19 17 49.5	-0.1
LSA	Lhasa	27.93	288	P	P	19 18 05.1	+1.5
LSA				S	S	19 22 48.4	+2.9
LSA				pmax	pmax		
	comp=Z,21nm,0.8s						
LSA				LR	LR		
	comp=Z,430nm,11.4s						
LSA				LR	LR		
	comp=Z,1µm,15.7s						
LSA				LR	LR		
	comp=Z,2µm,12.8s						
LSA	Lhasa	27.93	288	P	P	19 18 04.7	+1.1
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	Lhasa	27.93	288	P	P	19 18 04.7	+1.1
ZEA	Zeya	29.52	6	*e*P	P	19 18 20.9	+4.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TLY	Talaya	30.62	337	P	P	19 18 26.8	+0.1
	comp=Z,13nm,0.8s,baz=193,slow=6.0,SNR=4.0						
TLY				LR	LR	19 31 54.0	
	comp=Z,216nm,18.3s,baz=118,slow=38						
TLY	Talaya	30.62	337	*i* P	P	19 18 25.7	-1.0
TLY				pmax	pmax		
	comp=Z,17nm,0.9s						
TLY	Talaya	30.62	337	P	P	19 18 27.0	+0.2
TLY				IAmb	IAmb	19 18 27.6	
	comp=Z,18nm,0.9s						
TAPN	Taplejung	30.94	283	*e*P	P	19 18 31.4	+1.3
	comp=Z,19nm,0.9s						
ODAN	Odare	31.25	282	*e*P	P	19 18 33.5	+0.7
	comp=Z,18nm,0.7s						
MOY	Mondy	31.59	335	*e*P	P	19 18 34.6	-0.8
RAMN	Ramite	31.94	282	*e*P	P	19 18 39.1	+0.1
GUN	Gumba	32.54	284	*e*P	P	19 18 44.8	+0.5
	comp=Z,26nm,1.1s						
PKI	Pulchoki	32.97	283	*e*P	P	19 18 47.9	-0.1
PKIN	Phulchoki	32.98	283	*e*P	P	19 18 48.1	0.0
KKN	Kakani	33.07	284	*e*P	P	19 18 49.1	+0.3
DMN	Daman	33.23	284	*e*P	P	19 18 50.3	0.0
WMQ	Urumqi	34.02	313	*e*P	P	19 18 58.3	+1.6
WMQ				pP	pP	19 19 05.5	-1.3
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.7s						
WMQ				LR	LR		
	comp=Z,490nm,5.3s						
WMQ				LR	LR		
	comp=Z,640nm,7.3s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
DANN	Dangsing	34.39	285	*e*P	P	19 19 00.5	+0.2
	comp=Z,26nm,1.0s						
DGZ	Jazzator, Alta	36.85	322	*i* P	P	19 19 20.6	-0.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZSN	Zaisan	37.32	317	*e*P	P	19 19 23.8	-1.1
	baz=317						
ZSN	Zaisan	37.32	317	*e*P	P	19 19 23.8	-1.1
YAK	Yakutsk	37.93	6	P	P	19 19 28.5	-1.2
	comp=Z,3.6nm,0.5s,baz=65,slow=1.2,SNR=8.8						
YAK	Yakutsk	37.93	6	*ce*P	P	19 19 27.8	-2.0
YAK				pmax	pmax		
	comp=Z,18nm,1.3s						
YAK	Yakutsk	37.93	6	P	P	19 19 27.5	-2.3
YAK				IAmb	IAmb	19 19 30.1	
	comp=Z,11nm,0.7s						
MTN	Manton Dam	38.12	165	P	P	19 19 30.3	-1.5
MTN				IAmb	IAmb	19 19 53.5	
	comp=Z,56nm,1.4s						
MK31	Makanchi Array	38.68	315	P	P	19 19 36.1	-0.3
MK31				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MK31	Makanchi Array	38.68	315	P	P	19 19 36.1	-0.3
MKAR	Makanchi Array	38.68	315	P	P	19 19 36.2	-0.1
	comp=Z,2.4nm,0.5s,baz=100,slow=10,SNR=63						
MKAR				PcP	PcP	19 21 45.5	-2.4
	comp=Z,2.4nm,0.8s,baz=93,slow=4.9,SNR=6.7						
MKAR				LR	LR	19 36 53.9	
	comp=Z,177nm,19.5s,baz=96,slow=38						
MKAR	Makanchi Array	38.68	315	P	P	19 19 36.0	-0.4
MKAR				PcP	PcP	19 21 46.5	-1.4
MAKZ	Makanchi	38.88	315	P	P	19 19 38.1	0.0
MAKZ				pmax	pmax		
	comp=Z,12nm,1.1s						
MAKZ	Makanchi	38.88	315	P	P	19 19 38.1	0.0
PETK	Petropavlovsk-	39.23	34	LR	LR	19 35 36.6	
	comp=Z,144nm,21.2s,baz=221,slow=36						
KPKS	Kokpek	40.11	309	*e*P	P	19 19 47.1	-1.4
	baz=309						
KPKS	Kokpek	40.11	309	*e*P	P	19 19 47.9	-0.6
SATY	Saty	40.21	308	*e*P	P	19 19 49.4	0.0
	baz=308						
SATY	Saty	40.21	308	*e*P	P	19 19 49.3	0.0
ZAA0	Zalesovo Array	40.44	327	P	P	19 19 49.5	-1.4
ZALV	Zalesovo Beam	40.44	327	P	P	19 19 49.7	-1.2
	comp=Z,7.1nm,0.5s,baz=114,slow=7.8,SNR=46						
ZALV				LR	LR	19 37 53.6	
	comp=Z,165nm,19.2s,baz=108,slow=38						
TDK	Taldyqorghan	40.69	311	*e*P	P	19 19 53.3	+0.1
	comp=Z,8.9nm,0.8s,baz=311						
TDK	Taldyqorghan	40.69	311	*e*P	P	19 19 53.2	+0.1
TDK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RABL	Rabaul	40.88	130	P	P	19 19 55.2	+0.2
RABL				IAmb	IAmb	19 19 58.2	
	comp=Z,25nm,0.6s						
MDOK	Medeo	41.20	308	*e*P	P	19 19 56.7	-0.9
	baz=308						
MDOK	Medeo	41.20	308	*e*P	P	19 19 56.7	-0.9
SEM	Semipalatinsk	41.30	320	*e*P	P	19 19 56.8	-1.6
	baz=320						
SEM	Semipalatinsk	41.30	320	*e*P	P	19 19 56.7	-1.6
AAA	Alma-Ata	41.31	308	*e*P	P	19 19 58.0	-0.4
	baz=308						
AAA	Alma-Ata	41.31	308	*e*P	P	19 19 57.9	-0.4
KSH	Kashi	41.39	303	P	P	19 20 02.4	+3.3
KSH				pP	pP	19 20 11.4	+2.0
KSH				pmax	pmax		
	comp=Z,14nm,1.2s						
KSH				pmax	pmax		
	comp=Z,260nm,6.1s						
CHKK	Chushkaly	41.40	309	*e*P	P	19 19 58.9	-0.1
	baz=309						
CHKK	Chushkaly	41.40	309	*e*P	P	19 19 58.9	-0.1
PMG	Port Moresby	41.65	141	LR	LR	19 34 41.0	
	comp=Z,80nm,20.2s,baz=305,slow=32						
PMG	Port Moresby	41.65	141	*ce*P	P	19 20 00.0	-1.2
PMG				pmax	pmax		
	comp=Z,21nm,1.7s						
PMG	Port Moresby	41.65	141	P	P	19 20 00.3	-0.9
KUU	Kurty	41.86	309	*e*P	P	19 20 02.4	-0.5
	baz=309						
KUU	Kurty	41.86	309	*e*P	P	19 20 02.3	-0.5
KURK	Kurchatov	42.38	320	*ce*P	P	19 20 05.1	-1.7
KURK				pmax	pmax		
	comp=Z,17nm,1.7s						
KURK	Kurchatov	42.38	320	P	P	19 20 05.7	-1.1
KURBB	Kurchatov Arra	42.40	319	P	P	19 20 06.4	-0.6
	comp=Z,3.2nm,0.8s,baz=111,slow=9.5,SNR=20						
AAK	Ala-Archa	42.95	307	*ce*P	P	19 20 11.1	-0.7
AAK				pmax	pmax		
	comp=Z,25nm,2.5s						
AAK	Ala-Archa	42.95	307	P	P	19 20 12.2	+0.4
AAK				PcP	PcP	19 22 00.8	-1.2
NIL	Nilore	43.27	294	P	P	19 20 14.1	-0.3
NIL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NIL	Nilore	43.27	294	P	P	19 20 14.1	-0.3
COEN	Coen	43.40	149	P	P	19 20 15.7	+0.2
BTLS	Baital	43.71	310	*e*P	P	19 20 17.3	-0.4
	baz=310						
BTLS	Baital	43.71	310	*e*P	P	19 20 17.2	-0.4
WB0	Warramunga Arr	45.57	164	P	P	19 20 32.6	-0.1
WRAB	Tennant Creek	45.72	164	*ce*P	P	19 20 34.2	+0.3
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WRAB	Tennant Creek	45.72	164	P	P	19 20 33.1	-0.8
WRA	Warramunga Arr	45.72	164	P	P	19 20 32.7	-1.2
	comp=Z,2.5nm,0.7s,baz=346,slow=8.6,SNR=14						
WRA	Warramunga Arr	45.72	164	*i* P	P	19 20 33.7	-0.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	45.72	164	P	P	19 20 32.5	-1.5
WB2	Warramunga Arr	45.73	164	P	P	19 20 32.2	-1.7
BRZS	Berezniki	45.76	317	*e*P	P	19 20 33.4	-0.6
	baz=317						
BRZS	Berezniki	45.76	317	*e*P	P	19 20 33.3	-0.6
PSA00	Pilbara Seismi	45.79	183	P	P	19 20 35.6	+1.2
PSA00				IAmb	IAmb	19 21 02.8	
	comp=Z,27nm,1.5s						
WR0	Warramunga Arr	45.79	163	P	P	19 20 33.4	-1.1
WR0				IAmb	IAmb	19 20 40.5	
	comp=Z,8.7nm,0.9s						
KK31	Karatay Array	45.91	307	P	P	19 20 35.8	+0.5
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	45.91	307	P	P	19 20 35.8	+0.5
KKAR	Karatay Array	45.91	307	P	P	19 20 35.7	+0.4
KKAR	Karatay Array	45.91	307	P	P	19 20 35.7	+0.4
IUG	Iuzhnay	46.16	306	*e*P	P	19 20 37.4	-0.1
	comp=Z,3.2nm,0.7s,baz=306						
IUG	Iuzhnay	46.16	306	*e*P	P	19 20 37.3	-0.1
IUG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	Kabul	46.73	295	P	P	19 20 41.7	-0.4
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	Kabul	46.73	295	P	P	19 20 41.7	-0.4
KBL				IAmb	IAmb	19 20 43.8	
	comp=Z,8.6nm,0.8s						
TIXI	Tiksi	47.39	3	*ce*P	P	19 20 44.2	-2.2
TIXI	Tiksi	47.39	3	P	P	19 20 44.2	-2.2
TIXI				IAmb	IAmb	19 20 45.5	
	comp=Z,12nm,0.9s						
BVAR	Borovoye Array	47.95	320	P	P	19 20 50.7	-0.4
	comp=Z,2.9nm,0.5s,baz=54,slow=13,SNR=25						
BRVK	Borovoye	48.02	320	*i* P	P	19 20 50.4	-1.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	Borovoye	48.02	320	P	P	19 20 50.5	-1.1
BRVK				IAmb	IAmb	19 20 52.2	
	comp=Z,8.3nm,0.7s						
AS31	Alice Springs	49.20	166	P	P	19 21 01.5	+0.6
ASAR	Alice Springs	49.20	166	P	P	19 21 00.6	-0.4
	comp=Z,1.2nm,0.7s,baz=344,slow=6.8,SNR=18						
ASAR				LR	LR	19 43 46.0	
	comp=Z,41nm,18.7s,baz=18,slow=38						
ASAR	Alice Springs	49.20	166	P	P	19 21 00.8	-0.1
ASAR	Alice Springs	49.20	166	P	P	19 21 00.8	-0.1
HNR	Honiara	50.04	128	LR	LR	19 40 08.8	
	comp=Z,29nm,19.7s,baz=26,slow=33						
CTA	Charters Tower	50.16	150	P	P	19 21 08.9	+0.6
	comp=Z,7.0nm,0.8s,baz=328,slow=10,SNR=4.3						
CTAO	Charters Tower	50.16	150	P	P	19 21 08.9	+0.6
CTAO				pmax	pmax		
	comp=Z,14nm,1.0s						
CTAO	Charters Tower	50.16	150	P	P	19 21 08.9	+0.6
CTAO				IAmb	IAmb	19 21 09.7	
	comp=Z,14nm,1.0s						
ABKAR	Akbulak array	53.80	314	P	P	19 21 35.0	-0.2
ABKAR				IAmb	IAmb	19 21 35.9	
	comp=Z,28nm,1.4s						
ABKAR					PcP	19 22 38.9	-1.7
ABKAR	Akbulak array	53.80	314	P	P	19 21 35.0	-0.2
ABKAR				PcP	PcP	19 22 38.4	-2.3
SVE	Sverdlovsk	54.28	324	*e*P	P	19 21 37.7	-0.8
SVE				pmax	pmax		
	comp=Z,22nm,0.7s						
AKTO	Aktyubinsk	55.12	316	P	P	19 21 44.6	-0.1
	comp=Z,4.0nm,0.6s,baz=106,slow=10.0,SNR=10						
GEYT	Alibeck	55.32	300	P	P	19 21 46.5	+0.1
	comp=Z,5.1nm,0.8s,baz=90,slow=4.4,SNR=10						
GEYT	Alibeck	55.32	300	P	P	19 21 47.0	+0.6
GYA0B	ALIBECK ARRAY	55.32	300	P	P	19 21 47.1	+0.7
GYA0B				IAmb	IAmb	19 21 48.3	
	comp=Z,12nm,1.0s						
ARU	Arti	55.35	323	*c i*P	P	19 21 44.0	-2.3
ARU				S	S	19 29 25.7	-2.3
ARU				SS	SS	19 33 05.5	-7.0
ARU				pmax	pmax		
	comp=Z,21nm,0.7s						
ARU	Arti	55.35	323	P	P	19 21 45.4	-0.9
ARU				IAmb	IAmb	19 21 46.0	
	comp=Z,21nm,0.7s						
EIDS	Eidsvold	56.95	148	P	P	19 21 57.7	-0.3
EIDS				IAmb	IAmb	19 21 59.5	
	comp=Z,26nm,1.7s						
GAMB	Gambell	57.89	29	P	P	19 22 08.5	+4.4
GAMB				IAmb	IAmb	19 22 10.9	
	comp=Z,21nm,1.0s						
BBOO	Buckleboo	58.49	166	P	P	19 22 11.8	+3.1
STKA	Stephens Creek	59.05	161	P	P	19 22 13.2	+0.6
	comp=Z,1.9nm,0.4s,baz=329,slow=5.9,SNR=1.4						
KIRV	Kirov	60.44	325	*i* P	P	19 22 20.5	-1.3
ANM	Nome	60.74	28	P	P	19 22 24.1	+0.2
ANM				pmax	pmax		
	comp=Z,30nm,1.9s						
ANM	Nome	60.74	28	P	P	19 22 24.1	+0.2
ANM				IAmb	IAmb	19 22 25.9	
	comp=Z,30nm,1.9s						
ARMA	Armidale	61.50	151	P	P	19 22 29.8	+0.3
BELG	Belogornoye	61.61	318	*i* P	P	19 22 28.1	-1.8
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKT	Akhty	62.80	306	*e*P	P	19 22 37.7	-0.6
AKT				*e*		19 23 14.4	
AKT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TTA	Tatalina	64.91	30	P	P	19 22 51.1	-0.6
TTA				pmax	pmax		
	comp=Z,30nm,1.8s						
TTA	Tatalina	64.91	30	P	P	19 22 51.1	-0.6
TTA				IAmb	IAmb	19 22 54.0	
	comp=Z,30nm,1.8s						
KLMR	Klimovskoe	65.35	328	*e*P	P	19 22 50.7	-3.8
KLMR				pmax	pmax		
	comp=Z,24nm,1.1s						
KLMR	Klimovskoe	65.35	328	*e*P	P	19 22 50.7	-3.8
KLMR				AMP		19 22 53.8	
	comp=Z,24nm,1.1s						
ZEI	Tsey	65.37	308	*e*P	P	19 22 54.3	-0.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VRH	Novokhopyorsk	65.38	317	*e*P	P	19 22 53.3	-1.6
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
TOO	Toolangi	65.52	160	P	P	19 22 57.9	+2.0
TOO				pmax	pmax		
	comp=Z,32nm,1.5s						
TOO	Toolangi	65.52	160	P	P	19 22 57.9	+2.0
TOO				IAmb	IAmb	19 23 16.1	
	comp=Z,32nm,1.4s						
TMCR	Tamitsa	65.68	331	*e*P	P	19 22 54.2	-2.3
TMCR				pmax	pmax		
	comp=Z,31nm,1.5s						
KBZ	Khabaz	65.91	309	P	P	19 22 58.0	-0.3
	comp=Z,4.4nm,0.9s,baz=121,slow=1.4,SNR=5.8						
KBZ	Khabaz	65.91	309	*ce*P	P	19 22 57.5	-0.9
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	66.01	309	*e*P	P	19 22 57.3	-1.9
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV	Kislovodsk	66.01	309	P	P	19 22 59.0	-0.2
KIV				IAmb	IAmb	19 23 01.1	
	comp=Z,14nm,1.1s						
LPSR	Galich'ya Gora	66.86	319	*e*P	P	19 23 02.9	-1.4
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
COLD	Coldfoot	66.87	25	P	P	19 23 04.3	+0.1
COLD				IAmb	IAmb	19 23 06.4	
	comp=Z,10nm,1.5s						
VORD	Divnogorie	66.93	317	*e*P	P	19 23 03.0	-1.8
VORD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	66.96	317	*e*P	P	19 23 02.7	-2.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BPAW	Bear Paw Mtn.	67.01	28	P	P	19 23 04.8	-0.3
BPAW				IAmb	IAmb	19 23 07.6	
	comp=Z,44nm,2.0s						
KTH	Kantishna Hill	67.12	29	P	P	19 23 05.5	-0.4
I23K	Minto, Yukon-K	67.53	27	P	P	19 23 08.2	-0.1
I23K				IAmb	IAmb	19 23 37.0	
	comp=Z,22nm,1.8s						
SUA	Susitna One	67.54	31	P	P	19 23 08.5	-0.2
SUA				IAmb	IAmb	19 23 09.0	
	comp=Z,17nm,0.8s						
BWN	Browne	67.65	28	P	P	19 23 10.0	+0.8
BWN				IAmb	IAmb	19 23 11.3	
	comp=Z,13nm,0.7s						

OBN	Obninsk	67.76	322⇑	*e*P	P	19 23 08.4	-1.6
OBN				*e*		19 23 38.5	
OBN				*e*		19 25 39.9	
OBN				*e*SS	SS	19 36 25.0	-1.4
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,79nm,15.0s						
MDM	Murphy Dome	68.04	27	P	P	19 23 10.7	-1.0
MDM				IAmb	IAmb	19 23 14.3	
	comp=Z,40nm,1.7s						
RND	Reindeer	68.06	29	P	P	19 23 10.4	-1.5
RND				pmax	pmax		
	comp=Z,14nm,0.7s						
RND	Reindeer	68.06	29	P	P	19 23 10.3	-1.5
RND				IAmb	IAmb	19 23 11.6	
	comp=Z,14nm,0.7s						
WRH	Wood River Hil	68.19	28	P	P	19 23 11.7	-0.9
WRH				IAmb	IAmb	19 23 24.6	
	comp=Z,22nm,1.8s						
COLA	College	68.21	27	*i* P	P	19 23 11.0	-1.6
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CCB	Clear Creek Bu	68.27	28	P	P	19 23 11.1	-1.9
CCB				IAmb	IAmb	19 23 21.9	
	comp=Z,19nm,1.9s						
POKR	Poker Plat Res	68.34	27	P	P	19 23 13.1	-0.4
KOPT	Kop Dagi	68.48	305	P	P	19 23 16.2	+1.0
KOPT				IAmb	IAmb	19 23 49.5	
	comp=Z,14nm,1.4s						
SML	Sawmill	68.61	31	P	P	19 23 14.5	-0.8
KNK	Knik Glacier	68.63	31	P	P	19 23 14.6	-0.8
IL31		68.64	27	P	P	19 23 16.1	+0.9
ILAR	Eielson Array	68.64	27	P	P	19 23 13.5	-1.8
	comp=Z,1.0nm,0.6s,baz=303,slow=8.5,SNR=16						
ILAR	Eielson Array	68.64	27	P	P	19 23 13.2	-2.2
ILAR	Eielson Array	68.64	27	P	P	19 23 13.2	-2.2
HDA	Harding Lake	68.69	28	P	P	19 23 13.9	-1.7
HDA				IAmb	IAmb	19 23 43.5	
	comp=Z,27nm,2.0s						
MSVF	Nonsavu	68.86	122	P	P	19 23 17.7	+0.2
MSVF				pmax	pmax		
	comp=Z,15nm,1.0s						
MSVF	Nonsavu	68.86	122	P	P	19 23 17.7	+0.2
MSVF				IAmb	IAmb	19 23 19.1	
	comp=Z,15nm,1.0s						
MARD	Mardin	68.95	302	P	P	19 23 17.7	-0.2
MARD				IAmb	IAmb	19 23 18.9	
	comp=Z,10nm,0.6s						
KEV	Kevo	69.02	338	P	P	19 23 16.9	-0.7
KEV				pmax	pmax		
	comp=Z,118nm,1.8s						
KEV	Kevo	69.02	338	P	P	19 23 16.9	-0.7
SCM	Sheep Creek Mo	69.07	31	P	P	19 23 17.2	-1.0
SCM				pmax	pmax		
	comp=Z,15nm,0.7s						
SCM	Sheep Creek Mo	69.07	31	P	P	19 23 17.2	-1.0
SCM				IAmb	IAmb	19 23 18.3	
	comp=Z,15nm,0.7s						
GLI	Glacier Island	69.39	32	P	P	19 23 23.4	+3.3
ANN	Anapa	69.49	311	*e*P	P	19 23 19.7	-1.3
ANN				pmax	pmax		
	comp=Z,18nm,0.7s						
M24K	Tolsona, Glenn	69.54	30	P	P	19 23 20.4	-0.6
ARA0	ARCESS Array S	69.58	338	P	P	19 23 20.8	-0.4
ARC4	ARCESS Array S	69.58	338	P	P	19 23 18.3	-2.8
ARCES	ARCESS Array B	69.58	338	P	P	19 23 20.3	-0.8
	comp=Z,3.9nm,1.0s,baz=36,slow=6.4,SNR=6.5						
ARCES				LR	LR	19 57 27.7	
	comp=Z,44nm,18.5s,baz=235,slow=39						
ARCES	ARCESS Array B	69.58	338	P	P	19 23 21.0	-0.1
ARCES				pmax	pmax		
	comp=Z,25nm,1.6s						
ARCES	ARCESS Array B	69.58	338	P	P	19 23 21.0	-0.1
ARA3	ARCESS Array S	69.58	338	P	P	19 23 21.0	-0.2
KNTN	Kanton	69.72	103	P	P	19 23 20.1	-2.8
RIDG	Independent Ri	69.74	28	P	P	19 23 20.8	-1.5
KLU	Klutina	69.80	31	P	P	19 23 21.6	-1.1
KLU				IAmb	IAmb	19 23 49.7	
	comp=Z,30nm,1.5s						
DOT	Dot Lake	70.10	28	P	P	19 23 23.2	-1.3
N25K	Chitina, Valde	70.39	30	P	P	19 23 25.5	-0.8
N25K				IAmb	IAmb	19 23 50.6	
	comp=Z,22nm,1.4s						
MENT	Mentasta	70.43	29	P	P	19 23 26.4	-0.2
MENT				IAmb	IAmb	19 23 27.1	
	comp=Z,41nm,2.0s						
GLB	Gilahina Butte	70.79	30	P	P	19 23 28.1	-0.6
GLB				IAmb	IAmb	19 23 50.3	
	comp=Z,30nm,1.5s						
EGAK	Eagle	71.01	27	P	P	19 23 29.3	-0.7
EGAK				IAmb	IAmb	19 23 50.3	
	comp=Z,28nm,1.9s						
VRDI	Verde Repeater	71.02	31	P	P	19 23 28.1	-2.2
VRDI				IAmb	IAmb	19 23 28.7	
	comp=Z,20nm,1.3s						
MCARA	McCarthy VSAT	71.17	30	P	P	19 23 30.6	-0.4
MCARA				IAmb	IAmb	19 23 35.0	
	comp=Z,44nm,1.7s						
CRQM	Cirque	71.30	31	P	P	19 23 31.5	-0.5
TGL	Tana Glacier	71.44	31	P	P	19 23 31.0	-1.8
FIA1	FINESS Array S	71.60	330	P	P	19 23 32.6	-0.9
FINES	FINESS Array B	71.60	330	P	P	19 23 32.7	-0.9
	comp=Z,4.1nm,0.7s,baz=66,slow=5.2,SNR=17						
FINES				LR	LR	19 58 17.6	
	comp=Z,192nm,18.7s,baz=50,slow=38						
FINES	FINESS Array B	71.60	330	P	P	19 23 32.9	-0.7
FINES	FINESS Array B	71.60	330	P	P	19 23 32.9	-0.7
ISLE	Juniper Island	71.72	31	P	P	19 23 33.6	-0.9
BARN	Barnard Glacie	71.90	31	P	P	19 23 35.4	-0.2
BARN				IAmb	IAmb	19 23 36.7	
	comp=Z,38nm,1.6s						
CTGM	Chitina Glacie	72.08	31	P	P	19 23 36.3	-0.4
INK	Inuvik	72.70	22	P	P	19 23 38.5	-1.5
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	Inuvik	72.70	22	P	P	19 23 38.5	-1.5
INK				IAmb	IAmb	19 23 40.2	
	comp=Z,7.4nm,0.9s						
MNK	Minsk	72.78	322	*i* P	P	19 23 38.5	-2.2
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	19 23 38.5	-2.2
	comp=N,18nm,1.0s						
MNK				*i* P	P	19 23 38.5	-2.2
	comp=Z,14nm,0.7s						
MNK				*i* PcP	sP	19 23 54.9	-0.9
MNK				*i* PP	PP	19 26 21.1	-1.4
MNK				*i* PPP	PPP	19 28 11.6	
MNK				*i* S	S	19 33 02.9	-1.0
MNK				*i* SS	SS	19 37 46.2	+2.7
MNK				*i* SSS	SSS	19 41 02.9	
MNK				*i* LR	LR	19 56 26.3	
MNK				*i* LRM	MLR	19 58 15.5	
	comp=E,8.0nm,15.8s						
MNK				*i* LRM	MLR	19 58 15.5	
	comp=N,85nm,11.2s						
MNK				*i* LRM	MLR	19 58 26.3	
	comp=Z,31nm,8.5s						
AKASG	Malin Array Be	73.18	318	P	P	19 23 41.4	-1.7
	comp=Z,3.2nm,0.7s,baz=59,slow=6.3,SNR=9.2						
AKASG	Malin Array Be	73.18	318	P	P	19 23 40.7	-2.4
AKASG				pmax	pmax		
	comp=Z,8.0nm,2.0s						
AKASG	Malin Array Be	73.18	318	P	P	19 23 40.7	-2.4
AKBB	Malin Array Si	73.18	318	P	P	19 23 41.4	-1.7
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKBB	Malin Array Si	73.18	318	P	P	19 23 41.4	-1.7
NACGM	Naroch	73.26	323	*i* P	P	19 23 41.5	-2.0
NACGM				*i* P	P	19 23 41.5	-2.0
NACGM				*i* P	P	19 23 41.5	-2.0
NACGM				*i* PP	PP	19 26 20.4	-6.3
NACGM				*i* PPP	PPP	19 28 04.1	
NACGM				*i* S	S	19 32 58.2	-11
NACGM				*i* SS	SS	19 38 32.5	+42
NACGM				*i* SSS	SSS	19 42 17.3	
NACGM				*i* LQ	LQ	19 51 56.4	
NACGM				*i* LR	LR	19 56 51.7	
BR131	Keskin Array S	73.62	307	P	P	19 23 45.6	-0.6
BR131				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BR131	Keskin Array S	73.62	307	P	P	19 23 45.6	-0.6
BR131				IAmb	IAmb	19 23 46.6	
	comp=Z,8.5nm,0.9s						
BRTR	Keskin Array B	73.62	307	P	P	19 23 45.8	-0.4
	comp=Z,3.4nm,0.9s,baz=103,slow=5.3,SNR=20						
BRTR				LR	LR	19 58 51.8	
	comp=Z,16nm,18.7s,baz=78,slow=38						
BRTR	Keskin Array B	73.62	307	P	P	19 23 44.9	-1.3
BRTR	Keskin Array B	73.62	307	P	P	19 23 44.9	-1.3
MMAI	Mount Meron Ar	74.43	299	LR	LR	20 02 17.8	
	comp=Z,50nm,20.5s,baz=40,slow=40						
WHY	Whitehorse	75.15	30	P	P	19 23 54.2	-0.4
WHY				IAmb	IAmb	19 23 56.6	
	comp=Z,35nm,1.9s						
C36M	Paulatuk	75.31	20	P	P	19 23 53.3	-1.9
C36M				IAmb	IAmb	19 23 54.4	
	comp=Z,5.0nm,0.6s						
CSS	Mathiatis	75.41	302	P	P	19 23 55.9	-0.5
CSS				IAmb	IAmb	19 24 23.2	
	comp=Z,13nm,0.9s						
BESE	Bessie Mountai	75.99	32	P	P	19 24 02.6	+3.2
BESE				IAmb	IAmb	19 24 03.1	
	comp=Z,18nm,0.8s						
BUR08	Bucovina Ar. S	76.70	316	P	P	19 24 03.4	-0.3
BURAR	Bucovina Array	76.70	316	P	P	19 24 02.9	-0.8
MLR	Muntele Rosu	77.01	314	P	P	19 24 05.5	0.0
MLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MLR	Muntele Rosu	77.01	314	P	P	19 24 05.5	0.0
ELL	Elmali	77.39	305	P	P	19 24 08.2	+0.4
ELL				pmax	pmax		
	comp=Z,228nm,1.9s						
ELL	Elmali	77.39	305	P	P	19 24 08.2	+0.4
KOLS	Kolonicke sedl	78.01	318	*e*P	P	19 24 11.0	+0.1
KOLS	Kolonicke sedl	78.01	318	*e*P	P	19 24 11.0	+0.1
NC405	NORSAR Array S	78.10	332	P	P	19 24 09.6	-1.6
NB201	NORSAR Array S	78.31	332	P	P	19 24 11.0	-1.3
NB2	NORSAR Subarra	78.35	332	P	P	19 24 11.9	-0.7
	comp=Z,1.9nm,0.8s,baz=54,slow=6.2						
NOA	NORSAR Array B	78.35	332	P	P	19 24 11.5	-1.0
	comp=Z,1.2nm,0.8s,baz=59,slow=5.4,SNR=3.0						
NOA				LR	LR	20 02 11.1	
	comp=Z,130nm,19.7s,baz=250,slow=38						
NC204	NORSAR Array S	78.42	333	P	P	19 24 12.5	-0.5
VYHS	Vyhne	80.27	319	*e*P	P	19 24 22.1	-1.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	Vyhne	80.27	319	*e*P	P	19 24 22.1	-1.1
NNZ	Nelson	80.84	143	P	P	19 24 25.2	-1.0
RPZ	Rata Peaks	81.39	146	P	P	19 24 28.0	-1.1
	comp=Z,16nm,0.9s,baz=174,slow=21,SNR=4.8						
LBZ	Lake Benmore	81.44	147	P	P	19 24 28.8	-0.5
CLL	Collm	82.30	323	*e*P	P	19 24 35.0	+1.1
CLL				LmV		20 05 00.0	
	comp=Z,200nm,19.9s						
CLL	Collm	82.30	323	*e*P	P	19 24 35.0	+1.1
SUMG	Summit	82.32	354	P	P	19 24 32.0	-2.2
SUMG				pmax	pmax		
	comp=Z,15nm,1.6s						
SUMG	Summit	82.32	354	P	P	19 24 32.0	-2.2
SUMG				IAmb	IAmb	19 24 46.6	
	comp=Z,15nm,1.6s						
YKA	Yellowknife Ar	82.44	23	P	P	19 24 33.0	-1.4
	comp=Z,2.3nm,0.6s,baz=323,slow=4.1,SNR=39						
ITM	Ithomi	83.10	308	P	P	19 24 36.4	-2.1
GERES	GERESS Array B	83.12	321	P	P	19 24 37.3	-1.1
	comp=Z,1.1nm,0.7s,baz=96,slow=4.2,SNR=3.9						
E07A	Sunnyside	89.93	37	P	P	19 25 11.3	-0.4
E07A				IAmb	IAmb	19 25 13.1	
	comp=Z,8.8nm,0.7s						
D08A	Wollman Farm,	90.14	37	P	P	19 25 11.6	-1.1
D08A				IAmb	IAmb	19 25 12.5	
	comp=Z,28nm,1.7s						
NEW	Newport	90.36	35	P	P	19 25 13.0	-0.7
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	Newport	90.36	35	P	P	19 25 13.0	-0.7
NEW				IAmb	IAmb	19 25 14.4	
	comp=Z,6.9nm,0.9s						
YBH	Yreka Blue Hor	91.05	43	LR	LR	20 01 15.0	
	comp=Z,28nm,21.3s,baz=97,slow=32						
FCC	Fort Churchill	91.87	18	P	P	19 25 18.8	-1.6
FCC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FCC	Fort Churchill	91.87	18	P	P	19 25 18.8	-1.6
FCC				IAmb	IAmb	19 25 19.6	
	comp=Z,5.1nm,1.1s						
BMO	Blue Mountains	92.38	38	P	P	19 25 22.9	-0.3
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BMO	Blue Mountains	92.38	38		P	19 25 22.9	-0.3
BMO				IAmb	IAmb	19 25 37.4	
	comp=Z,7.0nm,1.0s						

MEX ***16*** *19:46:13.9±0.3, 14°.34N×94°.25W, h17^{km}±10^{km}, MD4.3*
IDC ***16*** *19:46:14.8±3.6, 15°.05N×93°.63W, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.7/41, mbtmp3.7/7, ML3.3/1, MS2.8/4, Ms1 2.8/4, ms1mx2.5/38, Error ellipse: s-maj=95.4km s-min=48.3km az=45.0*
NEIC ***16*** *19:46:17.7±2.4, 14°.76N±0°.03×94°.21W±0°.05, h30^{km}±8^{km}, mb4.2/7, Md4.3/14(MEX), Error ellipse: s-maj=8.3km s-min=1.4km az=118.0*
ISC 16 19:46:13.7±2.6**, 14°.72N**±0°.07×**94°.21W**±0°.05**, h5^{km}**±16^{km}**, n37, σ1^{s}.77**/42**, mb4.2**/9**, MS2.9**/4**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.36	44	*i* P	Pn	19 46 39.1	-0.2
PCIG				*i* S	Sg	19 46 59.2	+1.6
PCIG		1.36	44		Pn	19 46 39.1	-0.2
PCIG					Sn	19 46 53.8	-4.0
HUIG	Huatulco	2.11	300	*e*P	Pn	19 46 48.0	-1.6
HUIG				*e*S	Sn	19 47 11.9	-4.3
HUIG	Huatulco	2.11	300		Pn	19 46 48.0	-1.6
TGIG		2.29	27	*i* P	Pn	19 46 53.2	+1.0
TGIG				*i* S	Sb	19 47 23.7	-0.6
TGIG		2.29	27		Pb	19 46 54.8	-0.8
TGIG					Sg	19 47 26.0	-1.5
CMIG	Matias Romero	2.44	345	Pn	Pn	19 46 55.4	+1.1
	6.6nm,0.3s,baz=169,slow=14,SNR=75						
CMIG				Sn	Sn	19 47 24.2	-0.3
	20nm,0.3s,baz=120,slow=11,SNR=7.0						
CMIG				LR	LR	19 47 45.2	
	comp=Z,92nm,19.5s,baz=199,slow=38						
CMIG	Matias Romero	2.44	345	*i* P	Pn	19 46 55.3	+1.0
CMIG				*e*S	Sb	19 47 27.7	-0.8
CMIG	Matias Romero	2.44	345		Pn	19 46 55.3	+1.0
CMIG					Sn	19 47 23.4	-1.1
CCIG	Comitan	2.53	52	*i* P	Pn	19 46 55.9	+0.4
CCIG				*i* S	Sb	19 47 28.0	-3.1
CCIG	Comitan	2.53	52		Pb	19 46 57.8	-1.9
HUEH	Huehuetenango	2.68	77		Pn	19 46 57.8	+0.1
PEIG	Puerto Escondi	3.11	294	*e*P	Pn	19 47 01.7	-1.7
PEIG				*i* S	Sn	19 47 38.6	-2.4
PETF	Flores	4.71	62		Pn	19 47 26.6	+1.2
TLIG	Tlapa	5.05	305	Pn	Pn	19 47 32.3	+2.0
TEIG	Tepich	7.87	45	Pn	Pn	19 48 08.4	-0.5
ACON	Acoyapa	9.21	106	Pn	Pn	19 48 27.2	0.0
ESPN	Las Esperanzas	9.96	103	Pn	Pn	19 48 39.2	+1.7
TXAR	Lajitas Array	16.97	331	Pn	P	19 50 15.9	+1.9
	baz=151,slow=11,SNR=3.1						
TXAR	Lajitas Array	16.97	331	P	P	19 50 14.1	+0.2
121A	Cookes Peak, D	21.62	327	P	P	19 51 07.3	+2.4
121A				IAmb	IAmb	19 51 11.0	
	comp=Z,9.5nm,0.9s						
LENM	Lemitar	22.54	331	P	P	19 51 17.5	+2.7
TKL	Tuckaleechee C	22.85	22	LR	LR	20 00 28.7	
	comp=Z,40nm,20.6s,baz=183,slow=38						
S39A	Bolivar	22.89	2	P	P	19 51 18.7	+0.4
S39A				IAmb	IAmb	19 51 28.6	
	comp=Z,12nm,1.4s						
P40A	Paris	24.79	4	P	P	19 51 34.9	-1.6
P40A				IAmb	IAmb	19 51 44.7	
	comp=Z,5.1nm,0.7s						
WUAZ	Wupatki	25.81	326	P	P	19 51 47.0	+1.0
WUAZ				IAmb	IAmb	19 52 00.7	
	comp=Z,5.5nm,1.0s						
N38A	Joes South For	25.99	2	P	P	19 51 47.5	+0.2
ATAH	Atahualpa	26.79	143	LR	LR	20 01 15.0	
	comp=Z,22nm,18.8s,baz=255,slow=34						
ELK	Elko	31.75	329	P	P	19 52 42.1	+3.1
	comp=Z,0.7nm,0.6s,baz=33,slow=11,SNR=4.3						
ELK	Elko	31.75	329	P	P	19 52 38.8	-0.2
NVAR	Mina Array Bea	31.79	322	P	P	19 52 41.1	+1.8
	comp=Z,0.8nm,0.7s,baz=143,slow=9.5,SNR=4.5						
SADO	Sadowa	32.56	20	LR	LR	20 08 27.0	
	comp=Z,23nm,20.0s,baz=23,slow=42						
ULM	Lac du Bonnet	35.46	358	P	P	19 53 09.9	-1.0
	comp=Z,1.7nm,0.7s,baz=204,slow=18,SNR=4.0						
ULM	Lac du Bonnet	35.46	358	IAmb	IAmb	19 53 13.9	
	comp=Z,7.5nm,1.4s						
YKA	Yellowknife Ar	49.85	348	P	P	19 55 08.4	+0.8
	comp=Z,0.7nm,0.7s,baz=151,slow=7.6,SNR=12						
ILAR	Eielson Array	61.34	337	P	P	19 56 31.1	+0.9
	comp=Z,0.6nm,0.8s,baz=141,slow=4.9,SNR=6.3						
PPT2	Papeete2	63.35	241	*e*LR	LR	19 56 32.7	
	comp=Z,70nm,23.2s						

NEIC ***16*** *20:04:27.0±1.4, 43°.81N±0°.04×105°.37W±0°.05, h0^{km}±2^{km}, ML3.3/72, Error ellipse: s-maj=8.1km s-min=4.8km az=152.0*
IDC ***16*** *20:04:26.5±1.8, 43°.76N×105°.48W, h0^{km}, mb3.8/4, mb1 3.7/9, mb1mx3.6/42, mbtmp3.6/9, ML3.3/5, Error ellipse: s-maj=53.4km s-min=8.1km az=147.0*
ISC 16 20:04:26.3±0.8**, 43°.80N**±0°.06×**105°.39W**±0°.06**, h0^{km}, n80, σ1^{s}.12**/80**, mb3.8**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	71	Pg	Pg	20 04 45.9	-0.1
K22A	Casper	1.42	216		Pn	20 04 52.7	-0.8
K22A				IAML		20 05 18.0	
	comp=N,575nm,0.3s						
K22A				IAML		20 05 18.4	
	comp=E,368nm,0.3s						
PHWY	Pilot Hill	2.50	181		Pn	20 05 08.8	+0.3
PHWY				IAML		20 05 49.6	
	comp=E,105nm,0.7s						
RWWY	Rawlins	2.50	213		Pn	20 05 08.7	+0.1
RWWY				IAML		20 05 48.2	
	comp=E,158nm,0.8s						
RWWY				IAML		20 05 48.8	
	comp=E,172nm,0.8s						
N23A	Red Feather La	2.94	188	Pn	Pn	20 05 14.6	+0.1
N23A				IAML		20 06 04.7	
	comp=E,92nm,0.7s						
LAO	LASA Array	2.94	349		Pn	20 05 15.5	+1.0
RLMT	Red Lodge	3.07	297		Pn	20 05 16.8	+0.4
RLMT				IAML		20 06 09.2	
	comp=E,77nm,0.4s						
RLMT				IAML		20 06 15.2	
	comp=E,84nm,0.4s						
BW06	Boulder Array	3.21	253		Pn	20 05 17.0	-1.3
BW06				IAML		20 06 10.9	
	comp=E,55nm,0.4s						
PD31	Pinedale Array	3.21	253		Pn	20 05 17.4	-0.9
PDAR	Pinedale Array	3.21	253	Pn	Pn	20 05 19.6	+1.3
	comp=E,3.4nm,0.3s,baz=71,slow=16,SNR=57						
PDAR				Lg	Lg	20 06 05.2	
	comp=E,16nm,0.3s,baz=79,slow=32,SNR=5.3						
PDAR	Pinedale Array	3.21	253	Pn	Pn	20 05 16.8	-1.5
YNE	Yellowstone No	3.52	292		Pn	20 05 21.4	-1.2
YMP	Mirror Lake Pl	3.55	287		Pn	20 05 24.7	+1.8
LKWY	Lake	3.68	284		Pn	20 05 25.0	+0.2
LKWY				IAML		20 05 53.4	
	comp=E,39nm,0.5s						
H17A	Grant Village	3.78	281		Pn	20 05 26.8	+0.7
LOHW	Long Hollow	3.79	269		Pn	20 05 26.8	+0.7
OGNE	Ogallala	3.79	138	Pn	Pn	20 05 26.9	+0.9
FLWY	Flagg Ranch	3.84	276		Pn	20 05 28.8	+1.8
FLWY				IAML		20 06 38.0	
	comp=E,34nm,1.9s						
FLWY				IAML		20 07 06.0	
	comp=E,30nm,1.2s						
MOOW	Moose Ponds	3.88	271		Pn	20 05 30.0	+2.6
SNOW	Snow King Moun	3.91	267		Pn	20 05 28.2	+0.4
SNOW				IAML		20 06 35.7	
	comp=E,37nm,0.7s						
SNOW				IAML		20 06 38.2	
	comp=E,32nm,1.4s						
YPP	Pitchstone Pla	3.93	279		Pn	20 05 30.1	+1.9
REDW	Red Top Meadow	3.99	266		Pn	20 05 29.6	+0.6
REDW				IAML		20 06 37.8	
	comp=E,36nm,0.8s						
ISCO	Idaho Springs	4.00	182		Pn	20 05 30.1	+0.9
IMW	Indian Meadow	4.01	273		Pn	20 05 30.6	+1.2
IMW				IAML		20 06 45.1	
	comp=E,32nm,0.5s						
YMR	Madison River	4.10	284		Pn	20 05 32.3	+1.9
O20A	White River Ci	4.24	211	Pn	Pn	20 05 32.9	+0.5
O20A				IAML		20 06 46.2	
	comp=N,33nm,1.0s						
YHB	Horse Butte	4.28	285		Pn	20 05 34.5	+1.6
YHL	Hebgen Lake	4.29	286		Pn	20 05 34.6	+1.6
AHID	Auburn Hatcher	4.30	258		Pn	20 05 34.7	+1.5
AHID				IAML		20 06 47.6	
	comp=N,41nm,0.7s						
AHID				IAML		20 06 57.5	
	comp=E,37nm,0.7s						
ECR	Eagle Creek	4.42	262		Pn	20 05 35.5	+0.6
QLMT	Earthquake Lak	4.46	285		Pn	20 05 35.9	+0.5
RDMU	Red Mountain	4.48	225		Pn	20 05 36.9	+1.2
DGMT	Dagmar	4.74	10		Pn	20 05 40.0	+1.0
SMCO	Snowmass	4.77	195		Pn	20 05 42.0	+2.1
SMCO				IAML		20 06 59.4	
	comp=E,22nm,0.4s						
SMCO				IAML		20 07 06.2	
	comp=E,23nm,0.7s						
BOZ	Bozeman (W)	4.80	294		Pn	20 05 40.1	+0.1
BOZ				IAML		20 07 00.2	
	comp=E,16nm,1.0s						
BOZ				IAML		20 07 00.8	
	comp=E,14nm,1.2s						
Q24A	Divide	4.84	178	Pn	Pn	20 05 40.7	0.0
Q24A				IAML		20 07 03.6	
	comp=N,14nm,1.2s						
Q24A				IAML		20 07 03.9	
	comp=E,25nm,0.7s						
HWUT	Hardware Ranch	5.05	246		Pn	20 05 46.0	+2.5
HWUT				IAML		20 07 13.4	
	comp=E,23nm,1.3s						
TCUT	Toone Canyon	5.20	241		Pn	20 05 45.9	+0.3
EGMT	Eagleton	5.21	326	Pn	Pn	20 05 46.7	+1.2
KSCO	Kaye Shedlock'	5.22	156		Pn	20 05 46.1	+0.4
DLMT	Dillon	5.38	289		Pn	20 05 49.1	+1.1
DLMT				IAML		20 06 58.7	
	comp=E,14nm,5.0s						
DLMT				IAML		20 07 24.2	
	comp=E,20nm,4.8s						
HRY	Holter Researc	5.40	305		Pn	20 05 48.9	+0.7
MCMT	McKenzie Canyo	5.45	283		Pn	20 05 49.1	0.0
JLU	Jordanelle	5.52	237		Pn	20 05 50.2	+0.2
SPUT	South Promonto	5.78	247		Pn	20 05 53.3	-0.2
HVU	Hansel Valley	5.80	252		Pn	20 05 54.7	+1.0
PV22	Blue Mesa, Par	5.85	207		Pn	20 05 56.1	+1.6
P17A	Butcher Ranch,	5.90	225		Pn	20 05 55.9	+0.8
PV07	Paradox Valley	5.90	206		Pn	20 05 56.5	+1.3
PV15	Paradox Valley	5.93	204		Pn	20 05 56.2	+0.6
MPU	Maple Canyon	6.00	233		Pn	20 05 56.6	+0.1
PV23	Carpenter Ridg	6.00	208		Pn	20 05 58.1	+1.4
PV04	Paradox Valley	6.02	207		Pn	20 05 57.9	+1.1
PV12	Saucer Basin,	6.06	206		Pn	20 05 58.5	+1.1
PV14	Lion Creek, Pa	6.08	208		Pn	20 05 58.7	+1.0
PV11	David Mesa, Pa	6.10	207		Pn	20 05 58.7	+0.9
PV16	Nyswonger Mesa	6.10	207		Pn	20 05 59.1	+1.2
PV03	Paradox Valley	6.13	206		Pn	20 05 59.4	+1.1
PV02	Paradox Valley	6.14	205		Pn	20 06 00.2	+1.8
PV17	East Wray Mesa	6.14	207		Pn	20 05 59.5	+1.1
S22A	4UR Ranch, Cre	6.15	191		Pn	20 05 59.1	+0.5
PV01	Paradox Valley	6.15	204		Pn	20 05 59.5	+0.8
PV18	Skein Mesa, Pa	6.16	207	Pn	Pn	20 05 59.5	+0.8
PV13	Radium Mtn., P	6.21	206		Pn	20 05 60.0	+0.6
TMUT	Trail Mountain	6.27	226		Pn	20 06 01.2	+0.9
ECSD	EROS Data Cent	6.36	88	Pn	Pn	20 06 01.3	+0.1
PV05	Paradox Valley	6.37	207		Pn	20 06 00.9	-0.7
Q16A	Castle Valley	6.54	224		Pn	20 06 04.6	+0.7
DUG	Dugway, Tooele	6.60	239		Pn	20 06 05.5	+0.7
MSU	Marysvale	7.36	226	Pn	Pn	20 06 14.4	-0.8
ELK	Elko	7.92	251	Pn	Pn	20 06 25.9	+3.0
	comp=E,0.5nm,0.3s,baz=70,slow=8.6,SNR=6.7						
ELK	Elko	7.92	251		Pn	20 06 22.8	-0.1
ULM	Lac du Bonnet	9.15	42	Pn	Pn	20 06 39.2	-0.3
	comp=E,0.9nm,0.3s,baz=234,slow=12,SNR=11						
ULM				Pg		20 07 15.4	
	comp=E,1.0nm,0.3s,baz=220,slow=14,SNR=8.3						
ULM				Lg	Lg	20 09 11.3	
	comp=E,0.2nm,0.3s,baz=131,slow=18,SNR=2.3						

ULM	Lac du Bonnet	9.15	42		Pn	20 06 39.1	-0.5
NVAR	Mina Array Bea comp=E,0.1nm,0.3s,baz=48,slow=12,SNR=5.7	11.12	246	Pn	Pn	20 07 08.2	+1.5
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=5.7	19.48	347	P	P	20 08 54.6	+0.1
ARCES	ARCESS Array B comp=E,1.0nm,0.6s,baz=323,slow=15,SNR=0.7	61.38	18	P	P	20 14 43.3	-0.2
ZALV	Zalesovo Beam comp=E,0.3nm,0.5s,baz=343,slow=4.5,SNR=2.6	82.23	354	P	P	20 16 48.9	-0.2
SONM	Songino Array comp=E,0.2nm,0.4s,baz=53,slow=5.6,SNR=2.0	84.55	339	P	P	20 17 00.6	-0.7
MKAR	Makanchi Array comp=E,0.4nm,0.6s,baz=7.2,slow=4.8,SNR=5.9	89.53	355	P	P	20 17 25.7	+0.3

JMA ***16*** *20:07:10.6±0.1, 24°.36N×121°.92E, h53^{km}±2^{km}, M2.9*
TAP ***16*** *20:07:11.3, 24°.43N×121°.97E, h22^{km}, ML3.5, B*
ISC 16 20:07:11.7±0.9**, 24°.43N**±0°.02×**121°.97E**±0°.02**, h28**^{km}±4^{km}**,**
n124, σ0^{s}.88/213**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao baz=276	0.15	278	*i* P	Pb	20 07 16.9	-0.1
ENAH	baz=276			*i* S	Sn	20 07 20.8	+0.1
ENA	Nanau baz=267	0.21	270	P	Pb	20 07 17.5	-0.2
ENA	baz=267			S	Sb	20 07 22.1	+0.3
TWC	Suao baz=329	0.21	328	*e*P	Pb	20 07 17.5	-0.2
TWC	baz=329			S	Sb	20 07 22.0	+0.1
ILA	Ilan baz=328	0.39	329	S	Sb	20 07 26.3	+0.2
TWE	Neicheng baz=316	0.40	317	*i* P	Pb	20 07 20.1	-0.3
TWE	baz=316			S	Sb	20 07 26.5	+0.1
ENTT	Nioudou baz=299	0.42	300	P	Pb	20 07 20.5	-0.3
ENTT	baz=299			S	Sb	20 07 26.9	-0.1
NACB	Ninganchiao baz=233	0.43	234	*i* P	Pb	20 07 20.6	-0.2
NACB	baz=233			S	Sn	20 07 28.5	-0.4
NTC	Toucheng baz=342	0.44	343	P	Pb	20 07 21.0	0.0
NTC	baz=342			S	Sb	20 07 28.3	+0.8
NDT	Datong Townshi baz=291	0.45	293	P	Pb	20 07 21.1	-0.2
NDT	baz=291			S	Sb	20 07 28.2	+0.5
TWD	Chiawan baz=223	0.49	225	P	Pb	20 07 21.5	-0.2
TWD	baz=223			*e*S	Sb	20 07 29.1	+0.5
ETLH	Xiulin Townshi baz=243	0.50	244	P	Pb	20 07 21.6	-0.5
ETLH	baz=243			S	Sn	20 07 29.8	-1.0
NNSB	Datong baz=269	0.54	270	*i* P	Pb	20 07 22.3	-0.4
NNSB	baz=269			S	Sb	20 07 30.5	+0.3
NNSH	Datong baz=269	0.54	270	P	Pb	20 07 22.3	-0.4
NNSH	baz=269			*e*S	Sb	20 07 30.5	+0.4
NNS	Nan Shan baz=270	0.55	271	*i* P	Pb	20 07 22.4	-0.4
NNS	baz=270			S	Sn	20 07 31.0	-1.0
NWLT	Wulai baz=308	0.55	309	*i* P	Pb	20 07 22.3	-0.5
NWLT	baz=308			S	Sb	20 07 30.1	-0.4
TIPB	Shuangxi baz=345	0.56	346	P	Pb	20 07 22.5	-0.4
TIPB	baz=345			*e*S	Sb	20 07 31.3	+0.6
HWA	Hwalien baz=215	0.56	217	*e*S	Sn	20 07 32.2	+0.1
TWB1	Santiao Chiao baz=2.0	0.58	2	P	Pb	20 07 23.4	+0.1
TWB1	baz=2.0			*e*S	Sb	20 07 31.9	+0.8
YHNB	Yeheng baz=293	0.59	294	*i* P	Pb	20 07 23.2	-0.4
YHNB	baz=293			S	Sb	20 07 31.7	0.0
NSK	Sanguang baz=293	0.61	294	P	Pb	20 07 23.3	-0.6
NSK	baz=293			*e*S	Sb	20 07 32.5	+0.3
TWA	Mucha baz=327	0.65	327	P	Pb	20 07 24.8	+0.3
TWA	baz=327			*e*S	Sb	20 07 33.9	+0.6
NWF	Wu-fen Shan baz=344	0.66	345	P	Pb	20 07 24.9	+0.1
NWF	baz=344			S	Sb	20 07 34.3	+0.7
WFSB	Wu-fen Shan baz=344	0.66	345	*e*P	Pn	20 07 25.3	0.0
WFSB	baz=344			S	Sn	20 07 34.4	-0.3
NHDH	Xindian Distri baz=322	0.67	323	*i* P	Pb	20 07 24.8	0.0
NHDH	baz=322			S	Sb	20 07 34.3	+0.5
FUSS	Fushou baz=254	0.69	255	P	Pb	20 07 24.8	-0.4
FUSS	baz=254			*e*S	Sn	20 07 35.1	-0.5
TATO	Taipei baz=321	0.70	321	P	Pn	20 07 25.3	-0.4
TATO	baz=321			S	Sb	20 07 35.0	+0.4
WHF	Hehuan Shan baz=245	0.70	247	P	Pb	20 07 25.2	-0.4
WHF	baz=245			*e*S	Sn	20 07 35.5	-0.9
TAP	Taipei baz=325	0.74	325	P	Pn	20 07 26.2	-0.1
TAP	baz=325			*e*S	Sn	20 07 36.5	-0.1
TNOU	National Taiwa baz=345	0.74	346	P	Pn	20 07 24.0	-2.3
TNOU	baz=345			S	Sb	20 07 34.5	-1.3
BACT	New Taipei Cit baz=319	0.74	320	*e*P	Pn	20 07 26.1	-0.3
BACT	baz=319			S	Sn	20 07 37.3	+0.6
TWT	Tachien baz=256	0.75	257	P	Pn	20 07 26.1	-0.5
TWT	baz=256			*e*S	Sn	20 07 37.7	+0.7
TDCB	Techi baz=256	0.76	257	P	Pn	20 07 26.1	-0.7
TDCB	baz=256			S	Sn	20 07 37.5	+0.2
ESL	Shilin baz=218	0.79	219	P	Pn	20 07 25.5	-1.4
YM01	YM01 baz=332	0.80	333	P	Pn	20 07 27.0	-0.2
YM01	baz=332			S	Sn	20 07 38.1	-0.1
YM10	YM10 baz=332	0.81	333	P	Pn	20 07 27.1	-0.3
YM10	baz=332			S	Sn	20 07 38.6	+0.1
CHGB	Renai baz=243	0.81	243	P	Pn	20 07 27.0	-0.5
CHGB	baz=243			*e*S	Sn	20 07 41.0	+2.2
YM11	YM11 baz=333	0.82	334	*e*P	Pn	20 07 27.4	-0.1
YM11	baz=333			*e*S	Sb	20 07 39.7	+1.6
YM05	YM05 baz=332	0.82	333	P	Pn	20 07 27.1	-0.4
YM05	baz=332			*e*S	Sn	20 07 37.1	-1.6
YM04	YM04 baz=330	0.82	331	P	Pn	20 07 27.3	-0.2
YM04	baz=330			*e*S	Sb	20 07 39.5	+1.3
YM08	YM08 baz=335	0.83	335	P	Pn	20 07 26.8	-0.8
YM08	baz=335			*e*S	Sb	20 07 39.0	+0.6
NTY	Taoyuan baz=312	0.84	313	*e*P	Pn	20 07 27.5	-0.1
NTY	baz=312			*e*S	Sb	20 07 39.3	+0.8
TWS1	Kuangyinshan baz=323	0.84	323	P	Pb	20 07 27.8	+0.1
TWS1	baz=323			*e*S	Sb	20 07 39.5	+1.0
YM03	YM03 baz=332	0.84	332	P	Pn	20 07 27.3	-0.5
YM03	baz=332			*e*S	Sb	20 07 40.5	+1.7
ANP	Anpu baz=331	0.86	332	*e*P	Pb	20 07 28.4	+0.4
ANP	baz=331			*e*S	Sb	20 07 40.0	+0.8
NJD	Zhudong baz=290	0.86	291	*e*P	Pb	20 07 28.7	+0.7
NJD	baz=290			*e*S	Sb	20 07 41.7	+2.6
NTST	Danshui baz=326	0.87	327	*e*P	Pn	20 07 28.0	-0.1
NTST	baz=326			*e*S	Sb	20 07 41.1	+1.6
JYNG	Yonagunijimaku	0.89	88	P	Pn	20 07 27.4	-0.9
JYNG				S	Sn	20 07 40.4	+0.1
NCU	National Centr baz=306	0.89	307	*e*P	Pb	20 07 30.3	+1.7
NCU	baz=306			*e*S	Sb	20 07 42.4	+2.3
NCUH	Zhongli baz=306	0.90	307	P	Pb	20 07 28.8	+0.2
NCUH	baz=306			S	Sb	20 07 41.7	+1.6
LIOB	Emei baz=283	0.90	284	P	Pb	20 07 28.8	+0.1
LIOB	baz=283			S	Sb	20 07 41.6	+1.4
EGFH	Guangfu baz=213	0.91	213	*e*P	Pn	20 07 27.9	-0.7
EGFH	baz=213			*e*S	Sb	20 07 40.9	+0.4
NSTT	Nanjuang baz=282	0.91	283	P	Pb	20 07 29.0	+0.2
NSTT	baz=282			S	Sb	20 07 41.8	+1.3
TWY	Chenhua baz=338	0.91	338	P	Pb	20 07 29.3	+0.5
TWY	baz=338			S	Sb	20 07 42.4	+1.9
HSN1	Hsinchu baz=291	0.94	292	*e*P	Pb	20 07 29.3	+0.1
HSN1	baz=291			*e*S	Sb	20 07 42.4	+1.1
WHP	Taichung City baz=260	0.95	261	P	Pb	20 07 29.6	+0.1
WHP	baz=260			*e*S	Sb	20 07 42.2	+0.4
YOJ	Yonaguni jima	0.95	88	P	Pn	20 07 28.8	-0.3
YOJ				S	Sn	20 07 42.0	+0.2
YOJ	Yonaguni jima baz=87	0.95	88	P	Pn	20 07 29.0	-0.1
YOJ	baz=87			S	Sn	20 07 42.2	+0.4
SBCB	Hsinchu baz=291	0.97	292	P	Pb	20 07 30.0	+0.2
SBCB	baz=291			S	Sb	20 07 44.0	+1.8
WPL	Puli Township baz=245	1.01	246	*e*P	Pn	20 07 30.2	+0.1
WPL	baz=245			*e*S	Sb	20 07 44.2	+0.7
NHW	Xinwu Township baz=304	1.02	305	*e*S	Sb	20 07 44.0	+0.3
DPDB	Guoxing baz=247	1.03	248	*e*P	Pn	20 07 30.5	+0.1
NJN	Zhunan baz=283	1.03	284	*e*P	Pn	20 07 30.4	+0.1
NJN	baz=283			*e*S	Sb	20 07 46.3	+2.2
HGSD	Ruisui baz=208	1.06	208	*e*P	Pb	20 07 31.0	-0.3
HGSD	baz=208			*e*S	Sb	20 07 45.6	+0.8
NMLH	Miaoli baz=275	1.08	276	*e*P	Pb	20 07 31.9	+0.2
NMLH	baz=275			*e*S	Sb	20 07 48.0	+2.6
EHY	Hungye baz=212	1.09	213	*e*P	Pb	20 07 31.5	-0.4
TWQ1	Liyutan baz=265	1.10	266	*e*P	Pb	20 07 32.5	+0.5
TWQ1	baz=265			*e*S	Sb	20 07 46.8	+0.9
NSY	Sanyi baz=268	1.10	270	P	Pb	20 07 32.0	-0.1
NSY	baz=268			*e*S	Sb	20 07 46.8	+0.7
SMLT	Sun Moon Lake baz=240	1.12	241	P	Pb	20 07 32.1	-0.4
SMLT	baz=240			*e*S	Sb	20 07 47.4	+0.7
SSLB	Suanglung baz=235	1.13	236	*e*P	Pn	20 07 31.3	-0.3
SSLB	baz=235			*e*S	Sb	20 07 47.5	+0.7
TYC	Yuchr baz=242	1.14	243	P	Pb	20 07 32.9	+0.1
TYC	baz=242			*e*S	Sb	20 07 47.9	+0.6
PCYT	Pengchaiyu baz=4.0	1.20	4	*e*S	Sn	20 07 48.0	0.0
YULB	Yu-li baz=210	1.20	211	*e*P	Pb	20 07 33.2	-0.5
TCU	Taichung baz=256	1.22	257	*e*P	Pb	20 07 33.6	-0.3
TCU	baz=256			*e*S	Sb	20 07 49.5	+0.2
WDJ	Dajia District baz=265	1.22	266	*e*S	Sb	20 07 51.0	+1.6
EYUL	Yuli baz=208	1.23	209	*e*P	Pb	20 07 33.8	-0.5
TWF1	Yuli baz=209	1.24	210	*e*P	Pb	20 07 34.1	-0.2
WHYT	Xinyi Township baz=234	1.25	235	*e*P	Pb	20 07 34.3	-0.5
WHYT	baz=234			*e*S	Sb	20 07 50.6	+0.1
WJS	Zhushan baz=241	1.29	242	*e*P	Pb	20 07 35.1	-0.1
WJS	baz=241			*e*S	Sb	20 07 54.1	+2.8
WNT1	Nantou City baz=246	1.29	247	*e*S	Sb	20 07 52.5	+1.1
WNT	Mingjian baz=244	1.30	245	*e*P	Pb	20 07 35.6	+0.2
WNT	baz=244			*e*S	Sb	20 07 53.2	+1.6
YUS	Yu-Shan baz=224	1.32	225	*e*P	Pn	20 07 35.0	+0.3
YUS	baz=224			*e*S	Sb	20 07 53.5	+0.6
FULB	Fuli baz=206	1.37	207	*e*S	Sb	20 07 53.0	-0.9
ALS	Alishan baz=229	1.41	230	*e*P	Pb	20 07 36.6	-0.8
ALS	baz=229			*e*S	Sb	20 07 55.4	+0.4
CHN5	Tsauling baz=234	1.44	235	*e*P	Pb	20 07 37.5	-0.5
CHN5	baz=234			*e*S	Sb	20 07 57.5	+1.5
WGK	Gukeng baz=239	1.48	240	*e*P	Pb	20 07 38.3	-0.3
WDLH	Douliu baz=240	1.50	241	*e*P	Pb	20 07 38.6	-0.3
WDLH	baz=240			*e*S	Sb	20 07 58.2	+0.7
ELDTW	Lidau baz=215	1.51	216	*e*P	Pn	20 07 37.1	0.0
EDH	Donghe baz=202	1.57	203	*e*S	Sn	20 07 58.0	+0.8
IRIF	Iriomote-Funau	1.61	93	P	Pn	20 07 37.9	-0.3
IRIF				S	Sn	20 07 57.5	-0.5
WTK	Tuku baz=242	1.62	243	*e*P	Pn	20 07 38.8	+0.4
WTK	baz=242			*e*S	Sb	20 08 01.1	0.0
CHN4	Tsaushan baz=229	1.66	230	*e*P	Pb	20 07 40.9	-0.6
CHN4	baz=229			*e*S	Sb	20 08 02.6	+0.6
STYT	Tauyuan baz=221	1.68	222	*e*P	Pb	20 07 40.5	-1.4
STYT	baz=221			*e*S	Sb	20 08 02.6	-0.1
LONT	Longtian baz=206	1.70	207	*e*S	Sb	20 08 01.8	-1.5
WTP	Ta-pu baz=226	1.71	227	*e*P	Pb	20 07 41.2	-1.2
TWK	Hsinying baz=229	1.78	230	*e*P	Pb	20 07 42.6	-1.1
TWK	baz=229			*e*S	Sb	20 08 06.0	+0.3
WLGB	Puzi baz=238	1.80	239	*e*S	Sn	20 08 02.9	+0.2
TWGBT	Beinan baz=207	1.80	207	*e*S	Sn	20 08 02.9	+0.1
CHN1	Nanshi baz=226	1.81	227	*e*P	Pn	20 07 41.9	+0.9
CHN1	baz=226			*e*S	Sb	20 08 06.8	+0.3
SGST	Jiashian baz=223	1.85	224	*e*P	Pn	20 07 41.8	+0.3
SGST	baz=223			*e*S	Sn	20 08 04.5	+0.5
JKRS	Kuro-shima	1.87	95	P	Pn	20 07 41.1	-0.7
JKRS				S	Sn	20 08 04.3	-0.2
CHN8	Yiju baz=235	1.94	237	*e*S	Sn	20 08 06.8	+0.6
JIJ	Ishigaki jima	1.98	91	P	Pn	20 07 43.3	-0.1
JIJ				S	Sn	20 08 07.3	0.0
ECL	Taimali baz=206	2.05	207	*e*S	Sn	20 08 09.8	+0.9
SCST	Cishan baz=221	2.05	222	*e*P	Pn	20 07 45.2	+0.9
SSD	Sandimen baz=216	2.08	217	*e*P	Pn	20 07 46.2	+1.5
TSMG	Majia baz=215	2.10	216	*e*P	Pb	20 07 47.2	-1.9
JISG	Ishigakijimahi	2.14	85	P	Pn	20 07 45.3	-0.2
JISG				*e*S	Sn	20 08 11.0	-0.1
MASBT	Mashibuluo baz=214	2.19	214	*e*P	Pn	20 07 47.4	+1.2
MASBT	baz=214			*e*S	Sn	20 08 13.2	+0.9
PTTC	Pingtan baz=297	2.27	299	*e*P	Pn	20 07 47.0	-0.2
PTTC	baz=297			*e*S	Sn	20 08 12.6	-1.7
EAST	Anshuo baz=206	2.28	207	*e*S	Sn	20 08 15.6	+0.8
VWUC	VWUC baz=283	2.36	284	*e*P	Pn	20 07 47.8	-0.8
VWUC	baz=283			*e*S	Sn	20 08 14.9	-1.7
PHUB	P'eng-hu baz=247	2.38	248	*e*S	Sn	20 08 16.8	-0.2
SLIU	Shizi baz=206	2.45	206	*e*P	Pn	20 07 51.5	+1.6
JTJ	Tarama	2.50	85	*e*S	Sn	20 08 20.6	+0.6
MATB	Ma-tsu baz=312	2.51	314	*e*S	Sn	20 08 20.2	-0.2
MSUT	Lienchiang baz=312	2.54	313	*e*S	Sn	20 08 19.3	-1.8
VCHM	Qimei baz=242	2.62	243	*e*S	Sn	20 08 23.1	-0.1
PTMZ	Houxiangcun baz=283	2.66	284	*e*P	Pn	20 07 53.0	+0.3
PTMZ	baz=283			*e*S	Sn	20 08 24.9	+0.8
LYJJ	Jianjiangzhen baz=316	2.91	317	*e*S	Sn	20 08 28.6	-1.6
XPSS	Dashiqiu baz=327	2.96	328	*e*P	Pn	20 07 56.0	-0.8
XPSS	baz=327			*e*S	Sn	20 08 30.4	-1.2
JMJ	Miyako jima 2 baz=82	3.05	82	*e*S	Sn	20 08 34.8	+1.2
MHZQ	Yeshan baz=301	3.14	303	*e*S	Sn	20 08 35.3	-0.5
KNMB	Chin-men Tao baz=270	3.27	271	*e*P	Pn	20 07 59.9	-1.2
KNMB	baz=270			*e*S	Sn	20 08 37.4	-1.6
AXDP	Jialang baz=277	3.67	278	*e*P	Pn	20 08 06.3	-0.3
AXDP	baz=277			*e*S	Sn	20 08 46.4	-2.6

SKHL 16 20:08:56.8±0.2**, 44°.97N×148°.79E, h127**^{km}±18^{km}**, mb4.2**/3**,**
msh5.1/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.70	292	*e*P	Pn	20 09 17.0	+0.2
KUR	50nm,0.2s			AMB	AMB	20 09 22.0	
KUR				*i* S	Sn	20 09 32.0	0.0
KUR	332nm,0.2s			A	A	20 09 35.0	
KUR	195nm,0.2s			A	A	20 09 35.0	
YUK	Yuzh-Kuril'sk	2.29	247	*e*P	Pn	20 09 34.0	-0.2
YUK	20nm,0.2s			AMB	AMB	20 09 37.0	
YUK				*i* S	Sn	20 10 02.0	-0.9
YUK	79nm,0.2s			A	A	20 10 05.0	
YUK	67nm,0.2s			A	A	20 10 05.0	
GRPR	Tuman	2.37	247	*e*P	Pn	20 09 36.0	+0.8
GRPR	19nm,0.2s			AMB	AMB	20 09 41.0	
GRPR				*i* S	Sn	20 10 05.0	+0.4
GRPR	70nm,0.2s			A	A	20 10 07.0	
GRPR	55nm,0.2s			A	A	20 10 07.0	
GLVR	Golovnino	2.65	243	*e*P	Pn	20 09 40.0	+1.3
GLVR				*i* S	Sn	20 10 10.0	-1.0
GLVR	75nm,0.3s			A	A	20 10 13.0	
GLVR	107nm,0.3s			A	A	20 10 13.0	
NMR	Nemuro--Hokkai	2.72	235	*e*P	Pn	20 09 37.0	-2.7
NMR				*i* S	Sn	20 10 13.2	+0.5

IDC ***16*** *20:17:37.1±15.0, 21°.05S×177°.71W, h350^{km}±131^{km},*
mb3.1/5, mb1 3.4/5, mb1mx3.1/20, mbtmp3.8/5, Error
ellipse: s-maj=125.5km s-min=50.6km az=136.0
NEIC ***16*** *20:17:45.0±1.7, 21°.0S±0°.2×177°.86W±0°.05, h440^{km}±8^{km},*
mb4.1/13, Error ellipse: s-maj=28.2km s-min=5.2km
az=187.0
ISC 16 20:17:47.4±0.8**, 20°.7S**±0°.2×**177°.72W**±0°.10**, h500**^{km}**, n23,**
σ1^{s}.35/23**, mb3.9**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.98	306	P	P	20 19 11.0	-3.4
NIUE	Niue	7.51	79	P	P	20 19 38.5	-0.4
NIUE				S	S	20 21 09.5	-0.6
CTAO	Charters Tower	33.73	265	P	P	20 23 46.6	-0.3
CTAO	comp=Z,20nm,1.6s			IAmb	IAmb	20 23 58.7	
TOO	Toolangi	35.99	234	P	P	20 24 04.1	-1.5
TOO	comp=Z,33nm,1.6s			IAmb	IAmb	20 24 15.2	
COEN	Coen	37.86	274	P	P	20 24 22.8	+1.5
STKA	Stephens Creek comp=Z,1.6nm,0.8s,baz=76,slow=11,SNR=2.8	37.94	244	P	P	20 24 22.2	+0.5
BBOO	Buckleboo	42.69	244	P	P	20 24 59.7	-0.1
BBOO	comp=Z,13nm,1.3s			IAmb	IAmb	20 25 02.6	

WR0	**Warramunga Arr**	44.64	262	P	P	20 25 15.5	+0.3
ASAR	**Alice Springs**	44.73	257	P	P	20 25 15.9	+0.1
	comp=Z,0.3nm,0.4s,baz=96,slow=7.8,SNR=11						
ASAR				PcP	pwP	20 26 52.5	-0.4
	comp=Z,0.4nm,0.6s,baz=101,slow=3.7,SNR=4.8						
WB0	**Warramunga Arr**	44.81	262	P	P	20 25 16.8	+0.3
WB0				IAmb	IAmb	20 25 34.4	
	comp=Z,8.4nm,1.5s						
WB2	**Warramunga Arr**	44.82	262	P	P	20 25 16.9	+0.3
WB2				IAmb	IAmb	20 25 33.7	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	44.83	262	P	P	20 25 17.3	+0.6
	comp=Z,0.3nm,0.3s,baz=95,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	44.83	262	P	P	20 25 16.9	+0.2
MTN	**Manton Dam**	49.43	271	P	P	20 25 51.5	+0.1
FORT	**Forrest**	49.45	247	P	P	20 25 51.8	+0.4
FITZ	**Fitzroy Crossi**	53.26	262	P	P	20 26 20.0	+0.8
FITZ				IAmb	IAmb	20 26 27.3	
	comp=Z,9.0nm,1.4s						
JEW	**Eniwo**	73.57	330	P	P	20 28 31.3	+2.3
ILAR	**Eielson Array**	88.46	13	P	P	20 29 51.5	+6.0
	comp=Z,0.3nm,0.4s,baz=216,slow=5.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	90.43	289	P	P	20 30 02.0	+6.3
	comp=Z,0.4nm,0.3s,baz=125,slow=2.9,SNR=4.3						
AKASG	**Malin Array Be**	143.32	331	PKP	PKiKP	20 36 27.9	+0.1
	comp=Z,1.7nm,0.4s,baz=44,slow=4.4,SNR=12						
BRTR	**Keskin Array B**	147.18	312	PKPbc	PKPab	20 36 39.6	+1.8
	comp=Z,0.5nm,0.7s,baz=142,slow=6.3,SNR=4.2						
CLL	**Collm**	148.33	347	ePKPbc	PKPab	20 36 44.0	+2.2
GERES	**GERESS Array B**	150.47	345	PKPbc	PKPab	20 36 48.8	-2.2
	comp=Z,0.5nm,0.6s,baz=51,slow=5.2,SNR=2.5						

JMA ***16*** *20:25:10.9±0.2, 23°.98N×122°.53E, h15km±3km, M2.5*
TAP ***16*** *20:25:11.0, 23°.99N×122°.59E, h35km±1km, ML2.8, D*
ISC 16 20:25:10.9±0.9**, 23°.97N**±0°.03×**122°.55E**±0°.02**, h22**km±9km**,**
n81, σ0^{s}.94/138**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.60	37	P	Pb	20 25 22.6	-0.2
JYNG				S	Sb	20 25 30.3	-0.6
YOJ	**Yonaguni jima**	0.65	40	P	Pb	20 25 23.5	-0.1
YOJ				S	Sb	20 25 31.4	-0.8
YOJ	**Yonaguni jima**	0.65	40	eP	Pb	20 25 23.3	-0.3
	baz=38						
YOJ				eS	Sb	20 25 31.2	-1.0
	baz=38						
ENAH	**Nanao**	0.83	306	eP	Pn	20 25 28.0	+0.7
	baz=303						
ENAH				eS	Sb	20 25 37.8	+0.4
	baz=303						
ENA	**Nanau**	0.87	302	eP	Pb	20 25 26.9	-0.4
	baz=300						
ENA				eS	Sb	20 25 38.0	-0.6
	baz=300						
TWD	**Chiawan**	0.88	278	eP	Pb	20 25 26.9	-0.6
	baz=276						
NACB	**Ninganchiao**	0.90	284	eP	Pb	20 25 26.6	-1.2
	baz=268						
NACB				eS	Sb	20 25 39.2	-0.1
	baz=268						
TWC	**Suao**	0.91	315	eP	Pb	20 25 27.5	-0.4
	baz=302						
TWC				eS	Sb	20 25 38.2	-1.3
	baz=302						
ETLH	**Xiulin Townshi**	1.00	284	eP	Pn	20 25 28.8	-1.0
	baz=271						
ETLH				eS	Sb	20 25 42.4	-0.1
	baz=271						
ESL	**Shilin**	1.03	262	eP	Pn	20 25 30.0	0.0
	baz=252						
ESL				eS	Sn	20 25 44.1	+0.2
	baz=252						
ILA	**Ilan**	1.08	318	eP	Pn	20 25 30.4	-0.4
	baz=315						
ILA				eS	Sn	20 25 45.3	+0.3
	baz=315						
NTC	**Toucheng**	1.10	324	eP	Pb	20 25 31.1	-0.1
	baz=321						
NTC				eS	Sn	20 25 44.2	-1.3
	baz=321						
TWE	**Neicheng**	1.10	313	P	Pb	20 25 31.0	-0.3
	baz=311						
TWE				eS	Sb	20 25 45.6	+0.4
	baz=311						
ENTT	**Nioudou**	1.12	307	eP	Pb	20 25 31.6	0.0
	baz=292						
ENTT				eS	Sb	20 25 46.8	+1.0
	baz=292						
HGSD	**Ruisui**	1.13	246	eP	Pn	20 25 30.3	-1.2
	baz=245						
HGSD				eS	Sb	20 25 46.9	+0.7
	baz=245						
IRIF	**Iriomote-Funau**	1.14	71	P	Pb	20 25 32.3	+0.4
IRIF				S	Sb	20 25 47.4	+1.1
NDT	**Datong Townshi**	1.14	304	eP	Pb	20 25 32.4	+0.4
	baz=290						
NDT				eS	Sn	20 25 46.0	-0.5
	baz=290						
HATJ	**Hateruma jima**	1.15	85	P	Pb	20 25 32.7	+0.6
HATJ				S	Sb	20 25 48.3	+1.7
TWB1	**Santiao Chiao**	1.16	334	eP	Pb	20 25 32.4	+0.2
	baz=332						
NNSB	**Datong**	1.16	294	eP	Pn	20 25 31.7	-0.2
	baz=281						
NNSB				eS	Sn	20 25 46.9	-0.4
	baz=281						
NNSH	**Datong**	1.16	294	P	Pn	20 25 31.9	-0.1
	baz=282						
NNSH				eS	Sb	20 25 47.5	+0.4
	baz=282						
NNS	**Nan Shan**	1.17	294	P	Pn	20 25 32.3	+0.1
	baz=281						
NNS				eS	Sb	20 25 47.6	+0.1
	baz=281						
TIPB	**Shuangxi**	1.20	327	eP	Pb	20 25 33.1	+0.1
	baz=338						
TIPB				S	Sn	20 25 47.6	-0.4
	baz=338						
EHY	**Hungye**	1.22	248	P	Pn	20 25 32.0	-0.6
	baz=247						
EHY				eS	Sn	20 25 47.9	-0.4
	baz=247						
FUSS	**Fushou**	1.23	284	eP	Pn	20 25 32.8	-0.2
	baz=282						
NWLT	**Wulai**	1.25	310	P	Pb	20 25 34.4	+0.5
	baz=296						
NWLT				eS	Sb	20 25 50.2	+0.6
	baz=296						
CHGB	**Renai**	1.26	275	eP	Pn	20 25 33.0	-0.4
	baz=273						
CHGB				eS	Sb	20 25 50.3	+0.3
	baz=273						
YHNB	**Yeheng**	1.28	303	eP	Pb	20 25 34.2	-0.2
	baz=302						
YHNB				eS	Sb	20 25 51.3	+0.9
	baz=302						
YULB	**Yu-li**	1.28	244	eP	Pn	20 25 32.7	-0.8
	baz=233						
YULB				eS	Sn	20 25 48.9	-1.1
	baz=233						
EYUL	**Yuli**	1.28	242	eP	Pn	20 25 33.0	-0.5
	baz=232						
TWT	**Tachien**	1.29	283	P	Pb	20 25 34.5	-0.1
	baz=281						
NSK	**Sanguang**	1.30	303	P	Pb	20 25 34.4	-0.2
	baz=301						
NSK				eS	Sb	20 25 51.8	+0.9
	baz=301						
TWF1	**Yuli**	1.30	242	P	Pn	20 25 33.4	-0.4
	baz=241						
TWF1				S	Sn	20 25 49.8	-0.7
	baz=241						
TDCB	**Techi**	1.30	283	eP	Pn	20 25 34.0	+0.1
	baz=271						
TDCB				eS	Sn	20 25 50.6	-0.2
	baz=271						
NWF	**Wu-fen Shan**	1.30	328	eP	Pb	20 25 35.8	+1.0
	baz=326						
NWF				eS	Sb	20 25 52.7	+1.5
	baz=326						
WFSB	**Wu-fen Shan**	1.30	328	eP	Pn	20 25 34.0	+0.1
	baz=326						
WFSB				eS	Sb	20 25 50.7	-0.4
	baz=326						
JKRS	**Kuro-shima**	1.36	78	P	Pb	20 25 35.7	0.0
JKRS				S	Sb	20 25 54.4	+1.7
NHDH	**Xindian Distri**	1.36	317	eP	Pn	20 25 34.4	-0.2
	baz=331						
NHDH				eS	Sn	20 25 51.5	-0.5
	baz=331						
FULB	**Fuli**	1.38	237	eP	Pn	20 25 33.9	-1.0
	baz=226						
TATO	**Taipei**	1.40	316	eP	Pb	20 25 36.4	+0.1
	baz=331						
TATO				eS	Sb	20 25 54.0	+0.3
	baz=331						
SSLB	**Suanglung**	1.47	263	eP	Pn	20 25 36.8	+0.6
	baz=263						
YM01	**YM01**	1.48	323	eP	Pb	20 25 38.0	+0.3
	baz=321						
YM01				eS	Sb	20 25 56.0	0.0
	baz=321						
DPDB	**Guoxing**	1.49	273	eP	Pn	20 25 36.6	+0.2
	baz=272						
YM10	**YM10**	1.49	323	eP	Pb	20 25 37.8	-0.1
	baz=321						
YM10				eS	Sb	20 25 57.2	+0.8
	baz=321						
YM11	**YM11**	1.49	324	eP	Pb	20 25 39.0	+1.1
	baz=322						
YM05	**YM05**	1.49	323	eP	Pb	20 25 37.8	-0.2
	baz=322						
YM05				eS	Sb	20 25 56.8	+0.3
	baz=322						
WHP	**Taichung City**	1.50	282	eP	Pb	20 25 38.1	0.0
	baz=272						
YM08	**YM08**	1.50	325	eP	Pb	20 25 38.2	+0.2
	baz=323						
YM04	**YM04**	1.50	322	eP	Pb	20 25 38.0	-0.1
	baz=321						
YM04				eS	Sb	20 25 57.4	+0.6
	baz=321						
JIJ	**Ishigaki jima**	1.51	74	P	Pb	20 25 37.4	-0.8
JIJ				S	Sb	20 25 57.1	+0.2
EDH	**Donghe**	1.51	229	eP	Pn	20 25 34.4	-2.3
	baz=221						
EDH				eS	Sn	20 25 52.8	-2.8
	baz=221						
SMLT	**Sun Moon Lake**	1.51	267	eP	Pn	20 25 37.1	+0.3
	baz=257						
YUS	**Yu-Shan**	1.54	252	eP	Pn	20 25 37.5	0.0
	baz=252						
TYC	**Yuchr**	1.55	268	eP	Pn	20 25 37.5	+0.3
	baz=267						
TYC				eS	Sn	20 25 56.6	0.0
	baz=267						
LIOB	**Emei**	1.56	296	eP	Pb	20 25 38.7	-0.3
	baz=295						
ELDTW	**Lidau**	1.60	242	P	Pn	20 25 37.3	-0.8
	baz=241						
ALS	**Alishan**	1.66	255	P	Pn	20 25 39.5	+0.6
	baz=253						
ALS				eS	Sn	20 25 59.3	-0.5
	baz=253						
WJS	**Zhushan**	1.67	265	eP	Pb	20 25 40.2	-0.8
	baz=264						
WJS				eS	Sb	20 26 03.8	+2.1
	baz=264						
WNT	**Mingjian**	1.71	267	eP	Pb	20 25 40.8	-0.9
	baz=266						
WNT				eS	Sb	20 26 04.1	+1.4
	baz=266						
JISG	**Ishigakijimahi**	1.72	69	P	Pn	20 25 40.3	+0.8
JISG				S	Sb	20 26 02.8	-0.3
CHN5	**Tsauling**	1.75	258	eP	Pn	20 25 41.0	+1.0
	baz=258						
TWGBT	**Beinan**	1.77	230	eP	Pn	20 25 39.7	-0.5
	baz=222						
TWGBT				eS	Sn	20 26 00.3	-1.8
	baz=222						
STYT	**Tauyuan**	1.83	244	P	Pn	20 25 41.5	+0.4
	baz=236						
STYT				eS	Sn	20 26 04.0	+0.4
	baz=236						
WDLH	**Douliu**	1.86	262	eP	Pn	20 25 42.8	+1.3
	baz=260						
WDLH				eS	Sb	20 26 08.7	+1.6
	baz=260						
CHN4	**Tsaushan**	1.90	252	eP	Pb	20 25 43.6	-1.2
	baz=250						
CHN4				eS	Sb	20 26 08.3	+0.2
	baz=250						
WTP	**Ta-pu**	1.92	248	P	Pn	20 25 43.3	+1.1
	baz=239						
WTP				eS	Sb	20 26 08.4	-0.2
	baz=239						
SLGT	**Liugui**	2.00	241	P	Pn	20 25 44.6	+1.2
	baz=234						
SLGT				eS	Sb	20 26 09.9	-1.1
	baz=234						
ECL	**Taimali**	2.00	227	eP	Pn	20 25 43.1	-0.3
	baz=238						
SGST	**Jiashian**	2.01	244	eP	Pn	20 25 44.8	+1.3
	baz=235						
SGST				eS	Sn	20 26 09.4	+1.4
	baz=235						
CHN1	**Nanshi**	2.01	248	eP	Pn	20 25 45.1	+1.6
	baz=246						
CHN1				eS	Sb	20 26 11.1	-0.4
	baz=246						
TWK	**Hsinying**	2.02	250	P	Pn	20 25 44.8	+1.2
	baz=248						
TWK				eS	Sn	20 26 10.0	+1.8
	baz=248						
SNST	**Tainan City**	2.02	249	eP	Pn	20 25 45.0	+1.3
	baz=248						
JTJ	**Tarama**	2.08	71	P	Pb	20 25 46.0	-1.9
JTJ				eS	Sb	20 26 12.2	-1.0
SSD	**Sandimen**	2.14	236	eP	Pn	20 25 47.3	+2.0
	baz=229						
TSMG	**Majia**	2.15	235	eP	Pn	20 25 47.2	+1.7
	baz=229						
TSMG				eS	Sn	20 26 13.5	+2.0
	baz=229						
MASBT	**Mashibuluo**	2.22	233	eP	Pn	20 25 46.9	+0.5
	baz=227						
MASBT				eS	Sn	20 26 15.3	+2.1
	baz=227						
EAST	**Anshuo**	2.22	225	eP	Pn	20 25 47.5	+1.0
	baz=225						
SSPT	**Xinbi**	2.34	231	eP	Pn	20 25 50.2	+2.1
	baz=226						
SLIU	**Shizi**	2.37	223	eP	Pn	20 25 48.2	-0.3
	baz=231						
SCZT	**Fangliau**	2.38	229	eP	Pn	20 25 50.3	+1.7
	baz=222						
VWUC	**VWUC**	3.00	291	eP	Pn	20 25 55.7	-1.5
	baz=289						

TEH ***16*** *20:25:54.1, 27°.51N×52°.78E, h12km, ML3.4*
OMAN ***16*** *20:25:56.0±1.9, 27°.60N×52°.69E, h50km±188km, mb3.9/2, ml3.1/3, Error ellipse: s-maj=109.2km s-min=16.7km az=63.0*
ISC 16 20:25:55.1±1.3**, 27°.48N**±0°.07×**52°.80E**±0°.07**, h10**km**, n29,**
σ0^{s}.87/29**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	0.35	113	ePg	Pg	20 26 01.8	-0.3
JHRM	**Jahrom**	1.23	34	ePg	Pb	20 26 17.4	-1.2
JHRM				e		20 26 40.9	
	comp=Z,99nm,0.5s						
LAR1	**LAR**	1.41	82	ePg	Pb	20 26 21.5	-0.1
LAR1				e		20 26 54.4	
	comp=Z,99nm,0.3s						
AHBU	**AHRAM**	1.92	316	ePg	Pb	20 26 30.5	+0.3
SHI	**Shiraz**	2.17	353	ePn	Pn	20 26 31.6	0.0
BNDS	**Bandar-Abbas**	2.99	91	ePn	Pn	20 26 42.2	-0.6
GENO	**Geno**	3.00	91	ePn	Pn	20 26 42.6	-0.3
BANOM	**Banah**	3.49	116	P	Pn	20 26 49.7	+0.2
	SNR=11						
ASUD	**Al Ashush, Dub**	3.63	141	P	Pn	20 26 53.0	+1.5
	SNR=13						
MASF	**Masafi**	3.67	124	P	Pn	20 26 52.4	+0.4
	SNR=7.8						
KLNJ	**Kolanjah**	3.68	344	ePn	Pn	20 26 51.5	-0.9
IMEH	**Mehriz**	4.21	22	ePn	Pn	20 27 00.8	+1.2
KRBR	**Kerman**	4.28	53	ePn	Pn	20 27 00.7	+0.1
TVBK	**TV Kerman**	4.28	53	e		20 27 04.3	
	comp=Z,99nm,0.3s						
TVBK				ePn	Pn	20 27 02.4	+1.7
KHGB	**Koh Gabri**	4.33	47	ePn	Pn	20 27 01.9	+0.7
KHGB				e		20 27 57.7	
	comp=Z,99nm,0.4s						
IRAM	**Ramesheh**	4.33	355	ePn	Pn	20 27 01.4	+0.1
ISAD	**Sadrabad**	4.49	10	ePn	Pn	20 27 03.1	-0.4
IBAF	**Bafgh**	4.75	30	ePn	Pn	20 27 08.1	+1.1
CHMN	**Cheshme madani**	4.79	59	e		20 27 11.5	
	comp=Z,99nm,0.3s						
CHMN				ePn	Pn	20 27 09.7	+2.0
ICHK	**Chekchek**	4.95	16	ePn	Pn	20 27 09.3	-0.5
IGAR	**Gharneh**	4.96	353	ePn	Pn	20 27 09.8	-0.1
YZKH	**Yazd**	5.14	17	ePn	Pn	20 27 13.3	+1.1
KBAM	**BAM**	5.25	70	ePn	Pn	20 27 15.3	+1.5
ARQ	**Araqi**	5.32	140	P	Pn	20 27 15.0	+0.3
	SNR=16						
HOQ	**Hoqain**	5.62	133	P	Pn	20 27 18.8	-0.1
	SNR=20						
ANAR	**Anarak**	5.75	8	ePn	Pn	20 27 21.3	+0.6
TPRV	**Parvadeh(Tabas**	6.47	30	ePn	Pn	20 27 31.1	+0.5
TKDS	**Koohdasht(Taba**	7.16	30	ePn	Pn	20 27 39.8	-0.3
WBK	**Wadi Bani Khal**	7.40	130	P	Pn	20 27 43.0	-0.3
	SNR=9.1						

MOS ***16*** *20:28:54.3±3.1, 45°.18N×146°.18E, h81km, mb4.2/1, Error ellipse: s-maj=19.4km s-min=10.4km az=84.2*
JMA ***16*** *20:28:56.2±0.2, 43°.78N×147°.35E, h18km, M3.9*
SKHL ***16*** *20:28:56.3±0.3, 43°.99N×147°.53E, h45km±6km, mb4.6/5*
NIED ***16*** *20:28:56.2, 43°.78N×147°.35E, h18km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.03; $M_{\theta\theta}$-1.67; $M_{\phi\phi}$-0.36; $M_{r\theta}$2.81; $M_{\theta\phi}$-1.00; $M_{\phi r}$2.24; Fault plane solution: $M_0$4.17000×10^{14} NP1:ϕ_s53.00000°, δ75.00000°, λ85.00000°. NP2:ϕ_s252.00000°, δ16.00000°, λ108.00000°.*
ISC 16 20:28:52.7±1.9**, 43°.97N**±0°.08×**147°.48E**±0°.08**, h10**km±12km**,**
n33, σ1^{s}.42/38**, 2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	1.17	274	iP	Pn	20 29 16.0	+0.8
YUK				AMB	AMB	20 29 17.0	
	680nm,0.5s						
YUK				iS	Sn	20 29 30.8	-0.5
YUK				A	A	20 29 34.0	
	1µm,0.5s						
YUK				A	A	20 29 34.0	
	2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	1.17	274	d iPN	Pn	20 29 16.2	+1.0
YUK				iS	Sn	20 29 30.7	-0.5
YUK				pmax	pmax		
	comp=Z,570µm,0.2s						
YUK				pmax	pmax		
	comp=N,201µm,0.1s						
YUK				pmax	pmax		
	comp=E,198µm,0.2s						
YUK				smax	smax		
	comp=N,1µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
GRPR	**Tuman**	1.24	272	eP	Pn	20 29 16.0	-0.1
GRPR				AMB	AMB	20 29 20.0	
	comp=E,288nm,0.3s						
GRPR				iS	Sb	20 29 31.0	-1.2
GRPR				A	A	20 29 35.0	
	comp=E,1µm,0.3s						
GRPR				A	A	20 29 35.0	
	comp=E,1µm,0.3s						
GRPR	**Tuman**	1.24	272	ePN	Pg	20 29 16.9	+0.4
GRPR				iS	Sb	20 29 31.2	-1.0
GRPR				pmax	pmax		
	comp=Z,288nm,0.1s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
KUR	**Kuril'sk**	1.29	12	iP	Pg	20 29 17.5	-0.1
KUR				AMB	AMB	20 29 20.0	
	comp=N,85nm,0.5s						
KUR				iS	Sg	20 29 33.1	-1.2
KUR				A	A	20 29 35.0	
	comp=N,1µm,0.4s						
KUR				A	A	20 29 35.0	
	comp=N,781nm,0.4s						
KUR	**Kuril'sk**	1.29	12	ePN	Pg	20 29 17.4	-0.1
KUR				iS	Sn	20 29 33.4	-0.8
KUR				pmax	pmax		
	comp=Z,95nm,0.1s						
KUR				pmax	pmax		
	comp=N,63nm,0.2s						
KUR				smax	smax		
	comp=N,359nm,0.2s						
KUR				smax	smax		
	comp=E,1µm,0.2s						
NEM2	**Nemuro 2**	1.40	245	P	Pn	20 29 18.7	+0.3
NEM2				eS	Sn	20 29 34.6	-2.3
NMR	**Nemuro--Hokkai**	1.41	245	⇓ iPN	Pn	20 29 18.7	+0.2
GLVR	**Golovnino**	1.44	261	eP	Pb	20 29 20.0	+0.3
GLVR				AMB	AMB	20 29 22.0	
	comp=E,294nm,0.5s						
GLVR				iS	Sb	20 29 38.0	0.0
GLVR				A	A	20 29 39.0	
	comp=E,2µm,0.6s						
GLVR				A	A	20 29 39.0	
	comp=E,946nm,0.6s						
GLVR	**Golovnino**	1.44	261	ePN	Pg	20 29 20.2	-0.2
GLVR				iS	Sb	20 29 38.1	0.0
GLVR				pmax	pmax		
	comp=N,119nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,294nm,0.1s						
GLVR				smax	smax		
	comp=N,2µm,0.2s						
GLVR				smax	smax		
	comp=E,946nm,0.2s						
RUSJ	**Misakicho**	1.62	275	ePN	Pg	20 29 23.4	-0.4
JRA	**Rausu**	1.71	270	P	Pb	20 29 24.3	+0.1
JNSB	**Nemuroshibetsu**	1.80	265	P	Pb	20 29 25.6	-0.3
JKHN	**Kushirohamanak**	1.91	243	P	Pn	20 29 26.1	+0.8
JKHN				eS	Sn	20 29 47.8	-1.6
JNK	**Nakash**	2.04	260	P	Pn	20 29 28.4	+1.2
JNK				eS	Sn	20 29 52.6	-0.1
JAK	**Akkeshi**	2.25	245	P	Pn	20 29 30.9	+0.9
JAK				eS	Sn	20 29 56.3	-1.6
JTKR	**Abashiri--Toko**	2.58	271	P	Pn	20 29 36.7	+2.1
JAR	**Ashorobuto**	2.78	257	P	Pn	20 29 39.4	+2.1
JAR				eS	Sn	20 30 10.9	-0.1
JOB	**Onbets**	2.86	249	P	Pn	20 29 39.9	+1.4
JMP	**Maruseppu**	2.98	272	P	Pn	20 29 42.5	+2.4
JCH	**Churui**	3.30	247	P	Pn	20 29 45.5	+1.0
JKK2	**Kamakawa 2**	3.42	270	P	Pn	20 29 49.5	+3.3
ERM	**Erimo**	3.73	240	iPN	Pn	20 29 54.0	+3.6
YSS	**Yuzh-Sakhalins**	4.47	314	eP	Pn	20 30 02.9	+2.4
YSS				AMB	AMB	20 30 03.0	
	comp=E,24nm,0.3s						
YSS	**Yuzh-Sakhalins**	4.47	314	iPN	Pn	20 29 38.0	-23
KLR	**Kul'dur**	12.03	301	erx	rx	20 31 25.0	
KLR	**Kul'dur**	12.03	301	iPN	Pn	20 31 25.9	-18
EKMR	**Ekimchan**	13.23	319	eP	Pn	20 32 00.0	-0.6
SEY	**Seymchan**	19.21	7	erx	rx	20 33 02.8	
SEY	**Seymchan**	19.21	7	iP	P	20 33 02.8	-14
DGZ	**Jazzator, Alta**	40.52	300	eP	P	20 36 13.6	-18
KURK	**Kurchatov**	45.61	304	erx	rx	20 36 57.4	
KURK	**Kurchatov**	45.61	304	iP	P	20 36 57.4	-16
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						

IDC ***16*** *20:34:52.5±1.1, 17°.90N×147°.95E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/44, mbtmp3.6/8, ML3.8/1, Error ellipse: s-maj=36.3km s-min=22.3km az=106.0*
NEIC ***16*** *20:34:56.3±0.6, 17°.7N±0°.1×148°.2E±0°.2, h35km±7km, mb4.3/7, Error ellipse: s-maj=22.6km s-min=15.7km az=119.0*
ISC 16 20:34:56.6±0.7**, 17°.66N**±0°.09×**148°.1E**±0°.1**, h35**km**, n19,**
σ1^{s}.37/20**, mb3.6**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	5.11	218	Pn	Pn	20 36 11.7	+1.0
	3.5nm,0.3s,baz=148,slow=22,SNR=1.3						
GUMO				Sn	Sn	20 37 07.1	-1.4
	17nm,0.3s,baz=45,slow=23,SNR=4.6						
GUMO	**Guam**	5.11	218		Pn	20 36 11.2	+0.6

PATS	Pohnpei	14.65	136	Pn	Pn	20 38 19.4	-2.0
WB0	Warramunga Arr	39.56	201	P	P	20 42 24.0	-0.5
WB0				IAmb	IAmb	20 42 32.9	
	comp=Z,7.7nm,1.4s						
WR0	Warramunga Arr	39.69	200		P	20 42 27.1	+1.5
WR0				IAmb	IAmb	20 42 29.4	
	comp=Z,8.2nm,1.4s						
WB2	Warramunga Arr	39.73	200	P	P	20 42 26.1	+0.1
WRA	Warramunga Arr	39.74	201	P	P	20 42 27.8	+1.8
	comp=Z,0.4nm,0.5s,baz=24,slow=8.9,SNR=6.2						
WRA	Warramunga Arr	39.74	201	P	P	20 42 26.0	0.0
ASAR	Alice Springs	43.35	199	P	P	20 42 58.4	+2.8
	comp=Z,0.3nm,0.8s,baz=23,slow=7.3,SNR=2.3						
SONM	Songino Array	45.39	321	P	P	20 43 09.6	-2.2
	comp=Z,0.3nm,0.3s,baz=113,slow=3.3,SNR=2.0						
CMAR	Chiang Mai Arr	46.64	279	P	P	20 43 22.6	+0.6
	comp=Z,0.2nm,0.3s,baz=65,slow=7.9,SNR=2.2						
ZALV	Zalesovo Beam	60.23	323	P	P	20 45 00.5	-0.6
	comp=Z,1.0nm,0.7s,baz=94,slow=5.6,SNR=4.4						
MKAR	Makanchi Array	60.83	314	P	P	20 45 05.0	-0.4
KURK	Kurchatov	63.57	318	P	P	20 45 23.5	-0.2
KURK				IAmb	IAmb	20 45 24.9	
	comp=Z,2.2nm,0.8s						
KKAR	Karatay Array	69.19	310	P	P	20 45 59.8	0.0
ABKAR	Akbulak array	75.66	317	P	P	20 46 38.0	-0.2
ABKAR	Akbulak array	75.66	317	P	P	20 46 37.8	-0.4
YKA	Yellowknife Ar	77.83	28	P	P	20 46 50.6	+0.4
	comp=Z,0.2nm,0.5s,baz=286,slow=4.9,SNR=5.0						
NVAR	Mina Array Bea	81.97	52	P	P	20 47 15.5	+2.1
	comp=Z,0.3nm,0.6s,baz=285,slow=4.3,SNR=2.8						

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*NEIC **16** 20:43:40.0±2.5, 7°.40S±0°.06×106°.22E±0°.06, h50^{km}±8^{km}, mb4.4/24, Error ellipse: s-maj=8.4km s-min=8.0km az=132.0*

*DJA **16** 20:43:43.5±0.3, 8°S±4°×10°6E±°, h50^{km}±8^{km}, M4.7/21, mb4.9/7, mB5.2/4, MLv4.6/21, Mw(mB)4.5/4*

*IDC **16** 20:43:48.2±1.4, 7°.00S×106°.58E, h115^{km}±11^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.8/47, mbtmp4.3/19, MS3.0/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=27.3km s-min=10.4km az=56.0*

ISC 16 20:43:42.0±0.5**, 7°.47S**±0°.04×**106°.29E**±0°.04**, h66**^{km}**, n78, σ1^{s}89**/77**, mb4.2**/22**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBJI	Dramaga	1.02	27	P	Pn	20 44 01.1	+0.6
CGJI	Cibinong	1.03	325	P	Pn	20 44 02.1	+1.4
TNG	Tangerang	1.33	16	P	Pn	20 44 05.7	+1.1
LEM	Lembang	1.47	64	P	Pn	20 44 08.6	+2.0
	909nm,0.3s,baz=225,slow=2.5,SNR=174						
LEM				LR	LR	20 44 19.6	
	comp=Z,42nm,21.0s,baz=228,slow=30						
LEM				S	Sn	20 44 28.0	+3.0
	599nm,0.3s,baz=339,slow=23,SNR=10.0						
LEM	Lembang	1.47	64	P	Pn	20 44 07.7	+1.2
CISI	Cisompet, Garu	1.52	93	Pn	Pn	20 44 06.4	-0.7
CISI				Sn	Sn	20 44 24.3	-1.8
CISI	Cisompet, Garu	1.52	93	P	Pn	20 44 06.9	-0.2
CMJI	Cimerak	2.17	99	P	Pn	20 44 16.2	+0.4
JCJI	Jatiwangi	2.20	64	P	Pn	20 44 16.1	-0.1
BLSI	Bandar Lampung	2.33	334	P	Pn	20 44 19.2	+1.2
KASI	Kota Agung	2.62	317	P	Pn	20 44 24.3	+2.3
KPJI	Karang Pucung	2.63	87	P	Pn	20 44 24.1	+2.0
XMIS	Christmas Isla	3.06	192	Pn	Pn	20 44 27.5	-0.5
XMIS				Sn	Sn	20 45 01.2	-2.3
KLSI		3.16	331	P	Pn	20 44 32.3	+2.9
LWLI	Liwa	3.29	318	P	Pn	20 44 34.3	+3.1
SMRI	Semarang	4.14	85		Pn	20 44 46.0	+3.2
UGM	Wanagama	4.22	96	Pn	Pn	20 44 43.4	-0.6
UGM				Sn	Sn	20 45 28.9	-3.1
UGM	Wanagama	4.22	96	P	Pn	20 44 44.9	+1.0
MNAI	Manna	4.53	313		Pn	20 44 49.7	+1.7
MNAI				Sn	Sn	20 45 37.4	-2.0
MNAI	Manna	4.53	313	P	Pn	20 44 50.4	+2.4
LHSI	Lahat	4.54	323	P	Pn	20 44 51.6	+3.4
TPI	Tanjungpandan	4.87	16	P	Pn	20 44 54.5	+1.7
KSI	Kapahiang	5.28	316	P	Pn	20 45 00.9	+2.5
	2.6nm182nm,0.7s						
PWJI	Pagerwojo	5.50	96	P	Pn	20 45 03.6	+2.3
	0.7nm1μm88nm,0.6s						
JAGI	Jajag, Banyuwa	7.86	98	Pn	Pn	20 45 36.3	+2.7
GSI	Gunungsitoli	12.30	315	Pn	Pn	20 46 30.4	-4.0
KULM	Kulim	13.86	336	Pn	Pn	20 46 54.7	-0.8
MMRI	Maumere	15.84	95	Pn	Pn	20 47 21.3	+0.2
MMRI				IAmb	IAmb	20 47 24.4	
	comp=Z,26nm,0.5s						
GIRL	Giralia	16.92	154		P	20 47 35.4	-0.1
BATI	Baumata	17.39	100	P	P	20 47 40.6	-0.2
	comp=Z,7.2nm,0.3s,baz=306,slow=4.9,SNR=8.5						
MYLDM	Lahad Datu	17.50	44	Pn	Pn	20 47 38.5	-3.2
LUWI	Luwuk	17.63	70	Pn	Pn	20 47 40.5	-2.8
LUWI				IAmb	IAmb	20 48 09.7	
	comp=Z,21nm,1.0s						
SOEI	Soe	17.92	99		P	20 47 43.9	-2.9
SOEI				IAmb	IAmb	20 47 59.6	
	comp=Z,22nm,0.9s						
PSA00	Pilbara Seismi	19.19	138		P	20 48 00.1	-0.3
FITZ	Fitzroy Crossi	21.61	121	P	P	20 48 28.6	+2.0
	comp=Z,4.5nm,0.8s,baz=318,slow=7.6,SNR=7.2						
FITZ	Fitzroy Crossi	21.61	121	P	P	20 48 28.0	+1.3
MTN	Manton Dam	25.02	104	P	P	20 49 00.1	-0.1
CMAR	Chiang Mai Arr	26.76	344	P	P	20 49 13.3	-2.4
	comp=Z,1.3nm,0.7s,baz=180,slow=8.4,SNR=17						
CMAR				LR	LR	21 01 19.5	
	comp=Z,37nm,18.2s,baz=190,slow=40						
H01W3	Cape Leeuwin H	28.23	166	T	T	21 19 12.1	
	baz=341,slow=79,SNR=193						
H01W1	Cape Leeuwin H	28.24	166	T	T	21 19 12.8	
	baz=341,slow=79,SNR=163						
H01W2	Cape Leeuwin H	28.24	166	T	T	21 19 10.3	
	baz=341,slow=79,SNR=243						
WRA	Warramunga Arr	29.88	117	P	P	20 49 44.5	+0.8
	comp=Z,2.7nm,0.8s,baz=305,slow=9.3,SNR=22						
WRA	Warramunga Arr	29.88	117	P	P	20 49 44.6	+1.0
WB2	Warramunga Arr	29.89	117	P	P	20 49 44.8	+1.1
WB2				IAmb	IAmb	20 49 45.7	
	comp=Z,6.6nm,1.1s						
WR0	Warramunga Arr	30.07	117	P	P	20 49 46.5	+1.3
WR0				IAmb	IAmb	20 49 47.4	
	comp=Z,10nm,1.2s						
ASAR	Alice Springs	31.00	124	P	P	20 49 55.0	+1.4
	comp=Z,2.4nm,0.9s,baz=300,slow=7.8,SNR=26						
ASAR				LR	LR	21 02 06.2	
	comp=Z,30nm,21.4s,baz=319,slow=35						
AS31	Alice Springs	31.00	124	P	P	20 49 55.1	+1.6
H08S2	Diego Garcia H	33.49	267	T	T	21 25 51.5	
	baz=91,slow=76,SNR=186						
H08S3	Diego Garcia H	33.50	267	T	T	21 25 52.7	
	baz=91,slow=76,SNR=74						
H08S1	Diego Carcia H	33.51	267	T	T	21 25 53.1	
	baz=91,slow=76,SNR=80						
LSA	Lhasa	39.72	339	P	P	20 51 07.3	-1.3
LSA				IAmb	IAmb	20 51 10.5	
	comp=Z,2.1nm,0.5s						
STKA	Stephens Creek	40.86	131	P	P	20 51 20.0	+2.4
	comp=Z,18nm,0.5s,baz=309,slow=7.9,SNR=66						
STKA				LR	LR	21 11 04.7	
	comp=Z,20nm,18.2s,baz=203,slow=40						
STKA	Stephens Creek	40.86	131	IAmb	IAmb	20 51 20.7	
	comp=Z,3.4nm,0.6s						
NIL	Nilore	51.52	324	P	P	20 52 40.0	-1.3
WMQ	Urumqi	53.75	343	*e*P	P	20 52 59.3	+1.7
KBL	Kabul	54.63	322	P	P	20 53 03.7	-0.7
KBL				IAmb	IAmb	20 53 05.6	
	comp=Z,4.5nm,0.7s						
SONM	Songino Array	55.06	0	P	P	20 53 05.4	-1.7
	comp=Z,0.5nm,0.3s,baz=186,slow=9.8,SNR=4.6						
SONM				PcP	PcP	20 54 08.0	+0.1
	comp=Z,2.5nm,0.5s,baz=179,slow=4.0,SNR=15						
SONM	Songino Array	55.06	0	P	P	20 53 05.6	-1.5
WSAR	Wadi Sarin	55.68	305	P	P	20 53 13.8	+1.9
	comp=Z,2.4nm,0.6s,baz=161,slow=8.3,SNR=4.7						
MK31	Makanchi Array	58.09	341	P	P	20 53 26.8	-1.6
MKAR	Makanchi Array	58.09	341	P	P	20 53 26.1	-2.4
	comp=Z,1.0nm,0.6s,baz=146,slow=7.9,SNR=14						
GEYT	Alibeck	63.64	319	P	P	20 54 05.4	-1.0
	comp=Z,3.2nm,0.7s,baz=159,slow=5.6,SNR=6.4						
GEYT	Alibeck	63.64	319	P	P	20 54 05.6	-0.8
ZALV	Zalesovo Beam	63.81	346	P	P	20 54 04.2	-2.8
	comp=Z,0.8nm,0.3s,baz=160,slow=6.3,SNR=8.0						
MAW	Mawson	66.72	197	P	P	20 54 29.5	+3.8
	comp=Z,1.5nm,0.6s,baz=56,slow=11,SNR=6.0						
ABKAR	Akbulak array	69.45	330	P	P	20 54 42.6	-0.6
ABKAR	Akbulak array	69.45	330	P	P	20 54 42.3	-0.9
AKTO	Aktyubinsk	71.16	330	P	P	20 54 53.2	-0.4
	comp=Z,1.0nm,0.3s,baz=131,slow=7.8,SNR=4.1						
ARU	Arti	74.74	335	P	P	20 55 14.1	-0.5
	comp=Z,0.9nm,0.4s,baz=140,slow=3.5,SNR=7.3						
ARU	Arti	74.74	335	P	P	20 55 13.8	-0.8
VNDA	Vanda	75.64	169	P	P	20 55 22.8	+3.3
	comp=Z,1.5nm,0.5s,baz=326,slow=6.8,SNR=17						
VNDA	Vanda	75.64	169	P	P	20 55 22.1	+2.5
VNDA				IAmb	IAmb	20 55 23.6	
	comp=Z,4.1nm,1.1s						
KBZ	Khabaz	76.52	318	P	P	20 55 26.0	+1.0
	comp=Z,1.7nm,0.7s,baz=144,slow=8.1,SNR=2.9						
BELG	Belogornoye	77.64	328	P	P	20 55 30.6	-0.5
	comp=Z,3.0nm,0.4s,baz=102,slow=9.3,SNR=2.5						
BR131	Keskin Array S	81.61	312	P	P	20 55 53.2	0.0
BR131				IAmb	IAmb	20 55 54.9	
	comp=Z,3.1nm,0.8s						
BRTR	Keskin Array B	81.61	312	P	P	20 55 53.8	+0.6
	comp=Z,1.5nm,0.7s,baz=136,slow=6.7,SNR=13						
BRTR	Keskin Array B	81.61	312	P	P	20 55 53.2	0.0
MLR	Muntele Rosu	88.55	316	P	P	20 56 29.2	+1.4
	comp=Z,1.3nm,0.5s,baz=34,slow=3.6,SNR=3.0						

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*IDC **16** 20:53:24.9±1.1, 25°.42N×96°.50E, h0^{km}, mb3.4/6, mb1 3.5/7, mb1mx3.3/51, mbtmp3.3/7, ML3.1/1, Error ellipse: s-maj=51.5km s-min=15.8km az=67.0*

ISC 16 20:53:28.4±1.0**, 25°.4N**±0°.2×**96°.5E**±0°.4**, h25**^{km}**, n7, σ0^{s}65**/7**, mb3.4**/6**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.27	161	Pn	Pn	20 55 12.9	-0.1
	0.1nm,0.3s,baz=337,slow=14,SNR=4.0						
CMAR				Pg	Pb	20 55 39.5	+5.6
	0.1nm,0.3s,baz=338,slow=16,SNR=10						
CMAR				Lg	Lg	20 57 17.3	
	baz=337,slow=29,SNR=4.2						
SONM	Songino Array	23.71	17	P	P	20 58 38.1	-0.3
	0.2nm,0.4s,baz=211,slow=7.9,SNR=2.0						
MKAR	Makanchi Array	24.17	336	P	P	20 58 42.9	+0.2
	1.2nm,0.4s,baz=142,slow=8.5,SNR=28						
KURBB	Kurchatov Arra	28.74	336	P	P	20 59 24.2	+0.5
	0.4nm,0.7s,baz=156,slow=8.3,SNR=2.1						
BVAR	Borovoye Array	33.85	331	P	P	21 00 08.4	-0.3
	0.3nm,0.5s,baz=103,slow=11,SNR=4.7						
WRA	Warramunga Arr	58.17	137	P	P	21 03 21.4	+0.9
	0.3nm,0.8s,baz=328,slow=7.7,SNR=1.9						
ASAR	Alice Springs	60.75	140	P	P	21 03 37.7	-0.6
	0.3nm,0.8s,baz=324,slow=6.8,SNR=1.3						

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*IDC **16** 21:31:59.7±3.2, 34°.94N×24°.95E, h38^{km}±32^{km}, mb3.7/8, mb1 3.8/16, mb1mx3.6/46, mbtmp3.9/16, ML3.9/6, MS2.4/1, Ms1 2.4/1, ms1mx2.1/40, Error ellipse: s-maj=22.9km s-min=17.2km az=128.0*

*HLW **16** 21:32:00.9, 34°.90N×25°.28E, h20^{km}±19^{km}, Md3.9*

*ATH **16** 21:32:01.0, 35°.01N×24°.94E, h53^{km}±3^{km}, ML3.5/6, Error ellipse: s-maj=6.2km s-min=2.5km az=177.0*

*ISK **16** 21:32:00.3, 34°.99N×24°.96E, h64^{km}, ML3.5/15*

*THE **16** 21:32:02.5, 34°.84N×24°.90E, h40^{km}±2^{km}, ML3.6/9, Error ellipse: s-maj=3.4km s-min=1.2km az=351.0*

*DDA **16** 21:32:07.0, 35°.22N×25°.31E, h38^{km}±174^{km}, MW3.7*

ISC 16 21:32:00.5±0.7**, 34°.97N**±0°.05×**24°.92E**±0°.03**, h51**^{km}±6^{km}**, n101, σ2^{s}26**/119**, mb3.8**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.10	300	P	Pn	21 32 08.9	+0.4
SIVA				S	Sn	21 32 15.4	+1.3
SIVA				AML	AML	21 32 16.3	
	comp=N,47915μm,0.4s						
SIVA				AML	AML	21 32 16.4	
	comp=E,95817μm,0.3s						
SIVA	Sivas	0.10	300	P	Pn	21 32 08.9	+0.4
SIVA				S	Sn	21 32 14.8	+0.6
	comp=E,36μm,0.3s						
TMBK	Timbaki Herakl	0.16	310	P	Pn	21 32 09.5	+0.8
TMBK				S	Sn	21 32 16.4	+1.8
	comp=E,7μm,0.7s						
KSTL	Kastelli Herak	0.36	20	P	Pn	21 32 12.6	+2.3
IACM	Heraklion	0.36	20	P	Pn	21 32 11.7	+1.4
IACM	Heraklion	0.36	20	P	Pn	21 32 11.7	+1.4
IACM				S	Sn	21 32 21.0	+3.7
	comp=E,17μm,0.7s						
HRKL	Herakleio	0.38	23	P	Pn	21 32 11.9	+1.4
HRKL				S	Sn	21 32 20.4	+2.8
	comp=E,7μm,0.5s						
HRKL	Herakleio	0.38	23	PG	Pn	21 32 11.6	+1.1
NPS	Neapolis	0.64	62	P	Pn	21 32 15.4	+1.8
NPS				AML	AML	21 32 28.1	
	comp=E,4742μm,0.7s						
NPS				AML	AML	21 32 29.9	
	comp=N,3734μm,0.8s						
NPS	Neapolis	0.64	62	P	Pn	21 32 15.9	+2.3
NPS				S	Sn	21 32 26.7	+3.7
	comp=N,2μm,0.8s						
GVDS	Gavdos	0.69	260	P	Pn	21 32 15.8	+1.6
GVDS	Gavdos	0.69	260	PG	Pn	21 32 16.0	+1.8
GVDS				SG	Sn	21 32 27.6	+3.5
GVD	Gavdhos	0.70	260	P	Pn	21 32 15.3	+1.1
GVD				AML	AML	21 32 30.3	
	comp=N,10890μm,0.4s						
GVD				AML	AML	21 32 34.9	
	comp=E,12713μm,0.4s						
GVD	Gavdhos	0.70	260	P	Pn	21 32 15.2	+1.0
GVD				S	Sn	21 32 24.0	-0.2
	comp=E,6μm,0.4s						
GVD	Gavdhos	0.70	260	PG	Pn	21 32 15.7	+1.5
GVD				SG	Sn	21 32 27.1	+2.9
VAM	Vamos	0.73	307	P	Pn	21 32 17.1	+2.3
VAM				AML	AML	21 32 34.5	
	comp=N,8106μm,0.7s						
VAM				AML	AML	21 32 38.6	
	comp=E,5634μm,0.8s						
VAM	Vamos	0.73	307	P	Pn	21 32 16.9	+2.1
VAM				S	Sn	21 32 28.8	+3.7
	comp=E,3μm,0.5s						
IMMV	Iera Moni Meta	0.91	303	P	Pn	21 32 19.9	+2.8
IMMV				AML	AML	21 32 36.3	
	comp=N,5531μm,0.4s						
IMMV				AML	AML	21 32 37.4	
	comp=E,5304μm,0.9s						
IMMV	Iera Moni Meta	0.91	303	P	Pn	21 32 19.5	+2.4
IMMV				S	Sn	21 32 33.5	+4.2
	comp=E,3μm,0.9s						
IMMV	Iera Moni Meta	0.91	303	PG	Pn	21 32 19.2	+2.1
STIA	Sitia Lasithi	0.99	76	P	Pn	21 32 21.7	+3.6
ZKR	Zakros	1.07	82	P	Pn	21 32 22.0	+2.8
ZKR				AML	AML	21 32 41.8	
	comp=E,3467μm,0.7s						
ZKR				AML	AML	21 32 47.6	
	comp=N,1588μm,0.7s						
ZKR	Zakros	1.07	82	P	Pn	21 32 22.1	+2.8
ZKR				S	Sn	21 32 35.6	+2.4
	comp=N,1μm,0.7s						
ZKR	Zakros	1.07	82	PG	Pn	21 32 19.9	+0.6
ZKR				SG	Sn	21 32 33.8	+0.6
SANT	Santorini	1.47	17	PN	Pn	21 32 25.1	+0.5
SANT	Santorini	1.47	17	*i* P	Pn	21 32 26.2	+1.5
SNT5	Nea Kammeni, S	1.48	15	P	Pn	21 32 26.6	+1.8
SNT5	Nea Kammeni, S	1.48	15	P	Pn	21 32 26.6	+1.8
SAP3	Santorini-Thir	1.51	13	P	Pn	21 32 27.2	+2.1
SAP3	Santorini-Thir	1.51	13	P	Pn	21 32 27.5	+2.4
CMBO	Columbo, Santo	1.55	15	P	Pn	21 32 27.9	+2.2
ANKY	Antikythira Is	1.60	305	P	Pn	21 32 29.6	+3.2
ANKY	Antikythira Is	1.60	305	P	Pn	21 32 29.6	+3.2
MHLO	Agia Marina, M	1.77	346	P	Pn	21 32 30.3	+1.6
MHLO	Agia Marina, M	1.77	346	P	Pn	21 32 30.2	+1.5
KARP	Karpathos	1.92	72	P	Pn	21 32 34.1	+3.3
KARP	Karpathos	1.92	72	P	Pn	21 32 32.7	+1.9
KARP	Karpathos	1.92	72	PN	Pn	21 32 31.7	+0.9
KTHA	Kythira Island	1.99	311	PN	Pn	21 32 33.5	+1.8
KTHR	Kythira	2.02	310	P	Pn	21 32 34.2	+2.0
APE	Apeiranthos	2.16	13	PN	Pn	21 32 34.5	+0.5
APE	Apeiranthos	2.16	13	*i* P	Pn	21 32 35.8	+1.8
VLI	Veliai	2.38	318	P	Pn	21 32 38.5	+1.5
KOSK	Kos Island	2.44	43	PN	Pn	21 32 38.3	+0.4
KRND	KRANIDI	2.80	330	P	Pn	21 32 44.9	+2.0
BODT	Bodrum	2.85	42	PN	Pn	21 32 45.1	+1.6
ARG	Arkhangelos	2.90	64	PN	Pn	21 32 45.5	+1.4
BDRM	Kayabasi	2.93	44	*i* P	Pn	21 32 45.8	+1.2
EPID	Epidavros	3.02	332	P	Pn	21 32 47.8	+2.0
TURN	Turunc	3.25	55	PN	Pn	21 32 49.8	+0.9
TURN	Turunc	3.25	55	*i* P	Pn	21 32 50.6	+1.7
ITM	Ithomi	3.28	313	PN	Pn	21 32 50.9	+1.5
GCAM	G?zelcaml?	3.31	34	PN	Pn	21 32 50.8	+1.1
SLUM	Salum	3.47	176	P	Pn	21 32 51.4	-0.6
	baz=181						
YER	Yerkesik	3.48	51	P	Pn	21 32 55.3	+3.1
YER	Yerkesik	3.48	51	PN	Pn	21 32 53.5	+1.3
DALY	Dalyan (Mula)	3.55	58	PN	Pn	21 32 54.3	+1.2
URLA	Izmir	3.65	21	PN	Pn	21 32 55.5	+1.1
URLA	Izmir	3.65	21	*i* P	Pn	21 32 50.3	-4.1
FETY	Fethiye	3.77	63	PN	Pn	21 32 57.5	+1.3
DRO	Drossia	3.94	320	P	Pn	21 33 00.9	+2.4
AKAS	Kas	4.02	70	PN	Pn	21 33 00.9	+1.2
AKAS	Kas	4.02	70	*i* P	Pn	21 33 00.1	+0.4
AKAS				*i* S	Sn	21 33 45.7	+0.1
AKAS				IAML		21 33 50.0	
	comp=E,36nm,1.6s						
AKAS				IAML		21 33 52.0	
	comp=N,50nm,0.5s						
TAVA	DENIZLI_Tavas	4.08	51	*i* P	Pn	21 33 01.9	+1.4
CAEL	Denizli, Camel	4.16	58	*i* P	Pn	21 33 03.2	+1.5
GOLH	Golhisar	4.39	58	*i* P	Pn	21 33 05.4	+0.7
ELL	Elmali	4.42	65	PN	Pn	21 33 06.8	+1.6
AGG	Agios Georgios	4.55	334	PN	Pn	21 33 08.9	+2.1
USAK	Uak-Merkez	4.98	40	*i* P	Pn	21 33 15.9	+3.1
EVGI	Lefkada island	5.00	318	P	Pn	21 33 15.9	+2.9
KHAL	Karahalli	5.00	46	*i* P	Pn	21 33 14.1	+1.0
SWA2		5.72	175	P	Pn	21 33 21.7	-1.2
	baz=178						
SWA2				S	Sn	21 34 20.5	-6.8
	baz=178						
KEPZ	Antalya-Kepez	5.76	68	*i* P	Pn	21 33 24.9	+1.5
KEPZ				*i* S	Sn	21 34 25.6	-2.6
SEDI	Konya, Seydise	6.06	64	*i* P	Pn	21 33 28.8	+1.2
SEDI				*i* S	Sn	21 34 33.2	-2.4
SEDI				IAML		21 34 45.0	
	comp=E,12nm,0.7s						
SEDI				IAML		21 34 49.0	
	comp=N,5.5nm,0.5s						
DOGA	KONYA_Doganhis	6.27	58	*i* P	Pn	21 33 31.7	+1.1
STIP	Stip	7.05	343	*i* Pn	Pn	21 33 47.5	+6.5
HFRF	Wahat Farafira	8.32	159	P	Pn	21 33 56.4	-2.1
	baz=160						
HFRF				S	Sn	21 35 21.6	-9.5
	baz=160						
NBNS	Bani Suef	8.33	138	P	Pn	21 33 57.4	-1.3
	baz=139						
BRTR	Keskin Array B	8.41	53	Pn	Pn	21 34 01.1	+1.2
	comp=N,0.1nm,0.3s,baz=224,slow=13,SNR=4.8						
BRTR				LR	LR	21 38 03.5	
	comp=N,22nm,18.4s,baz=252,slow=43						
MMAI	Mount Meron Ar	8.92	100	Pn	Pn	21 34 04.3	-2.5
	comp=N,0.7nm,0.3s,baz=285,slow=11,SNR=9.4						
MMAI				Sn	Sn	21 35 38.0	-7.9
	comp=N,2.8nm,0.3s,baz=279,slow=22,SNR=8.5						
DBRK	Dubrovnik	9.33	328	*e*Pn	Pn	21 34 10.1	-2.1
DBRK				Sn	Sn	21 35 49.3	-6.4
STON	Ston	9.69	327	*e*Pn	Pn	21 34 15.2	-2.0
EIL	Elat	9.99	119	Pn	Pn	21 34 18.4	-3.1
	comp=N,0.5nm,0.3s,baz=287,slow=2.7,SNR=13						
EIL				Sn	Sn	21 36 03.1	-9.1
	comp=N,1.4nm,0.3s,baz=68,slow=0.7,SNR=9.7						
HDK1	Dakhla	10.16	156	P	Pn	21 34 22.4	-1.4
	baz=158						
RICI	Ricice	10.43	327	*e*Pn	Pn	21 34 25.2	-2.2
RICI				Sn	Sn	21 36 15.5	-7.3
HHRG	Al Ghardaqah	10.70	134	P	Pn	21 34 31.1	-0.1
	baz=135						
KIJV	Kijevo	11.16	327	*e*Pn	Pn	21 34 34.5	-2.8
KIJV				Sn	Sn	21 36 32.4	-8.2
MORI	Morici	11.38	324	*e*Pn	Pn	21 34 39.2	-1.1
MORI				Sn	Sn	21 36 41.2	-4.7
AKASG	Malin Array Be	16.04	10	Pn	Pn	21 35 42.7	+0.3
	comp=N,2.0nm,0.3s,baz=202,slow=11,SNR=19						
GERES	GERESS Array B	16.16	333	Pn	Pn	21 35 44.8	+0.7
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=7.1						
KVAR	Kislovodsk Arr	16.38	51	Pn	P	21 35 50.7	+1.6
	baz=260,slow=19,SNR=2.1						
KBZ	Khabaz	16.41	52	Pn	P	21 35 50.8	+1.6
	comp=N,0.2nm,0.3s,baz=245,slow=8.6,SNR=18						
GNI	Garni	16.54	66	Pn	P	21 35 52.1	+1.2
	comp=N,0.3nm,0.3s,baz=305,slow=16,SNR=2.1						
FINES	FINESS Array B	26.51	1	P	P	21 37 31.7	-1.1
	comp=N,6.0nm,1.0s,baz=160,slow=12,SNR=3.4						
EKA	Eskdalemuir Ar	28.09	325	P	P	21 37 49.2	+2.1
	comp=N,0.5nm,0.4s,baz=141,slow=12,SNR=1.5						
TORD	Torodi Ar. Bea	30.21	230	P	P	21 38 07.2	+0.9
	comp=N,3.1nm,0.6s,baz=34,slow=8.8,SNR=11						
ARCES	ARCESS Array B	34.62	0	P	P	21 38 43.0	-1.3
	comp=N,0.4nm,0.4s,baz=160,slow=7.4,SNR=6.6						
DBIC	Dimbokro	39.29	231	P	P	21 39 24.7	+0.2
	comp=N,1.1nm,0.5s,baz=16,slow=7.4,SNR=3.7						
MKAR	Makanchi Array	44.05	56	P	P	21 40 04.2	+1.1
	comp=N,1.6nm,0.7s,baz=280,slow=6.5,SNR=18						
ZALV	Zalesovo Beam	45.28	46	P	P	21 40 12.9	+0.1
	comp=N,0.7nm,0.5s,baz=280,slow=9.0,SNR=4.0						
YKA	Yellowknife Ar	77.57	342	P	P	21 43 51.8	+1.2
	comp=N,0.2nm,0.4s,baz=32,slow=5.1,SNR=3.5						

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*UPA **16** 21:45:34.0±0.6, 5°.73N×78°.26W, h23^{km}±7^{km}, MW4.3*

*RSNC **16** 21:45:35.7±1.0, 5°.79N×78°.08W, h32^{km}±14^{km}, ML2.9*

ISC 16 21:45:31.9±1.5**, 5°.76N**±0°.04×**78°.21W**±0°.03**, h14**^{km}±11^{km}**, n31, σ1^{s}48**/58**, 2C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.92	60⇓	*i*P	Pg	21 45 50.0	+0.3
SOLC				*e*S	Sg	21 46 00.4	-1.5
SOLC				*i*		21 46 01.9	
	comp=Z,504nm,0.2s						
PIZC	Pizarro, Choco	1.16	133⇑	*e*P	Pb	21 45 53.7	0.0
PIZC				*e*S	Sb	21 46 07.4	-1.1
PIZC				*i*		21 46 10.3	
	comp=Z,421nm,0.2s						
PTAC	Punta Ardita,	1.43	16	*e*P	Pn	21 45 57.2	-0.2
PTAC				*e*S	Sn	21 46 11.6	-4.5
MALC	Bahia Malaga	1.94	153	*e*P	Pn	21 46 05.8	+1.3
MALC				*e*S	Sn	21 46 28.1	-0.6
MALC				*i*		21 46 30.2	
	comp=Z,36nm,0.3s						
PLMC	San Jos del P	2.10	114	*e*P	Pn	21 46 07.0	+0.3
PLMC				*e*S	Sn	21 46 30.3	-2.4
PLMC				*i*		21 46 31.8	
	comp=Z,136nm,0.3s						
CBOC	Ciudad Bolivar	2.19	87	*e*P	Pn	21 46 08.1	+0.1
CBOC				*e*S	Sn	21 46 31.3	-3.8
CBOC				*i*		21 46 34.8	
	comp=Z,39nm,0.4s						
DBBC	Dabeiba	2.35	58⇓	*e*P	Pn	21 46 11.9	+1.8
DBBC				*i*		21 46 43.3	
	comp=Z,186nm,0.4s						
ACHO3	Achotines, Los	2.55	310	*e*P	Pn	21 46 13.6	+0.8
ACHO3				*e*S	Sn	21 46 43.1	-0.6
YOTC	Yotoco, Valle	2.56	133⇑	*e*P	Pn	21 46 13.7	+0.5
YOTC				*e*S	Sn	21 46 42.3	-1.9
YOTC				*i*		21 46 43.6	
	comp=Z,43nm,0.3s						
HELC	Santa Helena	2.70	81	*i* P	Pn	21 46 17.0	+1.8
HELC				*e*S	Sn	21 46 49.5	+1.6
HELC	Santa Helena	2.70	81	*e*P	Pn	21 46 16.7	+1.4
HELC				*e*S	Sn	21 46 45.3	-2.6
UPD2	Meteti	2.78	4	*e*P	Pn	21 46 17.2	+1.3
UPD2				*e*S	Sn	21 46 49.5	+0.3
UPD2	Meteti	2.78	4	*e*P	Pn	21 46 17.1	+1.3
UPD2				*e*S	Sn	21 46 48.5	-0.8
UPD2				*i*		21 46 58.3	
	comp=Z,67nm,0.5s						
AZU	Azuero	2.88	315	*e*P	Pn	21 46 17.8	+0.5
AZU				*e*S	Sn	21 46 51.5	-0.3
CAPC	Capurgana	2.98	17	*e*P	Pn	21 46 18.9	+0.1
CAPC				*e*S	Sn	21 46 52.4	-1.9
CAPC				*i*		21 46 55.7	
	comp=Z,41nm,0.2s						
CACAO	El Cacao, Vera	3.07	301	*e*P	Pn	21 46 20.5	+0.6
CACAO				*e*S	Sn	21 46 55.2	-1.3
UREC	San Jos de Ur	3.31	53	*e*P	Pn	21 46 26.1	+2.7
UREC				*e*S	Sn	21 47 03.4	+0.8
UREC				*i*		21 47 06.0	
	comp=Z,15nm,0.3s						
NORC	Norcasia	3.33	93	*e*P	Pn	21 46 26.4	+2.8
NORC				*e*S	Sn	21 47 02.8	-0.3

NORC				i		21 47 07.4	
	comp=Z,14nm,0.3s						
OCU3	Ocu, Herrera	3.35	311	eP	Pn	21 46 24.4	+0.6
OCU3				eS	Sn	21 47 02.6	-0.8
VTON	El Valle, Cocl	3.40	326	eP	Pn	21 46 25.7	+1.0
VTON				eS	Sn	21 47 04.6	-0.2
UPA	Univ. de Panam	3.46	338	eP	Pn	21 46 25.8	+0.5
UPA				eS	Sn	21 47 06.3	+0.2
CHOR3	La Chorrera	3.48	334	eP	Pn	21 46 26.9	+1.3
CHOR3				eS	Sn	21 47 06.1	-0.5
ORTC	Ortega, Tolima	3.48	122	eS	Sn	21 47 08.2	+1.5
ORTC				i		21 47 14.0	
	comp=Z,25nm,0.7s						
CHPO	Chepo, Panama	3.50	345	eP	Pn	21 46 26.7	+0.7
CHPO				eS	Sn	21 47 07.6	+0.3
ZANG	Zanguenga, Cho	3.58	333	eP	Pn	21 46 28.2	+1.2
ZANG				eS	Sn	21 47 09.4	+0.4
GMAL	Guarumal, Vera	3.60	304	eP	Pn	21 46 28.3	+1.0
GMAL				eS	Sn	21 47 09.1	-0.5
BCIP	Isla Barro Col	3.75	335	eP	Pn	21 46 29.8	+0.5
BCIP				eS	Sn	21 47 13.2	-0.1
BCIP	Isla Barro Col	3.75	335	eP	Pn	21 46 29.7	+0.3
BCIP				eS	Sn	21 47 14.1	+0.8
BCIP				i		21 47 16.9	
	comp=Z,21nm,0.2s						
FRIJ	El Hiral	3.75	336	eP	Pn	21 46 30.1	+0.7
PTBC	PUERTO BERRIO,	3.81	78	eP	Pn	21 46 33.7	+3.4
SJCC	San Jacinto, C	5.09	36	eP	Pn	21 46 49.2	+1.4
SJCC				eS	Sn	21 47 46.4	-0.1

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*DDA **16** 21:46:20.9, 37°.31N×27°.24E, h7^{km}±6^{km}, ML1.5*

ISK 16 21:46:12.4, 37°.01N×26°.69E, h17^{km}**, ML2.0**/6,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSK	Kos Island	0.35	138	PG	Pb	21 46 20.1	0.0
BODT	Bodrum	0.50	84	PG	Pb	21 46 22.7	0.0
BODT				SG	Sb	21 46 30.4	+0.7
BDRM	Kayabasi	0.60	85	i P	Pn	21 46 26.5	+0.2
BDRM				i P	Pb	21 46 26.8	+2.3
BDRM				i S	Sb	21 46 32.8	0.0
DDIM	Aydin, Didim	0.63	44	i P	Pn	21 46 27.6	+1.1
GCAM	G?zelcaml?	0.81	32	PG	Pn	21 46 28.7	-0.4
GCAM				SG	Sn	21 46 40.9	+0.2
GCAM	G?zelcaml?	0.81	32	i P	Pn	21 46 29.4	+0.3
GCAM				i S	Sn	21 46 41.8	+1.0
GCAM				IAML		21 46 44.0	
	comp=E,54nm,0.6s						
GCAM				IAML		21 46 45.0	
	comp=N,44nm,0.6s						
MLSB	Milas	0.91	72	PG	Pn	21 46 30.6	+0.1
APE	Apeiranthos	0.93	274	PG	Pn	21 46 30.9	+0.1
DGB	zmir	1.05	8	i P	Pg	21 46 34.9	+2.2
DGB				i S	Sn	21 46 48.7	+2.1
DGB				IAML		21 46 52.0	
	comp=E,15nm,0.5s						
DGB				IAML		21 47 02.0	
	comp=N,20nm,1.8s						
TURN	Turunc	1.27	100	PN	Pb	21 46 36.1	+0.3
TURN	Turunc	1.27	100	i P	Pb	21 46 35.7	-0.1
TURN				i S	Sg	21 46 53.4	0.0
ARG	Arkhangelos	1.40	124	PN	Pb	21 46 37.7	-0.4

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*MAN **16** 21:56:47.5, 13°.31N×124°.17E, h25^{km}, MS4.1*
MAN INTENSITY III - LEGASPI CITY; CABID-AN.
*IDC **16** 21:56:59.1±3.1, 12°.81N×123°.66E, h94^{km}±29^{km}, mb3.6/13, mb1 3.7/13, mb1mx3.5/36, mbtmp3.9/13, MS3.4/13, Ms1 3.4/13, ms1mx3.2/38, Error ellipse: s-maj=26.7km s-min=13.9km az=77.0*
*NEIC **16** 21:57:00.1±2.3, 12°.89N±0°.10×123°.6E±0°.1, h92^{km}±8^{km}, mb4.2/23, Error ellipse: s-maj=18.4km s-min=14.0km az=70.0*

ISC 16 21:56:53.9±0.5, **13°.06N**±0°.04×**123°.96E**±0°.06, **h35**^{km}, **n73**,
σ**1^{s}.95**/60, **mb4.2**/25, **MS3.5**/10, **5C-2D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.69	300	⇓eP	Pn	21 57 20.6	-0.4
GQP				eS	Sn	21 57 46.3	+4.8
JCNP	Jose Panganiba	1.73	315	eP	Pn	21 57 18.3	-3.3
JCNP				eS	Sn	21 57 42.7	+0.3
OTRP	Odiongan	2.01	250	eP	Pn	21 57 24.4	-1.0
OCLP	Ormoc	2.09	162	eP	Pn	21 57 25.1	-1.4
OCLP				eS	Sn	21 57 53.2	+1.9
BOAC	Boac	2.10	281	eP	Pn	21 57 24.8	-1.7
BOAC				eS	Sn	21 58 01.1	+10
LQP	Lukban	2.58	294	⇑eP	Pn	21 57 34.9	+1.6
LLP	Lapu-Lapu	2.72	180	⇓eP	Pn	21 57 38.7	+3.5
LLP				i S	Sn	21 58 17.6	+11
PGP	Puerto Galera	2.96	279	⇑eP	Pn	21 57 47.0	+8.6
JAP	San Jose, Anti	3.02	221	⇑eP	Pn	21 57 38.6	-0.7
MSLP	Maasin	3.04	163	eP	Pn	21 57 38.5	-0.9
MSLP				eS	Sn	21 58 25.1	+10
TGY	Tagaytay City	3.12	290	P	Pn	21 57 43.5	+2.9
	32nm,0.3s,baz=117,slow=1.2,SNR=15						
CNOP	Candoni, Negro	3.46	202	eP	Pn	21 57 45.1	-0.2
CNOP				eS	Sn	21 58 34.7	+10
CUYO	Cuyo Island	3.62	233	eP	Pn	21 57 47.1	-0.4
BUSP	Coron	3.82	254	eP	Pn	21 57 50.1	-0.1
GLSP	General Luna,	3.89	147	eP	Pn	21 57 47.6	-3.6
CVP	Callao Caves	5.06	336	⇑iP	Pn	21 58 05.0	-2.3
CVP				i S	Sn	21 59 04.0	-0.5
KCP	Kidapawan	6.11	169	⇑eP	Pn	21 58 25.7	+3.9
DAV	Davao City (W)	6.16	165	LR	LR	22 01 20.2	
	comp=Z,479nm,20.6s,baz=26,slow=44						
SIJI	Sorong	15.62	152	LR	LR	22 08 09.7	
	comp=Z,82nm,18.7s,baz=72,slow=43						
KSM	Kuching	17.75	231		Pn	22 00 54.4	-4.1
KSM				IAmb	IAmb	22 01 03.9	
	comp=Z,19nm,1.1s						
KAPI	Kappang	18.43	193	LR	LR	22 09 04.2	
	comp=Z,114nm,18.8s,baz=17,slow=40						
ENH	Enshi	21.74	324	P	P	22 01 43.8	+1.4
ENH				IAmb	IAmb	22 02 01.1	
	comp=Z,7.2nm,0.8s						
JCJ	Chichijima	22.05	48	LR	LR	22 10 29.3	
	comp=Z,101nm,20.2s,baz=138,slow=36						
BATI	Baumata	23.11	181	P	P	22 01 56.1	-0.9
	comp=Z,21nm,0.7s,baz=18,slow=13,SNR=1.6						
IPM	Ipoh	24.19	251	P	P	22 02 04.0	-3.4
KULM	Kulim	24.25	254	P	P	22 02 06.3	-1.6
KULM				IAmb	IAmb	22 02 22.8	
	comp=Z,14nm,1.1s						
SRIT	Nakonsritamara	24.32	262	P	P	22 02 06.8	-1.8
KSRS	Korea Array	24.55	8	P	P	22 02 13.8	+3.5
	comp=Z,2.4nm,0.8s,baz=187,slow=9.7,SNR=4.0						
CM31	Chiang Mai Arr	24.65	286	P	P	22 02 10.8	-0.8
CMAR	Chiang Mai Arr	24.65	286	P	P	22 02 10.7	-0.9
	comp=Z,1.3nm,0.8s,baz=101,slow=8.0,SNR=9.1						
CMAR				LR	LR	22 11 47.6	
	comp=Z,32nm,20.5s,baz=97,slow=36						
CMAR	Chiang Mai Arr	24.65	286	P	P	22 02 09.7	-1.9
MJAR	Matsushiro Arr	26.66	26	LR	LR	22 12 44.3	
	comp=Z,29nm,19.6s,baz=235,slow=35						
PSI	Prapat	26.77	250	LR	LR	22 13 03.2	
	comp=Z,111nm,19.5s,baz=90,slow=36						
BJT	Baijiatuau	27.72	347	P	P	22 02 40.7	+1.7
GSI	Gunungsitoli	28.62	248	P	P	22 02 41.3	-6.0
FITZ	Fitzroy Crossi	31.00	177	P	P	22 03 08.8	+0.5
USRK	Ussuriysk Ar.	31.79	11	P	P	22 03 17.8	+2.8
	comp=Z,6.0nm,0.9s,baz=206,slow=6.2,SNR=7.3						
WRA	Warramunga Arr	34.35	163	P	P	22 03 34.4	-3.2
	comp=Z,0.3nm,0.4s,baz=345,slow=9.3,SNR=2.2						
ULN	Ulaanbaatar	37.46	341	P	P	22 04 03.3	-0.9
ULN				IAmb	IAmb	22 04 06.5	
	comp=Z,3.5nm,1.0s						
SONM	Songino Array	37.64	341	P	P	22 04 04.7	-1.0
	comp=Z,1.1nm,0.8s,baz=153,slow=10.0,SNR=7.1						
SONM				LR	LR	22 20 32.3	
	comp=Z,75nm,18.7s,baz=135,slow=37						
SONM	Songino Array	37.64	341	IAmb	IAmb	22 04 05.4	
	comp=Z,1.6nm,1.0s						
AS31	Alice Springs	37.77	165	P	P	22 04 08.2	+1.3
ASAR	Alice Springs	37.77	165	P	P	22 04 04.7	-2.2
	comp=Z,0.5nm,0.3s,baz=348,slow=7.1,SNR=27						
H11S3	WAKE ISLAND Hy	41.40	77	T	T	22 48 28.3	
	baz=269,slow=75,SNR=213						
H11S1	WAKE ISLAND Hy	41.41	77	T	T	22 48 31.0	
	baz=269,slow=75,SNR=99						
H11S2	WAKE ISLAND Hy	41.42	77	T	T	22 48 27.5	
	baz=269,slow=75,SNR=126						
H11N1	WAKE ISLAND Hy	41.63	75	T	T	22 48 45.9	
	baz=267,slow=74,SNR=471						
H11N2	WAKE ISLAND Hy	41.64	75	T	T	22 48 48.8	
	baz=267,slow=74,SNR=240						
H11N3	WAKE ISLAND Hy	41.65	75	T	T	22 48 47.2	
	baz=267,slow=74,SNR=439						
STKA	Stephens Creek	47.77	160	P	P	22 05 29.4	+1.6
	comp=Z,2.3nm,0.7s,baz=32,slow=5.3,SNR=3.0						
STKA				LR	LR	22 28 37.6	
	comp=Z,50nm,18.5s,baz=34,slow=40						
PETK	Petropavlovsk-	48.12	27	P	P	22 05 33.5	+3.3
	comp=Z,4.9nm,0.8s,baz=193,slow=6.1,SNR=4.1						
MK31	Makanchi Array	48.45	322	P	P	22 05 32.4	-0.6
MK31				IAmb	IAmb	22 05 39.0	
	comp=Z,3.8nm,0.9s						
MKAR	Makanchi Array	48.45	322	P	P	22 05 32.0	-1.0
	comp=Z,1.4nm,0.7s,baz=113,slow=9.3,SNR=12						
MKAR				PcP	PcP	22 06 58.0	-0.8
	comp=Z,0.2nm,0.5s,baz=151,slow=3.3,SNR=1.3						
MKAR				LR	LR	22 26 58.3	
	comp=Z,56nm,19.8s,baz=100,slow=37						
MAKZ	Makanchi	48.65	322	P	P	22 05 34.5	0.0
MAKZ				IAmb	IAmb	22 05 39.9	
	comp=Z,3.0nm,1.0s						
NIL	Nilore	50.31	303	P	P	22 05 47.8	+0.4
NIL				IAmb	IAmb	22 06 00.0	
	comp=Z,2.7nm,0.9s						
ZALV	Zalesovo Beam	51.11	331	P	P	22 05 51.0	-2.0
	comp=Z,0.4nm,0.3s,baz=141,slow=7.3,SNR=3.9						
KURK	Kurchatov	52.50	325	P	P	22 06 02.9	-0.6
KK31	Karatay Array	54.70	314	P	P	22 06 19.3	-0.5
KK31				IAmb	IAmb	22 06 24.5	
	comp=Z,1.6nm,0.8s						
KKAR	Karatay Array	54.70	314	P	P	22 06 19.1	-0.6
KKAR	Karatay Array	54.70	314	P	P	22 06 19.3	-0.5
KKAR				IAmb	IAmb	22 06 24.5	
	comp=Z,1.6nm,0.8s						
BRVK	Borovoye	58.17	325	P	P	22 06 43.3	-0.9
GEYT	Alibeck	63.08	306	LR	LR	22 37 58.0	
	comp=Z,26nm,19.8s,baz=55,slow=39						
ABKAR	Akbulak array	63.30	319	P	P	22 07 20.1	+0.8
ABKAR	Akbulak array	63.30	319	P	P	22 07 19.6	+0.4
ABKAR				IAmb	IAmb	22 07 23.9	
	comp=Z,1.9nm,0.9s						
ARU	Arti	65.67	326	P	P	22 07 34.2	-0.4
ARU				IAmb	IAmb	22 07 41.5	
	comp=Z,3.0nm,0.8s						
NIKH	Nikolski High	65.97	38	P	P	22 07 37.6	+1.1
KBZ	Khabaz	74.67	312	LR	LR	22 44 21.0	
	comp=Z,31nm,21.9s,baz=149,slow=38						
PPLA	Purkeypile	75.68	28	P	P	22 08 36.4	+0.8
PPLA				IAmb	IAmb	22 08 53.9	
	comp=Z,6.4nm,1.2s						
BPAW	Bear Paw Mtn.	76.20	27	P	P	22 08 40.8	+2.4
BPAW				IAmb	IAmb	22 08 47.1	
	comp=Z,4.3nm,0.8s						
ILAR	Eielson Array	77.94	26	P	P	22 08 47.3	-0.9
	comp=Z,0.2nm,0.6s,baz=201,slow=9.7,SNR=1.2						
FINES	FINESS Array B	82.38	331	P	P	22 09 10.7	-1.4
	comp=Z,4.1nm,1.0s,baz=134,slow=12,SNR=1.4						
NOA	NORSAR Array B	89.27	333	LR	LR	22 53 04.0	
	comp=Z,43nm,18.4s,baz=265,slow=38						
YKA	Yellowknife Ar	92.13	23	P	P	22 09 58.9	-0.6
	comp=Z,0.1nm,0.4s,baz=302,slow=4.3,SNR=1.9						

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*IDC **16** 22:00:37.1±0.7, 38°.21S×93°.60W, h0^{km}, mb4.4/10, mb1 4.6/11, mb1mx4.4/26, mbtmp4.4/11, ML3.8/1, MS3.9/19, Ms1 3.9/19, ms1mx3.9/23, Error ellipse: s-maj=22.6km s-min=20.5km az=112.0*
*NEIC **16** 22:00:39.7±1.3, 38°.1S±0°.1×93°.7W±0°.1, h10^{km}±1^{km}, mb4.7/137, Error ellipse: s-maj=19.2km s-min=17.1km az=121.0*
*GCMT **16** 22:00:39.7±0.3, 38°.07S±0°.04×93°.67W±0°.02, h14^{km}±1^{km}, MW4.9/77, Moment Tensor Solution. s21,c23; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.08±.16; $M_{\theta\theta}$0.11±.09; $M_{\phi\phi}$1.97±.12; $M_{r\theta}$1.14±.29; $M_{\theta\phi}$0.30±.06; $M_{\phi r}$-0.98±.23; Best double couple: $M_0$2.49000×10^{16} NP1:ϕ_s207.00000°, δ38.00000°, λ-52.00000°. NP2: ϕ_s343.00000°, δ61.00000°, λ-115.00000°. Principal axes: T 2.1950, Plg13.0000°, Azm91.0000°; N 0.5850, Plg22.0000°, Azm356.0000°; P -2.7850, Plg64.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 22:00:38.8±0.4, **38°.14S**±0°.08×**93°.78W**±0°.07, **h10**^{km}, **n219**,
σ**0^{s}.98**/187, **mb4.7**/63, **MS4.0**/21, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	12.77	75	T	T	22 16 44.7	
	baz=244,slow=74						
H03S1	Juan Fernandez	12.79	75	T	T	22 16 44.9	
	baz=244,slow=74						
H03S3	Juan Fernandez	12.79	75	T	T	22 16 57.6	
	baz=244,slow=74						
VA04	Juan Ferndndez	12.93	74	Pn	Pn	22 03 39.1	-3.4
H03N3	Juan Fernandez	12.93	73	T	T	22 16 50.1	
	baz=249,slow=77						
H03N2	Juan Fernandez	12.93	73	T	T	22 16 50.6	
	baz=249,slow=77						
H03N1	Juan Fernandez	12.95	73	T	T	22 16 50.2	
	baz=249,slow=77						
GO07	Milladeo Hill,	16.05	114		P	22 04 26.6	-1.3
BI03	Tigo	16.53	92	Pn	Pn	22 04 30.8	+0.1
BI03				IAmb	IAmb	22 04 42.2	
	comp=Z,58nm,1.4s						
LL01	San Ignacio de	16.85	111		P	22 04 35.8	-0.9
RPN	Rapa Nui	17.06	305	LR	LR	22 09 11.7	
	comp=Z,982nm,20.3s,baz=21,slow=30						
LC01	Cunco	17.16	99		P	22 04 42.2	+1.9
BI02	San Fabin de	17.94	92	P	P	22 04 48.9	-0.2
PLCA	Paso Flores	18.12	106	P	Pn	22 04 50.0	-0.7
	comp=Z,0.1nm,0.3s,baz=271,slow=12,SNR=6.7						
PLCA				LR	LR	22 10 06.4	
	comp=Z,725nm,19.9s,baz=317,slow=32						
PLCA	Paso Flores	18.12	106	P	P	22 04 51.3	+0.3
PLCA	Paso Flores	18.12	106	eP	P	22 04 52.1	+1.1
BO02	Sierra Bellavi	18.79	87	P	Pn	22 04 58.4	-0.4
MT02	Curacav	19.01	82	P	Pn	22 05 02.1	+0.7
ROC1	El Roble	19.21	81	P	P	22 04 59.9	-3.3
MT05	Renca	19.28	83	P	Pn	22 05 05.8	+1.1
PEL	Peldehue	19.41	82	P	P	22 05 05.2	+0.1
PEL				IAmb	IAmb	22 05 10.3	
	comp=Z,101nm,1.5s						
VA03	San Esteban	19.65	81	P	Pn	22 05 08.6	-0.7
CO02	Combarbal	19.95	77	P	P	22 05 11.6	+0.5
CO02				IAmb	IAmb	22 05 15.5	
	comp=Z,59nm,1.4s						
GO09	Cerro Castillo	20.02	138	P	P	22 05 11.0	-0.6
GO09				IAmb	IAmb	22 05 21.7	
	comp=Z,72nm,1.4s						
CO03	El Pedregal	20.35	76	P	P	22 05 14.9	-0.5
GO04	Tololo Observa	20.58	74	P	P	22 05 18.3	+0.2
GO04				IAmb	IAmb	22 05 20.2	
	comp=Z,54nm,1.1s						
CO01	Juntas del Tor	21.21	75	P	P	22 05 24.8	-0.1
LCO	Las Campanas	21.23	71	P	P	22 05 23.8	-1.4
LCO				IAmb	IAmb	22 05 27.2	
	comp=Z,43nm,1.3s						
AC04	Llanos de Chal	21.39	69	P	P	22 05 25.1	-1.5
AC04				IAmb	IAmb	22 05 32.3	
	comp=Z,31nm,1.2s						
ZON	Zonda	21.59	80	P	P	22 05 29.1	+0.2
ZON				IAmb	IAmb	22 05 33.4	
	comp=Z,32nm,1.0s						
AC05	El Transito	21.64	72	P	P	22 05 30.0	+0.5
GO03	Copiap	22.34	69	P	P	22 05 37.9	+1.0
AC02	Maricunga	23.58	69	P	P	22 05 50.9	+0.6
PB14	IPOC Station P	24.00	63	P	P	22 05 53.1	-1.0
LVC	Limon Verde	26.34	61	LR	LR	22 14 04.5	
	comp=Z,447nm,19.7s,baz=220,slow=31						
PB16	IPOC Station P	28.95	54	P	P	22 06 38.8	-0.2
NNA	Nana	30.12	35	LR	LR	22 15 51.9	
	comp=Z,272nm,18.5s,baz=203,slow=30						
ITQB	Itaqui	31.81	86	eP	P	22 07 05.5	+2.0
PMSA	Palmer Station	31.89	156	LR	LR	22 16 22.9	
	comp=Z,210nm,21.7s,baz=292,slow=30						
CPUP	Villa Florida	32.81	80	P	P	22 07 10.7	-1.7
	comp=Z,2.7nm,0.9s,baz=238,slow=9.4,SNR=3.9						
CPUP				LR	LR	22 19 10.5	
	comp=Z,324nm,18.4s,baz=250,slow=34						
CPUP	Villa Florida	32.81	80	eP	P	22 07 11.7	-0.6
ATAH	Atahualpa	33.87	28	P	P	22 07 22.4	+0.3
	comp=Z,11nm,0.9s,baz=8.2,slow=4.2,SNR=5.2						
ATAH				LR	LR	22 17 48.3	
	comp=Z,243nm,19.4s,baz=225,slow=30						
SIV	San Ignacio	36.24	62	P	P	22 07 40.3	-1.9
	comp=Z,5.2nm,1.1s,baz=235,slow=13,SNR=7.7						
SIV				LR	LR	22 21 07.5	
	comp=Z,141nm,18.9s,baz=292,slow=34						
AQDB	Aquidauana	37.27	73	eP	P	22 07 50.6	-0.3
ETMB	Extrema	37.53	48	eP	P	22 07 53.1	0.0
PTLB	Pontes e Lacer	37.97	63	eP	P	22 07 56.2	-0.6
RKT	Rikitea	38.15	281	eLR	LR	22 18 12.0	
	comp=Z,423nm,28.0s						
TRCB	Terra Rica	38.29	78	eP	P	22 07 59.9	+0.3
PP1B	Ponte de Pedra	39.64	70	eP	P	22 08 10.7	-0.1
PCMB	Pacaembu	40.01	78	eP	P	22 08 14.2	+0.3
SAML	Samuel	40.04	51	P	P	22 08 13.4	-0.8
SAML	Samuel	40.04	51	eP	P	22 08 14.8	+0.6
OTAV	Otavalo	40.72	24	P	P	22 08 19.8	-0.5
ITRB	Iturama	41.78	76	eP	P	22 08 28.5	0.0
ARAG	Araguaiana, MT	43.11	70	eP	P	22 08 39.4	0.0
SNDB	Serra Nova Dou	45.91	67	eP	P	22 09 01.4	-0.4
BDFB	Brasilia	46.00	74	LR	LR	22 27 30.6	
	comp=Z,249nm,18.2s,baz=248,slow=35						
ROSC	El Rosal	46.42	27	LR	LR	22 26 29.2	
	comp=Z,116nm,18.7s,baz=226,slow=33						
ROSC	El Rosal	46.42	27	P	P	22 09 06.3	+0.1
ROSC				IAmb	IAmb	22 09 12.5	
	comp=Z,11nm,0.9s						
NPGB	Novo Progresso	46.52	58	eP	P	22 09 06.0	-0.6
ITTB	Itaituba	48.26	55	eP	P	22 09 20.6	+0.4
PTGA	Pitinga	48.48	48	P	P	22 09 19.5	-2.3
	comp=Z,2.1nm,0.8s,baz=330,slow=22,SNR=2.3						
PTGA	Pitinga	48.48	48	eP	P	22 09 23.6	+1.8
TBI	Tubuai	49.38	271	eLR	LR	22 23 22.7	
	comp=Z,713nm,27.2s,baz=120						
MEH	Mehetia	51.24	277	eT	T	23 04 26.8	
	comp=Z,13nm,0.2s						
QSPA	South Pole Qui	52.09	180	P	P	22 09 47.9	-0.8
	comp=Z,2.0nm,0.3s,baz=144,slow=5.1,SNR=5.4						
QSPA				LR	LR	22 28 08.8	
	comp=Z,87nm,18.3s,baz=148,slow=32						
QSPA	South Pole Qui	52.09	180	P	P	22 09 48.9	+0.2
QSPA				IAmb	IAmb	22 09 56.9	
	comp=Z,9.6nm,1.3s						
TVO	Taravao	52.22	277	eT	T	23 05 40.7	
	comp=Z,1.2nm,0.3s						
TIAR	Tiarei	52.42	277	eT	T	23 05 55.3	
	comp=Z,3.5nm,0.3s						
VNA3	Neumayer Olymp	52.55	156	P	P	22 09 52.0	0.0
PPT2	Papeete2	52.59	277	eS	S	22 17 17.5	-2.7
	comp=Z,148nm,24.5s						
PPT2				eLR	LR	22 24 53.4	
	comp=Z,360nm,25.0s,baz=101						
PPT	Papeete	52.60	277	LR	LR	22 25 58.6	
	comp=Z,155nm,19.6s,baz=172,slow=29						
VNA1	Neumayer--Stat	53.11	155	P	P	22 09 56.3	+0.4
VNA2	Neumayer--Watz	53.34	156	P	P	22 09 57.5	-0.2
	baz=311,slow=6.1						
SNAA	Sanae	54.60	157	P	P	22 10 06.9	-0.1
SNAA	Sanae	54.60	157	P	P	22 10 07.9	+0.8
SNAA				IAmb	IAmb	22 10 13.1	
	comp=Z,9.6nm,1.2s						
VNDA	Vanda	56.10	195	P	P	22 10 17.1	-0.5
	comp=Z,2.0nm,1.0s,baz=111,slow=9.8,SNR=3.9						
VNDA				LR	LR	22 29 24.0	
	comp=Z,52nm,20.6s,baz=95,slow=31						
VNDA	Vanda	56.10	195	P	P	22 10 19.0	+1.3
ZAIG	Zacatecas	61.14	351	P	P	22 10 54.5	+0.8
ZAIG				IAmb	IAmb	22 11 08.6	
	comp=Z,4.2nm,1.0s						
EMPR	Esperanza - Ma	61.86	30	P	P	22 10 59.7	+1.4
SKI	Saint Kitts	62.41	34	P	P	22 11 00.9	-1.0
SEUS	St. Eustatius	62.44	33	P	P	22 11 02.0	-0.1
SLBS	Sierra La Lagu	63.34	343	P	P	22 11 08.7	+0.5
HPIG		65.68	348	P	P	22 11 24.2	+0.7
MSWZ	Moikau Station	66.72	235	P	P	22 11 31.7	+1.7
DWPF	Disney Wildern	66.91	12	P	P	22 11 30.7	-0.4
TX31	Lajitas Ar. Si	67.75	351	P	P	22 11 38.2	+1.6
TX32	Lajitas Array	67.75	351	P	P	22 11 37.5	+0.9
TX32				IAmb	IAmb	22 11 39.1	
	comp=Z,5.7nm,1.2s						
TXAR	Lajitas Array	67.75	351	P	P	22 11 37.3	+0.7
	comp=Z,4.5nm,1.1s,baz=168,slow=6.4,SNR=17						
TXAR				LR	LR	22 36 03.5	
	comp=Z,83nm,18.6s,baz=0.0,slow=31						
TXAR	Lajitas Array	67.75	351	P	P	22 11 37.7	+1.1
JCT	Junction City	68.49	354	P	P	22 11 41.4	+0.2
NATX	Nacogdoches	69.54	359	P	P	22 11 48.3	+0.7
WHTX	Lake Whitney,	69.85	357	P	P	22 11 49.8	+0.3
WHTX				IAmb	IAmb	22 11 56.9	
	comp=Z,6.5nm,0.7s						
MNTX	Cornudas Mount	70.31	350	P	P	22 11 52.5	+0.1
MNTX				IAmb	IAmb	22 11 53.9	
	comp=Z,5.8nm,1.2s						
ABTX	Abilene, Hawle	70.61	355	P	P	22 11 53.6	-0.5
ABTX				IAmb	IAmb	22 11 55.7	
	comp=Z,5.8nm,0.9s						
319A	Douglas	70.65	346	P	P	22 11 55.3	+0.7
319A				IAmb	IAmb	22 12 04.3	
	comp=Z,4.6nm,0.8s						
TUC	Tucson	71.85	345	P	P	22 12 02.7	+1.0
TUC				IAmb	IAmb	22 12 04.3	
	comp=Z,6.0nm,1.4s						
214A	Organ Pipe Nat	71.95	343	P	P	22 12 03.2	+0.9
MSTX	Muleshoe	72.22	352	P	P	22 12 04.7	+0.6
MIAR	Mount Ida	72.31	0	P	P	22 12 04.6	+0.2
MIAR				IAmb	IAmb	22 12 08.8	
	comp=Z,6.8nm,1.1s						
W39A	Magazine	72.96	360	P	P	22 12 08.9	+0.7
W39A				IAmb	IAmb	22 12 23.4	
	comp=Z,5.4nm,1.2s						
AMTX	Amarillo	73.02	353	P	P	22 12 09.0	+0.3
BG3	Lake Jocassee	73.45	9	P	P	22 12 12.0	+0.8
BG3				IAmb	IAmb	22 12 19.5	
	comp=Z,11nm,1.2s						
OK029	Liberty Lake	73.64	357	P	P	22 12 12.6	+0.4
OK029				IAmb	IAmb	22 12 13.8	
	comp=Z,9.0nm,0.8s						
ANMO	Albuquerque	73.66	349	P	P	22 12 13.8	+1.2
X18A	Snowflake	73.84	346	P	P	22 12 14.4	+0.7
X18A				IAmb	IAmb	22 12 16.7	
	comp=Z,10nm,1.5s						
LCAR	Lake Charles	73.88	2	P	P	22 12 12.9	-0.7
109C	Camp Elliot, M	73.92	340	P	P	22 12 15.4	+1.5
QUOK	Quay	73.99	358	P	P	22 12 13.2	-1.0
QUOK				IAmb	IAmb	22 12 18.0	
	comp=Z,10nm,1.0s						
X16A	Lo Mia Camp, P	74.03	345	P	P	22 12 15.9	+1.1
U38A	Gravette	74.21	359	P	P	22 12 15.8	+0.2
U38A				IAmb	IAmb	22 12 23.5	
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	75.08	345	P	P	22 12 21.2	+0.4
W13A	Hualapai Mount	75.22	343	P	P	22 12 21.8	+0.1
S39A	Bolivar	75.45	0	P	P	22 12 22.0	-0.7
S39A				IAmb	IAmb	22 12 23.9	
	comp=Z,12nm,1.4s						
T25A	Trinidad	75.54	351	P	P	22 12 24.4	+0.9
T25A				IAmb	IAmb	22 12 28.7	
	comp=Z,7.5nm,1.2s						
U61A	Possum Corner	75.81	14	P	P	22 12 25.5	+0.8
MVCO	Mesa Verde	76.20	348	P	P	22 12 27.1	-0.2
MVCO				IAmb	IAmb	22 12 28.5	
	comp=Z,14nm,1.5s						
SDCO	Great Sand Dun	76.28	350	P	P	22 12 29.0	+1.2
S22A	4UR Ranch, Cre	76.46	349	P	P	22 12 29.9	+1.1
S22A				IAmb	IAmb	22 12 31.6	
	comp=Z,9.8nm,1.4s						
SHPR	Sheep Range	76.86	342	P	P	22 12 32.2	+1.3
SHPR				IAmb	IAmb	22 12 36.6	
	comp=Z,7.5nm,1.3s						
R53A	Hurricane	76.87	10	P	P	22 12 30.3	-0.4
ISA	Isabella, Lake	76.91	340	P	P	22 12 32.3	+1.1
ISA				IAmb	IAmb	22 12 34.1	
	comp=Z,7.0nm,1.4s						
PV01	Paradox Valley	77.11	348	P	P	22 12 33.7	+1.3
PV01				IAmb	IAmb	22 12 40.5	
	comp=Z,6.0nm,1.2s						
PKCU	Pink Cliffs	77.13	345	P	P	22 12 33.5	+0.8
PV05	Paradox Valley	77.14	348	P	P	22 12 34.7	+2.1
PV13	Radium Mtn., P	77.17	348	P	P	22 12 33.7	+0.9
PV13				IAmb	IAmb	22 12 35.5	

	comp=Z,5.1nm,1.1s						
KSCO	Kaye Shedlock'	77.20	353	P	P	22 12 34.0	+1.2
PV03	Paradox Valley	77.27	348	P	P	22 12 33.5	+0.3
PV12	Saucer Basin,	77.33	348	P	P	22 12 33.9	+0.2
PV12				IAmb	IAmb	22 12 38.6	
	comp=Z,6.9nm,1.1s						
PV16	Nyswonger Mesa	77.34	348	P	P	22 12 33.9	+0.3
PV04	Paradox Valley	77.42	348	P	P	22 12 35.0	+1.0
PV04				IAmb	IAmb	22 12 36.5	
	comp=Z,13nm,1.5s						
PV14	Lion Creek, Pa	77.42	348	P	P	22 12 34.5	+0.4
PV14				IAmb	IAmb	22 12 37.4	
	comp=Z,6.5nm,1.1s						
SZCU	Shurtz Canyon	77.44	344	P	P	22 12 35.0	+0.8
CCUT	Cedar City	77.45	344	P	P	22 12 35.5	+1.2
TPNV	Topopah Spring	77.54	342	P	P	22 12 36.2	+1.4
TPNV				IAmb	IAmb	22 12 37.9	
	comp=Z,10nm,1.4s						
MTPU	Mount Pierson	77.68	345	P	P	22 12 36.2	+0.5
PRN	Pahroc Range	77.69	343	P	P	22 12 36.3	+0.8
PRN				IAmb	IAmb	22 12 40.6	
	comp=Z,11nm,1.3s						
MSVF	Nonsavu	77.86	257	P	P	22 12 37.6	+0.6
SMCO	Snowmass	77.89	350	P	P	22 12 37.9	+1.0
SMCO				IAmb	IAmb	22 12 42.2	
	comp=Z,9.8nm,1.2s						
P52A	Corning	78.13	9	P	P	22 12 39.4	+1.7
MSU	Marysvale	78.13	345	P	P	22 12 38.8	+0.7
Q16A	Castle Valley	78.33	346	P	P	22 12 40.1	+1.0
SRU	San Rafael Swe	78.40	347	P	P	22 12 40.6	+1.1
PSUT	Pine Spring	78.50	344	P	P	22 12 39.3	-0.8
TMUT	Trail Mountain	78.70	346	P	P	22 12 41.1	-0.2
R11A	Troy Canyon, C	78.71	343	P	P	22 12 42.0	+0.8
R11A				IAmb	IAmb	22 12 43.6	
	comp=Z,5.8nm,1.2s						
P17A	Butcher Ranch,	78.79	347	P	P	22 12 42.8	+1.2
TPH	Tonopah	78.85	341	P	P	22 12 41.8	-0.2
O20A	White River Ci	79.01	349	P	P	22 12 44.1	+1.2
O20A				IAmb	IAmb	22 12 59.9	
	comp=Z,8.2nm,1.1s						
N49A	Columbus Grove	79.17	7	P	P	22 12 43.5	+0.1
N49A				IAmb	IAmb	22 12 54.6	
	comp=Z,9.6nm,0.9s						
BGNE	Belgrade	79.27	357	P	P	22 12 44.6	+0.6
LHV	Little Huntoon	79.35	340	P	P	22 12 45.7	+1.3
LHV				IAmb	IAmb	22 12 49.6	
	comp=Z,15nm,1.4s						
NV11	Mina Array Sit	79.43	341	P	P	22 12 46.1	+1.0
NV11				IAmb	IAmb	22 12 49.5	
	comp=Z,12nm,1.4s						
NVAR	Mina Array Bea	79.47	341	P	P	22 12 46.9	+1.4
	comp=Z,6.4nm,1.0s,baz=168,slow=6.5,SNR=24						
NVAR				LR	LR	22 43 41.3	
	comp=Z,30nm,18.2s,baz=270,slow=32						
MPU	Maple Canyon	79.48	346	P	P	22 12 46.1	+0.7
NLU	North Lily Min	79.50	346	P	P	22 12 46.5	+0.9
RDMU	Red Mountain	79.65	348	P	P	22 12 47.5	+1.1
CMB	Columbia Colle	79.66	339	P	P	22 12 47.0	+0.7
RYN	Ryan	79.71	341	P	P	22 12 47.0	+0.3
RYN				IAmb	IAmb	22 12 51.9	
	comp=Z,7.6nm,1.3s						
PHWY	Pilot Hill	79.78	351	P	P	22 12 47.9	+0.7
L40A	Anamosa	79.86	2	P	P	22 12 47.8	+0.7
L40A				IAmb	IAmb	22 12 59.3	
	comp=Z,9.4nm,1.1s						
DUG	Dugway, Tooele	79.88	345	P	P	22 12 49.0	+1.5
DUG				IAmb	IAmb	22 12 52.1	
	comp=Z,9.5nm,1.2s						
PNTR	Pine Nut	80.43	340	P	P	22 12 49.1	-1.6
K31A	O'Neill	80.51	356	P	P	22 12 51.1	+0.4
BGU	Big Grassy Mou	80.63	345	P	P	22 12 52.5	+0.9
AFDM	Forest Hills D	80.68	339	P	P	22 12 52.4	+0.6
AFDM				IAmb	IAmb	22 12 54.2	
	comp=Z,8.3nm,1.1s						
SPUT	South Promonto	80.89	346	P	P	22 12 53.4	+0.5
ELK	Elko	80.92	344	P	P	22 12 54.5	+1.2
ELK				IAmb	IAmb	22 12 57.3	
	comp=Z,8.8nm,1.4s						
PAHR	Pah Rah Range	80.95	340	P	P	22 12 53.8	+0.5
HWUT	Hardware Ranch	81.01	347	P	P	22 12 53.5	-0.1
BEKR	Beckworth	81.36	340	P	P	22 12 56.4	+0.9
BEKR				IAmb	IAmb	22 12 57.7	
	comp=Z,7.0nm,1.2s						
ORV	Oroville	81.39	339	P	P	22 12 57.0	+1.5
HVU	Hansel Valley	81.40	346	P	P	22 12 56.0	+0.4
MWH	Moku'aweowe	81.52	303	P	P	22 12 55.6	-1.7
ECSD	EROS Data Cent	81.53	358	P	P	22 12 57.0	+0.8
ECSD				IAmb	IAmb	22 12 59.6	
	comp=Z,9.4nm,1.3s						
BW06	Boulder Array	81.79	348	IAmb	IAmb	22 13 07.0	
	comp=Z,7.0nm,1.1s						
PD31	Pinedale Array	81.79	348	P	P	22 12 58.3	+0.5
PD31				IAmb	IAmb	22 13 07.1	
	comp=Z,6.0nm,1.1s						
PDAR	Pinedale Array	81.79	348	P	P	22 12 58.6	+0.8
	comp=Z,2.3nm,0.8s,baz=162,slow=5.8,SNR=14						
PDAR				LR	LR	22 42 50.6	
	comp=Z,43nm,20.4s,baz=52,slow=31						
PDAR	Pinedale Array	81.79	348	P	P	22 12 58.0	+0.2
REDW	Red Top Meadow	82.59	348	P	P	22 13 01.6	-0.3
REDW				IAmb	IAmb	22 13 04.2	
	comp=Z,7.3nm,1.2s						
LOHW	Long Hollow	82.79	348	P	P	22 13 03.6	+0.7
MOOW	Moose Ponds	82.94	348	P	P	22 13 03.9	+0.1
MOOW				IAmb	IAmb	22 13 13.8	
	comp=Z,6.8nm,1.4s						
SPMN	Marine on St.	82.99	1	P	P	22 13 04.1	+0.4
SPMN				IAmb	IAmb	22 13 14.6	
	comp=Z,7.3nm,1.0s						
IMW	Indian Meadow	83.12	348	IAmb	IAmb	22 13 08.8	
	comp=Z,7.7nm,1.4s						
MOD	Modoc Plateau	83.25	340	IAmb	IAmb	22 13 09.9	
	comp=Z,5.2nm,1.1s						
HLID	Hailey	83.44	345	P	P	22 13 07.8	+1.4
HLID				IAmb	IAmb	22 13 09.1	
	comp=Z,6.2nm,1.2s						
DZM	Mont Dzumac	83.94	247	*e*LR	LR	22 39 21.7	
	comp=Z,263nm,27.9s						
BCYI	Bear Canyon	83.97	346	P	P	22 13 09.0	0.0
YNE	Yellowstone No	84.05	349	P	P	22 13 09.7	+0.2
QLMT	Earthquake Lak	84.11	347	P	P	22 13 11.4	+1.7
AGMN	Agassiz Nation	86.08	359	P	P	22 13 19.6	+0.4
AGMN				IAmb	IAmb	22 13 26.6	
	comp=Z,3.3nm,0.6s						
ULM	Lac du Bonnet	88.03	359	P	P	22 13 28.4	-0.3
	comp=Z,3.9nm,1.1s,baz=173,slow=7.3,SNR=3.1						
ULM	Lac du Bonnet	88.03	359	IAmb	IAmb	22 13 30.8	
	comp=Z,10.0nm,1.5s						
BOSA	Boshof	92.50	130	LR	LR	22 49 09.8	
	comp=Z,70nm,20.1s,baz=202,slow=32						
DBIC	Dimbokro	93.23	84	LR	LR	22 53 24.3	
	comp=Z,43nm,18.1s,baz=205,slow=34						
STKA	Stephens Creek	93.32	225	LR	LR	22 49 50.2	
	comp=Z,51nm,18.8s,baz=192,slow=32						
H01W1	Cape Leeuwin H	102.85	203	T	T	00 10 14.9	
	baz=154,slow=76,SNR=11						
H01W2	Cape Leeuwin H	102.86	203	T	T	00 10 13.7	
	baz=154,slow=76,SNR=16						
H01W3	Cape Leeuwin H	102.87	203	T	T	00 10 14.7	
	baz=154,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	108.51	279	T	T	00 16 34.7	
	baz=126,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	108.53	279	T	T	00 16 36.5	
	baz=126,slow=75,SNR=27						
H11S3	WAKE ISLAND Hy	108.53	279	T	T	00 16 36.9	
	baz=126,slow=75,SNR=19						
GERES	GERESS Array B	128.18	53	PKP	PKiKP	22 19 46.2	+0.7
	comp=Z,0.4nm,0.7s,baz=258,slow=3.6,SNR=1.4						
AKASG	Malin Array Be	138.40	53	PKP	PKPdf	22 20 04.1	+0.2
	comp=Z,0.1nm,0.3s,baz=268,slow=3.5,SNR=1.8						
BRTR	Keskin Array B	139.56	71	PKP	PKPdf	22 20 04.6	-2.0
	comp=Z,0.4nm,0.8s,baz=246,slow=1.7,SNR=2.4						
TIXI	Tiksi	140.09	340	PKPdf	PKPdf	22 20 06.1	-0.2
YAK	Yakutsk	144.31	326	PKPdf	PKPab	22 20 11.7	-0.4
KOPT	Kop Dagi	144.75	72	PKPdf	PKiKP	22 20 20.4	+0.6
USA0B	Ussuriysk Arra	145.37	295		PKPdf	22 20 16.3	-0.3
USRK	Ussuriysk Ar.	145.37	295	PKPbc	PKPdf	22 20 15.3	-1.2
	comp=Z,16nm,1.0s,baz=111,slow=2.9,SNR=13						
USRK	Ussuriysk Ar.	145.37	295		PKPdf	22 20 15.8	-0.7
KLR	Kul'dur	145.74	304	PKPbc	PKPdf	22 20 16.5	-0.5
	comp=Z,4.9nm,1.1s,baz=78,slow=7.0,SNR=5.7						
KBZ	Khabaz	147.09	66	PKPbc	PKPbc	22 20 22.0	+0.4
	comp=Z,2.1nm,0.9s,baz=223,slow=11,SNR=4.4						
KSRS	Korea Array	147.23	282	PKPbc	PKPbc	22 20 22.1	-0.1
	comp=Z,3.7nm,0.9s,baz=133,slow=2.6,SNR=7.2						
ABKAR	Akbulak array	158.10	51	PKPdf	PKPdf	22 20 37.2	+1.7
ABKAR	Akbulak array	158.10	51	PKPdf	PKPdf	22 20 35.6	+0.2
SONM	Songino Array	162.38	310	PKPab	PKPab	22 21 27.5	-0.5
	comp=Z,4.6nm,1.1s,baz=63,slow=2.1,SNR=13						
SONM	Songino Array	162.38	310		PKPab	22 21 28.0	-0.1
MKAR	Makanchi Array	170.88	17	PKP	PKPdf	22 20 45.2	-1.6
	comp=Z,0.6nm,1.0s,baz=58,slow=3.0,SNR=3.6						

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*IDC **16** 22:15:07.5±2.4, 30°.21S×177°.57W, h0^{km}, mb4.1/3, mb1 4.2/3, mb1mx3.9/22, mbtmp4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/37, Error ellipse: s-maj=53.8km s-min=27.7km az=112.0*

*NEIC **16** 22:15:12.2±2.5, 29°.85S±0°.08×177°.24W±0°.06, h52^{km}±16^{km}, mb4.2/12, Error ellipse: s-maj=12.5km s-min=6.5km az=156.0*

ISC 16 22:15:10.9±1.8**, 29°.99S**±0°.10×**177°.2W**±0°.2**, h35^{km}, n29, σ1^{s}.58**/24**, mb4.3**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.97	319	Pn	Pn	22 15 29.0	+0.9
	302nm,0.3s,baz=49,slow=22,SNR=21						
RAO				Sn	Sn	22 15 39.7	-0.9
	2µm,0.3s,baz=85,slow=22,SNR=18						
RAO				LR	LR	22 15 53.0	
	comp=Z,267nm,18.2s,baz=194,slow=46						
RAO	Raoul Island	0.97	319		Pn	22 15 28.9	+0.9
RAO					Sn	22 15 38.7	-1.9
OUZ	Omahuta	9.35	234	Pn	Pn	22 17 26.5	+3.3
THZ	Tophouse	14.21	212	Pn	Pn	22 18 29.5	-0.2
KHZ	Kahutara	14.47	209	Pn	P	22 18 36.3	-3.1
LTZ	Lake Taylor	15.31	211		Pn	22 18 46.2	+1.8
OXZ	Oxford	15.85	210	Pn	P	22 18 53.4	-1.3
OXZ				IAmb	IAmb	22 19 00.8	
	comp=Z,11nm,1.0s						
DZM	Mont Dzumac	16.68	294	P	P	22 19 03.4	-0.7
LBZ	Lake Benmore	17.50	211	P	P	22 19 13.3	+0.2
LBZ				IAmb	IAmb	22 19 24.8	
	comp=Z,45nm,1.5s						
ARMA	Armidale	26.91	261	P	P	22 20 50.0	+1.1
ARMA				IAmb	IAmb	22 21 05.4	
	comp=Z,12nm,1.4s						
CTAO	Charters Tower	34.43	278	P	P	22 21 55.6	+0.3
STKA	Stephens Creek	35.25	256	P	P	22 22 02.0	-0.2
	comp=Z,1.4nm,0.4s,baz=97,slow=13,SNR=4.0						
STKA	Stephens Creek	35.25	256	P	P	22 22 02.8	+0.5
STKA				IAmb	IAmb	22 22 14.2	
	comp=Z,2.5nm,1.5s						
ASAR	Alice Springs	43.83	266	P	P	22 23 12.4	-1.4
	comp=Z,0.6nm,0.4s,baz=106,slow=7.1,SNR=12						
WR0	Warramunga Arr	44.60	271	P	P	22 23 19.4	-0.7
WC3	Warramunga Arr	44.75	271	P	P	22 23 19.7	-1.5
WC3				IAmb	IAmb	22 23 21.4	
	comp=Z,5.3nm,1.1s						
WB2	Warramunga Arr	44.77	271	P	P	22 23 20.1	-1.3
WB2				IAmb	IAmb	22 23 21.4	
	comp=Z,6.2nm,1.1s						
WRA	Warramunga Arr	44.78	271	P	P	22 23 19.8	-1.6
	comp=Z,1.6nm,0.3s,baz=111,slow=8.1,SNR=28						
WRA	Warramunga Arr	44.78	271	P	P	22 23 19.4	-2.1
WB0	Warramunga Arr	44.80	272	P	P	22 23 20.5	-1.1
WB0				IAmb	IAmb	22 23 36.4	
	comp=Z,8.7nm,1.5s						
H03S2	Juan Fernandez	80.10	123	T	T	23 56 46.0	
	baz=238,slow=74,SNR=16						
H03S1	Juan Fernandez	80.11	123	T	T	23 56 47.7	
	baz=238,slow=74,SNR=15						
H03S3	Juan Fernandez	80.12	123	T	T	23 56 49.2	
	baz=238,slow=74,SNR=16						
H03N3	Juan Fernandez	80.29	123	T	T	23 56 51.0	
	baz=242,slow=72,SNR=9.3						
H03N2	Juan Fernandez	80.29	123	T	T	23 56 53.0	
	baz=242,slow=72,SNR=10						
H03N1	Juan Fernandez	80.31	123	T	T	23 56 48.8	
	baz=242,slow=72,SNR=12						
PSI	Prapat	86.09	275	LR	LR	23 05 38.4	
	comp=Z,13nm,18.1s,baz=92,slow=35						
FINES	FINESS Array B	145.00	341	PKPbc	PKPdf	22 34 44.6	+0.9
	comp=Z,2.3nm,0.3s,baz=54,slow=4.5,SNR=39						
AKASG	Malin Array Be	151.39	324	PKPbc	PKiKP	22 35 02.8	+1.8
	comp=Z,0.4nm,0.3s,baz=48,slow=3.4,SNR=2.0						

NOU 16 22:26:14.5, 16°.83S×168°.44E, h15^{km}, MLv4.2, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.82	319	P	Pn	22 26 45.2	-0.1
LIFNC	LIFOU	4.09	196	P	Pn	22 27 16.1	-0.4
MARNC	Mare, Loyalty	4.64	185	P	Pn	22 27 23.7	-0.4
YATNC	Mamie plateau,	5.40	195	P	Pn	22 27 34.8	+0.2
DZM	Mont Dzumac	5.54	200	P	Pn	22 27 35.7	-0.9
NOUC	Port Laguerre	5.62	201	P	Pn	22 27 37.3	-0.2
OUENC	Ouen Island, N	5.76	195	P	Pn	22 27 40.4	+0.9

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*JMA **16** 22:39:59.9±0.1, 24°.51N×122°.86E, h102^{km}±2^{km}, M2.5*

*TAP **16** 22:40:00.1, 24°.60N×122°.86E, h98^{km}, ML3.2, C*

ISC 16 22:40:00.3±1.4**, 24°.54N**±0°.05×**122°.86E**±0°.02**, h96^{km}**±8^{km}**, n67, σ0^{s}.86**/112**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.12	137	P	Pn	22 40 14.2	+0.4
JYNG				S	Sn	22 40 24.6	+0.7
YOJ	Yonaguni jima	0.16	118	P	Pn	22 40 14.2	+0.3
YOJ				S	Sn	22 40 24.7	+0.7
YOJ	Yonaguni jima	0.16	118	P	Pn	22 40 14.4	+0.5
	baz=140						
YOJ				S	Sn	22 40 24.7	+0.7
	baz=140						
IRIF	Iriomote-Funau	0.82	104	P	Pn	22 40 18.7	+0.2
IRIF				S	Sn	22 40 32.1	-0.1
TWB1	Santiao Chiao	0.92	301	P	Pn	22 40 19.5	0.0
	baz=291						
TWB1				*e*S	Sn	22 40 33.4	-0.6
	baz=291						
TWC	Suao	0.92	275	*i* P	Pn	22 40 19.4	-0.2
	baz=270						
TWC				S	Sn	22 40 33.0	-1.0
	baz=270						
ENAH	Nanao	0.96	265	*e*P	Pn	22 40 19.5	-0.5
	baz=254						
HATJ	Hateruma jima	0.99	119	*e*S	Sn	22 40 35.8	+0.5
NTC	Toucheng	0.99	289	*e*P	Pn	22 40 19.5	-0.8
	baz=279						
ENA	Nanau	1.02	264	P	Pn	22 40 20.7	0.0
	baz=254						
ENA				S	Sn	22 40 36.0	-0.1
	baz=254						
TIPB	Shuangxi	1.03	295	P	Pn	22 40 20.7	-0.1
	baz=286						
TIPB				*e*S	Sn	22 40 36.2	-0.1
	baz=286						
JKRS	Kuro-shima	1.09	106	P	Pn	22 40 22.1	+0.7
JKRS				S	Sn	22 40 37.9	+0.5
TWE	Neicheng	1.10	280	P	Pn	22 40 21.7	+0.1
	baz=271						
TWE				S	Sn	22 40 37.3	-0.3
	baz=271						
NWF	Wu-fen Shan	1.11	299	*e*P	Pn	22 40 21.9	+0.1
	baz=295						
WFSB	Wu-fen Shan	1.11	299	*e*P	Pn	22 40 21.9	+0.1
	baz=295						
ENTT	Nioudou	1.18	275	P	Pn	22 40 23.1	+0.6
	baz=269						
JIJ	Ishigaki jima	1.18	98	P	Pn	22 40 22.5	0.0
JIJ				S	Sn	22 40 38.5	-0.8
NACB	Ninganchiao	1.21	253	⇑P	Pn	22 40 22.6	-0.2
	baz=243						
NACB				*e*S	Sn	22 40 38.0	-1.8
	baz=243						
NDT	Datong Townshi	1.23	273	*e*P	Pn	22 40 23.6	+0.6
	baz=269						
NDT				*e*S	Sn	22 40 40.1	-0.1
	baz=269						
TWD	Chiawan	1.24	249	P	Pn	22 40 22.9	-0.2
	baz=245						
TWD				*e*S	Sn	22 40 39.6	-0.8
	baz=245						
TWA	Mucha	1.24	291	*e*P	Pn	22 40 23.5	+0.3
	baz=279						
TWA				*e*S	Sn	22 40 39.9	-0.6
	baz=279						
NWLT	Wulai	1.26	281	*e*P	Pn	22 40 23.6	+0.2
	baz=284						
ETLH	Xiulin Townshi	1.30	256	*e*P	Pn	22 40 23.9	0.0
	baz=248						
YM01	YM01	1.32	298	*e*P	Pn	22 40 24.0	-0.1
	baz=294						
YM01				S	Sn	22 40 41.4	-0.8
	baz=294						
TATO	Taipei	1.32	290	*e*P	Pn	22 40 24.2	0.0
	baz=277						
TATO				*e*S	Sn	22 40 41.4	-0.8
	baz=277						
JISG	Ishigakijimahi	1.32	87	P	Pn	22 40 24.1	-0.1
JISG				S	Sn	22 40 41.4	-0.8
YM08	YM08	1.32	300	*e*P	Pn	22 40 24.0	-0.2
	baz=290						
YM10	YM10	1.33	298	*e*P	Pn	22 40 24.4	+0.1
	baz=288						
YM10				*e*S	Sn	22 40 42.6	+0.1
	baz=288						
NNSB	Datong	1.35	266	*e*P	Pn	22 40 24.7	+0.1
	baz=256						
NNSH	Datong	1.35	266	*e*P	Pn	22 40 24.8	+0.2
	baz=257						
YM04	YM04	1.35	297	P	Pn	22 40 24.2	-0.3
	baz=293						
YM04				S	Sn	22 40 42.2	-0.6
	baz=293						
YHNB	Yeheng	1.36	276	P	Pn	22 40 25.0	+0.4
	baz=265						
YHNB				S	Sn	22 40 42.8	-0.3
	baz=265						
NNS	Nan Shan	1.36	266	*e*P	Pn	22 40 24.7	0.0
	baz=256						
NSK	Sanguang	1.37	276	P	Pn	22 40 24.9	+0.1
	baz=265						
NSK				*e*S	Sn	22 40 43.1	-0.3
	baz=265						
TWS1	Kuangyinshan	1.43	294	*e*P	Pn	22 40 25.9	+0.5
	baz=282						
ESL	Shilin	1.49	241	P	Pn	22 40 25.9	-0.3
	baz=244						
ESL				*e*S	Sn	22 40 45.0	-0.8
	baz=244						
FUSS	Fushou	1.50	259	*e*P	Pn	22 40 27.0	+0.4
	baz=257						
TWT	Tachien	1.56	260	*e*P	Pn	22 40 28.1	+0.9
	baz=253						
TWT				S	Sn	22 40 47.6	-0.1
	baz=253						
TDCB	Techi	1.57	260	P	Pn	22 40 28.1	+0.6
	baz=253						
TDCB				*e*S	Sn	22 40 47.0	-1.0
	baz=253						
CHGB	Renai	1.61	253	*e*P	Pn	22 40 28.4	+0.5
	baz=243						
CHGB				*e*S	Sn	22 40 48.0	-0.9
	baz=243						
HGSD	Ruisui	1.67	232	*e*P	Pn	22 40 28.1	-0.4
	baz=227						
HGSD				*e*S	Sn	22 40 48.8	-1.2
	baz=227						
LIOB	Emei	1.68	274	*e*P	Pn	22 40 28.9	+0.2
	baz=270						
LIOB				*e*S	Sn	22 40 50.2	0.0
	baz=270						
JTJ	Tarama	1.68	86	P	Pn	22 40 28.7	+0.1
JTJ				S	Sn	22 40 49.1	-1.0
WHP	Taichung City	1.76	262	P	Pn	22 40 31.0	+1.3
	baz=255						
WHP				*e*S	Sn	22 40 52.5	+0.3
	baz=255						
YULB	Yu-li	1.83	232	P	Pn	22 40 30.2	-0.2
	baz=238						
YULB				*e*S	Sn	22 40 52.2	-1.3
	baz=238						
DPDB	Guoxing	1.83	255	*e*P	Pn	22 40 32.0	+1.4
	baz=249						
EYUL	Yuli	1.84	230	*e*P	Pn	22 40 30.5	-0.1
	baz=227						
TWF1	Yuli	1.85	231	P	Pn	22 40 30.8	-0.1
	baz=237						
TWF1				*e*S	Sn	22 40 52.9	-1.2
	baz=237						
SSLB	Suanglung	1.89	247	*e*P	Pn	22 40 31.8	+0.4
	baz=244						
SSLB				*e*S	Sn	22 40 54.1	-1.0
	baz=244						
SMLT	Sun Moon Lake	1.90	250	*e*P	Pn	22 40 32.4	+0.8
	baz=243						
SMLT				*e*S	Sn	22 40 56.3	+0.9
	baz=243						
TYC	Yuchr	1.93	251	*e*P	Pn	22 40 33.3	+1.4
	baz=244						
WNT	Mingjian	2.09	252	*e*P	Pn	22 40 36.2	+2.3
	baz=260						
EDH	Donghe	2.11	223	*e*P	Pn	22 40 33.8	-0.3
	baz=218						
EDH				*e*S	Sn	22 40 58.4	-1.6
	baz=218						
JIRB	Irabujima	2.12	82	*e*S	Sn	22 40 59.6	-0.8
ALS	Alishan	2.14	242	*e*P	Pn	22 40 35.9	+1.1
	baz=234						
ALS				*e*S	Sn	22 41 02.2	+1.1
	baz=234						
ELDTW	Lidau	2.15	232	*e*P	Pn	22 40 34.8	-0.1
	baz=226						
ELDTW				*e*S	Sn	22 41 00.3	-0.9
	baz=226						
CHN5	Tsauling	2.20	245	*e*P	Pn	22 40 37.0	+1.6
	baz=236						
CHN5				*e*S	Sn	22 41 03.7	+1.4
	baz=236						
JMJ	Miyako jima 2	2.23	82	*e*P	Pn	22 40 36.1	+0.4
	baz=85						
JMJ				*e*S	Sn	22 41 03.0	+0.1
	baz=85						
JMJ2	Miyako jima3	2.26	84	*e*S	Sn	22 41 03.0	-0.4
STYT	Tauyuan	2.36	235	P	Pn	22 40 38.7	+1.2
	baz=229						
STYT				*e*S	Sn	22 41 07.0	+1.0
	baz=229						
TWGBT	Beinan	2.36	224	*e*P	Pn	22 40 36.2	-1.3
	baz=229						
TWGBT				*e*S	Sn	22 41 04.4	-1.6
	baz=229						
TWG	Pinlang	2.37	224	*e*P	Pn	22 40 36.6	-0.9
	baz=229						
TWG				*e*S	Sn	22 41 04.8	-1.2
	baz=229						
CHN4	Tsaushan	2.38	241	*e*P	Pn	22 40 39.3	+1.6
	baz=231						
CHN4				*e*S	Sn	22 41 08.6	+2.1
	baz=231						
WTP	Ta-pu	2.42	238	*e*P	Pn	22 40 40.3	+1.9
	baz=230						
WTP				*e*S	Sn	22 41 09.2	+1.7
	baz=230						
TWK	Hsinying	2.51	240	*e*P	Pn	22 40 41.2	+1.8
	baz=237						
TWK				*e*S	Sn	22 41 11.1	+1.5
	baz=237						
CHN1	Nanshi	2.52	238	*e*P	Pn	22 40 40.2	+0.6
	baz=246						
PHUB	P'eng-hu	3.17	252	*e*P	Pn	22 40 47.0	-1.2
	baz=250						

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*IDC **16** 22:53:09.7±1.0, 56°.79S×150°.73W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.9/37, mbtmp4.1/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/17, Error ellipse: s-maj=44.9km s-min=28.6km az=20.0*

ISC 16 22:53:11.0±1.1**, 56°.8S**±0°.3×**150°.7W**±0°.2**, h10^{km}, n22, σ0^{s}.33**/8**, mb4.3**/4**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBI	Tubuai	33.38	2	*e*T	T	23 35 00.5	
	17nm,0.3s						
QSPA	South Pole Qui	33.39	180	P	P	22 59 49.4	+0.1
	4.0nm,1.0s,baz=62,slow=3.7,SNR=5.8						
MEH	Mehetia	38.86	4	*e*T	T	23 41 51.9	
	5.6nm,0.2s						
PPT2	Papeete2	39.10	2	*e*LR	LR	23 11 08.5	
	comp=Z,111nm,27.2s						
PPT	Papeete	39.13	2	LR	LR	23 12 03.0	
	comp=Z,55nm,18.4s,baz=170,slow=29						

VAH	Vaihoa	41.50	5	*e*T	T	23 45 04.5	
	29nm,0.3s						
H03S2	Juan Fernandez	52.71	96	T	T	23 59 25.7	
	baz=219,slow=74,SNR=69						
H03S1	Juan Fernandez	52.72	96	T	T	23 59 27.0	
	baz=219,slow=74,SNR=57						
H03S3	Juan Fernandez	52.73	96	T	T	23 59 26.2	
	baz=219,slow=74,SNR=52						
H03N3	Juan Fernandez	53.00	96	T	T	23 59 45.3	
	baz=222,slow=72,SNR=137						
H03N2	Juan Fernandez	53.01	96	T	T	23 59 45.3	
	baz=222,slow=72,SNR=134						
H03N1	Juan Fernandez	53.02	96	T	T	23 59 42.6	
	baz=222,slow=72,SNR=122						
ASAR	Alice Springs	62.57	268	P	P	23 03 35.0	0.0
	1.5nm,0.6s,baz=141,slow=6.6,SNR=14						
H01W1	Cape Leeuwin H	64.23	245	T	T	00 13 53.0	
	baz=141,slow=76,SNR=13						
H01W2	Cape Leeuwin H	64.23	245	T	T	00 13 55.3	
	baz=141,slow=76,SNR=15						
H01W3	Cape Leeuwin H	64.25	245	T	T	00 13 54.2	
	baz=141,slow=76,SNR=15						
WRA	Warramunga Arr	65.32	271	P	P	23 03 53.0	-0.2
	0.9nm,1.0s,baz=152,slow=7.2,SNR=2.9						
CPUP	Villa Florida	70.19	108	P	P	23 04 23.6	-0.1
	2.2nm,0.8s,baz=202,slow=6.1,SNR=5.6						
ILAR	Eielson Array	121.23	2	PKP	PKiKP	23 12 02.8	+0.2
	1.1nm,0.9s,baz=280,slow=2.5,SNR=8.1						
SONM	Songino Array	134.39	293	PKP	PKiKP	23 12 30.1	+0.5
	0.1nm,0.4s,baz=95,slow=3.5,SNR=1.5						
MKAR	Makanchi Array	146.53	276	PKPbc	PKPbc	23 12 51.7	+0.1
	4.2nm,0.8s,baz=118,slow=4.7,SNR=46						
ZALV	Zalesovo Beam	149.03	289	PKPbc	PKPbc	23 12 57.5	-0.5
	1.4nm,0.7s,baz=120,slow=3.6,SNR=7.5						

IDC 16 22:54:44.4±2.3**, 4°.86S**×**144°.89E, h99**^{km}±24^{km}**, mb3.0**/2**, mb1 3.4**/5**, mb1mx3.2**/36**, mbtmp3.6**/5**, Error ellipse: s-maj=33.7km s-min=13.2km az=50.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	4.78	299	P	Pn	22 55 55.0	+0.8
	1.1nm,0.3s,baz=137,slow=19,SNR=1.6						
JAY				S	Sn	22 56 48.5	0.0
	0.4nm,0.3s,baz=75,slow=21,SNR=1.4						
PMG	Port Moresby	5.05	154	P	Pn	22 55 59.1	+1.4
	2.7nm,0.3s,baz=311,slow=10,SNR=2.3						
PMG				S	Sn	22 56 54.5	-0.3
	0.9nm,0.3s,baz=143,slow=22,SNR=1.2						
WRA	Warramunga Arr	18.18	214	P	P	22 58 49.3	0.0
	0.4nm,0.3s,baz=35,slow=12,SNR=17						
ASAR	Alice Springs	21.49	208	P	P	22 59 25.5	+0.2
	0.7nm,0.8s,baz=35,slow=12,SNR=9.5						
ILAR	Eielson Array	85.27	24	P	P	23 07 09.6	-0.2
	0.2nm,0.6s,baz=243,slow=5.7,SNR=1.9						

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*IDC **16** 22:57:44.0±0.8, 9°.70S×117°.15E, h0^{km}, mb3.6/4, mb1 3.8/8, mb1mx3.6/36, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=30.7km s-min=18.4km az=62.0*

*NEIC **16** 22:57:52.4±2.0, 9°.59S±0°.07×117°.77E±0°.06, h65^{km}±7^{km}, mb4.1/10, Error ellipse: s-maj=10.6km s-min=7.9km az=205.0*

*DJA **16** 22:57:53.8±1.0, 9°S±5°×11°8E±°, h16^{km}±7^{km}, M4.0/12, mb4.0/3, MLv4.0/12*

ISC 16 22:57:50.9±0.6**, 9°.68S**±0°.05×**117°.86E**±0°.05**, h35**^{km}**, n57, σ2^{s}.52**/59**, mb3.9**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	0.85	355	P	Pn	22 58 07.2	+0.8
PLAI				S	Sn	22 58 16.3	-1.4
TWSI	Taliwang, Sumb	1.34	314	P	Pn	22 58 14.8	+1.6
TWSI				S	Sn	22 58 29.7	-0.1
BASI	Baing, Sumba	2.73	101	P	Pn	22 58 38.9	+6.6
SRBI	Singaraja	3.06	301	P	Pn	22 58 38.9	+2.1
JAGI	Jajag, Banyuwa	3.85	288	Pn	Pn	22 58 49.5	+1.8
JAGI				Sn	Sn	22 59 33.2	+1.4
JAGI	Jajag, Banyuwa	3.85	288	P	Pn	22 58 50.5	+2.8
EDFI	Ende, Flores	3.90	77	P	Pn	22 58 53.1	+4.6
ABJI	Asem Bagus	4.04	297	P	Pn	22 58 53.0	+2.7
MMRI	Maumere	4.45	77	Pn	Pn	22 58 58.6	+2.7
MMRI	Maumere	4.45	77	P	Pn	22 59 01.6	+5.6
KMMI	Kalianget	4.65	304	P	Pn	22 59 01.9	+3.2
BKSI	Bulukumba	4.88	28	P	Pn	22 59 04.6	+2.7
KAPI	Kappang	5.00	22	Pn	Pn	22 59 06.3	+2.7
	3.3nm,0.3s,baz=186,slow=8.5,SNR=4.6						
KAPI				Sn	Sn	23 00 00.8	+0.5
	16nm,0.3s,baz=332,slow=22,SNR=8.9						
KAPI	Kappang	5.00	22		Pn	22 59 05.8	+2.2
KAPI					Sn	23 00 00.3	+0.1
BNSI	Bone	5.70	23	P	Pn	22 59 15.9	+2.7
	0.1nm16nm,0.8s						
BATI	Baumata	5.75	96	Pn	Pn	22 59 20.3	+6.5
	6.2nm,0.3s,baz=271,slow=3.9,SNR=3.1						
BATI				Sn	Sn	23 00 23.3	+4.7
	5.1nm,0.3s,baz=47,slow=18,SNR=1.9						
SPSI	Sidrap Palu	5.99	19	P	Pn	22 59 19.6	+2.5
	0.1nm9.8nm,0.5s						
PWJI	Pagerwojo	6.20	285	P	Pn	22 59 23.1	+3.0
SOEI	Soe	6.32	91	Pn	Pn	22 59 22.6	+0.8
UGM	Wanagama	7.46	283	Pn	Pn	22 59 39.5	+2.2
LUWI	Luwuk	9.88	30	Pn	Pn	23 00 09.2	-1.3
FITZ	Fitzroy Crossi	11.27	139	Pn	Pn	23 00 31.7	+2.1
	0.6nm,0.3s,baz=323,slow=12,SNR=13						
FITZ				Sn	Sn	23 02 30.6	-3.8
	0.4nm,0.3s,baz=148,slow=21,SNR=1.8						
FITZ	Fitzroy Crossi	11.27	139		Pn	23 00 32.3	+2.7
PSAD1	Pilbara Seismi	11.86	171	Pn	Pn	23 00 39.7	+2.0
PSAC1	Pilbara Seismi	11.93	171	Pn	Pn	23 00 41.1	+2.4
PSAB2	Pilbara Seismi	11.96	171	Pn	Pn	23 00 41.7	+2.6
PSAA2	Pilbara Seismi	11.97	171	Pn	Pn	23 00 41.0	+1.9
PSAB1	Pilbara Seismi	11.97	171	Pn	Pn	23 00 41.2	+2.1
PSAC2	Pilbara Seismi	11.98	171	Pn	Pn	23 00 40.9	+1.6
PSA00	Pilbara Seismi	11.98	171	Pn	Pn	23 00 40.6	+1.3
PSAA1	Pilbara Seismi	11.98	171	Pn	Pn	23 00 41.6	+2.3
PSAA3	Pilbara Seismi	11.98	171	Pn	Pn	23 00 41.4	+2.0
PSAB3	Pilbara Seismi	12.00	171	Pn	Pn	23 00 41.6	+2.0
PSAC3	Pilbara Seismi	12.02	171	Pn	Pn	23 00 42.3	+2.4
PSAD3	Pilbara Seismi	12.04	171	Pn	Pn	23 00 42.8	+2.7
PSAD2	Pilbara Seismi	12.04	171	Pn	Pn	23 00 41.7	+1.6
GIRL	Giralia	13.35	195	Pn	Pn	23 00 60.0	+2.0
MTN	Manton Dam	13.40	105	Pn	Pn	23 01 02.1	+3.4
WB0	Warramunga Arr	18.86	124		Pn	23 02 11.2	+2.2
WB0				IAmb	IAmb	23 02 35.0	
	comp=Z,12nm,1.6s						
WRA	Warramunga Arr	18.90	125	P	Pn	23 02 11.4	+1.9
	comp=Z,0.1nm,0.3s,baz=300,slow=12,SNR=3.5						
WRA				S	Sn	23 05 33.5	-6.7
	comp=Z,0.1nm,0.3s,baz=292,slow=20,SNR=2.2						
WRA	Warramunga Arr	18.90	125	P	Pn	23 02 12.0	+2.5
WB2	Warramunga Arr	18.91	124	P	Pn	23 02 12.5	+2.9
WB2				IAmb	IAmb	23 02 45.2	
	comp=Z,14nm,1.7s						
WC3	Warramunga Arr	18.94	125	P	Pn	23 02 12.4	+2.5
WR0	Warramunga Arr	19.08	124	P	P	23 02 11.2	+0.6
MORW	Morawa	19.36	185	P	Pn	23 02 18.4	+3.5
MORW				IAmb	IAmb	23 03 11.0	
	comp=Z,20nm,1.2s						
ASAR	Alice Springs	20.70	134	P	Pn	23 02 31.9	+1.1
	comp=Z,1.0nm,0.8s,baz=319,slow=11,SNR=14						
ASAR				PcP	PcP	23 06 37.8	+0.2
	comp=Z,0.4nm,0.4s,baz=302,slow=2.0,SNR=5.0						
ASAR	Alice Springs	20.70	134	P	P	23 02 28.8	+0.5
FORT	Forrest	23.04	157	P	P	23 02 53.2	0.0
FORT				IAmb	IAmb	23 03 48.8	
	comp=Z,15nm,1.0s						
OXZ	Oxford	57.64	136	P	P	23 07 36.9	-0.9
SONM	Songino Array	58.16	351	P	P	23 07 38.7	-2.6
	comp=Z,0.5nm,0.5s,baz=169,slow=8.4,SNR=4.9						
MKAR	Makanchi Array	64.56	334	P	P	23 08 21.5	-3.0
	comp=Z,0.2nm,0.3s,baz=136,slow=6.4,SNR=11						
MAW	Mawson	68.22	200	P	P	23 08 44.7	-2.9
	comp=Z,8.7nm,0.4s,baz=67,slow=5.1,SNR=13						
ZALV	Zalesovo Beam	69.28	340	P	P	23 08 50.7	-3.7
	comp=Z,0.5nm,0.4s,baz=147,slow=5.6,SNR=3.7						
ABKAR	Akbulak array	77.47	325	P	P	23 09 40.0	-2.8
ABKAR	Akbulak array	77.47	325	P	P	23 09 39.8	-2.9
ABKAR				IAmb	IAmb	23 12 20.0	
	comp=Z,11nm,1.9s						
SNAA	Sanae	90.04	196	P	P	23 10 46.3	-0.5
YKA	Yellowknife Ar	115.27	24	PKP	PKiKP	23 16 27.2	-1.2
	comp=Z,0.1nm,0.3s,baz=319,slow=1.0,SNR=1.6						

WEL 16 23:11:53.4±0.6**, 37°S**±5°×**17°7E**±°**, h12**^{km}**, M3.8**/34**, ML3.9**/33**, MLv3.8**/34**, Error ellipse: s-maj=0.0km s-min=0.0km az=31.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.83	176	P	Pb	23 12 09.7	-0.1
WIZ				S	Sb	23 12 21.2	+0.2
KUZ	Kuaotunu	1.13	267	P	Pb	23 12 13.4	-1.4
KUZ				S	Sb	23 12 28.3	-1.1
HAZ	Te Kaha	1.19	154	P	Pn	23 12 13.3	-2.5
OPRZ	Ohinepanea	1.23	201	P	Pn	23 12 14.8	-1.7
TGRZ	Tauranga	1.24	213	P	Pn	23 12 15.2	-1.4
MXZ	Matakaoa Point	1.28	133	P	Pn	23 12 14.9	-2.2
MXZ				S	Sb	23 12 32.2	-1.7
MARZ	Manawahe	1.34	195	P	Pn	23 12 16.3	-1.6
RUGZ	Raukumara Rang	1.34	161	P	Pn	23 12 16.7	-1.4
RUGZ				S	Sb	23 12 34.7	-1.2
GRZ	Great Barrier	1.41	288	P	Pn	23 12 17.7	-1.2
GRZ				S	Sn	23 12 36.5	-0.9
PKGZ	Pakihiroa	1.42	148	P	Pn	23 12 17.4	-1.6
LIRZ	Lichensteins R	1.43	204	P	Pn	23 12 18.3	-0.9
EDRZ	Edgecumbe	1.44	192	P	Pn	23 12 17.8	-1.6
KMRZ	Kaimai	1.49	219	P	Pn	23 12 19.0	-1.0
KMRZ				S	Sb	23 12 40.3	+0.4
KARZ	Kaharoa	1.50	208	P	Pn	23 12 19.7	-0.4
WMGZ	Waiomatatini S	1.52	138	P	Pb	23 12 21.1	-0.5
WMGZ				S	Sg	23 12 41.9	-0.5
OMRZ	Omania	1.53	203	P	Pn	23 12 19.5	-1.1
MKRZ	Makatiti	1.53	200	P	Pn	23 12 20.9	+0.2
URZ	Urewera	1.56	180	P	Pn	23 12 19.7	-1.3
NGRZ	Ngongotaha	1.59	208	P	Pn	23 12 21.1	-0.3
WIAZ	Waiheke Island	1.60	266	P	Pn	23 12 22.2	+0.7
WIAZ				S	Sb	23 12 43.9	+0.8
TARZ	Mount Tarawera	1.62	197	P	Pn	23 12 20.9	-0.9
TWGZ	Tauwhareparae	1.63	156	P	Pb	23 12 23.8	+0.4
PUZ	Puketiti	1.65	147	P	Pn	23 12 22.8	+0.7
TOZ	Tahuroa Road	1.66	231	P	Pn	23 12 21.1	-1.2
MWZ	Matawai	1.67	169	P	Pn	23 12 21.0	-1.5
ETAZ	East Tamaki Re	1.78	261	P	Pn	23 12 23.8	-0.2
MUGZ	Murupara	1.80	189	P	Pn	23 12 23.6	-0.7
RAGZ	Rawiri	1.81	173	P	Pn	23 12 24.1	-0.4
TKGZ	Te Karaka	1.84	162	P	Pb	23 12 26.6	-0.3
ABAZ	Army Bay	1.84	272	P	Pn	23 12 24.7	-0.2
ABAZ				S	Sb	23 12 50.4	+0.3
EPAZ	Eden Park BICE	1.92	264	P	Pn	23 12 26.5	+0.6
HBAZ	Herne Bay Bore	1.93	265	P	Pb	23 12 28.1	-0.3
CNGZ	Carnagh Statio	1.98	155	P	Pb	23 12 28.6	-0.8
AWAZ	Awhitu Peninsu	2.02	259	P	Pn	23 12 27.0	-0.3
WTAZ	Waiatarua	2.06	263	P	Pn	23 12 27.6	-0.2
TLZ	Tolley Road	2.06	217	P	Pn	23 12 27.2	-0.7
RIGZ	Rimuhau	2.07	166	P	Pn	23 12 29.1	+1.1
SNGZ	Shannon Statio	2.09	175	P	Pb	23 12 29.9	-1.4
MTHZ	Maungataniwha	2.17	186	P	Pn	23 12 28.9	-0.5
KNZ	Kokohu	2.37	170	P	Pn	23 12 33.7	+1.7
WCZ	Waipu Caves	2.37	288	P	Pn	23 12 31.0	-1.0
NMHZ	Naumai	2.41	186	P	Pb	23 12 35.6	-1.2
BKZ	Black Stump Fm	2.52	191	P	Pb	23 12 37.4	-1.2
KATZ	Kakaramea	2.54	206	P	Pn	23 12 35.8	+1.2
ARHZ	Aropaoanui	2.57	182	P	Pn	23 12 36.4	+1.6
WTVZ	West Tongariro	2.71	206	P	Pn	23 12 37.2	+0.4
OTVZ	Oturere	2.72	205	P	Pn	23 12 37.3	+0.2
MCHZ	McNeill Hill	2.77	187	P	Pb	23 12 40.3	-2.5
KWHZ	Kaweka Forest	2.78	191	P	Pb	23 12 40.9	-2.2
WNVZ	Wahianoa	2.89	204	P	Pb	23 12 43.8	-1.2
BHHZ	Black Hill Sta	2.91	196	P	Pn	23 12 42.2	+2.6
KRHZ	Kereru	3.00	191	P	Pn	23 12 42.5	+1.7
VRZ	Vera Road	3.06	217	P	Pn	23 12 42.2	+0.6
KAHZ	Kahuranaki	3.10	184	P	Pn	23 12 44.2	+2.0
OUZ	Omahuta	3.22	296	P	Pn	23 12 43.1	-0.6
TSZ	Takapari Road	3.48	195	P	Pn	23 12 48.2	+0.8
LREZ	Lake Rotokare	3.50	217	P	Pn	23 12 49.7	+2.1
NEZ	North Egmont	3.51	222	P	Pn	23 12 49.8	+1.9
PKE	Pukeiti	3.52	224	P	Pn	23 12 49.4	+1.5
KHEZ	Kahui Hut	3.57	222	P	Pn	23 12 51.1	+2.4
BFZ	Birch Farm	4.04	190	P	Pn	23 12 56.3	+1.3
MRZ	Mangatainoka R	4.14	196	P	Pn	23 12 56.3	-0.2
HOWZ	Holdsworth Sta	4.38	196	P	Pn	23 12 59.3	-0.4
KIW	Kapiti Island	4.51	202	P	Pn	23 13 06.9	+5.5
DUWZ	D'Urville Isla	4.80	210	P	Pn	23 13 07.9	+2.4
NNZ	Nelson	5.38	212	P	Pn	23 13 17.1	+3.7
QRZ	Quartz Range	5.47	220	P	Pn	23 13 16.9	+2.3

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*NOU **16** 23:40:06.7, 38°.20S×179°.02E, h90^{km}, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL 16 23:40:10.8, 38°S±3°×**17°9E**±°**, h49**^{km}±4^{km}**, M3.2**/29**, ML3.5**/29**, MLv3.2**/29**, Error ellipse: s-maj=0.0km s-min=0.0km az=47.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.26	274	P	Pn	23 40 19.9	+0.5
PUZ				S	Sn	23 40 26.0	+0.4
WMGZ	Waiomatatini S	0.30	334	P	Pn	23 40 20.0	+0.2
WMGZ				S	Sn	23 40 26.6	+0.5
PKGZ	Pakihiroa	0.45	297	P	Pn	23 40 21.6	+0.2
PKGZ				S	Sn	23 40 29.0	+0.1
TWGZ	Tauwhareparae	0.48	260	P	Pn	23 40 22.6	+0.8
TWGZ				S	Sn	23 40 31.7	+2.1
CNGZ	Carnagh Statio	0.49	217	P	Pn	23 40 23.6	+1.7
MXZ	Matakaoa Point	0.57	338	P	Pn	23 40 23.1	+0.2
MXZ				S	Sn	23 40 31.8	+0.4
TKGZ	Te Karaka	0.67	239	P	Pn	23 40 25.0	+0.9
TKGZ				S	Sn	23 40 36.2	+2.4
HAZ	Te Kaha	0.71	298	P	Pn	23 40 24.7	0.0
HAZ				S	Sn	23 40 34.5	-0.2
RUGZ	Raukumara Rang	0.72	280	P	Pn	23 40 25.0	+0.1
MWZ	Matawai	0.86	253	P	Pn	23 40 27.1	+0.4
RIGZ	Rimuhau	0.89	226	P	Pn	23 40 28.0	+0.9
PRGZ	Paritu Road	0.99	213	P	Pn	23 40 29.4	+0.9
RAGZ	Rawiri	1.00	246	P	Pn	23 40 29.2	+0.6
KNZ	Kokohu	1.17	217	P	Pn	23 40 31.1	+0.4
URZ	Urewera	1.17	261	P	Pn	23 40 31.8	+1.0
MHGZ	Mahia Peninsul	1.18	206	P	Pn	23 40 31.9	+0.9
SNGZ	Shannon Statio	1.19	234	P	Pn	23 40 31.9	+0.7
WHRZ	Whale Island	1.29	280	P	Pn	23 40 33.2	+0.7
RTZ	Ruatahuna	1.36	247	P	Pn	23 40 34.6	+1.1
WHHZ	Waihua	1.44	227	P	Pn	23 40 35.3	+0.8
EDRZ	Edgecumbe	1.45	269	P	Pn	23 40 35.4	+0.7
MUGZ	Murupara	1.48	254	P	Pn	23 40 35.7	+0.7
MARZ	Manawahe	1.51	273	P	Pn	23 40 36.3	+0.9
MTHZ	Maungataniwha	1.56	240	P	Pn	23 40 37.1	+0.9
OPRZ	Ohinepanea	1.62	278	P	Pn	23 40 36.7	-0.2
TARZ	Mount Tarawera	1.64	264	P	Pn	23 40 38.1	+0.8
RRRZ	Republican Roa	1.65	261	P	Pn	23 40 38.0	+0.7
ARHZ	Aropaoanui	1.71	226	P	Pn	23 40 38.9	+0.8
NMHZ	Naumai	1.71	234	P	Pn	23 40 39.2	+0.9
KARZ	Kaharoa	1.85	271	P	Pn	23 40 40.2	+0.2
MRHZ	Matea Rd	1.85	246	P	Pn	23 40 41.0	+0.8
TGRZ	Tauranga	1.87	280	P	Pn	23 40 40.0	-0.3
BKZ	Black Stump Fm	1.96	236	P	Pn	23 40 42.3	+0.7
CKHZ	Cape Kidnapper	1.96	216	P	Pn	23 40 41.6	0.0
MCHZ	McNeill Hill	2.00	227	P	Pn	23 40 42.8	+0.7
KWHZ	Kaweka Forest	2.15	231	P	Pn	23 40 44.5	+0.3
KAHZ	Kahuranaki	2.16	217	P	Pn	23 40 44.2	-0.2
KRHZ	Kereru	2.32	227	P	Pn	23 40 46.4	-0.1
PXZ	Pawanui	2.35	214	P	Pn	23 40 46.2	-0.8
BHHZ	Black Hill Sta	2.41	234	P	Pn	23 40 48.0	+0.2
KATZ	Kakaramea	2.43	248	P	Pn	23 40 48.8	+0.7
TOZ	Tahuroa Road	2.46	277	P	Pn	23 40 48.2	-0.2
ETVZ	East Tongariro	2.48	244	P	Pn	23 40 49.1	+0.3
KRVZ	Karewarewa	2.51	246	P	Pn	23 40 49.6	+0.4
OTVZ	Oturere	2.52	244	P	Pn	23 40 49.7	+0.3
WTVZ	West Tongariro	2.56	245	P	Pn	23 40 50.6	+0.8
NGZ	Ngauruhoe	2.57	244	P	Pn	23 40 50.4	+0.2
WPHZ	Waipukurau	2.58	220	P	Pn	23 40 49.7	-0.4
PNHZ	Pukenui	2.60	225	P	Pn	23 40 49.8	-0.6
WNVZ	Wahianoa	2.64	241	P	Pn	23 40 51.2	+0.1
KUZ	Kuaotunu	2.64	300	P	Pn	23 40 50.2	-0.7
PRHZ	Porangahau	2.65	214	P	Pn	23 40 50.0	-1.0
ANWZ	Angora Road	2.88	214	P	Pn	23 40 52.8	-1.3
DVHZ	Dannevirke	2.90	220	P	Pn	23 40 53.3	-1.1
GRZ	Great Barrier	3.10	305	P	Pn	23 40 56.9	-0.2
BFZ	Birch Farm	3.16	214	P	Pn	23 40 56.2	-1.8
POWZ	Post Office Ro	3.17	223	P	Pn	23 40 57.4	-0.8
PRWZ	Pori Road	3.19	219	P	Pn	23 40 57.6	-0.8
MBAZ	Motutapu North	3.21	293	P	Pn	23 40 59.3	+0.6
TIWZ	Tintock	3.40	217	P	Pn	23 41 00.4	-0.9
MRZ	Mangatainoka R	3.46	221	P	Pn	23 41 00.5	-1.7
HOWZ	Holdsworth Sta	3.67	219	P	Pn	23 41 03.1	-2.0
PKE	Pukeiti	3.76	252	P	Pn	23 41 09.0	+2.7
OGWZ	Otaki Gorge	3.79	223	P	Pn	23 41 04.8	-1.9
KIW	Kapiti Island	3.96	225	P	Pn	23 41 07.0	-2.1
DUWZ	D'Urville Isla	4.51	232	P	Pn	23 41 15.1	-1.4
OUZ	Omahuta	4.93	304	P	Pn	23 41 23.5	+1.2
GVZ	Greta Valley S	6.45	219	P	Pn	23 41 41.3	-1.9
CTZ	Chatham Island	6.71	149	P	Pn	23 41 47.6	+0.9
CTZ				S	Sn	23 42 55.0	-6.7

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*NEIC **16** 23:55:53.0±1.7, 7°.47S±0°.08×128°.45E±0°.07, h134^{km}±7^{km}, mb4.3/43, Error ellipse: s-maj=11.5km s-min=9.6km az=166.0*

*IDC **16** 23:55:54.3±1.8, 7°.50S×128°.32E, h137^{km}±15^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/31, mbtmp4.3/12, MS3.5/5, Ms1 3.5/5, ms1mx2.9/29, Error ellipse: s-maj=21.4km s-min=12.0km az=115.0*

*DJA **16** 23:55:54.7±0.4, 8°S±3°×12°8E±°, h184^{km}±15^{km}, M4.4/12, mb4.3/10, mB5.1/6, MLv4.5/12, Mw(mB)4.4/6*

*NOU **16** 23:55:58.1, 7°.88S×128°.39E, h133^{km}, mb4.5, Banda Sea*

ISC 16 23:55:54.7±0.4**, 7°.63S**±0°.04×**128°.41E**±0°.06**, h151**^{km}**, n110, σ1^{s}.43**/113**, mb4.2**/21**, 3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.89	97	P	Pn	23 56 42.3	+1.6
BNDI	Bandanaira	3.43	26	P	Pn	23 56 49.0	+1.4
MSAI	Masohi	4.29	7	P	Pn	23 56 59.8	+1.0
NLAI	Namlea	4.55	343	P	Pn	23 57 03.1	+0.9
SOEI	Soe	4.60	242	Pn	Pn	23 57 03.5	+0.5
SOEI	Soe	4.60	242	P	Pn	23 57 03.8	+0.8
BATI	Baumata	5.34	241	P	Pn	23 57 13.4	+0.8
	83nm,0.3s,baz=143,slow=2.3,SNR=52						
BATI				S	Sn	23 58 11.9	-1.6
	47nm,0.3s,baz=71,slow=22,SNR=12						
BATI	Baumata	5.34	241	P	Pn	23 57 13.2	+0.6
	0.9nm2μm246nm,0.8s						
MTN	Manton Dam	5.83	153		Pn	23 57 19.7	+0.4
SANI	Sanana	6.04	336	P	Pn	23 57 21.4	-0.6
	0.1nm26nm,0.7s						
FAKI	Fak Fak	6.05	39		Pn	23 57 20.3	-1.8
FAKI	Fak Fak	6.05	39	P	Pn	23 57 20.8	-1.3
MMRI	Maumere	6.19	260	P	Pn	23 57 24.0	+0.1
	0.3nm36nm,1.6s						
EDFI	Ende, Flores	6.74	260	P	Pn	23 57 31.7	+0.3
	0.1nm10nm,1.0s						
SIJI	Sorong	7.30	23	P	Pn	23 57 37.8	-1.0
	9.0nm,0.3s,baz=240,slow=22,SNR=18						
SIJI				S	Sn	23 58 57.6	-2.9
	1.4nm,0.3s,baz=252,slow=23,SNR=1.5						
SWI	Sorong	7.30	23	P	Pn	23 57 38.9	+0.1
	0.2nm54nm,0.8s						
KNRA	Kununurra	8.00	178	Pn	Pn	23 57 48.7	+0.5
BASI	Baing, Sumba	8.15	251	P	Pn	23 57 49.9	-0.2
	58nm,1.0s						
BKSI	Bulukumba	8.54	285	P	Pn	23 57 55.0	-0.4
	1μm11nm,1.1s						
LUWI	Luwuk	8.62	319	P	Pn	23 57 56.6	+0.1
FITZ	Fitzroy Crossi	10.75	194	P	Pn	23 58 22.7	-1.8
	8.1nm,0.3s,baz=12,slow=10,SNR=141						
FITZ				S	Sn	00 00 17.4	-6.1
	3.0nm,0.3s,baz=100,slow=14,SNR=4.3						
WB0	Warramunga Arr	13.39	155	Pn	Pn	23 58 57.7	-1.2
WRAB	Tennant Creek	13.52	155	Pn	Pn	23 58 59.3	-1.2
WRA	Warramunga Arr	13.52	155	P	Pn	23 58 59.0	-1.6
	3.2nm,0.3s,baz=326,slow=13,SNR=74						
WRA				S	Sn	00 01 20.5	-10
	3.1nm,0.3s,baz=330,slow=22,SNR=11						
WRA	Warramunga Arr	13.52	155		Pn	23 58 58.7	-1.9
WB2	Warramunga Arr	13.53	155	Pn	Pn	23 58 59.3	-1.3
WR0	Warramunga Arr	13.62	155		Pn	23 59 00.5	-1.4
DAV	Davao City (W)	14.87	349	LR	LR	00 05 10.3	
	comp=Z,904nm,19.0s,baz=332,slow=38						
COEN	Coen	15.81	115		P	23 59 30.4	+0.5
PSAD1	Pilbara Seismi	16.05	210		P	23 59 33.3	+0.9
PSAD1				IAmb	IAmb	23 59 35.0	
	comp=Z,10nm,0.8s						
PSAC2	Pilbara Seismi	16.10	210		P	23 59 33.8	+0.7
PSAC2				IAmb	IAmb	23 59 52.2	
	comp=Z,10.0nm,0.7s						
PSAB2	Pilbara Seismi	16.11	210		P	23 59 33.9	+0.7
PSAB2				IAmb	IAmb	23 59 43.5	
	comp=Z,12nm,0.8s						
PSAD2	Pilbara Seismi	16.12	209		P	23 59 34.7	+1.4
PSAD2				IAmb	IAmb	23 59 40.6	
	comp=Z,15nm,1.1s						
PSAC1	Pilbara Seismi	16.12	210		P	23 59 34.4	+1.1
PSAC1				IAmb	IAmb	23 59 35.6	
	comp=Z,20nm,0.9s						
PSAA2	Pilbara Seismi	16.13	210		P	23 59 34.4	+1.0
PSAA2				IAmb	IAmb	23 59 35.3	
	comp=Z,11nm,0.6s						
PSA00	Pilbara Seismi	16.14	210		P	23 59 34.2	+0.7
PSA00				IAmb	IAmb	23 59 46.3	
	comp=Z,18nm,1.1s						
PSA00	Pilbara Seismi	16.14	210	P	P	23 59 33.7	+0.2
PSA00				IAmb	IAmb	23 59 37.5	
	comp=Z,5.9nm,0.8s						
PSAA3	Pilbara Seismi	16.14	210		P	23 59 34.4	+1.0
PSAA3				IAmb	IAmb	23 59 35.8	
	comp=Z,13nm,0.8s						
PSAA1	Pilbara Seismi	16.14	210		P	23 59 34.4	+0.9
PSAA1				IAmb	IAmb	23 59 35.9	
	comp=Z,16nm,0.8s						
PSAB1	Pilbara Seismi	16.14	210		P	23 59 34.3	+0.8
PSAB3	Pilbara Seismi	16.15	210		P	23 59 34.5	+0.9
PSAB3				IAmb	IAmb	23 59 35.6	
	comp=Z,15nm,0.8s						
PSAC3	Pilbara Seismi	16.19	210		P	23 59 34.8	+0.7
PSAC3				IAmb	IAmb	23 59 36.4	
	comp=Z,17nm,0.8s						
PSAD3	Pilbara Seismi	16.23	210		P	23 59 35.3	+0.8
PSAD3				IAmb	IAmb	23 59 36.6	
	comp=Z,14nm,0.8s						
AS31	Alice Springs	16.79	162	P	Pn	23 59 42.4	+1.3
ASAR	Alice Springs	16.80	162	P	Pn	23 59 42.5	+1.4
	comp=Z,1.6nm,0.3s,baz=334,slow=10.0,SNR=61						
ASAR				S	S	00 02 41.5	-6.4
	comp=Z,1.1nm,0.3s,baz=325,slow=15,SNR=8.0						
ASAR	Alice Springs	16.80	162	P	Pn	23 59 41.8	+0.7
UGM	Wanagama	17.72	268		P	23 59 49.9	-1.1
UGM				IAmb	IAmb	23 59 58.9	
	comp=Z,10nm,0.8s						
SBUM	Sibu	19.00	301	P	P	00 00 05.8	+0.9
GIRL	Giralia	20.22	221	P	Pn	00 00 20.3	-1.2
FORT	Forrest	23.03	181	P	P	00 00 49.0	+2.4
MORW	Morawa	24.30	207	P	P	00 01 00.2	+2.0
MORW				IAmb	IAmb	00 01 12.1	
	comp=Z,10nm,1.0s						
BBOO	Buckleboo	26.04	165	P	P	00 01 16.7	+2.8
KULM	Kulim	30.52	294	P	P	00 01 52.9	-1.1
KULM				IAmb	IAmb	00 02 00.9	
	comp=Z,9.6nm,1.1s						
UBPT	Khong Chiam	32.17	315	P	P	00 02 08.3	0.0
UBPT				IAmb	IAmb	00 02 19.7	
	comp=Z,5.8nm,1.2s						
QIZ	Qiongzhong	32.20	326	P	P	00 02 09.0	+0.4
QIZ				S	S	00 07 13.4	+2.8
QIZ				LR	LR		
	comp=N,190nm,5.5s						
QIZ				LR	LR		
	comp=E,300nm,9.7s						
QIZ				LR	LR		
	comp=Z,350nm,15.9s						
YHNB	Yeheng	32.83	348	P	P	00 02 12.1	-2.0
CAN	Canberra	33.41	149	P	P	00 02 21.9	+2.8
CMAR	Chiang Mai Arr	38.95	312	P	P	00 03 07.2	+0.9
	comp=Z,1.3nm,0.3s,baz=150,slow=7.3,SNR=1.0						
JNU	Nakatsue	40.59	3	P	P	00 03 17.3	-2.3
KMI	Kunming	41.04	323	⇓*e*P	P	00 03 23.9	+0.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JWT	Wachi	43.19	8	P	P	00 03 39.5	-1.1
KSRS	Korea Array	44.85	359	P	P	00 03 54.4	+0.6
	comp=Z,1.1nm,0.4s,baz=176,slow=9.7,SNR=4.2						
MJAR	Matsushiro Arr	44.89	11	P	P	00 03 52.5	-1.7
	comp=Z,0.8nm,0.5s,baz=212,slow=12,SNR=4.1						
LZH	Lanzhou	49.24	334	⇓P	P	00 04 30.1	+2.0
LZH				pP	pP	00 05 01.5	+0.4

LZH				sP	sP	00 05 16.8	-0.6
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,6.3s						
HHC	**Hu-ho-hao-te**	**50.67**	**343**	*e*P	**P**	**00 04 38.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.2s						
USA0B	**Ussuriysk Arra**	**51.69**	**3**	P	**P**	**00 04 46.1**	**0.0**
USA0B				IAmb	IAmb	00 04 52.1	
	comp=Z,7.1nm,1.1s						
USRK	**Ussuriysk Ar.**	**51.69**	**3**	P	**P**	**00 04 46.4**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=188,slow=8.0,SNR=4.6						
USRK	**Ussuriysk Ar.**	**51.69**	**3**	P	**P**	**00 04 46.3**	**+0.2**
BHW	**Baring Head**	**53.09**	**137**	P	**P**	**00 04 57.4**	**+0.8**
MSWZ	**Moikau Station**	**53.35**	**137**	P	**P**	**00 04 59.0**	**+0.5**
GTA	**Gaotai**	**53.78**	**333**	⇓P	**P**	**00 05 02.0**	**+0.2**
GTA				ScP	**ScP**	**00 09 49.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,41nm,6.2s						
GTA				LR	LR		
	comp=N,160nm,15.3s						
GTA				LR	LR		
	comp=E,210nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,16.7s						
SONM	**Songino Array**	**58.55**	**343**	P	**P**	**00 05 35.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=170,slow=7.4,SNR=8.7						
SONM				PcP	**PcP**	**00 06 24.7**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=157,slow=4.6,SNR=1.5						
SONM	**Songino Array**	**58.55**	**343**	P	**P**	**00 05 34.6**	**-0.9**
WMQ	**Urumqi**	**63.07**	**328**	*e*P	**P**	**00 06 07.8**	**+1.8**
PEA0B	**Petropavlovsk-**	**65.42**	**19**	P	**P**	**00 06 19.6**	**-1.4**
PETK	**Petropavlovsk-**	**65.42**	**19**	P	**P**	**00 06 21.8**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=183,slow=8.9,SNR=3.8						
PETK	**Petropavlovsk-**	**65.42**	**19**	P	**P**	**00 06 19.1**	**-1.9**
NIL	**Nilore**	**66.44**	**312**	P	**P**	**00 06 27.3**	**-0.7**
NIL				IAmb	IAmb	00 06 27.9	
	comp=Z,3.0nm,0.5s						
KSH	**Kashi**	**67.42**	**318**	P	**P**	**00 06 35.8**	**+1.5**
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
MK31	**Makanchi Array**	**67.90**	**328**	P	**P**	**00 06 36.8**	**-0.2**
MKAR	**Makanchi Array**	**67.90**	**328**	P	**P**	**00 06 36.9**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=121,slow=8.1,SNR=55						
MKAR				PcP	**PcP**	**00 07 03.4**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=117,slow=5.6,SNR=2.9						
MKAR				LR	LR	00 35 23.8	
	comp=Z,19nm,21.4s,baz=108,slow=35						
MKAR	**Makanchi Array**	**67.90**	**328**	P	**P**	**00 06 37.0**	**0.0**
MAKZ	**Makanchi**	**68.07**	**328**	P	**P**	**00 06 37.7**	**-0.3**
AAK	**Ala-Archa**	**70.01**	**321**	P	**P**	**00 06 50.4**	**+0.1**
ZAA0	**Zalesovo Array**	**71.46**	**335**	P	**P**	**00 06 57.0**	**-1.5**
ZAA0				IAmb	IAmb	00 06 58.4	
	comp=Z,3.5nm,0.9s						
ZALV	**Zalesovo Beam**	**71.46**	**335**	P	**P**	**00 06 57.9**	**-0.6**
	comp=Z,2.9nm,0.4s,baz=141,slow=5.3,SNR=13						
ZALV	**Zalesovo Beam**	**71.46**	**335**	P	**P**	**00 06 57.5**	**-1.0**
VNDA	**Vanda**	**72.02**	**173**	P	**P**	**00 07 03.7**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=317,slow=7.7,SNR=11						
VNDA	**Vanda**	**72.02**	**173**	P	**P**	**00 07 04.0**	**+2.4**
KURK	**Kurchatov**	**72.24**	**329**	P	**P**	**00 07 03.5**	**+0.3**
KK06	**Karatay Array**	**72.77**	**319**	P	**P**	**00 07 07.5**	**+0.9**
KKAR	**Karatay Array**	**72.78**	**319**	P	**P**	**00 07 07.2**	**+0.5**
BRVK	**Borovoye**	**77.83**	**328**	P	**P**	**00 07 34.9**	**-0.4**
BRVK				IAmb	IAmb	00 07 36.0	
	comp=Z,3.9nm,0.9s						
GEYT	**Alibeck**	**79.42**	**311**	LR	LR	00 48 42.4	
	comp=Z,22nm,19.0s,baz=205,slow=40						
AB07	**Akbulak array**	**82.01**	**322**	P	**P**	**00 07 57.9**	**+0.1**
AB06	**Akbulak array**	**82.01**	**322**	P	**P**	**00 07 57.7**	**-0.2**
AB03	**Akbulak array**	**82.02**	**322**	P	**P**	**00 07 57.6**	**-0.3**
AB02	**Akbulak array**	**82.02**	**322**	P	**P**	**00 07 57.6**	**-0.3**
AB01	**Akbulak array**	**82.02**	**322**	P	**P**	**00 07 57.3**	**-0.6**
AB31	**Akbulak array**	**82.02**	**322**	P	**P**	**00 07 57.6**	**-0.3**
ABKAR	**Akbulak array**	**82.02**	**322**	P	**P**	**00 07 57.3**	**-0.6**
AB08	**Akbulak array**	**82.03**	**322**	P	**P**	**00 07 57.8**	**-0.2**
AB04	**Akbulak array**	**82.03**	**322**	P	**P**	**00 07 57.9**	**0.0**
AB05	**Akbulak array**	**82.03**	**322**	P	**P**	**00 07 58.3**	**+0.4**
AB09	**Akbulak array**	**82.04**	**322**	P	**P**	**00 07 58.4**	**+0.4**
AKTO	**Aktyubinsk**	**83.61**	**323**	LR	LR	00 50 18.3	
	comp=Z,15nm,18.5s,baz=108,slow=39						
OHAK	**Old Harbor**	**90.08**	**32**	P	**P**	**00 08 36.1**	**-1.1**
KIRV	**Kirov**	**90.76**	**329**	LR	LR	00 51 20.4	
	comp=Z,24nm,18.8s,baz=99,slow=37						
TXAR	**Lajitas Array**	**126.61**	**59**	PKP	**PKiKP**	**00 14 42.5**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=305,slow=3.2,SNR=2.3						
TORD	**Torodi Ar. Bea**	**127.38**	**281**	PKP	**PKiKP**	**00 14 43.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=48,slow=2.2,SNR=3.6						

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*MAN **17** 00:02:42.8, 9°.87N×123°.89E, h11^{km}, MS4.0*

MAN INTENSITY IV - ANTEQUERA.

*IDC **17** 00:02:49.2±2.5, 9°.83N×123°.96E, h70^{km}±26^{km}, mb3.7/13, mb1 3.9/15, mb1mx3.8/38, mbtmp4.1/15, MS3.3/8, Ms1 3.3/8, ms1mx3.1/34, Error ellipse: s-maj=23.3km s-min=15.0km az=70.0*

*NEIC **17** 00:02:51.1±1.4, 9°.71N±0°.02×123°.9E±0°.1, h85^{km}±8^{km}, mb4.4/12, Error ellipse: s-maj=17.9km s-min=1.9km az=86.0*

ISC 17 00:02:43.8±1.1**, 9°.87N**±0°.03×**123°.94E**±0°.03**, h25**^{km}±8^{km}**, n52, σ1^{s}95**/61**, mb4.0**/17**, MS3.3**/7**, 1C-3D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.45**	**3**	⇓*i*P	**Pb**	**00 02 51.8**	**-1.4**
LLP				*i* S	**Sb**	**00 02 59.0**	**-0.6**
MSLP	**Maasin**	**0.94**	**74**	*e*P	**Pb**	**00 03 01.1**	**-0.5**
MSLP				*e*S	**Sn**	**00 03 16.2**	**+2.0**
CNOP	**Candoni, Negro**	**1.28**	**268**	*e*P	**Pn**	**00 03 04.3**	**-1.9**
CNOP				*e*S	**Sn**	**00 03 23.4**	**+0.8**
OCLP	**Ormoc**	**1.35**	**29**	*e*P	**Pn**	**00 03 07.3**	**+0.3**
OCLP				*e*S	**Sb**	**00 03 26.5**	**+1.2**
GUIM	**Jordan**	**1.53**	**300**	*e*P	**Pn**	**00 03 08.5**	**-1.1**
GUIM				*e*S	**Sb**	**00 03 29.1**	**-1.3**
CGP	**Cagayan de Oro**	**1.59**	**152**	⇓*e*P	**Pb**	**00 03 13.3**	**+0.8**
CGP				*i* S	**Sn**	**00 03 29.8**	**-0.4**
PAGZ	**Pagadian**	**2.08**	**195**	*e*P	**Pn**	**00 03 16.5**	**-0.7**
PAGZ				*e*S	**Sb**	**00 03 44.6**	**-1.8**
JAP	**San Jose, Anti**	**2.15**	**294**	⇓*e*P	**Pb**	**00 03 21.1**	**-1.0**
JAP				*e*S	**Sb**	**00 03 55.5**	**+7.2**
GLSP	**General Luna,**	**2.16**	**92**	*e*P	**Pn**	**00 03 20.1**	**+1.8**
GLSP				*e*S	**Sb**	**00 03 47.3**	**-1.3**
BUKP	**Musuan**	**2.27**	**151**	*e*P	**Pn**	**00 03 20.4**	**+0.7**
BUKP				*e*S	**Sb**	**00 03 51.9**	**+0.1**
KCP	**Kidapawan**	**3.06**	**158**	⇑*e*P	**Pn**	**00 03 33.5**	**+2.8**
DAV	**Davao City (W)**	**3.22**	**150**	P	**Pb**	**00 03 38.1**	**-2.3**
	38nm,0.3s,baz=60,slow=4.7,SNR=4.8						
DAV				S	**Sn**	**00 04 14.0**	**+3.6**
	26nm,0.3s,baz=274,slow=23,SNR=3.6						
DDMP	**Don Marcelino,**	**4.13**	**155**	*e*P	**Pn**	**00 03 48.4**	**+3.0**
DDMP				*e*S	**Sn**	**00 04 31.3**	**-1.6**
MYLDM	**Lahad Datu**	**7.13**	**230**	Pn	**Pn**	**00 04 30.1**	**+3.5**
SIJI	**Sorong**	**12.92**	**145**	LR	LR	00 10 24.7	
	comp=Z,59nm,20.7s,baz=147,slow=35						
YULB	**Yu-li**	**13.68**	**350**	Pn	**P**	**00 06 03.9**	**-1.0**
SSLB	**Suanglung**	**14.13**	**349**	Pn	**P**	**00 06 09.1**	**-0.8**
NACB	**Ninganchiao**	**14.40**	**351**	Pn	**P**	**00 06 11.0**	**-1.8**
FAKI	**Fak Fak**	**15.16**	**147**	Pn	**P**	**00 06 20.4**	**-1.0**
FAKI				IAmb	IAmb	00 06 24.8	
	comp=Z,9.1nm,0.8s						
UBPT	**Khong Chiam**	**18.81**	**288**		**Pn**	**00 07 06.6**	**+4.3**
UBPT				IAmb	IAmb	00 07 09.4	
	comp=Z,26nm,1.1s						
SOEI	**Soe**	**19.50**	**179**	P	**P**	**00 07 08.5**	**-0.9**
SOEI				IAmb	IAmb	00 07 25.9	
	comp=Z,17nm,1.0s						
BATI	**Baumata**	**19.95**	**181**	P	**Pn**	**00 07 16.1**	**+0.1**
	comp=Z,3.3nm,0.3s,baz=261,slow=4.8,SNR=5.6						
CMAR	**Chiang Mai Arr**	**25.67**	**292**	P	**P**	**00 08 13.8**	**+1.8**
	comp=Z,1.5nm,0.5s,baz=110,slow=8.3,SNR=11						
CMAR				LR	LR	00 18 33.2	
	comp=Z,57nm,18.2s,baz=122,slow=37						
PSI	**Prapat**	**25.82**	**256**	P	**P**	**00 08 14.6**	**+1.0**
	comp=Z,9.9nm,0.9s,baz=3.9,slow=0.5,SNR=5.3						
KSRS	**Korea Array**	**27.70**	**7**	P	**P**	**00 08 30.3**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=181,slow=9.7,SNR=4.5						
KSRS				LR	LR	00 18 48.6	
	comp=Z,48nm,21.0s,baz=202,slow=35						
WRA	**Warramunga Arr**	**31.34**	**161**	P	**P**	**00 09 00.9**	**-1.6**
	comp=Z,0.9nm,1.0s,baz=343,slow=9.3,SNR=3.2						
ASAR	**Alice Springs**	**34.72**	**164**	P	**P**	**00 09 32.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=334,slow=6.6,SNR=5.0						
USRK	**Ussuriysk Ar.**	**34.91**	**10**	P	**P**	**00 09 35.3**	**+1.9**
	comp=Z,3.1nm,0.8s,baz=194,slow=8.4,SNR=6.7						
USRK				LR	LR	00 24 48.6	
	comp=Z,24nm,19.1s,baz=112,slow=38						
USRK	**Ussuriysk Ar.**	**34.91**	**10**	P	**P**	**00 09 35.2**	**+1.8**
SONM	**Songino Array**	**40.64**	**342**	P	**P**	**00 10 21.5**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=158,slow=5.9,SNR=2.5						
SONM				LR	LR	00 27 44.6	
	comp=Z,36nm,18.4s,baz=102,slow=37						
STKA	**Stephens Creek**	**44.82**	**159**	LR	LR	00 33 21.6	
	comp=Z,74nm,18.3s,baz=25,slow=41						
MK31	**Makanchi Array**	**50.98**	**324**	P	**P**	**00 11 45.1**	**+1.5**
MK31				IAmb	IAmb	00 11 46.3	
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**50.98**	**324**	P	**P**	**00 11 44.5**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=128,slow=8.3,SNR=24						
MKAR	**Makanchi Array**	**50.98**	**324**	P	**P**	**00 11 45.5**	**+2.0**
MAKZ	**Makanchi**	**51.17**	**324**	P	**P**	**00 11 46.6**	**+1.6**
MAKZ				IAmb	IAmb	00 11 48.3	
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**53.90**	**333**	P	**P**	**00 12 03.5**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=113,slow=6.9,SNR=7.2						
ZALV				LR	LR	00 34 42.8	
	comp=Z,39nm,19.2s,baz=104,slow=36						
ZALV	**Zalesovo Beam**	**53.90**	**333**	P	**P**	**00 12 05.5**	**+0.5**
KURK	**Kurchatov**	**55.12**	**327**	P	**P**	**00 12 15.6**	**+1.8**
BKZ	**Black Stump Fm**	**68.98**	**139**	P	**P**	**00 13 47.3**	**+0.1**
BKZ				IAmb	IAmb	00 13 54.7	
	comp=Z,8.5nm,1.1s						
BHW	**Baring Head**	**69.21**	**141**	P	**P**	**00 13 47.9**	**-0.6**
IMAR	**Indian Mountai**	**77.92**	**25**	P	**P**	**00 14 40.9**	**+1.5**
MESA	**MESA**	**83.56**	**30**	P	**P**	**00 15 09.7**	**-0.2**
BARN	**Barnard Glacie**	**83.57**	**29**	P	**P**	**00 15 10.8**	**+0.8**
BARN				IAmb	IAmb	00 15 13.5	
	comp=Z,10.0nm,1.1s						
ARCES	**ARCESS Array B**	**83.77**	**340**	P	**P**	**00 15 06.8**	**-3.8**
SPITS	**Spitsbergen Ar**	**83.96**	**349**	LR	LR	00 58 01.1	
	comp=Z,27nm,18.0s,baz=245,slow=39						
BRTR	**Keskin Array B**	**84.01**	**309**	P	**P**	**00 15 12.5**	**-0.1**
	comp=Z,0.9nm,1.1s,baz=100,slow=6.0,SNR=3.3						
AKASG	**Malin Array Be**	**85.42**	**321**	P	**P**	**00 15 19.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=4.3,SNR=4.8						
INK	**Inuvik**	**85.49**	**21**	P	**P**	**00 15 19.4**	**+0.1**
	comp=Z,14nm,1.5s,baz=326,slow=4.5,SNR=4.0						
INK	**Inuvik**	**85.49**	**21**	P	**P**	**00 15 20.6**	**+1.3**
MAW	**Mawson**	**88.55**	**200**	P	**P**	**00 15 30.0**	**-3.9**
YKA	**Yellowknife Ar**	**95.05**	**23**	P	**P**	**00 16 04.9**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=310,slow=3.9,SNR=4.5						
PLCA	**Paso Flores**	**146.69**	**160**	PKPbc	**PKPbc**	**00 22 23.5**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=218,slow=6.7,SNR=3.9						

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*INET **17** 00:40:31.5, 11°.41N×86°.98W, h10^{km}, MW3.2*

UCR 17 00:40:31.6±1.5**, 11°.90N×86°.61W, h0**^{km}±14^{km}**, MW4.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUEV	**Buena Vista**	**1.61**	**133**	*i* P	Pn	00 41 00.7	-0.6
BUEV				*i* S	Sg	00 41 24.2	+0.9
LAPC	**Finca la Perla**	**1.61**	**134**	*i* P	Pn	00 41 00.4	-0.9
HORNC	**Hornillas**	**1.83**	**130**	*i* P	Pn	00 41 04.9	+0.5
CUI	**Cuipilapa**	**1.88**	**131**	*e*P	Pn	00 41 04.8	-0.3
GUAI	**GUAI**	**1.94**	**146**	*i* P	Pn	00 41 05.9	0.0
GUAI				*i* S	Sb	00 41 32.2	-0.5
ARE1	**Arenal 1**	**2.34**	**127**	*e*P	Pb	00 41 14.6	-0.1

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*DDA **17** 00:42:34.9, 39°.88N×30°.38E, h5^{km}, MW4.0*

*IDC **17** 00:42:34.3±0.7, 39°.91N×30°.35E, h0^{km}, mb3.8/13, mb1 3.9/19, mb1mx3.8/41, mbtmp3.8/19, ML3.6/6, MS3.0/10, Ms1 3.0/10, ms1mx2.8/44, Error ellipse: s-maj=12.6km s-min=8.5km az=28.0*

*MED_RC **17** 00:42:34.0±0.7, 40°.09N×30°.53E, h10^{km}, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.01±.16; $M_{\theta\theta}$0.74±.19; $M_{\phi\phi}$0.27±.14; $M_{r\theta}$2.90±.49; $M_{\theta\phi}$0.17±.27; $M_{\phi r}$-0.22±.79; Best double couple: $M_0$3.04000×10^{15} NP1:ϕ_s68.00000°, δ9.00000°, λ-115.00000°. NP2: ϕ_s273.00000°, δ82.00000°, λ-86.00000°. Principal axes: T 2.8900, Plg37.0000°, Azm360.0000°; N 0.2900, Plg4.0000°, Azm93.0000°; P -3.1900, Plg53.0000°, Azm188.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*MOS **17** 00:42:34.9±1.1, 39°.89N×30°.44E, h15^{km}, mb4.3/10 Error ellipse: s-maj=6.8km s-min=4.1km az=89.6*

*ISK **17** 00:42:34.7, 39°.88N×30°.40E, h7^{km}, ML4.2/52*

*IASPEI **17** 00:42:35.6±0.9, 39°.89N±0°.02×30°.40E±0°.02, h6^{km}±5^{km}, mb4.2/29, MS3.3/3, Error ellipse: s-maj=2.7km s-min=2.6km az=147.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **17** 00:42:36.2±1.6, 39°.92N±0°.04×30°.41E±0°.06, h7^{km}±2^{km}, Error ellipse: s-maj=6.8km s-min=5.1km az=128.0*

*THE **17** 00:42:37.2, 39°.92N×30°.38E, h2^{km}±3^{km}, ML3.8/1, Error ellipse: s-maj=4.9km s-min=1.1km az=80.0*

ISC 17 00:42:35.5±0.8**, 39°.88N**±0°.01×**30°.39E**±0°.01**, h5**^{km}±5^{km}**, n299, σ1^{s}38**/336**, mb4.2**/29**, MS3.3**/3**, 55C-24D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.05**	**90**	PG	**Pg**	**00 42 36.9**	**0.0**
BORA	**Eskisehir**	**0.05**	**90**	⇑*i*P	**Pg**	**00 42 36.9**	**0.0**
BORA				*i* S	**Sg**	**00 42 37.9**	**0.0**
SRCK	**Saricakaya, Es**	**0.24**	**49**	PG	**Pg**	**00 42 40.1**	**-0.2**
SRCK				SG	**Sg**	**00 42 44.0**	**+0.4**
SRCK	**Saricakaya, Es**	**0.24**	**49**	⇑*i*P	**Pg**	**00 42 40.2**	**-0.2**
SRCK				*i* S	**Sg**	**00 42 44.0**	**+0.4**
SRCK				IAML		00 42 44.0	
	comp=E,24μm,0.5s						
SRCK				IAML		00 42 45.0	
	comp=N,17μm,0.5s						
AUBOZ	**BOZOYUK**	**0.27**	**277**	PG	**Pg**	**00 42 40.8**	**-0.1**
AUBOZ				SG	**Sg**	**00 42 45.2**	**+0.7**
AUBOZ	**BOZOYUK**	**0.27**	**277**	⇑*i*P	**Pg**	**00 42 41.0**	**+0.1**
AUBOZ				*i* S	**Sg**	**00 42 45.3**	**+0.8**
AUBOZ				IAML		00 42 46.0	
	comp=N,49μm,0.5s						
AUBOZ				IAML		00 42 48.0	
	comp=E,18μm,0.5s						
BILE	**Bilecik/Merkez**	**0.48**	**306**	⇑*i*P	**Pg**	**00 42 44.5**	**-0.3**
BILE				*i* S	**Sg**	**00 42 51.3**	**+0.1**
BILE				IAML		00 42 52.0	
	comp=N,6μm,0.5s						
BILE				IAML		00 42 58.0	
	comp=E,4μm,0.7s						
SGAZ	**Eskisehir, Sey**	**0.49**	**135**	⇑*i*P	**Pg**	**00 42 44.7**	**-0.3**
SGAZ				*i* S	**Sb**	**00 42 52.4**	**-2.0**
SGAZ				IAML		00 42 53.0	
	comp=E,12μm,0.2s						
SGAZ				IAML		00 42 55.0	
	comp=N,5μm,0.2s						
ANDZ	**Kutahya, Merke**	**0.53**	**226**	⇑*i*P	**Pg**	**00 42 45.6**	**-0.1**
ANDZ				*i* S	**Sb**	**00 42 53.7**	**-1.6**
ANDZ				IAML		00 42 54.0	
	comp=E,4μm,0.5s						
ANDZ				IAML		00 42 54.0	
	comp=N,4μm,0.5s						
CAVI	**Cavuskoy**	**0.53**	**308**	PG	**Pg**	**00 42 45.6**	**-0.1**
KUTH	**Kutahya**	**0.56**	**210**	PG	**Pg**	**00 42 46.1**	**-0.2**
GULT	**Gulveren**	**0.56**	**10**	PG	**Pg**	**00 42 46.1**	**-0.2**
GEYV	**SAKARYA_Geyve**	**0.61**	**353**	⇑*i*P	**Pg**	**00 42 47.0**	**-0.2**
GEYV				*i* S	**Sg**	**00 42 56.5**	**+1.4**
GEYV				IAML		00 43 02.0	
	comp=E,7μm,0.4s						
GEYV				IAML		00 43 05.0	
	comp=N,6μm,0.4s						
AUKIR	**Kırka- Seyitga**	**0.61**	**169**	⇑*i*P	**Pg**	**00 42 47.1**	**-0.2**
AUKIR				*i* S	**Sb**	**00 42 56.2**	**-1.5**
AUKIR				IAML		00 42 59.0	
	comp=E,7μm,0.6s						
AUKIR				IAML		00 42 59.0	
	comp=N,6μm,0.4s						
CIFT	**Cifteler, Eski**	**0.73**	**135**	PG	**Pg**	**00 42 49.2**	**-0.4**
CIFT	**Cifteler, Eski**	**0.73**	**135**	⇑*i*P	**Pg**	**00 42 48.7**	**-1.0**
CIFT				*i* S	**Sn**	**00 43 04.1**	**-0.2**
ADVT	**Abdulvahap**	**0.74**	**318**	PG	**Pg**	**00 42 49.3**	**-0.5**
SPNC	**Sapanca-Adapaz**	**0.81**	**356**	PG	**Pg**	**00 42 51.0**	**0.0**
TVSB	**Tavsanli**	**0.83**	**239**	PG	**Pg**	**00 42 51.4**	**-0.1**
BTAS	**Taskesti**	**0.83**	**34**	⇑*i*P	**Pg**	**00 42 51.1**	**-0.4**
BTAS				*i* S	**Sn**	**00 43 06.0**	**-0.8**
AUMIH	**MIHALICIK**	**0.84**	**90**	PG	**Pg**	**00 42 51.1**	**-0.6**
AUMIH	**MIHALICIK**	**0.84**	**90**	⇑*i*P	**Pg**	**00 42 50.7**	**-1.0**
AUMIH				*i* S	**Sb**	**00 43 04.4**	**-0.1**
AUMIH				IAML		00 43 10.0	
	comp=E,6μm,0.8s						
MDUB	**Mudurnu**	**0.86**	**46**	PG	**Pg**	**00 42 51.6**	**-0.4**
MDUB	**Mudurnu**	**0.86**	**46**	Pg	**Pg**	**00 42 51.7**	**-0.4**
MDUB				Sn	**Sn**	**00 43 09.3**	**+1.9**
SAUV	**Serdivan-Sakar**	**0.86**	**357**	PG	**Pg**	**00 42 51.8**	**-0.3**
SVRH	**Sivrihisar-ESK**	**0.98**	**116**	PG	**Pg**	**00 42 53.7**	**-0.6**
IGD	**Bursa**	**0.99**	**293**	⇑*i*P	**Pg**	**00 42 53.4**	**-1.1**
IGD				*i* S	**Sn**	**00 43 10.4**	**-0.1**
IGD				IAML		00 43 11.0	
	comp=E,3μm,0.6s						
IGD				IAML		00 43 12.0	
	comp=N,3μm,0.6s						
AUSIV	**SIVRIHISAR**	**0.99**	**116**	PG	**Pg**	**00 42 53.9**	**-0.7**
AUSIV	**SIVRIHISAR**	**0.99**	**116**	⇑*i*P	**Pg**	**00 42 53.9**	**-0.7**
AUSIV				*i* S	**Sb**	**00 43 08.2**	**-0.5**
AUSIV				IAML		00 43 12.0	
	comp=N,7μm,0.5s						
AUSIV				IAML		00 43 14.0	
	comp=E,4μm,0.6s						
SAHE	**Sakarya_HENDEK**	**1.03**	**20**	⇑*i*P	**Pg**	**00 42 54.9**	**-0.5**
SAHE				*i* S	**Sn**	**00 43 11.2**	**-0.5**
SAHE				IAML		00 43 16.0	
	comp=E,3μm,0.4s						
SAHE				IAML		00 43 17.0	
	comp=N,2μm,0.5s						
GDZ	**Gediz**	**1.06**	**222**	*i* P	**Pg**	**00 42 55.4**	**-0.4**
GDZ				*i* S	**Sn**	**00 43 11.4**	**-0.9**
GDZ				IAML		00 43 15.0	
	comp=N,1μm,0.5s						
GDZ				IAML		00 43 17.0	
	comp=E,2μm,0.7s						
GEMT	**Gemlik**	**1.07**	**302**	PG	**Pg**	**00 42 55.9**	**-0.2**
KAYN	**Sakarya, Kayna**	**1.08**	**358**	⇑*i*P	**Pg**	**00 42 56.1**	**-0.3**
KAYN				*i* S	**Sg**	**00 43 10.8**	**+0.4**
KAYN				IAML		00 43 14.0	
	comp=N,3μm,0.8s						
KAYN				IAML		00 43 14.0	
	comp=E,2μm,0.5s						
HRT	**Hereke**	**1.09**	**330**	PG	**Pg**	**00 42 55.7**	**-0.7**
AFYO	**Afyonkarahisar**	**1.09**	**184**	⇑*i*P	**Pb**	**00 42 56.3**	**-0.7**
AFYO				*i* S	**Sn**	**00 43 11.8**	**-1.3**
AFYO				IAML		00 43 16.0	
	comp=E,4μm,0.5s						
YUVA	**Yuva-Kibriscik**	**1.12**	**62**	PN	**Pg**	**00 42 56.6**	**-0.4**
GEDZ	**Gediz**	**1.13**	**222**	PN	**Pb**	**00 42 57.0**	**-0.5**
CFTB	**Yalova**	**1.14**	**314**	PN	**Pb**	**00 42 57.3**	**-0.5**
ORLT	**Orhaneli**	**1.16**	**279**	PN	**Pg**	**00 42 57.4**	**-0.3**
TRML	**Termal-Yalova**	**1.18**	**309**	PN	**Pb**	**00 42 57.9**	**-0.5**
KAND	**Kocaeli-Kandir**	**1.22**	**353**	⇑*i*P	**Pn**	**00 42 58.6**	**-0.7**
KAND				*i* S	**Sb**	**00 43 15.1**	**-0.1**
KAND				IAML		00 43 18.0	
	comp=N,2μm,1.0s						
KAND				IAML		00 43 20.0	
	comp=E,3μm,0.7s						
SHAP	**Saphane-Kutahy**	**1.24**	**227**	PN	**Pb**	**00 42 58.9**	**-0.7**
KIBS	**BOLU**	**1.25**	**64**	⇑*i*P	**Pn**	**00 42 58.7**	**-1.0**
KIBS				*i* S	**Sn**	**00 43 17.1**	**0.0**
MDNY	**Mudanya-Bursa**	**1.25**	**293**	PN	**Pn**	**00 42 59.1**	**-0.6**
SHUT	**Suhut-Afyon**	**1.33**	**174**	PN	**Pg**	**00 43 00.6**	**-0.4**
SIMA	**Simav-Kutahya**	**1.35**	**234**	PN	**Pb**	**00 43 00.9**	**-0.4**
YIGI	**Dzce**	**1.35**	**36**	⇑*i*P	**Pn**	**00 43 00.2**	**-0.9**
YIGI				*i* S	**Sg**	**00 43 20.8**	**+1.8**
YIGI				IAML		00 43 25.0	
	comp=E,1μm,0.4s						
YIGI				IAML		00 43 29.0	
	comp=N,1μm,0.5s						
DST	**Dursunbey**	**1.39**	**259**	PN	**Pn**	**00 43 01.2**	**-0.5**
SILT	**Sile**	**1.39**	**336**	PN	**Pn**	**00 43 01.5**	**-0.2**
DURS	**Dursunbey**	**1.50**	**260**	⇓*i*P	**Pn**	**00 43 03.1**	**-0.2**
DURS				*i* S	**Sg**	**00 43 25.9**	**+2.1**
DURS				IAML		00 43 26.0	
	comp=E,1μm,0.5s						
DURS				IAML		00 43 27.0	
	comp=N,1μm,0.5s						
DEMI	**Demirci**	**1.54**	**238**	⇓*i*P	**Pb**	**00 43 03.9**	**-0.7**
DEMI				*i* S	**Sg**	**00 43 25.4**	**+0.3**
KAVV	**Kandilli-Istan**	**1.56**	**320**	PN	**Pn**	**00 43 04.1**	**+0.2**
ISK	**Istanbul-Kandi**	**1.56**	**320**	P	**Pn**	**00 43 03.9**	**0.0**
ISK				S	**Sn**	**00 43 24.4**	**-0.1**
	comp=N,3μm,0.6s						
ISK	**Istanbul-Kandi**	**1.56**	**320**	PN	**Pn**	**00 43 03.9**	**0.0**
USAK	**Uak-Merkez**	**1.58**	**223**	⇓*i*P	**Pb**	**00 43 04.2**	**-1.0**
USAK				*i* S	**Sg**	**00 43 26.8**	**+0.7**
USAK				IAML		00 43 29.0	
	comp=E,1μm,0.6s						
USAK				IAML		00 43 30.0	
	comp=N,1μm,0.4s						
BCAM	**Yenicaga**	**1.59**	**53**	*i* P	**Pn**	**00 43 04.1**	**-0.3**
BCAM				*i* S	**Sb**	**00 43 26.3**	**+0.4**
KCTX	**Karacabey (Bur**	**1.60**	**285**	PN	**Pn**	**00 43 04.5**	**-0.1**
KZIL	**AFYON_Kizioren**	**1.63**	**187**	*i* P	**Pg**	**00 43 07.1**	**+0.3**
KZIL				*i* S	**Sg**	**00 43 31.2**	**+3.3**
KZIL				IAML		00 43 34.0	
	comp=E,483nm,0.7s						
KDZE	**Karadeniz Ereo**	**1.64**	**29**	PN	**Pn**	**00 43 04.7**	**-0.4**
KHAL	**Karahalli**	**1.66**	**205**	*i* P	**Pn**	**00 43 05.3**	**-0.1**
KHAL				*i* S	**Sg**	**00 43 30.0**	**+1.1**
GRDE	**Gerede-Bolu**	**1.67**	**56**	PN	**Pn**	**00 43 05.1**	**-0.5**
AVCI	**Avcilar-stanb**	**1.69**	**312**	PN	**Pn**	**00 43 05.5**	**-0.2**
KHL	**Karahalli**	**1.69**	**204**	PN	**Pn**	**00 43 05.4**	**-0.5**
KLYT	**Kilyos**	**1.71**	**324**	PN	**Pn**	**00 43 06.0**	**0.0**
CMDR	**Camlidere-ANKA**	**1.71**	**68**	*i* P	**Pn**	**00 43 06.2**	**0.0**
CMDR				*i* S	**Sg**	**00 43 32.9**	**+2.3**
YVAC	**Isparta, Yalva**	**1.74**	**157**	*i* P	**Pb**	**00 43 07.1**	**-0.9**
YVAC				*i* S	**Sg**	**00 43 31.7**	**+0.3**
DEVR	**Zonguldak/Devr**	**1.75**	**43**	*i* P	**Pb**	**00 43 07.5**	**-0.7**
DEVR				*i* S	**Sb**	**00 43 30.1**	**-0.3**
BGKT	**Bogazkoy**	**1.79**	**317**	PN	**Pn**	**00 43 06.9**	**-0.2**
LOD	**Lodumlu**	**1.83**	**89**	PN	**Pn**	**00 43 07.2**	**-0.5**
BR231	**Keskin MP Arra**	**1.84**	**90**		**Pn**	**00 43 07.9**	**0.0**
BAGO	**Egridir - ISPA**	**1.91**	**170**	*i* P	**Pb**	**00 43 09.8**	**-1.2**
BAGO				*i* S	**Sg**	**00 43 43.9**	**+7.0**
KULA	**Kula-Manisa**	**1.91**	**225**	P	**Pn**	**00 43 08.7**	**-0.2**
KULA	**Kula-Manisa**	**1.91**	**225**	PN	**Pn**	**00 43 08.6**	**-0.3**
BALB	**Balikesir**	**1.95**	**264**	PN	**Pn**	**00 43 09.2**	**-0.1**
ELBA	**Catalca**	**1.96**	**311**	*i* P	**Pn**	**00 43 09.6**	**+0.2**
ELBA				*i* S	**Sn**	**00 43 35.0**	**+0.6**
CTKS	**Kestanelik-??a**	**1.97**	**314**	PN	**Pn**	**00 43 09.4**	**-0.2**
BASM	**Basmaki-Afyon**	**1.98**	**188**	PN	**Pn**	**00 43 09.6**	**-0.1**
MANT	**Manisa**	**1.99**	**226**	*i* P	**Pn**	**00 43 09.9**	**-0.1**
MANT				*i* S	**Sg**	**00 43 40.2**	**+0.8**
MANT	**Manisa**	**1.99**	**226**	Pn	**Pn**	**00 43 10.2**	**+0.2**
EDC	**Edincik**	**1.99**	**284**	PN	**Pn**	**00 43 09.6**	**-0.3**
DOGA	**KONYA_Doganhis**	**2.03**	**150**	*i* P	**Pb**	**00 43 11.2**	**-1.8**
DOGA				*i* S	**Sg**	**00 43 43.6**	**+2.8**
ISP	**Isparta**	**2.06**	**177**	PN	**Pn**	**00 43 10.5**	**-0.4**
ISP	**Isparta**	**2.06**	**177**	P	**Pb**	**00 43 11.4**	**-2.1**
ISP	**Isparta**	**2.06**	**177**		**Pb**	**00 43 11.4**	**-2.1**
AFSR	**Afar-Bala (An**	**2.12**	**101**	PN	**Pn**	**00 43 11.3**	**-0.4**
BALY	**Balya**	**2.14**	**267**	*i* P	**Pn**	**00 43 11.8**	**-0.1**
BALY				*i* S	**Sg**	**00 43 44.5**	**+0.4**
SLVT	**Silivri**	**2.14**	**310**	PN	**Pn**	**00 43 11.9**	**0.0**
KBUK	**KARABUK-Merkez**	**2.18**	**51**	*i* P	**Pb**	**00 43 15.2**	**-0.3**
AKHS	**Akhisar**	**2.23**	**244**	*i* P	**Pn**	**00 43 13.2**	**0.0**
AKHS				*i* S	**Sg**	**00 43 47.9**	**+0.7**
GOMA	**Golmarmara-Man**	**2.25**	**239**	PN	**Pn**	**00 43 13.3**	**-0.1**
BTIN	**Bartın**	**2.25**	**38**	*i* P	**Pb**	**00 43 16.1**	**-0.7**
CTYL	**Yalikoy Yolu**	**2.25**	**316**	PN	**Pn**	**00 43 13.4**	**-0.1**
MRMT	**Marmara Adasi**	**2.25**	**290**	PN	**Pn**	**00 43 13.5**	**-0.1**
LADK	**Ladik-KONYA**	**2.28**	**137**	PN	**Pn**	**00 43 14.0**	**+0.1**
CHBY	**Cihanbeyli**	**2.34**	**123**	PN	**Pn**	**00 43 14.4**	**-0.3**
CRLT	**Corlu**	**2.38**	**303**	PN	**Pn**	**00 43 14.9**	**-0.3**
BCK	**Bucak**	**2.42**	**176**	PN	**Pn**	**00 43 15.6**	**-0.3**
KRBG	**Karabiga-Canak**	**2.42**	**283**	PN	**Pn**	**00 43 15.4**	**-0.4**
TKR	**Tekirdag**	**2.44**	**298**	PN	**Pn**	**00 43 15.8**	**-0.3**
MASR	**Amasra-Bartin**	**2.46**	**39**	PN	**Pn**	**00 43 16.1**	**-0.2**
KONT	**Konya--Tatoy**	**2.47**	**141**	PN	**Pn**	**00 43 16.4**	**-0.1**
BR131	**Keskin Array S**	**2.51**	**92**	*d i*P	**Pn**	**00 43 17.0**	**-0.2**
BR131	**Keskin Array S**	**2.51**	**92**	Pn	**Pn**	**00 43 17.1**	**0.0**
BRTR	**Keskin Array B**	**2.51**	**92**	Pn	**Pn**	**00 43 17.1**	**0.0**
	comp=E,9.6nm,0.3s,baz=259,slow=11,SNR=278						
BRTR				Pg	**Pg**	**00 43 23.9**	**+0.2**

	comp=E,18nm,0.3s,baz=273,slow=15,SNR=50						
BRTR				Lg	Lg	00 43 56.5	
	comp=E,14nm,0.3s,baz=268,slow=19,SNR=10						
BRTR				LR	LR	00 44 22.6	
	comp=E,44nm,20.2s,baz=283,slow=43						
BRTR	Keskin Array B	2.51	92	PN	Pn	00 43 17.2	0.0
BRTR	Keskin Array B	2.51	92	P	Pn	00 43 16.6	-0.5
BRTR	Keskin Array B	2.51	92	Pn	Pn	00 43 16.6	-0.5
MAR4	Marsite Statio	2.53	292	PN	Pn	00 43 16.7	-0.6
CANT	Cankiri	2.58	73	PN	Pn	00 43 17.9	-0.1
RKY	Sarkoy-Tekirda	2.58	289	PN	Pn	00 43 18.0	-0.1
SERE	Sereflikochisa	2.63	110	PN	Pn	00 43 18.6	-0.2
KURC	Kurucasile-Bar	2.66	42	PN	Pn	00 43 18.5	-0.5
ILGA	Ilgaz	2.80	64	Pn	Pn	00 43 20.7	-0.4
EZN	Ezine	3.13	270	P	Pn	00 43 25.8	+0.3
ELL	Elmali	3.15	187	P	Pn	00 43 27.8	+1.9
ELL	Elmali	3.15	187		Pn	00 43 27.8	+1.9
YER	Yerkesik	3.20	212	P	Pn	00 43 27.6	+1.0
PRK	Paraskevi	3.24	260	P	Pn	00 43 28.5	+1.4
ENEZ	Enez	3.35	286	P	Pn	00 43 28.8	+0.3
EDRB	Edirne	3.39	307	P	Pn	00 43 28.7	-0.4
FETY	Fethiye	3.40	198	P	Pn	00 43 30.8	+1.5
BZK	Bozkurt	3.44	52	⇑P	Pb	00 43 37.6	+0.7
GADA	Gvkgeada	3.46	277	P	Pn	00 43 30.6	+0.5
ALN	Alexandroupoli	3.47	288	P	Pn	00 43 30.4	+0.2
ALN	Alexandroupoli	3.47	288	P	Pn	00 43 30.3	+0.1
ALN	Alexandroupoli	3.47	288	Pn	Pn	00 43 30.3	+0.1
SIGR	SIGRI	3.57	261	P	Pn	00 43 34.2	+2.7
AKAS	Kas	3.69	190	Pn	Pn	00 43 35.9	+2.5
SMTH	Samothraki Isl	3.77	281	P	Pn	00 43 34.1	-0.2
RDO	Rodhopi	3.91	290	P	Pn	00 43 36.7	+0.5
LIA	Limnos Island	4.00	272	P	Pn	00 43 38.0	+0.5
ARG	Arkhangelos	4.07	207	P	Pn	00 43 40.5	+2.0
DIKM	Dikmen	4.10	63	⇑P	Pg	00 43 53.1	-0.9
THAS	Thassos island	4.40	281	P	Pn	00 43 42.6	-0.3
MFTR	Murfatlar	4.54	342	⇑P	Pn	00 43 47.2	+2.4
TOKA	Tokat	4.69	83		Pn	00 43 48.1	+1.0
APE	Apeiranthos	4.73	235	*i* P	Pn	00 43 46.5	-1.1
TIRR	Tirgusor	4.80	343	⇑P	Pn	00 43 49.1	+0.6
TIRR	Tirgusor	4.80	343	⇑P	Pn	00 43 49.1	+0.6
TIRR	Tirgusor	4.80	343	Pn	Pn	00 43 48.8	+0.3
OUR	Ouranopolis	4.93	277	P	Pn	00 43 50.2	-0.1
TLBR	Topalu	4.97	340	⇑P	Pn	00 43 51.3	+0.4
JURR	Jurilovca	5.01	348	⇓P	Pn	00 43 51.1	-0.3
KARP	Karpathos	5.02	212	Pn	Pn	00 43 52.3	+0.7
HARR	Harsova	5.14	340	⇑P	Pn	00 43 53.4	+0.3
HARR	Harsova	5.14	340	⇑P	Pn	00 43 53.4	+0.3
NVR	Nevrokopi	5.18	289	P	Pn	00 43 54.0	+0.3
TPGR	Topolog	5.18	344	⇑P	Pn	00 43 54.2	+0.4
SEV	Sevastopol'	5.26	27	⇓*e*P	Pn	00 43 54.6	-0.2
SEV				*e*S	Sn	00 44 52.2	-3.6
SRS	Serrai	5.33	286	P	Pn	00 43 55.9	+0.2
PLG	Polygyros	5.34	278	P	Pn	00 43 56.1	+0.1
YAL	Yalta	5.39	30	⇓*e*P	Pn	00 43 56.0	-0.5
YAL				*e*S	Sn	00 44 55.8	-3.1
TLCR		5.43	348	⇑P	Pn	00 43 58.1	+1.0
TLCR		5.43	348	⇑P	Pn	00 43 58.1	+1.0
CSS	Mathiatis	5.44	154	Pn	Pn	00 43 58.1	+0.8
SOH	Sokhos	5.46	282	P	Pn	00 43 57.8	+0.3
CFR	Carcaliu	5.55	343	⇑P	Pn	00 43 59.0	+0.2
CFR	Carcaliu	5.55	343	⇑P	Pn	00 43 59.0	+0.2
HORT	Hortiatis	5.62	280	P	Pn	00 44 00.0	+0.1
ALU	Alushta	5.65	31	*e*P	Pn	00 43 59.8	-0.3
ALU				*e*S	Sn	00 45 02.8	-2.5
SIM	Simferopol'	5.77	27	⇓*i*P	Pn	00 44 01.4	-0.4
SIM				*i* S	Sn	00 45 05.3	-3.0
KNT	Kendrikon	5.85	285	P	Pn	00 44 03.4	+0.5
ISR	Istrita	5.96	333	⇑P	Pn	00 44 07.5	+3.1
ISR	Istrita	5.96	333	⇑P	Pn	00 44 07.5	+3.1
VTS	Vitosha	6.04	299	⇓P	Pn	00 44 07.0	+1.3
VTS	Vitosha	6.04	299	⇓P	Pn	00 44 07.0	+1.3
SUDU	Sudak	6.06	33	⇓*e*P	Pn	00 44 05.1	-0.7
SUDU				*e*S	Sn	00 45 12.4	-3.1
LIT	Litokhoron	6.07	275	P	Pn	00 44 05.8	-0.2
LIT	Litokhoron	6.07	275	Pn	Pn	00 44 05.8	-0.2
VAY	Valandovo	6.12	286	*i* Pn	Pn	00 44 06.8	+0.2
HUMR	Humele	6.14	321	⇓P	Pn	00 44 07.9	+1.0
BISRR	Bisoca	6.28	336	⇑P	Pn	00 44 10.0	+1.1
PETR	Petresti	6.28	339	⇓P	Pn	00 44 12.8	+4.0
AGG	Agios Georgios	6.29	265	P	Pn	00 44 09.9	+0.8
AGG	Agios Georgios	6.29	265	Pn	Pn	00 44 09.9	+0.8
VARL	Varlezi	6.30	344	⇑P	Pn	00 44 12.6	+3.6
NEHR	Nehoiu	6.31	333	⇓P	Pb	00 44 18.4	-7.5
FEO	Feodosiya	6.33	34	⇑*e*P	Pn	00 44 09.9	+0.4
FEO				*e*S	Sn	00 45 19.5	-2.6
STIP	Stip	6.48	289	*i* Pn	Pn	00 44 09.6	-2.0
MLR	Muntele Rosu	6.49	331	Pn	Pn	00 44 12.7	+0.8
	comp=E,0.3nm,0.3s,baz=120,slow=21,SNR=3.6						
MLR				Sn	Sn	00 45 27.1	+0.7
	comp=E,0.6nm,0.3s,baz=1.8,slow=23,SNR=1.0						
MLR				Lg	Lg	00 46 06.1	
	comp=E,0.4nm,0.3s,baz=28,slow=19,SNR=2.6						
MLR				LR	LR	00 47 32.9	
	comp=E,167nm,18.8s,baz=74,slow=46						
MLR	Muntele Rosu	6.49	331	⇑P	Pb	00 44 21.1	-7.9
MLR	Muntele Rosu	6.49	331		Pn	00 44 12.4	+0.6
VRI	Vrincioaia	6.56	337	⇓P	Pn	00 44 13.4	+0.7
VRI	Vrincioaia	6.56	337	⇓P	Pn	00 44 13.4	+0.7
PLOR	Plostina	6.57	337	⇓P	Pn	00 44 20.8	+8.0
PLOR	Plostina	6.57	337	⇓P	Pn	00 44 20.8	+8.0
MTUR	Matau	6.63	325	⇓P	Pn	00 44 15.4	+1.7
MTUR	Matau	6.63	325	⇓P	Pn	00 44 15.4	+1.7
BIR	Birlad	6.70	343	⇑P	Pn	00 44 15.4	+0.9
BIR	Birlad	6.70	343	⇑P	Pn	00 44 15.4	+0.9
VOIR		6.80	326	⇑P	Pn	00 44 24.6	+8.5
VOIR		6.80	326	⇑P	Pn	00 44 24.6	+8.5
ARR	Arges	6.93	324	⇑P	Pn	00 44 18.9	+1.1
FNA	Florina	6.94	280	P	Pn	00 44 19.1	+1.1
FNA	Florina	6.94	280		Pn	00 44 19.1	+1.1
VASR	Vaslui	7.02	345	⇑P	Pn	00 44 19.7	+0.8
OZUR		7.07	333	⇑P	Pn	00 44 20.7	+1.0
DOPR	Dopca	7.10	331	⇑P	Pn	00 44 21.3	+1.2
MILM	Milestii Mici	7.13	351	⇑P	Pn	00 44 25.2	+4.7
ITM	Ithomi	7.16	251	Pn	Pn	00 44 22.4	+1.5
TESR	Tescani	7.17	339	⇑P	Pn	00 44 21.3	+0.3
ANN	Anapa	7.17	44	*e*P	Pn	00 44 22.2	+1.2
ANN				*e*S	Sn	00 45 46.4	+3.6
ANN				pmax	pmax		
	comp=Z,17nm,0.9s						
LOT	Lotru	7.40	321	⇓P	Pn	00 44 25.2	+0.9
MDB	Medias	7.65	327	⇑P	Pn	00 44 31.1	+3.5
MDB	Medias	7.65	327	⇑P	Pn	00 44 31.1	+3.5
BIZ	Bicaz	7.71	338	⇑P	Pn	00 44 29.2	+0.7
GZR	Gura Zlata	7.86	317	⇑P	Pn	00 44 34.0	+3.5
MMAI	Mount Meron Ar	7.95	148	Pn	Pn	00 44 31.6	-0.3
	comp=Z,1.5nm,0.3s,baz=329,slow=12,SNR=18						
MMAI				Sn	Sn	00 46 01.3	-1.0
	comp=Z,0.2nm,0.3s,baz=305,slow=28,SNR=2.0						
MMAI				LR	LR	00 48 02.4	
	comp=Z,81nm,18.4s,baz=310,slow=41						
SORM	Soroca	8.38	351	⇑P	Pn	00 44 38.3	+0.7
SORM	Soroca	8.38	351	⇑P	Pn	00 44 38.3	+0.7
ARCR	ARCALIA	8.43	331	⇑P	Pn	00 44 40.6	+2.2
BURAR	Bucovina Array	8.59	336	⇓P	Pn	00 44 42.7	+2.1
BURAR	Bucovina Array	8.59	336	⇓P	Pn	00 44 42.7	+2.1
BURAR	Bucovina Array	8.59	336	Pn	Pn	00 44 41.6	+1.1
BUR08	Bucovina Ar. S	8.62	336	Pn	Pn	00 44 42.1	+1.1
DIVS	Divibare	8.81	302	Pn	Pn	00 44 44.0	+0.4
SCTE	Santa Cesarea	9.15	275	Pn	Pn	00 44 49.6	+1.4
KBZ	Khabaz	10.10	64	LR	LR	00 49 32.1	
	comp=Z,52nm,18.4s,baz=34,slow=41						
KOLS	Kolonicke sedl	10.74	330	*e*P	Pn	00 45 13.7	+3.7
KOLS	Kolonicke sedl	10.74	330	*e*PN	Pn	00 45 13.7	+3.7
EIL	Elat	10.85	158	Pn	Pn	00 45 11.0	-0.6
	comp=Z,0.2nm,0.3s,baz=356,slow=14,SNR=2.4						
EIL				LR	LR	00 51 05.5	
	comp=Z,53nm,18.1s,baz=334,slow=47						
AKASG	Malin Array Be	10.85	356	Pn	Pn	00 45 08.8	-2.7
	comp=Z,1.6nm,0.3s,baz=174,slow=12,SNR=7.1						
AKASG				Sn	Sn	00 47 07.4	-5.8
	comp=Z,2.4nm,0.3s,baz=164,slow=25,SNR=5.2						
AKASG	Malin Array Be	10.85	356	*i* P	Pn	00 45 13.1	+1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	10.85	356		Pn	00 45 11.5	0.0
AKBB	Malin Array Si	10.85	356	P	Pn	00 45 10.7	-0.8
AKBB	Malin Array Si	10.85	356	Pn	Pn	00 45 10.7	-0.8
LVV	L'vov	10.91	338	*e*P	Pn	00 45 17.7	+5.4
VYHS	Vyhne	11.94	320	*e*P	Pn	00 45 29.2	+2.8
VYHS	Vyhne	11.94	320	*e*PN	Pn	00 45 29.2	+2.8
VSR	Storozhevoye	12.89	25	*e*P	Pn	00 45 45.4	+6.1
VSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VRAC	Vranov	13.60	318	LR	LR	00 51 37.9	
	comp=Z,103nm,21.5s,baz=131,slow=40						
VRH	Novokhopyorsk	13.81	31	*e*P	Pn	00 45 49.9	-2.0
VRH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LPSR	Galich'ya Gora	14.02	22	*e*P	Pn	00 45 53.3	-1.3
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GERES	GERESS Array B	14.90	312	LR	LR	00 51 44.7	
	comp=Z,104nm,18.4s,baz=250,slow=37						
BELG	Belogornoye	17.24	38	P	Pn	00 46 37.1	+0.1
	comp=Z,0.2nm,0.3s,baz=291,slow=5.8,SNR=4.0						
BELG	Belogornoye	17.24	38	*i* P	P	00 46 37.8	-0.7
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SSB	Saint Sauveur	19.74	294	P	P	00 47 05.7	-0.5
SSB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SSB	Saint Sauveur	19.74	294	P	P	00 47 05.7	-0.5
RAYN	Ar Rayn	20.72	137	P	P	00 47 16.0	-0.9
RAYN				pmax	pmax		
	comp=Z,12nm,1.1s						
RAYN	Ar Rayn	20.72	137	P	P	00 47 16.0	-0.9
RAYN				IAmb	IAmb	00 47 22.3	
	comp=Z,12nm,1.1s						
GEYT	Alibeck	21.64	86	P	P	00 47 28.5	+1.8
	comp=Z,2.8nm,0.7s,baz=304,slow=11,SNR=5.9						
GEYT	Alibeck	21.64	86	P	P	00 47 28.2	+1.5
GYA0B	ALIBECK ARRAY	21.64	86	P	P	00 47 29.3	+2.6
GYA0B				IAmb	IAmb	00 47 34.1	
	comp=Z,4.1nm,0.6s						
KLMR	Klimovskoe	21.75	12	*e*P	P	00 47 26.8	-0.8
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	Klimovskoe	21.75	12	*e*P	P	00 47 26.9	-0.7
KLMR				AMP		00 47 42.1	
	comp=Z,18nm,1.3s						
FINES	FINESS Array B	21.75	354	P	P	00 47 25.1	-2.5
	comp=Z,1.3nm,0.5s,baz=167,slow=12,SNR=7.3						
FINES	FINESS Array B	21.75	354	P	P	00 47 25.5	-2.2
FIA1	FINESS Array S	21.75	354	P	P	00 47 26.9	-0.8
FIA1				IAmb	IAmb	00 47 39.4	
	comp=Z,13nm,1.1s						
AKTO	Aktyubinsk	22.03	52	P	P	00 47 29.4	-1.4
	comp=Z,1.0nm,0.6s,baz=271,slow=16,SNR=3.1						
ABKAR	Akbulak array	22.92	56	P	P	00 47 41.4	+1.1
ABKAR	Akbulak array	22.92	56	P	P	00 47 39.9	-0.4
NC602	NORSAR Array S	23.93	337	P	P	00 47 51.0	+0.8
NC602				IAmb	IAmb	00 48 10.9	
	comp=Z,12nm,0.8s						
NC405	NORSAR Array S	24.18	338	P	P	00 47 53.3	+0.7
NC405				IAmb	IAmb	00 48 05.7	
	comp=Z,16nm,1.0s						
NAO01	NORSAR Array S	24.21	337	P	P	00 47 52.7	-0.2
NB201	NORSAR Array S	24.25	337	P	P	00 47 52.9	-0.4
NB201				IAmb	IAmb	00 47 56.6	
	comp=Z,14nm,1.0s						
NOA	NORSAR Array B	24.27	337	P	P	00 47 51.5	-1.9
	comp=Z,2.1nm,0.9s,baz=141,slow=8.6,SNR=4.0						
NBO00	NORSAR Array S	24.39	337	P	P	00 47 54.2	-0.4
ARU	Arti	24.79	39	P	P	00 47 57.7	-0.4
	comp=Z,1.8nm,0.5s,baz=226,slow=5.2,SNR=11						
ARU	Arti	24.79	39	*d* *i*P	P	00 47 59.0	+0.9
ARU						00 48 33.5	
ARU				S	S	00 52 23.0	+2.2
ARU				SS	SnSn	00 53 14.8	+7.7
ARU				pmax	pmax		
	comp=Z,12nm,1.5s						
ARU	Arti	24.79	39	P	P	00 47 58.7	+0.6
ARU				IAmb	IAmb	00 48 01.0	
	comp=Z,5.7nm,0.7s						
SVE	Sverdlovsk	25.98	39	*e*P	P	00 48 10.6	+1.6
SVE				pmax	pmax		
	comp=Z,10.0nm,1.0s						
UOSS	Minazif	26.27	117	P	P	00 48 11.9	0.0
UOSS				IAmb	IAmb	00 48 26.6	
	comp=Z,3.4nm,0.8s						
ESBB	Sonseca Array	26.31	281	P	P	00 48 12.6	+0.4
ESBB				IAmb	IAmb	00 48 18.7	
	comp=Z,7.3nm,1.1s						
ESDC	Sonseca Array	26.31	281	P	P	00 48 11.2	-1.0
	comp=Z,1.8nm,0.7s,baz=67,slow=9.0,SNR=13						
ARCES	ARCESS Array B	29.83	357	LR	LR	01 00 42.0	
	comp=Z,68nm,18.5s,baz=290,slow=36						
KKAR	Karatay Array	30.03	71	P	P	00 48 46.3	+1.0
KKAR	Karatay Array	30.03	71	P	P	00 48 46.3	+1.0
AAK	Ala-Archa	32.99	71	*i* P	P	00 49 10.6	-1.0
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	32.99	71	P	P	00 49 13.2	+1.6
AAK				IAmb	IAmb	00 49 19.4	
	comp=Z,3.3nm,1.1s						
KURK	Kurchatov	35.03	56	*i* P	P	00 49 26.7	-2.3
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	35.03	56	P	P	00 49 29.5	+0.5
TOA0	Torodi Ar. Sit	36.69	232	P	P	00 49 44.0	+0.5
TOA0				IAmb	IAmb	00 49 46.7	
	comp=Z,3.7nm,0.8s						
TORD	Torodi Ar. Bea	36.69	232	P	P	00 49 43.5	-0.1
	comp=Z,3.0nm,0.6s,baz=37,slow=9.2,SNR=11						
TORD				LR	LR	01 07 42.1	
	comp=Z,37nm,18.3s,baz=320,slow=41						
TORD	Torodi Ar. Bea	36.69	232	P	P	00 49 44.0	+0.5
MK31	Makanchi Array	37.79	62	*i* P	P	00 49 52.4	-0.3
MKAR	Makanchi Array	37.79	62	P	P	00 49 52.8	+0.1
	comp=Z,1.1nm,0.6s,baz=271,slow=8.3,SNR=17						
MKAR	Makanchi Array	37.79	62	P	P	00 49 52.9	+0.2
MKAR	Makanchi Array	37.79	62	P	P	00 49 52.9	+0.2
ZALV	Zalesovo Beam	38.77	50	P	P	00 49 59.4	-1.3
	comp=Z,1.0nm,0.6s,baz=270,slow=8.5,SNR=5.1						
ZALV	Zalesovo Beam	38.77	50	*i* P	P	00 50 00.4	-0.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	38.77	50	P	P	00 50 01.1	+0.4
KOWA	Kowa	39.30	240	P	P	00 50 06.4	+0.8
DGZ	Jazzator, Alta	40.76	57	*i* P	P	00 50 14.9	-2.6
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.9s						
DBIC	Dimbokro	45.74	233	P	P	00 50 57.1	-0.8
	comp=Z,2.3nm,0.9s,baz=318,slow=7.4,SNR=3.8						
DBIC	Dimbokro	45.74	233	IAmb	IAmb	00 51 09.9	
	comp=Z,4.7nm,1.1s						
SONM	Songino Array	53.32	55	P	P	00 51 55.3	-0.4
	comp=Z,0.6nm,0.7s,baz=269,slow=6.5,SNR=5.1						
SONM	Songino Array	53.32	55	IAmb	IAmb	00 51 58.1	
	comp=Z,0.7nm,0.9s						
TULEG	Thule	53.70	343	P	P	00 51 57.8	0.0
TULEG				IAmb	IAmb	00 52 02.2	
	comp=Z,4.0nm,0.7s						
ULN	Ulaanbaatar	53.73	54	*i* P	P	00 51 58.4	-0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GGN	Saint George	67.52	311	P	P	00 53 32.8	+0.2
SEY	Seymchan	67.58	25	*i* P	P	00 53 32.0	-0.7
E63A	Oxbow	67.69	312	P	P	00 53 34.6	+1.0
KSRS	Korea Array	72.16	56	P	P	00 54 00.4	-0.8
	comp=Z,2.1nm,0.8s,baz=308,slow=5.0,SNR=4.1						
SUR	Sutherland	72.44	188	P	P	00 54 03.8	+0.8
YKA	Yellowknife Ar	74.16	344	P	P	00 54 12.2	-0.4
	comp=Z,1.5nm,0.9s,baz=31,slow=5.5,SNR=8.4						
IMAR	Indian Mountai	74.42	2	P	P	00 54 14.7	+0.6
GAMB	Gambell	75.20	10	P	P	00 54 18.3	-0.3
ILAR	Eielson Array	75.67	359	P	P	00 54 20.4	-0.9
	comp=Z,0.2nm,0.8s,baz=340,slow=5.0,SNR=1.9						
ASAJ	Asahikawa	76.50	43	LR	LR	01 31 46.6	
	comp=Z,21nm,19.4s,baz=196,slow=39						

*UPP **17** 00:49:20.6±0.0, 67°.82N×20°.20E, h0*^{km}*, ML2.2, Explosion*
*IDC **17** 00:49:21.5±1.1, 67°.85N×20°.87E, h0*^{km}*, mb1 3.5/4, mb1mx3.1/41, mbtmp3.4/4, ML2.4/4, Error ellipse: s-maj=16.7km s-min=7.6km az=110.0*
*KOLA **17** 00:49:21.3, 68°.40N×20°.37E, h0*^{km}*, ML2.4, Sweden, Lapland*
*HEL **17** 00:49:21.3±0.0, 67°.83N×20°.19E, h0*^{km}*, ML2.1, ML2.2(UPP), Explosion*
ISC 17 00:49:20.3±0.7, **67°.81N**±0°.03×**20°.23E**±0°.02, **h0**^{km}**, n26,** σ**0^{s}.88**/37, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.24	274	P	Pg	00 49 25.3	+0.3
RATU				S	Sg	00 49 28.5	+0.4
RATU	Laukkuluspa	0.24	274	*i* P	Pg	00 49 25.3	+0.3
RATU				*i* S	Sg	00 49 28.5	+0.4
KOVU	Salmi	0.42	356	P	Pg	00 49 28.3	0.0
KOVU	Salmi	0.42	356	*i* P	Pg	00 49 28.3	0.0
NIKU	Nikkaluokta	0.46	278	P	Pg	00 49 29.1	0.0
NIKU				S	Sg	00 49 35.5	+0.5
NIKU	Nikkaluokta	0.46	278	*i* P	Pg	00 49 29.1	0.0
NIKU				*i* S	Sg	00 49 35.5	+0.5
DUNU	Dundret	0.70	169	P	Pg	00 49 34.0	+0.3
DUNU	Dundret	0.70	169	*i* P	Pg	00 49 34.0	+0.3
LANU	Lannavaara	0.71	69	P	Pg	00 49 34.0	+0.2
LANU	Lannavaara	0.71	69	*e*P	Pg	00 49 33.9	0.0
LANU				*e*S	Sg	00 49 43.2	+0.2
MASU	Masugnsbyn	0.76	117	P	Pg	00 49 35.5	+0.6
MASU				S	Sg	00 49 45.6	+0.9
MASU	Masugnsbyn	0.76	117	*i* P	Pg	00 49 35.5	+0.6
MASU				*i* S	Sg	00 49 45.6	+0.9
SALU	Saltoluokta	0.79	238	*e*P	Pg	00 49 34.3	-1.1
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	00 49 43.7	0.0
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	00 49 43.8	+0.1
KIF				*e*S	Sg	00 49 59.6	+0.1
KIF				MSG		00 50 02.9	
	comp=Z,21nm,0.1s						
KLF	Kolari	1.55	110	*e*P	Pn	00 49 49.0	0.0
KLF				*e*SB	Sg	00 50 10.3	+0.4
TOF	Tornio	2.37	135	*e*SB	Sb	00 50 32.6	-0.9
TOF				MSG		00 50 34.8	
	comp=Z,8.4nm,0.2s						
SGF	Sodankyl	2.44	96	*e*S	Sn	00 50 32.5	+0.8
RNF	Rovaniemi	2.55	115	*e*SB	Sb	00 50 37.5	-1.3
ARCES	ARCESS Array B	2.59	46	Pn	Pn	00 50 03.9	+0.4
	baz=228,slow=13,SNR=17						
ARCES				Lg	Lg	00 50 35.3	
	baz=230,slow=24,SNR=21						
KONS	Konsvik	3.07	248	*e*P	Pb	00 50 16.4	+0.7
HAMF	Hammerfest	3.10	22	*e*P	Pn	00 50 12.2	+1.8
APA0	Apatity Array	4.86	86	P	Pn	00 50 33.8	-0.8
APA0				S	Sn	00 51 28.2	-3.3
FINES	FINESS Array B	6.86	156	Pn	Pn	00 51 03.0	+1.0
	comp=Z,0.2nm,0.3s,baz=343,slow=11,SNR=7.0						
FINES				Sn	Sn	00 52 19.8	-0.9
	comp=Z,0.2nm,0.3s,baz=350,slow=23,SNR=1.4						
FINES				Lg	Lg	00 52 53.4	
	comp=Z,0.3nm,0.3s,baz=349,slow=28,SNR=2.0						
NOA	NORSAR Array B	7.83	214	Pn	Pn	00 51 15.2	-0.1
	comp=Z,0.0nm,0.3s,baz=28,slow=14,SNR=1.8						
NOA				Lg	Lg	00 53 25.5	
	comp=Z,0.0nm,0.3s,baz=82,slow=9.4,SNR=1.6						
SPITS	Spitsbergen Ar	10.48	356	Pn	Pn	00 51 50.6	-1.0
	baz=168,slow=29,SNR=2.0						

*NEIC **17** 01:04:17.5±0.7, 36°.92N±0°.04×98°.02W±0°.04, h6*^{km}*±5*^{km}*, Error ellipse: s-maj=6.4km s-min=4.1km az=198.0*
*ANF **17** 01:04:17.6±0.3, 36°.92N×98°.06W, h0*^{km}*, ML3.8/8, Error ellipse: s-maj=3.8km s-min=3.4km az=110.0*
*TUL **17** 01:04:17.1±0.9, 36°.93N±0°.04×98°.03W±0°.04, h5*^{km}*±5*^{km}*, ML3.2, mb_Lg3.0/65(NEIC), Error ellipse: s-maj=6.1km s-min=3.9km az=192.0*
ISC 17 01:04:17.3±1.0, **36°.91N**±0°.02×**98°.04W**±0°.03, **h7**^{km}±8^{km}**, n80,** σ**0^{s}.78**/73, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.08	56		Pg	01 04 19.0	-0.3
KAN10	Anthony SW Sta	0.21	349		Pg	01 04 21.5	-0.1
KAN08	Anthony NE Sta	0.32	10		Pg	01 04 23.5	-0.1
KAN08				Sg	Sg	01 04 27.9	0.0
KAN01	Argonia South	0.33	43		Pg	01 04 23.6	-0.2
KAN12	Harper NE Stat	0.39	5		Pg	01 04 24.6	-0.3
KAN12				Sg	Sg	01 04 29.8	-0.1
CROK	Carrier	0.41	173		Pg	01 04 25.8	+0.5
KAN13	South Haven SW	0.46	77		Pg	01 04 26.0	-0.3
U32A	Winter Ranch,	0.94	236		Pg	01 04 35.2	-0.1
U32A				Sg	Sg	01 04 48.0	+0.5
U32A	Winter Ranch,	0.94	236	P		01 04 35.1	
	baz=54						
U32A				S		01 04 48.3	
	baz=54						
OK029	Liberty Lake	1.21	157		Pg	01 04 39.6	-0.9
T35A	Sooner Cattle	1.23	89		Pg	01 04 39.8	-1.0
T35B	Sooner Cattle	1.23	89	P		01 04 39.9	
	baz=271						
T35B				S		01 04 56.3	
	baz=271						
BCOK	Bluff Creek, N	1.30	164		Pn	01 04 41.6	-0.3
QUOK	Quay	1.30	124		Pn	01 04 41.6	-0.3
OK031	S. Brethren Rd	1.36	134		Pn	01 04 42.6	-0.1
OK030	Cody Creek RV	1.41	134		Pn	01 04 43.3	-0.2
OK025	Westminster Rd	1.45	157		Pn	01 04 44.0	+0.1
OKCFA	Oklahoma City	1.57	162		Pn	01 04 45.8	+0.2
OKCSW	OKLAHOMA CITY	1.58	162		Pn	01 04 46.1	+0.3
R32A	Long Quarter,	1.60	341	Pn	Pn	01 04 46.3	+0.3
R32A	Long Quarter,	1.60	341	P		01 04 46.4	
	baz=160						
R32A				S		01 05 07.4	
	baz=160						
W35A	Tecumseh	2.00	151	Pn	Pn	01 04 51.8	+0.3
TUL1	Leonard	2.07	118	P	Pn	01 04 53.9	+1.4
	baz=300						
TUL1				S	Sb	01 05 21.9	+0.7
	baz=300						
TUL1	Leonard	2.07	118		Pn	01 04 52.9	+0.4
TUL1				IAmb_Lg		01 05 23.6	
	comp=Z,86nm,0.9s						
TUL1	Leonard	2.07	118	P		01 04 53.9	
	baz=300						
TUL1				S		01 05 22.0	
	baz=300						
WMOK	Wichita Mounta	2.25	196	S	Sb	01 05 25.6	-0.8
	baz=15						
WMOK	Wichita Mounta	2.25	196	Pn	Pn	01 04 55.3	+0.3
WMOK	Wichita Mounta	2.25	196	P		01 04 55.9	
	baz=15						
CBKS	Cedar Bluff	2.32	325	P	Pn	01 04 56.8	+0.8
	baz=144						
CBKS				S	Sn	01 05 26.5	+1.6
	baz=144						
CBKS	Cedar Bluff	2.32	325		Pn	01 04 56.2	+0.2
CBKS	Cedar Bluff	2.32	325	P		01 04 56.7	
	baz=144						
KSU1	Kansas State U	2.46	27	P	Pn	01 04 58.5	+0.7
	baz=208						
KSU1				S	Sb	01 05 32.3	-0.1
	baz=208						
KSU1	Kansas State U	2.46	27	Pn	Pn	01 04 57.7	-0.1
KSU1				IAmb_Lg		01 05 34.8	
	comp=Z,76nm,0.8s						
U38A	Gravette	2.98	98		Pn	01 05 06.0	+1.0
X37A	Clayton	3.18	136		Pn	01 05 08.6	+0.9
X37A				IAmb_Lg		01 06 04.8	
	comp=Z,34nm,0.8s						
X37A	Clayton	3.18	136	P		01 05 08.2	
	baz=318						
HHAR	Hobbs	3.36	100		Pn	01 05 10.4	+0.2
AMTX	Amarillo	3.58	237	Pb	Pb	01 05 22.5	+1.5
	baz=54						
AMTX				Sb	Sg	01 06 09.9	-2.5
	baz=54						
AMTX	Amarillo	3.58	237		Pn	01 05 13.9	+0.5
AMTX				IAmb_Lg		01 06 17.6	
	comp=Z,26nm,0.7s						
Z35A	Perchaven, San	3.63	170	Pn	Pn	01 05 14.0	+0.1
Z35A	Perchaven, San	3.63	170	P		01 05 15.0	
	baz=350						
Z35A				S		01 05 58.7	
	baz=350						
S39A	Bolivar	3.84	77	Pn	Pn	01 05 16.9	+0.1
S39A	Bolivar	3.84	77	P		01 05 16.9	
	baz=260						
N33A	J Bar K, Exete	3.85	7	Pn	Pn	01 05 17.0	+0.1
W39A	Magazine	3.85	115	P	Pn	01 05 18.4	+1.5
	baz=298						
W39A	Magazine	3.85	115	Pn	Pn	01 05 18.0	+1.0
KSCO	Kaye Shedlock'	4.18	301	Pn	Pn	01 05 22.2	+0.5
KSCO					LR	01 06 30.4	
KSCO				IAmb_Lg		01 06 38.5	
	comp=Z,28nm,0.8s						
U40A	Yellville	4.21	96	P	Pn	01 05 22.2	+0.3
	baz=279						
U40A	Yellville	4.21	96	Pn	Pn	01 05 22.2	+0.3

U40A				IAmb_Lg		01 06 38.7	
	comp=Z,33nm,0.8s						
U40A	**Yellville**	**4.21**	**96**	P		01 05 22.2	
	baz=279						
U40A				P		01 05 22.2	
	baz=279						
MIAR	**Mount Ida**	**4.33**	**122**	Pn	**Pn**	**01 05 23.4**	**-0.2**
MIAR				IAmb_Lg		01 06 37.3	
	comp=Z,25nm,0.8s						
N35A	**Tabor**	**4.36**	**25**	Pn	**Pn**	**01 05 24.3**	**+0.3**
N35A					**Sb**	**01 06 26.1**	**-1.1**
Z38A	**Mt. Pleasant**	**4.42**	**145**	IAmb_Lg		01 06 49.7	
	comp=Z,20nm,0.8s						
P38A	**Dawn**	**4.46**	**51**	Pn	**Pn**	**01 05 25.8**	**+0.4**
P38A				IAmb_Lg		01 06 41.5	
	comp=Z,20nm,0.7s						
P38A	**Dawn**	**4.46**	**51**	P		01 05 25.6	
	baz=234						
ABTX	**Abilene, Hawle**	**4.48**	**198**	Pn	**Pn**	**01 05 26.2**	**+0.6**
ABTX					LR	01 06 35.8	
ABTX				IAmb_Lg		01 06 44.2	
	comp=Z,38nm,1.3s						
BGNE	**Belgrade**	**4.49**	**359**	Pn	**Pn**	**01 05 26.1**	**+0.4**
BGNE					LR	01 06 37.0	
BGNE				IAmb_Lg		01 06 47.9	
	comp=Z,41nm,0.8s						
BGNE	**Belgrade**	**4.49**	**359**	P		01 05 26.6	
	baz=179						
MGMO	**Mountain Grove**	**4.63**	**85**		**Pn**	**01 05 28.1**	**+0.5**
MGMO				IAmb_Lg		01 06 42.3	
	comp=Z,28nm,0.8s						
R40A	**Maddies Statio**	**4.79**	**72**		**Pn**	**01 05 29.9**	**+0.1**
R40A	**Maddies Statio**	**4.79**	**72**	P		01 05 29.9	
	baz=255						
MSTX	**Muleshoe**	**4.85**	**234**	Pn	**Pn**	**01 05 32.0**	**+1.2**
X40A	**Basin Creek Fa**	**4.88**	**118**	Pn	**Pn**	**01 05 31.1**	**-0.1**
X40A				IAmb_Lg		01 06 56.3	
	comp=Z,30nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.88**	**100**	Pn	**Pn**	**01 05 31.8**	**+0.7**
FCAR					**Sn**	**01 06 26.0**	**-1.9**
FCAR				IAmb_Lg		01 06 51.7	
	comp=Z,32nm,0.7s						
WHAR	**Wooly Hollow**	**4.93**	**107**	Pn	**Pn**	**01 05 32.7**	**+0.8**
WHAR					**Sb**	**01 06 44.0**	**+0.5**
WHAR				IAmb_Lg		01 07 02.4	
	comp=Z,23nm,0.9s						
WHTX	**Lake Whitney,**	**4.93**	**174**	P	**Pn**	**01 05 32.2**	**+0.4**
	baz=355						
WHTX	**Lake Whitney,**	**4.93**	**174**	Pn	**Pn**	**01 05 32.2**	**+0.4**
WHTX	**Lake Whitney,**	**4.93**	**174**	P		01 05 32.2	
	baz=355						
W41B	**Gary Mavity, V**	**5.01**	**109**	Pn	**Pn**	**01 05 33.8**	**+1.0**
W41B				IAmb_Lg		01 07 04.9	
	comp=Z,18nm,0.8s						
OGNE	**Ogallala**	**5.09**	**324**	Pn	**Pn**	**01 05 34.3**	**+0.2**
OGNE				IAmb_Lg		01 07 07.5	
	comp=Z,24nm,0.9s						
T25A	**Trinidad**	**5.10**	**274**	Pn	**Pn**	**01 05 35.0**	**+0.6**
T25A				IAmb_Lg		01 07 10.8	
	comp=Z,17nm,0.8s						
WLAR	**White Oak Lake**	**5.16**	**127**	IAmb_Lg		01 07 14.6	
	comp=Z,23nm,1.0s						
L34A	**Svendsen Farm,**	**5.21**	**14**	Pn	**Pn**	**01 05 35.3**	**-0.3**
L34A				IAmb_Lg		01 07 00.3	
	comp=Z,22nm,0.7s						
N38A	**Joes South For**	**5.39**	**43**	Pn	**Pn**	**01 05 38.1**	**0.0**
N38A				IAmb_Lg		01 07 20.7	
	comp=Z,26nm,0.8s						
N38A	**Joes South For**	**5.39**	**43**	P		01 05 38.0	
	baz=226						
P40A	**Paris**	**5.39**	**59**	Pn	**Pn**	**01 05 37.3**	**-0.8**
P40A				IAmb_Lg		01 07 08.8	
	comp=Z,16nm,0.8s						
CCM	**Cathedral Cave**	**5.53**	**76**	Pn	**Pn**	**01 05 40.0**	**+0.1**
T42A	**Van Buren**	**5.57**	**87**	Pn	**Pn**	**01 05 41.2**	**+0.7**
T42A				IAmb_Lg		01 07 24.0	
	comp=Z,15nm,0.8s						
LCAR	**Lake Charles**	**5.61**	**97**	Pn	**Pn**	**01 05 42.3**	**+1.2**
Z41A	**Richland Creek**	**5.63**	**129**	IAmb_Lg		01 07 28.0	
	comp=Z,16nm,0.8s						
K31A	**O'Neill**	**5.73**	**355**	IAmb_Lg		01 07 32.7	
	comp=Z,29nm,0.8s						
435B	**Jarrell**	**6.13**	**176**	IAmb_Lg		01 07 48.8	
	comp=Z,13nm,0.8s						
SCIA	**State Center**	**6.23**	**35**	IAmb_Lg		01 07 44.9	
	comp=Z,23nm,0.8s						
X43A	**Marvell**	**6.30**	**110**	IAmb_Lg		01 07 45.7	
	comp=Z,26nm,0.8s						
JCT	**Junction City**	**6.58**	**193**		Lg	01 07 46.3	
JCT				IAmb_Lg		01 08 03.4	
	comp=Z,18nm,0.7s						
ISCO	**Idaho Springs**	**6.61**	**298**		Lg	01 07 43.6	
ECSD	**EROS Data Cent**	**6.90**	**9**		Lg	01 07 51.9	
S44A	**Carbondale**	**7.05**	**81**	IAmb_Lg		01 08 02.0	
	comp=Z,22nm,0.9s						
ANMO	**Albuquerque**	**7.10**	**256**		Lg	01 07 59.0	
N23A	**Red Feather La**	**7.33**	**305**	Pg	**Pg**	**01 06 35.5**	**-2.2**
N23A					LR	01 08 07.4	
N23A				IAmb_Lg		01 08 14.4	
	comp=Z,19nm,0.9s						
OXF	**Oxford**	**7.42**	**106**	IAmb_Lg		01 08 22.0	
	comp=Z,17nm,0.8s						
Y45A	**Yeager Farm, C**	**7.58**	**111**		Lg	01 08 19.8	
HDIL	**Hopedale**	**7.74**	**59**		Lg	01 08 25.5	
MNTX	**Cornudas Mount**	**7.99**	**232**	Pg	Pg	01 06 44.8	-5.6
MNTX					LR	01 08 29.9	
BLO	**Bloomington**	**9.36**	**73**	IAmb_Lg		01 09 14.8	
	comp=Z,15nm,0.9s						

IDC 17 01:25:59.9±4.3**,59°.13S**×**150°.82W,h0**^{km}**,mb3.6**/3**,**
mb1 3.8/3**,mb1mx3.7**/14**,mbtmp3.6**/3**,MS3.2**/1**,Ms1 3.2**/1**,**
ms1mx2.8/12**,Error ellipse: s-maj=112.8km**
s-min=51.8km az=76.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**24.17**	**203**	P	P	01 31 17.1	-0.1
	1.2nm,0.8s,baz=27,slow=7.0,SNR=4.0						
URZ	**Urewera**	**29.27**	**301**	LR	LR	01 42 27.5	
	comp=Z,39nm,18.1s,baz=31,slow=34						
H03S2	**Juan Fernandez**	**52.54**	**95**	T	T	02 32 15.9	
	baz=219,slow=74						
H03S1	**Juan Fernandez**	**52.54**	**95**	T	T	02 32 21.0	
	baz=219,slow=74						
H03S3	**Juan Fernandez**	**52.55**	**95**	T	T	02 32 13.8	
	baz=219,slow=74						
H03N3	**Juan Fernandez**	**52.84**	**94**	T	T	02 32 32.2	
	baz=222,slow=72						
H03N2	**Juan Fernandez**	**52.85**	**94**	T	T	02 32 31.0	
	baz=222,slow=72						
H03N1	**Juan Fernandez**	**52.85**	**94**	T	T	02 32 32.1	
	baz=222,slow=72						
ASAR	**Alice Springs**	**62.47**	**270**	P	P	01 36 25.2	+0.3
	0.5nm,0.6s,baz=141,slow=6.7,SNR=6.4						
H01W1	**Cape Leeuwin H**	**63.20**	**247**	T	T	02 46 41.3	
	baz=141,slow=76						
H01W2	**Cape Leeuwin H**	**63.21**	**247**	T	T	02 46 39.7	
	baz=141,slow=76						
H01W3	**Cape Leeuwin H**	**63.22**	**247**	T	T	02 46 43.7	
	baz=141,slow=76						
WRA	**Warramunga Arr**	**65.33**	**272**	P	P	01 36 43.2	-0.5
	0.3nm,0.7s,baz=139,slow=7.1,SNR=2.2						
MKAR	**Makanchi Array**	**146.64**	**272**	PKPbc	PKPbc	01 45 41.6	-0.8
	1.1nm,0.7s,baz=119,slow=4.8,SNR=15						

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*DDA **17** 01:59:39.1,34°.99N×26°.76E,h5^{km}±4^{km},MW4.0*
*IDC **17** 01:59:40.1±1.1,34°.92N×26°.70E,h0^{km},mb4.0/10,*
mb1 3.9/16,mb1mx3.7/40,mbtmp3.8/16,ML3.6/5,MS2.9/2,
Ms1 2.9/2,ms1mx2.4/39,Error ellipse: s-maj=20.9km
s-min=17.3km az=167.0
*HLW **17** 01:59:40.5,35°.29N×26°.71E,h18^{km}±10^{km},Md4.5*
*NIC **17** 01:59:41.5±0.0,34°.80N×26°.62E,h27^{km}±7^{km},Ml4.1/3*
*ISK **17** 01:59:41.6,35°.08N×26°.70E,h7^{km},ML3.7/21*
*ATH **17** 01:59:42.2,35°.05N×26°.69E,h14^{km}±2^{km},ML3.6/6,Error*
ellipse: s-maj=4.9km s-min=1.2km az=336.0
*THE **17** 01:59:42.5,35°.05N×26°.69E,h0^{km}±5^{km},ML3.6/4,Error*
ellipse: s-maj=14.9km s-min=1.7km az=159.0
*NEIC **17** 01:59:44.8±1.7,34°.86N±0°.08×26°.77E±0°.02,h36^{km}±10^{km},*
Error ellipse: s-maj=12.0km s-min=2.6km az=179.0
ISC 17 01:59:40.6±1.2**,34°.92N**±0°.04×**26°.72E**±0°.02**,h5**^{km}±8^{km}**,**
n167,σ1^{s}**34**/188**,mb3.9**/15**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.45**	**295**	P	**Pg**	**01 59 49.5**	**+0.2**
ZKR				S	**Sb**	**01 59 56.3**	**-1.7**
ZKR				AML	AML	01 59 57.1	
	comp=N,11550µm,0.4s						
ZKR				AML	AML	01 59 58.7	
	comp=E,15106µm,0.4s						
ZKR	**Zakros**	**0.45**	**295**	P	**Pg**	**01 59 49.5**	**+0.2**
ZKR				S	**Sg**	**01 59 55.8**	**+0.6**
	comp=E,7µm,0.4s						
ZKR	**Zakros**	**0.45**	**295**	PG	**Pg**	**01 59 49.7**	**+0.4**
ZKR				SG	**Sg**	**01 59 55.9**	**+0.7**
STIA	**Sitia Lasithi**	**0.58**	**299**	P	**Pg**	**01 59 51.7**	**-0.1**
STIA				S	**Sb**	**02 00 00.3**	**-1.5**
KARP	**Karpathos**	**0.72**	**30**	P	**Pg**	**01 59 53.7**	**-0.8**
KARP				S	**Sg**	**02 00 03.2**	**-0.7**
KARP				AML	AML	02 00 07.3	
	comp=N,15788µm,0.5s						
KARP				AML	AML	02 00 07.5	
	comp=E,15019µm,0.4s						
KARP	**Karpathos**	**0.72**	**30**	P	**Pg**	**01 59 53.5**	**-1.0**
KARP				S	**Sg**	**02 00 04.2**	**+0.3**
	comp=E,8µm,0.5s						
KARP	**Karpathos**	**0.72**	**30**	PG	**Pg**	**01 59 53.6**	**-1.0**
KARP				SG	**Sg**	**02 00 02.3**	**-1.6**
KARP	**Karpathos**	**0.72**	**30**	Pg	**Pg**	**01 59 53.7**	**-0.8**
KARP	**Karpathos**	**0.72**	**30**	P	**Pg**	**01 59 53.7**	**-0.8**
KARP				S	**Sg**	**02 00 04.9**	**+1.0**
KARP				AML	AML	02 00 06.9	
	comp=E,16nm,0.5s						
KARP				AML	AML	02 00 06.9	
	comp=E,16nm,0.5s						
KARP				AML	AML	02 00 07.1	
	comp=E,15nm,0.4s						
KARP				AML	AML	02 00 07.1	
	comp=E,15nm,0.4s						
NPS	**Neapolis**	**0.96**	**291**	P	**Pg**	**01 59 59.2**	**+0.1**
NPS				S	**Sb**	**02 00 12.1**	**-0.8**
NPS				AML	AML	02 00 15.6	
	comp=N,7409µm,0.6s						
NPS				AML	AML	02 00 17.4	
	comp=E,10985µm,0.5s						
NPS	**Neapolis**	**0.96**	**291**	P	**Pg**	**01 59 58.9**	**-0.3**
NPS				S	**Sb**	**02 00 13.4**	**+0.5**
	comp=E,5µm,0.7s						
HRKL	**Herakleio**	**1.38**	**287**	P	**Pg**	**02 00 05.9**	**-1.2**
HRKL	**Herakleio**	**1.38**	**287**	PN	**Pb**	**02 00 07.1**	**+0.3**
HRKL				SN	**Sn**	**02 00 25.7**	**+0.6**
KSTL	**Kastelli Herak**	**1.40**	**286**	P	**Pg**	**02 00 02.9**	**-4.6**
KSTL				S	**Sg**	**02 00 21.5**	**-4.1**
SIVA	**Sivas**	**1.57**	**274**	P	**Pn**	**02 00 10.1**	**+1.1**
SIVA				AML	AML	02 00 38.5	
	comp=N,5748µm,0.7s						
SIVA				AML	AML	02 00 40.7	
	comp=E,5780µm,0.8s						
SIVA	**Sivas**	**1.57**	**274**	P	**Pn**	**02 00 09.8**	**+0.7**
TMBK	**Timbaki Herakl**	**1.61**	**276**	P	**Pn**	**02 00 10.3**	**+0.7**
NISR	**Nisiros**	**1.72**	**11**	P	**Pn**	**02 00 11.0**	**-0.1**
ARG	**Arkhangelos**	**1.73**	**41**	P	**Pn**	**02 00 12.9**	**+1.6**
ARG	**Arkhangelos**	**1.73**	**41**	P	**Pn**	**02 00 11.7**	**+0.4**
ARG				S	**Sn**	**02 00 33.6**	**-0.1**
	comp=E,1µm,0.8s						
ARG	**Arkhangelos**	**1.73**	**41**	PN	**Pn**	**02 00 11.2**	**-0.1**
ARG	**Arkhangelos**	**1.73**	**41**	P	**Pn**	**02 00 11.5**	**+0.2**
ARG				S	**Sn**	**02 00 35.4**	**+1.7**
SANT	**Santorini**	**1.77**	**325**	P	**Pn**	**02 00 11.7**	**-0.3**
SANT				AML	AML	02 00 39.9	
	comp=E,3136µm,0.5s						
SANT				AML	AML	02 00 50.5	
	comp=N,931µm,0.5s						
SANT	**Santorini**	**1.77**	**325**	PN	**Pn**	**02 00 11.5**	**-0.4**
SANT	**Santorini**	**1.77**	**325**	*i* P	**Pn**	**02 00 11.0**	**-0.9**
SANT	**Santorini**	**1.77**	**325**		**Pn**	**02 00 11.8**	**-0.2**
SNT5	**Nea Kammeni, S**	**1.83**	**324**	P	**Pn**	**02 00 12.0**	**-0.6**
KOSK	**Kos Island**	**1.84**	**7**	P	**Pn**	**02 00 12.9**	**+0.1**
KOSK	**Kos Island**	**1.84**	**7**	PN	**Pn**	**02 00 12.1**	**-0.7**
SAP3	**Santorini-Thir**	**1.88**	**324**	P	**Pn**	**02 00 13.2**	**-0.2**
VAM	**Vamos**	**2.12**	**284**	P	**Pn**	**02 00 18.5**	**+1.9**
VAM	**Vamos**	**2.12**	**284**	P	**Pn**	**02 00 18.5**	**+1.9**
MRSB	**Marmaris-Mugla**	**2.16**	**34**	PN	**Pn**	**02 00 17.2**	**0.0**
GVDS	**Gavdos**	**2.16**	**269**	PN	**Pn**	**02 00 19.3**	**+2.1**
GVD	**Gavdhos**	**2.16**	**269**	P	**Pb**	**02 00 20.1**	**-0.1**
GVD	**Gavdhos**	**2.16**	**269**	P	**Pb**	**02 00 20.1**	**-0.1**
GVD	**Gavdhos**	**2.16**	**269**	PN	**Pn**	**02 00 18.9**	**+1.6**
BODT	**Bodrum**	**2.19**	**13**	P	**Pn**	**02 00 18.2**	**+0.5**
BODT	**Bodrum**	**2.19**	**13**	PN	**Pn**	**02 00 17.2**	**-0.5**
BDRM	**Kayabasi**	**2.22**	**15**	*i* P	**Pn**	**02 00 17.5**	**-0.6**
TURN	**Turunc**	**2.23**	**33**	PN	**Pn**	**02 00 18.2**	**+0.1**
TURN	**Turunc**	**2.23**	**33**	*i* P	**Pn**	**02 00 18.8**	**+0.6**
IMMV	**Iera Moni Meta**	**2.30**	**284**	P	**Pb**	**02 00 21.8**	**-0.9**
IMMV				AML	AML	02 01 09.2	
	comp=N,1776µm,0.9s						
IMMV				AML	AML	02 01 15.4	
	comp=E,1994µm,0.9s						
IMMV	**Iera Moni Meta**	**2.30**	**284**	P	**Pn**	**02 00 21.4**	**+2.2**
IMMV	**Iera Moni Meta**	**2.30**	**284**	PN	**Pn**	**02 00 20.4**	**+1.2**
APE	**Apeiranthos**	**2.35**	**336**	P	**Pn**	**02 00 19.5**	**-0.4**
APE	**Apeiranthos**	**2.35**	**336**	PN	**Pn**	**02 00 19.4**	**-0.4**
APE	**Apeiranthos**	**2.35**	**336**	*i* P	**Pn**	**02 00 18.0**	**-1.9**
APE				*i* S	**Sn**	**02 00 46.3**	**-2.7**
APE	**Apeiranthos**	**2.35**	**336**	P	**Pn**	**02 00 19.6**	**-0.4**
DALY	**Dalyan (Mula)**	**2.46**	**39**	PN	**Pn**	**02 00 21.6**	**+0.3**
MLSB	**Milas**	**2.52**	**20**	PN	**Pn**	**02 00 21.9**	**-0.3**
YER	**Yerkesik**	**2.55**	**29**	P	**Pn**	**02 00 23.3**	**+0.7**
YER	**Yerkesik**	**2.55**	**29**	PN	**Pn**	**02 00 22.6**	**0.0**
DDIM	**Aydin, Didim**	**2.56**	**9**	*i* P	**Pn**	**02 00 24.3**	**+1.5**
FETY	**Fethiye**	**2.57**	**48**	P	**Pn**	**02 00 23.4**	**+0.4**
FETY	**Fethiye**	**2.57**	**48**	PN	**Pn**	**02 00 23.6**	**+0.6**
MHLO	**Agia Marina, M**	**2.58**	**314**	P	**Pn**	**02 00 24.6**	**+1.6**
KSL	**Kastellorizon**	**2.64**	**62**	P	**Pn**	**02 00 24.6**	**+0.7**
KSL				S	**Sn**	**02 00 57.6**	**+1.4**
MULA	**Mugla, Merkez-**	**2.67**	**29**	*i* P	**Pn**	**02 00 25.6**	**+1.3**
MULA				*i* S	**Sn**	**02 00 59.0**	**+2.0**
MULA				IAML		02 01 20.0	
	comp=N,118nm,0.7s						
AKAS	**Kas**	**2.69**	**60**	PN	**Pn**	**02 00 25.5**	**+0.8**
AKAS	**Kas**	**2.69**	**60**	*i* P	**Pn**	**02 00 25.1**	**+0.4**
AKAS				*i* S	**Sn**	**02 00 58.0**	**+0.3**
AKAS				IAML		02 01 06.0	
	comp=E,89nm,0.6s						
AKAS	**Kas**	**2.69**	**60**	Pn	**Pn**	**02 00 26.3**	**+1.6**
GCAM	**G?zelcaml?**	**2.80**	**8**	PN	**Pn**	**02 00 25.8**	**-0.3**
GCAM	**G?zelcaml?**	**2.80**	**8**	*i* P	**Pn**	**02 00 29.4**	**+3.4**
ANKY	**Antikythira Is**	**2.94**	**290**	P	**Pn**	**02 00 29.4**	**+1.4**
CAEL	**Denizli, Camel**	**3.05**	**43**	*i* P	**Pn**	**02 00 30.1**	**+0.5**
TAVA	**DENIZLI_Tavas**	**3.10**	**34**	*i* P	**Pn**	**02 00 31.1**	**+0.9**
DGB	**zmir**	**3.13**	**2**	*i* P	**Pn**	**02 00 30.6**	**+0.2**
ELL	**Elmali**	**3.17**	**54**	PN	**Pn**	**02 00 32.3**	**+1.0**
ELL	**Elmali**	**3.17**	**54**		**Pn**	**02 00 32.5**	**+1.3**
ELL	**Elmali**	**3.17**	**54**	P	**Pn**	**02 00 32.3**	**+1.0**
KTHA	**Kythira Island**	**3.26**	**295**	PN	**Pn**	**02 00 33.6**	**+1.2**
GOLH	**Golhisar**	**3.26**	**44**	*i* P	**Pn**	**02 00 33.2**	**+0.7**
KTHR	**Kythira**	**3.31**	**295**	P	**Pn**	**02 00 34.0**	**+1.0**
URLA	**Izmir**	**3.43**	**358**	PN	**Pn**	**02 00 34.8**	**0.0**
URLA	**Izmir**	**3.43**	**358**	*i* P	**Pn**	**02 00 34.6**	**-0.2**
VLI	**Veliai**	**3.55**	**301**	P	**Pn**	**02 00 36.9**	**+0.5**
SLUM	**Salum**	**3.65**	**201**	P	**Pn**	**02 00 39.2**	**+1.6**
	baz=199						
SLUM				S	**Sn**	**02 01 21.2**	**+0.1**
	baz=199						
ANTB	**Antalya**	**3.76**	**57**	PN	**Pn**	**02 00 40.7**	**+1.5**
KRND	**KRANIDI**	**3.79**	**311**	P	**Pn**	**02 00 41.2**	**+1.6**
MANT	**Manisa**	**3.86**	**22**	*i* P	**Pn**	**02 00 41.0**	**+0.2**
MANT	**Manisa**	**3.86**	**22**		**Pn**	**02 00 41.8**	**+1.0**
PTL	**Penteli**	**3.87**	**324**	P	**Pn**	**02 00 41.4**	**+0.6**
KULA	**Kula-Manisa**	**3.91**	**23**	PN	**Pn**	**02 00 41.9**	**+0.5**
EPID	**Epidavros**	**3.96**	**314**	P	**Pn**	**02 00 43.6**	**+1.6**
BASM	**Basmaki-Afyon**	**4.02**	**41**	PN	**Pn**	**02 00 43.6**	**+0.7**
BCK	**Bucak**	**4.03**	**50**	PN	**Pn**	**02 00 44.3**	**+1.3**
OSC1	**CSNet OBS 1**	**4.04**	**109**	P	**Pn**	**02 00 43.0**	**0.0**
AKHS	**Akhisar**	**4.04**	**12**	*i* P	**Pn**	**02 00 44.5**	**+1.3**
ZEDA	**zmir-Bergama**	**4.05**	**4**	*i* P	**Pn**	**02 00 44.4**	**+1.3**
KHAL	**Karahalli**	**4.10**	**32**	*i* P	**Pn**	**02 00 43.2**	**-0.8**
DKL	**Dikili**	**4.14**	**2**	PN	**Pn**	**02 00 44.8**	**+0.3**
EREA	**Eretria**	**4.14**	**328**	P	**Pn**	**02 00 45.7**	**+1.1**
USAK	**Uak-Merkez**	**4.21**	**25**	*i* P	**Pn**	**02 00 45.5**	**0.0**
ISP	**Isparta**	**4.22**	**46**	PN	**Pn**	**02 00 46.9**	**+1.2**
ISP	**Isparta**	**4.22**	**46**	Pn	**Pn**	**02 00 47.6**	**+2.0**
VILL	**Villia**	**4.24**	**321**	P	**Pn**	**02 00 47.7**	**+1.8**
VLX	**Vlachokerasia**	**4.27**	**306**	P	**Pn**	**02 00 47.5**	**+1.1**
LOUT	**Loutraki**	**4.29**	**316**	P	**Pn**	**02 00 48.8**	**+2.2**
SIGR	**SIGRI**	**4.33**	**351**	PN	**Pn**	**02 00 47.7**	**+0.6**
TRIP	**Tripoli**	**4.43**	**307**	P	**Pn**	**02 00 50.0**	**+1.4**
ITM	**Ithomi**	**4.49**	**302**	PN	**Pn**	**02 00 50.2**	**+1.0**
ITM	**Ithomi**	**4.49**	**302**	Pn	**Pn**	**02 00 52.2**	**+3.0**
THAL	**Thalero**	**4.51**	**315**	P	**Pn**	**02 00 51.6**	**+2.1**
SIMA	**Simav-Kutahya**	**4.53**	**23**	PN	**Pn**	**02 00 50.7**	**+0.8**
KOCA	**Canakkale, Ayv**	**4.59**	**354**	*i* P	**Pn**	**02 00 49.8**	**-0.9**
AKMS	**Akamas**	**4.62**	**87**	P	**Pn**	**02 00 51.1**	**+0.1**
AKMS				AML	AML	02 01 46.6	
	comp=E,0.5nm,0.4s						
AKMS				AML	AML	02 01 49.1	
	comp=E,0.8nm,0.7s						
GDZ	**Gediz**	**4.71**	**27**	*i* P	**Pn**	**02 00 52.0**	**-0.5**
LKR	**Lokris**	**4.77**	**322**	P	**Pn**	**02 00 54.4**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**4.81**	**358**	*i* P	**Pn**	**02 00 51.8**	**-1.9**
NATA	**Nata**	**4.82**	**90**	P	**Pn**	**02 00 54.4**	**+0.6**
KLV	**Kalavryta, Ach**	**4.82**	**312**	P	**Pn**	**02 00 55.4**	**+1.6**
DURS	**Dursunbey**	**4.88**	**16**	*i* P	**Pn**	**02 00 56.4**	**+1.8**
AXAR	**Agios Charalam**	**5.03**	**321**	P	**Pn**	**02 00 59.0**	**+2.3**
SZAC	**Souni**	**5.08**	**90**	P	**Pn**	**02 00 57.7**	**+0.3**
SZAC				AML	AML	02 02 00.1	
	comp=E,0.4nm,0.6s						
SZAC				AML	AML	02 02 00.2	
	comp=E,0.5nm,0.7s						
NEO	**Neokhori**	**5.19**	**329**	P	**Pn**	**02 01 00.1**	**+1.2**
XOR	**Xorichti**	**5.25**	**329**	P	**Pn**	**02 01 00.5**	**+0.7**
GOKA	**anakkale-Gk**	**5.30**	**353**	*i* P	**Pn**	**02 01 00.2**	**-0.2**
ANX	**Ano Chora**	**5.31**	**315**	P	**Pn**	**02 01 02.5**	**+1.8**
ASGA	**Asgata**	**5.37**	**90**	P	**Pn**	**02 01 01.9**	**+0.5**
AGG	**Agios Georgios**	**5.39**	**321**	P	**Pn**	**02 01 03.0**	**+1.3**
AGG	**Agios Georgios**	**5.39**	**321**	*i* P	**Pn**	**02 01 03.9**	**+2.3**
AGG	**Agios Georgios**	**5.39**	**321**	Pn	**Pn**	**02 01 04.4**	**+2.7**
CSS	**Mathiatis**	**5.43**	**88**	P	**Pn**	**02 01 02.3**	**0.0**
MVOU	**Mavrovouni**	**5.68**	**87**	P	**Pn**	**02 01 06.1**	**+0.5**
SWA2		**5.76**	**191**	P	**Pn**	**02 01 08.1**	**+1.3**
	baz=191						
SWA2				S	**Sn**	**02 02 12.3**	**-1.0**
	baz=191						
LIT	**Litokhoron**	**6.16**	**328**	*i* P	**Pn**	**02 01 13.8**	**+1.6**
LIT	**Litokhoron**	**6.16**	**328**		**Pn**	**02 01 15.0**	**+2.7**
MDUB	**Mudurnu**	**6.58**	**31**	Pn	**Pn**	**02 01 20.2**	**+2.1**
GRG	**Griva**	**6.92**	**332**	P	**Pn**	**02 01 24.7**	**+2.0**
VAY	**Valandovo**	**7.17**	**334**	*i* P	Pn	02 01 31.2	+5.1
FNA	**Florina**	**7.21**	**326**		**Pn**	**02 01 28.8**	**+2.0**
BR131	**Keskin Array S**	**7.31**	**47**		**Pn**	**02 01 29.6**	**+1.5**
BRTR	**Keskin Array B**	**7.31**	**47**	Pn	**Pn**	**02 01 28.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=218,slow=15,SNR=8.1						
BRTR				Sn	**Sn**	**02 02 50.0**	**-1.4**
	comp=E,0.1nm,0.3s,baz=213,slow=24,SNR=2.2						
BRTR				LR	LR	02 05 05.4	
	comp=E,40nm,18.6s,baz=239,slow=44						
MMAI	**Mount Meron Ar**	**7.46**	**102**	Pn	**Pn**	**02 01 29.3**	**-0.9**
	comp=E,1.2nm,0.3s,baz=291,slow=12,SNR=12						
MMAI				Sn	**Sn**	**02 02 54.2**	**-1.1**
	comp=E,2.5nm,0.3s,baz=289,slow=25,SNR=6.5						
STIP	**Stip**	**7.64**	**334**	*i* P	**Pn**	**02 01 36.4**	**+3.9**
HFRF	**Wahat Farafira**	**7.87**	**170**	P	**Pn**	**02 01 36.7**	**+1.0**
	baz=170						
EIL	**Elat**	**8.72**	**125**	Pn	**Pn**	**02 01 47.4**	**+0.1**
	comp=E,0.5nm,0.3s,baz=307,slow=3.3,SNR=10.0						
EIL				Sn	**Sn**	**02 03 20.9**	**-5.1**
	comp=E,0.8nm,0.3s,baz=326,slow=18,SNR=4.5						
HBST	**Basata**	**8.87**	**128**	P	**Pn**	**02 01 49.6**	**+0.2**
	baz=129						
HKAT	**Jabal Katrina**	**8.89**	**134**	P	**Pn**	**02 01 49.8**	**-0.2**
	baz=135						
HDK1	**Dakhla**	**9.63**	**165**	P	**Pn**	**02 02 01.7**	**+1.7**
	baz=165						
DIVS	**Divibare**	**10.53**	**333**		**Pn**	**02 02 14.1**	**+1.9**
MLR	**Muntele Rosu**	**10.57**	**357**	Pn	**Pn**	**02 02 13.4**	**+0.5**
	baz=164,slow=16						
GEVA	**Gevas**	**13.56**	**71**	Pn	**Pn**	**02 02 54.0**	**+0.3**
VYHS	**Vyhne**	**14.77**	**339**	*e*PN	**Pn**	**02 03 09.2**	**-0.9**
KBZ	**Khabaz**	**15.28**	**50**	Pn	**Pn**	**02 03 17.4**	**+0.5**
	baz=240,slow=13,SNR=2.4						
AKASG	**Malin Array Be**	**15.88**	**6**	Pn	**Pn**	**02 03 25.6**	**+1.0**
	comp=E,0.8nm,0.3s,baz=195,slow=12,SNR=2.6						
GERES	**GERESS Array B**	**16.92**	**329**	Pn	**Pn**	**02 03 38.1**	**0.0**
	comp=E,0.1nm,0.3s,baz=136,slow=13,SNR=6.9						
OBN	**Obninsk**	**21.32**	**16**	P	**P**	**02 04 29.6**	**+1.5**
	comp=E,1.5nm,0.5s,baz=14,slow=14,SNR=3.5						
BELG	**Belogornoye**	**22.96**	**34**	P	**P**	**02 04 47.2**	**+1.5**
	comp=E,2.0nm,0.5s,baz=180,slow=1.0,SNR=2.1						
ESDC	**Sonseca Array**	**24.79**	**290**	P	**P**	**02 05 01.9**	**-1.6**
	comp=E,1.1nm,0.8s,baz=83,slow=9.3,SNR=6.0						
FINES	**FINESS Array B**	**26.54**	**359**	P	**P**	**02 05 19.9**	**+1.0**
	comp=E,3.3nm,0.9s,baz=164,slow=12,SNR=1.8						
FINES				LR	LR	02 15 53.6	
	comp=E,55nm,19.9s,baz=64,slow=37						
AKTO	**Aktyubinsk**	**27.48**	**46**	P	**P**	**02 05 28.9**	**+1.3**
	comp=E,1.7nm,0.6s,baz=264,slow=4.6,SNR=4.9						
EKA	**Eskdalemuir Ar**	**28.98**	**324**	P	**P**	**02 05 41.3**	**+0.5**
	comp=E,1.8nm,0.9s,baz=121,slow=11,SNR=2.3						
TOA0	**Torodi Ar. Sit**	**31.34**	**232**	P	**P**	**02 06 02.1**	**+0.1**
TOA0				IAmb	IAmb	02 06 08.5	
	comp=Z,3.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**31.34**	**232**	P	**P**	**02 06 03.5**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=34,slow=8.9,SNR=9.4						
TORD	**Torodi Ar. Bea**	**31.34**	**232**	P	**P**	**02 06 02.3**	**+0.2**
ARCES	**ARCESS Array B**	**34.67**	**359**	P	P	02 06 26.6	-4.1
	comp=Z,3.1nm,1.0s,baz=192,slow=8.3,SNR=1.9						
KURK	**Kurchatov**	**40.34**	**51**	P	**P**	**02 07 19.1**	**+0.2**
MK31	**Makanchi Array**	**42.84**	**56**	P	**P**	**02 07 40.5**	**+1.0**
MK31				IAmb	IAmb	02 07 55.5	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**42.84**	**56**	P	**P**	**02 07 39.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=268,slow=8.3,SNR=16						
MKAR	**Makanchi Array**	**42.84**	**56**	P	**P**	**02 07 39.9**	**+0.3**
ZAA0	**Zalesovo Array**	**44.25**	**46**	P	**P**	**02 07 50.4**	**-0.3**
ZAA0				IAmb	IAmb	02 07 57.9	
	comp=Z,4.0nm,1.2s						
ZALV	**Zalesovo Beam**	**44.25**	**46**	P	**P**	**02 07 50.1**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=266,slow=9.8,SNR=8.2						
ZALV	**Zalesovo Beam**	**44.25**	**46**	P	**P**	**02 07 50.4**	**-0.3**
SONM	**Songino Array**	**58.65**	**51**	P	**P**	**02 09 39.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=284,slow=9.0,SNR=2.3						
YKA	**Yellowknife Ar**	**78.06**	**343**	P	**P**	**02 11 37.6**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=43,slow=6.1,SNR=5.3						

IDC 17 02:01:59.7±2.2**,7°.06N**×**62°.41E,h0**^{km}**,mb3.7**/4**,mb1 3.9**/4**,**
mb1mx3.5/31**,mbtmp3.7**/4**,MS3.3**/4**,Ms1 3.3**/4**,**
ms1mx2.8/41**,Error ellipse: s-maj=95.0km**
s-min=30.1km az=51.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**18.15**	**88**	LR	LR	02 12 02.3	
	comp=Z,67nm,19.0s,baz=38,slow=33						
CMAR	**Chiang Mai Arr**	**37.31**	**69**	LR	LR	02 24 11.0	
	comp=Z,33nm,18.0s,baz=69,slow=36						
BRTR	**Keskin Array B**	**41.52**	**326**	P	P	02 09 49.1	+0.1
	0.9nm,0.9s,baz=153,slow=6.2,SNR=4.4						
ZALV	**Zalesovo Beam**	**50.14**	**17**	P	P	02 10 56.4	-0.3
	0.3nm,0.3s,baz=217,slow=7.9,SNR=2.2						
BOSA	**Boshof**	**50.41**	**224**	LR	LR	02 29 03.1	
	comp=Z,36nm,18.8s,baz=244,slow=32						
KLR	**Kul'dur**	**71.23**	**40**	LR	LR	02 43 29.6	
	comp=Z,25nm,19.3s,baz=323,slow=35						
WRA	**Warramunga Arr**	**75.63**	**113**	P	P	02 13 47.3	+0.1
	1.2nm,1.0s,baz=279,slow=4.3,SNR=4.8						
ASAR	**Alice Springs**	**76.11**	**116**	P	P	02 13 50.0	+0.1
	0.9nm,0.9s,baz=293,slow=4.9,SNR=5.9						

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*TEH **17** 02:04:15.3,32°.73N×47°.66E,h10^{km},ML3.2*
*ISN **17** 02:04:15.0±1.0,32°.74N×47°.68E,h14^{km}±5^{km},ML3.0*
*KISR **17** 02:04:17.1±0.6,32°.39N×47°.45E,h181^{km}±24^{km},ML3.6,*
Hypocentre not reviewed by the ISC
ISC 17 02:04:14.4±1.4**,32°.74N**±0°.03×**47°.68E**±0°.03**,h1**^{km}±13^{km}**,**
n33,σ1^{s}**69**/38**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.80**	**10**	*e*Pg	**Pg**	**02 04 30.6**	**+0.8**
IKFM				*e*Sg	**Sn**	**02 04 43.5**	**-1.9**
IKFM				*e*		02 04 46.3	
	comp=Z,99nm,0.3s						
IKMR	**Kamar-syah**	**0.97**	**37**	*e*Pg	**Pn**	**02 04 34.1**	**-1.2**
IKMR				*e*		02 04 39.7	
	comp=Z,99nm,0.3s						
IKMR				*e*Sg	**Sn**	**02 04 50.7**	**+0.9**
IBDR	**Badra**	**1.52**	**285**	*e*Pg	**Pb**	**02 04 43.0**	**-0.5**
IBDR				*e*Sg	**Sg**	**02 05 03.0**	**-0.4**
IBDR				AML	AML	02 05 08.2	

	comp=N,169nm,0.5s						
IBDR				AML	AML	02 05 11.0	
	comp=E,162nm,0.5s						
AHWZ	**Ahwaz**	**1.62**	**150**	*e*Pg	**Pg**	**02 04 46.6**	**+1.1**
KCHF	**Cheshme Sefid,**	**1.63**	**341**	*e*Pg	**Pg**	**02 04 45.6**	**-0.1**
KCHF				*e*		02 05 11.0	
	comp=Z,99nm,0.6s						
KER	**Kermanshah**	**1.71**	**345**	*e*Pn	**Pg**	**02 04 47.2**	**0.0**
AMIS	**Naft Sefid**	**1.73**	**128**	*e*Pg	**Pg**	**02 04 47.8**	**+0.3**
AMIS				*e*		02 05 21.1	
	comp=Z,99nm,0.3s						
IBZA	**Bozab**	**1.74**	**5**	*e*Pn	**Pg**	**02 04 48.7**	**+0.9**
IBZA				*e*		02 04 52.9	
	comp=Z,99nm,0.6s						
IGHG	**Ghaleghazi**	**1.84**	**330**	*e*Pn	**Pb**	**02 04 49.4**	**+0.3**
IGHG				*e*		02 05 25.3	
	comp=Z,99nm,0.9s						
IALM	**Almabolaq**	**2.16**	**11**	*e*Pn	**Pb**	**02 04 54.3**	**-0.2**
NSR	**Nassriya**	**2.16**	**218**	*e*Pn	**Pn**	**02 04 52.0**	**+0.4**
NSR				*e*Sn	**Sn**	**02 05 18.0**	**-1.1**
NSR				AML	AML	02 05 23.0	
	comp=E,207nm,0.2s						
IDHR	**Dehrash**	**2.24**	**331**	*e*Pn	**Pb**	**02 04 53.9**	**-1.9**
IDHR				*e*		02 05 33.8	
	comp=Z,99nm,0.3s						
ILIN	**Lien**	**2.26**	**345**	*e*Pn	**Pb**	**02 04 54.6**	**-1.6**
ILIN				*e*		02 05 25.7	
	comp=Z,99nm,0.3s						
HSRG	**Sareghieh**	**2.55**	**11**	*e*Pn	**Pb**	**02 05 00.4**	**-0.8**
HSRG				*e*		02 05 41.9	
	comp=Z,99nm,0.5s						
IPIR	**Pirpir**	**2.71**	**90**	*e*Pn	**Pb**	**02 05 02.4**	**-1.4**
IPIR				*e*		02 05 52.6	
	comp=Z,99nm,0.6s						
BHD	**Baghdad**	**2.83**	**282**	*e*Pn	**Pn**	**02 05 01.0**	**+0.3**
BHD				*e*Sn	**Sn**	**02 05 36.0**	**+0.5**
BHD				AML	AML	02 05 41.3	
	comp=E,121nm,0.5s						
MIB	**Mutribah**	**2.94**	**186**	*e*P		02 05 03.2	
MIB				*e*S		02 05 38.2	
MIB				IAML		02 05 39.6	
	comp=Z,125nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.17**	**180**	*e*P		02 05 06.8	
IRAZ	**Razeghan**	**3.25**	**34**	*e*Pn	**Pb**	**02 05 09.9**	**-3.2**
RST	**Umm Al-Ruwaisa**	**3.28**	**191**	*e*P		02 05 07.4	
IKLH	**Kolahrood**	**3.32**	**79**	*e*Pn	**Pb**	**02 05 10.7**	**-3.7**
IKLH				*e*		02 05 12.4	
	comp=Z,99nm,0.1s						
QABG	**Abgarm-Qazvin**	**3.36**	**27**	*e*Pn	**Pn**	**02 05 09.5**	**+1.2**
IQOM	**Qom**	**3.52**	**52**	*e*Pn	**Pn**	**02 05 12.9**	**+2.4**
IGAR	**Gharneh**	**3.69**	**94**	*e*Pn	**Pn**	**02 05 14.3**	**+1.4**
IGAR				*e*		02 05 16.8	
	comp=Z,99nm,0.2s						
KLNJ	**Kolanjah**	**3.74**	**116**	*e*Pn	**Pn**	**02 05 15.4**	**+1.7**
KLNJ				*e*		02 06 34.0	
	comp=Z,99nm,0.6s						
RDF	**Al-Radifah**	**3.80**	**182**	*e*P		02 05 15.2	
RDF				*e*S		02 05 57.7	
RDF				IAML		02 06 03.5	
	comp=Z,122nm,0.4s						
IZEF	**Zefreh**	**3.91**	**86**	*e*Pn	**Pn**	**02 05 18.4**	**+2.4**
QRN	**Al-Qurain**	**3.98**	**177**	*e*P		02 05 17.0	
IVRN	**Varamin**	**4.05**	**55**	*e*Pn	**Pn**	**02 05 20.0**	**+2.3**
IRAM	**Ramesheh**	**4.08**	**102**	*e*Pn	**Pn**	**02 05 19.7**	**+1.4**
QALM	**Alamut, Qazvin**	**4.42**	**33**	*e*Pn	**Pn**	**02 05 25.6**	**+2.6**
IDMV	**Damavand**	**4.59**	**51**	*e*Pn	**Pn**	**02 05 27.3**	**+2.1**
ANAR	**Anarak**	**5.10**	**83**	*e*Pn	**Pn**	**02 05 33.7**	**+1.5**
IFIR	**Firoozkooh**	**5.10**	**54**	*e*Pn	**Pn**	**02 05 34.6**	**+2.3**
ILAS	**Lasjerd**	**5.11**	**57**	*e*Pn	**Pn**	**02 05 34.2**	**+1.8**
ISAD	**Sadrabad**	**5.15**	**98**	*e*Pn	**Pn**	**02 05 34.3**	**+1.4**
ISHM	**Shahmirzad**	**5.56**	**55**	*e*Pn	**Pn**	**02 05 40.2**	**+1.6**
IANJ	**Anjilo**	**5.84**	**60**	*e*Pn	**Pn**	**02 05 43.9**	**+1.5**

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*JMA **17** 02:17:14.6±0.1, 36°.22N×141°.05E, h46^{km}±2^{km}, M3.7*
JMA Felt I J1.
*NIED **17** 02:17:14.6, 36°.22N×141°.05E, h46^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.46; M$_{\theta\theta}$-0.43; M$_{\phi\phi}$-0.03; M$_{r\theta}$1.04; M$_{\theta\phi}$-0.36; M$_{\phi r}$2.64; Fault plane solution: M$_0$2.89000×10^{14} NP1:ϕ_s23.00000°, δ86.00000°, λ82.00000°. NP2:ϕ_s266.00000°, δ9.00000°, λ153.00000°.*
*IDC **17** 02:17:27.4±1.6, 35°.74N×139°.57E, h101^{km}±15^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.1/33, mbtmp3.6/7 Error ellipse: s-maj=30.9km s-min=12.6km az=68.0*
ISC 17 02:17:14.3±1.3, **36°.28N**±0°.03×**141°.03E**±0°.06, **h26**^{km}±11^{km}, **n18,** σ**0^{s}.85**/26, **mb3.3**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.36**	**280**	P	**Pn**	**02 17 24.5**	**+0.7**
JHYU				S	**Sn**	**02 17 31.0**	**+1.0**
JHO	**Hitachi**	**0.50**	**312**	P	**Pn**	**02 17 25.9**	**+0.2**
JHO				S	**Sn**	**02 17 33.9**	**+0.4**
JIHU	**Itakohorinouch**	**0.51**	**233**	P	**Pn**	**02 17 26.1**	**+0.3**
JIHU				S	**Sn**	**02 17 34.1**	**+0.4**
CHOJ	**Chosi**	**0.59**	**193**	P	**Pb**	**02 17 25.9**	**-0.1**
CHOJ				S	**Sb**	**02 17 33.5**	**-0.5**
JYT	**Yasato**	**0.67**	**266**	P	**Pn**	**02 17 28.1**	**0.0**
JYT				S	**Sn**	**02 17 37.5**	**-0.3**
JSMT	**Sammumatsuo**	**0.79**	**217**	P	**Pb**	**02 17 29.3**	**-0.1**
JSMT				S	**Sb**	**02 17 40.2**	**+0.6**
ONAJ	**Iwakimizuishiy**	**0.84**	**348**	P	**Pb**	**02 17 30.7**	**+0.3**
JFK	**Kawauchi**	**1.09**	**354**	P	**Pn**	**02 17 34.0**	**0.0**
JFK				S	**Sn**	**02 17 47.7**	**-0.6**
JAG	**Ashikaga**	**1.28**	**277**	P	**Pb**	**02 17 36.9**	**-0.8**
JAG				S	**Sb**	**02 17 53.0**	**-0.7**
MJAR	**Matsushiro Arr**	**2.29**	**277**	P	**Pn**	**02 17 51.2**	**+0.9**
	3.2nm,0.3s,baz=162,slow=3.6,SNR=75						
MAT	**Matsushiro**	**2.29**	**277**	P	**Pn**	**02 17 51.1**	**+0.7**
MAT				*e*S	**Sn**	**02 18 17.1**	**-0.6**
JHJ	**Hachijo jima 2**	**3.31**	**198**	P	**Pn**	**02 18 06.3**	**+1.9**
	14nm,0.3s,baz=131,slow=19,SNR=1.7						
JHJ				S	**Sn**	**02 18 41.0**	**-2.0**
	18nm,0.3s,baz=252,slow=19,SNR=2.0						
JNU	**Nakatsue**	**8.93**	**252**	P	Pn	02 19 15.9	-5.6
	0.6nm,0.3s,baz=78,slow=20,SNR=2.1						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**02 23 02.5**	**-0.1**
	0.4nm,0.6s,baz=99,slow=8.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**42.20**	**313**	P	**P**	**02 25 05.0**	**+0.3**
	0.4nm,0.4s,baz=91,slow=7.2,SNR=2.2						
MKAR	**Makanchi Array**	**44.26**	**303**	P	**P**	**02 25 22.7**	**+1.2**
	0.3nm,0.7s,baz=84,slow=7.2,SNR=4.4						
ILAR	**Eielson Array**	**50.30**	**32**	P	P	02 26 21.6	+13
	0.2nm,0.7s,baz=255,slow=4.8,SNR=5.8						
WRA	**Warramunga Arr**	**56.27**	**188**	P	**P**	**02 26 51.3**	**-1.2**
	0.2nm,0.4s,baz=5.1,slow=7.6,SNR=2.6						

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*IDC **17** 03:00:34.1±8.7, 15°.61N×93°.47W, h0^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.6/35, mbtmp3.5/5, ML3.9/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/22, Error ellipse: s-maj=184.9km s-min=74.8km az=21.0*
*NEIC **17** 03:00:46.8±2.6, 15°.74N±0°.06×94°.60W±0°.04, h39^{km}±11^{km}, mb4.1/21, Md4.3/35(MEX), Error ellipse: s-maj=8.4km s-min=5.4km az=184.0*
*MEX **17** 03:00:47.7±0.3, 15°.77N×94°.59W, h39^{km}±21^{km}, MD4.3*
ISC 17 03:00:46.4±1.0, **15°.77N**±0°.05×**94°.58W**±0°.03, **h47**^{km}±14^{km}, **n72,** σ**1^{s}.16**/96, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.31**	**93**	*i* P	**Pn**	**03 01 07.8**	**-0.5**
PCIG				*e*S	**Sn**	**03 01 24.0**	**-0.7**
PCIG		**1.31**	**93**		**Pn**	**03 01 07.8**	**-0.5**
PCIG					**Sn**	**03 01 24.0**	**-0.7**
CMIG	**Matias Romero**	**1.35**	**348**	Pn	**Pn**	**03 01 08.3**	**-0.6**
	72nm,0.3s,baz=167,slow=9.8,SNR=654						
CMIG				Sn	**Sn**	**03 01 24.0**	**-1.6**
	134nm,0.3s,baz=160,slow=18,SNR=14						
CMIG				LR	LR	03 01 52.0	
	comp=Z,146nm,20.3s,baz=238,slow=39						
CMIG	**Matias Romero**	**1.35**	**348**	*i* P	**Pn**	**03 01 08.3**	**-0.6**
CMIG				*e*S	**Sn**	**03 01 24.5**	**-1.1**
CMIG	**Matias Romero**	**1.35**	**348**		**Pn**	**03 01 08.3**	**-0.6**
CMIG					**Sn**	**03 01 24.5**	**-1.1**
HUIG	**Huatulco**	**1.47**	**270**	*i* P	**Pn**	**03 01 10.2**	**-0.3**
HUIG				*e*S	**Sn**	**03 01 27.3**	**-1.3**
HUIG	**Huatulco**	**1.47**	**270**		**Pn**	**03 01 10.2**	**-0.3**
HUIG					**Sn**	**03 01 27.3**	**-1.3**
TGIG		**1.72**	**54**	*e*P	**Pn**	**03 01 13.8**	**-0.3**
TGIG				*i* S	**Sn**	**03 01 34.0**	**-0.9**
TGIG		**1.72**	**54**		**Pn**	**03 01 13.8**	**-0.3**
TGIG					**Sn**	**03 01 34.0**	**-0.9**
PANG	**Puerto Angel**	**1.83**	**267**	*e*P	**Pn**	**03 01 15.0**	**-0.3**
PANG				*e*S	**Sn**	**03 01 35.8**	**-1.5**
PANG	**Puerto Angel**	**1.83**	**267**		**Pn**	**03 01 15.0**	**-0.3**
PANG					**Sn**	**03 01 35.8**	**-1.5**
THIG		**2.39**	**111**	*i* P	**Pn**	**03 01 23.0**	**-0.2**
THIG				*i* S	**Sn**	**03 01 51.2**	**0.0**
THIG		**2.39**	**111**		**Pn**	**03 01 24.8**	**+1.7**
CCIG	**Comitan**	**2.41**	**77**	*e*P	**Pn**	**03 01 23.5**	**0.0**
CCIG				*e*S	**Sn**	**03 01 51.1**	**-0.7**
CCIG	**Comitan**	**2.41**	**77**		**Pn**	**03 01 24.1**	**+0.6**
VHO	**Vista Hermosa**	**2.44**	**302**	*i* P	**Pn**	**03 01 23.5**	**-0.5**
VHO				*i* S	**Sn**	**03 01 51.7**	**-1.0**
PEIG	**Puerto Escondi**	**2.48**	**276**	*i* P	**Pn**	**03 01 24.1**	**-0.3**
PEIG				*i* S	**Sn**	**03 01 52.1**	**-1.3**
YOIG	**Yosondua**	**3.05**	**291**	*e*P	**Pn**	**03 01 32.1**	**-0.3**
YOIG				*i* S	**Sn**	**03 02 06.7**	**-1.1**
TOIG	**Toxpalan**	**3.32**	**315**	*e*P	**Pn**	**03 01 36.0**	**+0.1**
TOIG				*i* S	**Sn**	**03 02 12.7**	**-1.6**
TXIG	**Tlaxiaco**	**3.40**	**296**	*i* P	**Pn**	**03 01 37.6**	**+0.5**
TXIG				*i* S	**Sn**	**03 02 14.8**	**-1.6**
PNIG	**Pinotepa**	**3.47**	**281**	*e*P	**Pn**	**03 01 38.1**	**+0.2**
PNIG				*i* S	**Sn**	**03 02 17.0**	**-0.8**
PNIG	**Pinotepa**	**3.47**	**281**		**Pn**	**03 01 38.1**	**+0.2**
HLIG	**Huajuapan de L**	**3.71**	**304**	*i* P	**Pn**	**03 01 42.2**	**+0.8**
HLIG				*i* S	**Sn**	**03 02 23.5**	**-0.4**
TPIG	**Tehuac#an**	**3.75**	**315**	*i* P	**Pn**	**03 01 41.7**	**-0.2**
TPIG				*i* S	**Sn**	**03 02 23.9**	**-0.9**
TPIG	**Tehuac#an**	**3.75**	**315**		**Pn**	**03 01 43.8**	**+1.9**
TLIG	**Tlapa**	**4.22**	**296**	*i* P	**Pn**	**03 01 48.7**	**+0.4**
TLIG				*i* S	**Sn**	**03 02 35.0**	**-1.4**
TLIG	**Tlapa**	**4.22**	**296**		**Pn**	**03 01 50.5**	**+2.2**
PETF	**Flores**	**4.67**	**75**	Pn	**Pn**	**03 01 54.8**	**+0.5**
PPM	**Popocatepetl**	**5.07**	**311**	*i* P	**Pn**	**03 02 00.4**	**0.0**
ESQI	**Esquipulas**	**5.20**	**103**	Pn	**Pn**	**03 02 00.6**	**-1.2**
YAIG	**Yautepec**	**5.28**	**306**	*e*P	**Pn**	**03 02 03.9**	**+1.0**
YAIG				*i* S	**Sn**	**03 03 03.2**	**+0.7**
YAIG	**Yautepec**	**5.28**	**306**		**Pn**	**03 02 03.9**	**+1.0**
PLIG	**Platanillo**	**5.38**	**300**	*i* P	**Pn**	**03 02 04.7**	**+0.4**
PLIG				*i* S	**Sn**	**03 03 04.6**	**-0.5**
PLIG	**Platanillo**	**5.38**	**300**		**Pn**	**03 02 07.2**	**+2.9**
CAIG	**El Cayaco**	**5.60**	**284**	*e*P	**Pn**	**03 02 08.3**	**+1.1**
CAIG				*i* S	**Sn**	**03 03 10.0**	**-0.3**
CAIG	**El Cayaco**	**5.60**	**284**		**Pn**	**03 02 08.3**	**+1.1**
ARIG	**Puente Sto Nin**	**6.06**	**295**	*i* P	**Pn**	**03 02 14.7**	**+1.3**
ARIG				*e*S	**Sn**	**03 03 20.6**	**-0.9**
ARIG	**Puente Sto Nin**	**6.06**	**295**		**Pn**	**03 02 16.4**	**+2.9**
ZIIG	**Zihuatanejo**	**6.85**	**286**	*i* P	**Pn**	**03 02 24.3**	**0.0**
ZIIG				*i* S	**Sn**	**03 03 41.9**	**+1.0**
ZIIG	**Zihuatanejo**	**6.85**	**286**		**Pn**	**03 02 26.4**	**+2.1**
TGUH	**Tegucigalpa,Un**	**7.27**	**103**	Pn	**Pn**	**03 02 29.9**	**-0.3**
MOIG	**Morelia**	**7.40**	**303**	Pn	**Pn**	**03 02 32.0**	**-0.1**
TEIG	**Tepich**	**7.46**	**53**	Pn	**Pn**	**03 02 33.0**	**+0.3**
ZAIG	**Zacatecas**	**10.26**	**314**	Pn	**Pn**	**03 03 12.8**	**+1.4**
833A	**Chaparral WMA,**	**13.27**	**341**	Pn	**Pn**	**03 03 54.3**	**+2.1**
435B	**Jarrell**	**15.20**	**350**	Pn	**P**	**03 04 20.8**	**-1.4**
JCT	**Junction City**	**15.41**	**343**	Pn	**Pn**	**03 04 22.1**	**+1.3**
JCT				IAmb	IAmb	03 04 29.5	
	comp=Z,6.0nm,0.7s						
TXAR	**Lajitas Array**	**15.89**	**330**	Pn	**P**	**03 04 29.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=9.7						
TXAR	**Lajitas Array**	**15.89**	**330**	Pn	**Pn**	**03 04 28.7**	**+1.7**
TX31	**Lajitas Ar. Si**	**15.89**	**330**	Pn	**Pn**	**03 04 28.3**	**+1.3**
TX31				IAmb	IAmb	03 04 29.6	
	comp=Z,28nm,1.6s						
237A	**Washetta, Mont**	**16.20**	**356**	Pn	**P**	**03 04 32.7**	**-0.6**
237A				IAmb	IAmb	03 04 34.2	
	comp=Z,13nm,1.1s						
WHTX	**Lake Whitney,**	**16.36**	**351**		**P**	**03 04 34.7**	**-0.5**
WHTX				IAmb	IAmb	03 04 38.5	
	comp=Z,13nm,0.7s						
LPIG	**La Paz**	**16.94**	**302**	LR	LR	03 11 44.0	
	comp=Z,26nm,20.9s,baz=153,slow=37						
143A	**Socs Landing,**	**17.11**	**9**	Pn	**Pn**	**03 04 42.4**	**+0.2**
ABTX	**Abilene, Hawle**	**17.40**	**346**		**P**	**03 04 46.8**	**+0.1**
ABTX				IAmb	IAmb	03 04 51.9	
	comp=Z,8.5nm,0.8s						
GTBY	**Guantanamo Bay**	**18.99**	**75**	P	**P**	**03 05 04.9**	**+0.8**
W39A	**Magazine**	**19.36**	**2**	P	**Pn**	**03 05 10.6**	**+1.0**
W39A				IAmb	IAmb	03 05 19.8	
	comp=Z,5.5nm,0.8s						
MSTX	**Muleshoe**	**19.57**	**339**		**Pn**	**03 05 13.3**	**+1.1**
MSTX				IAmb	IAmb	03 05 14.2	
	comp=Z,14nm,1.2s						
OK025	**Westminster Rd**	**19.89**	**353**	P	**Pn**	**03 05 15.7**	**-0.1**
OK025				IAmb	IAmb	03 05 49.3	
	comp=Z,10.0nm,0.9s						
121A	**Cookes Peak, D**	**20.55**	**327**		Pn	03 05 23.6	-0.3
ANMO	**Albuquerque**	**21.87**	**333**	P	**P**	**03 05 36.9**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=141,slow=11,SNR=4.1						
ANMO	**Albuquerque**	**21.87**	**333**	P	**P**	**03 05 36.5**	**+0.9**
TUC	**Tucson**	**22.09**	**321**	P	**P**	**03 05 39.9**	**+2.1**
T25A	**Trinidad**	**23.00**	**340**	P	**P**	**03 05 48.7**	**+1.2**
PIX	**Pinacate**	**23.31**	**316**	P	**P**	**03 05 51.1**	**+0.7**
CBKS	**Cedar Bluff**	**23.40**	**350**	P	**P**	**03 05 52.2**	**+1.0**
CBKS				IAmb	IAmb	03 05 54.3	
	comp=Z,7.7nm,0.8s						
SDCO	**Great Sand Dun**	**23.93**	**338**	P	**P**	**03 05 58.3**	**+1.9**
GLA	**Glamis**	**25.14**	**317**	P	**P**	**03 06 08.7**	**+1.4**
GLA				IAmb	IAmb	03 06 10.1	
	comp=Z,4.4nm,0.7s						
K31A	**O'Neill**	**27.00**	**353**	P	**P**	**03 06 24.4**	**+0.4**
ATAH	**Atahualpa**	**27.84**	**144**	LR	LR	03 16 14.9	
	comp=Z,31nm,18.1s,baz=37,slow=35						
NVAR	**Mina Array Bea**	**30.74**	**322**	P	**P**	**03 06 58.4**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=135,slow=9.0,SNR=5.0						
YKA	**Yellowknife Ar**	**48.76**	**348**	P	**P**	**03 09 22.9**	**-3.5**
	comp=Z,0.3nm,0.8s,baz=147,slow=7.6,SNR=3.7						

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*IDC **17** 03:10:42.9±2.9, 10°.64S×161°.81E, h71^{km}±22^{km}, mb3.2/5, mb1 3.5/8, mb1mx3.4/28, mbtmp3.7/8, MS2.9/4, Ms1 2.9/4, ms1mx2.6/15, Error ellipse: s-maj=29.9km s-min=19.0km az=63.0*
ISC 17 03:10:40.9±1.0, **10°.6S**±0°.1×**161°.9E**±0°.1, **h54**^{km}**, n16,** σ**1^{s}.69**/11, **mb3.4**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.27**	**301**	P	**Pn**	**03 11 17.1**	**+1.1**
	39nm,0.3s,baz=354,slow=2.8,SNR=14						
HNR				S	**Sn**	**03 11 44.1**	**+1.3**
	169nm,0.3s,baz=55,slow=23,SNR=14						
HNR				LR	LR	03 12 15.2	
	comp=Z,61nm,18.1s,baz=127,slow=42						
HNR	**Honiara**	**2.27**	**301**	*e*P	**Pn**	**03 11 13.0**	**-3.0**
HNR				*e*S	Sn	03 11 25.0	-18
DZM	**Mont Dzumac**	**12.18**	**160**	P	**Pn**	**03 13 33.6**	**+1.8**
	1.1nm,0.3s,baz=34,slow=8.4,SNR=66						
DZM				S	**Sn**	**03 15 44.0**	**-2.1**
	0.1nm,0.3s,baz=146,slow=22,SNR=0.8						
DZM				LR	LR	03 17 30.7	
	comp=Z,81nm,20.0s,baz=106,slow=33						
PMG	**Port Moresby**	**14.58**	**273**	LR	LR	03 18 53.8	
	comp=Z,59nm,19.2s,baz=212,slow=34						
CTA	**Charters Tower**	**17.77**	**236**	P	**P**	**03 14 45.9**	**+1.1**
	0.1nm,0.3s,baz=227,slow=6.5,SNR=1.6						
WRA	**Warramunga Arr**	**28.12**	**247**	P	**P**	**03 16 27.0**	**-1.1**
	0.5nm,0.5s,baz=78,slow=9.1,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**29.32**	**9**	T	T	03 47 23.1	
	baz=188,slow=76,SNR=87						
H11S3	**WAKE ISLAND Hy**	**29.32**	**9**	T	T	03 47 23.7	
	baz=188,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.34**	**9**	T	T	03 47 24.8	
	baz=188,slow=76,SNR=14						
ASAR	**Alice Springs**	**29.66**	**240**	P	**P**	**03 16 41.6**	**-0.2**
	0.4nm,0.8s,baz=63,slow=9.8,SNR=5.3						
ASAR				LR	LR	03 29 05.7	
	comp=Z,36nm,18.7s,baz=135,slow=37						
H11N1	**WAKE ISLAND Hy**	**30.55**	**9**	T	T	03 48 59.3	
	baz=188,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**30.56**	**9**	T	T	03 48 55.5	
	baz=188,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**30.57**	**9**	T	T	03 48 57.9	
	baz=188,slow=76,SNR=12						
SONM	**Songino Array**	**76.14**	**325**	P	**P**	**03 22 23.2**	**-0.1**
	0.4nm,0.8s,baz=129,slow=4.6,SNR=1.7						
ILAR	**Eielson Array**	**84.36**	**20**	P	**P**	**03 23 07.5**	**+0.5**
	0.1nm,0.5s,baz=258,slow=4.5,SNR=1.3						
MKAR	**Makanchi Array**	**90.66**	**317**	P	**P**	**03 23 37.1**	**-0.7**
	0.1nm,0.4s,baz=102,slow=4.9,SNR=1.3						

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*IDC **17** 03:34:14.5±1.2, 1°.21S×122°.47E, h0^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/39, mbtmp3.6/6, ML3.9/1, Error ellipse: s-maj=144.0km s-min=20.1km az=66.0*
*NEIC **17** 03:34:35.1±2.9, 1°.47S±0°.08×122°.5E±0°.1, h193^{km}±6^{km}, mb4.0/7, Error ellipse: s-maj=17.5km s-min=7.7km az=54.0*
ISC 17 03:34:34.9±0.7, **1°.52S**±0°.09×**122°.5E**±0°.1, **h200**^{km}**, n17,** σ**1^{s}.63**/15, **mb3.7**/7, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.56**	**32**		**Pn**	**03 35 02.3**	**0.0**
TOLI2	**Tolitoli**	**3.11**	**327**	Pn	**Pn**	**03 35 23.7**	**-2.2**
TNTI	**Ternate**	**5.39**	**65**	Pn	**Pn**	**03 35 52.7**	**-1.7**
SOEI	**Soe**	**8.37**	**168**	Pn	**Pn**	**03 36 31.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**16.77**	**170**	P	**P**	**03 38 15.7**	**-1.6**
	0.4nm,0.3s,baz=18,slow=8.1,SNR=16						
WRA	**Warramunga Arr**	**21.68**	**148**	P	**P**	**03 39 11.2**	**+1.1**
	1.1nm,0.3s,baz=315,slow=9.8,SNR=12						
WRA	**Warramunga Arr**	**21.68**	**148**	IAmb	IAmb	03 39 15.5	
	comp=Z,0.3nm,1.4s						
AS31	**Alice Springs**	**24.64**	**154**	P	**P**	**03 39 38.0**	**+0.6**
ASAR	**Alice Springs**	**24.65**	**154**	P	**P**	**03 39 38.6**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=324,slow=8.9,SNR=21						
GSI	**Gunungsitoli**	**25.05**	**276**	P	**P**	**03 39 42.1**	**+0.9**
CHTO	**Chiang Mai**	**30.71**	**312**	P	**P**	**03 40 33.1**	**+1.7**
CHTO				IAmb	IAmb	03 41 36.1	
	comp=Z,2.8nm,0.8s						
STKA	**Stephens Creek**	**35.17**	**151**	P	**P**	**03 41 12.6**	**+2.7**
	comp=Z,0.8nm,0.4s,baz=315,slow=16,SNR=1.9						
STKA	**Stephens Creek**	**35.17**	**151**	IAmb	IAmb	03 42 25.4	
	comp=Z,3.3nm,1.6s						
KSAR	**Wonju Array Be**	**39.09**	**7**	P	**P**	**03 41 43.2**	**+0.5**
SONM	**Songino Array**	**51.12**	**346**	P	**P**	**03 43 16.1**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=161,slow=9.2,SNR=2.8						
MKAR	**Makanchi Array**	**59.63**	**329**	P	**P**	**03 44 19.3**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=123,slow=7.8,SNR=4.1						
AAK	**Ala-Archa**	**61.58**	**321**	P	**P**	**03 44 30.1**	**-1.2**
AAK				IAmb	IAmb	03 46 27.2	
	comp=Z,11nm,1.9s						

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*FUNV **17** 03:40:41.4, 10°.95N×62°.19W, h18^{km}, MW3.3*
*TRN **17** 03:40:41.6, 11°.11N×62°.26W, h9^{km}, MD3.0*
ISC 17 03:40:41.8±1.3, **11°.00N**±0°.03×**62°.32W**±0°.04, **h32**^{km}±14^{km}, **n16,** σ**2^{s}.17**/28, **1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.96**	**250**	*e*P	**Pn**	**03 41 00.8**	**+1.7**
CRUV				*e*S	**Sn**	**03 41 14.4**	**+2.7**
TRN	**Trinidad (W)**	**0.96**	**111**	*e*P	**Pn**	**03 41 00.9**	**+1.8**
TRN				*e*S	**Sn**	**03 41 14.1**	**+2.4**
TPP	**Pointe-a-Pierr**	**1.09**	**128**	*e*S	**Sn**	**03 41 19.0**	**+4.2**
GRGR	**Grenville**	**1.30**	**30**	*e*P	**Pn**	**03 41 04.3**	**+0.5**
GRGR				*e*S	**Sb**	**03 41 21.6**	**-0.5**
GRGR	**Grenville**	**1.30**	**30**	*e*P	**Pn**	**03 41 04.3**	**+0.5**
GRGR				*e*S	**Sb**	**03 41 21.2**	**-0.8**
TBH	**Brigand Hill**	**1.33**	**113**	*e*P	**Pb**	**03 41 07.2**	**+1.0**
TBH				*e*S	**Sb**	**03 41 24.6**	**+1.7**
TPR	**Prospect**	**1.52**	**83**	*e*P	**Pb**	**03 41 08.0**	**-1.4**
GCMP	**Grenada, Carri**	**1.72**	**30**	*e*P	**Pn**	**03 41 09.7**	**+0.2**
GCMP				*e*S	**Sn**	**03 41 30.9**	**+0.6**
ORIV	**Oritupano**	**2.20**	**209**	*e*P	**Pn**	**03 41 16.0**	**-0.2**
ORIV				*e*S	**Sn**	**03 41 43.7**	**+1.4**
SVOC	**Richmond Hill,**	**2.39**	**26**	*e*	Pn	03 41 13.2	-5.7
PCRV	**Puerto La Cruz**	**2.42**	**250**	*e*P	**Pn**	**03 41 20.2**	**+1.0**
PCRV				*e*S	**Sn**	**03 41 49.1**	**+1.3**
SVB	**Belmont**	**2.49**	**25**	*e*	**Pn**	**03 41 17.6**	**-2.6**
SVB				*e*S	**Sn**	**03 41 50.6**	**+1.2**
RIOV	**Rio Grande**	**2.95**	**170**	*e*P	**Pn**	**03 41 26.0**	**-0.6**
RIOV				*e*S	**Sn**	**03 41 59.6**	**-1.3**
MERV	**Las Mercedes**	**4.29**	**246**	⇓*e*P	**Pn**	**03 41 46.6**	**+1.8**
MERV				*e*S	**Sn**	**03 42 33.5**	**-0.4**
LUEV	**Luepa**	**5.19**	**171**	*e*P	**Pn**	**03 41 55.2**	**-2.3**
LUEV				*e*S	**Sn**	**03 42 50.5**	**-6.0**
BAUV	**El Baul**	**6.00**	**251**	*e*P	**Pn**	**03 42 08.6**	**+0.2**
BAUV				*e*S	**Sn**	**03 43 12.9**	**-3.2**

IDC 17 03:45:40.1±2.3, **0°.11N**×**125°.63E, h0**^{km}**, mb3.3**/3, **mb1 3.5**/3, **mb1mx3.2**/41, **mbtmp3.3**/3, **Error ellipse: s-maj=245.6km s-min=28.3km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**157**	P	P	03 50 33.9	+1.2
	0.3nm,0.4s,baz=336,slow=9.7,SNR=5.7						
ASAR	**Alice Springs**	**24.96**	**162**	P	P	03 51 04.9	-0.7
	0.4nm,0.5s,baz=343,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**59.93**	**327**	P	P	03 55 48.2	0.0
	0.2nm,0.4s,baz=127,slow=8.2,SNR=2.6						

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*NNC **17** 03:48:53.3±5.8, 39°.21N×71°.23E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=41.2km s-min=24.2km az=8.0*
*KRNET **17** 03:48:56.6±0.1, 39°.54N×71°.45E, h10^{km}, mb2.8*
ISC 17 03:48:57.5±1.6, **39°.51N**±0°.08×**71°.43E**±0°.04, **h10**^{km}**, n21,** σ**2^{s}.29**/37, **19C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.29**	**96**	⇑*i*P	**Pg**	**03 49 02.2**	**-1.3**
	baz=2.0						
DRK				⇑*e*S	**Sg**	**03 49 06.5**	**-0.9**
	baz=2.0						
BTK	**Batken**	**0.72**	**320**	⇓*i*P	**Pg**	**03 49 10.2**	**-1.2**
	baz=17						
BTK				⇓*i*S	**Sg**	**03 49 20.8**	**-0.1**
	baz=17						
OHH	**Osh**	**1.45**	**45**	⇑*e*P	**Pn**	**03 49 23.6**	**-0.3**
	baz=46						
OHH				⇑*e*S	**Sg**	**03 49 43.1**	**-1.2**
	baz=46						
SFK	**Sufi-Kurgan**	**1.68**	**72**	⇓*i*P	**Pn**	**03 49 27.6**	**+0.5**
	baz=73						
SFK				⇓*i*S	**Sg**	**03 49 50.8**	**-0.6**
	baz=73						
TRKS	**Terek-Say**	**2.03**	**354**	⇑*e*P	**Pn**	**03 49 32.7**	**+0.8**
	baz=54						
TRKS				⇑*i*S	**Sb**	**03 49 59.5**	**-0.5**
	baz=54						
ARSB	**Arslanbob**	**2.17**	**33**	⇓*i*P	**Pb**	**03 49 35.9**	**-1.0**
	baz=33						
ARSB				⇓*i*S	**Sg**	**03 50 04.9**	**-2.2**
	baz=33						
IUG	**Iuzhnay**	**2.84**	**339**	Pg	**Pb**	**03 49 45.9**	**-2.4**
	22nm,0.5s						
IUG				Lg	Lg	03 50 28.6	
	37nm,0.6s						
MNAS	**Manas**	**3.08**	**15**	⇑*i*P	**Pn**	**03 49 48.9**	**+2.5**
	baz=15						
MNAS				⇑*i*S	**Sb**	**03 50 26.7**	**-3.6**
	baz=15						
AML	**Almayashu**	**3.13**	**33**	⇑*i*P	**Pn**	**03 49 49.5**	**+2.2**
	baz=33						
AML				⇑*i*S	**Sb**	**03 50 28.4**	**-3.5**
	baz=33						
ARLS	**Aral**	**3.22**	**42**	⇑*i*P	**Pn**	**03 49 50.2**	**+1.9**
	baz=43						
ARLS				⇑*i*S	**Sb**	**03 50 30.2**	**-4.0**
	baz=43						
UCH	**Uchtor**	**3.58**	**40**	⇓*i*P	**Pn**	**03 49 55.8**	**+2.3**
	baz=40						
UCH				⇓*i*S	**Sn**	**03 50 38.1**	**+1.9**
	baz=40						
EKS2	**Erkin-Say**	**3.61**	**29**	⇓*e*P	**Pn**	**03 49 56.2**	**+2.5**
	baz=29						
EKS2				⇓*e*S	**Sn**	**03 50 39.5**	**+3.0**
	baz=29						
KK31	**Karatay Array**	**3.66**	**349**	⇑Pn	**Pn**	**03 49 56.4**	**+2.3**
	2.4nm,0.3s,baz=174,slow=13,SNR=30						
KK31				⇑Sn	**Sb**	**03 50 44.3**	**-2.3**
	1.3nm,0.3s,baz=170,slow=20,SNR=4.1						
KK31				⇑Lg	Lg	03 50 58.1	
	4.3nm,0.4s,baz=173,slow=30,SNR=6.5						
AAK	**Ala-Archa**	**3.89**	**36**	⇑*i*P	**Pn**	**03 50 00.3**	**+2.8**
	baz=36						
AAK				⇑*i*S	**Sn**	**03 50 46.9**	**+3.6**
	baz=36						
AAK	**Ala-Archa**	**3.89**	**36**	⇑Pn	**Pn**	**03 50 00.9**	**+3.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.9nm,0.5s						
AAK				⇑Sn	Sb	03 50 51.6	-1.9
	3.6nm,0.6s						
AAK				⇓Lg	Lg	03 51 06.5	
	8.7nm,0.6s						
KBK	Karagaybulak	4.12	39	⇓eP	Pn	03 50 03.5	+2.9
	baz=39						
KBK				⇓iS	Sn	03 50 52.0	+3.1
	baz=39						
USP	Ospenovka	4.41	31	⇓iP	Pn	03 50 06.7	+2.2
	baz=31						
USP				⇓iS	Sn	03 50 57.9	+2.0
	baz=31						
KST	Kastek	4.91	43	Pg	Pb	03 50 23.3	-0.4
	1.6nm,0.7s						
KST				Lg	Lg	03 51 32.7	
	3.9nm,0.8s						
DGS	Degeres	4.96	40	Pg	Pb	03 50 24.7	+0.2
	1.6nm,0.7s						
DGS				Lg	Lg	03 51 35.7	
	3.8nm,0.8s						
KTBS	Karatobe	5.75	41	Pg	Pb	03 50 39.5	+1.5
	1.2nm,0.8s						
KTBS				Lg	Lg	03 52 01.0	
	3.7nm,0.8s						
BTLS	Baital	5.86	19	Pg	Pb	03 50 41.5	+1.9
	0.8nm,1.0s						

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*NOU **17** 03:58:01.8, 19°.84S×177°.35W, h426^{km}, mb4.8, Fiji Islands Region*

*NEIC **17** 03:58:03.4±1.2, 20°.1S±0°.1×177°.7W±0°.1, h417^{km}±6^{km}, mb4.4/53, Error ellipse: s-maj=16.0km s-min=15.7km az=61.0*

*IDC **17** 03:58:05.2±0.8, 19°.77S×177°.87W, h426^{km}±8^{km}, mb3.7/15, mb1 4.0/17, mb1mx3.8/29, mbtmp4.5/17, Error ellipse: s-maj=17.9km s-min=9.7km az=144.0*

ISC 17 03:58:01.7±0.3**, 20°.07S**±0°.06×**177°.60W**±0°.06**, h400**^{km}**, n229, σ1^{s}34**/231**, mb4.5**/45**, 27C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.73	299	P	Pn	03 59 23.5	+2.4
	16nm,0.3s,baz=300,slow=23,SNR=63						
MSVF	Nonsavu	4.73	299		Pn	03 59 22.7	+1.6
MSVF	Nonsavu	4.73	299	P	Pn	03 59 23.5	+2.4
NIUE	Niue	7.30	83	P	Pn	03 59 47.4	-1.3
RAO	Raoul Island	9.14	182	P	P	04 00 08.8	-0.9
FUNA	Funafuti	11.89	344	P	Pn	04 00 42.0	+0.3
MARNC	Mare, Loyalty	13.52	262	P	Pn	04 01 00.0	-0.5
DVP	Devils Point	13.66	277	P	P	04 01 00.5	+0.9
PINNC	Pines Island,	14.16	257	P	P	04 01 08.1	+3.0
LIFNC	LIFOU	14.23	265	P	P	04 01 07.9	+2.0
YATNC	Mamie plateau,	14.62	259	P	P	04 01 12.6	+2.5
OUENC	Ouen Island, N	14.70	258	P	P	04 01 13.7	+2.8
DZM	Mont Dzumac	15.03	260	P	P	04 01 16.6	+2.0
	2.7nm,0.3s,baz=84,slow=16,SNR=169						
DZM				S	S	04 03 55.3	+0.9
	baz=196,slow=16,SNR=7.2						
DZM	Mont Dzumac	15.03	260	eP	P	04 01 18.2	+3.6
	582nm,1.1s						
DZM	Mont Dzumac	15.03	260	P	P	04 01 16.3	+1.7
DZM	Mont Dzumac	15.03	260	P	P	04 01 18.0	+3.4
NOUC	Port Laguerre	15.16	260	P	P	04 01 18.6	+2.6
SANVU	Saraoutou	15.19	285	P	P	04 01 17.2	+0.9
NFK	Norfolk Island	15.89	233	P	P	04 01 27.9	+4.2
RAR	Rarotonga	16.72	97	P	P	04 01 34.1	+1.5
	0.8nm,0.3s,baz=241,slow=5.9,SNR=4.8						
RAR	Rarotonga	16.72	97	P	P	04 01 34.2	+1.5
RAR	Rarotonga	16.72	97	P	P	04 01 30.5	-2.2
KOUNC	Koumac, New Ca	17.00	265	P	P	04 01 36.7	+1.0
MXZ	Matakaoa Point	17.79	191	P	P	04 01 46.5	+2.7
WMGZ	Waiomatatini S	18.02	190	P	P	04 01 50.4	+4.2
HAZ	Te Kaha	18.07	192	P	P	04 01 48.4	+1.6
PKGZ	Pakihiroa	18.15	191	P	P	04 01 49.0	+1.3
PUZ	Puketiti	18.29	190	P	P	04 01 50.5	+1.3
RUGZ	Raukumara Rang	18.30	192	P	P	04 01 49.8	+0.4
TWGZ	Tauwhareparae	18.44	191	P	P	04 01 54.1	+3.3
MWZ	Matawai	18.68	192	P	P	04 01 53.9	+0.6
URZ	Urewera	18.70	193	P	P	04 01 51.3	-2.1
	4.6nm,0.3s,baz=307,slow=3.6,SNR=22						
URZ				S	S	04 05 00.8	-3.2
	1.7nm,0.3s,baz=71,slow=22,SNR=8.4						
URZ	Urewera	18.70	193	P	P	04 01 52.0	-1.4
URZ				IAmb	IAmb	04 01 57.6	
	comp=Z,21nm,0.9s						
URZ	Urewera	18.70	193	P	P	04 01 53.7	+0.3
CNGZ	Carnagh Statio	18.70	190	P	P	04 01 55.9	+2.4
MUGZ	Murupara	18.98	194	P	P	04 01 57.2	+0.9
RIGZ	Rimuhau	19.00	191	P	P	04 01 57.4	+0.8
ETVZ	East Tongariro	19.86	195	P	P	04 02 05.6	+0.8
OTVZ	Oturere	19.89	196	P	P	04 02 05.1	-0.1
WNVZ	Wahianoa	20.07	196	P	P	04 02 07.4	+0.7
BHHZ	Black Hill Sta	20.11	194	P	P	04 02 06.1	-1.0
KRHZ	Kereru	20.18	194	P	P	04 02 10.9	+3.3
KAHZ	Kahuranaki	20.22	192	P	P	04 02 10.5	+2.4
PXZ	Pawanui	20.45	192	P	P	04 02 11.4	+1.3
PNHZ	Pukenui	20.48	194	P	P	04 02 11.7	+1.3
ANWZ	Angora Road	20.94	193	P	P	04 02 15.7	+1.2
BFZ	Birch Farm	21.20	193	P	P	04 02 17.9	+0.9
MRZ	Mangatainoka R	21.33	194	P	P	04 02 18.5	+0.4
OGWZ	Otaki Gorge	21.58	195	P	P	04 02 21.1	+0.8
BHW	Baring Head	22.21	195	P	P	04 02 29.0	+2.9
LTZ	Lake Taylor	24.20	198	P	P	04 02 45.1	+1.0
OXZ	Oxford	24.76	198	P	P	04 02 49.5	+0.5
RPZ	Rata Peaks	25.41	199	P	P	04 02 59.6	+4.8
	comp=Z,11nm,0.4s,baz=231,slow=1.4,SNR=9.2						
CTA	Charters Tower	33.91	264	P	P	04 04 09.8	+0.5
	comp=Z,29nm,0.6s,baz=94,slow=11,SNR=54						
CTAO	Charters Tower	33.91	264	P	P	04 04 09.2	-0.2
PMG	Port Moresby	35.62	282	P	P	04 04 24.5	+0.7
STKA	Stephens Creek	38.32	244	P	P	04 04 46.6	+0.6
	comp=Z,17nm,0.6s,baz=90,slow=9.5,SNR=34						
STKA	Stephens Creek	38.32	244	P	P	04 04 46.5	+0.5
WR0	Warramunga Arr	44.85	262	P	P	04 05 37.8	-0.6
WR0				IAmb	IAmb	04 05 39.2	
	comp=Z,9.3nm,0.8s						
AS31	Alice Springs	44.99	256	P	P	04 05 39.1	-0.4
AS31				IAmb	IAmb	04 05 40.6	
	comp=Z,21nm,0.8s						
ASAR	Alice Springs	44.99	256	P	P	04 05 39.4	-0.1
	comp=Z,72nm,0.7s,baz=94,slow=8.1,SNR=678						
ASAR				pP	pwP	04 07 00.7	-1.1
	comp=Z,5.3nm,0.9s,baz=86,slow=8.8,SNR=2.9						
ASAR				S	S	04 11 44.0	-3.6
	comp=Z,7.1nm,1.0s,baz=91,slow=15,SNR=23						
ASAR	Alice Springs	44.99	256	P	P	04 05 38.8	-0.7
WB0	Warramunga Arr	45.01	262	P	P	04 05 38.7	-1.1
WB2	Warramunga Arr	45.03	262	P	P	04 05 38.8	-1.1
WB2				IAmb	IAmb	04 05 40.0	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	45.04	262	P	P	04 05 39.1	-0.8
	comp=Z,11nm,0.6s,baz=98,slow=8.7,SNR=116						
WRA				S	S	04 11 43.4	-4.9
	comp=Z,0.4nm,0.6s,baz=93,slow=14,SNR=1.0						
WRA	Warramunga Arr	45.04	262	P	P	04 05 38.8	-1.2
SAUI	Saumlaki	50.83	276	P	P	04 06 23.9	+0.1
FAKI	Fak Fak	51.78	283	P	P	04 06 30.4	-0.3
FAKI	Fak Fak	51.78	283	P	P	04 06 30.3	-0.4
	comp=Z,37nm,1.2s						
SWI	Sorong	53.51	284	P	P	04 06 43.5	+0.3
	comp=Z,133nm,1.0s						
SOEI	Soe	56.87	271	P	P	04 07 08.1	+1.0
SOEI	Soe	56.87	271	P	P	04 07 08.3	+1.2
	comp=Z,114nm,1.0s						
BATI	Baumata	57.30	271	P	P	04 07 11.6	+1.6
TNTI	Ternate	57.72	284	P	P	04 07 12.7	-0.1
SANI	Sanana	57.88	281	P	P	04 07 13.7	-0.2
	comp=Z,39nm,1.0s						
VNDA	Vanda	58.37	185	P	P	04 07 18.6	+2.4
	comp=Z,3.0nm,1.2s,baz=334,slow=6.3,SNR=3.8						
VNDA	Vanda	58.37	185	P	P	04 07 17.6	+1.4
MMRI	Maumere	59.12	272	P	P	04 07 22.1	-0.3
EDFI	Ende, Flores	59.60	272	P	P	04 07 25.4	-0.3
	comp=Z,20nm,0.9s						
BNSI	Bone	62.50	276	P	P	04 07 44.9	0.0
	comp=Z,26nm,1.2s						
SPSI	Sidrap Palu	62.97	276	P	P	04 07 46.6	-1.3
	comp=Z,16nm,0.8s						
PLAI	Plampang	63.25	270	P	P	04 07 49.4	-0.4
	comp=Z,45nm,0.9s						
TWSI	Taliwang, Sumb	64.12	270	P	P	04 07 54.9	-0.5
	comp=Z,1µmcomp=Z,26nm,1.3s						
MPSI	Mapaga	64.41	280	P	P	04 07 57.0	-0.2
MJAR	Matsushiro Arr	70.09	323	P	P	04 08 31.3	-0.7
	comp=Z,4.2nm,0.5s,baz=162,slow=5.9,SNR=18						
MJAR	Matsushiro Arr	70.09	323	P	P	04 08 31.8	-0.2
MAT	Matsushiro	70.10	323	P	P	04 08 31.2	-0.8
KSM	Kuching	73.73	278	P	P	04 08 54.0	+0.1
YSS	Yuzh-Sakhalins	75.69	333	P	P	04 09 04.8	+0.6
PETK	Petropavlovsk-	75.96	345	P	P	04 09 05.4	-0.1
	comp=Z,4.4nm,0.6s,baz=116,slow=7.3,SNR=10.0						
PETK	Petropavlovsk-	75.96	345	P	P	04 09 05.6	0.0
KSAR	Wonju Array Be	76.84	318	P	P	04 09 10.9	+0.1
ISA	Isabella, Lake	78.77	45	P	P	04 09 22.7	+1.3
ISA				IAmb	IAmb	04 09 25.9	
	comp=Z,7.4nm,1.4s						
USRK	Ussuriysk Ar.	78.83	326	P	P	04 09 19.4	-2.0
	comp=Z,7.3nm,1.0s,baz=79,slow=4.1,SNR=6.2						
USRK	Ussuriysk Ar.	78.83	326	P	P	04 09 22.1	+0.6
CMB	Columbia Colle	78.89	43	P	P	04 09 22.3	+0.3
CMB				IAmb	IAmb	04 09 26.5	
	comp=Z,8.2nm,1.4s						
AFDM	Forest Hills D	79.07	42	P	P	04 09 24.1	+1.1
YBH	Yreka Blue Hor	79.72	38	P	P	04 09 27.1	+0.6
	comp=Z,3.0nm,1.0s,baz=220,slow=7.1,SNR=3.0						
YBH	Yreka Blue Hor	79.72	38	IAmb	IAmb	04 09 27.7	
	comp=Z,15nm,1.5s						
NJ2	Nanjing	79.90	309	eP	P	04 09 27.8	+0.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VCNR	Virginia City	80.10	42	P	P	04 09 29.5	+0.9
VCNR				IAmb	IAmb	04 09 33.4	
	comp=Z,9.8nm,1.5s						
NVAR	Mina Array Bea	80.45	43	P	P	04 09 31.3	+0.8
	comp=Z,0.4nm,0.5s,baz=219,slow=7.8,SNR=7.2						
NVAR				pP	pwP	04 11 07.3	+4.0
	comp=Z,1.4nm,1.0s,baz=232,slow=10,SNR=4.5						
NVAR	Mina Array Bea	80.45	43	P	P	04 09 31.2	+0.6
NV11	Mina Array Sit	80.55	43	P	P	04 09 32.0	+1.1
TUC	Tucson	82.42	52	P	P	04 09 41.5	+0.8
TUC				IAmb	IAmb	04 09 45.9	
	comp=Z,9.3nm,1.4s						
KNB	Kanab	83.33	47	P	P	04 09 46.0	+0.6
U15A	North Rim	83.39	48	IAmb	IAmb	04 09 51.1	
	comp=Z,12nm,1.4s						
IPM	Ipoh	83.45	277	P	P	04 09 45.9	-0.4
GHO	Glory Hole Cre	84.72	13	P	P	04 09 52.4	+0.8
BJI	Beijing	85.86	315	P	P	04 09 58.1	+0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ENH	Enshi	86.12	304	P	P	04 09 59.5	+0.4
RND	Reindeer	86.20	13	P	P	04 09 59.0	+0.3
TXAR	Lajitas Array	86.51	57	P	P	04 10 02.5	+1.5
	comp=Z,0.4nm,0.6s,baz=220,slow=8.6,SNR=7.1						
HDA	Harding Lake	87.48	13	IAmb	IAmb	04 10 06.3	
	comp=Z,4.4nm,0.6s						
CCB	Clear Creek Bu	87.52	12	P	P	04 10 04.8	0.0
IMAR	Indian Mountai	87.67	10	P	P	04 10 05.6	0.0
MDM	Murphy Dome	87.71	12	IAmb	IAmb	04 10 06.3	
	comp=Z,10nm,1.2s						
DLMT	Dillon	87.82	40	P	P	04 10 07.5	+0.7
DLMT				IAmb	IAmb	04 10 11.5	
	comp=Z,11nm,1.5s						
IL31		87.82	13	IAmb	IAmb	04 10 07.6	
	comp=Z,9.0nm,1.2s						
ILAR	Eielson Array	87.82	13	P	P	04 10 05.2	-1.1
	comp=Z,1.5nm,0.4s,baz=220,slow=5.4,SNR=42						
ILAR				pP	pwP	04 11 41.3	+0.7
	comp=Z,1.6nm,1.0s,baz=229,slow=4.3,SNR=6.5						
ILAR				PP	PP	04 13 37.5	-1.7
	comp=Z,1.7nm,1.2s,baz=211,slow=8.4,SNR=3.3						
ILAR	Eielson Array	87.82	13	P	P	04 10 05.4	-0.8
ILAR					pwP	04 11 39.9	-0.7
XAN	Xi'an	88.18	307	P	P	04 10 09.9	+1.2
XAN				pP	PcP	04 10 20.8	+11
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
PDAR	Pinedale Array	88.39	43	P	P	04 10 10.0	+0.2
	comp=Z,0.7nm,0.9s,baz=210,slow=5.1,SNR=4.8						
PDAR	Pinedale Array	88.39	43	P	P	04 10 11.2	+1.4
VNA3	Neumayer Olymp	88.54	176	P	P	04 10 10.2	+0.5
VNA3	Neumayer Olymp	88.54	176	pP	pP	04 11 48.2	+7.2
VNA2	Neumayer--Watz	88.99	177	P	P	04 10 12.5	+0.7
	baz=191,slow=3.3						
VNA2	Neumayer--Watz	88.99	177	pP	pP	04 11 50.8	+7.6
VNA1	Neumayer--Stat	89.21	176	P	P	04 10 14.5	+1.7
VNA1	Neumayer--Stat	89.21	176	pP	pP	04 11 48.8	+4.6
HHC	Hu-ho-hao-te	89.33	314	eP	P	04 10 13.0	-1.0
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,7.1s						
COLD	Coldfoot	89.39	10	IAmb	IAmb	04 10 15.3	
	comp=Z,13nm,1.4s						
KMI	Kunming	89.50	297	⇑eP	P	04 10 16.3	+1.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	Chiang Mai	90.46	290	P	P	04 10 19.5	-0.1
BMAR	Burnt Mountain	90.60	12	P	P	04 10 17.1	-2.1
BO02	Sierra Bellavi	91.72	128	P	P	04 10 24.5	-0.9
BO02				IAmb	IAmb	04 10 42.8	
	comp=Z,7.2nm,1.1s						
YAK	Yakutsk	91.86	338	P	P	04 10 24.6	-0.5
LZH	Lanzhou	92.81	307	⇑P	P	04 10 29.1	-1.2
LZH				pP	pP	04 12 04.5	+2.1
LZH				sP	sP	04 12 43.8	+0.4
LZH				PP	PP	04 14 21.3	+2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,67nm,4.2s						
INK	Inuvik	93.76	15	P	P	04 10 32.6	-1.0
	comp=Z,2.1nm,0.8s,baz=191,slow=2.9,SNR=4.5						
INK	Inuvik	93.76	15	IAmb	IAmb	04 10 34.7	
	comp=Z,7.2nm,1.4s						
AC04	Llanos de Chal	94.33	122	P	P	04 10 35.7	-1.6
ULN	Ulaanbaatar	95.29	319	P	P	04 10 41.1	-0.3
YKA	Yellowknife Ar	95.97	25	P	P	04 10 44.1	+0.3
	comp=Z,0.7nm,1.1s,baz=243,slow=4.0,SNR=3.3						
MKAR	Makanchi Array	111.18	313	PKiKP	PKiKP	04 15 47.5	-1.0
	comp=Z,0.4nm,0.6s,baz=248,slow=2.0,SNR=6.4						
MKAR				PP	PP	04 16 32.0	-3.4
	comp=Z,0.5nm,1.0s,baz=92,slow=10,SNR=3.7						
ABKAR	Akbulak array	126.04	317	PKPdf	PKPdf	04 16 16.5	-0.4
ARCES	ARCESS Array B	128.57	350	PKP	PKPdf	04 16 20.2	-1.0
	comp=Z,1.3nm,0.5s,baz=9.9,slow=1.4,SNR=13						
FINES	FINESS Array B	135.47	344	PKhKP	PKPdf	04 16 32.8	-1.6
	comp=Z,3.5nm,0.9s,baz=8.5,slow=3.9,SNR=7.5						
AKASG	Malin Array Be	142.82	332	PKhKP	PKPdf	04 16 44.1	-3.9
	comp=Z,3.4nm,0.5s,baz=41,slow=4.1,SNR=15						
TOKA	Tokat	144.61	312		PKPbc	04 16 51.3	0.0
SORM	Soroca	145.04	329	⇑P	PKPdf	04 16 52.0	+0.1
MBAR	Mbarara	145.47	237	PKPbc	PKPab	04 16 55.5	-0.3
ILGA	Ilgaz	146.16	315	PKPbc	PKPbc	04 16 57.0	+0.7
VASR	Vaslui	146.35	328	⇑P	PKPbc	04 16 56.6	+0.4
RUE	Ruedersdorf	146.47	347	ePKPbc	PKPbc	04 16 56.9	+0.6
	baz=19,slow=2.7						
BRTR	Keskin Array B	146.83	313	PKPbc	PKPbc	04 16 57.6	-0.4
	comp=Z,2.8nm,0.6s,baz=144,slow=4.2,SNR=28						
BRTR	Keskin Array B	146.83	313	PKPbc	PKPbc	04 16 57.8	-0.3
BUR08	Bucovina Ar. S	146.86	331	PKPbc	PKPbc	04 16 58.2	+0.3
BURAR	Bucovina Array	146.88	331	⇓P	PKPbc	04 16 58.8	+1.0
BURAR	Bucovina Array	146.88	331	PKPbc	PKPbc	04 16 57.9	0.0
BIZ	Bicaz	146.96	330	⇑P	PKPbc	04 16 58.9	+0.9
TESR	Tescani	147.00	329	⇑P	PKPbc	04 16 58.2	+0.1
FLTG	Flechtingen	147.08	350	ePKPbc	PKPbc	04 16 58.4	+0.3
	baz=19,slow=2.7						
CFR	Carcaliu	147.15	326	⇑P	PKPbc	04 16 58.6	+0.1
TPGR	Topolog	147.21	325	⇑P	PKPbc	04 16 58.8	+0.1
BR231	Keskin MP Arra	147.37	314	PKPbc	PKPbc	04 16 59.1	-0.3
VRI	Vrincioaia	147.41	328	⇑P	PKPbc	04 16 59.3	+0.1
CRVS	Cervenica-Dubn	147.42	336	ePKP	PKPbc	04 16 59.6	+0.5
OSTC	Ostas	147.67	343	⇑ePKP	PKPbc	04 16 59.6	-0.2
CHVC	Chvalec	147.69	344	⇑ePKP	PKPbc	04 17 00.3	+0.5
CLL	Collm	147.73	348	⇑iPKPbc	PKPbc	04 17 00.3	+0.5
	comp=Z,26nm,1.3s						
CLL				i PKPab	PKPab	04 17 03.0	-0.4
	comp=Z,14nm,1.3s						
CLL				e		04 19 00.0	
CLL	Collm	147.73	348	PKPbc	PKPbc	04 17 00.2	+0.5
CLL	Collm	147.73	348	ePKPbc	PKPbc	04 17 00.4	+0.5
	baz=19,slow=2.7						
UPC	Upice	147.77	344	⇑ePKP	PKPbc	04 17 00.1	+0.1
DPC	Dobruska-Polom	147.83	343	⇑ePKP	PKPbc	04 17 00.1	-0.1
NEHR	Nehoiu	147.94	328	⇓P	PKPbc	04 17 00.9	+0.3
BRG	Berggiesshubel	147.94	346	i PKP	PKPbc	04 17 00.5	+0.1
BRG				Amp		04 17 02.5	
	comp=Z,27nm,1.8s						
BRG	Berggiesshubel	147.94	346	i PKP	PKPbc	04 17 00.5	+0.1
BRG				Amp		04 17 02.5	
	comp=Z,27nm,1.8s						
KRLC	Kraliky	147.95	342	⇑ePKP	PKPbc	04 17 00.1	-0.4
MORC	Moravsky Berou	148.00	341	ePKP	PKPbc	04 17 01.3	+0.6
DOPR	Dopca	148.00	329	⇑P	PKiKP	04 17 01.5	-0.7
MLR	Muntele Rosu	148.07	328	⇓P	PKPbc	04 17 01.6	+0.5
MLR	Muntele Rosu	148.07	328		PKPbc	04 17 00.4	-0.7
MDUB	Mudurnu	148.11	316	PKPbc	PKPbc	04 17 01.2	-0.1
PVCC	Panska Ves	148.12	345	⇑ePKP	PKPbc	04 17 01.3	+0.4
VOIR		148.55	329	⇓P	PKPbc	04 17 02.7	+0.4
DRGR		148.61	333	⇑P	PKPbc	04 17 00.4	-1.9
PRU	Pruhonice	148.62	345	⇑ePKP	PKiKP	04 17 02.8	-0.6
MOX	Moxa	148.63	349	ePKPbc	PKiKP	04 17 02.9	-0.5
	baz=19,slow=2.7						
PLN	Plauen	148.68	348	ePKPbc	PKiKP	04 17 03.0	-0.5
	baz=19,slow=2.7						
TANN	Tannenbergstha	148.69	348	ePKPbc	PKiKP	04 17 03.1	-0.5
	baz=19,slow=2.7						
VRAC	Vranov	148.70	342	ePKP	PKiKP	04 17 03.0	-0.6
VYHS	Vyhne	148.71	339	ePKP	PKPbc	04 17 02.7	+0.3
GUNZ	Gunzen	148.76	348	ePKPbc	PKiKP	04 17 03.4	-0.3
	baz=19,slow=2.7						
JAVC	Velka Javorina	148.77	340	ePKP	PKiKP	04 17 04.3	+0.5
ARR	Arges	148.80	329	⇑P	PKiKP	04 17 03.8	-0.2
PSZ	Piszkesteto	148.82	337	PKPbc	PKPbc	04 17 03.1	+0.3
KRUC	Moravsky	148.97	342	ePKP	PKPbc	04 17 03.5	+0.4
TREC	Trest	149.02	343	⇑ePKP	PKPbc	04 17 03.3	+0.1
PBCC	Pribram	149.04	345	⇑ePKP	PKPbc	04 17 02.8	-0.4
MODS	Modra-Piesok	149.32	340	ePKP	PKPbc	04 17 03.9	-0.1
MEM	Membach	149.40	355	dPKiKP	PKPbc	04 17 04.2	+0.2
BTNL	Ternell	149.41	355	dPKiKP	PKPbc	04 17 04.2	+0.1
BSTI	Sart Tilman	149.45	356	dPKiKP	PKPbc	04 17 04.0	-0.1
KHC	Kasperske Hory	149.66	345	⇑ePKP	PKiKP	04 17 05.4	-0.2
KHC				ePKPAB	PKPab	04 17 11.8	+0.3
GZR	Gura Zlata	149.66	331	⇑P	PKPbc	04 17 04.8	-0.1
WET	Wettzell	149.80	346	ePKPbc	PKiKP	04 17 05.7	-0.1
	baz=19,slow=2.7						
GEC2	GERESS Array S	149.89	345	ePKPbc	PKiKP	04 17 05.9	-0.3
	baz=19,slow=2.7						
GERES	GERESS Array B	149.89	345	PKPbc	PKiKP	04 17 05.8	-0.3
	comp=Z,4.2nm,0.8s,baz=45,slow=2.3,SNR=26						
GERES	GERESS Array B	149.89	345		PKPbc	04 17 05.0	-0.4
DOU	Dourbes	149.99	357	dPKiKP	PKPbc	04 17 05.7	+0.2
BZS	Buzias	150.00	332	⇑P	PKPbc	04 17 05.6	0.0
CONA	Conrad Observa	150.15	342	eP	PKiKP	04 17 06.9	+0.2
	comp=Z,7.3nm,0.6s						
HERR	Herculane	150.21	331	⇑P	PKPbc	04 17 06.2	+0.1
WLF	Walferdange	150.32	355	dPKiKP	PKPbc	04 17 06.6	+0.3
MOA	Molln	150.67	344	eP	PKPbc	04 17 07.4	+0.2
	comp=Z,8.9nm,1.4s						
ARSA	Arzberg	150.86	341	eP	PKPbc	04 17 07.4	-0.2
	comp=Z,8.2nm,1.6s						
ALN	Alexandroupoli	151.08	321		PKPbc	04 17 07.4	-0.9
BFO	Black Forest	151.41	352		PKiKP	04 17 09.4	+0.2
VTS	Vitosha	151.48	327	⇑P	PKPbc	04 17 08.8	-0.6
KBA	Koelnbreinsper	151.62	344	i P	PKPbc	04 17 08.8	-0.8
	comp=Z,9.0nm,1.1s						
WATA	Walderalm	151.80	347	eP	PKPbc	04 17 09.5	-0.4
	comp=Z,3.8nm,0.5s						
OBKA	Obir	151.82	342	i P	PKPbc	04 17 09.5	-0.4
	comp=Z,14nm,1.6s						
WTTA	Wattenberg	151.85	347	i P	PKPbc	04 17 09.8	-0.3
	comp=Z,9.9nm,1.1s						
MOTA	Moosalm	151.89	347	eP	PKiKP	04 17 10.3	-0.1
	comp=Z,7.8nm,1.3s						
MYKA	Terra Mystica	151.96	343	eP	PKPbc	04 17 09.7	-0.5
	comp=Z,3.7nm,0.7s						
SQTA	Sankt Quirin	151.99	347	i P	PKiKP	04 17 10.7	+0.1
	comp=Z,9.2nm,1.3s						
ABTA	Abfaltersbach	152.14	345	i P	PKPbc	04 17 10.4	-0.2
	comp=Z,15nm,1.2s						
DAVA	Damuels	152.18	349	eP	PKiKP	04 17 11.2	+0.2
	comp=Z,11nm,1.4s						
FETA	Feichten	152.27	348	eP	PKiKP	04 17 11.4	+0.1
	comp=Z,14nm,1.3s						

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*REY **17** 04:07:52.9, 64°.66N×17°.44W, h10^{km}*

*IDC **17** 04:07:53.5±1.1, 64°.59N×17°.60W, h0^{km}, mb3.5/7, mb1 3.7/7, mb1mx3.5/30, mbtmp3.5/7, Error ellipse: s-maj=44.5km s-min=20.5km az=30.0*

ISC 17 04:07:52.8±0.6**, 64°.66N**±0°.02×**17°.41W**±0°.03**, h10**^{km}**, n31, σ1^{s}94**/46**, mb3.5**/7**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.14	9	P	Pg	04 07 55.9	-0.1
	baz=13						
IDYN				S	Sg	04 07 58.4	+0.2
	baz=13						
IURH	Urdarhals	0.20	35	P	Pg	04 07 57.1	+0.1
	baz=38						
IURH				S	Sg	04 08 00.1	+0.2
	baz=38						
THOR	Thorvaldshraun	0.42	48	P	Pb	04 08 00.8	-1.5
	baz=50						
THOR				S	Sb	04 08 07.2	-1.6
	baz=50						
ISKR	Skrokkalda	0.43	257	P	Pb	04 08 00.6	-1.9
	baz=256						
ISKR				S	Sb	04 08 07.7	-1.4
	baz=256						
IKRE	Kreppuhraun	0.46	74	P	Pb	04 08 01.5	-1.5
	baz=74						
IKRE				S	Sb	04 08 08.6	-1.3
	baz=74						
IJOK	Jokulheimar	0.49	226	P	Pb	04 08 01.7	-1.8
	baz=225						
IJOK				S	Sg	04 08 08.0	-0.8
	baz=225						
IASK	Askja	0.51	39	P	Pb	04 08 02.3	-1.7
	baz=40						
IASK				S	Sb	04 08 09.4	-2.1
	baz=40						
IIEY	Innrieyrar	0.64	209	P	Pb	04 08 04.6	-1.5
	baz=208						
IIEY				S	Sb	04 08 13.3	-1.9
	baz=208						
IKSK	Karasker	0.64	140	P	Pb	04 08 04.2	-1.9
	baz=140						
IKSK				S	Sb	04 08 13.1	-2.1
	baz=140						
ISVA	Svartarkot	0.69	6	P	Pb	04 08 05.0	-1.8
	baz=6.4						
ISVA				S	Sb	04 08 14.7	-1.7
	baz=6.4						
IKAL	Kalfafell	0.72	190	P	Pb	04 08 06.1	-1.3
	baz=189						
IKAL				S	Sb	04 08 15.9	-1.5
	baz=189						
IVSH	V-Sauoahnukur	0.74	77	P	Pb	04 08 06.2	-1.6
	baz=78						
IVSH				S	Sb	04 08 16.6	-1.3
	baz=78						
IFAG	Fagurholsmyri	0.85	157	P	Pb	04 08 08.3	-1.3
	baz=156						
IFAG				S	Sb	04 08 20.1	-1.0
	baz=156						
IADA	Aoalbol	0.86	64	P	Pb	04 08 08.2	-1.7
	baz=65						
IADA				S	Sb	04 08 20.2	-1.4
	baz=65						
IMEL	Melhnausar	0.97	19	P	Pb	04 08 09.8	-1.8
	baz=20						
IMEL				S	Sn	04 08 24.0	-2.3
	baz=20						
IREN	Reynihlio	1.02	12	P	Pg	04 08 10.6	-1.7
	baz=12						
ISNB	Snabyli	1.07	210	P	Pg	04 08 11.6	-1.6
	baz=210						
IKVO	Krokottuvotn	1.08	12	P	Pg	04 08 11.6	-2.0
	baz=12						
IGRS	Grimsstaoir	1.12	28	P	Pb	04 08 12.5	-1.8
	baz=29						
IFED	Fedgar	1.18	238	P	Pb	04 08 13.7	-1.5
	baz=238						
IRJU	Rjupnafell	1.18	208	P	Pb	04 08 13.8	-1.5
	baz=208						
ISKI	Skildingahlsh	1.23	7	P	Pn	04 08 14.0	-2.0
	baz=7.9						
IGHA	Grjothals	1.23	15	P	Pn	04 08 13.9	-2.2
	baz=15						
SCO	Scoresbysund	6.10	346	e	Pn	04 09 18.1	-4.7
	baz=156,slow=7.4						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO				i P	Pn	04 09 24.0	+1.1
SCO				eS	Sn	04 10 37.3	+4.7
SCO				IAML		04 10 45.2	
	comp=Z,0.9nm,0.5s						
AKASG	Malin Array Be	27.80	98	P	P	04 13 44.3	+2.7
	comp=Z,0.2nm,0.2s,baz=315,slow=9.1,SNR=1.3						
BRTR	Keskin Array B	38.44	105	P	P	04 15 18.4	+3.9
	comp=Z,0.6nm,0.8s,baz=343,slow=4.5,SNR=3.8						
YKA	Yellowknife Ar	39.25	313	P	P	04 15 22.3	+1.6
	comp=Z,0.4nm,0.9s,baz=50,slow=8.1,SNR=5.5						
ILAR	Eielson Array	45.71	332	P	P	04 16 16.6	+3.3
	comp=Z,0.6nm,1.0s,baz=18,slow=6.0,SNR=3.6						
MKAR	Makanchi Array	52.70	58	P	P	04 17 09.0	+2.0
	comp=Z,0.6nm,0.9s,baz=308,slow=7.1,SNR=2.6						
TORD	Torodi Ar. Bea	53.12	157	P	P	04 17 11.9	+1.6
	comp=Z,0.7nm,0.7s,baz=334,slow=9.6,SNR=2.6						
PDAR	Pinedale Array	53.21	293	P	P	04 17 13.1	+2.0
	comp=Z,0.7nm,0.8s,baz=54,slow=7.5,SNR=4.8						

IDC 17 04:29:00.9±3.1, 17°.21S×170°.42W, h0^{km}, mb3.6/3, mb1 4.0/3, mb1mx3.5/51, mbtmp3.6/3, MS4.1/2, Ms1 4.2/2, ms1mx2.8/37, Error ellipse: s-maj=291.6km s-min=31.2km az=152.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	52.30	253	P	P	04 38 14.7	-0.1
	0.6nm,0.5s,baz=89,slow=8.3,SNR=10						
GUMO	Guam	53.72	302	LR	LR	04 59 53.5	
	comp=Z,166nm,19.5s,baz=220,slow=34						
NVAR	Mina Array Bea	73.81	40	P	P	04 40 37.7	+0.1
	0.3nm,0.7s,baz=217,slow=4.2,SNR=3.5						
TXAR	Lajitas Array	79.28	55	P	P	04 41 08.7	0.0
	0.3nm,0.7s,baz=221,slow=6.8,SNR=4.8						
CMAR	Chiang Mai Arr	95.89	287	LR	LR	05 22 13.9	
	comp=Z,74nm,20.8s,baz=100,slow=33						

IDC 17 04:31:36.0±11.0, 2°.29N×128°.34E, h227^{km}±112^{km}, mb3.3/5, mb1 3.4/5, mb1mx3.0/58, mbtmp3.9/5, Error ellipse: s-maj=196.1km s-min=19.4km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.86	165	P	P	04 36 19.4	-0.6
	1.1nm,0.4s,baz=344,slow=10,SNR=11						
ASAR	Alice Springs	26.36	168	P	P	04 36 52.1	+0.5
	0.8nm,0.7s,baz=358,slow=8.5,SNR=11						
ASAR				PcP	PcP	04 40 10.9	-0.4
	0.3nm,0.4s,baz=352,slow=2.2,SNR=4.2						
STKA	Stephens Creek	36.23	161	P	P	04 38 17.6	+0.1
	1.0nm,0.4s,baz=338,slow=9.8,SNR=3.2						
MKAR	Makanchi Array	59.65	325	P	P	04 41 16.6	+0.1
	0.6nm,0.5s,baz=111,slow=8.5,SNR=11						
KURBB	Kurchatov Arra	63.82	327	P	P	04 41 44.0	-0.2
	1.2nm,0.2s,baz=125,slow=5.8,SNR=7.1						

IDC 17 04:36:55.0±11.0, 23°.87S×179°.53E, h596^{km}±116^{km}, mb2.9/4, mb1 3.1/5, mb1mx2.9/43, mbtmp3.9/5, Error ellipse: s-maj=251.2km s-min=38.1km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.19	276	P	P	04 39 34.9	-0.9
	0.1nm,0.3s,baz=94,slow=19,SNR=5.3						
CTA	Charters Tower	31.05	270	P	P	04 42 26.9	+0.8
	2.8nm,0.5s,baz=95,slow=11,SNR=11						
ASAR	Alice Springs	41.62	261	P	P	04 43 52.5	-0.2
	0.3nm,0.5s,baz=94,slow=8.1,SNR=4.7						
WRA	Warramunga Arr	41.98	266	P	P	04 43 54.8	-0.8
	0.9nm,0.5s,baz=102,slow=8.0,SNR=9.3						
TXAR	Lajitas Array	90.78	58	P	P	04 48 55.9	-0.1
	0.5nm,0.8s,baz=214,slow=6.0,SNR=7.4						

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*MOS **17** 04:37:43.8±1.2, 30°.33N×50°.59E, h20^{km}, mb4.4/13, Error ellipse: s-maj=8.7km s-min=5.4km az=79.0*

*IDC **17** 04:37:43.5±0.8, 30°.38N×50°.65E, h0^{km}, mb4.0/24, mb1 4.1/29, mb1mx3.9/62, mbtmp4.0/29, ML3.3/4, MS3.1/4, Ms1 3.1/4, ms1mx2.7/48, Error ellipse: s-maj=18.1km s-min=13.8km az=1.0*

*SGS **17** 04:37:44.4, 30°.96N×50°.89E, h31^{km}, Ml3.2*

*TEH **17** 04:37:46.9, 30°.44N×50°.74E, h15^{km}, ML4.1*

*NEIC **17** 04:37:48.6±1.7, 30°.36N±0°.05×50°.73E±0°.07, h35^{km}±6^{km}, Error ellipse: s-maj=10.4km s-min=5.8km az=129.0*

*DSN **17** 04:37:53.3±1.9, 29°.63N×50°.75E, h10^{km}, ML4.4/6, Error ellipse: s-maj=28.3km s-min=7.1km az=3.0*

*OMAN **17** 04:37:53.3±0.9, 29°.76N×50°.82E, h10^{km}, mb5.4/13, ms2.2/1, Error ellipse: s-maj=51.8km s-min=36.3km az=9.0*

ISC 17 04:37:45.0±0.4, 30°.36N±0°.03×50°.71E±0°.03, h10^{km}, n239, σ2^{s}.11/252, mb4.2/48, 14C-3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABEH	Behbahan	0.47	302	ePg	Pb	04 37 55.5	+0.2
ABEH				eSg	Sb	04 38 04.0	+1.8
KLNJ	Kolanjah	1.00	49	e		04 38 18.3	
	comp=Z,99nm,0.4s						
KLNJ				ePg	Pg	04 38 04.1	-0.2
KAZ1	Kazerun	1.08	132	e		04 38 31.6	
	comp=Z,99nm,0.2s						
KAZ1				ePg	Pn	04 38 08.7	+2.4
AHBU	AHRAM	1.57	161	ePg	Pg	04 38 17.5	+2.4
IBRJ	Brojen	1.62	17	ePg	Pn	04 38 15.5	+1.7
IBRJ				e		04 38 39.5	
	comp=Z,99nm,0.8s						
SHI	Shiraz	1.72	114	ePn	Pb	04 38 18.7	+2.0
SHI				e		04 38 58.2	
	comp=Z,99nm,0.4s						
AMIS	Naft Sefid	1.79	317	ePg	Pg	04 38 19.0	-0.3
AMIS				e		04 38 59.4	
	comp=Z,99nm,0.5s						
IRAM	Ramesheh	2.04	44	ePn	Pn	04 38 22.0	+2.4
IRAM				e		04 38 52.1	
	comp=Z,99nm,0.5s						
IPIR	Pirpir	2.33	4	ePn	Pn	04 38 25.8	+2.2
IPIR				e		04 39 00.4	
	comp=Z,99nm,0.5s						
IGAR	Gharneh	2.34	29	ePn	Pn	04 38 25.6	+1.9
IGAR				e		04 38 30.3	
	comp=Z,99nm,0.2s						
UMR	Umm Al-Rimmam	2.72	254	eP		04 38 32.4	
KBD	Kabd	2.88	247	eP		04 38 34.7	
IZEF	Zefreh	2.88	28	ePn	Pn	04 38 33.2	+2.0
QRN	Al-Qurain	2.92	237	eP		04 38 35.0	
MIB	Mutribah	2.97	260	eP		04 38 35.9	
ISAD	Sadrabad	2.99	58	ePn	Pn	04 38 35.4	+2.7
ISAD				e		04 38 36.7	
	comp=Z,99nm,0.2s						
NASN	Na'in	3.02	36	Pn	Pn	04 38 35.0	+1.9
NASN	Na'in	3.02	36	ePn	Pn	04 38 35.1	+1.9
IKLH	Kolahrood	3.05	14	ePn	Pn	04 38 35.3	+1.8
IKLH				e		04 38 56.4	
	comp=Z,99nm,0.5s						
RDF	Al-Radifah	3.10	243	eP		04 38 37.9	
RST	Umm Al-Ruwaisa	3.33	256	eP		04 38 40.5	
KHMZ	Khomeyn	3.43	349	Pn	Pn	04 38 40.3	+1.6
KHMZ	Khomeyn	3.43	349	ePn	Pn	04 38 40.3	+1.6
IMEH	Mehriz	3.51	72	ePn	Pn	04 38 42.6	+2.8
IMEH				e		04 38 45.1	
	comp=Z,99nm,0.2s						
ICHK	Chekchek	3.68	58	ePn	Pn	04 38 44.2	+2.0
ICHK				e		04 39 30.2	
	comp=Z,99nm,0.4s						
LMD1	Lamerd	3.69	144	ePn	Pn	04 38 46.8	+4.6
IKMR	Kamar-syah	3.72	328	ePn	Pn	04 38 44.4	+1.9
ANAR	Anarak	3.82	42	ePn	Pn	04 38 45.7	+1.7
YZKH	Yazd	3.89	58	ePn	Pn	04 38 47.3	+2.4
IKFM	Kafar-mosalman	3.99	323	ePn	Pn	04 38 47.7	+1.6
GHVR	GHOM	4.14	7	Pn	Pn	04 38 49.3	+0.9
GHVR	GHOM	4.14	7	ePn	Pn	04 38 49.4	+1.0
QYSM	Um Kedad	4.18	234	P	Pn	04 38 52.0	+3.2
ASAO	Ashtian	4.22	352	Pn	Pn	04 38 50.9	+1.4
ASAO	Ashtian	4.22	352	ePn	Pn	04 38 51.0	+1.4
IBAF	Bafgh	4.35	72	ePn	Pn	04 38 53.6	+2.3
IQOM	Qom	4.49	4	ePn	Pn	04 38 55.0	+1.8
IVRN	Varamin	4.71	10	ePn	Pn	04 38 57.6	+1.5
IBZA	Bozab	4.76	330	ePn	Pn	04 38 57.7	+0.7
SMAN	Sihmah	4.77	210	S	Sn	04 39 58.2	+5.9
SMAN	Sihmah	4.77	210	P	Pn	04 39 00.4	+3.5
IALM	Almabolaq	4.98	335	ePn	Pn	04 39 00.6	+0.6
KHGB	Koh Gabri	4.98	88	ePn	Pn	04 39 02.5	+2.4
KCHF	Cheshme Sefid,	4.99	322	ePn	Pn	04 39 01.8	+1.7
KER	Kermanshah	5.03	324	ePn	Pn	04 39 03.5	+2.9
IRAZ	Razeghan	5.08	353	ePn	Pn	04 39 02.9	+1.6
IHSB	Hasanabad	5.09	5	ePn	Pn	04 39 02.7	+1.3
RQBS	RQBS	5.14	235	S	Sn	04 40 03.7	+2.4
RQBS				P	Pn	04 39 04.4	+2.5
KRBR	Kerman	5.25	93	ePn	Pn	04 39 07.1	+3.3
TVBK	TV Kerman	5.25	92	ePn	Pn	04 39 06.5	+2.6
NGRK	Negar Kerman	5.27	96	ePn	Pn	04 39 07.9	+3.8
HSRG	Sareghieh	5.29	338	ePn	Pn	04 39 05.7	+1.4
IGHG	Ghaleghazi	5.29	320	ePn	Pn	04 39 06.4	+2.1
IMHD	Mahdasht	5.32	360	ePn	Pn	04 39 05.8	+1.3
IDMV	Damavand	5.33	12	ePn	Pn	04 39 05.3	+0.5
ILAS	Lasjerd	5.36	20	ePn	Pn	04 39 06.6	+1.4
DAMV	Damavand	5.37	11	ePn	Pn	04 39 06.5	+1.2
QABG	Abgarm-Qazvin	5.42	350	ePn	Pn	04 39 06.0	-0.1
ILIN	Lien	5.54	326	ePn	Pn	04 39 08.6	+0.9
IFIR	Firoozkooh	5.54	17	ePn	Pn	04 39 08.9	+1.1
CHTH	Charan	5.55	3	ePn	Pn	04 39 09.2	+1.4
BNDS	Bandar-Abbas	5.62	120	ePn	Pn	04 39 13.2	+4.4
IDHR	Dehrash	5.67	321	ePn	Pn	04 39 09.9	+0.5
JRN	Qarnain Island	5.71	160	ePn	Pn	04 39 13.1	+3.2
IANJ	Anjilo	5.77	27	ePn	Pn	04 39 11.9	+1.1
NHRD	Haradh	5.81	195	P	Pn	04 39 15.0	+3.8
ISHM	Shahmirzad	5.85	21	ePn	Pn	04 39 13.0	+1.0
CHMN	Cheshme madani	5.94	93	ePn	Pn	04 39 16.1	+2.8
IPRN	Peran	6.03	13	ePn	Pn	04 39 16.9	+2.6
IGZV	Ghazvin	6.03	356	ePn	Pn	04 39 15.6	+1.2
QALM	Alamut, Qazvin	6.06	360	ePn	Pn	04 39 16.2	+1.3
TNSJ	Nastanj	6.16	53	ePn	Pn	04 39 18.2	+2.1
TKDS	Koohdasht(Taba	6.34	58	ePn	Pn	04 39 20.3	+1.7
TABS	Tabas	6.36	57	ePn	Pn	04 39 20.9	+2.1
SHME	Shamm	6.43	131	P	Pn	04 39 21.1	+1.4
SHME	Shamm	6.43	131	ePn	Pn	04 39 21.1	+1.4
SHME	Shamm	6.43	131	P	Pn	04 39 21.7	+2.0
SHME				S	Sn	04 40 31.7	-1.5
ZNJK	Zanjan	6.52	346	Pn	Pn	04 39 22.8	+1.6
ZNJK	Zanjan	6.52	346	ePn	Pn	04 39 22.8	+1.6
BANOM	Banah	6.62	130	P	Pn	04 39 23.9	+1.5
BANOM				S	Sn	04 40 35.5	-2.5
BANOM	Banah	6.62	130	ePn	Pn	04 39 24.5	+2.1
BANOM	Banah	6.62	130	P	Pn	04 39 24.1	+1.8
BANOM				S	Sn	04 40 35.6	-2.4
IGLO	Ghaloghah	6.66	22	ePn	Pn	04 39 25.2	+2.1
KBAM	BAM	6.84	98	ePn	Pn	04 39 28.4	+3.0
NAZ	Nazwa, Dubai	6.92	139	ePn	Pn	04 39 28.0	+1.6
MASF	Masafi	6.92	135	P	Pn	04 39 28.8	+2.3
MASF				S	Sn	04 40 43.2	-2.1
MSFE	Esma-Masafi	6.93	135	P	Pn	04 39 27.8	+1.2
MSFE	Esma-Masafi	6.93	135	ePn	Pn	04 39 28.6	+2.0
ASUD	Al Ashush, Dub	7.03	143	ePn	Pn	04 39 29.5	+1.6
ASUD	Al Ashush, Dub	7.03	143	P	Pn	04 39 31.9	+3.9
	SNR=7.6						
MDH	Madha	7.06	134	ePn	Pn	04 39 30.2	+1.8
MDH	Madha	7.06	134	P	Pn	04 39 29.6	+1.3
MDH				S	Sn	04 40 45.8	-2.9
UOSS	Minazif	7.26	137	Pn	Pn	04 39 33.1	+1.9
UOSS	Minazif	7.26	137	ePn	Pn	04 39 34.9	+3.7
UOSS	Minazif	7.26	137	P	Pn	04 39 33.4	+2.2
UOSS				S	Sn	04 40 51.5	-2.3
ITEG	Tejag	7.31	68	ePn	Pn	04 39 33.7	+1.8
HATD	Hatta, Dubai	7.31	138	P	Pn	04 39 34.0	+2.1
HATD	Hatta, Dubai	7.31	138	ePn	Pn	04 39 35.5	+3.6
ASHO	Ashiyiah	7.38	139	P	Pn	04 39 34.7	+1.9
ASHO	Ashiyiah	7.38	139	ePn	Pn	04 39 35.7	+2.9
ASHO	Ashiyiah	7.38	139	P	Pn	04 39 35.0	+2.2
ASHO				S	Sn	04 40 54.7	-2.0
BSRN	Basiran	7.39	75	ePn	Pn	04 39 35.4	+2.4
ALNE	Al Ain	7.71	143	ePn	Pn	04 39 40.1	+2.7
IMND	Minoodasht	7.92	28	ePn	Pn	04 39 42.0	+1.9
SOHO	SOHO	8.08	139	P	Pn	04 39 42.2	-0.1
SOHO	SOHO	8.08	139	ePn	Pn	04 39 44.1	+1.8
IMON	Monand	8.13	67	ePn	Pn	04 39 45.2	+1.9
RAYN	Ar Rayn	8.24	216	P	Pn	04 39 45.3	+0.7
RAYN	Ar Rayn	8.24	216	P	Pn	04 39 44.9	+0.3
RAYN	Ar Rayn	8.24	216	Pn	Pn	04 39 44.9	+0.3
SBZV	Sabzevar	8.33	42	ePn	Pn	04 39 48.4	+2.3
ARQ	Araqi	8.70	142	P	Pn	04 39 52.5	+1.6
ARQ				S	Sn	04 41 26.6	-2.6
GRMI	Germi	8.75	345	ePn	Pn	04 39 53.5	+1.9
HOQ	Hoqain	8.95	137	P	Pn	04 39 59.0	+4.6
HOQ				P	Pn	04 39 59.0	+4.6
ISFR	Sfrayin	9.03	40	ePn	Pn	04 39 57.6	+2.0
IAKL	Akhelmad	9.16	45	ePn	Pn	04 39 59.7	+2.2
IPAY	Payeh	9.21	47	ePn	Pn	04 40 00.0	+1.9
GEYT	Alibeck	9.73	37	Pn	Pn	04 40 04.8	-0.2
	comp=Z,0.9nm,0.3s,baz=230,slow=11,SNR=7.7						
GEYT	Alibeck	9.73	37		Pn	04 40 06.9	+1.9
GYA0B	ALIBECK ARRAY	9.73	37	Pn	Pn	04 40 07.3	+2.3
IKRD	Kardeh	9.74	47	ePn	Pn	04 40 07.5	+11
JRKH	Jarkhoshk	9.79	53	ePn	Pn	04 40 08.6	+2.6
IMYA	Miami	9.86	50	ePn	Pn	04 40 09.1	+2.1
WSAR	Wadi Sarin	10.01	133	Pn	Pn	04 40 09.4	+0.5
	comp=Z,0.5nm,0.3s,baz=340,slow=14,SNR=2.1						
WSAR				Sn	Sn	04 41 55.4	-6.0
	comp=Z,1.9nm,0.3s,baz=158,slow=22,SNR=6.4						
WBK	Wadi Bani Khal	10.68	134	P	Pn	04 40 19.6	+1.5
MARD	Mardin	10.78	313	Pn	Pn	04 40 19.4	-0.2
MHTO	MHTO	11.39	143	P	Pn	04 40 29.9	+2.2
	SNR=6.9						
MHTO				S	Sn	04 42 30.9	-4.3
DOK	Doka	12.09	164	P	Pn	04 40 39.6	+2.2
	SNR=16						
WHFO	Wadi Hawf	12.69	167	P	Pn	04 40 45.0	-0.6
	SNR=39						
WHFO				S	Sn	04 43 02.9	-4.2
MAK	Makhachkala	12.84	349	eP	Pn	04 40 49.1	+1.6
MAK				eS	Sn	04 43 11.1	+0.7
MAK				pmax	pmax		
	comp=Z,345nm,1.7s						
MAK				MLR	MLR		
	comp=Z,237nm,9.0s						
SHAO	Shalim	13.07	159	P	Pn	04 40 52.0	+1.3
	SNR=7.2						
SHAO				S	Sn	04 43 10.3	-5.9
ABTO	Aybut	13.16	169	P	Pn	04 40 53.3	+1.3
	SNR=7.5						
DMTO	DMTO	13.16	162	P	Pn	04 40 52.1	+0.1
MMAI	Mount Meron Ar	13.30	285	Pn	Pn	04 40 54.3	+0.4
	baz=104,slow=15,SNR=1.2						
EIL	Elat	13.68	271	LR	LR	04 47 33.8	
	comp=Z,80nm,18.3s,baz=102,slow=43						
KBZ	Khabaz	14.72	337	Pn	Pn	04 41 15.5	+2.3
	comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=2.3						
KBZ	Khabaz	14.72	337	i P	Pn	04 41 12.8	-0.4
KIV	Kislovodsk	14.99	337	eP	Pn	04 41 18.8	+1.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBL	Kabul	16.03	70	P	Pn	04 41 31.3	+0.6
KBL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBL	Kabul	16.03	70	Pn	Pn	04 41 31.3	+0.6
BR131	Keskin Array S	16.80	308	i P	P	04 41 43.0	+0.4
BRTR	Keskin Array B	16.80	308	Pn	Pn	04 41 39.4	-0.9
	comp=Z,0.0nm,0.3s,baz=134,slow=10,SNR=2.4						
ABKAR	Akbulak array	20.14	18	P	P	04 42 18.6	-0.4
KK31	Karatay Array	20.28	46	P	P	04 42 21.7	+1.0
KK31				pmax	pmax		
	comp=Z,18nm,1.7s						
KK31	Karatay Array	20.28	46		P	04 42 21.7	+1.0
KK31				IAmb	IAmb	04 42 24.0	
	comp=Z,18nm,1.7s						
KKAR	Karatay Array	20.28	46	P	P	04 42 21.6	+0.9
KKAR	Karatay Array	20.28	46		P	04 42 21.6	+0.9
AKTO	Aktyubinsk	20.80	13	P	P	04 42 26.1	-0.1
	comp=Z,3.4nm,0.4s,baz=195,slow=7.8,SNR=16						
AKTO				LR	LR	04 52 46.0	
	comp=Z,84nm,18.5s,baz=201,slow=43						
VRH	Novokhopyorsk	21.88	345	eP	P	04 42 36.2	-1.6
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
BELG	Belogornoye	22.14	355	P	P	04 42 40.2	-0.4
	comp=Z,3.9nm,0.3s,baz=13,slow=10,SNR=2.3						
BELG	Belogornoye	22.14	355	i P	P	04 42 39.8	-0.8
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VSR	Storozhevoye	22.55	341	eP	P	04 42 42.4	-2.6
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAK	Ala-Archa	22.63	51	P	P	04 42 47.2	+1.1
	comp=Z,1.2nm,0.6s,baz=59,slow=23,SNR=2.7						
AAK				LR	LR	04 52 34.3	
	comp=Z,49nm,21.0s,baz=30,slow=39						
AAK	Ala-Archa	22.63	51	i P	P	04 42 48.0	+1.8
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	Ala-Archa	22.63	51	P	P	04 42 47.6	+1.4
AAK				IAmb	IAmb	04 43 01.2	
	comp=Z,6.0nm,1.3s						
BTLS	Baital	23.46	45	eP	P	04 42 54.8	+0.3
	baz=45						
BTLS	Baital	23.46	45	eP	P	04 42 54.8	+0.3
LPSR	Galich'ya Gora	23.85	342	eP	P	04 42 56.3	-1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRI	Vrincioaia	24.28	316	⇑P	P	04 43 03.7	+1.3
KUU	Kurty	24.38	49	eP	P	04 43 03.8	+0.5
	comp=Z,1.8nm,0.7s,baz=49						
KUU	Kurty	24.38	49	eP	P	04 43 03.8	+0.5
KUU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MDOK	Medeo	24.55	51	eP	P	04 43 05.4	+0.3
	baz=51						
MDOK	Medeo	24.55	51	eP	P	04 43 05.4	+0.3
MLR	Muntele Rosu	24.56	315	P	P	04 43 05.9	+0.8
	comp=Z,2.8nm,0.6s,baz=60,slow=16,SNR=14						
MLR	Muntele Rosu	24.56	315	⇓P	P	04 43 07.2	+2.1
MLR	Muntele Rosu	24.56	315	P	P	04 43 05.7	+0.6
MLR				pmax	pmax		
	comp=Z,22nm,1.8s						
MLR	Muntele Rosu	24.56	315	P	P	04 43 05.7	+0.6
SORM	Soroca	24.66	322	⇑P	P	04 43 05.0	-0.7
TESR	Tescani	24.67	318	⇓P	P	04 43 06.4	+0.6
VOIR		25.09	314	⇑P	P	04 43 11.1	+1.3
DOPR	Dopca	25.14	315	⇓P	P	04 43 11.1	+1.0
SATY	Saty	25.44	52	eP	P	04 43 13.3	+0.3
	comp=Z,1.8nm,0.8s,baz=52						
SATY	Saty	25.44	52	eP	P	04 43 13.3	+0.3
SATY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRZS	Berezniki	25.64	34	eP	P	04 43 15.5	+0.8
	baz=34						
BRZS	Berezniki	25.64	34	eP	P	04 43 15.4	+0.8
KPKS	Kokpek	25.78	52	eP	P	04 43 15.9	-0.2
	comp=Z,2.0nm,0.7s,baz=52						
KPKS	Kokpek	25.78	52	eP	P	04 43 15.9	-0.2
KPKS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	25.90	328	P	P	04 43 16.0	-1.0
	comp=Z,0.8nm,0.4s,baz=135,slow=8.9,SNR=7.5						
AKASG	Malin Array Be	25.90	328	ceP	P	04 43 16.5	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	25.90	328	ceP	P	04 43 14.5	-2.5
BURAR	Bucovina Array	26.08	319	P	P	04 43 18.9	+0.1
BUR08	Bucovina Ar. S	26.11	319	P	P	04 43 19.4	+0.4
BUR08				IAmb	IAmb	04 43 44.5	
	comp=Z,6.2nm,1.2s						
SHLS	Shalkode	26.20	53	eP	P	04 43 22.9	+3.0
	baz=53						
SHLS	Shalkode	26.20	53	eP	P	04 43 22.9	+3.0
ARU	Arti	26.64	10	P	P	04 43 25.2	+1.6
	comp=Z,1.9nm,0.5s,baz=188,slow=5.9,SNR=11						
ARU	Arti	26.64	10	c iP	P	04 43 25.2	+1.6
ARU						04 44 10.8	
ARU				S	S	04 47 59.5	+1.0
ARU				SS	SnSn	04 49 15.2	+14
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	26.64	10	P	P	04 43 25.4	+1.7
OBN	Obninsk	26.73	342	ceP	P	04 43 22.4	-2.0
OBN				e		04 44 06.4	
OBN				pmax	pmax		
	comp=Z,23nm,1.3s						
OBN	Obninsk	26.73	342	P	P	04 43 24.1	-0.3
BRVK	Borovoye	26.81	27	ceP	P	04 43 25.2	0.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	26.81	27	P	P	04 43 25.4	+0.3
BRVK				IAmb	IAmb	04 43 26.5	
	comp=Z,2.7nm,0.6s						
BVAR	Borovoye Array	26.83	27	P	P	04 43 25.6	+0.2
	comp=Z,2.7nm,0.5s,baz=213,slow=5.1,SNR=23						
KURBB	Kurchatov Arra	29.00	38	P	P	04 43 46.1	+1.3
	comp=Z,3.3nm,0.6s,baz=239,slow=9.5,SNR=16						
KURK	Kurchatov	29.10	38	ceP	P	04 43 45.5	-0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	29.10	38	P	P	04 43 46.7	+1.1
KURK				IAmb	IAmb	04 43 47.7	
	comp=Z,5.4nm,0.8s						
MAKZ	Makanchi	29.20	47	P	P	04 43 46.2	-0.4
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAKZ	Makanchi	29.20	47	P	P	04 43 46.2	-0.4
MAKZ				IAmb	IAmb	04 43 48.5	
	comp=Z,2.4nm,0.6s						
MK31	Makanchi Array	29.39	47	ceP	P	04 43 48.4	+0.1
MK31	Makanchi Array	29.39	47	P	P	04 43 49.0	+0.7
MKAR	Makanchi Array	29.39	47	P	P	04 43 49.4	+1.0
	comp=Z,0.7nm,0.4s,baz=242,slow=9.4,SNR=20						
MKAR				LR	LR	04 56 25.0	
	comp=Z,21nm,18.6s,baz=276,slow=38						
MKAR	Makanchi Array	29.39	47	P	P	04 43 48.3	0.0
MKAR	Makanchi Array	29.39	47	P	P	04 43 48.3	0.0
SEM	Semipalatinsk	29.82	39	eP	P	04 43 52.8	+0.5
	baz=39						
SEM	Semipalatinsk	29.82	39	eP	P	04 43 52.8	+0.5
KLMR	Klimovskoe	31.40	349	eP	P	04 44 03.6	-2.2
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	31.40	349	eP	P	04 44 03.6	-2.2
KLMR				AMP		04 44 14.6	
	comp=Z,18nm,1.4s						
MOA	Molln	32.86	312	eP	P	04 44 19.0	+0.1
	comp=Z,2.9nm,0.9s						
KBA	Koelnbreinsper	33.22	311	eP	P	04 44 22.4	+0.2
	comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	33.54	314	P	P	04 44 24.0	-0.9
	comp=Z,0.3nm,0.5s,baz=114,slow=6.6,SNR=5.6						
DGZ	Jazzator, Alta	33.66	44	i P	P	04 44 24.0	-2.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZAA0	Zalesovo Array	34.04	36	P	P	04 44 29.2	+0.2
ZALV	Zalesovo Beam	34.04	36	P	P	04 44 29.4	+0.3
	comp=Z,3.0nm,0.5s,baz=256,slow=11,SNR=17						
WTTA	Wattenberg	34.39	311	eP	P	04 44 32.2	-0.2
	comp=Z,2.7nm,0.5s						
SQTA	Sankt Quirin	34.66	310	eP	P	04 44 34.4	-0.3
	comp=Z,3.8nm,0.5s						
MOTA	Moosalm	34.76	311	i P	P	04 44 34.9	-0.7
	comp=Z,4.4nm,0.8s						
CLL	Collm	34.85	318	i P	P	04 44 31.7	-4.4
CLL				pmax	pmax		
	comp=Z,236nm,3.4s						
FETA	Feichten	34.93	310	eP	P	04 44 36.7	-0.3
	comp=Z,3.0nm,0.6s						
RETA	Reutte	35.02	311	eP	P	04 44 36.9	-0.8
	comp=Z,5.6nm,1.0s						
FINES	FINESS Array B	35.06	340	P	P	04 44 36.9	-0.9
	comp=Z,2.0nm,0.4s,baz=147,slow=9.2,SNR=23						
GRA1	Grafenberg Arr	35.35	314	P	P	04 44 40.2	-0.3
GRF	Grafenberg Arr	35.35	314	P	P	04 44 40.2	-0.3
GRF				pmax	pmax		
	comp=Z,70nm,2.0s						
DAVA	Damuels	35.55	310	eP	P	04 44 42.1	-0.3
	comp=Z,6.3nm,0.5s						
MBAR	Mbarara	36.19	215	ceP	P	04 44 44.5	-3.6
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KONO	Kongsberg	40.19	329	ceP	P	04 45 18.0	-3.2
KONO				pmax	pmax		
	comp=Z,99nm,2.5s						
NOA	NORSAR Array B	40.19	331	P	P	04 45 19.7	-1.5
	comp=Z,0.2nm,0.3s,baz=109,slow=9.4,SNR=2.9						
GTA	Gaotai	40.85	64	⇑P	P	04 45 28.0	+0.8
GTA				pP	sP	04 45 36.8	+4.8
GTA				sP	pP	04 45 40.5	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	41.77	347	P	P	04 45 33.6	-0.5
	comp=Z,2.9nm,0.8s,baz=172,slow=2.5,SNR=9.2						
EKA	Eskdalemuir Ar	45.26	319	P	P	04 46 01.6	-0.8
	comp=Z,0.4nm,0.3s,baz=103,slow=8.1,SNR=6.1						

SONM	Songino Array	45.58	51	P	P	04 46 06.2	+1.0
	comp=Z,0.3nm,0.5s,baz=255,slow=10,SNR=2.6						
SONM	Songino Array	45.58	51	IAmb	IAmb	04 46 11.4	
	comp=Z,1.5nm,1.3s						
TOA0	Torodi Ar. Sit	48.25	260	P	P	04 46 27.1	+0.8
TORD	Torodi Ar. Bea	48.25	260	P	P	04 46 27.2	+0.8
	comp=Z,1.2nm,0.4s,baz=56,slow=7.5,SNR=10						
TORD	Torodi Ar. Bea	48.25	260	P	P	04 46 27.1	+0.8
DBIC	Dimbokro	57.08	257	P	P	04 47 32.6	+0.9
	comp=Z,2.2nm,0.7s,baz=49,slow=6.1,SNR=4.1						
TIXI	Tiksi	57.78	21	*ce*P	P	04 47 33.4	-2.5
KSRS	Korea Array	62.82	61	P	P	04 48 10.5	-0.4
	comp=Z,1.6nm,0.7s,baz=288,slow=6.4,SNR=4.5						
JNU	Nakatsue	66.59	64	LR	LR	05 21 02.0	
	comp=Z,276nm,21.1s,baz=227,slow=39						
SEY	Seymchan	68.46	29	*i* P	P	04 48 44.6	-2.3
ILAR	Eielson Array	84.19	7	P	P	04 50 15.7	-0.5
	comp=Z,0.4nm,0.7s,baz=333,slow=5.8,SNR=4.8						
ILAR	Eielson Array	84.19	7	P	P	04 50 15.5	-0.7
ILAR	Eielson Array	84.19	7	P	P	04 50 15.5	-0.7
FITZ	Fitzroy Crossi	86.65	113	P	P	04 50 29.1	0.0
	comp=Z,1.6nm,0.7s,baz=262,slow=8.1,SNR=2.2						
YKA	Yellowknife Ar	86.72	353	P	P	04 50 28.2	-0.6
	comp=Z,0.2nm,0.5s,baz=13,slow=5.4,SNR=4.1						
WRA	Warramunga Arr	94.60	110	P	P	04 51 05.9	-0.5
	comp=Z,0.2nm,0.4s,baz=322,slow=4.4,SNR=1.5						
ASAR	Alice Springs	96.13	114	P	P	04 51 12.4	-0.9
	comp=Z,0.1nm,0.3s,baz=304,slow=4.7,SNR=2.2						

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*NOU **17** 04:41:48.4, 34°.57S×179°.06W, h341^{km}, mb4.2, South of Kermadec Islands*

WEL 17 04:41:59.9±0.7**, 34°S**±6°×**17°9E**±1°0**, h233**^{km}±13^{km}**, M4.2**/26**, mB4.6**/2**, MLv4.2**/26**, Mw(mB)3.8**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=87.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.35	188	P	Pn	04 42 53.5	-1.7
MXZ				S	S	04 43 39.8	+0.9
WMGZ	Waiomatatini S	3.59	186	P	Pn	04 42 57.6	-0.4
WMGZ				S	S	04 43 43.9	0.0
KUZ	Kuaotunu	3.60	225	P	Pn	04 42 59.0	+0.8
HAZ	Te Kaha	3.62	194	P	Pn	04 42 58.8	+0.4
HAZ				S	S	04 43 46.4	+1.9
PKGZ	Pakihiroa	3.70	190	P	Pn	04 42 58.0	-1.3
RUGZ	Raukumara Rang	3.84	195	P	Pn	04 43 01.0	-0.2
PUZ	Puketiti	3.86	188	P	Pn	04 42 59.6	-1.5
PUZ				S	S	04 43 49.2	-0.4
TWGZ	Tauwhareparae	4.00	191	P	Pn	04 43 01.2	-1.6
TWGZ				S	S	04 43 55.8	+3.1
OPRZ	Ohinepanea	4.07	207	P	Pn	04 43 04.6	+1.0
MARZ	Manawahe	4.15	205	P	Pn	04 43 05.6	+1.0
MWZ	Matawai	4.23	195	P	Pn	04 43 04.6	-1.1
MWZ				S	S	04 43 59.1	+1.3
EDRZ	Edgecumbe	4.24	204	P	Pn	04 43 06.5	+0.7
URZ	Urewera	4.26	199	P	Pn	04 43 05.0	-1.0
URZ				S	S	04 44 00.8	+2.5
CNGZ	Carnagh Statio	4.27	187	P	Pn	04 43 04.8	-1.2
TKGZ	Te Karaka	4.27	191	P	Pn	04 43 04.5	-1.7
TKGZ				S	S	04 43 59.5	+0.9
KMRZ	Kaimai	4.32	213	P	Pn	04 43 09.1	+2.3
TARZ	Mount Tarawera	4.43	205	P	Pn	04 43 10.6	+2.4
RIGZ	Rimuhau	4.55	191	P	Pn	04 43 08.3	-1.2
RIGZ				S	S	04 44 05.1	+0.3
MUGZ	Murupara	4.56	202	P	Pn	04 43 09.0	-0.7
RTZ	Ruatahuna	4.63	199	P	Pn	04 43 09.4	-1.2
SNGZ	Shannon Statio	4.70	195	P	Pn	04 43 09.8	-1.6
PRGZ	Paritu Road	4.74	190	P	Pn	04 43 11.0	-0.9
ALRZ	Allen Road	4.78	205	P	Pn	04 43 12.4	+0.1
KNZ	Kokohu	4.87	191	P	Pn	04 43 12.3	-1.2
RAHZ	Arahi	4.89	197	P	Pn	04 43 13.1	-0.6
MTHZ	Maungataniwha	4.89	199	P	Pn	04 43 12.6	-1.2
TLZ	Tolley Road	4.90	213	P	Pn	04 43 16.1	+2.2
MHGZ	Mahia Peninsul	4.96	189	P	Pn	04 43 13.2	-1.4
WHHZ	Waihua	5.01	195	P	Pn	04 43 14.2	-1.0
NMHZ	Naumai	5.13	199	P	Pn	04 43 16.2	-0.6
WATZ	Wairara	5.14	209	P	Pn	04 43 17.7	+0.9
ARHZ	Aropaoanui	5.24	196	P	Pn	04 43 16.7	-1.3
BKZ	Black Stump Fm	5.28	201	P	Pn	04 43 17.5	-1.2
RITZ	Rihia Road	5.32	207	P	Pn	04 43 19.2	+0.1
HIZ	Hauiti	5.37	216	P	Pn	04 43 22.8	+3.1
KATZ	Kakaramea	5.38	208	P	Pn	04 43 20.0	0.0
MCHZ	McNeill Hill	5.49	198	P	Pn	04 43 20.1	-1.0
KRVZ	Karewarewa	5.51	208	P	Pn	04 43 21.5	0.0
ETVZ	East Tongariro	5.52	207	P	Pn	04 43 20.3	-1.4
KWHZ	Kaweka Forest	5.54	200	P	Pn	04 43 20.7	-1.2
WTVZ	West Tongariro	5.54	208	P	Pn	04 43 21.9	-0.1
OTVZ	Oturere	5.56	207	P	Pn	04 43 21.3	-0.9
TWVZ	Taurewa	5.57	209	P	Pn	04 43 22.3	+0.1
NGZ	Ngauruhoe	5.59	207	P	Pn	04 43 22.3	-0.3
CKHZ	Cape Kidnapper	5.60	195	P	Pn	04 43 20.8	-1.7
GLKZ	Green Lake	5.65	29	P	Pn	04 43 25.4	+2.0
FWVZ	Far West T-bar	5.68	207	P	Pn	04 43 23.5	-0.3
BHHZ	Black Hill Sta	5.71	203	P	Pn	04 43 22.2	-1.8
WNVZ	Wahianoa	5.73	207	P	Pn	04 43 23.3	-1.0
KRHZ	Kereru	5.76	200	P	Pn	04 43 21.4	-3.2
KAHZ	Kahuranaki	5.77	196	P	Pn	04 43 22.6	-2.1
PKVZ	Pokaka	5.79	209	P	Pn	04 43 24.7	-0.3
VRZ	Vera Road	5.90	213	P	Pn	04 43 27.7	+1.4
PXZ	Pawanui	6.00	195	P	Pn	04 43 25.0	-2.6
PNHZ	Pukenui	6.06	200	P	Pn	04 43 26.0	-2.3
WPHZ	Waipukurau	6.13	198	P	Pn	04 43 26.9	-2.4
TSZ	Takapari Road	6.26	201	P	Pn	04 43 28.5	-2.4
PRHZ	Porangahau	6.28	196	P	Pn	04 43 28.6	-2.5
PKE	Pukeiti	6.33	217	P	Pn	04 43 33.9	+2.2
NEZ	North Egmont	6.33	216	P	Pn	04 43 33.6	+1.8
WAZ	Wanganui	6.33	209	P	Pn	04 43 30.8	-1.0
LREZ	Lake Rotokare	6.33	213	P	Pn	04 43 32.5	+0.7
KHEZ	Kahui Hut	6.39	216	P	Pn	04 43 34.1	+1.5
DVHZ	Dannevirke	6.43	199	P	Pn	04 43 30.2	-2.8
POWZ	Post Office Ro	6.63	201	P	Pn	04 43 33.1	-2.4
PRWZ	Pori Road	6.72	199	P	Pn	04 43 34.0	-2.6
CPWZ	Castlepoint	6.99	197	P	Pn	04 43 37.9	-2.3
CTZ	Chatham Island	10.10	161	P	P	04 44 24.8	-1.3
CTZ				S	S	04 46 13.6	+0.6

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*IDC **17** 04:43:51.6±5.8, 36°.18N×70°.35E, h167^{km}±52^{km}, mb3.3/5, mb1 3.5/10, mb1mx3.1/55, mbtmp3.9/10, MS3.8/1, Ms1 3.8/1, ms1mx2.6/37, Error ellipse: s-maj=41.8km s-min=24.9km az=31.0*

*NNC **17** 04:43:55.1±4.7, 36°.94N×70°.10E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=38.7km s-min=26.2km az=169.0*

ISC 17 04:43:55.7±0.8**, 36°.54N**±0°.06×**70°.45E**±0°.10**, h200**^{km}**, n26,** σ**1^{s}59**/31**, mb3.2**/4**, 6C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.96	156	P	Pn	04 44 45.8	+0.7
CEP				S	Sn	04 45 23.0	-0.7
THW	Thamme Wali	3.89	164	P	Pn	04 44 56.4	+0.2
SARP	Sargodha	4.96	158	P	Pn	04 45 09.4	-0.3
AML	Almayashu	6.12	23	P	Pn	04 45 25.6	+0.8
	SNR=73						
UCH	Uchtor	6.49	28	P	Pn	04 45 30.7	+1.1
	SNR=14						
KK31	Karatay Array	6.55	0	P	Pn	04 45 28.2	-1.8
	3.0nm,0.3s,baz=181,slow=12,SNR=26						
KK31				⇓S	Sn	04 46 41.7	-3.2
	28nm,0.8s,baz=186,slow=28,SNR=6.7						
EKS2	Erkin-Say	6.63	22	P	Pn	04 45 32.3	+1.2
	SNR=11						
AAK	Ala-Archa	6.84	26	P	Pn	04 45 35.2	+1.2
	4.0nm,0.3s,baz=181,slow=8.1,SNR=35						
AAK				S	Sn	04 46 51.1	-0.7
	4.8nm,0.3s,baz=4.3,slow=20,SNR=11						
AAK	Ala-Archa	6.84	26	P	Pn	04 45 35.1	+1.2
	SNR=11						
AAK	Ala-Archa	6.84	26	⇑P	Pn	04 45 34.8	+0.9
	3.2nm,0.3s						
AAK				⇑S	Sn	04 46 50.3	-1.6
	46nm,0.5s						
KBK	Karagaybulak	7.02	28	P	Pn	04 45 37.7	+1.4
	SNR=7.6						
USP	Ospenovka	7.40	24	P	Pn	04 45 42.0	+0.9
	SNR=6.3						
TKM2	Tokmak 2	7.50	30	P	Pn	04 45 43.4	+0.9
	SNR=5.6						
TKM2	Tokmak 2	7.50	30	⇑P	Pn	04 45 43.5	+1.0
	6.5nm,0.5s						
TKM2				⇑S	Sn	04 47 06.0	-1.5
	15nm,0.8s						
MKAR	Makanchi Array	13.52	37	P	P	04 47 01.0	-1.0
	0.3nm,0.3s,baz=210,slow=11,SNR=17						
AB31	Akbulak array	14.84	332	⇑P	P	04 47 17.9	+1.4
	1.4nm,0.6s,baz=146,slow=12,SNR=28						
AB31				⇑S	S	04 49 58.3	-2.1
	0.8nm,0.5s,baz=163,slow=22,SNR=3.7						
KURBB	Kurchatov Arra	15.23	20	P	Pn	04 47 20.5	+0.1
	0.1nm,0.3s,baz=208,slow=11,SNR=3.0						
BVAR	Borovoye Array	16.48	360	P	Pn	04 47 36.6	+1.0
	0.6nm,0.3s,baz=152,slow=10,SNR=8.1						
AKTO	Aktyubinsk	16.53	331	P	Pn	04 47 37.2	+1.1
	0.7nm,0.3s,baz=152,slow=11,SNR=22						
AKTO	Aktyubinsk	16.53	331	⇓P	Pn	04 47 40.4	+4.3
	8.6nm,0.8s						
ZALV	Zalesovo Beam	20.06	25	P	P	04 48 15.1	+1.6
	2.3nm,0.3s,baz=220,slow=11,SNR=16						
ARCES	ARCESS Array B	40.94	338	P	P	04 51 20.2	+2.0
	4.3nm,0.9s,baz=110,slow=8.0,SNR=6.9						
ASAJ	Asahikawa	53.91	58	LR	LR	05 16 59.0	
	comp=Z,94nm,21.2s,baz=144,slow=37						
TORD	Torodi Ar. Bea	65.28	268	P	P	04 54 14.5	-2.0
	0.2nm,0.6s,baz=38,slow=5.1,SNR=1.2						
WRA	Warramunga Arr	82.39	122	P	P	04 55 54.7	-0.8
	0.3nm,0.6s,baz=316,slow=5.8,SNR=2.2						
ASAR	Alice Springs	84.64	125	P	P	04 56 06.1	-0.8
	0.4nm,0.7s,baz=308,slow=5.1,SNR=4.6						

IDC 17 04:57:55.9±7.7**, 22°.47S**×**13°.88W, h0**^{km}**, mb4.1**/3**, mb1 4.1**/3**, mb1mx3.7**/21**, mbtmp4.1**/3**, MS3.3**/3**, Ms1 3.2**/3**, ms1mx2.9**/31**, Error ellipse: s-maj=443.9km s-min=130.4km az=104.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDFB	Brasilia	32.91	276	LR	LR	05 16 03.1	
	comp=Z,38nm,20.8s,baz=190,slow=33						
BOSA	Boshof	35.73	108	LR	LR	05 16 40.6	
	comp=Z,53nm,20.6s,baz=342,slow=32						
TORD	Torodi Ar. Bea	38.55	25	P	P	05 05 20.4	-0.1
	3.1nm,0.7s,baz=198,slow=8.7,SNR=11						
CPUP	Villa Florida	39.62	255	LR	LR	05 19 49.6	
	comp=Z,50nm,20.0s,baz=75,slow=33						
BRTR	Keskin Array B	76.12	36	P	P	05 09 46.0	+0.2
	1.2nm,1.0s,baz=207,slow=6.1,SNR=5.2						
AKASG	Malin Array Be	82.17	26	P	P	05 10 18.4	-0.1
	1.4nm,0.6s,baz=223,slow=5.1,SNR=4.9						

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*IDC **17** 05:00:28.4±0.6, 3°.04S×130°.07E, h0^{km}, mb4.2/11, mb1 4.4/13, mb1mx4.1/35, mbtmp4.3/13, ML3.1/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/44, Error ellipse: s-maj=27.7km s-min=14.2km az=72.0*

*DJA **17** 05:00:34.6±0.4, 3°S±6°×13°0E±°, h55^{km}±33^{km}, M4.3/9, mb4.6/3, mB4.9/1, MLv4.2/9, Mw(mB)4.2/1*

*NEIC **17** 05:00:34.6±0.5, 3°.1S±0°.1×130°.16E±0°.04, h48^{km}±10^{km}, mb4.5/13, Error ellipse: s-maj=19.2km s-min=5.2km az=173.0*

ISC 17 05:00:33.1±0.5**, 3°.05S**±0°.05×**130°.14E**±0°.06**, h35**^{km}**, n51,** σ**1^{s}48**/51**, mb4.3**/13**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.24	256	P	Pn	05 00 55.8	+1.8
BNDI	Bandanaira	1.48	189	P	Pn	05 01 00.2	+2.9
FAKI	Fak Fak	2.11	87	Pn	Pn	05 01 07.2	+1.2
FAKI	Fak Fak	2.11	87	P	Pn	05 01 07.2	+1.2
SIJI	Sorong	2.44	28	Pn	Pn	05 01 10.4	-0.1
	14nm,0.3s,baz=40,slow=18,SNR=24						
SIJI				Sn	Sn	05 01 37.0	-2.2
	20nm,0.3s,baz=296,slow=14,SNR=7.2						
SWI	Sorong	2.44	27	P	Pn	05 01 10.9	+0.3
NLAI	Namlea	3.04	266	P	Pn	05 01 20.4	+1.7
SANI	Sanana	4.26	283	P	Pn	05 01 34.9	-0.7
RKPI	Ransiki, Papua	4.32	69	P	Pn	05 01 37.8	+1.5
APSI	Ampana	8.74	284	P	Pn	05 02 37.5	+0.3
	745nm61nm,0.8s						
MRSI	Marisa	8.91	293	P	Pn	05 02 37.7	-1.8
BATI	Baumata	9.58	222	LR	LR	05 06 33.1	
	comp=Z,597nm,20.5s,baz=72,slow=38						
MMRI	Maumere	9.62	234	Pn	Pn	05 02 51.2	+2.0
KAPI	Kappang	10.54	259	Pn	Pn	05 03 07.0	+5.1
	3.2nm,0.3s,baz=158,slow=14,SNR=2.0						
KAPI				LR	LR	05 08 06.2	
	comp=Z,279nm,20.6s,baz=79,slow=44						
KAPI	Kappang	10.54	259		Pn	05 03 03.6	+1.7
JAY	Jayapura	10.57	87	LR	LR	05 07 40.0	
	comp=Z,115nm,18.9s,baz=304,slow=41						
FITZ	Fitzroy Crossi	15.59	196	Pn	Pn	05 04 06.5	-3.9
	0.1nm,0.3s,baz=130,slow=17,SNR=1.3						
WB0	Warramunga Arr	17.13	166		P	05 04 31.0	-0.3
WB0				IAmb	IAmb	05 04 32.8	
	comp=Z,46nm,1.2s						
WRA	Warramunga Arr	17.28	167	P	Pn	05 04 28.9	-3.0
	comp=Z,1.1nm,0.3s,baz=348,slow=11,SNR=27						
WRA				S	Sn	05 07 31.1	-12
	baz=346,slow=21,SNR=1.6						
WRA				LR	LR	05 11 46.1	
	comp=Z,144nm,19.2s,baz=270,slow=39						
WB2	Warramunga Arr	17.29	167	P	P	05 04 32.9	-0.1
WB2				IAmb	IAmb	05 04 34.7	
	comp=Z,26nm,1.1s						
PMG	Port Moresby	18.05	111	P	Pn	05 04 41.5	+0.2
	comp=Z,1.1nm,0.3s,baz=326,slow=12,SNR=4.8						
PMG	Port Moresby	18.05	111	P	P	05 04 42.1	+0.5
AS31	Alice Springs	20.82	170		P	05 05 11.6	-0.1
AS31				IAmb	IAmb	05 05 21.0	
	comp=Z,17nm,0.6s						
ASAR	Alice Springs	20.82	170	P	P	05 05 12.0	+0.3
	comp=Z,36nm,0.8s,baz=346,slow=10.0,SNR=318						
ASAR				S	S	05 08 56.7	-5.6
	comp=Z,1.4nm,0.7s,baz=350,slow=20,SNR=5.2						
ASAR				LR	LR	05 14 27.7	
	comp=Z,196nm,18.9s,baz=338,slow=40						
CTA	Charters Tower	23.11	138	P	P	05 05 37.5	+1.3
	comp=Z,7.6nm,0.8s,baz=317,slow=11,SNR=13						
CTAO	Charters Tower	23.11	138	P	P	05 05 36.4	+0.1
STKA	Stephens Creek	30.64	161	P	P	05 06 44.9	+0.6
	comp=Z,4.0nm,0.4s,baz=341,slow=8.1,SNR=14						
STKA	Stephens Creek	30.64	161	P	P	05 06 43.9	-0.3
NWAO	Narrogin (SRO)	32.09	201	P	P	05 06 57.5	+0.5
	comp=Z,9.0nm,1.0s,baz=112,slow=7.2,SNR=2.3						
CMAR	Chiang Mai Arr	37.42	306	P	P	05 07 43.7	+0.5
	comp=Z,1.1nm,0.3s,baz=127,slow=6.9,SNR=2.0						
CMAR	Chiang Mai Arr	37.42	306	P	P	05 07 42.7	-0.5
ULN	Ulaanbaatar	54.59	341	P	P	05 09 59.7	+1.6
ULN				IAmb	IAmb	05 10 07.1	
	comp=Z,5.8nm,1.1s						
SONM	Songino Array	54.77	341	P	P	05 10 00.4	+0.9
	comp=Z,0.8nm,0.6s,baz=153,slow=7.3,SNR=5.3						
SONM				PcP	PcP	05 11 03.1	+1.4
	comp=Z,0.5nm,0.6s,baz=150,slow=3.7,SNR=1.6						
SONM	Songino Array	54.77	341	P	P	05 09 60.0	+0.4
MK31	Makanchi Array	65.03	326	P	P	05 11 10.2	+0.3
MKAR	Makanchi Array	65.03	326	P	P	05 11 10.2	+0.3
	comp=Z,1.9nm,0.7s,baz=124,slow=7.5,SNR=14						
MKAR	Makanchi Array	65.03	326	P	P	05 11 09.8	-0.1
MAKZ	Makanchi	65.22	326	P	P	05 11 11.1	0.0
MAKZ				IAmb	IAmb	05 11 19.6	
	comp=Z,4.4nm,1.1s						
SEY	Seymchan	67.92	11	P	P	05 11 29.8	+1.8
	comp=Z,2.4nm,0.6s,baz=0.0,slow=20						
ZAA0	Zalesovo Array	68.13	333	P	P	05 11 29.9	+0.4
ZAA0				IAmb	IAmb	05 11 37.6	
	comp=Z,7.6nm,1.4s						
ZALV	Zalesovo Beam	68.13	333	P	P	05 11 29.4	-0.1
	comp=Z,0.8nm,0.5s,baz=123,slow=5.3,SNR=5.6						
ZALV	Zalesovo Beam	68.13	333	P	P	05 11 29.9	+0.4
KURK	Kurchatov	69.25	328	P	P	05 11 37.0	+0.5
KKAR	Karatay Array	70.50	318	P	P	05 11 44.0	-0.4
VNDA	Vanda	76.33	173	P	P	05 12 18.2	+0.1
	comp=Z,0.9nm,0.8s,baz=344,slow=7.4,SNR=1.9						
ABKAR	Akbulak array	79.53	321	P	P	05 12 36.1	-0.3
RAYN	Ar Rayn	86.29	294	P	P	05 13 12.4	+0.3
ILAR	Eielson Array	89.74	25	P	P	05 13 26.8	-0.7
	comp=Z,0.3nm,0.6s,baz=270,slow=5.8,SNR=5.5						
TXAR	Lajitas Array	122.73	57	PKP	PKPdf	05 19 25.4	-0.7
	comp=Z,0.5nm,0.9s,baz=251,slow=3.8,SNR=4.5						
TORD	Torodi Ar. Bea	128.08	284	PKP	PKPdf	05 19 36.5	-0.1
	comp=Z,0.7nm,0.6s,baz=59,slow=2.1,SNR=2.8						
CPUP	Villa Florida	149.91	167	PKPbc	PKiKP	05 20 21.8	+0.3
	comp=Z,2.3nm,0.7s,baz=200,slow=2.8,SNR=8.0						

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*BJI **17** 05:09:16.0±0.0, 13°.66N×120°.94E, h144^{km}, mB5.2/60, mb5.1/84*

*MAN **17** 05:09:17.8, 13°.89N×120°.45E, h128^{km}, MS5.1*

MAN INTENSITY III - PALUAN.

*KISR **17** 05:09:18.8±3.0, 6°.44N×127°.37E, h700^{km}±999^{km}, Hypocentre not reviewed by the ISC*

*MOS **17** 05:09:18.0±1.0, 13°.97N×120°.63E, h134^{km}, mb5.2/68, MS4.2/4, Error ellipse: s-maj=7.3km s-min=4.0km az=114.4*

*IDC **17** 05:09:19.0±0.3, 13°.92N×120°.72E, h128^{km}±2^{km}, mb4.8/41, mb1 4.8/42, mb1mx4.7/52, mbtmp5.2/42, MS3.8/14, Ms1 3.8/14, ms1mx3.5/44, Error ellipse: s-maj=8.7km s-min=5.9km az=87.0*

*KLM **17** 05:09:20, 14°.11N×121°.00E, h171^{km}, mb5.3*

*GCMT **17** 05:09:20.1±0.1, 14°.03N±0°.01×120°.66E±0°.01, h136^{km}, MW5.3/155, Moment Tensor Solution. s118,c176; s155,c265; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.67±.01; M$_{\theta\theta}$-0.49±.02; M$_{\phi\phi}$-0.17±.02; M$_{r\theta}$0.74±.01; M$_{\theta\phi}$0.32±.01; M$_{\phi r}$-0.27±.01; Best double couple: M$_0$1.03700×10^{17} NP1:ϕ_s311.00000°, δ21.00000°, λ107.00000°. NP2:ϕ_s113.00000°, δ70.00000°, λ84.00000°. Principal axes: T 1.0370, Plg65.0000°, Azm12.0000°; N 0.0000, Plg6.0000°, Azm115.0000°; P -1.0380, Plg24.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 05:09:21.1±1.6, 13°.95N±0°.07×120°.64E±0°.09, h146^{km}±5^{km}, mb5.3/92 Error ellipse: s-maj=12.9km s-min=10.8km az=81.0*

*DJA **17** 05:09:23.0±0.8, 14°N±4°×12°1E±°, h163^{km}±6^{km}, M5.0/90, mB5.5/55, mb5.3/90, Mw(mB)5.0/55, MwMwp5.2/4, Mwp5.4/4*

*BGR **17** 05:09:25.6±0.0, 14°.05N×122°.10E, h33^{km}, mb5.4*

ISC 17 05:09:19.8±0.3**, 13°.88N**±0°.02×**120°.59E**±0°.03**, h135**^{km}±2^{km}**, h136**^{km}**:pP-P, n868,** σ**1^{s}60**/1014**, mb5.3**/241**, 63C-42D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.37	247	*e*P	Pn	05 09 35.8	-3.1
LUBP				*e*S	Sn	05 09 50.8	-2.4
TGY	Tagaytay City	0.40	56	P	Pn	05 09 37.5	-1.6
	8µm,0.3s,baz=241,slow=1.0,SNR=212						
TGY				S	Sn	05 09 51.8	-1.9
	6µm,0.3s,baz=328,slow=21,SNR=10						
TGY	Tagaytay City	0.40	56	⇑*e*P	Pn	05 09 38.1	-1.0
TGY				*e*S	Sn	05 09 53.4	-0.2
PGP	Puerto Galera	0.51	137	⇑*e*P	Pn	05 09 44.0	+4.3
PGP				*e*S	Sn	05 09 52.7	-1.9
LQP	Lukban	0.95	76	⇓*e*P	Pn	05 09 42.0	-1.0
LQP				*i* S	Sn	05 10 00.4	-0.1
BOAC	Boac	1.28	109	*e*P	Pn	05 09 44.8	-1.1
BOAC				*e*S	Sn	05 10 07.0	+1.1
SJMP	San Jose	1.50	160	*e*P	Pn	05 09 47.2	-1.1
SJMP				*e*S	Sn	05 10 07.3	-2.7
BUSP	Coron	1.91	192	*e*P	Pn	05 09 51.3	-1.7
BUSP				*e*S	Sn	05 10 17.2	-1.1
SCZP	Santa Cruz	2.00	341	*e*P	Pn	05 09 51.8	-2.3
SCZP				*e*S	Sn	05 10 17.2	-3.1
OTRP	Odiongan	2.05	137	*e*P	Pn	05 09 54.1	-0.7
OTRP				*e*S	Sn	05 10 21.9	+0.4
BALP	Baler	2.08	27	*e*P	Pn	05 09 53.5	-1.5
BALP				*e*S	Sn	05 10 22.2	+0.1
SMPP	San Manuel, Pa	2.26	2	*e*P	Pn	05 09 53.9	-3.4
SMPP				*e*S	Sn	05 10 23.6	-2.5
CAUP	Cauayan	3.27	21	*e*P	Pn	05 10 09.4	-0.7
JAP	San Jose, Anti	3.38	157	⇑*e*P	Pn	05 10 13.6	+2.0
CVP	Callao Caves	3.98	17	⇑*e*P	Pn	05 10 19.1	-0.4
BATP	Bataraza	5.75	209	*e*P	Pn	05 10 41.4	-1.6
BATP				*e*S	Sn	05 11 45.8	-2.2
KCP	Kidapawan	8.13	147	⇑*e*P	Pn	05 11 19.0	+3.8
DAV	Davao City (W)	8.36	144	P	Pn	05 11 21.7	+3.6
	51nm,0.3s,baz=74,slow=3.1,SNR=10						
MYLDM	Lahad Datu	8.89	194	Pn	Pn	05 11 29.8	+4.5
KKM	Kota Kinabalu	8.90	209		Pn	05 11 26.6	+1.1
YULB	Yu-li	9.48	4	Pn	Pn	05 11 33.4	+0.2
QIZ	Qiongzhong	11.51	298	P	Pn	05 12 00.6	+0.4
QIZ				S	Sn	05 14 08.6	+1.4
QIZ				LR	LR		
	comp=N,730nm,9.2s						
QIZ				LR	LR		
	comp=E,350nm,5.0s						
QIZ				LR	LR		
	comp=Z,550nm,10.7s						
TOLI2	Tolitoli	12.69	179	Pn	Pn	05 12 17.6	+2.0
GTOI	Gorontalo	13.38	169	P	Pn	05 12 25.5	+1.0
	1µm167nm,1.1s						
MRSI	Marisa	13.38	174	P	P	05 12 27.8	-1.4
	3µm236nm,1.0s						
MPSI	Mapaga	13.47	183	P	P	05 12 28.6	-1.6
	2µm283nm,1.0s						
KMSI	Cibinong	13.64	165	P	P	05 12 31.2	-0.8
	272nm,1.1s						
SBUM	Sibu	14.05	217	Pn	P	05 12 35.7	-0.9
SMKI	Samarinda	14.62	194	P	P	05 12 45.1	+2.1
	3µm695nm,1.0s						
TNTI	Ternate	14.65	152	Pn	Pn	05 12 39.1	-1.5
UBPT	Khong Chiam	14.71	277	P	P	05 12 48.4	+4.5
	28nm,1.0s						
UBPT	Khong Chiam	14.71	277		P	05 12 44.6	+0.7
APSI	Ampana	14.73	176	P	P	05 12 45.3	+1.1
	2µm205nm,1.1s						
LUWI	Luwuk	14.98	172		P	05 12 46.4	-0.5
LUWI	Luwuk	14.98	172	P	P	05 12 47.0	0.0
	7µm428nm,1.0s						
BKB	Balikpapan	15.48	194	P	P	05 12 52.1	-0.4
BKB	Balikpapan	15.48	194	P	P	05 12 54.1	+1.6
	5µm274nm,0.9s						
MTKI	Muara Teweh, K	15.77	201	P	P	05 12 58.3	+2.6
KSM	Kuching	15.98	220	P	P	05 13 00.3	+2.3
KSM				IAmb	IAmb	05 13 08.0	
	comp=Z,91nm,0.7s						
KSM	Kuching	15.98	220	P	P	05 13 00.0	+1.9
STKI	Sintang	16.43	214	P	P	05 13 07.0	+4.0
SANI	Sanana	16.71	161	P	P	05 13 05.4	-0.6
	comp=Z,1µmcomp=Z,55nm,1.1s						
TTSI	Tana Toraja	16.83	183	P	Pn	05 13 10.7	+3.1
	comp=Z,2µmcomp=Z,154nm,1.0s						
SSE	Sheshan	17.14	2	P	P	05 13 09.3	-1.4
SSE				S	S	05 16 21.3	-1.2
SSE				pmax	pmax		
	comp=Z,25nm,0.7s						
SSE				pmax	pmax		
	comp=Z,410nm,4.8s						
SSE				LR	LR		
	comp=Z,270nm,23.3s						
SLVN	Son La	17.54	297	P	Pn	05 13 15.8	-0.3
WHN	Wuhan	17.55	342	⇓P	Pn	05 13 17.6	+1.5
WHN				sP	sP	05 13 52.4	-3.9
WHN				S	S	05 16 28.3	-2.7
WHN				pmax	pmax		
	comp=Z,2µm,3.6s						
WHN				LR	LR		
	comp=Z,1µm,11.2s						
WHN				LR	LR		
	comp=Z,1µm,16.9s						
KBKI	Kotabaru	17.62	195	P	Pn	05 13 19.2	+2.1
	comp=Z,5µmcomp=Z,159nm,0.8s						
SPSI	Sidrap Palu	17.75	183	P	Pn	05 13 20.7	+2.1
	comp=Z,1µmcomp=Z,165nm,0.9s						
SRAK	Srakaew	18.01	273	P	P	05 13 19.2	-1.1
	comp=Z,3µmcomp=Z,235nm,1.5s						
GYA	Guiyang	18.08	316	⇓P	Pn	05 13 24.0	+1.4
GYA				sP	sP	05 14 06.6	+5.5
GYA				S	S	05 16 39.3	-2.3
GYA				ScP	ScP	05 21 12.3	0.0
GYA				pmax	pmax		
	comp=Z,54nm,1.3s						
GYA				pmax	pmax		
	comp=Z,520nm,7.2s						
GYA				LR	LR		
	comp=Z,500nm,14.0s						
CHAI	Chaiyaphum	18.10	279	P	Pn	05 13 24.0	+1.2
	comp=Z,582nmcomp=Z,54nm,0.7s						
BBKI	Banjar Baru	18.15	199	P	Pn	05 13 25.2	+1.8
	comp=Z,4µmcomp=Z,351nm,1.4s						
NJ2	Nanjing	18.16	355	*e*P	Pn	05 13 23.4	+0.1
NJ2				sP	sP	05 14 03.1	+0.2
NJ2				S	Sn	05 16 46.5	-0.4

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NJ2                                 pmax   pmax
       comp=Z,46nm,1.3s
NJ2                                 pmax   pmax
       comp=Z,670nm,3.5s
BNSI   Bone              18.17 182  P      Pn     05 13 26.1 +2.5
       comp=Z,2µmcomp=Z,218nm,1.2s
PBKI   Pangkalan Bun     18.70 209  P      Pn     05 13 30.8 +0.9
       comp=Z,12µmcomp=Z,389nm,1.0s
KAPI   Kappang           18.79 183  P      Pn     05 13 30.9  0.0
       comp=Z,5.5nm,0.3s,baz=4.1,slow=6.1,SNR=53
KAPI                                S      S      05 16 58.3 +2.6
       baz=57,slow=23,SNR=6.1
KAPI   Kappang           18.79 183  P      Pn     05 13 30.6 -0.3
KAPI                                IAmb   IAmb   05 13 33.9
       comp=Z,140nm,0.9s
KAPI   Kappang           18.79 183  P      Pn     05 13 31.6 +0.7
KAPI   Kappang           18.79 183  P      Pn     05 13 31.6 +0.7
MSAI   Masohi            19.01 154  P      Pn     05 13 33.8 +0.3
       comp=Z,812nmcomp=Z,26nm,1.0s
BKSI   Bulukumba         19.08 181  P      Pn     05 13 34.1 -0.2
       comp=Z,1µmcomp=Z,169nm,0.9s
ENH    Enshi             19.27 330  P      P      05 13 34.0 +0.1
ENH                                 IAmb   IAmb   05 13 41.3
       comp=Z,140nm,1.3s
UTTA   Uttaradit         19.66 284  P      Pn     05 13 44.9 +3.8
       comp=Z,333nmcomp=Z,26nm,0.9s
NANT   Nan               19.70 287  P      Pn     05 13 42.4 +0.8
       comp=Z,12µmcomp=Z,592nm,1.0s
PHIT   Phitsanulok       19.71 282  P      Pn     05 13 45.4 +3.6
       comp=Z,74nm,1.1s
JSU    Suzuyama          19.74  26  P      P      05 13 39.9 +0.8
JSU                                 IAmb   IAmb   05 13 44.5
       comp=Z,136nm,1.1s
BSSI   Bau Bau, Buton    19.89 180  P      Pn     05 13 42.4 -1.4
       comp=Z,2µmcomp=Z,129nm,1.1s
KMI    Kunming           20.18 306 ⥣P      P      05 13 44.9 +0.8
KMI                                 pP     pwP    05 14 12.9 +1.8
KMI                                 sP     sP     05 14 25.8 +1.4
KMI                                 S      S      05 17 17.6 -5.9
KMI                                 sS     sS     05 18 04.8 +0.8
KMI                                 pmax   pmax
       comp=Z,44nm,1.7s
KMI                                 pmax   pmax
       comp=Z,530nm,7.3s
KMI                                 LR     LR
       comp=Z,210nm,6.4s
KMI                                 LR     LR
       comp=Z,230nm,8.5s
KMI                                 LR     LR
       comp=Z,290nm,9.6s
FAKI   Fak Fak           20.30 144  P      P      05 13 45.7 +0.5
FAKI   Fak Fak           20.30 144  P      Pn     05 13 48.1 -0.6
       comp=Z,900nmcomp=Z,27nm,0.7s
MYKOM  Kota Tinggi       20.45 235  P      Pn     05 13 50.0 -0.4
SUKH   Sukhothai         20.50 283  P      Pn     05 13 50.0 -0.9
       comp=Z,70nm,0.9s
UTHA   Uthaitani         20.52 277  P      Pn     05 13 51.9 +0.7
       comp=Z,24nm,0.7s
PAYA   Payao             20.59 288  P      Pn     05 13 50.6 -1.4
       comp=Z,12µmcomp=Z,1µm,1.0s
LAMP   Lampang           20.65 286  P      Pn     05 13 51.5 -1.2
       comp=Z,82nm,0.8s
CM35   Chiang Mai Arr    21.12 286  P      P      05 13 56.0 +2.0
CM36   Chiang Mai Arr    21.15 285  P      P      05 13 56.0 +1.7
CM34   Chiang Mai Arr    21.15 286  P      P      05 13 56.0 +1.6
CM09   Chiang Mai Arr    21.23 285  P      P      05 13 57.8 +2.5
       comp=Z,604nmcomp=Z,78nm,1.0s
CM04   Chiang Mai Arr    21.24 285  P      P      05 13 57.9 +2.6
       comp=Z,550nmcomp=Z,65nm,1.0s
CM01   Chiang Mai Arr    21.26 285  P      P      05 13 58.0 +2.5
       comp=Z,596nmcomp=Z,67nm,1.0s
CM05   Chiang Mai Arr    21.27 285  P      P      05 13 58.0 +2.3
       comp=Z,479nmcomp=Z,49nm,1.1s
CM02   Chiang Mai Arr    21.27 285  P      P      05 13 58.2 +2.5
       comp=Z,568nmcomp=Z,66nm,1.0s
CM31   Chiang Mai Arr    21.28 285  P      P      05 13 58.0 +2.2
       comp=Z,17µmcomp=Z,2µm,0.9s
CM31   Chiang Mai Arr    21.28 285  P      P      05 13 57.4 +1.7
CMAR   Chiang Mai Arr    21.28 285  P      P      05 13 57.7 +1.9
       comp=Z,35nm,0.8s,baz=99,slow=7.3,SNR=88
CMAR                                S      S      05 17 47.1 +2.7
       comp=Z,0.6nm,0.4s,baz=80,slow=17,SNR=4.8
CMAR                                ScP    ScP    05 21 19.4 -0.4
       comp=Z,4.4nm,0.6s,baz=76,slow=1.4,SNR=17
CMAR   Chiang Mai Arr    21.28 285  P      P      05 13 57.3 +1.5
CM15   Chiang Mai Arr    21.30 285  P      P      05 13 58.4 +2.4
       comp=Z,559nmcomp=Z,77nm,0.9s
CM13   Chiang Mai Arr    21.31 285  P      P      05 13 58.5 +2.4
       comp=Z,560nmcomp=Z,65nm,1.0s
JNU    Nakatsue          21.32  24  P      P      05 13 54.9 -1.2
       comp=Z,16nm,0.8s,baz=116,slow=3.2,SNR=4.0
CMMT   Chiang Mai        21.34 286  P      P      05 13 58.0 +1.6
       comp=Z,411nmcomp=Z,28nm,1.0s
CM33   Chiang Mai Arr    21.34 286  P      P      05 13 57.0 +0.6
CHTO   Chiang Mai        21.34 286  P      P      05 13 56.5 +0.1
CHTO                                pmax   pmax
       comp=Z,47nm,1.0s
CHTO   Chiang Mai        21.34 286  P      P      05 13 56.5 +0.1
CHTO   Chiang Mai        21.34 286  P      P      05 13 57.7 +1.3
CHTO                                P      P      05 13 57.7 +1.3
CHTO   Chiang Mai        21.34 286  P      P      05 13 57.7 +1.3
CHTO                                P      P      05 13 57.7 +1.3
TRTT   Trang             21.38 256  P      P      05 14 00.3 +3.4
       comp=Z,35nm,1.0s
CM32   Chiang Mai Arr    21.40 286  P      P      05 14 00.0 +2.9
KULM   Kulim             21.42 248  P      P      05 13 59.0 +1.7
PPBI   Pangkal Pinang    21.44 223  P      P      05 13 59.4 +2.0
       comp=Z,14µmcomp=Z,44nm,1.1s
IPM    Ipoh              21.44 246  P      P      05 13 58.6 +1.1
IPM    Ipoh              21.44 246  P      P      05 13 58.0 +0.5
KMMI   Kalianget         21.81 198  P      P      05 14 04.7 +3.3
       comp=Z,4µmcomp=Z,330nm,0.9s
SURT   Suratani          21.91 259  P      P      05 14 10.0 +7.5
       comp=Z,1.5nm,1.1s
GRJI   Gresik            22.18 202  P      P      05 14 08.3 +3.2
       comp=Z,2µmcomp=Z,329nm,0.9s
MHMT   Maesarieng        22.19 284  P      P      05 14 07.4 +2.2
       comp=Z,1µmcomp=Z,112nm,1.2s
TBJI   Tambak Boyo       22.32 203  P      P      05 14 09.2 +2.7
       comp=Z,4µmcomp=Z,345nm,1.0s
MMRI   Maumere           22.43 176  P      P      05 14 07.7 +0.1
MMRI                                IAmb   IAmb   05 14 16.3
       comp=Z,208nm,0.9s
MMRI   Maumere           22.43 176  P      P      05 14 08.4 +0.8
       comp=Z,256nm,0.9s
ABJI   Asem Bagus        22.44 197  P      P      05 14 09.9 +2.2
       comp=Z,4µmcomp=Z,314nm,1.4s
TIA    Tai'an            22.45 353  P      P      05 14 07.3 -0.4
TIA                                 S      S      05 18 02.9 -1.4
TIA                                 pmax   pmax
       comp=Z,100nm,0.9s
TIA                                 pmax   pmax
       comp=Z,850nm,3.8s
TIA                                 LR     LR
       comp=Z,380nm,17.3s
SRBI   Singaraja         22.47 194  P      P      05 14 10.2 +2.2
       comp=Z,7µmcomp=Z,898nm,0.9s
EDFI   Ende, Flores      22.51 177  P      P      05 14 09.0 +0.5
       comp=Z,3µmcomp=Z,353nm,0.8s
BLJI   Banyuglugur       22.58 198  P      P      05 14 10.9 +1.8
       comp=Z,2µmcomp=Z,200nm,0.8s
XAN    Xi'an             22.69 334  P      P      05 14 08.8 -1.3
XAN                                 pP     pP     05 14 34.4 -1.0
XAN                                 PP     PnPn   05 14 43.9 +1.2
XAN                                 S      S      05 18 01.5 -6.7
XAN                                 SS     SnSn   05 18 58.3 +3.4
XAN                                 pmax   pmax
       comp=Z,100nm,1.6s
XAN                                 pmax   pmax
       comp=Z,950nm,5.4s
XAN                                 LR     LR
       comp=Z,880nm,17.6s
XAN                                 LR     LR
       comp=Z,1µm,16.2s
XAN                                 LR     LR
       comp=Z,650nm,13.5s
PLAI   Plampang          22.73 187  P      P      05 14 12.1 +1.6
       comp=Z,6µmcomp=Z,794nm,0.8s
TWSI   Taliwang, Sumb    22.77 190  P      P      05 14 12.7 +1.8
       comp=Z,864nmcomp=Z,91nm,1.0s
CD2    Chengdu           22.96 320⥣iP      P      05 14 13.8 +1.2
CD2                                 pP     pwP    05 14 43.8 +2.9
CD2                                 PP     sP     05 14 51.8 -2.4
CD2                                 sP     pP     05 15 02.0  +24
CD2                                 S      S      05 18 07.1 -5.5
CD2                                 pmax   pmax
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       comp=Z,270nm,1.0s
CD2                                 pmax   pmax
       comp=Z,680nm,4.8s
CD2                                 LR     LR
       comp=Z,610nm,9.6s
CD2                                 LR     LR
       comp=Z,580nm,16.5s
CD2                                 LR     LR
       comp=Z,810nm,12.9s
DNP    Denpasar          23.04 194  P      P      05 14 17.3 +3.9
       comp=Z,738nm,1.0s
JAGI   Jajag, Banyuwa    23.11 196  P      P      05 14 15.8 +1.7
JAGI   Jajag, Banyuwa    23.11 196  P      P      05 14 16.5 +2.4
       comp=Z,3µmcomp=Z,329nm,0.8s
JMN    Monobe            23.15  29  P      P      05 14 14.6 +0.2
TJN    Taejon            23.21  14ceP      P      05 14 13.8 -1.0
WSI    Waingapu          23.40 181  P      P      05 14 16.8 +0.1
       comp=Z,717nm,1.1s
PWJI   Pagerwojo         23.44 202  P      P      05 14 19.2 +2.1
       comp=Z,3µmcomp=Z,321nm,1.0s
BKNI   Bangkinang        23.58 237  P      P      05 14 20.0 +1.6
       comp=Z,6µmcomp=Z,265nm,0.9s
GUMO   Guam              23.58  88  P      P      05 14 18.9 +0.4
       comp=Z,274nm,1.1s,baz=229,slow=6.8,SNR=5.5
GUMO                                LR     LR     05 22 14.9
       comp=Z,243nm,19.9s,baz=242,slow=33
GUMO   Guam              23.58  88  P      P      05 14 19.4 +1.0
GUMO                                pmax   pmax
       comp=Z,668nm,1.4s
GUMO   Guam              23.58  88  P      P      05 14 19.4 +1.0
GUMO   Guam              23.58  88  P      P      05 14 20.2 +1.8
WOJI   Wonogiri, Jawa    23.61 205  P      P      05 14 21.2 +2.5
       comp=Z,3µmcomp=Z,230nm,1.2s
SOEI   Soe               23.76 171  P      P      05 14 20.1 -0.1
SOEI   Soe               23.76 171  P      P      05 14 20.3 +0.1
       comp=Z,2µmcomp=Z,202nm,0.8s
UGM    Wanagama          23.85 205  P      P      05 14 23.1 +2.3
UGM    Wanagama          23.85 205  P      P      05 14 23.6 +2.8
       comp=Z,230nm,1.2s
SMPI   Sarmi             23.90 130  P      P      05 14 21.4 +0.1
       comp=Z,2µmcomp=Z,86nm,1.4s
BASI   Baing, Sumba      23.94 180  P      P      05 14 22.2 +0.6
       comp=Z,3µmcomp=Z,402nm,1.0s
SDSI   Sungai Dareh      24.02 234  P      P      05 14 23.8 +1.4
       comp=Z,981nmcomp=Z,114nm,0.9s
KPJI   Karang Pucung     24.05 209  P      P      05 14 25.9 +3.3
       comp=Z,3µmcomp=Z,109nm,0.8s
TSI    Tuntungan         24.07 247  P      P      05 14 25.7 +2.9
       comp=Z,226nm,1.0s
PSI    Prapat            24.07 245  P      P      05 14 24.8 +1.8
       comp=Z,63nm,0.8s,baz=0.3,slow=4.2,SNR=53
PSI                                 S      S      05 18 33.8 +2.8
       comp=Z,1.9nm,0.4s,baz=180,slow=19,SNR=10
PSI                                 ScP    ScP    05 21 25.3 -1.9
       comp=Z,24nm,1.1s,baz=180,slow=2.8,SNR=8.5
JCJ    Chichijima        24.07  54  LR     LR     05 23 11.7
       comp=Z,383nm,19.5s,baz=188,slow=35
RPSI   Rantau Prapat     24.12 244  P      P      05 14 24.8 +1.5
BATI   Baumata           24.12 173  P      P      05 14 23.5 +0.2
       comp=Z,356nm,0.7s,baz=315,slow=0.8,SNR=58
BATI                                S      S      05 18 33.2 +1.7
       comp=Z,19nm,0.5s,baz=114,slow=21,SNR=1.7
BATI                                ScP    ScP    05 21 27.1 -0.1
       comp=Z,19nm,0.5s,baz=101,slow=2.2,SNR=4.7
BATI   Baumata           24.12 173  P      P      05 14 23.7 +0.4
       comp=Z,2µmcomp=Z,280nm,0.8s
KLSI                     24.25 222  P      P      05 14 26.8 +2.3
       comp=Z,888nmcomp=Z,102nm,1.2s
LEM    Lembang           24.27 213  P      P      05 14 27.0 +2.1
       comp=Z,80nm,0.8s,baz=47,slow=9.1,SNR=9.5
LEM    Lembang           24.27 213  P      P      05 14 27.0 +2.1
LEM    Lembang           24.27 213  P      P      05 14 27.4 +2.6
KSRS   Korea Array       24.37  14  P      P      05 14 24.8 -0.5
       comp=Z,10nm,0.9s,baz=192,slow=11,SNR=16
LHSI   Lahat             24.42 225  P      P      05 14 28.9 +2.9
       comp=Z,9µmcomp=Z,4µmcomp=Z,472nm,0.9s
BLSI   Bandar Lampung    24.45 220  P      P      05 14 28.5 +2.2
       comp=Z,141nm,0.4s
DBJI   Dramaga           24.52 215  P      P      05 14 29.1 +2.2
MNSI   Mandailing Nat    24.52 240  P      P      05 14 28.9 +1.9
       comp=Z,132nm,0.9s
CMJI   Cimerak           24.67 210  P      P      05 14 31.2 +2.9
       comp=Z,117nm,0.8s
KRJI   Kerinci           24.73 232  P      P      05 14 31.3 +2.3
       comp=Z,425nm,1.0s
PDSI   Padang            24.78 235  P      P      05 14 30.5 +1.2
       comp=Z,64nm,0.9s
CISI   Cisompet, Garu    24.79 212  P      P      05 14 30.4 +1.0
CISI   Cisompet, Garu    24.79 212  P      P      05 14 31.2 +1.8
       comp=Z,296nm,1.1s
TIY    Taiyuan           24.82 344 eP      P      05 14 30.3 +0.8
TIY                                 S      S      05 18 35.5 -6.9
TIY                                 pmax   pmax
       comp=Z,91nm,0.8s
TIY                                 pmax   pmax
       comp=Z,380nm,4.5s
TIY                                 LR     LR
       comp=Z,170nm,5.5s
MASI   Maura Aman, Be    24.85 228  P      P      05 14 34.4 +4.4
       comp=Z,5µmcomp=Z,477nm,0.9s
LWLI   Liwa              24.94 222  P      P      05 14 32.9 +2.1
       comp=Z,205nm,0.9s
DL2    Dalian            24.94   2  P      P      05 14 30.4 -0.1
DL2                                 S      S      05 18 43.3 -0.7
DL2                                 sS     sS     05 19 39.3 +4.9
DL2                                 pmax   pmax
       comp=Z,88nm,0.9s
DL2                                 pmax   pmax
       comp=Z,270nm,4.4s
KSI    Kapahiang         24.95 227  P      P      05 14 33.5 +2.6
       comp=Z,161nm,1.0s
KASI   Kota Agung        25.04 221  P      P      05 14 33.3 +1.7
       comp=Z,4µmcomp=Z,2µmcomp=Z,132nm,1.0s
CGJI   Cibinong          25.17 217  P      P      05 14 33.4 +0.6
       comp=Z,66nm,1.0s
MNAI   Manna             25.20 225  P      P      05 14 34.4 +1.3
MNAI   Manna             25.20 225  P      P      05 14 35.4 +2.3
       comp=Z,4µmcomp=Z,362nm,1.3s
GENI   Genyem            25.39 129  P      P      05 14 36.3 +1.5
       comp=Z,106nm,1.2s
TPTI                     25.41 248  P      P      05 14 35.0  0.0
       comp=Z,10nm,0.8s
GSI    Gunungsitoli      25.97 243  P      P      05 14 39.3 -0.8
GSI                                 IAmb   IAmb   05 14 41.7
       comp=Z,69nm,0.8s
GSI    Gunungsitoli      25.97 243  P      P      05 14 40.4 +0.3
       comp=Z,105nm,0.9s
SISI   Saibi             26.12 236  P      P      05 14 43.9 +2.4
       comp=Z,1µmcomp=Z,134nm,1.1s
BJT    Baijiatuau        26.33 352  P      P      05 14 42.7 -0.3
BJT                                 pmax   pmax
       comp=Z,51nm,1.2s
BJT    Baijiatuau        26.33 352  P      P      05 14 42.7 -0.3
BJI    Beijing           26.35 352  P      P      05 14 42.9 -0.3
BJI                                 pmax   pmax
       comp=Z,63nm,1.6s
BJI                                 LR     LR
       comp=Z,270nm,12.9s
BJI                                 LR     LR
       comp=Z,240nm,15.9s
BJI                                 LR     LR
       comp=Z,140nm,16.7s
LZH    Lanzhou           26.74 329 ⥣P      P      05 14 48.0 +1.0
LZH                                 pP     pP     05 15 17.0 +1.7
LZH                                 sP     sP     05 15 31.4 +0.5
LZH                                 PP     PnPn   05 15 42.4 +5.6
LZH                                 S      S      05 19 13.5 +0.7
LZH                                 pmax   pmax
       comp=Z,140nm,1.3s
LZH                                 pmax   pmax
       comp=Z,220nm,4.3s
LZH                                 LR     LR
       comp=Z,1µm,12.1s
LZH                                 LR     LR
       comp=Z,1µm,12.6s
LZH                                 LR     LR
       comp=Z,970nm,13.5s
MAJO   Matsushiro        27.53  32 i P     P      05 14 51.8 -2.1
MAJO                                pmax   pmax
       comp=Z,19nm,1.4s
MJAR   Matsushiro Arr    27.53  32  P      P      05 14 51.6 -2.3
       comp=Z,12nm,1.2s,baz=214,slow=7.2,SNR=7.5
MJAR                                PcP    PcP    05 18 08.9 +0.3
       comp=Z,6.7nm,0.9s,baz=166,slow=3.1,SNR=5.7
MJAR                                ScP    ScP    05 21 36.0 -0.8
       comp=Z,2.8nm,0.9s,baz=181,slow=4.4,SNR=4.0
MJAR                                LR     LR     05 23 40.3
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       comp=Z,151nm,21.2s,baz=200,slow=31
HHC    Hu-ho-hao-te      28.00 345 eP      P      05 14 58.5 +0.4
HHC                                 pP     pP     05 15 27.0 -0.1
HHC                                 sP     sP     05 15 42.1 -0.8
HHC                                 S      S      05 19 35.8 +3.3
HHC                                 pmax   pmax
       comp=Z,58nm,1.1s
HHC                                 pmax   pmax
       comp=Z,350nm,4.8s
BTO    Baotou            28.19 343 eP      P      05 15 00.6 +0.9
BTO                                 S      S      05 19 38.1 +2.7
XMI    Christmas Isla    28.34 212  P      P      05 15 03.5 +2.3
       comp=Z,121nm,1.2s
SHL    Shillong          29.35 298  P      P      05 15 10.2 -0.1
SHL                                 pmax   pmax
       comp=Z,171nm,1.0s
SHL    Shillong          29.35 298  P      P      05 15 10.2 -0.1
SHL    Shillong          29.35 298  P      P      05 15 10.5 +0.2
       SNR=35
SHL    Shillong          29.35 298  P      P      05 15 10.5 +0.2
       SNR=35
CN2    Changchun         30.11   7 eP      P      05 15 12.6 -4.0
GTA    Gaotai            31.33 328 ⥣P      P      05 15 27.9 +0.3
GTA                                 pP     pP     05 15 57.5 +1.1
GTA                                 sP     sP     05 16 15.6 +3.7
GTA                                 PcP    PcP    05 18 19.3 +0.9
GTA                                 S      S      05 20 23.0 -1.8
GTA                                 ScP    ScP    05 21 48.8 -0.2
GTA                                 pmax   pmax
       comp=Z,92nm,1.3s
GTA                                 pmax   pmax
       comp=Z,340nm,7.6s
GTA                                 LR     LR
       comp=Z,710nm,19.6s
GTA                                 LR     LR
       comp=Z,570nm,19.3s
GTA                                 LR     LR
       comp=Z,460nm,17.1s
LSA    Lhasa             31.42 305  P      P      05 15 30.8 +1.9
LSA                                 S      S      05 20 23.5 -3.6
LSA                                 pmax   pmax
       comp=Z,260nm,1.3s
LSA    Lhasa             31.42 305 i P     P      05 15 30.3 +1.4
       SNR=23
LSA    Lhasa             31.42 305  P      P      05 15 30.0 +1.1
LSA                                 pmax   pmax
       comp=Z,109nm,1.2s
LSA    Lhasa             31.42 305  P      P      05 15 30.0 +1.1
LSA                                 IAmb   IAmb   05 15 32.0
       comp=Z,109nm,1.2s
MDJ    Mudanjiang        31.58  12  P      P      05 15 29.3 -0.2
MDJ                                 pmax   pmax
       comp=Z,32nm,1.1s
MDJ                                 pmax   pmax
       comp=Z,330nm,3.2s
USA0B  Ussuriysk Arra    31.75  16 i P     P      05 15 30.1 -0.9
USRK   Ussuriysk Ar.     31.75  16  P      P      05 15 30.7 -0.3
       comp=Z,16nm,0.8s,baz=205,slow=6.8,SNR=19
USRK                                PcP    PcP    05 18 18.3 -0.9
       comp=Z,2.4nm,0.7s,baz=203,slow=1.7,SNR=3.2
USRK   Ussuriysk Ar.     31.75  16  P      P      05 15 30.1 -0.9
FITZ   Fitzroy Crossi    32.16 171  P      P      05 15 34.0 -0.8
       comp=Z,12nm,1.0s,baz=343,slow=8.7,SNR=12
FITZ                                S      S      05 20 29.8 -8.0
       comp=Z,2.2nm,0.6s,baz=232,slow=15,SNR=2.2
TAPN   Taplejung         33.45 299 eP      P      05 15 47.3 +0.9
       comp=Z,246nm,1.1s
ODAN   Odare             33.59 298 eP      P      05 15 48.4 +0.8
       comp=Z,362nm,1.0s
RAMN   Ramite            34.29 298 eP      P      05 15 54.7 +1.1
       comp=Z,287nm,1.0s
MBWA   Marble Bar        34.83 181  P      P      05 15 58.2 +0.2
MBWA                                P      P      05 15 58.2 +0.2
MBWA   Marble Bar        34.83 181  P      P      05 15 58.2 +0.2
MBWA                                P      P      05 15 58.2 +0.2
PMG    Port Moresby      35.07 130  P      P      05 16 00.2  0.0
       comp=Z,31nm,0.9s,baz=317,slow=8.4,SNR=11
PMG                                 S      S      05 21 20.1 -2.8
       comp=Z,3.7nm,0.4s,baz=254,slow=15,SNR=1.5
PMG    Port Moresby      35.07 130  P      P      05 15 59.3 -0.8
GUN    Gumba             35.17 299 eP      P      05 16 02.0 +0.7
       comp=Z,587nm,1.2s
HIA    Hailar            35.29 359c iP     P      05 16 00.8 -0.9
HIA                                 pmax   pmax
       comp=Z,13nm,1.1s
PKI    Pulchoki          35.48 298 eP      P      05 16 04.2 +0.3
       comp=Z,305nm,1.3s
PKIN   Phulchoki         35.49 298 eP      P      05 16 04.2 +0.2
       comp=Z,288nm,1.4s
KKN    Kakani            35.64 299 eP      P      05 16 05.8 +0.6
       comp=Z,310nm,1.4s
ULN    Ulaanbaatar       35.71 344ceP      P      05 16 03.3 -2.1
ULN                                 pmax   pmax
       comp=Z,116nm,1.7s
ULN    Ulaanbaatar       35.71 344  P      P      05 16 04.6 -0.8
ULN                                 IAmb   IAmb   05 16 08.2
       comp=Z,100nm,1.4s
ULN    Ulaanbaatar       35.71 344  P      P      05 16 06.0 +0.6
ULN                                 P      P      05 16 06.0 +0.6
ULN    Ulaanbaatar       35.71 344  P      P      05 16 06.0 +0.6
ULN                                 P      P      05 16 06.0 +0.6
DMN    Daman             35.74 298 eP      P      05 16 06.5 +0.4
       comp=Z,265nm,1.3s
SONM   Songino Array     35.86 344  P      P      05 16 06.9 +0.3
       comp=Z,39nm,0.7s,baz=161,slow=9.8,SNR=128
SONM                                S      S      05 21 34.9 +0.4
       comp=Z,0.6nm,0.4s,baz=272,slow=9.9,SNR=4.4
SONM                                ScP    ScP    05 22 03.7 -1.1
       comp=Z,5.5nm,0.8s,baz=162,slow=5.1,SNR=16
SONM                                LR     LR     05 32 10.0
       comp=Z,177nm,18.7s,baz=106,slow=38
SONM   Songino Array     35.86 344  P      P      05 16 06.2 -0.5
WRAB   Tennant Creek     36.23 158ceP      P      05 16 08.6 -1.3
WRAB                                pmax   pmax
       comp=Z,23nm,0.6s
WRA    Warramunga Arr    36.23 158  P      P      05 16 08.8 -1.1
       comp=Z,23nm,0.6s,baz=336,slow=9.4,SNR=141
WRA                                 pP     pP     05 16 38.0 -1.8
       comp=Z,9.7nm,0.6s,baz=335,slow=9.5,SNR=2.9
WRA                                 S      S      05 21 34.6 -5.8
       comp=Z,18nm,1.0s,baz=340,slow=15,SNR=21
WRA                                 ScP    ScP    05 22 05.0 -1.5
       comp=Z,7.7nm,1.0s,baz=351,slow=3.8,SNR=7.1
GKN    Gorkha            36.25 299 eP      P      05 16 10.3  0.0
       comp=Z,320nm,1.4s
WR0    Warramunga Arr    36.32 157  P      P      05 16 09.6 -1.1
KLR    Kul'dur           36.43  12  P      P      05 16 10.8 -0.5
       comp=Z,33nm,0.8s,baz=213,slow=7.0,SNR=75
KLR                                 PcP    PcP    05 18 32.1 -0.4
       comp=Z,5.2nm,0.7s,baz=185,slow=5.0,SNR=4.6
KLR                                 ScP    ScP    05 22 06.0 -0.6
       comp=Z,2.5nm,0.5s,baz=203,slow=20,SNR=6.4
KOLN   Koldanda          37.08 298 eP      P      05 16 17.7 +0.3
       comp=Z,298nm,1.5s
DANN   Dangsing          37.09 299 eP      P      05 16 17.8 +0.2
       comp=Z,269nm,1.2s
PYUN   Piuthan           37.68 298 eP      P      05 16 23.2 +0.7
       comp=Z,296nm,1.1s
PATS   Pohnpei           37.72  97  P      P      05 16 23.7 +1.0
YSS    Yuzh-Sakhalins    37.83  25⥣eP      P      05 16 22.8 -0.4
YSS                                e*PP    pP     05 16 55.3 +2.3
YSS                                e*SP    sP     05 17 12.2 +3.8
YSS                                e                05 17 52.6
YSS                                e                05 18 33.5
YSS                                eS      S      05 22 05.8 +1.7
YSS                                 pmax   pmax
       comp=Z,40nm,1.3s
YSS                                 pmax   pmax
       comp=Z,400nm,5.1s
YSS                                 smax   smax
       comp=E,200nm,3.5s
YSS                                 MLR    MLR
       comp=Z,300nm,17.0s
GRNR   Gornyy            38.97  16⥣iP      P      05 16 32.4 -0.3
GRNR                                pmax   pmax
       comp=Z,20nm,1.0s
GRNR                                MLR    MLR
       comp=E,90nm,16.0s
GRNR                                MLR    MLR
       comp=N,70nm,13.0s
GRNR                                MLR    MLR
       comp=Z,220nm,15.0s
ZAK    Zakamensk         39.04 342 eP      P      05 16 32.8 -0.6
ZAK                                 pmax   pmax
       comp=Z,25nm,1.0s
AS31   Alice Springs     39.52 161  P      P      05 16 36.5 -1.1
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ASAR	Alice Springs	39.52	161	P	P	05 16 37.0	-0.5
	comp=Z,13nm,0.7s,baz=339,slow=6.7,SNR=107						
ASAR				ScP	ScP	05 22 17.4	-1.5
	comp=Z,4.5nm,0.9s,baz=346,slow=3.4,SNR=13						
ASAR				S	S	05 22 24.9	-5.2
	comp=Z,25nm,1.2s,baz=342,slow=16,SNR=27						
ASAR	Alice Springs	39.52	161	P	P	05 16 36.4	-1.2
PALK	Pallekele	39.72	265	LR	LR	05 31 57.9	
	comp=Z,92nm,21.3s,baz=181,slow=34						
TLY	Talaya	40.10	344	P	P	05 16 42.7	+0.7
	comp=Z,18nm,0.7s,baz=161,slow=7.3,SNR=19						
TLY				LR	LR	05 35 08.2	
	comp=Z,108nm,19.2s,baz=145,slow=39						
TLY	Talaya	40.10	344	eP	P	05 16 41.9	-0.1
TLY				eS	S	05 22 42.4	+4.3
TLY				eSS	SnSn	05 26 13.4	+19
TLY				pmax	pmax		
	comp=Z,70nm,1.0s						
TLY				MLR	MLR		
	comp=Z,258nm,14.0s						
TLY	Talaya	40.10	344	P	P	05 16 42.4	+0.2
TLY	Talaya	40.10	344	P	P	05 16 42.3	+0.2
TLY				P	P	05 16 42.3	+0.2
TLY	Talaya	40.10	344	P	P	05 16 42.3	+0.2
TLY				P	P	05 16 42.3	+0.2
ZEA	Zeya	40.11	6	eP	P	05 16 41.8	-0.2
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HYB	Hyderabad	40.58	281	i P	P	05 16 48.0	+1.5
	comp=Z,64nm,1.2s						
MOY	Mondy	40.86	341	eP	P	05 16 48.6	+0.2
MOY				pmax	pmax		
	comp=Z,69nm,1.6s						
TYV	Tymovskoe	40.99	21	eP	P	05 16 49.6	+0.3
TYV				eS	S	05 22 55.2	+3.9
TYV				pmax	pmax		
	comp=Z,15nm,1.3s						
TYV				pmax	pmax		
	comp=Z,400nm,4.6s						
TYV				smax	smax		
	comp=N,500nm,7.1s						
WMQ	Urumqi	41.00	323	eP	P	05 16 50.6	+1.0
WMQ				sP	sP	05 17 40.4	+6.0
WMQ				pmax	pmax		
	comp=N,62nm,2.3s						
WMQ				pmax	pmax		
	comp=N,490nm,3.7s						
WMQ				LR	LR		
	comp=N,1µm,18.5s						
WMQ				LR	LR		
	comp=N,850nm,7.9s						
WMQ				LR	LR		
	comp=N,280nm,21.1s						
WMQ	Urumqi	41.00	323	P	P	05 16 50.6	+1.0
WMQ				pmax	pmax		
	comp=Z,56nm,1.1s						
WMQ	Urumqi	41.00	323	P	P	05 16 50.6	+1.0
CTA	Charters Tower	42.15	143	S	S	05 23 07.0	-2.1
	comp=Z,0.4nm,0.3s,baz=40,slow=24,SNR=0.9						
CTAO	Charters Tower	42.15	143	P	P	05 16 58.9	-0.3
CTAO				pmax	pmax		
	comp=Z,41nm,1.0s						
CTAO	Charters Tower	42.15	143	P	P	05 16 58.9	-0.3
BOD	Bodaibo	44.14	355	eP	P	05 17 13.6	-1.0
BOD				pmax	pmax		
	comp=Z,27nm,1.6s						
ZSN	Zaisan	44.75	326	eP	P	05 17 18.8	-1.0
	baz=326						
ZSN	Zaisan	44.75	326	eP	P	05 17 18.7	-1.0
DGZ	Jazzator, Alta	44.83	330c	iP	P	05 17 21.1	+0.6
DGZ				pmax	pmax		
	comp=Z,31nm,1.0s						
HNR	Honiara	45.40	119	P	P	05 17 25.9	+0.6
HNR				pmax	pmax		
	comp=Z,69nm,0.9s						
HNR	Honiara	45.40	119	P	P	05 17 25.9	+0.6
HNR				IAmb	IAmb	05 17 35.6	
	comp=Z,69nm,0.9s						
SHLS	Shalkode	45.75	318	eP	P	05 17 24.7	-3.2
	comp=Z,70nm,0.9s,baz=318						
SHLS	Shalkode	45.75	318	eP	P	05 17 24.6	-3.2
SHLS				pmax	pmax		
	comp=Z,70nm,0.9s						
MK31	Makanchi Array	45.83	324	P	P	05 17 28.7	+0.4
MK31				pmax	pmax		
	comp=Z,56nm,1.1s						
MK31	Makanchi Array	45.83	324	P	P	05 17 28.7	+0.4
MK31				IAmb	IAmb	05 17 30.5	
	comp=Z,56nm,1.1s						
MKAR	Makanchi Array	45.83	324	P	P	05 17 29.0	+0.8
	comp=Z,35nm,0.8s,baz=124,slow=8.4,SNR=223						
MKAR				PcP	PcP	05 19 03.6	+0.2
	comp=Z,9.0nm,0.9s,baz=120,slow=4.3,SNR=5.0						
MKAR				ScP	ScP	05 22 42.3	-1.6
	comp=Z,2.8nm,0.7s,baz=134,slow=4.2,SNR=8.2						
MKAR				S	S	05 24 00.8	-1.2
	comp=Z,1.0nm,0.9s,baz=134,slow=7.5,SNR=2.2						
MKAR	Makanchi Array	45.83	324	P	P	05 17 28.4	+0.2
MAKZ	Makanchi	46.02	323	P	P	05 17 30.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,76nm,1.2s						
MAKZ	Makanchi	46.02	323	P	P	05 17 30.1	+0.4
MAKZ				IAmb	IAmb	05 17 32.0	
	comp=Z,76nm,1.2s						
KPKS	Kokpek	46.40	318	eP	P	05 17 31.6	-1.3
	comp=Z,47nm,0.8s,baz=318						
KPKS				eS	S	05 24 11.3	+0.8
	baz=318						
KPKS	Kokpek	46.40	318	eP	P	05 17 31.5	-1.3
KPKS				eS	S	05 24 11.2	+0.8
KPKS				pmax	pmax		
	comp=Z,47nm,0.8s						
SKR	Severo-Kuril's	46.63	31	eP	P	05 17 38.7	+4.4
SKR				e		05 19 03.4	
SKR				pmax	pmax		
	comp=Z,100nm,5.8s						
NWAO	Narrogin (SRO)	46.65	184	P	P	05 17 34.7	-0.1
	comp=Z,30nm,0.7s,baz=14,slow=6.6,SNR=27						
NWAO				pP	pP	05 18 05.0	-0.2
	comp=Z,9.8nm,0.8s,baz=12,slow=9.4,SNR=2.0						
NWAO	Narrogin (SRO)	46.65	184	P	P	05 17 35.0	+0.3
NWAO	Narrogin (SRO)	46.65	184	P	P	05 17 35.0	+0.3
KSH	Kashi	46.70	312	P	P	05 17 38.5	+3.2
KSH				pmax	pmax		
	comp=Z,110nm,1.0s						
KSH				pmax	pmax		
	comp=Z,410nm,7.4s						
NIL	Nilore	47.12	303	P	P	05 17 38.9	+0.3
NIL				pmax	pmax		
	comp=Z,60nm,0.9s						
NIL	Nilore	47.12	303	P	P	05 17 38.9	+0.3
NIL				IAmb	IAmb	05 17 40.2	
	comp=Z,60nm,0.9s						
NIL	Nilore	47.12	303	P	P	05 17 39.4	+0.8
NIL				P	P	05 17 39.4	+0.8
NIL	Nilore	47.12	303	P	P	05 17 39.4	+0.8
NIL				P	P	05 17 39.4	+0.8
TDK	Taldyqorghan	47.27	320	eP	P	05 17 39.7	+0.2
	comp=Z,173nm,0.9s,baz=319						
TDK				eS	S	05 24 25.0	+2.4
	baz=319						
TDK	Taldyqorghan	47.27	320	eP	P	05 17 39.6	+0.1
TDK				eS	S	05 24 25.0	+2.4
TDK				pmax	pmax		
	comp=Z,173nm,0.9s						
MDOK	Medeo	47.35	317	eP	P	05 17 40.1	-0.2
	baz=317						
MDOK	Medeo	47.35	317	eP	P	05 17 40.1	-0.2
TNSS	Tian-Shan	47.36	317	eP	P	05 17 40.5	-0.3
	baz=316						
TNSS	Tian-Shan	47.36	317	eP	P	05 17 40.4	-0.3
AAA	Alma-Ata	47.45	317	eP	P	05 17 41.0	0.0
	comp=Z,35nm,0.8s,baz=317						
AAA	Alma-Ata	47.45	317	eP	P	05 17 41.0	0.0
AAA				pmax	pmax		
	comp=Z,35nm,0.8s						
ULHL	Ulahol	47.52	315	P	P	05 17 43.6	+1.9
	SNR=14						
CHKK	Chushkaly	47.68	318	eP	P	05 17 42.5	-0.2
	baz=317						
CHKK	Chushkaly	47.68	318	eP	P	05 17 42.5	-0.2
KUU	Kurty	48.12	317	eP	P	05 17 45.2	-0.9
	baz=317						
KUU				eS	S	05 24 36.1	+1.4
	baz=317						
KUU	Kurty	48.12	317	eP	P	05 17 45.2	-0.9
KUU				eS	S	05 24 36.0	+1.4
TKM2	Tokmak 2	48.22	316	P	P	05 17 48.5	+1.4
	SNR=20						
TKM2	Tokmak 2	48.22	316	i P	P	05 17 48.2	+1.1
TKM2				pmax	pmax		
	comp=Z,64nm,1.1s						
YAK	Yakutsk	48.52	6	P	P	05 17 47.3	-1.4
	comp=Z,21nm,0.6s,baz=201,slow=2.1,SNR=15						
YAK				PcP	PcP	05 19 11.9	-0.6
	comp=Z,6.7nm,0.4s,baz=8.9,slow=3.1,SNR=1.5						
YAK	Yakutsk	48.52	6⇑	iP	P	05 17 48.0	-0.8
YAK				e*PP	pP	05 18 17.1	-2.7
YAK				e		05 19 11.6	
YAK				e		05 19 48.8	
YAK				ePPP	PPP	05 20 31.9	
YAK				eS	S	05 24 37.7	-1.8
YAK				e*SS	sS	05 25 36.4	+3.1
YAK				e		05 27 24.6	
YAK				pmax	pmax		
	comp=Z,62nm,0.8s						
YAK				pmax	pmax		
	comp=N,30nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,53nm,2.7s						
YAK				pmax	pmax		
	comp=N,56nm,2.5s						
YAK				pmax	pmax		
	comp=E,33nm,2.2s						
YAK				smax	smax		
	comp=N,91nm,3.3s						
YAK				smax	smax		
	comp=E,119nm,3.3s						
YAK	Yakutsk	48.52	6	P	P	05 17 47.7	-1.1
YAK				IAmb	IAmb	05 17 49.0	
	comp=Z,77nm,0.9s						
KBK	Karagaybulak	48.56	315	P	P	05 17 51.4	+1.7
	SNR=74						
UCH	Uchtor	48.70	315	P	P	05 17 52.9	+1.8
	SNR=105						
CHMS	Chumysh	48.83	316	P	P	05 17 52.6	+1.0
	SNR=38						
ZALV	Zalesovo Beam	48.85	333	P	P	05 17 51.4	-0.1
	comp=Z,19nm,0.5s,baz=125,slow=6.7,SNR=88						
ZALV				PcP	PcP	05 19 12.6	-1.3
	comp=Z,2.7nm,0.5s,baz=106,slow=5.4,SNR=2.3						
ZALV				ScP	ScP	05 22 55.0	-1.4
	comp=Z,0.7nm,0.6s,baz=177,slow=2.5,SNR=3.9						
ZALV	Zalesovo Beam	48.85	333	P	P	05 17 50.8	-0.7
AAK	Ala-Archa	48.87	315	P	P	05 17 53.5	+1.5
	SNR=33						
AAK	Ala-Archa	48.87	315	i P	P	05 17 53.5	+1.5
	SNR=41						
AAK	Ala-Archa	48.87	315	i P	P	05 17 52.9	+0.9
AAK				pmax	pmax		
	comp=Z,123nm,1.0s						
AAK	Ala-Archa	48.87	315	P	P	05 17 52.5	+0.5
AAK				IAmb	IAmb	05 17 54.9	
	comp=Z,96nm,1.4s						
AAK	Ala-Archa	48.87	315	P	P	05 17 54.4	+2.4
AAK	Ala-Archa	48.87	315	P	P	05 17 54.4	+2.4
PEA0B	Petropavlovsk-	48.92	29c	eP	P	05 17 51.3	-0.7
PETK	Petropavlovsk-	48.92	29	P	P	05 17 52.1	+0.2
	comp=Z,21nm,0.9s,baz=215,slow=4.7,SNR=16						
PETK				PcP	PcP	05 19 13.5	-0.7
	comp=Z,8.1nm,0.8s,baz=197,slow=4.6,SNR=5.7						
PETK				LR	LR	05 36 54.1	
	comp=Z,77nm,21.7s,baz=228,slow=34						
PETK	Petropavlovsk-	48.92	29	P	P	05 17 51.3	-0.7
SEM	Semipalatinsk	48.94	327	eP	P	05 17 50.6	-2.0
	comp=Z,26nm,1.1s,baz=326						
SEM	Semipalatinsk	48.94	327	eP	P	05 17 50.5	-2.0
SEM				pmax	pmax		
	comp=Z,26nm,1.1s						
SGDS	Sogindy	49.08	316	eP	P	05 17 52.3	-1.2
	baz=316						
SGDS				eS	S	05 24 49.4	+1.2
	baz=316						
SGDS	Sogindy	49.08	316	eP	P	05 17 52.3	-1.2
SGDS				eS	S	05 24 49.4	+1.2
USP	Ospenovka	49.10	316	P	P	05 17 54.7	+1.1
	SNR=66						
AML	Almayashu	49.24	314	P	P	05 17 56.6	+1.5
	SNR=83						
PET	Petropavlovsk	49.32	29	eP	P	05 17 53.6	-1.4
PET				e*SP	sP	05 18 42.1	+0.9
PET				eS	S	05 24 49.1	-1.8
PET				e*SS	sS	05 25 47.6	+2.8
PET				pmax	pmax		
	comp=Z,67nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
EKS2	Erkin-Say	49.37	315	P	P	05 17 57.3	+1.5
	SNR=57						
STKA	Stephens Creek	49.75	156	P	P	05 17 57.8	-0.8
	comp=Z,12nm,0.8s,baz=329,slow=7.8,SNR=15						
STKA				S	S	05 24 52.9	-4.7
	comp=Z,1.5nm,0.5s,baz=294,slow=20,SNR=5.4						
STKA				LR	LR	05 41 15.5	
	comp=Z,62nm,18.3s,baz=356,slow=38						
KURBB	Kurchatov Arra	49.98	326	S	S	05 25 01.9	+1.6
	comp=Z,0.3nm,0.5s,baz=248,slow=9.6,SNR=1.2						
KURK	Kurchatov	49.98	326	i P	P	05 18 01.0	+0.9
KURK				pmax	pmax		
	comp=Z,296nm,1.0s						
KURK	Kurchatov	49.98	326	P	P	05 18 00.1	0.0
KURK	Kurchatov	49.98	326	P	P	05 18 01.7	+1.6
KURK	Kurchatov	49.98	326	P	P	05 18 01.7	+1.6
BTLS	Baital	50.09	318	eP	P	05 17 59.5	-1.5
	comp=Z,33nm,1.0s,baz=318						
BTLS	Baital	50.09	318	eP	P	05 17 59.5	-1.5
BTLS				pmax	pmax		
	comp=Z,33nm,1.0s						
KBL	Kabul	50.72	303	P	P	05 18 06.9	+0.7
KBL				pmax	pmax		
	comp=Z,54nm,1.0s						
KBL	Kabul	50.72	303	P	P	05 18 06.9	+0.7
KBL				IAmb	IAmb	05 18 08.3	
	comp=Z,54nm,1.0s						
KBL	Kabul	50.72	303	P	P	05 18 07.0	+0.7
	SNR=21						
KBL	Kabul	50.72	303	P	P	05 18 07.0	+0.7
	SNR=21						
MA2	Magadan	50.77	19c	eP	P	05 18 05.2	-0.6
MA2				pmax	pmax		
	comp=Z,34nm,1.3s						
KKAR	Karatay Array	51.78	314	P	P	05 18 13.9	+0.2
KKAR	Karatay Array	51.78	314	P	P	05 18 13.9	+0.2
IUG	Iuzhnay	51.82	313	eP	P	05 18 13.2	-0.9
	comp=Z,48nm,1.0s,baz=313						
IUG	Iuzhnay	51.82	313	eP	P	05 18 13.2	-0.9
IUG				pmax	pmax		
	comp=Z,48nm,1.0s						
BRZS	Berezniki	52.97	323	eP	P	05 18 21.1	-1.3
	comp=Z,46nm,0.9s,baz=323						
BRZS	Berezniki	52.97	323	eP	P	05 18 21.1	-1.3
BRZS				pmax	pmax		
	comp=Z,46nm,0.9s						
SEY	Seymchan	53.87	17	P	P	05 18 29.1	+0.5
	comp=Z,18nm,0.8s,baz=227,slow=5.6,SNR=32						
SEY				PcP	PcP	05 19 32.2	-0.3
	comp=Z,3.9nm,0.6s,baz=230,slow=6.2,SNR=4.1						
SANVU	Saraoutou	54.53	121	P	P	05 18 35.1	+1.0
SANVU				IAmb	IAmb	05 18 36.8	
	comp=Z,77nm,1.1s						
SANVU	Saraoutou	54.53	121	P	P	05 18 35.5	+1.3
KOUNC	Koumac, New Ca	54.91	128	P	P	05 18 38.3	+1.5
BRVK	Borovoye	55.64	326	i P	P	05 18 42.1	+0.5
BRVK				pmax	pmax		
	comp=Z,220nm,1.1s						
BRVK	Borovoye	55.64	326	P	P	05 18 42.0	+0.5
BRVK	Borovoye	55.64	326	P	P	05 18 43.1	+1.5
BRVK				P	P	05 18 43.1	+1.5
BRVK	Borovoye	55.64	326	P	P	05 18 43.1	+1.5
BRVK				P	P	05 18 43.1	+1.5
LIFNC	LIFOU	57.33	126	P	P	05 18 55.2	+1.2
NOUC	Port Laguerre	57.33	128	P	P	05 18 54.6	+0.6
DZM	Mont Dzumac	57.42	128	eP	P	05 18 55.8	+1.0
	comp=Z,74nm,1.2s						
DZM	Mont Dzumac	57.42	128	P	P	05 18 55.1	+0.3
DZM				IAmb	IAmb	05 18 57.0	
	comp=Z,23nm,0.8s						
DZM	Mont Dzumac	57.42	128	P	P	05 18 56.2	+1.4
YATNC	Mamie plateau,	57.76	128	P	P	05 18 58.8	+1.8
OUENC	Ouen Island, N	57.92	128	P	P	05 18 59.6	+1.4
TIXI	Tiksi	57.96	3c	iP	P	05 18 55.8	-1.8
TIXI	Tiksi	57.96	3	P	P	05 18 55.9	-1.7
TIXI				IAmb	IAmb	05 18 57.7	
	comp=Z,55nm,1.0s						
JLN	Jalan Bani Buh	58.44	288	P	P	05 19 02.1	+0.3
JLN	Jalan Bani Buh	58.44	288	P	P	05 19 02.1	+0.3
PINNC	Pines Island,	58.49	128	P	P	05 19 03.6	+1.5
WBK	Wadi Bani Khal	58.83	288	P	P	05 19 05.1	+0.6
WBK	Wadi Bani Khal	58.83	288	P	P	05 19 05.1	+0.6
JMDO	Jabal Madar	59.64	288	P	P	05 19 10.1	0.0
JMDO	Jabal Madar	59.64	288	P	P	05 19 10.1	0.0
SMDO	Samad	59.65	289	P	P	05 19 10.5	+0.1
SMDO				P	P	05 19 10.5	+0.1
SMDO	Samad	59.65	289	P	P	05 19 10.5	+0.1
SMDO				P	P	05 19 10.5	+0.1
MHTO	MHTO	59.86	286	P	P	05 19 11.6	0.0
MHTO				P	P	05 19 11.6	0.0
MHTO	MHTO	59.86	286	P	P	05 19 11.6	0.0
MHTO				P	P	05 19 11.6	0.0
GEYT	Alibeck	59.95	306	P	P	05 19 13.5	+1.4
	comp=Z,49nm,0.9s,baz=150,slow=4.1,SNR=57						
GEYT	Alibeck	59.95	306	P	P	05 19 13.3	+1.2
GYA0B	ALIBECK ARRAY	59.95	306	P	P	05 19 12.8	+0.8
HOQ	Hoqain	60.30	289	P	P	05 19 14.9	+0.2
	SNR=6.1						
HOQ				P	P	05 19 14.9	+0.2
	SNR=6.1						
HOQ	Hoqain	60.30	289	P	P	05 19 14.9	+0.2
	SNR=6.1						
HOQ				P	P	05 19 14.9	+0.2
	SNR=6.1						
DQM	DQM	60.34	285	P	P	05 19 15.5	+0.5
DQM	DQM	60.34	285	P	P	05 19 15.5	+0.5
BSY	Bisya	60.45	288	P	P	05 19 16.0	+0.3
BSY	Bisya	60.45	288	P	P	05 19 16.0	+0.3
ABKAR	Akbulak array	60.53	319	P	P	05 19 15.5	-0.2
ABKAR	Akbulak array	60.53	319	P	P	05 19 15.7	0.0
ABKAR				IAmb	IAmb	05 19 17.3	
	comp=Z,42nm,0.8s						
SOHO	SOHO	60.98	290	P	P	05 19 19.1	-0.2
SOHO	SOHO	60.98	290	P	P	05 19 19.5	+0.3
SOHO				P	P	05 19 19.5	+0.3
SOHO	SOHO	60.98	290	P	P	05 19 19.5	+0.3
SOHO				P	P	05 19 19.5	+0.3
ARQ	Araqi	61.04	289	P	P	05 19 20.2	+0.5
ARQ				P	P	05 19 20.2	+0.5
ARQ	Araqi	61.04	289	P	P	05 19 20.2	+0.5
ARQ				P	P	05 19 20.2	+0.5
BANOM	Banah	61.12	292	i P	P	05 19 21.0	+0.8
	SNR=7.8						
BANOM	Banah	61.12	292	P	P	05 19 21.6	+1.4
BANOM	Banah	61.12	292	P	P	05 19 21.6	+1.4
SHME	Shamm	61.26	292	P	P	05 19 21.7	+0.6
SHME	Shamm	61.26	292	P	P	05 19 22.4	+1.3
SHME				P	P	05 19 22.4	+1.3
SHME	Shamm	61.26	292	P	P	05 19 22.4	+1.3
SHME				P	P	05 19 22.4	+1.3
MASF	Masafi	61.27	291	P	P	05 19 23.3	+2.1
MASF				P	P	05 19 23.3	+2.1
MASF	Masafi	61.27	291	P	P	05 19 23.3	+2.1
MASF				P	P	05 19 23.3	+2.1
MSFE	Esma-Masafi	61.27	291	P	P	05 19 22.8	+1.6
HATD	Hatta, Dubai	61.32	291	P	P	05 19 22.4	+0.9
	SNR=5.0						
HATD				P	P	05 19 22.4	+0.9
	SNR=5.0						
HATD	Hatta, Dubai	61.32	291	P	P	05 19 22.4	+0.9
	SNR=5.0						
HATD				P	P	05 19 22.4	+0.9
	SNR=5.0						
ASHO	Ashiyiah	61.39	291	i P	P	05 19 22.6	+0.6
	SNR=6.1						
ASHO	Ashiyiah	61.39	291	P	P	05 19 22.7	+0.6
	SNR=5.1						
ASHO	Ashiyiah	61.39	291	P	P	05 19 22.7	+0.6
	SNR=5.1						
ASUD	Al Ashush, Dub	62.06	291	i P	P	05 19 26.7	+0.2
	SNR=8.2						
ASUD	Al Ashush, Dub	62.06	291	P	P	05 19 27.4	+1.0
	SNR=5.2						
ASUD	Al Ashush, Dub	62.06	291	P	P	05 19 27.4	+1.0
	SNR=5.2						
SVE	Sverdlovsk	62.20	327d	iP	P	05 19 27.0	+0.2
SVE				pmax	pmax		
	comp=Z,184nm,1.2s						
UMZA	Um Al Zommool	62.33	289	P	P	05 19 28.3	0.0
UMZA	Um Al Zommool	62.33	289	P	P	05 19 28.3	0.0
SHAO	Shalim	62.33	283	P	P	05 19 29.3	+0.9
SHAO	Shalim	62.33	283	P	P	05 19 29.3	+0.9
ARU	Arti	63.18	327c	iP	P	05 19 32.9	-0.4
ARU						05 21 51.3	
ARU				S	S	05 27 57.7	+3.9
ARU				SS	SS	05 32 07.1	+5.0
ARU				pmax	pmax		
	comp=Z,65nm,0.8s						
ARU	Arti	63.18	327	P	P	05 19 32.6	-0.7
DOK	Doka	63.68	284	P	P	05 19 38.0	+0.7
DOK				P	P	05 19 38.0	+0.7
DOK	Doka	63.68	284	P	P	05 19 38.0	+0.7
DOK				P	P	05 19 38.0	+0.7
RBK	Rabkut	63.74	283	P	P	05 19 38.8	+1.1
RBK				P	P	05 19 38.8	+1.1
RBK	Rabkut	63.74	283	P	P	05 19 38.8	+1.1
RBK				P	P	05 19 38.8	+1.1
WHFO	Wadi Hawf	64.10	283	P	P	05 19 40.6	+0.5
WHFO	Wadi Hawf	64.10	283	P	P	05 19 40.6	+0.5
JRN	Qarnain Island	64.29	291	P	P	05 19 41.1	0.0
	SNR=9.8						
JRN	Qarnain Island	64.29	291	P	P	05 19 41.1	0.0
	SNR=9.8						
ABTO	Aybut	64.62	283	P	P	05 19 44.3	+0.8
ABTO	Aybut	64.62	283	P	P	05 19 44.3	+0.8
SOCY	Socotra	64.72	277	P	P	05 19 44.4	+0.2
SOCY	Socotra	64.72	277	P	P	05 19 44.4	+0.2
MSVF	Nonsavu	64.80	117	P	P	05 19 46.5	+1.9
	comp=Z,45nm,0.8s,baz=269,slow=6.5,SNR=45						
MSVF	Nonsavu	64.80	117	P	P	05 19 45.7	+1.1
MSVF				pmax	pmax		
	comp=Z,61nm,0.9s						
MSVF	Nonsavu	64.80	117	P	P	05 19 45.7	+1.1
MSVF				IAmb	IAmb	05 19 47.8	
	comp=Z,61nm,0.8s						
SLWR	Sila	65.40	290	P	P	05 19 49.3	+0.9
SLWR	Sila	65.40	290	P	P	05 19 49.3	+0.9
GAMB	Gambell	67.83	26	P	P	05 20 03.5	+0.5
GAMB				IAmb	IAmb	05 20 05.2	
	comp=Z,74nm,1.0s						
AKT	Akhty	68.14	309	eP	P	05 20 05.7	+0.1
AKT				e		05 20 26.9	
AKT				e*PP	PcP	05 20 34.4	+3.7
AKT				e		05 22 36.8	
AKT				pmax	pmax		
	comp=Z,72nm,1.2s						
MAK	Makhachkala	68.33	311	eP	P	05 20 07.0	+0.4
MAK				e*PP	PcP	05 20 34.1	+2.9
MAK				e		05 22 36.7	
MAK				eS	S	05 28 59.9	+3.0
MAK				e*SS	SKiKP	05 29 46.3	-0.9
MAK				pmax	pmax		
	comp=Z,298nm,1.3s						
QRN	Al-Qurain	68.41	296	eP		05 20 06.8	
KIRV	Kirov	68.46	328c	iP	P	05 20 06.6	-0.4
UMR	Umm Al-Rimmam	68.53	297	eP		05 20 07.5	
RDF	Al-Radifah	68.72	296	eP		05 20 08.8	
BELG	Belogornoye	68.73	321c	iP	P	05 20 08.5	-0.4
BELG				pmax	pmax		
	comp=Z,38nm,0.9s						
MIB	Mutribah	68.83	297	eP		05 20 09.9	
RST	Umm Al-Ruwaisa	69.15	297	eP		05 20 10.8	
GROC	Groznyy	69.58	311	eP	P	05 20 14.2	-0.1
GROC				e		05 20 38.4	
GROC				e*SP	sP	05 21 03.6	+2.3
GROC				e		05 22 50.1	
GROC				eS	S	05 29 11.5	-0.2
GROC				e		05 29 52.7	
GROC				pmax	pmax		
	comp=Z,73nm,1.2s						
GNI	Garni	70.42	308	P	P	05 20 21.6	+1.9
GNI	Garni	70.42	308c	eP	P	05 20 18.8	-1.0
GNI				pmax	pmax		
	comp=Z,115nm,1.7s						

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GNI   Garni            70.42 308   P       P      05 20 21.0 +1.2
GNI                                IAmb    IAmb   05 20 22.4
      comp=Z,94nm,1.3s
GNI   Garni            70.42 308   P       P      05 20 21.8 +2.1
GNI                                P       P      05 20 21.8 +2.1
GNI   Garni            70.42 308   P       P      05 20 21.8 +2.1
ANM   Nome             70.71  26   P       P      05 20 21.9 +1.1
ANM                                pmax    pmax
      comp=Z,43nm,0.9s
ANM   Nome             70.71  26   P       P      05 20 21.9 +1.1
ANM                                IAmb    IAmb   05 20 23.0
      comp=Z,43nm,0.9s
ZEI   Tsey             70.98 311  eP       P      05 20 20.8 -2.3
ZEI                                pmax    pmax
      comp=Z,64nm,1.4s
RAYN  Ar Rayn          71.10 290  i P      P      05 20 24.8 +0.8
      SNR=56
NCK   Nalchik          71.19 311  i P      P      05 20 23.3 -0.8
NCK                                pmax    pmax
      comp=Z,22nm,0.9s
KBZ   Khabaz           71.69 312   P       P      05 20 27.2 +0.2
      comp=Z,31nm,0.9s,baz=102,slow=3.6,SNR=39
KBZ                                LR      LR     05 55 33.0
      comp=Z,92nm,18.2s,baz=64,slow=39
KBZ   Khabaz           71.69 312ceP        P      05 20 27.1 +0.1
KBZ                                pmax    pmax
      comp=Z,43nm,1.0s
KIV   Kislovodsk       71.83 312 ⇓P        P      05 20 29.2 +1.1
KIV   Kislovodsk       71.83 312 i P       P      05 20 28.9 +0.8
      SNR=6.5
KIV   Kislovodsk       71.83 312  eP       P      05 20 28.1  0.0
KIV                                pmax    pmax
      comp=Z,219nm,1.0s
KIV                                MLR     MLR
      comp=Z,164nm,18.0s
KIV   Kislovodsk       71.83 312   P       P      05 20 28.7 +0.7
KIV                                IAmb    IAmb   05 20 30.2
      comp=Z,68nm,0.9s
KIV   Kislovodsk       71.83 312   P       P      05 20 29.2 +1.1
KIV   Kislovodsk       71.83 312   P       P      05 20 29.2 +1.1
RDOG  Red Dog Mine     72.17  23   P       P      05 20 29.8 +0.2
VRH   Novokhopyorsk    72.35 320  eP       P      05 20 30.3 -0.6
VRH                                pmax    pmax
      comp=Z,150nm,0.8s
DAMY  Dhamar           73.51 281   P       P      05 20 39.6 +0.8
DAMY                               IAmb    IAmb   05 20 42.0
      comp=Z,80nm,1.2s
KLMR  Klimovskoe       73.64 330  eP       P      05 20 35.7 -2.6
KLMR                              e               05 23 21.1
KLMR                               pmax    pmax
      comp=Z,126nm,1.0s
KLMR  Klimovskoe       73.64 330  eP       P      05 20 35.7 -2.6
KLMR                               AMP            05 20 38.7
      comp=Z,126nm,1.0s
KLMR                              ePP      PP     05 23 21.2 -2.8
KOPT  Kop Dagi         73.68 308   P       P      05 20 40.6 +1.3
TUWZ  Tuamarina        73.81 141   P       P      05 20 42.0 +2.5
VORR  Voronezh         73.91 320  eP       P      05 20 39.0 -1.0
VORR                               pmax    pmax
      comp=Z,300nm,1.2s
VSR   Storozhevoye     73.96 320  eP       P      05 20 39.6 -0.7
VSR                                pmax    pmax
      comp=Z,100nm,0.9s
SOC   Sochi            74.00 312  eP       P      05 20 38.7 -2.0
SOC                               e*PP     pP     05 21 09.7 -4.3
SOC                               e               05 23 23.8
SOC                               ePPP     PPP    05 25 11.4
SOC                               eS       S      05 30 03.0 +0.8
SOC                               eSS      SS     05 34 48.4 -1.0
SOC                                pmax    pmax
      comp=Z,33nm,0.8s
LPSR  Galich'ya Gora   74.05 321  eP       P      05 20 40.5 -0.3
LPSR                               pmax    pmax
      comp=Z,140nm,0.8s
TMCR  Tamitsa          74.37 333  eP       P      05 20 40.4 -2.0
TMCR                               pmax    pmax
      comp=Z,73nm,0.9s
A21K  Barrow           74.64  19   P       P      05 20 44.8 +1.0
      baz=268
MOS   Moscow           74.70 324  eP       P      05 20 43.3 -1.2
MOS                               eS       S      05 30 03.7 -5.9
MOS                                pmax    pmax
      comp=Z,107nm,0.8s
TTA   Tatalina         74.75  28   P       P      05 20 45.1 +0.3
TTA                                pmax    pmax
      comp=Z,49nm,0.9s
TTA   Tatalina         74.75  28   P       P      05 20 45.0 +0.3
TTA                                IAmb    IAmb   05 20 46.5
      comp=Z,49nm,0.9s
OBN   Obninsk          75.33 324⇑eP        P      05 20 46.6 -1.5
OBN                               e               05 21 00.8
OBN                               e               05 23 40.1
OBN                                pmax    pmax
      comp=Z,125nm,1.3s
ANN   Anapa            75.54 313  eP       P      05 20 48.6 -0.9
ANN                               e*PP     pP     05 21 18.3 -4.6
ANN                               eS       S      05 30 19.1 -0.1
ANN                                pmax    pmax
      comp=Z,65nm,0.9s
LVZ   Lovozero         75.72 337ceP        P      05 20 48.4 -1.8
LVZ                                pmax    pmax
      comp=Z,35nm,1.3s
APA   Apatity          76.21 337⇓iP        P      05 20 50.5 -2.4
APA                                pmax    pmax
      comp=Z,30nm,0.9s
APA                                MLR     MLR
      comp=Z,2µm,23.0s
RSO   Redoubt South    76.40  31   P       P      05 20 54.0 -0.4
KDAK  Kodiak Island    76.69  33   P       P      05 20 55.5 -0.3
      comp=Z,29nm,0.9s,baz=274,slow=3.2,SNR=10.0
MLY   Manley           76.97  26   P       P      05 20 58.0 +0.6
      baz=275,SNR=71
COLD  Coldfoot         77.01  24   P       P      05 20 58.2 +0.8
      baz=275
COLD  Coldfoot         77.01  24   P       P      05 20 57.9 +0.5
CAPN  Captain Cook N   77.16  30   P       P      05 20 59.7 +1.4
      baz=275
KIP   Kipapa           77.17  71ceP        P      05 20 57.8 -1.4
KIP                                pmax    pmax
      comp=Z,160nm,2.5s
TRF   Thorofare Moun   77.31  27   P       P      05 20 59.3 -0.1
TRF                                IAmb    IAmb   05 21 02.3
      comp=Z,60nm,1.0s
DIKM  Dikmen           77.47 310 ⇓P        P      05 21 00.9 +0.4
I23K  Minto, Yukon-K   77.54  26   P       P      05 21 01.3 +0.9
      baz=276,SNR=47
NEA2  Nenana           77.72  26   P       P      05 21 02.0 +0.5
      baz=276,SNR=39
RC01  Rabbit Creek A   77.81  30   P       P      05 21 01.7 -0.4
      baz=276,SNR=7.8
SIM   Simferopol'      77.86 314  eP       P      05 21 01.8 -0.8
SIM                               e               05 24 01.2
SIM                               eS       S      05 30 40.8 -3.8
SIM                                pmax    pmax
      comp=Z,106nm,0.7s
SIM                                smax    smax
      comp=N,32nm,1.2s
MCK   McKinley         77.88  27   P       P      05 21 02.4  0.0
      baz=277
O22K  Cooper Landing   77.89  30   P       P      05 21 02.4  0.0
      baz=277
RND   Reindeer         77.96  27   P       P      05 21 02.2 -0.7
RND                                pmax    pmax
      comp=Z,79nm,0.9s
RND   Reindeer         77.96  27   P       P      05 21 02.2 -0.7
RND                                IAmb    IAmb   05 21 03.4
      comp=Z,78nm,0.9s
MDM   Murphy Dome      78.04  26   P       P      05 21 02.9 -0.3
MDM                                IAmb    IAmb   05 21 05.4
      comp=Z,73nm,0.9s
PMR   Palmer           78.05  29   P       P      05 21 02.5 -0.8
PMR                                pmax    pmax
      comp=Z,65nm,0.9s
PMR   Palmer           78.05  29   P       P      05 21 02.5 -0.8
PMR                                IAmb    IAmb   05 21 03.8
      comp=Z,64nm,0.9s
TCOL  CIGO, UAF Yank   78.21  26   P       P      05 21 04.1  0.0
      baz=277,SNR=18
TCOL  CIGO, UAF Yank   78.21  26   P       P      05 21 03.4 -0.7
TCOL                               IAmb    IAmb   05 21 06.5
      comp=Z,54nm,0.8s
COLA  College          78.21  26c iP       P      05 21 03.3 -0.8
COLA                               pmax    pmax
      comp=Z,58nm,1.0s
COLA  College          78.21  26   P       P      05 21 02.7 -1.4
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COLA                               IAmb    IAmb   05 21 06.5
      comp=Z,54nm,0.8s
PUL   Pulkovo          78.27 329ceP        P      05 21 04.0 -0.5
PUL                                pmax    pmax
      comp=Z,93nm,0.6s
BZK   Bozkurt          78.35 311 ⇑P        P      05 21 06.0 +0.6
POKR  Poker Plat Res   78.36  26   P       P      05 21 05.2 +0.2
      baz=278,SNR=13
POKR  Poker Plat Res   78.36  26   P       P      05 21 04.7 -0.3
KNK   Knik Glacier     78.39  29   P       P      05 21 04.4 -0.8
KNK                                IAmb    IAmb   05 21 06.3
      comp=Z,70nm,0.8s
SML   Sawmill          78.40  29   P       P      05 21 04.7 -0.6
ILAR  Eielson Array    78.63  26   P       P      05 21 05.0 -1.5
      comp=Z,11nm,0.8s,baz=267,slow=4.1,SNR=61
ILAR  Eielson Array    78.63  26   P       P      05 21 05.0 -1.5
HDA   Harding Lake     78.66  26   P       P      05 21 05.4 -1.3
      baz=278,SNR=35
ARA0  ARCESS Array S   78.88 339  eP       P      05 21 07.7 -0.1
ARCES ARCESS Array B   78.88 339   P       P      05 21 07.5 -0.2
      comp=Z,21nm,0.8s,baz=76,slow=6.7,SNR=50
BR131 Keskin Array S   78.96 308c iP       P      05 21 08.6 -0.4
BR131 Keskin Array S   78.96 308   P       P      05 21 08.5 -0.4
BRTR  Keskin Array B   78.96 308   P       P      05 21 08.7 -0.3
      comp=Z,14nm,0.8s,baz=119,slow=4.5,SNR=82
BRTR                               PP      PP     05 24 15.2 +5.8
      comp=Z,1.3nm,0.9s,baz=86,slow=7.5,SNR=4.2
BRTR  Keskin Array B   78.96 308   P       P      05 21 08.1 -0.9
OPO   Ambohidratompo   79.19 248   P       P      05 21 11.4 +0.9
      comp=Z,21nm,0.9s,baz=29,slow=7.5
HAMF  Hammerfest       79.29 340  eP       P      05 21 10.3 +0.4
M24K  Tolsona, Glenn   79.36  29   P       P      05 21 11.0 +0.5
      baz=279,SNR=12
SPA0  Spitsbergen Ar   79.39 348  eP       P      05 21 10.7 +0.3
RIDG  Independent Ri   79.68  27   P       P      05 21 11.4 -0.8
KTK1  Kautokeino       79.77 339  eP       P      05 21 12.3 -0.3
KBS   Kingsbay         79.99 349ceP        P      05 21 12.5 -1.1
KBS                                pmax    pmax
      comp=Z,45nm,2.5s
SCRK  Sand Creek       80.01  26   P       P      05 21 13.8 -0.4
      baz=281,SNR=25
DOT   Dot Lake         80.04  27   P       P      05 21 13.8 -0.4
DOT                                IAmb    IAmb   05 21 15.7
      comp=Z,46nm,1.1s
FINES FINESS Array B   80.08 331   P       P      05 21 13.8 -0.5
      comp=Z,18nm,0.9s,baz=46,slow=4.5,SNR=25
FINES FINESS Array B   80.08 331   P       P      05 21 13.2 -1.1
N25K  Chitina, Valde   80.18  29   P       P      05 21 15.4 +0.3
      baz=281,SNR=9.2
AKASG Malin Array Be   80.26 320   P       P      05 21 14.5 -1.0
      comp=Z,25nm,1.0s,baz=65,slow=5.5,SNR=59
AKASG                              LR      LR     05 59 42.4
      comp=Z,83nm,18.6s,baz=265,slow=38
AKASG Malin Array Be   80.26 320   P       P      05 21 13.8 -1.7
AKBB  Malin Array Si   80.26 320   P       P      05 21 14.1 -1.4
AKBB                               pmax    pmax
      comp=Z,39nm,1.1s
AKBB  Malin Array Si   80.26 320   P       P      05 21 14.1 -1.4
VSU   Vasula           80.30 328  eP       P      05 21 15.4 -0.2
VSU   Vasula           80.30 328  i P      P      05 21 14.1 -1.5
VSU                                pmax    pmax
      comp=Z,287nm,0.9s
MNK   Minsk            80.39 324  i P      P      05 21 14.6 -1.6
      comp=E,5.0nm,1.0s
MNK                               i P      P      05 21 14.6 -1.6
      comp=N,17nm,1.0s
MNK                               i P      P      05 21 14.6 -1.6
      comp=Z,71nm,1.0s
MNK                               i PcP    PcP    05 21 21.0 -1.9
MNK                               i pP     pP     05 21 45.1 -4.8
MNK                               i sP     sP     05 22 16.6  +12
MNK                               i PP     PP     05 24 27.8 +7.1
MNK                               i PPP    PPP    05 26 28.9
MNK                               i S      S      05 31 09.3 -1.7
MNK                               i ScS    ScS    05 31 29.6 -0.3
MNK                               i sS     sS     05 32 01.2 -7.3
MNK                               i SS     SS     05 37 23.4  +58
MNK                               i SSS    SSS    05 39 15.6
MNK                               i SKKS   SKKSdf 05 46 51.0 +7.3
MNK                               i LRM    MLR    05 59 01.1
      comp=E,24nm,19.4s
MNK                               i LRM    MLR    05 59 01.1
      comp=N,164nm,19.4s
MNK                               i LRM    MLR    05 59 01.1
      comp=Z,74nm,19.4s
L26K  Log Cabin Wild   80.48  27   P       P      05 21 17.2 +0.7
      baz=282,SNR=11
MDUB  Mudurnu          80.68 309   P       P      05 21 17.3 -0.9
K27K  Chicken          80.82  26   P       P      05 21 19.4 +1.1
      baz=283
K27K  Chicken          80.82  26   P       P      05 21 18.5 +0.2
K27K                               IAmb    IAmb   05 21 20.6
      comp=Z,78nm,0.9s
IDID  Didziasalis      80.89 325  eP       P      05 21 19.0 +0.2
NACGM Naroch           80.95 324  i P      P      05 21 18.8 -0.3
NACGM                             i P      P      05 21 18.8 -0.3
NACGM                             i P      P      05 21 18.8 -0.3
NACGM                             i pP     pP     05 21 47.6 -5.2
NACGM                             i PP     PP     05 24 23.8 -1.5
NACGM                             i PPP    PPP    05 26 14.0
NACGM                             i S      S      05 31 09.3 -7.4
NACGM                             i sS     sS     05 32 08.7 -5.5
NACGM                             i SS     SS     05 36 10.7  -23
NACGM                             i SSS    SSS    05 39 37.3
TRO   Tromso           81.11 340  eP       P      05 21 19.4 -0.3
BCAR  Beaver Creek A   81.17  27   P       P      05 21 20.1 -0.2
IIGN  Ignalina         81.18 325  eP       P      05 21 20.5 +0.2
ISAL  Salakas          81.19 325  eP       P      05 21 20.4 +0.1
MILM  Milestii Mici    81.21 316 ⇑P        P      05 21 20.3 -0.4
TLCR                   81.53 314 ⇓P        P      05 21 22.7 +0.3
JURR  Jurilovca        81.57 314 ⇑P        P      05 21 23.0 +0.4
MTSE  Matsula          81.75 328  eP       P      05 21 20.8 -2.4
TPGR  Topolog          81.87 314 ⇑P        P      05 21 24.3  0.0
VASR  Vaslui           81.95 316 ⇑P        P      05 21 25.3 +0.7
TIRR  Tirgusor         81.96 314 ⇑P        P      05 21 24.2 -0.5
MANR  Mangalia         81.96 313 ⇑P        P      05 21 25.8 +1.1
IAS   Iasi             81.99 317 ⇓P        P      05 21 25.0 +0.3
CFR   Carcaliu         82.01 314 ⇑P        P      05 21 23.7 -1.2
MFTR  Murfatlar        82.01 313 ⇑P        P      05 21 25.7 +0.8
VARL  Varlezi          82.06 315 ⇑P        P      05 21 25.4 +0.2
TABL  Table Mountain   82.08  30   P       P      05 21 26.0 +0.7
TABL                               IAmb    IAmb   05 21 27.2
      comp=Z,87nm,1.0s
BIR   Birlad           82.14 316 ⇑P        P      05 21 26.5 +1.0
TLBR  Topalu           82.20 314 ⇓P        P      05 21 26.3 +0.4
HARR  Harsova          82.25 314 ⇑P        P      05 21 26.7 +0.6
PABE  Paberze          82.40 325  eP       P      05 21 26.9 +0.3
EPYK  Eagle Plains     82.40  23   P       P      05 21 26.5 -0.1
      baz=287
EPYK  Eagle Plains     82.40  23   P       P      05 21 26.3 -0.3
ICOR  Ion Corvin       82.46 313 ⇓P        P      05 21 28.2 +0.9
PETR  Petresti         82.52 315 ⇓P        P      05 21 28.9 +1.3
TESR  Tescani          82.75 316 ⇓P        P      05 21 28.9 +0.1
VRI   Vrincioaia       82.83 315 ⇓P        P      05 21 29.9 +0.7
PRAR  RASCA            82.84 317 ⇑P        P      05 21 29.5 +0.3
PLOR  Plostina         82.89 315 ⇓P        P      05 21 30.2 +0.6
STEI  Steigen          82.90 338  eP       P      05 21 28.4 -0.7
BISRR Bisoca           82.91 315 ⇓P        P      05 21 31.0 +1.3
INK   Inuvik           82.96  21   P       P      05 21 29.2 -0.1
      comp=Z,60nm,0.9s,baz=288,slow=5.7,SNR=152
INK   Inuvik           82.96  21   P       P      05 21 29.0 -0.4
INK                                IAmb    IAmb   05 21 30.3
      comp=Z,72nm,0.9s
KULA  Kula-Manisa      82.98 308   P       P      05 21 30.0 -0.3
BIZ   Bicaz            83.02 317 ⇓P        P      05 21 30.5 +0.4
FETY  Fethiye          83.05 306   P       P      05 21 30.0 -0.5
FAUS  Fauske           83.07 338  eP       P      05 21 29.6 -0.3
ISR   Istrita          83.12 315 ⇑P        P      05 21 31.5 +0.7
NEHR  Nehoiu           83.22 315 ⇓P        P      05 21 32.1 +0.8
KIBK  Kibwezi          83.33 266   P       P      05 21 34.4 +2.0
KIBK  Kibwezi          83.33 266   P       P      05 21 34.4 +2.0
PBUR  Paburge          83.39 326  eP       P      05 21 32.2 +0.4
SULR                   83.42 314 ⇑P        P      05 21 32.9 +0.7
OZUR                   83.42 316 ⇑P        P      05 21 32.6 +0.4
LOF   Lofoten          83.44 339  eP       P      05 21 31.5 -0.3
MLR   Muntele Rosu     83.45 315 ⇑P        P      05 21 31.1 -1.4
BURAR Bucovina Array   83.46 317 ⇓P        P      05 21 33.0 +0.5
BUR08 Bucovina Ar. S   83.46 317   P       P      05 21 32.0 -0.6
BUR08                              IAmb    IAmb   05 21 33.9
      comp=Z,44nm,0.9s
YER   Yerkesik         83.57 307   P       P      05 21 33.1 -0.1
EDRB  Edirne           83.70 311   P       P      05 21 33.4 -0.3
LVV   L'vov            83.70 320  eP       P      05 21 33.0 -0.6
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SGRR  Singureni        83.72 314 ⇑P        P      05 21 34.4 +0.7
DOPR  Dopca            83.72 316 ⇓P        P      05 21 34.2 +0.4
MOR8  Moi Rana         83.80 337  eP       P      05 21 32.3 -1.4
KMBO  Kilima Mbogo     83.80 267   P       P      05 21 37.0 +1.9
      comp=Z,17nm,0.9s,baz=51,slow=7.8,SNR=28
KMBO  Kilima Mbogo     83.80 267   P       P      05 21 37.0 +1.9
ARG   Arkhangelos      83.89 306   P       P      05 21 34.9 +0.1
VOIR                   84.08 315 ⇑P        P      05 21 35.0 -0.7
MTUR  Matau            84.12 315 ⇑P        P      05 21 35.9  0.0
ARCR  ARCALIA          84.15 317 ⇓P        P      05 21 36.9 +1.0
KONS  Konsvik          84.18 337  eP       P      05 21 35.1 -0.5
COPA  Copaceanca       84.27 314 ⇓P        P      05 21 36.8 +0.2
STFAR Stefanesti-Arg   84.27 315 ⇓P        P      05 21 36.9 +0.3
STOK  Stokkvaagen      84.28 337  eP       P      05 21 35.2 -0.9
HUMR  Humele           84.34 314 ⇑P        P      05 21 37.0 +0.1
ARR   Arges            84.38 315 ⇓P        P      05 21 37.6 +0.4
ENEZ  Enez             84.39 310   P       P      05 21 36.7 -0.5
ALN   Alexandroupoli   84.43 311   P       P      05 21 36.5 -0.9
ALN   Alexandroupoli   84.43 311   P       P      05 21 36.9 -0.5
ALN                                pmax    pmax
      comp=Z,49nm,0.9s
ALN   Alexandroupoli   84.43 311   P       P      05 21 36.9 -0.5
ALN                                IAmb    IAmb   05 21 38.0
      comp=Z,49nm,0.9s
EZN   Ezine            84.47 310   P       P      05 21 37.0 -0.6
UPP   Uppsala          84.50 330  eP       P      05 21 36.9 -0.5
LODK  Lodwar           84.56 272   P       P      05 21 41.0 +2.3
LODK  Lodwar           84.56 272   P       P      05 21 41.0 +2.3
SMG   Samos            84.56 307   P       P      05 21 38.0 -0.2
BMR   Baia Mare        84.57 318 ⇓P        P      05 21 38.7 +0.7
KWP   Kalwaria Pacla   84.58 320  eP       P      05 21 38.5 +0.4
PRK   Paraskevi        84.64 309   P       P      05 21 39.0 +0.5
GADA  Gvkgeada         84.70 310   P       P      05 21 38.1 -0.7
RDO   Rodhopi          84.74 311   P       P      05 21 38.2 -0.8
CJR   Cluj-Napoca      84.75 317 ⇓P        P      05 21 40.0 +1.0
KARP  Karpathos        84.81 305   P       P      05 21 39.7 +0.2
VLAD  Vladila          84.87 314 ⇑P        P      05 21 39.9 +0.4
SMTH  Samothraki Isl   84.91 310   P       P      05 21 38.7 -1.2
LOT   Lotru            84.95 315 ⇓P        P      05 21 40.3 +0.2
WHY   Whitehorse       84.98  29   P       P      05 21 40.4 +0.4
WHY                                IAmb    IAmb   05 21 42.1
      comp=Z,60nm,0.8s
KOLS  Kolonicke sedl   85.04 319  eP       P      05 21 40.5 +0.2
KOLS                               pmax    pmax
      comp=Z,26nm,1.1s
KOLS  Kolonicke sedl   85.04 319  eP       P      05 21 40.5 +0.2
UZH   Uzhgorod         85.10 319  i P      P      05 21 40.4 -0.2
BEL   Belsk            85.16 322  eP       P      05 21 41.1 +0.2
LIA   Limnos Island    85.31 310   P       P      05 21 40.7 -1.1
DRGR                   85.31 317 ⇑P        P      05 21 41.8 -0.1
NSS   Namsos           85.36 336  eP       P      05 21 40.8 -0.8
DEV   Deva             85.42 316 ⇓P        P      05 21 43.0 +0.7
THAS  Thassos island   85.48 311   P       P      05 21 41.7 -0.9
KAVA  Kavala           85.53 311   P       P      05 21 42.0 -0.9
SRE   Strehaia         85.53 315 ⇓P        P      05 21 43.0 +0.1
CRVS  Cervenica-Dubn   85.56 319  eP       P      05 21 43.6 +0.7
CRVS                               pmax    pmax
      comp=Z,201nm,1.1s
CRVS  Cervenica-Dubn   85.56 319  eP       P      05 21 43.6 +0.7
GZR   Gura Zlata       85.64 316 ⇑P        P      05 21 43.6 +0.1
C36M  Paulatuk         85.67  19   P       P      05 21 42.8 -0.2
      baz=298
C36M  Paulatuk         85.67  19   P       P      05 21 42.7 -0.3
APE   Apeiranthos      85.73 307 ⇓P        P      05 21 43.2 -0.8
PUNG  Punghina         85.82 314 ⇓P        P      05 21 44.6 +0.3
NVR   Nevrokopi        85.92 311   P       P      05 21 43.7 -1.2
SANT  Santorini        85.95 306 ⇓P        P      05 21 44.2 -1.0
SANT  Santorini        85.95 306   P       P      05 21 43.6 -1.6
SNT1  Gialos, Santor   85.97 306   P       P      05 21 43.5 -1.6
SNT5  Nea Kammeni, S   85.99 306   P       P      05 21 44.5 -0.8
HERR  Herculane        86.02 315 ⇓P        P      05 21 45.7 +0.4
VTS   Vitosha          86.04 313 ⇑P        P      05 21 45.7  0.0
OUR   Ouranopolis      86.09 310   P       P      05 21 44.5 -1.2
NIE   Niedzica         86.15 320  eP       P      05 21 46.6 +0.8
OJC   Ojcow            86.22 321  eP       P      05 21 46.2 +0.1
OJC   Ojcow            86.22 321   P       P      05 21 45.8 -0.4
OJC                                pmax    pmax
      comp=Z,76nm,0.9s
OJC   Ojcow            86.22 321   P       P      05 21 45.8 -0.4
KECS  Kecovo           86.30 319  eP       P      05 21 46.8 +0.2
KECS                               pmax    pmax
      comp=Z,23nm,0.9s
KECS  Kecovo           86.30 319  eP       P      05 21 46.8 +0.2
BZS   Buzias           86.36 316 ⇑P        P      05 21 46.2 -0.8
DAG   Danmarks Havn    86.41 351  i P      P      05 21 45.0 -1.6
DAG                                pmax    pmax
      comp=Z,11nm,0.8s
DAG   Danmarks Havn    86.41 351  i P      P      05 21 45.0 -1.6
      comp=Z,11nm,0.8s
DAG   Danmarks Havn    86.41 351  i P      P      05 21 45.0 -1.6
DAG                                IAmb    IAmb   05 21 48.2
      comp=Z,11nm,0.8s
PAIG  Paliouri         86.42 310   P       P      05 21 45.9 -1.4
SOH   Sokhos           86.42 311   P       P      05 21 46.0 -1.4
PLG   Polygyros        86.47 311   P       P      05 21 46.2 -1.5
TBLU  Trondheim        86.57 335  eP       P      05 21 47.0 -0.5
KNT   Kendrikon        86.67 311   P       P      05 21 47.1 -1.5
HORT  Hortiatis        86.67 311   P       P      05 21 46.7 -2.0
LANS  Liptovska Anna   86.75 320  eP       P      05 21 49.5 +0.6
LANS                               pmax    pmax
      comp=Z,12nm,0.9s
LANS  Liptovska Anna   86.75 320  eP       P      05 21 49.4 +0.6
PSZ   Piszkesteto      86.84 319 ⇑P        P      05 21 48.9 -0.4
PSZ   Piszkesteto      86.84 319  eP       P      05 21 49.4 +0.1
VAY   Valandovo        86.86 312  i P      P      05 21 48.3 -1.2
XOR   Xorichti         86.93 310   P       P      05 21 47.7 -2.2
NC602 NORSAR Array S   87.03 332  eP       P      05 21 47.8 -2.0
STIP  Stip             87.04 312  i P      P      05 21 48.0 -2.4
NB2   NORSAR Subarra   87.05 333   P       P      05 21 48.7 -1.4
      comp=Z,65nm,1.1s,baz=68,slow=4.4
NB2   NORSAR Subarra   87.05 333   P       P      05 21 48.7 -1.4
      baz=68,slow=4.4
NOA   NORSAR Array B   87.05 333   P       P      05 21 48.6 -1.4
      comp=Z,28nm,1.0s,baz=67,slow=4.5,SNR=39
NOA                                LR      LR     06 03 09.3
      comp=Z,52nm,18.4s,baz=60,slow=37
ATAL  Atalanti         87.23 309   P       P      05 21 49.0 -2.3
LIT   Litokhoron       87.25 311   P       P      05 21 49.8 -1.6
LIT   Litokhoron       87.25 311   P       P      05 21 49.4 -2.0
LIT                                pmax    pmax
      comp=Z,44nm,1.1s
LIT   Litokhoron       87.25 311   P       P      05 21 49.4 -2.0
LIT                                IAmb    IAmb   05 21 51.1
      comp=Z,44nm,1.1s
LKR   Lokris           87.26 309   P       P      05 21 49.0 -2.4
IMMV  Iera Moni Meta   87.34 306   P       P      05 21 51.7 -0.2
VYHS  Vyhne            87.34 319  eP       P      05 21 51.8 +0.1
VYHS                               pmax    pmax
      comp=Z,24nm,1.3s
VYHS  Vyhne            87.34 319  eP       P      05 21 51.8 +0.1
SKO   Skopje           87.50 313  i P      P      05 21 51.9 -0.6
BUD   Budapest         87.53 318  eP       P      05 21 52.6  0.0
DOMB  Dombas           87.58 334  eP       P      05 21 51.9 -0.6
AGG   Agios Georgios   87.66 310   P       P      05 21 51.0 -2.4
FRGS  Fruska Gora      87.71 316  eP       P      05 21 53.1 -0.4
OSL   Oslo             87.72 332  eP       P      05 21 51.3 -1.8
MORC  Moravsky Berou   87.75 321 ⇓P        P      05 21 54.2 +0.6
MORC  Moravsky Berou   87.75 321  eP       P      05 21 53.2 -0.4
MORC  Moravsky Berou   87.75 321   P       P      05 21 53.1 -0.5
MORC  Moravsky Berou   87.75 321   P       P      05 21 53.1 -0.5
MORC                               IAmb    IAmb   05 21 55.0
      comp=Z,41nm,1.4s
DIVS  Divibare         87.90 315  eP       P      05 21 54.0 -0.5
JAVC  Velka Javorina   87.96 320  eP       P      05 21 55.5 +0.9
KALE  Kalithea         87.98 309   P       P      05 21 52.5 -2.5
MOL   Molde            87.98 335  eP       P      05 21 54.4 +0.1
CSKK  Cskako           88.06 318  eP       P      05 21 54.7 -0.3
KLV   Kalavryta, Ach   88.07 309   P       P      05 21 52.7 -2.7
VLX   Vlachokerasia    88.08 308   P       P      05 21 53.5 -2.0
ANX   Ano Chora        88.09 309   P       P      05 21 53.7 -1.8
DLBC  Dease Lake       88.09  30   P       P      05 21 55.3 +0.2
      comp=Z,5.3nm,0.9s,baz=297,slow=8.0,SNR=4.0
TRIP  Tripoli          88.12 308   P       P      05 21 54.1 -1.5
KSP   Ksiaz            88.15 322  eP       P      05 21 55.6 +0.2
SJES  Sjenica          88.16 314  eP       P      05 21 55.9 +0.1
MORH  Mrgy, Hungar     88.17 317  eP       P      05 21 55.5  0.0
MORH  Mrgy, Hungar     88.17 317  eP       P      05 21 55.1 -0.5
OSTC  Ostas            88.29 322  eP       P      05 21 56.1  0.0
DPC   Dobruska-Polom   88.30 322  eP       P      05 21 55.8 -0.4
DPC   Dobruska-Polom   88.30 322  eP       P      05 21 55.8 -0.4
BBLS  Lazi&#263;i      88.38 315  eP       P      05 21 56.0 -0.7
AKN   Aaknes           88.39 335  eP       P      05 21 55.4 -0.9
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DRO	Drossia	88.43	309	P	P	05 21 56.1	-0.9
UPC	Upice	88.43	322	*e*P	P	05 21 56.9	+0.1
UPC	Upice	88.43	322	*e*P	P	05 21 56.9	+0.1
ITM	Ithomi	88.48	308	P	P	05 21 55.8	-1.5
VRAC	Vranov	88.48	321	⇓P	P	05 21 57.6	+0.6
VRAC	Vranov	88.48	321	*e*P	P	05 21 57.0	0.0
RLS	Riolos of Patr	88.58	309	P	P	05 21 57.0	-0.7
MPLH	Magyarpolny	88.59	318	*e*P	P	05 21 57.7	+0.2
HAPS	Han Pijesak,BI	88.62	315	*e*P	P	05 21 57.0	-0.9
PDO	Prodromos	88.64	309	P	P	05 21 56.5	-1.5
KRUC	Moravsky	88.69	320	*e*P	P	05 21 57.9	-0.1
KRUC				*e*PP	PP	05 25 31.4	+3.2
PYL	PYLOS	88.70	308	P	P	05 21 56.4	-1.9
RES	Resolute Bay	88.87	9	P	P	05 21 58.0	-0.3
	comp=Z,36nm,0.8s,baz=316,slow=5.3,SNR=138						
RES	Resolute Bay	88.87	9	P	P	05 21 58.0	-0.3
RES	Resolute Bay	88.87	9	P	P	05 21 57.6	-0.7
RES				IAmb	IAmb	05 21 59.1	
	comp=Z,44nm,0.9s						
PDG	Podgorica	88.92	313	⇑P	P	05 21 59.2	+0.1
PDG	Podgorica	88.92	313	*e*P	P	05 21 58.3	-0.9
RUE	Ruedersdorf	89.04	324	*e*P	P	05 21 59.5	0.0
	baz=65,slow=4.6						
DRME	Dracevica, Mon	89.04	313	⇑*i*P	P	05 21 59.1	-0.7
SOP	Sopron	89.05	319	*e*P	P	05 21 54.1	-5.5
TREC	Trest	89.17	321	*e*P	P	05 21 59.6	-0.7
TREC	Trest	89.17	321	*e*P	P	05 21 59.6	-0.7
BRY	Bratogost	89.28	314	*e*P	P	05 22 00.8	-0.3
PVCC	Panska Ves	89.29	322	*e*P	P	05 22 01.2	+0.4
PVCC	Panska Ves	89.29	322	*e*P	P	05 22 01.2	+0.4
CONA	Conrad Observa	89.41	319	*e*P	P	05 22 00.9	-0.6
	comp=Z,6.5nm,1.0s						
TREB	Trebinje	89.47	314	*e*P	P	05 22 00.4	-1.4
PRU	Pruhonice	89.50	322	*e*P	P	05 22 01.2	-0.6
PRU	Pruhonice	89.50	322	*e*P	P	05 22 01.2	-0.6
BRG	Berggiesshubel	89.53	323	*i* P	P	05 22 01.8	-0.2
BRG				Amp		05 22 03.2	
	comp=Z,32nm,1.1s						
BRG	Berggiesshubel	89.53	323	*i* P	P	05 22 01.7	-0.2
BRG				pmax	pmax		
	comp=Z,32nm,1.1s						
BRG	Berggiesshubel	89.53	323	*i* P	P	05 22 01.8	-0.2
BRG				Amp		05 22 03.2	
	comp=Z,32nm,1.1s						
BRG	Berggiesshubel	89.53	323	*e*P	P	05 22 01.5	-0.4
	baz=65,slow=4.6						
BLY	Banja Luka	89.61	316	*e*P	P	05 22 01.7	-0.7
ARSA	Arzberg	89.86	319	*e*P	P	05 22 02.6	-0.9
	comp=Z,5.6nm,0.8s						
BLS5	Blasjo	89.89	332	*e*P	P	05 22 02.7	-0.7
CLL	Collm	89.92	323	*i* P	P	05 22 02.9	-0.8
	comp=Z,24nm,1.2s						
CLL				*e*PP	PP	05 25 36.0	-1.9
CLL	Collm	89.92	323	*i* P	P	05 22 02.9	-0.8
CLL				pmax	pmax		
	comp=Z,24nm,1.2s						
CLL	Collm	89.92	323	P	P	05 22 02.4	-1.3
CLL				IAmb	IAmb	05 22 04.5	
	comp=Z,26nm,1.2s						
CLL	Collm	89.92	323	*e*P	P	05 22 03.1	-0.6
	comp=Z,24nm,1.2s,baz=65,slow=4.6						
MBAR	Mbarara	90.00	269	*i* P	P	05 22 03.7	-1.3
MBAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MBAR	Mbarara	90.00	269	P	P	05 22 06.9	+1.9
MBAR	Mbarara	90.00	269	P	P	05 22 06.9	+1.9
SOKA	Soboth	90.37	318	*e*P	P	05 22 05.8	-0.2
	comp=Z,9.1nm,0.9s						
BSEG	Bad Segeberg	90.39	326	*e*P	P	05 22 05.3	-0.4
	comp=Z,29nm,1.1s,baz=65,slow=4.6						
CRES	Cresnjev	90.40	318	*e*P	P	05 22 05.4	-0.7
KHC	Kasperske Hory	90.40	321	*e*P	P	05 22 05.7	-0.3
KHC	Kasperske Hory	90.40	321	*e*P	P	05 22 05.7	-0.3
KHC	Kasperske Hory	90.40	321	P	P	05 22 05.0	-1.0
GEC2	GERESS Array S	90.43	321	P	P	05 22 05.2	-1.1
GEC2	GERESS Array S	90.43	321	*e*P	P	05 22 06.1	-0.2
	comp=Z,30nm,1.3s,baz=65,slow=4.6						
GERES	GERESS Array B	90.43	321	P	P	05 22 06.2	0.0
	comp=Z,7.4nm,0.9s,baz=64,slow=6.1,SNR=43						
GERES				PP	PP	05 25 46.2	+4.1
	comp=Z,0.7nm,0.7s,baz=53,slow=6.5,SNR=3.4						
GERES				LR	LR	06 05 57.4	
	comp=Z,66nm,18.2s,baz=82,slow=38						
GERES	GERESS Array B	90.43	321	P	P	05 22 05.4	-0.8
MOA	Molln	90.44	320	*e*P	P	05 22 06.2	0.0
	comp=Z,21nm,0.8s						
FLTG	Flechtingen	90.53	325	*e*P	P	05 22 05.7	-0.8
	comp=Z,16nm,1.2s,baz=65,slow=4.6						
TANN	Tannenbergstha	90.58	323	*e*P	P	05 22 06.3	-0.6
	comp=Z,22nm,1.4s,baz=65,slow=4.6						
NKC	Novy Kostel	90.66	322	*e*P	P	05 22 06.8	-0.4
NKC	Novy Kostel	90.66	322	*e*P	P	05 22 06.8	-0.4
WERN	Wernitzgruen	90.68	322	*e*P	P	05 22 07.3	0.0
	comp=Z,22nm,1.2s,baz=65,slow=4.6						
OBKA	Obir	90.75	318	*e*P	P	05 22 07.3	-0.5
	comp=Z,15nm,1.0s						
WET	Wettzell	90.82	321	*e*P	P	05 22 07.6	-0.3
	comp=Z,28nm,1.5s,baz=65,slow=4.6						
ROTZ	Rotzenmuhle	90.98	322	*e*P	P	05 22 08.9	+0.2
	comp=Z,29nm,1.2s,baz=65,slow=4.6						
MOX	Moxa	90.99	323	*e*P	P	05 22 08.4	-0.3
	comp=Z,23nm,1.3s,baz=65,slow=4.6						
CEY	Cerknica	91.10	318	*e*P	P	05 22 08.3	-1.1
MAW	Mawson	91.23	199	LR	LR	06 00 33.4	
	comp=Z,43nm,18.6s,baz=55,slow=34						
KBA	Koelnbreinsper	91.31	319	*e*P	P	05 22 09.4	-1.1
	comp=Z,13nm,1.1s						
RJOB	Jochberg	91.40	320	*e*P	P	05 22 10.3	-0.4
	comp=Z,100nm,1.3s,baz=65,slow=4.6						
TIP	Timpagrande	91.75	311	⇓P	P	05 22 12.7	+0.2
ABTA	Abfaltersbach	91.96	319	*e*P	P	05 22 11.8	-1.5
	comp=Z,24nm,1.1s,SNR=5.8						
WTTA	Wattenberg	92.31	320	*e*P	P	05 22 14.5	-0.6
	comp=Z,45nm,1.1s,SNR=7.1						
WATA	Walderalm	92.32	320	*e*P	P	05 22 14.1	-1.0
	comp=Z,28nm,1.1s,SNR=5.6						
SQTA	Sankt Quirin	92.60	320	*e*P	P	05 22 15.8	-0.5
	comp=Z,41nm,1.2s,SNR=11						
MOTA	Moosalm	92.61	320	*e*P	P	05 22 15.6	-0.8
	comp=Z,34nm,1.0s,SNR=6.5						
SUMG	Summit	92.63	354	*i* P	P	05 22 16.0	-0.3
SUMG	Summit	92.63	354	P	P	05 22 15.0	-1.4
SUMG				IAmb	IAmb	05 22 17.5	
	comp=Z,26nm,1.1s						
SUMG	Summit	92.63	354	*i* P	P	05 22 16.0	-0.3
SUMG	Summit	92.63	354	*i* P	P	05 22 16.0	-0.3
YKA	Yellowknife Ar	92.65	22	P	P	05 22 15.9	-0.2
	comp=Z,17nm,0.9s,baz=313,slow=3.9,SNR=175						
YKA				PKKP	PKKPdf	05 39 26.1	-0.4
	comp=Z,0.3nm,0.8s,baz=121,slow=2.7,SNR=4.6						
RETA	Reutte	92.77	320	*e*P	P	05 22 16.1	-1.0
	comp=Z,11nm,1.5s						
FETA	Feichten	92.98	320	*e*P	P	05 22 17.6	-0.5
	comp=Z,32nm,1.1s,SNR=8.3						
DAVA	Damuels	93.40	320	*e*P	P	05 22 19.5	-0.6
	comp=Z,18nm,1.2s						
PPT	Papeete	93.94	107	LR	LR	06 02 00.2	
	comp=Z,20nm,18.5s,baz=284,slow=34						
PPT2	Papeete2	93.95	107	*e*S	S	05 33 17.4	-4.7
	comp=Z,336nm,25.2s						
PPT2	Papeete2	93.95	107	*e*LR	LR	05 52 52.9	
	comp=Z,203nm,32.5s						
MEM	Membach	94.23	324	*d*P	P	05 22 23.3	-0.3
VNDA	Vanda	94.24	172	P	P	05 22 22.6	-0.3
	comp=Z,1.9nm,0.8s,baz=326,slow=4.9,SNR=5.2						
BSTI	Sart Tilman	94.49	325	*d*P	P	05 22 24.7	-0.1
WLF	Walferdange	94.58	324	*d*P	P	05 22 24.3	-0.9
	comp=Z,21nm,1.3s						
BGES	Gesves	94.85	325	*d*P	P	05 22 26.5	+0.1
BMRD	Maredsous	95.07	325	*d*P	P	05 22 27.3	-0.1
DOU	Dourbes	95.27	324	*d*P	P	05 22 28.6	+0.2
ICESG	Greenland Ices	96.06	353	*i* P	P	05 22 30.9	-1.2
H04D	Lebanon	98.35	40	Pdiff	Pdif	05 22 43.1	+0.7
	baz=299						
SYO	Syowa Base	99.65	201	⇑*i*pPdiff	pP	05 23 26.4	+4.3
SYO	Syowa Base	99.65	201	⇑*i*PP	PP	05 26 54.0	+0.7
L04D	Klamath Falls	99.73	42	Pdiff	Pdif	05 22 49.4	+0.5
	baz=299						
NEW	Newport	99.74	35	P	Pdif	05 22 48.8	+0.1
	comp=Z,2.4nm,0.7s,baz=323,slow=5.9,SNR=6.3						
NEW	Newport	99.74	35	Pdiff	Pdif	05 22 49.1	+0.5
	baz=304						
J05D	Fort Rock, OR	99.90	41	Pdiff	Pdif	05 22 50.5	+0.9
	baz=300						
HLID	Hailey	103.95	38	Pdiff	Pdif	05 23 08.6	+1.0
	baz=305						
NVAR	Mina Array Bea	104.27	44	Pdiff	Pdif	05 23 09.9	+0.7
	comp=Z,0.6nm,0.7s,baz=278,slow=5.0,SNR=5.9						
NVAR				PP	PP	05 27 29.8	+1.2
	comp=Z,0.3nm,0.6s,baz=289,slow=8.5,SNR=5.4						
ESDC	Sonseca Array	105.88	319	PP	PP	05 27 41.5	+1.3
	comp=Z,3.1nm,1.1s,baz=47,slow=7.1,SNR=7.3						
PDAR	Pinedale Array	107.28	36	PP	PP	05 27 54.8	+4.4
	comp=Z,0.3nm,0.4s,baz=268,slow=4.2,SNR=4.5						
O20A	White River Ci	109.70	38	PKiKP	PKiKP	05 27 35.6	+0.2
	baz=309						
ECSD	EROS Data Cent	113.36	29	PKiKP	PKiKP	05 27 41.1	-0.8
	baz=320						
TORD	Torodi Ar. Bea	113.79	291	PKiKP	PKiKP	05 27 44.0	+0.6
	comp=Z,1.0nm,0.7s,baz=105,slow=1.7,SNR=4.0						
TORD				PP	PP	05 28 34.1	-4.0
	comp=Z,1.8nm,0.8s,baz=48,slow=8.8,SNR=5.5						
TORD				PKKPab	PKKPab	05 38 34.4	+0.2
	comp=Z,2.1nm,1.0s,baz=261,slow=4.0,SNR=5.0						
ANMO	Albuquerque	114.06	41	P	PKiKP	05 27 44.7	+1.0
	baz=309						
VNA2	Neumayer--Watz	114.94	197	PKiKP	PKiKP	05 27 44.0	-0.1
	baz=115,slow=2.6						
VNA2	Neumayer--Watz	114.94	197	SKPdf	SKPdf	05 31 04.7	-2.3
MNTX	Cornudas Mount	116.79	43	P	PKiKP	05 27 49.0	+0.2
	baz=309						
WMOK	Wichita Mounta	118.88	37	P	PKPdf	05 27 51.9	-1.0
	baz=315						
TX31	Lajitas Ar. Si	119.41	44	PKPdf	PKPdf	05 27 53.1	-0.9
TX32	Lajitas Array	119.41	44	PKPdf	PKPdf	05 27 53.1	-1.0
TXAR	Lajitas Array	119.42	44	PKP	PKPdf	05 27 53.5	-0.6
	comp=Z,2.6nm,0.8s,baz=223,slow=0.4,SNR=28						
TXAR	Lajitas Array	119.42	44		PKPdf	05 27 53.4	-0.7
S39A	Bolivar	119.62	31	PKPdf	PKPdf	05 27 53.7	-0.5
R40A	Maddies Statio	119.66	29		PKPdf	05 27 53.8	-0.3
U40A	Yellville	120.89	31	P	PKPdf	05 27 55.7	-1.0
	baz=322						
JCT	Junction City	121.21	41	PKIKP	PKiKP	05 27 57.6	0.0
JCT	Junction City	121.21	41	P	PKPdf	05 27 57.3	-0.2
	baz=313						
JCT	Junction City	121.21	41	PKPdf	PKiKP	05 27 57.6	0.0
T42A	Van Buren	121.22	29		PKPdf	05 27 57.1	-0.1
WHTX	Lake Whitney,	121.61	38	P	PKPdf	05 27 58.1	0.0
	baz=316						
M54A	Oil Creek Stat	121.80	18	P	PKPdf	05 27 57.0	-1.3
	baz=337						
ACSO	Alum Creek Sta	121.88	21	P	PKPdf	05 27 57.4	-1.0
	baz=333						
MIAR	Mount Ida	121.92	33	P	PKPdf	05 27 58.2	-0.4
	baz=320						
DBIC	Dimbokro	122.14	287	PKP	PKPdf	05 27 59.0	-0.6
	comp=Z,3.6nm,0.9s,baz=56,slow=2.5,SNR=3.6						
DBIC	Dimbokro	122.14	287	PKIKP	PKPdf	05 27 59.0	-0.6
WCI	Wyandotte Cave	122.36	25	P	PKPdf	05 27 59.4	0.0
	baz=329						
P52A	Corning	122.70	21	P	PKPdf	05 27 59.3	-0.7
	baz=334						
WVT	Waverly	123.47	28	PKIKP	PKPdf	05 28 01.4	-0.2
WVT	Waverly	123.47	28	P	PKPdf	05 28 01.0	-0.6
	baz=326						
WVT	Waverly	123.47	28	PKPdf	PKPdf	05 28 01.4	-0.2
S51A	Beattyville	123.94	23		PKPdf	05 28 02.3	-0.2
HKT	Hockley	124.04	38	PKIKP	PKPdf	05 28 02.8	+0.1
HKT	Hockley	124.04	38	PKPdf	PKPdf	05 28 02.8	+0.1
OXF	Oxford	124.06	30	P	PKPdf	05 28 02.0	-0.7
	baz=324						
Q56A	Snyder Ridge,	124.20	19	P	PKPdf	05 28 02.4	-0.6
	baz=337						
R54A	Victor	124.40	21	P	PKPdf	05 28 02.6	-0.8
	baz=334						
S54A	Dingess, Beckl	124.63	21	P	PKPdf	05 28 03.5	-0.3
	baz=334						
R56A	Bull Pasture M	124.72	19	P	PKPdf	05 28 03.6	-0.4
	baz=336						
Q58A	Fox Den Farm,	124.75	17	P	PKPdf	05 28 03.7	-0.2
	baz=338						
TZTN	Tazewell	124.92	24	P	PKPdf	05 28 04.0	-0.3
	baz=331						
R57A	Stanardsville	125.09	18	P	PKPdf	05 28 04.6	0.0
	baz=337						
CBN	Corbin Frederi	125.52	17	P	PKPdf	05 28 05.5	+0.1
	baz=338						
R58B	Mineral	125.59	18	P	PKPdf	05 28 05.3	-0.3
	baz=338						
T56A	Rocky Mt	125.76	20	P	PKPdf	05 28 04.8	-1.1
	baz=335						
S58A	Poland Farm, P	125.87	18	P	PKPdf	05 28 06.0	-0.1
	baz=338						
LRAL	Lakeview Retre	126.42	29	P	PKPdf	05 28 06.6	-0.7
	baz=326						
T59A	Double "B" Far	126.61	18	P	PKPdf	05 28 07.2	-0.3
	baz=338						
U58A	Oxford	126.83	19	P	PKPdf	05 28 07.2	-0.8
	baz=337						
V57A	Coltrane Farms	126.88	21	P	PKPdf	05 28 07.2	-0.9
	baz=335						
KMSC	Kings Mountain	127.00	23	P	PKPdf	05 28 08.2	-0.1
	baz=333						
JTS	Las Juntas de	145.09	48	PKIKP	PKPbc	05 28 41.8	-0.2
JTS	Las Juntas de	145.09	48		PKPbc	05 28 41.8	-0.2
DR12	Loma Pena Alta	146.08	17	PKPab	PKPab	05 28 45.5	-0.2
MPR	Mayaguez	147.21	14		PKPbc	05 28 48.0	-0.1
CBYP	Canovanas	147.42	11		PKPbc	05 28 48.5	-0.3
HUMP	Col San Antoni	147.55	11		PKPbc	05 28 49.2	+0.2
PDPR	Patillas Dam,	147.64	12		PKPbc	05 28 49.3	0.0
FDF	Fort de France	151.52	4	PKIKP	PKiKP	05 28 59.4	0.0
FDF	Fort de France	151.52	4		PKiKP	05 28 59.4	0.0
PLCA	Paso Flores	151.53	162	PKPbc	PKiKP	05 28 59.0	+0.2
	comp=Z,7.6nm,0.8s,baz=197,slow=2.9,SNR=24						
SDV	Santo Domingo	154.79	27		PKiKP	05 29 06.4	0.0
NBPA	Parau_RN	156.61	288	*e*P	PKPdf	05 29 03.3	+3.4
BDFB	Brasilia	168.84	260	PKPab	PKPab	05 30 23.3	0.0
	comp=Z,9.1nm,1.1s,baz=82,slow=4.0,SNR=7.6						
SAML	Samuel	173.86	37	PKP2	PKPab	05 30 45.3	+0.2
SAML	Samuel	173.86	37		PKPab	05 30 45.3	+0.2

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*IDC **17** 05:15:45.4±1.0, 13°.91N×120°.84E, h130km±4km, mb3.6/13, mb1 3.7/13, mb1mx3.4/68, mbtmp4.0/13, Error ellipse: s-maj=30.8km s-min=21.6km az=50.0*

*MAN **17** 05:15:45.5, 13°.92N×120°.44E, h113km, MS2.8*

ISC 17 05:15:45.6±0.7**, 13°.92N**±0°.05×**120°.46E**±0°.07**, h127**km±6km**, n23,** σ1^{s}**80**/32**, mb3.9**/13**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.28	229	*e*P	Pn	05 16 02.9	-0.5
LUBP				*e*S	Sn	05 16 15.4	-1.3
TGY	Tagaytay City	0.50	68	P	Pn	05 16 04.8	+0.3
	281nm,0.3s,baz=151,slow=5.8,SNR=7.4						
TGY				S	Sn	05 16 18.3	-0.4
	165nm,0.3s,baz=147,slow=20,SNR=12						
TGY	Tagaytay City	0.50	68	⇑*e*P	Pn	05 16 05.2	+0.7
TGY				*i* S	Sn	05 16 19.3	+0.6
PGP	Puerto Galera	0.63	131	⇑*e*P	Pn	05 16 05.7	+0.4
PGP				*e*S	Sn	05 16 19.3	-0.8
LQP	Lukban	1.06	79	⇓*e*P	Pn	05 16 09.5	+0.4
LQP				*e*S	Sn	05 16 26.1	-0.8
SJMP	San Jose	1.58	156	*e*P	Pn	05 16 14.4	-0.2
BUSP	Coron	1.92	188	*e*P	Pn	05 16 18.9	+0.4
BUSP				*e*S	Sn	05 16 43.0	-0.7
OTRP	Odiongan	2.17	135	*e*P	Pn	05 16 21.2	-0.3
OTRP				*e*S	Sn	05 16 48.2	-0.9
SMPP	San Manuel, Pa	2.23	5	*e*P	Pn	05 16 21.0	-1.4
SMPP				*e*S	Sn	05 16 45.9	-4.6
ENPP	El Nido	2.88	201	*e*P	Pn	05 16 31.4	+0.8
ENPP				*e*S	Sn	05 16 59.9	-5.4
CMAR	Chiang Mai Arr	21.15	285	P	P	05 20 24.9	+4.2
	3.4nm,0.9s,baz=97,slow=7.3,SNR=8.8						
SONM	Songino Array	35.78	344	P	P	05 22 33.9	+1.3
	1.4nm,0.6s,baz=165,slow=9.2,SNR=3.7						
WRA	Warramunga Arr	36.31	158	P	P	05 22 35.4	-1.8
	1.9nm,0.9s,baz=335,slow=9.6,SNR=1.5						
MKAR	Makanchi Array	45.72	324	P	P	05 23 55.7	+1.7
	0.9nm,0.5s,baz=106,slow=9.2,SNR=3.5						
ZALV	Zalesovo Beam	48.76	333	P	P	05 24 18.0	+0.6
	1.2nm,0.7s,baz=125,slow=9.0,SNR=2.6						
KURBB	Kurchatov Arra	49.88	326	P	P	05 24 27.4	+1.4
	3.4nm,0.8s,baz=124,slow=7.6,SNR=14						
BVAR	Borovoye Array	55.46	326	P	P	05 25 07.8	+0.8
	0.8nm,0.6s,baz=83,slow=6.1,SNR=5.0						
AKTO	Aktyubinsk	61.90	320	P	P	05 25 51.8	+0.2
	0.7nm,0.4s,baz=89,slow=12,SNR=4.2						
ARU	Arti	63.08	327	P	P	05 25 59.2	-0.1
	0.8nm,0.5s,baz=114,slow=4.5,SNR=3.4						
ILAR	Eielson Array	78.66	26	P	P	05 27 31.8	-1.6
	0.5nm,0.9s,baz=284,slow=3.6,SNR=4.5						
ARCES	ARCESS Array B	78.80	339	P	P	05 27 34.0	0.0
	6.9nm,1.1s,baz=78,slow=8.4,SNR=1.9						
BRTR	Keskin Array B	78.83	308	P	P	05 27 34.4	-0.6
	0.4nm,0.8s,baz=111,slow=3.2,SNR=3.0						
INK	Inuvik	82.98	21	P	P	05 27 55.8	-0.4
	1.2nm,0.7s,baz=280,slow=5.8,SNR=3.8						

TRN 17 05:18:49.4, 16°.65N×60°.81W, h23km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABD	La Joyeuse, An	0.68	256	*e*P	Pn	05 19 04.8	+1.3
ABD				*e*S	Sn	05 19 16.4	+3.1
MAGL	Barre de l'ile	0.83	214	*e*P	Pn	05 19 06.2	+0.6
MAGL				*e*S	Sn	05 19 20.3	+3.1
CBE	Ff, Capester	0.96	234	*e*P	Pn	05 19 08.7	+1.3
CBE				*e*S	Sn	05 19 24.1	+3.8
ANBD	Bethesda, Anti	1.00	294	*e*P	Pb	05 19 08.8	+0.7
ANBD				*e*S	Sn	05 19 24.3	+2.9
TDBA	Terre de Bas,	1.12	225	*e*P	Pb	05 19 12.2	+2.1
TDBA				*e*S	Sn	05 19 26.9	+2.5
TBG	Guadaloupe-3	1.13	226	*e*P	Pb	05 19 11.3	+1.1
TBG				*e*S	Sn	05 19 27.4	+2.9
MLYT	Lee's Yard	1.33	273	*e*P	Pb	05 19 15.3	+1.7
DSLB	Salisbury	1.34	206	*e*P	Pb	05 19 14.0	+0.2
DSLB				*e*S	Sb	05 19 31.7	+1.2
DLPL	La Plaine	1.37	198	*e*	Pb	05 19 23.3	+8.9
DLPL	La Plaine	1.37	198	*e*	Pb	05 19 23.9	+9.5
CXM	Morne La Croix	1.86	191	*e*P	Pb	05 19 21.9	-0.8
PCM	Pelee Case Pet	1.86	192	*e*P	Pb	05 19 21.6	-1.1
ILAM	Ilet Lapin Mar	1.86	182	*e*	Pn	05 19 18.8	-1.0
GBMF	Grand Be	1.87	191	*e*P	Pn	05 19 21.4	+1.4
FDF	Fort de France	1.93	190	*e*P	Pb	05 19 22.8	-1.1
FDF				*e*S	Sb	05 19 46.3	-1.3
SKI	Saint Kitts	1.97	291	*e*P	Pn	05 19 22.9	+1.5
LPMF	Morne Lapointe	2.06	184	*e*P	Pn	05 19 23.6	+0.9
ZAM	Aeronautique	2.07	186	*e*P	Pn	05 19 23.9	+1.2
MVM	Montagne Vaucl	2.08	182	*e*P	Pb	05 19 25.0	-1.4
BIM	Bigot	2.13	187	*e*P	Pn	05 19 25.2	+1.7
BIM	Bigot	2.13	187	*e*	Pb	05 19 30.4	+3.0
BIM				*e*S	Sb	05 19 51.9	-1.5
MPOM	Morne Pois Mar	2.19	181	*e*P	Pb	05 19 26.4	-1.9
MPOM				*e*S	Sb	05 19 53.6	-1.3
SLBI	Saint Lucia, B	2.61	184	*e*P	Pn	05 19 32.2	+2.1
SLBI				*e*S	Sn	05 20 04.0	+2.9

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*IDC **17** 05:25:04.5±2.5, 36°.47N×71°.32E, h171km±22km, mb3.5/14, mb1 3.6/21, mb1mx3.3/59, mbtmp4.1/21, MS2.7/1, Ms1 2.7/1, ms1mx2.4/28, Error ellipse: s-maj=17.0km s-min=14.0km az=6.0*

*NNC **17** 05:25:06.8±3.9, 37°.24N×70°.67E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=37.1km s-min=17.6km az=153.0*

*MOS **17** 05:25:06.6±0.9, 36°.72N×71°.38E, h198km, mb4.1/8, Error ellipse: s-maj=13.9km s-min=6.4km az=84.2*

ISC 17 05:25:06.6±0.5**, 36°.66N**±0°.05×**71°.28E**±0°.05**, h200**km**, n84,** σ2^{s}**43**/101**, mb3.8**/16**, 9C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.88	169	⇓P	Pn	05 25 55.8	+0.8
THW	Thamme Wali	3.87	174	P	Pn	05 26 07.8	+0.9
SARP	Sargodha	4.86	166	P	Pn	05 26 19.4	+0.1
IUG	Iuzhnay	5.57	350	*e*P	Pn	05 26 28.0	-0.3
	20nm,0.7s,baz=349						
IUG				*e*S	Sn	05 27 27.3	-5.6
	baz=349						
IUG	Iuzhnay	5.57	350	*e*PN	Pn	05 26 27.9	-0.3
IUG				pmax	pmax		
	comp=Z,20nm,0.7s						
THN	Thein Dam	5.58	138	*e*P	Pn	05 26 31.0	+2.5
THN				*e*S	Sn	05 27 32.0	-1.1
AML	Almayashu	5.78	18	P	Pn	05 26 30.8	-0.5
	SNR=275						
DHRM	DHARAMSHALA	6.04	135	*e*P	Pn	05 26 35.1	+0.5
DHRM				*e*S	Sn	05 27 41.1	-3.1
DHRM				IAML		05 27 42.7	
	comp=E,697nm,0.4s						
DHRM				IAML		05 27 43.2	
	comp=N,953nm,0.1s						
UCH	Uchtor	6.10	23	P	Pn	05 26 35.1	-0.4
	SNR=38						
EKS2	Erkin-Say	6.30	17	P	Pn	05 26 37.5	-0.2
	SNR=41						
KK31	Karatay Array	6.46	355	⇑P	Pn	05 26 37.8	-1.9
	comp=N,19nm,0.3s,baz=177,slow=12,SNR=183						
KK31				⇑S	Sn	05 27 45.8	-7.8
	comp=N,80nm,0.5s,baz=184,slow=23,SNR=25						
AAK	Ala-Archa	6.47	22	P	Pn	05 26 39.9	0.0
	comp=N,15nm,0.3s,baz=181,slow=5.8,SNR=139						
AAK				S	Sn	05 27 49.9	-4.1
	comp=N,3.9nm,0.3s,baz=214,slow=11,SNR=4.9						
AAK				LR	LR	05 29 12.6	
	comp=N,64nm,22.0s,baz=319,slow=37						
AAK	Ala-Archa	6.47	22	P	Pn	05 26 40.0	0.0
	SNR=57						
AAK	Ala-Archa	6.47	22	⇓P	Pn	05 26 39.8	-0.2
	comp=N,21nm,0.3s						
AAK				⇑S	Sn	05 27 49.9	-4.1
	comp=N,78nm,0.6s						
KBK	Karagaybulak	6.63	24	P	Pn	05 26 42.7	+0.7
	SNR=14						
BHK	Bhakra	6.75	139	*e*S	Sn	05 27 56.0	-4.5
ULHL	Ulahol	6.77	33	P	Pn	05 26 45.6	+1.7
	SNR=14						
CHMS	Chumysh	6.87	22	P	Pn	05 26 44.8	-0.3
	SNR=21						
USP	Ospenovka	7.05	20	P	Pn	05 26 46.6	-0.8
	SNR=33						
TKM2	Tokmak 2	7.08	27	P	Pn	05 26 48.0	0.0
	SNR=13						
TKM2	Tokmak 2	7.08	27	⇑P	Pn	05 26 48.0	0.0
	comp=N,17nm,0.5s						
TKM2				⇓S	Sn	05 28 05.4	-3.2
	comp=N,70nm,0.7s						
TKM2	Tokmak 2	7.08	27	*i* PN	Pn	05 26 48.1	+0.1
TKM2				pmax	pmax		
	comp=Z,17nm,0.5s						
SMLA	Simla	7.37	137	*e*P	Pn	05 26 51.5	-0.2
SMLA				*e*S	Sn	05 28 08.7	-6.5
SMLA				IAML		05 28 13.3	
	comp=N,276nm,0.5s						
SMLA				IAML		05 28 13.6	
	comp=E,328nm,0.3s						
MTBS	Maitube	7.58	30	*e*P	Pn	05 26 54.0	-0.3
	baz=32						
MTBS	Maitube	7.58	30	*e*PN	Pn	05 26 54.0	-0.3
AAA	Alma-Ata	7.84	32	*e*P	Pn	05 26 58.6	+0.8
	comp=E,11nm,0.5s,baz=34						
AAA				*e*S	Sn	05 28 22.4	-3.9
	baz=34						
AAA	Alma-Ata	7.84	32	*e*PN	Pn	05 26 58.5	+0.8
AAA				pmax	pmax		
	comp=Z,11nm,0.5s						
MDOK	Medeo	7.87	33	*e*P	Pn	05 26 58.6	+0.4
	baz=35						
MDOK	Medeo	7.87	33	*e*PN	Pn	05 26 58.5	+0.4
DDI	Dehra Dun	8.48	136	*e*P	Pn	05 27 06.6	+0.5
DDI				*e*S	Sn	05 28 36.9	-4.6
DDI				IAML		05 28 38.6	
	comp=N,288nm,0.4s						
BTLS	Baital	8.63	13	*e*P	Pn	05 27 07.0	-0.9
	baz=14						
BTLS	Baital	8.63	13	*e*PN	Pn	05 27 07.0	-0.9
NDI	New Delhi	9.39	146	*e*P	Pn	05 27 16.0	-2.0
NDI				*e*S	Sn	05 28 55.0	-8.2
GEYT	Alibeck	10.56	281	P	Pn	05 27 31.5	-1.6
	comp=N,2.6nm,0.3s,baz=128,slow=8.3,SNR=23						
GEYT				S	Sn	05 29 25.1	-5.8
	comp=N,3.6nm,0.3s,baz=332,slow=31,SNR=6.7						
GYA0B	ALIBECK ARRAY	10.56	281	⇓P	Pn	05 27 31.3	-1.7
GYA0B				⇑S	Sn	05 29 25.9	-5.0
MK31	Makanchi Array	13.03	36	*i* P	Pn	05 28 05.0	+0.7
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	13.03	36	P	Pn	05 28 05.3	+1.0
	comp=Z,0.4nm,0.3s,baz=210,slow=9.3,SNR=13						
PYUN	Piuthan	13.06	127	*e*P	Pn	05 28 03.6	-1.4
	comp=Z,78nm,0.3s						

DANN	**Dangsing**	**13.39**	**125**	*e*P	**Pn**	**05 28 08.4**	**-0.9**
	comp=Z,77nm,0.4s						
KOLN	**Koldanda**	**13.68**	**127**	*e*P	**Pn**	**05 28 12.1**	**-0.6**
	comp=Z,29nm,0.3s						
GKN	**Gorkha**	**14.20**	**124**	*e*P	**Pn**	**05 28 19.4**	**+0.2**
	comp=Z,53nm,0.3s						
KKN	**Kakani**	**14.77**	**123**	*e*P	**P**	**05 28 27.2**	**0.0**
	comp=Z,71nm,0.4s						
DMN	**Daman**	**14.77**	**124**	*e*P	**Pn**	**05 28 25.8**	**-0.5**
	comp=Z,41nm,0.2s						
KURBB	**Kurchatov Arra**	**14.90**	**18**	P	**P**	**05 28 28.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=4.5						
PKIN	**Phulchoki**	**14.99**	**123**	*e*P	**P**	**05 28 30.0**	**+0.3**
	comp=Z,88nm,0.4s						
PKI	**Pulchoki**	**15.00**	**123**	*e*P	**Pn**	**05 28 29.3**	**+0.1**
	comp=Z,66nm,0.4s						
KURK	**Kurchatov**	**15.01**	**18**	*i* P	**Pn**	**05 28 27.4**	**-1.3**
AB31	**Akbulak array**	**15.05**	**330**	⇑P	**Pn**	**05 28 28.4**	**-0.8**
	comp=Z,5.9nm,0.5s						
AB31				⇑S	**S**	**05 31 09.7**	**-6.6**
	comp=Z,15nm,0.7s,baz=144,slow=24,SNR=22						
GUN	**Gumba**	**15.11**	**121**	*e*P	**Pn**	**05 28 30.3**	**-0.2**
	comp=Z,30nm,0.3s						
SEM	**Semipalatinsk**	**15.19**	**22**	*e*P	**Pn**	**05 28 30.8**	**-0.3**
	baz=23						
SEM	**Semipalatinsk**	**15.19**	**22**	*e*P	**Pn**	**05 28 30.8**	**-0.3**
RAMN	**Ramite**	**16.21**	**122**	*e*P	**Pn**	**05 28 43.8**	**+0.1**
	comp=Z,36nm,0.2s						
BVAR	**Borovoye Array**	**16.38**	**358**	P	**Pn**	**05 28 46.1**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=140,slow=7.2,SNR=11						
BRVK	**Borovoye**	**16.41**	**358**	⇓P	**Pn**	**05 28 49.3**	**+3.7**
	comp=Z,7.9nm,1.0s						
BRVK	**Borovoye**	**16.41**	**358**	*i* P	**P**	**05 28 43.9**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TAPN	**Taplejung**	**16.73**	**119**	*e*P	**Pn**	**05 28 50.9**	**+1.0**
	comp=Z,47nm,0.4s						
AKTO	**Aktyubinsk**	**16.76**	**329**	P	**Pn**	**05 28 50.8**	**+1.1**
	comp=Z,9.5nm,0.3s,baz=139,slow=8.8,SNR=192						
AKTO				S	**S**	**05 31 51.5**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=180,slow=23,SNR=6.5						
AKTO	**Aktyubinsk**	**16.76**	**329**	⇑P	**Pn**	**05 28 50.6**	**+0.9**
	comp=Z,20nm,0.4s						
AKTO				⇑S	**S**	**05 31 51.6**	**-1.6**
	comp=Z,16nm,1.1s						
WSAR	**Wadi Sarin**	**17.27**	**223**	P	**P**	**05 28 53.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=176,slow=22,SNR=7.9						
DGZ	**Jazzator, Alta**	**17.52**	**37**	*i* P	**P**	**05 28 57.4**	**+0.3**
ZALV	**Zalesovo Beam**	**19.68**	**24**	P	**P**	**05 29 21.1**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=223,slow=11,SNR=10						
GNI	**Garni**	**21.06**	**288**	*i* P	**P**	**05 29 40.1**	**+4.8**
GNI				pmax	pmax		
	comp=Z,12nm,1.0s						
ARU	**Arti**	**21.56**	**341**	P	**P**	**05 29 41.8**	**+1.8**
	comp=Z,1.6nm,0.5s,baz=159,slow=8.4,SNR=6.1						
ARU	**Arti**	**21.56**	**341**	*d* *i*P	**P**	**05 29 41.4**	**+1.4**
ARU				S	**S**	**05 33 24.2**	**-1.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NCK	**Nalchik**	**22.19**	**296**	*i* P	**P**	**05 29 47.6**	**+1.1**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBZ	**Khabaz**	**22.73**	**297**	P	**P**	**05 29 53.0**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=131,slow=6.8,SNR=6.9						
BELG	**Belogornoye**	**22.91**	**321**	P	**P**	**05 29 55.1**	**+2.3**
	comp=Z,16nm,0.6s,baz=298,slow=0.9,SNR=8.8						
BELG	**Belogornoye**	**22.91**	**321**	*i* P	**P**	**05 29 53.9**	**+1.1**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	**29.60**	**288**	P	**P**	**05 30 56.2**	**+3.1**
	comp=Z,0.2nm,0.4s,baz=101,slow=8.9,SNR=1.9						
OBN	**Obninsk**	**29.96**	**319**	*e*P	**P**	**05 30 57.2**	**+1.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	**Malin Array Be**	**33.02**	**309**	P	**P**	**05 31 24.8**	**+2.1**
	comp=Z,1.2nm,0.5s,baz=80,slow=7.0,SNR=5.4						
AKASG	**Malin Array Be**	**33.02**	**309**	*i* P	**P**	**05 31 24.7**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	**FINESS Array B**	**37.48**	**326**	P	**P**	**05 32 02.8**	**+2.3**
	comp=Z,2.0nm,0.4s,baz=122,slow=9.5,SNR=25						
FINES	**FINESS Array B**	**37.48**	**326**	*i* P	**P**	**05 32 02.7**	**+2.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	**ARCESS Array B**	**41.08**	**337**	P	**P**	**05 32 32.7**	**+2.4**
	comp=Z,4.0nm,0.7s,baz=115,slow=8.9,SNR=22						
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**05 32 58.5**	**+1.6**
	comp=Z,1.3nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**05 32 57.0**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=52,slow=8.8,SNR=9.6						
ESDC	**Sonseca Array**	**57.58**	**298**	P	**P**	**05 34 37.3**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=56,slow=8.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**65.94**	**269**	P	**P**	**05 35 31.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=47,slow=5.8,SNR=9.4						
INK	**Inuvik**	**73.71**	**9**	P	**P**	**05 36 20.7**	**+2.8**
	comp=Z,0.5nm,0.5s,baz=0.0,slow=6.1,SNR=2.0						
YKA	**Yellowknife Ar**	**81.08**	**3**	P	**P**	**05 37 00.7**	**+1.8**
	comp=Z,1.1nm,0.7s,baz=355,slow=5.2,SNR=24						
YKA	**Yellowknife Ar**	**81.08**	**3**	*i* P	**P**	**05 37 01.1**	**+2.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**05 37 04.2**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=324,slow=4.8,SNR=8.6						
ASAR	**Alice Springs**	**84.16**	**125**	P	**P**	**05 37 16.1**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=312,slow=5.0,SNR=13						

IDC 17 05:57:59.2±14.0**, 53°.65N**×**159°.30E, h0**^{km}**, Error ellipse: s-maj=102.1km s-min=24.0km az=61.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	**PETROPAVLOVSK-**	**1.09**	**241**	*i*		06 03 30.0	
	baz=59,slow=331,SNR=34						
PETK	**Petropavlovsk-**	**1.10**	**241**	Pg	Pg	05 58 20.5	+0.2
	0.5nm,0.3s,baz=71,slow=18,SNR=12						
I53US	**FAIRBANKS INFR**	**28.34**	**46**	*i*		08 49 20.0	
	baz=269,slow=328,SNR=2.7						

IDC ***17*** *06:33:40.9±1.1, 36°.70N×98°.36W, h0^{km}, mb2.9/1, mb1 3.6/6, mb1mx3.4/48, mbtmp3.3/6, ML3.2/5, Error ellipse: s-maj=15.0km s-min=11.0km az=111.0*

NEIC ***17*** *06:33:41.9±1.4, 36°.58N±0°.01×98°.18W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.4km s-min=1.7km az=75.0*

TUL ***17*** *06:33:41.4±1.2, 36°.60N±0°.01×98°.22W±0°.02, h5^{km}±7^{km}, ML3.4, mb_Lg3.4/109(NEIC), Error ellipse: s-maj=2.7km s-min=1.9km az=100.0*

ANF ***17*** *06:33:42.3±1.2, 36°.56N×98°.17W, h5^{km}±8^{km}, ML4.2/13, Error ellipse: s-maj=3.9km s-min=3.6km az=16.0*

ISC 17 06:33:41.9±1.0**, 36°.59N**±0°.02×**98°.18W**±0°.03**, h5**^{km}±9^{km}**, n94, σ1**^{s}**21**/71**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.18**	**118**		**Pg**	**06 33 46.2**	**+0.7**
CROK				Sg	**Sg**	**06 33 49.4**	**+1.4**
KAN14	**Manchester OK**	**0.41**	**26**	Pg	**Pg**	**06 33 49.7**	**0.0**
KAN14				Sg	**Sg**	**06 33 55.6**	**+0.5**
KAN10	**Anthony SW Sta**	**0.54**	**8**	Pg	**Pg**	**06 33 51.9**	**-0.3**
KAN10				Sg	**Sg**	**06 33 59.5**	**+0.3**
KAN01	**Argonia South**	**0.66**	**31**		**Pg**	**06 33 54.3**	**-0.2**
KAN01				Sg	**Sg**	**06 34 03.0**	**0.0**
KAN08	**Anthony NE Sta**	**0.66**	**15**	Pg	**Pg**	**06 33 54.1**	**-0.4**
KAN08				Sg	**Sg**	**06 34 02.9**	**-0.2**
U32A	**Winter Ranch,**	**0.69**	**252**	Pg	**Pg**	**06 33 54.3**	**-0.9**
U32A				Sg	**Sg**	**06 34 03.8**	**-0.4**
U32A	**Winter Ranch,**	**0.69**	**252**	P		06 33 54.3	
	baz=70						
U32A				S		06 34 03.9	
	baz=70						
KAN13	**South Haven SW**	**0.71**	**53**		**Pg**	**06 33 55.3**	**-0.1**
KAN13				Sg	**Sg**	**06 34 04.6**	**0.0**
KAN12	**Harper NE Stat**	**0.72**	**12**	Pg	**Pg**	**06 33 55.3**	**-0.4**
KAN12				Sg	**Sg**	**06 34 05.3**	**+0.2**
OK029	**Liberty Lake**	**0.99**	**143**		**Pg**	**06 34 00.4**	**-0.4**
OK029				Sg	**Sg**	**06 34 14.3**	**+0.7**
BCOK	**Bluff Creek, N**	**1.04**	**153**		**Pg**	**06 34 01.4**	**-0.5**
BCOK				Sg	**Sg**	**06 34 15.8**	**+0.4**
OK025	**Westminster Rd**	**1.22**	**146**		**Pg**	**06 34 04.5**	**-0.8**
OK025				Sg	**Sb**	**06 34 21.7**	**+0.3**
OK031	**S. Brethren Rd**	**1.26**	**120**		**Pg**	**06 34 05.4**	**-0.6**
QUOK	**Quay**	**1.26**	**109**		**Pg**	**06 34 05.5**	**-0.5**
OK030	**Cody Creek RV**	**1.31**	**120**		**Pn**	**06 34 06.2**	**-0.6**
OKCFA	**Oklahoma City**	**1.31**	**153**		**Pn**	**06 34 05.8**	**-1.0**
OKCSW	**OKLAHOMA CITY**	**1.33**	**153**		**Pn**	**06 34 06.2**	**-0.9**
T35A	**Sooner Cattle**	**1.38**	**76**		**Pn**	**06 34 07.5**	**-0.3**
T35B	**Sooner Cattle**	**1.38**	**76**	P		06 34 07.6	
	baz=258,SNR=297						
T35B				S		06 34 26.0	
	baz=258						
FNO	**Franklin**	**1.48**	**154**		**Pn**	**06 34 08.7**	**-0.4**
W35A	**Tecumseh**	**1.79**	**143**		**Pn**	**06 34 13.6**	**+0.3**
R32A	**Long Quarter,**	**1.88**	**347**		**Pn**	**06 34 14.9**	**+0.3**
R32A				IAmb_Lg		06 34 41.1	
	comp=Z,162nm,0.8s						
R32A	**Long Quarter,**	**1.88**	**347**	P		06 34 14.4	
	baz=168						
R32A				S		06 34 40.1	
	baz=168						
WMOK	**Wichita Mounta**	**1.91**	**195**	P	**Pn**	**06 34 15.3**	**+0.2**
	baz=14						
WMOK				S	**Sb**	**06 34 41.2**	**-0.2**
	baz=14						
WMOK	**Wichita Mounta**	**1.91**	**195**	Pn	**Pn**	**06 34 15.2**	**+0.1**
WMOK	**Wichita Mounta**	**1.91**	**195**	P		06 34 14.9	
	baz=14,SNR=259						
WMOK				S		06 34 41.2	
	baz=14						
TUL1	**Leonard**	**2.05**	**109**	P	**Pn**	**06 34 17.5**	**+0.5**
	baz=290						
TUL1				S	**Sb**	**06 34 44.6**	**-0.7**
	baz=290						
TUL1	**Leonard**	**2.05**	**109**		**Pn**	**06 34 18.2**	**+1.2**
TUL1	**Leonard**	**2.05**	**109**	P		06 34 17.2	
	baz=290,SNR=125						
CBKS	**Cedar Bluff**	**2.54**	**331**	P	**Pn**	**06 34 25.2**	**+1.4**
	baz=151						
CBKS				S	**Sb**	**06 34 58.4**	**-1.0**
	baz=151						
CBKS	**Cedar Bluff**	**2.54**	**331**	Pn	**Pn**	**06 34 25.1**	**+1.4**
CBKS	**Cedar Bluff**	**2.54**	**331**	P		06 34 24.4	
	baz=151,SNR=63						
KSU1	**Kansas State U**	**2.80**	**26**	P	**Pn**	**06 34 27.9**	**+0.6**
	baz=207						
KSU1	**Kansas State U**	**2.80**	**26**	Pn	**Pn**	**06 34 28.5**	**+1.3**
KSU1				IAmb_Lg		06 35 15.1	
	comp=Z,102nm,0.7s						
KSU1	**Kansas State U**	**2.80**	**26**	P		06 34 27.5	
	baz=207,SNR=25						
X37A	**Clayton**	**3.04**	**130**	Pn	**Pn**	**06 34 30.5**	**-0.1**
X37A				IAmb_Lg		06 35 23.9	
	comp=Z,88nm,0.7s						
X37A	**Clayton**	**3.04**	**130**	P		06 34 30.2	
	baz=312						
U38A	**Gravette**	**3.06**	**92**		**Pn**	**06 34 31.9**	**+1.0**
U38A				IAmb_Lg		06 35 25.0	
	comp=Z,106nm,0.9s						
AMTX	**Amarillo**	**3.32**	**240**	Pb	**Pb**	**06 34 41.6**	**+0.4**
	baz=58						
Z35A	**Perchaven, San**	**3.34**	**167**	P		06 34 34.4	
	baz=347,SNR=6.2						
HHAR	**Hobbs**	**3.44**	**94**	Pn	**Pn**	**06 34 36.5**	**+0.4**
W39A	**Magazine**	**3.83**	**110**		**Pn**	**06 34 41.8**	**+0.3**
W39A				IAmb_Lg		06 35 52.1	
	comp=Z,61nm,0.8s						
W39A	**Magazine**	**3.83**	**110**	P		06 34 41.6	
	baz=293,SNR=20						
S39A	**Bolivar**	**4.04**	**73**	IAmb_Lg		06 35 58.3	
	comp=Z,52nm,0.8s						
S39A	**Bolivar**	**4.04**	**73**	P		06 34 44.5	
	baz=256,SNR=32						
ABTX	**Abilene, Hawle**	**4.14**	**197**	IAmb_Lg		06 35 52.1	
	comp=Z,99nm,1.3s						
N33B	**J Bar K, Exete**	**4.18**	**8**	P		06 34 45.3	
	baz=188						
N33A	**J Bar K, Exete**	**4.18**	**8**	IAmb_Lg		06 36 00.3	
	comp=Z,51nm,0.9s						
Z38A	**Mt. Pleasant**	**4.24**	**141**	Pn	**Pn**	**06 34 47.0**	**0.0**
Z38A				IAmb_Lg		06 36 01.3	
	comp=Z,83nm,0.8s						
Z38A	**Mt. Pleasant**	**4.24**	**141**	P		06 34 47.1	
	baz=322						
KSCO	**Kaye Shedlock’**	**4.27**	**306**	IAmb_Lg		06 36 00.3	
	comp=Z,80nm,0.9s						
MIAR	**Mount Ida**	**4.27**	**117**	P	**Pn**	**06 34 48.2**	**+0.7**
	baz=300						
MIAR	**Mount Ida**	**4.27**	**117**	Pn	**Pn**	**06 34 48.2**	**+0.7**
MIAR				IAmb_Lg		06 36 04.4	
	comp=Z,55nm,0.8s						
MIAR	**Mount Ida**	**4.27**	**117**	P		06 34 47.8	
	baz=300,SNR=53						
U40A	**Yellville**	**4.30**	**92**	P	**Pn**	**06 34 48.5**	**+0.5**
	baz=275						
U40A	**Yellville**	**4.30**	**92**		**Pn**	**06 34 48.7**	**+0.8**
U40A				IAmb_Lg		06 36 06.5	
	comp=Z,66nm,0.8s						
U40A	**Yellville**	**4.30**	**92**	P		06 34 48.4	
	baz=275,SNR=24						
U40A				P		06 34 48.4	
	baz=275,SNR=24						
MSTX	**Muleshoe**	**4.57**	**236**	Pb	**Pb**	**06 35 02.5**	**-0.2**
	baz=53						
WHTX	**Lake Whitney,**	**4.63**	**172**	P	**Pn**	**06 34 52.2**	**-0.1**
	baz=352						
WHTX				S	**Sn**	**06 35 46.8**	**+0.3**
	baz=352						
WHTX	**Lake Whitney,**	**4.63**	**172**		**Pn**	**06 34 52.3**	**-0.1**
WHTX	**Lake Whitney,**	**4.63**	**172**	P		06 34 52.2	
	baz=352,SNR=28						
P38A	**Dawn**	**4.76**	**49**	IAmb_Lg		06 36 16.0	
	comp=Z,63nm,0.9s						
MGMO	**Mountain Grove**	**4.78**	**81**	Pn	**Pn**	**06 34 55.4**	**+1.0**
MGMO				IAmb_Lg		06 36 19.1	
	comp=Z,46nm,0.7s						
BGNE	**Belgrade**	**4.81**	**0**	P	**Pn**	**06 34 54.6**	**-0.3**
	baz=181						
BGNE	**Belgrade**	**4.81**	**0**	Pn	**Pn**	**06 34 54.9**	**-0.1**
BGNE	**Belgrade**	**4.81**	**0**	P		06 34 54.6	
	baz=181						
X40A	**Basin Creek Fa**	**4.84**	**114**	P	**Pn**	**06 34 56.4**	**+1.1**
	baz=297						
X40A	**Basin Creek Fa**	**4.84**	**114**	Pn	**Pn**	**06 34 56.2**	**+0.8**
X40A				IAmb_Lg		06 36 21.6	
	comp=Z,60nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.95**	**96**	IAmb_Lg		06 36 25.3	
	comp=Z,49nm,0.8s						
237A	**Washetta, Mont**	**4.98**	**156**	P		06 34 57.1	
	baz=337,SNR=9.5						
R40A	**Maddies Statio**	**5.00**	**68**	IAmb_Lg		06 36 25.4	
	comp=Z,47nm,0.9s						
T25A	**Trinidad**	**5.02**	**278**	P	**Pn**	**06 34 58.3**	**+0.2**
	baz=94						
T25A				Sb	**Sb**	**06 36 16.3**	**+5.2**
	baz=94						
W41B	**Gary Mavity, V**	**5.02**	**105**	S	**Sn**	**06 35 54.9**	**-1.3**
	baz=288						
W41B	**Gary Mavity, V**	**5.02**	**105**	IAmb_Lg		06 36 25.6	
	comp=Z,89nm,0.7s						
Z41A	**Richland Creek**	**5.53**	**125**	IAmb_Lg		06 36 52.2	
	comp=Z,50nm,0.7s						
P40A	**Paris**	**5.66**	**57**	IAmb_Lg		06 36 44.2	
	comp=Z,74nm,0.8s						
N38A	**Joes South For**	**5.71**	**41**	IAmb_Lg		06 36 47.6	
	comp=Z,76nm,0.7s						
CCM	**Cathedral Cave**	**5.72**	**73**	IAmb_Lg		06 36 47.0	
	comp=Z,57nm,0.8s						
435B	**Jarrell**	**5.81**	**175**	IAmb_Lg		06 36 58.5	
	comp=Z,53nm,0.8s						
CCAR	**Cane Creek**	**5.88**	**115**	IAmb_Lg		06 37 03.4	
	comp=Z,68nm,1.1s						
K31A	**O'Neill**	**6.04**	**356**	IAmb_Lg		06 37 04.7	
	comp=Z,67nm,0.8s						
PBMO	**Poplar Bluff**	**6.23**	**86**	IAmb_Lg		06 37 01.5	
	comp=Z,44nm,0.8s						
X43A	**Marvell**	**6.30**	**107**	IAmb_Lg		06 37 07.3	
	comp=Z,68nm,0.9s						
SLM	**Saint Louis**	**6.63**	**70**	IAmb_Lg		06 37 12.5	
	comp=Z,35nm,0.7s						
143A	**Socs Landing,**	**6.80**	**123**	IAmb_Lg		06 37 34.2	
	comp=Z,44nm,0.8s						
ANMO	**Albuquerque**	**6.92**	**259**	Pn	**Pn**	**06 35 22.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=56,slow=12,SNR=3.7						
ANMO				Pg	**Pb**	**06 35 44.8**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=82,slow=16,SNR=14						
ANMO				Lg	Lg	06 37 16.8	
	comp=Z,1.7nm,0.3s,baz=357,slow=18,SNR=3.7						
S44A	**Carbondale**	**7.22**	**79**	IAmb_Lg		06 37 42.6	
	comp=Z,44nm,0.9s						
SIUC	**Southern Illin**	**7.25**	**78**	IAmb_Lg		06 37 35.0	
	comp=Z,36nm,0.8s						
PHWY	**Pilot Hill**	**7.36**	**312**	IAmb_Lg		06 37 49.1	
	comp=Z,40nm,0.9s						
N23A	**Red Feather La**	**7.43**	**308**	IAmb_Lg		06 37 38.8	
	comp=Z,42nm,0.7s						
W45A	**Hickory Valley**	**7.44**	**98**	IAmb_Lg		06 37 41.9	
	comp=Z,48nm,0.7s						
OXF	**Oxford**	**7.45**	**104**	IAmb_Lg		06 37 41.0	
	comp=Z,56nm,1.1s						
P43A	**Skaggs, Pawnee**	**7.48**	**63**	IAmb_Lg		06 37 46.1	
	comp=Z,51nm,0.8s						
Y45A	**Yeager Farm, C**	**7.58**	**109**	IAmb_Lg		06 38 02.9	
	comp=Z,30nm,0.9s						
L40A	**Anamosa**	**7.68**	**43**	IAmb_Lg		06 37 51.1	
	comp=Z,35nm,0.7s						
I37A	**Lemond, Waseca**	**8.27**	**25**	IAmb_Lg		06 38 22.0	
	comp=Z,34nm,0.8s						
OLIL	**Olney**	**8.28**	**72**	IAmb_Lg		06 38 20.1	
	comp=Z,43nm,1.1s						
833A	**Chaparral WMA,**	**8.31**	**187**	IAmb_Lg		06 38 09.7	
	comp=Z,23nm,0.9s						
O44A	**Mansfield**	**8.42**	**62**	IAmb_Lg		06 38 11.1	
	comp=Z,44nm,0.8s						
USIN	**University of**	**8.50**	**78**	IAmb_Lg		06 38 16.7	
	comp=Z,36nm,1.0s						
TXAR	**Lajitas Array**	**8.58**	**214**	Pn	**Pn**	**06 35 45.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=17						
TXAR				Pg	Pg	06 36 13.5	-13
	comp=Z,0.4nm,0.3s,baz=31,slow=13,SNR=4.1						
TXAR				Lg	Lg	06 38 04.3	
	comp=Z,0.9nm,0.3s,baz=109,slow=33,SNR=3.1						
K22A	**Casper**	**8.83**	**316**	IAmb_Lg		06 38 42.1	
	comp=Z,31nm,1.0s						
Z47A	**Carrollton**	**8.97**	**109**	IAmb_Lg		06 38 48.3	
	comp=Z,31nm,1.3s						
I40A	**Norwalk**	**9.30**	**36**	IAmb_Lg		06 38 44.5	
	comp=Z,29nm,1.0s						
X48A	**Hartselle**	**9.33**	**100**	IAmb_Lg		06 38 38.8	
	comp=Z,22nm,1.2s						
SFIN	**Lafayette**	**9.48**	**63**	IAmb_Lg		06 38 46.0	
	comp=Z,25nm,0.7s						
BLO	**Bloomington**	**9.57**	**71**	IAmb_Lg		06 38 47.2	
	comp=Z,31nm,0.8s						
CLTN	**Cedars of Leba**	**9.58**	**89**	IAmb_Lg		06 38 43.5	
	comp=Z,22nm,1.2s						
PDAR	**Pinedale Array**	**10.71**	**309**	Pn	**Pn**	**06 36 13.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=127,slow=15,SNR=5.7						
PDAR				Pg		06 36 57.1	
	comp=Z,0.3nm,0.3s,baz=111,slow=10.0,SNR=4.3						
PDAR				Lg	Lg	06 39 10.0	
	comp=Z,0.3nm,0.3s,baz=324,slow=50,SNR=2.1						
TKL	**Tuckaleechee C**	**11.69**	**90**	Pn	**Pn**	**06 36 28.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=297,slow=16,SNR=1.8						
TKL				Sn	**Sn**	**06 38 45.3**	**+5.1**
	comp=Z,0.2nm,0.3s,baz=58,slow=15,SNR=1.6						
TKL				Lg	Lg	06 39 39.5	
	comp=Z,0.4nm,0.3s,baz=164,slow=6.3,SNR=3.0						
ULM	**Lac du Bonnet**	**13.76**	**6**	Pn	Pn	06 36 51.5	-5.9
	comp=Z,0.2nm,0.3s,baz=187,slow=14,SNR=2.1						
ULM				Sn	Sn	06 39 16.4	-14
	comp=Z,0.1nm,0.3s,baz=169,slow=18,SNR=2.1						
ULM				Lg	Lg	06 40 41.6	
	comp=Z,0.2nm,0.3s,baz=248,slow=9.4,SNR=1.7						
YKA	**Yellowknife Ar**	**27.86**	**344**	P	**P**	**06 39 31.9**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=143,slow=9.0,SNR=3.8						

IDC ***17*** *07:56:16.5±0.6, 22°.97S×112°.25W, h0^{km}, mb4.4/12, mb1 4.6/13, mb1mx4.4/23, mbtmp4.4/13, ML4.0/1, MS4.4/20, Ms1 4.3/20, ms1mx4.3/25, Error ellipse: s-maj=20.4km s-min=16.1km az=50.0*

NEIC ***17*** *07:56:18.5±1.1, 23°.0S±0°.1×112°.1W±0°.1, h10^{km}±1^{km}, mb4.8/48, Error ellipse: s-maj=21.9km s-min=17.3km az=231.0*

BJI ***17*** *07:56:20.0±0.0, 23°.10S×112°.20W, h10^{km}, Ms5.0/3, Ms7 4.8/3*

GCMT ***17*** *07:56:22.5±0.1, 23°.10S±0°.01×111°.93W±0°.01, h13^{km}, MW5.2/142, Moment Tensor Solution. s110,c177; s142,c246; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.93±.02; $M_{\theta\theta}$0.62±.01; $M_{\phi\phi}$0.31±.01; $M_{r\theta}$-0.02±.03; $M_{\theta\phi}$-0.44±.01; $M_{\phi r}$-0.19±.03; Best double couple: $M_0$0.95100×10^{17} NP1:ϕ_s116.00000°, δ43.00000°, λ-104.00000°. NP2:ϕ_s315.00000°, δ49.00000°, λ-77.00000°. Principal axes: T 0.9360, Plg3.0000°, Azm36.0000°; N 0.0300, Plg10.0000°, Azm126.0000°; P -0.9660, Plg80.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 07:56:18.3±0.4**, 22°.97S**±0°.08×**112°.20W**±0°.07**, h10**^{km}**, n178, σ0**^{s}**79**/152**, mb4.7**/34**, MS4.5**/26**, 1C-2D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**4.89**	**148**	Pn	**Pn**	**07 57 29.7**	**-2.2**
	6.7nm,0.3s,baz=141,slow=22,SNR=19						
RPN				Sn	**Sn**	**07 58 30.8**	**+2.3**
	0.4nm,0.3s,baz=36,slow=19,SNR=1.1						
RPN				LR	LR	07 58 51.7	
	comp=Z,2μm,19.4s,baz=304,slow=32						
RPN	**Rapa Nui**	**4.89**	**148**	Pn	**Pn**	**07 57 30.8**	**-1.1**
RKT	**Rikitea**	**20.96**	**265**	*e*LQ	LQ	08 05 04.4	
	3μm,29.5s						
RKT				*e*LR	LR	08 05 58.2	
	comp=Z,3μm,30.0s						
TAOE	**Nuku Hiva Isla**	**30.24**	**293**	*e*LR	LR	08 10 17.8	
	comp=Z,507nm,29.5s						
H03N2	**Juan Fernandez**	**31.00**	**117**	T	T	08 35 12.1	
	baz=285,slow=75,SNR=364						
H03N3	**Juan Fernandez**	**31.01**	**117**	T	T	08 35 13.2	
	baz=285,slow=75,SNR=585						
H03N1	**Juan Fernandez**	**31.02**	**117**	T	T	08 35 13.2	
	baz=285,slow=75,SNR=673						
TBI	**Tubuai**	**34.20**	**262**	*e*S	**S**	**08 08 31.0**	**0.0**
	268nm,28.5s						
TBI				*e*LQ	LQ	08 10 41.2	
	922nm,31.0s						
TBI				*e*LR	LR	08 12 07.3	
	comp=Z,1μm,29.8s,baz=89						
TBI	**Tubuai**	**34.20**	**262**	*e*T	T	08 38 49.6	
	5.7nm,0.3s						
TIAR	**Tiarei**	**35.20**	**272**	*e*T	T	08 40 04.6	
	2.3nm,0.3s						
NNA	**Nana**	**35.35**	**78**	LR	LR	08 13 33.3	
	comp=Z,947nm,21.1s,baz=250,slow=29						
PPT2	**Papeete2**	**35.40**	**272**	*e*S	**S**	**08 08 49.6**	**-0.1**
	276nm,26.2s						
PPT2				*e*LQ	LQ	08 11 11.4	
	1μm,30.0s						
PPT2				*e*LR	LR	08 12 36.0	
	comp=Z,704nm,27.2s						
PPT	**Papeete**	**35.41**	**272**	LR	LR	08 14 22.7	
	comp=Z,282nm,19.2s,baz=108,slow=31						
ATAH	**Atahualpa**	**36.11**	**70**	P	**P**	**08 03 22.2**	**+1.0**
	3.6nm,0.7s,baz=261,slow=6.2,SNR=4.0						
MT02	**Curacav**	**37.43**	**115**	P	**P**	**08 03 31.9**	**0.0**
MT02				IAmb	IAmb	08 03 33.8	
	comp=Z,14nm,0.9s						
ROC1	**El Roble**	**37.51**	**115**	P	**P**	**08 03 33.0**	**+0.1**
LCO	**Las Campanas**	**37.64**	**108**	P	**P**	**08 03 34.1**	**+0.1**
LCO				IAmb	IAmb	08 03 35.7	
	comp=Z,22nm,1.1s						
BI02	**San Fabin de**	**37.76**	**121**	P	**P**	**08 03 34.9**	**+0.2**
VA03	**San Esteban**	**37.88**	**114**	P	**P**	**08 03 35.6**	**-0.2**
BO02	**Sierra Bellavi**	**37.89**	**118**	P	**P**	**08 03 36.8**	**+1.0**
BO02				IAmb	IAmb	08 03 40.6	
	comp=Z,15nm,1.2s						
AC05	**El Transito**	**38.02**	**108**	P	**P**	**08 03 37.0**	**0.0**
GO03	**Copiap**	**38.09**	**106**	P	**P**	**08 03 37.6**	**0.0**
GO03				IAmb	IAmb	08 03 39.1	
	comp=Z,22nm,1.0s						
GO02	**Mina Guanaco**	**38.85**	**102**	P	**P**	**08 03 44.2**	**-0.1**
GO02				IAmb	IAmb	08 03 55.2	
	comp=Z,24nm,0.9s						
PATCX	**Punta Patache**	**38.98**	**95**	P	**P**	**08 03 44.8**	**-0.3**
PATCX				IAmb	IAmb	08 03 47.6	
	comp=Z,22nm,1.0s						
TA01	**Diego Aracena**	**39.00**	**95**	P	**P**	**08 03 44.9**	**-0.3**
PB07	**IPOC Station P**	**39.06**	**97**	P	**P**	**08 03 45.4**	**-0.5**
PB07				IAmb	IAmb	08 03 47.3	
	comp=Z,26nm,1.0s						
AC02	**Maricunga**	**39.12**	**105**	P	**P**	**08 03 46.7**	**0.0**
PLCA	**Paso Flores**	**39.14**	**127**	P	**P**	**08 03 47.0**	**+0.8**
	comp=Z,4.9nm,1.0s,baz=301,slow=10,SNR=6.5						
PLCA				LR	LR	08 15 58.3	

	comp=Z,108nm,18.7s,baz=272,slow=30						
PLCA	Paso Flores	39.14	127	P	P	08 03 45.9	-0.4
PLCA				IAmb	IAmb	08 03 51.9	
	comp=Z,20nm,1.3s						
PLCA	Paso Flores	39.14	127	eP	P	08 03 47.1	+0.8
ZON	Zonda	39.41	112	P	P	08 03 48.4	-0.2
LVC	Limon Verde	39.80	98	P	P	08 03 52.9	+0.6
	comp=Z,4.2nm,0.8s,baz=266,slow=8.3,SNR=4.7						
LVC	Limon Verde	39.80	98	eP	P	08 03 51.9	-0.4
MNMC	Minye Minye	39.84	93	P	P	08 03 52.3	-0.3
MNMC				IAmb	IAmb	08 03 56.4	
	comp=Z,14nm,1.0s						
PB08	IPOC Station P	40.03	94	P	P	08 03 54.1	-0.2
PB08				IAmb	IAmb	08 03 55.7	
	comp=Z,13nm,1.0s						
CZSB	Cruzeiro do Su	40.82	75	eP	P	08 04 01.6	+1.2
JTS	Las Juntas de	42.48	42	LR	LR	08 17 36.9	
	comp=Z,665nm,19.2s,baz=326,slow=30						
PCON	Cinco Dias	43.01	59	eP	P	08 04 20.0	+1.0
CMIG	Matias Romero	43.26	25	LR	LR	08 18 33.4	
	comp=Z,459nm,20.3s,baz=178,slow=31						
TOLC	Tolima	45.24	57	eP	P	08 04 37.1	+0.5
RREF	El Recreo	45.42	57	eP	P	08 04 39.4	+1.1
CBOC	Ciudad Bolivar	45.52	55	eP	P	08 04 39.9	+1.3
ETMB	Extrema	45.82	81	eP	P	08 04 40.5	-0.3
ROSC	El Rosal	46.18	58	LR	LR	08 21 34.4	
	comp=Z,786nm,18.6s,baz=234,slow=33						
CHIC	Chingaza	46.51	59	eP	P	08 04 48.0	+1.3
SPBC	San Pablo de B	46.87	57	eP	P	08 04 48.8	-0.3
RUSC	La Rusia	47.79	58	eP	P	08 04 55.8	-1.0
SIV	San Ignacio	48.50	91	LR	LR	08 21 17.4	
	comp=Z,186nm,20.9s,baz=280,slow=31						
SAML	Samuel	48.91	82	P	P	08 05 04.3	-0.6
SAML				IAmb	IAmb	08 05 05.2	
	comp=Z,12nm,1.1s						
SAML	Samuel	48.91	82	eP	P	08 05 04.6	-0.4
CPUP	Villa Florida	49.67	106	P	P	08 05 10.4	-0.2
	comp=Z,2.3nm,1.0s,baz=270,slow=6.1,SNR=3.1						
CPUP				LR	LR	08 21 56.3	
	comp=Z,137nm,21.4s,baz=268,slow=31						
CPUP	Villa Florida	49.67	106	eP	P	08 05 10.7	+0.1
ITQB	Itaqui	49.87	110	eP	P	08 05 12.2	+0.1
VILB	Vilhena	50.24	88	eP	P	08 05 14.9	-0.1
SDV	Santo Domingo	51.55	57	LR	LR	08 24 07.0	
	comp=Z,602nm,20.5s,baz=242,slow=32						
SDV	Santo Domingo	51.55	57	P	P	08 05 26.1	+1.1
SDV				IAmb	IAmb	08 05 30.6	
	comp=Z,8.5nm,0.9s						
SDV	Santo Domingo	51.55	57	eP	P	08 05 20.9	-4.2
SDV	Santo Domingo	51.55	57	eP	P	08 05 25.3	+0.3
PLTB	Pedras Altas	52.24	113	eP	P	08 05 29.7	-0.2
AQDB	Aquidauana	52.27	99	eP	P	08 05 30.0	-0.3
CPSB	Cacapava Do Su	52.53	111	eP	P	08 05 31.6	-0.4
TXAR	Lajitas Array	52.64	9	P	P	08 05 32.6	-0.2
	comp=Z,0.3nm,0.8s,baz=201,slow=9.7,SNR=2.9						
TXAR				PcP	PcP	08 06 42.6	-0.2
	comp=Z,0.2nm,0.7s,baz=183,slow=7.1,SNR=3.8						
TXAR				LR	LR	08 23 55.4	
	comp=Z,388nm,18.2s,baz=0.0,slow=32						
MACA	Manacapuru-AM	53.56	76	eP	P	08 05 39.2	-0.6
SPX	San Pedro Mart	53.79	357	P	P	08 05 43.1	+1.6
ITAB	Concordia	54.12	108	eP	P	08 05 43.9	+0.1
JCT	Junction City	54.46	13	P	P	08 05 47.0	+0.9
TRCB	Terra Rica	54.53	102	eP	P	08 05 46.2	-0.7
PTGB	Pitanga	54.64	105	eP	P	08 05 48.1	+0.4
MNTX	Cornudas Mount	54.75	7	P	P	08 05 48.7	+0.6
CNLB	Canela	54.90	110	eP	P	08 05 48.7	-0.8
HKT	Hockley	54.91	17	P	P	08 05 49.8	+0.6
HKT				IAmb	IAmb	08 06 00.1	
	comp=Z,17nm,1.5s						
TUC	Tucson	54.98	1	P	P	08 05 50.2	+0.4
PTGA	Pitinga	55.29	74	P	P	08 05 51.7	-0.8
	comp=Z,6.7nm,0.9s,baz=241,slow=8.9,SNR=8.7						
PTGA	Pitinga	55.29	74	eP	P	08 05 51.9	-0.5
121A	Cookes Peak, D	55.35	5	P	P	08 05 53.4	+0.8
121A				IAmb	IAmb	08 05 58.7	
	comp=Z,16nm,1.4s						
PCMB	Pacaembu	56.03	101	eP	P	08 05 57.5	-0.3
NPGB	Novo Progresso	56.79	83	eP	P	08 06 01.7	-1.5
X16A	Lo Mia Camp, P	57.07	1	P	P	08 06 05.5	+0.6
ARAG	Araguaiana, MT	57.11	94	eP	P	08 06 04.8	-0.6
FRTB	Fartura	57.16	104	eP	P	08 06 05.7	-0.1
X18A	Snowflake	57.22	2	P	P	08 06 06.5	+0.6
X18A				IAmb	IAmb	08 06 17.7	
	comp=Z,6.6nm,0.8s						
ITRB	Iturama	57.33	99	eP	P	08 06 06.7	-0.3
MSTX	Muleshoe	57.33	9	P	P	08 06 07.8	+1.2
MSTX				IAmb	IAmb	08 06 18.4	
	comp=Z,12nm,1.1s						
ITTB	Itaituba	57.52	80	eP	P	08 06 06.8	-1.5
W13A	Hualapai Mount	57.77	358	P	P	08 06 10.8	+1.0
ANMO	Albuquerque	57.85	6	P	P	08 06 10.6	+0.2
ISA	Isabella, Lake	58.61	354	P	P	08 06 16.2	+0.7
ISA				IAmb	IAmb	08 06 19.5	
	comp=Z,12nm,1.4s						
BB19B	Bebedouro	58.64	101	eP	P	08 06 15.7	-0.4
RAO	Raoul Island	58.68	249	P	P	08 06 15.3	-0.9
	comp=Z,199nm,0.3s,baz=52,slow=19,SNR=2.4						
SNDB	Serra Nova Dou	58.77	90	eP	P	08 06 16.0	-1.0
U15A	North Rim	59.07	360	P	P	08 06 19.4	+0.4
U15A				IAmb	IAmb	08 06 36.2	
	comp=Z,15nm,1.5s						
SHPR	Sheep Range	59.22	357	P	P	08 06 20.5	+0.6
VAO	Valinhos	59.57	104	eP	P	08 06 22.3	-0.3
IPMB	Ipameri, GO	59.75	98	eP	P	08 06 24.2	+0.3
MALB	Monte Alegre	59.90	78	eP	P	08 06 23.6	-1.3
MVCO	Mesa Verde	59.96	3	P	P	08 06 25.0	0.0
S22A	4UR Ranch, Cre	60.60	5	P	P	08 06 28.9	-0.7
S22A				IAmb	IAmb	08 06 33.1	
	comp=Z,9.0nm,1.4s						
BDFB	Brasilia	60.62	96	P	P	08 06 29.5	-0.5
	comp=Z,5.1nm,0.8s,baz=270,slow=3.0,SNR=7.5						
BDFB				LR	LR	08 29 46.7	
	comp=Z,190nm,22.0s,baz=270,slow=33						
MTPU	Mount Pierson	60.68	0	P	P	08 06 30.1	0.0
R11A	Troy Canyon, C	61.07	357	P	P	08 06 32.6	0.0
CMB	Columbia Colle	61.16	353	P	P	08 06 33.6	+0.6
CMB				IAmb	IAmb	08 06 45.3	
	comp=Z,6.8nm,1.4s						
PSUT	Pine Spring	61.20	359	P	P	08 06 33.9	+0.4
PV22	Blue Mesa, Par	61.26	3	P	P	08 06 34.0	+0.1
PV22				IAmb	IAmb	08 06 36.0	
	comp=Z,4.9nm,0.8s						
NV11	Mina Array Sit	61.33	355	P	P	08 06 34.8	+0.5
NV11				IAmb	IAmb	08 06 37.5	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	61.34	355	P	P	08 06 35.4	+0.9
	comp=Z,3.2nm,0.7s,baz=186,slow=8.9,SNR=39						
NVAR				LR	LR	08 27 50.3	
	comp=Z,409nm,18.2s,baz=183,slow=31						
NVAR	Mina Array Bea	61.34	355	P	P	08 06 34.6	+0.1
BSCB	Bom Sucesso	62.04	102	eP	P	08 06 39.6	0.0
AFDM	Forest Hills D	62.14	352	P	P	08 06 40.2	+0.6
PRPB	Parauapebas	62.21	85	eP	P	08 06 40.7	+0.1
MCPB	Macapa, AP	62.53	78	eP	P	08 06 42.8	0.0
MPU	Maple Canyon	62.66	0	P	P	08 06 43.7	+0.4
SMTB	Santa Maria do	63.26	89	eP	P	08 06 47.2	-0.5
JANB	Januaria	64.19	96	eP	P	08 06 53.3	-0.5
SDBA	SAO DESIDERIO	64.51	93	eP	P	08 06 55.6	-0.3
MSVF	Nonsavu	65.07	260	P	P	08 07 00.9	+1.3
BELA	Belgrano 2	65.09	167	P	P	08 06 58.7	0.0
TMAB	Tom-Au,PA,Br	65.28	82	eP	P	08 07 01.9	+1.0
PD31	Pinedale Array	65.45	2	P	P	08 07 00.4	-1.2
PDAR	Pinedale Array	65.45	2	P	P	08 07 00.9	-0.7
	comp=Z,1.9nm,0.7s,baz=170,slow=6.0,SNR=16						
PDAR				LR	LR	08 31 15.0	
	comp=Z,209nm,18.3s,baz=178,slow=32						
PDAR	Pinedale Array	65.45	2	P	P	08 07 00.1	-1.5
K22A	Casper	65.50	5	P	P	08 07 01.4	-0.4
MFID	Camas Ranch	66.14	357	P	P	08 07 05.9	0.0
BSFB	Barra de Sao F	66.19	101	eP	P	08 07 06.5	-0.3
VNDA	Vanda	66.87	194	P	P	08 07 10.4	+0.3
	comp=Z,4.5nm,1.2s,baz=87,slow=5.6,SNR=3.6						
VNDA				LR	LR	08 30 04.1	
	comp=Z,338nm,21.4s,baz=103,slow=30						
NAN01	Guarapari, ES	67.14	100	eP	P	08 07 13.5	+0.6
ROSB	Rosrio	68.70	84	eP	P	08 07 22.7	0.0
NBPS	Pedro II - PI	70.58	87	eP	P	08 07 34.1	-0.3
VNA3	Neumayer Olymp	72.40	161	P	P	08 07 45.2	+0.9
VNA3	Neumayer Olymp	72.40	161	PP	PP	08 10 23.5	-1.3
VNA1	Neumayer--Stat	73.03	160	P	P	08 07 48.1	+0.1
VNA2	Neumayer--Watz	73.20	161	P	P	08 07 49.0	0.0
VNA2	Neumayer--Watz	73.20	161	PP	PP	08 10 31.8	+0.2
DZM	Mont Dzumac	74.13	252	eS	S	08 17 28.6	-0.6
	comp=Z,192nm,28.4s						
DZM	Mont Dzumac	74.13	252	eLR	LR	08 30 37.5	
	comp=Z,1µm,27.8s						
SNAA	Sanae	74.25	162	P	P	08 07 55.1	-0.2
SNAA	Sanae	74.25	162	P	P	08 07 54.7	-0.6
ULM	Lac du Bonnet	74.31	11	LR	LR	08 37 15.4	
	comp=Z,215nm,18.1s,baz=174,slow=33						
YKA	Yellowknife Ar	85.19	359	P	P	08 08 53.9	-0.5
	comp=Z,3.8nm,1.0s,baz=169,slow=4.9,SNR=27						
YKA				LR	LR	08 43 00.6	
	comp=Z,273nm,19.0s,baz=0.0,slow=33						
SYO	Syowa Base	86.03	170	⇑iP	P	08 08 53.0	-5.7
H11S2	WAKE ISLAND Hy	89.25	290	T	T	09 48 24.4	
	baz=114,slow=75,SNR=116						
H11S1	WAKE ISLAND Hy	89.26	290	T	T	09 48 31.0	
	baz=114,slow=75,SNR=134						
H11S3	WAKE ISLAND Hy	89.27	290	T	T	09 48 25.7	
	baz=114,slow=75,SNR=104						
H11N3	WAKE ISLAND Hy	89.58	292	T	T	09 48 56.3	
	baz=116,slow=75,SNR=9.9						
H11N1	WAKE ISLAND Hy	89.59	292	T	T	09 48 56.3	
	baz=116,slow=75,SNR=4.3						
H11N2	WAKE ISLAND Hy	89.60	292	T	T	09 48 57.6	
	baz=116,slow=75,SNR=15						
MAW	Mawson	89.63	178	LR	LR	08 45 14.2	
	comp=Z,586nm,20.9s,baz=212,slow=33						
STKA	Stephens Creek	90.86	235	P	P	08 09 22.1	-0.4
	comp=Z,6.1nm,1.1s,baz=118,slow=7.2,SNR=3.9						
STKA				LR	LR	08 44 13.0	
	comp=Z,141nm,18.4s,baz=88,slow=32						
ILAR	Eielson Array	91.48	346	P	P	08 09 23.7	-0.7
	comp=Z,0.6nm,0.8s,baz=161,slow=5.0,SNR=7.2						
ILAR				LR	LR	08 42 45.0	
	comp=Z,110nm,20.2s,baz=131,slow=30						
CLL	Collm	129.46	42	eSS	SS	08 35 00.0	+1.1
CLL				eSSSS		08 43 42.0	
CLL				LmH		09 01 00.0	
	comp=N,100nm,20.5s						
CLL				LmH		09 01 00.0	
	comp=E,200nm,21.9s						
NJ2	Nanjing	134.18	293	ePKP	PKPdf	08 15 36.8	+0.2
AKASG	Malin Array Be	139.25	37	PKP	PKPdf	08 15 44.8	-0.6
	comp=E,0.4nm,0.4s,baz=306,slow=2.2,SNR=4.7						
HHC	Hu-ho-hao-te	139.27	306	ePKP	PKPdf	08 15 46.8	+0.9
SONM	Songino Array	140.54	319	PKP	PKPdf	08 15 47.4	-0.7
	comp=E,1.7nm,0.9s,baz=145,slow=1.5,SNR=8.8						
GYA	Guiyang	144.62	284	⇓PKP	PKPbc	08 15 54.8	+0.1
LZH	Lanzhou	146.22	301	ePKPbc	PKPdf	08 15 59.0	+0.5
LZH				pPKP	pPKPab	08 16 02.3	-0.1
LZH				sPKP		08 16 04.1	
LZH				LR	LR		
	comp=E,87nm,18.0s						
LZH				LR	LR		
	comp=E,93nm,18.2s						
LZH				LR	LR		
	comp=E,140nm,20.1s						
ZALV	Zalesovo Beam	146.50	342	PKPbc	PKPdf	08 15 58.4	+0.2
	comp=E,5.8nm,0.8s,baz=32,slow=2.7,SNR=20						
BRTR	Keskin Array B	146.63	52	PKPbc	PKPbc	08 15 59.9	-0.7
	comp=E,2.7nm,0.8s,baz=236,slow=2.2,SNR=16						
KMI	Kunming	148.07	281	⇓PKPbc	PKPbc	08 16 04.3	-0.8
GTA	Gaotai	148.30	309	ePKPbc	PKPbc	08 16 04.3	-0.9
GTA				LR	LR		
	comp=E,100nm,17.8s						
GTA				LR	LR		
	comp=E,110nm,20.7s						
GTA				LR	LR		
	comp=E,110nm,19.6s						
UTHA	Uthaitani	149.28	262	P	PKiKP	08 16 10.2	+0.9
PAYA	Payao	149.91	269	P	PKPab	08 16 18.0	+2.7
CM35	Chiang Mai Arr	150.42	268	P	PKPbc	08 16 11.0	+0.1
CM36	Chiang Mai Arr	150.44	267	P	PKPbc	08 16 11.0	+0.1
CM34	Chiang Mai Arr	150.46	268	P	PKPbc	08 16 11.0	0.0
CM04	Chiang Mai Arr	150.51	267	P	PKiKP	08 16 12.2	+0.4
CM09	Chiang Mai Arr	150.51	267	P	PKiKP	08 16 12.2	+0.4
CM01	Chiang Mai Arr	150.54	267	P	PKiKP	08 16 12.1	+0.2
CM05	Chiang Mai Arr	150.54	267	P	PKiKP	08 16 12.0	+0.1
CM02	Chiang Mai Arr	150.55	267	P	PKiKP	08 16 12.0	+0.1
CMAR	Chiang Mai Arr	150.56	267	PKPbc	PKPbc	08 16 11.5	+0.3
	comp=E,7.1nm,0.8s,baz=96,slow=0.6,SNR=30						
CM15	Chiang Mai Arr	150.58	267	P	PKiKP	08 16 12.4	+0.5
CM13	Chiang Mai Arr	150.59	267	P	PKiKP	08 16 12.1	+0.1
CMMT	Chiang Mai	150.64	268	P	PKiKP	08 16 11.8	-0.3
CM33	Chiang Mai Arr	150.64	268	P	PKPbc	08 16 11.0	-0.4
CM32	Chiang Mai Arr	150.70	267	P	PKiKP	08 16 12.7	+0.5
KBZ	Khabaz	150.84	39	PKPbc	PKPbc	08 16 11.3	+0.2
	comp=E,8.8nm,1.0s,baz=225,slow=2.3,SNR=8.4						
MKAR	Makanchi Array	153.51	337	PKPbc	PKPbc	08 16 15.8	-1.3
	comp=E,1.8nm,0.8s,baz=29,slow=2.8,SNR=8.7						
WMQ	Urumqi	153.51	326	ePKPbc	PKPdf	08 16 10.0	+0.4

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*IDC **17** 08:23:54.3±1.6, 6.°84S×104.°68E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.8/44, mbtmp3.9/9, ML4.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=53.6km s-min=16.8km az=52.0*

*DJA **17** 08:24:00.4±0.4, 7°S±4°×10°5E±°, h10^{km}, M4.3/13, MLv4.3/13*

*NEIC **17** 08:24:06.3±1.4, 6.°5S±0.°3×105.°3E±0.°1, h80^{km}±13^{km}, mb4.3/5, Error ellipse: s-maj=40.8km s-min=4.7km az=206.0*

ISC 17 08:23:58.8±0.8**, 6.°93S**±0.°09×**104.°88E**±0.°06**, h23^{km}, n45, σ1ˢ52**/41**, mb4.0**/9**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.87	69	P	Pb	08 24 14.4	-0.8
KASI	Kota Agung	1.45	345	P	Pb	08 24 26.4	+1.4
BLSI	Bandar Lampung	1.59	13	P	Pb	08 24 26.8	-0.7
DBJI	Dramaga	1.90	79	P	Pn	08 24 30.6	+0.9
TNG	Tangerang	1.91	67	P	Pn	08 24 31.5	+1.6
TNG				P	Pn	08 24 31.6	+1.6
CBJI	Citeko	2.02	76	P	Pn	08 24 33.1	+1.6
LWLI	Liwa	2.06	337	P	Pb	08 24 36.9	+1.2
KLSI		2.23	356	P	Pb	08 24 37.7	-0.7
LEM	Lembang	2.72	88	Pn	Pn	08 24 43.4	+2.1
	26nm,0.3s,baz=307,slow=15,SNR=9.3						
LEM				Sn	Sn	08 25 15.8	+2.2
	28nm,0.3s,baz=161,slow=18,SNR=4.7						
LEM	Lembang	2.72	88	P	Pn	08 24 43.3	+2.0
CISI	Cisompet, Garu	2.98	102		Pn	08 24 46.4	+1.7
CISI				Sn	Sn	08 25 18.9	-0.9
CISI	Cisompet, Garu	2.98	102	P	Pn	08 24 45.8	+1.1
MNAI	Manna	3.19	323	Pn	Pb	08 24 54.2	-0.6
MNAI	Manna	3.19	323	P	Pb	08 24 53.2	-1.6
LHSI	Lahat	3.36	336	P	Pb	08 24 55.6	-2.1
CMJI	Cimerak	3.64	104	P	Pn	08 24 54.9	+1.1
KPJI	Karang Pucung	4.04	96	P	Pn	08 25 00.8	+1.5
UGM	Wanagama	5.68	100	Pn	Pn	08 25 23.9	+2.0
JAGI	Jajag, Banyuwa	9.32	100	Pn	Pn	08 26 13.1	+1.3
GSI	Gunungsitoli	10.95	318	Pn	Pn	08 26 37.8	+3.5
BATI	Baumata	18.86	101	P	Pn	08 28 19.6	+1.5
	6.4nm,0.3s,baz=270,slow=19,SNR=2.0						
SOEI	Soe	19.39	100	P	P	08 28 22.8	-0.6
SOEI				IAmb	IAmb	08 28 40.0	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	23.08	121	P	P	08 29 03.5	+0.5
	comp=Z,1.1nm,0.6s,baz=263,slow=8.1,SNR=1.6						
CMAR	Chiang Mai Arr	25.89	347	P	P	08 29 29.8	+0.6
H01W3	Cape Leeuwin H	29.10	164	T	T	09 00 23.8	
	baz=344,slow=76,SNR=41						
H01W1	Cape Leeuwin H	29.11	164	T	T	09 00 25.2	
	baz=344,slow=76,SNR=41						
H01W2	Cape Leeuwin H	29.11	164	T	T	09 00 25.6	
	baz=344,slow=76,SNR=53						
WRA	Warramunga Arr	31.37	117	P	P	08 30 18.1	0.0
	comp=Z,1.1nm,0.5s,baz=288,slow=10,SNR=13						
WRA	Warramunga Arr	31.37	117	P	P	08 30 17.7	-0.4
WR0	Warramunga Arr	31.55	117	P	P	08 30 19.6	-0.1
H08S2	Diego Garcia H	32.13	267	T	T	09 04 42.0	
	baz=91,slow=76,SNR=88						
H08S3	Diego Garcia H	32.14	267	T	T	09 04 44.1	
	baz=91,slow=76,SNR=153						
H08S1	Diego Carcia H	32.15	267	T	T	09 04 37.9	
	baz=91,slow=76,SNR=22						
ASAR	Alice Springs	32.46	124	P	P	08 30 28.2	+0.6
	comp=Z,0.7nm,0.8s,baz=288,slow=7.9,SNR=8.7						
PMG	Port Moresby	41.91	96	P	P	08 31 45.7	-2.2
STKA	Stephens Creek	42.27	131	P	P	08 31 51.5	+0.9
	comp=Z,11nm,0.7s,baz=312,slow=7.5,SNR=35						
MJAR	Matsushiro Arr	53.34	33	LR	LR	08 57 26.9	
	comp=Z,26nm,21.2s,baz=205,slow=38						
SONM	Songino Array	54.54	1	P	P	08 33 24.2	-1.0
	comp=Z,0.3nm,0.3s,baz=184,slow=4.0,SNR=2.1						
USRK	Ussuriysk Ar.	56.47	23	P	P	08 33 36.8	-2.1
	comp=Z,2.1nm,0.5s,baz=199,slow=6.3,SNR=9.6						
MK31	Makanchi Array	57.13	342	P	P	08 33 42.2	-1.4
MK31				IAmb	IAmb	08 34 03.2	
	comp=Z,3.2nm,1.5s						
MKAR	Makanchi Array	57.13	342	P	P	08 33 42.1	-1.5
	comp=Z,0.3nm,0.4s,baz=154,slow=8.8,SNR=10						
MKAR	Makanchi Array	57.13	342	P	P	08 33 42.0	-1.6
ZALV	Zalesovo Beam	62.96	347	P	P	08 34 21.2	-2.1
	comp=Z,0.5nm,0.4s,baz=150,slow=6.1,SNR=2.6						
ABKAR	Akbulak array	68.29	330	P	P	08 34 58.0	+0.1
TXAR	Lajitas Array	145.07	47	PKPbc	PKPdf	08 43 34.5	-0.7
	comp=Z,0.3nm,0.4s,baz=294,slow=0.8,SNR=14						

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*NEIC **17** 08:29:36.0±1.6, 16.°1S±0.°1×173.°8W±0.°1, h95^{km}±7^{km}, mb4.6/30, Error ellipse: s-maj=16.6km s-min=14.3km az=151.0*

*IDC **17** 08:29:37.5±0.6, 16.°11S×173.°90W, h106^{km}±5^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.4/34, mbtmp4.7/18, MS3.3/3, Ms1 3.3/3, ms1mx2.9/31, Error ellipse: s-maj=19.3km s-min=10.9km az=141.0*

*NOU **17** 08:29:37.3, 16.°05S×173.°51W, h132^{km}, mb4.8, Tonga Islands*

*BGR **17** 08:29:44.0±0.0, 16.°30S×172.°98W, h33^{km}*

ISC 17 08:29:33.9±0.4**, 16.°22S**±0.°05×**173.°71W**±0.°05**, h79^{km}**±3^{km}**, h80^{km}:pP-P, n187, σ1ˢ49**/182**, mb4.8**/34**, 18C-7D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.59	129	P	Pn	08 30 44.1	+3.2
MSVF	Nonsavu	8.03	258	P	Pn	08 31 36.7	+8.8
	0.8nm,0.3s,baz=101,slow=13,SNR=18						
MSVF	Nonsavu	8.03	258	Pn	Pn	08 31 31.8	+3.8
MSVF	Nonsavu	8.03	258	P	Pn	08 31 33.6	+5.7
KNTN	Kanton	13.51	9	Pn	Pn	08 32 43.7	+1.4
GLKZ	Green Lake	13.54	196	P	Pn	08 32 43.7	+1.0
GLKZ				S	Sn	08 35 07.2	-4.3
RAR	Rarotonga	14.10	113	P	Pn	08 32 53.0	+3.0
	2.7nm,0.3s,baz=261,slow=8.2,SNR=16						
RAR				S	Sn	08 35 21.7	-3.5
	2.2nm,0.3s,baz=126,slow=19,SNR=2.5						
RAR				LR	LR	08 37 10.9	
	comp=Z,94nm,19.8s,baz=282,slow=32						
RAR	Rarotonga	14.10	113		P	08 32 53.4	-1.9
DVP	Devils Point	17.38	262	P	P	08 33 33.2	+1.6
MARNC	Mare, Loyalty	18.05	250	P	Pn	08 33 40.8	+1.3
SANVU	Saraoutou	18.38	270	P	P	08 33 41.0	-1.6
SANVU				IAmb	IAmb	08 33 49.2	
	comp=Z,58nm,1.3s						
YATNC	Mamie plateau,	19.22	249	P	Pn	08 33 55.8	+2.3
OUENC	Ouen Island, N	19.35	248	P	Pn	08 33 55.1	0.0
DZM	Mont Dzumac	19.62	250	P	P	08 33 56.3	0.0
	comp=Z,0.5nm,0.3s,baz=73,slow=18,SNR=23						
DZM	Mont Dzumac	19.62	250	eP	Pn	08 34 01.2	+2.8
	comp=Z,130nm,1.1s						
DZM				eLR	LR	08 38 25.1	
	comp=Z,276nm,30.4s						
DZM	Mont Dzumac	19.62	250	P	P	08 33 56.6	+0.3
DZM				IAmb	IAmb	08 34 03.9	
	comp=Z,60nm,1.0s						
DZM	Mont Dzumac	19.62	250	P	Pn	08 33 58.2	-0.2
NOUC	Port Laguerre	19.75	250	P	Pn	08 33 59.9	+0.1
TARA	Tarawa	21.89	322	P	P	08 34 19.5	-1.2
KUZ	Kuaotunu	22.49	203	P	P	08 34 28.9	+2.0
HAZ	Te Kaha	22.73	198	P	P	08 34 31.1	+1.8
HAZ				S	S	08 38 30.0	-1.9
PUZ	Puketiti	22.89	196	P	P	08 34 32.6	+1.6
PUZ				S	S	08 38 30.7	-3.9
RUGZ	Raukumara Rang	22.95	198	P	P	08 34 33.8	+2.0
RUGZ				S	S	08 38 28.4	-7.4
MKAZ	Moumakai	23.02	203	P	P	08 34 34.2	+2.0
PAE	Paea	23.13	97	eT	T	08 57 42.8	
	comp=Z,2.1nm,0.3s						
PPT	Papeete	23.13	97	LR	LR	08 42 15.1	
	comp=Z,52nm,18.1s,baz=283,slow=32						
PPT2	Papeete2	23.13	97	eLR	LR	08 40 02.5	
	comp=Z,250nm,31.2s						
PPT2	Papeete2	23.13	97	eT	T	08 57 43.8	
	comp=Z,3.8nm,0.3s						
MWZ	Matawai	23.34	198	P	P	08 34 37.3	+2.0
TIAR	Tiarei	23.35	97	eT	T	08 57 59.9	
	comp=Z,2.5nm,0.3s						
URZ	Urewera	23.39	198	P	P	08 34 36.2	+0.4
	comp=Z,5.2nm,0.3s,baz=348,slow=4.6,SNR=7.5						
RIGZ	Rimuhau	23.61	197	P	P	08 34 40.3	+2.4
SNGZ	Shannon Statio	23.80	198	P	P	08 34 42.1	+2.6
TBI	Tubuai	23.87	111	eLR	LR	08 40 28.8	
	comp=Z,243nm,33.0s						
TBI	Tubuai	23.87	111	eT	T	08 58 39.3	
	comp=Z,8.1nm,0.3s						
MTHZ	Maungataniwha	24.02	198	P	P	08 34 44.4	+2.9
BKZ	Black Stump Fm	24.41	199	P	P	08 34 45.8	+0.7
TWVZ	Taurewa	24.67	201	P	P	08 34 48.6	+1.2
KWHZ	Kaweka Forest	24.67	199	P	P	08 34 48.4	+1.0
OTVZ	Oturere	24.67	200	P	P	08 34 48.7	+1.1
BHHZ	Black Hill Sta	24.84	199	P	P	08 34 49.2	+0.2
KAHZ	Kahuranaki	24.88	197	P	P	08 34 51.6	+2.3
KRHZ	Kereru	24.89	198	P	P	08 34 50.7	+1.4
PKVZ	Pokaka	24.89	200	P	P	08 34 56.0	+6.6
PXZ	Pawanui	25.10	197	P	P	08 34 54.3	+3.0
TSZ	Takapari Road	25.39	199	P	P	08 34 56.5	+2.5
DVHZ	Dannevirke	25.55	198	P	P	08 34 58.4	+3.0
ANWZ	Angora Road	25.61	198	P	P	08 35 00.5	+4.6
BFZ	Birch Farm	25.88	198	P	P	08 34 59.5	+1.2
TAOE	Nuku Hiva Isla	33.53	81	eT	T	09 10 48.3	
	comp=Z,24nm,0.3s						
RKT	Rikitea	37.03	107	eLR	LR	08 46 25.9	
	comp=Z,181nm,32.0s						
PMG	Port Moresby	38.70	275	P	P	08 36 50.7	+0.2
	comp=Z,23nm,0.9s,baz=77,slow=6.9,SNR=8.5						
PMG	Port Moresby	38.70	275	P	P	08 36 50.4	-0.1
H11S2	WAKE ISLAND Hy	39.52	330	T	T	09 18 09.4	
	baz=146,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	39.53	330	T	T	09 18 07.9	
	baz=146,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	39.53	330	T	T	09 18 10.8	
	baz=146,slow=76,SNR=11						
STKA	Stephens Creek	43.37	241	P	P	08 37 28.4	-0.2
	comp=Z,13nm,0.8s,baz=79,slow=8.0,SNR=19						
STKA				PcP	PcP	08 39 16.8	+0.7
	comp=Z,4.5nm,0.7s,baz=26,slow=1.6,SNR=6.5						
STKA	Stephens Creek	43.37	241	P	P	08 37 28.3	-0.4
WR0	Warramunga Arr	49.18	257	P	P	08 38 13.4	-1.0
WR0				IAmb	IAmb	08 38 16.7	
	comp=Z,5.4nm,0.8s						
WB0	Warramunga Arr	49.33	258	P	P	08 38 14.1	-1.5
WB2	Warramunga Arr	49.36	257	P	P	08 38 14.3	-1.5
WB2				IAmb	IAmb	08 38 16.3	
	comp=Z,15nm,0.9s						
WRA	Warramunga Arr	49.37	257	P	P	08 38 14.4	-1.4
	comp=Z,8.8nm,0.8s,baz=90,slow=7.0,SNR=50						
WRA				PcP	PcP	08 39 37.0	-0.4
	comp=Z,3.1nm,0.6s,baz=89,slow=3.8,SNR=8.7						
WRA	Warramunga Arr	49.37	257	P	P	08 38 14.7	-1.2
AS31	Alice Springs	49.57	253	P	P	08 38 15.3	-2.1
AS31				IAmb	IAmb	08 38 17.8	
	comp=Z,4.3nm,0.7s						
ASAR	Alice Springs	49.58	253	P	P	08 38 16.2	-1.2
	comp=Z,14nm,0.6s,baz=87,slow=8.3,SNR=301						
ASAR				PcP	PcP	08 39 37.8	-0.3
	comp=Z,3.3nm,0.6s,baz=106,slow=3.8,SNR=7.4						
ASAR	Alice Springs	49.58	253	P	P	08 38 16.0	-1.4
SIJI	Sorong	56.30	280	P	P	08 39 06.6	-0.4
	comp=Z,54nm,1.0s,baz=59,slow=5.9,SNR=12						
SWI	Sorong	56.31	280	P	P	08 39 07.0	0.0
	comp=Z,54nm,0.8s						
FITZ	Fitzroy Crossi	57.75	259	P	P	08 39 16.6	-0.6
	comp=Z,4.5nm,0.6s,baz=94,slow=7.6,SNR=15						
SOEI	Soe	60.59	268	P	P	08 39 36.8	-0.2
SOEI	Soe	60.59	268	P	P	08 39 38.2	+1.2
	comp=Z,81nm,1.0s						
VNDA	Vanda	62.53	186	P	P	08 39 51.2	+2.4
	comp=Z,7.3nm,0.9s,baz=6.6,slow=7.0,SNR=17						
VNDA	Vanda	62.53	186	P	P	08 39 49.6	+0.8
VNDA				IAmb	IAmb	08 39 52.5	
	comp=Z,7.0nm,0.8s						
EDFI	Ende, Flores	63.30	268	P	P	08 39 54.1	-1.1
	comp=Z,35nm,0.8s						
PLAI	Plampang	67.04	267	P	P	08 40 18.2	-1.0
	comp=Z,34nm,1.0s						
MPSI	Mapaga	67.47	277	P	P	08 40 21.4	-0.6

	comp=Z,22nm,0.8s						
TWSI	Taliwang, Sumb	67.92	267	P	P	08 40 24.1	-0.7
	comp=Z,584nmcomp=Z,35nm,1.0s						
JAGI	Jajag, Banyuwa	70.60	267	P	P	08 40 39.1	-2.3
	comp=Z,77nm,0.9s						
PWJI	Pagerwojo	72.96	266	P	P	08 40 55.0	-0.5
ESJX	Sierra Juarez	73.21	49	P	P	08 40 57.4	+0.6
PEA0B	Petropavlovsk-	73.32	342	P	P	08 40 56.4	-0.4
PETK	Petropavlovsk-	73.32	342	P	P	08 40 56.6	-0.2
	comp=Z,17nm,0.7s,baz=111,slow=9.2,SNR=26						
PETK	Petropavlovsk-	73.32	342	P	P	08 40 56.7	0.0
CMB	Columbia Colle	73.58	41	P	P	08 40 58.8	+0.1
AFDM	Forest Hills D	73.76	40	P	P	08 40 59.6	0.0
QSPA	South Pole Qui	73.82	180	P	P	08 41 01.6	+1.7
QSPA				IAmb	IAmb	08 41 03.4	
	comp=Z,6.8nm,0.8s						
YSS	Yuzh-Sakhalins	74.05	331	P	P	08 41 00.7	-0.4
YBH	Yreka Blue Hor	74.43	37	P	P	08 41 05.0	+1.3
YBH				IAmb	IAmb	08 41 05.8	
	comp=Z,7.2nm,0.8s						
BEKR	Beckworth	74.69	40	P	P	08 41 04.8	-0.4
BEKR				IAmb	IAmb	08 41 06.9	
	comp=Z,5.3nm,0.9s						
PNTR	Pine Nut	74.70	41	P	P	08 41 06.1	+0.7
PNTR				IAmb	IAmb	08 41 07.3	
	comp=Z,5.4nm,0.8s						
NVAR	Mina Array Bea	75.14	42	P	P	08 41 08.7	+0.7
	comp=Z,3.5nm,0.9s,baz=229,slow=8.2,SNR=25						
NVAR				pP	sP	08 41 36.0	-1.1
	comp=Z,5.2nm,0.9s,baz=230,slow=8.1,SNR=7.2						
NVAR	Mina Array Bea	75.14	42	P	P	08 41 08.8	+0.9
K05A	Summer Lake	76.11	37	P	P	08 41 14.2	+0.8
K05A				IAmb	IAmb	08 41 15.3	
	comp=Z,22nm,1.1s						
X16A	Lo Mia Camp, P	77.68	49	P	P	08 41 23.9	+1.5
MTPU	Mount Pierson	78.98	45	P	P	08 41 31.4	+1.7
SUA	Susitna One	79.56	11	P	P	08 41 31.9	-0.1
SUA				IAmb	IAmb	08 41 32.4	
	comp=Z,17nm,0.8s						
ANM	Nome	80.79	4	P	P	08 41 39.1	+0.7
ANM				IAmb	IAmb	08 41 39.6	
	comp=Z,6.3nm,0.8s						
TXAR	Lajitas Array	81.32	56	P	P	08 41 43.3	+1.1
	comp=Z,4.3nm,1.1s,baz=219,slow=7.3,SNR=22						
TXAR				pP	sP	08 42 10.8	-0.5
	comp=Z,2.4nm,1.0s,baz=213,slow=4.8,SNR=5.3						
ANMO	Albuquerque	81.56	50	P	P	08 41 43.7	+0.3
PD31	Pinedale Array	83.08	42	P	P	08 41 50.8	-0.5
PD31				IAmb	IAmb	08 41 52.1	
	comp=Z,5.6nm,0.8s						
PDAR	Pinedale Array	83.08	42	P	P	08 41 51.4	+0.1
	comp=Z,5.2nm,0.8s,baz=214,slow=3.1,SNR=42						
PDAR				pP	sP	08 42 19.4	-1.1
	comp=Z,0.8nm,0.7s,baz=204,slow=5.7,SNR=2.5						
PDAR	Pinedale Array	83.08	42	P	P	08 41 50.6	-0.6
COLA	College	83.22	11	P	P	08 41 50.2	-0.9
ILAR	Eielson Array	83.31	11	P	P	08 41 51.0	-0.6
	comp=Z,4.2nm,0.8s,baz=234,slow=6.4,SNR=54						
ILAR				pP	sP	08 42 19.6	-1.4
	comp=Z,1.2nm,0.7s,baz=218,slow=5.9,SNR=2.7						
MAW	Mawson	86.92	199	P	P	08 42 10.2	+0.5
	comp=Z,8.9nm,0.8s,baz=123,slow=5.9,SNR=11						
MAW	Mawson	86.92	199	P	P	08 42 10.5	+0.7
YKA	Yellowknife Ar	90.97	23	P	P	08 42 28.3	-0.4
	comp=Z,1.3nm,0.9s,baz=228,slow=4.3,SNR=16						
YKA				pP	sP	08 42 56.2	-2.0
	comp=Z,1.3nm,1.0s,baz=227,slow=4.3,SNR=4.2						
CMAR	Chiang Mai Arr	92.59	288	P	P	08 42 38.4	+1.1
	comp=Z,1.1nm,0.3s,baz=99,slow=2.9,SNR=11						
CMAR				LR	LR	09 22 12.6	
	comp=Z,18nm,20.1s,baz=130,slow=34						
SONM	Songino Array	95.26	318	P	P	08 42 47.9	-1.2
	comp=Z,0.6nm,0.7s,baz=93,slow=6.1,SNR=2.6						
MKAR	Makanchi Array	111.19	314	PKiKP	PKiKP	08 47 57.3	-1.2
	comp=Z,0.6nm,0.7s,baz=70,slow=0.7,SNR=7.2						
ARCES	ARCESS Array B	125.38	352	PKP	PKPdf	08 48 24.6	-0.5
	comp=Z,3.0nm,0.5s,baz=37,slow=1.6,SNR=23						
FINES	FINESS Array B	132.68	347	PKP	PKPdf	08 48 38.9	-0.3
	comp=Z,2.1nm,0.5s,baz=47,slow=3.3,SNR=13						
NOA	NORSAR Array B	135.10	357	PKP	PKPdf	08 48 43.7	-0.1
	comp=Z,1.2nm,0.8s,baz=14,slow=4.0,SNR=3.4						
AKASG	Malin Array Be	140.98	337	PKhKP	PKPpre	08 48 48.0	
	comp=Z,0.9nm,0.5s,baz=40,slow=4.1,SNR=4.7						
SORM	Soroca	143.38	335	⇓P	PKPab	08 48 55.9	+0.6
CLL	Collm	144.59	353	*e*PKPdf	PKPab	08 48 59.0	-0.9
	comp=Z,7.0nm,1.1s						
CHVC	Chvalec	144.83	349	*e*PKP	PKPab	08 48 59.7	-1.2
OSTC	Ostas	144.83	349	*e*PKP	PKPab	08 49 00.7	-0.2
KOLS	Kolonicke sedl	144.86	342	*e*PKP	PKPbc	08 49 01.2	+0.1
KMBO	Kilima Mbogo	144.90	243	PKP	PKPdf	08 49 03.0	-0.2
	comp=Z,12nm,0.8s,baz=63,slow=6.3,SNR=17						
UPC	Upice	144.91	349	*e*PKP	PKPab	08 49 00.5	-0.7
DPC	Dobruska-Polom	145.01	349	*e*PKP	PKPbc	08 49 01.1	-0.4
DPC				*e*pPKP	sPKPdf	08 49 32.8	+0.5
BZK	Bozkurt	145.01	323	⇓P	PKPbc	08 49 00.3	-1.4
BURAR	Bucovina Array	145.01	337	⇑P	PKPbc	08 49 01.0	-0.7
OKC	Ostrava-Krasne	145.12	347	*e*PKP	PKPbc	08 49 01.6	-0.2
CRVS	Cervenica-Dubn	145.13	342	*e*PKP	PKPab	08 49 02.1	+0.1
PVCC	Panska Ves	145.14	351	*e*PKP	PKPbc	08 49 01.5	-0.4
KRLC	Kraliky	145.18	348	*e*PKP	PKPbc	08 49 01.7	-0.4
KRLC				*e*pPKP	sPKPdf	08 49 33.1	+0.5
BIZ	Bicaz	145.24	336	⇑P	PKPbc	08 49 02.4	+0.1
MORC	Moravsky Berou	145.31	347	⇑P	PKPbc	08 49 02.5	0.0
MORC	Moravsky Berou	145.31	347	*e*PKP	PKPbc	08 49 02.2	-0.3
MORC				*e*		08 49 33.8	
TESR	Tescani	145.37	335	⇓P	PKPbc	08 49 02.6	-0.1
MOX	Moxa	145.40	354	*e*PKPbc	PKPdf	08 49 02.2	-0.5
	baz=7.3,slow=3.0						
LANS	Liptovska Anna	145.44	345	*e*PKP	PKPab	08 49 03.4	+0.2
TLCR		145.47	331	⇑P	PKPdf	08 49 02.9	0.0
GUNZ	Gunzen	145.60	353	*e*PKPbc	PKPdf	08 49 03.3	+0.2
	baz=7.3,slow=3.0						
PRU	Pruhonice	145.66	351	*e*PKP	PKPdf	08 49 02.8	-0.3
PRU				*e*x	x	08 49 34.4	
WERN	Wernitzgruen	145.67	353	*e*PKPbc	PKPbc	08 49 03.6	0.0
	baz=7.3,slow=3.0						
NKC	Novy Kostel	145.71	353	*e*PKP	PKPdf	08 49 03.0	-0.3
ARCR	ARCALIA	145.78	338	⇑P	PKPdf	08 49 02.5	-1.0
CFR	Carcaliu	145.79	332	⇑P	PKPdf	08 49 03.6	+0.1
VRI	Vrincioaia	145.86	334	⇑P	PKPdf	08 49 03.9	+0.3
PLOR	Plostina	145.90	334	⇑P	PKPdf	08 49 03.6	-0.2
TPGR	Topolog	145.91	331	⇑P	PKPbc	08 49 04.7	+0.2
VRAC	Vranov	145.95	348	⇑P	PKPbc	08 49 04.4	-0.1
VRAC	Vranov	145.95	348	*e*PKP	PKPbc	08 49 04.2	-0.3
VRAC				*e*		08 49 35.6	
TNS	Taunus Mts	146.04	358	*e*PKPbc	PKPbc	08 49 04.5	-0.3
	baz=7.3,slow=3.0						
OZUR		146.06	335	⇑P	PKPbc	08 49 04.8	-0.2
JAVC	Velka Javorina	146.15	346	*e*PKP	PKPab	08 49 05.8	-0.1
JAVC				*e*		08 49 37.9	
ROTZ	Rotzenmuhle	146.20	353	*e*PKPbc	PKPbc	08 49 05.2	0.0
	baz=7.3,slow=3.0						
VYHS	Vyhne	146.21	345	*e*PKP	PKPbc	08 49 05.0	-0.3
KRUC	Moravsky	146.22	348	*e*PKP	PKPdf	08 49 04.6	+0.5
KRUC				*e*		08 49 36.6	
HARR	Harsova	146.26	332	⇑P	PKiKP	08 49 08.4	-0.2
DOPR	Dopca	146.32	336	⇑P	PKPbc	08 49 06.2	+0.5
NEHR	Nehoiu	146.39	334	⇑P	PKPab	08 49 06.7	-0.2
PSZ	Piszkesteto	146.46	343	⇑P	PKPbc	08 49 06.3	+0.2
MLR	Muntele Rosu	146.48	335	⇓P	PKPbc	08 49 06.7	+0.3
SMOL	Smolenice	146.53	347	*e*PKP	PKPbc	08 49 06.7	+0.5
BRTR	Keskin Array B	146.60	320	PKPbc	PKPbc	08 49 06.4	-0.5
	comp=Z,10nm,0.8s,baz=108,slow=2.1,SNR=56						
DRGR		146.60	339	⇓P	PKPdf	08 49 05.7	+0.8
KHC	Kasperske Hory	146.65	351	*e*PKP	PKPbc	08 49 05.9	-0.7
KHC				*e*pPKP	sPKPbc	08 49 36.8	+0.3
MODS	Modra-Piesok	146.69	347	*e*PKP	PKPbc	08 49 06.0	-0.7
VOIR		146.89	336	⇓P	PKPbc	08 49 07.9	+0.5
GEC2	GERESS Array S	146.91	351	*e*PKPbc	PKPbc	08 49 07.1	-0.3
	baz=7.3,slow=3.0						
GERES	GERESS Array B	146.91	351	PKPbc	PKPbc	08 49 07.0	-0.3
	comp=Z,3.9nm,0.7s,baz=29,slow=3.0,SNR=34						
ARR	Arges	147.11	336	⇑P	PKPbc	08 49 08.7	+0.6
CONA	Conrad Observa	147.41	348	*i* P	PKPbc	08 49 09.0	+0.2
	comp=Z,15nm,0.9s						
MOA	Molln	147.78	350	*e*P	PKPbc	08 49 09.6	-0.2
	comp=Z,7.8nm,0.8s						
BFO	Black Forest	147.94	357	*e*PKPbc	PKPbc	08 49 10.0	-0.1
	baz=7.3,slow=3.0						
BZS	Buzias	148.00	340	⇓P	PKPbc	08 49 09.8	-0.6
ARSA	Arzberg	148.13	348	*e*P	PKPbc	08 49 10.2	-0.5
	comp=Z,7.3nm,1.0s						
HERR	Herculane	148.36	338	⇑P	PKPbc	08 49 11.0	-0.3
RETA	Reutte	148.61	354	*i* P	PKPbc	08 49 11.6	-0.4
	comp=Z,4.9nm,0.8s						
WATA	Walderalm	148.67	353	*i* P	PKPbc	08 49 11.8	-0.4
	comp=Z,6.2nm,0.6s						
KBA	Koelnbreinsper	148.68	351	*e*P	PKPbc	08 49 11.4	-1.0
	comp=Z,6.3nm,0.7s						
MOTA	Moosalm	148.71	354	*i* P	PKPbc	08 49 12.1	-0.3
	comp=Z,13nm,1.1s						
WTTA	Wattenberg	148.73	353	*i* P	PKPbc	08 49 12.3	-0.2
	comp=Z,14nm,0.6s,SNR=7.7						
SOKA	Soboth	148.78	348	*e*P	PKPbc	08 49 11.4	-1.1
	comp=Z,7.0nm,0.9s,SNR=4.4						
SQTA	Sankt Quirin	148.82	354	*i* P	PKPbc	08 49 12.4	-0.2
	comp=Z,7.4nm,0.8s						
DAVA	Damuels	148.88	355	*i* P	PKPbc	08 49 12.9	+0.1
	comp=Z,12nm,0.8s						
OBKA	Obir	149.03	349	*i* P	PKPbc	08 49 12.3	-0.8
	comp=Z,16nm,1.2s						
FETA	Feichten	149.07	354	*e*P	PKPbc	08 49 12.8	-0.5
	comp=Z,14nm,1.1s						
MYKA	Terra Mystica	149.07	350	*i* P	PKPbc	08 49 11.9	-1.3
	comp=Z,10nm,0.9s						
ABTA	Abfaltersbach	149.13	352	*e*P	PKPbc	08 49 12.3	-1.0
	comp=Z,12nm,0.7s,SNR=7.3						
VTS	Vitosha	149.96	335	⇑P	PKPbc	08 49 15.3	-0.3
ESDC	Sonseca Array	154.98	19	PKPbc	PKPbc	08 49 26.8	0.0
	comp=Z,1.0nm,0.9s,baz=330,slow=1.8,SNR=2.8						
ESDC				PKPab	PKPab	08 49 43.2	+0.8
	comp=Z,1.1nm,0.9s,baz=322,slow=3.6,SNR=3.2						
TORD	Torodi Ar. Bea	174.60	124	PKP	PKPdf	08 49 34.4	-1.1
	comp=Z,1.3nm,0.9s,baz=329,slow=1.7,SNR=4.4						

IDC 17 08:30:07.4±2.0**, 57°.10S**×**23°.79W, h0^{km}, mb4.1**/1**, mb1 4.1**/1**, mb1mx3.7**/23**, mbtmp4.1**/1**, Error ellipse: s-maj=116.3km s-min=73.9km az=137.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	73.11	26	P	P	08 41 39.4	0.0
	1.7nm,0.9s,baz=197,slow=6.1,SNR=5.2						
YKA	Yellowknife Ar	138.22	316	PKP	PKPdf	08 49 32.0	-0.8
	0.3nm,0.8s,baz=122,slow=3.0,SNR=5.0						
SONM	Songino Array	148.92	86	PKPbc	PKPbc	08 49 55.7	-0.6
	0.5nm,0.6s,baz=246,slow=2.5,SNR=2.9						
ILAR	Eielson Array	152.23	310	PKPbc	PKPbc	08 50 03.3	-0.1
	0.6nm,0.7s,baz=100,slow=1.2,SNR=9.7						

IDC 17 08:47:38.1±2.0**, 8°.25S**×**124°.58E, h0^{km}, mb3.4**/1**, mb1 3.8**/3**, mb1mx3.5**/24**, mbtmp3.6**/3**, ML3.8**/2**, Error ellipse: s-maj=284.6km s-min=32.0km az=58.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.98	142	Pn	Pn	08 51 11.7	+0.3
	0.4nm,0.3s,baz=319,slow=12,SNR=8.8						
WRA				Sn	Sn	08 53 43.2	-15
	0.8nm,0.3s,baz=312,slow=25,SNR=11						
ASAR	Alice Springs	17.75	151	P	Pn	08 51 46.7	-0.1
	0.4nm,0.3s,baz=330,slow=14,SNR=36						
ASAR				S	Sn	08 54 49.3	-16
	0.2nm,0.3s,baz=318,slow=23,SNR=8.0						
MKAR	Makanchi Array	66.45	330	P	P	08 58 29.3	0.0
	0.2nm,0.5s,baz=127,slow=6.4,SNR=4.2						

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*IDC **17** 08:59:06.8±1.3, 17°.87S×167°.81E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.8/30, mbtmp3.8/7, ML3.3/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/45, Error ellipse: s-maj=39.0km s-min=26.5km az=145.0*

*NOU **17** 08:59:08.7, 17°.93S×167°.57E, h0^{km}, MLv4.2, Vanuatu Islands*

ISC 17 08:59:08.4±0.9**, 17°.94S**±0°.06×**167°.77E**±0°.09**, h10^{km}, n20,** σ**1^{s}.48**/17**, mb3.9**/5**, MS3.1**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.45	62	P	Pn	08 59 21.1	+0.1
SANVU	Saraoutou	2.54	348	P	Pn	08 59 50.1	+0.4
LIFNC	LIFOU	2.87	190	P	Pn	08 59 55.6	+1.4
MARNC	Mare, Loyalty	3.53	176	P	Pn	09 00 04.5	+1.2
YATNC	Mamie plateau,	4.18	191	P	Pn	09 00 13.8	+1.5
KOUNC	Koumac, New Ca	4.19	231	P	Pn	09 00 12.6	+0.2
DZM	Mont Dzumac	4.29	197	Pn	Pn	09 00 13.8	-0.1
	1.8nm,0.3s,baz=253,slow=8.2,SNR=38						
DZM				Sn	Sn	09 00 60.0	-4.2
	12nm,0.3s,baz=132,slow=22,SNR=14						
DZM				LR	LR	09 01 46.8	
	comp=Z,118nm,19.9s,baz=73,slow=37						
DZM	Mont Dzumac	4.29	197	*e*LR	LR	09 01 03.0	
	comp=Z,126nm,24.8s						
DZM	Mont Dzumac	4.29	197	P	Pn	09 00 14.5	+0.6
NOUC	Port Laguerre	4.36	198	P	Pn	09 00 14.9	+0.1
OUENC	Ouen Island, N	4.54	191	P	Pn	09 00 18.4	+1.2
MSVF	Nonsavu	9.79	90	Pn	Pn	09 01 36.3	+6.8
	0.2nm,0.3s,baz=278,slow=12,SNR=8.7						
MSVF				LR	LR	09 04 26.2	
	comp=Z,186nm,18.2s,baz=225,slow=33						
CTA	Charters Tower	20.45	261	P	P	09 03 48.3	+2.0
	1.3nm,0.8s,baz=84,slow=10,SNR=1.6						
PMG	Port Moresby	21.73	290	LR	LR	09 11 07.9	
	comp=Z,52nm,19.9s,baz=152,slow=33						
STKA	Stephens Creek	27.41	235	LR	LR	09 14 33.9	
	comp=Z,47nm,20.1s,baz=23,slow=34						
WRA	Warramunga Arr	31.66	261	P	P	09 05 31.8	-0.4
	0.6nm,0.8s,baz=90,slow=9.1,SNR=4.1						
ASAR	Alice Springs	32.12	254	P	P	09 05 36.3	+0.1
	0.9nm,0.6s,baz=82,slow=8.7,SNR=14						
ASAR				LR	LR	09 18 03.1	
	comp=Z,87nm,19.1s,baz=108,slow=35						
QSPA	South Pole Qui	72.10	180	P	P	09 10 33.9	+1.0
	2.5nm,1.1s,baz=66,slow=3.7,SNR=3.2						
NVAR	Mina Array Bea	89.00	49	P	P	09 12 03.5	-0.5
	0.1nm,0.4s,baz=221,slow=6.6,SNR=3.9						
ILAR	Eielson Array	89.42	18	P	P	09 12 04.6	-0.5
	0.7nm,1.0s,baz=237,slow=5.4,SNR=3.4						

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*NEIC **17** 09:07:50.9±2.4, 24°.07S±0°.06×66°.92W±0°.09, h169^{km}±5^{km}, mb4.6/91, Md4.5(SJA), Error ellipse: s-maj=11.8km s-min=9.0km az=87.0*

*SJA **17** 09:07:50.2±0.7, 24°.12S×67°.13W, h201^{km}±5^{km}, ML4.5, MW4.3*

*IDC **17** 09:07:51.5±0.9, 24°.01S×66°.92W, h169^{km}±7^{km}, mb4.0/12, mb1 4.2/18, mb1mx4.1/29, mbtmp4.5/18, Error ellipse: s-maj=13.5km s-min=10.4km az=30.0*

*VAO **17** 09:07:52.1±0.2, 23°.98S×66°.99W, h186^{km}, mb4.8*

*GUC **17** 09:07:53.2±0.5, 23°.81S×67°.80W, h250^{km}±22^{km}, ML5.1*

ISC 17 09:07:50.9±0.5**, 24°.10S**±0°.04×**67°.13W**±0°.04**, h171**^{km}±5^{km}**, n246,** σ**1^{s}.68**/283**, mb4.5**/46**, 5C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.61	113	*e*P	Pn	09 08 25.8	+2.4
SLA				*e*S	Sn	09 08 52.1	+3.7
SLA				IAML		09 08 54.7	
	comp=Z,628nm,0.7s						
LVC	Limon Verde	2.21	312	P	Pn	09 08 32.4	+2.3
	comp=Z,194nm,0.3s,baz=128,slow=5.1,SNR=797						
LVC				S	Sn	09 09 02.7	+2.4
	comp=Z,836nm,0.3s,baz=311,slow=20,SNR=21						
LVC	Limon Verde	2.21	312	*e*P	Pn	09 08 32.3	+2.3
LVC				*i* S	Sn	09 09 01.5	+1.2
LVC	Limon Verde	2.21	312	Pn	Pn	09 08 32.5	+2.5
LVC	Limon Verde	2.21	312	*e*P	Pn	09 08 32.4	+2.3
LVC				*e*S	Sn	09 09 03.2	+2.9
LVC				IAML		09 09 05.7	
	comp=Z,1μm,0.5s						
LVC	Limon Verde	2.21	312	*e*P	Pn	09 08 32.2	+2.2
LVC				*e*S	Sn	09 09 02.3	+2.1
FSA	Cafayete	2.26	153	*e*P	Pn	09 08 31.9	+1.5
FSA				*e*S	Sn	09 09 02.9	+1.7
YJA	Yavi	2.43	38	*e*P	Pn	09 08 34.8	+2.1
YJA				*e*S	Sn	09 09 08.2	+3.2
YJA				IAML		09 09 13.3	
	comp=Z,178nm,1.2s						
GO02	Mina Guanaco	2.47	244	⇑*i*P	Pn	09 08 35.1	+2.0
GO02				*i* S	Sn	09 09 08.1	+2.4
GO02				IAML		09 09 09.4	
	comp=N,8μm,0.5s						
GO02	Mina Guanaco	2.47	244	Pn	Pn	09 08 35.2	+2.2
PB09	IPOC Station P	3.00	319	*e*P	Pn	09 08 41.2	+1.9
PB09				*i* S	Sn	09 09 18.7	+1.7
PB09				IAML		09 09 22.3	
	comp=E,3μm,0.5s						
PB09	IPOC Station P	3.00	319		Pn	09 08 42.0	+2.7
PB09	IPOC Station P	3.00	319	*e*P	Pn	09 08 41.6	+2.2
PB09				*e*S	Sn	09 09 19.1	+2.0
PB09				IAML		09 09 25.3	
	comp=Z,2μm,0.7s						
PB14	IPOC Station P	3.03	259	⇑*i*P	Pn	09 08 41.1	+1.3
PB14				*i* S	Sn	09 09 17.8	+0.1
PB14	IPOC Station P	3.03	259	Pn	Pn	09 08 41.0	+1.3
PB14	IPOC Station P	3.03	259	*e*P	Pn	09 08 41.2	+1.5
PB14				*e*S	Sn	09 09 18.4	+0.7
PB14				IAML		09 09 27.5	
	comp=Z,1μm,0.3s						
PB05	IPOC Station P	3.08	293	*e*P	Pn	09 08 41.6	+1.4
PB05				*i* S	Sn	09 09 18.1	-0.5
PB05				IAML		09 09 20.1	
	comp=E,4μm,0.3s						
PB05	IPOC Station P	3.08	293	*e*P	Pn	09 08 41.5	+1.3
PB05				*e*P		09 08 41.6	
PB05				*e*S	Sn	09 09 19.1	+0.6
PB05				IAML		09 09 25.3	
	comp=Z,2μm,0.8s						
AHML	Horco Molle	3.13	149	*e*P	Pn	09 08 42.3	+1.5
AHML				*e*S	Sn	09 09 20.5	+0.9
AHML				IAML		09 09 25.7	
	comp=Z,49nm,2.0s						
PB03	IPOC Station P	3.16	310	*e*P	Pn	09 08 42.7	+1.4
PB03				*i* S	Sn	09 09 20.6	+0.1
PB03	IPOC Station P	3.16	310	*e*P	Pn	09 08 42.7	+1.4
PB03				*e*S	Sn	09 09 20.5	+0.1
PB03				IAML		09 09 21.9	
	comp=Z,5μm,0.4s						
PB10	IPOC Station P	3.19	280	*e*P	Pn	09 08 43.1	+1.6
PB10				*i* S	Sn	09 09 20.2	-0.5
PB10				IAML		09 09 22.5	
	comp=E,3μm,0.5s						
PB10	IPOC Station P	3.19	280	Pn	Pn	09 08 43.3	+1.9
PB10	IPOC Station P	3.19	280	*e*P	Pn	09 08 43.1	+1.6
PB10				*e*S	Sn	09 09 21.1	+0.4
PB10				IAML		09 09 24.3	
	comp=Z,3μm,0.3s						
AC02	Maricunga	3.27	213	⇑*i*P	Pn	09 08 44.8	+1.9
AC02				*i* S	Sn	09 09 25.8	+2.4
AC02	Maricunga	3.27	213		Pn	09 08 44.8	+1.9
PB04	IPOC Station P	3.28	302	*e*P	Pn	09 08 44.1	+1.3
PB04				*i* S	Sn	09 09 22.6	-0.6
PB04	IPOC Station P	3.28	302	Pn	Pn	09 08 43.8	+1.0
PB04	IPOC Station P	3.28	302	*e*P	Pn	09 08 44.1	+1.3
PB04				*e*S	Sn	09 09 23.2	-0.1
PB04				IAML		09 09 27.6	
	comp=Z,5μm,0.9s						
PB07	IPOC Station P	3.47	312	*e*P	Pn	09 08 46.3	+1.1
PB07				*i* S	Sn	09 09 26.4	-1.0
PB07	IPOC Station P	3.47	312		Pn	09 08 46.1	+1.0
PB07	IPOC Station P	3.47	312	*e*P	Pn	09 08 46.3	+1.1
PB07				*e*S	Sn	09 09 27.0	-0.3
PB07				IAML		09 09 32.5	
	comp=Z,4μm,0.3s						
AC01	Pan de Azucar	3.74	236	⇑*i*P	Pn	09 08 48.7	+0.3
AC01				*i* S	Sn	09 09 31.9	-1.5
AC01	Pan de Azucar	3.74	236	Pn	Pn	09 08 48.8	+0.3
PATCX	Punta Patache	4.29	319		Pn	09 08 56.5	+0.9
PB08	IPOC Station P	4.36	334		Pn	09 08 58.4	+1.6
GO03	Copiap	4.46	218	Pn	Pn	09 08 57.5	-0.2
GO03	Copiap	4.46	218	*e*P	Pn	09 08 57.6	-0.1
GO03				*e*S	Sn	09 09 49.0	-1.0
TA01	Diego Aracena	4.51	321	Pn	Pn	09 08 58.7	+0.4
VCA	Vinchina	4.72	192	*e*P	Pn	09 09 02.7	+1.6
VCA				IAML		09 10 19.3	
	comp=Z,131nm,1.3s						
GO01	Chusmiza	4.81	336		Pn	09 09 03.3	+0.7
PSGCX	Pisagua	5.27	328	Pn	Pn	09 09 07.3	-1.0
AC04	Llanos de Chal	5.41	220	Pn	Pn	09 09 08.3	-1.7
MNMC	Minye Minye	5.45	335		Pn	09 09 10.7	-0.2
AC05	El Transito	5.49	210		Pn	09 09 10.9	-0.4
PB16	IPOC Station P	6.15	338		Pn	09 09 20.8	+0.5
CO01	Juntas del Tor	6.42	204		Pn	09 09 23.5	0.0
GO04	Tololo Observa	6.87	208		Pn	09 09 27.4	-2.2
RTLL	Cerro Villicun	7.30	189	*e*P	Pn	09 09 34.8	-0.2
RTLL				*e*S	Sn	09 10 54.5	-2.6
RTLL				IAML		09 10 58.1	
	comp=Z,87nm,0.4s						
CO03	El Pedregal	7.42	204		Pn	09 09 34.6	-2.0
ZON	Zonda	7.54	190		Pn	09 09 37.8	-0.4
ZON	Zonda	7.54	190	*e*P	Pn	09 09 38.3	+0.1
ZON				*e*S	Sn	09 11 00.7	-2.2
ZON				IAML		09 11 13.4	
	comp=Z,31nm,0.8s						
TCA	Tanti	7.55	163	*e*P	Pn	09 09 38.0	-0.4
TCA				*e*S	Sn	09 10 59.6	-3.6
TCA				IAML		09 11 02.3	
	comp=Z,31nm,0.8s						
RTCV	Cerro Valdivia	7.83	189	*e*P	Pn	09 09 41.7	-0.3
RTCV				*e*S	Sn	09 11 10.3	+0.5
RTCV				IAML		09 11 13.0	
	comp=Z,36nm,0.9s						
CO02	Combarbal	7.86	205		Pn	09 09 40.2	-2.3
RTLS	Leoncito	7.91	194	*e*P	Pn	09 09 43.3	+0.1
RTLS				*e*S	Sn	09 11 10.2	-1.7
RTLS				IAML		09 11 14.6	
	comp=Z,67nm,0.4s						
MRA	San Martin	8.38	172	*e*P	Pn	09 09 47.7	-1.6
MRA				*e*S	Sn	09 11 17.6	-5.4
MRA				IAML		09 11 34.4	
	comp=Z,22nm,0.5s						
VA03	San Esteban	9.14	198		Pn	09 09 57.4	-2.0
CPUP	Villa Florida	9.15	106	P	Pn	09 09 57.8	-1.7
	comp=Z,1.1nm,0.3s,baz=288,slow=12,SNR=26						
CPUP	Villa Florida	9.15	106	Pn	Pn	09 09 57.4	-2.0
CPUP	Villa Florida	9.15	106	*e*P	Pn	09 09 59.3	-0.2
ROC1	El Roble	9.48	200		Pn	09 10 00.7	-3.3
MT02	Curacav	9.78	200		Pn	09 10 04.4	-3.3
SIV	San Ignacio	9.87	36	P	Pn	09 10 07.1	-2.0
	comp=Z,8.0nm,0.3s,baz=227,slow=12,SNR=290						
SIV				S	Sn	09 11 45.5	-13
	comp=Z,0.5nm,0.3s,baz=231,slow=15,SNR=6.4						
ITQB	Itaqui	10.90	123	*e*P	Pn	09 10 22.1	-0.1
BO02	Sierra Bellavi	11.12	196		Pn	09 10 22.9	-2.3
AQDB	Aquidauana	11.18	73	*e*P	Pn	09 10 24.0	-2.1
VILB	Vilhena	12.88	32	*e*P	Pn	09 10 47.1	-0.9
BI02	San Fabin de	13.02	195		Pn	09 10 49.2	-0.5
PP1B	Ponte de Pedra	13.15	63	*e*P	Pn	09 10 49.4	-2.0
TRCB	Terra Rica	13.37	87	*e*P	Pn	09 10 53.4	-0.8
CPSB	Cacapava Do Su	13.70	120	*e*P	Pn	09 10 57.8	-0.4
PTGB	Pitanga	13.74	96	*e*P	Pn	09 10 58.3	-0.6
ITAB	Concordia	13.88	106	*e*P	Pn	09 10 60.0	-0.6
PLTB	Pedras Altas	14.18	126	*e*P	Pn	09 11 02.6	-1.7
ETMB	Extrema	14.23	4	*e*P	Pn	09 11 03.1	-1.9
PCMB	Pacaembu	14.84	84	*e*P	Pn	09 11 10.3	-2.2
NNA	Nana	15.17	321	P	P	09 11 19.1	+1.4
	comp=Z,0.9nm,0.3s,baz=135,slow=8.6,SNR=4.2						
LC01	Cunco	15.29	194		Pn	09 11 15.7	-2.2
LC01				IAmb	IAmb	09 11 21.6	
	comp=Z,81nm,1.7s						
CNLB	Canela	15.45	113	*e*P	Pn	09 11 18.6	-1.3
SAML	Samuel	15.53	15	P	Pn	09 11 20.2	-0.9
SAML				IAmb	IAmb	09 11 22.3	
	comp=Z,30nm,0.9s						
SAML	Samuel	15.53	15	*e*P	Pn	09 11 19.8	-1.2
FRTB	Fartura	16.11	91	*e*P	Pn	09 11 26.9	-1.2
ITRB	Iturama	16.17	78	*e*P	Pn	09 11 26.7	-2.1
ARAG	Araguaiana, MT	16.64	63	*e*P	P	09 11 32.9	-1.1
PLCA	Paso Flores	16.83	189	P	Pn	09 11 36.9	+0.3
	comp=Z,1.0nm,0.3s,baz=15,slow=11,SNR=39						
PLCA				PcP	PcP	09 16 14.5	+0.8
	comp=Z,0.1nm,0.3s,baz=90,slow=2.0,SNR=4.8						
PLCA	Paso Flores	16.83	189	P	Pn	09 11 36.9	+0.3
PLCA				IAmb	IAmb	09 11 44.8	
	comp=Z,24nm,0.8s						
PLCA	Paso Flores	16.83	189	*e*P	Pn	09 11 37.0	+0.3
CZSB	Cruzeiro do Su	17.13	341	*e*P	P	09 11 38.2	-1.1
BB19B	Bebedouro	17.45	84	*e*P	P	09 11 42.8	0.0
SPB	Sao Paulo	18.03	92	P	P	09 11 47.6	-1.4
SPB	Sao Paulo	18.03	92	*e*P	P	09 11 48.3	-0.8
PET01	Itanhaem-SP	18.12	95	*e*P	P	09 11 49.4	-0.7
VAO	Valinhos	18.52	91	*e*P	P	09 11 53.7	-0.9
IPMB	Ipameri, GO	18.67	75	*e*P	P	09 11 55.1	-1.1
LL01	San Ignacio de	18.75	192	P	P	09 11 57.1	+0.4
SNDB	Serra Nova Dou	19.27	54	*e*P	P	09 12 00.9	-1.7

PARB	Paraibuna	19.71	92	eP	P	09 12 06.3	-1.1
GO07	Milladeo Hill,	19.72	194	P	P	09 12 07.4	+0.3
BDFB	Brasilia	19.84	68	P	P	09 12 08.2	-0.7
	comp=Z,12nm,0.3s,baz=240,slow=12,SNR=295						
BDFB	Brasilia	19.84	68	P	P	09 12 08.4	-0.5
NPGB	Novo Progresso	20.38	36	eP	P	09 12 11.4	-3.1
ESAR	Angra dos Reis	20.83	92	eP	P	09 12 18.0	-1.2
BSCB	Bom Sucesso	20.88	86	eP	P	09 12 18.2	-1.6
MAN01	Angra dos Reis	21.29	91	eP	P	09 12 21.5	-2.7
MACA	Manacapuru-AM	21.73	18	eP	P	09 12 26.3	-2.5
VAS01	Vassouras-RJ	21.85	90	eP	P	09 12 29.4	-0.7
ITTB	Itaituba	22.49	31	eP	P	09 12 33.5	-2.7
DUB01	Friburgo-RJ	22.86	90	eP	P	09 12 38.6	-1.0
JANB	Januaria	23.28	71	eP	P	09 12 42.0	-1.6
CAM01	Campos-RJ	23.56	90	eP	P	09 12 45.0	-0.9
SMTB	Santa Maria do	24.05	54	eP	P	09 12 49.2	-1.4
SDBA	SAO DESIDERIO	24.06	65	eP	P	09 12 48.8	-1.9
PTGA	Pitinga	24.25	18	P	P	09 12 51.2	-1.1
	comp=Z,4.7nm,0.3s,baz=193,slow=10,SNR=18						
PTGA	Pitinga	24.25	18	P	P	09 12 49.9	-2.4
PTGA				IAmb	IAmb	09 12 52.2	
	comp=Z,19nm,0.9s						
PTGA	Pitinga	24.25	18	eP	P	09 12 51.2	-1.1
PRPB	Parauapebas	24.38	46	eP	P	09 12 50.6	-2.9
ALF01	Guarapari-ES	24.66	87	eP	P	09 12 54.5	-1.4
BSFB	Barra de Sao F	25.00	83	eP	P	09 12 57.2	-1.9
RIB01	Linhares ES	25.28	84	eP	P	09 12 59.7	-1.9
MALB	Monte Alegre	25.38	31	eP	P	09 13 00.5	-2.0
NAN01	Guarapari, ES	25.95	81	eP	P	09 13 05.2	-2.4
GDU01	Guandu, BA	27.99	73	eP	P	09 13 23.6	-2.3
NBPS	Pedro II - PI	31.57	56	eP	P	09 13 56.0	-1.6
SDV	Santo Domingo	32.96	354	P	P	09 14 05.8	-4.0
SDV				IAmb	IAmb	09 14 16.6	
	comp=Z,5.8nm,0.6s						
SDV	Santo Domingo	32.96	354	eP	P	09 14 09.6	-0.2
NBMO	Morrinhos-CE	33.33	56	eP	P	09 14 11.2	-1.6
NBPA	Parau_RN	34.13	63	eP	P	09 14 18.0	-1.7
RCBR	Riachuelo	35.08	64	P	P	09 14 22.9	-5.0
RCBR				IAmb	IAmb	09 14 27.9	
	comp=Z,18nm,0.8s						
RCBR	Riachuelo	35.08	64	eP	P	09 14 27.7	-0.2
NBPV	Pedro Velho	35.26	65	eP	P	09 14 27.7	-1.7
GRGR	Grenville	36.41	9	P	P	09 14 38.7	-0.4
HDC	Heredia	37.73	332	P	P	09 14 49.8	-0.7
FDF	Fort de France	39.04	9	P	P	09 15 00.3	-0.8
CBYP	Canovanas	42.13	2	P	P	09 15 22.1	-4.4
CBYP				IAmb	IAmb	09 15 25.5	
	comp=Z,11nm,0.9s						
CUPR	Culebra, Puert	42.19	3	P	P	09 15 24.4	-2.5
BELA	Belgrano 2	55.96	172	P	P	09 17 11.7	+0.8
VNA3	Neumayer Olymp	57.10	161	P	P	09 17 19.9	+1.0
451A	Vernon	57.26	341	P	P	09 17 21.1	+0.6
VNA1	Neumayer--Stat	57.30	160	P	P	09 17 21.6	+1.3
VNA2	Neumayer--Watz	57.66	160	P	P	09 17 24.0	+1.0
	baz=286,slow=8.9						
ZAIG	Zacatecas	57.93	321	P	P	09 17 27.9	+2.2
ZAIG				IAmb	IAmb	09 17 29.0	
	comp=Z,5.4nm,0.9s						
SNAA	Sanae	59.30	161	P	P	09 17 35.1	+0.8
SNAA	Sanae	59.30	161	P	P	09 17 34.4	+0.1
SNAA				IAmb	IAmb	09 17 35.9	
	comp=Z,9.0nm,0.8s						
833A	Chaparral WMA,	60.68	327	P	P	09 17 44.4	+0.2
143A	Socs Landing,	61.05	337	P	P	09 17 47.4	+0.9
143A				IAmb	IAmb	09 17 48.9	
	comp=Z,17nm,1.2s						
SWET	Sewanee	61.62	343	P	P	09 17 50.8	+0.4
JCT	Junction City	62.66	328	P	P	09 17 58.7	+1.3
JCT				IAmb	IAmb	09 17 59.1	
	comp=Z,7.5nm,0.7s						
S54A	Dingess, Beckl	63.00	347	P	P	09 18 00.1	+0.6
MIAR	Mount Ida	63.50	336	P	P	09 18 03.5	+0.7
MIAR				IAmb	IAmb	09 20 06.4	
	comp=Z,19nm,1.9s						
TXAR	Lajitas Array	63.69	325	P	P	09 18 05.4	+1.1
	comp=Z,1.0nm,0.8s,baz=155,slow=7.9,SNR=14						
TXAR	Lajitas Array	63.69	325	P	P	09 18 04.9	+0.6
TX31	Lajitas Ar. Si	63.69	325	P	P	09 18 05.3	+1.0
TX32	Lajitas Array	63.69	325	P	P	09 18 04.9	+0.6
TX32				IAmb	IAmb	09 19 20.9	
	comp=Z,12nm,1.9s						
W39A	Magazine	64.15	336	P	P	09 18 08.2	+1.2
W39A				IAmb	IAmb	09 18 09.2	
	comp=Z,6.4nm,0.8s						
X37A	Clayton	64.23	334	P	P	09 18 08.0	+0.4
CCM	Cathedral Cave	65.84	339	P	P	09 18 18.4	+0.5
CCM				IAmb	IAmb	09 19 08.1	
	comp=Z,24nm,1.7s						
OK025	Westminster Rd	65.88	333	P	P	09 18 18.8	+0.6
OK025				IAmb	IAmb	09 18 18.9	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	66.11	180	P	P	09 18 20.7	+1.2
S39A	Bolivar	66.21	338	P	P	09 18 21.0	+0.7
S39A				IAmb	IAmb	09 18 21.5	
	comp=Z,6.6nm,1.0s						
R40A	Maddies Statio	66.39	339	P	P	09 18 21.9	+0.5
R40A				IAmb	IAmb	09 18 23.1	
	comp=Z,25nm,1.6s						
MNTX	Cornudas Mount	66.46	325	P	P	09 18 22.6	+0.6
MSTX	Muleshoe	66.96	328	P	P	09 18 26.3	+1.0
MSTX				IAmb	IAmb	09 18 27.3	
	comp=Z,10nm,0.8s						
DBIC	Dimbokro	67.95	72	P	P	09 18 31.0	-0.7
	comp=Z,5.0nm,0.9s,baz=221,slow=7.8,SNR=7.1						
P38A	Dawn	68.02	338	P	P	09 18 31.8	+0.2
P38A				IAmb	IAmb	09 20 22.2	
	comp=Z,33nm,1.9s						
ANMO	Albuquerque	69.56	326	P	P	09 18 43.5	+2.0
ANMO				IAmb	IAmb	09 18 44.3	
	comp=Z,5.5nm,0.9s						
CBKS	Cedar Bluff	69.64	333	P	P	09 18 43.2	+1.5
CBKS				IAmb	IAmb	09 18 43.8	
	comp=Z,11nm,0.9s						
JFWS	Jewell Farm	70.00	342	P	P	09 18 44.3	+0.5
T25A	Trinidad	70.31	329	P	P	09 18 47.8	+1.7
T25A				IAmb	IAmb	09 18 48.2	
	comp=Z,17nm,1.5s						
I42A	Draeger Farm,	70.55	343	P	P	09 18 47.4	+0.4
X16A	Lo Mia Camp, P	71.81	323	P	P	09 18 57.3	+2.2
MVCO	Mesa Verde	72.36	326	P	P	09 19 00.5	+2.1
WUAZ	Wupatki	72.59	323	P	P	09 19 02.3	+2.6
WUAZ				IAmb	IAmb	09 19 02.9	
	comp=Z,6.3nm,0.8s						
KOWA	Kowa	72.59	65	P	P	09 18 59.6	-0.3
KOWA				IAmb	IAmb	09 19 01.6	
	comp=Z,6.8nm,0.7s						
ECSD	EROS Data Cent	72.72	338	P	P	09 19 00.6	+0.5
ISCO	Idaho Springs	73.01	330	P	P	09 19 04.2	+2.0
PV01	Paradox Valley	73.11	327	P	P	09 19 05.6	+2.8
W13A	Hualapai Mount	73.68	322	P	P	09 19 08.4	+2.2
U15A	North Rim	73.76	323	P	P	09 19 09.2	+2.5
PFO	Pinyon Flats O	74.14	319	P	P	09 19 11.1	+2.3
PFO				IAmb	IAmb	09 19 11.8	
	comp=Z,7.7nm,1.1s						
KNB	Kanab	74.48	324	P	P	09 19 13.7	+2.9
O20A	White River Ci	74.50	328	P	P	09 19 13.0	+2.2
O20A				IAmb	IAmb	09 19 13.7	
	comp=Z,7.4nm,0.9s						
VNDA	Vanda	74.58	190	P	P	09 19 12.6	+2.0
	comp=Z,4.5nm,0.9s,baz=124,slow=5.9,SNR=7.7						
VNDA	Vanda	74.58	190	P	P	09 19 13.2	+2.7
VNDA				IAmb	IAmb	09 19 13.8	
	comp=Z,8.7nm,1.1s						
LCMT	Little Creek M	74.71	323	P	P	09 19 14.4	+2.4
SRU	San Rafael Swe	74.84	326	P	P	09 19 14.7	+2.0
MTPU	Mount Pierson	74.89	325	P	P	09 19 15.6	+2.3
CCUT	Cedar City	75.17	324	P	P	09 19 17.5	+2.8
MSU	Marysvale	75.24	325	P	P	09 19 17.6	+2.5
MVU	Marysvale	75.25	325	P	P	09 19 17.8	+2.6
SHPR	Sheep Range	75.41	322	P	P	09 19 18.6	+2.5
TCRU	Three Creeks R	75.45	325	P	P	09 19 15.7	-0.7
GSC	Goldstone, Bar	75.51	320	P	P	09 19 18.8	+2.2
GSC				IAmb	IAmb	09 19 19.9	
	comp=Z,18nm,1.8s						
PRN	Pahroc Range	75.99	322	P	P	09 19 22.1	+2.8
MPU	Maple Canyon	76.08	326	P	P	09 19 22.0	+2.2
PSUT	Pine Spring	76.15	324	P	P	09 19 22.8	+2.5
TPNV	Topopah Spring	76.34	321	P	P	09 19 24.0	+2.7
JLU	Jordanelle	76.43	327	P	P	09 19 24.1	+2.3
TOA0	Torodi Ar. Sit	76.72	69	P	P	09 19 22.6	-1.1
TOA0				IAmb	IAmb	09 19 23.7	
	comp=Z,12nm,0.7s						
TORD	Torodi Ar. Bea	76.72	69	P	P	09 19 23.1	-0.5
	comp=Z,6.8nm,0.5s,baz=261,slow=5.8,SNR=51						
TORD	Torodi Ar. Bea	76.72	69	P	P	09 19 22.7	-1.0
ISA	Isabella, Lake	76.75	319	P	P	09 19 25.6	+2.0
R11A	Troy Canyon, C	76.96	323	P	P	09 19 27.1	+2.3
PDAR	Pinedale Array	77.17	329	P	P	09 19 26.9	+1.0
	comp=Z,0.6nm,0.5s,baz=132,slow=7.7,SNR=8.0						
HWUT	Hardware Ranch	77.25	327	P	P	09 19 28.0	+1.7
AHID	Auburn Hatcher	77.90	328	P	P	09 19 31.5	+1.6
AHID				IAmb	IAmb	09 19 32.2	
	comp=Z,8.4nm,1.1s						
REDW	Red Top Meadow	78.23	329	P	P	09 19 33.5	+1.7
REDW				IAmb	IAmb	09 20 42.5	
	comp=Z,22nm,2.0s						
ULM	Lac du Bonnet	78.28	342	P	P	09 19 32.1	+0.6
	comp=Z,2.6nm,0.7s,baz=169,slow=7.2,SNR=5.3						
OMMB	Old Mammoth Mi	78.38	320	P	P	09 19 35.0	+2.1
OMMB				IAmb	IAmb	09 19 35.5	
	comp=Z,5.9nm,0.8s						
MDPB	Devils Postpil	78.44	320	P	P	09 19 35.5	+2.4
ELK	Elko	78.48	325	P	P	09 19 34.8	+1.5
NVAR	Mina Array Bea	78.54	321	P	P	09 19 35.2	+1.7
	comp=Z,1.3nm,0.7s,baz=152,slow=6.0,SNR=15						
YNE	Yellowstone No	79.11	331	P	P	09 19 38.4	+1.8
YMR	Madison River	79.28	330	P	P	09 19 40.2	+2.8
YHL	Hebgen Lake	79.53	330	P	P	09 19 41.4	+2.5
PNTR	Pine Nut	79.73	321	P	P	09 19 42.5	+2.5
PNTR				IAmb	IAmb	09 19 43.0	
	comp=Z,9.9nm,0.8s						
VCNR	Virginia City	79.90	321	P	P	09 19 43.7	+2.8
PAHR	Pah Rah Range	80.02	322	P	P	09 19 43.9	+2.4
PAHR				IAmb	IAmb	09 19 44.5	
	comp=Z,7.8nm,0.9s						
HLID	Hailey	80.11	327	P	P	09 19 44.0	+2.2
HLID				IAmb	IAmb	09 19 45.0	
	comp=Z,6.5nm,0.9s						
MCMT	McKenzie Canyo	80.28	329	P	P	09 19 45.2	+2.4
BOSA	Boshof	80.80	117	P	P	09 19 46.0	+0.1
	comp=Z,1.8nm,0.3s,baz=256,slow=5.0,SNR=11						
LRM	Limekiln Ridge	80.84	330	P	P	09 19 46.9	+1.0
MAW	Mawson	81.38	163	P	P	09 19 49.2	+1.1
	comp=Z,9.0nm,0.8s,baz=222,slow=6.3,SNR=11						
MOD	Modoc Plateau	82.02	323	P	P	09 19 53.7	+1.7
F10A	Beach Ranch, E	83.23	327	P	P	09 20 00.1	+2.0
F10A				IAmb	IAmb	09 20 55.1	
	comp=Z,14nm,1.7s						
C09A	Chrisman Ranch	85.03	328	P	P	09 20 08.5	+1.5
C09A				IAmb	IAmb	09 20 09.0	
	comp=Z,5.4nm,0.8s						
FCC	Fort Churchill	85.53	346	P	P	09 20 09.9	+0.8
FCC				IAmb	IAmb	09 20 10.3	
	comp=Z,3.5nm,0.6s						
ESDC	Sonseca Array	86.55	44	P	P	09 20 14.9	+0.1
	comp=Z,1.4nm,0.8s,baz=238,slow=5.3,SNR=6.4						
YKA	Yellowknife Ar	94.17	340	P	P	09 20 50.2	+0.5
	comp=Z,1.2nm,0.7s,baz=126,slow=5.3,SNR=34						
ASAR	Alice Springs	128.31	205	PKP	PKPdf	09 26 38.0	+0.2
	comp=Z,3.5nm,0.7s,baz=140,slow=2.0,SNR=42						
ASAR	Alice Springs	128.31	205	PKPdf	PKPdf	09 26 37.7	-0.1
WRA	Warramunga Arr	131.48	207	PKP	PKPdf	09 26 44.4	+0.6
	comp=Z,2.2nm,0.5s,baz=162,slow=1.7,SNR=31						
WRA				SKPbc	SKPbc	09 29 52.6	-0.7
	comp=Z,1.3nm,0.7s,baz=156,slow=3.7,SNR=9.3						
WRA	Warramunga Arr	131.48	207		PKPdf	09 26 44.2	+0.4
SEY	Seymchan	133.12	336	PKP	PKiKP	09 26 46.5	-0.2
	comp=Z,2.3nm,0.7s,baz=57,slow=4.1,SNR=8.0						
SEY				SKPbc	SKPbc	09 29 58.0	+0.5
	comp=Z,1.1nm,0.3s,baz=226,slow=3.1,SNR=6.0						
PETK	Petropavlovsk-	135.62	323	PKhKP	PKPpre	09 26 43.7	
	comp=Z,2.7nm,1.0s,baz=82,slow=3.1,SNR=4.1						
PETK				PKP	PKiKP	09 26 51.6	-0.5
	comp=Z,1.2nm,0.7s,baz=113,slow=2.8,SNR=6.3						
ZALV	Zalesovo Beam	143.54	28	PKP	PKPbc	09 27 03.2	+0.5
	comp=Z,0.9nm,0.5s,baz=285,slow=3.5,SNR=5.2						
ZALV				SKPbc	SKPbc	09 30 27.8	+0.4
	comp=Z,0.9nm,0.6s,baz=272,slow=3.9,SNR=5.3						
KSH	Kashi	145.35	55	PKPbc	PKPab	09 27 09.3	0.0
MKAR	Makanchi Array	146.68	40	PKPbc	PKPbc	09 27 11.8	-0.7
	comp=Z,2.4nm,0.8s,baz=296,slow=3.1,SNR=13						
MKAR	Makanchi Array	146.68	40		PKPdf	09 27 11.5	+1.0
SIJI	Sorong	149.42	218	PKPbc	PKiKP	09 27 21.5	-0.2
	comp=Z,15nm,0.6s,baz=51,slow=5.9,SNR=9.2						
KAPI	Kappang	150.29	194	PKPbc	PKiKP	09 27 23.7	+0.2
	comp=Z,3.3nm,0.5s,baz=174,slow=9.2,SNR=4.6						
KAPI				PKPab	PKPab	09 27 30.3	+1.0
	comp=Z,5.5nm,0.5s,baz=153,slow=2.3,SNR=7.5						
KAPI	Kappang	150.29	194		PKiKP	09 27 24.1	+0.7
KLR	Kul'dur	150.86	334	PKPbc	PKiKP	09 27 23.5	0.0
	comp=Z,4.5nm,0.6s,baz=58,slow=2.6,SNR=17						
MJAR	Matsushiro Arr	154.94	306	PKPbc	PKPbc	09 27 33.1	+0.7
	comp=Z,1.2nm,0.5s,baz=95,slow=1.7,SNR=2.6						
MJAR				PKPab	PKPab	09 27 49.8	+1.3
	comp=Z,5.1nm,1.0s,baz=90,slow=2.4,SNR=5.4						
GTA	Gaotai	161.16	33	ePKP	PKPdf	09 27 32.4	+1.2
GTA				pPKP	PKPab	09 28 06.8	-8.6
GTA				sPKP		09 28 27.3	
LZH	Lanzhou	165.74	31	⇑PKP	PKPdf	09 27 35.6	0.0
LZH				pPKP	pPKPdf	09 28 21.8	-0.2
LZH				PKP	sPKPdf	09 28 37.5	-2.3
LZH				sPKP		09 28 40.1	

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*IDC **17** 09:16:39.0±1.1, 13°.93N×120°.85E, h126km±10km, mb3.3/6, mb1 3.5/6, mb1mx3.2/46, mbtmp3.7/6, Error ellipse: s-maj=78.3km s-min=16.5km az=69.0*

*MAN **17** 09:16:39.1, 13°.83N×120°.47E, h116km, MS2.7*

ISC 17 09:16:38.8±0.8**, 13°.84N**±0°.07×**120°.49E**±0°.08**, h126**km±6km**,**
n13, σ0ˢ69/22**, mb3.6**/6**, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.26	245	eP	Pn	09 16 56.0	-0.2
LUBP				eS	Sn	09 17 10.3	+0.9
TGY	Tagaytay City	0.50	59	P	Pn	09 16 57.8	+0.3
	198nm,0.3s,baz=173,slow=3.8,SNR=11						
TGY				S	Sn	09 17 10.8	-0.8
	345nm,0.3s,baz=317,slow=22,SNR=39						
PGP	Puerto Galera	0.56	127	⇑eP	Pn	09 16 57.9	+0.1
PGP				eS	Sn	09 17 11.6	-0.5
BOAC	Boac	1.37	106	eP	Pn	09 17 05.9	+0.8
BOAC				eS	Sn	09 17 26.2	+1.0
SJMP	San Jose	1.50	156	eP	Pn	09 17 07.3	+0.6
SJMP				eS	Sn	09 17 28.4	+0.6
BUSP	Coron	1.85	189	eP	Pn	09 17 11.3	+0.6
BUSP				eS	Sn	09 17 35.0	-0.1
OTRP	Odiongan	2.10	134	eP	Pn	09 17 14.1	+0.3
OTRP				eS	Sn	09 17 39.8	-0.7
SONM	Songino Array	35.86	344	P	P	09 23 27.0	+0.4
	1.7nm,0.5s,baz=164,slow=9.4,SNR=11						
WRA	Warramunga Arr	36.23	158	P	P	09 23 28.9	-1.0
	0.4nm,0.5s,baz=336,slow=9.4,SNR=6.4						
WRA				pP	pP	09 23 56.9	-0.8
	0.6nm,0.9s,baz=331,slow=10,SNR=2.7						
ASAR	Alice Springs	39.52	160	P	P	09 23 57.4	-0.2
	0.3nm,0.5s,baz=341,slow=7.1,SNR=5.8						
ASAR				pP	pP	09 24 25.8	+0.1
	0.5nm,0.5s,baz=336,slow=6.8,SNR=5.1						
MKAR	Makanchi Array	45.80	324	P	P	09 24 49.0	+1.0
	0.8nm,0.6s,baz=125,slow=7.7,SNR=3.9						
ZALV	Zalesovo Beam	48.84	333	P	P	09 25 11.4	0.0
	0.5nm,0.5s,baz=114,slow=3.6,SNR=2.4						
YKA	Yellowknife Ar	92.72	22	P	P	09 29 35.8	-0.7
	0.2nm,0.9s,baz=311,slow=4.0,SNR=4.1						

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*IDC **17** 09:24:39.4±1.5, 63°.45N×147°.27W, h43km±41km, mb3.3/1, mb1 3.6/4, mb1mx3.1/41, mbtmp3.4/4, ML2.7/3, Error ellipse: s-maj=27.8km s-min=10.8km az=109.0*

*AEIC **17** 09:24:40±0.9, 63°.55N±0°.03×147°.38W±0°.07, h68km±6km, ML3.0, ML3.3/82(NEIC), Error ellipse: s-maj=4.4km s-min=3.7km az=114.0*

*NEIC **17** 09:24:40.4±0.8, 63°.56N±0°.02×147°.40W±0°.07, h74km±8km, Error ellipse: s-maj=4.3km s-min=3.3km az=100.0*

*ANF **17** 09:24:40.0±0.3, 63°.65N×147°.21W, h18km, ML3.3/15, Error ellipse: s-maj=4.0km s-min=3.0km az=24.0*

ISC 17 09:24:40.6±0.9**, 63°.58N**±0°.02×**147°.39W**±0°.03**, h73**km±9km**,**
n110, σ1ˢ02/140**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RND	Reindeer	0.68	256		Pn	09 24 55.5	0.0
RND					Sn	09 25 06.8	+0.2
RND				IAML		09 25 07.5	
	comp=E,1µm,0.5s						
MCK	McKinley	0.70	283	P	Pn	09 24 55.8	0.0
	baz=104,SNR=89						
MCK				S	Sn	09 25 07.1	+0.1
	baz=104						
MCK	McKinley	0.70	283		Pn	09 24 55.8	0.0
MCK					Sn	09 25 07.3	+0.3
PS09	TAPS Pump Stn9	0.80	63		Sn	09 25 09.4	+0.4
WAT2	Susitna Watana	0.82	221		Pn	09 24 56.6	-0.6
WAT2					Sn	09 25 08.9	-0.7
HDA	Harding Lake	0.85	13	P	Pn	09 24 58.1	+0.6
	baz=193,SNR=234						
HDA				S	Sn	09 25 10.5	+0.5
	baz=193						
HDA				S	Sn	09 25 10.5	+0.5
	baz=193						
HDA	Harding Lake	0.85	13		Pn	09 24 58.0	+0.6
HDA					Sn	09 25 10.5	+0.5
HDA				IAML		09 25 11.0	
	comp=E,1µm,0.6s						
HDA				IAML		09 25 11.4	
	comp=N,573nm,0.7s						
WAT1	Susitna Watana	0.92	215		Pn	09 24 57.6	-0.7
WAT1					Sn	09 25 10.8	-0.6
WRH	Wood River Hil	0.94	341		Pn	09 24 58.7	+0.2
WRH					Sn	09 25 12.4	+0.5
WRH				IAML		09 25 13.0	
	comp=E,477nm,0.8s						
WRH				IAML		09 25 13.0	
	comp=N,546nm,0.7s						
PS08	TAPS Pump Stn8	1.00	14		Pn	09 24 59.7	+0.5
PS08					Sn	09 25 13.4	+0.3
WAT7	Susitna Watana	1.00	222		Pn	09 24 58.4	-1.0
WAT7					Sn	09 25 12.4	-0.9
WAT6	Susitna Watana	1.02	189		Pn	09 24 59.1	-0.5
PAX	Paxson	1.06	124		Pn	09 24 59.9	-0.3
CCB	Clear Creek Bu	1.08	351		Pn	09 25 00.5	+0.2
CCB					Sn	09 25 15.0	+0.1
CCB				IAML		09 25 15.5	
	comp=N,367nm,0.4s						
CCB				IAML		09 25 15.7	
	comp=E,549nm,0.4s						
BWN	Browne	1.09	304		Pn	09 24 59.6	-0.7
BWN					Sn	09 25 14.1	-1.1
RIDG	Independent Ri	1.15	81		Pn	09 25 01.1	0.0
RIDG					Sn	09 25 16.1	-0.4
HUR	Hurricane	1.18	240		Pn	09 25 00.8	-0.7
IL31		1.22	10		Pn	09 25 02.1	+0.2
IL31				Sn	Sn	09 25 18.0	+0.1
ILAR	Eielson Array	1.22	10	P	Pn	09 25 02.0	0.0
	comp=E,19nm,0.3s,baz=191,slow=13,SNR=1152						
ILAR				S	Sn	09 25 18.1	+0.2
	comp=E,33nm,0.3s,baz=353,slow=20,SNR=22						
ILAR	Eielson Array	1.22	10		Pn	09 25 01.8	-0.2
ILAR					Sn	09 25 17.5	-0.4
NEA2	Nenana	1.25	325	P	Pn	09 25 02.3	-0.2
	baz=144,SNR=76						
NEA2				S	Sn	09 25 18.3	-0.5
	baz=144						
NEA2	Nenana	1.25	325		Pn	09 25 02.2	-0.2
TRF	Thorofare Moun	1.30	265		Pn	09 25 03.3	0.0
TRF					Sn	09 25 20.0	-0.2
COLA	College	1.31	351		Pn	09 25 03.4	+0.3
TCOL	CIGO, UAF Yank	1.31	351	P	Pn	09 25 03.6	+0.4
	baz=171,SNR=86						
TCOL				S	Sn	09 25 20.2	0.0
	baz=171						
TCOL	CIGO, UAF Yank	1.31	351		Pn	09 25 03.5	+0.3
MDM	Murphy Dome	1.43	346		Pn	09 25 05.0	+0.3
MDM				IAML		09 25 23.9	
	comp=N,326nm,1.2s						
DOT	Dot Lake	1.49	86		Pn	09 25 04.9	-0.6
POKR	Poker Plat Res	1.54	359	P	Pn	09 25 06.7	+0.5
	baz=179,SNR=36						
POKR				S	Sn	09 25 25.4	-0.2
	baz=179						
POKR	Poker Plat Res	1.54	359		Pn	09 25 06.7	+0.5
POKR				IAML		09 25 26.6	
	comp=N,326nm,0.6s						
SCRK	Sand Creek	1.56	74	P	Pn	09 25 06.2	-0.4
	baz=256,SNR=51						
SCRK				S	Sn	09 25 25.2	-1.0
	baz=256						
SCRK	Sand Creek	1.56	74		Pn	09 25 06.2	-0.4
KTH	Kantishna Hill	1.58	271		Pn	09 25 06.2	-0.6
KTH				IAML		09 25 26.4	
	comp=E,254nm,0.9s						
KTH				IAML		09 25 26.6	
	comp=N,236nm,1.2s						
M24K	Tolsona, Glenn	1.58	159	P	Pn	09 25 07.3	+0.5
	baz=340,SNR=34						
M24K				S	Sn	09 25 28.6	+2.0
	baz=340						
M24K	Tolsona, Glenn	1.58	159		Pn	09 25 07.3	+0.5
BPAW	Bear Paw Mtn.	1.68	290		Pn	09 25 07.2	-0.7
BPAW				IAML		09 25 28.3	
	comp=E,266nm,0.6s						
PS11	TAPS Pump St11	1.75	149		Pn	09 25 09.2	+0.3
SCM	Sheep Creek Mo	1.76	179		Pn	09 25 08.6	-0.5
SCM				IAML		09 25 32.8	
	comp=E,313nm,0.8s						
MENT	Mentasta	1.78	110		Pn	09 25 09.4	0.0
MENT				IAML		09 25 35.5	
	comp=E,176nm,0.5s						
I23K	Minto, Yukon-K	1.79	332	P	Pn	09 25 09.7	+0.2
	baz=151,SNR=19						
I23K				S	Sn	09 25 31.4	+0.1
	baz=151						
I23K	Minto, Yukon-K	1.79	332		Pn	09 25 09.6	+0.2
I23K				IAML		09 25 46.7	
	comp=N,176nm,0.7s						
SML	Sawmill	1.83	194		Pn	09 25 09.9	-0.3
SML				IAML		09 25 35.6	
	comp=E,239nm,0.8s						
SML				IAML		09 25 39.4	
	comp=N,166nm,0.7s						
L26K	Log Cabin Wild	1.91	105	P	Pn	09 25 10.5	-0.5
	baz=288,SNR=57						
L26K	Log Cabin Wild	1.91	105		Pn	09 25 10.6	-0.5
GHO	Glory Hole Cre	1.95	202		Pn	09 25 11.6	-0.1
GHO				IAML		09 25 38.6	
	comp=N,168nm,0.8s						
GHO				IAML		09 25 38.6	
	comp=E,178nm,0.8s						
MLY	Manley	2.06	316	P	Pn	09 25 13.1	0.0
	baz=134,SNR=16						
MLY				S	Sn	09 25 36.9	-1.0
	baz=134						
MLY	Manley	2.06	316		Pn	09 25 13.1	0.0
PRP	Porcupine Dome	2.10	22		Pn	09 25 14.3	+0.5
PMR	Palmer	2.15	203		Pn	09 25 14.3	0.0
PMR				IAML		09 25 43.8	
	comp=E,145nm,0.6s						
KLU	Klutina	2.21	161		Pn	09 25 14.6	-0.5
KLU				IAML		09 25 53.8	
	comp=E,158nm,0.9s						
KLU				IAML		09 25 56.5	
	comp=N,144nm,0.6s						
CHUM	Lake Minchumin	2.21	280		Pn	09 25 14.5	-0.6
KNK	Knik Glacier	2.23	193		Pn	09 25 15.8	+0.3
KNK				IAML		09 25 47.7	
	comp=N,190nm,0.5s						
PPLA	Purkeypile	2.28	255		Pn	09 25 15.9	-0.2
PS12	TAPS Pump St12	2.36	153		Pn	09 25 16.7	-0.5
N25K	Chitina, Valde	2.37	146	P	Pn	09 25 16.6	-0.8
	baz=328,SNR=6.5						
N25K	Chitina, Valde	2.37	146		Pn	09 25 16.1	-1.2
K27K	Chicken	2.40	77	P	Pn	09 25 17.3	-0.4
	baz=261						
K27K				S	Sn	09 25 44.5	-1.6
	baz=261						
K27K	Chicken	2.40	77		Pn	09 25 17.4	-0.4
K27K				IAML		09 25 45.5	
	comp=E,129nm,0.6s						
SKT	Skwentna	2.49	232		Pn	09 25 18.4	-0.6
SKT				IAML		09 25 52.7	
	comp=E,109nm,0.5s						
SKT				IAML		09 25 54.4	
	comp=N,165nm,0.6s						
DIV	Divide	2.58	162		Pn	09 25 19.5	-0.6
BC03		2.58	99		Pn	09 25 19.3	-0.8
BCAR	Beaver Creek A	2.58	99		Pn	09 25 19.0	-1.2
SUA	Susitna One	2.63	218		Pn	09 25 21.5	+0.5
SUA				IAML		09 25 58.2	
	comp=E,131nm,0.8s						
GLB	Gilahina Butte	2.72	141		Pn	09 25 21.8	-0.3
GLI	Glacier Island	2.72	177		Pn	09 25 21.0	-0.9

GLI				IAML		09 26 03.0	
	comp=N,158nm,0.7s						
RC01	Rabbit Creek A	2.73	205	P	Pn	09 25 23.9	+1.8
	baz=23,SNR=6.5						
RC01				S	Sn	09 25 58.4	+4.3
	baz=23						
RC01	Rabbit Creek A	2.73	205		Pn	09 25 22.3	+0.2
PWL	Port Wells	2.77	190		Pn	09 25 22.3	-0.4
FID	Port Fidalgo	2.88	171		Pn	09 25 23.3	-0.8
FID				IAML		09 26 08.2	
	comp=E,105nm,0.6s						
FID				IAML		09 26 09.3	
	comp=N,134nm,0.5s						
BMRM	Bremner River	2.93	152		Pn	09 25 24.4	-0.5
STLK	Strandline Lak	2.93	227		Pn	09 25 25.3	+0.3
EGAK	Eagle	2.98	63		Pn	09 25 25.1	-0.4
EGAK				IAML		09 26 13.1	
	comp=N,112nm,0.9s						
EGAK				IAML		09 26 28.0	
	comp=N,83nm,0.7s						
VRDI	Verde Repeater	2.99	140		Pn	09 25 25.4	-0.5
MCARA	McCarthy VSAT	3.00	135		Pn	09 25 25.4	-0.3
MCARA				IAML		09 26 05.5	
	comp=E,82nm,1.0s						
MCARA				IAML		09 26 45.0	
	comp=N,71nm,1.3s						
FYU	Fort Yukon	3.13	16	Pn	Pn	09 25 28.2	+0.7
FYU				IAML		09 26 20.9	
	comp=N,70nm,4.5s						
FYU				IAML		09 26 29.4	
	comp=E,54nm,2.8s						
SPCG	Spurr Capps Gl	3.15	225		Pn	09 25 29.2	+1.3
BVCY	Beaver Creek	3.20	109		Pn	09 25 27.7	-0.9
SPCN	Chakachatna No	3.25	225		Pn	09 25 30.9	+1.7
GOAT	Goat Mountain	3.26	156		Pn	09 25 28.4	-1.0
O22K	Cooper Landing	3.30	200	S	Sn	09 26 13.5	+5.6
	baz=19						
PTPK	Patty Peak	3.32	134		Pn	09 25 31.2	+0.9
SLKM	Skilak Lake	3.36	205		Pn	09 25 31.4	+0.7
CRQM	Cirque	3.47	143		Pn	09 25 32.6	+0.3
CRQM				IAML		09 26 28.7	
	comp=E,62nm,2.1s						
CRQM				IAML		09 27 36.0	
	comp=N,74nm,3.4s						
BALM	Baldy	3.48	135		Pn	09 25 32.1	-0.3
BALM				IAML		09 26 45.6	
	comp=N,46nm,3.4s						
YUK2	White River	3.52	118		Pn	09 25 32.4	-0.6
TGL	Tana Glacier	3.55	141		Pn	09 25 32.6	-0.8
TGL				IAML		09 26 44.4	
	comp=E,47nm,0.9s						
TGL				IAML		09 27 13.9	
	comp=N,75nm,4.2s						
KIAG	Kiagna River	3.56	136		Pn	09 25 32.9	-0.7
SEW	Seward	3.62	197		Pn	09 25 33.7	-0.6
IM03		3.63	314		Pn	09 25 34.5	+0.1
IMAR	Indian Mountai	3.63	314		Pn	09 25 34.6	+0.2
BARN	Barnard Glacie	3.68	131		Pn	09 25 34.4	-0.9
BARN				IAML		09 26 16.5	
	comp=N,40nm,4.0s						
KHIT	Khitrov Hills	3.71	146		Pn	09 25 34.9	-0.6
COLD	Coldfoot	3.84	343	P	Pn	09 25 38.2	+0.9
	baz=161,SNR=12						
COLD				S	Sn	09 26 20.3	-0.9
	baz=161						
COLD	Coldfoot	3.84	343		Pn	09 25 38.1	+0.9
TTA	Tatalina	3.95	264		Pn	09 25 37.8	-1.0
TT01	Tatalina	3.96	264		Pn	09 25 37.9	-0.9
RSO	Redoubt South	4.02	221		Pn	09 25 38.9	-1.0
BM03	Burnt Mountain	4.02	16		Pn	09 25 40.5	+0.7
BMAR	Burnt Mountain	4.04	16		Pn	09 25 38.1	-1.8
LOGN	Logan Glacier	4.08	130		Pn	09 25 41.3	+0.7
BRSE	Bradley Lake S	4.17	204		Pn	09 25 41.2	-0.5
BRLK	Bradley Lake	4.18	205		Pn	09 25 41.1	-0.8
CNPM	China Poot	4.47	206		Pn	09 25 44.0	-1.8
KDAK	Kodiak Island	6.35	206	P	Pn	09 26 10.9	-0.6
	comp=N,0.3nm,0.3s,baz=340,slow=12,SNR=1.4						
KDAK				S	Sn	09 27 17.9	-4.6
	comp=N,0.3nm,0.3s,baz=108,slow=13,SNR=0.9						
WHY	Whitehorse	6.56	111	Pn	Pn	09 26 14.1	-0.3
INK	Inuvik	7.38	44	P	Pn	09 26 25.9	+0.5
	comp=N,0.2nm,0.3s,baz=239,slow=14,SNR=8.8						
INK				S	Sn	09 27 44.6	-2.8
	comp=N,0.2nm,0.3s,baz=43,slow=18,SNR=2.1						
INK	Inuvik	7.38	44	Pn	Pn	09 26 26.2	+0.9
ANM	Nome	7.94	285		Pn	09 26 33.7	+0.6
YKA	Yellowknife Ar	14.82	79	P	Pn	09 28 05.5	-0.4
	comp=N,0.0nm,0.3s,baz=288,slow=12,SNR=4.6						
PDAR	Pinedale Array	30.09	116	P	P	09 30 44.0	+0.9
	comp=N,0.6nm,0.8s,baz=332,slow=5.5,SNR=4.7						

PDG ***17*** *09:35:33.5±0.0, 42.°46N×19.°26E, h23^{km}, MD2.3/1, ML2.1/13, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

TIR ***17*** *09:35:33.8, 42.°44N×19.°32E, h5^{km}±10^{km}, Md2.7, Ml2.1*

IASPEI ***17*** *09:35:34.6±0.8, 42.°46N±0.°02×19.°30E±0.°02, h17^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=17.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

BEO ***17*** *09:35:35.2±0.5, 42.°46N×19.°40E, h6^{km}±3^{km}, ML2.0/9*

RHSSO ***17*** *09:35:35.4±0.4, 42.°44N×19.°30E, h8^{km}±2^{km}, ML2.1/8*

ISC 17 09:35:35.3±0.8**, 42.°46N**±0.°02×**19.°31E**±0.°02**, h14**^{km}±4^{km}**, n42,** σ1**^{s}25**/80**, 6C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.05	231	ePg	Pg	09 35 37.6	-0.4
PDG				eSg	Sg	09 35 40.3	+0.5
PDG	Podgorica	0.05	231	⇑iPg	Pg	09 35 37.6	-0.4
PDG				eSg	Sg	09 35 39.1	-0.7
TTG	Podgorica	0.05	231	⇑iPg	Pg	09 35 37.3	-0.7
TTG				i Sg	Sg	09 35 40.4	+0.6
DRME	Dracevica, Mon	0.29	198	⇑iPg	Pg	09 35 40.1	-1.3
DRME				eSg	Sg	09 35 45.2	-0.3
DRME	Dracevica, Mon	0.29	198	⇓iPg	Pg	09 35 39.9	-1.5
DRME				i Sg	Sg	09 35 45.3	-0.3
CEME	Cevo	0.30	287	ePg	Pg	09 35 39.8	-1.8
CEME				i Sg	Sg	09 35 45.0	-1.0
BUM	Brajici-Budva	0.35	243	⇑iPg	Pg	09 35 40.4	-2.0
BUM				i Sg	Sg	09 35 46.3	-1.0
NKME	Niksic	0.40	320	⇓iPg	Pg	09 35 41.6	-1.9
NKME				i Sg	Sg	09 35 48.4	-0.6
KOME	Kolasin	0.42	21	⇓iPg	Pg	09 35 42.4	-1.4
KOME				i Sg	Sg	09 35 49.9	+0.4
NKY	Niksic	0.42	327	⇑iPg	Pg	09 35 41.9	-1.9
NKY				i Sg	Sg	09 35 49.0	-0.6
PVY	Plav	0.50	74	⇓iPg	Pg	09 35 44.0	-1.3
PVY				i Sg	Sb	09 35 53.0	-0.1
ULC	Ulcinj	0.50	185	⇑iPg	Pg	09 35 43.3	-1.9
ULC				i Sg	Sg	09 35 51.7	-0.2
BCI	Bajram Curri	0.57	99	P	Pg	09 35 45.2	-1.4
	baz=96						
BCI				S	Sg	09 35 53.8	-0.4
	baz=96						
BCI				AMP			
	comp=N,0.8nm,0.5s,baz=96						
IVA	Berane	0.60	46	⇓iPg	Pg	09 35 45.7	-1.4
IVA				i Sg	Sb	09 35 56.0	+0.1
HCY	Herceg Novi	0.60	269	ePg	Pg	09 35 45.7	-1.4
HCY				eSg	Sg	09 35 55.2	+0.1
HCY	Herceg Novi	0.60	269	⇓iPg	Pg	09 35 44.6	-2.5
HCY				i Sg	Sg	09 35 54.0	-1.1
PUK	Puka	0.60	134	P	Pg	09 35 45.6	-1.6
	baz=132						
PUK				S	Sg	09 35 54.5	-0.7
	baz=132						
PUK				AMP			
	comp=N,0.5nm,0.4s,baz=132						
BRY	Bratogost	0.72	308	ePg	Pg	09 35 48.6	-0.7
BRY				eSg	Sg	09 35 58.6	-0.2
BRY	Bratogost	0.72	308	⇓iPg	Pg	09 35 46.8	-2.5
BRY				i Sg	Sg	09 35 58.2	-0.6
TREB	Trebinje	0.75	290	ePg	Pg	09 35 48.8	-1.2
TREB				eSg	Sb	09 36 00.6	+0.4
TREB	Trebinje	0.75	290	ePg	Pg	09 35 48.7	-1.2
TREB				eSg	Sg	09 36 00.3	+0.4
UPM	Unac-Piva	0.80	338	ePg	Pg	09 35 49.9	-1.0
UPM				eSg	Sg	09 36 01.5	0.0
UPM	Unac-Piva	0.80	338	ePg	Pg	09 35 48.6	-2.3
UPM				i Sg	Sg	09 36 01.4	0.0
DBRK	Dubrovnik	0.88	284	ePg	Pg	09 35 50.7	-1.7
DBRK				Sg	Sb	09 36 05.0	+1.0
SJES	Sjenica	0.94	31	ePg	Pg	09 35 51.9	-1.6
SJES				eSg	Sg	09 36 03.1	-2.7
SJES	Sjenica	0.94	31	⇓iPg	Pg	09 35 52.3	-1.2
SJES				eSg	Sb	09 36 06.3	+0.6
PHP	Peshkopia	1.15	132	P	Pg	09 35 56.2	-1.2
	baz=131						
PHP				S	Sb	09 36 12.6	+1.0
	baz=131						
PHP				AMP			
	comp=N,0.2nm,0.4s,baz=131						
STON	Ston	1.25	290	eSg	Sn	09 36 18.4	+3.4
STON	Ston	1.25	290	ePn	Pn	09 35 56.6	-1.7
STON				Sg	Sn	09 36 16.4	+1.4
STON	Ston	1.25	290	ePg	Pn	09 35 57.7	-0.6
STON				eSg	Sb	09 36 15.5	+0.8
IVAS	Ivanjica	1.27	29	ePg	Pn	09 35 58.3	-0.4
IVAS				eSg	Sb	09 36 14.6	-0.8
BBLS	Lazići	1.41	3	ePg	Pn	09 36 01.4	+0.9
BBLS				eSg	Sg	09 36 20.7	+0.1
BBLS	Lazići	1.41	3	ePg	Pn	09 36 01.1	+0.6
BBLS				eSg	Sg	09 36 20.8	+0.1
HAPS	Han Pijesak,Bl	1.65	351	ePn	Pn	09 36 03.5	-0.4
HAPS				eSg	Sg	09 36 27.9	-0.4
HAPS	Han Pijesak,Bl	1.65	351	ePn	Pn	09 36 04.6	+0.7
HAPS				eSn	Sn	09 36 26.3	+1.5
DIVS	Divibare	1.71	17	ePg	Pb	09 36 06.3	-0.3
DIVS				eSg	Sb	09 36 28.5	+0.6
DIVS	Divibare	1.71	17	ePn	Pb	09 36 06.4	-0.2
DIVS				eSn	Sb	09 36 28.9	+1.0
GRUS	Gruza	1.76	35	ePn	Pn	09 36 06.4	+1.1
RICI	Ricice	1.90	304	ePn	Pn	09 36 07.8	+0.5
RICI				Sn	Sn	09 36 32.7	+1.7
TEKS	Tekeris	2.09	4	eSg	Sg	09 36 41.8	-0.8
ZAGS	Zajecar	2.53	57	ePn	Pn	09 36 16.0	+0.1
KIJV	Kijevo	2.62	307	ePn	Pn	09 36 18.1	+0.8
KIJV				Sn	Sn	09 36 51.3	+2.5

IDC ***17*** *09:36:42.5±0.5, 51.°64N×175.°34W, h0^{km}, mb4.2/26, mb1 4.3/28, mb1mx4.1/61, mbtmp4.2/28, ML4.2/2, MS3.4/16, Ms1 3.4/16, ms1mx3.2/46, Error ellipse: s-maj=18.7km s-min=10.3km az=166.0*

MOS ***17*** *09:36:46.7±0.9, 51.°72N×175.°40W, h41^{km}, mb4.5/12, Error ellipse: s-maj=10.9km s-min=8.8km az=71.3*

AEIC ***17*** *09:36:47±2.1, 51.°62N±0.°08×175.°33W±0.°06, h29^{km}±4^{km}, ML4.4, mb4.4/89(NEIC), Error ellipse: s-maj=11.3km s-min=5.0km az=167.0*

NEIC ***17*** *09:36:49.5±1.7, 51.°70N±0.°07×175.°36W±0.°05, h50^{km}±3^{km}, Error ellipse: s-maj=10.5km s-min=4.1km az=170.0*

ISC 17 09:36:48.9±0.4**, 51.°63N**±0.°08×**175.°37W**±0.°03**, h47**^{km}**, n239,** σ1**^{s}20**/233**, mb4.5**/63**, MS3.5**/16**, 9C-6D, Fault plane solution: NP1:**ϕ_s233.89919°**,** δ43.52861°**,** λ61.36659°. **NP2:**ϕ_s90.88026°**,** δ52.80790°**,** λ114.47514°. **Principal axes:** T Plg70.0704°**,** Azm60.1342°**;** N Plg19.2709°**,** Azm255.4952°**;** P Plg4.8896°**,** Azm163.7813°**; Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	0.60	315		Pn	09 37 01.1	-0.1
GSTR	Great Sitkin T	0.63	318		Pn	09 37 02.1	+0.4
GSTD	Great Sitkin T	0.65	312		Pn	09 37 01.8	-0.1
ADAG	Mount Adagdak	0.84	295		Pn	09 37 04.8	+0.3
ADK	Adak	0.86	288	P	Pn	09 37 04.0	-0.6
ADK						09 37 15.7	
ADK	Adak	0.86	288		Pn	09 37 04.0	-0.6
ADK				Sn	Sn	09 37 15.7	-0.3
ATKA	Atka Island	0.93	51		Pn	09 37 04.0	-1.5
ATKA	Atka Island	0.93	51		Sn	09 37 16.1	-1.6
KOKL	Mount Kliuchef	1.00	46		Pn	09 37 06.0	-0.7
KOWE	Korovin West	1.01	43		Pn	09 37 06.4	-0.4
KOFP	Korovin Flat P	1.02	50		Pn	09 37 06.0	-0.8
KIKV	Kanaga Island	1.15	283		Pn	09 37 08.2	-0.3
KIMD	Kanaga Island	1.17	277		Pn	09 37 08.1	-0.8
KICM	Kanaga Island	1.17	285		Pn	09 37 08.9	0.0
TAFP	Tanaga Falls P	1.65	281		Pn	09 37 15.5	+0.1
TASE	Tanaga Southea	1.67	278		Pn	09 37 16.0	+0.2
GALAA	Gareloi Lava P	2.12	275		Pn	09 37 22.5	+0.6
CERAA	Semis' Rag'd T	3.09	277		Pn	09 37 35.8	+0.7
CEAP	Semis' Anvil P	3.16	279		Pn	09 37 36.2	+0.1
CESW	Semis' Southwe	3.16	277		Pn	09 37 36.8	+0.7
AMKA	Amchitka	3.34	268	Pn	Pn	09 37 38.3	-0.2
LSPA	Little Sitkin	3.78	277		Pn	09 37 46.2	+1.7
LSPA					Sn	09 38 31.8	+4.1
LSSA	Little Sitkin	3.81	277		Pn	09 37 46.8	+1.7
NIKH	Nikolski High	4.22	69		Pn	09 37 51.0	+0.4
OKSO	Okmok South	4.73	66		Pn	09 37 59.0	+1.3
OKSO					Sn	09 38 54.4	+3.2
MAPS	Pakushin South	5.57	64		Pn	09 38 10.4	+1.3
MAPS					Sn	09 39 13.8	+2.0
MGOD	Makushin Gods	5.60	64		Pn	09 38 10.8	+1.2
MGOD					Sn	09 39 15.7	+3.0
MREP	Makushin Rep't	5.68	64		Pn	09 38 12.1	+1.4
MSW	Makushin Switc	5.69	63		Pn	09 38 12.2	+1.4
MSW					Sn	09 39 17.6	+2.8
MNAT	Makushin Natee	5.74	63		Pn	09 38 12.8	+1.4
MNAT					Sn	09 39 17.7	+1.8
UNV	Unalaska Valle	5.82	64		Sn	09 39 20.6	+2.6
UNV	Unalaska Valle	5.82	64	Pn	Pn	09 38 13.6	+1.0
ZRO	Akutan Zero	6.20	63		Pn	09 38 19.4	+1.6
AKBBA	Akutan Broad B	6.23	63		Pn	09 38 19.9	+1.7
SPIA	Saint Paul Isl	6.31	26	Pn	Pn	09 38 22.4	+3.1
AKUT	Akutan	6.33	63	Pn	Pn	09 38 23.7	+4.2
SMY	Shemya	6.57	284	P	Pn	09 38 21.4	-1.4
SMY	Shemya	6.57	284	Pn	Pn	09 38 21.4	-1.4
DT1	Dutton Round H	8.57	61		Pn	09 38 51.9	+1.8
SDPT	Sand Point	9.62	61	Pn	Pn	09 39 03.2	-1.4
CNBA	Chernabura Isl	9.99	65	Pn	Pn	09 39 07.9	-1.7
CHGN	Chignik	11.02	58	Pn	Pn	09 39 21.4	-2.3
GAMB	Gambell	12.34	8	Pn	Pn	09 39 40.9	-0.7
OHAK	Old Harbor	13.99	58	Pn	Pn	09 40 01.2	-2.9
KDAK	Kodiak Island	14.50	56	Pn	Pn	09 40 07.7	-3.3
	1.5nm,0.3s,baz=285,slow=7.7,SNR=18						
KDAK				Sn	Sn	09 42 47.3	-2.9
	0.1nm,0.3s,baz=323,slow=20,SNR=1.1						
KDAK				LR	LR	09 46 38.4	
	comp=Z,316nm,19.9s,baz=263,slow=41						
KDAK	Kodiak Island	14.50	56	⇑eP	Pn	09 40 08.6	-2.4
KDAK	Kodiak Island	14.50	56		Pn	09 40 07.5	-3.5
CNPM	China Poot	15.70	50	Pn	Pn	09 40 24.4	-2.2
CNPM				IAmb	IAmb	09 40 30.1	
	comp=Z,50nm,1.3s						
PET	Petropavlovsk	15.92	285	⇑eP	Pn	09 40 28.4	-1.0
BRLK	Bradley Lake	15.95	50	Pn	Pn	09 40 27.9	-1.9
BRLK				IAmb	IAmb	09 40 39.5	
	comp=Z,50nm,1.3s						
PETK	Petropavlovsk-	16.48	286	Pn	P	09 40 38.1	-0.6
	comp=Z,0.5nm,0.3s,baz=86,slow=15,SNR=7.9						
PETK				LR	LR	09 46 22.3	
	comp=Z,149nm,21.6s,baz=95,slow=35						
O22K	Cooper Landing	16.74	48	Pn	Pn	09 40 38.3	-1.5
O22K				IAmb	IAmb	09 40 58.9	
	comp=Z,49nm,0.9s						
SEW	Seward	16.74	49	Pn	Pn	09 40 36.9	-2.8
SEW				IAmb	IAmb	09 40 54.8	
	comp=Z,73nm,1.4s						
RDOG	Red Dog Mine	17.56	16	P	P	09 40 50.1	-0.3
GHO	Glory Hole Cre	17.58	44		Pn	09 40 49.8	-0.5
KTH	Kantishna Hill	17.58	38	P	Pn	09 40 49.6	-0.7
KNK	Knik Glacier	17.65	46		Pn	09 40 49.5	-1.6
KNK				IAmb	IAmb	09 41 07.7	
	comp=Z,30nm,1.4s						
TRF	Thorofare Moun	17.77	39	P	Pn	09 40 51.8	-0.9
SML	Sawmill	17.86	45	P	Pn	09 40 52.7	-0.9
IMAR	Indian Mountai	18.08	29	P	Pn	09 40 55.8	-0.5
HIN	Hinchinbrook I	18.23	50	P	P	09 40 56.2	-1.7
HIN				IAmb	IAmb	09 41 08.9	
	comp=Z,80nm,1.3s						
SCM	Sheep Creek Mo	18.31	45	P	P	09 40 58.3	-0.5
SCM				pmax	pmax		
	comp=Z,30nm,1.3s						
SCM	Sheep Creek Mo	18.31	45	P	P	09 40 58.3	-0.5
SCM				IAmb	IAmb	09 41 15.5	
	comp=Z,30nm,1.3s						
RND	Reindeer	18.32	40	P	Pn	09 40 58.9	-0.4
RND				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RND	Reindeer	18.32	40	P	Pn	09 40 58.9	-0.4
FID	Port Fidalgo	18.34	49	P	P	09 40 56.1	-3.0
FID				IAmb	IAmb	09 41 24.7	
	comp=Z,67nm,1.5s						
BWN	Browne	18.46	37	P	P	09 40 59.4	-0.9
BWN				IAmb	IAmb	09 41 22.6	
	comp=Z,27nm,1.1s						
EYAK	Cordova Ski Ar	18.63	50	P	P	09 41 01.2	-1.0
EYAK				IAmb	IAmb	09 41 22.7	
	comp=Z,55nm,1.5s						
KLU	Klutina	18.82	47	P	P	09 41 03.6	-0.9
M24K	Tolsona, Glenn	18.91	45	P	Pn	09 41 06.8	+0.3
M24K				IAmb	IAmb	09 41 22.4	
	comp=Z,28nm,1.2s						
I23K	Minto, Yukon-K	19.01	35	P	Pn	09 41 08.0	+0.5
WRH	Wood River Hil	19.13	37	P	P	09 41 07.0	-0.6
CCB	Clear Creek Bu	19.32	37	P	P	09 41 08.8	-1.0
MDM	Murphy Dome	19.32	36	P	P	09 41 09.5	-0.3
COLA	College	19.42	36	deP	Pn	09 41 12.4	+0.1
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
N25K	Chitina, Valde	19.46	47	P	P	09 41 10.9	-0.6
PAX	Paxson	19.53	43	P	P	09 41 11.4	-0.8
PAX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PAX	Paxson	19.53	43	P	P	09 41 11.4	-0.8
HDA	Harding Lake	19.53	38	P	P	09 41 11.1	-1.0
HDA				IAmb	IAmb	09 41 25.5	
	comp=Z,9.6nm,0.4s						
IL31		19.73	37	P	Pn	09 41 15.0	-1.0
ILAR	Eielson Array	19.73	37	P	P	09 41 13.1	-1.1
	comp=Z,0.6nm,0.3s,baz=229,slow=9.9,SNR=47						
ILAR	Eielson Array	19.73	37	P	P	09 41 14.1	-0.1
ILAR	Eielson Array	19.73	37	P	P	09 41 14.1	-0.1
GLB	Gilahina Butte	19.78	48	P	P	09 41 14.9	0.0
GLB				IAmb	IAmb	09 41 29.2	
	comp=Z,24nm,1.4s						
VRDI	Verde Repeater	19.89	49	P	P	09 41 16.4	+0.1
VRDI				IAmb	IAmb	09 41 31.9	
	comp=Z,28nm,1.4s						
CRQM	Cirque	19.93	50	P	P	09 41 15.4	-1.3
CRQM				IAmb	IAmb	09 41 30.7	
	comp=Z,17nm,1.0s						
COLD	Coldfoot	19.97	29	P	P	09 41 17.3	+0.5
RIDG	Independent Ri	20.08	41	P	P	09 41 18.8	+0.6
RIDG				IAmb	IAmb	09 41 24.9	
	comp=Z,19nm,1.2s						
ISLE	Juniper Island	20.28	51	P	P	09 41 20.8	+0.3
ISLE				IAmb	IAmb	09 41 38.4	
	comp=Z,22nm,1.4s						
BALM	Baldy	20.37	50	P	P	09 41 18.7	-2.7
DOT	Dot Lake	20.37	42	P	P	09 41 21.2	-0.1
DOT				IAmb	IAmb	09 41 25.9	
	comp=Z,13nm,0.8s						
SEY	Seymchan	20.53	316	P	P	09 41 23.5	+0.6
	comp=Z,8.5nm,0.9s,baz=116,slow=13,SNR=5.5						
SEY	Seymchan	20.53	316	⇑eP	P	09 41 24.1	+1.2
FYU	Fort Yukon	21.20	34	P	P	09 41 30.1	0.0
FYU				IAmb	IAmb	09 41 46.0	
	comp=Z,13nm,1.1s						
K27K	Chicken	21.33	42	P	P	09 41 30.9	-0.7
K27K				IAmb	IAmb	09 41 39.9	
	comp=Z,13nm,0.9s						
BMAR	Burnt Mountain	21.87	32	P	P	09 41 32.6	-4.7
EGAK	Eagle	21.96	40	P	P	09 41 38.4	+0.1
EGAK				IAmb	IAmb	09 42 01.6	
	comp=Z,8.1nm,0.8s						
EPYK	Eagle Plains	24.24	38	P	P	09 42 00.8	-0.3
INK	Inuvik	26.03	34	P	P	09 42 17.7	+0.5
	comp=Z,1.3nm,0.8s,baz=228,slow=10,SNR=3.3						
INK	Inuvik	26.03	34	P	P	09 42 17.2	+0.1
INK				IAmb	IAmb	09 42 18.4	
	comp=Z,10nm,1.5s						
DLBC	Dease Lake	26.43	57	LR	LR	09 52 31.7	
	comp=Z,37nm,21.2s,baz=155,slow=36						
YSS	Yuzh-Sakhalins	27.43	277	⇑eP	P	09 42 27.9	-2.0
YSS				pmax	pmax		
	comp=Z,17nm,0.9s						
BBB	Bella Bella	28.76	70	LR	LR	09 51 24.7	
	comp=Z,107nm,20.1s,baz=304,slow=31						
ASAJ	Asahikawa	28.85	272	P	P	09 42 43.5	+0.9
	comp=Z,7.9nm,0.7s,baz=85,slow=11,SNR=5.1						
ASAJ				LR	LR	09 54 50.7	
	comp=Z,45nm,18.4s,baz=179,slow=38						
KLR	Kul'dur	33.17	287	P	P	09 43 20.6	0.0
	comp=Z,9.6nm,0.5s,baz=67,slow=7.7,SNR=66						
KLR	Kul'dur	33.17	287	d iP	P	09 43 20.1	-0.5
YKA	Yellowknife Ar	33.50	47	P	P	09 43 23.3	0.0
	comp=Z,0.2nm,0.3s,baz=278,slow=8.6,SNR=11						
YKA				PcP	PcP	09 46 03.7	+0.6
	comp=Z,0.6nm,0.6s,baz=290,slow=2.2,SNR=8.6						
YKA				LR	LR	09 58 10.6	
	comp=Z,90nm,18.7s,baz=0.0,slow=38						
H11N2	WAKE ISLAND Hy	34.74	210	T	T	10 20 16.9	
	baz=18,slow=76,SNR=232						
H11N3	WAKE ISLAND Hy	34.75	210	T	T	10 20 20.6	
	baz=18,slow=76,SNR=225						
H11N1	WAKE ISLAND Hy	34.76	210	T	T	10 20 24.3	
	baz=18,slow=76,SNR=191						
USRK	Ussuriysk Ar.	35.38	279	P	P	09 43 39.7	-0.1
	comp=Z,7.2nm,0.7s,baz=62,slow=9.1,SNR=5.6						
USRK				LR	LR	09 56 54.1	
	comp=Z,86nm,21.6s,baz=42,slow=34						
MJAR	Matsushiro Arr	35.94	264	P	P	09 43 45.4	+0.7
	comp=Z,1.3nm,0.6s,baz=50,slow=6.6,SNR=5.6						
MJAR				LR	LR	09 57 15.8	
	comp=Z,56nm,20.9s,baz=90,slow=34						
H11S1	WAKE ISLAND Hy	35.95	210	T	T	10 22 53.7	
	baz=20,slow=76,SNR=326						
H11S2	WAKE ISLAND Hy	35.97	210	T	T	10 22 41.7	
	baz=20,slow=76,SNR=197						
H11S3	WAKE ISLAND Hy	35.97	210	T	T	10 22 41.8	
	baz=20,slow=76,SNR=116						
HAWA	Hanford	36.23	76	P	P	09 43 44.7	-2.3
HAWA				IAmb	IAmb	09 44 05.9	
	comp=Z,4.3nm,0.8s						
NEW	Newport	36.78	72	P	P	09 43 52.3	+0.5
	comp=Z,2.5nm,0.5s,baz=302,slow=8.2,SNR=8.1						
NEW	Newport	36.78	72	P	P	09 43 52.4	+0.6
NEW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEW	Newport	36.78	72	P	P	09 43 52.4	+0.6
NEW				IAmb	IAmb	09 44 09.8	
	comp=Z,5.4nm,0.9s						
I07A	Izee	37.42	79	P	P	09 43 58.7	+1.4
I07A				IAmb	IAmb	09 44 27.1	
	comp=Z,4.9nm,1.2s						
JWT	Wachi	38.49	265	P	P	09 44 07.3	+0.9
RES	Resolute Bay	38.62	25	PcP	PcP	09 46 18.6	+0.5
	comp=Z,2.2nm,0.7s,baz=328,slow=2.0,SNR=6.9						
JTMT	Jette	38.70	71	P	P	09 44 08.7	+0.6
WVOR	Wild Horse Val	38.85	81	P	P	09 44 10.4	+1.0
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WVOR	Wild Horse Val	38.85	81	P	P	09 44 10.4	+1.0
WVOR				IAmb	IAmb	09 44 24.4	
	comp=Z,3.8nm,0.8s						
MSO	Missoula	39.36	72	P	P	09 44 14.2	+0.6
MSO				IAmb	IAmb	09 44 23.3	
	comp=Z,5.0nm,0.9s						
BCYI	Bear Canyon	41.00	75	P	P	09 44 27.1	-0.2
MCMT	McKenzie Canyo	41.05	74	P	P	09 44 28.0	+0.2
NVAR	Mina Array Bea	41.39	85	P	P	09 44 30.4	-0.2
	comp=Z,0.4nm,0.7s,baz=295,slow=6.9,SNR=2.9						
NVAR				PcP	PcP	09 46 28.5	+0.6
	comp=Z,0.7nm,0.9s,baz=287,slow=3.7,SNR=2.9						
KSRS	Korea Array	41.77	273	P	P	09 44 34.3	+0.9
	comp=Z,5.7nm,0.9s,baz=56,slow=7.9,SNR=9.9						
KSRS				LR	LR	10 01 09.1	
	comp=Z,40nm,19.3s,baz=54,slow=35						
YHL	Hebgen Lake	42.04	73	P	P	09 44 36.6	+0.7
YHL				IAmb	IAmb	09 44 45.8	
	comp=Z,4.8nm,0.9s						
RLMT	Red Lodge	43.03	72	P	P	09 44 43.5	-0.3
RLMT				IAmb	IAmb	09 44 54.6	
	comp=Z,12nm,1.2s						
R11A	Troy Canyon, C	43.13	84	P	P	09 44 45.2	+0.5
BW06	Boulder Array	44.18	75	P	P	09 44 53.7	+0.5
BW06				IAmb	IAmb	09 45 11.5	
	comp=Z,11nm,1.4s						
PD31	Pinedale Array	44.18	75	P	P	09 44 52.3	-0.9
PD31				IAmb	IAmb	09 45 11.5	
	comp=Z,9.9nm,1.4s						
PDAR	Pinedale Array	44.18	75	P	P	09 44 53.5	+0.4
	comp=Z,1.8nm,0.6s,baz=304,slow=3.7,SNR=23						

PDAR				LR	LR	09 59 36.3	
	comp=Z,40nm,21.9s,baz=324,slow=31						
FCC	**Fort Churchill**	**44.22**	**48**	P	**P**	**09 44 53.0**	**0.0**
FCC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FCC	**Fort Churchill**	**44.22**	**48**	P	**P**	**09 44 53.0**	**0.0**
PFO	**Pinyon Flats O**	**45.62**	**89**	⇑*e*P	**P**	**09 45 00.9**	**-3.6**
PFO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
O20A	**White River Ci**	**46.54**	**77**	P	**P**	**09 45 11.4**	**-0.5**
O20A				IAmb	IAmb	09 45 20.0	
	comp=Z,6.3nm,0.9s						
PV13	**Radium Mtn., P**	**47.41**	**79**	P	**P**	**09 45 19.2**	**+0.5**
PV13				IAmb	IAmb	09 45 37.0	
	comp=Z,7.2nm,0.9s						
ULM	**Lac du Bonnet**	**47.74**	**59**	P	**P**	**09 45 20.5**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=313,slow=8.6,SNR=5.4						
ULM	**Lac du Bonnet**	**47.74**	**59**	⇓*e*P	**P**	**09 45 19.8**	**-1.0**
ULM	**Lac du Bonnet**	**47.74**	**59**	P	**P**	**09 45 20.5**	**-0.3**
ULM				IAmb	IAmb	09 45 33.1	
	comp=Z,9.5nm,1.4s						
SONM	**Songino Array**	**48.44**	**298**	P	**P**	**09 45 26.3**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=38,slow=7.7,SNR=1.8						
SONM				PcP	**PcP**	**09 46 52.5**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=62,slow=2.3,SNR=7.7						
SONM				LR	LR	10 06 26.0	
	comp=Z,37nm,18.8s,baz=78,slow=37						
HHC	**Hu-ho-hao-te**	**49.67**	**288**	*e*P	**P**	**09 45 36.1**	**+0.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,79nm,4.8s						
B35A	**Bob, Littlefor**	**49.98**	**60**	P	**P**	**09 45 38.1**	**+0.1**
SPITS	**Spitsbergen Ar**	**50.26**	**357**	P	**P**	**09 45 39.8**	**+0.1**
	comp=Z,12nm,1.1s,baz=74,slow=6.2,SNR=1.6						
ECSD	**EROS Data Cent**	**51.19**	**66**	P	**P**	**09 45 47.3**	**+0.2**
F36A	**Milaca**	**51.60**	**62**	P	**P**	**09 45 50.4**	**+0.2**
F36A				IAmb	IAmb	09 46 02.0	
	comp=Z,8.7nm,1.4s						
E43A	**Lone Tree Farm**	**54.80**	**58**	P	**P**	**09 46 14.1**	**+0.4**
ZALV	**Zalesovo Beam**	**55.39**	**315**	PcP	**PcP**	**09 47 17.9**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=72,slow=4.7,SNR=5.8						
ZALV				LR	LR	10 11 41.0	
	comp=Z,70nm,18.4s,baz=82,slow=38						
XAN	**Xi'an**	**55.70**	**283**	P	**P**	**09 46 20.5**	**0.0**
XAN				pP	pP	09 46 28.4	-5.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
TXAR	**Lajitas Array**	**56.49**	**84**	P	**P**	**09 46 26.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=315,slow=4.1,SNR=6.4						
TXAR	**Lajitas Array**	**56.49**	**84**	P	**P**	**09 46 25.8**	**-0.5**
P40A	**Paris**	**56.51**	**67**	P	**P**	**09 46 25.6**	**-0.5**
R40A	**Maddies Statio**	**57.22**	**68**	P	**P**	**09 46 29.4**	**-1.7**
R40A				IAmb	IAmb	09 46 47.6	
	comp=Z,4.1nm,0.6s						
LZH	**Lanzhou**	**57.36**	**288**	*e*P	**P**	**09 46 32.1**	**-0.2**
LZH				pP	pP	09 46 41.8	-3.6
LZH				sP	sP	09 46 45.0	-5.7
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,52nm,7.2s						
ARCES	**ARCESS Array B**	**58.19**	**352**	P	**P**	**09 46 36.8**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=6.7,slow=8.4,SNR=1.1						
ARCES				PcP	**PcP**	**09 47 29.0**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=27,slow=4.2,SNR=4.4						
KURK	**Kurchatov**	**60.38**	**315**	P	**P**	**09 46 52.9**	**+0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**60.38**	**315**	P	**P**	**09 46 52.9**	**+0.1**
KURK				IAmb	IAmb	09 47 09.5	
	comp=Z,4.3nm,0.8s						
KURBB	**Kurchatov Arra**	**60.48**	**315**	P	**P**	**09 46 53.1**	**-0.4**
	comp=Z,1.8nm,0.4s,baz=44,slow=6.6,SNR=27						
PLVO	**Plevna**	**60.81**	**53**	P	**P**	**09 46 54.7**	**-1.1**
WMQ	**Urumqi**	**60.98**	**305**	*e*P	**P**	**09 46 59.3**	**+2.1**
MK31	**Makanchi Array**	**61.53**	**310**	⇓*e*P	**P**	**09 46 59.0**	**-1.8**
MKAR	**Makanchi Array**	**61.53**	**310**	P	**P**	**09 47 00.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=47,slow=6.0,SNR=10.0						
WVNY	**West Valley, N**	**61.90**	**56**	P	**P**	**09 47 03.7**	**+0.4**
PLAL	**Pickwick Lake**	**61.94**	**68**	P	**P**	**09 47 03.7**	**+0.1**
PLAL				IAmb	IAmb	09 47 23.2	
	comp=Z,3.1nm,0.9s						
M54A	**Oil Creek Stat**	**61.98**	**58**	P	**P**	**09 47 03.9**	**0.0**
BVAR	**Borovoye Array**	**62.06**	**321**	P	**P**	**09 47 04.6**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=69,slow=8.1,SNR=8.1						
BRVK	**Borovoye**	**62.07**	**322**	⇓*e*P	**P**	**09 47 04.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRVK	**Borovoye**	**62.07**	**322**	P	**P**	**09 47 05.5**	**+1.2**
BRVK				IAmb	IAmb	09 47 19.5	
	comp=Z,1.6nm,0.7s						
N54A	**Moraine State**	**62.20**	**58**	P	**P**	**09 47 05.6**	**+0.3**
LONY	**Lake Ozonia**	**62.35**	**52**	P	**P**	**09 47 05.4**	**-0.9**
M55A	**Ridgway**	**62.48**	**57**	P	**P**	**09 47 07.7**	**+0.4**
O54A	**Avella**	**62.55**	**59**	P	**P**	**09 47 08.1**	**+0.4**
M56A	**Emporium**	**62.78**	**57**	P	**P**	**09 47 09.6**	**+0.4**
BINY	**Binghamton**	**63.40**	**55**	P	**P**	**09 47 14.1**	**+0.9**
M57A	**Sunshine Farm,**	**63.43**	**56**	P	**P**	**09 47 13.0**	**-0.5**
ARU	**Arti**	**63.49**	**330**	⇑*e*P	**P**	**09 47 14.3**	**+0.7**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SSPA	**Standing Stone**	**63.54**	**57**	P	**P**	**09 47 14.7**	**+0.4**
FPAL	**Fort Paine**	**63.67**	**67**	P	**P**	**09 47 15.2**	**0.0**
G62A	**West of Eustis**	**63.87**	**50**	P	**P**	**09 47 16.3**	**0.0**
H62A	**Milan**	**64.05**	**50**	P	**P**	**09 47 17.0**	**-0.6**
P57A	**Homestead Farm**	**64.31**	**58**	P	**P**	**09 47 19.5**	**+0.2**
N59A	**State Game Lan**	**64.44**	**56**	P	**P**	**09 47 20.5**	**+0.3**
250A	**Grady**	**65.14**	**69**	P	**P**	**09 47 24.7**	**-0.1**
HODGE	**Hodges**	**65.81**	**65**	P	**P**	**09 47 29.0**	**0.0**
JSC	**Jenkinsville**	**66.33**	**64**	P	**P**	**09 47 32.9**	**+0.5**
JSC				pmax	pmax		
	comp=Z,8.0nm,1.4s						
JSC	**Jenkinsville**	**66.33**	**64**	P	**P**	**09 47 32.9**	**+0.5**
JSC				IAmb	IAmb	09 47 49.2	
	comp=Z,8.0nm,1.4s						
TAOE	**Nuku Hiva Isla**	**67.44**	**142**	*e*T	T	11 00 38.8	
	comp=Z,16nm,0.2s						
NOA	**NORSAR Array B**	**67.56**	**357**	P	**P**	**09 47 39.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=4.8,slow=6.3,SNR=2.5						
NOA				LR	LR	10 15 33.4	
	comp=Z,18nm,21.8s,baz=355,slow=34						
AAK	**Ala-Archa**	**68.32**	**312**	⇑*e*P	**P**	**09 47 45.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**69.00**	**325**	P	**P**	**09 47 48.8**	**-0.2**
ABKAR				IAmb	IAmb	09 47 50.9	
	comp=Z,1.9nm,0.8s						
KKAR	**Karatay Array**	**69.77**	**315**	P	**P**	**09 47 53.4**	**-0.5**
KKAR	**Karatay Array**	**69.77**	**315**	P	**P**	**09 47 53.4**	**-0.5**
PPT2	**Papeete2**	**72.52**	**154**	*e*LR	LR	10 10 21.7	
	comp=Z,127nm,23.8s						
PPT2	**Papeete2**	**72.52**	**154**	*e*T	T	11 06 54.5	
	comp=Z,7.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**73.11**	**278**	P	**P**	**09 48 14.7**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=25,slow=6.9,SNR=9.5						
CMAR	**Chiang Mai Arr**	**73.11**	**278**	*i* P	**P**	**09 48 15.1**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**73.11**	**293**	*e*P	**P**	**09 48 14.8**	**+0.2**
	comp=Z,16nm,0.7s						
ODAN	**Odare**	**73.67**	**293**	*e*P	**P**	**09 48 17.5**	**-0.3**
GUN	**Gumba**	**73.73**	**294**	*e*P	**P**	**09 48 18.6**	**+0.3**
	comp=Z,42nm,0.5s						
RAMN	**Ramite**	**74.05**	**293**	*e*P	**P**	**09 48 20.3**	**+0.2**
	comp=Z,27nm,0.6s						
PKI	**Pulchoki**	**74.26**	**294**	*e*P	**P**	**09 48 21.5**	**+0.1**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**74.26**	**294**	*e*P	**P**	**09 48 21.7**	**+0.4**
GKN	**Gorkha**	**74.36**	**295**	*e*P	**P**	**09 48 21.9**	**+0.1**
	comp=Z,15nm,0.5s						
DANN	**Dangsing**	**74.59**	**296**	*e*P	**P**	**09 48 23.6**	**+0.3**
	comp=Z,14nm,0.7s						
KOLN	**Koldanda**	**75.12**	**296**	*e*P	**P**	**09 48 26.4**	**+0.1**
CLL	**Collm**	**77.19**	**355**	*e*P	**P**	**09 48 37.0**	**-0.3**
TBI	**Tubuai**	**78.05**	**156**	*e*LR	LR	10 12 48.6	
	comp=Z,110nm,31.2s						
KAPI	**Kappang**	**78.71**	**247**	P	**P**	**09 48 47.1**	**+0.9**
	comp=Z,5.0nm,0.6s,baz=105,slow=12,SNR=4.0						
KIV	**Kislovodsk**	**79.26**	**333**	*e*P	**P**	**09 48 48.0**	**-1.0**
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
GEYT	**Alibeck**	**79.32**	**320**	LR	LR	10 26 40.5	
	comp=Z,31nm,20.6s,baz=35,slow=38						
KBZ	**Khabaz**	**79.41**	**333**	LR	LR	10 30 42.5	
	comp=Z,26nm,18.3s,baz=58,slow=41						
GERES	**GERESS Array B**	**79.61**	**354**	LR	LR	10 26 54.2	
	comp=Z,28nm,18.9s,baz=347,slow=38						
WB0	**Warramunga Arr**	**83.54**	**227**	P	**P**	**09 49 11.0**	**-0.7**
WB0				IAmb	IAmb	09 49 11.5	
	comp=Z,3.8nm,1.0s						
WR0	**Warramunga Arr**	**83.64**	**227**	P	**P**	**09 49 11.6**	**-0.6**
WR0				IAmb	IAmb	09 49 11.9	
	comp=Z,6.4nm,1.2s						
WRAB	**Tennant Creek**	**83.70**	**227**	⇑*e*P	**P**	**09 49 11.5**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,13nm,2.5s						
WB2	**Warramunga Arr**	**83.71**	**227**	P	**P**	**09 49 12.1**	**-0.4**
WB2				IAmb	IAmb	09 49 25.8	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**83.71**	**227**	P	**P**	**09 49 12.0**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=33,slow=5.7,SNR=10						
BRTR	**Keskin Array B**	**85.56**	**338**	P	**P**	**09 49 22.1**	**0.0**
	comp=Z,0.5nm,0.6s,baz=359,slow=3.4,SNR=3.9						
BRTR	**Keskin Array B**	**85.56**	**338**	*ce*P	**P**	**09 49 21.8**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AS31	**Alice Springs**	**87.15**	**225**	P	**P**	**09 49 30.0**	**+0.3**
ASAR	**Alice Springs**	**87.15**	**225**	P	**P**	**09 49 29.9**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=22,slow=4.9,SNR=28						
ASAR	**Alice Springs**	**87.15**	**225**	P	**P**	**09 49 30.0**	**+0.3**
ASAR	**Alice Springs**	**87.15**	**225**	P	**P**	**09 49 30.0**	**+0.3**
STKA	**Stephens Creek**	**91.34**	**216**	P	**P**	**09 49 49.7**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=313,slow=12,SNR=5.6						
STKA	**Stephens Creek**	**91.34**	**216**	⇓*e*P	**P**	**09 49 49.5**	**+0.4**
STKA	**Stephens Creek**	**91.34**	**216**	P	**P**	**09 49 49.8**	**+0.7**
STKA				IAmb	IAmb	09 49 50.7	
	comp=Z,1.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**115.45**	**3**	PKP	**PKiKP**	**09 55 25.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=345,slow=2.1,SNR=6.4						
H03N2	**Juan Fernandez**	**119.16**	**108**	T	T	12 05 51.4	
	baz=317,slow=77,SNR=29						
H03N1	**Juan Fernandez**	**119.18**	**108**	T	T	12 05 52.8	
	baz=317,slow=77,SNR=46						
H03N3	**Juan Fernandez**	**119.18**	**108**	T	T	12 05 51.8	
	baz=317,slow=77,SNR=40						
PLCA	**Paso Flores**	**129.01**	**109**	PKP	**PKPdf**	**09 55 51.1**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=282,slow=3.7,SNR=3.9						
MAW	**Mawson**	**148.00**	**218**	PKPbc	**PKPbc**	**09 56 27.8**	**+0.2**
	comp=Z,5.6nm,0.6s,baz=151,slow=3.6,SNR=10						
MAW	**Mawson**	**148.00**	**218**		**PKPbc**	**09 56 28.0**	**+0.5**
BOSA	**Boshof**	**152.31**	**318**	PKPbc	**PKPbc**	**09 56 39.7**	**+0.3**
	comp=Z,4.3nm,0.5s,baz=17,slow=2.4,SNR=23						
BOSA	**Boshof**	**152.31**	**318**	PKIKP	**PKPbc**	**09 56 39.6**	**+0.2**

KRNET ***17*** *09:42:06.3±0.1, 43°.75N×69°.42E, mb2.7*
NNC ***17*** *09:42:06.7±1.4, 43°.44N×69°.57E, h0*^{km}*, mb3.7, mpv3.3,*
Error ellipse: s-maj=7.3km s-min=5.3km az=105.0,
Suspected Mining explosion.
SOME ***17*** *09:42:06.5, 43°.65N×69°.75E*
ISC 17 09:41:48.9±4.6,**44°.3N**±0°.1×**68°.7E**±0°.2,**h0**^{km}**,n18,**
σ**1**^{s}**10**/22,**7C-7D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**1.73**	**131**	⇓P	**Pg**	**09 42 22.0**	**-0.2**
	0.9nm,0.2s,baz=295,slow=12,SNR=220						
KK31				⇓S	Sn	09 42 32.5	-11
	116nm,0.9s,baz=294,slow=30,SNR=128						
TRKS	**Terek-Say**	**3.25**	**146**	⇑*i*P	**Pg**	**09 42 51.0**	**-0.2**
	baz=50						
TRKS				⇑*i*S	**Sn**	**09 43 23.4**	**+2.6**
	baz=50						
MNAS	**Manas**	**3.27**	**121**	⇓*i*P	**Pg**	**09 42 50.3**	**-1.4**
	baz=18						
MNAS				⇓*i*S	**Sn**	**09 43 22.6**	**+1.2**
	baz=18						
MRKS	**Merke**	**3.61**	**113**	Pg	**Pg**	**09 42 56.9**	**-1.2**
	3.9nm,0.5s						
MRKS				Lg	Lg	09 43 33.5	
	13nm,0.4s						
ARSB	**Arslanbob**	**4.29**	**132**	⇑*i*P	**Pb**	**09 43 04.4**	**-0.9**
	baz=31						
ARSB				⇑*i*S	**Sn**	**09 43 46.7**	**+0.3**
	baz=31						
SGDS	**Sogindy**	**4.35**	**99**	Pg	**Pg**	**09 43 12.3**	**0.0**
	3.1nm,0.7s						
SGDS				Lg	Lg	09 43 59.1	
	6.2nm,0.3s						
BTK	**Batken**	**4.47**	**159**	⇓*i*P	**Pb**	**09 43 07.8**	**-0.6**
	baz=64						
BTK				⇓*i*S	**Sn**	**09 43 52.3**	**+1.4**
	baz=64						
AAK	**Ala-Archa**	**4.50**	**109**	⇑Pg	**Pg**	**09 43 14.5**	**-0.7**
	2.1nm,0.4s						
AAK				⇓Lg	Lg	09 44 05.6	
	3.2nm,0.5s						
KRBS	**Karabastau**	**5.05**	**94**	Pg	**Pg**	**09 43 25.6**	**-0.1**
	3.1nm,0.4s						
KRBS				Lg	Lg	09 44 22.6	
	7.6nm,0.2s						
TKM2	**Tokmak 2**	**5.17**	**103**	⇑Pg	**Pg**	**09 43 29.3**	**+1.3**
	3.7nm,1.1s						
TKM2				⇑Lg	Lg	09 44 27.4	
	4.6nm,0.8s						
DGS	**Degeres**	**5.21**	**99**	Pg	**Pg**	**09 43 28.3**	**-0.4**
	2.8nm,0.6s						
DGS				Lg	Lg	09 44 27.0	
	6.1nm,0.7s						
KST	**Kastek**	**5.39**	**100**	Pg	**Pg**	**09 43 31.8**	**-0.4**
	2.6nm,0.2s						
KST				Lg	Lg	09 44 32.8	
	5.8nm,0.6s						
KUU	**Kurty**	**5.50**	**91**	Pg	**Pg**	**09 43 35.0**	**+0.8**
	1.3nm,0.1s						
KUU				Lg	Lg	09 44 38.6	
	8.2nm,0.7s						
KTBS	**Karatobe**	**5.77**	**93**	Pg	**Pg**	**09 43 38.6**	**-0.9**
	2.6nm,0.4s						
KTBS				Lg	Lg	09 44 44.9	
	10nm,0.7s						
IZV	**Izvestkoviy**	**5.85**	**99**	Pg	**Pg**	**09 43 40.3**	**-0.8**
	1.0nm,0.2s						
IZV				Lg	Lg	09 44 47.4	
	9.9nm,0.5s						
CHKK	**Chushkaly**	**5.97**	**91**	Pg	**Pg**	**09 43 44.4**	**+1.1**
	1.8nm,0.1s						
CHKK				Lg	Lg	09 44 54.7	
	8.7nm,0.3s						
TNSS	**Tian-Shan**	**6.09**	**99**	Pg	**Pg**	**09 43 44.1**	**-1.5**
	0.5nm,0.1s						
TNSS				Lg	Lg	09 44 53.8	
	1.4nm,0.6s						
MNBS	**Baschi**	**6.96**	**88**	Pg	**Pg**	**09 44 01.9**	**-0.4**
	1.0nm,0.3s						
MNBS				Lg	Lg	09 45 24.2	
	6.0nm,0.5s						

NNC ***17*** *09:51:40.5±0.7, 42°.99N×78°.28E, h0*^{km}*, mb2.6, mpv2.8,*
Error ellipse: s-maj=6.7km s-min=2.1km az=166.0
KRNET ***17*** *09:51:40.3±0.1, 42°.81N×78°.44E, h12*^{km}*, mb2.0*
SOME ***17*** *09:51:41.4, 43°.05N×78°.30E, h10*^{km}
ISC 17 09:51:39.9±0.9,**42°.93N**±0°.02×**78°.33E**±0°.02,**h10**^{km}±7^{km},
n38,σ**1**^{s}**00**/74,**16C-4D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**0.14**	**24**	⇑*e*P	**Pg**	**09 51 43.7**	**+0.4**
	20nm,0.1s						
SATY				*e*S	**Sg**	**09 51 45.5**	**-0.1**
	362nm,0.1s						
SATY	**Saty**	**0.14**	**24**	P	**Pg**	**09 51 43.7**	**+0.4**
	20nm,0.1s						
SATY				S	**Sg**	**09 51 45.5**	**-0.1**
	362nm,0.1s						
ZHN	**Zhinishke**	**0.25**	**18**	*e*P	**Pg**	**09 51 45.0**	**-0.1**
	5.8nm,0.1s						
ZHN				*e*S	**Sg**	**09 51 47.7**	**-0.9**
	53nm,0.1s						
ZHN	**Zhinishke**	**0.25**	**18**	P	**Pg**	**09 51 45.1**	**-0.1**
	5.8nm,0.1s						
ZHN				S	**Sg**	**09 51 47.7**	**-0.9**
	53nm,0.1s						
PRZ	**Przheval'sk**	**0.45**	**173**	⇑*i*P	**Pg**	**09 51 46.4**	**-2.4**
	baz=85						
PRZ				⇑*i*S	**Sg**	**09 51 50.9**	**-3.9**
	baz=85						
ANVS	**Anan'yevo**	**0.51**	**253**	⇑*i*P	**Pb**	**09 51 51.3**	**+0.2**
	baz=68						
ANVS				⇑*i*S	**Sb**	**09 51 59.1**	**+0.5**
	baz=68						
UZB	**Uzynbulak**	**0.55**	**67**	*e*P	**Pg**	**09 51 51.3**	**+0.6**
	7.7nm,0.1s						
UZB				*e*S	**Sg**	**09 51 58.3**	**+0.3**
	5.7nm,0.1s						
UZB	**Uzynbulak**	**0.55**	**67**	P	**Pg**	**09 51 51.3**	**+0.6**
	7.7nm,0.1s						
UZB				S	**Sg**	**09 51 58.3**	**+0.3**
	5.7nm,0.1s						
KPKS	**Kokpek**	**0.59**	**26**	*e*P	**Pg**	**09 51 51.1**	**-0.4**
	2.6nm,0.1s						
KPKS				*e*S	**Sg**	**09 51 58.3**	**-1.1**
	13nm,0.2s						
KOTS	**Kotyrbulak**	**0.94**	**289**	*e*P	**Pb**	**09 51 58.8**	**+0.3**
	4.4nm,0.2s						
KOTS				*e*S	**Sb**	**09 52 11.2**	**+0.2**
	5.1nm,0.2s						
KOTS	**Kotyrbulak**	**0.94**	**289**	P	**Pb**	**09 51 58.8**	**+0.3**
	4.4nm,0.2s						
KOTS				S	**Sb**	**09 52 11.2**	**+0.2**
	5.1nm,0.2s						
MDOK	**Medeo**	**0.97**	**284**	*e*P	**Pg**	**09 51 58.6**	**+0.1**
	2.1nm,0.4s						
MDOK				*e*S	**Sg**	**09 52 10.7**	**-0.4**
	4.9nm,0.4s						
MDOK	**Medeo**	**0.97**	**284**	⇑P	**Pg**	**09 51 58.5**	**-0.1**
	1.6nm,0.5s						
MDOK				S	**Sg**	**09 52 10.4**	**-0.7**
	3.2nm,0.5s						
TNSS	**Tian-Shan**	**1.02**	**276**	*e*P	**Pb**	**09 51 60.0**	**+0.1**
	1.9nm,0.2s						
TNSS				*e*S	**Sb**	**09 52 13.3**	**-0.2**
	1.3nm,0.2s						
TNSS	**Tian-Shan**	**1.02**	**276**	P	**Pb**	**09 51 60.0**	**+0.1**
	1.9nm,0.2s						
TNSS				S	**Sb**	**09 52 13.3**	**-0.2**
	1.3nm,0.2s						
KNDC	**Almaty**	**1.04**	**286**	⇑P	**Pg**	**09 51 59.8**	**-0.1**
	11nm,0.3s						
KNDC				⇑S	**Sb**	**09 52 13.6**	**-0.1**
	15nm,0.6s						
MNBS	**Baschi**	**1.15**	**3**	*e*P	**Pg**	**09 52 01.5**	**-0.6**
	5.2nm,0.1s						
MNBS				*e*S	**Sb**	**09 52 15.8**	**-1.2**
	8.0nm,0.2s						
MNBS	**Baschi**	**1.15**	**3**	P	**Pg**	**09 52 01.5**	**-0.6**
	5.2nm,0.1s						
MNBS				S	**Sb**	**09 52 15.8**	**-1.2**
	8.0nm,0.2s						
KDJ	**Kajisay**	**1.17**	**227**	⇑*i*P	**Pb**	**09 52 02.0**	**-0.3**
	baz=34						
KDJ				⇑*i*S	**Sb**	**09 52 17.9**	**+0.3**
	baz=34						
ARXS	**Arharly**	**1.33**	**344**	*e*P	**Pn**	**09 52 04.4**	**-0.3**
	3.3nm,0.2s						
ARXS				*e*S	**Sb**	**09 52 20.9**	**-1.3**
	3.8nm,0.2s						
ARXS	**Arharly**	**1.33**	**344**	P	**Pn**	**09 52 04.4**	**-0.3**
	3.3nm,0.2s						
ARXS				S	**Sb**	**09 52 20.9**	**-1.3**
	3.8nm,0.2s						
KTBS	**Karatobe**	**1.43**	**304**	*e*P	**Pg**	**09 52 06.9**	**-0.5**
	1.1nm,0.2s						
KTBS				*e*S	**Sg**	**09 52 24.9**	**-1.2**
	9.3nm,0.5s						
KTBS	**Karatobe**	**1.43**	**304**	P	**Pg**	**09 52 06.9**	**-0.5**
	1.1nm,0.2s						
KTBS				S	**Sg**	**09 52 24.9**	**-1.2**
	9.3nm,0.5s						
KTMS	**Ketmen**	**1.57**	**70**	*e*P	**Pb**	**09 52 09.6**	**+0.5**
	1.1nm,0.1s						
KTMS				*e*S	**Sb**	**09 52 30.2**	**+1.2**
	5.8nm,0.0s						
KTMS	**Ketmen**	**1.57**	**70**	P	**Pb**	**09 52 09.6**	**+0.5**
	1.1nm,0.1s						
KTMS				S	**Sb**	**09 52 30.3**	**+1.2**
	5.8nm,0.0s						
ULHL	**Ulahol**	**1.69**	**247**	⇑*i*P	**Pb**	**09 52 12.3**	**+1.1**
	baz=52						
ULHL				⇑*i*S	**Sg**	**09 52 35.7**	**+1.5**
	baz=52						
KUU	**Kurty**	**1.74**	**304**	*e*P	**Pb**	**09 52 12.0**	**0.0**
	0.6nm,0.2s						
KUU				*e*S	**Sg**	**09 52 34.0**	**-1.9**
	7.2nm,0.2s						
KUU	**Kurty**	**1.74**	**304**	P	**Pb**	**09 52 12.0**	**0.0**
	0.6nm,0.2s						
KUU				S	**Sg**	**09 52 34.0**	**-1.9**
	7.2nm,0.2s						
DJR	**Jarkent**	**1.76**	**37**	*e*P	**Pg**	**09 52 13.0**	**-0.7**
	2.1nm,0.4s						
DJR				*e*S	**Sg**	**09 52 35.5**	**-0.9**
	4.1nm,0.2s						
DJR	**Jarkent**	**1.76**	**37**	P	**Pn**	**09 52 11.3**	**+0.7**
	1.7nm,0.3s						
DJR				S	**Sn**	**09 52 32.6**	**-0.4**
	4.1nm,0.2s						
BOOM	**Boomskoye usch**	**1.81**	**257**	⇓*i*P	**Pg**	**09 52 15.1**	**+0.4**
	baz=61						
BOOM				⇓*i*S	**Sg**	**09 52 40.4**	**+2.1**
	baz=61						
DGS	**Degeres**	**1.90**	**280**	*e*P	**Pb**	**09 52 15.5**	**+0.8**
	0.7nm,0.1s						
DGS				*e*S	**Sg**	**09 52 40.0**	**-0.9**
	2.6nm,0.2s						
DGS	**Degeres**	**1.90**	**280**	P	**Pb**	**09 52 15.5**	**+0.8**
	0.7nm,0.1s						
DGS				S	**Sg**	**09 52 40.0**	**-0.9**
	2.6nm,0.2s						
TKM2	**Tokmak 2**	**2.01**	**271**	⇑*i*P	**Pg**	**09 52 18.3**	**-0.1**
	baz=74						
TKM2				⇑*i*S	**Sg**	**09 52 46.0**	**+1.6**
	baz=74						
TKM2	**Tokmak 2**	**2.01**	**271**	⇑Pg	**Pn**	**09 52 15.5**	**+1.4**
	4.7nm,1.2s						
TKM2				⇑Lg	Lg	09 52 44.4	
	1.0nm,0.4s						
KAPS	**Kapalarasan**	**2.47**	**17**	*e*P	**Pb**	**09 52 24.7**	**+0.3**
	0.5nm,0.3s						
KAPS				*e*S	**Sb**	**09 52 56.0**	**+1.1**
	2.1nm,0.4s						
KAPS	**Kapalarasan**	**2.47**	**17**	Pg	**Pb**	**09 52 24.8**	**+0.3**
	0.5nm,0.3s						
KAPS				Lg	Lg	09 52 56.0	
	2.1nm,0.4s						
KBK	**Karagaybulak**	**2.50**	**265**	⇓*i*P	**Pb**	**09 52 25.2**	**+0.1**
	baz=68						
KBK				⇓*i*S	**Sb**	**09 52 57.7**	**+1.7**
	baz=68						

UPA ***17*** *09:52:28.3±1.9, 6°.75N×82°.36W, h13*^{km}*±12*^{km}*, MW4.6*
NEIC ***17*** *09:52:29.4±0.7, 6°.89N±0°.07×82°.40W±0°.09, h10*^{km}*±2*^{km}*,*
mb4.5/7, Error ellipse: s-maj=18.8km s-min=5.6km
az=233.0
IDC ***17*** *09:52:34.1±5.4, 7°.96N×81°.86W, h0*^{km}*, mb3.7/5, mb1 4.1/7,*
mb1mx3.8/30, mbtmp3.8/7, ML3.8/2, MS3.2/8, Ms1 3.2/8,
ms1mx2.9/34, Error ellipse: s-maj=136.2km s-min=43.7km
az=16.0
UCR ***17*** *09:52:42.1±1.6, 7°.67N×82°.99W, h5*^{km}*, MW3.8,*
mb4.5(NEIC)
ISC 17 09:52:29.2±0.9,**6°.90N**±0°.06×**82°.34W**±0°.03,**h10**^{km}**,n92,**
σ**1**^{s}**24**/109,**mb4.0**/8,**MS3.1**/5,**3C-6D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**1.39**	**52**	⇓*i*P	**Pn**	**09 52 54.1**	**-0.6**
GMAL				*e*S	**Sg**	**09 53 13.6**	**-0.5**
REME3	**Remedios, Chir**	**1.41**	**21**	*e*P	**Pn**	**09 52 54.6**	**-0.4**
NANC3	**Nancito, Chiri**	**1.46**	**24**	*e*P	**Pn**	**09 52 55.0**	**-0.7**
PEDE3	**Pedregal, Chir**	**1.48**	**357**	*e*P	Pg	09 53 08.3	+11
CHIR3	**Chiriqui UPA,**	**1.49**	**0**	*e*P	**Pn**	**09 52 55.7**	**-0.3**
CHIR3				*e*S	**Sg**	**09 53 17.7**	**+0.6**
LOCO3	**Loma Colorada,**	**1.50**	**357**	*e*P	**Pn**	**09 52 55.8**	**-0.5**
LOCO3				*e*S	**Sg**	**09 53 17.6**	**0.0**
DVD	**David**	**1.53**	**356**	⇓*i*P	**Pn**	**09 52 55.9**	**-0.8**
DVD				*e*S	**Sg**	**09 53 17.2**	**-1.4**
MARI3	**Mariato, Verag**	**1.53**	**61**	*e*P	**Pn**	**09 52 55.7**	**-0.9**
MARI3				*e*S	**Sn**	**09 53 15.6**	**-1.0**
CACAO	**El Cacao, Vera**	**1.53**	**73**	⇓*e*P	**Pn**	**09 52 54.9**	**-1.8**
CACAO				*e*S	**Sn**	**09 53 15.0**	**-1.6**
BAGA3	**Bagala, Chiriq**	**1.57**	**353**	⇑*i*P	**Pn**	**09 52 56.7**	**-0.5**
GUAL3	**Gualaca, Chiri**	**1.62**	**1**	*e*P	**Pb**	**09 52 58.4**	**-0.9**
CCOL	**Caracol de Cor**	**1.63**	**337**	*e*P	**Pn**	**09 52 56.4**	**-1.5**
PONU3	**Ponuga, Veragu**	**1.67**	**54**	*e*P	**Pn**	**09 52 58.1**	**-0.5**
PONU3				*e*S	**Sb**	**09 53 20.3**	**-0.9**

CDITO	Canoas	1.75	342	eP	Pn	09 52 58.0	-1.6
PTAR3	Potrerillos Ar	1.79	355	eP	Pn	09 53 00.6	+0.2
PIRO	Carate, Puerto	1.79	327	eP	Pn	09 52 57.8	-2.4
BCO2	Palmira	1.82	354	eP	Pn	09 53 00.3	-0.5
BCO2				eS	Sn	09 53 22.4	-1.5
CNAZ3	Canazas, Verag	1.83	38	eP	Pn	09 53 00.4	-0.3
CNAZ3				eS	Sb	09 53 25.0	-0.7
OCU3	Ocu, Herrera	1.87	56	eP	Pn	09 53 01.3	0.0
OCU3				eS	Sg	09 53 27.9	-1.4
PTJ1	Puerto Jimnez	1.89	330	⇓iP	Pn	09 53 00.5	-1.0
PTJ1				eS	Sn	09 53 24.7	-0.7
PTJ1	Puerto Jimnez	1.89	330	eP	Pn	09 53 00.2	-1.4
BRU2	Volcan	1.92	350	⇑iP	Pn	09 53 01.4	-0.7
BRU2				eS	Sb	09 53 28.4	0.0
BC3P	Paso Ancho	1.92	352	eP	Pb	09 53 03.8	-0.8
MLIR3	Monte Lirio, C	1.94	346	eP	Pn	09 53 02.4	0.0
EDSV	San Vito	2.01	342	eP	Pn	09 53 02.9	-0.5
CHGR2	Aguacate	2.04	5	⇓eP	Pn	09 53 04.1	+0.5
CHGR2				eS	Sb	09 53 30.0	-1.8
RIOS	Rincon, Osa	2.14	327	eP	Pn	09 53 02.7	-2.2
CHIT3	Chitre	2.18	61	eS	Sn	09 53 32.2	-0.3
ACHO3	Achotines, Los	2.21	76	eP	Pn	09 53 04.8	-1.2
ACHO3				eS	Sn	09 53 30.7	-2.7
AZU	Azuero	2.23	66	⇓iP	Pn	09 53 05.5	-0.8
AZU				eS	Sn	09 53 33.2	-0.7
POTG	Potrero Grande	2.28	340	eP	Pn	09 53 06.6	-0.3
PCRI3	Pocri, Los San	2.33	71	eP	Pn	09 53 07.1	-0.6
PCRI3				eS	Sn	09 53 36.7	+0.4
EDPN	Palmar Norte	2.33	332	eP	Pn	09 53 06.2	-1.5
EDBA	Buenos Aires	2.43	338	eP	Pn	09 53 09.1	0.0
DRK0	Durika	2.52	339	eP	Pn	09 53 10.0	-0.4
DRK0				eS	Sb	09 53 43.8	-1.9
DRK0	Durika	2.52	339	eP	Pn	09 53 09.9	-0.4
PNME	Penonome	2.54	52	eP	Pn	09 53 11.2	+0.7
PNME				eS	Sn	09 53 43.5	+1.9
EDLM	Las Mercedes	2.67	332	eP	Pn	09 53 11.6	-0.8
VTON	El Valle, Cocl	2.79	52	eP	Pn	09 53 15.8	+1.8
VTON				eS	Sb	09 53 51.9	-1.5
PEZE	Perez Zeledon,	2.80	332	eP	Pn	09 53 13.6	-0.7
ZANG	Zanguenga, Cho	3.19	50	eP	Pn	09 53 20.6	+1.1
ZANG				eS	Sb	09 54 05.1	+0.1
RIMA	Rio Macho	3.23	332	eP	Pn	09 53 19.6	-0.5
CHOR3	La Chorrera	3.23	52	eP	Pn	09 53 21.8	+1.8
CHOR3				eS	Sb	09 54 05.7	-0.5
LCR2	La Lucha 2	3.27	330	eP	Pn	09 53 20.1	-0.7
BCIP	Isla Barro Col	3.35	48	eP	Pn	09 53 21.7	0.0
BCIP				eS	Sn	09 54 01.8	+0.3
BCIP	Isla Barro Col	3.35	48		Pn	09 53 22.7	+1.1
BCIP	Isla Barro Col	3.35	48	eP	Pn	09 53 22.8	+1.2
UPA	Univ. de Panam	3.46	53	eP	Pn	09 53 23.4	+0.2
UPA				eS	Sg	09 54 17.4	-3.2
HDC	Heredia	3.55	330	⇑iP	Pn	09 53 24.9	+0.4
HDC				eS	Sn	09 54 07.7	+1.1
HDC	Heredia	3.55	330	eP	Pn	09 53 24.6	+0.1
HDC	Heredia	3.55	330		Pn	09 53 25.0	+0.4
JACO	JACO, Garabito	3.58	320	eP	Pn	09 53 23.4	-1.4
LAFE	Finca La Fe, P	3.85	319	eP	Pn	09 53 27.2	-1.4
JTS	Las Juntas de	4.25	323	Pn	Pn	09 53 33.6	-0.4
	19nm,0.3s,baz=166,slow=17,SNR=70						
JTS				Sn	Sn	09 54 21.5	-2.3
	5.7nm,0.3s,baz=150,slow=24,SNR=6.2						
JTS				LR	LR	09 55 15.2	
	comp=Z,375nm,21.7s,baz=230,slow=42						
JTS	Las Juntas de	4.25	323	eP	Pn	09 53 33.4	-0.6
JTS	Las Juntas de	4.25	323	eP	Pn	09 53 33.6	-0.4
JTS	Las Juntas de	4.25	323	Pn	Pn	09 53 33.7	-0.3
ARE1	Arenal 1	4.25	327	eP	Pn	09 53 34.8	+0.7
PLVR	Palo Verde	4.54	319	eP	Pn	09 53 37.5	-0.7
ORTG	Ortega, Santa	4.62	318	eP	Pn	09 53 39.3	0.0
SOLC	Bahia Solano	4.94	97	eP	Pn	09 53 42.0	-1.6
ESPN	Las Esperanzas	5.61	340		Pn	09 53 52.5	-0.2
ACON	Acoyapa	5.76	331		Pn	09 53 55.0	+0.1
CBOC	Ciudad Bolivar	6.37	99	eP	Pn	09 54 00.7	-2.7
YOTC	Yotoco, Valle	6.63	116	eP	Pn	09 54 04.0	-2.9
RREF	El Recreo	7.23	106	eP	Pn	09 54 17.1	+1.5
TOLC	Tolima	7.35	108	eP	Pn	09 54 18.5	+1.5
PCON	Cinco Dias	7.46	127	eP	Pn	09 54 19.2	+0.5
MARP	Paez Belalcaza	7.53	122	eP	Pn	09 54 20.1	+0.7
ORTC	Ortega, Tolima	7.66	112	eP	Pn	09 54 21.8	+0.8
PTBC	PUERTO BERRIO,	7.84	92	eP	Pn	09 54 26.4	+3.0
VILC	Villavicencio,	9.04	107	eP	Pn	09 54 43.2	+3.2
ATAH	Atahualpa	14.48	164	LR	LR	10 00 39.6	
	comp=Z,110nm,21.1s,baz=1.6,slow=32						
CMIG	Matias Romero	15.90	311	Pn	P	09 56 15.9	-1.0
	0.2nm,0.3s,baz=131,slow=11,SNR=1.8						
SJG	San Juan	19.32	53	LR	LR	10 03 04.0	
	comp=Z,43nm,19.6s,baz=267,slow=34						
TXAR	Lajitas Array	30.04	321	P	P	09 58 40.7	+2.1
	0.3nm,0.8s,baz=134,slow=7.7,SNR=2.5						
S51A	Beattyville	30.62	358	P	P	09 58 44.0	+0.4
S51A				IAmb	IAmb	09 58 46.2	
	comp=Z,6.7nm,0.7s						
SIV	San Ignacio	30.99	137	LR	LR	10 12 40.4	
	comp=Z,65nm,19.1s,baz=312,slow=38						
T42A	Van Buren	31.04	346	P	P	09 58 47.3	0.0
T42A				IAmb	IAmb	09 58 54.6	
	comp=Z,3.2nm,1.0s						
R49A	Shelbyville	31.36	356	P	P	09 58 51.5	+1.4
R49A				IAmb	IAmb	09 58 51.8	
	comp=Z,6.1nm,0.6s						
Q51A	Peebles	32.00	359	P	P	09 58 56.3	+0.5
L56A	Greenwood	35.35	6	P	P	09 59 24.3	-0.6
ANMO	Albuquerque	35.66	325	P	P	09 59 27.7	-0.2
L63A	North Scituate	36.10	14	P	P	09 59 30.9	-0.3
BDFB	Brasilia	40.71	124	LR	LR	10 18 16.3	
	comp=Z,26nm,18.5s,baz=334,slow=38						
CPUP	Villa Florida	40.99	145	LR	LR	10 19 05.7	
	comp=Z,29nm,19.2s,baz=66,slow=38						
ULM	Lac du Bonnet	44.67	348	P	P	10 00 41.8	-0.4
	comp=Z,2.8nm,0.8s,baz=178,slow=7.9,SNR=4.9						
ELK	Elko	44.69	324	LR	LR	10 20 49.6	
	comp=Z,22nm,18.2s,baz=92,slow=38						
NVAR	Mina Array Bea	45.17	319	P	P	10 00 49.2	+2.6
	comp=Z,0.7nm,0.6s,baz=134,slow=6.4,SNR=10						
YBH	Yreka Blue Hor	49.81	321	LR	LR	10 24 23.0	
	comp=Z,39nm,19.6s,baz=100,slow=39						
YKA	Yellowknife Ar	60.30	343	P	P	10 02 38.1	+0.3
	comp=Z,0.7nm,0.9s,baz=131,slow=7.6,SNR=9.1						
ILAR	Eielson Array	73.10	336	P	P	10 04 01.1	+1.6
	comp=Z,0.7nm,0.7s,baz=119,slow=5.3,SNR=7.6						

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*IDC **17** 09:57:16.2±0.8, 18°.05S×167°.91E, h0^{km}, mb4.2/11, mb1 4.4/13, mb1mx4.2/35, mbtmp4.3/13, ML4.2/2, MS3.9/4, Ms1 3.9/4, ms1mx3.4/31, Error ellipse: s-maj=24.5km s-min=17.9km az=131.0*

*NEIC **17** 09:57:17.9±1.6, 17°.95S±0°.05×167°.6E±0°.1, h10^{km}±1^{km}, mb4.8/30, Error ellipse: s-maj=21.6km s-min=7.2km az=258.0*

*NOU **17** 09:57:17.6, 18°.00S×167°.71E, h10^{km}, MLv4.6, Vanuatu Islands*

ISC 17 09:57:17.6±0.5**, 18°.03S**±0°.04×**167°.72E**±0°.08**, h10**^{km}**, n78, σ1.**^{s}**28**/71**, mb4.7**/23**, MS3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DVP	Devils Point	0.54	56	P	Pb	09 57 29.2	+0.1
SANVU	Saraoutou	2.61	349	Pn	Pn	09 57 58.9	-1.1
SANVU	Saraoutou	2.61	349	P	Pn	09 57 58.8	-1.1
LIFNC	LIFOU	2.77	189	P	Pn	09 58 01.8	-0.3
MARNC	Mare, Loyalty	3.45	175	P	Pn	09 58 10.9	-0.5
YATNC	Mamie plateau,	4.09	191	P	Pn	09 58 20.3	+0.1
KOUNC	Koumac, New Ca	4.10	232	P	Pn	09 58 21.1	+0.7
DZM	Mont Dzumac	4.20	196	Pn	Pn	09 58 21.9	+0.1
	3.1nm,0.3s,baz=52,slow=17,SNR=54						
DZM				Sn	Sn	09 59 10.7	-0.3
	26nm,0.3s,baz=308,slow=22,SNR=14						
DZM				LR	LR	09 59 54.7	
	comp=Z,532nm,18.9s,baz=54,slow=38						
DZM	Mont Dzumac	4.20	196	ePn	Pn	09 58 23.4	+1.6
	22nm,0.2s						
DZM				eSn	Sn	09 59 03.6	-7.4
	64nm,0.3s						
DZM				eLR	LR	09 59 21.5	
	comp=Z,870nm,25.9s						
DZM	Mont Dzumac	4.20	196	Pn	Pn	09 58 22.6	+0.8
NOUC	Port Laguerre	4.27	198	P	Pn	09 58 23.6	+1.0
OUENC	Ouen Island, N	4.45	191	P	Pn	09 58 25.8	+0.7
MSVF	Nonsavu	9.84	90	Pn	Pn	09 59 45.5	+6.2
	0.3nm,0.3s,baz=240,slow=9.5,SNR=16						
MSVF				LR	LR	10 02 45.0	
	comp=Z,2μm,19.6s,baz=208,slow=34						
HNR	Honiara	11.40	318	Pn	Pn	10 00 02.7	+2.1
	6.1nm,0.3s,baz=217,slow=10,SNR=2.6						
HNR				LR	LR	10 04 08.1	
	comp=Z,309nm,18.9s,baz=143,slow=36						
HNR	Honiara	11.40	318		Pn	09 59 59.3	-1.3
CTA	Charters Tower	20.39	261	P	Pn	10 01 57.1	+0.2
	13nm,1.0s,baz=72,slow=13,SNR=7.2						
CTAO	Charters Tower	20.39	261	P	P	10 01 54.4	-0.4
PMG	Port Moresby	21.72	291	LR	LR	10 09 25.4	
	comp=Z,408nm,18.5s,baz=101,slow=33						
PMG	Port Moresby	21.72	291	P	P	10 02 06.7	-2.4
URZ	Urewera	21.77	160	P	P	10 02 09.6	+0.2
	6.6nm,0.8s,baz=319,slow=9.3,SNR=3.2						
URZ	Urewera	21.77	160	P	P	10 02 07.7	-1.7
URZ				IAmb	IAmb	10 02 32.0	
	comp=Z,59nm,1.4s						
STKA	Stephens Creek	27.32	235	P	P	10 03 04.3	+1.6
	comp=Z,6.1nm,1.1s,baz=54,slow=14,SNR=4.4						
STKA	Stephens Creek	27.32	235	P	P	10 03 01.9	-0.8
WRA	Warramunga Arr	31.60	261	P	P	10 03 42.8	+2.0
	comp=Z,2.3nm,1.2s,baz=80,slow=6.4,SNR=24						
WRA	Warramunga Arr	31.60	261	P	P	10 03 39.4	-1.5
AS31	Alice Springs	32.05	254	P	P	10 03 45.3	+0.5
ASAR	Alice Springs	32.05	254	P	P	10 03 45.1	+0.3
	comp=Z,2.1nm,0.8s,baz=82,slow=8.0,SNR=17						
TBI	Tubuai	40.30	105	eLQ	LQ	10 14 39.7	
	comp=Z,312nm,25.8s						
TBI				eLR	LR	10 16 19.0	
	comp=Z,182nm,28.8s						
PPT2	Papeete2	40.59	96	eLR	LR	10 16 30.0	
	comp=Z,285nm,25.2s						
TAOE	Nuku Hiva Isla	51.37	87	eS	S	10 13 57.4	+14
	comp=Z,152nm,25.5s						
TAOE				eLR	LR	10 21 29.1	
	comp=Z,281nm,22.2s						
KRJI	Kerinci	66.80	276	P	P	10 08 15.2	+5.1
PETK	Petropavlovsk-	71.37	354	P	P	10 08 38.1	+0.7
	comp=Z,6.1nm,0.9s,baz=142,slow=5.1,SNR=4.6						
PETK	Petropavlovsk-	71.37	354	P	P	10 08 37.9	+0.4
QSPA	South Pole Qui	72.02	180	P	P	10 08 43.2	+1.6
KMI	Kunming	76.41	302	P	P	10 09 07.8	-0.2
CMAR	Chiang Mai Arr	76.69	295	P	P	10 09 11.1	+1.7
	comp=Z,1.1nm,0.5s,baz=122,slow=3.6,SNR=1.9						
CMAR	Chiang Mai Arr	76.69	295	P	P	10 09 09.9	+0.5
BELA	Belgrano 2	83.42	175	P	P	10 09 45.1	+0.3
RSO	Redoubt South	84.46	18	P	P	10 09 51.3	+0.9
ULN	Ulaanbaatar	85.04	324	P	P	10 09 53.9	+0.3
ULN				IAmb	IAmb	10 10 06.4	
	comp=Z,7.1nm,1.0s						
YAK	Yakutsk	85.30	343	P	P	10 09 54.2	-0.1
SONM	Songino Array	85.39	324	P	P	10 09 57.2	+1.9
	comp=Z,2.5nm,1.1s,baz=140,slow=4.1,SNR=11						
SONM	Songino Array	85.39	324	P	P	10 09 55.4	+0.1
AFDM	Forest Hills D	87.41	48	P	P	10 10 04.4	-0.9
AFDM				IAmb	IAmb	10 10 06.0	
	comp=Z,9.1nm,1.3s						
CMB	Columbia Colle	87.43	49	P	P	10 10 05.3	-0.1
ISA	Isabella, Lake	87.85	51	P	P	10 10 07.4	-0.2
ISA				IAmb	IAmb	10 10 08.6	
	comp=Z,3.8nm,0.9s						
MDPB	Devils Postpil	88.20	50	P	P	10 10 09.0	-0.4
MDPB				IAmb	IAmb	10 10 10.3	
	comp=Z,5.6nm,1.0s						
WAKR	Walker	88.31	49	P	P	10 10 09.8	-0.1
WAKR				IAmb	IAmb	10 10 11.2	
	comp=Z,6.0nm,1.2s						
RMX	La Rumorosa	88.47	55	P	P	10 10 11.6	+0.9
RMX				IAmb	IAmb	10 10 12.3	
	comp=Z,5.7nm,1.0s						
PAHR	Pah Rah Range	88.84	48	P	P	10 10 11.9	-0.4
LHV	Little Huntoon	88.87	49	P	P	10 10 11.9	-0.3
RYN	Ryan	89.01	49	P	P	10 10 13.5	+0.4
NVAR	Mina Array Bea	89.09	49	P	P	10 10 13.5	-0.1
	comp=Z,3.5nm,1.1s,baz=229,slow=7.8,SNR=14						
NVAR	Mina Array Bea	89.09	49	P	P	10 10 12.9	-0.6
NV11	Mina Array Sit	89.20	49	P	P	10 10 14.2	+0.3
NV11				IAmb	IAmb	10 10 20.2	
	comp=Z,8.3nm,1.4s						
ILAR	Eielson Array	89.52	18	P	P	10 10 12.8	-1.9
	comp=Z,0.6nm,0.7s,baz=230,slow=4.3,SNR=5.8						
GLA	Glamis	89.62	55	P	P	10 10 17.3	+1.3
GLA				IAmb	IAmb	10 10 18.3	
	comp=Z,8.5nm,1.2s						
TPNV	Topopah Spring	90.00	51	P	P	10 10 17.6	-0.2
TPNV				IAmb	IAmb	10 10 18.3	
	comp=Z,4.4nm,1.1s						
I07A	Izee	90.58	44	P	P	10 10 20.7	+0.4
I07A				IAmb	IAmb	10 10 20.9	
	comp=Z,4.1nm,1.0s						
PRN	Pahroc Range	91.06	51	P	P	10 10 23.4	+0.7
W13A	Hualapai Mount	91.09	53	P	P	10 10 23.6	+0.6
W13A				IAmb	IAmb	10 10 32.3	
	comp=Z,3.7nm,0.9s						
LCMT	Little Creek M	92.26	52	P	P	10 10 29.1	+0.8
TUC	Tucson	92.55	57	P	P	10 10 30.3	+0.7
TUC				IAmb	IAmb	10 10 31.0	
	comp=Z,3.6nm,1.0s						
X16A	Lo Mia Camp, P	92.74	55	P	P	10 10 31.3	+0.7
X16A				IAmb	IAmb	10 10 32.0	
	comp=Z,5.2nm,1.1s						
TXAR	Lajitas Array	97.46	62	P	P	10 10 51.8	-0.4
	comp=Z,0.5nm,0.9s,baz=256,slow=3.6,SNR=2.6						
YKA	Yellowknife Ar	100.26	27	P	Pdif	10 11 03.3	-0.4
	comp=Z,0.4nm,0.8s,baz=250,slow=5.0,SNR=4.2						
SOKA	Soboth	143.63	328	eP	PKPdf	10 16 52.2	-0.7
	comp=Z,11nm,1.7s						
KBA	Koelnbreinsper	144.19	330	eP	PKPbc	10 16 52.9	+0.8
	comp=Z,7.6nm,1.0s						
MYKA	Terra Mystica	144.36	329	eP	PKPbc	10 16 53.2	+0.7
	comp=Z,6.0nm,1.1s						
ABTA	Abfaltersbach	144.82	330	i P	PKPdf	10 16 54.7	-0.3
	comp=Z,7.0nm,0.9s						
WATA	Walderalm	144.82	331	eP	PKPdf	10 16 55.2	+0.1
	comp=Z,5.2nm,1.2s						
WTTA	Wattenberg	144.85	331	eP	PKPab	10 16 54.2	0.0
	comp=Z,8.8nm,1.3s						
MOTA	Moosalm	145.03	332	eP	PKPdf	10 16 56.0	+0.5
	comp=Z,11nm,1.2s						
RETA	Reutte	145.07	332	i P	PKPdf	10 16 56.2	+0.7
	comp=Z,5.0nm,1.0s						
SQTA	Sankt Quirin	145.08	332	eP	PKPdf	10 16 55.5	0.0
	comp=Z,10nm,1.1s						
FETA	Feichten	145.44	332	eP	PKPab	10 16 56.3	0.0
	comp=Z,13nm,1.0s						
DAVA	Damuels	145.61	333	eP	PKPab	10 16 58.1	+1.1
	comp=Z,9.7nm,0.9s						
TORD	Torodi Ar. Bea	165.69	252	PKP	PKPdf	10 17 23.5	-0.1
	comp=Z,1.0nm,1.0s,baz=126,slow=2.6,SNR=3.6						

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*IDC **17** 10:00:17.9±0.8, 17°.93S×167°.79E, h0^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.2/36, mbtmp4.3/15, ML4.3/2, Error ellipse: s-maj=22.9km s-min=17.8km az=138.0*

*NEIC **17** 10:00:18.7±1.4, 18°.02S±0°.03×167°.73E±0°.09, h10^{km}±1^{km}, mb4.8/32, Error ellipse: s-maj=15.2km s-min=5.5km az=87.0*

*NOU **17** 10:01:47.3, 21°.16S×167°.66E, h0^{km}, MLv3.1, Loyalty Islands*

ISC 17 10:00:19.1±0.5**, 18°.03S**±0°.05×**167°.72E**±0°.08**, h10**^{km}**, n76, σ1.**^{s}**66**/75**, mb4.7**/27**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.61	349	Pn	Pn	10 01 01.0	-0.4
MARNC	Mare, Loyalty	3.45	175	P	Sn	10 01 56.3	+2.5
YATNC	Mamie plateau,	4.09	191	P	Sn	10 02 08.6	-1.0
DZM	Mont Dzumac	4.20	196	Pn	Pn	10 01 24.3	+1.0
	3.9nm,0.3s,baz=48,slow=18,SNR=1.6						
DZM				Sn	Sn	10 02 10.3	-2.2
	15nm,0.3s,baz=160,slow=22,SNR=7.9						
DZM	Mont Dzumac	4.20	196	ePn	Pn	10 01 24.5	+1.2
	22nm,0.3s						
DZM				eSn	Sn	10 02 05.2	-7.3
	66nm,0.3s						
DZM				eLR	LR	10 02 15.3	
DZM	Mont Dzumac	4.20	196		Pn	10 01 23.8	+0.5
DZM					Sn	10 02 11.1	-1.4
DZM	Mont Dzumac	4.20	196	P	Sn	10 02 13.8	+1.3
NOUC	Port Laguerre	4.27	198	P	Sn	10 02 16.0	+2.0
PINNC	Pines Island,	4.57	183	P	Sn	10 02 14.2	-7.3
MSVF	Nonsavu	9.84	90	Pn	Pn	10 02 46.9	+6.2
	0.5nm,0.3s,baz=263,slow=10,SNR=8.6						
MSVF	Nonsavu	9.84	90	Pn	Pn	10 02 40.4	-0.4
HNR	Honiara	11.40	318	Pn	Pn	10 03 02.6	+0.5
	9.2nm,0.3s,baz=214,slow=11,SNR=2.2						
HNR	Honiara	11.40	318		Pn	10 03 00.9	-1.3
CTA	Charters Tower	20.40	261	P	Pn	10 04 58.7	+0.2
	9.7nm,0.9s,baz=84,slow=12,SNR=5.5						
CTAO	Charters Tower	20.40	261	P	P	10 04 55.6	-0.7
PMG	Port Moresby	21.72	291	P	P	10 05 11.8	+1.2
	6.9nm,0.9s,baz=124,slow=11,SNR=2.5						
PMG	Port Moresby	21.72	291	P	P	10 05 09.6	-1.1
URZ	Urewera	21.76	160	P	P	10 05 13.8	+2.9
	8.9nm,0.8s,baz=342,slow=9.6,SNR=3.4						
STKA	Stephens Creek	27.32	235	P	P	10 06 05.4	+1.2
	6.2nm,1.0s,baz=56,slow=11,SNR=4.8						
STKA	Stephens Creek	27.32	235	P	P	10 06 03.3	-0.9
WB2	Warramunga Arr	31.59	261	P	P	10 06 42.9	+0.7
WRA	Warramunga Arr	31.60	261	P	P	10 06 42.1	-0.2
	1.2nm,0.9s,baz=80,slow=9.1,SNR=3.6						
AS31	Alice Springs	32.05	254	P	P	10 06 45.5	-0.8
ASAR	Alice Springs	32.05	254	P	P	10 06 46.5	+0.1
	3.0nm,0.7s,baz=84,slow=8.6,SNR=8.2						
ASAR	Alice Springs	32.05	254	P	P	10 06 46.7	+0.4
TBI	Tubuai	40.30	105	eLR	LR	10 19 23.8	
	comp=Z,108nm,28.2s						
PPT2	Papeete2	40.59	96	eLR	LR	10 19 34.1	
	comp=Z,232nm,25.0s						
NWAO	Narrogin (SRO)	47.50	242	P	P	10 08 53.2	-1.4
MJAR	Matsushiro Arr	61.02	333	P	P	10 10 33.5	+0.6
	3.8nm,1.0s,baz=160,slow=7.4,SNR=4.3						
PETK	Petropavlovsk-	71.37	354	P	P	10 11 39.6	+0.6
	9.3nm,1.0s,baz=139,slow=5.7,SNR=6.6						
QSPA	South Pole Qui	72.02	180	P	P	10 11 43.7	+0.6
CMAR	Chiang Mai Arr	76.70	295	P	P	10 12 14.5	+3.5
	2.3nm,0.8s,baz=122,slow=4.1,SNR=11						
CMAR	Chiang Mai Arr	76.70	295	P	P	10 12 12.7	+1.8
SEY	Seymchan	81.59	353	P	P	10 12 37.1	+0.4
	baz=159,slow=8.0						
BELA	Belgrano 2	83.42	175	P	P	10 12 46.0	-0.3
ULN	Ulaanbaatar	85.04	324	P	P	10 12 56.1	+1.0
ULN				IAmb	IAmb	10 12 59.2	
	comp=Z,4.9nm,1.0s						
YAK	Yakutsk	85.30	343	P	P	10 12 56.6	+0.8
SONM	Songino Array	85.40	324	P	P	10 12 57.3	+0.5
	comp=Z,1.7nm,1.0s,baz=141,slow=5.2,SNR=6.1						
SONM	Songino Array	85.40	324	P	P	10 12 57.0	+0.2
AFDM	Forest Hills D	87.41	48	P	P	10 13 06.1	-0.7
AFDM				IAmb	IAmb	10 13 07.3	
	comp=Z,6.0nm,1.1s						
CMB	Columbia Colle	87.43	49	P	P	10 13 06.2	-0.7
CMB				IAmb	IAmb	10 13 08.0	
	comp=Z,4.8nm,1.1s						
YBH	Yreka Blue Hor	87.44	45	P	P	10 13 06.6	-0.3
	comp=Z,1.8nm,0.8s,baz=144,slow=4.8,SNR=3.7						
YBH	Yreka Blue Hor	87.44	45	P	P	10 13 05.7	-1.2
YBH				IAmb	IAmb	10 13 12.7	
	comp=Z,9.8nm,1.5s						
PASC	Pasadena Art C	87.46	53	P	P	10 13 05.2	-2.0
PASC				IAmb	IAmb	10 13 07.8	
	comp=Z,7.2nm,1.0s						
ISA	Isabella, Lake	87.84	51	P	P	10 13 08.8	-0.3
ISA				IAmb	IAmb	10 13 10.4	
	comp=Z,3.6nm,0.9s						
WAKR	Walker	88.31	49	P	P	10 13 11.0	-0.4
WAKR				IAmb	IAmb	10 13 12.3	
	comp=Z,6.5nm,1.2s						
PNTR	Pine Nut	88.43	48	P	P	10 13 11.3	-0.7
PNTR				IAmb	IAmb	10 13 12.8	
	comp=Z,3.6nm,0.8s						
RMX	La Rumorosa	88.47	55	P	P	10 13 11.8	-0.4
PAHR	Pah Rah Range	88.84	48	P	P	10 13 13.8	0.0
PAHR				IAmb	IAmb	10 13 14.6	
	comp=Z,7.1nm,1.3s						
LHV	Little Huntoon	88.87	49	P	P	10 13 13.5	-0.2
LHV				IAmb	IAmb	10 13 15.6	
	comp=Z,7.3nm,1.3s						
RYN	Ryan	89.01	49	P	P	10 13 14.2	-0.5
NVAR	Mina Array Bea	89.09	49	P	P	10 13 15.0	-0.1
	comp=Z,1.7nm,0.8s,baz=230,slow=7.6,SNR=14						
NVAR	Mina Array Bea	89.09	49	P	P	10 13 14.5	-0.5
NV11	Mina Array Sit	89.19	49	P	P	10 13 15.0	-0.4
NV11				IAmb	IAmb	10 13 16.3	
	comp=Z,5.5nm,1.1s						
IL31		89.51	18	P	P	10 13 14.9	-1.1
IL31				IAmb	IAmb	10 13 22.0	
	comp=Z,6.6nm,1.4s						
ILAR	Eielson Array	89.51	18	P	P	10 13 14.4	-1.8
	comp=Z,0.9nm,0.8s,baz=246,slow=4.7,SNR=7.9						
ILAR	Eielson Array	89.51	18	P	P	10 13 13.3	-2.9
I07A	Izee	90.58	44	P	P	10 13 21.9	+0.1
I07A				IAmb	IAmb	10 13 23.6	
	comp=Z,4.8nm,1.1s						
PRN	Pahroc Range	91.06	51	P	P	10 13 23.9	-0.3
PRN				IAmb	IAmb	10 13 25.4	
	comp=Z,5.0nm,0.9s						
W13A	Hualapai Mount	91.09	53	P	P	10 13 23.1	-1.4
LCMT	Little Creek M	92.26	52	P	P	10 13 29.6	-0.2
X16A	Lo Mia Camp, P	92.74	55	P	P	10 13 31.8	-0.3
X16A				IAmb	IAmb	10 13 33.4	
	comp=Z,4.8nm,0.9s						
U15A	North Rim	92.77	53	P	P	10 13 31.9	-0.4
319A	Douglas	93.45	58	P	P	10 13 36.1	+0.8
TXAR	Lajitas Array	97.45	62	P	P	10 13 53.6	-0.1
	comp=Z,0.4nm,0.8s,baz=227,slow=5.0,SNR=4.1						
TXAR	Lajitas Array	97.45	62	P	P	10 13 53.3	-0.3
YKA	Yellowknife Ar	100.26	27	P	Pdif	10 14 04.5	-0.7
	comp=Z,0.3nm,0.6s,baz=251,slow=4.1,SNR=6.5						
ARCES	ARCESS Array B	123.53	345	PKP	PKPdf	10 19 16.1	-0.1
	comp=Z,2.8nm,0.8s,baz=83,slow=2.2,SNR=3.9						
ARCES	ARCESS Array B	123.53	345		PKPdf	10 19 13.7	-2.5
MOTA	Moosalm	145.03	332	i P	PKPdf	10 19 56.5	-0.4
	comp=Z,10nm,0.9s						
RETA	Reutte	145.07	332	eP	PKPdf	10 19 57.0	0.0
	comp=Z,5.9nm,1.0s						
SQTA	Sankt Quirin	145.08	332	eP	PKPdf	10 19 56.6	-0.4
	comp=Z,7.4nm,0.8s						
FETA	Feichten	145.44	332	i P	PKPab	10 19 58.4	+0.5
	comp=Z,13nm,1.0s						
DAVA	Damuels	145.61	333	eP	PKPab	10 19 58.9	+0.5
	comp=Z,18nm,1.2s						
TORD	Torodi Ar. Bea	165.70	252	PKP	PKPdf	10 20 24.9	-0.2
	comp=Z,0.8nm,0.6s,baz=0.0,slow=0.3,SNR=4.3						
TORD	Torodi Ar. Bea	165.70	252	PKPdf	PKPdf	10 20 24.3	-0.8

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*IDC **17** 10:10:19.9±0.8, 17°.97S×167°.82E, h0^{km}, mb4.4/14, mb1 4.6/16, mb1mx4.4/35, mbtmp4.5/16, ML4.1/2, MS4.0/30, Ms1 4.0/30, ms1mx4.0/40, Error ellipse: s-maj=22.0km s-min=17.4km az=136.0*

*BJI **17** 10:10:20.0±0.0, 17°.90S×167°.60E, h10^{km}, mB5.1/15, mb4.7/19, Ms4.9/6, Ms7 4.6/6*

*NEIC **17** 10:10:20.5±1.7, 17°.91S±0°.07×167°.64E±0°.07, h10^{km}±1^{km}, mb4.8/43, Error ellipse: s-maj=12.2km s-min=10.2km az=132.0*

*NOU **17** 10:10:23.1, 17°.98S×167°.65E, h0^{km}, mb4.8, Vanuatu Islands*

*GCMT **17** 10:10:27.5±0.2, 17°.91S±0°.03×167°.55E±0°.02, h18^{km}±1^{km}, MW5.0/85, Moment Tensor Solution. s28,c31; s85,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.52±.16; $M_{\theta\theta}$-0.13±.09; $M_{\phi\phi}$-2.39±.11; $M_{r\theta}$0.44±.22; $M_{\theta\phi}$0.44±.06; $M_{\phi r}$-2.58±.25; Best double couple: $M_0$3.61600×10^{16} NP1:ϕ_s349.00000°, δ22.00000°, λ89.00000°. NP2: ϕ_s170.00000°, δ68.00000°, λ90.00000°. Principal axes: T 3.6410, Plg67.0000°, Azm81.0000°; N -0.0450, Plg0.0000°, Azm350.0000°; P -3.5920, Plg23.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 10:10:21.2±0.4**, 17°.93S**±0°.04×**167°.75E**±0°.06**, h10**^{km}**, n146, σ1.**^{s}**52**/113**, mb4.8**/36**, MS4.1**/34**, 1C-4D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DVP	Devils Point	0.47	64	P	Pn	10 10 33.8	-0.1
SANVU	Saraoutou	2.53	348		Pn	10 11 01.3	-1.0
SANVU	Saraoutou	2.53	348	P	Pb	10 11 05.0	-1.6
LIFNC	LIFOU	2.87	190	P	Pb	10 11 10.7	-1.8
MARNC	Mare, Loyalty	3.54	176	P	Pn	10 11 18.1	+1.9
KOUNC	Koumac, New Ca	4.18	231	P	Pn	10 11 24.8	-0.3
YATNC	Mamie plateau,	4.18	191	P	Pn	10 11 27.5	+2.4
DZM	Mont Dzumac	4.30	196	Pn	Pn	10 11 25.4	-1.3
	3.5nm,0.3s,baz=48,slow=20,SNR=44						
DZM				Pg	Pb	10 11 34.1	-2.8
	49nm,0.3s,baz=337,slow=7.7,SNR=54						
DZM				Sn	Sn	10 12 12.5	-4.5
	30nm,0.3s,baz=128,slow=23,SNR=11						

DZM				LR	LR	10 12 57.0	
	comp=Z,823nm,19.6s,baz=43,slow=37						
DZM	Mont Dzumac	4.30	196	*e*Pn	Pn	10 11 26.0	-0.7
	61nm,0.3s						
DZM				*e*Sn	Sn	10 12 12.5	-4.5
	80nm,0.3s						
DZM				*e*LR	LR	10 12 24.0	
	comp=Z,1µm,26.1s						
DZM	Mont Dzumac	4.30	196	Pn	Pn	10 11 26.1	-0.6
DZM	Mont Dzumac	4.30	196	P	Pn	10 11 27.8	+1.1
NOUC	Port Laguerre	4.36	198	P	Pn	10 11 28.5	+0.9
OUENC	Ouen Island, N	4.54	191	P	Pn	10 11 32.6	+2.6
PINNC	Pines Island,	4.67	183	P	Pn	10 11 34.5	+2.8
MSVF	Nonsavu	9.81	90	Pn	Pn	10 12 48.2	+5.7
	0.1nm,0.3s,baz=237,slow=8.3,SNR=19						
MSVF				LR	LR	10 15 48.5	
	comp=Z,3µm,19.3s,baz=214,slow=34						
MSVF	Nonsavu	9.81	90	P	Pn	10 12 47.5	+5.0
	62nm,1.2s						
HNR	Honiara	11.35	317	Pn	Pn	10 13 05.4	+1.9
	3.8nm,0.3s,baz=252,slow=2.1,SNR=4.7						
HNR				LR	LR	10 16 39.5	
	comp=Z,627nm,20.6s,baz=150,slow=33						
HNR	Honiara	11.35	317		Pn	10 13 00.6	-2.9
HNR	Honiara	11.35	317	P	Pn	10 13 06.4	+2.9
ARMA	Armidale	19.23	227	P	Pn	10 14 49.7	+3.1
	baz=20,SNR=4.4						
RMQ	Roma	19.52	241	P	Pn	10 14 51.8	+1.7
	baz=20,SNR=34						
CTA	Charters Tower	20.44	261	P	Pn	10 15 00.4	-0.6
	20nm,0.9s,baz=92,slow=12,SNR=14						
CTA				LR	LR	10 22 23.1	
	comp=Z,893nm,20.4s,baz=74,slow=35						
CTAO	Charters Tower	20.44	261		P	10 14 58.6	-0.3
CTAO				IAmb	IAmb	10 15 05.2	
	comp=Z,58nm,1.2s						
RABL	Rabaul	20.48	310	P	Pn	10 15 03.5	+2.0
RIV	Riverview	21.71	220	P	P	10 15 17.3	+4.9
	baz=22,SNR=3.4						
PMG	Port Moresby	21.71	290	P	P	10 15 14.0	+1.4
	comp=Z,7.8nm,0.8s,baz=93,slow=7.3,SNR=5.9						
PMG				LR	LR	10 22 37.7	
	comp=Z,691nm,18.4s,baz=136,slow=34						
PMG	Port Moresby	21.71	290	P	P	10 15 10.0	-2.7
URZ	Urewera	21.84	160	P	P	10 15 15.1	+1.2
	comp=Z,25nm,1.2s,baz=334,slow=4.6,SNR=5.5						
URZ	Urewera	21.84	160	P	P	10 15 16.0	+2.1
MTSU	Mount Surprise	22.28	266	P	P	10 15 19.7	+0.9
	baz=22,SNR=41						
QLP	Quilpie	23.37	244	P	P	10 15 30.9	+0.8
	baz=24,SNR=5.7						
CAN	Canberra	24.03	220	P	P	10 15 35.5	-1.0
CAN				IAmb	IAmb	10 15 48.0	
	comp=Z,24nm,1.0s						
CMSA	Cobar Meteorol	24.12	232	P	P	10 15 38.5	+1.2
	baz=24,SNR=10						
RPZ	Rata Peaks	25.85	175	LR	LR	10 25 22.5	
	comp=Z,472nm,20.2s,baz=353,slow=35						
STKA	Stephens Creek	27.40	235	P	P	10 16 08.1	+1.1
	baz=28,SNR=4.1						
STKA	Stephens Creek	27.40	235	P	P	10 16 07.5	+0.5
	comp=Z,8.4nm,1.0s,baz=69,slow=7.8,SNR=6.6						
STKA				LR	LR	10 25 58.1	
	comp=Z,514nm,19.4s,baz=58,slow=34						
STKA	Stephens Creek	27.40	235	P	P	10 16 06.9	-0.1
JAY	Jayapura	30.63	297	LR	LR	10 29 10.8	
	comp=Z,544nm,18.7s,baz=72,slow=37						
RAR	Rarotonga	30.75	101	LR	LR	10 25 39.9	
	comp=Z,284nm,19.9s,baz=268,slow=30						
WR0	Warramunga Arr	31.45	261	P	P	10 16 41.7	-1.4
WB0	Warramunga Arr	31.59	261	P	P	10 16 42.2	-2.2
WB2	Warramunga Arr	31.63	261	P	P	10 16 42.8	-1.9
WRAB	Tennant Creek	31.63	261	P	P	10 16 43.1	-1.6
WRA	Warramunga Arr	31.64	261	P	P	10 16 43.8	-1.0
	comp=Z,2.0nm,0.9s,baz=92,slow=9.0,SNR=6.0						
WRA				LR	LR	10 28 42.3	
	comp=Z,384nm,18.2s,baz=75,slow=35						
WRA	Warramunga Arr	31.64	261	P	P	10 16 42.6	-2.2
AS31	Alice Springs	32.10	254	P	P	10 16 47.8	-1.0
ASAR	Alice Springs	32.10	254	P	P	10 16 48.4	-0.5
	comp=Z,4.9nm,0.8s,baz=80,slow=8.3,SNR=61						
ASAR				LR	LR	10 29 44.3	
	comp=Z,684nm,18.1s,baz=90,slow=36						
ASAR	Alice Springs	32.10	254	P	P	10 16 47.1	-1.7
FAKI	Fak Fak	37.86	289	P	P	10 17 36.9	-1.6
FAKI				IAmb	IAmb	10 17 46.1	
	comp=Z,12nm,0.8s						
FORT	Forrest	38.16	243	P	P	10 17 40.8	-0.1
	baz=38,SNR=10						
SIJI	Sorong	39.65	291	LR	LR	10 34 38.1	
	comp=Z,241nm,19.4s,baz=82,slow=37						
FITZ	Fitzroy Crossi	39.98	263	P	P	10 17 55.0	-1.4
	baz=40,SNR=7.3						
TBI	Tubuai	40.30	105	*e*LQ	LQ	10 27 29.1	
	comp=Z,610nm,26.0s						
TBI				*e*LR	LR	10 29 07.7	
	comp=Z,255nm,26.0s						
PPT2	Papeete2	40.58	96	*e*LQ	LQ	10 27 37.2	
	comp=Z,452nm,26.8s						
PPT2				*e*LR	LR	10 29 18.6	
	comp=Z,480nm,25.8s						
PPT	Papeete	40.58	96	LR	LR	10 30 29.9	
	comp=Z,238nm,20.6s,baz=264,slow=30						
BATI	Baumata	43.36	274	LR	LR	10 36 04.6	
	comp=Z,318nm,20.1s,baz=135,slow=36						
MEEK	Meekatharra	46.05	250	P	P	10 18 45.6	+0.1
	baz=46,SNR=10						
KLBR	Kellerberrin	47.02	243	P	P	10 18 52.6	-0.4
	baz=47,SNR=5.9						
NWAO	Narrogin (SRO)	47.57	242	LR	LR	10 38 49.9	
	comp=Z,354nm,19.0s,baz=70,slow=36						
DAV	Davao City (W)	48.48	297	LR	LR	10 41 07.1	
	comp=Z,127nm,18.2s,baz=154,slow=38						
KAPI	Kappang	48.61	279	LR	LR	10 39 30.8	
	comp=Z,73nm,19.3s,baz=115,slow=36						
TAOE	Nuku Hiva Isla	51.34	87	*e*LR	LR	10 34 16.3	
	comp=Z,552nm,25.2s						
RKT	Rikitea	53.61	106	*e*LR	LR	10 35 18.5	
	comp=Z,196nm,32.8s						
LEM	Lembang	59.54	273	LR	LR	10 47 35.9	
	comp=Z,130nm,19.3s,baz=152,slow=38						
VNDA	Vanda	59.69	181	LR	LR	10 44 42.3	
	comp=Z,101nm,18.0s,baz=358,slow=35						
MJAR	Matsushiro Arr	60.95	333	LR	LR	10 48 38.3	
	comp=Z,32nm,18.4s,baz=210,slow=38						
JNU	Nakatsue	61.79	325	LR	LR	10 42 36.3	
	comp=Z,117nm,21.3s,baz=118,slow=31						
NJ2	Nanjing	68.29	316	*e*P	P	10 21 24.3	+1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USRK	Ussuriysk Ar.	69.94	333	P	P	10 21 34.0	+1.4
	comp=Z,2.4nm,0.9s,baz=142,slow=7.3,SNR=2.8						
PSI	Prapat	70.81	280	LR	LR	10 55 39.6	
	comp=Z,108nm,18.1s,baz=268,slow=38						
PEA0B	Petropavlovsk-	71.28	354	P	P	10 21 41.1	+0.6
PETK	Petropavlovsk-	71.28	354	P	P	10 21 41.1	+0.6
	comp=Z,16nm,1.1s,baz=96,slow=6.3,SNR=8.3						
PETK				LR	LR	10 49 40.2	
	comp=Z,107nm,19.3s,baz=155,slow=33						
PETK	Petropavlovsk-	71.28	354	P	P	10 21 40.2	-0.3
GSI	Gunungsitoli	71.59	278	P	P	10 21 41.9	-1.4
QSPA	South Pole Qui	72.11	180	P	P	10 21 44.9	-0.9
QSPA				IAmb	IAmb	10 21 51.8	
	comp=Z,7.8nm,1.0s						
KMI	Kunming	76.39	302	⇑*e*P	P	10 22 14.3	+2.9
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CM35	Chiang Mai Arr	76.59	295	P	P	10 22 17.0	+4.6
CM04	Chiang Mai Arr	76.63	295	P	P	10 22 18.4	+5.8
CM09	Chiang Mai Arr	76.63	295	P	P	10 22 19.6	+6.9
CM01	Chiang Mai Arr	76.65	295	P	P	10 22 19.0	+6.2
CM05	Chiang Mai Arr	76.66	295	P	P	10 22 19.0	+6.2
CM02	Chiang Mai Arr	76.67	295	P	P	10 22 19.6	+6.7
CMAR	Chiang Mai Arr	76.68	295	P	P	10 22 15.7	+2.7
	comp=Z,3.6nm,0.7s,baz=132,slow=4.6,SNR=13						
CMAR	Chiang Mai Arr	76.68	295	P	P	10 22 14.9	+1.9
CM15	Chiang Mai Arr	76.69	295	P	P	10 22 19.0	+6.0
CM13	Chiang Mai Arr	76.70	295	P	P	10 22 19.0	+6.0
CMMT	Chiang Mai	76.82	295	P	P	10 22 19.8	+6.0
CM33	Chiang Mai Arr	76.83	295	P	P	10 22 19.0	+5.2
HHC	Hu-ho-hao-te	78.32	320	*e*P	P	10 22 23.5	+1.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,6.4s						
HHC				LR	LR		
	comp=Z,230nm,17.4s						
HHC				LR	LR		
	comp=Z,270nm,17.6s						
HHC				LR	LR		
	comp=Z,190nm,17.8s						
MAW	Mawson	79.11	202	LR	LR	10 54 48.7	
	comp=Z,58nm,18.0s,baz=58,slow=34						
LZH	Lanzhou	80.81	313	*e*P	P	10 22 36.6	+1.1
LZH				pP	PcP	10 22 41.3	-0.8
LZH				sP	pwP	10 22 43.8	+1.5
LZH				*e*PP	PP	10 25 42.5	+2.5
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,86nm,5.5s						
LZH				LR	LR		
	comp=Z,150nm,16.3s						
LZH				LR	LR		
	comp=Z,150nm,16.4s						
LZH				LR	LR		
	comp=Z,260nm,18.6s						
SEY	Seymchan	81.50	353	P	P	10 22 38.9	+0.6
	comp=Z,7.1nm,0.9s,baz=162,slow=6.4,SNR=12						
ULN	Ulaanbaatar	84.98	324	P	P	10 22 56.5	-0.4
ULN				IAmb	IAmb	10 23 01.1	
	comp=Z,7.4nm,1.0s						
GTA	Gaotai	85.21	314	⇓P	P	10 22 59.0	+0.8
GTA				pP	pwP	10 23 05.5	0.0
GTA				sP	PcP	10 23 08.0	+6.7
GTA				S	S	10 33 30.6	+2.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,60nm,4.4s						
GTA				LR	LR		
	comp=Z,140nm,18.2s						
GTA				LR	LR		
	comp=Z,140nm,18.9s						
GTA				LR	LR		
	comp=Z,140nm,20.0s						
YAK	Yakutsk	85.21	343	P	P	10 22 57.9	+0.4
SONM	Songino Array	85.33	324	P	P	10 22 58.7	+0.1
	comp=Z,4.5nm,1.2s,baz=141,slow=4.3,SNR=8.0						
SONM				LR	LR	11 00 06.0	
	comp=Z,55nm,19.1s,baz=86,slow=35						
SONM	Songino Array	85.33	324	P	P	10 22 56.8	-1.9
TTA	Tatalina	85.46	16	P	P	10 22 58.6	-0.2
AFDM	Forest Hills D	87.32	48	P	P	10 23 07.3	-1.2
AFDM				IAmb	IAmb	10 23 09.9	
	comp=Z,7.3nm,1.4s						
CMB	Columbia Colle	87.35	49	P	P	10 23 07.9	-0.7
ISA	Isabella, Lake	87.77	51	P	P	10 23 09.4	-1.3
ISA				IAmb	IAmb	10 23 11.9	
	comp=Z,6.5nm,1.1s						
TKX	Tecate	87.97	55	P	P	10 23 10.6	-1.2
MDPB	Devils Postpil	88.12	49	P	P	10 23 11.7	-1.0
MDPB				IAmb	IAmb	10 23 13.7	
	comp=Z,4.7nm,1.0s						
OMMB	Old Mammoth Mi	88.17	50	P	P	10 23 12.3	-0.7
WAKR	Walker	88.22	49	P	P	10 23 12.4	-0.6
PNTR	Pine Nut	88.35	48	P	P	10 23 12.6	-1.1
PNTR				IAmb	IAmb	10 23 20.0	
	comp=Z,3.8nm,0.8s						
RMX	La Rumorosa	88.40	55	P	P	10 23 13.5	-0.4
RMX				IAmb	IAmb	10 23 16.5	
	comp=Z,6.2nm,1.0s						
PAHR	Pah Rah Range	88.76	48	P	P	10 23 15.2	-0.3
PAHR				IAmb	IAmb	10 23 16.5	
	comp=Z,7.1nm,1.2s						
LHV	Little Huntoon	88.79	49	P	P	10 23 15.8	+0.4
RYN	Ryan	88.93	49	P	P	10 23 15.3	-1.0
RYN				IAmb	IAmb	10 23 17.4	
	comp=Z,6.3nm,1.2s						
NVAR	Mina Array Bea	89.01	49	P	P	10 23 17.0	+0.2
	comp=Z,2.3nm,0.9s,baz=229,slow=7.7,SNR=14						
NVAR				LR	LR	10 57 10.6	
	comp=Z,55nm,18.1s,baz=246,slow=32						
NVAR	Mina Array Bea	89.01	49	P	P	10 23 16.2	-0.5
NV11	Mina Array Sit	89.11	49	P	P	10 23 17.2	0.0
ILAR	Eielson Array	89.42	18	P	P	10 23 16.6	-1.1
	comp=Z,0.7nm,0.7s,baz=237,slow=5.0,SNR=9.8						
ILAR				LR	LR	10 59 34.4	
	comp=Z,76nm,18.5s,baz=253,slow=33						
ILAR	Eielson Array	89.42	18	P	P	10 23 16.2	-1.6
TPNV	Topopah Spring	89.92	51	P	P	10 23 20.3	-0.7
TPNV				IAmb	IAmb	10 23 21.6	
	comp=Z,8.6nm,1.4s						
WVOR	Wild Horse Val	90.39	45	P	P	10 23 23.3	+0.3
I07A	Izee	90.50	43	P	P	10 23 23.6	+0.2
I07A				IAmb	IAmb	10 23 25.2	
	comp=Z,9.4nm,1.3s						
SHPR	Sheep Range	90.57	52	P	P	10 23 24.6	+0.5
SHPR				IAmb	IAmb	10 23 25.5	
	comp=Z,5.1nm,1.1s						
PRN	Pahroc Range	90.98	51	P	P	10 23 26.6	+0.7
PRN				IAmb	IAmb	10 23 27.3	
	comp=Z,6.3nm,1.0s						
W13A	Hualapai Mount	91.02	53	P	P	10 23 26.5	+0.3
W13A				IAmb	IAmb	10 23 27.4	
	comp=Z,4.3nm,0.9s						
LCMT	Little Creek M	92.18	52	P	P	10 23 31.2	-0.3
TUC	Tucson	92.47	57	P	P	10 23 32.0	-0.8
TUC				IAmb	IAmb	10 23 34.3	
	comp=Z,4.1nm,1.1s						
X16A	Lo Mia Camp, P	92.66	55	P	P	10 23 34.3	+0.4
X16A				IAmb	IAmb	10 23 35.3	
	comp=Z,5.9nm,1.1s						
U15A	North Rim	92.70	53	P	P	10 23 34.1	+0.1
U15A				IAmb	IAmb	10 23 35.5	
	comp=Z,5.4nm,1.0s						
WMQ	Urumqi	95.29	314	*e*P	P	10 23 45.5	0.0
PDAR	Pinedale Array	96.77	47	LR	LR	11 01 05.4	
	comp=Z,38nm,19.4s,baz=276,slow=32						
TXAR	Lajitas Array	97.39	62	P	Pdif	10 23 55.5	0.0
	comp=Z,0.3nm,0.7s,baz=248,slow=6.6,SNR=3.9						
TXAR				LR	LR	11 01 58.1	
	comp=Z,87nm,18.1s,baz=0.0,slow=32						
TXAR	Lajitas Array	97.39	62	P	P	10 23 54.3	-1.2
MKAR	Makanchi Array	99.82	316	LR	LR	11 08 01.5	
	comp=Z,40nm,22.0s,baz=92,slow=35						
YKA	Yellowknife Ar	100.16	27	P	Pdif	10 24 06.9	0.0
	comp=Z,0.5nm,0.9s,baz=263,slow=3.3,SNR=4.8						
ARCES	ARCESS Array B	123.45	345	PKP	PKiKP	10 29 18.4	0.0
	comp=Z,2.9nm,0.8s,baz=103,slow=1.9,SNR=1.7						
CLL	Collm	141.14	335	*e*PKPdf	PKiKP	10 29 54.0	-0.5
GERES	GERESS Array B	142.68	332	PKhKP	PKPpre	10 29 49.9	
	comp=Z,0.5nm,0.8s,baz=204,slow=2.9,SNR=4.2						
KBA	Koelnbreinsper	144.12	330	*e*P	PKPbc	10 29 56.1	+0.6
	comp=Z,8.8nm,1.1s						
ABTA	Abfaltersbach	144.75	330	*e*P	PKPdf	10 29 57.8	-0.7
	comp=Z,11nm,1.1s						
SNF	Seneffe	144.91	342	*d*PKiKP	PKiKP	10 30 01.5	-0.8
BMRD	Maredsous	144.94	341	*d*PKiKP	PKiKP	10 30 02.1	-0.3
MOTA	Moosalm	144.96	332	*e*P	PKPdf	10 29 58.5	-0.4
	comp=Z,13nm,1.0s						
RETA	Reutte	145.00	332	*e*P	PKPab	10 29 58.0	-0.2
	comp=Z,11nm,1.4s						
SQTA	Sankt Quirin	145.01	332	*e*P	PKPdf	10 29 58.5	-0.5
	comp=Z,9.8nm,0.8s						
WLF	Walferdange	145.04	339	*d*PKPdf	PKPdf	10 29 58.7	-0.1
FETA	Feichten	145.37	332	*e*P	PKPab	10 29 59.8	+0.2
	comp=Z,15nm,1.0s						
DAVA	Damuels	145.54	333	*e*P	PKPab	10 30 00.3	+0.1
	comp=Z,19nm,1.2s						
TORD	Torodi Ar. Bea	165.75	252	PKP	PKPdf	10 30 26.7	-0.5
	comp=Z,1.9nm,1.1s,baz=43,slow=1.0,SNR=4.7						
TORD	Torodi Ar. Bea	165.75	252		PKPdf	10 30 26.2	-1.1

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*NEIC **17** 10:21:26.8±1.1, 50°.2N±0°.2×179°.8W±0°.2, h35^{km}±25^{km},
Error ellipse: s-maj=29.6km s-min=8.0km az=205.0*

AEIC 17 10:21:25±1.0**, 50°.15N**±0°.09×**179°.78W**±0°.10**, h29**^{km}±9^{km}**,
ML3.1, Error ellipse: s-maj=13.1km s-min=8.7km
az=163.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	1.36	335		Pn	10 21 47.4	-0.6
CERAA	Semis' Rag'd T	1.79	349		Pn	10 21 55.2	+1.3
CESW	Semis' Southwe	1.80	347		Pn	10 21 55.2	+1.2
TASE	Tanaga Southea	2.01	32		Pn	10 21 58.1	+1.1
KIMD	Kanaga Island	2.27	44		Pn	10 22 01.2	+0.7
ADK	Adak	2.61	47		Pn	10 22 05.9	+0.7
ADK	Adak	2.61	47		Pn	10 22 06.0	+0.9
GSTD	Great Sitkin T	2.98	49		Pn	10 22 11.3	+1.0
GSMY	Great Sitkin M	3.01	50		Pn	10 22 12.1	+1.4
ATKA	Atka Island	4.07	58		Pn	10 22 25.3	+0.2
KOWE	Korovin West	4.12	55		Pn	10 22 27.4	+1.6
KOFP	Korovin Flat P	4.15	57		Pn	10 22 27.9	+1.5
UNV	Unalaska Valle	8.98	61	Pn	Pn	10 23 33.5	+1.0
IMAR	Indian Mountai	20.75	30	P	P	10 26 03.8	+0.9
RND	Reindeer	21.24	40	P	P	10 26 08.8	+0.5

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*IDC **17** 10:23:39.2±5.3, 7°.83S×123°.91E, h151^{km}±59^{km}, mb2.9/1,
mb1 3.3/5, mb1mx3.1/27, mbtmp3.6/5, Error ellipse:
s-maj=93.5km s-min=30.8km az=49.0*

*DJA **17** 10:23:42.4±1.4, 8°S±10°×12°4E±°, h171^{km}±12^{km}, M3.4/6,
mb3.7/1, MLv3.3/6*

ISC 17 10:23:43.1±1.3**, 8°.3S**±0°.1×**123°.9E**±0°.1**, h200**^{km}**, n11,
σ2^{s}25**/16**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.48	165	P	Pn	10 24 16.5	-0.3
SOEI				S	Sn	10 24 41.9	-1.1
MMRI	Maumere	1.66	259	P	Pn	10 24 17.2	-1.0
BATI	Baumata	1.89	187	P	Pn	10 24 20.6	0.0
	20nm,0.3s,baz=350,slow=6.1,SNR=9.3						
BATI				S	Sn	10 24 49.8	-0.1
	23nm,0.3s,baz=284,slow=22,SNR=7.7						
BATI	Baumata	1.89	187	P	Pn	10 24 20.4	-0.1
EDFI	Ende, Flores	2.21	259	P	Pn	10 24 23.8	-0.1
BASI	Baing, Sumba	3.77	240	P	Pn	10 24 43.6	+1.6
PLAI	Plampang	6.06	265	P	Pn	10 25 11.4	+0.2
FITZ	Fitzroy Crossi	9.87	170	P	Pn	10 26 01.9	+1.2
	0.1nm,0.3s,baz=344,slow=12,SNR=1.5						
FITZ				S	Sn	10 27 47.0	-4.2
	0.6nm,0.3s,baz=99,slow=20,SNR=9.4						
WRA	Warramunga Arr	15.37	140	P	P	10 27 13.5	+3.4
	0.4nm,0.3s,baz=317,slow=12,SNR=15						
WRA				S	S	10 29 56.0	-4.5
	0.1nm,0.3s,baz=302,slow=24,SNR=1.2						
ASAR	Alice Springs	18.03	149	P	Pn	10 27 43.8	+2.2
	0.2nm,0.3s,baz=330,slow=12,SNR=20						
ASAR				S	S	10 30 57.6	+1.8
	0.0nm,0.3s,baz=328,slow=24,SNR=2.3						
MKAR	Makanchi Array	66.16	330	P	P	10 34 07.6	-1.5
	0.2nm,0.7s,baz=152,slow=5.7,SNR=2.1						

IDC 17 10:37:45.4±2.8**, 2°.00N**×**127°.59E, h0**^{km}**, mb3.1**/3**,
mb1 3.3**/3**, mb1mx3.1**/38**, mbtmp3.2**/3**, Error ellipse:
s-maj=232.0km s-min=28.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.79	163	P	P	10 42 49.9	+0.1
	0.5nm,1.0s,baz=342,slow=11,SNR=4.6						
ASAR	Alice Springs	26.24	167	P	P	10 43 22.2	-0.1
	0.1nm,0.4s,baz=348,slow=7.5,SNR=6.3						
MKAR	Makanchi Array	59.46	325	P	P	10 47 50.2	0.0
	0.2nm,0.4s,baz=120,slow=6.5,SNR=2.3						

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*TIR **17** 10:53:30.1, 42°.45N×19°.28E, h7^{km}±18^{km}, Md2.9, Ml2.5*

*IASPEI **17** 10:53:31.5±0.8, 42°.43N±0°.02×19°.30E±0°.02, h17^{km}±4^{km},
Error ellipse: s-maj=3.0km s-min=2.6km az=20.5, GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009*

*RHSSO **17** 10:53:31.9±0.4, 42°.42N×19°.34E, h9^{km}±2^{km}, ML2.3/9*

*PDG **17** 10:53:31.2±0.0, 42°.43N×19°.29E, h17^{km}, MD2.7/5,
ML2.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*BEO **17** 10:53:32.2±0.7, 42°.42N×19°.28E, h16^{km}±3^{km}, ML2.3/8*

ISC 17 10:53:31.7±0.8**, 42°.43N**±0°.02×**19°.30E**±0°.02**, h17**^{km}±4^{km}**,
n41, σ0^{s}74**/82**, 15C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	Podgorica	0.03	271	*e*Pg	Pg	10 53 34.5	-0.2
PDG				*e*Sg	Sg	10 53 37.3	+0.6
PDG	Podgorica	0.03	271	⇑*i*Pg	Pg	10 53 34.5	-0.2
PDG				*e*Sg	Sg	10 53 36.7	0.0
TTG	Podgorica	0.03	271	⇓*i*Pg	Pg	10 53 34.1	-0.6
TTG				*i* Sg	Sg	10 53 36.6	-0.1
DRME	Dracevica, Mon	0.26	199	⇓*i*Pg	Pg	10 53 36.8	-0.6
DRME				*e*Sg	Sb	10 53 41.9	-0.2
DRME	Dracevica, Mon	0.26	199	⇓*i*Pg	Pg	10 53 36.8	-0.6
DRME				*i* Sg	Sg	10 53 41.4	+0.1
CEME	Cevo	0.30	293	⇑*i*Pg	Pg	10 53 37.4	-0.9
CEME				*i* Sg	Sg	10 53 42.6	-0.2
BUM	Brajici-Budva	0.33	247	⇓*i*Pg	Pg	10 53 37.8	-0.8
BUM				*i* Sg	Sg	10 53 43.3	-0.1
SDA	Shkodra	0.41	158	P	Pg	10 53 38.8	-1.2
	baz=157						
SDA				S	Sg	10 53 45.4	-0.2
	baz=157						
NKME	Niksic	0.42	323	⇑*i*Pg	Pg	10 53 39.4	-0.9
NKME				*i* Sg	Sg	10 53 46.3	+0.1
NKY	Niksic	0.44	330	⇑*i*Pg	Pg	10 53 39.8	-1.0
NKY				*i* Sg	Sg	10 53 47.0	+0.1
KOME	Kolasin	0.45	21	⇑*i*Pg	Pg	10 53 40.0	-0.9
KOME				*i* Sg	Sg	10 53 47.4	+0.3
ULC	Ulcinj	0.47	185	⇑*i*Pg	Pg	10 53 40.3	-0.8
ULC				*i* Sg	Sg	10 53 48.0	+0.5
PVY	Plav	0.52	71	⇓*i*Pg	Pg	10 53 41.3	-0.8
PVY				*i* Sg	Sb	10 53 49.8	+0.1
BCI	Bajram Curri	0.57	96	P	Pg	10 53 42.0	-1.1
	baz=97						
BCI				S	Sg	10 53 50.6	-0.2
	baz=97						
BCI				AMP			
	comp=N,1.7nm,0.5s,baz=97						
PUK	Puka	0.59	131	P	Pg	10 53 42.5	-0.9
	baz=131						
PUK				S	Sg	10 53 51.7	+0.4
	baz=131						
PUK				AMP			
	comp=N,0.9nm,0.4s,baz=131						
HCY	Herceg Novi	0.59	272	⇑*i*Pg	Pg	10 53 42.4	-1.1
HCY				*e*Sg	Sb	10 53 53.1	+1.3
HCY	Herceg Novi	0.59	272	⇑*i*Pg	Pg	10 53 42.4	-1.1
HCY				*i* Sg	Sb	10 53 51.9	+0.1
IVA	Berane	0.62	45	⇑*i*Pg	Pg	10 53 43.2	-0.9
IVA				*i* Sg	Sb	10 53 53.2	+0.5
BRY	Bratogost	0.73	310	⇑*i*Pg	Pg	10 53 44.9	-1.2
BRY				*e*Sg	Sb	10 53 56.4	+0.5
TREB	Trebinje	0.76	293	*e*Pg	Pb	10 53 46.7	+0.3
TREB				*e*Sg	Sb	10 53 57.5	+1.0
TREB	Trebinje	0.76	293	⇑*i*Pg	Pg	10 53 46.4	-0.1
TREB				*e*Sg	Sn	10 53 57.7	-1.0
UPM	Unac-Piva	0.82	340	⇑*i*Pg	Pb	10 53 47.2	-0.5
UPM				*e*Sg	Sg	10 53 58.6	-0.2
UPM	Unac-Piva	0.82	340	*e*Pg	Pb	10 53 46.6	-1.1
UPM				*i* Sg	Sb	10 53 59.6	+0.9
DBRK	Dubrovnik	0.88	286	*e*Pg	Pb	10 53 47.4	-1.2
DBRK				Sg	Sn	10 54 02.3	+0.5
SJES	Sjenica	0.97	31	*e*Pg	Pb	10 53 49.4	-0.7
SJES				*e*Sg	Sn	10 54 04.3	+0.2
SJES	Sjenica	0.97	31	⇑*i*Pg	Pb	10 53 49.2	-0.9
SJES				*e*Sg	Sb	10 54 02.6	-0.1
PHP	Peshkopia	1.13	131	P	Pn	10 53 53.0	+0.2
	baz=131						
PHP				S	Sg	10 54 09.9	+1.5
	baz=131						
PHP				AMP			
	comp=N,0.3nm,0.4s,baz=131						
STON	Ston	1.26	291	*e*Pg	Pb	10 53 55.1	+0.1
STON				*e*Sg	Sg	10 54 11.9	-0.5
STON	Ston	1.26	291	*e*Pn	Pn	10 53 53.9	-0.6
STON				Sg	Sg	10 54 13.4	+0.9
STON	Ston	1.26	291	*e*Pg	Pb	10 53 54.9	-0.1
STON				*e*Sg	Sg	10 54 12.8	+0.4
IVAS	Ivanjica	1.31	28	*e*Pg	Pn	10 53 55.2	-0.1
IVAS				*e*Sg	Sg	10 54 14.2	+0.2
BBLS	Lazići	1.44	3	*e*Pg	Pb	10 53 58.8	+0.7
BBLS				*e*Sg	Sg	10 54 18.4	+0.2
BBLS	Lazići	1.44	3	⇑*i*Pg	Pn	10 53 57.6	+0.5
BBLS				*e*Sg	Sg	10 54 17.7	-0.5
HAPS	Han Pijesak,Bl	1.68	351	*e*Pg	Pn	10 54 01.3	+0.9
HAPS				*e*Sg	Sg	10 54 25.6	-0.1
HAPS	Han Pijesak,Bl	1.68	351	*e*Pn	Pn	10 54 00.8	+0.4
HAPS				*e*Sn	Sb	10 54 23.4	+0.4

DIVS	**Divibare**	**1.74**	**17**	*e*Pg	**Pb**	**10 54 03.6**	**+0.3**
DIVS				*e*Sg	**Sg**	**10 54 27.8**	**-0.1**
DIVS	**Divibare**	**1.74**	**17**	⇑*i*Pn	**Pb**	**10 54 02.8**	**-0.5**
DIVS				*e*Sn	**Sb**	**10 54 24.4**	**-0.6**
GRUS	**Gruza**	**1.79**	**35**	*e*Pg	**Pb**	**10 54 05.1**	**+1.0**
GRUS				*e*Sg	**Sg**	**10 54 30.6**	**+1.2**
RICI	**Ricice**	**1.91**	**305**	*e*Pn	**Pn**	**10 54 03.7**	**+0.1**
RICI				Sn	**Sb**	**10 54 30.0**	**+0.2**
TEKS	**Tekeris**	**2.12**	**4**	*e*Pn	**Pn**	**10 54 08.0**	**+1.5**
TEKS				*e*Sn	**Sb**	**10 54 34.6**	**-1.3**
KIJV	**Kijevo**	**2.64**	**308**	*e*Pn	**Pn**	**10 54 14.1**	**+0.6**
KIJV				Sn	**Sn**	**10 54 46.8**	**+1.7**

IDC ***17*** *11:34:19.2±3.7, 24°.54S×179°.88E, h534^{km}±37^{km}, mb3.3/10, mb1 3.5/12, mb1mx3.2/30, mbtmp4.3/12, Error ellipse: s-maj=27.9km s-min=22.0km az=57.0*

ISC 17 11:34:20.3±0.8**, 24°.6S**±0°.1×**179°.8E**±0°.1**, h550**^{km}**, n22,** σ**0^s.84**/24**, mb3.8**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**11.30**	**284**	P	**P**	**11 36 51.3**	**-0.4**
OUENC	**Ouen Island, N**	**12.11**	**278**	P	P	11 37 04.4	+4.4
YATNC	**Mamie plateau,**	**12.15**	**280**	P	**P**	**11 37 01.5**	**+1.0**
DZM	**Mont Dzumac**	**12.55**	**279**	P	**P**	**11 37 04.8**	**+0.1**
	1.1nm,0.3s,baz=117,slow=16,SNR=15						
DZM	**Mont Dzumac**	**12.55**	**279**	P	**P**	**11 37 02.4**	**-2.3**
URZ	**Urewera**	**13.78**	**189**	P	**P**	**11 37 16.4**	**-0.6**
	1.0nm,0.3s,baz=38,slow=9.1,SNR=6.9						
URZ				S	**S**	**11 39 42.2**	**-0.3**
	0.5nm,0.3s,baz=234,slow=15,SNR=1.3						
CTA	**Charters Tower**	**31.32**	**272**	P	**P**	**11 39 56.9**	**+0.6**
	3.7nm,0.4s,baz=92,slow=11,SNR=16						
STKA	**Stephens Creek**	**34.30**	**249**	P	**P**	**11 40 21.8**	**+0.4**
	1.0nm,0.6s,baz=90,slow=13,SNR=1.7						
ASAR	**Alice Springs**	**41.76**	**261**	P	**P**	**11 41 22.6**	**+0.4**
	0.9nm,0.5s,baz=94,slow=6.7,SNR=25						
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**11 41 25.4**	**-0.2**
	2.2nm,0.4s,baz=100,slow=8.3,SNR=23						
FITZ	**Fitzroy Crossi**	**50.61**	**266**	P	**P**	**11 42 28.9**	**-0.3**
	2.5nm,0.6s,baz=158,slow=5.4,SNR=2.7						
SIJI	**Sorong**	**52.52**	**289**	P	**P**	**11 42 42.8**	**-0.3**
	7.9nm,0.6s,baz=156,slow=18,SNR=4.3						
MAW	**Mawson**	**77.01**	**201**	P	**P**	**11 45 17.9**	**+1.6**
	1.2nm,0.4s,baz=156,slow=4.9,SNR=6.1						
PETK	**Petropavlovsk-**	**79.77**	**347**	P	**P**	**11 45 30.7**	**-0.5**
	2.4nm,0.9s,baz=105,slow=8.5,SNR=4.8						
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**11 46 20.9**	**+0.7**
	0.5nm,0.3s,baz=151,slow=3.1,SNR=4.4						
TXAR	**Lajitas Array**	**90.96**	**58**	P	**P**	**11 46 27.1**	**+0.9**
	0.2nm,0.6s,baz=255,slow=5.4,SNR=2.4						
ARCES	**ARCESS Array B**	**132.57**	**348**	PKP	**PKPdf**	**11 52 31.1**	**-0.8**
	6.5nm,1.0s,baz=1.1,slow=6.1,SNR=2.3						
FINES	**FINESS Array B**	**139.09**	**341**	PKhKP	PKPpre	11 52 36.4	
	7.9nm,1.0s,baz=336,slow=3.0,SNR=4.5						
FINES				PKP	**PKPdf**	**11 52 43.9**	**-0.2**
	6.7nm,1.0s,baz=146,slow=3.7,SNR=3.9						
AKASG	**Malin Array Be**	**145.49**	**327**	PKPbc	**PKPdf**	**11 52 55.1**	**-0.6**
	0.7nm,0.3s,baz=45,slow=4.5,SNR=6.3						
MMAI	**Mount Meron Ar**	**147.85**	**293**	PKPbc	**PKiKP**	**11 53 05.2**	**-0.3**
	2.3nm,0.5s,baz=66,slow=5.4,SNR=7.0						
BRTR	**Keskin Array B**	**147.88**	**306**	PKP	**PKPdf**	**11 52 59.4**	**-0.9**
	1.0nm,0.7s,baz=76,slow=5.5,SNR=2.1						
BRTR				PKPbc	**PKPbc**	**11 53 04.0**	**-0.2**
	0.9nm,0.6s,baz=134,slow=3.6,SNR=6.3						
BRTR				PKPab	**PKPab**	**11 53 09.2**	**+0.5**
	1.1nm,0.6s,baz=107,slow=3.2,SNR=6.9						
TORD	**Torodi Ar. Bea**	**168.44**	**189**	PKPab	**PKPab**	**11 54 37.0**	**-0.8**
	0.4nm,0.4s,baz=158,slow=1.6,SNR=2.2						

NEIC ***17*** *11:35:29.3±2.0, 4°.51S±0°.05×102°.74E±0°.09, h67^{km}±6^{km}, mb4.6/17, Error ellipse: s-maj=14.4km s-min=3.4km az=62.0*

IDC ***17*** *11:35:29.3±4.0, 4°.44S×102°.80E, h61^{km}±35^{km}, mb4.1/23, mb1 4.2/24, mb1mx4.0/53, mbtmp4.4/24, ML4.0/1, MS2.9/6, Ms1 3.0/6, ms1mx2.7/39, Error ellipse: s-maj=31.5km s-min=10.9km az=54.0*

DJA ***17*** *11:35:30.0±0.4, 5°S±3°×10°3E±°, h34^{km}±5^{km}, M4.5/19, mb4.7/4, mB5.6/1, MLv4.5/19, Mw(mB)5.1/1*

ISC 17 11:35:28.2±0.5**, 4°.61S**±0°.06×**102°.68E**±0°.07**, h56**^{km}**, n116,** σ**1^s.45**/114**, mb4.6**/48**, 2D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.37**	**49**		**Pn**	**11 35 39.9**	**+1.3**
MNAI				Sn	**Sn**	**11 35 47.9**	**+1.9**
MNAI	**Manna**	**0.37**	**49**	P	**Pn**	**11 35 39.9**	**+1.3**
MNAI				S	**Sn**	**11 35 46.8**	**+0.7**
KSI	**Kapahiang**	**0.95**	**355**	P	**Pn**	**11 35 47.3**	**+1.7**
LHSI	**Lahat**	**1.15**	**48**	P	**Pn**	**11 35 49.6**	**+1.5**
LWLI	**Liwa**	**1.44**	**107**	P	**Pn**	**11 35 53.2**	**+1.1**
MASI	**Maura Aman, Be**	**1.52**	**343**	P	**Pn**	**11 35 55.6**	**+2.4**
KASI	**Kota Agung**	**2.03**	**117**	P	**Pn**	**11 36 00.7**	**+0.6**
KLSI		**2.05**	**92**	P	**Pn**	**11 36 01.3**	**+1.0**
BLSI	**Bandar Lampung**	**2.67**	**107**	P	**Pn**	**11 36 10.4**	**+1.6**
PMBI	**Palembang**	**2.68**	**51**	P	**Pn**	**11 36 09.4**	**+0.5**
KRJI	**Kerinci**	**2.78**	**334**	P	**Pn**	**11 36 12.9**	**+2.5**
JMBI	**JAMBI**	**3.11**	**18**	P	**Pn**	**11 36 16.7**	**+1.9**
CGJI	**Cibinong**	**3.60**	**124**	P	**Pn**	**11 36 23.0**	**+1.4**
SDSI	**Sungai Dareh**	**3.86**	**341**	P	**Pn**	**11 36 28.0**	**+2.9**
PPBI	**Pangkal Pinang**	**4.22**	**55**	P	**Pn**	**11 36 31.5**	**+1.4**
PDSI	**Padang**	**4.29**	**329**	P	**Pn**	**11 36 33.6**	**+2.6**
BKNI	**Bangkinang**	**5.17**	**342**	P	**Pn**	**11 36 45.9**	**+2.8**
	0.7nm6μm77nm,0.5s						
LEM	**Lembang**	**5.39**	**114**	P	**Pn**	**11 36 48.3**	**+2.0**
	4.5nm,0.3s,baz=325,slow=19,SNR=1.8						
LEM				LR	LR	11 38 39.5	
	comp=Z,29nm,19.0s,baz=65,slow=36						
CISI	**Cisompet, Garu**	**5.89**	**120**	Pn	**Pn**	**11 36 53.9**	**+0.8**
CISI	**Cisompet, Garu**	**5.89**	**120**	P	**Pn**	**11 36 53.8**	**+0.8**
	0.4nm42nm,0.7s						
MNSI	**Mandailing Nat**	**6.19**	**330**	P	**Pn**	**11 36 59.1**	**+1.9**
	0.2nm21nm,0.5s						
CMJI	**Cimerak**	**6.55**	**119**	P	**Pn**	**11 37 03.1**	**+1.1**
GSI	**Gunungsitoli**	**7.78**	**319**		**Pn**	**11 37 20.0**	**+1.2**
PSI	**Prapat**	**8.26**	**333**	LR	LR	11 40 48.5	
	comp=Z,83nm,20.7s,baz=94,slow=40						
COCO	**West Island**	**9.49**	**217**	Pn	**Pn**	**11 37 43.5**	**+1.1**
KULM	**Kulim**	**10.04**	**348**	Pn	**Pn**	**11 37 49.0**	**-0.9**
UBPT	**Khong Chiam**	**19.95**	**8**	P	**P**	**11 39 55.7**	**-0.2**
CMAR	**Chiang Mai Arr**	**23.21**	**351**	P	**P**	**11 40 29.6**	**-1.0**
	3.5nm,0.8s,baz=183,slow=8.5,SNR=25						
CMAR				LR	LR	11 49 03.8	
	comp=Z,35nm,21.4s,baz=170,slow=35						
CMAR	**Chiang Mai Arr**	**23.21**	**351**	P	**P**	**11 40 29.9**	**-0.7**
CHTO	**Chiang Mai**	**23.56**	**351**	P	**P**	**11 40 31.9**	**-2.0**
PALK	**Pallekele**	**24.90**	**298**	LR	LR	11 48 59.4	
	comp=Z,21nm,20.4s,baz=207,slow=32						
FITZ	**Fitzroy Crossi**	**26.16**	**123**	P	**P**	**11 40 57.0**	**-0.6**
	2.5nm,0.6s,baz=321,slow=6.5,SNR=6.7						
KMI	**Kunming**	**29.55**	**0**	⇓*e*P	**P**	**11 41 31.5**	**+3.5**
KMI				pmax	pmax		
	comp=Z,13nm,1.3s						
H08S2	**Diego Garcia H**	**30.16**	**263**	T	T	12 13 25.4	
	baz=86,slow=76,SNR=3.8						
H08S3	**Diego Garcia H**	**30.16**	**263**	T	T	12 13 25.5	
	baz=86,slow=76,SNR=4.6						
H08S1	**Diego Carcia H**	**30.18**	**263**	T	T	12 13 26.1	
	baz=86,slow=76,SNR=4.0						
H01W3	**Cape Leeuwin H**	**31.94**	**162**	T	T	12 15 42.5	
	baz=339,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**31.96**	**162**	T	T	12 15 41.6	
	baz=339,slow=76,SNR=32						
H01W1	**Cape Leeuwin H**	**31.96**	**162**	T	T	12 15 42.8	
	baz=339,slow=76,SNR=39						
WRA	**Warramunga Arr**	**34.39**	**119**	P	**P**	**11 42 10.2**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=301,slow=9.1,SNR=27						
WRA				PcP	**PcP**	**11 44 45.8**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=337,slow=1.5,SNR=2.5						
WRA	**Warramunga Arr**	**34.39**	**119**	P	**P**	**11 42 09.5**	**-0.8**
WRAB	**Tennant Creek**	**34.39**	**119**	P	**P**	**11 42 09.9**	**-0.5**
WRAB				IAmb	IAmb	11 42 11.3	
	comp=Z,5.5nm,0.7s						
ODAN	**Odare**	**34.60**	**335**	*e*P	**P**	**11 42 12.5**	**+0.2**
	comp=Z,13nm,0.6s						
TAPN	**Taplejung**	**34.91**	**336**	*e*P	**P**	**11 42 15.7**	**+0.7**
RAMN	**Ramite**	**35.01**	**334**	*e*P	**P**	**11 42 16.7**	**+0.8**
	comp=Z,6.5nm,0.5s						
ASAR	**Alice Springs**	**35.57**	**125**	P	**P**	**11 42 20.8**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=303,slow=8.3,SNR=22						
ASAR				PcP	**PcP**	**11 44 49.1**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=324,slow=3.1,SNR=5.0						
ASAR	**Alice Springs**	**35.57**	**125**	P	**P**	**11 42 20.4**	**-0.1**
AS31	**Alice Springs**	**35.57**	**125**	P	**P**	**11 42 21.3**	**+0.7**
PKI	**Pulchoki**	**36.07**	**333**	*e*P	**P**	**11 42 25.4**	**+0.3**
GUN	**Gumba**	**36.16**	**334**	*e*P	**P**	**11 42 26.1**	**+0.3**
	comp=Z,33nm,0.5s						
DMN	**Daman**	**36.24**	**333**	*e*P	**P**	**11 42 26.6**	**+0.2**
	comp=Z,28nm,0.9s						
KKN	**Kakani**	**36.32**	**333**	*e*P	**P**	**11 42 27.6**	**+0.6**
GKN	**Gorkha**	**36.79**	**333**	*e*P	**P**	**11 42 31.6**	**+0.6**
	comp=Z,24nm,0.7s						
KOLN	**Koldanda**	**37.08**	**331**	*e*P	**P**	**11 42 34.0**	**+0.5**
	comp=Z,44nm,0.8s						
DANN	**Dangsing**	**37.49**	**332**	*e*P	**P**	**11 42 37.5**	**+0.4**
	comp=Z,52nm,0.6s						
XAN	**Xi'an**	**38.89**	**8**	P	**P**	**11 42 48.0**	**-0.5**
XAN				pP	pP	11 42 55.1	-7.7
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2	**Nanjing**	**39.57**	**22**	*e*P	**P**	**11 42 54.6**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LZH	**Lanzhou**	**40.49**	**1**	*e*P	**P**	**11 43 02.3**	**+0.4**
LZH				pP	pP	11 43 19.3	+2.9
LZH				sP	sP	11 43 27.5	+4.6
LZH				PP	**PnPn**	**11 44 40.1**	**-0.3**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.8s						
GTA	**Gaotai**	**43.88**	**357**	⇓P	**P**	**11 43 29.5**	**+0.1**
GTA				pP	sP	11 43 49.3	-1.2
GTA				sP	pP	11 43 57.0	+13
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,27nm,5.1s						
GTA				LR	LR		
	comp=N,140nm,15.6s						
GTA				LR	LR		
	comp=E,100nm,15.3s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
CTA	**Charters Tower**	**45.09**	**114**	P	**P**	**11 43 39.3**	**0.0**
	comp=Z,9.3nm,0.8s,baz=284,slow=11,SNR=16						
CTAO	**Charters Tower**	**45.09**	**114**	P	**P**	**11 43 39.6**	**+0.3**
CTAO				IAmb	IAmb	11 43 40.7	
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**45.43**	**131**	P	**P**	**11 43 42.9**	**+1.1**
	comp=Z,9.3nm,0.6s,baz=310,slow=8.5,SNR=23						
STKA				LR	LR	12 03 46.0	
	comp=Z,20nm,19.3s,baz=203,slow=37						
BTO	**Baotou**	**45.49**	**8**	*e*P	**P**	**11 43 43.1**	**+0.9**
HHC	**Hu-ho-hao-te**	**45.96**	**9**	*e*P	**P**	**11 43 46.3**	**+0.4**
HHC				PP	**PP**	**11 45 33.8**	**-0.8**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.8s						
NIL	**Nilore**	**47.14**	**326**	P	**P**	**11 43 55.6**	**+0.4**
KSAR	**Wonju Array Be**	**47.97**	**27**	P	**P**	**11 43 58.8**	**-2.7**
KSRS	**Korea Array**	**48.00**	**27**	P	**P**	**11 44 01.4**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=225,slow=7.2,SNR=7.1						
WMQ	**Urumqi**	**50.06**	**346**	*e*P	**P**	**11 44 18.5**	**+1.0**
KSH	**Kashi**	**50.34**	**333**	P	**P**	**11 44 18.3**	**-1.4**
KSH				pP	pP	11 44 37.3	+2.7
KSH				pmax	pmax		
	comp=Z,15nm,0.8s						
SHLS	**Shalkode**	**51.98**	**339**	*e*P	**P**	**11 44 31.0**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=339						
SATY	**Saty**	**52.28**	**338**	*e*P	**P**	**11 44 34.1**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=338						
SONM	**Songino Array**	**52.32**	**3**	P	**P**	**11 44 34.8**	**+0.4**
	comp=Z,13nm,0.6s,baz=182,slow=9.3,SNR=91						
SONM				PcP	**PcP**	**11 45 44.7**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=174,slow=3.5,SNR=6.4						
SONM	**Songino Array**	**52.32**	**3**	P	**P**	**11 44 34.9**	**+0.5**
KPKS	**Kokpek**	**52.53**	**338**	*e*P	**P**	**11 44 35.6**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=338						
MAJO	**Matsushiro**	**52.70**	**36**	P	**P**	**11 44 35.2**	**-2.1**
MJAR	**Matsushiro Arr**	**52.70**	**36**	P	**P**	**11 44 35.3**	**-2.0**
	comp=Z,1.8nm,0.8s,baz=222,slow=8.0,SNR=4.9						
MJAR	**Matsushiro Arr**	**52.70**	**36**	IAmb	IAmb	11 44 43.4	
	comp=Z,5.3nm,1.3s						
TNSS	**Tian-Shan**	**52.83**	**336**	*e*P	**P**	**11 44 38.1**	**-0.5**
	baz=336						
MDOK	**Medeo**	**52.90**	**337**	*e*P	**P**	**11 44 39.0**	**+0.1**
	baz=337						
AAA	**Alma-Ata**	**52.99**	**337**	*e*P	**P**	**11 44 39.8**	**+0.4**
	baz=337						
CHKK	**Chushkaly**	**53.50**	**337**	*e*P	**P**	**11 44 42.0**	**-1.1**
	baz=337						
AAK	**Ala-Archa**	**53.52**	**334**	P	**P**	**11 44 42.6**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=153,slow=4.5,SNR=5.5						
AAK	**Ala-Archa**	**53.52**	**334**	P	**P**	**11 44 44.5**	**+1.1**
AAK				IAmb	IAmb	11 44 47.0	
	comp=Z,2.1nm,0.8s						
KUU	**Kurty**	**53.79**	**337**	*e*P	**P**	**11 44 44.2**	**-1.0**
	comp=Z,5.8nm,0.6s,baz=337						
TDK	**Taldyqorghan**	**53.95**	**339**	*e*P	**P**	**11 44 45.4**	**-0.9**
	baz=339						
ZSN	**Zaisan**	**54.16**	**345**	*e*P	**P**	**11 44 47.5**	**-0.3**
	comp=Z,7.5nm,0.8s,baz=345						
MK31	**Makanchi Array**	**54.27**	**343**	P	**P**	**11 44 48.4**	**-0.2**
MKAR	**Makanchi Array**	**54.27**	**343**	P	**P**	**11 44 48.1**	**-0.5**
	comp=Z,16nm,0.8s,baz=148,slow=8.2,SNR=104						
MKAR	**Makanchi Array**	**54.27**	**343**	P	**P**	**11 44 48.3**	**-0.3**
MAKZ	**Makanchi**	**54.37**	**343**	P	**P**	**11 44 49.6**	**+0.2**
MAKZ				IAmb	IAmb	11 44 50.1	
	comp=Z,7.2nm,1.2s						
USRK	**Ussuriysk Ar.**	**55.27**	**25**	P	**P**	**11 44 54.4**	**-1.4**
	comp=Z,5.4nm,0.7s,baz=217,slow=6.3,SNR=13						
USRK	**Ussuriysk Ar.**	**55.27**	**25**	P	**P**	**11 44 54.2**	**-1.7**
KKAR	**Karatay Array**	**55.69**	**332**	P	**P**	**11 44 57.3**	**-1.6**
TLY	**Talaya**	**56.08**	**1**	P	**P**	**11 45 02.5**	**+1.0**
	comp=Z,5.1nm,0.7s,baz=135,slow=2.9,SNR=2.9						
SEM	**Semipalatinsk**	**58.11**	**343**	*e*P	**P**	**11 45 14.8**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=343						
KURBB	**Kurchatov Arra**	**58.81**	**342**	P	**P**	**11 45 20.3**	**-0.5**
	comp=Z,5.9nm,0.8s,baz=159,slow=6.6,SNR=22						
KURK	**Kurchatov**	**58.86**	**342**	P	**P**	**11 45 20.9**	**-0.2**
ZALV	**Zalesovo Beam**	**60.23**	**348**	P	**P**	**11 45 29.6**	**-0.8**
	comp=Z,16nm,0.7s,baz=163,slow=5.0,SNR=77						
ZALV	**Zalesovo Beam**	**60.23**	**348**	P	**P**	**11 45 29.8**	**-0.7**
BRZS	**Berezniki**	**60.24**	**338**	*e*P	**P**	**11 45 29.4**	**-1.3**
	baz=338						
BVAR	**Borovoye Array**	**63.55**	**339**	P	**P**	**11 45 51.5**	**-1.3**
	comp=Z,3.2nm,0.6s,baz=102,slow=6.6,SNR=24						
BRVK	**Borovoye**	**63.61**	**339**	P	**P**	**11 45 52.4**	**-0.8**
BRVK				IAmb	IAmb	11 45 53.0	
	comp=Z,3.6nm,0.8s						
ABKAR	**Akbulak array**	**65.20**	**331**	P	**P**	**11 46 03.1**	**-0.5**
ABKAR	**Akbulak array**	**65.20**	**331**	P	**P**	**11 46 02.8**	**-0.9**
ABKAR				IAmb	IAmb	11 46 05.0	
	comp=Z,5.3nm,0.6s						
AKTO	**Aktyubinsk**	**66.92**	**331**	P	**P**	**11 46 13.7**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=108,slow=11,SNR=3.6						
MAW	**Mawson**	**68.46**	**195**	LR	LR	12 11 31.3	
	comp=Z,53nm,20.9s,baz=45,slow=32						
ARU	**Arti**	**70.66**	**336**	P	**P**	**11 46 37.3**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=124,slow=3.6,SNR=3.6						
ARU	**Arti**	**70.66**	**336**	P	**P**	**11 46 36.0**	**-1.8**
ARU				IAmb	IAmb	11 46 44.2	
	comp=Z,16nm,1.5s						
KBZ	**Khabaz**	**72.02**	**319**	P	**P**	**11 46 47.1**	**+0.9**
	comp=Z,5.8nm,1.0s,baz=176,slow=3.1,SNR=4.1						
MMAI	**Mount Meron Ar**	**73.72**	**306**	P	**P**	**11 46 58.4**	**+1.6**
	comp=Z,3.3nm,0.7s,baz=114,slow=8.4,SNR=3.1						
MNK	**Minsk**	**84.97**	**326**	*i* P	P	11 47 51.6	-5.8
	comp=E,4.0nm,0.9s						
MNK				*i* P	P	11 47 51.6	-5.8
	comp=N,17nm,0.9s						
MNK				*i* P	P	11 47 51.6	-5.8
	comp=Z,4.0nm,0.9s						
MNK				*i* PcP	**PcP**	**11 47 54.6**	**-6.0**
MNK				*i* pP	pP	11 48 08.4	-4.9
MNK				*i* PP	**PP**	**11 51 08.6**	**-6.3**
MNK				*i* PPP	PPP	11 53 01.6	
MNK				*i* S	S	11 58 09.5	-12
MNK				*i* ScS	**SKKSac**	**11 58 25.7**	**+2.4**
MNK				*i* sS	pS	11 58 40.0	-2.0
MNK				*i* SS	SS	12 02 41.8	-74
MNK				*i* SSS	SSS	12 07 21.5	
MNK				*i* SKKS	SKKSdf	12 12 39.5	-26
MNK				*i* LQ	LQ	12 18 14.5	
MNK				*i* LR	LR	12 20 18.5	
MNK				*i* LRM	MLR	12 27 21.1	
	comp=E,23nm,19.8s						
MNK				*i* LRM	MLR	12 27 21.1	
	comp=N,435nm,19.8s						
MNK				*i* LRM	MLR	12 27 21.1	
	comp=Z,78nm,19.8s						
FINES	**FINESS Array B**	**87.65**	**332**	P	**P**	**11 48 10.6**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=103,slow=6.1,SNR=7.9						
ARCES	**ARCESS Array B**	**89.82**	**340**	P	**P**	**11 48 20.4**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=88,slow=6.4,SNR=4.0						
GERES	**GERESS Array B**	**92.76**	**319**	P	**P**	**11 48 35.5**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=73,slow=3.3,SNR=2.0						
NVAR	**Mina Array Bea**	**129.82**	**42**	PKP	**PKPdf**	**11 54 32.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=335,slow=1.3,SNR=5.0						
TXAR	**Lajitas Array**	**144.97**	**42**	PKP	PKPbc	11 54 59.6	+0.2
	comp=Z,3.8nm,0.7s,baz=278,slow=1.4,SNR=59						

SGS ***17*** *11:42:04.8, 31°.22N×51°.84E, h0^{km}, Ml3.9*

IDC ***17*** *11:42:06.9±0.9, 30°.74N×51°.48E, h0^{km}, mb4.0/17, mb1 4.1/23, mb1mx3.9/57, mbtmp4.0/23, ML3.6/6, Error ellipse: s-maj=20.4km s-min=13.7km az=172.0*

TEH ***17*** *11:42:07.3, 30°.75N×51°.57E, h5^{km}, ML4.0*

NEIC ***17*** *11:42:08.6±2.3, 30°.61N±0°.04×51°.52E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=11.9km s-min=5.5km az=119.0*

OMAN ***17*** *11:42:16.8±1.6, 29°.92N×51°.32E, h10^{km}, mb5.3/12, ml3.9/1, Error ellipse: s-maj=40.1km s-min=12.4km az=78.0*

ISC 17 11:42:08.7±0.4**, 30°.70N**±0°.04×**51°.48E**±0°.04**, h10**^{km}**, n191,** σ**1^s.79**/205**, mb4.4**/46**, 6C-5D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLNJ	**Kolanjah**	**0.32**	**17**	*e*Pg	**Pg**	**11 42 12.8**	**-2.5**
ABEH	**Behbahan**	**1.07**	**265**	*e*	Sn	11 43 08.7	+24
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**1.08**	**173**	*e*Pg	**Pn**	**11 42 30.2**	**+0.2**
KAZ1				*e*		11 43 07.6	
	comp=Z,99nm,0.8s						
IBRJ	**Brojen**	**1.22**	**351**	*e*Pg	**Pn**	**11 42 30.3**	**-1.8**
IBRJ				*e*		11 42 57.8	
	comp=Z,99nm,0.6s						
IRAM	**Ramesheh**	**1.34**	**35**	*e*Pg	**Pn**	**11 42 30.8**	**-3.0**
IRAM				*e*		11 42 57.9	
	comp=Z,99nm,0.8s						
SHI	**Shiraz**	**1.38**	**140**	*e*Pg	**Pg**	**11 42 34.8**	**-0.5**
SHI				*e*Sg	**Sg**	**11 42 57.1**	**+3.8**
SHI				*e*		11 43 09.6	
	comp=Z,99nm,0.7s						
IGAR	**Gharneh**	**1.76**	**16**	*e*Pn	**Pn**	**11 42 38.9**	**-0.6**
IPIR	**Pirpir**	**2.04**	**346**	*e*Pn	**Pn**	**11 42 45.0**	**+1.6**
IPIR				*e*		11 43 23.5	
	comp=Z,99nm,0.6s						
AMIS	**Naft Sefid**	**2.11**	**298**	*e*Pn	**Pb**	**11 42 46.4**	**-0.8**
AMIS				*e*		11 43 37.8	
	comp=Z,99nm,0.6s						
ISAD	**Sadrabad**	**2.24**	**57**	*e*Pn	**Pn**	**11 42 47.3**	**+1.2**
ISAD				*e*		11 43 23.1	
	comp=Z,99nm,0.7s						
IZEF	**Zefreh**	**2.30**	**18**	*e*Pn	**Pn**	**11 42 48.6**	**+1.6**
AHWZ	**Ahwaz**	**2.52**	**285**	*e*Pn	**Pb**	**11 42 52.7**	**-1.3**
QIR1	**Qir**	**2.60**	**148**	*e*Pn	**Pn**	**11 42 52.8**	**+1.9**
QIR1				*e*		11 43 53.9	
	comp=Z,99nm,0.7s						
IKLH	**Kolahrood**	**2.61**	**2**	*e*Pn	**Pn**	**11 42 52.6**	**+1.4**
IKLH				*e*		11 43 48.2	
	comp=Z,99nm,0.6s						
IMEH	**Mehriz**	**2.77**	**75**	*e*Pn	**Pn**	**11 42 54.5**	**+1.1**
IMEH				*e*		11 43 41.3	
	comp=Z,99nm,0.6s						
JHRM	**Jahrom**	**2.85**	**140**	*e*Pn	**Pn**	**11 42 56.7**	**+2.3**
ICHK	**Chekchek**	**2.93**	**58**	*e*Pn	**Pn**	**11 42 56.9**	**+1.3**
ANAR	**Anarak**	**3.13**	**37**	*e*Pn	**Pn**	**11 42 59.5**	**+1.3**
KRSH	**Karshahi**	**3.30**	**9**	*e*Pn	**Pn**	**11 43 02.3**	**+1.6**
KBD	**Kabd**	**3.62**	**246**	*e*P		11 43 08.1	
QRN	**Al-Qurain**	**3.67**	**239**	*e*P		11 43 08.2	
MIB	**Mutribah**	**3.70**	**257**	*e*P		11 43 09.6	
IKMR	**Kamar-syah**	**3.85**	**318**	*e*Pn	**Pn**	**11 43 10.0**	**+2.0**
RDF	**Al-Radifah**	**3.85**	**244**	*e*P		11 43 11.4	
RST	**Umm Al-Ruwaisa**	**4.07**	**254**	*e*P		11 43 14.2	
IQOM	**Qom**	**4.14**	**355**	*e*Pn	**Pn**	**11 43 12.8**	**+0.5**
IKFM	**Kafar-mosalman**	**4.18**	**313**	*e*Pn	**Pn**	**11 43 14.1**	**+1.6**
IVRN	**Varamin**	**4.29**	**3**	*e*Pn	**Pn**	**11 43 15.2**	**+1.1**
KHGB	**Koh Gabri**	**4.32**	**93**	*e*Pn	**Pn**	**11 43 15.7**	**+1.0**
KHGB				*e*		11 43 35.3	
	comp=Z,99nm,0.6s						
TVBK	**TV Kerman**	**4.62**	**98**	*e*Pn	**Pn**	**11 43 20.3**	**+1.4**
TVBK				*e*		11 43 42.9	
	comp=Z,99nm,0.6s						
IHSB	**Hasanabad**	**4.72**	**358**	*e*Pn	**Pn**	**11 43 21.1**	**+0.9**
ILAS	**Lasjerd**	**4.83**	**14**	*e*Pn	**Pn**	**11 43 22.2**	**+0.5**
IRAZ	**Razeghan**	**4.87**	**345**	*e*Pn	**Pn**	**11 43 23.1**	**+0.9**
IDMV	**Damavand**	**4.88**	**5**	*e*Pn	**Pn**	**11 43 23.7**	**+1.2**
TPRV	**Parvadeh(Tabas**	**5.00**	**61**	*e*Pn	**Pn**	**11 43 25.5**	**+1.6**
IMHD	**Mahdasht**	**5.02**	**352**	*e*Pn	**Pn**	**11 43 25.2**	**+1.0**
IFIR	**Firoozkooh**	**5.04**	**12**	*e*Pn	**Pn**	**11 43 25.9**	**+1.3**
IANJ	**Anjilo**	**5.17**	**23**	*e*Pn	**Pn**	**11 43 27.2**	**+0.8**
QABG	**Abgarm-Qazvin**	**5.24**	**343**	*e*Pn	**Pn**	**11 43 28.8**	**+1.4**
GENO	**Geno**	**5.26**	**128**	*e*Pn	**Pn**	**11 43 27.2**	**-0.4**
HSRG	**Sareghieh**	**5.27**	**330**	*e*Pn	**Pn**	**11 43 28.6**	**+0.8**
CHMN	**Cheshme madani**	**5.30**	**98**	*e*Pn	**Pn**	**11 43 30.1**	**+1.7**
ISHM	**Shahmirzad**	**5.31**	**16**	*e*Pn	**Pn**	**11 43 29.2**	**+0.8**
SMAN	**Sihmah**	**5.42**	**215**	P	**Pn**	**11 43 32.2**	**+2.5**
TNSJ	**Nastanj**	**5.42**	**52**	*e*Pn	**Pn**	**11 43 31.1**	**+1.4**
IGHG	**Ghaleghazi**	**5.50**	**312**	*e*Pn	**Pn**	**11 43 33.6**	**+2.6**
IPRN	**Peran**	**5.57**	**7**	*e*Pn	**Pn**	**11 43 33.5**	**+1.7**
TKDS	**Koohdasht(Taba**	**5.59**	**57**	*e*Pn	**Pn**	**11 43 33.5**	**+1.4**
QALM	**Alamut, Qazvin**	**5.76**	**353**	*e*Pn	**Pn**	**11 43 35.6**	**+1.1**
IDHR	**Dehrash**	**5.86**	**314**	*e*Pn	**Pn**	**11 43 36.1**	**+0.3**
JRN	**Qarnain Island**	**5.87**	**168**	*e*Pn	**Pn**	**11 43 38.1**	**+2.4**
JRN	**Qarnain Island**	**5.87**	**168**	P	**Pn**	**11 43 36.5**	**+0.8**
RQBS	**RQBS**	**5.88**	**237**	P	**Pn**	**11 43 38.4**	**+2.4**
RQBS				S	**Sn**	**11 44 48.7**	**+5.2**
IGLO	**Ghaloghah**	**6.11**	**18**	*e*Pn	**Pn**	**11 43 41.7**	**+2.5**
SHME	**Shamm**	**6.19**	**137**	P	**Pn**	**11 43 41.2**	**+1.0**
SHME				S	**Sn**	**11 44 49.5**	**-1.5**
KBAM	**BAM**	**6.25**	**103**	*e*Pn	**Pn**	**11 43 41.8**	**+0.7**
NHRD	**Haradh**	**6.35**	**201**	P	**Pn**	**11 43 45.3**	**+2.9**
BANOM	**Banah**	**6.38**	**137**	*e*Pn	**Pn**	**11 43 43.4**	**+0.6**
BANOM	**Banah**	**6.38**	**137**	P	**Pn**	**11 43 44.0**	**+1.1**
	SNR=10						
BANOM				S	**Sn**	**11 44 53.4**	**-2.3**
ITEG	**Tejag**	**6.56**	**69**	*e*Pn	**Pn**	**11 43 46.4**	**+1.0**
IKOO	**Kooshah**	**6.64**	**73**	*e*Pn	**Pn**	**11 43 47.6**	**+0.9**
MASF	**Masafi**	**6.73**	**141**	P	**Pn**	**11 43 49.0**	**+1.3**
	SNR=8.4						
MASF				S	**Sn**	**11 45 04.4**	**0.0**
MSFE	**Esma-Masafi**	**6.74**	**141**	*e*Pn	**Pn**	**11 43 47.7**	**-0.1**
NAZ	**Nazwa, Dubai**	**6.79**	**146**	*e*Pn	**Pn**	**11 43 49.2**	**+0.8**
MDH	**Madha**	**6.86**	**141**	*e*Pn	**Pn**	**11 43 49.0**	**-0.4**
MDH	**Madha**	**6.86**	**141**	P	**Pn**	**11 43 50.5**	**+1.1**
MDH				S	**Sn**	**11 45 05.3**	**-2.3**
AFRZ	**Afriz**	**6.94**	**65**	*e*Pn	**Pn**	**11 43 51.8**	**+1.1**
ASUD	**Al Ashush, Dub**	**6.95**	**150**	P	**Pn**	**11 43 54.0**	**+3.4**
	SNR=5.4						
FAQ	**Al Faqa, Dubai**	**6.96**	**147**	*e*Pn	**Pn**	**11 43 50.7**	**-0.1**
UOSS	**Minazif**	**7.10**	**143**	Pn	**Pn**	**11 43 51.6**	**-1.1**
UOSS				Sn	**Sn**	**11 45 09.7**	**-3.7**
UOSS	**Minazif**	**7.10**	**143**	*e*Pn	**Pn**	**11 43 52.3**	**-0.4**
HATD	**Hatta, Dubai**	**7.16**	**144**	*e*Pn	**Pn**	**11 43 54.6**	**+1.1**
HATD	**Hatta, Dubai**	**7.16**	**144**	P	**Pn**	**11 43 55.4**	**+1.9**
HATD				S	**Sn**	**11 45 13.4**	**-1.5**
ASHO	**Ashiyiah**	**7.24**	**145**	*e*Pn	**Pn**	**11 43 54.9**	**+0.3**
ASHO	**Ashiyiah**	**7.24**	**145**	P	**Pn**	**11 43 55.0**	**+0.4**
	SNR=8.1						
ASHO				S	**Sn**	**11 45 15.8**	**-1.1**
SOHO	**SOHO**	**7.93**	**144**	P	**Pn**	**11 44 03.5**	**-0.6**
SOHO				S	**Sn**	**11 45 31.0**	**-3.0**
IAKL	**Akhelmad**	**8.45**	**44**	*e*Pn	**Pn**	**11 44 13.8**	**+2.4**
IPAY	**Payeh**	**8.49**	**46**	*e*Pn	**Pn**	**11 44 13.8**	**+1.8**
DWDS	**Al Duwadimi**	**8.51**	**225**	P	**Pn**	**11 44 14.5**	**+2.4**
ARQ	**Araqi**	**8.60**	**147**	P	**Pn**	**11 44 12.9**	**-0.5**
ARQ				S	**Sn**	**11 45 46.7**	**-3.8**
RAYN	**Ar Rayn**	**8.92**	**218**	Pn	**Pn**	**11 44 17.3**	**-0.4**
IKRD	**Kardeh**	**9.02**	**46**	*e*Pn	Pn	11 44 21.5	+10
JRKH	**Jarkhoshk**	**9.05**	**53**	*e*Pn	**Pn**	**11 44 21.3**	**+1.7**
GEYT	**Alibeck**	**9.06**	**35**	Pn	**Pn**	**11 44 19.9**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=216,slow=15,SNR=4.0						
GEYT	**Alibeck**	**9.06**	**35**		**Pn**	**11 44 22.1**	**+2.5**
GYA0B	**ALIBECK ARRAY**	**9.06**	**35**	Pn	**Pn**	**11 44 19.3**	**-0.2**
IMYA	**Miami**	**9.13**	**50**	*e*Pn	**Pn**	**11 44 22.8**	**+2.1**
BSY	**Bisya**	**9.43**	**146**	P	**Pn**	**11 44 26.1**	**+1.4**

BSY				S	Sn	11 46 06.3	-4.5
SMDO	Samad	9.61	141	P	Pn	11 44 28.4	+1.2
SMDO				S	Sn	11 46 12.2	-3.1
WSAR	Wadi Sarin	9.79	138	Pn	Pn	11 44 28.7	-0.9
	comp=Z,0.8nm,0.3s,baz=340,slow=7.2,SNR=6.8						
WSAR				Sn	Sn	11 46 14.0	-5.7
	comp=Z,0.3nm,0.3s,baz=342,slow=20,SNR=2.6						
WBK	Wadi Bani Khal	10.47	139	P	Pn	11 44 40.8	+1.7
MARD	Mardin	11.06	309	Pn	Pn	11 44 45.7	-1.4
MHTO	MHTO	11.30	147	P	Pn	11 44 50.3	+0.1
MHTO				S	Sn	11 46 51.0	-5.6
DQM	DQM	12.04	152	P	Pn	11 45 01.8	+1.3
DQM				S	Sn	11 47 10.7	-4.1
DOK	Doka	12.27	168	P	Pn	11 45 04.1	+0.5
DOK				S	Sn	11 47 11.6	-8.9
WHFO	Wadi Hawf	12.90	170	P	Pn	11 45 11.9	-0.3
	SNR=9.1						
WHFO				S	Sn	11 47 24.9	-11
DMTO	DMTO	13.31	166	P	Pn	11 45 17.9	+0.1
	SNR=6.4						
DMTO				S	Sn	11 47 34.3	-12
ABTO	Aybut	13.39	173	P	Pn	11 45 18.4	-0.6
ABTO				S	Sn	11 47 40.5	-7.5
MMAI	Mount Meron Ar	13.86	284	Pn	Pn	11 45 24.6	-0.8
	comp=Z,0.4nm,0.3s,baz=121,slow=17,SNR=2.2						
KBZ	Khabaz	14.68	335	Pn	Pn	11 45 39.3	+3.0
	comp=Z,0.1nm,0.3s,baz=158,slow=12,SNR=2.2						
KVAR	Kislovodsk Arr	14.95	335	Pn	Pn	11 45 42.2	+2.0
	baz=66,slow=20,SNR=2.7						
KIV	Kislovodsk	14.95	335	P	Pn	11 45 42.5	+2.4
BR131	Keskin Array S	17.11	307		P	11 46 09.8	-0.1
BRTR	Keskin Array B	17.11	307	P	Pn	11 46 07.5	-0.7
	comp=Z,0.1nm,0.3s,baz=301,slow=32,SNR=3.8						
BRTR	Keskin Array B	17.11	307	P	Pn	11 46 09.0	+0.8
ELL	Elmali	18.92	294	P	Pn	11 46 31.0	+0.7
ELL				IAmb	IAmb	11 46 41.2	
	comp=Z,35nm,0.9s						
AKAS	Kas	19.05	293	P	Pn	11 46 32.6	+0.6
AKAS				IAmb	IAmb	11 46 42.2	
	comp=Z,24nm,1.2s						
KKAR	Karatay Array	19.56	45	P	Pn	11 46 38.6	+0.7
AKTO	Aktyubinsk	20.31	12	P	P	11 46 43.3	-1.4
	comp=Z,3.0nm,0.7s,baz=200,slow=11,SNR=8.5						
KARP	Karpathos	20.92	290	P	P	11 46 52.6	+1.1
KSH	Kashi	21.83	60	P	P	11 46 57.6	-3.7
KSH				sP	pP	11 47 04.3	-0.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,490nm,4.8s						
AAK	Ala-Archa	21.89	51	P	P	11 47 02.1	0.0
	comp=Z,1.9nm,0.7s,baz=220,slow=9.0,SNR=7.4						
AAK	Ala-Archa	21.89	51	P	P	11 47 03.0	+1.0
SANT	Santorini	22.39	292	⇓P	P	11 47 07.8	+0.6
SANT	Santorini	22.39	292	P	P	11 47 07.7	+0.4
BTLS	Baital	22.75	45	*e*P	P	11 47 10.7	-0.3
	baz=45						
ALN	Alexandroupoli	22.93	303	P	P	11 47 13.3	+0.3
ALN				IAmb	IAmb	11 47 19.9	
	comp=Z,8.0nm,1.0s						
KUU	Kurty	23.65	49	*e*P	P	11 47 20.2	+0.1
	comp=Z,2.4nm,0.8s,baz=49						
AAA	Alma-Ata	23.75	51	*e*P	P	11 47 22.0	+0.8
	baz=51						
MDOK	Medeo	23.82	51	*e*P	P	11 47 22.3	+0.3
	baz=52						
VRI	Vrincioaia	24.50	315	⇓P	P	11 47 29.7	+1.6
SORM	Soroca	24.80	321	⇓P	P	11 47 31.7	+1.0
MLR	Muntele Rosu	24.80	314	P	P	11 47 30.6	-0.4
	comp=Z,5.4nm,0.8s,baz=22,slow=5.5,SNR=9.2						
MLR	Muntele Rosu	24.80	314	⇓P	P	11 47 32.3	+1.3
MLR	Muntele Rosu	24.80	314	P	P	11 47 32.6	+1.7
MLR				IAmb	IAmb	11 47 42.4	
	comp=Z,8.6nm,0.9s						
BRZS	Berezniki	24.98	34	*e*P	P	11 47 32.5	+0.1
	baz=34						
KPKS	Kokpek	25.04	52	*e*P	P	11 47 33.4	+0.3
	comp=Z,3.8nm,0.7s,baz=52						
AGG	Agios Georgios	25.24	297	P	P	11 47 35.4	+0.5
AGG				IAmb	IAmb	11 47 38.0	
	comp=Z,15nm,1.1s						
ITM	Ithomi	25.29	293	P	P	11 47 35.7	+0.3
LIT	Litokhoron	25.33	300	P	P	11 47 36.5	+0.7
LIT				IAmb	IAmb	11 47 44.4	
	comp=Z,8.8nm,1.0s						
VOIR		25.34	313	⇑P	P	11 47 36.4	+0.7
DOPR	Dopca	25.37	314	⇑P	P	11 47 37.1	+1.1
BIZ	Bicaz	25.41	317	⇑P	P	11 47 36.9	+0.6
SHLS	Shalkode	25.46	53	*e*P	P	11 47 40.0	+3.0
	comp=Z,2.9nm,0.7s,baz=53						
TDK	Taldyqorghan	25.46	48	*e*P	P	11 47 36.6	-0.2
	comp=Z,5.2nm,0.6s,baz=48						
VTS	Vitosha	25.47	306	⇑P	P	11 47 38.3	+1.2
ARR	Arges	25.57	312	⇑P	P	11 47 39.2	+1.3
AKASG	Malin Array Be	25.97	327	P	P	11 47 40.3	-1.1
	comp=Z,3.3nm,0.5s,baz=135,slow=9.4,SNR=21						
AKASG	Malin Array Be	25.97	327	P	P	11 47 40.7	-0.7
AKBB	Malin Array Si	25.97	327	P	P	11 47 41.0	-0.4
AKBB				IAmb	IAmb	11 47 48.3	
	comp=Z,13nm,1.2s						
BRVK	Borovoye	26.20	26	P	P	11 47 44.3	+0.8
BVAR	Borovoye Array	26.22	26	P	P	11 47 43.6	0.0
	comp=Z,2.2nm,0.6s,baz=350,slow=8.0,SNR=14						
BURAR	Bucovina Array	26.27	317	⇓P	P	11 47 45.9	+1.6
BURAR	Bucovina Array	26.27	317	P	P	11 47 46.1	+1.8
BUR08	Bucovina Ar. S	26.30	317	P	P	11 47 45.6	+1.1
BUR08				IAmb	IAmb	11 48 00.1	
	comp=Z,4.3nm,0.9s						
FNA	Florina	26.31	301	P	P	11 47 44.9	+0.2
FNA				IAmb	IAmb	11 47 49.2	
	comp=Z,7.3nm,0.6s						
KURBB	Kurchatov Arra	28.32	38	P	P	11 48 02.5	0.0
	comp=Z,0.5nm,0.2s,baz=236,slow=9.6,SNR=1.9						
KOLS	Kolonicke sedl	28.64	318	*e*P	P	11 48 08.5	+3.2
MK31	Makanchi Array	28.66	47	P	P	11 48 05.8	+0.1
MKAR	Makanchi Array	28.66	47	P	P	11 48 05.2	-0.5
	comp=Z,0.9nm,0.7s,baz=249,slow=9.4,SNR=8.5						
MKAR	Makanchi Array	28.66	47	P	P	11 48 05.5	-0.1
CRVS	Cervenica-Dubn	29.09	317	*e*P	P	11 48 10.9	+1.5
WMQ	Urumqi	31.40	55	*e*P	P	11 48 32.4	+2.5
MOA	Molln	33.12	312	P	P	11 48 44.6	-0.4
	comp=Z,2.1nm,0.5s						
ZAA0	Zalesovo Array	33.37	36	P	P	11 48 48.0	+1.0
ZAA0				IAmb	IAmb	11 48 50.6	
	comp=Z,4.7nm,1.4s						
ZALV	Zalesovo Beam	33.37	36	P	P	11 48 46.5	-0.4
	comp=Z,1.4nm,0.6s,baz=254,slow=9.9,SNR=6.1						
ZALV	Zalesovo Beam	33.37	36	P	P	11 48 48.2	+1.3
KBA	Koelnbreinsper	33.50	310	*e*P	P	11 48 48.9	+0.5
	comp=Z,13nm,1.1s						
GERES	GERESS Array B	33.79	313	P	P	11 48 49.5	-1.3
	comp=Z,0.6nm,0.5s,baz=111,slow=7.3,SNR=7.3						
ABTA	Abfaltersbach	33.97	309	*e*P	P	11 48 53.0	+0.6
	comp=Z,5.3nm,0.9s						
WTTA	Wattenberg	34.67	310	*i* P	P	11 48 58.5	-0.2
	comp=Z,6.1nm,0.7s						
WATA	Walderalm	34.73	310	*e*P	P	11 48 58.1	-1.0
	comp=Z,4.8nm,0.5s						
SQTA	Sankt Quirin	34.95	310	*i* P	P	11 48 60.0	-0.9
	comp=Z,8.3nm,0.5s						
FINES	FINESS Array B	34.98	339	P	P	11 49 00.0	-0.8
	comp=Z,11nm,1.1s,baz=148,slow=6.6,SNR=4.1						
MOTA	Moosalm	35.05	310	*i* P	P	11 49 00.5	-1.3
	comp=Z,7.5nm,0.9s						
FETA	Feichten	35.22	309	*e*P	P	11 49 02.8	-0.6
	comp=Z,4.6nm,0.5s						
RETA	Reutte	35.31	310	*i* P	P	11 49 03.2	-0.8
	comp=Z,3.8nm,0.7s						
DAVA	Damuels	35.84	309	*i* P	P	11 49 07.7	-0.9
	comp=Z,11nm,0.5s						
SENIN	Lac Senin/Sane	37.42	307	P	P	11 49 21.2	-0.9
BNI	Bardonecchia	37.67	305	P	P	11 49 23.5	-0.7
BNI				IAmb	IAmb	11 49 30.4	
	comp=Z,18nm,1.4s						
GTA	Gaotai	40.10	64	*e*P	P	11 49 45.3	+0.6
GTA				pP	sP	11 49 51.4	+1.5
GTA				sP	pP	11 49 54.8	+6.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	41.59	347	P	P	11 49 55.9	-0.5
	comp=Z,2.7nm,0.8s,baz=144,slow=11,SNR=2.0						
ARCES	ARCESS Array B	41.59	347	IAmb	IAmb	11 50 01.0	
	comp=Z,13nm,1.3s						
LZH	Lanzhou	43.61	68	*e*P	P	11 50 12.5	-1.0
LZH				pP	pP	11 50 15.8	-1.5
LZH				sP	sP	11 50 17.3	-1.5
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
CMAR	Chiang Mai Arr	44.55	94	P	P	11 50 20.0	-1.0
	comp=Z,1.1nm,0.8s,baz=290,slow=7.7,SNR=7.2						
SONM	Songino Array	44.84	51	P	P	11 50 22.2	-1.0
	comp=Z,0.3nm,0.3s,baz=201,slow=0.1,SNR=2.2						
SONM	Songino Array	44.84	51	IAmb	IAmb	11 50 31.8	
	comp=Z,1.0nm,1.0s						
KMI	Kunming	45.32	84	⇑*e*P	P	11 50 26.3	-1.0
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ESDC	Sonseca Array	45.57	297	P	P	11 50 28.6	-0.3
	comp=Z,0.5nm,0.6s,baz=70,slow=7.8,SNR=5.4						
ESDC	Sonseca Array	45.57	297	P	P	11 50 27.7	-1.2
PAB	San Pablo	45.88	297	P	P	11 50 31.8	+0.4
PBKT	Sadao Pong	47.11	96	P	P	11 50 40.3	-0.9
HHC	Hu-ho-hao-te	48.93	61	*e*P	P	11 50 54.1	-1.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
TOA0	Torodi Ar. Sit	48.97	260	P	P	11 50 55.8	+0.2
TOA0				IAmb	IAmb	11 50 56.7	
	comp=Z,4.4nm,0.7s						
TORD	Torodi Ar. Bea	48.97	260	P	P	11 50 55.7	0.0
	comp=Z,3.1nm,0.6s,baz=56,slow=8.6,SNR=22						
TORD	Torodi Ar. Bea	48.97	260	P	P	11 50 55.9	+0.3
KOWA	Kowa	53.21	265	P	P	11 51 28.1	+0.6
DBIC	Dimbokro	57.80	258	P	P	11 52 00.8	+0.2
	comp=Z,4.4nm,0.6s,baz=42,slow=8.1,SNR=11						
DBIC	Dimbokro	57.80	258	P	P	11 52 01.1	+0.5
KIC	Kosan Boka	57.87	257	*e*P	P	11 52 01.2	+0.1
	comp=Z,11nm,0.6s						
TIC	Toumodi	57.95	258	*e*P	P	11 52 01.7	0.0
LIC	Lamto	58.18	257	*e*P	P	11 52 03.4	+0.1
	comp=Z,26nm,0.6s						
SUMG	Summit	61.01	340	P	P	11 52 22.2	-0.2
EUNU	Eureka	67.09	353	P	P	11 53 01.4	-0.5
BPAW	Bear Paw Mtn.	83.86	10	P	P	11 54 38.5	+0.1
YKA	Yellowknife Ar	86.46	354	P	P	11 54 50.7	-0.6
	comp=Z,0.8nm,0.8s,baz=15,slow=5.0,SNR=14						

IDC 17 11:46:00.1±2.6, 5°.45N×126°.38E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.3/42, mbtmp3.6/4, Error ellipse: s-maj=267.9km s-min=21.8km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.42	163	P	P	11 51 38.9	+0.2
	0.6nm,0.3s,baz=343,slow=9.5,SNR=8.9						
ASAR	Alice Springs	29.85	166	P	P	11 52 09.2	-0.2
	0.3nm,0.7s,baz=339,slow=6.9,SNR=8.3						
MKAR	Makanchi Array	55.96	325	P	P	11 55 40.2	-0.1
	0.3nm,0.4s,baz=121,slow=8.1,SNR=7.0						
KURBB	Kurchatov Arra	60.12	327	P	P	11 56 09.2	0.0
	0.3nm,0.5s,baz=131,slow=6.0,SNR=4.8						

IDC 17 11:49:51.2±1.6, 1°.76N×125°.84E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/40, mbtmp3.5/4, Error ellipse: s-maj=171.6km s-min=21.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.12	159	P	P	11 54 57.4	-1.7
	0.6nm,0.4s,baz=338,slow=11,SNR=8.4						
ASAR	Alice Springs	26.46	163	P	P	11 55 31.9	+1.7
	0.4nm,0.8s,baz=333,slow=7.5,SNR=4.8						
MKAR	Makanchi Array	58.68	326	P	P	11 59 50.5	0.0
	0.4nm,0.5s,baz=122,slow=7.7,SNR=10						
KURBB	Kurchatov Arra	62.92	328	P	P	12 00 19.2	-0.2
	0.5nm,0.5s,baz=130,slow=6.6,SNR=8.4						

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*NOU **17** 12:07:47.1, 20°.24S×177°.52W, h539^{km}, mb4.5, Fiji Islands Region*

*NEIC **17** 12:07:48.2±1.4, 20°.3S±0°.1×177°.9W±0°.1, h534^{km}±6^{km}, mb4.5/39, Error ellipse: s-maj=19.5km s-min=17.0km az=94.0*

*IDC **17** 12:07:49.9±1.6, 20°.22S×177°.94W, h545^{km}±15^{km}, mb3.5/14, mb1 3.7/16, mb1mx3.6/23, mbtmp4.3/16, Error ellipse: s-maj=19.6km s-min=11.5km az=146.0*

ISC 17 12:07:49.4±0.4, 20°.28S±0°.09×177°.83W±0°.08, h550^{km}, n127, σ0^s.99/136, mb4.5/32, 19C-7D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.65	302	P	P	12 09 14.9	-1.6
	13nm,0.3s,baz=143,slow=6.7,SNR=81						
MSVF	Nonsavu	4.65	302	P	P	12 09 15.0	-1.5
NIUE	Niue	7.54	82	P	P	12 09 38.8	-3.8
DZM	Mont Dzumac	14.78	260	P	P	12 10 55.5	-1.2
	1.3nm,0.3s,baz=82,slow=17,SNR=25						
DZM	Mont Dzumac	14.78	260	P	P	12 10 51.5	-5.2
SANVU	Saraoutou	15.03	286	P	P	12 10 56.5	-2.8
OUZ	Omahuta	16.70	205	P	P	12 11 14.9	-0.3
KOUNC	Koumac, New Ca	16.77	266	P	P	12 11 17.9	+1.8
MXZ	Matakaoa Point	17.55	190	P	P	12 11 22.5	-0.5
URZ	Urewera	18.45	193	P	P	12 11 28.5	-2.7
	1.3nm,0.3s,baz=350,slow=2.6,SNR=14						
URZ	Urewera	18.45	193	P	P	12 11 28.9	-2.2
BKZ	Black Stump Fm	19.45	193	P	P	12 11 38.6	-1.8
BKZ				IAmb	IAmb	12 11 41.4	
	comp=Z,27nm,1.4s						
THZ	Tophouse	22.81	198	P	P	12 12 09.7	-0.9
THZ				IAmb	IAmb	12 12 24.2	
	comp=Z,15nm,1.0s						
CTAO	Charters Tower	33.67	264	P	P	12 13 45.1	-0.2
PMG	Port Moresby	35.45	283	P	P	12 13 59.9	-0.2
PMG				IAmb	IAmb	12 14 01.0	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	38.03	244	P	P	12 14 21.6	+0.5
	comp=Z,7.1nm,0.8s,baz=95,slow=11,SNR=15						
STKA	Stephens Creek	38.03	244	P	P	12 14 21.5	+0.4
WR0	Warramunga Arr	44.60	262	P	P	12 15 12.5	-0.8
AS31	Alice Springs	44.72	256	P	P	12 15 14.4	+0.1
ASAR	Alice Springs	44.73	256	P	P	12 15 14.2	0.0
	comp=Z,26nm,0.8s,baz=86,slow=8.6,SNR=222						
ASAR				PcP	PcP	12 16 45.1	+0.4
	comp=Z,3.1nm,0.7s,baz=99,slow=3.8,SNR=9.3						
ASAR				S	S	12 21 11.4	0.0
	comp=Z,0.6nm,1.0s,baz=95,slow=15,SNR=4.9						
ASAR	Alice Springs	44.73	256	P	P	12 15 13.7	-0.6
WB0	Warramunga Arr	44.77	262	P	P	12 15 13.8	-0.9
WB0				IAmb	IAmb	12 15 14.4	
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	44.78	262	P	P	12 15 13.8	-0.8
WB2				IAmb	IAmb	12 15 14.5	
	comp=Z,14nm,0.7s						
WRAB	Tennant Creek	44.78	262	P	P	12 15 13.8	-0.9
WRA	Warramunga Arr	44.79	262	P	P	12 15 14.1	-0.7
	comp=Z,5.6nm,0.3s,baz=96,slow=7.5,SNR=178						
WRA				PcP	PcP	12 16 45.7	+0.7
	comp=Z,1.5nm,0.8s,baz=101,slow=3.0,SNR=4.8						
WRA				S	S	12 21 10.2	-2.2
	comp=Z,0.3nm,0.6s,baz=11,slow=12,SNR=2.8						
WRA	Warramunga Arr	44.79	262	P	P	12 15 14.1	-0.7
FAKI	Fak Fak	51.60	283	P	P	12 16 05.4	-0.2
FAKI				IAmb	IAmb	12 16 32.1	
	comp=Z,28nm,1.5s						
VNDA	Vanda	58.15	185	P	P	12 16 51.5	+1.4
	comp=Z,0.7nm,0.7s,baz=9.9,slow=2.6,SNR=5.5						
VNDA	Vanda	58.15	185	P	P	12 16 52.0	+1.8
NWAO	Narrogin (SRO)	58.61	243	P	P	12 16 54.5	+0.3
NWAO				IAmb	IAmb	12 16 55.1	
	comp=Z,36nm,1.2s						
CASY	Casey	64.23	205	P	P	12 17 29.8	-0.4
CASY				IAmb	IAmb	12 17 51.4	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	69.79	180	P	P	12 18 05.9	+1.4
MJAR	Matsushiro Arr	70.12	324	P	P	12 18 06.8	-0.1
	comp=Z,4.0nm,0.6s,baz=161,slow=6.1,SNR=15						
MJAR	Matsushiro Arr	70.12	324	P	P	12 18 06.5	-0.3
MAJO	Matsushiro	70.13	324	P	P	12 18 07.2	+0.4
MAJO				IAmb	IAmb	12 18 10.4	
	comp=Z,32nm,1.5s						
JSU	Suzuyama	71.48	315	P	P	12 18 15.6	+0.7
PEA0B	Petropavlovsk-	76.10	345	P	P	12 18 40.7	+0.1
PEA0B				IAmb	IAmb	12 18 45.1	
	comp=Z,40nm,1.4s						
PETK	Petropavlovsk-	76.10	345	P	P	12 18 40.7	+0.1
	comp=Z,6.4nm,0.8s,baz=134,slow=8.5,SNR=6.7						
PETK	Petropavlovsk-	76.10	345	P	P	12 18 41.0	+0.4
KSRS	Korea Array	76.83	318	P	P	12 18 46.1	+1.2
	comp=Z,1.5nm,0.8s,baz=133,slow=6.2,SNR=5.0						
USA0B	Ussuriysk Arra	78.87	326	P	P	12 18 56.1	+0.3
USRK	Ussuriysk Ar.	78.87	326	P	P	12 18 57.4	+1.6
	comp=Z,7.9nm,0.7s,baz=85,slow=5.6,SNR=15						
USRK	Ussuriysk Ar.	78.87	326	P	P	12 18 56.4	+0.6
MDJ	Mudanjiang	80.43	325	P	P	12 19 03.7	-0.3
MDJ				IAmb	IAmb	12 19 06.1	
	comp=Z,11nm,0.8s						
NVAR	Mina Array Bea	80.75	43	P	P	12 19 07.1	+1.0
	comp=Z,0.2nm,0.5s,baz=229,slow=9.0,SNR=3.8						
K05A	Summer Lake	81.69	39	P	P	12 19 12.3	+1.6
K05A				IAmb	IAmb	12 19 20.2	
	comp=Z,18nm,1.4s						
IPM	Ipoh	83.26	277	P	P	12 19 20.0	+0.9
KULM	Kulim	83.90	278	P	P	12 19 23.8	+1.6
KULM				IAmb	IAmb	12 19 24.3	
	comp=Z,12nm,0.7s						
SUA	Susitna One	84.31	13	P	P	12 19 23.5	+0.2
SUA				IAmb	IAmb	12 19 24.0	
	comp=Z,14nm,1.1s						
TTA	Tatalina	84.70	10	P	P	12 19 25.6	+0.5
PMR	Palmer	84.77	13	P	P	12 19 25.3	0.0
PMR				IAmb	IAmb	12 19 37.7	
	comp=Z,14nm,1.5s						
GSI	Gunungsitoli	85.38	273	P	P	12 19 28.3	-1.2
TXAR	Lajitas Array	86.80	57	P	P	12 19 37.5	+1.4
	comp=Z,0.3nm,0.6s,baz=223,slow=7.1,SNR=7.0						
TXAR				pP	pP	12 21 34.8	-0.2
	comp=Z,0.4nm,1.0s,baz=227,slow=2.9,SNR=3.7						
TXAR	Lajitas Array	86.80	57	P	P	12 19 37.0	+0.9
WRH	Wood River Hil	87.55	12	P	P	12 19 38.5	-0.1
HDA	Harding Lake	87.73	13	P	P	12 19 39.3	-0.1
HDA				IAmb	IAmb	12 19 39.8	
	comp=Z,4.6nm,0.6s						
CCB	Clear Creek Bu	87.76	12	P	P	12 19 38.9	-0.6
CCB				IAmb	IAmb	12 19 39.6	
	comp=Z,4.7nm,0.6s						
TCOL	CIGO, UAF Yank	87.95	12	P	P	12 19 40.1	-0.3
TCOL				IAmb	IAmb	12 19 40.6	
	comp=Z,5.8nm,0.6s						
COLA	College	87.96	12	P	P	12 19 40.1	-0.3
COLA				IAmb	IAmb	12 19 40.6	
	comp=Z,5.5nm,0.6s						
IL31		88.06	13	P	P	12 19 40.4	-0.4
ILAR	Eielson Array	88.06	13	P	P	12 19 40.1	-0.8
	comp=Z,1.3nm,0.7s,baz=216,slow=5.7,SNR=19						
ILAR	Eielson Array	88.06	13	P	P	12 19 40.6	-0.4
PDAR	Pinedale Array	88.69	43	P	P	12 19 45.2	+0.5
	comp=Z,0.4nm,0.6s,baz=225,slow=3.6,SNR=4.1						
CMAR	Chiang Mai Arr	90.19	290	P	P	12 19 54.1	+2.2
	comp=Z,5.8nm,0.9s,baz=122,slow=3.0,SNR=32						
CMAR	Chiang Mai Arr	90.19	290	P	P	12 19 53.4	+1.4
CHTO	Chiang Mai	90.32	290	P	P	12 19 54.1	+1.6
SONM	Songino Array	95.69	319	P	P	12 20 17.2	+0.7
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=2.5						
ZALV	Zalesovo Beam	110.42	321	PKiKP	PKiKP	12 25 17.8	-1.2
	comp=Z,0.7nm,0.5s,baz=199,slow=1.6,SNR=4.2						
MKAR	Makanchi Array	111.16	313	PKiKP	PKiKP	12 25 20.1	-0.7
	comp=Z,0.7nm,0.6s,baz=57,slow=0.6,SNR=11						
BVAR	Borovoye Array	119.01	320	PKP	PKPdf	12 25 35.1	-0.5
	comp=Z,1.1nm,0.6s,baz=96,slow=2.9,SNR=10.0						
ARU	Arti	125.11	326	PKP	PKPdf	12 25 47.5	+0.4
	comp=Z,0.8nm,0.5s,baz=13,slow=4.3,SNR=5.2						
ARU	Arti	125.11	326		PKPdf	12 25 47.1	-0.1
AKTO	Aktyubinsk	127.01	318	PKP	PKiKP	12 25 51.9	+0.4
	comp=Z,1.3nm,0.8s,baz=12,slow=2.3,SNR=4.2						
ARCES	ARCESS Array B	128.73	350	PKP	PKPdf	12 25 54.0	+0.3
	comp=Z,5.3nm,0.9s,baz=347,slow=3.7,SNR=4.0						
FINES	FINESS Array B	135.60	344	PKP	PKPdf	12 26 07.3	+0.4
	comp=Z,1.6nm,0.8s,baz=108,slow=6.2,SNR=4.6						
AKASG	Malin Array Be	142.90	331	PKhKP	PKPdf	12 26 17.4	-3.0
	comp=Z,4.5nm,0.4s,baz=43,slow=4.5,SNR=33						
AKBB	Malin Array Si	142.90	331		PKPdf	12 26 17.7	-2.7
SORM	Soroca	145.10	329	⇑P	PKPdf	12 26 24.7	+0.4
MBAR	Mbarara	145.17	237		PKPbc	12 26 27.0	+0.3
GAZ	Gaziantep	145.21	307		PKPdf	12 26 24.9	0.0
ILGA	Ilgaz	146.15	315		PKPab	12 26 30.1	-0.8
BR131	Keskin Array S	146.81	313		PKPbc	12 26 30.7	+0.2
BRTR	Keskin Array B	146.81	313	PKPbc	PKPbc	12 26 30.4	-0.1
	comp=Z,3.4nm,0.6s,baz=133,slow=4.7,SNR=20						
BRTR	Keskin Array B	146.81	313		PKPbc	12 26 30.6	+0.1
BUR08	Bucovina Ar. S	146.93	331		PKPbc	12 26 31.5	+1.0
BURAR	Bucovina Array	146.94	331	⇑P	PKPbc	12 26 31.5	+1.0
BURAR	Bucovina Array	146.94	331		PKPbc	12 26 31.7	+1.1
BIZ	Bicaz	147.02	329	⇓P	PKPbc	12 26 31.7	+1.0
CFR	Carcaliu	147.19	325	⇑P	PKPbc	12 26 31.6	+0.5
TPGR	Topolog	147.25	324	⇑P	PKPbc	12 26 31.7	+0.4
ODBI	Odobesti	147.37	327	⇓P	PKiKP	12 26 33.4	+0.2
VRI	Vrincioaia	147.47	327	⇑P	PKPbc	12 26 31.6	-0.2
CRVS	Cervenica-Dubn	147.52	336	*e*PKP	PKPbc	12 26 32.7	+0.8
CRVS				*e*		12 26 36.5	
OSTC	Ostas	147.80	343	⇑*e*PKP	PKPbc	12 26 32.9	+0.3
CHVC	Chvalec	147.82	343	⇑*e*PKP	PKPbc	12 26 33.4	+0.8
MMAI	Mount Meron Ar	147.84	300	PKPbc	PKiKP	12 26 34.4	-0.3
	comp=Z,5.8nm,0.6s,baz=81,slow=6.8,SNR=13						
MMAI				PKPab	PKPab	12 26 38.9	+1.1
	comp=Z,7.6nm,0.7s,baz=71,slow=5.5,SNR=8.6						
CLL	Collm	147.88	347	⇓*i*PKPbc	PKPbc	12 26 33.0	+0.3
	comp=Z,16nm,0.8s						
CLL				*i* PKPab	PKPab	12 26 37.2	0.0
	comp=Z,6.0nm,0.8s						
CLL	Collm	147.88	347		PKPbc	12 26 32.9	+0.2
UPC	Upice	147.90	343	⇑*e*PKP	PKPbc	12 26 33.5	+0.7
DPC	Dobruska-Polom	147.96	343	⇑*e*PKP	PKPbc	12 26 33.8	+0.8
DPC				*e*PKPAB	PKPab	12 26 37.3	-0.4
LANS	Liptovska Anna	148.03	338	*e*PKP	PKiKP	12 26 34.8	+0.3
DOPR	Dopca	148.06	329	⇑P	PKiKP	12 26 34.6	0.0
KRLC	Kraliky	148.08	342	⇑*e*PKP	PKPbc	12 26 33.5	+0.2
MORC	Moravsky Berou	148.12	341	⇑P	PKPbc	12 26 34.2	+0.8
MLR	Muntele Rosu	148.12	328	PKPbc	PKPbc	12 26 34.0	+0.4
	comp=Z,2.6nm,0.6s,baz=284,slow=0.4,SNR=6.2						
MLR	Muntele Rosu	148.12	328	⇓P	PKPbc	12 26 34.1	+0.4
DRGR		148.69	332	⇓P	PKPbc	12 26 35.1	+0.2
PRU	Pruhonice	148.76	345	⇑*e*PKP	PKPbc	12 26 35.2	+0.3
VYHS	Vyhne	148.81	338	*e*PKP	PKiKP	12 26 36.0	-0.1
VYHS				*e*		12 26 52.1	
ARR	Arges	148.86	329	⇑P	PKiKP	12 26 36.8	+0.4
NKC	Novy Kostel	149.01	347	⇑*e*PKP	PKPbc	12 26 35.9	+0.3
PBCC	Pribram	149.18	345	⇑*e*PKP	PKPbc	12 26 35.7	-0.3
SMOL	Smolenice	149.26	340	*e*PKP	PKiKP	12 26 37.4	+0.4
MODS	Modra-Piesok	149.44	340	*e*PKP	PKPbc	12 26 37.0	+0.4
GZR	Gura Zlata	149.73	331	⇑P	PKPbc	12 26 37.9	+0.4
KHC	Kasperske Hory	149.79	345	⇑*e*PKP	PKPbc	12 26 37.2	-0.3
KHC				*e*PKPAB	PKPab	12 26 45.8	+0.5
KHC	Kasperske Hory	149.79	345		PKiKP	12 26 38.2	0.0
GERES	GERESS Array B	150.03	345	PKPbc	PKPbc	12 26 38.5	+0.3
	comp=Z,3.2nm,0.8s,baz=42,slow=2.2,SNR=24						
GERES				PKPab	PKPab	12 26 46.1	-0.2
	comp=Z,0.7nm,0.7s,baz=31,slow=6.2,SNR=3.0						
GERES	GERESS Array B	150.03	345		PKPbc	12 26 38.2	+0.1
BZS	Buzias	150.08	332	⇑P	PKPbc	12 26 38.7	+0.5
CONA	Conrad Observa	150.27	341	*e*P	PKiKP	12 26 39.6	+0.3
	comp=Z,4.3nm,0.7s						
HERR	Herculane	150.28	330	⇓P	PKPbc	12 26 38.8	+0.1
VTS	Vitosha	151.53	326	⇓P	PKPdf	12 26 35.7	+0.6
KBA	Koelnbreinsper	151.75	344	*e*P	PKiKP	12 26 43.9	+1.5
	comp=Z,3.5nm,0.7s						
WTTA	Wattenberg	152.00	346	*e*P	PKPbc	12 26 43.1	+0.3
	comp=Z,3.0nm,0.6s						
ABTA	Abfaltersbach	152.28	345	*i* P	PKPbc	12 26 42.7	-0.6
	comp=Z,5.2nm,0.7s						
TORD	Torodi Ar. Bea	172.90	176	PKP	PKPdf	12 26 56.8	+0.4
	comp=Z,1.0nm,1.0s,baz=135,slow=0.6,SNR=2.2						

IDC 17 12:11:38.9±22.0, 12°.03S×166°.89E, h142^{km}±196^{km}, mb3.4/4, mb1 3.7/4, mb1mx3.3/20, mbtmp3.8/4, Error ellipse: s-maj=141.8km s-min=59.7km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.23	252	P	P	12 17 53.2	-0.7
	0.4nm,0.6s,baz=79,slow=9.0,SNR=2.5						
ASAR	Alice Springs	33.38	245	P	P	12 18 04.3	+0.3
	0.7nm,0.7s,baz=73,slow=9.2,SNR=4.6						
ILAR	Eielson Array	84.08	18	P	P	12 23 53.4	0.0
	0.6nm,0.6s,baz=225,slow=5.2,SNR=7.6						
MKAR	Makanchi Array	95.00	317	P	P	12 24 45.9	+0.4
	0.3nm,0.5s,baz=95,slow=6.4,SNR=5.4						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	117.56	346	PKP	PKPdf	12 30 06.7	-0.7
	3.3nm,1.0s,baz=72,slow=2.9,SNR=3.8						

LJU 17 12:23:59.7,46°.06N×14°.80E,h6^{km},ML0.2,2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDS	**Vrh nad Dolski**	0.08	302	⇑iPg	Pg	12 24 01.7	+0.1
VNDS				i Sg	Sg	12 24 03.3	+0.3
VNDS				IAML		12 24 03.5	
	comp=Z,6.2nm,0.1s						
PDKS	**Podkum**	0.14	89	⇑iPg	Pg	12 24 02.7	+0.1
PDKS				i Sg	Sg	12 24 04.9	+0.2
PDKS				IAML		12 24 05.2	
	comp=Z,5.0nm,0.1s						
VISS	**Visnje**	0.26	173	i Pg	Pg	12 24 05.2	+0.4
GBAS	**Gorenja Brezov**	0.28	243	i Pg	Pg	12 24 05.3	+0.2
GBAS				i Sg	Sg	12 24 09.1	+0.3
GBAS				IAML		12 24 09.5	
	comp=Z,1.2nm,0.1s						

IDC ***17*** *12:25:55.2±1.5,39°.53N×51°.61E,h0^{km},mb3.6/5, mb1 3.7/10,mb1mx3.5/47,mbtmp3.6/10,ML3.7/4,MS3.2/5, Ms1 3.2/5,ms1mx2.5/42,Error ellipse: s-maj=27.1km s-min=15.2km az=162.0*

AZER ***17*** *12:26:00.3±0.1,39°.49N×51°.50E,h37^{km}±10^{km},ml3.4/30, Error ellipse: s-maj=11.9km s-min=1.5km az=280.0*

ISC 17 12:25:59.0±2.6,**39°.50N**±0°.05×**51°.78E**±0°.06,**h32**^{km}±19^{km}, **n47,σ2^{s}05**/76,**mb3.6**/5,**MS3.2**/4,**2C-1D,Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDR	**Nardaran**	1.75	309	Pn	Pn	12 26 27.2	+0.1
NDR				Sn	Sb	12 26 50.6	-1.3
GOBA	**Gobu**	1.81	300	Pn	Pn	12 26 28.9	+0.9
GOBA				Sn	Sn	12 26 50.0	+0.2
ALIB	**Äli-Bayra**	2.18	283	Pn	Pn	12 26 34.2	+1.1
ALIB				Sn	Sn	12 26 59.7	+0.6
GBS	**Qobustan**	2.41	296	Pn	Pn	12 26 38.6	+2.3
	SNR=12						
GBS				Sn	Sn	12 27 04.5	-0.2
LKRN	**Lenkeran, Azer**	2.46	252	Pn	Pn	12 26 37.0	0.0
LKRN				Sn	Sn	12 27 03.8	-2.1
ASTR	**Astara**	2.51	249	Pn	Pn	12 26 37.5	-0.1
ASTR				Sn	Sn	12 27 05.5	-1.6
ATGJ	**Altiaghaj**	2.56	303	Pn	Pn	12 26 38.9	+0.5
ATGJ				Sn	Sn	12 27 08.7	0.0
GLBA	**Clilabad**	2.63	265	Pn	Pn	12 26 38.0	-1.3
	SNR=3.3						
GLBA				Sn	Sn	12 27 09.6	-0.6
SIZA	**Siyzn**	2.71	307	Pn	Pn	12 26 42.3	+1.9
	SNR=6.6						
SIZA				Sn	Sn	12 27 12.5	+0.4
PQL	**Pirkuli**	2.76	299	Pn	Pn	12 26 42.1	+1.0
PQL				Sn	Sn	12 27 12.8	-0.7
LRK	**Lerik**	2.81	253	Pn	Pn	12 26 41.5	-0.4
	SNR=8.6						
LRK				Sn	Sn	12 27 12.2	-2.5
YRD	**Yardimli**	2.81	259	Pn	Pn	12 26 41.9	0.0
	SNR=11						
YRD				Sn	Sn	12 27 13.3	-1.5
KDMR	**Kurdemir**	2.90	289	Pn	Pn	12 26 43.5	+0.6
KDMR				Sn	Sn	12 27 15.2	-1.4
IML	**Ismayilli**	3.04	296	Pn	Pn	12 26 45.6	+0.6
	SNR=7.1						
IML				Sn	Sn	12 27 18.5	-1.8
QUBA	**Quba, Azerbaij**	3.12	308	Pn	Pn	12 26 47.2	+1.2
QUBA				Sn	Sn	12 27 21.2	-0.9
XNQ	**Khinaliq**	3.24	302	Pn	Pn	12 26 48.5	+0.6
	SNR=34						
XNQ				Sn	Sn	12 27 23.6	-1.9
ZRD	**Zardab**	3.24	285	Pn	Pn	12 26 48.4	+0.7
	SNR=12						
ZRD				Sn	Sn	12 27 24.0	-1.2
BLQ	**Beylaqan**	3.26	275	Pn	Pn	12 26 47.7	-0.3
BLQ				Sn	Sn	12 27 23.3	-2.5
QBL	**Gabala**	3.34	297	Pn	Pn	12 26 49.1	0.0
QBL				Sn	Sn	12 27 26.0	-1.7
QSAR	**Qusar**	3.35	308	Pn	Pn	12 26 50.4	+1.2
	SNR=10						
QSAR				Sn	Sn	12 27 26.8	-1.1
QRD	**Qoradiz**	3.45	271	Pn	Pn	12 26 50.8	+0.3
QRD				Sn	Sn	12 27 28.1	-2.2
BRDA	**Brd**	3.62	284	Pn	Pn	12 26 53.6	+0.8
BRDA				Sn	Sn	12 27 32.3	-2.1
AGDM	**Agdam**	3.65	281	Pn	Pn	12 26 53.2	-0.1
	SNR=4.9						
AGDM				Sn	Sn	12 27 31.6	-3.5
SEKA	**Sheki**	3.89	297	Pn	Pn	12 26 56.2	-0.5
SEKA				Sn	Sn	12 27 38.7	-2.6
GANJ	**Ganja**	4.34	287	Pn	Pn	12 27 01.7	-1.0
	SNR=2.8						
GANJ				Sn	Sn	12 27 47.3	-5.0
ZKTA	**Zakatala**	4.47	300	Pn	Pn	12 27 05.6	+1.1
ZKTA				Sn	Sn	12 27 53.4	-2.1
ORD	**Ordubad**	4.53	265	Pn	Pn	12 27 06.0	+0.6
	SNR=4.4						
ORD				Sn	Sn	12 27 54.6	-2.4
GDB	**GEDABAY**	4.78	287	Pn	Pn	12 27 08.1	-0.8
	SNR=18						
GDB				Sn	Sn	12 27 58.0	-5.3
SBZ	**Shahbuz**	4.82	271	Pn	Pn	12 27 10.5	+1.0
	SNR=4.7						
SBZ				Sn	Sn	12 28 01.4	-2.8
QZX	**Qazax, Azerbai**	5.14	290	Pn	Pn	12 27 13.5	-0.3
	SNR=6.7						
QZX				Sn	Sn	12 28 07.9	-4.1
GEYT	**Alibeck**	5.20	106	Pn	Pn	12 27 17.3	+2.7
	0.7nm,0.3s,baz=271,slow=17,SNR=2.0						
GNI	**Garni**	5.45	279	Pn	Pn	12 27 18.8	+0.6
	1.0nm,0.3s,baz=29,slow=16,SNR=4.2						
GNI				Sn	Sn	12 28 24.0	+4.0
	0.7nm,0.3s,baz=322,slow=7.6,SNR=2.0						
AB31	**Akbulak array**	11.36	28	P	Pn	12 28 37.0	-2.0
	1.3nm,0.8s,baz=211,slow=13,SNR=10						
AB31				⇑S	Sn	12 30 39.0	-5.8
	1.4nm,0.7s,baz=210,slow=26,SNR=7.9						
AKTO	**Aktyubinsk**	11.79	20	Pn	Pn	12 28 42.5	-2.4
	0.6nm,0.3s,baz=205,slow=15,SNR=8.4						
AKTO				Sn	Sn	12 30 49.0	-6.2
	0.2nm,0.3s,baz=313,slow=15,SNR=2.3						
AKTO	**Aktyubinsk**	11.79	20	⇓P	Pn	12 28 43.5	-1.4
	7.7nm,1.4s						
AKTO				⇑S	Sn	12 30 52.8	-2.4
	3.2nm,0.6s						
ARU	**Arti**	17.52	13	P	Pn	12 29 58.1	-2.6
	0.0nm,0.3s,baz=198,slow=13,SNR=5.9						
ARU				LR	LR	12 38 41.6	
	comp=Z,46nm,18.1s,baz=279,slow=44						
BVAR	**Borovoye Array**	18.59	37	P	P	12 30 12.8	-0.6
	0.3nm,0.3s,baz=224,slow=12,SNR=8.5						
AKASG	**Malin Array Be**	19.38	313	P	P	12 30 20.7	-1.4
	0.6nm,0.3s,baz=206,slow=8.7,SNR=1.7						
KURBB	**Kurchatov Arra**	21.80	51	P	P	12 30 49.4	+1.2
	0.8nm,0.8s,baz=254,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	23.32	62	P	P	12 31 05.7	+1.4
	0.8nm,0.8s,baz=273,slow=8.8,SNR=6.3						
ZALV	**Zalesovo Beam**	26.57	46	P	P	12 31 34.6	+0.6
	1.2nm,0.8s,baz=262,slow=10,SNR=3.7						
VRAC	**Vranov**	26.76	303	LR	LR	12 44 41.3	
	comp=Z,49nm,18.7s,baz=286,slow=42						
FINES	**FINESS Array B**	27.05	333	P	P	12 31 39.7	+1.5
	2.0nm,0.8s,baz=152,slow=8.6,SNR=1.4						
GERES	**GERESS Array B**	28.60	302	LR	LR	12 46 09.0	
	comp=Z,40nm,21.4s,baz=284,slow=43						
SONM	**Songino Array**	39.65	59	LR	LR	12 52 01.3	
	comp=Z,47nm,18.1s,baz=144,slow=39						
TORD	**Torodi Ar. Bea**	51.18	254	LR	LR	13 02 05.5	
	comp=Z,40nm,18.7s,baz=255,slow=42						
YKA	**Yellowknife Ar**	77.76	354	P	P	12 37 53.8	+1.3
	0.9nm,1.0s,baz=19,slow=5.7,SNR=5.7						

IDC ***17*** *12:45:25.6±1.2,37°.83N×134°.38E,h410^{km}±17^{km},mb2.8/3, mb1 2.9/7,mb1mx2.6/43,mbtmp3.5/7,Error ellipse: s-maj=28.1km s-min=20.9km az=56.0*

JMA ***17*** *12:45:31.2±0.2,37°.57N×134°.56E,h367^{km},M3.1*

ISC 17 12:45:25.3±1.0,**37°.9N**±0°.1×**134°.42E**±0°.10,**h407**^{km}**,n14, σ1^{s}34**/14,**Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	**Kaga**	2.20	135	P	P	12 46 24.0	+0.8
JKY	**Yasaka**	2.29	166	P	P	12 46 24.1	+0.2
JWT	**Wachi**	2.69	163	P	P	12 46 27.0	+0.4
JYTA	**Yamagatataniai**	2.92	140	P	P	12 46 28.9	+0.5
JNG	**Nsakai**	3.28	115	P	P	12 46 32.8	+1.4
MJAR	**Matsushiro Arr**	3.30	112	P	P	12 46 32.7	+1.2
	0.1nm,0.3s,baz=288,slow=9.5,SNR=12						
JOD2	**Odawara 2**	4.56	123	P	P	12 46 45.2	+2.1
JFK	**Kawauchi**	5.15	93	eS	S	12 47 54.5	-3.0
KSRS	**Korea Array**	5.17	268	P	P	12 46 48.9	-0.3
	0.1nm,0.3s,baz=83,slow=11,SNR=5.0						
USRK	**Ussuriysk Ar.**	6.60	345	P	P	12 47 06.1	+1.1
	baz=164,slow=11,SNR=2.0						
ASAJ	**Asahikawa**	8.79	42	P	P	12 47 29.6	+0.4
	3.8nm,0.3s,baz=228,slow=12,SNR=43						
SONM	**Songino Array**	22.73	305	P	P	12 49 54.5	+0.4
	0.5nm,0.9s,baz=111,slow=9.7,SNR=4.0						
ASAR	**Alice Springs**	61.20	181	P	P	12 54 58.9	0.0
	0.2nm,0.6s,baz=359,slow=6.6,SNR=4.3						
FINES	**FINESS Array B**	65.40	330	P	P	12 55 24.9	-0.7
	3.4nm,1.0s,baz=27,slow=9.4,SNR=1.7						

ISU ***17*** *13:10:10,40°.93N×69°.39E,h10^{km},Hypocentre not reviewed by the ISC*

KRNET ***17*** *13:11:08.8±0.1,41°.06N×69°.12E,h35^{km},mb3.0*

SOME ***17*** *13:11:10.7,40°.93N×69°.62E,h5^{km}*

NNC ***17*** *13:11:13.6±1.2,41°.04N×69°.61E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=9.9km s-min=7.1km az=13.0*

ISC 17 13:11:12.5±1.1,**41°.05N**±0°.04×**69°.59E**±0°.04,**h10**^{km}**,n35, σ2^{s}48**/53,**17C-10D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	**Tashkent**	0.35	321	⇓iP	Pg	13 11 17.2	-2.3
	baz=27						
TAS				⇓iS	Sg	13 11 23.2	-1.0
	baz=27						
TAS	**Tashkent**	0.35	321	i P		13 11 18.0	
TAS				i S		13 11 23.0	
YNGY	**Yangiyul**	0.42	278	i P		13 11 16.0	
YNGY				i S		13 11 21.0	
CHRV	**Charvak**	0.65	25	eP		13 11 25.0	
CHRV				eS		13 11 36.0	
IUG	**Iuzhnay**	1.14	17	eP	Pn	13 11 34.7	0.0
	114nm,0.3s						
IUG				eS	Sn	13 11 51.5	+1.0
	243nm,0.4s						
TRKS	**Terek-Say**	1.26	67	⇓iP	Pg	13 11 36.4	-0.4
	baz=75						
TRKS				⇓iS	Sn	13 11 56.8	+3.3
	baz=75						
CHM	**Chimkent**	1.27	1	eP	Pg	13 11 37.9	+1.1
	4.1nm,0.1s						
CHM				eS	Sn	13 11 56.7	+3.4
	702nm,0.3s						
BTK	**Batken**	1.36	136	⇑iP	Pn	13 11 37.1	-0.6
	baz=27						
BTK				⇑iS	Sg	13 11 57.6	+1.2
	baz=27						
BTK	**Batken**	1.36	136	eP		13 11 36.0	
BTK				eS		13 11 56.0	
KK31	**Karatay Array**	2.16	18	⇑Pn	Pb	13 11 51.3	-0.4
	2.9nm,0.2s,baz=210,slow=11,SNR=139						
KK31				Lg	Lg	13 12 22.6	
	26nm,0.3s,baz=206,slow=31,SNR=23						
DRK	**Karamyk**	2.31	132	⇑iP	Pn	13 11 49.9	-0.9
	baz=27						
DRK				⇑iS	Sb	13 12 21.2	-1.9
	baz=27						
OHH	**Osh**	2.48	101	⇓eP	Pn	13 11 53.7	+0.6
	baz=0.0						
OHH				⇓iS	Sb	13 12 26.2	-1.7
	baz=0.0						
OHH	**Osh**	2.48	101	eP		13 11 58.0	
OHH				eS		13 12 31.0	
ARSB	**Arslanbob**	2.58	83	⇑iP	Pn	13 11 55.3	+0.9
	baz=84						
ARSB				⇑iS	Sb	13 12 28.9	-1.7
	baz=84						
MNAS	**Manas**	2.61	56	⇑iP	Pn	13 11 54.9	0.0
	baz=59						
MNAS				⇑iS	Sn	13 12 28.5	+1.8
	baz=59						
SFK	**Sufi-Kurgan**	3.16	108	⇑iP	Pn	13 12 03.4	+0.9
	baz=6.0						
SFK				⇑iS	Sn	13 12 42.8	+2.4
	baz=6.0						
MRKS	**Merke**	3.20	57	⇑iP	Pg	13 12 12.0	-1.8
	16nm,0.5s						
MRKS				eS	Sg	13 12 55.6	+0.4
	44nm,0.3s						
MRKS	**Merke**	3.20	57	Pg	Pg	13 12 12.0	-1.8
	16nm,0.5s						
MRKS				Lg	Lg	13 12 55.6	
	44nm,0.3s						
AML	**Almayashu**	3.26	69	P	Pg	13 12 12.5	-2.5
	SNR=16						
PKMR	**Pachkamar**	3.51	226	eP		13 11 35.0	
PKMR				eS		13 11 49.0	
EKS2	**Erkin-Say**	3.52	61	P	Pg	13 12 19.3	-0.6
	SNR=5.6						
ARLS	**Aral**	3.65	76	⇓iP	Pn	13 12 09.9	+0.7
	baz=77						
ARLS				⇓iS	Sn	13 12 54.4	+2.1
	baz=77						
UCH	**Uchtor**	3.87	71	P	Pg	13 12 23.9	-2.8
	SNR=11						
AAK	**Ala-Archa**	3.99	65	P	Pg	13 12 26.2	-2.8
	SNR=8.0						
AAK	**Ala-Archa**	3.99	65	⇑Pg	Pg	13 12 26.6	-2.4
	8.1nm,0.9s						
AAK				⇑Lg	Lg	13 13 22.5	
	9.3nm,0.5s						
USP	**Ospenovka**	4.27	57	P	Pb	13 12 30.2	+2.5
	SNR=15						
KBK	**Karagaybulak**	4.31	66	P	Pg	13 12 32.4	-2.7
	SNR=6.6						
SGDS	**Sogindy**	4.44	56	Pg	Pg	13 12 34.1	-3.4
	5.0nm,0.5s						
SGDS				Lg	Lg	13 13 33.7	
	16nm,0.4s						
TKM2	**Tokmak 2**	4.85	65	P	Pb	13 12 41.1	+3.4
	SNR=7.3						
TKM2	**Tokmak 2**	4.85	65	⇓Pg	Pg	13 12 41.3	-4.1
	4.1nm,0.6s						
TKM2				⇑Lg	Lg	13 13 47.2	
	15nm,0.6s						
DGS	**Degeres**	5.09	63	eP	Pg	13 12 46.4	-3.6
	2.3nm,0.4s						
DGS				eS	Sg	13 13 55.2	-0.7
	14nm,0.5s						
KST	**Kastek**	5.15	65	⇓iP	Pg	13 12 46.9	-4.1
	4.0nm,0.4s						
KST				eS	Sg	13 13 56.0	-1.7
	22nm,0.5s						
KST	**Kastek**	5.15	65	Pg	Pg	13 12 46.9	-4.1
	4.0nm,0.4s						
KST				Lg	Lg	13 13 56.0	
	22nm,0.5s						
BTLS	**Baital**	5.15	38	eP	Pg	13 12 47.7	-3.4
	4.2nm,0.6s						
BTLS				eS	Sg	13 13 56.9	-0.9
	16nm,0.5s						
BTLS	**Baital**	5.15	38	Pg	Pg	13 12 47.7	-3.4
	4.2nm,0.6s						
BTLS				Lg	Lg	13 13 56.9	
	16nm,0.5s						
KRBS	**Karabastau**	5.22	58	eP	Pg	13 12 48.3	-4.2
	2.3nm,0.4s						
KRBS				eS	Sg	13 13 58.1	-2.1
	7.3nm,0.4s						
KUU	**Kurty**	5.74	58	⇑iP	Pg	13 12 59.6	-2.9
	1.4nm,0.1s						
KUU				⇑iS	Sg	13 14 17.5	+0.7
	15nm,0.4s						
KUU	**Kurty**	5.74	58	Pg	Pg	13 12 59.6	-2.9
	1.4nm,0.1s						
KUU				Lg	Lg	13 14 17.5	
	15nm,0.4s						
TNSS	**Tian-Shan**	5.83	68	eP	Pg	13 13 00.2	-3.9
	1.9nm,0.4s						
TNSS				eS	Sg	13 14 18.9	-0.6
	3.5nm,0.9s						
TNSS	**Tian-Shan**	5.83	68	Pg	Pg	13 13 00.2	-3.9
	1.9nm,0.4s						
TNSS				Lg	Lg	13 14 18.9	
	3.5nm,0.9s						
MDOK	**Medeo**	5.94	67	Pg	Pb	13 13 00.2	+4.1
	3.6nm,0.6s						
MDOK				Lg	Lg	13 14 20.5	
	9.8nm,1.0s						

IDC 17 13:17:41.4±8.4**,26°.04S**×**28°.94E,h0**^{km}**,mb1 2.6**/1**, mb1mx2.6**/31**,mbtmp2.6**/1**,ML2.3**/1**,Error ellipse: s-maj=90.9km s-min=57.3km az=141.0,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	4.16	231	Pn	Pn	13 18 45.8	-0.5
	0.1nm,0.3s,baz=45,slow=15,SNR=1.3						
BOSA				Pg	Pb	13 18 57.9	+2.3
	0.2nm,0.3s,baz=59,slow=16,SNR=1.7						
BOSA				Lg	Lg	13 19 53.7	
	1.5nm,0.3s,baz=330,slow=22,SNR=10						
I47ZA	**BOSHOF INFRASO**	4.18	231	i		13 42 30.0	
	baz=53,slow=309,SNR=0.9						
I35NA	**TSUMEB INFRASO**	12.50	301	i		14 36 50.0	
	baz=125,slow=307,SNR=4.1						

IDC ***17*** *13:26:13.5±2.1,2°.00S×134°.22E,h0^{km},mb3.2/2, mb1 3.7/5,mb1mx3.5/26,mbtmp3.6/5,ML3.7/3,Error ellipse: s-maj=38.2km s-min=18.6km az=47.0*

DJA ***17*** *13:26:14.7±1.8,2°S±10°×13°4E±1°5,h61^{km}±28^{km},M3.7/4, MLv3.7/4*

ISC 17 13:26:16.9±1.6,**1°.9S**±0°.1×**134°.3E**±0°.1,**h30**^{km}**,n7,σ1^{s}23**/9, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	2.26	244	P	Pn	13 26 52.3	0.0
FAKI				S	Sn	13 27 20.4	+1.1
SIJI	**Sorong**	3.19	289	Pn	Pn	13 27 04.0	-1.1
	16nm,0.3s,baz=72,slow=20,SNR=69						
SIJI				Sn	Sn	13 27 42.4	+0.2
	9.8nm,0.3s,baz=143,slow=20,SNR=9.3						
SIJI				Lg	Lg	13 27 54.5	
	9.5nm,0.3s,baz=112,slow=23,SNR=6.6						
SWI	**Sorong**	3.20	289	P	Pn	13 27 04.3	-0.9
WRA	**Warramunga Arr**	17.92	180	P	Pn	13 30 24.5	+0.4
	0.2nm,0.3s,baz=359,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	18.18	207	P	P	13 30 25.6	-1.8
	0.2nm,0.3s,baz=34,slow=12,SNR=3.1						
ASAR	**Alice Springs**	21.63	181	P	P	13 31 04.5	-0.4
	0.6nm,0.6s,baz=9.3,slow=12,SNR=13						
MKAR	**Makanchi Array**	66.50	324	P	P	13 37 05.5	+1.5
	0.2nm,0.5s,baz=115,slow=6.6,SNR=2.0						

IDC ***17*** *13:38:45.0±0.7,6°.79N×72°.96W,h168^{km}±10^{km},mb2.7/3, mb1 3.3/5,mb1mx3.0/31,mbtmp3.4/5,MS2.7/1,Ms1 2.7/1, ms1mx2.0/9,Error ellipse: s-maj=34.7km s-min=7.7km az=132.0*

RSNC ***17*** *13:38:45.9±1.1,6°.80N×73°.14W,h150^{km}±4^{km},ML3.6, Mw3.8*

ISC 17 13:38:44.3±0.8,**6°.83N**±0°.03×**73°.11W**±0°.04,**h161**^{km}±5^{km}, **n37,σ1^{s}52**/66,**mb3.2**/3,**5C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.24	197	⇑eP	Pn	13 39 06.1	-0.2
BARC				eS	Sn	13 39 21.6	-1.6
BARC				i		13 39 22.7	
	comp=Z,807nm,0.3s						
PAMC	**Pamplona, Colo**	0.65	39	⇑eP	Pn	13 39 08.9	+0.6
PAMC				eS	Sn	13 39 26.4	-0.3
PAMC				i		13 39 31.0	
	comp=Z,308nm,0.6s						
BRRC	**Barranca, Sant**	0.66	295	⇑eP	Pn	13 39 08.1	+0.3
BRRC				eS	Sn	13 39 25.6	-0.1
BRRC				i		13 39 31.5	
	comp=Z,419nm,0.3s						
RUSC	**La Rusia**	0.93	178	eP	Pn	13 39 10.0	-0.2
RUSC				eS	Sn	13 39 28.6	-1.4
RUSC				i		13 39 30.3	
	comp=Z,441nm,0.4s						
PTBC	**PUERTO BERRIO,**	1.37	258	⇑eP	Pn	13 39 12.6	-0.8
PTBC				eS	Sn	13 39 34.0	-1.7
PTBC				i		13 39 41.4	
	comp=Z,499nm,0.4s						
TAMC	**Tame, Arauca**	1.37	106	eP	Pn	13 39 14.2	+0.8
TAMC				eS	Sn	13 39 35.5	-0.3
TAMC				i		13 39 39.2	
	comp=Z,168nm,0.2s						
OCAC	**Ocana**	1.42	352	eP	Pn	13 39 14.3	+0.2
OCAC				eS	Sn	13 39 37.3	+0.2
OCAC				i		13 39 41.8	
	comp=Z,454nm,0.2s						
SPBC	**San Pablo de B**	1.51	219	eP	Pn	13 39 14.9	0.0
SPBC				eS	Sn	13 39 36.9	-1.6
SPBC				i		13 39 39.4	
	comp=Z,558nm,0.3s						
ZARC	**Zaragoza, Cauc**	1.86	291	eP	Pn	13 39 18.8	+0.3
ZARC				eS	Sn	13 39 43.6	-1.2
ZARC				i		13 39 51.0	
	comp=Z,648nm,0.3s						
NORC	**Norcasia**	2.15	234	eP	Pn	13 39 21.7	-0.2
NORC				eS	Sn	13 39 49.3	-1.7
NORC				i		13 39 57.1	
	comp=Z,397nm,0.2s						
SMLC	**San Martn de**	2.18	334	eP	Pn	13 39 22.3	+0.1
SMLC				eS	Sn	13 39 51.6	0.0
SMLC				i		13 39 54.0	
	comp=Z,359nm,0.3s						
CHIC	**Chingaza**	2.27	196	⇑eP	Pn	13 39 24.0	+0.3
CHIC				eS	Sn	13 39 53.1	-0.9
CHIC				i		13 39 59.2	
	comp=Z,247nm,0.3s						
ROSC	**El Rosal**	2.31	211	P	Pn	13 39 26.0	+1.9
	comp=Z,49nm,0.3s,baz=107,slow=20,SNR=40						
ROSC				S	Sn	13 39 57.6	+2.8
	comp=Z,54nm,0.3s,baz=128,slow=19,SNR=11						
ROSC	**El Rosal**	2.31	211	eP	Pn	13 39 25.8	+1.7
ROSC				eS	Sn	13 39 55.0	+0.1
ROSC				i		13 39 59.2	
	comp=Z,510nm,0.4s						
HELC	**Santa Helena**	2.48	255	eP	Pn	13 39 27.3	+1.2
HELC				eS	Sn	13 39 57.6	-0.8
HELC				i		13 40 04.3	
	comp=Z,170nm,0.3s						
UREC	**San Jos de Ur**	2.57	291	eP	Pn	13 39 25.9	-0.9
UREC				eS	Sn	13 39 57.0	-2.8
UREC				i		13 40 06.9	
	comp=Z,324nm,0.3s						
VILC	**Villavicencio,**	2.76	192	eP	Pn	13 39 28.7	-0.5
VILC				eS	Sn	13 40 03.7	-0.4
VILC				i		13 40 10.3	
	comp=Z,264nm,0.4s						
PTGC	**Puerto Gaitan,**	2.79	160	i P	Pn	13 39 28.9	-0.5
PTGC				eS	Sn	13 40 02.0	-2.5
RREF	**El Recreo**	2.93	229	eP	Pn	13 39 32.3	+0.4
RREF				eS	Sn	13 40 11.1	+2.4
RREF				i		13 40 17.3	
	comp=Z,290nm,0.3s						
TOLC	**Tolima**	3.13	225	eP	Pn	13 39 35.0	+1.0
TOLC				eS	Sn	13 40 13.3	+0.6
TOLC				i		13 40 19.2	
	comp=Z,475nm,0.4s						
SDV	**Santo Domingo**	3.20	50	P	Pn	13 39 35.4	+0.7
	comp=Z,18nm,0.3s,baz=247,slow=4.4,SNR=63						
SDV				S	Sn	13 40 13.4	-0.6
	comp=Z,24nm,0.3s,baz=252,slow=20,SNR=24						
SDV	**Santo Domingo**	3.20	50	eP	Pn	13 39 35.5	+0.8
SDV				eS	Sn	13 40 12.4	-1.6
SDV				i		13 40 14.5	
	comp=Z,58nm,0.4s						
ANIL	**Santa Ana**	3.25	225	eP	Pn	13 39 36.8	+1.2
ANIL				eS	Sn	13 40 15.9	+0.6
ANIL				i		13 40 22.6	
	comp=Z,72nm,0.3s						
ORTC	**Ortega, Tolima**	3.59	216	eP	Pn	13 39 40.1	+0.4
ORTC				eS	Sn	13 40 23.1	+0.4
ORTC				i		13 40 27.7	
	comp=Z,96nm,0.4s						
SJCC	**San Jacinto, C**	3.67	326	eP	Pn	13 39 39.8	-0.9
SJCC				eS	Sn	13 40 20.8	-3.9

SJCC				i		13 40 25.7	
	comp=Z,63nm,0.5s						
PLMC	San Jos del P	3.69	239	eP	Pn	13 39 41.5	+0.7
PLMC				eS	Sn	13 40 23.9	-1.0
PLMC				i		13 40 37.0	
	comp=Z,72nm,0.4s						
SMRC	Santa Marta, M	4.45	346	eP	Pn	13 39 51.2	+0.5
SMRC				eS	Sn	13 40 38.4	-4.1
SMRC				i		13 40 45.5	
	comp=Z,47nm,0.3s						
MACC	Macarena, Meta	4.71	189	eP	Pn	13 39 52.4	-1.7
MACC				eS	Sn	13 40 43.7	-5.0
MACC				i		13 40 52.9	
	comp=Z,36nm,0.3s						
MARP	Paez Belalcaza	4.87	216	eP	Pn	13 39 56.3	-0.1
MARP				eS	Sn	13 40 50.4	-2.4
GARC	Garzon, Huila	5.18	207	eP	Pn	13 39 59.7	-0.9
GARC				eS	Sn	13 40 57.2	-3.0
NNA	Nana	19.05	191	LR	LR	13 52 04.8	
	comp=Z,23nm,19.8s,baz=56,slow=42						
TXAR	Lajitas Array	36.47	312	P	P	13 45 35.3	+1.3
	comp=Z,0.2nm,0.4s,baz=132,slow=11,SNR=4.4						
PDAR	Pinedale Array	48.08	324	P	P	13 47 09.0	+1.1
	comp=Z,0.1nm,0.5s,baz=119,slow=7.3,SNR=1.9						
YKA	Yellowknife Ar	63.26	340	P	P	13 48 55.5	+0.1
	comp=Z,0.2nm,0.6s,baz=126,slow=7.8,SNR=3.5						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	13 57 20.0	-0.4
	comp=Z,0.2nm,0.4s,baz=310,slow=3.6,SNR=4.2						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	13 58 14.2	-0.3
	comp=Z,0.2nm,0.5s,baz=117,slow=3.6,SNR=6.0						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	13 58 17.6	+0.1
	comp=Z,0.3nm,0.4s,baz=111,slow=2.6,SNR=2.5						

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*IDC **17** 14:01:36.8±1.8, 3°.93N×126°.53E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/44, mbtmp3.3/5, Error ellipse: s-maj=130.1km s-min=21.1km az=69.0*

*DJA **17** 14:01:43.8±2.6, 4°N±20°×12°6E±2°0, h82km±12km, M4.1/4, mb4.2/1, MLv4.0/4*

ISC 17 14:01:42.8±1.4**, 4°.0N**±0°.1×**126°.7E**±0°.1**, h45**km**, n7,** σ**0ˢ.64**/8**, mb3.3**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.18	256	P	Pn	14 02 03.0	+0.1
SGSI				S	Sn	14 02 17.6	-0.3
GTOI	Gorontalo	4.94	228	P	Pn	14 02 55.1	+0.6
FITZ	Fitzroy Crossi	21.95	183	P	P	14 06 31.8	-1.0
	1.8nm,0.8s,baz=12,slow=9.3,SNR=2.0						
WRA	Warramunga Arr	24.93	163	P	P	14 07 01.4	-0.6
	0.2nm,0.4s,baz=341,slow=11,SNR=4.8						
ASAR	Alice Springs	28.36	166	P	P	14 07 33.4	+0.5
	0.1nm,0.3s,baz=342,slow=9.1,SNR=6.3						
MKAR	Makanchi Array	57.33	325	P	P	14 11 26.3	0.0
	0.2nm,0.3s,baz=118,slow=7.4,SNR=8.2						
KURBB	Kurchatov Arra	61.51	327	P	P	14 11 55.2	+0.1
	0.1nm,0.4s,baz=134,slow=6.8,SNR=1.9						

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*VAO **17** 14:25:43.2±4.8, 24°.85S×68°.84W, h141km±26km, mb4.5*

*SJA **17** 14:26:03.5±0.6, 24°.27S×67°.17W, h181km±5km, ML3.9, MW4.0*

*NEIC **17** 14:26:03.2±2.2, 24°.30S±0°.08×67°.1W±0°.2, h194km±20km, Error ellipse: s-maj=23.9km s-min=10.5km az=102.0*

*IDC **17** 14:26:03.5±1.3, 24°.19S×66°.96W, h172km±11km, mb3.5/7, mb1 3.7/12, mb1mx3.5/26, mbtmp4.0/12, Error ellipse: s-maj=22.4km s-min=14.7km az=16.0*

*GUC **17** 14:26:04.6±0.5, 24°.24S×67°.42W, h214km±7km, ML4.7*

ISC 17 14:26:03.3±0.7**, 24°.29S**±0°.04×**67°.17W**±0°.04**, h183**km±7km**, n94,** σ**1ˢ.39**/125**, mb3.8**/7**, 9C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.57	106	eP	Pn	14 26 37.6	+1.2
SLA				eS	Sn	14 27 02.2	+0.2
SLA				IAML		14 27 21.4	
	comp=Z,2μm,0.9s						
FSA	Cafayete	2.11	150	eP	Pn	14 26 42.8	+0.9
LVC	Limon Verde	2.32	316	P	Pn	14 26 45.8	+1.3
	comp=Z,25nm,0.3s,baz=131,slow=6.3,SNR=305						
LVC				S	Sn	14 27 16.5	+0.1
	comp=Z,102nm,0.3s,baz=62,slow=2.4,SNR=86						
LVC	Limon Verde	2.32	316	⇑iP	Pn	14 26 45.7	+1.3
LVC				eS	Sn	14 27 16.7	+0.3
LVC	Limon Verde	2.32	316		Pn	14 26 46.0	+1.5
LVC	Limon Verde	2.32	316	eP	Pn	14 26 45.8	+1.3
LVC				eS	Sn	14 27 17.9	+1.5
LVC				IAML		14 27 22.7	
	comp=Z,207nm,0.5s						
GO02	Mina Guanaco	2.37	248	⇑iP	Pn	14 26 46.5	+1.5
GO02				i S	Sn	14 27 18.6	+1.3
GO02	Mina Guanaco	2.37	248		Pn	14 26 46.5	+1.5
YJA	Yavi	2.60	36	eP	Pn	14 26 48.7	+0.9
YJA				eS	Sn	14 27 22.4	+0.1
YJA				IAML		14 27 29.0	
	comp=Z,42nm,1.1s						
PB14	IPOC Station P	2.97	263	⇑iP	Pn	14 26 52.8	+0.7
PB14				eS	Sn	14 27 29.3	-0.7
PB14	IPOC Station P	2.97	263		Pn	14 26 52.7	+0.7
PB14	IPOC Station P	2.97	263	eP	Pn	14 26 52.7	+0.7
PB14				eS	Sn	14 27 29.6	-0.4
PB14				IAML		14 27 34.7	
	comp=Z,295nm,0.4s						
AHML	Horco Molle	2.98	147	eP	Pn	14 26 53.0	+1.1
AHML				eS	Sn	14 27 29.6	-0.3
AHML				IAML		14 27 32.1	
	comp=Z,16nm,0.7s						
AC02	Maricunga	3.09	215	⇑iP	Pn	14 26 55.3	+1.6
AC02	Maricunga	3.09	215		Pn	14 26 55.4	+1.8
PB05	IPOC Station P	3.13	297	⇓iP	Pn	14 26 54.5	+0.7
PB05				i S	Sn	14 27 31.5	-1.7
PB05				IAML		14 27 35.6	
	comp=N,626nm,0.3s						
PB05	IPOC Station P	3.13	297	eP	Pn	14 26 54.5	+0.7
PB05				eS	Sn	14 27 31.6	-1.6
PB05				IAML		14 27 34.4	
	comp=Z,506nm,0.5s						
PB09	IPOC Station P	3.13	322	eP	Pn	14 26 55.4	+1.4
PB09				i S	Sn	14 27 33.1	-0.3
PB09				IAML		14 27 34.6	
	comp=N,809nm,0.5s						
PB09	IPOC Station P	3.13	322		Pn	14 26 55.6	+1.6
PB09	IPOC Station P	3.13	322	eP	Pn	14 26 55.4	+1.4
PB09				eS	Sn	14 27 33.2	-0.3
PB09				IAML		14 27 40.2	
	comp=Z,453nm,0.4s						
PB10	IPOC Station P	3.19	283	⇑iP	Pn	14 26 55.5	+1.1
PB10				i S	Sn	14 27 32.9	-1.5
PB10				IAML		14 27 38.9	
	comp=N,620nm,0.4s						
PB10	IPOC Station P	3.19	283		Pn	14 26 55.8	+1.3
PB10	IPOC Station P	3.19	283	eP	Pn	14 26 55.6	+1.1
PB10				eS	Sn	14 27 33.3	-1.1
PB10				IAML		14 27 40.3	
	comp=Z,462nm,0.6s						
PB03	IPOC Station P	3.26	313	⇑iP	Pn	14 26 56.2	+0.7
PB03				i S	Sn	14 27 34.7	-1.5
PB03				IAML		14 27 40.5	
	comp=N,1μm,0.3s						
PB03	IPOC Station P	3.26	313	eP	Pn	14 26 56.2	+0.7
PB03				eS	Sn	14 27 34.6	-1.6
PB03				IAML		14 27 40.9	
	comp=Z,972nm,0.4s						
PB04	IPOC Station P	3.36	305	⇑iP	Pn	14 26 57.3	+0.5
PB04				i S	Sn	14 27 36.8	-1.7
PB04				IAML		14 27 39.9	
	comp=E,2μm,0.4s						
PB04	IPOC Station P	3.36	305		Pn	14 26 57.5	+0.7
PB04	IPOC Station P	3.36	305	eP	Pn	14 26 57.7	+1.0
PB04				eS	Sn	14 27 37.0	-1.4
PB04				IAML		14 27 40.3	
	comp=Z,867nm,0.8s						
PB07	IPOC Station P	3.58	315	⇑iP	Pn	14 26 60.0	+0.5
PB07				i S	Sn	14 27 41.0	-2.2
PB07	IPOC Station P	3.58	315		Pn	14 27 00.2	+0.8
PB07	IPOC Station P	3.58	315	eP	Pn	14 26 59.9	+0.5
PB07				eS	Sn	14 27 41.2	-2.0
PB07				IAML		14 27 42.9	
	comp=Z,1μm,0.4s						
AC01	Pan de Azucar	3.62	239	⇑iP	Pn	14 26 59.7	+0.1
AC01				i S	Sn	14 27 42.4	-1.4
AC01	Pan de Azucar	3.62	239	Pn	Pn	14 26 59.8	+0.1
PB02	IPOC Station P	3.88	319	⇓iP	Pn	14 27 03.3	+0.1
GO03	Copiap	4.29	219	Pn	Pn	14 27 08.2	0.0
GO03	Copiap	4.29	219	eP	Pn	14 27 08.3	0.0
GO03				eS	Sn	14 27 58.1	-1.2
CYA	Choya	4.31	164	eP	Pn	14 27 09.6	+1.2
CYA				eS	Sn	14 27 59.2	-0.5
CYA				IAML		14 28 01.5	
	comp=Z,9.3nm,1.0s						
PATCX	Punta Patache	4.42	321	eP	Pn	14 27 10.1	+0.1
PATCX				i S	Sn	14 27 59.0	-3.2
PATCX	Punta Patache	4.42	321		Pn	14 27 10.6	+0.6
PB08	IPOC Station P	4.52	336	⇓iP	Pn	14 27 12.1	+0.5
PB08				i S	Sn	14 28 04.2	-0.9
PB08	IPOC Station P	4.52	336		Pn	14 27 12.4	+0.8
TA01	Diego Aracena	4.64	322	eP	Pn	14 27 12.6	-0.1
TA01	Diego Aracena	4.64	322	Pn	Pn	14 27 13.2	+0.5
GO01	Chusmiza	4.97	337		Pn	14 27 18.1	+0.7
AC04	Llanos de Chal	5.24	221	Pn	Pn	14 27 19.6	-0.9
AGUA	GUANDACOL	5.31	193	eP	Pn	14 27 22.6	+1.2
AGUA				eS	Sn	14 28 23.6	+0.7
AGUA				IAML		14 28 26.9	
	comp=Z,12nm,0.5s						
AC05	El Transito	5.31	211		Pn	14 27 21.5	0.0
PSGCX	Pisagua	5.42	329	Pn	Pn	14 27 21.3	-1.6
MNMC	Minye Minye	5.61	336		Pn	14 27 27.5	+1.9
LCO	Las Campanas	5.67	213	Pn	Pn	14 27 25.3	-0.9
AROD	Rodeo	6.20	199	eP	Pn	14 27 34.9	+1.6
AROD				eS	Sn	14 28 43.9	-0.3
CO01	Juntas del Tor	6.24	204		Pn	14 27 34.4	+0.8
PB16	IPOC Station P	6.32	339	Pn	Pn	14 27 35.4	+0.3
ACCO	Cerro Coronel	6.50	195	eP	Pn	14 27 38.1	+1.0
ACCO				eS	Sn	14 28 51.9	+0.8
ACCO				IAML		14 28 55.2	
	comp=Z,16nm,0.9s						
GO04	Tololo Observa	6.69	208		Pn	14 27 38.0	-1.6
RTLL	Cerro Villicun	7.11	189	eP	Pn	14 27 44.9	+0.1
RTLL				eS	Sn	14 29 02.0	-3.1
RTLL				IAML		14 29 05.8	
	comp=Z,21nm,0.4s						
CO03	El Pedregal	7.23	205	Pn	Pn	14 27 45.0	-1.5
TCA	Tanti	7.38	163	eP	Pn	14 27 47.9	-0.6
TCA				eS	Sn	14 29 08.5	-3.2
TCA				IAML		14 29 10.7	
	comp=Z,9.1nm,0.9s						
CO02	Combarbal	7.68	205	Pn	Pn	14 27 51.0	-1.4
CPUP	Villa Florida	9.13	105	P	Pn	14 28 10.1	-1.3
	comp=Z,0.2nm,0.3s,baz=273,slow=10,SNR=5.7						
SIV	San Ignacio	10.04	36	P	Pn	14 28 21.0	-2.5
	comp=Z,0.9nm,0.3s,baz=226,slow=12,SNR=30						
SIV				S	Sn	14 30 00.1	-15
	comp=Z,0.2nm,0.3s,baz=251,slow=16,SNR=3.1						
TRCB	Terra Rica	13.41	87	eP	Pn	14 29 08.4	+1.7
FRTB	Fartura	16.14	90	eP	P	14 29 39.4	-0.6
ITRB	Iturama	16.24	77	eP	P	14 29 41.4	+0.3
PLCA	Paso Flores	16.64	189	P	Pn	14 29 46.9	+0.8
	comp=Z,0.2nm,0.3s,baz=3.4,slow=12,SNR=7.1						
PLCA	Paso Flores	16.64	189		Pn	14 29 47.3	+1.2
PLCA				IAmb	IAmb	14 29 55.3	
	comp=Z,7.4nm,0.7s						
ARAG	Araguaiana, MT	16.76	62	eP	Pn	14 29 47.6	-0.1
BB19B	Bebedouro	17.50	83	eP	P	14 29 55.0	+0.1
VAO	Valinhos	18.55	90	eP	P	14 30 05.6	-0.8
LL01	San Ignacio de	18.56	192	P	Pn	14 30 08.3	-0.3
IPMB	Ipameri, GO	18.75	74	eP	P	14 30 08.2	-0.5
SNDB	Serra Nova Dou	19.41	54	eP	P	14 30 14.5	-1.1
BDFB	Brasilia	19.93	68	P	P	14 30 21.2	-0.3
	comp=Z,1.2nm,0.3s,baz=240,slow=11,SNR=23						
BDFB	Brasilia	19.93	68	P	P	14 30 21.1	-0.3
BDFB				IAmb	IAmb	14 30 21.7	
	comp=Z,17nm,0.8s						
NPGB	Novo Progresso	20.55	35	eP	P	14 30 24.8	-3.1
BSCB	Bom Sucesso	20.92	85	eP	P	14 30 30.5	-1.4
PEXB	Peixe	21.60	59	eP	P	14 30 37.5	-1.5
ITTB	Itaituba	22.66	31	eP	P	14 30 43.5	-5.7
JANB	Januaria	23.37	71	eP	P	14 30 54.5	-1.2
SDBA	SAO DESIDERIO	24.17	65	eP	P	14 30 59.3	-3.7
SMTB	Santa Maria do	24.19	54	eP	P	14 31 02.6	-0.5
PRPB	Parauapebas	24.54	46	eP	P	14 31 05.2	-1.1
GDU01	Guandu, BA	28.07	73	eP	P	14 31 36.2	-1.7
DBIC	Dimbokro	68.04	72	P	P	14 36 42.6	-0.8
	comp=Z,0.9nm,0.6s,baz=243,slow=4.5,SNR=1.6						
TORD	Torodi Ar. Bea	76.81	69	P	P	14 37 35.1	-0.2
	comp=Z,0.9nm,0.4s,baz=258,slow=5.1,SNR=8.4						
PDAR	Pinedale Array	77.32	329	P	P	14 37 39.7	+1.8
	comp=Z,0.3nm,0.8s,baz=119,slow=7.3,SNR=2.1						
NVAR	Mina Array Bea	78.67	321	P	P	14 37 48.1	+2.7
	comp=Z,0.2nm,0.6s,baz=132,slow=6.2,SNR=2.3						
BOSA	Boshof	80.74	117	P	P	14 37 58.0	+1.3
	comp=Z,3.1nm,1.0s,baz=320,slow=9.9,SNR=2.0						
MAW	Mawson	81.20	163	P	P	14 38 00.2	+2.0
	comp=Z,2.1nm,0.6s,baz=220,slow=5.2,SNR=1.8						
YKA	Yellowknife Ar	94.34	340	P	P	14 39 03.2	+1.7
	comp=Z,0.2nm,0.5s,baz=123,slow=5.9,SNR=7.3						
ASAR	Alice Springs	128.13	205	PKP	PKiKP	14 44 49.8	+0.7
	comp=Z,0.6nm,0.7s,baz=138,slow=1.7,SNR=12						
WRA	Warramunga Arr	131.30	207	PKP	PKiKP	14 44 56.0	+0.6
	comp=Z,0.4nm,0.5s,baz=159,slow=1.8,SNR=6.8						
ZALV	Zalesovo Beam	143.72	28	PKP	PKPdf	14 45 15.6	-0.5
	comp=Z,0.5nm,0.5s,baz=305,slow=5.1,SNR=2.0						
MKAR	Makanchi Array	146.84	40	PKPbc	PKPbc	14 45 23.6	-0.3
	comp=Z,1.0nm,0.8s,baz=296,slow=3.3,SNR=9.0						

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*NOU **17** 15:02:40.1, 19°.87S×177°.64W, h457km, mb4.1, Fiji Islands Region*

*IDC **17** 15:02:41.9±1.8, 20°.15S×178°.01W, h438km±17km, mb3.4/10, mb1 3.6/13, mb1mx3.4/31, mbtmp4.2/13, Error ellipse: s-maj=26.1km s-min=13.7km az=150.0*

*NEIC **17** 15:02:42.1±0.7, 19°.8S±0°.2×178°.0W±0°.1, h451km±14km, mb4.1/11, Error ellipse: s-maj=28.6km s-min=19.0km az=180.0*

ISC 17 15:02:42.9±0.6**, 20°.0S**±0°.1×**178°.06W**±0°.08**, h450**km**, n42,** σ**1ˢ.45**/44**, mb4.0**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	301	P	P	15 03 60.0	-1.0
	3.0nm,0.3s,baz=272,slow=22,SNR=25						
MSVF				S	S	15 05 00.2	-4.2
	baz=290,slow=23,SNR=1.1						
MSVF	Nonsavu	4.31	301	P	P	15 03 59.7	-1.2
MSVF	Nonsavu	4.31	301	P	P	15 04 00.4	-0.5
NIUE	Niue	7.72	85	P	P	15 04 29.1	-6.3
MARNC	Mare, Loyalty	13.10	261	P	P	15 05 34.4	+0.7
DVP	Devils Point	13.21	278	P	P	15 05 37.3	+2.4
	89μm,0.7s						
PINNC	Pines Island,	13.76	256	P	P	15 05 42.2	+1.4
LIFNC	LIFOU	13.81	264	P	P	15 05 42.6	+1.3
	39nm,1.3s						
YATNC	Mamie plateau,	14.20	259	P	P	15 05 46.8	+1.2
OUENC	Ouen Island, N	14.29	258	P	P	15 05 48.0	+1.5
DZM	Mont Dzumac	14.62	259	P	P	15 05 51.3	+1.2
	1.0nm,0.3s,baz=79,slow=18,SNR=33						
DZM	Mont Dzumac	14.62	259	P	P	15 05 52.6	+2.4
DZM	Mont Dzumac	14.62	259	P	P	15 05 52.5	+2.4
SANVU	Saraoutou	14.74	285	P	P	15 05 51.6	+0.2
NOUC	Port Laguerre	14.75	259	P	P	15 05 54.2	+2.8
KOUNC	Koumac, New Ca	16.57	265	P	P	15 06 11.7	+0.9
RAR	Rarotonga	17.17	97	P	P	15 06 15.8	-1.3
URZ	Urewera	18.69	192	P	P	15 06 27.9	-4.1
	0.7nm,0.3s,baz=14,slow=4.2,SNR=3.1						
CTAO	Charters Tower	33.48	264	P	P	15 08 44.1	+0.6
STKA	Stephens Creek	37.96	244	P	P	15 09 21.0	+0.3
	1.6nm,0.4s,baz=91,slow=12,SNR=12						
STKA	Stephens Creek	37.96	244	P	P	15 09 21.0	+0.3
WR0	Warramunga Arr	44.43	262	P	P	15 10 12.1	-0.4
WR0				IAmb	IAmb	15 10 13.0	
	comp=Z,3.6nm,0.4s						
AS31	Alice Springs	44.58	256	P	P	15 10 13.5	-0.3
AS31				IAmb	IAmb	15 10 14.7	
	comp=Z,4.6nm,0.8s						
ASAR	Alice Springs	44.58	256	P	P	15 10 13.7	-0.1
	comp=Z,13nm,0.6s,baz=89,slow=8.8,SNR=368						
ASAR				PcP	PcP	15 11 47.4	-0.1
	comp=Z,0.4nm,0.6s,baz=102,slow=2.7,SNR=2.1						
ASAR				S	S	15 16 16.3	+0.4
	comp=Z,0.7nm,0.8s,baz=94,slow=17,SNR=6.8						
ASAR	Alice Springs	44.58	256	P	P	15 10 13.2	-0.6
WB0	Warramunga Arr	44.59	262	P	P	15 10 13.2	-0.7
WB0				IAmb	IAmb	15 10 13.9	
	comp=Z,6.1nm,0.6s						
WB2	Warramunga Arr	44.60	262	P	P	15 10 13.4	-0.6
WB2				IAmb	IAmb	15 10 14.0	
	comp=Z,5.6nm,0.6s						
WRAB	Tennant Creek	44.61	262	P	P	15 10 13.5	-0.5
WRAB				IAmb	IAmb	15 10 13.9	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	44.62	262	P	P	15 10 13.3	-0.7
	comp=Z,2.8nm,0.3s,baz=96,slow=7.9,SNR=118						
WRA	Warramunga Arr	44.62	262	P	P	15 10 13.2	-0.8
SIJI	Sorong	53.05	285	P	P	15 11 17.6	+0.6
	comp=Z,20nm,0.7s,baz=114,slow=4.3,SNR=9.9						
MJAR	Matsushiro Arr	69.76	324	P	P	15 13 06.9	+0.2
	comp=Z,1.5nm,0.5s,baz=165,slow=5.7,SNR=7.3						
MAJO	Matsushiro	69.76	324	P	P	15 13 06.9	+0.2
QSPA	South Pole Qui	70.08	180	P	P	15 13 08.7	+0.3
QSPA				IAmb	IAmb	15 13 09.5	
	comp=Z,2.3nm,0.7s						
NVAR	Mina Array Bea	80.69	43	P	P	15 14 09.0	+0.7
	comp=Z,0.2nm,0.4s,baz=232,slow=8.7,SNR=2.6						
TXAR	Lajitas Array	86.83	57	P	P	15 14 40.3	+1.3
	comp=Z,0.3nm,0.6s,baz=223,slow=7.0,SNR=5.5						
ILAR	Eielson Array	87.83	13	P	P	15 14 41.9	-0.7
	comp=Z,0.2nm,0.6s,baz=224,slow=4.7,SNR=1.2						
PDAR	Pinedale Array	88.63	43	P	P	15 14 47.5	+0.3
	comp=Z,0.4nm,0.5s,baz=204,slow=2.6,SNR=3.9						
CMAR	Chiang Mai Arr	89.89	290	P	P	15 14 55.4	+2.0
	comp=Z,0.3nm,0.3s,baz=120,slow=3.2,SNR=5.2						
BRTR	Keskin Array B	146.45	313	PKPbc	PKPbc	15 21 32.6	-0.5
	comp=Z,0.5nm,0.7s,baz=98,slow=5.4,SNR=3.3						
MMAI	Mount Meron Ar	147.50	300	PKPbc	PKPbc	15 21 36.3	+0.3
	comp=Z,2.6nm,0.8s,baz=64,slow=3.4,SNR=1.8						
GERES	GERESS Array B	149.69	345	PKPbc	PKPbc	15 21 40.9	0.0
	comp=Z,0.6nm,0.8s,baz=29,slow=2.2,SNR=5.0						

IDC 17 15:13:02.5±5.4**, 4°.67N**×**127°.98E, h143**km±73km**, mb3.0**/3**, mb1 3.2**/4**, mb1mx2.9**/43**, mbtmp3.5**/4**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.1**/12**, Error ellipse: s-maj=220.8km s-min=24.6km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.41	149	P	Pn	15 14 36.5	+1.8
	0.9nm,0.3s,baz=323,slow=20,SNR=9.6						
SIJI				S	Sn	15 15 45.1	-1.8
	0.7nm,0.3s,baz=238,slow=21,SNR=1.6						
KAPI	Kappang	12.66	221	LR	LR	15 20 24.7	
	comp=Z,23nm,21.5s,baz=156,slow=35						
WRA	Warramunga Arr	25.25	166	P	P	15 18 16.7	+1.2
	0.5nm,0.3s,baz=347,slow=10,SNR=8.0						
ASAR	Alice Springs	28.75	169	P	P	15 18 46.0	-0.9
	0.4nm,0.9s,baz=343,slow=6.9,SNR=6.9						
MKAR	Makanchi Array	57.51	324	P	P	15 22 36.5	-0.4
	0.2nm,0.5s,baz=110,slow=7.4,SNR=4.9						

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*VAO **17** 15:48:55.3±0.5, 19°.86S×68°.05W, h185km±5km, mb4.1*

*NEIC **17** 15:48:55.3±2.4, 19°.98S±0°.07×68°.1W±0°.1, h198km±10km, mb4.6/8, Error ellipse: s-maj=17.8km s-min=10.7km az=81.0*

*IDC **17** 15:48:55.1±1.0, 19°.96S×67°.83W, h173km±11km, mb3.7/11, mb1 3.8/15, mb1mx3.6/40, mbtmp4.2/15, Error ellipse: s-maj=16.6km s-min=12.3km az=141.0*

*GUC **17** 15:48:57.0±0.7, 19°.98S×68°.09W, h196km±5km, ML4.1*

*SCB **17** 15:49:00.8±2.4, 20°.05S×68°.01W, h144km±18km, ML3.9/5, Error ellipse: s-maj=8.7km s-min=6.2km az=0.0*

ISC 17 15:48:55.4±0.6**, 19°.99S**±0°.04×**67°.99W**±0°.05**, h185**km±6km**, n112,** σ**1ˢ.45**/137**, mb4.0**/14**, 13C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	1.11	262	⇑iP	Pn	15 49 26.4	+1.5
PB08				eS	Sn	15 49 49.2	+1.6
PB08	IPOC Station P	1.11	262		Pn	15 49 26.4	+1.5
PB08	IPOC Station P	1.11	262	P	Pn	15 49 26.3	+1.5
PB08				S	Sn	15 49 44.9	-2.7
PB08				IAML		15 49 49.8	
	614nm,0.3s						
GO01	Chusmiza	1.18	286	⇑iP	Pn	15 49 26.6	+1.0
GO01				i S	Sn	15 49 50.6	+1.8
GO01				IAML		15 49 54.0	
	comp=E,2μm,0.3s						
GO01	Chusmiza	1.18	286		Pn	15 49 26.8	+1.2
MNMC	Minye Minye	1.74	299	⇑iP	Pn	15 49 31.6	+1.1
MNMC				eS	Sn	15 49 58.1	+0.5
MNMC	Minye Minye	1.74	299		Pn	15 49 31.9	+1.4
MNMC	Minye Minye	1.74	299	P	Pn	15 49 31.8	+1.4
MNMC				S	Sn	15 49 54.2	-3.4
MNMC				IAML		15 50 05.4	
	comp=E,3μm,0.2s						
HMBC	Humberstone	1.81	261	⇑iP	Pn	15 49 31.6	+0.7
HMBC				i S	Sn	15 49 58.2	-0.3
HMBC				IAML		15 49 59.1	
	comp=E,2μm,0.2s						
TA02	Huaiquique	2.03	262	⇑iP	Pn	15 49 34.0	+0.8
TA02				eS	Sn	15 50 01.8	-0.7
PSGC	Pisagua	2.05	281	⇑iP	Pn	15 49 33.8	+0.4
PSGC				i S	Sn	15 50 01.9	-1.1
PSGC				IAML		15 50 04.0	
	comp=E,1μm,0.2s						
PSGC	Pisagua	2.05	281	P	Pn	15 49 34.0	+0.5
PSGC				S	Sn	15 49 59.7	-3.3
PSGC				IAML		15 50 03.8	
	comp=E,988nm,0.2s						
PSGCX	Pisagua	2.05	281	Pn	Pn	15 49 34.2	+0.7
TA01	Diego Aracena	2.14	254	⇑iP	Pn	15 49 34.8	+0.5
TA01				eS	Sn	15 50 03.3	-1.2
TA01	Diego Aracena	2.14	254	Pn	Pn	15 49 34.8	+0.5
PB09	IPOC Station P	2.15	213	⇑iP	Pn	15 49 36.1	+1.5
PB09				eS	Sn	15 50 06.8	+1.6
PB09	IPOC Station P	2.15	213		Pn	15 49 36.5	+1.9
PB09	IPOC Station P	2.15	213	P	Pn	15 49 36.1	+1.5
PB16	IPOC Station P	2.19	319	⇑iP	Pn	15 49 37.2	+1.7
PB16				eS	Sn	15 50 07.7	+1.1
PB16	IPOC Station P	2.19	319		Pn	15 49 37.3	+1.8
PATCX	Punta Patache	2.19	247	i P	Pn	15 49 35.8	+0.7
PATCX				eS	Sn	15 50 05.0	-0.8
PATCX				IAML		15 50 06.2	
	comp=E,765nm,0.3s						
PATCX	Punta Patache	2.19	247		Pn	15 49 35.9	+0.9
PB02	IPOC Station P	2.22	233	⇑iP	Pn	15 49 36.1	+0.7
PB02				eS	Sn	15 50 06.4	-0.1
PB02				IAML		15 50 08.1	
	comp=E,913nm,0.1s						
PB02	IPOC Station P	2.22	233	P	Pn	15 49 36.4	+1.0
PB02				S	Sn	15 50 02.1	-4.4
PB02				IAML		15 50 12.5	
	comp=E,699nm,0.2s						
PB07	IPOC Station P	2.48	225	⇑iP	Pn	15 49 39.2	+0.8
PB07				eS	Sn	15 50 11.0	-0.8
PB07				IAML		15 50 14.2	
	comp=N,524nm,0.5s						
PB07	IPOC Station P	2.48	225		Pn	15 49 39.3	+1.0
MOCB	Mochara	2.53	120	P	Pn	15 49 41.5	+2.3
MOCB				S	Sn	15 50 10.1	-3.2
MOCB				IAML		15 50 16.4	
	comp=N,193nm,0.6s						
PB03	IPOC Station P	2.63	219	i P	Pn	15 49 41.3	+1.2
PB03				i S	Sn	15 50 14.4	-0.5
PB03				IAML		15 50 17.3	
	comp=E,328nm,0.1s						
LVC	Limon Verde	2.75	198	P	Pn	15 49 43.1	+1.6
	comp=E,83nm,0.3s,baz=40,slow=11,SNR=567						
LVC				S	Sn	15 50 17.8	+0.1
	comp=E,36nm,0.3s,baz=96,slow=21,SNR=24						
LVC	Limon Verde	2.75	198	eP	Pn	15 49 43.2	+1.6
LVC				i S	Sn	15 50 18.1	+0.4
LVC	Limon Verde	2.75	198	eP	Pn	15 49 43.2	+1.6
AP01	Chacalluta	2.75	306	i P	Pn	15 49 41.8	+0.5
AP01				i S	Sn	15 50 15.6	-1.4
PB04	IPOC Station P	3.08	220	⇑iP	Pn	15 49 46.3	+0.8
PB04				i S	Sn	15 50 23.5	-1.1
PB04				IAML		15 50 26.5	
	comp=N,356nm,0.3s						
PB04	IPOC Station P	3.08	220		Pn	15 49 46.6	+1.2
PB04	IPOC Station P	3.08	220	P	Pn	15 49 46.7	+1.2
BBOE	La Paz, Chanca	3.16	0	P	Pn	15 49 49.4	+2.5
YJA	Yavi	3.17	134	P	Pn	15 49 48.7	+1.9
BBOD	La Paz, Gloria	3.38	350	P	Pn	15 49 51.9	+2.3
PB05	IPOC Station P	3.52	216	⇑iP	Pn	15 49 51.5	+0.7
PB05				i S	Sn	15 50 32.2	-1.9
PB10	IPOC Station P	4.24	214	i P	Pn	15 49 59.7	0.0
PB10				eS	Sn	15 50 46.4	-3.9
PB10	IPOC Station P	4.24	214	Pn	Pn	15 49 59.8	+0.1

PB10	IPOC Station P	4.24	214	P	Pn	15 50 00.1	+0.4
PB14	IPOC Station P	5.13	205		Pn	15 50 11.4	0.0
SLA	San Lorenzo	5.24	154	P	Pn	15 50 14.3	+1.6
GO02	Mina Guanaco	5.36	196		Pn	15 50 14.6	+0.2
AC01	Pan de Azucar	6.58	201		Pn	15 50 28.8	-1.3
AC02	Maricunga	6.89	189	Pn	Pn	15 50 34.5	-0.1
SIV	San Ignacio	7.69	60	P	Pn	15 50 42.5	-2.2
	comp=N,4.3nm,0.3s,baz=259,slow=12,SNR=61						
SIV				S	Sn	15 51 59.2	-12
	baz=259,slow=13,SNR=4.2						
GO03	Copiap	7.84	195	Pn	Pn	15 50 44.9	-1.8
AC04	Llanos de Chal	8.65	198	Pn	Pn	15 50 54.7	-2.5
LCO	Las Campanas	9.31	195	Pn	Pn	15 51 03.5	-2.6
PTLB	Pontes e Lacer	9.56	63	eP	Pn	15 51 07.7	-1.5
CO01	Juntas del Tor	10.13	190		Pn	15 51 16.4	-0.3
VILB	Vilhena	10.23	48	eP	Pn	15 51 17.1	-1.0
ETMB	Extrema	10.26	10	eP	Pn	15 51 16.9	-1.4
CPUP	Villa Florida	11.65	125	P	Pn	15 51 35.2	-1.0
	comp=N,0.3nm,0.3s,baz=308,slow=15,SNR=4.8						
CPUP	Villa Florida	11.65	125	Pn	Pn	15 51 35.9	-0.4
CPUP	Villa Florida	11.65	125	eP	Pn	15 51 35.4	-1.0
SAML	Samuel	11.92	24	eP	Pn	15 51 37.9	-1.9
PP1B	Ponte de Pedra	12.64	81	eP	Pn	15 51 50.8	+1.8
MT02	Curacav	13.51	191		Pn	15 52 00.1	+0.3
TRCB	Terra Rica	14.57	104	eP	Pn	15 52 13.9	+0.8
BO02	Sierra Bellavi	14.95	189	P	P	15 52 19.3	+0.5
PTGB	Pitanga	15.46	111	eP	P	15 52 26.9	+2.4
PCMB	Pacaembu	15.72	99	eP	Pn	15 52 27.9	+0.7
ARAG	Araguaiana, MT	15.97	77	eP	P	15 52 31.1	+1.0
ITAB	Concordia	16.21	119	eP	Pn	15 52 34.7	+1.7
ITRB	Iturama	16.59	92	eP	P	15 52 37.7	+0.8
CPSB	Cacapava Do Su	16.74	131	eP	P	15 52 39.2	+0.7
FRTB	Fartura	17.45	104	eP	P	15 52 47.5	+1.2
NPGB	Novo Progresso	17.77	45	eP	P	15 52 49.1	-0.8
SNDB	Serra Nova Dou	17.91	66	eP	P	15 52 51.2	-0.1
MACA	Manacapuru-AM	18.18	24	eP	P	15 52 53.8	-0.5
BB19B	Bebedouro	18.26	97	eP	P	15 52 55.3	+0.1
IPMB	Ipameri, GO	18.81	87	eP	P	15 53 01.0	-0.2
BDFB	Brasilia	19.50	80	P	P	15 53 07.3	-1.4
	comp=N,0.8nm,0.3s,baz=255,slow=8.2,SNR=5.1						
ITTB	Itaituba	19.59	39	eP	P	15 53 08.4	-1.2
PET01	Itanhaem-SP	19.65	106	eP	P	15 53 12.0	+1.8
PEXB	Peixe	20.46	70	eP	P	15 53 19.3	+0.3
PTGA	Pitinga	20.69	23	P	P	15 53 20.4	-0.9
	comp=N,7.2nm,0.3s,baz=201,slow=16,SNR=28						
PTGA	Pitinga	20.69	23	P	P	15 53 19.7	-1.6
PTGA				IAmb	IAmb	15 53 20.7	
	comp=Z,9.0nm,0.4s						
PTGA	Pitinga	20.69	23	eP	P	15 53 20.1	-1.2
PLCA	Paso Flores	20.79	185	eP	P	15 53 23.1	+0.8
PRPB	Parauapebas	22.37	55	eP	P	15 53 37.8	-0.7
SMTB	Santa Maria do	22.61	64	eP	P	15 53 40.8	0.0
JANB	Januaria	23.09	82	eP	P	15 53 44.6	-0.5
SDBA	SAO DESIDERIO	23.39	75	eP	P	15 53 47.7	-0.2
MCPB	Macapa, AP	24.98	41	eP	P	15 54 03.0	+0.8
ALF01	Guarapari-ES	25.57	96	eP	P	15 54 08.8	+1.3
GDU01	Guandu, BA	27.87	82	eP	P	15 54 28.4	+0.3
RCBR	Riachuelo	34.20	70	P	P	15 55 24.4	+0.7
	comp=Z,5.4nm,0.6s,baz=255,slow=8.0,SNR=4.4						
RCBR	Riachuelo	34.20	70	P	P	15 55 21.7	-2.0
ICMP	Isla Caja de M	37.67	2	P	P	15 55 50.9	-2.0
ICMP				IAmb	IAmb	15 55 59.1	
	comp=Z,12nm,0.8s						
MLPR	Magueyes Islan	37.73	1	P	P	15 55 51.7	-1.7
CRPR	Cabo Rojo, PR	37.77	1	P	P	15 55 50.3	-3.4
CRPR				IAmb	IAmb	15 56 00.6	
	comp=Z,11nm,1.0s						
GTBY	Guantanamo Bay	40.28	350	P	P	15 56 12.5	-2.1
GTBY				IAmb	IAmb	15 56 30.4	
	comp=Z,30nm,1.1s						
TXAR	Lajitas Array	59.91	324	P	P	15 58 43.0	+0.9
	comp=Z,0.2nm,0.5s,baz=139,slow=8.4,SNR=5.6						
ANMO	Albuquerque	65.72	326	P	P	15 59 22.2	+1.6
	comp=Z,0.3nm,0.3s,baz=78,slow=12,SNR=3.7						
DBIC	Dimbokro	67.48	74	P	P	15 59 31.4	-0.4
	comp=Z,1.5nm,0.5s,baz=226,slow=6.8,SNR=3.7						
PFO	Pinyon Flats O	70.54	319	P	P	15 59 52.3	+1.7
	comp=Z,1.8nm,0.9s,baz=116,slow=6.9,SNR=2.3						
ULM	Lac du Bonnet	74.15	342	P	P	16 00 11.8	+0.5
	comp=Z,0.9nm,0.5s,baz=169,slow=5.9,SNR=4.8						
ELK	Elko	74.69	325	P	P	16 00 16.3	+1.4
	comp=Z,0.4nm,0.4s,baz=189,slow=19,SNR=2.3						
NVAR	Mina Array Bea	74.85	321	P	P	16 00 17.9	+2.0
	comp=Z,0.5nm,0.9s,baz=134,slow=5.2,SNR=3.7						
TOA0	Torodi Ar. Sit	76.04	70	P	P	16 00 22.8	-0.1
TOA0				IAmb	IAmb	16 00 23.3	
	comp=Z,7.3nm,0.8s						
TORD	Torodi Ar. Bea	76.04	70	P	P	16 00 22.8	-0.2
	comp=Z,6.0nm,0.3s,baz=256,slow=5.3,SNR=38						
TORD	Torodi Ar. Bea	76.04	70	P	P	16 00 22.7	-0.2
YKA	Yellowknife Ar	90.06	340	P	P	16 01 35.1	+1.4
	comp=Z,1.3nm,0.7s,baz=128,slow=5.0,SNR=26						
ASAR	Alice Springs	131.64	207	PKP	PKiKP	16 07 48.1	+0.1
	comp=Z,0.1nm,0.5s,baz=130,slow=1.7,SNR=7.1						
ASAR				SKPbc	SKPab	16 10 56.9	+0.8
	comp=Z,0.9nm,1.1s,baz=148,slow=3.8,SNR=4.9						
WRA	Warramunga Arr	134.69	210	PKP	PKiKP	16 07 54.1	-0.1
	comp=Z,0.2nm,0.5s,baz=160,slow=1.3,SNR=1.6						
ZALV	Zalesovo Beam	140.23	25	PKP	PKiKP	16 08 03.6	-0.7
	comp=Z,0.3nm,0.4s,baz=281,slow=0.7,SNR=1.4						
MKAR	Makanchi Array	143.91	35	PKP	PKPdf	16 08 08.2	-0.5
	comp=Z,0.1nm,0.4s,baz=296,slow=1.8,SNR=1.9						
SONM	Songino Array	151.85	8	PKPbc	PKiKP	16 08 30.0	+1.3
	comp=Z,0.3nm,0.3s,baz=321,slow=1.8,SNR=2.5						

BJI ***17*** *16:07:32.8±0.0, 0°.23S×125°.80E, h60^{km}, mB5.1/35, mb4.7/56, Ms4.4/8, Ms7 4.1/9*

NEIC ***17*** *16:07:40.4±2.6, 0°.45N±0°.08×125°.35E±0°.05, h62^{km}±8^{km}, mb4.8/43, Error ellipse: s-maj=11.8km s-min=7.7km az=181.0*

IDC ***17*** *16:07:41.6±1.4, 0°.41N×125°.28E, h72^{km}±12^{km}, mb4.3/25, mb1 4.4/30, mb1mx4.4/33, mbtmp4.6/30, MS3.5/13, Ms1 3.5/13, ms1mx3.3/32, Error ellipse: s-maj=12.5km s-min=8.4km az=74.0*

GCMT ***17*** *16:07:41.3±0.3, 0°.53N±0°.02×125°.21E±0°.02, h66^{km}±4^{km}, MW4.9/58, Moment Tensor Solution. s29,c29; s58,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.14±.14; M$_{\theta\theta}$-2.51±.11; M$_{\phi\phi}$2.64±.12; M$_{r\theta}$-0.30±.11; M$_{\theta\phi}$-0.54±.12; M$_{\phi r}$0.81±.12; Best double couple: M$_{0}$2.75500×10^{16} NP1:ϕ_s40.00000°,δ75.00000°,λ7.00000°. NP2: ϕ_s308.00000°,δ83.00000°,λ165.00000°. Principal axes: T 2.9250, Plg15.0000°, Azm263.0000°; N -0.3440, Plg74.0000°, Azm104.0000°; P -2.5860, Plg5.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***17*** *16:07:42.6±0.2, 1°N±2°×12°5E±°, h79^{km}±2^{km}, M5.1/58, mb5.1/58, mB5.5/27, MLv5.4/23, Mw(mB)5.0/27, MwMwp4.6/1, Mwp5.0/1*

KLM ***17*** *16:07:44, 0°.47N×125°.66E, h95^{km}, mb5.0*

ISC 17 16:07:41.8±0.3, **0°.44N**±0°.04×**125°.35E**±0°.04, **h73**^{km}**, n243, σ1^{s}.79**/266**, mb4.7**/72**, 3C-2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.37	276	P	Pn	16 08 05.0	-0.2
TNTI	Ternate	2.05	81		Pn	16 08 13.4	-0.7
TNTI	Ternate	2.05	81	P	Pn	16 08 13.4	-0.7
GTOI	Gorontalo	2.34	275	P	Pn	16 08 21.6	+3.4
SANI	Sanana	2.55	165	P	Pn	16 08 18.2	-2.8
LUWI	Luwuk	2.97	240	Pn	Pn	16 08 27.9	+1.4
LUWI	Luwuk	2.97	240	P	Pn	16 08 27.6	+1.0
SGSI	Sangihe	3.23	3	P	Pn	16 08 30.9	+0.7
MRSI	Marisa	3.41	271	P	Pn	16 08 32.5	-0.1
APSI	Ampana	3.93	250	P	Pn	16 08 42.1	+2.3
NLAI	Namlea	4.05	154	P	Pn	16 08 39.8	-1.6
TOLI2	Tolitoli	4.61	278	Pn	Pn	16 08 49.4	+0.3
MSAI	Masohi	5.19	136	P	Pn	16 08 56.7	-0.3
	2.8nm5μm201nm,0.8s						
MPSI	Mapaga	5.45	269	P	Pn	16 09 01.7	+1.2
	2.5nm3μm6μm582nm,0.9s						
DDMP	Don Marcelino,	5.64	4	eP	Pn	16 09 02.5	-0.6
SWI	Sorong	6.05	102	P	Pn	16 09 09.5	+0.8
	0.6nm2μm152nm,0.9s						
SIJI	Sorong	6.06	102	P	Pn	16 09 08.9	0.0
	22nm,0.3s,baz=200,slow=15,SNR=74						
SIJI				S	Sn	16 10 14.1	-2.7
	4.1nm,0.3s,baz=65,slow=19,SNR=1.7						
SKMP	Bagumbayan, Su	6.09	352	eP	Pn	16 09 10.6	+1.3
TTSI	Tana Toraja	6.52	238	P	Pn	16 09 17.6	+2.5
	3.5nm9μm1μm,0.9s						
MATI	Mati	6.53	8	eP	Pn	16 09 19.4	+4.2
KCP	Kidapawan	6.53	358	⇑iP	Pn	16 09 18.9	+3.5
DAV	Davao City (W)	6.59	2	P	Pn	16 09 19.7	+3.5
	60nm,0.3s,baz=142,slow=3.1,SNR=17						
DAV				S	Sn	16 10 43.7	+14
	58nm,0.3s,baz=119,slow=19,SNR=1.1						
BNDI	Bandanaira	6.71	137	P	Pn	16 09 18.5	+0.8
	5.0nm5μm377nm,0.9s						
SPSI	Sidrap Palu	7.08	232	P	Pn	16 09 24.7	+1.8
	2.4nm6μm697nm,0.9s						
BNSI	Bone	7.11	227	P	Pn	16 09 24.7	+1.5
	1.7nm4μm504nm,0.7s						
ZCP	Zamboanga City	7.23	333	⇑eP	Pn	16 09 26.3	+1.4
BUKP	Musuan	7.40	358	eP	Pn	16 09 30.4	+3.3
PAGZ	Pagadian	7.62	345	eP	Pn	16 09 31.4	+1.3
FAKI	Fak Fak	7.66	116	Pn	Pn	16 09 29.3	-1.5
FAKI	Fak Fak	7.66	116	P	Pn	16 09 32.6	+1.8
	0.5nm56nm,0.9s						
BKSI	Bulukumba	7.74	222	P	Pn	16 09 36.2	+4.3
	1.2nm2μm205nm,0.7s						
KAPI	Kappang	7.78	226	P	Pn	16 09 32.9	+0.5
	25nm,0.3s,baz=77,slow=8.5,SNR=42						
KAPI				S	Sn	16 10 58.0	-1.1
	baz=235,slow=23,SNR=1.0						
KAPI				LR	LR	16 13 08.7	
	comp=Z,328nm,18.3s,baz=66,slow=42						
KAPI	Kappang	7.78	226	Pn	Pn	16 09 33.2	+0.8
CGP	Cagayan de Oro	7.99	355	⇑eP	Pn	16 09 39.0	+3.8
BSSI	Bau Bau, Buton	8.14	216	P	Pn	16 09 40.5	+3.2
	1μm108nm,0.8s						
MYLDM	Lahad Datu	8.30	305	Pn	Pn	16 09 42.4	+2.9
BUTP	Butuan	8.48	2	eP	Pn	16 09 44.3	+2.4
BKB	Balikpapan	8.62	259		Pn	16 09 45.2	+1.4
BKB	Balikpapan	8.62	259	P	Pn	16 09 46.1	+2.3
	487nm,0.9s						
GLSP	General Luna,	9.32	5	eP	Pn	16 09 52.8	-0.5
MMRI	Maumere	9.53	199		Pn	16 09 56.8	+0.4
MMRI	Maumere	9.53	199	P	Pn	16 09 59.7	+3.4
	97nm,0.9s						
MSLP	Maasin	9.64	357	eP	Pn	16 09 55.8	-2.1
CNOP	Candoni, Negro	9.71	344	eP	Pn	16 09 59.9	+1.2
EDFI	Ende, Flores	9.83	202	P	Pn	16 10 01.9	+1.5
	16nm,0.6s						
SPMM	Sapulut	9.83	296	P	Pn	16 10 05.0	+4.5
KBKI	Kotabaru	9.90	248	P	Pn	16 10 04.5	+3.2
	2μm233nm,0.9s						
LLP	Lapu-Lapu	9.91	352	⇓eP	Pn	16 10 05.4	+3.9
SOEI	Soe	10.18	186	Pn	Pn	16 10 07.5	+2.2
SOEI	Soe	10.18	186	P	Pn	16 10 10.0	+4.7
	4μm422nm,0.8s						
GUIM	Jordan	10.49	345	eP	Pn	16 10 10.3	+0.9
MTKI	Muara Teweh, K	10.54	263	P	Pn	16 10 11.9	+1.8
	64nm,0.8s						
OCLP	Ormoc	10.57	356	eP	Pn	16 10 09.7	-0.7
KKM	Kota Kinabalu	10.68	302	Pn	Pn	16 10 14.8	+2.7
BATI	Baumata	10.71	189	P	Pn	16 10 16.8	+4.4
	15nm,0.3s,baz=60,slow=1.8,SNR=40						
BATI	Baumata	10.71	189	P	Pn	16 10 16.8	+4.4
	2μm179nm,0.9s						
BBKI	Banjar Baru	11.19	250	P	Pn	16 10 23.1	+4.1
	2μm78nm,0.9s						
BATP	Bataraza	11.20	318	eP	Pn	16 10 23.5	+4.4
CUYO	Cuyo Island	11.20	338	eP	Pn	16 10 22.1	+3.0
ENPP	El Nido	12.21	331	eP	Pn	16 10 34.7	+1.8
OTRP	Odiongan	12.30	345	eP	Pn	16 10 37.8	+3.7
TWSI	Taliwang, Sumb	12.42	223	P	Pn	16 10 36.7	+1.0
	33nm,1.1s						
BUSP	Coron	12.57	336	eP	Pn	16 10 39.7	+1.9
SJMP	San Jose	12.66	341	eP	Pn	16 10 42.1	+3.1
PVCP	Virac	13.13	355	eP	Pn	16 10 46.0	+0.7
SBUM	Sibu	13.27	279	Pn	Pn	16 10 47.6	+0.3
SBUM	Sibu	13.27	279	P	Pn	16 10 49.0	+1.7
KMMI	Kalianget	13.57	237	P	P	16 10 57.2	-0.5
	142nm,1.2s						
STKI	Sintang	13.88	269	P	P	16 10 58.9	-2.2
PBKI	Pangkalan Bun	14.03	257	P	P	16 11 00.6	-2.2
LQP	Lukban	14.10	345	⇓eP	P	16 11 03.4	-0.4
LUBP	Lubang	14.14	339	eP	Pn	16 10 59.0	+0.3
TGY	Tagaytay City	14.26	342	P	P	16 11 03.2	-2.2
	37nm,0.3s,baz=192,slow=5.7,SNR=12						
MTN	Manton Dam	14.39	157	P	Pn	16 11 00.1	-1.8
	baz=14,SNR=58						
MACP	Maragondon, Ca	14.48	342	eP	P	16 11 06.8	-1.0
POLP	Polilio Island	14.59	347	eP	P	16 11 08.2	-0.8
QVP	Quezon City--P	14.73	343	eP	P	16 11 12.0	+1.4
GRJI	Gresik	14.77	240	P	P	16 11 11.5	+0.5
	90nm,1.0s						
KSM	Kuching	15.07	274		P	16 11 13.9	-0.5
GENI	Genyem	15.12	102	P	Pn	16 11 10.6	-0.8
	69nm,0.8s						
JAY	Jayapura	15.63	101	P	Pn	16 11 18.1	+0.2
	1.1nm,0.3s,baz=250,slow=12,SNR=1.8						
PWJI	Pagerwojo	15.90	238	P	P	16 11 22.6	-1.0
	2μm160nm,0.7s						
SMPP	San Manuel, Pa	16.28	344	eP	P	16 11 28.5	+0.7
CAUP	Cauayan	16.77	348	eP	P	16 11 32.7	-0.4
MMPI	Merauke	17.40	121	P	P	16 11 42.3	+2.1
	230nm,0.8s						
APYP	Conner	17.78	347	eP	P	16 11 43.9	-0.4
SGCP	Mt. Cagua	17.99	350	eP	Pn	16 11 54.8	+7.8
KPJI	Karang Pucung	18.10	244	P	Pn	16 11 48.7	+0.2
	2μm136nm,0.8s						
FITZ	Fitzroy Crossi	18.42	179	P	P	16 11 51.1	-0.3
	baz=18,SNR=16						
FITZ	Fitzroy Crossi	18.42	179	P	P	16 11 50.8	-0.6
	1.8nm,0.3s,baz=11,slow=10,SNR=40						
LEM	Lembang	19.11	248	P	P	16 11 57.8	-1.4
	5.1nm,0.3s,baz=339,slow=11,SNR=8.6						
LEM				LR	LR	16 19 13.0	
	comp=Z,121nm,18.7s,baz=74,slow=36						
CISI	Cisompet, Garu	19.20	245	P	P	16 11 58.8	-1.3
CISI				IAmb	IAmb	16 12 06.7	
	comp=Z,90nm,0.9s						
CISI	Cisompet, Garu	19.20	245	P	P	16 11 59.2	-0.9
	comp=Z,129nm,0.6s						
CBJI	Citeko	19.68	249	P	P	16 12 04.2	-1.0
	comp=Z,129nm,0.8s						
DBJI	Dramaga	19.82	249	P	Pn	16 12 07.9	-1.0
	comp=Z,3μmcomp=Z,33nm,1.1s						
CGJI	Cibinong	20.83	250	P	P	16 12 15.8	-1.8
	comp=Z,42nm,0.5s						
PMBI	Palembang	20.84	261	P	Pn	16 12 21.9	+1.0
	comp=Z,9μmcomp=Z,247nm,0.5s						
KLSI		21.22	256	P	P	16 12 23.0	+1.2
	comp=Z,11nm,0.9s						
MYKOM	Kota Tinggi	21.54	274	P	P	16 12 23.7	-1.5
MYKOM				IAmb	IAmb	16 12 34.3	
	comp=Z,43nm,0.8s						
MYKOM	Kota Tinggi	21.54	274	P	P	16 12 27.0	+1.8
LWLI	Liwa	21.94	255	P	P	16 12 44.7	+15
WB0	Warramunga Arr	21.95	157	P	P	16 12 28.2	-1.4
WB0				IAmb	IAmb	16 12 31.4	
	comp=Z,44nm,0.6s						
WRAB	Tennant Creek	22.08	157	P	P	16 12 29.5	-1.5
WRA	Warramunga Arr	22.09	157	P	P	16 12 29.3	-1.8
	comp=Z,47nm,0.5s,baz=336,slow=10,SNR=144						
WRA				S	S	16 16 26.7	-3.8
	comp=Z,1.9nm,0.8s,baz=332,slow=17,SNR=2.6						
WRA	Warramunga Arr	22.09	157	P	P	16 12 29.0	-2.1
WB2	Warramunga Arr	22.09	157	P	P	16 12 29.8	-1.3
WR0	Warramunga Arr	22.18	157	P	P	16 12 30.3	-1.8
WR0				IAmb	IAmb	16 12 44.1	
	comp=Z,68nm,1.2s						
KSI	Kapahiang	23.10	260	P	P	16 12 45.4	+3.6
	comp=Z,4μmcomp=Z,50nm,1.1s						
YULB	Yu-li	23.15	350	P	P	16 12 38.5	-3.6
YULB				IAmb	IAmb	16 12 43.4	
	comp=Z,36nm,1.1s						
GUMO	Guam	23.33	55	P	P	16 12 44.7	+0.8
	comp=Z,65nm,0.5s,baz=46,slow=0.7,SNR=6.8						
GUMO				LR	LR	16 21 53.3	
	comp=Z,93nm,18.6s,baz=231,slow=36						
GUMO	Guam	23.33	55	P	P	16 12 40.9	-3.0
SSLB	Suanglung	23.60	350	P	P	16 12 45.0	-1.2
SSLB				IAmb	IAmb	16 12 49.0	
	comp=Z,46nm,1.0s						
PMG	Port Moresby	23.82	115	P	P	16 12 48.7	+0.4
	comp=Z,9.4nm,0.5s,baz=338,slow=5.9,SNR=13						
PMG				LR	LR	16 23 16.0	
	comp=Z,144nm,21.7s,baz=288,slow=39						
QIZ	Qiongzhong	23.93	321	P	P	16 12 49.3	0.0
QIZ				S	S	16 17 03.3	+2.5
QIZ				LR	LR		
	comp=Z,300nm,5.2s						
QIZ				LR	LR		
	comp=Z,380nm,3.5s						
QIZ				LR	LR		
	comp=Z,320nm,8.0s						
SDSI	Sungai Dareh	23.96	267	P	P	16 12 48.1	-1.5
	comp=Z,29nm,0.7s						
IPM	Ipoh	24.62	280	P	P	16 12 55.1	-0.5
IPM				IAmb	IAmb	16 12 57.4	
	comp=Z,85nm,1.5s						
IPM	Ipoh	24.62	280	P	P	16 12 56.0	+0.3
PDSI	Padang	24.92	267	P	P	16 12 56.1	-2.3
	comp=Z,21nm,0.8s						
QIS	Mount Isa	25.10	147	P	P	16 12 59.9	0.0
	baz=25,SNR=67						
KULM	Kulim	25.13	282	P	P	16 12 59.6	-0.6
KULM				IAmb	IAmb	16 13 01.1	
	comp=Z,30nm,1.1s						
KULM	Kulim	25.13	282	P	P	16 13 01.0	+0.8
AS31	Alice Springs	25.36	161	P	P	16 13 02.5	+0.2
ASAR	Alice Springs	25.36	161	P	P	16 13 02.5	+0.3
	comp=Z,39nm,0.6s,baz=343,slow=7.9,SNR=533						
ASAR				PcP	PcP	16 16 34.5	+1.1
	comp=Z,1.6nm,0.6s,baz=347,slow=2.6,SNR=3.6						
ASAR				S	S	16 17 22.4	-1.2
	comp=Z,7.5nm,0.9s,baz=351,slow=22,SNR=9.5						
ASAR				ScP	ScP	16 20 06.0	-0.4
	comp=Z,1.0nm,0.8s,baz=342,slow=2.1,SNR=4.4						
MTSU	Mount Surprise	26.24	136	P	P	16 13 10.5	+0.2
	baz=26,SNR=8.9						
PSI	Prapat	26.52	275	P	P	16 13 12.0	-0.9
	comp=Z,8.7nm,0.7s,baz=180,slow=2.8,SNR=5.3						
PSI				LR	LR	16 24 32.0	
	comp=Z,195nm,21.4s,baz=91,slow=38						
RABL	Rabaul	27.19	100	P	P	16 13 20.6	+1.7
MEEK	Meekatharra	27.69	193	P	P	16 13 22.7	-0.5
	baz=28,SNR=13						
GSI	Gunungsitoli	27.78	272	P	P	16 13 22.4	-1.8
GSI				IAmb	IAmb	16 13 28.6	
	comp=Z,14nm,0.8s						
GSI	Gunungsitoli	27.78	272	P	P	16 13 23.9	-0.3
	comp=Z,22nm,0.7s						
CTA	Charters Tower	28.91	136	P	P	16 13 34.8	+0.7
	comp=Z,2.1nm,0.4s,baz=309,slow=9.6,SNR=4.2						
MORW	Morawa	30.66	196	P	P	16 13 50.5	+1.0
	baz=31,SNR=3.8						
FORT	Forrest	31.15	175	P	P	16 13 53.6	-0.1
	baz=31,SNR=19						
CMAR	Chiang Mai Arr	31.51	306	P	P	16 13 57.2	+0.1
	comp=Z,1.5nm,0.7s,baz=133,slow=7.0,SNR=8.7						
CMAR				ScP	ScP	16 20 26.1	+0.5
	comp=Z,0.4nm,0.3s,baz=164,slow=3.3,SNR=5.5						
CHTO	Chiang Mai	31.70	307	P	P	16 13 58.8	0.0
BLDU	Ballidu	31.96	194	P	P	16 14 01.3	+0.5
	baz=32,SNR=11						
NJ2	Nanjing	32.04	350	eP	P	16 14 02.3	+0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
QLP	Quilpie	32.45	147	P	P	16 14 04.9	-0.4
	baz=32,SNR=4.4						
KLBR	Kellerberrin	32.66	192	P	P	16 14 07.0	0.0
	baz=33,SNR=8.4						
MUN	Mundaring	33.38	194	P	P	16 14 13.6	+0.3
	baz=33,SNR=5.7						
NWAO	Narrogin (SRO)	34.06	192	P	P	16 14 19.2	0.0
	baz=34,SNR=5.9						
BBOO	Buckleboo	34.58	164	P	P	16 14 23.8	+0.1
	baz=35,SNR=20						
RMQ	Roma	35.01	142	P	P	16 14 27.6	+0.1
	baz=35,SNR=4.3						
STKA	Stephens Creek	35.63	156	P	P	16 14 33.1	+0.4
	baz=36,SNR=12						
STKA	Stephens Creek	35.63	156	P	P	16 14 33.0	+0.2
	comp=Z,14nm,0.8s,baz=329,slow=9.4,SNR=28						
STKA	Stephens Creek	35.63	156	P	P	16 14 33.0	+0.2
HTT	Hallett	36.03	161	P	P	16 14 37.0	+0.8
	baz=36,SNR=15						
CD2	Chengdu	36.58	328	P	P	16 14 41.8	+0.9
CD2				pP	pP	16 14 58.1	+0.2
CD2				sP	sP	16 15 08.1	+1.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSAR	Wonju Array Be	36.90	3	P	P	16 14 43.9	+0.5
KSRS	Korea Array	36.91	3	P	P	16 14 44.0	+0.5
	comp=Z,6.3nm,0.6s,baz=174,slow=9.8,SNR=30						
KSRS				LR	LR	16 31 21.2	
	comp=Z,50nm,19.6s,baz=186,slow=38						
KS19	Wonju Array Si	36.95	3	P	P	16 14 43.6	-0.3
KS19				IAmb	IAmb	16 14 59.3	
	comp=Z,25nm,1.1s						
CMSA	Cobar Meteorol	37.19	151	P	P	16 14 47.0	+1.0
	baz=37,SNR=4.8						
MAJO	Matsushiro	37.85	17	P	P	16 14 51.1	-0.4
MAJO				IAmb	IAmb	16 14 53.4	
	comp=Z,17nm,0.8s						
MAT	Matsushiro	37.85	17	P	P	16 14 50.5	-1.1
MAT				eS	S	16 20 40.2	+2.6
MJAR	Matsushiro Arr	37.85	17	P	P	16 14 50.9	-0.7
	comp=Z,12nm,0.8s,baz=188,slow=8.7,SNR=25						
MJAR				LR	LR	16 28 32.3	
	comp=Z,54nm,21.8s,baz=210,slow=33						
MJAR	Matsushiro Arr	37.85	17	P	P	16 14 50.5	-1.1
ARMA	Armidale	39.58	143	P	P	16 15 07.3	+1.1
	baz=40,SNR=14						
JMM	Marumori	39.87	19	P	P	16 15 09.3	+0.9
ARPS	Mount Arapiles	40.06	159	P	P	16 15 10.9	+0.9
	baz=40,SNR=12						
BJI	Beijing	40.29	349	P	P	16 15 13.8	+2.0
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
LZH	Lanzhou	40.71	333	eP	P	16 15 18.0	+2.4
LZH				pP	pwP	16 15 35.8	+0.8
LZH				sP	sP	16 15 42.1	+1.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.8s						
HHC	Hu-ho-hao-te	42.12	344	eP	P	16 15 25.6	-1.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,6.7s						
CN2	Changchun	43.17	0	eP	P	16 15 33.4	-1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	Lhasa	43.67	315	P	P	16 15 41.5	+1.4
LSA				pmax	pmax		
	comp=Z,16nm,0.9s						
LSA	Lhasa	43.67	315	P	P	16 15 41.0	+0.9
USA0B	Ussuriysk Arra	43.97	7	P	P	16 15 40.6	-1.2
USA0B				IAmb	IAmb	16 15 48.0	
	comp=Z,11nm,0.9s						
USRK	Ussuriysk Ar.	43.97	7	P	P	16 15 41.4	-0.3
	comp=Z,4.5nm,0.6s,baz=185,slow=6.3,SNR=18						
USRK	Ussuriysk Ar.	43.97	7	P	P	16 15 41.7	0.0
MDJ	Mudanjiang	44.15	4	P	P	16 15 43.8	+0.6
MDJ				pmax	pmax		
	comp=Z,12nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,370nm,4.0s						
MDJ	Mudanjiang	44.15	4	P	P	16 15 44.1	+0.9
MDJ				IAmb	IAmb	16 15 45.3	
	comp=Z,12nm,0.7s						
SANVU	Saraoutou	44.26	113		P	16 15 46.1	+1.6
SANVU	Saraoutou	44.26	113	P	P	16 15 46.2	+1.8
TAPN	Taplejung	44.94	310	eP	P	16 15 49.7	-0.5
	comp=Z,7.7nm,0.5s						
ODAN	Odare	44.95	309	eP	P	16 15 50.4	+0.3
	comp=Z,12nm,0.6s						
PALK	Pallekele	45.03	280	P	P	16 15 49.7	-1.0
PALK				IAmb	IAmb	16 15 54.4	
	comp=Z,19nm,1.4s						
GTA	Gaotai	45.27	332	eP	P	16 15 52.1	-0.2
GTA				pP	pP	16 16 11.6	+1.6
GTA				sP	sP	16 16 18.9	+0.7
GTA				PcP	PcP	16 17 32.0	+0.9
GTA				ScP	ScP	16 21 17.3	-0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
GTA				LR	LR		

	comp=Z,140nm,16.4s						
RAMN	Ramite	45.61	309	*e*P	P	16 15 55.4	0.0
	comp=Z,32nm,0.5s						
JKA	Kamikawa-asahi	46.12	17	P	P	16 15 59.6	+0.8
GUN	Gumba	46.63	309	*e*P	P	16 16 03.2	-0.3
	comp=Z,27nm,0.6s						
PKI	Pulchoki	46.83	309	*e*P	P	16 16 04.5	-0.6
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	46.85	309	*e*P	P	16 16 04.6	-0.5
	comp=Z,9.0nm,0.4s						
KKN	Kakani	47.04	309	*e*P	P	16 16 05.8	-0.7
	comp=Z,13nm,0.5s						
DMN	Daman	47.09	308	*e*P	P	16 16 06.9	-0.1
	comp=Z,16nm,0.7s						
DANN	Dangsing	48.49	309	*e*P	P	16 16 16.8	-1.0
	comp=Z,72nm,0.6s						
HYB	Hyderabad	49.02	293	*i* P	P	16 16 19.5	-2.2
SONM	Songino Array	50.00	343	P	P	16 16 28.0	-0.8
	comp=Z,2.3nm,0.6s,baz=160,slow=8.3,SNR=15						
SONM				PcP	PcP	16 17 49.1	+1.2
	comp=Z,1.9nm,0.7s,baz=169,slow=4.3,SNR=1.8						
SONM				LR	LR	16 38 39.1	
	comp=Z,95nm,21.1s,baz=176,slow=37						
SONM	Songino Array	50.00	343	P	P	16 16 27.9	-0.9
WMQ	Urumqi	54.67	327	*e*P	P	16 17 04.8	+1.4
WMQ				pP	pP	16 17 19.8	-1.5
WMQ				sP	sP	16 17 28.3	-0.9
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,82nm,4.1s						
ZSN	Zaisan	58.55	329	*e*P	P	16 17 32.0	+1.2
	baz=329						
NIL	Nilore	58.89	310	P	P	16 17 32.8	-0.7
NIL				IAmb	IAmb	16 17 37.5	
	comp=Z,7.9nm,0.7s						
PETK	Petropavlovsk-	58.98	22	P	P	16 17 35.3	+1.6
	comp=Z,11nm,0.7s,baz=191,slow=3.6,SNR=27						
PETK				LR	LR	16 42 49.3	
	comp=Z,22nm,20.8s,baz=221,slow=36						
PETK	Petropavlovsk-	58.98	22	P	P	16 17 36.2	+2.5
SHLS	Shalkode	59.03	322	*e*P	P	16 17 34.0	-0.4
	comp=Z,2.2nm,0.8s,baz=322						
KSH	Kashi	59.44	317	P	P	16 17 39.3	+2.0
KSH				sP	sP	16 18 02.8	-0.6
KSH				PP	PP	16 19 53.4	+4.1
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MKAR	Makanchi Array	59.50	327	P	P	16 17 36.4	-1.0
	comp=Z,3.1nm,0.4s,baz=123,slow=7.9,SNR=58						
MKAR				ScP	ScP	16 22 18.3	-0.5
	comp=Z,0.5nm,0.8s,baz=112,slow=4.6,SNR=2.6						
MKAR				S	S	16 25 37.3	-4.2
	comp=Z,0.3nm,0.8s,baz=113,slow=11,SNR=2.8						
MKAR				LR	LR	16 43 28.3	
	comp=Z,67nm,21.3s,baz=120,slow=36						
SATY	Saty	59.63	322	*e*P	P	16 17 39.9	+1.3
	comp=Z,3.6nm,0.6s,baz=322						
KPKS	Kokpek	59.68	322	*e*P	P	16 17 40.2	+1.4
	comp=Z,4.9nm,0.6s,baz=322						
MAKZ	Makanchi	59.68	327	P	P	16 17 37.9	-0.7
MAKZ				IAmb	IAmb	16 17 42.9	
	comp=Z,6.0nm,0.9s						
MDOK	Medeo	60.53	321	*e*P	P	16 17 46.3	+1.5
	baz=321						
CHKK	Chushkaly	60.93	322	*e*P	P	16 17 48.6	+1.4
	baz=322						
YAK	Yakutsk	61.52	2	P	P	16 17 50.8	-0.1
MA2	Magadan	62.21	14	P	P	16 17 55.4	-0.2
ZAA0	Zalesovo Array	62.91	334	P	P	16 17 59.0	-1.3
ZALV	Zalesovo Beam	62.91	334	P	P	16 17 58.5	-1.7
	comp=Z,1.8nm,0.5s,baz=120,slow=5.5,SNR=9.3						
ZALV	Zalesovo Beam	62.91	334	P	P	16 17 58.2	-2.0
BTLS	Baital	63.35	322	*e*P	P	16 18 04.6	+1.3
	baz=322						
KURK	Kurchatov	63.79	329	P	P	16 18 04.6	-1.6
IUG	Iuzhnay	64.64	317	*e*P	P	16 18 12.5	+0.4
	baz=317						
KKAR	Karatay Array	64.72	319	P	P	16 18 12.7	+0.2
BRZS	Berezniki	66.59	326	*e*P	P	16 18 24.7	+0.4
	baz=326						
BRVK	Borovoye	69.41	328	P	P	16 18 39.8	-2.1
TIXI	Tiksi	71.14	1	P	P	16 18 51.4	-0.6
TIXI				IAmb	IAmb	16 18 54.6	
	comp=Z,7.4nm,0.8s						
GEYT	Alibeck	71.90	310	P	P	16 18 58.5	+1.0
	comp=Z,2.2nm,0.6s,baz=156,slow=7.6,SNR=3.6						
ABKAR	Akbulak array	73.83	322	P	P	16 19 07.9	-0.7
ARU	Arti	76.98	328	P	P	16 19 26.0	-0.5
ARU				IAmb	IAmb	16 19 35.1	
	comp=Z,5.1nm,0.7s						
VNDA	Vanda	80.36	172	P	P	16 19 44.9	+0.3
	comp=Z,1.5nm,0.6s,baz=316,slow=6.2,SNR=7.8						
RAYN	Ar Rayn	80.51	294	P	P	16 19 45.5	-1.2
KBZ	Khabaz	84.23	314	P	P	16 20 05.0	-0.5
	comp=Z,1.7nm,0.8s,baz=120,slow=5.7,SNR=6.6						
KBZ				LR	LR	17 03 03.0	
	comp=Z,29nm,18.2s,baz=103,slow=39						
IMAR	Indian Mountai	85.89	24	P	P	16 20 14.2	+0.9
COLD	Coldfoot	87.44	23	P	P	16 20 21.1	+0.2
COLD				IAmb	IAmb	16 20 24.2	
	comp=Z,14nm,1.3s						
KLMR	Klimovskoe	87.58	331	*e*P	P	16 20 19.7	-2.0
KLMR				AMP		16 20 30.8	
	comp=Z,23nm,1.5s						
I23K	Minto, Yukon-K	87.62	25	P	P	16 20 22.0	+0.2
I23K				IAmb	IAmb	16 20 39.7	
	comp=Z,4.1nm,0.8s						
KMBO	Kilima Mbogo	88.10	269	P	P	16 20 25.6	+0.1
	comp=Z,7.5nm,0.8s,baz=64,slow=3.0,SNR=14						
ILAR	Eielson Array	88.65	25	P	P	16 20 26.8	+0.1
	comp=Z,0.9nm,0.7s,baz=253,slow=4.8,SNR=20						
BMAR	Burnt Mountain	89.63	23	P	P	16 20 31.8	+0.5
QSPA	South Pole Qui	90.37	180	P	P	16 20 35.7	+0.9
	comp=Z,1.3nm,0.6s,baz=282,slow=1.0,SNR=13						
QSPA	South Pole Qui	90.37	180	P	P	16 20 36.2	+1.4
QSPA				IAmb	IAmb	16 20 49.6	
	comp=Z,4.3nm,1.1s						
BCAR	Beaver Creek A	90.92	27	P	P	16 20 38.4	+1.0
BRTR	Keskin Array B	91.04	310	P	P	16 20 37.5	-1.2
	comp=Z,0.8nm,0.7s,baz=123,slow=3.3,SNR=5.2						
BRTR	Keskin Array B	91.04	310	P	P	16 20 37.1	-1.5
ARCES	ARCESS Array B	93.04	340	P	P	16 20 47.0	0.0
	comp=Z,3.0nm,0.7s,baz=74,slow=6.7,SNR=7.5						
AKASG	Malin Array Be	93.55	321	P	P	16 20 48.2	-1.5
	comp=Z,0.8nm,0.5s,baz=66,slow=4.5,SNR=7.0						
MNK	Minsk	93.99	325	*i* P	P	16 20 50.5	-1.2
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	16 20 50.5	-1.2
	comp=N,10.0nm,1.0s						
MNK				*i* P	P	16 20 50.5	-1.2
	comp=Z,8.0nm,1.0s						
MNK				*i* pP	pP	16 21 07.5	-3.4
MNK				*i* sP	sP	16 21 48.7	+30
MNK				*i* PP	PP	16 24 37.1	-1.3
MNK				*i* PPP	PPP	16 26 38.1	
MNK				*i* sS	S	16 31 50.1	-5.9
MNK				*i* SP	SP	16 33 11.3	+1.1
MNK				*i* PS	PS	16 33 19.2	-0.7
MNK				*i* SS	SS	16 38 18.3	+1.4
MNK				*i* SSS	SSS	16 41 40.2	
MNK				*i* SKKS	SKKSdf	16 45 22.5	+23
MNK				*i* LQ	LQ	16 55 09.6	
MNK				*i* LR	LR	16 59 20.7	
MNK				*i* LRM	MLR	17 04 06.5	
	comp=Z,68nm,20.3s						
MNK				*i* LRM	MLR	17 04 09.6	
	comp=E,5.0nm,20.6s						
MNK				*i* LRM	MLR	17 05 14.4	
	comp=N,214nm,20.6s						
FINES	FINESS Array B	94.06	332	P	P	16 20 51.2	-0.6
	comp=N,2.2nm,0.6s,baz=96,slow=4.2,SNR=7.7						
FINES				LR	LR	17 05 54.7	
	comp=N,38nm,18.3s,baz=23,slow=37						
NACGM	Naroch	94.58	325	*i* P	P	16 20 54.7	+0.4
NACGM				*i* P	P	16 20 54.7	+0.4
NACGM				*i* P	P	16 20 54.7	+0.4
NACGM				*i* Pb	PcP	16 20 58.2	+3.5
	comp=Z,11nm,0.9s						
NACGM				*i* PP	PP	16 24 53.8	+11
NACGM				*i* PPP	PPP	16 26 49.3	
NACGM				*i* S	SKSac	16 31 15.7	-7.5
NACGM				*i* PS	PS	16 33 26.6	+0.3
NACGM				*i* SS	SS	16 38 41.4	+16
NACGM				*i* SSS	SSS	16 42 31.6	
NACGM				*i* LR	LR	17 04 01.1	
BURAR	Bucovina Array	96.51	318	P	P	16 21 03.2	-0.3
C36M	Paulatuk	96.75	20	P	P	16 21 03.2	-0.7
C36M				IAmb	IAmb	16 21 22.4	
	comp=Z,3.6nm,0.8s						
KOLS	Kolonicke sedl	98.25	320	*e*PDIFF	Pdif	16 21 12.0	+0.8
BOSA	Boshof	99.07	241	LR	LR	16 59 36.8	
	comp=Z,27nm,20.1s,baz=132,slow=32						
YKA	Yellowknife Ar	103.05	24	Pdiff	Pdif	16 21 33.1	+0.9
	comp=Z,0.1nm,0.5s,baz=304,slow=3.7,SNR=2.4						
YKA				PKKPbc	PKKPbc	16 37 29.3	-1.8
	comp=Z,0.2nm,0.8s,baz=90,slow=3.4,SNR=2.6						
TORD	Torodi Ar. Bea	122.55	286	PKP	PKiKP	16 26 30.1	-0.1
	comp=Z,0.7nm,0.6s,baz=123,slow=1.8,SNR=3.7						
TXAR	Lajitas Array	124.68	53	PKP	PKiKP	16 26 34.3	+0.1
	comp=Z,0.6nm,0.8s,baz=224,slow=2.5,SNR=6.1						
DBIC	Dimbokro	129.81	279	SKPbc	SKPab	16 29 59.5	-0.2
	comp=Z,3.4nm,0.8s,baz=101,slow=4.0,SNR=5.2						
CPUP	Villa Florida	154.13	174	PKPbc	PKiKP	16 27 37.5	+3.3
	comp=Z,1.3nm,0.6s,baz=279,slow=0.5,SNR=3.0						

IDC 17 16:42:24.5±2.5**, 6°.83S**×**130°.67E, h45**^{km}±39^{km}**, mb2.9**/1**, mb1 3.3**/5**, mb1mx3.2**/30**, mbtmp3.3**/5**, ML3.1**/4**, Error ellipse: s-maj=79.0km s-min=25.1km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.95	6	P	Pn	16 43 50.5	+0.2
	1.2nm,0.3s,baz=196,slow=20,SNR=8.9						
SIJI				S	Sn	16 44 52.1	-5.1
	0.7nm,0.3s,baz=257,slow=23,SNR=1.6						
FITZ	Fitzroy Crossi	12.22	203	P	Pn	16 45 15.9	-0.2
	0.1nm,0.3s,baz=21,slow=9.6,SNR=19						
FITZ				S	Sn	16 47 22.9	-8.2
	0.3nm,0.3s,baz=20,slow=20,SNR=7.7						
WRA	Warramunga Arr	13.51	165	P	Pn	16 45 32.3	-1.4
	0.1nm,0.3s,baz=349,slow=13,SNR=2.0						
WRA				S	Sn	16 47 55.6	-6.9
	0.3nm,0.3s,baz=335,slow=21,SNR=7.2						
ASAR	Alice Springs	17.02	170	P	P	16 46 20.7	-0.1
	0.1nm,0.3s,baz=355,slow=13,SNR=9.8						
ASAR				S	Sn	16 49 20.0	-7.9
	0.1nm,0.3s,baz=0.2,slow=28,SNR=2.2						
MKAR	Makanchi Array	68.45	326	P	P	16 53 21.8	-0.2
	0.1nm,0.4s,baz=123,slow=5.3,SNR=2.0						

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*IDC **17** 17:02:00.1±0.7, 9°.35S×158°.48E, h0^{km}, mb4.0/12, mb1 4.2/14, mb1mx4.0/32, mbtmp4.0/14, ML4.3/2, MS3.1/7, Ms1 3.1/7, ms1mx2.9/27, Error ellipse: s-maj=21.3km s-min=15.4km az=165.0*

*NEIC **17** 17:02:05.2±1.5, 9°.4S±0°.1×158°.49E±0°.07, h42^{km}±7^{km}, mb4.6/20, Error ellipse: s-maj=15.2km s-min=10.2km az=184.0*

ISC 17 17:02:04.3±0.5**, 9°.39S**±0°.09×**158°.50E**±0°.06**, h30**^{km}**, n52, σ0**^{s}**.90**/49**, mb4.4**/28**, MS3.0**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.43	92	Pn	Pn	17 02 28.0	-0.2
	163nm,0.3s,baz=235,slow=4.4,SNR=120						
HNR				LR	LR	17 02 36.4	
	comp=Z,76nm,19.3s,baz=338,slow=25						
HNR				Sn	Sb	17 02 47.0	-1.2
	553nm,0.3s,baz=166,slow=18,SNR=14						
SANVU	Saraoutou	10.41	126		Pn	17 04 33.6	+1.9
PMG	Port Moresby	11.19	269	LR	LR	17 08 45.4	
	comp=Z,268nm,19.8s,baz=75,slow=36						
PMG	Port Moresby	11.19	269	Pn	Pn	17 04 43.9	+1.5
CTA	Charters Tower	15.91	227	Pn	Pn	17 05 45.7	-0.5
	0.5nm,0.3s,baz=50,slow=13,SNR=6.4						
CTAO	Charters Tower	15.91	227	Pn	Pn	17 05 45.7	-0.5
JAY	Jayapura	18.96	290	P	Pn	17 06 23.6	-0.6
	1.7nm,0.3s,baz=101,slow=3.6,SNR=7.1						
MSVF	Nonsavu	20.72	116	LR	LR	17 13 33.9	
	comp=Z,34nm,20.3s,baz=182,slow=33						
WR0	Warramunga Arr	25.41	243	P	P	17 07 29.4	-0.1
WR0				IAmb	IAmb	17 07 35.0	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	25.48	243	P	P	17 07 29.1	-0.9
WB0				IAmb	IAmb	17 07 35.5	
	comp=Z,7.9nm,1.1s						
WRAB	Tennant Creek	25.57	243	P	P	17 07 31.0	+0.1
WB2	Warramunga Arr	25.57	243	P	P	17 07 30.6	-0.3
WB2				IAmb	IAmb	17 07 36.6	
	comp=Z,9.7nm,1.3s						
WRA	Warramunga Arr	25.59	243	P	P	17 07 31.1	+0.1
	comp=Z,3.4nm,0.9s,baz=70,slow=9.2,SNR=14						
WRA				PcP	PcP	17 11 02.3	+0.4
	comp=Z,0.5nm,0.6s,baz=91,slow=5.9,SNR=6.5						
WRA	Warramunga Arr	25.59	243	P	P	17 07 29.3	-1.8
GUMO	Guam	26.54	329	LR	LR	17 18 06.2	
	comp=Z,30nm,19.7s,baz=154,slow=36						
STKA	Stephens Creek	27.33	213	P	P	17 07 46.9	+0.3
	comp=Z,3.0nm,1.0s,baz=39,slow=13,SNR=3.6						
STKA				LR	LR	17 16 52.1	
	comp=Z,62nm,20.8s,baz=27,slow=33						
STKA	Stephens Creek	27.33	213	P	P	17 07 46.5	-0.2
AS31	Alice Springs	27.46	236	P	P	17 07 47.5	-0.5
ASAR	Alice Springs	27.46	236	P	P	17 07 47.3	-0.7
	comp=Z,0.8nm,0.8s,baz=56,slow=10,SNR=5.4						
ASAR				PcP	PcP	17 11 07.5	+1.3
	comp=Z,0.6nm,0.6s,baz=69,slow=2.5,SNR=9.0						
HIZ	Hauiti	32.51	156	P	P	17 08 31.4	-1.0
JMN	Monobe	48.85	333	P	P	17 10 47.2	0.0
JMN				IAmb	IAmb	17 11 08.8	
	comp=Z,67nm,1.3s						
JWT	Wachi	49.50	335	P	P	17 10 50.4	-1.7
MJAR	Matsushiro Arr	49.51	338	P	P	17 10 51.1	-1.2
	comp=Z,1.8nm,0.9s,baz=156,slow=8.0,SNR=2.3						
PPT	Papeete	51.01	105	LR	LR	17 31 12.2	
	comp=Z,21nm,18.3s,baz=198,slow=34						
KSRS	Korea Array	54.69	330	P	P	17 11 30.3	-0.5
	comp=Z,0.7nm,0.7s,baz=143,slow=6.9,SNR=4.2						
KSRS				LR	LR	17 32 10.0	
	comp=Z,7.1nm,20.6s,baz=350,slow=33						
PETK	Petropavlovsk-	62.25	359	P	P	17 12 23.4	+0.2
	comp=Z,5.7nm,1.1s,baz=140,slow=5.8,SNR=4.2						
CMAR	Chiang Mai Arr	64.94	295	P	P	17 12 42.5	+0.8
	comp=Z,1.1nm,0.8s,baz=121,slow=5.1,SNR=8.2						
CMAR	Chiang Mai Arr	64.94	295	P	P	17 12 41.1	-0.6
VNDA	Vanda	68.13	179	P	P	17 12 59.4	-1.7
VNDA				IAmb	IAmb	17 13 33.1	
	comp=Z,7.9nm,1.6s						
SONM	Songino Array	73.23	326	P	P	17 13 33.9	+1.2
	comp=Z,2.2nm,0.8s,baz=143,slow=6.1,SNR=12						
SONM	Songino Array	73.23	326	P	P	17 13 33.3	+0.6
LSA	Lhasa	75.48	304	P	P	17 13 45.9	-0.8
LSA				IAmb	IAmb	17 13 48.7	
	comp=Z,3.0nm,0.8s						
TAPN	Taplejung	77.60	301	*e*P	P	17 13 59.3	+0.8
	comp=Z,9.7nm,0.9s						
ODAN	Odare	77.73	300	*e*P	P	17 13 59.4	+0.3
	comp=Z,17nm,0.7s						
RAMN	Ramite	78.43	300	*e*P	P	17 14 03.6	+0.6
	comp=Z,3.2nm,0.4s						
GUN	Gumba	79.32	301	*e*P	P	17 14 08.5	+0.5
	comp=Z,11nm,0.7s						
PKI	Pulchoki	79.62	300	*e*P	P	17 14 09.8	+0.1
	comp=Z,8.5nm,0.7s						
PKIN	Phulchoki	79.63	300	*e*P	P	17 14 09.8	+0.2
	comp=Z,7.7nm,0.7s						
KKN	Kakani	79.79	300	*e*P	P	17 14 10.8	+0.4
	comp=Z,5.6nm,0.5s						
QSPA	South Pole Qui	80.60	180	P	P	17 14 15.4	+1.4
QSPA				IAmb	IAmb	17 14 51.0	
	comp=Z,8.8nm,1.4s						
SUA	Susitna One	80.93	22	P	P	17 14 16.8	+1.2
SUA				IAmb	IAmb	17 14 51.7	
	comp=Z,21nm,1.6s						
DANN	Dangsing	81.24	301	*e*P	P	17 14 18.2	-0.1
	comp=Z,7.6nm,0.7s						
SUCK	Suckling Hills	82.88	25	P	P	17 14 25.3	-0.5
IMAR	Indian Mountai	82.89	18	P	P	17 14 26.7	+0.9
M24K	Tolsona, Glenn	83.05	23	P	P	17 14 27.0	+0.3
M24K				IAmb	IAmb	17 14 35.7	
	comp=Z,35nm,1.5s						
ILAR	Eielson Array	84.35	21	P	P	17 14 33.5	+0.2
	comp=Z,0.4nm,0.5s,baz=253,slow=5.4,SNR=7.8						
ILAR	Eielson Array	84.35	21	P	P	17 14 32.5	-0.7
DGAR	Diego Garcia	84.94	263	P	P	17 14 36.3	-1.1
MKAR	Makanchi Array	87.49	318	P	P	17 14 48.1	-1.1
	comp=Z,0.4nm,0.5s,baz=97,slow=5.3,SNR=7.6						
ZALV	Zalesovo Beam	88.10	325	LR	LR	17 53 24.0	
	comp=Z,14nm,21.4s,baz=66,slow=35						
NVAR	Mina Array Bea	90.49	51	P	P	17 15 04.8	+1.0
	comp=Z,0.6nm,0.8s,baz=241,slow=6.0,SNR=5.2						
PDAR	Pinedale Array	97.72	48	P	Pdif	17 15 38.3	+1.4
	comp=Z,0.3nm,0.9s,baz=67,slow=34,SNR=1.9						

TAP 17 17:24:09.5, 22°.84N×120°.64E, h19^{km}**, ML1.7, 3C, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSD	Sandimen	0.09	187	⇑*i*P	Pg	17 24 13.8	+0.5
	baz=182						
SSD				*i* S	Sg	17 24 16.4	+0.7
	baz=182						
TSMG	Majia	0.13	180	⇑*i*P	Pg	17 24 14.1	+0.4
	baz=180						
TSMG				S	Sg	17 24 17.1	+0.6
	baz=180						
SCST	Cishan	0.15	289	*e*S	Sg	17 24 17.3	+0.5
	baz=289						
SLGT	Liugui	0.16	1	*e*P	Pg	17 24 14.5	+0.5
	baz=8.0						
SLGT				S	Sg	17 24 18.1	+1.0
	baz=8.0						
TWM1	Shoushan	0.20	266	*e*P	Pg	17 24 16.2	+1.6
	baz=266						
MASBT	Mashibuluo	0.22	183	⇑*i*P	Pg	17 24 15.4	+0.5
	baz=178						
MASBT				S	Sg	17 24 19.4	+0.8
	baz=178						
STYT	Tauyuan	0.34	18	P	Pb	17 24 17.8	+0.7
	baz=23						
STYT				*e*S	Sb	17 24 23.0	+0.9
	baz=23						
STYT	Tauyuan	0.34	18	*e*P	Pb	17 24 17.8	+0.7
	baz=89						
ECL	Taimali	0.37	130	P	Pb	17 24 18.1	+0.5
	baz=133						
ECL				*e*S	Sb	17 24 23.5	+0.5
	baz=133						
TWG	Pinlang	0.40	92	*e*P	Pb	17 24 18.8	+0.8
	baz=96						
TWG				*e*S	Sb	17 24 25.2	+1.5
	baz=96						
TWGBT	Beinan	0.40	93	*e*P	Pb	17 24 18.8	+0.7
	baz=96						
TWGBT				*e*S	Sb	17 24 25.3	+1.4
	baz=96						
WTP	Ta-pu	0.41	356	*e*S	Sn	17 24 26.2	-1.4
	baz=357						
TWK	Hsinying	0.45	341	*e*S	Sn	17 24 27.6	-1.1
	baz=354						
EAST	Anshuo	0.49	157	*e*P	Pb	17 24 20.2	+0.7
	baz=154						
EAST				*e*S	Sn	17 24 28.1	-1.4
	baz=154						
ELDTW	Lidau	0.49	44	*e*P	Pb	17 24 20.2	+0.6
	baz=55						
ELDTW				*e*S	Sb	17 24 27.9	+1.5
	baz=55						
CHN4	Tsaushan	0.51	355	*e*S	Sn	17 24 29.1	-1.0
	baz=355						
SCLT	Jiali	0.53	309	*e*S	Sn	17 24 30.2	-0.3
	baz=310						
ALS	Alishan	0.69	12	*e*S	Sn	17 24 34.4	-0.3
	baz=13						
FULB	Fuli	0.70	59	*e*P	Pn	17 24 24.6	+0.2
	baz=50						
FULB				*e*S	Sn	17 24 34.2	-0.5
	baz=50						
CHN5	Tsauling	0.76	2	*e*S	Sn	17 24 36.3	+0.1
	baz=3.0						
TWF1	Yuli	0.79	49	*e*S	Sg	17 24 35.8	+0.3
	baz=50						
YULB	Yu-li	0.82	47	*e*P	Pn	17 24 25.8	-0.2
	baz=53						
YULB				*e*S	Sg	17 24 36.5	+0.1
	baz=53						
WSF	Szhu	0.89	334	*e*S	Sn	17 24 40.2	+0.9
	baz=335						
EHY	Hungye	0.91	43	*e*P	Pg	17 24 28.2	+0.9
	baz=50						
EHY				*e*S	Sg	17 24 39.3	-0.1
	baz=50						

TAP 17 17:24:11.9, 23°.16N×120°.51E, h12^{km}**, ML1.2, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHN1	Nanshi	0.03	35	P	Pg	17 24 14.6	+0.4
	baz=34						
CHN1				S	Sg	17 24 16.5	+0.7
	baz=34						
SNST	Tainan City	0.06	349	P	Pg	17 24 14.8	+0.4
	baz=348						
SNST				S	Sg	17 24 16.9	+0.7
	baz=348						
SGST	Jiashian	0.10	139	P	Pg	17 24 15.1	+0.2
	baz=349						
SGST	Jiashian	0.10	139	*e*P	Pg	17 24 15.0	+0.2
	baz=137						
SGST				*e*S	Sg	17 24 18.0	+1.0
	baz=137						
TWK	Hsinying	0.11	349	*e*P	Pb	17 24 15.8	-0.1
	baz=354						
TWK				*e*S	Sg	17 24 18.1	+0.9
	baz=354						
WTP	Ta-pu	0.13	48	*i* P	Pb	17 24 15.9	-0.3
	baz=51						
WTP				S	Sg	17 24 18.8	+1.2
	baz=51						
CHN4	Tsaushan	0.20	22	P	Pb	17 24 17.0	-0.5
	baz=22						
CHN4				S	Sg	17 24 20.8	+1.3
	baz=22						

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*IDC **17** 17:30:16.8±1.4, 43°.79N×138°.22E, h261^{km}±14^{km}, mb2.7/4, mb1 2.9/7, mb1mx2.7/32, mbtmp3.2/7, Error ellipse: s-maj=29.1km s-min=17.0km az=116.0*

ISC 17 17:30:16.2±1.0**, 43°.8N**±0°.1×**138°.24E**±0°.10**, h250**^{km}**, n7, σ1**^{s}**.21**/7**, mb2.9**/4**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	Asahikawa	3.16	83	P	Pn	17 31 11.5	+1.1
	1.2nm,0.3s,baz=258,slow=5.3,SNR=13						
USRK	Ussuriysk Ar.	4.53	277	P	Pn	17 31 26.9	+0.7
	baz=86,slow=12,SNR=5.5						
MJAR	Matsushiro Arr	7.28	180	P	Pn	17 32 01.5	+1.0
	0.1nm,0.3s,baz=6.2,slow=11,SNR=9.3						
ILAR	Eielson Array	45.21	36	P	P	17 38 07.7	-0.5
	0.4nm,0.8s,baz=275,slow=7.0,SNR=6.1						
YKA	Yellowknife Ar	59.19	31	P	P	17 39 50.8	+0.2
	0.1nm,0.5s,baz=312,slow=5.7,SNR=2.7						
WRA	Warramunga Arr	63.56	184	P	P	17 40 18.6	-1.6
	0.3nm,0.5s,baz=1.9,slow=7.1,SNR=4.7						
ASAR	Alice Springs	67.28	184	P	P	17 40 43.5	-0.5
	0.2nm,0.7s,baz=356,slow=5.7,SNR=7.9						

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*NEIC **17** 17:47:08.3±2.8, 43°.63N±0°.05×105°.32W±0°.05, h0^{km}±1^{km}, ML3.2/54, Error ellipse: s-maj=10.2km s-min=5.3km az=152.0*

*IDC **17** 17:47:08.4±2.3, 43°.52N×105°.41W, h0^{km}, mb1 3.4/3, mb1mx3.2/31, mbtmp3.1/3, ML3.0/3, Error ellipse: s-maj=47.0km s-min=8.3km az=150.0*

ISC 17 17:47:07.4±0.9**, 43°.57N**±0°.04×**105°.36W**±0°.05**, h0**^{km}**, n45, σ1**^{s}**.77**/46**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.11	60		Pb	17 47 29.4	-0.2
K22A	Casper	1.25	223		Pn	17 47 34.5	+2.1
K22A				IAML		17 47 57.1	
	comp=E,359nm,0.9s						
PHWY	Pilot Hill	2.27	182	Pn	Pb	17 47 48.8	-0.6
PHWY				IAML		17 48 28.5	
	comp=E,116nm,0.8s						
RWWY	Rawlins	2.32	217		Pg	17 47 52.4	+0.4
N23A	Red Feather La	2.71	189		Pb	17 47 55.3	-1.6
N23A				IAML		17 48 36.9	
	comp=N,94nm,0.9s						

N23A				IAML		17 48 57.3	
	comp=E,91nm,0.9s						
PD31	**Pinedale Array**	**3.17**	**257**		**Pn**	**17 47 59.7**	**+0.8**
PDAR	**Pinedale Array**	**3.17**	**257**	Pn	**Pn**	**17 48 02.6**	**+3.8**
	comp=E,1.4nm,0.3s,baz=71,slow=15,SNR=28						
PDAR				Lg	Lg	17 48 45.6	
	comp=E,3.4nm,0.3s,baz=75,slow=31,SNR=12						
PDAR	**Pinedale Array**	**3.17**	**257**	Pn	**Pn**	**17 48 02.0**	**+3.2**
BW06	**Boulder Array**	**3.17**	**257**		**Pn**	**17 48 00.2**	**+1.4**
BW06				IAML		17 48 50.0	
	comp=E,54nm,0.8s						
LAO	**LASA Array**	**3.18**	**349**		**Pn**	**17 48 00.9**	**+2.2**
LAO				IAML		17 48 46.6	
	comp=E,116nm,0.8s						
RLMT	**Red Lodge**	**3.21**	**300**		**Pn**	**17 48 01.6**	**+2.4**
RLMT				IAML		17 49 40.4	
	comp=E,45nm,1.1s						
YNE	**Yellowstone No**	**3.63**	**295**		**Pn**	**17 48 08.1**	**+2.9**
YMP	**Mirror Lake Pl**	**3.65**	**290**		**Pn**	**17 48 06.2**	**+0.8**
LKWY	**Lake**	**3.77**	**287**		**Pn**	**17 48 09.1**	**+2.0**
LKWY				IAML		17 49 18.6	
	comp=E,40nm,1.4s						
LKWY				IAML		17 49 56.3	
	comp=E,30nm,4.6s						
LOHW	**Long Hollow**	**3.81**	**272**		**Pb**	**17 48 14.7**	**-1.0**
LOHW				IAML		17 49 18.7	
	comp=E,25nm,1.1s						
H17A	**Grant Village**	**3.85**	**284**		**Pn**	**17 48 11.0**	**+2.7**
H17A				IAML		17 49 13.5	
	comp=N,25nm,2.9s						
H17A				IAML		17 49 22.2	
	comp=E,27nm,1.4s						
FLWY	**Flagg Ranch**	**3.90**	**279**		**Pn**	**17 48 10.2**	**+1.5**
FLWY				IAML		17 49 29.2	
	comp=E,45nm,1.2s						
FLWY				IAML		17 49 29.2	
	comp=E,38nm,1.6s						
MOOW	**Moose Ponds**	**3.91**	**274**		**Pn**	**17 48 10.6**	**+1.6**
SNOW	**Snow King Moun**	**3.93**	**270**		**Pn**	**17 48 10.3**	**+1.1**
SNOW				IAML		17 49 28.2	
	comp=E,45nm,1.1s						
SNOW				IAML		17 49 33.4	
	comp=E,47nm,1.1s						
YPP	**Pitchstone Pla**	**4.00**	**282**		**Pn**	**17 48 12.1**	**+1.9**
REDW	**Red Top Meadow**	**4.00**	**269**		**Pn**	**17 48 11.1**	**+0.8**
REDW				IAML		17 49 41.9	
	comp=E,49nm,1.0s						
O20A	**White River Ci**	**4.05**	**213**	Pn	**Pn**	**17 48 15.2**	**+4.4**
O20A				IAML		17 49 28.3	
	comp=N,50nm,1.6s						
O20A				IAML		17 49 43.5	
	comp=E,47nm,1.1s						
YMR	**Madison River**	**4.18**	**287**		**Pn**	**17 48 14.8**	**+2.1**
AHID	**Auburn Hatcher**	**4.28**	**261**		**Pn**	**17 48 15.8**	**+1.9**
AHID				IAML		17 49 32.5	
	comp=N,41nm,0.9s						
RDMU	**Red Mountain**	**4.33**	**228**		**Pn**	**17 48 15.6**	**+0.9**
YHB	**Horse Butte**	**4.36**	**288**		**Pn**	**17 48 17.2**	**+2.1**
YHL	**Hebgen Lake**	**4.38**	**289**		**Pn**	**17 48 15.6**	**+0.1**
DGMT	**Dagmar**	**4.97**	**9**		**Pn**	**17 48 22.9**	**-0.4**
HWUT	**Hardware Ranch**	**4.98**	**249**		**Pn**	**17 48 24.4**	**+0.7**
TCUT	**Toone Canyon**	**5.11**	**243**		**Pn**	**17 48 25.0**	**-0.5**
JLU	**Jordanelle**	**5.42**	**239**		**Pn**	**17 48 28.5**	**-1.1**
P17A	**Butcher Ranch,**	**5.75**	**226**		**Pn**	**17 48 32.3**	**-1.8**
HVU	**Hansel Valley**	**5.75**	**254**		**Pn**	**17 48 33.3**	**-0.8**
PV23	**Carpenter Ridg**	**5.81**	**210**		**Pn**	**17 48 36.7**	**+1.6**
PV04	**Paradox Valley**	**5.82**	**209**		**Pn**	**17 48 37.2**	**+2.0**
PV12	**Saucer Basin,**	**5.86**	**208**		**Pn**	**17 48 37.3**	**+1.6**
PV11	**David Mesa, Pa**	**5.90**	**208**		**Pn**	**17 48 36.5**	**+0.3**
PV16	**Nyswonger Mesa**	**5.90**	**208**		**Pn**	**17 48 36.7**	**+0.4**
SRU	**San Rafael Swe**	**5.91**	**223**		**Pn**	**17 48 37.8**	**+1.4**
PV03	**Paradox Valley**	**5.93**	**208**		**Pn**	**17 48 37.2**	**+0.5**
PV02	**Paradox Valley**	**5.94**	**207**		**Pn**	**17 48 37.0**	**+0.3**
PV01	**Paradox Valley**	**5.95**	**205**		**Pn**	**17 48 38.4**	**+1.5**
ULM	**Lac du Bonnet**	**9.31**	**41**	Pn	**Pn**	**17 49 21.4**	**-1.5**
	comp=N,0.4nm,0.3s,baz=231,slow=12,SNR=4.6						
ULM				Pg		17 49 49.8	
	comp=N,0.1nm,0.3s,baz=217,slow=19,SNR=1.1						
ULM				Sn	**Sn**	**17 51 06.7**	**-1.5**
	comp=N,0.3nm,0.3s,baz=179,slow=3.3,SNR=6.4						
ULM				Lg	Lg	17 51 54.5	
	comp=N,0.1nm,0.3s,baz=315,slow=6.4,SNR=3.4						
ULM	**Lac du Bonnet**	**9.31**	**41**		**Pn**	**17 49 21.8**	**-1.0**
YKA	**Yellowknife Ar**	**19.72**	**347**	P	**Pn**	**17 51 40.6**	**+1.0**
	comp=N,0.0nm,0.3s,baz=154,slow=9.6,SNR=2.5						

IDC 17 18:01:18.2±5.6**, 1°.76N**×**99°.41E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/40**, mbtmp3.4**/3**, Error ellipse: s-maj=300.0km s-min=28.4km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.48**	**124**	P	P	18 08 59.2	+0.1
	0.7nm,0.3s,baz=302,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**42.00**	**129**	P	P	18 09 11.2	-0.4
	0.2nm,0.9s,baz=300,slow=7.7,SNR=4.9						
MKAR	**Makanchi Array**	**47.27**	**344**	P	P	18 09 53.3	-0.1
	0.2nm,0.5s,baz=152,slow=9.2,SNR=5.5						

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*BJI **17** 18:17:35.5±0.0, 37°.20N×142°.06E, h47^{km}, mB5.0/22, mb4.4/33, Ms4.6/8, Ms7 4.2/4*

*MOS **17** 18:17:35.9±1.3, 37°.42N×142°.10E, h41^{km}, mb4.4/12, Error ellipse: s-maj=8.6km s-min=5.2km az=90.2*

*NEIC **17** 18:17:37.1±2.2, 37°.37N±0°.05×142°.05E±0°.07, h35^{km}±5^{km}, mb4.7/50, Error ellipse: s-maj=7.9km s-min=7.2km az=100.0*

*NIED **17** 18:17:37.8, 37°.41N×141°.91E, h44^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.28; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$-0.85; $M_{r\theta}$-0.69; $M_{\theta\phi}$0.63; $M_{\phi r}$-0.14; Fault plane solution: $M_0$2.16000×10^{15} NP1: ϕ_s292.00000°, δ53.00000°, λ78.00000°. NP2: ϕ_s131.00000°, δ39.00000°, λ105.00000°.*

*JMA **17** 18:17:37.7±0.1, 37°.41N×141°.91E, h44^{km}±3^{km}, M4.5*

JMA Felt II J1.

*IDC **17** 18:17:38.7±1.8, 37°.36N×141°.89E, h46^{km}±17^{km}, mb3.8/22, mb1 4.1/29, mb1mx4.0/41, mbtmp4.1/29, ML3.6/6, MS3.0/10, Ms1 3.0/10, ms1mx2.9/49, Error ellipse: s-maj=16.0km s-min=11.7km az=106.0*

ISC 17 18:17:38.0±0.7**, 37°.39N**±0°.04×**142°.07E**±0°.05**, h45**^{km}±6^{km}**, n191,** σ1^{s}**89**/210**, mb4.4**/61**, 10C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.95**	**269**	P	**Pn**	**18 17 53.0**	**-1.9**
JFK				S	**Sn**	**18 18 03.7**	**-3.7**
JMST	**Minamisoumatoc**	**0.99**	**290**	P	**Pn**	**18 17 53.5**	**-2.0**
JMST				S	**Sn**	**18 18 04.9**	**-3.5**
JIKH	**Ishinomakikobu**	**1.04**	**333**	P	**Pn**	**18 17 55.0**	**-1.1**
JIKH				S	**Sn**	**18 18 07.1**	**-2.3**
ONAJ	**Iwakimizuishiy**	**1.05**	**255**	P	**Pn**	**18 17 54.6**	**-1.7**
ONAJ				S	**Sn**	**18 18 06.5**	**-3.4**
JMM	**Marumori**	**1.12**	**296**	P	**Pn**	**18 17 55.6**	**-1.6**
JMM				S	**Sn**	**18 18 08.1**	**-3.3**
JMM	**Marumori**	**1.12**	**296**		**Pn**	**18 17 55.6**	**-1.6**
JMM				Sn	**Sn**	**18 18 07.8**	**-3.6**
JIO	**Ouri**	**1.21**	**332**	P	**Pn**	**18 17 57.4**	**-1.0**
JIO				S	**Sn**	**18 18 11.7**	**-1.9**
JFT	**Otama**	**1.38**	**276**	P	**Pn**	**18 17 59.9**	**-0.9**
JFT				S	**Sn**	**18 18 15.8**	**-2.1**
JOU	**Okura**	**1.48**	**312**	P	**Pn**	**18 18 01.1**	**-1.0**
JOU				S	**Sn**	**18 18 19.5**	**-0.8**
JMK	**Ichinoseki**	**1.70**	**337**	P	**Pn**	**18 18 04.8**	**-0.3**
JMK				*e*S	**Sn**	**18 18 25.0**	**-0.6**
JYS	**Shirataka**	**1.79**	**298**	P	**Pn**	**18 18 05.5**	**-0.9**
JYS				S	**Sn**	**18 18 27.0**	**-0.9**
JFY	**Yanaizu**	**1.88**	**271**	P	**Pn**	**18 18 06.7**	**-1.0**
JFY				S	**Sn**	**18 18 28.1**	**-2.1**
JYT	**Yasato**	**1.90**	**233**	Pn	**Pn**	**18 18 06.2**	**-1.6**
JYK	**Kaneyama**	**2.04**	**319**	P	**Pn**	**18 18 09.3**	**-0.5**
JYK				*e*S	**Sn**	**18 18 32.8**	**-1.2**
JSD	**Sado**	**3.09**	**283**		**Pn**	**18 18 23.1**	**-1.0**
MJAR	**Matsushiro Arr**	**3.20**	**256**	P	**Pn**	**18 18 25.6**	**-0.2**
	5.5nm,0.3s,baz=75,slow=18,SNR=252						
MJAR				S	**Sn**	**18 19 06.4**	**+3.7**
	7.3nm,0.3s,baz=90,slow=28,SNR=5.9						
MJAR				LR	LR	18 19 18.9	
	comp=Z,81nm,19.3s,baz=60,slow=33						
MJAR	**Matsushiro Arr**	**3.20**	**256**	P	**Pn**	**18 18 24.9**	**-0.9**
MJAR	**Matsushiro Arr**	**3.20**	**256**		**Pn**	**18 18 24.9**	**-0.9**
MAJO	**Matsushiro**	**3.20**	**256**	*ce*P	**Pn**	**18 18 26.0**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,118nm,0.5s						
MAJO	**Matsushiro**	**3.20**	**256**	Pn	**Pn**	**18 18 25.3**	**-0.5**
MAT	**Matsushiro**	**3.20**	**256**	P	**Pn**	**18 18 26.1**	**+0.3**
MAT				S	**Sn**	**18 19 02.2**	**-0.6**
MJB9	**Matsu-Tunnel**	**3.21**	**256**		**Pn**	**18 18 25.4**	**-0.5**
JTM	**Tenmabayashi**	**3.48**	**347**		**Pn**	**18 18 30.1**	**+0.5**
JSG	**Sagara**	**4.15**	**230**		**Pn**	**18 18 39.0**	**+0.3**
JGF	**Kuroka**	**4.19**	**246**	Pn	**Pn**	**18 18 40.5**	**+1.0**
INU	**Inuyama**	**4.55**	**245**		**Pn**	**18 18 44.8**	**+0.5**
JHJ2	**Mitsune**	**4.65**	**204**	Pn	**Pn**	**18 18 44.2**	**-1.4**
JHJ	**Hachijo jima 2**	**4.65**	**204**	P	**Pn**	**18 18 43.9**	**-1.8**
	comp=Z,142nm,0.3s,baz=97,slow=6.1,SNR=12						
JHJ				S	**Sn**	**18 19 34.3**	**-4.1**
	comp=Z,132nm,0.3s,baz=84,slow=22,SNR=8.2						
ERM	**Erimo**	**4.70**	**10**	*de*P	**Pn**	**18 18 45.4**	**-0.9**
ERM	**Erimo**	**4.70**	**10**	Pn	**Pn**	**18 18 45.6**	**-0.7**
JEW	**Eniwo**	**5.47**	**355**		**Pn**	**18 18 57.1**	**+0.3**
JWT	**Wachi**	**5.78**	**251**	Pn	**Pn**	**18 19 02.0**	**+0.9**
NMR	**Nemuro--Hokkai**	**6.60**	**24**	*c i*P	**Pn**	**18 19 10.3**	**-2.0**
NMR				*i* S	**Sn**	**18 20 18.9**	**-7.2**
ASAJ	**Asahikawa**	**6.73**	**3**	P	**Pn**	**18 19 13.6**	**-0.7**
	comp=Z,9.1nm,0.3s,baz=206,slow=14,SNR=65						
ASAJ				S	**Sn**	**18 20 27.9**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=356,slow=34,SNR=2.1						
JKA	**Kamikawa-asahi**	**6.73**	**3**	Pn	**Pn**	**18 19 13.2**	**-1.0**
JKA	**Kamikawa-asahi**	**6.73**	**3**		**Sn**	**18 20 27.9**	**-1.6**
GRPR	**Tuman**	**7.17**	**22**	*e*P	**Pn**	**18 19 19.1**	**-1.1**
GRPR				*i* S	**Sn**	**18 20 33.5**	**-6.8**
GRPR				pmax	pmax		
	comp=Z,210nm,0.3s						
GRPR				pmax	pmax		
	comp=E,151nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**7.24**	**22**	*e*P	**Pn**	**18 19 20.1**	**-1.0**
YUK				*e*S	**Sn**	**18 20 36.6**	**-5.3**
YUK				pmax	pmax		
	comp=N,104nm,0.3s						
YUK				pmax	pmax		
	comp=E,58nm,0.3s						
YUK				pmax	pmax		
	comp=Z,218nm,0.3s						
JMN	**Monobe**	**7.60**	**244**	Pn	**Pn**	**18 19 26.0**	**-0.3**
JHS	**Saijyo**	**7.62**	**254**	Pn	**Pn**	**18 19 27.6**	**+1.2**
TEY	**Ternei**	**8.68**	**333**	*e*P	Pn	18 19 46.2	+5.4
KUR	**Kuril'sk**	**8.97**	**27**	*e*P	**Pn**	**18 19 44.4**	**-0.4**
KUR				*e*S	**Sn**	**18 21 19.1**	**-5.3**
KUR				pmax	pmax		
	comp=Z,44nm,0.9s						
KUR				smax	smax		
	comp=N,70nm,0.4s						
KUR				smax	smax		
	comp=E,55nm,0.3s						
YSS	**Yuzh-Sakhalins**	**9.57**	**3**	*e*P	**Pn**	**18 19 52.6**	**-0.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**9.57**	**3**	Pn	**Pn**	**18 19 53.5**	**+0.4**
JNU	**Nakatsue**	**10.09**	**248**	P	**Pn**	**18 19 59.9**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=81,slow=13,SNR=1.9						
JNU				LR	LR	18 24 09.7	
	comp=Z,130nm,19.8s,baz=82,slow=39						
JNU	**Nakatsue**	**10.09**	**248**	Pn	**Pn**	**18 19 58.6**	**-1.7**
USA0B	**Ussuriysk Arra**	**10.22**	**315**	P	**Pn**	**18 20 02.8**	**+0.8**
USA0B	**Ussuriysk Arra**	**10.22**	**315**	Pn	**Pn**	**18 20 02.8**	**+0.8**
USRK	**Ussuriysk Ar.**	**10.22**	**315**	P	**Pn**	**18 20 02.4**	**+0.3**
	baz=120,slow=14,SNR=8.8						
USRK				LR	LR	18 23 35.5	
	comp=Z,145nm,20.5s,baz=137,slow=35						
JCJ	**Chichijima**	**10.26**	**179**	Pn	**Pn**	**18 20 01.9**	**-0.7**
KSRS	**Korea Array**	**11.25**	**275**	P	**Pn**	**18 20 19.8**	**+3.7**
	comp=Z,0.5nm,0.3s,baz=86,slow=14,SNR=15						
KSRS				LR	LR	18 24 18.7	
	comp=Z,78nm,20.3s,baz=94,slow=36						
KSAR	**Wonju Array Be**	**11.28**	**275**	P	**Pn**	**18 20 18.4**	**+1.9**
KSAR	**Wonju Array Be**	**11.28**	**275**	Pn	**Pn**	**18 20 18.4**	**+1.9**
KS19	**Wonju Array Si**	**11.29**	**275**	Pn	**Pn**	**18 20 15.8**	**-0.8**
TYV	**Tymovskoe**	**13.48**	**2**	*e*P	**Pn**	**18 20 48.6**	**+2.2**
TYV				*e*S	**Sn**	**18 23 21.1**	**+6.5**
TYV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,3.8s						
TYV				smax	smax		
	comp=E,300nm,4.3s						
KLR	**Kul'dur**	**14.00**	**331**	P	**Pn**	**18 20 55.4**	**+1.9**
	comp=E,0.1nm,0.3s,baz=187,slow=13,SNR=1.9						
KLR				LR	LR	18 25 58.3	
	comp=E,97nm,21.7s,baz=140,slow=36						
DL2	**Dalian**	**16.15**	**282**	*e*P	**P**	**18 21 29.1**	**+4.7**
DL2				pmax	pmax		
	comp=Z,24nm,0.7s						
PEA0B	**Petropavlovsk-**	**19.12**	**30**	P	**P**	**18 21 57.2**	**+0.2**
PEA0B				pmax	pmax		
	comp=Z,70nm,1.5s						
PEA0B	**Petropavlovsk-**	**19.12**	**30**		**P**	**18 21 57.2**	**+0.2**
PEA0B				IAmb	IAmb	18 22 15.6	
	comp=Z,70nm,1.5s						
PETK	**Petropavlovsk-**	**19.12**	**30**	P	**P**	**18 21 56.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=197,slow=9.3,SNR=4.6						
PETK	**Petropavlovsk-**	**19.12**	**30**	Pn	**Pn**	**18 21 58.8**	**+0.6**
ZEA	**Zeya**	**19.30**	**333**	*e*P	**P**	**18 21 57.8**	**-1.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2	**Nanjing**	**19.79**	**261**	*e*P	**P**	**18 22 02.9**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YHNB	**Yeheng**	**21.74**	**240**	P	**P**	**18 22 27.2**	**+1.5**
NACB	**Ninganchiao**	**21.91**	**239**	P	**P**	**18 22 26.7**	**-0.8**
NACB				IAmb	IAmb	18 23 00.2	
	comp=Z,56nm,1.3s						
SSLB	**Suanglung**	**22.61**	**239**	P	**P**	**18 22 30.3**	**-4.7**
SSLB				IAmb	IAmb	18 22 58.8	
	comp=Z,74nm,1.6s						
YULB	**Yu-li**	**22.64**	**238**	P	**P**	**18 22 34.7**	**-0.6**
MA2	**Magadan**	**22.90**	**11**	P	**P**	**18 22 35.9**	**-1.8**
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
MA2	**Magadan**	**22.90**	**11**	P	**P**	**18 22 35.9**	**-1.8**
TWG	**Pinlang**	**23.18**	**237**	P	**P**	**18 22 40.2**	**-0.6**
TWG				IAmb	IAmb	18 23 31.3	
	comp=Z,50nm,1.2s						
GUMO	**Guam**	**23.83**	**173**	LR	LR	18 32 16.8	
	comp=Z,20nm,21.7s,baz=356,slow=37						
HHC	**Hu-ho-hao-te**	**23.86**	**288**	*e*P	**P**	**18 22 46.6**	**-0.6**
HHC				S	**S**	**18 26 49.5**	**-11**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,4.7s						
HHC				LR	LR		
	comp=Z,140nm,11.7s						
HHC				LR	LR		
	comp=Z,260nm,12.9s						
YAK	**Yakutsk**	**25.84**	**347**	*e*P	**P**	**18 23 03.9**	**-1.0**
YAK				*e**PP	**pP**	**18 23 13.4**	**-3.1**
YAK				*e*		18 23 41.6	
YAK				*e*PPP	PPP	18 23 54.5	
YAK				*e*		18 26 34.1	
YAK				*e*S	**S**	**18 27 31.5**	**+0.3**
YAK				*e**SS	**sS**	**18 27 54.4**	**+3.7**
YAK				*e*SS	**SnSn**	**18 28 32.9**	**+2.9**
YAK				*e*SSS	SSS	18 28 48.8	
YAK				*e*		18 33 56.1	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,64nm,2.8s						
YAK				pmax	pmax		
	comp=N,57nm,3.0s						
YAK				pmax	pmax		
	comp=E,57nm,3.2s						
YAK				smax	smax		
	comp=N,124nm,3.5s						
YAK				smax	smax		
	comp=E,100nm,3.7s						
YAK	**Yakutsk**	**25.84**	**347**	P	**P**	**18 23 05.0**	**+0.1**
YAK				IAmb	IAmb	18 23 05.3	
	comp=Z,12nm,0.6s						
SEY	**Seymchan**	**26.34**	**11**	P	**P**	**18 23 10.7**	**+1.3**
	comp=Z,3.1nm,0.7s,baz=205,slow=11,SNR=15						
ULN	**Ulaanbaatar**	**27.59**	**303**	⇓*e*P	**P**	**18 23 21.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ULN	**Ulaanbaatar**	**27.59**	**303**	P	**P**	**18 23 21.1**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**27.89**	**122**	T	T	18 52 55.5	
	baz=315,slow=75,SNR=266						
H11N1	**WAKE ISLAND Hy**	**27.90**	**122**	T	T	18 53 01.8	
	baz=315,slow=75,SNR=324						
H11N3	**WAKE ISLAND Hy**	**27.91**	**122**	T	T	18 52 57.0	
	baz=315,slow=75,SNR=375						
SONM	**Songino Array**	**28.02**	**303**	P	**P**	**18 23 24.4**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=97,slow=8.9,SNR=6.4						
SONM				LR	LR	18 34 27.2	
	comp=Z,36nm,21.4s,baz=26,slow=36						
SONM	**Songino Array**	**28.02**	**303**	P	**P**	**18 23 24.9**	**+0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**28.02**	**303**	P	**P**	**18 23 24.9**	**+0.1**
H11S1	**WAKE ISLAND Hy**	**28.62**	**124**	T	T	18 53 51.5	
	baz=317,slow=76,SNR=190						
H11S3	**WAKE ISLAND Hy**	**28.62**	**124**	T	T	18 53 59.0	
	baz=317,slow=76,SNR=250						
H11S2	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	18 53 51.1	
	baz=317,slow=76,SNR=157						
LZH	**Lanzhou**	**30.52**	**279**	*e*P	**P**	**18 23 46.3**	**-0.9**
LZH				pP	pP	18 23 57.3	-1.6
LZH				sP	sP	18 24 02.5	-1.7
LZH				PP	**PnPn**	**18 24 47.0**	**-0.3**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,82nm,5.2s						
GYA	**Guiyang**	**31.79**	**260**	⇓P	**P**	**18 23 59.9**	**+1.5**
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
TIXI	**Tiksi**	**35.00**	**353**	⇓*e*P	**P**	**18 24 24.7**	**-0.9**
KMI	**Kunming**	**35.53**	**261**	⇓P	**P**	**18 24 30.8**	**-0.2**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
UBPT	**Khong Chiam**	**39.15**	**246**	P	**P**	**18 25 02.5**	**+1.0**
SIJI	**Sorong**	**39.36**	**197**	LR	LR	18 38 07.0	
	comp=Z,51nm,20.6s,baz=58,slow=31						
DGZ	**Jazzator, Alta**	**40.61**	**306**	⇓*e*P	**P**	**18 25 14.1**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FAKI	**Fak Fak**	**41.13**	**195**	P	**P**	**18 25 18.0**	**+0.2**
WMQ	**Urumqi**	**41.15**	**297**	*e*P	**P**	**18 25 18.6**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
WMQ				LR	LR		
	comp=Z,730nm,29.0s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ				LR	LR		
	comp=Z,440nm,28.9s						
CHTO	**Chiang Mai**	**41.88**	**256**	P	**P**	**18 25 24.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,12nm,1.8s						
CHTO	**Chiang Mai**	**41.88**	**256**	P	**P**	**18 25 24.3**	**+0.2**
ZAA0	**Zalesovo Array**	**42.06**	**312**	P	**P**	**18 25 23.7**	**-1.4**
ZALV	**Zalesovo Beam**	**42.06**	**312**	P	**P**	**18 25 25.1**	**0.0**
	comp=Z,1.6nm,0.6s,baz=76,slow=6.3,SNR=6.3						
ZALV				PcP	**PcP**	**18 27 19.2**	**0.0**
	comp=Z,1.0nm,0.7s,baz=0.0,slow=0.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**42.06**	**312**	P	**P**	**18 25 24.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**42.09**	**255**	P	**P**	**18 25 25.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=50,slow=7.3,SNR=4.6						
CMAR				LR	LR	18 44 28.7	
	comp=Z,9.9nm,18.7s,baz=65,slow=38						
CMAR	**Chiang Mai Arr**	**42.09**	**255**	P	**P**	**18 25 26.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**42.09**	**255**	P	**P**	**18 25 26.5**	**+0.7**
MK31	**Makanchi Array**	**44.37**	**302**	P	**P**	**18 25 43.1**	**-0.8**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	**Makanchi Array**	**44.37**	**302**	P	**P**	**18 25 43.0**	**-0.8**
MKAR	**Makanchi Array**	**44.37**	**302**	P	**P**	**18 25 43.5**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=90,slow=9.6,SNR=16						
MKAR				LR	LR	18 43 59.6	
	comp=Z,31nm,18.7s,baz=358,slow=36						
MKAR	**Makanchi Array**	**44.37**	**302**	P	**P**	**18 25 43.3**	**-0.6**
MAKZ	**Makanchi**	**44.58**	**302**	P	**P**	**18 25 44.9**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	**Makanchi**	**44.58**	**302**	P	**P**	**18 25 44.9**	**-0.6**
KSM	**Kuching**	**46.17**	**227**	P	**P**	**18 25 57.0**	**-1.4**
RSO	**Redoubt South**	**46.30**	**38**	P	**P**	**18 25 57.8**	**-1.4**
BWN	**Browne**	**47.81**	**33**	P	**P**	**18 26 10.7**	**+0.1**
IL31		**48.92**	**33**	P	**P**	**18 26 19.5**	**+0.4**
IL31				IAmb	IAmb	18 26 37.0	
	comp=Z,9.0nm,1.2s						
ILAR	**Eielson Array**	**48.92**	**33**	P	**P**	**18 26 20.6**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=267,slow=6.6,SNR=8.5						
ILAR	**Eielson Array**	**48.92**	**33**	P	**P**	**18 26 18.3**	**-0.8**
SOEI	**Soe**	**49.78**	**203**	P	**P**	**18 26 25.7**	**-0.6**
BRVK	**Borovoye**	**50.77**	**312**	⇑*e*P	**P**	**18 26 33.8**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	**Borovoye**	**50.77**	**312**	P	**P**	**18 26 33.2**	**-0.3**
AAK	**Ala-Archa**	**50.78**	**298**	⇑*e*P	**P**	**18 26 35.7**	**+1.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**50.78**	**298**	P	**P**	**18 26 32.9**	**-1.0**
HON	**Honolulu**	**53.80**	**90**	P	**P**	**18 26 54.0**	**-2.3**
HON				pmax	pmax		
	comp=Z,113nm,1.1s						
HON	**Honolulu**	**53.80**	**90**	P	**P**	**18 26 54.0**	**-2.3**
GSI	**Gunungsitoli**	**54.43**	**239**	P	**P**	**18 27 01.3**	**+0.4**
ARU	**Arti**	**56.44**	**319**	*c i*P	**P**	**18 27 14.4**	**-0.4**
ARU						18 29 17.4	
ARU				S	**S**	**18 35 04.4**	**+2.0**
ARU				SS	**SS**	**18 38 49.2**	**-0.1**
ARU				pmax	pmax		
	comp=Z,11nm,1.9s						
ARU	**Arti**	**56.44**	**319**	P	**P**	**18 27 13.8**	**-1.1**
ARU				IAmb	IAmb	18 27 28.8	
	comp=Z,9.2nm,1.2s						
C36M	**Paulatuk**	**56.89**	**25**	P	**P**	**18 27 18.7**	**+0.9**
C36M				IAmb	IAmb	18 27 23.7	
	comp=Z,5.7nm,1.2s						
WB0	**Warramunga Arr**	**57.31**	**189**	P	**P**	**18 27 21.1**	**-0.2**
WB0				IAmb	IAmb	18 27 21.5	
	comp=Z,4.0nm,0.6s						
WRAB	**Tennant Creek**	**57.48**	**189**	P	**P**	**18 27 22.4**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRAB	**Tennant Creek**	**57.48**	**189**	P	**P**	**18 27 22.4**	**-0.1**
WRAB				IAmb	IAmb	18 27 23.8	
	comp=Z,4.6nm,0.9s						
WR0	**Warramunga Arr**	**57.48**	**188**	P	**P**	**18 27 22.3**	**-0.2**
WR0				IAmb	IAmb	18 27 23.4	
	comp=Z,16nm,1.5s						
WB2	**Warramunga Arr**	**57.48**	**189**	P	**P**	**18 27 22.2**	**-0.4**
WB2				IAmb	IAmb	18 27 37.1	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**57.49**	**189**	P	**P**	**18 27 22.3**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=6.7,slow=7.4,SNR=49						
WRA	**Warramunga Arr**	**57.49**	**189**	P	**P**	**18 27 21.7**	**-0.9**
WRA	**Warramunga Arr**	**57.49**	**189**	P	**P**	**18 27 21.7**	**-0.9**
ABKAR	**Akbulak array**	**58.11**	**310**	P	**P**	**18 27 26.0**	**-0.7**
ABKAR	**Akbulak array**	**58.11**	**310**	P	**P**	**18 27 26.0**	**-0.7**
ABKAR				IAmb	IAmb	18 27 39.8	
	comp=Z,7.8nm,1.6s						
EUNU	**Eureka**	**59.76**	**9**	P	**P**	**18 27 36.2**	**-1.6**
EUNU				IAmb	IAmb	18 28 10.4	
	comp=Z,8.7nm,1.4s						
AS31	**Alice Springs**	**61.21**	**189**	P	**P**	**18 27 46.2**	**-2.1**
ASAR	**Alice Springs**	**61.21**	**189**	P	**P**	**18 27 48.3**	**0.0**
	comp=Z,2.2nm,0.8s,baz=6.7,slow=6.1,SNR=26						
ASAR	**Alice Springs**	**61.21**	**189**	P	**P**	**18 27 46.6**	**-1.6**
RES	**Resolute Bay**	**62.13**	**15**	P	**P**	**18 27 54.8**	**+1.0**
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RES	**Resolute Bay**	**62.13**	**15**	P	**P**	**18 27 54.8**	**+1.0**
RES				IAmb	IAmb	18 29 34.7	
	comp=Z,5.5nm,1.2s						
YKA	**Yellowknife Ar**	**63.24**	**30**	P	**P**	**18 28 02.6**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=305,slow=5.9,SNR=9.9						
ARCES	**ARCESS Array B**	**63.85**	**339**	P	**P**	**18 28 05.8**	**+0.5**
	comp=Z,9.1nm,1.1s,baz=36,slow=7.8,SNR=1.7						
GEYT	**Alibeck**	**64.12**	**299**	P	**P**	**18 28 07.5**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=228,slow=52,SNR=2.0						
OBN	**Obninsk**	**68.12**	**323**	*e*P	**P**	**18 28 34.4**	**+1.4**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						

FIA1	FINESS Array S	68.74	332	P	P	18 28 36.7	-0.1
FINES	FINESS Array B	68.74	332	P	P	18 28 36.8	0.0
	comp=Z,2.2nm,0.7s,baz=48,slow=5.7,SNR=7.5						
FINES	FINESS Array B	68.74	332	P	P	18 28 36.6	-0.2
STKA	Stephens Creek	68.91	180	P	P	18 28 38.2	+0.2
	comp=Z,3.1nm,0.7s,baz=342,slow=3.4,SNR=8.6						
STKA	Stephens Creek	68.91	180	P	P	18 28 38.3	+0.2
STKA				pmax	pmax		
	comp=Z,6.0nm,1.8s						
STKA	Stephens Creek	68.91	180	P	P	18 28 38.3	+0.2
F07A	Phinny Hill Vi	69.19	48	P	P	18 28 38.9	-0.9
F07A				IAmb	IAmb	18 29 37.6	
	comp=Z,14nm,1.3s						
PINE	Pine Mountain	69.71	50	P	P	18 28 44.7	+1.3
PINE				IAmb	IAmb	18 30 37.2	
	comp=Z,14nm,1.1s						
KBZ	Khabaz	71.06	311	P	P	18 28 52.0	+0.6
	comp=Z,1.9nm,0.9s,baz=354,slow=12,SNR=2.3						
KBZ	Khabaz	71.06	311	⇑*e*P	P	18 28 51.4	+0.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	Kislovodsk	71.07	311	*e*P	P	18 28 50.8	-0.7
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
BEKR	Beckworth	72.23	53	P	P	18 29 00.1	+1.4
NC204	NORSAR Array S	74.01	338	P	P	18 29 09.4	+0.7
NB201	NORSAR Array S	74.03	337	P	P	18 29 08.9	+0.2
NB2	NORSAR Subarra	74.06	337	P	P	18 29 09.1	+0.2
	comp=Z,0.6nm,0.6s,baz=37,slow=6.2						
NOA	NORSAR Array B	74.06	337	P	P	18 29 08.4	-0.5
	comp=Z,1.7nm,0.9s,baz=38,slow=5.9,SNR=3.7						
AKASG	Malin Array Be	74.33	323	P	P	18 29 10.2	-0.4
	comp=Z,0.8nm,0.4s,baz=45,slow=6.2,SNR=8.6						
AKASG	Malin Array Be	74.33	323	c*e*P	P	18 29 10.1	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	74.33	323	⇑*e*P	P	18 29 13.8	+3.2
LHV	Little Huntoon	74.33	54	P	P	18 29 12.2	+1.4
LHV				IAmb	IAmb	18 29 21.2	
	comp=Z,9.9nm,1.5s						
NVAR	Mina Array Bea	74.36	54	P	P	18 29 13.8	+2.4
	comp=Z,1.2nm,0.7s,baz=291,slow=5.7,SNR=12						
NVAR	Mina Array Bea	74.36	54	P	P	18 29 11.6	+0.3
FRB	Frobisher Bay	76.31	13	P	P	18 29 22.4	+0.7
	comp=Z,1.5nm,0.4s,baz=329,slow=6.4,SNR=4.4						
TPNV	Topopah Spring	76.55	54	P	P	18 29 25.7	+1.9
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TPNV	Topopah Spring	76.55	54	P	P	18 29 25.7	+1.9
TPNV				IAmb	IAmb	18 29 41.4	
	comp=Z,4.3nm,1.1s						
DUG	Dugway, Tooele	76.73	49	P	P	18 29 27.1	+2.4
DUG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DUG	Dugway, Tooele	76.73	49	P	P	18 29 27.1	+2.4
PDAR	Pinedale Array	77.05	46	P	P	18 29 28.2	+1.6
	comp=Z,0.9nm,0.7s,baz=282,slow=3.3,SNR=8.7						
PDAR	Pinedale Array	77.05	46	P	P	18 29 27.5	+0.9
BUR08	Bucovina Ar. S	78.34	322	P	P	18 29 34.6	+1.1
BUR08				IAmb	IAmb	18 31 05.7	
	comp=Z,19nm,1.8s						
BURAR	Bucovina Array	78.36	322	P	P	18 29 34.6	+1.0
BRTR	Keskin Array B	79.00	312	P	P	18 29 37.8	+0.4
	comp=Z,0.4nm,0.6s,baz=69,slow=7.9,SNR=3.7						
BRTR	Keskin Array B	79.00	312	c*e*P	P	18 29 39.5	+2.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
PV17	East Wray Mesa	80.26	49	P	P	18 29 46.2	+1.8
PV17				IAmb	IAmb	18 29 46.7	
	comp=Z,28nm,1.7s						
SPX	San Pedro Mart	80.64	58		P	18 29 48.7	+2.0
SPX				IAmb	IAmb	18 30 19.4	
	comp=Z,15nm,1.7s						
RAYN	Ar Rayn	81.00	293	P	P	18 29 47.8	-0.5
RAYN				pmax	pmax		
	comp=Z,12nm,1.8s						
RAYN	Ar Rayn	81.00	293	P	P	18 29 47.8	-0.5
RAYN				IAmb	IAmb	18 31 28.2	
	comp=Z,12nm,1.8s						
CLL	Collm	81.05	330	*e*P	P	18 29 49.0	+1.0
CLL	Collm	81.05	330	*e*P	P	18 29 49.0	+1.0
GERES	GERESS Array B	82.68	329	P	P	18 29 56.8	0.0
	comp=Z,0.4nm,0.4s,baz=45,slow=5.8,SNR=5.5						
ANMO	Albuquerque	83.96	50	⇑*e*P	P	18 30 05.4	+1.6
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TXAR	Lajitas Array	89.49	53	P	P	18 30 32.3	+1.6
	comp=Z,0.6nm,0.5s,baz=307,slow=2.8,SNR=9.8						
H03N2	Juan Fernandez	146.54	96	T	T	21 21 36.7	
	baz=291,slow=76,SNR=24						
H03N3	Juan Fernandez	146.55	96	T	T	21 21 30.9	
	baz=291,slow=76,SNR=22						
H03N1	Juan Fernandez	146.56	96	T	T	21 21 40.6	
	baz=291,slow=76,SNR=25						

IDC 17 18:30:52.5±5.2**, 55°.69S**×**151°.15W, h0^{km}, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.6**/34**, mbtmp3.6**/2**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.8**/18**, Error ellipse: s-maj=446.3km s-min=59.0km az=165.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	27.32	200	LR	LR	18 45 36.9	
	comp=Z,48nm,18.0s,baz=280,slow=32						
URZ	Urewera	27.45	296	LR	LR	18 46 02.7	
	comp=Z,24nm,19.1s,baz=212,slow=33						
H03S2	Juan Fernandez	53.08	98	T	T	19 37 05.0	
	baz=219,slow=74,SNR=29						
H03S1	Juan Fernandez	53.08	98	T	T	19 37 09.1	
	baz=219,slow=74,SNR=32						
H03S3	Juan Fernandez	53.09	98	T	T	19 37 07.9	
	baz=219,slow=74,SNR=25						
H03N3	Juan Fernandez	53.36	97	T	T	19 37 20.6	
	baz=222,slow=72,SNR=40						
H03N2	Juan Fernandez	53.37	97	T	T	19 37 18.6	
	baz=222,slow=72,SNR=105						
H03N1	Juan Fernandez	53.38	97	T	T	19 37 25.7	
	baz=222,slow=72,SNR=42						
ASAR	Alice Springs	62.37	268	P	P	18 41 16.8	-0.1
	0.7nm,0.7s,baz=137,slow=6.5,SNR=9.8						
H01W1	Cape Leeuwin H	64.45	245	T	T	19 51 28.5	
	baz=141,slow=76,SNR=5.0						
H01W2	Cape Leeuwin H	64.46	245	T	T	19 51 35.6	
	baz=141,slow=76,SNR=5.3						
H01W3	Cape Leeuwin H	64.47	245	T	T	19 51 29.7	
	baz=141,slow=76,SNR=6.6						
WRA	Warramunga Arr	65.06	271	P	P	18 41 35.0	+0.4
	0.4nm,0.8s,baz=145,slow=5.6,SNR=2.4						
ILAR	Eielson Array	120.18	2	PKP	PKiKP	18 49 44.4	+0.5
	0.4nm,0.7s,baz=237,slow=2.2,SNR=4.1						
MKAR	Makanchi Array	146.16	278	PKPbc	PKPbc	18 50 33.3	-0.5
	1.5nm,0.8s,baz=115,slow=4.2,SNR=15						
ZALV	Zalesovo Beam	148.45	291	PKPbc	PKPdf	18 50 37.2	+1.1
	0.4nm,0.4s,baz=113,slow=3.7,SNR=2.3						

DJA 17 18:34:28.2±0.4**, 7°S**±4°×**12°1E**±°**, h10^{km}, M3.5**/7**, MLv3.5**/7**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSI	Bau Bau, Buton	1.15	308	P	Pb	18 34 48.4	-1.7
BSSI				S	Sb	18 35 04.9	-0.1
EDFI	Ende, Flores	1.91	171	P	Pn	18 35 00.9	0.0
EDFI				S	Sn	18 35 25.8	+0.7
MMRI	Maumere	1.96	155	P	Pn	18 35 01.5	0.0
BKSI	Bulukumba	1.98	320	P	Pn	18 35 00.0	-1.8
BNSI	Bone	2.75	332	P	Pn	18 35 10.8	-1.6
SPSI	Sidrap Palu	3.29	330	P	Pn	18 35 21.5	+1.6
PLAI	Plampang	4.09	241	P	Pb	18 35 43.1	+2.7

IDC ***17*** *18:35:52.1±0.5, 27°.14N×140°.26E, h388^{km}±5^{km}, mb3.6/26, mb1 3.7/31, mb1mx3.6/52, mbtmp4.3/31, Error ellipse: s-maj=10.4km s-min=8.9km az=89.0*

NEIC ***17*** *18:35:53.0±1.8, 27°.11N±0°.07×140°.25E±0°.09, h396^{km}±6^{km}, mb4.3/143, Error ellipse: s-maj=12.1km s-min=9.7km az=127.0*

JMA ***17*** *18:35:55.0±0.2, 27°.52N×140°.98E, h398^{km}±3^{km}, M4.2*

ISC 17 18:35:52.6±0.6**, 27°.21N**±0°.05×**140°.31E**±0°.06**, h392^{km}**±6^{km}**, n239,** σ1^{s}61/265**, mb4.2**/95**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.67	93	P	Pn	18 36 46.7	+0.8
CBIJ				*e*S	S	18 37 27.0	-1.9
JCJ	Chichijima	1.67	93	P	Pn	18 36 46.8	+0.9
	197nm,0.3s,baz=341,slow=20,SNR=30						
JCJ				S	S	18 37 27.4	-1.4
	177nm,0.3s,baz=300,slow=23,SNR=8.1						
JHH2	Haha-jima-NKT2	1.76	109	P	Pn	18 36 47.7	+1.3
JHJ2	Mitsune	5.90	356	P	Pn	18 37 25.0	+1.3
JHJ2				*e*S	S	18 38 35.0	-3.0
JHJ2	Mitsune	5.90	356	Pn	Pn	18 37 25.2	+1.5
JHJ2				S	S	18 38 34.9	-3.0
JHJ	Hachijo jima 2	5.91	356	P	Pn	18 37 25.1	+1.3
	65nm,0.3s,baz=65,slow=22,SNR=10						
JHJ				S	S	18 38 35.3	-2.9
	23nm,0.3s,baz=71,slow=23,SNR=1.2						
TTO1	TONANKAI O.B.S	7.08	335	P	P	18 37 41.0	+3.7
BSO1	Boso 1	7.44	4	P	P	18 37 41.3	+0.3
BSO3	Boso 3	7.57	1	P	P	18 37 43.2	+0.4
BSO3				*e*S	S	18 39 07.3	-4.5
JSG	Sagara	7.66	347	P	P	18 37 46.9	+2.8
BSO4	Boso 4	7.76	0	P	P	18 37 44.7	-0.3
JIE	Ise	7.80	337	P	P	18 37 48.7	+3.1
JKN2	Miekihoku	7.82	335	P	P	18 37 48.2	+2.4
HMMJ	Hamamatsu 2	7.94	344	P	P	18 37 48.8	+1.6
JOD2	Odawara 2	8.10	353	P	P	18 37 49.2	+0.1
JOD2				*e*S	S	18 39 19.2	-4.2
JMZ	Minamidaito 2	8.26	262	P	P	18 37 52.1	+1.1
JAO	Obara	8.45	343	P	P	18 37 54.9	+1.8
JMN	Monobe	8.54	321	P	P	18 37 57.6	+3.4
INU	Inuyama	8.59	342	P	P	18 37 56.6	+2.0
JHU	Hanno	8.66	354	P	Pn	18 37 54.6	-0.3
JHU				*e*S	S	18 39 29.4	-6.0
JGF	Kuroka	8.74	344	P	P	18 37 57.9	+1.6
JRY	Ryogami san	8.86	353	P	P	18 37 58.0	+0.3
JRY				*e*S	S	18 39 35.2	-4.5
JYT	Yasato	8.99	359	*e*S	S	18 39 37.5	-4.9
JYT	Yasato	8.99	359		Pn	18 37 58.7	0.0
JWT	Wachi	9.08	334	P	P	18 38 03.1	+3.1
JAG	Ashikaga	9.22	356	P	Pn	18 38 00.8	-0.6
JAG				*e*S	S	18 39 40.8	-6.4
JHO	Hitachi	9.38	1	P	P	18 38 03.7	+0.4
MJAR	Matsushiro Arr	9.47	350	P	Pn	18 38 04.2	-0.2
	0.3nm,0.3s,baz=167,slow=11,SNR=20						
MJAR				S	S	18 39 43.7	-8.9
	0.2nm,0.3s,baz=152,slow=14,SNR=4.4						
MJAR	Matsushiro Arr	9.47	350	P	Pn	18 38 03.7	-0.7
MAJO	Matsushiro	9.48	350	P	P	18 38 05.1	+0.6
MAT	Matsushiro	9.48	350	P	P	18 38 04.6	+0.1
MAT				S	S	18 39 49.4	-3.2
JSU	Suzuyama	9.60	299	P	P	18 38 06.1	+0.1
JHS	Saijyo	9.91	323	P	Pn	18 38 12.9	+3.4
JNU	Nakatsue	10.06	308	P	Pn	18 38 15.0	+3.7
	3.8nm,0.3s,baz=35,slow=2.0,SNR=22						
JNU	Nakatsue	10.06	308	P	Pn	18 38 15.2	+3.9
JFK	Kawauchi	10.14	3	P	Pn	18 38 12.2	+0.1
JMM	Marumori	10.63	2	P	Pn	18 38 19.2	+1.4
JOW	Kunigami	10.74	271		Pn	18 38 19.0	-0.2
JMK	Ichinoseki	11.74	3	P	Pn	18 38 31.0	+0.4
JTU	Tsushima	11.87	311	P	Pn	18 38 34.2	+1.9
JTM	Tenmabayashi	13.56	2	P	Pn	18 38 51.6	-0.2
GUMO	Guam	14.21	162	P	P	18 38 54.6	-2.3
KSRS	Korea Array	14.61	317	P	P	18 39 02.1	+1.1
	0.5nm,0.3s,baz=138,slow=11,SNR=13						
KSAR	Wonju Array Be	14.63	317	P	Pn	18 39 04.1	+0.3
KS19	Wonju Array Si	14.68	317	P	Pn	18 39 03.1	-1.3
ERM	Erimo	14.96	8	P	Pn	18 39 07.9	+0.5
JEW	Eniwo	15.62	3	P	Pn	18 39 14.5	-0.6
YOJ	Yonaguni jima	15.81	264	P	P	18 39 15.1	+0.8
ASAJ	Asahikawa	16.97	6	P	P	18 39 28.5	+2.2
	0.4nm,0.3s,baz=302,slow=32,SNR=1.2						
JKA	Kamikawa-asahi	16.97	6	P	P	18 39 28.3	+1.9
NACB	Ninganchiao	17.14	264	P	P	18 39 27.5	-0.9
NACB				IAmb	IAmb	18 39 39.4	
	comp=Z,37nm,1.1s						
YHNB	Yeheng	17.22	266	P	P	18 39 28.9	-0.4
YULB	Yu-li	17.61	262	P	P	18 39 33.4	+0.1
YULB				IAmb	IAmb	18 39 36.6	
	comp=Z,60nm,1.6s						
SSLB	Suanglung	17.80	263	P	P	18 39 35.9	+0.4
TWG	Pinlang	17.97	260	P	P	18 39 38.3	+1.0
USA0B	Ussuriysk Arra	18.23	341	P	P	18 39 42.0	+2.2
USA0B				IAmb	IAmb	18 39 43.5	
	comp=Z,15nm,0.7s						
USRK	Ussuriysk Ar.	18.23	341	P	P	18 39 40.9	+1.2
	baz=162,slow=9.3,SNR=24						
USRK	Ussuriysk Ar.	18.23	341	P	P	18 39 42.2	+2.4
MDJ	Mudanjiang	19.39	336	P	P	18 39 53.0	+1.3
MDJ				IAmb	IAmb	18 39 55.8	
	comp=Z,15nm,1.3s						
CN2	Changchun	20.45	328	*e*P	P	18 40 08.3	+6.7
KLR	Kul'dur	22.96	346	P	P	18 40 25.7	+1.4
	comp=Z,4.3nm,0.5s,baz=167,slow=7.2,SNR=25						
ENH	Enshi	27.16	284	P	P	18 41 01.6	-0.4
XAN	Xi'an	27.78	292	P	P	18 41 07.4	-0.1
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
FAKI	Fak Fak	30.95	196	P	P	18 41 34.6	-0.7
FAKI				IAmb	IAmb	18 41 40.3	
	comp=Z,41nm,1.3s						
CD2	Chengdu	32.07	285	P	P	18 41 44.0	-1.0
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				LR	LR		
	comp=E,490nm,12.7s						
CD2				LR	LR		
	comp=Z,520nm,9.2s						
LUWI	Luwuk	32.77	214	P	P	18 41 49.8	-1.3
ULN	Ulaanbaatar	33.10	317	P	P	18 41 54.2	+0.4
SONM	Songino Array	33.48	317	P	P	18 41 56.8	-0.1
	comp=Z,1.0nm,0.5s,baz=126,slow=8.4,SNR=6.8						
SONM	Songino Array	33.48	317	P	P	18 41 56.8	-0.1
KMI	Kunming	33.70	275	P	P	18 41 58.4	-0.9
KMI				IAmb	IAmb	18 42 00.6	
	comp=Z,10nm,1.0s						
YAK	Yakutsk	35.54	351		P	18 42 13.8	-0.1
YAK				IAmb	IAmb	18 42 15.2	
	comp=Z,9.0nm,0.7s						
GTA	Gaotai	35.68	300	P	P	18 42 15.5	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	Chiang Mai	38.84	267	P	P	18 42 41.7	-0.3
CM31	Chiang Mai Arr	38.96	266	P	P	18 42 43.9	+0.9
CMAR	Chiang Mai Arr	38.96	266	P	P	18 42 43.2	+0.2
	comp=Z,1.2nm,0.6s,baz=72,slow=5.1,SNR=20						
CMAR				PcP	PcP	18 44 44.9	+0.5
	comp=Z,1.1nm,0.8s,baz=46,slow=2.3,SNR=8.7						
CMAR	Chiang Mai Arr	38.96	266	P	P	18 42 43.8	+0.8
SOEI	Soe	39.90	205	P	P	18 42 50.2	-0.6
SOEI				IAmb	IAmb	18 42 53.2	
	comp=Z,15nm,1.0s						
BATI	Baumata	40.55	206	P	P	18 42 54.6	-1.2
	comp=Z,5.4nm,0.4s,baz=50,slow=5.1,SNR=5.6						
LSA	Lhasa	43.04	285	P	P	18 43 16.9	+0.6
SHL	Shillong	43.20	279	P	P	18 43 16.2	-1.0
SHL				IAmb	IAmb	18 43 17.6	
	comp=Z,10nm,0.9s						
JAGI	Jajag, Banyuwa	43.59	219	P	P	18 43 19.5	-0.7
JAGI				IAmb	IAmb	18 43 40.4	
	comp=Z,33nm,0.9s						
TIXI	Tiksi	44.94	355		P	18 43 29.8	-0.1
WMQ	Urumqi	45.15	306	P	P	18 43 31.6	-0.5
WMQ				IAmb	IAmb	18 43 33.6	
	comp=Z,11nm,1.0s						
UNV	Unalaska Valle	46.95	40	P	P	18 43 45.3	-0.4
WB0	Warramunga Arr	47.05	188	P	P	18 43 46.0	-0.8
WRAB	Tennant Creek	47.22	188	P	P	18 43 46.3	-1.8
WR0	Warramunga Arr	47.22	187	P	P	18 43 47.0	-1.1
WB2	Warramunga Arr	47.23	188	P	P	18 43 47.3	-0.8
WRA	Warramunga Arr	47.23	188	P	P	18 43 47.4	-0.8
	comp=Z,1.0nm,0.4s,baz=7.0,slow=8.6,SNR=17						
WRA	Warramunga Arr	47.23	188	P	P	18 43 47.1	-1.0
AKUT	Akutan	47.44	40	P	P	18 43 50.9	+1.6
ZAA0	Zalesovo Array	48.31	319	P	P	18 43 55.5	-0.4
ZALV	Zalesovo Beam	48.31	319	P	P	18 43 55.1	-0.8
	comp=Z,1.5nm,0.5s,baz=100,slow=6.8,SNR=10.0						
ZALV				PcP	PcP	18 45 14.8	-0.9
	comp=Z,1.6nm,0.5s,baz=114,slow=4.8,SNR=7.8						
ZALV	Zalesovo Beam	48.31	319	P	P	18 43 55.6	-0.3
ZALV				pP	PcP	18 45 14.9	-0.9
GSI	Gunungsitoli	48.37	245	P	P	18 43 56.5	-0.6
GSI				IAmb	IAmb	18 43 57.3	
	comp=Z,9.8nm,0.8s						
MK31	Makanchi Array	49.12	310	P	P	18 44 02.3	+0.1
MKAR	Makanchi Array	49.12	310	P	P	18 44 02.1	-0.1
	comp=Z,1.4nm,0.3s,baz=87,slow=11,SNR=36						
MKAR				PcP	PcP	18 45 18.4	-0.6
	comp=Z,0.9nm,0.8s,baz=90,slow=5.8,SNR=4.6						
MAKZ	Makanchi	49.33	310	P	P	18 44 03.9	+0.1
ASAR	Alice Springs	50.95	188	P	P	18 44 15.2	-0.9
	comp=Z,0.3nm,0.5s,baz=358,slow=4.5,SNR=12						
ASAR				PcP	PcP	18 45 25.9	-0.1
	comp=Z,0.3nm,0.6s,baz=359,slow=2.9,SNR=5.1						
KURK	Kurchatov	51.72	315	P	P	18 44 21.2	-0.1
KURK				IAmb	IAmb	18 44 21.8	
	comp=Z,22nm,1.4s						
CHGN	Chignik	51.96	38	P	P	18 44 23.1	+0.2
RDOG	Red Dog Mine	52.78	23	P	P	18 44 30.6	+1.8
RDOG				IAmb	IAmb	18 44 31.4	
	comp=Z,6.2nm,0.7s						
TTA	Tatalina	54.19	30		P	18 44 40.6	+1.6
AAK	Ala-Archa	54.82	305	P	P	18 44 44.2	+0.3
KDAK	Kodiak Island	55.27	37	P	P	18 44 47.1	+0.4
	comp=Z,3.3nm,0.5s,baz=346,slow=4.3,SNR=6.4						
KDAK	Kodiak Island	55.27	37	P	P	18 44 47.6	+0.9
RSO	Redoubt South	55.40	34	P	P	18 44 47.1	-0.7
IMAR	Indian Mountai	55.70	27	P	P	18 44 51.0	+1.4
IMAR				PcP	PcP	18 45 43.1	-0.3
PPLA	Purkeypile	55.92	31	P	P	18 44 53.0	+1.7
PPLA				IAmb	IAmb	18 45 16.6	
	comp=Z,18nm,1.4s						
PPLA				PcP	PcP	18 45 45.4	+0.8
CNPM	China Poot	56.08	35	P	P	18 44 52.6	+0.3
SKT	Skwentna	56.13	32	P	P	18 44 53.6	+1.0
SKT				IAmb	IAmb	18 44 55.6	
	comp=Z,12nm,1.4s						
SKT				PcP	PcP	18 45 45.2	0.0
BRLK	Bradley Lake	56.27	35	P	P	18 44 54.5	+0.8
BRLK				IAmb	IAmb	18 45 18.4	
	comp=Z,49nm,1.6s						
SUA	Susitna One	56.45	33	P	P	18 44 55.6	+0.5
SUA				IAmb	IAmb	18 45 22.0	
	comp=Z,19nm,1.6s						
KTH	Kantishna Hill	56.56	30	P	P	18 44 56.8	+1.1
KTH				IAmb	IAmb	18 45 00.8	
	comp=Z,23nm,1.7s						
BPAW	Bear Paw Mtn.	56.59	29	P	P	18 44 57.2	+1.3
BPAW				PcP	PcP	18 45 48.0	+0.9
TRF	Thorofare Moun	56.83	30	P	P	18 44 58.7	+1.0
TRF				IAmb	IAmb	18 44 59.0	
	comp=Z,13nm,1.5s						
TRF				PcP	PcP	18 45 48.9	+0.7
BRVK	Borovoye	56.89	317	P	P	18 44 58.1	+0.1
BRVK				IAmb	IAmb	18 44 58.9	
	comp=Z,11nm,0.7s						
NIL	Nilore	57.29	294	P	P	18 45 02.3	+1.1
NIL				IAmb	IAmb	18 45 03.3	
	comp=Z,11nm,0.6s						
COLD	Coldfoot	57.29	26	P	P	18 45 02.3	+1.7
COLD				PcP	PcP	18 45 50.9	+1.2
GHO	Glory Hole Cre	57.34	32	P	P	18 45 01.8	+0.7
GHO				IAmb	IAmb	18 45 03.3	
	comp=Z,13nm,1.3s						
I23K	Minto, Yukon-K	57.39	28	P	P	18 45 03.2	+1.9
RND	Reindeer	57.47	30	P	P	18 45 02.7	+0.7
RND				IAmb	IAmb	18 45 03.5	
	comp=Z,5.4nm,0.7s						
KNK	Knik Glacier	57.55	33	P	P	18 45 03.5	+0.9
KNK				IAmb	IAmb	18 45 10.6	
	comp=Z,36nm,1.5s						
SML	Sawmill	57.63	32	P	P	18 45 03.8	+0.8
SML				IAmb	IAmb	18 45 15.7	
	comp=Z,41nm,1.6s						
KK31	Karatay Array	57.66	306	P	P	18 45 03.9	+0.3
KK31				IAmb	IAmb	18 45 04.1	
	comp=Z,8.9nm,0.5s						
KKAR	Karatay Array	57.66	306	P	P	18 45 04.0	+0.4
KKAR				IAmb	IAmb	18 45 04.2	
	comp=Z,8.9nm,0.5s						
KKAR	Karatay Array	57.66	306	P	P	18 45 03.8	+0.2
MDM	Murphy Dome	57.85	28	P	P	18 45 05.8	+1.3
WRH	Wood River Hil	57.88	29	P	P	18 45 04.7	0.0
CCB	Clear Creek Bu	58.01	29	P	P	18 45 05.4	-0.2
CCB				PcP	PcP	18 45 52.5	-0.1
SCM	Sheep Creek Mo	58.10	32	P	P	18 45 07.5	+1.1
SCM				IAmb	IAmb	18 45 12.9	
	comp=Z,25nm,1.4s						
DHY	Denali Highway	58.12	31	P	P	18 45 07.5	+1.0
GLI	Glacier Island	58.20	33	P	P	18 45 07.5	+0.5
GLI				IAmb	IAmb	18 45 35.3	
	comp=Z,27nm,1.2s						
HDA	Harding Lake	58.37	29	P	P	18 45 08.3	+0.2
HDA				IAmb	IAmb	18 45 08.8	
	comp=Z,19nm,1.6s						
IL31		58.41	29	P	P	18 45 08.3	0.0
ILAR	Eielson Array	58.41	29	P	P	18 45 08.3	0.0
	comp=Z,1.8nm,0.7s,baz=245,slow=6.4,SNR=17						
ILAR	Eielson Array	58.41	29	P	P	18 45 08.2	-0.1
HIN	Hinchinbrook I	58.49	34	P	P	18 45 09.2	+0.3
Q23K	Middleton Isla	58.57	35	P	P	18 45 11.1	+1.7
M24K	Tolsona, Glenn	58.65	32	P	P	18 45 11.9	+1.8
M24K				IAmb	IAmb	18 45 36.2	
	comp=Z,36nm,1.4s						
KLU	Klutina	58.77	33	P	P	18 45 11.8	+0.9
KLU				IAmb	IAmb	18 45 22.0	
	comp=Z,33nm,1.5s						
PAX	Paxson	58.99	31	P	P	18 45 13.9	+1.5
PAX				IAmb	IAmb	18 45 15.6	
	comp=Z,13nm,1.6s						
PRP	Porcupine Dome	59.02	28	P	P	18 45 12.3	-0.4
RIDG	Independent Ri	59.28	30	P	P	18 45 15.0	+0.7
RAGM	Ragged Mountai	59.40	34	P	P	18 45 15.3	+0.2
N25K	Chitina, Valde	59.40	32	P	P	18 45 16.2	+0.9
N25K				IAmb	IAmb	18 45 32.1	
	comp=Z,27nm,1.6s						
BMAR	Burnt Mountain	59.48	26	P	P	18 45 15.2	-0.4
DOT	Dot Lake	59.62	30	P	P	18 45 17.4	+0.7
DOT				IAmb	IAmb	18 45 18.1	
	comp=Z,5.3nm,0.8s						
GLB	Gilahina Butte	59.78	33	P	P	18 45 18.9	+1.1
VRDI	Verde Repeater	59.97	33	P	P	18 45 19.8	+0.7
VRDI				IAmb	IAmb	18 45 20.5	
	comp=Z,20nm,1.4s						
CRQM	Cirque	60.14	33	P	P	18 45 21.2	+0.9
CRQM				IAmb	IAmb	18 45 38.2	
	comp=Z,31nm,1.3s						
MCARA	McCarthy VSAT	60.16	33	P	P	18 45 21.4	+1.2
MCARA				IAmb	IAmb	18 45 40.1	
	comp=Z,33nm,1.4s						
TGL	Tana Glacier	60.29	33	P	P	18 45 21.8	+0.6
KBL	Kabul	60.48	296	P	P	18 45 22.5	-0.6
KBL				IAmb	IAmb	18 45 24.3	
	comp=Z,7.4nm,0.8s						
K27K	Chicken	60.50	30	P	P	18 45 23.9	+1.4
BALM	Baldy	60.51	33	P	P	18 45 23.3	+0.6
BALM				IAmb	IAmb	18 45 31.9	
	comp=Z,20nm,1.4s						
ISLE	Juniper Island	60.54	34	P	P	18 45 23.7	+0.8
ISLE				IAmb	IAmb	18 45 26.1	
	comp=Z,31nm,1.3s						
BCAR	Beaver Creek A	60.67	31	P	P	18 45 24.8	+1.2
EGAK	Eagle	60.87	29	P	P	18 45 25.0	+0.1
EGAK				IAmb	IAmb	18 45 47.2	
	comp=Z,9.5nm,1.6s						
EPYK	Eagle Plains	62.60	27	P	P	18 45 37.8	+1.5
EPYK				IAmb	IAmb	18 45 38.5	
	comp=Z,11nm,0.8s						
HYT	Haines Junctio	62.88	33	P	P	18 45 40.3	+1.9
HYT				IAmb	IAmb	18 45 42.3	
	comp=Z,11nm,1.2s						
ARU	Arti	63.31	322	P	P	18 45 40.6	-0.4
ARU				IAmb	IAmb	18 45 41.4	
	comp=Z,6.9nm,0.7s						
INK	Inuvik	63.62	24	P	P	18 45 43.2	+0.4
	comp=Z,1.2nm,0.3s,baz=276,slow=6.0,SNR=8.8						
INK	Inuvik	63.62	24	P	P	18 45 43.5	+0.7
INK				PcP	PcP	18 46 15.5	+0.2
NWAO	Narrogin (SRO)	63.70	202	P	P	18 45 42.3	-1.6
AB07	Akbulak array	63.81	314	P	P	18 45 43.8	-0.6
AB07				PcP	PcP	18 46 13.3	-3.2
AB01	Akbulak array	63.82	314	P	P	18 45 44.0	-0.4
ABKAR	Akbulak array	63.82	314	P	P	18 45 43.9	-0.6
ABKAR	Akbulak array	63.82	314	P	P	18 45 44.1	-0.3
ABKAR				IAmb	IAmb	18 45 44.8	
	comp=Z,5.2nm,0.8s						
JIS	Juneau Island	64.87	36	P	P	18 45 53.0	+2.0
JIS				IAmb	IAmb	18 46 08.0	
	comp=Z,19nm,1.2s						

HRA	Herat	65.92	298	P	P	18 45 58.4	-0.1
HRA				IAmb	IAmb	18 45 59.6	
	comp=Z,4.7nm,0.8s						
C36M	Paulatuk	66.78	23	P	P	18 46 03.3	+0.4
C36M				IAmb	IAmb	18 46 03.7	
	comp=Z,4.7nm,0.5s						
DLBC	Dease Lake	67.07	35	P	P	18 46 06.7	+1.7
DLBC				IAmb	IAmb	18 46 22.7	
	comp=Z,9.2nm,1.4s						
GYB4	ALIBECK ARRAY	68.05	302	P	P	18 46 12.6	+1.2
SPB1	Spitsbergen Ar	69.97	350	P	P	18 46 22.9	+0.7
SPA1	Spitsbergen Ar	69.97	350	P	P	18 46 23.1	+0.8
EUNU	Eureka	70.02	8	P	P	18 46 23.1	+0.5
EUNU				IAmb	IAmb	18 46 23.7	
	comp=Z,3.6nm,0.6s						
KBS	Kingsbay	70.16	351	P	P	18 46 24.1	+0.7
KEV	Kevo	72.32	340	P	P	18 46 36.8	+0.5
RES	Resolute Bay	72.34	13	P	P	18 46 36.7	+0.4
RES				IAmb	IAmb	18 46 40.9	
	comp=Z,7.5nm,1.6s						
YKA	Yellowknife Ar	72.83	28	P	P	18 46 39.8	+0.3
	comp=Z,4.6nm,0.6s,baz=302,slow=5.0,SNR=56						
ARD2	ARCESS Array S	72.87	340	P	P	18 46 39.6	+0.1
ARD3	ARCESS Array S	72.87	340	P	P	18 46 39.4	-0.2
ARD1	ARCESS Array S	72.87	340	P	P	18 46 40.0	+0.4
ARC2	ARCESS Array S	72.88	340	P	P	18 46 39.8	+0.3
ARC3	ARCESS Array S	72.88	340	P	P	18 46 39.3	-0.3
ARCES	ARCESS Array B	72.88	340	P	P	18 46 39.6	0.0
	comp=Z,2.6nm,0.5s,baz=72,slow=8.5,SNR=30						
ARCES	ARCESS Array B	72.88	340	P	P	18 46 39.6	0.0
ARCES				PcP	PcP	18 46 58.1	+3.8
ARC6	ARCESS Array S	72.89	340	P	P	18 46 40.4	+0.8
HIZ	Hauiti	72.94	152	P	P	18 46 39.9	-0.4
E03A	Lebam	74.72	45	P	P	18 46 52.6	+2.1
TULEG	Thule	74.94	7	P	P	18 46 51.7	+0.4
TULEG				IAmb	IAmb	18 47 05.0	
	comp=Z,4.3nm,0.8s						
LON	Longmire	75.74	45	P	P	18 46 57.5	+1.0
LON				IAmb	IAmb	18 47 12.0	
	comp=Z,6.3nm,1.3s						
KHZ	Kahutara	75.76	155	P	P	18 46 57.4	+1.2
KBZ	Khabaz	76.70	312	P	P	18 47 02.1	+0.4
	comp=Z,4.6nm,0.8s,baz=99,slow=6.9,SNR=9.4						
FIA1	FINESS Array S	77.10	333	P	P	18 47 03.2	-0.3
FINES	FINESS Array B	77.10	333	P	P	18 47 03.1	-0.5
	comp=Z,11nm,0.3s,baz=68,slow=4.9,SNR=200						
FINES	FINESS Array B	77.10	333	P	P	18 47 03.0	-0.6
YBH	Yreka Blue Hor	77.26	50	P	P	18 47 05.9	+0.9
	comp=Z,2.4nm,0.8s,baz=324,slow=2.6,SNR=3.2						
YBH	Yreka Blue Hor	77.26	50	P	P	18 47 06.8	+1.9
NEW	Newport	77.94	42	P	P	18 47 09.3	+0.7
	comp=Z,3.6nm,0.9s,baz=308,slow=2.5,SNR=6.3						
NEW	Newport	77.94	42	P	P	18 47 09.9	+1.3
NEW				IAmb	IAmb	18 47 10.4	
	comp=Z,3.2nm,0.8s						
K05A	Summer Lake	78.05	48	P	P	18 47 10.7	+1.3
K05A				IAmb	IAmb	18 47 19.4	
	comp=Z,14nm,1.4s						
I07A	Izee	78.36	46	P	P	18 47 12.4	+1.5
I07A				IAmb	IAmb	18 47 24.8	
	comp=Z,6.4nm,1.5s						
BMO	Blue Mountains	79.41	45	P	P	18 47 17.9	+1.3
BMO				IAmb	IAmb	18 47 18.4	
	comp=Z,3.2nm,0.8s						
WVOR	Wild Horse Val	79.67	48	P	P	18 47 16.4	-1.7
BEKR	Beckworth	79.67	51	P	P	18 47 19.1	+0.9
BEKR				IAmb	IAmb	18 47 19.8	
	comp=Z,4.6nm,0.7s						
JTMT	Jette	79.87	41	P	P	18 47 20.1	+1.1
JTMT				IAmb	IAmb	18 47 20.9	
	comp=Z,3.2nm,0.9s						
SUMG	Summit	80.48	360	P	P	18 47 22.9	+0.8
SUMG				IAmb	IAmb	18 47 23.2	
	comp=Z,4.2nm,0.6s						
CMB	Columbia Colle	80.48	52	P	P	18 47 23.1	+0.8
CMB				IAmb	IAmb	18 47 28.3	
	comp=Z,5.8nm,1.6s						
PNTR	Pine Nut	80.55	51	P	P	18 47 23.3	+0.4
PNTR				IAmb	IAmb	18 47 24.5	
	comp=Z,3.0nm,0.7s						
WAKR	Walker	80.93	51	P	P	18 47 25.9	+1.0
MFID	Camas Ranch	81.03	46	P	P	18 47 26.3	+1.1
MFID				IAmb	IAmb	18 47 27.1	
	comp=Z,3.5nm,0.8s						
SOCY	Socotra	81.30	279	P	P	18 47 25.2	-1.8
RYN	Ryan	81.51	51	P	P	18 47 29.0	+1.2
RYN				IAmb	IAmb	18 47 29.6	
	comp=Z,2.8nm,0.7s						
AKASG	Malin Array Be	81.53	323	P	P	18 47 26.5	-0.9
	comp=Z,0.9nm,0.3s,baz=52,slow=5.3,SNR=13						
AKASG	Malin Array Be	81.53	323	P	P	18 47 26.7	-0.7
AKBB	Malin Array Si	81.53	323	P	P	18 47 26.7	-0.8
AKBB				IAmb	IAmb	18 47 27.4	
	comp=Z,23nm,1.6s						
NVAR	Mina Array Bea	81.75	51	P	P	18 47 30.4	+1.3
	comp=Z,2.0nm,0.6s,baz=294,slow=5.4,SNR=28						
SCO	Scoresbysund	81.76	354	P	P	18 47 28.0	-0.2
SCO				IAmb	IAmb	18 47 29.7	
	comp=Z,15nm,1.3s						
HLID	Hailey	81.85	45	P	P	18 47 31.5	+1.9
NV11	Mina Array Sit	81.86	51	P	P	18 47 30.4	+0.8
BCYI	Bear Canyon	82.11	44	P	P	18 47 32.3	+1.4
ELK	Elko	82.71	48	P	P	18 47 34.5	+0.4
	comp=Z,1.6nm,0.8s,baz=278,slow=8.7,SNR=6.4						
NB2	NORSAR Subarra	82.88	338	P	P	18 47 33.2	-1.0
	comp=Z,1.8nm,0.5s,baz=48,slow=4.8						
NOA	NORSAR Array B	82.88	338	P	P	18 47 33.3	-0.9
	comp=Z,1.8nm,0.5s,baz=54,slow=6.7,SNR=13						
RAYN	Ar Rayn	83.57	293	P	P	18 47 38.5	0.0
RAYN				IAmb	IAmb	18 47 39.4	
	comp=Z,7.7nm,0.8s						
RLMT	Red Lodge	84.19	42	P	P	18 47 43.0	+1.6
RLMT				IAmb	IAmb	18 47 43.2	
	comp=Z,4.3nm,0.5s						
BRTR	Keskin Array B	84.69	312	P	P	18 47 42.4	-1.4
	comp=Z,1.1nm,0.6s,baz=86,slow=4.0,SNR=8.5						
BRTR	Keskin Array B	84.69	312	P	P	18 47 43.2	-0.7
PDAR	Pinedale Array	85.30	44	P	P	18 47 47.3	+0.4
	comp=Z,0.6nm,0.6s,baz=238,slow=2.0,SNR=6.0						
PFO	Pinyon Flats O	85.38	55	P	P	18 47 46.2	-1.2
	comp=Z,4.8nm,0.9s,baz=268,slow=2.9,SNR=7.2						
CRVS	Cervenica-Dubn	86.66	325	*e*P	P	18 47 52.6	-0.5
VYHS	Vyhne	88.27	325	*e*P	P	18 48 00.1	-0.5
GERES	GERESS Array B	90.54	328	P	P	18 48 10.3	-1.0
	comp=Z,1.0nm,0.7s,baz=46,slow=5.8,SNR=8.8						
ANMO	Albuquerque	91.68	49	P	P	18 48 17.6	+0.6
	comp=Z,1.0nm,0.6s,baz=282,slow=1.9,SNR=4.2						
ANMO	Albuquerque	91.68	49	IAmb	IAmb	18 48 19.2	
	comp=Z,1.6nm,0.7s						
TXAR	Lajitas Array	96.86	52	P	P	18 48 41.4	+0.7
	comp=Z,0.5nm,0.6s,baz=278,slow=0.6,SNR=4.2						
PLCA	Paso Flores	151.23	126	PKPbc	PKiKP	18 55 00.8	-0.1
	comp=Z,3.7nm,0.5s,baz=236,slow=2.2,SNR=16						

IDC **17** *18:40:00.2±0.8, 23°.14N×120°.56E, h0^{km}, mb3.8/10, mb1 3.9/11, mb1mx3.7/54, mbtmp3.7/11, MS2.9/2, Ms1 3.0/2, ms1mx2.5/48, Error ellipse: s-maj=45.0km s-min=17.2km az=66.0*

JMA **17** *18:40:02.3±0.2, 23°.26N×120°.50E, h0^{km}, M4.0*

TAP **17** *18:40:03.0, 23°.17N×120°.52E, h12^{km}, ML4.3, B*

BJI **17** *18:40:02.0±0.0, 23°.20N×120°.50E, h16^{km}, ML3.7/3, Ms7 3.7/1*

NIED **17** *18:40:02.3, 23°.26N×120°.50E, h0^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.35; M$_{\theta\theta}$5.68; M$_{\phi\phi}$-5.34; M$_{r\theta}$-1.13; M$_{\theta\phi}$2.06; M$_{\phi r}$0.86; Fault plane solution: M$_0$6.05000×10^{14} NP1: ϕ_s124.00000°, δ88.00000°, λ-14.00000°. NP2: ϕ_s215.00000°, δ76.00000°, λ-178.00000°.*

NEIC **17** *18:40:03.6±2.0, 23°.20N±0°.03×120°.51E±0°.04, h16^{km}±4^{km}, mb4.4/19, ML4.3(TAP) Error ellipse: s-maj=4.8km s-min=3.6km az=86.0*

ASIES **17** *18:40:03.9, 23°.18N×120°.53E, h16^{km}, MW3.8*

IASPEI **17** *18:40:03.3±0.8, 23°.20N±0°.01×120°.54E±0°.02, h14^{km}±4^{km}, mb4.2/18, Error ellipse: s-maj=2.2km s-min=1.7km az=93.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ISC 17 18:40:03.1±0.6**, 23°.20N**±0°.01×**120°.57E**±0°.01**, h14**^{km}±3^{km}**, n193, σ1^{s}.21**/291**, mb4.2**/18**, 9C-28D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHN1	Nanshi	0.04	245	⇑*i*P	Pg	18 40 05.6	-0.2
	baz=38						
CHN1				*i* S	Sg	18 40 07.5	-0.1
	baz=38						
WTP	Ta-pu	0.06	44	*i* P	Pg	18 40 06.8	+0.9
	baz=53						
WTP				S	Sg	18 40 09.5	+1.6
	baz=53						
SNST	Tainan City	0.07	285	⇑*i*P	Pg	18 40 05.8	-0.2
	baz=339						
SNST				*i* S	Sg	18 40 08.0	+0.1
	baz=339						
TWK	Hsinying	0.10	311	⇑*i*P	Pg	18 40 06.4	0.0
	baz=351						
TWK				S	Sg	18 40 08.9	+0.5
	baz=351						
SGST	Jiashian	0.12	173	*i* P	Pg	18 40 06.0	-0.6
	baz=144						
SGST				*i* S	Sg	18 40 08.8	0.0
	baz=144						
CHN4	Tsaushan	0.15	9	⇑*i*P	Pb	18 40 08.0	+0.3
	baz=21						
CHN4				S	Sb	18 40 11.2	+0.4
	baz=21						
STYT	Tauyuan	0.18	103	⇓*i*P	Pb	18 40 08.8	+0.6
	baz=87						
STYT				S	Sb	18 40 13.1	+1.5
	baz=87						
SLGT	Liugui	0.22	161	⇓*i*P	Pb	18 40 08.8	-0.1
	baz=135						
SLGT				S	Sb	18 40 12.9	+0.1
	baz=135						
CHN3	Shinhua	0.23	236	⇓*i*P	Pg	18 40 08.3	+0.2
	baz=243						
CHN3				*i* S	Sg	18 40 12.5	+1.1
	baz=243						
ICHU	Yijhu	0.31	301	⇓*i*P	Pg	18 40 09.9	+0.4
	baz=311						
ICHU				*i* S	Sg	18 40 15.8	+1.9
	baz=311						
CHY	Chiayi	0.32	336	⇓*i*P	Pb	18 40 10.9	+0.2
	baz=347						
CHY				*i* S	Sb	18 40 17.0	+1.3
	baz=347						
SCST	Cishan	0.32	192	*i* P	Pb	18 40 10.6	0.0
	baz=171						
SCST				S	Sb	18 40 16.4	+0.8
	baz=171						
CHN2	Minshiung	0.34	345	⇓*i*P	Pb	18 40 11.4	+0.5
	baz=355						
CHN2				*i* S	Sb	18 40 18.0	+1.8
	baz=355						
SCLT	Jiali	0.34	266	⇓*i*P	Pg	18 40 10.2	0.0
	baz=270						
SCLT				S	Sg	18 40 16.5	+1.5
	baz=270						
TAI1	Yung-k'ang	0.35	243	P	Pg	18 40 10.5	+0.3
	baz=248						
TAI1				*e*S	Sg	18 40 17.1	+1.9
	baz=248						
CHN8	Yiju	0.36	294	*i* P	Pg	18 40 10.4	0.0
	baz=303						
CHN8				S	Sg	18 40 16.8	+1.5
	baz=303						
WLGB	Puzi	0.37	318	⇓*i*P	Pg	18 40 10.3	-0.3
	baz=328						
WLGB				*i* S	Sg	18 40 16.7	+1.0
	baz=328						
ALS	Alishan	0.38	35	⇓*i*P	Pb	18 40 12.2	+0.5
	baz=48						
ALS				S	Sn	18 40 19.2	-2.4
	baz=48						
TWM1	Shoushan	0.40	200	⇓*i*P	Pb	18 40 12.8	+0.8
	baz=179						
TWM1				*e*S	Sb	18 40 19.7	+1.7
	baz=179						
CHN5	Tsauling	0.41	14	⇓*i*P	Pb	18 40 12.6	+0.4
	baz=19						
CHN5				*i* S	Sn	18 40 20.3	-1.7
	baz=19						
ELDTW	Lidau	0.41	92	⇓*i*P	Pn	18 40 13.0	-1.7
	baz=87						
ELDTW				S	Sn	18 40 20.2	-2.0
	baz=87						
YUS	Yu-Shan	0.45	51	⇓*i*P	Pn	18 40 14.0	-1.6
	baz=52						
YUS				*i* S	Sn	18 40 21.8	-2.0
	baz=52						
SSD	Sandimen	0.46	173	⇓*i*P	Pb	18 40 13.0	+0.1
	baz=152						
SSD				S	Sb	18 40 20.3	+0.7
	baz=152						
SGLT	Jiouru	0.48	189	*i* P	Pb	18 40 14.2	+0.9
	baz=170						
SGLT				*e*S	Sn	18 40 24.0	+0.3
	baz=170						
WGK	Gukeng	0.48	359	*i* P	Pb	18 40 14.3	+0.9
	baz=7.0						
WGK				*e*S	Sb	18 40 21.7	+1.4
	baz=7.0						
WDLH	Douliu	0.48	357	*i* P	Pb	18 40 14.3	+0.9
	baz=3.0						
WDLH				*e*S	Sn	18 40 23.2	-0.6
	baz=3.0						
SNJT	Kaohsiung City	0.50	206	*e*P	Pb	18 40 14.1	+0.5
	baz=202						
SNJT				*e*S	Sn	18 40 24.2	+0.1
	baz=202						
TSMG	Majia	0.50	172	⇓*i*P	Pb	18 40 13.7	0.0
	baz=156						
TSMG				*e*S	Sb	18 40 21.1	+0.3
	baz=156						
WTK	Tuku	0.51	341	*i* P	Pb	18 40 14.2	+0.4
	baz=349						
WTK				S	Sb	18 40 23.2	+2.1
	baz=349						
TSPT	Pingtung City	0.53	187	*e*P	Pb	18 40 15.1	+1.0
	baz=171						
TSPT				*e*S	Sn	18 40 25.8	+0.9
	baz=171						
WSF	Szhu	0.54	324	⇓*i*P	Pg	18 40 14.1	+0.4
	baz=332						
WSF				*i* S	Sb	18 40 22.8	+0.9
	baz=332						
WHYT	Xinyi Township	0.56	28	P	Pn	18 40 15.7	-1.0
	baz=38						
WHYT				*e*S	Sn	18 40 24.6	-1.1
	baz=38						
MASBT	Mashibuluo	0.59	174	⇓*i*P	Pb	18 40 15.2	0.0
	baz=161						
MASBT				S	Sb	18 40 23.8	+0.4
	baz=161						
LONT	Longtian	0.60	120	⇓*i*P	Pn	18 40 16.1	-1.0
	baz=102						
LONT				*e*S	Sn	18 40 25.4	-1.2
	baz=102						
TWG	Pinlang	0.60	129	⇓*i*P	Pn	18 40 16.2	-1.0
	baz=123						
TWG				*i* S	Sn	18 40 25.7	-1.0
	baz=123						
TWG	Pinlang	0.60	129		Pn	18 40 16.2	-1.0
TWG				Sg	Sn	18 40 25.6	-1.0
TWGBT	Beinan	0.61	129	⇓*i*P	Pn	18 40 16.2	-1.0
	baz=123						
TWGBT				*i* S	Sn	18 40 25.7	-1.2
	baz=123						
WJS	Zhushan	0.63	13	⇑*i*P	Pn	18 40 17.0	-0.7
	baz=17						
WJS				*i* S	Sn	18 40 27.3	-0.3
	baz=17						
FULB	Fuli	0.67	90	⇓*i*P	Pn	18 40 18.1	-0.1
	baz=78						
FULB				*e*S	Sn	18 40 29.1	+0.7
	baz=78						
KAU	Kaohsiung	0.68	201	*e*P	Pb	18 40 17.5	+0.8
	baz=197						
KAU				*e*S	Sn	18 40 28.6	+0.1
	baz=197						
WMLT	Mailiao	0.68	332	*e*P	Pg	18 40 16.5	+0.1
	baz=338						
WMLT				*e*S	Sb	18 40 26.8	+0.9
	baz=338						
WNT	Mingjian	0.68	9	⇑*i*P	Pn	18 40 17.7	-0.6
	baz=14						
WNT				S	Sn	18 40 28.8	+0.1
	baz=14						
SSLB	Suanglung	0.68	31	*i* P	Pn	18 40 17.4	-1.0
	baz=41						
SSLB				*e*S	Sn	18 40 27.3	-1.5
	baz=41						
SSLB	Suanglung	0.68	31		Pn	18 40 17.3	-1.0
SSLB				Sg	Sn	18 40 28.1	-0.6
TWF1	Yuli	0.69	77	⇓*i*P	Pn	18 40 17.8	-0.6
	baz=75						
TWF1				S	Sn	18 40 28.0	-0.9
	baz=75						
TTN	Taitung	0.70	130	P	Pn	18 40 18.6	+0.1
	baz=124						
TTN				*e*S	Sn	18 40 30.1	+1.0
	baz=124						
YULB	Yu-li	0.70	74	⇓*i*P	Pn	18 40 17.8	-0.7
	baz=72						
YULB				*e*S	Sn	18 40 27.8	-1.4
	baz=72						
YULB	Yu-li	0.70	74		Pn	18 40 17.6	-0.9
YULB				Sg	Sn	18 40 27.7	-1.4
ECL	Taimali	0.70	149	⇓*i*P	Pb	18 40 17.4	+0.3
	baz=144						
ECL				*e*S	Sn	18 40 28.0	-1.2
	baz=144						
EYUL	Yuli	0.71	78	⇓*i*P	Pn	18 40 18.2	-0.4
	baz=76						
EYUL				*e*S	Sn	18 40 28.3	-1.0
	baz=76						
RLNB	Erlin	0.71	344	P	Pb	18 40 17.5	+0.2
	baz=350						
RLNB				*e*S	Sb	18 40 28.6	+1.7
	baz=350						
EDH	Donghe	0.71	109	P	Pn	18 40 18.6	-0.2
	baz=104						
SSPT	Xinbi	0.72	180	*i* P	Pb	18 40 17.9	+0.6
	baz=161						
SSPT				*e*S	Sn	18 40 29.6	+0.1
	baz=161						
CHKT	Chengkung	0.74	98	*e*P	Pn	18 40 19.3	+0.2
	baz=94						
CHKT				*e*S	Sn	18 40 30.3	+0.2
	baz=94						
SMLT	Sun Moon Lake	0.74	24	⇑*i*P	Pn	18 40 18.9	-0.4
	baz=27						
SMLT				*e*S	Sn	18 40 30.8	+0.4
	baz=27						
TYC	Yuchr	0.75	21	⇑*i*P	Pn	18 40 18.9	-0.3
	baz=24						
TYC				S	Sn	18 40 30.7	+0.4
	baz=24						
EHY	Hungye	0.76	66	*i* P	Pn	18 40 19.1	-0.2
	baz=73						
EHY				*e*S	Sn	18 40 30.2	-0.4
	baz=73						
SCZT	Fangliau	0.83	177	*e*P	Pb	18 40 19.2	-0.1
	baz=161						
SCZT				*e*S	Sn	18 40 31.9	-0.4
	baz=161						
WDGT	Dungji	0.84	274	P	Pg	18 40 18.0	-1.4
	baz=277						
WDGT				*e*S	Sg	18 40 29.5	-0.8
	baz=277						
HGSD	Ruisui	0.84	70	⇓*i*P	Pn	18 40 21.0	+0.6
	baz=73						
HGSD				S	Sn	18 40 32.4	-0.2
	baz=73						
WWF	Wufeng	0.84	8	P	Pn	18 40 20.2	-0.3
	baz=359						
WWF				*e*S	Sn	18 40 33.5	+0.8
	baz=359						
EAST	Anshuo	0.86	162	⇓*i*P	Pn	18 40 20.2	-0.5
	baz=150						
EAST				*e*S	Sn	18 40 32.6	-0.5
	baz=150						
WLCH	Liuqiu	0.87	192	*e*P	Pn	18 40 21.3	+0.4
	baz=187						
TWP	Hsiaoliuchiu	0.87	193	*e*P	Pn	18 40 20.8	-0.2
	baz=187						
WCHH	Zhanghua	0.87	359	*e*P	Pn	18 40 20.6	-0.3
	baz=4.0						
WCHH				*e*S	Sn	18 40 33.1	-0.3
	baz=4.0						
WPL	Puli Township	0.88	24	*e*P	Pn	18 40 20.6	-0.4
	baz=26						
WPL				*e*S	Sn	18 40 33.8	+0.1
	baz=26						
DPDB	Guoxing	0.89	22	*e*P	Pn	18 40 21.0	-0.2
	baz=24						
DPDB				*e*S	Sn	18 40 34.5	+0.6
	baz=24						
TAW	Tawu	0.89	160	*e*P	Pn	18 40 20.9	-0.3
	baz=155						
TAW				*e*S	Sn	18 40 33.2	-0.7
	baz=155						
EGFH	Guangfu	0.92	59	*e*P	Pn	18 40 22.0	+0.5
	baz=59						
EGFH				*e*S	Sn	18 40 35.5	+1.0
	baz=59						
TCU	Taichung	0.95	6	*e*P	Pn	18 40 21.6	-0.3
	baz=358						
TCU				*e*S	Sn	18 40 36.0	+0.8
	baz=358						
PHUB	P'eng-hu	0.97	289	*e*P	Pb	18 40 19.8	-1.8
	baz=293						
PHUB				*e*S	Sb	18 40 33.1	-1.1
	baz=293						
LDUT	Ludao	0.98	122	*e*P	Pn	18 40 22.6	+0.1
	baz=107						
LDUT				*e*S	Sn	18 40 38.8	+2.6
	baz=107						
PNG	Penghu	1.00	292	P	Pb	18 40 20.6	-1.6
	baz=295						
PNG				*e*S	Sb	18 40 34.2	-1.0
	baz=295						
ESL	Shilin	1.00	52	*e*P	Pn	18 40 23.4	+0.7
	baz=53						
ESL				*e*S	Sn	18 40 39.7	+3.0
	baz=53						
SLIU	Shizi	1.00	168	P	Pn	18 40 22.8	+0.1
	baz=151						
SLIU				*e*S	Sn	18 40 37.9	+1.2
	baz=151						
CHGB	Renai	1.02	33	P	Pn	18 40 23.3	+0.1
	baz=34						
CHGB				*e*S	Sn	18 40 38.9	+1.5
	baz=34						
VCHM	Qimei	1.05	271	*e*P	Pb	18 40 21.4	-1.6
	baz=273						
VCHM				*e*S	Sb	18 40 34.9	-1.7
	baz=273						
WHP	Taichung City	1.12	18	*e*P	Pg	18 40 25.1	+0.2
	baz=20						
WHP				*e*S	Sn	18 40 42.2	+2.4
	baz=20						
WHF	Hehuan Shan	1.14	34	*e*P	Pn	18 40 25.9	+0.9
	baz=36						
WHF				*e*S	Sn	18 40 43.6	+3.1
	baz=36						
WDJ	Dajia District	1.14	3	P	Pg	18 40 25.3	+0.2
	baz=7.0						
WDJ				*e*S	Sn	18 40 42.5	+2.4
	baz=7.0						
TWQ1	Liyutan	1.16	9	⇑*i*P	Pg	18 40 25.6	+0.1
	baz=1.0						
TWQ1				*e*S	Sn	18 40 42.6	+2.2
	baz=1.0						
TDCB	Techi	1.18	27	*e*P	Pg	18 40 26.0	+0.2
	baz=29						
TDCB				*e*S	Sn	18 40 43.0	+1.8
	baz=29						
TWT	Tachien	1.19	28	*i* P	Pg	18 40 26.1	+0.1
	baz=29						
TWT				*e*S	Sn	18 40 43.0	+1.6
	baz=29						
HEN	Hengchun	1.20	172	*e*P	Pg	18 40 27.3	+1.0
	baz=163						
HEN				*e*S	Sg	18 40 45.3	+3.4
	baz=163						
FUSS	Fushou	1.21	31	P	Pg	18 40 26.8	+0.3
	baz=22						
FUSS				*e*S	Sn	18 40 43.5	+1.4
	baz=22						
NSY	Sanyi	1.22	8	P	Pg	18 40 26.8	+0.1
	baz=1.0						
NSY				*e*S	Sg	18 40 44.7	+2.1
	baz=1.0						
HWA	Hwalien	1.22	51	*e*P	Pg	18 40 28.2	+1.5

	baz=51						
SNW	Nanwan	1.25	172	eP	Pg	18 40 28.0	+0.8
	baz=166						
TWK1	Hengchun	1.27	170	eP	Pn	18 40 26.3	-0.1
	baz=164						
TWKBT	Hengchun	1.28	170	eP	Pn	18 40 26.3	-0.2
	baz=165						
TWKBT				eS	Sb	18 40 42.9	-0.3
	baz=165						
TWD	Chiawan	1.28	47	P	Pg	18 40 28.4	+0.5
	baz=57						
TWD				eS	Sg	18 40 46.2	+1.6
	baz=57						
ETLH	Xiulin Townshi	1.30	40	eP	Pg	18 40 28.6	+0.3
	baz=32						
TSEB	Hengchuen, Pin	1.33	167	eP	Pg	18 40 28.4	-0.3
	baz=163						
NMLH	Miaoli	1.34	9	eP	Pb	18 40 27.9	-0.1
	baz=2.0						
NMLH				eS	Sg	18 40 48.8	+2.2
	baz=2.0						
NACB	Ninganchiao	1.35	44	P	Pg	18 40 28.9	-0.2
	baz=45						
NACB				eS	Sg	18 40 48.4	+1.7
	baz=45						
NACB	Ninganchiao	1.35	44		Pg	18 40 29.1	0.0
NACB				Sn	Sg	18 40 48.2	+1.5
NNSB	Datong	1.43	31	eP	Pg	18 40 30.0	-0.7
	baz=33						
NNSH	Datong	1.43	31	eP	Pg	18 40 30.0	-0.7
	baz=33						
NNS	Nan Shan	1.44	31	eP	Pg	18 40 30.4	-0.4
	baz=33						
LAY	Lan-yu	1.47	142	eP	Pb	18 40 30.1	-0.1
	baz=137						
NSTT	Nanjuang	1.48	15	eP	Pb	18 40 29.9	-0.4
	baz=18						
NSTT				eS	Sg	18 40 50.8	+0.1
	baz=18						
LIOB	Emei	1.49	16	P	Pb	18 40 30.3	-0.4
	baz=18						
LIOB				eS	Sg	18 40 51.0	-0.4
	baz=18						
HSN1	Hsinchu	1.62	15	eP	Pb	18 40 32.1	-0.7
	baz=17						
ENA	Nanau	1.62	41	eP	Pg	18 40 33.8	-0.6
	baz=59						
ENA				eS	Sg	18 40 56.5	+1.0
	baz=59						
SBCB	Hsinchu	1.63	13	eP	Pb	18 40 32.3	-0.6
	baz=16						
SBCB				eS	Sg	18 40 55.2	-0.4
	baz=16						
HSN	Hsinchu	1.63	13	eP	Pb	18 40 33.0	0.0
	baz=17						
NSK	Sanguang	1.64	26	eP	Pb	18 40 32.9	-0.2
	baz=28						
YHNB	Yeheng	1.64	27	eP	Pb	18 40 32.8	-0.3
	baz=29						
YHNB	Yeheng	1.64	27		Pb	18 40 32.3	-0.8
NDT	Datong Townshi	1.64	32	eP	Pg	18 40 33.7	-0.9
	baz=24						
NDT				eS	Sg	18 40 57.2	+1.2
	baz=24						
ENAH	Nanao	1.68	42	eP	Pg	18 40 34.6	-0.9
	baz=59						
ENTT	Nioudou	1.70	32	eP	Pg	18 40 34.7	-1.0
	baz=27						
NWLT	Wulai	1.79	28	eP	Pb	18 40 35.2	-0.5
	baz=30						
TWE	Neicheng	1.82	33	eP	Pg	18 40 36.7	-1.3
	baz=35						
TWC	Suao	1.83	40	eP	Pg	18 40 37.4	-0.8
	baz=57						
TATO	Taipei	1.96	25	eP	Pb	18 40 37.0	-1.5
	baz=9.0						
TATO	Taipei	1.96	25		Pn	18 40 36.7	+0.9
NHDH	Xindian Distri	1.96	26	eP	Pg	18 40 40.0	-0.8
	baz=37						
TWA	Mucha	2.00	27	eP	Pb	18 40 38.0	-1.3
	baz=38						
NTC	Toucheng	2.01	35	eP	Pb	18 40 38.7	-0.7
	baz=19						
TAP	Taipei	2.02	25	eP	Pg	18 40 40.7	-1.2
	baz=27						
TWS1	Kuangyinshan	2.04	22	eP	Pn	18 40 38.0	+0.9
	baz=8.0						
VWUC	VWUC	2.05	330	eP	Pn	18 40 36.4	-0.8
	baz=334						
TIPB	Shuangxi	2.10	33	eP	Pb	18 40 39.6	-1.5
	baz=19						
YM04	YM04	2.13	24	eP	Pn	18 40 39.0	+0.7
	baz=8.0						
YM10	YM10	2.15	25	eP	Pn	18 40 39.2	+0.7
	baz=11						
ANP	Anpu	2.16	24	eP	Pn	18 40 39.2	+0.5
	baz=9.0						
YM03	YM03	2.16	24	eP	Pn	18 40 39.5	+0.7
	baz=9.0						
YM11	YM11	2.16	25	eP	Pn	18 40 39.7	+0.9
	baz=11						
YM08	YM08	2.19	25	eP	Pn	18 40 38.9	-0.1
	baz=11						
TWB1	Santiao Chiao	2.22	36	eP	Pb	18 40 41.4	-1.6
	baz=19						
PTMZ	Houxiangcun	2.26	324	eP	Pn	18 40 38.8	-1.2
	baz=328						
KNM	Kinmen	2.30	302	eP	Pn	18 40 40.7	+0.2
	baz=302						
KNMB	Chin-men Tao	2.36	303	eP	Pn	18 40 39.9	-1.5
	baz=304						
KNMB	Chin-men Tao	2.36	303		Pn	18 40 40.3	-1.1
PTTC	Pingtan	2.40	343	eP	Pn	18 40 40.8	-1.1
	baz=346						
QZH	Quanzhou	2.50	314	Pn	Pn	18 40 42.0	-1.4
QZH				Sn	Sn	18 41 10.8	-2.9
QZH				smax	smax		
	comp=N,240nm,0.5s						
QZH				smax	smax		
	comp=E,270nm,0.5s						
JYNG	Yonagunijimaku	2.51	60	P	Pb	18 40 45.6	-2.3
JYNG				S	Sb	18 41 18.3	-0.3
YOJ	Yonaguni jima	2.56	60	P	Pb	18 40 46.7	-2.2
YOJ				S	Sb	18 41 19.0	-1.3
YOJ	Yonaguni jima	2.56	60	eP	Pb	18 40 46.5	-2.4
	baz=60						
YOJ	Yonaguni jima	2.56	60		Pn	18 40 42.6	-1.6
AXDP	Jialang	2.92	306	eP	Pn	18 40 48.1	-0.9
	baz=306						
MATB	Ma-tsu	2.99	349	eP	Pn	18 40 49.4	-0.6
	baz=352						
MSUT	Lienchiang	3.01	349	eP	Pn	18 40 49.3	-1.0
	baz=352						
HATJ	Hateruma jima	3.09	73	P	Pn	18 40 52.1	+0.7
HATJ				eS	Sb	18 41 31.6	-3.7
IRIF	Iriomote-Funau	3.11	68	P	Pb	18 40 54.5	-3.6
IRIF				S	Sb	18 41 33.2	-2.7
MHZQ	Yeshan	3.21	334	eP	Pn	18 40 52.7	-0.3
	baz=339						
JKRS	Kuro-shima	3.32	71	P	Pn	18 40 57.3	+2.7
JKRS				S	Sb	18 41 37.4	-4.6
LYJJ	Jianjiangzhen	3.41	348	eP	Pn	18 40 55.3	-0.5
	baz=351						
JIJ	Ishigaki jima	3.47	70	P	Pn	18 40 59.6	+2.9
JIJ				S	Sn	18 41 40.1	+2.5
JISG	Ishigakijimahi	3.69	67	P	Pn	18 41 01.6	+1.9
JISG				S	Sn	18 41 45.5	+2.5
XPSS	Dashiqiu	3.73	355	eP	Pn	18 40 59.9	-0.3
	baz=356						
JTJ	Tarama	4.04	68	P	Pn	18 41 07.1	+2.5
JTJ				eS	Sn	18 41 54.4	+2.7
JMJ	Miyako jima 2	4.61	69	eP	Pn	18 41 15.1	+2.8
	baz=67						
WHN	Wuhan	9.18	324	⇓P	Pn	18 42 15.3	+0.2
WHN				S	Sn	18 44 00.5	+2.3
WHN				LR	LR		
	comp=Z,520nm,12.5s						
KSRS	Korea Array	15.55	22	Pn	Pn	18 43 41.6	-0.2
	baz=192,slow=11,SNR=2.5						
MJAR	Matsushiro Arr	20.22	45	P	Pn	18 44 38.8	-0.9
CMAR	Chiang Mai Arr	20.75	261	LR	LR	18 53 45.7	
	comp=Z,29nm,19.1s,baz=175,slow=40						
CMAR	Chiang Mai Arr	20.75	261	P	P	18 44 43.6	0.0
KULM	Kulim	26.20	230	P	P	18 45 36.7	-0.8
KULM				IAmb	IAmb	18 45 46.6	
	comp=Z,6.9nm,1.0s						
SONM	Songino Array	27.06	339	P	P	18 45 44.7	-0.5
	comp=Z,0.8nm,0.8s,baz=155,slow=8.2,SNR=4.3						
SONM	Songino Array	27.06	339	IAmb	IAmb	18 45 46.5	
	comp=Z,1.1nm,0.9s						
LSA	Lhasa	27.07	290	P	P	18 45 47.7	+1.8
MKAR	Makanchi Array	38.66	317	P	P	18 47 25.6	-0.6
	comp=Z,0.4nm,0.6s,baz=107,slow=9.8,SNR=3.5						
MKAR	Makanchi Array	38.66	317	P	P	18 47 25.7	-0.5
YAK	Yakutsk	39.31	7	LR	LR	19 03 28.3	
	comp=Z,22nm,20.1s,baz=112,slow=36						
ZALV	Zalesovo Beam	40.77	328	P	P	18 47 42.8	-0.8
	comp=Z,0.9nm,0.6s,baz=100,slow=6.5,SNR=3.9						
WB0	Warramunga Arr	44.79	161	P	P	18 48 14.6	-1.9
WB0				IAmb	IAmb	18 48 20.2	
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	44.94	162	P	P	18 48 15.9	-1.8
	comp=Z,0.8nm,0.5s,baz=344,slow=8.8,SNR=4.9						
WRA	Warramunga Arr	44.94	162	IAmb	IAmb	18 48 21.0	
	comp=Z,0.5nm,1.6s						
WB2	Warramunga Arr	44.94	162	P	P	18 48 16.0	-1.8
WR0	Warramunga Arr	45.01	161	P	P	18 48 16.5	-1.8
WR0				IAmb	IAmb	18 48 25.5	
	comp=Z,5.9nm,1.2s						
KKAR	Karatay Array	45.62	308	P	P	18 48 23.9	+0.8
BRVK	Borovoye	48.15	321	P	P	18 48 42.9	+0.2
BRVK				IAmb	IAmb	18 48 44.4	
	comp=Z,4.7nm,1.6s						
AS31	Alice Springs	48.36	164		P	18 48 44.8	+0.3
ASAR	Alice Springs	48.36	164	P	P	18 48 43.6	-0.9
	comp=Z,0.7nm,0.8s,baz=335,slow=7.1,SNR=9.0						
ASAR	Alice Springs	48.36	164	P	P	18 48 43.4	-1.1
AMKA	Amchitka	52.80	42	P	P	18 49 18.5	+0.7
ABKAR	Akbulak array	53.73	315	P	P	18 49 24.7	0.0
ARU	Arti	55.55	323	P	P	18 49 38.5	+0.7
ARU				IAmb	IAmb	18 49 38.6	
	comp=Z,3.9nm,0.6s						
STKA	Stephens Creek	58.35	159	P	P	18 49 56.8	-1.0
	comp=Z,0.7nm,0.4s,baz=16,slow=10,SNR=3.6						
STKA	Stephens Creek	58.35	159	P	P	18 49 56.2	-1.6
GNI	Garni	64.89	305	P	P	18 50 42.9	+0.6
KBZ	Khabaz	65.65	309	P	P	18 50 47.2	+0.3
	comp=Z,1.5nm,0.8s,baz=56,slow=7.7,SNR=2.8						
TTA	Tatalina	66.64	30	P	P	18 50 52.7	-0.3
TTA				IAmb	IAmb	18 51 12.6	
	comp=Z,6.9nm,1.4s						
RND	Reindeer	69.78	29	P	P	18 51 13.3	+0.5
RND				IAmb	IAmb	18 51 14.0	
	comp=Z,2.6nm,0.9s						
SCM	Sheep Creek Mo	70.80	30	P	P	18 51 18.8	-0.3
KBS	Kingsbay	70.88	349	P	P	18 51 20.6	+1.5
M24K	Tolsona, Glenn	71.27	30	P	P	18 51 22.9	+1.1
EGAK	Eagle	72.71	26	P	P	18 51 30.9	+0.6
EGAK				IAmb	IAmb	18 51 36.3	
	comp=Z,9.4nm,1.6s						
AKASG	Malin Array Be	73.22	318	P	P	18 51 32.7	-1.0
	comp=Z,0.1nm,0.2s,baz=59,slow=5.5,SNR=2.2						
BRTR	Keskin Array B	73.30	306	P	P	18 51 35.0	+0.5
	comp=Z,0.6nm,0.8s,baz=101,slow=6.4,SNR=4.2						
YKA	Yellowknife Ar	84.09	23	P	P	18 52 33.2	0.0
	comp=Z,1.0nm,0.7s,baz=324,slow=4.1,SNR=18						

SJA ***17*** *18:41:37.1±0.6, 22°.57S×63°.45W, h624^{km}±5^{km}, ML5.7, MW5.4*

VAO ***17*** *18:41:42.7±0.2, 22°.28S×63°.09W, h556^{km}, mb5.4*

NEIC ***17*** *18:41:42.8±2.3, 22°.24S±0°.08×63°.15W±0°.09, h557^{km}±4^{km}, mb5.3/535, Mwb5.6/17, Mww5.6, Md5.6(SJA), Error ellipse: s-maj=12.4km s-min=11.2km az=63.0*

MOS ***17*** *18:41:42.4±1.3, 22°.24S×63°.18W, h557^{km}, mb5.1/5, Error ellipse: s-maj=10.0km s-min=6.9km az=100.3*

NEIC ***17*** *18:41:42.1, 22°.22S×63°.09W, h564^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.71; M$_{\theta\theta}$-0.08; M$_{\phi\phi}$-1.63; M$_{r\theta}$-0.54; M$_{\theta\phi}$0.49; M$_{\phi r}$2.43; Fault plane solution: M$_0$3.03000×10^{17} NP1:φ$_s$160.73000°, δ17.59000°, λ84.11000°. NP2:φ$_s$346.91000°, δ72.50000°, λ91.86000°. Principal axes: T 3.0056, Plg62.0000°, Azm260.0000°; N 0.0552, Plg2.0000°, Azm166.0000°; P -3.0608, Plg27.0000°, Azm75.0000°;*

BJI ***17*** *18:41:43.2±0.0, 21°.87S×63°.08W, h560^{km}, mB5.4/24*

IDC ***17*** *18:41:43.8±0.3, 22°.21S×63°.06W, h563^{km}±2^{km}, mb4.6/36, mb1 4.7/41, mb1mx4.7/49, mbtmp5.5/41, Error ellipse: s-maj=7.7km s-min=5.8km az=73.0*

NEIC ***17*** *18:41:44, 22°.46S×63°.16W, h580^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.04; M$_{\theta\theta}$0.11; M$_{\phi\phi}$-1.15; M$_{r\theta}$-0.40; M$_{\theta\phi}$0.58; M$_{\phi r}$2.33; Fault plane solution: M$_0$2.67000×10^{17} NP1:φ$_s$142.00000°, δ15.00000°, λ63.00000°. NP2:φ$_s$350.00000°, δ77.00000°, λ97.00000°. Principal axes: T 2.5201, Plg58.0000°, Azm269.0000°; N 0.2853, Plg7.0000°, Azm168.0000°; P -2.8054, Plg31.0000°, Azm74.0000°;*

GCMT ***17*** *18:41:44.8±0.2, 22°.12S±0°.02×63°.20W±0°.02, h573^{km}±1^{km}, MW5.5/112, Moment Tensor Solution. s112, c166; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.37±.04; M$_{\theta\theta}$-0.11±.07; M$_{\phi\phi}$-1.26±.07; M$_{r\theta}$0.04±.07; M$_{\theta\phi}$0.51±.06; M$_{\phi r}$2.09±.06; Best double couple: M$_0$2.52200×10^{17} NP1:φ$_s$143.00000°, δ19.00000°, λ58.00000°. NP2:φ$_s$357.00000°, δ74.00000°, λ101.00000°. Principal axes: T 2.5540, Plg60.0000°, Azm282.0000°; N -0.0650, Plg10.0000°, Azm174.0000°; P -2.4890, Plg28.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 17 18:41:43.2±0.2, **22°.24S**±0°.03×**63°.13W**±0°.03, **h561**^{km}±2^{km}, **h562**^{km}**:pP-P, n1096,** σ**1^{s}43**/1096, **mb5.2**/320, **18C-22D, Fault plane solution: NP1:**φ$_s$207.72894°, δ18.79050°, λ138.20921°. **NP2:**φ$_s$337.96603°, δ77.60458°, λ75.76552°. **Principal axes:** T Plg55.2057°, Azm230.2260°; N Plg13.8959°, Azm341.0829°; P Plg31.1737°, Azm79.6911°; **Fault plane solution: NP1:**φ$_s$111.68801°, δ32.03528°, λ3.75129°. **NP2:**φ$_s$18.50669°, δ88.01119°, λ121.98004°. **Principal axes:** T Plg38.6066°, Azm317.1424°; N Plg31.9585°, Azm197.2654°; P Plg35.0919°, Azm81.2682°; **Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASTB	Santa Barbara	2.10	215	eP	P	18 42 55.4	+0.9
ASTB				eS	S	18 43 52.6	0.0
YJA	Yavi	2.21	271	eP	P	18 42 56.6	+1.1
YJA				eS	S	18 43 56.0	+2.0
YJA				IAML		18 44 15.1	
	comp=Z,1µm,1.2s						
SLA	San Lorenzo	3.30	221	⇓iP	P	18 43 01.1	0.0
SLA				i S	S	18 44 02.6	-2.1
SLA	San Lorenzo	3.30	221	eP	P	18 43 01.0	-0.1
SLA				eS	S	18 44 03.1	-1.6
SLA				IAML		18 44 08.6	
	comp=Z,2µm,1.2s						
AHML	Horco Molle	4.95	203	⇓iP	P	18 43 12.6	-0.7
AHML	Horco Molle	4.95	203	eP	P	18 43 12.4	-0.9
AHML				eS	S	18 44 23.5	-3.4
AHML				IAML		18 44 58.7	
	comp=Z,205nm,1.4s						
LVC	Limon Verde	5.36	265	P	P	18 43 15.9	-1.3
	comp=Z,293nm,0.3s,baz=90,slow=4.5,SNR=950						
LVC				S	S	18 44 29.0	-4.8
	comp=Z,144nm,0.3s,baz=258,slow=22,SNR=21						
LVC	Limon Verde	5.36	265	⇑iP	P	18 43 15.5	-1.7
LVC				i S	S	18 44 28.4	-5.4
LVC	Limon Verde	5.36	265	ceP	P	18 43 15.2	-2.0
LVC				pmax	pmax		
	comp=Z,1µm,0.7s						
LVC	Limon Verde	5.36	265	P	P	18 43 15.5	-1.7
LVC	Limon Verde	5.36	265	eP	P	18 43 15.0	-2.1
PB09	IPOC Station P	5.69	273	⇓iP	P	18 43 18.8	-1.0
PB09				i S	S	18 44 34.2	-4.5
PB09	IPOC Station P	5.69	273	P	P	18 43 18.8	-1.0
PB09	IPOC Station P	5.69	273	eP	P	18 43 18.9	-0.9
PB09				eS	S	18 44 37.0	-1.7
PB09				IAML		18 44 41.0	
	comp=Z,2µm,0.7s						
PB08	IPOC Station P	6.00	289	⇓iP	P	18 43 22.4	-0.5
PB08				i S	S	18 44 40.8	-3.3
PB08	IPOC Station P	6.00	289	P	P	18 43 21.8	-1.1
PB03	IPOC Station P	6.14	270	eP	P	18 43 22.6	-1.3
PB03				eS	S	18 44 42.8	-3.3
GO01	Chusmiza	6.22	293	⇓iP	P	18 43 24.2	-0.7
GO01				i S	S	18 44 45.0	-3.0
GO01	Chusmiza	6.22	293	P	P	18 43 24.1	-0.9
PB07	IPOC Station P	6.29	273	P	P	18 43 23.7	-1.6
PB07	IPOC Station P	6.29	273	eP	P	18 43 24.1	-1.2
PB07				eS	S	18 44 46.6	-2.0
PB02	IPOC Station P	6.36	277	⇓iP	P	18 43 24.4	-1.3
PB02				eS	S	18 44 45.0	-4.6
PB04	IPOC Station P	6.50	268	P	P	18 43 25.2	-2.0
SIV	San Ignacio	6.51	18	P	P	18 43 27.6	+0.4
	comp=Z,44nm,0.3s,baz=216,slow=8.9,SNR=755						
SIV				S	S	18 44 52.9	+0.7
	baz=257,slow=10,SNR=13						
PB05	IPOC Station P	6.57	263	eP	P	18 43 25.4	-2.3
PB05				eS	S	18 44 51.2	-2.0
GO02	Mina Guanaco	6.60	243	⇓iP	P	18 43 26.4	-1.8
GO02				i S	S	18 44 50.6	-3.4
GO02	Mina Guanaco	6.60	243	P	P	18 43 26.2	-1.9
CYA	Choya	6.63	201	eP	P	18 43 26.2	-1.9
CYA				eS	S	18 44 49.5	-4.6
CYA				IAML		18 45 29.2	
	comp=Z,196nm,1.8s						
CPUP	Villa Florida	6.68	129	P	P	18 43 28.5	0.0
	comp=Z,52nm,0.3s,baz=314,slow=9.6,SNR=937						
CPUP	Villa Florida	6.68	129	P	P	18 43 28.2	-0.3
CPUP	Villa Florida	6.68	129	eP	P	18 43 28.9	+0.4
PATCX	Punta Patache	6.69	281	P	P	18 43 27.7	-1.2
TA01	Diego Aracena	6.78	283	⇓iP	P	18 43 28.1	-1.4
TA01				i S	S	18 44 52.9	-3.6
TA01	Diego Aracena	6.78	283	P	P	18 43 28.1	-1.4
MNMC	Minye Minye	6.80	296	⇓iP	P	18 43 29.2	-0.8
MNMC				i S	S	18 44 55.6	-1.8
MNMC	Minye Minye	6.80	296	P	P	18 43 28.9	-1.2
TA02	Huaiquique	6.82	285	⇓iP	P	18 43 28.9	-1.0
TA02				eS	S	18 44 53.6	-3.6
PB10	IPOC Station P	6.96	258	⇓iP	P	18 43 29.6	-1.7
PB10				i S	S	18 44 55.6	-4.2
PB10	IPOC Station P	6.96	258	P	P	18 43 29.4	-1.8
PSGC	Pisagua	7.04	291	i P	P	18 43 30.7	-1.6
PSGC				i S	S	18 44 56.2	-5.2
PSGCX	Pisagua	7.04	291	P	P	18 43 30.1	-2.1
PB14	IPOC Station P	7.09	249	⇓iP	P	18 43 31.0	-1.8
PB14				i S	S	18 44 59.7	-2.9
PB14	IPOC Station P	7.09	249	P	P	18 43 30.8	-2.0
AC02	Maricunga	7.13	229	P	P	18 43 31.4	-1.9
PB16	IPOC Station P	7.13	302	⇓iP	P	18 43 33.7	+0.1
PB16				i S	S	18 45 01.4	-2.4
PB16	IPOC Station P	7.13	302	P	P	18 43 33.3	-0.3
AANI	Anillaco	7.40	207	eP	P	18 43 32.7	-2.7
AANI				eS	S	18 45 00.9	-6.6
AANI				IAML		18 45 08.8	
	comp=Z,458nm,1.4s						
PTLB	Pontes e Lacer	7.74	30	eP	P	18 43 39.7	+0.9
PTLB				eS	S	18 45 14.6	+1.2
AP01	Chacalluta	7.78	298	P	P	18 43 37.9	-1.3
AC01	Pan de Azucar	7.85	239	⇓iP	P	18 43 38.7	-1.1
AC01				i S	S	18 45 11.3	-4.0
AC01	Pan de Azucar	7.85	239	P	P	18 43 38.5	-1.3
VCA	Vinchina	7.93	214	eP	P	18 43 38.4	-2.3
VCA				eS	S	18 45 11.6	-5.4
GO03	Copiap	8.37	229	P	P	18 43 43.5	-1.4
GO03	Copiap	8.37	229	eP	P	18 43 43.4	-1.5
GO03				eS	S	18 45 22.6	-2.1
AGUA	GUANDACOL	8.68	213	eP	P	18 43 45.6	-2.4
AGUA				eS	S	18 45 25.4	-5.1
AGUA				IAML		18 45 29.9	
	comp=Z,238nm,1.9s						
PP1B	Ponte de Pedra	9.03	61	eP	P	18 43 51.7	+0.1
PP1B				eS	S	18 45 36.9	0.0
TCA	Tanti	9.16	188	eP	P	18 43 49.6	-3.2
TCA				IAML		18 45 44.0	
	comp=Z,176nm,1.2s						
AC05	El Transito	9.21	223	P	P	18 43 52.5	-0.9
AVFE	Valle Fertil	9.24	204	eP	P	18 43 50.1	-3.5
AVFE				eS	S	18 45 33.4	-7.3
AVFE				IAML		18 45 35.1	
	comp=Z,220nm,1.1s						
AC04	Llanos de Chal	9.33	229	P	P	18 43 53.2	-1.3
ACHE	Chepes	9.43	199	eP	P	18 43 51.7	-3.9
ACHE				eS	S	18 45 34.6	-10
ITQB	Itaqui	9.44	143	eP	P	18 43 55.0	-0.5
ITQB				eS	S	18 45 43.1	-1.0
ACDV	Cuesta del Vie	9.56	213	eP	P	18 43 56.0	-0.9
ACDV				eS	S	18 45 42.0	-4.7
ACDV				IAML		18 45 45.0	
	comp=Z,467nm,0.9s						
LCO	Las Campanas	9.60	224	P	P	18 43 56.1	-1.4
LCO	Las Campanas	9.60	224	P	P	18 43 56.1	-1.4
VILB	Vilhena	9.64	17	eP	P	18 43 58.0	+0.1
TRCB	Terra Rica	9.72	95	eP	P	18 43 58.8	+0.2
TRCB				eS	S	18 45 48.9	-0.8
AROD	Rodeo	9.73	214	eP	P	18 43 58.4	-0.5
AROD				eS	S	18 45 48.1	-2.2
ACCO	Cerro Coronel	9.87	211	eP	P	18 43 58.9	-1.4
ACCO				eS	S	18 45 49.7	-3.1
ACCO				IAML		18 45 51.4	
	comp=Z,378nm,1.1s						
CO01	Juntas del Tor	9.93	218	P	P	18 44 00.4	-0.4
RTLL	Cerro Villicun	10.24	207	eP	P	18 44 01.9	-1.7
RTLL				eS	S	18 45 54.8	-4.3
RTLL				IAML		18 45 59.3	
	comp=Z,293nm,1.0s						
MRA	San Martin	10.40	192	eP	P	18 44 01.4	-4.0
MRA				IAML		18 46 01.9	
	comp=Z,24nm,0.5s						
PTGB	Pitanga	10.45	106	eP	P	18 44 06.2	+0.2
GO04	Tololo Observa	10.48	219	P	P	18 44 04.9	-1.4
GO04	Tololo Observa	10.48	219	eP	P	18 44 05.0	-1.4
GO04				eS	S	18 46 10.4	+6.4
ZON	Zonda	10.51	207	P	P	18 44 05.0	-1.4
ZON	Zonda	10.51	207	P	P	18 44 05.0	-1.4
ZON	Zonda	10.51	207	eP	P	18 44 05.0	-1.4
ZON				IAML		18 46 21.5	
	comp=Z,205nm,1.5s						
RTCV	Cerro Valdivia	10.73	206	eP	P	18 44 07.2	-1.5
CO03	El Pedregal	10.91	217	P	P	18 44 08.9	-1.7
PCMB	Pacaembu	11.04	89	eP	P	18 44 11.8	-0.2
PCMB				eS	S	18 46 13.4	-0.8
ITAB	Concordia	11.16	119	eP	P	18 44 11.7	-1.5
ITAB				eS	S	18 46 13.8	-2.7
CO02	Combarbal	11.36	217	P	P	18 44 13.2	-2.1
AUSP	Uspallata	11.40	208	eP	P	18 44 14.8	-1.0
ARCO	CERRO ARCO	11.75	205	eP	P	18 44 18.4	-0.9
CPSB	Cacapava Do Su	11.90	135	eP	P	18 44 19.1	-1.6
AAGR	Agrelo	11.93	204	eP	P	18 44 19.8	-1.2
ITRB	Iturama	12.19	80	eP	P	18 44 23.1	-0.7
ITRB				eS	S	18 46 34.8	-1.3
VA03	San Esteban	12.38	211	P	P	18 44 24.4	-1.3
ARAG	Araguaiana, MT	12.52	61	eP	P	18 44 26.7	-0.5
ARAG				eS	S	18 46 42.6	+0.4
ETMB	Extrema	12.70	346	eP	P	18 44 28.3	-0.8
PLTB	Pedras Altas	12.73	140	eP	P	18 44 27.4	-1.8
PEL	Peldehue	12.76	210	P	P	18 44 27.5	-2.0
PEL	Peldehue	12.76	210	P	P	18 44 27.5	-2.0
ROC1	El Roble	12.77	211	P	P	18 44 27.7	-2.2
MT05	Renca	12.99	210	P	P	18 44 30.1	-1.8
MT02	Curacav	13.06	211	P	P	18 44 30.1	-2.5
CNLB	Canela	13.11	125	eP	P	18 44 30.9	-2.3
SAML	Samuel	13.21	360	ceP	P	18 44 34.2	-0.2
SAML				pmax	pmax		
	comp=Z,73nm,1.3s						
SAML	Samuel	13.21	360	P	P	18 44 34.0	-0.4
SAML	Samuel	13.21	360	eP	P	18 44 34.2	-0.2
SAML				eS	S	18 46 55.1	-0.2
BB19B	Bebedouro	13.63	88	eP	P	18 44 37.7	-1.0
BO02	Sierra Bellavi	14.20	207	P	P	18 44 42.3	-2.0
SPB	Sao Paulo	14.53	98	P	P	18 44 45.9	-1.9
SPB	Sao Paulo	14.53	98	eP	P	18 44 46.2	-1.6
SPB				eS	S	18 47 16.6	-3.0
IPMB	Ipameri, GO	14.63	76	eP	P	18 44 47.7	-1.2
IPMB				eS	S	18 47 20.3	-1.5
PET01	Itanhaem-SP	14.71	101	eP	P	18 44 47.8	-1.8
VAO	Valinhos	14.95	96	eP	P	18 44 50.2	-1.9
SNDB	Serra Nova Dou	15.22	50	eP	P	18 44 53.9	-1.0
SNDB				eS	S	18 47 30.6	-1.6
BDFB	Brasilia	15.73	68	P	P	18 44 59.3	-0.8
	comp=Z,78nm,0.3s,baz=249,slow=9.6,SNR=431						
BDFB	Brasilia	15.73	68	P	P	18 44 59.2	-0.8
BDFB				pmax	pmax		
	comp=Z,2µm,1.4s						
BDFB	Brasilia	15.73	68	P	P	18 44 59.2	-0.8
BI02	San Fabin de	16.02	204	P	P	18 45 00.3	-2.1
PARB	Paraibuna	16.18	97	eP	P	18 45 02.8	-1.5
PARB				eS	S	18 47 47.9	-0.2

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NNA    Nana             16.59 306   P     P      18 45 08.0  0.0
       comp=Z,21nm,0.3s,baz=140,slow=7.9,SNR=106
NNA                                 S     S      18 47 58.9 +4.1
       comp=Z,3.7nm,0.3s,baz=322,slow=17,SNR=10.0
NNA                                 ScP   ScP    18 52 04.0 -0.9
       comp=Z,0.1nm,0.3s,baz=287,slow=3.5,SNR=4.7
NNA    Nana             16.59 306   P     P      18 45 08.2 +0.2
NNA                                       ScP    18 52 06.1 +1.2
NPGB   Novo Progresso   16.86  28  eP     P      18 45 09.5 -0.9
NPGB                               eS     S      18 47 59.0 -0.3
BI03   Tigo             16.89 208   P     P      18 45 09.2 -1.2
BSCB   Bom Sucesso      17.11  89  eP     P      18 45 12.6 -0.1
CZSB   Cruzeiro do Su   17.12 326  eP     P      18 45 11.4 -1.3
ESAR   Angra dos Reis   17.27  96  eP     P      18 45 13.4 -0.6
PEXB   Peixe            17.37  57  eP     P      18 45 15.1 +0.1
MAN01  Angra dos Reis   17.72  96  eP     P      18 45 18.1  0.0
VA04   Juan Fernndez    17.91 227   P     P      18 45 19.4 -0.3
LC01   Cunco            18.22 202   P     P      18 45 20.4 -2.0
LC01                                IAmb  IAmb   18 45 25.0
       comp=Z,110nm,1.1s
VAS01  Vassouras-RJ     18.22  94  eP     P      18 45 22.9 +0.2
MACA   Manacapuru-AM    19.11   7  eP     P      18 45 30.7 -0.1
ITTB   Itaituba         19.15  23  eP     P      18 45 30.9 -0.3
JANB   Januaria         19.20  71  eP     P      18 45 32.1 +0.4
DUB01  Friburgo-RJ      19.23  93  eP     P      18 45 32.3 +0.3
PLCA   Paso Flores      19.48 197   P     P      18 45 32.9 -1.1
       comp=Z,2.7nm,0.3s,baz=10,slow=11,SNR=66
PLCA                                PcP   PcP    18 49 28.3 +0.8
       comp=Z,0.7nm,0.3s,baz=360,slow=4.0,SNR=5.0
PLCA                                ScP   ScP    18 52 11.7 +0.8
       comp=Z,0.2nm,0.3s,baz=15,slow=3.4,SNR=4.7
PLCA   Paso Flores      19.48 197   P     P      18 45 32.4 -1.6
PLCA   Paso Flores      19.48 197  eP     P      18 45 32.6 -1.3
CAM01  Campos-RJ        19.91  93  eP     P      18 45 37.9 -0.2
SDBA   SAO DESIDERIO    19.94  64  eP     P      18 45 38.6 +0.2
SMTB   Santa Maria do   20.00  51  eP     P      18 45 39.6 +0.7
PRPB   Parauapebas      20.50  41  eP     P      18 45 43.5  0.0
ALF01  Guarapari-ES     20.92  90  eP     P      18 45 47.1 -0.1
ATAH   Atahualpa        21.02 313   P     P      18 45 49.7 +1.0
       comp=Z,38nm,0.5s,baz=143,slow=8.0,SNR=72
ATAH                                ScP   ScP    18 52 16.6 +1.1
       comp=Z,32nm,1.0s,baz=217,slow=1.1,SNR=5.6
BSFB   Barra de Sao F   21.14  85  eP     P      18 45 48.9 -0.3
RIB01  Linhares ES      21.45  86  eP     P      18 45 51.9 -0.1
LL01   San Ignacio de   21.54 199   P     P      18 45 50.7 -1.7
LL01                                IAmb  IAmb   18 45 51.8
       comp=Z,95nm,0.8s
PTGA   Pitinga          21.60   9   P     P      18 45 53.5 +0.2
       comp=Z,62nm,0.4s,baz=195,slow=10,SNR=142
PTGA                                S     S      18 49 14.5 -0.6
       comp=Z,12nm,0.6s,baz=289,slow=22,SNR=6.4
PTGA   Pitinga          21.60   9   P     P      18 45 53.6 +0.2
PTGA                                IAmb  IAmb   18 45 54.5
       comp=Z,100nm,0.8s
MALB   Monte Alegre     22.02  24  eP     P      18 45 57.0 -0.1
GO07   Milladeo Hill,   22.59 200   P     P      18 46 00.4 -1.5
GDU01  Guandu, BA       23.93  73  eP     P      18 46 13.9 -0.2
MCPB   Macapa, AP       24.27  28  eP     P      18 46 17.5 +0.3
TMAB   Tom-Au,PA,Br     24.56  39  eP     P      18 46 20.0 +0.3
ROSB   Rosrio           26.65  46  eP     P      18 46 37.8 -0.3
OTAV   Otavalo          26.87 324ceP      P      18 46 41.2 +0.6
OTAV                                pmax  pmax
       comp=Z,10.0nm,0.5s
OTAV   Otavalo          26.87 324   P     P      18 46 40.6  0.0
OTAV   Otavalo          26.87 324  eP     P      18 46 41.0 +0.5
PTGC   Puerto Gaitan,   27.71 340  eP     P      18 46 46.0 -1.4
VILC   Villavicencio,   28.15 337  eP     P      18 46 51.5 +0.1
RAC02  Cali,SGC         28.63 331  eP     P      18 46 47.7 -7.8
CHIC   Chingaza         28.65 338  eP     P      18 46 55.0 -1.0
MDP    Montagnes des    29.04  22   P     P      18 46 59.2 +0.2
       comp=Z,105nm,0.9s,baz=190,slow=12,SNR=30
ROSC   El Rosal         29.05 337   P     P      18 47 00.1 +0.5
       comp=Z,106nm,0.4s,baz=168,slow=5.0,SNR=42
ROSC                                S     S      18 51 13.9 +1.3
       comp=Z,88nm,1.1s,baz=358,slow=22,SNR=16
ROSC   El Rosal         29.05 337   P     P      18 46 59.8 +0.3
YOTC   Yotoco, Valle    29.09 332  eP     P      18 46 57.4 -2.2
RUSC   La Rusia         29.61 340  eP     P      18 47 03.2 -1.2
EFI    East Falkland    29.65 174⇑eP      P      18 47 02.5 -1.2
EFI                                 pmax  pmax
       comp=Z,33nm,0.8s
EFI    East Falkland    29.65 174   P     P      18 47 03.6 -0.1
SPBC   San Pablo de B   29.72 338  eP     P      18 47 03.5 -1.4
TAMC   Tame, Arauca     29.73 342  eP     P      18 47 03.6 -1.4
GO09   Cerro Castillo   29.86 192   P     P      18 47 05.6 +0.1
GO09                                IAmb  IAmb   18 47 07.3
       comp=Z,60nm,0.9s
PLMC   San Jos del P    29.89 333  eP     P      18 47 04.3 -2.0
NORC   Norcasia         29.93 336  eP     P      18 47 04.5 -2.1
BARC   Barichara        30.30 340  eP     P      18 47 08.6 -1.5
CBOC   Ciudad Bolivar   30.64 334  eP     P      18 47 12.3 -0.7
PTBC   PUERTO BERRIO,   30.68 338  eP     P      18 47 09.6 -3.5
HELC   Santa Helena     30.75 335  eP     P      18 47 11.5 -2.7
PAMC   Pamplona, Colo   30.85 341  eP     P      18 47 13.4 -1.7
BRRC   Barranca, Sant   30.95 339  eP     P      18 47 14.6 -0.8
RCBR   Riachuelo        30.95  62   P     P      18 47 16.2 +0.7
       comp=Z,305nm,1.0s,baz=226,slow=9.8,SNR=51
RCBR   Riachuelo        30.95  62ceP      P      18 47 16.8 +1.3
RCBR                                pmax  pmax
       comp=Z,542nm,1.3s
RCBR   Riachuelo        30.95  62   P     P      18 47 16.6 +1.1
RCBR   Riachuelo        30.95  62  eP     P      18 47 16.0 +0.5
ZARC   Zaragoza, Cauc   31.70 337  eP     P      18 47 18.6 -3.3
DBBC   Dabeiba          31.77 335  eP     P      18 47 20.3 -2.3
SDV    Santo Domingo    31.79 346   P     P      18 47 21.5 -1.3
       comp=Z,60nm,0.4s
SDV                                 S     S      18 51 48.0 -6.3
       comp=Z,12nm,0.8s,baz=236,slow=23,SNR=6.0
SDV    Santo Domingo    31.79 346   P     P      18 47 21.8 -1.0
SDV                                 IAmb  IAmb   18 47 22.7
       comp=Z,134nm,1.1s
SDV    Santo Domingo    31.79 346  eP     P      18 47 21.6 -1.1
OCAC   Ocana            31.89 341  eP     P      18 47 19.0 -4.6
UREC   San Jos de Ur    32.19 336  eP     P      18 47 23.2 -2.8
SMLC   San Martn de     32.66 340  eP     P      18 47 25.9 -4.0
MG01   Puerto William   32.82 185   P     P      18 47 30.8 +0.1
ARGC   Ariguani, Magd   33.71 340  eP     P      18 47 35.0 -3.8
PAYG   Puerto Ayora     34.03 305   P     P      18 47 43.1 +1.5
SJCC   San Jacinto, C   34.05 338  eP     P      18 47 37.9 -3.8
GRGR   Grenville        34.19   3   P     P      18 47 42.7 -0.1
BCIP   Isla Barro Col   35.25 331   P     P      18 47 51.2 -0.4
BCIP                                pmax  pmax
       comp=Z,88nm,1.0s
BCIP   Isla Barro Col   35.25 331   P     P      18 47 51.2 -0.4
BCIP                                IAmb  IAmb   18 47 52.4
       comp=Z,88nm,0.9s
SVB    Belmont          35.34   3   P     P      18 47 51.4 -1.0
SVB                                 IAmb  IAmb   18 47 57.0
       comp=Z,65nm,0.9s
MCLT   Moule a Chique   35.79   4   P     P      18 47 55.2 -0.9
BIM    Bigot            36.58   3  eP     P      18 48 02.1 -0.5
ZAM    Aeronautique     36.64   3  eP     P      18 48 03.3 +0.2
FDF    Fort de France   36.79   3  eP     P      18 48 03.8 -0.6
FDF    Fort de France   36.79   3   P     P      18 48 03.8 -0.6
FDF                                 pmax  pmax
       comp=Z,52nm,0.9s
FDF    Fort de France   36.79   3   P     P      18 48 03.8 -0.6
FDF                                 IAmb  IAmb   18 48 12.5
       comp=Z,52nm,0.9s
GBMF   Grand Be         36.85   3  eP     P      18 48 04.3 -0.6
CXM    Morne La Croix   36.87   3  eP     P      18 48 03.5 -1.6
PCM    Pelee Case Pet   36.87   3  eP     P      18 48 04.5 -0.5
BAMF   Morne Balai      36.87   3  eP     P      18 48 04.9 -0.1
HOPE   Hope Point       37.78 155   P     P      18 48 11.9  0.0
HOPE                                pmax  pmax
       comp=Z,234nm,1.6s
HOPE   Hope Point       37.78 155   P     P      18 48 11.9  0.0
HDC    Heredia          38.08 325   P     P      18 48 14.8 -0.2
JTS    Las Juntas de    38.77 324   P     P      18 48 21.7 +1.2
       comp=Z,99nm,0.4s,baz=196,slow=4.4,SNR=37
JTS    Las Juntas de    38.77 324c iP     P      18 48 22.1 +1.6
JTS                                 pmax  pmax
       comp=Z,243nm,1.0s
JTS    Las Juntas de    38.77 324   P     P      18 48 21.7 +1.2
SEUS   St. Eustatius    39.48   0   P     P      18 48 27.1 +1.0
SEUS                                IAmb  IAmb   18 48 29.9
       comp=Z,62nm,0.7s
CDVI   St. Croix        39.77 358   P     P      18 48 26.9 -1.5
CDVI                                IAmb  IAmb   18 48 28.0
       comp=Z,48nm,1.0s
ICMP   Isla Caja de M   40.01 355   P     P      18 48 28.9 -1.4
ESPN   Las Esperanzas   40.02 327   P     P      18 48 30.5  0.0
MLPR   Magueyes Islan   40.14 354   P     P      18 48 29.1 -2.3
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MTP    Monte Pirata     40.16 356   P     P      18 48 29.3 -2.1
OBIP   Obispado Ponce   40.18 355   P     P      18 48 29.9 -1.7
OBIP                                IAmb  IAmb   18 48 31.5
       comp=Z,96nm,0.8s
CRPR   Cabo Rojo, PR    40.19 354   P     P      18 48 30.0 -1.7
SJG    San Juan         40.21 356   P     P      18 48 30.9 -1.0
       comp=Z,28nm,0.4s,baz=168,slow=4.7,SNR=16
SJG                                 S     S      18 53 53.1 -6.0
       comp=Z,4.7nm,0.3s,baz=257,slow=23,SNR=18
SJG    San Juan         40.21 356   P     P      18 48 30.4 -1.5
SJG                                 IAmb  IAmb   18 48 32.2
       comp=Z,146nm,1.4s
HUMP   Col San Antoni   40.22 356   P     P      18 48 30.9 -1.0
ACON   Acoyapa          40.28 325   P     P      18 48 32.9 +0.3
CBYP   Canovanas        40.35 356   P     P      18 48 31.8 -1.3
CBYP                                IAmb  IAmb   18 48 33.1
       comp=Z,35nm,0.7s
CBYP                                      PcP    18 50 22.4 -0.1
CUPR   Culebra, Puert   40.35 357   P     P      18 48 31.0 -2.0
CUPR                                PcP   PcP    18 50 22.5  0.0
MPR    Mayaguez         40.39 354   P     P      18 48 31.6 -1.7
MPR                                 IAmb  IAmb   18 48 33.0
       comp=Z,162nm,1.2s
GCPR   Guaynabo City    40.40 356   P     P      18 48 31.0 -2.4
GCPR                                      PcP    18 50 21.8 -0.9
AOPR   Arecibo Observ   40.49 355   P     P      18 48 31.4 -2.7
AOPR                                PcP   PcP    18 50 22.3 -0.7
EMPR   Esperanza - Ma   40.60 355   P     P      18 48 32.9 -2.1
AGPR   Aguadilla, PR    40.64 354   P     P      18 48 33.4 -1.9
SDD    Santo Domingo    40.98 350   P     P      18 48 36.6 -1.4
BANI   BANI             40.99 350   P     P      18 48 37.7 -0.6
DR12   Loma Pena Alta   41.23 351   P     P      18 48 37.7 -2.3
LGNH   Logne            41.55 346   P     P      18 48 41.7 -0.8
LGNH                                IAmb  IAmb   18 48 43.6
       comp=Z,69nm,0.9s
SDDR   Presa de Saban   41.73 348   P     P      18 48 42.2 -1.8
SDDR                                IAmb  IAmb   18 48 46.3
       comp=Z,38nm,0.5s
CRIN   San Cristobal    41.90 324   P     P      18 48 44.3 -1.2
SC01   Santiago de lo   42.07 349   P     P      18 48 45.8 -0.8
SC01                                IAmb  IAmb   18 49 04.6
       comp=Z,140nm,1.2s
RPN    Rapa Nui         42.09 254   P     P      18 48 47.5 +0.8
       comp=Z,322nm,1.1s,baz=124,slow=3.1,SNR=7.4
RPN    Rapa Nui         42.09 254   P     P      18 48 47.7 +0.9
RPN                                 pmax  pmax
       comp=Z,610nm,1.2s
RPN    Rapa Nui         42.09 254   P     P      18 48 47.7 +0.9
PMSA   Palmer Station   42.53 181   P     P      18 48 49.4 -0.1
       comp=Z,48nm,0.9s,baz=20,slow=7.9,SNR=4.4
PMSA   Palmer Station   42.53 181   P     P      18 48 50.2 +0.7
MTDJ   Mount Denham     42.61 340   P     P      18 48 49.8 -1.2
TGUH   Tegucigalpa,Un   43.14 325   P     P      18 48 54.4 -0.8
GTBY   Guantanamo Bay   43.51 344   P     P      18 48 56.3 -1.5
GTBY                                IAmb  IAmb   18 48 56.8
       comp=Z,70nm,1.1s
GRTK   Grand Turk       44.18 349   P     P      18 49 01.5 -1.4
CBCY   The Bluff, Cay   44.77 337   P     P      18 49 05.4 -2.2
LCCY   Blossom Villag   44.82 337   P     P      18 49 06.8 -1.2
FSCY   Frank Sound, G   44.91 336   P     P      18 49 07.8 -0.8
CCIG   Comitan          47.67 321   P     P      18 49 29.0 -0.9
CCIG                                PcP   PcP    18 50 49.4 +1.2
TEIG   Tepich           48.83 328   P     P      18 49 37.1 -1.0
TEIG                                PcP   PcP    18 50 52.9 +0.7
ASCN   Ascension        48.97  81   P     P      18 49 38.6 -0.8
CMIG   Matias Romero    49.94 319   P     P      18 49 46.2 -0.1
       comp=Z,103nm,0.8s,baz=105,slow=5.7,SNR=93
061Z   Ochoppi          50.83 339   P     P      18 49 52.3 -0.3
TLIG   Tlapa            52.61 316   P     P      18 50 06.4 +0.6
TLIG                                IAmb  IAmb   18 50 07.9
       comp=Z,99nm,0.7s
SACV   Santiago Islan   53.55  50   P     P      18 50 11.4 -1.0
SHEL   Horse Pasture    54.32  94   P     P      18 50 18.2 +0.2
SHEL                                pmax  pmax
       comp=Z,134nm,1.1s
SHEL   Horse Pasture    54.32  94   P     P      18 50 18.2 +0.2
SHEL                                IAmb  IAmb   18 50 19.3
       comp=Z,134nm,1.1s
656A   Willston         54.60 339   P     P      18 50 19.1 -0.4
656A                                IAmb  IAmb   18 50 20.6
       comp=Z,189nm,1.2s
456A   Hilliard         55.70 340   P     P      18 50 27.0 -0.1
MOIG   Morelia          55.84 315   P     P      18 50 29.2 +0.6
MOIG                                IAmb  IAmb   18 50 30.7
       comp=Z,107nm,0.8s
553A   Crawfordville    56.00 338   P     P      18 50 29.2  0.0
257A   Skidaway Islan   56.56 342   P     P      18 50 32.9 -0.1
TIGA   Tifton           56.86 339   P     P      18 50 34.5 -0.6
       baz=157
TIGA   Tifton           56.86 339   P     P      18 50 34.5 -0.6
TIGA                                IAmb  IAmb   18 50 35.9
       comp=Z,92nm,0.8s
451A   Vernon           56.86 337   P     P      18 50 34.6 -0.5
255A   Hazlehurst       56.95 340   P     P      18 50 35.5 -0.2
255A                                IAmb  IAmb   18 50 36.9
       comp=Z,264nm,1.1s
RGRS   Roger Stewart    57.20 343   P     P      18 50 37.2 -0.2
BELA   Belgrano 2       57.33 173   P     P      18 50 38.1 +0.4
352A   Blakely          57.35 338   IAmb  IAmb   18 50 39.1
       comp=Z,161nm,0.8s
NHSC   New Hope         57.39 343   P     P      18 50 38.9 +0.2
       baz=161
NHSC   New Hope         57.39 343   IAmb  IAmb   18 50 40.6
       comp=Z,207nm,1.1s
VNA3   Neumayer Olymp   57.69 162   P     P      18 50 40.5 +0.2
Y60A   Bolivia          57.74 345   P     P      18 50 40.5 -0.6
       baz=163
Y60A   Bolivia          57.74 345   P     P      18 50 40.3 -0.7
Y60A                                IAmb  IAmb   18 50 42.2
       comp=Z,114nm,0.8s
VNA1   Neumayer--Stat   57.83 161   P     P      18 50 41.8 +0.7
BRAL   Brewton          57.85 336   P     P      18 50 41.6 -0.2
       baz=154
BRAL   Brewton          57.85 336   IAmb  IAmb   18 50 42.7
       comp=Z,220nm,0.8s
Z56A   Williston        57.93 342   P     P      18 50 42.0 -0.3
       baz=160
Y58A   Scranton         58.01 344   P     P      18 50 42.6 -0.3
       baz=162
MBO    M'Bour           58.08  55   P     P      18 50 43.0 -0.7
MBO                                 IAmb  IAmb   18 50 45.1
       comp=Z,138nm,1.1s
VNA2   Neumayer--Watz   58.21 161   P     P      18 50 43.9 +0.2
       baz=298,slow=7.9
X60A   Albert Glenn T   58.24 346   P     P      18 50 43.7 -0.7
       baz=164
250A   Grady            58.28 337   P     P      18 50 43.8 -0.9
250A                                IAmb  IAmb   18 50 45.2
       comp=Z,153nm,0.8s
250A                                PcP   PcP    18 51 28.8 +0.5
Y56A   Pelion           58.35 342   P     P      18 50 45.2  0.0
       baz=160
X59A   McDuffie Farm,   58.38 345   P     P      18 50 44.9 -0.4
       baz=163,SNR=6.0
X58A   Rowland          58.54 344   P     P      18 50 46.1 -0.3
       baz=162
W61A   Ground Anchor    58.59 347   P     P      18 50 46.5 -0.2
       baz=165
W60A   Pink Hill        58.63 346   P     P      18 50 46.6 -0.4
       baz=164
GOGA   Godfrey          58.64 340   P     P      18 50 46.2 -0.9
GOGA                                pmax  pmax
       comp=Z,46nm,1.0s
GOGA   Godfrey          58.64 340   P     P      18 50 46.5 -0.6
       baz=158,SNR=15
GOGA   Godfrey          58.64 340   P     P      18 50 46.2 -0.9
X57A   Johnson Farm,    58.65 344   P     P      18 50 46.8 -0.4
       baz=162
JSC    Jenkinsville     58.79 342   P     P      18 50 47.5 -0.6
JSC                                 pmax  pmax
       comp=Z,32nm,1.0s
JSC    Jenkinsville     58.79 342   P     P      18 50 47.5 -0.6
W59A   Clinton          58.91 345   P     P      18 50 48.3 -0.6
       baz=163
BIRD   Birdtown, Kers   58.92 343   P     P      18 50 48.5 -0.5
X56A   White Oak        58.93 343   P     P      18 50 49.0 -0.1
       baz=161,SNR=25
ZAIG   Zacatecas        58.96 317   IAmb  IAmb   18 50 52.4
       comp=Z,135nm,1.1s
W58A   Raeford          58.96 345   P     P      18 50 48.7 -0.5
       baz=162,SNR=5.4
346A   Big Creek Wild   58.99 334   IAmb  IAmb   18 50 50.1
       comp=Z,95nm,0.9s
HODGE  Hodges           59.03 342   P     P      18 50 49.3 -0.5
W57A   Gilead           59.27 344   P     P      18 50 50.8 -0.5
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       baz=162,SNR=11
W56A   Indian Trail     59.41 343   P     P      18 50 51.9 -0.4
       baz=161,SNR=7.8
V59A   Middlesex        59.43 346   P     P      18 50 51.9 -0.5
       baz=164,SNR=5.7
LRAL   Lakeview Retre   59.50 337   P     P      18 50 52.0 -0.8
       baz=154,SNR=24
LRAL   Lakeview Retre   59.50 337   P     P      18 50 51.7 -1.1
LRAL                                IAmb  IAmb   18 50 53.2
       comp=Z,125nm,1.2s
LRAL                                PcP   PcP    18 51 34.8 +1.6
344A   Westbrook Farm   59.58 333   P     P      18 50 52.3 -1.2
344A                                IAmb  IAmb   18 50 54.4
       comp=Z,118nm,1.1s
344A                                PcP   PcP    18 51 34.1 +0.5
U61A   Possum Corner    59.60 348   P     P      18 50 52.8 -0.6
       baz=166
KMSC   Kings Mountain   59.62 343   P     P      18 50 53.5 -0.2
       baz=160,SNR=18
V58A   Windy Hill, Pi   59.67 345   P     P      18 50 53.3 -0.7
       baz=163,SNR=5.4
SNAA   Sanae            59.85 161   P     P      18 50 54.9 +0.1
SNAA   Sanae            59.85 161   P     P      18 50 54.8 +0.1
       comp=Z,27nm,0.8s,baz=289,slow=6.6,SNR=44
SNAA                                pP    pP     18 52 44.7  0.0
       comp=Z,43nm,1.3s,baz=291,slow=5.7,SNR=8.3
SNAA   Sanae            59.85 161deP      P      18 50 54.5 -0.3
SNAA                                pmax  pmax
       comp=Z,25nm,0.9s
SNAA   Sanae            59.85 161   P     P      18 50 54.9 +0.1
SNAA                                pP    pP     18 52 44.4 -0.3
U60A   Pendleton        59.88 347   P     P      18 50 55.0 -0.3
       baz=165,SNR=8.6
V57A   Coltrane Farms   59.92 344   P     P      18 50 54.8 -0.8
       baz=162,SNR=6.4
146A   Union            59.93 335   IAmb  IAmb   18 50 56.5
       comp=Z,168nm,1.1s
V56A   Mocksville       60.03 344   P     P      18 50 56.3  0.0
       baz=161,SNR=22
Y49A   Blount Mountai   60.03 338   IAmb  IAmb   18 50 56.8
       comp=Z,96nm,0.6s
Z47A   Carrollton       60.04 336   P     P      18 50 55.4 -1.1
Z47A                                IAmb  IAmb   18 50 56.9
       comp=Z,83nm,0.8s
Z47A                                PcP   PcP    18 51 35.5 +0.1
441A   DeRidder         60.07 330   IAmb  IAmb   18 50 58.9
       comp=Z,114nm,0.8s
U58A   Oxford           60.11 346   P     P      18 50 56.5 -0.4
       baz=164,SNR=9.1
VBMS   Vicksburg        60.15 333   P     P      18 50 56.5 -0.7
       baz=151
VBMS   Vicksburg        60.15 333   P     P      18 50 56.5 -0.7
VBMS                                IAmb  IAmb   18 50 58.0
       comp=Z,159nm,1.2s
VBMS                                PcP   PcP    18 51 36.9 +1.1
342A   Flagon Creek P   60.21 331   IAmb  IAmb   18 50 59.2
       comp=Z,113nm,0.9s
U57A   Blanch           60.33 345   P     P      18 50 57.9 -0.4
       baz=163,SNR=12
T59A   Double "B" Far   60.44 347   P     P      18 50 58.6 -0.4
       baz=165,SNR=7.2
U56A   King             60.51 344   P     P      18 50 59.8 +0.3
       baz=162,SNR=13
T58A   Grand View Acr   60.63 346   P     P      18 50 60.0 -0.3
       baz=164,SNR=6.8
HKT    Hockley          60.67 327c iP     P      18 51 00.9 +0.2
HKT                                 pmax  pmax
       comp=Z,121nm,1.2s
HKT    Hockley          60.67 327   P     P      18 51 00.6  0.0
HKT                                 IAmb  IAmb   18 51 02.8
       comp=Z,221nm,1.3s
X48A   Hartselle        60.79 337   IAmb  IAmb   18 51 02.0
       comp=Z,103nm,0.8s
TKL    Tuckaleechee C   60.81 341   P     P      18 51 00.7 -0.8
       comp=Z,26nm,0.4s,baz=165,slow=7.3,SNR=40
T57A   Hurt             60.85 345   P     P      18 51 01.4 -0.3
       baz=163,SNR=6.7
V52A   Sevierville      60.93 341   IAmb  IAmb   18 51 02.7
       comp=Z,55nm,0.7s
U54A   Nelsons Funny    61.05 343   P     P      18 51 03.1  0.0
       baz=160,SNR=25
U54A   Nelsons Funny    61.05 343   IAmb  IAmb   18 51 04.2
       comp=Z,97nm,0.6s
T56A   Rocky Mt         61.06 345   P     P      18 51 03.3 +0.1
       baz=162,SNR=12
SWET   Sewanee          61.10 339   IAmb  IAmb   18 51 03.7
       comp=Z,123nm,1.2s
V51A   Loudon           61.12 340   P     P      18 51 02.4 -1.1
S59A   Mechanicsville   61.15 347   P     P      18 51 03.6 -0.1
       baz=165,SNR=6.3
S58A   Poland Farm, P   61.16 347   P     P      18 51 03.3 -0.5
       baz=164
833A   Chaparral WMA,   61.25 324   P     P      18 51 05.2 +0.6
       baz=141,SNR=73
833A   Chaparral WMA,   61.25 324         pP     18 52 57.8 +1.6
BLA    Blacksburg       61.34 344   P     P      18 51 04.8 -0.2
BLA                                 pmax  pmax
       comp=Z,103nm,1.4s
BLA    Blacksburg       61.34 344   P     P      18 51 05.1 +0.1
       baz=162,SNR=7.3
BLA    Blacksburg       61.34 344   P     P      18 51 04.8 -0.2
BLA                                 IAmb  IAmb   18 51 06.3
       comp=Z,103nm,1.4s
R58B   Mineral          61.47 347   P     P      18 51 05.6 -0.1
       baz=164,SNR=6.9
S57A   Dark Hollow, R   61.51 346   P     P      18 51 06.0  0.0
       baz=163,SNR=6.6
R59A   King George, V   61.53 347   P     P      18 51 05.8 -0.4
       baz=165
TZTN   Tazewell         61.56 341   P     P      18 51 05.7 -0.8
       baz=158,SNR=7.8
S56A   Natural Bridge   61.57 345   P     P      18 51 06.0 -0.4
       baz=163
CBN    Corbin Frederi   61.59 347   P     P      18 51 06.9 +0.4
       baz=165,SNR=5.3
CBN    Corbin Frederi   61.59 347   IAmb  IAmb   18 51 07.5
       comp=Z,58nm,0.5s
NATX   Nacogdoches      61.60 330   P     P      18 51 07.7 +1.0
       baz=147,SNR=22
NATX   Nacogdoches      61.60 330   P     P      18 51 07.3 +0.5
PLAL   Pickwick Lake    61.64 337   IAmb  IAmb   18 51 07.0
       comp=Z,61nm,0.8s
OXF    Oxford           61.72 335   P     P      18 51 06.2 -1.3
       baz=152,SNR=17
R58A   Rapidan          61.81 347   P     P      18 51 07.9 -0.1
       baz=164,SNR=8.0
V48A   Smith Brothers   61.87 338   P     P      18 51 07.2 -1.2
V48A                                IAmb  IAmb   18 51 07.9
       comp=Z,105nm,1.3s
R57A   Stanardsville    61.92 346   P     P      18 51 08.8 +0.1
       baz=164,SNR=12
Z41A   Richland Creek   62.02 332   P     P      18 51 09.8 +0.3
       baz=149
Z41A   Richland Creek   62.02 332   IAmb  IAmb   18 51 10.6
       comp=Z,142nm,1.5s
CLTN   Cedars of Leba   62.03 339   IAmb  IAmb   18 51 09.6
       comp=Z,66nm,0.6s
Q60A   Greensboro       62.07 349   P     P      18 51 10.3 +0.7
       baz=167,SNR=5.1
Q60A   Greensboro       62.07 349   IAmb  IAmb   18 51 11.3
       comp=Z,138nm,0.8s
S54A   Dingess, Beckl   62.12 344   P     P      18 51 10.0 -0.1
       baz=161,SNR=24
S54A   Dingess, Beckl   62.12 344   IAmb  IAmb   18 51 11.1
       comp=Z,84nm,0.8s
CCAR   Cane Creek       62.15 333   IAmb  IAmb   18 51 11.4
       comp=Z,195nm,1.3s
U49A   Red Boiling Sp   62.23 339   P     P      18 51 09.0 -1.8
435B   Jarrell          62.23 327   P     P      18 51 11.2 +0.3
       baz=144,SNR=8.6
435B   Jarrell          62.23 327   IAmb  IAmb   18 51 12.5
       comp=Z,145nm,1.1s
R55A   Marlinton        62.28 345   P     P      18 51 11.7 +0.5
       baz=162,SNR=9.1
R55A   Marlinton        62.28 345   IAmb  IAmb   18 51 13.0
       comp=Z,118nm,1.4s
X43A   Marvell          62.30 334   P     P      18 51 11.2  0.0
       baz=151,SNR=10
X43A   Marvell          62.30 334   P     P      18 51 10.8 -0.5
X43A                                IAmb  IAmb   18 51 12.2
       comp=Z,173nm,0.8s
Q58A   Fox Den Farm,    62.37 347   P     P      18 51 11.6 +0.1
       baz=165,SNR=15
R54A   Victor           62.40 344   P     P      18 51 11.9  0.0
       baz=161,SNR=20
WLAR   White Oak Lake   62.52 332   IAmb  IAmb   18 51 14.2
       comp=Z,202nm,1.1s
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WVT	Waverly	62.58	338	P	P	18 51 11.5	-1.5
WVT				pmax	pmax		
	comp=Z,384nm,1.6s						
WVT	Waverly	62.58	338	P	P	18 51 11.7	-1.3
	baz=154						
WVT	Waverly	62.58	338	P	P	18 51 11.5	-1.5
Q57A	Strasburg	62.61	347	P	P	18 51 13.7	+0.6
	baz=164,SNR=17						
P59A	Jarrettsville	62.77	348	P	P	18 51 14.7	+0.5
	baz=166,SNR=34						
Q56A	Snyder Ridge,	62.78	346	P	P	18 51 14.9	+0.6
	baz=163						
R53A	Hurricane	62.79	343	IAmb	IAmb	18 51 15.4	
	comp=Z,276nm,1.6s						
P58A	Pank, Wackersv	62.82	348	P	P	18 51 14.7	+0.2
	baz=165,SNR=12						
P60A	Greenville	62.82	349	P	P	18 51 14.4	-0.1
	baz=167,SNR=7.4						
O61A	Allentown	62.92	350	P	P	18 51 15.2	+0.2
	baz=168						
P57A	Homestead Farm	62.95	347	P	P	18 51 16.1	+0.8
	baz=164,SNR=29						
P57A	Homestead Farm	62.95	347	P	P	18 51 15.9	+0.6
P57A				IAmb	IAmb	18 51 17.3	
	comp=Z,76nm,0.7s						
Z38A	Mt. Pleasant	63.00	330	IAmb	IAmb	18 51 17.4	
	comp=Z,147nm,0.8s						
X40A	Basin Creek Fa	63.08	333	P	P	18 51 15.5	-0.8
	baz=149						
WHTX	Lake Whitney,	63.14	328	P	P	18 51 16.9	+0.1
	baz=144,SNR=14						
WHTX	Lake Whitney,	63.14	328	IAmb	IAmb	18 51 18.1	
	comp=Z,84nm,0.7s						
P56A	Dayton Farm, R	63.15	346	P	P	18 51 17.2	+0.5
	baz=164,SNR=11						
JCT	Junction City	63.15	325	P	P	18 51 16.6	-0.3
JCT				pmax	pmax		
	comp=Z,101nm,0.8s						
JCT	Junction City	63.15	325	P	P	18 51 17.1	+0.2
	baz=142,SNR=36						
JCT	Junction City	63.15	325	P	P	18 51 16.6	-0.3
JCT				IAmb	IAmb	18 51 18.2	
	comp=Z,101nm,0.8s						
Q53A	Leroy	63.17	344	P	P	18 51 16.7	-0.1
	baz=161,SNR=21						
GNAR	Gosnell	63.23	336	P	P	18 51 16.9	-0.3
O60A	Telford	63.27	350	P	P	18 51 17.6	+0.2
	baz=167,SNR=8.2						
O58A	Lewisberry	63.36	348	P	P	18 51 18.3	+0.3
	baz=166,SNR=13						
O59A	Robesonia	63.40	349	P	P	18 51 18.4	+0.2
	baz=166,SNR=5.7						
R50A	Paris	63.40	341	P	P	18 51 17.3	-1.0
R50A				IAmb	IAmb	18 51 18.9	
	comp=Z,68nm,0.9s						
W41B	Gary Mavity, V	63.43	334	P	P	18 51 17.6	-0.8
	baz=150,SNR=11						
MIAR	Mount Ida	63.45	332	P	P	18 51 18.1	-0.5
	baz=148,SNR=26						
MIAR	Mount Ida	63.45	332	IAmb	IAmb	18 51 19.3	
	comp=Z,79nm,1.1s						
Q52A	Bidwell	63.46	343	IAmb	IAmb	18 51 19.5	
	comp=Z,84nm,0.9s						
BRNJ	Basking Ridge	63.49	350	P	P	18 51 19.7	+0.9
LIC	Lamto	63.50	71	*e*P	P	18 51 18.3	-1.1
	comp=Z,130nm,0.6s						
N61A	South Mountain	63.52	351	P	P	18 51 19.4	+0.4
	baz=168						
MCWV	Mont Chateau	63.52	346	P	P	18 51 19.4	+0.4
	baz=163,SNR=20						
WHAR	Wooly Hollow	63.55	334	P	P	18 51 18.3	-0.9
O57A	Amberson	63.58	348	P	P	18 51 20.0	+0.6
	baz=165,SNR=16						
TIC	Toumodi	63.70	70	*e*P	P	18 51 19.7	-1.1
P53A	Whipple	63.73	344	pP	pP	18 53 14.7	+1.7
PARMO	Parma	63.75	336	P	P	18 51 19.8	-0.7
N60A	Cedar Hill Far	63.76	350	P	P	18 51 20.5	0.0
	baz=168,SNR=6.7						
LCAR	Lake Charles	63.76	335	IAmb	IAmb	18 51 21.0	
	comp=Z,66nm,0.8s						
WSPT	Westport, CT	63.79	351	IAmb	IAmb	18 51 21.1	
	comp=Z,106nm,1.5s						
KIC	Kosan Boka	63.81	71	*e*P	P	18 51 20.4	-1.0
	comp=Z,44nm,0.4s						
Q51A	Peebles	63.81	343	IAmb	IAmb	18 51 21.6	
	comp=Z,44nm,0.7s						
O56A	Blue Knob Stat	63.83	347	P	P	18 51 21.5	+0.5
	baz=164,SNR=15						
O56A	Blue Knob Stat	63.83	347	IAmb	IAmb	18 51 22.7	
	comp=Z,80nm,1.0s						
DBIC	Dimbokro	63.86	70	P	P	18 51 21.6	-0.1
	comp=Z,153nm,1.0s,baz=217,slow=6.9,SNR=107						
DBIC				pP	pP	18 53 14.8	+1.1
	comp=Z,18nm,1.0s,baz=194,slow=6.8,SNR=4.5						
DBIC				S	S	18 59 13.8	-0.4
	comp=Z,2.5nm,0.8s,baz=232,slow=14,SNR=10.0						
DBIC	Dimbokro	63.86	70	P	P	18 51 21.5	-0.2
DBIC				pmax	pmax		
	comp=Z,242nm,1.2s						
DBIC	Dimbokro	63.86	70	P	P	18 51 21.5	-0.2
HPIG		63.90	318	P	P	18 51 22.2	+0.3
HPIG				IAmb	IAmb	18 51 23.8	
	comp=Z,89nm,0.6s						
N59A	State Game Lan	63.92	349	P	P	18 51 21.8	+0.2
	baz=167,SNR=7.7						
M61A	Granite Spring	63.99	351	P	P	18 51 21.9	0.0
	baz=169						
FCAR	Ozark Folk Cen	63.99	334	IAmb	IAmb	18 51 22.3	
	comp=Z,74nm,0.6s						
M62A	Hamden	64.00	352	P	P	18 51 22.1	+0.2
	baz=170						
N58A	Sunbury	64.01	349	P	P	18 51 22.4	+0.4
	baz=166,SNR=15						
N58A	Sunbury	64.01	349	IAmb	IAmb	18 51 23.7	
	comp=Z,77nm,1.1s						
SSPA	Standing Stone	64.04	348	P	P	18 51 22.6	+0.4
	baz=165						
SSPA	Standing Stone	64.04	348	P	P	18 51 22.3	+0.1
SSPA				IAmb	IAmb	18 51 23.8	
	comp=Z,61nm,0.9s						
P52A	Corning	64.06	344	P	P	18 51 22.1	-0.4
	baz=160,SNR=28						
N57A	Milroy	64.09	348	P	P	18 51 22.9	+0.3
	baz=165,SNR=32						
W39A	Magazine	64.09	332	P	P	18 51 22.8	0.0
	baz=148,SNR=36						
W39A	Magazine	64.09	332	IAmb	IAmb	18 51 24.0	
	comp=Z,60nm,0.7s						
M60A	Port Jervis	64.13	350	P	P	18 51 22.9	0.0
	baz=168						
P51A	Williamsport	64.16	343	IAmb	IAmb	18 51 23.6	
	comp=Z,81nm,1.1s						
NVL	N'lazarevskaya	64.24	159⇑	*i*P	P	18 51 22.6	-0.5
NVL				*e**PP	pP	18 53 15.2	-0.1
NVL				*e*S	S	18 59 15.8	-1.1
NVL				pmax	pmax		
	comp=Z,36nm,0.8s						
L64A	Middleborough	64.25	354	P	P	18 51 23.7	+0.2
	baz=172						
L63A	North Scituate	64.26	353	P	P	18 51 23.8	+0.2
	baz=171,SNR=9.1						
L63A	North Scituate	64.26	353	IAmb	IAmb	18 51 24.9	
	comp=Z,248nm,1.6s						
X37A	Clayton	64.28	331	P	P	18 51 23.9	0.0
X37A				IAmb	IAmb	18 51 25.6	
	comp=Z,224nm,1.4s						
N56A	West Decatur	64.39	347	P	P	18 51 24.9	+0.4
	baz=164,SNR=15						
O53A	New Philadelph	64.41	345	P	P	18 51 24.6	0.0
	baz=161,SNR=23						
O53A	New Philadelph	64.41	345	IAmb	IAmb	18 51 25.7	
	comp=Z,77nm,0.8s						
TXAR	Lajitas Array	64.44	321	P	P	18 51 25.3	+0.1
	comp=Z,20nm,0.7s,baz=145,slow=8.5,SNR=111						
TXAR	Lajitas Array	64.44	321	P	P	18 51 24.6	-0.6
SLBS	Sierra La Lagu	64.47	312	P	P	18 51 26.4	+1.0
M59A	Waymart	64.47	350	P	P	18 51 25.2	+0.2
	baz=167,SNR=9.3						
M58A	Price’s Panora	64.48	349	P	P	18 51 25.6	+0.5
	baz=166,SNR=15						
S44A	Carbondale	64.48	337	IAmb	IAmb	18 51 24.9	
	comp=Z,51nm,0.7s						
SIUC	Southern Illin	64.49	337	IAmb	IAmb	18 51 25.0	
	comp=Z,126nm,1.3s						
M57A	Sunshine Farm,	64.57	348	P	P	18 51 26.1	+0.5
	baz=166,SNR=9.0						
T42A	Van Buren	64.58	335	P	P	18 51 24.3	-1.5
P49A	Miami Univ. Ec	64.68	342	P	P	18 51 25.4	-0.9
	baz=158,SNR=31						
P49A	Miami Univ. Ec	64.68	342	IAmb	IAmb	18 51 26.5	
	comp=Z,104nm,0.7s						
U40A	Yellville	64.69	334	P	P	18 51 25.9	-0.7
	baz=150,SNR=32						
U40A	Yellville	64.69	334	IAmb	IAmb	18 51 27.1	
	comp=Z,77nm,1.1s						
L60A	Shokan	64.72	351	P	P	18 51 27.0	+0.4
	baz=169,SNR=9.8						
ABTX	Abilene, Hawle	64.75	326	P	P	18 51 26.9	-0.1
	baz=142,SNR=18						
ABTX	Abilene, Hawle	64.75	326	IAmb	IAmb	18 51 28.1	
	comp=Z,133nm,1.1s						
N54A	Moraine State	64.80	346	P	P	18 51 27.5	+0.4
	baz=163,SNR=28						
N54A	Moraine State	64.80	346	IAmb	IAmb	18 51 28.7	
	comp=Z,93nm,0.7s						
P48A	Milroy	64.82	341	IAmb	IAmb	18 51 27.1	
	comp=Z,78nm,1.0s						
ACSO	Alum Creek Sta	64.84	343	P	P	18 51 26.9	-0.5
	baz=160,SNR=29						
ACSO	Alum Creek Sta	64.84	343	IAmb	IAmb	18 51 28.1	
	comp=Z,93nm,0.7s						
N53A	Lisbon	64.85	345	IAmb	IAmb	18 51 28.7	
	comp=Z,79nm,1.1s						
HRV	Adam Dziewonsk	64.89	353	P	P	18 51 27.5	-0.1
	baz=171						
BLO	Bloomington	64.89	340	IAmb	IAmb	18 51 28.0	
	comp=Z,109nm,0.9s						
M56A	Emporium	64.92	348	P	P	18 51 27.9	+0.1
	baz=165,SNR=14						
M56A	Emporium	64.92	348	IAmb	IAmb	18 51 29.1	
	comp=Z,51nm,0.8s						
L61B	Northampton	64.96	352	P	P	18 51 27.4	-0.6
	baz=170						
LPIG	La Paz	64.99	312	P	P	18 51 29.3	+0.7
	comp=Z,31nm,0.4s,baz=128,slow=1.2,SNR=11						
M55A	Ridgway	65.02	347	IAmb	IAmb	18 51 29.9	
	comp=Z,74nm,0.9s						
L58A	Harry Jones Me	65.03	350	P	P	18 51 28.9	+0.4
	baz=167,SNR=12						
L59A	Walton	65.04	350	P	P	18 51 28.9	+0.3
	baz=168,SNR=7.6						
K63A	Dunstable	65.06	353	P	P	18 51 28.5	-0.1
	baz=171						
HHAR	Hobbs	65.08	333	IAmb	IAmb	18 51 29.6	
	comp=Z,86nm,0.8s						
K62A	Royalston	65.12	353	P	P	18 51 29.1	+0.1
	baz=171						
MGMO	Mountain Grove	65.15	335	IAmb	IAmb	18 51 30.1	
	comp=Z,123nm,1.0s						
L57A	Andrews Acres	65.16	349	P	P	18 51 29.5	+0.2
	baz=166,SNR=7.4						
O49A	Covington	65.17	342	IAmb	IAmb	18 51 29.8	
	comp=Z,69nm,0.8s						
BINY	Binghamton	65.20	350	P	P	18 51 29.9	+0.3
	baz=167,SNR=12						
BINY	Binghamton	65.20	350	IAmb	IAmb	18 51 31.7	
	comp=Z,92nm,1.1s						
M54A	Oil Creek Stat	65.25	346	P	P	18 51 30.0	+0.1
	baz=163,SNR=15						
M54A	Oil Creek Stat	65.25	346	IAmb	IAmb	18 51 31.1	
	comp=Z,80nm,0.9s						
K61A	Williamstown	65.25	352	P	P	18 51 30.2	+0.3
	baz=170						
K60A	Five Rivers En	65.29	351	P	P	18 51 30.8	+0.7
	baz=169						
N51A	Ashland	65.33	344	IAmb	IAmb	18 51 31.1	
	comp=Z,136nm,1.2s						
TRY	Troy	65.37	351	IAmb	IAmb	18 51 32.2	
	comp=Z,191nm,1.7s						
U38A	Gravette	65.41	333	P	P	18 51 30.2	-0.8
U38A				IAmb	IAmb	18 51 31.8	
	comp=Z,124nm,1.4s						
M53A	WI Miller and	65.41	346	P	P	18 51 30.9	0.0
	baz=162,SNR=14						
M53A	WI Miller and	65.41	346	IAmb	IAmb	18 51 32.2	
	comp=Z,66nm,0.8s						
L56A	Greenwood	65.42	348	P	P	18 51 31.3	+0.3
	baz=165,SNR=14						
L56A	Greenwood	65.42	348	IAmb	IAmb	18 51 32.4	
	comp=Z,91nm,1.1s						
W35A	Tecumseh	65.44	330	P	P	18 51 30.3	-1.0
Q44A	Meyer Farm, Va	65.48	338	IAmb	IAmb	18 51 30.8	
	comp=Z,153nm,1.2s						
ALLY	Alegheny Colle	65.49	346	IAmb	IAmb	18 51 32.6	
	comp=Z,116nm,1.1s						
P46A	Rosedale	65.52	340	IAmb	IAmb	18 51 31.5	
	comp=Z,85nm,1.0s						
CCM	Cathedral Cave	65.53	336	P	P	18 51 30.6	-1.2
CCM				pmax	pmax		
	comp=Z,80nm,0.7s						
CCM	Cathedral Cave	65.53	336	P	P	18 51 30.8	-0.9
	baz=151						
CCM	Cathedral Cave	65.53	336	P	P	18 51 30.6	-1.2
CCM				IAmb	IAmb	18 51 31.9	
	comp=Z,80nm,0.7s						
TUL1	Leonard	65.58	331	P	P	18 51 32.0	-0.1
	baz=147,SNR=21						
TUL1	Leonard	65.58	331	IAmb	IAmb	18 51 33.1	
	comp=Z,130nm,0.9s						
K59A	Cooperstown	65.58	351	P	P	18 51 32.4	+0.4
	baz=168,SNR=11						
J62A	Henniker	65.62	353	P	P	18 51 32.6	+0.5
	baz=171						
K58A	Earlville	65.70	350	P	P	18 51 33.1	+0.4
	baz=167,SNR=16						
K58A	Earlville	65.70	350	IAmb	IAmb	18 51 34.2	
	comp=Z,53nm,0.7s						
L53A	Girard	65.81	346	P	P	18 51 33.4	0.0
	baz=163,SNR=27						
K57A	Scipio Center	65.81	349	P	P	18 51 33.3	-0.1
	baz=166						
N49A	Columbus Grove	65.81	343	IAmb	IAmb	18 51 34.0	
	comp=Z,120nm,0.8s						
J61A	Chester	65.83	352	P	P	18 51 33.8	+0.3
	baz=170						
J60A	Lant Hill Farm	65.84	352	P	P	18 51 33.9	+0.4
	baz=170						
WVNY	West Valley, N	65.89	347	IAmb	IAmb	18 51 35.4	
	comp=Z,78nm,0.7s						
ERPA	Erie	65.90	346	P	P	18 51 34.1	+0.2
	baz=163,SNR=35						
K56A	Middlesex	65.92	349	P	P	18 51 34.0	-0.1
	baz=166,SNR=7.8						
M50A	Fremont	65.96	344	IAmb	IAmb	18 51 35.0	
	comp=Z,77nm,1.1s						
WMOK	Wichita Mounta	66.01	328	P	P	18 51 34.5	-0.3
	baz=144,SNR=44						
WMOK	Wichita Mounta	66.01	328	IAmb	IAmb	18 51 36.3	
	comp=Z,143nm,1.2s						
I64A	Boothbay	66.10	355	P	P	18 51 35.4	+0.4
	baz=173						
R40A	Maddies Statio	66.13	335	IAmb	IAmb	18 51 35.6	
	comp=Z,60nm,0.7s						
SFIN	Lafayette	66.17	340	P	P	18 51 34.5	-1.1
	baz=156,SNR=25						
N47A	Urbana	66.21	341	pP	pP	18 53 30.4	+0.7
J59A	Piesco	66.21	351	P	P	18 51 36.4	+0.5
	baz=168,SNR=26						
J59A	Piesco	66.21	351	IAmb	IAmb	18 51 37.4	
	comp=Z,89nm,0.6s						
I62A	Tamworth	66.21	354	P	P	18 51 36.3	+0.5
	baz=172						
J58A	Remsen	66.22	350	P	P	18 51 36.1	+0.1
	baz=168,SNR=7.7						
J58A	Remsen	66.22	350	IAmb	IAmb	18 51 37.2	
	comp=Z,110nm,1.5s						
I63A	Otisfield	66.31	354	P	P	18 51 37.3	+0.9
	baz=172						
I61A	Oroboro, Fairl	66.37	353	P	P	18 51 37.4	+0.6
	baz=171						
J56A	Wolcott	66.40	349	P	P	18 51 36.7	-0.3
	baz=166,SNR=5.2						
O44A	Mansfield	66.41	339	IAmb	IAmb	18 51 36.8	
	comp=Z,138nm,1.1s						
I60A	Shoreham	66.41	352	P	P	18 51 37.3	+0.3
	baz=170						
I59A	Olmsteadville	66.44	352	P	P	18 51 37.5	+0.3
	baz=169,SNR=8.0						
I58A	Old Forge	66.50	351	P	P	18 51 37.8	+0.2
	baz=168,SNR=12						
LBNH	Lisbon	66.64	353	P	P	18 51 39.2	+0.7
	baz=171						
H65A	Eastbrook	66.77	356	P	P	18 51 39.5	+0.3
	baz=175						
H64A	Troy	66.78	355	P	P	18 51 39.7	+0.4
	baz=174						
H66A	Whiting	66.81	357	P	P	18 51 39.8	+0.3
	baz=176						
L48A	N Adams	66.83	343	IAmb	IAmb	18 51 40.0	
	comp=Z,93nm,0.7s						
I57A	Carthage	66.84	350	P	P	18 51 39.9	+0.2
	baz=167,SNR=16						
H63A	New Sharon	66.87	355	P	P	18 51 40.5	+0.7
	baz=173						
H62A	Milan	66.89	354	P	P	18 51 40.5	+0.5
	baz=172						
H61A	Lyndonville	66.93	353	P	P	18 51 40.8	+0.5
	baz=171,SNR=6.1						
AAM	Ann Arbor	66.96	344	P	P	18 51 40.0	-0.4
	baz=159						
AAM	Ann Arbor	66.96	344	IAmb	IAmb	18 51 41.0	
	comp=Z,89nm,1.2s						
H60A	Morristown	67.05	353	P	P	18 51 41.3	+0.3
	baz=170						
HDIL	Hopedale	67.05	339	P	P	18 51 40.0	-1.1
	baz=154,SNR=14						
PECO	Prince Edward	67.06	349	IAmb	IAmb	18 51 42.1	
	comp=Z,63nm,1.1s						
H58A	Gabriels	67.09	351	P	P	18 51 41.3	0.0
	baz=169,SNR=12						
K50A	Casco	67.14	345	IAmb	IAmb	18 51 41.9	
	comp=Z,64nm,0.7s						
MNTX	Cornudas Mount	67.18	322	P	P	18 51 41.6	-0.5
	baz=138,SNR=114						
MNTX	Cornudas Mount	67.18	322	IAmb	IAmb	18 51 42.9	
	comp=Z,117nm,1.1s						
H59A	Cadyville	67.25	352	P	P	18 51 42.4	+0.2
	baz=169						
G63A	Kingsbury	67.28	355	P	P	18 51 42.7	+0.3
	baz=173						
LONY	Lake Ozonia	67.35	351	P	P	18 51 43.1	+0.3
	baz=168,SNR=10						
LONY	Lake Ozonia	67.35	351	P	P	18 51 42.8	0.0
G64A	Maxfield	67.36	356	P	P	18 51 42.8	-0.1
	baz=174						
M44A	Midewin, Midew	67.39	340	IAmb	IAmb	18 51 43.0	
	comp=Z,123nm,1.2s						
PKME	Peaks-Kenny Pk	67.41	355	P	P	18 51 43.3	+0.2
	baz=174,SNR=5.1						
PKME	Peaks-Kenny Pk	67.41	355	IAmb	IAmb	18 51 44.5	
	comp=Z,68nm,1.2s						
L46A	Eue Claire	67.42	341	IAmb	IAmb	18 51 43.4	
	comp=Z,132nm,0.8s						
U32A	Winter Ranch,	67.44	329	IAmb	IAmb	18 51 45.1	
	comp=Z,174nm,1.2s						
MSTX	Muleshoe	67.44	325	P	P	18 51 43.9	+0.1
	baz=140,SNR=167						
G62A	West of Eustis	67.47	354	P	P	18 51 44.0	+0.5
	baz=172,SNR=5.5						
G60A	Masonville	67.53	353	P	P	18 51 44.7	+0.8
	baz=171						
AMTX	Amarillo	67.58	326	P	P	18 51 44.4	-0.1
	baz=141						
AMTX	Amarillo	67.58	326	IAmb	IAmb	18 51 45.7	
	comp=Z,91nm,0.8s						
G59A	Clarenceville	67.62	352	P	P	18 51 44.3	-0.1
	baz=170						
G61A	St-Isidore-de-	67.63	354	P	P	18 51 45.2	+0.7
	baz=172,SNR=6.7						
HQIL	Hanson Quary C	67.70	340	IAmb	IAmb	18 51 44.9	
	comp=Z,85nm,0.6s						
I51A	Listowel	67.74	346	P	P	18 51 44.9	-0.3
	baz=162,SNR=5.5						
G58A	Ormstown	67.80	352	P	P	18 51 45.5	+0.1
	baz=169,SNR=6.7						
G57A	Newington	67.88	351	P	P	18 51 46.1	+0.1
	baz=168,SNR=8.0						
F64A	Sherman	67.94	356	P	P	18 51 46.7	+0.4
	baz=175,SNR=5.5						
F64A	Sherman	67.94	356	P	P	18 51 46.2	-0.1
QSPA	South Pole Qui	67.96	180	P	P	18 51 47.2	+0.7
	comp=Z,72nm,1.0s,baz=175,slow=1.1,SNR=93						
QSPA	South Pole Qui	67.96	180	P	P	18 51 47.3	+0.7
QSPA				IAmb	IAmb	18 51 48.4	
	comp=Z,73nm,0.9s						
H53A	Bobcaygeon	67.97	348	P	P	18 51 46.2	-0.4
	baz=164,SNR=8.4						
L44A	Lake County Fo	68.06	340	P	P	18 51 46.6	-0.6
	baz=155						
J47A	Sunmer	68.14	343	IAmb	IAmb	18 51 48.1	
	comp=Z,84nm,1.0s						
F61A	St Evariste	68.26	354	P	P	18 51 47.9	-0.4
	baz=172						
SADO	Sadowa	68.27	348	P	P	18 51 47.8	-0.6
	comp=Z,19nm,0.5s,baz=183,slow=6.5,SNR=34						
F60A	Warwick	68.35	353	P	P	18 51 49.0	+0.2
	baz=171,SNR=5.2						
SRIG	Santa Rosalia	68.42	314	IAmb	IAmb	18 51 51.9	
	comp=Z,190nm,1.3s						
E64A	Bridgewater	68.46	357	P	P	18 51 49.7	+0.2
	baz=175						
KOWA	Kowa	68.46	63	P	P	18 51 49.8	-0.4
KOWA				IAmb	IAmb	18 51 51.5	
	comp=Z,121nm,0.9s						
L42A	Oliver, Polo	68.47	339	IAmb	IAmb	18 51 50.0	
	comp=Z,226nm,1.5s						
E63A	Oxbow	68.50	356	P	P	18 51 50.1	+0.4
	baz=175						
KSU1	Kansas State U	68.59	333	P	P	18 51 50.1	-0.4
	baz=147,SNR=16						
G54A	Lake Saint Pet	68.67	349	P	P	18 51 50.7	-0.2
	baz=165,SNR=12						
E60A	Ste Agathe de	68.69	354	P	P	18 51 51.1	+0.2
	baz=172						
HSIG		68.70	316	P	P	18 51 51.8	+0.5
HSIG				IAmb	IAmb	18 51 53.5	
	comp=Z,152nm,1.3s						
PQI	Presque Isle	68.72	356	IAmb	IAmb	18 51 52.5	
	comp=Z,110nm,1.9s						
E58A	La Victoria	68.90	352	P	P	18 51 52.2	0.0
	baz=170,SNR=9.2						
D63A	Stockholm	69.09	356	P	P	18 51 53.8	+0.5
	baz=175						
D60A	Saint Jean D’O	69.18	354	P	P	18 51 54.2	+0.4
	baz=172,SNR=6.2						
121A	Cookes Peak, D	69.19	321	P	P	18 51 55.9	+1.4
	baz=136,SNR=56						
121A	Cookes Peak, D	69.19	321	IAmb	IAmb	18 51 57.1	
	comp=Z,102nm,0.9s						
D62A	Allapoint, All	69.20	356	P	P	18 51 54.1	+0.2
	baz=174						
ALGO	Algonquin Park	69.21	349	P	P	18 51 53.7	-0.3
	baz=165,SNR=7.1						
E56A	St. Veronique	69.30	351	P	P	18 51 54.4	-0.2
	baz=168,SNR=13						
E55A	Montcerf-Lytto	69.36	350	P	P	18 51 54.8	-0.1
	baz=167,SNR=7.7						
D61A	St Aubert, Com	69.41	355	P	P	18 51 55.4	+0.3
	baz=173						
JFWS	Jewell Farm	69.48	339	P	P	18 51 55.2	-0.5
	baz=153,SNR=32						
GLMI	Grayling	69.56	344	P	P	18 51 56.5	+0.3
	baz=159						
GLMI	Grayling	69.56	344	IAmb	IAmb	18 51 57.5	
	comp=Z,114nm,0.9s						
D58A	Chemin du LacG	69.57	353	P	P	18 51 56.4	+0.3
	baz=170,SNR=24						
SCIA	State Center	69.63	336	P	P	18 51 56.4	-0.2
	baz=150,SNR=6.4						
N35A	Tabor	69.67	334	P	P	18 51 56.0	-1.0
CBKS	Cedar Bluff	69.75	330	P	P	18 51 58.1	+0.6
	baz=144,SNR=58						
D56A	ZEC Mazanza, M	69.75	352	P	P	18 51 57.2	-0.1
	baz=168,SNR=6.9						
D55A	Sainte-Anne-du	69.83	351	P	P	18 51 57.6	-0.1
	baz=168,SNR=30						
I42A	Draeger Farm,	69.93	340	IAmb	IAmb	18 51 59.0	
	comp=Z,132nm,1.1s						
ANMO	Albuquerque	70.18	323	P	P	18 52 01.2	+0.9
	comp=Z,65nm,0.9s,baz=133,slow=7.6,SNR=86						
ANMO				pP	pP	18 53 57.3	+0.9
	comp=Z,9.5nm,1.0s,baz=136,slow=9.6,SNR=5.5						
ANMO	Albuquerque	70.18	323	P	P	18 52 01.2	+0.9
	baz=138						
ANMO	Albuquerque	70.18	323	P	P	18 52 00.8	+0.5
ANMO				IAmb	IAmb	18 52 02.7	
	comp=Z,211nm,1.4s						
T25A	Trinidad	70.72	326	P	P	18 52 04.7	+1.2
	baz=140,SNR=73						
T25A	Trinidad	70.72	326	IAmb	IAmb	18 52 05.9	
	comp=Z,116nm,1.0s						
TUC	Tucson	70.83	319	P	P	18 52 04.8	+0.7
TUC				pmax	pmax		

	comp=Z,152nm,1.5s						
TUC	Tucson	70.83	319	P	P	18 52 05.0	+0.9
	baz=134						
TUC	Tucson	70.83	319	P	P	18 52 04.8	+0.7
TUC				IAmb	IAmb	18 52 06.5	
	comp=Z,152nm,1.4s						
E46A	Sault Ste Mari	70.92	345	IAmb	IAmb	18 52 04.7	
	comp=Z,84nm,1.1s						
BGNE	Belgrade	71.17	333	P	P	18 52 05.7	-0.1
	baz=146,SNR=21						
KSCO	Kaye Shedlock’	71.27	328	P	P	18 52 07.7	+1.2
	baz=142,SNR=28						
SDCO	Great Sand Dun	71.74	326	P	P	18 52 10.8	+1.2
	baz=139,SNR=171						
SDCO	Great Sand Dun	71.74	326	IAmb	IAmb	18 52 12.1	
	comp=Z,142nm,1.1s						
214A	Organ Pipe Nat	71.86	317	P	P	18 52 11.3	+1.3
	baz=132,SNR=31						
214A	Organ Pipe Nat	71.86	317	IAmb	IAmb	18 52 12.7	
	comp=Z,117nm,1.2s						
X18A	Snowflake	71.87	321	IAmb	IAmb	18 52 13.0	
	comp=Z,125nm,1.1s						
LSQQ	Lebel-sur-Quev	72.04	350	P	P	18 52 10.3	-0.3
	baz=166						
W18A	Petrified Fore	72.16	321	P	P	18 52 13.1	+1.2
	baz=135,SNR=49						
SPMN	Marine on St.	72.38	338	P	P	18 52 12.0	-0.7
	baz=151,SNR=20						
SPMN	Marine on St.	72.38	338	IAmb	IAmb	18 52 13.2	
	comp=Z,202nm,1.5s						
S22A	4UR Ranch, Cre	72.44	325	P	P	18 52 14.5	+0.9
	baz=138,SNR=27						
S22A	4UR Ranch, Cre	72.44	325	P	P	18 52 14.5	+0.9
Q24A	Divide	72.48	327	P	P	18 52 15.0	+1.2
	baz=140,SNR=94						
ECSD	EROS Data Cent	72.48	335	P	P	18 52 12.8	-0.6
	baz=148,SNR=76						
ECSD	EROS Data Cent	72.48	335	IAmb	IAmb	18 52 14.2	
	comp=Z,123nm,1.1s						
OGNE	Ogallala	72.51	330	P	P	18 52 14.5	+0.9
	baz=142,SNR=13						
SFX	San Felipe	72.56	315	P	P	18 52 14.7	+0.7
SFX				IAmb	IAmb	18 52 16.4	
	comp=Z,77nm,1.0s						
SFX				pP	pP	18 54 13.0	+1.8
TOA0	Torodi Ar. Sit	72.61	67	P	P	18 52 13.9	-0.7
TOA0				IAmb	IAmb	18 52 15.6	
	comp=Z,142nm,0.9s						
TOA0				pP	pP	18 54 11.1	+0.4
TORD	Torodi Ar. Bea	72.61	67	P	P	18 52 14.4	-0.3
	comp=Z,48nm,0.4s,baz=260,slow=6.0,SNR=424						
TORD				pP	pP	18 54 11.8	+1.1
	comp=Z,77nm,1.0s,baz=253,slow=5.8,SNR=21						
TORD				S	S	19 00 53.5	-1.8
	comp=Z,1.5nm,0.8s,baz=244,slow=9.7,SNR=4.6						
TORD	Torodi Ar. Bea	72.61	67	P	P	18 52 13.8	-0.9
TORD				pP	pP	18 54 11.9	+1.2
X16A	Lo Mia Camp, P	72.68	320	IAmb	IAmb	18 52 17.8	
	comp=Z,100nm,1.0s						
MATQ	Matagami	72.82	350	P	P	18 52 14.5	-0.6
	baz=166,SNR=11						
MVCO	Mesa Verde	72.96	324	P	P	18 52 17.7	+1.2
	baz=136,SNR=89						
MVCO	Mesa Verde	72.96	324	P	P	18 52 17.4	+0.8
SPX	San Pedro Mart	72.97	315	P	P	18 52 17.5	+0.7
SPX				pP	pP	18 54 15.8	+1.6
F36A	Milaca	73.18	338	IAmb	IAmb	18 52 17.9	
	comp=Z,57nm,0.7s						
E38A	The Farm, Brul	73.19	340	IAmb	IAmb	18 52 18.1	
	comp=Z,77nm,1.2s						
ISCO	Idaho Springs	73.35	327	P	P	18 52 19.8	+1.0
	baz=139,SNR=118						
WUAZ	Wupatki	73.40	321	P	P	18 52 20.6	+1.6
	baz=134,SNR=49						
WUAZ	Wupatki	73.40	321	P	P	18 52 20.0	+1.0
WUAZ				IAmb	IAmb	18 52 21.9	
	comp=Z,149nm,1.1s						
SUR	Sutherland	73.54	119	P	P	18 52 19.8	-0.3
SUR				pP	pP	18 54 16.4	-0.1
SUR				IAmb	IAmb	18 54 19.2	
	comp=Z,122nm,1.4s						
SMCO	Snowmass	73.58	326	IAmb	IAmb	18 52 23.1	
	comp=Z,116nm,0.8s						
CPBX	Cerro Prieto	73.75	316	IAmb	IAmb	18 52 22.7	
	comp=Z,161nm,1.2s						
PV02	Paradox Valley	73.81	324	IAmb	IAmb	18 52 23.9	
	comp=Z,216nm,1.6s						
PV13	Radium Mtn., P	73.82	324	IAmb	IAmb	18 52 23.9	
	comp=Z,92nm,0.9s						
GLA	Glamis	73.86	317	P	P	18 52 22.7	+1.3
	baz=131,SNR=16						
GLA	Glamis	73.86	317	IAmb	IAmb	18 52 24.0	
	comp=Z,147nm,1.2s						
SYO	Syowa Base	73.89	159⇑	*e*P	P	18 52 21.2	+0.2
SYO	Syowa Base	73.89	159⇓	*e*PcP	PcP	18 52 32.2	-0.8
PV03	Paradox Valley	73.90	324	IAmb	IAmb	18 52 24.3	
	comp=Z,85nm,1.3s						
ESJX	Sierra Juarez	73.90	315	IAmb	IAmb	18 52 23.7	
	comp=Z,71nm,1.2s						
PV05	Paradox Valley	73.91	324	IAmb	IAmb	18 52 24.1	
	comp=Z,107nm,1.0s						
PV12	Saucer Basin,	73.92	324	IAmb	IAmb	18 52 24.6	
	comp=Z,64nm,0.8s						
PV07	Paradox Valley	73.93	324	IAmb	IAmb	18 52 24.6	
	comp=Z,112nm,0.9s						
PV18	Skein Mesa, Pa	73.93	324	IAmb	IAmb	18 52 24.4	
	comp=Z,123nm,1.3s						
PV11	David Mesa, Pa	73.95	324	IAmb	IAmb	18 52 24.5	
	comp=Z,129nm,1.3s						
PV16	Nyswonger Mesa	73.98	324	IAmb	IAmb	18 52 24.7	
	comp=Z,90nm,1.2s						
PV17	East Wray Mesa	73.98	324	IAmb	IAmb	18 52 24.6	
	comp=Z,58nm,0.9s						
PV19	Morning Glory	74.02	324	IAmb	IAmb	18 52 24.9	
	comp=Z,94nm,1.2s						
PV20	West Nyswonger	74.03	324	IAmb	IAmb	18 52 24.9	
	comp=Z,59nm,1.0s						
PV04	Paradox Valley	74.03	324	IAmb	IAmb	18 52 25.1	
	comp=Z,68nm,0.9s						
PV14	Lion Creek, Pa	74.08	324	IAmb	IAmb	18 52 25.3	
	comp=Z,112nm,1.1s						
PV10	Paradox Valley	74.09	324	IAmb	IAmb	18 52 25.0	
	comp=Z,97nm,1.1s						
PV23	Carpenter Ridg	74.13	324	IAmb	IAmb	18 52 25.7	
	comp=Z,71nm,0.9s						
F33A	5 Mile Ranch,	74.15	337	IAmb	IAmb	18 52 23.3	
	comp=Z,106nm,1.4s						
PDMCI	Parker Dam,Lak	74.25	318	P	P	18 52 24.8	+1.2
	baz=132,SNR=21						
CCX	Cicese	74.29	315	IAmb	IAmb	18 52 26.4	
	comp=Z,85nm,1.0s						
N23A	Red Feather La	74.34	328	P	P	18 52 25.5	+1.1
	baz=139,SNR=59						
N23A	Red Feather La	74.34	328	IAmb	IAmb	18 52 26.8	
	comp=Z,76nm,0.7s						
EYMN	Ely	74.36	341	P	P	18 52 23.3	-0.6
	baz=153,SNR=11						
EYMN	Ely	74.36	341	IAmb	IAmb	18 52 24.6	
	comp=Z,85nm,1.1s						
RMX	La Rumorosa	74.37	316	IAmb	IAmb	18 52 26.8	
	comp=Z,141nm,1.2s						
SWSC	Sam W. Stewart	74.41	316	P	P	18 52 25.7	+1.2
	baz=130,SNR=9.5						
PHWY	Pilot Hill	74.41	328	IAmb	IAmb	18 52 27.0	
	comp=Z,181nm,1.2s						
IKP	In-Ko-Pah, Jac	74.42	316	P	P	18 52 26.0	+1.2
	baz=130,SNR=35						
U15A	North Rim	74.56	321	P	P	18 52 27.1	+1.5
U15A				IAmb	IAmb	18 52 28.9	
	comp=Z,108nm,1.1s						
BC3	Big Chuckawall	74.65	317	P	P	18 52 27.1	+1.1
	baz=131,SNR=75						
TSUM	Tsumeb	74.67	105	P	P	18 52 26.5	0.0
TSUM				IAmb	IAmb	18 52 27.7	
	comp=Z,137nm,1.2s						
TSUM				pP	pP	18 54 24.9	+1.4
TAOE	Nuku Hiva Isla	74.74	267	*e*P	P	18 52 27.7	+0.7
	comp=Z,305nm,1.2s						
MONP2	Monument Peak	74.78	316	P	P	18 52 28.1	+1.2
	baz=130,SNR=35						
IRM	Iron Mountain	74.78	317	P	P	18 52 27.9	+1.2
	baz=131,SNR=80						
BAR	Barrett	74.80	315	IAmb	IAmb	18 52 29.2	
	comp=Z,103nm,1.1s						
NEE2	Needles Airpor	74.85	318	P	P	18 52 28.3	+1.3
	baz=131,SNR=5.1						
O20A	White River Ci	74.95	326	P	P	18 52 29.0	+1.3
	baz=137,SNR=70						
BELC	Belle Mtn. Jos	75.21	317	P	P	18 52 30.6	+1.4
	baz=130,SNR=71						
109C	Camp Elliot, M	75.22	315	P	P	18 52 30.2	+1.1
	baz=129						
109C	Camp Elliot, M	75.22	315	IAmb	IAmb	18 52 31.4	
	comp=Z,122nm,1.4s						
TPFO	Pinon Flats	75.25	316	P	P	18 52 30.6	+1.2
	baz=130,SNR=36						
PFO	Pinyon Flats O	75.26	316	P	P	18 52 29.3	-0.2
	comp=Z,41nm,1.1s,baz=127,slow=5.4,SNR=44						
PFO				pP	pP	18 54 28.4	+0.5
	comp=Z,5.6nm,0.9s,baz=120,slow=3.2,SNR=4.9						
PFO	Pinyon Flats O	75.26	316	P	P	18 52 30.0	+0.5
PFO				*PP	pP	18 54 27.8	0.0
PFO				pmax	pmax		
	comp=Z,109nm,1.3s						
PFO	Pinyon Flats O	75.26	316	P	P	18 52 30.8	+1.3
	baz=130,SNR=30						
PFO	Pinyon Flats O	75.26	316	P	P	18 52 29.9	+0.5
PFO				IAmb	IAmb	18 52 32.1	
	comp=Z,109nm,1.2s						
PFO				pP	pP	18 54 27.8	0.0
B35A	Bob, Littlefor	75.43	339	IAmb	IAmb	18 52 30.8	
	comp=Z,96nm,0.7s						
GMRC	Granite Mounta	75.51	318	P	P	18 52 32.3	+1.5
	baz=131,SNR=118						
D32A	Dogwood Acres,	75.51	337	IAmb	IAmb	18 52 31.3	
	comp=Z,96nm,0.9s						
RWWY	Rawlins	75.57	327	IAmb	IAmb	18 52 33.6	
	comp=Z,128nm,0.8s						
MURC	Murrieta	75.73	316	P	P	18 52 33.2	+1.3
	baz=129,SNR=24						
RSSD	Black Hills	75.92	331	P	P	18 52 33.0	0.0
RSSD				pmax	pmax		
	comp=Z,156nm,1.4s						
RSSD	Black Hills	75.92	331	P	P	18 52 33.2	+0.3
	baz=141						
RSSD	Black Hills	75.92	331	P	P	18 52 33.0	0.0
RSSD				IAmb	IAmb	18 54 33.7	
	comp=Z,156nm,1.4s						
K22A	Casper	75.95	329	P	P	18 52 34.0	+0.9
	baz=139,SNR=27						
K22A	Casper	75.95	329	IAmb	IAmb	18 52 35.5	
	comp=Z,257nm,1.4s						
HEC	Hector,Ludlow	75.96	317	P	P	18 52 34.8	+1.6
	baz=130,SNR=22						
BBRC	Big Bear Solar	75.97	316	P	P	18 52 35.5	+2.0
	baz=130						
AGMN	Agassiz Nation	76.09	338	P	P	18 52 33.5	0.0
	baz=149,SNR=25						
AGMN	Agassiz Nation	76.09	338	IAmb	IAmb	18 52 34.7	
	comp=Z,95nm,1.1s						
SCI2	San Clemente I	76.22	315	P	P	18 52 35.8	+1.2
	baz=128,SNR=6.8						
SHPR	Sheep Range	76.33	319	IAmb	IAmb	18 52 38.2	
	comp=Z,105nm,1.3s						
RRX	Edison Barstow	76.41	317	P	P	18 52 37.0	+1.3
	baz=130						
BFSC	Mount Baldy Ra	76.43	316	P	P	18 52 36.9	+1.0
	baz=129,SNR=36						
GSC	Goldstone, Bar	76.56	317	P	P	18 52 37.9	+1.4
	baz=130,SNR=54						
GSC	Goldstone, Bar	76.56	317	P	P	18 52 37.1	+0.6
GSC				IAmb	IAmb	18 52 39.2	
	comp=Z,138nm,1.2s						
GSC				pP	pP	18 54 37.2	+1.7
SHOC	Shoshone, Teco	76.61	318	P	P	18 52 37.8	+1.1
	baz=130						
MWC	Mount Wilson	76.67	316	IAmb	IAmb	18 52 39.7	
	comp=Z,195nm,1.4s						
PASC	Pasadena Art C	76.72	316	IAmb	IAmb	18 52 39.8	
	comp=Z,184nm,1.2s						
PRN	Pahroc Range	76.85	320	IAmb	IAmb	18 52 41.4	
	comp=Z,188nm,1.2s						
DECC	Green Verdugo	76.87	316	P	P	18 52 39.7	+1.6
	baz=129,SNR=10						
VNDA	Vanda	77.02	189	P	P	18 52 39.0	+0.8
	comp=Z,24nm,0.9s,baz=144,slow=4.5,SNR=62						
VNDA	Vanda	77.02	189	P	P	18 52 38.8	+0.6
VNDA				pmax	pmax		
	comp=Z,37nm,1.0s						
VNDA	Vanda	77.02	189	P	P	18 52 38.8	+0.6
SNCC	San Nicolas Is	77.03	314	P	P	18 52 40.1	+1.1
	baz=128,SNR=7.2						
SNCC	San Nicolas Is	77.03	314	IAmb	IAmb	18 52 41.1	
	comp=Z,187nm,1.1s						
EDW2	Edwards Air Fo	77.05	316	P	P	18 52 39.9	+0.8
	baz=129,SNR=37						
MDND	Maddock	77.07	336	P	P	18 52 39.7	+0.8
	baz=146,SNR=18						
LRMC	Laurel Mtn Rad	77.22	317	P	P	18 52 41.3	+1.1
	baz=129,SNR=51						
TPNV	Topopah Spring	77.28	319	P	P	18 52 42.2	+1.7
	baz=131,SNR=76						
TPNV	Topopah Spring	77.28	319	IAmb	IAmb	18 52 43.5	
	comp=Z,149nm,1.2s						
FURC	Furnace Creek,	77.34	318	P	P	18 52 42.2	+1.6
	baz=130,SNR=36						
OSI	Osito Audit: C	77.35	316	P	P	18 52 41.8	+1.0
	baz=128						
DUG	Dugway, Tooele	77.45	323	P	P	18 52 42.6	+1.3
	baz=134,SNR=75						
DUG	Dugway, Tooele	77.45	323	IAmb	IAmb	18 52 44.0	
	comp=Z,63nm,0.8s						
MPMC	Manual Prospec	77.47	318	P	P	18 52 42.5	+0.9
	baz=130,SNR=53						
BW06	Boulder Array	77.54	327	P	P	18 52 42.4	+0.5
	baz=137,SNR=94						
BW06	Boulder Array	77.54	327	IAmb	IAmb	18 52 43.7	
	comp=Z,166nm,1.4s						
PD31	Pinedale Array	77.54	327	IAmb	IAmb	18 52 43.7	
	comp=Z,166nm,1.4s						
PDAR	Pinedale Array	77.54	327	P	P	18 52 42.3	+0.4
	comp=Z,26nm,0.5s,baz=122,slow=7.9,SNR=416						
PDAR	Pinedale Array	77.54	327	P	P	18 52 41.4	-0.5
PDAR				pP	pP	18 54 42.0	+0.9
SCZ2	Santa Cruz Isl	77.56	315	P	P	18 52 43.2	+1.2
	baz=128,SNR=14						
ULM	Lac du Bonnet	77.77	339	P	P	18 52 42.4	-0.2
	comp=Z,82nm,0.5s,baz=150,slow=6.1,SNR=267						
ULM				pP	pP	18 54 41.5	-0.1
	comp=Z,18nm,0.8s,baz=135,slow=5.6,SNR=8.2						
ULM	Lac du Bonnet	77.77	339*c*	*i*P	P	18 52 42.1	-0.5
ULM				*i* *PP	pP	18 54 44.1	+2.5
ULM	Lac du Bonnet	77.77	339	IAmb	IAmb	18 52 43.7	
	comp=Z,110nm,0.7s						
R11A	Troy Canyon, C	77.79	320	P	P	18 52 44.9	+1.6
	baz=131,SNR=113						
R11A	Troy Canyon, C	77.79	320	IAmb	IAmb	18 52 46.2	
	comp=Z,93nm,1.1s						
ISA	Isabella, Lake	77.84	317	P	P	18 52 44.8	+1.4
	baz=129,SNR=48						
ISA	Isabella, Lake	77.84	317	IAmb	IAmb	18 52 46.1	
	comp=Z,90nm,1.1s						
SBC	Santa Barbara	77.89	315	P	P	18 52 45.0	+1.4
	baz=128						
GRAC	Grapevine Rang	77.99	318	P	P	18 52 45.6	+1.4
	baz=130						
CWC	Cottonwood Cre	78.08	318	P	P	18 52 46.0	+1.1
	baz=129						
PKM	Mcpherson Peak	78.22	315	P	P	18 52 47.0	+1.3
	baz=128,SNR=44						
TBI	Tubuai	78.30	249	*e*P	P	18 52 47.0	+0.8
	comp=Z,344nm,1.1s						
BOSA	Boshof	78.33	116	P	P	18 52 45.4	-1.0
	comp=Z,29nm,1.1s,baz=252,slow=4.0,SNR=68						
BOSA				pP	pP	18 54 44.6	-0.3
	comp=Z,10nm,1.0s,baz=252,slow=5.6,SNR=5.5						
BOSA	Boshof	78.33	116	P	P	18 52 45.5	-0.9
BOSA					pP	18 54 44.2	-0.7
MORF	Marmelete	78.34	42	*e*P	P	18 52 45.6	-0.4
MORF				AMb	AMB	18 52 48.4	
	comp=Z,59nm,1.2s						
MORF				*e*pP	pP	18 54 42.5	-2.2
MORF	Marmelete	78.34	42	*e*P	P	18 52 45.6	-0.4
MORF				*e**PP	pP	18 54 42.4	-2.2
MORF				pmax	pmax		
	comp=Z,59nm,1.2s						
MORF	Marmelete	78.34	42	*e*P	P	18 52 47.0	+1.0
	comp=Z,58nm,1.2s						
MORF				*e*pP	pP	18 54 45.9	+1.3
VES	Vestal, Richgr	78.34	317	P	P	18 52 47.1	+1.1
	baz=128,SNR=31						
PTEO	Sao Teotonio	78.44	41	*e*P	P	18 52 48.5	+2.0
	comp=Z,100nm,1.4s						
PTEO				*e*pP	pP	18 54 47.2	+2.1
TIN	Tinemaha, Big	78.56	318	P	P	18 52 48.7	+1.3
	baz=129,SNR=16						
SMMC	Simmler	78.60	316	P	P	18 52 49.0	+1.5
	baz=128,SNR=32						
REDW	Red Top Meadow	78.63	327	IAmb	IAmb	18 52 49.8	
	comp=Z,170nm,1.5s						
SNOW	Snow King Moun	78.65	327	IAmb	IAmb	18 52 50.0	
	comp=Z,51nm,0.7s						
LOHW	Long Hollow	78.68	327	IAmb	IAmb	18 52 50.1	
	comp=Z,97nm,1.0s						
PBDV	Barranco-do-Ve	78.74	42	*e*P	P	18 52 49.4	+1.2
	comp=Z,72nm,1.4s						
PBDV				*e*pP	pP	18 54 49.0	+2.1
LAO	LASA Array	78.88	331	P	P	18 52 49.1	+0.4
	baz=140,SNR=19						
LAO	LASA Array	78.88	331	IAmb	IAmb	18 52 50.4	
	comp=Z,136nm,1.1s						
PCVE	Castro Verde	78.92	42	*e*P	P	18 52 50.0	+0.9
PCVE				*e*pP	pP	18 54 49.5	+1.6
PNCL	Nicolau / Gran	78.92	41	*e*P	P	18 52 50.1	+1.0
PNCL				*e*pP	pP	18 54 50.2	+2.3
MESJ	Messejana	78.94	41	*e*P	P	18 52 48.9	-0.3
MESJ				AMb	AMB	18 52 50.8	
	comp=Z,45nm,1.1s						
MESJ	Messejana	78.94	41	*e*P	P	18 52 48.9	-0.3
MESJ				pmax	pmax		
	comp=Z,45nm,1.1s						
MESJ	Messejana	78.94	41	*e*P	P	18 52 50.2	+1.0
	comp=Z,44nm,1.1s						
MESJ				*e*pP	pP	18 54 49.7	+1.7
PVAQ	Vaqueiros	78.97	42	*e*P	P	18 52 50.3	+0.9
	comp=Z,69nm,1.7s						
PVAQ				*e*pP	pP	18 54 49.7	+1.6
PVAQ	Vaqueiros	78.97	42	P	P	18 52 49.7	+0.4
PVAQ					pP	18 54 49.8	+1.6
PVAQ				IAmb	IAmb	18 54 51.8	
	comp=Z,113nm,1.5s						
PAGB	Antelope Grade	79.02	316	IAmb	IAmb	18 52 52.1	
	comp=Z,111nm,0.8s						
FLWY	Flagg Ranch	79.07	327	IAmb	IAmb	18 52 52.5	
	comp=Z,94nm,0.7s						
RLMT	Red Lodge	79.12	329	P	P	18 52 50.9	+0.7
	baz=137,SNR=92						
RLMT	Red Lodge	79.12	329	IAmb	IAmb	18 52 52.2	
	comp=Z,178nm,1.2s						
ELK	Elko	79.18	322	P	P	18 52 51.6	+0.9
	comp=Z,39nm,0.7s,baz=138,slow=4.1,SNR=84						
H17A	Grant Village	79.23	327	P	P	18 52 52.1	+1.2
	baz=136,SNR=41						
LKWY	Lake	79.27	328	IAmb	IAmb	18 52 55.9	
	comp=Z,229nm,1.6s						
PBEJ	Beja	79.27	41	*e*P	P	18 52 52.0	+1.1
	comp=Z,13nm,1.7s						
PBEJ				*e*pP	pP	18 54 52.5	+2.6
MLAC	Mammoth, Mammo	79.30	318	P	P	18 52 52.6	+1.2
	baz=129,SNR=13						
OMMB	Old Mammoth Mi	79.39	318	IAmb	IAmb	18 52 54.2	
	comp=Z,125nm,1.2s						
DGMT	Dagmar	79.39	334	P	P	18 52 52.6	+1.2
	baz=142,SNR=17						
VAH	Vaihoa	79.40	258	*e*P	P	18 52 52.9	+0.8
	comp=Z,268nm,1.2s						
NVAR	Mina Array Bea	79.47	319	P	P	18 52 53.2	+0.9
	comp=Z,32nm,1.0s,baz=142,slow=5.2,SNR=138						
NVAR				pP	pP	18 54 53.3	+1.1
	comp=Z,8.0nm,1.0s,baz=144,slow=1.9,SNR=6.3						
NVAR	Mina Array Bea	79.47	319	P	P	18 52 52.6	+0.4
NVAR					pP	18 54 53.0	+0.7
EVO	Evora	79.50	41	*e*P	P	18 52 52.9	+0.8
EVO				*e*pP	pP	18 54 53.2	+2.0
PSBE	So Bento	79.66	40	*e*P	P	18 52 54.3	+1.3
PMPB	Monarch Peak	79.67	316	IAmb	IAmb	18 52 55.7	
	comp=Z,197nm,1.4s						
PMTG	Montargil	79.72	40	*e*P	P	18 52 54.0	+0.8
	comp=Z,41nm,1.3s						
PMTG				*e*pP	pP	18 54 54.2	+1.9
LBTB	Lobatse	79.81	113	P	P	18 52 53.4	-1.0
LBTB				pP	pP	18 54 52.7	-0.6
PBAR	Barrancos	79.88	42	*e*P	P	18 52 54.6	+0.5
	comp=Z,45nm,1.8s						
PBAR				*e*pP	pP	18 54 55.4	+2.2
PESTR	Estremoz	79.97	41	*e*P	P	18 52 55.2	+0.6
	comp=Z,53nm,1.2s						
PESTR				*e*pP	pP	18 54 55.9	+2.1
PESTR	Estremoz	79.97	41	pP	pP	18 54 56.1	+2.3
TVO	Taravao	79.98	255	*e*P	P	18 52 56.0	+0.7
	comp=Z,57nm,1.2s						
PCAS	Casmilo, Conde	80.18	39	*e*P	P	18 52 56.6	+0.9
	comp=Z,140nm,1.8s						
PCAS				*e*pP	pP	18 54 57.1	+2.1
WAKR	Walker	80.21	319	IAmb	IAmb	18 52 59.0	
	comp=Z,90nm,1.2s						
PAE	Paea	80.32	255	*e*P	P	18 52 57.6	+0.7
	comp=Z,36nm,1.1s						
PPT2	Papeete2	80.34	255	*e*P	P	18 52 57.8	+0.7
	comp=Z,222nm,1.4s						
PPT	Papeete	80.35	255	P	P	18 52 58.6	+1.5
	comp=Z,106nm,1.1s,baz=81,slow=9.2,SNR=4.1						
SAO	San Andreas Ge	80.41	316	P	P	18 52 57.4	+0.5
SAO				pmax	pmax		
	comp=Z,51nm,1.2s						
SAO	San Andreas Ge	80.41	316	P	P	18 52 57.4	+0.5
TAM	Tamanrasset	80.43	61	P	P	18 52 57.9	+0.4
TAM				*PP	pP	18 54 56.6	-0.2
TAM				pmax	pmax		
	comp=Z,60nm,1.0s						
TAM	Tamanrasset	80.43	61	P	P	18 52 57.9	+0.4
TAM				pP	pP	18 54 56.6	-0.2
PMRV	Marv??o	80.44	40	*e*P	P	18 52 57.2	+0.1
	comp=Z,59nm,1.8s						
BOZ	Bozeman (W)	80.61	328	P	P	18 52 58.4	+0.4
	baz=135,SNR=16						
HLID	Hailey	80.63	325	P	P	18 52 59.5	+1.4
	baz=133,SNR=139						
HLID	Hailey	80.63	325	IAmb	IAmb	18 53 00.8	
	comp=Z,85nm,0.8s						
PCBR	Castelo Branco	80.65	40	*e*P	P	18 52 58.5	+0.4
	comp=Z,36nm,1.8s						
PNTR	Pine Nut	80.68	319	IAmb	IAmb	18 53 01.1	
	comp=Z,132nm,1.2s						
DLMT	Dillon	80.93	327	IAmb	IAmb	18 53 01.7	
	comp=Z,69nm,0.9s						
PAHR	Pah Rah Range	80.93	319	IAmb	IAmb	18 53 02.2	
	comp=Z,79nm,1.1s						
PVIS	Viseu	80.96	39	*e*P	P	18 53 00.5	+0.7
MTE	Manteigas	80.97	40	*e*P	P	18 53 00.3	+0.5
PVRL	Vila Real	81.42	39	*e*P	P	18 53 02.7	+0.6
	comp=Z,63nm,1.4s						
PVRL				*e*pP	pP	18 55 03.2	+1.3
AFDM	Forest Hills D	81.43	318	P	P	18 53 02.4	+0.2
AFDM				pP	pP	18 55 03.5	+0.5
POLO	Lamas de Olo	81.44	39	*e*P	P	18 53 02.6	+0.4
	comp=Z,35nm,1.6s						
POLO				*e*pP	pP	18 55 00.6	-1.4
EGMT	Eagleton	81.47	330	P	P	18 53 02.5	+0.3
	baz=137,SNR=17						
EGMT	Eagleton	81.47	330	IAmb	IAmb	18 53 04.2	
	comp=Z,156nm,1.2s						
PGAV	Gavieira, Arco	81.54	38	*e*P	P	18 53 03.5	+0.7
MVO	Moncorvo	81.75	39	*e*P	P	18 53 04.5	+0.7
	comp=Z,89nm,1.6s						
MVO				*e*pP	pP	18 55 05.8	+2.1
MAW	Mawson	82.02	162	P	P	18 53 05.1	+0.4
	comp=Z,24nm,0.9s,baz=232,slow=6.4,SNR=10						
ORV	Oroville	82.13	318	IAmb	IAmb	18 53 08.0	
	comp=Z,137nm,1.4s						
ORV				pP	pP	18 55 09.3	+2.5
PBRG	Braganca	82.32	39	*e*P	P	18 53 07.5	+0.8
	comp=Z,73nm,1.6s						
PAB	San Pablo	82.37	42	P	P	18 53 07.5	+0.4
PAB				pP	pP	18 55 07.8	+0.6
MSO	Missoula	82.62	328	P	P	18 53 08.7	+0.5
	baz=134,SNR=16						
ESDC	Sonseca Array	82.69	42	P	P	18 53 09.2	+0.6
	comp=Z,28nm,1.0s,baz=240,slow=4.4,SNR=83						
ESDC				pP	pP	18 55 09.2	+0.4
	comp=Z,19nm,1.0s,baz=237,slow=5.6,SNR=25						
ESDC	Sonseca Array	82.69	42	P	P	18 53 08.4	-0.2
ESDC					pP	18 55 09.0	+0.1
ESBB	Sonseca Array	82.69	42	P	P	18 53 09.2	+0.6
ESBB				pP	pP	18 55 10.5	+1.6
O03E	Paynes Creek	82.76	319	P	P	18 53 08.8	-0.1
	baz=127,SNR=22						
HOPS	Hopland Field	82.77	317	IAmb	IAmb	18 53 11.3	
	comp=Z,101nm,1.4s						
MOD	Modoc Plateau	82.84	321	IAmb	IAmb	18 53 11.6	

	comp=Z,85nm,1.4s						
BMO	Blue Mountains	83.04	324	IAmb	IAmb	18 53 12.4	
	comp=Z,206nm,1.9s						
O02D	Mt. Diablo Mer	83.29	318	P	P	18 53 11.3	-0.3
	baz=126						
KCPM	Cahto Peak	83.50	317	IAmb	IAmb	18 53 15.3	
	comp=Z,102nm,1.3s						
FFC	Flin Flon	83.56	339	P	P	18 53 12.7	+0.2
FFC				pmax	pmax		
	comp=Z,73nm,1.3s						
FFC	Flin Flon	83.56	339	P	P	18 53 12.7	+0.2
FFC				IAmb	IAmb	18 53 14.0	
	comp=Z,73nm,1.2s						
M04C	Macdoel	83.68	320	P	P	18 53 14.1	+0.5
	baz=127,SNR=12						
N02D	Trinity Center	83.71	319	P	P	18 53 13.3	-0.4
	baz=127,SNR=7.2						
I07A	Izee	83.75	323	IAmb	IAmb	18 53 16.1	
	comp=Z,65nm,1.0s						
M02C	Callahan	84.05	319	P	P	18 53 15.3	-0.1
	baz=126,SNR=8.9						
K04D	Chiloquin, OR	84.14	321	P	P	18 53 16.6	+0.8
	baz=127,SNR=6.1						
WALA	Waterton Lakes	84.15	329	IAmb	IAmb	18 53 16.3	
	comp=Z,68nm,1.4s						
YBH	Yreka Blue Hor	84.17	320	P	P	18 53 15.5	-0.4
	comp=Z,19nm,0.9s,baz=106,slow=3.6,SNR=24						
L04D	Klamath Falls	84.22	320	P	P	18 53 16.1	-0.1
	baz=127,SNR=11						
J05D	Fort Rock, OR	84.24	321	P	P	18 53 17.2	+0.9
	baz=128,SNR=26						
KHMM	Horse Mountain	84.28	318	IAmb	IAmb	18 53 18.1	
	comp=Z,72nm,1.3s						
PINE	Pine Mountain	84.38	322	IAmb	IAmb	18 53 19.6	
	comp=Z,96nm,0.9s						
JCC	Jacoby Creek,	84.43	318	IAmb	IAmb	18 53 19.4	
	comp=Z,114nm,1.1s						
E09A	Wood Farm, Sta	84.56	325	IAmb	IAmb	18 53 19.7	
	comp=Z,80nm,1.3s						
FCC	Fort Churchill	84.67	344	IAmb	IAmb	18 53 19.0	
	comp=Z,62nm,1.1s						
FCC				pP	pP	18 55 21.7	+2.6
J04D	Umpqua Nationa	84.72	321	P	P	18 53 19.5	+0.8
	baz=127						
KRMB	Red Mountain	84.77	319	IAmb	IAmb	18 53 21.1	
	comp=Z,78nm,1.0s						
I05D	Terrebonne, OR	84.94	322	P	P	18 53 20.7	+1.1
	baz=128,SNR=18						
L02E	Cave Junction	84.96	319	P	P	18 53 20.5	+0.8
	baz=126,SNR=6.8						
F07A	Phinny Hill Vi	85.12	324	P	P	18 53 20.9	+0.6
F07A				IAmb	IAmb	18 53 22.8	
	comp=Z,108nm,1.2s						
NEW	Newport	85.18	327	P	P	18 53 20.5	-0.2
	comp=Z,10nm,0.6s,baz=158,slow=3.5,SNR=14						
NEW	Newport	85.18	327	P	P	18 53 20.1	-0.5
	baz=131,SNR=12						
HAWA	Hanford	85.22	325	IAmb	IAmb	18 53 22.8	
	comp=Z,84nm,0.9s						
I04A	Tendick Farm,	85.22	321	P	P	18 53 20.9	0.0
	baz=127						
K02D	Willamette Mer	85.31	320	P	P	18 53 22.2	+0.8
	baz=126,SNR=15						
G05D	Wamic, OR	85.48	323	P	P	18 53 23.3	+1.2
	baz=128,SNR=16						
E07A	Sunnyside	85.50	325	IAmb	IAmb	18 53 24.2	
	comp=Z,59nm,1.1s						
LSZ	Lusaka	85.53	105	P	P	18 53 23.9	+0.7
LSZ				IAmb	IAmb	18 53 25.6	
	comp=Z,93nm,1.4s						
LSZ				pP	pP	18 55 25.1	+0.7
H04A	Detroit Lake	85.63	322	IAmb	IAmb	18 53 24.2	
	comp=Z,58nm,1.1s						
I03D	Drain, OR	85.71	321	P	P	18 53 23.8	+0.6
	baz=126						
J01E	Myrtle Point	85.74	320	P	P	18 53 24.0	+0.6
	baz=126						
H04D	Lebanon	85.85	322	P	P	18 53 23.3	-0.6
	baz=127						
F05D	White Salmon	85.96	323	P	P	18 53 25.0	+0.6
	baz=128,SNR=6.7						
COR	Corvallis	86.21	322	P	P	18 53 26.1	+0.6
COR				pmax	pmax		
	comp=Z,158nm,1.3s						
COR	Corvallis	86.21	322	P	P	18 53 26.1	+0.6
LTY	Liberty	86.37	325	IAmb	IAmb	18 53 27.9	
	comp=Z,54nm,0.7s						
G03D	McMinnville, O	86.56	322	P	P	18 53 28.6	+1.4
	baz=126						
C06D	Leavenworth	86.91	325	P	P	18 53 28.5	-0.3
	baz=128						
E04D	Cinebar	86.97	323	P	P	18 53 29.1	0.0
	baz=127						
D04E	Lakebay	87.46	324	P	P	18 53 31.0	-0.3
	baz=127						
E03A	Lebam	87.52	323	IAmb	IAmb	18 53 33.5	
	comp=Z,49nm,1.0s						
B05A	Bryant	87.75	325	P	P	18 53 32.4	-0.3
	baz=127,SNR=18						
D03D	Eldon	87.85	324	P	P	18 53 33.7	+0.5
	baz=127,SNR=6.5						
RAR	Rarotonga	87.98	248	P	P	18 53 35.3	+0.9
	comp=Z,10nm,0.8s,baz=337,slow=8.3,SNR=3.6						
RAR	Rarotonga	87.98	248	P	P	18 53 35.5	+1.0
RAR				IAmb	IAmb	18 53 36.4	
	comp=Z,45nm,1.3s						
A04D	Lummi Island	88.35	325	P	P	18 53 35.8	+0.3
	baz=127						
KEST	Kesra	89.53	51	P	P	18 53 42.2	+0.8
	comp=Z,15nm,0.9s,baz=229,slow=1.6,SNR=11						
KEST				pP	pP	18 55 45.6	+1.6
	comp=Z,14nm,1.0s,baz=284,slow=3.2,SNR=5.7						
KEST	Kesra	89.53	51	IAmb	IAmb	18 55 52.5	
	comp=Z,30nm,1.1s						
SSB	Saint Sauveur	91.03	41	P	P	18 53 48.7	+0.6
SSB				*PP	pP	18 55 51.6	+0.7
SSB				pmax	pmax		
	comp=Z,17nm,0.9s						
SSB	Saint Sauveur	91.03	41	P	P	18 53 48.7	+0.6
SSB				IAmb	IAmb	18 53 49.7	
	comp=Z,16nm,0.9s						
SSB				pP	pP	18 55 51.6	+0.7
VSL	Villasalto	91.31	48	IAmb	IAmb	18 53 51.1	
	comp=Z,28nm,0.9s						
CASY	Casey	91.63	177	P	P	18 53 50.9	+0.4
CASY				IAmb	IAmb	18 53 52.6	
	comp=Z,40nm,1.2s						
MBAR	Mbarara	93.36	92	⇑eP	P	18 53 59.7	0.0
MBAR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	Yellowknife Ar	93.74	339	P	P	18 53 59.8	-0.3
	comp=Z,11nm,0.7s,baz=125,slow=4.8,SNR=101						
YKA				pP	pP	18 56 04.4	+0.9
	comp=Z,12nm,0.9s,baz=119,slow=5.3,SNR=19						
YKA				PKKPbc	PKKPdf	19 11 00.7	-1.6
	comp=Z,0.1nm,0.4s,baz=80,slow=20,SNR=4.0						
ECH	Echery	94.06	39	P	P	18 54 01.0	-0.9
ECH				pmax	pmax		
	comp=Z,28nm,1.3s						
ECH	Echery	94.06	39	P	P	18 54 00.9	-0.9
ECH				IAmb	IAmb	18 57 56.2	
	comp=Z,28nm,1.3s						
WLF	Walferdange	94.19	38	IAmb	IAmb	18 56 07.9	
	comp=Z,44nm,1.4s						
DAVA	Damuels	95.24	41	i P	P	18 54 08.0	+0.6
	comp=Z,14nm,0.9s						
DAVA				eP	PP	18 58 04.3	-3.2
	comp=Z,23nm,1.6s						
FETA	Feichten	95.63	41	eP	P	18 54 09.8	+0.6
	comp=Z,18nm,1.1s						
FETA				eP	pP	18 56 13.8	+1.4
	comp=Z,22nm,1.3s						
FETA				eP	PP	18 58 09.0	-1.6
	comp=Z,10nm,1.3s						
RETA	Reutte	95.86	41	eP	P	18 54 10.6	+0.4
	comp=Z,13nm,1.0s						
RETA				eP	pP	18 56 14.6	+1.3
	comp=Z,26nm,1.3s						
RETA				eP	PP	18 58 09.8	-2.4
	comp=Z,11nm,1.4s						
MOTA	Moosalm	96.01	41	eP	P	18 54 11.2	+0.4
	comp=Z,22nm,1.3s						
MOTA				eP	pP	18 56 14.0	-0.2
	comp=Z,30nm,1.3s						
MOTA				eP	PP	18 58 11.1	-2.3
	comp=Z,8.8nm,1.2s						
SQTA	Sankt Quirin	96.02	41	eP	P	18 54 11.4	+0.5
	comp=Z,21nm,0.9s						
SQTA				eP	pP	18 56 14.4	+0.3
	comp=Z,26nm,1.2s						
WATA	Walderalm	96.29	41	eP	P	18 54 12.5	+0.3
	comp=Z,12nm,1.1s						
WATA				eP	pP	18 56 16.7	+1.3
	comp=Z,20nm,1.3s						
WTTA	Wattenberg	96.30	41	eP	P	18 54 12.8	+0.6
	comp=Z,25nm,1.2s,SNR=7.7						
WTTA				eP	pP	18 56 15.9	+0.4
	comp=Z,26nm,1.3s						
WTTA				eP	PP	18 58 12.2	-3.4
	comp=Z,9.9nm,1.0s						
ABTA	Abfaltersbach	96.61	42	eP	P	18 54 14.1	+0.6
	comp=Z,7.9nm,0.9s						
ABTA				eP	pP	18 56 17.3	+0.4
	comp=Z,12nm,1.4s						
GRF	Grafenberg Arr	97.11	39	ePdiff	P	18 54 15.8	+0.2
MYKA	Terra Mystica	97.27	43	eP	P	18 54 17.0	+0.6
	comp=Z,6.9nm,0.9s						
MYKA				eP	PP	18 58 21.5	-1.4
	comp=Z,13nm,1.4s						
OBKA	Obir	97.79	43	eP	Pdif	18 54 18.1	-0.6
	comp=Z,10nm,1.1s						
OBKA				eP	PP	18 58 23.1	-3.7
	comp=Z,23nm,1.7s						
MOA	Molln	98.16	42	eP	P	18 54 20.7	+0.3
	comp=Z,4.5nm,0.8s						
MOA				eP	pP	18 56 23.8	0.0
	comp=Z,11nm,1.2s						
SOKA	Soboth	98.16	43	eP	P	18 54 20.7	+0.2
	comp=Z,6.5nm,1.3s						
GERES	GERESS Array B	98.22	41	P	Pdif	18 54 20.4	-0.3
	comp=Z,1.2nm,0.9s,baz=215,slow=4.4,SNR=8.5						
GERES				pP	pP	18 56 23.8	-0.4
	comp=Z,1.2nm,0.9s,baz=248,slow=3.6,SNR=4.3						
GERES				PKKPbc	PKKPbc	19 10 51.0	-0.2
	comp=Z,0.6nm,0.6s,baz=62,slow=2.3,SNR=5.2						
KHC	Kasperske Hory	98.27	40	epP	pP	18 56 23.7	-0.6
ARSA	Arzberg	98.70	43	eP	pP	18 56 27.3	+1.1
	comp=Z,9.8nm,1.6s						
CLL	Collm	98.83	38	ePdif	P	18 54 24.0	+0.8
CLL				epP	pP	18 56 28.0	+1.3
CLL				i PP	PP	18 58 31.6	-2.8
	comp=Z,17nm,1.4s						
CLL				esPP		19 01 18.0	
CLL				eSKSac	SKSac	19 04 11.0	+4.0
CLL				eSdif	ScS	19 05 04.0	-0.4
CLL				eSP	SP	19 06 37.0	+1.3
CLL				esS	sS	19 08 48.0	+0.6
CLL				esSP		19 10 12.0	
CLL				eSS	SS	19 12 06.0	-2.6
CLL				ePKKSdf	PKKSdf	19 14 22.0	-7.7
CLL				esSS		19 15 24.0	
CLL				eSKKSacre		19 17 18.0	
CLL				eSSSS		19 19 12.0	
CLL				esSSSS		19 22 24.0	
CLL	Collm	98.83	38	eP	P	18 54 24.0	+0.8
CLL				e*PP	pP	18 56 28.0	+1.3
CLL				i		18 58 31.6	
CLL				e		19 04 11.0	
CLL				eS	ScS	19 05 04.0	-0.4
CLL				pmax	pmax		
	comp=Z,17nm,1.4s						
CONA	Conrad Observa	99.17	42	eP	pP	18 56 29.4	+0.9
	comp=Z,7.0nm,1.8s						
PRU	Pruhonice	99.19	40	epP	pP	18 56 29.4	+1.0
DPC	Dobruska-Polom	100.38	40	epP	pP	18 56 34.0	+0.2
KRLC	Kraliky	100.55	40	epP	pP	18 56 36.1	+1.5
VYHS	Vyhne	101.23	42	eP	Pdif	18 54 42.4	+8.5
VYHS	Vyhne	101.23	42	ePDIFF	Pdif	18 54 42.3	+8.4
INK	Inuvik	103.52	339	Pdiff	Pdif	18 54 44.0	+0.4
	comp=Z,1.3nm,0.5s,baz=85,slow=4.2,SNR=5.3						
INK				PKKPbc	PKKPbc	19 10 35.2	-1.2
	comp=Z,0.8nm,0.5s,baz=303,slow=2.5,SNR=6.8						
ILAR	Eielson Array	107.26	334	Pdiff	Pdif	18 55 00.1	-0.2
	comp=Z,0.2nm,0.5s,baz=146,slow=3.1,SNR=5.3						
ILAR				PKiKP	PKiKP	18 59 03.4	-2.1
	comp=Z,0.7nm,0.7s,baz=116,slow=2.1,SNR=5.7						
ILAR				PP	PP	18 59 33.3	-2.6
	comp=Z,3.9nm,1.0s,baz=107,slow=5.9,SNR=7.6						
AKASG	Malin Array Be	108.33	42	PKiKP	PKiKP	18 59 06.9	-1.0
	comp=Z,0.4nm,0.4s,baz=262,slow=2.7,SNR=6.3						
AKASG				PP	PP	18 59 29.6	-14
	comp=Z,0.2nm,0.3s,baz=307,slow=16,SNR=1.7						
AKASG				PKKPbc	PKKPbc	19 10 20.6	-0.7
	comp=Z,1.1nm,0.5s,baz=60,slow=3.7,SNR=5.4						
AKASG				PKKP	PKKPdf	19 10 35.2	+0.4
	comp=Z,2.4nm,0.8s,baz=62,slow=4.5,SNR=7.7						
MNK	Minsk	108.37	38	i PP	PP	18 59 44.8	+0.7
MNK				i PP	PP	18 59 44.8	+0.7
MNK				i PP	PP	18 59 44.8	+0.7
MNK				i PPP	PPP	19 02 08.5	
MNK				i SKS	SKSac	19 04 37.5	-13
MNK				i SP	SP	19 07 58.1	-15
MNK				i PS	PS	19 09 13.5	-6.1
MNK				i SS	SS	19 14 21.4	+3.8
MNK				i SKKS	SKKSdf	19 17 02.8	+8.2
MNK				i SSS	SSS	19 19 32.9	
MNK				i LRM	MLR	19 45 49.5	
	comp=E,17nm,19.8s						
MNK				i LRM	MLR	19 45 49.5	
	comp=N,107nm,19.8s						
MNK				i LRM	MLR	19 45 49.5	
	comp=Z,64nm,19.8s						
TRF	Thorofare Moun	108.39	332	Pdif	Pdif	18 55 01.5	-4.1
KTH	Kantishna Hill	108.69	332	Pdif	Pdif	18 55 03.3	-3.5
BRTR	Keskin Array B	108.89	54	PP	PP	18 59 42.7	-5.7
	comp=Z,1.4nm,0.9s,baz=235,slow=4.4,SNR=3.6						
BRTR				PKKP	PKKPab	19 10 32.9	+0.2
	comp=Z,0.8nm,0.8s,baz=98,slow=2.2,SNR=5.0						
FINES	FINESS Array B	108.89	31	PKKPbc	PKKPbc	19 10 18.0	-1.8
	comp=Z,0.9nm,0.4s,baz=60,slow=3.9,SNR=9.8						
FINES				PKKP	PKKPab	19 10 32.4	+0.5
	comp=Z,2.6nm,0.8s,baz=66,slow=5.3,SNR=4.7						
ARCES	ARCESS Array B	110.15	22	PKiKP	PKiKP	18 59 10.4	-0.4
	comp=Z,12nm,1.2s,baz=228,slow=2.3,SNR=3.6						
ARCES				PKKPbc	PKKPbc	19 10 14.7	-1.4
	comp=Z,6.1nm,1.0s,baz=43,slow=4.1,SNR=3.7						
ARCES				PKKP	PKKPab	19 10 26.7	+0.5
	comp=Z,7.6nm,0.9s,baz=54,slow=4.6,SNR=6.6						
DZM	Mont Dzumac	114.63	231	PKP	PKiKP	18 59 21.9	+0.9
	comp=Z,3.2nm,0.5s,baz=218,slow=7.7,SNR=12						
KLMR	Klimovskoe	115.30	32	ePKIKP	PKPdf	18 59 20.7	-0.1
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	Klimovskoe	115.30	32	ePKPdf	PKPdf	18 59 20.8	-0.1
KLMR				AMP		18 59 22.5	
	comp=Z,14nm,1.3s						
KIV	Kislovodsk	116.27	51	ePKIKP	PKiKP	18 59 27.3	+3.9
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	Khabaz	116.40	51	PKP	PKiKP	18 59 23.9	+0.4
	comp=Z,2.5nm,0.9s,baz=212,slow=5.8,SNR=4.2						
KBZ	Khabaz	116.40	51	⇑iPKIKP	PKiKP	18 59 25.1	+1.6
GNI	Garni	117.36	55	⇓iPKIKP	PKiKP	18 59 26.8	+1.0
BELG	Belogornoye	119.90	41	⇑iPKIKP	PKPdf	18 59 29.7	-0.3
KIRV	Kirov	120.44	34	⇑iPKIKP	PKiKP	18 59 31.3	+0.4
STKA	Stephens Creek	121.22	205	PKP	PKPdf	18 59 33.1	-0.3
	comp=Z,7.4nm,0.8s,baz=108,slow=5.0,SNR=11						
STKA				PKKPbc	PKKPbc	19 09 37.2	-0.9
	comp=Z,1.3nm,0.8s,baz=196,slow=4.2,SNR=4.1						
STKA	Stephens Creek	121.22	205	⇓iPKIKP	PKPdf	18 59 33.4	+0.1
STKA	Stephens Creek	121.22	205	PKPdf	PKPdf	18 59 33.2	-0.1
ARU	Arti	125.68	36	i PKIKP	PKiKP	18 59 42.3	+0.9
ARU						19 01 43.8	
ARU						19 06 01.2	
ARU				SS	SS	19 18 00.8	+1.6
ARU	Arti	125.68	36		PKiKP	18 59 41.5	+0.1
GEYT	Alibeck	127.61	59	PKP	PKPdf	18 59 45.1	-0.3
	comp=Z,1.9nm,0.6s,baz=204,slow=31,SNR=4.0						
GEYT				pPKP	PP	19 01 55.1	-0.7
	comp=Z,5.7nm,1.1s,baz=236,slow=10.0,SNR=3.6						
GEYT	Alibeck	127.61	59		PKiKP	18 59 46.3	+0.4
ABKAR	Akbulak array	127.99	44	PKPdf	PKPdf	18 59 45.7	+0.1
ABKAR	Akbulak array	127.99	44	PKPdf	PKiKP	18 59 46.1	-0.2
CTA	Charters Tower	129.07	216	PKP	PKPdf	18 59 49.0	+0.4
	comp=Z,18nm,1.1s,baz=231,slow=3.0,SNR=14						
CTA				PP	PP	19 02 03.8	-0.3
	comp=Z,5.6nm,1.0s,baz=120,slow=1.9,SNR=4.4						
CTAO	Charters Tower	129.07	216	PKIKP	PKPdf	18 59 48.9	+0.2
CTAO	Charters Tower	129.07	216	PKPdf	PKPdf	18 59 48.9	+0.2
TIXI	Tiksi	130.09	355	d iPKIKP	PKPdf	18 59 48.7	-0.2
TIXI	Tiksi	130.09	355		PKPpre	18 59 41.9	
ASAR	Alice Springs	131.46	201	PKhKP	PKPpre	18 59 35.3	
	comp=Z,0.9nm,0.5s,baz=135,slow=2.2,SNR=17						
ASAR				PKP	PKPdf	18 59 52.9	-0.2
	comp=Z,12nm,0.6s,baz=138,slow=1.7,SNR=84						
ASAR				pPKP	pPKPdf	19 02 05.2	+1.2
	comp=Z,2.6nm,0.8s,baz=162,slow=3.3,SNR=7.6						
ASAR				SKPbc	SKPbc	19 02 26.2	-0.3
	comp=Z,10nm,0.4s,baz=148,slow=3.8,SNR=20						
ASAR				PKKP	PKKPdf	19 09 48.5	-0.9
	comp=Z,0.2nm,0.5s,baz=346,slow=1.5,SNR=4.6						
ASAR				SKKPbc	SKKPbc	19 11 54.4	-1.1
	comp=Z,0.5nm,0.6s,baz=349,slow=3.2,SNR=8.1						
SEY	Seymchan	132.81	339	PKP	PKiKP	18 59 55.0	-0.6
	comp=Z,12nm,0.5s,baz=68,slow=1.6,SNR=41						
SEY				SKPbc	SKPbc	19 02 29.6	-0.1
	comp=Z,5.2nm,0.6s,baz=23,slow=1.7,SNR=8.1						
SEY	Seymchan	132.81	339	⇑iPKIKP	PKiKP	18 59 55.1	-0.5
BRVK	Borovoye	133.18	37	c iPKIKP	PKiKP	18 59 56.3	-0.3
BRVK	Borovoye	133.18	37	PKPdf	PKiKP	18 59 56.2	-0.5
WR0	Warramunga Arr	134.65	204		PKPpre	18 59 44.8	
WR0					PKPdf	18 59 56.0	-3.1
WB2	Warramunga Arr	134.73	203		PKPdf	18 59 58.6	-0.7
WRA	Warramunga Arr	134.74	203	PKhKP	PKPpre	18 59 44.4	
	comp=Z,1.1nm,0.6s,baz=161,slow=2.3,SNR=11						
WRA				PKP	PKPdf	18 59 59.6	+0.2
	comp=Z,15nm,0.5s,baz=170,slow=1.7,SNR=45						
WRA				pPKP	pPKPdf	19 02 11.0	+0.7
	comp=Z,2.9nm,0.9s,baz=154,slow=1.7,SNR=5.4						
WRA				SKPbc	SKPbc	19 02 37.4	-0.1
	comp=Z,19nm,0.6s,baz=159,slow=2.8,SNR=45						
WRA	Warramunga Arr	134.74	203		PKPpre	18 59 43.6	
WRAB	Tennant Creek	134.74	203	c iPKIKP	PKPdf	18 59 59.3	0.0
BRZS	Berezniki	135.74	40	ePKP	PKPdf	19 00 00.9	+0.7
	baz=40						
BRZS	Berezniki	135.74	40	ePKIKP	PKPdf	19 00 00.9	+0.7
PETK	Petropavlovsk-	136.29	325	PKhKP	PKPpre	18 59 56.8	
	comp=Z,3.3nm,1.0s,baz=269,slow=22,SNR=13						
PETK				PKP	PKPdf	19 00 01.9	+0.8
	comp=Z,14nm,0.9s,baz=83,slow=4.6,SNR=11						
PETK				SKPbc	SKPbc	19 02 40.8	-0.3
	comp=Z,12nm,1.1s,baz=67,slow=8.2,SNR=6.1						
PETK	Petropavlovsk-	136.29	325	PKPdf	PKPdf	19 00 01.5	+0.4
IUG	Iuzhnay	136.29	52	ePKP	PKPdf	19 00 02.3	+0.6
	baz=52						
IUG	Iuzhnay	136.29	52	ePKIKP	PKPdf	19 00 02.2	+0.6
PMG	Port Moresby	136.75	227	SKPbc	SKPbc	19 02 44.0	+0.4
	comp=Z,16nm,1.1s,baz=40,slow=2.5,SNR=5.6						
FITZ	Fitzroy Crossi	139.00	193	PKhKP	PKPpre	18 59 58.2	
	comp=Z,2.0nm,0.6s,baz=238,slow=1.4,SNR=8.5						
FITZ				PKP	PKPdf	19 00 07.8	+0.6
	comp=Z,6.3nm,0.6s,baz=259,slow=3.1,SNR=18						
FITZ				SKPbc	SKPbc	19 02 49.0	-0.9
	comp=Z,33nm,1.2s,baz=179,slow=3.2,SNR=9.7						
SGDS	Sogindy	139.23	49	ePKP	PKPdf	19 00 07.5	+0.5
	baz=49						
SGDS	Sogindy	139.23	49	ePKIKP	PKPdf	19 00 07.4	+0.5
YAK	Yakutsk	139.27	351	PKhKP	PKPpre	19 00 00.4	
	comp=Z,2.9nm,0.4s,baz=191,slow=0.2,SNR=7.6						
YAK				PKP	PKPdf	19 00 06.3	0.0
	comp=Z,4.6nm,0.5s,baz=175,slow=0.9,SNR=5.7						
YAK				SKPbc	SKPbc	19 02 48.9	-0.2
	comp=Z,2.5nm,0.6s,baz=238,slow=1.4,SNR=6.0						
YAK	Yakutsk	139.27	351	pmax	pmax		
	comp=Z,22nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,47nm,2.3s						
YAK				pmax	pmax		
	comp=N,17nm,2.0s						
YAK				pmax	pmax		
	comp=E,45nm,2.6s						
YAK	Yakutsk	139.27	351		PKPpre	18 59 59.0	
AAK	Ala-Archa	139.38	50	PKHKP	PKPpre	18 59 59.7	
AAK	Ala-Archa	139.38	50		PKPpre	18 59 59.7	
SEM	Semipalatinsk	139.90	36	ePKP	PKPdf	19 00 08.3	+0.1
	baz=36						
SEM	Semipalatinsk	139.90	36	ePKIKP	PKPdf	19 00 08.2	+0.1
ZALV	Zalesovo Beam	140.15	29	PKhKP	PKPpre	19 00 01.5	
	comp=E,0.7nm,0.4s,baz=310,slow=5.6,SNR=8.0						
ZALV				PKP	PKPdf	19 00 08.0	-0.1
	comp=E,14nm,0.5s,baz=289,slow=2.5,SNR=38						
ZALV				pPKP	pPKPdf	19 02 18.1	-1.1
	comp=E,12nm,1.1s,baz=302,slow=2.8,SNR=3.9						
ZALV				SKPbc	SKPbc	19 02 51.7	0.0
	comp=E,5.3nm,0.5s,baz=314,slow=3.5,SNR=10						
ZALV	Zalesovo Beam	140.15	29		PKPpre	19 00 01.6	
KUU	Kurty	140.27	47	ePKP	PKPdf	19 00 09.4	+0.7
	baz=47						
KUU	Kurty	140.27	47	ePKIKP	PKPdf	19 00 09.4	+0.7
MDOK	Medeo	141.00	48	ePKP	PKPdf	19 00 10.8	+0.5
	baz=48						
MDOK				ePKiKP	PKiKP	19 00 13.9	+0.8
	baz=48						
MDOK	Medeo	141.00	48	ePKIKP	PKPdf	19 00 10.7	+0.5
KSH	Kashi	141.28	54	PKP	PKPdf	19 00 05.8	-5.0
KSH				PP	PP	19 03 22.1	+1.2
KSH				AMB	AMB		
	comp=E,530nm,4.9s						
SHLS	Shalkode	142.65	47	ePKP	PKPdf	19 00 14.0	+0.8
	baz=47						
SHLS	Shalkode	142.65	47	ePKIKP	PKPdf	19 00 13.9	+0.8
MAKZ	Makanchi	142.70	40	PKIKP	PKPdf	19 00 10.6	-2.4
MAKZ	Makanchi	142.70	40	PKPdf	PKPdf	19 00 10.6	-2.4
MK31	Makanchi Array	142.89	40	PKIKP	PKPdf	19 00 10.9	-2.4
MK31	Makanchi Array	142.89	40	PKPdf	PKPdf	19 00 10.9	-2.4
MKAR	Makanchi Array	142.89	40	PKP	PKPdf	19 00 11.3	-2.0
	comp=E,26nm,0.8s,baz=299,slow=3.6,SNR=205						
MKAR				pPKP	pPKPdf	19 02 23.3	-1.1
	comp=E,3.9nm,0.7s,baz=316,slow=3.0,SNR=6.0						
MKAR				SKPbc	SKPbc	19 02 59.2	+0.4
	comp=E,1.7nm,0.5s,baz=289,slow=2.7,SNR=5.0						
MKAR				SKKPbc	SKKPab	19 11 14.4	+0.1
	comp=E,2.6nm,0.8s,baz=110,slow=5.7,SNR=13						
HYB	Hyderabad	143.70	91	i PKP	PKPbc	19 00 14.0	-0.6
	comp=E,90nm,1.0s						
HYB				e		19 02 25.0	
HYB				e		19 03 02.0	
ZSN	Zaisan	144.05	38	ePKP	PKPdf	19 00 15.3	0.0
	baz=38						
ZSN	Zaisan	144.05	38	ePKIKP	PKPdf	19 00 15.3	0.0
BOD	Bodaibo	144.40	3	ePKIKP	PKPbc	19 00 14.8	-0.7
BOD				pmax	pmax		
	comp=Z,14nm,1.4s						
JAY	Jayapura	146.13	226	PKPbc	PKPbc	19 00 22.7	+0.7
	comp=Z,115nm,1.0s,baz=308,slow=3.2,SNR=18						
JAY	Jayapura	146.13	226	PKP	PKPbc	19 00 22.7	+0.7
GENI	Genyem	146.43	226	PKP	PKPbc	19 00 22.4	-0.4
UGL	Uglegorsk	146.59	329	ePKIKP	PKPbc	19 00 21.1	-1.0
UGL				pmax	pmax		
	comp=Z,80nm,1.4s						
UGL				pmax	pmax		
	comp=Z,60nm,1.0s						
BATI	Baumata	147.08	192	PKPbc	PKiKP	19 00 25.5	-0.8
	comp=Z,59nm,0.6s,baz=253,slow=1.4,SNR=19						
BATI	Baumata	147.08	192	PKP	PKPbc	19 00 24.6	+0.1
ZEA	Zeya	147.57	348	ePKIKP	PKPdf	19 00 21.6	+0.6
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS	Yuzh-Sakhalins	147.69	326	ePKIKP	PKPdf	19 00 22.6	+1.2
YSS				e		19 00 29.4	
YSS				pmax	pmax		
	comp=Z,90nm,0.8s						
YSS	Yuzh-Sakhalins	147.69	326	PKPdf	PKPdf	19 00 22.2	+0.9
WMQ	Urumqi	147.69	41	ePKPbc	PKPdf	19 00 20.8	-0.8
WMQ				AMB	AMB		
	comp=Z,120nm,4.3s						
MOY	Mondy	148.15	19	ePKHKP	PKPdf	19 00 24.4	+2.2
MOY				pmax	pmax		
	comp=Z,85nm,1.8s						
IRK	Irkutsk	148.51	15	ePKHKP	PKPdf	19 00 23.1	+0.5
IRK				pmax	pmax		
	comp=Z,78nm,2.3s						
EDFI	Ende, Flores	148.85	189	PKP	PKPdf	19 00 25.5	+1.1
TLY	Talaya	148.87	16	ePKIKP	PKPdf	19 00 22.6	-0.6
TLY				pmax	pmax		
	comp=Z,79nm,1.4s						
TLY	Talaya	148.87	16		PKPdf	19 00 24.1	+0.9
MMRI	Maumere	148.87	190	PKP	PKPbc	19 00 28.2	-0.8
CISI	Cisompet, Garu	149.09	162		PKPbc	19 00 29.7	+0.1
CISI	Cisompet, Garu	149.09	162	PKP	PKPbc	19 00 29.2	-0.4
PLAI	Plampang	149.12	182	PKP	PKPbc	19 00 30.0	+0.4
TWSI	Taliwang, Sumb	149.22	180	PKP	PKPdf	19 00 23.6	-1.3
SRPI	Serui, Papua	149.48	221	PKP	PKiKP	19 00 30.9	-0.4
SRPI				PKP	PKPbc	19 00 31.9	+1.4
PWJI	Pagerwojo	149.52	170	PKP	PKPbc	19 00 30.8	+0.3
ASAJ	Asahikawa	149.56	322	PKPbc	PKPbc	19 00 29.6	-0.2

	comp=Z,338nm,1.4s,baz=232,slow=9.5,SNR=12						
ASAJ				pPKPbc	**pPKPbc**	**19 02 40.3**	**+0.5**
	comp=Z,31nm,1.1s,baz=224,slow=12,SNR=4.8						
SRBI	**Singaraja**	**149.82**	**177**	PKP	**PKiKP**	**19 00 31.8**	**-0.1**
KASI	**Kota Agung**	**149.87**	**155**	PKP	**PKPbc**	**19 00 31.7**	**+0.3**
ZAK	**Zakamensk**	**149.95**	**17**	*e*PKHKP	**PKPdf**	**19 00 25.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,21nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.0s						
BAKI	**Biak**	**150.09**	**221**	PKP	**PKiKP**	**19 00 34.8**	**+2.3**
LWLI	**Liwa**	**150.15**	**154**	PKP	**PKPbc**	**19 00 31.9**	**-0.3**
ERM	**Erimo**	**150.45**	**318**	PKIKP	**PKiKP**	**19 00 33.5**	**+1.1**
ERM	**Erimo**	**150.45**	**318**		**PKiKP**	**19 00 33.5**	**+1.1**
BNDI	**Bandanaira**	**150.51**	**207**	PKP	**PKPbc**	**19 00 31.6**	**-1.3**
KLR	**Kul'dur**	**150.59**	**340**	PKPbc	**PKPbc**	**19 00 32.1**	**+0.1**
	comp=Z,32nm,0.7s,baz=24,slow=3.3,SNR=50						
KLR				pPKPbc	**pPKPbc**	**19 02 42.5**	**+0.3**
	comp=Z,21nm,1.1s,baz=18,slow=3.8,SNR=13						
FAKI	**Fak Fak**	**150.83**	**213**	PKPdf	**PKPdf**	**19 00 28.6**	**+1.2**
FAKI	**Fak Fak**	**150.83**	**213**	PKP	**PKPbc**	**19 00 32.0**	**-1.6**
MSAI	**Masohi**	**151.97**	**206**	PKP	**PKPbc**	**19 00 33.6**	**-2.6**
GUMO	**Guam**	**152.04**	**257**	PKPbc	**PKPbc**	**19 00 35.4**	**-0.8**
	comp=Z,35nm,0.9s,baz=3.5,slow=23,SNR=4.7						
TEY	**Ternei**	**152.09**	**329**	⇓*e*PKIKP	**PKiKP**	**19 00 35.9**	**+0.2**
TEY				*e*		19 00 45.3	
TEY				*e*		19 02 47.6	
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
BKSI	**Bulukumba**	**152.43**	**187**	PKP	**PKiKP**	**19 00 37.8**	**+0.5**
KAPI	**Kappang**	**152.77**	**186**	PKPbc	**PKiKP**	**19 00 38.4**	**+0.4**
	comp=Z,18nm,1.0s,baz=213,slow=3.9,SNR=12						
KAPI				PKPab	**PKPab**	**19 00 52.2**	**+0.8**
	comp=Z,28nm,0.8s,baz=182,slow=4.4,SNR=10						
KAPI	**Kappang**	**152.77**	**186**	PKP2	**PKPab**	**19 00 52.2**	**+0.8**
KAPI						20 00 31.5	
KAPI	**Kappang**	**152.77**	**186**		**PKPdf**	**19 00 31.5**	**+1.3**
SIJI	**Sorong**	**153.08**	**213**	PKPbc	**PKPbc**	**19 00 38.7**	**0.0**
	comp=Z,30nm,0.7s,baz=6.3,slow=6.4,SNR=18						
SWI	**Sorong**	**153.09**	**213**	PKP	**PKiKP**	**19 00 39.4**	**+0.7**
SONM	**Songino Array**	**153.11**	**16**	PKP	**PKPdf**	**19 00 30.7**	**+0.8**
	comp=Z,3.6nm,0.7s,baz=277,slow=0.8,SNR=23						
SONM				PKPbc	**PKiKP**	**19 00 38.2**	**+0.3**
	comp=Z,8.2nm,0.8s,baz=292,slow=1.2,SNR=22						
SONM				PKPab	**PKPab**	**19 00 52.8**	**+0.6**
	comp=Z,6.0nm,0.6s,baz=309,slow=3.9,SNR=13						
SONM				pPKPbc	**pPKPbc**	**19 02 47.0**	**-1.3**
	comp=Z,3.2nm,0.9s,baz=290,slow=1.3,SNR=3.5						
ULN	**Ulaanbaatar**	**153.24**	**15**	PKIKP	**PKPdf**	**19 00 31.5**	**+1.4**
ULN	**Ulaanbaatar**	**153.24**	**15**	PKPdf	**PKPdf**	**19 00 31.5**	**+1.4**
SANI	**Sanana**	**154.27**	**201**	PKP	**PKPdf**	**19 00 33.8**	**+1.4**
USRK	**Ussuriysk Ar.**	**154.79**	**334**	PKP	**PKPdf**	**19 00 32.9**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=288,slow=3.0,SNR=5.3						
USRK				PKPbc	**PKPbc**	**19 00 41.8**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=347,slow=3.2,SNR=8.4						
USRK				PKPab	**PKPab**	**19 01 00.1**	**+0.8**
	comp=Z,5.0nm,0.5s,baz=32,slow=3.1,SNR=15						
USRK				pPKPbc	**pPKPbc**	**19 02 54.1**	**+2.2**
	comp=Z,5.1nm,0.7s,baz=40,slow=2.5,SNR=7.6						
USRK	**Ussuriysk Ar.**	**154.79**	**334**	PKPdf	**PKPdf**	**19 00 32.6**	**+0.4**
USRK				PKPab	**PKPab**	**19 00 60.0**	**+0.6**
MJAR	**Matsushiro Arr**	**156.64**	**312**	PKPab	**PKPab**	**19 01 07.4**	**-0.3**
	comp=Z,11nm,0.7s,baz=56,slow=2.8,SNR=15						
MJAR				pPKPab	**pPKPab**	**19 03 13.1**	**+0.5**
	comp=Z,7.4nm,1.2s,baz=54,slow=6.1,SNR=5.4						
MJAR	**Matsushiro Arr**	**156.64**	**312**		**PKPab**	**19 01 07.7**	**-0.1**
CN2	**Changchun**	**157.35**	**344**	*e*P	PKPdf	19 00 50.1	+15
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GTA	**Gaotai**	**157.54**	**36**	PKP	**PKPdf**	**19 00 36.9**	**+0.9**
GTA				PKPab	**PKPab**	**19 01 12.3**	**+0.7**
BTO	**Baotou**	**160.79**	**16**	*e*PKP	**PKPdf**	**19 00 40.5**	**+0.8**
HHC	**Hu-ho-hao-te**	**160.91**	**12**	*e*PKP	**PKPdf**	**19 00 41.0**	**+1.2**
HHC				AMB	AMB		
	comp=Z,140nm,7.9s						
KSRS	**Korea Array**	**162.08**	**330**	PKP	**PKPdf**	**19 00 40.7**	**-0.2**
	comp=Z,5.8nm,1.1s,baz=86,slow=0.5,SNR=9.7						
KSRS				PKPab	**PKPab**	**19 01 32.0**	**+0.8**
	comp=Z,17nm,0.9s,baz=36,slow=4.5,SNR=27						
KSRS				pPKPab	**pPKPab**	**19 03 38.1**	**+2.5**
	comp=Z,3.8nm,0.9s,baz=43,slow=4.5,SNR=6.9						
LZH	**Lanzhou**	**162.14**	**37**	⇓PKP	**PKPdf**	**19 00 41.9**	**+0.6**
LZH				sPKP		19 03 50.0	
UTHA	**Uthaitani**	**162.23**	**109**	P	**PKPdf**	**19 00 43.3**	**+1.6**
	comp=Z,208nmcomp=Z,20nm,1.0s						
BJI	**Beijing**	**162.24**	**2**	PKP	**PKPdf**	**19 00 41.8**	**+0.8**
BJI				SS	SS	19 24 53.5	+2.4
BJI				AMB	AMB		
	comp=Z,290nm,4.3s						
CM13	**Chiang Mai Arr**	**162.73**	**99**	P	**PKPdf**	**19 00 44.0**	**+1.9**
CM32	**Chiang Mai Arr**	**162.74**	**99**	P	**PKPdf**	**19 00 43.0**	**+0.9**
CM15	**Chiang Mai Arr**	**162.76**	**99**	P	**PKPdf**	**19 00 43.8**	**+1.6**
	comp=Z,5.8nm,1.3s						
CM05	**Chiang Mai Arr**	**162.76**	**100**	P	**PKPdf**	**19 00 43.0**	**+0.8**
	comp=Z,58nmcomp=Z,6.1nm,1.2s						
CM02	**Chiang Mai Arr**	**162.77**	**99**	P	**PKPdf**	**19 00 43.0**	**+0.8**
	comp=Z,68nmcomp=Z,7.5nm,1.1s						
CM31	**Chiang Mai Arr**	**162.77**	**99**	P	**PKPdf**	**19 00 43.7**	**+1.5**
	comp=Z,158nm,1.3s						
CMAR	**Chiang Mai Arr**	**162.77**	**99**	PKP	**PKPdf**	**19 00 42.7**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=263,slow=2.3,SNR=23						
CMAR				PKPab	**PKPab**	**19 01 34.5**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=249,slow=5.2,SNR=12						
CMAR				pPKP	**pPKPdf**	**19 02 55.6**	**+1.4**
	comp=Z,4.0nm,1.0s,baz=257,slow=2.3,SNR=11						
CMAR				pPKPab	**pPKPab**	**19 03 40.0**	**+1.1**
	comp=Z,3.1nm,1.0s,baz=254,slow=6.5,SNR=3.8						
CMAR				PP	**PP**	**19 05 21.8**	**-0.1**
	comp=Z,4.6nm,1.1s,baz=260,slow=5.4,SNR=9.5						
CMAR	**Chiang Mai Arr**	**162.77**	**99**		**PKPab**	**19 01 33.9**	**-1.2**
CM01	**Chiang Mai Arr**	**162.78**	**100**	P	**PKPdf**	**19 00 44.0**	**+1.8**
	comp=Z,81nmcomp=Z,7.1nm,1.4s						
CM04	**Chiang Mai Arr**	**162.79**	**100**	P	**PKPdf**	**19 00 43.0**	**+0.8**
	comp=Z,84nmcomp=Z,8.6nm,1.2s						
CHTO	**Chiang Mai**	**162.87**	**98**	PKIKP	**PKPdf**	**19 00 42.9**	**+0.6**
CHTO						19 01 34.8	
CHTO	**Chiang Mai**	**162.87**	**98**		**PKPdf**	**19 00 42.9**	**+0.6**
CHTO				PKPab	**PKPab**	**19 01 34.8**	**-0.6**
CM33	**Chiang Mai Arr**	**162.87**	**98**	P	**PKPdf**	**19 00 43.0**	**+0.7**
CMMT	**Chiang Mai**	**162.87**	**98**	P	**PKPdf**	**19 00 43.3**	**+1.0**
	comp=Z,6.5nm,1.7s						
CM36	**Chiang Mai Arr**	**162.93**	**99**	P	**PKPdf**	**19 00 43.0**	**+0.7**
CM35	**Chiang Mai Arr**	**163.03**	**99**	P	**PKPdf**	**19 00 43.0**	**+0.6**
CD2	**Chengdu**	**165.44**	**51**	PKP	**PKPdf**	**19 00 43.3**	**-1.0**
XAN	**Xi'an**	**166.32**	**29**	PKP	**PKPdf**	**19 00 45.5**	**+0.6**
KMI	**Kunming**	**166.74**	**75**	PKP	**PKPdf**	**19 00 43.6**	**-2.1**
GYA	**Guiyang**	**169.79**	**64**	PKP	**PKPdf**	**19 00 47.9**	**+0.4**
NJ2	**Nanjing**	**170.06**	**350**	*e*PKP	**PKPdf**	**19 00 47.5**	**+0.2**
WHN	**Wuhan**	**171.42**	**15**	⇓PKP	**PKPdf**	**19 00 48.3**	**+0.2**

*IDC **17** 18:54:42.6±1.4, 56.°94S×150.°74W, h0^{km}, mb4.0/2, mb1 4.2/2, mb1mx3.8/33, mbtmp4.0/2, MS3.8/2, Ms1 3.7/2, ms1mx3.1/18 Error ellipse: s-maj=157.8km s-min=42.8km az=178.0*

*NEIC **17** 18:54:44.8±2.0, 56.°9S±0.°2×150.°8W±0.°3, h15^{km}±2^{km}, mb4.6/9, Error ellipse: s-maj=36.7km s-min=18.1km az=194.0*

ISC 17 18:54:44.0±0.7**, 56.°8S**±0.°2×**150.°8W**±0.°1**, h10**^{km}**, n40,** σ**1.^{s}01**/25**, mb4.6**/7**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSWZ	**Moikau Station**	**26.71**	**291**	P	**P**	**19 00 21.4**	**-1.9**
QSPA	**South Pole Qui**	**33.30**	**180**	P	**P**	**19 01 21.1**	**-0.5**
QSPA				IAmb	IAmb	19 01 26.2	
	comp=Z,8.6nm,1.2s						
MSVF	**Nonsavu**	**45.50**	**316**	LR	LR	19 17 39.5	
	comp=Z,89nm,20.4s,baz=216,slow=30						
STKA	**Stephens Creek**	**51.91**	**269**	P	**P**	**19 03 55.5**	**+2.8**
H03S2	**Juan Fernandez**	**52.72**	**96**	T	T	20 00 58.4	
	baz=219,slow=74,SNR=19						
H03S1	**Juan Fernandez**	**52.73**	**96**	T	T	20 00 59.7	
	baz=219,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**52.74**	**96**	T	T	20 00 58.8	
	baz=219,slow=74,SNR=19						
LC01	**Cunco**	**52.76**	**106**	P	**P**	**19 03 59.0**	**+0.1**
LC01				IAmb	IAmb	19 04 07.1	
	comp=Z,6.7nm,0.9s						
H03N3	**Juan Fernandez**	**53.01**	**96**	T	T	20 01 20.4	
	baz=222,slow=72,SNR=48						
H03N2	**Juan Fernandez**	**53.02**	**96**	T	T	20 01 15.7	
	baz=222,slow=72,SNR=62						
H03N1	**Juan Fernandez**	**53.03**	**96**	T	T	20 01 11.7	
	baz=222,slow=72,SNR=42						
MAW	**Mawson**	**53.39**	**195**	LR	LR	19 24 54.1	
	comp=Z,92nm,19.3s,baz=237,slow=34						
AS31	**Alice Springs**	**62.55**	**268**	P	**P**	**19 05 05.6**	**-2.3**
ASAR	**Alice Springs**	**62.55**	**268**	P	**P**	**19 05 08.2**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=139,slow=6.6,SNR=9.5						
ASAR	**Alice Springs**	**62.55**	**268**	P	**P**	**19 05 06.2**	**-1.8**
H01W1	**Cape Leeuwin H**	**64.17**	**245**	T	T	20 15 19.8	
	baz=141,slow=75,SNR=10.0						
H01W2	**Cape Leeuwin H**	**64.17**	**245**	T	T	20 15 23.0	
	baz=141,slow=75,SNR=9.1						
H01W3	**Cape Leeuwin H**	**64.19**	**245**	T	T	20 15 27.1	
	baz=141,slow=75,SNR=9.2						
WB2	**Warramunga Arr**	**65.29**	**271**	P	**P**	**19 05 26.2**	**+0.2**
WRA	**Warramunga Arr**	**65.30**	**271**	P	**P**	**19 05 26.1**	**0.0**
	comp=Z,0.9nm,0.9s,baz=146,slow=5.2,SNR=2.8						
LVC	**Limon Verde**	**66.96**	**96**	P	**P**	**19 05 37.2**	**+0.1**
LVC				IAmb	IAmb	19 05 38.6	
	comp=Z,6.0nm,0.8s						
GO01	**Chusmiza**	**69.17**	**94**	P	**P**	**19 05 51.7**	**+0.5**
GO01				IAmb	IAmb	19 07 33.2	
	comp=Z,5.1nm,0.9s						
MNMC	**Minye Minye**	**69.39**	**94**	P	**P**	**19 05 52.6**	**+0.3**
PB16	**IPOC Station P**	**70.08**	**93**	P	**P**	**19 05 56.5**	**-0.5**
PB16				IAmb	IAmb	19 05 58.6	
	comp=Z,4.0nm,1.1s						
H10N3	**ASCENSION HYDR**	**106.26**	**134**	T	T	21 08 23.7	
	baz=204,slow=75,SNR=3.9						
H10N1	**ASCENSION HYDR**	**106.27**	**134**	T	T	21 08 32.4	
	baz=204,slow=75,SNR=6.9						
H10N2	**ASCENSION HYDR**	**106.28**	**134**	T	T	21 08 26.4	
	baz=204,slow=75,SNR=4.9						
ILAR	**Eielson Array**	**121.33**	**2**	PKP	**PKiKP**	**19 13 36.0**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=232,slow=1.8,SNR=7.6						
ILAR	**Eielson Array**	**121.33**	**2**		**PKPdf**	**19 13 35.9**	**+0.2**
RAYN	**Ar Rayn**	**144.66**	**206**		PKPbc	19 14 19.8	+0.3
KBL	**Kabul**	**145.09**	**247**		**PKPdf**	**19 14 21.4**	**+0.2**
MK31	**Makanchi Array**	**146.52**	**276**		**PKPbc**	**19 14 24.5**	**-0.1**
MKAR	**Makanchi Array**	**146.52**	**276**	PKPbc	**PKPbc**	**19 14 24.9**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=119,slow=4.5,SNR=41						
MKAR	**Makanchi Array**	**146.52**	**276**		**PKPbc**	**19 14 24.6**	**0.0**
MAKZ	**Makanchi**	**146.70**	**275**		**PKPbc**	**19 14 24.9**	**-0.2**
ZALV	**Zalesovo Beam**	**149.04**	**289**	PKPbc	**PKPbc**	**19 14 30.4**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=128,slow=2.6,SNR=7.3						
ZALV	**Zalesovo Beam**	**149.04**	**289**		**PKPbc**	**19 14 30.3**	**-0.8**
KKAR	**Karatay Array**	**150.62**	**260**		**PKPbc**	**19 14 35.1**	**-0.2**
KURK	**Kurchatov**	**150.74**	**279**		**PKPbc**	**19 14 35.1**	**-0.2**
ESDC	**Sonseca Array**	**152.39**	**114**	PKPbc	**PKPbc**	**19 14 39.5**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=247,slow=1.0,SNR=4.6						

*IDC **17** 18:57:25.5±1.2, 5.°26S×151.°87E, h0^{km}, mb4.0/9, mb1 4.3/10, mb1mx4.0/43, mbtmp4.1/10, ML1.8/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/37, Error ellipse: s-maj=43.1km s-min=19.1km az=125.0*

ISC 17 18:57:32.1±1.2**, 5.°4S**±0.°2×**151.°8E**±0.°2**, h45**^{km}**, n17,** σ**1.^{s}32**/13**, mb3.9**/9**, MS3.5**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.07**	**228**	Pn	**Pn**	**18 59 00.6**	**+1.2**
	1.5nm,0.3s,baz=32,slow=10,SNR=30						
PMG				Sn	**Sn**	**19 00 05.8**	**-1.9**
	3.9nm,0.3s,baz=152,slow=22,SNR=5.8						
PMG				LR	LR	19 00 48.3	
	comp=Z,82nm,18.4s,baz=24,slow=32						
DZM	**Mont Dzumac**	**21.86**	**141**	LR	LR	19 09 55.8	
	comp=Z,151nm,18.4s,baz=230,slow=34						
WRA	**Warramunga Arr**	**22.30**	**228**	P	**P**	**19 02 26.4**	**+0.5**
	2.9nm,0.6s,baz=53,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**25.04**	**222**	P	**P**	**19 02 53.6**	**+1.3**
	4.1nm,0.7s,baz=54,slow=9.6,SNR=16						
ASAR				LR	LR	19 12 38.8	
	comp=Z,42nm,20.1s,baz=60,slow=36						
STKA	**Stephens Creek**	**28.04**	**199**	LR	LR	19 14 06.1	
	comp=Z,61nm,19.2s,baz=23,slow=36						
FITZ	**Fitzroy Crossi**	**28.48**	**241**	P	**P**	**19 03 22.3**	**-1.0**
	7.8nm,0.9s,baz=79,slow=4.0,SNR=11						
RAR	**Rarotonga**	**49.51**	**113**	LR	LR	19 25 44.7	
	comp=Z,51nm,18.9s,baz=122,slow=34						
CMAR	**Chiang Mai Arr**	**57.18**	**296**	P	**P**	**19 07 16.4**	**+1.3**
	0.7nm,0.9s,baz=108,slow=4.7,SNR=4.9						
SONM	**Songino Array**	**66.25**	**328**	P	**P**	**19 08 16.6**	**+0.9**
	0.7nm,0.5s,baz=143,slow=5.5,SNR=6.0						
MKAR	**Makanchi Array**	**80.07**	**319**	P	**P**	**19 09 37.3**	**0.0**
	0.6nm,0.7s,baz=99,slow=7.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**81.05**	**327**	P	**P**	**19 09 40.9**	**-1.4**
	0.7nm,0.4s,baz=105,slow=9.3,SNR=4.0						
ILAR	**Eielson Array**	**83.07**	**22**	P	**P**	**19 09 50.8**	**-1.9**
	0.8nm,0.8s,baz=242,slow=4.7,SNR=6.7						
ILAR				LR	LR	19 40 13.6	
	comp=Z,37nm,20.4s,baz=114,slow=31						
NVAR	**Mina Array Bea**	**93.25**	**52**	P	**P**	**19 10 43.7**	**+1.1**
	1.1nm,0.7s,baz=252,slow=7.1,SNR=9.3						
NEW	**Newport**	**94.71**	**42**	LR	LR	19 46 51.3	
	comp=Z,18nm,20.2s,baz=136,slow=31						
ELK	**Elko**	**95.74**	**50**	LR	LR	19 45 30.7	
	comp=Z,31nm,21.0s,baz=235,slow=30						
GERES	**GERESS Array B**	**123.98**	**328**	PKP	**PKPdf**	**19 16 25.4**	**-0.4**
	0.7nm,0.7s,baz=50,slow=1.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**149.48**	**287**	PKPbc	**PKPbc**	**19 17 16.9**	**-0.6**
	4.3nm,0.7s,baz=68,slow=3.2,SNR=16						

IDC 17 19:19:25.7±5.0**, 56.°11S**×**151.°16W, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.6**/22**, mbtmp3.6**/2**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx3.0**/20**, Error ellipse: s-maj=427.8km s-min=57.1km az=165.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**26.91**	**201**	LR	LR	19 32 44.5	
	comp=Z,111nm,18.2s,baz=66,slow=30						
PPT	**Papeete**	**38.50**	**2**	LR	LR	19 39 01.7	
	comp=Z,53nm,21.2s,baz=352,slow=31						
H03S2	**Juan Fernandez**	**53.03**	**97**	T	T	20 25 29.9	
	baz=219,slow=74,SNR=32						
H03S1	**Juan Fernandez**	**53.03**	**97**	T	T	20 25 31.2	
	baz=219,slow=74,SNR=40						
H03S3	**Juan Fernandez**	**53.05**	**97**	T	T	20 25 30.4	
	baz=219,slow=74,SNR=44						
H03N3	**Juan Fernandez**	**53.31**	**97**	T	T	20 25 55.3	
	baz=222,slow=72,SNR=62						
H03N2	**Juan Fernandez**	**53.32**	**97**	T	T	20 25 55.1	
	baz=222,slow=72,SNR=143						
H03N1	**Juan Fernandez**	**53.33**	**97**	T	T	20 25 56.6	
	baz=222,slow=72,SNR=75						
ASAR	**Alice Springs**	**62.35**	**268**	P	P	19 29 49.9	-0.1
	0.8nm,0.7s,baz=138,slow=6.4,SNR=9.8						
H01W1	**Cape Leeuwin H**	**64.27**	**245**	T	T	20 40 25.1	
	baz=141,slow=76,SNR=5.9						
H01W2	**Cape Leeuwin H**	**64.28**	**245**	T	T	20 40 04.3	
	baz=141,slow=76,SNR=5.7						
H01W3	**Cape Leeuwin H**	**64.29**	**245**	T	T	20 40 24.3	
	baz=141,slow=76,SNR=5.7						
WRA	**Warramunga Arr**	**65.06**	**271**	P	P	19 30 08.0	+0.1
	0.4nm,0.8s,baz=144,slow=5.6,SNR=2.3						
H10N3	**ASCENSION HYDR**	**106.94**	**135**	T	T	21 33 11.8	
	baz=204,slow=75,SNR=5.4						
H10N1	**ASCENSION HYDR**	**106.94**	**135**	T	T	21 33 05.3	
	baz=204,slow=75,SNR=7.7						
H10N2	**ASCENSION HYDR**	**106.95**	**135**	T	T	21 33 13.0	
	baz=204,slow=75,SNR=7.2						
ILAR	**Eielson Array**	**120.60**	**2**	PKP	PKiKP	19 38 17.9	+0.1
	0.8nm,0.9s,baz=229,slow=3.1,SNR=5.4						
MKAR	**Makanchi Array**	**146.21**	**277**	PKPbc	PKPdf	19 39 06.5	+0.5
	2.6nm,0.8s,baz=122,slow=4.4,SNR=27						
ZALV	**Zalesovo Beam**	**148.59**	**290**	PKPbc	PKPbc	19 39 11.8	-1.5
	0.9nm,0.7s,baz=100,slow=3.2,SNR=5.1						

*DJA **17** 19:39:40.2±1.2, 3°N±5°×9°5E±°, h13^{km}±7^{km}, M4.2/8, mb4.6/1, MLv4.0/8*

*NEIC **17** 19:39:43.9±0.8, 2.°7N±0.°1×95.°6E±0.°1, h30^{km}±7^{km}, mb4.2/14, Error ellipse: s-maj=22.9km s-min=8.9km az=56.0*

*IDC **17** 19:39:53.2±8.6, 3.°09N×96.°32E, h95^{km}±58^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.3/53, mbtmp3.9/7, ML3.7/2, MS2.9/1, Ms1 3.1/1, ms1mx2.5/40, Error ellipse: s-maj=126.9km s-min=18.0km az=60.0*

ISC 17 19:39:43.0±0.8**, 2.°68N**±0.°06×**95.°59E**±0.°07**, h25**^{km}**, n45,** σ**0.^{s}84**/42**, mb4.2**/12**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.78**	**110**	P	**Pb**	**19 39 57.2**	**-0.8**
SNSI				S	**Sn**	**19 40 10.8**	**+1.4**
TPTI		**1.69**	**70**	P	**Pn**	**19 40 09.5**	**-1.4**
TPTI				S	**Sb**	**19 40 33.9**	**-0.4**
MLSI	**Meulaboh, Aceh**	**1.77**	**27**	P	**Pn**	**19 40 11.0**	**-1.1**
MLSI				S	**Sb**	**19 40 37.2**	**+0.5**
GSI	**Gunungsitoli**	**2.41**	**124**	Pn	**Pn**	**19 40 20.6**	**-0.2**
GSI	**Gunungsitoli**	**2.41**	**124**	P	**Pn**	**19 40 20.3**	**-0.5**
LHMI	**Lhok Sumawe**	**2.87**	**28**	Pn	**Pn**	**19 40 26.4**	**-0.8**
LHMI	**Lhok Sumawe**	**2.87**	**28**	P	**Pn**	**19 40 27.7**	**+0.5**
TSI	**Tuntungan**	**3.08**	**75**	P	**Pn**	**19 40 31.1**	**+1.0**
RPSI	**Rantau Prapat**	**3.33**	**90**		**Pn**	**19 40 34.1**	**+0.6**
PSI	**Prapat**	**3.33**	**88**	P	**Pn**	**19 40 34.1**	**+0.4**
	3.5nm,0.3s,baz=0.8,slow=2.0,SNR=6.9						
MNSI	**Mandailing Nat**	**4.41**	**115**	P	**Pn**	**19 40 48.6**	**+0.3**
KULM	**Kulim**	**5.68**	**63**	Pn	**Pn**	**19 41 05.8**	**0.0**
IPM	**Ipoh**	**5.71**	**72**	Pn	**Pn**	**19 41 06.1**	**-0.2**
MYKOM	**Kota Tinggi**	**8.30**	**96**	Pn	**Pn**	**19 41 41.9**	**0.0**
PBA	**Port Blair**	**9.36**	**343**	Pn	Pn	19 41 57.0	+0.7
CM31	**Chiang Mai Arr**	**16.02**	**12**	Pn	**Pn**	**19 43 27.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**16.02**	**12**	P	**Pn**	**19 43 28.4**	**+1.6**
	0.3nm,0.3s,baz=200,slow=11,SNR=23						
CMAR				LR	LR	19 48 33.3	
	comp=Z,51nm,21.6s,baz=220,slow=34						
CMAR	**Chiang Mai Arr**	**16.02**	**12**		**Pn**	**19 43 28.0**	**+1.2**
H08S2	**Diego Garcia H**	**25.22**	**246**	T	T	20 11 13.5	
	baz=67,slow=76,SNR=787						
H08S3	**Diego Garcia H**	**25.22**	**246**	T	T	20 11 18.1	
	baz=67,slow=76,SNR=883						
H08S1	**Diego Carcia H**	**25.24**	**246**	T	T	20 11 21.1	
	baz=67,slow=76,SNR=248						
LSA	**Lhasa**	**27.20**	**352**	P	**P**	**19 45 26.1**	**+0.7**
H01W3	**Cape Leeuwin H**	**41.22**	**157**	T	T	20 31 07.7	
	baz=332,slow=76,SNR=64						
H01W2	**Cape Leeuwin H**	**41.24**	**157**	T	T	20 31 08.6	
	baz=332,slow=76,SNR=91						
H01W1	**Cape Leeuwin H**	**41.24**	**157**	T	T	20 31 08.9	
	baz=332,slow=76,SNR=69						
AAK	**Ala-Archa**	**44.02**	**338**	P	**P**	**19 47 50.1**	**+1.3**
AAK				IAmb	IAmb	19 48 02.0	
	comp=Z,5.6nm,1.4s						
WB0	**Warramunga Arr**	**44.15**	**122**	P	**P**	**19 47 48.8**	**-1.1**
WB0				IAmb	IAmb	19 48 04.9	
	comp=Z,7.5nm,1.5s						
WRA	**Warramunga Arr**	**44.18**	**122**	P	**P**	**19 47 49.8**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=301,slow=9.2,SNR=4.8						
MK31	**Makanchi Array**	**45.44**	**347**	P	**P**	**19 48 00.3**	**+0.4**
MK31				IAmb	IAmb	19 48 01.0	
	comp=Z,4.0nm,1.1s						
MKAR	**Makanchi Array**	**45.44**	**347**	P	**P**	**19 48 00.2**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=162,slow=8.8,SNR=65						
MKAR	**Makanchi Array**	**45.44**	**347**	P	**P**	**19 48 00.0**	**+0.2**
MAKZ	**Makanchi**	**45.52**	**347**	P	**P**	**19 48 00.9**	**+0.4**
ASAR	**Alice Springs**	**45.56**	**127**	P	**P**	**19 48 01.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=303,slow=7.9,SNR=8.0						
SONM	**Songino Array**	**45.94**	**10**	P	**P**	**19 48 01.7**	**-2.3**
	comp=Z,0.6nm,0.4s,baz=187,slow=9.1,SNR=7.8						
SONM				PcP	**PcP**	**19 49 41.3**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=207,slow=1.6,SNR=3.9						
SONM	**Songino Array**	**45.94**	**10**	P	**P**	**19 48 03.4**	**-0.6**
KK31	**Karatay Array**	**46.03**	**334**	P	**P**	**19 48 05.1**	**+0.5**
KK31				IAmb	IAmb	19 48 08.5	
	comp=Z,3.0nm,1.1s						
KKAR	**Karatay Array**	**46.03**	**334**	P	**P**	**19 48 05.4**	**+0.8**
KURK	**Kurchatov**	**49.97**	**346**	P	**P**	**19 48 35.4**	**+0.5**
KURK				IAmb	IAmb	19 48 36.4	
	comp=Z,1.5nm,0.8s						
ZAA0	**Zalesovo Array**	**51.87**	**352**	P	**P**	**19 48 48.9**	**-0.2**
ZAA0				IAmb	IAmb	19 48 49.9	
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**51.87**	**352**	P	**P**	**19 48 49.4**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=182,slow=7.6,SNR=16						
ZALV	**Zalesovo Beam**	**51.87**	**352**	P	**P**	**19 48 49.2**	**+0.2**
BRVK	**Borovoye**	**54.40**	**342**	P	**P**	**19 49 07.9**	**+0.1**
ABKAR	**Akbulak array**	**55.46**	**332**	P	**P**	**19 49 15.8**	**+0.2**
ABKAR				IAmb	IAmb	19 49 17.0	
	comp=Z,2.6nm,0.8s						
ABKAR	**Akbulak array**	**55.46**	**332**	P	**P**	**19 49 16.0**	**+0.5**
YAK	**Yakutsk**	**64.47**	**17**	P	**P**	**19 50 16.0**	**-1.2**

*IDC **17** 19:50:34.1±2.5, 2.°63N×127.°14E, h74^{km}±24^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/39, mbtmp4.0/9, MS2.8/1, Ms1 2.8/1, ms1mx2.3/35, Error ellipse: s-maj=40.7km s-min=11.4km az=61.0*

*NEIC **17** 19:50:35.7±1.7, 2.°64N±0.°09×127.°17E±0.°10, h93^{km}±9^{km}, mb4.1/16, Error ellipse: s-maj=16.1km s-min=11.3km az=49.0*

ISC 17 19:50:36.4±0.7**, 2.°64N**±0.°08×**127.°18E**±0.°10**, h100**^{km}**, n33,** σ**0.^{s}97**/37**, mb4.0**/14**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.86**	**174**	Pn	**Pn**	**19 51 06.5**	**-0.8**
TNTI				Sn	**Sn**	**19 51 30.5**	**-0.2**
SIJI	**Sorong**	**5.37**	**130**	P	**Pn**	**19 51 53.7**	**-0.5**
	6.4nm,0.3s,baz=324,slow=14,SNR=29						
SIJI				S	**Sn**	**19 52 52.6**	**-2.2**
	0.9nm,0.3s,baz=71,slow=23,SNR=1.8						
TOLI2	**Tolitoli**	**6.57**	**257**	Pn	**Pn**	**19 52 09.0**	**-1.5**
FAKI	**Fak Fak**	**7.49**	**137**	Pn	**Pn**	**19 52 23.1**	**0.0**
MYLDM	**Lahad Datu**	**9.02**	**287**	Pn	**Pn**	**19 52 43.6**	**-0.2**
KKM	**Kota Kinabalu**	**11.44**	**288**	Pn	**Pn**	**19 53 16.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.66**	**184**	P	**P**	**19 55 07.5**	**-0.7**
	1.5nm,0.6s,baz=18,slow=7.6,SNR=13						
PMG	**Port Moresby**	**23.23**	**121**	LR	LR	20 06 06.4	
	comp=Z,27nm,21.2s,baz=238,slow=40						
WB0	**Warramunga Arr**	**23.36**	**163**	P	**P**	**19 55 35.4**	**-0.9**
WRAB	**Tennant Creek**	**23.51**	**163**	P	**P**	**19 55 37.0**	**-0.6**
WRAB				IAmb	IAmb	19 55 37.7	
	comp=Z,6.8nm,0.5s						
WRA	**Warramunga Arr**	**23.51**	**163**	P	**P**	**19 55 37.1**	**-0.5**
	comp=Z,2.6nm,0.4s,baz=340,slow=10,SNR=57						
WRA				PcP	**PcP**	**19 59 22.2**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=339,slow=2.4,SNR=1.5						
WRA				S	**S**	**19 59 46.8**	**+2.7**
	comp=Z,0.3nm,0.5s,baz=342,slow=17,SNR=2.0						
WRA	**Warramunga Arr**	**23.51**	**163**	P	**P**	**19 55 35.8**	**-1.9**
WB2	**Warramunga Arr**	**23.52**	**163**	P	**P**	**19 55 36.9**	**-0.7**
WB2				IAmb	IAmb	19 55 37.7	
	comp=Z,8.1nm,0.6s						
WR0	**Warramunga Arr**	**23.59**	**162**	P	**P**	**19 55 37.6**	**-0.7**
AS31	**Alice Springs**	**26.95**	**166**	P	**P**	**19 56 08.4**	**-0.3**
ASAR	**Alice Springs**	**26.95**	**166**	P	**P**	**19 56 08.3**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=340,slow=7.3,SNR=44						
ASAR				PcP	**PcP**	**19 59 29.8**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=356,slow=2.5,SNR=6.9						
GSI	**Gunungsitoli**	**29.61**	**268**	P	**P**	**19 56 31.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**31.82**	**302**	P	**P**	**19 56 52.2**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=115,slow=7.6,SNR=7.5						
CHTO	**Chiang Mai**	**31.97**	**302**	P	**P**	**19 56 52.0**	**-1.3**
CHTO				IAmb	IAmb	19 56 53.6	
	comp=Z,3.1nm,0.8s						
NWAO	**Narrogin (SRO)**	**36.60**	**194**	P	**P**	**19 57 33.6**	**+0.6**
STKA	**Stephens Creek**	**36.95**	**159**	P	**P**	**19 57 36.4**	**+0.4**
	comp=Z,5.3nm,0.6s,baz=332,slow=8.7,SNR=20						
STKA	**Stephens Creek**	**36.95**	**159**	P	**P**	**19 57 36.1**	**+0.1**
STKA				IAmb	IAmb	19 57 36.9	
	comp=Z,1.3nm,0.7s						
SONM	**Songino Array**	**48.47**	**341**	P	**P**	**19 59 09.1**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=118,slow=12,SNR=4.2						
SONM	**Songino Array**	**48.47**	**341**	P	**P**	**19 59 08.9**	**-0.1**
MK31	**Makanchi Array**	**58.70**	**325**	P	**P**	**20 00 24.1**	**+0.4**
MK31				IAmb	IAmb	20 00 33.1	
	comp=Z,1.5nm,1.3s						
MKAR	**Makanchi Array**	**58.70**	**325**	P	**P**	**20 00 24.0**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.5,SNR=10						
MAKZ	**Makanchi**	**58.89**	**325**	P	**P**	**20 00 25.2**	**+0.2**
ZALV	**Zalesovo Beam**	**61.76**	**333**	P	**P**	**20 00 43.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=120,slow=5.2,SNR=2.4						
ZALV	**Zalesovo Beam**	**61.76**	**333**	P	**P**	**20 00 44.1**	**-0.2**
KURK	**Kurchatov**	**62.90**	**328**	P	**P**	**20 00 52.0**	**0.0**
KURK				IAmb	IAmb	20 00 53.4	
	comp=Z,2.7nm,0.8s						
BRVK	**Borovoye**	**68.55**	**327**	P	**P**	**20 01 28.1**	**-0.1**
BRVK				IAmb	IAmb	20 01 30.4	
	comp=Z,4.3nm,1.4s						
ABKAR	**Akbulak array**	**73.28**	**321**	P	**P**	**20 01 57.2**	**+0.3**
VNDA	**Vanda**	**82.29**	**173**	P	**P**	**20 02 47.2**	**+0.9**
VNDA				IAmb	IAmb	20 02 50.6	
	comp=Z,2.8nm,1.3s						

*JMA **17** 19:52:44.6±0.1, 22°.98N×121°.57E, h30^{km}±4^{km}, M3.3*
*TAP **17** 19:52:46.1, 23°.04N×121°.47E, h39^{km}, ML3.6, C*
ISC 17 19:52:46.1±0.9, **23°.00N**±0°.02×**121°.53E**±0°.02, **h33**^{km}±5^{km},
n127, σ**1^{s}03**/207, **3C-13D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung** baz=304	**0.18**	**303**	⇓*i*P	**Pb**	**19 52 52.8**	**+0.4**
CHKT	baz=304			*i* S	**Sb**	**19 52 57.6**	**+0.9**
EDH	**Donghe** baz=239	**0.21**	**263**	⇓*i*P	**Pb**	**19 52 53.3**	**+0.6**
EDH	baz=239			*i* S	**Sb**	**19 52 58.4**	**+1.2**
FULB	**Fuli** baz=314	**0.29**	**313**	*i* P	**Pn**	**19 52 53.7**	**-0.4**
FULB	baz=314			S	**Sn**	**19 52 59.6**	**+0.4**
LDUT	**Ludao** baz=180	**0.33**	**190**	⇑*i*P	**Pb**	**19 52 54.6**	**+0.5**
LDUT	baz=180			S	**Sb**	**19 53 01.3**	**+1.6**
LONT	**Longtian** baz=257	**0.38**	**256**	⇓*i*P	**Pb**	**19 52 54.5**	**-0.3**
LONT	baz=257			S	**Sb**	**19 53 00.6**	**-0.3**
EYUL	**Yuli** baz=322	**0.40**	**331**	*e*P	**Pb**	**19 52 55.0**	**-0.1**
EYUL	baz=322			S	**Sb**	**19 53 02.3**	**+1.0**
TWF1	**Yuli** baz=322	**0.41**	**329**	⇓*i*P	**Pb**	**19 52 54.6**	**-0.7**
TWF1	baz=322			*e*S	**Sb**	**19 53 01.5**	**-0.1**
TTN	**Taitung** baz=234	**0.43**	**235**	*e*P	**Pb**	**19 52 56.2**	**+0.6**
TTN	baz=234			*e*S	**Sn**	**19 53 03.5**	**+0.8**
YULB	**Yu-li** baz=324	**0.45**	**331**	⇓*i*P	**Pb**	**19 52 54.9**	**-0.9**
YULB	baz=324			S	**Sb**	**19 53 02.4**	**-0.1**
TWGBT	**Beinan** baz=247	**0.45**	**246**	⇓*i*P	**Pb**	**19 52 55.1**	**-0.8**
TWGBT	baz=247			S	**Sb**	**19 53 01.4**	**-1.2**
TWG	**Pinlang** baz=247	**0.46**	**247**	⇓*i*P	**Pb**	**19 52 55.1**	**-0.8**
TWG	baz=247			S	**Sb**	**19 53 01.6**	**-1.2**
HGSD	**Ruisui**	**0.50**	**349**	*e*P	**Pb**	**19 52 55.9**	**-0.7**
HGSD				*e*S	**Sb**	**19 53 04.4**	**+0.5**
ELDTW	**Lidau** baz=293	**0.51**	**292**	⇓*i*P	**Pb**	**19 52 55.6**	**-1.2**
ELDTW	baz=293			*e*S	**Sb**	**19 53 02.1**	**-2.2**
EHY	**Hungye** baz=332	**0.54**	**339**	*e*P	**Pn**	**19 52 56.1**	**-1.4**
EHY	baz=332			*e*S	**Sb**	**19 53 02.4**	**-2.6**
ECL	**Taimali** baz=227	**0.67**	**233**	⇑*i*P	**Pn**	**19 52 57.5**	**-1.7**
ECL	baz=227			*e*S	**Sn**	**19 53 05.7**	**-2.8**
EGFH	**Guangfu** baz=344	**0.67**	**352**	*e*P	**Pn**	**19 52 58.0**	**-1.3**
EGFH	baz=344			*e*S	**Sn**	**19 53 07.2**	**-1.5**
STYT	**Tauyuan** baz=280	**0.73**	**283**	⇓*i*P	**Pn**	**19 52 59.3**	**-0.8**
STYT	baz=280			*e*S	**Sn**	**19 53 08.6**	**-1.6**
SLGT	**Liugui** baz=271	**0.81**	**270**	*e*P	**Pn**	**19 53 00.9**	**-0.4**
SLGT	baz=271			*e*S	**Sn**	**19 53 11.6**	**-0.6**
ESL	**Shilin** baz=348	**0.82**	**354**	*e*P	**Pn**	**19 53 00.3**	**-1.0**
ESL	baz=348			*e*S	**Sn**	**19 53 09.7**	**-2.6**
ALS	**Alishan** baz=313	**0.84**	**308**	*i* P	**Pn**	**19 53 01.7**	**-0.1**
ALS	baz=313			*e*S	**Sn**	**19 53 12.3**	**-0.9**
SSD	**Sandimen** baz=249	**0.86**	**253**	P	**Pn**	**19 53 01.3**	**-0.6**
SSD	baz=249			*e*S	**Sn**	**19 53 10.5**	**-2.9**
TAW	**Tawu** baz=223	**0.87**	**223**	*e*P	**Pn**	**19 53 00.6**	**-1.3**
TAW	baz=223			*e*S	**Sn**	**19 53 11.5**	**-1.9**
TSMG	**Majia** baz=246	**0.87**	**250**	*e*P	**Pn**	**19 53 01.2**	**-0.7**
TSMG	baz=246			*e*S	**Sn**	**19 53 11.2**	**-2.3**
SGST	**Jiashian** baz=277	**0.88**	**276**	P	**Pn**	**19 53 01.4**	**-0.7**
SGST	baz=277			*e*S	**Sn**	**19 53 13.1**	**-0.6**
WTP	**Ta-pu** baz=285	**0.88**	**286**	⇓*i*P	**Pn**	**19 53 02.2**	**0.0**
WTP	baz=285			*e*S	**Sn**	**19 53 14.0**	**+0.2**
EAST	**Anshuo** baz=224	**0.88**	**226**	⇑*i*P	**Pn**	**19 53 00.9**	**-1.3**
EAST	baz=224			*e*S	**Sn**	**19 53 11.6**	**-2.2**
MASBT	**Mashibuluo** baz=241	**0.91**	**245**	*e*P	**Pn**	**19 53 01.9**	**-0.7**
MASBT	baz=241			*e*S	**Sn**	**19 53 15.0**	**+0.4**
WHYT	**Xinyi Township** baz=319	**0.93**	**318**	*e*P	**Pn**	**19 53 03.2**	**+0.3**
CHN1	**Nanshi** baz=287	**0.94**	**282**	⇓*i*P	**Pn**	**19 53 03.5**	**+0.5**
CHN1	baz=287			*e*S	**Sn**	**19 53 16.0**	**+0.6**
SSLB	**Suanglung** baz=332	**0.95**	**326**	*e*P	**Pn**	**19 53 02.4**	**-0.7**
SSLB	baz=332			*e*S	**Sn**	**19 53 13.5**	**-2.0**
LAY	**Lan-yu** baz=170	**0.96**	**179**	P	**Pn**	**19 53 02.8**	**-0.5**
LAY	baz=170			*e*S	**Sn**	**19 53 15.9**	**+0.2**
SCST	**Cishan** baz=260	**0.96**	**263**	*e*P	**Pn**	**19 53 04.3**	**+1.0**
SCST	baz=260			*e*S	**Sb**	**19 53 18.1**	**+1.4**
SNST	**Tainan City** baz=289	**0.97**	**283**	*i* P	**Pn**	**19 53 04.1**	**+0.6**
SNST	baz=289			*e*S	**Sn**	**19 53 17.5**	**+1.3**
CHN5	**Tsauling** baz=307	**0.98**	**307**	*i* P	**Pn**	**19 53 04.1**	**+0.5**
CHN5	baz=307			*e*S	**Sn**	**19 53 16.9**	**+0.4**
TWK	**Hsinying** baz=284	**0.99**	**286**	⇓*i*P	**Pn**	**19 53 04.2**	**+0.4**
TWK	baz=284			*e*S	**Sn**	**19 53 17.7**	**+1.0**
SGLT	**Jiouru** baz=250	**0.99**	**254**	*e*P	**Pb**	**19 53 05.1**	**+0.2**
TSPT	**Pingtung City** baz=237	**1.00**	**252**	*e*P	**Pb**	**19 53 06.3**	**+1.3**
TSPT	baz=237			*e*S	**Sb**	**19 53 18.7**	**+0.8**
SSPT	**Xinbi** baz=229	**1.02**	**240**	*e*P	**Pn**	**19 53 04.5**	**+0.4**
SSPT	baz=229			*e*S	**Sn**	**19 53 18.0**	**+0.6**
SLIU	**Shizi** baz=205	**1.03**	**221**	*e*P	**Pn**	**19 53 03.0**	**-1.3**
TWM1	**Shoushan** baz=257	**1.03**	**260**	*e*P	**Pb**	**19 53 06.2**	**+0.7**
TWM1	baz=257			*e*S	**Sb**	**19 53 20.3**	**+1.5**
SCZT	**Fangliau** baz=230	**1.05**	**234**	P	**Pn**	**19 53 04.0**	**-0.5**
SCZT	baz=230			*e*S	**Sn**	**19 53 16.2**	**-1.7**
SMLT	**Sun Moon Lake** baz=330	**1.05**	**327**	*e*P	**Pn**	**19 53 04.7**	**+0.1**
SMLT	baz=330			*e*S	**Sn**	**19 53 16.6**	**-1.6**
CHN3	**Shinhua** baz=272	**1.07**	**274**	*e*P	**Pb**	**19 53 06.5**	**+0.3**
CHN3	baz=272			*e*S	**Sb**	**19 53 22.5**	**+2.6**
TWD	**Chiawan** baz=352	**1.08**	**3**	*e*P	**Pn**	**19 53 03.9**	**-0.9**
TWD	baz=352			*e*S	**Sn**	**19 53 17.9**	**-0.8**
TYC	**Yuchr** baz=333	**1.09**	**326**	P	**Pn**	**19 53 05.3**	**+0.3**
TYC	baz=333			*e*S	**Sn**	**19 53 18.7**	**-0.3**
WJS	**Zhushan** baz=319	**1.10**	**318**	*e*P	**Pn**	**19 53 05.7**	**+0.5**
CHGB	**Renai** baz=352	**1.10**	**343**	⇓*i*P	**Pn**	**19 53 05.0**	**-0.4**
CHGB	baz=352			*e*S	**Sn**	**19 53 18.8**	**-0.9**
CHN2	**Minshiung** baz=298	**1.10**	**299**	*e*P	**Pn**	**19 53 06.3**	**+1.1**
CHN2	baz=298			*e*S	**Sb**	**19 53 21.4**	**+0.6**
WGK	**Gukeng** baz=308	**1.12**	**308**	*e*P	**Pn**	**19 53 06.4**	**+1.0**
SNJT	**Kaohsiung City** baz=255	**1.13**	**258**	*e*P	**Pb**	**19 53 07.6**	**+0.6**
SNJT	baz=255			*e*S	**Sb**	**19 53 22.9**	**+1.5**
CHY	**Chiayi** baz=295	**1.13**	**296**	*e*P	**Pn**	**19 53 06.1**	**+0.5**
CHY	baz=295			*e*S	**Sn**	**19 53 21.1**	**+1.1**
WPL	**Puli Township** baz=337	**1.14**	**333**	*e*P	**Pn**	**19 53 05.7**	**0.0**
WPL	baz=337			*e*S	**Sn**	**19 53 19.7**	**-0.5**
WDLH	**Douliu** baz=306	**1.14**	**307**	*e*P	**Pn**	**19 53 06.5**	**+0.7**
WDLH	baz=306			*e*S	**Sn**	**19 53 21.5**	**+1.2**
WHF	**Hehuan Shan** baz=356	**1.17**	**348**	*e*P	**Pn**	**19 53 05.6**	**-0.9**
DPDB	**Guoxing** baz=337	**1.17**	**332**	P	**Pn**	**19 53 06.5**	**+0.3**
DPDB	baz=337			*e*S	**Sn**	**19 53 20.6**	**-0.5**
WNT	**Mingjian** baz=318	**1.17**	**319**	P	**Pn**	**19 53 06.9**	**+0.8**
WNT	baz=318			*e*S	**Sn**	**19 53 21.4**	**+0.4**
NACB	**Ninganchiao** baz=353	**1.17**	**3**	*e*P	**Pn**	**19 53 05.5**	**-0.7**
NACB	baz=353			*e*S	**Sn**	**19 53 21.0**	**0.0**
WNT1	**Nantou City** baz=319	**1.19**	**319**	*e*P	**Pn**	**19 53 07.1**	**+0.6**
WNT1	baz=319			*e*S	**Sn**	**19 53 22.7**	**+1.1**
ETLH	**Xiulin Townshi** baz=359	**1.20**	**358**	*e*P	**Pn**	**19 53 05.4**	**-1.3**
ICHU	**Yijhu** baz=286	**1.21**	**288**	*e*P	**Pn**	**19 53 06.9**	**+0.3**
ICHU	baz=286			*e*S	**Sn**	**19 53 22.5**	**+0.7**
WLGB	**Puzi** baz=292	**1.23**	**293**	*e*P	**Pn**	**19 53 06.4**	**-0.5**
WLGB	baz=292			*e*S	**Sn**	**19 53 21.3**	**-1.0**
HEN	**Hengchun** baz=203	**1.23**	**217**	P	**Pn**	**19 53 07.2**	**+0.2**
WLCH	**Liuqiu** baz=236	**1.24**	**239**	*e*P	**Pb**	**19 53 10.0**	**+1.0**
WLCH	baz=236			*e*S	**Sb**	**19 53 24.7**	**0.0**
TWKBT	**Hengchun** baz=199	**1.25**	**212**	*e*P	**Pn**	**19 53 06.5**	**-0.7**
TWKBT	baz=199			*e*S	**Sn**	**19 53 22.8**	**-0.1**
TWK1	**Hengchun** baz=208	**1.25**	**213**	*e*P	**Pn**	**19 53 06.7**	**-0.5**
WTK	**Tuku** baz=303	**1.25**	**303**	*e*P	**Pn**	**19 53 07.4**	**+0.2**
WTK	baz=303			*e*S	**Sn**	**19 53 23.6**	**+0.6**
CHN8	**Yiju** baz=285	**1.26**	**286**	*e*P	**Pn**	**19 53 07.9**	**+0.5**
CHN8	baz=285			*e*S	**Sn**	**19 53 24.5**	**+1.3**
FUSS	**Fushou** baz=348	**1.27**	**348**	*e*P	**Pn**	**19 53 07.2**	**-0.6**
FUSS	baz=348			*e*S	**Sn**	**19 53 23.4**	**-0.4**
WWF	**Wufeng** baz=323	**1.29**	**324**	*e*P	**Pn**	**19 53 09.0**	**+1.2**
WWF	baz=323			*e*S	**Sn**	**19 53 25.6**	**+1.6**
TWT	**Tachien** baz=346	**1.29**	**346**	*e*P	**Pn**	**19 53 07.7**	**-0.2**
TDCB	**Techi** baz=339	**1.29**	**345**	*e*P	**Pn**	**19 53 07.8**	**-0.2**
WSF	**Szhu** baz=297	**1.36**	**298**	*e*P	**Pn**	**19 53 08.7**	**0.0**
WSF	baz=297			*e*S	**Sn**	**19 53 25.9**	**+0.3**
WHP	**Taichung City** baz=344	**1.38**	**337**	*e*P	**Pn**	**19 53 10.4**	**+1.3**
WHP	baz=344			*e*S	**Sn**	**19 53 26.0**	**-0.3**
TCU	**Taichung** baz=325	**1.39**	**326**	*e*P	**Pb**	**19 53 11.5**	**+0.1**
TCU	baz=325			*e*S	**Sb**	**19 53 29.0**	**+0.2**
RLNB	**Erlin** baz=309	**1.39**	**310**	*e*P	**Pn**	**19 53 09.4**	**+0.2**
WCHH	**Zhanghua** baz=306	**1.40**	**321**	*e*P	**Pn**	**19 53 10.0**	**+0.8**
NNSB	**Datong** baz=6.0	**1.43**	**355**	*e*P	**Pn**	**19 53 09.2**	**-0.6**
NNSH	**Datong** baz=5.0	**1.43**	**355**	*e*P	**Pn**	**19 53 09.4**	**-0.5**
ENA	**Nanau** baz=358	**1.44**	**8**	*e*P	**Pn**	**19 53 09.0**	**-0.8**
NNS	**Nan Shan** baz=6.0	**1.44**	**354**	*e*P	**Pn**	**19 53 10.1**	**+0.1**
TWQ1	**Liyutan** baz=332	**1.51**	**333**	*e*P	**Pn**	**19 53 12.1**	**+1.3**
TWQ1	baz=332			*e*S	**Sn**	**19 53 31.7**	**+2.2**
WDJ	**Dajia District** baz=328	**1.57**	**329**	*e*P	**Pn**	**19 53 13.5**	**+1.8**
WDJ	baz=328			*e*S	**Sn**	**19 53 33.1**	**+2.2**
NSY	**Sanyi** baz=333	**1.58**	**334**	*e*P	**Pn**	**19 53 12.9**	**+1.1**
NSY	baz=333			*e*S	**Sn**	**19 53 33.3**	**+2.3**
NDT	**Datong Townshi** baz=360	**1.60**	**359**	*e*P	**Pn**	**19 53 11.8**	**-0.3**
TWC	**Suao** baz=22	**1.63**	**10**	*e*P	**Pn**	**19 53 12.8**	**+0.4**
TWC	baz=22			*e*S	**Sn**	**19 53 32.8**	**+0.4**
ENTT	**Nioudou** baz=2.0	**1.63**	**1**	*e*P	**Pn**	**19 53 12.0**	**-0.6**
YHNB	**Yeheng** baz=5.0	**1.67**	**355**	P	**Pn**	**19 53 13.2**	**+0.1**
YHNB	baz=5.0			*e*S	**Sn**	**19 53 32.8**	**-0.7**
NMLH	**Miaoli** baz=335	**1.67**	**336**	*e*P	**Pn**	**19 53 14.9**	**+1.8**
NMLH	baz=335			*e*S	**Sn**	**19 53 35.8**	**+2.4**
NSK	**Sanguang** baz=5.0	**1.68**	**355**	P	**Pn**	**19 53 13.3**	**+0.2**
NSK	baz=5.0			*e*S	**Sn**	**19 53 32.7**	**-0.9**
NSTT	**Nanjuang** baz=344	**1.69**	**344**	*e*P	**Pn**	**19 53 15.3**	**+1.9**
LIOB	**Emei** baz=344	**1.71**	**344**	*e*P	**Pn**	**19 53 14.1**	**+0.5**
TWE	**Neicheng** baz=3.0	**1.72**	**4**	*e*P	**Pn**	**19 53 13.9**	**+0.2**
TWE	baz=3.0			*e*S	**Sn**	**19 53 33.8**	**-0.7**
WDGT	**Dungji** baz=277	**1.74**	**279**	*e*P	**Pn**	**19 53 13.8**	**-0.2**
NWLT	**Wulai** baz=10.0	**1.77**	**359**	*e*P	**Pn**	**19 53 14.7**	**+0.2**
HSN1	**Hsinchu** baz=345	**1.83**	**345**	*e*P	**Pb**	**19 53 18.4**	**-0.6**
NTC	**Toucheng** baz=358	**1.87**	**8**	*e*P	**Pn**	**19 53 17.1**	**+1.3**
PHUB	**P'eng-hu** baz=285	**1.87**	**286**	*e*P	**Pn**	**19 53 15.2**	**-0.6**
PNG	**Penghu** baz=286	**1.90**	**288**	*e*P	**Pn**	**19 53 15.8**	**-0.3**
JYNG	**Yonagunijimaku**	**1.94**	**42**	P	**Pn**	**19 53 17.1**	**+0.3**
JYNG				S	**Sn**	**19 53 40.3**	**+0.3**
TATO	**Taipei** baz=8.0	**1.97**	**359**	*e*P	**Pn**	**19 53 17.3**	**+0.1**
TIPB	**Shuangxi** baz=357	**1.98**	**8**	*e*P	**Pn**	**19 53 18.1**	**+0.8**
TIPB	baz=357			*e*S	**Sn**	**19 53 39.6**	**-1.5**
YOJ	**Yonaguni jima**	**1.99**	**43**	P	**Pn**	**19 53 18.0**	**+0.6**
YOJ				S	**Sn**	**19 53 41.3**	**+0.1**
YOJ	**Yonaguni jima** baz=46	**1.99**	**43**	*e*P	**Pn**	**19 53 18.3**	**+0.8**
TWB1	**Santiao Chiao** baz=360	**2.04**	**12**	*e*P	**Pn**	**19 53 18.4**	**+0.2**
NWF	**Wu-fen Shan** baz=6.0	**2.08**	**6**	*e*P	**Pn**	**19 53 19.6**	**+0.9**
WFSB	**Wu-fen Shan** baz=6.0	**2.08**	**6**	*e*P	**Pn**	**19 53 19.7**	**+1.1**
TWS1	**Kuangyinshan** baz=9.0	**2.09**	**357**	*e*P	**Pn**	**19 53 20.3**	**+1.5**
YM01	**YM01**	**2.14**	**1**	*e*P	**Pn**	**19 53 20.4**	**+0.9**
YM04	**YM04** baz=359	**2.15**	**0**	*e*P	**Pn**	**19 53 19.7**	**+0.1**
YM10	**YM10** baz=360	**2.15**	**1**	*e*P	**Pn**	**19 53 19.1**	**-0.5**
YM11	**YM11**	**2.16**	**1**	*e*P	**Pn**	**19 53 20.4**	**+0.6**
YM03	**YM03** baz=359	**2.17**	**0**	*e*P	**Pn**	**19 53 20.5**	**+0.5**
ANP	**Anpu** baz=359	**2.18**	**360**	*e*P	**Pn**	**19 53 21.0**	**+0.9**
YM08	**YM08** baz=1.0	**2.18**	**1**	*e*P	**Pn**	**19 53 19.7**	**-0.3**
HATJ	**Hateruma jima**	**2.34**	**63**	P	**Pn**	**19 53 22.2**	**0.0**
HATJ				S	**Sn**	**19 53 49.4**	**-0.4**
IRIF	**Iriomote-Funau**	**2.42**	**56**	P	**Pn**	**19 53 24.1**	**+0.8**
IRIF				S	**Sn**	**19 53 52.6**	**+0.9**
JKRS	**Kuro-shima**	**2.59**	**61**	P	**Pn**	**19 53 26.3**	**+0.7**
JKRS				S	**Sn**	**19 53 55.5**	**-0.5**
VWUC	**VWUC** baz=316	**2.75**	**317**	*e*P	**Pn**	**19 53 26.1**	**-1.7**
JIJ	**Ishigaki jima**	**2.75**	**60**	P	**Pn**	**19 53 28.2**	**+0.3**
JIJ				S	**Sn**	**19 53 59.9**	**-0.2**
PTTC	**Pingtan** baz=327	**2.96**	**328**	*e*P	**Pn**	**19 53 30.1**	**-0.7**
PTMZ	**Houxiangcun** baz=313	**3.00**	**313**	*e*P	**Pn**	**19 53 30.3**	**-1.0**
JISG	**Ishigakijimahi**	**3.00**	**58**	P	**Pn**	**19 53 31.4**	**+0.1**
JISG				S	**Sn**	**19 54 04.6**	**-1.5**
KNMB	**Chin-men Tao** baz=297	**3.23**	**297**	*e*P	**Pn**	**19 53 33.6**	**-0.8**
JTJ	**Tarama**	**3.33**	**60**	P	**Pn**	**19 53 36.2**	**+0.3**
JTJ				S	**Sn**	**19 54 14.6**	**+0.2**
MATB	**Ma-tsu** baz=335	**3.45**	**336**	*e*P	**Pn**	**19 53 35.9**	**-1.6**
MHZQ	**Yeshan** baz=324	**3.83**	**324**	*e*P	**Pn**	**19 53 41.9**	**-0.9**
JMJ	**Miyako jima 2** baz=64	**3.89**	**62**	*e*P	**Pn**	**19 53 45.0**	**+1.4**

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*ARE **17** 20:18:28±2.5, 12°.2S±0°.2×76°.1W±0°.1, h121^{km}±9^{km}, ML4.3,*
Error ellipse: s-maj=28.2km s-min=14.5km az=213.0
NEIC 17 20:18:29.1±0.8, **12°.0S**±0°.2×**75°.7W**±0°.2, **h61**^{km}±71^{km},
Error ellipse: s-maj=33.2km s-min=18.7km az=52.0,
Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**1.15**	**270**	Pn	Pn	20 18 49.3	0.0
NNA				Sn	Sn	20 19 04.2	-0.1
PB16	**IPOC Station P**	**8.67**	**137**	Pn	Pn	20 20 32.9	+0.4
MNMC	**Minye Minye**	**9.20**	**141**	Pn	Pn	20 20 39.6	+0.2
PSGCX	**Pisagua**	**9.26**	**146**	Pn	Pn	20 20 39.4	-0.7
GO01	**Chusmiza**	**9.85**	**142**	Pn	Pn	20 20 48.7	+0.2
TA01	**Diego Aracena**	**10.02**	**149**	Pn	Pn	20 20 51.0	+0.6
PB08	**IPOC Station P**	**10.24**	**143**	Pn	Pn	20 20 53.5	-0.3
PATCX	**Punta Patache**	**10.25**	**150**	Pn	Pn	20 20 53.9	+0.3
PB10	**IPOC Station P**	**12.45**	**158**	Pn	Pn	20 21 22.9	-0.7
OTAV	**Otavalo**	**12.45**	**347**	Pn	Pn	20 21 23.9	-0.2

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*JMA **17** 20:37:15.9±0.2, 22°.77N×121°.41E, h22^{km}, M3.3*
*TAP **17** 20:37:18.2, 22°.86N×121°.29E, h17^{km}, ML3.3, C*
ISC 17 20:37:17.9±0.9, **22°.82N**±0°.02×**121°.37E**±0°.02, **h21**^{km}±1^{km},
n111, σ**1^{s}12**/216, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDH	**Donghe** baz=9.0	**0.17**	**338**	*i* P	**Pb**	**20 37 22.0**	**-1.7**
EDH	baz=9.0			*i* S	**Sb**	**20 37 25.0**	**-2.8**
LDUT	**Ludao** baz=128	**0.17**	**148**	P	**Pb**	**20 37 24.4**	**+0.7**
LDUT	baz=128			S	**Sb**	**20 37 29.3**	**+1.5**
TTN	**Taitung** baz=229	**0.22**	**253**	P	**Pb**	**20 37 23.1**	**-0.6**
TTN	baz=229			S	**Sb**	**20 37 27.1**	**-0.7**
LONT	**Longtian** baz=288	**0.24**	**292**	*e*P	**Pb**	**20 37 23.4**	**-0.6**
LONT	baz=288			S	**Sb**	**20 37 27.2**	**-0.9**
TWGBT	**Beinan** baz=257	**0.27**	**270**	*e*P	**Pb**	**20 37 23.6**	**-0.6**
TWGBT	baz=257			S	**Sb**	**20 37 28.1**	**-0.4**
TWG	**Pinlang** baz=257	**0.28**	**271**	*i* P	**Pb**	**20 37 23.2**	**-1.0**
TWG	baz=257			S	**Sb**	**20 37 27.6**	**-1.1**
CHKT	**Chengkung** baz=20	**0.28**	**359**	P	**Pb**	**20 37 24.4**	**+0.1**
CHKT	baz=20			S	**Sb**	**20 37 29.0**	**+0.2**
FULB	**Fuli** baz=350	**0.39**	**349**	P	**Pb**	**20 37 26.0**	**0.0**
FULB	baz=350			S	**Sn**	**20 37 33.8**	**-1.3**
ECL	**Taimali** baz=240	**0.44**	**241**	P	**Pb**	**20 37 26.2**	**-0.8**
ECL	baz=240			*e*S	**Sb**	**20 37 32.5**	**-0.6**
ELDTW	**Lidau** baz=325	**0.49**	**319**	P	**Pb**	**20 37 26.4**	**-1.6**
ELDTW	baz=325			S	**Sb**	**20 37 33.1**	**-1.7**
EYUL	**Yuli** baz=355	**0.53**	**355**	P	**Pb**	**20 37 28.3**	**-0.3**
EYUL	baz=355			*e*S	**Sb**	**20 37 35.9**	**+0.1**
TWF1	**Yuli** baz=353	**0.54**	**353**	*e*P	**Pb**	**20 37 27.8**	**-0.9**
TWF1	baz=353			*e*S	**Sb**	**20 37 35.3**	**-0.8**
YULB	**Yu-li** baz=353	**0.58**	**353**	*e*P	**Pb**	**20 37 28.3**	**-1.1**
YULB	baz=353			*e*S	**Sb**	**20 37 35.9**	**-1.3**
TAW	**Tawu** baz=214	**0.64**	**224**	*e*P	**Pb**	**20 37 29.2**	**-1.1**
TAW	baz=214			S	**Sb**	**20 37 38.9**	**0.0**
EAST	**Anshuo** baz=228	**0.65**	**228**	P	**Pb**	**20 37 30.0**	**-0.6**
EAST	baz=228			S	**Sb**	**20 37 38.0**	**-1.3**
STYT	**Tauyuan** baz=303	**0.66**	**301**	P	**Pb**	**20 37 29.4**	**-1.5**
STYT	baz=303			S	**Sb**	**20 37 38.0**	**-1.8**
HGSD	**Ruisui** baz=23	**0.67**	**4**	P	**Pb**	**20 37 31.1**	**+0.1**
HGSD	baz=23			*e*S	**Sn**	**20 37 42.8**	**+0.6**
TSMG	**Majia** baz=257	**0.68**	**261**	P	**Pb**	**20 37 29.9**	**-1.3**

TSMG				*e*S	**Sb**	**20 37 38.2**	**-1.9**
	baz=257						
SSD	**Sandimen**	**0.69**	**264**	P	**Pb**	**20 37 29.7**	**-1.5**
	baz=261						
SSD				S	**Sb**	**20 37 37.3**	**-3.0**
	baz=261						
EHY	**Hungye**	**0.69**	**356**	P	**Pb**	**20 37 30.0**	**-1.2**
	baz=355						
EHY				*e*S	**Sb**	**20 37 39.7**	**-0.6**
	baz=355						
SLGT	**Liugui**	**0.69**	**285**	*e*P	**Pb**	**20 37 29.8**	**-1.5**
	baz=280						
SLGT				*e*S	**Sb**	**20 37 39.4**	**-1.1**
	baz=280						
MASBT	**Mashibuluo**	**0.71**	**254**	*e*P	**Pb**	**20 37 30.5**	**-1.1**
	baz=247						
MASBT				*e*S	**Sb**	**20 37 38.7**	**-2.3**
	baz=247						
SGST	**Jiashian**	**0.78**	**290**	P	**Pb**	**20 37 30.9**	**-1.8**
	baz=290						
SGST				S	**Sb**	**20 37 41.7**	**-1.1**
	baz=290						
LAY	**Lan-yu**	**0.79**	**168**	P	**Pn**	**20 37 33.9**	**+0.1**
	baz=152						
LAY				S	**Sn**	**20 37 45.1**	**+0.1**
	baz=152						
SLIU	**Shizi**	**0.80**	**222**	*e*P	**Pb**	**20 37 32.3**	**-0.8**
	baz=213						
SLIU				*e*S	**Sn**	**20 37 44.5**	**-0.8**
	baz=213						
SCST	**Cishan**	**0.81**	**275**	*e*P	**Pn**	**20 37 33.7**	**-0.5**
	baz=270						
SCST				*e*S	**Sn**	**20 37 44.7**	**-0.9**
	baz=270						
SSPT	**Xinbi**	**0.81**	**246**	P	**Pb**	**20 37 33.0**	**-0.3**
	baz=243						
SSPT				S	**Sb**	**20 37 43.6**	**-0.2**
	baz=243						
SGLT	**Jiouru**	**0.82**	**264**	*e*P	**Pn**	**20 37 33.7**	**-0.5**
	baz=259						
SGLT				*e*S	**Sn**	**20 37 44.6**	**-1.1**
	baz=259						
WTP	**Ta-pu**	**0.82**	**302**	*e*P	**Pb**	**20 37 32.7**	**-0.8**
	baz=303						
WTP				*e*S	**Sn**	**20 37 44.5**	**-1.3**
	baz=303						
TSPT	**Pingtung City**	**0.82**	**260**	*e*P	**Pn**	**20 37 34.2**	**0.0**
	baz=255						
TSPT				*e*S	**Sn**	**20 37 45.1**	**-0.6**
	baz=255						
SCZT	**Fangliau**	**0.82**	**238**	P	**Pb**	**20 37 33.0**	**-0.5**
	baz=223						
SCZT				*e*S	**Sb**	**20 37 44.1**	**0.0**
	baz=223						
EGFH	**Guangfu**	**0.85**	**3**	*e*P	**Pb**	**20 37 33.8**	**-0.1**
	baz=358						
EGFH				*e*S	**Sb**	**20 37 43.9**	**-1.0**
	baz=358						
CHN1	**Nanshi**	**0.86**	**295**	*e*P	**Pn**	**20 37 34.5**	**-0.3**
	baz=298						
CHN1				S	**Sn**	**20 37 46.8**	**0.0**
	baz=298						
ALS	**Alishan**	**0.87**	**323**	P	**Pb**	**20 37 33.6**	**-0.9**
	baz=335						
ALS				*e*S	**Sb**	**20 37 44.7**	**-1.0**
	baz=335						
TWM1	**Shoushan**	**0.88**	**271**	*e*P	**Pn**	**20 37 35.1**	**+0.1**
	baz=265						
TWM1				*e*S	**Sn**	**20 37 47.5**	**+0.3**
	baz=265						
SNST	**Tainan City**	**0.90**	**297**	P	**Pn**	**20 37 34.7**	**-0.7**
	baz=305						
SNST				S	**Sn**	**20 37 47.5**	**-0.2**
	baz=305						
TWK	**Hsinying**	**0.93**	**299**	*e*P	**Pn**	**20 37 35.1**	**-0.7**
	baz=300						
TWK				*e*S	**Sn**	**20 37 49.1**	**+0.5**
	baz=300						
SNJT	**Kaohsiung City**	**0.96**	**266**	*e*P	**Pn**	**20 37 37.6**	**+1.5**
	baz=263						
SNJT				S	**Sn**	**20 37 52.9**	**+3.7**
	baz=263						
CHN3	**Shinhua**	**0.96**	**286**	P	**Pn**	**20 37 37.3**	**+1.1**
	baz=285						
CHN3				S	**Sn**	**20 37 52.1**	**+2.8**
	baz=285						
ESL	**Shilin**	**0.99**	**3**	*e*P	**Pb**	**20 37 35.1**	**-1.3**
	baz=12						
ESL				*e*S	**Sb**	**20 37 47.8**	**-1.3**
	baz=12						
WHYT	**Xinyi Township**	**1.00**	**331**	*e*P	**Pn**	**20 37 36.3**	**-0.4**
	baz=337						
WHYT				S	**Sn**	**20 37 49.6**	**-0.6**
	baz=337						
HEN	**Hengchun**	**1.00**	**216**	*e*P	**Pn**	**20 37 36.9**	**+0.2**
	baz=198						
HEN				*e*S	**Sn**	**20 37 49.9**	**-0.2**
	baz=198						
CHN5	**Tsauling**	**1.01**	**321**	P	**Pb**	**20 37 36.2**	**-0.5**
	baz=325						
CHN5				*e*S	**Sn**	**20 37 50.2**	**-0.3**
	baz=325						
TSEB	**Hengchuen, Pin**	**1.01**	**206**	P	**Pn**	**20 37 36.9**	**0.0**
	baz=187						
TSEB				*e*S	**Sb**	**20 37 50.0**	**+0.5**
	baz=187						
KAU	**Kaohsiung**	**1.01**	**256**	*e*P	**Pn**	**20 37 38.4**	**+1.5**
	baz=246						
KAU				*e*S	**Sn**	**20 37 53.0**	**+2.5**
	baz=246						
TWKBT	**Hengchun**	**1.01**	**211**	*e*P	**Pb**	**20 37 36.5**	**-0.3**
	baz=190						
TWKBT				*e*S	**Sb**	**20 37 49.9**	**+0.3**
	baz=190						
TWK1	**Hengchun**	**1.02**	**211**	*e*P	**Pb**	**20 37 36.8**	**0.0**
	baz=190						
TWK1				*e*S	**Sb**	**20 37 49.5**	**-0.2**
	baz=190						
WLCH	**Liuqiu**	**1.03**	**243**	*e*P	**Pn**	**20 37 38.2**	**+1.1**
	baz=229						
WLCH				*e*S	**Sn**	**20 37 53.3**	**+2.4**
	baz=229						
SSLB	**Suanglung**	**1.04**	**338**	*e*P	**Pb**	**20 37 36.2**	**-1.0**
	baz=355						
SSLB				*e*S	**Sn**	**20 37 51.9**	**+0.6**
	baz=355						
TWP	**Hsiaoliuchiu**	**1.04**	**244**	*e*P	**Pn**	**20 37 38.4**	**+1.1**
	baz=229						
TWP				*e*S	**Sn**	**20 37 53.3**	**+2.0**
	baz=229						
CHN2	**Minshiung**	**1.09**	**311**	P	**Pn**	**20 37 38.5**	**+0.6**
	baz=313						
CHN2				S	**Sn**	**20 37 54.1**	**+1.7**
	baz=313						
CHY	**Chiayi**	**1.11**	**308**	*e*P	**Pb**	**20 37 38.2**	**-0.1**
	baz=310						
CHY				*e*S	**Sn**	**20 37 53.3**	**+0.5**
	baz=310						
WGK	**Gukeng**	**1.14**	**319**	*e*P	**Pb**	**20 37 39.0**	**+0.1**
	baz=323						
WGK				*e*S	**Sn**	**20 37 55.2**	**+1.5**
	baz=323						
ICHU	**Yijhu**	**1.14**	**298**	*e*P	**Pb**	**20 37 39.0**	**+0.1**
	baz=299						
ICHU				*e*S	**Sn**	**20 37 55.4**	**+1.6**
	baz=299						
SCLT	**Jiali**	**1.14**	**288**	*e*P	**Pb**	**20 37 38.9**	**-0.1**
	baz=288						
SCLT				*e*S	**Sn**	**20 37 55.4**	**+1.6**
	baz=288						
SMLT	**Sun Moon Lake**	**1.15**	**338**	*e*P	**Pb**	**20 37 39.1**	**0.0**
	baz=351						
SMLT				*e*S	**Sn**	**20 37 53.5**	**-0.5**
	baz=351						
WDLH	**Douliu**	**1.16**	**319**	*e*P	**Pb**	**20 37 39.6**	**+0.4**
	baz=322						
WDLH				*e*S	**Sn**	**20 37 55.6**	**+1.5**
	baz=322						
WJS	**Zhushan**	**1.16**	**329**	P	**Pb**	**20 37 39.8**	**+0.5**
	baz=334						
WJS				S	**Sn**	**20 37 56.0**	**+1.8**
	baz=334						
HWA	**Hwalien**	**1.17**	**10**	*e*P	**Pb**	**20 37 39.7**	**+0.2**
	baz=6.0						
HWA				*e*S	**Sn**	**20 37 54.6**	**+0.1**
	baz=6.0						
TYC	**Yuchr**	**1.18**	**336**	P	**Pb**	**20 37 40.4**	**+0.8**
	baz=355						
TYC				*e*S	**Sn**	**20 37 55.8**	**+1.1**
	baz=355						
WLGB	**Puzi**	**1.19**	**304**	*e*P	**Pb**	**20 37 39.0**	**-0.7**
	baz=305						
WLGB				*e*S	**Sn**	**20 37 55.7**	**+0.9**
	baz=305						
CHN8	**Yiju**	**1.19**	**296**	*e*P	**Pb**	**20 37 39.4**	**-0.4**
	baz=297						
CHN8				*e*S	**Sn**	**20 37 57.0**	**+2.1**
	baz=297						
WNT	**Mingjian**	**1.23**	**329**	*i* P	**Pb**	**20 37 40.9**	**+0.5**
	baz=334						
WNT				S	**Sn**	**20 37 58.1**	**+2.2**
	baz=334						
WPL	**Puli Township**	**1.25**	**342**	*e*P	**Pb**	**20 37 40.1**	**-0.7**
	baz=359						
WPL				*e*S	**Sn**	**20 37 57.3**	**+0.9**
	baz=359						
CHGB	**Renai**	**1.25**	**352**	*e*P	**Pn**	**20 37 39.4**	**-1.0**
	baz=11						
CHGB				*e*S	**Sb**	**20 37 55.2**	**-1.5**
	baz=11						
WTK	**Tuku**	**1.25**	**314**	P	**Pb**	**20 37 40.7**	**-0.1**
	baz=317						
WTK				S	**Sn**	**20 37 56.6**	**+0.2**
	baz=317						
WNT1	**Nantou City**	**1.26**	**330**	*e*P	**Pb**	**20 37 41.3**	**+0.4**
	baz=334						
WNT1				S	**Sn**	**20 37 59.1**	**+2.5**
	baz=334						
TWD	**Chiawan**	**1.27**	**9**	*e*P	**Pn**	**20 37 38.2**	**-2.3**
	baz=7.0						
TWD				S	**Sb**	**20 37 57.7**	**+0.6**
	baz=7.0						
DPDB	**Guoxing**	**1.28**	**341**	*e*P	**Pb**	**20 37 41.2**	**-0.1**
	baz=357						
DPDB				*e*S	**Sb**	**20 37 58.3**	**+1.0**
	baz=357						
WHF	**Hehuan Shan**	**1.33**	**356**	*e*P	**Pn**	**20 37 41.2**	**-0.4**
	baz=17						
WHF				S	**Sn**	**20 37 58.1**	**-0.7**
	baz=17						
WSF	**Szhu**	**1.34**	**308**	*e*P	**Pn**	**20 37 41.2**	**-0.1**
	baz=310						
WSF				S	**Sb**	**20 37 59.5**	**+0.6**
	baz=310						
NACB	**Ninganchiao**	**1.37**	**9**	*e*P	**Pn**	**20 37 40.1**	**-1.6**
	baz=16						
NACB				*e*S	**Sn**	**20 37 57.6**	**-1.7**
	baz=16						
WWF	**Wufeng**	**1.37**	**333**	*e*P	**Pb**	**20 37 44.6**	**+1.8**
	baz=338						
WWF				*e*S	**Sb**	**20 38 02.6**	**+2.8**
	baz=338						
ETLH	**Xiulin Townshi**	**1.39**	**4**	P	**Pn**	**20 37 41.9**	**-0.2**
	baz=12						
ETLH				*e*S	**Sn**	**20 37 59.0**	**-0.9**
	baz=12						
FUSS	**Fushou**	**1.43**	**355**	*e*P	**Pn**	**20 37 42.5**	**-0.4**
	baz=14						
FUSS				S	**Sn**	**20 37 59.8**	**-1.4**
	baz=14						
TDCB	**Techi**	**1.44**	**352**	*e*P	**Pn**	**20 37 42.6**	**-0.3**
	baz=11						
TDCB				*e*S	**Sn**	**20 38 00.8**	**-0.6**
	baz=11						
WCHH	**Zhanghua**	**1.46**	**329**	*e*P	**Pb**	**20 37 44.6**	**+0.2**
	baz=333						
WCHH				*e*S	**Sb**	**20 38 04.2**	**+1.6**
	baz=333						
TCU	**Taichung**	**1.47**	**334**	*e*P	**Pb**	**20 37 45.1**	**+0.6**
	baz=339						
TCU				*e*S	**Sb**	**20 38 03.7**	**+0.9**
	baz=339						
WHP	**Taichung City**	**1.51**	**345**	P	**Pb**	**20 37 45.4**	**+0.2**
	baz=5.0						
WHP				*e*S	**Sb**	**20 38 05.0**	**+1.1**
	baz=5.0						
NNSB	**Datong**	**1.60**	**0**	*e*P	**Pn**	**20 37 44.6**	**-0.6**
	baz=20						
NNSB				*e*S	**Sn**	**20 38 04.6**	**-0.7**
	baz=20						
NNSH	**Datong**	**1.60**	**0**	*e*P	**Pn**	**20 37 44.3**	**-0.9**
	baz=19						
NNSH				*e*S	**Sn**	**20 38 04.7**	**-0.6**
	baz=19						
NNS	**Nan Shan**	**1.62**	**0**	P	**Pb**	**20 37 46.3**	**-0.8**
	baz=20						
NNS				*e*S	**Sn**	**20 38 04.7**	**-0.9**
	baz=20						
TWQ1	**Liyutan**	**1.62**	**340**	P	**Pb**	**20 37 47.5**	**+0.4**
	baz=345						
TWQ1				S	**Sb**	**20 38 09.8**	**+2.6**
	baz=345						
ENA	**Nanau**	**1.64**	**12**	*e*P	**Pn**	**20 37 45.6**	**0.0**
	baz=8.0						
ENA				*e*S	**Sn**	**20 38 05.5**	**-0.4**
	baz=8.0						
WDJ	**Dajia District**	**1.67**	**336**	*e*P	**Pb**	**20 37 48.4**	**+0.5**
	baz=341						
WDJ				S	**Sb**	**20 38 10.7**	**+2.3**
	baz=341						
ENAH	**Nanao**	**1.67**	**14**	*e*S	**Sn**	**20 38 06.2**	**-0.6**
	baz=6.0						
NSY	**Sanyi**	**1.69**	**341**	P	**Pb**	**20 37 48.5**	**+0.2**
	baz=345						
NSY				S	**Sb**	**20 38 11.7**	**+2.6**
	baz=345						
NDT	**Datong Townshi**	**1.78**	**4**	*e*P	**Pn**	**20 37 47.4**	**-0.1**
	baz=12						
NDT				*e*S	**Sn**	**20 38 09.9**	**+0.3**
	baz=12						
NMLH	**Miaoli**	**1.79**	**343**	*e*P	**Pb**	**20 37 49.5**	**-0.6**
	baz=347						
NMLH				*e*S	**Sb**	**20 38 12.3**	**+0.2**
	baz=347						
PHUB	**P'eng-hu**	**1.80**	**293**	*e*S	**Sn**	**20 38 09.1**	**-0.8**
	baz=293						
ENTT	**Nioudou**	**1.82**	**6**	*e*P	**Pn**	**20 37 48.9**	**+0.8**
	baz=13						
ENTT				*e*S	**Sb**	**20 38 11.6**	**-1.4**
	baz=13						
PNG	**Penghu**	**1.83**	**294**	P	**Pn**	**20 37 48.2**	**+0.1**
	baz=295						
PNG				S	**Sn**	**20 38 11.0**	**+0.3**
	baz=295						
TWC	**Suao**	**1.84**	**14**	*e*P	**Pn**	**20 37 48.4**	**+0.1**
	baz=8.0						
TWC				*e*S	**Sn**	**20 38 10.2**	**-0.7**
	baz=8.0						
NSTT	**Nanjuang**	**1.84**	**349**	P	**Pb**	**20 37 50.0**	**-0.8**
	baz=8.0						
NSTT				S	**Sb**	**20 38 13.8**	**+0.4**
	baz=8.0						
YHNB	**Yeheng**	**1.84**	**0**	*e*P	**Pb**	**20 37 49.5**	**-1.5**
	baz=21						
YHNB				*e*S	**Sn**	**20 38 11.1**	**-0.1**
	baz=21						
LIOB	**Emei**	**1.85**	**350**	P	**Pb**	**20 37 50.6**	**-0.4**
	baz=354						
LIOB				S	**Sb**	**20 38 14.1**	**+0.3**
	baz=354						
NSK	**Sanguang**	**1.85**	**360**	*e*P	**Pb**	**20 37 49.5**	**-1.6**
	baz=21						
NSK				*e*S	**Sn**	**20 38 11.6**	**+0.2**
	baz=21						
TWE	**Neicheng**	**1.92**	**8**	P	**Pn**	**20 37 49.8**	**+0.5**
	baz=16						
TWE				*e*S	**Sn**	**20 38 12.7**	**-0.1**
	baz=16						
NWLT	**Wulai**	**1.96**	**3**	*e*P	**Pn**	**20 37 50.5**	**+0.5**
	baz=23						
NWLT				*e*S	**Sn**	**20 38 13.7**	**-0.2**
	baz=23						
SBCB	**Hsinchu**	**2.00**	**350**	*e*S	**Sb**	**20 38 17.0**	**-1.0**
	baz=354						
TATO	**Taipei**	**2.15**	**3**	*e*P	**Pn**	**20 37 53.4**	**+0.8**
	baz=22						
TATO				*e*S	**Sn**	**20 38 18.8**	**+0.2**
	baz=22						
TIPB	**Shuangxi**	**2.19**	**11**	*e*P	**Pn**	**20 37 53.3**	**+0.2**
	baz=17						
TIPB				*e*S	**Sn**	**20 38 18.7**	**-0.8**
	baz=17						
YOJ	**Yonaguni jima**	**2.22**	**42**	*e*S	**Sb**	**20 38 23.1**	**-1.3**
YM04	**YM04**	**2.33**	**4**	*e*P	**Pn**	**20 37 55.1**	**0.0**
	baz=23						
YM04				*e*S	**Sn**	**20 38 22.9**	**-0.2**
	baz=23						
YM10	**YM10**	**2.33**	**4**	*e*S	**Sn**	**20 38 22.9**	**-0.4**
	baz=24						
HATJ	**Hateruma jima**	**2.55**	**61**	*e*S	**Sn**	**20 38 28.8**	**+0.3**
IRIF	**Iriomote-Funau**	**2.64**	**55**	P	**Pn**	**20 38 01.0**	**+1.8**
IRIF				*e*S	**Sn**	**20 38 33.0**	**+2.4**
JKRS	**Kuro-shima**	**2.80**	**59**	P	**Pn**	**20 38 03.3**	**+1.8**
JKRS				*e*S	**Sn**	**20 38 35.8**	**+1.1**
JIJ	**Ishigaki jima**	**2.97**	**58**	P	**Pn**	**20 38 04.9**	**+1.1**
JIJ				*e*S	**Sn**	**20 38 40.1**	**+1.2**
JISG	**Ishigakijimahi**	**3.22**	**56**	P	**Pn**	**20 38 06.8**	**-0.4**
JISG				S	**Sn**	**20 38 44.5**	**-0.5**
JTJ	**Tarama**	**3.55**	**59**	P	**Pn**	**20 38 12.8**	**+1.0**
JTJ				S	**Sn**	**20 38 53.5**	**+0.3**

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*IDC **17** 20:40:53.2±1.1, 17°.71S×39°.54E, h0^{km}, mb3.7/9, mb1 3.9/13, mb1mx3.7/43, mbtmp3.9/13, ML4.1/4, MS3.2/7, Ms1 3.2/7, ms1mx2.8/49, Error ellipse: s-maj=26.1km s-min=20.9km az=151.0*

*NEIC **17** 20:40:54.7±1.7, 17°.9S±0°.1×39°.47E±0°.05, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=25.3km s-min=7.5km az=181.0*

ISC 17 20:40:54.7±0.7**, 17°.8S**±0°.1×**39°.50E**±0°.07**, h10^{km}, n26, σ0^{s}.96**/25**, mb3.7**/9**, MS3.2**/3**, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZOMB	**Zomba**	**4.65**	**301**	*i* P	**Pn**	**20 42 06.5**	**+1.3**
ZOMB				S	**Sn**	**20 42 57.8**	**-1.5**
OPO	**Ambohidratompo**	**7.35**	**97**	Pn	**Pn**	**20 42 42.1**	**-0.3**
	2.7nm,0.3s,baz=274,slow=18,SNR=9.8						
OPO				Sn	Sn	20 43 58.6	-7.4
	6.8nm,0.3s,baz=222,slow=15,SNR=3.6						
OPO				LR	LR	20 45 20.0	
	comp=Z,209nm,20.6s,baz=310,slow=36						
ABPO	**Ambohimpanom**	**7.44**	**101**	Pn	**Pn**	**20 42 43.2**	**-0.4**
MATP	**Matopo**	**10.72**	**254**	Pn	Pn	20 43 25.8	-2.8
	0.3nm,0.3s,baz=78,slow=13,SNR=11						
MATP				Sn	Sn	20 45 18.8	-10
	0.5nm,0.3s,baz=0.0,slow=20,SNR=1.9						
MATP				LR	LR	20 47 52.8	
	comp=Z,69nm,20.4s,baz=35,slow=39						
LSZ	**Lusaka**	**11.13**	**281**	Pn	**Pn**	**20 43 33.6**	**-0.6**
LBTB	**Lobatse**	**14.80**	**239**	Pn	**Pn**	**20 44 23.2**	**-1.1**
	0.7nm,0.3s,baz=51,slow=14,SNR=11						
LBTB				Sn	Sn	20 46 58.3	-10
	0.3nm,0.3s,baz=355,slow=20,SNR=1.2						
BOSA	**Boshof**	**16.93**	**228**	Pn	**Pn**	**20 44 51.2**	**-0.8**
	0.4nm,0.3s,baz=50,slow=13,SNR=7.2						
BOSA				LR	LR	20 51 54.7	
	comp=Z,69nm,18.2s,baz=3.0,slow=39						
BOSA	**Boshof**	**16.93**	**228**		**Pn**	**20 44 50.3**	**-1.7**
BOSA				IAmb	IAmb	20 45 06.0	
	comp=Z,9.1nm,0.9s						
MBAR	**Mbarara**	**19.14**	**332**	P	**P**	**20 45 17.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=250,slow=2.0,SNR=2.1						
MBAR				LR	LR	20 52 18.1	
	comp=Z,48nm,21.4s,baz=139,slow=36						
MBAR	**Mbarara**	**19.14**	**332**		**P**	**20 45 19.2**	**+0.8**
TSUM	**Tsumeb**	**20.83**	**263**	P	**P**	**20 45 37.7**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=84,slow=7.1,SNR=7.5						
TSUM				LR	LR	20 54 02.6	
	comp=Z,117nm,20.6s,baz=136,slow=38						
TSUM	**Tsumeb**	**20.83**	**263**	P	**P**	**20 45 37.5**	**+0.7**
TSUM				IAmb	IAmb	20 45 50.6	
	comp=Z,14nm,1.5s						
SUR	**Sutherland**	**22.25**	**226**	P	**P**	**20 45 53.6**	**+1.6**
	comp=Z,23nm,1.0s,baz=57,slow=15,SNR=7.7						
SUR				LR	LR	20 54 54.8	
	comp=Z,67nm,19.5s,baz=35,slow=38						
SUR	**Sutherland**	**22.25**	**226**	P	**P**	**20 45 53.2**	**+1.2**
TOA0	**Torodi Ar. Sit**	**48.35**	**307**	P	**P**	**20 49 37.7**	**+0.7**
TOA0				IAmb	IAmb	20 49 48.5	
	comp=Z,2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**48.35**	**307**	P	**P**	**20 49 36.6**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=124,slow=7.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**48.35**	**307**	P	**P**	**20 49 37.8**	**+0.8**
DBIC	**Dimbokro**	**50.09**	**295**	P	**P**	**20 49 51.1**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=109,slow=9.2,SNR=4.4						
DBIC	**Dimbokro**	**50.09**	**295**	P	**P**	**20 49 50.9**	**+0.6**
DBIC				IAmb	IAmb	20 50 02.0	
	comp=Z,9.7nm,1.2s						
BRTR	**Keskin Array B**	**57.48**	**355**	P	**P**	**20 50 44.6**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=168,slow=8.3,SNR=1.9						
ESDC	**Sonseca Array**	**70.09**	**326**	P	**P**	**20 52 06.2**	**-1.1**
	comp=Z,0.6nm,1.0s,baz=146,slow=5.5,SNR=2.1						
GERES	**GERESS Array B**	**70.21**	**342**	P	**P**	**20 52 07.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=181,slow=5.9,SNR=2.6						
MKAR	**Makanchi Array**	**74.95**	**29**	P	**P**	**20 52 35.1**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=214,slow=4.9,SNR=3.8						
MKAR	**Makanchi Array**	**74.95**	**29**	P	**P**	**20 52 36.3**	**+0.3**
ASAR	**Alice Springs**	**86.89**	**114**	P	**P**	**20 53 40.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=257,slow=4.6,SNR=1.8						
CPUP	**Villa Florida**	**88.14**	**243**	LR	LR	21 31 07.6	
	comp=Z,26nm,18.2s,baz=43,slow=34						

IDC 17 20:58:13.5±3.1**, 6°.75S**×**129°.78E, h89^{km}**±43^{km}**, mb2.7**/1**, mb1 3.0**/5**, mb1mx2.8**/38**, mbtmp3.2**/5**, Error ellipse: s-maj=76.0km s-min=24.6km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.03**	**14**	P	Pn	20 59 40.2	+0.1
	0.2nm,0.3s,baz=229,slow=20,SNR=1.9						
SIJI				S	Sn	21 00 43.6	-4.2
	0.3nm,0.3s,baz=277,slow=23,SNR=1.7						
FITZ	**Fitzroy Crossi**	**11.98**	**199**	P	Pn	21 01 00.6	-0.6
	0.1nm,0.3s,baz=27,slow=16,SNR=1.5						
FITZ				S	Sn	21 03 06.2	-6.7
	0.1nm,0.3s,baz=72,slow=9.6,SNR=1.5						
WRA	**Warramunga Arr**	**13.84**	**162**	P	Pn	21 01 26.9	+1.0
	0.1nm,0.3s,baz=346,slow=13,SNR=2.1						
WRA				S	Sn	21 03 53.5	-4.7
	0.1nm,0.3s,baz=343,slow=19,SNR=1.7						
ASAR	**Alice Springs**	**17.28**	**167**	P	Pn	21 02 08.8	-0.4
	0.0nm,0.3s,baz=343,slow=9.5,SNR=1.5						
MKAR	**Makanchi Array**	**67.90**	**327**	P	P	21 09 02.6	0.0
	0.1nm,0.6s,baz=130,slow=5.8,SNR=1.5						

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*IDC **17** 21:03:02.3±7.2, 0°.60N×124°.73E, h163^{km}±73^{km}, mb3.2/6, mb1 3.3/8, mb1mx3.0/53, mbtmp3.7/8, MS3.8/1, Ms1 3.8/1, ms1mx2.4/18, Error ellipse: s-maj=56.8km s-min=18.4km az=70.0*

ISC 17 21:02:57.5±0.9**, 0°.6N**±0°.2×**124°.7E**±0°.2**, h116^{km}, n9, σ0^{s}.93**/9**, mb3.7**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**16.33**	**101**	P	**P**	**21 06 41.1**	**+0.2**
	0.6nm,0.3s,baz=315,slow=10.0,SNR=1.9						
FITZ	**Fitzroy Crossi**	**18.62**	**177**	P	**P**	**21 07 07.0**	**+0.9**
	0.2nm,0.3s,baz=353,slow=8.1,SNR=1.9						
WRA	**Warramunga Arr**	**22.52**	**156**	P	**P**	**21 07 48.5**	**+0.7**
	2.1nm,0.4s,baz=335,slow=10,SNR=19						
ASAR	**Alice Springs**	**25.75**	**160**	P	**P**	**21 08 17.7**	**+0.2**
	0.2nm,0.4s,baz=348,slow=9.0,SNR=2.3						
ASAR				PcP	**PcP**	**21 11 43.1**	**-1.6**
	0.1nm,0.4s,baz=347,slow=2.1,SNR=4.4						
STKA	**Stephens Creek**	**36.07**	**155**	P	**P**	**21 09 47.5**	**-0.5**
	0.6nm,0.4s,baz=317,slow=18,SNR=2.8						
DZM	**Mont Dzumac**	**46.55**	**122**	LR	LR	21 32 25.1	
	comp=Z,97nm,19.2s,baz=291,slow=38						
SONM	**Songino Array**	**49.64**	**344**	P	**P**	**21 11 37.4**	**+0.1**
	0.3nm,0.8s,baz=153,slow=7.1,SNR=2.1						
MKAR	**Makanchi Array**	**58.99**	**327**	P	**P**	**21 12 44.6**	**-0.3**
	0.2nm,0.3s,baz=127,slow=8.0,SNR=10						
ZALV	**Zalesovo Beam**	**62.46**	**335**	P	**P**	**21 13 09.2**	**+0.9**
	0.5nm,0.3s,baz=148,slow=8.5,SNR=2.4						

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*AUST **17** 21:30:35.9±0.5, 31°.96S×138°.63E, h0^{km}, Error ellipse: s-maj=4.7km s-min=4.1km az=66.0*

*NOU **17** 21:30:36.8, 31°.99S×138°.71E, h0^{km}, MLv3.2, South Australia*

*IDC **17** 21:30:40.4±4.4, 31°.21S×139°.01E, h0^{km}, mb1 2.9/3, mb1mx2.9/20, mbtmp2.7/3, ML2.6/3, Error ellipse: s-maj=81.5km s-min=16.5km az=34.0*

ISC 17 21:30:33.9±0.9**, 31°.89S**±0°.04×**138°.89E**±0°.05**, h10^{km}, n8, σ2^{s}.76**/15**, South Australia**

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

HTT	Hallett	1.53	179	P	Pg	21 31 04.1	+0.8
	baz=1.5,SNR=21						
HTT				S	Sg	21 31 24.5	+1.3
	baz=1.5						
LCRK	Leigh Creek	1.55	338	P	Pg	21 31 06.3	+2.6
	baz=1.6,SNR=18						
LCRK				S	Sg	21 31 27.0	+3.2
	baz=1.6						
STKA	Stephens Creek	2.31	90	P	Pg	21 31 18.5	+0.4
	baz=2.5,SNR=5.2						
STKA				S	Sg	21 31 49.9	+1.9
	baz=2.5						
STKA	Stephens Creek	2.31	90	Pn	Pg	21 31 18.8	+0.7
	0.6nm,0.3s,baz=256,slow=16,SNR=6.8						
STKA				Lg	Lg	21 31 54.4	
	5.3nm,0.3s,baz=288,slow=20,SNR=5.8						
BBOO	Buckleboo	2.56	248	P	Pn	21 31 15.4	-0.1
	baz=2.3,SNR=21						
BBOO				S	Sn	21 31 47.2	+0.5
	baz=2.3						
MULG	Mulgathing	4.44	290	P	Pn	21 31 41.5	+0.2
	baz=4.3						
MULG				S	Sn	21 32 31.9	-1.2
	baz=4.3						
ASAR	Alice Springs	9.31	330	Pn	Pn	21 32 49.7	+1.5
	0.1nm,0.3s,baz=154,slow=14,SNR=2.3						
ASAR				Sn	Sn	21 34 28.9	-4.1
	0.1nm,0.3s,baz=153,slow=22,SNR=2.8						
WRA	Warramunga Arr	12.58	340	Pn	Pn	21 33 32.9	-0.2
	0.1nm,0.3s,baz=155,slow=14,SNR=1.4						
WRA				Sn	Sn	21 35 46.5	-6.8
	0.0nm,0.3s,baz=159,slow=24,SNR=1.8						

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*SNET **17** 21:35:52.4±1.5, 13°.10N×89°.52W, h22^{km}±14^{km}, ML4.1*
*UCR **17** 21:35:52.4±1.5, 13°.10N×89°.53W, h22^{km}±14^{km}, ML4.0*
ISC 17 21:35:49.9±3.2**, 13°.1N**±0°.2×**89°.6W**±0°.1**, h10**^{km}**, n14, σ0ˢ.31**/18**, 4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	Boqueron	0.68	27	*e*P	Pn	21 36 05.6	-0.2
BOQS	Boqueron	0.68	27	*e*P	Pn	21 36 05.6	-0.2
SBLS	San Blas	0.71	358	*i* P	Pn	21 36 06.0	-0.2
SBLS	San Blas	0.71	358	*i* P	Pn	21 36 06.0	-0.2
LFRS	El Faro	0.72	46	⇓*i*P	Pn	21 36 05.9	-0.4
LFRS	El Faro	0.72	46	⇓*i*P	Pn	21 36 05.9	-0.4
LFU	La Fuente	0.78	37	*e*P	Pn	21 36 07.1	+0.1
LFU	La Fuente	0.78	37	*e*P	Pn	21 36 07.1	+0.1
LBRS	Las Brisas	0.82	41	⇓*i*P	Pn	21 36 07.6	0.0
LBRS	Las Brisas	0.82	41	⇓*i*P	Pn	21 36 07.6	0.0
PACA	Pacayal	1.29	74	*e*P	Pb	21 36 14.8	+0.5
PACA				*e*S	Sb	21 36 30.5	-0.4
PACA				IAML		21 36 35.9	
	comp=Z,250nm,0.2s						
PACA	Pacayal	1.29	74	*e*P	Pb	21 36 14.8	+0.5
PACA				*e*S	Sb	21 36 30.5	-0.4
PACA				IAML		21 36 35.9	
	comp=Z,250nm,0.2s						
CNCH	Conchagua	1.73	85	*e*P	Pn	21 36 19.8	-0.3
CNCH				*e*S	Sn	21 36 42.3	+0.1
CNCH				IAML		21 36 45.2	
	comp=Z,32µm,0.1s						
CNCH	Conchagua	1.73	85	*e*P	Pn	21 36 19.8	-0.3
CNCH				*e*S	Sn	21 36 42.3	+0.1
CNCH				IAML		21 36 45.2	
	comp=Z,32µm,0.1s						

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*DJA **17** 21:45:34.6±0.5, 4°S±4°×12°9E±°, h193^{km}±6^{km}, M3.6/6, mb3.8/1, MLv3.5/6*
*IDC **17** 21:45:42.8±3.9, 4°.65S×129°.28E, h297^{km}±44^{km}, mb2.7/1, mb1 3.0/3, mb1mx2.7/30, mbtmp3.6/3, Error ellipse: s-maj=120.1km s-min=16.0km az=71.0*
ISC 17 21:45:32.8±1.0**, 4°.54S**±0°.07×**129°.26E**±0°.07**, h200**^{km}**, n8, σ2ˢ.15**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.64	89	P	Pn	21 46 03.5	+3.0
MSAI	Masohi	1.23	344	P	Pn	21 46 04.8	+0.6
MSAI				S	Sn	21 46 26.5	-2.2
NLAI	Namlea	2.51	301	P	Pn	21 46 18.2	+1.4
NLAI				S	Sn	21 46 51.3	+0.2
FAKI	Fak Fak	3.39	62	P	Pn	21 46 29.2	+2.1
FAKI				S	Sn	21 47 09.3	-0.3
SWI	Sorong	4.16	29	P	Pn	21 46 37.1	+0.5
SWI				S	Sn	21 47 24.5	-2.3
WRA	Warramunga Arr	16.09	163	P	Pn	21 49 09.7	+1.4
	0.2nm,0.3s,baz=342,slow=12,SNR=9.6						
WRA				S	S	21 52 02.9	-3.6
	0.1nm,0.3s,baz=340,slow=22,SNR=2.1						
ASAR	Alice Springs	19.54	167	P	Pn	21 49 48.4	-0.7
	0.7nm,0.3s,baz=349,slow=12,SNR=74						
ASAR				S	S	21 53 12.3	-2.9
	0.1nm,0.3s,baz=348,slow=22,SNR=2.6						
MKAR	Makanchi Array	65.78	327	P	P	21 55 57.1	+0.7
	0.1nm,0.4s,baz=131,slow=6.3,SNR=5.4						

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*IDC **17** 21:54:20.4±1.4, 45°.92N×106°.99W, h0^{km}, mb1 3.1/3, mb1mx3.0/39, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=50.5km s-min=10.0km az=128.0*
*NEIC **17** 21:54:22.7±1.6, 45°.85N±0°.03×106°.71W±0°.08, h0^{km}±2^{km}, ML2.9/36, Error ellipse: s-maj=10.0km s-min=3.1km az=118.0*
ISC 17 21:54:20.3±1.0**, 45°.98N**±0°.05×**106°.65W**±0°.05**, h0**^{km}**, n24, σ1ˢ.49**/25**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	0.77	22		Pn	21 54 39.6	+1.1
RLMT	Red Lodge	2.03	246	Pn	Pn	21 54 56.9	+0.9
RLMT				IAML		21 55 25.2	
	82nm,0.4s						
RLMT				IAML		21 55 25.8	
	96nm,0.4s						
GCMT	Greycliff	2.12	266	Pn	Pn	21 54 58.2	+1.0
YNE	Yellowstone No	2.56	249	Pn	Pn	21 55 04.5	+1.3
RSSD	Black Hills	2.62	134		Pb	21 55 06.7	-1.6
YMP	Mirror Lake Pl	2.77	245		Pn	21 55 08.1	+1.8
EGMT	Eagleton	2.95	315		Pb	21 55 13.1	-0.7
DGMT	Dagmar	3.00	33		Pb	21 55 12.8	-1.8
LKWY	Lake	3.00	243	Pn	Pn	21 55 10.8	+1.4
LKWY				IAML		21 56 06.7	
	38nm,0.7s						
LKWY				IAML		21 56 14.7	
	33nm,1.6s						
H17A	Grant Village	3.20	242		Pn	21 55 14.5	+2.4
K22A	Casper	3.33	178		Pn	21 55 14.3	+0.5
K22A				IAML		21 56 16.8	
	comp=N,42nm,0.5s						
YHL	Hebgen Lake	3.39	252		Pn	21 55 13.2	-1.6
YHB	Horse Butte	3.43	251		Pn	21 55 15.6	+0.3
FLWY	Flagg Ranch	3.44	238		Pn	21 55 16.9	+1.5
FLWY				IAML		21 56 15.7	
	comp=N,32nm,2.0s						
BOZ	Bozeman (W)	3.51	266		Pb	21 55 20.3	-3.1
BOZ				IAML		21 56 14.3	
	comp=N,26nm,2.4s						
BOZ				IAML		21 56 17.7	
	comp=N,22nm,1.3s						
QLMT	Earthquake Lak	3.56	253	Pn	Pn	21 55 18.7	+1.7
HRY	Holter Researc	3.67	283		Pn	21 55 19.8	+1.4
MOOW	Moose Ponds	3.67	234		Pn	21 55 19.1	+0.6
MOOW				IAML		21 56 16.6	
	comp=N,16nm,5.0s						
LOHW	Long Hollow	3.68	231		Pn	21 55 19.3	+0.6
LOHW				IAML		21 57 26.3	
	comp=N,25nm,5.0s						
PD31	Pinedale Array	3.83	214		Pn	21 55 21.0	+0.2
PDAR	Pinedale Array	3.83	214	Pn	Pn	21 55 21.4	+0.6
	comp=N,0.3nm,0.3s,baz=40,slow=13,SNR=7.8						
PDAR				Pg	Pb	21 55 28.6	-0.3
	comp=N,1.4nm,0.3s,baz=41,slow=18,SNR=19						
PDAR				Lg	Lg	21 56 13.6	
	comp=N,2.5nm,0.3s,baz=47,slow=31,SNR=11						
PDAR	Pinedale Array	3.83	214		Pn	21 55 22.7	+2.0
ULM	Lac du Bonnet	8.38	55	Pn	Pn	21 56 24.2	+1.3
	comp=N,0.4nm,0.3s,baz=252,slow=11,SNR=4.8						
ULM				Lg	Lg	21 58 40.3	
	comp=N,0.2nm,0.3s,baz=321,slow=10,SNR=2.1						
YKA	Yellowknife Ar	17.17	347	P	Pn	21 58 21.3	0.0
	comp=N,0.0nm,0.3s,baz=164,slow=14,SNR=3.2						

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*ISK **17** 22:18:22.9, 36°.48N×27°.44E, h6^{km}, ML3.1/16*
*NIC **17** 22:18:23.0±0.0, 36°.51N×27°.46E, h8^{km}±2^{km}, Ml3.8/2*
*ATH **17** 22:18:23.5, 36°.49N×27°.43E, h23^{km}±4^{km}, ML2.9/2, Error ellipse: s-maj=4.5km s-min=1.1km az=359.0*
*DDA **17** 22:18:23.0, 36°.47N×27°.45E, h7^{km}±3^{km}, ML2.7*
*THE **17** 22:18:23.2, 36°.49N×27°.49E, h1^{km}±1^{km}, ML2.9/3, Error ellipse: s-maj=1.9km s-min=0.9km az=245.0*
ISC 17 22:18:24.1±1.1**, 36°.49N**±0°.02×**27°.44E**±0°.02**, h19**^{km}±2^{km}**, n53, σ0ˢ.81**/70**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.28	297	P	Pb	22 18 29.8	-0.6
NISR				S	Sb	22 18 34.3	-0.2
NISR				AML	AML	22 18 37.6	
	comp=N,4765µm,0.4s						
NISR				AML	AML	22 18 38.2	
	comp=E,6589µm,0.2s						
NISR	Nisiros	0.28	297	P	Pb	22 18 29.9	-0.5
KOSK	Kos Island	0.45	306	P	Pg	22 18 33.6	+0.2
KOSK	Kos Island	0.45	306	PG	Pg	22 18 32.4	-0.9
BDRM	Kayabasi	0.58	1	*i* P	Pb	22 18 34.3	-1.2
BDRM				*i* S	Sb	22 18 42.6	-0.7
BDRM				IAML		22 18 45.0	
	comp=E,1µm,0.3s						
BDRM				IAML		22 18 46.0	
	comp=N,1µm,0.4s						
BODT	Bodrum	0.58	350	P	Pb	22 18 34.7	-0.9
BODT				S	Sg	22 18 43.3	-0.3
BODT	Bodrum	0.58	350	PG	Pb	22 18 34.8	-0.9
BODT				SG	Sg	22 18 43.3	-0.3
ARG	Arkhangelos	0.62	116	P	Pb	22 18 35.2	-1.0
ARG				S	Sb	22 18 44.0	-0.4
ARG				AML	AML	22 18 46.6	
	comp=E,3255µm,0.3s						
ARG				AML	AML	22 18 46.7	
	comp=N,3061µm,0.3s						
ARG	Arkhangelos	0.62	116	P	Pb	22 18 35.2	-1.0
ARG				S	Sb	22 18 43.6	-0.8
	comp=N,2µm,0.3s						
ARG	Arkhangelos	0.62	116	P	Pb	22 18 35.2	-1.0
ARG				S	Sb	22 18 44.5	+0.1
MRSB	Marmaris-Mugla	0.65	69	PG	Pb	22 18 36.1	-0.7
MRSB				SG	Sg	22 18 45.7	0.0
TURN	Turunc	0.71	66	PG	Pb	22 18 36.9	-0.9
TURN	Turunc	0.71	66	*i* P	Pb	22 18 36.5	-1.3
TURN				*i* S	Sg	22 18 47.3	-0.2
TURN				IAML		22 18 49.0	
	comp=N,507nm,0.3s						
TURN				IAML		22 18 51.0	
	comp=E,425nm,0.3s						
MLSB	Milas	0.85	19	PG	Pb	22 18 39.9	-0.4
DIDI	Didim-Aydin	0.90	350	PG	Pb	22 18 40.8	-0.3
YER	Yerkesik	0.94	46	P	Pb	22 18 40.5	-1.2
YER				S	Sg	22 18 54.3	-0.4
YER	Yerkesik	0.94	46	PG	Pb	22 18 41.5	-0.2
KARP	Karpathos	0.96	194	P	Pb	22 18 41.1	-1.1
KARP	Karpathos	0.96	194	P	Pb	22 18 41.9	-0.3
KARP				S	Sn	22 18 56.1	+0.2
	comp=E,452nm,0.4s						
KARP	Karpathos	0.96	194	P	Pb	22 18 42.0	-0.3
KARP				S	Sn	22 18 56.5	+0.6
DDIM	Aydin, Didim	0.98	351	*i* P	Pb	22 18 42.2	-0.2
DDIM				*i* S	Sn	22 18 57.0	+0.8
DDIM				IAML		22 18 59.0	
	comp=E,246nm,0.3s						
DDIM				IAML		22 19 02.0	
	comp=N,460nm,0.4s						
DALY	Dalyan (Mula)	1.03	71	PG	Pb	22 18 43.0	-0.3
DALY	Dalyan (Mula)	1.03	71	*i* P	Pb	22 18 42.8	-0.6
DALY				IAML		22 19 01.0	
	comp=N,133nm,0.3s						
DALY				IAML		22 19 01.0	
	comp=E,143nm,0.3s						
MULA	Mugla, Merkez-	1.04	42	*i* P	Pb	22 18 43.3	-0.3
MULA				*i* S	Sn	22 18 57.6	-0.4
MULA				IAML		22 19 01.0	
	comp=E,210nm,0.6s						
MULA				IAML		22 19 02.0	
	comp=N,144nm,0.5s						
GCAM	G?zelcaml?	1.22	352	PN	Pb	22 18 46.9	+0.3
GCAM	G?zelcaml?	1.22	352	*i* P	Pn	22 18 46.2	+0.1
GCAM				*i* S	Sg	22 19 04.9	+1.1
GCAM				IAML		22 19 07.0	
	comp=E,114nm,0.5s						
GCAM				IAML		22 19 09.0	
	comp=N,60nm,0.2s						
SMG	Samos	1.31	339	P	Pn	22 18 46.9	-0.4
SMG	Samos	1.31	339	P	Pn	22 18 46.7	-0.7
SMG				S	Sg	22 19 07.0	+0.5
	comp=N,465nm,0.4s						
FETY	Fethiye	1.33	83	P	Pn	22 18 47.7	0.0
FETY	Fethiye	1.33	83	PN	Pb	22 18 48.3	-0.2
ANAF	Anafi Island	1.35	265	P	Pn	22 18 47.7	-0.2
ANAF	Anafi Island	1.35	265	P	Pn	22 18 48.4	+0.5
APE	Apeiranthos	1.64	291	P	Pn	22 18 52.2	+0.2
APE	Apeiranthos	1.64	291	P	Pn	22 18 52.1	+0.2
THR3	Thira Island,	1.64	268	P	Pn	22 18 52.4	+0.5
THR6	Thira Island,	1.65	266	P	Pn	22 18 52.3	+0.3
THR6	Thira Island,	1.65	266	P	Pn	22 18 52.4	+0.3
ZKR	Zakros	1.69	216	P	Pn	22 18 53.9	+1.3
KSL	Kastellorizon	1.77	100	P	Pb	22 18 55.0	-0.8
KSL	Kastellorizon	1.77	100	P	Pn	22 18 53.7	+0.1
KSL				S	Sb	22 19 17.4	-0.2
AKAS	Kas	1.77	98	PN	Pn	22 18 54.9	+1.1
NPS	Neapolis	1.92	231	P	Pn	22 18 56.9	+1.1
URLA	Izmir	1.99	341	PN	Pn	22 18 57.2	+0.5
ELL	Elmali	2.00	82	PN	Pn	22 18 58.4	+1.4
KULA	Kula-Manisa	2.25	25	PN	Pn	22 19 01.8	+1.5
BASM	Basmaki-Afyon	2.53	55	PN	Pn	22 19 05.7	+1.5
ANTB	Antalya	2.62	80	PN	Pn	22 19 07.2	+1.9
SIMA	Simav-Kutahya	2.87	25	PN	Pn	22 19 10.8	+2.0
AKMS	Akamas	4.24	109	P	Pn	22 19 28.0	+0.3
AKMS				AML	AML	22 20 17.6	
	comp=N,0.5nm,0.5s						
AKMS				AML	AML	22 20 19.4	
	comp=N,0.3nm,0.6s						
SZAC	Souni	4.76	110	P	Pn	22 19 34.9	+0.1
SZAC				AML	AML	22 20 30.7	
	comp=N,0.2nm,0.5s						
SZAC				AML	AML	22 20 33.4	
	comp=N,0.3nm,0.4s						
ASGA	Asgata	5.03	108	P	Pn	22 19 38.8	+0.3
CSS	Mathiatis	5.03	106	P	Pn	22 19 39.6	+1.1
MVOU	Mavrovouni	5.25	104	P	Pn	22 19 43.1	+1.6

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*IDC **17** 22:28:55.3±1.2, 22°.94S×112°.08W, h0^{km}, mb4.3/7, mb1 4.6/7, mb1mx4.1/35, mbtmp4.3/7, MS3.7/10, Ms1 3.7/10, ms1mx3.5/26, Error ellipse: s-maj=47.2km s-min=34.1km az=62.0*
*NEIC **17** 22:28:57.1±1.1, 22°.9S±0°.2×112°.0W±0°.2, h10^{km}±1^{km}, mb4.7/34, Error ellipse: s-maj=27.8km s-min=21.2km az=218.0*
ISC 17 22:28:56.7±0.8**, 23°.0S**±0°.2×**112°.1W**±0°.1**, h10**^{km}**, n79, σ0ˢ.54**/67**, mb4.7**/22**, MS3.7**/10**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N2	Juan Fernandez	30.92	117	T	T	23 07 48.4	
	baz=285,slow=75,SNR=110						
H03N3	Juan Fernandez	30.93	117	T	T	23 07 52.0	
	baz=285,slow=75,SNR=126						
H03N1	Juan Fernandez	30.94	117	T	T	23 07 51.6	
	baz=285,slow=75,SNR=180						
ROC1	El Roble	37.43	115	P	P	22 36 10.5	0.0
LCO	Las Campanas	37.56	108	P	P	22 36 12.0	+0.3
LCO				IAmb	IAmb	22 36 14.8	
	comp=Z,16nm,1.2s						
AC05	El Transito	37.93	108	P	P	22 36 15.3	+0.6
AC05				IAmb	IAmb	22 36 17.6	
	comp=Z,22nm,1.2s						
GO03	Copiap	38.01	106	P	P	22 36 15.7	+0.4
LL01	San Ignacio de	38.19	130	P	P	22 36 17.0	+0.5
LL01				IAmb	IAmb	22 36 19.9	
	comp=Z,16nm,1.3s						
GO02	Mina Guanaco	38.76	102	P	P	22 36 22.1	+0.1
GO02				IAmb	IAmb	22 36 24.8	
	comp=Z,14nm,1.0s						
PATCX	Punta Patache	38.88	95	P	P	22 36 23.2	+0.4
PATCX				IAmb	IAmb	22 36 25.4	
	comp=Z,29nm,1.2s						
TA01	Diego Aracena	38.91	95	P	P	22 36 23.5	+0.7
TA01				IAmb	IAmb	22 36 25.2	
	comp=Z,29nm,1.3s						
PB07	IPOC Station P	38.97	97	P	P	22 36 24.2	+0.7
PB07				IAmb	IAmb	22 36 26.3	
	comp=Z,15nm,1.0s						
PLCA	Paso Flores	39.08	127	LR	LR	22 48 47.4	
	comp=Z,43nm,18.1s,baz=166,slow=30						
ZON	Zonda	39.33	112	P	P	22 36 26.9	+0.6
PB09	IPOC Station P	39.54	97	P	P	22 36 28.9	+0.6
PB09				IAmb	IAmb	22 36 31.6	
	comp=Z,19nm,1.1s						
LVC	Limon Verde	39.71	98	P	P	22 36 30.0	0.0
MNMC	Minye Minye	39.75	93	P	P	22 36 30.8	+0.6
PB08	IPOC Station P	39.94	94	P	P	22 36 32.6	+0.7
GO01	Chusmiza	40.00	94	P	P	22 36 33.0	+0.5
PB16	IPOC Station P	40.02	92	P	P	22 36 33.1	+0.3
JTS	Las Juntas de	42.40	42	LR	LR	22 49 45.8	
	comp=Z,116nm,21.2s,baz=354,slow=30						
CMIG	Matias Romero	43.21	24	LR	LR	22 50 40.4	
	comp=Z,95nm,20.3s,baz=188,slow=30						
ROSC	El Rosal	46.09	58	LR	LR	22 53 51.7	
	comp=Z,89nm,18.5s,baz=236,slow=32						
LPIG	La Paz	46.80	2	LR	LR	22 52 51.9	
	comp=Z,46nm,18.9s,baz=244,slow=31						
SAML	Samuel	48.82	82	P	P	22 37 42.3	-0.3
SAML				IAmb	IAmb	22 37 44.0	
	comp=Z,8.5nm,1.1s						
SRIG	Santa Rosalia	49.97	360	P	P	22 37 50.1	-0.9
SDV	Santo Domingo	51.45	57	P	P	22 38 02.6	-0.2
TX31	Lajitas Ar. Si	52.61	9	P	P	22 38 11.4	+0.5
TX31				IAmb	IAmb	22 38 17.8	
	comp=Z,11nm,1.4s						
TXAR	Lajitas Array	52.61	9	P	P	22 38 11.4	+0.5
	comp=Z,0.8nm,0.9s,baz=174,slow=12,SNR=5.9						
TXAR				LR	LR	22 56 30.1	
	comp=Z,42nm,18.7s,baz=0.0,slow=32						
TXAR	Lajitas Array	52.61	9	P	P	22 38 11.1	+0.1
JCT	Junction City	54.42	13	P	P	22 38 24.5	+0.3
JCT				IAmb	IAmb	22 38 26.0	
	comp=Z,9.9nm,0.9s						
CBX	Cerro Bola	55.12	355	P	P	22 38 30.0	+0.7
PTGA	Pitinga	55.20	74	P	P	22 38 29.9	-0.3
NATX	Nacogdoches	56.90	18	P	P	22 38 41.9	0.0
GSC	Goldstone, Bar	58.10	355	P	P	22 38 50.4	0.0
GSC				IAmb	IAmb	22 38 52.1	
	comp=Z,9.7nm,1.4s						
DR12	Loma Pena Alta	58.83	49	P	P	22 38 56.0	+0.2
AIN	Ainahou	59.68	311	P	P	22 39 02.2	+0.4
BDFB	Brasilia	60.52	96	P	P	22 39 07.6	-0.1
	comp=Z,2.0nm,0.6s,baz=262,slow=7.1,SNR=3.8						
BDFB	Brasilia	60.52	96	P	P	22 39 07.0	-0.8
BDFB				IAmb	IAmb	22 39 09.4	
	comp=Z,5.2nm,1.1s						
PV20	West Nyswonger	61.03	3	P	P	22 39 10.1	-0.7
NVAR	Mina Array Bea	61.33	354	P	P	22 39 13.3	+0.5
	comp=Z,4.2nm,0.9s,baz=177,slow=7.0,SNR=13						
NVAR				LR	LR	22 59 36.2	
	comp=Z,77nm,19.8s,baz=148,slow=30						
NVAR	Mina Array Bea	61.33	354	P	P	22 39 13.2	+0.4
RDMU	Red Mountain	63.23	2	P	P	22 39 25.4	-0.1
PD31	Pinedale Array	65.43	2	P	P	22 39 38.5	-1.4
PD31				IAmb	IAmb	22 39 42.5	
	comp=Z,9.2nm,1.6s						
PDAR	Pinedale Array	65.43	2	P	P	22 39 38.9	-1.0
	comp=Z,1.7nm,0.9s,baz=185,slow=6.0,SNR=6.0						
PDAR				LR	LR	23 03 30.8	
	comp=Z,51nm,18.3s,baz=146,slow=32						
MFID	Camas Ranch	66.12	357	P	P	22 39 44.2	0.0
MFID				IAmb	IAmb	22 39 46.4	
	comp=Z,5.7nm,1.1s						
HLID	Hailey	66.21	358	P	P	22 39 45.0	+0.2
HLID				IAmb	IAmb	22 39 46.2	
	comp=Z,5.7nm,1.1s						
VNDA	Vanda	66.91	194	LR	LR	23 02 53.8	
	comp=Z,86nm,19.5s,baz=354,slow=30						
C09A	Chrisman Ranch	70.64	356	P	P	22 40 12.6	+0.4
C09A				IAmb	IAmb	22 40 13.5	
	comp=Z,11nm,1.2s						
SIT	Sitka	82.06	347	P	P	22 41 18.5	+1.7
DLBC	Dease Lake	82.44	351	P	P	22 41 19.6	+0.7
	comp=Z,5.6nm,1.0s,baz=180,slow=3.0,SNR=4.1						
YKA	Yellowknife Ar	85.17	359	P	P	22 41 32.9	+0.2
	comp=Z,3.2nm,1.1s,baz=169,slow=5.3,SNR=27						
H11S2	WAKE ISLAND Hy	89.33	290	T	T	00 20 50.7	
	baz=114,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	89.34	290	T	T	00 20 52.9	
	baz=114,slow=75,SNR=6.6						
H11S3	WAKE ISLAND Hy	89.35	290	T	T	00 20 53.7	
	baz=114,slow=75,SNR=5.7						
MAW	Mawson	89.64	178	LR	LR	23 18 35.6	
	comp=Z,72nm,19.4s,baz=218,slow=33						
KTH	Kantishna Hill	91.44	344	P	P	22 42 02.2	-0.5
INK	Inuvik	92.34	352	P	P	22 42 07.0	+0.3
	comp=Z,3.7nm,1.1s,baz=175,slow=3.9,SNR=4.1						
BMAR	Burnt Mountain	93.29	348	P	P	22 42 11.1	-0.1
AKASG	Malin Array Be	139.18	37	PKP	PKPdf	22 48 23.1	-0.5
	comp=Z,0.2nm,0.3s,baz=273,slow=3.0,SNR=6.4						
SONM	Songino Array	140.59	319	PKP	PKPdf	22 48 25.5	-1.1
	comp=Z,0.8nm,1.0s,baz=46,slow=4.2,SNR=4.9						
SONM	Songino Array	140.59	319		PKPdf	22 48 26.9	+0.4
ELL	Elmali	144.53	58	PKPdf	PKPdf	22 48 33.9	0.0
MDUB	Mudurnu	144.53	52	PKPdf	PKPab	22 48 31.9	-0.2
ARU	Arti	145.86	9	PKPdf	PKPdf	22 48 34.7	-0.7
BR231	Keskin MP Arra	145.88	52	PKPdf	PKPdf	22 48 36.2	+0.1
ILGA	Ilgaz	146.13	50	PKPdf	PKPdf	22 48 36.9	+0.3
ZAA0	Zalesovo Array	146.51	342	PKPdf	PKPdf	22 48 36.5	0.0
ZALV	Zalesovo Beam	146.51	342	PKPbc	PKPdf	22 48 36.6	+0.1
	comp=Z,1.4nm,0.6s,baz=31,slow=3.5,SNR=7.8						
ZALV	Zalesovo Beam	146.51	342	PKPdf	PKPdf	22 48 36.3	-0.2
BR131	Keskin Array S	146.54	52	PKPdf	PKPdf	22 48 37.4	+0.1
BRTR	Keskin Array B	146.54	52	PKPbc	PKPbc	22 48 38.8	+0.1
	comp=Z,5.5nm,1.1s,baz=249,slow=2.4,SNR=20						
BRTR	Keskin Array B	146.54	52		PKPbc	22 48 38.5	-0.3
BRVK	Borovoye	149.88	357	PKPbc	PKPbc	22 48 46.8	-0.1
CMAR	Chiang Mai Arr	150.66	267	PKPbc	PKiKP	22 48 50.2	-0.3
	comp=Z,3.8nm,1.0s,baz=63,slow=0.6,SNR=17						
CMAR	Chiang Mai Arr	150.66	267		PKiKP	22 48 50.1	-0.4
KBZ	Khabaz	150.76	39	PKPbc	PKPbc	22 48 49.5	+0.2
	comp=Z,9.8nm,1.1s,baz=221,slow=4.9,SNR=8.2						
MKAR	Makanchi Array	153.53	337	PKPbc	PKPbc	22 48 55.0	-0.5
	comp=Z,0.5nm,0.7s,baz=13,slow=1.6,SNR=5.1						
MKAR	Makanchi Array	153.53	337	PKPdf	PKPdf	22 48 48.5	+0.7
MKAR					PKPbc	22 48 54.5	-1.1

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*NEIC **17** 22:34:38.8±1.3, 5°.57S±0°.09×147°.2E±0°.1, h193^{km}±6^{km}, mb4.2/18, Error ellipse: s-maj=17.3km s-min=10.6km az=51.0*
*IDC **17** 22:34:38.4±1.1, 5°.59S×147°.16E, h188^{km}±10^{km}, mb3.7/18, mb1 3.9/24, mb1mx3.8/44, mbtmp4.3/24, MS2.9/1, Ms1 2.8/1, ms1mx2.3/36, Error ellipse: s-maj=12.3km s-min=8.0km az=102.0*
ISC 17 22:34:39.1±0.4**, 5°.60S**±0°.06×**147°.15E**±0°.07**, h195**^{km}**, n58, σ1ˢ.00**/62**, mb4.0**/24**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.78	180	P	Pn	22 35 37.9	-0.1
	89nm,0.3s,baz=332,slow=6.6,SNR=100						
PMG				S	Sn	22 36 21.8	-2.5
	30nm,0.3s,baz=346,slow=13,SNR=3.3						
JAY	Jayapura	7.12	295	P	Pn	22 36 20.8	-0.2
	1.3nm,0.3s,baz=131,slow=22,SNR=9.4						
JAY				S	Sn	22 37 39.4	-2.4
	2.3nm,0.3s,baz=325,slow=18,SNR=2.8						
HNR	Honiara	13.24	107	P	Pn	22 37 39.7	-0.2
	14nm,0.3s,baz=80,slow=6.0,SNR=3.7						
HNR	Honiara	13.24	107	Pn	Pn	22 37 39.1	-0.7
CTA	Charters Tower	14.43	183	P	P	22 37 56.2	+0.2
	1.2nm,0.3s,baz=2.6,slow=13,SNR=11						
CTAO	Charters Tower	14.43	183		P	22 37 55.8	-0.3
SIJI	Sorong	16.54	286	P	Pn	22 38 21.1	+0.9
	0.6nm,0.3s,baz=239,slow=22,SNR=1.8						
WB0	Warramunga Arr	18.77	220		P	22 38 44.9	+1.2
WB0				IAmb	IAmb	22 38 49.0	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	18.82	220	P	P	22 38 45.5	+1.3
WB2	Warramunga Arr	18.93	220		P	22 38 46.8	+1.4
WB2				IAmb	IAmb	22 38 50.8	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	18.94	220	P	P	22 38 46.9	+1.4
	comp=Z,3.3nm,0.3s,baz=47,slow=12,SNR=90						

WRA				S	**S**	**22 42 09.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=40,slow=21,SNR=9.2						
WRA				PcP	**PcP**	**22 43 02.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=24,slow=1.7,SNR=3.0						
WRA	**Warramunga Arr**	**18.94**	**220**	P	**P**	**22 38 46.1**	**+0.6**
AS31	**Alice Springs**	**22.03**	**214**	P	**P**	**22 39 19.8**	**+1.6**
AS31				IAmb	IAmb	22 39 24.6	
	comp=Z,4.8nm,0.9s						
ASAR	**Alice Springs**	**22.03**	**214**	P	**P**	**22 39 19.5**	**+1.3**
	comp=Z,10nm,0.7s,baz=48,slow=8.5,SNR=131						
ASAR				S	**S**	**22 43 09.2**	**+2.1**
	comp=Z,3.4nm,1.0s,baz=34,slow=16,SNR=9.0						
FITZ	**Fitzroy Crossi**	**24.41**	**238**	P	**P**	**22 39 40.6**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=26,slow=8.2,SNR=27						
DZM	**Mont Dzumac**	**24.83**	**133**	P	**P**	**22 39 43.8**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=86,slow=18,SNR=1.5						
STKA	**Stephens Creek**	**26.66**	**191**	P	**P**	**22 40 00.5**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=0.0,slow=9.1,SNR=1.4						
STKA				LR	LR	22 52 22.3	
	comp=Z,24nm,20.8s,baz=200,slow=40						
KSRS	**Korea Array**	**46.43**	**339**	P	**P**	**22 42 46.2**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=153,slow=8.2,SNR=2.6						
USRK	**Ussuriysk Ar.**	**51.42**	**346**	P	**P**	**22 43 24.6**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=155,slow=4.3,SNR=4.6						
USRK	**Ussuriysk Ar.**	**51.42**	**346**	P	**P**	**22 43 24.2**	**+0.1**
KLR	**Kul'dur**	**56.23**	**348**	P	**P**	**22 43 59.7**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=141,slow=6.5,SNR=2.1						
HHC	**Hu-ho-hao-te**	**56.57**	**328**	*e*P	**P**	**22 44 01.9**	**+0.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
PEA0B	**Petropavlovsk-**	**59.16**	**7**	P	**P**	**22 44 19.6**	**+0.3**
PETK	**Petropavlovsk-**	**59.16**	**7**	P	**P**	**22 44 19.5**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=173,slow=8.9,SNR=3.0						
PETK	**Petropavlovsk-**	**59.16**	**7**	P	**P**	**22 44 19.7**	**+0.5**
ULN	**Ulaanbaatar**	**63.83**	**331**	P	**P**	**22 44 51.1**	**+0.3**
SONM	**Songino Array**	**64.13**	**331**	P	**P**	**22 44 53.3**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=142,slow=5.0,SNR=9.8						
SONM	**Songino Array**	**64.13**	**331**	P	**P**	**22 44 53.1**	**+0.4**
YAK	**Yakutsk**	**68.77**	**351**	P	**P**	**22 45 21.5**	**-0.1**
VNDA	**Vanda**	**72.30**	**177**	P	**P**	**22 45 43.2**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=325,slow=6.8,SNR=10						
VNDA	**Vanda**	**72.30**	**177**	P	**P**	**22 45 43.5**	**+0.7**
VNDA				IAmb	IAmb	22 45 44.3	
	comp=Z,2.1nm,0.8s						
WMQ	**Urumqi**	**72.59**	**319**	*e*P	**P**	**22 45 46.5**	**+1.3**
MK31	**Makanchi Array**	**77.28**	**320**	P	**P**	**22 46 11.7**	**-0.3**
MKAR	**Makanchi Array**	**77.28**	**320**	P	**P**	**22 46 11.7**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=99,slow=7.8,SNR=12						
MAKZ	**Makanchi**	**77.49**	**320**	P	**P**	**22 46 12.7**	**-0.5**
TIXI	**Tiksi**	**78.03**	**354**	P	**P**	**22 46 15.0**	**-0.5**
TIXI				IAmb	IAmb	22 46 18.1	
	comp=Z,3.7nm,1.4s						
ZALV	**Zalesovo Beam**	**78.75**	**328**	P	**P**	**22 46 18.2**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=127,slow=6.4,SNR=3.2						
KSH	**Kashi**	**79.22**	**312**	P	**P**	**22 46 26.0**	**+3.1**
KSH				pP	pP	22 47 01.0	-8.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,130nm,6.4s						
KDAK	**Kodiak Island**	**79.48**	**28**	P	**P**	**22 46 23.1**	**-0.6**
	comp=Z,10nm,1.0s,baz=190,slow=6.1,SNR=2.3						
CNPM	**China Poot**	**80.92**	**27**	P	**P**	**22 46 31.7**	**+0.3**
TRF	**Thorofare Moun**	**83.13**	**24**	P	**P**	**22 46 42.7**	**-0.3**
I23K	**Minto, Yukon-K**	**84.26**	**22**	P	**P**	**22 46 48.7**	**+0.3**
I23K				IAmb	IAmb	22 46 53.1	
	comp=Z,6.1nm,1.5s						
QSPA	**South Pole Qui**	**84.37**	**180**	P	**P**	**22 46 49.0**	**-0.3**
QSPA				IAmb	IAmb	22 46 49.8	
	comp=Z,7.1nm,1.2s						
IL31		**85.05**	**23**	P	**P**	**22 46 51.2**	**-1.2**
IL31				IAmb	IAmb	22 46 51.6	
	comp=Z,4.4nm,0.8s						
ILAR	**Eielson Array**	**85.05**	**23**	P	**P**	**22 46 51.0**	**-1.5**
	comp=Z,3.1nm,0.7s,baz=252,slow=4.9,SNR=44						
ILAR	**Eielson Array**	**85.05**	**23**	P	**P**	**22 46 51.1**	**-1.4**
INK	**Inuvik**	**91.22**	**21**	P	**P**	**22 47 20.9**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=225,slow=4.3,SNR=4.2						
NVAR	**Mina Array Bea**	**97.00**	**52**	P	**P**	**22 47 50.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=246,slow=5.9,SNR=5.6						
NEW	**Newport**	**97.96**	**42**	P	Pdif	22 47 53.0	0.0
	comp=Z,0.3nm,0.3s,baz=241,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**98.75**	**28**	P	**P**	**22 47 55.5**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=277,slow=4.5,SNR=3.2						
PDAR	**Pinedale Array**	**103.53**	**47**	Pdiff	**Pdif**	**22 48 17.7**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=257,slow=3.6,SNR=2.5						
GERES	**GERESS Array B**	**121.66**	**326**	PKP	**PKPdf**	**22 53 09.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=102,slow=1.4,SNR=6.7						
PLCA	**Paso Flores**	**122.37**	**147**	PKP	**PKPdf**	**22 53 11.6**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=259,slow=5.2,SNR=3.5						
PLCA	**Paso Flores**	**122.37**	**147**		**PKPdf**	**22 53 11.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**145.14**	**285**	PKPbc	**PKPbc**	**22 53 53.9**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=73,slow=3.6,SNR=8.3						
TORD	**Torodi Ar. Bea**	**145.14**	**285**		**PKPbc**	**22 53 53.4**	**-0.9**
BDFB	**Brasilia**	**154.10**	**145**	PKPbc	**PKiKP**	**22 54 16.8**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=250,slow=1.5,SNR=3.3						
BDFB	**Brasilia**	**154.10**	**145**		**PKPbc**	**22 54 16.6**	**-0.3**

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*IDC **17** 22:48:47.6±1.1, 8.°77N×125.°66E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.6/49, mbtmp3.9/6, ML4.2/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/48, Error ellipse: s-maj=51.9km s-min=12.6km az=87.0*

*MAN **17** 22:48:48.3, 8.°78N×125.°82E, h7^{km}, MS3.2*

ISC 17 22:48:49.4±1.1, **8.°80N**±0.°03×**125.°80E**±0.°06, **h16**^{km}±7^{km}, **n23,** σ1^{s}**89**/26, **mb3.6**/5, **MS3.0**/3, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.24**	**314**	*e*P	**Pg**	**22 48 54.3**	**-0.5**
BUTP				*e*S	**Sg**	**22 49 00.5**	**+2.0**
GLSP	**General Luna,**	**1.03**	**18**	*e*P	**Pg**	**22 49 07.6**	**-1.8**
CGP	**Cagayan de Oro**	**1.14**	**252**	⇑*e*P	**Pb**	**22 49 09.2**	**-1.6**
CGP				*i* S	**Sn**	**22 49 27.4**	**+1.3**
BUKP	**Musuan**	**1.17**	**218**	*e*P	**Pb**	**22 49 10.0**	**-1.4**
BUKP				*e*S	**Sn**	**22 49 27.4**	**+0.5**
MSLP	**Maasin**	**1.61**	**325**	*e*P	**Pn**	**22 49 16.4**	**-0.9**
MSLP				*e*S	**Sn**	**22 49 31.8**	**-6.0**
DAV	**Davao City (W)**	**1.74**	**187**	Pg	**Pb**	**22 49 19.3**	**-1.6**
	63nm,0.3s,baz=11,slow=4.1,SNR=9.5						
DAV				Lg	Lg	22 49 40.6	
	105nm,0.3s,baz=89,slow=23,SNR=9.7						
DAV				LR	LR	22 50 21.1	
	comp=Z,482nm,20.4s,baz=166,slow=55						
MATI	**Mati**	**1.90**	**166**	*e*P	**Pn**	**22 49 21.6**	**+0.3**
MATI				*e*S	**Sn**	**22 49 44.4**	**-0.5**
KCP	**Kidapawan**	**1.92**	**201**	⇓*e*P	**Pg**	**22 49 24.0**	**-2.3**
LLP	**Lapu-Lapu**	**2.35**	**310**	*e*P	**Pb**	**22 49 30.7**	**-0.7**
LLP				*e*S	**Sn**	**22 49 57.4**	**+1.5**
OCLP	**Ormoc**	**2.52**	**332**	*e*P	**Pn**	**22 49 31.6**	**+1.9**
SKMP	**Bagumbayan, Su**	**2.59**	**209**	*e*P	**Pn**	**22 49 31.5**	**+0.8**
SKMP				*e*S	**Sb**	**22 50 05.1**	**-1.9**
DDMP	**Don Marcelino,**	**2.68**	**182**	*e*P	**Pn**	**22 49 32.8**	**+0.8**
DDMP				*e*S	**Sb**	**22 50 10.6**	**+0.7**
SIJI	**Sorong**	**11.05**	**150**	Pn	**Pn**	**22 51 29.4**	**+2.4**
	1.5nm,0.3s,baz=318,slow=12,SNR=5.8						
KAPI	**Kappang**	**14.99**	**204**	LR	LR	22 57 47.4	
	comp=Z,43nm,21.3s,baz=21,slow=36						
BATI	**Baumata**	**19.00**	**186**	LR	LR	23 01 20.4	
	comp=Z,80nm,19.4s,baz=251,slow=40						
FITZ	**Fitzroy Crossi**	**26.73**	**180**	P	**P**	**22 54 29.4**	**+1.0**
	3.3nm,1.0s,baz=352,slow=7.1,SNR=2.2						
CMAR	**Chiang Mai Arr**	**27.77**	**293**	LR	LR	23 05 52.9	
	comp=Z,33nm,18.5s,baz=158,slow=37						
WRA	**Warramunga Arr**	**29.78**	**164**	P	**P**	**22 54 55.3**	**-0.3**
	0.5nm,0.7s,baz=344,slow=9.5,SNR=3.7						
MJAR	**Matsushiro Arr**	**29.83**	**20**	LR	LR	23 06 07.6	
	comp=Z,32nm,20.7s,baz=135,slow=35						
ASAR	**Alice Springs**	**33.23**	**166**	P	**P**	**22 55 26.3**	**+0.3**
	0.5nm,0.6s,baz=345,slow=7.1,SNR=12						
USRK	**Ussuriysk Ar.**	**35.67**	**8**	P	**P**	**22 55 47.9**	**+1.0**
	2.6nm,0.8s,baz=198,slow=8.9,SNR=6.0						
STKA	**Stephens Creek**	**43.18**	**160**	LR	LR	23 19 04.7	
	comp=Z,37nm,19.6s,baz=101,slow=42						
MKAR	**Makanchi Array**	**52.91**	**324**	P	**P**	**22 58 05.2**	**+0.3**
	0.6nm,0.7s,baz=124,slow=7.7,SNR=7.5						

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*MOS **17** 23:02:50.7±1.1, 40.°69N×52.°82E, h50^{km}, mb4.6/17, Error ellipse: s-maj=4.6km s-min=3.5km az=29.0*

*NEIC **17** 23:02:51.7±1.7, 40.°61N±0.°07×52.°80E±0.°08, h47^{km}±6^{km}, mb4.6/86, Error ellipse: s-maj=10.6km s-min=9.1km az=188.0*

*IDC **17** 23:02:52.3±0.5, 40.°59N×52.°80E, h53^{km}±4^{km}, mb4.1/21, mb1 4.3/37, mb1mx4.2/55, mbtmp4.4/37, MS3.2/18, Ms1 3.2/18, ms1mx3.0/54, Error ellipse: s-maj=11.5km s-min=7.6km az=167.0*

*NNC **17** 23:02:53.1±1.6, 40.°86N×53.°53E, h0^{km}, mb4.7, Error ellipse: s-maj=15.0km s-min=8.1km az=81.0*

ISC 17 23:02:51.9±0.3, **40.°69N**±0.°03×**52.°79E**±0.°03, **h50**^{km}±3^{km}, **h50**^{km}**:pP-P, n480,** σ1^{s}**79**/548, **mb4.5**/102, **MS3.3**/13, **51C-35D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**3.67**	**239**	P	**Pn**	**23 03 45.4**	**-0.7**
AKT	**Akhty**	**3.91**	**283**	*e*P	**Pn**	**23 03 51.2**	**+1.8**
AKT				*e*S	**Sn**	**23 04 37.2**	**+3.2**
AKT				pmax	pmax		
	comp=Z,123nm,0.2s						
AKT				smax	smax		
	comp=N,647nm,0.4s						
AKT				smax	smax		
	comp=E,918nm,0.3s						
AKT				smax	smax		
	comp=E,672nm,0.3s						
AKT				MLR	MLR		
	comp=Z,166nm,2.0s						
SEKA	**Sheki**	**4.27**	**279**	P	**Pn**	**23 03 56.2**	**+1.9**
MNGR	**Mingechevir, A**	**4.33**	**273**	P	**Pn**	**23 03 57.4**	**+2.2**
MAK	**Makhachkala**	**4.55**	**302**	*e*P	**Pn**	**23 03 56.8**	**-1.4**
MAK				*e*S	**Sn**	**23 04 49.1**	**-0.7**
MAK				pmax	pmax		
	comp=Z,274nm,1.1s						
MAK				MLR	MLR		
	comp=Z,113nm,12.0s						
GNBR	**Gunib**	**4.69**	**293**	⇓*e*P	**Pn**	**23 04 03.2**	**+3.1**
ZKTA	**Zakatala**	**4.75**	**284**	P	**Pn**	**23 03 57.4**	**-3.5**
GEYT	**Alibeck**	**4.97**	**122**	P	**Pn**	**23 04 03.4**	**-0.5**
	comp=Z,15nm,0.3s,baz=288,slow=17,SNR=174						
GEYT				S	**Sn**	**23 04 55.2**	**-4.8**
	comp=Z,16nm,0.3s,baz=154,slow=44,SNR=1.5						
GEYT	**Alibeck**	**4.97**	**122**		**Pn**	**23 04 03.0**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**4.97**	**122**	⇑P	**Pn**	**23 04 03.2**	**-0.8**
GYA0B				⇓S	**Sn**	**23 04 58.5**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**4.97**	**122**		**Pn**	**23 04 03.0**	**-0.9**
DBC	**Dubki**	**5.02**	**300**	*c i*P	**Pn**	**23 04 06.1**	**+1.4**
DDFL	**Dedoflistskaro**	**5.10**	**281**	P	**Pn**	**23 04 08.8**	**+3.0**
DDFL				S	**Sn**	**23 04 56.2**	**-7.1**
DDFL	**Dedoflistskaro**	**5.10**	**281**	P	**Pn**	**23 04 08.8**	**+3.0**
DDFL				S	**Sn**	**23 04 56.2**	**-7.1**
ASHT	**Ashkhabad**	**5.13**	**121**	P	**Pn**	**23 04 06.2**	**0.0**
ASHT	**Ashkhabad**	**5.13**	**121**	Pn	**Pn**	**23 04 06.2**	**0.0**
BTLR	**Botlikh**	**5.30**	**294**	*d i*P	**Pn**	**23 04 11.4**	**+2.9**
DVE	**Vedeno**	**5.47**	**297**	*ce*P	**Pn**	**23 04 14.3**	**+3.5**
NAX	**Nakhchivan**	**5.81**	**257**	P	**Pn**	**23 04 16.4**	**+0.9**
BTNK	**Botanikuri**	**6.11**	**282**	P	**Pn**	**23 04 22.2**	**+2.6**
BTNK				S	**Sn**	**23 05 29.4**	**+1.2**
BTNK	**Botanikuri**	**6.11**	**282**	P	**Pn**	**23 04 22.2**	**+2.6**
BTNK				S	**Sn**	**23 05 29.3**	**+1.2**
GNI	**Garni**	**6.17**	**268**	P	**Pn**	**23 04 22.0**	**+1.5**
	comp=Z,3.8nm,0.3s,baz=37,slow=2.8,SNR=20						
GNI				S	**Sn**	**23 05 32.5**	**+2.7**
	comp=Z,7.8nm,0.3s,baz=335,slow=6.2,SNR=1.8						
GNI				LR	LR	23 07 45.7	
	comp=Z,72nm,18.8s,baz=90,slow=48						
GNI	**Garni**	**6.17**	**268**	P	**Pn**	**23 04 21.3**	**+0.8**
GNI	**Garni**	**6.17**	**268**	*d i*P	**Pn**	**23 04 21.7**	**+1.2**
GNI				pmax	pmax		
	comp=Z,13nm,0.5s						
GNI	**Garni**	**6.17**	**268**	Pn	**Pn**	**23 04 21.8**	**+1.3**
GNI	**Garni**	**6.17**	**268**	P	**Pn**	**23 04 22.1**	**+1.6**
DMNI	**Dmanisi**	**6.54**	**278**	P	**Pn**	**23 04 26.1**	**+0.6**
DMNI				S	**Sn**	**23 05 36.8**	**-2.0**
DMNI	**Dmanisi**	**6.54**	**278**	P	**Pn**	**23 04 26.1**	**+0.6**
DMNI				S	**Sn**	**23 05 36.8**	**-2.0**
BRNG	**Burnasheti**	**6.83**	**281**	P	**Pn**	**23 04 31.3**	**+1.7**
BRNG				S	**Sn**	**23 05 45.7**	**-0.3**
ZEI	**Tsey**	**6.97**	**290**	*e*P	**Pn**	**23 04 35.0**	**+3.5**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BKRG	**Bakuriani**	**7.07**	**282**	P	**Pn**	**23 04 34.2**	**+1.4**
BKRG				S	**Sn**	**23 05 51.9**	**-0.1**
BKRG	**Bakuriani**	**7.07**	**282**	P	**Pn**	**23 04 34.2**	**+1.4**
BKRG				S	**Sn**	**23 05 51.8**	**-0.1**
NCK	**Nalchik**	**7.39**	**295**	*de*P	**Pn**	**23 04 38.2**	**+1.1**
NCK				pmax	pmax		
	comp=Z,30nm,0.3s						
TKB	**Tkibuli**	**7.54**	**286**	P	**Pn**	**23 04 41.9**	**+2.8**
TKB	**Tkibuli**	**7.54**	**286**	P	**Pn**	**23 04 41.9**	**+2.8**
ABS	**Abastumani**	**7.60**	**281**	P	**Pn**	**23 04 41.7**	**+1.6**
ABS				S	**Sn**	**23 06 02.7**	**-2.2**
ABS	**Abastumani**	**7.60**	**281**	P	**Pn**	**23 04 41.7**	**+1.6**
ABS				S	**Sn**	**23 06 02.6**	**-2.2**
KBZ	**Khabaz**	**7.95**	**296**	P	**Pn**	**23 04 44.6**	**0.0**
	comp=Z,1.6nm,0.3s,baz=123,slow=3.4,SNR=61						
KBZ				S	**Sn**	**23 06 09.9**	**-3.1**
	comp=Z,9.2nm,0.3s,baz=358,slow=14,SNR=6.2						
KBZ	**Khabaz**	**7.95**	**296**	*de*P	**Pn**	**23 04 44.4**	**-0.2**
KVAR	**Kislovodsk Arr**	**8.16**	**297**	P	**Pn**	**23 04 48.2**	**+0.5**
	baz=291,slow=22,SNR=7.0						
KIV	**Kislovodsk**	**8.16**	**297**	*i* P	**Pn**	**23 04 47.9**	**+0.1**
	SNR=12						
KIV	**Kislovodsk**	**8.16**	**297**	*e*P	**Pn**	**23 04 47.8**	**0.0**
KIV				*e*S	**Sn**	**23 06 18.9**	**+0.2**
KIV				pmax	pmax		
	comp=Z,76nm,0.8s						
KIV				MLR	MLR		
	comp=Z,29nm,9.0s						
KIV	**Kislovodsk**	**8.16**	**297**	Pn	**Pn**	**23 04 48.2**	**+0.4**
KIV	**Kislovodsk**	**8.16**	**297**	P	**Pn**	**23 04 48.0**	**+0.3**
KIV				S	**Sn**	**23 06 15.0**	**-3.7**
CHVG	**Ch'k'valeri**	**8.26**	**288**	P	Pn	23 04 56.3	+7.2
CHVG	**Ch'k'valeri**	**8.26**	**288**	P	Pn	23 04 56.2	+7.2
GOF	**Gofitskoye**	**8.38**	**305**	⇑*e*P	**Pn**	**23 04 51.6**	**+1.0**
GOF				*e*S	**Sn**	**23 06 21.4**	**-2.4**
GOF				pmax	pmax		
	comp=Z,34nm,1.1s						
GOF				smax	smax		
	comp=E,294nm,0.6s						
GOF				smax	smax		
	comp=N,160nm,0.4s						
KOPT	**Kop Dagi**	**9.41**	**270**	Pn	**Pn**	**23 05 06.3**	**+1.3**
HRA	**Herat**	**9.79**	**127**	Pn	**Pn**	**23 05 09.1**	**-1.1**
MARD	**Mardin**	**9.94**	**254**	Pn	**Pn**	**23 05 12.5**	**+0.4**
AB31	**Akbulak array**	**9.95**	**28**	P	**Pn**	**23 05 11.4**	**-0.6**
	comp=N,4.8nm,0.3s,baz=205,slow=13,SNR=235						
AB31				⇓S	**Sn**	**23 06 58.4**	**-3.8**
	comp=N,38nm,0.4s,baz=207,slow=26,SNR=14						
ABKAR	**Akbulak array**	**9.95**	**28**	Pn	**Pn**	**23 05 11.4**	**-0.7**
ABKAR	**Akbulak array**	**9.95**	**28**	Pn	**Pn**	**23 05 11.3**	**-0.7**
SOC	**Sochi**	**10.13**	**291**	*e*P	**Pn**	**23 05 12.4**	**-2.2**
SOC				*e*		23 07 06.1	
SOC				MLR	MLR		
	comp=Z,39nm,12.0s						
AKTO	**Aktyubinsk**	**10.41**	**19**	P	**Pn**	**23 05 18.4**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=213,slow=8.4,SNR=53						
AKTO				S	**Sn**	**23 07 09.7**	**-3.8**
	comp=Z,23nm,0.3s,baz=62,slow=22,SNR=16						
AKTO				LR	LR	23 10 42.4	
	comp=Z,115nm,20.4s,baz=214,slow=45						
AKTO	**Aktyubinsk**	**10.41**	**19**	⇓P	**Pn**	**23 05 18.2**	**-0.2**
	comp=Z,18nm,0.3s						
AKTO				⇓S	**Sn**	**23 07 11.5**	**-1.9**
	comp=Z,232nm,0.7s						
MIB	**Mutribah**	**11.74**	**204**	*e*P		23 05 34.6	
UMR	**Umm Al-Rimmam**	**11.86**	**202**	*e*P		23 05 36.6	
ANN	**Anapa**	**12.01**	**295**	*e*P	**Pn**	**23 05 40.3**	**0.0**
ANN				pmax	pmax		
	comp=Z,11nm,1.1s						
RST	**Umm Al-Ruwaisa**	**12.13**	**205**	*e*P		23 05 39.4	
BELG	**Belogornoye**	**12.23**	**345**	P	**Pn**	**23 05 43.0**	**-0.2**
	comp=Z,7.3nm,0.3s,baz=30,slow=0.9,SNR=18						
BELG				S	**Sn**	**23 07 52.0**	**-5.9**
	comp=Z,18nm,0.3s,baz=34,slow=19,SNR=5.8						
BELG				LR	LR	23 11 38.3	
	comp=Z,178nm,18.4s,baz=280,slow=43						
BELG	**Belogornoye**	**12.23**	**345**	*de*P	**Pn**	**23 05 42.7**	**-0.5**
RDF	**Al-Radifah**	**12.50**	**202**	*e*P		23 05 44.6	
QRN	**Al-Qurain**	**12.57**	**200**	*e*P		23 05 45.5	
VRH	**Novokhopyorsk**	**13.02**	**328**	*e*P	**Pn**	**23 05 53.2**	**-0.7**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
KK31	**Karatay Array**	**13.42**	**74**	⇑P	**Pn**	**23 05 56.0**	**-3.6**
	comp=Z,5.4nm,0.5s,baz=288,slow=12,SNR=16						
KK31				⇑S	**Sn**	**23 08 23.5**	**-3.7**
	comp=Z,12nm,0.7s,baz=270,slow=24,SNR=6.3						
KK31	**Karatay Array**	**13.42**	**74**	P	**Pn**	**23 05 58.8**	**-0.8**
KK31	**Karatay Array**	**13.42**	**74**	Pn	**Pn**	**23 05 58.8**	**-0.8**
KKAR	**Karatay Array**	**13.42**	**74**	P	**Pn**	**23 05 59.0**	**-0.6**
KKAR	**Karatay Array**	**13.42**	**74**		**Pn**	**23 05 58.7**	**-0.8**
KKAR	**Karatay Array**	**13.42**	**74**		**Pn**	**23 05 59.0**	**-0.6**
VSR	**Storozhevoye**	**14.14**	**323**	*e*P	**Pn**	**23 06 08.1**	**-1.1**
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
KBL	**Kabul**	**14.26**	**110**	P	**Pn**	**23 06 11.2**	**+0.1**
KBL	**Kabul**	**14.26**	**110**		**Pn**	**23 06 11.2**	**+0.1**
BR131	**Keskin Array S**	**14.67**	**272**	⇑*e*P	**Pn**	**23 06 18.7**	**+2.3**
BR131	**Keskin Array S**	**14.67**	**272**		**Pn**	**23 06 17.8**	**+1.4**
BRTR	**Keskin Array B**	**14.67**	**272**	P	**Pn**	**23 06 17.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=85,slow=10.0,SNR=6.9						
BRTR				LR	LR	23 12 43.8	
	comp=Z,24nm,21.1s,baz=69,slow=40						
BRTR	**Keskin Array B**	**14.67**	**272**	*ce*P	**P**	**23 06 20.8**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**14.67**	**272**		**Pn**	**23 06 17.0**	**+0.5**
SHME	**Shamm**	**14.87**	**168**	*i* P	**Pn**	**23 06 16.7**	**-2.2**
	SNR=5.3						
SHME	**Shamm**	**14.87**	**168**	P	**Pn**	**23 06 17.8**	**-1.1**
BANOM	**Banah**	**15.02**	**168**	*i* P	**Pn**	**23 06 18.9**	**-2.0**
	SNR=7.8						
BANOM	**Banah**	**15.02**	**168**	P	**Pn**	**23 06 19.0**	**-1.9**
	SNR=8.1						
LPSR	**Galich'ya Gora**	**15.21**	**326**	*e*P	**Pn**	**23 06 21.6**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,90nm,0.7s						
MSFE	**Esma-Masafi**	**15.55**	**169**	P	**Pn**	**23 06 24.2**	**-3.6**
MDH	**Madha**	**15.63**	**168**	P	**Pn**	**23 06 27.6**	**-1.2**
MDH	**Madha**	**15.63**	**168**	P	**Pn**	**23 06 29.5**	**+0.7**
JRN	**Qarnain Island**	**15.71**	**180**	P	**Pn**	**23 06 26.8**	**-2.9**
AML	**Almayashu**	**15.75**	**78**	P	**Pn**	**23 06 30.3**	**-0.3**
	SNR=12						
EKS2	**Erkin-Say**	**15.80**	**76**	P	**P**	**23 06 36.9**	**+2.7**
	SNR=11						
NAZ	**Nazwa, Dubai**	**15.84**	**170**	P	**Pn**	**23 06 26.5**	**-5.0**
MMAI	**Mount Meron Ar**	**15.87**	**247**	P	**Pn**	**23 06 33.0**	**+1.0**
	comp=Z,2.1nm,0.3s,baz=60,slow=14,SNR=29						
MMAI				LR	LR	23 13 46.1	
	comp=Z,43nm,19.2s,baz=235,slow=41						
UOSS	**Minazif**	**15.96**	**169**	P	**Pn**	**23 06 30.0**	**-3.0**
UOSS	**Minazif**	**15.96**	**169**	Pn	**Pn**	**23 06 30.8**	**-2.2**
UOSS	**Minazif**	**15.96**	**169**	P	**Pn**	**23 06 30.5**	**-2.6**
HATD	**Hatta, Dubai**	**16.07**	**169**	*i* P	**Pn**	**23 06 31.7**	**-2.7**
	SNR=5.5						
HATD	**Hatta, Dubai**	**16.07**	**169**	P	**Pn**	**23 06 31.7**	**-2.7**
FAQ	**Al Faqa, Dubai**	**16.07**	**171**	P	**Pn**	**23 06 31.4**	**-3.1**
ASUD	**Al Ashush, Dub**	**16.16**	**172**	P	**Pn**	**23 06 33.3**	**-2.2**
BTLS	**Baital**	**16.17**	**67**	*e*P	**Pn**	**23 06 35.0**	**-0.5**
	baz=68						
BTLS	**Baital**	**16.17**	**67**	*e*P	**Pn**	**23 06 35.0**	**-0.5**
ASHO	**Ashiyiah**	**16.20**	**169**	*i* P	**Pn**	**23 06 33.6**	**-2.5**
	SNR=9.1						
ASHO	**Ashiyiah**	**16.20**	**169**	P	**Pn**	**23 06 33.8**	**-2.3**
ARU	**Arti**	**16.20**	**12**	P	**Pn**	**23 06 35.4**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=195,slow=6.9,SNR=18						
ARU				S	**Sn**	**23 09 24.9**	**-9.4**
	comp=Z,0.0nm,0.3s,baz=92,slow=19,SNR=13						
ARU				LR	LR	23 14 26.6	
	comp=Z,186nm,19.0s,baz=224,slow=43						
ARU	**Arti**	**16.20**	**12**	*c i*P	**Pn**	**23 06 34.3**	**-1.5**
ARU				S	**Sn**	**23 09 32.2**	**-2.1**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	**Arti**	**16.20**	**12**	Pn	**Pn**	**23 06 34.6**	**-1.2**
ARU				IAmb	IAmb	23 06 53.4	
	comp=Z,65nm,0.8s						
AAK	**Ala-Archa**	**16.33**	**76**	P	**Pn**	**23 06 38.7**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=235,slow=5.4,SNR=14						
AAK				LR	LR	23 13 21.9	
	comp=Z,57nm,19.5s,baz=286,slow=38						
AAK	**Ala-Archa**	**16.33**	**76**	P	**P**	**23 06 39.1**	**-0.9**
	SNR=8.5						
AAK	**Ala-Archa**	**16.33**	**76**	⇑P	**Pn**	**23 06 37.7**	**-0.2**
	comp=Z,16nm,1.1s						
AAK				⇓S	**Sn**	**23 09 33.9**	**-4.2**
	comp=Z,14nm,1.1s						
AAK	**Ala-Archa**	**16.33**	**76**	⇑*e*P	**Pn**	**23 06 38.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AAK	**Ala-Archa**	**16.33**	**76**		**Pn**	**23 06 38.0**	**+0.2**
USP	**Ospenovka**	**16.34**	**74**	P	**P**	**23 06 40.8**	**+0.8**
	SNR=9.5						
CSS	**Mathiatis**	**16.39**	**256**		**P**	**23 06 39.9**	**-0.7**
SGDS	**Sogindy**	**16.44**	**73**	*e*P	**Pn**	**23 06 39.2**	**+0.1**
	baz=74						
SGDS	**Sogindy**	**16.44**	**73**	*e*P	**Pn**	**23 06 39.2**	**+0.1**
CHMS	**Chumysh**	**16.52**	**75**	P	**P**	**23 06 43.5**	**+1.5**
	SNR=7.6						
SLWR	**Sila**	**16.60**	**184**	P	**Pn**	**23 06 37.9**	**-3.2**
KBK	**Karagaybulak**	**16.67**	**76**	P	**P**	**23 06 45.6**	**+1.8**
	SNR=15						
BRZS	**Berezniki**	**16.74**	**50**	*e*P	**Pn**	**23 06 43.6**	**+0.8**
	comp=Z,8.2nm,0.7s,baz=50						
BRZS	**Berezniki**	**16.74**	**50**	*e*P	**Pn**	**23 06 43.5**	**+0.8**
BRZS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SVE	**Sverdlovsk**	**16.94**	**15**	*e*P	**Pn**	**23 06 45.4**	**+0.3**
SVE				*e*S	**Sn**	**23 09 45.4**	**-6.8**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
TKM2	**Tokmak 2**	**17.14**	**75**	P	**P**	**23 06 49.3**	**+0.2**
	SNR=20						
TKM2	**Tokmak 2**	**17.14**	**75**	⇑P	**P**	**23 06 48.9**	**-0.1**
	comp=Z,18nm,0.9s						
TKM2				⇓S	**Sn**	**23 09 52.6**	**-5.1**
	comp=Z,9.6nm,0.8s						
TKM2	**Tokmak 2**	**17.14**	**75**	*i* P	**P**	**23 06 48.9**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,16nm,0.8s						
BRVK	**Borovoye**	**17.15**	**38**	⇑P	**Pn**	**23 06 47.5**	**-0.3**
	comp=Z,38nm,0.9s						
BRVK				⇑S	**Sn**	**23 09 52.0**	**-5.4**
	comp=Z,41nm,0.8s						
BRVK	**Borovoye**	**17.15**	**38**	⇓*e*P	**Pn**	**23 06 47.2**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,25nm,0.9s						
BRVK	**Borovoye**	**17.15**	**38**		**Pn**	**23 06 47.0**	**-0.7**
BRVK				IAmb	IAmb	23 07 03.9	
	comp=Z,34nm,0.8s						
BVAR	**Borovoye Array**	**17.18**	**38**	P	**P**	**23 06 48.8**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=217,slow=15,SNR=15						
BVAR				S	Sn	23 09 44.7	-13
	comp=Z,1.6nm,0.3s,baz=222,slow=19,SNR=3.8						
ARQ	**Araqi**	**17.59**	**169**	P	**Pn**	**23 06 50.6**	**-2.8**
	SNR=10						
NIL	**Nilore**	**17.74**	**107**	P	**Pn**	**23 06 54.2**	**-1.0**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	**Nilore**	**17.74**	**107**		**Pn**	**23 06 54.1**	**-1.0**
KSH	**Kashi**	**17.77**	**86**	P	**Pn**	**23 06 52.6**	**-3.0**
KSH				pP	pP	23 07 01.8	-5.5
KSH				S	Sn	23 10 01.8	-11
KSH				pmax	pmax		
	comp=Z,17nm,0.5s						
KSH				pmax	pmax		
	comp=Z,360nm,5.2s						
OBN	**Obninsk**	**18.00**	**329**	P	**Pn**	**23 06 59.6**	**+1.5**
	comp=Z,2.8nm,0.3s,baz=327,slow=23,SNR=14						
OBN				S	**Sn**	**23 10 09.0**	**-8.9**
	comp=Z,0.6nm,0.3s,baz=217,slow=23,SNR=1.8						
OBN	**Obninsk**	**18.00**	**329**	⇑P	**Pn**	**23 06 59.7**	**+1.5**
OBN	**Obninsk**	**18.00**	**329**	*c i*P	**Pn**	**23 06 59.3**	**+1.1**
OBN				*i* S	**Sn**	**23 10 13.0**	**-4.9**
OBN				pmax	pmax		
	comp=Z,17nm,0.5s						
OBN				MLR	MLR		
	comp=Z,143nm,20.0s						
OBN	**Obninsk**	**18.00**	**329**	P	**Pn**	**23 06 58.8**	**+0.7**
OBN				IAmb	IAmb	23 06 60.0	
	comp=Z,33nm,0.5s						
KIRV	**Kirov**	**18.04**	**354**	P	**Pn**	**23 07 00.1**	**+1.5**
	comp=Z,8.5nm,0.3s,baz=300,slow=1.5,SNR=10						
KIRV				S	**Sn**	**23 10 10.5**	**-8.3**
	comp=Z,3.9nm,0.3s,baz=232,slow=15,SNR=3.8						
KIRV				LR	LR	23 15 44.2	
	comp=Z,143nm,19.6s,baz=186,slow=42						
KIRV	**Kirov**	**18.04**	**354**	*ce*P	**Pn**	**23 07 00.6**	**+2.0**
MOS	**Moscow**	**18.07**	**332**	*e*P	**P**	**23 06 57.7**	**-1.2**
MOS				*e*S	**Sn**	**23 10 11.4**	**-8.1**

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MOS                                pmax    pmax
      comp=Z,61nm,0.6s
WSAR  Wadi Sarin        18.08 162  P       P       23 06 57.8 -1.5
      comp=Z,1.8nm,0.3s,baz=352,slow=7.8,SNR=26
TLCR                    18.10 292 ⇑P       Pn      23 06 59.7 +0.2
AAA   Alma-Ata          18.11  74 eP       Pn      23 07 00.2 +0.5
      comp=Z,7.0nm,0.7s,baz=74
AAA   Alma-Ata          18.11  74 eP       Pn      23 07 00.1 +0.5
AAA                                pmax    pmax
      comp=Z,7.0nm,0.7s
SMDO  Samad             18.13 164  P       P       23 06 59.3 -0.7
SMDO                               P       P       23 06 59.3 -0.7
TNSS  Tian-Shan         18.13  75 eP       Pn      23 07 02.3 +2.0
      baz=75
TNSS  Tian-Shan         18.13  75 eP       Pn      23 07 02.3 +2.0
CHKK  Chushkaly         18.17  72 eP       P       23 07 00.1  0.0
      baz=72
CHKK  Chushkaly         18.17  72 eP       P       23 07 00.1  0.0
RAYN  Ar Rayn           18.18 202  P       P       23 06 57.2 -3.3
RAYN  Ar Rayn           18.18 202  P       P       23 06 57.1 -3.3
RAYN                               pmax    pmax
      comp=Z,33nm,1.0s
RAYN  Ar Rayn           18.18 202  P       P       23 06 57.1 -3.4
RAYN                               IAmb    IAmb    23 06 59.5
      comp=Z,32nm,0.9s
MDOK  Medeo             18.20  74 eP       Pn      23 07 01.4 +0.4
      baz=75
MDOK  Medeo             18.20  74 eP       Pn      23 07 01.3 +0.4
EIL   Elat              18.23 238  P       Pn      23 07 01.8 +0.7
      comp=Z,0.5nm,0.3s,baz=22,slow=12,SNR=6.8
EIL                                LR      LR      23 15 55.6
      comp=Z,62nm,18.3s,baz=50,slow=43
ELL   Elmali            18.27 265  P       Pn      23 07 02.3 +0.5
ELL                                pmax    pmax
      comp=Z,35nm,0.7s
ELL   Elmali            18.27 265  P       Pn      23 07 02.3 +0.5
ELL                                IAmb    IAmb    23 07 05.8
      comp=Z,35nm,0.7s
TIRR  Tirgusor          18.32 290  P       P       23 07 01.3 -0.5
TIRR                               pmax    pmax
      comp=Z,55nm,1.3s
TIRR  Tirgusor          18.32 290  P       P       23 07 01.3 -0.5
TIRR                               IAmb    IAmb    23 07 02.1
      comp=Z,55nm,1.3s
MILM  Milestii Mici     18.36 298 ⇑P       P       23 07 02.1  0.0
CFR   Carcaliu          18.57 292 ⇓P       P       23 07 04.8 +0.3
TLBR  Topalu            18.59 290 ⇑P       Pn      23 07 05.5 +0.1
AKAS  Kas               18.68 264  P       P       23 07 05.6 -0.3
HARR  Harsova           18.68 291 ⇑P       Pn      23 07 06.3 -0.2
WBK   Wadi Bani Khal    18.77 162  P       P       23 07 06.7 -0.2
      SNR=10.0
SORM  Soroca            18.93 301 ⇑P       P       23 07 08.5 +0.1
VASR  Vaslui            19.00 297 ⇑P       Pn      23 07 09.9 -0.4
AKASG Malin Array Be    19.19 309  P       P       23 07 11.5 +0.3
      comp=Z,12nm,0.3s,baz=105,slow=10.0,SNR=33
AKASG                              S       S       23 10 39.6 -6.2
      comp=Z,0.7nm,0.3s,baz=105,slow=22,SNR=3.2
AKASG Malin Array Be    19.19 309  P       P       23 07 11.2  0.0
AKASG                              pmax    pmax
      comp=Z,3.0nm,0.9s
AKASG Malin Array Be    19.19 309  P       P       23 07 11.2  0.0
AKBB  Malin Array Si    19.19 309  P       P       23 07 11.0 -0.2
AKBB                               pmax    pmax
      comp=Z,26nm,0.6s
AKBB  Malin Array Si    19.19 309  P       P       23 07 11.0 -0.2
AKBB                               IAmb    IAmb    23 07 14.8
      comp=Z,26nm,0.6s
SATY  Saty              19.20  74 eP       Pn      23 07 13.5 +0.6
      baz=75
SATY  Saty              19.20  74 eP       Pn      23 07 13.5 +0.6
TDK   Taldyqorghan      19.24  69 eP       P       23 07 12.4 +0.5
      comp=Z,14nm,0.6s,baz=69
TDK   Taldyqorghan      19.24  69 eP       P       23 07 12.4 +0.5
TDK                                pmax    pmax
      comp=Z,14nm,0.6s
JLN   Jalan Bani Buh    19.32 161  P       P       23 07 12.2 -0.6
      SNR=5.8
ODBI  Odobesti          19.39 294 ⇑P       Pn      23 07 15.1 +0.1
KPKS  Kokpek            19.40  73 eP       P       23 07 14.1 +0.4
      baz=74
KPKS  Kokpek            19.40  73 eP       P       23 07 14.1 +0.4
VRI   Vrincioaia        19.63 294 ⇑P       Pn      23 07 17.8  0.0
PLOR  Plostina          19.68 294 ⇓P       Pn      23 07 18.5 +0.1
TESR  Tescani           19.76 296 ⇓P       Pn      23 07 18.5 -0.8
SULR                    19.88 290 ⇑P       Pn      23 07 20.3 -0.4
NEHR  Nehoiu            19.89 293 ⇑P       Pn      23 07 20.3 -0.7
SHLS  Shalkode          19.97  74 eP       Pn      23 07 24.0 +2.0
      comp=Z,8.7nm,0.7s,baz=74
SHLS  Shalkode          19.97  74 eP       Pn      23 07 24.0 +2.0
SHLS                               pmax    pmax
      comp=Z,9.0nm,0.7s
MHTO  MHTO              20.13 166  P       P       23 07 20.7 -1.0
      SNR=11
MHTO                               P       P       23 07 20.7 -1.0
      SNR=11
MLR   Muntele Rosu      20.14 293  P       Pn      23 07 23.9 -0.1
      comp=Z,8.9nm,0.3s,baz=100,slow=3.2,SNR=51
MLR                                LR      LR      23 17 03.5
      comp=Z,70nm,18.7s,baz=92,slow=42
MLR   Muntele Rosu      20.14 293 ⇑P       Pn      23 07 23.5 -0.5
MLR   Muntele Rosu      20.14 293  P       P       23 07 22.6 +0.8
MLR                                pmax    pmax
      comp=Z,57nm,1.4s
MLR   Muntele Rosu      20.14 293  P       P       23 07 22.6 +0.8
MLR                                IAmb    IAmb    23 07 26.4
      comp=Z,57nm,1.4s
PRAR  RASCA             20.17 298 ⇑P       P       23 07 22.5 +0.5
BIZ   Bicaz             20.19 297 ⇑P       P       23 07 23.0 +0.8
ALN   Alexandroupoli    20.23 279  P       P       23 07 23.5 +0.9
ALN                                pmax    pmax
      comp=Z,8.0nm,1.1s
ALN   Alexandroupoli    20.23 279  P       P       23 07 23.5 +0.9
OZUR                    20.30 294 ⇑P       Pn      23 07 24.8 -1.1
KURBB Kurchatov Arra    20.45  52  P       Pn      23 07 27.2 -0.3
      comp=Z,11nm,0.6s,baz=253,slow=11,SNR=42
KURBB                              pP      pP      23 07 38.9 +2.4
      comp=Z,8.8nm,0.6s,baz=252,slow=12,SNR=10
KURBB                              S       S       23 11 08.4 -2.7
      comp=Z,2.2nm,0.6s,baz=275,slow=24,SNR=5.2
KURBB Kurchatov Arra    20.45  52 ⇓P       Pn      23 07 26.7 -0.8
      comp=Z,11nm,0.6s
KURBB                             ⇑S       S       23 11 11.6 +0.6
      comp=Z,30nm,0.7s
KURK  Kurchatov         20.54  52  P       Pn      23 07 27.9 -0.6
KURK                               pmax    pmax
      comp=Z,36nm,0.9s
KURK  Kurchatov         20.54  52  P       Pn      23 07 27.9 -0.7
KURK                               IAmb    IAmb    23 07 29.1
      comp=Z,36nm,0.8s
DOPR  Dopca             20.57 294 ⇓P       Pn      23 07 27.9 -1.0
COPA  Copaceanca        20.61 289 ⇑P       P       23 07 27.9 +1.2
MTUR  Matau             20.75 292 ⇑P       Pn      23 07 30.2 -0.9
VOIR                    20.77 292 ⇑P       P       23 07 29.9 +1.4
KARP  Karpathos         20.77 264  P       P       23 07 28.7 +0.1
HUMR  Humele            20.78 290 ⇓P       Pn      23 07 30.1 -1.3
STFAR Stefanesti-Arg    20.80 291 ⇓P       Pn      23 07 30.7 -1.0
BURAR Bucovina Array    20.89 299 ⇓P       P       23 07 30.9 +1.0
BURAR Bucovina Array    20.89 299  P       P       23 07 30.2 +0.4
BUR08 Bucovina Ar. S    20.90 299  P       P       23 07 30.5 +0.5
BUR08                              IAmb    IAmb    23 07 31.9
      comp=Z,36nm,0.9s
ARR   Arges             21.05 292 ⇑P       P       23 07 33.0 +1.4
VLAD  Vladila           21.20 288 ⇓P       P       23 07 34.2 +1.1
ARCR  ARCALIA           21.39 297 ⇓P       P       23 07 36.5 +1.3
SEM   Semipalatinsk     21.43  54 eP       P       23 07 35.9  0.0
      baz=54
SEM   Semipalatinsk     21.43  54 eP       P       23 07 35.8  0.0
APE   Apeiranthos       21.49 269 ⇓P       P       23 07 38.3 +1.9
APE   Apeiranthos       21.49 269deP       P       23 07 37.9 +1.6
APE                                pmax    pmax
      comp=Z,6.0nm,0.6s
MNK   Minsk             21.60 318 i P      P       23 07 36.6 -0.6
      comp=E,5.0nm,0.8s
MNK                               i P      P       23 07 36.6 -0.6
      comp=N,20nm,0.8s
MNK                               i P      P       23 07 36.6 -0.6
      comp=Z,56nm,0.8s
MNK                               i pP     pP      23 07 49.2 +0.3
MNK                               i sP     sP      23 07 56.5 +1.3
MNK                               i PP     PnPn    23 07 59.3  0.0
MNK                               i S      S       23 11 32.3 -1.2
MNK                               i PcP    PcP     23 11 36.3 -1.0
MNK                               i sS     sS      23 11 53.6 +1.3
MNK                               i SS     SnSn    23 11 59.8 -0.3
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MNK                               i LQ     LQ      23 14 18.0
MNK                               i LR     LR      23 15 56.7
MNK                               i LRM    MLR     23 17 33.9
      comp=E,5.0nm,16.8s
MNK                               i LRM    MLR     23 17 35.2
      comp=Z,83nm,16.8s
MNK                               i LRM    MLR     23 17 39.1
      comp=N,138nm,16.8s
LOT   Lotru             21.67 292 ⇑P       P       23 07 39.6 +1.4
SANT  Santorini         21.77 267  P       P       23 07 39.0 -0.3
KLMR  Klimovskoe        21.78 342 eP       P       23 07 36.6 -2.5
KLMR                               pmax    pmax
      comp=Z,58nm,0.7s
KLMR  Klimovskoe        21.78 342 eP       P       23 07 36.7 -2.4
KLMR                               AMP             23 07 42.1
      comp=Z,58nm,0.7s
CJR   Cluj-Napoca       21.87 296 ⇑P       P       23 07 42.2 +1.9
MAKZ  Makanchi          21.88  64 ⇑P       P       23 07 41.6 +1.2
      comp=Z,16nm,0.8s
MAKZ                              ⇓S       S       23 11 40.2 +1.1
      comp=Z,8.0nm,0.8s
MAKZ  Makanchi          21.88  64  P       P       23 07 41.5 +1.2
MAKZ                               pmax    pmax
      comp=Z,23nm,1.1s
MAKZ  Makanchi          21.88  64  P       P       23 07 41.5 +1.2
MAKZ                               IAmb    IAmb    23 07 45.2
      comp=Z,22nm,1.1s
DOK   Doka              22.03 177  P       P       23 07 40.0 -2.1
      SNR=94
BMR   Baia Mare         22.05 298 ⇓P       P       23 07 43.7 +1.5
SRE   Strehaia          22.05 290 ⇑P       P       23 07 43.5 +1.3
MK31  Makanchi Array    22.09  64 ⇑P       P       23 07 44.1 +1.5
      comp=Z,9.4nm,0.7s
MK31                              ⇓S       S       23 11 44.1 +0.9
      comp=Z,7.2nm,0.7s
MK31  Makanchi Array    22.09  64c iP      P       23 07 44.1 +1.5
MK31                              i *PP    pP      23 07 56.3 +2.0
MK31                               pmax    pmax
      comp=Z,9.0nm,0.6s
MK31  Makanchi Array    22.09  64  P       P       23 07 43.8 +1.1
MKAR  Makanchi Array    22.09  64  P       P       23 07 44.2 +1.6
      comp=Z,8.0nm,0.6s,baz=258,slow=11,SNR=95
MKAR                               S       S       23 11 43.4 +0.3
      comp=Z,1.2nm,0.5s,baz=266,slow=23,SNR=1.7
MKAR                               LR      LR      23 16 43.6
      comp=Z,44nm,20.0s,baz=241,slow=38
MKAR  Makanchi Array    22.09  64  P       P       23 07 43.7 +1.1
LVV   L'vov             22.09 304 eP       P       23 07 43.8 +1.2
LVV                               e                23 08 01.4
LVV                               eS       S       23 11 41.1 -2.0
VTS   Vitosha           22.12 285 ⇑P       P       23 07 44.9 +1.8
NACGM Naroch            22.35 318 i P      P       23 07 45.1 -0.2
NACGM                             i P      P       23 07 45.1 -0.2
NACGM                             i P      P       23 07 45.1 -0.2
NACGM                             i PP     sP      23 08 00.5 -2.8
NACGM                             i S      S       23 11 49.7 +2.2
NACGM                             i SS     SnSn    23 12 20.2 +1.7
NACGM                             i SSS    SSS     23 12 36.3
NACGM                             i LQ     LQ      23 14 27.0
NACGM                             i LR     LR      23 16 02.3
GZR   Gura Zlata        22.36 292 ⇓P       P       23 07 46.2 +0.6
DRGR                    22.48 296 ⇓P       P       23 07 47.6 +0.7
IDID  Didziasalis       22.57 319 eP       P       23 07 48.5 +0.8
WHFO  Wadi Hawf         22.71 178  P       P       23 07 46.3 -3.2
      SNR=134
SHAO  Shalim            22.72 173 i P      P       23 07 45.7 -3.9
      SNR=34
SHAO  Shalim            22.72 173  P       P       23 07 46.5 -3.1
      SNR=34
IIGN  Ignalina          22.85 319 eP       P       23 07 51.2 +0.7
KWP   Kalwaria Pacla    22.89 303 eP       P       23 07 52.0 +0.9
KWP   Kalwaria Pacla    22.89 303  P       P       23 07 52.1 +1.0
KWP                                pmax    pmax
      comp=Z,20nm,0.7s
KWP   Kalwaria Pacla    22.89 303  P       P       23 07 52.1 +1.0
KWP                                IAmb    IAmb    23 08 11.0
      comp=Z,20nm,0.7s
DMTO  DMTO              22.97 175  P       P       23 07 49.2 -2.9
      SNR=18
UZH   Uzhgorod          22.98 300⇑iP       P       23 07 53.8 +1.8
UZH                               i                23 08 08.5
ISAL  Salakas           23.00 319 eP       P       23 07 53.0 +0.8
KOLS  Kolonicke sedl    23.04 301 eP       P       23 07 55.9 +3.3
KOLS                               pmax    pmax
      comp=Z,10.0nm,0.7s
KOLS  Kolonicke sedl    23.04 301 eP       P       23 07 55.8 +3.2
RBK   Rabkut            23.14 177  P       P       23 07 50.7 -3.1
      SNR=7.5
BZS   Buzias            23.18 293 ⇓P       P       23 07 55.8 +1.7
ABTO  Aybut             23.26 179  P       P       23 07 52.1 -2.9
      SNR=8.5
ABTO                               P       P       23 07 52.2 -2.9
      SNR=21
AGG   Agios Georgios    23.39 276  P       P       23 07 56.4 +0.3
AGG                                pmax    pmax
      comp=Z,13nm,1.0s
AGG   Agios Georgios    23.39 276  P       P       23 07 56.4 +0.3
CRVS  Cervenica-Dubn    23.57 301 eP       P       23 07 58.9 +1.2
CRVS                               pmax    pmax
      comp=Z,46nm,1.7s
CRVS  Cervenica-Dubn    23.57 301 eP       P       23 07 58.9 +1.2
ZSN   Zaisan            23.90  63 eP       P       23 08 01.7 +0.9
      baz=63
ZSN   Zaisan            23.90  63 eP       P       23 08 01.6 +0.9
PABE  Paberze           24.06 318 eP       P       23 08 03.2 +1.1
KECS  Kecovo            24.15 300 eP       P       23 08 04.2 +1.1
KECS  Kecovo            24.15 300 eP       P       23 08 04.2 +1.1
ITM   Ithomi            24.20 272  P       P       23 08 03.4 -0.2
ITM                                IAmb    IAmb    23 08 04.3
      comp=Z,12nm,0.7s
VSU   Vasula            24.28 326 eP       P       23 08 04.8 +0.8
VSU   Vasula            24.28 326⇑eP       P       23 08 05.4 +1.3
VSU                                pmax    pmax
      comp=Z,54nm,0.8s
DIVS  Divibare          24.37 289  P       P       23 08 06.0 +0.8
DIVS                               IAmb    IAmb    23 08 07.5
      comp=Z,14nm,1.0s
NIE   Niedzica          24.40 302 eP       P       23 08 07.3 +1.9
PSZ   Piszkesteto       24.49 298 eP       P       23 08 19.3  +13
PSZ   Piszkesteto       24.49 298  P       P       23 08 07.6 +1.4
PSZ                                pmax    pmax
      comp=Z,8.0nm,1.0s
PSZ   Piszkesteto       24.49 298  P       P       23 08 07.6 +1.4
OJC   Ojcow             24.85 304 eP       P       23 08 10.6 +1.2
OJC   Ojcow             24.85 304  P       P       23 08 09.9 +0.5
OJC                                pmax    pmax
      comp=Z,13nm,0.6s
OJC   Ojcow             24.85 304  P       P       23 08 09.9 +0.5
OJC                                IAmb    IAmb    23 08 12.3
      comp=Z,13nm,0.6s
LANS  Liptovska Anna    24.90 301 eP       P       23 08 12.3 +2.4
LANS                               pmax    pmax
      comp=Z,3.0nm,0.7s
LANS  Liptovska Anna    24.90 301 eP       P       23 08 12.3 +2.4
TMCR  Tamitsa           25.04 345 eP       P       23 08 11.9 +1.0
TMCR                               pmax    pmax
      comp=Z,91nm,0.7s
PDG   Podgorica         25.06 285  P       P       23 08 13.2 +1.8
ZAA0  Zalesovo Array    25.19  47  P       P       23 08 13.5 +1.1
ZAA0                               IAmb    IAmb    23 08 15.2
      comp=Z,7.7nm,0.7s
ZALV  Zalesovo Beam     25.19  47  P       P       23 08 13.9 +1.5
      comp=Z,11nm,0.7s,baz=263,slow=11,SNR=36
ZALV                               pP      pP      23 08 25.4 +0.1
      comp=Z,3.4nm,0.3s,baz=260,slow=11,SNR=7.3
ZALV                               LR      LR      23 19 35.6
      comp=Z,85nm,20.4s,baz=4.0,slow=40
ZALV  Zalesovo Beam     25.19  47 i P      P       23 08 13.8 +1.4
ZALV                               pmax    pmax
      comp=Z,9.0nm,0.6s
ZALV  Zalesovo Beam     25.19  47  P       P       23 08 12.8 +0.4
VYHS  Vyhne             25.25 299 eP       P       23 08 14.5 +1.5
VYHS  Vyhne             25.25 299 eP       P       23 08 14.5 +1.5
MORH  Mrgy, Hungar      25.27 294 eP       P       23 08 14.6 +1.4
PBUR  Paburge           25.32 318 eP       P       23 08 14.7 +1.1
SRO   Srobarova         25.54 298 eP       P       23 08 17.4 +1.7
SRO                                pmax    pmax
      comp=Z,13nm,0.9s
SRO   Srobarova         25.54 298 eP       P       23 08 17.4 +1.7
TIH   Tihany            25.79 296 eP       P       23 08 19.7 +1.8
DGZ   Jazzator, Alta    25.82  58⇑eP       P       23 08 19.8 +1.4
DGZ                                pmax    pmax
      comp=Z,8.0nm,0.8s
WMQ   Urumqi            25.91  71 eP       P       23 08 21.3 +2.2
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WMQ                                pP      sP      23 08 35.8 -2.2
WMQ                                pmax    pmax
      comp=Z,13nm,1.1s
WMQ                                pmax    pmax
      comp=Z,180nm,5.3s
WMQ                                LR      LR
      comp=N,270nm,5.5s
WMQ                                LR      LR
      comp=E,470nm,5.5s
WMQ                                LR      LR
      comp=Z,280nm,29.0s
WMQ   Urumqi            25.91  71  P       P       23 08 20.2 +1.0
WMQ                                pmax    pmax
      comp=Z,28nm,1.1s
WMQ   Urumqi            25.91  71  P       P       23 08 20.2 +1.0
WMQ                                IAmb    IAmb    23 08 24.5
      comp=Z,28nm,1.1s
MPLH  Magyarpolny       26.04 296 eP       P       23 08 21.7 +1.5
JAVC  Velka Javorina    26.05 300 eP       P       23 08 22.1 +1.8
MORC  Moravsky Berou    26.22 302 eP       P       23 08 23.4 +1.5
MORC  Moravsky Berou    26.22 302  P       P       23 08 22.9 +1.0
MORC                               pmax    pmax
      comp=Z,8.0nm,0.8s
MORC  Moravsky Berou    26.22 302  P       P       23 08 22.9 +1.0
MODS  Modra-Piesok      26.27 299 eP       P       23 08 23.4 +1.1
MODS                               pmax    pmax
      comp=Z,13nm,1.1s
MODS  Modra-Piesok      26.27 299 eP       P       23 08 23.4 +1.1
FIA1  FINESS Array S    26.37 331  P       P       23 08 23.9 +0.9
FIA1                               IAmb    IAmb    23 08 27.4
      comp=Z,26nm,1.1s
FINES FINESS Array B    26.37 331  P       P       23 08 24.1 +1.1
      comp=Z,4.1nm,0.4s,baz=139,slow=11,SNR=50
FINES                              pP      pP      23 08 36.6 +0.7
      comp=Z,3.7nm,0.4s,baz=140,slow=11,SNR=5.1
FINES                              LR      LR      23 20 25.6
      comp=Z,102nm,20.0s,baz=139,slow=40
FINES FINESS Array B    26.37 331  P       P       23 08 23.8 +0.8
RICI  Ricice            26.48 288  P       P       23 08 25.9 +1.6
KRLC  Kraliky           26.75 303 eP       P       23 08 27.5 +0.9
KRLC                              e                23 08 47.7
KRLC  Kraliky           26.75 303 eP       P       23 08 27.5 +0.9
KRLC                              esP      sP      23 08 47.7 +2.2
KALN  Kalnik            26.79 294  P       P       23 08 28.3 +1.3
VRAC  Vranov            26.79 301  P       P       23 08 28.0 +1.0
      comp=Z,4.1nm,0.8s,baz=124,slow=12,SNR=3.9
VRAC  Vranov            26.79 301 eP       P       23 08 29.9 +2.9
VRAC  Vranov            26.79 301  P       P       23 08 28.0 +1.0
KRUC  Moravsky          26.90 300 eP       P       23 08 29.3 +1.3
KIJV  Kijevo            26.96 289  P       P       23 08 30.6 +2.1
HVAR  Hvar              27.02 287  P       P       23 08 30.5 +1.4
DAMY  Dhamar            27.03 198  P       P       23 08 30.8 +1.0
DPC   Dobruska-Polom    27.07 303 eP       P       23 08 30.6 +1.1
DPC   Dobruska-Polom    27.07 303 eP       P       23 08 30.6 +1.1
KSP   Ksiaz             27.15 304 eP       P       23 08 31.6 +1.4
OSTC  Ostas             27.16 304 eP       P       23 08 31.5 +1.2
OSTC                              ex       x       23 08 48.9
CONA  Conrad Observa    27.20 298 i P      P       23 08 31.4 +0.6
      comp=Z,0.6nm,0.3s
CHVC  Chvalec           27.27 304 eP       P       23 08 32.5 +1.2
UPC   Upice             27.29 304 eP       P       23 08 32.9 +1.5
UPC   Upice             27.29 304 eP       P       23 08 32.9 +1.5
ARSA  Arzberg           27.42 296 i P      P       23 08 33.1 +0.5
      comp=Z,3.4nm,0.7s
MORI  Morici            27.47 289  P       P       23 08 33.9 +0.8
OZLJ  Ozalj             27.50 293  P       P       23 08 34.4 +1.1
SOKA  Soboth            27.76 295 eP       P       23 08 37.0 +1.3
      comp=Z,6.1nm,1.0s,SNR=7.2
SOKA                              eS       sP      23 08 56.1 +1.4
      comp=Z,5.9nm,0.7s
NVLJ  Novalja           28.00 291  P       P       23 08 38.0 +0.3
OBKA  Obir              28.10 295 i P      P       23 08 40.6 +1.8
      comp=Z,3.1nm,0.6s
PRU   Pruhonice         28.18 302 eP       P       23 08 39.9 +0.6
PRU   Pruhonice         28.18 302 eP       P       23 08 39.9 +0.6
MOA   Molln             28.27 298 i P      P       23 08 40.9 +0.7
      comp=Z,0.7nm,0.3s
SOCY  Socotra           28.41 178  P       P       23 08 37.6 -4.2
SOCY                               IAmb    IAmb    23 08 39.8
      comp=Z,16nm,0.9s
BRG   Berggiesshubel    28.64 304 i P      P       23 08 45.2 +1.8
BRG                                Amp             23 08 47.0
      comp=Z,5.6nm,0.7s
BRG   Berggiesshubel    28.64 304 i P      P       23 08 45.2 +1.8
BRG                                pmax    pmax
      comp=Z,6.0nm,0.7s
BRG                                pmax    pmax
      comp=Z,3.0nm,1.0s
BRG                                pmax    pmax
      comp=Z,13nm,1.4s
BRG                                pmax    pmax
      comp=Z,10.0nm,1.2s
BRG   Berggiesshubel    28.64 304 i P      P       23 08 45.2 +1.8
BRG                                Amp             23 08 47.0
      comp=Z,5.6nm,0.7s
GERES GERESS Array B    28.66 300  P       P       23 08 44.9 +1.1
      comp=Z,1.6nm,0.6s,baz=90,slow=9.2,SNR=20
GERES                              LR      LR      23 24 02.4
      comp=Z,32nm,18.9s,baz=93,slow=44
GERES GERESS Array B    28.66 300  P       P       23 08 44.3 +0.5
KHC   Kasperske Hory    28.75 300⇑eP       P       23 08 46.1 +1.6
KHC                                pmax    pmax
      comp=Z,12nm,1.7s
KHC   Kasperske Hory    28.75 300 eP       P       23 08 44.6 +0.1
KHC                               esP      sP      23 09 04.0 +0.5
KHC                               ex       x       23 09 37.8
KHC   Kasperske Hory    28.75 300  P       P       23 08 44.9 +0.3
BSD   Bornholm Skovb    28.79 313 i P      P       23 08 44.2 -0.5
BSD                                pmax    pmax
      comp=Z,2.0nm,0.3s
BSD   Bornholm Skovb    28.79 313 i P      P       23 08 44.2 -0.5
      comp=Z,2.4nm,0.3s
BSD   Bornholm Skovb    28.79 313 i P      P       23 08 44.2 -0.5
BSD                                IAmb    IAmb    23 08 45.1
      comp=Z,2.4nm,0.3s
KBA   Koelnbreinsper    28.91 296 eP       P       23 08 47.3 +1.3
      comp=Z,4.6nm,0.6s,SNR=5.5
KBA                               i S      sP      23 09 06.3 +1.3
      comp=Z,4.8nm,0.5s
CLL   Collm             29.27 305 eP       P       23 08 50.0 +1.0
CLL   Collm             29.27 305  P       P       23 08 50.2 +1.2
CLL                                pmax    pmax
      comp=Z,7.0nm,1.3s
CLL   Collm             29.27 305  P       P       23 08 50.2 +1.2
ABTA  Abfaltersbach     29.49 295 eP       P       23 08 52.3 +1.1
      comp=Z,1.5nm,0.5s
ABTA                              eS       sP      23 09 11.1 +1.0
      comp=Z,2.6nm,0.6s
NKC   Novy Kostel       29.54 303 eP       P       23 08 53.0 +1.5
NKC   Novy Kostel       29.54 303 eP       P       23 08 53.0 +1.5
WTTA  Wattenberg        30.06 297 i P      P       23 08 56.8 +0.4
      comp=Z,5.2nm,0.4s
WTTA                              eS       sP      23 09 16.5 +1.2
      comp=Z,5.4nm,0.3s
WATA  Walderalm         30.10 297 eP       P       23 08 56.5 -0.1
      comp=Z,2.1nm,0.4s
WATA                              i S      sP      23 09 16.6 +1.0
      comp=Z,1.9nm,0.3s
SQTA  Sankt Quirin      30.36 296 eP       P       23 08 58.8 -0.1
      comp=Z,2.2nm,0.3s
MOTA  Moosalm           30.42 297 i P      P       23 08 59.2 -0.3
      comp=Z,1.4nm,0.4s
MOTA                              eS       sP      23 09 19.1 +0.7
      comp=Z,1.4nm,0.2s
RETA  Reutte            30.64 297 i P      P       23 09 01.3 -0.1
      comp=Z,1.1nm,0.3s
RETA                              eS       sP      23 09 21.2 +0.9
      comp=Z,2.3nm,0.5s
FETA  Feichten          30.69 296 eP       P       23 09 02.4 +0.5
      comp=Z,1.3nm,0.3s
DAVA  Damuels           31.25 297 i P      P       23 09 06.8  0.0
      comp=Z,4.8nm,0.5s
DAVA                              eS       sP      23 09 27.2 +1.4
      comp=Z,5.1nm,0.6s
KEV   Kevo              32.09 343  P       P       23 09 15.4 +1.7
KEV                                pmax    pmax
      comp=Z,63nm,1.5s
KEV   Kevo              32.09 343  P       P       23 09 15.4 +1.7
NC405 NORSAR Array S    32.21 323  P       P       23 09 15.4 +0.5
ARA0  ARCESS Array S    32.26 342 eP       P       23 09 16.2 +1.0
ARCES ARCESS Array B    32.26 342  P       P       23 09 16.5 +1.3
      comp=Z,12nm,1.1s,baz=140,slow=2.7,SNR=11
ARCES                              pP      pP      23 09 29.8 +1.6
      comp=Z,3.7nm,0.7s,baz=141,slow=4.7,SNR=2.1
ARCES                              LR      LR      23 24 31.5
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      comp=Z,117nm,19.8s,baz=125,slow=40
ARCES ARCESS Array B  32.26 342   P      P       23 09 16.4 +1.2
ARCES                             pmax   pmax
      comp=Z,30nm,1.5s
ARCES ARCESS Array B  32.26 342   P      P       23 09 16.4 +1.2
OSL   Oslo            32.29 321  eP      P       23 09 16.1 +0.6
NB2   NORSAR Subarra  32.41 323   P      P       23 09 16.8 +0.1
      comp=Z,3.4nm,0.5s,baz=113,slow=8.6
NB2   NORSAR Subarra  32.41 323   P      P       23 09 16.8 +0.1
      baz=113,slow=8.6
NOA   NORSAR Array B  32.41 323   P      P       23 09 16.9 +0.1
      comp=Z,5.4nm,0.6s,baz=114,slow=8.4,SNR=20
NOA                               LR     LR      23 23 37.2
      comp=Z,59nm,18.3s,baz=355,slow=38
KTK1  Kautokeino      32.42 341  eP      P       23 09 18.4 +1.8
KONO  Kongsberg       32.75 320   P      P       23 09 19.9 +0.3
KONO                              pmax   pmax
      comp=Z,54nm,1.4s
KONO  Kongsberg       32.75 320   P      P       23 09 19.9 +0.3
VSL   Villasalto      32.98 282   P      P       23 09 21.7 -0.1
ECH   Echery          33.02 299   P      P       23 09 21.9 -0.3
ECH                               pmax   pmax
      comp=Z,7.0nm,1.3s
ECH   Echery          33.02 299   P      P       23 09 21.9 -0.3
SENIN Lac Senin/Sane  33.10 295   P      P       23 09 23.0 -0.1
SENIN                             IAmb   IAmb    23 09 30.0
      comp=Z,4.7nm,0.7s
MOR8  Moi Rana        33.31 333  eP      P       23 09 25.6 +1.2
NSS   Namsos          33.45 329  eP      P       23 09 25.7 +0.2
SKAR  Skarslia        33.66 322  eP      P       23 09 28.9 +1.4
FAUS  Fauske          33.67 335  eP      P       23 09 29.2 +1.7
DOMB  Dombas          33.72 324  eP      P       23 09 27.6 -0.4
BNI   Bardonecchia    33.72 293   P      P       23 09 29.0 +0.6
BNI                               pmax   pmax
      comp=Z,33nm,1.5s
BNI   Bardonecchia    33.72 293   P      P       23 09 29.0 +0.6
KONS  Konsvik         33.94 333  eP      P       23 09 29.3 -0.5
TRO   Tromso          33.96 340  eP      P       23 09 31.2 +1.2
STEI  Steigen         33.99 336  eP      P       23 09 31.4 +1.2
KEST  Kesra           34.23 276   P      P       23 09 34.2 +1.4
      comp=Z,2.4nm,0.8s,baz=45,slow=3.0,SNR=6.2
KEST  Kesra           34.23 276   P      P       23 09 33.9 +1.0
KEST                              IAmb   IAmb    23 09 44.9
      comp=Z,10.0nm,1.3s
ODD1  Odda            34.27 320  eP      P       23 09 33.8 +0.9
AKN   Aaknes          34.69 324  eP      P       23 09 37.0 +0.6
SSB   Saint Sauveur   35.17 294   P      P       23 09 41.3 +0.5
SSB                               pmax   pmax
      comp=Z,8.0nm,0.5s
SSB   Saint Sauveur   35.17 294   P      P       23 09 41.3 +0.5
GTA   Gaotai          35.69  76  ⇓P      P       23 09 47.4 +2.0
GTA                               pP     pP      23 09 56.4 -2.1
GTA                               sP     sP      23 10 00.8 -3.7
GTA                               pmax   pmax
      comp=Z,5.0nm,1.0s
GTA                               pmax   pmax
      comp=Z,89nm,5.8s
GTA                               LR     LR
      comp=N,100nm,14.2s
GTA                               LR     LR
      comp=E,170nm,13.4s
GTA                               LR     LR
      comp=Z,65nm,14.9s
ZAK   Zakamensk       36.04  57  eP      P       23 09 48.8 +0.5
ZAK                               pmax   pmax
      comp=Z,3.0nm,1.0s
SONM  Songino Array   38.38  61   P      P       23 10 09.5 +1.3
      comp=Z,1.0nm,0.7s,baz=279,slow=10,SNR=9.4
SONM                              pP     pP      23 10 22.7 +1.3
      comp=Z,0.9nm,0.7s,baz=277,slow=9.2,SNR=6.8
SONM                              PcP    PcP     23 12 20.7 -0.1
      comp=Z,0.5nm,0.6s,baz=248,slow=1.6,SNR=3.6
SONM                              LR     LR      23 25 52.9
      comp=Z,42nm,18.6s,baz=15,slow=36
SONM  Songino Array   38.38  61   P      P       23 10 08.7 +0.5
SONM                              pmax   pmax
      comp=Z,1.0nm,0.8s
SONM  Songino Array   38.38  61   P      P       23 10 08.7 +0.5
ULN   Ulaanbaatar     38.81  61c iP      P       23 10 13.4 +1.6
ULN                               pmax   pmax
      comp=Z,14nm,1.7s
ULN   Ulaanbaatar     38.81  61   P      P       23 10 13.2 +1.4
ULN                               IAmb   IAmb    23 10 14.6
      comp=Z,11nm,1.1s
ESK   Eskdalemuir     39.11 311   P      P       23 10 14.6 +0.6
ESK                               pmax   pmax
      comp=Z,24nm,1.3s
ESK   Eskdalemuir     39.11 311   P      P       23 10 14.6 +0.6
LZH   Lanzhou         39.82  80  eP      P       23 10 19.0 -1.4
LZH                               pP     pP      23 10 32.8 -0.9
LZH                               sP     sP      23 10 38.5 -1.1
LZH                              ePP     PnPn    23 11 55.3 -0.8
LZH                               pmax   pmax
      comp=Z,21nm,1.2s
LZH                               pmax   pmax
      comp=Z,100nm,5.4s
SPA0  Spitsbergen Ar  40.39 349   P      P       23 10 26.4 +2.0
SPA0  Spitsbergen Ar  40.39 349  eP      P       23 10 26.6 +2.2
KBS   Kingsbay        41.55 349   P      P       23 10 34.8 +0.9
KBS                               pmax   pmax
      comp=Z,21nm,1.2s
KBS   Kingsbay        41.55 349   P      P       23 10 34.8 +0.9
KBS                               IAmb   IAmb    23 10 43.1
      comp=Z,21nm,1.1s
CD2   Chengdu         41.97  87   P      P       23 10 36.3 -1.6
CD2                               pmax   pmax
      comp=Z,10.0nm,0.5s
ESBB  Sonseca Array   42.72 288   P      P       23 10 43.8 -0.1
ESDC  Sonseca Array   42.72 288   P      P       23 10 44.0  0.0
      comp=Z,3.0nm,0.5s,baz=60,slow=8.4,SNR=73
ESDC  Sonseca Array   42.72 288   P      P       23 10 43.9  0.0
PAB   San Pablo       43.04 288   P      P       23 10 46.8 +0.2
PAB                               pmax   pmax
      comp=Z,10.0nm,1.1s
PAB   San Pablo       43.04 288   P      P       23 10 46.8 +0.2
PAB                               IAmb   IAmb    23 10 58.2
      comp=Z,9.8nm,1.1s
HHC   Hu-ho-hao-te    43.76  70  eP      P       23 10 53.8 +1.3
HHC                               pmax   pmax
      comp=Z,7.0nm,1.0s
HHC                               pmax   pmax
      comp=Z,190nm,5.0s
HHC                               LR     LR
      comp=N,280nm,15.3s
HHC                               LR     LR
      comp=E,240nm,15.9s
HHC                               LR     LR
      comp=Z,100nm,15.2s
KMI   Kunming         44.13  95  ⇓P      P       23 10 55.8 +0.1
KMI                               pmax   pmax
      comp=Z,7.0nm,0.9s
XAN   Xi'an           44.46  80   P      P       23 10 59.1 +1.1
XAN                               pP     pP      23 11 09.5 -2.0
XAN                               pmax   pmax
      comp=Z,12nm,0.6s
MTE   Manteigas       45.03 290   P      P       23 11 02.9 +0.3
PESTR Estremoz        45.63 288   P      P       23 11 07.6 +0.3
PESTR                             IAmb   IAmb    23 11 22.2
      comp=Z,10nm,1.3s
MBAR  Mbarara         45.74 212   P      P       23 11 07.3 -1.2
      comp=Z,1.6nm,0.3s,baz=319,slow=3.1,SNR=1.3
PVAQ  Vaqueiros       46.30 286   P      P       23 11 12.8 +0.4
DAG   Danmarks Havn   46.55 342 i P      P       23 11 15.3 +1.4
DAG                             i                23 11 30.0
DAG                               pmax   pmax
      comp=Z,5.0nm,0.6s
DAG   Danmarks Havn   46.55 342 i P      P       23 11 15.3 +1.4
      comp=Z,5.2nm,0.6s
DAG                             i                23 11 30.0
DAG   Danmarks Havn   46.55 342 i P      P       23 11 15.3 +1.4
DAG                               IAmb   IAmb    23 11 15.8
      comp=Z,5.2nm,0.6s
DAG                             i                23 11 30.0
ENH   Enshi           46.61  84   P      P       23 11 14.5 -0.6
ENH                               IAmb   IAmb    23 11 16.4
      comp=Z,4.7nm,0.6s
TIXI  Tiksi           47.63  25deP      P       23 11 24.2 +1.9
TIXI                              pmax   pmax
      comp=Z,33nm,1.3s
TIXI  Tiksi           47.63  25   P      P       23 11 23.9 +1.5
TIXI                              IAmb   IAmb    23 11 25.5
      comp=Z,11nm,1.3s
YAK   Yakutsk         49.15  37deP      P       23 11 35.2 +1.0
YAK                               pmax   pmax
      comp=Z,4.0nm,0.6s
SUMG  Summit          52.10 338   P      P       23 11 58.2 +1.4
SUMG                              pmax   pmax
      comp=Z,9.0nm,0.7s
SUMG  Summit          52.10 338   P      P       23 11 58.2 +1.4
SUMG  Summit          52.10 338 i P      P       23 11 58.8 +2.1
      comp=Z,24nm,0.7s
SUMG                            i                23 12 13.4
SUMG  Summit          52.10 338 i P      P       23 11 58.9 +2.1
SUMG                              IAmb   IAmb    23 11 59.7
      comp=Z,24nm,0.7s
SUMG                            i                23 12 13.4
TOA0  Torodi Ar. Sit  52.27 253   P      P       23 11 57.6 -0.7
TORD  Torodi Ar. Bea  52.27 253   P      P       23 11 57.5 -0.8
      comp=Z,0.9nm,0.5s,baz=45,slow=7.8,SNR=6.9
TORD  Torodi Ar. Bea  52.27 253   P      P       23 11 57.6 -0.6
NJ2   Nanjing         52.77  77  eP      P       23 12 00.9 -0.9
NJ2                               pmax   pmax
      comp=Z,9.0nm,0.5s
ICESG Greenland Ices  53.52 334 i P      P       23 12 08.6 +1.3
ICESG                           i                23 12 24.1
KLR   Kul'dur         54.13  53   LR     LR      23 37 12.4
      comp=Z,38nm,18.7s,baz=338,slow=38
KLR   Kul'dur         54.13  53⇑eP      P       23 12 12.6 +1.0
KLR                               pmax   pmax
      comp=Z,7.0nm,1.0s
KOWA  Kowa            55.61 259   P      P       23 12 22.5 -0.2
KOWA                              IAmb   IAmb    23 12 23.5
      comp=Z,4.0nm,0.8s
USA0B Ussuriysk Arra  56.38  58⇑eP      P       23 12 28.7 +0.9
USRK  Ussuriysk Ar.   56.38  58   P      P       23 12 28.0 +0.2
      comp=Z,3.5nm,0.7s,baz=277,slow=7.8,SNR=5.6
USRK                              pP     pP      23 12 42.8 +1.2
      comp=Z,2.1nm,0.7s,baz=288,slow=7.4,SNR=2.2
KSRS  Korea Array     56.73  67   P      P       23 12 31.1 +0.7
      comp=Z,3.6nm,0.7s,baz=293,slow=7.7,SNR=9.0
KSRS                              pP     pP      23 12 45.4 +1.1
      comp=Z,1.5nm,0.4s,baz=293,slow=7.3,SNR=4.7
EUNU  Eureka          57.35 352   P      P       23 12 35.9 +1.6
EUNU                              IAmb   IAmb    23 12 52.6
      comp=Z,4.4nm,0.9s
SEY   Seymchan        58.70  32⇑eP      P       23 12 45.7 +1.9
LSZ   Lusaka          60.19 208   P      P       23 12 54.5 -0.2
LSZ                               pmax   pmax
      comp=Z,13nm,1.3s
LSZ   Lusaka          60.19 208   P      P       23 12 54.5 -0.2
DBIC  Dimbokro        61.37 253   P      P       23 13 02.1 -0.7
      comp=Z,2.7nm,0.5s,baz=27,slow=7.1,SNR=18
DBIC  Dimbokro        61.37 253   P      P       23 13 02.0 -0.7
DBIC                              IAmb   IAmb    23 13 02.5
      comp=Z,3.6nm,0.6s
KIC   Kosan Boka      61.50 253  ePKP2   P       23 13 02.8 -0.9
      comp=Z,13nm,0.6s
TIC   Toumodi         61.51 253  ePKP2   P       23 13 02.8 -1.0
LIC   Lamto           61.80 253  ePKP2   P       23 13 04.1 -1.6
      comp=Z,29nm,0.6s
JWT   Wachi           63.03  66   P      P       23 13 14.8 +1.1
LBTB  Lobatse         70.09 206   P      P       23 13 58.7 -0.1
LBTB                              pmax   pmax
      comp=Z,15nm,0.7s
LBTB  Lobatse         70.09 206   P      P       23 13 58.7 -0.1
COLD  Coldfoot        70.99   9   P      P       23 14 05.0 +1.3
COLD                              IAmb   IAmb    23 14 06.3
      comp=Z,4.6nm,1.0s
INK   Inuvik          71.22   2   P      P       23 14 05.0  0.0
INK                               pmax   pmax
      comp=Z,3.0nm,1.0s
INK   Inuvik          71.22   2   P      P       23 14 05.0  0.0
BMAR  Burnt Mountain  71.40   7   P      P       23 14 07.0 +0.8
IMAR  Indian Mountai  71.69  11   P      P       23 14 09.0 +1.1
I23K  Minto, Yukon-K  73.08  10   P      P       23 14 17.0 +0.8
PRP   Porcupine Dome  73.17   8   P      P       23 14 17.8 +0.9
MDM   Murphy Dome     73.41   9   P      P       23 14 19.6 +1.4
MDM                               IAmb   IAmb    23 14 20.1
      comp=Z,10.0nm,1.4s
BOSA  Boshof          73.54 205   P      P       23 14 18.8 -0.6
      comp=Z,3.2nm,0.6s,baz=10.0,slow=5.8,SNR=16
BOSA                              pP     pP      23 14 33.8  0.0
      comp=Z,6.6nm,0.8s,baz=26,slow=5.2,SNR=6.1
BOSA  Boshof          73.54 205   P      P       23 14 18.6 -0.8
BOSA                              pmax   pmax
      comp=Z,7.0nm,1.1s
BOSA  Boshof          73.54 205   P      P       23 14 18.6 -0.8
BOSA                              IAmb   IAmb    23 14 19.5
      comp=Z,6.7nm,1.1s
IL31                  73.74   9   P      P       23 14 20.8 +0.7
ILAR  Eielson Array   73.74   9   P      P       23 14 20.9 +0.7
      comp=Z,1.2nm,0.7s,baz=332,slow=4.5,SNR=19
ILAR                              pP     PcP     23 14 35.6  0.0
      comp=Z,0.9nm,0.7s,baz=333,slow=4.5,SNR=6.9
ILAR                              PP     PP      23 17 07.8 +3.4
      comp=Z,0.7nm,1.0s,baz=350,slow=9.2,SNR=5.4
ILAR  Eielson Array   73.74   9   P      P       23 14 21.0 +0.9
TTA   Tatalina        74.18  13   P      P       23 14 24.0 +1.2
TTA                               pmax   pmax
      comp=Z,8.0nm,1.5s
TTA   Tatalina        74.18  13   P      P       23 14 23.9 +1.2
TTA                               IAmb   IAmb    23 14 25.8
      comp=Z,8.0nm,1.5s
EGAK  Eagle           74.30   6   P      P       23 14 24.4 +1.0
EGAK                              IAmb   IAmb    23 14 24.9
      comp=Z,5.8nm,1.1s
KTH   Kantishna Hill  74.40  11   P      P       23 14 25.1 +1.0
KTH                               IAmb   IAmb    23 14 26.7
      comp=Z,17nm,1.4s
SKT   Skwentna        75.80  12   P      P       23 14 32.5 +0.4
SKT                               IAmb   IAmb    23 14 33.4
      comp=Z,7.9nm,0.9s
BCAR  Beaver Creek A  75.93   7   P      P       23 14 34.3 +1.5
YKA   Yellowknife Ar  76.66 354   P      P       23 14 37.1 +0.2
      comp=Z,0.8nm,0.6s,baz=16,slow=6.1,SNR=15
YKA                               pP     pP      23 14 53.0 +1.7
      comp=Z,0.7nm,0.6s,baz=20,slow=6.0,SNR=5.8
YKA   Yellowknife Ar  76.66 354 i P      P       23 14 37.0 +0.1
YKA                               pmax   pmax
      comp=Z,1.0nm,0.5s
BATG  Bathurst New B  76.95 322   P      P       23 14 40.1 +1.3
FCC   Fort Churchill  77.15 343   P      P       23 14 40.4 +0.7
FCC                               pmax   pmax
      comp=Z,4.0nm,0.9s
FCC   Fort Churchill  77.15 343   P      P       23 14 40.4 +0.7
FCC                               IAmb   IAmb    23 14 41.5
      comp=Z,4.3nm,0.8s
SEW   Seward          77.91  11   P      P       23 14 44.3 +0.4
CTGM  Chitina Glacie  78.04   7   P      P       23 14 46.2 +1.3
PQI   Presque Isle    78.30 323   P      P       23 14 46.6 +0.3
PQI                               IAmb   IAmb    23 14 48.5
      comp=Z,9.5nm,0.9s
D62A  Allapoint, All  78.46 324   P      P       23 14 48.5 +1.2
D62A                              IAmb   IAmb    23 14 49.9
      comp=Z,6.8nm,0.8s
HYT   Haines Junctio  78.49   5   P      P       23 14 48.4 +1.1
HYT                               IAmb   IAmb    23 14 52.7
      comp=Z,10nm,1.3s
MOQ   Mont Orford     81.25 324   P      P       23 15 03.8 +1.4
WRA   Warramunga Arr  96.61 110   P      P       23 16 15.3 -1.2
      comp=Z,0.3nm,0.5s,baz=320,slow=4.1,SNR=3.1
WRA                               pP     pP      23 16 31.3 +0.1
      comp=Z,0.6nm,0.6s,baz=321,slow=4.3,SNR=3.3
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*IDC **17** 23:19:09.2±0.6, 13°.54N×143°.99E, h204^{km}±19^{km}, mb3.3/7, mb1 3.4/7, mb1mx3.0/55, mbtmp3.8/7, Error ellipse: s-maj=63.7km s-min=15.3km az=79.0*

ISC 17 23:19:09.2±0.9**, 13°.5N**±0°.2×**143°.9E**±0°.1**, h200**^{km}**, n8, σ0**^{s}**.47**/9**, mb3.6**/7**, South of Mariana Islands**

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Code  Station Name       Δ°  AZ°    Phase ID           Time       Res
                                  Op     ISC      h  m  s     ISC
GUMO  Guam             0.98  84   P      Pn      23 19 39.1 +0.3
      104nm,0.3s,baz=93,slow=4.6,SNR=60
GUMO                              S      Sn      23 20 01.6 -0.1
      298nm,0.3s,baz=152,slow=23,SNR=31
WRA   Warramunga Arr  34.52 196   P      P       23 25 39.3 +0.6
      0.9nm,0.6s,baz=15,slow=9.6,SNR=9.8
ASAR  Alice Springs   38.20 195   P      P       23 26 09.7 -0.1
      0.3nm,0.8s,baz=11,slow=10,SNR=7.3
CMAR  Chiang Mai Arr  43.39 283   P      P       23 26 52.7 +0.3
      0.9nm,0.3s,baz=84,slow=6.6,SNR=4.2
STKA  Stephens Creek  45.16 183   P      P       23 27 05.5 -0.6
      1.2nm,0.4s,baz=0.0,slow=8.1,SNR=3.5
MKAR  Makanchi Array  60.89 316   P      P       23 29 00.9 +0.1
      0.4nm,0.6s,baz=89,slow=7.8,SNR=5.7
KURBB Kurchatov Arra  64.07 320   P      P       23 29 21.5 -0.3
      0.8nm,0.4s,baz=101,slow=7.3,SNR=6.6
BVAR  Borovoye Array  69.40 322   P      P       23 29 54.8 -0.6
      0.2nm,0.4s,baz=104,slow=6.1,SNR=5.7
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*IDC **17** 23:21:26.8±1.0, 34°.88N×113°.10W, h0^{km}, mb1 3.1/4, mb1mx3.0/46, mbtmp2.6/4, ML3.2/4, Error ellipse: s-maj=14.2km s-min=10.6km az=168.0*

*ANF **17** 23:21:27.6±0.3, 35°.00N×113°.25W, h1^{km}, ML3.5/25, Error ellipse: s-maj=3.0km s-min=2.0km az=171.0*

*NEIC **17** 23:21:28.8±1.1, 34°.95N±0°.04×113°.24W±0°.03, h12^{km}±8^{km}, ML3.1/52, Error ellipse: s-maj=5.9km s-min=3.4km az=173.0*

ISC 17 23:21:28.5±1.2**, 34°.95N**±0°.02×**113°.25W**±0°.02**, h2**^{km}±11^{km}**, n57, σ1**^{s}**.23**/82**, Western Arizona**

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Code  Station Name       Δ°  AZ°    Phase ID           Time       Res
                                  Op     ISC      h  m  s     ISC
W13A  Hualapai Mount   0.54 287   Pg     Pg      23 21 39.3 +0.3
W13A                              Sg     Sg      23 21 46.6 +0.6
PDMCI Parker Dam,Lak   0.97 229   P      Pg      23 21 47.5 +0.3
      baz=49,SNR=144
PDMCI                             S      Sb      23 22 00.9 -0.6
      baz=49
NEE2  Needles Airpor   1.14 261   P      Pb      23 21 50.5 -0.5
      baz=80,SNR=41
NEE2                              S      Sg      23 22 06.0 +0.8
      baz=80
X16A  Lo Mia Camp, P   1.58 109          Pn      23 21 57.3 -0.4
X16A                              IAML           23 22 18.0
      comp=E,181nm,0.3s
X16A                              IAML           23 22 22.3
      comp=N,170nm,1.0s
WUAZ  Wupatki          1.64  69   P      Pn      23 21 58.0 -0.5
      baz=250,SNR=87
WUAZ                              S      Sn      23 22 18.8 -1.4
      baz=250
WUAZ  Wupatki          1.64  69   Pn     Pn      23 21 58.0 -0.5
WUAZ                              IAML           23 22 21.3
      comp=N,294nm,0.3s
U15A  North Rim        1.67  28          Pn      23 21 58.3 -0.8
U15A                              Sg     Sn      23 22 19.3 -2.0
U15A                              IAML           23 22 21.4
      comp=N,388nm,0.6s
IRM   Iron Mountain    1.75 244   P      Pn      23 21 59.1 -0.8
      baz=63,SNR=75
IRM                               S      Sn      23 22 21.8 -1.1
      baz=63
GMRC  Granite Mounta   1.99 266   P      Pn      23 22 02.3 -1.0
      baz=85,SNR=27
GMRC                              S      Sn      23 22 27.4 -1.5
      baz=85
LCMT  Little Creek M   2.06   0   Pn     Pn      23 22 03.7 -0.6
KNB   Kanab            2.10   9          Pn      23 22 04.5 -0.4
SHPR  Sheep Range      2.20 316          Pn      23 22 05.5 -0.8
SHPR                              IAML           23 22 40.3
      comp=E,99nm,1.2s
BC3   Big Chuckawall   2.23 235   Pb     Pb      23 22 09.7 +0.1
      baz=54,SNR=23
BC3                               Sb     Sg      23 22 40.8 +0.5
      baz=54
ICU   Indian Springs   2.27 346          Pn      23 22 07.2 +0.1
GLA   Glamis           2.30 215   Pn     Pn      23 22 07.5  0.0
      baz=34
GLA                               Pg     Pg      23 22 11.8 -0.8
      baz=34,SNR=32
GLA                               Sb     Sg      23 22 42.4  0.0
      baz=34
GLA   Glamis           2.30 215          Pn      23 22 07.6 +0.1
BELC  Belle Mtn. Jos   2.46 248   Pn     Pn      23 22 08.8 -0.9
      baz=67,SNR=24
BELC                              Pg     Pg      23 22 15.7  0.0
      baz=67
BELC                              Sb     Sg      23 22 47.1 -0.4
      baz=67
HEC   Hector,Ludlow    2.54 268   Pn     Pn      23 22 09.9 -0.9
      baz=86,SNR=24
HEC                               Sg     Sg      23 22 50.6 +0.5
      baz=86
CCUT  Cedar City       2.60 358          Pn      23 22 12.2 +0.3
PKCU  Pink Cliffs      2.61  17          Pn      23 22 12.3 +0.3
SHOC  Shoshone, Teco   2.65 292   Pg     Pg      23 22 18.8 -0.5
      baz=110,SNR=14
SHOC                              Sg     Sg      23 22 54.5 +0.9
      baz=110
SZCU  Shurtz Canyon    2.65   3          Pn      23 22 11.8 -0.6
X18A  Snowflake        2.75  98          Pn      23 22 14.0 +0.2
X18A                              IAML           23 23 03.3
      comp=E,70nm,0.8s
X18A                              IAML           23 23 06.7
      comp=N,53nm,0.7s
PRN   Pahroc Range     2.85 330          Pn      23 22 16.0 +0.8
PRN                               IAML           23 23 08.1
      comp=E,121nm,1.0s
W18A  Petrified Fore   2.89  86   Pg     Pb      23 22 22.1 +1.2
      baz=268,SNR=14
W18A                              Sb     Sb      23 22 57.9 +1.1
      baz=268
GSC   Goldstone, Bar   2.94 278   P      Pn      23 22 15.4 -0.9
      baz=96,SNR=15
GSC                               S      Sn      23 22 52.0 -0.2
      baz=96
GSC   Goldstone, Bar   2.94 278          Pn      23 22 15.4 -0.9
GSC                               IAML           23 23 07.9
      comp=E,82nm,0.6s
GSC                               IAML           23 23 16.0
      comp=N,50nm,1.1s
PFO   Pinyon Flats O   2.97 244   Pn     Pn      23 22 16.6 -0.2
      comp=N,1.8nm,0.3s,baz=54,slow=13,SNR=16
PFO                               Sn     Sn      23 22 50.2 -2.9
      comp=N,1.8nm,0.3s,baz=304,slow=22,SNR=8.3
PFO                               Lg     Lg      23 23 03.0
      comp=N,7.8nm,0.3s,baz=327,slow=19,SNR=15
PFO   Pinyon Flats O   2.97 244   P      Pn      23 22 16.7 -0.2
      baz=62
PFO                               S      Sn      23 22 53.5 +0.3
      baz=62
PFO                               Sb     Sg      23 23 02.5 -1.6
      baz=62
PFO   Pinyon Flats O   2.97 244          Pn      23 22 16.1 -0.7
PFO                               IAML           23 23 07.6
      comp=N,49nm,0.8s
214A  Organ Pipe Nat   3.00 173   Pb     Pb      23 22 23.5 +0.8
      baz=353
214A                              Sb     Sg      23 23 03.7 -1.3
      baz=353
214A  Organ Pipe Nat   3.00 173          Pn      23 22 18.3 +1.1
CPBX  Cerro Prieto     3.05 215          Pn      23 22 16.9 -0.8
TPNV  Topopah Spring   3.15 310   Pg     Pb      23 22 27.1 +1.8
      baz=128,SNR=37
TPNV                              Sb     Sg      23 23 07.0 -2.7
      baz=128
TPNV  Topopah Spring   3.15 310          Pn      23 22 20.2 +0.9
TPNV                              IAML           23 23 14.8
      comp=N,70nm,0.9s
TPNV                              IAML           23 23 17.4
      comp=N,65nm,0.8s
MTPU  Mount Pierson    3.21  15          Pn      23 22 21.1 +0.8
IKP   In-Ko-Pah, Jac   3.30 227   P      Pn      23 22 21.8 +0.5
      baz=45
FURC  Furnace Creek,   3.31 298   Sg     Sg      23 23 14.3 -0.5
      baz=116
RMX   La Rumorosa      3.32 226   Pn     Pn      23 22 21.6 -0.1
TUC   Tucson           3.34 141   P      Pn      23 22 21.6 -0.2
      baz=323
TUC                               Sb     Sb      23 23 12.0 +2.5
      baz=323
TUC   Tucson           3.34 141   Pn     Pn      23 22 21.3 -0.5
TUC                               IAML           23 23 17.7
      comp=N,32nm,1.1s
TUC                               IAML           23 23 17.9
      comp=N,33nm,0.8s
MONP2 Monument Peak    3.34 233   P      Pn      23 22 21.8 -0.2
      baz=51
PIX   Pinacate         3.38 183          Pn      23 22 22.4 +0.1
PIX                               IAML           23 23 21.8
      comp=E,38nm,0.9s
MPMC  Manual Prospec   3.63 289   P      Pn      23 22 25.4 -0.6
      baz=106,SNR=8.7
MPMC                              Sb     Sg      23 23 23.8 -1.4
      baz=106
BAR   Barrett          3.64 233   Pn     Pn      23 22 26.3 +0.4
ESJX  Sierra Juarez    3.70 218   Pn     Pn      23 22 26.7 -0.1
ESJX                              IAML           23 23 17.7
      comp=N,24nm,0.0s
ESJX                              IAML           23 23 23.6
      comp=E,20nm,0.1s
R11A  Troy Canyon, C   3.88 332   Sb     Sb      23 23 28.2 +2.9
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	baz=150						
EDW2	Edwards Air Fo	3.90	270	S	Sn	23 23 14.7	-1.2
	baz=88						
MVCO	Mesa Verde	4.46	58	Sb	Sb	23 23 43.9	+1.8
	baz=241						
121A	Cookes Peak, D	5.15	116	P	Pn	23 22 47.4	+0.6
	baz=300,SNR=5.8						
DUG	Dugway, Tooele	5.25	4	Pb	Pb	23 23 01.8	+0.7
	baz=184,SNR=5.9						
NVAR	Mina Array Bea	5.35	312	Pn	Pn	23 22 52.1	+2.6
	comp=E,0.2nm,0.3s,baz=133,slow=14,SNR=4.4						
NVAR				Pg	Pg	23 23 07.6	-3.4
	comp=E,0.9nm,0.3s,baz=130,slow=15,SNR=11						
NVAR				Lg	Lg	23 24 16.1	
	comp=E,0.3nm,0.3s,baz=129,slow=32,SNR=3.3						
NVAR	Mina Array Bea	5.35	312		Pn	23 22 50.8	+1.2
ANMO	Albuquerque	5.58	88	Pg	Pb	23 23 05.8	-1.0
	comp=E,0.2nm,0.3s,baz=261,slow=13,SNR=3.0						
ANMO				Lg	Lg	23 24 19.5	
	comp=E,0.4nm,0.3s,baz=173,slow=20,SNR=3.1						
ELK	Elko	6.00	345	Pg	Pb	23 23 18.2	+4.2
	comp=E,0.6nm,0.3s,baz=194,slow=12,SNR=12						
ELK				Lg	Lg	23 24 36.1	
	comp=E,0.2nm,0.3s,baz=19,slow=7.0,SNR=6.4						
PDAR	Pinedale Array	8.32	19	Pn	Pn	23 23 31.4	+1.0
	comp=E,0.1nm,0.3s,baz=183,slow=14,SNR=2.6						
PDAR				Pg	Pb	23 23 53.4	-0.1
	comp=E,0.1nm,0.3s,baz=173,slow=15,SNR=4.5						
PDAR				Lg	Lg	23 25 48.8	
	comp=E,0.1nm,0.3s,baz=191,slow=33,SNR=2.1						
TXAR	Lajitas Array	9.86	122	Pn	Pn	23 23 50.1	-1.3
	comp=E,0.0nm,0.3s,baz=289,slow=12,SNR=1.1						
TXAR				Lg	Lg	23 26 35.3	
	comp=E,0.0nm,0.3s,baz=298,slow=30,SNR=2.3						

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*IDC **17** 23:30:13.8±1.9, 36°.01N×69°.74E, h107^{km}±16^{km}, mb4.0/37, mb1 4.1/42, mb1mx4.0/59, mbtmp4.4/42, MS2.8/2, Ms1 2.8/2, ms1mx2.4/44, Error ellipse: s-maj=11.9km s-min=7.9km az=20.0*

*NNC **17** 23:30:15.0±1.7, 36°.74N×69°.31E, h0^{km}, mb5.3, mpv5.4, Error ellipse: s-maj=18.0km s-min=8.2km az=158.0*

*MOS **17** 23:30:15.6±1.1, 36°.26N×69°.86E, h130^{km}, mb4.5/22, Error ellipse: s-maj=5.2km s-min=3.7km az=82.8*

*NEIC **17** 23:30:17.1±2.2, 36°.24N±0°.06×69°.67E±0°.08, h134^{km}±6^{km}, mb4.4/59, Error ellipse: s-maj=10.0km s-min=7.4km az=121.0*

*BJI **17** 23:30:17.7±0.0, 36°.33N×69°.90E, h134^{km}, mB4.8/20, mb4.5/29*

ISC 17 23:30:15.1±0.3, **36°.24N**±0°.03×**69°.71E**±0°.03, **h112**^{km}, **n343**, σ1^s.**63**/373, **mb4.3**/88, **24C-32D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.78	198	PN	Pn	23 30 48.7	+3.0
KBL	Kabul	1.78	198	Pn	Pn	23 30 48.7	+3.0
KBL	Kabul	1.78	198	P	Pn	23 30 48.6	+3.0
	SNR=2405						
KBL				S	Sn	23 31 12.8	+3.9
CEP	Cherat	3.01	143	P	Pn	23 31 04.3	+2.9
CEP				S	Sn	23 31 40.0	+2.9
THW	Thamme Wali	3.83	153	P	Pn	23 31 13.8	+1.6
NIL	Nilore	3.89	131	PN	Pn	23 31 16.3	+3.3
NIL	Nilore	3.89	131	Pn	Pn	23 31 16.3	+3.3
NIL	Nilore	3.89	131	P	Pn	23 31 16.3	+3.3
SARP	Sargodha	4.96	149	P	Pn	23 31 28.2	+0.8
IUG	Iuzhnay	5.90	2	eP	Pn	23 31 40.6	+0.4
	51nm,0.5s,baz=2.2						
IUG	Iuzhnay	5.90	2	ePN	Pn	23 31 40.5	+0.4
IUG				pmax	pmax		
	comp=Z,51nm,0.5s						
KSH	Kashi	5.94	55	P	Pn	23 31 38.8	-1.8
KSH				sP		23 32 09.6	
HRA	Herat	6.38	255	Pn	Pn	23 31 47.8	+1.1
AML	Almayashu	6.64	27	P	Pn	23 31 52.0	+1.5
	SNR=500						
DHRM	DHARAMSHALA	6.75	124	eP	Pn	23 31 53.0	+1.1
DHRM				eS	Sn	23 33 05.8	-1.7
DHRM				IAML		23 33 09.1	
	comp=N,2μm,0.2s						
DHRM				IAML		23 33 09.2	
	comp=E,2μm,0.3s						
BRLS	Borolday	6.78	1	eP	Pn	23 31 49.3	-2.7
	comp=E,43nm,0.8s,baz=360						
KK31	Karatay Array	6.88	5	⇓P	Pn	23 31 53.0	-0.3
	comp=E,45nm,0.3s,baz=192,slow=12,SNR=1655						
KK31				⇓S	Sn	23 33 07.4	-2.7
	comp=E,28nm,0.3s,baz=44,slow=31,SNR=4.6						
KK31	Karatay Array	6.88	5	PN	Pn	23 31 54.6	+1.3
KK31	Karatay Array	6.88	5	Pn	Pn	23 31 54.6	+1.3
KKAR	Karatay Array	6.88	5	PN	Pn	23 31 54.6	+1.3
KKAR	Karatay Array	6.88	5	Pn	Pn	23 31 54.6	+1.3
KKAR	Karatay Array	6.88	5		Pn	23 31 54.1	+0.8
UCH	Uchtor	7.04	30	P	Pn	23 31 57.5	+1.5
	SNR=700						
EKS2	Erkin-Say	7.14	25	P	Pn	23 31 58.6	+1.6
	SNR=187						
BHK	Bhakra	7.37	129	eP	Pn	23 32 06.6	+6.6
BHK				eP	Pn	23 32 06.6	+6.6
BHK				eS	Sn	23 33 20.2	-1.8
BHK				eS	Sn	23 33 20.2	-1.8
AAK	Ala-Archa	7.38	29	P	Pn	23 32 02.4	+2.2
	comp=E,138nm,0.3s,baz=169,slow=4.0,SNR=736						
AAK				S	Sn	23 33 23.0	+0.6
	comp=E,22nm,0.3s,baz=126,slow=22,SNR=15						
AAK				LR	LR	23 35 38.8	
	comp=E,55nm,21.5s,baz=197,slow=43						
AAK	Ala-Archa	7.38	29	P	Pn	23 32 02.0	+1.8
	SNR=482						
AAK	Ala-Archa	7.38	29	⇓P	Pn	23 32 02.0	+1.8
	comp=E,149nm,0.3s						
AAK				⇓S	Sn	23 33 23.4	+1.0
	comp=E,437nm,0.8s						
AAK	Ala-Archa	7.38	29	Pn	Pn	23 32 01.9	+1.7
AAK	Ala-Archa	7.38	29	P	Pn	23 32 02.0	+1.8
AAK				S	Sn	23 33 23.6	+1.1
KBK	Karagaybulak	7.58	31	P	Pn	23 32 04.8	+1.9
	SNR=265						
CHMS	Chumysh	7.79	28	P	Pn	23 32 06.8	+1.2
	SNR=340						
ULHL	Ulahol	7.85	38	P	Pn	23 32 08.0	+1.4
	SNR=43						
USP	Ospenovka	7.92	26	P	Pn	23 32 08.4	+0.9
	SNR=340						
SMLA	Simla	8.04	127	eP	Pn	23 32 09.4	+0.4
SMLA				eS	Sn	23 33 34.8	-3.5
SMLA				IAML		23 33 37.7	
	comp=N,673nm,0.3s						
SMLA				IAML		23 33 38.0	
	comp=E,406nm,0.3s						
TKM2	Tokmak 2	8.07	32	P	Pn	23 32 11.0	+1.4
	SNR=48						
TKM2	Tokmak 2	8.07	32	⇑P	Pn	23 32 10.7	+1.1
	comp=E,96nm,0.5s						
TKM2				⇓S	Sn	23 33 40.7	+1.5
	comp=E,124nm,0.8s						
TKM2	Tokmak 2	8.07	32	i PN	Pn	23 32 10.6	+1.1
TKM2				pmax	pmax		
	comp=Z,96nm,0.5s						
SGDS	Sogindy	8.13	26	eP	Pn	23 32 10.1	-0.2
	comp=Z,32nm,0.5s,baz=26						
SGDS				eS	Sn	23 33 40.3	-0.2
	baz=26						
SGDS	Sogindy	8.13	26	ePN	Pn	23 32 10.1	-0.2
SGDS				pmax	pmax		
	comp=Z,32nm,0.5s						
MTBS	Maitube	8.61	35	eP	Pn	23 32 17.1	+0.3
	baz=35						
MTBS	Maitube	8.61	35	ePN	Pn	23 32 17.1	+0.3
TNSS	Tian-Shan	8.78	37	eP	Pn	23 32 19.7	+0.3
	baz=38						
TNSS	Tian-Shan	8.78	37	ePN	Pn	23 32 19.7	+0.3
AAA	Alma-Ata	8.90	36	eP	Pn	23 32 21.8	+1.0
	baz=37						
AAA	Alma-Ata	8.90	36	ePN	Pn	23 32 21.7	+1.0
KNDC	Almaty	8.93	37	⇓P	Pn	23 32 22.8	+1.7
	comp=Z,201nm,0.6s						
KNDC				⇓S	Sn	23 34 02.1	+2.3
	comp=Z,264nm,1.5s						
MDOK	Medeo	8.93	37	eP	Pn	23 32 22.2	+1.0
	baz=37						
MDOK	Medeo	8.93	37	⇑P	Pn	23 32 22.2	+1.0
	comp=Z,141nm,0.7s						
MDOK				S	Sn	23 34 01.1	+1.2
	comp=Z,105nm,1.3s						
MDOK	Medeo	8.93	37	ePN	Pn	23 32 22.1	+1.0
DDI	Dehra Dun	9.14	128	eP	Pn	23 32 23.7	-0.3
DDI				eS	Sn	23 33 58.8	-6.5
DDI				IAML		23 34 02.0	
	comp=N,246nm,0.4s						
DDI				IAML		23 34 02.4	
	comp=E,302nm,0.4s						
BTLS	Baital	9.38	19	eP	Pn	23 32 26.9	-0.3
	baz=19						
BTLS	Baital	9.38	19	eP	Pn	23 32 26.9	-0.3
GEYT	Alibeck	9.41	284	P	Pn	23 32 27.3	-0.4
	comp=E,12nm,0.3s,baz=105,slow=9.0,SNR=94						
GEYT				S	Sn	23 34 08.2	-3.5
	comp=E,4.4nm,0.3s,baz=110,slow=40,SNR=3.0						
GEYT	Alibeck	9.41	284		Pn	23 32 26.8	-0.9
GYA0B	ALIBECK ARRAY	9.41	284	⇓P	Pn	23 32 26.9	-0.8
GYA0B				⇓S	Sn	23 34 07.4	-4.3
GYA0B	ALIBECK ARRAY	9.41	284	Pn	Pn	23 32 26.9	-0.8
CHKK	Chushkaly	9.43	34	eP	Pn	23 32 27.2	-0.7
	baz=34						
CHKK	Chushkaly	9.43	34	eP	Pn	23 32 27.1	-0.7
SATY	Saty	9.55	42	eP	Pn	23 32 29.1	-0.6
	comp=E,14nm,0.7s,baz=42						
SATY	Saty	9.55	42	eP	Pn	23 32 29.0	-0.6
SATY				pmax	pmax		
	comp=Z,14nm,0.7s						
KPKS	Kokpek	9.98	41	eP	Pn	23 32 35.3	-0.1
	comp=Z,41nm,0.7s,baz=41						
KPKS	Kokpek	9.98	41	eP	Pn	23 32 35.2	-0.1
KPKS				pmax	pmax		
	comp=Z,41nm,0.7s						
SHLS	Shalkode	10.20	44	eP	Pn	23 32 41.4	+3.0
	comp=Z,18nm,0.7s,baz=46						
SHLS	Shalkode	10.20	44	eP	Pn	23 32 41.3	+3.0
SHLS				pmax	pmax		
	comp=Z,18nm,0.7s						
TDK	Taldyqorghan	10.96	34	eP	Pn	23 32 47.2	-1.4
	comp=Z,42nm,1.1s,baz=34						
TDK	Taldyqorghan	10.96	34	eP	Pn	23 32 47.1	-1.4
TDK				pmax	pmax		
	comp=Z,41nm,1.1s						
BHUJ	Bhuj	12.94	180	eP	Pn	23 33 13.7	-1.1
BHUJ				eS	Sn	23 35 27.7	-10
BHUJ				IAML		23 35 32.5	
	comp=N,40nm,0.5s						
BHUJ				IAML		23 35 33.5	
	comp=E,59nm,0.7s						
BRZS	Berezniki	13.90	8	eP	Pn	23 33 26.4	-0.7
	baz=8.0						
BRZS	Berezniki	13.90	8	eP	Pn	23 33 26.3	-0.8
MAKZ	Makanchi	13.98	37	⇓P	P	23 33 31.3	-1.1
	comp=E,25nm,0.6s						
MAKZ	Makanchi	13.98	37	P	Pn	23 33 27.9	-0.2
MAKZ	Makanchi	13.98	37	Pn	Pn	23 33 27.9	-0.2
MK31	Makanchi Array	14.12	38	⇓P	P	23 33 33.8	-0.3
	comp=E,23nm,0.7s,baz=226,slow=14,SNR=366						
MK31	Makanchi Array	14.12	38	deP	Pn	23 33 29.4	-0.6
MK31				pmax	pmax		
	comp=Z,23nm,0.6s						
MK31	Makanchi Array	14.12	38	Pn	Pn	23 33 30.2	+0.3
MKAR	Makanchi Array	14.12	38	P	Pn	23 33 30.8	+0.9
	comp=Z,1.4nm,0.3s,baz=225,slow=13,SNR=83						
MKAR	Makanchi Array	14.12	38	Pn	Pn	23 33 30.0	0.0
BHPL	Bhopal	14.58	151	eP	Pn	23 33 35.4	-0.6
BHPL				IAmb	IAmb	23 33 41.9	
	comp=Z,29nm,0.8s						
BHPL				eS	Sn	23 36 06.5	-10
BHPL				IAML		23 36 09.1	
	comp=N,28nm,0.4s						
BHPL				IAML		23 36 09.9	
	comp=E,39nm,0.3s						
AB31	Akbulak array	14.84	334	⇑P	Pn	23 33 38.5	-0.5
	comp=E,3.7nm,0.3s,baz=156,slow=11,SNR=242						
AB31				⇑S	Sn	23 36 15.7	-7.0
	comp=E,13nm,0.6s,baz=152,slow=24,SNR=7.8						
ABKAR	Akbulak array	14.84	334	Pn	Pn	23 33 38.1	-0.8
ABKAR	Akbulak array	14.84	334	Pn	Pn	23 33 38.2	-0.8
SHME	Shamm	15.42	233	P	P	23 33 49.6	+1.1
WMQ	Urumqi	15.70	56	eP	P	23 33 51.3	-0.3
WMQ				sP	sP	23 34 32.3	+5.3
WMQ				LR	LR		
	comp=E,290nm,6.1s						
WMQ				LR	LR		
	comp=E,350nm,6.1s						
WMQ	Urumqi	15.70	56	P	Pn	23 33 50.5	+0.5
WMQ				pmax	pmax		
	comp=Z,21nm,0.5s						
WMQ	Urumqi	15.70	56	Pn	Pn	23 33 50.5	+0.5
KURBB	Kurchatov Arra	15.72	21	P	Pn	23 33 49.9	-0.1
	comp=Z,0.5nm,0.3s,baz=212,slow=11,SNR=26						
KURBB	Kurchatov Arra	15.72	21	⇑P	P	23 33 51.6	0.0
	comp=Z,39nm,0.8s						
KURK	Kurchatov	15.83	21	P	Pn	23 33 49.8	-1.6
KURK				pmax	pmax		
	comp=Z,22nm,0.9s						
KURK	Kurchatov	15.83	21		Pn	23 33 49.8	-1.6
KURK				IAmb	IAmb	23 33 56.1	
	comp=Z,22nm,0.9s						
ZSN	Zaisan	15.87	40	eP	Pn	23 33 51.5	-0.5
	baz=41						
ZSN	Zaisan	15.87	40	eP	Pn	23 33 51.5	-0.5
SEM	Semipalatinsk	16.08	25	eP	Pn	23 33 53.2	-1.5
	baz=25						
SEM	Semipalatinsk	16.08	25	eP	Pn	23 33 53.2	-1.5
WSAR	Wadi Sarin	16.12	220	P	P	23 33 55.8	-0.6
	comp=Z,0.6nm,0.3s,baz=52,slow=6.7,SNR=7.8						
UOSS	Minazif	16.17	230		Pn	23 33 55.6	-0.2
UOSS				IAmb	IAmb	23 33 59.0	
	comp=Z,14nm,0.7s						
UOSS	Minazif	16.17	230	P	P	23 33 56.0	-0.9
ASHO	Ashiyiah	16.45	229	P	P	23 34 00.0	0.0
WBK	Wadi Bani Khal	16.48	217	P	P	23 34 01.5	+1.2
	SNR=5.3						
AKTO	Aktyubinsk	16.51	333	P	P	23 34 00.5	0.0
	comp=Z,3.4nm,0.3s,baz=138,slow=12,SNR=52						
AKTO				S	Sn	23 36 55.2	-7.8
	comp=Z,0.8nm,0.3s,baz=200,slow=23,SNR=4.0						
AKTO	Aktyubinsk	16.51	333	⇓P	P	23 34 00.9	+0.4
	comp=Z,31nm,0.9s						
AKTO				⇑S	Sn	23 36 57.9	-5.1
	comp=Z,25nm,0.8s						
JLN	Jalan Bani Buh	16.66	215	P	P	23 34 03.3	+1.1
	SNR=8.0						
BVAR	Borovoye Array	16.79	1	P	P	23 34 03.7	+0.2
	comp=Z,6.3nm,0.3s,baz=170,slow=18,SNR=66						
LKRN	Lenkeran, Azer	16.80	285	P	P	23 34 06.7	+3.0
BRVK	Borovoye	16.82	1	⇓P	Pn	23 34 03.3	-0.2
	comp=Z,30nm,1.2s						
BRVK	Borovoye	16.82	1	deP	Pn	23 34 03.2	-0.4
BRVK				pmax	pmax		
	comp=Z,30nm,1.2s						
BRVK	Borovoye	16.82	1		Pn	23 34 03.5	-0.1
BRVK				IAmb	IAmb	23 34 06.4	
	comp=Z,20nm,0.7s						
JMDO	Jabal Madar	17.11	219	P	Pn	23 34 09.2	+1.8
	SNR=6.4						
SEKA	Sheki	18.23	293	P	Pn	23 34 22.9	+2.1
MNGR	Mingechevir, A	18.26	291	P	Pn	23 34 24.2	+3.1
GTK	Tadong	18.34	114	eP	Pn	23 34 21.9	-0.3
MHTO	MHTO	18.34	217	P	Pn	23 34 22.8	+0.6
	SNR=8.6						
DGZ	Jazzator, Alta	18.62	38	ceP	Pn	23 34 25.9	+0.5
BOK	Bokaro	18.68	127	eP	P	23 34 24.7	+0.2
BOK				IAmb	IAmb	23 34 27.8	
	comp=Z,17nm,0.5s						
ZKTA	Zakatala	18.73	294	P	Pn	23 34 29.3	+2.7
GANJ	Ganja	18.82	291	P	Pn	23 34 30.6	+2.8
DBC	Dubki	18.85	298	ceP	Pn	23 34 30.4	+2.3
DVE	Vedeno	19.34	297	⇓eP	Pn	23 34 33.5	-0.3
NAX	Nakhchivan	19.37	286	P	Pn	23 34 37.0	+2.8
UMR	Umm Al-Rimmam	19.62	256	eP		23 34 35.3	
SLWR	Sila	19.71	237	P	P	23 34 35.2	-0.5
KBD	Kabd	19.80	255	eP		23 34 37.9	
MIB	Mutribah	19.81	258	eP		23 34 37.9	
GNI	Garni	19.99	289	P	Pn	23 34 42.7	+1.2
	comp=Z,18nm,0.6s,baz=30,slow=6.5,SNR=18						
GNI	Garni	19.99	289	deP	Pn	23 34 42.6	+1.1
GNI				pmax	pmax		
	comp=Z,19nm,1.0s						
GNI	Garni	19.99	289		Pn	23 34 40.5	-1.0
GNI				IAmb	IAmb	23 34 51.7	
	comp=Z,19nm,0.7s						
RDF	Al-Radifah	20.02	255	eP		23 34 39.6	
RST	Umm Al-Ruwaisa	20.20	257	eP		23 34 41.6	
HYB	Hyderabad	20.32	155	i P	P	23 34 43.5	+1.1
HYB				e		23 38 18.0	
ZAA0	Zalesovo Array	20.59	26	P	P	23 34 46.0	+1.1
ZALV	Zalesovo Beam	20.59	26	P	P	23 34 46.0	+1.1
	comp=Z,44nm,0.4s,baz=222,slow=11,SNR=216						
ZALV				S	S	23 38 26.1	-2.7
	comp=Z,1.5nm,0.6s,baz=215,slow=12,SNR=2.2						
ZALV	Zalesovo Beam	20.59	26	P	P	23 34 45.9	+0.9
ZEI	Tsey	20.91	296	eP	Pn	23 34 52.1	-0.2
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NCK	Nalchik	21.26	298	⇓eP	P	23 34 54.8	+2.6
NCK				pmax	pmax		
	comp=Z,38nm,1.0s						
SVE	Sverdlovsk	21.48	346	ceP	P	23 34 56.0	+1.6
SVE				eS	S	23 38 48.6	+2.7
SVE				pmax	pmax		
	comp=Z,37nm,0.9s						
ARU	Arti	21.56	343	P	P	23 34 56.4	+1.2
	comp=Z,10nm,0.8s,baz=158,slow=7.3,SNR=52						
ARU				S	S	23 38 48.8	+1.4
	comp=Z,1.4nm,0.5s,baz=158,slow=23,SNR=7.3						
ARU	Arti	21.56	343	c iP	P	23 34 56.1	+0.9
ARU						23 35 26.7	
ARU				S	S	23 38 49.5	+2.2
ARU				pmax	pmax		
	comp=Z,60nm,1.5s						
ARU	Arti	21.56	343	P	P	23 34 56.1	+0.9
SHL	Shillong	21.75	113	P	P	23 34 57.6	-0.2
SHL				pmax	pmax		
	comp=Z,35nm,0.6s						
SHL	Shillong	21.75	113	eP	P	23 34 57.2	-0.6
SHL	Shillong	21.75	113	P	P	23 34 57.6	-0.2
SHL	Shillong	21.75	113	P	P	23 34 57.9	+0.1
	SNR=15						
KBZ	Khabaz	21.80	298	P	P	23 34 59.6	+1.7
	comp=Z,4.2nm,0.7s,baz=112,slow=9.6,SNR=7.9						
KBZ				S	S	23 38 55.1	+3.1
	comp=Z,2.4nm,0.9s,baz=201,slow=15,SNR=2.2						
KBZ	Khabaz	21.80	298	⇓eP	P	23 34 59.4	+1.5
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TEZP	TEZPUR	21.87	110	eP	P	23 34 57.7	-1.1
KVAR	Kislovodsk Arr	21.99	299	P	P	23 35 01.8	+1.7
	comp=Z,4.5nm,0.8s,baz=45,slow=18,SNR=1.7						
KVAR				S	S	23 39 04.1	+8.4
	comp=Z,9.7nm,0.8s,baz=210,slow=14,SNR=5.2						
GOF	Gofitskoye	21.99	302	⇑eP	P	23 35 01.9	+2.0
GOF				pmax	pmax		
	comp=Z,30nm,0.9s						
KIV	Kislovodsk	21.99	299	eP	P	23 35 02.1	+2.0
KIV				eS	S	23 38 57.4	+1.7
KIV				pmax	pmax		
	comp=Z,36nm,0.9s						
KIV				MLR	MLR		
	comp=Z,73nm,14.0s						
KIV	Kislovodsk	21.99	299	P	P	23 35 01.1	+1.0
KIV				IAmb	IAmb	23 35 07.3	
	comp=Z,9.8nm,0.8s						
ZIRO	ZIRO	22.22	106	eP	P	23 35 03.0	+0.3
DOK	Doka	22.29	222	P	P	23 35 03.4	+0.1
	SNR=20						
BELG	Belogornoye	22.45	323	P	P	23 35 05.3	+0.7
	comp=Z,50nm,1.0s,baz=150,slow=1.2,SNR=17						
BELG				S	S	23 39 10.2	+7.3
	comp=Z,6.6nm,0.8s,baz=246,slow=6.3,SNR=2.2						
BELG	Belogornoye	22.45	323	ceP	P	23 35 05.0	+0.4
BELG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WHFO	Wadi Hawf	23.06	222	P	P	23 35 11.0	+0.1
	SNR=47						
RBK	Rabkut	23.17	220	P	P	23 35 11.2	-0.7
MOKO	MOKOCHONG	23.34	108	eP	P	23 35 13.2	-0.4
KOHI	KOHIMA	23.34	110	eP	P	23 35 14.5	+0.9
ABTO	Aybut	23.78	222	P	P	23 35 17.8	+0.3
	SNR=8.8						
GTA	Gaotai	23.94	73	P	P	23 35 20.3	+1.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SOC	Sochi	24.05	297	eP	P	23 35 18.9	-0.8
SOC				eS	S	23 39 26.3	-2.6
SOC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	Ar Rayn	24.44	245	P	P	23 35 23.5	0.0
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	Ar Rayn	24.44	245	P	P	23 35 23.5	0.0
RAYN				IAmb	IAmb	23 35 25.4	
	comp=Z,10nm,0.8s						
KIRV	Kirov	26.03	336	P	P	23 35 38.8	+1.4
	comp=Z,19nm,0.4s,baz=130,slow=4.3,SNR=20						
KIRV	Kirov	26.03	336	c iP	P	23 35 38.2	+0.8
MOY	Mondy	27.03	45	eP	P	23 35 48.5	+1.9
LZH	Lanzhou	27.48	80	eP	P	23 35 51.8	+0.9
LZH				pP	pP	23 36 18.3	+2.1
LZH				sP	sP	23 36 35.0	+5.4
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,85nm,4.7s						
ZAK	Zakamensk	27.95	49	eP	P	23 35 54.8	0.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	Keskin Array S	28.52	288	⇓eP	P	23 36 01.3	+1.2
BR131	Keskin Array S	28.52	288	P	P	23 36 01.1	+1.0
BRTR	Keskin Array B	28.52	288	P	P	23 36 01.5	+1.4
	comp=Z,0.9nm,0.7s,baz=104,slow=8.2,SNR=9.0						
BRTR	Keskin Array B	28.52	288	P	P	23 35 59.1	-1.0
TLY	Talaya	28.57	47	P	P	23 36 02.6	+2.3
	comp=Z,4.2nm,0.5s,baz=225,slow=8.5,SNR=14						
TLY	Talaya	28.57	47	⇓eP	P	23 36 02.0	+1.7
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TLY	Talaya	28.57	47	P	P	23 36 02.0	+1.7
TLY				IAmb	IAmb	23 36 03.3	
	comp=Z,4.3nm,0.6s						
CD2	Chengdu	28.77	91	P	P	23 36 04.8	+2.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	Songino Array	29.34	55	P	P	23 36 08.8	+1.6
	comp=Z,1.7nm,0.6s,baz=268,slow=9.3,SNR=16						
SONM	Songino Array	29.34	55	P	P	23 36 07.9	+0.7
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	29.34	55	P	P	23 36 07.9	+0.7
OBN	Obninsk	29.46	320	LR	LR	23 49 37.3	
	comp=Z,32nm,21.9s,baz=224,slow=39						
OBN	Obninsk	29.46	320	⇑eP	P	23 36 08.7	+0.7
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ULN	Ulaanbaatar	29.78	55	P	P	23 36 12.0	+0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	29.78	55	P	P	23 36 11.9	+0.8
KMI	Kunming	30.36	102	⇓eP	P	23 36 19.4	+2.8
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KLMR	Klimovskoe	31.20	332	eP	P	23 36 21.4	-1.9
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	31.20	332	eP	P	23 36 21.5	-1.9
KLMR				AMP		23 36 23.4	
	comp=Z,18nm,1.4s						
CMAR	Chiang Mai Arr	31.26	117	P	P	23 36 24.1	-0.2
	comp=Z,3.5nm,0.8s,baz=295,slow=8.3,SNR=17						
CMAR	Chiang Mai Arr	31.26	117	i P	P	23 36 24.8	+0.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ELL	Elmali	31.84	283	P	P	23 36 30.0	+0.6
ELL				pmax	pmax		
	comp=Z,23nm,0.6s						
ELL	Elmali	31.84	283	P	P	23 36 30.0	+0.6
XAN	Xi'an	32.00	82	P	P	23 36 30.8	+0.1
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
AKASG	Malin Array Be	32.30	309	P	P	23 36 33.5	+0.4
	comp=Z,1.8nm,0.4s,baz=85,slow=7.0,SNR=15						
AKBB	Malin Array Si	32.30	309	P	P	23 36 33.4	+0.3
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	Malin Array Si	32.30	309	P	P	23 36 33.4	+0.3
AKBB				IAmb	IAmb	23 36 40.8	
	comp=Z,2.7nm,0.6s						
HHC	Hu-ho-hao-te	32.83	69	eP	P	23 36 39.9	+1.9
HHC				pP	sP	23 37 11.4	-5.8

HHC				sP	PP	23 37 29.5	-25
HHC				sS	sS	23 42 40.1	+8.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
PLOR	**Plostina**	33.51	300	⇑P	P	23 36 46.4	+2.7
PLOR	**Plostina**	33.51	300	⇑P	P	23 36 46.4	+2.7
ENH	**Enshi**	33.62	89	P	P	23 36 45.4	+0.5
MLR	**Muntele Rosu**	34.00	300	⇑P	P	23 36 51.2	+3.1
MLR	**Muntele Rosu**	34.00	300	P	P	23 36 49.7	+1.6
MLR				pmax	pmax		
	comp=Z,16nm,1.0s						
MLR	**Muntele Rosu**	34.00	300	P	P	23 36 49.7	+1.6
DOPR	**Dopca**	34.39	300	⇓P	P	23 36 53.2	+1.8
BURAR	**Bucovina Array**	34.55	303	⇑P	P	23 36 54.2	+1.4
BURAR	**Bucovina Array**	34.55	303	⇑P	P	23 36 54.2	+1.4
BURAR	**Bucovina Array**	34.55	303	P	P	23 36 53.5	+0.7
BUR08	**Bucovina Ar. S**	34.57	303	P	P	23 36 53.7	+0.8
VOIR		34.63	299	⇓P	P	23 36 55.2	+1.7
VOIR		34.63	299	⇓P	P	23 36 55.2	+1.7
ARR	**Arges**	34.92	299	⇑P	P	23 36 58.0	+2.0
ARCR	**ARCALIA**	35.12	302	⇓P	P	23 37 00.5	+2.9
DRGR		36.24	302	⇓P	P	23 37 09.2	+1.9
DRGR		36.24	302	⇓P	P	23 37 09.2	+1.9
KOLS	**Kolonicke sedl**	36.57	305	*e*P	P	23 37 11.5	+1.5
KOLS	**Kolonicke sedl**	36.57	305	*e*P	P	23 37 11.5	+1.5
MDVR	**Moldovita**	37.02	298	⇑P	P	23 37 15.7	+1.9
BZS	**Buzias**	37.04	300	⇓P	P	23 37 15.6	+1.7
BZS	**Buzias**	37.04	300	⇓P	P	23 37 15.6	+1.7
FINES	**FINESS Array B**	37.12	327	P	P	23 37 15.1	+0.7
	comp=Z,3.4nm,0.8s,baz=104,slow=8.5,SNR=11						
LVZ	**Lovozero**	37.32	339	P	P	23 37 16.7	+0.7
LVZ				pmax	pmax		
	comp=Z,13nm,1.1s						
LVZ	**Lovozero**	37.32	339	P	P	23 37 16.7	+0.7
LVZ				IAmb	IAmb	23 37 28.0	
	comp=Z,13nm,1.1s						
UBPT	**Khong Chiam**	38.07	114	P	P	23 37 22.6	-0.3
UBPT				IAmb	IAmb	23 37 22.7	
	comp=Z,13nm,1.1s						
DIVS	**Divibare**	38.30	298	P	P	23 37 25.6	+0.9
VYHS	**Vyhne**	38.84	305	*e*P	P	23 37 29.5	+0.4
VYHS	**Vyhne**	38.84	305	*e*P	P	23 37 29.5	+0.4
MORC	**Moravsky Berou**	39.68	307	P	P	23 37 36.7	+0.6
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MORC	**Moravsky Berou**	39.68	307	P	P	23 37 36.7	+0.6
KEV	**Kevo**	40.66	339	P	P	23 37 43.5	-0.2
KEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KEV	**Kevo**	40.66	339	P	P	23 37 43.5	-0.2
KEV				IAmb	IAmb	23 37 50.8	
	comp=Z,5.7nm,0.9s						
CONA	**Conrad Observa**	40.86	304	*e*P	P	23 37 46.5	+0.7
	comp=Z,5.9nm,1.0s						
ARA0	**ARCESS Array S**	40.99	338	*e*P	P	23 37 47.4	+0.8
ARCES	**ARCESS Array B**	40.99	338	P	P	23 37 47.5	+1.0
	comp=Z,6.8nm,0.7s,baz=106,slow=6.7,SNR=15						
ARCES	**ARCESS Array B**	40.99	338	P	P	23 37 47.3	+0.8
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARCES	**ARCESS Array B**	40.99	338	P	P	23 37 47.3	+0.8
KTK1	**Kautokeino**	41.44	337	*e*P	P	23 37 50.7	+0.5
SOKA	**Soboth**	41.52	302	*e*P	P	23 37 52.5	+1.2
	comp=Z,4.0nm,0.7s						
HAMF	**Hammerfest**	42.09	339	*e*P	P	23 37 55.7	+0.3
GERES	**GERESS Array B**	42.23	305	P	P	23 37 57.6	+0.6
	comp=Z,0.7nm,0.8s,baz=86,slow=7.2,SNR=7.3						
GERES				PcP	PcP	23 39 48.3	-0.7
	comp=Z,0.9nm,0.8s,baz=96,slow=4.9,SNR=5.3						
CLL	**Collm**	42.54	309	*e*P	P	23 37 59.0	-0.4
CLL	**Collm**	42.54	309	*e*P	P	23 37 59.0	-0.4
IPM	**Ipoh**	42.76	130	P	P	23 38 01.2	-0.4
IPM				IAmb	IAmb	23 38 02.2	
	comp=Z,12nm,0.9s						
ZOU	**Zoufplan**	42.95	302	P	P	23 38 02.4	-0.6
ZOU				IAmb	IAmb	23 38 20.9	
	comp=Z,5.2nm,1.1s						
ZEA	**Zeya**	43.01	47	*e*P	P	23 38 05.3	+2.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TRO	**Tromso**	43.09	337	*e*P	P	23 38 04.1	+0.6
GSI	**Gunungsitoli**	43.30	137	P	P	23 38 06.9	+1.0
MOR8	**Moi Rana**	43.53	331	*e*P	P	23 38 07.2	0.0
FAUS	**Fauske**	43.55	333	*e*P	P	23 38 07.6	+0.3
NC405	**NORSAR Array S**	43.73	323	P	P	23 38 08.7	-0.1
STEI	**Steigen**	43.74	334	*e*P	P	23 38 09.2	+0.4
NC602	**NORSAR Array S**	43.77	323	P	P	23 38 07.9	-1.2
NC602	**NORSAR Array S**	43.77	323	*e*P	P	23 38 09.7	+0.6
WTTA	**Wattenberg**	43.77	303	*e*P	P	23 38 10.0	+0.5
	comp=Z,12nm,1.6s						
GRA1	**Grafenberg Arr**	43.78	307	P	P	23 38 10.7	+1.3
GRF	**Grafenberg Arr**	43.78	307	P	P	23 38 10.7	+1.3
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAFF	**Raffo Rosso**	43.82	289	P	P	23 38 10.5	+0.6
NC303	**NORSAR Array S**	43.91	324	P	P	23 38 10.4	+0.2
CTI	**Castel Tesino**	43.92	302	P	P	23 38 10.7	0.0
CTI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CTI	**Castel Tesino**	43.92	302	P	P	23 38 10.7	0.0
NB201	**NORSAR Array S**	43.92	323	P	P	23 38 09.9	-0.5
NB2	**NORSAR Subarra**	43.96	323	P	P	23 38 10.3	-0.4
	comp=Z,3.5nm,0.6s,baz=99,slow=7.9						
NB2	**NORSAR Subarra**	43.96	323	P	P	23 38 10.3	-0.4
	baz=99,slow=7.9						
NOA	**NORSAR Array B**	43.96	323	P	P	23 38 10.4	-0.3
	comp=Z,3.1nm,0.7s,baz=99,slow=7.9,SNR=13						
OSL	**Oslo**	44.09	322	*e*P	P	23 38 12.2	+0.5
MOTA	**Moosalm**	44.12	303	*e*P	P	23 38 12.5	+0.2
	comp=Z,8.7nm,1.8s						
KONS	**Konsvik**	44.13	331	*e*P	P	23 38 12.0	+0.1
NBO00	**NORSAR Array S**	44.17	323	P	P	23 38 11.6	-0.7
NBO00				IAmb	IAmb	23 38 12.6	
	comp=Z,12nm,0.8s						
NC204	**NORSAR Array S**	44.21	324	P	P	23 38 12.5	-0.2
LOF	**Lofoten**	44.41	334	*e*P	P	23 38 14.3	+0.3
KONO	**Kongsberg**	44.63	321	P	P	23 38 15.4	-0.6
KONO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KONO	**Kongsberg**	44.63	321	P	P	23 38 15.4	-0.6
KONO				IAmb	IAmb	23 38 34.2	
	comp=Z,10nm,1.1s						
KONO	**Kongsberg**	44.63	321	*e*P	P	23 38 16.2	+0.2
TBLU	**Trondheim**	44.70	326	*e*P	P	23 38 16.6	+0.2
YAK	**Yakutsk**	44.78	35	*e*P	P	23 38 17.1	0.0
YAK				*e*		23 39 56.3	
YAK				*e*		23 40 08.9	
YAK				*e*S	S	23 44 44.9	-0.6
YAK				*e**SS	sS	23 45 33.0	+1.3
YAK				*e*		23 48 02.6	
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,125nm,4.0s						
YAK				pmax	pmax		
	comp=E,78nm,3.8s						
YAK				pmax	pmax		
	comp=N,71nm,3.9s						
YAK				smax	smax		
	comp=E,93nm,4.2s						
YAK				smax	smax		
	comp=N,57nm,3.9s						
YAK	**Yakutsk**	44.78	35	P	P	23 38 17.6	+0.5
DAVA	**Damuels**	44.95	304	*e*P	P	23 38 18.9	0.0
	comp=N,4.2nm,0.5s						
DOMB	**Dombas**	45.10	325	*e*P	P	23 38 19.8	+0.1
HOMB	**Homborsund**	45.13	319	*e*P	P	23 38 20.3	+0.4
BJO1	**Bjornoya**	45.20	343	*e*P	P	23 38 20.6	+0.3
MOL	**Molde**	45.85	325	*e*P	P	23 38 25.5	0.0
KSRS	**Korea Array**	45.95	70	P	P	23 38 27.1	+0.5
	comp=N,1.4nm,0.6s,baz=273,slow=7.2,SNR=8.0						
KLR	**Kul'dur**	46.13	53	P	P	23 38 28.6	+0.6
	comp=N,2.7nm,0.6s,baz=280,slow=10,SNR=12						
KLR	**Kul'dur**	46.13	53	⇓*e*P	P	23 38 28.5	+0.5
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TIXI	**Tiksi**	46.40	22*c*	*i*P	P	23 38 30.2	+0.4
TIXI				*i* *PP	pP	23 39 00.7	+4.6
TIXI	**Tiksi**	46.40	22	P	P	23 38 30.2	+0.4
TIXI				IAmb	IAmb	23 38 32.5	
	comp=Z,10nm,0.7s						
SENIN	**Lac Senin/Sane**	46.85	303	P	P	23 38 34.0	0.0
SENIN				IAmb	IAmb	23 38 34.7	
	comp=Z,4.3nm,0.7s						
HSPB	**Hornsund (broa**	47.12	345	*e*P	P	23 38 36.3	+1.0
USRK	**Ussuriysk Ar.**	47.20	60	P	P	23 38 35.5	-0.9
	comp=Z,1.0nm,0.5s,baz=260,slow=8.4,SNR=7.2						
USRK	**Ussuriysk Ar.**	47.20	60	P	P	23 38 35.8	-0.6
USRK	**Ussuriysk Ar.**	47.20	60	P	P	23 38 35.8	-0.6
SPA0	**Spitsbergen Ar**	47.51	347	P	P	23 38 39.5	+1.2
SPA0	**Spitsbergen Ar**	47.51	347	*e*P	P	23 38 39.5	+1.2
BNI	**Bardonecchia**	47.54	301	P	P	23 38 39.6	+0.4
BNI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BNI	**Bardonecchia**	47.54	301	P	P	23 38 39.6	+0.4
KMBO	**Kilima Mbogo**	47.89	226	P	P	23 38 41.9	-0.4
	comp=Z,0.6nm,0.5s,baz=78,slow=20,SNR=1.8						
KEST	**Kesra**	48.13	288	P	P	23 38 43.9	+0.1
	comp=Z,2.2nm,0.7s,baz=34,slow=8.2,SNR=4.4						
KBS	**Kingsbay**	48.63	347	P	P	23 38 47.6	+0.6
KBS				pmax	pmax		
	comp=Z,18nm,1.1s						
KBS	**Kingsbay**	48.63	347	P	P	23 38 47.6	+0.6
MBAR	**Mbarara**	51.51	233	⇑*e*P	P	23 39 09.9	+0.2
MBAR				pmax	pmax		
	comp=Z,7.0nm,1.8s						
JSD	**Sado**	53.52	66	P	P	23 39 23.6	-0.5
DAG	**Danmarks Havn**	54.68	344	*i* P	P	23 39 32.3	+0.4
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	54.68	344	*i* P	P	23 39 32.3	+0.4
	comp=Z,3.4nm,0.7s						
DAG	**Danmarks Havn**	54.68	344	*i* P	P	23 39 32.3	+0.4
DAG				IAmb	IAmb	23 39 32.9	
	comp=Z,3.4nm,0.7s						
ESDC	**Sonseca Array**	56.65	298	P	P	23 39 46.5	-0.1
	comp=Z,1.3nm,0.6s,baz=58,slow=7.6,SNR=17						
PETK	**Petropavlovsk-**	60.88	44	P	P	23 40 14.7	-0.9
	comp=Z,3.0nm,0.7s,baz=302,slow=6.3,SNR=2.3						
TOA0	**Torodi Ar. Sit**	64.67	268	P	P	23 40 39.5	-1.8
TORD	**Torodi Ar. Bea**	64.67	268	P	P	23 40 40.0	-1.2
	comp=Z,1.4nm,0.6s,baz=44,slow=5.8,SNR=6.2						
TORD	**Torodi Ar. Bea**	64.67	268	P	P	23 40 39.7	-1.6
KOWA	**Kowa**	68.54	273	P	P	23 41 04.9	-1.0
DBIC	**Dimbokro**	73.64	266	P	P	23 41 35.3	-1.4
	comp=Z,2.5nm,0.8s,baz=42,slow=7.6,SNR=3.1						
DBIC	**Dimbokro**	73.64	266	P	P	23 41 35.1	-1.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	**Dimbokro**	73.64	266	P	P	23 41 35.1	-1.6
DBIC				IAmb	IAmb	23 41 36.0	
	comp=Z,3.7nm,0.9s						
INK	**Inuvik**	74.32	9	P	P	23 41 40.2	+0.4
	comp=Z,6.9nm,0.8s,baz=360,slow=7.2,SNR=18						
INK	**Inuvik**	74.32	9	P	P	23 41 40.1	+0.4
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
INK	**Inuvik**	74.32	9	P	P	23 41 40.1	+0.4
INK				IAmb	IAmb	23 41 41.1	
	comp=Z,5.7nm,0.8s						
TTA	**Tatalina**	74.62	20	P	P	23 41 41.6	-0.1
TTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TTA	**Tatalina**	74.62	20	P	P	23 41 41.6	-0.1
PRP	**Porcupine Dome**	74.94	14	P	P	23 41 43.9	+0.3
BPAW	**Bear Paw Mtn.**	74.95	17	P	P	23 41 42.9	-0.7
COLA	**College**	75.01	16	⇓*e*P	P	23 41 43.6	-0.1
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	75.31	15	P	P	23 41 45.0	-0.6
	comp=Z,3.1nm,0.9s,baz=316,slow=4.8,SNR=23						
ILAR	**Eielson Array**	75.31	15	P	P	23 41 44.7	-0.8
ILAR	**Eielson Array**	75.31	15	P	P	23 41 44.7	-0.8
KTH	**Kantishna Hill**	75.43	18	P	P	23 41 45.9	-0.4
KTH				IAmb	IAmb	23 41 47.0	
	comp=Z,6.3nm,0.8s						
FITZ	**Fitzroy Crossi**	75.58	126	P	P	23 41 45.8	-1.8
	comp=Z,1.2nm,0.8s,baz=307,slow=4.8,SNR=1.1						
PPLA	**Purkeypile**	75.66	18	P	P	23 41 47.5	-0.2
PPLA				IAmb	IAmb	23 41 53.8	
	comp=Z,5.9nm,0.8s						
RND	**Reindeer**	76.05	17	P	P	23 41 49.1	-0.7
RND				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RND	**Reindeer**	76.05	17	P	P	23 41 49.1	-0.7
RND				IAmb	IAmb	23 41 49.3	
	comp=Z,4.2nm,0.8s						
EGAK	**Eagle**	76.44	13	P	P	23 41 52.6	+0.7
RIDG	**Independent Ri**	76.64	15	P	P	23 41 52.0	-1.2
RIDG				IAmb	IAmb	23 41 54.1	
	comp=Z,5.2nm,0.8s						
DHY	**Denali Highway**	76.67	16	P	P	23 41 52.5	-0.9
DHY				IAmb	IAmb	23 41 54.2	
	comp=Z,6.3nm,0.8s						
BOSA	**Boshof**	76.88	219	P	P	23 41 53.6	-1.4
	comp=Z,1.7nm,0.8s,baz=34,slow=7.3,SNR=1.4						
DAWY	**Dawson**	77.41	13	P	P	23 41 57.6	+0.2
TGL	**Tana Glacier**	79.74	16	P	P	23 42 07.6	-2.8
KDAK	**Kodiak Island**	79.82	21	P	P	23 42 10.3	-0.3
	comp=Z,8.5nm,0.9s,baz=344,slow=8.4,SNR=1.8						
KDAK	**Kodiak Island**	79.82	21	P	P	23 42 09.2	-1.5
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDAK	**Kodiak Island**	79.82	21	P	P	23 42 09.2	-1.5
KDAK				IAmb	IAmb	23 42 10.7	
	comp=Z,6.5nm,0.8s						
OHAK	**Old Harbor**	80.08	22	P	P	23 42 11.7	-0.4
OHAK				IAmb	IAmb	23 42 26.6	
	comp=Z,13nm,1.1s						
HYT	**Haines Junctio**	80.74	13	P	P	23 42 15.1	-0.7
HYT				IAmb	IAmb	23 42 17.0	
	comp=Z,13nm,1.1s						
YKA	**Yellowknife Ar**	81.55	2	P	P	23 42 19.8	0.0
	comp=Z,2.1nm,0.7s,baz=354,slow=5.0,SNR=42						
NWAO	**Narrogin (SRO)**	81.91	141	P	P	23 42 19.6	-2.5
	comp=Z,5.7nm,0.7s,baz=74,slow=15,SNR=2.2						
NWAO	**Narrogin (SRO)**	81.91	141	P	P	23 42 20.1	-2.0
NWAO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NWAO	**Narrogin (SRO)**	81.91	141	P	P	23 42 20.1	-2.0
NWAO				IAmb	IAmb	23 42 34.1	
	comp=Z,9.5nm,1.0s						
WRA	**Warramunga Arr**	82.75	121	P	P	23 42 24.9	-1.8
	comp=Z,3.3nm,0.8s,baz=323,slow=4.9,SNR=26						
WRAB	**Tennant Creek**	82.75	121	⇑*e*P	P	23 42 25.2	-1.5
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DLBC	**Dease Lake**	84.24	10	P	P	23 42 33.7	-0.2
	comp=Z,1.6nm,0.3s,baz=320,slow=4.4,SNR=4.1						
ASAR	**Alice Springs**	84.97	124	P	P	23 42 36.1	-1.8
	comp=Z,3.2nm,0.7s,baz=311,slow=5.0,SNR=52						
CTA	**Charters Tower**	91.39	114	P	P	23 43 06.5	-2.1
	comp=Z,2.1nm,0.6s,baz=262,slow=8.2,SNR=4.0						
STKA	**Stephens Creek**	95.48	126	P	P	23 43 25.7	-1.5
	comp=Z,0.5nm,0.4s,baz=225,slow=5.7,SNR=1.2						
NEW	**Newport**	95.65	5	P	P	23 43 27.5	-0.4
	comp=Z,1.0nm,0.5s,baz=293,slow=7.7,SNR=2.1						
QSPA	**South Pole Qui**	126.04	180	PKP	PKPdf	23 49 01.2	-1.9
	comp=Z,1.1nm,0.8s,baz=240,slow=0.8,SNR=1.8						

ATH 17 23:35:04.4, 40°.18N×25°.03E, h13^{km}±4^{km}, ML1.2/1, Error ellipse: s-maj=4.7km s-min=1.3km az=170.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	0.31	158	P	Pg	23 35 10.6	-0.1
LIA				S	Sg	23 35 14.9	0.0
LIA				AML	AML	23 35 14.9	
	comp=E,204µm,0.3s						
LIA				AML	AML	23 35 15.1	
	comp=N,103µm,0.1s						
SMTH	**Samothraki Isl**	0.48	53	P	Pg	23 35 13.5	-0.3
SMTH				S	Sg	23 35 20.6	+0.3
THAS	**Thassos island**	0.48	331	P	Pg	23 35 13.9	0.0
THAS				S	Sg	23 35 20.1	-0.3
OUR	**Ouranopolis**	0.82	281	P	Pg	23 35 20.2	+0.1
ALN	**Alexandroupoli**	1.05	47	P	Pb	23 35 23.7	-0.8

ROM 17 23:35:38.6±0.1, 42°.493N±0°.006×13°.369E±0°.006, h11^{km}, ML1.1/1, 1C-2D, Error ellipse: s-maj=0.8km s-min=0.4km az=165.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	0.12	278	P	Pg	23 35 42.1	+0.4
RM33				S	Sg	23 35 44.2	+0.4
SMA1	**SAN MARTINO**	0.14	350	⇓P	Pg	23 35 42.6	+0.6
SMA1				S	Sg	23 35 45.3	+0.8
TERO	**Teramo**	0.22	53	⇓P	Pg	23 35 43.8	+0.5
TERO				S	Sg	23 35 47.3	+0.9
LNSS	**Leonessa**	0.27	294	P	Pg	23 35 44.8	+0.6
LNSS				S	Sg	23 35 48.9	+1.0
NRCA	**Norcia**	0.39	331	⇑P	Pg	23 35 46.7	+0.3
NRCA				S	Sg	23 35 52.5	+1.0
NRCA				AML	AML		
	comp=E,52µm,0.1s						
NRCA				AML	AML		
	comp=N,33µm,1.6s						
SSM1	**San Severino M**	0.75	349	P	Pg	23 35 52.0	-1.1

LDG 17 23:36:21.4±0.1, 47°.45N×7°.85E, h11^{km}, Ml1.7/3, Error ellipse: s-maj=1.2km s-min=0.9km az=175.0

ZUR 17 23:36:21.4, 47°.45N×7°.85E, h10^{km}, MLh1.1/13, 6C-6D, Error ellipse: s-maj=1.5km s-min=0.5km az=13.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ROTHE	**Rothenfluh**	0.05	63	⇓Pg	Pg	23 36 23.8	+0.3
	0.2nm,SNR=112						
ROTHE				⇓Pg	Pg	23 36 23.8	+0.3
ROTHE				Sg	Sg	23 36 25.5	+0.4
EMMET	**Emmethof**	0.11	98	⇓Pg	Pg	23 36 24.4	+0.2
EMMET				⇓Pg	Pg	23 36 24.4	+0.2
	0.1nm,SNR=34						
SFRA	**Frenkendorf**	0.11	297	Pg	Pg	23 36 24.4	+0.2
	0.6nm,SNR=20						
SFRA				Pg	Pg	23 36 24.4	+0.2
SFRA				Sg	Sg	23 36 26.4	+0.2
SAUR	**Augst-Roemermu**	0.12	312	Sg	Sg	23 36 26.5	+0.1
	0.4nm,SNR=6.3						
SAUR				Sg	Sg	23 36 26.5	+0.1
SKAF	**Kaiseraugst-Fr**	0.12	313	⇓Pg	Pg	23 36 24.5	+0.2
SKAF				Sg	Sg	23 36 26.5	0.0
SSCN	**Schweizerhalle**	0.15	302	Sg	Sg	23 36 27.3	+0.2
	0.5nm,SNR=5.7						
SSCN				Sg	Sg	23 36 27.3	+0.2
BALST	**Balsthal**	0.16	223	⇑Pg	Pg	23 36 24.9	-0.1
	0.1nm,SNR=96						
BALST				⇑Pg	Pg	23 36 24.9	-0.1
SMZW	**Muttenz-Waldha**	0.17	304	Sg	Sg	23 36 27.9	+0.3
SMZW				Sg	Sg	23 36 27.9	+0.3
	0.2nm,SNR=6.7						
SBEG	**Bettingen Gewe**	0.17	312	⇓Pg	Pg	23 36 25.4	+0.2
SBEG				Sg	Sg	23 36 28.1	+0.3
SRER	**Reinach, Raine**	0.18	289	Pg	Pg	23 36 25.7	+0.3
SRER				Sg	Sg	23 36 28.7	+0.7
SRHH	**Riehen, Zur Ho**	0.19	313	Pg	Pg	23 36 25.6	+0.3
SRHH				Sg	Sg	23 36 28.4	+0.3
SULZ	**Cheisacher**	0.19	67	Pg	Pg	23 36 25.9	+0.4
SULZ				Pg	Pg	23 36 25.9	+0.4
	0.1nm,SNR=16						
OTER2	**Otterbach 2 (B**	0.21	307	Pg	Pg	23 36 25.7	0.0
OTER2				Sg	Sg	23 36 28.5	-0.3
DAGMA	**Lutertal, Dagm**	0.25	154	Pg	Pg	23 36 26.7	+0.3
	SNR=4.8						
DAGMA				Pg	Pg	23 36 26.7	+0.3
DAGMA				Sg	Sg	23 36 30.2	+0.4
ACHB	**Acheberg**	0.30	64	Sg	Sg	23 36 32.2	+0.7
	0.1nm,SNR=7.0						
ACHB				Sg	Sg	23 36 32.2	+0.7
HAMIK	**Hmikon, Dlik**	0.35	126	Sg	Sg	23 36 33.7	+0.7
METMA	**Mettma DE**	0.37	46	Pg	Pg	23 36 29.1	+0.3
	0.1nm,SNR=35						
METMA				Pg	Pg	23 36 29.1	+0.3
METMA				Sg	Sg	23 36 34.1	+0.3
BOURR	**Bourrignon**	0.43	262	Pg	Pg	23 36 30.1	+0.3
FELD	**Feldberg im Sc**	0.43	13	Pg	Pg	23 36 30.3	+0.3
	SNR=19						
FELD				Pg	Pg	23 36 30.3	+0.3
BERGE	**Lenzkirch (DE)**	0.47	28	⇑Pg	Pg	23 36 30.9	+0.3
	0.1nm,SNR=51						
BERGE				⇑Pg	Pg	23 36 30.9	+0.3
BERGE				Sg	Sg	23 36 37.3	+0.5
KIZ	**Kirchzarten**	0.51	5	Sg	Sg	23 36 38.2	+0.4
	SNR=24						
KIZ				Sg	Sg	23 36 38.2	+0.4
SLE	**Schleitheim**	0.53	54	⇑Pg	Pg	23 36 32.0	+0.2
	SNR=17						
SLE				⇑Pg	Pg	23 36 32.0	+0.2
SLE				Sg	Sg	23 36 39.0	+0.3
HINF	**Hinteralfeld**	0.77	299	*e*Pg	Pb	23 36 36.6	-0.2
HINF				*e*Sg	Sb	23 36 47.2	-0.1
	2.0nm,0.2s						
BFO	**Black Forest**	0.93	20	Sg	Sg	23 36 51.7	+0.2
	SNR=22						
BFO				Sg	Sg	23 36 51.7	+0.2
CDF	**Champ du Feu**	1.03	338	*e*Pg	Pg	23 36 40.8	-0.5
CDF				*e*Sg	Sg	23 36 54.8	0.0
	1.2nm,0.3s						
HAU	**Haudompre**	1.16	299	*e*Pg	Pg	23 36 44.7	+1.1
HAU				*e*Sg	Sg	23 36 59.0	+0.4
	3.8nm,0.3s						
CABF	**La Chapelle**	1.47	236	*e*Pg	Pb	23 36 49.2	+0.4
CABF				*e*Sg	Sn	23 37 07.1	-0.2
	1.0nm,0.2s						
SFTF	**Sexfontaines**	2.04	293	*e*Sg	Sg	23 37 26.1	-0.8
LOR	**Lormes**	2.72	268	*e*Sg	Sb	23 37 46.0	+2.5

ROM 17 23:37:42.4±0.2, 43°.389N±0°.004×12°.443E±0°.005, h4^{km}, ML1.1/3, 2C-2D, Error ellipse: s-maj=0.5km s-min=0.4km az=314.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	0.03	256	P	Pg	23 37 43.5	+0.1
ATVO				S	Sg	23 37 44.2	+0.1
ATVO				AML	AML		
	comp=E,907µm,0.1s						
ATVO				AML	AML		
	comp=N,774µm,0.2s						
ATVO				AML	AML		
	comp=E,906µm,0.1s						
ATVO				AML	AML		
	comp=N,772µm,0.2s						
ATPI	**Pietralunga -**	0.07	334	⇑P	Pg	23 37 44.1	+0.1
ATPI				S	Sg	23 37 45.3	+0.2
ATPI				AML	AML		
	comp=E,146µm,0.4s						
ATPI				AML	AML		
	comp=N,137µm,0.4s						
PIEI	**Pieia**	0.16	24	⇓P	Pg	23 37 46.1	+0.5
PIEI				S	Sg	23 37 49.0	+1.2
PIEI				AML	AML		
	comp=E,91µm,0.2s						
PIEI				AML	AML		
	comp=N,91µm,0.2s						
PIEI				AML	AML		
	comp=E,91µm,0.2s						
APEC	**Apecchio**	0.17	354	P	Pg	23 37 46.3	+0.5
APEC				AML	AML		
	comp=E,64µm,0.3s						
APEC				AML	AML		
	comp=N,76µm,1.4s						
APEC				AML	AML		
	comp=E,64µm,0.3s						
APEC				AML	AML		
	comp=N,76µm,1.4s						
BADI	**Badiali**	0.19	310	⇓P	Pg	23 37 46.6	+0.5
BADI				S	Sg	23 37 50.0	+1.3
NARO	**Abbazia di Nar**	0.24	24	⇑P	Pg	23 37 47.6	+0.4

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*BJI **17** 23:39:47.6±0.0, 6°.23S×132°.13E, h60^{km}, mB5.4/57, mb5.5/77, Ms5.1/60, Ms7 4.7/37*

*MOS **17** 23:39:47.9±0.9, 5°.79S×131°.85E, h39^{km}, mb5.5/40, Error ellipse: s-maj=7.7km s-min=4.6km az=116.0*

*NOU **17** 23:39:48.7, 5°.79S×131°.88E, h22^{km}, ML5.7, Banda Sea*

*NEIC **17** 23:39:50.8, 5°.77S×131°.84E, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.22; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$1.08; $M_{r\theta}$-0.18; $M_{\theta\phi}$1.13; $M_{\phi r}$0.02; Fault plane solution: $M_0$1.67000×10^{17} NP1:ϕ_s156.89000°,*

δ85.05000°,λ-178.04000°. NP2:ϕ_s66.73000°,δ88.05000°, λ-4.96000°. Principal axes: T 1.5373, Plg2.0000°, Azm112.0000°; N 0.2333, Plg85.0000°, Azm225.0000°; P -1.7706, Plg5.0000°, Azm22.0000°;

*NEIC **17** 23:39:51.9±1.6,5°.77S±0°.06×131°.86E±0°.07,h57^{km}±4^{km}, mb5.6/131,Mwb5.4/25,Mww5.5,Mwc5.6(GCMT) Error ellipse: s-maj=9.8km s-min=8.1km az=93.0*

*IDC **17** 23:39:52.6±1.5,5°.79S×131°.88E,h62^{km}±13^{km},mb4.9/32, mb1 5.0/36,mb1mx4.9/40,mbtmp5.3/36,MS4.3/21, Ms1 4.3/21,ms1mx4.2/31,Error ellipse: s-maj=11.2km s-min=8.9km az=65.0*

*DJA **17** 23:39:53.5±0.2,6°S±2°×13°2E±°,h80^{km}±2^{km},M5.6/115, mb5.8/115,mB6.0/94,MLv6.3/15,Mw(mB)5.7/94, MwMwp5.1/31,Mwp5.4/31*

*NEIC **17** 23:39:53,5°.76S×132°.14E,h80^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.31; $M_{\theta\theta}$-1.60; $M_{\phi\phi}$1.29; $M_{r\theta}$-0.34; $M_{\theta\phi}$1.00; $M_{\phi r}$0.79; Fault plane solution: $M_0$1.97000×10^{17} NP1:ϕ_s63.00000°, δ63.00000°,λ7.00000°. NP2:ϕ_s330.00000°,δ84.00000°, λ153.00000°. Principal axes: T 1.8829, Plg23.0000°, Azm284.0000°; N 0.1674, Plg62.0000°, Azm138.0000°; P -2.0503, Plg14.0000°, Azm20.0000°;*

*GCMT **17** 23:39:53.9±0.1,5°.71S±0°.01×131°.84E±0°.01,h80^{km}±1^{km}, MW5.6/127,Moment Tensor Solution. s118,c186; s127,c201; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}0.16±.03; $M_{\theta\theta}$-2.39±.04; $M_{\phi\phi}$2.23±.04; $M_{r\theta}$0.01±.04; $M_{\theta\phi}$1.38±.04; $M_{\phi r}$0.57±.03; Best double couple: $M_0$2.75400×10^{17} NP1:ϕ_s61.00000°,δ79.00000°, λ7.00000°. NP2:ϕ_s330.00000°,δ83.00000°,λ169.00000°. Principal axes: T 2.7310, Plg12.0000°, Azm285.0000°; N 0.0430, Plg77.0000°, Azm118.0000°; P -2.7780, Plg3.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 23:39:54,5°.71S×131°.89E,h78^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.07; $M_{\theta\theta}$-2.33; $M_{\phi\phi}$2.26; $M_{r\theta}$-0.05; $M_{\theta\phi}$1.37; $M_{\phi r}$0.55; Fault plane solution: $M_0$2.73000×10^{17} NP1:ϕ_s61.00000°, δ79.00000°,λ5.00000°. NP2:ϕ_s330.00000°,δ85.00000°, λ169.00000°. Principal axes: T 2.7385, Plg11.0000°, Azm285.0000°; N -0.0165, Plg78.0000°, Azm126.0000°; P -2.7221, Plg4.0000°, Azm16.0000°;*

ISC 17 23:39:52.3±0.3,**5°.79S**±0°.03×**131°.86E**±0°.03,**h65**^{km}±2^{km}, **h66**^{km}**:pP-P,n704,**σ**1s78**/773,**mb5.6**/204,**26C-21D,Fault plane solution: NP1:**ϕ_s53.65092°,δ41.71228°, λ27.24177°. **NP2:**ϕ_s302.62741°**,**δ72.26711°**,**λ128.39633°. **Principal axes:** T Plg48.0067°, Azm253.6558°**;** N Plg36.2697°, Azm109.0572°**;** P Plg18.2088°, Azm5.0896°**; Fault plane solution: NP1:**ϕ_s64.22494°**,**δ89.17939°, λ3.21145°. **NP2:**ϕ_s334.17889°**,**δ86.78888°**,**λ179.17810°. **Principal axes:** T Plg2.8508°, Azm289.2440°**;** N Plg86.6855°, Azm78.5439°**;** P Plg1.6894°, Azm199.1599°**;**

Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.25	194		Pn	23 40 28.8	+1.5
SAUI	Saumlaki	2.25	194	P	Pn	23 40 29.1	+1.9
BNDI	Bandanaira	2.32	303	P	Pn	23 40 30.5	+2.3
FAKI	Fak Fak	2.88	8		Pn	23 40 36.4	+0.5
FAKI	Fak Fak	2.88	8	P	Pn	23 40 36.5	+0.7
MSAI	Masohi	3.80	310	P	Pn	23 40 49.6	+1.2
RKPI	Ransiki, Papua	4.84	29	P	Pn	23 41 04.4	+1.7
SIJI	Sorong	4.92	353	P	Pn	23 41 03.3	-0.5
	360nm,0.3s,baz=65,slow=3.5,SNR=302						
SIJI				S	Sn	23 41 55.4	-4.1
	1µm,0.3s,baz=19,slow=23,SNR=8.5						
SIJI				LR	LR	23 43 46.4	
	comp=Z,9µm,19.9s,baz=189,slow=47						
SWI	Sorong	4.93	353	P	Pn	23 41 03.1	-0.8
NLAI	Namlea	5.38	298	P	Pn	23 41 11.9	+1.9
	8.0nm29µm3µm,0.8s						
SRPI	Serui, Papua	5.86	48	P	Pn	23 41 16.1	-0.4
	45nm13µm28µm3µm,1.1s						
BAKI	Biak	6.23	43	P	Pn	23 41 22.1	+0.4
	16nm35µm3µm,0.7s						
KDU	Kakadu	6.88	175	P	Pn	23 41 29.0	-1.5
	baz=6.9,SNR=1000						
SANI	Sanana	6.94	302	P	Pn	23 41 30.7	-0.6
	5.7nm11µm18µm1µm,0.7s						
MTN	Manton Dam	7.04	186	P	Pn	23 41 31.8	-1.0
	baz=7.1,SNR=1000						
MTN				S	Sn	23 42 46.1	-5.4
	baz=7.1						
SMPI	Sarmi	7.81	61	P	Pn	23 41 44.8	+1.5
	4.6nm7µm290nm,0.7s						
TNTI	Ternate	7.91	325	Pn	Pn	23 41 45.1	+0.4
TNTI	Ternate	7.91	325	P	Pn	23 41 46.6	+1.9
	3.1nm3µm7µm637nm,0.7s						
SOEI	Soe	8.49	242		Pn	23 41 54.7	+1.9
SOEI	Soe	8.49	242	P	Pn	23 41 55.5	+2.8
	6µm33µm5µm,0.9s						
MMPI	Merauke	8.87	108	P	Pn	23 41 57.8	0.0
	15µm54µm3µm,0.8s						
GENI	Genyem	8.88	69	P	Pn	23 41 59.8	+1.9
	5µm11µm1µm,0.8s						
BATI	Baumata	9.22	241	P	Pn	23 42 03.5	+0.8
	207nm,0.3s,baz=149,slow=3.4,SNR=118						
BATI				S	Sn	23 43 41.5	-3.5
	344nm,0.3s,baz=67,slow=20,SNR=10						
BATI	Baumata	9.22	241	P	Pn	23 42 04.4	+1.7
	3µm12µm1µm,0.8s						
KDI	Kendari	9.38	281	P	Pn	23 42 04.5	-0.3
	164nm,0.8s						
JAY	Jayapura	9.40	70	P	Pn	23 42 04.2	-0.9
	9.7nm,0.3s,baz=266,slow=8.2,SNR=58						
JAY				S	Sn	23 43 46.7	-2.7
	14nm,0.3s,baz=283,slow=23,SNR=8.0						
JAY	Jayapura	9.40	70	P	Pn	23 42 04.5	-0.7
	3µm279nm,0.9s						
MMRI	Maumere	9.95	253	Pn	Pn	23 42 13.2	+0.6
MMRI	Maumere	9.95	253	P	Pn	23 42 15.7	+3.1
	6µm17µm1µm,1.0s						
KMSI	Cibinong	10.09	309	P	Pn	23 42 16.0	+1.5
	11µm1µm,0.7s						
LUWI	Luwuk	10.22	297	Pn	Pn	23 42 16.0	-0.3
LUWI	Luwuk	10.22	297	P	Pn	23 42 18.9	+2.6
	12µm1µm,1.0s						
KNRA	Kununurra	10.28	197	P	Pn	23 42 15.6	-1.5
	baz=10,SNR=90						
EDFI	Ende, Flores	10.51	253	P	Pn	23 42 21.4	+1.1
	3µm4µm312nm,0.9s						
APSI	Ampana	11.28	295	P	Pn	23 42 33.3	+2.5
	5µm8µm1µm,0.9s						
BSSI	Bau Bau, Buton	11.31	268	P	Pn	23 42 35.4	+4.2
	3µm12µm1µm,1.1s						
SGSI	Sangihe	11.34	326	P	Pn	23 42 32.5	+0.9
	16µm412nm,0.6s						
BKSI	Bulukumba	11.69	272	P	Pn	23 42 38.1	+1.7
	7µm9µm729nm,0.8s						
MRSI	Marisa	11.70	302	P	Pn	23 42 37.5	+1.1
	5µm8µm815nm,1.1s						
BNSI	Bone	11.79	276	P	Pn	23 42 41.2	+3.5
	8µm9µm830nm,0.8s						
BASI	Baing, Sumba	12.00	248	P	Pn	23 42 40.1	-0.5
	3µm9µm978nm,1.0s						
KAPI	Kappang	12.08	273	P	Pn	23 42 42.4	+0.8
	1.0nm,0.3s,baz=93,slow=15,SNR=8.9						
KAPI				LR	LR	23 48 32.1	
	comp=Z,2µm,20.5s,baz=104,slow=43						
KAPI	Kappang	12.08	273	Pn	Pn	23 42 42.6	+1.0
KAPI	Kappang	12.08	273	P	Pn	23 42 43.9	+2.3
WSI	Waingapu	12.09	251	P	Pn	23 42 42.3	+0.6
	2µm,0.9s						
SPSI	Sidrap Palu	12.18	278	P	Pn	23 42 46.4	+3.3
	7µm15µm736nm,1.1s						
TTSI	Tana Toraja	12.31	282	P	Pn	23 42 47.7	+2.9
	6µm10µm638nm,1.0s						
PCI	Palu	12.94	292	P	Pn	23 42 49.6	-3.9
TOLI2	Tolitoli	13.01	301	Pn	Pn	23 42 54.2	-0.2
DDMP	Don Marcelino,	13.31	332	eP	Pn	23 43 00.8	+2.4
MPSI	Mapaga	13.40	297	P	Pn	23 43 00.7	+1.0
	7µm7µm376nm,0.6s						
FITZ	Fitzroy Crossi	13.66	206	P	Pn	23 43 00.1	-2.9
	224nm,0.3s,baz=35,slow=12,SNR=574						
FITZ				S	Sn	23 45 22.2	-11
	119nm,0.3s,baz=227,slow=22,SNR=9.6						
FITZ				LR	LR	23 48 55.2	
	comp=Z,2µm,21.9s,baz=31,slow=40						
MATI	Mati	13.83	336	eP	P	23 43 14.4	+2.7
WB0	Warramunga Arr	14.11	170		Pn	23 43 04.1	-5.0
SKMP	Bagumbayan, Su	14.24	329	eP	Pn	23 43 09.3	-1.5
WRAB	Tennant Creek	14.27	170	ceP	Pn	23 43 05.9	-5.2
WRAB				pmax	pmax		
	comp=Z,442nm,0.9s						
WRA	Warramunga Arr	14.27	170	P	Pn	23 43 06.9	-4.3
	comp=Z,46nm,0.3s,baz=356,slow=13,SNR=186						
WRA				S	Sn	23 45 34.5	-14
	comp=Z,107nm,0.3s,baz=271,slow=6.5,SNR=15						
PLAI	Plampang	14.29	257	P	Pn	23 43 09.9	-1.5
	comp=Z,4µmcomp=Z,5µmcomp=Z,334nm,0.7s						
KCP	Kidapawan	14.40	332	⇑eP	Pn	23 43 14.6	+1.7
KCP				iS	P	23 43 20.9	+2.9
TWSI	Taliwang, Sumb	15.14	258	P	Pn	23 43 20.3	-2.2
	comp=Z,2µmcomp=Z,179nm,0.8s						
BUKP	Musuan	15.18	333	eP	P	23 43 29.2	+2.6
PMG	Port Moresby	15.58	104	P	Pn	23 43 26.3	-1.8
	comp=Z,7.2nm,0.3s,baz=295,slow=8.9,SNR=173						
PMG				LR	LR	23 49 59.8	
	comp=Z,1µm,18.5s,baz=282,slow=39						
PMG	Port Moresby	15.58	104	P	Pn	23 43 25.8	-2.3
PMG				pmax	pmax		
	comp=Z,1µm,1.1s						
PMG	Port Moresby	15.58	104	Pn	Pn	23 43 25.8	-2.3
BKB	Balikpapan	15.59	286	P	P	23 43 32.2	+0.9
BKB				IAmb	IAmb	23 44 06.2	
	comp=Z,508nm,1.2s						
BKB	Balikpapan	15.59	286	P	P	23 43 32.9	+1.7
	comp=Z,6µmcomp=Z,7µmcomp=Z,229nm,0.8s						
KBKI	Kotabaru	15.84	278	P	P	23 43 32.9	-1.0
	comp=Z,3µmcomp=Z,351nm,1.0s						
CGP	Cagayan de Oro	15.85	333	⇓eP	P	23 43 36.0	+1.9
BUTP	Butuan	15.93	337	eP	P	23 43 37.0	+2.1
PAGZ	Pagadian	15.97	328	eP	P	23 43 34.8	-0.6
GLSP	General Luna,	16.49	340	eP	P	23 43 40.4	-0.8
QIS	Mount Isa	16.49	154	P	Pn	23 43 36.5	-3.0
	baz=16,SNR=102						
SRBI	Singaraja	16.68	261	P	Pn	23 43 41.2	-0.7
	comp=Z,4µmcomp=Z,283nm,0.8s						
DNP	Denpasar	16.76	259	P	Pn	23 43 42.8	-0.1
	comp=Z,31µmcomp=Z,493nm,0.7s						
BBKI	Banjar Baru	17.12	277	P	P	23 43 49.8	+1.6
	comp=Z,16µmcomp=Z,1µm,1.6s						
MYLDM	Lahad Datu	17.22	309		P	23 43 50.3	+1.0
MYLDM				IAmb	IAmb	23 44 23.8	
	comp=Z,691nm,1.0s						
MTSU	Mount Surprise	17.28	136	P	Pn	23 43 45.9	-3.4
	baz=17,SNR=244						
MSLP	Maasin	17.29	336	eP	P	23 43 53.0	+3.0
MTKI	Muara Teweh, K	17.60	285	P	P	23 43 54.7	+1.2
	comp=Z,3µmcomp=Z,145nm,0.9s						
ABJI	Asem Bagus	17.61	263	P	P	23 43 54.2	+0.6
	comp=Z,8µmcomp=Z,624nm,1.1s						
JAGI	Jajag, Banyuwa	17.77	260	Pn	Pn	23 43 51.5	-3.9
JAGI				IAmb	IAmb	23 43 58.2	
	comp=Z,400nm,1.2s						
JAGI	Jajag, Banyuwa	17.77	260	P	Pn	23 43 52.2	-3.2
	comp=Z,3µmcomp=Z,4µmcomp=Z,277nm,0.9s						
KMMI	Kalianget	17.82	265	P	Pn	23 43 59.0	+3.0
	comp=Z,10µmcomp=Z,28µmcomp=Z,3µm,0.8s						
LLP	Lapu-Lapu	17.83	334	⇓eP	Pn	23 43 57.2	+1.2
LLP				eS	S	23 47 15.8	-1.2
AS31	Alice Springs	17.88	174		P	23 43 53.4	-3.2
ASAR	Alice Springs	17.88	174	P	P	23 43 54.4	-2.2
	comp=Z,29nm,0.3s,baz=348,slow=8.5,SNR=377						
ASAR				S	Sn	23 47 04.7	-11
	comp=Z,35nm,0.3s,baz=358,slow=28,SNR=10						
ASAR	Alice Springs	17.88	174	P	P	23 43 53.9	-2.7
ASAR	Alice Springs	17.88	174		P	23 43 53.9	-2.7
CNOP	Candoni, Negro	18.03	329	eP	Pn	23 43 59.0	+0.6
OCLP	Ormoc	18.22	337	eP	Pn	23 44 03.4	+2.6
BLJI	Banyuglugur	18.24	263	P	P	23 44 00.4	-0.1
SPMM	Sapulut	18.57	304	P	Pn	23 44 07.0	+1.8
GUIM	Jordan	18.74	330	eP	Pn	23 44 07.5	+0.5
BWJI	Bawean	19.10	269	P	Pn	23 44 12.5	+1.1
	comp=Z,3µmcomp=Z,732nm,1.0s						
GRJI	Gresik	19.29	266	P	Pn	23 44 13.1	-0.6
	comp=Z,5µmcomp=Z,632nm,0.8s						
KKM	Kota Kinabalu	19.55	307	P	P	23 44 14.2	-0.8
CUYO	Cuyo Island	19.74	327	eP	Pn	23 44 18.9	0.0
TBJI	Tambak Boyo	19.91	266	P	Pn	23 44 20.2	-0.8
	comp=Z,9µmcomp=Z,738nm,0.9s						
CTA	Charters Tower	19.94	137	P	Pn	23 44 20.5	-0.8
	comp=Z,11nm,0.3s,baz=323,slow=14,SNR=212						
CTA				S	S	23 47 51.8	-8.3
	comp=Z,3.7nm,0.3s,baz=45,slow=20,SNR=2.1						
CTAO	Charters Tower	19.94	137	P	P	23 44 20.1	+1.0
CTAO				pmax	pmax		
	comp=Z,518nm,1.0s						
CTAO	Charters Tower	19.94	137		P	23 44 20.1	+1.0
PWJI	Pagerwojo	20.03	263	P	P	23 44 17.9	-2.2
	comp=Z,2µmcomp=Z,261nm,1.2s						
BATP	Bataraza	20.16	316	eP	Pn	23 44 22.8	-1.1
RABL	Rabaul	20.29	86	P	Pn	23 44 24.7	-0.8
	comp=Z,532nm,1.7s						
PBKI	Pangkalan Bun	20.36	278	P	P	23 44 23.1	-0.6
	comp=Z,20µmcomp=Z,833nm,1.0s						
OTRP	Odiongan	20.52	332	eP	Pn	23 44 26.7	-1.4
PVCP	Virac	20.72	338	eP	Pn	23 44 29.1	-1.3
ENPP	El Nido	20.93	324	eP	Pn	23 44 31.3	-1.7
AUQP	San Andres	21.07	334	eP	P	23 44 36.8	+5.6
BUSP	Coron	21.14	327	eP	P	23 44 32.8	+0.8
STKI	Sintang	21.16	285	P	P	23 44 31.7	-0.6
	comp=Z,66nm,0.8s						
SBUM	Sibu	21.25	292	P	P	23 44 32.7	-0.6
SBUM				IAmb	IAmb	23 44 34.7	
	comp=Z,465nm,1.4s						
SBUM	Sibu	21.25	292	P	P	23 44 34.0	+0.7
UGM	Wanagama	21.29	263	P	P	23 44 32.3	-1.4
BOAC	Boac	21.56	333	eP	P	23 44 38.5	+2.0
JCNP	Jose Panganiba	21.92	336	eP	P	23 44 41.2	+0.8
PGP	Puerto Galera	22.02	331	⇑eP	P	23 44 43.4	+2.0
LQP	Lukban	22.27	333	⇑eP	P	23 44 45.0	+0.7
TGY	Tagaytay City	22.54	331	P	P	23 44 49.6	+2.5
	comp=Z,209nm,0.4s,baz=265,slow=5.5,SNR=7.6						
KSM	Kuching	22.70	288	P	P	23 44 46.6	-2.2
KSM				IAmb	IAmb	23 44 51.7	
	comp=Z,239nm,1.2s						
KSM	Kuching	22.70	288	P	P	23 44 48.0	-0.8
MACP	Maragondon, Ca	22.78	331	eP	P	23 44 48.3	-1.3
KPJI	Karang Pucung	22.83	265	P	P	23 44 48.2	-1.9
	comp=Z,4µmcomp=Z,384nm,0.8s						
QVP	Quezon City--P	22.96	332	eP	P	23 44 53.1	+1.7
GUMO	Guam	23.19	34	P	P	23 44 54.0	+0.4
	comp=Z,358nm,0.9s,baz=194,slow=5.4,SNR=19						
GUMO				LR	LR	23 54 24.5	
	comp=Z,626nm,18.6s,baz=198,slow=38						
GUMO	Guam	23.19	34	P	P	23 44 53.4	-0.2
GUMO				pmax	pmax		
	comp=Z,747nm,1.2s						
GUMO	Guam	23.19	34	P	P	23 44 53.4	-0.2
GUMO	Guam	23.19	34	P	P	23 44 54.5	+0.9
	comp=Z,666nm,1.3s						
BALP	Baler	23.69	335	eP	P	23 44 59.5	+1.2
QLP	Quilpie	23.81	152	P	P	23 44 59.5	+0.2
	baz=24,SNR=59						
GIRL	Giralia	23.88	224	P	P	23 45 01.8	+1.9
	baz=24,SNR=21						
CISI	Cisompet, Garu	23.94	264	P	P	23 44 59.0	-1.7
CISI	Cisompet, Garu	23.94	264	P	P	23 44 58.3	-2.4
	comp=Z,2µmcomp=Z,11µmcomp=Z,1µm,1.1s						
LEM	Lembang	24.11	266	P	P	23 45 01.5	-0.9
	comp=Z,310nm,0.9s,baz=38,slow=9.3,SNR=38						
LEM	Lembang	24.11	266	P	P	23 45 00.7	-1.7
	comp=Z,2µmcomp=Z,3µmcomp=Z,198nm,0.9s						
MEEK	Meekatharra	24.28	210	P	P	23 45 03.9	+0.3
	baz=24,SNR=49						
TPI	Tanjungpandan	24.32	276	P	P	23 45 02.6	-1.5
	comp=Z,1µmcomp=Z,150nm,1.0s						
CAUP	Cauayan	24.67	336	eP	P	23 45 09.9	+2.8
CBJI	Citeko	24.87	267	P	P	23 45 07.2	-1.9
	comp=Z,8µmcomp=Z,785nm,0.9s						
DBJI	Dramaga	24.97	267	P	P	23 45 08.9	-1.2
	comp=Z,5µmcomp=Z,253nm,1.1s						
BOLP	Bolinao	25.00	332	eP	P	23 45 09.7	-0.5
FORT	Forrest	25.11	188	P	P	23 45 11.3	+0.3
	baz=25,SNR=171						
SGCP	Mt. Cagua	25.77	338	eP	P	23 45 16.7	-0.4
PPBI	Pangkal Pinang	25.91	277	P	P	23 45 17.5	-1.0
	comp=Z,193nm,1.1s						
CGJI	Cibinong	26.02	267	P	P	23 45 17.1	-2.5
	comp=Z,3µmcomp=Z,371nm,1.1s						
RMQ	Roma	26.15	144	P	P	23 45 21.0	+0.5
	baz=26,SNR=12						
XMI	Christmas Isla	26.31	258	P	P	23 45 23.3	+1.2
	comp=Z,250nm,1.2s						
XMIS	Christmas Isla	26.35	258	P	P	23 45 25.0	+2.5
	comp=Z,124nm,0.8s						
BLSI	Bandar Lampung	26.49	270	P	P	23 45 22.2	-1.6
	comp=Z,116nm,0.4s						
EIDS	Eidsvold	26.79	139	P	P	23 45 26.4	0.0
	baz=27,SNR=4.8						
KLSI		27.04	271	P	P	23 45 28.7	0.0
	comp=Z,444nmcomp=Z,20nm,1.2s						
KMBL	Kambalda	27.11	199	P	P	23 45 29.4	+0.2
	baz=27,SNR=18						
PMBI	Palembang	27.15	275	P	P	23 45 29.7	0.0
PMBI	Palembang	27.15	275	P	P	23 45 30.9	+1.2
	comp=Z,2µmcomp=Z,39µmcomp=Z,394nm,0.5s						
BBOO	Buckleboo	27.17	172	P	P	23 45 29.2	-0.4
	baz=27,SNR=36						
KASI	Kota Agung	27.23	269	P	P	23 45 29.1	-1.3
	comp=Z,1µmcomp=Z,182nm,1.0s						
STKA	Stephens Creek	27.51	162	P	P	23 45 32.8	+0.1
	baz=28,SNR=18						
STKA	Stephens Creek	27.51	162	P	P	23 45 32.5	-0.2
	comp=Z,20nm,1.0s,baz=334,slow=8.5,SNR=24						
STKA				LR	LR	23 56 54.5	
	comp=Z,1µm,20.6s,baz=332,slow=37						
STKA	Stephens Creek	27.51	162	P	P	23 45 32.3	-0.4
STKA				pmax	pmax		
	comp=Z,37nm,0.9s						
STKA	Stephens Creek	27.51	162	P	P	23 45 32.3	-0.4
MORW	Morawa	27.57	211	P	P	23 45 33.5	+0.3
	baz=28,SNR=26						
LWLI	Liwa	27.68	270	P	P	23 45 33.2	-1.4
	comp=Z,6µmcomp=Z,112nm,0.8s						
HNR	Honiara	28.07	99	P	P	23 45 36.7	-1.1
	comp=Z,35nm,0.4s,baz=194,slow=5.1,SNR=6.5						
HNR				LR	LR	23 58 37.4	
	comp=Z,717nm,19.8s,baz=265,slow=40						
HNR	Honiara	28.07	99	P	P	23 45 36.8	-1.1
HNR				pmax	pmax		
	comp=Z,187nm,0.9s						
HNR	Honiara	28.07	99	P	P	23 45 36.8	-1.1
HNR				IAmb	IAmb	23 46 28.8	
	comp=Z,187nm,0.9s						
HTT	Hallett	28.27	167	P	P	23 45 39.5	0.0
	baz=28,SNR=13						
LHSI	Lahat	28.30	273	P	P	23 45 40.4	+0.4
	comp=Z,2µmcomp=Z,148nm,1.3s						
JMBI	JAMBI	28.45	277	P	P	23 45 43.4	+2.1
	comp=Z,130nm,1.1s						
BLDU	Ballidu	28.51	208	P	P	23 45 42.2	+0.6
	baz=29,SNR=85						
CMSA	Cobar Meteorol	28.71	155	P	P	23 45 45.6	+2.2
	baz=29,SNR=11						
KLBR	Kellerberrin	28.87	206	P	P	23 45 45.5	+0.7
	baz=29,SNR=42						
MYKOM	Kota Tinggi	28.97	284	P	P	23 45 47.0	+1.1
DLV	T Lat	29.17	307	P	P	23 45 47.9	0.0
DLV				IAmb	IAmb	23 46 12.2	
	comp=Z,298nm,1.7s						
PATS	Pohnpei	29.23	65	P	P	23 45 48.3	+0.1
KSI	Kapahiang	29.24	273	P	P	23 45 47.8	-0.6
MUN	Mundaring	29.88	207	P	P	23 45 54.3	+0.5
	baz=30,SNR=8.0						
NWAO	Narrogin (SRO)	30.24	205	P	P	23 45 57.8	+0.8
	baz=30,SNR=22						
NWAO	Narrogin (SRO)	30.24	205	P	P	23 45 57.4	+0.4
	comp=Z,9.6nm,0.3s,baz=52,slow=7.9,SNR=34						
NWAO				LR	LR	23 59 05.4	
	comp=Z,741nm,18.3s,baz=21,slow=38						
NWAO	Narrogin (SRO)	30.24	205	P	P	23 45 57.5	+0.5
NWAO				pmax	pmax		
	comp=Z,160nm,0.8s						
NWAO	Narrogin (SRO)	30.24	205	P	P	23 45 57.5	+0.5
NWAO	Narrogin (SRO)	30.24	205	P	P	23 45 57.6	+0.6
SDSI	Sungai Dareh	30.75	278	P	P	23 45 59.0	-2.7
	comp=Z,2µmcomp=Z,109nm,0.9s						
ARMA	Armidale	30.76	145	P	P	23 46 02.9	+1.2
	baz=31,SNR=8.5						
SSLB	Suanglung	31.27	340	P	P	23 46 05.5	-0.6
YOJ	Yonaguni jima	31.28	344	P	P	23 46 05.1	-1.0
YOJ				pmax	pmax		
	comp=Z,446nm,1.6s						
YOJ	Yonaguni jima	31.28	344	P	P	23 46 05.1	-1.0
BKNI	Bangkinang	31.36	280	P	P	23 46 05.4	-1.7
BKNI	Bangkinang	31.36	280	P	P	23 46 04.1	-3.0
	comp=Z,2µmcomp=Z,3µmcomp=Z,328nm,0.9s						
PDSI	Padang	31.70	278	P	P	23 46 06.8	-3.3
	comp=Z,1µmcomp=Z,53nm,1.0s						
ARPS	Mount Arapiles	32.16	165	P	P	23 46 14.9	+1.1
	baz=32,SNR=22						
YNG	Young	32.24	154	P	P	23 46 15.9	+1.4
	baz=32,SNR=4.7						
IPM	Ipoh	32.44	288	P	P	23 46 15.9	-0.6
IPM				IAmb	IAmb	23 46 18.2	
	comp=Z,92nm,0.9s						
IPM	Ipoh	32.44	288	P	P	23 46 17.0	+0.5
QIZ	Qiongzhong	32.84	319	P	P	23 46 20.4	+0.4
QIZ				S	S	23 51 35.0	+2.1
QIZ				LR	LR		
	comp=Z,670nm,10.4s						
QIZ				LR	LR		
	comp=Z,370nm,9.3s						
QIZ	Qiongzhong	32.84	319	P	P	23 46 19.3	-0.7
QIZ				IAmb	IAmb	23 46 53.0	
	comp=Z,213nm,1.8s						
MNSI	Mandailing Nat	32.89	280	P	P	23 46 18.6	-1.9
	comp=Z,2µmcomp=Z,186nm,0.8s						
KULM	Kulim	33.05	289	P	P	23 46 20.9	-0.9
KULM				IAmb	IAmb	23 46 22.8	
	comp=Z,101nm,1.1s						
KULM	Kulim	33.05	289	P	P	23 46 22.0	+0.1
CAN	Canberra	33.37	154	P	P	23 46 25.1	+0.7
CAN				pmax	pmax		
	comp=Z,59nm,0.9s						
CAN	Canberra	33.37	154	P	P	23 46 25.1	+0.7
CAN				IAmb	IAmb	23 46 47.8	
	comp=Z,59nm,0.9s						
UBPT	Khong Chiam	33.49	309	P	P	23 46 26.0	+0.3
	comp=Z,1µmcomp=Z,76nm,1.0s						
UBPT	Khong Chiam	33.49	309	P	P	23 46 26.1	+0.4
UBPT				IAmb	IAmb	23 46 27.2	
	comp=Z,115nm,0.9s						
CNB	Canberra Magne	33.52	154	P	P	23 46 27.5	+1.7
	baz=34,SNR=7.2						
PSI	Prapat	33.98	284	P	P	23 46 28.2	-1.9
	comp=Z,54nm,0.8s,baz=180,slow=4.3,SNR=21						
TOO	Toolangi	33.99	160	P	P	23 46 31.8	+2.0
	baz=34,SNR=9.6						
TSI	Tuntungan	34.51	285	P	P	23 46 33.9	-0.6
	comp=Z,65nm,1.3s						
KOUNC	Koumac, New Ca	34.72	118	P	P	23 46 36.4	+0.2
TRTT	Trang	34.83	293	P	P	23 46 37.0	-0.3
	comp=Z,210nm,1.4s						
GSI	Gunungsitoli	34.95	281	P	P	23 46 35.9	-2.5
GSI	Gunungsitoli	34.95	281	P	P	23 46 35.4	-3.0
	comp=Z,179nm,0.8s						
SRAK	Srakaew	35.53	304	P	P	23 46 39.3	-4.0
	comp=Z,6µmcomp=Z,655nm,0.8s						
TPTI		35.78	284	P	P	23 46 43.0	-2.5
	comp=Z,594nmcomp=Z,44nm,0.8s						
PATY	Pattaya	35.97	301	P	P	23 46 48.7	+1.6
	comp=Z,70nm,0.8s						
SANVU	Saraoutou	35.99	108	P	P	23 46 47.6	+0.4
SANVU	Saraoutou	35.99	108	P	P	23 46 47.8	+0.6
SURT	Suratani	36.07	294	P	P	23 46 49.2	+1.3
	comp=Z,3.2nm,1.1s						
PKDT	Phuket	36.09	292	P	P	23 46 48.2	0.0
	comp=Z,13µmcomp=Z,167nm,1.3s						
KHON	Khomkaen	36.18	308	P	P	23 46 49.3	+0.5
	comp=Z,4µmcomp=Z,633nm,0.9s						
LHMI	Lhok Sumawe	36.54	287	P	P	23 46 50.9	-1.0
LHMI	Lhok Sumawe	36.54	287	P	P	23 46 51.5	-0.4
	comp=Z,4µmcomp=Z,512nm,0.8s						
CHAI	Chaiyaphum	36.59	306	P	P	23 46 52.4	0.0
	comp=Z,2µmcomp=Z,250nm,0.8s						
NOUC	Port Laguerre	37.02	119	P	P	23 46 56.0	0.0
PHET	Kaeng Krachan	37.02	300	P	P	23 46 56.7	+0.6
	comp=Z,2µmcomp=Z,205nm,0.9s						
JSU	Suzuyama	37.11	358	P	P	23 46 57.5	+0.9
DZM	Mont Dzumac	37.13	119	P	P	23 46 57.2	+0.2
	comp=Z,17nm,0.7s,baz=317,slow=7.6,SNR=17						
DZM	Mont Dzumac	37.13	119	eP	P	23 46 57.3	+0.2
	comp=Z,122nm,1.3s						
DZM	Mont Dzumac	37.13	119	eLR	LR	23 57 05.2	
	comp=Z,1µm,25.8s						
DZM	Mont Dzumac	37.13	119	P	P	23 46 57.3	+0.2

DZM				IAmb	IAmb	23 47 19.8	
	comp=Z,106nm,1.1s						
DZM	Mont Dzumac	37.13	119	P	P	23 46 57.5	+0.5
LIFNC	LIFOU	37.40	117	P	P	23 46 59.3	+0.1
YATNC	Mamie plateau,	37.51	119	P	P	23 47 00.9	+0.7
OUENC	Ouen Island, N	37.60	120	P	P	23 47 01.3	+0.4
SSE	Sheshan	38.07	345	P	P	23 47 06.3	+1.7
SSE				S	S	23 52 50.5	-2.2
SSE				pmax	pmax		
	comp=Z,37nm,0.8s						
SSE				pmax	pmax		
	comp=Z,140nm,4.7s						
SSE				LR	LR		
	comp=Z,220nm,23.6s						
SSE				LR	LR		
	comp=Z,210nm,14.7s						
SRDT	SRDT	38.14	302	P	P	23 47 06.6	+1.1
	comp=Z,106nm,1.1s						
PINNC	Pines Island,	38.19	120	P	P	23 47 07.0	+1.2
MARNC	Mare, Loyalty	38.32	118	P	P	23 47 07.3	+0.3
SLVN	Son La	38.45	315	P	P	23 47 08.4	+0.3
PHIT	Phitsanulok	38.56	307	P	P	23 47 09.9	+1.0
	comp=Z,6µmcomp=Z,901nm,0.8s						
JNU	Nakatsue	38.71	359	P	P	23 47 10.8	+0.8
	comp=Z,225nm,1.0s,baz=35,slow=23,SNR=45						
JNU	Nakatsue	38.71	359	P	P	23 47 10.2	+0.2
UTTA	Uttaradit	38.76	308	P	P	23 47 11.0	+0.4
	comp=Z,1µmcomp=Z,199nm,0.8s						
SUKH	Sukhothai	39.34	307	P	P	23 47 16.4	+0.8
	comp=Z,168nm,0.7s						
JMN	Monobe	39.35	3	P	P	23 47 16.1	+0.7
NJ2	Nanjing	39.62	343	⇓P	P	23 47 19.4	+1.8
NJ2				pP	pP	23 47 30.3	-1.9
NJ2				sP	pwP	23 47 42.9	+3.4
NJ2				S	S	23 53 15.8	-0.2
NJ2				sS	sS	23 53 44.8	+2.4
NJ2				SS	SS	23 56 08.9	-4.7
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,300nm,3.5s						
NJ2				LR	LR		
	comp=Z,500nm,17.5s						
NJ2				LR	LR		
	comp=Z,460nm,15.6s						
NJ2				LR	LR		
	comp=Z,1µm,22.1s						
WHN	Wuhan	39.83	336	⇓P	P	23 47 21.3	+1.9
WHN				S	S	23 53 16.4	-2.8
WHN				pmax	pmax		
	comp=Z,190nm,0.9s						
WHN				LR	LR		
	comp=Z,2µm,22.6s						
LAMP	Lampang	39.92	308	P	P	23 47 21.0	+0.7
	comp=Z,2µmcomp=Z,221nm,0.8s						
PAYA	Payao	40.21	309	P	P	23 47 23.0	+0.3
	comp=Z,8µmcomp=Z,1µm,0.9s						
GYA	Guiyang	40.30	324	⇓P	P	23 47 24.4	+0.9
GYA				pP	sP	23 47 42.6	-2.5
GYA				S	S	23 53 25.8	-0.9
GYA				pmax	pmax		
	comp=Z,99nm,0.8s						
CM36	Chiang Mai Arr	40.34	308	P	P	23 47 24.0	+0.2
CM04	Chiang Mai Arr	40.36	307	P	P	23 47 24.0	0.0
	comp=Z,715nmcomp=Z,108nm,0.8s						
CM09	Chiang Mai Arr	40.38	307	P	P	23 47 24.0	-0.1
	comp=Z,716nmcomp=Z,118nm,0.8s						
CM35	Chiang Mai Arr	40.38	308	P	P	23 47 24.0	-0.1
CM01	Chiang Mai Arr	40.39	307	P	P	23 47 25.0	+0.8
	comp=Z,730nmcomp=Z,107nm,0.8s						
CM05	Chiang Mai Arr	40.39	307	P	P	23 47 24.9	+0.6
	comp=Z,551nmcomp=Z,84nm,0.8s						
CM02	Chiang Mai Arr	40.41	307	P	P	23 47 25.1	+0.8
	comp=Z,612nmcomp=Z,95nm,0.8s						
CM31	Chiang Mai Arr	40.42	307	P	P	23 47 25.1	+0.6
	comp=Z,18µmcomp=Z,3µm,0.8s						
CM31	Chiang Mai Arr	40.42	307	P	P	23 47 24.4	-0.1
CM31				IAmb	IAmb	23 47 27.0	
	comp=Z,108nm,0.9s						
CMAR	Chiang Mai Arr	40.42	307	P	P	23 47 25.2	+0.7
	comp=Z,68nm,0.8s,baz=138,slow=7.6,SNR=204						
CMAR				LR	LR	00 07 25.4	
	comp=Z,183nm,19.3s,baz=105,slow=41						
CMAR	Chiang Mai Arr	40.42	307	P	P	23 47 24.1	-0.4
CMAR	Chiang Mai Arr	40.42	307	P	P	23 47 24.1	-0.4
CM13	Chiang Mai Arr	40.43	307	P	P	23 47 25.2	+0.6
	comp=Z,622nmcomp=Z,108nm,0.8s						
CM15	Chiang Mai Arr	40.44	307	P	P	23 47 25.2	+0.6
	comp=Z,801nmcomp=Z,118nm,0.9s						
CM34	Chiang Mai Arr	40.48	308	P	P	23 47 25.0	0.0
JHS	Saijyo	40.59	2	P	P	23 47 26.6	+1.0
CM32	Chiang Mai Arr	40.61	307	P	P	23 47 26.0	0.0
CMMT	Chiang Mai	40.62	308	P	P	23 47 26.5	+0.4
	comp=Z,657nmcomp=Z,69nm,0.8s						
CHTO	Chiang Mai	40.62	308	P	P	23 47 26.3	+0.2
CHTO				pmax	pmax		
	comp=Z,97nm,0.8s						
CHTO	Chiang Mai	40.62	308	P	P	23 47 26.3	+0.2
CHTO				IAmb	IAmb	23 47 28.9	
	comp=Z,97nm,0.8s						
CHTO	Chiang Mai	40.62	308	P	P	23 47 26.7	+0.6
CHTO				S	S	23 53 28.4	-3.0
CM33	Chiang Mai Arr	40.62	308	P	P	23 47 26.0	-0.1
JWT	Wachi	40.99	4	P	P	23 47 29.5	+0.6
MHMT	Maesarieng	41.08	306	P	P	23 47 30.0	+0.1
	comp=Z,1µmcomp=Z,136nm,1.0s						
INU	Inuyama	41.21	6	P	P	23 47 31.2	+0.6
JGF	Kuroka	41.49	7	P	P	23 47 33.4	+0.3
JGF				IAmb	IAmb	23 47 34.8	
	comp=Z,164nm,1.1s						
ENH	Enshi	41.78	330	P	P	23 47 35.5	-0.1
ENH				IAmb	IAmb	23 47 36.9	
	comp=Z,78nm,0.8s						
KMI	Kunming	41.79	319	⇑P	P	23 47 36.8	+0.9
KMI				pP	pP	23 47 52.3	+1.8
KMI				sP	pwP	23 47 58.6	+0.4
KMI				PP	PnPn	23 49 16.8	-2.4
KMI				S	S	23 53 48.4	-0.6
KMI				pmax	pmax		
	comp=Z,62nm,1.3s						
KMI				pmax	pmax		
	comp=Z,210nm,3.5s						
KMI				LR	LR		
	comp=Z,340nm,14.2s						
KMI				LR	LR		
	comp=Z,320nm,20.5s						
KMI	Kunming	41.79	319	P	P	23 47 37.0	+1.1
KMI				pmax	pmax		
	comp=Z,96nm,1.1s						
KMI	Kunming	41.79	319	P	P	23 47 37.0	+1.1
KMI				IAmb	IAmb	23 48 02.3	
	comp=Z,96nm,1.1s						
TJN	Taejon	42.16	355	*de*P	P	23 47 39.3	+0.9
WAKE	Wake Island	42.36	53	P	P	23 47 40.7	+0.3
JYT	Yasato	42.52	10	P	P	23 47 41.0	-0.4
JYT				IAmb	IAmb	23 48 21.9	
	comp=Z,82nm,0.7s						
MAJO	Matsushiro	42.53	8	P	P	23 47 41.1	-0.4
MAJO				pmax	pmax		
	comp=Z,179nm,1.1s						
MAJO	Matsushiro	42.53	8	P	P	23 47 41.1	-0.4
MAJO				IAmb	IAmb	23 47 42.2	
	comp=Z,179nm,1.1s						
MAT	Matsushiro	42.53	8	P	P	23 47 41.0	-0.5
MAT				*e*S	S	23 53 57.2	-2.0
MJAR	Matsushiro Arr	42.53	8	P	P	23 47 41.3	-0.2
	comp=Z,79nm,1.0s,baz=189,slow=9.7,SNR=88						
MJAR				LR	LR	00 03 17.2	
	comp=Z,1µm,21.6s,baz=200,slow=33						
MJAR	Matsushiro Arr	42.53	8	P	P	23 47 40.5	-1.0
MJAR				pmax	pmax		
	comp=Z,24nm,1.0s						
MJAR	Matsushiro Arr	42.53	8	P	P	23 47 40.5	-1.0
PBA	Port Blair	42.60	294	P	P	23 47 41.9	-0.4
PBA				IAmb	IAmb	23 48 13.9	
	comp=Z,78nm,0.9s						
KSAR	Wonju Array Be	43.17	355	P	P	23 47 47.9	+1.3
KSAR	Wonju Array Be	43.17	355	P	P	23 47 47.9	+1.3
KSRS	Korea Array	43.18	355	P	P	23 47 47.9	+1.3
	comp=Z,16nm,0.9s,baz=173,slow=10,SNR=33						
KSRS				LR	LR	00 03 28.0	
	comp=Z,464nm,21.1s,baz=175,slow=33						
KS19	Wonju Array Si	43.23	355	P	P	23 47 48.0	+0.9
INCN	Inchon	43.33	354	P	P	23 47 48.1	+0.2
INCN				pmax	pmax		
	comp=Z,59nm,1.2s						
INCN	Inchon	43.33	354	P	P	23 47 48.1	+0.2
TIA	Tai'an	44.01	343	P	P	23 47 54.0	+0.6
TIA				S	S	23 54 18.8	-2.0
TIA				pmax	pmax		
	comp=Z,24nm,0.8s						
TIA				pmax	pmax		
	comp=Z,160nm,3.5s						
TIA				LR	LR		
	comp=Z,370nm,19.8s						
TIA				LR	LR		
	comp=Z,340nm,18.2s						
JMM	Marumori	44.22	10	P	P	23 47 55.4	+0.4
XAN	Xi'an	45.17	333	P	P	23 48 02.6	-0.1
XAN				pP	pP	23 48 19.9	+2.2
XAN				PcP	PcP	23 49 44.9	+2.7
XAN				PP	PP	23 49 47.5	-2.1
XAN				S	S	23 54 33.3	-4.5
XAN				pmax	pmax		
	comp=Z,140nm,0.9s						
XAN				LR	LR		
	comp=Z,470nm,16.0s						
XAN				LR	LR		
	comp=Z,120nm,9.4s						
XAN				LR	LR		
	comp=Z,740nm,24.0s						
CD2	Chengdu	45.32	325	⇑*i*P	P	23 48 03.8	-0.2
CD2				PP	PP	23 49 53.3	+2.1
CD2				S	S	23 54 42.8	+2.7
CD2				sS	sS	23 55 11.1	+4.2
CD2				ScS	ScS	23 57 54.3	-0.6
CD2				SS	SS	23 57 59.1	-5.8
CD2				pmax	pmax		
	comp=Z,80nm,1.0s						
CD2				pmax	pmax		
	comp=Z,240nm,4.7s						
CD2				LR	LR		
	comp=Z,600nm,20.2s						
CD2				LR	LR		
	comp=Z,1µm,22.6s						
CD2				LR	LR		
	comp=Z,930nm,25.5s						
DL2	Dalian	45.47	349	*e*P	P	23 48 04.3	-0.7
DL2				sP	pwP	23 48 24.0	-1.3
DL2				S	S	23 54 40.6	-1.3
DL2				pmax	pmax		
	comp=Z,45nm,1.1s						
DL2				pmax	pmax		
	comp=Z,450nm,4.8s						
DL2				LR	LR		
	comp=Z,540nm,19.9s						
DL2				LR	LR		
	comp=Z,550nm,18.7s						
DL2				LR	LR		
	comp=Z,740nm,21.0s						
MSVF	Nonsavu	46.62	109	P	P	23 48 15.2	+0.7
	comp=Z,20nm,1.1s,baz=98,slow=4.0,SNR=9.2						
MSVF	Nonsavu	46.62	109	⇑*e*P	P	23 48 14.4	-0.1
MSVF				pmax	pmax		
	comp=Z,14nm,1.1s						
MSVF	Nonsavu	46.62	109	P	P	23 48 15.0	+0.5
MSVF	Nonsavu	46.62	109	P	P	23 48 15.6	+1.1
TIY	Taiyuan	46.91	339	*e*P	P	23 48 17.4	+1.0
TIY				pP	pP	23 48 34.4	+3.0
TIY				S	S	23 55 01.3	-1.5
TIY				pmax	pmax		
	comp=Z,45nm,0.8s						
JTM	Tenmabayashi	47.12	10	P	P	23 48 18.6	+0.8
BJT	Baijiatuau	47.82	344	P	P	23 48 24.5	+1.2
BJT				pmax	pmax		
	comp=Z,78nm,1.0s						
BJT	Baijiatuau	47.82	344	P	P	23 48 24.5	+1.2
BJT				IAmb	IAmb	23 48 49.2	
	comp=Z,78nm,1.0s						
BJI	Beijing	47.84	344	P	P	23 48 25.0	+1.5
BJI				sP	sP	23 48 47.5	+1.1
BJI				S	S	23 55 13.5	-2.2
BJI				pmax	pmax		
	comp=Z,46nm,1.0s						
BJI				LR	LR		
	comp=Z,360nm,18.5s						
BJI				LR	LR		
	comp=Z,430nm,20.2s						
SNY	Shenyang	47.99	352	P	P	23 48 25.3	+0.7
SNY				S	S	23 55 16.8	-0.9
SNY				pmax	pmax		
	comp=Z,27nm,1.0s						
SNY				pmax	pmax		
	comp=Z,270nm,5.5s						
SNY				LR	LR		
	comp=Z,810nm,17.3s						
SNY				LR	LR		
	comp=Z,470nm,12.0s						
SNY				LR	LR		
	comp=Z,1µm,21.8s						
OUZ	Omahuta	48.28	133		P	23 48 28.4	+1.4
OUZ				IAmb	IAmb	23 49 12.0	
	comp=Z,65nm,1.2s						
LZH	Lanzhou	49.25	330	⇑P	P	23 48 35.9	+1.3
LZH				pP	pP	23 48 51.9	+2.0
LZH				sP	pwP	23 49 01.6	+5.3
LZH				PP	PP	23 50 32.6	+3.4
LZH				S	S	23 55 34.0	-2.1
LZH				SS	SS	23 59 06.9	-1.6
LZH				pmax	pmax		
	comp=Z,71nm,1.3s						
LZH				pmax	pmax		
	comp=Z,300nm,5.4s						
LZH				LR	LR		
	comp=Z,890nm,15.0s						
LZH				LR	LR		
	comp=Z,870nm,14.7s						
LZH				LR	LR		
	comp=Z,970nm,16.8s						
CN2	Changchun	49.70	354	*e*P	P	23 48 35.8	-1.9
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
USA0B	Ussuriysk Arra	49.76	0	*d i*P	P	23 48 38.8	+0.7
USA0B	Ussuriysk Arra	49.76	0	P	P	23 48 39.0	+0.9
USRK	Ussuriysk Ar.	49.76	0	P	P	23 48 39.1	+1.0
	comp=Z,20nm,0.9s,baz=180,slow=6.9,SNR=23						
USRK				LR	LR	00 08 19.9	
	comp=Z,316nm,21.6s,baz=171,slow=34						
USRK	Ussuriysk Ar.	49.76	0	P	P	23 48 38.8	+0.7
USRK	Ussuriysk Ar.	49.76	0	P	P	23 48 38.8	+0.7
SHL	Shillong	49.79	311	P	P	23 48 38.5	-0.4
SHL				pmax	pmax		
	comp=Z,114nm,0.9s						
SHL	Shillong	49.79	311	*e*P	P	23 48 38.6	-0.3
SHL				IAmb	IAmb	23 48 39.5	
	comp=Z,84nm,0.8s						
SHL	Shillong	49.79	311	P	P	23 48 38.5	-0.4
SHL	Shillong	49.79	311	P	P	23 48 38.7	-0.3
	SNR=32						
HHC	Hu-ho-hao-te	50.01	340	*e*P	P	23 48 41.9	+1.6
HHC				sP	pwP	23 49 04.8	+2.4
HHC				S	S	23 55 47.4	+1.0
HHC				ScS	ScS	23 58 23.4	-2.3
HHC				SS	SS	23 59 23.4	+2.9
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.2s						
HHC				LR	LR		
	comp=Z,320nm,16.6s						
HHC				LR	LR		
	comp=Z,270nm,16.2s						
MDJ	Mudanjiang	50.22	358	P	P	23 48 42.8	+1.2
MDJ				pmax	pmax		
	comp=Z,68nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,290nm,6.1s						
MDJ	Mudanjiang	50.22	358	P	P	23 48 42.2	+0.6
MDJ				IAmb	IAmb	23 48 44.0	
	comp=Z,70nm,1.1s						
BTO	Baotou	50.34	338	*e*P	P	23 48 44.5	+1.7
BTO				S	S	23 55 50.5	-0.5
TEY	Ternei	50.77	4	⇓*e*P	P	23 48 46.6	+0.9
TEY				*e*		23 49 06.6	
TEY				pmax	pmax		
	comp=N,30nm,1.4s						
TEY				pmax	pmax		
	comp=Z,50nm,1.3s						
LBZ	Lake Benmore	50.99	145	P	P	23 48 48.2	+0.8
RPZ	Rata Peaks	51.09	144	P	P	23 48 49.6	+1.4
	comp=Z,6.8nm,0.5s,baz=324,slow=5.9,SNR=6.0						
RPZ	Rata Peaks	51.09	144	P	P	23 48 49.5	+1.2
RPZ				IAmb	IAmb	23 49 16.4	
	comp=Z,57nm,0.9s						
KHZ	Kahutara	51.86	141		P	23 48 54.1	+0.2
KHZ				IAmb	IAmb	23 49 16.4	
	comp=Z,78nm,1.0s						
BKZ	Black Stump Fm	52.16	136	P	P	23 48 56.5	+0.1
BKZ				IAmb	IAmb	23 49 26.3	
	comp=Z,84nm,0.9s						
LSA	Lhasa	52.64	314	P	P	23 49 01.6	+1.0
LSA				sP	pwP	23 49 25.8	+2.5
LSA				S	S	23 56 15.4	-8.4
PALK	Pallekele	52.66	284	P	P	23 49 00.5	0.0
	comp=Z,57nm,0.8s,baz=194,slow=7.1,SNR=26						
PALK	Pallekele	52.66	284	*c i*P	P	23 48 59.9	-0.6
PALK				pmax	pmax		
	comp=Z,159nm,1.3s						
PALK	Pallekele	52.66	284	P	P	23 49 00.3	-0.2
PALK	Pallekele	52.66	284	P	P	23 49 00.3	-0.2
YSS	Yuzh-Sakhalins	53.40	9	*e*P	P	23 49 05.5	+0.3
YSS				*e**PP	pP	23 49 18.2	-3.2
YSS				*e*		23 52 09.7	
YSS				*e*S	S	23 56 30.2	-2.2
YSS				*e*		23 58 51.3	
YSS				pmax	pmax		
	comp=Z,60nm,1.2s						
YSS				pmax	pmax		
	comp=Z,500nm,3.2s						
YSS	Yuzh-Sakhalins	53.40	9	P	P	23 49 05.2	0.0
YSS				IAmb	IAmb	23 49 19.1	
	comp=Z,53nm,0.6s						
BOK	Bokaro	53.62	305	*e*P	P	23 49 07.8	+0.5
BOK				IAmb	IAmb	23 49 09.6	
	comp=Z,23nm,0.8s						
GTA	Gaotai	53.84	329	⇑P	P	23 49 10.1	+1.3
GTA				S	S	23 56 39.4	+0.3
GTA				pmax	pmax		
	comp=Z,98nm,0.9s						
GTA				pmax	pmax		
	comp=Z,69nm,6.2s						
GTA				LR	LR		
	comp=Z,250nm,19.6s						
GTA				LR	LR		
	comp=Z,300nm,19.3s						
GTA				LR	LR		
	comp=Z,380nm,19.3s						
MDRS	Chennai	54.58	290	*e*P	P	23 49 14.3	-0.1
MDRS				IAmb	IAmb	23 49 16.7	
	comp=Z,78nm,1.0s						
KLR	Kul'dur	54.79	360	*d i*P	P	23 49 16.0	+0.7
UGL	Uglegorsk	55.36	8	⇓*i*P	P	23 49 20.7	+1.3
UGL				*e*		23 49 32.9	
UGL				*e*S	S	23 57 02.1	+3.3
UGL				pmax	pmax		
	comp=E,150nm,1.1s						
UGL				pmax	pmax		
	comp=Z,210nm,1.0s						
UGL				MLR	MLR		
	comp=E,2µm,20.0s						
UGL				MLR	MLR		
	comp=N,4µm,19.0s						
UGL				MLR	MLR		
	comp=Z,2µm,24.0s						
HIA	Hailar	55.84	350	P	P	23 49 24.0	+1.1
HIA				pmax	pmax		
	comp=Z,16nm,1.0s						
HIA	Hailar	55.84	350	P	P	23 49 24.0	+1.1
GRNR	Gornyy	56.47	3	⇑*i*P	P	23 49 27.8	+0.4
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
TRD	Trivandrum	56.55	284	*e*P	P	23 49 28.9	+0.3
TRD				IAmb	IAmb	23 49 30.3	
	comp=Z,121nm,0.8s						
TYV	Tymovskoe	57.19	8	*e*P	P	23 49 33.8	+1.4
TYV				*e*S	S	23 57 28.3	+5.3
TYV				pmax	pmax		
	comp=Z,300nm,4.2s						
TYV				pmax	pmax		
	comp=Z,30nm,1.1s						
TYV				smax	smax		
	comp=E,500nm,4.4s						
TYV				smax	smax		
	comp=E,12nm,1.8s						
HYB	Hyderabad	57.47	295	*i* P	P	23 49 34.0	-1.1
	comp=E,100nm,1.0s						
HYB	Hyderabad	57.47	295	*e*P	P	23 49 34.5	-0.6
HYB				IAmb	IAmb	23 49 35.2	
	comp=Z,50nm,0.9s						
ULN	Ulaanbaatar	57.72	340	*d i*P	P	23 49 38.3	+1.9
ULN				pmax	pmax		
	comp=Z,24nm,0.7s						
ULN	Ulaanbaatar	57.72	340	P	P	23 49 38.0	+1.6
ULN				IAmb	IAmb	23 50 02.7	
	comp=Z,57nm,0.8s						
ULN	Ulaanbaatar	57.72	340	P	P	23 49 38.4	+2.0
SONM	Songino Array	57.92	340	P	P	23 49 39.5	+1.8
	comp=Z,10nm,0.7s,baz=159,slow=7.5,SNR=48						
SONM				LR	LR	00 16 08.4	
	comp=Z,154nm,21.9s,baz=166,slow=38						
SONM	Songino Array	57.92	340	P	P	23 49 39.2	+1.4
SONM				pmax	pmax		
	comp=Z,46nm,1.1s						
SONM	Songino Array	57.92	340	P	P	23 49 39.2	+1.4
DGAR	Diego Garcia	59.00	265	*ce*P	P	23 49 46.8	+1.0
DGAR				pmax	pmax		
	comp=Z,403nm,2.5s						
DGAR	Diego Garcia	59.00	265	P	P	23 49 46.7	+0.9
ZEA	Zeya	59.43	357	*e*P	P	23 49 49.3	+1.3
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.7s						
CIT	Chita	59.67	347	*e*P	P	23 49 51.4	+1.6
CIT				*e*		23 50 08.3	
CIT				*e*		23 50 36.8	
CIT				*e*		23 53 33.6	
BHPL	Bhopal	60.46	301	*e*P	P	23 49 55.4	-0.4
BHPL				IAmb	IAmb	23 49 56.1	
	comp=Z,40nm,0.8s						
ZAK	Zakamensk	61.16	340	*e*P	P	23 50 01.2	+1.2
ZAK				pmax	pmax		
	comp=Z,29nm,1.2s						
GOA	Goa	61.23	291	*e*P	P	23 50 01.0	0.0
GOA				IAmb	IAmb	23 50 01.9	
	comp=Z,42nm,0.8s						
POO	Poona	62.06	294	*e*P	P	23 50 06.1	-0.5
POO				IAmb	IAmb	23 50 06.8	
	comp=Z,57nm,0.8s						
TLY	Talaya	62.13	341	⇑*e*P	P	23 50 08.2	+1.8
TLY				pmax	pmax		
	comp=Z,14nm,1.4s						
TLY	Talaya	62.13	341		P	23 50 07.7	+1.3
CASY	Casey	62.19	190		P	23 50 07.9	+1.4
IRK	Irkutsk	62.41	341	*e*P	P	23 50 16.0	+7.7
IRK				pmax	pmax		
	comp=Z,79nm,2.1s						
PEA0B	Petropavlovsk-	62.62	17	P	P	23 50 10.9	+1.3
PEA0B				pmax	pmax		
	comp=Z,152nm,1.3s						
PEA0B	Petropavlovsk-	62.62	17	P	P	23 50 10.9	+1.3
PETK	Petropavlovsk-	62.62	17	P	P	23 50 10.8	+1.1
	comp=Z,41nm,1.0s,baz=198,slow=4.4,SNR=23						
PETK				LR	LR	00 13 01.2	
	comp=Z,247nm,21.1s,baz=210,slow=32						
PET	Petropavlovsk	62.83	18	*e*P	P	23 50 08.3	-2.7
PET				*e**PP	pP	23 50 25.1	-3.2
PET				*e*		23 52 31.2	
PET				*e*S	S	23 58 32.8	-2.5
PET				*e*		23 59 50.6	
PET				*e*SS	SS	00 02 39.3	-2.3
PET				pmax	pmax		
	comp=Z,69nm,1.1s						
PET				pmax	pmax		
	comp=Z,100nm,12.8s						
PET				pmax	pmax		
	comp=Z,100nm,19.8s						
PET	Petropavlovsk	62.83	18	P	P	23 50 12.7	+1.7
MOY	Mondy	63.03	339	*e*P	P	23 50 13.4	+0.8
MOY				pmax	pmax		
	comp=Z,66nm,3.2s						
WMQ	Urumqi	63.42	326	⇑*i*P	P	23 50 16.9	+1.7
WMQ				sP	pwP	23 50 39.4	+1.4

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WMQ                                PcP      PcP      23 50 54.1 +2.5
WMQ                                S        S        23 58 42.3 -0.9
WMQ                                pmax     pmax
       comp=Z,230nm,0.9s
WMQ                                pmax     pmax
       comp=Z,550nm,3.7s
WMQ                                LR       LR
       comp=Z,110nm,8.9s
WMQ                                LR       LR
       comp=Z,190nm,10.1s
WMQ    Urumqi            63.42 326 P        P        23 50 16.6 +1.4
WMQ                                pmax     pmax
       comp=Z,159nm,0.8s
WMQ    Urumqi            63.42 326 P        P        23 50 16.6 +1.4
SMLA   Simla             63.80 309 eP       P        23 50 18.4 +0.6
SMLA                               IAmb     IAmb     23 50 29.3
       comp=Z,258nm,1.0s
DHRM   DHARAMSHALA       64.94 310 eP       P        23 50 25.6 -0.1
DHRM                               IAmb     IAmb     23 50 36.5
       comp=Z,198nm,0.6s
BOD    Bodaibo           65.03 350 eP       P        23 50 26.2 +0.8
BOD                                pmax     pmax
       comp=Z,61nm,1.3s
MA2    Magadan           66.87  10d iP      P        23 50 38.2 +1.0
MA2                                pmax     pmax
       comp=Z,70nm,1.7s
MA2    Magadan           66.87  10 P        P        23 50 38.1 +0.9
MA2                                IAmb     IAmb     23 50 39.6
       comp=Z,59nm,1.2s
ZSN    Zaisan            67.23 327 eP       P        23 50 39.1 -0.7
       comp=Z,14nm,0.9s,baz=328
ZSN                                eS       S        23 59 31.5 +1.9
       baz=328
ZSN    Zaisan            67.23 327 eP       P        23 50 39.1 -0.7
ZSN                                eS       S        23 59 31.5 +1.9
ZSN                                pmax     pmax
       comp=Z,14nm,0.9s
DGZ    Jazzator, Alta    67.35 330ceP       P        23 50 42.0 +1.4
DGZ                                pmax     pmax
       comp=Z,34nm,1.0s
YAK    Yakutsk           67.64 359d iP      P        23 50 42.7 +0.7
YAK                                e                 23 51 07.9
YAK                                e                 23 53 14.2
YAK                                ePPP     PPP      23 54 49.2
YAK                                eS       S        23 59 32.6 -1.3
YAK                                e*SS     SKiKP    00 00 18.4  -15
YAK                                e                 00 00 30.8
YAK                                eSS      SS       00 03 51.2 -4.9
YAK                                pmax     pmax
       comp=Z,83nm,0.9s
YAK                                pmax     pmax
       comp=N,23nm,1.0s
YAK                                pmax     pmax
       comp=E,4.0nm,0.9s
YAK                                pmax     pmax
       comp=Z,116nm,2.7s
YAK                                pmax     pmax
       comp=E,58nm,2.5s
YAK                                pmax     pmax
       comp=N,48nm,3.0s
YAK                                smax     smax
       comp=E,162nm,2.7s
YAK                                smax     smax
       comp=N,156nm,2.3s
YAK    Yakutsk           67.64 359 P        P        23 50 42.8 +0.7
RAR    Rarotonga         67.77 110 LR       LR       00 18 15.9
       comp=N,69nm,18.8s,baz=282,slow=34
NIL    Nilore            67.85 310 P        P        23 50 44.3 +0.3
NIL                                pmax     pmax
       comp=Z,45nm,0.8s
NIL    Nilore            67.85 310 P        P        23 50 44.3 +0.3
NIL                                IAmb     IAmb     23 51 08.8
       comp=Z,45nm,0.8s
NIL    Nilore            67.85 310 P        P        23 50 44.4 +0.4
SHLS   Shalkode          67.92 321 eP       P        23 50 42.3 -2.0
       comp=Z,62nm,0.8s,baz=322
SHLS                               eS       S        23 59 36.8 -1.4
       baz=322
SHLS   Shalkode          67.92 321 eP       P        23 50 42.3 -2.0
SHLS                               eS       S        23 59 36.8 -1.4
SHLS                               pmax     pmax
       comp=Z,62nm,0.8s
PDGK   Podgornoye        67.99 321 i P      P        23 50 45.4 +0.6
PDGK                               pmax     pmax
       comp=Z,9.0nm,0.9s
MK31   Makanchi Array    68.25 326c iP      P        23 50 47.1 +0.9
MK31                               pmax     pmax
       comp=Z,102nm,0.8s
MK31   Makanchi Array    68.25 326 P        P        23 50 47.4 +1.2
MK31                               IAmb     IAmb     23 51 11.7
       comp=Z,75nm,0.9s
MKAR   Makanchi Array    68.25 326 P        P        23 50 47.7 +1.5
       comp=Z,124nm,0.9s,baz=117,slow=7.7,SNR=543
MKAR                               LR       LR       00 22 34.8
       comp=Z,260nm,21.7s,baz=118,slow=38
MKAR   Makanchi Array    68.25 326ceP       P        23 50 47.4 +1.2
MKAR                               pmax     pmax
       comp=Z,124nm,0.9s
MKAR   Makanchi Array    68.25 326 P        P        23 50 47.0 +0.8
KSH    Kashi             68.40 316 P        P        23 50 49.4 +2.0
KSH                                PP       PP       23 53 26.0 +6.8
KSH                                S        S        23 59 47.1 +3.0
KSH                                pmax     pmax
       comp=Z,130nm,0.9s
KSH                                pmax     pmax
       comp=Z,530nm,6.1s
KSH                                LR       LR
       comp=Z,570nm,5.9s
KSH                                LR       LR
       comp=Z,520nm,5.6s
KSH                                LR       LR
       comp=Z,620nm,6.1s
MAKZ   Makanchi          68.44 326 P        P        23 50 48.2 +0.8
MAKZ                               pmax     pmax
       comp=Z,88nm,0.9s
MAKZ   Makanchi          68.44 326 P        P        23 50 48.2 +0.8
MAKZ                               IAmb     IAmb     23 50 49.6
       comp=Z,88nm,0.9s
SATY   Saty              68.53 321 eP       P        23 50 48.0 -0.2
       comp=Z,60nm,0.8s,baz=321
SATY                               eS       S        23 59 47.5 +1.9
       baz=321
SATY   Saty              68.53 321 eP       P        23 50 47.9 -0.2
SATY                               eS       S        23 59 47.4 +1.9
SATY                               pmax     pmax
       comp=Z,60nm,0.8s
KPKS   Kokpek            68.56 321 eP       P        23 50 47.7 -0.6
       comp=Z,92nm,0.9s,baz=321
KPKS                               eS       S        23 59 47.5 +1.6
       baz=321
KPKS   Kokpek            68.56 321 eP       P        23 50 47.7 -0.6
KPKS                               eS       S        23 59 47.4 +1.6
KPKS                               pmax     pmax
       comp=Z,92nm,0.9s
MDOK   Medeo             69.44 320 eP       P        23 50 53.6 -0.2
       baz=320
MDOK                               eS       S        23 59 57.6 +1.3
       baz=320
MDOK   Medeo             69.44 320 eP       P        23 50 53.6 -0.2
MDOK                               eS       S        23 59 57.6 +1.3
TNSS   Tian-Shan         69.44 320 eP       P        23 50 54.7 +0.5
       baz=320
TNSS   Tian-Shan         69.44 320 eP       P        23 50 54.6 +0.5
ULHL   Ulahol            69.51 319 P        P        23 50 56.2 +1.9
       SNR=6.5
TDK    Taldyqorghan      69.53 323 eP       P        23 50 53.7 -0.6
       comp=Z,80nm,1.1s,baz=323
TDK    Taldyqorghan      69.53 323 eP       P        23 50 53.6 -0.6
TDK                                pmax     pmax
       comp=Z,80nm,1.1s
AAA    Alma-Ata          69.55 320 eP       P        23 50 54.7 +0.3
       comp=Z,41nm,0.9s,baz=320
AAA    Alma-Ata          69.55 320 eP       P        23 50 54.7 +0.3
AAA                                pmax     pmax
       comp=Z,41nm,0.9s
MTBS   Maitube           69.82 320 eP       P        23 50 57.3 +1.2
       baz=320
MTBS   Maitube           69.82 320 eP       P        23 50 57.2 +1.2
CHKK   Chushkaly         69.82 321 eP       P        23 50 55.8 -0.2
       comp=Z,530nm,0.8s,baz=321
CHKK   Chushkaly         69.82 321 eP       P        23 50 55.8 -0.2
CHKK                               pmax     pmax
       comp=Z,530nm,0.8s
TKM2   Tokmak 2          70.25 320 P        P        23 51 00.2 +1.4
       SNR=58
TKM2   Tokmak 2          70.25 320 i P      P        23 50 59.8 +0.9
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TKM2                               pmax     pmax
       comp=Z,60nm,0.8s
SEY    Seymchan          70.30  10⇑eP       P        23 51 00.1 +1.7
SEY                                i *PP    pP       23 51 13.0 -2.3
KBK    Karagaybulak      70.55 319 P        P        23 51 02.0 +1.4
       SNR=35
UCH    Uchtor            70.63 318 P        P        23 51 03.4 +1.8
       SNR=78
AAK    Ala-Archa         70.83 319 P        P        23 51 03.9 +1.6
       SNR=38
AAK    Ala-Archa         70.83 319 i P      P        23 51 04.0 +1.6
       SNR=50
AAK    Ala-Archa         70.83 319ceP       P        23 51 03.6 +1.3
AAK                                pmax     pmax
       comp=Z,193nm,1.0s
AAK    Ala-Archa         70.83 319 P        P        23 51 03.7 +1.3
AAK                                IAmb     IAmb     23 51 15.7
       comp=Z,80nm,1.1s
AAK    Ala-Archa         70.83 319 P        P        23 51 03.9 +1.6
CHMS   Chumysh           70.83 319 P        P        23 51 03.0 +0.8
       SNR=21
USP    Ospenovka         71.12 319 P        P        23 51 05.3 +1.4
       SNR=106
SGDS   Sogindy           71.12 320 eP       P        23 51 03.9 -0.2
       comp=Z,20nm,0.9s,baz=320
SGDS   Sogindy           71.12 320 eP       P        23 51 03.8 -0.2
SGDS                               pmax     pmax
       comp=Z,20nm,0.9s
AML    Almayashu         71.13 318 P        P        23 51 06.2 +1.8
       SNR=112
EKS2   Erkin-Say         71.31 319 P        P        23 51 06.9 +1.6
       SNR=56
ZAA0   Zalesovo Array    71.34 333 P        P        23 51 05.0  0.0
ZAA0                               IAmb     IAmb     23 51 38.3
       comp=Z,157nm,1.6s
ZALV   Zalesovo Beam     71.34 333 P        P        23 51 05.3 +0.4
       comp=Z,20nm,1.0s,baz=108,slow=4.8,SNR=49
ZALV                               LR       LR       00 25 27.8
       comp=Z,133nm,21.6s,baz=145,slow=38
ZALV   Zalesovo Beam     71.34 333 P        P        23 51 05.2 +0.2
KBL    Kabul             71.42 309 P        P        23 51 06.4 +0.3
KBL                                pmax     pmax
       comp=Z,67nm,0.9s
KBL    Kabul             71.42 309 P        P        23 51 06.4 +0.3
KBL                                IAmb     IAmb     23 51 18.1
       comp=Z,67nm,0.8s
KBL    Kabul             71.42 309 P        P        23 51 06.5 +0.3
       SNR=42
KBL                                S        S        00 00 18.2 -1.7
SEM    Semipalatinsk     71.44 328 eP       P        23 51 04.6 -1.3
       comp=Z,21nm,1.1s,baz=328
SEM    Semipalatinsk     71.44 328 eP       P        23 51 04.6 -1.3
SEM                                pmax     pmax
       comp=Z,21nm,1.1s
BTLS   Baital            72.24 321 eP       P        23 51 09.8 -0.8
       comp=Z,25nm,1.2s,baz=321
BTLS   Baital            72.24 321 eP       P        23 51 09.7 -0.8
BTLS                               pmax     pmax
       comp=Z,25nm,1.2s
KURK   Kurchatov         72.47 328 P        P        23 51 12.4 +0.6
KURK                               pmax     pmax
       comp=Z,69nm,1.0s
KURK   Kurchatov         72.47 328 P        P        23 51 12.4 +0.6
KURK                               IAmb     IAmb     23 51 40.1
       comp=Z,69nm,0.9s
VNDA   Vanda             73.42 173 P        P        23 51 17.8 +0.8
       comp=Z,2.9nm,0.5s,baz=317,slow=9.0,SNR=13
VNDA                               LR       LR       00 22 48.9
       comp=Z,311nm,18.6s,baz=347,slow=35
VNDA   Vanda             73.42 173 P        P        23 51 18.0 +0.9
VNDA                               pmax     pmax
       comp=Z,21nm,0.9s
VNDA   Vanda             73.42 173 P        P        23 51 18.0 +0.9
IUG    Iuzhnay           73.60 317 eP       P        23 51 18.3 -0.5
       comp=Z,23nm,1.1s,baz=317
IUG    Iuzhnay           73.60 317 eP       P        23 51 18.3 -0.5
IUG                                pmax     pmax
       comp=Z,23nm,1.1s
KK31   Karatay Array     73.67 318 P        P        23 51 19.8 +0.7
KK31                               pmax     pmax
       comp=Z,63nm,1.0s
KK31   Karatay Array     73.67 318 P        P        23 51 19.8 +0.7
KK31                               IAmb     IAmb     23 51 50.2
       comp=Z,63nm,1.0s
KKAR   Karatay Array     73.67 318 P        P        23 51 19.6 +0.5
KKAR                               pmax     pmax
       comp=Z,63nm,1.0s
KKAR   Karatay Array     73.67 318 P        P        23 51 19.6 +0.5
KKAR                               IAmb     IAmb     23 51 50.2
       comp=Z,63nm,1.0s
KKAR   Karatay Array     73.67 318 P        P        23 51 19.6 +0.5
TAS    Tashkent          73.78 316 P        P        23 51 21.0 +1.2
TAS                                pmax     pmax
       comp=Z,137nm,0.9s
TAS    Tashkent          73.78 316 P        P        23 51 21.0 +1.2
BRLS   Borolday          74.09 318 eP       P        23 51 22.0 +0.3
       comp=Z,29nm,0.9s,baz=317
BRLS   Borolday          74.09 318 eP       P        23 51 21.9 +0.3
BRLS                               pmax     pmax
       comp=Z,29nm,0.9s
BRZS   Berezniki         75.37 325 eP       P        23 51 28.1 -0.7
       comp=Z,12nm,0.8s,baz=325
BRZS   Berezniki         75.37 325 eP       P        23 51 28.1 -0.7
BRZS                               pmax     pmax
       comp=Z,12nm,0.8s
HMH    Humu‘ula Sheep    75.75  68 P        P        23 51 32.7 +0.8
MLH    Mauna Loa         75.82  68 P        P        23 51 33.2 +1.0
MLH                                IAmb     IAmb     23 51 57.7
       comp=Z,120nm,1.1s
JLN    Jalan Bani Buh    76.08 294 P        P        23 51 33.6 +0.2
HRA    Herat             76.69 307 P        P        23 51 37.5 +0.6
MAW    Mawson            76.75 202 P        P        23 51 37.8 +1.6
       comp=Z,5.4nm,0.5s,baz=96,slow=6.3,SNR=12
MAW    Mawson            76.75 202 P        P        23 51 37.9 +1.6
MAW                                pmax     pmax
       comp=Z,11nm,1.0s
MAW    Mawson            76.75 202 P        P        23 51 37.9 +1.6
WSAR   Wadi Sarin        77.01 295 P        P        23 51 39.5 +0.8
       comp=Z,11nm,0.9s,baz=128,slow=11,SNR=6.6
MHTO   MHTO              77.16 293 P        P        23 51 39.5  0.0
       SNR=13
MHTO                               S        S        00 01 21.8 -2.3
JMDO   Jabal Madar       77.31 294 P        P        23 51 49.0 +8.6
       SNR=5.5
TIXI   Tiksi             77.31 359deP       P        23 51 38.9 -0.4
TIXI                               pmax     pmax
       comp=Z,83nm,1.0s
TIXI   Tiksi             77.31 359 P        P        23 51 39.1 -0.1
TBI    Tubuai            77.35 113 eS       S        00 01 24.8 -1.4
       comp=Z,367nm,27.0s
TBI    Tubuai            77.35 113 eLR      LR       00 15 38.3
       comp=Z,382nm,33.5s
PPT2   Papeete2          77.39 107 eS       S        00 01 25.3 -1.7
       comp=Z,100nm,23.8s
PPT2   Papeete2          77.39 107 eLQ      LQ       00 12 28.5
       comp=Z,567nm,35.5s
PPT2                               eLR      LR       00 15 37.7
       comp=Z,694nm,35.5s
SMDO   Samad             77.50 295 P        P        23 51 42.0 +0.5
       SNR=9.9
BIDO   Bidbid            77.52 296 P        P        23 51 42.4 +0.9
       SNR=20
BRVK   Borovoye          78.11 327c iP      P        23 51 44.5 +0.3
BRVK                               pmax     pmax
       comp=Z,35nm,0.8s
BRVK   Borovoye          78.11 327 P        P        23 51 44.9 +0.7
BRVK                               IAmb     IAmb     23 52 30.6
       comp=Z,50nm,0.9s
BSY    Bisya             78.20 295 P        P        23 51 45.9 +0.6
HOQ    Hoqain            78.27 295 P        P        23 51 46.5 +0.8
       SNR=16
HOQ                                S        S        00 01 36.2 +0.1
UNV    Unalaska Valle    78.50  32 P        P        23 51 47.1 +0.8
UNV                                IAmb     IAmb     23 52 25.2
       comp=Z,83nm,1.0s
SHAO   Shalim            78.79 290 P        P        23 51 49.1 +0.5
ARQ    Araqi             78.93 295 P        P        23 51 49.8 +0.5
ARQ                                S        S        00 01 42.9 -0.3
SOHO   SOHO              79.07 296 i P      P        23 51 50.4 +0.4
       SNR=17
SOHO   SOHO              79.07 296 P        P        23 51 50.5 +0.4
SOCY   Socotra           79.43 283 P        P        23 51 52.3  0.0
SOCY                               IAmb     IAmb     23 52 04.3
       comp=Z,73nm,0.9s
SOCY   Socotra           79.43 283 P        P        23 51 52.2 -0.1
MDH    Madha             79.51 297 P        P        23 51 52.1 -0.3
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UOSS   Minazif           79.53 297 i P      P        23 51 52.6  0.0
       SNR=6.2
UOSS   Minazif           79.53 297 P        P        23 51 53.1 +0.5
UOSS                               IAmb     IAmb     23 52 26.2
       comp=Z,57nm,1.1s
HATD   Hatta, Dubai      79.57 296 i P      P        23 51 53.4 +0.6
       SNR=7.1
HATD   Hatta, Dubai      79.57 296 P        P        23 51 53.6 +0.8
       SNR=8.9
ASHO   Ashiyiah          79.61 296 i P      P        23 51 53.3 +0.3
       SNR=9.4
ASHO   Ashiyiah          79.61 296 P        P        23 51 53.6 +0.6
       SNR=7.6
BANOM  Banah             79.64 298 i P      P        23 51 54.0 +0.8
       SNR=14
BANOM  Banah             79.64 298 P        P        23 51 54.4 +1.2
       SNR=15
MSFE   Esma-Masafi       79.65 297 i P      P        23 51 54.1 +0.8
       SNR=12
MASF   Masafi            79.65 297 P        P        23 51 54.9 +1.7
       SNR=11
ALNE   Al Ain            79.76 296 P        P        23 51 54.3 +0.4
ALNE   Al Ain            79.76 296 P        P        23 51 54.8 +1.0
       SNR=11
SHME   Shamm             79.80 298 i P      P        23 51 54.9 +0.9
       SNR=13
SHME   Shamm             79.80 298 P        P        23 51 55.1 +1.1
       SNR=9.4
NAZ    Nazwa, Dubai      80.02 297 P        P        23 51 55.7 +0.5
       SNR=12
FAQ    Al Faqa, Dubai    80.03 296 P        P        23 51 55.6 +0.3
FAQ    Al Faqa, Dubai    80.03 296 P        P        23 51 56.0 +0.7
       SNR=11
ASUD   Al Ashush, Dub    80.25 296 P        P        23 51 57.1 +0.6
ASUD   Al Ashush, Dub    80.25 296 P        P        23 51 57.2 +0.8
       SNR=9.7
GEYT   Alibeck           80.86 310 P        P        23 52 00.6 +1.1
       comp=Z,23nm,0.9s,baz=159,slow=4.5,SNR=36
GEYT                               LR       LR       00 34 29.1
       comp=Z,75nm,19.7s,baz=60,slow=40
GEYT   Alibeck           80.86 310 P        P        23 52 00.2 +0.8
GYA0B  ALIBECK ARRAY     80.86 310 P        P        23 52 00.2 +0.7
GYA0B                              IAmb     IAmb     23 52 33.0
       comp=Z,57nm,0.9s
GAMB   Gambell           81.11  22 P        P        23 52 01.4 +1.3
ABKAR  Akbulak array     82.72 321 P        P        23 52 09.0  0.0
ABKAR  Akbulak array     82.72 321 P        P        23 52 08.9  0.0
OPO    Ambohidratompo    83.14 252 P        P        23 52 13.3 +1.2
       comp=Z,4.9nm,0.6s,baz=41,slow=4.4,SNR=4.7
ANM    Nome              83.90  23 P        P        23 52 15.8 +1.1
ANM                                pmax     pmax
       comp=Z,30nm,1.1s
ANM    Nome              83.90  23 P        P        23 52 15.8 +1.1
QSPA   South Pole Qui    84.18 180 P        P        23 52 17.9 +1.6
       comp=Z,7.5nm,1.0s,baz=278,slow=1.9,SNR=12
QSPA   South Pole Qui    84.18 180 P        P        23 52 16.9 +0.5
QSPA                               IAmb     IAmb     23 52 53.5
       comp=Z,52nm,0.9s
SVE    Sverdlovsk        84.70 328 eP       P        23 52 20.1 +1.2
SVE                                pmax     pmax
       comp=Z,105nm,1.3s
SYO    Syowa Base        85.45 201⇓esP      sP       23 52 46.4 +0.3
ARU    Arti              85.67 328d iP      P        23 52 23.2 -0.6
ARU                                *PP      pP       23 52 34.3 -6.5
ARU                                                  23 55 41.7
ARU                                S        SKSac    00 02 43.9 +0.5
ARU                                SS       SS       00 08 31.1 +2.6
ARU                                pmax     pmax
       comp=Z,18nm,1.1s
ARU    Arti              85.67 328 P        P        23 52 23.4 -0.4
SII    Sitkinak Islan    86.06  32 P        P        23 52 27.3 +1.6
RDOG   Red Dog Mine      86.34  20 P        P        23 52 27.7 +0.8
OHAK   Old Harbor        86.72  32 P        P        23 52 29.7 +0.9
TTA    Tatalina          87.10  26 P        P        23 52 31.6 +0.8
TTA                                pmax     pmax
       comp=Z,53nm,1.0s
TTA    Tatalina          87.10  26 P        P        23 52 31.6 +0.8
TTA                                IAmb     IAmb     23 52 58.9
       comp=Z,52nm,1.0s
TAOE   Nuku Hiva Isla    87.15  99 eLR      LR       00 20 20.8
       comp=Z,348nm,28.4s
KDAK   Kodiak Island     87.23  31 P        P        23 52 32.5 +1.1
       comp=Z,49nm,0.8s,baz=238,slow=3.4,SNR=23
KDAK   Kodiak Island     87.23  31ceP       P        23 52 32.7 +1.3
KDAK                               pmax     pmax
       comp=Z,100nm,1.0s
KDAK   Kodiak Island     87.23  31 P        P        23 52 32.4 +1.0
QRN    Al-Qurain         87.46 299 eP                23 52 11.2
UMR    Umm Al-Rimmam     87.75 300 eP                23 52 12.0
RDF    Al-Radifah        87.81 299 eP                23 52 12.9
RSO    Redoubt South     87.86  29 P        P        23 52 35.1 +0.4
MIB    Mutribah          88.11 300 eP                23 52 13.9
HOM    Homer             88.19  30 P        P        23 52 37.3 +1.3
       baz=255
BRLK   Bradley Lake      88.59  30 P        P        23 52 38.4 +0.5
RAYN   Ar Rayn           88.95 294 i P      P        23 52 40.8 +0.4
       SNR=18
RAYN   Ar Rayn           88.95 294 P        P        23 52 40.4  0.0
RAYN                               pmax     pmax
       comp=Z,74nm,1.0s
RAYN   Ar Rayn           88.95 294 P        P        23 52 40.4  0.0
IMAR   Indian Mountai    88.96  23 P        P        23 52 39.6 +0.1
SUA    Susitna One       89.06  28 P        P        23 52 40.7 +0.5
SUA                                IAmb     IAmb     23 53 08.4
       comp=Z,57nm,1.2s
O22K   Cooper Landing    89.32  29 P        P        23 52 42.8 +1.6
       baz=257
RC01   Rabbit Creek A    89.45  28 P        P        23 52 43.0 +1.1
       baz=257
KTH    Kantishna Hill    89.49  26          P        23 52 42.1  0.0
KTH                                IAmb     IAmb     23 53 09.4
       comp=Z,29nm,1.2s
CUT    Chulitna          89.50  27 P        P        23 52 43.4 +1.4
       baz=257
MLY    Manley            89.92  24 P        P        23 52 44.0  0.0
       baz=256
KNK    Knik Glacier      90.12  28 P        P        23 52 45.1  0.0
KNK                                IAmb     IAmb     23 53 45.3
       comp=Z,68nm,1.3s
RND    Reindeer          90.36  26 P        P        23 52 45.7 -0.5
RND                                pmax     pmax
       comp=Z,30nm,0.9s
RND    Reindeer          90.36  26 P        P        23 52 45.6 -0.5
RND                                IAmb     IAmb     23 53 13.3
       comp=Z,30nm,0.9s
MCK    McKinley          90.39  26 P        P        23 52 46.4 +0.2
       baz=258
I23K   Minto, Yukon-K    90.52  24 P        P        23 52 47.6 +0.9
       baz=257
NEA2   Nenana            90.52  25 P        P        23 52 47.9 +1.1
       baz=258
COLD   Coldfoot          90.65  22 P        P        23 52 48.6 +1.2
       baz=257
SCM    Sheep Creek Mo    90.74  28 P        P        23 52 48.9 +1.0
SCM                                pmax     pmax
       comp=Z,26nm,1.0s
SCM    Sheep Creek Mo    90.74  28 P        P        23 52 48.9 +1.0
SCM                                IAmb     IAmb     23 52 51.0
       comp=Z,26nm,1.0s
WRH    Wood River Hil    90.91  25 P        P        23 52 48.3 -0.2
WRH                                IAmb     IAmb     23 53 15.3
       comp=Z,20nm,0.9s
DHY    Denali Highway    90.95  27 P        P        23 52 49.1 +0.1
KIRV   Kirov             90.97 329⇑eP       P        23 52 48.3 -0.6
BELG   Belogornoye       91.03 322deP       P        23 52 48.4 -0.9
BELG                               pmax     pmax
       comp=Z,2.0nm,0.9s
CCB    Clear Creek Bu    91.06  25 P        P        23 52 48.7 -0.5
CCB                                IAmb     IAmb     23 53 15.2
       comp=Z,18nm,0.9s
COLA   College           91.09  25⇑eP       P        23 52 48.7 -0.6
COLA                               pmax     pmax
       comp=Z,5.0nm,0.9s
M24K   Tolsona, Glenn    91.32  28 P        P        23 52 51.8 +1.2
       baz=260
HDA    Harding Lake      91.38  25 P        P        23 52 49.9 -0.9
       baz=260
IL31                     91.47  25 P        P        23 52 50.0 -1.2
ILAR   Eielson Array     91.47  25 P        P        23 52 50.1 -1.1
       comp=Z,5.9nm,0.7s,baz=258,slow=4.4,SNR=69
ILAR                               LR       LR       00 28 25.8
       comp=Z,267nm,21.3s,baz=262,slow=32
ILAR   Eielson Array     91.47  25 P        P        23 52 49.6 -1.6
GNI    Garni             91.49 310 P        P        23 52 52.6 +0.5
       comp=Z,6.3nm,1.1s,baz=173,slow=4.6,SNR=3.9
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GNI	Garni	91.49	310⇓	eP	P	23 52 53.3	+1.3
GNI				pmax	pmax		
	comp=Z,29nm,2.5s						
GNI	Garni	91.49	310	P	P	23 52 52.3	+0.2
GNI				IAmb	IAmb	23 54 02.0	
	comp=Z,23nm,1.1s						
N25K	Chitina, Valde	91.98	28	P	P	23 52 54.5	+0.8
	baz=262						
ZEI	Tsey	92.39	313	eP	P	23 52 55.8	-0.4
ZEI				pmax	pmax		
	comp=Z,12nm,1.4s						
FYU	Fort Yukon	92.45	23	P	P	23 52 56.2	+0.6
DOT	Dot Lake	92.52	26	P	P	23 52 56.4	+0.3
CRQM	Cirque	92.56	29	P	P	23 52 56.8	+0.3
SCRK	Sand Creek	92.59	26	P	P	23 52 57.1	+0.5
	baz=262						
GEVA	Gevas	92.61	308	P	P	23 52 57.9	+0.6
NCK	Nalchik	92.68	313⇑	eP	P	23 52 57.2	-0.1
NCK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BMAR	Burnt Mountain	92.83	23	P	P	23 52 56.1	-1.3
KBZ	Khabaz	93.21	313	P	P	23 52 59.7	+0.1
	comp=Z,3.2nm,1.0s,baz=225,slow=4.1,SNR=3.6						
KBZ				LR	LR	00 40 07.5	
	comp=Z,37nm,21.2s,baz=78,slow=39						
KBZ	Khabaz	93.21	313⇓	eP	P	23 52 59.2	-0.4
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KVAR	Kislovodsk Arr	93.37	314	P	P	23 53 00.7	+0.1
	comp=Z,3.7nm,1.0s,baz=65,slow=20,SNR=1.7						
KIV	Kislovodsk	93.38	314	eP	P	23 53 02.8	+2.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
K27K	Chicken	93.44	26	P	P	23 53 02.0	+1.7
	baz=264						
K27K	Chicken	93.44	26	P	P	23 53 01.2	+0.9
K27K				IAmb	IAmb	23 53 28.6	
	comp=Z,25nm,1.1s						
BCAR	Beaver Creek A	93.47	27	P	P	23 53 01.0	+0.5
CTGM	Chitina Glacie	93.47	29	P	P	23 53 02.0	+1.3
EGAK	Eagle	93.91	25	P	P	23 53 02.6	+0.2
NVL	N'lazarevskaya	94.04	197	eP	P	23 53 17.5	+15
NVL				e*PP	sP	23 53 38.4	+12
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMBO	Kilima Mbogo	94.47	268	P	P	23 53 06.8	+0.3
	comp=Z,1.6nm,0.8s,baz=55,slow=8.8,SNR=4.1						
DAWY	Dawson	94.62	26	P	P	23 53 06.5	+0.8
EPYK	Eagle Plains	95.84	24	P	P	23 53 11.6	+0.3
	baz=269						
EPYK	Eagle Plains	95.84	24	P	P	23 53 11.3	0.0
EPYK				IAmb	IAmb	23 53 38.2	
	comp=Z,32nm,1.4s						
KLMR	Klimovskoe	96.16	331	eP	P	23 53 10.5	-2.3
KLMR				e		23 57 03.3	
KLMR				pmax	pmax		
	comp=Z,26nm,1.2s						
KLMR	Klimovskoe	96.16	331	eP	P	23 53 10.5	-2.3
KLMR				AMP		23 53 26.7	
	comp=Z,26nm,1.2s						
KLMR				ePP	PP	23 57 03.3	-3.1
INK	Inuvik	97.06	22	P	P	23 53 15.4	-1.3
	comp=Z,9.9nm,1.0s,baz=264,slow=6.1,SNR=11						
ANN	Anapa	97.18	314	iP	P	23 53 15.9	-1.9
ANN				e*PP	pP	23 53 30.7	-3.5
ANN				pmax	pmax		
	comp=Z,15nm,0.9s						
SNAA	Sanae	97.26	193	P	Pdif	23 53 27.3	+10
SNAA	Sanae	97.26	193⇓	eP	Pdif	23 53 17.8	0.0
SNAA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SNAA	Sanae	97.26	193	P	Pdif	23 53 19.4	+1.7
OBN	Obninsk	97.74	325⇑	eP	P	23 53 18.8	-1.2
OBN				pmax	pmax		
	comp=Z,11nm,0.8s						
APA	Apatity	98.55	337⇓	iP	P	23 53 17.3	-6.1
APA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,1μm,20.0s						
VNA2	Neumayer--Watz	98.81	193	Pdiff	Pdif	23 53 38.2	+14
	baz=120,slow=4.8						
VNA3	Neumayer Olymp	99.04	192	Pdiff	Pdif	23 53 38.6	+13
VNA1	Neumayer--Stat	99.21	193	Pdiff	Pdif	23 53 36.0	+10
BR131	Keskin Array S	99.99	309⇑	eP	Pdif	23 53 30.3	-0.4
BRTR	Keskin Array B	99.99	309	P	Pdif	23 53 29.9	-0.8
	comp=Z,1.1nm,0.9s,baz=110,slow=6.7,SNR=7.8						
BRTR				PP	PP	23 57 37.5	+0.9
	comp=Z,2.2nm,1.0s,baz=95,slow=7.2,SNR=4.0						
BRTR	Keskin Array B	99.99	309	P	Pdif	23 53 30.1	-0.6
BRTR	Keskin Array B	99.99	309		Pdif	23 53 30.1	-0.6
MATP	Matopo	100.42	248	P	Pdif	23 53 32.1	-0.9
	comp=Z,0.7nm,0.6s,baz=140,slow=7.9,SNR=1.4						
ARCES	ARCESS Array B	101.09	340	Pdiff	Pdif	23 53 35.3	+0.6
	comp=Z,4.3nm,1.0s,baz=95,slow=7.3,SNR=1.2						
BOSA	Boshof	101.67	239	Pdiff	Pdif	23 53 39.4	+1.0
	comp=Z,2.9nm,1.1s,baz=69,slow=8.6,SNR=1.7						
AKASG	Malin Array Be	102.46	321	Pdiff	Pdif	23 53 40.1	-1.1
	comp=Z,0.3nm,0.3s,baz=80,slow=3.7,SNR=1.7						
AKASG				PP	PP	23 57 55.3	+0.7
	comp=Z,0.6nm,0.5s,baz=70,slow=7.3,SNR=2.4						
FINES	FINESS Array B	102.59	332	Pdiff	Pdif	23 53 39.9	-1.6
	comp=Z,2.1nm,0.8s,baz=56,slow=5.5,SNR=1.7						
MNK	Minsk	102.80	325	iP	Pdif	23 53 41.0	-1.6
	comp=E,2.0nm,0.9s						
MNK				iP	Pdif	23 53 41.0	-1.6
	comp=N,3.0nm,0.9s						
MNK				iP	Pdif	23 53 41.0	-1.6
	comp=Z,6.0nm,0.9s						
MNK				ipP	pPdif	23 54 00.9	+1.1
MNK				isP	sPdif	23 54 08.9	+2.5
MNK				iPP	PP	23 57 55.5	-1.5
MNK				iPPP	PPP	00 00 06.1	
MNK				iS	SKSac	00 04 14.0	-2.5
MNK				isS	SKKSac	00 04 50.0	-6.7
MNK				iSP	SP	00 06 56.0	-1.3
MNK				iPS	PS	00 07 05.3	-0.8
MNK				iSS	SS	00 12 25.9	-6.5
MNK				iSSS	SSS	00 16 26.4	
MNK				iSKKS	SKKSdf	00 16 50.5	-6.5
MNK				iLQ	LQ	00 30 34.8	
MNK				iLR	LR	00 35 27.4	
MNK				iLRM	MLR	00 41 09.4	
	comp=N,118nm,18.8s						
MNK				iLRM	MLR	00 41 11.7	
	comp=Z,65nm,18.8s						
MNK				iLRM	MLR	00 41 13.6	
	comp=E,16nm,18.8s						
BUR08	Bucovina Ar. S	105.47	318	Pdif	Pdif	23 53 55.2	+0.4
YKA	Yellowknife Ar	105.86	26	Pdiff	Pdif	23 53 56.5	+0.4
	comp=E,0.8nm,0.9s,baz=290,slow=4.5,SNR=8.2						
YKA				PKiKP	PKiKP	23 58 08.9	+0.6
	comp=E,0.2nm,0.5s,baz=356,slow=0.7,SNR=4.7						
YKA				PKKPbc	PKKPbc	00 09 33.5	-0.6
	comp=E,0.1nm,0.4s,baz=98,slow=3.8,SNR=4.0						
YKA				PKKP	PKKPdf	00 09 43.6	-1.3
	comp=E,0.8nm,0.9s,baz=102,slow=3.1,SNR=9.4						
CRVS	Cervenica-Dubn	107.71	320	ePDIFF	Pdif	23 54 05.6	+1.0
CRVS				e		23 54 24.5	
NVAR	Mina Array Bea	109.10	51	PKiKP	PKiKP	23 58 16.6	+1.3
	comp=E,0.4nm,0.9s,baz=260,slow=5.0,SNR=2.1						
NVAR				PKKPab	PKKPab	00 09 35.0	+0.2
	comp=E,0.7nm,0.7s,baz=116,slow=2.1,SNR=4.9						
KRLC	Kraliky	110.39	321	ePKIKP	PKiKP	23 58 21.0	+3.8
KRLC	Kraliky	110.39	321	ePKP	PKiKP	23 58 21.0	+3.8
KRLC				ex	x	23 58 41.4	
PRU	Pruhonice	111.79	322	epPKP	PKiKP	23 58 38.7	+19
PRU				ePP	PP	23 59 02.1	-0.8
BRG	Berggiesshubel	111.88	323	ex	PKiKP	23 58 21.4	+1.4
BRG				Amp		23 58 23.4	
	comp=Z,2.5nm,1.0s						
BRG				ex	x	23 58 56.7	
BRG				Amp		23 58 57.7	
	comp=Z,13nm,1.4s						
BRG				ex	x	23 59 34.6	
BRG				Amp		23 59 35.5	
	comp=Z,9.6nm,1.2s						
BRG	Berggiesshubel	111.88	323	ex	x	23 58 21.4	
BRG				Amp		23 58 23.4	
	comp=Z,2.5nm,1.0s						
BRG				ex	x	23 58 56.7	
BRG				Amp		23 58 57.7	
	comp=Z,13nm,1.4s						
BRG				ex	x	23 59 34.6	
BRG				Amp		23 59 35.5	
	comp=Z,9.6nm,1.2s						
CLL	Collm	112.30	324	e(sPKiKP)		23 58 49.0	
CLL				e(PKiKP)	PKiKP	23 58 17.0	-3.7
CLL				ePP	PP	23 59 06.0	-0.5
CLL				ePS	PKKPbc	00 08 42.0	-31
CLL				ePPS	PPS	00 09 42.0	
CLL				eSS	SS	00 14 48.0	+7.1
CLL				e		00 17 30.0	
CLL				e		00 18 00.0	
CLL				eSSS	SSS	00 18 54.0	
CLL				e		00 25 36.0	
CLL				Lm	MLR	00 48 00.0	
	comp=Z,200nm,20.3s						
KHC	Kasperske Hory	112.66	321	ePKIKP	PKiKP	23 58 28.6	+7.1
KHC				e		23 58 43.1	
KHC	Kasperske Hory	112.66	321	ePKP	PKiKP	23 58 28.6	+7.1
KHC				ex	x	23 58 43.1	
GERES	GERESS Array B	112.67	321	PKiKP	PKiKP	23 58 21.6	0.0
	comp=Z,0.4nm,0.5s,baz=92,slow=1.5,SNR=5.3						
ABTA	Abfaltersbach	114.08	319	eP	PKPdf	23 58 24.3	-0.1
	comp=Z,0.9nm,0.5s						
WTTA	Wattenberg	114.49	320	iP	PKPdf	23 58 25.1	-0.1
	comp=Z,2.1nm,0.3s						
WATA	Walderalm	114.50	320	iP	PKPdf	23 58 24.2	-1.0
	comp=Z,1.4nm,0.5s						
PDAR	Pinedale Array	114.73	45	PKKPab	PKKPab	00 09 12.6	+2.8
	comp=Z,0.9nm,0.7s,baz=108,slow=5.2,SNR=4.8						
SQTA	Sankt Quirin	114.78	320	eP	PKiKP	23 58 24.9	-0.8
	comp=Z,0.8nm,0.4s						
MOTA	Moosalm	114.80	320	eP	PKiKP	23 58 24.7	-1.1
	comp=Z,0.4nm,0.3s						
RETA	Reutte	114.97	320	iP	PKPdf	23 58 26.1	+0.1
	comp=Z,0.3nm,0.3s						
FETA	Feichten	115.15	320	eP	PKiKP	23 58 26.0	-0.6
	comp=Z,0.4nm,0.3s						
DAVA	Damuels	115.60	320	iP	PKiKP	23 58 26.8	-0.6
	comp=Z,0.7nm,0.2s						
T25A	Trinidad	120.12	50	P	PKiKP	23 58 38.1	+1.5
	baz=287						
ULM	Lac du Bonnet	120.43	33	PKP	PKiKP	23 58 36.6	+0.2
	comp=Z,1.1nm,0.4s,baz=29,slow=2.1,SNR=4.7						
ULM	Lac du Bonnet	120.43	33		PKPdf	23 58 36.4	+0.1
OGNE	Ogallala	120.64	45	P	PKiKP	23 58 39.2	+1.9
	baz=291						
MNTX	Cornudas Mount	120.75	57	P	PKiKP	23 58 39.2	+1.5
	baz=283						
MNTX	Cornudas Mount	120.75	57	PKPdf	PKiKP	23 58 38.6	+0.9
TXAR	Lajitas Array	122.73	59	PKP	PKiKP	23 58 42.9	+1.1
	comp=Z,0.4nm,0.5s,baz=196,slow=2.6,SNR=5.9						
TXAR	Lajitas Array	122.73	59		PKiKP	23 58 42.7	+1.0
JCT	Junction City	125.69	56	PKIKP	PKPdf	23 58 47.1	0.0
JCT	Junction City	125.69	56	P	PKiKP	23 58 48.9	+1.4
	baz=286						
JCT	Junction City	125.69	56		PKPdf	23 58 47.1	0.0
ESDC	Sonseca Array	127.91	317	PKP	PKiKP	23 58 52.5	+0.8
	comp=Z,1.2nm,1.1s,baz=360,slow=3.0,SNR=2.6						
S39A	Bolivar	128.12	46		PKiKP	23 58 52.2	+0.1
PLCA	Paso Flores	129.34	158	PKP	PKiKP	23 58 55.7	+1.1
	comp=Z,0.9nm,0.7s,baz=187,slow=8.1,SNR=1.3						
TOA0	Torodi Ar. Sit	130.37	282	PKPdf	PKiKP	23 58 57.0	-0.2
TORD	Torodi Ar. Bea	130.37	282	PKP	PKiKP	23 58 57.5	+0.3
	comp=Z,4.1nm,0.8s,baz=53,slow=1.8,SNR=12						
TORD				SKPbc	SKPab	00 02 13.1	-1.1
	comp=Z,16nm,1.1s,baz=68,slow=3.1,SNR=9.8						
TORD	Torodi Ar. Bea	130.37	282	PKPdf	PKiKP	23 58 57.0	-0.2
KOWA	Kowa	135.78	285	PKP	PKiKP	23 59 08.2	0.0
	comp=Z,2.3nm,0.7s,baz=59,slow=2.7,SNR=6.9						
KOWA	Kowa	135.78	285	PKPdf	PKPdf	23 59 06.9	+0.4
KIC	Kosan Boka	136.85	273	ePKP1	PKPdf	23 59 08.0	-0.6
	comp=Z,10nm,1.1s						
DBIC	Dimbokro	136.97	274	PKP	PKiKP	23 59 09.9	-0.7
	comp=Z,1.9nm,0.6s,baz=96,slow=5.4,SNR=3.9						
DBIC	Dimbokro	136.97	274	PKIKP	PKiKP	23 59 10.0	-0.7
DBIC	Dimbokro	136.97	274		PKPdf	23 59 09.3	+0.5
LIC	Lamto	137.13	273	ePKP1	PKPdf	23 59 07.3	-1.8
	comp=Z,43nm,1.6s						
TIC	Toumodi	137.13	274	ePKP1	PKPdf	23 59 07.6	-1.5
LCCY	Blossom Villag	146.02	63		PKPab	23 59 26.8	+0.5
NNA	Nana	146.44	122	PKP2	PKPab	23 59 28.3	+0.2
NNA	Nana	146.44	122		PKPab	23 59 28.3	+0.2
CPUP	Villa Florida	146.85	165	PKPbc	PKPab	23 59 28.8	-0.5
	comp=Z,1.0nm,0.4s,baz=199,slow=4.1,SNR=3.7						
PB08	IPOC Station P	146.97	142		PKPab	23 59 30.0	-0.4
GO01	Chusmiza	147.30	141		PKPab	23 59 31.6	-0.2
MNMC	Minye Minye	147.44	140		PKPab	23 59 31.7	-0.5
PB16	IPOC Station P	148.08	139		PKPbc	23 59 32.5	+0.3
BCIP	Isla Barro Col	148.40	82	eP	PKPbc	23 59 32.5	0.0
OTAV	Otavalo	149.25	99	PKP2	PKiKP	23 59 36.3	-0.2
OTAV	Otavalo	149.25	99		PKiKP	23 59 36.2	-0.2
OTAV	Otavalo	149.25	99	eP	PKiKP	23 59 37.1	+0.6
PTAC	Punta Ardita,	150.49	86	eP	PKPdf	23 59 34.2	+1.9
GCUF	Volcan Galeras	150.51	98	eP	PKiKP	23 59 40.3	+1.2
MALC	Bahia Malaga	150.86	92	eP	PKPab	23 59 46.3	+0.3
SOTA	Rioblanco	151.38	96	eP	PKiKP	23 59 44.0	+3.1
PCON	Cinco Dias	151.61	96	eP	PKiKP	23 59 41.7	+0.3
YOTC	Yotoco, Valle	151.84	92	eP	PKPbc	23 59 40.0	-1.1
PLMC	San Jos del P	151.97	90	eP	PKiKP	23 59 42.4	+0.8
DBBC	Dabeiba	152.08	86	eP	PKPab	23 59 55.7	+4.6
MARP	Paez Belalcaza	152.12	95	eP	PKiKP	23 59 42.9	+0.8
CBOC	Ciudad Bolivar	152.28	88	eP	PKiKP	23 59 43.2	+0.8
BETC	Betania	152.60	95	eP	PKPab	00 00 00.4	+7.1
UREC	San Jos de Ur	152.73	84	eP	PKiKP	23 59 43.4	+0.4
HELC	Santa Helena	152.76	88	eP	PKiKP	23 59 43.6	+0.1
ANIL	Santa Ana	152.82	91	eP	PKPab	23 59 56.4	+1.8
RREF	El Recreo	152.90	91	eP	PKiKP	23 59 45.2	+1.0
TOLC	Tolima	152.91	91	eP	PKiKP	23 59 45.2	+1.3
ORTC	Ortega, Tolima	152.93	93	eP	PKPbc	23 59 41.0	-2.4
NORC	Norcasia	153.40	89	eP	PKPbc	23 59 41.0	-3.4
ZARC	Zaragoza, Cauc	153.41	85	eP	PKPbc	23 59 43.4	-0.9
PTBC	PUERTO BERRIO,	153.83	87	eP	PKiKP	23 59 46.2	+0.9
MACC	Macarena, Meta	154.11	97	eP	PKiKP	23 59 46.1	+0.2
SMLC	San Martn de	154.11	82	eP	PKPdf	23 59 40.5	+2.9
SPBC	San Pablo de B	154.20	89	eP	PKPbc	23 59 43.4	-2.7
CHIC	Chingaza	154.49	91	eP	PKiKP	23 59 48.7	+1.4
OCAC	Ocana	154.90	83	eP	PKPbc	23 59 46.0	-1.6
RUSC	La Rusia	155.19	88	eP	PKPdf	23 59 45.4	+5.6
PAMC	Pamplona, Colo	155.56	85	eP	PKPdf	23 59 45.4	+5.1
SDV	Santo Domingo	157.48	81	eP	PKPdf	23 59 44.4	+1.9

IDC 18 00:16:09.3±1.1**, 19°.06N×120°.23E, h0**^{km}**, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.5**/32**, mbtmp3.5**/5 **Error ellipse: s-maj=83.0km s-min=22.5km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	30.84	342	P	P	00 22 27.3	+0.1
	0.3nm,0.8s,baz=144,slow=9.7,SNR=2.2						
WRA	Warramunga Arr	41.16	160	P	P	00 23 55.2	-0.4
	0.7nm,0.9s,baz=343,slow=9.1,SNR=3.3						
MKAR	Makanchi Array	41.55	320	P	P	00 23 58.3	-0.4
	0.5nm,0.9s,baz=108,slow=9.6,SNR=3.2						
ASAR	Alice Springs	44.51	162	P	P	00 24 22.9	+0.1
	0.6nm,0.7s,baz=342,slow=6.6,SNR=11						
YKA	Yellowknife Ar	88.02	22	P	P	00 29 01.3	0.0
	0.4nm,0.7s,baz=317,slow=4.1,SNR=7.4						

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*UPP **18** 00:26:02.5±0.1, 67°.85N×20°.19E, h1^{km}±9^{km}, ML2.3, Explosion*

HEL 18 00:25:46.6±0.1**, 67°.19N×20°.65E, h0**^{km}**, ML1.8, ML2.3**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	207	iP	Pg	00 25 47.7	-0.2
DUNU				iS	Sg	00 25 49.0	+0.1
MASU	Masugnsbyn	0.59	62	iP	Pg	00 25 57.5	-0.3
RATU	Laukkuluspa	0.76	328	P	Pn	00 26 06.9	+2.3
RATU	Laukkuluspa	0.76	328	iP	Pg	00 26 00.1	-1.0
KUA	Kurravaara	0.78	351	P	Pn	00 26 04.7	-0.2
KUA				S	Sg	00 26 06.3	-5.4
SALU	Saltoluokta	0.86	284	P	Sg	00 26 17.3	+3.2
SALU	Saltoluokta	0.86	284	iP	Pg	00 26 02.1	-0.9
ERTU	Ertsjaerv	0.88	136	eP	Pg	00 26 02.0	-1.4
ERTU				eS	Sg	00 26 13.9	-0.8
NIKU	Nikkaluokta	0.93	318	P	Pn	00 26 10.8	+3.9
NIKU	Nikkaluokta	0.93	318	eP	Pg	00 26 03.2	-1.1
PAJU	Pajala	0.98	98	eP	Pg	00 26 03.9	-1.4
LANU	Lannavaara	1.01	30	P	Pn	00 26 15.8	+7.9
LANU	Lannavaara	1.01	30	eP	Pg	00 26 04.5	-1.3
LANU				eSN	Sn	00 26 24.9	+2.1
KOVU	Salmi	1.06	350	P	Pn	00 26 09.4	+0.7
KOVU				S	Sg	00 26 14.6	-6.0
KALU	Kalix	1.72	140	eSN	Sn	00 26 39.9	-0.3
KIF	Kilpisjarvi	1.83	2	eP	Pg	00 26 26.3	+4.7
KIF	Kilpisjarvi	1.83	2	ePG	Pn	00 26 19.9	+0.7
KIF				eS	Sn	00 26 40.6	-2.4
KIF				MSG		00 26 41.8	
	comp=Z,9.7nm,0.2s						
TOF	Tornio	1.84	125	ePN	Pn	00 26 19.3	0.0
TOF				MSG		00 26 41.3	
	comp=Z,3.9nm,0.2s						
TOF				eSN	Sn	00 26 43.4	+0.2
RNF	Rovaniemi	2.19	103	ePB	Pn	00 26 25.1	+0.8
RNF				e		00 26 47.4	
SGF	Sodankyl	2.29	81	ePB	Pn	00 26 26.3	+0.7
	baz=267						
SGF				eSG	Sb	00 26 57.0	-0.6
BURU	Burvik	2.63	173	eP	Pn	00 26 30.5	+0.3
ARA0	ARCESS Array S	2.97	35	eP	Pg	00 26 45.9	+2.5
ARA0	ARCESS Array S	2.97	35	e	Sg	00 27 22.0	+0.2
VRF	Varrio	3.49	77	eP	Pn	00 26 41.9	-0.2

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*MAN **18** 00:27:18.9, 13°.91N×120°.49E, h117^{km}, MS5.0*
MAN INTENSITY II - PUERTO GALERA.
*MOS **18** 00:27:19.0±0.9, 13°.96N×120°.66E, h135^{km}, mb5.3/99, Error ellipse: s-maj=6.6km s-min=3.7km az=113.7*
*IDC **18** 00:27:19.3±0.3, 13°.92N×120°.75E, h125^{km}±2^{km}, mb4.9/54, mb1 4.9/55, mb1mx4.8/63, mbtmp5.3/55, MS3.7/26, Ms1 3.7/26, ms1mx3.5/52, Error ellipse: s-maj=9.2km s-min=7.4km az=79.0*
*BJI **18** 00:27:20.5±0.0, 13°.83N×120°.86E, h168^{km}, mB5.3/57, mb5.4/85*
*DJA **18** 00:27:21.4±0.5, 14°N±3°×12°1E±°, h153^{km}±5^{km}, M5.2/73, mB5.7/54, mb5.5/73, Mw(mB)5.2/54, MwMwp4.9/4, Mwp5.2/4*
*GCMT **18** 00:27:21.2±0.1, 14°.02N±0°.01×120°.67E±0°.01, h129^{km}±1^{km}, MW5.2/140, Moment Tensor Solution. s90,c118; s140,c244; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.09±.13; $M_{\theta\theta}$-2.55±.14; $M_{\phi\phi}$-1.54±.14; $M_{r\theta}$5.66±.10; $M_{\theta\phi}$3.32±.12; $M_{\phi r}$-1.22±.10; Best double couple: $M_0$7.56600×10^{16} NP1:ϕ_s336.00000°, δ26.00000°, λ135.00000°. NP2:ϕ_s108.00000°, δ72.00000°, λ71.00000°. Principal axes: T 7.3760, Plg59.0000°, Azm352.0000°; N 0.3800, Plg18.0000°, Azm114.0000°; P -7.7560, Plg25.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **18** 00:27:21, 14°.06N×120°.77E, h138^{km}, mb5.3*
*NEIC **18** 00:27:22.2±1.4, 13°.93N±0°.06×120°.69E±0°.09, h150^{km}±4^{km}, mb5.3/170, Error ellipse: s-maj=12.3km s-min=8.7km az=100.0*
*NOU **18** 00:27:25.8, 13°.97N×120°.53E, h182^{km}, mb5.1, Mindoro, Philippines*

ISC 18 00:27:21.0±0.3**, 13°.91N**±0°.02×**120°.62E**±0°.03**, h140**^{km}±2^{km}**, h141**^{km}**:pP-P, n1050, σ1^{s}41**/1160**, mb5.3**/285**, 134C-75D, Fault plane solution: NP1:**ϕ_s96.74200°**,** δ81.09586°**,** λ44.38191°. **NP2:**ϕ_s358.12845°**,** δ46.29001°**,** λ167.63562°. **Principal axes:** T Plg36.7314°, Azm327.6502°**;** N Plg44.9169°, Azm105.7293°**;** P Plg22.2823°, Azm219.8451°**; Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.36	59	P	Pn	00 27 37.9	-2.8
	3μm,0.3s,baz=268,slow=1.8,SNR=181						
TGY				S	Sn	00 27 51.5	-4.2
	3μm,0.3s,baz=323,slow=21,SNR=16						
TGY	Tagaytay City	0.36	59⇓	eP	Pn	00 27 38.7	-2.0
TGY				eS	Sn	00 27 52.2	-3.4
LUBP	Lubang	0.40	244	eP	Pn	00 27 36.5	-4.2
LUBP				eS	Sn	00 27 50.9	-4.9
PGP	Puerto Galera	0.52	141⇑	eP	Pn	00 27 38.2	-3.2
PGP				iS	Sn	00 27 53.4	-3.6
LQP	Lukban	0.92	77⇓	iP	Pn	00 27 42.7	-1.8
LQP				iS	Sn	00 28 00.3	-1.8
BOAC	Boac	1.28	110	eP	Pn	00 27 44.9	-2.7
BOAC				eS	Sn	00 28 06.0	-1.6
BUSP	Coron	1.94	192	eP	Pn	00 27 51.8	-3.1
BUSP				eS	Sn	00 28 17.2	-3.7
BALP	Baler	2.04	27	eP	Pn	00 27 54.2	-1.8
BALP				eS	Sn	00 28 21.5	-1.5
OTRP	Odiongan	2.06	138	eP	Pn	00 27 54.6	-1.7
OTRP				eS	Sn	00 28 21.9	-1.5
SMPP	San Manuel, Pa	2.23	2	eP	Pn	00 27 55.8	-2.6
BCP	Baguio City	2.49	360⇑	iP	Pn	00 27 58.8	-3.0
BCP				iS	Sn	00 28 30.6	-2.6
ENPP	El Nido	2.93	203	eP	Pn	00 28 04.5	-2.7
ENPP				eS	Sn	00 28 39.5	-3.3
CUYO	Cuyo Island	3.07	173	eP	Pn	00 28 06.9	-2.1
CAUP	Cauayan	3.23	21	eP	Pn	00 28 09.9	-1.1
CVP	Callao Caves	3.94	17⇑	eP	Pn	00 28 19.6	-0.8
CNOP	Candoni, Negro	4.52	154	eP	Pn	00 28 27.6	-0.3
CNOP				eS	Sn	00 29 21.6	+1.6
LLP	Lapu-Lapu	4.85	137⇓	iP	Pn	00 28 34.6	+2.3
LLP				eS	Sn	00 29 31.7	+3.9
BATP	Bataraza	5.78	209	eP	Pn	00 28 43.4	-1.4
BATP				eS	Sn	00 29 45.7	-4.5
CGP	Cagayan de Oro	6.74	143⇓	eP	Pn	00 29 00.7	+3.1
KCP	Kidapawan	8.15	147⇑	iP	Pn	00 29 19.1	+2.5
DAV	Davao City (W)	8.37	144	P	Pn	00 29 23.5	+4.1
	27nm,0.3s,baz=28,slow=3.9,SNR=8.2						
TWG	Pinlang	8.87	3	Pn	Pn	00 29 24.6	-1.5
MYLDM	Lahad Datu	8.92	194	Pn	Pn	00 29 29.6	+2.7
KKM	Kota Kinabalu	8.94	209	Pn	Pn	00 29 28.3	+1.2
YULB	Yu-li	9.45	4	Pn	Pn	00 29 33.8	-0.1
SSLB	Suanglung	9.83	2	Pn	Pn	00 29 39.2	+0.2
SPMM	Sapulut	10.02	204	P	Pn	00 29 45.0	+3.4
NACB	Ninganchiao	10.25	5	Pn	Pn	00 29 43.5	-1.1
KNMB	Chin-men Tao	10.71	349	Pn	Pn	00 29 50.4	-0.2
YOJ	Yonaguni jima	10.73	12	P	Pn	00 29 50.3	-0.7
YOJ	Yonaguni jima	10.73	12	Pn	Pn	00 29 50.3	-0.7
QIZ	Qiongzhong	11.52	298	P	Pn	00 30 02.3	+1.0
QIZ				S	Sn	00 32 10.8	+2.3
QIZ				LR	LR		
	comp=N,250nm,3.7s						
QIZ				LR	LR		
	comp=E,330nm,10.7s						
QIZ				LR	LR		
	comp=Z,460nm,11.5s						
TOLI2	Tolitoli	12.72	179	Pn	Pn	00 30 18.4	+1.4
GTOI	Gorontalo	13.40	170	P	Pn	00 30 26.0	+0.2
	1μm152nm,1.2s						
MRSI	Marisa	13.41	174	P	Pn	00 30 28.1	+2.2
	3μm220nm,1.2s						
MPSI	Mapaga	13.51	183	P	P	00 30 29.7	-1.7
	3μm332nm,0.8s						
KMSI	Cibinong	13.66	166	P	P	00 30 31.3	-1.9
	175nm,0.8s						
SBUM	Sibu	14.09	217	Pn	P	00 30 36.8	-1.1
TNTI	Ternate	14.67	152	Pn	Pn	00 30 39.7	-2.2
TNTI	Ternate	14.67	152	P	Pn	00 30 40.1	-1.7
UBPT	Khong Chiam	14.72	277	P	P	00 30 49.4	+4.5
	19nm,1.1s						
UBPT	Khong Chiam	14.72	277		P	00 30 45.2	+0.3
APSI	Ampana	14.76	176	P	P	00 30 46.0	+0.6
	2μm206nm,1.0s						
LUWI	Luwuk	15.01	172		P	00 30 48.1	0.0
LUWI	Luwuk	15.01	172	P	P	00 30 49.7	+1.6
	6μm511nm,1.0s						
JMZ	Minamidaito 2	15.47	38		Pn	00 30 52.1	+0.3
BKB	Balikpapan	15.52	194		Pn	00 30 52.1	-0.3
BKB	Balikpapan	15.52	194	P	P	00 30 54.5	+0.8
	3μm4μm470nm,1.0s						
MTKI	Muara Teweh, K	15.81	201	P	P	00 30 58.6	+1.6
	1μm58nm,0.9s						
KSM	Kuching	16.02	220	P	P	00 31 00.3	+1.0
STKI	Sintang	16.47	214	P	P	00 31 07.5	+3.3
	66nm,0.6s						
SANI	Sanana	16.73	161	P	P	00 31 05.0	-2.1
	55nm,0.8s						
TTSI	Tana Toraja	16.86	183	P	Pn	00 31 11.1	+2.2
	2μm145nm,1.0s						
SSE	Sheshan	17.11	2	P	Pn	00 31 12.4	+0.7
SSE				S	S	00 34 19.9	-2.5
SSE				pmax	pmax		
	comp=Z,29nm,1.4s						
SSE				pmax	pmax		

	comp=Z,320nm,6.5s						
SSE				LR	LR		
	comp=E,230nm,14.1s						
SSE				LR	LR		
	comp=Z,160nm,21.2s						
SSE	Sheshan	17.11	2		Pn	00 31 11.6	-0.2
NONG	Nongkai	17.29	286	P	Pn	00 31 19.8	+5.7
	21µm32nm,2.0s						
WHN	Wuhan	17.53	342	⇓P	Pn	00 31 17.8	+1.0
WHN				S	S	00 34 31.8	+0.7
WHN				pmax	pmax		
	comp=Z,160nm,1.0s						
WHN				pmax	pmax		
	comp=Z,3µm,3.5s						
WHN				LR	LR		
	comp=N,370nm,5.5s						
WHN				LR	LR		
	comp=E,960nm,7.2s						
WHN				LR	LR		
	comp=Z,840nm,15.3s						
SLVN	Son La	17.54	297		Pn	00 31 18.1	+0.9
KBKI	Kotabaru	17.66	195	P	Pn	00 31 19.8	+1.3
	2µm285nm,0.7s						
SPSI	Sidrap Palu	17.78	183	P	Pn	00 31 21.3	+1.4
	2µm212nm,0.9s						
SRAK	Srakaew	18.03	273	P	P	00 31 19.8	-1.6
	184nm,0.9s						
GYA	Guiyang	18.07	316	⇑P	Pn	00 31 23.9	+0.5
GYA				S	S	00 34 43.5	+1.5
GYA				pmax	pmax		
	comp=Z,87nm,1.3s						
GYA				LR	LR		
	comp=Z,380nm,12.5s						
SIJI	Sorong	18.08	143	P	P	00 31 20.5	-1.6
	1.6nm,0.3s,baz=308,slow=18,SNR=2.4						
CHAI	Chaiyaphum	18.11	279	P	Pn	00 31 24.0	+0.2
	1µm120nm,0.8s						
NJ2	Nanjing	18.13	355	⇑P	Pn	00 31 23.8	-0.1
NJ2				sP	sP	00 32 07.1	+2.3
NJ2				S	S	00 34 35.0	-7.8
NJ2				pmax	pmax		
	comp=Z,44nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.9s						
BBKI	Banjar Baru	18.19	199	P	Pn	00 31 26.0	+1.3
	4µm271nm,0.9s						
BNSI	Bone	18.20	182	P	Pn	00 31 26.4	+1.5
	2µm228nm,1.1s						
NLAI	Namlea	18.21	159	P	P	00 31 24.0	+0.6
	51nm,0.9s						
PBKI	Pangkalan Bun	18.74	209	P	Pn	00 31 31.4	+0.2
	8µm456nm,1.0s						
KAPI	Kappang	18.82	183	P	Pn	00 31 32.1	-0.1
	20nm,0.3s,baz=4.0,slow=5.8,SNR=44						
KAPI				LR	LR	00 39 25.7	
	comp=Z,253nm,18.5s,baz=350,slow=39						
KAPI	Kappang	18.82	183	P	Pn	00 31 31.8	-0.4
KAPI				pmax	pmax		
	comp=Z,137nm,0.8s						
KAPI	Kappang	18.82	183	P	Pn	00 31 31.8	-0.4
KAPI				IAmb	IAmb	00 31 34.5	
	comp=Z,137nm,0.8s						
KAPI	Kappang	18.82	183	P	Pn	00 31 31.7	-0.5
MSAI	Masohi	19.03	154	P	Pn	00 31 33.6	-1.0
	comp=Z,27nm,0.8s						
BKSI	Bulukumba	19.11	181	P	Pn	00 31 34.7	-0.9
	comp=Z,2µmcomp=Z,185nm,0.7s						
ENH	Enshi	19.25	330	P	P	00 31 34.9	+0.2
ENH				IAmb	IAmb	00 31 44.4	
	comp=Z,126nm,1.0s						
UTTA	Uttaradit	19.67	284	P	Pn	00 31 42.5	+0.4
	comp=Z,354nmcomp=Z,41nm,0.7s						
JSU	Suzuyama	19.70	26	P	P	00 31 39.4	-0.1
JSU				IAmb	IAmb	00 31 44.2	
	comp=Z,133nm,0.9s						
NANT	Nan	19.71	287	P	Pn	00 31 42.1	-0.6
	comp=Z,19µmcomp=Z,1µm,0.8s						
PHIT	Phitsanulok	19.73	282	P	Pn	00 31 43.4	+0.6
	comp=Z,194nm,1.0s						
BSSI	Bau Bau, Buton	19.92	180	P	P	00 31 42.9	+0.9
	comp=Z,2µmcomp=Z,180nm,0.6s						
KMI	Kunming	20.18	306	⇑P	Pn	00 31 47.5	-0.8
KMI				pP	pwP	00 32 14.8	+1.4
KMI				sP	sP	00 32 35.1	+8.5
KMI				S	S	00 35 20.1	-3.9
KMI				sS	sS	00 36 05.8	+0.1
KMI				pmax	pmax		
	comp=Z,70nm,1.5s						
KMI				pmax	pmax		
	comp=Z,270nm,3.5s						
KMI				LR	LR		
	comp=Z,170nm,6.9s						
KMI				LR	LR		
	comp=Z,130nm,4.0s						
KMI				LR	LR		
	comp=Z,180nm,12.2s						
KMI	Kunming	20.18	306	P	Pn	00 31 46.8	-1.5
KMI				pmax	pmax		
	comp=Z,98nm,1.2s						
KMI	Kunming	20.18	306	P	Pn	00 31 46.8	-1.5
KMI				IAmb	IAmb	00 31 49.7	
	comp=Z,98nm,1.2s						
FAKI	Fak Fak	20.32	145	P	P	00 31 45.8	-0.4
FAKI	Fak Fak	20.32	145	P	P	00 31 46.2	0.0
MYKOM	Kota Tinggi	20.49	235	P	P	00 31 49.0	+0.9
MYKOM				IAmb	IAmb	00 31 56.5	
	comp=Z,142nm,1.3s						
BNDI	Bandanaira	20.50	153	P	P	00 31 49.2	+1.0
	comp=Z,200nm,1.2s						
SUKH	Sukhothai	20.51	283	P	Pn	00 31 50.7	-1.3
	comp=Z,2µmcomp=Z,202nm,1.2s						
UTHA	Uthaitani	20.54	277	P	Pn	00 31 52.5	+0.1
	comp=Z,395nmcomp=Z,55nm,0.8s						
PAYA	Payao	20.59	288	P	P	00 31 51.1	+1.8
	comp=Z,18µmcomp=Z,2µm,0.9s						
LAMP	Lampang	20.66	286	P	Pn	00 31 52.0	-1.8
	comp=Z,2µmcomp=Z,186nm,0.7s						
TPI	Tanjungpandan	20.96	219	P	Pn	00 31 57.1	-0.3
	comp=Z,122nm,1.2s						
CM35	Chiang Mai Arr	21.13	286	P	P	00 31 56.0	+1.0
CM36	Chiang Mai Arr	21.16	285	P	P	00 31 56.0	+0.7
CM34	Chiang Mai Arr	21.16	286	P	P	00 31 56.0	+0.7
CM09	Chiang Mai Arr	21.25	285	P	P	00 31 58.4	+2.2
	comp=Z,950nmcomp=Z,111nm,0.9s						
CM04	Chiang Mai Arr	21.25	285	P	P	00 31 58.4	+2.1
	comp=Z,791nmcomp=Z,96nm,1.0s						
CM01	Chiang Mai Arr	21.27	285	P	P	00 31 58.0	+1.5
	comp=Z,783nmcomp=Z,89nm,1.1s						
CM05	Chiang Mai Arr	21.28	285	P	P	00 31 58.0	+1.4
	comp=Z,565nmcomp=Z,67nm,0.9s						
CM02	Chiang Mai Arr	21.29	285	P	P	00 31 58.0	+1.4
	comp=Z,919nmcomp=Z,112nm,0.9s						
JNU	Nakatsue	21.29	24	P	P	00 31 55.6	-0.9
	comp=Z,26nm,0.9s,baz=164,slow=5.9,SNR=11						
JNU	Nakatsue	21.29	24	P	P	00 31 55.9	-0.6
CM31	Chiang Mai Arr	21.29	285	P	P	00 31 58.9	+2.2
	comp=Z,28µmcomp=Z,3µm,0.8s						
CM31	Chiang Mai Arr	21.29	285	P	P	00 31 58.4	+1.7
CM31				IAmb	IAmb	00 32 00.5	
	comp=Z,98nm,0.8s						
CMAR	Chiang Mai Arr	21.29	285	P	P	00 31 58.5	+1.8
	comp=Z,62nm,0.8s,baz=98,slow=7.4,SNR=181						
CMAR				S	S	00 35 48.4	+3.2
	comp=Z,1.4nm,0.8s,baz=87,slow=18,SNR=5.3						
CMAR				PcP	PcP	00 35 57.2	+1.4
	comp=Z,2.2nm,0.6s,baz=71,slow=0.2,SNR=5.8						
CMAR				ScP	ScP	00 39 19.8	-0.1
	comp=Z,2.0nm,0.5s,baz=79,slow=1.2,SNR=12						
CMAR	Chiang Mai Arr	21.29	285	P	P	00 31 57.9	+1.2
CM15	Chiang Mai Arr	21.31	285	P	P	00 31 59.0	+2.1
	comp=Z,976nmcomp=Z,121nm,0.9s						
CM13	Chiang Mai Arr	21.32	285	P	P	00 31 59.0	+2.0
	comp=Z,799nmcomp=Z,102nm,1.0s						
CMMT	Chiang Mai	21.35	286	P	P	00 31 58.5	+1.2
	comp=Z,459nmcomp=Z,45nm,0.9s						
CM33	Chiang Mai Arr	21.35	286	P	P	00 31 58.0	+0.7
CHTO	Chiang Mai	21.35	286	P	P	00 31 58.5	+1.2
CHTO				pmax	pmax		
	comp=Z,64nm,0.9s						
CHTO	Chiang Mai	21.35	286	P	P	00 31 58.5	+1.2
CHTO	Chiang Mai	21.35	286	P	P	00 31 58.6	+1.2
TRTT	Trang	21.41	256	P	P	00 32 00.8	+2.9
	comp=Z,34nm,0.9s						
CM32	Chiang Mai Arr	21.41	286	P	P	00 32 00.0	+2.0
KULM	Kulim	21.45	248	P	P	00 31 58.9	+0.5
KULM	Kulim	21.45	248	P	P	00 32 00.0	+1.6
IPM	Ipoh	21.47	246	P	P	00 31 58.6	-0.1
IPM	Ipoh	21.47	246	P	P	00 31 59.0	+0.4
KMMI	Kalianget	21.85	198	P	P	00 32 05.7	+3.2
	comp=Z,6µmcomp=Z,517nm,0.7s						
JTU	Tsushima	22.01	20	P	P	00 32 04.2	+0.1
JTU				IAmb	IAmb	00 32 05.5	
	comp=Z,171nm,1.0s						
MHMT	Maesarieng	22.20	284	P	P	00 32 07.9	+1.7
	comp=Z,2µmcomp=Z,224nm,1.2s						
GRJI	Gresik	22.21	202	P	P	00 32 08.8	+2.6
	comp=Z,3µmcomp=Z,391nm,0.9s						
TIA	Tai'an	22.43	353	P	P	00 32 07.5	-0.7
TIA				S	S	00 36 04.6	+0.4
TIA				pmax	pmax		
	comp=Z,130nm,1.1s						
TIA				pmax	pmax		
	comp=Z,590nm,6.2s						
MMRI	Maumere	22.46	176	P	P	00 32 08.7	0.0
MMRI	Maumere	22.46	176	P	P	00 32 08.9	+0.2
	comp=Z,4µmcomp=Z,457nm,0.6s						
ABJI	Asem Bagus	22.48	197	P	P	00 32 11.3	+2.5
	comp=Z,5µmcomp=Z,379nm,1.0s						
SRBI	Singaraja	22.50	194	P	P	00 32 11.4	+2.3
	comp=Z,11µmcomp=Z,1µm,0.7s						
EDFI	Ende, Flores	22.54	177	P	P	00 32 09.8	+0.2
	comp=Z,5µmcomp=Z,506nm,0.7s						
XAN	Xi'an	22.67	334	P	P	00 32 10.1	-0.5
XAN				pP	pP	00 32 40.9	+4.2
XAN				PP	PnPn	00 32 45.0	+1.4
XAN				S	S	00 36 10.3	+2.0
XAN				SS	SnSn	00 37 02.1	+6.5
XAN				pmax	pmax		
	comp=Z,180nm,0.8s						
XAN				pmax	pmax		
	comp=Z,890nm,5.4s						
XAN				LR	LR		
	comp=Z,780nm,16.7s						
XAN				LR	LR		
	comp=Z,870nm,16.7s						
XAN				LR	LR		
	comp=Z,500nm,20.6s						
PLAI	Plampang	22.77	187	P	P	00 32 13.3	+1.7
	comp=Z,1µmcomp=Z,11µmcomp=Z,1µm,0.7s						
TWSI	Taliwang, Sumb	22.81	190	P	P	00 32 13.4	+1.4
	comp=Z,1µmcomp=Z,110nm,0.9s						
JMBI	JAMBI	22.84	229	P	P	00 32 15.8	+3.5
	comp=Z,8µmcomp=Z,717nm,1.3s						
CD2	Chengdu	22.95	320	P	P	00 32 13.4	+0.1
CD2				pP	pwP	00 32 43.3	+0.9
CD2				sS	sS	00 37 06.8	+6.1
CD2				pmax	pmax		
	comp=Z,560nm,0.8s						
CD2				pmax	pmax		
	comp=Z,810nm,4.3s						
CD2				LR	LR		
	comp=Z,630nm,10.0s						
CD2				LR	LR		
	comp=Z,600nm,11.6s						
CD2				LR	LR		
	comp=Z,570nm,11.4s						
PMBI	Palembang	22.95	224	P	P	00 32 15.2	+1.9
PMBI	Palembang	22.95	224	P	P	00 32 15.8	+2.4
	comp=Z,70µmcomp=Z,331nm,0.5s						
DNP	Denpasar	23.07	194	P	P	00 32 17.4	+2.9
	comp=Z,25µmcomp=Z,841nm,0.9s						
JMN	Monobe	23.12	29	P	P	00 32 14.7	0.0
JAGI	Jajag, Banyuwa	23.14	196	P	P	00 32 16.6	+1.4
JAGI	Jajag, Banyuwa	23.14	196	P	P	00 32 16.8	+1.7
	comp=Z,4µmcomp=Z,381nm,0.8s						
TJN	Taejon	23.18	14	*de*P	P	00 32 14.5	-0.7
WSI	Waingapu	23.43	181	P	P	00 32 16.9	-0.8
	comp=Z,18µmcomp=Z,1µm,0.8s						
PWJI	Pagerwojo	23.48	202	P	P	00 32 20.1	+1.9
	comp=Z,3µmcomp=Z,368nm,1.0s						
GUMO	Guam	23.56	88	P	P	00 32 18.6	-0.3
	comp=Z,68nm,0.7s,baz=208,slow=8.1,SNR=4.7						
GUMO				LR	LR	00 40 04.9	
	comp=Z,140nm,21.9s,baz=254,slow=33						
GUMO	Guam	23.56	88	P	P	00 32 19.8	+0.8
GUMO				pmax	pmax		
	comp=Z,325nm,1.4s						
GUMO	Guam	23.56	88	P	P	00 32 19.8	+0.8
BKNI	Bangkinang	23.62	237	P	P	00 32 20.4	+0.9
BKNI	Bangkinang	23.62	237	P	P	00 32 20.8	+1.3
	comp=Z,12µmcomp=Z,290nm,0.9s						
SOEI	Soe	23.79	171	P	P	00 32 20.4	-0.8
SOEI				IAmb	IAmb	00 32 32.5	
	comp=Z,170nm,0.9s						
SOEI	Soe	23.79	171	P	P	00 32 21.1	0.0
	comp=Z,2µmcomp=Z,220nm,0.9s						
JHS	Saijyo	23.84	26	P	P	00 32 21.4	+0.1
JHS				IAmb	IAmb	00 32 24.6	
	comp=Z,130nm,1.2s						
UGM	Wanagama	23.88	205	P	P	00 32 23.4	+1.5
SMPI	Sarmi	23.90	130	P	P	00 32 22.4	+0.3
	comp=Z,72nm,1.2s						
BASI	Baing, Sumba	23.97	180	P	P	00 32 22.1	-0.6
	comp=Z,4µmcomp=Z,558nm,0.9s						
JCJ	Chichijima	24.04	54	P	P	00 32 22.2	-1.0
	comp=Z,114nm,0.4s,baz=275,slow=8.5,SNR=5.3						
JCJ				LR	LR	00 41 01.7	
	comp=Z,175nm,21.2s,baz=282,slow=34						
JCJ	Chichijima	24.04	54	P	P	00 32 22.0	-1.2
SDSI	Sungai Dareh	24.06	234	P	P	00 32 24.6	+1.1
	comp=Z,204nm,0.6s						
INCN	Inchon	24.08	12	P	P	00 32 23.9	+0.4
INCN				pmax	pmax		
	comp=Z,45nm,0.8s						
INCN	Inchon	24.08	12	P	P	00 32 23.9	+0.4
INCN	Inchon	24.08	12	P	P	00 32 23.6	+0.1
KPJI	Karang Pucung	24.08	209	P	P	00 32 26.5	+2.8
	comp=Z,4µmcomp=Z,143nm,0.6s						
TSI	Tuntungan	24.10	247	P	P	00 32 25.7	+1.9
	comp=Z,3µmcomp=Z,296nm,0.9s						
PSI	Prapat	24.10	245	P	P	00 32 25.2	+1.2
	comp=Z,106nm,0.8s,baz=0.3,slow=3.9,SNR=59						
BATI	Baumata	24.15	173	P	P	00 32 24.0	-0.3
	comp=Z,439nm,0.5s,baz=358,slow=1.8,SNR=121						
BATI	Baumata	24.15	173	P	P	00 32 24.2	-0.1
	comp=Z,3µmcomp=Z,394nm,0.7s						
KLSI		24.29	222	P	P	00 32 27.6	+2.0
	comp=Z,2µmcomp=Z,164nm,0.8s						
LEM	Lembang	24.31	213	P	P	00 32 28.1	+2.2
	comp=Z,74nm,0.7s,baz=70,slow=6.3,SNR=14						
LEM	Lembang	24.31	213	P	P	00 32 29.1	+3.2
	comp=Z,79nm,1.2s						
KSAR	Wonju Array Be	24.31	14	P	P	00 32 24.8	-0.7
KSAR	Wonju Array Be	24.31	14	P	P	00 32 24.8	-0.7
KSRS	Korea Array	24.33	14	P	P	00 32 24.4	-1.3
	comp=Z,9.5nm,0.5s,baz=198,slow=9.9,SNR=22						
KS19	Wonju Array Si	24.37	14	P	P	00 32 25.6	-0.5
LHSI	Lahat	24.46	225	P	P	00 32 29.4	+2.3
	comp=Z,6µmcomp=Z,615nm,0.8s						
BLSI	Bandar Lampung	24.49	220	P	P	00 32 29.4	+2.0
	comp=Z,2µmcomp=Z,228nm,1.1s						
DBJI	Dramaga	24.55	215	P	P	00 32 30.4	+2.4
	comp=Z,95nm,1.0s						
MNSI	Mandailing Nat	24.56	240	P	P	00 32 28.8	+0.8
	comp=Z,2µmcomp=Z,208nm,0.9s						
CMJI	Cimerak	24.71	210	P	P	00 32 30.7	+1.4
	comp=Z,181nm,0.8s						
TIY	Taiyuan	24.80	344	*e*P	P	00 32 30.3	+0.2
TIY				pP	pP	00 33 02.1	+2.6
TIY				pmax	pmax		
	comp=Z,90nm,0.7s						
TIY				LR	LR		
	comp=Z,210nm,7.2s						
TIY				LR	LR		
	comp=Z,220nm,4.4s						
TIY				LR	LR		
	comp=Z,290nm,7.5s						
PDSI	Padang	24.81	235	P	P	00 32 31.1	+0.7
	comp=Z,2µmcomp=Z,106nm,0.6s						
CISI	Cisompet, Garu	24.82	212	P	P	00 32 30.8	+0.4
CISI	Cisompet, Garu	24.82	212	P	P	00 32 31.2	+0.7
	comp=Z,4µmcomp=Z,314nm,1.1s						
LHMI	Lhok Sumawe	24.86	252	P	P	00 32 31.8	+1.1
LHMI				IAmb	IAmb	00 32 35.5	
	comp=Z,97nm,0.7s						
MASI	Maura Aman, Be	24.88	228	P	P	00 32 33.5	+2.5
	comp=Z,6µmcomp=Z,697nm,1.0s						
DL2	Dalian	24.91	2	P	P	00 32 30.8	-0.2
DL2				pP	sP	00 33 09.1	-7.7
DL2				*e*S	S	00 36 42.4	-1.5
DL2				pmax	pmax		
	comp=Z,140nm,0.6s						
DL2				pmax	pmax		
	comp=Z,480nm,5.2s						
LWLI	Liwa	24.97	222	P	P	00 32 33.9	+2.0
	comp=Z,8µmcomp=Z,384nm,0.9s						
KSI	Kapahiang	24.98	227	P	P	00 32 34.0	+2.1
	comp=Z,204nm,0.7s						
KASI	Kota Agung	25.07	221	P	P	00 32 33.7	+1.0
	comp=Z,2µmcomp=Z,133nm,0.8s						
JWT	Wachi	25.11	29	P	P	00 32 32.8	0.0
JWT				IAmb	IAmb	00 32 34.0	
	comp=Z,99nm,0.9s						
CGJI	Cibinong	25.20	217	P	P	00 32 33.8	0.0
	comp=Z,89nm,1.1s						
MNAI	Manna	25.23	225	P	P	00 32 35.1	+0.9
MNAI	Manna	25.23	225	P	P	00 32 35.5	+1.4
	comp=Z,420nm,1.2s						
TPTI		25.44	248	P	P	00 32 35.5	-0.6
	comp=Z,22nm,0.8s						
JHJ	Hachijo jima 2	25.89	39	LR	LR	00 42 50.2	
	comp=Z,503nm,18.0s,baz=52,slow=36						
INU	Inuyama	25.96	32	P	P	00 32 39.5	-1.0
INU				IAmb	IAmb	00 32 43.1	
	comp=Z,64nm,1.1s						
GSI	Gunungsitoli	26.00	243	P	P	00 32 41.0	-0.1
GSI				IAmb	IAmb	00 32 42.3	
	comp=Z,112nm,0.9s						
GSI	Gunungsitoli	26.00	243	P	P	00 32 41.1	-0.1
	comp=Z,139nm,0.9s						
BJT	Baijiatuau	26.30	352	P	P	00 32 43.8	+0.3
BJT				pmax	pmax		
	comp=Z,274nm,1.6s						
BJT	Baijiatuau	26.30	352	P	P	00 32 43.8	+0.3
BJI	Beijing	26.32	352	P	P	00 32 43.8	+0.2
BJI				S	S	00 37 06.3	+0.2
BJI				pmax	pmax		
	comp=Z,78nm,1.2s						
JGF	Kuroka	26.33	32	P	P	00 32 43.4	-0.5
JGF				IAmb	IAmb	00 32 44.3	
	comp=Z,51nm,1.0s						
LZH	Lanzhou	26.72	329	⇑P	P	00 32 48.8	+1.2
LZH				pP	pP	00 33 23.4	+6.4
LZH				PP	PnPn	00 33 43.3	+5.7
LZH				sS	sS	00 38 11.8	+6.5
LZH				SS	SnSn	00 38 39.4	+5.6
LZH				pmax	pmax		
	comp=Z,170nm,1.3s						
LZH				pmax	pmax		
	comp=Z,580nm,4.5s						
MOKO	MOKOCHONG	27.38	301	*e*P	P	00 32 53.4	-0.1
MOKO				IAmb	IAmb	00 32 55.6	
	comp=Z,76nm,0.9s						
MAJO	Matsushiro	27.49	32	P	P	00 32 53.7	-0.6
MAJO				pmax	pmax		
	comp=Z,46nm,1.4s						
MAJO	Matsushiro	27.49	32	P	P	00 32 53.7	-0.6
MAT	Matsushiro	27.49	32	P	P	00 32 51.8	-2.5
MAT				*e*S	S	00 37 26.8	+2.0
MJAR	Matsushiro Arr	27.49	32	P	P	00 32 52.5	-1.8
	comp=Z,3.9nm,0.6s,baz=211,slow=8.1,SNR=9.2						
MJAR				PcP	PcP	00 36 09.3	+0.3
	comp=Z,5.0nm,0.8s,baz=175,slow=2.6,SNR=6.2						
MJAR				LR	LR	00 41 40.3	
	comp=Z,102nm,21.4s,baz=205,slow=31						
MJAR	Matsushiro Arr	27.49	32	P	P	00 32 53.0	-1.3
MJAR						00 36 08.7	
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	Matsushiro Arr	27.49	32	P	P	00 32 53.0	-1.3
MJAR				PcP	PcP	00 36 08.7	-0.4
KOHI	KOHIMA	27.50	299	*e*P	P	00 32 54.0	-0.6
KOHI				IAmb	IAmb	00 32 56.0	
	comp=Z,100nm,1.2s						
SAIH	SAIHA	27.56	292	*e*P	P	00 32 56.0	+0.9
SAIH				IAmb	IAmb	00 32 59.5	
	comp=Z,127nm,1.0s						
HHC	Hu-ho-hao-te	27.98	345	*e*P	P	00 32 59.3	+0.7
HHC				S	S	00 37 26.6	-5.9
HHC				sS	sS	00 38 27.8	+2.8
HHC				SS	SnSn	00 39 09.5	+5.4
HHC				pmax	pmax		
	comp=Z,83nm,1.1s						
HHC				pmax	pmax		
	comp=Z,240nm,5.5s						
BTO	Baotou	28.16	343	*e*P	P	00 33 00.8	+0.5
JYT	Yasato	28.32	35	P	P	00 33 00.7	-0.8
JYT				IAmb	IAmb	00 33 01.1	
	comp=Z,41nm,0.5s						
ZIRO	ZIRO	28.38	303	*e*P	P	00 33 02.8	+0.3
ZIRO				IAmb	IAmb	00 33 03.5	
	comp=Z,30nm,0.7s						
MTN	Manton Dam	28.55	158	P	P	00 33 02.7	-1.1
	baz=29,SNR=14						
TEZP	TEZPUR	28.92	300	*e*P	P	00 33 07.2	+0.2
TEZP				IAmb	IAmb	00 33 07.8	
	comp=Z,72nm,1.0s						
KDU	Kakadu	28.92	156	P	P	00 33 05.6	-1.5
	baz=29,SNR=11						
SHL	Shillong	29.35	298	P	P	00 33 11.7	+0.6
SHL				pmax	pmax		
	comp=Z,266nm,0.9s						
SHL	Shillong	29.35	298	*e*P	P	00 33 11.4	+0.3
SHL				IAmb	IAmb	00 33 13.1	
	comp=Z,184nm,1.0s						
SHL	Shillong	29.35	298	P	P	00 33 11.7	+0.6
SHL	Shillong	29.35	298	P	P	00 33 11.6	+0.5
	SNR=45						
GUWA	GUWAHATI	29.71	299	*e*P	P	00 33 13.9	-0.1
GUWA				IAmb	IAmb	00 33 14.8	
	comp=Z,102nm,1.1s						
CN2	Changchun	30.07	7	*e*P	P	00 33 15.4	-1.6
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA	Gaotai	31.32	328	⇑P	P	00 33 28.6	+0.4
GTA				pP	sP	00 34 06.6	-7.5
GTA				sP	PP	00 34 20.3	-21
GTA				PcP	PcP	00 36 18.0	-1.0
GTA				pmax	pmax		
	comp=Z,120nm,1.2s						
GTA				pmax	pmax		
	comp=Z,380nm,6.2s						
GTA				LR	LR		
	comp=Z,550nm,17.1s						
GTA				LR	LR		
	comp=Z,400nm,17.1s						
GTA				LR	LR		
	comp=Z,430nm,17.8s						
LSA	Lhasa	31.42	305	*i* P	P	00 33 31.0	+1.4
	SNR=20						
LSA	Lhasa	31.42	305	P	P	00 33 31.5	+1.9
LSA				pmax	pmax		
	comp=Z,87nm,0.9s						
LSA	Lhasa	31.42	305	P	P	00 33 31.5	+1.9
LSA				IAmb	IAmb	00 33 32.5	
	comp=Z,87nm,0.9s						
MDJ	Mudanjiang	31.55	12	P	P	00 33 29.9	0.0
MDJ				pmax	pmax		
	comp=Z,43nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.9s						
MDJ	Mudanjiang	31.55	12	P	P	00 33 30.0	0.0
MDJ				IAmb	IAmb	00 33 30.9	
	comp=Z,28nm,0.7s						
USA0B	Ussuriysk Arra	31.71	16	*d i*P	P	00 33 31.9	+0.5
USA0B	Ussuriysk Arra	31.71	16	P	P	00 33 31.5	+0.1
USA0B				IAmb	IAmb	00 33 32.6	
	comp=Z,26nm,0.8s						
USRK	Ussuriysk Ar.	31.71	16	P	P	00 33 31.6	+0.2
	comp=Z,20nm,0.6s,baz=201,slow=8.3,SNR=66						
USRK				PcP	PcP	00 36 19.0	-0.7
	comp=Z,1.5nm,0.5s,baz=231,slow=7.2,SNR=5.5						
USRK				LR	LR	00 45 59.0	
	comp=Z,162nm,20.4s,baz=194,slow=35						
FITZ	Fitzroy Crossi	32.19	171	P	P	00 33 34.9	-0.9
	baz=32,SNR=20						
FITZ	Fitzroy Crossi	32.19	171	P	P	00 33 34.7	-1.1
	comp=Z,6.6nm,0.6s,baz=3.0,slow=11,SNR=3.5						
TEY	Ternei	33.87	21	⇑*i*P	P	00 33 49.1	-1.0
TEY				pmax	pmax		
	comp=N,20nm,1.3s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,70nm,0.7s						
BOK	Bokaro	34.22	292	*e*P	P	00 33 54.8	+1.3
BOK				IAmb	IAmb	00 33 56.2	
	comp=Z,50nm,1.0s						

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MBWA  Marble Bar        34.86 181    P      P       00 33 58.4 -0.6
PMG   Port Moresby      35.08 130    P      P       00 34 00.1 -0.8
PMG                                  pmax   pmax
      comp=Z,26nm,1.1s
PMG   Port Moresby      35.08 130    P      P       00 34 00.1 -0.8
HIA   Hailar            35.26 359    P      P       00 34 01.1 -1.0
HIA                                  pmax   pmax
      comp=Z,16nm,0.7s
HIA   Hailar            35.26 359    P      P       00 34 01.1 -1.0
ASAJ  Asahikawa         35.48  28    P      P       00 34 04.3 +0.2
      comp=Z,15nm,0.6s,baz=230,slow=8.9,SNR=7.5
ASAJ                                 PcP    PcP     00 36 30.4  0.0
      comp=Z,7.2nm,0.7s,baz=157,slow=5.4,SNR=4.3
ASAJ                                 LR     LR      00 47 15.9
      comp=Z,199nm,21.6s,baz=206,slow=34
ULN   Ulaanbaatar       35.68 344c iP     P       00 34 06.0 +0.1
ULN                                  pmax   pmax
      comp=Z,127nm,1.7s
ULN   Ulaanbaatar       35.68 344    P      P       00 34 06.0 +0.1
ULN                                  IAmb   IAmb    00 34 08.7
      comp=Z,50nm,0.9s
ULN   Ulaanbaatar       35.68 344    P      P       00 34 06.5 +0.6
SONM  Songino Array     35.83 344    P      P       00 34 07.6 +0.5
      comp=Z,70nm,0.6s,baz=163,slow=10,SNR=502
SONM                                 PcP    PcP     00 36 31.7 +0.1
      comp=Z,1.9nm,0.5s,baz=172,slow=3.9,SNR=6.7
SONM                                 ScP    ScP     00 40 04.3 -0.5
      comp=Z,4.0nm,0.8s,baz=161,slow=4.4,SNR=13
SONM                                 LR     LR      00 50 00.9
      comp=Z,122nm,21.6s,baz=99,slow=38
SONM  Songino Array     35.83 344    P      P       00 34 07.1 -0.1
WB0   Warramunga Arr    36.11 158    P      P       00 34 08.3 -1.3
WB0                                  IAmb   IAmb    00 34 10.4
      comp=Z,49nm,0.7s
WRAB  Tennant Creek     36.25 158d iP     P       00 34 09.4 -1.4
WRAB                                 pmax   pmax
      comp=Z,21nm,0.7s
WRAB  Tennant Creek     36.25 158    P      P       00 34 09.3 -1.5
WRAB                                 IAmb   IAmb    00 34 11.7
      comp=Z,50nm,0.7s
WRA   Warramunga Arr    36.25 158    P      P       00 34 09.5 -1.3
      comp=Z,42nm,0.6s,baz=336,slow=9.5,SNR=213
WRA                                  pP     pP      00 34 39.2 -2.4
      comp=Z,12nm,0.7s,baz=336,slow=9.6,SNR=3.3
WRA                                  S      S       00 39 35.0 -6.1
      comp=Z,11nm,1.1s,baz=339,slow=15,SNR=12
WRA                                  ScP    ScP     00 40 05.7 -0.9
      comp=Z,3.7nm,1.0s,baz=350,slow=3.7,SNR=6.6
WRA   Warramunga Arr    36.25 158    P      P       00 34 09.0 -1.9
WRA                                  pmax   pmax
      comp=Z,1.0nm,0.7s
WRA   Warramunga Arr    36.25 158    P      P       00 34 09.0 -1.9
KLR   Kul'dur           36.39  12    P      P       00 34 11.3 -0.4
      comp=Z,40nm,0.6s,baz=233,slow=7.5,SNR=152
KLR                                  PcP    PcP     00 36 33.0 -0.1
      comp=Z,5.1nm,0.5s,baz=215,slow=3.4,SNR=7.2
KLR                                  ScP    ScP     00 40 07.3 +0.7
      comp=Z,2.0nm,0.7s,baz=249,slow=3.2,SNR=6.6
KLR                                  LR     LR      00 49 35.9
      comp=Z,148nm,21.1s,baz=192,slow=37
KLR   Kul'dur           36.39  12c iP     P       00 34 11.1 -0.6
KLR                                  pmax   pmax
      comp=Z,65nm,0.8s
GIRL  Giralia           36.86 190    P      P       00 34 16.3 +0.4
      baz=37,SNR=5.6
YSS   Yuzh-Sakhalins    37.80  25⇓eP     P       00 34 23.8 +0.2
YSS                                  pmax   pmax
      comp=Z,62nm,1.7s
GRNR  Gornyy            38.94  16⇑iP     P       00 34 33.2 +0.1
GRNR                                 pmax   pmax
      comp=N,10.0nm,1.1s
GRNR                                 pmax   pmax
      comp=Z,20nm,1.1s
GRNR                                 MLR    MLR
      comp=E,340nm,16.0s
GRNR                                 MLR    MLR
      comp=N,300nm,20.0s
GRNR                                 MLR    MLR
      comp=Z,180nm,16.0s
QIS   Mount Isa         39.01 151    P      P       00 34 33.7 -0.4
      baz=39,SNR=19
ZAK   Zakamensk         39.02 342   eP      P       00 34 33.6 -0.3
ZAK                                  pmax   pmax
      comp=Z,38nm,0.9s
MTSU  Mount Surprise    39.50 143    P      P       00 34 38.4 +0.2
      baz=40,SNR=21
AS31  Alice Springs     39.54 161    P      P       00 34 37.8 -0.7
ASAR  Alice Springs     39.54 161    P      P       00 34 37.9 -0.6
      comp=Z,19nm,0.4s,baz=335,slow=7.6,SNR=275
ASAR                                 pP     pP      00 35 07.4 -2.3
      comp=Z,14nm,0.8s,baz=332,slow=7.3,SNR=3.9
ASAR                                 ScP    ScP     00 40 18.2 -0.8
      comp=Z,2.3nm,0.9s,baz=350,slow=3.3,SNR=9.2
ASAR                                 S      S       00 40 26.2 -4.5
      comp=Z,11nm,1.1s,baz=346,slow=21,SNR=18
ASAR  Alice Springs     39.54 161    P      P       00 34 37.7 -0.8
TLY   Talaya            40.08 344    LR     LR      00 52 56.9
      comp=Z,69nm,20.1s,baz=146,slow=38
TLY   Talaya            40.08 344c iP     P       00 34 42.7 +0.2
TLY                                  pmax   pmax
      comp=Z,23nm,0.8s
TLY   Talaya            40.08 344    P      P       00 34 43.0 +0.4
TLY                                  IAmb   IAmb    00 34 45.2
      comp=Z,50nm,0.5s
TLY   Talaya            40.08 344    P      P       00 34 43.1 +0.6
ZEA   Zeya              40.08   6   eP      P       00 34 42.0 -0.5
ZEA                                  pmax   pmax
      comp=E,10.0nm,0.5s
ZEA                                  pmax   pmax
      comp=Z,20nm,0.5s
MEEK  Meekatharra       40.35 183    P      P       00 34 44.7 -0.4
      baz=40,SNR=65
IRK   Irkutsk           40.42 345   eP      P       00 34 44.4 -0.9
IRK                                  pmax   pmax
      comp=Z,109nm,1.2s
HYB   Hyderabad         40.59 281   i P     P       00 34 48.5 +1.2
      comp=Z,50nm,1.0s
MOY   Mondy             40.84 341   eP      P       00 34 49.1 +0.2
MOY                                  pmax   pmax
      comp=Z,97nm,2.6s
TYV   Tymovskoe         40.96  21   eP      P       00 34 49.4 -0.3
TYV                                 eS      S       00 40 50.7 -0.4
TYV                                  pmax   pmax
      comp=Z,300nm,4.8s
TYV                                  pmax   pmax
      comp=Z,15nm,1.1s
TYV                                  smax   smax
      comp=E,800nm,7.0s
WMQ   Urumqi            40.99 323    P      P       00 34 51.5 +1.3
WMQ                                  pP     pwP     00 35 24.0 +1.0
WMQ                                  sP     sP      00 35 42.8 +6.2
WMQ                                  pmax   pmax
      comp=E,55nm,1.5s
WMQ                                  pmax   pmax
      comp=E,310nm,5.3s
WMQ                                  LR     LR
      comp=E,850nm,15.5s
WMQ                                  LR     LR
      comp=E,600nm,18.1s
WMQ                                  LR     LR
      comp=E,370nm,19.1s
WMQ   Urumqi            40.99 323    P      P       00 34 51.7 +1.5
WMQ                                  pmax   pmax
      comp=Z,59nm,1.0s
WMQ   Urumqi            40.99 323    P      P       00 34 51.7 +1.5
WMQ                                  IAmb   IAmb    00 34 54.1
      comp=Z,59nm,1.0s
BHPL  Bhopal            41.85 289   eP      P       00 34 58.0 +0.6
BHPL                                 IAmb   IAmb    00 34 58.8
      comp=Z,34nm,0.6s
CTAO  Charters Tower    42.16 143    P      P       00 35 00.1 +0.1
CTAO                                 pmax   pmax
      comp=Z,51nm,1.1s
CTAO  Charters Tower    42.16 143    P      P       00 35 00.1 +0.1
MORW  Morawa            42.95 186    P      P       00 35 06.0 -0.2
      baz=43,SNR=36
SMLA  Simla             43.33 301   eP      P       00 35 09.9 +0.7
SMLA                                 IAmb   IAmb    00 35 10.6
      comp=Z,79nm,0.7s
BOD   Bodaibo           44.11 355   eP      P       00 35 15.0 -0.1
BOD                                  pmax   pmax
      comp=Z,27nm,1.6s
DHRM  DHARAMSHALA       44.31 302   eP      P       00 35 17.5 +0.1
      comp=Z,821nm,0.8s
DHRM                                 IAmb   IAmb    00 35 18.2
      comp=Z,68nm,0.8s
BLDU  Ballidu           44.43 185    P      P       00 35 17.3 -0.7
      baz=44,SNR=20
ZSN   Zaisan            44.74 326   eP      P       00 35 19.5 -0.8
      baz=326
ZSN   Zaisan            44.74 326   eP      P       00 35 19.5 -0.8
DGZ   Jazzator, Alta    44.81 330c iP     P       00 35 21.9 +0.8
DGZ                                  pmax   pmax
      comp=Z,33nm,0.9s
FORT  Forrest           45.01 171    P      P       00 35 22.3 -0.2
      baz=45,SNR=73
KMBL  Kambalda          45.03 178    P      P       00 35 22.3 -0.5
      baz=45,SNR=97
KLBR  Kellerberrin      45.33 183    P      P       00 35 24.5 -0.6
      baz=45,SNR=35
SHLS  Shalkode          45.74 318   eP      P       00 35 25.3 -3.1
      comp=Z,91nm,0.5s,baz=318
SHLS  Shalkode          45.74 318   eP      P       00 35 25.3 -3.1
SHLS                                 pmax   pmax
      comp=Z,91nm,0.5s
MK31  Makanchi Array    45.81 324ceP      P       00 35 29.5 +0.7
MK31                                 pmax   pmax
      comp=Z,59nm,0.8s
MK31  Makanchi Array    45.81 324    P      P       00 35 29.8 +1.0
MK31                                 IAmb   IAmb    00 35 31.1
      comp=Z,48nm,0.8s
MKAR  Makanchi Array    45.81 324    P      P       00 35 29.8 +1.0
      comp=Z,32nm,0.6s,baz=124,slow=9.2,SNR=371
MKAR                                 PcP    PcP     00 37 04.6 +0.7
      comp=Z,6.1nm,0.6s,baz=115,slow=4.4,SNR=3.8
MKAR                                 ScP    ScP     00 40 44.4 +0.4
      comp=Z,5.1nm,1.0s,baz=117,slow=5.0,SNR=7.6
MKAR  Makanchi Array    45.81 324ceP      P       00 35 29.5 +0.7
MKAR                                 pmax   pmax
      comp=Z,32nm,0.6s
MKAR  Makanchi Array    45.81 324    P      P       00 35 29.3 +0.5
MUN   Mundaring         45.82 185    P      P       00 35 28.5 -0.4
      baz=46,SNR=8.3
MAKZ  Makanchi          46.00 323    P      P       00 35 31.1 +0.8
MAKZ                                 pmax   pmax
      comp=Z,147nm,1.5s
MAKZ  Makanchi          46.00 323    P      P       00 35 31.1 +0.8
MAKZ                                 IAmb   IAmb    00 35 32.5
      comp=Z,147nm,1.4s
KPKS  Kokpek            46.39 318   eP      P       00 35 32.0 -1.5
      comp=Z,82nm,0.6s,baz=318
KPKS  Kokpek            46.39 318   eP      P       00 35 32.0 -1.5
KPKS                                 pmax   pmax
      comp=Z,82nm,0.6s
SATY  Saty              46.39 317   eP      P       00 35 32.8 -0.8
      comp=Z,47nm,0.7s,baz=317
SATY  Saty              46.39 317   eP      P       00 35 32.7 -0.8
SATY                                 pmax   pmax
      comp=Z,47nm,0.7s
SKR   Severo-Kuril's    46.59  31   eP      P       00 35 34.0 -0.7
SKR                                 eS      S       00 42 21.1 +8.2
SKR                                 eSS     ScS     00 45 16.7 +1.8
SKR                                  pmax   pmax
      comp=Z,11nm,0.6s
SKR                                  pmax   pmax
      comp=Z,100nm,8.3s
SKR                                  pmax   pmax
      comp=Z,300nm,8.4s
SKR                                  MLR    MLR
      comp=Z,500nm,18.0s
SKR                                  MLR    MLR
      comp=Z,200nm,18.0s
NWAO  Narrogin (SRO)    46.69 184    P      P       00 35 35.5 -0.2
      baz=47,SNR=25
NWAO  Narrogin (SRO)    46.69 184    P      P       00 35 35.5 -0.2
NWAO                                 pmax   pmax
      comp=Z,41nm,0.7s
NWAO  Narrogin (SRO)    46.69 184    P      P       00 35 35.5 -0.2
NWAO                                 IAmb   IAmb    00 35 36.3
      comp=Z,41nm,0.7s
NWAO  Narrogin (SRO)    46.69 184    P      P       00 35 34.6 -1.1
KSH   Kashi             46.70 312    P      P       00 35 39.0 +3.0
KSH                                  pmax   pmax
      comp=Z,140nm,0.6s
KSH                                  pmax   pmax
      comp=Z,570nm,7.4s
KSH                                  LR     LR
      comp=Z,420nm,5.5s
KSH                                  LR     LR
      comp=Z,330nm,5.8s
NIL   Nilore            47.12 303    P      P       00 35 39.7 +0.4
NIL                                  pmax   pmax
      comp=Z,74nm,0.7s
NIL   Nilore            47.12 303    P      P       00 35 39.7 +0.4
NIL                                  IAmb   IAmb    00 35 40.7
      comp=Z,74nm,0.7s
NIL   Nilore            47.12 303    P      P       00 35 39.8 +0.5
TDK   Taldyqorghan      47.26 320   eP      P       00 35 39.4 -0.7
      comp=Z,227nm,0.6s,baz=320
TDK   Taldyqorghan      47.26 320   eP      P       00 35 39.4 -0.7
TDK                                  pmax   pmax
      comp=Z,227nm,0.6s
MDOK  Medeo             47.34 317   eP      P       00 35 40.2 -0.7
      baz=317
MDOK  Medeo             47.34 317   eP      P       00 35 40.2 -0.7
TNSS  Tian-Shan         47.35 317   eP      P       00 35 40.6 -0.8
      baz=316
TNSS  Tian-Shan         47.35 317   eP      P       00 35 40.5 -0.8
AAA   Alma-Ata          47.45 317   eP      P       00 35 41.4 -0.3
      baz=317
AAA   Alma-Ata          47.45 317   eP      P       00 35 41.3 -0.3
ULHL  Ulahol            47.51 315    P      P       00 35 44.2 +1.9
      SNR=46
CHKK  Chushkaly         47.67 318   eP      P       00 35 42.1 -1.2
      baz=318
CHKK  Chushkaly         47.67 318   eP      P       00 35 42.1 -1.2
TKM2  Tokmak 2          48.22 316    P      P       00 35 49.1 +1.3
      SNR=83
TKM2  Tokmak 2          48.22 316   i P     P       00 35 49.0 +1.3
TKM2                                 pmax   pmax
      comp=Z,65nm,0.6s
YAK   Yakutsk           48.49   6    P      P       00 35 48.5 -0.7
      comp=Z,16nm,0.3s,baz=176,slow=0.7,SNR=33
YAK                                  LR     LR      00 57 55.0
      comp=Z,59nm,18.9s,baz=218,slow=38
YAK   Yakutsk           48.49   6c iP     P       00 35 48.2 -1.0
YAK                                 e*PP    pP      00 36 21.3  0.0
YAK                                 e               00 37 12.8
YAK                                 e               00 37 42.8
YAK                                 eS      S       00 42 35.3 -4.1
YAK                                 eSS     SS      00 46 08.9 -2.1
YAK                                  pmax   pmax
      comp=Z,85nm,0.9s
YAK                                  pmax   pmax
      comp=E,10.0nm,1.3s
YAK                                  pmax   pmax
      comp=N,30nm,1.1s
YAK                                  pmax   pmax
      comp=Z,71nm,2.0s
YAK                                  pmax   pmax
      comp=N,40nm,2.0s
YAK                                  pmax   pmax
      comp=E,22nm,2.2s
YAK                                  smax   smax
      comp=E,120nm,5.2s
YAK                                  smax   smax
      comp=N,84nm,4.1s
YAK   Yakutsk           48.49   6    P      P       00 35 48.4 -0.8
YAK                                  IAmb   IAmb    00 35 49.5
      comp=Z,94nm,0.9s
KBK   Karagaybulak      48.56 315    P      P       00 35 52.0 +1.6
      SNR=152
UCH   Uchtor            48.70 315    P      P       00 35 53.7 +2.0
      SNR=138
BBOO  Buckleboo         48.75 163    P      P       00 35 50.8 -0.8
      baz=49,SNR=197
CHMS  Chumysh           48.82 316    P      P       00 35 53.6 +1.5
      SNR=6.3
ZAA0  Zalesovo Array    48.83 333    P      P       00 35 52.0  0.0
ZAA0                                 IAmb   IAmb    00 35 52.5
      comp=Z,42nm,0.6s
ZALV  Zalesovo Beam     48.83 333    P      P       00 35 52.1 +0.1
      comp=Z,38nm,0.5s,baz=124,slow=6.5,SNR=192
ZALV                                 PcP    PcP     00 37 13.7 -0.7
      comp=Z,4.5nm,0.6s,baz=111,slow=3.0,SNR=3.5
ZALV  Zalesovo Beam     48.83 333    P      P       00 35 51.5 -0.5
ZALV                                        PcP     00 37 13.8 -0.7
AAK   Ala-Archa         48.86 315    P      P       00 35 53.1 +0.5
      comp=Z,24nm,0.5s,baz=126,slow=5.9,SNR=58
AAK   Ala-Archa         48.86 315    P      P       00 35 54.3 +1.7
      SNR=10
AAK   Ala-Archa         48.86 315   i P     P       00 35 54.2 +1.6
      SNR=57
AAK   Ala-Archa         48.86 315c iP     P       00 35 53.3 +0.7
AAK                                  pmax   pmax
      comp=Z,219nm,1.1s
AAK   Ala-Archa         48.86 315    P      P       00 35 53.7 +1.0
AAK                                  IAmb   IAmb    00 35 56.2
      comp=Z,44nm,0.8s
AAK   Ala-Archa         48.86 315    P      P       00 35 54.3 +1.6
PEA0B Petropavlovsk-    48.88  29deP      P       00 35 53.0 +0.6
PEA0B Petropavlovsk-    48.88  29    P      P       00 35 52.5 +0.1
PEA0B                                IAmb   IAmb    00 35 53.7
      comp=Z,37nm,0.9s
PETK  Petropavlovsk-    48.88  29    P      P       00 35 52.5 +0.1
      comp=Z,19nm,0.7s,baz=218,slow=5.0,SNR=37
PETK                                 PcP    PcP     00 37 14.6 -0.1
      comp=Z,7.0nm,0.6s,baz=224,slow=1.6,SNR=8.1
PETK                                 LR     LR      00 58 32.9
      comp=Z,55nm,18.7s,baz=234,slow=38
PETK  Petropavlovsk-    48.88  29    P      P       00 35 52.5 +0.1
PETK                                 PcP    PcP     00 37 13.9 -0.8
SEM   Semipalatinsk     48.93 327   eP      P       00 35 50.9 -2.3
      comp=Z,26nm,0.8s,baz=327
SEM   Semipalatinsk     48.93 327   eP      P       00 35 50.8 -2.3
SEM                                  pmax   pmax
      comp=Z,26nm,0.8s
SGDS  Sogindy           49.07 316   eP      P       00 35 53.5 -0.6
      comp=Z,10nm,0.5s,baz=316
SGDS  Sogindy           49.07 316   eP      P       00 35 53.5 -0.6
SGDS                                 pmax   pmax
      comp=Z,10.0nm,0.5s
USP   Ospenovka         49.09 316    P      P       00 35 55.6 +1.4
      SNR=17
AML   Almayashu         49.23 314    P      P       00 35 57.6 +1.8
      SNR=6.5
EKS2  Erkin-Say         49.36 315    P      P       00 35 58.4 +2.0
      SNR=9.9
STKA  Stephens Creek    49.77 156    P      P       00 35 58.8 -0.7
      baz=50,SNR=23
STKA  Stephens Creek    49.77 156    P      P       00 35 58.5 -0.9
      comp=Z,7.9nm,0.3s,baz=335,slow=7.7,SNR=51
STKA                                 LR     LR      01 02 23.9
      comp=Z,19nm,18.3s,baz=9.2,slow=42
STKA  Stephens Creek    49.77 156ceP      P       00 35 59.0 -0.5
STKA  Stephens Creek    49.77 156    P      P       00 35 58.9 -0.5
KURBB Kurchatov Arra    49.97 326    P      P       00 36 01.3 +0.7
      comp=Z,124nm,0.8s,baz=126,slow=7.8,SNR=770
KURBB                                PcP    PcP     00 37 18.9 +0.2
      comp=Z,5.3nm,0.6s,baz=119,slow=3.8,SNR=4.4
KURK  Kurchatov         49.97 326    P      P       00 36 01.5 +0.8
KURK                                 pmax   pmax
      comp=Z,323nm,0.8s
KURK  Kurchatov         49.97 326    P      P       00 36 01.5 +0.8
BTLS  Baital            50.08 318   eP      P       00 36 00.1 -1.5
      comp=Z,26nm,0.5s,baz=318
BTLS  Baital            50.08 318   eP      P       00 36 00.1 -1.5
BTLS                                 pmax   pmax
      comp=Z,26nm,0.5s
HTT   Hallett           50.21 160    P      P       00 36 02.4 -0.3
      baz=50,SNR=31
KBL   Kabul             50.72 303    P      P       00 36 07.7 +0.8
KBL                                  pmax   pmax
      comp=Z,59nm,0.9s
KBL   Kabul             50.72 303    P      P       00 36 07.7 +0.8
KBL                                  IAmb   IAmb    00 36 08.9
      comp=Z,59nm,0.8s
KBL   Kabul             50.72 303    P      P       00 36 08.0 +1.1
      SNR=20
MA2   Magadan           50.73  19ceP      P       00 36 06.1 -0.1
MA2                                  pmax   pmax
      comp=Z,57nm,1.3s
MA2   Magadan           50.73  19    P      P       00 36 06.4 +0.1
MA2                                  IAmb   IAmb    00 36 07.5
      comp=Z,37nm,0.8s
DZA   Taraz             51.13 314   eP      P       00 36 08.7 -0.9
      comp=Z,50nm,0.9s,baz=314
DZA   Taraz             51.13 314   eP      P       00 36 08.7 -0.9
DZA                                  pmax   pmax
      comp=Z,50nm,0.9s
CMSA  Cobar Meteorol    51.20 152    P      P       00 36 10.7 +0.6
      baz=51,SNR=11
KK31  Karatay Array     51.77 314    P      P       00 36 15.1 +0.8
KK31                                 pmax   pmax
      comp=Z,93nm,0.9s
KK31  Karatay Array     51.77 314    P      P       00 36 15.1 +0.8
KK31                                 IAmb   IAmb    00 36 16.3
      comp=Z,93nm,0.8s
KKAR  Karatay Array     51.77 314    P      P       00 36 15.0 +0.7
KKAR                                 pmax   pmax
      comp=Z,93nm,0.9s
KKAR  Karatay Array     51.77 314    P      P       00 36 15.0 +0.7
KKAR                                 IAmb   IAmb    00 36 16.3
      comp=Z,93nm,0.8s
KKAR  Karatay Array     51.77 314    P      P       00 36 14.7 +0.3
IUG   Iuzhnay           51.81 313   eP      P       00 36 13.9 -0.9
      comp=Z,57nm,0.9s,baz=313
IUG   Iuzhnay           51.81 313   eP      P       00 36 13.9 -0.9
IUG                                  pmax   pmax
      comp=Z,57nm,0.9s
TAS   Tashkent          52.10 312    P      P       00 36 17.8 +1.0
TAS                                  pmax   pmax
      comp=Z,187nm,1.1s
TAS   Tashkent          52.10 312    P      P       00 36 17.8 +1.0
BRLS  Borolday          52.22 314   eP      P       00 36 18.1 +0.5
      comp=Z,38nm,1.0s,baz=314
BRLS  Borolday          52.22 314   eP      P       00 36 18.1 +0.5
BRLS                                 pmax   pmax
      comp=Z,38nm,1.0s
BRZS  Berezniki         52.96 323   eP      P       00 36 21.9 -1.1
      comp=Z,46nm,0.6s,baz=323
BRZS  Berezniki         52.96 323   eP      P       00 36 21.8 -1.1
BRZS                                 pmax   pmax
      comp=Z,46nm,0.6s
ARMA  Armidale          53.23 146    P      P       00 36 26.7 +1.4
      baz=53,SNR=5.0
SEY   Seymchan          53.84  17    P      P       00 36 29.6 +0.4
      comp=Z,24nm,0.7s,baz=219,slow=6.1,SNR=50
SEY                                  PcP    PcP     00 37 33.0  0.0
      comp=Z,9.1nm,0.5s,baz=260,slow=2.2,SNR=9.2
SEY   Seymchan          53.84  17⇑eP      P       00 36 29.5 +0.4
SEY                                 i *PP   pP      00 37 05.7 +3.9
ARPS  Mount Arapiles    54.24 159    P      P       00 36 31.9 -0.4
      baz=54,SNR=58
SANVU Saraoutou         54.53 121    P      P       00 36 35.1 +0.3
SANVU                                IAmb   IAmb    00 36 36.8
      comp=Z,25nm,0.5s
YNG   Young             54.74 152    P      P       00 36 37.0 +0.9
      baz=55,SNR=6.2
BVAR  Borovoye Array    55.55 326    P      P       00 36 42.0 +0.3
      comp=Z,27nm,0.5s,baz=65,slow=12,SNR=83
BVAR  Borovoye Array    55.55 326    P      P       00 36 42.0 +0.3
BRVK  Borovoye          55.62 326c iP     P       00 36 42.7 +0.5
BRVK                                 pmax   pmax
      comp=Z,281nm,1.1s
BRVK  Borovoye          55.62 326    P      P       00 36 42.9 +0.7
BRVK  Borovoye          55.62 326    P      P       00 36 43.2 +1.0
CAN   Canberra          55.87 152    P      P       00 36 44.4 +0.2
CAN                                  pmax   pmax
      comp=Z,53nm,1.5s
CAN   Canberra          55.87 152    P      P       00 36 44.4 +0.2
CAN                                  IAmb   IAmb    00 36 46.0
      comp=Z,53nm,1.5s
CNB   Canberra Magne    56.03 152    P      P       00 36 46.0 +0.6
      baz=56,SNR=28
HRA   Herat             56.26 302    P      P       00 36 47.8 +0.5
HRA                                  IAmb   IAmb    00 36 49.0
      comp=Z,44nm,1.0s
TOO   Toolangi          56.30 156    P      P       00 36 47.8 +0.6
      baz=56,SNR=10
DZM   Mont Dzumac       57.43 128    P      P       00 36 56.1 +0.6
DZM                                  IAmb   IAmb    00 36 57.9
      comp=Z,15nm,0.6s
DZM   Mont Dzumac       57.43 128    P      P       00 36 56.8 +1.3
YATNC Mamie plateau,    57.76 128    P      P       00 36 59.6 +1.9
OUENC Ouen Island, N    57.93 128    P      P       00 37 00.6 +1.8
TIXI  Tiksi             57.93   3c iP     P       00 36 56.7 -1.4
TIXI  Tiksi             57.93   3    P      P       00 36 56.8 -1.2
TIXI                                 IAmb   IAmb    00 36 58.2
      comp=Z,40nm,0.8s
MARNC Mare, Loyalty     58.33 126    P      P       00 37 03.0 +1.3
WBK   Wadi Bani Khal    58.84 288    P      P       00 37 05.2 -0.1
BIDO  Bidbid            59.57 289    P      P       00 37 10.3 +0.1
BIDO                                 P      P       00 37 11.1 +0.8
      SNR=6.6
JMDO  Jabal Madar       59.65 288    P      P       00 37 10.5 -0.4
AMKA  Amchitka          59.84  38    P      P       00 37 11.9 +0.3
MHTO  MHTO              59.87 286    P      P       00 37 11.8 -0.6
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GEYT	Alibeck	59.95	306	P	P	00 37 14.2	+1.5
	comp=Z,46nm,0.8s,baz=158,slow=4.8,SNR=98						
GEYT				LR	LR	01 04 42.4	
	comp=Z,65nm,20.6s,baz=45,slow=37						
GEYT	Alibeck	59.95	306	P	P	00 37 13.9	+1.3
GYA0B	ALIBECK ARRAY	59.95	306	P	P	00 37 13.9	+1.2
HOQ	Hoqain	60.31	289	P	P	00 37 15.1	-0.3
HOQ				P	P	00 37 16.0	+0.6
	SNR=6.1						
ABKAR	Akbulak array	60.52	319	P	P	00 37 16.8	+0.5
ABKAR	Akbulak array	60.52	319	P	P	00 37 16.8	+0.5
SOHO	SOHO	60.99	290	*i* P	P	00 37 19.8	-0.2
	SNR=6.0						
BANOM	Banah	61.13	292	*i* P	P	00 37 22.1	+1.2
	SNR=11						
BANOM	Banah	61.13	292	P	P	00 37 21.7	+0.8
	SNR=5.6						
MDH	Madha	61.15	291	P	P	00 37 20.3	-0.8
UOSS	Minazif	61.25	291	P	P	00 37 21.3	-0.4
UOSS	Minazif	61.25	291	P	P	00 37 21.6	-0.1
SHME	Shamm	61.26	292	P	P	00 37 22.6	+0.9
MSFE	Esma-Masafi	61.27	291	*i* P	P	00 37 22.5	+0.6
	SNR=6.0						
HATD	Hatta, Dubai	61.32	291	*i* P	P	00 37 22.6	+0.3
	SNR=6.7						
ASHO	Ashiyiah	61.40	291	*i* P	P	00 37 22.9	+0.2
	SNR=10						
ALNE	Al Ain	61.71	290	*i* P	P	00 37 25.2	+0.3
	SNR=5.8						
ALNE	Al Ain	61.71	290	P	P	00 37 25.0	+0.1
	SNR=9.3						
FAQ	Al Faqa, Dubai	61.82	291	*i* P	P	00 37 25.3	-0.2
	SNR=7.8						
AKTO	Aktyubinsk	62.00	320	P	P	00 37 26.8	+0.5
	comp=Z,33nm,0.5s,baz=97,slow=9.8,SNR=117						
AKTO				LR	LR	01 06 24.7	
	comp=Z,149nm,18.0s,baz=114,slow=38						
ASUD	Al Ashush, Dub	62.06	291	*i* P	P	00 37 27.4	+0.2
	SNR=6.1						
ASUD	Al Ashush, Dub	62.06	291	P	P	00 37 27.5	+0.4
	SNR=5.2						
SVE	Sverdlovsk	62.18	327	*d i*P	P	00 37 27.9	+0.6
SVE				pmax	pmax		
	comp=Z,155nm,1.3s						
SHAO	Shalim	62.35	283	*i* P	P	00 37 30.0	+0.8
	SNR=55						
ADK	Adak	62.38	38	P	P	00 37 28.8	0.0
ADK				pmax	pmax		
	comp=Z,204nm,1.8s						
ADK	Adak	62.38	38	P	P	00 37 28.8	0.0
ARU	Arti	63.16	327	P	P	00 37 33.8	-0.1
	comp=Z,23nm,0.4s,baz=106,slow=4.3,SNR=178						
ARU				LR	LR	01 05 01.1	
	comp=Z,85nm,18.6s,baz=125,slow=36						
ARU	Arti	63.16	327	*c i*P	P	00 37 33.7	-0.1
ARU						00 38 09.0	
ARU						00 39 53.6	
ARU				S	S	00 45 56.2	+2.3
ARU				SS	SS	00 50 03.9	+1.6
ARU				pmax	pmax		
	comp=Z,181nm,1.7s						
ARU	Arti	63.16	327	P	P	00 37 33.5	-0.3
ATKA	Atka Island	63.95	38	P	P	00 37 38.6	-0.5
JRN	Qarnain Island	64.29	291	P	P	00 37 41.6	-0.2
	SNR=5.5						
SOCY	Socotra	64.74	277	P	P	00 37 44.4	-0.6
SOCY				IAmb	IAmb	00 37 45.5	
	comp=Z,38nm,0.7s						
MSVF	Nonsavu	64.80	117	*ce*P	P	00 37 47.2	+1.9
MSVF				pmax	pmax		
	comp=Z,24nm,0.9s						
MSVF	Nonsavu	64.80	117	P	P	00 37 46.9	+1.6
MSVF				IAmb	IAmb	00 37 48.3	
	comp=Z,29nm,0.8s						
MSVF	Nonsavu	64.80	117	P	P	00 37 47.6	+2.3
NIKH	Nikolski High	67.29	38	P	P	00 38 00.2	-0.4
GAMB	Gambell	67.80	26	P	P	00 38 04.4	+0.9
GAMB				IAmb	IAmb	00 38 05.7	
	comp=Z,53nm,0.9s						
AKT	Akhty	68.14	309	*e*P	P	00 38 06.8	+0.6
AKT				*e*		00 38 31.5	
AKT				*e**PP	pwP	00 38 40.7	-1.2
AKT				*e*		00 40 38.0	
AKT				pmax	pmax		
	comp=Z,83nm,1.2s						
QRN	Al-Qurain	68.41	296	*e*P		00 38 07.3	
KIRV	Kirov	68.44	328	P	P	00 38 07.5	-0.1
	comp=Z,112nm,0.7s,baz=117,slow=1.9,SNR=51						
KIRV	Kirov	68.44	328	*c i*P	P	00 38 07.3	-0.3
UMR	Umm Al-Rimmam	68.53	297	*e*P		00 38 08.2	
RDF	Al-Radifah	68.72	296	*e*P		00 38 09.3	
BELG	Belogornoye	68.72	321	P	P	00 38 09.4	-0.1
	comp=Z,180nm,0.8s,baz=122,slow=0.9,SNR=87						
BELG				LR	LR	01 07 47.8	
	comp=Z,59nm,21.2s,baz=81,slow=35						
BELG	Belogornoye	68.72	321	*c i*P	P	00 38 09.0	-0.5
BELG				pmax	pmax		
	comp=Z,31nm,0.9s						
MIB	Mutribah	68.84	297	*e*P		00 38 10.9	
RST	Umm Al-Ruwaisa	69.16	296	*e*P		00 38 11.8	
GNI	Garni	70.42	308	P	P	00 38 21.2	+0.9
	comp=Z,14nm,0.8s,baz=132,slow=3.1,SNR=21						
GNI	Garni	70.42	308	P	P	00 38 21.5	+1.2
GNI	Garni	70.42	308	*c i*P	P	00 38 21.3	+0.9
GNI				pmax	pmax		
	comp=Z,102nm,1.7s						
GNI	Garni	70.42	308	P	P	00 38 21.6	+1.3
ANM	Nome	70.67	26	P	P	00 38 22.3	+1.1
ANM				pmax	pmax		
	comp=Z,44nm,1.0s						
ANM	Nome	70.67	26	P	P	00 38 22.3	+1.1
ANM				IAmb	IAmb	00 38 23.6	
	comp=Z,44nm,1.0s						
ZEI	Tsey	70.97	311	*e*P	P	00 38 22.1	-1.6
ZEI				pmax	pmax		
	comp=Z,56nm,1.3s						
RAYN	Ar Rayn	71.11	290	*i* P	P	00 38 25.4	+0.7
	SNR=57						
RAYN	Ar Rayn	71.11	290	P	P	00 38 25.4	+0.7
RAYN				pmax	pmax		
	comp=Z,80nm,1.0s						
RAYN	Ar Rayn	71.11	290	P	P	00 38 25.4	+0.7
RAYN				IAmb	IAmb	00 38 26.5	
	comp=Z,80nm,0.9s						
NCK	Nalchik	71.18	311	⇓*e*P	P	00 38 24.8	+0.1
NCK				pmax	pmax		
	comp=Z,19nm,1.0s						
GOF	Gofitskoye	71.54	313	⇑*i*P	P	00 38 27.2	+0.4
GOF				pmax	pmax		
	comp=Z,53nm,1.1s						
KBZ	Khabaz	71.68	312	P	P	00 38 28.0	+0.4
	comp=Z,27nm,0.9s,baz=111,slow=5.1,SNR=40						
KBZ				LR	LR	01 13 23.6	
	comp=Z,86nm,18.4s,baz=104,slow=38						
KBZ	Khabaz	71.68	312	*c i*P	P	00 38 27.8	+0.2
KBZ				pmax	pmax		
	comp=Z,52nm,1.1s						
GEVA	Gevas	71.81	306	P	P	00 38 29.6	+0.8
GEVA				IAmb	IAmb	00 38 30.9	
	comp=Z,53nm,0.9s						
KVAR	Kislovodsk Arr	71.82	312	P	P	00 38 30.0	+1.3
	comp=Z,21nm,0.8s,baz=94,slow=23,SNR=11						
KIV	Kislovodsk	71.83	312	*i* P	P	00 38 29.7	+1.0
	SNR=10						
KIV	Kislovodsk	71.83	312	*e*P	P	00 38 28.8	+0.1
KIV				*e*S	S	00 47 37.7	-0.3
KIV				pmax	pmax		
	comp=Z,242nm,1.0s						
KIV				pmax	pmax		
	comp=Z,180nm,4.6s						
KIV				MLR	MLR		
	comp=Z,173nm,18.0s						
KIV	Kislovodsk	71.83	312	P	P	00 38 29.3	+0.6
KIV				IAmb	IAmb	00 38 30.3	
	comp=Z,61nm,0.7s						
VRH	Novokhopyorsk	72.34	320	*e*P	P	00 38 30.8	-0.6
VRH				pmax	pmax		
	comp=Z,160nm,0.7s						
DAMY	Dhamar	73.52	281	P	P	00 38 41.0	+1.5
DAMY				IAmb	IAmb	00 38 42.6	
	comp=Z,49nm,1.1s						
KLMR	Klimovskoe	73.63	330	*e*P	P	00 38 35.7	-3.1
KLMR				*e*		00 41 21.8	
KLMR				pmax	pmax		
	comp=Z,121nm,1.1s						
KLMR	Klimovskoe	73.63	330	*e*P	P	00 38 35.7	-3.1
KLMR				AMP		00 38 39.3	
	comp=Z,121nm,1.1s						
KLMR				*e*PP	PP	00 41 21.9	-2.7
KOPT	Kop Dagi	73.68	308	P	P	00 38 41.1	+1.2
MARD	Mardin	73.69	305	P	P	00 38 40.8	+0.9
MARD				IAmb	IAmb	00 38 41.4	
	comp=Z,64nm,0.6s						
VORD	Divnogorie	73.88	319	*e*P	P	00 38 39.2	-1.3
VORD				pmax	pmax		
	comp=Z,40nm,0.6s						
VSR	Storozhevoye	73.94	320	*e*P	P	00 38 40.0	-0.9
VSR				pmax	pmax		
	comp=Z,80nm,0.6s						
SOC	Sochi	73.99	312	*e*P	P	00 38 40.0	-1.3
SOC				*e*		00 41 28.3	
SOC				*e*PPP	PPP	00 43 12.9	
SOC				*e*S	S	00 48 01.8	-0.6
SOC				*e*SS	SS	00 52 49.9	+0.2
SOC				*e*SSS	SSS	00 56 10.8	
SOC				pmax	pmax		
	comp=Z,39nm,0.5s						
LPSR	Galich'ya Gora	74.04	321	*e*P	P	00 38 41.1	-0.3
LPSR				pmax	pmax		
	comp=Z,140nm,0.7s						
TMCR	Tamitsa	74.35	333	*e*P	P	00 38 41.1	-1.9
TMCR				pmax	pmax		
	comp=Z,69nm,0.8s						
A21K	Barrow	74.60	19	P	P	00 38 45.1	+0.9
	baz=268						
A21K	Barrow	74.60	19	P	P	00 38 45.2	+1.0
MOS	Moscow	74.69	324	*e*P	P	00 38 42.3	-2.8
MOS				pmax	pmax		
	comp=Z,109nm,0.7s						
MOS				pmax	pmax		
	comp=Z,100nm,0.8s						
OBN	Obninsk	75.32	324	P	P	00 38 48.0	-0.6
	comp=Z,17nm,0.5s,baz=5.5,slow=1.9,SNR=21						
OBN	Obninsk	75.32	324	⇓P	P	00 38 48.6	-0.1
OBN	Obninsk	75.32	324	*c i*P	P	00 38 48.2	-0.5
OBN						00 39 01.0	
OBN				SS	SS	00 53 05.0	-4.1
OBN				pmax	pmax		
	comp=Z,136nm,1.3s						
OBN	Obninsk	75.32	324	P	P	00 38 48.1	-0.6
OBN				IAmb	IAmb	00 38 49.1	
	comp=Z,73nm,0.7s						
ANN	Anapa	75.53	313	*e*P	P	00 38 48.8	-1.3
ANN				pmax	pmax		
	comp=Z,49nm,0.6s						
ATD	Arta Tunnel	75.58	279	P	P	00 38 52.5	+1.4
IMAR	Indian Mountai	75.63	25	P	P	00 38 50.7	+0.4
SII	Sitkinak Islan	75.88	35	P	P	00 38 52.6	+0.6
APA	Apatity	76.19	337	⇑*i*P	P	00 38 52.1	-1.3
APA				*i* *PP	pP	00 39 28.1	-0.1
APA				pmax	pmax		
	comp=Z,34nm,0.8s						
APA				MLR	MLR		
	comp=Z,900nm,25.0s						
GAZ	Gaziantep	76.54	305	P	P	00 38 57.2	+1.0
GAZ				IAmb	IAmb	00 38 58.4	
	comp=Z,64nm,0.9s						
KDAK	Kodiak Island	76.66	33	P	P	00 38 56.2	-0.1
	comp=Z,12nm,0.4s,baz=293,slow=3.1,SNR=46						
KDAK	Kodiak Island	76.66	33	*d i*P	P	00 38 56.5	+0.2
KDAK				pmax	pmax		
	comp=Z,56nm,1.1s						
KDAK	Kodiak Island	76.66	33	P	P	00 38 56.5	+0.2
TOKA	Tokat	76.71	309	P	P	00 38 57.7	+0.6
TOKA				IAmb	IAmb	00 38 58.7	
	comp=Z,46nm,0.9s						
MLY	Manley	76.94	26	P	P	00 38 58.7	+1.0
	baz=275,SNR=112						
COLD	Coldfoot	76.97	24	P	P	00 38 58.9	+1.0
	baz=275,SNR=37						
COLD	Coldfoot	76.97	24	P	P	00 38 58.5	+0.7
SUA	Susitna One	77.25	29	P	P	00 38 59.6	-0.1
SUA				IAmb	IAmb	00 39 00.9	
	comp=Z,82nm,0.8s						
TRF	Thorofare Moun	77.27	27	P	P	00 38 59.8	0.0
TRF				IAmb	IAmb	00 39 02.8	
	comp=Z,44nm,0.8s						
CUT	Chulitna	77.39	28	P	P	00 39 00.2	-0.1
	baz=276,SNR=21						
I23K	Minto, Yukon-K	77.50	26	P	P	00 39 01.8	+0.9
	baz=276,SNR=62						
NEA2	Nenana	77.69	26	P	P	00 39 02.3	+0.4
	baz=276,SNR=48						
RC01	Rabbit Creek A	77.78	30	P	P	00 39 02.3	-0.1
	baz=276,SNR=10						
MCK	McKinley	77.84	27	P	P	00 39 03.0	+0.2
	baz=277,SNR=77						
SIM	Simferopol'	77.86	314	*c i*P	P	00 39 02.3	-0.9
SIM				*e*		00 39 08.8	
SIM				pmax	pmax		
	comp=Z,77µm,0.4s						
HOPEN	Hopen	77.88	346	*e*P	P	00 39 02.4	-0.3
RND	Reindeer	77.92	27	P	P	00 39 03.0	-0.3
RND				pmax	pmax		
	comp=Z,72nm,0.7s						
RND	Reindeer	77.92	27	P	P	00 39 03.0	-0.3
RND				IAmb	IAmb	00 39 04.0	
	comp=Z,72nm,0.7s						
PMR	Palmer	78.01	29	P	P	00 39 03.4	-0.3
PMR				pmax	pmax		
	comp=Z,55nm,0.8s						
PMR	Palmer	78.01	29	P	P	00 39 03.4	-0.3
PMR				IAmb	IAmb	00 39 04.3	
	comp=Z,55nm,0.8s						
TCOL	CIGO, UAF Yank	78.17	26	P	P	00 39 04.6	+0.1
	baz=277,SNR=11						
TCOL	CIGO, UAF Yank	78.17	26	P	P	00 39 04.2	-0.3
TCOL				IAmb	IAmb	00 39 07.0	
	comp=Z,50nm,0.7s						
COLA	College	78.17	26	*d i*P	P	00 39 04.5	0.0
COLA				pmax	pmax		
	comp=Z,46nm,0.9s						
PUL	Pulkovo	78.25	329	⇓*e*P	P	00 39 03.9	-1.2
PUL				pmax	pmax		
	comp=Z,117nm,0.7s						
KEV	Kevo	78.31	339	P	P	00 39 05.1	-0.1
KEV				pmax	pmax		
	comp=Z,130nm,1.5s						
KEV	Kevo	78.31	339	P	P	00 39 05.1	-0.1
KEV				IAmb	IAmb	00 39 05.6	
	comp=Z,130nm,1.5s						
POKR	Poker Plat Res	78.32	26	P	P	00 39 05.6	+0.2
	baz=278,SNR=16						
POKR	Poker Plat Res	78.32	26	P	P	00 39 05.6	+0.2
BZK	Bozkurt	78.35	311	⇓P	P	00 39 06.8	+0.8
KNK	Knik Glacier	78.35	29	P	P	00 39 05.7	+0.1
KNK				IAmb	IAmb	00 39 06.8	
	comp=Z,62nm,0.8s						
IL31		78.60	26	P	P	00 39 06.3	-0.5
ILAR	Eielson Array	78.60	26	P	P	00 39 05.7	-1.2
	comp=Z,9.7nm,0.7s,baz=276,slow=3.8,SNR=110						
ILAR	Eielson Array	78.60	26	P	P	00 39 05.9	-1.0
ILAR	Eielson Array	78.60	26	P	P	00 39 05.9	-1.0
MMAI	Mount Meron Ar	78.60	301	P	P	00 39 09.0	+1.4
	comp=Z,14nm,0.6s,baz=74,slow=8.8,SNR=49						
HDA	Harding Lake	78.62	26	P	P	00 39 06.4	-0.6
	baz=278,SNR=43						
ILGA	Ilgaz	78.69	310	P	P	00 39 08.6	+0.3
ILGA				IAmb	IAmb	00 39 09.9	
	comp=Z,94nm,1.8s						
ARA0	ARCESS Array S	78.86	339	P	P	00 39 08.3	+0.1
ARA0				IAmb	IAmb	00 39 08.9	
	comp=Z,38nm,0.8s						
ARA0	ARCESS Array S	78.86	339	*e*P	P	00 39 08.3	+0.1
ARCES	ARCESS Array B	78.86	339	P	P	00 39 08.3	+0.1
	comp=Z,17nm,0.5s,baz=76,slow=6.8,SNR=105						
ARCES				LR	LR	01 17 55.1	
	comp=Z,66nm,18.8s,baz=25,slow=38						
ARCES	ARCESS Array B	78.86	339	P	P	00 39 08.4	+0.1
ARCES				pmax	pmax		
	comp=Z,26nm,0.7s						
ARCES	ARCESS Array B	78.86	339	P	P	00 39 08.4	+0.1
BR131	Keskin Array S	78.95	308	P	P	00 39 09.4	-0.1
BR131				pmax	pmax		
	comp=Z,23nm,0.9s						
BR131	Keskin Array S	78.95	308	P	P	00 39 09.4	-0.1
BRTR	Keskin Array B	78.95	308	P	P	00 39 09.4	-0.1
	comp=Z,9.4nm,0.6s,baz=118,slow=4.5,SNR=94						
BRTR				PP	PP	00 42 11.2	+1.1
	comp=Z,2.6nm,0.8s,baz=85,slow=8.7,SNR=6.1						
BRTR				LR	LR	01 18 46.1	
	comp=Z,18nm,18.1s,baz=40,slow=39						
BRTR	Keskin Array B	78.95	308	*ce*P	P	00 39 09.5	-0.1
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BRTR	Keskin Array B	78.95	308	P	P	00 39 09.3	-0.3
BMAR	Burnt Mountain	79.11	23	P	P	00 39 08.9	-0.8
HAMF	Hammerfest	79.27	340	*e*P	P	00 39 10.3	-0.1
M24K	Tolsona, Glenn	79.32	29	P	P	00 39 12.0	+1.0
	baz=279,SNR=10						
SPA0	Spitsbergen Ar	79.37	348	P	P	00 39 11.1	+0.2
SPA0				IAmb	IAmb	00 39 12.3	
	comp=Z,173nm,1.5s						
SPA0	Spitsbergen Ar	79.37	348	⇑*i*P	P	00 39 11.1	+0.2
SPITS	Spitsbergen Ar	79.37	348	P	P	00 39 11.1	+0.2
	comp=Z,21nm,0.5s,baz=92,slow=8.3,SNR=97						
PAX	Paxson	79.50	28	P	P	00 39 12.4	+0.4
PAX				pmax	pmax		
	comp=Z,30nm,0.8s						
PAX	Paxson	79.50	28	P	P	00 39 12.4	+0.4
EIL	Elat	79.54	298	P	P	00 39 14.1	+1.3
	comp=Z,51nm,0.8s,baz=21,slow=1.5,SNR=30						
RIDG	Independent Ri	79.64	27	P	P	00 39 12.8	+0.2
KTK1	Kautokeino	79.75	339	*e*P	P	00 39 12.8	-0.3
HSPB	Hornsund (broa	79.89	347	*e*P	P	00 39 13.8	+0.1
HSPB	Hornsund (broa	79.89	347	*e*	P	00 39 13.6	-0.1
KBS	Kingsbay	79.96	349	*e*P	P	00 39 12.6	-1.5
KBS	Kingsbay	79.96	349	*i* P	P	00 39 13.9	-0.1
SCRK	Sand Creek	79.97	26	P	P	00 39 14.7	+0.1
	baz=281,SNR=37						
CSS	Mathiatis	79.97	304	P	P	00 39 15.9	+0.9
CSS				IAmb	IAmb	00 39 16.9	
	comp=Z,80nm,0.8s						
FIA1	FINESS Array S	80.06	331	P	P	00 39 14.7	-0.2
FINES	FINESS Array B	80.06	331	P	P	00 39 14.4	-0.5
	comp=Z,20nm,0.7s,baz=55,slow=5.9,SNR=122						
FINES				LR	LR	01 15 39.5	
	comp=Z,92nm,18.5s,baz=66,slow=36						
FINES	FINESS Array B	80.06	331	*i* P	P	00 39 14.3	-0.6
FINES				pmax	pmax		
	comp=Z,21nm,0.7s						
FINES	FINESS Array B	80.06	331	P	P	00 39 14.6	-0.2
N25K	Chitina, Valde	80.15	29	P	P	00 39 16.2	+0.7
	baz=281,SNR=8.9						
AKASG	Malin Array Be	80.25	320	P	P	00 39 15.2	-0.8
	comp=Z,15nm,0.6s,baz=65,slow=5.4,SNR=46						
AKASG				PP	PP	00 42 24.7	+4.4
	comp=Z,0.7nm,0.5s,baz=71,slow=8.6,SNR=5.5						
AKASG	Malin Array Be	80.25	320	P	P	00 39 15.0	-1.1
AKBB	Malin Array Si	80.25	320	P	P	00 39 15.2	-0.9
AKBB				pmax	pmax		
	comp=Z,41nm,1.2s						
AKBB	Malin Array Si	80.25	320	P	P	00 39 15.2	-0.9
VSU	Vasula	80.29	328	*e*P	P	00 39 16.2	+0.1
VSU	Vasula	80.29	328	*c i*P	P	00 39 15.8	-0.3
VSU				pmax	pmax		
	comp=Z,237nm,0.9s						
MENT	Mentasta	80.29	28	P	P	00 39 17.2	+1.0
LEF	Lefka	80.30	304	⇑P	P	00 39 17.7	+0.9
CASY	Casey	80.31	184	P	P	00 39 15.8	-0.1
MNK	Minsk	80.38	324	*i* P	P	00 39 16.2	-0.5
	comp=E,4.0nm,1.0s						
MNK				*i* P	P	00 39 16.2	-0.5
	comp=N,14nm,1.0s						
MNK				*i* P	P	00 39 16.2	-0.5
	comp=Z,64nm,1.0s						
MNK				*i* PcP	PcP	00 39 22.6	-0.8
MNK				*i* pP	pP	00 39 56.1	+4.7
MNK				*i* sP	sP	00 40 13.6	+7.3
MNK				*i* PP	PP	00 42 20.9	-0.4
MNK				*i* PPP	PPP	00 44 11.1	
MNK				*i* S	S	00 49 07.1	-3.9
MNK				*i* ScS	SKKSac	00 49 26.7	+3.0
MNK				*i* sS	sS	00 50 18.5	+7.9
MNK				*i* SSS	SSS	00 57 51.8	
MNK				*i* SKKS	SKKSdf	01 04 38.7	-5.1
MDUB	Mudurnu	80.68	309	P	P	00 39 18.5	-0.3
K27K	Chicken	80.79	26	P	P	00 39 20.0	+1.3
	baz=283,SNR=43						
IDID	Didziasalis	80.88	325	*e*P	P	00 39 19.7	+0.3
MCARA	McCarthy VSAT	80.93	29	P	P	00 39 20.0	+0.5
NACGM	Naroch	80.94	324	*i* P	P	00 39 19.1	-0.6
NACGM				*i* P	P	00 39 19.1	-0.6
NACGM				*i* P	P	00 39 19.1	-0.6
NACGM				*i* Pb	PcP	00 39 21.0	-4.8
	comp=Z,110nm,0.9s						
NACGM				*i* PP	PP	00 42 09.4	-16
NACGM				*i* PPP	PPP	00 43 38.7	
NACGM				*i* S	S	00 49 00.1	-17
NACGM				*i* SS	SS	00 53 45.7	-48
NACGM				*i* SSS	SSS	00 57 12.4	
NACGM				*i* LQ	LQ	01 08 23.1	
NACGM				*i* LR	LR	01 14 11.7	
EGAK	Eagle	81.01	25	P	P	00 39 20.0	+0.1
EGAK				IAmb	IAmb	00 39 21.2	
	comp=Z,60nm,0.7s						
TRO	Tromso	81.09	340	*e*P	P	00 39 20.3	+0.1
BCAR	Beaver Creek A	81.13	27	P	P	00 39 21.7	+1.1
IIGN	Ignalina	81.16	325	*e*P	P	00 39 21.1	+0.3
ISAL	Salakas	81.17	325	*e*P	P	00 39 21.0	+0.1
MILM	Milestii Mici	81.20	316	⇓P	P	00 39 20.9	-0.4
SORM	Soroca	81.28	317	⇑P	P	00 39 21.2	-0.4
TLCR		81.53	314	⇑P	P	00 39 23.3	+0.3
MTSE	Matsula	81.73	328	*e*P	P	00 39 21.4	-2.3
TPGR	Topolog	81.87	314	⇑P	P	00 39 25.0	+0.1
GIUM	Giurgiulesti	81.89	315	⇓P	P	00 39 25.4	+0.5
VASR	Vaslui	81.94	316	⇑P	P	00 39 25.4	+0.2
TIRR	Tirgusor	81.95	314	⇑P	P	00 39 25.0	-0.1
TIRR	Tirgusor	81.95	314	P	P	00 39 25.1	-0.1
TIRR				pmax	pmax		
	comp=Z,51nm,0.9s						
TIRR	Tirgusor	81.95	314	P	P	00 39 25.1	-0.1
TIRR				IAmb	IAmb	00 39 26.2	
	comp=Z,51nm,0.9s						
IAS	Iasi	81.98	317	⇓P	P	00 39 25.3	0.0
CFR	Carcaliu	82.00	314	⇑P	P	00 39 25.4	-0.1
BIR	Birlad	82.13	316	⇓P	P	00 39 27.0	+0.8
ISK	Istanbul-Kandi	82.16	310	P	P	00 39 25.9	-0.5
HARR	Harsova	82.24	314	⇓P	P	00 39 27.2	+0.5
EPYK	Eagle Plains	82.37	23	P	P	00 39 27.3	+0.3
	baz=287						
EPYK	Eagle Plains	82.37	23	P	P	00 39 27.1	0.0
ELL	Elmali	82.37	306	P	P	00 39 27.9	+0.1
ELL				pmax	pmax		
	comp=Z,171nm,0.6s						
ELL	Elmali	82.37	306	P	P	00 39 27.9	+0.1
PABE	Paberze	82.38	325	*e*P	P	00 39 27.6	+0.4
ICOR	Ion Corvin	82.45	313	⇑P	P	00 39 28.7	+0.8
PETR	Petresti	82.51	315	⇓P	P	00 39 28.7	+0.6
N2IH	Innhavet	82.62	338	*e*P	P	00 39 27.9	-0.3
ODBI	Odobesti	82.62	315	⇓P	P	00 39 29.5	+0.8
TESR	Tescani	82.74	316	⇑P	P	00 39 29.5	+0.2
KSL	Kastellorizon	82.75	305	P	P	00 39 28.9	-0.7
VRI	Vrincioaia	82.82	315	⇑P	P	00 39 30.5	+0.7
PRAR	RASCA	82.84	317	⇓P	P	00 39 29.9	0.0
PLOR	Plostina	82.88	315	⇓P	P	00 39 30.9	+0.7
STEI	Steigen	82.88	338	⇑*i*P	P	00 39 29.1	-0.5
RASA	Rasa	82.89	314	⇑P	P	00 39 30.7	+0.6
BISRR	Bisoca	82.91	315	⇑P	P	00 39 31.7	+1.4
INK	Inuvik	82.93	21	P	P	00 39 29.9	+0.1
	comp=Z,49nm,0.7s,baz=300,slow=5.0,SNR=135						
INK				LR	LR	01 16 43.5	
	comp=Z,45nm,18.3s,baz=248,slow=36						
INK	Inuvik	82.93	21	P	P	00 39 29.8	0.0
INK				pmax	pmax		
	comp=Z,59nm,0.9s						
INK	Inuvik	82.93	21	P	P	00 39 29.8	0.0
INK				IAmb	IAmb	00 39 30.9	
	comp=Z,59nm,0.8s						
N2ST	Straumen	82.95	338	*e*P	P	00 39 29.5	-0.4
KULA	Kula-Manisa	82.98	308	P	P	00 39 30.4	-0.5
BIZ	Bicaz	83.01	317	⇑P	P	00 39 31.0	+0.3
N2TV	T¥rnvik	83.05	338	*e*P	P	00 39 29.9	-0.5
FETY	Fethiye	83.05	306	P	P	00 39 30.8	-0.4
FAUS	Fauske	83.05	338	*e*P	P	00 39 29.8	-0.6
MANT	Manisa	83.07	308	P	P	00 39 31.2	-0.3
ISR	Istrita	83.11	315	⇑P	P	00 39 32.1	+0.7
N2VI	Vinje	83.12	339	*e*P	P	00 39 30.2	-0.6
NEHR	Nehoiu	83.22	315	⇑P	P	00 39 32.8	+1.0
AAL	Aland	83.25	330	*e*P	P	00 39 30.6	-1.1
PBUR	Paburge	83.38	326	*e*P	P	00 39 32.5	+0.1
SULR		83.41	314	⇓P	P	00 39 34.0	+1.2
LOF	Lofoten	83.41	339	*e*P	P	00 39 30.8	-1.6

OZUR		83.41	316	⇑P	P	00 39 33.4	+0.5
MLR	Muntele Rosu	83.44	315	P	P	00 39 33.3	+0.2
	comp=Z,28nm,0.6s,baz=346,slow=3.7,SNR=119						
MLR				PP	PP	00 42 51.7	+4.9
	comp=Z,4.8nm,0.9s,baz=94,slow=10.0,SNR=3.3						
MLR	Muntele Rosu	83.44	315	⇓P	P	00 39 33.7	+0.5
MLR	Muntele Rosu	83.44	315	P	P	00 39 33.4	+0.2
MLR				pmax	pmax		
	comp=Z,46nm,0.8s						
MLR	Muntele Rosu	83.44	315	P	P	00 39 33.4	+0.2
MLR				IAmb	IAmb	00 39 34.5	
	comp=Z,46nm,0.8s						
BURAR	Bucovina Array	83.45	317	⇑P	P	00 39 33.8	+0.7
BURAR	Bucovina Array	83.45	317	P	P	00 39 33.0	-0.1
BUR08	Bucovina Ar. S	83.45	317	P	P	00 39 33.4	+0.3
BUR08				IAmb	IAmb	00 39 34.4	
	comp=Z,42nm,0.7s						
YER	Yerkesik	83.57	307	P	P	00 39 33.8	-0.1
NBB05	Inndyr	83.63	338	eP	P	00 39 32.6	-0.8
LVV	L'vov	83.69	320	eP	P	00 39 34.3	+0.2
EDRB	Edirne	83.69	311	P	P	00 39 34.3	0.0
SGRR	Singureni	83.71	314	⇓P	P	00 39 35.1	+0.8
DOPR	Dopca	83.71	316	⇑P	P	00 39 34.9	+0.5
MOR8	Moi Rana	83.78	337	eP	P	00 39 32.8	-1.4
KMBO	Kilima Mbogo	83.83	267	P	P	00 39 37.6	+1.8
	comp=Z,13nm,0.9s,baz=59,slow=6.8,SNR=26						
KMBO	Kilima Mbogo	83.83	267	i P	P	00 39 37.9	+2.1
KMBO				pmax	pmax		
	comp=Z,13nm,0.9s						
ARG	Arkhangelos	83.89	306	P	P	00 39 35.5	+0.1
VOIR		84.07	315	⇑P	P	00 39 36.0	-0.2
ARCR	ARCALIA	84.14	317	⇑P	P	00 39 37.4	+0.9
KONS	Konsvik	84.16	337	eP	P	00 39 35.6	-0.5
STOK	Stokkvaagen	84.26	337	eP	P	00 39 35.9	-0.7
COPA	Copaceanca	84.26	314	⇓P	P	00 39 37.5	+0.4
STFAR	Stefanesti-Arg	84.27	315	⇑P	P	00 39 37.8	+0.6
HUMR	Humele	84.33	314	⇑P	P	00 39 37.4	-0.1
BODT	Bodrum	84.34	307	P	P	00 39 37.3	-0.4
ARR	Arges	84.37	315	⇑P	P	00 39 38.1	+0.4
ENEZ	Enez	84.38	310	P	P	00 39 37.4	-0.4
ALN	Alexandroupoli	84.42	311	P	P	00 39 37.2	-0.8
ALN	Alexandroupoli	84.42	311	P	P	00 39 37.7	-0.3
ALN				pmax	pmax		
	comp=Z,38nm,0.8s						
ALN	Alexandroupoli	84.42	311	P	P	00 39 37.7	-0.3
ALN				IAmb	IAmb	00 39 38.6	
	comp=Z,38nm,0.8s						
BMR	Baia Mare	84.56	318	⇓P	P	00 39 39.6	+1.0
SMG	Samos	84.56	307	P	P	00 39 38.8	0.0
KWP	Kalwaria Pacla	84.57	320	eP	P	00 39 38.9	+0.3
KWP	Kalwaria Pacla	84.57	320	P	P	00 39 38.9	+0.3
KWP				pmax	pmax		
	comp=Z,125nm,1.1s						
KWP	Kalwaria Pacla	84.57	320	P	P	00 39 38.9	+0.3
NISR	Nisiros	84.59	306	P	P	00 39 38.5	-0.4
PRK	Paraskevi	84.64	309	P	P	00 39 39.5	+0.4
GADA	Gvkgeada	84.70	310	P	P	00 39 38.6	-0.8
CJR	Cluj-Napoca	84.74	317	⇑P	P	00 39 40.7	+1.1
RDO	Rodhopi	84.74	311	P	P	00 39 39.1	-0.5
KARP	Karpathos	84.80	305	P	P	00 39 40.3	+0.2
KARP	Karpathos	84.80	305	P	P	00 39 40.6	+0.5
VLAD	Vladila	84.86	314	⇑P	P	00 39 40.7	+0.6
SMTH	Samothraki Isl	84.91	310	P	P	00 39 39.5	-1.0
LOT	Lotru	84.94	315	⇓P	P	00 39 41.0	+0.4
WHY	Whitehorse	84.94	29	P	P	00 39 41.4	+1.0
SIGR	SIGRI	84.96	309	P	P	00 39 42.8	+2.1
KOLS	Kolonicke sedl	85.03	319	eP	P	00 39 41.1	+0.2
KOLS				pmax	pmax		
	comp=Z,51nm,1.7s						
KOLS	Kolonicke sedl	85.03	319	eP	P	00 39 41.1	+0.2
UZH	Uzhgorod	85.09	319	⇑iP	P	00 39 41.8	+0.6
EUNU	Eureka	85.13	5	P	P	00 39 41.1	+0.2
BEL	Belsk	85.15	322	eP	P	00 39 41.8	+0.4
LIA	Limnos Island	85.30	310	P	P	00 39 41.3	-1.1
DRGR		85.31	317	⇑P	P	00 39 42.9	+0.5
NSS	Namsos	85.34	336	eP	P	00 39 41.1	-1.0
DEV	Deva	85.42	316	⇓P	P	00 39 43.9	+1.0
THAS	Thassos island	85.47	311	P	P	00 39 42.5	-0.7
KAVA	Kavala	85.53	311	P	P	00 39 42.9	-0.6
SRE	Strehaia	85.53	315	⇑P	P	00 39 43.8	+0.4
CRVS	Cervenica-Dubn	85.55	319	eP	P	00 39 44.3	+0.8
CRVS				pmax	pmax		
	comp=Z,174nm,1.1s						
CRVS	Cervenica-Dubn	85.55	319	eP	P	00 39 44.3	+0.8
BAIL	Bailesti	85.60	314	⇓P	P	00 39 44.9	+1.1
GZR	Gura Zlata	85.63	316	⇑P	P	00 39 44.1	+0.1
C36M	Paulatuk	85.64	19	P	P	00 39 43.5	+0.1
	baz=298						
C36M	Paulatuk	85.64	19	P	P	00 39 43.6	+0.1
ZKR	Zakros	85.66	305	P	P	00 39 44.5	+0.2
ANAF	Anafi Island	85.71	306	P	P	00 39 43.5	-1.1
APE	Apeiranthos	85.72	307	P	P	00 39 43.1	-1.6
STIA	Sitia Lasithi	85.73	305	P	P	00 39 45.0	+0.3
PUNG	Punghina	85.81	314	⇓P	P	00 39 45.6	+0.7
NVR	Nevrokopi	85.91	311	P	P	00 39 44.5	-1.0
THR8	Santorini-Mono	85.93	306	P	P	00 39 44.1	-1.5
SANT	Santorini	85.95	306	P	P	00 39 44.1	-1.7
SANT	Santorini	85.95	306	P	P	00 39 44.8	-0.9
THR7	Fira-Santorini	85.96	306	P	P	00 39 44.8	-1.0
SNT1	Gialos, Santor	85.96	306	P	P	00 39 44.5	-1.3
CMBO	Columbo, Santo	85.97	306	P	P	00 39 44.6	-1.2
THR3	Thira Island,	85.99	306	P	P	00 39 44.9	-1.0
SNT5	Nea Kammeni, S	85.99	306	P	P	00 39 44.8	-1.1
THR6	Thira Island,	86.00	306	P	P	00 39 44.9	-1.1
HERR	Herculane	86.01	315	⇓P	P	00 39 46.3	+0.4
SAP3	Santorini-Thir	86.02	306	P	P	00 39 44.9	-1.2
THR5	Thira Island,	86.03	306	P	P	00 39 45.0	-1.1
VTS	Vitosha	86.04	313	⇑P	P	00 39 46.4	+0.2
OUR	Ouranopolis	86.08	310	P	P	00 39 45.4	-0.9
NPS	Neapolis	86.10	305	P	P	00 39 46.4	-0.1
NIE	Niedzica	86.14	320	eP	P	00 39 47.4	+1.0
SRS	Serrai	86.17	311	P	P	00 39 45.4	-1.3
OJC	Ojcow	86.21	321	eP	P	00 39 46.9	+0.2
OJC	Ojcow	86.21	321	P	P	00 39 47.0	+0.2
OJC				pmax	pmax		
	comp=Z,63nm,0.8s						
OJC	Ojcow	86.21	321	P	P	00 39 47.0	+0.2
OJC				IAmb	IAmb	00 39 48.0	
	comp=Z,63nm,0.8s						
KECS	Kecovo	86.29	319	eP	P	00 39 47.7	+0.6
KECS				pmax	pmax		
	comp=Z,22nm,0.7s						
KECS	Kecovo	86.29	319	eP	P	00 39 47.7	+0.6
BZS	Buzias	86.35	316	⇓P	P	00 39 47.3	-0.2
DAG	Danmarks Havn	86.39	351	i P	P	00 39 45.6	-1.4
DAG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DAG	Danmarks Havn	86.39	351	i P	P	00 39 45.6	-1.4
	comp=Z,9.9nm,0.5s						
DAG	Danmarks Havn	86.39	351	i P	P	00 39 45.7	-1.4
DAG				IAmb	IAmb	00 39 46.8	
	comp=Z,9.9nm,0.5s						
PAIG	Paliouri	86.41	310	P	P	00 39 46.6	-1.3
PLG	Polygyros	86.47	311	P	P	00 39 47.0	-1.2
MDVR	Moldovita	86.52	315	⇑P	P	00 39 48.9	+0.5
TBLU	Trondheim	86.55	335	eP	P	00 39 47.8	-0.3
KNT	Kendrikon	86.66	311	P	P	00 39 48.1	-1.0
MHLO	Agia Marina, M	86.69	307	P	P	00 39 47.9	-1.5
LANS	Liptovska Anna	86.74	320	eP	P	00 39 50.5	+1.1
LANS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LANS	Liptovska Anna	86.74	320	eP	P	00 39 50.5	+1.1
AMBH	Ambrzfalva	86.74	317	eP	P	00 39 50.2	+0.8
NC405	NORSAR Array S	86.78	333	P	P	00 39 49.0	-0.3
GKP	Gorka Klasztor	86.79	324	eP	P	00 39 49.0	-0.4
GKP	Gorka Klasztor	86.79	324	eP	P	00 39 50.2	+0.8
SIVA	Sivas	86.80	305	P	P	00 39 49.9	0.0
PSZ	Piszkesteto	86.83	319	⇑P	P	00 39 50.1	+0.2
PSZ	Piszkesteto	86.83	319	eP	P	00 39 49.8	-0.1
PSZ	Piszkesteto	86.83	319	P	P	00 39 49.4	-0.5
PSZ				pmax	pmax		
	comp=Z,20nm,1.1s						
PSZ	Piszkesteto	86.83	319	P	P	00 39 49.4	-0.5
VAY	Valandovo	86.86	312	i P	P	00 39 49.3	-0.8
NC602	NORSAR Array S	87.01	332	e	P	00 39 48.1	-2.2
NB2	NORSAR Subarra	87.03	333	P	P	00 39 49.1	-1.5
	comp=Z,29nm,0.9s,baz=66,slow=4.6						
NB2	NORSAR Subarra	87.03	333	P	P	00 39 49.1	-1.5
	baz=66,slow=4.6						
NOA	NORSAR Array B	87.03	333	P	P	00 39 49.3	-1.2
	comp=Z,22nm,0.9s,baz=67,slow=4.5,SNR=46						
NOA				PP	PP	00 43 10.4	-4.9
	comp=Z,1.4nm,0.7s,baz=70,slow=8.4,SNR=5.1						
NOA				LR	LR	01 21 11.2	
	comp=Z,43nm,19.3s,baz=80,slow=37						
STIP	Stip	87.03	312	i P	P	00 39 49.1	-1.8
VILL	Villia	87.15	308	P	P	00 39 49.2	-2.4
VAM	Vamos	87.18	306	P	P	00 39 51.5	-0.2
ATAL	Atalanti	87.23	309	P	P	00 39 49.8	-2.1
LIT	Litokhoron	87.25	311	P	P	00 39 50.7	-1.3
LIT				pmax	pmax		
	comp=Z,59nm,1.4s						
LIT	Litokhoron	87.25	311	P	P	00 39 50.7	-1.3
LIT				IAmb	IAmb	00 39 51.7	
	comp=Z,59nm,1.4s						
VYHS	Vyhne	87.33	319	eP	P	00 39 52.2	0.0
VYHS				pmax	pmax		
	comp=Z,21nm,1.4s						
VYHS	Vyhne	87.33	319	eP	P	00 39 52.2	0.0
IMMV	Iera Moni Meta	87.34	306	P	P	00 39 52.4	-0.1
GVDS	Gavdos	87.41	305	P	P	00 39 52.5	-0.4
GVD	Gavdhos	87.42	305	P	P	00 39 52.6	-0.3
BSD	Bornholm Skovb	87.44	326	eP	P	00 39 52.0	-0.5
BSD	Bornholm Skovb	87.44	326	eP	P	00 39 51.6	-0.9
BSD	Bornholm Skovb	87.44	326	i P	P	00 39 51.6	-0.9
BSD	Bornholm Skovb	87.44	326	eP	P	00 39 51.7	-0.9
KRND	KRANIDI	87.48	308	P	P	00 39 50.8	-2.3
SKO	Skopje	87.49	313	i P	P	00 39 53.2	+0.1
BUD	Budapest	87.52	318	eP	P	00 39 53.8	+0.7
DOMB	Dombas	87.56	334	eP	P	00 39 52.5	-0.5
OSL	Oslo	87.70	332	eP	P	00 39 53.6	-0.1
MORC	Moravsky Berou	87.73	321	⇑P	P	00 39 54.6	+0.5
MORC	Moravsky Berou	87.73	321	eP	P	00 39 54.3	+0.2
MORC				ePP	PP	00 43 25.2	+3.9
MORC	Moravsky Berou	87.73	321	P	P	00 39 54.1	0.0
MORC				pmax	pmax		
	comp=Z,38nm,1.4s						
MORC	Moravsky Berou	87.73	321	P	P	00 39 54.1	0.0
MORC				IAmb	IAmb	00 39 55.6	
	comp=Z,38nm,1.4s						
ANKY	Antikythira Is	87.77	306	P	P	00 39 53.6	-0.9
VLI	Veliai	87.82	307	P	P	00 39 52.6	-2.2
KTHA	Kythira Island	87.85	307	P	P	00 39 53.4	-1.5
FNA	Florina	87.88	311	P	P	00 39 53.6	-1.4
FNA				pmax	pmax		
	comp=Z,11nm,0.6s						
FNA	Florina	87.88	311	P	P	00 39 53.6	-1.4
SRO	Srobarova	87.88	319	eP	P	00 39 55.3	+0.5
SRO	Srobarova	87.88	319	eP	P	00 39 55.3	+0.5
KTHR	Kythira	87.89	307	P	P	00 39 53.9	-1.2
DIVS	Divibare	87.90	315	P	P	00 39 54.9	-0.2
JAVC	Velka Javorina	87.95	320	eP	P	00 39 56.5	+1.3
JAVC				ePP	PP	00 43 28.3	+5.2
MOL	Molde	87.96	335	eP	P	00 39 54.2	-0.6
KALE	Kalithea	87.98	309	P	P	00 39 53.4	-2.2
SERG	Sergoula	88.03	309	P	P	00 39 53.7	-2.1
CSKK	Cskako	88.05	318	eP	P	00 39 55.3	-0.3
DLBC	Dease Lake	88.06	30	P	P	00 39 56.7	+1.2
	comp=Z,4.6nm,0.7s,baz=298,slow=5.0,SNR=7.6						
DLBC				LR	LR	01 22 47.5	
	comp=Z,25nm,19.0s,baz=278,slow=38						
DLBC	Dease Lake	88.06	30	P	P	00 39 56.6	+1.1
KLV	Kalavryta, Ach	88.06	309	P	P	00 39 54.3	-1.7
VLX	Vlachokerasia	88.08	308	P	P	00 39 54.4	-1.7
ANX	Ano Chora	88.09	309	P	P	00 39 54.6	-1.5
KRLC	Kraliky	88.10	321	eP	P	00 39 55.8	-0.1
KRLC				e		00 43 20.5	
KRLC	Kraliky	88.10	321	eP	P	00 39 55.8	-0.1
KRLC				ePP	PP	00 43 20.5	-3.7
TRIP	Tripoli	88.12	308	P	P	00 39 55.0	-1.2
KSP	Ksiaz	88.14	322	eP	P	00 39 56.4	+0.4
MORH	Mrgy, Hungar	88.16	317	eP	P	00 39 55.7	-0.4
OSTC	Ostas	88.28	322	eP	P	00 39 56.6	-0.1
DPC	Dobruska-Polom	88.29	322	eP	P	00 39 56.9	+0.2
DPC				e		00 43 23.5	
DPC	Dobruska-Polom	88.29	322	eP	P	00 39 56.9	+0.2
DPC				ePP	PP	00 43 23.5	-2.2
KONO	Kongsberg	88.34	332	eP	P	00 39 56.0	-0.7
AKN	Aaknes	88.37	335	eP	P	00 39 56.4	-0.4
CHVC	Chvalec	88.37	322	eP	P	00 39 56.8	-0.3
UPC	Upice	88.42	322	eP	P	00 39 57.2	-0.1
UPC	Upice	88.42	322	eP	P	00 39 57.2	-0.1
DRO	Drossia	88.42	309	P	P	00 39 56.4	-1.2
TIH	Tihany	88.44	318	eP	P	00 39 56.9	-0.5
VRAC	Vranov	88.47	321	P	P	00 39 57.8	+0.2
	comp=Z,9.3nm,0.6s,baz=56,slow=6.0,SNR=16						
VRAC	Vranov	88.47	321	⇓P	P	00 39 58.5	+0.9
VRAC	Vranov	88.47	321	eP	P	00 39 57.8	+0.2
VRAC				ePP	PP	00 43 30.4	+3.2
ITM	Ithomi	88.47	308	P	P	00 39 56.5	-1.4
SKAR	Skarslia	88.48	333	eP	P	00 39 57.4	0.0
AMT	Artemida-Makis	88.54	308	P	P	00 39 57.1	-1.1
DBG	Daneborg	88.57	350	i P	P	00 39 55.9	-1.6
RLS	Riolos of Patr	88.58	309	P	P	00 39 57.5	-0.8
MPLH	Magyarpolny	88.58	318	eP	P	00 39 57.9	-0.2
KRUC	Moravsky	88.68	320	eP	P	00 39 58.9	+0.4
KRUC				ePP	PP	00 43 32.1	+3.3
PYL	PYLOS	88.70	308	P	P	00 39 57.3	-1.6
RES	Resolute Bay	88.84	9	P	P	00 39 58.6	-0.2
	comp=Z,38nm,0.8s,baz=308,slow=5.6,SNR=122						
RES	Resolute Bay	88.84	9	P	P	00 39 58.4	-0.3
RES				pmax	pmax		
	comp=Z,39nm,0.8s						
RES	Resolute Bay	88.84	9	P	P	00 39 58.4	-0.3
RES				IAmb	IAmb	00 39 59.7	
	comp=Z,39nm,0.8s						
PDG	Podgorica	88.91	313	⇑P	P	00 39 59.9	+0.2
PDG	Podgorica	88.91	313	P	P	00 39 59.6	-0.2
PDG				IAmb	IAmb	00 40 00.2	
	comp=Z,55nm,1.0s						
RUE	Ruedersdorf	89.03	324	eP	P	00 40 00.2	+0.1
	comp=Z,56nm,0.9s,baz=66,slow=4.8						
HYA	Hoyanger	89.18	334	eP	P	00 39 59.9	-0.7
PVCC	Panska Ves	89.28	322	eP	P	00 40 01.2	-0.1
PVCC	Panska Ves	89.28	322	eP	P	00 40 01.2	-0.1
CONA	Conrad Observa	89.40	319	eP	P	00 40 01.7	-0.3
	comp=Z,3.2nm,0.9s						
CONA				eP	PP	00 43 33.2	-1.5
	comp=Z,16nm,1.6s						
PRU	Pruhonice	89.49	322	eP	P	00 40 02.1	-0.2
PRU	Pruhonice	89.49	322	eP	P	00 40 02.1	-0.2
BRG	Berggiesshubel	89.52	323	⇑iP	P	00 40 02.5	+0.1
BRG				Amp		00 40 04.4	
	comp=Z,28nm,1.2s						
BRG	Berggiesshubel	89.52	323	⇑iP	P	00 40 02.5	+0.1
BRG				pmax	pmax		
	comp=Z,28nm,1.2s						
BRG	Berggiesshubel	89.52	323	⇑iP	P	00 40 02.5	+0.1
BRG				Amp		00 40 04.4	
	comp=Z,28nm,1.2s						
BRG	Berggiesshubel	89.52	323	eP	P	00 40 02.6	+0.1
	comp=Z,28nm,1.2s,baz=66,slow=4.8						
PRA	Prague	89.52	322	eP	P	00 40 02.5	0.0
PRA	Prague	89.52	322	eP	P	00 40 02.5	0.0
TULEG	Thule	89.55	2	P	P	00 40 01.6	-0.5
TULEG	Thule	89.55	2	i P	P	00 40 01.5	-0.6
TULEG				IAmb	IAmb	00 40 04.0	
	comp=Z,8.2nm,0.7s						
TULEG				i		00 40 59.7	
ODD1	Odda	89.57	333	eP	P	00 40 01.8	-0.7
SUE	Sulen	89.84	334	e	P	00 39 55.5	-8.1
ARSA	Arzberg	89.85	319	eP	P	00 40 03.8	-0.3
	comp=Z,5.5nm,0.7s						
ARSA				eP	PP	00 43 37.9	-0.3
	comp=Z,7.5nm,1.4s						
FBE	Freiberg	89.85	323	eP	P	00 40 04.3	+0.3
	comp=Z,26nm,1.0s,baz=66,slow=4.8						
BLS5	Blasjo	89.88	332	eP	P	00 40 04.1	+0.2
CLL	Collm	89.91	323	⇑iP	P	00 40 03.8	-0.4
	comp=Z,19nm,1.1s						
CLL				e		00 41 10.0	
CLL				e		00 43 32.0	
CLL				ePP	PP	00 43 40.0	+1.5
CLL	Collm	89.91	323	⇑iP	P	00 40 03.8	-0.4
CLL				pmax	pmax		
	comp=Z,19nm,1.1s						
CLL	Collm	89.91	323	P	P	00 40 03.4	-0.8
CLL	Collm	89.91	323	eP	P	00 40 03.9	-0.4
	comp=Z,19nm,1.1s,baz=66,slow=4.8						
PBCC	Pribram	89.93	322	eP	P	00 40 04.1	-0.3
PBCC				ex	x	00 40 12.3	
MBAR	Mbarara	90.02	269	αeP	P	00 40 04.2	-1.5
MBAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MBAR	Mbarara	90.02	269	P	P	00 40 06.2	+0.5
SOKA	Soboth	90.36	318	eP	P	00 40 06.0	-0.6
	comp=Z,8.3nm,0.9s						
SOKA				eP	PP	00 43 40.6	-1.8
	comp=Z,8.5nm,1.5s						
KHC	Kasperske Hory	90.39	321	ceP	P	00 40 06.4	-0.2
KHC				pmax	pmax		
	comp=Z,37nm,1.5s						
KHC	Kasperske Hory	90.39	321	eP	P	00 40 06.1	-0.5
KHC				ePP	PP	00 43 43.8	+1.4
KHC	Kasperske Hory	90.39	321	P	P	00 40 06.4	-0.2
GEC2	GERESS Array S	90.42	321	P	P	00 40 06.8	0.0
GEC2	GERESS Array S	90.42	321	eP	P	00 40 06.8	0.0
	comp=Z,28nm,1.4s,baz=66,slow=4.8						
GERES	GERESS Array B	90.42	321	P	P	00 40 06.8	0.0
	comp=Z,4.9nm,0.7s,baz=71,slow=4.9,SNR=47						
GERES				PP	PP	00 43 45.6	+2.9
	comp=Z,1.0nm,0.9s,baz=68,slow=7.4,SNR=4.6						
MOA	Molln	90.43	320	i P	P	00 40 06.9	+0.1
	comp=Z,20nm,0.8s,SNR=8.7						
MOA				eP	PP	00 43 42.5	-0.3
	comp=Z,13nm,2.1s						
TANN	Tannenbergstha	90.57	323	eP	P	00 40 07.2	-0.2
	comp=Z,18nm,1.2s,baz=66,slow=4.8						
NKC	Novy Kostel	90.65	322	eP	P	00 40 07.8	+0.1
NKC	Novy Kostel	90.65	322	eP	P	00 40 07.8	+0.1
NEUB	Neuenburg	90.66	323	eP	P	00 40 07.7	-0.1
	comp=Z,29nm,1.2s,baz=66,slow=4.8						
GUNZ	Gunzen	90.67	323	eP	P	00 40 07.9	0.0
	comp=Z,29nm,1.2s,baz=66,slow=4.8						
WERN	Wernitzgruen	90.67	322	eP	P	00 40 08.0	+0.2
	comp=Z,20nm,1.2s,baz=66,slow=4.8						
PLN	Plauen	90.72	323	eP	P	00 40 08.1	0.0
	comp=Z,18nm,1.4s,baz=66,slow=4.8						
OBKA	Obir	90.73	318	eP	P	00 40 07.9	-0.5
	comp=Z,9.8nm,0.9s						
WET	Wettzell	90.81	321	eP	P	00 40 08.8	+0.3
	comp=Z,19nm,1.3s,baz=66,slow=4.8						
LJU	Ljubljana	90.92	318	eP	P	00 40 08.3	-0.7
ROTZ	Rotzenmuhle	90.97	322	eP	P	00 40 09.5	+0.3
	comp=Z,24nm,1.2s,baz=66,slow=4.8						
MOX	Moxa	90.98	323	eP	P	00 40 09.2	-0.1
	comp=Z,22nm,1.4s,baz=66,slow=4.8						
CEY	Cerknica	91.09	318	i P	P	00 40 09.7	-0.2
CLZ	Clausthal	91.21	324	eP	P	00 40 10.4	+0.1
	comp=Z,37nm,1.4s,baz=66,slow=4.8						
KBA	Koelnbreinsper	91.30	319	eP	P	00 40 10.2	-0.8
	comp=Z,9.5nm,0.9s						
KBA				eP	PP	00 43 48.2	-1.6
	comp=Z,6.6nm,1.4s						
ROBS	Robic	91.50	318	eP	P	00 40 10.7	-1.0
SGRT	San Giovanni R	91.60	314	P	P	00 40 11.7	-0.8
SGRT				IAmb	IAmb	00 40 12.2	
	comp=Z,32nm,0.9s						
ZOU	Zoufplan	91.73	319	P	P	00 40 12.2	-0.9
ZOU				IAmb	IAmb	00 41 18.9	
	comp=Z,32nm,1.7s						
TIP	Timpagrande	91.74	311	P	P	00 40 13.4	+0.3
TIP				IAmb	IAmb	00 40 14.2	
	comp=Z,29nm,1.2s						
ABTA	Abfaltersbach	91.95	319	eP	P	00 40 12.7	-1.3
	comp=Z,18nm,1.3s						
SCO	Scoresbysund	91.95	348	eP	P	00 40 11.4	-1.9
SCO	Scoresbysund	91.95	348	i P	P	00 40 11.4	-1.9
SCO	Scoresbysund	91.95	348	eP	P	00 40 11.4	-1.9
STAL	STALIGIAL	92.01	319	P	P	00 40 13.1	-1.0
FUR	Furstenfeldbru	92.17	321	eP	P	00 40 15.0	+0.2
	comp=Z,49nm,1.4s,baz=66,slow=4.8						
WTTA	Wattenberg	92.30	320	i P	P	00 40 15.2	-0.5
	comp=Z,47nm,1.2s,SNR=7.8						
WTTA				eP	PP	00 43 56.8	-0.9
	comp=Z,14nm,1.4s						
WATA	Walderalm	92.31	320	i P	P	00 40 14.8	-0.8
	comp=Z,29nm,1.4s,SNR=5.4						
WATA				eP	PP	00 43 57.0	-0.8
	comp=Z,12nm,1.4s						
SQTA	Sankt Quirin	92.59	320	i P	P	00 40 16.2	-0.8
	comp=Z,46nm,1.6s,SNR=8.6						
SQTA				eP	PP	00 43 58.5	-1.4
	comp=Z,11nm,1.7s						
MOTA	Moosalm	92.60	320	i P	P	00 40 16.4	-0.6
	comp=Z,31nm,1.1s,SNR=7.4						
MOTA				eP	PP	00 44 00.6	+0.6
	comp=Z,16nm,1.5s						
SUMG	Summit	92.60	354	P	P	00 40 16.3	-0.6
SUMG				pmax	pmax		
	comp=Z,18nm,1.0s						
SUMG	Summit	92.60	354	P	P	00 40 16.3	-0.6
SUMG				IAmb	IAmb	00 40 18.0	
	comp=Z,18nm,1.0s						
SUMG	Summit	92.60	354	i P	P	00 40 16.2	-0.6
	comp=Z,44nm,1.0s						
SUMG	Summit	92.60	354	i P	P	00 40 16.3	-0.6
SUMG				IAmb	IAmb	00 40 17.8	
	comp=Z,44nm,1.0s						
YKA	Yellowknife Ar	92.61	22	P	P	00 40 16.9	+0.4
	comp=Z,8.1nm,0.5s,baz=321,slow=3.5,SNR=221						
YKA				PKKP	PKKPdf	00 57 27.6	+0.5
	comp=Z,0.2nm,0.4s,baz=121,slow=3.8,SNR=5.9						
YKA				SKKP	SKKPdf	01 00 50.5	+2.1
	comp=Z,0.2nm,0.6s,baz=120,slow=3.7,SNR=5.4						
CEL	Celeste	92.69	310	P	P	00 40 17.5	0.0
RETA	Reutte	92.76	320	eP	P	00 40 16.8	-0.8
	comp=Z,5.0nm,0.9s						
RETA				eP	PP	00 43 59.6	-1.5
	comp=Z,7.6nm,1.2s						
CTI	Castel Tesino	92.77	319	P	P	00 40 17.2	-0.6
CTI				pmax	pmax		
	comp=Z,16nm,1.2s						
CTI	Castel Tesino	92.77	319	P	P	00 40 17.2	-0.6
INTR	Introdacqua	92.80	314	P	P	00 40 18.1	+0.2
INTR				IAmb	IAmb	00 40 37.6	
	comp=Z,25nm,1.2s						
FETA	Feichten	92.97	320	i P	P	00 40 18.6	-0.1
	comp=Z,28nm,1.1s,SNR=8.0						
FETA				eP	PP	00 44 02.5	-0.4
	comp=Z,13nm,1.3s						
MURB	Monte Urbino	93.27	316	P	P	00 40 20.7	+0.6
MURB				IAmb	IAmb	00 40 22.1	
	comp=Z,23nm,0.8s						
DAVA	Damuels	93.39	320	eP	P	00 40 20.4	-0.2
	comp=Z,7.5nm,0.8s						
DAVA				eP	PP	00 44 05.9	-0.3
	comp=Z,5.2nm,0.9s						
DAVOX	Davos/Dischmat	93.60	320	P	P	00 40 21.6	-0.1
	comp=Z,12nm,0.9s,baz=17,slow=2.9,SNR=17						
PPT	Papeete	93.93	107	LR	LR	01 15 41.6	
	comp=Z,25nm,20.9s,baz=206,slow=31						
RAFF	Raffo Rosso	94.19	310		P	00 40 25.1	+0.8
MEM	Membach	94.22	324	dP	P	00 40 23.9	-0.3
VNDA	Vanda	94.26	172	P	P	00 40 23.9	+0.2
	comp=Z,1.0nm,0.8s,baz=335,slow=6.3,SNR=5.4						
VNDA				PP	PP	00 44 10.1	-2.5
	comp=Z,1.0nm,0.8s,baz=329,slow=8.7,SNR=5.7						
VNDA				LR	LR	01 25 43.8	
	comp=Z,41nm,18.0s,baz=328,slow=37						
VNDA	Vanda	94.26	172	P	P	00 40 23.9	+0.2
WLF	Walferdange	94.57	324	dP	P	00 40 26.6	+0.8
BGES	Gesves	94.84	325	dP	P	00 40 26.5	-0.5
DOU	Dourbes	95.25	324	dP	P	00 40 28.2	-0.7
EKA	Eskdalemuir Ar	96.45	331	P	P	00 40 33.1	-1.1
	comp=Z,0.7nm,0.5s,baz=100,slow=9.5,SNR=7.3						
EKA				PP	PP	00 44 26.2	-3.1
	comp=Z,2.6nm,1.0s,baz=54,slow=8.8,SNR=3.9						
NEW	Newport	99.71	35	Pdiff	Pdif	00 40 49.5	+0.4
	baz=304						
J05D	Fort Rock, OR	99.86	41	Pdiff	Pdif	00 40 51.4	+1.3
	baz=300						
NVAR	Mina Array Bea	104.23	44	Pdiff	Pdif	00 41 09.9	+0.2
	comp=Z,0.6nm,0.7s,baz=287,slow=6.2,SNR=4.2						
NVAR				PP	PP	00 45 28.2	-0.8
	comp=Z,0.7nm,0.8s,baz=270,slow=9.9,SNR=5.0						
ESDC	Sonseca Array	105.87	319	PP	PP	00 45 40.2	-0.5
	comp=Z,3.8nm,1.1s,baz=48,slow=8.3,SNR=7.9						
PDAR	Pinedale Array	107.24	36	Pdiff	Pdif	00 41 26.1	+3.1
	comp=Z,0.2nm,0.5s,baz=348,slow=3.8,SNR=2.3						
PDAR				PKiKP	PKiKP	00 45 30.9	-0.3
	comp=Z,0.2nm,0.4s,baz=289,slow=2.8,SNR=4.6						
ECSD	EROS Data Cent	113.32	29	PKiKP	PKiKP	00 45 41.7	-0.7
	baz=320						
TORD	Torodi Ar. Bea	113.79	291	PKiKP	PKiKP	00 45 43.0	-1.0
	comp=Z,0.5nm,0.4s,baz=66,slow=2.3,SNR=5.2						
TORD				PP	PP	00 46 35.6	-3.2
	comp=Z,1.8nm,0.8s,baz=56,slow=6.9,SNR=4.1						
TORD				PKKPbc	PKKPab	00 56 34.0	-0.8
	comp=Z,1.1nm,0.7s,baz=246,slow=3.1,SNR=3.7						
ANMO	Albuquerque	114.02	41	⇑iPKIKP	PKiKP	00 45 45.4	+1.1

ANMO				pmax	pmax		
	comp=Z,9.0nm,2.5s						
VNA2	Neumayer--Watz	114.97	197	PKiKP	PKPdf	00 45 45.0	+0.3
	baz=38,slow=0.8						
VNA3	Neumayer Olymp	115.42	196	PKiKP	PKiKP	00 45 45.0	-0.5
MNTX	Cornudas Mount	116.75	43	P	PKiKP	00 45 49.9	+0.5
	baz=309						
JFWS	Jewell Farm	116.76	25	P	PKPdf	00 45 48.2	-0.9
	baz=326						
LATQ	La Tuque	117.82	10	P	PKPdf	00 45 50.5	-0.4
	baz=345						
WMOK	Wichita Mounta	118.85	37	P	PKPdf	00 45 52.8	-0.5
	baz=315						
TXAR	Lajitas Array	119.38	44	PKP	PKiKP	00 45 54.8	+0.1
	comp=Z,1.5nm,0.4s,baz=156,slow=0.4,SNR=56						
TXAR				PP	PP	00 47 16.9	-0.2
	comp=Z,0.6nm,0.9s,baz=309,slow=4.3,SNR=4.5						
TXAR	Lajitas Array	119.38	44		PKPdf	00 45 54.3	-0.3
TUL1	Leonard	119.67	34	P	PKPdf	00 45 54.4	-0.4
	baz=318						
ABTX	Abilene, Hawle	119.81	39	P	PKiKP	00 45 55.3	0.0
	baz=314						
SFIN	Lafayette	120.17	24	P	PKPdf	00 45 55.1	-0.5
	baz=328						
CCM	Cathedral Cave	120.29	29	P	PKPdf	00 45 55.4	-0.6
	baz=324						
PKME	Peaks-Kenny Pk	120.42	8	P	PKPdf	00 45 55.9	-0.1
	baz=349						
G63A	Kingsbury	120.53	8	P	PKPdf	00 45 55.9	-0.4
	baz=348						
G65A	Princeton	120.70	7	P	PKPdf	00 45 56.3	-0.2
	baz=351						
U40A	Yellville	120.86	31	P	PKPdf	00 45 56.7	-0.5
	baz=322						
H65A	Eastbrook	121.12	7	P	PKPdf	00 45 57.2	-0.2
	baz=350						
H66A	Whiting	121.14	7	P	PKPdf	00 45 57.0	-0.3
	baz=351						
JCT	Junction City	121.17	41	P	PKiKP	00 45 58.1	0.0
	baz=313						
J58A	Remsen	121.18	14	P	PKPdf	00 45 57.4	-0.1
	baz=342						
J59A	Piesco	121.25	13	P	PKPdf	00 45 57.6	-0.1
	baz=343						
M53A	WI Miller and	121.52	19	P	PKPdf	00 45 57.5	-0.8
	baz=336						
FCAR	Ozark Folk Cen	121.59	31		PKPdf	00 45 57.3	-1.2
M54A	Oil Creek Stat	121.76	18	P	PKPdf	00 45 58.4	-0.4
	baz=337						
L56A	Greenwood	121.77	16	P	PKPdf	00 45 58.3	-0.5
	baz=339						
K59A	Cooperstown	121.83	13	P	PKPdf	00 45 58.4	-0.5
	baz=342						
ACSO	Alum Creek Sta	121.84	21	P	PKPdf	00 45 58.5	-0.4
	baz=333						
MIAR	Mount Ida	121.88	33	P	PKiKP	00 45 59.2	-0.1
	baz=320						
L57A	Andrews Acres	122.08	15	P	PKPdf	00 45 58.8	-0.5
	baz=340						
BINY	Binghamton	122.11	15	P	PKPdf	00 45 59.2	-0.2
	baz=341						
DBIC	Dimbokro	122.15	287	PKP	PKPdf	00 45 59.7	-0.5
	comp=Z,1.1nm,0.4s,baz=55,slow=3.9,SNR=5.7						
KIC	Kosan Boka	122.15	287	*e*PKP1	PKPdf	00 45 59.4	-0.8
	comp=Z,7.5nm,0.6s						
M56A	Emporium	122.21	17	P	PKPdf	00 45 59.3	-0.3
	baz=338						
L58A	Harry Jones Me	122.29	14	P	PKPdf	00 45 59.7	-0.1
	baz=341						
TIC	Toumodi	122.31	287	*e*PKP1	PKPdf	00 45 59.6	-0.9
WCI	Wyandotte Cave	122.33	25	PKIKP	PKPdf	00 45 59.8	-0.1
WCI	Wyandotte Cave	122.33	25	P	PKPdf	00 45 59.2	-0.7
	baz=329						
WCI	Wyandotte Cave	122.33	25		PKPdf	00 45 59.8	-0.1
L59A	Walton	122.34	14	P	PKPdf	00 45 59.6	-0.3
	baz=342						
O53A	New Philadelph	122.42	20	P	PKPdf	00 45 59.5	-0.5
	baz=335						
LIC	Lamto	122.47	287	*e*PKP1	PKPdf	00 45 58.7	-2.1
	comp=Z,9.2nm,0.7s						
M57A	Sunshine Farm,	122.63	16	P	PKPdf	00 46 00.1	-0.3
	baz=339						
P52A	Corning	122.67	21	P	PKPdf	00 45 59.8	-0.8
	baz=334						
P52A	Corning	122.67	21		PKPdf	00 45 59.7	-0.8
N56A	West Decatur	122.70	17	P	PKPdf	00 46 00.2	-0.4
	baz=338						
M58A	Price’s Panora	122.77	15	P	PKPdf	00 46 00.4	-0.3
	baz=340						
M59A	Waymart	122.87	14	P	PKPdf	00 46 00.6	-0.2
	baz=341						
833A	Chaparral WMA,	122.89	42	P	PKiKP	00 46 01.5	+0.1
	baz=312						
N57A	Milroy	123.06	16	P	PKPdf	00 46 00.9	-0.4
	baz=339						
SSPA	Standing Stone	123.08	17	P	PKPdf	00 46 00.6	-0.7
	baz=338						
N58A	Sunbury	123.21	16	P	PKPdf	00 46 01.1	-0.4
	baz=340						
O56A	Blue Knob Stat	123.23	17	P	PKPdf	00 46 01.6	-0.1
	baz=338						
N59A	State Game Lan	123.38	15	P	PKPdf	00 46 01.6	-0.3
	baz=341						
WVT	Waverly	123.43	28	PKIKP	PKPdf	00 46 01.8	-0.3
WVT	Waverly	123.43	28	P	PKPdf	00 46 01.8	-0.3
	baz=326						
WVT	Waverly	123.43	28	PKPdf	PKPdf	00 46 01.8	-0.3
M61A	Granite Spring	123.47	13	P	PKPdf	00 46 01.9	-0.1
	baz=343						
O57A	Amberson	123.55	17	P	PKPdf	00 46 01.7	-0.5
	baz=339						
Q53A	Leroy	123.57	21	P	PKPdf	00 46 01.9	-0.3
	baz=334						
N60A	Cedar Hill Far	123.58	14	P	PKPdf	00 46 02.1	-0.1
	baz=342						
O58A	Lewisberry	123.82	16	P	PKPdf	00 46 02.3	-0.4
	baz=339						
O59A	Robesonia	123.84	15	P	PKPdf	00 46 02.6	-0.1
	baz=340						
P56A	Dayton Farm, R	123.85	18	P	PKPdf	00 46 02.6	-0.2
	baz=337						
HKT	Hockley	124.00	38*c*	*i*PKIKP	PKiKP	00 46 03.6	+0.1
OXF	Oxford	124.02	30	P	PKPdf	00 46 03.0	-0.2
	baz=324						
P57A	Homestead Farm	124.11	17	P	PKPdf	00 46 03.0	-0.3
	baz=338						
Q56A	Snyder Ridge,	124.17	19	P	PKPdf	00 46 03.0	-0.4
	baz=337						
P58A	Pank, Wackersv	124.31	17	P	PKPdf	00 46 03.6	0.0
	baz=339						
R54A	Victor	124.36	21	P	PKPdf	00 46 03.4	-0.5
	baz=334						
Q57A	Strasburg	124.41	18	P	PKPdf	00 46 03.7	-0.2
	baz=337						
P60A	Greenville	124.45	15	P	PKPdf	00 46 03.7	-0.2
	baz=341						
R55A	Marlinton	124.56	20	P	PKPdf	00 46 04.2	-0.1
	baz=335						
S54A	Dingess, Beckl	124.59	21	P	PKPdf	00 46 03.9	-0.4
	baz=334						
R56A	Bull Pasture M	124.68	19	P	PKPdf	00 46 03.8	-0.7
	baz=336						
Q58A	Fox Den Farm,	124.71	17	P	PKPdf	00 46 04.1	-0.3
	baz=338						
TZTN	Tazewell	124.88	24	P	PKPdf	00 46 04.8	-0.1
	baz=331						
R57A	Stanardsville	125.06	18	P	PKiKP	00 46 05.3	-0.2
	baz=337						
R58A	Rapidan	125.21	18	P	PKPdf	00 46 05.4	0.0
	baz=338						
R58B	Mineral	125.56	18	P	PKPdf	00 46 06.1	0.0
	baz=338						
T56A	Rocky Mt	125.73	20	P	PKPdf	00 46 06.3	-0.2
	baz=335						
S58A	Poland Farm, P	125.83	18	P	PKPdf	00 46 06.4	-0.2
	baz=338						
LRAL	Lakeview Retre	126.38	29	P	PKPdf	00 46 07.9	+0.1
	baz=326						
U57A	Blanch	126.50	20	P	PKPdf	00 46 07.7	-0.2
	baz=336						
T59A	Double "B" Far	126.57	18	P	PKiKP	00 46 08.5	-0.1
	baz=338						
V56A	Mocksville	126.67	21	P	PKPdf	00 46 08.4	+0.1
	baz=334						
V57A	Coltrane Farms	126.85	21	P	PKPdf	00 46 08.6	-0.1
	baz=335						
KMSC	Kings Mountain	126.96	23	P	PKPdf	00 46 08.6	-0.2
	baz=333						
V59A	Middlesex	127.47	19	P	PKPdf	00 46 09.7	-0.1
	baz=337						
JTS	Las Juntas de	145.05	48	PKIKP	PKPbc	00 46 41.4	-1.0
JTS	Las Juntas de	145.05	48		PKPbc	00 46 41.4	-1.0
SDDR	Presa de Saban	145.27	20		PKPab	00 46 43.2	0.0
DR12	Loma Pena Alta	146.05	17		PKPbc	00 46 45.3	-0.1
BANI	BANI	146.13	19		PKPab	00 46 46.6	+0.1
CRPR	Cabo Rojo, PR	147.38	14		PKPbc	00 46 49.2	0.0
CBYP	Canovanas	147.39	11		PKPbc	00 46 48.7	-0.6
CUPR	Culebra, Puert	147.46	10		PKPbc	00 46 48.6	-0.8
SJG	San Juan	147.49	12	PKP2	PKPbc	00 46 48.9	-0.6
SJG	San Juan	147.49	12		PKPbc	00 46 48.9	-0.6
SJG	San Juan	147.49	12	*e*P	PKPbc	00 46 48.7	-0.7
HUMP	Col San Antoni	147.52	11		PKPbc	00 46 49.0	-0.6
CDVI	St. Croix	148.09	10	PKPab	PKiKP	00 46 52.7	-0.1
GO07	Milladeo Hill,	148.41	160		PKiKP	00 46 52.1	-0.6
FDF	Fort de France	151.49	4	PKIKP	PKPbc	00 46 59.4	-0.1
FDF	Fort de France	151.49	4		PKPbc	00 46 59.4	-0.1
PLCA	Paso Flores	151.55	162	PKPbc	PKiKP	00 46 59.3	-0.1
	comp=Z,4.6nm,0.8s,baz=214,slow=1.6,SNR=16						
SJCC	San Jacinto, C	151.63	34	*e*P	PKiKP	00 47 00.2	-0.1
SMLC	San Martn de	153.14	34	*e*P	PKPbc	00 47 02.9	-0.2
OCAC	Ocana	154.01	33	*e*P	PKiKP	00 47 05.3	0.0
SDV	Santo Domingo	154.75	27	PKPdf	PKPdf	00 46 58.1	-0.1
SDV				PKPbc	PKPbc	00 47 06.6	-0.3
SDV	Santo Domingo	154.75	27	*e*P	PKPdf	00 46 58.2	0.0
PTBC	PUERTO BERRIO,	154.77	37	*e*P	PKPbc	00 47 06.2	-0.6
PAMC	Pamplona, Colo	155.09	33	*e*P	PKPdf	00 47 06.8	+7.7
SPBC	San Pablo de B	155.70	38	*e*P	PKPdf	00 47 08.7	+9.3
TOLC	Tolima	155.76	42	*e*P	PKPdf	00 47 06.0	+6.2
RUSC	La Rusia	156.08	36	*e*P	PKPdf	00 47 09.4	+9.0
ORTC	Ortega, Tolima	156.31	43	*e*P	PKPdf	00 47 08.2	+8.1
CHIC	Chingaza	156.72	39	*e*P	PKPdf	00 47 00.9	-0.2
ROSB	Rosrio	161.37	305	*e*P	PKPdf	00 47 09.5	+3.5
ITAB	Concordia	165.11	206	*e*P	PKPdf	00 47 12.8	+3.6
PTGA	Pitinga	166.89	3		PKPab	00 48 13.7	-1.0
CPUP	Villa Florida	167.50	189	PKP	PKPdf	00 47 10.3	-0.8
	comp=Z,1.8nm,0.6s,baz=213,slow=0.4,SNR=4.4						
BDFB	Brasilia	168.87	260	PKP	PKPdf	00 47 10.0	-2.4
	comp=Z,1.0nm,0.7s,baz=120,slow=6.6,SNR=3.0						
BDFB				PKPab	PKPab	00 48 23.9	-0.1
	comp=Z,2.2nm,0.6s,baz=108,slow=3.3,SNR=6.8						
SAML	Samuel	173.82	37	PKP2	PKPab	00 48 44.4	-1.2
SAML	Samuel	173.82	37		PKPab	00 48 44.4	-1.2

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*HLW **18** 00:47:21.9, 34°.24N×26°.83E, h15km±12km, Md3.8*
*THE **18** 00:47:28.1, 34°.77N×26°.57E, h54km±4km, ML1.9/1, Error ellipse: s-maj=6.9km s-min=2.5km az=340.0*
ISC 18 00:47:19.5±1.3**, 34°.24N**±0°.04×**26°.73E**±0°.10**, h35km, n13, σ2s.37**/17**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.97	334	P	Pn	00 47 38.5	+1.9
ZKR				S	Sn	00 47 46.4	-2.7
	142nm,0.5s						
STIA	Sitia Lasithi	1.09	331	P	Pn	00 47 40.6	+2.3
STIA				S	Sn	00 47 49.1	-3.0
KARP	Karpathos	1.35	15	P	Pn	00 47 44.0	+2.1
NPS	Neapolis	1.37	318	P	Pn	00 47 44.9	+2.8
KSTL	Kastelli Herak	1.73	308	P	Pn	00 47 47.0	0.0
SIVA	Sivas	1.76	297	P	Pn	00 47 50.6	+3.1
ANAF	Anafi Island	2.25	340	P	Pn	00 47 55.0	+0.8
SANT	Santorini	2.36	334	P	Pn	00 47 56.1	+0.3
THR3	Thira Island,	2.42	334	P	Pn	00 47 57.5	+1.0
SLUM	Salum	3.03	205	P	Pn	00 48 06.8	+1.9
	baz=207						
SLUM				S	Sn	00 48 39.2	-0.7
	baz=207						
SWA2		5.10	193	P	Pn	00 48 35.3	+1.9
	baz=194						
NBNS	Bani Suef	6.83	144	P	Pn	00 48 58.7	+1.5
	baz=144						
HFRF	Wahat Farafira	7.20	169	P	Pn	00 49 03.2	+0.9
	baz=169						
HFRF				S	Sn	00 50 18.6	-4.3
	baz=169						

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*MOS **18** 00:48:55.8±1.5, 45°.83N×151°.89E, h47km, mb4.2/1, Error ellipse: s-maj=31.2km s-min=17.7km az=143.8*
*SKHL **18** 00:48:57.4±0.5, 45°.62N×151°.93E, h66km±3km, mb4.8/3*
*IDC **18** 00:48:59.4±3.9, 45°.91N×151°.86E, h58km±35km, mb3.0/3, mb1 3.2/5, mb1mx2.9/39, mbtmp3.4/5, ML2.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/14, Error ellipse: s-maj=43.0km s-min=34.4km az=119.0*
ISC 18 00:48:54.4±2.1**, 45°.3N**±0°.2×**152°.3E**±0°.2**, h50km, n22, σ1s.79**/19**, mb3.3**/3**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.09	270	*e*P	Pn	00 49 41.5	+0.8
KUR				AMB	AMB	00 49 42.9	
	130nm,0.3s						
KUR				*e*S	Sn	00 50 14.0	-2.4
KUR				A	A	00 50 20.1	
	229nm,0.3s						
KUR				A	A	00 50 20.1	
	93nm,0.3s						
KUR	Kuril'sk	3.09	270	*e*PN	Pn	00 49 41.5	+0.8
KUR				*e*S	Sn	00 50 16.9	+0.5
KUR				pmax	pmax		
	comp=Z,109nm,0.4s						
KUR				pmax	pmax		
	comp=N,29nm,0.2s						
KUR				pmax	pmax		
	comp=E,23nm,0.2s						
KUR				smax	smax		
	comp=N,265nm,0.6s						
KUR				smax	smax		
	comp=E,100nm,0.4s						
YUK	Yuzh-Kuril'sk	4.73	256	*e*P	Pn	00 50 04.6	+1.5
YUK				AMB	AMB	00 50 07.1	
	comp=E,90nm,0.5s						
YUK				*e*S	Sn	00 50 55.0	-1.7
YUK				A	A	00 50 56.9	
	comp=E,340nm,0.7s						
YUK				A	A	00 50 56.9	
	comp=E,260nm,0.7s						
GRPR	Tuman	4.81	256	*e*P	Pn	00 50 06.0	+1.8
GRPR				AMB	AMB	00 50 11.0	
	comp=E,50nm,0.4s						
GRPR				*e*S	Sn	00 50 57.8	-0.7
GRPR				A	A	00 51 06.0	
	comp=E,154nm,0.5s						
GRPR				A	A	00 51 06.0	
	comp=E,120nm,0.5s						
GRPR	Tuman	4.81	256	*e*PN	Pn	00 50 07.5	+3.3
GRPR				pmax	pmax		
	comp=Z,95nm,0.2s						
NMR	Nemuro--Hokkai	5.07	250	*e*P	Pn	00 50 08.5	+0.8
NMR				*e*S	Sn	00 51 02.0	-2.9
NMR	Nemuro--Hokkai	5.07	250	*e*PN	Pn	00 50 08.1	+0.4
JKA	Kamikawa-asahi	6.98	263	*e*P	Pn	00 50 36.5	+2.6
ASAJ	Asahikawa	6.98	263	P	Pn	00 50 36.5	+2.5
	comp=Z,0.4nm,0.3s,baz=73,slow=18,SNR=4.1						
PETK	Petropavlovsk-	8.57	23	P	Pn	00 50 54.9	-0.7
	comp=Z,0.1nm,0.3s,baz=170,slow=9.0,SNR=1.1						
H11N2	WAKE ISLAND Hy	28.26	150	T	T	01 25 18.8	
	baz=338,slow=76,SNR=49						
H11N1	WAKE ISLAND Hy	28.27	150	T	T	01 25 20.5	
	baz=338,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	28.28	150	T	T	01 25 20.1	
	baz=338,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	29.32	151	T	T	01 26 39.5	
	baz=339,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	29.33	151	T	T	01 26 40.5	
	baz=339,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	29.34	151	T	T	01 26 41.2	
	baz=339,slow=76,SNR=38						
MKAR	Makanchi Array	47.07	298	P	P	00 57 21.6	+0.6
	comp=Z,0.2nm,0.5s,baz=69,slow=6.0,SNR=4.1						
KURK	Kurchatov	47.66	304	*e*P	P	00 57 25.1	-0.3
KURK	Kurchatov	47.66	304	P	P	00 57 25.1	-0.3
KURBB	Kurchatov Arra	47.75	304	P	P	00 57 25.1	-1.0
	comp=Z,0.2nm,0.4s,baz=72,slow=8.8,SNR=2.1						
YKA	Yellowknife Ar	52.43	36	LR	LR	01 22 13.4	
	comp=Z,19nm,20.8s,baz=0.0,slow=38						
ASAR	Alice Springs	70.67	198	P	P	01 00 11.8	+7.1
	comp=Z,0.2nm,0.6s,baz=14,slow=5.0,SNR=1.7						

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*IDC **18** 01:07:02.9±0.9, 50°.05N×176°.36W, h0km, mb3.8/17, mb1 4.0/17, mb1mx3.8/59, mbtmp3.8/17, Error ellipse: s-maj=25.2km s-min=16.5km az=177.0*
*AEIC **18** 01:07:07±1.5, 50°.31N±0°.08×176°.24W±0°.08, h35km±9km, ML3.9, mb4.1/14(NEIC), Error ellipse: s-maj=12.1km s-min=7.7km az=174.0*
*NEIC **18** 01:07:07.2±1.2, 50°.3N±0°.1×176°.19W±0°.08, h29km±11km, Error ellipse: s-maj=16.1km s-min=7.6km az=175.0*
ISC 18 01:07:07.6±0.8**, 50°.25N**±0°.09×**176°.24W**±0°.05**, h28km, n68, σ1s.01**/67**, mb3.8**/20**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	1.61	356		Pn	01 07 33.4	-0.8
KIMD	Kanaga Island	1.64	338		Pn	01 07 33.8	-0.7
ADK	Adak	1.66	350		Pn	01 07 33.4	-1.4
KIKV	Kanaga Island	1.73	340		Pn	01 07 35.4	-0.4
ADAG	Mount Adagdak	1.75	353		Pn	01 07 35.8	-0.2
GSIG	Igitkin Island	1.75	6		Pn	01 07 35.7	-0.3
KINC	Kanaga Island	1.77	342		Pn	01 07 35.9	-0.4
GSMY	Great Sitkin M	1.80	4		Pn	01 07 36.2	-0.5
GSTD	Great Sitkin T	1.81	2		Pn	01 07 36.5	-0.4
GSTD					Sn	01 07 59.5	+0.6
GSTR	Great Sitkin T	1.85	3		Pn	01 07 37.5	0.0
TASE	Tanaga Southea	1.95	325		Pn	01 07 38.8	-0.1
TAFP	Tanaga Falls P	1.98	327		Pn	01 07 39.2	0.0
TAFP					Sn	01 08 03.0	-0.2
GALAA	Gareloi Lava P	2.20	314		Pn	01 07 42.4	+0.1
GAEA	Gareloi East	2.20	315		Pn	01 07 42.3	0.0
ATKA	Atka Island	2.34	33		Pn	01 07 43.2	-0.9
ATKA					Sn	01 08 10.9	-1.0
KOFP	Korovin Flat P	2.43	33		Pn	01 07 45.1	-0.3
KOWE	Korovin West	2.46	30		Pn	01 07 45.7	-0.1
AMKA	Amchitka	3.04	293		Pn	01 07 52.5	-1.3
CERAA	Semis’ Rag’d T	3.06	304		Pn	01 07 53.9	-0.1
CESW	Semis’ Southwe	3.12	304		Pn	01 07 55.0	+0.1
NIKH	Nikolski High	5.34	57		Pn	01 08 25.4	0.0
OKSP	Okmok Steeple	5.78	56		Pn	01 08 32.1	+0.7
OKSO	Okmok South	5.89	55		Pn	01 08 33.3	+0.3
MAPS	Pakushin South	6.75	55		Pn	01 08 45.2	+0.6
MGOD	Makushin Gods	6.78	55		Pn	01 08 45.6	+0.4
MREP	Makushin Rep’t	6.85	55		Pn	01 08 46.6	+0.4
MSW	Makushin Switc	6.88	54		Pn	01 08 47.1	+0.5
MNAT	Makushin Natee	6.92	55		Pn	01 08 47.6	+0.5
UNV	Unalaska Valle	7.00	55		Pn	01 08 48.5	+0.5
CNBA	Chernabura Isl	11.12	59	Pn	Pn	01 09 43.3	-1.2
KDAK	Kodiak Island	15.75	52	Pn	Pn	01 10 44.6	-2.6
	0.7nm,0.3s,baz=180,slow=7.1,SNR=10						
KDAK	Kodiak Island	15.75	52	IAmb	IAmb	01 10 47.8	
	comp=Z,87nm,1.6s						
PETK	Petropavlovsk-	16.38	290	Pn	P	01 10 58.0	+0.1
	comp=Z,0.3nm,0.3s,baz=91,slow=18,SNR=15						
KTH	Kantishna Hill	19.02	36	P	P	01 11 25.5	-1.5
KTH				IAmb	IAmb	01 11 33.9	
	comp=Z,12nm,0.9s						
RDOG	Red Dog Mine	19.03	15	P	P	01 11 25.6	-1.5
BPAW	Bear Paw Mtn.	19.29	35	P	P	01 11 28.4	-1.6
BPAW				IAmb	IAmb	01 11 40.6	
	comp=Z,28nm,1.8s						
RND	Reindeer	19.74	38	P	P	01 11 33.4	-1.5
DHY	Denali Highway	20.18	40	P	P	01 11 37.3	-2.4
DHY				IAmb	IAmb	01 12 29.6	
	comp=Z,10nm,1.3s						
I23K	Minto, Yukon-K	20.46	33	P	P	01 11 41.9	-0.7
I23K				IAmb	IAmb	01 11 50.9	
	comp=Z,9.4nm,1.4s						
CCB	Clear Creek Bu	20.75	35	P	P	01 11 44.9	-0.9
MDM	Murphy Dome	20.76	34	P	P	01 11 45.0	-0.9
HDA	Harding Lake	20.96	36	P	P	01 11 47.3	-0.8
HDA				IAmb	IAmb	01 11 51.3	
	comp=Z,3.9nm,0.5s						
IL31		21.16	36	P	P	01 11 48.8	-1.3
IL31				IAmb	IAmb	01 12 22.0	
	comp=Z,16nm,1.7s						
ILAR	Eielson Array	21.16	36	P	P	01 11 49.8	-0.4
	comp=Z,1.0nm,0.5s,baz=227,slow=9.6,SNR=21						
SEY	Seymchan	21.17	319	P	P	01 11 51.2	+1.0
	comp=Z,1.4nm,0.4s,baz=96,slow=14,SNR=4.5						
DOT	Dot Lake	21.77	40	P	P	01 11 56.2	-0.6
BCAR	Beaver Creek A	22.53	42	P	P	01 12 02.9	-2.0
K27K	Chicken	22.73	40	P	P	01 12 04.9	-2.1
K27K				IAmb	IAmb	01 12 11.0	
	comp=Z,8.9nm,1.2s						
BMAR	Burnt Mountain	23.33	31	P	P	01 12 12.0	-1.1
EGAK	Eagle	23.38	38	P	P	01 12 12.7	-0.8
EGAK				IAmb	IAmb	01 12 19.6	
	comp=Z,7.8nm,1.1s						
INK	Inuvik	27.48	33	P	P	01 12 53.0	+2.1
	comp=Z,0.8nm,0.4s,baz=252,slow=4.6,SNR=6.7						
H11N2	WAKE ISLAND Hy	33.28	210	T	T	01 48 37.3	
	baz=20						
H11N3	WAKE ISLAND Hy	33.29	210	T	T	01 48 34.9	
	baz=20						
H11N1	WAKE ISLAND Hy	33.30	210	T	T	01 48 39.5	
	baz=20						
YKA	Yellowknife Ar	34.84	46	P	P	01 13 57.8	+2.0
	comp=Z,0.6nm,0.7s,baz=277,slow=8.8,SNR=7.2						
NVAR	Mina Array Bea	42.07	83	P	P	01 14 57.0	0.0
	comp=Z,3.6nm,1.3s,baz=287,slow=9.3,SNR=3.4						
PDAR	Pinedale Array	45.10	73	P	P	01 15 22.1	+0.7
	comp=Z,0.4nm,0.6s,baz=327,slow=4.5,SNR=5.2						
SONM	Songino Array	48.61	299	P	P	01 15 48.4	-0.2
	comp=Z,0.6nm,0.7s,baz=68,slow=5.2,SNR=4.2						
TXAR	Lajitas Array	57.21	82	P	P	01 16 52.0	-0.2
	comp=Z,0.6nm,0.7s,baz=296,slow=4.7,SNR=7.6						
ARCES	ARCESS Array B	59.47	351	P	P	01 17 08.0	+0.7
	comp=Z,6.4nm,1.1s,baz=5.7,slow=10.0,SNR=3.8						
KURBB	Kurchatov Arra	61.08	315	P	P	01 17 18.9	+0.4
	comp=Z,2.0nm,0.6s,baz=42,slow=6.6,SNR=23						
MKAR	Makanchi Array	62.01	310	P	P	01 17 24.9	0.0
	comp=Z,0.4nm,0.5s,baz=47,slow=6.0,SNR=8.6						
FINES	FINESS Array B	67.23	349	P	P	01 17 59.2	+0.5
	comp=Z,1.4nm,0.7s,baz=44,slow=6.4,SNR=1.5						
AAK	Ala-Archa	68.83	312	P	P	01 18 08.6	-0.7
	comp=Z,1.4nm,0.7s,baz=54,slow=7.0,SNR=6.4						
NOA	NORSAR Array B	68.90	356	P	P	01 18 10.4	+1.2
	comp=Z,0.7nm,0.8s,baz=20,slow=8.5,SNR=3.3						
WRA	Warramunga Arr	82.37	226	P	P	01 19 25.1	-1.7
	comp=Z,0.5nm,0.7s,baz=35,slow=5.7,SNR=5.0						
ASAR	Alice Springs	85.79	225	P	P	01 19 43.8	-0.4
	comp=Z,0.5nm,0.8s,baz=21,slow=5.2,SNR=4.4						
BRTR	Keskin Array B	86.63	337	P	P	01 19 49.1	+0.7
	comp=Z,0.4nm,0.5s,baz=2.5,slow=2.7,SNR=7.2						

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*IDC **18** 01:53:58.8±1.2, 35°.86N×141°.15E, h0km, mb3.3/4, mb1 3.5/7, mb1mx3.4/35, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=33.2km s-min=21.9km az=91.0*
*JMA **18** 01:54:00.8±0.2, 35°.93N×141°.14E, h19km±3km, M4.2*
JMA Felt I J1.
*NIED **18** 01:54:00.9, 35°.93N×141°.14E, h19km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.09; $M_{\theta\theta}$0.68; $M_{\phi\phi}$1.41; $M_{r\theta}$-1.69; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.54; Fault plane solution: $M_0$2.78000×10^{14} NP1:ϕ_s57.00000°, δ65.00000°, λ-71.00000°. NP2:ϕ_s198.00000°, δ31.00000°, λ-125.00000°.*
ISC 18 01:54:01.5±1.5**, 35°.90N**±0°.04×**141°.03E**±0°.06**, h14km**±10km**, n20, σ0s.87**/22**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.24	216	P	Pb	01 54 07.7	+0.1
CHOJ				S	Sb	01 54 12.4	+0.8
JIHU	Itakohorinouch	0.42	280	P	Pb	01 54 11.3	+0.7
JIHU				S	Sb	01 54 18.7	+1.9
JSMT	Sammumatsuo	0.54	242	P	Pn	01 54 13.8	-0.9
JHYU	Hitachinakayam	0.57	321	P	Pb	01 54 12.9	-0.4
JHYU				S	Sg	01 54 21.2	+0.8
JYT	Yasato	0.76	296	P	Pg	01 54 15.7	-0.5
JYT				S	Sg	01 54 26.8	+0.6
JHO	Hitachi	0.81	332	P	Pg	01 54 16.0	-1.2
JHO				S	Sg	01 54 27.6	-0.2
MJAR	Matsushiro Arr	2.37	287	Pn	Pn	01 54 39.7	-0.3
	1.2nm,0.3s,baz=108,slow=8.1,SNR=53						
MJAR				Sn	Sn	01 55 08.5	-0.3
	1.4nm,0.3s,baz=92,slow=20,SNR=2.6						
MAT	Matsushiro	2.38	287	P	Pn	01 54 39.5	-0.5
MAT				*e*S	Sn	01 55 09.3	+0.4
JHJ	Hachijo jima 2	2.96	201	Pn	Pn	01 54 49.0	+1.1
	16nm,0.3s,baz=68,slow=19,SNR=1.3						
JHJ				Sn	Sn	01 55 22.1	-1.1

	14nm,0.3s,baz=358,slow=12,SNR=1.5						
ASAJ	Asahikawa	8.30	8	Pn	Pn	01 56 01.5	+0.2
	0.4nm,0.3s,baz=153,slow=16,SNR=1.4						
H11N2	WAKE ISLAND Hy	27.85	118	T	T	02 28 51.3	
	baz=311,slow=75,SNR=56						
H11N1	WAKE ISLAND Hy	27.86	118	T	T	02 28 48.5	
	baz=311,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	27.87	118	T	T	02 28 51.1	
	baz=311,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	28.52	121	T	T	02 29 38.6	
	baz=314,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	28.52	121	T	T	02 29 38.7	
	baz=314,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	28.54	121	T	T	02 29 40.0	
	baz=314,slow=76,SNR=23						
MKAR	Makanchi Array	44.47	303	P	P	02 02 12.3	+0.2
	0.5nm,0.7s,baz=84,slow=8.6,SNR=5.1						
WRA	Warramunga Arr	55.89	188	P	P	02 03 38.0	-0.8
	0.3nm,0.6s,baz=5.4,slow=7.4,SNR=5.2						
ASAR	Alice Springs	59.62	188	P	P	02 04 03.8	-1.2
	0.3nm,0.8s,baz=14,slow=9.4,SNR=4.3						
YKA	Yellowknife Ar	64.94	30	P	P	02 04 39.9	-0.3
	0.2nm,0.7s,baz=295,slow=6.1,SNR=3.6						

IDC 18 02:33:28.7±2.1**, 57°.18S×150°.48W, h0^{km}, mb3.9**/2**, mb1 4.0**/2**, mb1mx3.7**/26**, mbtmp3.9**/2**, Error ellipse: s-maj=72.7km s-min=56.2km az=83.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	52.54	96	T	T	03 39 40.7	
	baz=219,slow=74,SNR=12						
H03S1	Juan Fernandez	52.54	96	T	T	03 39 44.5	
	baz=219,slow=74,SNR=13						
H03S3	Juan Fernandez	52.55	96	T	T	03 39 43.5	
	baz=219,slow=74,SNR=13						
MAW	Mawson	53.10	195	P	P	02 42 47.1	-0.1
	3.7nm,0.7s,baz=131,slow=18,SNR=2.1						
ASAR	Alice Springs	62.69	268	P	P	02 43 55.0	-0.2
	0.2nm,0.6s,baz=146,slow=6.6,SNR=5.3						
H01W1	Cape Leeuwin H	64.17	245	T	T	03 54 06.2	
	baz=142,slow=74						
H01W2	Cape Leeuwin H	64.17	245	T	T	03 54 09.9	
	baz=142						
H01W3	Cape Leeuwin H	64.18	245	T	T	03 54 07.3	
	baz=142,slow=74						
H10N3	ASCENSION HYDR	105.92	134	T	T	04 47 06.0	
	baz=204						
H10N1	ASCENSION HYDR	105.93	134	T	T	04 47 10.1	
	baz=204						
H10N2	ASCENSION HYDR	105.94	134	T	T	04 47 07.3	
	baz=204						
ILAR	Eielson Array	121.66	2	PKP	PKPdf	02 52 22.2	-0.6
	0.3nm,0.8s,baz=195,slow=2.0,SNR=2.5						
MKAR	Makanchi Array	146.69	275	PKPbc	PKPbc	02 53 11.1	-0.4
	0.6nm,0.8s,baz=124,slow=3.9,SNR=7.1						

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*IDC **18** 02:44:42.0±0.8, 13°.81N×146°.64E, h0^{km}, mb3.9/11, mb1 4.1/11, mb1mx3.9/48, mbtmp3.9/11, Error ellipse: s-maj=21.7km s-min=17.5km az=126.0*

*NEIC **18** 02:44:43.0±1.2, 13°.8N±0°.1×146°.71E±0°.09, h10^{km}±1^{km}, mb4.4/17, Error ellipse: s-maj=19.5km s-min=14.0km az=183.0*

ISC 18 02:44:46.9±0.6**, 13°.77N**±0°.10×**146°.69E**±0°.08**, h37^{km}, n42,** σ1**^{s}19**/41**, mb4.2**/17**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.78	264	Pn	Pn	02 45 13.9	-1.1
	301nm,0.3s,baz=124,slow=9.9,SNR=182						
GUMO				Sn	Sn	02 45 35.8	-0.5
	96nm,0.3s,baz=26,slow=22,SNR=7.2						
GUMO	Guam	1.78	264		Pn	02 45 14.0	-1.0
PATS	Pohnpei	13.35	120	Pn	Pn	02 47 51.7	-2.1
H11S3	WAKE ISLAND Hy	19.77	74	T	T	03 09 42.4	
	baz=253						
H11S1	WAKE ISLAND Hy	19.79	74	T	T	03 09 57.0	
	baz=253						
H11S2	WAKE ISLAND Hy	19.79	74	T	T	03 09 49.2	
	baz=253						
JMN	Monobe	23.03	332	P	P	02 49 48.9	+0.1
PMG	Port Moresby	23.03	179	P	P	02 49 50.1	+1.2
MAT	Matsushiro	23.92	343	P	P	02 49 52.3	-5.1
KSRS	Korea Array	28.91	328	P	P	02 50 42.1	-0.3
	2.2nm,0.6s,baz=131,slow=8.7,SNR=5.4						
WRAB	Tennant Creek	35.62	200	P	P	02 51 39.8	-1.5
WRA	Warramunga Arr	35.64	200	P	P	02 51 41.3	-0.1
	1.1nm,0.7s,baz=19,slow=9.5,SNR=7.4						
WRA				PcP	PcP	02 54 11.2	+1.5
	0.4nm,0.7s,baz=13,slow=3.2,SNR=2.5						
ASAR	Alice Springs	39.25	199	P	P	02 52 12.4	+0.3
	0.5nm,0.7s,baz=31,slow=9.2,SNR=9.5						
HIA	Hailar	41.75	334	P	P	02 52 31.8	-0.6
CM31	Chiang Mai Arr	46.00	282	P	P	02 53 07.3	+0.3
CM31				IAmb	IAmb	02 53 08.5	
	comp=Z,4.6nm,0.8s						
CMAR	Chiang Mai Arr	46.00	282	P	P	02 53 07.0	-0.1
	comp=Z,1.4nm,0.5s,baz=84,slow=5.9,SNR=6.7						
SONM	Songino Array	47.62	324	P	P	02 53 19.9	+0.6
	comp=Z,0.5nm,0.5s,baz=133,slow=6.9,SNR=5.5						
SONM	Songino Array	47.62	324	P	P	02 53 19.7	+0.4
NIKH	Nikolski High	52.57	32	P	P	02 53 56.0	-0.6
ZAA0	Zalesovo Array	62.51	324	P	P	02 55 06.1	-0.5
ZAA0				IAmb	IAmb	02 55 26.5	
	comp=Z,3.0nm,1.2s						
ZALV	Zalesovo Beam	62.51	324	P	P	02 55 06.6	0.0
	comp=Z,1.1nm,0.5s,baz=100,slow=6.4,SNR=5.3						
ZALV	Zalesovo Beam	62.51	324	P	P	02 55 07.0	+0.4
MK31	Makanchi Array	62.59	316	P	P	02 55 07.3	-0.1
MK31				IAmb	IAmb	02 55 08.4	
	comp=Z,1.5nm,0.5s						
MKAR	Makanchi Array	62.59	316	P	P	02 55 08.1	+0.7
	comp=Z,1.5nm,0.4s,baz=91,slow=8.5,SNR=50						
MKAR	Makanchi Array	62.59	316	P	P	02 55 07.8	+0.5
MAKZ	Makanchi	62.81	316	P	P	02 55 09.5	+0.7
KURK	Kurchatov	65.59	320	P	P	02 55 26.8	-0.1
KURK				IAmb	IAmb	02 55 27.9	
	comp=Z,3.3nm,0.9s						
HDA	Harding Lake	67.53	26	P	P	02 55 39.2	+0.2
ILAR	Eielson Array	67.65	25	P	P	02 55 39.8	0.0
	comp=Z,0.5nm,0.5s,baz=255,slow=5.6,SNR=13						
KK31	Karatay Array	70.67	311	P	P	02 55 58.8	-0.2
KK31				IAmb	IAmb	02 55 59.8	
	comp=Z,4.5nm,1.4s						
KKAR	Karatay Array	70.67	311	P	P	02 55 59.4	+0.4
BRVK	Borovoye	70.95	322	P	P	02 56 00.6	+0.2
BRVK				IAmb	IAmb	02 56 01.7	
	comp=Z,2.2nm,0.6s						
INK	Inuvik	73.52	22	P	P	02 56 16.0	+0.5
ABKAR	Akbulak array	77.59	318	P	P	02 56 38.9	-0.3
YKA	Yellowknife Ar	81.88	28	P	P	02 57 03.2	+1.0
	comp=Z,0.3nm,0.6s,baz=286,slow=4.7,SNR=8.4						
NVAR	Mina Array Bea	85.42	52	P	P	02 57 23.1	+2.0
	comp=Z,0.6nm,0.7s,baz=273,slow=5.5,SNR=6.3						
NVAR	Mina Array Bea	85.42	52	P	P	02 57 21.9	+0.8
FINES	FINESS Array B	91.74	336	P	P	02 57 49.6	-0.8
	comp=Z,1.6nm,0.6s,baz=92,slow=6.1,SNR=8.4						
DBIC	Dimbokro	145.21	304	PKPbc	PKPdf	03 04 22.4	+0.8
	comp=Z,3.2nm,0.5s,baz=34,slow=4.0,SNR=12						
KIC	Kosan Boka	145.29	303	*e*PKP2	PKPdf	03 04 23.0	+1.2
	comp=Z,6.7nm,0.7s						
TIC	Toumodi	145.35	304	*e*PKP2	PKPab	03 04 23.2	+1.3
LIC	Lamto	145.60	303	*e*PKP2	PKPab	03 04 24.1	+1.3
	comp=Z,23nm,1.0s						

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*NIED **18** 02:48:37.5, 32°.16N×140°.04E, h14^{km}, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.07; $M_{\theta\theta}$1.00; $M_{\phi\phi}$-3.07; $M_{r\theta}$1.12; $M_{\theta\phi}$-0.33; $M_{\phi r}$-0.05; Fault plane solution: $M_0$2.94000×10^{14} NP1:ϕ_s33.00000°, δ54.00000°, λ132.00000°. NP2:ϕ_s156.00000°, δ53.00000°, λ48.00000°.*

JMA 18 02:48:37.5±0.1**, 32°.16N×140°.03E, h14^{km}, M3.7, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.38	323	P	Pg	02 48 45.1	-0.1
JAOM				*e*S	Sg	02 48 50.8	+0.5
JHCJ	Hachijojimakas	0.93	348	P	Pb	02 48 54.8	-0.6
JHJ2	Mitsune	0.97	349	P	Pb	02 48 55.7	-0.3
JIM2	Oshima 3	2.60	349	P	Pn	02 49 20.8	+1.7
BSO1	Boso 1	2.61	17	P	Pn	02 49 19.0	+0.2
BSO3	Boso 3	2.67	9	P	Pn	02 49 20.7	+0.9
JRY	Ryogami san	3.96	347	P	Pn	02 49 41.7	+3.9

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*NEIC **18** 02:53:33.8±0.9, 7°.9S±0°.2×109°.02E±0°.07, h108^{km}±9^{km}, mb4.1/5, Error ellipse: s-maj=23.3km s-min=8.9km az=194.0*

*DJA **18** 02:53:34.1±0.4, 8°S±4°×10°9E±°, h43^{km}±16^{km}, M4.3/11, mb4.9/1, MLv4.0/11*

*IDC **18** 02:53:36.6±1.1, 7°.85S×109°.09E, h133^{km}±15^{km}, mb3.4/10, mb1 3.5/11, mb1mx3.3/42, mbtmp3.8/11, Error ellipse: s-maj=50.8km s-min=12.1km az=48.0*

ISC 18 02:53:32.3±0.7**, 8°.2S**±0°.1×**108°.99E**±0°.06**, h100^{km}, n34,** σ2**^{s}47**/33**, mb3.8**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.70	310	P	Pn	02 53 49.8	+0.1
CMJI				S	Sn	02 54 00.9	-1.8
KPJI	Karang Pucung	0.90	356	P	Pn	02 53 53.4	+1.8
CISI	Cisompet, Garu	1.34	300	Pn	Pn	02 53 57.2	+0.6
CISI	Cisompet, Garu	1.34	300	P	Pn	02 53 57.3	+0.6
CISI				S	Sn	02 54 15.1	-0.1
UGM	Wanagama	1.55	78		Pn	02 54 00.5	+1.3
UGM	Wanagama	1.55	78	P	Pn	02 54 01.3	+2.1
LEM	Lembang	1.95	316	P	Pn	02 54 07.1	+2.8
	19nm,0.3s,baz=78,slow=6.1,SNR=10						
LEM				S	Sn	02 54 32.9	+4.0
	31nm,0.3s,baz=349,slow=18,SNR=12						
LEM				LR	LR	02 54 43.9	
	comp=Z,65nm,18.2s,baz=50,slow=38						
LEM	Lembang	1.95	316	P	Pn	02 54 07.2	+2.8
SKJI	Sukabumi	2.70	297	P	Pn	02 54 15.5	+1.4
DBJI	Dramaga	2.78	307	P	Pn	02 54 17.8	+2.7
PWJI	Pagerwojo	2.79	86	P	Pn	02 54 17.6	+2.3
TNG	Tangerang	3.10	311	P	Pn	02 54 22.5	+3.1
TNG				P	Pn	02 54 22.4	+3.1
GRJI	Gresik	3.70	70	P	Pn	02 54 30.3	+2.9
JAGI	Jajag, Banyuwa	5.11	93	Pn	Pn	02 54 50.2	+3.6
JAGI	Jajag, Banyuwa	5.11	93	P	Pn	02 54 49.0	+2.4
TOLI2	Tolitoli	14.98	52		P	02 57 00.2	-1.7
FITZ	Fitzroy Crossi	18.93	123	P	Pn	02 57 49.3	+2.1
	0.1nm,0.3s,baz=283,slow=14,SNR=2.4						
FITZ				S	S	03 01 08.2	-7.2
	0.1nm,0.3s,baz=360,slow=19,SNR=1.5						
WRA	Warramunga Arr	27.16	118	P	P	02 59 08.4	+2.0
	0.4nm,0.7s,baz=289,slow=11,SNR=3.7						
ASAR	Alice Springs	28.37	126	P	P	02 59 19.6	+2.3
	0.9nm,0.7s,baz=304,slow=9.2,SNR=16						
H08S2	Diego Garcia H	36.15	268	T	T	03 38 38.1	
	baz=93,slow=76,SNR=9.0						
H08S3	Diego Garcia H	36.16	268	T	T	03 38 36.6	
	baz=93,slow=76,SNR=66						
H08S1	Diego Carcia H	36.16	268	T	T	03 38 45.4	
	baz=93,slow=76,SNR=4.6						
STKA	Stephens Creek	38.36	132	P	P	03 00 46.5	+2.8
	1.5nm,0.4s,baz=310,slow=11,SNR=4.8						
STKA	Stephens Creek	38.36	132	IAmb	IAmb	03 01 52.8	
	comp=Z,3.3nm,1.6s						
SONM	Songino Array	55.87	358	P	P	03 02 58.7	-0.9
	comp=Z,0.3nm,0.4s,baz=180,slow=9.9,SNR=3.7						
MK31	Makanchi Array	59.72	339	P	P	03 03 25.1	-1.4
MK31				IAmb	IAmb	03 04 21.6	
	comp=Z,3.6nm,1.6s						
MKAR	Makanchi Array	59.72	339	P	P	03 03 24.6	-1.9
	comp=Z,0.5nm,0.4s,baz=146,slow=6.7,SNR=14						
KLR	Kul'dur	60.60	17	P	P	03 03 30.4	-2.0
	comp=Z,1.2nm,0.5s,baz=234,slow=8.7,SNR=8.1						
KURBB	Kurchatov Arra	64.29	339	P	P	03 03 55.9	-1.0
	comp=Z,0.3nm,0.4s,baz=157,slow=5.3,SNR=3.6						
ZAA0	Zalesovo Array	65.22	345	P	P	03 04 01.0	-1.9
ZAA0				IAmb	IAmb	03 05 50.6	
	comp=Z,2.1nm,0.8s						
ZALV	Zalesovo Beam	65.22	345	P	P	03 04 01.7	-1.2
	comp=Z,0.7nm,0.3s,baz=156,slow=6.7,SNR=6.0						
BVAR	Borovoye Array	69.27	336	P	P	03 04 26.4	-2.1
	comp=Z,0.3nm,0.6s,baz=134,slow=11,SNR=3.8						
ABKAR	Akbulak array	71.48	329	P	P	03 04 40.9	-1.1
BRTR	Keskin Array B	84.12	311	P	P	03 05 52.8	+0.2
	comp=Z,0.4nm,0.6s,baz=133,slow=9.0,SNR=4.9						

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*IDC **18** 03:01:23.8±0.7, 35°.80N×115°.49E, h0^{km}, mb3.9/10, mb1 4.0/14, mb1mx3.7/43, mbtmp3.8/14, ML3.0/3, MS3.3/10, Ms1 3.3/10, ms1mx3.1/38, Error ellipse: s-maj=18.3km s-min=16.7km az=66.0*

*NEIC **18** 03:01:24.5±1.8, 35°.65N±0°.07×115°.4E±0°.1, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=13.8km s-min=12.5km az=278.0*

*BJI **18** 03:01:24.8±0.0, 35°.70N×115°.40E, h10^{km}, mB4.6/9, mb4.3/16, ML4.5/25, Ms3.9/15, Ms7 3.9/10*

ISC 18 03:01:25.3±0.4**, 35°.84N**±0°.03×**115°.54E**±0°.03**, h10^{km}, n51,** σ2**^{s}30**/59**, mb4.1**/13**, MS3.4**/6**, 2C-1D, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIA	Tai'an	1.34	73	Pg	Pb	03 01 50.8	+0.4
TIA				Sg	Sg	03 02 11.3	+3.0
TIA				smax	smax		
	comp=N,7µm,0.7s						
TIA				smax	smax		
	comp=E,9µm,0.5s						
TIY	Taiyuan	3.12	308	Pn	Pn	03 02 14.3	-0.3
TIY				Pg	Pb	03 02 16.8	-4.0
TIY				Sg	Sb	03 03 01.1	+2.2
TIY				smax	smax		
	comp=N,1µm,0.8s						
TIY				smax	smax		
	comp=E,1µm,1.3s						
BJT	Baijiatuau	4.20	7		Pn	03 02 29.6	+0.2
BJI	Beijing	4.23	7	Pn	Pn	03 02 29.9	+0.2
BJI				Pg	Pg	03 02 44.3	-1.9
BJI				Sg	Sg	03 03 44.3	+3.3
BJI				smax	smax		
	comp=N,360nm,0.6s						
BJI				smax	smax		
	comp=E,440nm,1.1s						
NJ2	Nanjing	4.67	143	⇑Pn	Pn	03 02 34.3	-1.6
NJ2				Pg	Pb	03 02 49.4	+2.1
NJ2				Sn	Sn	03 03 27.5	-2.6
NJ2				Sg	Sb	03 03 48.8	+5.2
NJ2				smax	smax		
	comp=N,320nm,0.7s						
NJ2				smax	smax		
	comp=E,260nm,0.5s						
WHN	Wuhan	5.37	191	Pn	Pn	03 02 45.8	+0.3
WHN				Sg	Sb	03 04 04.5	+0.8
WHN				smax	smax		
	comp=N,920nm,0.7s						
WHN				smax	smax		
	comp=E,2µm,1.0s						
XAN	Xi'an	5.72	254	Pn	Pn	03 02 46.6	-3.7
XAN				Pg	Pb	03 03 08.1	+2.9
XAN				Sg	Sb	03 04 21.0	+7.1
XAN				smax	smax		
	comp=N,240nm,1.0s						
XAN				smax	smax		
	comp=E,230nm,1.0s						
DL2	Dalian	5.74	56	Pn	Pn	03 02 54.1	+3.7
DL2				Pg	Pg	03 03 12.4	-2.7
DL2				Sn	Sn	03 03 55.3	-1.0
DL2				Sg	Sg	03 04 29.3	-0.1
DL2				smax	smax		
	comp=N,230nm,0.8s						
DL2				smax	smax		
	comp=E,180nm,0.7s						
DL2				LR	LR		
	comp=N,670nm,9.7s						
DL2				LR	LR		
	comp=E,790nm,6.5s						
DL2				LR	LR		
	comp=Z,270nm,7.4s						
BTO	Baotou	6.44	319	*e*Pg	Pb	03 03 22.4	+4.9
SSE	Sheshan	6.68	133	Pn	Pn	03 03 00.7	-2.7
ENH	Enshi	7.52	224	Pn	Pn	03 03 10.7	-4.4
LZH	Lanzhou	9.48	275	*e*P	Pn	03 03 44.0	+1.9
LZH				pP		03 03 45.9	
LZH				sP		03 03 47.1	
LZH				Pg		03 04 15.1	
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.3s						
LZH				LR	LR		
	comp=E,550nm,6.8s						
KSRS	Korea Array	10.08	77	Pn	Pn	03 03 50.3	+0.2
	0.1nm,0.3s,baz=270,slow=14,SNR=2.5						
KSRS				Lg	Lg	03 06 43.5	
	1.2nm,0.3s,baz=265,slow=30,SNR=8.2						
KSRS				LR	LR	03 07 58.3	
	comp=Z,61nm,20.9s,baz=290,slow=39						
GYA	Guiyang	12.04	222	⇑P	Pn	03 04 18.5	+1.4
GYA				S	Sn	03 06 34.9	+3.4
GYA				pmax	pmax		
	comp=Z,11nm,0.8s						
GYA				LR	LR		
	comp=E,750nm,11.6s						
GYA				LR	LR		
	comp=Z,980nm,12.0s						
JNU	Nakatsue	12.94	98	LR	LR	03 09 12.6	
	comp=Z,78nm,20.9s,baz=282,slow=36						
GTA	Gaotai	12.97	291	*e*P	Pn	03 04 26.4	-3.3
GTA				pP		03 04 35.8	
GTA				sP		03 04 39.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				smax	smax		
	comp=N,21nm,1.7s						
GTA				smax	smax		
	comp=E,13nm,1.9s						
SONM	Songino Array	13.78	333	Pn	Pn	03 04 41.1	+0.5
	baz=161,slow=14,SNR=2.3						
SONM				Sn	Sn	03 07 17.3	+3.6
	baz=151,slow=23,SNR=1.8						
SONM				Lg	Lg	03 08 32.9	
	comp=E,0.1nm,0.3s,baz=134,slow=28,SNR=6.1						
SONM				LR	LR	03 09 41.7	
	comp=E,45nm,21.4s,baz=118,slow=36						
KMI	Kunming	15.34	229	⇓*e*P	Pn	03 05 02.6	+0.5
KMI				pmax	pmax		
	comp=E,5.0nm,0.7s						
KMI				LR	LR		
	comp=E,730nm,11.1s						
KMI				LR	LR		
	comp=E,510nm,10.6s						
KMI				LR	LR		
	comp=E,390nm,10.3s						
KLR	Kul'dur	17.89	37	P	P	03 05 35.0	+0.3
	comp=E,0.2nm,0.3s,baz=194,slow=16,SNR=4.2						
KLR				LR	LR	03 12 29.7	
	comp=E,81nm,18.7s,baz=228,slow=37						
MJAR	Matsushiro Arr	18.31	81	P	Pn	03 05 39.6	+0.3
	comp=E,0.0nm,0.3s,baz=275,slow=12,SNR=2.1						
JHJ	Hachijo jima 2	20.16	91	LR	LR	03 13 17.1	
	comp=E,203nm,21.3s,baz=13,slow=35						
CMAR	Chiang Mai Arr	22.70	225	P	P	03 06 26.8	-0.3
	comp=E,1.1nm,0.4s,baz=35,slow=8.8,SNR=8.3						
CMAR				LR	LR	03 16 23.7	
	comp=E,109nm,20.3s,baz=106,slow=40						
CMAR	Chiang Mai Arr	22.70	225	P	P	03 06 22.7	-4.5
SHL	Shillong	22.72	250	P	P	03 06 24.2	-3.3
WMQ	Urumqi	22.75	299	*e*P	P	03 06 27.0	-0.6
MK31	Makanchi Array	27.07	304	P	P	03 07 08.3	+0.4
MKAR	Makanchi Array	27.07	304	P	P	03 07 07.9	-0.1
	comp=E,0.4nm,0.9s,baz=104,slow=9.5,SNR=2.7						
YAK	Yakutsk	27.68	14	LR	LR	03 19 30.9	
	comp=E,133nm,18.3s,baz=230,slow=39						
ZALV	Zalesovo Beam	27.99	320	LR	LR	03 19 12.1	
	comp=E,54nm,20.8s,baz=124,slow=38						
KURK	Kurchatov	30.35	311	P	P	03 07 37.1	+0.1
KURK	Kurchatov	30.35	311	IAmb	IAmb	03 07 38.9	
	comp=Z,15nm,1.9s						
KURBB	Kurchatov Arra	30.39	311	P	P	03 07 37.1	-0.2
	comp=Z,0.3nm,0.3s,baz=111,slow=9.2,SNR=2.3						
AAK	Ala-Archa	32.26	295	LR	LR	03 22 52.3	
	comp=Z,46nm,19.3s,baz=102,slow=40						
KULM	Kulim	33.35	208	P	P	03 08 02.1	-1.5
NIL	Nilore	34.62	279	P	P	03 08 13.8	-0.9
NIL				IAmb	IAmb	03 09 17.1	
	comp=Z,7.8nm,1.4s						
KK31	Karatay Array	35.17	296	P	P	03 08 19.0	-0.2
KK31				IAmb	IAmb	03 08 49.9	
	comp=Z,8.9nm,1.8s						
KKAR	Karatay Array	35.17	296	P	P	03 08 18.4	-0.8
KKAR				IAmb	IAmb	03 08 49.9	
	comp=Z,8.9nm,1.8s						
WRA	Warramunga Arr	58.26	159	P	P	03 11 19.8	-0.3
	comp=Z,1.6nm,0.8s,baz=347,slow=7.8,SNR=8.4						
BWN	Browne	60.46	30	P	P	03 11 36.3	+1.5
TCOL	CIGO, UAF Yank	60.84	29	P	P	03 11 38.6	+1.2
AKASG	Malin Array Be	61.11	314	LR	LR	03 39 33.7	
	comp=Z,56nm,18.1s,baz=0.0,slow=38						
ILAR	Eielson Array	61.27	29	P	P	03 11 40.5	+0.2
	comp=Z,1.0nm,0.9s,baz=289,slow=5.3,SNR=7.5						
PRP	Porcupine Dome	61.49	28	P	P	03 11 43.3	+1.3
ASAR	Alice Springs	61.68	161	P	P	03 11 43.6	+0.1
	comp=Z,1.9nm,0.8s,baz=344,slow=6.2,SNR=15						
ASAR	Alice Springs	61.68	161	P	P	03 11 41.7	-1.8
BR131	Keskin Array S	62.66	301	P	P	03 11 50.0	-0.2
BR131				IAmb	IAmb	03 12 01.8	
	comp=Z,4.1nm,1.1s						
BRTR	Keskin Array B	62.66	301	P	P	03 11 49.8	-0.5
	comp=Z,1.0nm,0.9s,baz=79,slow=6.0,SNR=6.7						
BRTR	Keskin Array B	62.66	301	P	P	03 11 49.3	-0.9
STKA	Stephens Creek	71.66	157	P	P	03 12 47.4	+0.3
	comp=Z,4.0nm,0.9s,baz=339,slow=8.6,SNR=7.0						
YKA	Yellowknife Ar	74.07	22	P	P	03 13 01.4	+0.4
	comp=Z,0.2nm,0.6s,baz=328,slow=4.6,SNR=4.1						
NVAR	Mina Array Bea	90.90	39	P	P	03 14 31.4	+1.8
	comp=Z,0.4nm,0.8s,baz=339,slow=3.7,SNR=3.9						

IDC 18 03:56:46.7±2.2**, 3°.14N×128°.19E, h0^{km}, mb3.3**/4**, mb1 3.4**/4**, mb1mx3.2**/44**, mbtmp3.3**/4**, Error ellipse: s-maj=179.9km s-min=23.3km az=68.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.72	166	P	P	04 02 00.7	0.0
	0.1nm,0.3s,baz=345,slow=10,SNR=2.0						
ASAR	Alice Springs	27.22	168	P	P	04 02 32.4	-0.2
	0.2nm,0.4s,baz=348,slow=6.9,SNR=8.5						
MKAR	Makanchi Array	58.87	325	P	P	04 06 48.1	+0.6
	0.2nm,0.4s,baz=116,slow=8.1,SNR=4.9						
KURBB	Kurchatov Arra	63.02	327	P	P	04 07 15.0	-0.6
	0.2nm,0.5s,baz=124,slow=6.4,SNR=2.9						

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*IDC **18** 03:59:54.8±0.5, 32°.63S×71°.61W, h0^{km}, mb4.6/13, mb1 4.6/16, mb1mx4.5/34, mbtmp4.5/16, ML4.9/3, MS4.3/15, Ms1 4.3/15, ms1mx4.2/21, Error ellipse: s-maj=20.8km s-min=16.4km az=79.0*

*SJA **18** 03:59:57.4±0.6, 32°.68S×71°.84W, h13^{km}±4^{km}, ML4.8, MW4.8*

*NEIC **18** 03:59:58.3, 32°.67S×71°.77W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-1.04; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.12; $M_{\phi r}$-1.30; Fault plane solution: $M_0$1.69000×10^{16} NP1:ϕ_s180.83000°, δ70.42000°, λ86.10000°. NP2:ϕ_s12.31000°, δ19.95000°, λ100.82000°. Principal axes: T 1.7033, Plg64.0000°, Azm84.0000°; N -0.0360, Plg4.0000°, Azm182.0000°; P -1.6673, Plg25.0000°, Azm274.0000°;*

*NEIC **18** 03:59:58.8±2.1, 32°.66S±0°.04×71°.81W±0°.07, h25^{km}±3^{km} Error ellipse: s-maj=8.1km s-min=6.1km az=78.0*

*GCMT **18** 03:59:58.0±0.3, 33°.13S±0°.02×71°.90W±0°.02, h25^{km}, MW5.2/61, Moment Tensor Solution. s32,c33; s61,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.11±.18; $M_{\theta\theta}$0.10±.14; $M_{\phi\phi}$-3.20±.12; $M_{r\theta}$2.58±.33; $M_{\theta\phi}$-0.06±.08; $M_{\phi r}$-5.47±.26; Best double couple: $M_0$6.81300×10^{16} NP1:ϕ_s18.00000°, δ17.00000°, λ128.00000°. NP2: ϕ_s158.00000°, δ77.00000°, λ80.00000°. Principal axes: T 7.0240, Plg57.0000°, Azm55.0000°; N -0.4150, Plg10.0000°, Azm161.0000°; P -6.6020, Plg31.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GUC **18** 03:59:59.0±0.7, 32°.71S×71°.69W, h28^{km}±3^{km}, ML4.8, MW4.9*

*VAO **18** 04:00:04.2±0.6, 32°.39S×71°.40W, h49^{km}, mb4.8*

ISC 18 03:59:56.6±0.9**, 32°.68S**±0°.02×**71°.90W**±0°.04**, h13^{km}**±5^{km}**, n544,** σ1**^{s}45**/561**, mb5.1**/81**, MS4.4**/16**, 7C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.80	112		Pb	04 00 12.6	+0.2
ROC1	El Roble	0.80	112	*e*P	Pg	04 00 12.4	+0.3
ROC1				*e*S	Pg	04 00 12.4	+0.3
ROCH	El Roble	0.80	112	⇓*i*P	Pb	04 00 12.6	+0.1
ROCH				*i* S	Sg	04 00 22.7	0.0
MT02	Curacav	0.86	133	⇓*i*P	Pg	04 00 13.6	+0.3
MT02				*i* S	Sb	04 00 24.1	-0.8
MT02	Curacav	0.86	133		Pb	04 00 13.4	0.0
VA05	Santo Domingo	1.01	167	⇑*i*P	Pn	04 00 16.7	+0.3
VA05				*i* S	Sn	04 00 30.3	-0.1
PEL	Peldehue	1.12	115	*i* P	Pb	04 00 17.1	-0.7
PEL				*i* S	Sb	04 00 30.9	-1.4
PEL				IAML		04 00 33.0	
	comp=E,31µm,0.4s						
PEL	Peldehue	1.12	115	Pn	Pb	04 00 17.4	-0.4
PEL	Peldehue	1.12	115	*e*P	Pb	04 00 17.9	+0.1
PEL				*e*S	Sn	04 00 33.6	+0.3
VA03	San Esteban	1.14	95	⇓*i*P	Pb	04 00 17.4	-0.8
VA03				*i* S	Sb	04 00 31.5	-1.4
VA03				IAML		04 00 32.7	
	comp=E,42µm,0.3s						
VA03	San Esteban	1.14	95		Pb	04 00 17.2	-0.9
MT05	Renca	1.21	127	⇓*i*P	Pb	04 00 19.3	0.0
MT05				*i* S	Sb	04 00 34.4	-0.5
MT05				IAML		04 00 41.1	
	comp=E,59µm,0.4s						
MT05	Renca	1.21	127	Pn	Pn	04 00 19.1	-0.1
MT09	Talagante	1.33	146	⇓*i*P	Pb	04 00 21.7	+0.1
MT09				*i* S	Sb	04 00 37.9	-0.8
MT09				IAML		04 00 39.5	
	comp=N,37µm,0.3s						
FSR	Penalolen	1.40	125	*e*P	Pg	04 00 23.4	-0.1
FSR				*i* S	Sg	04 00 41.4	-0.3
MT03	Universidad Ad	1.42	125	⇓*i*P	Pb	04 00 22.7	-0.3
MT03				*e*S	Sn	04 00 40.6	-0.2
MT03				IAML		04 00 48.6	
	comp=N,33µm,0.4s						
CO02	Combarbal	1.65	28	⇑*i*P	Pn	04 00 26.0	+0.6
CO02				*i* S	Sb	04 00 47.6	-0.1
CO02				IAML		04 00 53.9	
	comp=E,48µm,0.3s						
CO02	Combarbal	1.65	28		Pn	04 00 26.0	+0.6
BO03	Pichilemu	1.82	182	⇑*i*P	Pn	04 00 27.9	+0.4
LMEL	Las Melosas	1.84	130	*e*P	Pb	04 00 29.3	-0.8
LMEL				*e*S	Sb	04 00 52.6	-0.5
LMEL				IAML		04 00 59.5	
	comp=E,14µm,0.2s						
CO03	El Pedregal	2.10	30	⇑*i*P	Pn	04 00 32.4	+0.9
CO03				*i* S	Sn	04 00 58.3	+0.7
CO03				IAML		04 01 08.8	
	comp=E,10µm,0.3s						
CO03	El Pedregal	2.10	30		Pn	04 00 32.4	+0.9
AUSP	Uspallata	2.17	79	*e*P	Pb	04 00 35.2	-0.7
BO02	Sierra Bellavi	2.31	157	*e*P	Pn	04 00 35.2	+0.8
BO02				*i* S	Sb	04 01 05.5	-1.0
BO02				IAML		04 01 13.3	
	comp=N,15µm,0.5s						
BO02	Sierra Bellavi	2.31	157	Pn	Pn	04 00 35.0	+0.7
RTLS	Leoncito	2.37	69	*e*P	Pb	04 00 38.5	-0.8
RTLS				*e*S	Sb	04 01 08.7	+0.2
RTLS				IAML		04 01 19.5	
	comp=Z,2µm,1.2s						
ARCO	CERRO ARCO	2.50	95	*e*P	Pb	04 00 40.8	-0.7
ARCO				IAML		04 01 24.4	
	comp=Z,5µm,1.5s						
ASAL	Salagasta	2.58	89	*e*P	Pb	04 00 42.0	-0.8
ASAL				IAML		04 01 29.7	
	comp=Z,2µm,1.2s						
AAGR	Agrelo	2.61	100	*e*P	Pb	04 00 42.2	-1.1
AAGR				IAML		04 01 45.6	
	comp=Z,2µm,1.6s						
GO04	Tololo Observa	2.67	21	⇑*i*P	Pn	04 00 39.7	+0.3
GO04				*i* S	Sb	04 01 17.0	+0.1
GO04	Tololo Observa	2.67	21		Pn	04 00 39.8	+0.3
GO04	Tololo Observa	2.67	21	*e*P	Pn	04 00 40.0	+0.6
GO04				*e*S	Sb	04 01 17.1	+0.1
AVIZ	Vizcacheras	2.95	107	*e*P	Pb	04 00 47.5	-1.4
ZON	Zonda	2.95	68		Pn	04 00 46.3	+3.1
ZON	Zonda	2.95	68	*e*P	Pn	04 00 46.4	+3.1
ZON				*e*S	Sb	04 01 24.3	-0.8
ZON				IAML		04 01 34.8	
	comp=Z,2µm,0.4s						
RTCV	Cerro Valdivia	2.96	75	*e*P	Pn	04 00 46.2	+2.9
RTCV				IAML		04 01 36.0	
	comp=Z,2µm,1.3s						
COIS	El Sosneado	3.09	142	*e*P	Pn	04 00 47.8	+2.7
CO01	Juntas del Tor	3.10	30	*e*P	Pn	04 00 46.8	+1.3
CO01				*i* S	Sb	04 01 27.3	-2.2
CO01				IAML		04 01 36.5	
	comp=E,2µm,0.2s						
CO01	Juntas del Tor	3.10	30		Pn	04 00 46.4	+0.9
LAMA	Las Malvinas	3.17	136	*e*P	Pn	04 00 49.4	+3.2
RTLL	Cerro Villicun	3.20	66	*e*P	Pn	04 00 49.0	+2.3
RTLL				*e*S	Sb	04 01 33.1	+0.9
RTLL				IAML		04 01 36.0	
	comp=Z,5µm,0.5s						
RFA	San Rafael	3.54	127	*e*P	Pn	04 00 54.4	+3.1
RFA				IAML		04 01 57.0	
	comp=Z,1µm,1.1s						
EDS3	Malargue	3.71	147	*e*P	Pn	04 00 57.5	+3.8
LCO	Las Campanas	3.79	16	Pn	Pn	04 00 55.2	+0.2
BI02	San Fabin de	4.01	173	*e*P	Pn	04 00 58.8	+1.0
BI02	San Fabin de	4.01	173	Pn	Pn	04 00 58.6	+0.8
AC05	El Transito	4.07	20	⇑*i*P	Pn	04 00 59.5	+0.8
AC05	El Transito	4.07	20		Pn	04 00 59.1	+0.4
BI03	Tigo	4.26	192	*e*P	Pn	04 01 01.3	+0.2
BI03	Tigo	4.26	192		Pn	04 01 01.6	+0.5
AC04	Llanos de Chal	4.51	9	⇑*i*P	Pn	04 01 03.8	-0.8
AC04	Llanos de Chal	4.51	9	Pn	Pn	04 01 03.8	-0.8
VCA	Vinchina	5.05	40	*e*P	Pn	04 01 15.0	+2.8
VCA				*e*S	Sb	04 02 26.0	+0.4
VCA				IAML		04 02 30.9	
	comp=Z,3µm,0.6s						
MRA	San Martin	5.22	89	*e*P	Pn	04 01 16.0	+1.5
MRA				*e*S	Sn	04 02 19.6	+5.0
MRA				IAML		04 02 23.6	
	comp=Z,330nm,1.4s						
GO03	Copiap	5.27	16	Pn	Pn	04 01 14.8	-0.3
VA04	Juan Fernndez	5.89	259	Pn	Pn	04 01 24.7	+1.1
H03N1	Juan Fernandez	5.94	261	T	T	04 07 52.5	
	baz=89,slow=74,SNR=662						
H03N3	Juan Fernandez	5.95	261	T	T	04 07 52.2	
	baz=89,slow=74,SNR=2194						
H03N2	Juan Fernandez	5.96	261	T	T	04 07 53.5	
	baz=89,slow=74,SNR=627						
H03S1	Juan Fernandez	5.99	257	T	T	04 07 44.9	
	baz=82,slow=75,SNR=1135						
H03S3	Juan Fernandez	5.99	257	T	T	04 07 46.2	
	baz=82,slow=75,SNR=1111						
H03S2	Juan Fernandez	6.00	257	T	T	04 07 46.8	
	baz=82,slow=75,SNR=1998						
LC01	Cunco	6.21	180	Pn	Pn	04 01 28.0	+0.1
AC02	Maricunga	6.30	23	Pn	Pn	04 01 29.7	+0.1
TCA	Tanti	6.34	80	*e*P	Pn	04 01 30.8	+0.9
TCA				*e*S	Sn	04 02 44.7	+2.4
TCA				IAML		04 02 49.2	
	comp=Z,670nm,1.3s						
AC01	Pan de Azucar	6.60	10	Pn	Pn	04 01 30.8	-2.6
CYA	Choya	6.74	53	*e*P	Pn	04 01 34.8	-0.4
CYA				*e*S	Sn	04 02 52.5	+0.5
CYA				IAML		04 03 31.4	
	comp=Z,511nm,1.9s						
GO02	Mina Guanaco	7.75	16	Pn	Pn	04 01 47.1	-2.3
PLCA	Paso Flores	8.11	173	Pn	Pn	04 01 55.4	+1.3
	comp=Z,6.7nm,0.3s,baz=333,slow=11,SNR=262						
PLCA				Lg	Lg	04 04 02.6	
	comp=Z,0.7nm,0.3s,baz=266,slow=19,SNR=1.8						
PLCA				LR	LR	04 05 36.9	
	comp=Z,676nm,19.2s,baz=350,slow=42						
PLCA	Paso Flores	8.11	173	Pn	Pn	04 01 55.1	+1.0
PB14	IPOC Station P	8.13	10	Pn	Pn	04 01 50.9	-3.7
PB14	IPOC Station P	8.13	10	*e*P	Pn	04 01 52.2	-2.4
AHML	Horco Molle	8.18	46	*e*P	Pn	04 01 58.4	+3.3
AHML				*e*S	Sn	04 03 38.6	+11
PB10	IPOC Station P	9.21	8	Pn	Pn	04 02 07.4	-1.7
LL01	San Ignacio de	9.69	182		Pn	04 02 16.6	+0.9
LVC	Limon Verde	10.37	16	Pn	Pn	04 02 21.0	-4.4
	comp=Z,0.9nm,0.3s,baz=172,slow=10.0,SNR=13						
LVC				LR	LR	04 06 46.5	
	comp=Z,2µm,18.7s,baz=212,slow=40						
LVC	Limon Verde	10.37	16		Pn	04 02 21.3	-4.1
GO07	Milladeo Hill,	10.51	187	Pn	Pn	04 02 25.3	-1.6
PB07	IPOC Station P	11.05	10		Pn	04 02 31.5	-3.1
LPA	La Plata	11.83	105	*e*P	Pn	04 02 50.7	+5.8
LPA				PP	PbPb	04 03 30.5	+7.0
LPA				S	Sn	04 04 50.1	-6.7
LPA				PCP	PcP	04 08 36.4	+3.7
LPA				SCS	ScS	04 15 43.6	+2.6
LPA				PKIKP	PKiKP	04 16 26.3	-4.5
LPA				SKIKS		04 23 27.0	
PSGCX	Pisagua	13.12	7		Pn	04 02 57.3	-5.5
ITQB	Itaqui	13.41	81	*e*P	Pn	04 03 04.7	-1.9
MNMC	Minye Minye	13.65	9	Pn	Pn	04 03 07.2	-2.9
CPUP	Villa Florida	14.17	67	Pn	Pn	04 03 15.3	-1.6
	comp=Z,1.6nm,0.3s,baz=231,slow=8.7,SNR=18						
CPUP				Sn	Sn	04 05 41.6	-12
	comp=Z,1.2nm,0.3s,baz=256,slow=16,SNR=1.7						
CPUP				Lg	Lg	04 07 02.5	
	comp=Z,1.9nm,0.3s,baz=315,slow=20,SNR=2.1						
CPUP				LR	LR	04 09 32.8	
	comp=Z,495nm,19.7s,baz=248,slow=42						
CPUP	Villa Florida	14.17	67	Pn	Pn	04 03 15.6	-1.3
PB16	IPOC Station P	14.44	9		Pn	04 03 20.2	-1.1
PLTB	Pedras Altas	15.51	92	*e*P	Pn	04 03 34.9	-0.2
CPSB	Cacapava Do Su	15.90	87	*e*P	Pn	04 03 39.2	-0.8
CNLB	Canela	18.35	85	*e*P	Pn	04 04 09.7	-1.1
GO09	Cerro Castillo	18.58	181	P	P	04 04 10.2	-3.0
AQDB	Aquidauana	18.88	54	*e*P	P	04 04 15.8	-0.9
PTGB	Pitanga	19.10	71	*e*P	P	04 04 18.6	-0.6
SIV	San Ignacio	19.29	33	P	P	04 04 19.8	-1.5
	comp=Z,0.8nm,0.3s,baz=231,slow=10,SNR=38						
SIV				LR	LR	04 13 04.0	
	comp=Z,2µm,19.2s,baz=226,slow=41						
TRCB	Terra Rica	19.66	65	*e*P	P	04 04 24.4	-0.9
NNA	Nana	21.09	346	P	P	04 04 41.5	+0.7
	comp=Z,4.5nm,0.5s,baz=218,slow=6.5,SNR=2.1						
NNA				LR	LR	04 11 27.5	
	comp=Z,458nm,18.5s,baz=180,slow=33						
NNA	Nana	21.09	346	P	P	04 04 40.8	0.0
PCMB	Pacaembu	21.38	64	*e*P	P	04 04 42.1	-1.8
PP1B	Ponte de Pedra	21.46	50	*e*P	P	04 04 43.5	-1.3
FRTB	Fartura	21.76	70	*e*P	P	04 04 46.4	-1.6
VILB	Vilhena	22.36	31	*e*P	P	04 04 53.4	-1.1
ITRB	Iturama	23.19	61	*e*P	P	04 05 00.8	-2.4
ETMB	Extrema	23.35	14	*e*P	P	04 05 04.4	-0.3
SPB	Sao Paulo	23.35	73	P	P	04 05 04.2	-0.5
SPB				IAmb	IAmb	04 05 05.7	
	comp=Z,56nm,1.1s						
SPB	Sao Paulo	23.35	73	*e*P	P	04 05 04.2	-0.5
BB19B	Bebedouro	23.78	67	*e*P	P	04 05 07.8	-1.2
VAO	Valinhos	24.01	73	*e*P	P	04 05 09.4	-1.9
CZSB	Cruzeiro do Su	24.83	358	*e*P	P	04 05 19.4	+0.8
ARAG	Araguaiana, MT	24.84	52	*e*P	P	04 05 17.0	-1.8
SAML	Samuel	24.95	21	P	P	04 05 19.7	0.0
SAML	Samuel	24.95	21	*e*P	P	04 05 19.9	+0.2
IPMB	Ipameri, GO	25.85	61	*e*P	P	04 05 25.3	-2.6
ATAH	Atahualpa	26.12	345	LR	LR	04 14 31.2	
	comp=Z,409nm,18.1s,baz=191,slow=34						
BSCB	Bom Sucesso	26.77	71	*e*P	P	04 05 34.9	-1.5
VAS01	Vassouras-RJ	27.21	75	*e*P	P	04 05 40.3	+0.1
BDFB	Brasilia	27.51	58	P	P	04 05 40.8	-2.3
	comp=Z,26nm,0.9s,baz=225,slow=7.6,SNR=29						
BDFB				LR	LR	04 17 34.4	
	comp=Z,2µm,21.8s,baz=240,slow=39						
BDFB	Brasilia	27.51	58	P	P	04 05 40.7	-2.3
SNDB	Serra Nova Dou	27.96	47	*e*P	P	04 05 45.2	-1.8
NPGB	Novo Progresso	29.78	35	*e*P	P	04 06 01.2	-1.9
JANB	Januaria	30.58	62	*e*P	P	04 06 08.8	-1.5
MACA	Manacapuru-AM	31.19	22	*e*P	P	04 06 15.0	-0.6
SDBA	SAO DESIDERIO	31.91	57	*e*P	P	04 06 20.3	-1.7
ITTB	Itaituba	31.96	32	*e*P	P	04 06 22.1	-0.3
NAN01	Guarapari, ES	32.16	70	*e*P	P	04 06 21.7	-2.4
SMTB	Santa Maria do	32.67	49	*e*P	P	04 06 27.8	-0.8
OTAV	Otavalo	33.32	348	P	P	04 06 32.5	-2.2
OTAV				IAmb	IAmb	04 06 43.7	
	comp=Z,17nm,1.2s						
OTAV	Otavalo	33.32	348	*e*P	P	04 06 35.6	+0.9
PRPB	Parauapebas	33.44	43	*e*P	P	04 06 33.7	-1.7
PTGA	Pitinga	33.70	22	P	P	04 06 37.1	-0.5
PTGA				IAmb	IAmb	04 06 38.1	
	comp=Z,28nm,1.1s						
MACC	Macarena, Meta	34.68	357	*e*P	P	04 06 47.4	+1.3
SOTA	Rioblanco	34.91	352	*e*P	P	04 06 52.3	+3.7
GDU01	Guandu, BA	34.99	65	*e*P	P	04 06 47.0	-1.8
PCON	Cinco Dias	35.07	352	*e*P	P	04 06 51.8	+1.7
ORTC	Ortega, Tolima	36.52	354	*e*P	P	04 07 04.1	+2.2
YOTC	Yotoco, Valle	36.70	353	*e*P	P	04 07 04.7	+1.2
CHIC	Chingaza	37.14	357	*e*P	P	04 07 09.7	+2.1
MCPB	Macapa, AP	37.19	34	*e*P	P	04 07 06.9	-0.7
TOLC	Tolima	37.20	354	*e*P	P	04 07 11.8	+3.8
ROSC	El Rosal	37.38	356	P	P	04 07 14.4	+4.8
	comp=Z,12nm,0.6s,baz=95,slow=21,SNR=9.0						
ROSC	El Rosal	37.38	356	P	P	04 07 08.1	-1.5
ROSC				IAmb	IAmb	04 07 15.5	
	comp=Z,22nm,0.9s						
RREF	El Recreo	37.51	354	*e*P	P	04 07 14.2	+3.2
TMAB	Tom-Au,PA,Br	37.53	41	*e*P	P	04 07 09.9	-0.5
PLMC	San Jos del P	37.61	353	*e*P	P	04 07 12.7	+1.6
NORC	Norcasia	38.13	355	*e*P	P	04 07 17.8	+2.2
SPBC	San Pablo de B	38.17	356	*e*P	P	04 07 16.5	+0.6
RUSC	La Rusia	38.37	358	*e*P	P	04 07 19.1	+1.1
CBOC	Ciudad Bolivar	38.53	353	*e*P	P	04 07 20.8	+1.8
PTBC	PUERTO BERRIO,	39.07	356	*e*P	P	04 07 22.9	-0.5
DBBC	Dabeiba	39.69	353	*e*P	P	04 07 31.8	+3.1
ZARC	Zaragoza, Cauc	40.04	355	*e*P	P	04 07 31.9	+0.4
SMLC	San Martn de	41.30	357	*e*P	P	04 07 40.5	-1.4
SDV	Santo Domingo	41.35	2	P	P	04 07 43.6	+1.1
	comp=Z,14nm,0.9s,baz=219,slow=4.4,SNR=14						
SDV	Santo Domingo	41.35	2	P	P	04 07 40.9	-1.6
SDV	Santo Domingo	41.35	2	*e*P	P	04 07 42.7	+0.3
SDV	Santo Domingo	41.35	2	*e*P	P	04 07 42.8	+0.3
MDP	Montagnes des	41.79	30	P	P	04 07 44.3	-1.6
	comp=Z,7.7nm,0.8s,baz=206,slow=7.5,SNR=5.7						
SJCC	San Jacinto, C	42.45	355	*e*P	P	04 07 46.5	-4.8
TGUH	Tegucigalpa,Un	48.74	340	P	P	04 08 41.8	+0.6
ICMP	Isla Caja de M	50.54	7	P	P	04 08 54.0	-0.7
VNA3	Neumayer Olymp	50.54	158	P	P	04 08 55.2	+1.0
MLPR	Magueyes Islan	50.57	6	P	P	04 08 53.2	-1.7
OBIP	Obispado Ponce	50.69	7	P	P	04 08 56.1	+0.3
SJG	San Juan	50.80	7	P	P	04 08 55.7	-1.0
SJG				IAmb	IAmb	04 08 57.1	
	comp=Z,23nm,0.9s						
VNA1	Neumayer--Stat	50.84	157	P	P	04 08 58.2	+1.7
VNA2	Neumayer--Watz	51.19	158	P	P	04 09 00.0	+0.9
	baz=287,slow=8.2						
SC01	Santiago de lo	51.82	1	P	P	04 09 05.4	+1.1
SNAA	Sanae	52.76	158	P	P	04 09 11.8	+0.9
SNAA	Sanae	52.76	158	P	P	04 09 11.2	+0.3
SNAA				IAmb	IAmb	04 09 35.0	
	comp=Z,31nm,1.3s						
TEIG	Tepich	54.89	341	P	P	04 09 27.8	+0.9
RKT	Rikitea	55.85	263	*e*LR	LR	04 25 52.9	
	comp=Z,305nm,25.0s						
QSPA	South Pole Qui	57.56	180	P	P	04 09 47.1	+1.5
QSPA				IAmb	IAmb	04 09 48.2	
	comp=Z,26nm,1.1s						
VNDA	Vanda	65.42	191	P	P	04 10 40.5	+2.1
	comp=Z,2.4nm,1.1s,baz=127,slow=3.5,SNR=3.9						
VNDA				LR	LR	04 39 45.6	
	comp=Z,67nm,18.0s,baz=130,slow=36						
VNDA	Vanda	65.42	191	P	P	04 10 39.5	+1.1
833A	Chaparral WMA,	66.05	334	P	P	04 10 44.9	+1.8
	baz=155						
833A	Chaparral WMA,	66.05	334	P	P	04 10 45.1	+2.0
833A				IAmb	IAmb	04 10 45.6	
	comp=Z,18nm,0.9s						
HKT	Hockley	66.29	337	P	P	04 10 45.0	+0.6
HKT				IAmb	IAmb	04 11 37.0	
	comp=Z,25nm,1.8s						
GOGA	Godfrey	66.63	349	P	P	04 10 46.6	0.0
	baz=169						
LRAL	Lakeview Retre	66.89	346	P	P	04 10 48.6	+0.2
	baz=166						
TAOE	Nuku Hiva Isla	66.98	274	*e*S	S	04 19 42.7	-0.4
	comp=Z,368nm,30.1s						
TAOE	Nuku Hiva Isla	66.98	274	*e*LR	LR	04 31 02.8	
	comp=Z,319nm,23.0s,baz=132						
TAOE	Nuku Hiva Isla	66.98	274	P	P	04 10 50.0	+0.5
X58A	Rowland	67.24	353	P	P	04 10 50.8	+0.3
	baz=173						
143A	Socs Landing,	67.58	342	P	P	04 10 55.0	+2.3
NATX	Nacogdoches	67.60	339	P	P	04 10 55.0	+2.1
	baz=159						
NATX	Nacogdoches	67.60	339	P	P	04 10 54.2	+1.3
NATX				IAmb	IAmb	04 10 55.4	
	comp=Z,18nm,0.9s						
W58A	Raeford	67.69	353	P	P	04 10 54.0	+0.6
	baz=173						
TBI	Tubuai	67.75	256	*e*LR	LR	04 31 24.2	
	comp=Z,620nm,27.0s,baz=110						
TBI	Tubuai	67.75	256	*e*T	T	05 24 40.4	
	comp=Z,15nm,0.2s						
X51A	Calhoun	67.99	348	P	P	04 10 55.0	-0.2
KMSC	Kings Mountain	68.04	352	P	P	04 10 56.1	+0.6
	baz=171						
KMSC	Kings Mountain	68.04	352	P	P	04 10 56.4	+0.8
KMSC				IAmb	IAmb	04 10 56.7	
	comp=Z,17nm,1.0s						
BG3	Lake Jocassee	68.11	350	P	P	04 10 56.1	+0.1
BG3				IAmb	IAmb	04 10 57.4	
	comp=Z,10.0nm,0.9s						
JCT	Junction City	68.15	334	P	P	04 10 57.8	+1.4
	baz=155						
JCT	Junction City	68.15	334	P	P	04 10 57.0	+0.7
237A	Washetta, Mont	68.18	338	P	P	04 10 58.5	+2.0
Y45A	Yeager Farm, C	68.24	344	P	P	04 10 58.0	+1.2
X48A	Hartselle	68.28	347	P	P	04 10 57.5	+0.5
X48A				IAmb	IAmb	04 10 58.5	
	comp=Z,16nm,0.8s						
V59A	Middlesex	68.34	354	P	P	04 10 58.3	+0.9
	baz=174						
V58A	Windy Hill, Pi	68.45	354	P	P	04 10 58.2	+0.1
	baz=173						
Z41A	Richland Creek	68.48	341	P	P	04 10 59.6	+1.3
	baz=161						
V56A	Mocksville	68.60	352	P	P	04 10 59.6	+0.6
	baz=172						
TXAR	Lajitas Array	68.64	330	P	P	04 11 00.5	+0.9
	comp=Z,1.5nm,0.6s,baz=151,slow=8.0,SNR=18						
TXAR				LR	LR	04 36 38.2	
	comp=Z,204nm,18.6s,baz=0.0,slow=32						
TXAR	Lajitas Array	68.64	330	P	P	04 11 00.0	+0.4
TX31	Lajitas Ar. Si	68.64	330	P	P	04 11 00.8	+1.2
TX31				IAmb	IAmb	04 11 21.8	
	comp=Z,15nm,1.0s						
TX32	Lajitas Array	68.64	330	P	P	04 11 00.8	+1.2
W50A	Signal Mountai	68.69	348	P	P	04 10 59.9	+0.2
WHTX	Lake Whitney,	68.70	337	P	P	04 11 01.0	+1.3
	baz=157						
WHTX	Lake Whitney,	68.70	337	P	P	04 11 01.2	+1.4
WHTX				IAmb	IAmb	04 11 01.8	
	comp=Z,12nm,0.8s						
V53A	Saluda	68.75	350	P	P	04 11 00.1	0.0
U61A	Possum Corner	68.78	356	P	P	04 11 01.9	+1.8
	baz=176						
CPCT	Cooper Cave	68.80	349	P	P	04 11 00.9	+0.6
CPCT				IAmb	IAmb	04 11 01.4	
	comp=Z,15nm,0.8s						
SWET	Sewanee	68.81	348	P	P	04 11 00.3	-0.1
OXF	Oxford	68.83	345	P	P	04 11 00.5	0.0
	baz=164,SNR=6.1						
OXF	Oxford	68.83	345	P	P	04 11 00.6	+0.1
TKL	Tuckaleechee C	68.88	350	P	P	04 11 00.2	-0.6
TKL				IAmb	IAmb	04 11 01.6	
	comp=Z,12nm,0.8s						
U59A	Littleton	68.89	355	P	P	04 11 01.9	+1.1
	baz=174						
U59A	Littleton	68.89	355	P	P	04 11 02.1	+1.2
U60A	Pendleton	68.97	355	P	P	04 11 01.8	+0.6
	baz=175						
U58A	Oxford	68.99	354	P	P	04 11 01.9	+0.5
	baz=174						
PLAL	Pickwick Lake	69.00	346	P	P	04 11 01.6	0.0
PLAL				IAmb	IAmb	04 11 02.5	
	comp=Z,13nm,0.8s						
V52A	Sevierville	69.04	350	P	P	04 11 01.6	-0.2
V52A				IAmb	IAmb	04 11 02.6	
	comp=Z,16nm,0.8s						
U57A	Blanch	69.10	354	P	P	04 11 02.5	+0.4
	baz=173						
V51A	Loudon	69.11	349	P	P	04 11 02.6	+0.3
U56A	King	69.12	353	P	P	04 11 02.6	+0.2
	baz=172						
U54A	Nelsons Funny	69.46	351	P	P	04 11 04.7	+0.2
	baz=171						
U54A	Nelsons Funny	69.46	351	P	P	04 11 04.9	+0.4
V48A	Smith Brothers	69.48	347	P	P	04 11 04.4	-0.1
T59A	Double "B" Far	69.49	355	P	P	04 11 05.4	+0.9
	baz=175						
T59A	Double "B" Far	69.49	355	P	P	04 11 05.7	+1.2
T58A	Grand View Acr	69.54	354	P	P	04 11 05.5	+0.7
	baz=174						
T60A	Surry	69.60	356	P	P	04 11 06.8	+1.6
	baz=176						
T57A	Hurt	69.66	354	P	P	04 11 06.0	+0.4
	baz=173						
CLTN	Cedars of Leba	69.73	348	P	P	04 11 06.7	+0.6
CLTN				IAmb	IAmb	04 11 07.5	
	comp=Z,16nm,0.9s						
T56A	Rocky Mt	69.76	353	P	P	04 11 07.0	+0.8
	baz=173						
Z35A	Perchaven, San	69.87	338	P	P	04 11 08.3	+1.3
MIAR	Mount Ida	69.90	341	P	P	04 11 07.9	+0.8
	baz=161						
MIAR	Mount Ida	69.90	341	P	P	04 11 07.9	+0.8
MIAR				IAmb	IAmb	04 11 08.3	
	comp=Z,21nm,1.4s						
ABTX	Abilene, Hawle	70.03	335	P	P	04 11 09.1	+1.1
	baz=155						
ABTX	Abilene, Hawle	70.03	335	P	P	04 11 09.2	+1.2
ABTX				IAmb	IAmb	04 11 10.0	
	comp=Z,20nm,1.3s						
U49A	Red Boiling Sp	70.05	348	P	P	04 11 08.1	+0.1
U49A				IAmb	IAmb	04 11 09.1	
	comp=Z,29nm,1.6s						
WVT	Waverly	70.06	346	P	P	04 11 08.3	+0.2
	baz=166						
WVT	Waverly	70.06	346	P	P	04 11 08.0	0.0
W41B	Gary Mavity, V	70.14	342	P	P	04 11 09.4	+0.8
	baz=162						
S58A	Poland Farm, P	70.16	355	P	P	04 11 09.8	+1.2
	baz=174						
S59A	Mechanicsville	70.26	355	P	P	04 11 10.3	+1.1
	baz=175						
S56A	Natural Bridge	70.36	354	P	P	04 11 10.1	+0.2
	baz=173						
S57A	Dark Hollow, R	70.38	354	P	P	04 11 10.5	+0.5
	baz=174						
R58B	Mineral	70.50	355	P	P	04 11 11.9	+1.2
	baz=174						
R58B	Mineral	70.50	355	P	P	04 11 12.1	+1.3
PPT2	Papeete2	70.55	261	*e*LR	LR	04 32 40.2	
	comp=Z,260nm,26.0s,baz=114						
PPT	Papeete	70.56	261	LR	LR	04 33 33.4	
	comp=Z,139nm,18.2s,baz=160,slow=28						
W39A	Magazine	70.57	341	P	P	04 11 12.5	+1.3
	baz=160,SNR=7.6						
W39A	Magazine	70.57	341	P	P	04 11 12.6	+1.3
S54A	Dingess, Beckl	70.66	352	P	P	04 11 12.0	+0.2
	baz=172						
LCAR	Lake Charles	70.73	344	P	P	04 11 12.6	+0.4
LCAR				IAmb	IAmb	04 11 13.3	
	comp=Z,14nm,0.7s						
S51A	Beattyville	70.80	350	P	P	04 11 12.5	-0.1
S51A				IAmb	IAmb	04 11 28.5	
	comp=Z,12nm,1.1s						
R58A	Rapidan	70.84	355	P	P	04 11 13.4	+0.6
	baz=174						
R57A	Stanardsville	70.88	354	P	P	04 11 13.9	+0.8
	baz=174						
R54A	Victor	71.00	352	P	P	04 11 13.7	-0.1
	baz=172						
R55A	Marlinton	71.01	353	P	P	04 11 14.7	+0.7
	baz=172						
R56A	Bull Pasture M	71.07	354	P	P	04 11 15.3	+1.0
	baz=173						
T45A	Paducah	71.08	346	P	P	04 11 16.5	+2.3
PBMO	Poplar Bluff	71.23	344	P	P	04 11 15.7	+0.5
PBMO				IAmb	IAmb	04 11 16.0	
	comp=Z,9.3nm,0.6s						
U40A	Yellville	71.42	342	P	P	04 11 17.1	+0.8
	baz=161,SNR=10						
U40A	Yellville	71.42	342	P	P	04 11 17.1	+0.8
U40A				IAmb	IAmb	04 11 17.7	
	comp=Z,20nm,1.1s						
MNTX	Cornudas Mount	71.42	330	P	P	04 11 16.8	+0.3
	baz=151						
MNTX	Cornudas Mount	71.42	330	P	P	04 11 16.6	+0.1
Q58A	Fox Den Farm,	71.46	355	P	P	04 11 18.0	+1.5
	baz=175						

Q57A	Strasburg	71.61	355	P	P	04 11 18.7	+1.3
	baz=174						
HHAR	Hobbs	71.64	341	P	P	04 11 18.3	+0.6
WMOK	Wichita Mounta	71.66	337	P	P	04 11 18.3	+0.4
	baz=156,SNR=5.4						
WMOK	Wichita Mounta	71.66	337	P	P	04 11 18.2	+0.4
R49A	Shelbyville	71.68	349	P	P	04 11 17.9	0.0
R49A				IAmb	IAmb	04 11 18.5	
	comp=Z,17nm,1.1s						
WCI	Wyandotte Cave	71.81	348	P	P	04 11 17.3	-1.3
	baz=167						
TUL1	Leonard	71.81	340	P	P	04 11 19.2	+0.5
	baz=159						
TUL1	Leonard	71.81	340	P	P	04 11 18.8	+0.1
TUL1				IAmb	IAmb	04 11 20.2	
	comp=Z,21nm,1.4s						
SIUC	Southern Illin	71.87	346	P	P	04 11 19.5	+0.5
SIUC				IAmb	IAmb	04 11 20.1	
	comp=Z,10nm,0.8s						
Q52A	Bidwell	71.92	352	P	P	04 11 20.1	+0.7
P58A	Pank, Wackersv	71.98	356	P	P	04 11 20.7	+1.1
	baz=175						
P57A	Homestead Farm	72.02	355	P	P	04 11 21.3	+1.4
	baz=174						
P57A	Homestead Farm	72.02	355	P	P	04 11 21.5	+1.6
P57A				IAmb	IAmb	04 11 22.1	
	comp=Z,29nm,1.1s						
P59A	Jarrettsville	72.05	356	P	P	04 11 21.5	+1.5
	baz=176						
P56A	Dayton Farm, R	72.11	354	P	P	04 11 22.0	+1.6
	baz=174						
Q51A	Peebles	72.13	351	P	P	04 11 20.8	+0.2
Q51A				IAmb	IAmb	04 11 21.6	
	comp=Z,14nm,0.9s						
P60A	Greenville	72.21	357	P	P	04 11 22.0	+1.1
	baz=176						
WUPA	West Chester U	72.33	357	P	P	04 11 23.2	+1.5
WUPA				IAmb	IAmb	04 11 23.9	
	comp=Z,13nm,1.1s						
MCWV	Mont Chateau	72.35	354	P	P	04 11 22.8	+0.9
	baz=173						
MSTX	Muleshoe	72.38	333	P	P	04 11 23.1	+0.8
	baz=153						
MSTX	Muleshoe	72.38	333	P	P	04 11 23.4	+1.1
MSTX				IAmb	IAmb	04 11 24.1	
	comp=Z,13nm,0.9s						
P51A	Williamsport	72.54	351	P	P	04 11 23.2	+0.3
P51A				IAmb	IAmb	04 11 23.8	
	comp=Z,22nm,0.8s						
P52A	Corning	72.57	352	P	P	04 11 23.1	-0.1
	baz=171						
P52A	Corning	72.57	352	P	P	04 11 23.4	+0.2
P52A				IAmb	IAmb	04 11 24.0	
	comp=Z,20nm,0.9s						
O58A	Lewisberry	72.58	356	P	P	04 11 24.2	+0.9
	baz=175						
CCM	Cathedral Cave	72.64	344	P	P	04 11 24.1	+0.4
	baz=163						
CCM	Cathedral Cave	72.64	344	P	P	04 11 23.8	+0.2
CCM				IAmb	IAmb	04 11 25.1	
	comp=Z,23nm,0.9s						
O60A	Telford	72.70	357	P	P	04 11 25.1	+1.2
	baz=177						
O57A	Amberson	72.72	355	P	P	04 11 25.1	+1.0
	baz=175						
O59A	Robesonia	72.73	357	P	P	04 11 25.4	+1.2
	baz=176						
AMTX	Amarillo	72.79	335	P	P	04 11 25.7	+1.0
	baz=154						
AMTX	Amarillo	72.79	335	P	P	04 11 26.1	+1.3
AMTX				IAmb	IAmb	04 11 26.8	
	comp=Z,28nm,1.4s						
S39A	Bolivar	72.80	342	P	P	04 11 25.3	+0.7
S39A				IAmb	IAmb	04 11 26.1	
	comp=Z,30nm,1.4s						
P49A	Miami Univ. Ec	72.83	350	P	P	04 11 23.9	-0.8
	baz=169						
P49A	Miami Univ. Ec	72.83	350	P	P	04 11 24.4	-0.2
O56A	Blue Knob Stat	72.84	355	P	P	04 11 25.8	+1.0
	baz=174						
P48A	Milroy	72.86	349	P	P	04 11 23.9	-1.0
P48A				IAmb	IAmb	04 11 25.3	
	comp=Z,31nm,1.2s						
T35A	Sooner Cattle	72.95	340	P	P	04 11 26.7	+1.1
T35A				IAmb	IAmb	04 11 27.4	
	comp=Z,17nm,1.1s						
O53A	New Philadelph	73.07	353	P	P	04 11 26.5	+0.3
	baz=172						
O53A	New Philadelph	73.07	353	P	P	04 11 26.7	+0.6
R40A	Maddies Statio	73.11	343	P	P	04 11 27.2	+0.8
SSPA	Standing Stone	73.16	355	P	P	04 11 27.4	+0.7
	baz=175						
121A	Cookes Peak, D	73.17	329	P	P	04 11 29.4	+2.2
	baz=149						
121A	Cookes Peak, D	73.17	329	P	P	04 11 29.5	+2.3
121A				IAmb	IAmb	04 11 45.0	
	comp=Z,12nm,0.9s						
N60A	Cedar Hill Far	73.24	357	P	P	04 11 28.2	+1.1
	baz=177						
N57A	Milroy	73.25	356	P	P	04 11 27.9	+0.7
	baz=175						
ACSO	Alum Creek Sta	73.27	351	P	P	04 11 27.1	-0.2
	baz=170						
ACSO	Alum Creek Sta	73.27	351	P	P	04 11 27.0	-0.2
N58A	Sunbury	73.29	356	P	P	04 11 28.4	+1.1
	baz=176						
N59A	State Game Lan	73.31	357	P	P	04 11 28.9	+1.3
	baz=176						
O49A	Covington	73.41	350	P	P	04 11 28.4	+0.2
O49A				IAmb	IAmb	04 11 28.9	
	comp=Z,28nm,1.1s						
N54A	Moraine State	73.65	354	P	P	04 11 29.5	0.0
	baz=173						
P43A	Skaggs, Pawnee	73.79	346	P	P	04 11 30.4	0.0
P43A				IAmb	IAmb	04 11 31.2	
	comp=Z,20nm,0.9s						
M59A	Waymart	73.92	357	P	P	04 11 32.7	+1.5
	baz=177						
M56A	Emporium	74.02	355	P	P	04 11 32.1	+0.3
	baz=174						
M56A	Emporium	74.02	355	P	P	04 11 32.1	+0.3
N49A	Columbus Grove	74.11	350	P	P	04 11 31.9	-0.3
M54A	Oil Creek Stat	74.17	354	P	P	04 11 32.5	-0.1
	baz=173						
L63A	North Scituate	74.17	0	P	P	04 11 33.3	+0.7
	baz=180						
LENM	Lemitar	74.22	330	P	P	04 11 35.8	+2.5
P40A	Paris	74.23	344	P	P	04 11 33.5	+0.5
LIC	Lamto	74.25	72	*e*P	P	04 11 32.5	-1.2
	comp=Z,31nm,0.9s						
N47A	Urbana	74.29	349	P	P	04 11 32.8	-0.5
N47A				IAmb	IAmb	04 11 33.6	
	comp=Z,19nm,0.9s						
TUC	Tucson	74.33	326	P	P	04 11 35.6	+1.8
	baz=147						
TUC	Tucson	74.33	326	P	P	04 11 34.8	+1.0
MAW	Mawson	74.41	164	P	P	04 11 34.3	+0.6
	comp=Z,2.3nm,0.4s,baz=220,slow=13,SNR=3.1						
MAW				LR	LR	04 47 39.3	
	comp=Z,344nm,18.1s,baz=237,slow=38						
TIC	Toumodi	74.50	71	*e*P	P	04 11 34.4	-0.8
KIC	Kosan Boka	74.55	72	*e*P	P	04 11 34.9	-0.6
	comp=Z,41nm,1.0s						
L59A	Walton	74.56	358	P	P	04 11 36.0	+1.1
	baz=177						
BINY	Binghamton	74.60	357	P	P	04 11 35.8	+0.7
	baz=176						
HDIL	Hopedale	74.62	346	P	P	04 11 35.1	-0.1
	baz=165						
HDIL	Hopedale	74.62	346	P	P	04 11 35.4	+0.2
L56A	Greenwood	74.63	356	P	P	04 11 35.6	+0.3
	baz=175						
DBIC	Dimbokro	74.64	72	P	P	04 11 35.0	-1.0
	comp=Z,11nm,0.8s,baz=209,slow=6.8,SNR=15						
DBIC				LR	LR	04 44 38.8	
	comp=Z,164nm,18.1s,baz=212,slow=36						
DBIC	Dimbokro	74.64	72	P	P	04 11 35.3	-0.7
DBIC				IAmb	IAmb	04 11 36.5	
	comp=Z,17nm,1.0s						
ANMO	Albuquerque	74.68	331	P	P	04 11 37.8	+1.9
	baz=150						
ANMO	Albuquerque	74.68	331	P	P	04 11 37.0	+1.0
P38A	Dawn	74.68	343	P	P	04 11 35.9	+0.3
P38A				IAmb	IAmb	04 11 36.7	
	comp=Z,16nm,0.9s						
L61B	Northampton	74.76	359	P	P	04 11 37.1	+1.1
	baz=179						
214A	Organ Pipe Nat	75.00	325	P	P	04 11 40.0	+2.3
	baz=145						
214A	Organ Pipe Nat	75.00	325	P	P	04 11 40.1	+2.3
R32A	Long Quarter,	75.01	338	P	P	04 11 38.8	+1.2
R32A				IAmb	IAmb	04 11 39.5	
	comp=Z,23nm,1.2s						
J62A	Henniker	75.54	0	P	P	04 11 42.0	+1.6
	baz=180						
CBKS	Cedar Bluff	75.69	338	P	P	04 11 42.7	+1.2
	baz=156						
CBKS	Cedar Bluff	75.69	338	P	P	04 11 42.9	+1.4
N38A	Joes South For	75.72	343	P	P	04 11 42.1	+0.6
T25A	Trinidad	75.80	334	P	P	04 11 44.6	+2.2
	baz=152,SNR=10						
T25A	Trinidad	75.80	334	P	P	04 11 44.5	+2.2
T25A				IAmb	IAmb	04 11 45.3	
	comp=Z,22nm,1.1s						
I60A	Shoreham	76.16	359	P	P	04 11 45.0	+1.0
	baz=179						
X16A	Lo Mia Camp, P	76.39	327	P	P	04 11 48.1	+2.3
L40A	Anamosa	76.47	345	P	P	04 11 45.4	-0.4
LBNH	Lisbon	76.55	360	P	P	04 11 47.7	+1.5
	baz=180						
SDCO	Great Sand Dun	76.75	333	P	P	04 11 49.5	+1.6
	baz=151,SNR=6.8						
SDCO	Great Sand Dun	76.75	333	P	P	04 11 48.6	+0.8
H58A	Gabriels	76.75	358	P	P	04 11 48.5	+1.1
	baz=178						
KSCO	Kaye Shedlock’	76.83	336	P	P	04 11 50.0	+1.9
H61A	Lyndonville	76.84	360	P	P	04 11 48.9	+1.0
	baz=180						
JFWS	Jewell Farm	77.08	346	P	P	04 11 49.7	+0.5
	baz=164						
S22A	4UR Ranch, Cre	77.26	332	P	P	04 11 52.6	+1.9
	baz=150,SNR=6.0						
S22A	4UR Ranch, Cre	77.26	332	P	P	04 11 52.7	+1.9
S22A				IAmb	IAmb	04 12 10.3	
	comp=Z,23nm,1.8s						
WUAZ	Wupatki	77.27	328	P	P	04 11 53.1	+2.4
	baz=147,SNR=7.9						
WUAZ	Wupatki	77.27	328	P	P	04 11 53.0	+2.3
G63A	Kingsbury	77.45	2	P	P	04 11 52.7	+1.4
	baz=182						
MVCO	Mesa Verde	77.47	331	P	P	04 11 53.6	+1.7
	baz=149,SNR=5.6						
MVCO	Mesa Verde	77.47	331	P	P	04 11 53.8	+1.9
MVCO				IAmb	IAmb	04 12 21.2	
	comp=Z,14nm,1.2s						
G62A	West of Eustis	77.54	1	P	P	04 11 52.9	+1.1
	baz=181						
G65A	Princeton	77.61	3	P	P	04 11 53.7	+1.6
	baz=184						
BC3	Big Chuckawall	77.68	324	P	P	04 11 55.2	+2.2
	baz=144,SNR=5.5						
Q24A	Divide	77.68	334	P	P	04 11 54.9	+1.8
	baz=152,SNR=5.4						
Q24A	Divide	77.68	334	P	P	04 11 55.1	+2.0
Q24A				IAmb	IAmb	04 11 55.7	
	comp=Z,13nm,0.9s						
IRM	Iron Mountain	77.93	324	P	P	04 11 56.2	+2.0
	baz=144						
F63A	Nahmakanta, Br	78.05	2	P	P	04 11 56.1	+1.5
	baz=182						
W13A	Hualapai Mount	78.09	326	P	P	04 11 57.7	+2.3
I40A	Norwalk	78.10	346	P	P	04 11 55.2	+0.3
I40A				IAmb	IAmb	04 11 57.4	
	comp=Z,37nm,1.4s						
PFO	Pinyon Flats O	78.15	323	P	P	04 11 57.3	+1.7
	baz=143						
PFO	Pinyon Flats O	78.15	323	P	P	04 11 56.8	+1.2
BELC	Belle Mtn. Jos	78.23	324	P	P	04 11 58.5	+2.4
	baz=143						
F64A	Sherman	78.24	3	P	P	04 11 57.2	+1.6
	baz=183						
U15A	North Rim	78.44	328	P	P	04 11 55.2	-2.1
MURC	Murrieta	78.51	323	P	P	04 12 00.2	+2.7
	baz=142						
SMCO	Snowmass	78.56	333	P	P	04 11 59.0	+0.9
SMCO				IAmb	IAmb	04 12 01.0	
	comp=Z,18nm,1.2s						
ISCO	Idaho Springs	78.59	334	P	P	04 11 59.9	+1.8
	baz=151						
ISCO	Idaho Springs	78.59	334	P	P	04 11 59.9	+1.8
E60A	Ste Agathe de	78.68	0	P	P	04 11 59.0	+1.0
	baz=180						
GMRC	Granite Mounta	78.69	325	P	P	04 12 00.9	+2.4
	baz=144,SNR=6.5						
I37A	Lemond, Waseca	78.81	344	P	P	04 11 59.2	+0.3
K31A	O'Neill	78.88	340	P	P	04 12 00.2	+0.9
E56A	St. Veronique	78.90	358	P	P	04 11 59.2	-0.1
	baz=177						
KNB	Kanab	79.17	328	P	P	04 12 03.6	+2.4
D60A	Saint Jean D’O	79.23	1	P	P	04 12 01.9	+0.9
	baz=181						
BFSC	Mount Baldy Ra	79.25	323	P	P	04 12 03.6	+2.0
	baz=142						
ECSD	EROS Data Cent	79.33	342	P	P	04 12 01.8	+0.1
	baz=159						
ECSD	EROS Data Cent	79.33	342	P	P	04 12 02.1	+0.5
ECSD				IAmb	IAmb	04 12 03.1	
	comp=Z,18nm,0.8s						
LCMT	Little Creek M	79.36	327	P	P	04 12 04.6	+2.5
D58A	Chemin du LacG	79.41	359	P	P	04 12 02.4	+0.4
	baz=179						
D62A	Allapoint, All	79.43	2	P	P	04 12 03.1	+1.0
	baz=182						
TSUM	Tsumeb	79.46	106	P	P	04 12 03.8	+0.5
TSUM				IAmb	IAmb	04 12 04.6	
	comp=Z,16nm,0.9s						
D61A	St Aubert, Com	79.53	1	P	P	04 12 03.9	+1.2
	baz=181						
GSC	Goldstone, Bar	79.66	324	P	P	04 12 06.1	+2.3
	baz=143						
GSC	Goldstone, Bar	79.66	324	P	P	04 12 06.1	+2.3
MTPU	Mount Pierson	79.73	329	P	P	04 12 06.8	+2.3
SZCU	Shurtz Canyon	79.77	328	P	P	04 12 07.4	+2.9
SPMN	Marine on St.	79.83	345	P	P	04 12 04.1	-0.3
	baz=162						
SHPR	Sheep Range	79.83	326	P	P	04 12 07.2	+2.4
CCUT	Cedar City	79.85	328	P	P	04 12 07.6	+2.6
O20A	White River Ci	79.88	333	P	P	04 12 05.7	+0.7
	baz=149						
O20A	White River Ci	79.88	333	P	P	04 12 07.2	+2.2
SHOC	Shoshone, Teco	79.88	325	P	P	04 12 06.5	+1.6
	baz=143						
SRU	San Rafael Swe	79.92	330	P	P	04 12 06.8	+1.5
EDW2	Edwards Air Fo	79.93	323	P	P	04 12 06.9	+1.7
	baz=142						
KOWA	Kowa	79.98	66	P	P	04 12 05.2	-0.7
KOWA				IAmb	IAmb	04 12 06.6	
	comp=Z,15nm,0.8s						
LRMC	Laurel Mtn Rad	80.24	324	P	P	04 12 08.9	+1.9
	baz=142						
P17A	Butcher Ranch,	80.32	330	P	P	04 12 09.3	+1.9
TMUT	Trail Mountain	80.36	330	P	P	04 12 09.6	+1.8
PRN	Pahroc Range	80.51	326	P	P	04 12 11.0	+2.6
PRN				IAmb	IAmb	04 12 27.0	
	comp=Z,12nm,1.1s						
BOSA	Boshof	80.58	118	P	P	04 12 08.4	-0.8
	comp=Z,8.1nm,0.8s,baz=247,slow=3.7,SNR=14						
BOSA				LR	LR	04 45 43.1	
	comp=Z,276nm,18.1s,baz=227,slow=34						
BOSA	Boshof	80.58	118	P	P	04 12 08.3	-0.8
BOSA				IAmb	IAmb	04 12 43.6	
	comp=Z,18nm,1.1s						
F36A	Milaca	80.59	345	P	P	04 12 08.2	-0.2
MPMC	Manual Prospec	80.60	324	P	P	04 12 10.9	+1.9
	baz=142						
FURC	Furnace Creek,	80.62	325	P	P	04 12 11.0	+2.3
	baz=143						
TPNV	Topopah Spring	80.71	325	P	P	04 12 11.8	+2.2
	baz=143,SNR=6.7						
TPNV	Topopah Spring	80.71	325	P	P	04 12 11.9	+2.4
RDMU	Red Mountain	80.77	332	P	P	04 12 11.2	+1.4
ISA	Isabella, Lake	80.78	323	P	P	04 12 12.2	+2.4
	baz=142						
ISA	Isabella, Lake	80.78	323	P	P	04 12 12.2	+2.4
PKM	Mcpherson Peak	80.87	322	P	P	04 12 13.0	+2.5
	baz=141						
MPU	Maple Canyon	81.14	330	P	P	04 12 13.5	+1.7
CWC	Cottonwood Cre	81.19	324	P	P	04 12 14.1	+1.9
	baz=142						
F33A	5 Mile Ranch,	81.22	343	P	P	04 12 12.2	+0.4
CASY	Casey	81.34	181	P	P	04 12 14.0	+1.6
K22A	Casper	81.42	335	P	P	04 12 14.4	+1.3
	baz=151						
K22A	Casper	81.42	335	P	P	04 12 14.6	+1.4
K22A				IAmb	IAmb	04 12 39.6	
	comp=Z,14nm,1.1s						
LSQQ	Lebel-sur-Quev	81.50	357	P	P	04 12 13.4	+0.2
	baz=176						
R11A	Troy Canyon, C	81.52	327	P	P	04 12 16.0	+2.1
	baz=144						
R11A	Troy Canyon, C	81.52	327	P	P	04 12 15.9	+2.1
JLU	Jordanelle	81.56	331	P	P	04 12 15.9	+1.9
TIN	Tinemaha, Big	81.75	324	P	P	04 12 17.4	+2.4
	baz=142						
DUG	Dugway, Tooele	81.79	330	P	P	04 12 17.0	+1.8
	baz=146						
DUG	Dugway, Tooele	81.79	330	P	P	04 12 17.0	+1.8
RSSD	Black Hills	81.86	337	P	P	04 12 16.4	+0.9
	baz=153						
RSSD	Black Hills	81.86	337	P	P	04 12 15.4	-0.2
TPH	Tonopah	82.07	325	P	P	04 12 19.0	+2.2
EYMN	Ely	82.16	347	P	P	04 12 16.8	0.0
	baz=163						
MATQ	Matagami	82.23	356	P	P	04 12 17.1	+0.1
	baz=175						
HWUT	Hardware Ranch	82.45	331	P	P	04 12 19.9	+1.2
SPUT	South Promonto	82.56	330	P	P	04 12 20.5	+1.3
OMMB	Old Mammoth Mi	82.57	324	P	P	04 12 21.7	+2.2
PD31	Pinedale Array	82.64	333	P	P	04 12 20.1	+0.5
PDAR	Pinedale Array	82.64	333	P	P	04 12 20.1	+0.5
	comp=Z,0.6nm,0.6s,baz=140,slow=7.1,SNR=6.1						
PDAR	Pinedale Array	82.64	333	P	P	04 12 19.6	0.0
LBTB	Lobatse	82.75	115	P	P	04 12 19.5	-1.2
LBTB				IAmb	IAmb	04 12 22.3	
	comp=Z,21nm,1.2s						
NVAR	Mina Array Bea	82.87	325	P	P	04 12 22.6	+1.6
	comp=Z,2.4nm,0.9s,baz=152,slow=6.3,SNR=18						
B35A	Bob, Littlefor	83.01	346	P	P	04 12 21.4	+0.3
E28A	Huff	83.06	340	P	P	04 12 22.6	+1.1
HVU	Hansel Valley	83.09	330	P	P	04 12 23.0	+1.1
RYN	Ryan	83.13	325	P	P	04 12 24.2	+2.0
ELK	Elko	83.30	328	P	P	04 12 24.6	+1.5
AGMN	Agassiz Nation	83.42	344	P	P	04 12 23.4	+0.2
	baz=160						
TOA0	Torodi Ar. Sit	83.65	70	P	P	04 12 24.7	-0.5
TOA0				IAmb	IAmb	04 12 25.8	
	comp=Z,15nm,0.8s						
TORD	Torodi Ar. Bea	83.65	70	P	P	04 12 24.6	-0.6
	comp=Z,12nm,0.8s,baz=265,slow=4.6,SNR=38						
TORD				LR	LR	04 49 38.9	
	comp=Z,169nm,18.0s,baz=55,slow=36						
TORD	Torodi Ar. Bea	83.65	70	P	P	04 12 24.3	-0.9
MDND	Maddock	83.93	342	P	P	04 12 26.8	+0.9
	baz=157						
MDND	Maddock	83.93	342	P	P	04 12 26.9	+1.1
PNTR	Pine Nut	84.02	325	P	P	04 12 29.5	+2.7
PNTR				IAmb	IAmb	04 12 42.9	
	comp=Z,12nm,1.0s						
YMR	Madison River	84.79	333	P	P	04 12 33.0	+2.4
HLID	Hailey	85.25	330	P	P	04 12 34.5	+1.7
	baz=145						
HLID	Hailey	85.25	330	P	P	04 12 34.5	+1.7
HLID				IAmb	IAmb	04 13 02.3	
	comp=Z,11nm,1.4s						
ULM	Lac du Bonnet	85.25	345	P	P	04 12 32.4	-0.1
	comp=Z,5.0nm,0.8s,baz=161,slow=3.6,SNR=9.4						
ULM	Lac du Bonnet	85.25	345	P	P	04 12 32.5	0.0
ULM				IAmb	IAmb	04 12 33.2	
	comp=Z,14nm,1.1s						
ORV	Oroville	85.31	324	P	P	04 12 35.0	+2.0
ORV				IAmb	IAmb	04 12 48.7	
	comp=Z,19nm,1.6s						
MCMT	McKenzie Canyo	85.66	332	P	P	04 12 36.4	+1.4
DGMT	Dagmar	85.79	339	P	P	04 12 36.1	+0.8
	baz=153						
DGMT	Dagmar	85.79	339	P	P	04 12 36.0	+0.7
DLMT	Dillon	86.00	333	P	P	04 12 38.5	+1.9
DLMT				IAmb	IAmb	04 12 38.9	
	comp=Z,11nm,1.4s						
LSZ	Lusaka	90.10	108	P	P	04 12 57.0	0.0
LSZ				IAmb	IAmb	04 12 59.4	
	comp=Z,8.3nm,0.9s						
TAM	Tamanrasset	92.14	64	P	P	04 13 05.7	-0.5
TAM				IAmb	IAmb	04 13 07.5	
	comp=Z,7.4nm,1.4s						
ESDC	Sonseca Array	95.57	46	LR	LR	04 55 48.1	
	comp=Z,108nm,19.2s,baz=230,slow=35						
YKA	Yellowknife Ar	100.85	341	P	Pdif	04 13 44.0	-0.5
	comp=Z,0.4nm,0.5s,baz=133,slow=5.6,SNR=11						
DZM	Mont Dzumac	102.12	234	*e*LR	LR	04 47 18.2	
	comp=Z,326nm,24.3s						
GERES	GERESS Array B	111.14	45	PKiKP	PKiKP	04 18 28.7	-0.9
	comp=Z,0.4nm,0.6s,baz=180,slow=1.0,SNR=3.8						
ILAR	Eielson Array	113.07	333	PKiKP	PKiKP	04 18 32.1	-0.5
	comp=Z,0.3nm,0.8s,baz=93,slow=1.8,SNR=4.6						
BR131	Keskin Array S	121.08	60	PKPdf	PKPdf	04 18 48.7	-0.3
BRTR	Keskin Array B	121.08	60	PKP	PKPdf	04 18 48.5	-0.6
	comp=Z,1.4nm,0.8s,baz=197,slow=3.7,SNR=10						
BRTR	Keskin Array B	121.08	60		PKPdf	04 18 48.1	-0.9
AKASG	Malin Array Be	121.21	47	PKP	PKPdf	04 18 47.4	-1.3
	comp=Z,1.1nm,0.5s,baz=262,slow=2.5,SNR=8.3						
AKASG	Malin Array Be	121.21	47		PKPdf	04 18 47.9	-0.8
WRA	Warramunga Arr	121.97	209	PKP	PKPdf	04 18 50.4	-0.9
	comp=Z,0.6nm,0.5s,baz=158,slow=1.6,SNR=12						
WRA	Warramunga Arr	121.97	209	PKPdf	PKPdf	04 18 50.9	-0.4
H11S2	WAKE ISLAND Hy	125.90	270	T	T	06 37 53.7	
	baz=118,slow=75,SNR=206						
H11S1	WAKE ISLAND Hy	125.91	270	T	T	06 37 54.8	
	baz=118,slow=75,SNR=164						
H11S3	WAKE ISLAND Hy	125.92	270	T	T	06 37 57.0	
	baz=118,slow=75,SNR=129						
H11N3	WAKE ISLAND Hy	126.28	271	T	T	06 38 22.7	
	baz=117,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	126.29	271	T	T	06 38 24.5	
	baz=117,slow=75,SNR=27						
H11N2	WAKE ISLAND Hy	126.30	271	T	T	06 38 25.4	
	baz=117,slow=75,SNR=97						
KBZ	Khabaz	128.79	58	PKP	PKiKP	04 19 05.0	+0.8
	comp=Z,2.5nm,0.9s,baz=223,slow=3.3,SNR=3.7						
ARU	Arti	138.66	40	PKP	PKPdf	04 19 21.3	-0.3
	comp=Z,0.5nm,0.4s,baz=309,slow=6.5,SNR=3.3						
SEY	Seymchan	138.94	331	PKP	PKiKP	04 19 23.1	-1.0
	comp=Z,2.7nm,0.7s,baz=75,slow=2.2,SNR=8.0						
AKTO	Aktyubinsk	139.39	49	PKP	PKPdf	04 19 22.8	-0.3
	comp=Z,1.1nm,0.7s,baz=298,slow=8.2,SNR=2.8						
TIXI	Tiksi	139.41	350	PKPdf	PKPdf	04 19 23.3	+0.8
ABKAR	Akbulak array	140.76	51	PKPdf	PKPdf	04 19 25.8	+0.2
BRVK	Borovoye	146.15	42	PKPbc	PKPbc	04 19 35.8	-0.2
GSI	Gunungsitoli	147.26	160	PKPbc	PKPbc	04 19 40.8	+0.4
YAK	Yakutsk	147.52	341	PKPbc	PKPbc	04 19 39.0	-0.6
	comp=Z,18nm,0.6s,baz=114,slow=0.4,SNR=15						
YAK	Yakutsk	147.52	341		PKPbc	04 19 39.3	-0.3
KBL	Kabul	147.55	76	PKPbc	PKPdf	04 19 39.0	+0.8
KKAR	Karatay Array	148.79	60		PKPdf	04 19 39.4	-0.4
KKAR				PKPbc	PKPbc	04 19 43.8	+0.2
HYB	Hyderabad	149.35	113	*i* PKP	PKPbc	04 19 45.5	-0.3
NIL	Nilore	150.89	78		PKPbc	04 19 48.9	-0.2
IPM	Ipoh	151.18	165		PKPbc	04 19 48.9	-1.4
IPM				PKPab	sPKPbc	04 19 56.8	+1.3
EKS2	Erkin-Say	151.23	60	P	PKPbc	04 19 50.0	+0.3
	SNR=9.4						
AML	Almayashu	151.25	61	P	PKiKP	04 19 51.0	+0.3
	SNR=11						
USP	Ospenovka	151.65	58	P	PKPbc	04 19 50.7	+0.1
	SNR=16						
AAK	Ala-Archa	151.75	60	P	PKiKP	04 19 51.4	0.0
	SNR=22						
AAK	Ala-Archa	151.75	60		PKPbc	04 19 51.1	+0.1
UCH	Uchtor	151.83	61	P	PKiKP	04 19 52.1	+0.2
	SNR=19						
CHMS	Chumysh	151.88	59	P	PKPbc	04 19 50.9	-0.2
	SNR=6.8						
KBK	Karagaybulak	152.08	60	P	PKiKP	04 19 52.2	+0.2
	SNR=6.4						
TKM2	Tokmak 2	152.50	59	P	PKPbc	04 19 52.6	-0.1
	SNR=10						
ZAA0	Zalesovo Array	153.04	31		PKPbc	04 19 52.8	-0.4
ZALV	Zalesovo Beam	153.04	31	PKP	PKPdf	04 19 45.7	-0.2
	comp=Z,1.4nm,0.6s,baz=311,slow=5.5,SNR=6.7						
ZALV				PKPbc	PKPbc	04 19 53.0	-0.2
	comp=Z,15nm,0.7s,baz=299,slow=3.3,SNR=54						
KSH	Kashi	153.25	66	PKPbc	PKPdf	04 19 45.5	-1.4
KSH				pPKP	PKiKP	04 19 54.6	+0.1
KSH				PP	PP	04 23 43.4	+3.1
KSH				AMB	AMB		
	comp=Z,410nm,5.4s						
MJAR	Matsushiro Arr	154.97	287	PKPdf	PKPdf	04 19 49.7	+0.5

MJAR					PKPab	04 20 13.3	-0.3
MAT	Matsushiro	154.98	287	P	PKPab	04 20 13.2	-0.4
MAKZ	Makanchi	155.59	47	PKPdf	PKPdf	04 19 49.9	+0.1
MAKZ				PKPab	PKPab	04 20 15.3	-0.5
MK31	Makanchi Array	155.79	47		PKPdf	04 19 50.3	+0.2
MK31				PKPab	PKPab	04 20 16.0	-0.7
MKAR	Makanchi Array	155.79	47	PKP	PKPdf	04 19 50.1	+0.1
	comp=Z,1.3nm,0.9s,baz=318,slow=1.6,SNR=9.0						
MKAR				PKPab	PKPab	04 20 16.3	-0.4
	comp=Z,3.9nm,0.7s,baz=296,slow=3.9,SNR=22						
MKAR	Makanchi Array	155.79	47	PKPdf	PKPdf	04 19 49.8	-0.2
MKAR				PKPab	PKPab	04 20 15.8	-0.9
KLR	Kul'dur	155.81	320	PKPab	PKPab	04 20 17.6	+1.0
	comp=Z,1.5nm,0.8s,baz=5.6,slow=3.9,SNR=5.1						
WMQ	Urumqi	160.54	49	*e*PKP	PKPdf	04 19 55.4	-0.6
WMQ				AMB	AMB		
	comp=Z,160nm,4.7s						
WMQ				LR	LR		
	comp=Z,460nm,26.7s						
SONM	Songino Array	164.80	4	PKP	PKPdf	04 20 00.1	0.0
	comp=Z,0.4nm,0.8s,baz=63,slow=0.3,SNR=2.0						
SONM				PKPab	PKPab	04 20 56.5	+0.6
	comp=Z,1.7nm,0.9s,baz=348,slow=3.5,SNR=8.6						
SONM	Songino Array	164.80	4	PKPdf	PKPdf	04 20 00.5	+0.4
SONM				PKPab	PKPab	04 20 55.9	0.0
ULN	Ulaanbaatar	164.81	3	PKPab	PKPab	04 20 56.4	+0.4
GTA	Gaotai	170.50	43	PKP	PKPdf	04 20 05.3	+0.9
GTA				PKPab	PKPab	04 21 22.3	+0.8
GTA				LR	LR		
	comp=Z,510nm,20.0s						
GTA				LR	LR		
	comp=Z,650nm,18.5s						
GTA				LR	LR		
	comp=Z,510nm,20.4s						
NJ2	Nanjing	170.89	269	*e*PKP	PKPdf	04 20 05.8	+1.1
HHC	Hu-ho-hao-te	171.38	342	*e*PKP	PKPdf	04 20 01.8	-3.0
LZH	Lanzhou	175.10	45	*e*PKP	PKPdf	04 20 05.3	-1.2
LZH				pPKP	sPKPdf	04 20 12.9	+1.2
LZH				sPKP		04 20 15.5	
CD2	Chengdu	175.90	114	PKP	PKPdf	04 20 05.8	-0.9

NOU ***18*** *04:12:03.3, 18°.40S×168°.60E, h0^{km}, MLv4.6, Vanuatu Islands*

IDC ***18*** *04:12:07.5±2.1, 18°.48S×168°.05E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.8/35, mbtmp4.0/5, ML5.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/33, Error ellipse: s-maj=42.5km s-min=31.4km az=168.0*

ISC 18 04:12:04.2±2.1**, 18°.40S**±0°.08×**168°.6E**±0°.2**, h10^{km}, n12, σ0^s.77**/12**, mb3.9**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.76	332	P	Pg	04 12 18.3	-0.7
LIFNC	LIFOU	2.67	208	P	Pn	04 12 46.7	-0.7
MARNC	Mare, Loyalty	3.10	189	P	Pn	04 12 53.6	+0.3
YATNC	Mamie plateau,	3.96	203	P	Pn	04 13 05.6	+0.5
DZM	Mont Dzumac	4.16	208	Pn	Pn	04 13 08.1	+0.2
	baz=22,slow=19						
DZM				Sn	Sn	04 13 55.3	-1.4
	16nm,0.3s,baz=131,slow=19,SNR=2.9						
DZM				LR	LR	04 14 25.3	
	comp=Z,123nm,19.1s,baz=273,slow=36						
OUENC	Ouen Island, N	4.31	202	P	Pn	04 13 10.5	+0.6
KOUNC	Koumac, New Ca	4.57	241	P	Pn	04 13 14.2	+0.8
MSVF	Nonsavu	9.04	87	Pn	Pn	04 14 26.8	+12
	0.9nm,0.3s,baz=308,slow=14,SNR=4.0						
MSVF				LR	LR	04 17 13.2	
	comp=Z,112nm,19.6s,baz=300,slow=32						
CTA	Charters Tower	21.14	262	P	P	04 16 50.2	+0.8
	4.3nm,0.8s,baz=88,slow=13,SNR=7.9						
STKA	Stephens Creek	27.77	236	P	P	04 17 54.1	+0.7
	1.5nm,0.7s,baz=74,slow=5.5,SNR=3.8						
STKA				LR	LR	04 28 44.8	
	comp=Z,33nm,18.0s,baz=24,slow=36						
WRA	Warramunga Arr	32.34	262	P	P	04 18 33.6	-0.3
	0.5nm,0.8s,baz=90,slow=8.2,SNR=3.1						
ASAR	Alice Springs	32.72	255	P	P	04 18 37.5	+0.1
	1.9nm,0.6s,baz=83,slow=8.4,SNR=26						

OMAN ***18*** *04:12:39.9±1.8, 26°.76N×58°.33E, h10^{km}, ml3.1/9, Error ellipse: s-maj=66.8km s-min=14.5km az=112.0*

TEH ***18*** *04:12:45.5, 26°.81N×57°.75E, h8^{km}, ML3.1*

ISC 18 04:12:41.5±1.0**, 26°.72N**±0°.04×**58°.06E**±0°.06**, h10^{km}, n19, σ1^s.96**/23**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK1	Jask	1.11	194	*e*Pg	Pn	04 13 08.1	+5.1
KHNJ	Kahnooj	1.26	346	*e*Sg	Sn	04 13 24.1	+1.8
KHNJ				*e*Pg	Pg	04 13 07.0	+1.3
BANOM	Banah	1.77	244	*e*Pn	Pb	04 13 13.4	-0.6
BANOM	Banah	1.77	244	P	Pb	04 13 13.3	-0.6
	SNR=30						
GENO	Geno	1.81	292	*e*Pg	Pg	04 13 15.6	-0.7
GENO				*e*		04 13 50.4	
	comp=Z,99nm,0.4s						
SHME	Shamm	1.84	249	*e*Pn	Pb	04 13 15.2	-0.1
SHME	Shamm	1.84	249	P	Pb	04 13 14.8	-0.5
	SNR=29						
SHME				S	Sg	04 13 43.1	+2.3
MDH	Madha	2.12	229	P	Pn	04 13 16.6	-0.5
KBAM	BAM	2.43	8	*e*Pn	Pg	04 13 27.5	-0.6
KBAM				*e*		04 13 28.7	
	comp=Z,99nm,0.4s						
UOSS	Minazif	2.43	224	P	Pb	04 13 23.3	-2.0
SOHO	SOHO	2.92	208	P	Pn	04 13 27.7	-0.3
NGRK	Negar Kerman	3.14	338	*e*	Sg	04 14 25.1	+2.7
	comp=Z,99nm,0.4s						
HOQ	Hoqain	3.20	192	P	Pn	04 13 31.9	0.0
HOQ				S	Sn	04 14 08.6	-1.5
ASUD	Al Ashush, Dub	3.23	230	P	Pb	04 13 36.0	-2.9
	SNR=5.5						
TVBK	TV Kerman	3.45	341	*e*Pn	Pb	04 13 41.0	-1.8
TVBK				*e*		04 14 50.2	
	comp=Z,99nm,0.5s						
SMDO	Samad	3.65	180	P	Pn	04 13 40.0	+2.0
SMDO				S	Sn	04 14 22.3	+1.0
KHGB	Koh Gabri	3.90	339	*e*Pn	Pb	04 13 45.9	-4.5
KHGB				*e*		04 14 57.0	
	comp=Z,99nm,0.6s						
WBK	Wadi Bani Khal	4.18	168	P	Pn	04 13 47.7	+2.4
	SNR=12						
WBK				S	Sn	04 14 32.1	-2.1
JLN	Jalan Bani Buh	4.71	165	P	Pn	04 13 54.5	+1.8

DJA 18 04:12:48.6±0.5**, 8°S**±5°×**12°1E**±°**, h174^{km}**±6^{km}**, M3.7**/7**, mB5.6**/1**, mb3.8**/2**, MLv3.6**/7**, Mw(mB)5.1**/1**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.98	107	P	Pn	04 13 16.0	+0.3
EDFI				S	Sn	04 13 37.0	+0.5
WSI	Waingapu	1.27	200	P	Sn	04 13 43.9	+3.2
WSI				S	Sn	04 13 40.8	+0.1
MMRI	Maumere	1.49	96	P	Pn	04 13 21.0	+1.0
BASI	Baing, Sumba	1.75	185	S	Sn	04 13 49.1	+0.2
PLAI	Plampang	2.95	263	P	Pn	04 13 36.9	+0.5
PLAI				S	Sn	04 14 12.9	-0.7
BATI	Baumata	3.36	121	P	Pn	04 13 42.3	+0.8
SOEI	Soe	3.71	110	P	Pn	04 13 46.4	+0.4
TWSI	Taliwang, Sumb	3.82	266	P	Pn	04 13 47.2	-0.1
TWSI				S	Sn	04 14 33.0	-0.1
APSI	Ampana	7.56	7	P	Pn	04 14 35.8	-0.4

NEIC ***18*** *04:17:42.9±1.0, 55°.7N±0°.2×161°.9W±0°.1, h173^{km}±7^{km}, Error ellipse: s-maj=24.2km s-min=7.4km az=162.0*

AEIC ***18*** *04:17:44±1.9, 55°.6N±0°.1×161°.79W±0°.10, h171^{km}±7^{km}, ML3.2/48, ML3.3/14(NEIC), Error ellipse: s-maj=18.7km s-min=7.3km az=168.0*

IDC ***18*** *04:17:50.8±4.9, 56°.22N×161°.07W, h190^{km}±28^{km}, mb2.8/2, mb1 3.0/5, mb1mx2.7/46, mbtmp3.2/5, Error ellipse: s-maj=49.9km s-min=30.8km az=99.0*

NOU ***18*** *04:17:55.2, 55°.95N×160°.06W, h0^{km}, MLv4.0, Alaska Peninsula*

ISC 18 04:17:42.5±0.8**, 55°.99N**±0°.09×**161°.96W**±0°.06**, h150^{km}, n60, σ1^s.79**/63**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PN6	Pavlof North-6	0.54	177		Pn	04 18 06.6	+2.6
PS1A	Pavlof South-1	0.58	168		Pn	04 18 06.5	+2.2
PS1A					Sn	04 18 24.2	+3.4
PS4A	Pavlof South-4	0.65	175		Pn	04 18 06.5	+1.9
HAG	Hague Volcano	0.67	177		Pn	04 18 06.8	+2.0
DT1	Dutton Round H	0.90	192		Pn	04 18 07.6	+1.2
SDPT	Sand Point	1.06	127		Pn	04 18 08.8	+1.1
SDPT					Sn	04 18 27.7	+0.9
SDPT	Sand Point	1.06	127	IAML		04 18 28.0	
	comp=N,179nm,0.4s						
SDPT				IAML		04 18 29.0	
	comp=E,191nm,0.8s						
FALS	False Pass	1.40	217		Pn	04 18 11.7	+0.7
FALS					Sn	04 18 33.3	+0.6
BRPK	Brown Peak	1.69	218		Pn	04 18 14.5	+0.5
SSBA	Shishaldin	1.73	226		Pn	04 18 15.3	+0.7
CNBA	Chernabura Isl	1.79	130		Pn	04 18 14.6	-0.5
CNBA					Sn	04 18 38.5	-1.6
CHGN	Chignik	2.01	80	Pn	Pn	04 18 19.3	+1.7
CHGN				IAML		04 18 51.7	
	comp=E,73nm,0.2s						
WECS	Westdahl Cape	2.17	229		Pn	04 18 20.4	+0.7
AKSA	Akutan Strait	2.84	231		Pn	04 18 28.8	+1.1
AKSA	Akutan Strait	2.84	231		Pn	04 18 28.6	+0.9
AKUT	Akutan	2.87	231	Pn	Pn	04 18 28.1	0.0
AKUT				IAML		04 20 15.7	
	comp=E,82nm,3.8s						
AKUT				IAML		04 20 33.9	
	comp=N,76nm,4.0s						
AHB	Akutan Harbor	2.90	231		Pn	04 18 29.1	+0.5
AKLV	Akutan Long Va	2.94	233		Pn	04 18 29.3	+0.4
MTBL	Makushin Table	3.39	235		Pn	04 18 35.2	+0.5
UNV	Unalaska Valle	3.39	233		Pn	04 18 34.5	-0.2
UNV					Sn	04 19 13.2	-1.9
MNAT	Makushin Natee	3.44	234		Pn	04 18 35.6	+0.1
MSW	Makushin Switc	3.47	235		Pn	04 18 35.9	+0.1
MREP	Makushin Rep't	3.52	234		Pn	04 18 36.6	+0.1
CHIR	Chirikof Islan	3.57	90		Pn	04 18 37.7	+0.6
CHIR	Chirikof Islan	3.57	90	IAML		04 19 13.7	
	comp=E,106nm,2.5s						
MGOD	Makushin Gods	3.59	234		Pn	04 18 37.5	+0.2
MAPS	Pakushin South	3.61	235		Pn	04 18 37.8	+0.2
SII	Sitkinak Islan	4.37	79	Pn	Pn	04 18 48.9	+1.4
KABR	Katmai Barrier	4.38	58		Pn	04 18 51.0	+3.3
OKSO	Okmok South	4.46	236		Pn	04 18 48.6	-0.1
OHAK	Old Harbor	4.95	72		Pn	04 18 55.8	+0.7
OHAK	Old Harbor	4.95	72	IAML		04 19 51.0	
	comp=N,43nm,4.1s						
OHAK				IAML		04 20 48.5	
	comp=E,29nm,4.8s						
NIKH	Nikolski High	5.03	236		Pn	04 18 55.0	-1.1
KDAK	Kodiak Island	5.45	67	P	Pn	04 19 02.9	+1.2
	comp=E,1.1nm,0.3s,baz=226,slow=3.9,SNR=40						
KDAK				S	Sn	04 20 01.5	-2.1
	comp=E,1.5nm,0.3s,baz=59,slow=20,SNR=11						
KDAK	Kodiak Island	5.45	67	Pn	Pn	04 19 03.1	+1.4
DFR	Drift River	6.72	43		Pn	04 19 21.8	+3.1
CNPM	China Poot	6.75	54		Pn	04 19 21.1	+2.1
BRLK	Bradley Lake	7.01	53		Pn	04 19 24.0	+1.5
BRSE	Bradley Lake S	7.07	53		Pn	04 19 24.8	+1.5
TT01	Tatalina	7.57	21		Pn	04 19 34.0	+4.1
SLKM	Skilak Lake	7.67	49		Pn	04 19 33.8	+2.5
SEW	Seward	7.81	53		Pn	04 19 34.8	+1.7
O22K	Cooper Landing	7.87	50	Pn	Pn	04 19 35.8	+1.9
SUA	Susitna One	8.01	42		Pn	04 19 38.5	+2.7
SKT	Skwentna	8.06	38	Pn	Pn	04 19 41.6	+5.1
ATKA	Atka Island	8.13	247		Pn	04 19 36.2	-1.2
PWL	Port Wells	8.65	50		Pn	04 19 45.3	+0.9
PMR	Palmer	8.71	45	Pn	Pn	04 19 47.9	+2.8
KNK	Knik Glacier	8.88	47	Pn	Pn	04 19 49.3	+2.0
GHO	Glory Hole Cre	8.89	44	Pn	Pn	04 19 48.6	+1.0
SML	Sawmill	9.14	45		Pn	04 19 52.9	+2.0
GLI	Glacier Island	9.20	52	Pn	Pn	04 19 52.3	+0.6
HIN	Hinchinbrook I	9.28	55		Pn	04 19 53.9	+1.2
FID	Port Fidalgo	9.42	53		Pn	04 19 54.9	+0.3
JPK	Jack Peak	9.50	51		Pn	04 19 56.6	+1.0
SCM	Sheep Creek Mo	9.56	46		Pn	04 19 58.2	+1.8
ILAR	Eielson Array	11.51	34	P	Pn	04 20 22.8	+0.7
	comp=E,0.1nm,0.3s,baz=223,slow=13,SNR=1.6						
INK	Inuvik	17.90	35	P	P	04 21 40.5	+0.4
	comp=E,0.2nm,0.3s,baz=240,slow=5.5,SNR=2.0						
INK				S	S	04 24 51.4	-6.2
	comp=E,0.2nm,0.3s,baz=26,slow=17,SNR=6.4						
YKA	Yellowknife Ar	24.58	55	P	P	04 22 48.5	+0.3
	comp=E,0.3nm,0.6s,baz=274,slow=8.7,SNR=1.9						
TXAR	Lajitas Array	48.62	98	P	P	04 26 11.5	+0.6
	comp=E,0.3nm,0.6s,baz=304,slow=6.4,SNR=5.6						

WEL 18 04:20:40.6±0.8**, 35°S**±10°×**18°0W**±1°5**, h33^{km}, M3.9**/29**, mB4.4**/5**, ML4.3**/29**, MLv4.0**/29**, Mw(mB)3.6**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.4, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.62	217	P	Pn	04 21 20.4	-0.1
WMGZ	Waiomatatini S	2.77	212	P	Pn	04 21 24.0	+1.3
PKGZ	Pakihiroa	2.99	216	P	Pn	04 21 25.7	0.0
HAZ	Te Kaha	3.04	221	P	Pn	04 21 26.8	+0.5
PUZ	Puketiti	3.05	212	P	Pn	04 21 26.9	+0.4
RUGZ	Raukumara Rang	3.25	220	P	Pn	04 21 29.0	-0.2
TWGZ	Tauwhareparae	3.26	214	P	Pb	04 21 36.9	-0.9
TWGZ				S	Sn	04 22 10.4	+3.3
CNGZ	Carnagh Statio	3.43	209	P	Pn	04 21 32.3	+0.7
TKGZ	Te Karaka	3.54	213	P	Pn	04 21 34.4	+1.3
TKGZ				S	Sn	04 22 14.2	+0.4
MWZ	Matawai	3.60	217	P	Pn	04 21 34.0	-0.2
MWZ				S	Sn	04 22 17.2	+1.6
URZ	Urewera	3.76	222	P	Pn	04 21 35.9	-0.4
URZ				S	Sn	04 22 20.1	+0.7
RAGZ	Rawiri	3.79	217	P	Pn	04 21 37.0	+0.4
RAGZ				S	Sn	04 22 18.8	-1.2
RIGZ	Rimuhau	3.80	211	P	Pn	04 21 36.9	+0.1
RIGZ				S	Sn	04 22 21.7	+1.3
EDRZ	Edgecumbe	3.87	226	P	Pn	04 21 40.3	+2.5
PRGZ	Paritu Road	3.93	209	P	Pn	04 21 38.8	+0.2
PRGZ				S	Sn	04 22 24.8	+1.2
SNGZ	Shannon Statio	4.05	215	P	Pn	04 21 40.3	+0.1
RTZ	Ruatahuna	4.09	219	P	Pn	04 21 40.5	-0.5
KNZ	Kokohu	4.10	210	P	Pn	04 21 40.0	-0.9
KNZ				S	Sn	04 22 29.0	+1.3
MUGZ	Murupara	4.11	222	P	Pn	04 21 40.6	-0.4
MUGZ				S	Sn	04 22 28.2	+0.3
KARZ	Kaharoa	4.12	231	P	Pn	04 21 42.2	+1.0
MHGZ	Mahia Peninsul	4.12	207	P	Pn	04 21 40.4	-0.8
RAHZ	Arahi	4.28	216	P	Pn	04 21 44.0	+0.7
WHHZ	Waihua	4.33	213	P	Pn	04 21 44.5	+0.3
WHHZ				S	Sn	04 22 34.5	+1.0
MTHZ	Maungataniwha	4.35	218	P	Pn	04 21 44.3	0.0
NMHZ	Naumai	4.55	217	P	Pn	04 21 47.2	0.0
ARHZ	Aropaoanui	4.59	214	P	Pn	04 21 46.6	-1.0
ARHZ				S	Sn	04 22 42.2	+2.4
BKZ	Black Stump Fm	4.76	218	P	Pn	04 21 49.7	-0.3
BKZ				S	Sn	04 22 43.7	-0.4
MCHZ	McNeill Hill	4.88	215	P	Pn	04 21 51.2	-0.4
MCHZ				S	Sn	04 22 48.6	+1.7
RITZ	Rihia Road	4.97	224	P	Pb	04 22 00.7	-6.1
KWHZ	Kaweka Forest	4.99	217	P	Pn	04 21 53.2	-0.1
KWHZ				P	Pb	04 21 53.5	-14
KAHZ	Kahuranaki	5.08	211	P	Pn	04 21 52.6	-1.8
KAHZ				S	Sn	04 22 52.4	+0.3
ETVZ	East Tongariro	5.16	224	P	Pn	04 21 55.2	-0.4
KRHZ	Kereru	5.19	216	P	Pn	04 21 54.2	-1.7
KRHZ				S	Sn	04 22 53.2	-1.4
OTVZ	Oturere	5.20	224	P	Pn	04 21 54.8	-1.4
WTVZ	West Tongariro	5.21	225	P	Pn	04 21 56.2	-0.1
BHHZ	Black Hill Sta	5.22	219	P	Pn	04 21 55.8	-0.6
BHHZ				S	Sn	04 22 54.8	-0.7
NGZ	Ngauruhoe	5.25	224	P	Pn	04 22 03.4	+6.6
TWVZ	Taurewa	5.27	226	P	Pn	04 22 03.2	+6.1
HIZ	Hauiti	5.30	234	P	Pn	04 21 58.2	+0.8
MOVZ	Moawhango	5.33	221	P	Pn	04 21 58.9	+1.1
FWVZ	Far West T-bar	5.33	224	P	Pn	04 22 04.6	+6.6
WNVZ	Wahianoa	5.35	223	P	Pn	04 21 58.2	-0.1

BJI ***18*** *04:27:38.0±0.0, 28°.56N×142°.60E, h7^{km}, mB5.0/44, mb4.9/65, Ms4.6/48, Ms7 4.3/46*

IDC ***18*** *04:27:40.7±0.5, 28°.64N×142°.51E, h0^{km}, mb4.7/23, mb1 4.8/29, mb1mx4.8/32, mbtmp4.7/29, ML3.8/6, MS4.1/9, Ms1 4.1/9, ms1mx3.8/50, Error ellipse: s-maj=15.6km s-min=11.1km az=91.0*

NEIC ***18*** *04:27:43.9±1.3, 28°.57N±0°.04×142°.49E±0°.09, h21^{km}±3^{km}, mb5.0/161, Error ellipse: s-maj=12.7km s-min=2.7km az=67.0*

NIED ***18*** *04:27:44.6, 28°.65N×142°.26E, h58^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.72; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.58; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.36; $M_{\phi r}$1.96; Fault plane solution: $M_0$2.12000×10^{16} NP1:ϕ_s10.00000°, δ80.00000°, λ83.00000°. NP2:ϕ_s227.00000°, δ12.00000°, λ127.00000°.*

JMA ***18*** *04:27:44.5±0.1, 28°.65N×142°.26E, h58^{km}, M4.6*

MOS ***18*** *04:27:44.7±1.0, 28°.71N×142°.45E, h35^{km}, mb5.2/68, MS4.7/5, Error ellipse: s-maj=8.2km s-min=4.0km az=115.8*

GCMT ***18*** *04:27:45.9±0.5, 28°.51N±0°.04×142°.61E±0°.03, h27^{km}±1^{km}, MW4.9/53, Moment Tensor Solution. s26,c32; s53,c73; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.35±.19; $M_{\theta\theta}$-0.11±.11; $M_{\phi\phi}$-2.24±.12; $M_{r\theta}$0.47±.22; $M_{\theta\phi}$-0.04±.09; $M_{\phi r}$1.06±.17; Best double couple: $M_0$2.56900×10^{16} NP1:ϕ_s172.00000°, δ33.00000°, λ75.00000°. NP2: ϕ_s11.00000°, δ58.00000°, λ100.00000°. Principal axes: T 2.6580, Plg75.0000°, Azm308.0000°; N -0.1790, Plg8.0000°, Azm185.0000°; P -2.4810, Plg13.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***18*** *04:27:50.4, 28°.30N×142°.43E, h52^{km}, mb5.1, Bonin Islands, Japan Region*

ISC 18 04:27:46.0±0.7**, 28°.66N**±0°.04×**142°.38E**±0°.05**, h42^{km}**±5^{km}**, n536, σ1^s.97**/296**, mb5.0**/213**, MS4.3**/28**, 54C-23D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.56	186	P	Pn	04 28 10.4	-0.9
CBIJ				*e*S	Sn	04 28 29.3	-1.1
JCJ	Chichijima	1.56	186	Pn	Pn	04 28 10.2	-1.1
	145nm,0.3s,baz=337,slow=7.5,SNR=16						
JCJ				Sn	Sn	04 28 29.0	-1.4
	277nm,0.3s,baz=268,slow=21,SNR=30						
JCJ				LR	LR	04 28 35.7	
	comp=Z,529nm,19.3s,baz=342,slow=35						
JCJ	Chichijima	1.56	186	Pn	Pn	04 28 09.8	-1.5
JHH2	Haha-jima-NKT2	2.02	185	P	Pn	04 28 16.8	-0.8
JHJ	Hachijo jima 2	4.97	334	Pn	Pn	04 28 58.4	+0.2
	24nm,0.3s,baz=105,slow=20,SNR=2.3						
JHJ				Sn	Sn	04 29 53.9	-0.5
	42nm,0.3s,baz=66,slow=20,SNR=2.3						
JHJ				LR	LR	04 30 54.6	
	comp=Z,2µm,18.6s,baz=196,slow=39						
BSO1	Boso 1	6.09	349	P	Pn	04 29 12.9	-0.1
BSO1				*e*S	Sn	04 30 21.1	-0.1
BSO3	Boso 3	6.33	346	P	Pn	04 29 17.1	+0.6
BSO4	Boso 4	6.55	345	P	Pn	04 29 21.2	+1.6
JOD2	Odawara 2	7.15	338	P	Pn	04 29 28.0	-0.1
JOD2				*e*S	Sn	04 30 48.4	+0.4
JHU	Hanno	7.64	341	P	Pn	04 29 35.6	+0.9
JYT	Yasato	7.77	347	P	Pn	04 29 35.9	-0.6
JYT				S	Sn	04 31 01.8	-1.3
JYT	Yasato	7.77	347	Pn	Pn	04 29 35.1	-1.3
JRY	Ryogami san	7.90	339	P	Pn	04 29 38.9	+0.5
JRY				*e*S	Sn	04 31 05.1	-1.4
INU	Inuyama	8.07	327		Pn	04 29 44.3	+3.7
JHO	Hitachi	8.07	350	P	Pn	04 29 39.0	-1.7
JGF	Kuroka	8.12	330		Pn	04 29 44.8	+3.4
JAG	Ashikaga	8.13	343	P	Pn	04 29 40.9	-0.5
JAG				S	Sn	04 31 07.6	-4.3
MJAR	Matsushiro Arr	8.61	337	Pn	Pn	04 29 47.8	-0.3
	1.7nm,0.3s,baz=158,slow=13,SNR=81						
MJAR				Sn	Sn	04 31 22.2	-1.6
	0.2nm,0.3s,baz=83,slow=39,SNR=2.8						
MJAR				LR	LR	04 33 05.3	
	comp=Z,677nm,19.2s,baz=160,slow=38						
MAJO	Matsushiro	8.61	337	P	Pn	04 29 49.0	+0.9
MAJO	Matsushiro	8.61	337	Pn	Pn	04 29 49.0	+0.9
MAT	Matsushiro	8.61	337	P	Pn	04 29 48.8	+0.8
MAT				S	Sn	04 31 21.4	-2.5
JWT	Wachi	8.87	320	Pn	Pn	04 29 56.1	+4.6
JMM	Marumori	9.28	352		Pn	04 29 54.4	-2.8
JNU	Nakatsue	10.83	297	Pn	Pn	04 30 19.1	+0.6
	0.1nm,0.3s,baz=37,slow=5.1,SNR=2.0						
JNU				LR	LR	04 34 23.7	
	comp=Z,1µm,18.4s,baz=116,slow=37						
ERM	Erimo	13.34	3	⇑*e*P	Pn	04 30 48.5	-4.2
KSRS	Korea Array	14.95	310	Pn	P	04 31 16.1	-3.1
	0.5nm,0.3s,baz=122,slow=10,SNR=16						
KSRS				LR	LR	04 37 02.7	
	comp=Z,953nm,18.4s,baz=118,slow=37						
KSAR	Wonju Array Be	14.97	310	P	P	04 31 19.9	+0.5
KSAR	Wonju Array Be	14.97	310	P	P	04 31 19.9	+0.5
KS19	Wonju Array Si	15.01	310	P	P	04 31 20.1	+0.2
ASAJ	Asahikawa	15.43	1	Pn	Pn	04 31 18.2	-2.4
	2.2nm,0.3s,baz=192,slow=13,SNR=10.0						
ASAJ				Sn	Sn	04 33 59.6	-11
	0.5nm,0.3s,baz=72,slow=21,SNR=3.7						
ASAJ				LR	LR	04 38 38.2	
	comp=Z,330nm,21.0s,baz=160,slow=43						
JKA	Kamikawa-asahi	15.43	1		Pn	04 31 18.2	-2.4
YUK	Yuzh-Kuril'sk	15.60	9	⇑*e*P	Pn	04 31 20.5	-2.3
INCN	Inchon	15.85	308	P	P	04 31 30.4	+1.1
INCN				pmax	pmax		
	comp=Z,49nm,0.9s						
INCN	Inchon	15.85	308		P	04 31 30.4	+1.1
TEY	Ternei	16.98	346	⇑*e*P	P	04 31 40.2	-1.5
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,100nm,2.8s						
USA0B	Ussuriysk Arra	17.59	335	*de*P	P	04 31 48.2	-0.3
USA0B	Ussuriysk Arra	17.59	335		P	04 31 47.0	-1.5
USRK	Ussuriysk Ar.	17.59	335	P	P	04 31 47.0	-1.5
	baz=159,slow=10.0,SNR=23						
USRK				LR	LR	04 39 13.7	
	comp=Z,424nm,18.3s,baz=141,slow=39						
USRK	Ussuriysk Ar.	17.59	335	P	P	04 31 47.0	-1.5
YSS	Yuzh-Sakhalins	18.27	1	*e*P	Pn	04 31 53.9	-2.2
YSS				*e*S	Sn	04 35 11.3	-7.8
YSS				MLR	MLR		
	comp=Z,900nm,12.0s						
YSS				MLR	MLR		
	comp=E,800nm,13.0s						
SSE	Sheshan	18.53	283	P	Pn	04 31 59.4	-0.1
SSE				S	S	04 35 27.4	-0.8
SSE				pmax	pmax		
	comp=E,14nm,0.7s						
SSE				pmax	pmax		
	comp=E,140nm,7.5s						
SSE				LR	LR		
	comp=E,240nm,22.1s						
SSE				LR	LR		
	comp=E,270nm,17.5s						
MDJ	Mudanjiang	18.91	331	P	Pn	04 32 03.4	-0.5
MDJ				pP	P	04 32 05.3	+2.3
MDJ				PP	sP	04 32 18.5	+1.4
MDJ				S	Sn	04 35 40.4	+5.9
MDJ				SS	SnSn	04 35 59.8	+11
MDJ				pmax	pmax		
	comp=E,28nm,0.8s						
MDJ				pmax	pmax		
	comp=E,550nm,4.1s						
MDJ				LR	LR		
	comp=E,580nm,15.3s						
MDJ				LR	LR		
	comp=E,570nm,15.9s						
MDJ				LR	LR		
	comp=E,870nm,19.4s						
MDJ	Mudanjiang	18.91	331	P	Pn	04 32 02.7	-1.2
MDJ				IAmb	IAmb	04 32 07.3	
	comp=Z,96nm,1.2s						
TATO	Taipei	19.00	264	P	Pn	04 32 07.0	+1.9
NACB	Ninganchiao	19.14	261	P	Pn	04 32 08.1	+1.3
NACB				IAmb	IAmb	04 32 16.7	
	comp=Z,145nm,1.5s						
YHNB	Yeheng	19.18	263	P	Pn	04 32 08.6	+1.1
YHNB				IAmb	IAmb	04 32 10.0	

	comp=Z,65nm,0.6s						
YULB	**Yu-li**	**19.65**	**259**	P	**Pn**	**04 32 14.2**	**+1.3**
YULB				IAmb	IAmb	04 32 18.9	
	comp=Z,81nm,0.8s						
SSLB	**Suanglung**	**19.81**	**261**	P	**Pn**	**04 32 16.8**	**+1.9**
DL2	**Dalian**	**20.00**	**306**	P	P	04 32 07.3	-7.7
DL2				S	**S**	**04 35 49.4**	**-8.2**
DL2				pmax	pmax		
	comp=Z,39nm,1.4s						
DL2				pmax	pmax		
	comp=Z,200nm,5.4s						
DL2				LR	LR		
	comp=N,940nm,14.8s						
DL2				LR	LR		
	comp=E,1µm,15.2s						
DL2				LR	LR		
	comp=Z,1µm,17.2s						
TWG	**Pinlang**	**20.04**	**258**	P	**Pn**	**04 32 19.0**	**+1.4**
TWG				IAmb	IAmb	04 32 40.9	
	comp=Z,78nm,1.1s						
CN2	**Changchun**	**20.31**	**323**	*e*P	Pn	04 32 19.6	-0.9
CN2				*e*S	Sn	04 36 06.0	-2.3
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,17.0s						
NJ2	**Nanjing**	**20.57**	**285**	⇑P	Pn	04 32 22.3	-1.4
NJ2				pP	pP	04 32 26.8	-4.0
NJ2				sP	pwP	04 32 29.3	-4.7
NJ2				S	Sn	04 36 18.3	+3.5
NJ2				pmax	pmax		
	comp=Z,52nm,0.7s						
NJ2				LR	LR		
	comp=Z,430nm,8.5s						
NJ2				LR	LR		
	comp=Z,720nm,10.9s						
NJ2				LR	LR		
	comp=Z,750nm,14.5s						
KLR	**Kul'dur**	**22.10**	**341**	P	**P**	**04 32 38.0**	**+0.5**
	comp=Z,24nm,0.9s,baz=168,slow=8.3,SNR=20						
KLR				LR	LR	04 41 30.8	
	comp=Z,369nm,18.2s,baz=161,slow=38						
KLR	**Kul'dur**	**22.10**	**341**	*ce*P	**P**	**04 32 37.3**	**-0.2**
KLR				pmax	pmax		
	comp=Z,38nm,1.0s						
TYV	**Tymovskoe**	**22.18**	**0**	*e*P	**P**	**04 32 40.7**	**+2.4**
TYV				pmax	pmax		
	comp=Z,300nm,3.9s						
TYV				pmax	pmax		
	comp=Z,19nm,1.1s						
GRNR	**Gornyy**	**22.54**	**350**	⇑*i*P	**P**	**04 32 43.4**	**+1.2**
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,330nm,19.0s						
GRNR				MLR	MLR		
	comp=N,90nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,210nm,17.0s						
H11N2	**WAKE ISLAND Hy**	**24.03**	**106**	T	T	04 57 56.8	
	baz=297,slow=75						
H11N1	**WAKE ISLAND Hy**	**24.03**	**106**	T	T	04 58 02.7	
	baz=297,slow=75						
H11N3	**WAKE ISLAND Hy**	**24.05**	**106**	T	T	04 57 52.3	
	baz=297,slow=75						
SKR	**Severo-Kuril's**	**24.33**	**22**	*e*P	**P**	**04 32 55.6**	**-4.0**
SKR				pmax	pmax		
	comp=Z,35nm,1.1s						
SKR				pmax	pmax		
	comp=Z,400nm,7.6s						
SKR				MLR	MLR		
	comp=Z,500nm,20.0s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
BJT	**Baijiatuau**	**24.34**	**305**	P	**P**	**04 33 00.0**	**+0.2**
BJT				pmax	pmax		
	comp=Z,63nm,1.8s						
BJT	**Baijiatuau**	**24.34**	**305**	P	**P**	**04 33 00.0**	**+0.2**
BJT				IAmb	IAmb	04 33 00.7	
	comp=Z,63nm,1.8s						
BJI	**Beijing**	**24.34**	**305**	P	**P**	**04 32 59.9**	**+0.1**
BJI				S	S	04 37 23.4	+7.2
BJI				pmax	pmax		
	comp=Z,14nm,1.1s						
BJI				LR	LR		
	comp=Z,490nm,18.4s						
BJI				LR	LR		
	comp=Z,950nm,15.5s						
BJI				LR	LR		
	comp=Z,670nm,18.4s						
WHN	**Wuhan**	**24.42**	**281**	⇓P	**P**	**04 33 02.0**	**+1.4**
WHN				S	**S**	**04 37 09.9**	**-7.8**
WHN				pmax	pmax		
	comp=Z,260nm,1.5s						
WHN				LR	LR		
	comp=Z,1µm,5.0s						
WHN				LR	LR		
	comp=Z,560nm,4.7s						
WHN				LR	LR		
	comp=Z,820nm,20.3s						
H11S3	**WAKE ISLAND Hy**	**24.43**	**109**	T	T	04 58 29.5	
	baz=304,slow=75						
H11S1	**WAKE ISLAND Hy**	**24.43**	**109**	T	T	04 58 24.6	
	baz=304,slow=75						
H11S2	**WAKE ISLAND Hy**	**24.44**	**109**	T	T	04 58 24.1	
	baz=304,slow=75						
TGY	**Tagaytay City**	**24.60**	**238**	P	**P**	**04 33 04.4**	**+1.9**
	comp=Z,142nm,0.3s,baz=197,slow=6.8,SNR=4.0						
HIA	**Hailar**	**26.89**	**326**	*ce*P	**P**	**04 33 24.8**	**+1.9**
HIA				pmax	pmax		
	comp=Z,55nm,1.1s						
HIA	**Hailar**	**26.89**	**326**	P	**P**	**04 33 24.6**	**+1.7**
HIA				IAmb	IAmb	04 33 27.6	
	comp=Z,44nm,0.9s						
PETK	**Petropavlovsk-**	**26.92**	**21**	P	**P**	**04 33 23.1**	**0.0**
	comp=Z,5.9nm,0.9s,baz=98,slow=3.3,SNR=5.2						
ZEA	**Zeya**	**27.40**	**340**	*e*P	**P**	**04 33 28.8**	**+1.5**
ZEA				*e*S	**S**	**04 38 04.7**	**+0.2**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ZEA				smax	smax		
	comp=N,100nm,4.0s						
ZEA				smax	smax		
	comp=E,200nm,5.8s						
ZEA				MLR	MLR		
	comp=N,200nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,16.0s						
HHC	**Hu-ho-hao-te**	**27.94**	**304**	*e*P	**P**	**04 33 32.8**	**+0.4**
HHC				S	**S**	**04 38 17.3**	**+3.8**
HHC				SS	SnSn	04 39 43.1	+13
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=Z,690nm,15.7s						
HHC				LR	LR		
	comp=Z,1µm,15.8s						
HHC				LR	LR		
	comp=Z,1µm,17.0s						
ENH	**Enshi**	**28.63**	**281**	P	**P**	**04 33 38.9**	**+0.3**
ENH				IAmb	IAmb	04 33 40.4	
	comp=Z,27nm,1.0s						
XAN	**Xi'an**	**28.99**	**289**	P	**P**	**04 33 41.6**	**-0.2**
XAN				sP	pP	04 33 47.3	-5.2
XAN				PP	**PP**	**04 34 40.6**	**-7.1**
XAN				S	**S**	**04 38 31.8**	**+1.7**
XAN				pmax	pmax		
	comp=Z,23nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,4.3s						
XAN				LR	LR		
	comp=Z,550nm,15.5s						
XAN				LR	LR		
	comp=Z,880nm,17.3s						
XAN				LR	LR		
	comp=Z,1µm,16.7s						
QIZ	**Qiongzhong**	**31.18**	**259**	P	P	04 34 02.3	+1.1
QIZ				S	S	04 39 10.6	+6.1
QIZ				LR	LR		
	comp=Z,230nm,6.2s						
QIZ				LR	LR		
	comp=Z,460nm,11.9s						
QIZ				LR	LR		
	comp=Z,450nm,15.4s						
MA2	**Magadan**	**31.44**	**8**	⇓*e*P	**P**	**04 34 04.1**	**+1.0**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA	**Guiyang**	**31.66**	**275**	⇓P	P	04 34 06.8	+1.2
GYA				PP	**PP**	**04 35 14.4**	**-3.2**
GYA				pmax	pmax		
	comp=Z,36nm,1.2s						
GYA				pmax	pmax		
	comp=Z,230nm,5.3s						
GYA				LR	LR		
	comp=Z,510nm,17.0s						
LZH	**Lanzhou**	**33.21**	**293**	*e*P	P	04 34 20.4	+1.3
LZH				sP	pP	04 34 25.8	-4.0
LZH				*e*S	S	04 39 46.3	+10
LZH				SS	**SnSn**	**04 41 39.0**	**+0.5**
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,5.2s						
LZH				LR	LR		
	comp=Z,420nm,13.0s						
LZH				LR	LR		
	comp=Z,670nm,12.5s						
LZH				LR	LR		
	comp=Z,690nm,14.6s						
ULN	**Ulaanbaatar**	**33.33**	**315**	*c* *i*P	P	04 34 21.3	+1.4
ULN				pmax	pmax		
	comp=Z,23nm,1.2s						
ULN	**Ulaanbaatar**	**33.33**	**315**	P	P	04 34 21.2	+1.2
ULN				IAmb	IAmb	04 34 22.6	
	comp=Z,24nm,1.1s						
GTOI	**Gorontalo**	**33.45**	**217**	P	P	04 34 23.0	+1.9
	comp=Z,25nm,1.0s						
CD2	**Chengdu**	**33.48**	**284**	⇑P	**P**	**04 34 21.8**	**+0.4**
CD2				S	S	04 39 45.0	+4.7
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
CD2				LR	LR		
	comp=Z,590nm,13.7s						
CD2				LR	LR		
	comp=Z,960nm,16.2s						
CD2				LR	LR		
	comp=Z,1µm,15.2s						
SONM	**Songino Array**	**33.73**	**315**	P	**P**	**04 34 24.6**	**+1.2**
	comp=Z,7.0nm,0.7s,baz=124,slow=8.6,SNR=44						
SONM				PcP	**PcP**	**04 37 03.2**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=42,slow=3.0,SNR=5.4						
SONM				LR	LR	04 48 46.5	
	comp=Z,297nm,18.8s,baz=110,slow=37						
SONM	**Songino Array**	**33.73**	**315**	P	**P**	**04 34 24.3**	**+0.9**
SONM				PcP	**PcP**	**04 37 04.3**	**+2.1**
MRSI	**Marisa**	**34.16**	**218**	P	P	04 34 31.3	+4.0
TOLI2	**Tolitoli**	**34.29**	**221**	P	**P**	**04 34 25.7**	**-2.7**
TOLI2				IAmb	IAmb	04 34 32.1	
	comp=Z,26nm,1.0s						
YAK	**Yakutsk**	**34.42**	**349**	*e*P	**P**	**04 34 29.2**	**+0.2**
YAK				*e*		04 35 47.2	
YAK				*e*		04 37 10.6	
YAK				*e*S	**S**	**04 39 58.0**	**+4.1**
YAK				*e*SS	**SnSn**	**04 42 09.3**	**+2.6**
YAK				*e*		04 44 53.0	
YAK				pmax	pmax		
	comp=Z,32nm,1.1s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,148nm,4.3s						
YAK				pmax	pmax		
	comp=E,108nm,4.3s						
YAK				smax	smax		
	comp=E,219nm,4.6s						
YAK				MLR	MLR		
	comp=Z,231nm,18.0s						
YAK				MLR	MLR		
	comp=N,162nm,16.0s						
YAK				MLR	MLR		
	comp=E,94nm,16.0s						
SEY	**Seymchan**	**34.90**	**8**	P	**P**	**04 34 34.3**	**+1.2**
	comp=E,8.5nm,0.7s,baz=187,slow=7.3,SNR=28						
SEY	**Seymchan**	**34.90**	**8**	⇑*e*P	**P**	**04 34 34.1**	**+1.0**
NLAI	**Namlea**	**34.95**	**207**	P	P	04 34 38.6	+4.5
BOD	**Bodaibo**	**35.23**	**334**	*e*P	P	04 34 37.9	+1.8
BOD				pmax	pmax		
	comp=Z,26nm,1.2s						
KMI	**Kunming**	**35.41**	**274**	⇑P	P	04 34 39.9	+1.5
KMI				pP	pP	04 34 41.4	-7.7
KMI				sP	pwP	04 34 42.8	-10
KMI				S	S	04 40 15.4	+4.8
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
KMI				pmax	pmax		
	comp=Z,61nm,3.5s						
KMI				LR	LR		
	comp=Z,190nm,10.1s						
KMI				LR	LR		
	comp=Z,420nm,24.3s						
KMI				LR	LR		
	comp=Z,590nm,19.4s						
KMI	**Kunming**	**35.41**	**274**	P	P	04 34 40.3	+1.9
KMI				pmax	pmax		
	comp=Z,100nm,1.9s						
KMI	**Kunming**	**35.41**	**274**	P	P	04 34 40.2	+1.9
SLVN	**Son La**	**35.51**	**267**	P	P	04 34 40.7	+1.7
ZAK	**Zakamensk**	**36.56**	**317**	*e*P	P	04 34 49.3	+1.5
ZAK				pmax	pmax		
	comp=Z,11nm,1.0s						
UBPT	**Khong Chiam**	**36.57**	**257**	P	P	04 34 51.6	+3.6
	comp=Z,11nm,1.0s						
GTA	**Gaotai**	**36.57**	**298**	⇓P	**P**	**04 34 48.1**	**+0.1**
GTA				pP	pP	04 34 52.0	-6.7
GTA				sP	pwP	04 34 54.6	-7.8
GTA				PcP	**PcP**	**04 37 12.1**	**+1.4**
GTA				ScP	**ScP**	**04 40 59.3**	**+5.3**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,77nm,7.6s						
GTA				LR	LR		
	comp=Z,290nm,14.5s						
GTA				LR	LR		
	comp=Z,400nm,15.3s						
GTA				LR	LR		
	comp=Z,380nm,16.0s						
IRK	**Irkutsk**	**36.73**	**321**	*e*P	P	04 34 50.4	+1.4
IRK				pmax	pmax		
	comp=Z,57nm,1.8s						
TLY	**Talaya**	**36.85**	**319**	*e*P	P	04 34 53.1	+3.0
TLY				*e*S	S	04 40 35.6	+4.0
TLY				pmax	pmax		
	comp=Z,54nm,0.6s						
TLY				MLR	MLR		
	comp=Z,1µm,14.0s						
TLY	**Talaya**	**36.85**	**319**	P	P	04 34 52.1	+2.0
NONG	**Nongkai**	**37.38**	**262**	P	P	04 34 57.0	+2.1
	comp=Z,22µmcomp=Z,165nm,1.0s						
KHON	**Khomkaen**	**38.37**	**260**	P	P	04 35 06.2	+2.9
MOY	**Mondy**	**38.38**	**318**	*e*P	P	04 35 05.6	+2.5
MOY				pmax	pmax		
	comp=Z,40nm,1.5s						
SBUM	**Sibu**	**38.79**	**233**	P	P	04 35 09.0	+2.2
SPSI	**Sidrap Palu**	**39.05**	**218**	P	**P**	**04 35 09.9**	**+1.0**
	comp=Z,35nm,0.6s						
BNSI	**Bone**	**39.23**	**217**	P	P	04 35 13.8	+3.3
	comp=Z,42nm,1.3s						
CHAI	**Chaiyaphum**	**39.28**	**260**	P	P	04 35 12.4	+1.4
	comp=Z,2µmcomp=Z,190nm,0.9s						
MTKI	**Muara Teweh, K**	**39.48**	**227**	P	P	04 35 14.3	+1.7
PAYA	**Payao**	**39.74**	**266**	P	P	04 35 17.6	+2.8
	comp=Z,194nm,1.2s						
UTTA	**Uttaradit**	**39.76**	**263**	P	P	04 35 16.3	+1.4
	comp=Z,562nmcomp=Z,82nm,0.8s						
BKSI	**Bulukumba**	**40.01**	**216**	P	P	04 35 19.3	+2.4
	comp=Z,18nm,1.0s						
SRAK	**Srakaew**	**40.09**	**257**	P	**P**	**04 35 15.0**	**-2.6**
	comp=Z,12µmcomp=Z,2µm,0.8s						
PHIT	**Phitsanulok**	**40.11**	**263**	P	P	04 35 20.0	+2.2
	comp=Z,98nm,0.8s						
LAMP	**Lampang**	**40.27**	**265**	P	P	04 35 20.8	+1.7
	comp=Z,35nm,0.8s						
CM34	**Chiang Mai Arr**	**40.56**	**266**	P	P	04 35 23.0	+1.4
CM35	**Chiang Mai Arr**	**40.62**	**266**	P	P	04 35 23.0	+0.9
SUKH	**Sukhothai**	**40.67**	**264**	P	P	04 35 24.0	+1.5
	comp=Z,21nm,0.6s						
CM36	**Chiang Mai Arr**	**40.74**	**265**	P	P	04 35 24.0	+1.0
CM33	**Chiang Mai Arr**	**40.75**	**266**	P	**P**	**04 35 24.0**	**+0.8**
CMMT	**Chiang Mai**	**40.76**	**266**	P	P	04 35 24.4	+1.2
	comp=Z,21nm,0.9s						
CHTO	**Chiang Mai**	**40.76**	**266**	P	P	04 35 24.5	+1.3
CHTO				pmax	pmax		
	comp=Z,33nm,0.9s						
CHTO	**Chiang Mai**	**40.76**	**266**	P	P	04 35 24.5	+1.3
CHTO				IAmb	IAmb	04 35 25.4	
	comp=Z,34nm,0.9s						
CM09	**Chiang Mai Arr**	**40.86**	**265**	P	P	04 35 26.1	+2.1
	comp=Z,171nmcomp=Z,20nm,0.8s						
CM04	**Chiang Mai Arr**	**40.88**	**265**	P	P	04 35 26.0	+1.8
	comp=Z,169nmcomp=Z,17nm,1.1s						
CM01	**Chiang Mai Arr**	**40.89**	**265**	P	P	04 35 26.0	+1.7
	comp=Z,15nm,0.9s						
CM31	**Chiang Mai Arr**	**40.89**	**265**	P	P	04 35 27.3	+3.0
CM31	**Chiang Mai Arr**	**40.89**	**265**	P	P	04 35 25.3	+1.0
CM31				IAmb	IAmb	04 35 26.8	
	comp=Z,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.89**	**265**	P	P	04 35 25.6	+1.3
	comp=Z,8.2nm,0.8s,baz=49,slow=8.9,SNR=39						
CMAR				PcP	**PcP**	**04 37 26.2**	**+1.8**
	comp=Z,1.1nm,0.4s,baz=86,slow=1.2,SNR=8.1						
CMAR				LR	LR	04 52 30.6	
	comp=Z,252nm,20.0s,baz=124,slow=36						
CMAR	**Chiang Mai Arr**	**40.89**	**265**	*i* P	P	04 35 26.1	+1.8
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.89**	**265**	P	**P**	**04 35 25.0**	**+0.7**
CM02	**Chiang Mai Arr**	**40.90**	**265**	P	P	04 35 26.4	+2.0
	comp=Z,110nmcomp=Z,17nm,0.9s						
CM32	**Chiang Mai Arr**	**40.90**	**266**	P	P	04 35 26.0	+1.6
CM15	**Chiang Mai Arr**	**40.91**	**265**	P	P	04 35 26.0	+1.5
CM05	**Chiang Mai Arr**	**40.91**	**265**	P	P	04 35 26.6	+2.1
	comp=Z,107nmcomp=Z,13nm,0.9s						
CM13	**Chiang Mai Arr**	**40.94**	**265**	P	P	04 35 26.7	+2.0
	comp=Z,13nm,0.9s						
UTHA	**Uthaitani**	**41.64**	**261**	P	P	04 35 32.5	+2.1
	comp=Z,582nmcomp=Z,87nm,0.8s						
MMRI	**Maumere**	**41.87**	**211**	P	**P**	**04 35 31.9**	**-0.3**
MHMT	**Maesarieng**	**41.89**	**266**	P	P	04 35 34.6	+2.1
	comp=Z,2µmcomp=Z,53nm,0.9s						
SOEI	**Soe**	**42.01**	**207**	P	**P**	**04 35 33.6**	**+0.1**
EDFI	**Ende, Flores**	**42.21**	**211**	P	**P**	**04 35 35.7**	**+0.6**
	comp=Z,30nm,0.9s						
PHET	**Kaeng Krachan**	**42.67**	**258**	P	P	04 35 41.0	+2.1
	comp=Z,811nmcomp=Z,68nm,0.9s						
TIXI	**Tiksi**	**43.68**	**354**	*c* *i*P	**P**	**04 35 47.0**	**+0.7**
TIXI	**Tiksi**	**43.68**	**354**	P	**P**	**04 35 47.0**	**+0.7**
PLAI	**Plampang**	**44.19**	**216**	P	**P**	**04 35 51.3**	**+0.3**
	comp=Z,41nm,0.7s						
TWSI	**Taliwang, Sumb**	**44.59**	**217**	P	**P**	**04 35 54.8**	**+0.6**
	comp=Z,31nm,0.8s						
SHL	**Shillong**	**44.78**	**278**	P	P	04 35 57.1	+1.1
SHL				pmax	pmax		
	comp=Z,45nm,1.3s						
SHL	**Shillong**	**44.78**	**278**	P	P	04 35 57.0	+1.1
TRTT	**Trang**	**45.19**	**251**	P	P	04 36 02.1	+3.0
WMQ	**Urumqi**	**45.82**	**305**	P	P	04 36 06.0	+2.2
WMQ				pP	pP	04 36 08.5	-6.2
WMQ				sP	pwP	04 36 12.6	-5.9
WMQ				pmax	pmax		
	comp=Z,40nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.9s						
KULM	**Kulim**	**45.82**	**248**	P	**P**	**04 36 04.0**	**0.0**
KULM				IAmb	IAmb	04 36 07.2	
	comp=Z,33nm,1.2s						
KULM	**Kulim**	**45.82**	**248**	P	P	04 36 06.0	+1.9
IPM	**Ipoh**	**45.99**	**246**	P	P	04 36 07.0	+1.6
PKDT	**Phuket**	**46.30**	**252**	P	P	04 36 10.8	+3.0
DGZ	**Jazzator, Alta**	**46.32**	**313**	*c* *i*P	P	04 36 09.8	+2.0
DGZ				pmax	pmax		
	comp=Z,36nm,0.9s						
ZSN	**Zaisan**	**47.87**	**309**	*e*P	P	04 36 21.1	+1.4
	comp=Z,6.9nm,0.9s,baz=309						
ZSN	**Zaisan**	**47.87**	**309**	*e*P	P	04 36 21.1	+1.4
ZSN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TAPN	**Taplejung**	**47.92**	**282**	*e*P	P	04 36 21.9	+1.2
	comp=Z,12nm,0.5s						
KPJI	**Karang Pucung**	**48.17**	**227**	P	**P**	**04 36 23.3**	**+1.0**
	comp=Z,158nm,0.9s						
ODAN	**Odare**	**48.33**	**282**	*e*P	P	04 36 24.9	+1.1
	comp=Z,21nm,0.4s						
ZALV	**Zalesovo Beam**	**48.43**	**318**	P	P	04 36 25.4	+1.5
	comp=Z,29nm,0.8s,baz=98,slow=7.6,SNR=97						
ZALV				PcP	**PcP**	**04 37 51.0**	**+1.3**
	comp=Z,6.8nm,0.6s,baz=110,slow=3.4,SNR=6.3						
ZALV	**Zalesovo Beam**	**48.43**	**318**	*i* P	P	04 36 25.3	+1.4
ZALV				pmax	pmax		
	comp=Z,29nm,0.8s						
ZALV	**Zalesovo Beam**	**48.43**	**318**	P	P	04 36 25.2	+1.4
ZALV				PcP	**PcP**	**04 37 51.2**	**+1.6**
ANM	**Nome**	**48.50**	**27**	P	**P**	**04 36 25.0**	**+0.8**
ANM				pmax	pmax		
	comp=Z,15nm,1.0s						
ANM	**Nome**	**48.50**	**27**	P	**P**	**04 36 25.0**	**+0.8**
ANM				IAmb	IAmb	04 36 30.2	
	comp=Z,15nm,1.0s						
CTAO	**Charters Tower**	**48.60**	**175**	P	**P**	**04 36 25.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTAO	**Charters Tower**	**48.60**	**175**	P	**P**	**04 36 25.9**	**+0.4**
WB0	**Warramunga Arr**	**48.76**	**190**	P	**P**	**04 36 26.6**	**-0.1**
WRAB	**Tennant Creek**	**48.92**	**190**	*c* *i*P	**P**	**04 36 28.4**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,38nm,0.8s						
WRAB	**Tennant Creek**	**48.92**	**190**	P	**P**	**04 36 28.2**	**+0.2**
WB2	**Warramunga Arr**	**48.93**	**190**	P	**P**	**04 36 28.0**	**-0.1**
WRA	**Warramunga Arr**	**48.94**	**190**	P	**P**	**04 36 28.4**	**+0.3**
	comp=Z,37nm,0.7s,baz=11,slow=8.3,SNR=194						
WRA				PcP	**PcP**	**04 37 54.0**	**+2.1**
	comp=Z,3.6nm,0.7s,baz=9.9,slow=4.2,SNR=1.8						
WRA				ScP	**ScP**	**04 41 48.3**	**+4.7**
	comp=Z,0.6nm,0.8s,baz=7.1,slow=4.4,SNR=2.8						
WRA	**Warramunga Arr**	**48.94**	**190**	*i* P	**P**	**04 36 28.6**	**+0.5**
WRA				pmax	pmax		
	comp=Z,37nm,0.7s						
WRA	**Warramunga Arr**	**48.94**	**190**	P	**P**	**04 36 27.2**	**-0.9**
RAMN	**Ramite**	**48.98**	**282**	*e*P	P	04 36 30.0	+1.2
	comp=Z,78nm,0.9s						
SDSI	**Sungai Dareh**	**49.00**	**240**	P	P	04 36 30.7	+1.9
	comp=Z,32nm,0.8s						
KLSI		**49.09**	**234**	P	P	04 36 31.0	+1.5
	comp=Z,27nm,1.0s						
GUN	**Gumba**	**49.35**	**283**	*e*P	P	04 36 33.2	+1.4
	comp=Z,137nm,0.9s						
MNSI	**Mandailing Nat**	**49.35**	**244**	P	P	04 36 32.7	+1.2
	comp=Z,28nm,0.8s						
LHSI	**Lahat**	**49.36**	**236**	P	P	04 36 34.0	+2.5
	comp=Z,5µmcomp=Z,89nm,0.9s						
MK31	**Makanchi Array**	**49.62**	**309**	*c* *i*P	P	04 36 34.4	+1.2
MK31				pmax	pmax		
	comp=Z,17nm,0.7s						
MK31	**Makanchi Array**	**49.62**	**309**	P	**P**	**04 36 34.2**	**+1.0**
MK31				IAmb	IAmb	04 36 36.0	
	comp=Z,16nm,0.8s						
MKAR	**Makanchi Array**	**49.62**	**309**	P	P	04 36 34.5	+1.3
	comp=Z,19nm,0.8s,baz=92,slow=9.4,SNR=186						
MKAR				PcP	**PcP**	**04 37 55.3**	**+1.1**
	comp=Z,7.4nm,1.0s,baz=76,slow=6.1,SNR=5.9						
MKAR				ScP	ScP	04 41 52.7	+6.3
	comp=Z,0.6nm,0.7s,baz=90,slow=5.0,SNR=3.1						
MKAR	**Makanchi Array**	**49.62**	**309**	P	**P**	**04 36 33.9**	**+0.7**
PDSI	**Padang**	**49.73**	**241**	P	P	04 36 35.4	+1.0
	comp=Z,17nm,0.7s						
PKI	**Pulchoki**	**49.84**	**283**	*e*P	**P**	**04 36 36.2**	**+0.7**
	comp=Z,62nm,1.1s						
MAKZ	**Makanchi**	**49.84**	**309**	P	P	04 36 36.1	+1.3
MAKZ				pmax	pmax		
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	**49.84**	**309**	P	P	04 36 36.1	+1.3
MAKZ				IAmb	IAmb	04 36 37.3	
	comp=Z,15nm,0.9s						
PKIN	**Phulchoki**	**49.85**	**283**	*e*P	**P**	**04 36 36.4**	**+0.9**
	comp=Z,57nm,1.0s						
KKN	**Kakani**	**49.89**	**283**	*e*P	P	04 36 36.8	+1.1
	comp=Z,93nm,0.9s						

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SANVU Saraoutou         49.99 148   P      P      04 36 36.1 -0.1
SANVU                               IAmb   IAmb   04 36 56.6
      comp=Z,22nm,0.9s
DMN   Daman             50.09 283  eP      P      04 36 38.4 +1.1
      comp=Z,52nm,0.9s
GKN   Gorkha            50.38 284  eP      P      04 36 40.4 +1.0
      comp=Z,124nm,1.1s
GSI   Gunungsitoli      50.64 246   P      P      04 36 42.2 +1.0
GSI   Gunungsitoli      50.64 246   P      P      04 36 42.8 +1.6
RDOG  Red Dog Mine      50.73  23   IAmb   IAmb   04 36 47.1
      comp=Z,16nm,0.7s
SEM   Semipalatinsk     50.98 313  eP      P      04 36 44.3 +0.7
      comp=Z,10.0nm,0.9s,baz=313
SEM   Semipalatinsk     50.98 313  eP      P      04 36 44.3 +0.7
SEM                                 pmax   pmax
      comp=Z,10.0nm,0.9s
DANN  Dangsing          51.04 285  eP      P      04 36 46.0 +1.5
      comp=Z,156nm,0.9s
KOLN  Koldanda          51.33 284  eP      P      04 36 47.7 +1.1
      comp=Z,160nm,0.9s
PYUN  Piuthan           51.76 285  eP      P      04 36 51.1 +1.3
      comp=Z,192nm,0.8s
PDGK  Podgornoye        51.79 304  i P     P      04 36 50.6 +0.9
PDGK                                pmax   pmax
      comp=Z,53nm,0.9s
SHLS  Shalkode          51.83 304  eP      P      04 36 48.2 -1.8
      comp=Z,9.3nm,0.7s,baz=304
SHLS  Shalkode          51.83 304  eP      P      04 36 48.2 -1.8
SHLS                                pmax   pmax
      comp=Z,9.0nm,0.7s
TTA   Tatalina          52.02  31   P      P      04 36 52.4 +1.4
TTA                                 pmax   pmax
      comp=Z,10.0nm,1.3s
TTA   Tatalina          52.02  31   P      P      04 36 52.4 +1.4
KURK  Kurchatov         52.02 314   P      P      04 36 52.8 +1.7
KURK                                pmax   pmax
      comp=Z,86nm,1.1s
KURK  Kurchatov         52.02 314   P      P      04 36 52.8 +1.7
KPKS  Kokpek            52.36 304  eP      P      04 36 54.6 +0.6
      comp=Z,10nm,0.8s,baz=304
KPKS  Kokpek            52.36 304  eP      P      04 36 54.5 +0.6
KPKS                                pmax   pmax
      comp=Z,10.0nm,0.8s
TDK   Taldyqorghan      52.42 306  eP      P      04 36 55.4 +1.1
      comp=Z,6.7nm,0.6s,baz=306
TDK   Taldyqorghan      52.42 306  eP      P      04 36 55.3 +1.1
TDK                                 pmax   pmax
      comp=Z,7.0nm,0.6s
SATY  Saty              52.61 304  eP      P      04 36 56.6 +0.8
      comp=Z,7.4nm,0.9s,baz=304
SATY  Saty              52.61 304  eP      P      04 36 56.6 +0.8
SATY                                pmax   pmax
      comp=Z,7.0nm,0.9s
AS31  Alice Springs     52.66 190   P      P      04 36 56.0 -0.1
ASAR  Alice Springs     52.66 190   P      P      04 36 56.1  0.0
      comp=Z,2.1nm,0.4s,baz=2.6,slow=4.9,SNR=31
ASAR                                PcP    PcP    04 38 07.7 +2.1
      comp=Z,2.0nm,0.8s,baz=7.6,slow=2.8,SNR=2.7
KDAK  Kodiak Island     53.02  37⇑eP      P      04 36 59.0 +0.6
KDAK                                pmax   pmax
      comp=Z,34nm,1.3s
CHKK  Chushkaly         53.55 305  eP      P      04 37 03.7 +1.2
      baz=305
CHKK  Chushkaly         53.55 305  eP      P      04 37 03.7 +1.2
IMAR  Indian Mountai    53.58  27   P      P      04 37 03.7 +1.3
MDOK  Medeo             53.59 304  eP      P      04 37 04.2 +1.1
      baz=304
MDOK  Medeo             53.59 304  eP      P      04 37 04.1 +1.1
TNSS  Tian-Shan         53.67 304  eP      P      04 37 05.7 +1.8
      baz=304
TNSS  Tian-Shan         53.67 304  eP      P      04 37 05.7 +1.7
AAA   Alma-Ata          53.68 304  eP      P      04 37 05.5 +2.0
      comp=Z,27nm,0.7s,baz=304
AAA   Alma-Ata          53.68 304  eP      P      04 37 05.5 +1.9
AAA                                 pmax   pmax
      comp=Z,27nm,0.7s
SKT   Skwentna          53.93  32   IAmb   IAmb   04 37 10.4
      comp=Z,33nm,1.7s
MTBS  Maitube           54.04 304  eP      P      04 37 07.8 +1.5
      baz=304
MTBS  Maitube           54.04 304  eP      P      04 37 07.7 +1.5
SUA   Susitna One       54.25  33   P      P      04 37 08.6 +1.1
BPAW  Bear Paw Mtn.     54.43  30   IAmb   IAmb   04 37 14.4
      comp=Z,22nm,1.7s
MLY   Manley            54.66  29   P      P      04 37 12.4 +2.1
      baz=262
TRF   Thorofare Moun    54.66  31   IAmb   IAmb   04 37 15.4
      comp=Z,12nm,1.0s
TKM2  Tokmak 2          54.67 304   P      P      04 37 13.1 +2.1
      SNR=14
TKM2  Tokmak 2          54.67 304  i P     P      04 37 12.7 +1.7
TKM2                                pmax   pmax
      comp=Z,16nm,0.8s
RC01  Rabbit Creek A    54.71  33   P      P      04 37 12.2 +1.5
      baz=266
KSH   Kashi             54.94 300   P      P      04 37 18.1 +5.2
KSH                                 PcP    PcP    04 38 20.1 +5.7
KSH                                 pmax   pmax
      comp=Z,62nm,0.8s
KSH                                 pmax   pmax
      comp=Z,540nm,6.2s
PMR   Palmer            55.03  33   P      P      04 37 13.9 +0.9
PMR                                 pmax   pmax
      comp=Z,16nm,0.9s
PMR   Palmer            55.03  33   P      P      04 37 13.9 +0.9
PMR                                 IAmb   IAmb   04 37 17.3
      comp=Z,16nm,0.9s
BWN   Browne            55.10  30   IAmb   IAmb   04 37 24.0
      comp=Z,19nm,0.8s
KBK   Karagaybulak      55.18 304   P      P      04 37 16.4 +1.7
      SNR=30
COLD  Coldfoot          55.19  26   P      P      04 37 16.4 +2.3
      baz=261
I23K  Minto, Yukon-K    55.25  29   P      P      04 37 16.1 +1.5
      baz=263
I23K  Minto, Yukon-K    55.25  29   IAmb   IAmb   04 37 21.0
      comp=Z,9.8nm,1.1s
CHMS  Chumysh           55.27 304   P      P      04 37 16.7 +1.6
      SNR=7.8
MCK   McKinley          55.29  30   P      P      04 37 16.1 +1.2
      baz=265
SGDS  Sogindy           55.30 305  eP      P      04 37 16.3 +1.0
      comp=Z,8.0nm,0.9s,baz=305
SGDS  Sogindy           55.30 305  eP      P      04 37 16.3 +1.0
SGDS                                pmax   pmax
      comp=Z,8.0nm,0.9s
RND   Reindeer          55.30  31   IAmb   IAmb   04 37 19.5
      comp=Z,8.7nm,0.8s
NEA2  Nenana            55.32  29   P      P      04 37 16.6 +1.6
      baz=264
KNK   Knik Glacier      55.34  33   IAmb   IAmb   04 37 21.1
      comp=Z,15nm,0.8s
USP   Ospenovka         55.42 305   P      P      04 37 17.9 +1.7
      SNR=20
SML   Sawmill           55.43  33   IAmb   IAmb   04 37 21.7
      comp=Z,17nm,0.9s
BTLS  Baital            55.49 307  eP      P      04 37 17.6 +1.0
      comp=Z,9.6nm,0.7s,baz=307
BTLS  Baital            55.49 307  eP      P      04 37 17.6 +1.0
BTLS                                pmax   pmax
      comp=Z,10.0nm,0.7s
AAK   Ala-Archa         55.52 304   P      P      04 37 18.7 +1.7
      SNR=15
AAK   Ala-Archa         55.52 304  i P     P      04 37 18.8 +1.7
      SNR=19
AAK   Ala-Archa         55.52 304c iP      P      04 37 18.5 +1.5
AAK                                 pmax   pmax
      comp=Z,47nm,0.8s
AAK   Ala-Archa         55.52 304   P      P      04 37 18.7 +1.7
AAK                                 IAmb   IAmb   04 37 19.6
      comp=Z,15nm,0.8s
DZM   Mont Dzumac       55.52 153  eP      P      04 37 17.3 +0.2
      comp=Z,28nm,1.1s
DZM   Mont Dzumac       55.52 153  eLR     LR     04 53 21.4
      comp=Z,192nm,22.3s
DZM   Mont Dzumac       55.52 153   P      P      04 37 16.5 -0.6
DZM                                 IAmb   IAmb   04 37 29.6
      comp=Z,20nm,1.3s
UCH   Uchtor            55.57 303   P      P      04 37 19.9 +2.1
      SNR=23
MDM   Murphy Dome       55.71  29   IAmb   IAmb   04 37 31.1
      comp=Z,32nm,1.7s
BRZS  Berezniki         55.86 313  eP      P      04 37 20.2 +0.9
      comp=Z,26nm,1.2s,baz=313
BRZS  Berezniki         55.86 313  eP      P      04 37 20.1 +0.9
BRZS                                pmax   pmax
      comp=Z,26nm,1.2s
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EKS2  Erkin-Say         56.03 304   P      P      04 37 22.7 +2.0
      SNR=11
AML   Almayashu         56.18 303   P      P      04 37 24.5 +2.3
      SNR=40
HDA   Harding Lake      56.22  30   IAmb   IAmb   04 37 36.9
      comp=Z,23nm,1.7s
IL31                    56.27  29   IAmb   IAmb   04 37 26.7
      comp=Z,11nm,1.1s
ILAR  Eielson Array     56.27  29   P      P      04 37 22.0 +0.1
      comp=Z,5.8nm,0.9s,baz=262,slow=5.8,SNR=21
ILAR  Eielson Array     56.27  29   P      P      04 37 22.4 +0.6
NDI   New Delhi         56.48 287  eP      P      04 37 25.5 +1.6
KLU   Klutina           56.56  33   P      P      04 37 25.0 +0.9
KLU                                 IAmb   IAmb   04 37 34.8
      comp=Z,17nm,1.1s
FYU   Fort Yukon        57.07  27   IAmb   IAmb   04 37 34.0
      comp=Z,18nm,1.1s
BRVK  Borovoye          57.08 317c iP      P      04 37 29.9 +2.1
BRVK                                pmax   pmax
      comp=Z,51nm,1.3s
BRVK  Borovoye          57.08 317   P      P      04 37 29.7 +1.9
BMAR  Burnt Mountain    57.38  26   P      P      04 37 30.0 +0.2
SCRK  Sand Creek        57.49  30   P      P      04 37 31.8 +1.1
      baz=269
GLB   Gilahina Butte    57.58  33   IAmb   IAmb   04 37 37.7
      comp=Z,17nm,1.2s
DZA   Taraz             57.77 305  eP      P      04 37 34.1 +1.2
      baz=305
DZA   Taraz             57.77 305  eP      P      04 37 34.0 +1.1
MCARA McCarthy VSAT     57.96  33   IAmb   IAmb   04 37 39.3
      comp=Z,20nm,1.0s
KKAR  Karatay Array     58.32 305   P      P      04 37 38.3 +1.6
KKAR  Karatay Array     58.32 305   P      P      04 37 38.3 +1.6
K27K  Chicken           58.34  30   P      P      04 37 38.2 +1.8
      baz=271
K27K  Chicken           58.34  30   IAmb   IAmb   04 37 43.0
      comp=Z,9.9nm,1.1s
NIL   Nilore            58.37 294   P      P      04 37 39.1 +1.8
NIL                                 pmax   pmax
      comp=Z,32nm,1.0s
NIL   Nilore            58.37 294   P      P      04 37 39.1 +1.9
BCAR  Beaver Creek A    58.49  31   P      P      04 37 38.6 +1.0
HYB   Hyderabad         59.20 274  i P     P      04 37 44.5 +1.3
STKA  Stephens Creek    60.20 181   P      P      04 37 49.8 +0.1
      comp=Z,4.9nm,0.7s,baz=352,slow=11,SNR=4.4
STKA  Stephens Creek    60.20 181   P      P      04 37 50.3 +0.6
STKA                                pmax   pmax
      comp=Z,2.0nm,1.0s
STKA  Stephens Creek    60.20 181   P      P      04 37 50.3 +0.6
EPYK  Eagle Plains      60.49  27   P      P      04 37 53.5 +2.2
      baz=274
HYT   Haines Junctio    60.67  34   P      P      04 37 54.1 +1.3
HYT                                 IAmb   IAmb   04 37 56.1
      comp=Z,12nm,1.2s
KBL   Kabul             61.49 296   P      P      04 38 00.3 +1.5
KBL                                 pmax   pmax
      comp=Z,12nm,0.9s
KBL   Kabul             61.49 296   P      P      04 38 00.3 +1.5
KBL                                 IAmb   IAmb   04 38 07.2
      comp=Z,12nm,0.8s
INK   Inuvik            61.54  25   P      P      04 37 59.8 +1.5
INK                                 pmax   pmax
      comp=Z,18nm,1.3s
INK   Inuvik            61.54  25   P      P      04 37 59.8 +1.5
INK                                 IAmb   IAmb   04 38 04.4
      comp=Z,18nm,1.2s
WHY   Whitehorse        61.97  34   P      P      04 38 03.0 +1.5
WHY                                 IAmb   IAmb   04 38 33.6
      comp=Z,13nm,1.1s
SVE   Sverdlovsk        62.10 322⇑eP      P      04 38 04.7 +2.4
SVE                                 pmax   pmax
      comp=Z,38nm,1.0s
ARU   Arti              63.30 322c iP      P      04 38 12.0 +1.7
ARU                                               04 40 27.8
ARU                                 S      S      04 46 47.4 +8.2
ARU                                 SS     SS     04 50 52.7 +7.1
ARU                                 pmax   pmax
      comp=Z,61nm,1.0s
ARU   Arti              63.30 322   P      P      04 38 11.9 +1.6
ABKAR Akbulak array     64.13 314   P      P      04 38 17.9 +2.0
C36M  Paulatuk          64.74  23   P      P      04 38 21.2 +1.7
      baz=284
HRA   Herat             66.87 298   IAmb   IAmb   04 38 38.1
      comp=Z,13nm,0.9s
KIRV  Kirov             67.50 326c iP      P      04 38 39.2 +1.8
EUNU  Eureka            68.34   8   P      P      04 38 43.4 +1.0
EUNU                                IAmb   IAmb   04 38 46.5
      comp=Z,5.5nm,0.8s
GEYT  Alibeck           68.80 302   P      P      04 38 48.0 +1.9
      comp=Z,6.0nm,0.8s,baz=64,slow=6.8,SNR=10
GYA0B ALIBECK ARRAY     68.80 302   P      P      04 38 47.8 +1.8
GYA0B                               IAmb   IAmb   04 38 50.2
      comp=Z,11nm,0.8s
KBS   Kingsbay          69.03 351⇑eP      P      04 38 48.6 +1.9
KBS                                 pmax   pmax
      comp=Z,27nm,1.1s
TMCR  Tamitsa           70.52 333  eP      P      04 38 55.3 -0.7
TMCR                                pmax   pmax
      comp=Z,19nm,1.1s
BELG  Belogornoye       70.58 320c iP      P      04 38 58.4 +1.8
BELG                                pmax   pmax
      comp=Z,11nm,0.9s
YKA   Yellowknife Ar    70.69  29   P      P      04 38 58.0 +0.8
      comp=Z,1.8nm,0.6s,baz=296,slow=5.7,SNR=41
YKA   Yellowknife Ar    70.69  29  i P     P      04 38 58.2 +1.1
YKA                                 pmax   pmax
      comp=Z,2.0nm,0.6s
KLMR  Klimovskoe        71.32 330  eP      P      04 39 01.3 +0.4
KLMR                               e              04 41 39.9
KLMR                                pmax   pmax
      comp=Z,13nm,1.1s
KLMR  Klimovskoe        71.32 330  eP      P      04 39 01.4 +0.5
KLMR                                AMP           04 39 03.4
      comp=Z,13nm,1.1s
KLMR                               ePP     PP     04 41 40.0 +1.0
ARCES ARCESS Array B    72.13 341   P      P      04 39 06.9 +1.2
      comp=Z,16nm,1.0s,baz=75,slow=5.3,SNR=13
TULEG Thule             73.28   7   P      P      04 39 13.5 +1.1
TULEG                               IAmb   IAmb   04 39 14.8
      comp=Z,35nm,1.7s
DAG   Danmarks Havn     74.17 356  i P     P      04 39 19.0 +1.4
DAG                                 pmax   pmax
      comp=Z,12nm,1.1s
DAG   Danmarks Havn     74.17 356  i P     P      04 39 19.0 +1.4
      comp=Z,12nm,1.1s
DAG   Danmarks Havn     74.17 356  i P     P      04 39 19.0 +1.4
DAG                                 IAmb   IAmb   04 39 20.8
      comp=Z,12nm,1.1s
MAK   Makhachkala       74.38 311  eP      P      04 39 15.6 -3.8
MAK                                ePPP    PPP    04 43 47.9
MAK                                eS      S      04 48 46.5 -4.4
MAK                                 pmax   pmax
      comp=Z,399nm,1.6s
MAK                                 MLR    MLR
      comp=Z,414nm,18.0s
VRH   Novokhopyorsk     74.42 320  eP      P      04 39 20.7 +1.2
VRH                                 pmax   pmax
      comp=Z,10.0nm,0.7s
MOS   Moscow            74.52 325  eP      P      04 39 20.8 +0.8
MOS                                e              04 39 32.8
MOS                                 pmax   pmax
      comp=Z,35nm,1.2s
BANOM Banah             74.83 291  i P     P      04 39 23.1 +0.7
      SNR=8.5
AKT   Akhty             74.85 309  eP      P      04 39 24.4 +2.0
AKT                                e              04 39 36.6
AKT                                 pmax   pmax
      comp=Z,74nm,0.8s
SHME  Shamm             74.91 292  i P     P      04 39 25.2 +2.4
      SNR=12
LPSR  Galich'ya Gora    75.32 322  eP      P      04 39 26.2 +1.5
LPSR                                pmax   pmax
      comp=Z,20nm,0.9s
UOSS  Minazif           75.32 291   P      P      04 39 27.3 +2.1
OBN   Obninsk           75.35 325⇑iP      P      04 39 27.1 +2.3
OBN                                               04 39 38.0
OBN                                 SS     SS     04 54 02.0  +11
OBN                                 pmax   pmax
      comp=Z,13nm,0.9s
OBN                                 MLR    MLR
      comp=Z,434nm,17.0s
OBN   Obninsk           75.35 325   P      P      04 39 27.4 +2.6
OBN                                 IAmb   IAmb   04 39 30.8
      comp=Z,16nm,0.8s
SOHO  SOHO              75.39 290  i P     P      04 39 27.5 +1.9
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      SNR=8.4
HATD  Hatta, Dubai      75.43 290   P      P      04 39 28.0 +2.1
ASHO  Ashiyiah          75.55 290   P      P      04 39 28.8 +2.2
NEW   Newport           75.64  43   P      P      04 39 28.1 +1.4
      baz=297
BFZ   Birch Farm        75.81 154   P      P      04 39 26.8 -0.7
VSR   Storozhevoye      75.84 321  eP      P      04 39 29.1 +1.4
VSR                                 pmax   pmax
      comp=Z,30nm,1.2s
VORD  Divnogorie        75.89 321  eP      P      04 39 29.3 +1.4
VORD                                pmax   pmax
      comp=Z,10.0nm,0.9s
FAQ   Al Faqa, Dubai    75.91 291   P      P      04 39 30.3 +1.7
ASUD  Al Ashush, Dub    76.18 291   P      P      04 39 31.7 +1.6
GOF   Gofitskoye        76.38 314⇑eP      P      04 39 33.2 +2.3
GOF                                 pmax   pmax
      comp=Z,29nm,0.7s
FINES FINESS Array B    76.62 334   P      P      04 39 33.3 +1.4
      comp=Z,2.6nm,0.4s,baz=65,slow=5.4,SNR=18
FINES FINESS Array B    76.62 334  i P     P      04 39 33.5 +1.6
FINES                               pmax   pmax
      comp=Z,3.0nm,0.4s
ORV   Oroville          76.70  52   P      P      04 39 33.6 +0.8
ORV                                 pmax   pmax
      comp=Z,29nm,1.9s
ORV   Oroville          76.70  52   P      P      04 39 33.6 +0.8
ORV                                 IAmb   IAmb   04 40 08.4
      comp=Z,30nm,1.9s
NCK   Nalchik           76.73 312⇓eP      P      04 39 35.1 +2.2
NCK                                 pmax   pmax
      comp=Z,10.0nm,1.2s
ZEI   Tsey              76.85 312  eP      P      04 39 34.9 +1.1
ZEI                                 pmax   pmax
      comp=Z,13nm,1.0s
KBZ   Khabaz            77.07 313   P      P      04 39 37.2 +2.4
      comp=Z,16nm,0.8s,baz=75,slow=4.1,SNR=62
KBZ   Khabaz            77.07 313c iP      P      04 39 37.3 +2.5
KBZ                                 pmax   pmax
      comp=Z,18nm,0.8s
KIV   Kislovodsk        77.10 313 ⇑P       P      04 39 38.1 +3.0
KIV   Kislovodsk        77.10 313  i P     P      04 39 39.1 +3.9
      SNR=6.8
KIV   Kislovodsk        77.10 313  eP      P      04 39 36.8 +1.7
KIV                                 pmax   pmax
      comp=Z,73nm,1.0s
KIV   Kislovodsk        77.10 313   P      P      04 39 36.9 +1.8
GNI   Garni             77.47 309   P      P      04 39 40.7 +3.4
GNI   Garni             77.47 309ceP       P      04 39 40.5 +3.1
GNI                                 pmax   pmax
      comp=Z,23nm,1.1s
GNI   Garni             77.47 309   P      P      04 39 39.6 +2.2
CHVG  Ch'k'valeri       78.07 312 ⇓P       P      04 39 43.0 +2.6
CHVG  Ch'k'valeri       78.07 312 ⇓P       P      04 39 43.0 +2.6
CMB   Columbia Colle    78.15  53   IAmb   IAmb   04 40 00.9
      comp=Z,25nm,1.8s
WAKR  Walker            78.60  52   IAmb   IAmb   04 40 03.9
      comp=Z,22nm,1.8s
SUMG  Summit            79.04   0   P      P      04 39 47.4 +1.7
SUMG                                pmax   pmax
      comp=Z,63nm,1.7s
SUMG  Summit            79.04   0   P      P      04 39 47.4 +1.7
SUMG  Summit            79.04   0  i P     P      04 39 47.9 +2.2
      comp=Z,31nm,0.5s
SUMG  Summit            79.04   0  i P     P      04 39 48.0 +2.3
SUMG                                IAmb   IAmb   04 39 50.1
      comp=Z,31nm,0.5s
SOC   Sochi             79.18 314  eP      P      04 39 47.7 +1.2
SOC                                e              04 42 45.5
SOC                                ePPP    PPP    04 44 34.9
SOC                                eS      S      04 49 48.7 +5.5
SOC                                eSS     SS     04 54 58.4 +9.1
SOC                                 pmax   pmax
      comp=Z,31nm,0.7s
RYN   Ryan              79.18  52   IAmb   IAmb   04 40 07.0
      comp=Z,20nm,1.9s
NVAR  Mina Array Bea    79.42  52   P      P      04 39 49.5 +1.3
      comp=Z,2.1nm,0.6s,baz=298,slow=6.0,SNR=18
HLID  Hailey            79.53  46   P      P      04 39 50.5 +1.8
      baz=300
DLMT  Dillon            79.76  44   IAmb   IAmb   04 39 56.6
      comp=Z,20nm,1.8s
MNK   Minsk             79.92 327  i P     P      04 39 51.5 +1.2
      comp=E,4.0nm,1.0s
MNK                                i P     P      04 39 51.5 +1.2
      comp=N,34nm,1.5s
MNK                                i P     P      04 39 51.5 +1.2
      comp=Z,23nm,1.0s
MNK                                i PP    PP     04 42 56.2 +4.5
MNK                                i PPP   PPP    04 44 46.1
MNK                                i S     S      04 49 59.0 +8.4
MNK                                i SS    SS     04 55 17.3  +18
MNK                                i SSS   SSS    04 58 44.3
MNK                                i LQ    LQ     05 10 32.3
MNK                                i LR    LR     05 16 42.8
MNK                                i LRM   MLR    05 17 03.0
      comp=N,330nm,25.6s
MNK                                i LRM   MLR    05 17 06.8
      comp=E,22nm,14.8s
MNK                                i LRM   MLR    05 17 39.3
      comp=Z,257nm,19.5s
IDID  Didziasalis       79.97 328  eP      P      04 39 52.7 +2.1
ANN   Anapa             80.00 316  eP      P      04 39 51.2 +0.3
ANN                                 pmax   pmax
      comp=Z,34nm,1.0s
ANN                                 MLR    MLR
      comp=Z,436nm,16.0s
PKM   Mcpherson Peak    80.01  56   P      P      04 39 52.2 +0.7
      baz=298
ISAL  Salakas           80.10 329  eP      P      04 39 53.4 +2.1
UMR   Umm Al-Rimmam     80.10 298  eP             04 39 53.1
IIGN  Ignalina          80.19 329  eP      P      04 39 53.9 +2.1
NACGM Naroch            80.20 328  i P     P      04 39 54.0 +2.2
NACGM                              i P     P      04 39 54.0 +2.2
NACGM                              i P     P      04 39 54.0 +2.2
NACGM                              i Pb    pP     04 40 00.2 -3.2
      comp=Z,36nm,0.8s
NACGM                              i PcP   pwP    04 40 05.7 -1.8
NACGM                              i PP    PP     04 43 03.7  +10
NACGM                              i PPP   PPP    04 44 44.5
NACGM                              i S     S      04 50 04.9  +11
NACGM                              i PS    PnS    04 51 27.7  +45
NACGM                              i SS    SS     04 55 16.5  +13
NACGM                              i SSS   SSS    04 58 51.8
NACGM                              i LQ    LQ     05 07 53.4
NACGM                              i LR    LR     05 16 12.7
PPT2  Papeete2          80.21 116  eLR     LR     05 04 41.7
      comp=Z,142nm,22.8s
BOZ   Bozeman (W)       80.23  43   IAmb   IAmb   04 40 20.9
      comp=Z,13nm,0.8s
MIB   Mutribah          80.28 299  eP             04 39 54.5
FFC   Flin Flon         80.33  32   P      P      04 39 53.5 +1.0
FFC                                 pmax   pmax
      comp=Z,9.0nm,1.2s
FFC   Flin Flon         80.33  32   P      P      04 39 53.5 +1.0
KOPT  Kop Dagi          80.41 310   IAmb   IAmb   04 40 00.1
      comp=Z,15nm,1.0s
RDF   Al-Radifah        80.52 298  eP             04 39 55.6
RST   Umm Al-Ruwaisa    80.68 298  eP             04 39 55.9
PABE  Paberze           81.11 330  eP      P      04 39 58.6 +1.9
MPMC  Manual Prospec    81.12  54   P      P      04 39 58.5 +1.1
      baz=299
LRMC  Laurel Mtn Rad    81.27  54   P      P      04 39 59.3 +1.2
      baz=299
EDW2  Edwards Air Fo    81.33  55   P      P      04 39 59.2 +0.9
      baz=299
R11A  Troy Canyon, C    81.33  51   P      P      04 39 59.7 +1.2
      baz=300
AKASG Malin Array Be    81.46 324   P      P      04 39 59.6 +1.0
      comp=Z,4.6nm,0.6s,baz=50,slow=5.5,SNR=22
AKBB  Malin Array Si    81.46 324⇑eP      P      04 39 59.7 +1.1
AKBB  Malin Array Si    81.46 324   IAmb   IAmb   04 40 00.7
      comp=Z,7.0nm,0.8s
TPNV  Topopah Spring    81.56  53   P      P      04 40 00.6 +0.9
TPNV                                pmax   pmax
      comp=Z,6.0nm,0.8s
TPNV  Topopah Spring    81.56  53   P      P      04 40 00.8 +1.1
      baz=299
TPNV  Topopah Spring    81.56  53   P      P      04 40 00.6 +0.9
FLWY  Flagg Ranch       81.58  44   IAmb   IAmb   04 40 18.6
      comp=Z,18nm,1.6s
RLMT  Red Lodge         81.89  43   IAmb   IAmb   04 40 15.5
      comp=Z,18nm,0.9s
SIM   Simferopol'       81.93 317  eP      P      04 40 03.0 +1.8
SIM                                 pmax   pmax
      comp=Z,18nm,0.7s
```

NC204	**NORSAR Array S**	**82.19**	**339**	P	**P**	**04 40 03.7**	**+1.3**
NB2	**NORSAR Subarra**	**82.23**	**338**	P	**P**	**04 40 03.5**	**+1.0**
	comp=Z,12nm,0.9s,baz=43,slow=5.3						
NOA	**NORSAR Array B**	**82.23**	**338**	P	**P**	**04 40 03.5**	**+1.0**
	comp=Z,5.4nm,0.7s,baz=41,slow=5.2,SNR=16						
DUG	**Dugway, Tooele**	**82.26**	**48**	P	**P**	**04 40 04.6**	**+1.3**
	baz=301						
DUG	**Dugway, Tooele**	**82.26**	**48**	IAmb	IAmb	04 40 08.8	
	comp=Z,29nm,1.8s						
ICESG	**Greenland Ices**	**82.53**	**1**	*i* P	**P**	**04 40 03.0**	**-1.3**
ICESG				IAmb	IAmb	04 40 08.1	
	comp=Z,10nm,0.8s						
SHPR	**Sheep Range**	**82.54**	**53**	IAmb	IAmb	04 40 37.7	
	comp=Z,17nm,1.9s						
TOKA	**Tokat**	**82.91**	**312**	IAmb	IAmb	04 40 10.2	
	comp=Z,13nm,0.8s						
BW06	**Boulder Array**	**82.99**	**45**	P	**P**	**04 40 07.2**	**+0.1**
	baz=303						
PD31	**Pinedale Array**	**82.99**	**45**	P	**P**	**04 40 07.5**	**+0.4**
PDAR	**Pinedale Array**	**82.99**	**45**	P	**P**	**04 40 07.8**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=300,slow=1.7,SNR=12						
PFO	**Pinyon Flats O**	**83.06**	**56**	P	**P**	**04 40 07.8**	**+0.3**
PFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PFO	**Pinyon Flats O**	**83.06**	**56**	P	**P**	**04 40 08.6**	**+1.1**
	baz=300						
PFO	**Pinyon Flats O**	**83.06**	**56**	P	**P**	**04 40 07.8**	**+0.3**
BELC	**Belle Mtn. Jos**	**83.20**	**55**	P	**P**	**04 40 09.0**	**+0.7**
	baz=300						
TAOE	**Nuku Hiva Isla**	**83.38**	**104**	*e*T	T	06 11 26.3	
	comp=Z,30nm,0.2s						
SORM	**Soroca**	**83.42**	**322**	⇑P	**P**	**04 40 09.0**	**+0.1**
SORM	**Soroca**	**83.42**	**322**	⇑P	**P**	**04 40 09.0**	**+0.1**
BZK	**Bozkurt**	**83.61**	**315**	⇑P	**P**	**04 40 05.8**	**-4.2**
IRM	**Iron Mountain**	**83.73**	**55**	P	**P**	**04 40 12.2**	**+1.4**
	baz=300						
BC3	**Big Chuckawall**	**83.76**	**55**	P	**P**	**04 40 12.3**	**+1.2**
	baz=300						
SWSC	**Sam W. Stewart**	**83.87**	**56**	P	**P**	**04 40 12.6**	**+1.1**
	baz=300						
KNB	**Kanab**	**83.90**	**51**	P	**P**	**04 40 12.9**	**+1.1**
KNB				pmax	pmax		
	comp=Z,14nm,1.2s						
KNB	**Kanab**	**83.90**	**51**	P	**P**	**04 40 12.9**	**+1.1**
PDMCI	**Parker Dam,Lak**	**84.38**	**54**	P	**P**	**04 40 15.7**	**+1.7**
	baz=301						
U15A	**North Rim**	**84.57**	**51**	IAmb	IAmb	04 40 35.4	
	comp=Z,18nm,1.9s						
VASR	**Vaslui**	**84.61**	**321**	⇓P	P	04 40 17.3	+2.2
RAYN	**Ar Rayn**	**84.67**	**294**	*i* P	P	04 40 18.4	+2.6
	SNR=48						
RAYN	**Ar Rayn**	**84.67**	**294**	P	P	04 40 17.7	+1.9
RAYN				pmax	pmax		
	comp=Z,72nm,1.0s						
RAYN	**Ar Rayn**	**84.67**	**294**	P	P	04 40 17.7	+1.8
TLCR		**84.90**	**319**	⇑P	P	04 40 18.5	+2.1
TLCR		**84.90**	**319**	⇑P	P	04 40 18.5	+2.0
VARL	**Varlezi**	**85.02**	**320**	⇓P	P	04 40 23.6	+6.6
PRAR	**RASCA**	**85.03**	**322**	⇑P	P	04 40 22.7	+5.5
BR131	**Keskin Array S**	**85.07**	**313**	*c* *i*P	P	04 40 19.2	+1.6
BRTR	**Keskin Array B**	**85.07**	**313**	P	P	04 40 19.3	+1.7
	comp=Z,14nm,0.8s,baz=102,slow=3.9,SNR=100						
BRTR	**Keskin Array B**	**85.07**	**313**	*i* P	P	04 40 19.2	+1.6
BRTR				pmax	pmax		
	comp=Z,15nm,0.8s						
O20A	**White River Ci**	**85.26**	**47**	P	**P**	**04 40 19.8**	**+1.1**
	baz=304						
CFR	**Carcaliu**	**85.29**	**320**	⇓P	P	04 40 23.9	+5.5
CFR	**Carcaliu**	**85.29**	**320**	⇓P	P	04 40 23.9	+5.5
TESR	**Tescani**	**85.32**	**321**	⇑P	**P**	**04 40 19.2**	**+0.6**
TPGR	**Topolog**	**85.32**	**319**	⇑P	P	04 40 20.2	+1.6
BIZ	**Bicaz**	**85.36**	**322**	⇑P	P	04 40 20.4	+1.7
BUR08	**Bucovina Ar. S**	**85.41**	**323**	P	P	04 40 20.6	+1.5
BUR08				IAmb	IAmb	04 40 27.4	
	comp=Z,7.2nm,1.0s						
BURAR	**Bucovina Array**	**85.42**	**323**	⇑P	P	04 40 24.9	+5.8
BURAR	**Bucovina Array**	**85.42**	**323**	⇑P	P	04 40 24.9	+5.7
KWP	**Kalwaria Pacla**	**85.43**	**325**	P	P	04 40 20.9	+1.8
KWP				pmax	pmax		
	comp=Z,33nm,1.2s						
KWP	**Kalwaria Pacla**	**85.43**	**325**	P	P	04 40 20.9	+1.8
PETR	**Petresti**	**85.48**	**320**	⇑P	P	04 40 25.6	+6.2
ODBI	**Odobesti**	**85.55**	**321**	⇑P	P	04 40 27.3	+7.6
BR231	**Keskin MP Arra**	**85.56**	**313**	P	P	04 40 22.0	+1.9
BR231				IAmb	IAmb	04 40 23.3	
	comp=Z,10nm,0.7s						
TIRR	**Tirgusor**	**85.56**	**319**	⇑P	P	04 40 25.6	+5.8
TIRR	**Tirgusor**	**85.56**	**319**	⇑P	P	04 40 25.6	+5.8
VRI	**Vrincioaia**	**85.67**	**321**	⇑P	P	04 40 27.5	+7.1
VRI	**Vrincioaia**	**85.67**	**321**	⇑P	P	04 40 27.5	+7.2
WUAZ	**Wupatki**	**85.68**	**52**	P	P	04 40 22.8	+2.0
	baz=302						
TLBR	**Topalu**	**85.72**	**319**	⇓P	P	04 40 24.7	+4.1
PLOR	**Plostina**	**85.72**	**321**	⇑P	P	04 40 27.0	+6.4
PLOR	**Plostina**	**85.72**	**321**	⇑P	P	04 40 27.0	+6.4
GRER		**85.83**	**320**	⇑P	P	04 40 28.9	+7.8
PV11	**David Mesa, Pa**	**85.86**	**48**	IAmb	IAmb	04 40 24.9	
	comp=Z,10nm,0.7s						
BISRR	**Bisoca**	**85.87**	**321**	⇓P	P	04 40 28.5	+7.1
KOLS	**Kolonicke sedl**	**86.10**	**325**	*e*P	P	04 40 25.3	+2.9
KOLS	**Kolonicke sedl**	**86.10**	**325**	*e*P	P	04 40 25.3	+2.9
MDUB	**Mudurnu**	**86.20**	**315**	P	P	04 40 24.9	+1.7
ARCR	**ARCALIA**	**86.21**	**323**	⇑P	P	04 40 32.8	+10
ISR	**Istrita**	**86.23**	**320**	⇑P	P	04 40 29.8	+6.6
ISR	**Istrita**	**86.23**	**320**	⇑P	P	04 40 29.8	+6.6
MLR	**Muntele Rosu**	**86.33**	**321**	⇓P	P	04 40 30.4	+6.6
MLR	**Muntele Rosu**	**86.33**	**321**	⇓P	P	04 40 30.4	+6.6
DOPR	**Dopca**	**86.35**	**321**	⇓P	P	04 40 26.0	+2.3
OJC	**Ojcow**	**86.47**	**327**	*e*P	**P**	**04 40 25.3**	**+1.2**
OJC	**Ojcow**	**86.47**	**327**	P	**P**	**04 40 25.4**	**+1.2**
OJC				pmax	pmax		
	comp=Z,45nm,2.0s						
OJC	**Ojcow**	**86.47**	**327**	P	**P**	**04 40 25.4**	**+1.2**
CRVS	**Cervenica-Dubn**	**86.53**	**325**	*e*P	P	04 40 25.8	+1.3
CRVS	**Cervenica-Dubn**	**86.53**	**325**	*e*P	P	04 40 25.8	+1.3
214A	**Organ Pipe Nat**	**86.54**	**55**	P	**P**	**04 40 26.5**	**+1.5**
	baz=302						
NIE	**Niedzica**	**86.76**	**326**	*e*P	P	04 40 28.0	+2.3
VOIR		**86.86**	**321**	⇓P	P	04 40 28.4	+2.1
VOIR		**86.86**	**321**	⇓P	P	04 40 28.4	+2.1
ARR	**Arges**	**87.13**	**321**	⇓P	P	04 40 29.6	+2.0
DRGR		**87.26**	**323**	⇓P	P	04 40 29.8	+1.6
DRGR		**87.26**	**323**	⇓P	P	04 40 29.8	+1.6
AGMN	**Agassiz Nation**	**87.35**	**35**	P	**P**	**04 40 29.3**	**+0.8**
	baz=312						
KSP	**Ksiaz**	**87.66**	**329**	*e*P	P	04 40 32.0	+2.1
TUC	**Tucson**	**87.81**	**54**	P	**P**	**04 40 32.5**	**+1.3**
	baz=303						
CHVC	**Chvalec**	**87.95**	**329**	*e*P	P	04 40 34.8	+3.4
DPC	**Dobruska-Polom**	**88.00**	**329**	*e*P	**P**	**04 40 32.4**	**+0.8**
DPC	**Dobruska-Polom**	**88.00**	**329**	*e*P	**P**	**04 40 32.4**	**+0.8**
SIRR	**Siria**	**88.15**	**323**	⇓P	**P**	**04 40 29.0**	**-3.5**
SDCO	**Great Sand Dun**	**88.37**	**47**	P	**P**	**04 40 35.5**	**+1.5**
	baz=305						
HERR	**Herculane**	**88.65**	**322**	⇑P	P	04 40 36.1	+1.3
CLL	**Collm**	**88.77**	**331**	*e*P	**P**	**04 40 36.0**	**+0.8**
CLL				Lm	MLR	05 05 00.0	
	comp=N,100nm,19.3s						
CLL				Lm	MLR	05 05 00.0	
	comp=E,200nm,20.2s						
CLL	**Collm**	**88.77**	**331**	*e*P	**P**	**04 40 33.0**	**-2.2**
MANT	**Manisa**	**89.01**	**314**	P	**P**	**04 40 37.4**	**+0.5**
NKC	**Novy Kostel**	**89.80**	**330**	*e*P	P	04 40 41.7	+1.6
NKC	**Novy Kostel**	**89.80**	**330**	*e*P	P	04 40 41.7	+1.6
CONA	**Conrad Observa**	**89.92**	**327**	*e*P	**P**	**04 40 41.7**	**+0.9**
	comp=E,5.0nm,1.5s						
KHC	**Kasperske Hory**	**90.11**	**329**	*e*P	**P**	**04 40 42.1**	**+0.5**
KHC	**Kasperske Hory**	**90.11**	**329**	*e*P	**P**	**04 40 42.1**	**+0.5**
GERES	**GERESS Array B**	**90.26**	**329**	P	**P**	**04 40 42.3**	**-0.1**
	comp=E,0.6nm,0.8s,baz=57,slow=3.6,SNR=3.7						
ARSA	**Arzberg**	**90.56**	**327**	*e*P	**P**	**04 40 43.0**	**-0.7**
	comp=E,3.5nm,0.9s						
MOA	**Molln**	**90.73**	**328**	*e*P	**P**	**04 40 45.2**	**+0.7**
	comp=E,7.6nm,1.4s						
SOKA	**Soboth**	**91.21**	**327**	*e*P	**P**	**04 40 47.3**	**+0.5**
	comp=E,10nm,1.5s						
OBKA	**Obir**	**91.56**	**327**	*e*P	**P**	**04 40 49.5**	**+1.1**
	comp=E,9.3nm,1.5s						
KBA	**Koelnbreinsper**	**91.72**	**328**	*e*P	**P**	**04 40 49.7**	**+0.4**
	comp=E,6.7nm,1.1s						
MYKA	**Terra Mystica**	**91.91**	**327**	*e*P	**P**	**04 40 49.6**	**-0.4**
	comp=E,8.6nm,1.1s						
MNTX	**Cornudas Mount**	**91.95**	**52**	P	**P**	**04 40 52.2**	**+1.7**
	baz=306						
SANT	**Santorini**	**92.26**	**314**	P	**P**	**04 40 52.1**	**+0.3**
SANT				IAmb	IAmb	04 40 52.7	
	comp=Z,8.8nm,1.0s						
ABTA	**Abfaltersbach**	**92.35**	**328**	*e*P	**P**	**04 40 51.4**	**-0.7**
	comp=Z,6.8nm,0.9s						
AMTX	**Amarillo**	**92.55**	**48**	P	**P**	**04 40 54.9**	**+1.6**
	baz=308						
AMTX	**Amarillo**	**92.55**	**48**	IAmb	IAmb	04 41 13.9	
	comp=Z,9.2nm,1.1s						
DAVA	**Damuels**	**93.14**	**330**	*e*P	**P**	**04 40 55.2**	**-0.5**
	comp=Z,6.3nm,1.0s						
TX32	**Lajitas Array**	**94.53**	**53**	IAmb	IAmb	04 41 15.8	
	comp=Z,13nm,1.6s						
TXAR	**Lajitas Array**	**94.53**	**53**	P	**P**	**04 41 04.0**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=306,slow=2.6,SNR=17						
TXAR	**Lajitas Array**	**94.53**	**53**	P	**P**	**04 41 04.0**	**+1.5**
ABTX	**Abilene, Hawle**	**95.28**	**48**	P	**P**	**04 41 07.0**	**+1.2**
QSPA	**South Pole Qui**	**118.42**	**180**		**PKiKP**	**04 46 29.2**	**+1.0**
TOA0	**Torodi Ar. Sit**	**123.67**	**312**	PKPdf	**PKiKP**	**04 46 40.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**123.67**	**312**	PKP	**PKiKP**	**04 46 40.3**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=3.3,slow=2.8,SNR=7.5						
KOWA	**Kowa**	**126.17**	**318**		**PKiKP**	**04 46 46.0**	**+1.0**
DBIC	**Dimbokro**	**132.77**	**313**	PKP	**PKiKP**	**04 46 59.2**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=17,slow=1.9,SNR=5.2						
PTGA	**Pitinga**	**144.97**	**41**		**PKiKP**	**04 47 19.8**	**-3.4**
PTGA	**Pitinga**	**144.97**	**41**	*e*P	**PKiKP**	**04 47 20.1**	**-3.1**
MACA	**Manacapuru-AM**	**146.47**	**45**	*e*P	**PKiKP**	**04 47 24.2**	**-2.1**
ETMB	**Extrema**	**147.28**	**61**	*e*P	**PKiKP**	**04 47 24.7**	**-3.2**
MCPB	**Macapa, AP**	**148.66**	**29**	*e*P	**PKPbc**	**04 47 26.8**	**-2.6**
MALB	**Monte Alegre**	**148.97**	**34**	*e*P	**PKiKP**	**04 47 28.8**	**-2.6**
PB16	**IPOC Station P**	**149.09**	**78**	PKPbc	**PKPab**	**04 47 31.2**	**-4.1**
MNMC	**Minye Minye**	**149.35**	**79**	PKPbc	**PKPab**	**04 47 32.6**	**-3.4**
GO01	**Chusmiza**	**149.91**	**80**	PKPbc	**PKPab**	**04 47 34.5**	**-4.0**
ITTB	**Itaituba**	**150.34**	**39**	*e*P	**PKPbc**	**04 47 29.7**	**-3.8**
PLCA	**Paso Flores**	**150.54**	**123**	PKPbc	**PKiKP**	**04 47 33.7**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=247,slow=4.3,SNR=9.7						
PLCA	**Paso Flores**	**150.54**	**123**	*e*P	**PKPbc**	**04 47 29.1**	**-4.2**
LVC	**Limon Verde**	**151.21**	**85**	*e*P	**PKPbc**	**04 47 31.1**	**-4.6**
TMAB	**Tom-Au,PA,Br**	**152.02**	**23**	*e*P	**PKPbc**	**04 47 33.0**	**-4.4**
ROSB	**Rosrio**	**153.64**	**15**	*e*P	**PKPbc**	**04 47 34.2**	**-6.8**
ARAG	**Araguaiana, MT**	**161.62**	**48**	*e*P	**PKPdf**	**04 47 43.8**	**+0.8**

DDA ***18*** *04:39:12.1, 39°.17N×29°.12E, h7*^{km}*±2*^{km}*, ML1.2*

ISK 18 04:39:12.2, 39°.19N×29°.12E, h6^{km}**, ML1.7**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.15**	**224**	PG	Pg	04 39 16.1	+0.8
SIMA				SG	Sg	04 39 18.4	+1.1
SHAP	**Saphane-Kutahy**	**0.19**	**154**	PG	Pg	04 39 16.5	+0.6
SHAP				SG	Sg	04 39 19.4	+1.0
GEDZ	**Gediz**	**0.27**	**122**	PG	Pg	04 39 17.9	+0.4
GEDZ				SG	Sg	04 39 22.4	+1.3
GDZ	**Gediz**	**0.30**	**109**	*i* P	Pg	04 39 18.4	+0.3
GDZ				*i* S	Sg	04 39 22.7	+0.5
DEMI	**Demirci**	**0.34**	**245**	*i* P	Pg	04 39 19.6	+0.7
DEMI				IAML		04 39 24.0	
	comp=N,45nm,0.3s						
DEMI				*i* S	Sg	04 39 24.7	+1.2
DEMI				IAML		04 39 25.0	
	comp=E,53nm,0.2s						
TVSB	**Tavsanli**	**0.37**	**46**	PG	Pg	04 39 20.1	+0.6
TVSB				SG	Sg	04 39 24.6	+0.2
USAK	**Uak-Merkez**	**0.48**	**189**	*i* P	Pg	04 39 22.0	+0.5
USAK				IAML		04 39 29.0	
	comp=N,15nm,0.2s						
ANDZ	**Kutahya, Merke**	**0.69**	**62**	*i* P	Pg	04 39 25.3	-0.1
KULA	**Kula-Manisa**	**0.76**	**208**	PG	Pg	04 39 27.1	+0.3
MANT	**Manisa**	**0.82**	**212**	*i* P	Pg	04 39 28.3	+0.3
MANT				*i* S	Sg	04 39 38.9	+0.2
MANT				IAML		04 39 39.0	
	comp=E,12nm,0.5s						
MANT				IAML		04 39 39.0	
	comp=N,14nm,0.5s						
KHAL	**Karahalli**	**0.87**	**160**	*i* P	Pb	04 39 29.4	-0.3
KHAL				*i* S	Sg	04 39 40.5	+0.3
KHAL				IAML		04 39 41.0	
	comp=N,5.9nm,0.4s						
KHAL				IAML		04 39 46.0	
	comp=E,11nm,0.5s						
BALB	**Balikesir**	**1.06**	**296**	PG	Pb	04 39 33.1	+0.2
BALB				SG	Sn	04 39 48.4	-0.2
CAVI	**Cavuskoy**	**1.16**	**29**	PN	Pb	04 39 34.7	+0.1
CAVI				SN	Sn	04 39 51.2	+0.1
KCTX	**Karacabey (Bur**	**1.22**	**332**	PN	Pn	04 39 35.9	0.0
KCTX				SN	Sn	04 39 53.5	+0.7
BORA	**Eskisehir**	**1.24**	**56**	PN	Pn	04 39 36.4	+0.2
SHUT	**Suhut-Afyon**	**1.29**	**119**	PN	Pb	04 39 37.1	+0.2
TRML	**Termal-Yalova**	**1.42**	**2**	PN	Pb	04 39 38.9	-0.2
SRCK	**Saricakaya, Es**	**1.44**	**53**	PN	Pb	04 39 39.3	-0.2
GULT	**Gulveren**	**1.64**	**41**	PN	Pn	04 39 42.2	+0.5

BJI ***18*** *04:47:33.1±0.0, 51°.85N×179°.55W, h110*^{km}*, mB5.8/58, mb6.1/83*

MOS ***18*** *04:47:37.2±0.9, 51°.98N×179°.62E, h108*^{km}*, mb5.8/98, MS4.1/5, Error ellipse: s-maj=6.3km s-min=3.9km az=102.6*

NEIC ***18*** *04:47:38.1, 51°.92N×179°.58E, h100*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-1.49;* $M_{\theta\theta}$*0.04;* $M_{\phi\phi}$*1.45;* $M_{r\theta}$*0.15;* $M_{\theta\phi}$*-1.19;* $M_{\phi r}$*-1.92; Fault plane solution:* M_0*2.70000×*10^{17} *NP1:*ϕ_s*350.93000°, δ70.09000°, λ-70.23000°. NP2:*ϕ_s*124.39000°, δ27.77000°, λ-133.04000°. Principal axes: T 2.8557, Plg23.0000°, Azm66.0000°; N -0.3551, Plg19.0000°, Azm164.0000°; P -2.5005, Plg60.0000°, Azm290.0000°;*

NEIC ***18*** *04:47:38.1±1.5, 51°.92N±0°.07×179°.58E±0°.08, h102*^{km}*±1*^{km}*, mb5.8/765, Mwb5.6/48, Mww5.5, ML5.6(AEIC), Mwc5.6(GCMT) Error ellipse: s-maj=12.3km s-min=7.9km az=179.0*

NEIC ***18*** *04:47:39, 51°.92N×179°.77E, h102*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-1.53;* $M_{\theta\theta}$*-0.03;* $M_{\phi\phi}$*1.56;* $M_{r\theta}$*0.57;* $M_{\theta\phi}$*-1.07;* $M_{\phi r}$*-1.90; Fault plane solution:* M_0*2.73000×*10^{17} *NP1:*ϕ_s*139.00000°, δ22.00000°, λ-111.00000°. NP2:*ϕ_s*342.00000°, δ69.00000°, λ-81.00000°. Principal axes: T 2.9539, Plg24.0000°, Azm66.0000°; N -0.5184, Plg8.0000°, Azm159.0000°; P -2.4355, Plg65.0000°, Azm267.0000°;*

NEIC ***18*** *04:47:39, 52°.01N×179°.41E, h110*^{km}*, Moment Tensor Solution. Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-1.56;* $M_{\theta\theta}$*0.41;* $M_{\phi\phi}$*1.16;* $M_{r\theta}$*0.79;* $M_{\theta\phi}$*-0.74;* $M_{\phi r}$*-1.36; Fault plane solution:* M_0*2.24000×*10^{17} *NP1:*ϕ_s*147.00000°, δ23.00000°, λ-92.00000°. NP2:*ϕ_s*329.00000°, δ67.00000°, λ-89.00000°. Principal axes: T 2.2604, Plg22.0000°, Azm59.0000°; N -0.0469, Plg1.0000°, Azm149.0000°; P -2.2135, Plg68.0000°, Azm241.0000°;*

IDC ***18*** *04:47:39.9±0.5, 52°.00N×179°.62E, h118*^{km}*±3*^{km}*, mb5.3/46, mb1 5.4/48, mb1mx5.3/55, mbtmp5.7/48, MS4.2/36, Ms1 4.2/36, ms1mx4.2/51 Error ellipse: s-maj=8.9km s-min=6.4km az=156.0*

NOU ***18*** *04:47:39.6, 52°.06N×179°.66E, h113*^{km}*, ML5.8, Rat Islands, Aleutian Islands*

GCMT ***18*** *04:47:40.1±0.1, 51°.94N±0°.01×179°.76E±0°.01, h99*^{km}*, MW5.5/165, Moment Tensor Solution. s142,c262; s165,c340; Duration:* 1^s4 *Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*-1.47±.03;* $M_{\theta\theta}$*-0.10±.03;* $M_{\phi\phi}$*1.57±.03;* $M_{r\theta}$*0.38±.02;* $M_{\theta\phi}$*-1.02±.03;* $M_{\phi r}$*-1.77±.02; Best double couple:* M_0*2.53900×*10^{17} *NP1:*ϕ_s*137.00000°, δ24.00000°, λ-117.00000°. NP2:*ϕ_s*346.00000°, δ69.00000°, λ-79.00000°. Principal axes: T 2.7920, Plg23.0000°, Azm68.0000°; N -0.5050, Plg11.0000°, Azm162.0000°; P -2.2860, Plg65.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***18*** *04:47:40.6±0.0, 51°.82N×177°.70E, h33*^{km}*, mb5.8*

ISC 18 04:47:38.8±0.2**, 51°.92N**±0°.03×**179°.57E**±0°.02**, h111**^{km}±1^{km}**, h110**^{km}**:pP-P, n1870,** σ1^s**28**/1877**, mb5.8**/674**, 460C-396D, Fault plane solution: NP1:**ϕ_s328.22272°**,** δ70.32923°**,** λ-117.18232°. **NP2:**ϕ_s204.97871°**,** δ33.10774°**,** λ-38.04411°. **Principal axes:** T Plg20.7494°**,** Azm78.4306°**;** N Plg25.4780°**,** Azm338.0302°**;** P Plg56.1324°**,** Azm202.7971°**; Fault plane solution: NP1:**ϕ_s348.40006°**,** δ74.58878°**,** λ-40.23420°. **NP2:** ϕ_s91.07194°**,** δ51.48726°**,** λ-160.14607°. **Principal axes:** T Plg14.6194°**,** Azm44.4911°**;** N Plg47.3885°**,** Azm150.9633°**;** P Plg38.9187°**,** Azm302.3328°**; Fault plane solution: NP1:**ϕ_s3.80054°**,** δ79.72518°**,** λ-92.40141°. **NP2:**ϕ_s197.03124°**,** δ10.54878°**,** λ-76.98524°. **Principal axes:** T Plg34.6826°**,** Azm95.8653°**;** N Plg2.3629°**,** Azm4.2291°**;** P Plg55.2134°**,** Azm270.8238°**; Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESW	**Semis' Southwe**	**0.02**	**190**		**Pn**	**04 47 52.8**	**-1.2**
CETU	**Semis' Tuman**	**0.06**	**313**		**Pn**	**04 47 53.4**	**-0.7**
CERAA	**Semis' Rag'd T**	**0.07**	**102**		**Pn**	**04 47 52.7**	**-1.3**
CEAP	**Semis' Anvil P**	**0.08**	**4**		**Pn**	**04 47 53.4**	**-0.6**
AMKA	**Amchitka**	**0.57**	**197**		**Pn**	**04 47 54.3**	**-1.9**
AMKA					**Sn**	**04 48 06.0**	**-3.2**
LSPA	**Little Sitkin**	**0.62**	**274**		**Pn**	**04 47 56.3**	**-0.3**
LSNW	**Little Sitkin**	**0.65**	**275**		**Pn**	**04 47 56.5**	**-0.4**
LSSA	**Little Sitkin**	**0.66**	**273**		**Pn**	**04 47 56.6**	**-0.2**
GALAA	**Gareloi Lava P**	**1.04**	**98**		**Pn**	**04 47 59.5**	**-1.0**
TASE	**Tanaga Southea**	**1.49**	**92**		**Pn**	**04 48 04.5**	**-1.0**
TAFP	**Tanaga Falls P**	**1.52**	**90**		**Pn**	**04 48 04.7**	**-1.1**
KIMD	**Kanaga Island**	**1.99**	**93**		**Pn**	**04 48 10.7**	**-1.0**
KICM	**Kanaga Island**	**2.00**	**89**		**Pn**	**04 48 11.3**	**-0.5**
KIKV	**Kanaga Island**	**2.02**	**90**		**Pn**	**04 48 11.1**	**-1.0**
ADK	**Adak**	**2.32**	**89**	P	**Pn**	**04 48 14.8**	**-1.1**
ADK	**Adak**	**2.32**	**89**		**Pn**	**04 48 14.8**	**-1.1**
ADAG	**Mount Adagdak**	**2.37**	**87**		**Pn**	**04 48 15.6**	**-0.9**
GSSP	**Great Sitkin S**	**2.63**	**85**		**Pn**	**04 48 19.1**	**-0.9**
GSTD	**Great Sitkin T**	**2.65**	**85**		**Pn**	**04 48 19.0**	**-1.3**
GSTR	**Great Sitkin T**	**2.71**	**85**		**Pn**	**04 48 20.2**	**-0.7**
GSMY	**Great Sitkin M**	**2.71**	**86**		**Pn**	**04 48 19.9**	**-1.1**
SMY	**Shemya**	**3.45**	**286**	P	**Pn**	**04 48 30.2**	**-0.6**
SMY						04 49 13.0	
SMY	**Shemya**	**3.45**	**286**	Pn	**Pn**	**04 48 30.2**	**-0.6**
SMY	**Shemya**	**3.45**	**286**		**Sn**	**04 49 12.9**	**+2.1**
KOWE	**Korovin West**	**3.83**	**81**		**Pn**	**04 48 35.4**	**-0.5**
ATKA	**Atka Island**	**3.86**	**83**	Pn	**Pn**	**04 48 34.9**	**-1.3**
ATKA	**Atka Island**	**3.86**	**83**		**Sn**	**04 49 19.7**	**-0.9**
KOKL	**Mount Kliuchef**	**3.86**	**82**		**Pn**	**04 48 35.8**	**-0.5**
KOFP	**Korovin Flat P**	**3.92**	**82**		**Pn**	**04 48 37.0**	**-0.1**
NIKH	**Nikolski High**	**7.15**	**77**	Pn	**Pn**	**04 49 20.2**	**-0.5**
NIKH	**Nikolski High**	**7.15**	**77**		**Sn**	**04 50 42.1**	**+1.7**
OKSP	**Okmok Steeple**	**7.52**	**75**		**Pn**	**04 49 26.3**	**+0.7**
OKSO	**Okmok South**	**7.61**	**74**		**Pn**	**04 49 27.4**	**+0.6**
OKFG	**Magazine Ridge**	**7.76**	**74**		**Pn**	**04 49 29.6**	**+0.8**
SPIA	**Saint Paul Isl**	**7.92**	**44**	Pn	**Pn**	**04 49 33.2**	**+2.2**
MAPS	**Pakushin South**	**8.38**	**72**		**Pn**	**04 49 37.9**	**+0.6**
MGOD	**Makushin Gods**	**8.42**	**72**		**Pn**	**04 49 39.0**	**+1.1**
MSW	**Makushin Switc**	**8.49**	**71**		**Pn**	**04 49 39.7**	**+1.0**
MREP	**Makushin Rep't**	**8.49**	**72**		**Pn**	**04 49 39.6**	**+0.7**
MNAT	**Makushin Natee**	**8.54**	**71**		**Pn**	**04 49 40.5**	**+1.0**
MTBL	**Makushin Table**	**8.56**	**71**		**Pn**	**04 49 40.6**	**+0.9**
UNV	**Unalaska Valle**	**8.64**	**72**		**Pn**	**04 49 41.4**	**+0.6**
AKRB	**Akutan Reef Bi**	**8.94**	**70**		**Pn**	**04 49 46.6**	**+1.8**
AKMO	**Akutan Morgan**	**8.96**	**70**		**Pn**	**04 49 46.3**	**+1.1**
AKGG	**Akutan Green G**	**8.99**	**70**		**Pn**	**04 49 47.1**	**+1.6**
AKLV	**Akutan Long Va**	**9.01**	**70**		**Pn**	**04 49 47.2**	**+1.4**
AKBBA	**Akutan Broad B**	**9.01**	**70**		**Pn**	**04 49 47.1**	**+1.3**
AKUT	**Akutan**	**9.11**	**70**	Pn	**Pn**	**04 49 47.6**	**+0.4**
AKSA	**Akutan Strait**	**9.15**	**70**		**Pn**	**04 49 49.4**	**+1.7**
AKSA	**Akutan Strait**	**9.15**	**70**		**Pn**	**04 49 49.8**	**+2.0**
WEBT	**Westdahl Beart**	**9.77**	**68**		**Pn**	**04 49 58.3**	**+2.2**
WESP	**Westdahl Peak**	**9.77**	**69**		**Pn**	**04 49 57.8**	**+1.6**
FALS	**False Pass**	**10.58**	**67**		**Pn**	**04 50 07.1**	**+0.1**
SDPT	**Sand Point**	**12.32**	**66**	Pn	**Pn**	**04 50 28.6**	**-1.7**
GAMB	**Gambell**	**12.74**	**18**	Pn	**Pn**	**04 50 37.9**	**+2.2**
CNBA	**Chernabura Isl**	**12.77**	**69**	Pn	**Pn**	**04 50 33.4**	**-2.7**
PET	**Petropavlovsk**	**12.80**	**283**	*e*P	**Pn**	**04 50 35.3**	**-1.2**
PET				*e*S	**Sn**	**04 52 54.2**	**-2.9**
PET				pmax	pmax		
	comp=Z,364nm,1.1s						
PET				MLR	MLR		
	comp=Z,2µm,21.0s						
PET	**Petropavlovsk**	**12.80**	**283**	Pn	**Pn**	**04 50 36.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**13.37**	**284**	*de*P	**Pn**	**04 50 46.1**	**+2.2**
PEA0B	**Petropavlovsk-**	**13.37**	**284**		**Pn**	**04 50 44.2**	**+0.3**
PETK	**Petropavlovsk-**	**13.37**	**284**	P	**Pn**	**04 50 44.4**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=88,slow=15,SNR=24						
PETK				S	**Sn**	**04 53 06.0**	**-4.9**
	comp=Z,1.4nm,0.3s,baz=104,slow=15,SNR=1.6						
PETK				LR	LR	04 55 59.0	
	comp=Z,667nm,19.4s,baz=89,slow=37						
PETK				PcP	**PcP**	**04 56 03.9**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=104,slow=4.7,SNR=12						
PETK				ScP	**ScP**	**04 59 25.7**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=49,slow=2.7,SNR=18						
PETK	**Petropavlovsk-**	**13.37**	**284**	Pn	**Pn**	**04 50 44.3**	**+0.4**
SKR	**Severo-Kuril's**	**14.71**	**274**	*e*P	**P**	**04 51 03.1**	**-1.2**
SKR				*e*S	**Sn**	**04 53 35.4**	**-7.9**
SKR				pmax	pmax		
	comp=Z,100nm,1.8s						
SKR				pmax	pmax		
	comp=Z,700nm,2.8s						
SKR				pmax	pmax		
	comp=Z,166nm,0.9s						
SKR				MLR	MLR		
	comp=Z,500nm,13.0s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
ANM	**Nome**	**14.89**	**26**	P	**Pn**	**04 51 04.4**	**+1.1**
ANM	**Nome**	**14.89**	**26**	P	**Pn**	**04 51 04.4**	**+1.1**
KDAK	**Kodiak Island**	**17.00**	**59**	P	**Pn**	**04 51 27.7**	**-1.7**
	comp=Z,70nm,0.3s,baz=286,slow=5.8,SNR=228						
KDAK				S	**Sn**	**04 54 29.2**	**-9.0**
	comp=Z,3.6nm,0.3s,baz=235,slow=23,SNR=5.8						
KDAK	**Kodiak Island**	**17.00**	**59**	*ce*P	**Pn**	**04 51 26.5**	**-2.9**
KDAK				pmax	pmax		
	comp=Z,792nm,0.8s						
KDAK	**Kodiak Island**	**17.00**	**59**	P	**Pn**	**04 51 27.3**	**-2.1**
KDAK				IAmb	IAmb	04 51 30.5	
	comp=Z,641nm,0.7s						
TTA	**Tatalina**	**17.03**	**40**	P	**P**	**04 51 31.1**	**+1.1**
TTA				pmax	pmax		
	comp=Z,714nm,1.2s						
TTA	**Tatalina**	**17.03**	**40**	P	**P**	**04 51 31.1**	**+1.1**
TTA				IAmb	IAmb	04 51 33.8	
	comp=Z,714nm,1.2s						
MA2	**Magadan**	**17.81**	**307**	*d* *i*P	**Pn**	**04 51 40.1**	**+0.8**
MA2				pmax	pmax		
	comp=Z,131nm,1.3s						
MA2	**Magadan**	**17.81**	**307**	P	**Pn**	**04 51 39.4**	**+0.1**
MA2					**PcP**	**04 56 09.9**	**+0.2**
HOM	**Homer**	**17.82**	**53**	P	**Pn**	**04 51 39.0**	**-0.4**
	baz=257,SNR=14						
CNPM	**China Poot**	**18.00**	**54**	IAmb	IAmb	04 51 55.1	
	comp=Z,562nm,1.2s						
SEY	**Seymchan**	**18.16**	**318**	P	**Pn**	**04 51 44.2**	**+0.7**
	comp=Z,2.0nm,0.3s,baz=122,slow=9.3,SNR=177						
SEY				PcP	**PcP**	**04 56 10.7**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=141,slow=4.3,SNR=9.0						
SEY				ScP	**ScP**	**04 59 33.0**	**-2.2**
	baz=122,slow=5.3						
BRLK	**Bradley Lake**	**18.22**	**53**	IAmb	IAmb	04 52 00.7	
	comp=Z,503nm,1.0s						
CAPN	**Captain Cook N**	**18.34**	**50**	P	**Pn**	**04 51 46.3**	**+0.8**
	baz=254,SNR=9.4						
CAPN				S	**Sn**	**04 55 18.8**	**+8.4**
	baz=254						
O22K	**Cooper Landing**	**18.95**	**51**	P	**P**	**04 51 51.6**	**+0.7**
	baz=257,SNR=102						
O22K				S	**S**	**04 55 21.8**	**+1.8**
	baz=257						
SEW	**Seward**	**19.00**	**52**	P	**P**	**04 51 50.4**	**-1.0**
SEW				IAmb	IAmb	04 51 58.6	
	comp=Z,724nm,0.8s						
RC01	**Rabbit Creek A**	**19.09**	**49**	P	**P**	**04 51 52.0**	**-0.4**
	baz=255,SNR=41						
RC01				S	**S**	**04 55 25.1**	**+2.2**
	baz=255						
CUT	**Chulitna**	**19.23**	**45**	P	**Pn**	**04 51 55.0**	**-1.1**
	baz=251,SNR=92						
IMAR	**Indian Mountai**	**19.46**	**33**	P	**P**	**04 51 57.0**	**+0.6**
BPAW	**Bear Paw Mtn.**	**19.57**	**40**	IAmb	IAmb	04 52 04.0	
	comp=Z,701nm,0.9s						
GHO	**Glory Hole Cre**	**19.65**	**48**	IAmb	IAmb	04 52 25.8	
	comp=Z,449nm,1.0s						
SML	**Sawmill**	**19.93**	**48**	IAmb	IAmb	04 52 09.2	
	comp=Z,537nm,0.8s						
MLY	**Manley**	**20.07**	**38**	P	Pn	04 52 05.2	-0.7
	baz=243,SNR=374						
MLY				S	**S**	**04 55 43.2**	**+0.9**
	baz=243						
RND	**Reindeer**	**20.18**	**43**	P	**P**	**04 52 04.3**	**0.0**

RND				pmax	pmax		
	comp=Z,617nm,0.8s						
RND	**Reindeer**	**20.18**	**43**	P	**P**	**04 52 04.3**	**0.0**
RND				IAmb	IAmb	04 52 09.3	
	comp=Z,616nm,0.8s						
MCK	**McKinley**	**20.26**	**42**	P	**P**	**04 52 05.4**	**+0.3**
	baz=249,SNR=516						
MCK				S	**S**	**04 55 46.9**	**+0.9**
	baz=249						
Q23K	**Middleton Isla**	**20.44**	**55**	P	**P**	**04 52 07.8**	**+0.7**
	baz=264,SNR=7.9						
MID	**Middleton Isla**	**20.45**	**55**	P	**P**	**04 52 06.1**	**-1.0**
MID	**Middleton Isla**	**20.45**	**55**	P	**P**	**04 52 06.1**	**-1.0**
HIN	**Hinchinbrook I**	**20.50**	**52**	IAmb	IAmb	04 52 11.2	
	comp=Z,647nm,1.0s						
NEA2	**Nenana**	**20.53**	**40**	P	**P**	**04 52 09.2**	**+1.1**
	baz=247,SNR=572						
NEA2				S	**S**	**04 55 53.7**	**+2.4**
	baz=247						
I23K	**Minto, Yukon-K**	**20.65**	**38**	P	**P**	**04 52 10.6**	**+1.4**
	baz=245,SNR=276						
I23K				S	**S**	**04 55 55.5**	**+2.1**
	baz=245						
I23K	**Minto, Yukon-K**	**20.65**	**38**	IAmb	IAmb	04 52 13.7	
	comp=Z,315nm,0.8s						
EYAK	**Cordova Ski Ar**	**20.89**	**52**	P	**P**	**04 52 11.5**	**-0.3**
EYAK				IAmb	IAmb	04 52 15.4	
	comp=Z,421nm,1.0s						
KLU	**Klutina**	**20.98**	**49**	IAmb	IAmb	04 52 23.5	
	comp=Z,353nm,0.8s						
M24K	**Tolsona, Glenn**	**20.99**	**48**	P	**P**	**04 52 13.9**	**+0.9**
	baz=257,SNR=166						
M24K				S	**S**	**04 56 01.6**	**+1.2**
	baz=257						
MDM	**Murphy Dome**	**21.01**	**39**	P	**P**	**04 52 13.3**	**+0.1**
CCB	**Clear Creek Bu**	**21.06**	**40**	IAmb	IAmb	04 52 18.5	
	comp=Z,363nm,0.9s						
TCOL	**CIGO, UAF Yank**	**21.12**	**40**	P	**P**	**04 52 14.3**	**+0.1**
	baz=248,SNR=208						
TCOL				S	**S**	**04 56 04.3**	**+1.6**
	baz=248						
TCOL	**CIGO, UAF Yank**	**21.12**	**40**	IAmb	IAmb	04 52 18.9	
	comp=Z,604nm,0.8s						
COLA	**College**	**21.12**	**40**	*c* *i*P	**P**	**04 52 14.2**	**-0.1**
COLA				pmax	pmax		
	comp=Z,245nm,0.6s						
COLA	**College**	**21.12**	**40**	P	**P**	**04 52 14.2**	**-0.1**
COLA				IAmb	IAmb	04 52 18.9	
	comp=Z,602nm,0.8s						
HDA	**Harding Lake**	**21.32**	**41**	P	**P**	**04 52 15.2**	**-1.2**
	baz=250,SNR=110						
COLD	**Coldfoot**	**21.33**	**33**	P	**P**	**04 52 17.8**	**+1.3**
	baz=239,SNR=116						
COLD				S	**S**	**04 56 10.9**	**+4.2**
	baz=239						
COLD	**Coldfoot**	**21.33**	**33**	P	**P**	**04 52 16.5**	**0.0**
POKR	**Poker Plat Res**	**21.38**	**39**	P	**P**	**04 52 17.3**	**+0.2**
	baz=248,SNR=170						
POKR				S	**S**	**04 56 10.6**	**+2.8**
	baz=248						
POKR	**Poker Plat Res**	**21.38**	**39**	IAmb	IAmb	04 52 21.0	
	comp=Z,484nm,0.9s						
RAGM	**Ragged Mountai**	**21.40**	**53**	IAmb	IAmb	04 52 21.4	
	comp=Z,618nm,1.0s						
ILAR	**Eielson Array**	**21.47**	**40**	P	**P**	**04 52 16.5**	**-1.6**
	comp=Z,86nm,0.8s,baz=242,slow=8.3,SNR=149						
ILAR				S	**S**	**04 56 07.5**	**-2.0**
	comp=Z,6.5nm,0.9s,baz=221,slow=8.2,SNR=2.7						
ILAR				PcP	**PcP**	**04 56 15.2**	**-1.0**
	comp=Z,8.0nm,0.4s,baz=227,slow=3.0,SNR=8.0						
ILAR				ScP	**ScP**	**04 59 39.9**	**-2.9**
	comp=Z,21nm,0.6s,baz=286,slow=3.1,SNR=33						
ILAR				PKiKP	**PKiKP**	**05 04 00.5**	**-1.9**
	comp=Z,1.9nm,0.5s,baz=297,slow=2.8,SNR=8.0						
ILAR	**Eielson Array**	**21.47**	**40**	P	**P**	**04 52 16.8**	**-1.3**
KAIM	**Kayak Island**	**21.47**	**54**	IAmb	IAmb	04 52 20.8	
	comp=Z,502nm,0.9s						
PAX	**Paxson**	**21.52**	**46**	IAmb	IAmb	04 52 26.2	
	comp=Z,342nm,0.9s						
HMT	**Hamilton**	**21.59**	**53**	IAmb	IAmb	04 52 21.9	
	comp=Z,522nm,1.0s						
N25K	**Chitina, Valde**	**21.62**	**49**	P	**P**	**04 52 19.7**	**-0.1**
	baz=260,SNR=163						
N25K				S	**S**	**04 56 11.7**	**-0.8**
	baz=260						
N25K	**Chitina, Valde**	**21.62**	**49**	IAmb	IAmb	04 52 24.3	
	comp=Z,299nm,0.9s						
SUCK	**Suckling Hills**	**21.81**	**54**	IAmb	IAmb	04 52 24.6	
	comp=Z,971nm,1.4s						
KUR	**Kuril'sk**	**21.89**	**265**	⇑*i*P	**P**	**04 52 23.9**	**+1.2**
KUR				*e*S	**S**	**04 56 24.2**	**+6.7**
KUR				pmax	pmax		
	comp=N,645nm,1.3s						
KUR				pmax	pmax		
	comp=E,364nm,1.3s						
KUR				pmax	pmax		
	comp=Z,2µm,1.3s						
KUR				pmax	pmax		
	comp=Z,5µm,4.4s						
GLB	**Gilahina Butte**	**21.96**	**50**	IAmb	IAmb	04 52 26.2	
	comp=Z,650nm,0.8s						
VRDI	**Verde Repeater**	**22.10**	**51**	IAmb	IAmb	04 52 27.5	
	comp=Z,735nm,0.9s						
A21K	**Barrow**	**22.21**	**20**	P	**P**	**04 52 26.9**	**+1.2**
	baz=221,SNR=13						
A21K				S	**S**	**04 56 21.1**	**-1.3**
	baz=221						
A21K	**Barrow**	**22.21**	**20**	IAmb	IAmb	04 52 28.9	
	comp=Z,407nm,0.7s						
MENT	**Mentasta**	**22.29**	**46**	P	**P**	**04 52 26.3**	**-0.4**
MENT				IAmb	IAmb	04 52 58.8	
	comp=Z,430nm,1.1s						
DOT	**Dot Lake**	**22.30**	**44**	IAmb	IAmb	04 52 29.0	
	comp=Z,493nm,0.8s						
MCARA	**McCarthy VSAT**	**22.33**	**50**	IAmb	IAmb	04 52 29.0	
	comp=Z,1µm,1.3s						
TGL	**Tana Glacier**	**22.34**	**52**	IAmb	IAmb	04 52 29.0	
	comp=Z,645nm,1.1s						
SCRK	**Sand Creek**	**22.42**	**43**	P	**P**	**04 52 27.5**	**-0.6**
	baz=255,SNR=668						
SCRK				S	**S**	**04 56 27.0**	**+0.6**
	baz=255						
ISLE	**Juniper Island**	**22.57**	**52**	IAmb	IAmb	04 52 57.3	
	comp=Z,466nm,1.1s						
BALM	**Baldy**	**22.61**	**51**	IAmb	IAmb	04 52 31.4	
	comp=Z,456nm,1.2s						
MESA	**MESA**	**22.73**	**54**	IAmb	IAmb	04 52 32.7	
	comp=Z,602nm,1.0s						
YAH	**Yahtse**	**22.84**	**53**	IAmb	IAmb	04 52 34.6	
	comp=Z,573nm,1.0s						
TYV	**Tymovskoe**	**22.90**	**282**	*e*P	**P**	**04 52 34.5**	**+1.6**
TYV				pmax	pmax		
	comp=Z,3µm,3.6s						
TYV				pmax	pmax		
	comp=Z,425nm,1.1s						
BARN	**Barnard Glacie**	**22.95**	**51**	IAmb	IAmb	04 52 35.8	
	comp=Z,548nm,0.9s						
CTGM	**Chitina Glacie**	**23.09**	**52**	IAmb	IAmb	04 52 37.0	
	comp=Z,392nm,0.9s						
BCAR	**Beaver Creek A**	**23.18**	**46**	P	**P**	**04 52 34.8**	**-0.6**
K27K	**Chicken**	**23.25**	**44**	P	**P**	**04 52 36.8**	**+0.8**
	baz=257						
K27K				S	**S**	**04 56 42.8**	**+3.5**
	baz=257						
K27K	**Chicken**	**23.25**	**44**	IAmb	IAmb	04 52 39.3	
	comp=Z,834nm,1.1s						
BMAR	**Burnt Mountain**	**23.35**	**35**	P	**P**	**04 52 35.9**	**-1.1**
NKL	**Nikolayevsk**	**23.50**	**288**	*e*P	**P**	**04 52 41.2**	**+2.9**
NKL				pmax	pmax		
	comp=N,6.0nm,0.5s						
NKL				pmax	pmax		
	comp=E,35nm,0.5s						
NKL				pmax	pmax		
	comp=Z,802nm,1.3s						
NKL				MLR	MLR		
	comp=E,1µm,12.0s						
NKL				MLR	MLR		
	comp=N,174nm,17.0s						
NKL				MLR	MLR		
	comp=Z,595nm,18.0s						
PCA	**Pinnacle**	**23.57**	**54**	IAmb	IAmb	04 52 39.9	
	comp=Z,617nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**23.73**	**264**	*d* *e*P	**P**	**04 52 41.2**	**+0.6**
BCPM	**Bancas Point**	**23.88**	**54**	P	**P**	**04 52 40.8**	**-0.9**
BCPM				IAmb	IAmb	04 52 42.5	
	comp=Z,342nm,0.9s						
YSS	**Yuzh-Sakhalins**	**24.27**	**273**	κ *i*P	**P**	**04 52 47.2**	**+1.8**
YSS				*e**PP	**pP**	**04 53 10.0**	**+1.2**
YSS				*e**SP	**sP**	**04 53 21.6**	**-0.7**
YSS				*e*		04 56 22.5	
YSS				*e*S	**S**	**04 57 00.0**	**+4.0**
YSS				*e**SS	**sS**	**04 57 37.7**	**-0.2**
YSS				*e*SS	**SnSn**	**04 58 03.5**	**+12**
YSS				pmax	pmax		
	comp=Z,2µm,3.0s						
YSS				pmax	pmax		
	comp=Z,700nm,0.9s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
YSS	**Yuzh-Sakhalins**	**24.27**	**273**	P	**P**	**04 52 45.8**	**+0.4**
YSS					**PcP**	**04 56 23.0**	**+0.7**
HYT	**Haines Junctio**	**24.95**	**52**	IAmb	IAmb	04 52 57.3	
	comp=Z,285nm,0.9s						
JKA	**Kamikawa-asahi**	**25.70**	**267**	P	**P**	**04 52 58.9**	**+0.4**
ASAJ	**Asahikawa**	**25.71**	**267**	P	**P**	**04 52 59.9**	**+1.5**
	comp=Z,657nm,0.9s,baz=56,slow=7.1,SNR=154						
ASAJ				PcP	**PcP**	**04 56 26.6**	**+1.0**
	comp=Z,48nm,0.9s,baz=261,slow=2.6,SNR=4.3						
ASAJ				ScP	**ScP**	**04 59 54.9**	**+0.3**
	comp=Z,65nm,0.8s,baz=254,slow=4.3,SNR=9.7						
EPYK	**Eagle Plains**	**25.98**	**39**	P	**P**	**04 52 59.2**	**-1.5**
	baz=258						
EPYK	**Eagle Plains**	**25.98**	**39**	IAmb	IAmb	04 53 02.5	
	comp=Z,387nm,0.8s						
ERM	**Erimo**	**26.50**	**263**	*d* *e*P	**P**	**04 53 06.4**	**+0.8**
ERM				pmax	pmax		
	comp=Z,367nm,1.3s						
ERM	**Erimo**	**26.50**	**263**	P	**P**	**04 53 06.7**	**+1.1**
ERM				IAmb	IAmb	04 53 08.2	
	comp=Z,647nm,1.5s						
ERM				PcP	**PcP**	**04 56 30.0**	**+2.6**
GRNR	**Gornyy**	**26.69**	**285**	⇓*i*P	**P**	**04 53 08.1**	**+0.8**
GRNR				*e*S	**S**	**04 57 39.5**	**+5.2**
GRNR				pmax	pmax		
	comp=E,70nm,1.0s						
GRNR				pmax	pmax		
	comp=N,40nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,180nm,1.1s						
GRNR				smax	smax		
	comp=N,8.0nm,1.1s						
JEW	**Eniwo**	**27.09**	**266**	P	**P**	**04 53 11.1**	**+0.1**
INK	**Inuvik**	**27.60**	**36**	P	**P**	**04 53 16.3**	**+1.1**
	comp=N,114nm,0.8s,baz=246,slow=8.3,SNR=270						
INK				PcP	**PcP**	**04 56 29.1**	**-0.5**
	comp=N,18nm,0.6s,baz=164,slow=3.3,SNR=3.4						
INK				S	**S**	**04 57 49.1**	**+0.9**
	comp=N,19nm,1.0s,baz=19,slow=25,SNR=5.1						
INK				PKiKP	**PKiKP**	**05 04 04.0**	**-1.6**
	comp=N,8.7nm,0.9s,baz=119,slow=9.3,SNR=7.3						
INK				LR	LR	05 04 59.0	
	comp=N,1µm,21.1s,baz=240,slow=38						
INK	**Inuvik**	**27.60**	**36**	IAmb	IAmb	04 53 22.2	
	comp=Z,214nm,0.9s						
YAK	**Yakutsk**	**28.29**	**310**	P	**P**	**04 53 21.0**	**-0.4**
	comp=Z,192nm,0.8s,baz=83,slow=2.9,SNR=76						
YAK				PcP	**PcP**	**04 56 31.1**	**-0.3**
	comp=Z,47nm,0.7s,baz=250,slow=0.5,SNR=9.1						
YAK				ScP	**ScP**	**05 00 00.3**	**-1.7**
	comp=Z,126nm,0.7s,baz=232,slow=0.3,SNR=43						
YAK	**Yakutsk**	**28.29**	**310**	*d* *i*P	**P**	**04 53 21.0**	**-0.4**
YAK				*e*		04 54 12.6	
YAK				*e*		04 56 31.1	
YAK				*e*S	**S**	**04 57 57.5**	**-1.7**
YAK				*e**SS	**sS**	**04 58 38.0**	**-3.5**
YAK				*e*		05 03 59.1	
YAK				pmax	pmax		
	comp=Z,442nm,0.9s						
YAK				pmax	pmax		
	comp=N,35nm,1.0s						
YAK				pmax	pmax		
	comp=E,158nm,1.0s						
YAK				pmax	pmax		
	comp=Z,120nm,1.5s						
YAK				pmax	pmax		
	comp=E,86nm,1.0s						
YAK				smax	smax		
	comp=N,258nm,2.4s						
YAK				smax	smax		
	comp=E,212nm,2.0s						
YAK	**Yakutsk**	**28.29**	**310**	P	**P**	**04 53 21.2**	**-0.2**
YAK				PcP	**PcP**	**04 56 31.4**	**0.0**
JTM	**Tenmabayashi**	**28.49**	**262**	IAmb	IAmb	04 53 25.4	
	comp=Z,246nm,1.2s						
DLBC	**Dease Lake**	**28.91**	**57**	P	**P**	**04 53 27.5**	**+0.5**
	comp=Z,38nm,0.9s,baz=285,slow=10.0,SNR=54						
DLBC	**Dease Lake**	**28.91**	**57**	IAmb	IAmb	04 53 29.4	
	comp=Z,340nm,1.9s						
TEY	**Ternei**	**28.96**	**273**	⇓*i*P	**P**	**04 53 27.5**	**0.0**
TEY				pmax	pmax		
	comp=N,200nm,1.8s						
TEY				pmax	pmax		
	comp=Z,400nm,1.7s						
TEY				pmax	pmax		
	comp=N,60nm,1.2s						
TEY				pmax	pmax		
	comp=E,130nm,1.2s						
TEY				pmax	pmax		
	comp=Z,200nm,1.1s						
TEY				pmax	pmax		
	comp=E,70nm,0.6s						
TEY				pmax	pmax		
	comp=Z,100nm,0.6s						
TEY				pmax	pmax		
	comp=N,50nm,0.7s						
TIXI	**Tiksi**	**29.66**	**330**	*d* *i*P	**P**	**04 53 33.2**	**-0.2**
KLR	**Kul'dur**	**30.06**	**284**	ScP	**ScP**	**05 00 07.6**	**-0.4**
	comp=N,8.4nm,0.8s,baz=28,slow=4.1,SNR=9.6						
KLR				PKiKP	**PKiKP**	**05 04 05.8**	**-1.9**
	comp=N,3.2nm,0.8s,baz=332,slow=23,SNR=6.8						
KLR	**Kul'dur**	**30.06**	**284**	*d* *i*P	**P**	**04 53 37.5**	**+0.3**
KLR				pmax	pmax		
	comp=Z,533nm,1.2s						
JMM	**Marumori**	**30.45**	**258**	IAmb	IAmb	04 53 42.8	
	comp=Z,320nm,1.1s						
ZEA	**Zeya**	**31.08**	**294**	*e*P	**P**	**04 53 46.0**	**-0.1**
ZEA				*e*S	**S**	**04 58 38.8**	**-4.2**
ZEA				pmax	pmax		
	comp=N,70nm,0.7s						
ZEA				pmax	pmax		
	comp=E,110nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,250nm,1.1s						
ZEA				smax	smax		
	comp=E,300nm,6.3s						
ZEA				smax	smax		
	comp=N,300nm,6.0s						
C36M	**Paulatuk**	**31.15**	**35**	P	**P**	**04 53 47.8**	**+1.2**
	baz=265,SNR=158						
C36M				S	**S**	**04 58 44.3**	**+0.5**
	baz=265						
C36M	**Paulatuk**	**31.15**	**35**	P	**P**	**04 53 47.9**	**+1.4**
C36M				IAmb	IAmb	04 53 48.9	
	comp=Z,218nm,0.8s						
JSD	**Sado**	**31.89**	**261**	P	**P**	**04 53 53.8**	**+0.5**
JSD					**PcP**	**04 56 41.5**	**+0.3**
USA0B	**Ussuriysk Arra**	**32.23**	**275**	*d* *i*P	**P**	**04 53 56.2**	**-0.1**
USA0B	**Ussuriysk Arra**	**32.23**	**275**	IAmb	IAmb	04 53 57.5	
	comp=Z,132nm,0.8s						
USRK	**Ussuriysk Ar.**	**32.23**	**275**	P	**P**	**04 53 56.2**	**0.0**
	comp=Z,119nm,0.7s,baz=57,slow=7.2,SNR=124						
USRK				PcP	**PcP**	**04 56 43.0**	**+1.0**
	comp=Z,62nm,0.7s,baz=62,slow=1.5,SNR=34						
USRK				ScP	**ScP**	**05 00 16.2**	**+1.0**
	comp=Z,36nm,0.7s,baz=55,slow=4.0,SNR=37						
USRK				LR	LR	05 05 46.4	
	comp=Z,476nm,21.6s,baz=54,slow=34						
USRK	**Ussuriysk Ar.**	**32.23**	**275**	P	**P**	**04 53 55.9**	**-0.4**
MJAR	**Matsushiro Arr**	**32.88**	**259**	P	**P**	**04 54 03.0**	**+0.9**
	comp=Z,108nm,0.9s,baz=50,slow=7.4,SNR=192						
MJAR				PcP	**PcP**	**04 56 44.7**	**+0.6**
	comp=Z,29nm,0.8s,baz=74,slow=1.3,SNR=27						
MJAR				ScP	**ScP**	**05 00 17.3**	**-0.4**
	comp=Z,25nm,0.9s,baz=28,slow=1.7,SNR=24						
MJAR				LR	LR	05 04 51.0	
	comp=Z,274nm,21.1s,baz=60,slow=31						
MJAR	**Matsushiro Arr**	**32.88**	**259**	P	**P**	**04 54 02.4**	**+0.3**
MJAR				IAmb	IAmb	04 54 04.7	
	comp=Z,196nm,1.4s						
MJAR					**PcP**	**04 56 45.1**	**+1.0**
MAJO	**Matsushiro**	**32.88**	**259**	P	**P**	**04 54 03.0**	**+0.9**
MAJO						04 56 44.7	
MAJO				pmax	pmax		
	comp=Z,481nm,1.1s						
MAJO	**Matsushiro**	**32.88**	**259**	P	**P**	**04 54 03.0**	**+0.9**
MAJO				PcP	**PcP**	**04 56 44.7**	**+0.6**
MAT	**Matsushiro**	**32.88**	**259**	P	**P**	**04 54 03.3**	**+1.2**
MAT				S	**S**	**04 59 14.8**	**+3.3**
MDJ	**Mudanjiang**	**33.49**	**278**	P	**P**	**04 54 07.1**	**-0.2**
MDJ				pP	pP	04 54 30.6	-1.1
MDJ				sP	sP	04 54 42.9	-1.5
MDJ				PP	**PnPn**	**04 55 20.8**	**-1.5**
MDJ				S	**S**	**04 59 19.4**	**-1.3**
MDJ				pmax	pmax		
	comp=Z,90nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,760nm,4.0s						
MDJ				LR	LR		
	comp=Z,830nm,11.8s						
MDJ				LR	LR		
	comp=Z,650nm,10.6s						
MDJ				LR	LR		
	comp=Z,2µm,31.4s						
MDJ	**Mudanjiang**	**33.49**	**278**	P	**P**	**04 54 06.3**	**-0.9**
MDJ				IAmb	IAmb	04 54 08.2	
	comp=Z,123nm,1.1s						
MDJ					**PcP**	**04 56 46.3**	**+0.7**
INU	**Inuyama**	**34.40**	**258**	IAmb	IAmb	04 54 17.1	
	comp=Z,122nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**34.85**	**202**	T	T	05 31 40.3	
	baz=16						
H11S2	**WAKE ISLAND Hy**	**34.87**	**202**	T	T	05 31 41.3	
	baz=16,slow=74						
H11S3	**WAKE ISLAND Hy**	**34.87**	**202**	T	T	05 31 41.6	
	baz=16,slow=74						
KIP	**Kipapa**	**35.06**	**142**	⇑*e*P	**P**	**04 54 23.3**	**+2.3**
KIP				pmax	pmax		
	comp=Z,307nm,1.3s						
KIP	**Kipapa**	**35.06**	**142**	P	**P**	**04 54 21.4**	**+0.4**
KIP				IAmb	IAmb	04 54 24.0	
	comp=Z,184nm,0.8s						
JWT	**Wachi**	**35.42**	**260**	P	**P**	**04 54 24.9**	**+0.9**
YKA	**Yellowknife Ar**	**35.59**	**47**	P	**P**	**04 54 25.6**	**+0.5**
	comp=Z,238nm,0.8s,baz=283,slow=7.9,SNR=1456						
YKA				pP	**pP**	**04 54 51.8**	**+2.1**
	comp=Z,35nm,0.7s,baz=286,slow=6.6,SNR=3.6						
YKA				PcP	**PcP**	**04 56 51.6**	**+0.3**
	comp=Z,6.4nm,0.6s,baz=294,slow=2.6,SNR=5.0						
YKA				S	**S**	**04 59 51.8**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=285,slow=15,SNR=4.4						
YKA				ScP	**ScP**	**05 00 24.7**	**-2.2**
	comp=Z,27nm,0.7s,baz=292,slow=2.9,SNR=30						
YKA				PKiKP	**PKiKP**	**05 04 09.8**	**-1.5**
	comp=Z,3.3nm,0.7s,baz=280,slow=0.6,SNR=9.3						
YKA				LR	LR	05 10 27.8	
	comp=Z,941nm,18.9s,baz=0.0,slow=38						
NLWA	**Neilton Lookou**	**36.10**	**74**	IAmb	IAmb	04 54 32.2	
	comp=Z,172nm,1.1s						
A04D	**Lummi Island**	**36.16**	**72**	P	**P**	**04 54 31.0**	**+0.8**
	baz=298,SNR=5.1						
HLK	**Haleakala**	**36.35**	**140**	P	**P**	**04 54 32.5**	**+0.2**
HLK				IAmb	IAmb	04 54 34.8	
	comp=Z,167nm,0.8s						
D03D	**Eldon**	**36.50**	**74**	P	**P**	**04 54 34.4**	**+1.3**
	baz=299,SNR=61						
B05A	**Bryant**	**36.74**	**72**	P	**P**	**04 54 35.7**	**+0.7**
	baz=298,SNR=66						
BOD	**Bodaibo**	**36.84**	**306**	*e*P	**P**	**04 54 35.6**	**-0.2**
BOD				pmax	pmax		
	comp=Z,453nm,1.5s						
D04E	**Lakebay**	**36.86**	**74**	P	**P**	**04 54 37.8**	**+1.7**
	baz=299,SNR=19						
B06A	**Marblemount**	**36.98**	**71**	IAmb	IAmb	04 54 38.2	
	comp=Z,104nm,1.1s						
JHS	**Saijyo**	**37.01**	**261**	P	**P**	**04 54 38.2**	**+0.6**
HIA	**Hailar**	**37.14**	**290**	*d* *i*P	**P**	**04 54 38.5**	**0.0**
HIA				pmax	pmax		
	comp=Z,218nm,1.1s						
HIA	**Hailar**	**37.14**	**290**	P	**P**	**04 54 38.3**	**-0.2**
HIA					**PcP**	**04 56 57.3**	**+1.0**
F04D	**Rainier, OR**	**37.26**	**76**	P	**P**	**04 54 40.5**	**+1.0**
	baz=301,SNR=14						
E04D	**Cinebar**	**37.29**	**75**	P	**P**	**04 54 41.2**	**+1.5**
	baz=300,SNR=49						
JCJ	**Chichijima**	**37.40**	**243**	P	**P**	**04 54 41.8**	**+0.8**
POHA	**Pohakuloa**	**37.54**	**139**	P	**P**	**04 54 43.1**	**+0.6**
POHA				IAmb	IAmb	04 54 45.2	
	comp=Z,176nm,0.8s						
KHLU	**Kahalu`u**	**37.55**	**140**	IAmb	IAmb	04 54 44.5	
	comp=Z,123nm,0.7s						
G03D	**McMinnville, O**	**37.56**	**77**	P	**P**	**04 54 43.1**	**+1.0**
	baz=302,SNR=9.8						
C06D	**Leavenworth**	**37.61**	**72**	P	**P**	**04 54 42.9**	**+0.4**
	baz=299,SNR=7.9						
LON	**Longmire**	**37.64**	**74**	IAmb	IAmb	04 54 45.1	
	comp=Z,85nm,0.7s						
I02D	**Swisshome**	**37.79**	**79**	P	**P**	**04 54 45.7**	**+1.7**
	baz=303						
COR	**Corvallis**	**37.86**	**78**	P	**P**	**04 54 45.6**	**+1.0**
COR				pmax	pmax		
	comp=Z,410nm,0.9s						
COR	**Corvallis**	**37.86**	**78**	P	**P**	**04 54 45.6**	**+1.0**
LTY	**Liberty**	**38.07**	**73**	IAmb	IAmb	04 54 47.6	
	comp=Z,87nm,0.8s						
H04D	**Lebanon**	**38.24**	**78**	P	**P**	**04 54 49.3**	**+1.5**
	baz=302,SNR=23						
J01E	**Myrtle Point**	**38.25**	**80**	P	**P**	**04 54 49.6**	**+1.7**
	baz=304,SNR=12						
F05D	**White Salmon**	**38.29**	**75**	P	**P**	**04 54 48.9**	**+0.7**
	baz=301,SNR=12						
I03D	**Drain, OR**	**38.31**	**79**	P	**P**	**04 54 50.3**	**+1.9**
	baz=303,SNR=24						
KBO	**Bosley Butte**	**38.60**	**82**	P	**P**	**04 54 52.4**	**+1.4**
KSRS	**Korea Array**	**38.62**	**269**	P	**P**	**04 54 52.7**	**+1.7**
	comp=Z,141nm,0.9s,baz=59,slow=8.3,SNR=207						
KSRS				PcP	**PcP**	**04 57 02.1**	**+1.2**
	comp=Z,42nm,0.9s,baz=57,slow=3.3,SNR=27						
KSRS				ScP	**ScP**	**05 00 38.1**	**-0.5**
	comp=Z,4.9nm,0.7s,baz=64,slow=3.4,SNR=9.6						
KS19	**Wonju Array Si**	**38.63**	**269**	P	**P**	**04 54 52.3**	**+1.2**
KS19				IAmb	IAmb	04 54 54.1	
	comp=Z,244nm,1.1s						
KS19					**PcP**	**04 57 02.0**	**+1.0**
KSAR	**Wonju Array Be**	**38.66**	**269**	P	**P**	**04 54 51.8**	**+0.5**
KSAR	**Wonju Array Be**	**38.66**	**269**	P	**P**	**04 54 51.8**	**+0.5**
KSAR					**PcP**	**04 57 01.9**	**+0.8**
K02D	**Willamette Mer**	**38.67**	**81**	P	**P**	**04 54 53.4**	**+1.8**
	baz=304,SNR=41						
SNY	**Shenyang**	**38.69**	**278**	⇓P	**P**	**04 54 52.6**	**+1.0**
SNY				sP	**sP**	**04 55 28.3**	**-0.7**
SNY				pmax	pmax		
	comp=Z,270nm,1.3s						
SNY				LR	LR		
	comp=Z,1µm,24.0s						
SNY				LR	LR		
	comp=Z,550nm,16.7s						
SNY				LR	LR		
	comp=Z,1µm,31.9s						
G05D	**Wamic, OR**	**38.72**	**76**	P	**P**	**04 54 52.8**	**+1.0**
	baz=302,SNR=22						
I04A	**Tendick Farm,**	**38.83**	**78**	P	**P**	**04 54 54.1**	**+1.3**
	baz=303,SNR=57						
E07A	**Sunnyside**	**38.90**	**73**	IAmb	IAmb	04 54 54.9	
	comp=Z,223nm,1.4s						
L02E	**Cave Junction**	**39.02**	**81**	P	**P**	**04 54 56.3**	**+2.0**
	baz=305,SNR=38						
HUMO	**Hull Mountain**	**39.16**	**80**	P	**P**	**04 54 56.8**	**+1.2**
HUMO				IAmb	IAmb	04 54 58.6	
	comp=Z,335nm,1.2s						
HAWA	**Hanford**	**39.18**	**73**	IAmb	IAmb	04 54 57.1	
	comp=Z,218nm,0.8s						
I05D	**Terrebonne, OR**	**39.18**	**77**	P	**P**	**04 54 56.6**	**+0.9**
	baz=303,SNR=36						
KRMB	**Red Mountain**	**39.19**	**82**	IAmb	IAmb	04 54 59.3	
	comp=Z,292nm,1.0s						
F07A	**Phinny Hill Vi**	**39.20**	**74**	IAmb	IAmb	04 54 57.5	
	comp=Z,202nm,0.8s						
C09A	**Chrisman Ranch**	**39.20**	**71**	IAmb	IAmb	04 54 56.7	
	comp=Z,133nm,0.8s						
J04D	**Umpqua Nationa**	**39.32**	**79**	P	**P**	**04 54 58.7**	**+1.7**
	baz=304,SNR=25						
INCN	**Inchon**	**39.40**	**270**	P	**P**	**04 54 58.7**	**+1.1**
INCN						04 57 04.1	
INCN				pmax	pmax		
	comp=Z,625nm,1.2s						
INCN	**Inchon**	**39.40**	**270**	P	**P**	**04 54 58.7**	**+1.1**
INCN					**PcP**	**04 57 04.1**	**+0.5**
INCN	**Inchon**	**39.40**	**270**	P	**P**	**04 54 59.0**	**+1.4**
E08A	**Dider Farm, El**	**39.41**	**73**	IAmb	IAmb	04 54 58.7	

	comp=Z,151nm,0.9s						
JTU	Tsushima	39.60	264	IAmb	IAmb	04 55 02.7	
	comp=Z,127nm,1.0s						
NEW	Newport	39.64	69	P	P	04 54 59.2	-0.3
	baz=300,SNR=146						
NEW	Newport	39.64	69	IAmb	IAmb	04 55 00.3	
	comp=Z,199nm,0.8s						
TJN	Taejon	39.65	268	*d i*P	P	04 55 00.8	+1.2
RES	Resolute Bay	39.67	25	IAmb	IAmb	04 55 27.4	
	comp=Z,110nm,1.1s						
PINE	Pine Mountain	39.72	77	IAmb	IAmb	04 55 03.1	
	comp=Z,227nm,1.1s						
L04D	Klamath Falls	39.77	80	P	P	04 55 02.4	+1.6
	baz=305,SNR=89						
YBH	Yreka Blue Hor	39.80	81	P	P	04 55 02.1	+1.1
YBH				pmax	pmax		
	comp=Z,297nm,0.9s						
YBH	Yreka Blue Hor	39.80	81	P	P	04 55 02.1	+1.1
J05D	Fort Rock, OR	39.83	78	P	P	04 55 02.8	+1.6
	baz=304,SNR=105						
K04D	Chiloquin, OR	39.88	80	P	P	04 55 03.1	+1.4
	baz=304,SNR=41						
M02C	Callahan	39.91	82	P	P	04 55 04.0	+2.1
	baz=306,SNR=106						
M02C				S	S	05 00 59.9	+1.4
	baz=306						
E09A	Wood Farm, Sta	39.94	72	IAmb	IAmb	04 55 03.5	
	comp=Z,184nm,1.1s						
EUNU	Eureka	40.03	16	P	P	04 55 02.7	+0.4
KMRM	Mail Ridge	40.07	84	P	P	04 55 04.6	+1.4
N02D	Trinity Center	40.25	82	P	P	04 55 06.7	+2.1
	baz=306,SNR=88						
N02D				S	S	05 01 06.0	+2.5
	baz=306						
M04C	Macdoel	40.31	81	P	P	04 55 06.9	+1.7
	baz=305,SNR=181						
K05A	Summer Lake	40.35	79	P	P	04 55 06.5	+0.9
I07A	Izee	40.43	76	P	P	04 55 06.4	+0.2
I07A				IAmb	IAmb	04 55 08.1	
	comp=Z,197nm,1.0s						
KCPM	Cahto Peak	40.47	84	IAmb	IAmb	04 55 10.6	
	comp=Z,221nm,1.1s						
WDC	Whiskeytown Da	40.58	83	P	P	04 55 07.9	+0.7
WDC				pmax	pmax		
	comp=Z,292nm,1.1s						
WDC	Whiskeytown Da	40.58	83	P	P	04 55 07.9	+0.7
WDC				IAmb	IAmb	04 55 11.0	
	comp=Z,292nm,1.1s						
O02D	Mt. Diablo Mer	40.67	83	P	P	04 55 10.2	+2.1
	baz=307,SNR=88						
O02D				S	S	05 01 14.5	+4.7
	baz=307						
JSU	Suzuyama	41.01	260	P	P	04 55 11.7	+0.8
JSU				PcP	PcP	04 57 08.8	0.0
O03E	Paynes Creek	41.20	82	P	P	04 55 13.5	+1.0
	baz=307,SNR=299						
O03E				S	S	05 01 20.7	+3.0
	baz=307						
HOPS	Hopland Field	41.21	85	P	P	04 55 12.8	+0.3
BMO	Blue Mountains	41.32	74	P	P	04 55 13.4	0.0
BMO				pmax	pmax		
	comp=Z,130nm,0.9s						
BMO	Blue Mountains	41.32	74	P	P	04 55 13.4	0.0
BMO				IAmb	IAmb	04 55 14.8	
	comp=Z,130nm,0.8s						
GDXM	Geysers	41.49	85	IAmb	IAmb	04 55 19.1	
	comp=Z,290nm,1.2s						
JTMT	Jette	41.55	69	IAmb	IAmb	04 55 16.2	
	comp=Z,217nm,1.2s						
DL2	Dalian	41.62	275	P	P	04 55 16.3	+0.5
DL2				pP	pP	04 55 41.0	0.0
DL2				PcP	PcP	04 57 10.1	-0.5
DL2				S	S	05 01 24.9	+1.3
DL2				pmax	pmax		
	comp=Z,420nm,0.9s						
DL2				pmax	pmax		
	comp=Z,530nm,3.6s						
ORV	Oroville	41.83	83	IAmb	IAmb	04 55 20.3	
	comp=Z,222nm,0.9s						
MCCM	Marconi Confer	41.85	86	IAmb	IAmb	04 55 21.0	
	comp=Z,266nm,1.3s						
MSO	Missoula	42.23	70	P	P	04 55 20.3	-0.5
	baz=302,SNR=229						
MSO	Missoula	42.23	70	IAmb	IAmb	04 55 21.4	
	comp=Z,187nm,0.9s						
AFDM	Forest Hills D	42.53	83	IAmb	IAmb	04 55 26.5	
	comp=Z,248nm,1.2s						
RUBR	Rubicon Trail	42.97	83	IAmb	IAmb	04 55 31.4	
	comp=Z,234nm,0.9s						
MFID	Camas Ranch	43.01	75	P	P	04 55 26.6	-0.5
MFID				IAmb	IAmb	04 55 28.5	
	comp=Z,118nm,0.9s						
CMB	Columbia Colle	43.45	84	IAmb	IAmb	04 55 34.3	
	comp=Z,233nm,1.1s						
WAKR	Walker	43.74	83	P	P	04 55 34.0	+0.8
HLID	Hailey	43.77	74	P	P	04 55 33.4	+0.1
	baz=305,SNR=267						
HLID	Hailey	43.77	74	IAmb	IAmb	04 55 34.8	
	comp=Z,187nm,0.9s						
EGMT	Eagleton	43.98	66	P	P	04 55 34.0	-0.9
	baz=303,SNR=125						
EGMT	Eagleton	43.98	66	IAmb	IAmb	04 55 35.2	
	comp=Z,210nm,0.9s						
RYN	Ryan	44.23	82	IAmb	IAmb	04 55 40.2	
	comp=Z,270nm,1.0s						
BOZ	Bozeman (W)	44.25	70	P	P	04 55 36.6	-0.4
	baz=304,SNR=31						
BOZ				S	S	05 02 01.0	-1.3
	baz=304						
BJI	Beijing	44.27	280	P	P	04 55 38.3	+1.2
BJI				pP	pP	04 56 02.0	-0.5
BJI				sP	sP	04 56 11.5	-3.5
BJI				PcP	PcP	04 57 19.8	+0.3
BJI				ScP	ScP	05 01 01.3	+0.3
BJI				PcS	PcS	05 01 13.0	+0.2
BJI				S	S	05 02 02.3	-0.1
BJI				ScS	SS	05 05 23.3	-0.7
BJI				pmax	pmax		
	comp=Z,210nm,0.9s						
BJI				pmax	pmax		
	comp=Z,1.0nm,2.9s						
BJI				LR	LR		
	comp=Z,840nm,18.8s						
BJI				LR	LR		
	comp=Z,620nm,16.9s						
BJI				LR	LR		
	comp=Z,1µm,37.7s						
BJT	Baijiatuau	44.29	280	P	P	04 55 38.1	+0.8
BJT				IAmb	IAmb	04 55 39.5	
	comp=Z,178nm,0.9s						
BJT					PcP	04 57 19.7	+0.1
IRK	Irkutsk	44.29	302	*e*P	P	04 55 36.8	-0.3
IRK				*e*		04 57 19.5	
IRK				pmax	pmax		
	comp=Z,466nm,1.1s						
PMPB	Monarch Peak	44.35	86	IAmb	IAmb	04 55 47.2	
	comp=Z,198nm,1.2s						
NVAR	Mina Array Bea	44.49	82	P	P	04 55 40.2	+1.0
	comp=Z,217nm,0.9s,baz=298,slow=7.1,SNR=525						
NVAR				PcP	PcP	04 57 21.3	+0.7
	comp=Z,19nm,0.8s,baz=310,slow=3.4,SNR=2.5						
NVAR				ScP	ScP	05 01 01.5	-0.8
	comp=Z,23nm,0.8s,baz=274,slow=4.9,SNR=22						
NVAR				PKiKP	PKiKP	05 04 17.5	-2.5
	comp=Z,2.9nm,0.8s,baz=269,slow=8.1,SNR=4.5						
NVAR				LR	LR	05 10 59.6	
	comp=Z,373nm,21.6s,baz=296,slow=31						
NVAR	Mina Array Bea	44.49	82	P	P	04 55 39.7	+0.5
OMMB	Old Mammoth Mi	44.57	84	IAmb	IAmb	04 55 43.7	
	comp=Z,275nm,1.1s						
NV11	Mina Array Sit	44.58	82	IAmb	IAmb	04 55 43.0	
	comp=Z,208nm,0.9s						
FFC	Flin Flon	44.65	54	P	P	04 55 39.2	-0.7
FFC				pmax	pmax		
	comp=Z,108nm,1.0s						
FFC	Flin Flon	44.65	54	P	P	04 55 39.2	-0.7
FFC				IAmb	IAmb	04 55 40.4	
	comp=Z,108nm,1.0s						
MLAC	Mammoth, Mammo	44.66	83	P	P	04 55 42.4	+1.8
	baz=309,SNR=72						
MLAC				S	S	05 02 14.0	+5.4
	baz=309						
TULEG	Thule	44.77	18	P	P	04 55 40.8	+0.1
TULEG				IAmb	IAmb	04 56 07.8	
	comp=Z,218nm,1.6s						
TULEG	Thule	44.77	18	⇓*i*P	P	04 55 41.3	+0.7
TULEG				IAmb	IAmb	04 55 41.7	
	comp=Z,52nm,0.7s						
QLMT	Earthquake Lak	44.80	71	P	P	04 55 41.1	-0.5
QLMT					PcP	04 57 22.4	+0.8
TLY	Talaya	44.91	301	P	P	04 55 43.1	+1.0
	comp=Z,56nm,0.6s,baz=28,slow=5.1,SNR=9.7						
TLY				PcP	PcP	04 57 22.0	+0.4
	comp=Z,20nm,0.7s,baz=345,slow=2.3,SNR=4.9						
TLY				ScP	ScP	05 01 02.9	-0.6
	comp=Z,12nm,0.9s,baz=337,slow=3.4,SNR=5.1						
TLY	Talaya	44.91	301	*d i*P	P	04 55 42.5	+0.4
TLY				*e*		04 57 22.6	
TLY				*e*		04 57 31.4	
TLY				*e*S	S	05 02 12.4	+0.9
TLY				*e*		05 02 55.4	
TLY				*e*		05 05 29.4	
TLY				pmax	pmax		
	comp=Z,561nm,1.1s						
TLY	Talaya	44.91	301	P	P	04 55 42.7	+0.6
TLY				IAmb	IAmb	04 55 44.5	
	comp=Z,272nm,1.2s						
TLY					PcP	04 57 22.3	+0.7
TLY	Talaya	44.91	301	P	P	04 55 43.3	+1.2
ELK	Elko	44.93	78	IAmb	IAmb	04 55 44.7	
	comp=Z,208nm,0.8s						
ULN	Ulaanbaatar	45.11	295	*d i*P	P	04 55 44.6	+0.7
ULN				pmax	pmax		
	comp=Z,208nm,0.8s						
ULN	Ulaanbaatar	45.11	295	P	P	04 55 44.3	+0.4
ULN				IAmb	IAmb	04 55 46.1	
	comp=Z,201nm,0.9s						
ULN				PcP	PcP	04 57 23.0	+0.5
ULN	Ulaanbaatar	45.11	295	P	P	04 55 45.0	+1.1
VOG	Valley Oaks Go	45.16	85	P	P	04 55 44.9	+0.7
	baz=310						
YNM	Yellowstone No	45.28	70	IAmb	IAmb	04 55 48.6	
	comp=Z,171nm,0.9s						
TIN	Tinemaha, Big	45.40	84	P	P	04 55 47.9	+1.6
	baz=310,SNR=110						
TIN				S	S	05 02 23.1	+4.0
	baz=310						
YUF	Upper Falls	45.40	70	IAmb	IAmb	04 55 53.2	
	comp=Z,123nm,1.0s						
SMMC	Simmler	45.43	87	P	P	04 55 47.8	+1.4
	baz=311,SNR=26						
SMMC				S	S	05 02 23.6	+4.2
	baz=311						
SONM	Songino Array	45.49	295	P	P	04 55 48.1	+1.2
	comp=Z,118nm,0.8s,baz=56,slow=8.4,SNR=792						
SONM				PcP	PcP	04 57 24.3	+0.5
	comp=Z,80nm,0.7s,baz=68,slow=2.7,SNR=17						
SONM				ScP	ScP	05 01 05.6	-0.6
	comp=Z,44nm,0.7s,baz=49,slow=3.2,SNR=38						
SONM				PKiKP	PKiKP	05 04 19.1	-1.5
	comp=Z,1.5nm,0.7s,baz=126,slow=1.8,SNR=4.1						
SONM				LR	LR	05 15 37.6	
	comp=Z,123nm,19.6s,baz=57,slow=37						
SONM	Songino Array	45.49	295	P	P	04 55 47.0	+0.1
SONM				IAmb	IAmb	04 55 48.8	
	comp=Z,103nm,0.8s						
SONM				PcP	PcP	04 57 23.9	0.0
YNE	Yellowstone No	45.52	70	IAmb	IAmb	04 55 48.0	
	comp=Z,145nm,0.9s						
H17A	Grant Village	45.55	71	P	P	04 55 48.6	+1.1
	baz=306,SNR=225						
H17A	Grant Village	45.55	71	IAmb	IAmb	04 55 49.9	
	comp=Z,243nm,0.8s						
LKWY	Lake	45.55	70	IAmb	IAmb	04 55 49.7	
	comp=Z,170nm,0.9s						
YMP	Mirror Lake Pl	45.59	70	IAmb	IAmb	04 55 49.0	
	comp=Z,133nm,0.9s						
IMW	Indian Meadow	45.62	71	IAmb	IAmb	04 55 49.5	
	comp=Z,130nm,0.9s						
VES	Vestal, Richgr	45.65	86	P	P	04 55 48.7	+0.6
	baz=311,SNR=111						
VES				S	S	05 02 24.3	+1.8
	baz=311						
FLWY	Flagg Ranch	45.66	71	IAmb	IAmb	04 55 49.9	
	comp=Z,246nm,0.8s						
HVU	Hansel Valley	45.79	75	IAmb	IAmb	04 55 50.9	
	comp=Z,222nm,1.0s						
ZAK	Zakamensk	45.80	300	*e*P	P	04 55 49.9	+0.7
ZAK				*e*		04 57 25.4	
ZAK				pmax	pmax		
	comp=Z,261nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,99nm,1.2s						
PKM	Mcpherson Peak	45.83	87	P	P	04 55 51.0	+1.2
	baz=311,SNR=43						
PKM				S	S	05 02 27.6	+2.3
	baz=311						
MOOW	Moose Ponds	45.83	71	P	P	04 55 49.2	-0.4
CWC	Cottonwood Cre	45.89	84	P	P	04 55 51.1	+0.9
	baz=310						
CWC				S	S	05 02 28.9	+2.7
	baz=310						
RLMT	Red Lodge	45.89	69	P	P	04 55 50.1	0.0
	baz=305,SNR=62						
RLMT				S	S	05 02 24.2	-1.9
	baz=305						
GRAC	Grapevine Rang	45.97	83	P	P	04 55 52.0	+1.3
	baz=310,SNR=59						
GRAC				S	S	05 02 31.2	+4.1
	baz=310						
TIA	Tai'an	46.09	276	P	P	04 55 52.4	+0.8
TIA				pmax	pmax		
	comp=Z,420nm,0.9s						
ISA	Isabella, Lake	46.15	85	P	P	04 55 52.2	+0.1
	baz=311,SNR=58						
ISA				S	S	05 02 30.2	+0.5
	baz=311						
BGU	Big Grassy Mou	46.16	76	IAmb	IAmb	04 55 54.0	
	comp=Z,107nm,1.0s						
SBC	Santa Barbara	46.18	88	P	P	04 55 53.4	+1.2
	baz=312,SNR=9.4						
SBC				S	S	05 02 34.0	+3.9
	baz=312						
AHID	Auburn Hatcher	46.20	73	IAmb	IAmb	04 55 53.8	
	comp=Z,145nm,1.0s						
R11A	Troy Canyon, C	46.20	80	P	P	04 55 53.3	+0.7
	baz=309,SNR=389						
R11A				S	S	05 02 30.4	-0.3
	baz=309						
SPUT	South Promonto	46.27	75	IAmb	IAmb	04 55 54.9	
	comp=Z,175nm,1.1s						
ARVC	Arvin	46.28	86	P	P	04 55 53.3	+0.2
	baz=311,SNR=14						
FCC	Fort Churchill	46.31	46	IAmb	IAmb	04 55 54.2	
	comp=Z,248nm,0.8s						
MOY	Mondy	46.32	302	*e*P	P	04 55 54.0	+0.7
MOY				pmax	pmax		
	comp=Z,376nm,1.5s						
MPMC	Manual Prospec	46.50	84	P	P	04 55 55.8	+0.8
	baz=311,SNR=137						
MPMC				S	S	05 02 37.4	+2.5
	baz=311						
SCZ2	Santa Cruz Isl	46.53	88	P	P	04 55 55.6	+0.6
	baz=312,SNR=18						
SCZ2				S	S	05 02 37.7	+2.7
	baz=312						
HHC	Hu-ho-hao-te	46.57	284	*e*P	P	04 55 56.8	+1.4
HHC				pP	pP	04 56 20.4	-0.7
HHC				sP	sP	04 56 33.0	-0.5
HHC				PP	PP	04 57 44.8	-1.2
HHC				S	S	05 02 31.6	-4.0
HHC				SS	SS	05 06 01.6	-0.9
HHC				pmax	pmax		
	comp=Z,260nm,1.3s						
HHC				pmax	pmax		
	comp=Z,1µm,5.0s						
FURC	Furnace Creek,	46.62	83	P	P	04 55 56.9	+1.2
	baz=310,SNR=86						
FURC				S	S	05 02 39.8	+3.6
	baz=310						
HWUT	Hardware Ranch	46.62	74	IAmb	IAmb	04 55 57.4	
	comp=Z,177nm,1.2s						
OSI	Osito Audit: C	46.68	87	P	P	04 55 57.2	+0.9
	baz=312						
OSI	Osito Audit: C	46.68	87	P	P	04 55 57.4	+1.2
OSI				IAmb	IAmb	04 55 58.3	
	comp=Z,192nm,0.8s						
TPNV	Topopah Spring	46.69	82	P	P	04 55 57.4	+0.9
	baz=310,SNR=583						
TPNV				S	S	05 02 40.3	+2.8
	baz=310						
LAO	LASA Array	46.72	65	P	P	04 55 56.4	-0.1
	baz=305,SNR=36						
LAO	LASA Array	46.72	65	IAmb	IAmb	04 55 57.5	
	comp=Z,214nm,0.8s						
DUG	Dugway, Tooele	46.73	77	P	P	04 55 57.4	+0.7
	baz=308,SNR=427						
DUG				S	S	05 02 38.4	+0.2
	baz=308						
LRMC	Laurel Mtn Rad	46.75	85	P	P	04 55 57.3	+0.4
	baz=311,SNR=77						
LRMC				S	S	05 02 39.8	+1.3
	baz=311						
DGMT	Dagmar	46.84	62	P	P	04 55 56.4	-0.8
	baz=304,SNR=28						
DGMT	Dagmar	46.84	62	IAmb	IAmb	04 55 57.6	
	comp=Z,189nm,0.9s						
EDW2	Edwards Air Fo	46.95	86	P	P	04 55 59.0	+0.6
	baz=311,SNR=37						
SSE	Sheshan	47.00	267	P	P	04 55 59.8	+1.1
SSE				pmax	pmax		
	comp=Z,160nm,1.0s						
SSE				pmax	pmax		
	comp=Z,640nm,5.9s						
SSE				LR	LR		
	comp=Z,230nm,19.2s						
SSE				LR	LR		
	comp=Z,250nm,18.0s						
CTU	Camp Tracy	47.07	75	IAmb	IAmb	04 56 00.8	
	comp=Z,158nm,1.1s						
SNCC	San Nicolas Is	47.09	89	P	P	04 56 00.3	+0.8
	baz=312,SNR=13						
SNCC	San Nicolas Is	47.09	89	IAmb	IAmb	04 56 01.4	
	comp=Z,179nm,0.8s						
BW06	Boulder Array	47.11	72	P	P	04 55 59.4	-0.3
	baz=307,SNR=273						
BW06				S	S	05 02 40.7	-2.8
	baz=307						
BW06	Boulder Array	47.11	72	IAmb	IAmb	04 56 00.6	
	comp=Z,239nm,0.9s						
PD31	Pinedale Array	47.11	72	IAmb	IAmb	04 56 00.6	
	comp=Z,215nm,0.9s						
PDAR	Pinedale Array	47.11	72	P	P	04 55 59.4	-0.4
	comp=Z,176nm,0.8s,baz=305,slow=3.8,SNR=1034						
PDAR				pP	pwP	04 56 27.2	-0.7
	comp=Z,32nm,0.7s,baz=312,slow=3.3,SNR=3.0						
PDAR				PcP	PcP	04 57 29.5	-0.3
	comp=Z,4.5nm,0.6s,baz=263,slow=1.5,SNR=0.9						
PDAR				ScP	ScP	05 01 10.4	-2.7
	comp=Z,18nm,0.9s,baz=240,slow=0.8,SNR=15						
PDAR	Pinedale Array	47.11	72	P	P	04 55 59.2	-0.5
DECC	Green Verdugo	47.16	87	P	P	04 56 00.6	+0.6
	baz=312,SNR=8.4						
DECC				S	S	05 02 44.8	+0.7
	baz=312						
GUMO	Guam	47.28	229	P	P	04 55 59.3	-1.7
GUMO				pmax	pmax		
	comp=Z,737nm,1.2s						
GUMO	Guam	47.28	229	P	P	04 55 59.3	-1.7
GUMO	Guam	47.28	229	P	P	04 56 02.2	+1.2
JLU	Jordanelle	47.30	75	IAmb	IAmb	04 56 02.9	
	comp=Z,196nm,1.1s						
NLU	North Lily Min	47.33	76	IAmb	IAmb	04 56 03.1	
	comp=Z,123nm,0.9s						
SHOC	Shoshone, Teco	47.35	83	P	P	04 56 02.2	+0.8
	baz=311,SNR=179						
SHOC				S	S	05 02 48.6	+1.9
	baz=311						
GSC	Goldstone, Bar	47.41	84	P	P	04 56 02.8	+0.8
	baz=311,SNR=243						
GSC				S	S	05 02 48.1	+0.4
	baz=311						
GSC	Goldstone, Bar	47.41	84	IAmb	IAmb	04 56 05.1	
	comp=Z,182nm,0.8s						
FMP	Fort Macarthur	47.54	87	P	P	04 56 03.3	+0.5
	baz=312						
MPU	Maple Canyon	47.55	76	IAmb	IAmb	04 56 04.9	
	comp=Z,86nm,0.8s						
RRX	Edison Barstow	47.57	85	P	P	04 56 04.0	+0.9
	baz=312,SNR=6.1						
BFSC	Mount Baldy Ra	47.59	86	P	P	04 56 04.0	+0.6
	baz=312,SNR=68						
BFSC				S	S	05 02 50.8	+0.5
	baz=312						
BTO	Baotou	47.64	285	*e*P	P	04 56 05.0	+1.3
NJ2	Nanjing	47.79	270	⇓*i*P	P	04 56 05.3	+0.5
NJ2				pP	pP	04 56 30.5	-0.1
NJ2				sP	sP	04 56 42.3	-0.7
NJ2				PcP	PcP	04 57 32.3	+0.3
NJ2				PP	PP	04 57 56.3	-1.0
NJ2				ScP	ScP	05 01 16.6	+0.8
NJ2				pmax	pmax		
	comp=Z,170nm,1.0s						
SCI2	San Clemente I	47.88	88	P	P	04 56 06.2	+0.7
	baz=313,SNR=7.9						
TCRU	Three Creeks R	47.95	78	IAmb	IAmb	04 56 08.6	
	comp=Z,153nm,0.9s						
TIY	Taiyuan	48.00	280	*e*P	P	04 56 08.3	+1.8
TIY				PcP	PcP	04 57 33.5	+0.7
TIY				S	S	05 02 54.9	-1.1
TIY				sS	sS	05 03 44.4	+3.9
TIY				pmax	pmax		
	comp=Z,260nm,0.9s						
TIY				pmax	pmax		
	comp=Z,690nm,11.3s						
TIY				LR	LR		
	comp=Z,600nm,17.0s						
TIY				LR	LR		
	comp=Z,280nm,5.9s						
TIY				LR	LR		
	comp=Z,1µm,41.1s						
HEC	Hector,Ludlow	48.01	85	P	P	04 56 07.3	+0.7
	baz=312,SNR=24						
HEC				S	S	05 02 57.8	+1.6
	baz=312						
BBRC	Big Bear Solar	48.03	86	P	P	04 56 07.7	+0.8
	baz=312,SNR=20						
BBRC				S	S	05 02 56.8	0.0
	baz=312						
CCUT	Cedar City	48.06	80	IAmb	IAmb	04 56 09.5	
	comp=Z,382nm,1.5s						
SZCU	Shurtz Canyon	48.20	79	IAmb	IAmb	04 56 10.2	
	comp=Z,153nm,1.3s						
PATS	Pohnpei	48.24	209	P	P	04 56 08.9	+0.5
MURC	Murrieta	48.30	86	P	P	04 56 09.3	+0.5
	baz=312,SNR=44						
MURC				S	S	05 03 00.5	+0.3
	baz=312						
P17A	Butcher Ranch,	48.43	76	IAmb	IAmb	04 56 11.7	
	comp=Z,205nm,0.9s						
GMRC	Granite Mounta	48.46	84	P	P	04 56 10.8	+0.7
	baz=312,SNR=120						
GMRC				S	S	05 03 03.8	+1.2
	baz=312						
PFO	Pinyon Flats O	48.75	86	*c i*P	P	04 56 12.5	+0.2
PFO				*i* *PP	pwP	04 56 38.8	-1.9
PFO				pmax	pmax		
	comp=Z,60nm,0.9s						
PFO	Pinyon Flats O	48.75	86	P	P	04 56 12.5	+0.2
	baz=312,SNR=61						
PFO				S	S	05 03 07.5	+0.9
	baz=312						
PFO	Pinyon Flats O	48.75	86	P	P	04 56 12.6	+0.2
TPFO	Pinon Flats	48.75	86	S	S	05 03 07.7	+0.9
	baz=312						
BELC	Belle Mtn. Jos	48.77	85	P	P	04 56 12.5	0.0
	baz=312,SNR=90						
BELC				S	S	05 03 08.0	+1.0
	baz=312						
109C	Camp Elliot, M	48.83	87	P	P	04 56 13.7	+0.8
	baz=313,SNR=47						
109C				S	S	05 03 10.0	+2.3
	baz=313						
109C	Camp Elliot, M	48.83	87	IAmb	IAmb	04 56 14.8	
	comp=Z,148nm,0.8s						
K22A	Casper	48.95	70	P	P	04 56 12.9	-0.9
	baz=308,SNR=48						
K22A	Casper	48.95	70	IAmb	IAmb	04 56 14.6	
	comp=Z,123nm,0.9s						
NEE2	Needles Airpor	49.11	83	P	P	04 56 15.3	+0.4
	baz=312,SNR=6.1						
NEE2				S	S	05 03 13.9	+2.4
	baz=312						
RWWY	Rawlins	49.15	71	IAmb	IAmb	04 56 15.9	
	comp=Z,131nm,1.0s						
IRM	Iron Mountain	49.19	84	P	P	04 56 16.1	+0.5
	baz=312,SNR=57						
IRM				S	S	05 03 14.5	+1.8
	baz=312						
KBS	Kingsbay	49.20	357	*d i*P	P	04 56 15.8	+0.8

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KBS                                pmax    pmax
       comp=Z,146nm,0.7s
KBS    Kingsbay         49.20 357  P       P         04 56 16.1 +1.0
KBS                                IAmb    IAmb      04 56 17.4
       comp=Z,168nm,0.9s
KBS    Kingsbay         49.20 357⇓iP       P         04 56 16.3 +1.3
KBS                                IAmb    IAmb      04 56 17.1
       comp=Z,382nm,0.9s
BAR    Barrett          49.24  87  IAmb    IAmb      04 56 17.8
       comp=Z,120nm,0.8s
MONP2  Monument Peak    49.25  87  P       P         04 56 16.9 +0.6
       baz=313,SNR=59
MONP2                              S       S         05 03 17.7 +3.8
       baz=313
BC3    Big Chuckawall   49.34  85  P       P         04 56 16.7  0.0
       baz=312,SNR=47
BC3                                S       S         05 03 14.9  0.0
       baz=312
W13A   Hualapai Mount   49.34  83  IAmb    IAmb      04 56 19.6
       comp=Z,133nm,0.9s
RSSD   Black Hills      49.49  67  P       P         04 56 17.0 -0.9
RSSD                               pmax    pmax
       comp=Z,56nm,0.9s
RSSD   Black Hills      49.49  67  P       P         04 56 16.9 -1.1
       baz=308
RSSD   Black Hills      49.49  67  P       P         04 56 17.0 -0.9
CBX    Cerro Bola       49.50  87  IAmb    IAmb      04 56 20.4
       comp=Z,96nm,0.7s
O20A   White River Ci   49.51  74  P       P         04 56 17.8 -0.4
       baz=309,SNR=118
O20A                               S       S         05 03 15.8 -1.5
       baz=309
SWSC   Sam W. Stewart   49.60  86  P       P         04 56 18.9 +0.3
       baz=313,SNR=16
SWSC                               S       S         05 03 20.7 +2.3
       baz=313
IKP    In-Ko-Pah, Jac   49.61  87  P       P         04 56 19.4 +0.6
       baz=313,SNR=36
IKP                                S       S         05 03 19.6 +1.0
       baz=313
RMX    La Rumorosa      49.66  87  P       P         04 56 19.8 +0.5
RMX                                        PcP       04 57 40.0 +1.0
MDND   Maddock          49.70  61  P       P         04 56 18.8 -0.5
       baz=307,SNR=53
PDMCI  Parker Dam,Lak   49.71  84  P       P         04 56 19.9 +0.4
       baz=312,SNR=84
PDMCI                              S       S         05 03 21.2 +1.4
       baz=312
SPA0   Spitsbergen Ar   49.76 356  P       P         04 56 19.1 -0.1
SPA0   Spitsbergen Ar   49.76 356 eP       P         04 56 19.4 +0.1
SPITS  Spitsbergen Ar   49.76 356  ScP     ScP       05 01 20.7 -2.8
       comp=Z,24nm,1.1s,baz=19,slow=4.9,SNR=3.3
UPNV   Upernavik        49.79  19⇓iP       P         04 56 20.2 +0.7
UPNV                               IAmb    IAmb      04 56 20.5
       comp=Z,70nm,0.7s
UPNV                              i                  04 56 45.3
CCX    Cicese           49.80  88  IAmb    IAmb      04 56 22.1
       comp=Z,73nm,0.8s
E28A   Huff             49.87  63  IAmb    IAmb      04 56 21.1
       comp=Z,160nm,0.9s
GLA    Glamis           50.13  85  P       P         04 56 23.3 +0.5
       baz=313,SNR=55
GLA                                S       S         05 03 27.5 +1.7
       baz=313
GLA    Glamis           50.13  85  IAmb    IAmb      04 56 24.4
       comp=Z,117nm,0.7s
ESJX   Sierra Juarez    50.15  87  IAmb    IAmb      04 56 23.9
       comp=Z,52nm,0.7s
ULM    Lac du Bonnet    50.23  56  P       P         04 56 22.3 -0.9
       comp=Z,74nm,0.8s,baz=303,slow=8.1,SNR=117
ULM                                ScP     ScP       05 01 22.8 -3.2
       comp=Z,11nm,0.7s,baz=282,slow=5.0,SNR=4.3
ULM    Lac du Bonnet    50.23  56c iP      P         04 56 22.0 -1.2
N23A   Red Feather La   50.39  71  P       P         04 56 24.7 -0.2
       baz=309,SNR=34
WUAZ   Wupatki          50.60  80  P       P         04 56 27.3 +0.9
       baz=312,SNR=200
WUAZ                               S       S         05 03 35.2 +2.7
       baz=312
YOJ    Yonaguni jima    50.63 260  P       P         04 56 25.2 -1.3
YOJ                                pmax    pmax
       comp=Z,283nm,1.2s
YOJ    Yonaguni jima    50.63 260  P       P         04 56 25.2 -1.3
HOPEN  Hopen            50.81 353 eP       P         04 56 27.7 +0.6
HSPB   Hornsund (broa   50.95 355 eP       P         04 56 28.9 +0.7
HSPB                              epP      pP        04 56 56.0 +2.3
HSPB   Hornsund (broa   50.95 355 eP       P         04 56 28.6 +0.4
DAG    Danmarks Havn    51.05   5⇓iP       P         04 56 29.1 +0.1
DAG                                pmax    pmax
       comp=Z,39nm,0.8s
DAG    Danmarks Havn    51.05   5⇓iP       P         04 56 29.1 +0.1
       comp=Z,39nm,0.8s
DAG    Danmarks Havn    51.05   5⇓iP       P         04 56 29.1 +0.1
DAG                                IAmb    IAmb      04 56 29.6
       comp=Z,39nm,0.8s
MVCO   Mesa Verde       51.23  77  P       P         04 56 31.2  0.0
       baz=311,SNR=112
MVCO                               S       S         05 03 42.9 +1.6
       baz=311
ISCO   Idaho Springs    51.28  72  P       P         04 56 31.7 +0.1
       baz=310,SNR=50
ISCO   Idaho Springs    51.28  72  IAmb    IAmb      04 56 33.1
       comp=Z,95nm,1.2s
X16A   Lo Mia Camp, P   51.29  81  IAmb    IAmb      04 56 35.0
       comp=Z,136nm,0.9s
NUUG   Nuugaatsiaq      51.33  19 i P      P         04 56 31.6 +0.5
NUUG                               IAmb    IAmb      04 56 32.1
       comp=Z,30nm,0.8s
AGMN   Agassiz Nation   51.42  58  P       P         04 56 31.0 -1.1
       baz=308,SNR=76
AGMN   Agassiz Nation   51.42  58  IAmb    IAmb      04 56 32.9
       comp=Z,194nm,1.1s
YHNB   Yeheng           51.48 261  P       P         04 56 32.0 -0.9
YHNB                               IAmb    IAmb      04 56 34.4
       comp=Z,75nm,0.8s
SFX    San Felipe       51.49  87  P       P         04 56 32.9  0.0
D32A   Dogwood Acres,   51.52  60  IAmb    IAmb      04 56 32.8
       comp=Z,159nm,0.9s
WHN    Wuhan            51.61 272 ⇓P       P         04 56 34.3 +0.5
WHN                                S       S         05 03 50.5 +4.3
WHN                                pmax    pmax
       comp=Z,530nm,0.8s
WHN                                LR      LR
       comp=Z,4µm,41.6s
NACB   Ninganchiao      51.71 261  P       P         04 56 33.4 -1.1
NACB                               IAmb    IAmb      04 56 35.7
       comp=Z,172nm,1.1s
W18A   Petrified Fore   51.87  80  P       P         04 56 36.7 +0.8
       baz=312,SNR=22
W18A                               S       S         05 03 53.1 +3.1
       baz=312
S22A   4UR Ranch, Cre   51.89  75  P       P         04 56 36.9 +0.8
       baz=311,SNR=165
S22A   4UR Ranch, Cre   51.89  75  IAmb    IAmb      04 56 38.3
       comp=Z,139nm,1.1s
Q24A   Divide           52.09  73  P       P         04 56 37.8 +0.1
       baz=311,SNR=13
214A   Organ Pipe Nat   52.12  85  P       P         04 56 38.0 +0.4
       baz=314,SNR=41
214A                               S       S         05 03 54.5 +1.3
       baz=314
SUSD   Miller           52.15  64  P       P         04 56 36.6 -1.0
       baz=309,SNR=21
YULB   Yu-li            52.47 260  P       P         04 56 39.6 -0.6
B35A   Bob, Littlefor   52.50  57  IAmb    IAmb      04 56 40.4
       comp=Z,162nm,0.9s
XAN    Xi'an            52.56 279  P       P         04 56 41.1 +0.2
XAN                                pP      pP        04 57 05.6 -1.3
XAN                                PcP     PcP       04 57 49.8 +0.2
XAN                                PP      PP        04 58 41.1 +0.5
XAN                                SS      SKiKP     05 07 40.6  -10
XAN                                pmax    pmax
       comp=Z,200nm,1.3s
XAN                                pmax    pmax
       comp=Z,710nm,6.3s
XAN                                LR      LR
       comp=Z,410nm,23.5s
XAN                                LR      LR
       comp=Z,550nm,19.1s
XAN                                LR      LR
       comp=Z,1µm,41.2s
OGNE   Ogallala         52.63  69  P       P         04 56 41.2 -0.1
       baz=310,SNR=22
OGNE   Ogallala         52.63  69  IAmb    IAmb      04 56 42.5
       comp=Z,143nm,0.9s
SDCO   Great Sand Dun   52.68  74  P       P         04 56 42.4 +0.4
       baz=311,SNR=144
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SDCO   Great Sand Dun   52.68  74  IAmb    IAmb      04 56 43.8
       comp=Z,130nm,1.1s
F33A   5 Mile Ranch,    52.72  61  IAmb    IAmb      04 56 41.6
       comp=Z,100nm,1.0s
ZALV   Zalesovo Beam    52.92 312  P       P         04 56 42.4 -0.7
       comp=Z,8.2nm,0.6s,baz=49,slow=6.9,SNR=40
ZALV                               PcP     PcP       04 57 50.4 -0.2
       comp=Z,36nm,0.7s,baz=32,slow=3.7,SNR=15
ZALV                               ScP     ScP       05 01 34.9 -2.6
       comp=Z,5.6nm,0.7s,baz=30,slow=5.2,SNR=6.0
ZALV                               PKiKP   PKiKP     05 04 26.3 -1.7
       comp=Z,1.9nm,0.5s,baz=116,slow=1.6,SNR=4.6
ZALV                               LR      LR        05 20 07.9
       comp=Z,168nm,20.1s,baz=30,slow=37
ZALV   Zalesovo Beam    52.92 312  P       P         04 56 42.1 -1.0
ZALV                               PcP     PcP       04 57 49.8 -0.8
QZH    Quanzhou         52.98 264⇓iP       P         04 56 43.9  0.0
QZH                                sP      sP        04 57 23.4 +1.1
QZH                                S       S         05 04 06.3 +1.3
QZH                                pmax    pmax
       comp=Z,170nm,1.3s
SUMG   Summit           53.01  13 i P      P         04 56 45.0 +1.0
SUMG                              i                  04 57 10.5
SUMG                               pmax    pmax
       comp=Z,180nm,0.8s
SUMG   Summit           53.01  13  P       P         04 56 44.2 +0.2
SUMG                               IAmb    IAmb      04 57 13.7
       comp=Z,188nm,1.2s
SUMG   Summit           53.01  13 i P      P         04 56 45.0 +1.0
       comp=Z,180nm,0.8s
SUMG                              i                  04 57 10.5
SUMG   Summit           53.01  13 i P      P         04 56 45.0 +1.0
SUMG                               IAmb    IAmb      04 56 45.8
       comp=Z,181nm,0.8s
SUMG                              i                  04 57 10.6
TUC    Tucson           53.13  83  P       P         04 56 45.3 +0.2
TUC                                pmax    pmax
       comp=Z,528nm,2.0s
TUC    Tucson           53.13  83  P       P         04 56 45.7 +0.6
       baz=314
TUC                                S       S         05 04 07.9 +0.9
       baz=314
TUC    Tucson           53.13  83  P       P         04 56 45.3 +0.2
BJO1   Bjornoya         53.19 354 eP       P         04 56 45.5 +0.7
DBG    Daneborg         53.35   7 i P      P         04 56 46.1 +0.2
DBG                                IAmb    IAmb      04 56 46.8
       comp=Z,50nm,0.7s
DBG                               i                  04 57 43.7
KSCO   Kaye Shedlock'   53.55  71  P       P         04 56 48.5 +0.4
       baz=311,SNR=34
ILULI  Ilulissat        53.61  20 i P      P         04 56 48.0 +0.1
ILULI                              pmax    pmax
       comp=Z,44nm,0.7s
ILULI  Ilulissat        53.61  20 i P      P         04 56 48.0 +0.1
       comp=Z,44nm,0.7s
ILULI  Ilulissat        53.61  20 i P      P         04 56 48.1 +0.1
ILULI                              IAmb    IAmb      04 56 48.7
       comp=Z,44nm,0.7s
T25A   Trinidad         53.73  74  P       P         04 56 50.1 +0.6
       baz=312,SNR=146
T25A                               S       S         05 04 15.3  0.0
       baz=312
ECSD   EROS Data Cent   53.90  63  P       P         04 56 48.9 -1.6
       baz=310,SNR=71
EYMN   Ely              53.92  56  P       P         04 56 49.8 -0.7
       baz=310,SNR=71
ANMO   Albuquerque      53.97  77c iP      P         04 56 51.6 +0.3
ANMO                               pmax    pmax
       comp=Z,99nm,1.3s
ANMO   Albuquerque      53.97  77  P       P         04 56 51.8 +0.4
       baz=313
ANMO   Albuquerque      53.97  77  P       P         04 56 51.7 +0.4
ANMO                               IAmb    IAmb      04 56 53.2
       comp=Z,89nm,1.2s
F36A   Milaca           54.20  59  IAmb    IAmb      04 56 52.7
       comp=Z,90nm,1.1s
LZH    Lanzhou          54.26 285 ⇓P       P         04 56 54.8 +1.4
LZH                                pP      pP        04 57 20.6 +1.1
LZH                                sP      sP        04 57 33.4 +1.7
LZH                                PcP     PcP       04 57 57.4 +1.2
LZH                                PP      PP        04 58 55.0 -1.0
LZH                                ScP     ScP       05 01 44.0 +0.1
LZH                                S       S         05 04 20.3 -2.0
LZH                                ScS     ScS       05 06 31.3 -0.4
LZH                                pmax    pmax
       comp=Z,440nm,1.3s
LZH                                pmax    pmax
       comp=Z,1µm,5.7s
LZH                                LR      LR
       comp=Z,820nm,16.3s
LZH                                LR      LR
       comp=Z,720nm,16.3s
LZH                                LR      LR
       comp=Z,930nm,17.2s
Y22D   IRIS PASSCAL I   54.28  79  P       P         04 56 55.0 +1.4
       baz=313,SNR=12
DGZ    Jazzator, Alta   54.40 307d iP      P         04 56 55.0 +0.8
DGZ                                pmax    pmax
       comp=Z,169nm,1.0s
GTA    Gaotai           54.42 290 ⇓P       P         04 56 55.5 +1.0
GTA                                pP      pP        04 57 18.0 -2.7
GTA                                sP      sP        04 57 30.3 -2.5
GTA                                PcP     PcP       04 57 57.5 +0.8
GTA                                PP      PP        04 58 59.0 +1.7
GTA                                ScP     ScP       05 01 44.1 -0.4
GTA                                PcS     PcS       05 01 57.0 +0.5
GTA                                S       S         05 04 26.3 +1.9
GTA                                ScS     ScS       05 06 31.3 -1.4
GTA                                pmax    pmax
       comp=Z,320nm,1.1s
GTA                                pmax    pmax
       comp=Z,390nm,5.6s
GTA                                LR      LR
       comp=Z,510nm,17.8s
GTA                                LR      LR
       comp=Z,650nm,17.1s
GTA                                LR      LR
       comp=Z,510nm,17.1s
BGNE   Belgrade         54.55  66  P       P         04 56 54.6 -0.7
       baz=311,SNR=22
319A   Douglas          54.70  83  IAmb    IAmb      04 56 58.6
       comp=Z,142nm,1.1s
ENH    Enshi            54.81 276  P       P         04 56 56.4 -0.8
ENH                                IAmb    IAmb      04 56 58.2
       comp=Z,138nm,0.8s
121A   Cookes Peak, D   54.81  81  P       P         04 56 58.2 +0.8
       baz=314,SNR=50
121A                               S       S         05 04 33.0 +3.1
       baz=314
SPMN   Marine on St.    55.00  60  P       P         04 56 57.6 -0.7
       baz=311,SNR=34
SPMN   Marine on St.    55.00  60  IAmb    IAmb      04 56 59.0
       comp=Z,94nm,0.8s
HSIG                    55.32  86  P       P         04 57 01.2 +0.4
HSIG                                       PcP       04 58 00.5 +0.3
CBKS   Cedar Bluff      55.36  70  P       P         04 57 01.0 -0.2
       baz=312,SNR=107
N33A   J Bar K, Exete   55.39  66  IAmb    IAmb      04 57 01.4
       comp=Z,178nm,1.1s
SFJD   Kangerlussuaq    55.52  21 i P      P         04 57 00.8 -0.9
SFJD   Kangerlussuaq    55.52  21 i P      P         04 57 00.8 -0.9
SFJD   Kangerlussuaq    55.52  21 i P      P         04 57 00.8 -0.9
SRIG   Santa Rosalia    55.73  88  IAmb    IAmb      04 57 06.2
       comp=Z,60nm,0.9s
ICESG  Greenland Ices   55.90  16⇓iP       P         04 57 05.0 +0.1
ICESG                              IAmb    IAmb      04 57 05.4
       comp=Z,68nm,0.7s
R32A   Long Quarter,    56.22  69  IAmb    IAmb      04 57 08.3
       comp=Z,138nm,0.9s
G40A   Rib Lake         56.35  58  IAmb    IAmb      04 57 08.7
       comp=Z,82nm,0.8s
HAMF   Hammerfest       56.51 351 eP       P         04 57 08.0 -0.8
K38A   Parkersburg      56.73  62  IAmb    IAmb      04 57 11.8
       comp=Z,184nm,1.2s
MNTX   Cornudas Mount   56.86  80  P       P         04 57 12.6 +0.8
       baz=314,SNR=151
MNTX                               S       S         05 05 00.1 +3.5
       baz=314
MSTX   Muleshoe         56.86  76  P       P         04 57 11.9  0.0
       baz=314,SNR=95
MSTX                               S       S         05 04 58.7 +1.8
       baz=314
AMTX   Amarillo         56.88  74  P       P         04 57 12.3 +0.2
       baz=314
AMTX   Amarillo         56.88  74  P       P         04 57 12.2 +0.2
AMTX                               IAmb    IAmb      04 57 13.6
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       comp=Z,90nm,0.7s
SCO    Scoresbysund     56.92   8 i P      P         04 57 12.5 +0.9
SCO                                pmax    pmax
       comp=Z,34nm,0.9s
SCO    Scoresbysund     56.92   8 i P      P         04 57 12.5 +0.9
       comp=Z,34nm,0.9s
SCO    Scoresbysund     56.92   8 i P      P         04 57 12.6 +0.9
SCO                                IAmb    IAmb      04 57 13.4
       comp=Z,34nm,0.9s
KSU1   Kansas State U   56.97  67  P       P         04 57 11.6 -1.0
       baz=313,SNR=44
SCIA   State Center     56.98  63  P       P         04 57 12.2 -0.4
       baz=313,SNR=10
I40A   Norwalk          57.05  59  IAmb    IAmb      04 57 13.6
       comp=Z,103nm,0.6s
ZSN    Zaisan           57.17 306⇓iP       P         04 57 14.4 +0.6
       comp=Z,113nm,0.9s,baz=307
ZSN                               eS       S         05 05 03.2 +2.8
       baz=307
ZSN    Zaisan           57.17 306d iP      P         04 57 14.4 +0.6
ZSN                               eS       S         05 05 03.1 +2.7
ZSN                                pmax    pmax
       comp=Z,113nm,0.9s
SEM    Semipalatinsk    57.37 311 eP       P         04 57 14.6 -0.8
       comp=Z,79nm,1.5s,baz=312
SEM    Semipalatinsk    57.37 311 eP       P         04 57 14.6 -0.8
SEM                                pmax    pmax
       comp=Z,79nm,1.5s
ARA0   ARCESS Array S   57.38 349 eP       P         04 57 14.7 -0.2
ARCES  ARCESS Array B   57.38 349  P       P         04 57 14.7 -0.2
       comp=Z,79nm,0.7s,baz=26,slow=8.4,SNR=186
ARCES                              PcP     PcP       04 58 07.0 -0.6
       comp=Z,15nm,0.6s,baz=19,slow=4.4,SNR=5.6
ARCES                              ScP     ScP       05 01 54.6 -2.3
       comp=Z,13nm,1.1s,baz=24,slow=6.9,SNR=2.6
ARCES                              PKPPKP  P'P'df    05 26 58.3 -5.4
       comp=Z,16nm,1.1s,baz=357,slow=2.4,SNR=4.0
ARCES                              LR      LR        05 27 17.0
       comp=Z,214nm,18.0s,baz=5.0,slow=42
ARCES  ARCESS Array B   57.38 349  P       P         04 57 14.5 -0.4
ARCES                              pmax    pmax
       comp=Z,80nm,0.8s
ARCES  ARCESS Array B   57.38 349  P       P         04 57 14.5 -0.4
ARCES                              IAmb    IAmb      04 57 15.7
       comp=Z,80nm,0.8s
KAN12  Harper NE Stat   57.40  70  IAmb    IAmb      04 57 15.8
       comp=Z,65nm,0.6s
U32A   Winter Ranch,    57.44  71  IAmb    IAmb      04 57 17.3
       comp=Z,109nm,0.8s
KAN08  Anthony NE Sta   57.46  70  IAmb    IAmb      04 57 16.3
       comp=Z,208nm,1.4s
LVZ    Lovozero         57.66 345d iP      P         04 57 16.0 -0.9
LVZ                                pmax    pmax
       comp=Z,271nm,1.0s
LVZ    Lovozero         57.66 345  P       P         04 57 16.0 -0.9
CD2    Chengdu          57.87 280  P       P         04 57 19.6 +0.6
CD2                                S       S         05 05 10.8 +0.7
CD2                                sS      sS        05 05 55.5 -0.1
CD2                                pmax    pmax
       comp=Z,330nm,0.7s
CD2                                LR      LR
       comp=Z,780nm,21.6s
CD2                                LR      LR
       comp=Z,670nm,21.6s
CD2                                LR      LR
       comp=Z,640nm,17.2s
KURK   Kurchatov        57.91 313  P       P         04 57 18.6 -0.3
KURK                               pmax    pmax
       comp=Z,246nm,1.6s
KURK   Kurchatov        57.91 313  P       P         04 57 18.6 -0.3
KURK                               IAmb    IAmb      04 57 20.5
       comp=Z,246nm,1.6s
JFWS   Jewell Farm      57.91  60  P       P         04 57 17.9 -1.2
       baz=313,SNR=30
TRO    Tromso           57.93 352 eP       P         04 57 18.8 +0.1
L40A   Anamosa          57.97  61  IAmb    IAmb      04 57 20.1
       comp=Z,125nm,0.8s
KURBB  Kurchatov Arra   58.01 313  P       P         04 57 19.5 -0.1
       comp=Z,33nm,0.7s,baz=42,slow=6.8,SNR=192
KURBB                              ScP     ScP       05 01 57.9 -2.0
       comp=Z,6.1nm,0.7s,baz=44,slow=4.4,SNR=6.1
KTK1   Kautokeino       58.12 350 eP       P         04 57 20.0 -0.1
APA    Apatity          58.16 345⇓iP       P         04 57 18.7 -1.6
APA                               i *PP    pP        04 57 44.4 -2.2
APA                               i                  04 58 09.5
APA                                pmax    pmax
       comp=Z,26nm,1.1s
APA                                MLR     MLR
       comp=Z,1µm,12.0s
WMQ    Urumqi           58.19 302  P       P         04 57 22.8 +1.7
WMQ                                pP      pP        04 57 47.0 -0.5
WMQ                                sP      sP        04 57 57.5 -2.1
WMQ                                PcP     PcP       04 58 14.3 +3.0
WMQ                                S       S         05 05 15.6 +1.7
WMQ                                sS      sS        05 06 00.8 +3.1
WMQ                                pmax    pmax
       comp=Z,580nm,0.9s
WMQ                                pmax    pmax
       comp=Z,2µm,4.7s
WMQ                                LR      LR
       comp=Z,930nm,18.1s
WMQ                                LR      LR
       comp=Z,740nm,18.7s
WMQ                                LR      LR
       comp=Z,570nm,25.1s
P38A   Dawn             58.36  65  P       P         04 57 21.2 -0.9
T35A   Sooner Cattle    58.52  69  IAmb    IAmb      04 57 24.3
       comp=Z,131nm,1.1s
WMOK   Wichita Mounta   58.70  72  P       P         04 57 24.8 +0.1
       baz=314,SNR=69
WMOK   Wichita Mounta   58.70  72  IAmb    IAmb      04 57 26.1
       comp=Z,66nm,1.1s
MK31   Makanchi Array   58.90 307d iP      P         04 57 25.3 -0.5
MK31   Makanchi Array   58.90 307  P       P         04 57 25.3 -0.5
MK31                               IAmb    IAmb      04 57 26.9
       comp=Z,100nm,0.8s
MKAR   Makanchi Array   58.90 307  P       P         04 57 25.4 -0.4
       comp=Z,103nm,0.8s,baz=52,slow=7.1,SNR=760
MKAR                               ScP     ScP       05 02 01.5 -2.5
       comp=Z,3.1nm,0.9s,baz=64,slow=3.4,SNR=2.5
MKAR                               PKiKP   PKiKP     05 04 33.8 -1.4
       comp=Z,1.1nm,0.7s,baz=12,slow=0.8,SNR=2.9
MKAR                               LR      LR        05 23 46.0
       comp=Z,315nm,21.5s,baz=34,slow=37
MKAR   Makanchi Array   58.90 307  P       P         04 57 25.0 -0.8
QUOK   Quay             58.92  70  IAmb    IAmb      04 57 26.7
       comp=Z,104nm,1.2s
OK025  Westminster Rd   58.97  71  IAmb    IAmb      04 57 28.0
       comp=Z,164nm,1.2s
OKCFA  Oklahoma City    59.02  71  IAmb    IAmb      04 57 28.6
       comp=Z,161nm,1.3s
MAKZ   Makanchi         59.04 307  P       P         04 57 26.3 -0.6
MAKZ                               pmax    pmax
       comp=Z,150nm,0.9s
MAKZ   Makanchi         59.04 307  P       P         04 57 26.3 -0.6
FNO    Franklin         59.16  71  IAmb    IAmb      04 57 29.1
       comp=Z,122nm,1.0s
ISOG   Isortoq, Green   59.18  18 i P      P         04 57 26.8 -0.6
ISOG                               IAmb    IAmb      04 57 27.6
       comp=Z,39nm,0.8s
GYA    Guiyang          59.26 275 ⇓P       P         04 57 28.8  0.0
GYA                                pP      sP        04 58 00.0 -7.4
GYA                                sP      PcP       04 58 12.6 -3.3
GYA                                PcP     PcP       04 58 16.9 +1.0
GYA                                ScP     ScP       05 02 05.9 -0.1
GYA                                S       S         05 05 28.1 -0.2
GYA                                ScS     ScS       05 07 09.3 +1.0
GYA                                pmax    pmax
       comp=Z,130nm,1.0s
GYA                                pmax    pmax
       comp=Z,680nm,3.5s
GYA                                LR      LR
       comp=Z,540nm,28.1s
ANGG   Ammassalik, Gr   59.37  17  P       P         04 57 28.0 -0.7
ANGG   Ammassalik, Gr   59.37  17 i P      P         04 57 27.9 -0.9
MATQ   Matagami         59.42  47  P       P         04 57 28.4 -1.0
       baz=316,SNR=21
MATQ                               S       S         05 05 26.2 -3.3
       baz=316
GLMI   Grayling         59.54  55  P       P         04 57 30.3 +0.1
       baz=314,SNR=26
TX32   Lajitas Array    59.57  80  IAmb    IAmb      04 57 31.9
       comp=Z,82nm,0.7s
TXAR   Lajitas Array    59.57  80  P       P         04 57 31.1 +0.3
       comp=Z,56nm,0.5s,baz=305,slow=4.9,SNR=782
TXAR                               ScP     ScP       05 02 06.4 -1.0
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	comp=Z,15nm,0.8s,baz=290,slow=3.7,SNR=11						
TXAR				LR	LR	05 20 45.7	
	comp=Z,294nm,21.7s,baz=0.0,slow=33						
TXAR				PKPPKP	**P'P'df**	**05 27 04.3**	**+4.0**
	comp=Z,3.1nm,0.9s,baz=134,slow=5.4,SNR=9.2						
TXAR				PKP2bc		05 27 11.5	
	comp=Z,3.3nm,0.9s,baz=142,slow=6.3,SNR=7.1						
TXAR	**Lajitas Array**	**59.57**	**80**	P	**P**	**04 57 30.7**	**-0.1**
N2VI	**Vinje**	**59.58**	**354**	*e*P	**P**	**04 57 30.9**	**+0.8**
TUL1	**Leonard**	**59.64**	**70**	P	**P**	**04 57 30.6**	**-0.5**
	baz=314,SNR=38						
L44A	**Lake County Fo**	**59.67**	**59**	P	**P**	**04 57 30.7**	**-0.5**
	baz=314,SNR=28						
ABTX	**Abilene, Hawle**	**59.67**	**75**	P	**P**	**04 57 31.7**	**+0.3**
	baz=315,SNR=81						
ABTX				S	**S**	**05 05 33.5**	**+0.2**
	baz=315						
SLBS	**Sierra La Lagu**	**59.78**	**90**	P	**P**	**04 57 32.8**	**+0.5**
SLBS				IAmb	IAmb	04 57 35.5	
	comp=Z,92nm,0.8s						
N2IH	**Innhavet**	**59.81**	**353**	*e*P	**P**	**04 57 31.9**	**+0.2**
TGY	**Tagaytay City**	**59.81**	**253**	LR	LR	05 22 30.0	
	comp=Z,148nm,20.0s,baz=135,slow=35						
BVAR	**Borovoye Array**	**59.81**	**319**	P	**P**	**04 57 31.2**	**-0.8**
	comp=Z,12nm,0.5s,baz=40,slow=12,SNR=76						
BVAR				pP	**pP**	**04 57 59.7**	**+1.2**
	comp=Z,9.2nm,0.5s,baz=64,slow=10,SNR=4.6						
BVAR				ScP	**ScP**	**05 02 06.8**	**-1.1**
	comp=Z,6.5nm,0.6s,baz=19,slow=19,SNR=9.0						
LOF	**Lofoten**	**59.81**	**354**	*e*P	**P**	**04 57 31.5**	**-0.2**
BRVK	**Borovoye**	**59.83**	**319**	*d i*P	**P**	**04 57 32.0**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,60nm,1.3s						
BRVK	**Borovoye**	**59.83**	**319**	P	**P**	**04 57 32.2**	**+0.1**
BRVK	**Borovoye**	**59.83**	**319**	P	**P**	**04 57 32.3**	**+0.1**
STEI	**Steigen**	**59.89**	**353**	*e*P	**P**	**04 57 32.2**	**-0.1**
HDIL	**Hopedale**	**60.05**	**62**	P	**P**	**04 57 33.2**	**-0.7**
	baz=314,SNR=56						
HPIG		**60.06**	**84**	P	**P**	**04 57 34.2**	**-0.1**
HPIG				IAmb	IAmb	04 57 36.0	
	comp=Z,228nm,1.7s						
U38A	**Gravette**	**60.08**	**68**	IAmb	IAmb	04 57 34.7	
	comp=Z,97nm,1.2s						
N2SV	**S¸rv¥gen**	**60.08**	**354**	*e*P	**P**	**04 57 33.6**	**+0.1**
N2TV	**T¥rnvik**	**60.26**	**353**	*e*P	**P**	**04 57 34.9**	**+0.1**
FAUS	**Fauske**	**60.43**	**353**	*e*P	**P**	**04 57 36.2**	**+0.2**
N2ST	**Straumen**	**60.44**	**353**	*e*P	**P**	**04 57 36.1**	**+0.1**
TMCR	**Tamitsa**	**60.44**	**342**	*e*P	**P**	**04 57 34.0**	**-2.1**
TMCR				pmax	pmax		
	comp=Z,95nm,0.8s						
HHAR	**Hobbs**	**60.45**	**68**	IAmb	IAmb	04 57 36.6	
	comp=Z,60nm,0.6s						
RABL	**Rabaul**	**60.57**	**212**	P	**P**	**04 57 37.9**	**+0.3**
	comp=Z,160nm,1.6s						
SVE	**Sverdlovsk**	**60.58**	**326**	⇑*e*P	**P**	**04 57 37.5**	**+0.3**
SVE				*e*S	**S**	**05 05 48.0**	**+3.9**
SVE				pmax	pmax		
	comp=Z,65nm,1.2s						
Z35A	**Perchaven, San**	**60.59**	**73**	IAmb	IAmb	04 57 38.6	
	comp=Z,154nm,1.4s						
CCM	**Cathedral Cave**	**60.73**	**65**	P	**P**	**04 57 37.1**	**-1.4**
CCM				pmax	pmax		
	comp=Z,57nm,0.7s						
CCM	**Cathedral Cave**	**60.73**	**65**	P	**P**	**04 57 37.0**	**-1.4**
	baz=315						
CCM	**Cathedral Cave**	**60.73**	**65**	P	**P**	**04 57 37.1**	**-1.4**
CCM				IAmb	IAmb	04 57 38.4	
	comp=Z,57nm,0.7s						
MGMO	**Mountain Grove**	**60.79**	**66**	IAmb	IAmb	04 57 39.5	
	comp=Z,126nm,1.1s						
X37A	**Clayton**	**60.81**	**70**	IAmb	IAmb	04 57 41.0	
	comp=Z,105nm,1.1s						
NBB05	**Inndyr**	**60.86**	**354**	*e*P	**P**	**04 57 39.1**	**+0.2**
SLM	**Saint Louis**	**60.88**	**64**	IAmb	IAmb	04 57 40.0	
	comp=Z,191nm,1.2s						
U40A	**Yellville**	**61.02**	**67**	P	**P**	**04 57 39.0**	**-1.4**
	baz=315,SNR=120						
U40A	**Yellville**	**61.02**	**67**	IAmb	IAmb	04 57 41.5	
	comp=Z,214nm,1.2s						
BRZS	**Berezniki**	**61.09**	**315**	⇓*i*P	**P**	**04 57 40.4**	**-0.4**
	baz=315						
BRZS	**Berezniki**	**61.09**	**315**	*d i*P	**P**	**04 57 40.3**	**-0.4**
JCT	**Junction City**	**61.10**	**77**	P	**P**	**04 57 40.8**	**-0.3**
	baz=316,SNR=42						
JCT				S	**S**	**05 05 49.5**	**-2.0**
	baz=316						
JCT	**Junction City**	**61.10**	**77**	IAmb	IAmb	04 57 42.1	
	comp=Z,189nm,1.4s						
W39A	**Magazine**	**61.30**	**69**	P	**P**	**04 57 41.9**	**-0.5**
	baz=315,SNR=50						
W39A	**Magazine**	**61.30**	**69**	IAmb	IAmb	04 57 43.2	
	comp=Z,223nm,1.4s						
SFIN	**Lafayette**	**61.37**	**60**	P	**P**	**04 57 42.5**	**-0.2**
	baz=315,SNR=18						
WHTX	**Lake Whitney,**	**61.42**	**74**	P	**P**	**04 57 43.6**	**+0.3**
	baz=316,SNR=31						
WHTX				S	**S**	**05 05 58.3**	**+2.8**
	baz=316						
WHTX	**Lake Whitney,**	**61.42**	**74**	IAmb	IAmb	04 57 44.8	
	comp=Z,71nm,0.7s						
KONS	**Konsvik**	**61.46**	**354**	*e*P	**P**	**04 57 42.9**	**0.0**
ARU	**Arti**	**61.60**	**327**	P	**P**	**04 57 43.4**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=2.6,slow=3.8,SNR=29						
ARU				LR	LR	05 24 47.4	
	comp=Z,304nm,21.4s,baz=38,slow=36						
ARU	**Arti**	**61.60**	**327**	*d i*P	**P**	**04 57 43.9**	**-0.2**
ARU				*PP	**pP**	**04 58 06.8**	**-3.7**
ARU						04 58 23.7	
ARU						04 59 57.0	
ARU				S	**S**	**05 06 01.1**	**+4.1**
ARU				pmax	pmax		
	comp=Z,61nm,1.9s						
ARU	**Arti**	**61.60**	**327**	P	**P**	**04 57 43.5**	**-0.5**
STOK	**Stokkvaagen**	**61.63**	**354**	*e*P	**P**	**04 57 44.0**	**0.0**
L48A	**N Adams**	**61.67**	**57**	IAmb	IAmb	04 57 45.6	
	comp=Z,120nm,0.8s						
MOR8	**Moi Rana**	**61.69**	**353**	*e*P	**P**	**04 57 43.4**	**-1.1**
N47A	**Urbana**	**61.76**	**59**	IAmb	IAmb	04 57 46.1	
	comp=Z,104nm,1.1s						
AAM	**Ann Arbor**	**61.82**	**57**	P	**P**	**04 57 45.5**	**-0.2**
	baz=316,SNR=13						
AAM	**Ann Arbor**	**61.82**	**57**	IAmb	IAmb	04 57 46.8	
	comp=Z,89nm,0.8s						
P46A	**Rosedale**	**61.85**	**61**	IAmb	IAmb	04 57 47.4	
	comp=Z,126nm,0.8s						
MIAR	**Mount Ida**	**61.88**	**69**	P	**P**	**04 57 46.2**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,371nm,1.3s						
MIAR	**Mount Ida**	**61.88**	**69**	P	**P**	**04 57 46.2**	**-0.1**
	baz=316,SNR=98						
MIAR				S	**S**	**05 06 02.1**	**+0.9**
	baz=316						
MIAR	**Mount Ida**	**61.88**	**69**	P	**P**	**04 57 46.2**	**-0.1**
ALGO	**Algonquin Park**	**61.97**	**51**	P	**P**	**04 57 45.8**	**-0.9**
	baz=317,SNR=13						
K50A	**Casco**	**62.01**	**56**	IAmb	IAmb	04 57 48.5	
	comp=Z,102nm,0.9s						
I51A	**Listowel**	**62.08**	**54**	P	**P**	**04 57 48.0**	**+0.5**
	baz=316,SNR=33						
TDK	**Taldyqorghan**	**62.08**	**308**	*e*P	**P**	**04 57 47.3**	**-0.3**
	comp=Z,184nm,1.1s,baz=308						
TDK	**Taldyqorghan**	**62.08**	**308**	*e*P	**P**	**04 57 47.2**	**-0.3**
TDK				pmax	pmax		
	comp=Z,184nm,1.1s						
WHAR	**Wooly Hollow**	**62.10**	**68**	IAmb	IAmb	04 57 48.6	
	comp=Z,88nm,0.8s						
S44A	**Carbondale**	**62.10**	**64**	IAmb	IAmb	04 57 48.6	
	comp=Z,57nm,0.8s						
SIUC	**Southern Illin**	**62.10**	**64**	IAmb	IAmb	04 57 47.9	
	comp=Z,209nm,1.6s						
LCAR	**Lake Charles**	**62.19**	**66**	P	**P**	**04 57 46.9**	**-1.4**
LCAR				IAmb	IAmb	04 57 48.6	
	comp=Z,96nm,1.3s						
W41B	**Gary Mavity, V**	**62.20**	**68**	P	**P**	**04 57 47.5**	**-0.9**
	baz=316,SNR=71						
W41B	**Gary Mavity, V**	**62.20**	**68**	IAmb	IAmb	04 57 49.4	
	comp=Z,227nm,1.4s						
435B	**Jarrell**	**62.21**	**75**	P	**P**	**04 57 49.0**	**+0.5**
	baz=316,SNR=15						
435B				S	**S**	**05 06 06.9**	**+1.4**
	baz=316						
435B	**Jarrell**	**62.21**	**75**	IAmb	IAmb	04 58 50.1	
	comp=Z,74nm,0.8s						
SADO	**Sadowa**	**62.31**	**52**	LR	LR	05 26 09.9	
	comp=Z,380nm,18.4s,baz=341,slow=37						
SADO	**Sadowa**	**62.31**	**52**	IAmb	IAmb	04 57 49.6	
	comp=Z,77nm,0.8s						
X40A	**Basin Creek Fa**	**62.35**	**69**	P	**P**	**04 57 49.2**	**-0.2**
	baz=316,SNR=48						
X40A	**Basin Creek Fa**	**62.35**	**69**	IAmb	IAmb	04 57 50.2	
	comp=Z,154nm,1.4s						
G54A	**Lake Saint Pet**	**62.36**	**51**	P	**P**	**04 57 48.6**	**-0.7**
	baz=317,SNR=9.1						
237A	**Washetta, Mont**	**62.39**	**73**	IAmb	IAmb	04 57 51.2	
	comp=Z,254nm,1.6s						
N49A	**Columbus Grove**	**62.53**	**58**	IAmb	IAmb	04 57 51.1	
	comp=Z,118nm,0.7s						
BLO	**Bloomington**	**62.54**	**61**	IAmb	IAmb	04 57 51.3	
	comp=Z,93nm,0.9s						
BORG	**Borgarnes**	**62.54**	**10**	P	**P**	**04 57 51.1**	**+0.9**
BORG				pmax	pmax		
	comp=Z,510nm,2.0s						
BORG	**Borgarnes**	**62.54**	**10**	P	**P**	**04 57 51.1**	**+0.9**
E55A	**Montcerf-Lytto**	**62.55**	**49**	P	**P**	**04 57 49.3**	**-1.2**
	baz=318,SNR=17						
PARMO	**Parma**	**62.55**	**65**	IAmb	IAmb	04 57 52.4	
	comp=Z,178nm,0.9s						
KIRV	**Kirov**	**62.63**	**333**	P	**P**	**04 57 50.7**	**-0.2**
	comp=Z,20nm,0.8s,baz=339,slow=2.6,SNR=9.1						
KMI	**Kunming**	**62.65**	**276**	⇓P	**P**	**04 57 52.1**	**+0.3**
KMI				pP	pP	04 58 19.5	+0.8
KMI				sP	PcP	04 58 30.5	+0.8
KMI				S	**S**	**05 06 08.3**	**-3.2**
KMI				sS	sS	05 06 56.3	-1.6
KMI				pmax	pmax		
	comp=Z,130nm,1.1s						
KMI				pmax	pmax		
	comp=Z,650nm,4.5s						
KMI				LR	LR		
	comp=Z,150nm,12.3s						
KMI				LR	LR		
	comp=Z,330nm,13.3s						
KMI				LR	LR		
	comp=Z,320nm,20.6s						
KMI	**Kunming**	**62.65**	**276**	IAmb	IAmb	04 57 53.4	
	comp=Z,108nm,0.8s						
D56A	**ZEC Mazanza, M**	**62.71**	**48**	P	**P**	**04 57 50.5**	**-1.2**
	baz=318,SNR=26						
H53A	**Bobcaygeon**	**62.72**	**52**	P	**P**	**04 57 51.4**	**-0.4**
	baz=317,SNR=19						
PVMO	**Portageville**	**62.76**	**65**	IAmb	IAmb	04 57 53.3	
	comp=Z,243nm,1.1s						
WLAR	**White Oak Lake**	**62.77**	**70**	IAmb	IAmb	04 57 54.5	
	comp=Z,134nm,0.7s						
QIZ	**Qiongzhong**	**62.78**	**266**	P	**P**	**04 57 52.3**	**-0.1**
QIZ				S	**S**	**05 06 13.0**	**+0.2**
QIZ				LR	LR		
	comp=Z,150nm,3.9s						
QIZ				LR	LR		
	comp=Z,260nm,7.7s						
QIZ				LR	LR		
	comp=Z,340nm,14.3s						
M50A	**Fremont**	**62.78**	**57**	IAmb	IAmb	04 57 53.2	
	comp=Z,91nm,0.8s						
HBAR	**Harrisburg**	**62.84**	**66**	IAmb	IAmb	04 57 53.8	
	comp=Z,233nm,1.1s						
PEBM	**Pemiscott Bayo**	**62.89**	**65**	IAmb	IAmb	04 57 54.2	
	comp=Z,209nm,1.1s						
833A	**Chaparral WMA,**	**62.89**	**78**	P	**P**	**04 57 53.7**	**+0.6**
	baz=317,SNR=7.9						
833A				S	**S**	**05 06 15.2**	**+1.1**
	baz=317						
833A	**Chaparral WMA,**	**62.89**	**78**	IAmb	IAmb	04 57 55.2	
	comp=Z,286nm,1.7s						
SHLS	**Shalkode**	**62.90**	**306**	⇓*i*P	**P**	**04 57 52.3**	**-0.9**
	comp=Z,226nm,0.8s,baz=306						
SHLS	**Shalkode**	**62.90**	**306**	*d i*P	**P**	**04 57 52.2**	**-0.9**
SHLS				pmax	pmax		
	comp=Z,226nm,0.8s						
GNAR	**Gosnell**	**62.91**	**66**	P	**P**	**04 57 52.9**	**-0.2**
GNAR				IAmb	IAmb	04 57 53.7	
	comp=Z,198nm,1.3s						
T45A	**Paducah**	**62.92**	**64**	IAmb	IAmb	04 57 56.9	
	comp=Z,86nm,0.8s						
P48A	**Milroy**	**62.92**	**60**	IAmb	IAmb	04 57 53.4	
	comp=Z,122nm,0.8s						
E56A	**St. Veronique**	**62.96**	**48**	P	**P**	**04 57 51.9**	**-1.3**
	baz=318,SNR=21						
O49A	**Covington**	**62.98**	**59**	IAmb	IAmb	04 57 54.1	
	comp=Z,155nm,1.3s						
KPKS	**Kokpek**	**63.06**	**307**	⇓*i*P	**P**	**04 57 54.6**	**+0.5**
	comp=Z,202nm,1.0s,baz=307						
KPKS	**Kokpek**	**63.06**	**307**	*d i*P	**P**	**04 57 54.6**	**+0.5**
KPKS				pmax	pmax		
	comp=Z,202nm,1.0s						
KLMR	**Klimovskoe**	**63.11**	**339**	*e*P	**P**	**04 57 51.8**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,94nm,1.0s						
KLMR	**Klimovskoe**	**63.11**	**339**	*e*P	**P**	**04 57 51.8**	**-2.2**
KLMR				AMP		04 57 55.0	
	comp=Z,94nm,1.0s						
DELO	**Deloro Mine**	**63.23**	**51**	IAmb	IAmb	04 57 56.4	
	comp=Z,143nm,1.3s						
NATX	**Nacogdoches**	**63.24**	**72**	P	**P**	**04 57 55.9**	**+0.5**
	baz=316,SNR=21						
NATX	**Nacogdoches**	**63.24**	**72**	P	**P**	**04 57 55.4**	**+0.1**
P49A	**Miami Univ. Ec**	**63.25**	**60**	P	**P**	**04 57 54.3**	**-1.0**
	baz=316,SNR=20						
P49A	**Miami Univ. Ec**	**63.25**	**60**	IAmb	IAmb	04 57 55.5	
	comp=Z,129nm,1.2s						
Z41A	**Richland Creek**	**63.25**	**70**	P	**P**	**04 57 55.3**	**-0.1**
	baz=316,SNR=11						
Z41A	**Richland Creek**	**63.25**	**70**	IAmb	IAmb	04 57 56.5	
	comp=Z,204nm,1.4s						
WCI	**Wyandotte Cave**	**63.34**	**62**	P	**P**	**04 57 55.3**	**-0.7**
WCI				pmax	pmax		
	comp=Z,106nm,1.2s						
WCI	**Wyandotte Cave**	**63.34**	**62**	P	**P**	**04 57 55.4**	**-0.5**
	baz=316						
WCI	**Wyandotte Cave**	**63.34**	**62**	P	**P**	**04 57 55.3**	**-0.7**
WCI				IAmb	IAmb	04 57 56.7	
	comp=Z,106nm,1.1s						
LATQ	**La Tuque**	**63.36**	**46**	P	**P**	**04 57 55.0**	**-0.8**
	baz=319,SNR=33						
JAY	**Jayapura**	**63.41**	**225**	LR	LR	05 20 19.0	
	comp=Z,286nm,21.2s,baz=12,slow=31						
JAY	**Jayapura**	**63.41**	**225**	P	**P**	**04 57 57.6**	**+0.9**
	comp=Z,1µmcomp=Z,79nm,1.2s						
X43A	**Marvell**	**63.45**	**67**	P	**P**	**04 57 56.3**	**-0.4**
	baz=316,SNR=14						
X43A	**Marvell**	**63.45**	**67**	IAmb	IAmb	04 57 58.2	
	comp=Z,222nm,1.1s						
735A	**Kenedy**	**63.47**	**76**	IAmb	IAmb	04 57 59.5	
	comp=Z,160nm,1.1s						
N51A	**Ashland**	**63.48**	**57**	IAmb	IAmb	04 57 57.9	
	comp=Z,212nm,0.9s						
NSS	**Namsos**	**63.48**	**354**	*e*P	**P**	**04 57 56.2**	**-0.3**
SATY	**Saty**	**63.50**	**307**	⇓*i*P	**P**	**04 57 57.8**	**+0.7**
	comp=Z,134nm,1.2s,baz=307						
SATY	**Saty**	**63.50**	**307**	*d i*P	**P**	**04 57 57.7**	**+0.7**
SATY				pmax	pmax		
	comp=Z,134nm,1.2s						
D58A	**Chemin du LacG**	**63.53**	**47**	P	**P**	**04 57 55.9**	**-1.2**
	baz=319,SNR=32						
M52A	**Chesterland**	**63.55**	**56**	IAmb	IAmb	04 57 58.1	
	comp=Z,110nm,0.7s						
CHKK	**Chushkaly**	**63.61**	**308**	*e*P	**P**	**04 57 57.1**	**-0.6**
	baz=308						
CHKK	**Chushkaly**	**63.61**	**308**	*e*P	**P**	**04 57 57.0**	**-0.6**
F57A	**Harrington**	**63.66**	**49**	P	**P**	**04 57 56.6**	**-1.3**
	baz=318						
ACSO	**Alum Creek Sta**	**63.66**	**58**	P	**P**	**04 57 57.5**	**-0.5**
	baz=317,SNR=32						
ACSO	**Alum Creek Sta**	**63.66**	**58**	IAmb	IAmb	04 57 59.3	
	comp=Z,92nm,0.8s						
GENI	**Genyem**	**63.72**	**225**	P	**P**	**04 57 59.4**	**+0.8**
	comp=Z,7µmcomp=Z,296nm,1.1s						
L53A	**Girard**	**63.81**	**55**	P	**P**	**04 57 59.1**	**+0.1**
	baz=317,SNR=23						
ERPA	**Erie**	**63.83**	**55**	P	**P**	**04 57 58.9**	**-0.1**
	baz=317,SNR=18						
ERPA	**Erie**	**63.83**	**55**	IAmb	IAmb	04 58 00.8	
	comp=Z,172nm,0.8s						
SMPI	**Sarmi**	**63.83**	**227**	P	**P**	**04 58 00.0**	**+0.7**
	comp=Z,1µmcomp=Z,101nm,1.5s						
HKT	**Hockley**	**63.86**	**74**	*c i*P	**P**	**04 57 59.8**	**+0.4**
HKT				pmax	pmax		
	comp=Z,57nm,1.1s						
HKT	**Hockley**	**63.86**	**74**	P	**P**	**04 57 59.8**	**+0.4**
HKT				IAmb	IAmb	04 58 01.5	
	comp=Z,215nm,1.6s						
E58A	**La Victoria**	**63.89**	**47**	P	**P**	**04 57 58.2**	**-1.2**
	baz=319,SNR=29						
PECO	**Prince Edward**	**63.97**	**51**	IAmb	IAmb	04 58 01.2	
	comp=Z,152nm,1.1s						
M53A	**WI Miller and**	**63.97**	**56**	P	**P**	**04 57 59.8**	**-0.3**
	baz=317,SNR=34						
M53A	**WI Miller and**	**63.97**	**56**	IAmb	IAmb	04 58 01.6	
	comp=Z,238nm,1.1s						
WVT	**Waverly**	**64.01**	**64**	P	**P**	**04 58 00.0**	**-0.4**
WVT				pmax	pmax		
	comp=Z,60nm,1.1s						
WVT	**Waverly**	**64.01**	**64**	P	**P**	**04 57 59.7**	**-0.7**
	baz=317						
WVT	**Waverly**	**64.01**	**64**	P	**P**	**04 58 00.0**	**-0.4**
G57A	**Newington**	**64.05**	**49**	P	**P**	**04 57 59.2**	**-1.2**
	baz=318,SNR=7.7						
J55A	**Hilton**	**64.06**	**52**	IAmb	IAmb	04 58 01.5	
	comp=Z,135nm,0.8s						
D59A	**Saint-Raymond**	**64.06**	**46**	P	**P**	**04 57 59.7**	**-0.8**
	baz=319,SNR=21						
MDOK	**Medeo**	**64.09**	**307**	*i* P	**P**	**04 58 01.4**	**+0.3**
	baz=308						
MDOK	**Medeo**	**64.09**	**307**	*i* P	**P**	**04 58 01.3**	**+0.3**
AAA	**Alma-Ata**	**64.12**	**308**	*e*P	**P**	**04 58 01.7**	**+0.6**
	comp=Z,322nm,1.2s,baz=308						
AAA	**Alma-Ata**	**64.12**	**308**	*e*P	**P**	**04 58 01.7**	**+0.6**
AAA				pmax	pmax		
	comp=Z,322nm,1.2s						
BTLS	**Baital**	**64.14**	**311**	⇓*i*P	**P**	**04 58 00.9**	**-0.1**
	baz=311						
BTLS	**Baital**	**64.14**	**311**	*d i*P	**P**	**04 58 00.9**	**-0.1**
E59A	**St. Maurice**	**64.16**	**47**	P	**P**	**04 58 00.8**	**-0.4**
	baz=319						
P51A	**Williamsport**	**64.17**	**59**	IAmb	IAmb	04 58 01.8	
	comp=Z,65nm,0.7s						
TNSS	**Tian-Shan**	**64.23**	**307**	*e*P	**P**	**04 58 02.7**	**+0.5**
	baz=308						
TNSS	**Tian-Shan**	**64.23**	**307**	*e*P	**P**	**04 58 02.7**	**+0.5**
OXF	**Oxford**	**64.30**	**66**	P	**P**	**04 58 01.9**	**-0.3**
	baz=317,SNR=94						
BAKI	**Biak**	**64.33**	**230**	P	**P**	**04 58 03.5**	**+0.9**
	comp=Z,3µmcomp=Z,227nm,1.3s						
N53A	**Lisbon**	**64.36**	**56**	P	**P**	**04 58 02.1**	**-0.5**
N53A				IAmb	IAmb	04 58 03.3	
	comp=Z,86nm,1.0s						
R50A	**Paris**	**64.37**	**60**	IAmb	IAmb	04 58 03.7	
	comp=Z,114nm,1.1s						
MTBS	**Maitube**	**64.42**	**308**	*e*P	**P**	**04 58 03.6**	**+0.6**
	baz=308						
MTBS	**Maitube**	**64.42**	**308**	*e*P	**P**	**04 58 03.6**	**+0.6**
M54A	**Oil Creek Stat**	**64.44**	**55**	P	**P**	**04 58 02.7**	**-0.4**
	baz=318,SNR=15						
M54A	**Oil Creek Stat**	**64.44**	**55**	IAmb	IAmb	04 58 04.5	
	comp=Z,86nm,1.0s						
G58A	**Ormstown**	**64.45**	**49**	P	**P**	**04 58 01.7**	**-1.4**
	baz=319,SNR=12						
143A	**Socs Landing,**	**64.47**	**69**	IAmb	IAmb	04 58 05.5	
	comp=Z,85nm,1.0s						
F59A	**Saint Guilaume**	**64.51**	**48**	P	**P**	**04 58 02.5**	**-0.9**
	baz=319,SNR=22						
J56A	**Wolcott**	**64.52**	**52**	P	**P**	**04 58 03.0**	**-0.6**
	baz=318,SNR=8.1						
J56A	**Wolcott**	**64.52**	**52**	IAmb	IAmb	04 58 04.7	
	comp=Z,133nm,0.8s						
D60A	**Saint Jean D'O**	**64.54**	**46**	P	**P**	**04 58 02.7**	**-0.9**
	baz=320,SNR=6.5						
P52A	**Corning**	**64.54**	**58**	P	**P**	**04 58 03.0**	**-0.8**
	baz=317,SNR=23						
P52A	**Corning**	**64.54**	**58**	IAmb	IAmb	04 58 04.7	
	comp=Z,85nm,0.7s						
O53A	**New Philadelph**	**64.57**	**57**	P	**P**	**04 58 03.2**	**-0.8**
	baz=318,SNR=25						
O53A	**New Philadelph**	**64.57**	**57**	IAmb	IAmb	04 58 04.5	
	comp=Z,86nm,0.8s						
I57A	**Carthage**	**64.61**	**51**	P	**P**	**04 58 03.4**	**-0.7**
	baz=319,SNR=6.7						
LONY	**Lake Ozonia**	**64.61**	**50**	P	**P**	**04 58 02.8**	**-1.4**
	baz=319,SNR=7.6						
D61A	**St Aubert, Com**	**64.65**	**45**	P	**P**	**04 58 03.5**	**-0.8**
	baz=320,SNR=26						
N54A	**Moraine State**	**64.67**	**55**	P	**P**	**04 58 04.0**	**-0.6**
	baz=318,SNR=31						
N54A	**Moraine State**	**64.67**	**55**	IAmb	IAmb	04 58 05.4	
	comp=Z,81nm,0.7s						
PLAL	**Pickwick Lake**	**64.71**	**65**	IAmb	IAmb	04 58 07.7	
	comp=Z,77nm,0.6s						
E60A	**Ste Agathe de**	**64.72**	**46**	P	**P**	**04 58 03.8**	**-1.0**
	baz=320,SNR=16						
K56A	**Middlesex**	**64.72**	**53**	P	**P**	**04 58 04.9**	**0.0**
	baz=318,SNR=48						
SLVN	**Son La**	**64.73**	**273**	P	**P**	**04 58 05.7**	**+0.4**
SLVN				IAmb	IAmb	04 58 07.6	
	comp=Z,170nm,0.9s						
F60A	**Warwick**	**64.80**	**47**	P	**P**	**04 58 04.0**	**-1.3**
	baz=320,SNR=11						
TBLU	**Trondheim**	**64.86**	**355**	*e*P	**P**	**04 58 04.8**	**-0.7**
CLTN	**Cedars of Leba**	**64.87**	**63**	IAmb	IAmb	04 58 07.7	
	comp=Z,130nm,0.9s						
342A	**Flagon Creek P**	**64.89**	**71**	IAmb	IAmb	04 58 07.9	
	comp=Z,107nm,1.2s						
M55A	**Ridgway**	**64.92**	**54**	IAmb	IAmb	04 58 07.4	
	comp=Z,114nm,0.8s						
H58A	**Gabriels**	**64.95**	**49**	P	**P**	**04 58 04.9**	**-1.5**
	baz=319,SNR=6.8						
Q52A	**Bidwell**	**64.97**	**58**	IAmb	IAmb	04 58 07.2	
	comp=Z,92nm,0.7s						
TKM2	**Tokmak 2**	**64.98**	**308**	P	**P**	**04 58 07.5**	**+0.6**
	SNR=83						
H59A	**Cadyville**	**65.00**	**49**	P	**P**	**04 58 05.4**	**-1.3**
	baz=319,SNR=13						
T50A	**Nancy**	**65.01**	**61**	P	**P**	**04 58 06.7**	**-0.2**
T50A				IAmb	IAmb	04 58 07.9	
	comp=Z,79nm,0.8s						
ZAIG	**Zacatecas**	**65.02**	**85**	IAmb	IAmb	04 58 09.4	
	comp=Z,414nm,2.0s						
FIA1	**FINESS Array S**	**65.02**	**346**	IAmb	IAmb	04 58 06.9	
	comp=Z,114nm,0.8s						
FINES	**FINESS Array B**	**65.02**	**346**	P	**P**	**04 58 05.8**	**-0.7**
	comp=Z,94nm,0.8s,baz=19,slow=9.0,SNR=177						
FINES				pP	**PcP**	**04 58 35.5**	**-2.9**
	comp=Z,28nm,0.9s,baz=43,slow=8.6,SNR=3.0						
FINES				PKPPKP	P'P'df	05 26 36.7	-15
	comp=Z,5.6nm,0.9s,baz=113,slow=2.8,SNR=9.4						
FINES				LR	LR	05 32 16.5	
	comp=Z,164nm,18.2s,baz=22,slow=41						
FINES	**FINESS Array B**	**65.02**	**346**	*i* P	**P**	**04 58 05.8**	**-0.7**
FINES				pmax	pmax		
	comp=Z,95nm,0.8s						
L56A	**Greenwood**	**65.03**	**53**	P	**P**	**04 58 07.0**	**0.0**
	baz=318,SNR=124						
L56A				S	**S**	**05 06 40.0**	**-0.1**
	baz=318						
P53A	**Whipple**	**65.04**	**57**	IAmb	IAmb	04 58 07.8	
	comp=Z,63nm,0.8s						
SGDS	**Sogindy**	**65.05**	**309**	⇓*i*P	**P**	**04 58 07.7**	**+0.5**
	comp=Z,93nm,1.8s,baz=309						
SGDS	**Sogindy**	**65.05**	**309**	*d i*P	**P**	**04 58 07.6**	**+0.5**
SGDS				pmax	pmax		
	comp=Z,93nm,1.8s						
O54A	**Avella**	**65.05**	**56**	IAmb	IAmb	04 58 08.4	
	comp=Z,414nm,1.9s						
K57A	**Scipio Center**	**65.09**	**52**	P	**P**	**04 58 06.8**	**-0.5**
	baz=319,SNR=21						
E61A	**Lac Etchemin**	**65.10**	**46**	P	**P**	**04 58 06.5**	**-0.9**
	baz=320,SNR=5.1						
I58A	**Old Forge**	**65.12**	**50**	P	**P**	**04 58 06.4**	**-1.1**
	baz=319,SNR=7.9						
ULHL	**Ulahol**	**65.17**	**307**	P	**P**	**04 58 09.6**	**+1.5**
	SNR=20						
M56A	**Emporium**	**65.20**	**54**	P	**P**	**04 58 07.7**	**-0.4**
	baz=318,SNR=36						
M56A				S	**S**	**05 06 43.8**	**+1.5**
	baz=318						
M56A	**Emporium**	**65.20**	**54**	IAmb	IAmb	04 58 09.0	
	comp=Z,104nm,0.8s						
J58A	**Remsen**	**65.22**	**51**	P	**P**	**04 58 07.4**	**-0.7**
	baz=319,SNR=13						
J58A	**Remsen**	**65.22**	**51**	IAmb	IAmb	04 58 08.7	
	comp=Z,102nm,1.1s						
F61A	**St Evariste**	**65.23**	**46**	P	**P**	**04 58 07.6**	**-0.5**
	baz=320,SNR=13						
D62A	**Allapoint, All**	**65.23**	**44**	P	**P**	**04 58 07.6**	**-0.5**
	baz=321						
D62A	**Allapoint, All**	**65.23**	**44**	IAmb	IAmb	04 58 08.9	
	comp=Z,106nm,1.1s						
USP	**Ospenovka**	**65.25**	**309**	P	**P**	**04 58 09.0**	**+0.6**
	SNR=135						
G60A	**Masonville**	**65.29**	**48**	P	**P**	**04 58 07.3**	**-1.3**
	baz=320						
VBMS	**Vicksburg**	**65.33**	**69**	P	**P**	**04 58 09.1**	**+0.1**
	baz=317,SNR=10						

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VBMS  Vicksburg        65.33  69  P       P        04 58 09.2 +0.3
VBMS                              IAmb    IAmb     04 58 10.3
      comp=Z,96nm,0.7s
CHMS  Chumysh          65.33 309  P       P        04 58 09.5 +0.6
      SNR=39
Q53A  Leroy            65.43  58  P       P        04 58 09.3 -0.2
      baz=318,SNR=67
Q53A                              S       S        05 06 43.8 -1.4
      baz=318
L57A  Andrews Acres    65.48  53  P       P        04 58 09.6 -0.2
      baz=319,SNR=36
K58A  Earlville        65.49  51  P       P        04 58 09.5 -0.4
      baz=319,SNR=12
K58A  Earlville        65.49  51  IAmb    IAmb     04 58 10.8
      comp=Z,133nm,1.3s
KBK   Karagaybulak     65.50 308  P       P        04 58 10.8 +0.7
      SNR=90
J59A  Piesco           65.51  50  P       P        04 58 09.0 -1.0
      baz=319,SNR=14
J59A  Piesco           65.51  50  IAmb    IAmb     04 58 10.2
      comp=Z,56nm,0.6s
G61A  St-Isidore-de-   65.52  47  P       P        04 58 09.2 -0.8
      baz=320,SNR=13
H60A  Morristown       65.53  48  P       P        04 58 09.0 -1.2
      baz=320,SNR=8.7
N56A  West Decatur     65.57  54  P       P        04 58 10.2 -0.2
      baz=318,SNR=28
R53A  Hurricane        65.60  59  IAmb    IAmb     04 58 11.8
      comp=Z,152nm,0.7s
D63A  Stockholm        65.68  44  P       P        04 58 10.2 -0.8
      baz=321,SNR=11
MOL   Molde            65.68 356 eP       P        04 58 11.1 +0.4
MCWV  Mont Chateau     65.72  56  P       P        04 58 10.7 -0.7
      baz=318,SNR=14
AAK   Ala-Archa        65.73 309  P       P        04 58 12.3 +0.7
      comp=Z,66nm,0.8s,baz=111,slow=3.7,SNR=143
AAK                               PP      PP       05 00 34.4 -2.7
      comp=Z,23nm,0.7s,baz=76,slow=4.3,SNR=5.3
AAK                               PKPPKP  P'P'df   05 26 41.8 -8.9
      comp=Z,2.2nm,0.8s,baz=182,slow=3.5,SNR=5.4
AAK                               LR      LR       05 28 09.3
      comp=Z,219nm,18.3s,baz=38,slow=37
AAK   Ala-Archa        65.73 309  P       P        04 58 12.3 +0.7
      SNR=74
AAK   Ala-Archa        65.73 309d iP      P        04 58 12.2 +0.7
AAK                               pmax    pmax
      comp=Z,692nm,1.7s
AAK   Ala-Archa        65.73 309  P       P        04 58 11.9 +0.3
AAK                               IAmb    IAmb     04 58 14.0
      comp=Z,113nm,0.9s
AAK   Ala-Archa        65.73 309  P       P        04 58 12.3 +0.7
BINY  Binghamton       65.75  52  P       P        04 58 11.4 -0.2
      baz=319,SNR=35
BINY  Binghamton       65.75  52  IAmb    IAmb     04 58 12.6
      comp=Z,118nm,0.9s
344A  Westbrook Farm   65.77  70  IAmb    IAmb     04 58 14.5
      comp=Z,305nm,1.8s
I60A  Shoreham         65.80  49  P       P        04 58 10.7 -1.1
      baz=320,SNR=9.4
M57A  Sunshine Farm,   65.84  53  P       P        04 58 11.9 -0.2
      baz=319,SNR=41
M57A                              S       S        05 06 49.6 -0.4
      baz=319
M57A  Sunshine Farm,   65.84  53  IAmb    IAmb     04 58 13.3
      comp=Z,144nm,0.8s
K59A  Cooperstown      65.87  51  P       P        04 58 11.6 -0.8
      baz=319,SNR=12
H61A  Lyndonville      65.91  48  P       P        04 58 11.7 -0.8
      baz=320,SNR=11
O56A  Blue Knob Stat   65.92  55  P       P        04 58 12.1 -0.6
      baz=318,SNR=12
PUL   Pulkovo          65.92 344⇑eP       P        04 58 12.3  0.0
PUL                               pmax    pmax
      comp=Z,78nm,0.7s
L58A  Harry Jones Me   65.94  52  P       P        04 58 12.5 -0.3
      baz=319,SNR=31
ACCN  Adirondack Com   65.97  50  IAmb    IAmb     04 58 13.3
      comp=Z,68nm,0.8s
SSPA  Standing Stone   65.98  54  P       P        04 58 12.7 -0.3
      baz=319
SSPA  Standing Stone   65.98  54  P       P        04 58 12.3 -0.7
SSPA                              IAmb    IAmb     04 58 14.5
      comp=Z,91nm,0.8s
G62A  West of Eustis   66.02  47  P       P        04 58 12.5 -0.7
      baz=320,SNR=16
G62A  West of Eustis   66.02  47  IAmb    IAmb     04 58 13.9
      comp=Z,70nm,0.8s
E63A  Oxbow            66.02  45  P       P        04 58 11.9 -1.2
      baz=321,SNR=16
E63A  Oxbow            66.02  45  IAmb    IAmb     04 58 13.4
      comp=Z,64nm,0.8s
UCH   Uchtor           66.03 308  P       P        04 58 14.6 +0.7
      SNR=50
EKS2  Erkin-Say        66.06 309  P       P        04 58 14.5 +0.9
      SNR=92
N57A  Milroy           66.06  54  P       P        04 58 12.9 -0.7
      baz=319,SNR=18
N57A                              S       S        05 06 52.8 +0.1
      baz=319
TZTN  Tazewell         66.06  61  P       P        04 58 13.4 -0.2
      baz=318,SNR=18
TZTN                              S       S        05 06 52.2 -0.7
      baz=318
W50A  Signal Mountai   66.09  63  IAmb    IAmb     04 58 14.6
      comp=Z,72nm,0.9s
AKN   Aaknes           66.09 356 eP       P        04 58 14.1 +0.7
DOMB  Dombas           66.13 355 eP       P        04 58 13.8 +0.1
LBNH  Lisbon           66.13  48  P       P        04 58 12.9 -1.1
LBNH                              pmax    pmax
      comp=Z,50nm,0.9s
LBNH  Lisbon           66.13  48  P       P        04 58 13.1 -0.9
      baz=320,SNR=10
LBNH  Lisbon           66.13  48  P       P        04 58 12.9 -1.1
M58A  Price's Panora   66.14  53  P       P        04 58 13.7 -0.4
      baz=319,SNR=36
V51A  Loudon           66.17  62  IAmb    IAmb     04 58 15.7
      comp=Z,168nm,1.4s
J60A  Lant Hill Farm   66.20  50  P       P        04 58 13.6 -0.7
      baz=320,SNR=24
R54A  Victor           66.22  58  P       P        04 58 14.3 -0.3
      baz=318,SNR=26
L59A  Walton           66.22  52  P       P        04 58 14.1 -0.5
      baz=319,SNR=19
L59A  Walton           66.22  52  IAmb    IAmb     04 58 15.4
      comp=Z,93nm,0.9s
H62A  Milan            66.23  47  P       P        04 58 13.9 -0.7
      baz=320,SNR=30
H62A  Milan            66.23  47  IAmb    IAmb     04 58 15.2
      comp=Z,129nm,0.6s
I61A  Oroboro, Fairl   66.24  49  P       P        04 58 13.9 -0.7
      baz=320,SNR=10.0
E64A  Bridgewater      66.28  44  P       P        04 58 13.8 -1.1
      baz=321,SNR=20
F63A  Nahmakanta, Br   66.28  45  P       P        04 58 14.1 -0.8
      baz=321,SNR=16
F63A  Nahmakanta, Br   66.28  45  IAmb    IAmb     04 58 15.4
      comp=Z,80nm,0.9s
ZIRO  ZIRO             66.30 285 eP       P        04 58 16.9 +1.4
ZIRO                              IAmb    IAmb     04 58 17.2
      comp=Z,222nm,0.8s
LSA   Lhasa            66.30 288  P       P        04 58 18.1 +2.3
LSA                               pmax    pmax
      comp=Z,1µm,0.9s
LSA   Lhasa            66.30 288  P       P        04 58 16.5 +0.7
LSA                               pmax    pmax
      comp=Z,298nm,1.0s
LSA   Lhasa            66.30 288  P       P        04 58 16.5 +0.7
LSA   Lhasa            66.30 288  P       P        04 58 17.8 +2.0
S54A  Dingess, Beckl   66.33  59  P       P        04 58 15.2 -0.2
      baz=318,SNR=19
S54A  Dingess, Beckl   66.33  59  IAmb    IAmb     04 58 16.4
      comp=Z,68nm,0.7s
KSPA  Keystone Colle   66.34  52  IAmb    IAmb     04 58 16.3
      comp=Z,76nm,0.9s
P56A  Dayton Farm, R   66.35  56  P       P        04 58 15.2 -0.2
      baz=319,SNR=20
FPAL  Fort Paine       66.41  64  IAmb    IAmb     04 58 16.4
      comp=Z,85nm,0.9s
SWI   Sorong           66.42 235  P       P        04 58 16.4 +0.3
      comp=Z,7µmcomp=Z,751nm,1.3s
N58A  Sunbury          66.42  54  P       P        04 58 15.7 -0.2
      baz=319,SNR=48
N58A                              S       S        05 06 55.7 -1.2
      baz=319
N58A  Sunbury          66.42  54  IAmb    IAmb     04 58 17.4
      comp=Z,153nm,1.0s
O57A  Amberson         66.43  55  P       P        04 58 15.7 -0.3
      baz=319,SNR=36
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K60A  Five Rivers En   66.45  51  P       P        04 58 15.0 -1.0
      baz=320
TRY   Troy             66.47  50  P       P        04 58 15.3 -0.8
F64A  Sherman          66.49  45  P       P        04 58 15.3 -0.9
      baz=321,SNR=19
F64A  Sherman          66.49  45  IAmb    IAmb     04 58 16.6
      comp=Z,96nm,1.0s
AML   Almayashu        66.50 309  P       P        04 58 17.7 +0.8
      SNR=95
G63A  Kingsbury        66.51  46  P       P        04 58 15.7 -0.6
      baz=321,SNR=10
Q56A  Snyder Ridge,    66.52  56  P       P        04 58 15.9 -0.6
      baz=319,SNR=7.4
M59A  Waymart          66.52  52  P       P        04 58 16.0 -0.5
      baz=319,SNR=28
J61A  Chester          66.53  49  P       P        04 58 16.0 -0.5
      baz=320,SNR=15
PKME  Peaks-Kenny Pk   66.54  46  P       P        04 58 16.0 -0.5
      baz=321,SNR=7.3
TKL   Tuckaleechee C   66.60  62  LR      LR       05 26 19.1
      comp=Z,308nm,20.5s,baz=318,slow=35
TKL   Tuckaleechee C   66.60  62  IAmb    IAmb     04 58 18.3
      comp=Z,85nm,1.1s
R55A  Marlinton        66.60  58  P       P        04 58 16.9 -0.2
      baz=318,SNR=13
AKTO  Aktyubinsk       66.65 324  P       P        04 58 17.1 -0.1
      comp=Z,28nm,0.6s,baz=51,slow=7.0,SNR=42
AKTO                              LR      LR       05 29 46.6
      comp=Z,221nm,18.8s,baz=29,slow=38
H63A  New Sharon       66.67  47  P       P        04 58 16.6 -0.8
      baz=321,SNR=8.0
I62A  Tamworth         66.69  48  P       P        04 58 16.6 -0.9
      baz=320,SNR=5.5
K61A  Williamstown     66.71  50  P       P        04 58 17.0 -0.7
      baz=320,SNR=9.9
LRAL  Lakeview Retre   66.74  66  P       P        04 58 16.9 -1.1
      baz=318,SNR=17
LRAL  Lakeview Retre   66.74  66  P       P        04 58 16.9 -1.1
L60A  Shokan           66.77  51  P       P        04 58 17.5 -0.5
      baz=320,SNR=11
G64A  Maxfield         66.78  46  P       P        04 58 17.4 -0.7
      baz=321,SNR=7.6
MOKO  MOKOCHONG        66.78 283 eP       P        04 58 19.9 +1.4
MOKO                              IAmb    IAmb     04 58 21.5
      comp=Z,307nm,0.8s
P57A  Homestead Farm   66.78  55  P       P        04 58 17.7 -0.5
      baz=319,SNR=12
N59A  State Game Lan   66.83  53  P       P        04 58 18.2 -0.2
      baz=319,SNR=44
N59A  State Game Lan   66.83  53  IAmb    IAmb     04 58 19.5
      comp=Z,134nm,0.8s
O58A  Lewisberry       66.85  54  P       P        04 58 18.2 -0.4
      baz=319,SNR=16
R56A  Bull Pasture M   66.88  57  P       P        04 58 18.3 -0.6
      baz=319,SNR=12
ABKAR Akbulak array    66.89 322  P       P        04 58 18.3 -0.4
I63A  Otisfield        66.90  48  P       P        04 58 18.5 -0.3
      baz=321,SNR=9.4
I63A  Otisfield        66.90  48  IAmb    IAmb     04 58 19.6
      comp=Z,84nm,0.9s
Q57A  Strasburg        66.92  56  P       P        04 58 18.4 -0.7
      baz=319,SNR=8.7
L61A  Hillsdale 1, H   66.93  51  P       P        04 58 18.7 -0.3
      baz=320,SNR=12
J62A  Henniker         66.96  49  P       P        04 58 18.9 -0.4
      baz=320,SNR=11
NB201 NORSAR Array S   66.99 354 eP       P        04 58 19.4 +0.2
NB2   NORSAR Subarra   67.00 354  P       P        04 58 19.1 -0.2
      comp=Z,189nm,0.8s,baz=7.0,slow=6.5
NB2   NORSAR Subarra   67.00 354  P       P        04 58 19.1 -0.2
      baz=7.0,slow=6.5
NOA   NORSAR Array B   67.00 354  P       P        04 58 19.2  0.0
      comp=Z,122nm,0.8s,baz=8.1,slow=6.3,SNR=425
NOA                               pP      PcP      04 58 48.5 +1.7
      comp=Z,19nm,0.9s,baz=8.9,slow=6.3,SNR=2.9
NOA                               PKPPKP  P'P'df   05 26 39.0 -9.3
      comp=Z,5.4nm,1.0s,baz=160,slow=2.8,SNR=6.4
NOA                               LR      LR       05 28 22.3
      comp=Z,95nm,20.5s,baz=340,slow=36
U54A  Nelsons Funny    67.01  60  P       P        04 58 19.7  0.0
      baz=318,SNR=21
U54A  Nelsons Funny    67.01  60  IAmb    IAmb     04 58 21.0
      comp=Z,73nm,0.7s
NBO00 NORSAR Array S   67.04 354  IAmb    IAmb     04 58 20.7
      comp=Z,202nm,1.0s
DZA   Taraz            67.04 311⇓iP       P        04 58 19.9 +0.1
      comp=Z,23nm,1.1s,baz=311
DZA   Taraz            67.04 311d iP      P        04 58 19.9 +0.1
DZA                               pmax    pmax
      comp=Z,23nm,1.1s
TNTI  Ternate          67.04 239  P       P        04 58 20.5 +0.4
TNTI                              IAmb    IAmb     04 58 23.0
      comp=Z,87nm,0.8s
TNTI  Ternate          67.04 239  P       P        04 58 19.9 -0.2
AAL   Aland            67.05 349 eP       P        04 58 18.6 -0.8
H64A  Troy             67.05  46  P       P        04 58 19.1 -0.7
      baz=321
M60A  Port Jervis      67.08  52  P       P        04 58 19.4 -0.6
      baz=320,SNR=21
O59A  Robesonia        67.08  54  P       P        04 58 19.7 -0.4
      baz=319,SNR=25
O59A                              S       S        05 07 05.2 +0.2
      baz=319
HYA   Hoyanger         67.14 357 eP       P        04 58 20.3 +0.3
P58A  Pank, Wackersv   67.14  55  P       P        04 58 19.7 -0.7
      baz=319,SNR=9.9
PMG   Port Moresby     67.14 215  LR      LR       05 22 50.4
      comp=Z,261nm,21.7s,baz=358,slow=31
L61B  Northampton      67.15  50  P       P        04 58 19.7 -0.8
      baz=320,SNR=8.2
N60A  Cedar Hill Far   67.19  53  P       P        04 58 20.4 -0.3
      baz=320,SNR=35
K62A  Royalston        67.20  49  P       P        04 58 20.2 -0.5
      baz=320,SNR=7.6
NAO01 NORSAR Array S   67.22 354  P       P        04 58 20.1 -0.5
NAO01                             IAmb    IAmb     04 58 21.6
      comp=Z,131nm,0.9s
BLA   Blacksburg       67.24  58  P       P        04 58 20.9 -0.2
      baz=319,SNR=15
BLA   Blacksburg       67.24  58  IAmb    IAmb     04 58 22.1
      comp=Z,62nm,0.7s
KKAR  Karatay Array    67.26 311  P       P        04 58 20.7 -0.5
KKAR  Karatay Array    67.26 311  P       P        04 58 20.7 -0.5
J63A  Strafford        67.27  48  P       P        04 58 20.5 -0.6
      baz=321
LUPA  Lehigh Univers   67.27  53  IAmb    IAmb     04 58 22.7
      comp=Z,207nm,1.0s
NC602 NORSAR Array S   67.28 354 eP       P        04 58 30.6  +10
SUE   Sulen            67.29 357 eP       P        04 58 21.7 +0.7
S56A  Natural Bridge   67.34  58  P       P        04 58 21.6 -0.2
      baz=319,SNR=30
G65A  Princeton        67.35  45  P       P        04 58 20.9 -0.7
      baz=322,SNR=9.6
KSH   Kashi            67.36 305  P       P        04 58 26.3 +4.3
KSH                               sP      sP       04 59 04.0 +2.9
KSH                               PP      PP       05 00 56.9 +5.7
KSH                               S       S        05 07 10.9 +2.3
KSH                               pmax    pmax
      comp=Z,760nm,0.8s
KSH                               pmax    pmax
      comp=Z,2µm,7.4s
KSH                               LR      LR
      comp=Z,530nm,7.0s
KSH                               LR      LR
      comp=Z,480nm,9.5s
KSH                               LR      LR
      comp=Z,450nm,6.5s
Q58A  Fox Den Farm,    67.36  55  P       P        04 58 21.2 -0.7
      baz=319,SNR=26
R57A  Stanardsville    67.42  56  P       P        04 58 21.9 -0.3
      baz=319,SNR=21
I64A  Boothbay         67.43  47  P       P        04 58 21.0 -1.2
      baz=321
SDMD  Soldier's Deli   67.44  55  P       P        04 58 22.0 -0.3
H65A  Eastbrook        67.44  46  P       P        04 58 21.7 -0.5
      baz=322,SNR=5.9
O60A  Telford          67.46  53  P       P        04 58 22.2 -0.2
      baz=320,SNR=30
KOHI  KOHIMA           67.47 283 eP       P        04 58 23.9 +1.0
KOHI                              IAmb    IAmb     04 58 27.3
      comp=Z,397nm,1.2s
L62A  Suffield         67.48  50  P       P        04 58 22.1 -0.4
      baz=320,SNR=7.1
P59A  Jarrettsville    67.49  54  P       P        04 58 22.3 -0.3
      baz=320,SNR=25
M61A  Granite Spring   67.51  51  P       P        04 58 22.1 -0.7
      baz=320,SNR=6.0
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K63A  Dunstable        67.51  49  P       P        04 58 22.2 -0.5
      baz=321,SNR=8.5
SKAR  Skarslia         67.53 355 eP       P        04 58 23.1 +0.4
T56A  Rocky Mt         67.58  58  P       P        04 58 22.7 -0.6
      baz=319,SNR=7.0
S57A  Dark Hollow, R   67.60  57  P       P        04 58 23.2 -0.2
      baz=319,SNR=12
TEZP  TEZPUR           67.60 285 eP       P        04 58 23.8 +0.3
TEZP                              IAmb    IAmb     04 58 25.4
      comp=Z,343nm,1.4s
BRNJ  Basking Ridge    67.60  52  IAmb    IAmb     04 58 24.2
      comp=Z,75nm,0.8s
UPP   Uppsala          67.62 350 eP       P        04 58 22.9 -0.2
HRV   Adam Dziewonsk   67.64  49  P       P        04 58 23.0 -0.5
HRV                               pmax    pmax
      comp=Z,54nm,0.9s
HRV   Adam Dziewonsk   67.64  49  P       P        04 58 22.9 -0.6
      baz=321
HRV   Adam Dziewonsk   67.64  49  P       P        04 58 23.0 -0.5
NONG  Nongkai          67.65 271  P       P        04 58 24.3 +0.4
      comp=Z,348nm,1.2s
PAL   Palisades        67.67  52  P       P        04 58 23.3 -0.4
      baz=320,SNR=12
PAL   Palisades        67.67  52  IAmb    IAmb     04 58 24.5
      comp=Z,76nm,0.8s
N61A  South Mountain   67.68  52  P       P        04 58 23.6 -0.1
      baz=320,SNR=8.2
R58A  Rapidan          67.68  56  P       P        04 58 23.5 -0.4
      baz=319,SNR=11
FAKI  Fak Fak          67.69 233  P       P        04 58 24.4 +0.2
FAKI  Fak Fak          67.69 233  P       P        04 58 24.7 +0.5
      comp=Z,4µmcomp=Z,415nm,1.2s
GGN   Saint George     67.73  45  IAmb    IAmb     04 58 24.6
      comp=Z,89nm,0.9s
P60A  Greenville       67.73  54  P       P        04 58 23.7 -0.4
      baz=320,SNR=6.0
VSU   Vasula           67.77 345 eP       P        04 58 23.9 -0.2
VSU   Vasula           67.77 345d iP      P        04 58 23.5 -0.5
VSU                               pmax    pmax
      comp=Z,276nm,0.9s
EMMW  East Machias     67.78  45  IAmb    IAmb     04 58 25.4
      comp=Z,85nm,0.8s
H66A  Whiting          67.78  45  P       P        04 58 23.9 -0.5
      baz=322
CPNY  Central Park     67.81  52  IAmb    IAmb     04 58 25.5
      comp=Z,86nm,0.7s
M62A  Hamden           67.83  51  P       P        04 58 24.1 -0.6
      baz=320
WES   Weston           67.84  49  IAmb    IAmb     04 58 25.7
      comp=Z,60nm,0.7s
U56A  King             67.91  59  P       P        04 58 25.0 -0.3
      baz=319,SNR=17
250A  Grady            67.94  66  IAmb    IAmb     04 58 26.3
      comp=Z,82nm,0.7s
Q59A  Harwood          67.94  55  P       P        04 58 25.9 +0.5
      baz=320
N62A  Caumsett State   67.94  51  P       P        04 58 24.8 -0.6
      baz=320
SANVU Saraoutou        67.94 193  P       P        04 58 25.3 -0.2
SANVU Saraoutou        67.94 193  P       P        04 58 26.6 +1.1
BER   Bergen           67.95 357 eP       P        04 58 25.4 +0.3
MTSE  Matsula          67.97 347 eP       P        04 58 21.4 -3.8
R58B  Mineral          68.00  56  P       P        04 58 25.6 -0.2
      baz=319,SNR=11
T57A  Hurt             68.01  58  P       P        04 58 25.5 -0.4
      baz=319,SNR=16
LMN   Caledonia Moun   68.02  43  IAmb    IAmb     04 58 26.6
      comp=Z,103nm,0.9s
O61A  Allentown        68.06  53  P       P        04 58 26.0 -0.2
      baz=320,SNR=18
CBN   Corbin Frederi   68.08  56  P       P        04 58 26.1 -0.2
      baz=320,SNR=5.2
BRAL  Brewton          68.09  67  P       P        04 58 26.9 +0.3
      baz=318,SNR=6.9
BRAL  Brewton          68.09  67  IAmb    IAmb     04 58 28.4
      comp=Z,95nm,0.9s
L63A  North Scituate   68.11  50  P       P        04 58 25.7 -0.8
      baz=321,SNR=5.7
DRLN  Deer Lake        68.12  36  IAmb    IAmb     04 58 28.1
      comp=Z,108nm,1.1s
OSL   Oslo             68.13 354 eP       P        04 58 26.8 +0.5
MOIG  Morelia          68.18  86  P       P        04 58 28.0 +0.5
MOIG                              IAmb    IAmb     04 58 30.8
      comp=Z,140nm,0.8s
MOS   Moscow           68.18 338 eP       P        04 58 25.1 -1.5
MOS                              e*PP     PcP      04 58 50.4 -1.3
MOS                              eS       S        05 07 16.3 -1.2
MOS                               pmax    pmax
      comp=Z,125nm,0.7s
MOS                               pmax    pmax
      comp=Z,200nm,0.8s
S58A  Poland Farm, P   68.18  57  P       P        04 58 26.6 -0.4
      baz=319,SNR=13
R59A  King George, V   68.21  56  P       P        04 58 26.8 -0.4
      baz=320
IUG   Iuzhnay          68.23 311⇓iP       P        04 58 28.0 +0.6
      comp=Z,51nm,1.1s,baz=311
IUG   Iuzhnay          68.23 311d iP      P        04 58 27.9 +0.6
IUG                               pmax    pmax
      comp=Z,51nm,1.1s
Q60A  Greensboro       68.25  54  P       P        04 58 27.2 -0.2
      baz=320
V56A  Mocksville       68.25  60  P       P        04 58 27.2 -0.3
      baz=319,SNR=21
P61A  Hammonton        68.26  53  P       P        04 58 27.5 +0.1
      baz=320
P61A  Hammonton        68.26  53  IAmb    IAmb     04 58 28.3
      comp=Z,104nm,0.8s
M63A  Gales Ferry      68.26  50  P       P        04 58 26.8 -0.6
      baz=321,SNR=12
M63A  Gales Ferry      68.26  50  P       P        04 58 26.8 -0.6
M63A                              IAmb    IAmb     04 58 28.4
      comp=Z,174nm,1.1s
KMSC  Kings Mountain   68.31  61  P       P        04 58 27.6 -0.2
      baz=319,SNR=44
KMSC  Kings Mountain   68.31  61  IAmb    IAmb     04 58 29.3
      comp=Z,132nm,1.1s
UBPT  Khong Chiam      68.32 267  P       P        04 58 28.6 +0.5
      comp=Z,90nm,1.2s
UBPT  Khong Chiam      68.32 267  IAmb    IAmb     04 58 29.9
      comp=Z,259nm,1.3s
ODD1  Odda             68.37 356 eP       P        04 58 28.1 +0.2
U57A  Blanch           68.40  58  P       P        04 58 28.1 -0.3
      baz=319,SNR=25
L64A  Middleborough    68.42  49  P       P        04 58 27.7 -0.7
      baz=321,SNR=5.4
T58A  Grand View Acr   68.43  57  P       P        04 58 27.9 -0.6
      baz=319,SNR=12
GOGA  Godfrey          68.44  63  P       P        04 58 27.8 -0.8
      baz=319,SNR=17
S59A  Mechanicsville   68.45  56  P       P        04 58 28.2 -0.4
      baz=320,SNR=13
BELG  Belogornoye      68.48 331  P       P        04 58 28.3 -0.3
      comp=Z,75nm,0.8s,baz=314,slow=0.7,SNR=44
BELG                              LR      LR       05 30 37.1
      comp=Z,136nm,19.9s,baz=331,slow=38
BELG  Belogornoye      68.48 331d iP      P        04 58 27.9 -0.7
BELG                              pmax    pmax
      comp=Z,13nm,0.9s
HODGE Hodges           68.49  62  IAmb    IAmb     04 58 29.9
      comp=Z,77nm,0.7s
KONO  Kongsberg        68.49 355d iP      P        04 58 28.8 +0.3
KONO                              pmax    pmax
      comp=Z,231nm,0.7s
KONO  Kongsberg        68.49 355  P       P        04 58 28.8 +0.3
KONO  Kongsberg        68.49 355 eP       P        04 58 29.0 +0.5
M64A  Tiverton         68.54  50  P       P        04 58 28.1 -1.0
      baz=321
GUWA  GUWAHATI         68.57 285 eP       P        04 58 29.9 +0.3
GUWA                              IAmb    IAmb     04 58 31.3
      comp=Z,404nm,1.2s
V57A  Coltrane Farms   68.58  59  P       P        04 58 28.8 -0.7
      baz=319,SNR=8.7
Q61A  Milford          68.60  54  P       P        04 58 29.9 +0.3
      baz=320
PAYA  Payao            68.70 274  P       P        04 58 31.0 +0.5
      comp=Z,56µmcomp=Z,7µm,0.9s
W56A  Indian Trail     68.71  60  P       P        04 58 29.7 -0.6
      baz=319,SNR=9.7
S60A  Water View       68.83  56  P       P        04 58 30.6 -0.3
      baz=320,SNR=6.6
U58A  Oxford           68.84  58  P       P        04 58 30.5 -0.6
      baz=320
BLS5  Blasjo           68.87 356 eP       P        04 58 31.2 +0.3
T59A  Double "B" Far   68.92  57  P       P        04 58 31.5 -0.1
      baz=320,SNR=17
SHL   Shillong         68.93 285  P       P        04 58 32.2 +0.2
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SHL				pmax	pmax		
	comp=Z,553nm,1.1s						
SHL	Shillong	68.93	285	eP	P	04 58 32.1	+0.1
SHL				IAmb	IAmb	04 58 33.7	
	comp=Z,430nm,1.1s						
SHL	Shillong	68.93	285	P	P	04 58 32.2	+0.2
SHL	Shillong	68.93	285	P	P	04 58 32.4	+0.4
	SNR=119						
X56A	White Oak	68.96	61	P	P	04 58 31.5	-0.4
	baz=319,SNR=23						
OBN	Obninsk	68.99	338	P	P	04 58 31.2	-0.6
	comp=Z,7.5nm,0.4s,baz=6.3,slow=2.1,SNR=5.4						
OBN				LR	LR	05 31 39.4	
	comp=Z,42nm,20.9s,baz=12,slow=38						
OBN	Obninsk	68.99	338	d iP	P	04 58 31.1	-0.6
OBN				e*PP	pP	04 59 00.2	+1.4
OBN				e*SP	sP	04 59 14.2	+3.5
OBN				S	S	05 07 33.0	+5.8
OBN				e		05 08 19.7	
OBN				pmax	pmax		
	comp=Z,188nm,1.7s						
OBN				MLR	MLR		
	comp=Z,297nm,18.0s						
OBN	Obninsk	68.99	338	P	P	04 58 31.3	-0.4
OBN				IAmb	IAmb	04 58 32.4	
	comp=Z,372nm,1.8s						
V58A	Windy Hill, Pi	69.00	59	P	P	04 58 31.8	-0.3
	baz=320,SNR=16						
KKM	Kota Kinabalu	69.00	252	P	P	04 58 32.6	+0.2
KKM				IAmb	IAmb	04 58 34.5	
	comp=Z,138nm,1.1s						
W57A	Gilead	69.02	60	P	P	04 58 31.7	-0.5
	baz=319,SNR=11						
KMSI	Cibinong	69.04	242	P	P	04 58 34.4	+1.9
	comp=Z,5µmcomp=Z,237nm,0.5s						
KMY	Karmoy	69.13	357	eP	P	04 58 33.0	+0.5
KHON	Khomkaen	69.16	270	P	P	04 58 33.7	+0.4
	comp=Z,4µmcomp=Z,610nm,0.9s						
T60A	Surry	69.22	56	P	P	04 58 33.1	-0.3
	baz=320,SNR=6.0						
SLIT	Slitere, Latvi	69.23	347	eP	P	04 58 32.6	-0.5
154A	Montrose	69.23	64	IAmb	IAmb	04 58 34.5	
	comp=Z,109nm,0.9s						
451A	Vernon	69.25	67	IAmb	IAmb	04 58 35.8	
	comp=Z,175nm,1.4s						
U59A	Littleton	69.27	57	P	P	04 58 33.6	-0.2
	baz=320,SNR=10						
Y56A	Pelion	69.34	61	P	P	04 58 34.1	-0.2
	baz=319						
MSVF	Nonsavu	69.37	182	d iP	P	04 58 35.8	+1.3
MSVF				pmax	pmax		
	comp=Z,74nm,1.1s						
MSVF	Nonsavu	69.37	182	P	P	04 58 35.3	+0.8
MSVF	Nonsavu	69.37	182	P	P	04 58 36.5	+2.0
LAMP	Lampang	69.48	274	P	P	04 58 30.2	-5.1
V59A	Middlesex	69.48	58	P	P	04 58 34.5	-0.6
	baz=320,SNR=21						
X57A	Johnson Farm,	69.48	60	P	P	04 58 34.7	-0.4
	baz=320,SNR=15						
UTTA	Uttaradit	69.49	273	P	P	04 58 35.6	+0.3
	comp=Z,5µmcomp=Z,704nm,0.8s						
U60A	Pendleton	69.51	57	P	P	04 58 35.1	-0.1
	baz=320,SNR=11						
GTOI	Gorontalo	69.52	243	P	P	04 58 35.1	-0.4
	comp=Z,1µmcomp=Z,72nm,1.2s						
W58A	Raeford	69.52	59	P	P	04 58 35.0	-0.3
	baz=320,SNR=12						
Z56A	Williston	69.66	62	P	P	04 58 36.0	-0.1
	baz=319,SNR=20						
Z56A	Williston	69.66	62	IAmb	IAmb	04 58 37.8	
	comp=Z,172nm,0.7s						
Y57A	Sumter	69.66	61	P	P	04 58 36.0	-0.2
	baz=320,SNR=8.6						
Y57A	Sumter	69.66	61	IAmb	IAmb	04 58 37.1	
	comp=Z,75nm,0.7s						
CM33	Chiang Mai Arr	69.68	275	P	P	04 58 36.0	-0.5
CMMT	Chiang Mai	69.68	275	P	P	04 58 36.6	0.0
	comp=Z,1µmcomp=Z,102nm,1.0s						
CHTO	Chiang Mai	69.68	275	P	P	04 58 36.8	+0.3
CHTO				pmax	pmax		
	comp=Z,200nm,1.1s						
CHTO	Chiang Mai	69.68	275	P	P	04 58 36.8	+0.3
CHTO				IAmb	IAmb	04 58 38.1	
	comp=Z,200nm,1.1s						
CHTO	Chiang Mai	69.68	275	P	P	04 58 36.8	+0.3
TAOE	Nuku Hiva Isla	69.71	137	eP	P	04 58 36.5	-0.2
	comp=Z,196nm,1.0s						
TAOE	Nuku Hiva Isla	69.71	137	eT	T	06 13 40.4	
	comp=Z,30nm,0.2s						
TAOE	Nuku Hiva Isla	69.71	137	P	P	04 58 37.1	+0.4
TAOE				IAmb	IAmb	04 58 37.9	
	comp=Z,88nm,0.9s						
MSAI	Masohi	69.72	235	P	P	04 58 38.5	+1.8
	comp=Z,1µmcomp=Z,52nm,0.8s						
CM36	Chiang Mai Arr	69.81	274	P	P	04 58 37.0	-0.3
X58A	Rowland	69.82	60	P	P	04 58 36.9	-0.2
	baz=320,SNR=10						
W59A	Clinton	69.83	59	P	P	04 58 37.0	-0.2
	baz=320,SNR=7.8						
TIGA	Tifton	69.85	65	P	P	04 58 36.7	-0.7
	baz=319						
CM32	Chiang Mai Arr	69.86	275	P	P	04 58 38.0	+0.3
SNART	Snartemo	69.92	356	eP	P	04 58 37.7	+0.4
SNART	Snartemo	69.92	356	i P	P	04 58 37.8	+0.4
HOMB	Homborsund	69.92	355	eP	P	04 58 37.6	+0.2
HOMB	Homborsund	69.92	355	⇓iP	P	04 58 37.8	+0.4
SPMM	Sapulut	69.93	251	P	P	04 58 39.0	+0.9
CM09	Chiang Mai Arr	69.93	274	P	P	04 58 38.0	-0.1
	comp=Z,2µmcomp=Z,183nm,1.0s						
CM31	Chiang Mai Arr	69.95	274	P	P	04 58 38.8	+0.6
	comp=Z,40µmcomp=Z,5µm,1.0s						
CM31	Chiang Mai Arr	69.95	274	IAmb	IAmb	04 58 40.0	
	comp=Z,156nm,0.8s						
CMAR	Chiang Mai Arr	69.95	274	P	P	04 58 38.8	+0.5
	comp=Z,113nm,0.8s,baz=27,slow=7.2,SNR=366						
CMAR				PKP2bc		05 26 35.6	
	comp=Z,1.3nm,0.6s,baz=233,slow=5.0,SNR=7.0						
CMAR				LR	LR	05 30 03.9	
	comp=Z,98nm,21.9s,baz=90,slow=36						
CMAR	Chiang Mai Arr	69.95	274	ceP	P	04 58 38.7	+0.5
CMAR				pmax	pmax		
	comp=Z,117nm,0.8s						
CMAR	Chiang Mai Arr	69.95	274	P	P	04 58 38.0	-0.2
CM02	Chiang Mai Arr	69.97	274	P	P	04 58 38.9	+0.6
	comp=Z,2µmcomp=Z,229nm,0.9s						
CM15	Chiang Mai Arr	69.97	274	P	P	04 58 38.0	-0.3
	comp=Z,1µmcomp=Z,176nm,0.9s						
CM01	Chiang Mai Arr	69.97	274	P	P	04 58 38.0	-0.3
	comp=Z,2µmcomp=Z,218nm,1.0s						
CM04	Chiang Mai Arr	69.97	274	P	P	04 58 38.0	-0.3
	comp=Z,2µmcomp=Z,224nm,0.9s						
U61A	Possum Corner	69.98	57	P	P	04 58 38.1	-0.1
	baz=320,SNR=5.2						
U61A	Possum Corner	69.98	57	IAmb	IAmb	04 58 39.8	
	comp=Z,181nm,1.2s						
CM05	Chiang Mai Arr	69.99	274	P	P	04 58 39.0	+0.6
	comp=Z,1µmcomp=Z,184nm,1.0s						
V60A	Jim Taylor Roa	69.99	57	P	P	04 58 38.0	-0.2
	baz=320,SNR=7.1						
PHIT	Phitsanulok	70.00	272	P	P	04 58 39.2	+0.7
	comp=Z,6µmcomp=Z,688nm,1.0s						
CM13	Chiang Mai Arr	70.00	274	P	P	04 58 39.0	+0.5
	comp=Z,2µmcomp=Z,201nm,0.9s						
CHAI	Chaiyaphum	70.01	270	P	P	04 58 38.5	-0.1
	comp=Z,2µmcomp=Z,220nm,1.0s						
CNNC	Cliffs of the	70.07	58	P	P	04 58 38.5	-0.2
	baz=320,SNR=7.8						
TAPN	Taplejung	70.07	289	eP	P	04 58 40.3	+1.1
	comp=Z,2µm,1.0s						
255A	Hazlehurst	70.10	64	IAmb	IAmb	04 58 40.4	
	comp=Z,524nm,1.9s						
Y58A	Scranton	70.14	60	P	P	04 58 39.1	0.0
	baz=320,SNR=11						
Y58A	Scranton	70.14	60	IAmb	IAmb	04 58 40.7	
	comp=Z,145nm,0.8s						
SANI	Sanana	70.15	239	P	P	04 58 38.7	-0.7
	comp=Z,3µmcomp=Z,233nm,1.2s						
X59A	McDuffie Farm,	70.20	59	P	P	04 58 39.1	-0.4
	baz=320,SNR=5.3						
MRSI	Marisa	70.24	244	P	P	04 58 39.6	-0.3
	comp=Z,5µmcomp=Z,584nm,1.2s						
SUKH	Sukhothai	70.26	273	P	P	04 58 40.5	+0.5
	comp=Z,3µmcomp=Z,255nm,0.8s						
W60A	Pink Hill	70.30	58	P	P	04 58 40.1	0.0
	baz=320						
V61A	Roper	70.33	57	P	P	04 58 40.4	+0.2
	baz=320						
V61A	Roper	70.33	57	IAmb	IAmb	04 58 41.5	
	comp=Z,107nm,0.8s						
TOLI2	Tolitoli	70.37	245	P	P	04 58 40.3	-0.4
TOLI2				IAmb	IAmb	04 58 41.5	
	comp=Z,256nm,1.0s						
NHSC	New Hope	70.47	61	P	P	04 58 41.4	+0.3
	baz=320						
NHSC	New Hope	70.47	61	IAmb	IAmb	04 58 42.7	
	comp=Z,121nm,0.8s						
Y59A	Loris	70.50	60	P	P	04 58 41.1	-0.2
	baz=320						
X60A	Albert Glenn T	70.53	59	P	P	04 58 41.2	-0.3
	baz=320						
SAIH	SAIHA	70.56	282	eP	P	04 58 42.5	+0.4
SAIH				IAmb	IAmb	04 58 44.2	
	comp=Z,229nm,0.9s						
NLAI	Namlea	70.57	237	P	P	04 58 43.0	+1.1
	comp=Z,4µmcomp=Z,47nm,0.9s						
ODAN	Odare	70.62	289	eP	P	04 58 43.4	+0.9
	comp=Z,679nm,1.1s						
ISAL	Salakas	70.63	344	eP	P	04 58 41.6	-0.1
GUN	Gumba	70.71	291	eP	P	04 58 44.4	+1.3
	comp=Z,2µm,0.8s						
LPSR	Galich'ya Gora	70.72	336	eP	P	04 58 41.5	-0.8
LPSR				e*SP	pP	04 59 10.3	+0.8
LPSR				eS	S	05 07 42.2	-5.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
LPSR				smax	smax		
	comp=N,30nm,1.2s						
IDID	Didziasalis	70.78	344	eP	P	04 58 42.4	-0.2
MHMT	Maesarieng	70.79	275	P	P	04 58 43.9	+0.6
	comp=N,4µmcomp=N,400nm,1.2s						
IIGN	Ignalina	70.83	344	eP	P	04 58 42.6	-0.3
Y60A	Bolivia	70.84	59	P	P	04 58 43.0	-0.3
	baz=320						
PBUR	Paburge	70.84	347	eP	P	04 58 42.5	-0.5
RAMN	Ramite	71.02	289	eP	P	04 58 45.9	+1.0
	comp=N,2µm,1.0s						
LUWI	Luwuk	71.04	242	P	P	04 58 44.0	-0.8
LUWI	Luwuk	71.04	242	P	P	04 58 43.8	-1.0
	comp=N,9µmcomp=N,736nm,1.2s						
PABE	Paberze	71.04	346	eP	P	04 58 44.4	+0.2
GOET	G??ttrup	71.11	354	i P	P	04 58 45.9	+1.3
GOET	G??ttrup	71.11	354	i P	P	04 58 45.8	+1.2
GOET				i P	P	04 58 46.0	+1.3
KKN	Kakani	71.15	291	eP	P	04 58 46.8	+1.2
	comp=N,875nm,0.7s						
NACGM	Naroch	71.16	344	i P	P	04 58 44.9	-0.1
NACGM				i P	P	04 58 44.9	-0.1
NACGM				i P	P	04 58 44.9	-0.1
NACGM				i pP	pP	04 59 09.3	-3.0
NACGM				i sP	sP	04 59 25.5	+1.3
NACGM				i PP	PP	05 01 29.3	+6.0
NACGM				i PPP	PPP	05 03 17.1	
NACGM				i S	S	05 07 47.5	-5.0
NACGM				i SP	SPn	05 08 17.9	-1.4
NACGM				i sS	sS	05 08 36.8	-1.5
NACGM				i SS	SS	05 12 24.0	-2.9
NACGM				i SSS	SSS	05 15 42.3	
NACGM				i LQ	LQ	05 25 02.8	
NACGM				i LR	LR	05 30 25.8	
PKI	Pulchoki	71.24	291	eP	P	04 58 47.2	+0.9
	comp=N,1µm,1.0s						
PKIN	Phulchoki	71.24	291	eP	P	04 58 47.1	+0.8
	comp=N,670nm,0.7s						
VRH	Novokhopyorsk	71.25	334	eP	P	04 58 44.0	-1.5
VRH				e*SP	pP	04 59 13.3	+0.3
VRH				eS	S	05 07 50.3	-3.3
VRH				pmax	pmax		
	comp=Z,70nm,0.6s						
VRH				smax	smax		
	comp=E,60nm,1.7s						
456A	Hilliard	71.27	64	IAmb	IAmb	04 58 47.8	
	comp=Z,111nm,0.8s						
MNK	Minsk	71.35	343	i P	P	04 58 46.6	+0.5
	comp=E,4.0nm,0.7s						
MNK				i P	P	04 58 46.6	+0.5
	comp=N,61nm,0.8s						
MNK				i P	P	04 58 46.6	+0.5
	comp=Z,126nm,0.8s						
MNK				i pP	pP	04 59 12.0	-1.5
MNK				i PP	PP	05 01 26.9	+1.9
MNK				i PPP	PPP	05 03 10.9	
MNK				i S	S	05 07 59.0	+4.2
MNK				i SS	SS	05 12 38.0	+8.2
MNK				i SSS	SSS	05 15 58.1	
MNK				i LQ	LQ	05 25 35.2	
MNK				i LR	LR	05 31 03.0	
MNK				i LRM	MLR	05 33 36.1	
	comp=E,26nm,22.9s						
MNK				i LRM	MLR	05 33 38.7	
	comp=N,273nm,40.0s						
MNK				i LRM	MLR	05 33 40.0	
	comp=Z,56nm,17.7s						
MNK	Minsk	71.35	343	⇓eP	P	04 58 46.0	-0.1
MNK				pmax	pmax		
	comp=Z,450nm,1.0s						
GKN	Gorkha	71.36	292	eP	P	04 58 47.7	+0.9
	comp=Z,1µm,0.9s						
DMN	Daman	71.39	291	eP	P	04 58 48.2	+1.1
	comp=Z,800nm,0.9s						
TLIG	Tlapa	71.39	85	P	P	04 58 48.0	+0.9
TLIG				IAmb	IAmb	04 58 51.0	
	comp=Z,390nm,1.9s						
SRAK	Srakaew	71.41	269	P	P	04 58 45.4	-1.7
	comp=Z,29µmcomp=Z,3µm,0.9s						
MPSI	Mapaga	71.50	246	P	P	04 58 47.3	-0.2
	comp=Z,4µmcomp=Z,379nm,1.2s						
DRUM	Mains of Drumt	71.52	1	eP	P	04 58 46.7	-0.4
DRUM				IAmb	IAmb	04 58 48.1	
	comp=Z,182nm,1.2s						
APSI	Ampana	71.55	243	P	P	04 58 48.0	+0.2
	comp=Z,3µmcomp=Z,264nm,1.3s						
DANN	Dangsing	71.60	292	eP	P	04 58 49.5	+1.1
	comp=Z,1µm,0.8s						
MUD	Monsted U'grnd	71.70	354	i P	P	04 58 48.9	+0.8
MUD				pmax	pmax		
	comp=Z,140nm,1.0s						
MUD	Monsted U'grnd	71.70	354	i P	P	04 58 48.9	+0.8
	comp=Z,140nm,1.0s						
MUD	Monsted U'grnd	71.70	354	i P	P	04 58 49.0	+0.8
MUD				i P	P	04 58 49.0	+0.8
MUD				IAmb	IAmb	04 58 49.7	
	comp=Z,140nm,1.0s						
UTHA	Uthaitani	71.84	272	P	P	04 58 50.2	+0.6
	comp=Z,3µmcomp=Z,342nm,1.0s						
VSR	Storozhevoye	71.92	335	eP	P	04 58 48.7	-0.9
VSR				e*SP	pP	04 59 17.0	-0.2
VSR				eS	S	05 07 58.9	-2.5
VSR				pmax	pmax		
	comp=Z,40nm,0.7s						
VSR				smax	smax		
	comp=N,40nm,1.0s						
INVG	Invergeldie, C	71.97	2	eP	P	04 58 49.5	-0.4
656A	Willston	72.01	65	IAmb	IAmb	04 59 49.9	
	comp=Z,147nm,1.4s						
LAWE	Loch Awe, Argy	72.10	3	eP	P	04 58 50.4	-0.2
LAWE				IAmb	IAmb	04 58 52.1	
	comp=Z,262nm,1.4s						
VORD	Divnogorie	72.12	335	eP	P	04 58 49.7	-1.0
VORD				e*SP	pP	04 59 18.2	-0.1
VORD				pmax	pmax		
	comp=Z,40nm,0.7s						
KOLN	Koldanda	72.13	292	eP	P	04 58 52.3	+0.8
	comp=Z,817nm,1.0s						
COP	Copenhagen	72.23	352	⇓iP	P	04 58 51.7	+0.4
COP				pmax	pmax		
	comp=Z,100nm,0.8s						
COP	Copenhagen	72.23	352	⇓iP	P	04 58 51.7	+0.4
	comp=Z,104nm,0.8s						
COP	Copenhagen	72.23	352	⇓iP	P	04 58 51.6	+0.3
COP				⇓iP	P	04 58 51.7	+0.4
COP				IAmb	IAmb	04 58 52.5	
	comp=Z,104nm,0.8s						
PYUN	Piuthan	72.23	293	eP	P	04 58 52.9	+0.8
	comp=Z,2µm,1.0s						
ESY	Stoneypath	72.51	1	eP	P	04 58 53.4	+0.3
SAUI	Saumlaki	72.55	231	P	P	04 58 54.7	+0.9
SAUI	Saumlaki	72.55	231	P	P	04 58 56.1	+2.4
BSD	Bornholm Skovb	72.57	351	eP	P	04 58 53.0	-0.3
BSD	Bornholm Skovb	72.57	351	⇓iP	P	04 58 52.7	-0.6
BSD				pmax	pmax		
	comp=Z,59nm,0.7s						
BSD	Bornholm Skovb	72.57	351	⇓iP	P	04 58 52.7	-0.6
	comp=Z,59nm,0.7s						
BSD	Bornholm Skovb	72.57	351	⇓iP	P	04 58 52.8	-0.6
BSD				⇓iP	P	04 58 52.8	-0.6
BSD				IAmb	IAmb	04 58 53.3	
	comp=Z,59nm,0.7s						
PGBU	Glenifferbraes	72.58	2	eP	P	04 58 53.0	-0.4
LLD	Lille Linde	72.60	352	i P	P	04 58 53.9	+0.4
LLD				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LLD	Lille Linde	72.60	352	i P	P	04 58 53.9	+0.4
	comp=Z,2.6nm,1.0s						
LLD	Lille Linde	72.60	352	i P	P	04 58 53.3	-0.2
LLD				i P	P	04 58 54.0	+0.4
LLD				IAmb	IAmb	04 58 54.7	
	comp=Z,2.6nm,1.0s						
EBL	Broad Law	72.65	2	eP	P	04 58 54.4	+0.5
VAH	Vaihoa	72.70	147	eP	P	04 58 54.4	-0.1
	comp=Z,213nm,0.9s						
DHRM	DHARAMSHALA	72.75	300	eP	P	04 58 55.6	+0.4
SRDT	SRDT	72.96	272	P	P	04 58 57.0	+0.7
	comp=Z,18µmcomp=Z,122nm,1.2s						
PATY	Pattaya	72.98	269	P	P	04 58 57.0	+0.6
	comp=Z,393nm,0.9s						
EKA	Eskdalemuir Ar	73.09	2	P	P	04 58 56.5	+0.1
	comp=Z,86nm,1.1s,baz=359,slow=5.1,SNR=7.4						
ESK	Eskdalemuir	73.10	2	eP	P	04 58 56.6	+0.1
ESK				IAmb	IAmb	04 58 58.0	
	comp=Z,113nm,1.2s						
ESK	Eskdalemuir	73.10	2	P	P	04 58 57.0	+0.5
ESK				pmax	pmax		
	comp=Z,119nm,1.2s						
ESK	Eskdalemuir	73.10	2	P	P	04 58 57.0	+0.5
SMLA	Simla	73.15	299	eP	P	04 58 57.7	+0.5
LIFNC	LIFOU	73.19	192	P	P	04 58 59.2	+1.9
CLGH	Cloghs, Cushen	73.26	3	eP	P	04 58 57.5	+0.1
CLGH				IAmb	IAmb	04 58 59.0	
	comp=Z,213nm,1.3s						
NIL	Nilore	73.27	303	P	P	04 58 58.5	+0.5
NIL				pmax	pmax		
	comp=Z,443nm,0.9s						
NIL	Nilore	73.27	303	P	P	04 58 58.5	+0.5
NIL	Nilore	73.27	303	P	P	04 58 58.9	+1.0
NEWG	New Galloway	73.28	2	eP	P	04 58 57.5	-0.1
RGN	Rugen	73.28	352	eP	P	04 58 58.4	+0.9
	comp=Z,348nm,1.1s,baz=8.5,slow=5.5						
DDI	Dehra Dun	73.29	298	eP	P	04 58 59.0	+0.9
DDI				IAmb	IAmb	04 59 00.1	
	comp=Z,949nm,1.0s						
BHK	Bhakra	73.33	300	eP	P	04 58 59.0	+0.7
KOUNC	Koumac, New Ca	73.39	195	P	P	04 58 59.8	+1.3
SKMB	Sankelmark Bun	73.41	354	eP	P	04 58 59.5	+1.2
	comp=Z,222nm,0.8s,baz=8.5,slow=5.5						
DWPF	Disney Wildern	73.59	65	P	P	04 59 00.1	+0.2
	baz=320						
DWPF	Disney Wildern	73.59	65	P	P	04 59 00.0	+0.2
EDMD	Edmundbyers	73.61	1	eP	P	04 58 59.5	0.0
EDMD				IAmb	IAmb	04 59 00.7	
	comp=Z,99nm,1.1s						
SMKI	Samarinda	73.67	247	P	P	04 59 02.9	+2.5
PHET	Kaeng Krachan	73.75	270	P	P	04 59 01.0	+0.1
	comp=Z,2µmcomp=Z,293nm,0.9s						
MARNC	Mare, Loyalty	73.78	191	P	P	04 59 02.9	+2.1
BOK	Bokaro	73.83	288	eP	P	04 59 02.0	+0.7
KESW	Keswick, Cumbr	73.83	2	eP	P	04 59 00.8	0.0
KESW				IAmb	IAmb	04 59 02.3	
	comp=Z,145nm,1.1s						
CMIG	Matias Romero	74.02	83	LR	LR	05 27 39.0	
	comp=Z,168nm,21.8s,baz=308,slow=32						
BSEG	Bad Segeberg	74.13	353	eP	P	04 59 03.2	+0.7
	comp=Z,196nm,0.9s,baz=8.5,slow=5.5						
GKP	Gorka Klasztor	74.14	349	eP	P	04 59 02.4	-0.2
GKP	Gorka Klasztor	74.14	349	eP	P	04 59 02.3	-0.3
SBUM	Sibu	74.24	253	P	P	04 59 04.5	+0.7
SBUM				IAmb	IAmb	04 59 06.0	
	comp=Z,482nm,1.9s						
SBUM	Sibu	74.24	253	P	P	04 59 04.0	+0.3
PPT	Papeete	74.24	149	LR	LR	05 23 08.3	
	comp=Z,165nm,21.5s,baz=345,slow=29						
WIM	Isle of Man	74.24	3	eP	P	04 59 03.3	+0.1
PPT2	Papeete2	74.26	149	eS	S	05 08 28.0	-0.5
	comp=Z,482nm,28.0s						
PPT2	Papeete2	74.26	149	eLR	LR	05 21 37.1	
	comp=Z,814nm,33.0s						
PPT2	Papeete2	74.26	149	eT	T	06 19 35.0	
	comp=Z,8.2nm,0.2s						
TIAR	Tiarei	74.30	149	eP	P	04 59 03.7	-0.2
	comp=Z,35nm,0.9s						
PAE	Paea	74.33	149	eP	P	04 59 03.7	-0.3
	comp=Z,22nm,1.0s						
PAE	Paea	74.33	149	eT	T	06 19 39.6	
	comp=Z,3.4nm,0.3s						
TTSI	Tana Toraja	74.33	244	P	P	04 59 04.2	0.0
	comp=Z,4µmcomp=Z,317nm,1.1s						
HPK	Haverah Park	74.48	1	eP	P	04 59 04.5	-0.1
HPK				IAmb	IAmb	04 59 06.0	
	comp=Z,149nm,1.1s						
YATNC	Mamie plateau,	74.50	192	P	P	04 59 06.7	+1.8
TVO	Taravao	74.54	149	eP	P	04 59 05.1	-0.3
	comp=Z,30nm,0.8s						
TVO	Taravao	74.54	149	eT	T	06 19 55.7	
	comp=Z,1.2nm,0.3s						
DZM	Mont Dzumac	74.57	193	eP	P	04 59 05.2	-0.2
	comp=Z,320nm,1.2s						
DZM	Mont Dzumac	74.57	193	eLR	LR	05 22 14.0	
	comp=Z,1µm,33.4s						
DZM	Mont Dzumac	74.57	193	P	P	04 59 06.6	+1.2
DZM				IAmb	IAmb	04 59 08.6	
	comp=Z,177nm,1.2s						
DZM	Mont Dzumac	74.57	193	P	P	04 59 07.3	+1.9
NOUC	Port Laguerre	74.62	193	P	P	04 59 07.4	+1.8
KBL	Kabul	74.70	307	P	P	04 59 05.7	-0.8
KBL				pmax	pmax		
	comp=Z,239nm,1.0s						
KBL	Kabul	74.70	307	P	P	04 59 05.7	-0.8
KBL				IAmb	IAmb	04 59 08.2	
	comp=Z,239nm,0.9s						
KBL	Kabul	74.70	307	P	P	04 59 05.9	-0.6
	SNR=99						
AKASG	Malin Array Be	74.71	341	P	P	04 59 05.4	-0.6
	comp=Z,30nm,0.5s,baz=23,slow=6.0,SNR=112						
AKASG				pP	pP	04 59 33.9	+0.1
	comp=Z,26nm,0.6s,baz=23,slow=6.2,SNR=5.7						
AKASG	Malin Array Be	74.71	341	P	P	04 59 05.4	-0.6
AKBB	Malin Array Si	74.71	341	deP	P	04 59 05.2	-0.7
AKBB	Malin Array Si	74.71	341	IAmb	IAmb	04 59 06.6	
	comp=Z,172nm,1.4s						
OUENC	Ouen Island, N	74.86	192	P	P	04 59 09.5	+2.5
PINNC	Pines Island,	74.97	192	P	P	04 59 09.7	+2.1
WPS	Cemaes, Angles	74.99	3	eP	P	04 59 07.4	-0.1
WPS				IAmb	IAmb	04 59 08.4	
	comp=Z,143nm,1.3s						
WME	Myndd Eilian	75.00	2	eP	P	04 59 07.5	-0.1
NDI	New Delhi	75.02	297	eP	P	04 59 08.0	-0.1
RAR	Rarotonga	75.03	160	P	P	04 59 08.8	+0.8
RAR				pmax	pmax		
	comp=Z,95nm,1.9s						
RAR	Rarotonga	75.03	160	P	P	04 59 08.8	+0.8
RAR	Rarotonga	75.03	160	P	P	04 59 09.0	+1.0
LBWR	Ladybower, Pea	75.04	1	eP	P	04 59 07.7	-0.1
LBWR				IAmb	IAmb	04 59 09.0	
	comp=Z,114nm,1.0s						
BEL	Belsk	75.08	347	eP	P	04 59 08.3	+0.3
BEL				epP	pP	04 59 36.8	+1.2
SPSI	Sidrap Palu	75.12	243	P	P	04 59 08.4	-0.4
	comp=Z,3µmcomp=Z,155nm,1.0s						
RUE	Ruedersdorf	75.28	351	eP	P	04 59 09.1	-0.1
	comp=Z,86nm,0.9s,baz=8.5,slow=5.5						
BNSI	Bone	75.29	243	P	P	04 59 09.9	+0.1
	comp=Z,3µmcomp=Z,221nm,1.1s						
STNC	Stoke	75.35	1	eP	P	04 59 10.1	+0.5
STNC				IAmb	IAmb	04 59 11.1	
	comp=Z,133nm,1.0s						
MTKI	Muara Teweh, K	75.40	249	P	P	04 59 10.3	-0.1
	comp=Z,111nm,1.5s						
LLW	Llanuwychllyn	75.56	2	eP	P	04 59 10.9	+0.1
NRDL	Niedersach Rie	75.58	353	eP	P	04 59 11.0	+0.2
	comp=Z,124nm,1.1s,baz=8.5,slow=5.5						
FLTG	Flechtingen	75.66	353	eP	P	04 59 10.9	-0.4
	comp=Z,101nm,0.9s,baz=8.5,slow=5.5						
CWF	Charnwood Fore	75.71	1	eP	P	04 59 11.6	-0.1
CWF				IAmb	IAmb	04 59 13.0	
	comp=Z,151nm,1.3s						
ASSE	Asse, Remlinge	75.90	353	eP	P	04 59 12.9	+0.2
	comp=Z,231nm,1.7s,baz=8.5,slow=5.5						
HLM1	Long Mynd	75.91	2	eP	P	04 59 12.9	0.0

HLM1				IAmb	IAmb	04 59 13.6	
	comp=Z,82nm,1.1s						
IBBN	Ibbenburen	75.92	355	eP	P	04 59 13.3	+0.5
	comp=Z,356nm,1.0s,baz=8.5,slow=5.5						
KAPI	Kappang	76.00	243	P	P	04 59 13.7	-0.1
KAPI				pmax	pmax		
	comp=Z,546nm,1.9s						
KAPI	Kappang	76.00	243	P	P	04 59 13.7	-0.1
BKSI	Bulukumba	76.05	242	P	P	04 59 14.0	-0.1
	comp=Z,4µmcomp=Z,388nm,1.1s						
KSM	Kuching	76.16	254	P	P	04 59 14.9	+0.2
KSM				IAmb	IAmb	04 59 16.4	
	comp=Z,141nm,1.0s						
KSM	Kuching	76.16	254	P	P	04 59 15.0	+0.2
CLZ	Clausthal	76.21	353	eP	P	04 59 15.0	+0.4
	comp=Z,164nm,1.0s,baz=8.5,slow=5.5						
CCIG	Comitan	76.32	81	P	P	04 59 16.2	+0.3
GOF	Gofitskoye	76.39	330	⇓iP	P	04 59 15.9	+0.2
GOF				pmax	pmax		
	comp=Z,180nm,0.8s						
MCH1	Michaelchurch	76.43	2	eP	P	04 59 15.7	0.0
MCH1				IAmb	IAmb	04 59 16.9	
	comp=Z,113nm,0.9s						
RSBS	Rosebush, Pemb	76.43	3	eP	P	04 59 15.8	0.0
RSBS				IAmb	IAmb	04 59 17.0	
	comp=Z,146nm,1.1s						
SSW	Stow on the Wo	76.48	1	eP	P	04 59 17.1	+1.1
CLL	Collm	76.52	351	⇓iP	P	04 59 15.8	-0.5
	comp=Z,260nm,2.2s						
CLL				i PcP	PcP	04 59 26.4	-1.0
CLL				epP	pP	04 59 44.0	+0.1
CLL				ePP	PP	05 02 07.0	-1.8
CLL				e(S)	S	05 08 47.0	-5.7
CLL				ePS	PnS	05 09 44.0	-0.8
CLL				e		05 10 34.0	
CLL	Collm	76.52	351	⇓iP	P	04 59 15.8	-0.5
CLL				e		04 59 44.0	
CLL				pmax	pmax		
	comp=Z,260nm,2.2s						
CLL	Collm	76.52	351	eP	P	04 59 15.7	-0.6
	comp=Z,46nm,0.9s,baz=8.5,slow=5.5						
LVV	L'vov	76.52	344	eP	P	04 59 15.5	-0.8
GTTG	Gottingen	76.53	353	eP	P	04 59 16.7	+0.3
	comp=Z,140nm,1.1s,baz=8.5,slow=5.5						
KBKI	Kotabaru	76.59	247	P	P	04 59 16.6	-0.5
	comp=Z,2µmcomp=Z,138nm,0.9s						
KSP	Ksiaz	76.63	349	eP	P	04 59 16.5	-0.4
KSP				epP	pP	04 59 45.0	+0.1
STRD	Stroud	76.67	1	eP	P	04 59 17.4	+0.3
STRD				IAmb	IAmb	04 59 18.4	
	comp=Z,664nm,1.4s						
NEUB	Neuenburg	76.73	352	eP	P	04 59 17.3	-0.1
	comp=Z,171nm,1.1s,baz=8.5,slow=5.5						
OLDB	Oldbury-Upon-S	76.78	1	eP	P	04 59 17.5	-0.2
MAK	Makhachkala	76.79	326	eP	P	04 59 16.5	-1.4
MAK				e*PP	pP	04 59 42.3	-3.3
MAK				e*SP	sP	04 59 53.6	-3.8
MAK				e		05 02 11.2	
MAK				eS	S	05 08 56.4	+0.5
MAK				e*SS	sS	05 09 42.0	-0.2
MAK				pmax	pmax		
	comp=Z,472nm,1.9s						
OJC	Ojcow	76.79	347	eP	P	04 59 17.8	0.0
OJC				epP	pP	04 59 46.7	+0.9
BUG	Bochum--Univer	76.81	355	eP	P	04 59 17.8	0.0
	comp=Z,149nm,1.3s,baz=8.5,slow=5.5						
BRG	Berggiesshubel	76.86	351	⇓iP	P	04 59 18.0	-0.2
BRG				Amp		04 59 19.9	
	comp=Z,44nm,0.9s						
BRG	Berggiesshubel	76.86	351	⇓iP	P	04 59 18.0	-0.2
BRG				pmax	pmax		
	comp=Z,44nm,0.9s						
BRG	Berggiesshubel	76.86	351	⇓iP	P	04 59 18.0	-0.2
BRG				Amp		04 59 19.9	
	comp=Z,44nm,0.9s						
BRG	Berggiesshubel	76.86	351	eP	P	04 59 17.7	-0.5
	comp=Z,44nm,0.9s,baz=8.5,slow=5.5						
FBE	Freiberg	76.87	351	eP	P	04 59 18.3	+0.1
	comp=Z,85nm,1.0s,baz=8.5,slow=5.5						
CHVC	Chvalec	76.91	349	eP	P	04 59 18.5	0.0
KWP	Kalwaria Pacla	76.92	345	eP	P	04 59 19.1	+0.5
KWP				epP	pP	04 59 47.9	+1.4
OSTC	Ostas	76.92	349	eP	P	04 59 18.7	+0.1
SWN1	Swindon	76.93	1	eP	P	04 59 19.1	+0.5
SWN1				IAmb	IAmb	04 59 20.2	
	comp=Z,309nm,1.0s						
DBC	Dubki	76.97	326	d iP	P	04 59 18.1	-0.9
DBC				pmax	pmax		
	comp=Z,24nm,0.8s						
KASTN	Kahler Asten	76.98	354	eP	P	04 59 19.1	+0.2
	comp=Z,68nm,1.0s,baz=8.5,slow=5.5						
GEYT	Alibeck	76.99	316	P	P	04 59 18.8	-0.5
	comp=Z,17nm,1.0s,baz=348,slow=2.1,SNR=15						
GEYT				PP	PP	05 02 13.6	+0.3
	comp=Z,13nm,0.9s,baz=26,slow=3.8,SNR=6.9						
GEYT				LR	LR	05 34 59.1	
	comp=Z,255nm,21.6s,baz=280,slow=37						
GEYT	Alibeck	76.99	316	P	P	04 59 19.4	+0.1
GYA0B	ALIBECK ARRAY	76.99	316	P	P	04 59 19.8	+0.5
UPC	Upice	77.00	349	eP	P	04 59 18.7	-0.3
UPC	Upice	77.00	349	eP	P	04 59 18.7	-0.3
DPC	Dobruska-Polom	77.12	349	eP	P	04 59 19.3	-0.4
DPC	Dobruska-Polom	77.12	349	eP	P	04 59 19.3	-0.4
PVCC	Panska Ves	77.14	350	eP	P	04 59 19.8	+0.1
PVCC	Panska Ves	77.14	350	eP	P	04 59 19.8	+0.1
WOL	Wolverton	77.14	1	eP	P	04 59 19.1	-0.6
WOL				IAmb	IAmb	04 59 20.9	
	comp=Z,173nm,0.8s						
UBBA	Unterbreizbach	77.25	353	eP	P	04 59 20.2	-0.1
	comp=Z,106nm,1.5s,baz=8.5,slow=5.5						
MOX	Moxa	77.30	352	eP	P	04 59 20.5	-0.1
	comp=Z,59nm,0.9s,baz=8.5,slow=5.5						
SURT	Suratani	77.32	268	P	P	04 59 22.6	+1.4
	comp=Z,4.6nm,1.2s						
SORM	Soroca	77.33	341	⇓P	P	04 59 20.5	-0.3
SORM	Soroca	77.33	341	⇓P	P	04 59 20.5	-0.3
KRLC	Kraliky	77.33	349	eP	P	04 59 20.6	-0.3
KRLC	Kraliky	77.33	349	eP	P	04 59 20.6	-0.3
CTA	Charters Tower	77.39	212	P	P	04 59 21.9	+0.4
	comp=Z,71nm,0.9s,baz=16,slow=7.1,SNR=84						
CTAO	Charters Tower	77.39	212	P	P	04 59 21.6	+0.2
CTAO				pmax	pmax		
	comp=Z,140nm,1.1s						
CTAO	Charters Tower	77.39	212	P	P	04 59 21.6	+0.2
CTAO				IAmb	IAmb	04 59 23.1	
	comp=Z,140nm,1.1s						
OKC	Ostrava-Krasne	77.39	348	eP	P	04 59 21.2	0.0
OKC	Ostrava-Krasne	77.39	348	eP	P	04 59 21.2	0.0
PLN	Plauen	77.41	352	eP	P	04 59 21.1	-0.2
	comp=Z,41nm,0.8s,baz=8.5,slow=5.5						
WERD	Werda	77.44	352	eP	P	04 59 21.2	-0.2
	comp=Z,34nm,1.2s,baz=8.5,slow=5.5						
TANN	Tannenbergstha	77.45	352	eP	P	04 59 21.5	-0.1
	comp=Z,37nm,0.9s,baz=8.5,slow=5.5						
BBKI	Banjar Baru	77.48	248	P	P	04 59 22.2	+0.1
	comp=Z,4µmcomp=Z,115nm,1.5s						
KVAR	Kislovodsk Arr	77.49	330	LR	LR	05 35 51.8	
	comp=Z,338nm,21.7s,baz=291,slow=37						
KIV	Kislovodsk	77.49	330	⇓P	P	04 59 21.6	-0.4
KIV	Kislovodsk	77.49	330	⇓P	P	04 59 21.6	-0.4
KIV	Kislovodsk	77.49	330	P	P	04 59 22.1	+0.1
KIV	Kislovodsk	77.49	330	P	P	04 59 21.9	-0.1
NIE	Niedzica	77.50	346	eP	P	04 59 22.4	+0.5
GUNZ	Gunzen	77.52	352	eP	P	04 59 21.9	0.0
	comp=Z,50nm,0.9s,baz=8.5,slow=5.5						
BEBN	Eben Emael	77.53	356	dP	P	04 59 21.9	0.0
BEBN				dpP	pP	04 59 49.8	0.0
MORC	Moravsky Berou	77.53	348	⇓P	P	04 59 22.0	0.0
MORC	Moravsky Berou	77.53	348	eP	P	04 59 22.0	0.0
MORC	Moravsky Berou	77.53	348	⇓P	P	04 59 22.0	0.0
SOEI	Soe	77.56	236	P	P	04 59 22.1	-0.6
SOEI				IAmb	IAmb	04 59 40.1	
	comp=Z,170nm,0.9s						
SOEI	Soe	77.56	236	P	P	04 59 22.5	-0.2
	comp=Z,3µmcomp=Z,210nm,1.0s						
UCC	Uccle	77.57	357	dP	P	04 59 22.1	0.0
WERN	Wernitzgruen	77.59	352	eP	P	04 59 22.4	+0.1
	comp=Z,90nm,0.9s,baz=8.5,slow=5.5						
PRA	Prague	77.60	350	eP	P	04 59 22.5	+0.2
PRA	Prague	77.60	350	eP	P	04 59 22.5	+0.2
NCK	Nalchik	77.62	329	⇓eP	P	04 59 22.7	+0.1
NCK				pmax	pmax		
	comp=Z,46nm,0.9s						
KBZ	Khabaz	77.63	329	P	P	04 59 22.9	+0.3
	comp=Z,17nm,0.8s,baz=102,slow=2.5,SNR=41						
KBZ				LR	LR	05 38 44.8	
	comp=Z,215nm,20.2s,baz=24,slow=40						
KBZ	Khabaz	77.63	329	deP	P	04 59 22.6	0.0
KBZ				pmax	pmax		
	comp=Z,24nm,0.9s						
TRTT	Trang	77.63	267	P	P	04 59 23.4	+0.4
NKC	Novy Kostel	77.64	352	eP	P	04 59 22.4	-0.2
NKC	Novy Kostel	77.64	352	eP	P	04 59 22.4	-0.2
PRU	Pruhonice	77.67	350	eP	P	04 59 22.2	-0.5
PRU	Pruhonice	77.67	350	eP	P	04 59 22.2	-0.5
KOLS	Kolonicke sedl	77.67	345	eP	P	04 59 23.2	+0.4
KOLS				pmax	pmax		
	comp=Z,65nm,1.0s						
KOLS	Kolonicke sedl	77.67	345	eP	P	04 59 23.2	+0.4
MMRI	Maumere	77.68	238	IAmb	IAmb	04 59 23.6	
	comp=Z,218nm,1.0s						
MMRI	Maumere	77.68	238	P	P	04 59 22.9	-0.3
	comp=Z,248nm,1.2s						
MEM	Membach	77.70	356	dP	P	04 59 23.1	+0.2
	comp=Z,141nm,1.0s						
MEM				dpP	pP	04 59 51.9	+1.1
AHRW	Bad Neuenahr-A	77.71	355	eP	P	04 59 23.3	+0.4
	comp=Z,144nm,1.1s,baz=8.5,slow=5.5						
BTNL	Ternell	77.72	356	dP	P	04 59 23.4	+0.3
	comp=Z,122nm,0.0s						
BTNL				dpP	pP	04 59 51.8	+0.8
BSTI	Sart Tilman	77.74	356	dP	P	04 59 23.6	+0.5
BSTI				dpP	pP	04 59 50.4	-0.7
CRVS	Cervenica-Dubn	77.83	345	eP	P	04 59 24.1	+0.4
CRVS				pmax	pmax		
	comp=Z,90nm,0.9s						
CRVS	Cervenica-Dubn	77.83	345	eP	P	04 59 24.1	+0.4
SNF	Seneffe	77.87	357	dP	P	04 59 24.1	+0.3
	comp=Z,105nm,1.1s						
SNF				dpP	pP	04 59 52.2	+0.4
LANS	Liptovska Anna	77.89	347	eP	P	04 59 25.3	+1.3
LANS				pmax	pmax		
	comp=Z,76nm,0.9s						
LANS	Liptovska Anna	77.89	347	eP	P	04 59 25.3	+1.3
BCLA	Clavier	77.92	356	dP	P	04 59 24.2	+0.1
	comp=Z,90nm,1.0s						
TNS	Taunus Mts	77.95	354	eP	P	04 59 24.3	0.0
	comp=Z,78nm,0.8s,baz=8.5,slow=5.5						
BHOU	Houvegnez	77.95	356	dP	P	04 59 24.4	+0.1
BHOU				dpP	pP	04 59 51.2	-1.1
BGES	Gesves	77.96	356	dP	P	04 59 24.4	0.0
	comp=Z,87nm,1.2s						
BGES				dpP	pP	04 59 53.0	+0.6
UZH	Uzhgorod	77.96	345	⇑iP	P	04 59 23.6	-0.8
UZH				e		04 59 35.8	
AKT	Akhty	78.01	325	eP	P	04 59 24.9	0.0
AKT				e		04 59 33.2	
AKT				e*PP	pP	04 59 54.1	+1.4
AKT				e*SP	sP	05 00 04.5	+0.1
AKT				pmax	pmax		
	comp=Z,31nm,0.9s						
PBCC	Pribram	78.03	350	eP	P	04 59 24.2	-0.5
BMRD	Maredsous	78.06	357	dP	P	04 59 25.2	+0.4
	comp=Z,132nm,1.3s						
BMRD				dpP	pP	04 59 53.1	+0.3
EDFI	Ende, Flores	78.06	239	P	P	04 59 23.8	-1.6
HRA	Herat	78.09	311	IAmb	IAmb	04 59 28.5	
	comp=Z,250nm,1.6s						
VRAC	Vranov	78.11	349	P	P	04 59 25.5	+0.2
	comp=Z,53nm,0.8s,baz=11,slow=5.4,SNR=87						
VRAC	Vranov	78.11	349	⇓P	P	04 59 24.9	-0.3
VRAC	Vranov	78.11	349	eP	P	04 59 25.4	+0.2
VRAC	Vranov	78.11	349	⇓P	P	04 59 24.9	-0.3
ROTZ	Rotzenmuhle	78.12	352	eP	P	04 59 25.3	+0.1
	comp=Z,51nm,1.1s,baz=8.5,slow=5.5						
ZEI	Tsey	78.15	328	eP	P	04 59 23.5	-2.3
ZEI				pmax	pmax		
	comp=Z,37nm,0.7s						
RCHB	Rochefort	78.18	356	dP	P	04 59 25.6	0.0
	comp=Z,84nm,1.1s						
CCA1	Carnmenellis	78.19	3	eP	P	04 59 25.2	-0.4
CCA1				IAmb	IAmb	04 59 26.8	
	comp=Z,124nm,1.0s						
TREC	Trest	78.25	349	eP	P	04 59 25.7	-0.3
TREC	Trest	78.25	349	eP	P	04 59 25.7	-0.3
BATI	Baumata	78.26	236	P	P	04 59 26.8	+0.4
	comp=Z,582nm,0.9s,baz=295,slow=0.4,SNR=49						
BATI	Baumata	78.26	236	P	P	04 59 26.6	+0.2
	comp=Z,3µmcomp=Z,344nm,1.0s						
DOU	Dourbes	78.27	357	dP	P	04 59 26.2	+0.2
	comp=Z,62nm,1.1s						
DOU				dpP	pP	04 59 54.9	+0.9
ANN	Anapa	78.27	333	eP	P	04 59 23.9	-2.2
ANN				e*PP	pP	04 59 50.3	-3.7
ANN				eS	S	05 09 17.4	+5.6
ANN				pmax	pmax		
	comp=Z,26nm,0.7s						
GRA1	Grafenberg Arr	78.28	352	IAmb	IAmb	04 59 27.7	
	comp=Z,105nm,0.9s						
GRF	Grafenberg Arr	78.28	352	eP	P	04 59 26.5	+0.4
	comp=Z,111nm,0.8s,baz=8.5,slow=5.5						
KRUC	Moravsky	78.38	349	eP	P	04 59 26.7	0.0
IAS	Iasi	78.39	341	⇓P	P	04 59 26.7	0.0
IAS	Iasi	78.39	341	⇓P	P	04 59 26.7	0.0
KECS	Kecovo	78.39	346	eP	P	04 59 27.2	+0.5
KECS				pmax	pmax		
	comp=Z,38nm,0.9s						
KECS	Kecovo	78.39	346	eP	P	04 59 27.2	+0.5
MILM	Milestii Mici	78.39	340	⇑P	P	04 59 26.1	-0.7
MILM	Milestii Mici	78.39	340	⇑P	PKKPbc	05 18 19.9	-0.7
JAVC	Velka Javorina	78.42	348	eP	P	04 59 28.2	+1.2
PKDT	Phuket	78.43	268	P	P	04 59 28.1	+0.6
BURAR	Bucovina Array	78.44	343	⇑P	P	04 59 27.3	+0.2
BURAR	Bucovina Array	78.44	343	⇑P	PKKPbc	05 18 22.2	+1.6
BURAR	Bucovina Array	78.44	343	⇑P	P	04 59 27.3	+0.2
BURAR	Bucovina Array	78.44	343	P	P	04 59 26.6	-0.5
PRAR	RASCA	78.49	342	⇑P	P	04 59 27.3	0.0
VYHS	Vyhne	78.62	347	eP	P	04 59 28.5	+0.5
VYHS				pmax	pmax		
	comp=Z,66nm,1.0s						
VYHS	Vyhne	78.62	347	eP	P	04 59 28.5	+0.5
KHC	Kasperske Hory	78.62	351	d iP	P	04 59 27.7	-0.3
KHC				pmax	pmax		
	comp=Z,207nm,1.7s						
KHC	Kasperske Hory	78.62	351	eP	P	04 59 28.0	0.0
KHC				ex	x	04 59 31.3	
KHC				epP	pP	04 59 56.0	-0.1
KHC				ex	x	05 00 22.0	
WLF	Walferdange	78.64	356	dP	P	04 59 28.7	+0.6
	comp=Z,69nm,0.9s						
WLF				dpP	pP	04 59 57.4	+1.4
WLF	Walferdange	78.64	356	eP	P	04 59 28.5	+0.5
	comp=Z,86nm,1.0s,baz=8.5,slow=5.5						
WET	Wettzell	78.67	351	eP	P	04 59 28.4	+0.1
	comp=Z,41nm,1.1s,baz=8.5,slow=5.5						
BMR	Baia Mare	78.69	344	⇓P	P	04 59 28.8	+0.4
BMR	Baia Mare	78.69	344	⇓P	P	04 59 28.8	+0.4
SOC	Sochi	78.73	331	eP	P	04 59 27.7	-1.0
SOC				e*PP	pP	04 59 52.1	-4.5
SOC				e		05 02 24.0	
SOC				ePPP	PPP	05 04 18.5	
SOC				eS	S	05 09 26.4	+10
SOC				eSS	SS	05 14 27.1	+5.1
SOC				pmax	pmax		
	comp=Z,45nm,1.4s						
SMOL	Smolenice	78.78	348	eP	P	04 59 29.9	+1.0
SMOL				pmax	pmax		
	comp=Z,41nm,1.1s						
SMOL	Smolenice	78.78	348	eP	P	04 59 29.9	+1.0
CHVG	Ch'k'valeri	78.80	329	⇑P	P	04 59 28.8	-0.3
CHVG	Ch'k'valeri	78.80	329	⇑P	P	04 59 28.8	-0.3
VASR	Vaslui	78.87	341	⇑P	P	04 59 29.9	+0.5
VASR	Vaslui	78.87	341	⇑P	PKKPbc	05 18 18.9	-0.7
GEC2	GERESS Array S	78.89	351	eP	P	04 59 29.4	-0.2
	comp=Z,37nm,0.9s,baz=8.5,slow=5.5						
GERES	GERESS Array B	78.89	351	P	P	04 59 29.4	-0.2
	comp=Z,19nm,0.7s,baz=26,slow=5.3,SNR=192						
GERES				pP	pP	04 59 58.2	+0.6
	comp=Z,3.5nm,0.6s,baz=17,slow=5.6,SNR=2.6						
GERES				PKKPbc	PKKPbc	05 18 20.1	+0.4
	comp=Z,0.9nm,0.6s,baz=180,slow=2.0,SNR=9.7						
GERES				PKPPKP	P'P'df	05 26 18.9	-8.7
	comp=Z,0.7nm,0.7s,baz=174,slow=2.5,SNR=5.0						
BIZ	Bicaz	78.92	342	⇓P	P	04 59 30.1	+0.4
BIZ	Bicaz	78.92	342	⇓P	PKKPbc	05 18 20.9	+1.4
MODS	Modra-Piesok	78.94	348	eP	P	04 59 29.8	0.0
MODS				pmax	pmax		
	comp=Z,104nm,1.2s						
MODS	Modra-Piesok	78.94	348	eP	P	04 59 29.8	0.0
PBA	Port Blair	78.98	275	eP	P	04 59 29.9	-0.5
PBA				IAmb	IAmb	04 59 31.7	
	comp=Z,139nm,0.7s						
KULM	Kulim	79.02	265	P	P	04 59 30.1	-0.6
KULM				IAmb	IAmb	04 59 32.0	
	comp=Z,116nm,1.1s						
KULM	Kulim	79.02	265	P	P	04 59 31.0	+0.3
PSZ	Piszkesteto	79.03	346	⇑P	P	04 59 31.5	+1.1
PSZ	Piszkesteto	79.03	346	eP	P	04 59 31.0	+0.6
PSZ	Piszkesteto	79.03	346	⇑P	P	04 59 31.5	+1.1
ARCR	ARCALIA	79.11	343	⇑P	P	04 59 32.0	+1.3
ARCR	ARCALIA	79.11	343	⇑P	PKKPbc	05 18 20.1	+1.0
ZST	Bratislava	79.14	348	eP	P	04 59 31.7	+0.9
ZST				pmax	pmax		
	comp=Z,261nm,1.2s						
ZST	Bratislava	79.14	348	eP	P	04 59 31.7	+0.9
BHPL	Bhopal	79.15	294	eP	P	04 59 31.4	0.0
BHPL				IAmb	IAmb	04 59 32.6	
	comp=Z,402nm,0.7s						
TESR	Tescani	79.22	341	⇓P	P	04 59 31.4	0.0
LTVH	Ltavrtes, Hu	79.24	345	eP	P	04 59 32.3	+0.9
JSA	Saint Aubin	79.26	1	eP	P	04 59 31.4	0.0
JSA				IAmb	IAmb	04 59 32.6	
	comp=Z,223nm,0.8s						
BIR	Birlad	79.26	341	⇑P	P	04 59 31.5	0.0
BIR	Birlad	79.26	341	⇑P	P	04 59 31.5	0.0
STU	Stuttgart	79.35	354	P	P	04 59 31.7	-0.3
STU				pmax	pmax		
	comp=Z,83nm,1.0s						
STU	Stuttgart	79.35	354	P	P	04 59 31.7	-0.3
STU	Stuttgart	79.35	354	eP	P	04 59 31.8	-0.3
	comp=Z,70nm,0.8s,baz=8.5,slow=5.5						
SRO	Srobarova	79.36	347	eP	P	04 59 32.8	+0.8
SRO				pmax	pmax		
	comp=Z,61nm,1.0s						
SRO	Srobarova	79.36	347	eP	P	04 59 32.8	+0.8
IPM	Ipoh	79.42	264	IAmb	IAmb	04 59 33.5	
	comp=Z,103nm,0.9s						
IPM	Ipoh	79.42	264	P	P	04 59 33.0	+0.1
CONA	Conrad Observa	79.56	349	i P	P	04 59 33.7	+0.5
	comp=Z,62nm,0.9s,SNR=30						
VARL	Varlezi	79.56	340	⇓P	P	04 59 33.7	+0.5
BUD	Budapest	79.58	347	eP	P	04 59 34.2	+1.0
CJR	Cluj-Napoca	79.60	343	⇑P	P	04 59 34.2	+0.7
CJR	Cluj-Napoca	79.60	343	⇑P	PKKPbc	05 18 17.1	-1.0
CJR	Cluj-Napoca	79.60	343	⇑P	P	04 59 34.2	+0.7
DRGR		79.68	344	⇓P	P	04 59 34.0	+0.1
DRGR		79.68	344	⇑P	PKKPbc	05 18 18.7	+0.8
DRGR		79.68	344	⇓P	P	04 59 34.0	+0.1
SOP	Sopron	79.71	348	eP	P	04 59 34.8	+0.8
TBI	Tubuai	79.71	151	eS	S	05 09 26.2	-1.1
	comp=Z,449nm,28.0s						
TBI	Tubuai	79.71	151	eLR	LR	05 24 10.9	
	comp=Z,773nm,34.5s						
TBI	Tubuai	79.71	151	eT	T	06 26 26.2	
	comp=Z,4.1nm,0.3s						
FUR	Furstenfeldbru	79.79	352	eP	P	04 59 34.3	-0.1
	comp=Z,122nm,1.1s,baz=8.5,slow=5.5						
OZUR		79.79	342	⇓P	P	04 59 35.2	+0.7
MYKOM	Kota Tinggi	79.80	260	IAmb	IAmb	04 59 36.5	
	comp=Z,127nm,1.2s						
CSKK	Cskako	79.80	347	eP	P	04 59 35.3	+0.8
MOA	Molln	79.81	350	i P	P	04 59 34.6	+0.1
	comp=Z,20nm,0.9s,SNR=8.6						
VRI	Vrincioaia	79.82	341	⇑P	P	04 59 34.6	0.0
VRI	Vrincioaia	79.82	341	⇑P	PKKPbc	05 18 17.3	-0.2
VRI	Vrincioaia	79.82	341	⇑P	P	04 59 34.6	0.0
BFO	Black Forest	79.84	354	P	P	04 59 34.3	-0.4
BFO				pmax	pmax		
	comp=Z,52nm,1.0s						
BFO	Black Forest	79.84	354	P	P	04 59 34.3	-0.4
BFO	Black Forest	79.84	354	eP	P	04 59 34.5	-0.2
	comp=Z,56nm,0.9s,baz=8.5,slow=5.5						
PLOR	Plostina	79.85	341	⇓P	P	04 59 35.2	+0.4
PLOR	Plostina	79.85	341	⇓P	P	04 59 35.2	+0.4
NGP	Nagpur	79.86	291	eP	P	04 59 35.2	0.0
ODBI	Odobesti	79.86	341	⇑P	P	04 59 35.2	+0.5
PETR	Petresti	79.86	341	⇑P	P	04 59 36.2	+1.4
EGYH	Egyhazaskeszo	79.87	348	eP	P	04 59 31.8	-3.1
GIUM	Giurgiulesti	79.88	340	⇑P	P	04 59 36.0	+1.1
BASI	Baing, Sumba	79.88	239	P	P	04 59 34.6	-0.6
	comp=Z,3µmcomp=Z,319nm,1.1s						
DOPR	Dopca	79.99	342	⇓P	P	04 59 36.6	+1.1
DOPR	Dopca	79.99	342	⇓P	PKKPbc	05 18 17.6	+0.4
MDB	Medias	80.01	343	⇑P	P	04 59 36.5	+0.9
MDB	Medias	80.01	343	⇑P	P	04 59 36.5	+0.9
TLCR		80.04	339	⇓P	P	04 59 35.4	-0.3
TLCR		80.04	339	⇓P	P	04 59 35.4	-0.3
MPLH	Magyarpolny	80.09	348	eP	P	04 59 36.4	+0.4
BISRR	Bisoca	80.13	341	⇑P	P	04 59 36.8	+0.4
BISRR	Bisoca	80.13	341	⇓P	PKKPbc	05 18 16.9	0.0
CFR	Carcaliu	80.19	340	⇓P	P	04 59 36.1	-0.5
CFR	Carcaliu	80.19	340	⇑P	PKKPbc	05 18 17.6	+1.0
CFR	Carcaliu	80.19	340	⇓P	P	04 59 36.1	-0.5
GNI	Garni	80.23	327	P	P	04 59 37.4	+0.2
	comp=Z,8.6nm,0.7s,baz=185,slow=3.1,SNR=13						
GNI	Garni	80.23	327	d iP	P	04 59 37.7	+0.6
GNI				pmax	pmax		
	comp=Z,74nm,1.7s						
GNI	Garni	80.23	327	P	P	04 59 37.2	+0.1
GNI	Garni	80.23	327	P	P	04 59 37.9	+0.8
PLAI	Plampang	80.24	242	P	P	04 59 35.4	-1.8
GRER		80.24	341	⇑P	P	04 59 37.2	+0.4
ARSA	Arzberg	80.26	349	i P	P	04 59 37.6	+0.6
	comp=Z,52nm,1.1s,SNR=16						
TIH	Tihany	80.31	347	eP	P	04 59 38.1	+1.0
NEHR	Nehoiu	80.33	341	⇑P	P	04 59 38.1	+0.7
MLR	Muntele Rosu	80.34	342	P	P	04 59 37.5	0.0
	comp=Z,30nm,0.8s,baz=344,slow=2.9,SNR=61						
MLR				PKKPbc	PKKPbc	05 18 16.5	0.0
	comp=Z,4.2nm,0.7s,baz=265,slow=5.9,SNR=13						
MLR	Muntele Rosu	80.34	342	⇑P	P	04 59 38.9	+1.4
MLR	Muntele Rosu	80.34	342	⇑P	PKKPbc	05 18 17.4	+0.8
MLR	Muntele Rosu	80.34	342	⇑P	P	04 59 38.9	+1.4
SIRR	Siria	80.36	345	⇓P	P	04 59 26.6	-11
UBR	Ueberruh	80.37	353	eP	P	04 59 37.5	0.0
	comp=Z,93nm,1.4s,baz=8.5,slow=5.5						
AMBH	Ambrzfalva	80.43	345	eP	P	04 59 38.6	+0.8
TPGR	Topolog	80.44	340	⇓P	P	04 59 38.0	0.0
RETA	Reutte	80.50	352	i P	P	04 59 38.2	-0.2
	comp=Z,44nm,1.2s,SNR=12						
DEV	Deva	80.52	344	⇑P	P	04 59 38.5	+0.1
DEV	Deva	80.52	344	⇑P	P	04 59 38.5	+0.1
FSCY	Frank Sound, G	80.55	71	IAmb	IAmb	04 59 40.7	
	comp=Z,331nm,1.4s						
VOIR		80.56	342	⇓P	P	04 59 39.5	+0.8
VOIR		80.56	342	⇓P	PKKPbc	05 18 18.7	+2.8
VOIR		80.56	342	⇓P	P	04 59 39.5	+0.8
ISR	Istrita	80.58	341	⇓P	P	04 59 39.1	+0.4
ISR	Istrita	80.58	341	⇓P	P	04 59 39.1	+0.4
WATA	Walderalm	80.59	352	i P	P	04 59 39.1	+0.2
	comp=Z,103nm,0.8s,SNR=41						
MOTA	Moosalm	80.62	352	i P	P	04 59 39.1	0.0
	comp=Z,126nm,1.3s,SNR=34						
WTTA	Wattenberg	80.65	352	i P	P	04 59 39.6	+0.4
	comp=Z,124nm,0.8s,SNR=43						
TWSI	Taliwang, Sumb	80.65	243	P	P	04 59 37.7	-1.7
KBA	Koelnbreinsper	80.67	351	i P	P	04 59 40.0	+0.7
	comp=Z,217nm,0.7s,SNR=93						
HARR	Harsova	80.70	340	⇑P	P	04 59 38.6	-0.7
HARR	Harsova	80.70	340	⇑P	PKKPbc	05 18 16.4	+0.9
HARR	Harsova	80.70	340	⇑P	P	04 59 38.6	-0.7
ARR	Arges	80.71	342	⇑P	P	04 59 40.1	+0.7
ARR	Arges	80.71	342	⇑P	PKKPbc	05 18 16.7	+1.1
SQTA	Sankt Quirin	80.73	352	i P	P	04 59 40.0	+0.4
	comp=Z,99nm,0.9s,SNR=21						
MTUR	Matau	80.77	342	⇓P	P	04 59 41.2	+1.4
MTUR	Matau	80.77	342	⇓P	P	04 59 41.2	+1.4
DAVA	Damuels	80.78	353	i P	P	04 59 40.2	+0.4
	comp=Z,48nm,1.2s,SNR=11						
TLBR	Topalu	80.81	340	⇓P	P	04 59 39.9	0.0
TIRR	Tirgusor	80.82	340	⇑P	P	04 59 40.1	+0.2
TIRR	Tirgusor	80.82	340	⇑P	P	04 59 40.1	+0.2
TIRR	Tirgusor	80.82	340	⇑P	P	04 59 40.1	+0.2
MORH	Mrgy, Hungar	80.87	347	eP	P	04 59 40.0	-0.2
MORH	Mrgy, Hungar	80.87	347	⇓iP	P	04 59 39.5	-0.7
BEHE	Becsehely	80.88	348	eP	P	04 59 42.3	+2.1
SOKA	Soboth	80.88	349	i P	P	04 59 40.8	+0.4
	comp=Z,156nm,1.1s,SNR=35						
KMMI	Kalianget	80.90	246	P	P	04 59 42.4	+1.7
	comp=Z,4µmcomp=Z,344nm,1.3s						
AMRR	Amara	80.90	340	⇓P	P	04 59 39.8	-0.6

AMRR	Amara	80.90	340	⇓P	P	04 59 39.8	-0.6
PERS	Pernice	80.92	349	iP	P	04 59 40.8	+0.3
TIM	Timisoara	80.95	345	⇑P	P	04 59 39.8	-0.8
TIM	Timisoara	80.95	345	⇑P	P	04 59 39.8	-0.8
KOGS	Kog	80.97	348	iP	P	04 59 40.8	+0.1
FETA	Feichten	80.97	352	iP	P	04 59 41.3	+0.4
	comp=Z,96nm,1.0s,SNR=36						
BZS	Buzias	81.00	345	⇑P	P	04 59 40.7	-0.2
BZS	Buzias	81.00	345	⇑P	PKKPbc	05 18 15.8	+0.9
BZS	Buzias	81.00	345	⇑P	P	04 59 40.7	-0.2
TGUH	Tegucigalpa,Un	81.00	79	IAmb	IAmb	04 59 45.4	
	comp=Z,206nm,1.3s						
CVDA	Cernavoda	81.02	340	⇑P	P	04 59 41.3	+0.3
GZR	Gura Zlata	81.02	344	⇓P	P	04 59 41.4	+0.3
GZR	Gura Zlata	81.02	344	⇓P	P	04 59 41.4	+0.3
GROS	Grobnik	81.04	349	iP	P	04 59 41.3	+0.1
SRBI	Singaraja	81.04	245	P	P	04 59 40.4	-1.1
	comp=Z,2µmcomp=Z,182nm,1.1s						
SULR		81.06	341	⇑P	P	04 59 41.7	+0.5
ABTA	Abfaltersbach	81.08	351	iP	P	04 59 41.4	0.0
	comp=Z,112nm,1.0s,SNR=28						
MFTR	Murfatlar	81.08	339	⇑P	P	04 59 42.0	+0.7
MYKA	Terra Mystica	81.08	350	iP	P	04 59 41.5	+0.1
	comp=Z,47nm,1.0s,SNR=16						
KTUT	Trabzon	81.09	330	⇓P	P	04 59 45.1	+3.6
OBKA	Obir	81.11	350	iP	P	04 59 41.7	+0.2
	comp=Z,106nm,0.8s,SNR=30						
TPI	Tanjungpandan	81.11	254	P	P	04 59 42.5	+0.6
	comp=Z,2µmcomp=Z,148nm,1.0s						
EFOR	EFORIE	81.13	339	⇓P	P	04 59 42.1	+0.5
LEHL	Lehliu	81.14	341	⇑P	P	04 59 41.8	+0.2
KALN	Kalnik	81.25	348	P	P	04 59 42.5	+0.2
ICOR	Ion Corvin	81.28	340	⇑P	P	04 59 42.8	+0.5
DAVOX	Davos/Dischmat	81.28	353	P	P	04 59 43.0	+0.4
	comp=Z,59nm,0.8s,baz=348,slow=5.5,SNR=100						
DAVOX				PKKPbc	PKKPbc	05 18 14.5	0.0
	comp=Z,2.5nm,0.6s,baz=75,slow=21,SNR=5.3						
BANR	Banloc	81.31	345	⇓P	P	04 59 43.3	+0.8
RASA	Rasa	81.32	340	⇓P	P	04 59 42.7	+0.1
LHMI	Lhok Sumawe	81.36	267	P	P	04 59 44.7	+1.5
	comp=Z,8µmcomp=Z,912nm,1.0s						
MANR	Mangalia	81.39	339	⇑P	P	04 59 40.7	-2.2
HUMR	Humele	81.45	342	⇓P	P	04 59 43.2	-0.1
DNP	Denpasar	81.53	244	P	P	04 59 42.8	-1.2
PTJ	Puntijarka	81.53	349	P	P	04 59 43.6	-0.2
WB0	Warramunga Arr	81.54	222	IAmb	IAmb	04 59 44.8	
	comp=Z,185nm,0.9s						
PPBI	Pangkal Pinang	81.54	256	P	P	04 59 44.6	+0.4
	comp=Z,66µmcomp=Z,141nm,1.2s						
SGRR	Singureni	81.55	341	⇑P	P	04 59 43.1	-0.7
LJU	Ljubljana	81.57	350	iP	P	04 59 43.2	-0.7
LJU	Ljubljana	81.57	350	⇓iP	P	04 59 42.9	-1.0
HERR	Herculane	81.58	344	⇓P	P	04 59 43.6	-0.3
HERR	Herculane	81.58	344	⇑P	PKKPbc	05 18 15.0	+1.4
ZAG	Zagreb	81.61	348	eP	P	04 59 44.6	+0.5
WR0	Warramunga Arr	81.65	222	IAmb	IAmb	04 59 45.3	
	comp=Z,141nm,0.8s						
CRES	Cresnjev	81.67	349	⇓iP	P	04 59 43.9	-0.6
BLJI	Banyuglugur	81.68	246	P	P	04 59 45.6	+0.8
	comp=Z,128nm,1.0s						
WRAB	Tennant Creek	81.70	222	d iP	P	04 59 44.3	-0.5
WRAB				pmax	pmax		
	comp=Z,310nm,1.3s						
WRAB	Tennant Creek	81.70	222	P	P	04 59 44.7	-0.1
WRAB				IAmb	IAmb	04 59 45.8	
	comp=Z,269nm,1.1s						
TSI	Tuntungan	81.70	265	P	P	04 59 44.6	-0.4
	comp=Z,439nm,0.9s						
WB2	Warramunga Arr	81.71	222	IAmb	IAmb	04 59 45.8	
	comp=Z,246nm,0.9s						
WRA	Warramunga Arr	81.72	222	P	P	04 59 44.7	-0.2
	comp=Z,124nm,0.8s,baz=32,slow=6.0,SNR=514						
WRA				PKiKP	PKiKP	05 05 06.6	-1.2
	comp=Z,1.4nm,0.6s,baz=1.3,slow=1.6,SNR=5.9						
WRA				PKKPbc	PKKPbc	05 18 15.2	+0.4
	comp=Z,1.0nm,0.7s,baz=230,slow=2.1,SNR=9.5						
WRA				LR	LR	05 34 18.4	
	comp=Z,79nm,20.7s,baz=55,slow=34						
WRA	Warramunga Arr	81.72	222	iP	P	04 59 44.7	-0.2
WRA				pmax	pmax		
	comp=Z,139nm,0.8s						
WRA	Warramunga Arr	81.72	222	P	P	04 59 43.9	-1.0
FRGS	Fruska Gora	81.74	346	⇓iP	P	04 59 44.8	0.0
RMGR	Halanga-Turnu	81.74	344	⇑P	P	04 59 44.9	+0.1
COPA	Copaceanca	81.79	342	⇓P	P	04 59 43.5	-1.5
MDVR	Moldovita	81.80	344	⇓P	P	04 59 45.0	-0.2
CEY	Cerknica	81.88	350	⇓iP	P	04 59 45.2	-0.4
PUNG	Punghina	82.07	343	⇓P	P	04 59 46.4	-0.1
VLAD	Vladila	82.07	342	⇓P	P	04 59 46.8	+0.2
ZIMR		82.22	341	⇑P	P	04 59 47.1	-0.2
ZIMR		82.22	341	⇑P	P	04 59 47.1	-0.2
RIY	Rijeka	82.28	349	P	P	04 59 46.7	-0.9
RIY	Rijeka	82.28	349	⇓iP	P	04 59 47.1	-0.5
TEKS	Tekeris	82.37	346	⇓iP	P	04 59 48.5	+0.3
MLSI	Meulaboh, Aceh	82.44	267	P	P	04 59 47.3	-1.6
BLY	Banja Luka	82.51	347	eP	P	04 59 48.6	-0.3
JMBI	JAMBI	82.63	258	P	P	04 59 51.5	+1.7
	comp=Z,198nm,1.1s						
BKNI	Bangkinang	82.67	261	P	P	04 59 50.0	-0.1
BKNI	Bangkinang	82.67	261	P	P	04 59 50.4	+0.3
	comp=Z,3µmcomp=Z,402nm,1.0s						
DIVS	Divibare	82.74	345	⇓iP	P	04 59 50.1	-0.1
DIVS	Divibare	82.74	345	IAmb	IAmb	04 59 51.4	
	comp=Z,95nm,1.1s						
TPTI		82.75	266	P	P	04 59 48.9	-1.6
HAPS	Han Pijesak,Bl	82.91	346	eP	P	04 59 50.4	-0.7
UDBI	Udbina	82.92	348	P	P	04 59 50.7	-0.3
PWJI	Pagerwojo	82.92	247	P	P	04 59 49.7	-1.6
BBLS	Lazići	83.06	346	⇓iP	P	04 59 52.2	+0.4
HYB	Hyderabad	83.07	289	iP	P	04 59 52.5	+0.3
	comp=Z,735nm,1.0s						
HYB				epP	pP	05 00 21.0	+0.5
HYB				esP	sP	05 00 33.0	+0.7
HYB				e		05 01 08.5	
HYB				eS	S	05 10 03.0	+0.3
HYB	Hyderabad	83.07	289	eP	P	04 59 52.3	+0.1
HYB				IAmb	IAmb	04 59 53.7	
	comp=Z,490nm,0.8s						
MNSI	Mandailing Nat	83.20	263	P	P	04 59 50.9	-1.9
BNI	Bardonecchia	83.21	355	IAmb	IAmb	04 59 55.1	
	comp=Z,104nm,0.9s						
PRMA	PARMA	83.25	352	IAmb	IAmb	04 59 54.0	
	comp=Z,85nm,0.9s						
KIJV	Kijevo	83.35	348	P	P	04 59 53.3	+0.1
SDSI	Sungai Dareh	83.42	260	P	P	04 59 53.4	-0.5
	comp=Z,1µmcomp=Z,76nm,1.3s						
BHUJ	Bhuj	83.44	299	eP	P	04 59 55.1	+1.2
BHUJ				IAmb	IAmb	04 59 55.8	
	comp=Z,162nm,0.6s						
MTDJ	Mount Denham	83.53	69	IAmb	IAmb	04 59 57.5	
	comp=Z,205nm,1.6s						
DUGI	Dugi Otok	83.53	349	P	P	04 59 54.0	-0.1
SJES	Sjenica	83.56	345	⇓iP	P	04 59 54.8	+0.4
UGM	Wanagama	83.57	249	P	P	04 59 53.8	-0.8
UGM	Wanagama	83.57	249	P	P	04 59 54.9	+0.2
	comp=Z,263nm,1.1s						
MORI	Morici	83.57	348	P	P	04 59 53.6	-0.7
VTS	Vitosha	83.63	343	⇑P	P	04 59 54.2	-0.6
VTS	Vitosha	83.63	343	⇑P	PKKPbc	05 18 10.6	+1.5
VTS	Vitosha	83.63	343	⇑P	P	04 59 54.2	-0.6
RICI	Ricice	83.75	347	P	P	04 59 54.7	-0.6
ZIRJ	Zirje	83.79	348	P	P	04 59 55.3	-0.1
SNSI	Sinabang, Aceh	83.94	266	P	P	04 59 57.2	+0.6
	comp=Z,4µmcomp=Z,355nm,1.3s						
MDUB	Mudurnu	83.95	336	IAmb	IAmb	04 59 57.6	
	comp=Z,228nm,1.3s						
PDSI	Padang	84.00	261	P	P	04 59 55.0	-1.9
FITZ	Fitzroy Crossi	84.01	231	P	P	04 59 57.4	+0.6
	comp=Z,172nm,0.7s,baz=26,slow=5.0,SNR=419						
FITZ				LR	LR	05 38 54.1	
	comp=Z,69nm,18.1s,baz=30,slow=37						
BR131	Keskin Array S	84.02	334	d iP	P	04 59 55.9	-1.0
BR131	Keskin Array S	84.02	334	IAmb	IAmb	04 59 57.6	
	comp=Z,169nm,1.9s						
BRTR	Keskin Array B	84.02	334	P	P	04 59 56.4	-0.5
	comp=Z,10nm,0.8s,baz=54,slow=2.7,SNR=84						
BRTR				PKKPbc	PKKPbc	05 18 07.6	-0.6
	comp=Z,1.7nm,0.6s,baz=184,slow=4.2,SNR=10						
BRTR				LR	LR	05 39 34.9	
	comp=Z,73nm,21.6s,baz=24,slow=37						
BRTR	Keskin Array B	84.02	334	P	P	04 59 55.7	-1.1
KPJI	Karang Pucung	84.03	250	P	P	04 59 55.5	-1.4
GSI	Gunungsitoli	84.03	264	P	P	04 59 57.1	0.0
	comp=Z,292nm,1.2s						
MARD	Mardin	84.12	328	P	P	04 59 57.4	0.0
BRY	Bratogost	84.13	346	eP	P	04 59 57.1	-0.3
ESPN	Las Esperanzas	84.25	78	IAmb	IAmb	05 00 01.1	
	comp=Z,80nm,0.8s						
STON	Ston	84.28	347	eP	P	04 59 56.7	-1.2
KRJI	Kerinci	84.31	259	P	P	04 59 58.7	+0.1
	comp=Z,9µmcomp=Z,179nm,0.9s						
TREB	Trebinje	84.34	346	eP	P	04 59 57.6	-0.7
KLSI		84.40	255	P	P	04 59 57.5	-1.4
OSSC	Osservatorio P	84.40	351	IAmb	IAmb	04 59 59.4	
	comp=Z,175nm,0.9s						
LHSI	Lahat	84.44	257	P	P	04 59 58.1	-1.0
	comp=Z,2µmcomp=Z,152nm,1.1s						
PDG	Podgorica	84.48	345	⇑P	P	04 59 58.9	-0.1
PDG	Podgorica	84.48	345	eP	P	04 59 57.9	-1.1
PDG	Podgorica	84.48	345	IAmb	IAmb	04 59 59.8	
	comp=Z,109nm,1.0s						
CBJI	Citeko	84.51	252	P	P	04 59 59.4	0.0
HCY	Herceg Novi	84.58	346	eP	P	04 59 58.2	-1.3
BLSI	Bandar Lampung	84.63	254	P	P	04 59 58.9	-1.1
MASI	Maura Aman, Be	84.67	258	P	P	05 00 05.2	+4.9
DBJI	Dramaga	84.68	252	P	P	04 59 59.0	-1.3
DRME	Dracevica, Mon	84.73	345	eP	P	05 00 00.2	0.0
CISI	Cisompet, Garu	84.86	251	P	P	04 59 59.5	-1.7
KSI	Kapahiang	84.86	257	P	P	05 00 01.8	+0.5
	comp=Z,54nm,0.7s						
POO	Poona	84.91	294	eP	P	05 00 01.9	+0.4
POO				⇓iP	PcP	05 00 02.0	-2.6
	comp=Z,330nm,0.3s						
LHI	Lord Howe Isla	85.02	197	P	P	05 00 02.9	+1.5
LWLI	Liwa	85.06	255	P	P	05 00 00.5	-1.8
CASP	Castiglione de	85.16	352	IAmb	IAmb	05 00 02.5	
	comp=Z,72nm,0.8s						
SISI	Saibi	85.16	262	P	P	05 00 02.6	-0.1
	comp=Z,124nm,1.1s						
KASI	Kota Agung	85.20	255	P	P	05 00 00.7	-2.2
ASAR	Alice Springs	85.22	221	P	P	05 00 03.2	+0.5
	comp=Z,104nm,0.8s,baz=27,slow=4.9,SNR=674						
ASAR				PKiKP	PKiKP	05 05 12.7	-0.6
	comp=Z,2.0nm,0.8s,baz=350,slow=1.3,SNR=4.6						
ASAR				PKKPbc	PKKPbc	05 18 07.0	+0.2
	comp=Z,0.4nm,0.5s,baz=202,slow=1.8,SNR=6.2						
ASAR				SKKPbc	SKKPbc	05 21 33.1	-3.6
	comp=Z,1.0nm,0.7s,baz=193,slow=1.9,SNR=11						
ASAR				PKPPKP	P'P'df	05 26 16.3	+3.3
	comp=Z,0.5nm,0.8s,baz=215,slow=3.0,SNR=4.6						
ASAR				LR	LR	05 33 33.9	
	comp=Z,192nm,22.0s,baz=25,slow=32						
ASAR	Alice Springs	85.22	221	P	P	05 00 02.6	-0.1
LATE	Laterza	85.25	351	IAmb	IAmb	05 00 03.7	
	comp=Z,89nm,1.1s						
CGJI	Cibinong	85.35	253	P	P	05 00 01.7	-1.9
TIR	Tirane	85.44	345	⇓P	P	05 00 00.9	-2.9
TIR	Tirane	85.44	345	⇓P	P	05 00 00.9	-2.9
MDRS	Chennai	85.49	285	eP	P	05 00 04.8	+0.4
MDRS				IAmb	IAmb	05 00 06.3	
	comp=Z,156nm,1.1s						
INTR	Introdacqua	85.62	349	IAmb	IAmb	05 00 06.7	
	comp=Z,150nm,1.1s						
SGRT	San Giovanni R	85.65	348	IAmb	IAmb	05 00 05.7	
	comp=Z,98nm,1.0s						
MANT	Manisa	86.47	338	IAmb	IAmb	05 00 09.5	
	comp=Z,173nm,1.8s						
PBRG	Braganca	86.49	5	eP	P	05 00 08.7	-0.3
PCAB	Cabril	86.51	6	eP	P	05 00 08.9	-0.2
ISP	Isparta	86.62	336	P	P	05 00 08.6	-1.2
ISP				pmax	pmax		
	comp=Z,19nm,0.9s						
ISP	Isparta	86.62	336	P	P	05 00 08.6	-1.2
OUZ	Omahuta	86.93	185	IAmb	IAmb	05 00 13.6	
	comp=Z,122nm,0.9s						
PVRL	Vila Real	86.96	5	eP	P	05 00 11.2	-0.1
	comp=Z,95nm,1.0s						
PTO	Porto	87.04	6	eP	P	05 00 11.6	0.0
	comp=Z,155nm,1.4s						
MVO	Moncorvo	87.11	5	eP	P	05 00 11.8	-0.3
	comp=Z,84nm,0.9s						
GOA	Goa	87.34	292	eP	P	05 00 13.1	-0.3
GOA				IAmb	IAmb	05 00 14.3	
	comp=Z,310nm,0.8s						
PVIS	Viseu	87.51	6	eP	P	05 00 13.5	-0.5
	comp=Z,106nm,1.0s						
ELL	Elmali	87.80	336	IAmb	IAmb	05 00 15.8	
	comp=Z,179nm,1.9s						
MTE	Manteigas	87.85	5	eP	P	05 00 15.3	-0.3
	comp=Z,114nm,1.0s						
MTE	Manteigas	87.85	5	IAmb	IAmb	05 00 16.5	
	comp=Z,91nm,0.9s						
SHME	Shamm	87.94	311	P	P	05 00 14.8	-1.3
	SNR=6.2						
BANOM	Banah	87.97	311	P	P	05 00 15.3	-1.1
	SNR=5.4						
COI	Coimbra	87.98	6	eP	P	05 00 15.9	-0.2
COI	Coimbra	87.98	6	IAmb	IAmb	05 00 17.1	
	comp=Z,99nm,0.8s						
TIP	Timpagrande	88.04	347	⇓P	P	05 00 16.3	-0.2
PCAS	Casmilo, Conde	88.13	6	eP	P	05 00 16.5	-0.4
PCBR	Castelo Branco	88.41	5	eP	P	05 00 17.4	-0.7
	comp=Z,67nm,0.9s						
XMI	Christmas Isla	88.42	251	P	P	05 00 20.0	+1.6
	comp=Z,236nm,1.3s						
XMIS	Christmas Isla	88.46	251	P	P	05 00 19.9	+1.2
	comp=Z,189nm,1.1s						
MIB	Mutribah	88.48	320	eP		05 00 17.1	
UMR	Umm Al-Rimmam	88.56	320	eP		05 00 18.0	
PSBE	So Bento	88.65	6	eP	P	05 00 18.9	-0.4
ESDC	Sonseca Array	88.73	3	P	P	05 00 18.8	-1.0
	comp=Z,14nm,0.7s,baz=350,slow=4.2,SNR=127						
ESDC				pP	pP	05 00 48.6	+0.3
	comp=Z,6.5nm,0.9s,baz=352,slow=3.9,SNR=3.3						
ESDC				PKKPbc	PKKPbc	05 17 57.4	+0.3
	comp=Z,2.4nm,0.9s,baz=192,slow=1.9,SNR=12						
ESDC				PKPPKP	P'P'df	05 26 00.3	-9.1
	comp=Z,1.0nm,0.7s,baz=209,slow=1.5,SNR=7.9						
ESDC				LR	LR	05 43 21.7	
	comp=Z,92nm,18.1s,baz=25,slow=38						
ESDC	Sonseca Array	88.73	3	P	P	05 00 18.9	-0.8
ESDC				IAmb	IAmb	05 00 19.8	
	comp=Z,59nm,1.0s						
PMRV	Marv??o	88.82	5	eP	P	05 00 19.3	-0.8
	comp=Z,47nm,2.1s						
PAB	San Pablo	88.84	3	P	P	05 00 19.9	-0.4
PAB				pmax	pmax		
	comp=Z,23nm,1.1s						
PAB	San Pablo	88.84	3	P	P	05 00 19.9	-0.4
UOSS	Minazif	88.85	311	P	P	05 00 19.0	-1.5
RST	Umm Al-Ruwaisa	88.89	320	eP		05 00 18.8	
PMTG	Montargil	89.13	6	eP	P	05 00 20.8	-0.7
PMAFR	Mafra	89.17	7	eP	P	05 00 22.0	+0.3
SANT	Santorini	89.20	339	⇓P	PKKPbc	05 17 56.2	+0.4
ASUD	Al Ashush, Dub	89.53	311	P	P	05 00 22.4	-1.2
	SNR=5.3						
JLN	Jalan Bani Buh	89.66	307	P	P	05 00 23.9	-0.4
	SNR=7.1						
EVO	Evora	89.68	6	eP	P	05 00 23.5	-0.6
	comp=Z,96nm,1.9s						
PALK	Pallekele	89.77	281	d iP	P	05 00 25.2	+0.3
PALK				pmax	pmax		
	comp=Z,62nm,1.0s						
PALK	Pallekele	89.77	281	P	P	05 00 25.8	+0.9
PALK				IAmb	IAmb	05 00 26.8	
	comp=Z,64nm,1.0s						
MMAI	Mount Meron Ar	89.77	331	P	P	05 00 23.8	-1.0
	comp=Z,1.5nm,0.4s,baz=357,slow=5.0,SNR=10.0						
ALNE	Al Ain	89.82	311	P	P	05 00 24.8	-0.3
	SNR=8.6						
STKA	Stephens Creek	89.84	212	P	P	05 00 25.9	+1.2
	comp=Z,161nm,0.7s,baz=357,slow=6.0,SNR=335						
STKA				LR	LR	05 35 21.5	
	comp=Z,182nm,21.6s,baz=18,slow=32						
STKA	Stephens Creek	89.84	212	d iP	P	05 00 25.7	+1.0
STKA	Stephens Creek	89.84	212	P	P	05 00 25.3	+0.6
STKA				IAmb	IAmb	05 00 27.0	
	comp=Z,52nm,0.9s						
SJG	San Juan	89.98	60	P	P	05 00 25.5	-0.3
SJG				pmax	pmax		
	comp=Z,89nm,1.5s						
SJG	San Juan	89.98	60	P	P	05 00 25.5	-0.3
SJG				IAmb	IAmb	05 00 27.3	
	comp=Z,89nm,1.4s						
SJG	San Juan	89.98	60	eP	P	05 00 25.4	-0.4
ARQ	Araqi	90.07	310	P	P	05 00 25.2	-1.0
	SNR=9.4						
PBAR	Barrancos	90.09	5	eP	P	05 00 25.6	-0.5
	comp=Z,86nm,1.5s						
JMDO	Jabal Madar	90.12	308	P	P	05 00 25.4	-1.1
	SNR=7.6						
HIZ	Hauiti	90.16	184	P	P	05 00 26.5	+0.6
PBEJ	Beja	90.19	6	eP	P	05 00 26.4	-0.1
	comp=Z,19nm,1.5s						
BSY	Bisya	90.24	309	P	P	05 00 26.0	-1.1
	SNR=8.8						
PCVE	Castro Verde	90.57	6	eP	P	05 00 28.2	-0.1
PAYG	Puerto Ayora	90.61	90	P	P	05 00 30.1	+1.2
PAYG				IAmb	IAmb	05 00 32.4	
	comp=Z,46nm,0.8s						
BKZ	Black Stump Fm	90.75	182	IAmb	IAmb	05 00 28.0	
	comp=Z,47nm,0.7s						
PVAQ	Vaqueiros	90.82	6	eP	P	05 00 29.4	0.0
MORF	Marmelete	90.85	7	eP	P	05 00 29.2	-0.5
CAN	Canberra	90.91	205	P	P	05 00 30.4	+0.8
CAN				pmax	pmax		
	comp=Z,47nm,0.7s						
CAN	Canberra	90.91	205	P	P	05 00 30.4	+0.8
CAN				IAmb	IAmb	05 00 31.6	
	comp=Z,47nm,0.7s						
MHTO	MHTO	91.36	307	P	P	05 00 31.3	-0.9
	SNR=12						
SJCC	San Jacinto, C	91.52	72	eP	P	05 00 32.1	-0.9
KEST	Kesra	92.30	352	P	P	05 00 35.9	-0.6
	comp=Z,19nm,0.9s,baz=317,slow=2.7,SNR=17						
QRZ	Quartz Range	92.57	185	IAmb	IAmb	05 00 37.8	
	comp=Z,76nm,1.0s						
SMLC	San Martn de	93.04	72	eP	P	05 00 39.4	-0.7
ZARC	Zaragoza, Cauc	93.62	73	eP	P	05 00 40.5	-2.3
OCAC	Ocana	93.93	71	eP	P	05 00 44.5	+0.1
CBOC	Ciudad Bolivar	94.23	75	eP	P	05 00 45.5	-0.3
PTBC	PUERTO BERRIO,	94.62	73	eP	P	05 00 46.3	-1.0
RAYN	Ar Rayn	94.80	319	P	P	05 00 47.4	-0.7
RAYN				pmax	pmax		
	comp=Z,18nm,1.1s						
RAYN	Ar Rayn	94.80	319	P	P	05 00 47.4	-0.7
PLMC	San Jos del P	94.83	76	eP	P	05 00 47.2	-1.1
SDV	Santo Domingo	94.98	69	P	P	05 00 49.1	0.0
SDV	Santo Domingo	94.98	69	eP	P	05 00 47.7	-1.5
SDV	Santo Domingo	94.98	69	eP	P	05 00 49.3	+0.2
PAMC	Pamplona, Colo	95.02	72	eP	P	05 00 48.9	-0.8
COCO	West Island	95.06	257	P	P	05 00 49.9	+0.8
COCO				pmax	pmax		
	comp=Z,250nm,1.5s						
COCO	West Island	95.06	257	P	P	05 00 49.9	+0.8
BARC	Barichara	95.33	72	eP	P	05 00 50.5	-0.4
RREF	El Recreo	95.39	75	eP	P	05 00 51.3	-0.3
YOTC	Yotoco, Valle	95.52	76	eP	P	05 00 50.9	-0.7
RPZ	Rata Peaks	95.54	186	P	P	05 00 51.6	+0.9
RPZ				IAmb	IAmb	05 00 55.4	
	comp=Z,31nm,0.8s						
MDT	Midelt	95.55	4	P	P	05 00 50.6	-0.8
	comp=Z,10nm,0.7s,baz=352,slow=4.3,SNR=23						
SPBC	San Pablo de B	95.55	74	eP	P	05 00 50.9	-0.8
TOLC	Tolima	95.66	75	eP	P	05 00 52.6	+0.2
RUSC	La Rusia	95.95	73	eP	P	05 00 52.8	-1.2
ROSC	El Rosal	96.05	74	P	P	05 00 54.0	-0.3
	comp=Z,2.2nm,0.3s,baz=134,slow=22,SNR=1.6						
ROSC				LR	LR	05 46 15.1	
	comp=Z,69nm,20.2s,baz=352,slow=37						
ORTC	Ortega, Tolima	96.24	76	eP	P	05 00 53.7	-1.1
CHIC	Chingaza	96.57	74	eP	P	05 00 55.6	-1.1
PCON	Cinco Dias	96.80	77	eP	P	05 00 58.2	+0.3
OTAV	Otavalo	97.20	80	P	Pdif	05 00 59.9	+0.2
OTAV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OTAV	Otavalo	97.20	80	P	Pdif	05 00 59.9	+0.3
OTAV	Otavalo	97.20	80	eP	P	05 00 59.3	-0.3
OTAV	Otavalo	97.20	80	eP	Pdif	05 01 00.4	+0.7
NWAO	Narrogin (SRO)	100.54	229	P	Pdif	05 01 13.1	-0.3
	comp=Z,35nm,0.9s,baz=7.0,slow=4.4,SNR=13						
PTGA	Pitinga	108.90	66	PKKPab	PKKPab	05 17 15.6	-1.1
	comp=Z,6.6nm,0.8s,baz=159,slow=6.5,SNR=9.1						
KOWA	Kowa	113.79	4	PKiKP	PKiKP	05 06 03.4	-1.1
	comp=Z,4.1nm,0.6s,baz=339,slow=2.2,SNR=12						
KOWA				SKP	SKPdf	05 09 26.7	-2.9
	comp=Z,4.0nm,0.8s,baz=10,slow=2.6,SNR=8.2						
ITTB	Itaituba	114.26	64	eP	Pdif	05 02 16.6	+1.6
TORD	Torodi Ar. Bea	115.18	358	PKP	PKiKP	05 06 05.9	-1.3
	comp=Z,6.1nm,0.5s,baz=347,slow=2.4,SNR=58						
TORD				SKP	SKPdf	05 09 29.4	-3.0
	comp=Z,3.5nm,0.5s,baz=348,slow=2.4,SNR=11						
TORD				PKKPbc	PKKPbc	05 16 40.7	+0.4
	comp=Z,12nm,1.0s,baz=206,slow=1.8,SNR=23						
TORD				PKKPab	PKKPab	05 16 47.8	-3.3
	comp=Z,16nm,0.7s,baz=196,slow=3.5,SNR=25						
PB16	IPOC Station P	117.10	85	PKPdf	PKPdf	05 06 11.5	+0.1
PB07	IPOC Station P	119.41	88	PKPdf	PKPdf	05 06 14.8	-0.5
KMBO	Kilima Mbogo	120.36	315	PKP	PKPdf	05 06 17.3	-0.2
	comp=Z,20nm,0.9s,baz=12,slow=3.8,SNR=35						
LVC	Limon Verde	120.67	88	PKIKP	PKPdf	05 06 17.8	-0.1
LVC	Limon Verde	120.67	88	PKPdf	PKPdf	05 06 17.8	-0.1
LVC	Limon Verde	120.67	88	eP	PKiKP	05 06 18.4	+0.4
DBIC	Dimbokro	121.52	5	PKP	PKPdf	05 06 18.4	-1.0
	comp=Z,16nm,0.5s,baz=346,slow=2.8,SNR=62						
DBIC				SKP	SKPdf	05 09 42.0	-2.5
	comp=Z,5.0nm,0.5s,baz=23,slow=2.5,SNR=9.9						
DBIC				PKKPbc	PKKPbc	05 16 18.1	+0.6
	comp=Z,7.0nm,0.7s,baz=148,slow=5.5,SNR=10						
DBIC	Dimbokro	121.52	5	PKPdf	PKPdf	05 06 18.5	-1.0
DBIC				PKKPbc	PKKPbc	05 16 18.5	+0.9
TIC	Toumodi	121.53	5	ePKIKP	PKPdf	05 06 18.6	-0.9
KIC	Kosan Boka	121.83	5	ePKIKP	PKPdf	05 06 19.1	-1.0
	comp=Z,42nm,0.7s						
LIC	Lamto	121.95	5	ePKIKP	PKPdf	05 06 19.4	-0.9
	comp=Z,84nm,0.8s						
H03N2	Juan Fernandez	122.27	104	T	T	07 19 30.1	
	baz=317,slow=77						
H03N1	Juan Fernandez	122.28	104	T	T	07 19 36.6	
	baz=317,slow=77						
H03N3	Juan Fernandez	122.28	104	T	T	07 19 31.2	
	baz=317,slow=77						
SMTB	Santa Maria do	122.43	59	eP	PKPdf	05 06 21.1	-0.1
YJA	Yavi	122.44	85	iP	PKPdf	05 06 21.8	+0.3
MBAR	Mbarara	122.55	322	PKP	PKPdf	05 06 21.5	-0.1
	comp=Z,5.8nm,0.6s,baz=65,slow=6.7,SNR=5.0						
MBAR	Mbarara	122.55	322		PKPdf	05 06 21.7	0.0
SNDB	Serra Nova Dou	122.98	65	eP	PKPdf	05 06 21.6	-0.6
HJA	Humahuaca	123.27	86	iP	PKiKP	05 06 23.6	+0.5
LCO	Las Campanas	124.19	95	PKIKP	PKPdf	05 06 24.3	-0.1
LCO	Las Campanas	124.19	95	PKPdf	PKPdf	05 06 24.3	-0.1
FSA	Cafayete	125.04	89	iP	PKPdf	05 06 26.2	+0.2
PP1B	Ponte de Pedra	125.41	72	eP	PKPdf	05 06 27.0	+0.3
VCA	Vinchina	125.54	92	iP	PKPdf	05 06 27.3	+0.4
ARAG	Araguaiana, MT	125.70	68	eP	PKPdf	05 06 26.9	-0.4
AHML	Horco Molle	125.93	89	iP	PKPdf	05 06 27.6	+0.1
ROC1	El Roble	126.75	98		PKPdf	05 06 28.5	-0.7
ROC1	El Roble	126.75	98	iP	PKPdf	05 06 28.8	-0.3
CYA	Choya	126.82	90	iP	PKPdf	05 06 29.0	-0.1
SDBA	SAO DESIDERIO	126.83	59	eP	PKPdf	05 06 29.0	-0.6
RTLS	Leoncito	127.00	96	iP	PKPdf	05 06 30.0	+0.3
AQDB	Aquidauana	127.15	75	eP	PKPdf	05 06 29.7	-0.3
RTLL	Cerro Villicun	127.19	95	iP	PKPdf	05 06 29.7	-0.1
AUSP	Uspallata	127.24	96	iP	PKPdf	05 06 30.5	+0.3
AVFE	Valle Fertil	127.35	94	iP	PKPdf	05 06 29.8	-0.3
RTCV	Cerro Valdivia	127.51	96	eP	PKPdf	05 06 30.2	-0.1
BDFB	Brasilia	127.79	64	PKP	PKPdf	05 06 31.0	-0.4
	comp=Z,19nm,1.0s,baz=284,slow=2.2,SNR=9.9						
BDFB				SKPbc	SKiKP	05 09 36.9	-21
	comp=Z,4.6nm,0.5s,baz=356,slow=2.5,SNR=12						
BDFB	Brasilia	127.79	64	PKIKP	PKPdf	05 06 31.5	+0.1
BDFB	Brasilia	127.79	64	PKPdf	PKPdf	05 06 31.5	+0.1
ASAL	Salagasta	127.83	96	iP	PKPdf	05 06 31.2	+0.2
ARCO	CERRO ARCO	127.94	97	iP	PKPdf	05 06 31.4	+0.1
AAGR	Agrelo	128.17	97	iP	PKPdf	05 06 32.0	+0.3
CASY	Casey	128.93	209	PKPdf	PKPdf	05 06 32.2	+0.3
JANB	Januaria	129.34	60	eP	PKPdf	05 06 33.5	-0.8
RFA	San Rafael	129.53	98	iP	PKPdf	05 06 34.3	+0.1
IPMB	Ipameri, GO	129.57	66	eP	PKPdf	05 06 34.2	-0.5
TCA	Tanti	129.59	92	iP	PKPdf	05 06 34.5	+0.1
VNDA	Vanda	129.65	185	PKP	PKPdf	05 06 33.5	+0.5
	comp=Z,3.6nm,0.9s,baz=344,slow=3.7,SNR=16						
VNDA				SKPbc	SKPbc	05 09 45.8	+1.0
	comp=Z,17nm,0.9s,baz=331,slow=4.0,SNR=19						
ITRB	Iturama	129.70	70	eP	PKPdf	05 06 34.7	-0.2
ABPO	Ambohimpanom	130.46	293	PKIKP	PKPdf	05 06 37.1	+0.6
ABPO	Ambohimpanom	130.46	293	PKPdf	PKPdf	05 06 37.1	+0.6
CPUP	Villa Florida	130.53	82	PKP	PKPdf	05 06 36.0	-0.2
	comp=Z,29nm,0.7s,baz=308,slow=2.5,SNR=46						
CPUP				SKPbc	SKPbc	05 09 47.7	-1.9
	comp=Z,32nm,0.6s,baz=314,slow=3.4,SNR=48						
CPUP	Villa Florida	130.53	82	PKIKP	PKPdf	05 06 36.0	-0.2
PCMB	Pacaembu	130.65	72	eP	PKPdf	05 06 36.6	0.0
GDU01	Guandu, BA	130.68	54	eP	PKPdf	05 06 36.4	-0.5

TRCB	Terra Rica	130.75	74	*e*P	PKPdf	05 06 36.8	0.0
BB19B	Bebedouro	131.83	69	*e*P	PKPdf	05 06 39.5	+0.6
PLCA	Paso Flores	132.10	106	PKP	PKPdf	05 06 39.3	+0.5
	comp=Z,34nm,0.8s,baz=289,slow=2.5,SNR=61						
PLCA				SKPab	SKPbc	05 09 54.4	-0.4
	comp=Z,117nm,1.1s,baz=300,slow=4.2,SNR=51						
PLCA	Paso Flores	132.10	106	PKIKP	PKPdf	05 06 39.6	+0.8
PLCA	Paso Flores	132.10	106	PKPdf	PKPdf	05 06 39.6	+0.8
PLCA	Paso Flores	132.10	106	*e*P	PKPdf	05 06 38.5	-0.3
PTGB	Pitanga	132.54	75	*e*P	PKPdf	05 06 39.0	-1.2
FRTB	Fartura	132.98	72	*e*P	PKPdf	05 06 40.6	-0.4
ITQB	Itaqui	133.36	84	*e*P	PKPdf	05 06 41.5	0.0
NAN01	Guarapari, ES	133.87	58	*e*P	PKPdf	05 06 42.6	-0.1
BSCB	Bom Sucesso	133.91	65	*e*P	PKPdf	05 06 42.4	-0.5
VAO	Valinhos	134.24	69	*e*P	PKPdf	05 06 43.5	+0.1
BSFB	Barra de Sao F	134.31	59	*e*P	PKPdf	05 06 42.8	-0.8
RIB01	Linhares ES	134.94	59	*e*P	PKPdf	05 06 44.4	-0.3
PARB	Paraibuna	135.27	68	*e*P	PKPdf	05 06 45.3	-0.1
VAS01	Vassouras-RJ	135.68	65	*e*P	PKPdf	05 06 46.0	-0.1
CPSB	Cacapava Do Su	135.83	82	*e*P	PKPdf	05 06 46.3	+0.2
MAN01	Angra dos Reis	135.84	66	*e*P	PKPdf	05 06 47.0	+0.6
DUB01	Friburgo-RJ	136.11	63	*e*P	PKPdf	05 06 46.7	-0.2
CNLB	Canela	136.64	79	*e*P	PKPdf	05 06 47.3	-0.4
PLTB	Pedras Altas	136.68	84	*e*P	PKPdf	05 06 47.4	-0.2
LSZ	Lusaka	136.91	317	PKIKP	PKPdf	05 06 48.7	+0.1
LSZ	Lusaka	136.91	317	PKPdf	PKPdf	05 06 48.7	+0.1
QSPA	South Pole Qui	141.68	180	PKhKP	PKPpre	05 06 49.7	
	comp=Z,129nm,1.1s,baz=322,slow=1.0,SNR=100						
QSPA				SKPbc	SKPbc	05 10 22.2	-0.3
	comp=Z,14nm,0.6s,baz=5.1,slow=0.5,SNR=6.7						
TSUM	Tsumeb	144.42	330	PKPdf	PKPab	05 07 00.3	-0.2
EFI	East Falkland	145.17	113	PKIKP	PKPbc	05 07 01.3	-0.7
EFI	East Falkland	145.17	113		PKPbc	05 07 01.2	-0.7
PMSA	Palmer Station	145.83	137	SKPbc	SKPbc	05 10 31.0	-1.3
	comp=Z,20nm,0.9s,baz=41,slow=1.4,SNR=4.3						
PMSA	Palmer Station	145.83	137	PKPbc	PKPbc	05 07 04.1	+0.4
PMSA	Palmer Station	145.83	137	*e*P	PKPdf	05 07 03.4	+0.6
CRZF	Crozet Islands	146.00	258		PKPbc	05 07 05.3	+0.5
MAW	Mawson	146.29	218	PKPbc	PKPbc	05 07 05.3	+0.3
	comp=Z,172nm,0.5s,baz=66,slow=3.5,SNR=66						
MAW	Mawson	146.29	218	PKPbc	PKPbc	05 07 04.9	-0.1
LBTB	Lobatse	146.62	314	PKP2	PKPdf	05 07 06.2	+0.5
LBTB	Lobatse	146.62	314		PKPdf	05 07 06.2	+0.5
BOSA	Boshof	149.85	311	PKP	PKPdf	05 07 10.6	-0.3
	comp=Z,13nm,0.8s,baz=13,slow=1.7,SNR=23						
BOSA				PKPbc	PKPbc	05 07 16.1	+0.3
	comp=Z,106nm,0.6s,baz=34,slow=2.3,SNR=77						
BOSA	Boshof	149.85	311	PKPdf	PKPdf	05 07 10.8	-0.1
BOSA				PKPbc	PKPbc	05 07 15.7	-0.1
SYO	Syowa Base	154.60	213⇑	*i*PKPbc	PKiKP	05 07 25.4	+0.4
SYO	Syowa Base	154.60	213⇑	*e*X	PKiKP	05 07 32.4	+7.4
SYO	Syowa Base	154.60	213⇑	*i*PKPab	PKPab	05 07 40.4	+0.1
SUR	Sutherland	155.08	313	PKPdf	PKPdf	05 07 18.8	+0.3
SUR					PKPab	05 07 27.5	-16
SNAA	Sanae	160.15	178	PKPab	PKPab	05 08 03.8	-0.5
SNAA	Sanae	160.15	178	PKPdf	PKPdf	05 07 22.2	-1.3
SNAA	Sanae	160.15	178	PKP	PKPdf	05 07 21.9	-1.5
	comp=Z,4.5nm,0.8s,baz=112,slow=2.9,SNR=16						
SNAA				PKPab	PKPab	05 08 03.5	-0.8
	comp=Z,14nm,0.6s,baz=210,slow=6.9,SNR=21						
VNA3	Neumayer Olymp	160.17	171	PKPab	PKPab	05 08 04.4	0.0
VNA3	Neumayer Olymp	160.17	171	PKPdf	PKPdf	05 07 21.7	-1.7
NVL	N'lazarevskaya	160.28	192⇓	*e*PKP2	PKPab	05 08 03.6	-1.2
NVL				pmax	pmax		
	comp=Z,84nm,0.9s						
VNA2	Neumayer--Watz	160.67	173	PKPab	PKPab	05 08 06.7	+0.2
VNA2	Neumayer--Watz	160.67	173	PKPdf	PKPdf	05 07 22.5	-1.5
	baz=156,slow=0.2						
VNA1	Neumayer--Stat	160.87	172	PKPab	PKPab	05 08 07.6	+0.3
VNA1	Neumayer--Stat	160.87	172	PKPdf	PKPdf	05 07 22.8	-1.3

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*JMA **18** 05:22:05.5±0.1, 23.°91N×122.°61E, h52^{km}±5^{km}, M2.2*
*TAP **18** 05:22:06.4, 23.°95N×122.°61E, h38^{km}±1^{km}, ML2.7, D*
ISC 18 05:22:03.0±1.0**, 23.°84N**±0.°03×**122.°61E**±0.°02**, h16**^{km}±9^{km}**,**
n47, σ0.^{s}78/87**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.68	27	P	Pn	05 22 18.2	+0.2
JYNG				S	Sn	05 22 27.7	-0.5
YOJ	Yonaguni jima	0.72	31	P	Pn	05 22 18.9	+0.4
YOJ				S	Sn	05 22 29.2	0.0
YOJ	Yonaguni jima	0.72	31	P	Pn	05 22 19.0	+0.5
	baz=34						
YOJ				*e*S	Sn	05 22 28.9	-0.3
	baz=34						
TWD	Chiawan	0.95	285	*e*P	Pn	05 22 23.1	+1.4
	baz=278						
ENA	Nanau	0.98	307	*e*P	Pn	05 22 23.2	+1.1
	baz=301						
ENA				*e*S	Sn	05 22 35.7	0.0
	baz=301						
NACB	Ninganchiao	0.98	290	P	Pn	05 22 23.1	+1.0
	baz=272						
NACB				S	Sn	05 22 35.7	+0.1
	baz=272						
TWC	Suao	1.03	318	*e*P	Pn	05 22 23.5	+0.7
	baz=304						
TWC				*e*S	Sg	05 22 35.7	-0.8
	baz=304						
ESL	Shilin	1.07	269	*i* P	Pg	05 22 24.6	+0.8
	baz=262						
ESL				S	Sn	05 22 38.5	+0.5
	baz=262						
ETLH	Xiulin Townshi	1.09	290	P	Pg	05 22 24.8	+0.7
	baz=274						
ETLH				*e*S	Sn	05 22 38.6	+0.2
	baz=274						
HATJ	Hateruma jima	1.12	79	P	Pg	05 22 25.0	+0.4
HATJ				*e*S	Sb	05 22 39.2	+1.0
HGSD	Ruisui	1.14	252	*e*P	Pg	05 22 26.6	+1.5
	baz=247						
HGSD				*e*S	Sn	05 22 40.2	+0.8
	baz=247						
IRIF	Iriomote-Funau	1.14	64	P	Pg	05 22 25.2	+0.2
IRIF				*e*S	Sb	05 22 39.3	+0.4
EHY	Hungye	1.22	254	P	Pg	05 22 27.3	+0.7
	baz=248						
EHY				S	Sg	05 22 43.0	+0.4
	baz=248						
NDT	Datong Townshi	1.25	307	P	Pg	05 22 27.6	+0.4
	baz=292						
NDT				*e*S	Sg	05 22 43.2	-0.3
	baz=292						
NNSB	Datong	1.26	298	*e*P	Pg	05 22 27.6	+0.2
	baz=283						
NNSB				*e*S	Sg	05 22 43.7	-0.2
	baz=283						
NNSH	Datong	1.26	298	*e*P	Pg	05 22 27.6	+0.2
	baz=283						
NNSH				*e*S	Sg	05 22 43.6	-0.3
	baz=283						
WHF	Hehuan Shan	1.26	284	P	Pg	05 22 27.8	+0.3
	baz=278						
WHF				*e*S	Sg	05 22 43.2	-0.9
	baz=278						
NNS	Nan Shan	1.27	298	*e*P	Pg	05 22 27.9	+0.3
	baz=294						
YULB	Yu-li	1.28	250	P	Pg	05 22 28.2	+0.5
	baz=236						
YULB				S	Sg	05 22 44.8	+0.4
	baz=236						
TWF1	Yuli	1.29	248	P	Pg	05 22 28.4	+0.4
	baz=243						
TWF1				S	Sg	05 22 45.0	+0.1
	baz=243						
FUSS	Fushou	1.31	288	P	Pg	05 22 28.6	+0.3
	baz=283						
FUSS				S	Sg	05 22 45.5	0.0
	baz=283						
CHGB	Renai	1.33	280	P	Pg	05 22 28.9	+0.2
	baz=265						
CHGB				S	Sg	05 22 45.5	-0.5
	baz=265						
TIPB	Shuangxi	1.33	328	*e*P	Pb	05 22 27.8	+0.2
	baz=325						
TIPB				*e*S	Sb	05 22 43.8	-0.7
	baz=325						
JKRS	Kuro-shima	1.34	73	P	Pb	05 22 28.4	+0.6
JKRS				*e*S	Sn	05 22 45.1	+0.6
CHKT	Chengkung	1.36	237	*e*P	Pg	05 22 29.8	+0.6
	baz=223						
CHKT				*e*S	Sn	05 22 43.8	-1.1
	baz=223						
FULB	Fuli	1.36	242	*e*S	Sg	05 22 46.3	-0.7
	baz=228						
TWT	Tachien	1.37	288	P	Pg	05 22 29.9	+0.4
	baz=272						
TWT				*e*S	Sg	05 22 47.4	0.0
	baz=272						
NWLT	Wulai	1.37	313	*e*P	Pg	05 22 29.1	-0.3
	baz=310						
NWLT				*e*S	Sb	05 22 45.2	-0.4
	baz=310						
TDCB	Techi	1.39	288	*e*P	Pg	05 22 29.9	+0.1
	baz=273						
TDCB				*e*S	Sg	05 22 46.3	-1.6
	baz=273						
YHNB	Yeheng	1.39	307	*e*P	Pg	05 22 29.5	-0.3
	baz=303						
YHNB				*e*S	Sb	05 22 45.8	-0.4
	baz=303						
NSK	Sanguang	1.41	306	P	Pg	05 22 29.6	-0.5
	baz=303						
NSK				*e*S	Sb	05 22 46.1	-0.6
	baz=303						
EDH	Donghe	1.48	234	*e*P	Pg	05 22 30.6	-0.9
	baz=223						
EDH				*e*S	Sb	05 22 48.0	-0.5
	baz=223						
JIJ	Ishigaki jima	1.50	69	P	Pn	05 22 29.8	+0.6
JIJ				S	Sn	05 22 47.0	-1.4
SSLB	Suanglung	1.51	268	*e*P	Pg	05 22 32.5	+0.4
	baz=263						
SSLB				*e*S	Sg	05 22 51.1	-0.8
	baz=263						
WHP	Taichung City	1.58	286	*e*P	Pg	05 22 32.9	-0.5
	baz=281						
WHP				*e*S	Sb	05 22 51.8	+0.2
	baz=281						
ELDTW	Lidau	1.60	246	*e*P	Pn	05 22 30.8	+0.2
	baz=241						
ELDTW				*e*S	Sb	05 22 52.1	0.0
	baz=241						
TYC	Yuchr	1.60	273	*e*P	Pg	05 22 33.5	-0.4
	baz=267						
TYC				*e*S	Sg	05 22 53.3	-1.4
	baz=267						
LONT	Longtian	1.64	236	*e*S	Sg	05 22 54.7	-1.3
	baz=225						
LIOB	Emei	1.66	299	*e*P	Pg	05 22 34.2	-0.7
	baz=296						
LIOB				*e*S	Sg	05 22 55.3	-1.2
	baz=296						
NSTT	Nanjuang	1.66	299	*e*P	Pg	05 22 35.4	+0.4
	baz=295						
NSTT				*e*S	Sb	05 22 54.5	+0.5
	baz=295						
JISG	Ishigakijimahi	1.73	64	P	Pn	05 22 32.8	+0.5
JISG				S	Sn	05 22 52.1	-1.9
TWGBT	Beinan	1.73	234	*e*S	Sb	05 22 55.5	-0.4
	baz=223						
CHN4	Tsaushan	1.91	256	*e*P	Pg	05 22 39.3	-0.4
	baz=242						
CHN4				*e*S	Sg	05 23 04.1	-0.5
	baz=242						
WTP	Ta-pu	1.92	252	*e*P	Pg	05 22 39.3	-0.6
	baz=240						
WTP				*e*S	Sg	05 23 03.6	-1.3
	baz=240						
CHN1	Nanshi	2.02	252	*e*S	Sg	05 23 05.7	-2.2
	baz=247						
TWK	Hsinying	2.02	254	*e*S	Sg	05 23 06.1	-2.2
	baz=249						
JTJ	Tarama	2.07	67	P	Pn	05 22 37.9	+0.8
JTJ				*e*S	Sn	05 23 01.3	-1.3

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*IDC **18** 05:31:34.3±1.1, 3.°06S×129.°94E, h0^{km}, mb3.8/5,*
mb1 4.0/8, mb1mx3.7/32, mbtmp3.8/8, ML3.7/3, Error
ellipse: s-maj=41.5km s-min=18.5km az=78.0
*DJA **18** 05:31:38.5±1.6, 3°S±3°×13°0E±°, h10^{km}±12^{km}, M3.5/6,*
MLv3.5/6
ISC 18 05:31:37.7±0.7**, 2.°90S**±0.°05×**130.°14E**±0.°04**, h25**^{km}**, n14,**
σ2.^{s}30/20**, mb3.7**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.29	250	P	Pb	05 32 02.3	+1.0
MSAI				S	Sb	05 32 21.6	+4.1
BNDI	Bandanaira	1.63	188	P	Pn	05 32 06.9	+2.0
BNDI				S	Sb	05 32 29.7	+2.4
FAKI	Fak Fak	2.11	91	P	Pn	05 32 13.5	+2.1
FAKI				S	Sb	05 32 40.5	-0.5
SIJI	Sorong	2.31	29	Pn	Pn	05 32 17.1	+2.9
	8.8nm,0.3s,baz=168,slow=22,SNR=14						
SIJI				Sn	Sn	05 32 43.1	+1.3
	12nm,0.3s,baz=72,slow=23,SNR=6.8						
SWI	Sorong	2.31	29	P	Pb	05 32 17.6	-1.1
NLAI	Namlea	3.06	264	P	Pn	05 32 24.9	+0.5
SANI	Sanana	4.23	281	P	Pn	05 32 37.5	-3.2
FITZ	Fitzroy Crossi	15.74	196	Pn	Pn	05 35 15.0	-2.9
	0.1nm,0.3s,baz=61,slow=12,SNR=2.3						
WRA	Warramunga Arr	17.43	167	P	Pn	05 35 35.9	-3.4
	0.7nm,0.3s,baz=348,slow=13,SNR=16						
ASAR	Alice Springs	20.97	170	P	P	05 36 18.4	-0.8
	7.5nm,0.7s,baz=349,slow=11,SNR=125						
ASAR				S	S	05 40 08.1	-3.6
	0.7nm,0.8s,baz=347,slow=20,SNR=4.2						
ASAR				PcP	PcP	05 40 27.2	+0.9
	0.4nm,0.6s,baz=1.8,slow=2.5,SNR=3.1						
CTA	Charters Tower	23.22	139	P	P	05 36 43.1	0.0
	1.6nm,0.7s,baz=307,slow=13,SNR=3.6						
STKA	Stephens Creek	30.78	161	P	P	05 37 51.0	-0.3
	1.0nm,0.4s,baz=336,slow=10.0,SNR=3.1						
SONM	Songino Array	54.63	341	P	P	05 41 04.4	0.0
	0.2nm,0.5s,baz=153,slow=9.7,SNR=2.3						
MKAR	Makanchi Array	64.91	326	P	P	05 42 16.1	+1.0
	0.2nm,0.3s,baz=130,slow=6.2,SNR=5.5						

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*IDC **18** 05:40:08.4±0.9, 3.°08S×130.°09E, h0^{km}, mb3.9/6,*
mb1 4.0/9, mb1mx3.8/27, mbtmp3.9/9, ML3.7/3, MS3.2/2,
Ms1 3.2/2, ms1mx2.7/35, Error ellipse: s-maj=28.8km
s-min=14.1km az=93.0
*DJA **18** 05:40:11.0±0.4, 3°S±4°×13°0E±°, h10^{km}, M3.9/8, mb4.2/1,*
MLv3.7/8
ISC 18 05:40:11.6±0.7**, 3.°05S**±0.°05×**130.°24E**±0.°06**, h25**^{km}**, n18,**
σ2.^{s}12/22**, mb3.9**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.35	258	P	Pn	05 40 35.7	+0.9
MSAI				S	Sn	05 40 53.3	+1.4
BNDI	Bandanaira	1.50	193	P	Pn	05 40 39.5	+2.6
FAKI	Fak Fak	2.01	86	P	Pn	05 40 46.4	+2.5
SIJI	Sorong	2.40	25	Pn	Pn	05 40 49.6	+0.2
	6.3nm,0.3s,baz=309,slow=24,SNR=14						
SIJI				Sn	Sn	05 41 18.5	+0.6
	19nm,0.3s,baz=211,slow=19,SNR=4.0						
SIJI				Lg	Lg	05 41 27.9	
	17nm,0.3s,baz=281,slow=20,SNR=8.0						
SWI	Sorong	2.40	25	P	Pn	05 40 48.4	-1.0
NLAI	Namlea	3.15	267	P	Pn	05 40 59.6	0.0
SANI	Sanana	4.37	283	P	Pn	05 41 15.0	-1.4
GTOI	Gorontalo	8.11	297	P	Pn	05 42 10.5	+2.7
BATI	Baumata	9.65	222	LR	LR	05 46 12.4	
	comp=Z,222nm,18.7s,baz=29,slow=38						
KAPI	Kappang	10.65	259	LR	LR	05 47 33.9	
	comp=Z,84nm,18.9s,baz=64,slow=42						
FITZ	Fitzroy Crossi	15.62	196	Pn	Pn	05 43 48.7	-1.5
	0.1nm,0.3s,baz=30,slow=9.8,SNR=2.0						
FITZ				Sn	Sn	05 46 36.5	-6.1
	0.1nm,0.3s,baz=221,slow=20,SNR=1.3						
WRA	Warramunga Arr	17.25	167	P	Pn	05 44 09.9	-1.1
	0.8nm,0.3s,baz=346,slow=11,SNR=14						
WRA				S	Sn	05 47 20.0	-2.4
	0.2nm,0.3s,baz=358,slow=18,SNR=2.6						
ASAR	Alice Springs	20.80	171	P	P	05 44 51.8	+0.6
	8.6nm,0.4s,baz=352,slow=11,SNR=149						
ASAR				S	S	05 48 39.7	-2.5
	0.8nm,0.8s,baz=356,slow=25,SNR=4.9						
ASAR				PcP	PcP	05 49 00.6	+0.7
	1.0nm,0.8s,baz=350,slow=1.1,SNR=5.9						
CTA	Charters Tower	23.04	139	P	P	05 45 16.2	+1.1
	2.2nm,0.5s,baz=307,slow=13,SNR=3.1						
STKA	Stephens Creek	30.60	161	P	P	05 46 24.4	+0.7
	1.0nm,0.4s,baz=327,slow=19,SNR=4.5						
SONM	Songino Array	54.81	341	P	P	05 49 39.4	-0.3
	0.3nm,0.5s,baz=163,slow=8.7,SNR=2.4						
MKAR	Makanchi Array	65.10	326	P	P	05 50 50.0	-0.3
	0.9nm,0.8s,baz=116,slow=7.6,SNR=7.8						
ZALV	Zalesovo Beam	68.19	333	P	P	05 51 11.8	+2.1
	0.3nm,0.3s,baz=149,slow=6.1,SNR=2.3						

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*VIE **18** 05:59:40.1±0.4, 47.°07N×9.°11E, h6^{km}±2^{km}, mb1.6/1,*
ml1.3/5, Error ellipse: s-maj=2.4km s-min=1.8km az=90.0
9 km ESE of Glarus
ZUR 18 05:59:41.0, 47.°11N×9.°22E, h10^{km}±2^{km}**, MLh0.9**/9**, Error**
ellipse: s-maj=3.9km s-min=0.7km az=156.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLONS	Plons/SG	0.13	120	Pg	Pg	05 59 44.1	0.0
PLONS				Pg	Pg	05 59 44.1	0.0
	0.1nm,SNR=73						
PLONS				Sg	Sg	05 59 46.8	+0.5
SGT04	Schlatt-Haslen	0.25	21	Sg	Sg	05 59 50.6	+0.9
SGT04				Sg	Sg	05 59 50.6	+0.9
	SNR=24						
SGT03	Degersheim	0.25	357	Pg	Pg	05 59 46.4	+0.2
SGT03				Pg	Pg	05 59 46.4	+0.2
	SNR=13						
SGT03				Sg	Sg	05 59 50.8	+1.0
LIENZ	Kamor/St.Gall	0.26	46	Pg	Pg	05 59 46.8	+0.4
LIENZ				Pg	Pg	05 59 46.8	+0.4
	SNR=21						
PANIX	Pigniu (Panix)	0.30	194	Sg	Sg	05 59 51.4	+0.3
	SNR=48						
PANIX				Sg	Sg	05 59 51.4	+0.3
LLS	Linth-Limmern	0.30	209	Sg	Sg	05 59 51.5	+0.2
	SNR=44						
LLS				Sg	Sg	05 59 51.5	+0.2
MUO	Muotathal	0.42	250	Pg	Pg	05 59 49.5	+0.1
	SNR=27						
MUO				Pg	Pg	05 59 49.5	+0.1
MUO				Sg	Sb	05 59 56.4	-0.8
WEIN	Weingarten	0.45	339	Sg	Sb	05 59 56.8	-0.8
DAVA	Damuels	0.48	69	*e*Pg	Pb	05 59 51.2	-0.5
	0.4nm,0.1s						
DAVA				*e*Sg	Sb	05 59 59.8	+0.9
	0.6nm,0.1s						
EWZT2	Wettswil, ZR	0.54	295	Pg	Pg	05 59 51.8	+0.2
EWZT2				Sg	Sb	06 00 00.1	-0.4
DAVOX	Davos/Dischmat	0.56	126	Sg	Sb	06 00 00.9	-0.2
DAVOX				Sg	Sb	06 00 00.9	-0.2
	SNR=2.4						
FETA	Feichten	1.04	95	*e*Pg	Pn	06 00 01.4	-0.3
	0.1nm,0.1s						
FETA				*e*Sg	Sn	06 00 17.1	+0.8
	0.5nm,0.2s						
RETA	Reutte	1.11	70	*e*Pg	Pn	06 00 03.5	+0.8
	0.2nm,0.2s						
RETA				*e*Sg	Sn	06 00 20.1	+2.0
	0.6nm,0.1s						
MOTA	Moosalm	1.30	79	*e*Pg	Pg	06 00 07.1	+1.0
	0.5nm,0.2s						
MOTA				*e*Sg	Sg	06 00 26.1	+3.1
	0.5nm,0.2s						
SQTA	Sankt Quirin	1.36	85	*e*Pn	Pb	06 00 06.9	+0.2
	0.2nm,0.2s						
SQTA				*e*Sg	Sg	06 00 27.5	+2.7
	0.2nm,0.1s						

ROM 18 06:01:00.5±0.1**, 42.°549N**±0.°008×**13.°230E**±0.°006**,**
h11^{km}**, ML1.2**/3**, Error ellipse: s-maj=0.9km**
s-min=0.5km az=177.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RM33	Pellescritta (	0.04	196	P	Pg	06 01 03.0	+0.3
RM33				S	Sg	06 01 04.3	0.0
RM33				AML	AML		
	comp=E,427µm,0.6s						
RM33				AML	AML		
	comp=N,331µm,0.3s						
SMA1	SAN MARTINO	0.11	43	P	Pg	06 01 04.0	+0.5
SMA1				S	Sg	06 01 06.2	+0.5
CAMP	Campotosto	0.13	96	P	Pg	06 01 04.3	+0.5
CAMP				S	Sg	06 01 06.7	+0.5
LNSS	Leonessa	0.15	291	P	Pg	06 01 04.6	+0.6
LNSS				S	Sg	06 01 07.4	+0.9
LNSS				AML	AML		
	comp=E,105µm,0.2s						
LNSS				AML	AML		
	comp=N,137µm,0.6s						
NRCA	Norcia	0.30	343	P	Pg	06 01 06.9	+0.4
NRCA				S	Sg	06 01 11.4	+0.8
NRCA				AML	AML		
	comp=E,73µm,1.3s						
NRCA				AML	AML		
	comp=N,52µm,1.3s						

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*IDC **18** 06:05:18.6±1.1, 52.°03N×169.°64W, h0^{km}, mb3.7/9,*
mb1 3.9/11, mb1mx3.6/56, mbtmp3.7/11, ML3.4/2, Error
ellipse: s-maj=32.7km s-min=18.5km az=174.0
*AEIC **18** 06:05:21±1.8, 51.°9N±0.°1×169.°6W±0.°1, h54^{km}±10^{km},*
ML3.1, Error ellipse: s-maj=18.7km s-min=9.8km az=151.0
*NEIC **18** 06:05:23.0±1.4, 52.°0N±0.°1×169.°64W±0.°09, h28^{km}±15^{km},*
Error ellipse: s-maj=20.7km s-min=2.5km az=157.0
ISC 18 06:05:23.1±0.9**, 52.°1N**±0.°1×**169.°66W**±0.°07**, h30**^{km}**, n29,**
σ0.^{s}94/29**, mb3.6**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.04	28		Pb	06 05 41.8	-0.7
OKSP	Okmok Steeple	1.46	35		Pn	06 05 47.6	+0.3
OKSO	Okmok South	1.59	35		Pn	06 05 49.8	+0.7
OKFG	Magazine Ridge	1.72	38		Pn	06 05 51.7	+0.8
MAPS	Pakushin South	2.40	42		Pn	06 06 01.2	+0.9
MGOD	Makushin Gods	2.42	43		Pn	06 06 00.9	+0.3
MREP	Makushin Rep't	2.49	44		Pn	06 06 02.5	+0.9
MSW	Makushin Switc	2.54	42		Pn	06 06 03.1	+0.8
MNAT	Makushin Natee	2.56	43		Pn	06 06 03.8	+1.2
UNV	Unalaska Valle	2.62	46		Pn	06 06 03.3	+0.1
MTBL	Makushin Table	2.63	42		Pn	06 06 05.1	+1.6
KOFP	Korovin Flat P	2.74	276		Pn	06 06 06.5	+1.5
ATKA	Atka Island	2.80	275		Pn	06 06 03.6	-2.1
KOKL	Mount Kliuchef	2.80	277		Pn	06 06 06.3	+0.4
AKUT	Akutan	3.13	47	Pn	Pn	06 06 10.3	0.0
GSTD	Great Sitkin T	4.00	272		Pn	06 06 23.2	+0.9
ADK	Adak	4.34	270		Pn	06 06 28.0	+1.0
KDAK	Kodiak Island	11.36	53	Pn	Pn	06 08 01.5	-1.5
	0.2nm,0.3s,baz=118,slow=14,SNR=1.7						
ILAR	Eielson Array	17.31	34	P	Pn	06 09 20.9	-1.3
	0.1nm,0.3s,baz=227,slow=11,SNR=4.9						
PETK	Petropavlovsk-	19.77	286	P	P	06 09 51.1	+0.7
	1.0nm,0.3s,baz=85,slow=14,SNR=29						
INK	Inuvik	23.70	33	P	P	06 10 31.4	-0.5
	1.0nm,0.5s,baz=242,slow=7.0,SNR=5.2						
YKA	Yellowknife Ar	30.58	48	P	P	06 11 34.2	+0.5
	0.5nm,0.8s,baz=272,slow=7.5,SNR=7.8						
KLR	Kul'dur	36.39	289	P	P	06 12 23.9	-0.4
	0.7nm,0.4s,baz=86,slow=7.1,SNR=4.7						
PDAR	Pinedale Array	40.64	79	P	P	06 13 00.9	+0.4
	0.2nm,0.5s,baz=18,slow=6.6,SNR=2.3						
TXAR	Lajitas Array	52.94	88	P	P	06 14 36.1	-0.5
	0.5nm,0.7s,baz=286,slow=5.1,SNR=6.8						
KURBB	Kurchatov Arra	62.59	318	P	P	06 15 44.6	+0.7
	0.4nm,0.7s,baz=44,slow=7.3,SNR=3.2						
BVAR	Borovoye Array	63.85	324	P	P	06 15 52.7	+0.5
	0.7nm,0.5s,baz=37,slow=13,SNR=9.6						
FINES	FINESS Array B	66.15	352	P	P	06 16 07.0	+0.1
	5.6nm,1.1s,baz=178,slow=23,SNR=3.4						
ASAR	Alice Springs	90.06	230	P	P	06 18 19.8	0.0
	0.6nm,0.6s,baz=29,slow=4.7,SNR=15						

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*IDC **18** 06:15:16.6±1.0, 34.°20N×83.°04E, h0^{km}, mb3.7/8,*
mb1 3.9/12, mb1mx3.6/38, mbtmp3.7/12, ML3.0/4, MS3.1/1,
Ms1 3.1/1, ms1mx2.4/44, Error ellipse: s-maj=36.3km
s-min=16.8km az=56.0
ISC 18 06:15:22.1±0.7**, 34.°31N**±0.°09×**83.°2E**±0.°1**, h35**^{km}**, n19,**
σ0.^{s}87/18**, mb3.7**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DANN	Dangsing	5.96	175	*e*P	Pn	06 16 48.6	+0.5
	27nm,0.5s						
KOLN	Koldanda	6.53	177	*e*P	Pn	06 16 56.5	+0.7
	14nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GUN	**Gumba**	**6.78**	**159**	*e*P	**Pn**	**06 17 00.2**	**+0.8**
	16nm,0.4s						
PKIN	**Phulchoki**	**6.97**	**164**	*e*P	**Pn**	**06 17 02.0**	**0.0**
	8.6nm,0.4s						
PKI	**Pulchoki**	**6.98**	**164**	*e*P	**Pn**	**06 17 01.9**	**-0.2**
	7.2nm,0.3s						
ODAN	**Odare**	**8.25**	**153**	*e*P	Pn	06 17 14.9	-4.7
	25nm,0.8s						
AAK	**Ala-Archa**	**10.75**	**323**	Pn	**Pn**	**06 17 53.9**	**+0.2**
	0.3nm,0.3s,baz=156,slow=17,SNR=1.5						
MKAR	**Makanchi Array**	**12.49**	**357**	Pn	**Pn**	**06 18 17.1**	**-0.3**
	0.1nm,0.3s,baz=175,slow=14,SNR=5.9						
MKAR				Sn	Sn	06 20 21.5	-14
	0.0nm,0.3s,baz=186,slow=28,SNR=1.5						
KURBB	**Kurchatov Arra**	**16.66**	**350**	Pn	**Pn**	**06 19 12.0**	**-0.7**
	0.0nm,0.3s,baz=170,slow=11,SNR=28						
ZALV	**Zalesovo Beam**	**19.67**	**3**	P	**P**	**06 19 48.8**	**+0.9**
	0.1nm,0.3s,baz=186,slow=12,SNR=8.4						
CMAR	**Chiang Mai Arr**	**21.12**	**134**	P	**P**	**06 20 01.9**	**-2.1**
	0.5nm,0.4s,baz=312,slow=51,SNR=1.3						
SONM	**Songino Array**	**22.00**	**45**	P	**P**	**06 20 14.6**	**+1.3**
	1.6nm,1.0s,baz=239,slow=6.7,SNR=6.3						
SONM				LR	LR	06 30 08.1	
	comp=Z,41nm,18.3s,baz=62,slow=40						
AKASG	**Malin Array Be**	**42.05**	**310**	P	**P**	**06 23 09.7**	**-0.4**
	0.3nm,0.5s,baz=73,slow=8.3,SNR=3.1						
FINES	**FINESS Array B**	**44.93**	**325**	P	**P**	**06 23 32.6**	**-0.6**
	5.0nm,1.0s,baz=158,slow=7.6,SNR=3.6						
NB2	**NORSAR Subarra**	**52.07**	**324**	P	**P**	**06 24 28.7**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=87,slow=7.4						
NOA	**NORSAR Array B**	**52.07**	**324**	P	**P**	**06 24 28.1**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=87,slow=7.1,SNR=4.9						
WRA	**Warramunga Arr**	**72.64**	**130**	P	**P**	**06 26 46.9**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=326,slow=6.2,SNR=8.1						
ASAR	**Alice Springs**	**75.12**	**133**	P	**P**	**06 27 01.6**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=314,slow=5.9,SNR=6.9						
YKA	**Yellowknife Ar**	**82.47**	**8**	P	**P**	**06 27 39.8**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=347,slow=5.0,SNR=8.8						

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*NOU **18** 06:17:20.9, 19°.20S×169°.42E, h209^{km}, MLv4.4, Vanuatu Islands*

*IDC **18** 06:17:21.6±1.9, 19°.17S×169°.29E, h222^{km}±23^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.6/26, mbtmp4.2/10, Error ellipse: s-maj=43.7km s-min=14.3km az=159.0*

*NEIC **18** 06:17:21.4±1.4, 19°.12S±0°.03×169°.2E±0°.1, h226^{km}±8^{km}, mb4.1/14, Error ellipse: s-maj=16.3km s-min=3.6km az=91.0*

ISC 18 06:17:20.1±0.6**, 19°.16S**±0°.06×**169°.27E**±0°.09**, h200**^{km}**, n52, σ1ṡ61**/47**, mb4.0**/14**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.76**	**324**	P	**Pn**	**06 17 59.6**	**+3.4**
LIFNC	**LIFOU**	**2.50**	**230**	P	**Pn**	**06 18 05.7**	**+1.8**
MARNC	**Mare, Loyalty**	**2.58**	**207**	P	**Pn**	**06 18 06.4**	**+1.5**
YATNC	**Mamie plateau,**	**3.64**	**217**	P	**Pn**	**06 18 18.4**	**+0.9**
DZM	**Mont Dzumac**	**3.92**	**222**	P	**Pn**	**06 18 23.2**	**+2.3**
	2.4nm,0.3s,baz=47,slow=19,SNR=56						
DZM				S	**Sn**	**06 19 12.3**	**+3.4**
	baz=182,slow=11,SNR=3.6						
DZM	**Mont Dzumac**	**3.92**	**222**		**Pn**	**06 18 23.0**	**+2.0**
OUENC	**Ouen Island, N**	**3.96**	**215**	P	**Pn**	**06 18 24.0**	**+2.7**
NOUC	**Port Laguerre**	**4.04**	**223**	P	**Pn**	**06 18 25.0**	**+2.7**
SANVU	**Saraoutou**	**4.19**	**332**	Pn	**Pn**	**06 18 25.4**	**+1.2**
SANVU	**Saraoutou**	**4.19**	**332**	P	**Pn**	**06 18 26.3**	**+2.1**
MSVF	**Nonsavu**	**8.45**	**82**	P	**Pn**	**06 19 20.9**	**+1.5**
	0.5nm,0.3s,baz=220,slow=9.8,SNR=5.8						
MSVF	**Nonsavu**	**8.45**	**82**		**Pn**	**06 19 22.2**	**+2.8**
CTA	**Charters Tower**	**21.70**	**264**	P	**P**	**06 21 55.9**	**+0.4**
	3.8nm,0.6s,baz=91,slow=12,SNR=10						
CTAO	**Charters Tower**	**21.70**	**264**	P	**P**	**06 21 54.3**	**-1.1**
CTAO				IAmb	IAmb	06 21 57.4	
	comp=Z,5.3nm,0.8s						
MSWZ	**Moikau Station**	**22.76**	**168**	P	**P**	**06 22 04.5**	**-0.7**
PMG	**Port Moresby**	**23.49**	**291**	P	**P**	**06 22 12.0**	**0.0**
	comp=Z,9.5nm,0.8s,baz=344,slow=4.8,SNR=3.5						
STKA	**Stephens Creek**	**27.91**	**238**	P	**P**	**06 22 51.5**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=87,slow=11,SNR=7.1						
STKA	**Stephens Creek**	**27.91**	**238**	P	**P**	**06 22 50.0**	**-1.7**
WR0	**Warramunga Arr**	**32.70**	**263**	P	**P**	**06 23 33.2**	**-0.7**
WB0	**Warramunga Arr**	**32.85**	**263**	P	**P**	**06 23 34.3**	**-1.0**
WB0				IAmb	IAmb	06 23 35.1	
	comp=Z,4.1nm,0.6s						
WB2	**Warramunga Arr**	**32.88**	**263**	P	**P**	**06 23 34.8**	**-0.7**
WB2				IAmb	IAmb	06 23 35.5	
	comp=Z,3.5nm,0.9s						
WRA	**Warramunga Arr**	**32.89**	**263**	P	**P**	**06 23 34.5**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=83,slow=6.6,SNR=21						
WRA	**Warramunga Arr**	**32.89**	**263**	P	**P**	**06 23 34.2**	**-1.4**
AS31	**Alice Springs**	**33.17**	**256**	P	**P**	**06 23 38.0**	**0.0**
ASAR	**Alice Springs**	**33.17**	**256**	P	**P**	**06 23 37.9**	**-0.2**
	comp=Z,16nm,0.4s,baz=83,slow=9.0,SNR=401						
ASAR	**Alice Springs**	**33.17**	**256**	P	**P**	**06 23 37.4**	**-0.6**
VNDA	**Vanda**	**58.51**	**182**	P	**P**	**06 26 54.3**	**-0.6**
QSPA	**South Pole Qui**	**70.89**	**180**	P	**P**	**06 28 14.6**	**-0.6**
QSPA				IAmb	IAmb	06 28 26.4	
	comp=Z,9.5nm,1.4s						
MAW	**Mawson**	**78.52**	**202**	P	P	06 28 54.9	-3.9
MAW				IAmb	IAmb	06 29 16.6	
	comp=Z,3.8nm,1.2s						
SONM	**Songino Array**	**87.17**	**323**	P	**P**	**06 29 43.0**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=141,slow=5.2,SNR=6.5						
KTH	**Kantishna Hill**	**88.08**	**17**	P	P	06 29 45.2	-2.3
KTH				IAmb	IAmb	06 29 45.4	
	comp=Z,2.4nm,1.0s						
RND	**Reindeer**	**88.54**	**17**	P	P	06 29 48.0	-1.6
NVAR	**Mina Array Bea**	**88.73**	**48**	P	**P**	**06 29 50.9**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=228,slow=9.6,SNR=6.5						
SNAA	**Sanae**	**89.24**	**182**	P	**P**	**06 29 51.3**	**-1.7**
SNAA				IAmb	IAmb	06 29 56.9	
	comp=Z,3.4nm,1.2s						
IMAR	**Indian Mountai**	**89.35**	**14**	P	P	06 29 52.2	-1.1
WRH	**Wood River Hil**	**89.58**	**17**	P	P	06 29 52.4	-2.0
ILAR	**Eielson Array**	**90.15**	**17**	P	P	06 29 54.6	-2.4
	comp=Z,0.5nm,0.7s,baz=240,slow=5.2,SNR=7.2						
YKA	**Yellowknife Ar**	**100.58**	**27**	P	**Pdif**	**06 30 44.6**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=253,slow=3.9,SNR=4.5						
MKAR	**Makanchi Array**	**101.70**	**316**	P	**Pdif**	**06 30 50.7**	**+0.7**
	comp=Z,0.1nm,0.6s,baz=90,slow=5.5,SNR=1.9						
ARCES	**ARCESS Array B**	**125.00**	**345**	PKP	**PKPdf**	**06 35 54.0**	**-1.7**
	comp=Z,6.4nm,1.1s,baz=49,slow=3.7,SNR=4.8						
ARCES	**ARCESS Array B**	**125.00**	**345**		**PKPdf**	**06 35 53.6**	**-2.1**
CONA	**Conrad Observa**	**144.09**	**329**	*e*P	**PKPab**	**06 36 31.4**	**+1.5**
	comp=Z,5.5nm,1.3s						
GERES	**GERESS Array B**	**144.44**	**332**	PKP	**PKPab**	**06 36 30.4**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=29,slow=3.8,SNR=16						
GERES	**GERESS Array B**	**144.44**	**332**		**PKPab**	**06 36 30.6**	**-0.7**
MOA	**Molln**	**144.91**	**330**	*e*P	**PKPbc**	**06 36 32.1**	**-0.8**
	comp=Z,5.4nm,0.8s						
SOKA	**Soboth**	**145.36**	**328**	*e*P	**PKPdf**	**06 36 33.6**	**-0.5**
	comp=Z,2.0nm,0.5s						
WATA	**Walderalm**	**146.51**	**332**	*e*P	**PKPdf**	**06 36 35.5**	**-0.7**
	comp=Z,3.3nm,0.9s						
WTTA	**Wattenberg**	**146.54**	**332**	*e*P	**PKPdf**	**06 36 34.6**	**-1.7**
	comp=Z,13nm,1.6s						
MOTA	**Moosalm**	**146.71**	**333**	*e*P	**PKPdf**	**06 36 37.6**	**+1.1**
	comp=Z,3.4nm,1.0s						
SQTA	**Sankt Quirin**	**146.76**	**332**	*e*P	**PKPdf**	**06 36 36.7**	**+0.1**
	comp=Z,2.8nm,0.8s						
FETA	**Feichten**	**147.12**	**333**	*e*P	**PKPdf**	**06 36 38.2**	**+1.0**
	comp=Z,6.0nm,1.2s						
DAVA	**Damuels**	**147.28**	**334**	*e*P	**PKPdf**	**06 36 41.0**	**+3.5**
	comp=Z,7.5nm,1.4s						

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*BJI **18** 06:41:28.8±0.0, 56°.27N×114°.04E, h5^{km}, mB4.9/37, mb4.8/51, Ms5.4/52, Ms7 5.0/52*

*BYKL **18** 06:41:30.9±0.2, 56°.13N×113°.75E, h7^{km}±3^{km}, Mw4.9/17(IEC), #STATIONS HRV KDAK PET MAJO INCN SSE ENH KMI WMQ AAK KURK BRVK ARU KONO LVZ SUMG ALE FELT I=V MSK at Severomuisk, IV-V at Taksimo, IV at Yanchukan, III-IV at Novyy Uoyan*

*GCMT **18** 06:41:30.9±0.2, 56°.21N±0°.01×113°.75E±0°.02, h17^{km}, MW5.0/121, Moment Tensor Solution. s46,c58; s121,c204; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.11; $M_{\theta\theta}$4.48±.11; $M_{\phi\phi}$-3.97±.10; $M_{r\theta}$-0.96±.25; $M_{\theta\phi}$1.78±.09; $M_{\phi r}$0.88±.25; Best double couple: $M_0$4.77900×10^{16} NP1:ϕ_s214.00000°, δ74.00000°, λ-175.00000°. NP2:ϕ_s123.00000°, δ85.00000°, λ-16.00000°. Principal axes: T 4.9510, Plg8.0000°, Azm170.0000°; N -0.3480, Plg73.0000°, Azm288.0000°; P -4.6070, Plg15.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **18** 06:41:30.9±1.4, 56°.09N×113°.68E, h10^{km}, mb5.0/60, MS4.9/23 Error ellipse: s-maj=5.6km s-min=4.2km az=72.4*

MOS Felt (IV-V) at Severomuysk, Taksimo;(III-IV) at Novyy Uoyan.

*IDC **18** 06:41:31.0±0.4, 56°.21N×113°.68E, h0^{km}, mb4.4/33, mb1 4.6/39, mb1mx4.5/52, mbtmp4.4/39, ML4.1/5, MS4.5/34, Ms1 4.5/34, ms1mx4.4/45, Error ellipse: s-maj=11.9km s-min=8.2km az=151.0*

*NEIC **18** 06:41:33.9±1.6, 56°.16N±0°.07×113°.7E±0°.1, h10^{km}±1^{km}, mb5.0/276, Error ellipse: s-maj=12.4km s-min=11.9km az=119.0*

ISC 18 06:41:32.8±0.4**, 56°.22N**±0°.02×**113°.71E**±0°.02**, h9**^{km}±2^{km}**, h9**^{km}**:pP-P, n783, σ1ṡ94**/867**, mb4.9**/215**, MS4.8**/65**, 27C-36D, Fault plane solution: NP1:**ϕ_s108.09086°**,** δ86.49096°**,** λ-12.86095°. **NP2:**ϕ_s198.89146°**,** δ77.16357°**,** λ-176.40089°. **Principal axes:** T Plg6.5354°, Azm154.1531°**;** N Plg76.6767°, Azm273.0839°**;** P Plg11.5589°, Azm62.8105°**; East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.13**	**220**	⇓*i*Pg	**Pg**	**06 41 32.5**	**-3.2**
SVKR				*e*Sg	**Sg**	**06 41 34.6**	**-3.1**
SVKR	**Severomuysk**	**0.13**	**220**	⇓*i*PG	**Pg**	**06 41 32.5**	**-3.2**
UKT	**Uakit**	**0.73**	**184**	⇑*i*Pg	Pg	06 41 41.8	-5.1
UKT				Pmax		06 41 48.1	
	5µm,0.4s						
UKT				*e*Sg	**Sg**	**06 41 50.6**	**-5.8**
UKT				Smax		06 41 58.8	
	38µm,0.9s						
UKT	**Uakit**	**0.73**	**184**	⇑*i*PG	Pg	06 41 41.8	-5.1
UKT				*e*S	**Sg**	**06 41 51.3**	**-5.1**
YOA	**Uoyan**	**1.11**	**267**	⇓*i*Pg	**Pg**	**06 41 51.3**	**-2.8**
YOA				*e*		06 41 54.3	
YOA				max		06 41 57.4	
	19µm,0.4s						
YOA				*e*Sg	**Sg**	**06 42 07.0**	**-1.6**
YOA				*e*		06 42 11.8	
YOA				max		06 42 15.0	
	185µm,0.5s						
YOA	**Uoyan**	**1.11**	**267**	*e*PG	**Pg**	**06 41 51.4**	**-2.7**
YOA				*e*		06 42 07.0	
YOA				pmax	pmax		
	comp=Z,4µm,0.2s						
YOA				smax	smax		
	comp=N,186µm,0.5s						
NLYR	**Nelyaty**	**1.15**	**75**	⇓*i*Pg	**Pg**	**06 41 51.3**	**-3.5**
NLYR				*e*Pb	**Pb**	**06 41 53.6**	**-1.2**
NLYR				max		06 41 55.5	
	comp=N,9µm,0.3s						
NLYR				*e*Sg	**Sg**	**06 42 06.9**	**-2.7**
NLYR				*e*Sb	**Sn**	**06 42 10.5**	**-0.4**
NLYR				max		06 42 11.9	
	comp=N,42µm,1.0s						
NLYR	**Nelyaty**	**1.15**	**75**	⇓*i*PG	**Pg**	**06 41 51.3**	**-3.5**
NLYR				*e*		06 42 06.5	
NLYR				pmax	pmax		
	comp=Z,9µm,0.3s						
NLYR				smax	smax		
	comp=N,41µm,1.1s						
KMO	**Kumora**	**1.44**	**258**	⇓*i*Pg	**Pn**	**06 41 56.6**	**-2.6**
KMO				*e*		06 41 58.4	
KMO				max		06 42 00.0	
	comp=N,9µm,0.4s						
KMO				*e*Sg	**Sb**	**06 42 16.2**	**-2.2**
KMO				*e*		06 42 19.3	
KMO				max		06 42 20.2	
	comp=N,78µm,0.9s						
KMO	**Kumora**	**1.44**	**258**	⇓*i*PG	**Pn**	**06 41 56.6**	**-2.6**
KMO				*e*		06 42 16.0	
KMO				pmax	pmax		
	comp=Z,6µm,0.3s						
KMO				smax	smax		
	comp=N,78µm,0.9s						
BOD	**Bodaibo**	**1.62**	**6**	⇑*i*Pg	**Pn**	**06 42 01.3**	**-0.2**
BOD				*e*		06 42 04.8	
BOD				max		06 42 05.5	
	comp=N,15µm,1.2s						
BOD				*e*Sg	**Sn**	**06 42 23.6**	**+1.1**
BOD				Smax		06 42 25.8	
	comp=N,25µm,1.4s						
BOD	**Bodaibo**	**1.62**	**6**	⇓*i*PN	**Pn**	**06 42 00.8**	**-0.7**
BOD				*i*		06 42 04.9	
BOD				*e*		06 42 24.1	
BOD				*i*		06 42 26.7	
YLYR	**Ulyunkhan**	**1.97**	**228**	⇓*i*Pn	**Pn**	**06 42 05.0**	**-1.5**
YLYR				*e*Pg	**Pb**	**06 42 05.5**	**-3.4**
YLYR				*e*		06 42 08.5	
YLYR				max		06 42 08.9	
	comp=N,7µm,0.3s						
YLYR				*e*Sg	**Sn**	**06 42 31.1**	**-0.2**
YLYR				Smax		06 42 34.8	
	comp=N,35µm,0.8s						
YLYR	**Ulyunkhan**	**1.97**	**228**	⇓*i*PN	**Pn**	**06 42 05.0**	**-1.5**
YLYR				*e*		06 42 06.0	
YLYR				*e*		06 42 29.9	
YLYR				pmax	pmax		
	comp=Z,7µm,0.3s						
YLYR				smax	smax		
	comp=N,35µm,0.8s						
NIZ	**Nizh Angarsk**	**2.38**	**261**	⇓*i*Pn	**Pn**	**06 42 11.1**	**-1.0**
NIZ				*e*Pg	**Pb**	**06 42 13.6**	**-2.3**
NIZ				*e*		06 42 16.9	
NIZ				max		06 42 17.6	
	comp=N,3µm,0.9s						
NIZ				*e*Sn	**Sn**	**06 42 41.3**	**-0.1**
NIZ				*e*Sg	**Sb**	**06 42 45.7**	**+0.4**
NIZ				Smax		06 42 47.8	
	comp=N,10µm,0.4s						
NIZ	**Nizh Angarsk**	**2.38**	**261**	⇓*i*PN	**Pn**	**06 42 11.0**	**-1.0**
NIZ				*e*		06 42 13.6	
NIZ				*e*		06 42 45.8	
NIZ				pmax	pmax		
	comp=Z,3µm,2.1s						
NIZ				smax	smax		
	comp=N,12µm,0.9s						
CRS	**Chara**	**2.62**	**73**	⇓*i*Pn	**Pn**	**06 42 14.1**	**-1.2**
CRS				⇑*i*Pg	**Pb**	**06 42 18.9**	**-1.0**
CRS				Pmax		06 42 20.3	
	comp=N,13µm,0.9s						
CRS				*e*		06 42 26.3	
CRS				*e*		06 42 40.1	
CRS				*e*Sn	**Sn**	**06 42 45.4**	**-1.8**
CRS				*e*Sg	**Sb**	**06 42 52.7**	**+0.5**
CRS				Smax		06 42 58.3	
	comp=N,26µm,1.8s						
CRS	**Chara**	**2.62**	**73**	⇓*i*PN	**Pn**	**06 42 14.1**	**-1.2**
CRS				*i*		06 42 18.8	
CRS				*e*		06 42 52.1	
CRS				pmax	pmax		
	comp=Z,13µm,0.9s						
CRS				smax	smax		
	comp=N,26µm,1.7s						
VTMR	**Vitim**	**3.29**	**350**	⇑*i*Pn	**Pn**	**06 42 23.8**	**-0.7**
VTMR				*e*Pg	**Pb**	**06 42 31.8**	**+0.4**
VTMR				*e*Sg	**Sg**	**06 43 16.4**	**-2.0**
SYVR	**Suvo**	**3.34**	**221**	*e*Pn	**Pn**	**06 42 23.1**	**-2.1**
SYVR				*e*		06 42 25.6	
SYVR				*e*Pg	**Pb**	**06 42 30.3**	**-1.9**
SYVR				*e*PgPg	**PnPn**	**06 42 32.7**	**+0.4**
SYVR				max		06 42 35.6	
	comp=N,3µm,1.1s						
SYVR				*e*		06 42 55.5	
SYVR				*e*Sn	**Sn**	**06 43 02.2**	**-2.8**
SYVR				*e*Sg	**Sb**	**06 43 12.2**	**-0.7**
SYVR				Smax		06 43 23.6	
	comp=N,15µm,1.1s						
SYVR	**Suvo**	**3.34**	**221**	*e*PN	**Pn**	**06 42 23.2**	**-2.0**
SYVR				*e*		06 42 29.3	
SYVR				*e*		06 43 12.5	
SYVR				pmax	pmax		
	comp=Z,3µm,1.2s						
SYVR				smax	smax		
	comp=N,16µm,1.1s						
TUP	**Tupik**	**4.00**	**114**	⇓*i*Pn	**Pn**	**06 42 31.4**	**-2.8**
TUP				*e*		06 42 34.6	
TUP				*e*Pg	**Pb**	**06 42 42.0**	**-1.4**
TUP				Pmax		06 42 43.0	
	comp=N,633nm,0.6s						
TUP				*e*Sn	**Sn**	**06 43 16.9**	**-4.3**
TUP				*e*Sg	**Sb**	**06 43 33.5**	**+1.7**
TUP				*e*SgSg	**Sg**	**06 43 37.8**	**-3.2**
TUP				max		06 43 44.0	
	comp=N,14µm,1.4s						
TUP	**Tupik**	**4.00**	**114**	⇓*i*PN	**Pn**	**06 42 31.5**	**-2.8**
TUP				*e*		06 42 41.8	
TUP				*e*S	**Sn**	**06 43 18.4**	**-2.8**
TUP				*e*		06 43 34.1	
TUP				pmax	pmax		
	comp=Z,619nm,0.6s						
TUP				smax	smax		
	comp=N,14µm,1.5s						
MXMB	**Maximikha**	**4.12**	**226**	*e*Pn	**Pn**	**06 42 35.2**	**-0.8**
MXMB				*e*Pg	**Pb**	**06 42 44.7**	**-0.9**
MXMB				*e*Sn	**Sn**	**06 43 20.8**	**-3.6**
MXMB				*e*Sg	**Sb**	**06 43 37.6**	**+2.1**
CIT	**Chita**	**4.20**	**181**	*e*Pn	**Pn**	**06 42 34.1**	**-3.0**
CIT				*e*Pg	**Pb**	**06 42 44.9**	**-2.0**
CIT				Pmax		06 42 46.4	
	comp=N,2µm,0.9s						
CIT				*e*Sg	**Sb**	**06 43 37.8**	**0.0**
CIT				Smax		06 43 57.4	
	comp=N,13µm,1.7s						
CIT	**Chita**	**4.20**	**181**	*e*PN	Pn	06 42 32.9	-4.2
CIT				*e*		06 42 45.0	
CIT				*e*S	**Sn**	**06 43 23.0**	**-3.4**
CIT				*e*		06 43 38.1	
CIT				pmax	pmax		
	comp=Z,2µm,1.5s						
CIT				smax	smax		
	comp=N,13µm,2.0s						
OGRR	**Ongureny**	**4.37**	**236**	⇓*i*Pn	**Pn**	**06 42 38.4**	**-0.9**
OGRR				*e*Pg	**Pb**	**06 42 49.2**	**-0.5**
OGRR				*e*		06 42 51.3	
OGRR				max		06 42 54.7	
	comp=N,2µm,1.9s						
OGRR				*e*Sn	**Sn**	**06 43 27.0**	**-3.3**
OGRR				*e*Sg	**Sb**	**06 43 44.9**	**+2.5**
OGRR				Smax		06 43 52.7	
	comp=N,7µm,1.6s						
OGRR	**Ongureny**	**4.37**	**236**	*e*PN	**Pn**	**06 42 38.4**	**-0.9**
OGRR				*e*		06 42 49.6	
OGRR				*e*		06 43 44.7	
OGRR				pmax	pmax		
	comp=Z,2µm,2.4s						
OGRR				smax	smax		
	comp=E,7µm,2.2s						
YKLR	**Yuktali**	**4.43**	**82**	*e*Pg	**Pb**	**06 42 49.3**	**-1.5**
YKLR				*e*Sn	**Sn**	**06 43 28.9**	**-3.0**
YKLR				*e*Sg	**Sb**	**06 43 47.5**	**+3.2**
ZRHB	**Zarechye**	**5.30**	**229**	*e*Pg	**Pb**	**06 43 06.1**	**+0.5**
ZRHB				Pmax		06 43 13.3	
	comp=E,1µm,1.6s						
ZRHB				*e*Sg	**Sb**	**06 44 14.0**	**+4.7**
ZRHB				Smax		06 44 35.6	
	comp=E,16µm,1.2s						
TRG	**Tyrgan**	**5.51**	**234**	*e*Pn	**Pn**	**06 42 53.2**	**-1.9**
TRG				*e*		06 42 55.2	
TRG				*e*Pg	**Pb**	**06 43 08.9**	**-0.3**
TRG				Pmax		06 43 18.9	
	comp=E,532nm,1.4s						
TRG				*e*Sn	**Sn**	**06 43 53.0**	**-5.6**
TRG				*e*Sg	**Sb**	**06 44 18.8**	**+3.4**
TRG				Smax		06 44 22.7	
	comp=E,3µm,1.1s						
TRG	**Tyrgan**	**5.51**	**234**	*e*PN	**Pn**	**06 42 52.9**	**-2.2**
TRG				*e*		06 43 07.8	
TRG				*e*S	**Sn**	**06 43 52.9**	**-5.6**
TRG				*e*		06 44 18.6	
TRG				pmax	pmax		
	comp=Z,526nm,1.4s						
TRG				smax	smax		
	comp=N,3µm,0.5s						
FFNB	**Fofonovo**	**5.84**	**227**	*e*Pn	**Pn**	**06 42 58.1**	**-1.4**
FFNB				*e*Pg	**Pb**	**06 43 16.5**	**+1.8**
FFNB				*e*Sn	**Sn**	**06 44 03.0**	**-3.6**
FFNB				*e*Sg	**Sb**	**06 44 31.7**	**+7.0**
KAB	**Kabansk**	**5.88**	**228**	*e*Pn	**Pn**	**06 43 00.2**	**+0.1**
KAB				*e*Pg	**Pb**	**06 43 17.7**	**+2.2**
KAB				Pmax		06 43 41.4	
	comp=N,2µm,1.3s						
KAB				*e*Sg	**Sb**	**06 44 33.4**	**+7.4**
KAB				Smax		06 44 58.6	
	comp=N,16µm,1.3s						
HRMR	**Khuramsha**	**6.08**	**224**	⇓*i*Pn	**Pn**	**06 43 01.3**	**-1.6**
HRMR				*e*Pg	**Pb**	**06 43 20.4**	**+1.5**
HRMR				Pmax		06 43 27.5	
	comp=N,765nm,0.6s						
HRMR				*e*Sg	**Sb**	**06 44 38.9**	**+7.1**
HRMR				Smax		06 44 49.0	
	comp=N,15µm,1.0s						
IENR	**Iengra**	**6.22**	**85**	*e*Pn	**Pn**	**06 43 03.8**	**-1.0**
IENR				*e*Pg	**Pb**	**06 43 22.3**	**+1.0**
IENR				*e*Sg	**Sb**	**06 44 42.6**	**+6.8**
KPC	**Khapcheranga**	**6.57**	**188**	⇑*i*Pn	Pn	06 43 05.4	-4.3
KPC				*e*Pg	**Pb**	**06 43 28.4**	**+1.1**
KPC				Pmax		06 43 31.6	
	comp=N,139nm,0.3s						
KPC				*e*Sn	**Sn**	**06 44 29.4**	**+4.7**
KPC				*e*Sg	**Sb**	**06 44 52.0**	**+6.1**
KPC				Smax		06 45 01.2	
	comp=N,6µm,1.4s						
KPC	**Khapcheranga**	**6.57**	**188**	*e*PN	**Pn**	**06 43 05.9**	**-3.8**
KPC				*e*		06 43 26.6	
KPC				*e*		06 44 50.0	
KPC				pmax	pmax		
	comp=Z,138nm,0.4s						
KPC				smax	smax		
	comp=E,6µm,1.8s						
LSTR	**Listvyanka**	**6.80**	**234**	*e*Pn	**Pn**	**06 43 12.9**	**+0.2**
LSTR				*e*Pg	**Pb**	**06 43 33.6**	**+2.5**
LSTR				Pmax		06 43 36.5	
	comp=E,251nm,1.1s						
LSTR				*e*Sg	**Sb**	**06 45 00.3**	**+7.9**
LSTR				Smax		06 45 07.7	
	comp=E,5µm,1.6s						
IRK	**Irkutsk**	**6.81**	**238**	*e*Pg	**Pb**	**06 43 33.8**	**+2.5**
IRK				Pmax		06 43 39.7	
	comp=E,444nm,0.8s						
IRK				*e*Sg	**Sb**	**06 45 00.1**	**+7.4**
IRK				Smax		06 45 16.1	
	comp=E,4µm,1.0s						
IRK	**Irkutsk**	**6.81**	**238**	*e*PN	**Pn**	**06 43 12.7**	**-0.2**
IRK				*e*		06 43 33.7	
IRK				*e*		06 45 00.5	
IRK				pmax	pmax		
	comp=Z,449nm,0.9s						
IRK				smax	smax		
	comp=N,4µm,1.2s						
TLY	**Talaya**	**7.47**	**237**	Pn	**Pn**	**06 43 20.8**	**-1.2**
	comp=N,0.0nm,0.3s,baz=21,slow=2.3,SNR=18						
TLY				Lg	Lg	06 45 19.1	
	comp=N,0.6nm,0.3s,baz=291,slow=19,SNR=13						
TLY				LR	LR	06 45 57.9	
	comp=N,3µm,20.6s,baz=42,slow=36						
TLY	**Talaya**	**7.47**	**237**	*e*Pn	**Pn**	**06 43 20.3**	**-1.7**
TLY				*e*Pg	**Pb**	**06 43 45.6**	**+3.0**
TLY				Pmax		06 43 57.4	
	comp=N,159nm,1.2s						
TLY				*e*		06 45 17.0	
TLY				*e*Sg	Sb	06 45 21.0	+9.3
TLY				Smax		06 45 33.3	
	comp=N,2µm,1.0s						
TLY	**Talaya**	**7.47**	**237**	*e*PN	**Pn**	**06 43 20.0**	**-2.0**
TLY				*e*		06 43 44.5	
TLY				*e*		06 45 19.2	
TLY				pmax	pmax		
	comp=Z,158nm,0.4s						
TLY				smax	smax		
	comp=E,1.0nm,0.6s						
TLY	**Talaya**	**7.47**	**237**	Pn	**Pn**	**06 43 19.8**	**-2.2**
HIA	**Hailar**	**7.86**	**150**	PN	Pn	06 43 22.6	-4.7
HIA	**Hailar**	**7.86**	**150**	Pn	Pn	06 43 22.6	-4.7
ARS	**Arshan**	**7.91**	**242**	*e*Pn	**Pn**	**06 43 27.7**	**-0.3**
ARS				*e*Pg	**Pb**	**06 43 51.4**	**+1.4**
ARS				Pmax		06 43 56.6	
	comp=E,203nm,1.0s						
ARS				*e*Sg	Sb	06 45 34.1	+10
ARS				Smax		06 45 50.7	
	comp=E,6µm,0.9s						
ARS	**Arshan**	**7.91**	**242**	*e*PN	**Pn**	**06 43 28.3**	**+0.3**

ARS				*e*		06 43 51.1	
ARS				pmax	pmax		
	comp=Z,181nm,0.6s						
ZEA	**Zeya**	**8.18**	**102**	*e*PN	**Pn**	**06 43 30.6**	**-1.0**
ZEA				*e*		06 43 58.9	
ZEA				*e*S	**Sn**	**06 45 02.1**	**-2.0**
ZEA				pmax	pmax		
	comp=Z,70nm,0.6s						
ZEA				smax	smax		
	comp=N,2µm,1.0s						
ZEA				smax	smax		
	comp=E,2µm,1.0s						
ZEA				smax	smax		
	comp=E,4µm,2.7s						
ZEA				MLR	MLR		
	comp=Z,1µm,3.0s						
ZAK	**Zakamensk**	**8.55**	**231**	*e*	**Pn**	**06 43 40.4**	**+3.6**
ZAK				*e*Pg	Pg	06 44 03.1	-13
ZAK				Pmax		06 44 17.6	
	comp=Z,80nm,1.2s						
ZAK				*e*Sg	Sg	06 45 53.2	-14
ZAK				Smax		06 46 24.1	
	comp=Z,2µm,1.8s						
ZAK	**Zakamensk**	**8.55**	**231**	*e*PN	**Pn**	**06 43 40.3**	**+3.5**
ZAK				pmax	pmax		
	comp=Z,56nm,1.6s						
MOY	**Mondy**	**8.77**	**244**	*e*Pn	**Pn**	**06 43 38.3**	**-1.5**
MOY				*e*		06 43 41.6	
MOY				*e*		06 43 51.0	
MOY				max		06 44 03.8	
	comp=Z,344nm,1.1s						
MOY				*e*Sn	**Sn**	**06 45 13.0**	**-5.8**
MOY				*e*Sg	Sg	06 46 01.0	-13
MOY				Smax		06 46 26.8	
	comp=Z,3µm,2.0s						
MOY	**Mondy**	**8.77**	**244**	*e*PN	**Pn**	**06 43 37.9**	**-1.9**
MOY				*e*		06 44 06.4	
MOY				*e*S	**Sn**	**06 45 14.3**	**-4.5**
MOY				*e*		06 46 00.7	
ORL	**Orlik**	**8.90**	**251**	*e*Pn	**Pn**	**06 43 40.2**	**-1.4**
ORL				*e*		06 43 51.5	
ORL				max		06 44 29.5	
	comp=Z,283nm,1.3s						
ORL				*e*Sn	**Sn**	**06 45 17.3**	**-4.8**
ORL				*e*Sg	Sg	06 46 05.7	-13
ORL				Smax		06 46 28.0	
	comp=Z,2µm,1.6s						
ORL	**Orlik**	**8.90**	**251**	*e*PN	**Pn**	**06 43 40.3**	**-1.4**
ORL				*e*		06 44 10.8	
ORL				*e*S	**Sn**	**06 45 17.3**	**-4.8**
ORL				*e*		06 46 03.7	
ORL				pmax	pmax		
	comp=Z,302nm,1.0s						
ORL				smax	smax		
	comp=N,1µm,1.6s						
ULN	**Ulaanbaatar**	**9.31**	**209**	⇑*e*P	**Pn**	**06 43 47.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,27nm,1.7s						
ULN	**Ulaanbaatar**	**9.31**	**209**	Pn	**Pn**	**06 43 45.4**	**-1.8**
SONM	**Songino Array**	**9.52**	**211**	Pn	**Pn**	**06 43 47.8**	**-2.3**
	comp=Z,1.7nm,0.3s,baz=20,slow=14,SNR=27						
SONM				Lg	Lg	06 46 24.8	
	comp=Z,28nm,0.3s,baz=22,slow=28,SNR=5.5						
SONM				LR	LR	06 47 35.1	
	comp=Z,1µm,20.7s,baz=27,slow=38						
SONM	**Songino Array**	**9.52**	**211**	P	**Pn**	**06 43 48.7**	**-1.4**
SONM	**Songino Array**	**9.52**	**211**	Pn	**Pn**	**06 43 48.7**	**-1.4**
YAK	**Yakutsk**	**10.05**	**48**	Pn	**Pn**	**06 43 53.5**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=24,slow=1.5,SNR=9.2						
YAK				Sn	**Sn**	**06 45 49.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=301,slow=23,SNR=1.6						
YAK				Lg	Lg	06 46 38.5	
	comp=Z,0.4nm,0.3s,baz=156,slow=23,SNR=11						
YAK				LR	LR	06 47 48.9	
	comp=Z,3µm,18.8s,baz=256,slow=38						
YAK	**Yakutsk**	**10.05**	**48**	*e*P	**Pn**	**06 43 53.5**	**-3.7**
YAK				*e*S	**Sn**	**06 45 46.4**	**-3.6**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,41nm,0.9s						
YAK				smax	smax		
	comp=E,60nm,0.9s						
YAK				MLR	MLR		
	comp=Z,2µm,7.0s						
YAK				MLR	MLR		
	comp=E,1µm,6.0s						
TDJR	**Todzha**	**10.97**	**257**	*e*Pn	**Pn**	**06 44 10.4**	**+0.5**
TDJR				*e*Sg	Sn	06 47 08.8	+56
KLR	**Kul'dur**	**12.96**	**115**	Pn	**Pn**	**06 44 35.0**	**-2.0**
	comp=E,1.8nm,0.3s,baz=312,slow=15,SNR=31						
KLR				Sn	**Sn**	**06 46 59.7**	**-1.4**
	comp=E,0.6nm,0.3s,baz=191,slow=20,SNR=2.2						
KLR				Lg	Lg	06 48 13.8	
	comp=E,1.4nm,0.3s,baz=303,slow=15,SNR=3.6						
KLR				LR	LR	06 49 08.1	
	comp=E,1µm,18.4s,baz=307,slow=35						
KLR	**Kul'dur**	**12.96**	**115**	*ce*P	**Pn**	**06 44 34.7**	**-2.3**
KLR				pmax	pmax		
	comp=Z,11nm,0.7s						
CN2	**Changchun**	**14.51**	**144**	*e*P	**Pn**	**06 44 55.4**	**-2.8**
CN2				S	**Sn**	**06 47 40.9**	**+1.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,4µm,10.0s						
CN2				LR	LR		
	comp=Z,5µm,10.0s						
CN2				LR	LR		
	comp=Z,4µm,15.0s						
MDJ	**Mudanjiang**	**15.36**	**132**	P	**Pn**	**06 45 09.6**	**0.0**
MDJ				PP	**sP**	**06 45 17.6**	**-0.8**
MDJ				S	**Sn**	**06 47 55.0**	**-4.7**
MDJ				SS	**SnSn**	**06 48 09.1**	**-3.0**
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
MDJ				LR	LR		
	comp=Z,14µm,11.0s						
MDJ				LR	LR		
	comp=Z,21µm,12.4s						
MDJ				LR	LR		
	comp=Z,5µm,8.5s						
MDJ	**Mudanjiang**	**15.36**	**132**		**Pn**	**06 45 09.7**	**+0.1**
HHC	**Hu-ho-hao-te**	**15.44**	**186**	*e*P	**Pn**	**06 45 10.5**	**-0.3**
HHC				S	**Sn**	**06 48 03.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,7.0s						
HHC				LR	LR		
	comp=Z,4µm,6.4s						
HHC				LR	LR		
	comp=Z,3µm,6.4s						
HHC				LR	LR		
	comp=Z,2µm,6.4s						
BJI	**Beijing**	**16.27**	**173**	P	**Pn**	**06 45 22.0**	**+0.6**
BJI				pmax	pmax		
	comp=Z,44nm,1.0s						
BJI				LR	LR		
	comp=Z,4µm,13.8s						
BJI				LR	LR		
	comp=Z,1µm,7.1s						
BJI				LR	LR		
	comp=Z,3µm,18.2s						
BJT	**Baijiatuau**	**16.29**	**173**	P	**Pn**	**06 45 21.4**	**-0.3**
BJT				pmax	pmax		
	comp=Z,45nm,1.0s						
BJT	**Baijiatuau**	**16.29**	**173**		**Pn**	**06 45 21.4**	**-0.3**
ZAA0	**Zalesovo Array**	**16.64**	**274**		**Pn**	**06 45 25.6**	**-0.5**
ZALV	**Zalesovo Beam**	**16.64**	**274**	Pn	**Pn**	**06 45 25.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=68,slow=13,SNR=36						
ZALV				Lg	Lg	06 50 07.9	
	comp=Z,0.2nm,0.3s,baz=93,slow=24,SNR=1.7						
ZALV				LR	LR	06 52 13.6	
	comp=Z,2µm,19.8s,baz=66,slow=39						
ZALV	**Zalesovo Beam**	**16.64**	**274**	*i* P	**Pn**	**06 45 26.6**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZALV	**Zalesovo Beam**	**16.64**	**274**	Pn	**Pn**	**06 45 25.7**	**-0.4**
USA0B	**Ussuriysk Arra**	**16.71**	**128**	⇑*e*P	**Pn**	**06 45 26.4**	**-0.6**
USA0B	**Ussuriysk Arra**	**16.71**	**128**		**Pn**	**06 45 27.3**	**+0.3**
USRK	**Ussuriysk Ar.**	**16.71**	**128**	Pn	**Pn**	**06 45 25.7**	**-1.3**
	baz=150,slow=30,SNR=8.3						
USRK				Lg	Lg	06 50 12.2	
	baz=297,slow=21,SNR=4.1						
USRK				LR	LR	06 51 04.1	
	comp=Z,1µm,18.7s,baz=315,slow=34						
USRK	**Ussuriysk Ar.**	**16.71**	**128**	Pn	**Pn**	**06 45 26.1**	**-0.9**
TIXI	**Tiksi**	**16.77**	**17**	⇓*e*P	**Pn**	**06 45 22.6**	**-4.9**
TIXI	**Tiksi**	**16.77**	**17**	Pn	**Pn**	**06 45 21.2**	**-6.3**
TIXI				IAmb	IAmb	06 45 26.8	
	comp=Z,85nm,0.9s						
OKH	**Okha**	**16.97**	**87**	*d* *i*P	**Pn**	**06 45 31.1**	**+1.0**
OKH				*i* S	**Sn**	**06 48 40.7**	**+2.1**
OKH				pmax	pmax		
	comp=Z,200nm,12.7s						
OKH				smax	smax		
	comp=N,400nm,10.7s						
OKH				smax	smax		
	comp=E,200nm,7.4s						
OKH				MLR	MLR		
	comp=E,6µm,12.0s						
OKH				MLR	MLR		
	comp=Z,4µm,18.0s						
OKH				MLR	MLR		
	comp=N,2µm,9.0s						
DGZ	**Jazzator, Alta**	**17.05**	**259**	⇓*e*P	**Pn**	**06 45 28.4**	**-3.0**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV	**Tymovskoe**	**17.94**	**95**	*e*P	**P**	**06 45 49.7**	**+6.8**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,4.6s						
TYV				MLR	MLR		
	comp=Z,5µm,12.0s						
DL2	**Dalian**	**18.10**	**160**	P	**P**	**06 45 46.1**	**+1.4**
DL2				S	**S**	**06 49 11.0**	**-1.1**
DL2				pmax	pmax		
	comp=Z,76nm,1.1s						
DL2				pmax	pmax		
	comp=Z,520nm,3.6s						
DL2				LR	LR		
	comp=Z,2µm,9.2s						
DL2				LR	LR		
	comp=Z,4µm,12.3s						
DL2				LR	LR		
	comp=Z,5µm,11.2s						
TIY	**Taiyuan**	**18.53**	**183**	*e*P	**P**	**06 45 49.6**	**+0.1**
TIY				S	**S**	**06 49 21.4**	**+0.4**
TIY				pmax	pmax		
	comp=Z,250nm,4.7s						
TIY				LR	LR		
	comp=Z,2µm,11.0s						
TIY				LR	LR		
	comp=Z,1µm,6.3s						
TIY				LR	LR		
	comp=Z,3µm,13.4s						
UGL	**Uglegorsk**	**18.53**	**101**	*e*P	**P**	**06 45 47.0**	**-2.4**
UGL				S	**Sn**	**06 49 13.2**	**-3.4**
UGL				smax	smax		
UGL				MLR	MLR		
	comp=Z,4µm,6.0s						
UGL				MLR	MLR		
	comp=N,4µm,7.0s						
UGL				MLR	MLR		
	comp=E,5µm,9.0s						
GTA	**Gaotai**	**19.16**	**215**	⇑P	**P**	**06 45 57.3**	**+0.7**
GTA				pP	sP	06 46 01.5	+0.9
GTA				sP	pP	06 46 03.9	+4.5
GTA				S	**Sn**	**06 49 30.0**	**-2.2**
GTA				sS	S	06 49 35.3	+1.5
GTA				pmax	pmax		
	comp=E,11nm,1.5s						
GTA				pmax	pmax		
	comp=E,83nm,5.8s						
GTA				LR	LR		
	comp=E,6µm,13.1s						
GTA				LR	LR		
	comp=E,13µm,13.8s						
GTA				LR	LR		
	comp=E,3µm,12.7s						
ZSN	**Zaisan**	**19.74**	**256**	*e*P	**P**	**06 46 03.1**	**+0.5**
	baz=256						
ZSN	**Zaisan**	**19.74**	**256**	*e*P	**P**	**06 46 03.1**	**+0.5**
MA2	**Magadan**	**19.81**	**65**	*ce*P	**P**	**06 46 03.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,62nm,1.7s						
MA2	**Magadan**	**19.81**	**65**	P	**P**	**06 46 03.3**	**0.0**
TIA	**Tai'an**	**20.14**	**172**	P	**P**	**06 46 04.5**	**-2.6**
TIA				S	Sn	06 49 59.5	+3.9
TIA				pmax	pmax		
	comp=Z,32nm,1.8s						
TIA				LR	LR		
	comp=Z,3µm,14.2s						
TIA				LR	LR		
	comp=Z,2µm,11.4s						
TIA				LR	LR		
	comp=Z,5µm,17.2s						
YSS	**Yuzh-Sakhalins**	**20.15**	**105**	*e*P	**P**	**06 46 06.5**	**-0.6**
YSS				*e*		06 46 12.5	
YSS				*e*S	**S**	**06 49 49.1**	**-4.1**
YSS				MLR	MLR		
	comp=Z,4µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,12.0s						
YSS	**Yuzh-Sakhalins**	**20.15**	**105**	P	**P**	**06 46 06.0**	**-1.2**
SEY	**Seymchan**	**20.44**	**55**	P	**P**	**06 46 09.8**	**-0.3**
	comp=E,11nm,0.9s,baz=274,slow=8.7,SNR=21						
SEY				Lg	Lg	06 52 09.8	
	comp=E,16nm,1.1s,baz=261,slow=14,SNR=4.5						
SEY				LR	LR	06 54 15.7	
	comp=E,2µm,18.6s,baz=277,slow=37						
SEY	**Seymchan**	**20.44**	**55**	⇓*e*P	**P**	**06 46 08.8**	**-1.3**
INCN	**Inchon**	**20.66**	**150**	P	**P**	**06 46 11.9**	**-0.8**
INCN				pmax	pmax		
	comp=Z,126nm,1.5s						
INCN	**Inchon**	**20.66**	**150**	P	**P**	**06 46 11.9**	**-0.8**
INCN				IAmb	IAmb	06 46 15.5	
	comp=Z,126nm,1.4s						
WMQ	**Urumqi**	**20.66**	**244**	P	**P**	**06 46 14.8**	**+2.0**
WMQ				PP	**PnPn**	**06 46 34.8**	**+4.5**
WMQ				S	**S**	**06 49 59.0**	**-4.6**
WMQ				pmax	pmax		
	comp=Z,100nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,680nm,6.1s						
WMQ				LR	LR		
	comp=Z,6µm,11.1s						
WMQ				LR	LR		
	comp=Z,3µm,14.5s						
WMQ				LR	LR		
	comp=Z,4µm,18.1s						
WMQ	**Urumqi**	**20.66**	**244**	P	**P**	**06 46 13.5**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,96nm,1.1s						
WMQ	**Urumqi**	**20.66**	**244**	P	**P**	**06 46 13.5**	**+0.7**
WMQ				IAmb	IAmb	06 46 16.5	
	comp=Z,96nm,1.1s						
SEM	**Semipalatinsk**	**20.67**	**268**	*e*P	**P**	**06 46 11.6**	**-1.5**
	comp=Z,15nm,1.1s,baz=268						
SEM				*e*S	**S**	**06 50 03.8**	**-0.2**
	baz=268						
SEM	**Semipalatinsk**	**20.67**	**268**	*e*P	**P**	**06 46 11.5**	**-1.5**
SEM				*e*S	**S**	**06 50 03.7**	**-0.2**
SEM				pmax	pmax		
	comp=Z,15nm,1.1s						
KSAR	**Wonju Array Be**	**21.06**	**147**	P	**P**	**06 46 17.1**	**+0.1**
KSAR	**Wonju Array Be**	**21.06**	**147**	P	**P**	**06 46 17.1**	**+0.1**
KSRS	**Korea Array**	**21.06**	**147**	P	**P**	**06 46 15.5**	**-1.5**
	comp=Z,8.2nm,0.9s,baz=349,slow=8.9,SNR=18						
KSRS				Lg	Lg	06 52 32.8	
	comp=Z,4.6nm,0.8s,baz=344,slow=26,SNR=4.9						
KSRS				LR	LR	06 55 08.0	
	comp=Z,2µm,18.2s,baz=340,slow=39						
LZH	**Lanzhou**	**21.22**	**203**	*e*P	**P**	**06 46 17.8**	**-1.1**
LZH				pP	pP	06 46 20.9	-1.0
LZH				sP	sP	06 46 23.4	+0.3
LZH				S	**S**	**06 50 13.9**	**-1.0**
LZH				sS	pS	06 50 21.5	-1.6
LZH				SS	**SnSn**	**06 50 39.9**	**+3.4**
LZH				pmax	pmax		
	comp=Z,36nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.6s						
LZH				LR	LR		
	comp=Z,6µm,8.1s						
LZH				LR	LR		
	comp=Z,5µm,11.5s						
KURK	**Kurchatov**	**21.43**	**270**	P	**P**	**06 46 19.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,84nm,0.9s						
KURK	**Kurchatov**	**21.43**	**270**	P	**P**	**06 46 19.8**	**-1.1**
KURK				IAmb	IAmb	06 46 27.1	
	comp=Z,84nm,0.9s						
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**06 46 20.9**	**-1.1**
	comp=Z,24nm,0.8s,baz=63,slow=13,SNR=55						
KURBB				Lg	Lg	06 52 44.2	
	comp=Z,5.2nm,1.1s,baz=61,slow=11,SNR=2.6						
MK31	**Makanchi Array**	**21.53**	**257**	⇑*e*P	**P**	**06 46 20.0**	**-2.1**
MK31	**Makanchi Array**	**21.53**	**257**	P	**P**	**06 46 20.4**	**-1.7**
MK31				IAmb	IAmb	06 46 24.5	
	comp=Z,47nm,1.1s						
MKAR	**Makanchi Array**	**21.53**	**257**	P	**P**	**06 46 22.4**	**+0.3**
	comp=Z,29nm,0.8s,baz=56,slow=9.5,SNR=89						
MKAR				Lg	Lg	06 52 46.1	
	comp=Z,5.7nm,1.1s,baz=56,slow=9.0,SNR=2.9						
MKAR				LR	LR	06 55 01.4	
	comp=Z,4µm,20.9s,baz=43,slow=38						
MKAR	**Makanchi Array**	**21.53**	**257**	P	**P**	**06 46 20.8**	**-1.4**
MAKZ	**Makanchi**	**21.70**	**258**	P	**P**	**06 46 23.5**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,48nm,0.9s						
MAKZ	**Makanchi**	**21.70**	**258**	P	**P**	**06 46 23.5**	**-0.4**
MAKZ				IAmb	IAmb	06 46 28.7	
	comp=Z,48nm,0.8s						
ASAJ	**Asahikawa**	**21.93**	**111**	P	**P**	**06 46 25.4**	**-0.9**
	comp=Z,10nm,1.0s,baz=350,slow=33,SNR=2.1						
XAN	**Xi'an**	**22.42**	**190**	P	**P**	**06 46 30.3**	**-1.4**
XAN				pP	sP	06 46 37.1	+1.3
XAN				PP	**PnPn**	**06 46 56.4**	**+1.9**
XAN				S	**S**	**06 50 36.6**	**-1.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,140nm,3.1s						
XAN				LR	LR		
	comp=Z,4µm,13.5s						
XAN				LR	LR		
	comp=Z,8µm,13.9s						
XAN				LR	LR		
	comp=Z,5µm,11.3s						
JTM	**Tenmabayashi**	**23.59**	**119**	P	**P**	**06 46 40.8**	**-2.9**
NJ2	**Nanjing**	**24.43**	**169**	*e*P	**P**	**06 46 52.3**	**+0.7**
NJ2				pP	**sP**	**06 46 55.6**	**-0.2**
NJ2				sP	**pP**	**06 46 58.9**	**+4.3**
NJ2				S	**S**	**06 51 12.8**	**+1.5**
NJ2				sS	**pS**	**06 51 20.9**	**+5.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,230nm,4.5s						
NJ2				LR	LR		
	comp=Z,3µm,12.1s						
NJ2				LR	LR		
	comp=Z,2µm,12.3s						
NJ2				LR	LR		
	comp=Z,4µm,13.3s						
TDK	**Taldyqorghan**	**24.77**	**258**	*e*P	**P**	**06 46 55.2**	**+0.4**
	comp=Z,68nm,0.9s,baz=259						
TDK				*e*S	**S**	**06 51 18.7**	**+1.8**
	baz=259						
TDK				LR	LR	06 55 51.3	
	comp=Z,3µm,12.4s,baz=259						
TDK	**Taldyqorghan**	**24.77**	**258**	*e*P	**P**	**06 46 55.1**	**+0.4**
TDK				*e*S	**S**	**06 51 18.7**	**+1.8**
TDK				pmax	pmax		
	comp=Z,68nm,0.9s						
TDK				MLR	MLR		
	comp=Z,3µm,12.0s						
BVAR	**Borovoye Array**	**24.97**	**281**	P	**P**	**06 46 52.2**	**-4.2**
	comp=Z,1.5nm,0.7s,baz=230,slow=50,SNR=7.4						
BRVK	**Borovoye**	**25.02**	**281**	*ce*P	**P**	**06 46 55.9**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,67nm,1.7s						
BRVK	**Borovoye**	**25.02**	**281**	P	**P**	**06 46 56.3**	**-0.5**
BRVK				IAmb	IAmb	06 47 10.3	
	comp=Z,34nm,0.9s						
BRZS	**Berezniki**	**25.11**	**273**	*e*P	**P**	**06 46 58.5**	**+0.8**
	comp=Z,20nm,1.2s,baz=274						
BRZS	**Berezniki**	**25.11**	**273**	*e*P	**P**	**06 46 58.5**	**+0.8**
BRZS				pmax	pmax		
	comp=Z,20nm,1.2s						
PEA0B	**Petropavlovsk-**	**25.31**	**78**	P	**P**	**06 46 58.6**	**-0.8**
PEA0B				pmax	pmax		
	comp=Z,21nm,0.9s						
PEA0B	**Petropavlovsk-**	**25.31**	**78**	P	**P**	**06 46 58.6**	**-0.8**
PEA0B				IAmb	IAmb	06 47 02.2	
	comp=Z,21nm,0.8s						
PETK	**Petropavlovsk-**	**25.31**	**78**	P	**P**	**06 46 57.1**	**-2.3**
	comp=Z,18nm,0.9s,baz=323,slow=2.2,SNR=9.1						
PETK				LR	LR	06 57 00.4	
	comp=Z,2µm,20.4s,baz=311,slow=37						
PETK	**Petropavlovsk-**	**25.31**	**78**	P	**P**	**06 46 58.9**	**-0.5**
PETK	**Petropavlovsk-**	**25.31**	**78**	P	**P**	**06 46 58.9**	**-0.5**
SHLS	**Shalkode**	**25.42**	**254**	*e*P	**P**	**06 46 58.7**	**-2.0**
	comp=Z,64nm,0.9s,baz=254						
SHLS	**Shalkode**	**25.42**	**254**	*e*P	**P**	**06 46 58.6**	**-2.0**
SHLS				pmax	pmax		
	comp=Z,64nm,0.9s						
SKR	**Severo-Kuril's**	**25.53**	**84**	*e*P	**P**	**06 46 58.4**	**-3.1**
SKR				*e*S	**S**	**06 51 35.7**	**+6.9**
SKR				pmax	pmax		
	comp=Z,200nm,6.0s						
SKR				pmax	pmax		
	comp=Z,41nm,1.6s						
SKR				MLR	MLR		
	comp=Z,700nm,18.0s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
KPKS	**Kokpek**	**25.62**	**255**	*e*P	**P**	**06 47 02.6**	**0.0**
	comp=Z,34nm,1.0s,baz=256						
KPKS	**Kokpek**	**25.62**	**255**	*e*P	**P**	**06 47 02.5**	**0.0**
KPKS				pmax	pmax		
	comp=Z,34nm,1.0s						
PET	**Petropavlovsk**	**25.86**	**78**	*e*P	**P**	**06 47 06.2**	**+1.7**
PET				*e*S	**S**	**06 51 31.2**	**-2.8**
PET				MLR	MLR		
	comp=Z,2µm,14.0s						
PET				MLR	MLR		
	comp=Z,2µm,12.0s						
PET	**Petropavlovsk**	**25.86**	**78**	P	**P**	**06 47 04.2**	**-0.2**
PET				IAmb	IAmb	06 47 07.7	
	comp=Z,44nm,1.2s						
JNU	**Nakatsue**	**25.98**	**146**	LR	LR	06 58 02.9	
	comp=Z,1µm,20.3s,baz=344,slow=38						
SATY	**Saty**	**26.05**	**255**	*e*P	**P**	**06 47 06.8**	**+0.3**
	comp=Z,24nm,1.3s,baz=255						
SATY	**Saty**	**26.05**	**255**	*e*P	**P**	**06 47 06.7**	**+0.3**
SATY				pmax	pmax		
	comp=Z,24nm,1.3s						
ENH	**Enshi**	**26.10**	**188**	P	**P**	**06 47 06.7**	**-0.2**
ENH				IAmb	IAmb	06 47 10.7	
	comp=Z,26nm,1.3s						
CD2	**Chengdu**	**26.25**	**200**	*e*P	**P**	**06 47 08.8**	**+0.6**
CD2				S	**S**	**06 51 40.8**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,5µm,10.0s						
CD2				LR	LR		
	comp=Z,10µm,14.5s						
CD2				LR	LR		
	comp=Z,5µm,11.6s						
CHKK	**Chushkaly**	**26.29**	**258**	*e*P	**P**	**06 47 08.2**	**-0.2**
	baz=258						
CHKK	**Chushkaly**	**26.29**	**258**	*e*P	**P**	**06 47 08.2**	**-0.2**
MDOK	**Medeo**	**26.71**	**256**	*e*P	**P**	**06 47 12.8**	**+0.4**
	baz=257						
MDOK				*e*S	**S**	**06 51 49.5**	**+1.5**
	baz=257						
MDOK				LR	LR	06 56 44.1	
	comp=Z,4µm,11.6s,baz=257						
MDOK	**Medeo**	**26.71**	**256**	*e*P	**P**	**06 47 12.8**	**+0.4**
MDOK				*e*S	**S**	**06 51 49.5**	**+1.5**
MDOK				MLR	MLR		
	comp=Z,4µm,12.0s						
AAA	**Alma-Ata**	**26.76**	**257**	*e*P	**P**	**06 47 12.7**	**-0.1**
	comp=Z,76nm,1.3s,baz=257						
AAA				LR	LR	06 56 44.8	
	comp=Z,3µm,12.5s,baz=257						
AAA	**Alma-Ata**	**26.76**	**257**	*e*P	**P**	**06 47 12.6**	**-0.1**

AAA				pmax	pmax		
	comp=Z,76nm,1.3s						
AAA				MLR	MLR		
	comp=Z,3µm,12.0s						
TNSS	**Tian-Shan**	**26.85**	**256**	*e*P	**P**	**06 47 15.4**	**+1.3**
	baz=257						
TNSS	**Tian-Shan**	**26.85**	**256**	*e*P	**P**	**06 47 15.3**	**+1.3**
MTBS	**Maitube**	**27.07**	**257**	*e*P	**P**	**06 47 16.9**	**+1.3**
	baz=258						
MTBS	**Maitube**	**27.07**	**257**	*e*P	**P**	**06 47 16.9**	**+1.3**
BTLS	**Baital**	**27.15**	**263**	*e*P	**P**	**06 47 16.6**	**+0.5**
	comp=Z,15nm,1.2s,baz=263						
BTLS	**Baital**	**27.15**	**263**	*e*P	**P**	**06 47 16.6**	**+0.5**
BTLS				pmax	pmax		
	comp=Z,15nm,1.2s						
TKM2	**Tokmak 2**	**27.67**	**258**	P	**P**	**06 47 23.6**	**+2.5**
	SNR=16						
SGDS	**Sogindy**	**27.84**	**259**	*e*P	**P**	**06 47 23.8**	**+1.3**
	comp=Z,9.8nm,1.6s,baz=260						
SGDS	**Sogindy**	**27.84**	**259**	*e*P	**P**	**06 47 23.8**	**+1.3**
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.6s						
USP	**Ospenovka**	**28.04**	**259**	P	**P**	**06 47 26.6**	**+2.4**
	SNR=12						
CHMS	**Chumysh**	**28.08**	**259**	P	**P**	**06 47 27.1**	**+2.5**
	SNR=10						
KBK	**Karagaybulak**	**28.20**	**258**	P	**P**	**06 47 28.5**	**+2.7**
	SNR=7.3						
AAK	**Ala-Archa**	**28.46**	**258**	P	**P**	**06 47 28.7**	**+0.6**
	comp=Z,7.2nm,1.0s,baz=71,slow=6.8,SNR=26						
AAK				LR	LR	06 59 12.2	
	comp=Z,3µm,18.8s,baz=52,slow=37						
AAK	**Ala-Archa**	**28.46**	**258**	P	**P**	**06 47 30.6**	**+2.5**
	SNR=12						
AAK	**Ala-Archa**	**28.46**	**258**	⇑*e*P	**P**	**06 47 28.5**	**+0.4**
AAK				pmax	pmax		
	comp=Z,117nm,1.7s						
AAK	**Ala-Archa**	**28.46**	**258**	P	**P**	**06 47 27.6**	**-0.4**
AAK				IAmb	IAmb	06 47 31.8	
	comp=Z,33nm,1.3s						
SVE	**Sverdlovsk**	**28.68**	**294**	*e*P	P	06 47 36.1	+6.4
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
EKS2	**Erkin-Say**	**28.84**	**259**	P	**P**	**06 47 34.9**	**+3.5**
	SNR=11						
JHJ	**Hachijo jima 2**	**29.29**	**131**	LR	LR	06 58 14.2	
	comp=Z,475nm,21.8s,baz=32,slow=34						
KSH	**Kashi**	**29.84**	**252**	P	P	06 47 46.3	+6.0
KSH				sP	sP	06 47 53.4	+8.9
KSH				pmax	pmax		
	comp=Z,68nm,1.4s						
KSH				pmax	pmax		
	comp=Z,600nm,5.3s						
KSH				LR	LR		
	comp=Z,2µm,8.3s						
KSH				LR	LR		
	comp=Z,5µm,12.5s						
KSH				LR	LR		
	comp=Z,4µm,12.5s						
ARU	**Arti**	**29.89**	**294**	P	**P**	**06 47 38.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=18,slow=7.0,SNR=3.7						
ARU				LR	LR	06 59 22.2	
	comp=Z,1µm,21.1s,baz=64,slow=36						
ARU	**Arti**	**29.89**	**294**	*d i*P	**P**	**06 47 38.0**	**-2.4**
ARU						06 48 32.9	
ARU				S	**S**	**06 52 36.3**	**-1.0**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ARU				MLR	MLR		
	comp=Z,1µm,14.0s						
ARU	**Arti**	**29.89**	**294**	P	**P**	**06 47 39.5**	**-0.9**
DZA	**Taraz**	**30.03**	**262**	*e*P	**P**	**06 47 43.1**	**+1.3**
	baz=262						
DZA	**Taraz**	**30.03**	**262**	*e*P	**P**	**06 47 43.1**	**+1.3**
GYA	**Guiyang**	**30.17**	**193**	*e*P	**P**	**06 47 44.1**	**+0.8**
GYA				S	**S**	**06 52 46.3**	**+3.9**
GYA				SS	**ScP**	**06 54 23.4**	**-3.0**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GYA				LR	LR		
	comp=Z,1µm,13.6s						
GYA				LR	LR		
	comp=Z,2µm,12.7s						
GYA				LR	LR		
	comp=Z,2µm,20.7s						
KK31	**Karatay Array**	**30.34**	**263**	P	**P**	**06 47 43.9**	**-0.7**
KK31				pmax	pmax		
	comp=Z,15nm,1.0s						
KK31	**Karatay Array**	**30.34**	**263**	P	**P**	**06 47 43.9**	**-0.7**
KK31				IAmb	IAmb	06 47 47.5	
	comp=Z,15nm,1.0s						
KKAR	**Karatay Array**	**30.34**	**263**	P	**P**	**06 47 44.4**	**-0.2**
KKAR	**Karatay Array**	**30.34**	**263**	P	**P**	**06 47 44.1**	**-0.5**
KKAR				IAmb	IAmb	06 47 47.5	
	comp=Z,15nm,1.0s						
KKAR	**Karatay Array**	**30.34**	**263**	P	**P**	**06 47 44.4**	**-0.2**
IUG	**Iuzhnay**	**31.24**	**262**	*e*P	**P**	**06 47 53.5**	**+0.8**
	comp=Z,20nm,1.1s,baz=262						
IUG	**Iuzhnay**	**31.24**	**262**	*e*P	**P**	**06 47 53.4**	**+0.8**
IUG				pmax	pmax		
	comp=Z,20nm,1.1s						
KMI	**Kunming**	**32.07**	**199**	⇓P	**P**	**06 48 01.3**	**+1.1**
KMI				pP	sP	06 48 04.8	+0.3
KMI				sP	pP	06 48 06.3	+3.1
KMI				S	**S**	**06 53 12.0**	**-0.5**
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				pmax	pmax		
	comp=Z,110nm,4.3s						
KMI				LR	LR		
	comp=Z,2µm,10.9s						
KMI				LR	LR		
	comp=Z,2µm,12.8s						
KMI				LR	LR		
	comp=Z,2µm,11.3s						
ABKAR	**Akbulak array**	**32.55**	**281**	P	**P**	**06 48 03.5**	**-0.4**
ABKAR	**Akbulak array**	**32.55**	**281**	P	**P**	**06 48 01.9**	**-2.0**
TAPN	**Taplejung**	**34.34**	**224**	*e*P	**P**	**06 48 21.3**	**+1.2**
	comp=Z,44nm,1.2s						
SHL	**Shillong**	**34.47**	**216**	P	**P**	**06 48 21.0**	**-0.1**
SHL				pmax	pmax		
	comp=Z,39nm,1.4s						
SHL	**Shillong**	**34.47**	**216**	P	**P**	**06 48 21.0**	**-0.1**
SHL				IAmb	IAmb	06 48 23.6	
	comp=Z,39nm,1.4s						
GUN	**Gumba**	**34.57**	**227**	*e*P	**P**	**06 48 24.1**	**+2.0**
	comp=Z,72nm,1.2s						
ODAN	**Odare**	**34.91**	**224**	*e*P	**P**	**06 48 25.3**	**+0.4**
	comp=Z,71nm,1.0s						
KKN	**Kakani**	**34.92**	**227**	*e*P	**P**	**06 48 26.4**	**+1.4**
	comp=Z,80nm,1.0s						
GKN	**Gorkha**	**35.00**	**229**	*e*P	**P**	**06 48 27.5**	**+1.9**
	comp=Z,80nm,0.8s						
PKI	**Pulchoki**	**35.06**	**227**	*e*P	**P**	**06 48 28.0**	**+1.6**
PKIN	**Phulchoki**	**35.06**	**227**	*e*P	**P**	**06 48 28.1**	**+1.8**
DANN	**Dangsing**	**35.07**	**230**	*e*P	**P**	**06 48 28.8**	**+2.4**
	comp=Z,27nm,0.8s						
RAMN	**Ramite**	**35.14**	**225**	*e*P	**P**	**06 48 28.1**	**+1.2**
	comp=Z,24nm,0.9s						
KOLN	**Koldanda**	**35.64**	**230**	*e*P	**P**	**06 48 33.2**	**+2.0**
	comp=Z,81nm,0.9s						
NIL	**Nilore**	**35.70**	**248**	P	**P**	**06 48 31.4**	**-0.1**
NIL				pmax	pmax		
	comp=Z,31nm,1.4s						
NIL	**Nilore**	**35.70**	**248**	P	**P**	**06 48 31.4**	**-0.1**
NIL				IAmb	IAmb	06 48 34.5	
	comp=Z,31nm,1.4s						
KLMR	**Klimovskoe**	**37.09**	**309**	*e*P	**P**	**06 48 39.5**	**-3.4**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	**Klimovskoe**	**37.09**	**309**	*e*P	**P**	**06 48 39.5**	**-3.4**
KLMR				AMP		06 48 46.7	
	comp=Z,20nm,1.3s						
KLMR				LQ	LQ	07 00 37.4	
KLMR				LQ	LQ	07 00 37.4	
KLMR				LR	LR	07 02 26.8	
SPA0	**Spitsbergen Ar**	**37.17**	**340**	P	**P**	**06 48 45.0**	**+1.5**
SPA0				IAmb	IAmb	06 48 46.2	
	comp=Z,57nm,1.3s						
SPITS	**Spitsbergen Ar**	**37.17**	**340**	P	**P**	**06 48 44.0**	**+0.5**
	comp=Z,16nm,0.9s,baz=84,slow=10,SNR=13						
KBL	**Kabul**	**37.24**	**254**	P	**P**	**06 48 44.7**	**-0.1**
KBL				pmax	pmax		
	comp=Z,12nm,1.5s						
KBL	**Kabul**	**37.24**	**254**	P	**P**	**06 48 44.7**	**-0.1**
QIZ	**Qiongzhong**	**37.24**	**186**	P	**P**	**06 48 43.8**	**-0.8**
QIZ				S	**S**	**06 54 31.3**	**-0.4**
QIZ				LR	LR		
	comp=Z,1µm,15.9s						
QIZ				LR	LR		
	comp=Z,550nm,9.8s						
QIZ				LR	LR		
	comp=Z,2µm,17.4s						
BELG	**Belogornoye**	**37.42**	**293**	⇑*e*P	**P**	**06 48 44.6**	**-1.2**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
RDOG	**Red Dog Mine**	**37.55**	**38**	P	**P**	**06 48 48.9**	**+2.1**
ANM	**Nome**	**38.17**	**44**	P	**P**	**06 48 52.6**	**+0.5**
ANM				pmax	pmax		
	comp=Z,14nm,0.9s						
ANM	**Nome**	**38.17**	**44**	P	**P**	**06 48 52.5**	**+0.5**
ARCES	**ARCESS Array B**	**38.50**	**326**	P	**P**	**06 48 55.8**	**+0.9**
	comp=Z,11nm,0.9s,baz=63,slow=11,SNR=12						
ARCES				LR	LR	07 07 51.2	
	comp=Z,440nm,18.4s,baz=75,slow=41						
ARCES	**ARCESS Array B**	**38.50**	**326**	IAmb	IAmb	06 48 56.7	
	comp=Z,20nm,1.2s						
CMAR	**Chiang Mai Arr**	**39.31**	**202**	P	**P**	**06 49 02.1**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=359,slow=7.1,SNR=5.2						
CMAR				LR	LR	07 04 54.7	
	comp=Z,472nm,20.3s,baz=66,slow=36						
CMAR	**Chiang Mai Arr**	**39.31**	**202**	*ce*P	**P**	**06 49 03.0**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GEYT	**Alibeck**	**40.77**	**267**	P	**P**	**06 49 14.5**	**+0.4**
	comp=Z,8.3nm,0.9s,baz=32,slow=5.8,SNR=16						
GEYT				LR	LR	07 07 27.9	
	comp=Z,631nm,21.6s,baz=355,slow=38						
GEYT	**Alibeck**	**40.77**	**267**	P	**P**	**06 49 13.9**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**40.77**	**267**	P	**P**	**06 49 14.7**	**+0.6**
GYA0B				IAmb	IAmb	06 49 17.8	
	comp=Z,27nm,1.2s						
VRH	**Novokhopyorsk**	**41.12**	**295**	*e*P	**P**	**06 49 14.7**	**-2.0**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VRH				MLR	MLR		
	comp=Z,2µm,16.0s						
LPSR	**Galich'ya Gora**	**41.69**	**298**	*e*P	**P**	**06 49 19.8**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
LPSR				MLR	MLR		
	comp=Z,640nm,11.0s						
IMAR	**Indian Mountai**	**41.70**	**38**	P	**P**	**06 49 22.6**	**+1.1**
COLD	**Coldfoot**	**42.19**	**35**	P	**P**	**06 49 27.2**	**+1.8**
	baz=304,SNR=8.4						
COLD	**Coldfoot**	**42.19**	**35**	P	**P**	**06 49 25.6**	**+0.2**
FIA1	**FINESS Array S**	**42.40**	**315**	P	**P**	**06 49 28.9**	**+1.9**
FIA1				IAmb	IAmb	06 49 33.5	
	comp=Z,41nm,1.4s						
FINES	**FINESS Array B**	**42.40**	**315**	P	**P**	**06 49 25.8**	**-1.3**
	comp=Z,6.3nm,0.6s,baz=60,slow=9.1,SNR=26						
FINES				LR	LR	07 08 30.4	
	comp=Z,559nm,18.3s,baz=63,slow=38						
VSR	**Storozhevoye**	**42.40**	**296**	*e*P	**P**	**06 49 25.8**	**-1.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR				MLR	MLR		
	comp=Z,1µm,15.0s						
TTA	**Tatalina**	**42.59**	**43**	P	**P**	**06 49 29.4**	**+0.6**
TTA				pmax	pmax		
	comp=Z,11nm,1.2s						
TTA	**Tatalina**	**42.59**	**43**	P	**P**	**06 49 29.4**	**+0.6**
MLY	**Manley**	**43.28**	**38**	P	**P**	**06 49 36.4**	**+2.1**
	baz=306,SNR=9.5						
EUNU	**Eureka**	**43.48**	**5**	P	**P**	**06 49 37.5**	**+1.7**
I23K	**Minto, Yukon-K**	**43.68**	**37**	P	**P**	**06 49 38.9**	**+1.5**
	baz=307,SNR=15						
I23K	**Minto, Yukon-K**	**43.68**	**37**	P	**P**	**06 49 39.5**	**+2.1**
I23K				IAmb	IAmb	06 49 41.5	
	comp=Z,17nm,0.9s						
BPAW	**Bear Paw Mtn.**	**43.74**	**39**	P	**P**	**06 49 41.3**	**+3.3**
BMAR	**Burnt Mountain**	**43.84**	**33**	P	**P**	**06 49 39.1**	**+0.4**
DAG	**Danmarks Havn**	**43.91**	**346**	*i* P	**P**	**06 49 36.5**	**-2.6**
DAG	**Danmarks Havn**	**43.91**	**346**	*i* P	**P**	**06 49 36.5**	**-2.6**
DAG	**Danmarks Havn**	**43.91**	**346**	*i* P	**P**	**06 49 36.6**	**-2.6**
KTH	**Kantishna Hill**	**44.09**	**40**	P	**P**	**06 49 43.0**	**+2.1**
KTH				IAmb	IAmb	06 49 44.8	
	comp=Z,17nm,1.1s						
FYU	**Fort Yukon**	**44.17**	**34**	P	**P**	**06 49 43.6**	**+2.3**
MDM	**Murphy Dome**	**44.18**	**37**	P	**P**	**06 49 42.7**	**+1.2**
BWN	**Browne**	**44.23**	**39**	P	**P**	**06 49 43.5**	**+1.6**
BWN				IAmb	IAmb	06 49 49.6	
	comp=Z,28nm,1.0s						
GOF	**Gofitskoye**	**44.26**	**287**	⇑*e*P	**P**	**06 49 43.0**	**+0.7**
GOF				pmax	pmax		
	comp=Z,18nm,0.9s						
POKR	**Poker Plat Res**	**44.35**	**37**	P	**P**	**06 49 45.7**	**+2.9**
	baz=308						
POKR	**Poker Plat Res**	**44.35**	**37**	P	**P**	**06 49 44.4**	**+1.5**
TCOL	**CIGO, UAF Yank**	**44.35**	**37**	P	**P**	**06 49 44.9**	**+2.1**
	baz=308						
TCOL	**CIGO, UAF Yank**	**44.35**	**37**	P	**P**	**06 49 44.4**	**+1.6**
TCOL				IAmb	IAmb	06 49 47.4	
	comp=Z,16nm,0.9s						
COLA	**College**	**44.36**	**37**	P	**P**	**06 49 44.4**	**+1.6**
COLA				pmax	pmax		
	comp=Z,16nm,1.0s						
COLA	**College**	**44.36**	**37**	P	**P**	**06 49 44.4**	**+1.6**
COLA				IAmb	IAmb	06 49 47.4	
	comp=Z,16nm,0.9s						
TRF	**Thorofare Moun**	**44.38**	**40**	P	**P**	**06 49 44.6**	**+1.3**
TRF				IAmb	IAmb	06 49 47.1	
	comp=Z,24nm,1.0s						
CCB	**Clear Creek Bu**	**44.51**	**37**	P	**P**	**06 49 46.2**	**+2.1**
CCB				IAmb	IAmb	06 49 47.8	
	comp=Z,16nm,1.3s						
WRH	**Wood River Hil**	**44.52**	**38**	P	**P**	**06 49 45.6**	**+1.4**
WRH				IAmb	IAmb	06 49 47.7	
	comp=Z,28nm,1.3s						
MCK	**McKinley**	**44.69**	**39**	P	**P**	**06 49 47.0**	**+1.4**
	baz=308,SNR=5.9						
PRP	**Porcupine Dome**	**44.73**	**36**	P	**P**	**06 49 47.5**	**+1.5**
PRP				IAmb	IAmb	06 49 50.0	
	comp=Z,14nm,1.0s						
IL31		**44.75**	**37**	P	**P**	**06 49 47.0**	**+1.1**
IL31				IAmb	IAmb	06 49 49.6	
	comp=Z,32nm,1.2s						
ILAR	**Eielson Array**	**44.75**	**37**	P	**P**	**06 49 45.9**	**-0.1**
	comp=Z,13nm,1.0s,baz=299,slow=6.9,SNR=45						
ILAR				LR	LR	07 09 10.9	
	comp=Z,769nm,18.7s,baz=326,slow=37						
ILAR	**Eielson Array**	**44.75**	**37**	P	**P**	**06 49 47.1**	**+1.1**
ILAR	**Eielson Array**	**44.75**	**37**	P	**P**	**06 49 47.1**	**+1.1**
RND	**Reindeer**	**44.92**	**39**	P	**P**	**06 49 50.0**	**+2.5**
RND				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RND	**Reindeer**	**44.92**	**39**	P	**P**	**06 49 50.0**	**+2.5**
HDA	**Harding Lake**	**44.95**	**37**	P	**P**	**06 49 48.8**	**+1.1**
	baz=309,SNR=7.5						
HDA	**Harding Lake**	**44.95**	**37**	P	**P**	**06 49 49.9**	**+2.2**
HDA				IAmb	IAmb	06 49 50.6	
	comp=Z,14nm,1.0s						
CUT	**Chulitna**	**45.03**	**41**	P	**P**	**06 49 49.6**	**+1.3**
	baz=308						
KIV	**Kislovodsk**	**45.18**	**286**	*e*P	**P**	**06 49 50.0**	**+0.2**
KIV				*e*S	**S**	**06 56 30.8**	**+1.4**
KIV				pmax	pmax		
	comp=Z,215nm,4.1s						
KIV				pmax	pmax		
	comp=Z,51nm,1.0s						
KIV				MLR	MLR		
	comp=Z,3µm,16.0s						
KIV	**Kislovodsk**	**45.18**	**286**	P	**P**	**06 49 49.4**	**-0.4**
KIV				IAmb	IAmb	06 50 01.8	
	comp=Z,15nm,0.9s						
KBZ	**Khabaz**	**45.22**	**285**	LR	LR	07 09 49.3	
	comp=Z,1µm,18.1s,baz=28,slow=38						
RSO	**Redoubt South**	**45.30**	**44**	P	**P**	**06 49 53.0**	**+2.3**
SUA	**Susitna One**	**45.45**	**42**	P	**P**	**06 49 54.2**	**+2.5**
SUA				IAmb	IAmb	06 49 55.2	
	comp=Z,27nm,1.0s						
DHY	**Denali Highway**	**45.65**	**39**	P	**P**	**06 49 53.9**	**+0.5**
DHY				IAmb	IAmb	06 49 56.3	
	comp=Z,17nm,0.9s						
GHO	**Glory Hole Cre**	**45.93**	**41**	P	**P**	**06 49 55.5**	**0.0**
PMR	**Palmer**	**45.97**	**41**	P	**P**	**06 49 56.4**	**+0.7**
PMR				pmax	pmax		
	comp=Z,21nm,1.0s						
PMR	**Palmer**	**45.97**	**41**	P	**P**	**06 49 56.4**	**+0.7**
PMR				IAmb	IAmb	06 49 58.6	
	comp=Z,21nm,1.0s						
RC01	**Rabbit Creek A**	**46.06**	**42**	P	**P**	**06 49 57.2**	**+0.7**
	baz=310						
RIDG	**Independent Ri**	**46.09**	**37**	P	**P**	**06 49 56.4**	**-0.3**
RIDG				IAmb	IAmb	06 49 59.0	
	comp=Z,12nm,0.9s						
SML	**Sawmill**	**46.12**	**41**	P	**P**	**06 49 57.9**	**+0.9**
SCRK	**Sand Creek**	**46.23**	**37**	P	**P**	**06 49 59.4**	**+1.5**
	baz=311						
KNK	**Knik Glacier**	**46.33**	**41**	P	**P**	**06 50 01.8**	**+3.2**
KNK				IAmb	IAmb	06 50 02.1	
	comp=Z,14nm,1.0s						
PAX	**Paxson**	**46.38**	**38**	P	**P**	**06 49 59.8**	**+0.7**
PAX				pmax	pmax		
	comp=Z,13nm,1.0s						
PAX	**Paxson**	**46.38**	**38**	P	**P**	**06 49 59.8**	**+0.7**
PAX				IAmb	IAmb	06 50 01.7	
	comp=Z,13nm,1.0s						
INK	**Inuvik**	**46.40**	**28**	P	**P**	**06 49 58.9**	**-0.2**
	comp=Z,34nm,1.3s,baz=326,slow=11,SNR=17						
INK	**Inuvik**	**46.40**	**28**	P	**P**	**06 49 58.9**	**-0.2**
DOT	**Dot Lake**	**46.42**	**37**	P	**P**	**06 49 58.6**	**-0.6**
BRLK	**Bradley Lake**	**46.47**	**44**	P	**P**	**06 50 00.8**	**+1.0**
EGAK	**Eagle**	**46.61**	**35**	P	**P**	**06 50 02.0**	**+1.3**
GNI	**Garni**	**46.66**	**280**	*i* P	**P**	**06 50 02.5**	**+0.9**
GNI				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GNI	**Garni**	**46.66**	**280**	P	**P**	**06 50 02.2**	**+0.6**
GNI				IAmb	IAmb	06 50 06.2	
	comp=Z,28nm,1.5s						
M24K	**Tolsona, Glenn**	**46.70**	**40**	P	**P**	**06 50 04.5**	**+3.0**
	baz=311						
M24K	**Tolsona, Glenn**	**46.70**	**40**	P	**P**	**06 50 03.6**	**+2.1**
K27K	**Chicken**	**46.82**	**36**	P	**P**	**06 50 03.9**	**+1.5**
	baz=312,SNR=9.6						
K27K	**Chicken**	**46.82**	**36**	P	**P**	**06 50 04.2**	**+1.8**
K27K				IAmb	IAmb	06 50 06.0	
	comp=Z,17nm,0.9s						
EPYK	**Eagle Plains**	**46.88**	**31**	P	**P**	**06 50 04.2**	**+1.4**
	baz=314						
EPYK	**Eagle Plains**	**46.88**	**31**	P	**P**	**06 50 04.2**	**+1.4**
EPYK				IAmb	IAmb	06 50 05.8	
	comp=Z,9.7nm,0.9s						
HYB	**Hyderabad**	**46.94**	**229**	*i* P	**P**	**06 50 05.0**	**+1.2**
MENT	**Mentasta**	**47.01**	**38**	P	**P**	**06 50 04.9**	**+1.0**
MENT				IAmb	IAmb	06 50 06.8	
	comp=Z,9.5nm,0.9s						
SOC	**Sochi**	**47.02**	**287**	*e*P	**P**	**06 50 00.9**	**-3.3**
SOC				*e*		06 51 51.3	
SOC				*e*S	**S**	**06 56 53.1**	**-2.6**
SOC				*e*SS	**SS**	**07 00 19.2**	**-2.8**
SOC				MLR	MLR		
	comp=Z,631nm,15.0s						
KDAK	**Kodiak Island**	**47.08**	**47**	P	**P**	**06 50 04.2**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=325,slow=6.4,SNR=8.1						
OHAK	**Old Harbor**	**47.15**	**48**	P	**P**	**06 50 06.5**	**+1.5**
KLU	**Klutina**	**47.20**	**40**	P	**P**	**06 50 07.1**	**+1.7**
ANN	**Anapa**	**47.40**	**290**	*e*P	P	06 50 00.7	-6.4
ANN				MLR	MLR		
	comp=Z,1µm,15.0s						
TULEG	**Thule**	**47.50**	**1**	P	**P**	**06 50 08.6**	**+1.1**
BCAR	**Beaver Creek A**	**47.57**	**37**	P	**P**	**06 50 08.7**	**+0.3**
N25K	**Chitina, Valde**	**47.59**	**39**	P	**P**	**06 50 09.0**	**+0.4**
	baz=312,SNR=10						
N25K	**Chitina, Valde**	**47.59**	**39**	P	**P**	**06 50 09.0**	**+0.4**
AKASG	**Malin Array Be**	**47.60**	**301**	P	**P**	**06 50 06.7**	**-1.9**
	comp=Z,3.8nm,0.7s,baz=42,slow=9.0,SNR=8.5						
AKASG	**Malin Array Be**	**47.60**	**301**	P	**P**	**06 50 08.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AKASG	**Malin Array Be**	**47.60**	**301**	P	**P**	**06 50 08.2**	**-0.4**
AKBB	**Malin Array Si**	**47.60**	**301**	P	**P**	**06 50 09.0**	**+0.4**
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKBB	**Malin Array Si**	**47.60**	**301**	P	**P**	**06 50 09.0**	**+0.4**
AKBB				IAmb	IAmb	06 50 14.3	
	comp=Z,9.1nm,1.1s						
EYAK	**Cordova Ski Ar**	**47.89**	**41**	P	**P**	**06 50 12.9**	**+2.2**
C36M	**Paulatuk**	**47.95**	**24**	P	**P**	**06 50 10.0**	**-1.0**
	baz=320,SNR=37						
C36M	**Paulatuk**	**47.95**	**24**	P	**P**	**06 50 10.1**	**-1.0**
RES	**Resolute Bay**	**47.99**	**10**	P	**P**	**06 50 09.8**	**-1.6**
	comp=Z,6.0nm,1.1s,baz=325,slow=7.6,SNR=8.4						
RES	**Resolute Bay**	**47.99**	**10**	P	**P**	**06 50 10.3**	**-1.0**
RES				pmax	pmax		
	comp=Z,19nm,1.4s						
RES	**Resolute Bay**	**47.99**	**10**	P	**P**	**06 50 10.3**	**-1.0**
RES				IAmb	IAmb	06 50 13.4	
	comp=Z,19nm,1.4s						
NB2	**NORSAR Subarra**	**48.26**	**320**	P	**P**	**06 50 11.6**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=48,slow=7.4						
NOA	**NORSAR Array B**	**48.26**	**320**	P	**P**	**06 50 12.2**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=44,slow=8.2,SNR=7.8						
NOA				LR	LR	07 11 50.4	
	comp=Z,652nm,21.3s,baz=35,slow=38						
CRQM	**Cirque**	**48.69**	**40**	P	**P**	**06 50 18.8**	**+1.7**
TGL	**Tana Glacier**	**48.80**	**39**	P	**P**	**06 50 20.9**	**+3.0**
TGL				IAmb	IAmb	06 50 22.1	
	comp=Z,20nm,0.9s						
BARN	**Barnard Glacie**	**49.00**	**39**	P	**P**	**06 50 20.6**	**+1.0**
CTGM	**Chitina Glacie**	**49.18**	**39**	P	**P**	**06 50 22.4**	**+1.6**
SUMG	**Summit**	**50.06**	**349**	*i* P	**P**	**06 50 26.8**	**-0.8**
SUMG	**Summit**	**50.06**	**349**	*i* P	**P**	**06 50 26.8**	**-0.8**
SUMG	**Summit**	**50.06**	**349**	*i* P	**P**	**06 50 26.9**	**-0.8**
HYT	**Haines Junctio**	**50.59**	**37**	P	**P**	**06 50 33.5**	**+2.0**
MYLDM	**Lahad Datu**	**51.03**	**174**	P	**P**	**06 50 35.5**	**+0.4**
MYLDM				IAmb	IAmb	06 50 41.6	
	comp=Z,25nm,1.1s						
KWP	**Kalwaria Pacla**	**51.41**	**304**	P	**P**	**06 50 39.3**	**+1.6**
KWP	**Kalwaria Pacla**	**51.41**	**304**	P	**P**	**06 50 39.2**	**+1.6**
BURAR	**Bucovina Array**	**51.63**	**300**	⇓P	**P**	**06 50 38.3**	**-1.2**
BURAR	**Bucovina Array**	**51.63**	**300**	⇓P	**P**	**06 50 38.3**	**-1.2**
BURAR	**Bucovina Array**	**51.63**	**300**	P	**P**	**06 50 38.5**	**-1.0**
KOLS	**Kolonicke sedl**	**52.10**	**303**	*e*P	**P**	**06 50 44.3**	**+1.4**
KOLS	**Kolonicke sedl**	**52.10**	**303**	*e*P	**P**	**06 50 44.3**	**+1.4**
DOPR	**Dopca**	**52.71**	**299**	⇑P	**P**	**06 50 48.1**	**+0.6**
MLR	**Muntele Rosu**	**52.78**	**298**	⇑P	**P**	**06 50 46.8**	**-1.3**
MLR	**Muntele Rosu**	**52.78**	**298**	⇑P	**P**	**06 50 46.8**	**-1.3**
BR131	**Keskin Array S**	**52.97**	**288**	⇓*e*P	**P**	**06 50 48.6**	**-1.0**
BRTR	**Keskin Array B**	**52.97**	**288**	P	**P**	**06 50 47.5**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=56,slow=3.8,SNR=3.6						
BRTR				LR	LR	07 18 04.5	
	comp=Z,235nm,18.1s,baz=43,slow=41						
BRTR	**Keskin Array B**	**52.97**	**288**	*i* P	**P**	**06 50 52.5**	**+2.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**52.97**	**288**	P	**P**	**06 50 48.5**	**-1.1**
OKC	**Ostrava-Krasne**	**53.34**	**307**	AMS	AMS	07 16 20.0	
	comp=Z,1µm,7.9s						
DRGR		**53.42**	**301**	⇑P	**P**	**06 50 50.8**	**-1.9**
DRGR		**53.42**	**301**	⇑P	**P**	**06 50 50.8**	**-1.9**
ICESG	**Greenland Ices**	**53.50**	**348**	*i* P	**P**	**06 50 53.8**	**+0.5**
ICESG				IAmb	IAmb	06 50 57.6	
	comp=Z,16nm,1.1s						
ARR	**Arges**	**53.51**	**299**	⇓P	P	06 51 01.1	+7.6
MORC	**Moravsky Berou**	**53.66**	**307**	⇑P	**P**	**06 50 54.1**	**-0.3**
MORC	**Moravsky Berou**	**53.66**	**307**	*e*P	**P**	**06 50 55.0**	**+0.6**
MORC	**Moravsky Berou**	**53.66**	**307**	⇑P	**P**	**06 50 54.1**	**-0.3**
OSTC	**Ostas**	**53.68**	**308**	AMS	AMS	07 17 30.0	
	comp=Z,1µm,15.1s						
CHVC	**Chvalec**	**53.73**	**308**	*e*P	**P**	**06 50 56.4**	**+1.5**
CHVC				AMS	AMS	07 17 30.0	
	comp=Z,1µm,8.9s						
KRLC	**Kraliky**	**53.78**	**308**	*e*P	**P**	**06 50 53.1**	**-2.2**
KRLC				*e*		06 50 57.4	
KRLC				MLR	MLR		
	comp=Z,1µm,13.2s						
KRLC	**Kraliky**	**53.78**	**308**	*e*P	**P**	**06 50 53.1**	**-2.2**
KRLC				*e*pP	**pP**	**06 50 57.4**	**-0.9**
KRLC				AMS	AMS	07 16 10.0	
	comp=Z,1µm,13.2s						
DPC	**Dobruska-Polom**	**53.78**	**308**	*e*P	**P**	**06 50 54.2**	**-1.1**
DPC				*e*		06 50 59.2	
DPC				MLR	MLR		
	comp=Z,700nm,17.6s						
DPC	**Dobruska-Polom**	**53.78**	**308**	*e*P	**P**	**06 50 54.2**	**-1.1**
DPC				*e*pP	**sP**	**06 50 59.2**	**-0.3**
DPC				AMS	AMS	07 14 40.0	
	comp=Z,700nm,17.6s						
UPC	**Upice**	**53.80**	**308**	*e*P	**P**	**06 50 54.6**	**-0.8**
UPC				*e*		06 50 58.7	
UPC				MLR	MLR		
	comp=Z,1µm,9.0s						
UPC	**Upice**	**53.80**	**308**	*e*P	**P**	**06 50 54.6**	**-0.8**
UPC				*e*pP	**sP**	**06 50 58.7**	**-1.0**

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UPC                                 AMS     AMS     07 17 30.0
       comp=Z,1µm,9.0s
VYHS   Vyhne            54.00 305   eP      P       06 50 56.7  -0.2
VYHS   Vyhne            54.00 305   eP      P       06 50 56.7  -0.2
PVCC   Panska Ves       54.42 309   AMS     AMS     07 16 20.0
       comp=Z,1µm,15.5s
VRAC   Vranov           54.42 307   eP      P       06 51 00.8  +0.8
BRG    Berggiesshubel   54.43 310   eP      P       06 51 01.3  +1.4
BRG                                 Amp             06 51 03.7
       comp=Z,4.3nm,0.8s
BRG                                 Amp             07 17 11.0
       comp=Z,1.5nm,17.4s
BRG                                 Amp             07 17 15.0
       comp=E,1.3nm,11.3s
BRG                                 Amp             07 17 31.0
       comp=N,1.0nm,11.3s
BRG    Berggiesshubel   54.43 310   eP      P       06 51 01.3  +1.4
BRG                                 pmax    pmax
       comp=Z,4.0nm,0.8s
BRG                                 MLR     MLR
       comp=Z,1µm,17.4s
BRG                                 MLR     MLR
       comp=E,1µm,11.3s
BRG                                 MLR     MLR
       comp=N,1µm,11.3s
BRG    Berggiesshubel   54.43 310   eP      P       06 51 01.3  +1.4
BRG                                 Amp             06 51 03.7
       comp=Z,4.3nm,0.8s
BRG                                 Amp             07 17 11.0
       comp=Z,1.5nm,17.4s
BRG                                 Amp             07 17 15.0
       comp=E,1.3nm,11.3s
BRG                                 Amp             07 17 31.0
       comp=N,1.0nm,11.3s
CLL    Collm            54.51 311   eP      P       06 50 59.0  -1.5
       comp=Z,4.0nm,0.9s
CLL                                 e               06 51 03.0
CLL                                 eS      S       06 58 39.0  -0.3
CLL                                 eSS     SS      07 02 24.0  +3.0
CLL                                 Lmax            07 15 00.0
CLL    Collm            54.51 311   eP      P       06 50 59.0  -1.5
CLL                                 e               06 51 03.0
CLL                                 eS      S       06 58 39.0  -0.3
CLL                                 pmax    pmax
       comp=Z,4.0nm,0.9s
CLL    Collm            54.51 311   P       P       06 51 02.6  +2.0
KRUC   Moravsky         54.69 307   eP      P       06 51 01.2  -0.7
BZS    Buzias           54.80 301  ⇓P       P       06 51 04.0  +1.3
BZS    Buzias           54.80 301  ⇓P       P       06 51 04.0  +1.3
PRA    Prague           54.81 309   AMS     AMS     07 15 20.0
       comp=Z,500nm,18.5s
PRU    Pruhonice        54.83 309   eP      P       06 51 10.7  +7.9
PRU                                 MLR     MLR
       comp=Z,1µm,16.3s
PRU    Pruhonice        54.83 309   epP     pP      06 51 10.7  +4.8
PRU                                 AMS     AMS     07 15 20.0
       comp=Z,1µm,16.3s
DLBC   Dease Lake       54.88  35   P       P       06 51 02.8  -0.4
       comp=Z,12nm,1.2s,baz=329,slow=6.8,SNR=7.6
DLBC   Dease Lake       54.88  35   P       P       06 51 05.5  +2.3
TREC   Trest            54.92 308   AMS     AMS     07 16 20.0
       comp=Z,700nm,15.3s
HERR   Herculane        54.95 300  ⇑P       P       06 51 03.2  -0.6
TOLI2  Tolitoli         55.23 171   P       P       06 51 06.9  +0.8
NKC    Novy Kostel      55.55 310   AMS     AMS     07 16 50.0
       comp=Z,2µm,15.2s
CONA   Conrad Observa   55.77 306   eP      P       06 51 10.1  +0.3
       comp=Z,4.1nm,1.0s
YKA    Yellowknife Ar   55.80  25   P       P       06 51 08.0  -1.7
       comp=Z,12nm,0.8s,baz=334,slow=6.7,SNR=37
YKA                                 LR      LR      07 16 07.0
       comp=Z,318nm,21.9s,baz=0.0,slow=37
YKA    Yellowknife Ar   55.80  25   P       P       06 51 08.0  -1.7
KHC    Kasperske Hory   55.88 309⇓eP      P       06 51 10.1  -0.4
KHC                                 pmax    pmax
       comp=Z,12nm,1.0s
KHC    Kasperske Hory   55.88 309   eP      P       06 51 09.8  -0.7
KHC                                 epP     sP      06 51 14.2  -0.6
KHC                                 ex      x       06 51 18.3
KHC                                 AMS     AMS     07 18 50.0
       comp=Z,1µm,11.3s
KHC    Kasperske Hory   55.88 309   P       P       06 51 10.1  -0.4
GERES  GERESS Array B   56.04 308   P       P       06 51 10.7  -1.0
       comp=Z,1.9nm,0.7s,baz=32,slow=7.8,SNR=11
GERES                               LR      LR      07 16 20.0
       comp=Z,487nm,18.5s,baz=43,slow=37
GERES  GERESS Array B   56.04 308   P       P       06 51 10.6  -1.2
ARSA   Arzberg          56.43 306   eP      P       06 51 17.6  +3.2
       comp=Z,4.5nm,1.2s
MOA    Molln            56.54 307   eP      P       06 51 14.7  -0.5
       comp=Z,7.4nm,1.3s
SOKA   Soboth           57.08 306   eP      P       06 51 19.0  -0.1
       comp=Z,10nm,2.0s
OBKA   Obir             57.43 306   eP      P       06 51 21.4  -0.2
       comp=Z,12nm,1.1s
KBA    Koelnbreinsper   57.53 307   eP      P       06 51 22.2  -0.2
       comp=Z,7.6nm,1.3s
EKR7   Eskdalemuir Ar   57.55 323   P       P       06 51 23.7  +1.5
MYKA   Terra Mystica    57.74 307   eP      P       06 51 23.4  -0.4
       comp=Z,8.4nm,1.2s
WATA   Walderalm        58.12 308   eP      P       06 51 26.2  -0.4
       comp=Z,10nm,1.4s
WTTA   Wattenberg       58.15 308   eP      P       06 51 25.4  -1.3
       comp=Z,6.2nm,1.0s
ABTA   Abfaltersbach    58.16 307   eP      P       06 51 30.1  +3.3
       comp=Z,3.6nm,0.9s
MOTA   Moosalm          58.32 309   eP      P       06 51 29.1  +1.2
       comp=Z,4.0nm,0.9s
RETA   Reutte           58.36 309   eP      P       06 51 31.2  +3.1
       comp=Z,5.9nm,1.1s
SQTA   Sankt Quirin     58.37 309   eP      P       06 51 27.9  -0.3
       comp=Z,5.9nm,1.1s
RAYN   Ar Rayn          58.70 266   P       P       06 51 31.3  +0.6
RAYN                                pmax    pmax
       comp=Z,11nm,1.1s
RAYN   Ar Rayn          58.70 266   P       P       06 51 31.3  +0.6
RAYN                                IAmb    IAmb    06 51 32.8
       comp=Z,11nm,1.1s
FETA   Feichten         58.73 309   eP      P       06 51 30.9   0.0
       comp=Z,4.8nm,0.9s
DAVA   Damuels          58.89 309   eP      P       06 51 31.2  -0.7
       comp=Z,6.4nm,1.2s
CTI    Castel Tesino    59.08 307   P       P       06 51 32.5  -0.6
CTI                                 pmax    pmax
       comp=Z,10.0nm,1.2s
CTI    Castel Tesino    59.08 307   P       P       06 51 32.5  -0.6
CTI                                 IAmb    IAmb    06 51 58.2
       comp=Z,10nm,1.2s
FCC    Fort Churchill   63.24  16   P       P       06 52 02.2  +1.2
FCC                                 pmax    pmax
       comp=Z,27nm,1.0s
FCC    Fort Churchill   63.24  16   P       P       06 52 02.2  +1.2
FFC    Flin Flon        65.65  22   P       P       06 52 17.5  +0.7
FFC                                 pmax    pmax
       comp=Z,17nm,0.9s
FFC    Flin Flon        65.65  22   P       P       06 52 17.5  +0.7
NEW    Newport          67.59  34   P       P       06 52 30.3  +0.9
       comp=Z,2.7nm,0.7s,baz=323,slow=8.2,SNR=6.7
NEW    Newport          67.59  34   P       P       06 52 30.6  +1.2
NEW                                 pmax    pmax
       comp=Z,3.0nm,0.7s
NEW    Newport          67.59  34   P       P       06 52 31.2  +1.8
       baz=332
NEW    Newport          67.59  34   P       P       06 52 30.6  +1.2
C09A   Chrisman Ranch   67.63  35   P       P       06 52 32.0  +2.3
C09A                                IAmb    IAmb    06 52 37.5
       comp=Z,9.3nm,1.1s
WALA   Waterton Lakes   67.85  32   P       P       06 52 32.7  +1.5
WALA                                IAmb    IAmb    06 52 35.1
       comp=Z,11nm,1.0s
KEST   Kesra            68.32 302   LR      LR      07 23 32.3
       comp=Z,271nm,19.2s,baz=349,slow=37
JTMT   Jette            68.92  33   P       P       06 52 39.0  +1.1
F10A   Beach Ranch, E   69.58  35   P       P       06 52 43.0  +1.0
MSO    Missoula         69.84  33   P       P       06 52 44.3  +0.7
       baz=334
MSO    Missoula         69.84  33   P       P       06 52 44.6  +1.0
MSO                                 IAmb    IAmb    06 52 47.0
       comp=Z,14nm,1.3s
BMO    Blue Mountains   70.55  36   P       P       06 52 49.4  +1.5
BMO                                 pmax    pmax
       comp=Z,13nm,1.0s
BMO    Blue Mountains   70.55  36   P       P       06 52 49.4  +1.5
BMO                                 IAmb    IAmb    06 52 52.8
       comp=Z,13nm,1.0s
HRY    Holter Researc   70.58  31   P       P       06 52 48.8  +0.7

ESDC   Sonseca Array    70.90 314   P       P       06 52 49.2  -0.9
       comp=Z,4.2nm,0.6s,baz=24,slow=6.4,SNR=24
ESDC   Sonseca Array    70.90 314   P       P       06 52 49.4  -0.7
DGMT   Dagmar           70.99  26   P       P       06 52 51.6  +1.2
       baz=339,SNR=6.6
DGMT   Dagmar           70.99  26   P       P       06 52 51.2  +0.8
ULM    Lac du Bonnet    71.09  20   P       P       06 52 51.0  -0.1
       comp=Z,7.8nm,1.0s,baz=327,slow=6.4,SNR=9.1
ULM                                 LR      LR      07 26 49.1
       comp=Z,398nm,18.1s,baz=342,slow=38
ULM    Lac du Bonnet    71.09  20   P       P       06 52 51.8  +0.8
ULM                                 pmax    pmax
       comp=Z,12nm,1.2s
ULM    Lac du Bonnet    71.09  20   P       P       06 52 51.8  +0.8
ULM                                 IAmb    IAmb    06 52 52.3
       comp=Z,12nm,1.2s
DLMT   Dillon           71.57  32   P       P       06 52 55.3  +1.1
DLMT                                IAmb    IAmb    06 52 58.7
       comp=Z,16nm,1.2s
MCMT   McKenzie Canyo   71.98  33   P       P       06 52 58.0  +1.3
MOD    Modoc Plateau    72.13  39   P       P       06 52 58.4  +0.8
MOD                                 IAmb    IAmb    06 53 01.3
       comp=Z,8.7nm,1.1s
LAO    LASA Array       72.14  28   P       P       06 52 59.7  +2.2
LAO                                 IAmb    IAmb    06 53 01.4
       comp=Z,23nm,1.4s
MFID   Camas Ranch      72.31  36   P       P       06 53 00.0  +1.4
MFID                                IAmb    IAmb    06 53 03.5
       comp=Z,7.8nm,0.9s
QLMT   Earthquake Lak   72.40  32   P       P       06 53 01.2  +2.0
YHL    Hebgen Lake      72.46  32   P       P       06 53 00.7  +1.0
YHB    Horse Butte      72.54  32   P       P       06 52 59.6  -0.5
MDND   Maddock          72.63  23   P       P       06 53 02.2  +1.9
HLID   Hailey           72.64  35   P       P       06 53 02.9  +2.3
       baz=334,SNR=6.1
HLID   Hailey           72.64  35   P       P       06 53 02.1  +1.5
YNE    Yellowstone No   72.65  31   P       P       06 53 02.1  +1.3
LKWY   Lake             72.94  31   P       P       06 53 03.8  +1.2
LKWY                                pmax    pmax
       comp=Z,9.0nm,1.0s
LKWY   Lake             72.94  31   P       P       06 53 03.8  +1.2
LKWY                                IAmb    IAmb    06 53 13.5
       comp=Z,8.6nm,0.9s
AGMN   Agassiz Nation   72.97  20   P       P       06 53 03.2  +1.0
       baz=343,SNR=6.6
AGMN   Agassiz Nation   72.97  20   P       P       06 53 02.4  +0.1
AGMN                                IAmb    IAmb    06 53 03.9
       comp=Z,21nm,1.1s
H17A   Grant Village    73.05  32   P       P       06 53 04.9  +1.8
       baz=336
H17A   Grant Village    73.05  32   P       P       06 53 05.5  +2.3
YPP    Pitchstone Pla   73.10  32   P       P       06 53 05.4  +1.9
FLWY   Flagg Ranch      73.30  32   P       P       06 53 05.8  +1.2
FLWY                                IAmb    IAmb    06 53 09.7
       comp=Z,10nm,0.9s
MOOW   Moose Ponds      73.59  32   P       P       06 53 07.6  +1.3
LOHW   Long Hollow      73.76  32   P       P       06 53 08.7  +1.4
ORV    Oroville         73.76  41   P       P       06 53 09.2  +2.1
ORV                                 pmax    pmax
       comp=Z,8.0nm,1.2s
ORV    Oroville         73.76  41   P       P       06 53 09.2  +2.1
SNOW   Snow King Moun   73.85  32   P       P       06 53 11.2  +3.3
SNOW                                IAmb    IAmb    06 53 12.9
       comp=Z,15nm,1.4s
BEKR   Beckworth        73.91  40   P       P       06 53 10.1  +1.9
REDW   Red Top Meadow   73.91  32   P       P       06 53 09.6  +1.4
REDW                                IAmb    IAmb    06 53 13.2
       comp=Z,17nm,1.4s
MATQ   Matagami         73.97   8   P       P       06 53 09.9  +1.8
       baz=354
EYMN   Ely              74.09  17   P       P       06 53 10.0  +1.1
       baz=346
PAHR   Pah Rah Range    74.40  40   P       P       06 53 13.0  +2.0
LSQQ   Lebel-sur-Quev   74.72   7   P       P       06 53 11.7  -0.8
       baz=354
HVU    Hansel Valley    74.76  34   P       P       06 53 15.5  +2.4
HVU                                 pmax    pmax
       comp=Z,4.0nm,0.8s
HVU    Hansel Valley    74.76  34   P       P       06 53 15.5  +2.4
BW06   Boulder Array    74.84  32   P       P       06 53 13.3  -0.4
       baz=337
BW06   Boulder Array    74.84  32   P       P       06 53 15.2  +1.5
PD31   Pinedale Array   74.84  32   P       P       06 53 14.0  +0.4
PDAR   Pinedale Array   74.84  32   P       P       06 53 13.2  -0.4
       comp=Z,2.2nm,0.8s,baz=38,slow=3.6,SNR=18
PDAR                                LR      LR      07 30 52.6
       comp=Z,259nm,19.2s,baz=346,slow=40
PDAR   Pinedale Array   74.84  32   P       P       06 53 14.1  +0.4
PNTR   Pine Nut         74.87  40   P       P       06 53 14.8  +0.9
PNTR                                IAmb    IAmb    06 53 23.1
       comp=Z,7.1nm,0.8s
ELK    Elko             74.90  36   LR      LR      07 30 42.8
       comp=Z,211nm,18.5s,baz=346,slow=39
ELK    Elko             74.90  36   P       P       06 53 16.0  +2.0
ELK                                 pmax    pmax
       comp=Z,3.0nm,0.9s
ELK    Elko             74.90  36   P       P       06 53 16.0  +2.0
RSSD   Black Hills      75.09  27   P       P       06 53 16.5  +1.4
RSSD                                pmax    pmax
       comp=Z,6.0nm,0.9s
RSSD   Black Hills      75.09  27   P       P       06 53 14.5  -0.5
       baz=339
RSSD   Black Hills      75.09  27   P       P       06 53 16.5  +1.4
F33A   5 Mile Ranch,    75.24  21   P       P       06 53 15.5   0.0
F33A                                IAmb    IAmb    06 53 17.9
       comp=Z,23nm,1.4s
HWUT   Hardware Ranch   75.30  33   P       P       06 53 17.8  +1.5
HWUT                                IAmb    IAmb    06 53 20.6
       comp=Z,17nm,1.0s
E38A   The Farm, Brul   75.38  18   P       P       06 53 17.1  +0.8
E38A                                IAmb    IAmb    06 53 18.8
       comp=Z,20nm,0.9s
CMB    Columbia Colle   75.51  41   P       P       06 53 19.2  +1.8
CMB                                 pmax    pmax
       comp=Z,8.0nm,1.5s
CMB    Columbia Colle   75.51  41   P       P       06 53 19.1  +1.8
RYN    Ryan             75.66  40   P       P       06 53 19.9  +1.5
F36A   Milaca           75.75  19   P       P       06 53 19.8  +1.3
F36A                                IAmb    IAmb    06 53 21.0
       comp=Z,16nm,0.9s
NVAR   Mina Array Bea   75.92  40   P       P       06 53 19.9   0.0
       comp=Z,2.2nm,0.6s,baz=327,slow=5.0,SNR=18
NVAR                                LR      LR      07 28 56.8
       comp=Z,391nm,19.7s,baz=328,slow=38
NVAR   Mina Array Bea   75.92  40   P       P       06 53 20.1  +0.2
NV11   Mina Array Sit   75.97  40   P       P       06 53 21.4  +1.3
SUSD   Miller           76.00  23   P       P       06 53 20.8  +0.8
       baz=342
SUSD   Miller           76.00  23   P       P       06 53 19.8  -0.2
LHV    Little Huntoon   76.00  40   P       P       06 53 23.4  +3.3
LHV                                 IAmb    IAmb    06 53 25.3
       comp=Z,15nm,1.3s
CTU    Camp Tracy       76.07  34   P       P       06 53 21.9  +1.3
DUG    Dugway, Tooele   76.19  35   P       P       06 53 22.8  +1.5
DUG                                 pmax    pmax
       comp=Z,8.0nm,1.3s
DUG    Dugway, Tooele   76.19  35   P       P       06 53 23.4  +2.0
       baz=335
DUG    Dugway, Tooele   76.19  35   P       P       06 53 22.8  +1.5
JLU    Jordanelle       76.25  34   P       P       06 53 23.6  +1.9
MDPB   Devils Postpil   76.35  41   P       P       06 53 24.2  +1.8
MLAC   Mammoth, Mammo76.44  40   P       P       06 53 26.0  +3.1
       baz=333
SPMN   Marine on St.    76.50  19   P       P       06 53 24.5  +1.8
       baz=345,SNR=5.4
SPMN   Marine on St.    76.50  19   P       P       06 53 22.3  -0.5
SPMN                                IAmb    IAmb    06 53 25.6
       comp=Z,19nm,1.0s
TPH    Tonopah          76.62  39   P       P       06 53 24.6  +0.8
TPH                                 pmax    pmax
       comp=Z,32nm,0.9s
TPH    Tonopah          76.62  39   P       P       06 53 24.6  +0.8
LATQ   La Tuque         76.63   5   P       P       06 53 24.7  +1.2
       baz=356
NLU    North Lily Min   76.64  34   P       P       06 53 25.6  +1.6
RDMU   Red Mountain     76.85  32   P       P       06 53 26.4  +1.2
D61A   St Aubert, Com   76.90   3   P       P       06 53 27.6  +2.6
       baz=358
G40A   Rib Lake         76.90  17   P       P       06 53 26.8  +1.7
G40A                                IAmb    IAmb    06 53 27.5
       comp=Z,23nm,1.1s
D58A   Chemin du LacG   76.91   5   P       P       06 53 27.3  +2.2
       baz=356,SNR=6.6
R11A   Troy Canyon, C   76.94  38   P       P       06 53 27.0  +1.3
       baz=334,SNR=6.2

R11A   Troy Canyon, C   76.94  38   P       P       06 53 27.6  +2.0
D62A   Allapoint, All   77.05   2   P       P       06 53 26.1  +0.3
       baz=358
D62A   Allapoint, All   77.05   2   P       P       06 53 28.1  +2.3
D63A   Stockholm        77.11   1   P       P       06 53 28.0  +1.8
       baz=359
D60A   Saint Jean D'O   77.17   3   P       P       06 53 28.3  +1.8
       baz=357
ECSD   EROS Data Cent   77.19  22   P       P       06 53 26.8   0.0
       baz=343,SNR=9.9
ECSD   EROS Data Cent   77.19  22   P       P       06 53 26.2  -0.5
ECSD                                IAmb    IAmb    06 53 29.2
       comp=Z,15nm,1.1s
E56A   St. Veronique    77.35   6   P       P       06 53 28.8  +1.2
       baz=355
PHWY   Pilot Hill       77.35  29   P       P       06 53 28.3  +0.3
PHWY                                IAmb    IAmb    06 53 29.6
       comp=Z,7.4nm,0.8s
E55A   Montcerf-Lytto   77.37   7   P       P       06 53 29.9  +2.2
       baz=354
P17A   Butcher Ranch,   77.50  34   P       P       06 53 31.1  +2.3
TMUT   Trail Mountain   77.52  34   P       P       06 53 31.0  +2.0
E58A   La Victoria      77.61   5   P       P       06 53 28.4  -0.6
       baz=356
O20A   White River Ci   77.64  32   P       P       06 53 31.2  +1.7
       baz=338,SNR=7.8
O20A   White River Ci   77.64  32   P       P       06 53 31.3  +1.7
O20A                                IAmb    IAmb    06 53 34.2
       comp=Z,18nm,1.2s
WB0    Warramunga Arr   77.68 160   P       P       06 53 29.8  +0.2
E60A   Ste Agathe de    77.69   4   P       P       06 53 31.2  +1.8
       baz=357
E63A   Oxbow            77.72   2   P       P       06 53 32.1  +2.5
       baz=359
E63A   Oxbow            77.72   2   P       P       06 53 32.2  +2.7
ALGO   Algonquin Park   77.72   8   P       P       06 53 31.3  +1.7
       baz=353
E64A   Bridgewater      77.73   1   P       P       06 53 32.2  +2.5
       baz=359
TCRU   Three Creeks R   77.75  35   P       P       06 53 31.7  +1.5
K31A   O'Neill          77.78  24   P       P       06 53 31.2  +1.1
WRAB   Tennant Creek    77.83 160ceP     P       06 53 30.5  +0.1
WRAB                                pmax    pmax
       comp=Z,9.0nm,1.0s
WRAB   Tennant Creek    77.83 160   P       P       06 53 30.9  +0.5
WRAB                                IAmb    IAmb    06 53 33.0
       comp=Z,7.1nm,0.8s
WRA    Warramunga Arr   77.84 160   P       P       06 53 30.2  -0.3
       comp=Z,6.4nm,0.9s,baz=347,slow=6.4,SNR=25
WRA                                 LR      LR      07 31 22.3
       comp=Z,81nm,18.6s,baz=5.0,slow=38
WRA    Warramunga Arr   77.84 160   P       P       06 53 30.5   0.0
WRA    Warramunga Arr   77.84 160   P       P       06 53 30.4   0.0
WB2    Warramunga Arr   77.84 160   P       P       06 53 31.0  +0.6
WB2                                 IAmb    IAmb    06 53 33.0
       comp=Z,7.9nm,0.8s
WC3    Warramunga Arr   77.86 160   P       P       06 53 30.6   0.0
WC3                                 IAmb    IAmb    06 53 33.1
       comp=Z,8.6nm,0.8s
WR0    Warramunga Arr   77.89 160   P       P       06 53 31.2  +0.5
WR0                                 IAmb    IAmb    06 53 32.9
       comp=Z,8.3nm,0.9s
MVU    Marysvale        77.92  35   P       P       06 53 32.6  +1.4
MSU    Marysvale        77.92  35   P       P       06 53 32.6  +1.4
MSU    Marysvale        77.92  35   P       P       06 53 32.6  +1.4
PRN    Pahroc Range     77.97  38   P       P       06 53 33.3  +1.9
F60A   Warwick          78.08   4   P       P       06 53 32.7  +1.1
       baz=357
F61A   St Evariste      78.10   3   P       P       06 53 34.4  +2.7
       baz=357
GLMI   Grayling         78.15  13   P       P       06 53 33.9  +1.8
F59A   Saint Guilaume   78.16   5   P       P       06 53 34.1  +2.1
       baz=356
I40A   Norwalk          78.17  18   P       P       06 53 33.8  +1.6
I40A                                IAmb    IAmb    06 53 34.7
       comp=Z,12nm,0.8s
FURC   Furnace Creek,   78.18  40   P       P       06 53 35.5  +3.1
       baz=334
G54A   Lake Saint Pet   78.27   8   P       P       06 53 34.8  +2.1
       baz=353
MPMC   Manual Prospec   78.32  40   P       P       06 53 35.7  +2.2
       baz=334
MTPU   Mount Pierson    78.35  35   P       P       06 53 35.9  +2.2
CCUT   Cedar City       78.41  36   P       P       06 53 36.5  +2.6
SZCU   Shurtz Canyon    78.46  36   P       P       06 53 36.1  +1.9
OGNE   Ogallala         78.58  27   P       P       06 53 35.1  +0.5
OGNE                                IAmb    IAmb    06 53 36.5
       comp=Z,16nm,0.8s
PLVO   Plevna           78.71   8   P       P       06 53 35.4  +0.3
MOQ    Mont Orford      78.72   4   P       P       06 53 35.8  +0.5
SHPR   Sheep Range      78.75  38   P       P       06 53 36.9  +1.2
LRMC   Laurel Mtn Rad   78.77  41   P       P       06 53 37.8  +2.0
       baz=334,SNR=6.8
G61A   St-Isidore-de-   78.78   4   P       P       06 53 38.5  +3.0
       baz=357
G57A   Newington        78.79   6   P       P       06 53 37.9  +2.4
       baz=355
G58A   Ormstown         78.79   6   P       P       06 53 36.6  +1.0
       baz=356
G64A   Maxfield         78.88   2   P       P       06 53 39.1  +3.0
       baz=359
SMCO   Snowmass         78.90  31   P       P       06 53 38.8  +2.0
SMCO                                IAmb    IAmb    06 53 41.3
       comp=Z,20nm,1.4s
SHOC   Shoshone, Teco   78.90  39   P       P       06 53 39.3  +3.0
       baz=334
LCMT   Little Creek M   78.94  37   P       P       06 53 37.8  +1.1
PV22   Blue Mesa, Par   78.96  33   P       P       06 53 38.1  +1.3
PV22                                IAmb    IAmb    06 53 40.4
       comp=Z,9.0nm,0.8s
PV23   Carpenter Ridg   78.97  33   P       P       06 53 38.6  +1.6
PV23                                IAmb    IAmb    06 53 41.0
       comp=Z,19nm,1.1s
PV14   Lion Creek, Pa   79.04  33   P       P       06 53 38.0  +0.7
PV14                                IAmb    IAmb    06 53 40.4
       comp=Z,12nm,1.0s
PV04   Paradox Valley   79.05  33   P       P       06 53 38.7  +1.3
BGNE   Belgrade         79.07  24   P       P       06 53 38.3  +1.1
BGNE                                IAmb    IAmb    06 53 39.6
       comp=Z,16nm,0.8s
KNB    Kanab            79.07  36   P       P       06 53 39.1  +1.6
KNB                                 pmax    pmax
       comp=Z,16nm,0.9s
KNB    Kanab            79.07  36   P       P       06 53 39.1  +1.6
PV20   West Nyswonger   79.08  33   P       P       06 53 39.2  +1.7
PV07   Paradox Valley   79.09  33   P       P       06 53 39.8  +2.2
PV17   East Wray Mesa   79.14  33   P       P       06 53 39.0  +1.1
PV17                                IAmb    IAmb    06 53 52.6
       comp=Z,10nm,1.1s
PV11   David Mesa, Pa   79.15  33   P       P       06 53 39.7  +1.7
PV12   Saucer Basin,    79.15  33   P       P       06 53 40.0  +2.0
JFWS   Jewell Farm      79.19  18   P       P       06 53 39.2  +1.4
       baz=347
EDW2   Edwards Air Fo   79.19  41   P       P       06 53 39.9  +1.9
       baz=334,SNR=5.0
PV03   Paradox Valley   79.20  33   P       P       06 53 40.2  +2.0
PV15   Paradox Valley   79.23  33   P       P       06 53 40.4  +1.9
PV15                                IAmb    IAmb    06 53 43.2
       comp=Z,18nm,1.2s
GSC    Goldstone, Bar   79.25  40   P       P       06 53 39.8  +1.4
GSC                                 pmax    pmax
       comp=Z,4.0nm,1.1s
GSC    Goldstone, Bar   79.25  40   P       P       06 53 40.9  +2.6
       baz=334
GSC    Goldstone, Bar   79.25  40   P       P       06 53 39.8  +1.4
PV05   Paradox Valley   79.28  33   P       P       06 53 41.5  +2.8
PV01   Paradox Valley   79.39  33   P       P       06 53 40.2  +0.9
H60A   Morristown       79.45   5   P       P       06 53 42.1  +2.9
       baz=356
H62A   Milan            79.50   4   P       P       06 53 42.2  +2.7
       baz=357
H62A   Milan            79.50   4   P       P       06 53 42.5  +3.0
H62A                                IAmb    IAmb    06 53 42.8
       comp=Z,24nm,0.9s
H61A   Lyndonville      79.51   4   P       P       06 53 42.4  +2.9
       baz=357
H58A   Gabriels         79.52   6   P       P       06 53 41.1  +1.5
       baz=356
VT1    Waterbury        79.67   5   P       P       06 53 43.6  +3.2
VT1                                 IAmb    IAmb    06 53 43.7
       comp=Z,19nm,0.9s
MWC    Mount Wilson     79.75  41   P       P       06 53 42.7  +1.4
MWC                                 pmax    pmax
       comp=Z,7.0nm,1.1s
MWC    Mount Wilson     79.75  41   P       P       06 53 42.7  +1.4
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LBNH	Lisbon	79.80	4	P	P	06 53 43.8	+2.7
	baz=357						
HEC	Hector,Ludlow	79.84	40	P	P	06 53 43.8	+2.3
	baz=334,SNR=5.3						
L40A	Anamosa	79.84	19	P	P	06 53 42.0	+0.6
L40A				IAmb	IAmb	06 53 43.3	
	comp=Z,15nm,0.8s						
BFSC	Mount Baldy Ra	79.89	41	P	P	06 53 43.6	+1.7
	baz=334						
I63A	Otisfield	80.04	3	P	P	06 53 42.8	+0.5
	baz=358						
I63A	Otisfield	80.04	3	P	P	06 53 43.4	+1.0
I61A	Oroboro, Fairl	80.10	4	P	P	06 53 44.8	+2.1
	baz=357						
I60A	Shoreham	80.14	5	P	P	06 53 44.2	+1.4
	baz=356						
N35A	Tabor	80.14	22	P	P	06 53 44.1	+1.1
MVCO	Mesa Verde	80.27	33	P	P	06 53 46.3	+2.2
	baz=338						
MVCO	Mesa Verde	80.27	33	P	P	06 53 45.3	+1.3
S22A	4UR Ranch, Cre	80.27	32	P	P	06 53 46.2	+2.1
	baz=338						
S22A	4UR Ranch, Cre	80.27	32	P	P	06 53 45.6	+1.5
J59A	Piesco	80.45	6	P	P	06 53 45.7	+1.0
	baz=355						
J59A	Piesco	80.45	6	P	P	06 53 46.2	+1.5
SDCO	Great Sand Dun	80.65	31	P	P	06 53 48.5	+2.3
	baz=339,SNR=11						
SDCO	Great Sand Dun	80.65	31	P	P	06 53 48.1	+1.9
BELC	Belle Mtn. Jos	80.71	40	P	P	06 53 48.2	+1.9
	baz=334						
J60A	Lant Hill Farm	80.73	5	P	P	06 53 47.9	+1.8
	baz=356						
J62A	Henniker	80.82	4	P	P	06 53 48.8	+2.2
	baz=357						
IRM	Iron Mountain	80.87	39	P	P	06 53 48.9	+1.8
	baz=335,SNR=7.2						
PFO	Pinyon Flats O	80.89	40	⇓*e*P	P	06 53 48.0	+0.7
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	80.89	40	P	P	06 53 49.1	+1.8
	baz=334						
PFO	Pinyon Flats O	80.89	40	P	P	06 53 48.8	+1.5
PFO				IAmb	IAmb	06 53 50.9	
	comp=Z,14nm,1.5s						
TPFO	Pinon Flats	80.90	40	P	P	06 53 49.0	+1.6
	baz=334						
WUAZ	Wupatki	80.92	36	P	P	06 53 50.0	+2.6
	baz=336						
WUAZ	Wupatki	80.92	36	P	P	06 53 49.5	+2.0
L48A	N Adams	81.01	14	P	P	06 53 48.9	+1.2
K57A	Scipio Center	81.04	8	P	P	06 53 49.2	+1.3
	baz=354						
PDMCI	Parker Dam,Lak	81.09	38	P	P	06 53 50.7	+2.6
	baz=335						
K59A	Cooperstown	81.11	6	P	P	06 53 50.7	+2.5
	baz=355						
BC3	Big Chuckawall	81.21	40	P	P	06 53 51.3	+2.3
	baz=335						
ASAR	Alice Springs	81.39	161	P	P	06 53 50.0	+0.2
	comp=Z,2.4nm,0.9s,baz=351,slow=4.6,SNR=14						
ASAR				LR	LR	07 30 56.0	
	comp=Z,48nm,21.9s,baz=304,slow=36						
MONP2	Monument Peak	81.55	41	P	P	06 53 52.3	+1.4
	baz=334						
BINY	Binghamton	81.61	7	P	P	06 53 52.9	+2.1
	baz=355						
KSU1	Kansas State U	81.62	23	P	P	06 53 52.4	+1.4
	baz=344,SNR=7.3						
KSU1	Kansas State U	81.62	23	P	P	06 53 52.6	+1.7
L59A	Walton	81.68	7	P	P	06 53 51.0	-0.2
	baz=355						
L57A	Andrews Acres	81.75	8	P	P	06 53 53.1	+1.5
	baz=354						
P38A	Dawn	81.77	21	P	P	06 53 52.9	+1.2
P38A				IAmb	IAmb	06 53 54.1	
	comp=Z,9.9nm,0.8s						
L58A	Harry Jones Me	81.78	7	P	P	06 53 53.1	+1.4
	baz=355						
R32A	Long Quarter,	81.78	25	P	P	06 53 53.4	+1.5
R32A				IAmb	IAmb	06 53 53.9	
	comp=Z,15nm,0.9s						
IKP	In-Ko-Pah, Jac	81.88	41	P	P	06 53 54.6	+2.0
	baz=334						
M53A	WI Miller and	81.95	11	P	P	06 53 54.6	+1.9
	baz=352						
GLA	Glamis	81.98	39	P	P	06 53 55.6	+2.6
GLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GLA	Glamis	81.98	39	P	P	06 53 55.2	+2.2
	baz=335						
GLA	Glamis	81.98	39	P	P	06 53 55.6	+2.6
M54A	Oil Creek Stat	81.99	10	P	P	06 53 54.2	+1.3
	baz=353						
P40A	Paris	82.15	20	P	P	06 53 55.3	+1.6
P40A				IAmb	IAmb	06 53 56.1	
	comp=Z,14nm,0.9s						
M56A	Emporium	82.15	9	P	P	06 53 55.3	+1.6
	baz=353						
SFIN	Lafayette	82.17	16	P	P	06 53 55.5	+1.7
	baz=348						
SFIN	Lafayette	82.17	16	P	P	06 53 54.6	+0.8
SFIN				IAmb	IAmb	06 53 56.1	
	comp=Z,14nm,0.8s						
N51A	Ashland	82.28	12	P	P	06 53 55.1	+0.8
N51A				IAmb	IAmb	06 53 56.4	
	comp=Z,18nm,1.2s						
X18A	Snowflake	82.28	35	P	P	06 53 55.5	+0.7
M59A	Waymart	82.31	7	P	P	06 53 56.1	+1.6
	baz=355						
M57A	Sunshine Farm,	82.38	8	P	P	06 53 57.3	+2.4
	baz=354						
M57A	Sunshine Farm,	82.38	8	P	P	06 53 56.0	+1.0
M57A				IAmb	IAmb	06 53 58.3	
	comp=Z,15nm,1.1s						
M58A	Price's Panora	82.40	8	P	P	06 53 57.0	+2.0
	baz=354						
N54A	Moraine State	82.50	10	P	P	06 53 57.1	+1.6
	baz=352						
N54A	Moraine State	82.50	10	P	P	06 53 57.0	+1.4
M60A	Port Jervis	82.57	6	P	P	06 53 57.8	+1.9
	baz=355						
N56A	West Decatur	82.70	9	P	P	06 53 58.6	+1.9
	baz=353						
ACSO	Alum Creek Sta	82.88	13	P	P	06 53 59.5	+1.9
	baz=351						
N59A	State Game Lan	82.90	7	P	P	06 53 60.0	+2.3
	baz=355						
N58A	Sunbury	82.91	8	P	P	06 53 59.7	+2.0
	baz=354						
N57A	Milroy	82.93	9	P	P	06 53 59.9	+2.2
	baz=354						
PAL	Palisades	82.93	6	P	P	06 53 60.0	+2.3
	baz=356						
ANMO	Albuquerque	82.98	32	⇓*e*P	P	06 53 59.4	+1.1
ANMO				pmax	pmax		
	comp=Z,25nm,3.6s						
ANMO	Albuquerque	82.98	32	P	P	06 54 01.0	+2.6
	baz=339						
ANMO	Albuquerque	82.98	32	P	P	06 53 59.5	+1.1
ANMO				IAmb	IAmb	06 54 03.0	
	comp=Z,12nm,1.4s						
N60A	Cedar Hill Far	82.99	7	P	P	06 54 00.6	+2.5
	baz=355						
SSPA	Standing Stone	83.02	9	P	P	06 54 00.2	+2.0
	baz=354						
SSPA	Standing Stone	83.02	9	P	P	06 53 59.5	+1.3
O53A	New Philadelph	83.07	11	P	P	06 53 59.4	+0.9
	baz=352						
N61A	South Mountain	83.16	6	P	P	06 54 01.0	+2.1
	baz=356						
KAN10	Anthony SW Sta	83.17	25	P	P	06 54 00.2	+1.1
KAN01	Argonia South	83.22	25	P	P	06 54 00.9	+1.5
LUPA	Lehigh Univers	83.25	7	P	P	06 54 01.0	+1.6
Q44A	Meyer Farm, Va	83.30	18	P	P	06 54 00.0	+0.4
R40A	Maddies Statio	83.30	20	P	P	06 54 00.6	+0.9
R40A				IAmb	IAmb	06 54 01.4	
	comp=Z,6.7nm,1.1s						
P48A	Milroy	83.31	15	P	P	06 54 00.8	+1.1
P48A				IAmb	IAmb	06 54 01.8	
	comp=Z,12nm,1.0s						
O56A	Blue Knob Stat	83.32	9	P	P	06 54 01.7	+1.8
	baz=353						
O56A	Blue Knob Stat	83.32	9	P	P	06 54 02.0	+2.1
P49A	Miami Univ. Ec	83.34	14	P	P	06 54 01.0	+1.1
	baz=350						
P49A	Miami Univ. Ec	83.34	14	P	P	06 54 01.4	+1.4
P49A				IAmb	IAmb	06 54 01.7	
	comp=Z,12nm,0.9s						
KMBO	Kilima Mbogo	83.42	258	LR	LR	07 35 43.1	
	comp=Z,259nm,18.6s,baz=75,slow=39						
O59A	Robesonia	83.47	8	P	P	06 54 01.3	+0.7
	baz=354						
P52A	Corning	83.57	12	P	P	06 54 01.2	0.0
	baz=351						
BNM	Barren Site	83.67	33	P	P	06 54 03.5	+1.5
S39A	Bolivar	83.67	21	P	P	06 54 01.2	-0.4
S39A				IAmb	IAmb	06 54 03.6	
	comp=Z,10nm,0.9s						
214A	Organ Pipe Nat	83.68	38	P	P	06 54 03.7	+1.9
	baz=336						
CCM	Cathedral Cave	83.73	20	P	P	06 54 03.1	+1.2
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	83.73	20	P	P	06 54 03.1	+1.2
	baz=346						
CCM	Cathedral Cave	83.73	20	P	P	06 54 03.1	+1.2
CCM				IAmb	IAmb	06 54 04.0	
	comp=Z,8.4nm,0.8s						
T35A	Sooner Cattle	83.73	24	P	P	06 54 03.2	+1.2
T35A				IAmb	IAmb	06 54 04.7	
	comp=Z,12nm,0.9s						
CROK	Carrier	83.78	25	P	P	06 54 03.6	+1.4
P53A	Whipple	83.81	12	P	P	06 54 02.0	-0.3
P60A	Greenville	84.01	7	P	P	06 54 05.1	+1.8
	baz=355						
P60A	Greenville	84.01	7	P	P	06 54 04.2	+0.9
Q51A	Peebles	84.02	13	P	P	06 54 03.9	+0.4
P56A	Dayton Farm, R	84.05	10	P	P	06 54 05.8	+2.2
	baz=353						
P58A	Pank, Wackersv	84.20	9	P	P	06 54 05.5	+1.2
	baz=354						
Q54A	Coxs Mills	84.36	11	P	P	06 54 06.8	+1.7
AMTX	Amarillo	84.39	29	P	P	06 54 08.2	+2.7
	baz=341						
AMTX	Amarillo	84.39	29	P	P	06 54 07.7	+2.2
WCI	Wyandotte Cave	84.39	16	P	P	06 54 06.5	+1.2
WCI				pmax	pmax		
	comp=Z,19nm,0.9s						
WCI	Wyandotte Cave	84.39	16	P	P	06 54 06.1	+0.8
	baz=349						
WCI	Wyandotte Cave	84.39	16	P	P	06 54 06.5	+1.2
MGMO	Mountain Grove	84.40	21	P	P	06 54 06.7	+1.3
MGMO				IAmb	IAmb	06 54 07.5	
	comp=Z,7.3nm,0.8s						
Q53A	Leroy	84.41	12	P	P	06 54 06.6	+1.2
	baz=352,SNR=5.8						
SIUC	Southern Illin	84.42	18	P	P	06 54 05.9	+0.5
S44A	Carbondale	84.44	18	P	P	06 54 06.2	+0.6
Q56A	Snyder Ridge,	84.48	10	P	P	06 54 06.4	+0.7
	baz=353						
R49A	Shelbyville	84.50	15	P	P	06 54 07.2	+1.4
Q57A	Strasburg	84.56	9	P	P	06 54 03.2	-2.9
	baz=353						
OK031	S. Brethren Rd	84.58	24	P	P	06 54 08.2	+1.9
OK031				IAmb	IAmb	06 54 09.5	
	comp=Z,9.5nm,0.8s						
OK029	Liberty Lake	84.59	25	P	P	06 54 08.1	+1.8
T42A	Van Buren	84.75	20	P	P	06 54 08.7	+1.6
T42A				IAmb	IAmb	06 54 09.4	
	comp=Z,9.3nm,0.8s						
121A	Cookes Peak, D	84.81	34	P	P	06 54 10.5	+2.7
	baz=338						
OK025	Westminster Rd	84.82	25	P	P	06 54 08.6	+1.1
TUL1	Leonard	84.86	24	P	P	06 54 08.8	+1.1
	baz=344						
TUL1	Leonard	84.86	24	P	P	06 54 08.8	+1.1
TUL1				IAmb	IAmb	06 54 10.4	
	comp=Z,6.8nm,0.7s						
R53A	Hurricane	84.88	12	P	P	06 54 09.7	+1.9
HHAR	Hobbs	84.91	22	P	P	06 54 08.8	+0.8
HHAR				IAmb	IAmb	06 54 09.8	
	comp=Z,7.2nm,0.8s						
U40A	Yellville	85.06	21	P	P	06 54 10.0	+1.3
	baz=346,SNR=7.4						
U40A	Yellville	85.06	21	P	P	06 54 10.1	+1.3
U40A				IAmb	IAmb	06 54 11.0	
	comp=Z,11nm,0.8s						
FNO	Franklin	85.11	25	P	P	06 54 09.9	+0.9
PBMO	Poplar Bluff	85.12	19	P	P	06 54 10.2	+1.2
PBMO				IAmb	IAmb	06 54 14.4	
	comp=Z,19nm,1.4s						
T45A	Paducah	85.20	18	P	P	06 54 10.6	+1.2
WMOK	Wichita Mounta	85.27	26	P	P	06 54 11.4	+1.5
WMOK				pmax	pmax		
	comp=Z,16nm,1.1s						
WMOK	Wichita Mounta	85.27	26	P	P	06 54 12.4	+2.6
	baz=343,SNR=15						
WMOK	Wichita Mounta	85.27	26	P	P	06 54 11.4	+1.5
WMOK				IAmb	IAmb	06 54 14.0	
	comp=Z,16nm,1.1s						
R57A	Stanardsville	85.28	10	P	P	06 54 12.0	+2.2
	baz=353						
W35A	Tecumseh	85.34	25	P	P	06 54 11.1	+0.9
PARMO	Parma	85.35	19	P	P	06 54 12.0	+1.9
319A	Douglas	85.40	36	P	P	06 54 12.8	+2.2
319A				IAmb	IAmb	06 54 13.7	
	comp=Z,13nm,1.3s						
S54A	Dingess, Beckl	85.48	12	P	P	06 54 12.4	+1.6
	baz=352						
S54A	Dingess, Beckl	85.48	12	P	P	06 54 12.5	+1.6
FCAR	Ozark Folk Cen	85.66	21	P	P	06 54 12.2	+0.5
FCAR				IAmb	IAmb	06 54 13.7	
	comp=Z,7.0nm,0.8s						
LCAR	Lake Charles	85.67	20	P	P	06 54 12.9	+1.2
LCAR				IAmb	IAmb	06 54 17.2	
	comp=Z,7.8nm,0.9s						
R58B	Mineral	85.67	9	P	P	06 54 13.9	+2.2
	baz=354						
S57A	Dark Hollow, R	85.77	10	P	P	06 54 14.5	+2.3
	baz=353						
S56A	Natural Bridge	85.79	11	P	P	06 54 15.0	+2.7
	baz=353						
S59A	Mechanicsville	85.92	9	P	P	06 54 15.6	+2.7
	baz=354						
W39A	Magazine	85.98	22	P	P	06 54 14.9	+1.6
	baz=345						
S60A	Water View	86.03	8	P	P	06 54 16.1	+2.7
	baz=354						
U49A	Red Boiling Sp	86.15	16	P	P	06 54 15.4	+1.3
U49A				IAmb	IAmb	06 54 16.3	
	comp=Z,14nm,1.4s						
WVT	Waverly	86.20	17	P	P	06 54 15.1	+0.7
WVT				pmax	pmax		
	comp=Z,11nm,0.8s						
WVT	Waverly	86.20	17	P	P	06 54 15.1	+0.7
	baz=348						
WVT	Waverly	86.20	17	P	P	06 54 15.1	+0.7
WVT				IAmb	IAmb	06 54 17.1	
	comp=Z,11nm,0.8s						
X37A	Clayton	86.22	24	P	P	06 54 17.2	+2.7
X37A				IAmb	IAmb	06 54 17.9	
	comp=Z,9.9nm,0.9s						
W41B	Gary Mavity, V	86.32	21	P	P	06 54 16.5	+1.5
	baz=346						
MNTX	Cornudas Mount	86.33	33	P	P	06 54 15.8	+0.7
	baz=339						
MNTX	Cornudas Mount	86.33	33	P	P	06 54 17.9	+2.8
CLTN	Cedars of Leba	86.48	16	P	P	06 54 18.4	+2.6
CLTN				IAmb	IAmb	06 54 20.1	
	comp=Z,8.7nm,1.0s						
MBAR	Mbarara	86.58	264	*ce*P	P	06 54 16.9	+0.2
MBAR				pmax	pmax		
	comp=Z,8.0nm,1.7s						
T60A	Surry	86.58	8	P	P	06 54 18.4	+2.2
	baz=354						
T60A	Surry	86.58	8	P	P	06 54 18.6	+2.4
T58A	Grand View Acr	86.62	10	P	P	06 54 17.7	+1.3
	baz=353						
T59A	Double "B" Far	86.68	9	P	P	06 54 18.1	+1.4
T59A				IAmb	IAmb	06 54 23.2	
	comp=Z,19nm,1.4s						
U54A	Nelsons Funny	86.68	12	P	P	06 54 17.9	+1.1
	baz=352						
V48A	Smith Brothers	86.75	17	P	P	06 54 18.4	+1.3
V48A				IAmb	IAmb	06 54 19.6	
	comp=Z,8.4nm,0.9s						
X40A	Basin Creek Fa	86.87	22	P	P	06 54 19.3	+1.7
	baz=346						
X40A	Basin Creek Fa	86.87	22	P	P	06 54 19.9	+2.2
X40A				IAmb	IAmb	06 54 23.3	
	comp=Z,7.7nm,1.1s						
ABTX	Abilene, Hawle	87.06	28	P	P	06 54 20.8	+2.0
	baz=342,SNR=9.1						
ABTX	Abilene, Hawle	87.06	28	P	P	06 54 20.2	+1.5
U58A	Oxford	87.16	10	P	P	06 54 21.8	+2.8
	baz=353						
U61A	Possum Corner	87.41	8	P	P	06 54 21.2	+1.0
	baz=354						
V56A	Mocksville	87.54	12	P	P	06 54 23.1	+2.2
	baz=352						
W57A	Gilead	88.24	11	P	P	06 54 25.0	+0.8
	baz=352						
Z47A	Carrollton	89.03	18	P	P	06 54 28.5	+0.5
TXAR	Lajitas Array	89.05	32	P	P	06 54 28.2	-0.1
	comp=Z,1.1nm,0.7s,baz=300,slow=2.2,SNR=9.4						
TXAR				LR	LR	07 38 57.7	
	comp=Z,268nm,19.4s,baz=0.0,slow=39						
TXAR	Lajitas Array	89.05	32	P	P	06 54 27.4	-0.9
TXAR	Lajitas Array	89.05	32	P	P	06 54 27.4	-0.9
JCT	Junction City	89.06	28	P	P	06 54 30.1	+1.8
JCT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JCT	Junction City	89.06	28	P	P	06 54 30.0	+1.8
	baz=342						
JCT	Junction City	89.06	28	P	P	06 54 30.1	+1.8
JCT				IAmb	IAmb	06 54 31.4	
	comp=Z,4.5nm,0.8s						
NATX	Nacogdoches	89.10	24	P	P	06 54 30.5	+2.1
NATX				IAmb	IAmb	06 54 32.2	
	comp=Z,11nm,0.8s						
GOGA	Godfrey	89.53	14	P	P	06 54 32.7	+2.3
	baz=351						
DZM	Mont Dzumac	89.78	132	*e*LR	LR	07 23 06.3	
	comp=Z,191nm,22.6s						
TORD	Torodi Ar. Bea	90.95	295	P	P	06 54 35.8	-1.4
	comp=Z,1.4nm,1.0s,baz=9.5,slow=4.5,SNR=3.8						
KOWA	Kowa	92.60	301	P	P	06 54 44.1	-0.8
	comp=Z,0.9nm,0.6s,baz=20,slow=9.3,SNR=4.2						
KOWA	Kowa	92.60	301	IAmb	IAmb	06 55 08.5	
	comp=Z,7.4nm,1.5s						
DBIC	Dimbokro	99.77	298	LR	LR	07 46 15.5	
	comp=Z,213nm,18.3s,baz=358,slow=39						
TAOE	Nuku Hiva Isla	106.28	81	*e*LR	LR	07 30 56.0	
	comp=Z,365nm,22.3s						
PPT2	Papeete2	108.15	95	*e*LR	LR	07 31 49.0	
	comp=Z,230nm,23.0s,baz=319						
RKT	Rikitea	120.72	86	*e*LR	LR	07 37 25.6	
	comp=Z,323nm,34.0s						
CPUP	Villa Florida	149.44	344	PKPbc	PKPbc	07 01 22.5	+0.6
	comp=Z,4.7nm,0.8s,baz=8.0,slow=4.2,SNR=11						
CPUP	Villa Florida	149.44	344		PKPbc	07 01 23.4	+1.4

BYKL 18 06:46:33.0±0.3, 56°.16N×113°.67E, h10km±3km, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.08	235	*e*Pg	Pg	06 46 35.2	-0.2
SVKR				*e*Sg	Sg	06 46 37.0	0.0
SVKR				Pmax			
	3µm,0.2s						
SVKR				Smax			
	10µm,0.3s						
UKT	Uakit	0.67	182	*e*Pg	Pg	06 46 45.2	-0.8
UKT				*e*Sg	Sg	06 46 53.9	-0.9
UKT				Pmax			
	173nm,0.8s						
UKT				Smax			
	229nm,1.1s						
NLYR	Nelyaty	1.18	73	*e*Pg	Pb	06 46 54.1	-1.4
NLYR				*e*Sg	Sb	06 47 09.8	-1.0
NLYR				Pmax			
	103nm,0.4s						
NLYR				Smax			
	127nm,0.2s						
KMO	Kumora	1.41	260	*e*Pg	Pn	06 46 57.9	-0.9
KMO				*e*Sg	Sn	06 47 15.9	-1.5
KMO				Pmax			
	30nm,0.2s						
KMO				Smax			
	70nm,0.4s						
BOD	Bodaibo	1.67	6	*e*Pg	Pb	06 47 03.2	-0.7
BOD				*e*Sg	Sb	06 47 25.3	+0.3
BOD				Pmax			
	35nm,0.1s						
BOD				Smax			
	80nm,0.3s						
YLYR	Ulyunkhan	1.92	229	*e*Pn	Pn	06 47 06.6	+0.8
YLYR				*e*Pg	Pb	06 47 07.7	-0.4
YLYR				*e*Sg	Sb	06 47 33.2	+1.1
YLYR				Pmax			
	57nm,0.2s						
YLYR				Smax			
	185nm,0.3s						
CRS	Chara	2.65	72	*e*Sg	Sb	06 47 54.4	+1.2

MOS 18 06:47:16.1±1.3, 56°.15N×113°.81E, h10km, mb4.3/4, Error ellipse: s-maj=13.7km s-min=9.4km az=61.7
MOS Felt (II-III) at Severomuisk.
BYKL 18 06:47:17.8±0.2, 56°.13N×113°.77E, h2km±5km

ISC 18 06:47:17.7±0.6, 56°.10N±0°.03×113°.66E±0°.02, h10km, n46, $\sigma 2^{s}.80$/78, mb4.2/4, 1C-1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.06	289	⇓*i*Pg	Pg	06 47 19.5	-0.4
SVKR				Pmax		06 47 19.8	
	10µm,0.1s						
SVKR				*e*Sg	Sg	06 47 21.5	0.0
SVKR				Smax		06 47 23.8	
	54µm,0.4s						
SVKR	Severomuysk	0.06	289	*e*PG	Pg	06 47 19.4	-0.4
SVKR				pmax	pmax		
	comp=Z,10µm,0.1s						
UKT	Uakit	0.61	182	*e*Pg	Pg	06 47 29.2	-0.3
UKT				Pmax		06 47 31.1	
	comp=Z,455nm,0.6s						
UKT				*e*Sg	Sg	06 47 37.8	+0.3
UKT				Smax		06 47 49.5	
	comp=Z,1µm,1.0s						
YOA	Uoyan	1.09	273	*e*Pg	Pg	06 47 38.4	-0.1
YOA				*e*Pb	Pn	06 47 40.6	+1.6
YOA				max		06 47 41.1	
	comp=Z,1µm,0.2s						
YOA				*e*Sg	Sn	06 47 54.4	+0.4
YOA				*e*		06 48 00.4	
YOA				max		06 48 01.9	
	comp=Z,7µm,0.4s						
YOA	Uoyan	1.09	273	*e*PG	Pg	06 47 38.5	-0.1
YOA				*e*		06 47 54.5	
YOA				pmax	pmax		
	comp=Z,662nm,0.3s						
YOA				smax	smax		
	comp=E,7µm,0.4s						
NLYR	Nelyaty	1.21	70	*e*Pg	Pb	06 47 37.7	-2.9
NLYR				*e*		06 47 40.5	
NLYR				max		06 47 40.7	
	comp=E,1µm,0.3s						
NLYR				*e*Sg	Sb	06 47 53.9	-2.3
NLYR				*e*Sb	Sn	06 47 58.0	+1.0
NLYR				max		06 47 59.3	
	comp=E,3µm,1.1s						
KMO	Kumora	1.40	262	*e*Pg	Pb	06 47 44.0	+0.1
KMO				*e*Pb	Pg	06 47 45.4	+0.9
KMO				max		06 47 47.0	
	comp=E,555nm,0.3s						
KMO				*e*Sg	Sg	06 48 03.9	+1.3
KMO				*e*Sb	Sn	06 48 06.5	+4.7
KMO				max		06 48 07.7	
	comp=E,3µm,0.7s						
KMO	Kumora	1.40	262	*e*PG	Pb	06 47 43.8	-0.1
KMO				*e*		06 48 03.2	
KMO				pmax	pmax		
	comp=Z,526nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,0.7s						
BOD	Bodaibo	1.74	6	*e*Pg	Pn	06 47 48.0	+0.1
BOD				Pmax		06 47 49.4	
	comp=N,323nm,0.5s						
BOD				*e*Sg	Sn	06 48 09.9	-0.2
BOD				Smax		06 48 14.1	
	comp=N,1µm,0.9s						
BOD	Bodaibo	1.74	6	*e*PN	Pn	06 47 48.0	+0.1
BOD				*e*		06 48 10.1	
BOD				pmax	pmax		

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              comp=Z,320nm,0.5s
BOD                                    smax     smax
              comp=E,1µm,0.9s
YLYR   Ulyunkhan          1.88 230   ePn      Pb       06 47 52.4 +0.4
YLYR                                 ePg      Pg       06 47 53.0 -0.6
YLYR                                  Pmax             06 47 54.1
              comp=E,867nm,0.5s
YLYR                                 eSg      Sg       06 48 19.4 +1.5
YLYR                                  Smax             06 48 25.1
              comp=E,2µm,1.3s
YLYR   Ulyunkhan          1.88 230   ePN      Pb       06 47 52.3 +0.3
YLYR                                 e                 06 47 53.8
YLYR                                 eS       Sg       06 48 17.3 -0.6
YLYR                                 e                 06 48 19.0
YLYR                                  pmax    pmax
              comp=Z,869nm,0.5s
YLYR                                  smax    smax
              comp=N,2µm,0.5s
NIZ    Nizh Angarsk       2.34 264   ePn      Pb       06 47 58.7 -1.2
NIZ                                  ePg      Pg       06 48 00.5 -2.0
NIZ                                   Pmax             06 48 01.1
              comp=N,205nm,0.8s
NIZ                                  eSg      Sg       06 48 32.5 -0.3
NIZ                                   Smax             06 48 33.6
              comp=N,463nm,0.7s
CRS    Chara              2.68  71   ePg      Pb       06 48 04.9 -0.8
CRS                                   Pmax             06 48 06.5
              comp=N,665nm,0.9s
CRS                                  eSg      Sb       06 48 39.3 +0.7
CRS                                   Smax             06 48 47.2
              comp=N,811nm,1.0s
SYVR   Suvo               3.23 222   ePn      Pn       06 48 10.1 +1.7
SYVR                                 ePg      Pb       06 48 16.8 +1.7
SYVR                                  Pmax             06 48 22.4
              comp=N,302nm,0.8s
SYVR                                 eSg      Sg       06 48 59.3 -2.1
SYVR                                  Smax             06 49 10.1
              comp=N,839nm,1.5s
SYVR   Suvo               3.23 222   ePN      Pn       06 48 11.2 +2.8
SYVR                                 e                 06 48 18.8
SYVR                                 e                 06 48 59.4
SYVR                                  pmax    pmax
              comp=Z,312nm,0.8s
SYVR                                  smax    smax
              comp=N,840nm,1.0s
VTMR   Vitim              3.41 350   ePg      Pb       06 48 19.2 +1.2
VTMR                                 eSn      Sn       06 48 51.5 +0.3
VTMR                                 eSg      Sg       06 49 04.0 -2.9
TUP    Tupik              3.97 112   ePn      Pn       06 48 18.7 +0.1
TUP                                  ePg      Pb       06 48 28.8 +1.1
TUP                                   Pmax             06 48 30.6
              comp=N,92nm,0.5s
TUP                                  eSn      Sn       06 49 03.9 -1.3
TUP                                  eSg      Sb       06 49 19.9 +4.1
TUP                                   Smax             06 49 27.9
              comp=N,727nm,1.1s
TUP                                  e                 06 49 32.1
TUP    Tupik              3.97 112   ePN      Pn       06 48 18.9 +0.3
TUP                                  e                 06 48 28.7
TUP                                  eS       Sn       06 49 04.7 -0.5
TUP                                  e                 06 49 19.6
TUP                                   pmax    pmax
              comp=Z,124nm,0.6s
TUP                                   smax    smax
              comp=N,705nm,1.4s
MXMB   Maximikha          4.03 227   ePn      Pn       06 48 22.6 +3.3
MXMB                                 ePg      Pg       06 48 32.0 -2.7
MXMB                                 eSg      Sg       06 49 25.2 -1.6
CIT    Chita              4.08 181    Pg      Pb       06 48 30.8 +1.1
CIT                                   Pmax             06 48 36.8
              comp=N,91nm,0.1s
CIT                                  eSg      Sg       06 49 25.5 -3.2
CIT                                   Smax             06 49 30.9
              comp=N,325nm,0.7s
OGRR   Ongureny           4.28 237   ePn      Pn       06 48 24.3 +1.5
OGRR                                 ePg      Pb       06 48 35.9 +2.9
OGRR                                  Pmax             06 48 38.5
              comp=N,90nm,0.8s
OGRR                                 eSg      Sg       06 49 32.1 -2.9
OGRR                                  Smax             06 49 40.2
              comp=N,344nm,1.7s
YKLR   Yuktali            4.47  80   eSg      Sb       06 49 34.0 +3.8
TRG    Tyrgan             5.42 235   eSg      Sg       06 50 07.5 -4.1
TRG                                   Smax             06 50 10.1
              comp=N,254nm,1.8s
FFNB   Fofonovo           5.74 228   eSg      Sg       06 50 18.6 -3.2
KAB    Kabansk            5.78 228   eSg      Sg       06 50 19.2 -4.0
KAB                                   Smax             06 50 38.8
              comp=N,1µm,1.2s
HRMR   Khuramsha          5.98 224   ePg      Pg       06 49 07.4 -4.7
HRMR                                  Pmax             06 49 09.5
              comp=N,242nm,0.6s
HRMR                                 eSg      Sg       06 50 25.7 -3.8
HRMR                                  Smax             06 50 31.1
              comp=N,786nm,1.1s
CLNS   Chul'man           6.27  79   eSg      Sb       06 50 29.0 +7.2
KPC    Khapcheranga       6.45 187    Pg      Pb       06 49 13.9 +3.9
KPC                                  eSg      Sg       06 50 38.0 -6.6
KPC                                  e                 06 50 41.4
KPC                                   max              06 50 45.2
              comp=N,264nm,1.1s
IVK    Ivanovka           6.95 236   eSg      Sg       06 50 53.6 -6.9
IVK                                   Smax             06 50 55.7
              comp=N,133nm,1.3s
TLY    Talaya             7.39 237   eSg      Sg       06 51 08.6 -6.0
TLY                                   Smax             06 51 34.3
              comp=N,105nm,2.0s
TLY    Talaya             7.39 237   i PN     Pn       06 49 07.5 +2.0
ARS    Arshan             7.83 242   eSg      Sg       06 51 21.7 -7.0
ARS                                   Smax             06 51 39.8
              comp=N,244nm,1.6s
ORL    Orlik              8.84 252   eSg      Sg       06 51 52.9 -8.3
ORL                                   Smax             06 52 14.9
              comp=N,168nm,2.2s
ULN    Ulaanbaatar        9.19 209   i P      Pn       06 49 31.4 +1.0
YAK    Yakutsk           10.15  48   i P      Pn       06 49 42.3 -0.9
KLR    Kul'dur           12.93 115   i P      Pn       06 50 21.5 +0.2
TIXI   Tiksi             16.89  17   i P      Pn       06 51 13.0 -0.7
DGZ    Jazzator, Alta    17.00 259   i P      P        06 51 18.1 +0.7
DGZ                                   pmax    pmax
              comp=Z,85nm,1.3s
MK31   Makanchi Array    21.48 258   i P      P        06 52 05.5 -0.7
BRVK   Borovoye          25.02 281   i P      P        06 52 43.6 +2.2
BRVK                                  pmax    pmax
              comp=Z,4.0nm,0.9s
AAK    Ala-Archa         28.41 258   i P      P        06 53 14.4 +2.1
AAK                                   pmax    pmax
              comp=Z,4.0nm,0.8s
SVE    Sverdlovsk        28.70 294   eP       P        06 53 11.2 -3.3
ARU    Arti              29.91 294c iP       P        06 53 25.0 -0.3
ARU                                   S       S        06 58 21.3 -0.9
ARU                                   pmax    pmax
              comp=Z,7.0nm,1.2s
KIRV   Kirov             33.58 301   i P      P        06 53 56.1 -1.4
BELG   Belogornoye       37.44 293   i P      P        06 54 31.7 +1.0
BELG                                  pmax    pmax
              comp=Z,2.0nm,1.0s
```

IDC ***18*** *06:51:26.4±4.0, 7°.40S×13°.42W, h0km, mb4.1/7, mb1 4.2/8, mb1mx3.8/39, mbtmp4.1/8, ML3.0/1, MS3.4/8, Ms1 3.4/8, ms1mx3.2/49, Error ellipse: s-maj=139.9km s-min=69.1km az=137.0*

NEIC ***18*** *06:51:27.1±1.8, 7°.3S±0°.1×13°.8W±0°.2, h10km±2km, mb4.3/8, Error ellipse: s-maj=35.7km s-min=2.9km az=131.0*

ISC 18 06:51:29.2±2.3**, 7°.5S**±0°.1×**13°.7W**±0°.1**, h28**km±17km**, n45, σ1ˢ.39**/46**, mb4.4**/24**, MS3.4**/7**, Ascension Island region**

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Code   Station Name        Δ°   AZ°    Phase ID               Time     Res
                                      Op       ISC          h  m  s    ISC
ASCN   Ascension          0.78 234             Pn       06 51 44.7 +0.4
ASCN                                           Sn       06 51 55.4 +0.3
H10N2  ASCENSION HYDR     0.83 245   Pn       Pn       06 51 45.7 +0.9
              baz=82,slow=14
H10N2                                Sn       Sb       06 51 56.0 +0.2
H10N2                                T        T        06 52 46.4
              baz=107
H10N1  ASCENSION HYDR     0.84 243   Pn       Pn       06 51 45.7 +0.8
              baz=82,slow=14
H10N1                                Sn       Sb       06 51 55.7 -0.1
H10N1                                T        T        06 52 46.7
              baz=107
H10N3  ASCENSION HYDR     0.85 244   Pn       Pn       06 51 45.7 +0.6
              baz=82,slow=14
H10N3                                Sn       Sb       06 51 56.4 +0.2
H10N3                                T        T        06 52 46.4
              baz=107
H10S2  ASCENSION HYDR     1.74 212   Pn       Pn       06 51 58.0 +0.7
H10S2                                Sn       Sn       06 52 17.5 -0.9
H10S2                                T        T        06 54 00.2
              baz=30,slow=74,SNR=470
H10S3  ASCENSION HYDR     1.74 212   Pn       Pn       06 51 58.1 +0.7
H10S3                                Sn       Sn       06 52 17.7 -0.8
H10S3                                T        T        06 53 55.4
              baz=190,slow=74,SNR=1046
LIC    Lamto             16.14  33   ePKP2    P        06 55 17.3 +0.1
              28nm,1.1s
KIC    Kosan Boka        16.40  33   ePKP2    Pn       06 55 16.4 -1.2
              68nm,1.8s
TIC    Toumodi           16.49  32   ePKP2    Pn       06 55 17.6 -1.1
DBIC   Dimbokro          16.60  32   Pn       Pn       06 55 18.2 -1.9
              0.1nm,0.3s,baz=209,slow=6.8,SNR=3.7
DBIC                                 LR       LR       07 00 13.8
              comp=Z,115nm,20.4s,baz=202,slow=32
DBIC   Dimbokro          16.60  32            Pn       06 55 19.3 -0.7
RCBR   Riachuelo         22.09 273   LR       LR       07 02 38.5
              comp=Z,117nm,21.2s,baz=137,slow=30
KOWA   Kowa              23.86  24   P        P        06 56 40.6 +0.3
              3.3nm,0.8s,baz=214,slow=10,SNR=6.7
KOWA                                 LR       LR       07 04 47.4
              comp=Z,136nm,20.3s,baz=210,slow=34
KOWA   Kowa              23.86  24   P        P        06 56 40.1 -0.2
KOWA                                 IAmb     IAmb     06 56 48.8
              comp=Z,3.9nm,0.8s
TOA0   Torodi Ar. Sit    25.58  37   P        P        06 56 54.9 -1.2
TOA0                                 IAmb     IAmb     06 56 59.5
              comp=Z,4.6nm,1.0s
TORD   Torodi Ar. Bea    25.58  37   P        P        06 56 54.0 -2.1
              comp=Z,3.5nm,1.0s,baz=216,slow=10,SNR=6.1
TORD                                 LR       LR       07 05 36.1
              comp=Z,46nm,21.3s,baz=285,slow=34
TORD   Torodi Ar. Bea    25.58  37   P        P        06 56 55.6 -0.5
TSUM   Tsumeb            32.55 114   LR       LR       07 08 55.3
              comp=Z,97nm,18.7s,baz=326,slow=32
BDFB   Brasilia          34.52 253   LR       LR       07 09 28.3
              comp=Z,38nm,20.7s,baz=290,slow=31
BOSA   Boshof            42.33 125   LR       LR       07 13 22.2
              comp=Z,72nm,21.0s,baz=294,slow=31
PTGA   Pitinga           46.57 276   LR       LR       07 17 58.7
              comp=Z,39nm,18.7s,baz=87,slow=34
SAML   Samuel            48.95 265   P        P        07 00 12.6 -0.9
SAML                                 IAmb     IAmb     07 00 19.2
              comp=Z,3.0nm,0.9s
DAVA   Damuels           58.40  19   eP       P        07 01 22.9 +0.6
              comp=Z,8.7nm,1.1s
FETA   Feichten          58.44  19   eP       P        07 01 23.3 +0.7
              comp=Z,4.3nm,1.1s
SQTA   Sankt Quirin      58.77  20   eP       P        07 01 25.6 +0.8
              comp=Z,6.3nm,1.1s
ABTA   Abfaltersbach     58.81  21   eP       P        07 01 25.1  0.0
              comp=Z,8.9nm,1.4s
MOTA   Moosalm           58.85  19   eP       P        07 01 25.8 +0.4
              comp=Z,4.4nm,1.0s
RETA   Reutte            58.86  19   eP       P        07 01 25.7 +0.3
              comp=Z,2.7nm,0.9s
WTTA   Wattenberg        58.95  20   eP       P        07 01 27.0 +0.8
              comp=Z,10.0nm,1.0s
WATA   Walderalm         59.00  20   eP       P        07 01 28.4 +2.0
              comp=Z,6.2nm,1.2s
MYKA   Terra Mystica     59.12  22   eP       P        07 01 29.9 +2.7
              comp=Z,5.5nm,1.0s
OBKA   Obir              59.35  22   eP       P        07 01 33.3 +4.4
              comp=Z,12nm,1.4s
KBA    Koelnbreinsper    59.39  21   eP       P        07 01 31.8 +2.6
              comp=Z,2.2nm,0.8s
ARSA   Arzberg           60.34  23   eP       P        07 01 39.1 +3.5
              comp=Z,3.8nm,1.3s
MOA    Molln             60.38  21   eP       P        07 01 36.6 +0.9
              comp=Z,3.1nm,1.0s
GERES  GERESS Array B    61.02  20   P        P        07 01 40.9 +0.7
              comp=Z,2.2nm,0.9s,baz=188,slow=8.9,SNR=10
GERES  GERESS Array B    61.02  20   P        P        07 01 40.5 +0.2
CONA   Conrad Observa    61.03  22   eP       P        07 01 40.3  0.0
              comp=Z,5.0nm,1.5s
BRTR   Keskin Array B    64.17  39   P        P        07 02 02.8 +1.3
              comp=Z,0.8nm,0.8s,baz=187,slow=9.5,SNR=4.9
AKASG  Malin Array Be    68.78  28   P        P        07 02 30.4 -0.2
              comp=Z,0.2nm,0.3s,baz=225,slow=6.5,SNR=5.0
AKASG  Malin Array Be    68.78  28   P        P        07 02 30.2 -0.4
FINES  FINESS Array B    75.36  19   P        P        07 03 10.6 +0.9
              comp=Z,5.2nm,1.0s,baz=227,slow=4.1,SNR=9.5
ARCES  ARCESS Array B    81.42  13   P        P        07 03 43.9 +0.8
              comp=Z,4.0nm,0.9s,baz=190,slow=4.4,SNR=6.6
346A   Big Creek Wild    81.84 303   P        P        07 03 43.7 -2.4
CCM    Cathedral Cave    84.84 309   P        P        07 04 01.4 -0.1
CCM                                  IAmb     IAmb     07 04 04.8
              comp=Z,10nm,1.2s
```

IDC ***18*** *06:52:45.9±6.3, 55°.50N×113°.97E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.2/46, mbtmp3.6/4, ML2.4/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/49, Error ellipse: s-maj=196.8km s-min=29.0km az=153.0*

MOS ***18*** *06:52:46.8±3.3, 56°.19N×113°.77E, h7km, mb4.0/1, Error ellipse: s-maj=14.5km s-min=8.1km az=58.5*

BYKL ***18*** *06:52:47.4±0.2, 56°.15N×113°.77E, h5km±4km*

ISC 18 06:52:47.8±0.6**, 56°.14N**±0°.02×**113°.80E**±0°.02**, h10**km**, n53, σ2ˢ.96**/96**, mb3.5**/3**, 5C-8D, East of Lake Baykal**

```
Code   Station Name        Δ°   AZ°    Phase ID               Time     Res
                                      Op       ISC          h  m  s    ISC
SVKR   Severomuysk        0.13 262⇓iPg      Pg       06 52 49.2 -1.7
SVKR                                  Pmax             06 52 49.8
              15µm,0.2s
SVKR                                 eSg      Sg       06 52 51.4 -1.7
SVKR                                  Smax             06 52 58.4
              60µm,0.9s
SVKR   Severomuysk        0.13 262⇓iPG      Pg       06 52 49.2 -1.7
SVKR                                 e                 06 52 51.3
SVKR                                  pmax    pmax
              comp=Z,16µm,0.8s
SVKR                                  smax    smax
              comp=N,38µm,0.9s
UKT    Uakit              0.66 188   ePg      Pg       06 52 58.8 -1.7
UKT                                   Pmax             06 53 01.6
              comp=N,445nm,0.2s
UKT                                  eSg      Sg       06 53 08.2 -0.9
UKT                                   Smax             06 53 16.2
              comp=N,3µm,1.2s
UKT    Uakit              0.66 188⇑iPG      Pg       06 52 58.6 -1.9
UKT                                  eS       Sg       06 53 08.0 -1.1
NLYR   Nelyaty            1.12  71⇓iPg      Pb       06 53 07.5 -1.7
NLYR                                 eSg      Sg       06 53 21.6 -2.2
NLYR                                 e                 06 53 27.2
NLYR                                  max              06 53 27.7
              comp=N,4µm,0.8s
NLYR   Nelyaty            1.12  71⇓iPG      Pb       06 53 07.5 -1.7
NLYR                                 e                 06 53 21.5
NLYR                                  pmax    pmax
              comp=Z,763nm,0.4s
NLYR                                  smax    smax
              comp=E,4µm,0.9s
YOA    Uoyan              1.16 271⇓iPg      Pb       06 53 08.2 -1.7
YOA                                   Pmax             06 53 08.9
              comp=E,1µm,0.3s
YOA                                  ePb      Pn       06 53 10.5 +0.4
YOA                                  eSg      Sb       06 53 24.5 -0.5
YOA                                  eSb      Sn       06 53 28.7 +2.7
YOA                                   max              06 53 31.6
              comp=E,4µm,0.4s
YOA    Uoyan              1.16 271⇓iPG      Pb       06 53 08.2 -1.7
YOA                                  e                 06 53 23.6
YOA                                   pmax    pmax
              comp=Z,1µm,0.2s
YOA                                   smax    smax
              comp=E,4µm,0.3s
KMO    Kumora             1.48 261⇓iPg      Pn       06 53 13.6 -0.9
KMO                                  ePb      Pb       06 53 15.1 -0.2
KMO                                   max              06 53 15.3
              comp=E,753nm,0.3s
KMO                                  eSg      Sb       06 53 34.2  0.0
KMO                                  eSb      Sg       06 53 36.7 +1.4
KMO                                   max              06 53 40.8
              comp=E,4µm,1.3s
KMO    Kumora             1.48 261⇓iPG      Pn       06 53 13.6 -0.9
KMO                                  e                 06 53 34.2
KMO                                   pmax    pmax
              comp=Z,747nm,0.3s
KMO                                   smax    smax
              comp=N,4µm,1.4s
BOD    Bodaibo            1.69   4⇑iPg      Pn       06 53 17.6 +0.3
BOD                                   Pmax             06 53 19.1
              comp=N,202nm,0.3s
BOD                                  eSg      Sn       06 53 39.9 +0.9
BOD                                   Smax             06 53 43.0
              comp=N,698nm,0.4s
YLYR   Ulyunkhan          1.96 231   ePn      Pn       06 53 22.1 +1.0
YLYR                                 ePg      Pb       06 53 22.7 -0.8
YLYR                                 e                 06 53 23.8
YLYR                                  max              06 53 25.2
              comp=N,338nm,0.3s
YLYR                                 eSg      Sb       06 53 48.2 +0.2
YLYR                                  Smax             06 53 56.9
              comp=N,3µm,1.4s
YLYR   Ulyunkhan          1.96 231⇑iPN      Pn       06 53 22.0 +1.0
YLYR                                 e                 06 53 23.5
YLYR                                 eS       Sb       06 53 46.9 -1.1
YLYR                                 e                 06 53 48.6
YLYR                                  pmax    pmax
              comp=Z,357nm,0.3s
YLYR                                  smax    smax
              comp=N,3µm,0.9s
NIZ    Nizh Angarsk       2.42 263   ePn      Pn       06 53 28.3 +0.9
NIZ                                  ePg      Pb       06 53 30.5 -0.9
NIZ                                   Pmax             06 53 30.9
              comp=N,179nm,0.4s
NIZ                                  eSn      Sn       06 53 57.5 +0.5
NIZ                                  eSg      Sb       06 54 03.0 +1.8
NIZ                                   Smax             06 54 03.7
              comp=N,998nm,1.0s
NIZ    Nizh Angarsk       2.42 263   ePN      Pn       06 53 28.3 +0.9
NIZ                                  e                 06 53 30.5
NIZ                                  eS       Sn       06 53 57.5 +0.5
NIZ                                  e                 06 54 02.8
NIZ                                   pmax    pmax
              comp=Z,228nm,1.5s
NIZ                                   smax    smax
              comp=N,1µm,1.0s
CRS    Chara              2.59  71   ePn      Pn       06 53 30.0 +0.2
CRS                                  ePg      Pb       06 53 34.7 +0.3
CRS                                   Pmax             06 53 35.0
              comp=N,472nm,1.1s
CRS                                  ePgPg    PbPb     06 53 40.3 +2.8
CRS                                  eSg      Sb       06 54 08.7 +2.4
CRS                                   Smax             06 54 13.3
              comp=N,770nm,0.7s
CRS    Chara              2.59  71⇑ePN      Pn       06 53 30.4 +0.6
CRS                                  i                 06 53 34.7
CRS                                  e                 06 54 08.2
CRS                                   pmax    pmax
              comp=Z,478nm,0.7s
CRS                                   smax    smax
              comp=E,768nm,0.8s
SYVR   Suvo               3.31 223   ePn      Pn       06 53 40.2 +0.6
SYVR                                 ePg      Pb       06 53 47.7 +1.1
SYVR                                 ePgPg    PbPb     06 53 49.5 -0.2
SYVR                                 e                 06 53 52.0
SYVR                                  max              06 53 56.0
              comp=E,147nm,1.1s
SYVR                                 eSn      Sn       06 54 19.4 +0.3
SYVR                                 eSg      Sb       06 54 30.0 +3.1
SYVR                                 eSgSg    Sg       06 54 35.8 +1.7
SYVR                                  max              06 54 41.8
              comp=E,2µm,1.8s
SYVR   Suvo               3.31 223   ePN      Pn       06 53 40.3 +0.6
SYVR                                 e                 06 53 49.7
SYVR                                 e                 06 54 30.0
SYVR                                  pmax    pmax
              comp=Z,154nm,0.8s
SYVR                                  smax    smax
              comp=N,2µm,1.6s
VTMR   Vitim              3.38 349   ePn      Pn       06 53 40.5  0.0
VTMR                                 ePg      Pb       06 53 48.4 +0.7
VTMR                                 eSn      Sn       06 54 20.0 -0.6
VTMR                                 eSg      Sb       06 54 31.0 +2.2
TUP    Tupik              3.92 113   ePn      Pn       06 53 48.2 +0.2
TUP                                  ePg      Pb       06 53 58.4 +1.5
TUP                                   Pmax             06 53 59.1
              comp=N,97nm,0.5s
TUP                                  eSn      Sn       06 54 33.1 -0.9
TUP                                  eSg      Sg       06 54 49.1 -4.3
TUP                                  e                 06 55 05.0
TUP                                   max              06 55 10.9
              comp=N,470nm,0.9s
TUP    Tupik              3.92 113⇑iPN      Pn       06 53 48.2 +0.2
TUP                                  e                 06 53 58.1
TUP                                  eS       Sn       06 54 34.2 +0.2
TUP                                  e                 06 54 49.0
TUP                                   pmax    pmax
              comp=Z,96nm,0.5s
TUP                                   smax    smax
              comp=N,471nm,1.1s
MXMB   Maximikha          4.11 228   ePg      Pb       06 54 00.1  0.0
MXMB                                 eSg      Sb       06 54 53.7 +3.9
CIT    Chita              4.13 182   ePg      Pb       06 54 01.2 +0.7
CIT                                   Pmax             06 54 04.7
              comp=N,120nm,0.2s
CIT                                  eSg      Sb       06 54 54.9 +4.5
CIT                                   Smax             06 55 01.2
              comp=N,491nm,0.4s
CIT    Chita              4.13 182   ePN      Pb       06 54 01.2 +0.7
CIT                                  eS       Sn       06 54 38.9 -0.3
CIT                                  e                 06 54 54.7
CIT                                   pmax    pmax
              comp=Z,211nm,0.9s
CIT                                   smax    smax
              comp=E,551nm,1.6s
OGRR   Ongureny           4.37 238   ePn      Pn       06 53 56.2 +2.1
OGRR                                 ePg      Pb       06 54 06.2 +1.7
OGRR                                 e                 06 54 08.3
OGRR                                  max              06 54 10.4
              comp=E,93nm,1.1s
OGRR                                 eSn      Sn       06 54 44.8 -0.2
OGRR                                 eSg      Sb       06 55 02.3 +5.1
OGRR                                  Smax             06 55 13.8
              comp=E,567nm,1.8s
OGRR   Ongureny           4.37 238   ePN      Pn       06 53 56.1 +2.0
OGRR                                 e                 06 54 07.2
OGRR                                 e                 06 55 02.0
OGRR                                  pmax    pmax
              comp=Z,110nm,2.1s
OGRR                                  smax    smax
              comp=E,565nm,1.9s
YKLR   Yuktali            4.39  81   ePg      Pb       06 54 05.5 +0.5
YKLR                                 eSg      Sg       06 55 03.9 -4.8
TRG    Tyrgan             5.51 235   ePn      Pn       06 54 10.0 +0.2
TRG                                  ePg      Pb       06 54 25.6 +1.6
TRG                                   Pmax             06 54 33.0
              comp=E,83nm,1.4s
TRG                                  eSg      Sg       06 55 37.8 -6.6
TRG                                   Smax             06 55 49.1
              comp=E,305nm,1.6s
TRG    Tyrgan             5.51 235   ePN      Pn       06 54 09.3 -0.5
TRG                                  e                 06 54 25.3
TRG                                  eS       Sn       06 55 09.9 -3.2
TRG                                  e                 06 55 35.5
TRG                                   pmax    pmax
              comp=Z,84nm,1.6s
TRG                                   smax    smax
              comp=N,305nm,1.3s
FFNB   Fofonovo           5.82 228    Smax             06 54 35.4
FFNB                                 eSg      Sg       06 55 47.9 -6.6
KAB    Kabansk            5.87 229   eSg      Sg       06 55 48.6 -7.3
KAB                                   Smax             06 56 18.3
              comp=N,1µm,1.7s
HRMR   Khuramsha          6.06 225   ePg      Pb       06 54 36.8 +3.4
HRMR                                  Pmax             06 54 45.9
              comp=N,73nm,0.7s
HRMR                                 eSn      Sn       06 55 24.0 -2.8
HRMR                                 eSg      Sg       06 55 56.0 -6.2
HRMR                                  Smax             06 56 06.3
              comp=N,1µm,0.9s
IENR   Iengra             6.18  85   eSg      Sg       06 55 59.3 -6.6
KPC    Khapcheranga       6.50 188   ePn      Pn       06 54 23.2 -0.3
KPC                                  ePg      Pb       06 54 45.1 +4.2
KPC                                   Pmax             06 54 48.7
              comp=N,11nm,0.4s
KPC                                  eSg      Sg       06 56 10.1 -6.2
KPC                                   Smax             06 56 18.4
              comp=N,316nm,1.7s
KPC    Khapcheranga       6.50 188   ePN      Pn       06 54 22.7 -0.8
```

KPC				*e*		06 54 43.8	
KPC				*e*		06 56 09.9	
KPC				pmax	pmax		
	comp=Z,36nm,1.0s						
KPC				smax	smax		
	comp=E,316nm,1.9s						
LSTR	**Listvyanka**	**6.79**	**235**	*e*Pg	**Pb**	**06 54 49.5**	**+3.6**
LSTR				Pmax		06 54 52.0	
	comp=E,40nm,1.4s						
LSTR				*e*Sn	**Sn**	**06 55 43.3**	**-1.5**
LSTR				*e*Sg	**Sg**	**06 56 17.5**	**-8.2**
LSTR				Smax		06 56 25.0	
	comp=E,278nm,2.0s						
IVK	**Ivanovka**	**7.03**	**236**	*e*		06 56 21.5	
IVK				*e*Sg	**Sg**	**06 56 25.5**	**-7.8**
IVK				Smax		06 56 29.0	
	comp=E,211nm,2.0s						
TLY	**Talaya**	**7.47**	**238**	Lg	Lg	06 56 35.5	
	comp=E,0.0nm,0.3s,baz=92,slow=12,SNR=8.5						
TLY	**Talaya**	**7.47**	**238**	Pg	**Pb**	**06 55 01.9**	**+4.5**
TLY				*e*		06 56 33.9	
TLY				*e*Sg	**Sg**	**06 56 38.4**	**-9.0**
TLY				Smax		06 56 46.0	
	comp=E,144nm,1.1s						
ARS	**Arshan**	**7.91**	**242**	*e*	Pn	06 54 51.6	+8.7
ARS				*e*Pg	**Pb**	**06 55 09.5**	**+4.5**
ARS				max		06 55 13.4	
	comp=E,29nm,0.6s						
ARS				*e*		06 56 48.1	
ARS				*e*Sg	Sg	06 56 50.4	-11
ARS				Smax		06 57 08.1	
	comp=E,305nm,0.8s						
ZAK	**Zakamensk**	**8.54**	**232**	*e*Sg	Sg	06 57 12.3	-9.2
ZAK				Smax		06 57 58.9	
	comp=E,241nm,1.8s						
MOY	**Mondy**	**8.78**	**245**	*e*Sg	Sg	06 57 19.0	-10
MOY				Smax		06 57 23.7	
	comp=E,228nm,1.7s						
MOY	**Mondy**	**8.78**	**245**	*e*PN	Pn	06 55 03.8	+9.0
MOY				*i*		06 57 23.7	
ORL	**Orlik**	**8.93**	**252**	*e*	**Sn**	**06 56 37.1**	**-0.3**
ORL				*e*Sg	Sg	06 57 21.7	-12
ORL				Smax		06 57 39.8	
	comp=E,122nm,2.0s						
SONM	**Songino Array**	**9.48**	**212**	Lg	Lg	06 57 43.4	
	comp=E,2.2nm,0.3s,baz=24,slow=24,SNR=14						
YAK	**Yakutsk**	**10.07**	**48**	Lg	Lg	06 57 56.6	
	comp=E,0.1nm,0.3s,baz=337,slow=23,SNR=6.3						
ZALV	**Zalesovo Beam**	**16.70**	**275**	Pn	**Pn**	**06 56 41.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=93,slow=16,SNR=2.0						
KURK	**Kurchatov**	**21.48**	**270**	P	**P**	**06 57 39.1**	**+2.9**
MKAR	**Makanchi Array**	**21.57**	**258**	P	**P**	**06 57 35.8**	**-1.4**
	comp=E,2.1nm,0.9s,baz=59,slow=9.2,SNR=7.0						
KURBB	**Kurchatov Arra**	**21.58**	**270**	P	**P**	**06 57 39.1**	**+1.9**
	comp=E,4.2nm,0.8s,baz=66,slow=11,SNR=7.4						
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**07 02 28.1**	**+3.4**
	comp=E,0.4nm,0.7s,baz=337,slow=6.6,SNR=5.2						
MMAI	**Mount Meron Ar**	**57.05**	**281**	LR	LR	07 29 23.3	
	comp=E,114nm,18.1s,baz=25,slow=38						

*INET **18** 07:13:32.9, 11°.61N×88°.05W, h15^{km}, MW3.3*
*IDC **18** 07:13:33.3±2.2, 12°.23N×87°.76W, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.6/50, mbtmp3.6/7, ML3.0/2, Error ellipse: s-maj=62.6km s-min=27.6km az=41.0*
*SNET **18** 07:13:34.9±1.0, 11°.91N×88°.02W, h16^{km}±7^{km}, ML3.9*
*NEIC **18** 07:13:35.4±1.7, 11°.77N±0°.08×87°.88W±0°.09, h35^{km}±2^{km}, mb4.2/21, Error ellipse: s-maj=15.7km s-min=11.9km az=230.0*

ISC 18 07:13:33.2±2.3**, 11°.84N**±0°.07×**87°.95W**±0°.06**, h15**^{km}±13^{km}**, n60, σ0ˢ.94**/73**, mb4.1**/13**, 2C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.23**	**46**		**Pg**	**07 13 56.8**	**-0.1**
CNCH	**Conchagua**	**1.44**	**4**	*e*P	**Pn**	**07 13 59.2**	**+0.4**
CNCH				*e*P	**Pb**	**07 13 59.3**	**-0.4**
CNCH				IAML		07 14 26.9	
	comp=Z,32µm,0.4s						
CNCH	**Conchagua**	**1.44**	**4**	*e*P	**Pn**	**07 13 59.2**	**+0.4**
CNCH				*e*P	**Pb**	**07 13 59.3**	**-0.4**
CNCH				IAML		07 14 26.9	
	comp=Z,32µm,0.4s						
LCND	**La Caada**	**1.47**	**2** ⇑	*e*P	**Pn**	**07 13 59.6**	**+0.5**
LCND				IAML		07 14 01.1	
	comp=Z,444nm,0.4s						
LCND				*e*S	**Sb**	**07 14 18.5**	**-0.1**
LCND	**La Caada**	**1.47**	**2** ⇑	*e*P	**Pn**	**07 13 59.6**	**+0.5**
LCND				IAML		07 14 01.1	
	comp=Z,444nm,0.4s						
LCND				*e*S	**Sb**	**07 14 18.5**	**-0.1**
LCY	**Lacayo**	**1.61**	**348**	*e*P	**Pn**	**07 14 01.7**	**+0.5**
LCY	**Lacayo**	**1.61**	**348**	*e*P	**Pn**	**07 14 01.7**	**+0.5**
VSM	**San Miguel**	**1.61**	**349**	*e*P	**Pn**	**07 14 02.1**	**+0.7**
VSM	**San Miguel**	**1.61**	**349**	*e*P	**Pn**	**07 14 02.1**	**+0.7**
RANC	**El Ranchito**	**1.62**	**348**	*e*P	**Pn**	**07 14 01.8**	**+0.4**
RANC				*e*S	**Sn**	**07 14 22.6**	**+0.4**
RANC	**El Ranchito**	**1.62**	**348**	*e*P	**Pn**	**07 14 01.8**	**+0.4**
RANC				*e*S	**Sn**	**07 14 22.6**	**+0.4**
TECA	**Tecapa**	**1.73**	**342**	*e*P	**Pn**	**07 14 02.9**	**-0.1**
TECA				*e*S	**Sb**	**07 14 26.4**	**-0.2**
TECA	**Tecapa**	**1.73**	**342**	*e*P	**Pn**	**07 14 02.9**	**-0.1**
TECA				*e*S	**Sb**	**07 14 26.4**	**-0.2**
LFRS	**El Faro**	**2.08**	**329**	*e*P	**Pn**	**07 14 07.4**	**-0.3**
LFRS	**El Faro**	**2.08**	**329**	*e*P	**Pn**	**07 14 07.4**	**-0.3**
PAVA	**Las Pavas**	**2.10**	**333**	*e*P	**Pn**	**07 14 08.3**	**+0.4**
PAVA	**Las Pavas**	**2.10**	**333**	*e*P	**Pn**	**07 14 08.3**	**+0.4**
LBRS	**Las Brisas**	**2.17**	**331**	*e*P	**Pn**	**07 14 09.7**	**+0.8**
LBRS	**Las Brisas**	**2.17**	**331**	*e*P	**Pn**	**07 14 09.7**	**+0.8**
PMON	**Piamonte**	**2.29**	**325**	*e*P	**Pn**	**07 14 11.1**	**+0.5**
PMON				*e*S	**Sn**	**07 14 39.5**	**+0.9**
PMON	**Piamonte**	**2.29**	**325**	*e*P	**Pn**	**07 14 11.1**	**+0.5**
PMON				*e*S	**Sn**	**07 14 39.5**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.31**	**17**	*e*P	**Pn**	**07 14 11.7**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.31**	**17**	*e*P	**Pn**	**07 14 11.7**	**+0.9**
TGUH	**Tegucigalpa,Un**	**2.31**	**17**		**Pn**	**07 14 11.4**	**+0.6**
JAYA	**Jayaque - finc**	**2.33**	**321**	*e*P	**Pn**	**07 14 10.9**	**-0.2**
JAYA				*e*S	**Sn**	**07 14 38.4**	**-1.1**
JAYA				IAML		07 14 42.7	
	comp=Z,174nm,0.1s						
JAYA	**Jayaque - finc**	**2.33**	**321**	*e*P	**Pn**	**07 14 10.9**	**-0.2**
JAYA				*e*S	**Sn**	**07 14 38.4**	**-1.1**
JAYA				IAML		07 14 42.7	
	comp=Z,174nm,0.1s						
TACO	**Tacachico**	**2.53**	**327**	*e*P	**Pn**	**07 14 14.5**	**+0.8**
TACO	**Tacachico**	**2.53**	**327**	*e*P	**Pn**	**07 14 14.5**	**+0.8**
ACON	**Acoyapa**	**2.72**	**87**		**Pn**	**07 14 17.0**	**+0.7**
JTS	**Las Juntas de**	**3.32**	**117**	Pn	**Pn**	**07 14 28.2**	**+3.6**
	comp=Z,1.1nm,0.3s,baz=14,slow=21,SNR=2.0						
JTS				Sn	**Sn**	**07 15 03.7**	**-0.1**
	comp=Z,2.9nm,0.3s,baz=85,slow=6.2,SNR=3.9						
HDC	**Heredia**	**4.18**	**115**	Pn	**Pn**	**07 14 35.6**	**-1.1**
CMIG	**Matias Romero**	**8.51**	**309**	Pn	**Pn**	**07 15 38.1**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=146,slow=8.6,SNR=7.2						
JAKH	**Jacmel**	**16.20**	**65**	Pn	**Pn**	**07 17 20.2**	**-0.2**
833A	**Chaparral WMA,**	**19.59**	**329**	P	**P**	**07 18 01.9**	**+1.1**
833A				IAmb	IAmb	07 18 03.5	
	comp=Z,16nm,0.8s						
Y49A	**Blount Mountai**	**21.97**	**3**	P	**P**	**07 18 26.6**	**+0.1**
Y49A				IAmb	IAmb	07 18 35.6	
	comp=Z,10nm,1.4s						
Y52A	**Lilburn**	**22.21**	**9**	P	**P**	**07 18 30.4**	**+1.2**
TX31	**Lajitas Ar. Si**	**22.75**	**322**	P	**P**	**07 18 36.8**	**+1.8**
TX32	**Lajitas Array**	**22.75**	**322**	P	**P**	**07 18 37.0**	**+1.9**
TXAR	**Lajitas Array**	**22.75**	**322**	P	**P**	**07 18 36.1**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=136,slow=9.7,SNR=22						
TXAR	**Lajitas Array**	**22.75**	**322**	P	**P**	**07 18 36.7**	**+1.6**
MIAR	**Mount Ida**	**23.18**	**348**	P	**P**	**07 18 39.6**	**+0.3**
MIAR				IAmb	IAmb	07 18 41.6	
	comp=Z,6.8nm,0.8s						
BIRD	**Birdtown, Kers**	**23.71**	**15**	P	**P**	**07 18 44.9**	**+0.4**
TKL	**Tuckaleechee C**	**24.02**	**8**	P	**P**	**07 18 47.6**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=198,slow=9.8,SNR=3.9						
TKL	**Tuckaleechee C**	**24.02**	**8**	P	**P**	**07 18 46.3**	**-1.2**
V53A	**Saluda**	**24.18**	**10**	P	**P**	**07 18 48.6**	**-0.5**
V53A				IAmb	IAmb	07 19 08.1	
	comp=Z,7.3nm,1.2s						
LCAR	**Lake Charles**	**24.30**	**354**	P	**P**	**07 18 49.4**	**-0.7**
U49A	**Red Boiling Sp**	**24.65**	**4**	P	**P**	**07 18 53.8**	**+0.5**
U49A				IAmb	IAmb	07 19 22.3	
	comp=Z,9.8nm,1.4s						
FNO	**Franklin**	**24.84**	**341**	P	**P**	**07 18 55.5**	**+0.4**
T42A	**Van Buren**	**25.25**	**354**	P	**P**	**07 18 58.2**	**-0.5**
T42A				IAmb	IAmb	07 19 15.0	
	comp=Z,6.3nm,1.4s						
MSTX	**Muleshoe**	**25.86**	**331**	P	**P**	**07 19 05.7**	**+1.2**
MSTX				IAmb	IAmb	07 19 10.6	
	comp=Z,7.5nm,1.0s						
S39A	**Bolivar**	**26.19**	**350**	P	**P**	**07 19 07.2**	**-0.1**
S39A				IAmb	IAmb	07 19 08.1	
	comp=Z,5.0nm,0.9s						
CCM	**Cathedral Cave**	**26.28**	**354**	P	**P**	**07 19 07.8**	**-0.2**
M54A	**Oil Creek Stat**	**30.44**	**12**	P	**P**	**07 19 44.9**	**-0.3**
PDAR	**Pinedale Array**	**36.09**	**333**	P	**P**	**07 20 34.8**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=133,slow=9.2,SNR=2.2						
REDW	**Red Top Meadow**	**37.14**	**332**	P	**P**	**07 20 44.7**	**+1.0**
REDW				IAmb	IAmb	07 20 49.5	
	comp=Z,2.6nm,0.8s						
ULM	**Lac du Bonnet**	**38.85**	**352**	P	**P**	**07 20 56.0**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=167,slow=6.7,SNR=4.1						
ULM	**Lac du Bonnet**	**38.85**	**352**	P	**P**	**07 20 56.0**	**-1.7**
ULM				IAmb	IAmb	07 21 21.1	
	comp=Z,8.8nm,1.5s						
FCC	**Fort Churchill**	**47.06**	**356**	P	**P**	**07 22 02.7**	**-1.3**
YKA	**Yellowknife Ar**	**54.08**	**345**	P	**P**	**07 22 55.9**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=145,slow=7.0,SNR=6.2						
CMAR	**Chiang Mai Arr**	**149.14**	**347**	PKPbc	**PKPbc**	**07 33 22.8**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=19,slow=3.8,SNR=1.1						

BYKL 18 07:13:54.9±0.2**, 56°.12N**×**113°.74E, h6**^{km}±3^{km}**, 1C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**268** ⇑	*i*Pg	Pg	07 13 56.7	-0.5
SVKR				*e*Sg	Sg	07 13 58.7	0.0
SVKR				Pmax			
	5µm,0.1s						
SVKR				Smax			
	51µm,0.3s						
UKT	**Uakit**	**0.64**	**186**	*e*Pg	Pg	07 14 05.9	-1.2
UKT				*e*Sg	Sg	07 14 14.1	-1.3
UKT				Pmax			
	128nm,0.6s						
UKT				Smax			
	482nm,0.7s						
YOA	**Uoyan**	**1.13**	**271**	*e*Pg	Pg	07 14 15.1	-1.4
YOA				*e*Sg	Sg	07 14 30.3	-0.9
YOA				Pmax			
	73nm,1.5s						
YOA				Smax			
	673nm,1.3s						
NLYR	**Nelyaty**	**1.16**	**70** ⇓	*i*Pg	Pg	07 14 15.6	-1.4
NLYR				*e*Pb	Pn	07 14 17.6	0.0
NLYR				*e*Sg	Sg	07 14 31.0	-1.0
NLYR				*e*Sb	Sn	07 14 34.6	+0.8
NLYR				max			
	384nm,0.2s						
NLYR				max			
	801nm,0.7s						
KMO	**Kumora**	**1.45**	**262** ⇓	*i*Pg	Pn	07 14 20.5	-1.1
KMO				*e*Pb	Pb	07 14 21.7	-0.5
KMO				*e*Sg	Sb	07 14 40.2	-0.6
KMO				max			
	328nm,0.2s						
KMO				max			
	1µm,1.0s						
BOD	**Bodaibo**	**1.71**	**5**	*e*Pg	Pn	07 14 25.3	+0.1
BOD				Pmax			
	171nm,0.2s						
BOD				Smax			
	580nm,0.2s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*Pn	Pn	07 14 28.6	+0.4
YLYR				*e*Pg	Pb	07 14 29.5	-0.9
YLYR				*e*Sg	Sb	07 14 54.8	+0.2
YLYR				Pmax			
	127nm,0.3s						
YLYR				Smax			
	809nm,1.0s						
NIZ	**Nizh Angarsk**	**2.39**	**263**	*e*Pn	Pn	07 14 34.8	+0.3
NIZ				*e*Pg	Pb	07 14 37.6	-0.6
NIZ				*e*Sg	Sg	07 15 09.9	-1.6
NIZ				Pmax			
	54nm,0.4s						
NIZ				Smax			
	286nm,0.7s						
CRS	**Chara**	**2.63**	**71** ⇓	*i*Pg	Pb	07 14 42.5	+0.1
CRS				*e*Sg	Sb	07 15 16.7	+1.8
CRS				Pmax			
	309nm,0.9s						
CRS				Smax			
	490nm,0.7s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pn	Pn	07 14 46.7	-0.1
SYVR				*e*Pg	Pb	07 14 54.2	+0.7
SYVR				*e*Sg	Sg	07 15 37.1	-3.0
SYVR				Pmax			
	36nm,0.8s						
SYVR				Smax			
	227nm,0.9s						
VTMR	**Vitim**	**3.39**	**350**	*e*Pg	Pb	07 14 56.5	+1.2
VTMR				*e*Sg	Sg	07 15 40.3	-3.4
TUP	**Tupik**	**3.94**	**113**	*e*Pn	Pn	07 14 56.5	+0.6
TUP				*e*Pg	Pb	07 15 06.0	+1.3
TUP				*e*Sg	Sb	07 15 56.8	+4.2
TUP				Pmax			
	88nm,0.8s						
TUP				Smax			
	314nm,1.1s						
OGRR	**Ongureny**	**4.33**	**238**	*e*Pn	Pn	07 15 01.7	+0.5
OGRR				*e*Pg	Pb	07 15 12.2	+0.9
OGRR				*e*Sg	Sg	07 16 09.5	-4.3
OGRR				Pmax			
	11nm,0.5s						
OGRR				Smax			
	119nm,1.0s						
KPC	**Khapcheranga**	**6.48**	**188**	*e*Pn	Pn	07 15 30.3	-0.5
KPC				*e*Sg	Sg	07 17 15.9	-6.9
KPC				Pmax			
	7.0nm,0.5s						
KPC				Smax			
	54nm,1.1s						

*MOS **18** 07:14:16.4±1.5, 56°.06N×113°.85E, h7^{km}, mb4.2/3, Error ellipse: s-maj=9.7km s-min=6.3km az=65.0*
*IDC **18** 07:14:17.4±1.0, 56°.11N×113°.97E, h0^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.5/62, mbtmp3.7/11, ML3.2/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/47, Error ellipse: s-maj=25.9km s-min=14.6km az=153.0*
*BYKL **18** 07:14:17.3±0.2, 56°.11N×113°.73E, h5^{km}±3^{km}, FELT I=II MSK at Yanchukan*
*BJI **18** 07:14:20.8±0.0, 55°.66N×114°.10E, h14^{km}, mB4.6/2, mb4.2/3*

ISC 18 07:14:18.6±0.5**, 56°.13N**±0°.03×**113°.76E**±0°.02**, h10**^{km}**, n75, σ2ˢ.59**/123**, mb3.7**/9**, 2D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.11**	**266**	*e*Pg	**Pg**	**07 14 19.5**	**-2.0**
SVKR				*e*Sg	**Sg**	**07 14 21.5**	**-2.0**
SVKR	**Severomuysk**	**0.11**	**266**	*e*PG	**Pg**	**07 14 19.5**	**-2.0**
UKT	**Uakit**	**0.64**	**187**	*e*Pg	**Pg**	**07 14 28.7**	**-2.4**
UKT				Pmax		07 14 29.3	
	585nm,0.4s						
UKT				*e*Sg	**Sg**	**07 14 36.5**	**-3.0**
UKT				Smax		07 14 38.5	
	6µm,0.7s						
UKT	**Uakit**	**0.64**	**187**	*e*PG	**Pg**	**07 14 28.7**	**-2.4**
UKT				*e*		07 14 36.8	
UKT				pmax	pmax		
	comp=Z,178nm,0.2s						
UKT				smax	smax		
	comp=E,3µm,0.3s						
YOA	**Uoyan**	**1.14**	**271**	*e*Pg	**Pb**	**07 14 37.8**	**-2.6**
YOA				Pmax		07 14 40.4	
	comp=E,1µm,0.4s						
YOA				*e*Sg	**Sb**	**07 14 53.4**	**-1.9**
YOA				*e*Sb	**Sn**	**07 14 57.6**	**+1.3**
YOA				max		07 15 01.3	
	comp=E,12µm,0.7s						
YOA	**Uoyan**	**1.14**	**271**	*e*PG	**Pb**	**07 14 37.8**	**-2.6**
YOA				*e*		07 14 53.5	
YOA				pmax	pmax		
	comp=Z,1µm,0.3s						
YOA				smax	smax		
	comp=N,12µm,0.7s						
NLYR	**Nelyaty**	**1.14**	**70**	*e*Pg	**Pb**	**07 14 38.5**	**-2.0**
NLYR				*e*Pb	**Pg**	**07 14 40.4**	**-0.2**
NLYR				max		07 14 40.7	
	comp=N,2µm,0.3s						
NLYR				*e*Sg	**Sb**	**07 14 53.8**	**-1.6**
NLYR				*e*Sb	**Sn**	**07 14 57.5**	**+1.1**
NLYR				max		07 14 59.1	
	comp=N,5µm,0.8s						
NLYR	**Nelyaty**	**1.14**	**70**	*e*PG	**Pb**	**07 14 38.5**	**-2.0**
NLYR				*e*		07 14 53.5	
NLYR				pmax	pmax		
	comp=Z,2µm,0.5s						
NLYR				smax	smax		
	comp=E,6µm,0.9s						
KMO	**Kumora**	**1.46**	**262**	*e*Pg	**Pn**	**07 14 42.9**	**-2.1**
KMO				*e*		07 14 44.6	
KMO				max		07 14 50.0	
	comp=E,918nm,0.5s						
KMO				*e*Sg	**Sn**	**07 15 02.4**	**-1.8**
KMO				*e*Sb	**Sb**	**07 15 04.7**	**+0.3**
KMO				max		07 15 06.3	
	comp=E,8µm,0.9s						
KMO	**Kumora**	**1.46**	**262**	*e*PG	**Pn**	**07 14 41.4**	**-3.6**
KMO				*e*		07 15 01.4	
KMO				pmax	pmax		
	comp=Z,725nm,0.4s						
KMO				smax	smax		
	comp=N,8µm,0.9s						
KMO	**Kumora**	**1.46**	**262**	*e*Sb	**Pn**	**07 14 42.6**	**-2.4**
BOD	**Bodaibo**	**1.70**	**4**	*e*Pg	**Pn**	**07 14 48.1**	**-0.3**
BOD				Pmax		07 14 48.4	
	comp=N,677nm,0.2s						
BOD				*e*Sg	**Sn**	**07 15 10.3**	**+0.1**
BOD				Smax		07 15 11.3	
	comp=N,3µm,0.4s						
BOD	**Bodaibo**	**1.70**	**4**	*e*PN	**Pn**	**07 14 47.9**	**-0.5**
BOD				*e*		07 15 10.7	
BOD				pmax	pmax		
	comp=Z,670nm,0.3s						
BOD				smax	smax		
	comp=E,3µm,0.8s						
BOD	**Bodaibo**	**1.70**	**4**	*e*Sg	**Pn**	**07 14 47.5**	**-0.9**
YLYR	**Ulyunkhan**	**1.94**	**231** ⇓	*i*Pg	**Pn**	**07 14 51.6**	**0.0**
YLYR				Pmax		07 14 52.2	
	comp=E,455nm,0.3s						
YLYR				*e*Sg	**Sb**	**07 15 17.4**	**-0.8**
YLYR				Smax		07 15 19.6	
	comp=E,5µm,0.4s						
YLYR	**Ulyunkhan**	**1.94**	**231** ⇓	*i*PN	**Pn**	**07 14 51.6**	**0.0**
YLYR				*e*		07 15 16.6	
YLYR				pmax	pmax		
	comp=Z,703nm,0.4s						
YLYR				smax	smax		
	comp=E,6µm,0.4s						
NIZ	**Nizh Angarsk**	**2.40**	**263**	*e*Pn	**Pn**	**07 14 57.8**	**-0.1**
NIZ				*e*Pg	**Pb**	**07 15 00.3**	**-1.6**
NIZ				Pmax		07 15 02.0	
	comp=E,290nm,0.6s						
NIZ				*e*Sn	**Sn**	**07 15 25.0**	**-2.4**
NIZ				*e*Sg	**Sb**	**07 15 31.7**	**+0.2**
NIZ				Smax		07 15 38.5	
	comp=E,2µm,0.9s						
NIZ	**Nizh Angarsk**	**2.40**	**263**	*e*PN	**Pn**	**07 14 59.8**	**+1.9**
NIZ				*e*		07 15 32.1	
NIZ				pmax	pmax		
	comp=Z,226nm,0.5s						
NIZ				smax	smax		
	comp=N,1µm,0.9s						
CRS	**Chara**	**2.62**	**71**	*e*Pn	**Pn**	**07 15 01.0**	**0.0**
CRS				*e*Pg	**Pb**	**07 15 05.4**	**-0.2**
CRS				Pmax		07 15 05.8	
	comp=N,2µm,1.0s						
CRS				*e*Sg	**Sb**	**07 15 39.7**	**+1.9**
CRS				Smax		07 15 41.7	
	comp=N,921nm,0.7s						
SYVR	**Suvo**	**3.29**	**223**	*e*Pn	**Pn**	**07 15 09.8**	**-0.4**
SYVR				*e*		07 15 12.2	
SYVR				*e*Pg	**Pb**	**07 15 16.4**	**-0.7**
SYVR				*e*PgPg	**PbPb**	**07 15 19.8**	**-0.4**
SYVR				*e*		07 15 21.7	
SYVR				max		07 15 22.0	
	comp=N,276nm,0.8s						
SYVR				*e*Sg	**Sb**	**07 15 59.0**	**+1.8**
SYVR				Smax		07 16 14.0	
	comp=N,1µm,1.3s						
SYVR	**Suvo**	**3.29**	**223**	*e*PN	**Pn**	**07 15 11.1**	**+0.9**
SYVR				*e*		07 15 16.7	
SYVR				*e*		07 15 58.1	
SYVR				pmax	pmax		
	comp=Z,280nm,0.8s						
SYVR				smax	smax		
	comp=E,1µm,0.8s						
VTMR	**Vitim**	**3.39**	**349**	*e*Pn	**Pn**	**07 15 11.2**	**-0.3**
VTMR				*e*Pg	**Pb**	**07 15 18.1**	**-0.6**
VTMR				*e*Sn	**Sn**	**07 15 49.3**	**-2.4**
VTMR				*e*Sg	**Sb**	**07 16 01.1**	**+1.2**
TUP	**Tupik**	**3.93**	**113**	*e*Pn	**Pn**	**07 15 18.1**	**-0.9**
TUP				*e*		07 15 22.0	
TUP				*e*Pg	**Pb**	**07 15 29.0**	**+1.0**
TUP				*e*		07 15 32.1	
TUP				max		07 15 32.6	
	comp=E,75nm,0.6s						
TUP				*e*Sg	**Sb**	**07 16 19.4**	**+3.8**
TUP				Smax		07 16 24.3	
	comp=E,2µm,0.9s						
TUP	**Tupik**	**3.93**	**113**	*e*PN	**Pn**	**07 15 18.1**	**-0.9**
TUP				*e*		07 15 28.0	
TUP				*e*S	**Sn**	**07 16 03.2**	**-2.0**
TUP				*e*		07 16 18.8	
TUP				pmax	pmax		
	comp=Z,75nm,0.6s						
TUP				smax	smax		
	comp=E,2µm,0.9s						
MXMB	**Maximikha**	**4.09**	**227**	*e*Pg	**Pb**	**07 15 30.4**	**-0.2**
MXMB				*e*Sg	**Sb**	**07 16 23.8**	**+3.8**
CIT	**Chita**	**4.12**	**182**	*e*Pn	**Pn**	**07 15 20.3**	**-1.3**
CIT				*e*Pg	**Pb**	**07 15 30.6**	**-0.5**
CIT				Pmax		07 15 32.4	
	comp=E,131nm,0.1s						
CIT				*e*Sg	**Sb**	**07 16 23.7**	**+2.8**
CIT				Smax		07 16 29.4	
	comp=E,750nm,0.4s						
CIT	**Chita**	**4.12**	**182**	*e*PN	**Pn**	**07 15 19.5**	**-2.1**
CIT				*e*		07 15 29.7	
CIT				*e*S	**Sn**	**07 16 06.4**	**-3.3**
CIT				*e*		07 16 22.4	
CIT				pmax	pmax		
	comp=Z,232nm,1.1s						
CIT				smax	smax		
	comp=E,947nm,1.4s						
OGRR	**Ongureny**	**4.34**	**238**	*e*Pn	**Pn**	**07 15 24.7**	**0.0**
OGRR				*e*Pg	**Pb**	**07 15 34.8**	**-0.2**
OGRR				Pmax		07 15 40.9	
	comp=E,141nm,1.1s						
OGRR				*e*Sn	**Sn**	**07 16 13.4**	**-1.9**
OGRR				*e*Sg	**Sb**	**07 16 31.6**	**+4.2**
OGRR				Smax		07 16 42.6	
	comp=E,594nm,1.7s						
OGRR	**Ongureny**	**4.34**	**238**	*e*PN	**Pn**	**07 15 24.3**	**-0.4**
OGRR				*e*		07 15 35.4	
OGRR				*e*		07 16 30.3	
OGRR				pmax	pmax		
	comp=Z,172nm,1.9s						
OGRR				smax	smax		
	comp=E,592nm,1.8s						
YKLR	**Yuktali**	**4.42**	**81**	*e*Pn	**Pn**	**07 15 24.8**	**-0.8**
YKLR				*e*Pg	**Pb**	**07 15 35.8**	**-0.4**
YKLR				*e*Sg	**Sb**	**07 16 33.8**	**+4.3**
TRG	**Tyrgan**	**5.48**	**235**	*e*Pg	**Pb**	**07 15 54.5**	**+0.1**
TRG				Pmax		07 16 00.8	
	comp=E,50nm,1.0s						
TRG				*e*Sg	**Sb**	**07 17 05.1**	**+4.9**
TRG				Smax		07 17 15.4	
	comp=E,244nm,0.9s						
TRG	**Tyrgan**	**5.48**	**235**	*e*PN	**Pn**	**07 15 39.3**	**-1.0**
TRG				*e*		07 15 55.3	
TRG				*e*S	**Sn**	**07 16 40.3**	**-3.1**
TRG				*e*		07 17 05.0	
TRG				pmax	pmax		
	comp=Z,50nm,1.1s						
TRG				smax	smax		
	comp=N,244nm,1.0s						
HRMR	**Khuramsha**	**6.04**	**225**	*e*Pn	**Pn**	**07 15 49.4**	**+1.4**
HRMR				*e*Pg	**Pb**	**07 16 06.3**	**+2.4**

HRMR				Pmax		07 16 09.8	
	comp=N,114nm,0.6s						
HRMR				*e*Sg	Sg	07 17 24.6	-7.8
HRMR				Smax		07 17 37.7	
	comp=N,1µm,0.7s						
IENR	**Iengra**	6.20	84	*e*Sg	Sg	07 17 30.0	-7.5
CLNS	**Chul'man**	6.21	79	*e*Pn	Pn	07 15 50.5	+0.2
CLNS				*e*Pg	Pb	07 16 08.8	+2.0
CLNS				*e*Sg	Sg	07 17 31.0	-6.8
KPC	**Khapcheranga**	6.49	188	*e*Pg	Pb	07 16 14.1	+2.6
KPC				Pmax		07 16 23.2	
	comp=N,19nm,0.6s						
KPC				*e*Sg	Sb	07 17 37.0	+7.9
KPC				Smax		07 17 47.4	
	comp=N,625nm,1.7s						
KPC	**Khapcheranga**	6.49	188	*e*PN	Pn	07 15 51.2	-3.0
KPC				*e*		07 16 11.9	
KPC				*e*		07 17 34.8	
KPC				pmax	pmax		
	comp=Z,19nm,0.5s						
KPC				smax	smax		
	comp=E,625nm,1.7s						
KPC	**Khapcheranga**	6.49	188	*e*Pg	Pn	07 15 51.6	-2.6
IRK	**Irkutsk**	6.79	239	*e*Sg	Sb	07 17 46.7	+8.9
IRK				Smax		07 18 01.3	
	comp=E,420nm,0.7s						
IRK	**Irkutsk**	6.79	239	*e*PG	Pb	07 16 19.7	+3.0
IRK				*e*		07 17 46.8	
IRK				pmax	pmax		
	comp=Z,123nm,0.1s						
IRK				smax	smax		
	comp=N,264nm,0.8s						
TLY	**Talaya**	7.45	238	Pn	Pn	07 16 08.0	+0.6
	comp=N,0.0nm,0.3s,baz=35,slow=8.3,SNR=2.7						
TLY				Pg	Pb	07 16 29.9	+2.0
	comp=N,0.0nm,0.3s,baz=43,slow=13,SNR=9.8						
TLY				Lg	Lg	07 18 06.0	
	comp=N,0.1nm,0.3s,baz=107,slow=22,SNR=9.7						
TLY				LR	LR	07 19 04.9	
	comp=N,156nm,18.5s,baz=17,slow=38						
TLY	**Talaya**	7.45	238	*e*Pn	Pn	07 16 07.9	+0.6
TLY				*e*Pg	Pb	07 16 30.1	+2.2
TLY				Pmax		07 16 37.6	
	comp=N,17nm,0.8s						
TLY				*e*Sn	Sn	07 17 25.9	-5.9
TLY				*e*Sg	Sb	07 18 05.8	+9.1
TLY				Smax		07 18 15.0	
	comp=N,180nm,1.3s						
TLY	**Talaya**	7.45	238	*e*PG	Pb	07 16 31.2	+3.3
TLY				*e*		07 18 06.0	
TLY				pmax	pmax		
	comp=Z,24nm,0.7s						
TLY				smax	smax		
	comp=E,134nm,0.5s						
ARS	**Arshan**	7.89	242	*e*	Pn	07 16 15.4	+2.0
ARS				*e*Pg	Pb	07 16 39.9	+4.5
ARS				Pmax		07 16 43.0	
	comp=E,33nm,0.8s						
ARS				*e*Sg	Sb	07 18 20.0	+11
ARS				Smax		07 18 27.6	
	comp=E,450nm,0.7s						
ARS	**Arshan**	7.89	242	*e*PN	Pn	07 16 15.6	+2.2
ARS				*e*		07 16 40.1	
ARS				pmax	pmax		
	comp=Z,33nm,0.5s						
ZEA	**Zeya**	8.13	101	*e*PN	Pn	07 16 17.5	+0.9
ZEA				*e*		07 16 45.4	
ZEA				*e*S	Sn	07 17 49.6	+1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				smax	smax		
	comp=N,190nm,1.1s						
ZAK	**Zakamensk**	8.51	232	*e*Pn	Pn	07 16 20.6	-1.4
ZAK				*e*Pg	Pg	07 16 50.9	-11
ZAK				Pmax		07 16 57.4	
	comp=N,9.0nm,0.5s						
ZAK				*e*Sg	Sg	07 18 39.1	-13
ZAK				Smax		07 19 13.4	
	comp=N,170nm,1.4s						
ZAK	**Zakamensk**	8.51	232	*e*PN	Pn	07 16 25.2	+3.2
ZAK				*e*		07 16 46.5	
ZAK				*e*		07 18 39.1	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.2s						
ZAK				smax	smax		
	comp=N,171nm,1.6s						
MOY	**Mondy**	8.76	245	*e*Pn	Pn	07 16 25.1	-0.3
MOY				max		07 16 47.2	
	comp=N,31nm,1.9s						
MOY				*e*Sg	Sg	07 18 46.3	-13
MOY				Smax		07 18 53.5	
	comp=N,216nm,1.5s						
MOY	**Mondy**	8.76	245	*e*PN	Pn	07 16 25.0	-0.3
MOY				*e*		07 16 54.5	
MOY				*e*S	Sn	07 17 57.6	-6.5
MOY				*i*		07 18 53.6	
ORL	**Orlik**	8.91	252	*e*Pn	Pn	07 16 28.2	+0.9
ORL				max		07 16 53.5	
	comp=N,21nm,1.3s						
ORL				*e*Sn	Sn	07 18 03.4	-4.2
ORL				*e*Sg	Sg	07 18 51.9	-12
ORL				Smax		07 19 01.6	
	comp=N,146nm,1.4s						
ORL	**Orlik**	8.91	252	*e*PN	Pn	07 16 27.7	+0.4
ORL				*e*		07 16 57.7	
ORL				*e*S	Sn	07 18 03.5	-4.2
ORL				*e*		07 18 51.9	
ORL				pmax	pmax		
	comp=Z,28nm,0.9s						
ORL				smax	smax		
	comp=N,145nm,1.4s						
ULN	**Ulaanbaatar**	9.24	209	*i* P	Pn	07 16 34.5	+2.5
SONM	**Songino Array**	9.46	212	Pn	Pn	07 16 34.5	-0.5
	comp=N,0.4nm,0.3s,baz=25,slow=13,SNR=7.1						
SONM				Pg		07 17 12.5	
	comp=N,0.8nm,0.3s,baz=12,slow=15,SNR=7.3						
SONM				Lg	Lg	07 19 07.9	
	comp=N,1.4nm,0.3s,baz=32,slow=28,SNR=4.4						
YAK	**Yakutsk**	10.09	48	Pn	Pn	07 16 47.2	+3.8
	comp=N,0.1nm,0.3s,baz=298,slow=3.0,SNR=2.0						
YAK				Lg	Lg	07 19 25.5	
	comp=N,0.3nm,0.3s,baz=340,slow=23,SNR=9.7						
YAK	**Yakutsk**	10.09	48	*e*P	Pn	07 16 41.6	-1.8
YAK				*e*S	Sn	07 18 34.4	-2.0
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK				smax	smax		
	comp=N,12nm,1.1s						
YAK				smax	smax		
	comp=E,11nm,1.0s						
YAK				MLR	MLR		
	comp=Z,152nm,9.0s						
YAK				MLR	MLR		
	comp=N,70nm,9.0s						
KLR	**Kul'dur**	12.89	115	Pn	Pn	07 17 21.7	0.0
	comp=N,0.4nm,0.3s,baz=310,slow=14,SNR=8.2						
KLR				Lg	Lg	07 21 00.6	
	comp=N,0.4nm,0.3s,baz=34,slow=20,SNR=8.1						
KLR	**Kul'dur**	12.89	115	*i* P	Pn	07 17 23.5	+1.8
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
USRK	**Ussuriysk Ar.**	16.63	128	Lg	Lg	07 23 00.1	
	baz=332,slow=28,SNR=7.7						
ZALV	**Zalesovo Beam**	16.68	275	Pn	Pn	07 18 12.3	+0.1
	comp=Z,0.2nm,0.3s,baz=64,slow=6.8,SNR=3.7						
ZALV				Lg	Lg	07 23 03.4	
	comp=Z,0.1nm,0.3s,baz=81,slow=20,SNR=5.3						
SEY	**Seymchan**	20.47	55	P	P	07 18 56.7	+0.7
	comp=Z,0.8nm,0.3s,baz=267,slow=12,SNR=6.1						
SEY				Lg	Lg	07 25 00.1	
	comp=Z,3.7nm,0.3s,baz=348,slow=15,SNR=4.7						
KURK	**Kurchatov**	21.46	270	P	P	07 19 10.2	+3.3
MK31	**Makanchi Array**	21.54	258	*i* P	P	07 19 08.5	+0.7
MKAR	**Makanchi Array**	21.54	258	P	P	07 19 09.1	+1.3
	comp=Z,1.8nm,0.8s,baz=64,slow=9.5,SNR=13						
KURBB	**Kurchatov Arra**	21.56	270	P	P	07 19 10.2	+2.3
	comp=Z,3.0nm,0.7s,baz=65,slow=12,SNR=12						
BVAR	**Borovoye Array**	25.02	281	P	P	07 19 44.4	+2.0
	comp=Z,0.5nm,0.6s,baz=240,slow=24,SNR=5.0						
BRVK	**Borovoye**	25.06	281	*i* P	P	07 19 44.8	+2.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	**Ala-Archa**	28.47	258	*i* P	P	07 20 15.0	+1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	29.95	294	*i* P	P	07 20 29.7	+3.1
ARU				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	42.48	315	P	P	07 22 14.4	+1.0
	comp=Z,4.4nm,1.1s,baz=39,slow=12,SNR=6.3						
ILAR	**Eielson Array**	44.80	37	P	P	07 22 32.3	+0.3
	comp=Z,0.5nm,0.9s,baz=308,slow=4.4,SNR=4.7						
SCO	**Scoresbysund**	49.79	342	*i* P	P	07 23 13.9	+3.2
SCO	**Scoresbysund**	49.79	342	*i* P	P	07 23 13.9	+3.2
SCO	**Scoresbysund**	49.79	342	*i* P	P	07 23 13.9	+3.2
YKA	**Yellowknife Ar**	55.87	25	P	P	07 23 54.1	-1.6
	comp=Z,0.6nm,0.8s,baz=334,slow=6.6,SNR=8.1						

BYKL 18 07:14:42.9±0.6, 56°.16N×113°.82E, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.15	254	*e*Pg	Pg	07 14 45.3	-0.5
SVKR				*e*Sg	Sg	07 14 47.3	-0.5
SVKR				Pmax			
	6µm,0.1s						
SVKR				Smax			
	40µm,0.6s						
UKT	**Uakit**	0.68	189	*e*Pg	Pg	07 14 55.3	-0.6
UKT				*e*Sg	Sg	07 15 04.1	-0.6
UKT				Pmax			
	246nm,0.2s						
UKT				Smax			
	524nm,0.5s						
NLYR	**Nelyaty**	1.10	72	*e*Pg	Pg	07 15 02.6	-1.4
NLYR				*e*Sg	Sg	07 15 17.7	-0.5
YOA	**Uoyan**	1.17	270	*e*Sg	Sg	07 15 19.9	-0.6
YOA				Smax			
	948nm,0.2s						
KMO	**Kumora**	1.50	261	*e*Sg	Sg	07 15 29.1	-1.8
BOD	**Bodaibo**	1.67	3	*e*Sg	Sn	07 15 35.5	+0.1
BOD				Smax			
	463nm,0.4s						
YLYR	**Ulyunkhan**	1.98	231	*e*Sg	Sb	07 15 44.3	-0.8
YLYR				Smax			
	757nm,0.5s						
NIZ	**Nizh Angarsk**	2.44	263	*e*Sg	Sb	07 15 58.2	+0.1
NIZ				Smax			
	410nm,0.9s						
CRS	**Chara**	2.57	71	*e*Sg	Sb	07 16 01.7	-0.4
CRS				Smax			
	349nm,0.8s						
TUP	**Tupik**	3.91	114	*e*Sg	Sb	07 16 42.6	+2.0
TUP				Smax			
	200nm,0.9s						
KPC	**Khapcheranga**	6.53	188	*e*Sg	Sg	07 18 06.5	-5.9
KPC				Smax			
	131nm,1.6s						

BYKL 18 07:20:58.1±0.3, 56°.11N×113°.75E, h6^{km}±7^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.11	274	*e*Pg	Pg	07 21 00.3	-0.1
SVKR				*e*Sg	Sg	07 21 02.2	+0.2
SVKR				Pmax			
	1µm,0.1s						
SVKR				Smax			
	18µm,0.3s						
UKT	**Uakit**	0.63	186	*e*Pg	Pg	07 21 09.5	-0.6
UKT				*e*Sg	Sg	07 21 17.9	-0.4
UKT				Pmax			
	66nm,0.2s						
UKT				Smax			
	167nm,0.7s						
YOA	**Uoyan**	1.14	272	*e*Pg	Pg	07 21 18.4	-1.4
YOA				*e*Sg	Sg	07 21 33.8	-0.7
YOA				Pmax			
	287nm,0.2s						
YOA				Smax			
	597nm,0.5s						
NLYR	**Nelyaty**	1.15	70	*e*Pg	Pg	07 21 19.2	-1.0
NLYR				*e*Pb	Pn	07 21 21.2	+0.4
NLYR				*e*Sg	Sg	07 21 35.0	-0.2
NLYR				max			
	130nm,0.4s						
NLYR				max			
	228nm,0.7s						
KMO	**Kumora**	1.45	262	*e*Pg	Pn	07 21 24.0	-0.9
KMO				*e*Pb	Pb	07 21 25.2	-0.3
KMO				*e*Sg	Sb	07 21 43.7	-0.5
KMO				max			
	100nm,0.2s						
KMO				max			
	268nm,0.6s						
BOD	**Bodaibo**	1.72	5	*e*Pg	Pn	07 21 28.8	+0.3
BOD				Pmax			
	57nm,0.2s						
BOD				Smax			
	240nm,0.3s						
YLYR	**Ulyunkhan**	1.92	231	*e*Pg	Pb	07 21 32.5	-1.1
YLYR				*e*Sg	Sb	07 21 58.4	+0.6
YLYR				Pmax			
	47nm,0.3s						
YLYR				Smax			
	309nm,0.4s						
NIZ	**Nizh Angarsk**	2.39	264	*e*Pg	Pb	07 21 40.9	-0.6
NIZ				*e*Sg	Sb	07 22 12.4	+1.2
NIZ				Pmax			
	18nm,0.4s						
NIZ				Smax			
	65nm,0.9s						
CRS	**Chara**	2.63	71	*e*Pg	Pb	07 21 46.0	+0.4
CRS				*e*Sg	Sb	07 22 20.2	+2.1
CRS				Pmax			
	13nm,0.1s						
CRS				Smax			
	87nm,0.6s						
TUP	**Tupik**	3.93	113	*e*Pn	Pn	07 21 58.8	-0.1
TUP				*e*Pg	Pb	07 22 07.8	+0.1
TUP				*e*Sg	Sb	07 22 58.2	+2.7
TUP				Pmax			
	9.0nm,0.8s						
TUP				Smax			
	81nm,1.0s						

BYKL 18 07:21:18.9±0.3, 56°.17N×113°.76E, h2^{km}±6^{km}, 1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.12	245	⇓*i*Pg	Pg	07 21 20.9	-0.4
SVKR				*e*Sg	Sg	07 21 23.0	0.0
SVKR				Pmax			
	6µm,0.1s						
SVKR				Smax			
	14µm,0.4s						
UKT	**Uakit**	0.69	186	*e*Pg	Pg	07 21 31.7	-0.3
UKT				*e*Sg	Sg	07 21 40.3	-0.6
UKT				Pmax			
	221nm,0.4s						
UKT				Smax			
	501nm,1.0s						
NLYR	**Nelyaty**	1.13	73	*e*Pg	Pg	07 21 38.8	-1.7
NLYR				*e*Sg	Sg	07 21 53.7	-1.4
NLYR				*e*Sb	Sn	07 21 57.4	-0.4
NLYR				Pmax			
	315nm,0.3s						
NLYR				max			
	1µm,0.6s						
KMO	**Kumora**	1.46	260	*e*Pg	Pn	07 21 44.8	-1.5
KMO				*e*Sg	Sg	07 22 03.9	-2.0
BOD	**Bodaibo**	1.66	5	*e*Pg	Pn	07 21 49.2	+0.2
BOD				*e*Sg	Sb	07 22 11.6	+0.1
BOD				Pmax			
	65nm,0.3s						
BOD				Smax			
	201nm,0.5s						
YLYR	**Ulyunkhan**	1.97	230	*e*Pn	Pn	07 21 53.2	0.0
YLYR				*e*Pg	Pb	07 21 54.6	-0.8
YLYR				*e*Sg	Sb	07 22 19.9	-0.4
YLYR				Pmax			
	112nm,0.4s						
YLYR				Smax			
	363nm,0.3s						
CRS	**Chara**	2.60	72	*e*Pg	Pb	07 22 05.4	-0.9
CRS				*e*Sg	Sb	07 22 39.0	+0.3
CRS				Smax			
	112nm,0.5s						

BYKL 18 07:21:20.2±0.2, 56°.15N×113°.78E, h7^{km}±4^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.13	255	*e*Sg	Sg	07 21 25.0	+0.1
SVKR				Smax			
	39µm,0.3s						
UKT	**Uakit**	0.67	187	*e*Sg	Sg	07 21 40.9	-0.8
UKT				Pmax			
	221nm,0.4s						
UKT				Smax			
	615nm,1.0s						
NLYR	**Nelyaty**	1.12	72	*e*Pg	Pg	07 21 40.2	-1.6
NLYR				*e*Pb	Pb	07 21 41.4	-0.6
NLYR				*e*Sg	Sg	07 21 54.8	-1.5
NLYR				*e*Sb	Sn	07 21 58.3	+0.2
NLYR				max			
	345nm,0.3s						
NLYR				max			
	1µm,1.0s						
YOA	**Uoyan**	1.15	270	*e*Pg	Pg	07 21 40.3	-2.0
YOA				*e*Sg	Sg	07 21 55.3	-1.9
YOA				Pmax			
	388nm,0.1s						
YOA				Smax			
	2µm,0.7s						
KMO	**Kumora**	1.47	261	*e*Pg	Pn	07 21 46.4	-0.7
KMO				*e*Sg	Sn	07 22 05.8	-0.8
KMO				*e*Sb	Sg	07 22 08.3	+0.8
KMO				Pmax			
	310nm,0.4s						
KMO				max			
	1µm,0.9s						
BOD	**Bodaibo**	1.68	4	*e*Pg	Pb	07 21 51.1	-0.3
BOD				*e*Sg	Sg	07 22 13.4	-0.7
BOD				Pmax			
	159nm,0.2s						
BOD				Smax			
	590nm,0.2s						
YLYR	**Ulyunkhan**	1.96	230	*e*Pn	Pn	07 21 53.8	-0.1
YLYR				*e*Pg	Pb	07 21 55.3	-0.9
YLYR				*e*Sg	Sb	07 22 21.0	+0.1
YLYR				Pmax			
	115nm,0.6s						
YLYR				Smax			
	605nm,0.4s						
NIZ	**Nizh Angarsk**	2.41	263	*e*Pn	Pn	07 22 00.3	+0.2
NIZ				*e*Pg	Pb	07 22 03.6	-0.3
NIZ				*e*Sg	Sb	07 22 34.7	+0.9
NIZ				Pmax			
	62nm,0.8s						
NIZ				Smax			
	193nm,1.0s						
CRS	**Chara**	2.60	71	*e*Pg	Pb	07 22 06.1	-1.0
CRS				*e*Sg	Sb	07 22 39.9	+0.7
CRS				Pmax			
	251nm,0.8s						
CRS				Smax			
	191nm,0.6s						
SYVR	**Suvo**	3.32	223	*e*Pg	Pb	07 22 19.7	+0.4
SYVR				*e*Sg	Sb	07 23 02.0	+2.2
SYVR				Pmax			
	31nm,0.7s						
SYVR				Smax			
	210nm,1.2s						
TUP	**Tupik**	3.93	114	*e*Pn	Pn	07 22 21.0	+0.1
TUP				*e*Pg	Pb	07 22 31.1	+1.3
TUP				*e*Sg	Sg	07 23 22.8	-3.5
TUP				Pmax			
	18nm,0.4s						
TUP				Smax			
	207nm,1.1s						
MXMB	**Maximikha**	4.11	227	*e*Pg	Pb	07 22 33.5	+0.7
MXMB				*e*Sg	Sb	07 23 27.0	+4.3
OGRR	**Ongureny**	4.37	237	*e*Pn	Pn	07 22 28.1	+1.2
OGRR				*e*Pg	Pb	07 22 39.7	+2.5
OGRR				*e*Sg	Sg	07 23 36.8	-3.5
OGRR				Pmax			
	19nm,1.2s						
OGRR				Smax			
	83nm,1.6s						
YKLR	**Yuktali**	4.40	81	*e*Pg	Pb	07 22 39.0	+1.2
YKLR				*e*Sg	Sb	07 23 35.6	+4.6
TRG	**Tyrgan**	5.51	235	*e*Pg	Pb	07 22 58.8	+2.2
TRG				*e*Sg	Sg	07 24 10.6	-6.3
TRG				Pmax			
	16nm,1.4s						
TRG				Smax			
	43nm,1.3s						
KPC	**Khapcheranga**	6.51	188	*e*Pg	Pb	07 23 18.2	+4.4
KPC				*e*Sg	Sg	07 24 43.2	-5.9
KPC				Pmax			
	9.0nm,0.9s						
KPC				Smax			
	48nm,0.9s						

REY 18 07:21:42.1, 64°.66N×17°.45W, h10^{km}, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IURH	**Urdarhals**	0.21	38	P	Pg	07 21 46.4	-0.1
	baz=38						
ISKR	**Skrokkalda**	0.42	257	P	Pg	07 21 49.8	-0.4
	baz=257						
THOR	**Thorvaldshraun**	0.43	49	P	Pg	07 21 50.2	-0.4
	baz=49						
THOR				S	Sg	07 21 56.8	+0.5
	baz=49						
IKRE	**Kreppuhraun**	0.47	74	P	Pg	07 21 50.8	-0.5
	baz=74						
IKRE				S	Sg	07 21 57.7	+0.1
	baz=74						
IJOK	**Jokulheimar**	0.48	225	P	Pg	07 21 50.8	-0.6
	baz=225						
IJOK				S	Sg	07 21 57.0	-0.8
	baz=225						
IASK	**Askja**	0.52	40	P	Pg	07 21 51.6	-0.7
	baz=40						
IASK				S	Sg	07 21 59.2	0.0
	baz=40						
IMKO	**Mokollar**	0.57	55	P	Pg	07 21 52.5	-0.7
	baz=55						
IMKO				S	Sg	07 22 01.1	+0.3
	baz=55						
IIEY	**Innrieyrar**	0.64	208	P	Pg	07 21 53.5	-0.9
	baz=208						
IIEY				S	Sg	07 22 02.6	-0.1
	baz=208						
IKSK	**Karasker**	0.65	139	P	Pg	07 21 53.5	-1.1
	baz=139						
IKSK				S	Sg	07 22 02.9	-0.3
	baz=139						
ISVA	**Svartarkot**	0.69	7	P	Pg	07 21 54.4	-1.1
	baz=6.7						
ISVA				S	Sg	07 22 03.8	-0.6
	baz=6.7						
IKAL	**Kalfafell**	0.72	189	P	Pg	07 21 55.0	-0.9
	baz=188						
IVSH	**V-Sauoahnukur**	0.75	77	P	Pg	07 21 55.4	-1.2
	baz=78						
IVSH				S	Sg	07 22 05.8	-0.6
	baz=78						
IFAG	**Fagurholsmyri**	0.86	156	P	Pg	07 21 57.5	-1.1
	baz=156						
IADA	**Aoalbol**	0.88	65	P	Pg	07 21 57.4	-1.6
	baz=65						
IADA				S	Sg	07 22 09.3	-1.1
	baz=65						
IMEL	**Melhnausar**	0.98	20	P	Pg	07 21 59.0	-1.8
	baz=20						
IREN	**Reynihlio**	1.02	13	P	Pg	07 21 59.8	-1.9
	baz=13						
ISNB	**Snabyli**	1.06	210	P	Pg	07 22 00.7	-1.7
	baz=210						
IKVO	**Krokottuvotn**	1.09	12	P	Pg	07 22 00.9	-2.1
	baz=12						
IGRS	**Grimsstaoir**	1.13	29	P	Pb	07 22 01.7	-2.0
	baz=29						
IFED	**Fedgar**	1.16	238	P	Pb	07 22 03.0	-1.2
	baz=238						
IRJU	**Rjupnafell**	1.17	208	P	Pb	07 22 02.7	-1.6

```
      baz=208
IMJO  Mjoaskard          1.21 234  P       Pn     07 22 03.5  -1.6
      baz=234
ISKI  Skildingahlsh      1.23   8  P       Pn     07 22 03.2  -2.1
      baz=8.0
ISKI                               S       Sb     07 22 20.1  -1.3
      baz=8.0
IGHA  Grjothals          1.24  15  P       Pn     07 22 03.3  -2.1
      baz=15
```

BYKL 18 07:21:53.3±0.3, 56°.11N×113°.73E, h8^{km}±5^{km}, 1C, East of Lake Baykal

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                   Op      ISC     h  m  s      ISC
SVKR  Severomuysk        0.10 274⇑ iPg     Pg     07 21 55.3  -0.4
SVKR                               eSg     Sg     07 21 57.3   0.0
SVKR                                Pmax
      6μm,0.2s
SVKR                                Smax
      38μm,0.4s
UKT   Uakit              0.62 185  ePg     Pg     07 22 04.6  -0.8
UKT                                eSg     Sg     07 22 12.9  -0.6
UKT                                 Pmax
      50nm,0.1s
UKT                                 Smax
      627nm,0.8s
YOA   Uoyan              1.12 272  ePg     Pg     07 22 13.3  -1.5
YOA                                eSg     Sg     07 22 28.4  -1.0
YOA                                 Pmax
      737nm,0.3s
YOA                                 Smax
      2μm,0.5s
NLYR  Nelyaty            1.16  70  ePg     Pg     07 22 14.4  -1.2
NLYR                               ePb     Pn     07 22 16.2  +0.3
NLYR                               eSg     Sg     07 22 30.7   0.0
NLYR                               eSb     Sn     07 22 33.8  +1.8
NLYR                                max
      382nm,0.3s
NLYR                                max
      973nm,0.8s
KMO   Kumora             1.44 262  ePg     Pn     07 22 19.2  -0.5
KMO                                eSg     Sn     07 22 38.4  -0.3
KMO                                eSb     Sg     07 22 41.0  +1.5
KMO                                 Pmax
      366nm,0.4s
KMO                                 max
      967nm,0.9s
BOD   Bodaibo            1.72   5  ePg     Pn     07 22 24.0  +0.5
BOD                                eSg     Sb     07 22 46.6  -0.3
BOD                                 Pmax
      146nm,0.3s
BOD                                 Smax
      694nm,0.7s
YLYR  Ulyunkhan          1.91 231  ePg     Pb     07 22 27.8  -0.6
YLYR                                Pmax
      166nm,0.2s
YLYR                                Smax
      805nm,0.4s
NIZ   Nizh Angarsk       2.38 264  ePn     Pn     07 22 32.4  -0.2
NIZ                                ePg     Pb     07 22 36.3  -0.1
NIZ                                eSg     Sg     07 23 08.3  -1.4
NIZ                                 Pmax
      88nm,0.6s
NIZ                                 Smax
      197nm,0.5s
CRS   Chara              2.64  71  ePg     Pb     07 22 40.5  -0.3
CRS                                 Pmax
      290nm,0.7s
CRS                                 Smax
      196nm,0.8s
TUP   Tupik              3.94 113  ePn     Pn     07 22 54.1  +0.1
TUP                                ePg     Pb     07 23 04.1  +1.1
TUP                                eSg     Sg     07 23 55.3  -4.4
TUP                                 Pmax
      70nm,1.3s
TUP                                 Smax
      233nm,1.0s
KPC   Khapcheranga       6.47 188  ePg     Pb     07 23 49.2  +3.1
KPC                                eSg     Sg     07 25 12.4  -8.4
KPC                                 Pmax
      3.0nm,0.4s
KPC                                 Smax
      95nm,1.6s
```

BYKL 18 07:22:19.5±0.2, 56°.14N×113°.71E, h9^{km}±3^{km}, 1C, East of Lake Baykal

```
Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                   Op      ISC     h  m  s      ISC
SVKR  Severomuysk        0.09 255⇑ iPg     Pg     07 22 21.9   0.0
SVKR                                Pmax          07 22 22.0
      6μm,0.1s
SVKR                               eSg     Sg     07 22 23.8  +0.2
SVKR                                Smax          07 22 24.0
      89μm,0.5s
UKT   Uakit              0.65 184  ePg     Pg     07 22 31.3  -0.8
UKT                                 Pmax          07 22 33.7
      458nm,0.2s
UKT                                eSg     Sg     07 22 39.6  -1.1
UKT                                 Smax          07 22 40.9
      2μm,0.7s
YOA   Uoyan              1.11 270  ePg     Pg     07 22 40.3  -0.5
YOA                                ePb     Pn     07 22 42.4  +1.1
YOA                                 max           07 22 42.6
      2μm,0.4s
YOA                                eSg     Sg     07 22 55.0  -0.3
YOA                                e              07 22 57.7
YOA                                e              07 23 00.1
YOA                                 max           07 23 03.1
      6μm,0.5s
NLYR  Nelyaty            1.17  72  ePg     Pb     07 22 40.9  -0.9
NLYR                               ePb     Pn     07 22 42.7  +0.7
NLYR                                max           07 22 43.6
      671nm,0.4s
NLYR                               eSg     Sg     07 22 56.1  -0.9
NLYR                               eSb     Sn     07 22 59.8  +1.8
NLYR                                max           07 23 01.3
      2μm,1.1s
KMO   Kumora             1.43 261  ePg     Pn     07 22 45.8  +0.2
KMO                                ePb     Pg     07 22 47.0  +0.1
KMO                                 max           07 22 50.2
      491nm,0.4s
KMO                                eSg     Sb     07 23 05.0  +0.3
KMO                                e              07 23 07.8
KMO                                 max           07 23 08.6
      3μm,1.0s
BOD   Bodaibo            1.69   5  ePg     Pb     07 22 50.0  -0.7
BOD                                 Pmax          07 22 50.2
      187nm,0.3s
BOD                                eSg     Sb     07 23 12.7  +0.6
BOD                                 Smax          07 23 13.5
      1μm,0.8s
YLYR  Ulyunkhan          1.93 230  ePn     Pn     07 22 52.3  -0.1
YLYR                               ePg     Pb     07 22 54.0  -0.7
YLYR                                Pmax          07 22 54.7
      392nm,0.4s
YLYR                               eSg     Sb     07 23 19.6  +0.7
YLYR                                Smax          07 23 22.1
      2μm,0.4s
NIZ   Nizh Angarsk       2.37 263  ePn     Pn     07 22 58.5  -0.1
NIZ                                ePg     Pb     07 23 01.3  -1.1
NIZ                                 Pmax          07 23 03.0
      141nm,0.4s
NIZ                                eSg     Sb     07 23 31.4  -0.3
NIZ                                 Smax          07 23 40.9
      496nm,0.7s
CRS   Chara              2.64  71  ePg     Pb     07 23 06.8  -0.1
CRS                                 Pmax          07 23 15.4
      180nm,0.7s
CRS                                eSg     Sb     07 23 41.0  +1.6
CRS                                 Smax          07 23 43.9
      318nm,0.8s
SYVR  Suvo               3.28 222  ePg     Pb     07 23 18.7  +0.8
SYVR                                Pmax          07 23 24.3
      95nm,0.9s
SYVR                               eSn     Sn     07 23 49.9  -0.3
SYVR                               eSg     Sg     07 24 01.5  -3.3
SYVR                                Smax          07 24 16.5
      338nm,1.3s
VTMR  Vitim              3.37 350  ePg     Pb     07 23 19.8  +0.5
VTMR                               eSg     Sb     07 24 02.9  +2.6
TUP   Tupik              3.96 113  ePn     Pn     07 23 20.9  +0.5
TUP                                ePg     Pb     07 23 30.9  +1.4
TUP                                 Pmax          07 23 39.0
      111nm,1.3s
TUP                                eSg     Sb     07 24 21.7  +4.2
TUP                                e              07 24 26.4
TUP                                 max           07 24 27.4
      499nm,0.8s
MXMB  Maximikha          4.08 227  ePn     Pn     07 23 23.1  +1.1
MXMB                               ePg     Pb     07 23 33.1  +1.7
MXMB                               eSg     Sg     07 24 26.1  -4.1
CIT   Chita              4.13 181  ePn     Pn     07 23 23.3  +0.6
CIT                                ePg     Pb     07 23 33.4  +1.1
CIT                                 Pmax          07 23 34.6
      160nm,0.1s
CIT                                eSg     Sb     07 24 26.8  +4.5
CIT                                 Smax          07 24 31.9
      338nm,0.2s
OGRR  Ongureny           4.33 237  ePn     Pn     07 23 26.2  +0.8
OGRR                               ePg     Pb     07 23 37.6  +1.9
OGRR                                Pmax          07 23 48.8
      78nm,1.4s
OGRR                               e              07 24 11.5
OGRR                               eSg     Sg     07 24 34.3  -4.0
OGRR                                Smax          07 24 43.4
      214nm,1.8s
YKLR  Yuktali            4.44  81  ePg     Pb     07 23 39.5  +1.9
YKLR                               eSg     Sg     07 24 36.7  -5.3
TRG   Tyrgan             5.47 235  ePg     Pb     07 23 57.0  +1.9
TRG                                 Pmax          07 24 13.2
      37nm,1.4s
TRG                                eSg     Sb     07 25 07.4  +6.6
TRG                                 Smax          07 25 20.5
      74nm,0.9s
FFNB  Fofonovo           5.79 228  ePg     Pb     07 24 03.0  +2.5
FFNB                               eSg     Sg     07 25 18.7  -6.5
HRMR  Khuramsha          6.03 224  e       Pb     07 23 57.5  -7.2
HRMR                               ePg     Pg     07 24 08.7  -6.2
HRMR                                Pmax          07 24 10.3
      62nm,0.7s
HRMR                               eSg     Sg     07 25 27.5  -5.4
HRMR                                Smax          07 25 38.2
      438nm,0.8s
IENR  Iengra             6.23  85  eSg     Sg     07 25 32.5  -6.7
CLNS  Chul'man           6.24  79  ePg     Pb     07 24 10.9  +2.7
CLNS                               eSg     Sb     07 25 30.8  +8.0
KPC   Khapcheranga       6.50 188  ePn     Pn     07 23 56.6  +1.3
KPC                                ePg     Pb     07 24 17.3  +4.6
KPC                                 Pmax          07 24 24.0
      11nm,0.6s
KPC                                eSg     Sg     07 25 41.6  -6.3
KPC                                 Smax          07 25 48.0
      174nm,1.4s
LSTR  Listvyanka         6.76 234  ePg     Pb     07 24 20.6  +3.6
LSTR                                Pmax          07 24 24.9
      20nm,1.4s
LSTR                               e              07 25 24.6
LSTR                               eSg     Sg     07 25 48.3  -7.9
LSTR                                Smax          07 25 54.4
      106nm,1.4s
TLY   Talaya             7.43 237  ePg     Pb     07 24 32.5  +4.0
TLY                                 Pmax          07 24 41.0
      21nm,1.8s
TLY                                eSg     Sg     07 26 08.5  -9.4
TLY                                 Smax          07 26 17.2
      47nm,1.0s
ARS   Arshan             7.87 242  ePn     Pn     07 24 15.3  +1.2
ARS                                ePg     Pb     07 24 40.7  +4.6
ARS                                 Pmax          07 24 53.2
      24nm,1.4s
ARS                                eSg     Sg     07 26 22.0   -10
ARS                                 Smax          07 26 25.2
      115nm,0.6s
MOY   Mondy              8.74 244  ePg     Pg     07 24 55.8   -11
MOY                                 Pmax          07 25 00.8
      8.0nm,0.6s
MOY                                eSg     Sg     07 26 48.7   -11
MOY                                 Smax          07 27 05.7
      55nm,0.5s
ORL   Orlik              8.88 252  ePg     Pg     07 24 59.7   -10
ORL                                 Pmax          07 25 18.1
      15nm,1.5s
ORL                                eSg     Sg     07 26 54.3   -10
ORL                                 Smax          07 27 03.8
      40nm,1.1s
TDJR  Todzha            10.95 257  e              07 27 01.8
TDJR                               eSg     Sn     07 27 57.0   +58
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*REY **18** 07:35:49.0, 64°.67N×17°.48W, h5^{km}*

*IDC **18** 07:35:50.1±0.5, 64°.51N×17°.74W, h0^{km}, mb4.1/28, mb1 4.2/32, mb1mx4.1/46, mbtmp4.1/32, ML2.7/3, MS3.9/28, Ms1 3.9/28, ms1mx3.8/45, Error ellipse: s-maj=16.0km s-min=7.8km az=16.0*

*BGR **18** 07:35:52.8±0.0, 64°.82N×17°.34W, h10^{km}, mb5.1, Ms3.7*

*NEIC **18** 07:35:52.3±1.5, 64°.71N±0°.08×17°.3W±0°.2, h7^{km}±4^{km}, mb4.7/129, Error ellipse: s-maj=12.4km s-min=9.7km az=46.0*

*MOS **18** 07:35:53.4±1.1, 64°.63N×17°.51W, h27^{km}, mb4.8/50, MS4.3/9, Error ellipse: s-maj=10.5km s-min=6.4km az=112.3*

*GCMT **18** 07:35:54.3±0.3, 64°.72N±0°.04×17°.49W±0°.05, h12^{km}, MW4.8/76, Moment Tensor Solution. s16,c17; s76,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.14±.07; $M_{\theta\theta}$0.12±.07; $M_{\phi\phi}$1.02±.04; $M_{r\theta}$-1.31±.24; $M_{\theta\phi}$-0.62±.05; $M_{\phi r}$-0.19±.20; Best double couple: $M_0$1.74400×10^{16} NP1:ϕ_s357.00000°, δ41.00000°, λ-39.00000°. NP2: ϕ_s118.00000°, δ66.00000°, λ-124.00000°. Principal axes: T 1.4440, Plg14.0000°, Azm232.0000°; N 0.5990, Plg31.0000°, Azm133.0000°; P -2.0440, Plg55.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 07:35:52.5±0.3, 64°.66N±0°.03×17°.47W±0°.03, h10^{km}, n422, σ1^s.94/426, mb4.7/143, MS4.1/35, 12C-16D, Iceland

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                   Op      ISC     h  m  s      ISC
IDYN  Dyngjuhals         0.14  19  P       Pg     07 35 52.0  -3.7
      baz=21
IURH  Urdarhals          0.21  41  P       Pg     07 35 53.2  -3.7
      baz=42
IURH                               S       Sg     07 35 56.5  -3.5
      baz=42
ISKR  Skrokkalda         0.41 256  P       Pg     07 35 56.5  -4.0
      baz=255
ISKR                               S       Sg     07 36 02.2  -3.7
      baz=255
THOR  Thorvaldshraun     0.44  51  P       Pg     07 35 57.0  -4.1
      baz=52
IJOK  Jokulheimar        0.48 224  P       Pg     07 35 57.8  -4.0
      baz=223
IKRE  Kreppuhraun        0.48  75  P       Pg     07 35 57.7  -4.2
      baz=76
IKRE                               S       Sg     07 36 05.0  -3.3
      baz=76
IASK  Askja              0.53  41  P       Pg     07 35 58.4  -4.4
      baz=42
IMKO  Mokollar           0.58  56  P       Pg     07 35 59.4  -4.3
      baz=57
IMKO                               S       Sg     07 36 08.3  -3.0
      baz=57
IIEY  Innrieyrar         0.64 207  P       Pg     07 36 00.5  -4.2
      baz=206
IIEY                               S       Sg     07 36 09.6  -3.5
      baz=206
IKSK  Karasker           0.66 139  P       Pg     07 36 00.8  -4.5
      baz=139
ISVA  Svartarkot         0.69   8  P       Pg     07 36 01.1  -4.6
      baz=7.9
IKAL  Kalfafell          0.72 188  P       Pg     07 36 01.9  -4.5
      baz=187
IKAL                               S       Sg     07 36 12.4  -3.4
      baz=187
IVSH  V-Sauoahnukur      0.76  78  P       Pg     07 36 02.8  -4.4
      baz=78
IVSH                               S       Sg     07 36 13.1  -4.0
      baz=78
IFAG  Fagurholsmyri      0.87 155  P       Pg     07 36 04.2  -4.9
      baz=155
IADA  Aoalbol            0.89  65  P       Pg     07 36 04.8  -4.7
      baz=66
IADA                               S       Sg     07 36 17.0  -4.0
      baz=66
IMEL  Melhnausar         0.97  20  P       Pg     07 36 05.9  -5.3
      baz=20
IMEL                               S       Sg     07 36 19.7  -4.1
      baz=20
IREN  Reynihlio          1.02  13  P       Pg     07 36 06.6  -5.4
      baz=14
ISNB  Snabyli            1.06 209  P       Pb     07 36 07.7  -5.1
      baz=209
ISNB                               S       Sg     07 36 22.3  -4.2
      baz=209
IKVO  Krokottuvotn       1.09  13  P       Pg     07 36 07.6  -5.7
      baz=13
IGRS  Grimsstaoir        1.13  30  P       Pb     07 36 08.5  -5.6
      baz=30
IFED  Fedgar             1.16 238  P       Pb     07 36 09.2  -5.3
      baz=237
IRJU  Rjupnafell         1.17 207  P       Pn     07 36 09.5  -5.4
      baz=207
IMJO  Mjoaskard          1.21 234  P       Pn     07 36 10.1  -5.3
      baz=233
ISKI  Skildingahlsh      1.23   9  P       Pb     07 36 09.8  -5.9
      baz=8.7
IGHA  Grjothals          1.23  16  P       Pb     07 36 09.9  -5.9
      baz=16
IGYG  Gygjarholskot      1.25 253  P       Pn     07 36 10.3  -5.6
      baz=253
BORG  Borgarnes          1.66 275  Pg      Pn     07 36 16.9  -4.7
      57nm,0.3s,baz=95,slow=7.7,SNR=124
BORG                               Lg      Lg     07 36 40.4
      45nm,0.3s,baz=230,slow=20,SNR=8.4
BORG  Borgarnes          1.66 275  P       Pn     07 36 17.8  -3.7
BORG  Borgarnes          1.66 275          Pn     07 36 17.8  -3.7
SCO   Scoresbysund       6.09 346  e       Pn     07 37 15.0  -7.4
      baz=152,slow=12
SCO                                i P     Pb     07 37 20.8   -18
SCO                                i S     Sn     07 38 33.2  +1.1
SCO                                 IAML          07 38 44.7
      comp=Z,5.4nm,0.5s
ANGG  Ammassalik, Gr     8.54 286  Pn      Pn     07 37 57.2  +1.3
DBG   Daneborg           9.74 356  i P     Pn     07 38 19.0  +6.6
SUMG  Summit            10.95 325  P       Pn     07 38 27.4  -1.9
SUMG  Summit            10.95 325  Pn      Pn     07 38 27.4  -1.9
SUMG  Summit            10.95 325  i P     Pn     07 38 41.3   +12
SUMG  Summit            10.95 325  i P     Pn     07 38 41.3   +12
EKB10 Eskdalemuir Ar    11.72 136  Pn      Pn     07 38 39.3  -0.2
EKB7  Eskdalemuir Ar    11.73 136  Pn      Pn     07 38 38.1  -1.6
EKR1  Eskdalemuir Ar    11.74 136  Pn      Pn     07 38 38.6  -1.2
EKA   Eskdalemuir Ar    11.75 136  Pn      Pn     07 38 37.0  -2.9
      baz=324,slow=13,SNR=18
EKA   Eskdalemuir Ar    11.75 136  P       Pn     07 38 37.0  -2.9
ESK   Eskdalemuir       11.75 136  P       Pn     07 38 39.3  -0.6
ESK   Eskdalemuir       11.75 136  Pn      Pn     07 38 39.2  -0.6
DAG   Danmarks Havn     12.18 359  i P     Pn     07 38 48.5  +2.8
DAG   Danmarks Havn     12.18 359  i P     Pn     07 38 48.5  +2.8
DAG   Danmarks Havn     12.18 359  i P     Pn     07 38 48.5  +2.8
NOA   NORSAR Array B    13.52  92  Pn      Pn     07 39 02.4  -1.7
      comp=Z,0.0nm,0.3s,baz=270,slow=2.9,SNR=2.6
NOA                                LR      LR     07 44 26.8
      comp=Z,310nm,19.2s,baz=295,slow=38
SFJD  Kangerlussuaq     13.68 295  LR      LR     07 43 40.3
      comp=Z,783nm,19.4s,baz=86,slow=34
SPITS Spitsbergen Ar    16.87  23  LR      LR     07 44 41.9
      comp=Z,238nm,20.4s,baz=275,slow=31
ARCES ARCESS Array B    17.11  55  P       P      07 39 52.8  -0.2
      baz=293,slow=13,SNR=1.9
ARCES                              LR      LR     07 45 23.9
      comp=Z,360nm,18.1s,baz=295,slow=33
SNF   Seneffe           18.21 131  dx      Pn     07 40 06.4  +1.4
BEBN  Eben Emael        18.43 128  dx      Pn     07 40 10.4  +2.8
BEBN                               dx      x      07 40 19.8
BCLA  Clavier           18.62 129  dx      Pn     07 40 12.7  +2.7
NRDL  Niedersach Rie    18.65 118  eP      Pn     07 40 10.8  +0.5
      comp=Z,248nm,2.2s,baz=326,slow=11
DOU   Dourbes           18.67 131  dx      Pn     07 40 12.9  +2.2
DOU                                dx      x      07 40 20.1
MEM   Membach           18.70 128  dx      Pn     07 40 13.3  +2.3
MEM                                dx      x      07 40 21.1
BTNL  Ternell           18.76 127  dx      Pn     07 40 13.3  +1.6
BTNL                               dx      x      07 40 22.1
CLZ   Clausthal         19.26 119  eP      Pn     07 40 18.3  +0.5
      comp=Z,104nm,1.6s,baz=326,slow=11
WLF   Walferdange       19.55 129  P       Pn     07 40 21.2  -0.1
WLF                                pmax    pmax
      comp=Z,24nm,1.3s
WLF   Walferdange       19.55 129  P       Pn     07 40 21.2  -0.1
FINES FINESS Array B    19.69  79  P       P      07 40 21.3  -0.1
      comp=Z,0.1nm,0.3s,baz=338,slow=15,SNR=5.1
FINES                              LR      LR     07 47 31.8
      comp=Z,142nm,18.6s,baz=302,slow=35
FINES FINESS Array B    19.69  79  P       Pn     07 40 23.0  +0.2
FINES FINESS Array B    19.69  79  P       Pn     07 40 23.0  +0.2
TULEG Thule             19.86 327  P       P      07 40 23.3  +0.2
TULEG                              IAmb    IAmb   07 40 38.9
      comp=Z,53nm,1.5s
NEUB  Neuenburg         20.30 118  eP      P      07 40 29.2  +1.1
      comp=Z,99nm,1.4s,baz=326,slow=11
MOX   Moxa              20.69 119  eL      L      07 49 52.4
      comp=Z,335nm,18.5s
CLL   Collm             20.69 116  eP      P      07 40 32.0  -0.3
      comp=Z,37nm,1.2s
CLL                                i              07 40 37.4
CLL                                i              07 40 42.1
CLL                                ePPP    PPP    07 40 57.0
CLL                                eS      S      07 44 24.0  +0.9
CLL                                eSSS    SSS    07 44 54.0
CLL                                 LmH           07 48 00.0
      comp=N,400nm,19.3s
CLL                                 LmH           07 48 00.0
      comp=E,800nm,19.0s
CLL   Collm             20.69 116  eP      P      07 40 32.0  -0.3
CLL                                eS      S      07 44 24.0  +0.9
CLL                                 pmax   pmax
      comp=Z,37nm,1.2s
CLL   Collm             20.69 116  P       P      07 40 32.1  -0.2
CLL                                IAmb    IAmb   07 40 35.7
      comp=Z,54nm,1.4s
CLL   Collm             20.69 116  eP      P      07 40 33.0  +0.6
      comp=Z,37nm,1.2s,baz=326,slow=11
GKP   Gorka Klasztor    20.90 107  eP      Pn     07 40 36.9  -0.2
PLN   Plauen            21.02 118  eP      P      07 40 36.8  +0.9
      comp=Z,164nm,1.9s,baz=326,slow=11
WERD  Werda             21.11 118  eP      P      07 40 37.7  +0.8
      comp=Z,39nm,1.6s,baz=326,slow=11
FBE   Freiberg          21.13 116  eP      P      07 40 37.8  +0.7
      comp=Z,867nm,3.0s,baz=326,slow=11
ECH   Echery            21.14 129  P       P      07 40 37.8  +0.6
ECH                                pmax    pmax
      comp=Z,47nm,1.5s
ECH   Echery            21.14 129  P       P      07 40 37.8  +0.6
ECH                                IAmb    IAmb   07 40 52.6
      comp=Z,47nm,1.5s
GUNZ  Gunzen            21.19 118  eP      P      07 40 38.4  +0.7
      comp=Z,432nm,2.5s,baz=326,slow=11
TANN  Tannenbergstha    21.20 118  eP      P      07 40 38.5  +0.7
      comp=Z,394nm,2.3s,baz=326,slow=11
WERN  Wernitzgruen      21.27 118  eP      P      07 40 39.5  +0.9
      comp=Z,160nm,1.7s,baz=326,slow=11
GRA1  Grafenberg Arr    21.32 121  P       P      07 40 39.0  -0.2
GRA1                               IAmb    IAmb   07 40 54.0
      comp=Z,34nm,1.2s
GRF   Grafenberg Arr    21.32 121  P       P      07 40 39.0  -0.2
GRF                                pmax    pmax
      comp=Z,34nm,1.2s
GRF   Grafenberg Arr    21.32 121  eP      P      07 40 40.1  +1.0
      comp=Z,237nm,2.4s,baz=326,slow=11
GRF                                eL      L      07 49 13.2
      comp=Z,287nm,19.5s
NKC   Novy Kostel       21.34 118  eP      P      07 40 41.0  +1.7
NKC                                MLR     MLR
      comp=Z,700nm,12.4s
NKC   Novy Kostel       21.34 118  eP      P      07 40 41.0  +1.7
NKC                                AMS     AMS    07 53 10.0
      comp=Z,700nm,12.4s
STU   Stuttgart         21.36 125  P       P      07 40 39.3  -0.3
STU                                pmax    pmax
      comp=Z,41nm,1.2s
STU   Stuttgart         21.36 125  P       P      07 40 39.3  -0.3
STU                                IAmb    IAmb   07 40 50.3
      comp=Z,41nm,1.2s
STU   Stuttgart         21.36 125  eP      P      07 40 40.3  +0.7
      comp=Z,351nm,2.5s,baz=326,slow=11
BRG   Berggiesshubel    21.40 115  eP      P      07 40 39.4  -0.6
BRG                                Amp            07 40 43.3
      comp=Z,201nm,2.5s
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BRG	Berggiesshubel	21.40	115	eP	P	07 40 39.4	-0.6
BRG				pmax	pmax		
	comp=Z,201nm,2.5s						
BRG	Berggiesshubel	21.40	115	eP	P	07 40 39.4	-0.6
BRG				Amp		07 40 43.3	
	comp=Z,201nm,2.5s						
BRG	Berggiesshubel	21.40	115	eP	P	07 40 40.5	+0.5
	comp=Z,110nm,1.7s,baz=326,slow=11						
BFO	Black Forest	21.44	127	P	P	07 40 41.5	+1.1
BFO				pmax	pmax		
	comp=Z,27nm,1.3s						
BFO	Black Forest	21.44	127	P	P	07 40 41.5	+1.1
BFO	Black Forest	21.44	127	eP	P	07 40 41.7	+1.3
	comp=Z,180nm,2.4s,baz=326,slow=11						
VSU	Vasula	21.55	86	eP	P	07 40 41.6	0.0
VSU	Vasula	21.55	86	i P	P	07 40 41.1	-0.5
ROTZ	Rotzenmuhle	21.62	119	eP	P	07 40 43.4	+1.0
	comp=Z,88nm,1.8s,baz=326,slow=11						
FRB	Frobisher Bay	21.76	291	P	P	07 40 43.1	-0.6
	comp=Z,5.5nm,0.9s,baz=223,slow=4.8,SNR=1.4						
PVCC	Panska Ves	21.92	115	eP	P	07 40 47.4	+1.9
PVCC				MLR	MLR		
	comp=Z,700nm,10.4s						
PVCC	Panska Ves	21.92	115	eP	P	07 40 47.4	+1.9
PVCC				eS	Sn	07 44 54.9	-2.4
PVCC				AMS	AMS	07 53 20.0	
	comp=Z,700nm,10.4s						
PABE	Paberze	22.20	95	eP	P	07 40 48.6	+0.1
PRA	Prague	22.23	116	AMS	AMS	07 53 20.0	
	comp=Z,500nm,9.1s						
PRU	Pruhonice	22.34	116	eP	P	07 40 52.0	+2.0
PRU				eS	S	07 44 58.4	+3.1
PRU				MLR	MLR		
	comp=Z,800nm,10.8s						
PRU	Pruhonice	22.34	116	eP	P	07 40 52.0	+2.0
PRU				eS	S	07 44 58.4	+3.1
PRU				AMS	AMS	07 53 30.0	
	comp=Z,800nm,10.8s						
KSP	Ksiaz	22.35	112	eP	P	07 40 51.5	+1.3
CHVC	Chvalec	22.45	113	eP	P	07 40 52.5	+1.2
CHVC				AMS	AMS	07 54 20.0	
	comp=Z,900nm,6.8s						
UPC	Upice	22.50	113	eP	P	07 40 53.9	+2.1
UPC				MLR	MLR		
	comp=Z,800nm,11.0s						
UPC	Upice	22.50	113	eP	P	07 40 53.9	+2.1
UPC				eS	S	07 45 03.2	+4.8
UPC				AMS	AMS	07 54 10.0	
	comp=Z,800nm,11.0s						
OSTC	Ostas	22.54	113	eP	P	07 40 54.2	+1.9
OSTC				eS	Sn	07 45 07.8	-4.5
OSTC				AMS	AMS	07 53 20.0	
	comp=Z,900nm,6.5s						
UBR	Ueberruh	22.61	126	eP	P	07 40 54.0	+0.9
	comp=Z,220nm,1.8s,baz=326,slow=11						
KHC	Kasperske Hory	22.66	118	P	P	07 40 54.0	+0.4
KHC				pmax	pmax		
	comp=Z,23nm,1.4s						
KHC	Kasperske Hory	22.66	118	eP	P	07 40 53.5	-0.1
KHC				ex	x	07 41 00.5	
KHC				eS	Sn	07 45 08.7	-6.5
KHC				AMS	AMS	07 51 30.0	
	comp=Z,800nm,14.8s						
KHC	Kasperske Hory	22.66	118	P	P	07 40 54.0	+0.4
DPC	Dobruska-Polom	22.75	113	eP	P	07 40 55.1	+0.6
DPC				eS	S	07 45 06.8	+3.9
DPC				MLR	MLR		
	comp=Z,700nm,11.0s						
DPC	Dobruska-Polom	22.75	113	eP	P	07 40 55.1	+0.6
DPC				eS	S	07 45 06.8	+3.9
DPC				AMS	AMS	07 54 20.0	
	comp=Z,700nm,11.0s						
SENIN	Lac Senin/Sane	22.81	132		P	07 40 54.8	-0.5
DAVA	Damuels	22.87	126	eP	P	07 40 57.0	+1.1
	comp=Z,31nm,1.5s						
SSB	Saint Sauveur	22.94	137	P	P	07 40 58.2	+1.7
SSB				pmax	pmax		
	comp=Z,31nm,1.4s						
SSB	Saint Sauveur	22.94	137	P	P	07 40 58.1	+1.7
SSB				IAmb	IAmb	07 41 09.8	
	comp=Z,31nm,1.4s						
GEC2	GERESS Array S	22.94	119	P	P	07 40 57.1	+0.6
GEC2				IAmb	IAmb	07 41 06.0	
	comp=Z,34nm,1.3s						
GEC2	GERESS Array S	22.94	119	eP	P	07 40 58.2	+1.6
	comp=Z,195nm,2.2s,baz=326,slow=11						
GEC2B	GERESS ARRAY S	22.94	119	P	P	07 40 55.6	-1.0
GERES	GERESS Array B	22.94	119	P	P	07 40 54.8	-1.8
	comp=Z,4.0nm,1.1s,baz=330,slow=7.7,SNR=13						
GERES	GERESS Array B	22.94	119	P	P	07 40 56.3	-0.3
GERES	GERESS Array B	22.94	119		P	07 40 56.2	-0.3
RETA	Reutte	23.00	125	eP	P	07 40 57.8	+0.6
	comp=Z,22nm,1.4s						
ISAL	Salakas	23.08	93	eP	P	07 40 57.6	-0.2
KRLC	Kraliky	23.15	113	eS	S	07 45 16.0	+6.1
KRLC				AMS	AMS	07 55 00.0	
	comp=Z,900nm,8.2s						
MOTA	Moosalm	23.25	125	eP	P	07 41 01.3	+1.6
	comp=Z,15nm,1.3s						
TREC	Trest	23.26	116	eP	P	07 40 59.7	0.0
TREC				MLR	MLR		
	comp=Z,700nm,8.8s						
TREC	Trest	23.26	116	eP	P	07 40 59.7	0.0
TREC				eS	S	07 45 15.8	+4.1
TREC				AMS	AMS	07 53 10.0	
	comp=Z,700nm,8.8s						
IIGN	Ignalina	23.27	93	eP	P	07 41 00.0	+0.3
DAVOX	Davos/Dischmat	23.30	127	P	P	07 40 58.5	-1.9
	comp=Z,2.6nm,0.9s,baz=267,slow=9.0,SNR=2.9						
TMCR	Tamitsa	23.34	66	eP	P	07 40 57.7	-2.6
TMCR				pmax	pmax		
	comp=Z,31nm,0.9s						
SQTA	Sankt Quirin	23.39	125	eP	P	07 41 03.4	+2.2
	comp=Z,11nm,1.0s						
FETA	Feichten	23.39	125	eP	P	07 41 03.2	+1.9
	comp=Z,25nm,1.5s						
WATA	Walderalm	23.42	124	eP	P	07 41 03.9	+2.3
	comp=Z,16nm,1.5s						
BEL	Belsk	23.43	105	eP	P	07 41 03.0	+1.6
WTTA	Wattenberg	23.51	124	eP	P	07 41 04.5	+2.1
	comp=Z,24nm,1.4s						
IDID	Didziasalis	23.51	92	eP	P	07 41 01.8	-0.4
EUNU	Eureka	23.68	336	P	P	07 41 03.7	0.0
VRAC	Vranov	23.68	114	P	P	07 41 03.0	-0.9
	comp=Z,3.6nm,0.7s,baz=318,slow=11,SNR=8.2						
VRAC				LR	LR	07 51 30.5	
	comp=Z,267nm,18.2s,baz=336,slow=40						
VRAC	Vranov	23.68	114	⇑P	P	07 41 03.4	-0.5
VRAC	Vranov	23.68	114	eP	P	07 41 04.9	+1.0
MORC	Moravsky Berou	23.68	112	⇓P	P	07 41 02.3	-1.7
MORC	Moravsky Berou	23.68	112	eP	P	07 41 05.5	+1.5
MORC	Moravsky Berou	23.68	112	P	P	07 41 05.0	+1.0
MORC				pmax	pmax		
	comp=Z,33nm,1.4s						
MORC	Moravsky Berou	23.68	112	P	P	07 41 05.0	+1.0
MORC				IAmb	IAmb	07 41 19.9	
	comp=Z,33nm,1.4s						
BNI	Bardonecchia	23.79	134	P	P	07 41 03.6	-1.5
BNI				pmax	pmax		
	comp=Z,40nm,1.5s						
BNI	Bardonecchia	23.79	134	P	P	07 41 03.6	-1.5
BNI				IAmb	IAmb	07 41 16.0	
	comp=Z,40nm,1.5s						
KRUC	Moravsky	23.80	115	eP	P	07 41 06.7	+1.6
NACGM	Naroch	23.80	93	i P	P	07 41 01.2	-3.8
NACGM				i P	P	07 41 01.2	-3.8
NACGM				i P	P	07 41 01.2	-3.8
NACGM				i PP	PnPn	07 41 28.3	-4.2
NACGM				i PPP	PPP	07 41 51.2	
NACGM				i PcP	PcP	07 44 29.4	-18
NACGM				i S	S	07 45 13.4	-6.9
NACGM				i SS	SnSn	07 46 00.1	+1.8
NACGM				i SSS	SSS	07 46 09.1	
NACGM				i LQ	LQ	07 48 09.6	
NACGM				i LR	LR	07 50 07.4	
OKC	Ostrava-Krasne	23.88	111	eS	S	07 45 32.1	+11
MOA	Molln	23.98	119	eP	P	07 41 08.2	+1.5
	comp=Z,18nm,1.5s						
OJC	Ojcow	24.25	109	eP	P	07 41 10.2	+0.9
OJC	Ojcow	24.25	109	P	P	07 41 09.9	+0.7
OJC				pmax	pmax		
	comp=Z,24nm,1.5s						
OJC	Ojcow	24.25	109		P	07 41 09.9	+0.7
OJC				IAmb	IAmb	07 41 11.1	
	comp=Z,24nm,1.5s						
ABTA	Abfaltersbach	24.26	123	eP	P	07 41 12.0	+2.6
	comp=Z,9.6nm,1.4s						
KBA	Koelnbreinsper	24.28	122	eP	P	07 41 10.4	+0.6
	comp=Z,10nm,1.5s						
JAVC	Velka Javorina	24.46	113	eP	P	07 41 14.2	+2.9
CONA	Conrad Observa	24.52	117	eP	P	07 41 11.8	0.0
	comp=Z,9.2nm,1.1s						
MNK	Minsk	24.55	93	i P	P	07 41 14.3	+2.4
	comp=E,7.0nm,1.3s						
MNK				i P	P	07 41 14.3	+2.4
	comp=N,37nm,1.3s						
MNK				i P	P	07 41 14.3	+2.4
	comp=Z,42nm,1.5s						
MNK				i PP	PnPn	07 41 46.6	+3.9
MNK				i PcP	PcP	07 44 49.9	+0.4
MNK				i S	S	07 45 37.6	+5.4
MNK				i SS	SnSn	07 46 26.7	+10
MNK				i LQ	LQ	07 49 01.0	
MNK				i LR	LR	07 50 54.5	
MNK				i LRM	MLR	07 51 46.2	
	comp=E,16nm,13.6s						
MNK				i LRM	MLR	07 51 46.2	
	comp=N,342nm,15.2s						
MNK				i LRM	MLR	07 51 46.2	
	comp=Z,160nm,15.4s						
MNK	Minsk	24.55	93	eP	P	07 41 13.0	+1.1
CTI	Castel Tesino	24.55	125	P	P	07 41 12.5	+0.3
CTI				pmax	pmax		
	comp=Z,46nm,1.5s						
CTI	Castel Tesino	24.55	125	P	P	07 41 12.5	+0.3
SMOL	Smolenice	24.65	114	eP	P	07 41 13.4	+0.5
SMOL				pmax	pmax		
	comp=Z,48nm,2.1s						
SMOL	Smolenice	24.65	114	eP	P	07 41 13.4	+0.5
MODS	Modra-Piesok	24.70	115	eP	P	07 41 14.6	+1.2
MODS				pmax	pmax		
	comp=Z,102nm,2.0s						
MODS	Modra-Piesok	24.70	115	eP	P	07 41 14.6	+1.2
STAL	STALIGIAL	24.75	124	P	P	07 41 14.7	+0.9
STAL				IAmb	IAmb	07 41 35.5	
	comp=Z,25nm,1.5s						
MYKA	Terra Mystica	24.77	122	eP	P	07 41 16.2	+2.1
	comp=Z,9.6nm,1.2s						
ARSA	Arzberg	24.95	118	eP	P	07 41 16.2	+0.5
	comp=Z,10nm,1.3s						
LANS	Liptovska Anna	24.95	111	eP	P	07 41 16.7	+1.1
LANS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
LANS	Liptovska Anna	24.95	111	eP	P	07 41 16.7	+1.1
SOP	Sopron	24.99	116	eP	P	07 41 27.9	+12
NIE	Niedzica	25.08	109	eP	P	07 41 17.7	+0.9
OBKA	Obir	25.21	121	eP	P	07 41 18.6	+0.6
	comp=Z,8.3nm,1.2s						
VYHS	Vyhne	25.22	112	eP	P	07 41 18.6	+0.5
VYHS				pmax	pmax		
	comp=Z,48nm,1.6s						
VYHS	Vyhne	25.22	112	eP	P	07 41 18.6	+0.5
SOKA	Soboth	25.24	120	eP	P	07 41 19.1	+0.7
	comp=Z,5.1nm,1.1s						
KLMR	Klimovskoe	25.59	72	eP	P	07 41 17.5	-3.7
KLMR				pmax	pmax		
	comp=Z,28nm,1.3s						
KLMR	Klimovskoe	25.59	72	eP	P	07 41 17.6	-3.7
KLMR				AMP		07 41 28.5	
	comp=Z,28nm,1.3s						
MPLH	Magyarpolny	25.79	116	eP	P	07 41 27.5	+4.3
KWP	Kalwaria Pacla	25.90	106	P	P	07 41 23.7	-0.5
KWP				pmax	pmax		
	comp=Z,64nm,0.6s						
KWP	Kalwaria Pacla	25.90	106	P	P	07 41 23.7	-0.5
CSKK	Cskako	25.91	115	eP	P	07 41 29.6	+5.3
CRVS	Cervenica-Dubn	25.95	109	eP	P	07 41 29.8	+5.1
CRVS				pmax	pmax		
	comp=Z,46nm,1.4s						
CRVS	Cervenica-Dubn	25.95	109	eP	P	07 41 29.8	+5.1
BEHE	Becsehely	26.07	118	eP	P	07 41 27.5	+1.7
PSZ	Piszkesteto	26.11	112	⇑P	P	07 41 25.4	-0.8
PSZ	Piszkesteto	26.11	112	eP	P	07 41 27.5	+1.4
PSZ	Piszkesteto	26.11	112	P	P	07 41 25.4	-0.8
PSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
PSZ	Piszkesteto	26.11	112	P	P	07 41 25.4	-0.8
PSZ				IAmb	IAmb	07 41 32.8	
	comp=Z,21nm,1.3s						
BUD	Budapest	26.11	114	eP	P	07 41 27.9	+1.8
ESDC	Sonseca Array	26.24	156	P	P	07 41 25.4	-2.0
	comp=Z,1.2nm,0.7s,baz=348,slow=9.0,SNR=9.5						
ESDC				LR	LR	07 51 36.3	
	comp=Z,494nm,18.5s,baz=330,slow=36						
ESDC	Sonseca Array	26.24	156	P	P	07 41 27.7	+0.3
KOLS	Kolonicke sedl	26.26	108	eP	P	07 41 29.8	+2.3
KOLS				pmax	pmax		
	comp=Z,22nm,1.3s						
KOLS	Kolonicke sedl	26.26	108	eP	P	07 41 29.8	+2.3
LVV	L'vov	26.30	104	eP	P	07 41 28.4	+0.6
LVV				eS	S	07 45 56.3	-3.9
RES	Resolute Bay	26.48	324	P	P	07 41 28.8	-0.4
	comp=Z,1.6nm,0.9s,baz=76,slow=7.1,SNR=4.5						
RES				LR	LR	07 51 48.7	
	comp=Z,370nm,21.1s,baz=98,slow=36						
RES	Resolute Bay	26.48	324	P	P	07 41 29.5	+0.3
RES				pmax	pmax		
	comp=Z,4.0nm,1.3s						
RES	Resolute Bay	26.48	324	P	P	07 41 29.5	+0.3
UZH	Uzhgorod	26.51	108	eP	P	07 41 40.0	+10
UZH				e		07 41 43.3	
MORH	Mrgy, Hungar	27.00	116	eP	P	07 41 31.7	-2.5
AKASG	Malin Array Be	27.83	98	P	P	07 41 41.5	0.0
	comp=Z,3.1nm,0.8s,baz=322,slow=9.8,SNR=11						
AKASG				LR	LR	07 53 22.9	
	comp=Z,130nm,19.1s,baz=335,slow=38						
AKASG	Malin Array Be	27.83	98	P	P	07 41 42.5	+1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AKASG	Malin Array Be	27.83	98	P	P	07 41 42.5	+1.0
AKBB	Malin Array Si	27.83	98	P	P	07 41 41.6	+0.1
AKBB				pmax	pmax		
	comp=Z,11nm,1.2s						
AKBB	Malin Array Si	27.83	98	P	P	07 41 41.6	+0.1
OBN	Obninsk	27.87	84	P	P	07 41 43.9	+2.1
	comp=Z,2.5nm,0.4s,baz=199,slow=15,SNR=4.1						
OBN				LR	LR	07 52 50.3	
	comp=Z,30nm,20.8s,baz=334,slow=36						
OBN	Obninsk	27.87	84	⇓eP	P	07 41 41.3	-0.5
OBN				pmax	pmax		
	comp=Z,18nm,1.1s						
OBN				MLR	MLR		
	comp=Z,178nm,15.0s						
OBN	Obninsk	27.87	84	P	P	07 41 41.9	+0.1
MOS	Moscow	27.91	82	eP	P	07 41 47.3	+5.1
MOS				e		07 42 26.6	
DRGR		28.15	110	⇓P	P	07 41 44.5	0.0
BUR08	Bucovina Ar. S	28.48	106	P	P	07 41 44.6	-2.9
BURAR	Bucovina Array	28.51	106	P	P	07 41 45.7	-2.1
BZS	Buzias	28.67	113	⇓P	P	07 41 49.1	0.0
GZR	Gura Zlata	29.31	112	⇑P	P	07 41 55.4	+0.5
BIZ	Bicaz	29.42	106	⇑P	P	07 41 57.0	+1.3
TESR	Tescani	29.98	106	⇓P	P	07 42 01.9	+1.2
ARR	Arges	30.08	109	⇑P	P	07 42 02.8	+1.1
VOIR		30.20	109	⇓P	P	07 42 02.9	+0.2
MLR	Muntele Rosu	30.52	108	⇑P	P	07 42 05.3	-0.3
BISRR	Bisoca	30.79	107	⇑P	P	07 42 08.0	+0.1
KIRV	Kirov	30.97	69	P	P	07 42 10.7	+1.4
	comp=Z,4.1nm,0.5s,baz=312,slow=10.0,SNR=4.4						
KIRV	Kirov	30.97	69	i P	P	07 42 07.3	-2.0
LMN	Caledonia Moun	31.85	257	P	P	07 42 18.8	+1.6
MDT	Midelt	32.85	160	P	P	07 42 24.9	-1.2
	comp=Z,3.2nm,1.0s,baz=181,slow=6.7,SNR=2.7						
BELG	Belogornoye	34.48	79	P	P	07 42 39.5	-0.4
	comp=Z,15nm,1.0s,baz=262,slow=6.8,SNR=6.1						
BELG	Belogornoye	34.48	79	i P	P	07 42 39.6	-0.4
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AGG	Agios Georgios	34.56	118	P	P	07 42 39.6	-1.3
AGG				pmax	pmax		
	comp=Z,24nm,1.3s						
AGG	Agios Georgios	34.56	118	P	P	07 42 39.6	-1.3
ANN	Anapa	35.90	97	eP	P	07 42 52.0	-0.3
ANN				pmax	pmax		
	comp=Z,55nm,1.6s						
ANN				MLR	MLR		
	comp=Z,615nm,16.0s						
ARU	Arti	36.07	66	P	P	07 42 54.4	+0.7
	comp=Z,0.8nm,0.7s,baz=322,slow=7.4,SNR=3.7						
ARU	Arti	36.07	66	P	P	07 42 55.5	+1.8
ARU						07 44 15.3	
ARU				S	S	07 48 34.1	+1.7
ARU				SS	SnSn	07 50 48.7	-8.1
ARU	Arti	36.07	66	P	P	07 42 52.6	-1.1
ARU				IAmb	IAmb	07 42 56.5	
	comp=Z,12nm,1.3s						
SVE	Sverdlovsk	36.60	64	eP	P	07 42 59.3	+1.1
SOC	Sochi	37.85	96	eP	P	07 43 09.2	+0.2
SOC				ePPP	PPP	07 44 57.4	
SOC				eS	S	07 49 00.7	+0.9
SOC				eSS	SnSn	07 51 39.3	-0.9
SOC				eSSS	SSS	07 52 07.5	
SOC				MLR	MLR		
	comp=Z,190nm,11.0s						
GOF	Gofitskoye	38.10	91	⇑eP	P	07 43 16.6	+5.5
GOF				pmax	pmax		
	comp=Z,37nm,1.5s						
BR131	Keskin Array S	38.47	105	P	P	07 43 14.7	+0.4
BR131				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BR131	Keskin Array S	38.47	105	P	P	07 43 14.7	+0.4
BRTR	Keskin Array B	38.47	105	P	P	07 43 14.6	+0.2
	comp=Z,2.0nm,0.8s,baz=324,slow=6.1,SNR=9.1						
BRTR				LR	LR	07 59 44.0	
	comp=Z,35nm,18.5s,baz=336,slow=37						
BRTR	Keskin Array B	38.47	105	P	P	07 43 14.7	+0.3
BRTR	Keskin Array B	38.47	105	P	P	07 43 14.7	+0.3
KIV	Kislovodsk	38.83	92	eP	P	07 43 19.2	+1.9
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIV				MLR	MLR		
	comp=Z,353nm,16.0s						
KIV	Kislovodsk	38.83	92	P	P	07 43 19.3	+2.0
KBZ	Khabaz	39.10	92	P	P	07 43 21.4	+1.9
	comp=Z,3.2nm,0.8s,baz=325,slow=14,SNR=5.7						
KBZ				LR	LR	07 59 41.4	
	comp=Z,214nm,19.7s,baz=328,slow=36						
KBZ	Khabaz	39.10	92	i P	P	07 43 22.1	+2.7
KBZ				pmax	pmax		
	comp=Z,21nm,2.0s						
YKA	Yellowknife Ar	39.23	313	P	P	07 43 19.4	-0.9
	comp=Z,7.0nm,1.3s,baz=45,slow=8.5,SNR=18						
YKA				PcP	PcP	07 45 28.6	-0.4
	comp=Z,1.3nm,1.1s,baz=44,slow=3.2,SNR=5.4						
YKA				LR	LR	07 59 29.6	
	comp=Z,271nm,19.8s,baz=0.0,slow=36						
INK	Inuvik	39.85	329	LR	LR	08 01 38.7	
	comp=Z,161nm,20.5s,baz=32,slow=39						
AKTO	Aktyubinsk	40.28	73	P	P	07 43 29.2	0.0
	comp=Z,1.8nm,0.8s,baz=338,slow=6.7,SNR=5.0						
FFC	Flin Flon	40.61	297	P	P	07 43 33.0	+1.1
FFC				pmax	pmax		
	comp=Z,13nm,1.4s						
FFC	Flin Flon	40.61	297	P	P	07 43 33.0	+1.1
ULM	Lac du Bonnet	41.62	289	P	P	07 43 39.7	-0.5
	comp=Z,2.1nm,0.8s,baz=52,slow=8.5,SNR=3.3						
ULM				LR	LR	08 00 45.6	
	comp=Z,265nm,18.7s,baz=67,slow=36						
ULM	Lac du Bonnet	41.62	289	i P	P	07 43 41.0	+0.8
ABKAR	Akbulak array	41.98	73	P	P	07 43 43.1	-0.1
ABKAR	Akbulak array	41.98	73	P	P	07 43 43.7	+0.5
ABKAR				IAmb	IAmb	07 43 48.6	
	comp=Z,11nm,1.5s						
TIXI	Tiksi	42.03	15	ceP	P	07 43 44.5	+1.2
TIXI	Tiksi	42.03	15	P	P	07 43 43.9	+0.6
TIXI				IAmb	IAmb	07 43 48.6	
	comp=Z,21nm,1.4s						
GNI	Garni	42.82	94	i P	P	07 43 51.7	+1.4
GNI				pmax	pmax		
	comp=Z,21nm,1.7s						
GNI	Garni	42.82	94	P	P	07 43 49.9	-0.4
GNI				IAmb	IAmb	07 43 59.2	
	comp=Z,22nm,1.4s						
BMAR	Burnt Mountain	42.91	333	P	P	07 43 49.7	-0.9
BRVK	Borovoye	43.12	62	ceP	P	07 43 51.7	-0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	43.12	62	P	P	07 43 52.0	-0.4
MARD	Mardin	43.50	100	P	P	07 43 55.0	-0.8
MARD				IAmb	IAmb	07 44 02.6	
	comp=Z,15nm,1.1s						
FYU	Fort Yukon	43.78	333	P	P	07 43 57.6	+0.1
P53A	Whipple	44.10	267	P	P	07 44 01.7	+1.2
N49A	Columbus Grove	44.12	271	P	P	07 44 00.5	0.0
N49A				IAmb	IAmb	07 44 03.8	
	comp=Z,19nm,1.1s						
COLD	Coldfoot	44.13	336	P	P	07 44 00.8	+0.4
COLD				IAmb	IAmb	07 44 04.4	
	comp=Z,14nm,1.4s						
DAWY	Dawson	44.71	328	P	P	07 44 05.4	+0.3
DAWY				IAmb	IAmb	07 44 12.6	
	comp=Z,14nm,1.4s						
PRP	Porcupine Dome	44.76	332	P	P	07 44 06.4	+0.8
IL31		45.70	332	P	P	07 44 14.1	+1.3
ILAR	Eielson Array	45.70	332	P	P	07 44 12.8	-0.1
	comp=Z,5.7nm,1.2s,baz=29,slow=5.8,SNR=19						
ILAR				PcP	PcP	07 45 50.0	-0.6
	comp=Z,1.4nm,0.9s,baz=10,slow=3.0,SNR=6.4						
ILAR				LR	LR	08 05 48.2	
	comp=Z,158nm,18.7s,baz=32,slow=39						
ILAR	Eielson Array	45.70	332	P	P	07 44 12.9	+0.1
MDM	Murphy Dome	45.79	333	P	P	07 44 15.7	+2.0
COLA	College	45.79	333	i P	P	07 44 14.4	+0.8
COLA				pmax	pmax		
	comp=Z,14nm,1.5s						
COLA	College	45.79	333	P	P	07 44 15.1	+1.6
COLA				IAmb	IAmb	07 44 16.0	
	comp=Z,12nm,1.1s						
TCOL	CIGO, UAF Yank	45.80	333	P	P	07 44 15.2	+1.5
TCOL				IAmb	IAmb	07 44 16.1	
	comp=Z,8.8nm,1.0s						
I23K	Minto, Yukon-K	45.84	334	P	P	07 44 15.9	+2.0
I23K				IAmb	IAmb	07 44 22.3	
	comp=Z,19nm,1.4s						
IMAR	Indian Mountai	45.87	337	P	P	07 44 13.8	-0.3
CCB	Clear Creek Bu	45.99	333	P	P	07 44 15.7	+0.6
CCB				IAmb	IAmb	07 44 19.1	
	comp=Z,8.9nm,1.4s						
HDA	Harding Lake	46.03	332	P	P	07 44 15.6	+0.1
HDA				IAmb	IAmb	07 44 23.3	
	comp=Z,9.7nm,1.4s						
DOT	Dot Lake	46.11	330	P	P	07 44 17.3	+1.2
DOT				IAmb	IAmb	07 44 20.4	
	comp=Z,11nm,1.2s						
BCAR	Beaver Creek A	46.12	329	P	P	07 44 16.9	+0.7
HDIL	Hopedale	46.61	275	P	P	07 44 21.8	+1.4
BPAW	Bear Paw Mtn.	47.09	334	P	P	07 44 24.9	+1.0
ECSD	EROS Data Cent	47.11	284	P	P	07 44 26.3	+2.1
WCI	Wyandotte Cave	47.26	271	P	P	07 44 26.4	+1.0
WCI				pmax	pmax		
	comp=Z,14nm,0.9s						
WCI	Wyandotte Cave	47.26	271	P	P	07 44 26.4	+1.0
P43A	Skaggs, Pawnee	47.47	275	P	P	07 44 27.1	+0.1
ZAA0	Zalesovo Array	47.63	51	P	P	07 44 27.9	-0.2
ZALV	Zalesovo Beam	47.63	51	P	P	07 44 27.7	-0.4
	comp=Z,2.2nm,0.8s,baz=330,slow=8.6,SNR=6.2						
ZALV	Zalesovo Beam	47.63	51	i P	P	07 44 28.6	+0.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	Zalesovo Beam	47.63	51	P	P	07 44 27.5	-0.6
USIN	University of	48.07	272	P	P	07 44 32.2	+0.5
KURK	Kurchatov	48.10	58	P	P	07 44 31.5	-0.3
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	Kurchatov	48.10	58	P	P	07 44 31.5	-0.3
KURK				IAmb	IAmb	07 44 36.8	
	comp=Z,6.7nm,1.0s						
EGMT	Eagleton	48.89	297	P	P	07 44 39.2	+1.2
ANM	Nome	48.95	342	P	P	07 44 39.4	+1.2
ANM				pmax	pmax		
	comp=Z,16nm,1.3s						
ANM	Nome	48.95	342	P	P	07 44 39.4	+1.2
TTA	Tatalina	49.07	336	P	P	07 44 40.3	+1.1
TTA				pmax	pmax		
	comp=Z,12nm,1.4s						
TTA	Tatalina	49.07	336	P	P	07 44 40.3	+1.1
TTA				IAmb	IAmb	07 44 47.0	
	comp=Z,12nm,1.4s						
WRAK	Wrangell Islan	49.47	318		S	07 51 50.5	+1.5
GEYT	Alibeck	50.41	84	P	P	07 44 51.4	+1.7
	comp=Z,1.3nm,0.7s,baz=341,slow=3.5,SNR=1.5						
GEYT				LR	LR	08 07 02.9	
	comp=Z,59nm,20.0s,baz=10.0,slow=37						

S39A	**Bolivar**	50.73	276	P	P	07 44 52.6	+0.5
S39A				IAmb	IAmb	07 44 54.1	
	comp=Z,14nm,1.3s						
HRY	**Holter Researc**	50.77	298	P	P	07 44 52.4	0.0
JTMT	**Jette**	50.83	300	P	P	07 44 53.4	+0.6
KK31	**Karatay Array**	51.27	70	P	P	07 44 56.5	+0.4
KK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KK31	**Karatay Array**	51.27	70	P	P	07 44 56.5	+0.4
KKAR	**Karatay Array**	51.27	70	P	P	07 44 56.2	+0.1
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KKAR	**Karatay Array**	51.27	70	P	P	07 44 56.2	+0.1
YAK	**Yakutsk**	51.27	19	LR	LR	08 05 42.5	
	comp=Z,88nm,21.3s,baz=260,slow=35						
YAK	**Yakutsk**	51.27	19	*i* P	P	07 44 55.8	0.0
YAK				pmax	pmax		
	comp=Z,11nm,0.4s						
BOZ	**Bozeman (W)**	51.62	297	P	P	07 44 59.7	+0.9
BOZ				IAmb	IAmb	07 45 02.9	
	comp=Z,9.6nm,1.0s						
BOZ					S	07 52 20.2	+0.7
YMP	**Mirror Lake Pl**	51.77	295	P	P	07 45 01.0	+0.9
DGZ	**Jazzator, Alta**	52.07	53	*i* P	P	07 45 02.3	+0.1
DGZ				pmax	pmax		
	comp=Z,11nm,1.7s						
YHL	**Hebgen Lake**	52.07	296	P	P	07 45 03.0	+0.6
QLMT	**Earthquake Lak**	52.19	296	P	P	07 45 04.5	+1.4
H17A	**Grant Village**	52.22	295	P	P	07 45 05.1	+1.6
H17A				IAmb	IAmb	07 45 08.6	
	comp=Z,12nm,1.1s						
SEY	**Seymchan**	52.49	6	*i* P	P	07 45 05.5	+0.7
MAKZ	**Makanchi**	52.59	59	P	P	07 45 06.0	+0.1
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MAKZ	**Makanchi**	52.59	59	P	P	07 45 06.0	+0.1
MK31	**Makanchi Array**	52.72	58	P	P	07 45 06.0	-0.8
MK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MK31	**Makanchi Array**	52.72	58	P	P	07 45 06.0	-0.8
MKAR	**Makanchi Array**	52.72	58	P	P	07 45 06.4	-0.4
	comp=Z,2.0nm,1.0s,baz=320,slow=5.4,SNR=9.6						
MKAR				LR	LR	08 06 08.7	
	comp=Z,55nm,19.9s,baz=312,slow=34						
MKAR	**Makanchi Array**	52.72	58	P	P	07 45 06.2	-0.6
LOHW	**Long Hollow**	52.89	295	P	P	07 45 09.1	+0.7
LOHW				IAmb	IAmb	07 45 11.8	
	comp=Z,9.4nm,1.4s						
SNOW	**Snow King Moun**	53.07	295	P	P	07 45 10.9	+1.1
SNOW				IAmb	IAmb	07 45 14.0	
	comp=Z,12nm,1.2s						
TOA0	**Torodi Ar. Sit**	53.13	156	P	P	07 45 09.5	-0.6
TORD	**Torodi Ar. Bea**	53.13	156	P	P	07 45 09.1	-1.0
	comp=Z,2.0nm,0.8s,baz=348,slow=8.9,SNR=6.1						
TORD				LR	LR	08 08 01.3	
	comp=Z,92nm,18.4s,baz=50,slow=36						
TORD	**Torodi Ar. Bea**	53.13	156	P	P	07 45 08.7	-1.4
BW06	**Boulder Array**	53.19	293	P	P	07 45 09.4	-1.2
BW06				IAmb	IAmb	07 45 12.9	
	comp=Z,10.0nm,1.0s						
PD31	**Pinedale Array**	53.19	293	P	P	07 45 09.3	-1.3
PD31				IAmb	IAmb	07 45 12.9	
	comp=Z,9.1nm,1.0s						
PDAR	**Pinedale Array**	53.19	293	P	P	07 45 08.8	-1.9
	comp=Z,5.3nm,0.9s,baz=50,slow=5.6,SNR=19						
PDAR				LR	LR	08 06 48.7	
	comp=Z,208nm,20.4s,baz=31,slow=35						
PDAR	**Pinedale Array**	53.19	293	P	P	07 45 09.4	-1.3
REDW	**Red Top Meadow**	53.20	295	P	P	07 45 10.8	+0.2
REDW				IAmb	IAmb	07 45 14.2	
	comp=Z,16nm,1.4s						
AAK	**Ala-Archa**	53.25	67	*c e* P	P	07 45 11.6	+0.6
AAK				pmax	pmax		
	comp=Z,44nm,2.5s						
AAK	**Ala-Archa**	53.25	67	P	P	07 45 10.5	-0.4
AAK				IAmb	IAmb	07 45 14.9	
	comp=Z,12nm,1.4s						
N23A	**Red Feather La**	53.32	289	P	P	07 45 11.8	+0.2
KAN14	**Manchester OK**	53.32	280	P	P	07 45 11.3	0.0
MOY	**Mondy**	54.65	42	*e* P	P	07 45 21.0	0.0
MOY				pmax	pmax		
	comp=Z,47nm,2.1s						
O20A	**White River Ci**	54.89	290	P	P	07 45 23.3	+0.3
O20A				IAmb	IAmb	07 45 28.9	
	comp=Z,9.9nm,1.4s						
HWUT	**Hardware Ranch**	54.96	294	P	P	07 45 24.1	+0.6
HWUT				IAmb	IAmb	07 45 27.2	
	comp=Z,13nm,1.1s						
RDMU	**Red Mountain**	55.05	292	P	P	07 45 24.8	+0.5
TCUT	**Toone Canyon**	55.32	294	P	P	07 45 25.4	-0.7
WMOK	**Wichita Mounta**	55.56	279	P	P	07 45 28.8	+1.1
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMOK	**Wichita Mounta**	55.56	279	P	P	07 45 28.8	+1.1
WMOK				IAmb	IAmb	07 45 30.4	
	comp=Z,8.9nm,1.2s						
SPUT	**South Promonto**	55.56	294	P	P	07 45 28.9	+1.0
JLU	**Jordanelle**	55.77	293	P	P	07 45 29.6	+0.2
SDCO	**Great Sand Dun**	55.81	287	P	P	07 45 30.2	+0.4
MPU	**Maple Canyon**	56.35	293	P	P	07 45 34.0	+0.6
ZAK	**Zakamensk**	56.46	41	*e* P	P	07 45 31.7	-2.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
P17A	**Butcher Ranch,**	56.46	292	P	P	07 45 34.5	+0.2
KSH	**Kashi**	56.49	68	P	P	07 45 37.8	+3.4
KSH				S	S	07 53 27.1	+1.7
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				pmax	pmax		
	comp=Z,430nm,4.7s						
KSH				LR	LR		
	comp=N,460nm,9.3s						
KSH				LR	LR		
	comp=E,590nm,6.4s						
KSH				LR	LR		
	comp=Z,610nm,6.3s						
NLU	**North Lily Min**	56.58	293	P	P	07 45 36.3	+1.2
PV04	**Paradox Valley**	56.64	290	P	P	07 45 35.7	+0.1
PV04				IAmb	IAmb	07 45 38.5	
	comp=Z,5.1nm,0.9s						
DUG	**Dugway, Tooele**	56.66	294	P	P	07 45 36.7	+1.1
DUG				pmax	pmax		
	comp=Z,12nm,1.4s						
DUG	**Dugway, Tooele**	56.66	294	P	P	07 45 36.7	+1.1
DUG				IAmb	IAmb	07 45 39.3	
	comp=Z,12nm,1.4s						
SRU	**San Rafael Swe**	56.68	292	P	P	07 45 36.0	+0.2
SRU				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SRU	**San Rafael Swe**	56.68	292	P	P	07 45 36.0	+0.2
PV14	**Lion Creek, Pa**	56.71	290	P	P	07 45 36.5	+0.4
PV14				IAmb	IAmb	07 45 38.9	
	comp=Z,6.5nm,0.9s						
PV16	**Nyswonger Mesa**	56.72	290	P	P	07 45 37.1	+0.9
PV16				IAmb	IAmb	07 45 40.0	
	comp=Z,12nm,1.5s						
PV01	**Paradox Valley**	56.73	289	P	P	07 45 36.9	+0.6
PV01				IAmb	IAmb	07 45 39.5	
	comp=Z,7.9nm,1.0s						
PV02	**Paradox Valley**	56.74	290	P	P	07 45 36.8	+0.5
PV02				IAmb	IAmb	07 45 39.4	
	comp=Z,12nm,1.0s						
PV03	**Paradox Valley**	56.74	290	P	P	07 45 36.5	+0.2
PV03				IAmb	IAmb	07 45 39.2	
	comp=Z,12nm,1.2s						
PV17	**East Wray Mesa**	56.76	290	P	P	07 45 36.9	+0.4
PV18	**Skein Mesa, Pa**	56.77	290	P	P	07 45 37.4	+0.9
PV13	**Radium Mtn., P**	56.81	290	P	P	07 45 36.8	-0.1
PV05	**Paradox Valley**	56.99	290	P	P	07 45 37.4	-0.8
WMQ	**Urumqi**	57.23	56	*e* P	P	07 45 42.5	+3.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.3s						
ABTX	**Abilene, Hawle**	57.74	279	P	P	07 45 42.8	-0.4
ABTX				IAmb	IAmb	07 45 46.6	
	comp=Z,12nm,1.3s						
MSU	**Marysvale**	57.85	293	P	P	07 45 44.1	-0.1
MSU	**Marysvale**	57.85	293	P	P	07 45 44.1	-0.1
MVU	**Marysvale**	57.88	293	P	P	07 45 44.4	0.0
MTPU	**Mount Pierson**	58.26	292	P	P	07 45 48.0	+0.8
PSUT	**Pine Spring**	58.50	294	P	P	07 45 49.0	+0.3
DBIC	**Dimbokro**	58.58	165	P	P	07 45 47.3	-1.9
	comp=Z,5.9nm,1.1s,baz=77,slow=14,SNR=3.2						
DBIC				LR	LR	08 11 35.1	
	comp=Z,169nm,18.8s,baz=344,slow=37						
ANMO	**Albuquerque**	58.60	286	P	P	07 45 50.3	+0.9
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANMO	**Albuquerque**	58.60	286	P	P	07 45 50.3	+0.9
SZCU	**Shurtz Canyon**	59.01	293	P	P	07 45 53.0	+0.7
CCUT	**Cedar City**	59.16	293	P	P	07 45 54.5	+1.2
R11A	**Troy Canyon, C**	59.34	295	P	P	07 45 54.9	+0.4
R11A				IAmb	IAmb	07 45 58.0	
	comp=Z,7.8nm,1.2s						
BNM	**Barren Site**	59.36	285	P	P	07 45 54.6	-0.1
LCMT	**Little Creek M**	59.58	293	P	P	07 45 56.5	+0.4
SONM	**Songino Array**	59.64	40	P	P	07 45 56.1	-0.2
	comp=Z,1.0nm,1.0s,baz=331,slow=5.6,SNR=5.3						
SONM				LR	LR	08 14 34.6	
	comp=Z,111nm,19.0s,baz=342,slow=39						
SONM	**Songino Array**	59.64	40	P	P	07 45 56.4	+0.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	59.64	40	P	P	07 45 56.4	+0.1
JCT	**Junction City**	59.66	278	P	P	07 45 57.0	+0.4
JCT				pmax	pmax		
	comp=Z,13nm,1.1s						
JCT	**Junction City**	59.66	278	P	P	07 45 57.0	+0.4
U15A	**North Rim**	59.70	291	P	P	07 45 56.9	-0.2
U15A				IAmb	IAmb	07 45 59.6	
	comp=Z,6.7nm,1.1s						
WUAZ	**Wupatki**	60.12	290	P	P	07 45 60.0	+0.1
NVAR	**Mina Array Bea**	60.31	297	P	P	07 46 01.1	-0.1
	comp=Z,0.8nm,0.8s,baz=29,slow=2.9,SNR=5.7						
NVAR				LR	LR	08 12 10.9	
	comp=Z,336nm,18.7s,baz=29,slow=36						
NIL	**Nilore**	60.44	74	P	P	07 46 01.8	-0.1
NIL				pmax	pmax		
	comp=Z,11nm,1.1s						
NIL	**Nilore**	60.44	74	P	P	07 46 01.8	-0.1
SHPR	**Sheep Range**	60.77	294	P	P	07 46 01.9	-2.5
SHPR				IAmb	IAmb	07 46 08.1	
	comp=Z,12nm,1.4s						
X16A	**Lo Mia Camp, P**	61.10	290	P	P	07 46 07.1	+0.5
X16A				IAmb	IAmb	07 46 10.2	
	comp=Z,5.6nm,1.0s						
OMMB	**Old Mammoth Mi**	61.30	297	P	P	07 46 09.1	+1.1
OMMB				IAmb	IAmb	07 46 12.0	
	comp=Z,9.9nm,1.5s						
MDPB	**Devils Postpil**	61.31	298	P	P	07 46 08.9	+0.9
MDPB				IAmb	IAmb	07 46 11.9	
	comp=Z,6.5nm,1.2s						
TXAR	**Lajitas Array**	62.30	280	P	P	07 46 12.4	-2.2
	comp=Z,1.4nm,0.9s,baz=64,slow=2.9,SNR=7.5						
TXAR				LR	LR	08 12 40.3	
	comp=Z,189nm,19.2s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	62.30	280	P	P	07 46 13.8	-0.8
TXAR	**Lajitas Array**	62.30	280	P	P	07 46 13.8	-0.8
TUC	**Tucson**	62.67	288	P	P	07 46 18.2	+1.2
TUC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TUC	**Tucson**	62.67	288	P	P	07 46 18.2	+1.2
ISA	**Isabella, Lake**	62.80	296	P	P	07 46 18.4	+0.5
ISA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ISA	**Isabella, Lake**	62.80	296	P	P	07 46 18.4	+0.5
ISA				IAmb	IAmb	07 46 21.5	
	comp=Z,5.3nm,1.1s						
319A	**Douglas**	62.87	286	P	P	07 46 19.1	+0.7
KLR	**Kul'dur**	63.94	22	LR	LR	08 13 37.9	
	comp=Z,68nm,19.5s,baz=340,slow=35						
KLR	**Kul'dur**	63.94	22	*c e* P	P	07 46 27.6	+2.5
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GTA	**Gaotai**	65.29	49	*e* P	P	07 46 34.6	+0.3
GTA				pP	sP	07 46 40.0	+0.7
GTA				sP	pP	07 46 43.4	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,160nm,4.7s						
GTA				LR	LR		
	comp=N,140nm,17.8s						
GTA				LR	LR		
	comp=E,180nm,16.4s						
GTA				LR	LR		
	comp=Z,170nm,15.6s						
HHC	**Hu-ho-hao-te**	67.51	40	*e* P	P	07 46 49.6	+1.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	**Lanzhou**	69.62	48	*e* P	P	07 47 01.5	-0.2
LZH				pP	pP	07 47 03.0	-2.4
LZH				sP	sP	07 47 04.9	-1.9
LZH				*e* PP	PP	07 49 36.8	+1.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,8.0s						
LZH				LR	LR		
	comp=N,180nm,16.0s						
LZH				LR	LR		
	comp=E,180nm,15.7s						
LZH				LR	LR		
	comp=Z,230nm,18.3s						
ROSC	**El Rosal**	71.93	241	LR	LR	08 17 33.6	
	comp=Z,24nm,18.7s,baz=42,slow=35						
ROSC	**El Rosal**	71.93	241	P	P	07 47 13.3	-2.9
ROSC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ROSC	**El Rosal**	71.93	241	P	P	07 47 13.3	-2.9
KSAR	**Wonju Array Be**	74.65	28	P	P	07 47 31.2	-0.4
KSAR	**Wonju Array Be**	74.65	28	P	P	07 47 31.2	-0.4
KMBO	**Kilima Mbogo**	76.65	123	LR	LR	08 25 10.8	
	comp=Z,103nm,19.2s,baz=316,slow=39						
NJ2	**Nanjing**	77.73	37	*e* P	P	07 47 49.8	+0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WHN	**Wuhan**	77.94	41	P	P	07 47 57.0	+6.7
SAML	**Samuel**	80.95	226	P	P	07 48 07.5	+0.7
SAML				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SAML	**Samuel**	80.95	226	P	P	07 48 07.5	+0.7
CMAR	**Chiang Mai Arr**	84.12	59	P	P	07 48 22.9	-0.6
	comp=Z,0.5nm,0.3s,baz=308,slow=7.4,SNR=1.7						

**ROM 18 07:38:21.2±0.1, 42.°675N±0.°004×13.°184E±0.°007,
h10^{km}, ML1.3/3, 2C-1D, Error ellipse: s-maj=0.6km
s-min=0.3km az=244.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMA1	**SAN MARTINO**	0.12	112	⇑P	Pg	07 38 24.9	+0.7
SMA1				S	Sg	07 38 27.5	+1.3
SMA1				AML	AML		
	comp=N,128µm,0.9s						
SMA1				AML	AML		
	comp=E,206µm,0.7s						
LNSS	**Leonessa**	0.13	236	⇑P	Pg	07 38 24.7	+0.5
LNSS				S	Sg	07 38 27.2	+0.8
LNSS				AML	AML		
	comp=N,372µm,0.3s						
LNSS				AML	AML		
	comp=N,372µm,0.3s						
LNSS				AML	AML		
	comp=E,366µm,0.2s						
NRCA	**Norcia**	0.17	342	P	Pg	07 38 25.1	+0.3
NRCA				S	Sg	07 38 27.9	+0.5
NRCA				AML	AML		
	comp=E,213µm,0.2s						
NRCA				AML	AML		
	comp=N,166µm,1.4s						
RM33	**Pellescritta (**	0.17	172	P	Pg	07 38 25.5	+0.6
RM33				S	Sg	07 38 28.5	+1.0
RM33				AML	AML		
	comp=E,136µm,1.4s						
RM33				AML	AML		
	comp=N,85µm,1.1s						
RM33				AML	AML		
	comp=E,136µm,1.4s						
CAMP	**Campotosto**	0.22	130	P	Pg	07 38 26.4	+0.6
TERO	**Teramo**	0.31	99	P	Pg	07 38 27.8	+0.3
TERO				S	Sg	07 38 32.7	+1.0
FDMO	**Fiordimonte**	0.37	349	P	Pg	07 38 28.8	+0.3
FDMO				S	Sb	07 38 35.1	-0.5
CESI	**CESI - Serrava**	0.39	328	P	Pb	07 38 29.8	-0.4
CESI				S	Sb	07 38 35.4	-0.8
FIAM	**Fiamignano**	0.41	187	P	Pg	07 38 29.4	+0.2
FIAM				S	Sb	07 38 35.9	-1.0
CSP1	**Cessapalombo**	0.42	2	⇓P	Pg	07 38 29.8	+0.3
CSP1				S	Sb	07 38 36.4	-0.7
CSP1				AML	AML		
	comp=E,73µm,1.6s						
CSP1				AML	AML		
	comp=N,74µm,1.6s						

IASPEI ***18*** *07:44:14.8±0.8, 44.°51N±0.°02×7.°22E±0.°02, h8^{km}±6^{km},*
Error ellipse: s-maj=2.7km s-min=2.1km az=60.3, GT5
selection from ISC bulletin GT5 identified by Bondr and
McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
GEN ***18*** *07:44:14.7, 44.°51N×7.°23E, h6^{km}±3^{km}, Ml1.7*
ROM ***18*** *07:44:14.3±0.1, 44.°471N±0.°003×7.°163E±0.°006,*
h11^{km}, ML2.0/8, Error ellipse: s-maj=0.5km s-min=0.1km
az=263.0
STR ***18*** *07:44:15.1±0.4, 44°N±2°×°±°, h8^{km}, MLv1.9/7,*
smi:scs/0.6/LOCSAT earthModelID
smi:scs/0.6/alpes_taup-2.11 preliminary
LDG ***18*** *07:44:15.0±0.1, 44.°51N×7.°22E, h5^{km}, Md2.5/2, Ml2.2/16,*
Error ellipse: s-maj=1.3km s-min=0.9km az=58.0
ISC 18 07:44:14.7±0.8, **44.°50N**±0.°01×**7.°21E**±0.°02, **h10**^{km}±5^{km},
n61, σ1^{s}.**18**/109, **10C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PZZ	**Stroppo**	0.07	274	P	Pg	07 44 16.9	-0.1
PZZ				S	Sg	07 44 18.2	-0.6
PZZ	**Stroppo**	0.07	274	⇑*i* P	Pg	07 44 16.9	-0.1
PZZ				S	Sg	07 44 18.2	-0.6
PZZ				AML	AML		
	comp=N,5310µm,1.2s						
PZZ				AML	AML		
	comp=E,6550µm,0.3s						
STV	**Sant Anna di V**	0.27	162	P	Pg	07 44 20.2	0.0
STV				S	Sg	07 44 23.8	-0.1
STV	**Sant Anna di V**	0.27	162	⇑*e* P	Pg	07 44 20.2	0.0
STV				S	Sg	07 44 23.7	-0.1
STV				AML	AML		
	comp=N,176µm,0.3s						
STV				AML	AML		
	comp=E,192µm,0.3s						
SURF	**Saint Ours**	0.28	266	Pg	Pg	07 44 20.8	+0.3
SURF				Sg	Sg	07 44 25.0	+0.7
ENR	**Entracque**	0.32	151	P	Pg	07 44 20.9	-0.1
ENR				S	Sg	07 44 25.2	0.0
ENR	**Entracque**	0.32	151	⇑*e* P	Pg	07 44 21.1	+0.1
ENR				S	Sg	07 44 25.4	+0.1
ENR				AML	AML		
	comp=N,632µm,0.2s						
ENR				AML	AML		
	comp=N,632µm,0.2s						
ENR				AML	AML		
	comp=E,678µm,0.1s						
ISO	**Isola**	0.34	200	Pg	Pg	07 44 21.7	+0.2
ISO				Sg	Sg	07 44 26.2	+0.3
MBDF	**Montbardon**	0.38	306	*e* Pg	Pg	07 44 22.7	+0.4
MBDF				*e* Sg	Sg	07 44 27.4	0.0
	comp=E,48nm,0.3s						
OGAG	**Argentiere**	0.48	265	Pg	Pb	07 44 26.0	+0.7
OGAG				Sg	Sb	07 44 33.8	+1.4
TURF	**col de Turini**	0.54	166	Pg	Pg	07 44 25.5	+0.2
TURF				Sg	Sg	07 44 32.7	+0.3
MGRO	**Montegrosso**	0.63	137	P	Pg	07 44 26.8	-0.1
MGRO				S	Sg	07 44 35.5	+0.3
MGRO	**Montegrosso**	0.63	137	⇑*e* P	Pg	07 44 26.8	-0.1
MGRO				S	Sg	07 44 35.6	+0.4
RSP	**Reno Superiore**	0.65	4	P	Pg	07 44 26.6	-0.6
RSP	**Reno Superiore**	0.65	4	⇓*e* P	Pg	07 44 26.6	-0.6
RSP				S	Sg	07 44 36.1	+0.3
RSP				AML	AML		
	comp=N,89µm,0.5s						
RSP				AML	AML		
	comp=N,89µm,0.5s						
RSP				AML	AML		
	comp=E,74µm,1.2s						
SBF	**Sospel**	0.66	166	*e* Pg	Pg	07 44 27.7	+0.3
SBF				*e* Sg	Sg	07 44 36.3	+0.2
	comp=E,18nm,0.2s						
BNI	**Bardonecchia**	0.67	326	⇑*e* P	Pg	07 44 27.8	+0.2
BNI				S	Sg	07 44 36.2	-0.2
ESCA	**l'Escarene**	0.68	170	Pg	Pg	07 44 28.0	+0.1
ESCA				Sg	Sg	07 44 37.3	+0.5
RORO	**Rocca Rossa**	0.73	122	P	Pg	07 44 28.5	-0.3
RORO				S	Sg	07 44 38.0	-0.2
RORO	**Rocca Rossa**	0.73	122	⇑*e* P	Pg	07 44 28.4	-0.3
RORO				S	Sg	07 44 38.2	-0.1
RORO				AML	AML		
	comp=N,130µm,1.3s						
RORO				AML	AML		
	comp=E,114µm,0.2s						
MONC	**Moncucco Torin**	0.77	42	⇓*e* P	Pb	07 44 30.5	+0.3
MONC				S	Sb	07 44 41.6	+1.0
MONC				AML	AML		
	comp=N,132µm,1.3s						
MONC				AML	AML		
	comp=E,134µm,1.6s						
IMI	**Imperia**	0.77	140	P	Pg	07 44 29.4	-0.1
IMI				S	Sg	07 44 39.1	-0.4
IMI	**Imperia**	0.77	140	⇓*e* P	Pg	07 44 29.4	-0.1
IMI				S	Sg	07 44 39.5	0.0
CALF	**Calern**	0.78	195	Pg	Pg	07 44 30.1	+0.4
CALF				Sg	Sg	07 44 39.8	-0.1
OGMO	**Fort Saint-Gob**	0.80	332	Pg	Pg	07 44 30.7	+0.7
OGMO				Sg	Sg	07 44 40.9	+0.4
QLNO	**Quiliano**	0.83	102	⇑*e* P	Pg	07 44 30.8	+0.1
QLNO				S	Sg	07 44 41.3	-0.3
QLNO				AML	AML		
	comp=E,108µm,1.1s						
QLNO				AML	AML		
	comp=N,95µm,1.6s						
FINB	**Finale Ligure**	0.86	112	⇑*e* P	Pg	07 44 31.2	-0.1
FINB				S	Sg	07 44 42.7	+0.2
ROTM	**Rocchetta Tana**	0.89	67	⇑*e* P	Pb	07 44 32.5	+0.4
ROTM				S	Sb	07 44 45.0	+0.9
PCP	**Piancastagn**	0.96	87	P	Pg	07 44 32.9	-0.2
PCP				S	Sg	07 44 45.3	-0.2
PCP	**Piancastagn**	0.96	87	⇑*e* P	Pg	07 44 32.9	-0.2
PCP				S	Sg	07 44 45.3	-0.2
LSD	**Lago del Serru**	0.96	357	P	Pg	07 44 32.8	-0.4
LSD				S	Sg	07 44 45.5	-0.2
LSD	**Lago del Serru**	0.96	357	P	Pg	07 44 32.8	-0.4
LSD				S	Sg	07 44 45.6	-0.1
LSD				AML	AML		
	comp=N,48µm,0.3s						
LSD				AML	AML		
	comp=E,81µm,1.0s						
BLAF	**les Blancs**	1.00	237	Pg	Pb	07 44 35.0	+0.9
FRF	**La Foret Royal**	1.02	203	*e* Pg	Pg	07 44 34.2	-0.2
FRF				*e* Sg	Sg	07 44 47.2	-0.5
	comp=E,25nm,0.2s						
ORIF	**Oris-en-Rattie**	1.03	294	*e* Pg	Pg	07 44 34.5	-0.1
ORIF				*e* Sg	Sg	07 44 47.9	-0.1
	comp=E,8.6nm,0.3s						
LPG	**La Plagne**	1.05	342	*e* Pg	Pg	07 44 34.5	-0.3
LPG				*e* Sg	Sg	07 44 47.7	-0.8
	comp=E,8.2nm,0.2s						
LPL	**La Plagne**	1.07	342	*e* Pg	Pg	07 44 34.8	-0.4
LPL				*e* Sg	Sg	07 44 47.9	-1.3
	comp=E,16nm,0.5s						
MLYF	**Mely**	1.16	244	Pg	Pn	07 44 38.2	+1.2
RSL	**Roselend**	1.26	341	Pg	Pg	07 44 39.7	+0.9
RSL				Sg	Sb	07 44 55.6	+0.8
MRGE	**Morge**	1.27	355	⇓*e* P	Pn	07 44 38.7	+0.1
MRGE				S	Sb	07 44 55.0	-0.3
LMR	**La Mourre**	1.27	204	*e* Pg	Pn	07 44 38.7	+0.2
LMR				*e* Sg	Sb	07 44 54.6	-0.5
	comp=E,11nm,0.2s						
SMRF	**Simiane la Rot**	1.29	246	*e* P	Pn	07 44 40.2	+0.8
SMRF				*e* Sg	Sb	07 44 56.4	+0.9
	comp=E,9.3nm,0.3s						
VIVF	**Saint-Julien-l**	1.84	282	*e* P	Pn	07 44 47.8	+1.4
VIVF				*e* Sn	Sn	07 45 08.6	-0.9
VIVF				*e* Sg	Sb	07 45 13.2	+1.6
	comp=E,3.1nm,0.3s						
CABF	**La Chapelle**	2.25	340	*e* P	Pn	07 44 53.5	+1.5
CABF	**La Chapelle**	2.25	340	*e* Pg	Pb	07 44 57.0	+1.6

CABF				*e*Sn	**Sb**	**07 45 25.0**	**+1.6**
	comp=E,1.1nm,0.4s						
PGF	**Pioggiola**	**2.35**	**146**	*e*Pn	**Pn**	**07 44 52.3**	**-1.1**
PGF				*e*Sn	**Sn**	**07 45 20.4**	**-1.9**
	comp=E,2.3nm,0.3s						
LASF	**Ste Croix**	**2.44**	**261**	*e*Pn	**Pn**	**07 44 54.4**	**-0.2**
LASF	**Ste Croix**	**2.44**	**261**	*e*Pg	**Pg**	**07 45 01.1**	**-0.4**
LASF				*e*Sn	**Sn**	**07 45 22.1**	**-2.4**
	comp=E,1.0nm,0.3s						
MNTV	**Mantova**	**2.63**	**74**	P	**Pg**	**07 45 05.4**	**+0.4**
MNTV				S	**Sg**	**07 45 45.0**	**+5.9**
SMF	**Signal de Mont**	**3.19**	**313**	*e*Pn	**Pn**	**07 45 04.5**	**-0.4**
HINF	**Hinteralfeld**	**3.32**	**356**	*e*Pn	**Pn**	**07 45 06.2**	**-0.5**
HINF				*e*Sn	**Sn**	**07 45 43.6**	**-2.7**
	comp=E,0.6nm,0.3s						
ASQU	**Asqua**	**3.37**	**100**	P	**Pg**	**07 45 21.6**	**+2.4**
AVF	**Avril sur Loir**	**3.54**	**312**	*e*P	**Pn**	**07 45 12.4**	**+2.7**
HAU	**Haudompre**	**3.56**	**351**	*e*Pn	**Pn**	**07 45 09.7**	**-0.2**
HAU				*e*Sn	**Sn**	**07 45 49.3**	**-2.6**
	comp=E,1.4nm,0.4s						
SSF	**Saint Saulge**	**3.64**	**316**	*e*P	**Pn**	**07 45 13.8**	**+2.8**
BGF	**Bois d'Agland**	**3.69**	**305**	*e*P	**Pn**	**07 45 14.5**	**+2.8**
CPGN	**Carpegna, Ital**	**3.75**	**99**	P	**Pb**	**07 45 19.9**	**-1.0**
MTLF	**Montolieu**	**3.79**	**254**	*e*Sn	**Sn**	**07 45 55.5**	**-2.1**
	comp=E,0.3nm,0.3s						
PE3	**Peglio**	**3.89**	**100**	P	**Pg**	**07 45 28.8**	**-0.5**
TCF	**Toulx Ste Croi**	**3.95**	**299**	*e*Pn	**Pn**	**07 45 13.8**	**-1.5**
TCF				*e*Sn	**Sn**	**07 45 59.2**	**-2.4**
TCF				*e*Sg	**Sg**	**07 46 18.0**	**-3.4**
	comp=E,0.7nm,0.3s						
PP3	**Marolino**	**4.76**	**101**	P	Pb	07 45 33.5	-4.5

BYKL 18 07:48:33.1±0.3,56°.11N×113°.69E,h6^{km}±4^{km},1C,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.07**	**275**	⇑*i*Pg	Pg	07 48 34.5	-0.4
SVKR				*e*Sg	Sg	07 48 36.4	+0.2
SVKR				Pmax			
	2μm,0.1s						
SVKR				Smax			
	6μm,0.4s						
UKT	**Uakit**	**0.62**	**183**	*e*Pg	Pg	07 48 43.5	-1.6
UKT				*e*Sg	Sg	07 48 52.2	-1.0
UKT				Pmax			
	25nm,0.4s						
UKT				Smax			
	83nm,0.4s						
YOA	**Uoyan**	**1.10**	**272**	*e*Pg	Pg	07 48 53.2	-1.0
YOA				*e*Sg	Sg	07 49 08.4	-0.1
YOA				*e*Sb	Sn	07 49 11.8	+1.2
YOA				Pmax			
	55nm,0.2s						
YOA				max			
	242nm,0.5s						
NLYR	**Nelyaty**	**1.19**	**70**	*e*Pg	Pg	07 48 53.9	-1.9
NLYR				*e*Pb	Pb	07 48 55.9	-0.1
NLYR				*e*Sg	Sg	07 49 10.5	-0.7
NLYR				*e*Sb	Sn	07 49 14.1	+1.4
NLYR				max			
	94nm,0.2s						
NLYR				max			
	116nm,0.8s						
NLYR	**Nelyaty**	**1.19**	**70**	*e*Sg	Sn	07 49 13.6	+0.9
KMO	**Kumora**	**1.42**	**262**	*e*Pg	Pn	07 48 58.4	-1.0
KMO				*e*Pb	Pb	07 48 59.8	-0.1
KMO				*e*Sg	Sb	07 49 17.3	-0.9
KMO				max			
	30nm,0.4s						
KMO				*e*Sg			
	54nm,0.8s						
BOD	**Bodaibo**	**1.72**	**6**	*e*Pg	Pn	07 49 03.8	+0.2
BOD				*e*Sg	Sb	07 49 26.5	-0.5
BOD				Pmax			
	16nm,0.1s						
BOD				Smax			
	140nm,0.4s						
YLYR	**Ulyunkhan**	**1.90**	**230**	*e*Pn	Pn	07 49 05.4	-0.6
YLYR				*e*Pg	Pb	07 49 07.4	-0.7
YLYR				*e*Sg	Sb	07 49 32.6	+0.6
YLYR				Pmax			
	20nm,0.3s						
YLYR				Smax			
	117nm,0.7s						
CRS	**Chara**	**2.66**	**71**	*e*Pn	Pn	07 49 16.7	+0.2
CRS				*e*Pg	Pb	07 49 20.8	-0.3
CRS				*e*Sg	Sg	07 49 56.2	-2.2
CRS				Pmax			
	26nm,0.7s						
CRS				Smax			
	48nm,0.4s						
TUP	**Tupik**	**3.96**	**113**	*e*Pn	Pn	07 49 34.4	0.0
TUP				*e*Pg	Pb	07 49 44.2	+0.9
TUP				*e*Sg	Sb	07 50 35.8	+4.4
TUP				Pmax			
	9.0nm,0.3s						
TUP				Smax			
	28nm,0.9s						

BYKL 18 07:48:36.0±0.3,56°.11N×113°.68E,h4^{km}±5^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.07**	**276**	*e*Pg	Pg	07 48 37.4	-0.1
SVKR				*e*Sg	Sg	07 48 39.3	+0.7
SVKR				Pmax			
	4μm,0.2s						
SVKR				Smax			
	6μm,0.4s						
UKT	**Uakit**	**0.62**	**183**	*e*Pg	Pg	07 48 46.7	-1.2
UKT				*e*Sg	Sg	07 48 54.9	-1.1
UKT				Pmax			
	46nm,0.3s						
UKT				Smax			
	90nm,0.4s						
NLYR	**Nelyaty**	**1.19**	**70**	*e*Pg	Pg	07 48 57.1	-1.7
NLYR				*e*		07 48 58.4	
NLYR				*e*Sb	Sn	07 49 16.7	+0.6
NLYR				max			
	184nm,0.3s						
NLYR				max			
	253nm,0.8s						
KMO	**Kumora**	**1.41**	**262**	*e*Pg	Pn	07 49 01.2	-1.3
KMO				*e*Sg	Sb	07 49 20.0	-1.2
KMO				Pmax			
	38nm,0.6s						
KMO				Smax			
	102nm,0.8s						
BOD	**Bodaibo**	**1.72**	**6**	*e*Pg	Pn	07 49 06.7	0.0
BOD				*e*Sg	Sn	07 49 29.3	+0.1
BOD				Pmax			
	18nm,0.3s						
BOD				Smax			
	141nm,0.3s						
YLYR	**Ulyunkhan**	**1.89**	**230**	*e*Pg	Pb	07 49 10.1	-1.0
YLYR				*e*Sg	Sb	07 49 35.7	+0.6
YLYR				Pmax			
	23nm,0.3s						
YLYR				Smax			
	108nm,0.2s						
CRS	**Chara**	**2.66**	**71**	*e*Pg	Pb	07 49 23.8	-0.4
CRS				*e*Sg	Sb	07 49 59.0	+1.7
CRS				Pmax			
	49nm,1.0s						
CRS				Smax			
	58nm,0.5s						
TUP	**Tupik**	**3.97**	**113**	*e*Pn	Pn	07 49 37.8	+0.2
TUP				*e*Pg	Pb	07 49 47.0	+0.6
TUP				*e*Sg	Sb	07 50 38.4	+3.7
TUP				Pmax			
	7.0nm,0.6s						
TUP				Smax			
	51nm,0.6s						

*IDC **18** 07:53:09.7±1.9,21°.06S×179°.22W,h631^{km}±21^{km},mb3.1/5, mb1 3.3/6,mb1mx3.0/31,mbtmp4.2/6,Error ellipse: s-maj=26.4km s-min=21.6km az=63.0*

ISC 18 07:53:08.1±1.2,**21°.5S**±0°.1×**179°.2W**±0°.2,**h600**^{km}**,n11,** σ**2^{s}.45**/12,**mb3.9**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.56**	**324**	P	**P**	**07 54 38.9**	**+1.1**
	14nm,0.3s,baz=145,slow=5.5,SNR=44						
URZ	**Urewera**	**17.04**	**190**	P	**P**	**07 56 35.8**	**+1.1**
	1.0nm,0.3s,baz=133,slow=15,SNR=1.3						
URZ				S	**S**	**07 59 17.8**	**-5.0**
	0.3nm,0.3s,baz=55,slow=7.3,SNR=1.5						
STKA	**Stephens Creek**	**36.41**	**245**	P	**P**	**07 59 24.6**	**+1.0**
	2.2nm,0.7s,baz=84,slow=15,SNR=4.8						
ASAR	**Alice Springs**	**43.26**	**258**	P	**P**	**08 00 18.1**	**-0.2**
	3.1nm,0.5s,baz=98,slow=7.5,SNR=74						
ASAR				PcP	**PcP**	**08 01 52.6**	**-1.0**
	0.9nm,0.6s,baz=104,slow=4.0,SNR=8.1						
WRA	**Warramunga Arr**	**43.41**	**263**	P	**P**	**08 00 18.6**	**-0.9**
	1.0nm,0.3s,baz=97,slow=7.7,SNR=16						
VNDA	**Vanda**	**56.85**	**185**	P	**P**	**08 01 58.5**	**+2.1**
	0.8nm,0.8s,baz=19,slow=5.5,SNR=5.9						
QSPA	**South Pole Qui**	**68.60**	**180**	P	**P**	**08 03 13.6**	**+1.6**
	1.9nm,0.5s,baz=214,slow=1.8,SNR=16						
ARCES	**ARCESS Array B**	**129.67**	**349**	PKP	**PKPdf**	**08 11 05.7**	**-3.5**
	2.3nm,0.8s,baz=31,slow=2.8,SNR=4.6						
AKASG	**Malin Array Be**	**143.32**	**330**	PKP	PKPab	08 11 30.4	-2.9
	0.5nm,0.4s,baz=47,slow=4.6,SNR=8.2						
BRTR	**Keskin Array B**	**146.67**	**311**	PKPbc	**PKPdf**	**08 11 41.5**	**+0.4**
	0.7nm,0.7s,baz=134,slow=4.7,SNR=4.6						
GERES	**GERESS Array B**	**150.82**	**342**	PKPbc	**PKPbc**	**08 11 51.7**	**-2.0**
	0.5nm,0.5s,baz=29,slow=3.0,SNR=6.3						

BYKL 18 08:08:31.7±0.6,56°.07N×113°.69E,h8^{km}±10^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.09**	**303**	*e*Pg	Pg	08 08 34.6	+0.6
SVKR				*e*Sg	Sg	08 08 36.5	+0.9
SVKR				Pmax			
	1μm,0.1s						
SVKR				Smax			
	6μm,0.4s						
UKT	**Uakit**	**0.58**	**184**	*e*Pg	Pg	08 08 41.5	-1.5
UKT				Pmax			
	24nm,0.3s						
UKT				Smax			
	94nm,0.3s						
NLYR	**Nelyaty**	**1.20**	**69**	*e*Pg	Pb	08 08 53.2	-1.5
NLYR				*e*Pb	Pn	08 08 55.5	+0.7
NLYR				*e*Sg	Sg	08 09 09.7	-0.5
NLYR				max			
	136nm,0.3s						
NLYR				Smax			
	272nm,1.2s						
KMO	**Kumora**	**1.41**	**264**	*e*Pg	Pn	08 08 57.1	-0.6
KMO				Pmax			
	19nm,0.3s						
KMO				Smax			
	237nm,0.6s						
BOD	**Bodaibo**	**1.76**	**5**	*e*Sg	Sn	08 09 25.7	+0.6
BOD				Smax			
	109nm,0.3s						
YLYR	**Ulyunkhan**	**1.87**	**231**	*e*Sg	Sg	08 09 30.9	-0.9
YLYR				Smax			
	172nm,0.6s						
TUP	**Tupik**	**3.95**	**112**	*e*Sg	Sg	08 10 33.9	-4.4
TUP				Smax			
	41nm,0.9s						

BYKL 18 08:08:36.6±0.6,56°.12N×113°.75E,h13^{km}±8^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.11**	**268**	*e*Pg	Pg	08 08 39.8	+0.1
SVKR				*e*Sg	Sg	08 08 41.8	-0.2
SVKR				Pmax			
	6μm,0.1s						
SVKR				Smax			
	10μm,0.1s						
UKT	**Uakit**	**0.64**	**186**	*e*Pg	Pg	08 08 48.8	-0.2
UKT				*e*Sg	Sg	08 08 57.5	+0.1
UKT				Pmax			
	62nm,0.4s						
UKT				Smax			
	176nm,0.8s						
NLYR	**Nelyaty**	**1.15**	**70**	*e*Pg	Pb	08 08 58.1	-0.2
NLYR				*e*Sg	Sb	08 09 13.2	0.0
NLYR				Pmax			
	78nm,0.5s						
NLYR				Smax			
	255nm,0.8s						
KMO	**Kumora**	**1.45**	**262**	*e*Pg	Pn	08 09 02.2	-0.3
KMO				*e*Sg	Sn	08 09 20.5	-0.9
KMO				Pmax			
	52nm,0.3s						
KMO				Smax			
	189nm,0.8s						
BOD	**Bodaibo**	**1.71**	**5**	*e*Pg	Pb	08 09 07.6	-0.2
BOD				*e*Sg	Sb	08 09 29.6	+0.4
BOD				Pmax			
	52nm,0.2s						
BOD				Smax			
	131nm,0.4s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*Pg	Pb	08 09 12.0	+0.4
YLYR				*e*Sg	Sb	08 09 36.7	+1.1
YLYR				Pmax			
	68nm,0.2s						
YLYR				Smax			
	164nm,0.8s						
TUP	**Tupik**	**3.93**	**113**	*e*Pg	Pb	08 09 46.6	+0.8
TUP				*e*Sg	Sb	08 10 36.8	+3.6
TUP				Pmax			
	12nm,0.3s						
TUP				Smax			
	48nm,1.4s						

BYKL 18 08:08:40.2±0.2,56°.10N×113°.77E,h5^{km}±6^{km},East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.12**	**278**	*e*Pg	Pg	08 08 42.7	0.0
SVKR				*e*Sg	Sg	08 08 44.6	+0.2
SVKR				Pmax			
	9μm,0.1s						
SVKR				Smax			
	24μm,0.2s						
UKT	**Uakit**	**0.62**	**188**	*e*Pg	Pg	08 08 51.8	-0.3
UKT				*e*Sg	Sg	08 09 00.0	-0.1
UKT				Pmax			
	91nm,0.2s						
UKT				Smax			
	318nm,0.5s						
YOA	**Uoyan**	**1.15**	**272**	*e*Pg	Pg	08 09 00.7	-1.5
YOA				*e*Sg	Sg	08 09 16.0	-1.0
YOA				Pmax			
	390nm,0.3s						
YOA				Smax			
	938nm,0.4s						
NLYR	**Nelyaty**	**1.15**	**69**	*e*Pg	Pg	08 09 01.1	-1.1
NLYR				*e*Sg	Sg	08 09 15.6	-1.4
NLYR				Pmax			
	100nm,0.2s						
NLYR				Smax			
	449nm,0.5s						
KMO	**Kumora**	**1.46**	**263**	*e*Pg	Pn	08 09 06.5	-0.7
KMO				*e*Pb	Pb	08 09 07.8	0.0
KMO				*e*Sg	Sb	08 09 25.7	-1.0
KMO				max			
	359nm,0.4s						
KMO				Smax			
	567nm,0.8s						
BOD	**Bodaibo**	**1.73**	**4**	*e*Pg	Pn	08 09 11.2	+0.3
BOD				*e*Sg	Sn	08 09 33.6	+0.3
BOD				Pmax			
	120nm,0.5s						
BOD				Smax			
	359nm,0.5s						
YLYR	**Ulyunkhan**	**1.93**	**232**	*e*Pg	Pb	08 09 15.0	-0.8
YLYR				*e*Sg	Sb	08 09 40.4	+0.3
YLYR				Pmax			
	172nm,0.2s						
YLYR				Smax			
	345nm,0.3s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*Pg	Pb	08 09 23.3	-0.6
NIZ				*e*Sg	Sb	08 09 54.7	+0.9
NIZ				Pmax			
	39nm,0.5s						
NIZ				Smax			
	155nm,0.6s						
CRS	**Chara**	**2.62**	**70**	*e*Pg	Pb	08 09 28.1	+0.5
CRS				*e*Sg	Sg	08 10 02.5	-1.8
CRS				Pmax			
	63nm,0.7s						
CRS				Smax			
	145nm,0.6s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pn	Pn	08 09 32.2	0.0
SYVR				*e*Pg	Pb	08 09 39.0	+0.2
SYVR				*e*Sg	Sb	08 10 21.5	+2.6
SYVR				Pmax			
	28nm,1.0s						
SYVR				Smax			
	90nm,0.7s						
VTMR	**Vitim**	**3.41**	**349**	*e*Pg	Pb	08 09 40.7	-0.4
VTMR				*e*Sg	Sb	08 10 24.6	+1.8
VTMR				Pmax			
	50nm,0.3s						
VTMR				Smax			
	325nm,0.3s						
TUP	**Tupik**	**3.92**	**113**	*e*Pn	Pn	08 09 41.4	+0.4
TUP				*e*Pg	Pb	08 09 50.7	+1.0
TUP				*e*Sg	Sb	08 10 40.7	+3.4
TUP				Pmax			
	14nm,0.4s						
TUP				Smax			
	81nm,0.7s						
OGRR	**Ongureny**	**4.33**	**238**	*e*Pg	Pb	08 09 59.6	+2.8
OGRR				*e*Sg	Sg	08 10 55.5	-3.8
OGRR				Pmax			
	12nm,0.9s						
OGRR				Smax			
	45nm,0.9s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pg	Pb	08 10 35.9	+2.8
KPC				*e*Sg	Sb	08 11 58.9	+8.3
KPC				Pmax			
	2.0nm,0.3s						
KPC				Smax			
	26nm,1.0s						

BYKL 18 08:08:47.7±0.2,56°.11N×113°.77E,h10^{km}±3^{km},1C,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.12**	**273**	⇑*i*Pg	Pg	08 08 50.0	-0.6
SVKR				*e*Sg	Sg	08 08 51.9	-0.8
SVKR				Pmax			
	17μm,0.1s						
SVKR				Smax			
	71μm,0.4s						
UKT	**Uakit**	**0.63**	**187**	*e*Pg	Pg	08 08 59.0	-0.9
UKT				*e*Sg	Sg	08 09 07.9	-0.2
UKT				Pmax			
	231nm,0.5s						
UKT				Smax			
	605nm,0.8s						
NLYR	**Nelyaty**	**1.14**	**70**	*e*Pg	Pb	08 09 09.0	-0.6
NLYR				*e*Sg	Sb	08 09 24.4	-0.1
NLYR				*e*Sb	Sn	08 09 28.0	+2.5
NLYR				Pmax			
	180nm,0.3s						
NLYR				max			
	821nm,0.9s						
YOA	**Uoyan**	**1.15**	**272**	*e*Pg	Pb	08 09 08.4	-1.2
YOA				*e*Sg	Sb	08 09 23.6	-0.9
YOA				Pmax			
	833nm,0.2s						
YOA				Smax			
	2μm,0.6s						
KMO	**Kumora**	**1.46**	**262**	*e*Pg	Pn	08 09 13.6	-0.5
KMO				*e*Pb	Pb	08 09 15.1	+0.1
KMO				*e*Sg	Sn	08 09 32.7	-0.6
KMO				max			
	630nm,0.5s						
KMO				Smax			
	955nm,1.0s						
BOD	**Bodaibo**	**1.72**	**4**	*e*Pg	Pb	08 09 18.5	-0.8
BOD				*e*Sg	Sb	08 09 41.0	0.0
BOD				Pmax			
	245nm,0.6s						
BOD				Smax			
	546nm,0.7s						
YLYR	**Ulyunkhan**	**1.93**	**231**	*e*Pn	Pn	08 09 20.2	-0.4
YLYR				*e*Pg	Pb	08 09 22.3	-0.7
YLYR				*e*Sg	Sb	08 09 48.4	+1.3
YLYR				Pmax			
	291nm,0.3s						
YLYR				Smax			
	865nm,0.3s						
NIZ	**Nizh Angarsk**	**2.40**	**264**	*e*Pn	Pn	08 09 27.8	+0.7
NIZ				*e*Pg	Pb	08 09 30.7	-0.3
NIZ				*e*Sg	Sb	08 10 02.0	+1.3
NIZ				Pmax			
	66nm,0.5s						
NIZ				Smax			
	242nm,0.5s						
CRS	**Chara**	**2.62**	**71**	*e*Pg	Pb	08 09 35.3	+0.6
CRS				*e*Sg	Sb	08 10 09.0	+2.2
CRS				Pmax			
	237nm,1.0s						
CRS				Smax			
	320nm,0.9s						
SYVR	**Suvo**	**3.28**	**223**	*e*Pg	Pb	08 09 46.7	+0.7
SYVR				*e*Sg	Sb	08 10 28.7	+2.7
SYVR				Pmax			
	37nm,0.7s						
SYVR				Smax			
	205nm,1.1s						
VTMR	**Vitim**	**3.40**	**349**	*e*Pg	Pb	08 09 49.4	+1.4
VTMR				*e*Sg	Sg	08 10 33.4	-3.5
TUP	**Tupik**	**3.92**	**113**	*e*Pn	Pn	08 09 48.4	+0.5
TUP				*e*Pg	Pb	08 09 58.0	+1.1
TUP				*e*Sg	Sb	08 10 48.8	+4.5
TUP				Pmax			
	28nm,0.7s						
TUP				Smax			
	175nm,0.9s						
MXMB	**Maximikha**	**4.08**	**228**	*e*Pg	Pb	08 10 00.9	+1.3
MXMB				*e*Sg	Sg	08 10 54.0	-4.6
OGRR	**Ongureny**	**4.34**	**238**	*e*Pn	Pn	08 09 55.2	+1.5
OGRR				*e*Pg	Pb	08 10 05.7	+1.7
OGRR				*e*Sg	Sg	08 11 02.2	-4.7
OGRR				Pmax			
	27nm,1.2s						
OGRR				Smax			
	91nm,1.6s						
YKLR	**Yuktali**	**4.41**	**80**	*e*Pn	Pn	08 09 54.6	-0.1
YKLR				*e*Pg	Pb	08 10 06.5	+1.3
YKLR				*e*Sg	Sb	08 11 03.7	+5.2
TRG	**Tyrgan**	**5.48**	**235**	*e*Pn	Pn	08 10 10.9	+1.6
TRG				*e*Pg	Pb	08 10 27.1	+3.7
TRG				*e*Sg	Sg	08 11 38.1	-5.3
TRG				Pmax			
	8.0nm,0.7s						
TRG				Smax			
	34nm,0.8s						
FFNB	**Fofonovo**	**5.79**	**228**	*e*Pg	Pb	08 10 31.8	+3.0
FFNB				*e*Sg	Sg	08 11 47.4	-6.1
KPC	**Khapcheranga**	**6.47**	**188**	*e*Pn	Pn	08 10 22.0	-1.0
KPC				*e*Pg	Pb	08 10 43.6	+3.2
KPC				*e*Sg	Sg	08 12 07.3	-8.0
KPC				Pmax			
	6.0nm,0.4s						
KPC				Smax			
	105nm,1.5s						

BYKL 18 08:09:35.5±0.4,56°.13N×113°.71E,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.09**	**261**	*e*Pg	Pg	08 09 36.8	-0.3
SVKR				*e*Sg	Sg	08 09 38.7	+0.5
SVKR				Pmax			
	2μm,0.1s						
SVKR				Smax			
	23μm,0.4s						
UKT	**Uakit**	**0.64**	**184**	*e*Pg	Pg	08 09 46.4	-1.4
UKT				*e*Sg	Sg	08 09 54.7	-1.4

UKT				Pmax			
	84nm,0.5s						
UKT				Smax			
	96nm,0.6s						
YOA	**Uoyan**	**1.11**	**271**	*e*Pg	Pg	08 09 56.2	-0.6
YOA				*e*Sg	Sg	08 10 11.4	+0.2
YOA				Pmax			
	453nm,0.7s						
YOA				Smax			
	990nm,1.0s						
NLYR	**Nelyaty**	**1.17**	**71**	*e*Pg	Pg	08 09 56.1	-1.8
NLYR				*e*Pb	Pb	08 09 57.8	-0.8
NLYR				*e*Sg	Sg	08 10 11.8	-1.2
NLYR				*e*Sb	Sn	08 10 15.5	-0.3
NLYR				max			
	124nm,0.2s						
NLYR				max			
	361nm,0.7s						
KMO	**Kumora**	**1.43**	**261**	*e*Pg	Pn	08 10 01.1	-1.6
KMO				*e*Sg	Sg	08 10 20.2	-1.2
KMO				*e*Sb	Sn	08 10 22.6	+0.4
KMO				Pmax			
	68nm,0.5s						
KMO				max			
	250nm,0.8s						
BOD	**Bodaibo**	**1.70**	**5**	*e*Pg	Pn	08 10 05.7	-0.7
BOD				*e*Sg	Sn	08 10 27.8	-1.1
BOD				Pmax			
	53nm,0.4s						
BOD				Smax			
	86nm,1.0s						
YLYR	**Ulyunkhan**	**1.92**	**230**	*e*Pg	Pn	08 10 09.6	+0.2
YLYR				*e*Sg	Sn	08 10 34.8	+0.5
YLYR				Pmax			
	78nm,0.4s						
YLYR				Smax			
	183nm,0.5s						
NIZ	**Nizh Angarsk**	**2.37**	**263**	*e*Sg	Sb	08 10 49.0	+0.2
NIZ				Smax			
	73nm,0.4s						
CRS	**Chara**	**2.64**	**71**	*e*Sg	Sb	08 10 57.3	+0.7
CRS				Smax			
	68nm,0.7s						
TUP	**Tupik**	**3.96**	**113**	*e*Sg	Sg	08 11 39.2	-3.4
TUP				Smax			
	66nm,1.5s						

IDC 18 08:12:04.9±2.1, 6°.57S×129°.63E, h0^{km}, mb4.0/1, mb1 4.0/4, mb1mx3.6/38, mbtmp3.8/4, ML3.7/3, Error ellipse: s-maj=90.5km s-min=26.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.10**	**198**	Pn	Pn	08 14 59.4	+0.6
	0.7nm,0.3s,baz=17,slow=9.1,SNR=28						
FITZ				Sn	Sn	08 17 03.9	-11
	0.7nm,0.3s,baz=98,slow=15,SNR=4.0						
WRA	**Warramunga Arr**	**14.06**	**161**	Pn	Pn	08 15 24.9	-0.6
	0.2nm,0.3s,baz=343,slow=13,SNR=4.0						
WRA				Sn	Sn	08 17 47.6	-15
	1.0nm,0.3s,baz=328,slow=23,SNR=9.6						
ASAR	**Alice Springs**	**17.49**	**167**	P	Pn	08 16 10.4	-0.1
	0.3nm,0.3s,baz=345,slow=9.6,SNR=30						
ASAR				S	Sn	08 19 11.7	-14
	0.3nm,0.3s,baz=342,slow=24,SNR=7.1						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	08 23 03.9	0.0
	0.7nm,0.4s,baz=119,slow=7.9,SNR=21						

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*IDC **18** 08:15:54.6±0.6, 30°.45N×142°.01E, h0^{km}, mb4.1/18,*
mb1 4.2/24, mb1mx4.1/44, mbtmp4.1/24, ML3.4/6, MS3.6/12,
Ms1 3.7/12, ms1mx3.4/52, Error ellipse: s-maj=18.4km
s-min=14.6km az=83.0
*NIED **18** 08:15:55.7, 30°.56N×142°.55E, h54^{km}, MW4.6, Moment*
Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm;
M$_{rr}$4.37; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-4.33; M$_{r\theta}$-3.20; M$_{\theta\phi}$0.95; M$_{\phi r}$5.84;
Fault plane solution: M$_0$8.01000×10^{15} NP1:
φ$_s$334.00000°, δ74.00000°, λ82.00000°. NP2:
φ$_s$181.00000°, δ18.00000°, λ116.00000°.
*JMA **18** 08:15:55.6±0.2, 30°.56N×142°.55E, h54^{km}, M4.3*
*MOS **18** 08:15:58.3±1.2, 30°.45N×142°.04E, h33^{km}, mb4.6/25, Error*
ellipse: s-maj=12.4km s-min=6.2km az=118.7
*NEIC **18** 08:16:00.2±1.5, 30°.49N±0°.07×142°.0E±0°.1, h34^{km}±5^{km},*
mb4.6/41, Error ellipse: s-maj=14.8km s-min=8.7km
az=70.0

ISC 18 08:15:58.3±0.5, 30°.46N±0°.05×142°.04E±0°.07, h23^{km}, n140, σ1^{s}.30/140, mb4.5/46, MS3.8/8, 9C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.25**	**325**	P	**Pn**	**08 16 48.6**	**+0.6**
JHJ	**Hachijo jima 2**	**3.28**	**325**	Pn	**Pn**	**08 16 48.2**	**-0.1**
	11nm,0.3s,baz=262,slow=22,SNR=1.9						
JHJ				Sn	**Sn**	**08 17 24.6**	**-2.0**
	27nm,0.3s,baz=243,slow=21,SNR=2.2						
JHJ				LR	LR	08 18 07.8	
	comp=Z,704nm,21.1s,baz=112,slow=41						
CBIJ	**Chichi jima**	**3.35**	**178**	P	**Pn**	**08 16 48.7**	**-0.6**
CBIJ				*e*S	**Sn**	**08 17 27.8**	**-0.6**
JCJ	**Chichijima**	**3.35**	**178**	Pn	**Pn**	**08 16 49.5**	**+0.2**
	18nm,0.3s,baz=286,slow=21,SNR=2.4						
JCJ				Sn	**Sn**	**08 17 25.1**	**-3.3**
	21nm,0.3s,baz=249,slow=20,SNR=2.7						
JCJ				LR	LR	08 18 02.8	
	comp=Z,435nm,21.1s,baz=71,slow=38						
JCJ	**Chichijima**	**3.35**	**178**		**Pn**	**08 16 50.7**	**+1.4**
BSO1	**Boso 1**	**4.28**	**348**	P	**Pn**	**08 17 00.1**	**-1.5**
BSO3	**Boso 3**	**4.52**	**344**	P	**Pn**	**08 17 04.4**	**-0.7**
JOD2	**Odawara 2**	**5.40**	**333**	P	**Pn**	**08 17 17.5**	**0.0**
JHU	**Hanno**	**5.86**	**337**	*e*S	**Sn**	**08 18 26.7**	**-3.5**
JYT	**Yasato**	**5.96**	**345**	Pn	**Pn**	**08 17 25.6**	**+0.4**
JRY	**Ryogami san**	**6.14**	**335**	P	**Pn**	**08 17 27.2**	**-0.4**
JRY				S	**Sn**	**08 18 35.9**	**-1.2**
JHO	**Hitachi**	**6.26**	**349**	P	**Pn**	**08 17 26.9**	**-2.4**
JHO				S	**Sn**	**08 18 34.0**	**-6.1**
JAG	**Ashikaga**	**6.33**	**341**	P	**Pn**	**08 17 29.3**	**-1.0**
JAG				S	**Sn**	**08 18 39.1**	**-2.8**
INU	**Inuyama**	**6.45**	**320**	Pn	**Pn**	**08 17 31.9**	**0.0**
JGF	**Kuroka**	**6.46**	**324**	Pn	**Pn**	**08 17 36.8**	**+4.7**
MJAR	**Matsushiro Arr**	**6.86**	**333**	Pn	**Pn**	**08 17 37.3**	**-0.2**
	0.6nm,0.3s,baz=150,slow=10,SNR=32						
MJAR				Sn	**Sn**	**08 18 52.1**	**-2.8**
	0.2nm,0.3s,baz=162,slow=18,SNR=5.3						
MJAR	**Matsushiro Arr**	**6.86**	**333**	P	**Pn**	**08 17 37.5**	**0.0**
MJAR	**Matsushiro Arr**	**6.86**	**333**		**Pn**	**08 17 37.5**	**0.0**
MAJO	**Matsushiro**	**6.86**	**333**	P	**Pn**	**08 17 38.6**	**+1.0**
MAJO	**Matsushiro**	**6.86**	**333**	Pn	**Pn**	**08 17 38.6**	**+1.0**
MAT	**Matsushiro**	**6.86**	**333**	P	**Pn**	**08 17 37.9**	**+0.3**
MAT				S	**Sn**	**08 18 53.9**	**-1.1**
MJB9	**Matsu-Tunnel**	**6.87**	**333**		Pn	08 17 32.3	-5.4
JMM	**Marumori**	**7.46**	**352**		**Pn**	**08 17 44.5**	**-1.2**
JNU	**Nakatsue**	**9.87**	**288**	LR	LR	08 22 10.6	
	comp=Z,327nm,18.2s,baz=83,slow=38						
JTM	**Tenmabayashi**	**10.34**	**356**	Pn	**Pn**	**08 18 26.3**	**+1.1**
KSRS	**Korea Array**	**13.63**	**305**	Pn	**Pn**	**08 19 10.3**	**+0.1**
	0.1nm,0.3s,baz=110,slow=13,SNR=2.6						
ASAJ	**Asahikawa**	**13.64**	**2**	Pn	**Pn**	**08 19 08.4**	**-1.9**
	0.4nm,0.3s,baz=70,slow=25,SNR=1.9						
USRK	**Ussuriysk Ar.**	**15.86**	**333**	Pn	**Pn**	**08 19 38.3**	**-1.8**
	baz=147,slow=13,SNR=2.6						
GUMO	**Guam**	**16.99**	**171**	LR	LR	08 26 22.8	
	comp=Z,244nm,18.2s,baz=358,slow=37						
MDJ	**Mudanjiang**	**17.21**	**329**	P	**Pn**	**08 19 57.3**	**+0.1**
YOJ	**Yonaguni jima**	**17.91**	**255**	P	**Pn**	**08 20 05.5**	**-0.4**
YOJ				pmax	pmax		
	comp=Z,284nm,1.4s						
YOJ	**Yonaguni jima**	**17.91**	**255**	P	**Pn**	**08 20 05.5**	**-0.4**
SSLB	**Suanglung**	**19.90**	**256**		**P**	**08 20 27.3**	**-1.0**
KLR	**Kul'dur**	**20.31**	**340**	P	**P**	**08 20 32.6**	**0.0**
	comp=Z,0.9nm,0.5s,baz=120,slow=12,SNR=2.8						
KLR	**Kul'dur**	**20.31**	**340**	*ce*P	Pn	08 20 36.0	+1.3
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BJT	**Baijiatuau**	**23.12**	**301**	P	**P**	**08 21 02.0**	**-0.7**
BJT				pmax	pmax		
	comp=Z,15nm,1.3s						
BJT	**Baijiatuau**	**23.12**	**301**	P	**P**	**08 21 02.0**	**-0.7**
WAKE	**Wake Island**	**24.89**	**111**	P	**P**	**08 21 20.4**	**+0.9**
HIA	**Hailar**	**25.25**	**324**	P	**P**	**08 21 23.0**	**+0.4**
HIA				pmax	pmax		
	comp=Z,11nm,1.0s						
HIA	**Hailar**	**25.25**	**324**	P	**P**	**08 21 23.0**	**+0.4**
HIA				IAmb	IAmb	08 21 36.4	
	comp=Z,11nm,1.0s						
TGY	**Tagaytay City**	**25.35**	**235**	LR	LR	08 29 50.5	
	comp=Z,287nm,21.0s,baz=305,slow=33						
PETK	**Petropavlovsk-**	**25.36**	**22**	LR	LR	08 31 57.2	
	comp=Z,91nm,20.8s,baz=237,slow=38						
PET	**Petropavlovsk**	**25.61**	**24**	*ce*P	**P**	**08 21 25.9**	**+0.2**
PET				pmax	pmax		
	comp=Z,120nm,1.3s						
ZEA	**Zeya**	**25.62**	**339**	*e*P	**P**	**08 21 28.8**	**+3.0**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2	**Magadan**	**29.71**	**9**	*ce*P	**P**	**08 22 02.2**	**-0.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ULN	**Ulaanbaatar**	**31.87**	**313**	*ce*P	**P**	**08 22 23.6**	**+1.8**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ULN	**Ulaanbaatar**	**31.87**	**313**	P	**P**	**08 22 22.1**	**+0.3**
ULN				IAmb	IAmb	08 22 24.5	
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**32.28**	**313**	P	**P**	**08 22 26.2**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=124,slow=7.4,SNR=11						
SONM				LR	LR	08 36 26.4	
	comp=Z,157nm,18.7s,baz=68,slow=38						
SONM	**Songino Array**	**32.28**	**313**	P	**P**	**08 22 26.3**	**+0.9**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**32.28**	**313**	P	**P**	**08 22 26.3**	**+0.9**
SEY	**Seymchan**	**33.17**	**9**	P	**P**	**08 22 32.9**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=185,slow=23,SNR=3.5						
YOA	**Uoyan**	**33.36**	**329**	pmax	pmax		
	comp=Z,85nm,0.2s						
ZAK	**Zakamensk**	**35.06**	**316**	*e*P	**P**	**08 22 50.3**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TLY	**Talaya**	**35.31**	**318**	*ce*P	**P**	**08 22 54.3**	**+2.7**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	**Talaya**	**35.31**	**318**	P	**P**	**08 22 52.7**	**+1.1**
TLY				IAmb	IAmb	08 22 54.6	
	comp=Z,9.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.78**	**263**	P	**P**	**08 23 36.8**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=37,slow=9.0,SNR=4.6						
CMAR				LR	LR	08 42 35.5	
	comp=Z,117nm,18.3s,baz=115,slow=39						
CMAR	**Chiang Mai Arr**	**40.78**	**263**	*i* P	**P**	**08 23 38.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DGZ	**Jazzator, Alta**	**44.91**	**311**	*i* P	**P**	**08 24 12.3**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ZALV	**Zalesovo Beam**	**46.91**	**317**	P	**P**	**08 24 25.9**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=79,slow=8.0,SNR=4.1						
ZALV				LR	LR	08 45 04.5	
	comp=Z,119nm,18.4s,baz=16,slow=37						
ZALV	**Zalesovo Beam**	**46.91**	**317**	*i* P	**P**	**08 24 29.3**	**+2.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**46.91**	**317**	P	**P**	**08 24 26.4**	**-0.4**
ANM	**Nome**	**47.04**	**28**	P	**P**	**08 24 27.5**	**-0.2**
ANM				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ANM	**Nome**	**47.04**	**28**	P	**P**	**08 24 27.5**	**-0.2**
ANM				IAmb	IAmb	08 24 31.1	
	comp=Z,7.7nm,1.1s						
MK31	**Makanchi Array**	**48.29**	**307**	*ce*P	**P**	**08 24 38.2**	**+0.5**
MK31	**Makanchi Array**	**48.29**	**307**	P	**P**	**08 24 38.0**	**+0.3**
MKAR	**Makanchi Array**	**48.29**	**307**	P	**P**	**08 24 37.8**	**+0.1**
	comp=Z,3.4nm,1.0s,baz=90,slow=9.2,SNR=18						
MKAR	**Makanchi Array**	**48.29**	**307**	*i* P	**P**	**08 24 38.4**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**48.29**	**307**	P	**P**	**08 24 38.1**	**+0.3**
MAKZ	**Makanchi**	**48.51**	**307**	P	**P**	**08 24 39.8**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MAKZ	**Makanchi**	**48.51**	**307**	P	**P**	**08 24 39.8**	**+0.4**
MAKZ				IAmb	IAmb	08 24 41.4	
	comp=Z,6.3nm,1.2s						
RDOG	**Red Dog Mine**	**49.21**	**24**	P	**P**	**08 24 45.7**	**+1.3**
RDOG				IAmb	IAmb	08 24 47.2	
	comp=Z,5.2nm,0.8s						
WB0	**Warramunga Arr**	**50.47**	**189**	P	**P**	**08 24 54.2**	**-0.3**
WB0				IAmb	IAmb	08 24 56.0	
	comp=Z,6.2nm,0.8s						
KURK	**Kurchatov**	**50.59**	**313**	P	**P**	**08 24 55.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**50.59**	**313**	P	**P**	**08 24 55.1**	**+0.1**
KURK				IAmb	IAmb	08 25 01.1	
	comp=Z,4.7nm,1.0s						
WR0	**Warramunga Arr**	**50.64**	**189**	P	**P**	**08 24 55.5**	**-0.3**
WR0				IAmb	IAmb	08 24 57.4	
	comp=Z,3.6nm,0.8s						
WRAB	**Tennant Creek**	**50.64**	**189**	*i* P	**P**	**08 24 56.1**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAB	**Tennant Creek**	**50.64**	**189**	P	**P**	**08 24 56.5**	**+0.7**
WB2	**Warramunga Arr**	**50.65**	**189**	P	**P**	**08 24 56.7**	**+0.8**
WB2				IAmb	IAmb	08 24 57.0	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**50.65**	**189**	P	**P**	**08 24 55.4**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=8.8,slow=8.0,SNR=19						
WRA				LR	LR	08 45 39.9	
	comp=Z,66nm,19.2s,baz=340,slow=35						
WRA	**Warramunga Arr**	**50.65**	**189**	P	**P**	**08 24 55.8**	**-0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	**Warramunga Arr**	**50.65**	**189**	P	**P**	**08 24 55.8**	**-0.1**
AAK	**Ala-Archa**	**54.29**	**303**	*i* P	**P**	**08 25 24.6**	**+1.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ASAR	**Alice Springs**	**54.38**	**189**	P	**P**	**08 25 23.5**	**0.0**
	comp=Z,3.5nm,1.0s,baz=3.2,slow=6.4,SNR=16						
IL31		**54.85**	**30**	P	**P**	**08 25 25.8**	**-0.5**
IL31				IAmb	IAmb	08 25 27.6	
	comp=Z,10nm,1.4s						
ILAR	**Eielson Array**	**54.85**	**30**	P	**P**	**08 25 26.6**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=257,slow=5.8,SNR=14						
ILAR	**Eielson Array**	**54.85**	**30**	P	**P**	**08 25 25.8**	**-0.6**
BRVK	**Borovoye**	**55.58**	**316**	*ce*P	**P**	**08 25 34.0**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BRVK	**Borovoye**	**55.58**	**316**	P	**P**	**08 25 32.0**	**+0.1**
KK31	**Karatay Array**	**57.06**	**304**	P	**P**	**08 25 43.8**	**+1.1**
KK31				pmax	pmax		
	comp=Z,11nm,1.0s						
KK31	**Karatay Array**	**57.06**	**304**	P	**P**	**08 25 43.8**	**+1.1**
KKAR	**Karatay Array**	**57.06**	**304**	P	**P**	**08 25 43.3**	**+0.6**
KKAR	**Karatay Array**	**57.06**	**304**	P	**P**	**08 25 43.2**	**+0.6**
BCAR	**Beaver Creek A**	**57.11**	**32**	P	**P**	**08 25 43.6**	**+0.9**
DAWY	**Dawson**	**58.11**	**31**	P	**P**	**08 25 51.9**	**+2.2**
DAWY				IAmb	IAmb	08 25 52.3	
	comp=Z,9.3nm,1.4s						
EPYK	**Eagle Plains**	**59.03**	**28**	P	**P**	**08 25 58.5**	**+2.4**
KBL	**Kabul**	**60.46**	**295**	P	**P**	**08 26 07.0**	**+0.4**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBL	**Kabul**	**60.46**	**295**	P	**P**	**08 26 07.0**	**+0.4**
SVE	**Sverdlovsk**	**60.51**	**321**	*e*P	**P**	**08 26 07.7**	**+1.3**
PALK	**Pallekele**	**61.69**	**261**	LR	LR	08 53 05.5	
	comp=Z,23nm,18.5s,baz=188,slow=36						
ARU	**Arti**	**61.72**	**321**	*c i*P	**P**	**08 26 13.6**	**-0.9**
ARU						08 26 50.4	
ARU						08 28 26.8	
ARU				S	**S**	**08 34 35.6**	**-0.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	**Arti**	**61.72**	**321**	P	**P**	**08 26 14.4**	**-0.2**
ARU				IAmb	IAmb	08 26 28.8	
	comp=Z,9.4nm,1.2s						
ABKAR	**Akbulak array**	**62.69**	**313**	P	**P**	**08 26 20.4**	**-0.8**
KIRV	**Kirov**	**65.86**	**325**	*ce*P	**P**	**08 26 42.8**	**+1.0**
GEYT	**Alibeck**	**67.61**	**302**	P	**P**	**08 26 53.8**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=132,slow=4.2,SNR=3.8						
YKA	**Yellowknife Ar**	**69.26**	**29**	P	**P**	**08 27 03.0**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=295,slow=5.9,SNR=14						
YKA	**Yellowknife Ar**	**69.26**	**29**	*i* P	**P**	**08 27 03.9**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YBH	**Yreka Blue Hor**	**74.02**	**51**	LR	LR	08 54 18.6	
	comp=Z,51nm,20.5s,baz=306,slow=31						
FINES	**FINESS Array B**	**74.89**	**333**	P	**P**	**08 27 36.5**	**-0.4**
	comp=Z,5.9nm,1.0s,baz=82,slow=4.0,SNR=8.4						
FINES	**FINESS Array B**	**74.89**	**333**	*i* P	**P**	**08 27 38.5**	**+1.6**
FINES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MSO	**Missoula**	**77.11**	**43**	P	**P**	**08 27 50.0**	**0.0**
NVAR	**Mina Array Bea**	**78.55**	**52**	P	**P**	**08 27 58.9**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=302,slow=5.7,SNR=9.4						
NVAR	**Mina Array Bea**	**78.55**	**52**	P	**P**	**08 27 58.3**	**-0.1**
AKASG	**Malin Array Be**	**79.85**	**323**	P	**P**	**08 28 03.4**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=57,slow=4.5,SNR=4.4						
AKASG	**Malin Array Be**	**79.85**	**323**	*i* P	**P**	**08 28 06.4**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**79.85**	**323**	P	**P**	**08 28 03.1**	**-1.8**
H17A	**Grant Village**	**80.40**	**44**	P	**P**	**08 28 09.8**	**+1.4**
H17A				IAmb	IAmb	08 28 13.5	
	comp=Z,3.9nm,0.9s						
NOA	**NORSAR Array B**	**80.45**	**338**	P	**P**	**08 28 07.0**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=40,slow=5.4,SNR=3.9						
DUG	**Dugway, Tooele**	**81.29**	**48**	P	**P**	**08 28 12.4**	**-0.7**
DUG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
DUG	**Dugway, Tooele**	**81.29**	**48**	P	**P**	**08 28 12.4**	**-0.7**
PD31	**Pinedale Array**	**81.92**	**45**	P	**P**	**08 28 16.2**	**-0.2**
PD31				IAmb	IAmb	08 28 18.3	
	comp=Z,6.9nm,1.4s						
PDAR	**Pinedale Array**	**81.92**	**45**	P	**P**	**08 28 16.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=277,slow=2.5,SNR=7.5						
PDAR	**Pinedale Array**	**81.92**	**45**	P	**P**	**08 28 16.8**	**+0.3**
JLU	**Jordanelle**	**81.94**	**48**	P	**P**	**08 28 17.5**	**+0.8**
BR131	**Keskin Array S**	**83.64**	**313**	P	**P**	**08 28 26.0**	**+0.7**
BR131				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BR131	**Keskin Array S**	**83.64**	**313**	P	**P**	**08 28 26.0**	**+0.7**
BR131				IAmb	IAmb	08 28 32.5	
	comp=Z,6.6nm,1.0s						
BRTR	**Keskin Array B**	**83.64**	**313**	P	**P**	**08 28 24.3**	**-1.0**
	comp=Z,3.3nm,1.0s,baz=98,slow=3.7,SNR=11						
BRTR	**Keskin Array B**	**83.64**	**313**	*i* P	**P**	**08 28 26.3**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**83.64**	**313**	P	**P**	**08 28 25.3**	**0.0**
RAYN	**Ar Rayn**	**83.69**	**293**	P	**P**	**08 28 25.3**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RAYN	**Ar Rayn**	**83.69**	**293**	P	**P**	**08 28 25.2**	**-0.5**
PV14	**Lion Creek, Pa**	**84.75**	**48**	P	**P**	**08 28 31.4**	**+0.3**
PV12	**Saucer Basin,**	**84.92**	**48**	P	**P**	**08 28 31.6**	**-0.4**
PV12				IAmb	IAmb	08 28 35.1	
	comp=Z,6.4nm,1.3s						
PV03	**Paradox Valley**	**84.93**	**48**	P	**P**	**08 28 32.1**	**+0.2**
PV03				IAmb	IAmb	08 28 34.4	
	comp=Z,5.0nm,1.1s						
VYHS	**Vyhne**	**86.44**	**326**	*e*P	**P**	**08 28 38.8**	**-0.2**
VYHS	**Vyhne**	**86.44**	**326**	*e*P	**P**	**08 28 38.8**	**-0.2**
CLL	**Collm**	**87.06**	**331**	*e*P	**P**	**08 28 45.0**	**+3.0**
TX31	**Lajitas Ar. Si**	**93.69**	**53**	P	**P**	**08 29 14.8**	**+1.3**
TX32	**Lajitas Array**	**93.69**	**53**	P	**P**	**08 29 14.8**	**+1.3**
TXAR	**Lajitas Array**	**93.69**	**53**	P	**P**	**08 29 14.3**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=298,slow=2.7,SNR=11						
TXAR	**Lajitas Array**	**93.69**	**53**	P	**P**	**08 29 14.4**	**+0.9**

BYKL 18 08:22:23.9±0.2, 56°.10N×113°.74E, 2C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**280**	⇑*i*Pg	Pg	08 22 26.1	+0.2
SVKR				*e*Sg	Sg	08 22 28.3	+1.1
SVKR				Pmax			
	6µm,0.2s						
SVKR				Smax			
	12µm,0.3s						
SVKR	**Severomuysk**	**0.10**	**280**	⇑*i*P	Pg	08 22 26.0	+0.1
UKT	**Uakit**	**0.62**	**186**	*e*Pg	Pg	08 22 34.8	-0.9
UKT				*e*Sg	Sg	08 22 43.2	-0.4
UKT				Pmax			
	31nm,0.2s						
UKT				Smax			
	217nm,0.2s						
YOA	**Uoyan**	**1.13**	**273**	*e*Pg	Pg	08 22 43.8	-1.7
YOA				*e*Sg	Sg	08 22 59.5	-0.6
YOA				Pmax			
	242nm,0.2s						
YOA				Smax			
	860nm,0.5s						
YOA	**Uoyan**	**1.13**	**273**	*e*P	Pg	08 22 44.0	-1.5
YOA	**Uoyan**	**1.13**	**273**	*e*	Pn	08 23 00.0	+13
NLYR	**Nelyaty**	**1.16**	**69**	*e*Pg	Pg	08 22 44.3	-1.9
NLYR				*e*Sg	Sg	08 23 00.5	-0.7
NLYR				*e*Sb	Sn	08 23 04.3	+0.3
NLYR				Pmax			
	94nm,0.4s						
NLYR				max			
	298nm,0.8s						
KMO	**Kumora**	**1.44**	**263**	*e*Pg	Pn	08 22 49.6	-1.7
KMO				*e*Pb	Pg	08 22 50.9	-0.6
KMO				*e*Sg	Sg	08 23 08.8	-1.4
KMO				*e*Sb	Sn	08 23 11.6	+0.7
KMO				max			
	256nm,0.4s						
KMO				max			
	170nm,0.9s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	08 22 54.6	-0.6
BOD				*e*Sg	Sn	08 23 17.2	-0.8
BOD				Pmax			
	72nm,0.2s						
BOD				Smax			
	235nm,0.6s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Pn	Pn	08 22 57.6	-0.1
YLYR				*e*Pg	Pb	08 22 58.6	-1.0
YLYR				*e*Sg	Sb	08 23 24.3	+0.2
YLYR				Pmax			
	145nm,0.3s						
YLYR				Smax			
	376nm,0.2s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pn	Pn	08 23 04.2	0.0
NIZ				*e*Pg	Pb	08 23 06.8	-0.9
NIZ				*e*Sg	Sb	08 23 38.8	+1.2
NIZ				Pmax			
	20nm,0.5s						
NIZ				Smax			
	74nm,0.5s						
CRS	**Chara**	**2.64**	**70**	*e*Pg	Pb	08 23 11.5	-0.5
CRS				*e*Sg	Sb	08 23 46.3	+1.4
CRS				Pmax			
	61nm,0.9s						
CRS				Smax			
	99nm,1.0s						
SYVR	**Suvo**	**3.27**	**223**	*e*Pg	Pb	08 23 21.9	-0.8
SYVR				*e*Sg	Sb	08 24 04.3	+1.4
SYVR				Pmax			
	18nm,0.5s						
SYVR				Smax			
	82nm,1.2s						
VTMR	**Vitim**	**3.41**	**350**	*e*Pg	Pb	08 23 24.9	-0.2
VTMR				*e*Sg	Sg	08 24 10.5	-2.8
TUP	**Tupik**	**3.93**	**113**	*e*Pn	Pn	08 23 26.4	+0.9
TUP				*e*Pg	Pb	08 23 34.6	+0.6
TUP				*e*Sg	Sg	08 24 26.5	-3.6
TUP				*e*		08 24 30.6	
TUP				Pmax			
	11nm,0.6s						
TUP				max			
	86nm,1.4s						
OGRR	**Ongureny**	**4.32**	**238**	*e*Pg	Pb	08 23 40.9	+0.3
OGRR				*e*Sg	Sb	08 24 37.2	+3.9
OGRR				Pmax			
	14nm,0.8s						
OGRR				Smax			
	27nm,1.3s						
YKLR	**Yuktali**	**4.43**	**80**	*e*Pg	Pb	08 23 42.4	-0.1
YKLR				*e*Sg	Sb	08 24 40.0	+3.5
TRG	**Tyrgan**	**5.46**	**235**	*e*Pg	Pb	08 24 01.3	+1.2
TRG				*e*Sg	Sg	08 25 13.7	-5.4
TRG				Pmax			
	3.0nm,0.1s						
TRG				Smax			
	20nm,1.1s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pg	Pb	08 24 20.0	+2.9
KPC				*e*		08 25 24.7	
KPC				*e*Sg	Sg	08 25 44.7	-6.5

KPC				Pmax			
	2.0nm,1.1s						
KPC				Smax			
	39nm,1.5s						

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*IDC **18** 08:30:23.4±0.5, 16°.91S×14°.16W, h0^{km}, mb4.3/20, mb1 4.4/20, mb1mx4.3/30, mbtmp4.3/20, MS4.4/26, Ms1 4.4/26, ms1mx4.4/31, Error ellipse: s-maj=18.7km s-min=14.4km az=142.0*

*BJI **18** 08:30:26.6±0.0, 16°.20S×14°.26W, h6^{km}, mb5.4/1, Ms5.4/5, Ms7 5.0/5*

*NEIC **18** 08:30:29.0±2.0, 16°.4S±0°.1×14°.03W±0°.10, h10^{km}±1^{km}, mb5.2/76, Error ellipse: s-maj=22.7km s-min=15.4km az=167.0*

*GCMT **18** 08:30:30.0±0.1, 16°.69S±0°.01×14°.37W±0°.01, h12^{km}, MW5.2/136, Moment Tensor Solution. s72,c93; s136,c235; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-6.79±.10; M$_{\theta\theta}$0.29±.10; M$_{\phi\phi}$6.50±.09; M$_{r\theta}$2.46±.32; M$_{\theta\phi}$-0.36±.09; M$_{\phi r}$0.94±.28; Best double couple: M$_0$7.10300×10^{16} NP1:φ$_s$340.00000°, δ44.00000°, λ-116.00000°. NP2:φ$_s$194.00000°, δ51.00000°, λ-67.00000°. Principal axes: T 6.5730, Plg4.0000°, Azm268.0000°; N 1.0580, Plg17.0000°, Azm359.0000°; P -7.6330, Plg72.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 08:30:25.9±0.4**, 16°.97S**±0°.09×**14°.18W**±0°.06**, h10^{km}, n248, σ1^s.37**/205**, mb5.1**/72**, MS4.5**/34**, 9C-8D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.97	357	T	T	08 40 16.4	
	baz=176,slow=74,SNR=74						
H10S3	ASCENSION HYDR	7.98	357	T	T	08 40 16.8	
	baz=44,slow=74,SNR=101						
SHEL	Horse Pasture	8.16	84	Pn	Pn	08 32 25.5	+1.0
H10N1	ASCENSION HYDR	9.07	358	T	T	08 41 42.6	
	baz=189,slow=79,SNR=30						
H10N3	ASCENSION HYDR	9.08	358	T	T	08 41 39.3	
	baz=189,slow=79,SNR=67						
H10N2	ASCENSION HYDR	9.09	358	T	T	08 41 40.8	
	baz=189,slow=79,SNR=32						
RCBR	Riachuelo	23.96	295	P	P	08 35 39.6	-1.1
	30nm,1.1s,baz=110,slow=12,SNR=4.2						
RCBR				LR	LR	08 43 05.8	
	comp=Z,1μm,19.4s,baz=136,slow=32						
RCBR	Riachuelo	23.96	295	PKIKP	P	08 35 42.8	+2.1
RCBR	Riachuelo	23.96	295	P	P	08 35 42.8	+2.1
RCBR	Riachuelo	23.96	295	eP	P	08 35 39.6	-1.1
RCBR	Riachuelo	23.96	295	pmax	pmax		
	comp=Z,50nm,1.1s						
GDU01	Guandu, BA	24.69	274	eP	P	08 35 48.2	+0.8
LIC	Lamto	24.76	22	eP	P	08 35 46.5	-1.4
	comp=Z,257nm,1.9s						
NAN01	Guarapari, ES	24.77	264	eP	P	08 35 47.1	-0.9
KIC	Kosan Boka	24.99	23	eP	P	08 35 48.1	-1.9
	comp=Z,430nm,1.8s						
TIC	Toumodi	25.15	22	eP	P	08 35 49.2	-2.3
DBIC	Dimbokro	25.23	22	P	P	08 35 50.4	-1.8
	comp=Z,24nm,0.9s,baz=180,slow=10,SNR=20						
DBIC				LR	LR	08 43 20.6	
	comp=Z,802nm,19.7s,baz=180,slow=31						
DBIC	Dimbokro	25.23	22	P	P	08 35 50.8	-1.4
BSFB	Barra de Sao F	25.43	262	eP	P	08 35 53.1	-1.0
BDFB	Brasilia	32.48	267	P	P	08 36 56.2	-0.8
	comp=Z,1.6nm,0.5s,baz=74,slow=9.4,SNR=3.5						
BDFB				LR	LR	08 47 30.1	
	comp=Z,2μm,20.6s,baz=113,slow=32						
KOWA	Kowa	32.84	18	P	P	08 36 58.5	-1.4
KOWA				IAmb	IAmb	08 37 06.8	
	comp=Z,34nm,1.0s						
SMTB	Santa Maria do	33.50	280	eP	P	08 37 04.8	-1.0
TOA0	Torodi Ar. Sit	33.79	29	P	P	08 37 07.2	-1.1
TOA0				IAmb	IAmb	08 37 15.5	
	comp=Z,40nm,1.1s						
TORD	Torodi Ar. Bea	33.79	29	P	P	08 37 06.7	-1.6
	comp=Z,20nm,0.8s,baz=213,slow=8.9,SNR=67						
TORD				LR	LR	08 48 49.0	
	comp=Z,1μm,18.8s,baz=200,slow=33						
TORD	Torodi Ar. Bea	33.79	29	P	P	08 37 06.4	-1.8
ITRB	Iturama	34.41	260	eP	P	08 37 14.1	+0.4
PCMB	Pacaembu	35.24	256	eP	P	08 37 20.9	-0.1
ARAG	Araguaiana, MT	36.10	266	eP	P	08 37 28.7	+0.4
TMAB	Tom-Au,PA,Br	36.34	290	eP	P	08 37 29.8	-0.6
PRPB	Parauapebas	36.45	283	eP	P	08 37 30.0	-1.4
LBTB	Lobatse	37.88	109	P	P	08 37 46.4	+2.8
BOSA	Boshof	38.00	115	P	P	08 37 43.1	-1.3
	comp=Z,3.9nm,1.0s,baz=301,slow=5.3,SNR=3.1						
BOSA				LR	LR	08 50 58.0	
	comp=Z,1μm,19.6s,baz=278,slow=32						
AQDB	Aquidauana	39.40	258	eP	P	08 37 57.1	+0.9
MATP	Matopo	40.50	102	P	P	08 38 04.4	-1.0
	comp=Z,3.6nm,0.8s,baz=292,slow=9.7,SNR=5.3						
LSZ	Lusaka	40.69	94	P	P	08 38 09.9	+2.9
MCPB	Macapa, AP	40.78	290	eP	P	08 38 07.2	-0.4
CPUP	Villa Florida	41.01	249	P	P	08 38 09.6	+0.2
	comp=Z,2.4nm,0.8s,baz=96,slow=9.1,SNR=7.0						
CPUP				LR	LR	08 53 39.3	
	comp=Z,822nm,18.1s,baz=90,slow=34						
CPUP	Villa Florida	41.01	249	P	P	08 38 16.1	+6.6
CPUP	Villa Florida	41.01	249	eP	P	08 38 10.6	+1.1
NPGB	Novo Progresso	41.38	279	eP	P	08 38 12.6	0.0
MALB	Monte Alegre	42.17	287	eP	P	08 38 18.2	-0.9
ITTB	Itaituba	42.60	282	eP	P	08 38 21.3	-1.3
TAM	Tamanrasset	43.97	27	P	P	08 38 33.4	-0.3
VILB	Vilhena	44.56	269	eP	P	08 38 38.7	+0.2
SIV	San Ignacio	44.89	264	P	P	08 38 39.4	-1.7
	comp=Z,1.0nm,0.8s,baz=117,slow=8.2,SNR=4.5						
SIV				PP	PP	08 40 27.0	+1.0
	comp=Z,1.8nm,0.9s,baz=72,slow=5.5,SNR=4.2						
MBAR	Mbarara	47.11	75	P	P	08 38 57.2	-1.6
MBAR				IAmb	IAmb	08 39 08.9	
	comp=Z,27nm,1.3s						
PTGA	Pitinga	47.85	285	P	P	08 39 03.9	-0.5
SAML	Samuel	48.31	273	P	P	08 39 07.9	0.0
ETMB	Extrema	50.99	271	eP	P	08 39 29.8	+1.4
AC02	Maricunga	51.58	249	P	P	08 39 33.1	-0.2
LCO	Las Campanas	52.96	246	P	P	08 39 42.5	-0.7
LCO				IAmb	IAmb	08 39 56.1	
	comp=Z,29nm,1.1s						
MT05	Renca	53.12	241	P	P	08 39 48.8	+4.8
BO02	Sierra Bellavi	53.25	239	P	P	08 39 51.5	+6.5
BO02				IAmb	IAmb	08 39 57.8	
	comp=Z,22nm,1.1s						
CO02	Combarbal	53.25	244	P	P	08 39 51.1	+6.0
CO02				IAmb	IAmb	08 39 57.8	
	comp=Z,43nm,1.4s						
ROC1	El Roble	53.33	241	P	P	08 39 50.7	+4.9
PLCA	Paso Flores	53.75	232	LR	LR	09 00 00.6	
	comp=Z,975nm,19.8s,baz=76,slow=33						
LC01	Cunco	54.51	234	P	P	08 40 00.0	+5.9
SNAA	Sanae	55.11	176	P	P	08 39 58.1	+0.1
	comp=Z,2.6nm,0.8s,baz=334,slow=6.8,SNR=4.2						
H05N1	Guadeloupe/Mar	56.82	303	T	T	09 41 19.1	
	SNR=8.2						
KEST	Kesra	56.96	23	P	P	08 40 10.5	-1.2
	comp=Z,8.4nm,0.9s,baz=201,slow=3.2,SNR=6.3						
KEST				LR	LR	09 03 32.0	
	comp=Z,398nm,20.4s,baz=148,slow=35						
KEST	Kesra	56.96	23	P	P	08 40 13.3	+1.7
GO09	Cerro Castillo	57.12	219	P	P	08 40 20.5	+7.9
GO09				IAmb	IAmb	08 40 20.9	
	comp=Z,38nm,1.2s						
ESDC	Sonseca Array	57.15	9	P	P	08 40 12.0	-0.9
	comp=Z,1.8nm,0.9s,baz=183,slow=7.0,SNR=7.8						
ESDC				LR	LR	09 02 44.2	
	comp=Z,224nm,21.7s,baz=190,slow=34						
ESDC	Sonseca Array	57.15	9	IAmb	IAmb	08 40 19.9	
	comp=Z,18nm,1.3s						
SDV	Santo Domingo	61.44	290	P	P	08 40 43.8	+0.6
SDV				IAmb	IAmb	08 40 55.4	
	comp=Z,21nm,1.1s						
SDV	Santo Domingo	61.44	290	eP	P	08 40 42.0	-1.2
ROSC	El Rosal	63.22	285	P	P	08 40 54.8	-0.7
	comp=Z,3.6nm,0.4s,baz=124,slow=10,SNR=8.1						
ROSC				LR	LR	09 07 04.5	
	comp=Z,1μm,19.5s,baz=143,slow=35						
ROSC	El Rosal	63.22	285	P	P	08 40 55.3	-0.2
ROSC				IAmb	IAmb	08 40 58.3	
	comp=Z,26nm,1.2s						
INTR	Introdacqua	64.17	23	P	P	08 41 01.1	+0.3
OSSC	Osservatorio P	64.56	20	P	P	08 41 02.7	-0.5
BNI	Bardonecchia	64.58	16	P	P	08 41 03.6	+0.1
SANT	Santorini	64.94	35	P	P	08 41 04.5	-1.4
SANT				IAmb	IAmb	08 41 12.9	
	comp=Z,26nm,1.1s						
KARP	Karpathos	65.29	36	P	P	08 41 07.4	-0.8
OTAV	Otavalo	65.52	278	P	P	08 41 16.4	+5.8
OTAV	Otavalo	65.52	278	eP	P	08 41 10.1	-0.6
LIT	Litokhoron	66.26	30	P	P	08 41 14.3	0.0
LIT				IAmb	IAmb	08 41 21.7	
	comp=Z,16nm,1.0s						
TEOL	Teolo	66.33	20	P	P	08 41 14.0	-0.6
TEOL				IAmb	IAmb	08 41 20.9	
	comp=Z,23nm,1.1s						
CLF	Chambon-Foret	66.35	12	P	P	08 41 14.6	-0.1
DAVOX	Davos/Dischmat	67.06	18	LR	LR	09 10 03.1	
	comp=Z,273nm,18.5s,baz=208,slow=36						
STAL	STALIGIAL	67.46	20	P	P	08 41 20.7	-1.2
STAL				IAmb	IAmb	08 41 33.4	
	comp=Z,21nm,1.2s						
DAVA	Damuels	67.52	17	eP	P	08 41 21.2	-1.1
	comp=Z,26nm,1.2s						
FETA	Feichten	67.53	18	eP	P	08 41 21.2	-1.2
	comp=Z,22nm,1.3s						
ELL	Elmali	67.71	37	P	P	08 41 22.9	-0.8
ABTA	Abfaltersbach	67.83	19	eP	P	08 41 25.8	+1.6
	comp=Z,20nm,1.8s						
SQTA	Sankt Quirin	67.85	18	eP	P	08 41 23.3	-1.1
	comp=Z,14nm,1.3s						
MOTA	Moosalm	67.93	18	eP	P	08 41 24.9	0.0
	comp=Z,21nm,1.7s						
RETA	Reutte	67.95	18	eP	P	08 41 26.1	+1.1
	comp=Z,11nm,1.2s						
WTTA	Wattenberg	68.02	19	eP	P	08 41 24.9	-0.6
	comp=Z,21nm,1.2s						
WATA	Walderalm	68.06	19	eP	P	08 41 25.9	+0.1
	comp=Z,18nm,1.7s						
MYKA	Terra Mystica	68.10	20	eP	P	08 41 28.0	+2.1
	comp=Z,12nm,1.2s						
MANT	Manisa	68.18	35	P	P	08 41 24.4	-2.4
MANT				IAmb	IAmb	08 41 29.6	
	comp=Z,24nm,1.0s						
OBKA	Obir	68.30	21	eP	P	08 41 31.3	+4.1
	comp=Z,12nm,1.4s						
KBA	Koelnbreinsper	68.39	20	eP	P	08 41 29.4	+1.5
	comp=Z,15nm,1.6s						
VTS	Vitosha	68.57	29	⇑P	P	08 41 29.0	0.0
SOKA	Soboth	68.61	21	eP	P	08 41 28.5	-0.6
	comp=Z,15nm,1.5s						
ALN	Alexandroupoli	68.61	32	P	P	08 41 28.6	-0.6
STU	Stuttgart	68.68	16	P	P	08 41 27.9	-1.4
STU				IAmb	IAmb	08 41 36.2	
	comp=Z,17nm,1.3s						
WLF	Walferdange	68.74	14	dP	P	08 41 29.9	+0.2
WLF	Walferdange	68.74	14	P	P	08 41 29.7	0.0
WLF				IAmb	IAmb	08 41 37.9	
	comp=Z,29nm,1.3s						
BMRD	Maredsous	69.03	13	dPcP	PcP	08 41 57.7	+2.1
BEHE	Becsehely	69.05	22	eP	P	08 41 36.9	+5.1
BGES	Gesves	69.18	13	dPcP	PcP	08 41 56.3	+0.1
ARSA	Arzberg	69.27	21	eP	P	08 41 34.3	+1.1
	comp=Z,17nm,1.2s						
MOA	Molln	69.37	20	eP	P	08 41 33.8	+0.1
	comp=Z,15nm,1.5s						
MAW	Mawson	69.51	157	LR	LR	09 04 28.9	
	comp=Z,286nm,21.7s,baz=242,slow=29						
MORH	Mrgy, Hungar	69.53	24	eP	P	08 41 35.3	+0.5
BTNL	Ternell	69.60	14	dP	P	08 41 34.8	-0.3
BTNL				dsP	sP	08 41 39.7	+1.7
MDVR	Moldovita	69.61	26	⇑P	P	08 41 35.4	+0.1
TIH	Tihany	69.82	23	eP	P	08 41 37.1	+0.6
MPLH	Magyarpolny	69.92	22	eP	P	08 41 38.2	+1.1
CONA	Conrad Observa	69.97	21	eP	P	08 41 37.5	-0.1
	comp=Z,18nm,1.9s						
SOP	Sopron	70.00	22	eP	P	08 41 38.7	+1.1
EGYH	Egyhazaskeszo	70.05	22	eP	P	08 41 33.1	-4.8
GEC2	GERESS Array S	70.06	19	P	P	08 41 37.9	-0.2
GEC2				IAmb	IAmb	08 41 45.1	
	comp=Z,20nm,1.5s						
GERES	GERESS Array B	70.06	19	P	P	08 41 37.0	-1.1
	comp=Z,0.9nm,0.7s,baz=210,slow=4.6,SNR=7.2						
GERES				PP	PP	08 44 11.6	-1.8
	comp=Z,1.7nm,0.9s,baz=195,slow=9.7,SNR=7.3						
GERES				LR	LR	09 12 06.6	
	comp=Z,324nm,19.4s,baz=200,slow=36						
GERES	GERESS Array B	70.06	19	P	P	08 41 37.4	-0.7
GRF	Grafenberg Arr	70.07	17	eP	P	08 41 38.0	-0.1
	comp=Z,31nm,1.4s,baz=206,slow=6.2						
GRF				eL	L	09 11 45.6	
	comp=Z,310nm,18.2s						
BZS	Buzias	70.24	26	⇑P	P	08 41 38.4	-0.7
KHC	Kasperske Hory	70.27	19	eP	P	08 41 39.2	-0.1
KHC				epP	pwP	08 41 45.0	-1.2
KHC				ePP	PP	08 44 16.0	+0.8
CSKK	Cskako	70.35	23	eP	P	08 41 38.5	-1.3
ZST	Bratislava	70.63	22	eP	P	08 41 42.2	+0.7
RAYN	Ar Rayn	70.84	57	P	P	08 41 42.6	-0.7
MODS	Modra-Piesok	70.85	22	eP	P	08 41 42.5	-0.3
SMOL	Smolenice	71.02	22	eP	P	08 41 44.5	+0.7
MOX	Moxa	71.04	17	eL	L	09 12 22.4	
	comp=Z,261nm,20.1s						
KRUC	Moravsky	71.13	21	eP	P	08 41 45.5	+1.0
PRU	Pruhonice	71.33	19	epP	pP	08 41 51.4	+3.7
ARR	Arges	71.34	28	⇑P	P	08 41 45.3	-0.6
JAVC	Velka Javorina	71.40	22	eP	P	08 41 47.0	+0.8
VRAC	Vranov	71.41	21	LR	LR	09 13 17.2	
	comp=Z,297nm,18.0s,baz=206,slow=36						
VRAC	Vranov	71.41	21	eP	P	08 41 45.5	-0.7
PSZ	Piszkesteto	71.42	23	eP	P	08 41 46.4	+0.1
PSZ	Piszkesteto	71.42	23	P	P	08 41 46.7	+0.3
PSZ				IAmb	IAmb	08 41 54.0	
	comp=Z,34nm,1.5s						
VYHS	Vyhne	71.51	22	eP	P	08 41 47.1	+0.3
VOIR		71.58	28	⇑P	P	08 41 44.7	-2.7
DRGR		71.63	26	⇓P	P	08 41 46.1	-1.6
PVCC	Panska Ves	71.81	19	epP	pP	08 41 54.3	+3.7
BRTR	Keskin Array B	71.89	37	P	P	08 41 49.0	-0.4
	comp=Z,3.2nm,0.8s,baz=200,slow=7.6,SNR=18						
BRTR				LR	LR	09 13 30.0	
	comp=Z,32nm,20.8s,baz=230,slow=36						
BRTR	Keskin Array B	71.89	37	P	P	08 41 49.8	+0.3
BR131	Keskin Array S	71.89	37	P	P	08 41 49.8	+0.3
BR131				IAmb	IAmb	08 41 57.9	
	comp=Z,21nm,1.1s						
BRG	Berggiesshubel	71.92	18	eP	P	08 41 49.2	0.0
BRG				Amp		08 41 58.9	
	comp=Z,15nm,1.5s						
BRG				ex	x	08 44 30.3	
BRG				Amp		08 44 32.4	
	comp=Z,52nm,2.1s						
BRG	Berggiesshubel	71.92	18	eP	P	08 41 49.2	0.0
BRG				Amp		08 41 58.9	
	comp=Z,15nm,1.5s						
BRG				ex	x	08 44 30.3	
BRG				Amp		08 44 32.4	
	comp=Z,52nm,2.1s						
CLL	Collm	72.03	18	eP	P	08 41 51.0	+1.2
CLL				eS	S	08 51 12.0	+0.6
CLL				eSS	SS	08 55 48.0	-0.9
CLL				eSSSS		09 00 36.0	
CLL				Lm	MLR	09 12 00.0	
	comp=N,200nm,19.8s						
CLL				Lm	MLR	09 12 00.0	
	comp=E,200nm,20.0s						
CLL				Lm	MLR	09 12 00.0	
	comp=Z,300nm,19.9s						
MLR	Muntele Rosu	72.03	28	LR	LR	09 11 11.5	
	comp=Z,287nm,21.6s,baz=224,slow=34						
MLR	Muntele Rosu	72.03	28	⇑P	P	08 41 47.9	-2.3
MLR	Muntele Rosu	72.03	28	P	P	08 41 49.9	-0.3
KRLC	Kraliky	72.13	20	eP	P	08 41 50.9	+0.4
KRLC				ex	x	08 41 56.9	
MORC	Moravsky Berou	72.13	21	⇓P	P	08 41 51.4	+0.9
MORC	Moravsky Berou	72.13	21	eP	P	08 41 47.3	-3.3
MORC	Moravsky Berou	72.13	21	P	P	08 41 50.1	-0.4
MORC				IAmb	IAmb	08 41 58.2	
	comp=Z,23nm,1.4s						
DOPR	Dopca	72.14	28	⇑P	P	08 41 47.8	-2.9
DPC	Dobruska-Polom	72.21	20	eP	P	08 41 50.9	-0.1
DPC				epP	pwP	08 41 57.0	-1.0
CHVC	Chvalec	72.33	20	eP	P	08 41 51.3	-0.4
CHVC				epP	pwP	08 41 57.6	-1.1
OSTC	Ostas	72.36	20	eP	P	08 41 51.1	-0.7
OSTC				ex	x	08 41 57.9	
GAZ	Gaziantep	72.40	41	P	P	08 41 51.6	-0.8
GAZ				IAmb	IAmb	08 42 01.5	
	comp=Z,19nm,1.2s						
OZUR		72.42	28	⇓P	P	08 41 51.0	-1.3
KSP	Ksiaz	72.63	20	eP	P	08 41 56.8	+3.3
VRI	Vrincioaia	72.67	29	⇑P	P	08 42 00.2	+6.3
ILGA	Ilgaz	72.81	36	P	P	08 41 55.0	0.0
ILGA				IAmb	IAmb	08 42 03.2	
	comp=Z,19nm,1.2s						
CRVS	Cervenica-Dubn	72.83	24	eP	P	08 41 55.7	+1.0
KOLS	Kolonicke sedl	73.17	24	eP	P	08 41 58.1	+1.4
OJC	Ojcow	73.29	22	eP	P	08 41 57.9	+0.5
OJC	Ojcow	73.29	22	P	P	08 41 57.0	-0.4
OJC				IAmb	IAmb	08 42 04.8	
	comp=Z,39nm,1.5s						
BURAR	Bucovina Array	73.34	27	⇑P	P	08 41 57.9	0.0
BURAR	Bucovina Array	73.34	27	P	P	08 41 57.7	-0.2
KWP	Kalwaria Pacla	73.90	24	P	P	08 42 01.2	+0.2
KWP				IAmb	IAmb	08 42 01.7	
	comp=Z,33nm,1.6s						
MARD	Mardin	74.75	43	P	P	08 42 07.7	+1.3
KOPT	Kop Dagi	76.17	40	P	P	08 42 15.8	+1.2
KOPT				IAmb	IAmb	08 42 23.6	
	comp=Z,20nm,1.2s						
AKASG	Malin Array Be	77.39	27	P	P	08 42 18.4	-2.6
	comp=Z,1.9nm,0.5s,baz=222,slow=5.2,SNR=19						
AKASG				LR	LR	09 17 38.9	
	comp=Z,79nm,21.0s,baz=200,slow=37						
AKASG	Malin Array Be	77.39	27	P	P	08 42 19.9	-1.1
AKBB	Malin Array Si	77.39	27	P	P	08 42 21.0	+0.1
AKBB				IAmb	IAmb	08 42 27.7	
	comp=Z,48nm,1.6s						
GNI	Garni	78.91	42	P	P	08 42 31.3	+1.4
NACGM	Naroch	79.60	23	i P	P	08 42 32.4	-0.6
NACGM				i P	P	08 42 32.4	-0.6
NACGM				i P	P	08 42 32.4	-0.6
NACGM				i PcP	PcP	08 42 47.7	+6.8
NACGM				i PP	PP	08 45 08.6	-25
NACGM				i PPP	PPP	08 47 27.2	
NACGM				i S	S	08 52 22.5	-12
NACGM				i PS	PnS	08 53 21.6	+2.8
NACGM				i SS	SS	08 56 52.9	-51
NACGM				i SSS	SSS	09 00 50.1	
NACGM				i LQ	LQ	09 10 37.9	
NACGM				i LR	LR	09 16 56.2	
KBZ	Khabaz	79.79	38	P	P	08 42 33.5	-0.9
	comp=Z,4.0nm,0.8s,baz=239,slow=3.2,SNR=7.7						
KIV	Kislovodsk	79.80	38	P	P	08 42 36.1	+1.5
KIV				IAmb	IAmb	08 42 42.5	
	comp=Z,27nm,1.2s						
UOSS	Minazif	80.22	60	P	P	08 42 37.7	+0.6
UOSS				IAmb	IAmb	08 42 46.0	
	comp=Z,34nm,1.2s						
NB2	NORSAR Subarra	80.37	12	P	P	08 42 36.9	-0.2
	comp=Z,75nm,2.5s,baz=205,slow=5.9						
NB2	NORSAR Subarra	80.37	12	P	P	08 42 36.9	-0.2
	baz=205,slow=5.9						
NOA	NORSAR Array B	80.37	12	P	P	08 42 37.1	-0.1
	comp=Z,1.1nm,0.9s,baz=215,slow=23,SNR=3.1						
NOA				LR	LR	09 18 39.5	
	comp=Z,60nm,18.9s,baz=180,slow=36						
U57A	Blanch	81.21	312	P	P	08 42 48.0	+5.8
	baz=118						
N58A	Sunbury	81.61	317	P	P	08 42 50.3	+6.2
	baz=120						
BORG	Borgarnes	81.65	357	LR	LR	09 11 08.8	
	comp=Z,39nm,20.0s,baz=189,slow=30						
P57A	Homestead Farm	81.78	315	P	P	08 42 48.2	+3.1
	baz=119						
O57A	Amberson	81.89	316	P	P	08 42 51.5	+5.8
	baz=120						
KMSC	Kings Mountain	82.05	310	P	P	08 42 53.2	+6.6
	baz=117						
N57A	Milroy	82.11	317	P	P	08 42 52.7	+5.8
	baz=120						
R56A	Bull Pasture M	82.20	314	P	P	08 42 53.6	+6.2
	baz=118						
G58A	Ormstown	82.24	322	P	P	08 42 53.5	+6.1
	baz=123						
SSPA	Standing Stone	82.27	316	P	P	08 42 53.2	+5.5
	baz=120						
Q56A	Snyder Ridge,	82.36	315	P	P	08 42 54.5	+6.3
	baz=118						
N56A	West Decatur	82.68	317	P	P	08 42 54.8	+5.0
	baz=119						
L56A	Greenwood	82.81	318	P	P	08 42 56.4	+5.9
	baz=120						
E56A	St. Veronique	83.58	323	P	P	08 42 59.7	+5.4
	baz=122						
M54A	Oil Creek Stat	83.87	317	P	P	08 43 01.6	+5.6
	baz=118						
O53A	New Philadelph	84.31	315	P	P	08 43 04.4	+6.2
	baz=117						
FINES	FINESS Array B	84.46	18	P	P	08 42 57.7	-0.7
	comp=Z,2.3nm,0.8s,baz=50,slow=3.0,SNR=1.8						
FINES				LR	LR	09 22 24.6	
	comp=Z,142nm,18.4s,baz=209,slow=37						
L53A	Girard	84.48	317	P	P	08 43 05.0	+6.0
	baz=118						
M53A	WI Miller and	84.50	316	P	P	08 43 05.2	+6.0
	baz=118						
P52A	Corning	84.66	314	P	P	08 43 05.5	+5.5
	baz=117						
T50A	Nancy	85.42	311	P	P	08 43 05.7	+1.8
VNDA	Vanda	85.67	179	P	P	08 43 03.9	-0.6
	comp=Z,1.8nm,1.0s,baz=231,slow=4.0,SNR=4.9						
VNDA				LR	LR	09 16 03.3	
	comp=Z,192nm,21.2s,baz=176,slow=32						
LSQQ	Lebel-sur-Quev	86.03	324	P	P	08 43 11.8	+5.3
	baz=121						
V48A	Smith Brothers	86.35	309	P	P	08 43 08.3	-0.2
GEYT	Alibeck	86.99	49	LR	LR	09 20 60.0	
	comp=Z,215nm,19.4s,baz=215,slow=35						
PLAL	Pickwick Lake	86.99	308	P	P	08 43 10.8	-0.8
WVT	Waverly	87.26	309	P	P	08 43 17.8	+4.9
	baz=113						
WVT	Waverly	87.26	309	P	P	08 43 13.0	+0.1
SCO	Scoresbysund	87.39	357	P	P	08 43 15.8	+3.0
344A	Westbrook Farm	87.73	304	P	P	08 43 15.4	+0.2
VBMS	Vicksburg	87.84	304	P	P	08 43 16.2	+0.4
VBMS				IAmb	IAmb	08 43 26.1	
	comp=Z,21nm,1.1s						
W45A	Hickory Valley	87.90	308	P	P	08 43 15.3	-0.7
SFJD	Kangerlussuaq	87.94	346	LR	LR	09 12 36.1	
	comp=Z,97nm,18.8s,baz=136,slow=29						
143A	Socs Landing,	88.71	305	P	P	08 43 19.4	-0.5
LPAR	Lepanto	88.91	308	P	P	08 43 20.3	-0.5
S44A	Carbondale	88.91	310	P	P	08 43 20.2	-0.5
S44A				IAmb	IAmb	08 43 26.8	
	comp=Z,20nm,1.0s						
W41B	Gary Mavity, V	90.24	307	P	P	08 43 26.9	-0.2
	baz=110						
CCM	Cathedral Cave	90.51	310	P	P	08 43 27.2	-1.0
	baz=111						
CCM	Cathedral Cave	90.51	310	P	P	08 43 27.5	-0.7
CCM				IAmb	IAmb	08 43 39.9	
	comp=Z,20nm,1.1s						
ARCES	ARCESS Array B	90.72	13	LR	LR	09 26 30.4	
	comp=Z,134nm,18.8s,baz=225,slow=37						
MIAR	Mount Ida	91.05	306	P	P	08 43 31.6	+0.8
MIAR				IAmb	IAmb	08 43 39.1	
	comp=Z,22nm,1.6s						
HKT	Hockley	91.34	301	P	P	08 43 33.1	+0.9
HKT				IAmb	IAmb	08 43 39.8	
	comp=Z,20nm,1.6s						
R40A	Maddies Statio	91.35	310	P	P	08 43 31.5	-0.7
W39A	Magazine	91.43	306	P	P	08 43 32.9	+0.3
	baz=109						
HHAR	Hobbs	91.91	307	P	P	08 43 34.1	-0.7
HHAR				IAmb	IAmb	08 43 41.1	
	comp=Z,12nm,1.1s						
U38A	Gravette	92.31	307	IAmb	IAmb	08 43 43.0	
	comp=Z,19nm,1.3s						
WHTX	Lake Whitney,	93.31	302	P	P	08 43 41.1	-0.3
WHTX				IAmb	IAmb	08 43 48.0	
	comp=Z,12nm,1.0s						
JCT	Junction City	94.78	300	P	P	08 43 48.8	+0.5
	baz=106						
JCT	Junction City	94.78	300	P	P	08 43 48.4	+0.2
JCT				IAmb	IAmb	08 43 54.9	
	comp=Z,8.0nm,0.9s						
ECSD	EROS Data Cent	96.23	314	P	P	08 43 59.0	+4.5
	baz=107						
ULM	Lac du Bonnet	97.68	320	LR	LR	09 20 10.0	
	comp=Z,161nm,19.6s,baz=103,slow=31						

TXAR	Lajitas Array	97.69	298	P	P	08 44 00.7	-0.8
	comp=Z,0.5nm,0.9s,baz=57,slow=48,SNR=3.0						
TXAR				LR	LR	09 27 27.0	
	comp=Z,41nm,21.4s,baz=0.0,slow=35						
KSH	Kashi	100.71	52	P	Pdif	08 44 15.3	+0.4
KSH				sP	pwP	08 44 21.8	-0.2
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RKT	Rikitea	109.74	237	*e*LR	LR	09 21 31.5	
	comp=Z,331nm,25.8s						
TBI	Tubuai	120.70	229	*e*LR	LR	09 26 44.7	
	comp=Z,390nm,36.0s,baz=108						
TAOE	Nuku Hiva Isla	120.73	249	*e*LR	LR	09 26 33.6	
	comp=Z,262nm,26.2s						
KMI	Kunming	121.02	71	PKP	PKPdf	08 49 19.0	-0.7
CD2	Chengdu	122.25	64	PKP	PKiKP	08 49 23.3	+1.4
LZH	Lanzhou	122.30	58	*e*PKP	PKiKP	08 49 23.4	+1.4
LZH				sPKP		08 49 28.1	
LZH				LR	LR		
	comp=Z,330nm,18.5s						
LZH				LR	LR		
	comp=Z,340nm,17.9s						
LZH				LR	LR		
	comp=Z,280nm,20.3s						
ILAR	Eielson Array	122.70	338	PKP	PKPdf	08 49 19.9	-1.6
	comp=Z,0.5nm,0.9s,baz=319,slow=33,SNR=3.4						
SONM	Songino Array	122.84	44	PKP	PKPdf	08 49 20.7	-1.8
	comp=Z,0.6nm,0.9s,baz=130,slow=24,SNR=3.1						
PPT2	Papeete2	124.25	234	*e*LR	LR	09 28 13.5	
	comp=Z,622nm,32.2s,baz=136						
STKA	Stephens Creek	126.16	154	PKP	PKPdf	08 49 29.1	-0.2
	comp=Z,0.8nm,0.4s,baz=136,slow=14,SNR=2.1						
HHC	Hu-ho-hao-te	127.82	51	*e*PKP	PKPdf	08 49 30.4	-1.8
HHC				LR	LR		
	comp=Z,210nm,17.9s						
HHC				LR	LR		
	comp=Z,220nm,18.0s						
HHC				LR	LR		
	comp=Z,340nm,17.0s						
ASAR	Alice Springs	128.98	141	PKP	PKPdf	08 49 33.3	-1.6
	comp=Z,1.4nm,1.0s,baz=231,slow=2.5,SNR=8.5						
WRA	Warramunga Arr	132.03	139	PKP	PKPdf	08 49 39.2	-1.6
	comp=Z,0.6nm,0.7s,baz=229,slow=2.0,SNR=4.2						
NJ2	Nanjing	135.06	61	*e*PKP	PKiKP	08 49 48.4	+1.0
DZM	Mont Dzumac	141.19	181	*e*LR	LR	09 36 15.4	
	comp=Z,201nm,25.3s						
MJAR	Matsushiro Arr	148.75	46	PKPbc	PKPbc	08 50 12.9	-1.1
	comp=Z,0.7nm,0.6s,baz=318,slow=12,SNR=4.5						

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*IDC **18** 08:44:37.7±1.4, 5°.67S×104°.02E, h0km, mb4.0/10, mb1 4.2/11, mb1mx3.9/51, mbtmp4.1/11, ML5.2/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/25, Error ellipse: s-maj=59.1km s-min=15.1km az=54.0*

*DJA **18** 08:44:48.9±0.5, 6°S±3°×10°4E±°, h35km±8km, M4.3/16, MLv4.3/16*

*NEIC **18** 08:44:48.8±1.3, 5°.5S±0°.1×104°.34E±0°.09, h81km±9km, mb4.2/5, Error ellipse: s-maj=20.0km s-min=7.6km az=210.0*

ISC 18 08:44:47.4±0.9**, 5°.73S**±0°.07×**104°.20E**±0°.06**, h72**km±7km**, n49, σ1ˢ.55**/51**, mb4.1**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	0.36	55	P	Pn	08 44 59.5	+0.2
KASI				S	Sn	08 45 05.5	-2.5
LWLI	Liwa	0.72	349	P	Pn	08 45 04.0	+1.1
LWLI				S	Sn	08 45 14.9	+0.6
BLSI	Bandar Lampung	1.10	71	P	Pn	08 45 08.2	+0.8
BLSI				S	Sn	08 45 23.0	+0.8
KLSI		1.16	27	P	Pn	08 45 09.9	+1.8
KLSI				S	Sn	08 45 25.0	+1.4
CGJI	Cibinong	1.72	121	P	Pn	08 45 15.7	+0.2
CGJI				S	Sn	08 45 36.5	-0.2
MNAI	Manna	1.84	318		Pn	08 45 18.0	+0.9
MNAI				Sn	Sn	08 45 41.5	+2.0
MNAI	Manna	1.84	318	P	Pn	08 45 18.2	+1.2
LHSI	Lahat	2.01	340	P	Pn	08 45 22.0	+2.7
KSI	Kapahiang	2.61	322	P	Pn	08 45 29.7	+2.2
DBJI	Dramaga	2.67	108	P	Pn	08 45 28.7	+0.5
PMBI	Palembang	2.84	12	Pn	Pn	08 45 28.9	-1.7
PMBI	Palembang	2.84	12	P	Pn	08 45 33.7	+3.1
MASI	Maura Aman, Be	3.23	323	P	Pn	08 45 38.6	+2.7
LEM	Lembang	3.57	108	Pn	Pn	08 45 42.4	+1.8
	7.8nm,0.3s,baz=208,slow=6.7,SNR=9.8						
LEM				Sn	Sn	08 46 23.6	+1.9
	5.5nm,0.3s,baz=92,slow=22,SNR=1.6						
LEM				LR	LR	08 47 19.0	
	comp=Z,113nm,21.2s,baz=128,slow=43						
LEM	Lembang	3.57	108	P	Pn	08 45 42.8	+2.2
CISI	Cisompet, Garu	4.02	117		Pn	08 45 47.0	+0.2
CISI	Cisompet, Garu	4.02	117	P	Pn	08 45 46.9	+0.2
JMBI	JAMBI	4.11	352	P	Pn	08 45 51.1	+3.3
KRJI	Kerinci	4.53	323	P	Pn	08 45 56.9	+3.2
CMJI	Cimerak	4.69	116	P	Pn	08 45 56.2	+0.5
GSI	Gunungsitoli	9.62	316		Pn	08 47 01.1	-2.2
PSI	Prapat	9.98	328	LR	LR	08 51 09.9	
	comp=Z,95nm,18.7s,baz=91,slow=40						
JAGI	Jajag, Banyuwa	10.24	106	Pn	Pn	08 47 13.4	+1.7
BATI	Baumata	19.78	104	P	P	08 49 12.8	+0.7
	6.7nm,0.3s,baz=248,slow=2.0,SNR=5.5						
FITZ	Fitzroy Crossi	24.28	122	P	P	08 49 58.2	+0.1
	3.5nm,1.0s,baz=2.5,slow=8.1,SNR=3.1						
CMAR	Chiang Mai Arr	24.59	348	P	P	08 49 58.1	-2.9
	0.8nm,0.3s,baz=213,slow=23,SNR=5.9						
H01W3	Cape Leeuwin H	30.43	164	T	T	09 22 35.9	
	baz=342,slow=76,SNR=6.4						
H01W1	Cape Leeuwin H	30.44	164	T	T	09 22 44.7	
	baz=342,slow=76,SNR=6.3						
H01W2	Cape Leeuwin H	30.44	164	T	T	09 22 44.1	
	baz=342,slow=76,SNR=5.0						
H08S2	Diego Garcia H	31.54	265	T	T	09 24 40.6	
	baz=88,slow=76,SNR=12						
H08S3	Diego Garcia H	31.55	265	T	T	09 24 39.2	
	baz=88,slow=76,SNR=13						
H08S1	Diego Carcia H	31.56	265	T	T	09 24 42.3	
	baz=88,slow=76,SNR=9.8						
WB0	Warramunga Arr	32.50	118	P	P	08 51 11.4	-0.2
WRA	Warramunga Arr	32.52	119	P	P	08 51 11.3	-0.4
	0.8nm,0.8s,baz=292,slow=9.9,SNR=6.1						
WB2	Warramunga Arr	32.53	119	P	P	08 51 11.6	-0.2
WB2				IAmb	IAmb	08 51 25.9	
	comp=Z,3.3nm,1.1s						
ASAR	Alice Springs	33.69	125	P	P	08 51 22.1	+0.3
	comp=Z,1.5nm,0.5s,baz=293,slow=7.4,SNR=30						
ASAR				PcP	PcP	08 54 01.1	+0.7
	comp=Z,0.5nm,0.6s,baz=300,slow=2.0,SNR=6.7						
AS31	Alice Springs	33.69	125	P	P	08 51 22.6	+0.7
AS31				IAmb	IAmb	08 51 29.7	
	comp=Z,1.3nm,0.3s						
STKA	Stephens Creek	43.56	131	P	P	08 52 45.5	+1.2
	comp=Z,3.7nm,0.6s,baz=311,slow=8.9,SNR=16						
STKA	Stephens Creek	43.56	131	P	P	08 52 45.5	+1.2
SONM	Songino Array	53.37	2	P	P	08 53 58.7	-0.9
	comp=Z,0.5nm,0.6s,baz=178,slow=10,SNR=4.6						
SONM				PcP	PcP	08 55 05.1	-1.1
	comp=Z,0.9nm,0.4s,baz=185,slow=3.3,SNR=6.0						
USRK	Ussuriysk Ar.	55.65	24	P	P	08 54 15.9	-0.2
	comp=Z,1.6nm,0.7s,baz=194,slow=5.2,SNR=4.8						
MKAR	Makanchi Array	55.79	342	P	P	08 54 15.8	-1.3
	comp=Z,0.5nm,0.5s,baz=147,slow=9.2,SNR=11						
MKAR	Makanchi Array	55.79	342	P	P	08 54 16.1	-1.0
ZALV	Zalesovo Beam	61.65	347	P	P	08 54 56.6	-0.9
	comp=Z,1.0nm,0.4s,baz=150,slow=4.5,SNR=5.8						
ZALV	Zalesovo Beam	61.65	347	P	P	08 54 57.1	-0.4
ABKAR	Akbulak array	66.92	330	P	P	08 55 31.4	-0.7
ABKAR				IAmb	IAmb	08 55 32.5	
	comp=Z,4.3nm,1.1s						
FINES	FINESS Array B	89.35	332	P	P	08 57 35.7	+0.1
	comp=Z,1.9nm,0.8s,baz=127,slow=5.0,SNR=6.3						
TXAR	Lajitas Array	144.73	45	PKP	PKPdf	09 04 16.6	-0.3
	comp=Z,2.0nm,0.7s,baz=276,slow=1.1,SNR=19						
TXAR	Lajitas Array	144.73	45		PKPdf	09 04 17.0	+0.2

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*TEH **18** 09:09:27.2, 30°.30N×57°.43E, h7km, ML3.5*

*THR **18** 09:09:28.5±1.2, 30°.34N×57°.42E, h14km±8km, ML3.4*

ISC 18 09:09:27.7±0.9**, 30°.19N**±0°.03×**57°.36E**±0°.03**, h10**km**, n25, σ0ˢ.94**/31**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMN	Cheshme madani	0.36	154	*e*Pg	Pb	09 09 36.4	0.0
TVBK	TV Kerman	0.56	249	*e*Pg	Pn	09 09 41.2	-0.8
TVBK				*e*Sg	Sn	09 09 50.3	-1.2
KRBR	Kerman	0.56	249	*e*Pg	Pn	09 09 41.3	-0.7
KRBR				*e*Sg	Sn	09 09 50.9	-0.6
KRBR				IAML		09 09 51.2	
	comp=E,2μm,0.2s						
KRBR	Kerman	0.56	249	*e*Pg	Pn	09 09 41.3	-0.7
NGRK	Negar Kerman	0.77	225	*e*Pg	Pn	09 09 45.5	+0.6
NGRK				*e*Sg	Sn	09 09 57.6	+0.8
KHGB	Koh Gabri	0.79	284	*e*Pg	Pg	09 09 43.4	+0.5
KHGB				*e*Sg	Sg	09 09 54.0	+0.8
KBAM	BAM	1.42	137	*e*Pg	Pg	09 09 54.9	0.0
KBAM				*e*		09 10 18.0	
	comp=Z,99nm,0.3s						
IBAF	Bafgh	2.08	313	*e*		09 10 06.8	
	comp=Z,99nm,0.2s						
IBAF				*e*Pn	Pb	09 10 05.0	-0.7
BSRN	Basiran	2.33	40	*e*Pn	Pn	09 10 06.7	+0.4
BSRN				*e*Sg	Sn	09 10 36.6	+1.6
BSRN	Basiran	2.33	40	*e*Pn	Pn	09 10 06.7	+0.4
NHDN	Nehbandan	2.61	62	*e*		09 10 50.2	
	comp=Z,99nm,0.3s						
NHDN				*e*Pn	Pn	09 10 09.5	-0.6
IKOO	Kooshah	2.64	32	*e*Pn	Pn	09 10 10.1	-0.5
IKOO				*e*		09 10 55.6	
	comp=Z,99nm,0.2s						
IMEH	Mehriz	2.65	298	*e*Pn	Pb	09 10 13.6	-1.8
IMEH				*e*		09 10 53.9	
	comp=Z,99nm,0.5s						
TPRV	Parvadeh(Tabas	2.89	349	*e*Pn	Pn	09 10 14.3	+0.4
TPRV				*e*		09 11 00.6	
	comp=Z,99nm,0.4s						
ITEG	Tejag	2.95	23	*e*Pn	Pn	09 10 14.5	-0.3
ITEG				*e*		09 11 02.4	
	comp=Z,99nm,0.4s						
BNDS	Bandar-Abbas	2.97	201	*e*Pn	Pb	09 10 20.3	-0.4
BNDS	Bandar-Abbas	2.97	201	*e*Pn	Pb	09 10 20.3	-0.4
YZKH	Yazd	3.23	314	*e*Pn	Pn	09 10 20.3	+1.7
YZKH	Yazd	3.23	314	*e*Pn	Pn	09 10 20.3	+1.7
TKDS	Koohdasht(Taba	3.42	357	*e*Pn	Pn	09 10 21.9	+0.7
TABS	Tabas	3.46	357	*e*Pn	Pn	09 10 21.8	+0.1
TABS				*e*S	Sn	09 11 01.7	-1.1
TABS	Tabas	3.46	357	*e*Pn	Pn	09 10 21.8	+0.1
AFRZ	Afriz	3.52	23	*e*Pn	Pn	09 10 21.8	-0.9
TNSJ	Nastanj	3.82	351	*e*Pn	Pn	09 10 26.2	-0.5
ANAR	Anarak	4.31	315	*e*Pn	Pn	09 10 35.3	+1.9

IDC 18 09:21:13.0±6.7**, 60°.62N**×**162°.67E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/38**, mbtmp3.5**/3**, Error ellipse: s-maj=260.5km s-min=28.6km az=167.0, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	22.98	58	P	P	09 26 18.9	+0.1
	0.7nm,0.9s,baz=268,slow=6.6,SNR=6.9						
SONM	Songino Array	34.18	274	P	P	09 28 00.4	+0.6
	0.2nm,0.4s,baz=60,slow=7.7,SNR=2.1						
MKAR	Makanchi Array	46.47	291	P	P	09 29 40.9	-0.6
	1.3nm,0.8s,baz=46,slow=7.0,SNR=10						

NOU 18 09:24:27.9, 10°.20S×**161°.12E, h16**km**, mb4.7, Solomon Islands, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.39	303	P	Pn	09 24 52.4	-0.2
SANVU	Saraoutou	7.90	132	P	Pn	09 26 21.5	-0.7
DVP	Devils Point	10.15	138	P	Pn	09 26 53.6	+0.6
	36μm,0.7s						
KOUNC	Koumac, New Ca	10.73	164	P	Pn	09 27 00.6	-0.5
LIFNC	LIFOU	12.05	151	P	Pn	09 27 18.1	-1.0
NOUC	Port Laguerre	12.84	158	P	Pn	09 27 30.2	+0.4
DZM	Mont Dzumac	12.86	157	P	Pn	09 27 30.3	0.0
YATNC	Mamie plateau,	13.03	156	P	Pn	09 27 31.8	-0.6
MARNC	Mare, Loyalty	13.03	150	P	Pn	09 27 33.1	+0.6
OUENC	Ouen Island, N	13.33	156	P	Pn	09 27 36.7	+0.1

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*IDC **18** 09:41:52.4±0.6, 14°.51N×55°.70E, h0km, mb4.0/22, mb1 4.1/22, mb1mx4.0/50, mbtmp4.0/22, MS3.5/18, Ms1 3.5/18, ms1mx3.3/47, Error ellipse: s-maj=16.6km s-min=14.8km az=129.0*

*NEIC **18** 09:41:53.7±1.4, 14°.5N±0°.1×55°.5E±0°.2, h11km±4km, mb4.3/11, Error ellipse: s-maj=27.4km s-min=10.5km az=117.0*

*OMAN **18** 09:41:54.2±24.0, 14°.61N×55°.42E, h10km±172km, ml3.9/6, Error ellipse: s-maj=217.7km s-min=30.6km az=280.0*

ISC 18 09:41:54.5±0.6**, 14°.69N**±0°.07×**55°.58E**±0°.08**, h10**km**, n90, σ1ˢ.67**/82**, mb4.3**/42**, MS3.3**/16**, 6C-7D, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.93	212	Pn	Pn	09 42 33.9	-7.4
SOCY	Socotra	2.93	212	P	Pn	09 42 35.0	-6.2
	SNR=35						
SOCY				S	Sn	09 43 03.1	-13
	SNR=8.4						
DMTO	DMTO	3.07	349	P	Pn	09 42 42.4	-0.8
	SNR=6.8						
DMTO				S	Sn	09 43 16.4	-3.7
RBK	Rabkut	3.10	335	P	Pn	09 42 44.6	+1.1
RBK				S	Sn	09 43 17.1	-3.6
SHAO	Shalim	3.32	1	P	Pn	09 42 46.6	0.0
	SNR=18						
SHAO				S	Sn	09 43 20.9	-5.2
ABTO	Aybut	3.44	321	P	Pn	09 42 47.8	-0.5
	SNR=34						
ABTO				S	Sn	09 43 26.4	-2.9
WHFO	Wadi Hawf	3.65	332	P	Pn	09 42 52.2	+1.0
	SNR=10						
WHFO				S	Sn	09 43 33.3	-1.2
DOK	Doka	4.15	341	P	Pn	09 42 59.4	+1.5
WSAR	Wadi Sarin	8.98	18	LR	LR	09 47 40.5	
	comp=Z,322nm,18.6s,baz=205,slow=38						
UOSS	Minazif	10.22	3		Pn	09 44 23.6	+2.2
ATD	Arta Tunnel	12.79	257	LR	LR	09 48 43.2	
	comp=Z,184nm,18.9s,baz=68,slow=32						
RAYN	Ar Rayn	12.95	314		Pn	09 44 57.5	-1.3
KBL	Kabul	23.20	29	P	P	09 47 01.9	0.0
KBL				IAmb	IAmb	09 47 11.3	
	comp=Z,7.6nm,0.9s						
GEYT	Alibeck	23.26	5	P	P	09 47 02.9	+0.7
	comp=Z,4.5nm,0.9s,baz=195,slow=11,SNR=3.2						
GEYT				LR	LR	09 57 08.7	
	comp=Z,90nm,20.6s,baz=290,slow=39						
GEYT	Alibeck	23.26	5	P	P	09 47 03.2	+1.0
GYA0B	ALIBECK ARRAY	23.26	5	P	P	09 47 04.2	+1.9
GYA0B				IAmb	IAmb	09 47 09.3	
	comp=Z,10nm,0.9s						
KMBO	Kilima Mbogo	24.00	231	P	P	09 47 09.7	-0.2
	comp=Z,1.5nm,0.5s,baz=71,slow=10,SNR=4.3						
EIL	Elat	24.17	312	LR	LR	09 56 59.8	
	comp=Z,84nm,19.7s,baz=104,slow=37						
PALK	Pallekele	25.72	104	LR	LR	09 55 16.1	
	comp=Z,104nm,21.2s,baz=18,slow=31						
MMAI	Mount Meron Ar	25.87	318	P	P	09 47 29.4	+2.8
	comp=Z,0.3nm,0.3s,baz=120,slow=8.8,SNR=1.5						
MMAI				LR	LR	09 58 27.8	
	comp=Z,69nm,19.4s,baz=155,slow=38						
GEVA	Gevas	26.01	337	P	P	09 47 28.8	+0.8
GNI	Garni	27.08	342	P	P	09 47 40.3	+2.7
	comp=Z,4.6nm,0.5s,baz=214,slow=16,SNR=3.3						
GNI				LR	LR	10 00 19.1	
	comp=Z,161nm,19.1s,baz=150,slow=41						
GNI	Garni	27.08	342	P	P	09 47 38.6	+1.0
KBZ	Khabaz	30.91	342	P	P	09 48 13.6	+2.2
	comp=Z,1.4nm,0.9s,baz=117,slow=9.0,SNR=2.9						
KKAR	Karatay Array	31.09	21	P	P	09 48 13.9	+0.9
BRTR	Keskin Array B	31.50	327	P	P	09 48 18.8	+2.0
	comp=Z,0.6nm,0.8s,baz=43,slow=46,SNR=2.3						
BRTR				LR	LR	10 01 24.7	
	comp=Z,28nm,19.6s,baz=158,slow=37						
AAK	Ala-Archa	32.26	27	P	P	09 48 23.7	+0.2
AAK				IAmb	IAmb	09 48 41.0	
	comp=Z,6.8nm,1.4s						
ABKAR	Akbulak array	34.66	5	P	P	09 48 45.8	+1.7
ABKAR				IAmb	IAmb	09 48 51.3	
	comp=Z,6.8nm,1.1s						
ABKAR	Akbulak array	34.66	5	P	P	09 48 44.6	+0.5
MAKZ	Makanchi	38.87	29	P	P	09 49 20.8	+0.7
MK31	Makanchi Array	39.01	29	P	P	09 49 22.9	+1.6
MKAR	Makanchi Array	39.01	29	P	P	09 49 22.6	+1.4
	comp=Z,1.5nm,0.6s,baz=216,slow=6.0,SNR=12						
MKAR				LR	LR	10 06 41.4	
	comp=Z,52nm,20.5s,baz=234,slow=38						
MKAR	Makanchi Array	39.01	29	P	P	09 49 22.4	+1.1
VTS	Vitosha	39.33	321	⇓P	P	09 49 24.6	+0.5
VRI	Vrincioaia	39.42	328	⇓P	P	09 49 25.9	+1.2
PLOR	Plostina	39.45	328	⇓P	P	09 49 28.5	+3.6
MLR	Muntele Rosu	39.58	327	⇑P	P	09 49 30.7	+4.6
VOIR		40.02	326	⇑P	P	09 49 31.5	+1.7
DOPR	Dopca	40.19	327	⇑P	P	09 49 32.7	+1.7
ARR	Arges	40.20	326	⇑P	P	09 49 32.9	+1.6
KURBB	Kurchatov Arra	40.37	23	P	P	09 49 33.3	+0.8
	comp=Z,1.1nm,0.3s,baz=222,slow=8.4,SNR=8.1						
HERR	Herculane	41.14	324	⇓P	P	09 49 40.8	+1.9
GZR	Gura Zlata	41.24	325	⇓P	P	09 49 42.5	+2.6
BURAR	Bucovina Array	41.37	329	⇑P	P	09 49 43.2	+2.4
ARCR	ARCALIA	41.46	328	⇓P	P	09 49 44.1	+2.6
MDVR	Moldovita	41.49	323	⇑P	P	09 49 39.8	-2.0
CMAR	Chiang Mai Arr	41.66	79	P	P	09 49 41.6	-1.9
	comp=Z,0.9nm,0.4s,baz=274,slow=8.7,SNR=7.9						
CMAR				LR	LR	10 05 02.5	
	comp=Z,27nm,21.4s,baz=189,slow=33						
AKASG	Malin Array Be	41.77	335	P	P	09 49 44.7	+0.8
	comp=Z,0.2nm,0.2s,baz=134,slow=8.2,SNR=4.1						
AKASG				LR	LR	10 10 25.2	
	comp=Z,36nm,18.8s,baz=330,slow=41						
DRGR		42.14	326	⇓P	P	09 49 49.3	+2.1
MATP	Matopo	43.89	218	P	P	09 50 02.0	+0.4
	comp=Z,3.6nm,0.7s,baz=32,slow=7.6,SNR=10						
PSI	Prapat	44.34	101	LR	LR	10 04 59.1	
	comp=Z,44nm,19.4s,baz=270,slow=31						
ZAA0	Zalesovo Array	45.38	24	P	P	09 50 13.3	+0.3
ZAA0				IAmb	IAmb	09 50 20.1	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	45.38	24	P	P	09 50 13.1	0.0
	comp=Z,1.8nm,0.6s,baz=228,slow=7.4,SNR=9.0						
ZALV				LR	LR	10 10 10.7	
	comp=Z,69nm,20.4s,baz=198,slow=37						
ZALV	Zalesovo Beam	45.38	24	P	P	09 50 13.0	-0.1
ARSA	Arzberg	46.45	323	*e*P	P	09 50 23.0	+1.4
	comp=Z,5.4nm,0.9s						
SOKA	Soboth	46.45	322	*e*P	P	09 50 21.9	+0.2
	comp=Z,6.6nm,1.3s						
CONA	Conrad Observa	46.60	324	*e*P	P	09 50 23.5	+0.6
	comp=Z,7.0nm,1.0s						
OBKA	Obir	46.66	321	*e*P	P	09 50 24.8	+1.4
	comp=Z,6.8nm,1.3s						
MYKA	Terra Mystica	47.26	321	*e*P	P	09 50 29.2	+1.1
	comp=Z,5.7nm,0.7s						
KRLC	Kraliky	47.26	327	*e*P	P	09 50 28.3	+0.3
MOA	Molln	47.48	323	*e*P	P	09 50 30.9	+1.2
	comp=Z,6.3nm,1.2s						
KBA	Koelnbreinsper	47.65	322	*e*P	P	09 50 32.0	+0.8
	comp=Z,10nm,1.7s						
DPC	Dobruska-Polom	47.66	327	*e*P	P	09 50 32.7	+1.6
ABTA	Abfaltersbach	48.01	321	*e*P	P	09 50 34.6	+0.7
	comp=Z,6.9nm,1.3s						
GERES	GERESS Array B	48.31	324	P	P	09 50 35.9	-0.2
	comp=Z,0.9nm,1.0s,baz=216,slow=18,SNR=3.0						
KHC	Kasperske Hory	48.52	324	*e*P	P	09 50 36.4	-1.3
WTTA	Wattenberg	48.77	321	*e*P	P	09 50 39.9	0.0
	comp=Z,12nm,1.3s						
WATA	Walderalm	48.84	321	*e*P	P	09 50 39.8	-0.5
	comp=Z,7.3nm,1.2s						
SQTA	Sankt Quirin	49.02	321	*e*P	P	09 50 41.3	-0.4
	comp=Z,6.1nm,0.7s						
MOTA	Moosalm	49.13	321	*e*P	P	09 50 42.5	-0.2
	comp=Z,10nm,1.0s						
FETA	Feichten	49.22	320	*e*P	P	09 50 43.3	0.0
	comp=Z,6.4nm,1.0s						
RETA	Reutte	49.41	321	*e*P	P	09 50 44.4	-0.2
	comp=Z,3.4nm,0.8s						
DAVA	Damuels	49.86	320	*e*P	P	09 50 48.0	-0.1
	comp=Z,3.7nm,0.5s						
FINES	FINESS Array B	51.27	342	P	P	09 50 58.0	-0.4
	comp=Z,3.2nm,1.0s,baz=132,slow=5.4,SNR=5.8						
FINES				LR	LR	10 18 22.2	
	comp=Z,26nm,19.3s,baz=220,slow=42						
BOSA	Boshof	52.09	214	P	P	09 51 03.4	-1.7
	comp=Z,2.5nm,0.8s,baz=80,slow=7.6,SNR=2.8						
BOSA				LR	LR	10 13 48.3	
	comp=Z,51nm,18.0s,baz=60,slow=37						
TORD	Torodi Ar. Bea	52.23	275	P	P	09 51 06.2	0.0
	comp=Z,1.8nm,0.9s,baz=83,slow=6.5,SNR=5.4						
ESDC	Sonseca Array	57.40	308	P	P	09 51 43.2	-0.3
	comp=Z,2.5nm,0.8s,baz=91,slow=7.0,SNR=13						
ARCES	ARCESS Array B	57.97	348	LR	LR	10 18 33.2	
	comp=Z,47nm,19.6s,baz=295,slow=38						
DBIC	Dimbokro	59.78	269	P	P	09 51 59.8	-0.6
	comp=Z,2.8nm,0.8s,baz=68,slow=7.0,SNR=3.6						
KSRS	Korea Array	67.28	55	P	P	09 52 49.2	-0.4
	comp=Z,1.1nm,0.6s,baz=267,slow=7.0,SNR=4.2						
DAV	Davao City (W)	68.94	88	LR	LR	10 20 29.4	
	comp=Z,85nm,19.1s,baz=65,slow=34						
H01W3	Cape Leeuwin H	74.24	133	T	T	11 14 20.4	
	baz=302,slow=75,SNR=21						
H01W2	Cape Leeuwin H	74.25	133	T	T	11 14 20.9	
	baz=302,slow=75,SNR=22						
H01W1	Cape Leeuwin H	74.26	133	T	T	11 14 21.7	
	baz=302,slow=75,SNR=27						
MAW	Mawson	82.23	177	LR	LR	10 21 22.1	
	comp=Z,56nm,20.2s,baz=238,slow=29						
WRA	Warramunga Arr	84.72	112	P	P	09 54 27.8	-1.6
	comp=Z,1.3nm,0.9s,baz=298,slow=4.1,SNR=7.9						
ASAR	Alice Springs	85.47	116	P	P	09 54 31.5	-1.6
	comp=Z,1.2nm,0.7s,baz=291,slow=4.4,SNR=19						
ILAR	Eielson Array	98.95	10	P	P	09 55 35.5	+0.5
	comp=Z,0.2nm,0.6s,baz=322,slow=32,SNR=1.4						
PDAR	Pinedale Array	121.22	347	PKP	PKPdf	10 00 47.9	-0.5
	comp=Z,0.1nm,0.4s,baz=74,slow=42,SNR=3.0						
NVAR	Mina Array Bea	126.86	354	PKP	PKPdf	10 00 59.7	+0.4
	comp=Z,1.0nm,0.8s,baz=335,slow=1.0,SNR=8.0						

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*IDC **18** 10:01:42.5±2.1, 57°.33N×32°.98W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/40, mbtmp3.6/7, MS3.5/25, Ms1 3.5/25, ms1mx3.3/56, Error ellipse: s-maj=70.4km s-min=22.9km az=179.0*

ISC 18 10:01:44.8±2.1**, 57°.3N**±0°.5×**33°.0W**±0°.2**, h15**km**, n30, σ0ˢ.83**/10**, mb3.8**/7**, MS3.5**/22**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	9.35	32	LR	LR	10 06 38.6	
	comp=Z,480nm,18.8s,baz=263,slow=32						
SFJD	Kangerlussuaq	12.67	327	LR	LR	10 08 34.1	
	comp=Z,193nm,19.8s,baz=120,slow=32						
FRB	Frobisher Bay	18.43	305	LR	LR	10 11 55.7	
	comp=Z,146nm,20.2s,baz=123,slow=33						
ESDC	Sonseca Array	25.81	121	LR	LR	10 15 27.2	
	comp=Z,46nm,20.8s,baz=270,slow=32						
DAVOX	Davos/Dischmat	27.95	94	LR	LR	10 17 44.0	
	comp=Z,109nm,19.1s,baz=270,slow=34						
GERES	GERESS Array B	28.79	87	LR	LR	10 18 03.3	
	comp=Z,65nm,19.4s,baz=317,slow=34						
VRAC	Vranov	30.09	84	LR	LR	10 19 49.6	
	comp=Z,89nm,18.4s,baz=321,slow=36						
SADO	Sadowa	30.97	266	LR	LR	10 18 09.1	
	comp=Z,89nm,18.7s,baz=74,slow=32						
MDT	Midelt	31.25	129	LR	LR	10 18 54.3	
	comp=Z,56nm,19.0s,baz=336,slow=33						
KEST	Kesra	35.45	109	LR	LR	10 21 32.7	
	comp=Z,59nm,18.4s,baz=304,slow=34						
AKASG	Malin Array Be	36.00	73	P	P	10 08 45.5	+0.7
	0.7nm,0.5s,baz=304,slow=8.6,SNR=2.3						
AKASG				LR	LR	10 23 09.2	
	comp=Z,62nm,18.1s,baz=315,slow=36						
ULM	Lac du Bonnet	36.59	287	LR	LR	10 21 29.0	
	comp=Z,69nm,18.2s,baz=86,slow=32						
OBN	Obninsk	37.22	63	LR	LR	10 22 27.3	
	comp=Z,15nm,19.8s,baz=13,slow=34						
MLR	Muntele Rosu	37.45	82	LR	LR	10 24 06.0	
	comp=Z,94nm,18.4s,baz=310,slow=36						
YKA	Yellowknife Ar	38.66	313	P	P	10 09 06.8	-0.4
	0.7nm,0.9s,baz=62,slow=9.3,SNR=6.3						
YKA				PcP	PcP	10 11 17.4	-1.4
	0.3nm,0.9s,baz=68,slow=3.8,SNR=3.7						
TKL	Tuckaleechee C	39.91	259	LR	LR	10 24 52.6	
	comp=Z,91nm,18.1s,baz=22,slow=35						
BELG	Belogornoye	44.12	60	LR	LR	10 26 21.6	
	comp=Z,57nm,18.5s,baz=41,slow=34						
BRTR	Keskin Array B	45.53	83	LR	LR	10 28 58.5	
	comp=Z,16nm,20.4s,baz=312,slow=36						
DLBC	Dease Lake	47.19	315	LR	LR	10 28 56.9	
	comp=Z,137nm,18.8s,baz=58,slow=35						

KBZ	Khabaz	47.59	72	LR	LR	10 29 39.7	
	comp=Z,40nm,18.1s,baz=109,slow=35						
ILAR	Eielson Array	48.33	328	P	P	10 10 25.7	+0.7
	1.0nm,0.9s,baz=38,slow=6.3,SNR=9.7						
ILAR				PcP	PcP	10 11 51.2	-0.3
	0.6nm,0.7s,baz=37,slow=3.6,SNR=6.7						
NEW	Newport	48.53	298	LR	LR	10 30 03.2	
	comp=Z,62nm,18.8s,baz=17,slow=35						
PDAR	Pinedale Array	48.60	287	P	P	10 10 28.4	+0.7
	0.3nm,0.5s,baz=58,slow=5.6,SNR=3.9						
PDAR				LR	LR	10 29 34.5	
	comp=Z,88nm,18.1s,baz=15,slow=34						
ELK	Elko	52.99	289	LR	LR	10 31 31.3	
	comp=Z,81nm,18.3s,baz=9.5,slow=34						
DBIC	Dimbokro	55.10	145	LR	LR	10 32 13.7	
	comp=Z,44nm,18.2s,baz=0.0,slow=33						
NVAR	Mina Array Bea	56.29	290	P	P	10 11 25.4	+0.7
	0.3nm,0.7s,baz=42,slow=8.5,SNR=2.6						
NVAR				LR	LR	10 33 18.6	
	comp=Z,54nm,18.7s,baz=2.5,slow=34						
JTS	Las Juntas de	61.43	242	LR	LR	10 37 22.9	
	comp=Z,24nm,18.1s,baz=116,slow=35						
MKAR	Makanchi Array	63.19	44	P	P	10 12 12.0	+0.1
	0.6nm,0.5s,baz=344,slow=5.7,SNR=9.1						
SONM	Songino Array	69.93	28	P	P	10 12 54.5	-0.5
	1.2nm,0.9s,baz=322,slow=6.6,SNR=6.1						
ASAR	Alice Springs	145.07	21	PKPbc	PKPbc	10 21 19.9	-0.7
	0.6nm,0.6s,baz=346,slow=2.6,SNR=12						

TUL ***18*** *10:17:26.7±1.2, 36°.80N±0°.02×98°.27W±0°.05, h6^{km}±7^{km}, ML3.1, mb_Lg3.1/78(NEIC), Error ellipse: s-maj=5.6km s-min=2.9km az=98.0*

ANF ***18*** *10:17:27.5±0.3, 36°.77N×98°.32W, h0^{km}, ML3.8/11, Error ellipse: s-maj=3.7km s-min=2.9km az=39.0*

NEIC ***18*** *10:17:27.1±1.2, 36°.79N±0°.03×98°.241W±0°.006, h8^{km}±7^{km}, Error ellipse: s-maj=4.0km s-min=0.7km az=181.0*

ISC 18 10:17:27.1±1.1**, 36°.77N**±0°.02×**98°.24W**±0°.03**, h6**^{km}±10^{km}**, n84, σ0^{s}.99**/78**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.29	50		Pg	10 17 32.8	+0.1
KAN14				Sg	Sg	10 17 36.8	+0.3
CROK	Carrier	0.34	143		Pg	10 17 34.1	+0.4
CROK				Sg	Sg	10 17 39.6	+1.5
KAN10	Anthony SW Sta	0.37	18		Pg	10 17 34.0	-0.2
KAN10				Sg	Sg	10 17 39.0	-0.1
KAN08	Anthony NE Sta	0.50	25		Pg	10 17 36.4	-0.3
KAN08				Sg	Sg	10 17 43.3	+0.1
KAN01	Argonia South	0.54	45		Pg	10 17 37.3	-0.2
KAN01				Sg	Sg	10 17 44.5	-0.1
KAN12	Harper NE Stat	0.56	20		Pg	10 17 37.6	-0.3
KAN12				Sg	Sg	10 17 44.9	-0.2
KAN13	South Haven SW	0.66	68		Pg	10 17 39.5	-0.2
KAN13				Sg	Sg	10 17 48.2	0.0
U32A	Winter Ranch,	0.73	238	Pg	Pg	10 17 40.5	-0.6
U32A				Sg	Sg	10 17 50.5	-0.1
U32A	Winter Ranch,	0.73	238	P		10 17 40.5	
	baz=54						
U32A				S		10 17 50.7	
	baz=54						
OK029	Liberty Lake	1.16	147		Pg	10 17 48.8	-0.6
OK029				Sg	Sg	10 18 04.8	+0.4
BCOK	Bluff Creek, N	1.23	155		Pg	10 17 49.8	-0.8
BCOK				Sg	Sg	10 18 07.0	+0.5
QUOK	Quay	1.37	116		Pn	10 17 51.6	-1.3
T35A	Sooner Cattle	1.39	84		Pn	10 17 52.8	-0.3
T35B	Sooner Cattle	1.39	84	P		10 17 52.8	
	baz=266,SNR=75						
T35B				S		10 18 11.6	
	baz=266						
OK031	S. Brethren Rd	1.40	126		Pn	10 17 53.0	-0.2
OK025	Westminster Rd	1.40	148		Pn	10 17 52.8	-0.4
OK030	Cody Creek RV	1.45	125		Pn	10 17 53.8	-0.1
OKCFA	Oklahoma City	1.50	155		Pn	10 17 54.4	-0.2
OKCFA				IAmb_Lg		10 18 17.7	
	comp=Z,74nm,0.8s						
OKCSW	OKLAHOMA CITY	1.51	154		Pn	10 17 54.7	-0.1
FNO	Franklin	1.66	156		Pn	10 17 56.8	0.0
R32A	Long Quarter,	1.69	347	Pn	Pn	10 17 57.4	+0.1
R32A	Long Quarter,	1.69	347	P		10 17 57.3	
	baz=168,SNR=108						
R32A				S		10 18 19.6	
	baz=168						
W35A	Tecumseh	1.96	145		Pn	10 18 01.5	+0.6
WMOK	Wichita Mounta	2.08	192	P	Pn	10 18 02.9	+0.3
	baz=11						
WMOK				S	Sb	10 18 31.6	+0.2
	baz=11						
WMOK	Wichita Mounta	2.08	192		Pn	10 18 03.1	+0.5
WMOK	Wichita Mounta	2.08	192	P		10 18 02.8	
	baz=11						
TUL1	Leonard	2.15	113	P	Pn	10 18 05.2	+1.5
	baz=295						
TUL1				S	Sb	10 18 34.6	+1.0
	baz=295						
TUL1	Leonard	2.15	113		Pn	10 18 05.1	+1.5
TUL1				IAmb_Lg		10 18 38.2	
	comp=Z,87nm,0.8s						
TUL1	Leonard	2.15	113	P		10 18 05.2	
	baz=295,SNR=33						
TUL1				S		10 18 34.6	
	baz=295						
CBKS	Cedar Bluff	2.36	330	P	Pn	10 18 07.3	+0.9
	baz=150						
CBKS				S	Sb	10 18 37.5	-1.9
	baz=150						
CBKS	Cedar Bluff	2.36	330		Pn	10 18 07.4	+0.9
CBKS	Cedar Bluff	2.36	330	P		10 18 07.3	
	baz=150,SNR=32						
KSU1	Kansas State U	2.66	29	S	Sb	10 18 48.8	+0.8
	baz=210						
KSU1	Kansas State U	2.66	29		Pn	10 18 11.6	+1.1
KSU1				IAmb_Lg		10 18 56.2	
	comp=Z,63nm,1.0s						
KSU1	Kansas State U	2.66	29	Sb		10 18 49.9	
	baz=210						
U38A	Gravette	3.12	95		Pn	10 18 17.8	+0.9
U38A	Gravette	3.12	95	P		10 18 17.5	
	baz=278,SNR=9.5						
X37A	Clayton	3.19	132		Pn	10 18 18.8	+0.9
X37A				IAmb_Lg		10 19 12.6	
	comp=Z,38nm,0.9s						
X37A	Clayton	3.19	132	P		10 18 18.4	
	baz=314						
AMTX	Amarillo	3.37	237	Pb	Pb	10 18 28.1	+0.6
	baz=54						
AMTX	Amarillo	3.37	237		Pn	10 18 21.4	+0.9
AMTX				IAmb_Lg		10 19 16.7	
	comp=Z,44nm,0.8s						
HHAR	Hobbs	3.50	97		Pn	10 18 21.5	-0.6
HHAR				IAmb_Lg		10 19 24.1	
	comp=Z,34nm,0.7s						
HHAR	Hobbs	3.50	97	P		10 18 22.8	
	baz=280						
Z35A	Perchaven, San	3.53	166		Pn	10 18 23.6	+1.0
Z35A	Perchaven, San	3.53	166	P		10 18 23.4	
	baz=347						
W39A	Magazine	3.94	112	Sb	Sg	10 19 31.6	-2.0
	baz=295						
W39A	Magazine	3.94	112		Pn	10 18 29.3	+1.1
N33A	J Bar K, Exete	4.01	9	IAmb_Lg		10 19 43.2	
	comp=Z,44nm,0.8s						
S39A	Bolivar	4.03	75	Pn	Pn	10 18 29.6	+0.2
S39A				IAmb_Lg		10 19 34.2	
	comp=Z,30nm,0.8s						
S39A	Bolivar	4.03	75	P		10 18 29.4	
	baz=259,SNR=12						
KSCO	Kaye Shedlock’	4.13	304	S	Sn	10 19 20.4	+0.9
	baz=121						
KSCO	Kaye Shedlock’	4.13	304		Pn	10 18 29.3	-1.6
KSCO				IAmb_Lg		10 19 35.1	
	comp=Z,27nm,0.7s						
ABTX	Abilene, Hawle	4.30	196		Pn	10 18 33.9	+0.7
U40A	Yellville	4.36	94	Pn	Pn	10 18 32.1	-1.8
U40A				IAmb_Lg		10 19 54.3	
	comp=Z,36nm,0.7s						
MIAR	Mount Ida	4.40	119	P	Pn	10 18 35.9	+1.4
	baz=302						
MIAR				Sb	Sg	10 19 45.0	-3.4
	baz=302						
MIAR	Mount Ida	4.40	119	IAmb_Lg		10 19 46.9	
	comp=Z,29nm,0.8s						
Z38A	Mt. Pleasant	4.41	142	IAmb_Lg		10 19 57.9	
	comp=Z,25nm,0.9s						
BGNE	Belgrade	4.63	1	P	Pn	10 18 38.1	+0.5
	baz=181						
BGNE	Belgrade	4.63	1		Pn	10 18 37.5	-0.2
BGNE				IAmb_Lg		10 19 59.2	
	comp=Z,41nm,0.8s						
BGNE	Belgrade	4.63	1	P		10 18 37.5	
	baz=181,SNR=13						
MSTX	Muleshoe	4.64	234		Pn	10 18 37.4	-0.6
P38A	Dawn	4.67	51		Pn	10 18 38.2	-0.1
P38A				IAmb_Lg		10 19 56.1	
	comp=Z,30nm,0.7s						
P38A	Dawn	4.67	51	P		10 18 38.4	
	baz=234,SNR=6.3						
MGMO	Mountain Grove	4.80	84		Pn	10 18 39.8	-0.2
WHTX	Lake Whitney,	4.81	172	P	Pn	10 18 40.9	+0.7
	baz=352						
WHTX	Lake Whitney,	4.81	172		Pn	10 18 40.0	-0.2
WHTX	Lake Whitney,	4.81	172	P		10 18 40.6	
	baz=352						
T25A	Trinidad	4.96	276		Pn	10 18 41.9	-0.4
X40A	Basin Creek Fa	4.96	116	P	Pn	10 18 43.3	+1.2
	baz=299						
X40A	Basin Creek Fa	4.96	116	IAmb_Lg		10 20 14.8	
	comp=Z,41nm,0.8s						
R40A	Maddies Statio	4.98	71		Pn	10 18 42.8	+0.3
FCAR	Ozark Folk Cen	5.01	98	IAmb_Lg		10 20 09.4	
	comp=Z,45nm,1.3s						
WHAR	Wooly Hollow	5.04	105		Pn	10 18 43.8	+0.4
WHAR				IAmb_Lg		10 20 10.4	
	comp=Z,36nm,0.9s						
OGNE	Ogallala	5.11	326		Pn	10 18 42.4	-2.0
OGNE				IAmb_Lg		10 20 16.7	
	comp=Z,24nm,0.8s						
W41B	Gary Mavity, V	5.11	106	IAmb_Lg		10 20 17.5	
	comp=Z,32nm,0.8s						
237A	Washetta, Mont	5.17	156	Pn	Pn	10 18 43.9	-1.1
WLAR	White Oak Lake	5.20	125	IAmb_Lg		10 20 25.1	
	comp=Z,22nm,0.8s						
P40A	Paris	5.60	59		Pn	10 18 48.2	-2.7
P40A				IAmb_Lg		10 20 30.4	
	comp=Z,33nm,0.8s						
N38A	Joes South For	5.60	43	Pn	Pn	10 18 49.5	-1.5
N38A				IAmb_Lg		10 20 34.4	
	comp=Z,40nm,0.8s						
Z41A	Richland Creek	5.67	127	IAmb_Lg		10 20 35.1	
	comp=Z,27nm,0.9s						
CCM	Cathedral Cave	5.71	75		Pn	10 18 52.2	-0.3
CCM				IAmb_Lg		10 20 29.6	
	comp=Z,28nm,0.7s						
T42A	Van Buren	5.73	85		Pn	10 18 51.3	-1.5
T42A				IAmb_Lg		10 20 31.8	
	comp=Z,19nm,0.9s						
LCAR	Lake Charles	5.76	95	IAmb_Lg		10 20 30.6	
	comp=Z,21nm,0.9s						
K31A	O'Neill	5.86	356	IAmb_Lg		10 20 38.2	
	comp=Z,30nm,0.7s						
Q24A	Divide	5.89	294	IAmb_Lg		10 20 39.7	
	comp=Z,34nm,1.1s						
435B	Jarrell	6.00	175	IAmb_Lg		10 20 43.2	
	comp=Z,21nm,0.8s						
PBMO	Poplar Bluff	6.27	88	IAmb_Lg		10 20 50.5	
	comp=Z,24nm,0.8s						
SLM	Saint Louis	6.61	71	IAmb_Lg		10 21 00.2	
	comp=Z,16nm,0.8s						
143A	Socs Landing,	6.94	124	IAmb_Lg		10 21 17.7	
	comp=Z,15nm,0.8s						
ECSD	EROS Data Cent	7.06	10	Pn	Pn	10 19 11.3	+0.2
PHWY	Pilot Hill	7.21	311	IAmb_Lg		10 21 28.2	
	comp=Z,27nm,0.9s						
S44A	Carbondale	7.22	80	Pn	Pn	10 19 14.3	+1.0
HALT	Halls	7.23	94	IAmb_Lg		10 21 17.5	
	comp=Z,27nm,0.7s						
SIUC	Southern Illin	7.26	80	Pn	Pn	10 19 13.1	-0.7
SIUC				IAmb_Lg		10 21 19.8	
	comp=Z,29nm,0.9s						
N23A	Red Feather La	7.29	307	IAmb_Lg		10 21 21.6	
	comp=Z,19nm,0.7s						
P43A	Skaggs, Pawnee	7.44	65	Pn	Pn	10 19 15.9	-0.3
Y22D	IRIS PASSCAL I	7.58	252	IAmb_Lg		10 21 41.4	
	comp=Z,19nm,0.9s						
Q44A	Meyer Farm, Va	7.60	71	Pn	Pn	10 19 18.7	+0.2
T45A	Paducah	7.69	85	IAmb_Lg		10 21 36.6	
	comp=Z,28nm,0.8s						

IDC ***18*** *10:18:27.4±1.2, 23°.50N×123°.84E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/45, mbtmp3.5/4, Error ellipse: s-maj=69.7km s-min=25.1km az=70.0*

JMA ***18*** *10:18:28.1±0.2, 24°.22N×125°.27E, h30^{km}±5^{km}, M3.4*

ISC 18 10:18:28.0±1.8**, 24°.23N**±0°.09×**125°.25E**±0°.07**, h29**^{km}±14^{km}**, n14, σ0^{s}.49**/21**, mb3.5**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	Miyako jima3	0.52	8	P	Pb	10 18 38.5	-0.2
JMJ2				S	Sb	10 18 46.3	+0.3
JOGS	Gusukube	0.55	15	P	Pb	10 18 39.1	-0.1
JOGS				S	Sb	10 18 47.4	+0.5
JIRB	Irabujima	0.60	353	P	Pb	10 18 39.7	-0.4
JIRB				S	Sb	10 18 48.3	0.0
JTJ	Tarama	0.65	310	P	Pb	10 18 40.7	-0.1
JTJ				S	Sb	10 18 50.0	+0.4
JIKM	Ikemajima	0.70	360	P	Pn	10 18 41.3	-0.6
JIKM				S	Sb	10 18 50.9	0.0
JISG	Ishigakijimahi	0.93	293	P	Pn	10 18 44.9	-0.2
JISG				S	Sb	10 18 57.8	+0.3
JIJ	Ishigaki jima	1.02	278	P	Pb	10 18 47.0	0.0
JIJ				*e*S	Sb	10 19 01.1	+1.0
JKRS	Kuro-shima	1.13	271	P	Pb	10 18 49.0	+0.1
HATJ	Hateruma jima	1.33	263	P	Pb	10 18 51.7	-0.6
HATJ				*e*S	Sb	10 19 08.4	-0.5
IRIF	Iriomote-Funau	1.39	275	P	Pb	10 18 52.6	-0.7
MKAR	Makanchi Array	40.93	314	P	P	10 26 08.1	+0.2
	0.2nm,0.5s,baz=115,slow=8.0,SNR=5.4						
WRA	Warramunga Arr	44.78	168	P	P	10 26 39.3	0.0
	0.7nm,0.5s,baz=348,slow=8.8,SNR=7.1						
ASAR	Alice Springs	48.34	169	P	P	10 27 07.8	+0.6
	0.3nm,0.4s,baz=355,slow=7.6,SNR=14						
YKA	Yellowknife Ar	81.46	24	P	P	10 30 52.5	+10
	0.3nm,0.8s,baz=304,slow=3.3,SNR=3.8						

NNC ***18*** *10:26:23.9±1.1, 38°.95N×71°.49E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=9.0km s-min=6.1km az=3.0*

KRNET ***18*** *10:26:24.5±0.1, 39°.25N×71°.62E, h16^{km}, mb2.9*

ISC 18 10:26:26.9±1.9**, 39°.38N**±0°.08×**71°.65E**±0°.04**, h2**^{km}±11^{km}**, n16, σ1^{s}.44**/28**, 22C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.15	51	⇓*i*P	Pg	10 26 29.9	0.0
	baz=32						
DRK				⇓*i*S	Sg	10 26 34.2	+2.2
	baz=32						
BTK	Batken	0.93	317	⇑*i*P	Pb	10 26 43.6	-2.1
	baz=23						
BTK				⇑*i*S	Sg	10 26 57.6	+0.9
	baz=23						
OHH	Osh	1.44	37	⇑*i*P	Pb	10 26 53.2	-1.2
	baz=35						
OHH				⇑*i*S	Sg	10 27 13.9	+0.9
	baz=35						
SFK	Sufi-Kurgan	1.56	66	⇑*i*P	Pb	10 26 54.7	-2.0
	baz=62						
SFK				⇑*i*S	Sg	10 27 16.7	-0.4
	baz=62						
ARSB	Arslanbob	2.19	27	⇑*i*P	Pb	10 27 04.8	-2.5
	baz=26						
ARSB				⇑*i*S	Sb	10 27 34.3	-0.7
	baz=26						
AML	Almayashu	3.15	29	⇓*i*P	Pn	10 27 18.2	+0.3
	baz=28						
AML				⇓*i*S	Sn	10 27 57.4	+1.0
	baz=28						
MNAS	Manas	3.17	12	⇓*i*P	Pn	10 27 18.6	+0.7
	baz=11						
MNAS				⇓*i*S	Sn	10 27 58.2	+1.9
	baz=11						
ARLS	Aral	3.21	39	⇑*i*P	Pn	10 27 19.2	+0.8
	baz=38						
ARLS				⇑*i*S	Sn	10 27 58.6	+1.3
	baz=38						
UCH	Uchtor	3.58	37	⇑*i*P	Pn	10 27 24.0	+0.2
	baz=36						
UCH				⇑*i*S	Sn	10 28 07.4	+0.5
	baz=36						
EKS2	Erkin-Say	3.65	26	⇑*e*P	Pn	10 27 25.1	+0.6
	baz=25						
EKS2				⇑*i*S	Sn	10 28 09.4	+1.2
	baz=25						
KK31	Karatay Array	3.81	347	Pn	Pb	10 27 29.5	-5.4
	1.6nm,0.3s,baz=162,slow=11,SNR=49						
KK31				Sn	Sb	10 28 20.4	-1.1
	3.5nm,0.3s,baz=175,slow=24,SNR=9.1						
AAK	Ala-Archa	3.90	33	⇑*i*P	Pn	10 27 28.5	+0.5
	baz=32						
AAK				⇑*i*S	Sn	10 28 15.3	+0.9
	baz=32						
AAK	Ala-Archa	3.90	33	⇑Pn	Pb	10 27 31.2	-5.3
	2.2nm,0.6s						
AAK				⇑Sn	Sb	10 28 23.2	-1.0
	6.1nm,0.6s						
ULHL	Ulahol	4.51	49	⇑*i*P	Pn	10 27 36.7	+0.3
	baz=48						
ULHL				⇑*i*S	Sn	10 28 29.4	-0.1
	baz=48						
TKM2	Tokmak 2	4.62	39	⇑Pn	Pn	10 27 40.6	+2.7
	1.9nm,0.7s						
TKM2				⇑Sn	Sb	10 28 41.5	-3.5
	1.8nm,0.5s						
AB31	Akbulak array	12.93	324	⇓P	Pn	10 29 32.4	+0.9
	0.5nm,0.5s,baz=262,slow=36,SNR=11						

NNC ***18*** *10:33:46.6±1.8, 44°.31N×84°.29E, h3^{km}±9^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=14.0km s-min=5.4km az=122.0*

SOME ***18*** *10:33:47.1, 44°.45N×84°.18E, h10^{km}*

ISC 18 10:33:46.6±1.7**, 44°.26N**±0°.07×**84°.14E**±0°.08**, h10**^{km}**, n29, σ1^{s}.58**/44**, 4C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.84	333	⇓Pn	Pn	10 34 33.2	+1.2
	0.1nm,0.2s,baz=150,slow=15,SNR=92						
MK31				⇓Pg	Pb	10 34 38.4	+0.9
	1.3nm,0.3s,baz=140,slow=17,SNR=17						
MK31				⇑Lg	Lg	10 35 16.8	
	4.6nm,0.3s,baz=152,slow=34,SNR=10						
KTMS	Ketmen	2.86	255	*e*P	Pg	10 34 41.1	-0.3
	13nm,0.3s						
KTMS				*e*S	Sg	10 35 19.7	+1.3
	46nm,0.4s						
KTMS	Ketmen	2.86	255	Pg	Pg	10 34 41.1	-0.3
	13nm,0.3s						
KTMS				Lg	Lg	10 35 19.7	
	46nm,0.4s						
MAKZ	Makanchi	2.96	330	⇑Pn	Pn	10 34 35.1	+1.4
	1.4nm,0.3s						
MAKZ				⇑Lg	Lg	10 35 21.9	
	30nm,1.0s						
DJR	Jarkent	3.12	273	*e*P	Pg	10 34 46.4	0.0
	5.9nm,0.3s						
DJR				*e*S	Sg	10 35 29.0	+2.1
	20nm,0.4s						
DJR	Jarkent	3.12	273	Pg	Pg	10 34 46.4	0.0
	5.9nm,0.3s						
DJR				Lg	Lg	10 35 29.0	
	20nm,0.4s						
ZSN	Zaisan	3.23	9	*e*P	Pb	10 34 42.9	-1.0
	9.4nm,0.3s						
ZSN				*e*S	Sb	10 35 23.2	-0.1
	23nm,0.8s						
ZSN	Zaisan	3.23	9	Pg	Pb	10 34 42.9	-1.0
	9.4nm,0.3s						
ZSN				Lg	Lg	10 35 23.2	
	23nm,0.8s						
PDGK	Podgornoye	3.49	256	⇓Pn	Pn	10 34 42.7	+1.7
	7.6nm,0.6s						
PDGK				⇓Lg	Lg	10 35 39.4	
	24nm,0.7s						
KAPS	Kapalarasan	3.56	288	*e*P	Pg	10 34 52.7	-2.0
	2.3nm,0.2s						
KAPS				*e*S	Sg	10 35 40.2	-0.5
	19nm,0.4s						
KAPS	Kapalarasan	3.56	288	Pg	Pg	10 34 55.8	+1.2
	2.3nm,0.2s						
KAPS				Lg	Lg	10 35 44.8	
	19nm,0.4s						
SHLS	Shalkode	3.57	254	*e*P	Pb	10 34 48.4	-1.4
	13nm,0.3s						
SHLS				*e*S	Sb	10 35 32.6	-0.6
	46nm,0.4s						
SHLS	Shalkode	3.57	254	Pg	Pb	10 34 48.4	-1.4
	13nm,0.3s						
SHLS				Lg	Lg	10 35 32.6	
	46nm,0.4s						
UZB	Uzynbulak	3.87	255	*e*P	Pg	10 35 00.4	-0.4
	1.9nm,0.2s						
UZB				*e*S	Sg	10 35 53.4	+2.5
	9.6nm,0.6s						
UZB	Uzynbulak	3.87	255	Pg	Pg	10 35 00.4	-0.4
	1.9nm,0.2s						
UZB				Lg	Lg	10 35 53.4	
	9.6nm,0.6s						
KPKS	Kokpek	4.02	260	*e*P	Pg	10 35 01.0	-2.6
	16nm,0.3s						
KPKS				*e*S	Sg	10 35 54.1	-1.7
	34nm,0.4s						
MNBS	Baschi	4.13	269	*e*P	Pg	10 35 03.6	-2.1
	12nm,0.3s						
MNBS				*e*S	Sg	10 35 58.7	-0.5
	28nm,0.4s						
MNBS	Baschi	4.13	269	Pg	Pg	10 35 03.6	-2.1
	12nm,0.3s						
MNBS				Lg	Lg	10 35 58.7	
	28nm,0.4s						
TDK	Taldyqorghan	4.16	282	*e*P	Pg	10 35 04.4	-1.8
	24nm,0.2s						
TDK				*e*S	Sg	10 36 00.2	+0.1
	29nm,0.5s						
SATY	Saty	4.33	256	*e*P	Pg	10 35 08.2	-1.3
	3.2nm,0.1s						
SATY				*e*S	Sg	10 36 06.5	+0.9
	14nm,0.4s						
SATY	Saty	4.33	256	Pg	Pg	10 35 08.2	-1.3
	3.2nm,0.1s						
SATY				Lg	Lg	10 36 06.5	
	14nm,0.4s						
KURS	Kuram	4.38	262	*e*P	Pg	10 35 10.6	0.0
	3.5nm,0.4s						
KURS				*e*S	Sg	10 36 10.5	+3.2
	7.5nm,0.4s						
CHKK	Chushkaly	5.17	268	*e*P	Pg	10 35 22.0	-3.6
	1.9nm,0.2s						
CHKK				*e*S	Sg	10 36 30.3	-2.2
	4.6nm,0.2s						
KOTS	Kotyrbulak	5.19	261	*e*P	Pg	10 35 24.2	-1.8
	14nm,0.3s						
KOTS				*e*S	Sg	10 36 33.7	+0.4
	13nm,0.2s						
TNSS	Tian-Shan	5.36	259	*e*P	Pg	10 35 28.8	-0.4
	1.2nm,0.3s						
TNSS				*e*S	Sg	10 36 41.4	+2.7
	1.6nm,0.5s						
TNSS	Tian-Shan	5.36	259	Pg	Pg	10 35 28.8	-0.4
	1.2nm,0.3s						
TNSS				Lg	Lg	10 36 41.4	
	1.6nm,0.5s						
KTBS	Karatobe	5.41	267	*e*P	Pg	10 35 28.8	-1.3
	1.3nm,0.3s						
KTBS				*e*S	Sg	10 36 41.5	+1.4
	9.2nm,0.7s						
TKM2	Tokmak 2	6.35	261	⇑Lg	Lg	10 37 12.4	
	3.1nm,0.7s						
KURBB	Kurchatov Arra	7.41	331	⇓Pn	Pn	10 35 35.7	+1.0
	1.6nm,0.8s						
KURBB				⇓Lg	Lg	10 37 42.8	
	15nm,0.7s						

NOU 18 10:46:55.4, 15°.51S×168°.50E, h148^{km}, MLv4.5, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.25	273	P	Pn	10 47 22.4	+0.1
DVP	Devils Point	2.22	188	P	Pn	10 47 33.2	+0.1
MARNC	Mare, Loyalty	5.96	184	P	Pn	10 48 21.9	+0.4
KOUNC	Koumac, New Ca	6.42	218	P	Pn	10 48 28.3	+0.6
YATNC	Mamie plateau,	6.69	193	P	Pn	10 48 30.7	-0.6
DZM	Mont Dzumac	6.81	196	P	Pn	10 48 31.9	-1.1

OUENC	Ouen Island, N	7.05	193	P	Pn	10 48 36.6	+0.5
PINNC	Pines Island,	7.13	188	P	Pn	10 48 37.8	+0.6

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*IDC **18** 11:28:14.3±1.4, 2°.18N×126°.58E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.5/34, mbtmp3.5/6, MS2.7/1, Ms1 2.7/1, ms1mx2.1/26, Error ellipse: s-maj=100.1km s-min=18.9km az=64.0*

ISC 18 11:28:20.6±1.2**, 2°.2N**±0°.3×**126°.6E**±0°.5**, h47^{km}, n7, σ0^{s}.55**/6**, mb3.4**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.58	122	LR	LR	11 32 08.6	
	comp=Z,73nm,21.0s,baz=142,slow=42						
WRA	Warramunga Arr	23.25	161	P	P	11 33 23.5	-0.5
	0.5nm,0.3s,baz=341,slow=11,SNR=9.7						
ASAR	Alice Springs	26.64	165	P	P	11 33 54.5	-0.5
	0.2nm,0.7s,baz=348,slow=7.7,SNR=1.7						
CMAR	Chiang Mai Arr	31.55	303	P	P	11 34 38.8	0.0
	0.3nm,0.4s,baz=127,slow=7.0,SNR=2.0						
STKA	Stephens Creek	36.73	158	P	P	11 35 24.0	+0.6
	2.2nm,0.8s,baz=339,slow=11,SNR=3.9						
SONM	Songino Array	48.73	342	P	P	11 37 00.5	-0.2
	0.1nm,0.4s,baz=149,slow=3.0,SNR=2.3						
MKAR	Makanchi Array	58.75	326	P	P	11 38 14.0	+0.1
	0.3nm,0.4s,baz=122,slow=7.3,SNR=9.8						

IDC 18 11:33:04.1±1.5**, 4°.79N×123°.38E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/36**, mbtmp3.5**/4**, Error ellipse: s-maj=205.6km s-min=22.4km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.84	157	P	P	11 38 46.6	+0.2
	0.3nm,0.3s,baz=333,slow=10.0,SNR=7.8						
ASAR	Alice Springs	30.09	160	P	P	11 39 15.3	-0.1
	0.2nm,0.4s,baz=340,slow=7.0,SNR=8.4						
MKAR	Makanchi Array	54.81	326	P	P	11 42 36.9	+0.9
	0.2nm,0.4s,baz=128,slow=8.4,SNR=5.8						
ZALV	Zalesovo Beam	58.16	334	P	P	11 42 58.2	-1.4
	0.4nm,0.6s,baz=123,slow=7.1,SNR=1.8						

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*SJA **18** 12:13:05.9±0.5, 24°.26S×67°.27W, h187^{km}±5^{km}, ML3.9, MW4.1*
*NEIC **18** 12:13:06.5±2.8, 24°.32S±0°.07×67°.32W±0°.03, h177^{km}±10^{km}, Error ellipse: s-maj=10.3km s-min=3.9km az=189.0*
*IDC **18** 12:13:07.0±1.0, 24°.11S×67°.08W, h159^{km}±8^{km}, mb3.7/11, mb1 3.8/16, mb1mx3.7/33, mbtmp4.1/16, MS3.0/1, Ms1 2.9/1, ms1mx2.5/22, Error ellipse: s-maj=14.8km s-min=11.8km az=36.0*
*GUC **18** 12:13:07.9±0.6, 24°.22S×67°.58W, h202^{km}±7^{km}, ML4.2*
*VAO **18** 12:13:08.4±0.5, 24°.07S×67°.22W, h190^{km}±5^{km}, mb4.4*
ISC 18 12:13:06.8±0.6**, 24°.24S**±0°.03×**67°.32W**±0°.04**, h170^{km}**±6^{km}**, n136, σ1^{s}.42**/159**, mb3.9**/12**, 14C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.73	107	*i* P	Pn	12 13 41.1	+0.7
SLA				*e*S	Sn	12 14 06.8	+0.5
SLA				IAML		12 14 07.8	
	comp=Z,601nm,0.8s						
HJA	Humahuaca	2.03	60	*i* P	Pn	12 13 44.7	+0.8
HJA				*e*S	Sn	12 14 13.8	+1.2
LVC	Limon Verde	2.18	318	P	Pn	12 13 47.1	+1.5
	comp=Z,16nm,0.3s,baz=160,slow=6.4,SNR=256						
LVC				S	Sn	12 14 15.8	+0.3
	comp=Z,54nm,0.3s,baz=310,slow=20,SNR=67						
LVC	Limon Verde	2.18	318	⇓*i*P	Pn	12 13 47.0	+1.5
LVC				*e*S	Sn	12 14 16.4	+0.8
LVC	Limon Verde	2.18	318		Pn	12 13 47.5	+1.8
LVC	Limon Verde	2.18	318	*i* P	Pn	12 13 47.1	+1.5
LVC				*e*S	Sn	12 14 17.2	+1.6
LVC	Limon Verde	2.18	318	*e*P	Pn	12 13 47.1	+1.5
PB15	IPOC Station P	2.22	297		Pn	12 13 47.4	+1.5
FSA	Cafayete	2.23	147	*i* P	Pn	12 13 46.3	+0.4
GO02	Mina Guanaco	2.26	245	⇑*i*P	Pn	12 13 47.6	+1.2
GO02				*i* S	Sn	12 14 18.4	+1.3
GO02	Mina Guanaco	2.26	245		Pn	12 13 47.6	+1.2
PB06	IPOC Station P	2.57	306		Pn	12 13 51.2	+1.3
YJA	Yavi	2.64	39	*i* P	Pn	12 13 52.2	+1.1
YJA				*e*S	Sn	12 14 26.4	+1.0
PB14	IPOC Station P	2.83	262	⇑*i*P	Pn	12 13 53.8	+0.5
PB14				*i* S	Sn	12 14 28.5	-0.8
PB14				IAML		12 14 29.6	
	comp=E,178nm,0.6s						
PB14	IPOC Station P	2.83	262		Pn	12 13 53.8	+0.5
PB05	IPOC Station P	2.98	297	⇑*i*P	Pn	12 13 55.6	+0.7
PB05				*i* S	Sn	12 14 31.0	-1.2
PB05				IAML		12 14 33.9	
	comp=E,461nm,0.6s						
PB05	IPOC Station P	2.98	297	*i* P	Pn	12 13 55.8	+0.9
PB05				IAML		12 14 35.8	
	comp=Z,346nm,0.5s						
PB09	IPOC Station P	3.00	324	⇑*i*P	Pn	12 13 57.0	+1.7
PB09				*i* S	Sn	12 14 33.5	+0.6
PB09				IAML		12 14 40.5	
	comp=N,519nm,0.5s						
PB09	IPOC Station P	3.00	324		Pn	12 13 56.9	+1.7
PB09	IPOC Station P	3.00	324	*i* P	Pn	12 13 56.6	+1.4
PB09				IAML		12 14 37.8	
	comp=Z,382nm,0.6s						
PB10	IPOC Station P	3.04	283	⇑*i*P	Pn	12 13 56.5	+0.9
PB10				*i* S	Sn	12 14 32.9	-0.6
PB10				IAML		12 14 38.6	
	comp=E,376nm,0.6s						
PB10	IPOC Station P	3.04	283		Pn	12 13 56.5	+0.9
AC02	Maricunga	3.06	212	⇑*i*P	Pn	12 13 57.2	+1.1
AC02				*i* S	Sn	12 14 35.8	+1.3
AC02				IAML		12 14 48.3	
	comp=E,125nm,0.2s						
AC02	Maricunga	3.06	212	Pn	Pn	12 13 57.1	+0.9
AHML	Horco Molle	3.11	145	*i* P	Pn	12 13 56.5	+0.2
PB03	IPOC Station P	3.12	314	⇑*i*P	Pn	12 13 57.5	+0.8
PB03				*i* S	Sn	12 14 34.8	-0.7
PB03				IAML		12 14 35.7	
	comp=E,696nm,0.2s						
PB04	IPOC Station P	3.22	306	⇑*i*P	Pn	12 13 58.6	+0.7
PB04				*e*S	Sn	12 14 36.4	-1.2
PB04				IAML		12 14 40.5	
	comp=N,775nm,0.6s						
PB04	IPOC Station P	3.22	306		Pn	12 13 58.4	+0.5
PB04	IPOC Station P	3.22	306	*i* P	Pn	12 13 58.8	+1.0
PB07	IPOC Station P	3.44	316	⇑*i*P	Pn	12 14 01.3	+0.7
PB07				*i* S	Sn	12 14 40.9	-1.7
PB07	IPOC Station P	3.44	316		Pn	12 14 01.4	+0.7
AC01	Pan de Azucar	3.52	237	⇑*i*P	Pn	12 14 01.2	-0.3
AC01	Pan de Azucar	3.52	237		Pn	12 14 01.2	-0.3
GO03	Copiap	4.25	217	⇑*i*P	Pn	12 14 10.0	-0.9
GO03				*i* S	Sn	12 14 59.0	-1.9
GO03	Copiap	4.25	217	Pn	Pn	12 14 09.7	-1.1
GO03	Copiap	4.25	217	*i* P	Pn	12 14 10.2	-0.6
PATCX	Punta Patache	4.29	322	⇑*i*P	Pn	12 14 11.3	-0.2
PATCX				*i* S	Sn	12 15 00.1	-1.9
PATCX	Punta Patache	4.29	322		Pn	12 14 11.6	+0.1
CYA	Choya	4.40	162	*i* P	Pn	12 14 12.7	-0.1
PB08	IPOC Station P	4.42	337	⇓*i*P	Pn	12 14 14.1	+0.7
PB08				*i* S	Sn	12 15 04.9	-0.5
PB08	IPOC Station P	4.42	337		Pn	12 14 14.3	+0.9
TA01	Diego Aracena	4.51	324	*e*P	Pn	12 14 13.8	-0.5
TA01	Diego Aracena	4.51	324	Pn	Pn	12 14 13.7	-0.5
VCA	Vinchina	4.55	190	*i* P	Pn	12 14 15.3	+0.5
HMBC	Humberstone	4.60	328	*e*P	Pn	12 14 14.5	-1.0
HMBC				*i* S	Sn	12 15 05.6	-3.6
GO01	Chusmiza	4.87	339		Pn	12 14 19.8	+0.4
AC04	Llanos de Chal	5.19	220	⇑*i*P	Pn	12 14 21.0	-2.1
AC04				*i* S	Sn	12 15 19.8	-3.0
AC04	Llanos de Chal	5.19	220	Pn	Pn	12 14 21.3	-1.8
AC05	El Transito	5.29	209	⇑*i*P	Pn	12 14 23.3	-1.1
AC05				*i* S	Sn	12 15 23.1	-2.2
AC05	El Transito	5.29	209		Pn	12 14 23.3	-1.1
PSGC	Pisagua	5.30	330	*e*P	Pn	12 14 22.5	-2.1
PSGC				*i* S	Sn	12 15 14.6	-11
PSGCX	Pisagua	5.30	330	Pn	Pn	12 14 22.9	-1.7
MNMC	Minye Minye	5.50	337		Pn	12 14 27.1	-0.4
LCO	Las Campanas	5.63	212	Pn	Pn	12 14 27.1	-2.0
PB16	IPOC Station P	6.22	340		Pn	12 14 38.0	+0.8
CO01	Juntas del Tor	6.23	203		Pn	12 14 37.1	+0.2
GO04	Tololo Observa	6.67	207		Pn	12 14 40.1	-2.6
RTLL	Cerro Villicun	7.14	188	*i* P	Pn	12 14 48.5	-0.2
RTLL				IAML		12 16 09.0	
	comp=Z,17nm,0.5s						
CO03	El Pedregal	7.22	204		Pn	12 14 47.4	-2.5
ZON	Zonda	7.38	189		Pn	12 14 51.9	-0.1
ZON	Zonda	7.38	189	*i* P	Pn	12 14 51.5	-0.4
ZON				IAML		12 16 17.1	
	comp=Z,9.8nm,1.6s						
TCA	Tanti	7.47	162	*i* P	Pn	12 14 51.8	-1.4
CO02	Combarbal	7.67	204		Pn	12 14 52.9	-2.9
RTCV	Cerro Valdivia	7.67	188	*i* P	Pn	12 14 55.4	-0.4
RTCV				IAML		12 16 44.5	
	comp=Z,16nm,3.4s						
RTLS	Leoncito	7.73	193	*i* P	Pn	12 14 56.3	-0.5
RTLS				IAML		12 16 24.9	
	comp=Z,13nm,0.6s						
CPUP	Villa Florida	9.28	105	P	Pn	12 15 13.8	-3.3
	comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=7.5						
CPUP	Villa Florida	9.28	105		Pn	12 15 15.5	-1.6
MT02	Curacav	9.59	200	Pn	Pn	12 15 17.9	-3.2
SIV	San Ignacio	10.09	37	P	Pn	12 15 24.8	-3.0
	comp=Z,4.8nm,0.3s,baz=227,slow=12,SNR=81						
SIV				S	Sn	12 17 03.6	-16
	comp=Z,0.1nm,0.3s,baz=242,slow=18,SNR=2.1						
AQDB	Aquidauana	11.39	73	*e*P	Pn	12 15 44.6	-0.1
PTLB	Pontes e Lacer	11.65	43	*e*P	Pn	12 15 45.9	-2.1
VILB	Vilhena	13.09	32	*e*P	Pn	12 16 06.3	-0.4
PP1B	Ponte de Pedra	13.37	63	*e*P	Pn	12 16 07.8	-2.2
TRCB	Terra Rica	13.55	87	*e*P	Pn	12 16 11.2	-1.3
CPSB	Cacapava Do Su	13.78	120	*e*P	P	12 16 16.6	-1.5
PTGB	Pitanga	13.90	95	*e*P	Pn	12 16 16.6	-0.2
ITAB	Concordia	14.01	106	*e*P	Pn	12 16 19.1	+1.0
PLTB	Pedras Altas	14.24	125	*e*P	P	12 16 22.4	-0.9
ETMB	Extrema	14.38	4	*e*P	Pn	12 16 21.5	-1.3
PCMB	Pacaembu	15.03	83	*e*P	Pn	12 16 29.4	-1.4
LC01	Cunco	15.12	194	P	Pn	12 16 30.9	-0.8
SAML	Samuel	15.71	15	P	Pn	12 16 38.5	-0.7
SAML				IAmb	IAmb	12 16 39.8	
	comp=Z,10nm,0.7s						
SAML	Samuel	15.71	15	*e*P	Pn	12 16 38.3	-0.9
FRTB	Fartura	16.28	90	*e*P	P	12 16 45.2	-0.8
ITRB	Iturama	16.37	77	*e*P	P	12 16 45.5	-1.4
PLCA	Paso Flores	16.67	189	P	Pn	12 16 51.6	+0.9
	comp=Z,0.5nm,0.3s,baz=34,slow=16,SNR=7.4						
PLCA	Paso Flores	16.67	189	P	P	12 16 47.4	-2.7
PLCA				IAmb	IAmb	12 16 59.7	
	comp=Z,13nm,0.7s						
PLCA	Paso Flores	16.67	189	*e*P	Pn	12 16 52.1	+1.5
ARAG	Araguaiana, MT	16.86	63	*e*P	P	12 16 51.6	-0.7
CLDB	Colider	17.23	42	*e*P	P	12 16 54.5	-1.9
BB19B	Bebedouro	17.63	83	*e*P	P	12 17 01.0	+0.2
PET01	Itanhaem-SP	18.28	94	*e*P	P	12 17 07.1	-0.7
LL01	San Ignacio de	18.58	192	P	P	12 17 09.8	-1.0
LL01				IAmb	IAmb	12 17 17.0	
	comp=Z,28nm,0.8s						
VAO	Valinhos	18.70	90	*e*P	P	12 17 11.4	-1.0
IPMB	Ipameri, GO	18.88	74	*e*P	P	12 17 13.8	-0.6
PARB	Paraibuna	19.88	92	*e*P	P	12 17 24.9	-0.3
BDFB	Brasilia	20.05	68	P	P	12 17 26.2	-0.9
	comp=Z,4.1nm,0.3s,baz=239,slow=12,SNR=75						
BDFB				LR	LR	12 25 54.5	
	comp=Z,38nm,18.3s,baz=165,slow=39						
BDFB	Brasilia	20.05	68	P	P	12 17 26.2	-0.9
NPGB	Novo Progresso	20.59	36	*e*P	P	12 17 29.9	-2.9
BSCB	Bom Sucesso	21.06	86	*e*P	P	12 17 36.2	-1.6
PEXB	Peixe	21.70	60	*e*P	P	12 17 42.4	-2.2
MACA	Manacapuru-AM	21.91	18	*e*P	P	12 17 44.9	-1.9
VAS01	Vassouras-RJ	22.02	90	*e*P	P	12 17 46.8	-1.1
ITTB	Itaituba	22.69	31	*e*P	P	12 17 51.9	-2.3
DUB01	Friburgo-RJ	23.03	90	*e*P	P	12 17 55.9	-1.4
JANB	Januaria	23.49	71	*e*P	P	12 17 59.6	-1.9
CAM01	Campos-RJ	23.73	89	*e*P	P	12 18 02.9	-0.6
SMTB	Santa Maria do	24.27	54	*e*P	P	12 18 07.0	-1.6
SDBA	SAO DESIDERIO	24.28	65	*e*P	P	12 18 06.9	-1.8
PTGA	Pitinga	24.43	18	P	P	12 18 08.8	-1.2
	comp=Z,3.2nm,0.4s,baz=207,slow=14,SNR=9.0						
PTGA	Pitinga	24.43	18	P	P	12 18 09.8	-0.2
PTGA				IAmb	IAmb	12 18 10.3	
	comp=Z,11nm,1.1s						
ALF01	Guarapari-ES	24.84	87	*e*P	P	12 18 12.6	-1.0
BSFB	Barra de Sao F	25.19	83	*e*P	P	12 18 15.2	-1.7
RIB01	Linhares ES	25.46	84	*e*P	P	12 18 17.8	-1.6
MALB	Monte Alegre	25.59	32	*e*P	P	12 18 18.9	-1.5
NAN01	Guarapari, ES	26.14	81	*e*P	P	12 18 23.2	-2.2
GDU01	Guandu, BA	28.19	73	*e*P	P	12 18 41.7	-2.0
USHA	Ushuaia	30.57	181	P	P	12 19 07.0	+2.7
	comp=Z,39nm,0.6s,baz=345,slow=2.1,SNR=2.1						
PMSA	Palmer Station	40.59	178	P	P	12 20 32.1	+2.7
	comp=Z,20nm,1.0s,baz=340,slow=6.2,SNR=2.9						
TXAR	Lajitas Array	63.70	325	P	P	12 23 22.0	+1.6
	comp=Z,0.4nm,0.6s,baz=161,slow=8.7,SNR=4.7						
DBIC	Dimbokro	68.16	72	P	P	12 23 48.0	-1.1
	comp=Z,1.4nm,0.6s,baz=213,slow=5.9,SNR=1.5						
VNDA	Vanda	74.42	190	P	P	12 24 28.4	+2.8
	comp=Z,0.7nm,0.7s,baz=110,slow=7.8,SNR=1.9						
TORD	Torodi Ar. Bea	76.93	69	P	P	12 24 41.0	0.0
	comp=Z,3.4nm,0.4s,baz=261,slow=5.7,SNR=19						
TORD	Torodi Ar. Bea	76.93	69	P	P	12 24 40.9	0.0
PDAR	Pinedale Array	77.20	329	P	P	12 24 43.6	+1.5
	comp=Z,0.2nm,0.4s,baz=134,slow=7.0,SNR=4.7						
ULM	Lac du Bonnet	78.36	342	P	P	12 24 48.3	+0.2
	comp=Z,1.3nm,0.7s,baz=190,slow=6.1,SNR=2.2						
NVAR	Mina Array Bea	78.54	321	P	P	12 24 52.1	+2.5
	comp=Z,0.2nm,0.5s,baz=152,slow=6.6,SNR=4.1						
BOSA	Boshof	80.89	117	P	P	12 25 02.9	+0.4
	comp=Z,2.8nm,0.9s,baz=279,slow=3.2,SNR=5.5						
YKA	Yellowknife Ar	94.25	340	P	P	12 26 07.4	+1.3
	comp=Z,0.4nm,0.6s,baz=130,slow=5.1,SNR=12						
ASAR	Alice Springs	128.12	205	PKP	PKiKP	12 31 54.5	+0.4
	comp=Z,1.1nm,0.8s,baz=133,slow=1.7,SNR=18						
ASAR	Alice Springs	128.12	205		PKiKP	12 31 54.3	+0.2
WRA	Warramunga Arr	131.28	208	PKP	PKiKP	12 32 00.8	+0.3
	comp=Z,0.7nm,0.5s,baz=162,slow=1.6,SNR=12						
WRA				SKPbc	SKPbc	12 35 09.5	+0.8
	comp=Z,0.7nm,0.7s,baz=158,slow=3.9,SNR=8.9						
GEYT	Alibeck	131.95	60	PKP	PKiKP	12 32 01.2	-0.1
	comp=Z,0.8nm,0.4s,baz=100,slow=1.8,SNR=1.9						
ZALV	Zalesovo Beam	143.74	28	PKP	PKPdf	12 32 20.8	-0.4
	comp=Z,1.4nm,0.7s,baz=309,slow=4.3,SNR=8.5						
ZALV				SKPbc	SKiKP	12 35 45.8	+0.8
	comp=Z,0.3nm,0.5s,baz=320,slow=3.8,SNR=3.7						
MKAR	Makanchi Array	146.90	40	PKPbc	PKPab	12 32 30.4	-0.5
	comp=Z,1.8nm,0.7s,baz=305,slow=2.9,SNR=22						
KLR	Kul'dur	150.91	334	PKPbc	PKiKP	12 32 40.1	+0.4
	comp=Z,1.3nm,0.6s,baz=123,slow=3.5,SNR=5.2						

IDC 18 12:18:46.6±7.3**, 5°.05N×123°.38E, h616^{km}**±111^{km}**, mb2.6**/4**, mb1 2.8**/4**, mb1mx2.4**/51**, mbtmp3.7**/4**, Error ellipse: s-maj=134.4km s-min=29.6km az=61.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.11	175	P	P	12 23 07.0	-0.3
	1.3nm,0.8s,baz=333,slow=6.8,SNR=1.3						
WRA	Warramunga Arr	27.07	157	P	P	12 23 41.9	-0.4
	0.6nm,0.4s,baz=337,slow=9.5,SNR=12						
ASAR	Alice Springs	30.33	161	P	P	12 24 11.0	+0.6
	0.3nm,0.3s,baz=340,slow=7.1,SNR=26						
MKAR	Makanchi Array	54.60	326	P	P	12 27 18.8	+0.1
	0.4nm,0.3s,baz=118,slow=8.0,SNR=10						
MKAR				PcP	PcP	12 28 11.5	-0.5
	0.3nm,0.7s,baz=155,slow=2.5,SNR=3.0						

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*IDC **18** 12:33:53.5±0.6, 9°.69N×123°.74E, h0^{km}, mb4.1/17, mb1 4.2/18, mb1mx4.1/36, mbtmp4.1/18, ML4.4/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/43, Error ellipse: s-maj=29.1km s-min=13.3km az=68.0*
*MAN **18** 12:33:56.3, 9°.76N×123°.72E, h17^{km}, MS4.0*
MAN INTENSITY IV - TAGBILARAN CITY; LOON AND MARIBOJOC.
*NEIC **18** 12:34:05.1±1.8, 9°.66N±0°.06×123°.6E±0°.1, h87^{km}±9^{km}, mb4.6/25, Error ellipse: s-maj=20.0km s-min=6.2km az=108.0*
ISC 18 12:33:56.1±1.1**, 9°.72N**±0°.03×**123°.74E**±0°.03**, h16^{km}**±7^{km}**, n80, σ1^{s}.22**/92**, mb4.3**/35**, 2C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.64	21	⇓*i*P	Pg	12 34 08.0	-0.6
LLP				*i* S	Sg	12 34 16.8	-0.3
CNOP	Candoni, Negro	1.09	276	*e*P	Pb	12 34 15.1	-1.5
CNOP				*e*S	Sg	12 34 31.6	+0.3
MSLP	Maasin	1.18	69	*e*P	Pn	12 34 18.0	0.0
MSLP				*e*S	Sg	12 34 36.8	+2.5
GUIM	Jordan	1.45	309	*e*P	Pn	12 34 20.2	-1.5
GUIM				*e*S	Sn	12 34 40.1	-0.2
CGP	Cagayan de Oro	1.57	143	⇑*e*P	Pn	12 34 23.1	-0.4
CGP				*i* S	Sg	12 34 45.4	-1.4
OCLP	Ormoc	1.58	33	*e*P	Pn	12 34 23.3	-0.2
OCLP				*e*S	Sg	12 34 48.1	+1.1
PAGZ	Pagadian	1.89	191	*e*P	Pn	12 34 27.9	+0.1
PAGZ				*e*S	Sg	12 34 55.5	-1.6
JAP	San Jose, Anti	2.04	300	⇓*e*P	Pb	12 34 32.0	-0.8
JAP				*e*S	Sg	12 35 03.8	+2.1
BUKP	Musuan	2.25	144	*e*P	Pn	12 34 33.5	+0.7
BUKP				*e*S	Sb	12 35 02.8	-1.4
GLSP	General Luna,	2.36	88	*e*P	Pn	12 34 33.8	-0.4
GLSP				*e*S	Sn	12 35 04.1	+1.3
KCP	Kidapawan	3.01	153	⇑*e*P	Pn	12 34 45.5	+2.2
DAV	Davao City (W)	3.20	145	Pn	Pn	12 34 45.4	-0.4
	47nm,0.3s,baz=90,slow=1.0,SNR=2.3						
DAV				Sn	Sb	12 35 33.8	+2.3
	62nm,0.3s,baz=187,slow=12,SNR=1.7						
MYLDM	Lahad Datu	6.88	229	Pn	Pn	12 35 40.5	+4.1
KKM	Kota Kinabalu	8.30	244	Pn	Pn	12 35 59.6	+3.6
LUWI	Luwuk	10.73	185	Pn	Pn	12 36 36.7	+7.4
KAPI	Kappang	15.17	195	LR	LR	12 43 56.9	
	comp=Z,27nm,20.9s,baz=48,slow=40						
CMAR	Chiang Mai Arr	25.54	293	P	P	12 39 25.6	+1.1
	1.0nm,0.7s,baz=113,slow=7.3,SNR=9.5						
CMAR				LR	LR	12 49 39.9	
	comp=Z,29nm,18.6s,baz=58,slow=37						
CMAR	Chiang Mai Arr	25.54	293	P	P	12 39 25.8	+1.3
GSI	Gunungsitoli	27.33	254	P	P	12 39 40.7	+0.1
GSI				IAmb	IAmb	12 39 42.1	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	27.70	176	P	P	12 39 43.0	-0.9
	comp=Z,3.7nm,1.0s,baz=349,slow=10,SNR=1.9						
WRA	Warramunga Arr	31.27	161	P	P	12 40 14.6	-0.9
	comp=Z,0.4nm,0.7s,baz=338,slow=9.0,SNR=1.9						
WRA				PcP	PcP	12 43 08.9	-1.0
	comp=Z,1.6nm,1.1s,baz=338,slow=2.7,SNR=4.0						
AS31	Alice Springs	34.64	163	P	P	12 40 45.5	+0.5
ASAR	Alice Springs	34.64	163	P	P	12 40 45.6	+0.7
	comp=Z,1.5nm,0.8s,baz=337,slow=7.0,SNR=24						
ASAR				PcP	PcP	12 43 17.8	-1.5
	comp=Z,0.3nm,0.6s,baz=342,slow=2.8,SNR=6.3						
ASAR	Alice Springs	34.64	163		P	12 40 46.0	+1.0
USRK	Ussuriysk Ar.	35.09	10	P	P	12 40 49.9	+1.3
	comp=Z,1.8nm,0.8s,baz=208,slow=8.2,SNR=4.3						
KLR	Kul'dur	39.95	8	P	P	12 41 30.1	+0.4
	comp=Z,2.5nm,0.8s,baz=104,slow=6.2,SNR=5.4						
SONM	Songino Array	40.72	342	P	P	12 41 36.4	+0.2
	comp=Z,0.8nm,0.9s,baz=154,slow=6.4,SNR=4.4						
SONM				LR	LR	13 00 09.1	
	comp=Z,45nm,18.9s,baz=322,slow=39						
SONM	Songino Array	40.72	342	P	P	12 41 36.7	+0.4
ZSN	Zaisan	49.90	326	*e*P	P	12 42 49.1	+0.1
	baz=326						
SHLS	Shalkode	50.89	319	*e*P	P	12 42 55.5	-1.2
	comp=Z,1.9nm,0.9s,baz=319						
MK31	Makanchi Array	50.98	324	P	P	12 42 58.2	+1.0
MKAR	Makanchi Array	50.98	324	P	P	12 42 58.2	+1.0
	comp=Z,4.5nm,0.9s,baz=128,slow=7.7,SNR=31						
MKAR				PcP	PcP	12 44 13.1	-0.2
	comp=Z,0.8nm,0.6s,baz=164,slow=2.8,SNR=5.3						
MAKZ	Makanchi	51.17	324	P	P	12 42 59.5	+0.8
SATY	Saty	51.53	318	*e*P	P	12 43 02.2	+0.6
	comp=Z,1.2nm,0.9s,baz=318						
KPKS	Kokpek	51.53	319	*e*P	P	12 43 02.1	+0.5
	comp=Z,1.7nm,0.9s,baz=319						
NIL	Nilore	51.99	305	P	P	12 43 06.1	+1.1
TDK	Taldyqorghan	52.42	320	*e*P	P	12 43 08.7	+0.7
	comp=Z,3.3nm,0.7s,baz=320						
MDOK	Medeo	52.47	318	*e*P	P	12 43 09.3	+0.7
	baz=318						
TNSS	Tian-Shan	52.49	318	*e*P	P	12 43 10.1	+1.1
	baz=318						
CHKK	Chushkaly	52.81	319	*e*P	P	12 43 10.9	0.0
	baz=319						
ZALV	Zalesovo Beam	53.94	333	P	P	12 43 18.9	0.0
	comp=Z,1.3nm,0.5s,baz=130,slow=6.6,SNR=9.1						
SEM	Semipalatinsk	54.09	327	*e*P	P	12 43 19.9	-0.5
	baz=327						
KURK	Kurchatov	55.13	327	P	P	12 43 27.7	+0.1
KURK				IAmb	IAmb	12 43 29.5	
	comp=Z,13nm,1.1s						
BTLS	Baital	55.22	319	*e*P	P	12 43 28.5	0.0
	comp=Z,1.1nm,0.9s,baz=319						
KKAR	Karatay Array	56.88	316	P	P	12 43 40.6	+0.2
KKAR	Karatay Array	56.88	316	P	P	12 43 39.6	-0.8
KKAR				IAmb	IAmb	12 43 42.0	
	comp=Z,3.3nm,1.0s						
IUG	Iuzhnay	56.90	314	*e*P	P	12 43 41.4	+0.7
	comp=Z,1.4nm,0.8s,baz=314						
BRZS	Berezniki	58.12	324	*e*P	P	12 43 49.1	+0.1
	comp=Z,1.3nm,0.8s,baz=324						
BRVK	Borovoye	60.79	326	P	P	12 44 07.9	+0.6
BRVK				IAmb	IAmb	12 44 09.4	
	comp=Z,5.0nm,0.9s						
TIXI	Tiksi	61.96	2	P	P	12 44 14.3	-0.6
TIXI				IAmb	IAmb	12 44 15.3	
	comp=Z,4.5nm,0.8s						
GEYT	Alibeck	64.88	307	P	P	12 44 35.7	+0.7
	comp=Z,1.0nm,0.4s,baz=28,slow=3.4,SNR=4.8						
GEYT	Alibeck	64.88	307	P	P	12 44 35.4	+0.4
ABKAR	Akbulak array	65.67	320	P	P	12 44 39.9	+0.1
KBZ	Khabaz	76.74	313	P	P	12 45 45.9	-1.0
	comp=Z,1.2nm,0.7s,baz=183,slow=12,SNR=3.9						
IMAR	Indian Mountai	78.14	24	P	P	12 45 54.3	0.0
KLMR	Klimovskoe	78.76	330	*e*P	P	12 45 54.8	-3.1
KLMR				AMP		12 45 57.7	
	comp=Z,14nm,1.1s						
BPAW	Bear Paw Mtn.	79.26	26	P	P	12 46 00.9	+0.3
BPAW				IAmb	IAmb	12 46 02.1	
	comp=Z,6.1nm,1.0s						
COLD	Coldfoot	79.58	23	P	P	12 46 03.3	+1.1
COLD				IAmb	IAmb	12 46 03.8	
	comp=Z,22nm,2.0s						
ILAR	Eielson Array	81.02	26	P	P	12 46 09.3	-0.8
	comp=Z,0.6nm,0.7s,baz=246,slow=4.8,SNR=4.3						
BMAR	Burnt Mountain	81.75	23	P	P	12 46 10.5	-3.4
PAX	Paxson	81.78	27	P	P	12 46 14.1	-0.1
RIDG	Independent Ri	81.99	27		P	12 46 15.4	+0.1
RIDG				IAmb	IAmb	12 46 16.8	
	comp=Z,9.0nm,1.1s						
K27K	Chicken	83.17	26	P	P	12 46 22.4	+1.1
K27K				IAmb	IAmb	12 46 23.9	
	comp=Z,7.3nm,1.0s						
BCAR	Beaver Creek A	83.44	27	P	P	12 46 23.9	+1.1
BALM	Baldy	83.47	29	P	P	12 46 24.4	+1.3
BARN	Barnard Glacie	83.80	29	P	P	12 46 26.7	+1.8
BARN				IAmb	IAmb	12 46 27.3	
	comp=Z,7.3nm,0.6s						
BR131	Keskin Array S	83.95	309	P	P	12 46 25.2	-0.8
BR131				IAmb	IAmb	12 46 26.7	
	comp=Z,4.4nm,0.9s						
BRTR	Keskin Array B	83.95	309	P	P	12 46 25.9	-0.1
	comp=Z,1.8nm,0.9s,baz=101,slow=6.4,SNR=10.0						
BRTR	Keskin Array B	83.95	309	P	P	12 46 25.3	-0.8
CTGM	Chitina Glacie	83.97	29		P	12 46 27.0	+1.3
DAWY	Dawson	84.33	26	P	P	12 46 28.2	+0.8
DAWY				IAmb	IAmb	12 46 29.4	
	comp=Z,6.4nm,1.0s						
EPYK	Eagle Plains	84.97	24	P	P	12 46 30.8	+0.2
FINES	FINESS Array B	85.18	331	P	P	12 46 30.5	-1.1
	comp=Z,4.6nm,1.0s,baz=114,slow=2.3,SNR=5.6						
AKASG	Malin Array Be	85.40	321	P	P	12 46 31.3	-1.6
	comp=Z,1.2nm,0.6s,baz=59,slow=5.3,SNR=6.6						
AKASG	Malin Array Be	85.40	321	P	P	12 46 32.1	-0.9
INK	Inuvik	85.70	21		P	12 46 34.5	+0.4
WHY	Whitehorse	87.12	29	P	P	12 46 42.6	+1.2
WHY				IAmb	IAmb	12 46 44.2	
	comp=Z,8.9nm,1.1s						
VNDA	Vanda	89.71	172	P	P	12 46 52.6	-0.4
	comp=Z,1.3nm,0.7s,baz=312,slow=8.5,SNR=5.3						
YKA	Yellowknife Ar	95.26	23	P	P	12 47 19.5	+0.4
	comp=Z,2.2nm,0.8s,baz=308,slow=3.6,SNR=49						
PLCA	Paso Flores	146.62	160	PKPbc	PKPbc	12 53 37.9	+0.3
	comp=Z,3.3nm,0.9s,baz=219,slow=5.4,SNR=4.7						

IDC 18 12:49:45.0±6.0**, 56°.49S×150°.56W, h0^{km}, mb3.5**/2**,**

mb1 3.8/2, mb1mx3.6/38, mbtmp3.5/2, Error ellipse: s-maj=716.5km s-min=87.3km az=170.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**52.65**	**96**	T	T	13 55 58.3	
	baz=219,slow=74,SNR=18						
H03S1	**Juan Fernandez**	**52.66**	**96**	T	T	13 55 59.6	
	baz=219,slow=74,SNR=20						
H03S3	**Juan Fernandez**	**52.67**	**96**	T	T	13 55 58.8	
	baz=219,slow=74,SNR=19						
H03N3	**Juan Fernandez**	**52.94**	**96**	T	T	13 56 22.2	
	baz=222,slow=72,SNR=16						
H03N2	**Juan Fernandez**	**52.95**	**96**	T	T	13 56 16.0	
	baz=222,slow=72,SNR=30						
H03N1	**Juan Fernandez**	**52.96**	**96**	T	T	13 56 16.2	
	baz=222,slow=72,SNR=12						
ASAR	**Alice Springs**	**62.67**	**268**	P	P	13 00 10.8	-0.6
	0.4nm,0.7s,baz=137,slow=6.4,SNR=7.3						
WRA	**Warramunga Arr**	**65.40**	**271**	P	P	13 00 30.2	+0.8
	0.6nm,1.0s,baz=151,slow=5.5,SNR=2.6						
H10S3	**ASCENSION HYDR**	**105.36**	**135**	T	T	15 02 00.4	
	baz=22						
H10S2	**ASCENSION HYDR**	**105.36**	**135**	T	T	15 02 05.2	
	baz=198						
H10N3	**ASCENSION HYDR**	**106.44**	**134**	T	T	15 03 26.2	
	baz=204,slow=75,SNR=3.8						
H10N1	**ASCENSION HYDR**	**106.44**	**134**	T	T	15 03 22.4	
	baz=204,slow=75,SNR=7.3						
H10N2	**ASCENSION HYDR**	**106.45**	**134**	T	T	15 03 26.7	
	baz=204,slow=75,SNR=4.5						
MKAR	**Makanchi Array**	**146.59**	**276**	PKPbc	PKPbc	13 09 27.0	-0.5
	1.3nm,0.8s,baz=117,slow=4.2,SNR=16						
ZALV	**Zalesovo Beam**	**149.03**	**289**	PKPbc	PKPbc	13 09 32.7	-1.0
	0.5nm,0.6s,baz=134,slow=4.3,SNR=3.6						

*IDC **18** 12:50:52.9±6.2, 6°.19S×151°.76E, h83^{km}±49^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.3/47, mbtmp3.7/7, ML1.4/1, MS3.9/1, Ms1 3.9/1, ms1mx2.5/28, Error ellipse: s-maj=65.3km s-min=31.2km az=121.0*

ISC 18 12:50:47.6±2.0**, 6°.1S**±0°.4×**152°.0E**±0°.4**, h36**^{km}**, n8, σ1^{s}.55**/8**, mb3.6**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.82**	**235**	P	**Pn**	**12 52 13.7**	**+2.4**
	0.7nm,0.3s,baz=51,slow=14,SNR=2.0						
PMG				S	**Sn**	**12 53 15.8**	**-1.1**
	5.0nm,0.3s,baz=0.9,slow=23,SNR=11						
WRA	**Warramunga Arr**	**22.00**	**230**	P	**P**	**12 55 39.3**	**+0.4**
	1.3nm,0.5s,baz=55,slow=9.9,SNR=14						
ASAR	**Alice Springs**	**24.67**	**223**	P	**P**	**12 56 03.6**	**-1.6**
	1.2nm,0.8s,baz=55,slow=9.1,SNR=25						
FITZ	**Fitzroy Crossi**	**28.35**	**243**	P	**P**	**12 56 37.0**	**-1.4**
	3.8nm,0.5s,baz=50,slow=8.6,SNR=21						
PSI	**Prapat**	**53.71**	**278**	LR	LR	13 25 17.7	
	comp=Z,102nm,19.9s,baz=58,slow=39						
MKAR	**Makanchi Array**	**80.74**	**319**	P	**P**	**13 02 57.4**	**+0.1**
	0.2nm,0.7s,baz=102,slow=6.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**81.75**	**327**	P	**P**	**13 03 02.3**	**-0.2**
	0.4nm,0.5s,baz=98,slow=2.9,SNR=2.7						
ILAR	**Eielson Array**	**83.63**	**22**	P	**P**	**13 03 12.5**	**+0.5**
	0.4nm,0.7s,baz=235,slow=6.3,SNR=4.1						

*NEIC **18** 12:59:27.4±2.0, 18°.16N±0°.05×94°.69W±0°.05, h33^{km}±10^{km}, Error ellipse: s-maj=9.0km s-min=4.5km az=218.0*

*IDC **18** 12:59:28.0±4.3, 17°.73N×94°.16W, h63^{km}±56^{km}, mb3.2/3, mb1 3.6/4, mb1mx3.3/38, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=68.5km s-min=62.5km az=116.0*

*MEX **18** 12:59:28.7±0.6, 18°.20N×94°.68W, h30^{km}±4^{km}, MD4.0*

ISC 18 12:59:27.6±1.1**, 18°.14N**±0°.05×**94°.67W**±0°.04**, h27**^{km}±10^{km}**, n40, σ1^{s}.28**/52**, Bay of Campeche**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.26**	**115**	*e*P	**Pb**	**12 59 34.4**	**+0.2**
TUIG				*e*S	**Sn**	**12 59 39.6**	**-1.2**
TUIG	**Tuzandepetl**	**0.26**	**115**		**Pb**	**12 59 34.4**	**+0.2**
TUIG					**Sn**	**12 59 39.6**	**-1.2**
CMIG	**Matias Romero**	**1.07**	**191**	P	**Pn**	**12 59 46.1**	**-0.6**
	15nm,0.3s,baz=10,slow=14,SNR=252						
CMIG				S	**Sn**	**12 59 58.6**	**-2.1**
	83nm,0.3s,baz=98,slow=22,SNR=13						
CMIG				LR	LR	13 00 17.8	
	comp=Z,32nm,21.5s,baz=348,slow=54						
CMIG	**Matias Romero**	**1.07**	**191**	*i* P	**Pn**	**12 59 46.2**	**-0.6**
CMIG				*e*S	**Sn**	**12 59 59.2**	**-1.5**
CMIG	**Matias Romero**	**1.07**	**191**		**Pn**	**12 59 46.2**	**-0.6**
CMIG					**Sn**	**12 59 59.2**	**-1.5**
TGIG		**2.01**	**132**	*i* P	**Pn**	**12 59 59.2**	**-0.6**
TGIG				*i* S	**Sn**	**13 00 23.0**	**-1.0**
VHO	**Vista Hermosa**	**2.24**	**242**	*e*P	**Pn**	**13 00 03.7**	**+0.6**
VHO				*e*S	**Sn**	**13 00 30.2**	**+0.3**
TOIG	**Toxpalan**	**2.28**	**269**	*i* P	**Pn**	**13 00 03.2**	**-0.3**
TOIG				*e*S	**Sn**	**13 00 28.8**	**-2.0**
TPIG	**Tehuac#an**	**2.57**	**277**	*i* P	**Pn**	**13 00 06.4**	**-1.2**
TPIG				*i* S	**Sn**	**13 00 36.2**	**-2.0**
HUIG	**Huatulco**	**2.73**	**210**	*e*P	**Pn**	**13 00 08.9**	**-0.8**
HUIG				*i* S	**Sn**	**13 00 41.7**	**-0.2**
PCIG		**2.79**	**150**	*i* P	**Pn**	**13 00 10.4**	**-0.1**
PCIG				*i* S	**Sn**	**13 00 42.4**	**-0.9**
CCIG	**Comitan**	**3.05**	**127**	Pn	**Pn**	**13 00 14.6**	**+0.4**
PEIG	**Puerto Escondi**	**3.19**	**228**	*e*P	**Pn**	**13 00 15.1**	**-0.9**
PEIG				*i* S	**Sn**	**13 00 52.1**	**-1.0**
TLIG	**Tlapa**	**3.75**	**262**	Pn	**Pn**	**13 00 24.4**	**+0.6**
TEIG	**Tepich**	**6.39**	**70**		**Pn**	**13 00 59.1**	**-0.9**
833A	**Chaparral WMA,**	**11.02**	**338**		**Pn**	**13 02 02.5**	**-1.0**
JTS	**Las Juntas de**	**12.23**	**128**	Pn	**Pn**	**13 02 21.6**	**+1.5**
FSCY	**Frank Sound, G**	**12.83**	**83**	Pn	**Pn**	**13 02 26.4**	**-1.9**
435B	**Jarrell**	**12.86**	**349**		**Pn**	**13 02 28.7**	**+0.1**
HDC	**Heredia**	**13.05**	**127**	Pn	**Pn**	**13 02 33.2**	**+1.8**
237A	**Washetta, Mont**	**13.84**	**356**	Pn	**Pn**	**13 02 40.8**	**-1.2**
TXAR	**Lajitas Array**	**13.85**	**325**	P	**P**	**13 02 51.4**	**+1.2**
	0.0nm,0.3s,baz=140,slow=14,SNR=3.7						
WHTX	**Lake Whitney,**	**14.02**	**350**	Pn	**Pn**	**13 02 42.8**	**-1.7**
ABTX	**Abilene, Hawle**	**15.10**	**344**	Pn	**Pn**	**13 02 58.4**	**-0.8**
ABTX				IAmb	IAmb	13 03 00.3	
	comp=Z,4.3nm,0.8s						
Z35A	**Perchaven, San**	**15.30**	**352**	Pn	**Pn**	**13 03 01.1**	**-0.7**
WLAR	**White Oak Lake**	**15.54**	**5**	Pn	**Pn**	**13 03 04.4**	**-0.5**
X40A	**Basin Creek Fa**	**16.36**	**5**	Pn	**Pn**	**13 03 13.7**	**-1.7**
MIAR	**Mount Ida**	**16.37**	**3**	Pn	**Pn**	**13 03 13.6**	**-1.9**
MIAR				IAmb	IAmb	13 03 42.0	
	comp=Z,14nm,1.5s						
X37A	**Clayton**	**16.39**	**358**	Pn	**Pn**	**13 03 14.9**	**-0.9**
X37A				IAmb	IAmb	13 03 17.9	
	comp=Z,18nm,1.5s						
WMOK	**Wichita Mounta**	**16.93**	**348**	Pn	**Pn**	**13 03 20.0**	**-2.7**
WMOK				IAmb	IAmb	13 03 38.5	
	comp=Z,18nm,2.0s						
W39A	**Magazine**	**17.00**	**2**	Pn	**Pn**	**13 03 23.2**	**-0.3**
W39A				IAmb	IAmb	13 04 18.1	
	comp=Z,26nm,1.6s						
TUL1	**Leonard**	**17.73**	**357**	Pn	**Pn**	**13 03 30.7**	**-1.8**
PLAL	**Pickwick Lake**	**17.77**	**18**	Pn	**P**	**13 03 32.6**	**-1.1**
PLAL				IAmb	IAmb	13 04 03.4	
	comp=Z,44nm,2.0s						
OK031	**S. Brethren Rd**	**17.84**	**354**		**Pn**	**13 03 32.7**	**-1.3**
QUOK	**Quay**	**18.05**	**355**	Pn	**Pn**	**13 03 35.8**	**-0.7**
QUOK				IAmb	IAmb	13 03 47.7	
	comp=Z,14nm,1.2s						
T35A	**Sooner Cattle**	**18.77**	**355**		**Pn**	**13 03 45.6**	**+0.4**
T35A				IAmb	IAmb	13 04 23.5	
	comp=Z,38nm,1.9s						
ANMO	**Albuquerque**	**19.75**	**330**	P	**Pn**	**13 03 58.1**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=144,slow=12,SNR=9.7						
ANMO	**Albuquerque**	**19.75**	**330**	P	**Pn**	**13 03 56.1**	**-1.1**
NVAR	**Mina Array Bea**	**28.86**	**319**	P	**P**	**13 05 27.4**	**+3.2**
	comp=Z,0.4nm,0.7s,baz=134,slow=7.7,SNR=4.4						
YKA	**Yellowknife Ar**	**46.44**	**347**	P	**P**	**13 07 51.6**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=146,slow=8.0,SNR=10						

*NDI **18** 13:09:32.5±4.3, 25°.39N×96°.99E, h10^{km}, ML4.0, mb4.2(NEIC)*

*IDC **18** 13:09:33.7±0.7, 25°.50N×96°.75E, h0^{km}, mb3.9/13, mb1 4.0/14, mb1mx3.8/41, mbtmp3.9/14, ML4.1/1, MS3.5/14, Ms1 3.5/14, ms1mx3.3/45, Error ellipse: s-maj=28.7km s-min=12.9km az=61.0*

*BJI **18** 13:09:35.2±0.0, 25°.41N×96°.57E, h8^{km}, mB4.6/5, mb4.2/17, ML4.0/4, Ms4.1/17, Ms7 4.1/17*

*NEIC **18** 13:09:51.2±1.8, 26°.0N±0°.1×95°.60E±0°.07, h79^{km}±14^{km}, mb4.2/10, Error ellipse: s-maj=19.3km s-min=6.7km az=195.0*

ISC 18 13:09:38.4±0.5**, 25°.58N**±0°.04×**96°.55E**±0°.04**, h25**^{km}**, n105, σ1^{s}.70**/98**, mb4.0**/17**, MS3.5**/13**, 2C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.86**	**340**	*e*P	**Pb**	**13 10 12.0**	**+0.3**
LKP				IAML		13 10 44.3	
	comp=N,1μm,0.9s						
MOKO	**MOKOCHONG**	**1.97**	**292**	*e*P	**Pb**	**13 10 14.1**	**+0.4**
MOKO				*e*S	**Sb**	**13 10 42.6**	**+4.6**
MOKO				IAML		13 10 44.2	
	comp=E,4μm,1.0s						
MOKO				IAML		13 10 44.2	
	comp=N,5μm,0.9s						
KOHI	**KOHIMA**	**2.21**	**274**	*e*S	**Sn**	**13 10 40.6**	**+0.5**
KOHI				IAML		13 10 52.1	
	comp=N,2μm,0.6s						
KOHI				IAML		13 10 52.4	
	comp=E,3μm,0.9s						
JORH	**JORHAT**	**2.37**	**300**	*e*P	**Pb**	**13 10 20.4**	**0.0**
IMP	**Imphal**	**2.47**	**253**	*e*P	**Pn**	**13 10 18.6**	**+1.4**
IMP				*e*S	**Sb**	**13 10 51.4**	**-0.8**
IMP				IAML		13 10 52.9	
	comp=E,320nm,0.6s						
IMP				IAML		13 10 53.3	
	comp=N,505nm,0.7s						
ZIRO	**ZIRO**	**3.10**	**309**	*e*P	**Pn**	**13 10 27.0**	**+1.1**
ZIRO				*e*S	**Sn**	**13 11 05.9**	**+3.7**
ZIRO				IAML		13 11 07.4	
	comp=E,1μm,0.5s						
SILR	**SILCHAR**	**3.48**	**258**	*e*P	**Pn**	**13 10 32.5**	**+1.4**
SILR				*e*S	**Sb**	**13 11 19.5**	**-1.8**
SHL	**Shillong**	**4.21**	**271**	*e*P	**Pn**	**13 10 40.9**	**-0.3**
SHL	**Shillong**	**4.21**	**271**	Pn	**Pn**	**13 10 40.6**	**-0.7**
GUWA	**GUWAHATI**	**4.42**	**279**	*e*P	**Pn**	**13 10 43.5**	**-0.4**
GUWA				IAML		13 11 36.4	
	comp=E,426nm,0.5s						
GUWA				IAML		13 11 36.5	
	comp=N,229nm,0.5s						
SAIH	**SAIHA**	**4.48**	**227**	*e*P	**Pn**	**13 10 43.0**	**-1.8**
SAIH				*e*S	**Sn**	**13 11 35.8**	**-0.4**
SAIH				IAML		13 11 42.4	
	comp=E,137nm,0.7s						
SAIH				IAML		13 11 42.7	
	comp=N,138nm,0.7s						
KMI	**Kunming**	**5.62**	**93**	⇑P	Pb	13 11 24.8	+8.8
KMI				S	Sb	13 12 37.4	+14
KMI				pmax	pmax		
	comp=Z,28nm,1.3s						
KMI				LR	LR		
	comp=N,1μm,6.2s						
KMI				LR	LR		
	comp=E,2μm,8.9s						
KMI				LR	LR		
	comp=Z,2μm,10.6s						
KMI	**Kunming**	**5.62**	**93**		Pb	13 11 24.3	+8.3
LSA	**Lhasa**	**6.31**	**312**	Pg	**Pb**	**13 11 23.8**	**-4.0**
LSA				Sn	**Sn**	**13 12 23.6**	**+1.8**
LSA				LR	LR		
	comp=Z,2μm,5.7s						
LSA				LR	LR		
	comp=Z,1μm,5.7s						
LSA				LR	LR		
	comp=Z,2μm,7.8s						
LSA	**Lhasa**	**6.31**	**312**	Pn	**Pn**	**13 11 09.6**	**-0.6**
PAYA	**Payao**	**6.91**	**153**	P	**Pn**	**13 11 18.6**	**+0.5**
PAYA	**Payao**	**6.91**	**153**	P	Pn	13 11 26.2	+8.0
CM33	**Chiang Mai Arr**	**7.08**	**161**	P	**Pn**	**13 11 21.9**	**+1.3**
CM33	**Chiang Mai Arr**	**7.08**	**161**	P	**Pn**	**13 11 23.0**	**+2.4**
CHTO	**Chiang Mai**	**7.09**	**161**	Pn	**Pb**	**13 11 41.7**	**+0.9**
CMMT	**Chiang Mai**	**7.09**	**161**	P	**Pn**	**13 11 17.6**	**-3.1**
CMMT	**Chiang Mai**	**7.09**	**161**	P	**Pn**	**13 11 24.5**	**+3.8**
CM34	**Chiang Mai Arr**	**7.12**	**160**	P	**Pn**	**13 11 23.7**	**+2.7**
CM34	**Chiang Mai Arr**	**7.12**	**160**	P	**Pn**	**13 11 24.0**	**+3.0**
CM32	**Chiang Mai Arr**	**7.21**	**162**	P	**Pn**	**13 11 22.5**	**+0.2**
CM32	**Chiang Mai Arr**	**7.21**	**162**	P	**Pn**	**13 11 24.0**	**+1.7**
CM35	**Chiang Mai Arr**	**7.28**	**160**	P	**Pn**	**13 11 25.1**	**+1.8**
CM35	**Chiang Mai Arr**	**7.28**	**160**	P	**Pn**	**13 11 25.0**	**+1.8**
GTK	**Tadong**	**7.33**	**285**	*e*P	**Pn**	**13 11 24.7**	**+0.7**
GTK				*e*S	**Sn**	**13 12 45.6**	**-0.9**
GTK				IAML		13 12 47.5	
	comp=E,120nm,0.9s						
GTK				IAML		13 12 48.9	
	comp=N,101nm,1.0s						
CM36	**Chiang Mai Arr**	**7.41**	**161**	P	**Pn**	**13 11 25.5**	**+0.4**
CM36	**Chiang Mai Arr**	**7.41**	**161**	P	**Pn**	**13 11 27.0**	**+1.9**
CM15	**Chiang Mai Arr**	**7.43**	**162**	P	**Pn**	**13 11 26.3**	**+1.1**
CM15	**Chiang Mai Arr**	**7.43**	**162**	P	Pn	13 11 30.0	+4.7
CM31	**Chiang Mai Arr**	**7.43**	**162**	P	**Pn**	**13 11 26.8**	**+1.6**
CM31	**Chiang Mai Arr**	**7.43**	**162**	P	Pn	13 11 30.9	+5.6
CM31	**Chiang Mai Arr**	**7.43**	**162**		**Pb**	**13 11 48.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**7.43**	**162**	Pn	**Pn**	**13 11 22.8**	**-2.5**
	comp=N,0.9nm,0.3s,baz=332,slow=12,SNR=17						
CMAR				Pg	**Pb**	**13 11 48.3**	**+1.7**
	comp=N,0.6nm,0.3s,baz=344,slow=16,SNR=14						
CMAR				Lg	Lg	13 13 24.4	
	comp=N,0.7nm,0.3s,baz=343,slow=28,SNR=5.2						
CMAR				LR	LR	13 14 46.2	
	comp=N,147nm,20.8s,baz=5.5,slow=43						
CMAR	**Chiang Mai Arr**	**7.43**	**162**		**Pb**	**13 11 47.8**	**+1.2**
CM02	**Chiang Mai Arr**	**7.45**	**162**	P	**Pn**	**13 11 26.7**	**+1.1**
CM02	**Chiang Mai Arr**	**7.45**	**162**	P	**Pn**	**13 11 27.0**	**+1.4**
CM13	**Chiang Mai Arr**	**7.45**	**162**	P	**Pn**	**13 11 24.4**	**-1.2**
CM13	**Chiang Mai Arr**	**7.45**	**162**	P	Pn	13 11 30.6	+4.9
CM09	**Chiang Mai Arr**	**7.45**	**162**	P	**Pn**	**13 11 26.5**	**+0.8**
CM09	**Chiang Mai Arr**	**7.45**	**162**	P	Pn	13 11 30.2	+4.6
CM01	**Chiang Mai Arr**	**7.47**	**162**	P	**Pn**	**13 11 26.5**	**+0.6**
CM01	**Chiang Mai Arr**	**7.47**	**162**	P	**Pn**	**13 11 28.0**	**+2.2**
MHMT	**Maesarieng**	**7.48**	**170**	P	**Pn**	**13 11 29.5**	**+3.5**
MHMT	**Maesarieng**	**7.48**	**170**	P	**Pb**	**13 11 51.0**	**+3.5**
CM05	**Chiang Mai Arr**	**7.48**	**162**	P	**Pn**	**13 11 27.5**	**+1.5**
CM05	**Chiang Mai Arr**	**7.48**	**162**	P	**Pn**	**13 11 27.6**	**+1.6**
CM04	**Chiang Mai Arr**	**7.49**	**162**	P	**Pn**	**13 11 27.6**	**+1.4**
CM04	**Chiang Mai Arr**	**7.49**	**162**	P	**Pn**	**13 11 27.8**	**+1.6**
LAMP	**Lampang**	**7.58**	**157**	P	**Pn**	**13 11 25.8**	**-1.6**
TAPN	**Taplejung**	**8.11**	**285**	*e*P	**Pn**	**13 11 34.7**	**-0.2**
	comp=N,47nm,0.5s						
ODAN	**Odare**	**8.32**	**281**	*e*P	**Pn**	**13 11 37.7**	**0.0**
	comp=N,124nm,0.6s						
SUKH	**Sukhothai**	**8.55**	**160**	P	Pn	13 11 24.7	-16
SUKH	**Sukhothai**	**8.55**	**160**	P	**Pn**	**13 11 41.2**	**+0.5**
UTTA	**Uttaradit**	**8.64**	**154**	P	Pn	13 11 37.5	-4.4
UTTA	**Uttaradit**	**8.64**	**154**	P	**Pn**	**13 11 44.9**	**+3.0**
RAMN	**Ramite**	**9.03**	**281**	*e*P	**Pn**	**13 11 47.3**	**-0.2**
	comp=N,69nm,0.6s						
GUN	**Gumba**	**9.81**	**286**	*e*P	**Pn**	**13 11 58.1**	**-0.2**
	comp=N,30nm,0.4s						
BOK	**Bokaro**	**9.86**	**262**	*e*P	**Pn**	**13 11 56.4**	**-2.2**
BOK				*e*S	**Sn**	**13 13 43.8**	**-4.6**
PKI	**Pulchoki**	**10.17**	**284**	*e*P	**Pn**	**13 12 01.9**	**-1.2**
	comp=N,10nm,0.4s						
PKIN	**Phulchoki**	**10.18**	**284**	*e*P	**Pn**	**13 12 02.7**	**-0.5**
	comp=N,16nm,0.4s						
KKN	**Kakani**	**10.31**	**285**	*e*P	**Pn**	**13 12 04.9**	**-0.1**
	comp=N,18nm,0.4s						
UTHA	**Uthaitani**	**10.33**	**164**	P	Pn	13 12 10.4	+5.3
DMN	**Daman**	**10.44**	**284**	*e*P	**Pn**	**13 12 06.0**	**-0.8**
	comp=N,15nm,0.4s						
DANN	**Dangsing**	**11.73**	**286**	*e*P	**Pn**	**13 12 22.5**	**-2.1**
	comp=N,17nm,0.5s						
BHPL	**Bhopal**	**17.57**	**266**	*e*P	**Pn**	**13 13 40.5**	**-1.3**
HYB	**Hyderabad**	**18.59**	**248**	*i* P	**P**	**13 13 53.0**	**-1.0**
WMQ	**Urumqi**	**19.58**	**341**	*e*P	**Pn**	**13 14 07.3**	**+1.3**
WMQ				pmax	pmax		
	comp=N,25nm,0.9s						
WMQ	**Urumqi**	**19.58**	**341**	P	**P**	**13 14 05.4**	**+0.8**
WMQ				IAmb	IAmb	13 14 20.4	
	comp=Z,16nm,1.0s						
NIL	**Nilore**	**21.76**	**297**	P	**P**	**13 14 27.5**	**-0.8**
SONM	**Songino Array**	**23.54**	**17**	P	**P**	**13 14 45.5**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=207,slow=6.1,SNR=8.8						
SONM				LR	LR	13 25 12.7	
	comp=Z,229nm,19.7s,baz=203,slow=40						
MK31	**Makanchi Array**	**24.02**	**335**	P	**P**	**13 14 51.7**	**+0.4**
MK31				IAmb	IAmb	13 14 53.9	
	comp=Z,15nm,1.5s						
MKAR	**Makanchi Array**	**24.02**	**335**	P	**P**	**13 14 52.2**	**+0.9**
	comp=Z,2.5nm,0.5s,baz=136,slow=7.7,SNR=57						
MKAR				LR	LR	13 25 30.4	
	comp=Z,104nm,18.9s,baz=142,slow=40						
MKAR	**Makanchi Array**	**24.02**	**335**	P	**P**	**13 14 51.2**	**-0.1**
MAKZ	**Makanchi**	**24.15**	**335**	P	**P**	**13 14 52.4**	**-0.1**
MAKZ				IAmb	IAmb	13 15 12.3	
	comp=Z,8.8nm,1.2s						
AAK	**Ala-Archa**	**24.84**	**319**	P	**P**	**13 15 01.0**	**+2.0**
	comp=Z,1.1nm,0.6s,baz=163,slow=8.3,SNR=4.8						
AAK				LR	LR	13 26 45.4	
	comp=Z,98nm,18.0s,baz=130,slow=41						
AAK	**Ala-Archa**	**24.84**	**319**	P	**P**	**13 14 58.8**	**-0.2**
KBL	**Kabul**	**25.36**	**297**	P	**P**	**13 15 03.6**	**-0.3**
TLY	**Talaya**	**26.62**	**10**	LR	LR	13 26 55.8	
	comp=Z,121nm,19.9s,baz=189,slow=39						
KKAR	**Karatay Array**	**27.54**	**316**	P	**P**	**13 15 23.0**	**-0.2**
KURBB	**Kurchatov Arra**	**28.59**	**336**	P	**P**	**13 15 32.9**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=146,slow=9.7,SNR=13						
KSRS	**Korea Array**	**29.12**	**58**	LR	LR	13 27 45.4	
	comp=Z,82nm,18.4s,baz=256,slow=38						
ZAA0	**Zalesovo Array**	**29.65**	**346**	P	**P**	**13 15 41.3**	**-0.5**
ZALV	**Zalesovo Beam**	**29.65**	**346**	P	**P**	**13 15 42.9**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=171,slow=8.8,SNR=11						
ZALV				LR	LR	13 28 18.7	
	comp=Z,59nm,18.4s,baz=42,slow=38						
BRVK	**Borovoye**	**33.78**	**331**	P	**P**	**13 16 16.9**	**-1.2**
BRVK				IAmb	IAmb	13 16 20.0	
	comp=Z,9.0nm,1.5s						
ABKAR	**Akbulak array**	**36.93**	**319**	P	**P**	**13 16 45.0**	**-0.3**
ABKAR				IAmb	IAmb	13 16 54.9	
	comp=Z,3.7nm,0.8s						
ABKAR	**Akbulak array**	**36.93**	**319**	P	**P**	**13 16 44.8**	**-0.4**
MJAR	**Matsushiro Arr**	**37.07**	**63**	P	**P**	**13 16 45.2**	**-1.4**
	comp=Z,1.7nm,0.8s,baz=289,slow=8.1,SNR=4.2						
MJAR				LR	LR	13 33 39.2	
	comp=Z,60nm,21.6s,baz=260,slow=39						
PETK	**Petropavlovsk-**	**52.75**	**42**	LR	LR	13 44 29.3	
	comp=Z,52nm,19.7s,baz=251,slow=40						
BRTR	**Keskin Array B**	**53.80**	**302**	P	**P**	**13 19 00.1**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=64,slow=2.9,SNR=2.5						
BRTR	**Keskin Array B**	**53.80**	**302**	P	**P**	**13 18 58.6**	**-0.7**
AKASG	**Malin Array Be**	**56.44**	**315**	P	**P**	**13 19 17.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=79,slow=6.8,SNR=2.1						
AKASG				LR	LR	13 45 20.1	
	comp=Z,41nm,18.8s,baz=305,slow=38						
WRA	**Warramunga Arr**	**58.28**	**137**	P	**P**	**13 19 29.1**	**-2.2**
	comp=Z,2.8nm,0.9s,baz=327,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**58.56**	**328**	P	**P**	**13 19 32.3**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=118,slow=18,SNR=1.3						
MLR	**Muntele Rosu**	**58.92**	**309**	⇓P	**P**	**13 19 37.8**	**+2.1**
VOIR		**59.55**	**309**	⇑P	**P**	**13 19 37.9**	**-2.1**
ARCES	**ARCESS Array B**	**59.66**	**337**	LR	LR	13 48 54.2	
	comp=Z,77nm,19.0s,baz=255,slow=40						
ASAR	**Alice Springs**	**60.87**	**140**	P	**P**	**13 19 47.1**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=324,slow=6.7,SNR=14						
NOA	**NORSAR Array B**	**65.74**	**328**	LR	LR	13 51 13.5	
	comp=Z,36nm,19.3s,baz=0.0,slow=38						
GERES	**GERESS Array B**	**66.63**	**314**	P	**P**	**13 20 26.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=77,slow=5.8,SNR=8.2						
GERES				LR	LR	13 55 32.9	
	comp=Z,31nm,19.3s,baz=95,slow=41						
STKA	**Stephens Creek**	**71.51**	**141**	LR	LR	13 59 14.1	
	comp=Z,21nm,19.8s,baz=203,slow=42						
ILAR	**Eielson Array**	**77.59**	**23**	P	**P**	**13 21 30.8**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=309,slow=5.7,SNR=3.2						

BYKL 18 13:19:53.6±0.2**, 56°.11N**×**113°.72E, h7**^{km}±4^{km}**, 1C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**274**	⇑*i*Pg	Pg	13 19 55.4	-0.4
SVKR				*e*Sg	Sg	13 19 57.5	+0.2
UKT	**Uakit**	**0.62**	**185**	*e*Pg	Pg	13 20 04.3	-1.3
UKT				*e*Sg	Sg	13 20 12.6	-1.2
UKT				Pmax			
	57nm,0.6s						
UKT				Smax			
	189nm,1.1s						
YOA	**Uoyan**	**1.12**	**272**	*e*Pg	Pg	13 20 13.8	-1.2
YOA				*e*Pb	Pn	13 20 16.1	+0.4
YOA				*e*Sg	Sg	13 20 29.2	-0.3
YOA				*e*Sb	Sn	13 20 32.1	+0.8
YOA				max			
	152nm,0.2s						
YOA				max			
	579nm,0.6s						
NLYR	**Nelyaty**	**1.17**	**70**	*e*Pg	Pg	13 20 14.5	-1.5
NLYR				*e*Pb	Pn	13 20 17.0	+0.6
NLYR				*e*Sg	Sg	13 20 30.5	-0.7
NLYR				*e*Sb	Sn	13 20 34.2	+1.6
NLYR				max			
	48nm,0.3s						
NLYR				max			
	236nm,0.8s						
KMO	**Kumora**	**1.43**	**262**	*e*Pg	Pn	13 20 19.2	-0.8
KMO				*e*Pb	Pb	13 20 20.4	-0.2
KMO				*e*		13 20 24.6	
KMO				*e*Sg	Sb	13 20 38.0	-1.1
KMO				*e*		13 20 41.2	
KMO				max			
	130nm,0.4s						
KMO				max			
	326nm,1.2s						
BOD	**Bodaibo**	**1.72**	**5**	*e*Pg	Pn	13 20 24.1	+0.2
BOD				*e*Sn	Sn	13 20 46.3	+0.2
BOD				*e*Sg	Sb	13 20 47.0	-0.3
BOD				Pmax			
	57nm,0.3s						
BOD				Smax			
	243nm,0.4s						
YLYR	**Ulyunkhan**	**1.91**	**231**	*e*Pn	Pn	13 20 27.4	+0.8
YLYR				*e*Pg	Pb	13 20 27.8	-0.9
YLYR				*e*Sg	Sb	13 20 53.7	+0.9
YLYR				Pmax			
	92nm,0.3s						
YLYR				Smax			
	137nm,0.3s						
NIZ	**Nizh Angarsk**	**2.38**	**264**	*e*Pn	Pn	13 20 33.0	+0.1
NIZ				*e*Pg	Pb	13 20 35.8	-0.9
NIZ				*e*Sg	Sg	13 21 08.0	-1.8
NIZ				Pmax			
	14nm,0.5s						
NIZ				Smax			
	72nm,0.7s						
CRS	**Chara**	**2.64**	**71**	*e*Pn	Pn	13 20 36.2	-0.5
CRS				*e*Pg	Pb	13 20 41.4	+0.2
CRS				*e*Sg	Sb	13 21 15.6	+1.7
CRS				Pmax			
	38nm,0.9s						
CRS				Smax			
	83nm,0.6s						
TUP	**Tupik**	**3.94**	**113**	*e*Pn	Pn	13 20 54.3	-0.2
TUP				*e*Pg	Pb	13 21 05.1	+1.7

*BYKL **18** 13:20:33.9±0.2, 56°.11N×113°.73E, h12^{km}±3^{km}, FELT I=II MSK at Severomuisk*

*MOS **18** 13:20:33.7±1.6, 56°.09N×113°.69E, h10^{km}, mb3.8/2, Error ellipse: s-maj=10.1km s-min=6.4km az=68.3*

MOS Felt (II) at Severomuisk.

*IDC **18** 13:20:34.1±1.6, 56°.21N×113°.69E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/36, mbtmp3.5/7, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/38, Error ellipse: s-maj=34.0km s-min=24.4km az=150.0*

ISC 18 13:20:35.5±0.5**, 56°.12N**±0°.03×**113°.71E**±0°.02**, h10**^{km}**, n77, σ2^{s}.89**/127**, mb3.6**/6**, 2C, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.08**	**268**	⇑*i*Pg	**Pg**	**13 20 36.1**	**-1.8**
SVKR				*e*Sg	**Sg**	**13 20 38.4**	**-1.3**
SVKR	**Severomuysk**	**0.08**	**268**	⇑*i*PG	**Pg**	**13 20 36.1**	**-1.8**
SVKR				*e*		13 20 38.0	
SVKR				pmax	pmax		
	comp=Z,19μm,0.6s						
SVKR				smax	smax		
	comp=N,77μm,0.8s						
UKT	**Uakit**	**0.63**	**184**	*e*Pg	**Pg**	**13 20 45.1**	**-2.7**
UKT				Pmax		13 20 45.6	
	comp=N,409nm,0.6s						
UKT				*e*Sg	**Sg**	**13 20 53.5**	**-2.6**
UKT				Smax		13 20 54.2	
	comp=N,2μm,1.1s						
UKT	**Uakit**	**0.63**	**184**	*e*PG	**Pg**	**13 20 45.0**	**-2.7**
UKT				*e*S	**Sg**	**13 20 53.5**	**-2.6**

YOA	**Uoyan**	1.11	271	ePg	**Pb**	**13 20 54.5**	**-2.3**
YOA				Pmax		13 20 55.2	
	comp=N,976nm,0.3s						
YOA				ePb	**Pg**	**13 20 56.7**	**-0.1**
YOA				eSg	**Sb**	**13 21 09.2**	**-2.1**
YOA				eSb	**Sg**	**13 21 12.9**	**+1.7**
YOA				max		13 21 13.2	
	comp=N,3µm,0.6s						
YOA	**Uoyan**	1.11	271	ePG	**Pb**	**13 20 54.7**	**-2.1**
YOA				e		13 21 10.7	
YOA				pmax	pmax		
	comp=Z,928nm,0.2s						
YOA				smax	smax		
	comp=N,7µm,0.6s						
NLYR	**Nelyaty**	1.17	71	ePg	**Pb**	**13 20 55.2**	**-2.6**
NLYR				ePb	**Pg**	**13 20 57.3**	**-0.7**
NLYR				max		13 20 57.5	
	comp=N,401nm,0.3s						
NLYR				eSg	**Sb**	**13 21 11.3**	**-1.8**
NLYR				eSb	**Sn**	**13 21 14.7**	**+0.7**
NLYR				max		13 21 15.1	
	comp=N,2µm,0.8s						
NLYR	**Nelyaty**	1.17	71	ePG	**Pb**	**13 20 54.8**	**-3.0**
NLYR				e		13 21 10.3	
NLYR				pmax	pmax		
	comp=Z,434nm,0.7s						
NLYR				smax	smax		
	comp=N,2µm,0.8s						
KMO	**Kumora**	1.43	262	ePg	**Pn**	**13 21 00.0**	**-1.5**
KMO				ePb	**Pb**	**13 21 01.2**	**-0.9**
KMO				max		13 21 01.5	
	comp=N,1µm,0.5s						
KMO				eSg	**Sn**	**13 21 19.5**	**-0.8**
KMO				eSb	**Sg**	**13 21 22.2**	**+0.9**
KMO				max		13 21 23.1	
	comp=N,3µm,1.1s						
KMO	**Kumora**	1.43	262	ePG	**Pn**	**13 20 59.9**	**-1.5**
KMO				e		13 21 19.1	
KMO				pmax	pmax		
	comp=Z,1µm,0.4s						
KMO				smax	smax		
	comp=N,3µm,1.0s						
BOD	**Bodaibo**	1.71	5	ePg	**Pn**	**13 21 04.7**	**-0.6**
BOD				Pmax		13 21 05.1	
	comp=N,551nm,1.1s						
BOD				eSg	**Sn**	**13 21 27.2**	**0.0**
BOD				Smax		13 21 28.1	
	comp=N,1µm,0.6s						
BOD	**Bodaibo**	1.71	5	ePN	**Pn**	**13 21 04.0**	**-1.3**
BOD				e		13 21 27.6	
BOD				pmax	pmax		
	comp=Z,556nm,0.8s						
BOD				smax	smax		
	comp=E,1µm,0.3s						
YLYR	**Ulyunkhan**	1.91	230	ePg	**Pn**	**13 21 08.4**	**+0.3**
YLYR				Pmax		13 21 08.9	
	comp=E,574nm,0.4s						
YLYR				eSg	**Sb**	**13 21 34.6**	**+0.3**
YLYR				Smax		13 21 36.0	
	comp=E,2µm,0.4s						
YLYR	**Ulyunkhan**	1.91	230	ePN	**Pn**	**13 21 08.1**	**0.0**
YLYR				e		13 21 09.4	
YLYR				eS	**Sn**	**13 21 32.5**	**+0.3**
YLYR				e		13 21 33.8	
YLYR				pmax	pmax		
	comp=Z,193nm,0.4s						
YLYR				smax	smax		
	comp=E,2µm,0.3s						
NIZ	**Nizh Angarsk**	2.37	263	ePn	**Pn**	**13 21 12.6**	**-1.8**
NIZ				ePg	**Pb**	**13 21 17.0**	**-1.2**
NIZ				Pmax		13 21 20.6	
	comp=E,126nm,0.7s						
NIZ				eSg	**Sb**	**13 21 48.4**	**+0.9**
NIZ				Smax		13 21 49.8	
	comp=E,568nm,0.7s						
NIZ	**Nizh Angarsk**	2.37	263	ePN	**Pb**	**13 21 17.0**	**-1.2**
NIZ				eS	**Sn**	**13 21 42.6**	**-0.9**
NIZ				e		13 21 49.3	
NIZ				pmax	pmax		
	comp=Z,200nm,0.6s						
NIZ				smax	smax		
	comp=N,520nm,0.9s						
CRS	**Chara**	2.65	71	ePn	**Pn**	**13 21 16.5**	**-1.7**
CRS				ePg	**Pb**	**13 21 22.0**	**-0.9**
CRS				Pmax		13 21 22.5	
	comp=N,579nm,1.0s						
CRS				eSg	**Sb**	**13 21 56.4**	**+0.9**
CRS				Smax		13 21 58.4	
	comp=N,792nm,0.8s						
CRS	**Chara**	2.65	71	ePN	**Pb**	**13 21 21.3**	**-1.6**
CRS				e		13 21 56.0	
CRS				pmax	pmax		
	comp=Z,579nm,0.6s						
CRS				smax	smax		
	comp=E,793nm,0.6s						
SYVR	**Suvo**	3.27	222	ePn	**Pn**	**13 21 25.9**	**-0.8**
SYVR				ePg	**Pb**	**13 21 31.6**	**-1.9**
SYVR				e		13 21 33.8	
SYVR				max		13 21 35.6	
	comp=E,138nm,1.1s						
SYVR				eSg	**Sb**	**13 22 15.1**	**+1.8**
SYVR				Smax		13 22 21.6	
	comp=E,505nm,1.3s						
SYVR	**Suvo**	3.27	222	ePN	**Pn**	**13 21 25.8**	**-0.9**
SYVR				e		13 21 33.9	
SYVR				e		13 22 15.0	
SYVR				pmax	pmax		
	comp=Z,139nm,0.9s						
SYVR				smax	smax		
	comp=E,561nm,0.8s						
VTMR	**Vitim**	3.39	350	ePn	**Pn**	**13 21 27.2**	**-1.1**
VTMR				ePg	**Pb**	**13 21 35.7**	**+0.2**
VTMR				eSg	**Sb**	**13 22 17.7**	**+1.0**
KHNR	**Khani**	3.57	74	ePg	**Pb**	**13 21 37.9**	**-0.7**
KHNR				eSg	**Sb**	**13 22 24.7**	**+2.8**
TUP	**Tupik**	3.96	113	ePn	**Pn**	**13 21 35.0**	**-1.2**
TUP				ePg	**Pb**	**13 21 43.5**	**-1.7**
TUP				e		13 21 48.4	
TUP				max		13 21 49.1	
	comp=E,56nm,0.5s						
TUP				eSg	**Sb**	**13 22 36.1**	**+3.0**
TUP				eSgSg	**Sg**	**13 22 40.9**	**-1.5**
TUP				max		13 22 41.4	
	comp=E,583nm,1.0s						
TUP	**Tupik**	3.96	113	ePN	**Pn**	**13 21 35.0**	**-1.2**
TUP				e		13 21 44.6	
TUP				eS	**Sn**	**13 22 20.0**	**-2.6**
TUP				e		13 22 35.4	
TUP				pmax	pmax		
	comp=Z,56nm,0.5s						
TUP				smax	smax		
	comp=E,575nm,0.8s						
MXMB	**Maximikha**	4.06	227	ePg	**Pb**	**13 21 45.5**	**-1.5**
MXMB				eSg	**Sb**	**13 22 39.5**	**+3.4**
CIT	**Chita**	4.11	181	ePg	**Pb**	**13 21 47.4**	**-0.5**
CIT				Pmax		13 21 49.1	
	comp=E,144nm,0.4s						
CIT				eSg	**Sb**	**13 22 41.1**	**+3.6**
CIT				Smax		13 22 46.2	
	comp=E,509nm,1.2s						
CIT	**Chita**	4.11	181	ePN	**Pn**	**13 21 39.4**	**+1.1**
CIT				e		13 21 48.0	
CIT				e		13 22 43.3	
CIT				pmax	pmax		
	comp=Z,83nm,1.1s						
CIT				smax	smax		
	comp=E,525nm,1.4s						
OGRR	**Ongureny**	4.32	237	ePn	**Pn**	**13 21 41.3**	**+0.2**
OGRR				ePg	**Pb**	**13 21 51.4**	**+0.1**
OGRR				Pmax		13 21 53.6	
	comp=E,83nm,1.3s						
OGRR				eSg	**Sb**	**13 22 47.4**	**+4.0**
OGRR				Smax		13 22 57.9	
	comp=E,197nm,1.5s						
OGRR	**Ongureny**	4.32	237	ePN	**Pn**	**13 21 40.7**	**-0.4**
OGRR				e		13 21 51.4	
OGRR				e		13 22 45.2	
OGRR				pmax	pmax		
	comp=Z,83nm,1.3s						
OGRR				smax	smax		
	comp=N,198nm,1.8s						
YKLR	**Yuktali**	4.45	81	ePg	**Pb**	**13 21 52.8**	**-0.8**
YKLR				eSg	**Sb**	**13 22 51.1**	**+3.9**
ZRHB	**Zarechye**	5.24	230	eSg	**Sg**	**13 23 18.1**	**-5.5**
ZRHB				Smax		13 23 40.8	
	comp=N,735nm,1.1s						
TRG	**Tyrgan**	5.46	235	ePn	**Pn**	**13 21 56.0**	**-0.8**
TRG				ePg	**Pb**	**13 22 11.5**	**+0.7**
TRG				Pmax		13 22 16.7	
	comp=N,34nm,1.6s						
TRG				eSg	**Sb**	**13 23 22.6**	**+6.3**
TRG				Smax		13 23 27.1	
	comp=N,86nm,1.2s						
TRG	**Tyrgan**	5.46	235	ePN	**Pn**	**13 21 55.6**	**-1.2**
TRG				e		13 22 11.6	
TRG				eS	**Sn**	**13 22 57.6**	**-2.0**
TRG				e		13 23 21.8	
TRG				pmax	pmax		
	comp=Z,34nm,1.1s						
TRG				smax	smax		
	comp=N,87nm,1.0s						
FFNB	**Fofonovo**	5.77	228	ePg	**Pb**	**13 22 18.2**	**+2.0**
FFNB				eSg	**Sb**	**13 23 32.8**	**+7.4**
KAB	**Kabansk**	5.82	228	eSg	**Sb**	**13 23 33.8**	**+7.2**
KAB				Smax		13 23 45.0	
	comp=N,510nm,1.3s						
STDB	**Stepnoy Dvoret**	5.85	231	ePg	**Pb**	**13 22 17.9**	**+0.4**
STDB				eSg	**Sb**	**13 23 34.2**	**+6.5**
HRMR	**Khuramsha**	6.01	224	ePn	**Pn**	**13 22 04.1**	**-0.4**
HRMR				ePg	**Pb**	**13 22 23.9**	**+3.6**
HRMR				Pmax		13 22 25.8	
	comp=N,59nm,0.6s						
HRMR				eSg	**Sg**	**13 23 41.8**	**-6.6**
HRMR				Smax		13 23 51.0	
	comp=N,649nm,0.9s						
IENR	**Iengra**	6.23	84	eSg	**Sb**	**13 23 46.3**	**+7.8**
BGT	**Bolshoye Golou**	6.36	234	ePn	**Pn**	**13 22 07.5**	**-1.7**
BGT				ePg	**Pb**	**13 22 27.7**	**+1.5**
BGT				Pmax		13 22 30.6	
	comp=N,9.0nm,0.9s						
BGT				eSg	**Sb**	**13 23 50.7**	**+8.4**
BGT				Smax		13 23 59.6	
	comp=N,72nm,1.2s						
KPC	**Khapcheranga**	6.48	188	ePn	**Pn**	**13 22 09.4**	**-1.5**
KPC				ePg	**Pb**	**13 22 30.6**	**+2.4**
KPC				Pmax		13 22 34.1	
	comp=N,3.0nm,0.4s						
KPC				e		13 23 18.4	
KPC				eSg	**Sg**	**13 23 54.5**	**-8.7**
KPC				Smax		13 24 03.8	
	comp=N,309nm,1.9s						
KPC	**Khapcheranga**	6.48	188	ePN	**Pn**	**13 22 09.3**	**-1.6**
KPC				e		13 22 30.0	
KPC				e		13 23 54.4	
KPC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KPC				smax	smax		
	comp=E,309nm,2.0s						
LSTR	**Listvyanka**	6.75	235	ePn	**Pn**	**13 22 13.4**	**-1.1**
LSTR				ePg	**Pb**	**13 22 34.6**	**+1.9**
LSTR				Pmax		13 22 35.0	
	comp=E,10.0nm,1.2s						
LSTR				eSg	**Sb**	**13 24 01.7**	**+8.4**
LSTR				Smax		13 24 14.3	
	comp=E,111nm,1.8s						
IRK	**Irkutsk**	6.76	239	eSg	Sb	13 24 03.1	+9.3
IRK				Smax		13 24 08.9	
	comp=E,199nm,1.1s						
IRK	**Irkutsk**	6.76	239	ePN	**Pn**	**13 22 14.6**	**-0.1**
IRK				e		13 22 37.6	
IRK				e		13 24 04.2	
IRK				pmax	pmax		
	comp=Z,57nm,0.1s						
IRK				smax	smax		
	comp=N,189nm,0.9s						
IVK	**Ivanovka**	6.98	236	ePg	**Pb**	**13 22 39.1**	**+2.3**
IVK				Pmax		13 22 39.5	
	comp=N,8.0nm,1.2s						
IVK				eSg	**Sg**	**13 24 11.0**	**-8.4**
IVK				Smax		13 24 17.0	
	comp=N,68nm,2.0s						
TLY	**Talaya**	7.42	237	Pg	**Pb**	**13 22 42.2**	**-2.0**
	comp=N,0.0nm,0.3s,baz=32,slow=19,SNR=2.2						
TLY				Lg	Lg	13 24 24.9	
	comp=N,0.0nm,0.3s,baz=276,slow=21,SNR=5.6						
TLY	**Talaya**	7.42	237	ePn	**Pn**	**13 22 22.4**	**-1.4**
TLY				ePg	**Pb**	**13 22 47.7**	**+3.5**
TLY				Pmax		13 22 52.4	
	comp=N,20nm,1.6s						
TLY				eSg	Sg	13 24 23.9	-10
TLY				Smax		13 24 33.3	
	comp=N,51nm,1.6s						
TLY	**Talaya**	7.42	237	ePG	Pb	13 22 49.1	+4.9
TLY				e		13 24 24.8	
TLY				pmax	pmax		
	comp=Z,13nm,0.7s						
TLY				smax	smax		
	comp=E,54nm,0.7s						
HIA	**Hailar**	7.78	149	i PN	**Pn**	**13 22 29.4**	**+0.7**
ARS	**Arshan**	7.86	242	ePn	**Pn**	**13 22 29.0**	**-0.8**
ARS				ePg	**Pb**	**13 22 55.7**	**+3.9**
ARS				Pmax		13 22 58.3	
	comp=E,20nm,0.8s						
ARS				eSn	**Sn**	**13 23 55.6**	**-3.3**
ARS				eSg	Sb	13 24 36.9	+11
ARS				Smax		13 24 40.3	
	comp=E,137nm,1.0s						
ARS	**Arshan**	7.86	242	ePG	**Pb**	**13 22 54.8**	**+3.0**
ARS				pmax	pmax		
	comp=Z,22nm,0.6s						
ZEA	**Zeya**	8.16	101	ePG	Pb	13 23 02.4	+5.7
ZEA				eS	**Sn**	**13 24 09.9**	**+4.0**
ZEA				smax	smax		
	comp=E,50nm,0.7s						
ZEA				smax	smax		
	comp=N,80nm,1.2s						
ZAK	**Zakamensk**	8.49	232	eSg	Sg	13 24 57.8	-10
ZAK				Smax		13 25 15.8	
	comp=N,65nm,1.8s						
MOY	**Mondy**	8.73	245	ePn	**Pn**	**13 22 40.7**	**-1.1**
MOY				max		13 22 42.8	
	comp=N,11nm,1.4s						
MOY				eSg	Sg	13 25 03.5	-12
MOY				Smax		13 25 10.1	
	comp=N,106nm,1.5s						
MOY	**Mondy**	8.73	245	ePN	**Pn**	**13 22 41.0**	**-0.8**
MOY				e		13 23 11.3	
MOY				e		13 25 06.0	
ORL	**Orlik**	8.88	252	ePn	**Pn**	**13 22 42.6**	**-1.2**
ORL				max		13 22 57.6	
	comp=N,14nm,1.4s						
ORL				eSg	Sg	13 25 07.9	-12
ORL				Smax		13 25 18.7	
	comp=N,57nm,1.2s						
ORL	**Orlik**	8.88	252	ePN	**Pn**	**13 22 42.6**	**-1.2**
ORL				e		13 23 16.6	
ORL				eS	**Sn**	**13 24 20.1**	**-3.7**
ORL				e		13 25 07.8	
ORL				pmax	pmax		
	comp=Z,13nm,0.6s						
ORL				smax	smax		
	comp=N,62nm,1.9s						
ULN	**Ulaanbaatar**	9.22	209	i P	**Pn**	**13 22 52.2**	**+3.6**
SONM	**Songino Array**	9.44	212	Pn	**Pn**	**13 22 51.3**	**-0.2**
	baz=28,slow=10,SNR=1.3						
SONM				Pg		13 23 29.1	
	comp=N,0.2nm,0.3s,baz=1.3,slow=17,SNR=3.5						
SONM				Lg	Lg	13 25 30.6	
	comp=N,2.2nm,0.3s,baz=25,slow=27,SNR=13						
YAK	**Yakutsk**	10.12	48	Sn	**Sn**	**13 24 48.8**	**-5.1**
	comp=N,0.1nm,0.3s,baz=72,slow=20,SNR=1.6						
YAK				Lg	Lg	13 25 42.3	
	comp=N,0.1nm,0.3s,baz=313,slow=23,SNR=7.2						
YAK	**Yakutsk**	10.12	48	eP	**Pn**	**13 22 59.8**	**-0.8**
YAK				eS	**Sn**	**13 24 54.0**	**+0.1**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK				smax	smax		
	comp=E,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,80nm,1.0s						
YAK				pmax	pmax		
	comp=E,34nm,1.2s						
YAK				pmax	pmax		
	comp=Z,40nm,1.1s						
KLR	**Kul'dur**	12.91	115	Pn	**Pn**	**13 23 40.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=307,slow=14,SNR=5.6						
KLR				Sn	**Sn**	**13 26 07.6**	**+5.0**
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=1.7						
KLR				Lg	Lg	13 27 18.1	
	comp=Z,0.3nm,0.3s,baz=35,slow=22,SNR=6.2						
KLR	**Kul'dur**	12.91	115	P	**Pn**	**13 23 40.0**	**+1.1**
ZALV	**Zalesovo Beam**	16.65	275	Pn	**P**	**13 24 30.8**	**-0.2**
	baz=73,slow=9.8,SNR=2.6						
ZALV				Lg	Lg	13 29 08.6	
	comp=Z,0.1nm,0.3s,baz=30,slow=31,SNR=2.0						
USRK	**Ussuriysk Ar.**	16.65	128	Lg	Lg	13 29 17.6	
	baz=140,slow=43,SNR=1.2						
USRK				LR	LR	13 31 50.8	
	comp=Z,53nm,19.2s,baz=223,slow=40						
DGZ	**Jazzator, Alta**	17.03	259	i P	**Pn**	**13 24 34.7**	**+1.0**
KURK	**Kurchatov**	21.43	270	P	**P**	**13 25 25.8**	**+2.4**
MK31	**Makanchi Array**	21.51	258	i P	**P**	**13 25 23.8**	**-0.5**
MKAR	**Makanchi Array**	21.51	258	P	**P**	**13 25 23.7**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=55,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	21.51	258	i P	**P**	**13 25 24.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	21.53	270	P	**P**	**13 25 25.8**	**+1.3**
	comp=Z,2.4nm,0.6s,baz=67,slow=11,SNR=13						
BVAR	**Borovoye Array**	24.99	281	P	**P**	**13 25 58.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=81,slow=8.9,SNR=2.5						
BRVK	**Borovoye**	25.04	281	i P	**P**	**13 25 57.8**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	42.47	315	P	**P**	**13 28 29.8**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=81,slow=11,SNR=0.9						
YKA	**Yellowknife Ar**	55.89	25	P	**P**	**13 30 12.0**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=335,slow=6.6,SNR=4.6						
YKA	**Yellowknife Ar**	55.89	25	i P	**P**	**13 30 15.5**	**+2.8**
COCO	**West Island**	69.50	198	i P	**P**	**13 31 44.8**	**+0.9**

BYKL 18 13:20:40.1±0.3, 56°.12N×113°.74E, h2^{km}±8^{km}, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	0.10	268	ePg	Pg	13 20 41.6	-0.5
SVKR				eSg	Sg	13 20 43.7	+0.3
UKT	**Uakit**	0.64	186	eSg	Sg	13 20 59.5	-1.0
UKT				Smax			
	937nm,0.3s						
YOA	**Uoyan**	1.13	271	ePg	Pg	13 21 00.2	-1.5
YOA				eSg	Sg	13 21 15.6	-0.7
YOA				Pmax			
	819nm,0.2s						
YOA				Smax			
	7µm,0.9s						
NLYR	**Nelyaty**	1.16	70	ePg	Pg	13 21 00.1	-2.1
NLYR				eSg	Sg	13 21 16.3	-0.9
NLYR				eSb	Sn	13 21 19.4	-0.3
NLYR				Pmax			
	426nm,0.9s						
NLYR				max			
	2µm,0.9s						
KMO	**Kumora**	1.45	262	ePg	Pn	13 21 06.6	-0.7
KMO				eSg	Sg	13 21 26.3	-0.2
KMO				eSb	Sn	13 21 27.8	+1.0
KMO				Pmax			
	628nm,0.5s						
KMO				max			
	2µm,1.0s						
BOD	**Bodaibo**	1.71	5	ePg	Pn	13 21 10.6	-0.3
BOD				eSg	Sn	13 21 33.3	0.0
BOD				Pmax			
	249nm,0.3s						
BOD				Smax			
	955nm,0.5s						
YLYR	**Ulyunkhan**	1.93	231	ePg	Pn	13 21 13.7	-0.2
YLYR				eSg	Sn	13 21 39.0	+0.3
YLYR				Pmax			
	436nm,0.4s						
YLYR				Smax			
	1µm,0.4s						
NIZ	**Nizh Angarsk**	2.39	263	eSg	Sb	13 21 54.4	+0.8
NIZ				Smax			
	516nm,0.5s						
CRS	**Chara**	2.63	71	eSg	Sb	13 22 01.9	+1.3
CRS				Smax			
	705nm,0.8s						
VTMR	**Vitim**	3.39	350	ePg	Pb	13 21 41.7	+0.9
VTMR				eSg	Sb	13 22 24.4	+2.0
KHNR	**Khani**	3.55	74	ePg	Pb	13 21 44.4	+0.8
KHNR				eSg	Sg	13 22 31.3	-2.7
MXMB	**Maximikha**	4.07	227	ePg	Pb	13 21 53.4	+0.9
MXMB				eSg	Sb	13 22 45.8	+3.7
OGRR	**Ongureny**	4.33	238	ePn	Pn	13 21 46.9	0.0
OGRR				ePg	Pb	13 21 58.4	+1.5
YKLR	**Yuktali**	4.43	81	ePg	Pb	13 21 59.4	+0.9
YKLR				eSg	Sb	13 22 56.6	+4.3

BYKL 18 13:21:31.4±0.0, 56°.29N×113°.38E, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	0.20	150	⇑iPg	Pg	13 21 34.4	-0.8
SVKR				eSg	Sg	13 21 36.4	-1.4
BOD	**Bodaibo**	1.57	12	eSg	Sn	13 22 20.1	-1.4
BOD				Smax			
	156nm,1.1s						
YLYR	**Ulyunkhan**	1.90	223	eSg	Sn	13 22 30.0	+0.4
YLYR				Smax			
	152nm,0.6s						

BYKL 18 13:22:19.7±0.3, 56°.14N×113°.72E, h4^{km}±6^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	0.09	256	⇑iPg	Pg	13 22 21.2	-0.4
SVKR				eSg	Sg	13 22 23.3	+0.3
UKT	**Uakit**	0.66	185	ePg	Pg	13 22 30.5	-1.7
UKT				eSg	Sg	13 22 38.6	-2.1
UKT				Pmax			
	19nm,0.2s						
UKT				Smax			
	556nm,1.2s						
YOA	**Uoyan**	1.12	270	ePg	Pg	13 22 39.2	-1.9
YOA				eSg	Sg	13 22 54.3	-1.3
YOA				eSb	Sn	13 22 57.7	-0.3
YOA				Pmax			
	344nm,0.3s						
YOA				max			
	2µm,0.8s						
NLYR	**Nelyaty**	1.16	72	ePg	Pg	13 22 40.2	-1.7
NLYR				ePb	Pb	13 22 42.2	-0.1
NLYR				eSg	Sg	13 22 56.6	-0.3
NLYR				eSb	Sn	13 22 59.5	+0.5
NLYR				max			
	297nm,0.5s						
NLYR				max			
	965nm,0.6s						
KMO	**Kumora**	1.44	261	ePg	Pg	13 22 45.2	-1.3
KMO				ePb	Pb	13 22 46.3	-0.7
KMO				e		13 22 50.4	
KMO				eSg	Sb	13 23 05.4	-0.3
KMO				eSb	Sn	13 23 07.0	+1.2
KMO				max			
	257nm,0.4s						
KMO				max			
	896nm,1.0s						
BOD	**Bodaibo**	1.69	5	ePn	Pn	13 22 49.7	-0.3
BOD				ePg	Pb	13 22 50.1	-1.2
BOD				eSn	Sn	13 23 12.3	+0.2
BOD				eSg	Sb	13 23 12.8	-0.1
BOD				Pmax			
	135nm,0.3s						
BOD				Smax			
	905nm,0.4s						
YLYR	**Ulyunkhan**	1.93	230	ePn	Pn	13 22 53.2	-0.1
YLYR				ePg	Pb	13 22 53.5	-1.9
YLYR				eSg	Sb	13 23 19.3	-0.5
YLYR				Pmax			
	127nm,0.2s						
YLYR				Smax			
	394nm,0.5s						
NIZ	**Nizh Angarsk**	2.38	263	ePg	Pb	13 23 01.5	-1.6
NIZ				eSg	Sb	13 23 34.2	+1.5
NIZ				Pmax			
	41nm,0.4s						

NIZ				Smax			
	107nm,0.6s						
CRS	**Chara**	2.63	71	*e*Pg	Pb	13 23 07.1	-0.3
CRS				*e*Sg	Sb	13 23 41.3	+1.2
CRS				Pmax			
	173nm,0.8s						
CRS				Smax			
	220nm,0.7s						
SYVR	**Suvo**	3.29	222	*e*Sg	Sb	13 24 00.5	+1.6
SYVR				Smax			
	137nm,1.4s						
VTMR	**Vitim**	3.37	350	*e*	Pb	13 23 21.3	+1.4
VTMR				*e*Sg	Sb	13 24 03.0	+1.8
KHNR	**Khani**	3.55	75	*e*Pg	Pb	13 23 23.1	0.0
KHNR				*e*Sg	Sb	13 24 10.0	+3.4
TUP	**Tupik**	3.96	113	*e*Sg	Sb	13 24 21.4	+3.2
TUP				*e*SgSg	SbSb	13 24 24.9	+1.6
TUP				max			
	190nm,1.5s						
MXMB	**Maximikha**	4.08	227	*e*Sg	Sb	13 24 25.6	+4.0
OGRR	**Ongureny**	4.33	237	*e*Pg	Pb	13 23 38.8	+2.5
OGRR				*e*Sg	Sg	13 24 35.3	-3.4
OGRR				Pmax			
	50nm,1.3s						
OGRR				Smax			
	77nm,2.2s						
YKLR	**Yuktali**	4.44	81	*e*Sg	Sb	13 24 36.9	+5.0
TRG	**Tyrgan**	5.47	235	*e*Sg	Sg	13 25 09.7	-5.6
TRG				Smax			
	36nm,1.2s						
KPC	**Khapcheranga**	6.50	188	*e*Sg	Sg	13 25 42.7	-5.5
KPC				Smax			
	52nm,1.4s						

ANF ***18*** *13:23:41.9±0.1, 33°.34N×116°.34W, h18^{km}±1^{km}, ML3.6/37, Error ellipse: s-maj=1.3km s-min=1.1km az=73.0*

NEIC ***18*** *13:23:42.5±0.8, 33°.338N±0°.008×116°.35W±0°.01, h19^{km}±1^{km}, Error ellipse: s-maj=1.7km s-min=0.6km az=132.0*

PAS ***18*** *13:23:43.0±1.2, 33°.338N±0°.009×116°.332W±0°.010, h13^{km}±2^{km}, ML3.7/200, ML3.4/84(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=216.0*

ISC 18 13:23:42.8±0.9**, 33°.32N**±0°.01×**116°.33W**±0°.01**, h18**^{km}±3^{km}**, n171,** σ0^{s}96/229**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORC	**Borrego Spring**	0.09	232		Pg	13 23 47.7	+1.4
SLH	**Sleepy Hollow**	0.14	153		Pg	13 23 46.7	-0.2
SLH					Sg	13 23 49.5	-0.3
FRD	**Ford Ranch, An**	0.28	308		Pn	13 23 52.5	+0.4
FRD	**Ford Ranch, An**	0.28	308		Pn	13 23 52.5	+0.4
MATG	**Mataguay Scout**	0.29	245		Pg	13 23 49.0	-0.2
MATG					Sg	13 23 53.4	-0.3
SALN	**Salton City**	0.29	98		Sg	13 23 53.4	-0.2
XPFO	**Pion Flat**	0.30	341		Pn	13 23 52.5	+0.1
XPFO	**Pion Flat**	0.30	341	Pg	Pg	13 23 48.6	-0.9
XPFO				IAML		13 23 53.0	
	9µm,0.3s						
XPFO				IAML		13 23 53.5	
	3µm,0.2s						
PFO	**Pinyon Flats O**	0.31	340	P	Pg	13 23 48.3	-1.2
	baz=159,SNR=1000						
PFO				S	Sg	13 23 52.7	-1.5
	baz=159						
PFO	**Pinyon Flats O**	0.31	340		Pg	13 23 48.6	-1.0
PFO	**Pinyon Flats O**	0.31	340	Pg	Pg	13 23 48.5	-1.0
PFO				IAML		13 23 53.0	
	10µm,0.2s						
PFO				IAML		13 23 53.5	
	3µm,0.2s						
BZNA	**Buzz No.'s Pla**	0.33	301		Sg	13 23 54.0	-0.7
PMD	**Palm Desert**	0.33	354		Pn	13 23 53.0	+0.3
SNDA	**J Saunders Pla**	0.33	315		Sg	13 23 54.0	-0.7
DNR	**Dunn Ranch,Anz**	0.35	315		Pg	13 23 49.8	-0.4
DNR					Sg	13 23 54.9	-0.4
CRY	**Cary Ranch**	0.42	306		Pg	13 23 50.9	-0.5
CRY					Sg	13 23 56.5	-0.7
MONP2	**Monument Peak**	0.43	190	P	Pg	13 23 51.4	-0.4
	baz=9.1,SNR=579						
MONP2				S	Sg	13 23 58.0	+0.1
	baz=9.1						
MONP2	**Monument Peak**	0.43	190		Pg	13 23 51.7	-0.1
MONP2					Sg	13 23 58.0	+0.1
CTCC	**Cactus City**	0.44	41		Pg	13 23 51.3	-0.5
CTCC					Sg	13 23 57.2	-0.7
PLM	**Palomar**	0.44	274		Pg	13 23 51.7	-0.2
PLM					Sg	13 23 57.7	-0.4
GVDA	**Garner Valley**	0.45	321		Pg	13 23 51.2	-0.8
GVDA					Sg	13 23 56.9	-1.3
ERRC	**Elmore Ranch**	0.47	115		Pg	13 23 52.9	+0.6
CTW	**Cottonwood Mou**	0.52	47		Pg	13 23 52.7	-0.6
CTW					Sg	13 23 60.0	-0.4
CRR	**Carrizo Plain**	0.53	145		Pg	13 23 53.4	0.0
CRR					Sb	13 24 01.6	+0.8
SUP	**Superstition M**	0.56	130		Pg	13 23 54.3	+0.3
SUP					Sg	13 24 01.9	+0.3
SWSC	**Sam W. Stewart**	0.58	130	P	Pg	13 23 54.0	-0.4
	baz=312,SNR=511						
SWSC				S	Sg	13 24 02.5	+0.2
	baz=312						
SWSC	**Sam W. Stewart**	0.58	130		Pg	13 23 54.1	-0.4
SWSC					Sg	13 24 02.9	+0.6
FRK	**Frink**	0.59	82		Pg	13 23 53.9	-0.6
HWB	**Hans Werner Br**	0.60	241		Pg	13 23 54.1	-0.6
HWB					Sg	13 24 02.4	-0.4
DPP	**Dos Picos Cty**	0.60	238		Pg	13 23 54.2	-0.6
DPP					Sg	13 24 02.2	-0.7
POB	**Polly Butte**	0.61	307		Pg	13 23 54.2	-0.8
EW2	**E Wide Canyon**	0.62	354		Pg	13 23 54.3	-0.8
EW2					Sg	13 24 02.8	-0.6
DEVC	**Devers**	0.65	342		Pg	13 23 54.9	-0.7
DEVC					Sg	13 24 03.3	-0.9
DGR	**Domenigoni Val**	0.65	300		Pg	13 23 54.9	-0.8
DGR					Sg	13 24 03.3	-1.2
BACC	**Bachelor Mtn.**	0.66	296		Pg	13 23 55.0	-0.8
BACC					Sg	13 24 03.8	-0.8
HAY	**Hayfield**	0.67	55		Pg	13 23 55.7	-0.2
HAY					Sg	13 24 05.2	+0.4
HMTC	**Hemet**	0.68	305		Pb	13 23 55.3	-0.8
HMTC					Sg	13 24 04.1	-1.2
WEMD	**Westmorland, C**	0.69	114		Pb	13 23 56.9	+0.7
COK2	**Cook Ranch 2**	0.69	133		Pb	13 23 56.0	-0.3
IKP	**In-Ko-Pah, Jac**	0.70	164	P	Pg	13 23 56.2	-0.3
	baz=345,SNR=891						
IKP				S	Sg	13 24 05.9	+0.1
	baz=345						
IKP	**In-Ko-Pah, Jac**	0.70	164		Pg	13 23 56.4	-0.2
IKP					Sg	13 24 05.8	+0.1
BAR	**Barrett**	0.70	204	Pg	Pb	13 23 56.2	-0.2
BAR	**Barrett**	0.70	204		Sg	13 24 05.4	-0.5
BAR	**Barrett**	0.70	204	IAML		13 24 05.9	
	comp=N,11µm,0.2s						
BAR				IAML		13 24 06.1	
	comp=E,8µm,0.2s						
BELC	**Belle Mtn. Jos**	0.73	22	P	Pb	13 23 56.1	-1.0
	baz=203,SNR=440						
BELC				S	Sb	13 24 05.7	-1.1
	baz=203						
BELC	**Belle Mtn. Jos**	0.73	22		Pb	13 23 56.3	-0.8
BELC					Sb	13 24 06.1	-0.8
BLAC	**Blackrock camp**	0.75	356		Pb	13 23 56.5	-0.8
BLAC					Sb	13 24 06.6	-0.7
RMX	**La Rumorosa**	0.75	163		Sn	13 24 09.2	-0.4
RMX	**La Rumorosa**	0.75	163		Pb	13 23 57.8	+0.4
RMX	**La Rumorosa**	0.75	163	IAML		13 24 09.6	
	comp=E,2µm,0.3s						
RMX				IAML		13 24 09.8	
	comp=N,2µm,0.2s						
WESC	**Westside Schoo**	0.76	138		Pb	13 23 56.9	-0.5
WESC					Sb	13 24 07.6	+0.3
YUH	**Yuha Desert**	0.76	153		Pb	13 23 56.8	-0.6
YUH					Sb	13 24 07.8	+0.5
GORC	**Green Oak Ranc**	0.77	258		Pb	13 23 57.0	-0.6
GORC					Sb	13 24 07.2	-0.5
MURC	**Murrieta**	0.77	291	P	Pb	13 23 56.9	-0.8
	baz=110,SNR=589						
MURC				S	Sb	13 24 07.0	-0.8
	baz=110						
MURC	**Murrieta**	0.77	291		Pb	13 23 57.1	-0.6
MURC					Sb	13 24 07.5	-0.3
SDRC	**San Diego Road**	0.78	221		Pb	13 23 57.3	-0.4
SDRC					Sb	13 24 07.6	-0.3
109C	**Camp Elliot, M**	0.78	236	P	Pb	13 23 57.1	-0.6
	baz=55,SNR=166						
109C				S	Sb	13 24 07.5	-0.5
	baz=55						
109C	**Camp Elliot, M**	0.78	236	Pg	Pb	13 23 57.1	-0.6
CPE	**Camp Elliot**	0.78	236		Pb	13 23 57.1	-0.6
CPE					Sb	13 24 07.5	-0.5
BBSC	**Beaumont Base**	0.81	318		Pb	13 23 57.9	-0.3
BBSC					Sb	13 24 08.5	-0.4
BC3	**Big Chuckawall**	0.81	65	P	Pb	13 23 57.5	-0.8
	baz=247,SNR=519						
BC3				S	Sb	13 24 08.1	-0.9
	baz=247						
BC3	**Big Chuckawall**	0.81	65		Pb	13 23 57.6	-0.7
BC3					Sb	13 24 08.0	-0.9
TPC	**Twentynine Pal**	0.82	17		Pb	13 23 57.6	-0.8
SGL	**Mount Signal**	0.84	143		Pb	13 23 58.0	-0.9
OLP	**Otay Lakes Par**	0.87	215		Pb	13 23 59.0	-0.3
OLP					Sb	13 24 10.1	-0.5
SNR	**Schaffner Ranc**	0.88	121		Pb	13 23 58.7	-0.8
PEC	**Perris**	0.89	310		Pb	13 23 59.1	-0.7
PEC					Sb	13 24 10.3	-1.1
CFT	**Crafton Hills**	0.96	318		Pb	13 24 00.7	-0.3
ELS	**Elsinore Mount**	0.97	290		Pb	13 24 00.2	-0.9
GTM	**Goat Mountain**	0.97	359		Pb	13 24 00.4	-0.7
SME	**Santa Rosa Min**	0.99	301		Pb	13 24 00.6	-0.8
SVD	**Seven Oaks Dam**	1.01	321		Pb	13 24 01.4	-0.4
SVD					Sb	13 24 14.4	-0.3
TJX	**Tijuana**	1.01	217		Pb	13 24 01.8	+0.1
TJX	**Tijuana**	1.01	217		Sb	13 24 15.4	+0.7
TJX	**Tijuana**	1.01	217	IAML		13 24 16.0	
	comp=N,8µm,0.4s						
TJX				IAML		13 24 18.0	
	comp=E,5µm,0.4s						
UABX	**UABC, Campus M**	1.02	132		Pb	13 24 01.7	-0.1
UABX	**UABC, Campus M**	1.02	132		Sb	13 24 15.2	+0.4
UABX	**UABC, Campus M**	1.02	132	IAML		13 24 15.6	
	comp=N,6µm,0.5s						
UABX				IAML		13 24 18.2	
	comp=E,7µm,0.4s						
CBX	**Cerro Bola**	1.04	196		Sb	13 24 15.7	0.0
CBX	**Cerro Bola**	1.04	196		Pb	13 24 02.2	-0.2
CBX	**Cerro Bola**	1.04	196	IAML		13 24 18.3	
	comp=N,1µm,0.4s						
CBX				IAML		13 24 18.9	
	comp=E,2µm,0.6s						
RSBC	**Riverside Bore**	1.05	308		Pb	13 24 01.9	-0.5
RSBC	**Riverside Bore**	1.05	308		Pb	13 24 01.8	-0.7
RSBC					Sb	13 24 15.0	-0.9
BBRC	**Big Bear Solar**	1.06	333	P	Pb	13 24 02.2	-0.5
	baz=152,SNR=491						
BBRC				S	Sb	13 24 15.9	-0.4
	baz=152						
BBRC	**Big Bear Solar**	1.06	333		Pb	13 24 02.2	-0.5
BBRC					Sb	13 24 15.6	-0.7
BTL	**Butler Peak**	1.09	329		Pb	13 24 02.9	-0.3
RVR	**Riverside**	1.10	308		Pb	13 24 02.4	-0.8
RVR					Sb	13 24 16.4	-0.7
COA	**Coachella**	1.11	114		Pb	13 24 01.8	-1.7
MLSC	**Mira Loma**	1.23	304		Pn	13 24 04.7	-0.3
MLSC					Sb	13 24 20.6	-0.4
CPBX	**Cerro Prieto**	1.25	136		Pn	13 24 03.8	-1.5
EMSC	**East Mesa**	1.27	117		Pn	13 24 04.0	-1.6
GLA	**Glamis**	1.29	102	P	Pn	13 24 04.3	-1.6
	baz=283,SNR=75						
GLA	**Glamis**	1.29	102		Pn	13 24 04.2	-1.8
GLA				IAML		13 24 32.4	
	comp=N,479nm,0.7s						
GLA				IAML		13 24 36.2	
	comp=E,733nm,0.6s						
IRM	**Iron Mountain**	1.29	50	P	Pn	13 24 04.7	-1.2
	baz=231,SNR=105						
IRM				S	Sn	13 24 22.3	-0.5
	baz=231						
IRM	**Iron Mountain**	1.29	50		Pb	13 24 07.5	+0.9
CHNC	**Chino**	1.31	301		Pn	13 24 06.2	0.0
SS2	**San Sevaine**	1.31	313		Pn	13 24 06.1	-0.1
ESJX	**Sierra Juarez**	1.35	166		Pn	13 24 05.3	-1.6
ESJX				IAML		13 24 25.7	
	comp=E,527nm,0.2s						
ESJX				IAML		13 24 26.2	
	comp=N,434nm,0.1s						
BFSC	**Mount Baldy Ra**	1.43	310	Pb	Pn	13 24 07.5	-0.5
	baz=129,SNR=148						
BFSC				Sb	Sn	13 24 26.8	+0.4
	baz=129						
BFSC	**Mount Baldy Ra**	1.43	310		Pn	13 24 08.4	+0.4
SSK	**Sunset Peak**	1.44	308		Pn	13 24 07.9	-0.2
PSRC	**Puddingstone R**	1.45	302		Pn	13 24 08.6	+0.5
CCX	**Cicese**	1.48	191		Pn	13 24 08.7	+0.2
CCX				IAML		13 24 30.8	
	comp=N,723nm,0.5s						
HEC	**Hector,Ludlow**	1.50	360	Pn	Pn	13 24 08.1	-0.8
	baz=180,SNR=170						
HEC				Pg	Pb	13 24 10.1	-0.1
	baz=180						
GMRC	**Granite Mounta**	1.56	21	Pn	Pn	13 24 08.7	-1.0
	baz=201,SNR=262						
GMRC				Pg	Pb	13 24 11.3	+0.1
	baz=201						
GMRC				Sb	Sn	13 24 31.1	+1.4
	baz=201						
BLYC	**Blythe**	1.57	74		Pn	13 24 08.6	-1.1
RRX	**Edison Barstow**	1.64	341	Pg	Pb	13 24 13.0	+0.5
	baz=160,SNR=60						
RRX				Sb	Sb	13 24 34.4	+1.4
	baz=160						
FMP	**Fort Macarthur**	1.68	284	Pb	Pn	13 24 12.0	+0.7
	baz=102						
FMP				Sb	Sb	13 24 34.8	+0.8
	baz=102						
MWC	**Mount Wilson**	1.69	303		Pn	13 24 12.6	+1.0
PASC	**Pasadena Art C**	1.76	299	Pn	Pn	13 24 13.4	+1.1
PASC				IAML		13 24 36.9	
	comp=N,457nm,0.7s						
PASC				IAML		13 24 37.5	
	comp=E,438nm,0.4s						
SCI2	**San Clemente I**	1.89	260	P	Pn	13 24 13.9	-0.2
	baz=78,SNR=19						
DECC	**Green Verdugo**	1.91	300	Pb	Pn	13 24 16.1	+1.7
	baz=118,SNR=33						
DECC				Sb	Sb	13 24 41.1	+0.5
	baz=118						
GSC	**Goldstone, Bar**	2.01	349	Pn	Pn	13 24 15.5	-0.4
	baz=169,SNR=290						
GSC				Pg	Pb	13 24 19.8	+0.9
	baz=169						
GSC	**Goldstone, Bar**	2.01	349	Pn	Pn	13 24 15.3	-0.6
GSC				IAML		13 24 51.7	
	comp=E,212nm,0.7s						
NEE2	**Needles Airpor**	2.03	44	Pg	Pb	13 24 19.8	+0.8
	baz=225,SNR=22						
NEE2				Sb	Sb	13 24 45.7	+1.8
	baz=225						
EDW2	**Edwards Air Fo**	2.08	319	Pg	Pb	13 24 20.3	+0.3
	baz=138,SNR=117						
EDW2				Sb	Sb	13 24 46.4	+0.9
	baz=138						
OSI	**Osito Audit: C**	2.37	304	Pb	Pb	13 24 25.0	+0.1
	baz=122,SNR=21						
OSI				Sb	Sb	13 24 54.7	+0.9
	baz=122						
OSI	**Osito Audit: C**	2.37	304		Pn	13 24 20.6	-0.1
OSI				IAML		13 25 00.8	
	comp=E,251nm,1.0s						
OSI				IAML		13 25 04.9	
	comp=N,261nm,0.8s						
SPX	**San Pedro Mart**	2.40	162	Pn	Pn	13 24 20.9	-0.5
SPX				IAML		13 24 59.4	
	comp=E,99nm,0.6s						
LRMC	**Laurel Mtn Rad**	2.42	333	P	Pn	13 24 21.4	-0.2
	baz=152,SNR=84						
LRMC				Sb	Sb	13 24 57.0	+1.5
	baz=152						
SHOC	**Shoshone, Teco**	2.57	1	P	Pn	13 24 23.2	-0.4
	baz=181,SNR=50						
SFX	**San Felipe**	2.60	151	Pn	Pn	13 24 22.9	-1.0
SFX				IAML		13 25 05.7	
	comp=E,131nm,0.7s						
SFX				IAML		13 25 07.2	
	comp=N,105nm,0.6s						
SNCC	**San Nicolas Is**	2.67	269	P	Pn	13 24 25.0	+0.1
	baz=87						
SNCC	**San Nicolas Is**	2.67	269	Pn	Pn	13 24 24.6	-0.3
W13A	**Hualapai Mount**	2.69	48	Pn	Pn	13 24 25.4	-0.1
W13A				IAML		13 25 07.0	
	comp=E,113nm,0.5s						
W13A				IAML		13 25 08.2	
	comp=N,170nm,0.4s						
ARVC	**Arvin**	2.74	312	Pb	Pb	13 24 31.8	+0.5
	baz=130,SNR=23						
ARVC				Sb	Sb	13 25 06.9	+2.3
	baz=130						
MPMC	**Manual Prospec**	2.89	341	Pn	Pn	13 24 27.7	-0.4
	baz=160,SNR=48						
MPMC				Pg	Pb	13 24 35.3	+1.4
	baz=160						
MPMC				Sb	Sb	13 25 12.2	+3.2
	baz=160						
ISA	**Isabella, Lake**	2.93	323	Pg	Pb	13 24 35.9	+1.4
	baz=142						
ISA				Sb	Sb	13 25 13.1	+3.1
	baz=142						
ISA	**Isabella, Lake**	2.93	323	Pn	Pn	13 24 28.9	+0.4
ISA				IAML		13 25 19.0	
	comp=N,92nm,0.8s						
ISA				IAML		13 25 22.2	
	comp=E,92nm,1.1s						
PIX	**Pinacate**	3.00	125	Pn	Pn	13 24 27.8	-1.6
SBC	**Santa Barbara**	3.02	293	Sb	Sb	13 25 14.9	+2.3
	baz=110						
FURC	**Furnace Creek,**	3.17	352	Pg	Pb	13 24 40.7	+2.2
	baz=172,SNR=79						
214A	**Organ Pipe Nat**	3.27	114	P	Pn	13 24 31.9	-1.2
	baz=296						
214A	**Organ Pipe Nat**	3.27	114	Pn	Pn	13 24 31.5	-1.6
PKM	**Mcpherson Peak**	3.28	299	Sb	Sb	13 25 22.2	+1.9
	baz=117						
SHPR	**Sheep Range**	3.32	17	Pn	Pn	13 24 34.0	0.0
TPNV	**Topopah Spring**	3.62	1	P	Pn	13 24 38.4	+0.3
	baz=181,SNR=20						
TPNV	**Topopah Spring**	3.62	1	Pn	Pn	13 24 38.3	+0.2
TPNV				IAML		13 25 38.7	
	comp=E,47nm,0.4s						
TPNV				IAML		13 25 41.4	
	comp=E,41nm,0.4s						
SMMC	**Simmler**	3.62	304	Sb	Sb	13 25 34.8	+4.8
	baz=122						
GRAC	**Grapevine Rang**	3.76	347	P	Pn	13 24 40.7	+0.8
	baz=167,SNR=6.5						
PRN	**Pahroc Range**	4.21	14		Pn	13 24 46.7	+0.5
PRN				IAML		13 25 59.6	
	comp=E,68nm,0.8s						
PRN				IAML		13 26 00.2	
	comp=N,54nm,0.7s						
X16A	**Lo Mia Camp, P**	4.21	74	Pn	Pn	13 24 46.4	+0.1
LCMT	**Little Creek M**	4.47	34		Pn	13 24 50.3	+0.6
LCMT				IAML		13 26 06.0	
	comp=E,28nm,0.9s						
U15A	**North Rim**	4.54	46		Pn	13 24 51.4	+0.5
U15A				IAML		13 26 06.9	
	comp=E,46nm,1.1s						
U15A				IAML		13 26 11.5	
	comp=N,42nm,0.9s						
WUAZ	**Wupatki**	4.65	61	P	Pn	13 24 53.4	+1.2
	baz=243,SNR=18						
WUAZ	**Wupatki**	4.65	61	Pn	Pn	13 24 52.8	+0.5
WUAZ				IAML		13 26 24.9	
	comp=N,23nm,1.3s						
WUAZ				IAML		13 26 35.1	
	comp=N,23nm,1.0s						
KNB	**Kanab**	4.67	37	Pn	Pn	13 24 53.6	+1.0
KNB				IAML		13 26 12.5	
	comp=E,51nm,1.1s						
KNB				IAML		13 26 13.8	
	comp=N,40nm,1.0s						
MLAC	**Mammoth, Mammo**	4.76	335	Sb	Sg	13 26 11.5	-4.0
	baz=154						
TUC	**Tucson**	4.78	101	Pn	Pn	13 24 54.3	+0.3
TPH	**Tonopah**	4.80	352		Pn	13 24 54.6	+0.3
OMMB	**Old Mammoth Mi**	4.80	334	Pn	Pn	13 24 55.4	+0.9
OMMB				IAML		13 26 23.1	
	comp=N,19nm,0.7s						
OMMB				IAML		13 26 26.9	
	comp=E,24nm,1.3s						
MDPB	**Devils Postpil**	4.85	333	Pn	Pn	13 24 55.3	+0.2
MDPB				IAML		13 26 18.7	
	comp=E,34nm,1.0s						
MDPB				IAML		13 26 19.4	
	comp=N,21nm,0.8s						
CCUT	**Cedar City**	4.87	29	Pn	Pn	13 24 55.6	+0.3
SZCU	**Shurtz Canyon**	5.02	31	Pn	Pn	13 24 58.1	+0.7
SZCU				IAML		13 26 22.6	
	comp=E,22nm,0.6s						
SZCU				IAML		13 26 30.3	
	comp=N,14nm,0.7s						
R11A	**Troy Canyon, C**	5.05	7	Pg	Pb	13 25 15.8	+5.1
	baz=187						
R11A	**Troy Canyon, C**	5.05	7	Pn	Pn	13 24 58.2	+0.4
LHV	**Little Huntoon**	5.22	341	Pn	Pn	13 25 01.0	+1.1
LHV				IAML		13 26 35.9	
	comp=E,23nm,2.1s						
LHV				IAML		13 26 38.4	
	comp=N,17nm,1.8s						
PKCU	**Pink Cliffs**	5.26	37		Pn	13 25 01.5	+0.7
X18A	**Snowflake**	5.44	75		Pn	13 25 03.5	+0.4
PSUT	**Pine Spring**	5.58	20	Pn	Pn	13 25 05.6	+0.6
W18A	**Petrified Fore**	5.75	70	Pn	Pn	13 25 07.8	+0.4
MTPU	**Mount Pierson**	5.79	34	Pn	Pn	13 25 09.0	+0.8
121A	**Cookes Peak, D**	7.23	94	Pn	Pn	13 25 28.1	+0.4
PV17	**East Wray Mesa**	7.77	48	Pn	Pn	13 25 36.8	+1.7
PV13	**Radium Mtn., P**	7.78	50	Pn	Pn	13 25 36.7	+1.3
PV14	**Lion Creek, Pa**	7.79	48	Pn	Pn	13 25 34.9	-0.4
PV03	**Paradox Valley**	7.82	49	Pn	Pn	13 25 36.7	+0.8
PV11	**David Mesa, Pa**	7.83	49	Pn	Pn	13 25 35.8	-0.2
PV04	**Paradox Valley**	7.87	48	Pn	Pn	13 25 37.4	+0.9
PV12	**Saucer Basin,**	7.89	49	Pn	Pn	13 25 38.7	+1.9
BNM	**Barren Site**	8.13	81	Pn	Pn	13 25 40.2	+0.1

PAS ***18*** *13:24:37.9±0.9, 33°.337N±0°.008×116°.33W±0°.01, h13^{km}±2^{km}, ML2.7/23, ML2.6/12(NEIC), Error ellipse: s-maj=1.3km s-min=1.1km az=58.0*

NEIC 18 13:24:37.3±0.7**, 33°.34N**±0°.01×**116°.35W**±0°.02**, h18**^{km}±2^{km}**, Error ellipse: s-maj=2.1km s-min=1.4km az=67.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORC	**Borrego Spring**	0.10	218		Pg	13 24 40.5	-0.3
BORC					Sg	13 24 42.5	-0.8
SLH	**Sleepy Hollow**	0.17	152		Pb	13 24 41.6	-0.1
FRD	**Ford Ranch, An**	0.26	305		Pb	13 24 43.4	-0.1
FRD					Sg	13 24 47.4	+0.1
FRD	**Ford Ranch, An**	0.26	305		Pb	13 24 43.4	-0.1
FRD					Sg	13 24 47.2	-0.1
XPFO	**Pion Flat**	0.28	341		Pg	13 24 43.4	-0.2
XPFO					Sg	13 24 47.4	-0.6
PFO	**Pinyon Flats O**	0.28	341		Pg	13 24 43.5	-0.2
PFO					Sg	13 24 47.6	-0.3
PFO	**Pinyon Flats O**	0.28	341	Pg	Pg	13 24 43.4	-0.3
PFO				IAML		13 24 47.8	
	303nm,0.1s						
PFO				IAML		13 24 47.8	
	681nm,0.1s						
MATG	**Mataguay Scout**	0.29	240		Pg	13 24 43.8	+0.1
MATG					Sg	13 24 48.1	0.0
SNDA	**J Saunders Pla**	0.30	313		Pb	13 24 44.2	-0.1
SNDA					Sb	13 24 49.2	+0.2
BZNA	**Buzz No.'s Pla**	0.30	299		Pb	13 24 44.3	0.0
BZNA					Sg	13 24 48.7	+0.2
PMD	**Palm Desert**	0.30	355		Pg	13 24 43.7	-0.2
PMD					Sg	13 24 47.8	-0.6
SALN	**Salton City**	0.31	102		Pg	13 24 44.0	0.0
DNR	**Dunn Ranch,Anz**	0.33	313		Pb	13 24 44.6	-0.1
CRY	**Cary Ranch**	0.39	304		Pb	13 24 45.8	-0.1
CRY					Sb	13 24 51.4	-0.2
GVDA	**Garner Valley**	0.42	320		Pg	13 24 46.0	-0.1
GVDA					Sg	13 24 51.9	0.0
CTCC	**Cactus City**	0.43	44		Pg	13 24 46.1	0.0
CTCC					Sb	13 24 52.4	-0.2
PLM	**Palomar**	0.43	272		Pb	13 24 46.6	0.0
PLM					Sb	13 24 52.9	+0.1
MONP2	**Monument Peak**	0.45	188		Pg	13 24 46.5	-0.1
MONP2					Sg	13 24 52.9	0.0
ERRC	**Elmore Ranch**	0.49	117		Pb	13 24 47.8	+0.3
CTW	**Cottonwood Mou**	0.52	50		Pg	13 24 47.5	-0.2

CTW					Sg	13 24 54.7	-0.1
CRR	Carrizo Plain	0.56	145		Pg	13 24 48.2	-0.1
CRR					Sb	13 24 56.0	-0.1
POB	Polly Butte	0.59	306		Pb	13 24 49.3	+0.1
FRK	Frink	0.60	84		Pg	13 24 48.8	-0.3
EW2	E Wide Canyon	0.60	355		Pb	13 24 49.3	+0.1
EW2					Sg	13 24 57.3	+0.1
HWB	Hans Werner Br	0.60	239		Pg	13 24 49.3	0.0
HWB					Sg	13 24 57.0	-0.3
DPP	Dos Picos Cty	0.60	236		Pb	13 24 49.3	0.0
DPP					Sg	13 24 57.2	-0.2
SWSC	Sam W. Stewart	0.61	131		Pg	13 24 49.2	-0.1
SWSC					Sg	13 24 57.4	0.0
DEVC	Devers	0.62	342		Pb	13 24 50.0	+0.4
DEVC					Sb	13 24 58.5	+0.4
DGR	Domenigoni Val	0.63	299		Pb	13 24 49.8	0.0
DGR					Sg	13 24 58.1	-0.2
BACC	Bachelor Mtn.	0.64	295		Pg	13 24 49.9	0.0
HMTC	Hemet	0.66	304		Pb	13 24 50.2	-0.1
HMTC					Sb	13 24 59.3	+0.2
HAY	Hayfield	0.66	57		Pg	13 24 50.8	+0.4
HAY					Sb	13 25 00.1	+0.8
BAR	Barrett	0.71	202		Pb	13 24 51.0	-0.2
BAR					Sb	13 25 00.5	-0.3
BAR	Barrett	0.71	202	Pg	Pb	13 24 50.9	-0.3
BAR	Barrett	0.71	202	IAML		13 25 00.6	
	comp=N,438nm,0.2s						
BAR				IAML		13 25 00.7	
	comp=E,333nm,0.1s						
COK2	Cook Ranch 2	0.71	133		Pg	13 24 51.8	+0.4
COK2					Sn	13 25 02.1	-1.0
BELC	Belle Mtn. Jos	0.72	24		Pb	13 24 51.1	-0.2
IKP	In-Ko-Pah, Jac	0.72	164		Pb	13 24 51.1	-0.2
IKP					Sb	13 25 00.5	-0.4
BLAC	Blackrock camp	0.72	357		Pb	13 24 51.4	-0.1
BLAC					Sg	13 25 01.4	+0.1
MURC	Murrieta	0.75	290		Pg	13 24 52.0	0.0
MURC					Sg	13 25 02.3	+0.2
GORC	Green Oak Ranc	0.76	256		Pb	13 24 51.9	-0.1
GORC					Sb	13 25 02.0	-0.1
RMX	La Rumorosa	0.77	163		Sn	13 25 04.0	-0.7
RMX	La Rumorosa	0.77	163	Pg	Pn	13 24 53.2	-0.2
RMX				IAML		13 25 04.3	
	comp=E,235nm,0.3s						
RMX				IAML		13 25 04.9	
	comp=N,165nm,0.1s						
WESC	Westside Schoo	0.78	138		Sn	13 25 04.3	-0.3
YUH	Yuha Desert	0.78	153		Pg	13 24 52.5	0.0
YUH					Sb	13 25 02.1	-0.5
109C	Camp Elliot, M	0.78	235	Pg	Pb	13 24 52.0	-0.4
CPE	Camp Elliot	0.78	235		Pb	13 24 52.1	-0.3
CPE					Sb	13 25 02.3	-0.3
SDRC	San Diego Road	0.79	220		Pb	13 24 52.1	-0.3
SDRC					Sb	13 25 02.3	-0.4
TPC	Twentynine Pal	0.80	18		Pb	13 24 52.6	-0.1
BC3	Big Chuckawall	0.81	67		Sb	13 25 03.2	-0.4
SGL	Mount Signal	0.87	143		Sg	13 25 05.5	-0.1
PEC	Perris	0.87	309		Pb	13 24 54.0	0.0
PEC					Sg	13 25 05.6	-0.2
OLP	Otay Lakes Par	0.88	214		Pb	13 24 53.8	-0.3
OLP					Sb	13 25 05.2	-0.3
GTM	Goat Mountain	0.95	360		Sg	13 25 08.0	-0.3
ELS	Elsinore Mount	0.95	289		Pb	13 24 55.5	+0.1
ELS					Sb	13 25 07.8	+0.2
SME	Santa Rosa Min	0.97	300		Pb	13 24 55.5	-0.1
BBRC	Big Bear Solar	1.03	333		Sg	13 25 11.0	0.0
ESJX	Sierra Juarez	1.38	166		Sn	13 25 19.5	-0.2
ESJX	Sierra Juarez	1.38	166	Pn	Pb	13 25 02.4	-0.2
ESJX				IAML		13 25 20.1	
	comp=E,66nm,0.1s						
CCX	Cicese	1.50	190		Sb	13 25 23.5	+0.3
SHPR	Sheep Range	3.30	17	Pn	Pn	13 25 27.5	-0.8
SHPR				IAML		13 25 52.3	
	comp=E,22nm,1.1s						

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*IDC **18** 13:37:38.6±2.4, 6°30S×130°12E, h92^{km}±28^{km}, mb3.0/2, mb1 3.6/7, mb1mx3.3/37, mbtmp3.8/7, Error ellipse: s-maj=44.6km s-min=21.0km az=94.0*

*NEIC **18** 13:37:40.5±2.1, 6°12S±0°05×130°2E±0°1, h105^{km}±12^{km}, mb4.2/3, Error ellipse: s-maj=17.5km s-min=6.2km az=80.0*

ISC 18 13:37:38.2±0.7**, 6°24S**±0°06×**130°16E**±0°09**, h100**^{km}**, n20,** σ**2^{s}97**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.07	147		Pn	13 38 15.9	+4.3
FAKI	Fak Fak	3.90	32	Pn	Pn	13 38 36.8	+0.7
SIJI	Sorong	5.45	12	P	Pn	13 38 58.0	+1.0
	2.0nm,0.3s,baz=239,slow=23,SNR=29						
SIJI				S	Sn	13 39 53.2	-5.2
	3.8nm,0.3s,baz=129,slow=23,SNR=3.9						
SOEI	Soe	6.80	239	Pn	Pn	13 39 21.1	+5.6
BATI	Baumata	7.54	238	P	Pn	13 39 26.0	+0.5
	1.7nm,0.3s,baz=52,slow=18,SNR=2.4						
BATI				S	Sn	13 40 48.2	-1.3
	1.7nm,0.3s,baz=305,slow=19,SNR=1.5						
KAPI	Kappang	10.43	276	Pn	Pn	13 40 05.4	+0.5
FITZ	Fitzroy Crossi	12.59	200	P	Pn	13 40 32.9	-0.8
	0.4nm,0.3s,baz=28,slow=17,SNR=23						
FITZ				S	Sn	13 42 43.2	-8.8
	0.2nm,0.3s,baz=94,slow=14,SNR=2.3						
WB0	Warramunga Arr	14.06	163		Pn	13 40 51.6	-1.4
BKB	Balikpapan	14.13	290	Pn	Pn	13 40 49.4	-4.5
WRAB	Tennant Creek	14.21	164	Pn	Pn	13 40 53.0	-1.8
WRA	Warramunga Arr	14.21	164	P	Pn	13 40 53.5	-1.4
	0.7nm,0.3s,baz=329,slow=13,SNR=22						
WRA				S	Sn	13 43 21.4	-10
	0.5nm,0.3s,baz=354,slow=22,SNR=5.3						
WRA	Warramunga Arr	14.21	164		Pn	13 40 52.9	-2.0
WB2	Warramunga Arr	14.21	164		Pn	13 40 53.0	-2.0
WR0	Warramunga Arr	14.29	163	Pn	Pn	13 40 54.1	-1.8
AS31	Alice Springs	17.70	169	P	P	13 41 39.3	+1.4
AS31				IAmb	IAmb	13 41 44.1	
	comp=Z,0.8nm,0.5s						
ASAR	Alice Springs	17.70	169	P	Pn	13 41 39.4	+1.1
	comp=Z,0.4nm,0.3s,baz=345,slow=9.3,SNR=47						
ASAR				S	Sn	13 44 47.3	-8.4
	comp=Z,0.1nm,0.3s,baz=350,slow=27,SNR=3.8						
CAN	Canberra	33.74	152	P	P	13 44 12.2	+2.0
CAN				IAmb	IAmb	13 44 12.9	
	comp=Z,51nm,1.5s						
SONM	Songino Array	57.78	341	P	P	13 47 20.8	+1.8
	comp=Z,0.2nm,0.4s,baz=150,slow=3.2,SNR=2.0						
SONM	Songino Array	57.78	341	IAmb	IAmb	13 47 25.2	
	comp=Z,0.6nm,1.1s						
MKAR	Makanchi Array	67.68	327	P	P	13 48 26.0	+1.3
	comp=Z,0.2nm,0.4s,baz=116,slow=7.4,SNR=5.2						

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*IDC **18** 13:43:55.6±0.9, 36°26N×142°07E, h0^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.7/44, mbtmp3.7/12, ML3.5/3, Error ellipse: s-maj=24.0km s-min=18.9km az=97.0*

*JMA **18** 13:43:58.8±0.4, 36°37N×141°95E, h29^{km}, M3.5*

*NIED **18** 13:43:58.8, 36°37N×141°95E, h29^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.04; $M_{\theta\theta}$-1.69; $M_{\phi\phi}$-1.35; $M_{r\theta}$-0.88; $M_{\theta\phi}$-1.73; $M_{\phi r}$1.30; Fault plane solution: $M_0$3.50000×10^{14} NP1:ϕ_s25.00000°, δ52.00000°, λ59.00000°. NP2:ϕ_s250.00000°, δ48.00000°, λ123.00000°.*

*NEIC **18** 13:44:00.3±1.5, 36°28N±0°03×142°01E±0°08, h35^{km}±7^{km}, mb4.6/14 Error ellipse: s-maj=9.7km s-min=4.2km az=76.0*

ISC 18 13:43:58.2±0.6**, 36°29N**±0°04×**141°95E**±0°05**, h19**^{km}**, n64,** σ**1^{s}28**/62**, mb3.9**/15**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.06	237	P	Pg	13 44 19.0	+0.1
CHOJ				*e*S	Sg	13 44 33.9	+1.0
JHYU	Hitachinakayam	1.11	273	P	Pg	13 44 18.3	-1.3
JHYU				*e*S	Sg	13 44 33.9	-0.2
JHO	Hitachi	1.16	286	P	Pb	13 44 18.5	-1.1
JIHU	Itakohorinouch	1.20	255	P	Pg	13 44 20.6	-0.8
ONAJ	Iwakimizuishiy	1.23	311	P	Pb	13 44 20.1	-0.8
JFK	Kawauchi	1.38	321	P	Pb	13 44 22.3	-1.1
JYT	Yasato	1.42	268		Pb	13 44 22.9	-1.2
JFT	Otama	1.78	314	P	Pb	13 44 28.6	-1.7
BSO1	Boso 1	1.82	206	P	Pb	13 44 28.7	-1.8
JMM	Marumori	1.82	330	P	Pn	13 44 28.2	-0.3
JMM	Marumori	1.82	330		Pn	13 44 27.8	-0.7
BSO3	Boso 3	1.90	219	P	Pb	13 44 30.6	-1.4
JFY	Yanaizu	2.12	302	P	Pb	13 44 34.2	-1.8
MJAR	Matsushiro Arr	3.03	276	Pn	Pn	13 44 46.5	+1.4
	1.8nm,0.3s,baz=111,slow=9.5,SNR=126						
MJAR				Sn	Sn	13 45 19.8	-1.2
	0.6nm,0.3s,baz=71,slow=19,SNR=6.1						
MJAR	Matsushiro Arr	3.03	276		Pn	13 44 46.1	+0.9
MAJO	Matsushiro	3.03	276		Pn	13 44 46.7	+1.5
MAT	Matsushiro	3.03	276	P	Pn	13 44 46.7	+1.5
MAT				*e*S	Sn	13 45 18.9	-2.1
JSD	Sado	3.43	302	Pn	Pn	13 44 51.7	+1.1
JHJ2	Mitsune	3.63	210	Pn	Pn	13 44 53.2	-0.1
JHJ	Hachijo jima 2	3.63	210	Pn	Pn	13 44 53.3	-0.1
	25nm,0.3s,baz=331,slow=22,SNR=10						
JHJ				Sn	Sn	13 45 35.3	-0.5
	24nm,0.3s,baz=116,slow=22,SNR=5.9						
JGF	Kuroka	3.79	261		Pn	13 44 58.5	+2.8
INU	Inuyama	4.12	258		Pn	13 45 02.5	+2.4
JTM	Tenmabayashi	4.54	351	Pn	Pn	13 45 08.4	+2.5
JWT	Wachi	5.42	261	Pn	Pn	13 45 21.1	+3.2
ERM	Erimo	5.79	9	Pn	Pn	13 45 24.0	+1.0
JHS	Saijyo	7.31	262	Pn	Pn	13 45 47.4	+3.4
ASAJ	Asahikawa	7.83	3	Pn	Pn	13 45 50.6	-0.4
	0.8nm,0.3s,baz=339,slow=24,SNR=1.3						
ASAJ				Sn	Sn	13 47 18.6	-0.5
	0.3nm,0.3s,baz=43,slow=23,SNR=1.5						
JKA	Kamikawa-asahi	7.83	3		Pn	13 45 50.9	-0.2
JCJ	Chichijima	9.17	179	Pn	Pn	13 46 08.9	-0.6
PET	Petropavlovsk	20.43	30	P	Pn	13 48 34.3	-2.0
PET				IAmb	IAmb	13 48 39.4	
	comp=Z,35nm,1.1s						
YULB	Yu-li	22.00	240	P	P	13 48 51.0	-0.2
YULB				IAmb	IAmb	13 49 03.2	
	comp=Z,60nm,1.5s						
H11N2	WAKE ISLAND Hy	27.40	120	T	T	14 18 17.4	
	baz=313,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.40	120	T	T	14 18 12.4	
	baz=313,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	27.41	120	T	T	14 18 14.7	
	baz=313,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	28.09	122	T	T	14 19 09.6	
	baz=315,slow=76,SNR=7.5						
H11S3	WAKE ISLAND Hy	28.09	123	T	T	14 19 09.8	
	baz=315,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	28.11	123	T	T	14 19 12.6	
	baz=315,slow=76,SNR=6.3						
SONM	Songino Array	28.56	305	P	P	13 49 53.7	+0.8
	comp=Z,1.2nm,0.5s,baz=108,slow=8.9,SNR=11						
SONM	Songino Array	28.56	305	P	P	13 49 53.5	+0.6
ATKA	Atka Island	34.61	49	P	P	13 50 45.1	-0.7
CMAR	Chiang Mai Arr	41.74	257	P	P	13 51 47.9	+1.6
	comp=Z,0.5nm,0.5s,baz=56,slow=4.9,SNR=2.0						
ZALV	Zalesovo Beam	42.74	313	P	P	13 51 54.7	+0.8
	comp=Z,0.9nm,0.5s,baz=94,slow=8.2,SNR=5.2						
MK31	Makanchi Array	44.88	303	P	P	13 52 11.6	+0.2
MKAR	Makanchi Array	44.88	303	P	P	13 52 12.2	+0.8
	comp=Z,0.6nm,0.6s,baz=89,slow=10,SNR=8.4						
MKAR	Makanchi Array	44.88	303	P	P	13 52 11.5	+0.2
KURK	Kurchatov	46.73	309	P	P	13 52 25.9	+0.1
KURK				IAmb	IAmb	13 52 30.7	
	comp=Z,8.2nm,1.4s						
GHO	Glory Hole Cre	49.05	36	P	P	13 52 45.2	+1.5
GHO				IAmb	IAmb	13 52 45.6	
	comp=Z,6.8nm,0.8s						
SCM	Sheep Creek Mo	49.81	36	P	P	13 52 49.3	-0.2
WB0	Warramunga Arr	56.21	189	P	P	13 53 36.5	-0.5
WB0				IAmb	IAmb	13 53 52.1	
	comp=Z,7.6nm,1.5s						
WR0	Warramunga Arr	56.38	188	P	P	13 53 38.0	-0.2
WR0				IAmb	IAmb	13 53 53.8	
	comp=Z,6.9nm,1.5s						
WB2	Warramunga Arr	56.39	189	P	P	13 53 37.8	-0.5
WB2				IAmb	IAmb	13 53 46.2	
	comp=Z,6.6nm,1.5s						
WRA	Warramunga Arr	56.39	189	P	P	13 53 38.1	-0.2
	comp=Z,0.8nm,0.9s,baz=6.0,slow=7.6,SNR=5.3						
WRA	Warramunga Arr	56.39	189	IAmb	IAmb	13 53 46.8	
	comp=Z,0.2nm,1.2s						
ABKAR	Akbulak array	58.75	311	P	P	13 53 54.9	+0.2
AS31	Alice Springs	60.12	189	P	P	13 54 04.2	-0.1
ASAR	Alice Springs	60.12	189	P	P	13 54 04.7	+0.3
	comp=Z,0.4nm,0.8s,baz=13,slow=6.9,SNR=5.9						
ASAR	Alice Springs	60.12	189	P	P	13 54 04.5	+0.2
YKA	Yellowknife Ar	64.23	30	P	P	13 54 31.9	+0.5
	comp=Z,0.2nm,0.6s,baz=307,slow=6.5,SNR=5.9						
FINES	FINESS Array B	69.67	333	P	P	13 55 07.0	+0.9
	comp=Z,3.3nm,0.9s,baz=65,slow=14,SNR=2.5						
K05A	Summer Lake	71.08	51	P	P	13 55 13.5	-1.9
PDAR	Pinedale Array	77.88	46	P	P	13 55 55.7	+0.8
	comp=Z,0.3nm,0.8s,baz=301,slow=7.3,SNR=2.6						
PDAR	Pinedale Array	77.88	46	P	P	13 55 54.2	-0.7
BURAR	Bucovina Array	79.16	322	P	P	13 55 59.9	-1.8
CLL	Collm	81.95	330	*i* P	P	13 56 17.6	+1.1

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*JMA **18** 13:51:20.8±0.1, 35°67N×140°74E, h49^{km}±2^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s171.00000°, δ8.00000°, λ61.00000°. NP2:ϕ_s21.00000°, δ83.00000°, λ94.00000°. Principal axes: T Plg52.0000°, Azm295.0000°; N Plg4.0000°, Azm200.0000°; P Plg38.0000°, Azm107.0000°;*

JMA Felt I J1.

*NIED **18** 13:51:20.8, 35°67N×140°74E, h49^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.19; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.12; $M_{r\theta}$-0.14; $M_{\theta\phi}$0.06; $M_{\phi r}$1.18; Fault plane solution: $M_0$1.66000×10^{15} NP1: ϕ_s354.00000°, δ68.00000°, λ88.00000°. NP2: ϕ_s179.00000°, δ22.00000°, λ94.00000°.*

*NEIC **18** 13:51:22.5±1.6, 35°75N±0°06×140°71E±0°09, h51^{km}±10^{km}, mb4.0/8 Error ellipse: s-maj=10.1km s-min=8.1km az=79.0*

*IDC **18** 13:51:25.2±1.6, 35°55N×140°39E, h73^{km}±16^{km}, mb3.4/18, mb1 3.6/20, mb1mx3.5/42, mbtmp3.7/20, MS3.1/5, Ms1 3.2/5, ms1mx2.8/28, Error ellipse: s-maj=19.9km s-min=10.8km az=79.0*

ISC 18 13:51:21.8±0.7**, 35°67N**±0°04×**140°81E**±0°05**, h44**^{km}±6^{km}**, n75,** σ**1^{s}46**/70**, mb3.8**/24**, MS3.1**/3**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.05	53	⇑P	Pn	13 51 28.4	-0.3
CHOJ				*e*S	Sn	13 51 33.9	+0.3
JSMT	Sammumatsuo	0.29	265	⇓P	Pn	13 51 29.6	-0.7
JSMT				S	Sn	13 51 36.6	+0.3
JIHU	Itakohorinouch	0.37	322	⇓P	Pn	13 51 30.8	-0.3
JIHU				*e*S	Sn	13 51 37.7	-0.1
JCN	Nagara	0.56	243	⇓P	Pn	13 51 32.7	-0.7
JYT	Yasato	0.75	318	⇓P	Pn	13 51 34.5	-1.4
JYT	Yasato	0.75	318	Pn	Pn	13 51 34.3	-1.6
JYT				Sn	Sn	13 51 44.4	-1.7
BSO4	Boso 4	0.78	210	⇓P	Pn	13 51 35.5	-0.8
BSO3	Boso 3	0.90	196	P	Pn	13 51 36.9	-0.9
BSO1	Boso 1	1.02	172	P	Pn	13 51 38.9	-0.3
JMM	Marumori	2.19	360		Pn	13 51 56.2	+0.5
MJAR	Matsushiro Arr	2.28	293	P	Pn	13 51 56.7	-0.2
	3.4nm,0.3s,baz=98,slow=14,SNR=220						
MJAR				S	Sn	13 52 27.5	+3.8
	1.6nm,0.3s,baz=145,slow=14,SNR=4.4						
MJAR	Matsushiro Arr	2.28	293		Pn	13 51 55.9	-1.0
MAJO	Matsushiro	2.28	293	Pn	Pn	13 51 56.9	0.0
MAT	Matsushiro	2.28	293	P	Pn	13 51 56.8	-0.1
MAT				*e*S	Sn	13 52 23.8	0.0
MJB9	Matsu-Tunnel	2.28	293		Pn	13 51 56.9	0.0
JSG	Sagara	2.37	246		Pn	13 51 59.1	+1.1
JHJ2	Mitsune	2.68	198	Pn	Pn	13 52 01.4	-1.0
JHJ	Hachijo jima 2	2.68	199	P	Pn	13 52 01.8	-0.7
	16nm,0.3s,baz=318,slow=22,SNR=17						
JHJ				S	Sn	13 52 33.8	+0.1
	56nm,0.3s,baz=86,slow=23,SNR=6.7						
JGF	Kuroka	2.81	270	Pn	Pn	13 52 04.5	+0.3
INU	Inuyama	3.11	265		Pn	13 52 07.7	-0.6
JSD	Sado	3.12	320		Pn	13 52 09.0	+0.5
JWT	Wachi	4.43	267	Pn	Pn	13 52 26.0	-0.4
JTM	Tenmabayashi	5.11	2	Pn	Pn	13 52 36.5	+0.7
JMN	Monobe	6.03	253	Pn	Pn	13 52 49.4	+1.0
JHS	Saijyo	6.32	266	Pn	Pn	13 52 53.2	+0.8
ERM	Erimo	6.59	15	Pn	Pn	13 52 55.4	-0.7
ASAJ	Asahikawa	8.55	9	P	Pn	13 53 20.6	-2.2
	0.6nm,0.3s,baz=202,slow=19,SNR=9.4						
ASAJ				S	Sn	13 54 52.2	-5.7
	0.4nm,0.3s,baz=105,slow=27,SNR=1.7						
JNU	Nakatsue	8.59	256	LR	LR	13 57 11.0	
	comp=Z,187nm,18.8s,baz=34,slow=42						
KSRS	Korea Array	10.52	284	P	Pn	13 53 53.8	+3.9
	0.1nm,0.3s,baz=99,slow=14,SNR=5.0						
KSRS				LR	LR	13 57 54.7	
	comp=Z,83nm,19.1s,baz=100,slow=38						
USRK	Ussuriysk Ar.	10.87	324	P	Pn	13 53 55.9	+1.2
	baz=118,slow=12,SNR=2.2						
HHC	Hu-ho-hao-te	23.48	292	*e*P	P	13 56 27.6	+0.1
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,6.7s						
ENH	Enshi	26.75	267	P	P	13 56 55.0	-2.3
ULN	Ulaanbaatar	27.74	307	P	P	13 57 06.7	+0.5
H11N2	WAKE ISLAND Hy	27.91	118	T	T	14 26 20.2	
	baz=309,slow=75,SNR=9.7						
H11N1	WAKE ISLAND Hy	27.92	118	T	T	14 26 31.2	
	baz=309,slow=75,SNR=9.5						
H11N3	WAKE ISLAND Hy	27.93	118	T	T	14 26 24.6	
	baz=309,slow=75,SNR=9.2						
SONM	Songino Array	28.17	306	P	P	13 57 08.5	-1.5
	comp=Z,0.6nm,0.6s,baz=103,slow=10,SNR=5.6						
SONM				LR	LR	14 08 48.0	
	comp=Z,26nm,18.3s,baz=248,slow=37						
SONM	Songino Array	28.17	306	P	P	13 57 08.4	-1.6
SEY	Seymchan	28.22	11	P	P	13 57 12.2	+2.1
	comp=Z,0.4nm,0.3s,baz=15,slow=20,SNR=1.9						
H11S1	WAKE ISLAND Hy	28.57	120	T	T	14 27 06.1	
	baz=312,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	28.57	120	T	T	14 27 05.6	
	baz=312,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	28.58	120	T	T	14 27 08.6	
	baz=312,slow=75,SNR=15						
CMAR	Chiang Mai Arr	40.69	256	LR	LR	14 16 05.5	
	comp=Z,30nm,18.5s,baz=156,slow=37						
WMQ	Urumqi	41.03	298	*e*P	P	13 59 00.8	0.0
ZAA0	Zalesovo Array	42.48	313	P	P	13 59 11.5	-0.8
ZAA0				IAmb	IAmb	13 59 12.7	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	42.48	313	P	P	13 59 11.7	-0.7
	comp=Z,1.6nm,0.7s,baz=90,slow=5.9,SNR=9.3						
ZALV	Zalesovo Beam	42.48	313	P	P	13 59 11.5	-0.8
MK31	Makanchi Array	44.44	303	P	P	13 59 27.0	-1.3
MK31				IAmb	IAmb	13 59 28.3	
	comp=Z,1.5nm,0.9s						
MKAR	Makanchi Array	44.44	303	P	P	13 59 27.4	-0.8
	comp=Z,1.1nm,0.5s,baz=86,slow=9.8,SNR=18						
MKAR	Makanchi Array	44.44	303	P	P	13 59 27.0	-1.2
MAKZ	Makanchi	44.65	303	P	P	13 59 29.2	-0.8
MAKZ				IAmb	IAmb	13 59 49.5	
	comp=Z,4.6nm,1.4s						
KAPI	Kappang	45.04	210	LR	LR	14 15 41.3	
	comp=Z,24nm,21.7s,baz=69,slow=32						
AAK	Ala-Archa	50.72	299	P	P	14 00 16.2	-1.0
	comp=Z,0.7nm,0.6s,baz=84,slow=9.2,SNR=1.7						
ILAR	Eielson Array	50.91	32	P	P	14 00 22.3	+4.2
	comp=Z,0.3nm,0.7s,baz=264,slow=5.9,SNR=3.1						
KKAR	Karatay Array	53.39	301	P	P	14 00 36.1	-0.8
KKAR	Karatay Array	53.39	301	P	P	14 00 36.1	-0.8
KKAR				IAmb	IAmb	14 00 56.5	
	comp=Z,1.5nm,0.9s						
WRA	Warramunga Arr	55.65	187	P	P	14 00 51.9	-1.5
	comp=Z,0.8nm,0.7s,baz=2.0,slow=7.5,SNR=12						
INK	Inuvik	55.82	27	P	P	14 00 55.5	+1.5
	comp=Z,0.5nm,0.9s,baz=314,slow=9.3,SNR=3.7						
ABKAR	Akbulak array	58.45	311	P	P	14 01 11.9	-1.1
ABKAR				IAmb	IAmb	14 01 20.6	
	comp=Z,1.5nm,0.8s						
AB03	Akbulak array	58.45	311	P	P	14 01 11.7	-1.2
ASAR	Alice Springs	59.38	187	P	P	14 01 18.8	-0.8
	comp=Z,0.4nm,0.5s,baz=18,slow=11,SNR=13						
YKA	Yellowknife Ar	65.23	30	P	P	14 02 00.1	+1.8
	comp=Z,0.3nm,1.0s,baz=298,slow=6.4,SNR=2.5						
FINES	FINESS Array B	69.79	332	P	P	14 02 26.4	-0.7
	comp=Z,4.7nm,1.1s,baz=90,slow=5.6,SNR=4.7						
KBZ	Khabaz	71.42	311	P	P	14 02 37.4	0.0
	comp=Z,2.3nm,0.8s,baz=45,slow=4.0,SNR=4.4						
AKASG	Malin Array Be	75.07	322	P	P	14 02 58.0	-0.7
	comp=Z,0.5nm,0.4s,baz=47,slow=6.2,SNR=4.5						
NOA	NORSAR Array B	75.25	337	P	P	14 02 59.2	-0.4
	comp=Z,0.5nm,0.6s,baz=39,slow=5.8,SNR=3.9						
NVAR	Mina Array Bea	76.20	53	P	P	14 03 09.0	+3.3
	comp=Z,0.4nm,0.7s,baz=291,slow=7.6,SNR=3.3						
PDAR	Pinedale Array	78.97	45	P	P	14 03 22.4	+1.2
	comp=Z,0.2nm,0.4s,baz=316,slow=2.5,SNR=1.8						
BRTR	Keskin Array B	79.39	311	P	P	14 03 23.1	-0.3
	comp=Z,0.4nm,0.6s,baz=66,slow=3.5,SNR=2.2						
CLL	Collm	82.03	330	*e*P	P	14 03 37.0	0.0
GERES	GERESS Array B	83.61	328	P	P	14 03 45.0	-0.4
	comp=Z,0.2nm,0.3s,baz=34,slow=7.1,SNR=3.7						
KMBO	Kilima Mbogo	101.66	277	P	Pdif	14 05 08.3	-2.0
	comp=Z,1.8nm,0.2s,baz=55,slow=8.8,SNR=6.1						
H03N2	Juan Fernandez	147.35	98	T	T	16 55 41.8	
	baz=291						
H03N3	Juan Fernandez	147.36	98	T	T	16 55 38.9	
	baz=291						
H03N1	Juan Fernandez	147.36	98	T	T	16 55 43.0	
	baz=291						

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*JMA **18** 13:55:03.1±0.2, 35°67N×140°76E, h49^{km}±2^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s143.00000°, δ9.00000°, λ59.00000°. NP2:ϕ_s354.00000°, δ82.00000°, λ95.00000°. Principal axes: T Plg53.0000°, Azm270.0000°; N Plg5.0000°, Azm174.0000°; P Plg37.0000°, Azm80.0000°;*

JMA Felt I J1.

*NIED **18** 13:55:03.2, 35°67N×140°76E, h49^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.58; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.61; $M_{r\theta}$-0.20; $M_{\theta\phi}$-0.02; $M_{\phi r}$0.85; Fault plane solution: $M_0$1.06000×10^{15} NP1: ϕ_s349.00000°, δ73.00000°, λ82.00000°. NP2: ϕ_s195.00000°, δ18.00000°, λ114.00000°.*

*IDC **18** 13:55:06.1±2.3, 35°55N×140°48E, h62^{km}±21^{km}, mb3.3/12, mb1 3.4/14, mb1mx3.3/49, mbtmp3.6/14, MS2.7/1, Ms1 2.7/1, ms1mx2.1/26 Error ellipse: s-maj=26.5km s-min=12.5km az=77.0*

ISC 18 13:55:04.2±0.8**, 35°65N**±0°05×**140°78E**±0°07**, h44**^{km}±6^{km}**, n35,** σ**1^{s}10**/32**, mb3.6**/13**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.08	49	⇑P	Pn	13 55 10.8	-0.4
CHOJ				*e*S	Sn	13 55 16.3	+0.1
JSMT	Sammumatsuo	0.27	269	⇓P	Pn	13 55 12.1	-0.4
JSMT				S	Sn	13 55 19.5	+1.1
JIHU	Itakohorinouch	0.38	326	⇓P	Pn	13 55 13.3	-0.3
JIHU				*e*S	Sn	13 55 20.9	+0.6
JCN	Nagara	0.53	244	⇓P	Pn	13 55 15.1	-0.3
JCN				S	Sn	13 55 24.3	+0.8
JYT	Yasato	0.75	320	⇓P	Pn	13 55 17.0	-1.4
BSO4	Boso 4	0.75	209	P	Pn	13 55 18.1	-0.2
BSO3	Boso 3	0.88	195	P	Pn	13 55 19.6	-0.2
BSO3				X		13 55 29.8	
BSO1	Boso 1	1.01	171	P	Pn	13 55 21.9	+0.6
MJAR	Matsushiro Arr	2.27	294	P	Pn	13 55 39.2	+0.1
	2.6nm,0.3s,baz=98,slow=14,SNR=43						
MJAR				S	Sn	13 56 06.8	+0.9
	1.7nm,0.3s,baz=123,slow=14,SNR=5.1						
MJAR				LR	LR	13 56 40.7	
	comp=Z,169nm,20.8s,baz=90,slow=46						
MAT	Matsushiro	2.27	294	P	Pn	13 55 39.3	+0.1
MAT				*e*S	Sn	13 56 06.7	+0.7
JHJ	Hachijo jima 2	2.66	198	P	Pn	13 55 44.5	0.0
	38nm,0.3s,baz=306,slow=23,SNR=8.2						
JHJ				S	Sn	13 56 13.7	-1.8
	18nm,0.3s,baz=237,slow=22,SNR=1.4						
ASAJ	Asahikawa	8.57	9	P	Pn	13 57 03.1	-2.5
	0.7nm,0.3s,baz=210,slow=16,SNR=6.4						
ASAJ				S	Sn	13 58 32.5	-8.3
	0.2nm,0.3s,baz=190,slow=14,SNR=1.7						
KSRS	Korea Array	10.50	284	P	Pn	13 57 36.3	+4.3
	0.1nm,0.3s,baz=99,slow=15,SNR=3.0						
H11N2	WAKE ISLAND Hy	27.92	118	T	T	14 29 58.1	
	baz=310,slow=75,SNR=6.1						
H11N1	WAKE ISLAND Hy	27.92	118	T	T	14 29 53.9	
	baz=310,slow=75,SNR=6.9						
H11N3	WAKE ISLAND Hy	27.93	118	T	T	14 30 00.4	
	baz=310,slow=75,SNR=8.8						

SONM	Songino Array 0.3nm,0.5s,baz=101,slow=12,SNR=3.0	28.16	306	P	P	14 00 51.7	-0.7
H11S3	WAKE ISLAND Hy baz=312,slow=75,SNR=7.9	28.57	120	T	T	14 30 47.5	
H11S1	WAKE ISLAND Hy baz=312,slow=75,SNR=12	28.57	120	T	T	14 30 49.5	
H11S2	WAKE ISLAND Hy baz=312,slow=75,SNR=10	28.59	120	T	T	14 30 50.3	
ZALV	Zalesovo Beam 0.7nm,0.4s,baz=86,slow=6.1,SNR=4.4	42.48	314	P	P	14 02 54.2	-0.6
MKAR	Makanchi Array 0.6nm,0.5s,baz=85,slow=10,SNR=9.8	44.44	303	P	P	14 03 09.9	-0.7
KURBB	Kurchatov Arra 0.9nm,0.4s,baz=86,slow=7.8,SNR=9.6	46.46	309	P	P	14 03 24.8	-1.8
AAK	Ala-Archa 0.5nm,0.4s,baz=284,slow=4.2,SNR=3.5	50.71	299	P	P	14 04 00.8	+1.3
ILAR	Eielson Array 0.2nm,0.8s,baz=272,slow=8.0,SNR=2.2	50.94	32	P	P	14 04 01.6	+0.9
BVAR	Borovoye Array 0.4nm,0.5s,baz=50,slow=9.9,SNR=3.1	51.13	313	P	P	14 04 00.7	-1.7
WRA	Warramunga Arr 0.4nm,0.4s,baz=2.1,slow=7.7,SNR=8.2	55.62	187	P	P	14 04 34.6	-1.0
INK	Inuvik 0.2nm,0.6s,baz=284,slow=4.2,SNR=1.1	55.85	27	P	P	14 04 37.9	+1.3
ASAR	Alice Springs 0.3nm,0.7s,baz=19,slow=11,SNR=14	59.35	187	P	P	14 05 01.6	-0.3
YKA	Yellowknife Ar 0.1nm,0.6s,baz=299,slow=7.7,SNR=2.0	65.26	30	P	P	14 05 43.0	+2.1
FINES	FINESS Array B 2.4nm,1.0s,baz=76,slow=5.9,SNR=3.4	69.80	332	P	P	14 06 09.2	-0.4
AKASG	Malin Array Be 0.2nm,0.3s,baz=46,slow=5.5,SNR=2.0	75.08	322	P	P	14 06 40.4	-0.8
H03N2	Juan Fernandez baz=279	147.36	98	T	T	16 59 22.6	
H03N3	Juan Fernandez baz=279	147.37	98	T	T	16 59 25.9	
H03N1	Juan Fernandez baz=279	147.38	98	T	T	16 59 27.6	

IDC 18 14:02:18.4±3.5**,29°.47N**×**80°.75E,h0**^{km}**,mb3.4**/4**,**
mb1 3.5/6**,mb1mx3.2**/50**,mbtmp3.4**/6**,ML3.4**/2**,Error**
ellipse: s-maj=130.2km s-min=22.9km az=69.0,
Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.1nm,0.3s,baz=189,slow=12,SNR=5.5	17.34	4	P	Pn	14 06 22.4	+0.6
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=319,slow=9.5,SNR=1.5	19.89	119	P	Pn	14 06 52.6	-0.5
KURBB	Kurchatov Arra 0.8nm,0.6s,baz=181,slow=11,SNR=11	21.19	356	P	P	14 07 05.8	+0.4
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=195,slow=8.4,SNR=3.1	24.64	6	P	P	14 07 40.1	-0.4
WRA	Warramunga Arr 0.3nm,0.8s,baz=321,slow=6.7,SNR=2.0	71.28	127	P	P	14 13 39.7	-0.3
ASAR	Alice Springs 0.3nm,0.5s,baz=314,slow=6.2,SNR=9.2	73.50	130	P	P	14 13 53.1	-0.1

JMA ***18*** *14:03:20.2±0.1, 22°.68N×121°.41E, h17*^{km}*±5*^{km}*, M3.9*
NEIC ***18*** *14:03:21.0±0.9, 22°.71N±0°.03×121°.37E±0°.06, h12*^{km}*±6*^{km}*,*
Error ellipse: s-maj=8.3km s-min=3.2km az=68.0
TAP ***18*** *14:03:22.8, 22°.77N×121°.26E, h18*^{km}*, ML4.1, B*
IDC ***18*** *14:03:29.7±3.8, 22°.28N×120°.82E, h80*^{km}*±33*^{km}*, mb3.1/8,*
mb1 3.3/8, mb1mx3.1/45, mbtmp3.4/8, Error ellipse:
s-maj=36.9km s-min=18.0km az=69.0
ISC 18 14:03:22.6±0.7**,22°.73N**±0°.02×**121°.34E**±0°.02**,h24**^{km}±4^{km}**,**
n176,σ1^{s}**27**/270**,mb3.6**/15**,5C-19D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=117	0.13	115	⇓*i*P	Pb	14 03 28.2	+0.8
LDUT	baz=117			*i* S	Sb	14 03 32.6	+2.0
TTN	Taitung baz=258	0.18	278	⇑*i*P	Pb	14 03 27.3	-0.6
TTN	baz=258			S	Sb	14 03 30.7	-0.8
EDH	Donghe baz=10.0	0.24	352	⇑*i*P	Pb	14 03 28.0	-0.7
EDH	baz=10.0			*i* S	Sb	14 03 31.9	-1.1
TWGBT	Beinan baz=293	0.26	290	⇑*i*P	Pb	14 03 27.7	-1.2
TWGBT	baz=293			*i* S	Sb	14 03 31.8	-1.5
LONT	Longtian baz=321	0.26	312	⇑*i*P	Pb	14 03 27.9	-1.2
LONT	baz=321			S	Sb	14 03 32.6	-0.8
TWG	Pinlang baz=293	0.27	290	*i* P	Pb	14 03 27.7	-1.3
TWG	baz=293			S	Sb	14 03 32.1	-1.3
TWG	Pinlang	0.27	290	Pg	Pb	14 03 27.5	-1.5
TWG				Sg	Sb	14 03 30.6	-2.8
CHKT	Chengkung baz=30	0.37	3	P	Pb	14 03 30.3	-0.4
CHKT	baz=30			S	Sb	14 03 35.9	-0.2
ECL	Taimali baz=236	0.38	250	⇓*i*P	Pb	14 03 30.1	-0.7
ECL	baz=236			*i* S	Sb	14 03 35.3	-1.1
FULB	Fuli baz=351	0.47	355	P	Pb	14 03 31.9	-0.4
FULB	baz=351			S	Sb	14 03 38.8	-0.1
ELDTW	Lidau baz=333	0.55	327	⇓*i*P	Pb	14 03 32.2	-1.5
ELDTW	baz=333			*e*S	Sb	14 03 37.4	-3.8
TAW	Tawu baz=217	0.55	228	*e*P	Pb	14 03 33.5	-0.2
TAW	baz=217			*e*S	Sb	14 03 40.8	-0.4
EAST	Anshuo baz=231	0.57	233	⇑*i*P	Pb	14 03 33.5	-0.5
EAST	baz=231			*e*S	Sb	14 03 40.2	-1.6
EYUL	Yuli baz=352	0.62	358	P	Pb	14 03 34.5	-0.3
EYUL	baz=352			S	Sb	14 03 42.4	-0.7
TWF1	Yuli baz=353	0.62	356	⇓*i*P	Pb	14 03 33.6	-1.2
TWF1	baz=353			*e*S	Sb	14 03 41.8	-1.4
TSMG	Majia baz=265	0.64	268	⇓*i*P	Pb	14 03 34.0	-1.2
TSMG	baz=265			S	Sb	14 03 41.1	-2.7
SSD	Sandimen baz=269	0.66	272	⇓*i*P	Pb	14 03 34.1	-1.3
SSD	baz=269			S	Sb	14 03 41.4	-2.7
YULB	Yu-li baz=353	0.66	356	⇓*i*P	Pb	14 03 34.1	-1.5
YULB	baz=353			*e*S	Sb	14 03 42.7	-1.7
YULB	Yu-li	0.66	356	Pg	Pb	14 03 33.9	-1.6
MASBT	Mashibuluo baz=246	0.67	260	⇓*i*P	Pb	14 03 34.7	-0.9
MASBT	baz=246			S	Sb	14 03 42.4	-2.0
STYT	Tauyuan baz=311	0.69	309	⇓*i*P	Pb	14 03 34.9	-1.2
STYT	baz=311			*e*S	Sb	14 03 43.3	-1.9
SLGT	Liugui baz=294	0.69	292	⇓*i*P	Pb	14 03 35.0	-1.1
SLGT	baz=294			*e*S	Sb	14 03 44.2	-1.0
LAY	Lan-yu baz=149	0.71	164	*e*P	Pn	14 03 36.5	-0.8
LAY	baz=149			*e*S	Sn	14 03 48.2	+0.8
SSPT	Xinbi baz=240	0.76	251	⇓*i*P	Pb	14 03 37.2	+0.1
SSPT	baz=240			*e*S	Sb	14 03 47.4	+0.5
HGSD	Ruisui baz=21	0.76	6	*e*P	Pb	14 03 36.9	-0.3
HGSD	baz=21			*e*S	Sn	14 03 50.0	+1.3
EHY	Hungye baz=354	0.77	359	*e*P	Pb	14 03 35.7	-1.7
EHY	baz=354			*e*S	Sb	14 03 45.6	-2.0
SGST	Jiashian baz=297	0.78	297	⇓*i*P	Pb	14 03 36.2	-1.4
SGST	baz=297			*e*S	Sb	14 03 47.3	-0.5
TSPT	Pingtung City baz=262	0.78	266	*e*P	Pn	14 03 37.9	-0.2
SGLT	Jiouru baz=272	0.79	270	*e*P	Pb	14 03 37.5	0.0
SGLT	baz=272			*e*S	Sb	14 03 47.2	-0.7
SCST	Cishan baz=277	0.80	281	P	Pb	14 03 37.5	-0.3
SCST	baz=277			*e*S	Sn	14 03 49.2	-0.3
YUS	Yu-Shan baz=340	0.84	335	⇓*i*P	Pb	14 03 37.5	-1.3
YUS	baz=340			*e*S	Sb	14 03 48.1	-1.8
WTP	Ta-pu baz=309	0.84	308	⇓*i*P	Pb	14 03 38.1	-0.6
WTP	baz=309			*e*S	Sb	14 03 48.2	-1.4
TWM1	Shoushan baz=273	0.85	276	⇓*i*P	Pn	14 03 39.3	+0.1
TWM1	baz=273			*e*S	Sn	14 03 51.0	0.0
CHN1	Nanshi baz=311	0.88	301	⇓*i*P	Pb	14 03 39.0	-0.1
CHN1	baz=311			S	Sn	14 03 51.6	+0.1
HEN	Hengchun baz=210	0.91	218	*e*P	Pn	14 03 39.6	-0.3
HEN	baz=210			*e*S	Sn	14 03 52.0	-0.3
SNST	Tainan City baz=312	0.92	302	P	Pn	14 03 40.1	0.0
SNST	baz=312			*e*S	Sb	14 03 51.7	0.0
TSEB	Hengchuen, Pin baz=190	0.92	206	*e*P	Pn	14 03 39.9	-0.1
TSEB	baz=190			*e*S	Sn	14 03 53.7	+1.2
ALS	Alishan baz=338	0.92	328	⇓*i*P	Pb	14 03 39.3	-0.9
ALS	baz=338			*e*S	Sb	14 03 50.2	-1.9
TWKBT	Hengchun baz=193	0.93	212	*i* P	Pb	14 03 39.3	-0.7
TWKBT	baz=193			*e*S	Sn	14 03 52.7	+0.1
CHN4	Tsaushan baz=314	0.93	312	⇓*i*P	Pb	14 03 39.6	-0.4
CHN4	baz=314			*e*S	Sb	14 03 50.1	-1.8
TWK1	Hengchun baz=193	0.93	213	P	Pb	14 03 39.5	-0.5
TWK1	baz=193			*e*S	Sn	14 03 52.8	+0.1
SNJT	Kaohsiung City baz=268	0.93	272	*e*P	Pn	14 03 41.6	+1.5
SNJT	baz=268			*e*S	Sn	14 03 55.4	+2.6
EGFH	Guangfu baz=357	0.94	5	*e*P	Pb	14 03 39.5	-0.7
TWK	Hsinying baz=305	0.95	304	⇓*i*P	Pb	14 03 40.1	-0.4
TWK	baz=305			*e*S	Sn	14 03 53.5	+0.1
CHN3	Shinhua baz=290	0.96	291	P	Pn	14 03 42.1	+1.5
WLCH	Liuqiu baz=234	0.97	247	*e*P	Pn	14 03 42.0	+1.3
WLCH	baz=234			*e*S	Sn	14 03 54.0	+0.3
KAU	Kaohsiung baz=252	0.97	261	*e*P	Pn	14 03 42.7	+2.0
KAU	baz=252			*e*S	Sn	14 03 54.2	+0.5
CHN5	Tsauling baz=327	1.06	325	P	Pn	14 03 41.9	-0.2
CHN5	baz=327			*e*S	Sn	14 03 56.0	-0.1
WHYT	Xinyi Township baz=339	1.06	335	P	Pb	14 03 42.0	-0.3
WHYT	baz=339			*e*S	Sb	14 03 54.9	-0.9
TAI1	Yung-k'ang baz=286	1.07	287	*e*P	Pb	14 03 43.1	+0.6
ESL	Shilin baz=9.0	1.08	4	*e*P	Pb	14 03 42.5	-0.1
ESL	baz=9.0			*e*S	Sb	14 03 55.6	-0.8
SSLB	Suanglung baz=336	1.11	341	*i* P	Pn	14 03 42.1	-0.7
SSLB	Suanglung	1.11	341		Pn	14 03 42.0	-0.7
CHY	Chiayi baz=313	1.14	312	P	Pb	14 03 43.8	+0.2
CHY	baz=313			*e*S	Sn	14 04 00.1	+2.2
SCLT	Jiali baz=292	1.15	293	*e*P	Pb	14 03 43.8	+0.1
SCLT	baz=292			*e*S	Sn	14 04 00.1	+2.0
ICHU	Yijhu baz=303	1.16	303	P	Pb	14 03 44.3	+0.3
ICHU	baz=303			*e*S	Sn	14 04 00.6	+2.1
WGK	Gukeng baz=324	1.19	323	*e*P	Pb	14 03 44.8	+0.2
WGK	baz=324			*e*S	Sb	14 04 01.2	+1.6
WDLH	Douliu baz=313	1.21	322	P	Pb	14 03 45.2	+0.4
WDLH	baz=313			*e*S	Sb	14 04 01.7	+1.7
CHN8	Yiju baz=300	1.21	301	*e*P	Pb	14 03 44.5	-0.3
CHN8	baz=300			*e*S	Sb	14 04 02.2	+2.2
WLGB	Puzi baz=308	1.22	308	*e*P	Pn	14 03 44.3	+0.2
WLGB	baz=308			*e*S	Sb	14 04 01.1	+1.0
SMLT	Sun Moon Lake baz=352	1.22	341	*e*P	Pb	14 03 44.8	-0.3
SMLT	baz=352			*e*S	Sb	14 04 00.6	+0.2
WJS	Zhushan baz=334	1.23	333	P	Pb	14 03 45.5	+0.4
WJS	baz=334			*e*S	Sb	14 04 02.1	+1.6
TYC	Yuchr baz=354	1.25	339	P	Pb	14 03 45.7	+0.2
TYC	baz=354			*e*S	Sb	14 04 02.5	+1.2
WNT	Mingjian baz=333	1.29	332	P	Pb	14 03 46.7	+0.4
WNT	baz=333			*e*S	Sb	14 04 04.5	+2.1
WTK	Tuku baz=317	1.30	318	*e*P	Pb	14 03 45.8	-0.5
WTK	baz=317			*e*S	Sb	14 04 04.4	+1.9
WNT1	Nantou City baz=333	1.32	333	*e*P	Pb	14 03 47.2	+0.5
WNT1	baz=333			*e*S	Sb	14 04 06.0	+2.7
WPL	Puli Township baz=356	1.32	345	P	Pb	14 03 46.2	-0.6
WPL	baz=356			*e*S	Sb	14 04 04.2	+0.8
CHGB	Renai baz=7.0	1.33	353	P	Pn	14 03 45.5	-0.4
CHGB	baz=7.0			*e*S	Sb	14 04 04.7	+0.9
DPDB	Guoxing baz=356	1.35	344	*e*P	Pb	14 03 47.3	0.0
DPDB	baz=356			*e*S	Sb	14 04 05.5	+1.3
TWD	Chiawan baz=3.0	1.36	10	P	Pn	14 03 45.4	-0.8
TWD	baz=3.0			*e*S	Sn	14 04 03.0	-0.5
WSF	Szhu baz=311	1.37	311	*e*P	Pn	14 03 46.4	+0.1
WSF	baz=311			*e*S	Sb	14 04 05.4	+0.7
WHF	Hehuan Shan baz=12	1.41	357	P	Pn	14 03 46.7	-0.5
WHF	baz=12			*e*S	Sn	14 04 05.1	-0.2
WWF	Wufeng baz=336	1.44	336	*e*P	Pb	14 03 49.0	+0.3
WWF	baz=336			*e*S	Sb	14 04 08.4	+1.9
NACB	Ninganchiao baz=10.0	1.46	9	*e*P	Pn	14 03 45.9	-1.6
NACB	baz=10.0			*e*S	Sn	14 04 04.9	-0.8
NACB	Ninganchiao	1.46	9	Pn	Pn	14 03 45.7	-1.7
RLNB	Erlin baz=322	1.47	322	*e*P	Pb	14 03 48.3	-0.9
RLNB	baz=322			*e*S	Sb	14 04 07.9	+0.5
ETLH	Xiulin Townshi baz=19	1.48	5	*e*P	Pn	14 03 46.3	-1.5
FUSS	Fushou baz=10.0	1.51	357	*e*P	Pn	14 03 48.6	+0.1
FUSS	baz=10.0			*e*S	Sn	14 04 07.4	-0.1
WCHH	Zhanghua baz=332	1.52	332	*e*P	Pb	14 03 50.3	+0.1
WCHH	baz=332			*e*S	Sb	14 04 10.6	+1.4
TDCB	Techi baz=7.0	1.53	354	*e*P	Pn	14 03 48.9	+0.3
TCU	Taichung baz=337	1.54	337	*e*P	Pb	14 03 50.4	-0.1
TCU	baz=337			*e*S	Sb	14 04 10.0	+0.5
WHP	Taichung City baz=357	1.58	347	*e*P	Pb	14 03 51.2	-0.1
WHP	baz=357			*e*S	Sb	14 04 13.3	+2.4
WDGT	Dungji baz=287	1.64	289	*e*P	Pn	14 03 49.8	-0.1
WDGT	baz=287			*e*S	Sn	14 04 09.8	-0.5
NNSB	Datong baz=16	1.69	1	*e*P	Pn	14 03 50.1	-0.7
NNSB	baz=16			*e*S	Sn	14 04 12.0	+0.2
NNSH	Datong baz=15	1.69	1	*e*P	Pn	14 03 50.8	0.0
TWQ1	Liyutan baz=341	1.69	342	*e*P	Pb	14 03 52.8	-0.3
TWQ1	baz=341			*e*S	Sb	14 04 15.1	+1.1
NNS	Nan Shan baz=15	1.70	1	*e*P	Pn	14 03 51.1	+0.1
NNS	baz=15			*e*S	Sn	14 04 12.4	+0.3
ENA	Nanau	1.73	12	*e*P	Pn	14 03 51.3	+0.1
ENA				*e*S	Sn	14 04 12.5	0.0
WDJ	Dajia District baz=337	1.73	338	*e*P	Pn	14 03 52.1	+0.9
WDJ	baz=337			*e*S	Sb	14 04 17.1	+1.9
NSY	Sanyi baz=341	1.76	343	*e*P	Pb	14 03 54.0	-0.3
NSY	baz=341			*e*S	Sb	14 04 16.7	+0.8
ENAH	Nanao baz=14	1.77	14	*e*P	Pn	14 03 49.6	-2.0
PHUB	P'eng-hu baz=294	1.81	296	*e*P	Pn	14 03 51.8	-0.4
PHUB	baz=294			*e*S	Sn	14 04 13.1	-1.3
VCHM	Qimei baz=283	1.83	286	*e*P	Pn	14 03 52.3	-0.2
VCHM	baz=283			*e*S	Sn	14 04 13.9	-1.0
PNG	Penghu baz=295	1.84	297	*e*P	Pn	14 03 52.7	-0.1
PNG	baz=295			*e*S	Sn	14 04 14.4	-0.9
NMLH	Miaoli baz=342	1.87	344	*e*P	Pb	14 03 55.9	-0.2
NMLH	baz=342			*e*S	Sb	14 04 20.3	+1.2
NDT	Datong Townshi baz=17	1.87	5	*e*P	Pb	14 03 54.2	-1.9
NDT	baz=17			*e*S	Sn	14 04 16.2	+0.2
ENTT	Nioudou baz=18	1.91	6	*e*P	Pn	14 03 54.7	+1.0
NSTT	Nanjuang baz=3.0	1.92	351	*e*P	Pb	14 03 56.6	-0.3
NSTT	baz=3.0			*e*S	Sb	14 04 21.3	+0.8
TWC	Suao baz=3.0	1.93	14	*e*P	Pn	14 03 54.4	+0.4
TWC	baz=3.0			*e*S	Sn	14 04 17.2	-0.2
LIOB	Emei baz=349	1.93	351	*e*P	Pb	14 03 55.5	-1.6
LIOB	baz=349			*e*S	Sb	14 04 20.6	-0.2
YHNB	Yeheng baz=14	1.93	1	P	Pn	14 03 54.6	+0.6
YHNB	baz=14			*e*S	Sn	14 04 16.5	-1.1
YHNB	Yeheng	1.93	1	Pn	Pn	14 03 54.5	+0.5
NSK	Sanguang baz=14	1.94	0	*e*P	Pn	14 03 54.5	+0.4
NSK	baz=14			*e*S	Sn	14 04 18.3	+0.6
NWLT	Wulai baz=15	2.04	4	*e*P	Pn	14 03 56.1	+0.6
NTC	Toucheng baz=10.0	2.16	12	*e*P	Pn	14 03 57.5	+0.3
TATO	Taipei	2.24	3	Pn	Pn	14 03 58.7	+0.5
TWA	Mucha baz=15	2.25	6	*e*P	Pn	14 03 59.2	+0.8
JYNG	Yonagunijimaku	2.26	40	P	Pn	14 03 58.8	+0.3
JYNG				S	Sn	14 04 25.6	0.0
TIPB	Shuangxi baz=9.0	2.28	11	*e*P	Pn	14 03 58.8	+0.1
TIPB	baz=9.0			*e*S	Sn	14 04 24.8	-1.2
YOJ	Yonaguni jima	2.31	41	P	Pn	14 04 00.3	+1.2
YOJ				*e*S	Sb	14 04 28.5	-3.1
YOJ	Yonaguni jima baz=44	2.31	41	*e*P	Pn	14 03 59.1	0.0
YOJ	Yonaguni jima	2.31	41	Pn	Pn	14 03 59.5	+0.4
TWB1	Santiao Chiao baz=3.0	2.34	14	*e*P	Pn	14 04 01.3	+1.7
NWF	Wu-fen Shan baz=8.0	2.37	10	*e*P	Pb	14 04 02.3	-2.2
WFSB	Wu-fen Shan baz=8.0	2.37	10	*e*P	Pb	14 04 01.8	-2.7
YM01	YM01 baz=16	2.42	5	*e*P	Pn	14 04 02.3	+1.7
YM04	YM04 baz=15	2.42	4	*e*P	Pn	14 04 00.4	-0.3
YM10	YM10 baz=16	2.42	5	*e*P	Pb	14 04 02.9	-2.7
NTST	Danshui baz=14	2.43	2	*e*P	Pn	14 04 02.1	+1.4
YM05	YM05 baz=16	2.43	5	*e*P	Pn	14 04 02.2	+1.3
YM11	YM11 baz=16	2.44	5	*e*P	Pn	14 04 01.9	+1.0
YM03	YM03 baz=15	2.45	4	*e*P	Pb	14 04 03.3	-2.6
ANP	Anpu baz=15	2.45	4	*e*P	Pn	14 04 02.9	+1.7
HATJ	Hateruma jima	2.62	59	P	Pn	14 04 04.0	+0.6
HATJ				*e*S	Sn	14 04 34.0	-0.5
IRIF	Iriomote-Funau	2.71	53	P	Pn	14 04 05.6	+0.9
IRIF				*e*S	Sn	14 04 37.9	+1.1
VWUC	VWUC baz=322	2.84	323	*e*P	Pn	14 04 06.0	-0.4
JKRS	Kuro-shima	2.87	58	P	Pn	14 04 07.6	+0.7
JIJ	Ishigaki jima	3.04	57	P	Pn	14 04 09.8	+0.6
JIJ				S	Sn	14 04 45.1	+0.2
PTMZ	Houxiangcun baz=318	3.07	319	*e*P	Pn	14 04 09.7	+0.1
PTTC	Pingtan baz=331	3.11	333	*e*P	Pn	14 04 10.3	+0.1

KNM	Kinmen	3.15	303	*e*P	Pn	14 04 12.1	+1.4
	baz=300						
KNMB	Chin-men Tao	3.21	303	*e*P	Pn	14 04 11.6	0.0
	baz=302						
KNMB	Chin-men Tao	3.21	303	Pn	Pn	14 04 12.1	+0.5
JISG	Ishigakijimahi	3.29	55	P	Pn	14 04 12.9	+0.3
JTJ	Tarama	3.62	58	P	Pn	14 04 18.0	+0.8
JTJ				S	Sn	14 04 59.1	-0.1
MATB	Ma-tsu	3.64	340	*e*P	Pn	14 04 17.1	-0.3
	baz=338						
AXDP	Jialang	3.77	306	*e*P	Pn	14 04 19.1	-0.1
	baz=305						
MHZQ	Yeshan	3.96	328	*e*P	Pn	14 04 22.1	+0.2
	baz=327						
LYJJ	Jianjiangzhen	4.07	340	*e*P	Pn	14 04 23.8	+0.4
	baz=338						
JIRB	Irabujima	4.08	58	P	Pn	14 04 24.2	+0.6
JIRB				*e*S	Sn	14 05 10.4	-0.2
JMJ2	Miyako jima3	4.17	60	P	Pn	14 04 25.5	+0.8
JMJ2				*e*S	Sn	14 05 13.4	+0.8
JMJ	Miyako jima 2	4.17	59	*e*P	Pn	14 04 24.9	+0.1
	baz=66						
JIKM	Ikemajima	4.19	58	P	Pn	14 04 25.6	+0.6
JIKM				*e*S	Sn	14 05 13.4	+0.2
JOGS	Gusukube	4.24	61	P	Pn	14 04 26.7	+1.0
JOGS				*e*S	Sn	14 05 14.6	+0.2
XPSS	Dashiqiu	4.31	346	*e*P	Pn	14 04 26.6	-0.1
	baz=344						
MAJO	Matsushiro	20.07	43	P	P	14 07 54.1	-0.1
MAJO				IAmb	IAmb	14 07 55.0	
	comp=Z,11nm,1.1s						
MJAR	Matsushiro Arr	20.07	43	P	P	14 07 54.2	-0.1
CMAR	Chiang Mai Arr	21.39	263	P	P	14 08 04.2	-4.5
	comp=Z,0.5nm,0.5s,baz=97,slow=15,SNR=2.1						
USA0B	Ussuriysk Arra	23.14	20	P	P	14 08 27.2	+0.1
USA0B				IAmb	IAmb	14 08 54.7	
	comp=Z,16nm,1.4s						
USRK	Ussuriysk Ar.	23.14	20	P	P	14 08 27.3	+0.3
JEW	Eniwo	26.11	35	P	P	14 08 54.9	+0.3
SOEI	Soe	32.41	175	P	P	14 09 51.5	+0.6
MKAR	Makanchi Array	39.49	317	P	P	14 10 53.7	+2.5
	comp=Z,0.4nm,0.7s,baz=127,slow=8.4,SNR=3.7						
YAK	Yakutsk	39.69	6	P	P	14 10 56.2	+3.6
	comp=Z,3.6nm,0.4s,baz=162,slow=2.3,SNR=2.5						
ZALV	Zalesovo Beam	41.55	328	P	P	14 11 08.3	+0.3
	comp=Z,0.4nm,0.4s,baz=125,slow=10,SNR=2.9						
H11N1	WAKE ISLAND Hy	42.44	85	T	T	14 56 30.8	
	baz=282,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	42.45	85	T	T	14 56 35.4	
	baz=282,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	42.46	85	T	T	14 56 36.3	
	baz=282,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	42.53	87	T	T	14 56 37.6	
	baz=284,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	42.54	87	T	T	14 56 39.0	
	baz=284,slow=75,SNR=26						
H11S2	WAKE ISLAND Hy	42.55	87	T	T	14 56 39.0	
	baz=284,slow=75,SNR=38						
KURBB	Kurchatov Arra	43.32	321	P	P	14 11 25.0	+2.5
	comp=Z,0.4nm,0.4s,baz=115,slow=6.5,SNR=2.4						
WB0	Warramunga Arr	44.12	162	P	P	14 11 28.6	-0.7
WB0				IAmb	IAmb	14 11 32.2	
	comp=Z,2.2nm,1.1s						
WRAB	Tennant Creek	44.26	162	P	P	14 11 30.2	-0.2
WRAB				IAmb	IAmb	14 11 50.8	
	comp=Z,6.4nm,1.5s						
WRA	Warramunga Arr	44.27	162	P	P	14 11 27.8	-2.6
	comp=Z,0.3nm,0.5s,baz=345,slow=8.9,SNR=2.1						
WRA	Warramunga Arr	44.27	162	P	P	14 11 29.9	-0.5
WB2	Warramunga Arr	44.27	162	P	P	14 11 30.3	-0.2
WB2				IAmb	IAmb	14 11 45.5	
	comp=Z,2.4nm,1.1s						
WR0	Warramunga Arr	44.34	162	P	P	14 11 30.8	-0.3
WR0				IAmb	IAmb	14 11 46.1	
	comp=Z,2.2nm,1.4s						
AS31	Alice Springs	47.71	164	P	P	14 11 57.7	+0.1
ASAR	Alice Springs	47.71	164	P	P	14 11 57.0	-0.6
	comp=Z,0.2nm,0.4s,baz=342,slow=7.5,SNR=14						
ASAR				ScP	ScP	14 17 11.4	-8.1
	comp=Z,0.2nm,0.7s,baz=336,slow=5.7,SNR=4.6						
ASAR	Alice Springs	47.71	164	P	P	14 11 57.7	+0.2
TTA	Tatalina	66.69	30	P	P	14 14 12.5	+1.1
RND	Reindeer	69.85	29	P	P	14 14 30.6	-0.5
RND				IAmb	IAmb	14 14 54.0	
	comp=Z,4.6nm,1.3s						
SCM	Sheep Creek Mo	70.85	30	P	P	14 14 37.8	+0.4
GERES	GERESS Array B	84.05	321	P	P	14 15 52.1	+0.7
	comp=Z,0.3nm,0.8s,baz=106,slow=7.3,SNR=3.5						
YKA	Yellowknife Ar	84.25	23	P	P	14 15 56.6	+4.7
	comp=Z,0.2nm,0.9s,baz=286,slow=5.1,SNR=1.6						

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*IDC **18** 14:04:55.9±2.5, 35°.67N×140°.96E, h41^{km}±22^{km}, mb3.3/8, mb1 3.5/11, mb1mx3.3/48, mbtmp3.6/11, ML3.2/3, MS2.8/5, Ms1 2.8/5, ms1mx2.6/30, Error ellipse: s-maj=31.0km s-min=12.2km az=88.0*

*JMA **18** 14:04:57.3±0.1, 35°.66N×140°.74E, h47^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ$_s$191.00000°, δ9.00000°, λ96.00000°. NP2: ϕ$_s$5.00000°, δ81.00000°, λ89.00000°. Principal axes: T Plg54.0000°, Azm274.0000°; N Plg1.0000°, Azm5.0000°; P Plg36.0000°, Azm96.0000°;*

JMA Felt I J1.

ISC 18 14:04:56.7±0.9**, 35°.70N**±0°.05×**140°.99E**±0°.07**, h51**^{km}±7^{km}**, n32, σ1^{s}.60**/29**, mb3.6**/8**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.10	270	⇑P	Pn	14 05 04.7	0.0
CHOJ				S	Sn	14 05 10.0	-0.4
JSMT	Sammumatsuo	0.44	262	⇓P	Pn	14 05 06.0	-1.3
JIHU	Itakohorinouch	0.46	305	⇓P	Pn	14 05 07.2	-0.3
JIHU				*e*S	Sn	14 05 14.0	-1.3
JCN	Nagara	0.70	246	⇓P	Pn	14 05 09.0	-1.5
JYT	Yasato	0.83	309	⇓P	Pn	14 05 10.9	-1.2
BSO4	Boso 4	0.89	217	P	Pn	14 05 11.8	-1.0
BSO3	Boso 3	0.98	204	P	Pn	14 05 13.4	-0.5
BSO1	Boso 1	1.05	180	P	Pn	14 05 15.2	+0.6
JIM2	Oshima 3	1.61	233	P	Pn	14 05 20.1	-2.6
JOD2	Odawara 2	1.61	255	⇓P	Pn	14 05 20.5	-2.2
MJAR	Matsushiro Arr	2.40	291	P	Pn	14 05 32.2	-1.3
	1.8nm,0.3s,baz=96,slow=14,SNR=118						
MJAR				S	Sn	14 06 05.8	+4.1
	1.5nm,0.3s,baz=99,slow=32,SNR=3.7						
MJAR				LR	LR	14 06 34.1	
	comp=Z,127nm,20.3s,baz=120,slow=42						
MAT	Matsushiro	2.40	291	P	Pn	14 05 33.3	-0.2
MAT				*e*S	Sn	14 06 01.2	-0.6
JHJ	Hachijo jima 2	2.76	201	P	Pn	14 05 37.9	-0.6
	38nm,0.3s,baz=310,slow=23,SNR=12						
JHJ				S	Sn	14 06 08.8	-1.9
	49nm,0.3s,baz=78,slow=23,SNR=6.1						
ASAJ	Asahikawa	8.49	8	P	Pn	14 06 56.9	-0.1
	0.3nm,0.3s,baz=197,slow=18,SNR=6.0						
ASAJ				S	Sn	14 08 28.4	-3.0
	0.2nm,0.3s,baz=324,slow=19,SNR=1.7						
KSRS	Korea Array	10.65	283	P	Pn	14 07 29.8	+3.3
	0.1nm,0.3s,baz=99,slow=13,SNR=2.5						
KSRS				LR	LR	14 11 20.5	
	comp=Z,54nm,21.0s,baz=112,slow=36						
USRK	Ussuriysk Ar.	10.93	324	LR	LR	14 11 42.7	
	comp=Z,36nm,21.8s,baz=160,slow=37						
H11N2	WAKE ISLAND Hy	27.80	118	T	T	14 40 12.4	
	baz=309,slow=75,SNR=7.0						
H11N1	WAKE ISLAND Hy	27.80	118	T	T	14 40 04.5	
	baz=309,slow=75,SNR=8.1						
H11N3	WAKE ISLAND Hy	27.81	118	T	T	14 40 03.4	
	baz=309,slow=75,SNR=4.3						
SONM	Songino Array	28.27	306	LR	LR	14 23 14.7	
	comp=Z,22nm,19.6s,baz=309,slow=39						
H11S1	WAKE ISLAND Hy	28.46	120	T	T	14 40 40.4	
	baz=312,slow=76,SNR=9.4						
H11S3	WAKE ISLAND Hy	28.46	120	T	T	14 40 36.2	
	baz=312,slow=76,SNR=6.1						
H11S2	WAKE ISLAND Hy	28.47	120	T	T	14 40 42.5	
	baz=312,slow=76,SNR=6.6						
TLY	Talaya	30.96	313	LR	LR	14 24 42.7	
	comp=Z,18nm,18.2s,baz=140,slow=38						
ZALV	Zalesovo Beam	42.57	313	P	P	14 12 47.7	+0.5
	0.8nm,0.6s,baz=87,slow=7.4,SNR=4.3						
MKAR	Makanchi Array	44.54	303	P	P	14 13 03.4	+0.1
	0.3nm,0.6s,baz=86,slow=9.0,SNR=5.4						
KURBB	Kurchatov Arra	46.56	309	P	P	14 13 19.1	0.0
	0.7nm,0.4s,baz=84,slow=8.1,SNR=7.1						
ILAR	Eielson Array	50.80	32	P	P	14 13 51.4	-0.1
	0.5nm,1.1s,baz=257,slow=8.2,SNR=1.9						
WRA	Warramunga Arr	55.70	188	P	P	14 14 27.9	0.0
	0.3nm,0.4s,baz=2.4,slow=7.7,SNR=9.0						
ASAR	Alice Springs	59.43	188	P	P	14 14 54.5	+0.4
	0.2nm,0.5s,baz=21,slow=11,SNR=9.5						
AKASG	Malin Array Be	75.14	322	P	P	14 16 33.4	+0.2
	0.3nm,0.4s,baz=44,slow=6.2,SNR=4.1						
NOA	NORSAR Array B	75.28	337	P	P	14 16 34.4	+0.5
	0.5nm,0.8s,baz=29,slow=7.6,SNR=1.8						

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*NEIC **18** 14:13:35.5±2.1, 16°.6S±0°.2×13°.7W±0°.1, h10^{km}±2^{km}, mb4.6/5, Error ellipse: s-maj=40.6km s-min=11.1km az=150.0*

*IDC **18** 14:13:35.8±7.6, 16°.46S×13°.72W, h0^{km}, mb4.2/4, mb1 4.1/4, mb1mx3.8/30, mbtmp4.2/4, MS3.6/11, Ms1 3.6/11, ms1mx3.4/23, Error ellipse: s-maj=334.7km s-min=112.7km az=100.0*

ISC 18 14:13:35.5±1.7**, 16°.7S**±0°.3×**13°.7W**±0°.1**, h10**^{km}**, n19, σ1^{s}.16**/10**, mb4.5**/6**, MS3.7**/11**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	Horse Pasture	7.70	86	Pn	Pn	14 15 27.9	0.0
DBIC	Dimbokro	24.77	21	P	P	14 18 58.8	+1.1
	12nm,1.1s,baz=194,slow=8.9,SNR=4.2						
DBIC				LR	LR	14 26 38.1	
	comp=Z,89nm,19.3s,baz=180,slow=32						
DBIC	Dimbokro	24.77	21	P	P	14 18 58.5	+0.9
DBIC				IAmb	IAmb	14 19 06.6	
	comp=Z,18nm,1.2s						
BDFB	Brasilia	32.92	267	LR	LR	14 30 24.5	
	comp=Z,174nm,21.7s,baz=117,slow=31						
TOA0	Torodi Ar. Sit	33.30	28	P	P	14 20 12.3	-1.3
TOA0				IAmb	IAmb	14 20 21.4	
	comp=Z,11nm,1.1s						
TORD	Torodi Ar. Bea	33.30	28	P	P	14 20 13.0	-0.6
	comp=Z,5.6nm,0.9s,baz=213,slow=9.2,SNR=12						
TORD				LR	LR	14 32 05.0	
	comp=Z,133nm,18.5s,baz=180,slow=34						
TORD	Torodi Ar. Bea	33.30	28	P	P	14 20 12.5	-1.1
BOSA	Boshof	37.74	115	LR	LR	14 33 43.9	
	comp=Z,84nm,19.1s,baz=274,slow=32						
CPUP	Villa Florida	41.53	249	LR	LR	14 35 28.5	
	comp=Z,85nm,20.0s,baz=94,slow=32						
SAML	Samuel	48.72	273	P	P	14 22 20.6	-0.1
SAML				IAmb	IAmb	14 22 31.8	
	comp=Z,6.5nm,1.4s						
PLCA	Paso Flores	54.29	232	LR	LR	14 43 52.1	
	comp=Z,105nm,18.9s,baz=142,slow=33						
ROSC	El Rosal	63.56	284	LR	LR	14 49 59.5	
	comp=Z,82nm,20.5s,baz=111,slow=34						
BRTR	Keskin Array B	71.37	37	P	P	14 24 57.5	+1.5
	comp=Z,0.7nm,0.4s,baz=222,slow=3.9,SNR=6.3						
BRTR				LR	LR	14 55 19.7	
	comp=Z,11nm,21.7s,baz=230,slow=35						
BRTR	Keskin Array B	71.37	37	P	P	14 24 54.6	-1.3
AKASG	Malin Array Be	76.91	26	P	P	14 25 28.2	+0.3
	comp=Z,0.3nm,0.5s,baz=223,slow=5.4,SNR=2.0						
AKASG	Malin Array Be	76.91	26	IAmb	IAmb	14 25 33.4	
	comp=Z,1.9nm,1.2s						
NOA	NORSAR Array B	79.96	12	LR	LR	15 00 52.7	
	comp=Z,12nm,18.0s,baz=295,slow=36						
GEYT	Alibeck	86.45	49	LR	LR	15 03 17.9	
	comp=Z,37nm,19.8s,baz=215,slow=34						
ARCES	ARCESS Array B	90.31	13	LR	LR	15 10 13.5	
	comp=Z,25nm,18.9s,baz=265,slow=38						

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*GUC **18** 14:14:46.3±0.7, 30°.93S×71°.72W, h31^{km}±4^{km}, ML3.8*

*NEIC **18** 14:14:47.5±2.1, 30°.88S±0°.01×71°.88W±0°.07, h36^{km}±15^{km}, Error ellipse: s-maj=9.2km s-min=1.5km az=84.0*

ISC 18 14:14:43.5±3.4**, 30°.88S**±0°.03×**71°.95W**±0°.06**, h7**^{km}±23^{km}**, n42, σ1^{s}.61**/56**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO03	El Pedregal	1.08	88	*i* P	Pb	14 15 04.0	-0.6
CO03				*i* S	Sb	14 15 17.1	-1.8
CO03				IAML		14 15 19.2	
	comp=E,2μm,0.6s						
CO03	El Pedregal	1.08	88		Pb	14 15 03.9	-0.6
CO03				Sn	Sb	14 15 15.3	-3.6
GO04	Tololo Observa	1.22	55	⇓*i*P	Pn	14 15 07.4	+0.3
GO04				*i* S	Sb	14 15 23.0	+0.1
GO04				IAML		14 15 29.3	
	comp=E,6μm,0.6s						
GO04	Tololo Observa	1.22	55		Pn	14 15 07.3	+0.2
GO04				Sn	Sb	14 15 21.6	-1.3
CO01	Juntas del Tor	1.84	61	⇑*i*P	Pn	14 15 17.1	+1.5
CO01				*e*S	Sn	14 15 39.9	+0.6
CO01	Juntas del Tor	1.84	61		Pn	14 15 16.9	+1.2
LCO	Las Campanas	2.16	30	Pn	Pn	14 15 21.6	+1.5
VA03	San Esteban	2.22	148	⇑*i*P	Pn	14 15 21.6	+0.8
VA03				*e*S	Sn	14 15 49.3	+0.8
VA03				IAML		14 15 57.3	
	comp=N,1μm,0.4s						
VA03	San Esteban	2.22	148		Pn	14 15 21.6	+0.8
ROCH	El Roble	2.23	159	*i* P	Pn	14 15 21.6	+0.6
ROCH				*i* S	Sb	14 15 51.3	-0.8
ROCH				IAML		14 15 58.6	
	comp=N,826nm,0.3s						
ROC1	El Roble	2.23	159		Pn	14 15 21.6	+0.6
MT02	Curacav	2.47	164	*e*P	Pn	14 15 25.7	+1.6
MT02				*i* S	Sn	14 15 56.3	+1.8
MT02	Curacav	2.47	164		Pn	14 15 25.3	+1.2
PEL	Peldehue	2.50	155	*e*P	Pn	14 15 25.7	+1.2
PEL				*i* S	Sn	14 15 56.6	+1.3
PEL				IAML		14 16 09.4	
	comp=N,447nm,0.6s						
PEL	Peldehue	2.50	155		Pn	14 15 25.3	+0.8
AC05	El Transito	2.50	36	⇑*i*P	Pn	14 15 27.2	+2.5
AC05				*e*S	Sb	14 15 58.8	-1.1
AC05	El Transito	2.50	36		Pn	14 15 26.2	+1.5
MT05	Renca	2.70	158	*e*P	Pn	14 15 29.4	+2.0
MT05				*i* S	Sn	14 16 02.5	+2.1
MT05				IAML		14 16 13.5	
	comp=E,1μm,0.3s						
MT05	Renca	2.70	158	Pn	Pn	14 15 28.2	+0.8
AC04	Llanos de Chal	2.77	16	⇓*i*P	Pn	14 15 30.0	+1.7
AC04				*i* S	Sn	14 16 02.2	+0.1
AC04	Llanos de Chal	2.77	16	Pn	Pn	14 15 29.6	+1.3
VA05	Santo Domingo	2.78	174	*e*P	Pn	14 15 28.9	+0.5
VA05				IAML		14 16 17.4	
	comp=E,486nm,0.3s						
MT03	Universidad Ad	2.88	155	⇓*i*P	Pn	14 15 31.2	+1.4
MT03				*i* S	Sn	14 16 06.7	+2.0
MT03				IAML		14 16 19.6	
	comp=N,731nm,0.6s						
ZON	Zonda	2.88	104	Pn	Pn	14 15 32.4	+2.6
MT09	Talagante	3.00	165	*e*P	Pn	14 15 32.6	+1.2
MT09				IAML		14 16 24.3	
	comp=N,335nm,0.6s						
LMEL	Las Melosas	3.30	154	*e*P	Pn	14 15 37.8	+2.0
LMEL				*e*S	Sn	14 16 16.3	+1.0
GO03	Copiap	3.60	25	*e*P	Pn	14 15 41.5	+1.7
GO03				IAML		14 16 36.9	
	comp=N,152nm,0.5s						
GO03	Copiap	3.60	25	Pn	Pn	14 15 41.2	+1.5
BO03	Pichilemu	3.60	180	IAML		14 16 41.1	
	comp=E,47nm,0.2s						
BO02	Sierra Bellavi	4.02	166	*e*P	Pn	14 15 47.8	+2.3
BO02	Sierra Bellavi	4.02	166	Pn	Pn	14 15 46.1	+0.6
AC02	Maricunga	4.73	32	*e*P	Pn	14 15 57.6	+2.0
AC02				*i* S	Sn	14 16 54.3	+3.4
AC02				IAML		14 17 15.4	
	comp=E,91nm,0.5s						
AC02	Maricunga	4.73	32	Pn	Pn	14 15 57.1	+1.4
AC01	Pan de Azucar	4.86	14	Pn	Pn	14 15 57.0	-0.1
BI02	San Fabin de	5.79	175	Pn	Pn	14 16 10.6	+0.7
GO02	Mina Guanaco	6.07	21	Pn	Pn	14 16 14.1	+0.2
PB14	IPOC Station P	6.38	13	Pn	Pn	14 16 19.3	+1.1
VA04	Juan Fernndez	6.45	243	Pn	Pn	14 16 19.9	+1.1
PB07	IPOC Station P	9.30	12	Pn	Pn	14 16 57.5	-0.6
AP01	Chacalluta	12.54	7	Pn	Pn	14 17 43.9	+1.6
OTAV	Otavalo	31.56	348	P	P	14 21 02.9	-4.2
OTAV				IAmb	IAmb	14 21 29.8	
	comp=Z,8.2nm,1.1s						
QSPA	South Pole Qui	59.34	180	P	P	14 24 46.6	+0.6
QSPA				IAmb	IAmb	14 24 56.8	
	comp=Z,7.9nm,1.5s						

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*IDC **18** 14:23:54.1±0.9, 9°.98S×159°.96E, h0^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.0/37, mbtmp4.0/12, ML1.9/1, MS3.3/8, Ms1 3.3/8, ms1mx3.1/27, Error ellipse: s-maj=24.9km s-min=8.3km az=100.0*

ISC 18 14:23:58.1±0.7**, 9°.93S**±0°.10×**160°.0E**±0°.1**, h32**^{km}**, n22, σ1^{s}.93**/16**, mb3.9**/11**, MS3.2**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.49	354	Pg	Pb	14 24 05.6	-3.0
	5μm,0.3s,baz=183,slow=4.3,SNR=1199						
HNR				Lg	Lg	14 24 11.6	
	19μm,0.3s,baz=259,slow=22,SNR=39						
HNR				LR	LR	14 24 21.0	
	comp=Z,578nm,19.8s,baz=346,slow=49						
PMG	Port Moresby	12.67	271	Pn	Pn	14 26 54.4	-1.7
	0.3nm,0.3s,baz=270,slow=9.1,SNR=2.0						
PMG				LR	LR	14 31 32.0	
	comp=Z,368nm,18.3s,baz=90,slow=36						
DZM	Mont Dzumac	13.57	154	Pn	P	14 27 14.5	-2.6
	0.2nm,0.3s,baz=120,slow=8.3,SNR=3.3						
DZM				LR	LR	14 31 26.6	
	comp=Z,149nm,20.3s,baz=30,slow=33						
DZM	Mont Dzumac	13.57	154	*e*P	P	14 27 14.1	-3.0
	26nm,1.4s						
DZM				*e*LR	LR	14 30 16.7	
	comp=Z,196nm,25.6s						
CTA	Charters Tower	16.67	231	Pn	P	14 27 52.8	+1.2
	0.3nm,0.3s,baz=87,slow=13,SNR=7.2						
MSVF	Nonsavu	19.16	116	LR	LR	14 34 06.5	
	comp=Z,120nm,19.3s,baz=3.9,slow=32						
WRA	Warramunga Arr	26.68	245	P	P	14 29 34.8	+0.4
	1.8nm,0.7s,baz=71,slow=9.4,SNR=15						
STKA	Stephens Creek	27.70	215	P	P	14 29 44.7	+1.1
	1.3nm,0.5s,baz=36,slow=13,SNR=3.1						
STKA				LR	LR	14 39 38.8	
	comp=Z,42nm,19.3s,baz=31,slow=34						
GUMO	Guam	27.77	327	LR	LR	14 39 58.9	
	comp=Z,42nm,19.7s,baz=149,slow=35						
ASAR	Alice Springs	28.40	238	P	P	14 29 49.8	-0.2
	0.9nm,0.7s,baz=59,slow=10.0,SNR=26						
SIJI	Sorong	29.95	286	LR	LR	14 44 16.4	
	comp=Z,99nm,18.2s,baz=138,slow=41						
FITZ	Fitzroy Crossi	34.26	252	P	P	14 30 41.0	-0.5
	2.6nm,0.8s,baz=68,slow=4.2,SNR=5.3						
PPT	Papeete	49.45	105	LR	LR	14 49 38.5	
	comp=Z,33nm,19.3s,baz=242,slow=31						
PPT2	Papeete2	49.45	105	*e*LR	LR	14 46 51.0	
	comp=Z,70nm,24.2s						
KSRS	Korea Array	55.90	329	LR	LR	14 55 32.3	
	comp=Z,14nm,20.9s,baz=155,slow=34						
CMAR	Chiang Mai Arr	66.50	295	P	P	14 34 47.2	+2.0
	1.5nm,0.9s,baz=114,slow=5.0,SNR=11						
SONM	Songino Array	74.50	326	P	P	14 35 34.6	+1.0
	1.0nm,0.9s,baz=146,slow=8.5,SNR=4.5						
ILAR	Eielson Array	84.34	20	P	P	14 36 27.1	+0.5
	0.9nm,0.5s,baz=247,slow=5.4,SNR=22						
MKAR	Makanchi Array	88.87	318	P	P	14 36 49.6	+0.4
	0.8nm,0.7s,baz=100,slow=5.4,SNR=7.0						
NVAR	Mina Array Bea	89.68	51	P	P	14 36 56.7	+3.2
	0.3nm,0.7s,baz=277,slow=7.0,SNR=2.1						
YKA	Yellowknife Ar	96.60	28	P	P	14 37 24.4	-0.1
	0.3nm,0.6s,baz=258,slow=3.7,SNR=7.1						
PDAR	Pinedale Array	96.98	48	P	P	14 37 28.5	+1.5
	0.1nm,0.3s,baz=215,slow=7.6,SNR=1.8						

IDC 18 14:28:19.2±5.3**, 16°.14S**×**15°.67W, h0**^{km}**, mb4.0**/3**, mb1 4.0**/3**, mb1mx3.6**/33**, mbtmp4.0**/3**, MS3.5**/7**, Ms1 3.4**/7**, ms1mx3.1**/25**, Error ellipse: s-maj=480.7km s-min=72.3km az=112.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.21	8	T	T	14 38 12.2	
	baz=178,slow=74,SNR=5.4						
H10S3	ASCENSION HYDR	7.21	8	T	T	14 38 12.5	
	baz=42,slow=74,SNR=9.7						
DBIC	Dimbokro	25.06	26	P	P	14 33 45.8	+0.4
	7.8nm,1.1s,baz=207,slow=9.0,SNR=3.4						
DBIC				LR	LR	14 41 04.1	
	comp=Z,46nm,21.4s,baz=159,slow=30						
BDFB	Brasilia	31.10	266	LR	LR	14 45 12.0	
	comp=Z,117nm,20.6s,baz=116,slow=33						
TORD	Torodi Ar. Bea	33.79	32	P	P	14 35 02.3	-0.7
	4.2nm,1.1s,baz=209,slow=9.4,SNR=5.6						
TORD				LR	LR	14 46 44.1	
	comp=Z,93nm,18.4s,baz=180,slow=33						
BOSA	Boshof	39.64	115	LR	LR	14 50 05.2	
	comp=Z,33nm,20.8s,baz=237,slow=33						
CPUP	Villa Florida	39.98	248	LR	LR	14 50 18.3	
	comp=Z,45nm,19.6s,baz=87,slow=33						
PLCA	Paso Flores	53.15	231	LR	LR	14 58 60.0	
	comp=Z,61nm,18.3s,baz=148,slow=35						
ROSC	El Rosal	61.64	285	LR	LR	15 04 58.5	
	comp=Z,53nm,20.2s,baz=115,slow=36						
BRTR	Keskin Array B	72.10	38	P	P	14 39 46.3	+0.7
	0.4nm,0.7s,baz=197,slow=4.5,SNR=3.2						
MJAR	Matsushiro Arr	149.17	44	PKPbc	PKPbc	14 48 09.4	-0.7
	1.7nm,1.0s,baz=305,slow=4.3,SNR=4.4						

TAP 18 14:34:59.6, 23°.75N×**122°.82E, h68**^{km}±1^{km}**, ML2.2, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.73	14	P	Pn	14 35 14.9	+0.2
	baz=7.0						
YOJ				*e*S	Sn	14 35 24.3	-1.5
	baz=7.0						
HWA	Hwalien	1.14	282	*e*P	Pn	14 35 19.5	-0.2
	baz=275						
HWA				*e*S	Sn	14 35 34.2	-0.5
	baz=275						
ENAH	Nanao	1.16	307	S	Sn	14 35 35.0	-0.2
	baz=307						
ENA	Nanau	1.20	305	*e*P	Pn	14 35 20.5	0.0
	baz=305						
ENA				*e*S	Sn	14 35 35.8	-0.3
	baz=305						
NACB	Ninganchiao	1.20	291	*e*P	Pn	14 35 19.6	-0.9
	baz=290						
NACB				*e*S	Sn	14 35 34.8	-1.4
	baz=290						
TWC	Suao	1.23	314	*e*P	Pn	14 35 20.2	-0.7
	baz=314						
TWC				*e*S	Sn	14 35 36.2	-0.7
	baz=314						
ETLH	Xiulin Townshi	1.31	291	*e*S	Sn	14 35 39.5	+0.7
	baz=290						
HGSD	Ruisui	1.31	259	*e*P	Pn	14 35 20.6	-1.3
	baz=259						
HGSD				*e*S	Sn	14 35 37.7	-1.0
	baz=259						
EHY	Hungye	1.40	260	P	Pn	14 35 22.7	-0.5
	baz=260						
EHY				*e*S	Sn	14 35 39.6	-1.2
	baz=260						
EHY	Hungye	1.40	260	*e*S	Pn	14 35 22.7	-0.4
	baz=189						
EYUL	Yuli	1.44	254	*e*P	Pn	14 35 23.0	-0.6
	baz=249						
EYUL				*e*S	Sn	14 35 40.6	-1.2
	baz=249						
YULB	Yu-li	1.44	256	*e*P	Pn	14 35 23.3	-0.5
	baz=251						
YULB				S	Sn	14 35 40.7	-1.2
	baz=251						
ENTT	Nioudou	1.45	308	*e*P	Pn	14 35 24.5	+0.7
	baz=299						
TWF1	Yuli	1.45	254	*e*P	Pn	14 35 22.9	-1.0
	baz=249						
TWF1				*e*S	Sn	14 35 40.8	-1.4
	baz=249						
NDT	Datong Townshi	1.46	306	*e*P	Pn	14 35 25.0	+1.0
	baz=298						
WHF	Hehuan Shan	1.48	286	P	Pn	14 35 23.9	-0.6
	baz=285						
WHF				*e*S	Sn	14 35 42.3	-1.1
	baz=285						
WHF	Hehuan Shan	1.48	286	*e*P	Pn	14 35 23.7	-0.9
	baz=347						
NNSB	Datong	1.48	297	*e*P	Pn	14 35 24.0	-0.3

	baz=297						
NNS	**Nan Shan** baz=297	1.49	298	*e*P	Pn	14 35 24.9	+0.4
FULB	**Fuli** baz=242	1.51	249	*e*P	Pn	14 35 24.6	0.0
FUSS	**Fushou** baz=289	1.52	289	*e*P	Pn	14 35 24.7	-0.3
FUSS	baz=289			*e*S	Sn	14 35 43.8	-0.4
YHNB	**Yeheng** baz=297	1.60	305	*e*P	Pn	14 35 26.4	+0.5
NSK	**Sanguang** baz=297	1.62	305	*e*P	Pn	14 35 26.5	+0.4
SSLB	**Suanglung** baz=271	1.71	272	*e*P	Pn	14 35 26.6	-0.7
WHP	**Taichung City** baz=294	1.79	287	*e*P	Pn	14 35 29.3	+0.8
WHP	baz=294			*e*S	Sn	14 35 50.2	-0.2
ALS	**Alishan** baz=257	1.86	263	P	Pn	14 35 30.5	+0.8

TAP 18 14:35:14.8, 23°.73N × 121°.37E, h7^{km}, ML0.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=141	0.08	141	*e*P	Pg	14 35 16.5	-0.3
EGFH	baz=141			*e*S	Sg	14 35 18.2	0.0
ESL	**Shilin** baz=37	0.10	34	*i* P	Pg	14 35 17.1	0.0
ESL	baz=37			*i* S	Sg	14 35 18.8	+0.1
EHY	**Hungye** baz=189	0.23	192	P	Pg	14 35 19.4	0.0
HGSD	**Ruisui** baz=168	0.24	169	*e*P	Pg	14 35 19.6	0.0

TAP 18 15:10:55.9, 24°.00N × 121°.50E, h21^{km}, ML2.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=100	0.10	100	*i* P	Pb	15 11 01.0	+1.0
HWA	baz=100			*i* S	Sb	15 11 04.4	+1.7
TWD	**Chiawan** baz=48	0.12	46	P	Pb	15 11 00.8	-1.3
TWD	baz=48			S	Sb	15 11 03.8	-2.7
ESL	**Shilin** baz=195	0.19	199	*e*P	Pb	15 11 01.3	-0.5
ESL	baz=195			S	Sb	15 11 04.9	-0.9
NACB	**Ninganchiao** baz=26	0.20	26	*i* P	Pb	15 11 01.6	-0.2
NACB	baz=26			S	Sb	15 11 04.9	-0.9
ETLH	**Xiulin Townshi** baz=355	0.21	356	*i* P	Pb	15 11 01.9	0.0
ETLH	baz=355			S	Sb	15 11 05.3	-0.8
WHF	**Hehuan Shan** baz=305	0.26	305	*i* P	Pb	15 11 02.8	+0.2
WHF	baz=305			*e*S	Sb	15 11 07.2	0.0
CHGB	**Renai** baz=282	0.30	282	*i* P	Pb	15 11 03.7	+0.8
CHGB	baz=282			*e*S	Sb	15 11 08.4	+0.7
EGFH	**Guangfu** baz=191	0.33	191	P	Pb	15 11 03.6	+0.5
EGFH	baz=191			*e*S	Sb	15 11 08.6	+0.7
FUSS	**Fushou** baz=317	0.34	317	*i* P	Pb	15 11 04.3	+0.9
FUSS	baz=317			S	Sb	15 11 09.7	+1.1
TWT	**Tachien** baz=309	0.39	311	*e*P	Pn	15 11 05.4	-1.2
TWT	baz=309			S	Sb	15 11 11.6	+1.8
TDCB	**Techi** baz=309	0.40	310	*e*P	Pn	15 11 05.5	-1.2
TDCB	baz=309			*e*S	Sb	15 11 11.3	+1.2
NNSB	**Datong** baz=346	0.44	346	*i* P	Pb	15 11 06.0	+0.9
NNSB	baz=346			S	Sb	15 11 11.8	+0.5
NNS	**Nan Shan** baz=346	0.46	345	P	Pb	15 11 06.2	+0.9
NNS	baz=346			S	Sb	15 11 12.6	+0.9
ENA	**Nanau** baz=28	0.48	27	P	Pb	15 11 06.1	+0.3
ENA	baz=28			*e*S	Sb	15 11 13.5	+1.1
WPL	**Puli Township** baz=272	0.50	272	*e*P	Pb	15 11 06.7	+0.8
WPL	baz=272			*e*S	Sb	15 11 13.8	+1.0
HGSD	**Ruisui** baz=187	0.51	188	*e*P	Pb	15 11 07.0	+0.9
HGSD	baz=187			*e*S	Sb	15 11 14.2	+1.1
EHY	**Hungye** baz=197	0.51	198	P	Pb	15 11 06.7	+0.4
EHY	baz=197			S	Sb	15 11 14.6	+1.3
DPDB	**Guoxing** baz=274	0.53	274	*e*P	Pn	15 11 07.5	-0.8
DPDB	baz=274			*e*S	Sb	15 11 15.0	+1.3
ENAH	**Nanao** baz=32	0.53	32	*e*P	Pn	15 11 07.5	-0.8
SSLB	**Suanglung** baz=247	0.54	248	P	Pb	15 11 07.5	+0.7
SSLB	baz=247			S	Sb	15 11 14.4	+0.3
SMLT	**Sun Moon Lake** baz=258	0.56	259	*e*P	Pb	15 11 07.8	+0.6
SMLT	baz=258			*e*S	Sb	15 11 15.7	+0.8
WHP	**Taichung City** baz=299	0.58	299	*e*P	Pn	15 11 08.6	-0.4
WHP	baz=299			S	Sb	15 11 16.6	+1.2
TYC	**Yuchr** baz=261	0.59	261	*e*P	Pb	15 11 08.1	+0.4
TYC	baz=261			*e*S	Sb	15 11 16.4	+0.6
NDT	**Datong Townshi** baz=1.0	0.60	1	P	Pb	15 11 08.6	+0.7
NDT	baz=1.0			S	Sb	15 11 17.2	+1.1
YULB	**Yu-li** baz=197	0.63	197	P	Pb	15 11 08.4	+0.1
YULB	baz=197			S	Sn	15 11 18.3	-0.8
ENTT	**Nioudou** baz=6.0	0.65	5	*e*P	Pn	15 11 09.4	-0.5
ENTT	baz=6.0			S	Sb	15 11 18.3	+1.1
EYUL	**Yuli** baz=194	0.67	194	P	Pn	15 11 09.7	-0.5
EYUL	baz=194			S	Sn	15 11 19.0	-1.0
TWF1	**Yuli** baz=195	0.67	196	P	Pb	15 11 09.4	+0.5
TWF1	baz=195			*e*S	Sn	15 11 19.1	-1.0
YHNB	**Yeheng** baz=350	0.68	351	P	Pn	15 11 10.2	-0.3
YHNB	baz=350			*e*S	Sb	15 11 19.3	+1.0
NSK	**Sanguang** baz=349	0.69	349	*e*P	Pn	15 11 10.2	-0.4
NSK	baz=349			S	Sn	15 11 19.7	-1.0
TWC	**Suao** baz=28	0.69	28	P	Pn	15 11 11.9	+1.4
TWC	baz=28			S	Sn	15 11 19.6	-1.0
WWF	**Wufeng** baz=273	0.73	274	*e*P	Pn	15 11 11.0	-0.1
WWF	baz=273			*e*S	Sn	15 11 20.9	-0.7
TWE	**Neicheng** baz=13	0.74	12	*e*P	Pb	15 11 10.6	+0.5
TWE	baz=13			S	Sn	15 11 21.0	-0.8
WNT	**Mingjian** baz=260	0.76	261	*e*P	Pn	15 11 10.9	-0.5
WNT	baz=260			*e*S	Sn	15 11 21.8	-0.4
NSTT	**Nanjuang** baz=324	0.78	324	*e*P	Pb	15 11 11.2	+0.4
NSTT	baz=324			*e*S	Sn	15 11 22.8	0.0
NWLT	**Wulai**	0.78	0	*e*P	Pn	15 11 11.8	+0.1
NWLT				*e*S	Sn	15 11 22.1	-0.8
LIOB	**Emei** baz=325	0.78	326	*e*P	Pn	15 11 12.0	+0.2
LIOB	baz=325			*e*S	Sn	15 11 22.8	-0.1
ALS	**Alishan** baz=232	0.80	233	*e*P	Pb	15 11 11.7	+0.4
ALS	baz=232			S	Sn	15 11 23.8	+0.1
FULB	**Fuli** baz=193	0.81	193	*e*S	Sn	15 11 23.1	-0.6
NJD	**Zhudong** baz=333	0.83	333	*e*P	Pn	15 11 12.8	+0.4
NJD	baz=333			*e*S	Sn	15 11 24.8	+0.8
CHN5	**Tsauling** baz=242	0.85	242	*e*P	Pn	15 11 12.8	+0.1
CHN5	baz=242			*e*S	Sn	15 11 24.4	-0.3
ELDTW	**Lidau** baz=208	0.92	209	*e*P	Pb	15 11 13.4	+0.2
ELDTW	baz=208			S	Sn	15 11 25.8	-0.6

JMA 18 15:11:03.4±0.1, 24°.14N × 123°.57E, h16^{km}±2^{km}, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	0.23	111	P	Pg	15 11 08.4	-0.2
HATJ				*e*S	Sg	15 11 12.4	+0.3
IRIF	**Iriomote-Funau**	0.24	37	P	Pg	15 11 08.6	-0.2
IRIF				S	Sg	15 11 12.7	+0.2
JKRS	**Kuro-shima**	0.41	76	P	Pg	15 11 11.7	-0.1
JKRS				S	Sb	15 11 18.0	-0.4
JIJ	**Ishigaki jima**	0.57	67	P	Pg	15 11 14.1	-0.6
JIJ				S	Sg	15 11 21.9	-0.4
YOJ	**Yonaguni jima**	0.60	302	P	Pg	15 11 14.9	-0.4
JISG	**Ishigakijimahi**	0.81	56	P	Pb	15 11 18.5	-0.6
JISG				*e*S	Sg	15 11 30.1	+0.2
JTJ	**Tarama**	1.15	64	P	Pn	15 11 24.6	-0.2
JTJ				*e*S	Sn	15 11 40.3	+0.1

DDA 18 15:16:29.7, 36°.48N × 28°.94E, h7^{km}±3^{km}, ML1.5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	0.41	326	*i* P	Pg	15 16 37.7	0.0
DALY				*i* S	Sb	15 16 45.2	-0.5
AKAS	**Kas**	0.59	114	*i* P	Pg	15 16 40.8	-0.3
AKAS				*i* S	Sb	15 16 50.7	-0.4
AKAS	comp=N,28nm,0.5s			IAML		15 16 55.0	
TURN	**Turunc**	0.63	298	*i* P	Pg	15 16 42.2	+0.3
TURN				*i* S	Sb	15 16 51.9	-0.3
GOLH	**Golhisar**	0.91	33	*i* P	Pg	15 16 47.0	-0.2
GOLH				*i* S	Sb	15 17 00.6	+0.4
GOLH	comp=E,12nm,1.1s			IAML		15 17 02.0	
GOLH	comp=N,12nm,0.5s			IAML		15 17 04.0	
MULA	**Mugla, Merkez-**	0.92	328	*i* P	Pg	15 16 47.5	+0.1
TAVA	**DENIZLI_Tavas**	0.99	359	*i* P	Pg	15 16 48.2	-0.5
TAVA				*i* S	Sg	15 17 01.8	+0.3
TAVA	comp=N,24nm,0.7s			IAML		15 17 03.0	
BDRM	**Kayabasi**	1.33	296	*i* P	Pn	15 16 53.9	-0.9
BDRM				*i* S	Sb	15 17 11.8	-0.6
BDRM	comp=N,20nm,0.5s			IAML		15 17 14.0	
KHAL	**Karahalli**	1.94	13	*i* P	Pb	15 17 04.9	-0.5
KHAL				*i* S	Sn	15 17 23.2	-4.7
KHAL	comp=E,5.3nm,0.4s			IAML		15 17 29.0	

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*DDA **18** 15:16:39.4, 39°.61N × 28°.87E, h7^{km}±2^{km}, ML1.8*

ISK 18 15:16:39.0, 39°.64N × 28°.88E, h0^{km}, ML2.1/23, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DST	**Dursunbey**	0.20	260	PG	Pg	15 16 43.9	+1.0
DST				SG	Sg	15 16 47.7	+2.2
DURS	**Dursunbey**	0.32	263	*i* P	Pg	15 16 45.9	+0.9
DURS				*i* S	Sg	15 16 50.0	+0.9
DURS	**Dursunbey**	0.32	263	*i* P	Pg	15 16 45.9	+0.9
DURS				*i* S	Sg	15 16 50.7	+1.6
ORLT	**Orhaneli**	0.41	2	PG	Pb	15 16 48.1	-1.0
ORLT				SG	Sb	15 16 54.9	-1.0
TVSB	**Tavsanli**	0.49	112	PG	Pb	15 16 49.5	-1.0
TVSB				SG	Sb	15 16 57.6	-0.7
SIMA	**Simav-Kutahya**	0.56	172	PG	Pb	15 16 50.9	-0.8
DEMI	**Demirci**	0.61	192	*i* P	Pg	15 16 50.7	+0.1
SHAP	**Saphane-Kutahy**	0.67	156	PG	Pb	15 16 53.2	-0.4
IGD	**Bursa**	0.67	22	*i* P	Pg	15 16 51.8	-0.1
IGD	**Bursa**	0.67	22	*i* P	Pg	15 16 52.6	+0.7
GDZ	**Gediz**	0.72	139	*i* P	Pb	15 16 53.8	-0.7
GDZ	**Gediz**	0.72	139	*i* P	Pg	15 16 53.3	+0.5
GDZ				*i* S	Sg	15 17 01.2	-0.9
MDNY	**Mudanya-Bursa**	0.73	0	PG	Pb	15 16 54.3	-0.3
KCTX	**Karacabey (Bur**	0.74	328	PG	Pb	15 16 54.6	-0.3
BALB	**Balikesir**	0.77	270	PG	Pb	15 16 55.3	0.0
GEMT	**Gemlik**	0.83	17	PG	Pb	15 16 56.3	0.0
USAK	**Uak-Merkez**	0.93	173	*i* P	Pg	15 16 57.4	+0.6
USAK	**Uak-Merkez**	0.93	173	*i* P	Pg	15 16 57.2	+0.4
USAK	comp=N,31nm,0.7s			IAML		15 17 04.0	
USAK	comp=E,73nm,0.7s			IAML		15 17 04.0	
USAK				*i* S	Sb	15 17 09.9	-1.0
AUBOZ	**BOZOYUK**	0.93	73	PG	Pb	15 16 58.1	0.0
CAVI	**Cavuskoy**	0.93	52	PG	Pb	15 16 58.0	0.0
STEP	**BALIKESIR_Sava**	0.94	254	*i* P	Pg	15 16 57.1	+0.2
STEP				*i* S	Sg	15 17 09.5	+0.5
STEP	**BALIKESIR_Sava**	0.94	254	*i* P	Pg	15 16 57.0	+0.1
STEP				*i* S	Sg	15 17 09.8	+0.8
STEP	comp=E,21nm,0.5s			IAML		15 17 15.0	
STEP	comp=N,18nm,0.7s			IAML		15 17 19.0	
BALY	**Balya**	0.98	276	*i* P	Pb	15 16 58.8	-0.1
BALY				*i* S	Sb	15 17 12.0	-0.3
EDC	**Edincik**	1.05	313	PG	Pb	15 17 00.4	+0.3
KULA	**Kula-Manisa**	1.14	189	PN	Pn	15 17 01.9	-0.3
MANT	**Manisa**	1.17	192	*i* P	Pg	15 17 00.9	-0.5
BORA	**Eskisehir**	1.24	78	PN	Pn	15 17 03.9	+0.2
HRT	**Hereke**	1.33	27	PN	Pn	15 17 05.2	+0.3
MRMT	**Marmara Adasi**	1.38	315	PN	Pb	15 17 06.3	+0.6
SRCK	**Saricakaya, Es**	1.40	73	PN	Pb	15 17 06.5	+0.4
KRBG	**Karabiga-Canak**	1.43	302	PN	Pb	15 17 06.9	+0.4
KAVV	**Kandilli-Istan**	1.43	5	PN	Pb	15 17 06.9	+0.4
ISK	**Istanbul-Kandi**	1.43	5	PN	Pb	15 17 06.9	+0.3
GULT	**Gulveren**	1.49	57	PN	Pb	15 17 07.9	+0.4
SAUV	**Serdivan-Sakar**	1.56	45	PN	Pb	15 17 08.8	0.0
SILT	**Sile**	1.62	21	PN	Pb	15 17 09.8	0.0
LPK	**Lapseki**	1.79	295	PN	Pb	15 17 12.0	-0.6
AUMIH	**MIHALICIK**	2.02	83	PN	Pn	15 17 15.4	+0.9
ERIK	**Erikli-Kesan**	2.09	300	PN	Pn	15 17 16.3	+1.1

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*IDC **18** 15:19:15.6±1.1, 2°.17S × 139°.80E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.5/25, mbtmp3.4/5, ML2.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/19, Error ellipse: s-maj=28.2km s-min=17.3km az=27.0*

*DJA **18** 15:19:18.7±0.6, 2°S±8° × 14°0E±°, h30^{km}±7^{km}, M3.7/4, mb4.6/1, MLv3.2/4*

ISC 18 15:19:19.0±0.8, 2°.25S±0°.09 × 139°.77E±0°.06, h25^{km}, n11, σ1^{s}.25/13, mb3.5/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	0.52	130	P	**Pn**	**15 19 30.7**	**-0.1**
GENI				S	**Sn**	**15 19 37.4**	**-1.5**
JAY	**Jayapura** 14nm,0.3s,baz=238,slow=8.8,SNR=76	0.97	106	Pn	**Pb**	**15 19 36.2**	**-0.9**
JAY	22nm,0.3s,baz=127,slow=20,SNR=22			Sn	**Sn**	**15 19 52.1**	**+2.1**
JAY	**Jayapura**	0.97	106	P	**Pn**	**15 19 35.8**	**-1.2**
JAY				S	**Sn**	**15 19 49.3**	**-0.7**
SMPI	**Sarmi**	1.09	284	P	**Pn**	**15 19 37.7**	**-1.0**
WAMI	**Wamena**	1.94	213	P	**Pn**	**15 19 49.2**	**-1.1**
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=19,slow=12,SNR=4.1	18.36	196	P	**Pn**	**15 23 33.6**	**+1.5**
ASAR	**Alice Springs** 1.6nm,0.9s,baz=24,slow=10,SNR=7.9	22.03	194	P	**P**	**15 24 12.8**	**+0.9**
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,baz=111,slow=6.1,SNR=4.3	45.14	299	P	**P**	**15 27 33.8**	**-0.1**
PETK	**Petropavlovsk-** comp=Z,14nm,21.8s,baz=121,slow=32	57.18	13	LR	LR	15 49 12.9	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=106,slow=7.7,SNR=2.3	70.08	322	P	**P**	**15 30 29.2**	**+0.1**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=260,slow=5.2,SNR=2.4	84.98	24	P	**P**	**15 31 52.7**	**+0.8**

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*IDC **18** 15:44:44.8±0.9, 16°.91S × 14°.31W, h0^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.1/31, mbtmp4.2/14, MS4.1/16, Ms1 4.0/16, ms1mx3.9/30, Error ellipse: s-maj=31.2km s-min=19.4km az=147.0*

*NEIC **18** 15:44:45.4±1.0, 16°.9S±0°.1 × 14°.3W±0°.1, h10^{km}±4^{km}, mb4.8/19, Error ellipse: s-maj=17.6km s-min=15.8km az=133.0*

*GCMT **18** 15:44:48.4±0.3, 16°.43S±0°.03 × 14°.28W±0°.02, h14^{km}±1^{km}, MW4.9/91, Moment Tensor Solution. s18,c18; s91,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.13±.19; $M_{\theta\theta}$-0.24±.10; $M_{\phi\phi}$2.37±.14; $M_{r\theta}$1.90±.33; $M_{\theta\phi}$0.10±.07; $M_{\phi r}$-0.47±.27; Best double couple: $M_0$2.88400×10^{16} NP1:ϕ_s207.00000°, δ47.00000°, λ-45.00000°. NP2: ϕ_s332.00000°, δ59.00000°, λ-127.00000°. Principal axes: T 2.4240, Plg7.0000°, Azm87.0000°; N 0.9160, Plg31.0000°, Azm353.0000°; P -3.3430, Plg58.0000°, Azm189.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 15:44:45.8±0.6, 17°.0S±0°.1 × 14°.29W±0°.10, h10^{km}, n72, σ1^{s}.39/54, mb4.7/36, MS4.1/16, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	8.00	358	Pn	**Pn**	**15 46 41.4**	**-0.5**
H10S2	baz=44,slow=74,SNR=21			T	T	15 54 47.5	
H10S3	**ASCENSION HYDR**	8.01	357	Pn	**Pn**	**15 46 41.5**	**-0.5**
H10S3	baz=176,slow=74,SNR=38			T	T	15 54 46.4	
H10N1	**ASCENSION HYDR** baz=179,slow=79,SNR=8.5	9.10	359	T	T	15 56 01.4	
H10N3	**ASCENSION HYDR** baz=179,slow=79,SNR=17	9.11	359	T	T	15 56 10.9	
H10N2	**ASCENSION HYDR** baz=179,slow=79,SNR=8.6	9.12	359	T	T	15 56 03.9	
RCBR	**Riachuelo** comp=Z,354nm,19.1s,baz=140,slow=32	23.88	295	LR	LR	15 57 26.1	
LIC	**Lamto** 79nm,1.6s	24.83	22	*e*PKIKP	**P**	**15 50 10.8**	**+2.4**
KIC	**Kosan Boka** 71nm,1.1s	25.06	23	*e*PKIKP	**P**	**15 50 11.0**	**+0.5**
TIC	**Toumodi**	25.22	22	*e*PKIKP	**P**	**15 50 11.4**	**-0.6**
DBIC	**Dimbokro** 8.0nm,0.9s,baz=179,slow=11,SNR=7.2	25.30	22	P	**P**	**15 50 12.9**	**+0.2**
DBIC	comp=Z,250nm,19.6s,baz=182,slow=31			LR	LR	15 57 42.0	
DBIC	**Dimbokro**	25.30	22	P	**P**	**15 50 11.4**	**-1.3**
TSUM	**Tsumeb** comp=Z,424nm,21.7s,baz=312,slow=32	30.36	99	LR	LR	16 00 41.1	
BDFB	**Brasilia** comp=Z,593nm,20.6s,baz=113,slow=32	32.37	267	LR	LR	16 01 50.5	
BDFB	**Brasilia**	32.37	267	P	**P**	**15 51 15.6**	**-0.3**
KOWA	**Kowa**	32.90	19	P	**P**	**15 51 19.6**	**-0.8**
KOWA	comp=Z,14nm,0.9s			IAmb	IAmb	15 51 27.4	
TOA0	**Torodi Ar. Sit**	33.86	29	P	**P**	**15 51 28.0**	**-0.8**
TORD	**Torodi Ar. Bea** comp=Z,14nm,0.9s,baz=213,slow=8.0,SNR=33	33.86	29	P	**P**	**15 51 28.3**	**-0.5**
TORD	comp=Z,345nm,18.6s,baz=195,slow=33			LR	LR	16 03 09.9	
TORD	**Torodi Ar. Bea**	33.86	29	P	**P**	**15 51 28.1**	**-0.7**
SUR	**Sutherland**	35.19	122	P	**P**	**15 51 40.2**	**-0.3**
LBTB	**Lobatse**	37.97	109	P	**P**	**15 52 04.2**	**0.0**
BOSA	**Boshof** comp=Z,322nm,19.5s,baz=272,slow=32	38.08	115	LR	LR	16 05 08.3	
MATP	**Matopo** comp=Z,3.3nm,0.8s,baz=263,slow=5.8,SNR=6.3	40.59	102	P	**P**	**15 52 27.8**	**+1.7**
CPUP	**Villa Florida** comp=Z,2.1nm,0.8s,baz=117,slow=2.3,SNR=2.6	40.90	249	P	**P**	**15 52 28.0**	**-0.4**
CPUP	comp=Z,226nm,18.3s,baz=82,slow=34			LR	LR	16 07 59.8	
CPUP	**Villa Florida**	40.90	249	P	**P**	**15 52 28.1**	**-0.4**
SIV	**San Ignacio** comp=Z,0.9nm,0.7s,baz=319,slow=20,SNR=2.2	44.78	264	P	**P**	**15 53 00.7**	**+0.5**
PTGA	**Pitinga**	47.76	285	P	**P**	**15 53 22.6**	**-1.0**
PTGA	comp=Z,12nm,1.3s			IAmb	IAmb	15 53 30.6	
SAML	**Samuel**	48.20	273	P	**P**	**15 53 26.5**	**-0.5**
SAML	comp=Z,5.9nm,1.1s			IAmb	IAmb	15 53 36.1	
LVC	**Limon Verde** comp=Z,54nm,18.6s,baz=118,slow=35	51.46	254	LR	LR	16 14 58.6	
LCO	**Las Campanas**	52.85	246	P	**P**	**15 54 03.3**	**+1.0**
LCO	comp=Z,11nm,1.1s			IAmb	IAmb	15 54 06.2	
GO04	**Tololo Observa**	52.95	245	P	**P**	**15 54 03.7**	**+0.8**
GO04	comp=Z,19nm,1.2s			IAmb	IAmb	15 54 05.0	
PLCA	**Paso Flores** comp=Z,287nm,19.5s,baz=123,slow=33	53.65	232	LR	LR	16 14 30.5	
H05N1	**Guadeloupe/Mar** SNR=3.3	56.75	303	T	T	16 55 41.7	
KEST	**Kesra** comp=Z,5.5nm,1.0s,baz=309,slow=6.5,SNR=2.9	57.03	23	P	**P**	**15 54 30.9**	**-1.2**
KEST	comp=Z,108nm,18.0s,baz=236,slow=36			LR	LR	16 18 40.4	
ESDC	**Sonseca Array** comp=Z,0.6nm,0.7s,baz=183,slow=7.3,SNR=2.9	57.20	9	P	**P**	**15 54 33.9**	**+0.8**
ESDC	comp=Z,74nm,18.7s,baz=170,slow=34			LR	LR	16 17 26.1	
PMSA	**Palmer Station** comp=Z,49nm,18.6s,baz=128,slow=32	58.17	203	LR	LR	16 15 44.5	
NNA	**Nana** comp=Z,229nm,18.4s,baz=114,slow=35	60.56	266	LR	LR	16 20 25.8	
ROSC	**El Rosal** comp=Z,4.3nm,0.4s,baz=164,slow=8.8,SNR=4.0	63.13	285	P	**P**	**15 55 16.6**	**+1.8**
ROSC	comp=Z,440nm,18.0s,baz=100,slow=36			LR	LR	16 22 33.2	
FETA	**Feichten** comp=Z,9.1nm,1.3s	67.59	18	*e*P	**P**	**15 55 43.4**	**+0.7**
ABTA	**Abfaltersbach** comp=Z,9.2nm,1.9s	67.89	20	*e*P	**P**	**15 55 47.5**	**+3.0**
SQTA	**Sankt Quirin** comp=Z,11nm,1.4s	67.91	18	*e*P	P	15 55 49.7	+5.0
MOTA	**Moosalm** comp=Z,6.6nm,1.3s	67.99	18	*e*P	**P**	**15 55 48.9**	**+3.6**
RETA	**Reutte** comp=Z,9.0nm,1.7s	68.02	18	*e*P	**P**	**15 55 49.4**	**+4.2**
WTTA	**Wattenberg** comp=Z,9.0nm,1.3s	68.08	19	*e*P	**P**	**15 55 46.4**	**+0.6**
MYKA	**Terra Mystica** comp=Z,9.5nm,1.6s	68.16	20	*e*P	P	15 55 52.1	+5.9
OBKA	**Obir** comp=Z,12nm,1.7s	68.36	21	*e*P	P	15 55 53.9	+6.4
KBA	**Koelnbreinsper** comp=Z,4.3nm,1.1s	68.46	20	*e*P	P	15 55 55.1	+7.0
SOKA	**Soboth** comp=Z,8.7nm,1.2s	68.67	21	*e*P	**P**	**15 55 49.8**	**+0.3**
ARSA	**Arzberg** comp=Z,7.3nm,1.2s	69.34	21	*e*P	**P**	**15 55 54.2**	**+0.7**
MOA	**Molln**	69.43	20	*e*P	**P**	**15 55 56.9**	**+2.9**

	comp=Z,7.0nm,1.4s						
MAW	Mawson	69.52	156	LR	LR	16 19 00.7	
	comp=Z,146nm,21.0s,baz=248,slow=30						
CONA	Conrad Observa	70.04	21	eP	P	15 55 59.9	+2.1
	comp=Z,6.8nm,1.2s						
GERES	GERESS Array B	70.12	19	P	P	15 55 58.0	-0.4
	comp=Z,0.3nm,0.6s,baz=189,slow=7.6,SNR=4.0						
GERES	GERESS Array B	70.12	19	P	P	15 55 57.4	-1.0
RAYN	Ar Rayn	70.94	57	P	P	15 56 02.1	-1.8
RAYN				IAmb	IAmb	15 56 13.7	
	comp=Z,5.3nm,1.1s						
BR131	Keskin Array S	71.97	37	P	P	15 56 10.3	+0.4
BR131				IAmb	IAmb	15 56 18.5	
	comp=Z,11nm,1.1s						
BRTR	Keskin Array B	71.97	37	P	P	15 56 10.9	+1.1
	comp=Z,1.8nm,0.8s,baz=196,slow=6.7,SNR=15						
BRTR	Keskin Array B	71.97	37	P	P	15 56 10.5	+0.6
MLR	Muntele Rosu	72.11	29	P	P	15 56 09.7	-0.8
AKASG	Malin Array Be	77.47	27	P	P	15 56 40.1	-1.2
	comp=Z,1.7nm,0.7s,baz=225,slow=5.1,SNR=7.5						
AKASG	Malin Array Be	77.47	27	P	P	15 56 39.8	-1.4
AKBB	Malin Array Si	77.47	27	P	P	15 56 40.1	-1.2
AKBB				IAmb	IAmb	15 56 48.2	
	comp=Z,17nm,1.4s						
KBZ	Khabaz	79.88	38	P	P	15 56 56.0	+1.3
	comp=Z,3.4nm,1.0s,baz=94,slow=0.9,SNR=4.9						
NOA	NORSAR Array B	80.42	12	P	P	15 56 57.4	+0.1
	comp=Z,0.8nm,0.9s,baz=208,slow=5.9,SNR=2.7						
FINES	FINESS Array B	84.52	18	P	P	15 57 19.3	+0.7
	comp=Z,1.6nm,0.7s,baz=205,slow=6.2,SNR=1.9						
VNDA	Vanda	85.64	179	LR	LR	16 29 51.8	
	comp=Z,48nm,18.7s,baz=192,slow=32						
W45A	Hickory Valley	87.83	308	P	P	15 57 34.9	-0.8
CCM	Cathedral Cave	90.45	310	P	P	15 57 46.8	-1.1
LTZ	Lake Taylor	120.21	186		PKPdf	16 03 35.3	-2.2
ASAR	Alice Springs	129.02	142	PKP	PKPdf	16 03 53.9	-1.0
	comp=Z,0.5nm,0.9s,baz=207,slow=0.2,SNR=3.0						
ASAR	Alice Springs	129.02	142		PKPdf	16 03 54.8	0.0
WRA	Warramunga Arr	132.07	139	PKP	PKPdf	16 04 01.7	+1.0
	comp=Z,0.3nm,0.9s,baz=235,slow=1.7,SNR=1.9						
MJAR	Matsushiro Arr	148.85	46	PKPbc	PKPbc	16 04 33.4	-0.7
	comp=Z,0.9nm,0.9s,baz=266,slow=1.9,SNR=1.8						

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*NOU **18** 15:45:37.8, 10°.84S×161°.99E, h0^{km}, mb4.5, Solomon Islands*

*IDC **18** 15:45:41.1±2.8, 10°.80S×161°.77E, h61^{km}±25^{km}, mb3.4/8, mb1 3.7/11, mb1mx3.6/29, mbtmp3.8/11, ML1.7/1, MS3.4/6, Ms1 3.4/6, ms1mx3.2/19, Error ellipse: s-maj=26.8km s-min=25.1km az=139.0*

ISC 18 15:45:38.8±0.7**, 10°.8S**±0°.1×**162°.02E**±0°.09**, h35^{km}, n33, σ2^{s}.23**/24**, mb3.6**/8**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.43	303	P	Pn	15 46 16.1	+0.1
	137nm,0.3s,baz=185,slow=6.1,SNR=67						
HNR				S	Sn	15 46 49.9	+5.4
	372nm,0.3s,baz=141,slow=18,SNR=8.2						
HNR				LR	LR	15 47 21.4	
	comp=Z,656nm,18.3s,baz=156,slow=44						
HNR	Honiara	2.43	303	P	Pn	15 46 18.1	+2.1
SANVU	Saraoutou	6.87	133	P	Pn	15 47 19.0	+1.9
DVP	Devils Point	9.15	140	P	Pn	15 47 50.5	+2.2
	36μm,0.4s						
KOUNC	Koumac, New Ca	9.97	168	P	Pn	15 48 01.3	+1.7
LIFNC	LIFOU	11.15	154	P	Pn	15 48 16.1	+0.3
NOUC	Port Laguerre	12.00	161	P	Pn	15 48 29.8	+2.4
DZM	Mont Dzumac	12.02	160	P	Pn	15 48 30.0	+2.2
	1.1nm,0.3s,baz=344,slow=15,SNR=48						
DZM				S	Sn	15 50 29.4	-11
	0.1nm,0.3s,baz=100,slow=18,SNR=1.1						
DZM				LR	LR	15 52 14.3	
	comp=Z,131nm,19.1s,baz=51,slow=33						
DZM	Mont Dzumac	12.02	160	ePn	Pn	15 48 29.8	+2.1
	2.8nm,0.2s						
DZM				eSn	Sn	15 50 32.3	-8.3
	4.1nm,0.3s						
DZM				eLR	LR	15 51 11.1	
	comp=Z,148nm,24.5s						
DZM	Mont Dzumac	12.02	160	P	Pn	15 48 30.8	+3.1
MARNC	Mare, Loyalty	12.12	152	P	Pn	15 48 31.1	+2.1
YATNC	Mamie plateau,	12.16	158	P	Pn	15 48 31.3	+1.6
OUENC	Ouen Island, N	12.48	159	P	Pn	15 48 36.5	+2.6
PMG	Port Moresby	14.69	274	P	Pn	15 49 03.4	-0.7
	0.1nm,0.3s,baz=268,slow=11,SNR=2.1						
PMG				LR	LR	15 54 15.4	
	comp=Z,217nm,19.3s,baz=102,slow=36						
MSVF	Nonsavu	17.01	116	LR	LR	15 54 53.6	
	comp=Z,148nm,19.3s,baz=335,slow=32						
CTA	Charters Tower	17.79	237	P	P	15 49 44.6	+0.4
	0.8nm,0.3s,baz=70,slow=13,SNR=14						
WRA	Warramunga Arr	28.17	248	P	P	15 51 26.4	-1.7
	0.9nm,0.8s,baz=78,slow=9.2,SNR=6.9						
STKA	Stephens Creek	28.24	219	LR	LR	16 02 33.2	
	comp=Z,87nm,20.3s,baz=26,slow=36						
H11S2	WAKE ISLAND Hy	29.43	9	T	T	16 22 24.6	
	baz=188,slow=76,SNR=55						
H11S3	WAKE ISLAND Hy	29.43	9	T	T	16 22 30.3	
	baz=188,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	29.45	9	T	T	16 22 28.3	
	baz=188,slow=76,SNR=41						
ASAR	Alice Springs	29.69	241	P	P	15 51 39.1	-2.6
	0.4nm,0.6s,baz=65,slow=10.0,SNR=5.7						
ASAR				LR	LR	16 03 33.1	
	comp=Z,56nm,18.0s,baz=100,slow=36						
H11N1	WAKE ISLAND Hy	30.66	9	T	T	16 23 56.6	
	baz=188,slow=76,SNR=33						
H11N3	WAKE ISLAND Hy	30.67	9	T	T	16 23 57.2	
	baz=188,slow=76,SNR=44						
H11N2	WAKE ISLAND Hy	30.68	9	T	T	16 23 58.1	
	baz=188,slow=76,SNR=44						
PPT2	Papeete2	47.32	104	eLR	LR	16 08 05.1	
	comp=Z,63nm,27.8s						
CMAR	Chiang Mai Arr	68.66	295	P	P	15 56 37.0	-2.1
	0.2nm,0.3s,baz=134,slow=5.2,SNR=2.7						
SONM	Songino Array	76.31	325	P	P	15 57 23.1	-1.2
	0.5nm,0.7s,baz=152,slow=5.2,SNR=4.0						
H02S1	DAWSON INLET T	84.44	33	T	T	17 31 17.9	
	SNR=20						
ILAR	Eielson Array	84.44	20	P	P	15 58 07.3	-0.1
	0.3nm,0.6s,baz=246,slow=4.6,SNR=6.7						
NVAR	Mina Array Bea	88.66	51	P	P	15 58 30.4	+1.4
	0.2nm,0.6s,baz=256,slow=7.3,SNR=2.3						
MKAR	Makanchi Array	90.83	317	P	P	15 58 37.0	-1.6
	0.1nm,0.5s,baz=89,slow=6.8,SNR=2.0						
YKA	Yellowknife Ar	96.42	28	P	P	15 59 03.1	-0.8
	0.3nm,0.6s,baz=255,slow=3.6,SNR=5.5						

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*IDC **18** 16:01:38.7±3.2, 37°.39N×38°.33E, h0^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.2/32, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=68.8km s-min=19.9km az=16.0*

*DDA **18** 16:01:40.7, 38°.24N×38°.82E, h11^{km}±5^{km}, MW3.6*

*ISK **18** 16:01:41.7, 38°.30N×38°.78E, h6^{km}, ML3.5/17*

ISC 18 16:01:40.0±1.0**, 38°.27N**±0°.02×**38°.80E**±0°.02**, h8**^{km}±9^{km}**, n64, σ2^{s}.35**/93**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	33	i P	Pg	16 01 46.8	+1.5
ELZG				i S	Sg	16 01 49.5	+0.6
ELZG				IAML		16 01 52.0	
	comp=E,10μm,0.3s						
ELZG				IAML		16 01 53.0	
	comp=N,10μm,0.6s						
MALT	Malatya	0.30	278	PG	Pb	16 01 47.7	0.0
MALT				SG	Sb	16 01 52.2	-0.6
AKCD	Akcadag	0.69	272	i P	Pb	16 01 55.0	+0.6
AKCD				i S	Sg	16 02 02.2	-0.2
AKCD				IAML		16 02 07.0	
	comp=E,3μm,0.4s						
AKCD				IAML		16 02 08.0	
	comp=N,6μm,0.5s						
ARPR	Arapgir-MALATY	0.90	336	PG	Pg	16 01 58.4	+1.2
ARPR				SG	Sb	16 02 11.3	+1.2
HEKM	Malatya_Hekimh	0.90	313	i P	Pg	16 01 58.1	+0.9
HEKM				i S	Sg	16 02 06.2	-2.7
HEKM				IAML		16 02 14.0	
	comp=E,2μm,0.4s						
HEKM				IAML		16 02 17.0	
	comp=N,2μm,0.4s						
KOVA	Elazig, Kovanc	0.90	61	i P	Pg	16 01 57.9	+0.5
KOVA				i S	Sg	16 02 07.5	-1.6
KOVA				IAML		16 02 18.0	
	comp=E,340nm,0.8s						
KOVA				IAML		16 02 25.0	
	comp=N,269nm,1.3s						
TNCL	Tunceli-Merkez	1.02	34	i P	Pg	16 01 59.8	+0.2
TNCL				i S	Sg	16 02 07.5	-5.3
TNCL				IAML		16 02 15.0	
	comp=E,606nm,0.7s						
TNCL				IAML		16 02 16.0	
	comp=N,759nm,0.7s						
KEMA	Kemaliye	1.02	346	i P	Pg	16 02 00.1	+0.5
KEMA				i S	Sg	16 02 07.9	-5.0
KEMA				IAML		16 02 15.0	
	comp=E,2μm,0.3s						
KEMA				IAML		16 02 16.0	
	comp=N,2μm,0.5s						
DARE	Darende-Malaty	1.08	286	PG	Pg	16 02 01.2	+0.5
DARE				SG	Sn	16 02 17.4	+0.6
DYBB	Diyarbakir	1.10	107	PN	Pn	16 02 03.7	+1.9
DYBB				SN	Sn	16 02 19.7	+2.4
SANL	SANLIURFA_Merk	1.11	172	i P	Pn	16 02 04.4	+2.4
SANL				i S	Sb	16 02 16.5	+0.3
SANL				IAML		16 02 22.0	
	comp=N,1μm,0.5s						
SANL				IAML		16 02 22.0	
	comp=E,2μm,0.3s						
REFA	Refahiye_ERZN	1.12	359	i P	Pn	16 02 10.6	+8.4
REFA				i S	Sn	16 02 25.3	+7.4
REFA				IAML		16 02 35.0	
	comp=E,167nm,1.4s						
REFA				IAML		16 02 38.0	
	comp=N,148nm,0.7s						
HANI	Diyarbakir_Han	1.26	83	i P	Pb	16 02 05.4	+1.3
HANI				i S	Sg	16 02 17.1	-3.5
HANI				IAML		16 02 26.0	
	comp=E,407nm,0.5s						
HANI				IAML		16 02 31.0	
	comp=N,325nm,0.5s						
CUGUR	Gurin_SVAS	1.28	291	i P	Pg	16 02 05.0	+0.4
CUGUR				i S	Sg	16 02 18.1	-3.2
CUGUR				IAML		16 02 28.0	
	comp=N,1μm,0.9s						
CUGUR				IAML		16 02 29.0	
	comp=E,1μm,0.5s						
ELBS	KAHRAMANMARAS	1.31	273	i P	Pb	16 02 05.8	+0.7
ELBS				i S	Sg	16 02 19.1	-3.2
ELBS				IAML		16 02 29.0	
	comp=N,2μm,0.8s						
ELBS				IAML		16 02 29.0	
	comp=E,2μm,0.9s						
GZT	Gaziantep	1.34	227	i P	Pb	16 02 07.4	+1.9
GZT				i S	Sg	16 02 20.4	-2.7
GZT				IAML		16 02 28.0	
	comp=N,991nm,0.3s						
GZT				IAML		16 02 29.0	
	comp=E,1μm,0.7s						
SURC	SANLIURFA_SURC	1.40	186	i P	Pg	16 02 08.7	+1.9
SURC				i S	Sb	16 02 21.8	-2.7
SURC				IAML		16 02 31.0	
	comp=N,661nm,0.4s						
SURC				IAML		16 02 33.0	
	comp=E,882nm,0.8s						
CUKAN	kangal_SIVAS	1.47	315	i P	Pn	16 02 07.9	+0.8
CUKAN				i S	Sn	16 02 23.6	-3.0
CUKAN				IAML		16 02 29.0	
	comp=N,278nm,0.8s						
CUKAN				IAML		16 02 32.0	
	comp=E,214nm,0.4s						
ERZN	Erzincan	1.49	28	PN	Pb	16 02 09.5	+1.4
MAZI	Mazidag	1.54	122	PN	Pg	16 02 10.8	+1.4
KHMN	Narli-Kahraman	1.57	236	PN	Pg	16 02 10.8	+0.7
EUZM	Uzumlu	1.59	26	i P	Pn	16 02 10.3	+1.7
EUZM				i S	Sn	16 02 25.6	-3.9
EUZM				IAML		16 02 35.0	
	comp=N,73nm,0.5s						
EUZM				IAML		16 02 38.0	
	comp=E,95nm,0.7s						
BNGB	Bingl	1.64	63	PN	Pb	16 02 11.9	+1.4
GAZ	Gaziantep	1.67	229	PN	Pg	16 02 12.3	+0.2
KMRS	Kahramanmaras	1.69	244	PN	Pg	16 02 12.4	0.0
HCB	Kahramanmara	1.77	239	i P	Pb	16 02 13.1	+0.4
HCB				i S	Sn	16 02 31.8	-1.8
HCB				IAML		16 02 46.0	
	comp=E,196nm,0.7s						
HCB				IAML		16 02 47.0	
	comp=N,206nm,0.7s						
YEDI	Yedisu-Bingol	1.79	49	PN	Pb	16 02 14.0	+0.9
CUZAR	Zara_SIVAS	1.80	334	i P	Pb	16 02 14.6	+1.3
CUZAR				i S	Sn	16 02 32.0	-2.7
CUZAR				IAML		16 02 45.0	
	comp=E,450nm,0.5s						
CUZAR				IAML		16 02 46.0	
	comp=N,272nm,0.6s						
SARI	SarD1z-Kayseri	1.88	275	PN	Pb	16 02 14.8	+0.1
CUALT	Altinyayla-SIV	1.89	303	i P	Pb	16 02 15.9	+1.1
CUALT				i S	Sn	16 02 34.4	-2.4
CUALT				IAML		16 02 44.0	
	comp=E,155nm,0.6s						
CUALT				IAML		16 02 49.0	
	comp=N,118nm,0.4s						
SVAN	Silvan-Diyarba	1.89	93	PN	Pb	16 02 15.8	+1.0
SVAN	Silvan-Diyarba	1.89	93	i P	Pb	16 02 16.6	+1.8
SVAN				i S	Sn	16 02 33.1	-3.6
SVAN				IAML		16 02 45.0	
	comp=E,116nm,0.7s						
SVAN				IAML		16 02 55.0	
	comp=N,84nm,0.5s						
KELT	Kelkit	1.90	11	i P	Pb	16 02 15.6	+0.5
KELT				i S	Sn	16 02 33.6	-3.7
KELT				IAML		16 02 44.0	
	comp=E,113nm,0.5s						
KELT				IAML		16 02 48.0	
	comp=N,149nm,0.5s						
BTMN	Batman	1.98	100	i P	Pn	16 02 15.9	+1.9
BTMN				i S	Sn	16 02 35.5	-3.6
BTMN				IAML		16 02 52.0	
	comp=N,366nm,0.6s						
BTMN				IAML		16 03 01.0	
	comp=E,269nm,0.9s						
SUSE	Susehri	1.99	347	i P	Pb	16 02 17.3	+0.8
SUSE				i S	Sn	16 02 36.3	-3.0
SUSE				IAML		16 02 48.0	
	comp=N,143nm,1.1s						
SUSE				IAML		16 02 51.0	
	comp=E,127nm,0.6s						
KAMA	Osmaniye	2.01	238	i P	Pb	16 02 16.2	-0.6
KAMA				IAML		16 02 55.0	
	comp=N,103nm,0.5s						
KAMA				IAML		16 02 56.0	
	comp=E,102nm,0.7s						
KUZU	Kuzuini	2.03	223	i P	Pb	16 02 16.9	-0.3
KUZU				IAML		16 02 55.0	
	comp=E,807nm,0.5s						
KUZU				IAML		16 02 56.0	
	comp=N,995nm,0.4s						
KARO	Karliova-Bingo	2.04	59	PN	Pb	16 02 17.7	+0.3
SCER	sogukcermik	2.05	321	i P	Pb	16 02 18.4	+0.7
SCER				i S	Sn	16 02 38.1	-2.7
SCER				IAML		16 02 52.0	
	comp=N,324nm,0.5s						
SCER				IAML		16 02 52.0	
	comp=E,262nm,0.9s						
ANDN	Andirin	2.06	251	i P	Pb	16 02 17.1	-0.6
ANDN				IAML		16 02 54.0	
	comp=E,281nm,0.4s						
ANDN				IAML		16 02 55.0	
	comp=N,334nm,0.6s						
ALUC	Giresun/Alucra	2.07	359	i P	Pb	16 02 18.2	+0.3
ALUC				i S	Sn	16 02 38.2	-3.1
ALUC				IAML		16 02 49.0	
	comp=E,254nm,0.6s						
ALUC				IAML		16 02 53.0	
	comp=N,192nm,1.1s						
MUSM	Mu-Merkez	2.17	77	i P	Pb	16 02 19.7	0.0
MUSM				i S	Sn	16 02 43.1	-0.7
MUSM				IAML		16 02 53.0	
	comp=N,57nm,0.6s						
MUSM				IAML		16 03 04.0	
	comp=E,53nm,1.4s						
KOPT	Kop Dagi	2.18	37	i P	Pb	16 02 20.3	+0.4
KOPT				i S	Sn	16 02 39.8	-4.6
KOPT				IAML		16 02 59.0	
	comp=E,50nm,0.9s						
KOPT				IAML		16 03 01.0	
	comp=N,60nm,1.0s						
BAYB	BAYBURT	2.28	29	i P	Pb	16 02 22.9	+1.4
BAYB				i S	Sn	16 02 45.8	-0.9
BAYB				IAML		16 03 04.0	
	comp=E,52nm,0.8s						
BAYB				IAML		16 03 14.0	
	comp=N,41nm,0.8s						
BAYT	Aydıntepe-Bayb	2.36	26	PN	Pn	16 02 21.9	+2.7
BNN	Bunyan	2.39	285	PN	Pn	16 02 22.1	+2.5
RSDY	Resadiye-TOKAT	2.41	332	PN	Pn	16 02 22.4	+2.6
SRTM	Siirt_Merkez	2.48	96	i P	Pn	16 02 22.9	+2.2
SRTM				IAML		16 03 06.0	
	comp=N,312nm,0.5s						
SRTM				IAML		16 03 12.0	
	comp=E,291nm,0.6s						
KOZT	Kozan	2.48	252	PN	Pb	16 02 23.7	-1.2
GURO	Guroymak-BITLI	2.55	83	PN	Pn	16 02 25.1	+3.2
GUNE	Kayseri	2.57	285	i P	Pb	16 02 26.4	0.0
GUNE				IAML		16 03 23.0	
	comp=N,210nm,0.9s						
GUNE				IAML		16 03 29.0	
	comp=E,190nm,0.7s						
ESPY	Espiye-Giresun	2.64	359	PN	Pn	16 02 25.8	+2.9
TOKT	Tokat	2.69	320	PN	Pn	16 02 26.4	+2.7
CEYT	Ceyhan	2.73	243	PN	Pb	16 02 27.3	-1.8
KTUT	Trabzon	2.81	15	PN	Pn	16 02 28.5	+3.3
PERV	Siirt/Pervari-	2.97	95	i P	Pn	16 02 26.3	-1.3
SIRC	Yozgat	3.04	292	i P	Pn	16 02 31.0	+2.4
SIRC				IAML		16 03 30.0	
	comp=N,28nm,0.7s						
SIRC				IAML		16 03 30.0	
	comp=E,22nm,0.9s						
CMRD	Camardi-Nigde	3.07	260	PN	Pn	16 02 32.0	+3.0
CKRK	Yozgat, Cekere	3.13	306	i P	Pn	16 02 33.0	+3.2
CKRK				IAML		16 03 25.0	
	comp=N,36nm,0.7s						
CKRK				IAML		16 03 45.0	
	comp=E,24nm,0.9s						
KARA	Karaisali	3.14	252	PN	Pn	16 02 32.9	+3.1
KRTS	Karatas	3.21	239	PN	Pn	16 02 34.2	+3.4
BRTR	Keskin Array B	4.28	291	Pn	Pn	16 02 48.7	+3.2
	comp=E,1.3nm,0.3s,baz=119,slow=14,SNR=46						
BRTR				Sn	Sn	16 03 39.7	+3.9
	comp=E,0.1nm,0.3s,baz=121,slow=22,SNR=2.1						
BRTR				Lg	Lg	16 03 55.2	
	baz=123,slow=29,SNR=1.5						
GERES	GERESS Array B	20.94	308	P	Pn	16 06 25.7	-0.1
	comp=E,0.6nm,0.7s,baz=113,slow=10,SNR=5.7						
MKAR	Makanchi Array	32.80	61	P	P	16 08 20.0	+6.2
	comp=E,0.3nm,0.7s,baz=280,slow=6.8,SNR=3.6						

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*NIED **18** 16:15:06.9, 30°.57N×142°.44E, h31^{km}, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.82; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.78; $M_{r\theta}$-0.52; $M_{\theta\phi}$0.20; $M_{\phi r}$0.67; Fault plane solution: $M_0$1.18000×10^{17} NP1: ϕ_s330.00000°, δ68.00000°, λ78.00000°. NP2: ϕ_s180.00000°, δ25.00000°, λ117.00000°.*

*JMA **18** 16:15:06.9±0.1, 30°.57N×142°.44E, h31^{km}, M5.4*

*IDC **18** 16:15:07.7±0.4, 30°.48N×142°.09E, h0^{km}, mb4.9/38, mb1 4.9/42, mb1mx4.9/50, mbtmp4.9/42, ML4.5/4, MS4.8/37, Ms1 4.8/37, ms1mx4.7/44, Error ellipse: s-maj=13.4km s-min=8.1km az=91.0*

*NEIC **18** 16:15:08.4±1.4, 30°.48N±0°.06×142°.16E±0°.09, h10^{km}±1^{km}, mb5.2/265, Mww5.3, Error ellipse: s-maj=12.9km s-min=9.3km az=77.0*

*BJI **18** 16:15:09.4±0.0, 30°.51N×141°.97E, h27^{km}, mB5.1/62, mb4.9/77, Ms5.3/84, Ms7 5.1/78*

*MOS **18** 16:15:10.7±1.2, 30°.46N×142°.09E, h34^{km}, mb5.3/63, MS4.8/20, Error ellipse: s-maj=6.5km s-min=3.7km az=112.4*

*GCMT **18** 16:15:13.4±0.1, 30°.46N±0°.01×142°.18E±0°.01, h12^{km}, MW5.2/143, Moment Tensor Solution. s83,c135; s143,c264; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.84±.01; $M_{\theta\theta}$0.02±.01; $M_{\phi\phi}$-0.86±.01; $M_{r\theta}$-0.06±.03; $M_{\theta\phi}$0.06±.01; $M_{\phi r}$0.33±.03; Best double couple: $M_0$0.91700×10^{17} NP1:ϕ_s178.00000°, δ34.00000°, λ94.00000°. NP2:ϕ_s354.00000°, δ56.00000°, λ88.00000°. Principal axes: T 0.9030, Plg79.0000°, Azm255.0000°; N 0.0280, Plg2.0000°, Azm355.0000°; P -0.9300, Plg11.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 16:15:16, 30°.37N×142°.02E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.85; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.03; $M_{\theta\phi}$0.21; $M_{\phi r}$0.91; Fault plane solution: $M_0$1.28000×10^{17} NP1:ϕ_s157.00000°, δ24.00000°, λ71.00000°. NP2:ϕ_s358.00000°, δ68.00000°, λ98.00000°. Principal axes: T 1.2410, Plg66.0000°, Azm283.0000°; N 0.0730, Plg8.0000°, Azm175.0000°; P -1.3140, Plg22.0000°, Azm82.0000°;*

ISC 18 16:15:10.9±0.2**, 30°.47N**±0°.03×**142°.13E**±0°.03**, h23^{km}, n900, σ1^{s}.57**/1005**, mb5.1**/279**, MS4.9**/72**, 34C-12D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	3.26	323	P	Pn	16 15 59.4	-1.2
JHCJ				eS	Sn	16 16 38.6	-0.2
JHJ2	Mitsune	3.29	324	P	Pn	16 15 59.8	-1.1
JHJ2				eS	Sn	16 16 39.0	-0.3
JHJ2	Mitsune	3.29	324	Pn	Pn	16 16 00.2	-0.7
JHJ	Hachijo jima 2	3.31	323	Pn	Pn	16 16 00.0	-1.2
	38nm,0.3s,baz=67,slow=22,SNR=13						
JHJ				Sn	Sn	16 16 39.2	-0.7
	187nm,0.3s,baz=252,slow=23,SNR=6.6						
JHJ				LR	LR	16 17 31.1	
	comp=Z,14μm,18.7s,baz=152,slow=44						
CBIJ	Chichi jima	3.37	179	P	Pn	16 16 00.9	-1.1
CBIJ				eS	Sn	16 16 41.2	-0.1
JCJ	Chichijima	3.37	179	Pn	Pn	16 16 02.3	+0.2
	149nm,0.3s,baz=288,slow=23,SNR=23						
JCJ				Sn	Sn	16 16 41.9	+0.6
	208nm,0.3s,baz=231,slow=22,SNR=12						
JCJ	Chichijima	3.37	179		Pn	16 16 01.7	-0.3
JMKN	Mikurajimanish	4.03	328	S	Sn	16 16 56.8	-0.9
BSO1	Boso 1	4.28	347	P	Pn	16 16 11.7	-2.4
JSG	Sagara	5.35	323	Pn	Pn	16 16 29.6	+0.3
JOD2	Odawara 2	5.42	333	P	Pn	16 16 28.7	-1.6
JOD2				eS	Sn	16 17 30.8	-1.1
JYT	Yasato	5.96	345	eS	Sn	16 17 42.8	-2.5
JYT	Yasato	5.96	345	Pn	Pn	16 16 36.1	-1.6
JIE	Ise	6.02	312	P	Pn	16 16 38.5	0.0
JRY	Ryogami san	6.15	335	eS	Sn	16 17 49.0	-1.1
JHO	Hitachi	6.26	348	P	Pn	16 16 39.5	-2.3
JHO				eS	Sn	16 17 48.5	-4.1
JAG	Ashikaga	6.34	340	eS	Sn	16 17 51.5	-3.2
INU	Inuyama	6.49	320		Pn	16 16 44.1	-0.9
JGF	Kuroka	6.50	323	Pn	Pn	16 16 45.3	+0.2
MJAR	Matsushiro Arr	6.88	333	Pn	Pn	16 16 50.5	+0.1
	2.8nm,0.3s,baz=160,slow=10,SNR=192						
MJAR				Sn	Sn	16 18 06.5	-1.4
	1.5nm,0.3s,baz=166,slow=18,SNR=6.5						
MJAR				LR	LR	16 19 20.7	
	comp=Z,6μm,19.2s,baz=125,slow=37						
MJAR	Matsushiro Arr	6.88	333	P	Pn	16 16 49.7	-0.7
MJAR	Matsushiro Arr	6.88	333		Pn	16 16 49.7	-0.7
MAJO	Matsushiro	6.88	333	i P	Pn	16 16 50.1	-0.3
MAJO	Matsushiro	6.88	333	Pn	Pn	16 16 50.0	-0.3
MAT	Matsushiro	6.88	333	P	Pn	16 16 50.7	+0.3
MAT				S	Sn	16 18 06.1	-1.9
MJB9	Matsu-Tunnel	6.89	333		Pn	16 16 50.0	-0.5
JFK	Kawauchi	6.96	352	P	Pn	16 16 48.1	-3.3
JWT	Wachi	7.42	312	Pn	Pn	16 16 57.6	-0.1
JMM	Marumori	7.46	352		Pn	16 16 55.9	-2.3
JMN	Monobe	7.71	297	Pn	Pn	16 17 01.4	-0.4
JSD	Sado	8.20	338	Pn	Pn	16 17 06.9	-1.5
JMK	Ichinoseki	8.49	355	P	Pn	16 17 08.7	-3.7
JNU	Nakatsue	9.93	288	Pn	Pn	16 17 33.6	+1.4
	0.2nm,0.3s,baz=126,slow=7.8,SNR=2.9						
JNU				LR	LR	16 21 23.7	
	comp=Z,6μm,18.6s,baz=104,slow=38						
JTM	Tenmabayashi	10.33	356	Pn	Pn	16 17 35.0	-2.6
ERM	Erimo	11.55	4	i P	Pn	16 17 51.5	-2.8
ERM	Erimo	11.55	4	Pn	Pn	16 17 49.4	-4.9
JEW	Eniwo	12.36	358		Pn	16 18 01.4	-3.9
NMR	Nemuro--Hokkai	13.19	12	eP	Pn	16 18 10.7	-6.0
JKA	Kamikawa-asahi	13.62	1	Pn	Pn	16 18 18.7	-3.9
ASAJ	Asahikawa	13.62	1	Pn	Pn	16 18 18.2	-4.4

	3.6nm,0.3s,baz=208,slow=11,SNR=30						
ASAJ				Sn	Sn	16 20 41.0	-12
	1.1nm,0.3s,baz=51,slow=30,SNR=3.1						
ASAJ				LR	LR	16 24 25.0	
	comp=Z,3µm,20.6s,baz=190,slow=41						
ASAJ	**Asahikawa**	**13.62**	**1**	P	**Pn**	**16 18 18.7**	**-3.9**
KSRS	**Korea Array**	**13.68**	**304**	Pn	**Pn**	**16 18 25.5**	**+2.0**
	0.9nm,0.3s,baz=108,slow=12,SNR=24						
KSRS				LR	LR	16 23 52.8	
	comp=Z,4µm,18.6s,baz=109,slow=38						
KSAR	**Wonju Array Be**	**13.71**	**304**	P	**Pn**	**16 18 22.0**	**-1.8**
KSAR	**Wonju Array Be**	**13.71**	**304**		**Pn**	**16 18 21.9**	**-1.8**
KS19	**Wonju Array Si**	**13.74**	**304**		**Pn**	**16 18 22.5**	**-1.8**
GRPR	**Tuman**	**13.80**	**11**	*e*P	Pn	16 18 19.3	-5.7
GRPR				pmax	pmax		
	comp=Z,155nm,1.3s						
GRPR				pmax	pmax		
	comp=Z,73µm,0.4s						
GRPR				pmax	pmax		
	comp=N,43nm,0.2s						
GRPR				pmax	pmax		
	comp=E,33nm,0.1s						
INCN	**Inchon**	**14.62**	**303**	P	Pn	16 18 31.8	-4.6
INCN				P	Pn	16 18 31.8	-4.6
TEY	**Ternei**	**15.17**	**345**	⇑*e*P	**Pn**	**16 18 39.6**	**-4.0**
TEY				*e*		16 21 37.7	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,20nm,1.4s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TEY				MLR	MLR		
	comp=Z,200nm,16.0s						
USA0B	**Ussuriysk Arra**	**15.88**	**332**	P	**Pn**	**16 18 50.8**	**-2.0**
USA0B				pmax	pmax		
	comp=Z,22nm,1.0s						
USA0B	**Ussuriysk Arra**	**15.88**	**332**		**Pn**	**16 18 50.8**	**-2.0**
USRK	**Ussuriysk Ar.**	**15.88**	**332**	Pn	**Pn**	**16 18 51.4**	**-1.5**
	baz=162,slow=12,SNR=18						
USRK				LR	LR	16 25 02.7	
	comp=Z,2µm,18.6s,baz=139,slow=38						
USRK	**Ussuriysk Ar.**	**15.88**	**332**	P	**Pn**	**16 18 50.8**	**-2.0**
YSS	**Yuzh-Sakhalins**	**16.46**	**2**	*e*P	**Pn**	**16 18 57.6**	**-2.7**
YSS				*e*S	**Sn**	**16 21 55.6**	**-6.7**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=Z,3µm,13.0s						
YSS				MLR	MLR		
	comp=N,3µm,16.0s						
YSS	**Yuzh-Sakhalins**	**16.46**	**2**	Pn	**Pn**	**16 18 57.8**	**-2.4**
YSS				IAmb	IAmb	16 19 23.9	
	comp=Z,146nm,1.1s						
GUMO	**Guam**	**16.99**	**171**	P	**Pn**	**16 19 08.4**	**+1.2**
	comp=Z,7.2nm,0.3s,baz=161,slow=3.1,SNR=8.5						
GUMO				LR	LR	16 25 36.2	
	comp=Z,4µm,18.5s,baz=358,slow=37						
MDJ	**Mudanjiang**	**17.24**	**328**	P	**Pn**	**16 19 08.6**	**-1.4**
MDJ				pP	pP	16 19 15.3	-0.6
MDJ				PP	**sP**	**16 19 17.8**	**-0.5**
MDJ				sP	pwP	16 19 19.0	-5.6
MDJ				S	**Sn**	**16 22 21.6**	**+0.5**
MDJ				SS	**SnSn**	**16 22 34.6**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,22nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,470nm,3.7s						
MDJ				LR	LR		
	comp=Z,6µm,14.6s						
MDJ				LR	LR		
	comp=Z,5µm,13.2s						
MDJ				LR	LR		
	comp=Z,7µm,17.5s						
MDJ	**Mudanjiang**	**17.24**	**328**		**Pn**	**16 19 08.2**	**-1.8**
YOJ	**Yonaguni jima**	**17.98**	**255**	P	**Pn**	**16 19 17.7**	**-1.7**
YOJ				pmax	pmax		
	comp=Z,205nm,1.3s						
YOJ	**Yonaguni jima**	**17.98**	**255**	Pn	**Pn**	**16 19 17.7**	**-1.7**
YOJ				IAmb	IAmb	16 19 25.6	
	comp=Z,205nm,1.3s						
SSE	**Sheshan**	**18.01**	**277**	P	**P**	**16 19 20.9**	**+0.9**
SSE				pmax	pmax		
	comp=Z,28nm,0.9s						
SSE				pmax	pmax		
	comp=Z,570nm,10.3s						
SSE				LR	LR		
	comp=Z,460nm,14.4s						
SSE				LR	LR		
	comp=Z,2µm,16.5s						
SSE	**Sheshan**	**18.01**	**277**	P	**Pn**	**16 19 19.8**	**+0.1**
UGL	**Uglegorsk**	**18.58**	**360**	*e*P	**Pn**	**16 19 28.6**	**+2.1**
UGL				*e*S	**Sn**	**16 22 53.2**	**-0.3**
UGL				pmax	pmax		
	comp=Z,193nm,1.0s						
UGL				smax	smax		
	comp=E,4µm,5.9s						
UGL				smax	smax		
	comp=N,3µm,5.4s						
UGL				MLR	MLR		
	comp=Z,2µm,19.0s						
UGL				MLR	MLR		
	comp=N,3µm,14.0s						
UGL				MLR	MLR		
	comp=E,2µm,9.0s						
SNY	**Shenyang**	**18.74**	**312**	⇓P	**P**	**16 19 26.8**	**-1.2**
SNY				S	**Sn**	**16 22 51.3**	**-6.2**
SNY				pmax	pmax		
	comp=E,12nm,1.6s						
SNY				pmax	pmax		
	comp=E,650nm,8.4s						
SNY				LR	LR		
	comp=E,6µm,15.1s						
SNY				LR	LR		
	comp=E,3µm,17.3s						
SNY				LR	LR		
	comp=E,6µm,15.7s						
CN2	**Changchun**	**18.76**	**320**	*e*P	**P**	**16 19 27.1**	**-1.1**
CN2				*e*S	**Sn**	**16 22 58.4**	**+0.4**
CN2				pmax	pmax		
	comp=E,30nm,1.3s						
CN2				pmax	pmax		
	comp=E,600nm,6.0s						
CN2				LR	LR		
	comp=E,5µm,15.0s						
CN2				LR	LR		
	comp=E,4µm,15.0s						
CN2				LR	LR		
	comp=E,4µm,19.0s						
DL2	**Dalian**	**18.81**	**302**	P	**P**	**16 19 26.6**	**-2.2**
DL2				S	**Sn**	**16 22 49.8**	**-9.4**
DL2				pmax	pmax		
	comp=E,32nm,1.3s						
DL2				pmax	pmax		
	comp=E,610nm,5.3s						
DL2				LR	LR		
	comp=E,4µm,14.2s						
DL2				LR	LR		
	comp=E,5µm,15.3s						
DL2				LR	LR		
	comp=E,6µm,16.5s						
TATO	**Taipei**	**19.07**	**258**		**P**	**16 19 31.8**	**+0.1**
TATO				IAmb	IAmb	16 19 47.3	
	comp=Z,135nm,0.9s						
TATO	**Taipei**	**19.07**	**258**	P	**Pn**	**16 19 32.8**	**+0.2**
TATO				P	**Pn**	**16 19 32.8**	**+0.2**
YHNB	**Yeheng**	**19.27**	**258**	P	**P**	**16 19 33.9**	**-0.2**
YHNB				IAmb	IAmb	16 19 37.4	
	comp=Z,232nm,1.5s						
NACB	**Ninganchiao**	**19.28**	**256**	P	**P**	**16 19 33.4**	**-0.7**
NACB				IAmb	IAmb	16 19 37.4	
	comp=Z,142nm,1.4s						
YULB	**Yu-li**	**19.85**	**254**		**P**	**16 19 40.3**	**0.0**
YULB				IAmb	IAmb	16 19 51.8	
	comp=Z,94nm,0.7s						
NJ2	**Nanjing**	**19.95**	**281**	⇓P	**P**	**16 19 41.6**	**+0.2**
NJ2				pP	**pP**	**16 19 46.1**	**0.0**
NJ2				sP	**pwP**	**16 19 52.4**	**-1.5**
NJ2				PP	**PnPn**	**16 20 00.4**	**+3.0**
NJ2				S	**S**	**16 23 21.3**	**-3.5**
NJ2				sS	**Sn**	**16 23 27.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,45nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,320nm,3.6s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
NJ2				LR	LR		
	comp=Z,3µm,16.6s						
NJ2				LR	LR		
	comp=Z,5µm,16.8s						
SSLB	**Suanglung**	**19.97**	**256**		**P**	**16 19 41.3**	**-0.4**
TWG	**Pinlang**	**20.29**	**253**	P	**P**	**16 19 44.9**	**-0.2**
TWG				IAmb	IAmb	16 19 54.6	
	comp=Z,203nm,1.4s						
KLR	**Kul'dur**	**20.32**	**340**	P	**P**	**16 19 44.8**	**-0.4**
	comp=Z,15nm,0.9s,baz=141,slow=6.7,SNR=24						
KLR	**Kul'dur**	**20.32**	**340**	*ce*P	**P**	**16 19 44.5**	**-0.7**
KLR				pmax	pmax		
	comp=Z,45nm,0.9s						
TYV	**Tymovskoe**	**20.37**	**1**	*e*P	**P**	**16 19 46.9**	**+1.1**
TYV				*e*S	Sn	16 23 36.2	-0.5
TYV				pmax	pmax		
	comp=Z,82nm,1.1s						
TYV				pmax	pmax		
	comp=Z,600nm,4.4s						
TYV				smax	smax		
	comp=N,10.0nm,1.5s						
TYV				smax	smax		
	comp=E,2µm,5.6s						
TYV				MLR	MLR		
	comp=Z,3µm,16.0s						
GRNR	**Gornyy**	**20.72**	**350**	⇓*i*P	Pn	16 19 51.7	-0.3
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,1µm,11.0s						
GRNR				MLR	MLR		
	comp=N,890nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,15.0s						
TIA	**Tai'an**	**21.63**	**292**	P	**P**	**16 19 56.4**	**-3.1**
TIA				pmax	pmax		
	comp=Z,18nm,2.6s						
TIA				LR	LR		
	comp=Z,3µm,16.7s						
TIA				LR	LR		
	comp=Z,5µm,19.1s						
TIA				LR	LR		
	comp=Z,7µm,18.6s						
NKL	**Nikolayevsk**	**22.68**	**358**	*e*P	**P**	**16 20 08.7**	**-1.9**
NKL				pmax	pmax		
	comp=E,32nm,0.9s						
NKL				pmax	pmax		
	comp=N,10.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,76nm,1.1s						
NKL				MLR	MLR		
	comp=E,2µm,10.0s						
NKL				MLR	MLR		
	comp=N,284nm,18.0s						
NKL				MLR	MLR		
	comp=Z,2µm,18.0s						
SKR	**Severo-Kuril's**	**22.74**	**23**	*e*P	**P**	**16 20 07.1**	**-4.1**
SKR				*e*		16 20 49.8	
SKR				*e*S	**S**	**16 24 14.2**	**-4.2**
SKR				*e*SS	**SnSn**	**16 25 04.2**	**+15**
SKR				pmax	pmax		
	comp=Z,48nm,1.4s						
SKR				pmax	pmax		
	comp=Z,700nm,7.2s						
SKR				pmax	pmax		
	comp=Z,300nm,4.7s						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
BJT	**Baijiatuau**	**23.17**	**301**	P	**P**	**16 20 14.1**	**-1.7**
BJT				pmax	pmax		
	comp=Z,66nm,1.1s						
BJT	**Baijiatuau**	**23.17**	**301**	P	**P**	**16 20 14.1**	**-1.7**
BJT				IAmb	IAmb	16 20 17.2	
	comp=Z,66nm,1.1s						
BJI	**Beijing**	**23.17**	**301**	P	**P**	**16 20 13.8**	**-2.0**
BJI				S	**S**	**16 24 24.8**	**-1.3**
BJI				SS	**SnSn**	**16 25 02.8**	**+2.6**
BJI				pmax	pmax		
	comp=Z,56nm,1.2s						
BJI				LR	LR		
	comp=Z,1µm,18.2s						
BJI				LR	LR		
	comp=Z,4µm,14.9s						
BJI				LR	LR		
	comp=Z,3µm,17.7s						
WHN	**Wuhan**	**23.91**	**277**	⇑P	**P**	**16 20 22.9**	**-0.2**
WHN				pmax	pmax		
	comp=Z,93nm,1.1s						
WHN				pmax	pmax		
	comp=Z,1µm,3.0s						
WHN				LR	LR		
	comp=Z,5µm,14.3s						
WHN				LR	LR		
	comp=Z,8µm,14.3s						
WHN				LR	LR		
	comp=Z,12µm,16.7s						
H11N2	**WAKE ISLAND Hy**	**24.80**	**110**	T	T	16 46 27.0	
	baz=311,slow=72						
H11N1	**WAKE ISLAND Hy**	**24.80**	**110**	T	T	16 46 27.6	
	baz=311,slow=72						
H11N3	**WAKE ISLAND Hy**	**24.81**	**110**	T	T	16 46 32.3	
	baz=311,slow=72						
HIA	**Hailar**	**25.29**	**324**	P	**P**	**16 20 35.8**	**+0.3**
HIA				pmax	pmax		
	comp=Z,68nm,1.1s						
HIA	**Hailar**	**25.29**	**324**	P	**P**	**16 20 35.8**	**+0.3**
HIA				IAmb	IAmb	16 20 41.2	
	comp=Z,68nm,1.1s						
PEA0B	**Petropavlovsk-**	**25.31**	**22**	P	**P**	**16 20 34.8**	**-0.8**
PEA0B				pmax	pmax		
	comp=Z,30nm,1.1s						
PEA0B	**Petropavlovsk-**	**25.31**	**22**	P	**P**	**16 20 34.8**	**-0.8**
PETK	**Petropavlovsk-**	**25.31**	**22**	P	**P**	**16 20 36.4**	**+0.8**
	comp=Z,6.9nm,1.0s,baz=178,slow=4.3,SNR=4.8						
PETK				LR	LR	16 31 00.2	
	comp=Z,2µm,20.8s,baz=219,slow=38						
PETK	**Petropavlovsk-**	**25.31**	**22**	P	**P**	**16 20 34.2**	**-1.5**
TGY	**Tagaytay City**	**25.42**	**235**	LR	LR	16 31 07.3	
	comp=Z,2µm,18.7s,baz=46,slow=38						
TIY	**Taiyuan**	**25.56**	**294**	*e*P	**P**	**16 20 37.8**	**-0.3**
TIY				S	**S**	**16 25 07.3**	**+2.7**
TIY				pmax	pmax		
	comp=Z,25nm,0.5s						
TIY				pmax	pmax		
	comp=Z,530nm,6.3s						
TIY				LR	LR		
	comp=Z,2µm,19.3s						
TIY				LR	LR		
	comp=Z,4µm,15.8s						
TIY				LR	LR		
	comp=Z,5µm,16.0s						
PET	**Petropavlovsk**	**25.56**	**23**	*e*P	**P**	**16 20 39.4**	**+1.6**
PET				*e*S	**S**	**16 25 04.7**	**+0.5**
PET				MLR	MLR		
	comp=Z,3µm,15.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET	**Petropavlovsk**	**25.56**	**23**	P	**P**	**16 20 36.6**	**-1.3**
PET				IAmb	IAmb	16 20 42.7	
	comp=Z,48nm,1.2s						
ZEA	**Zeya**	**25.63**	**339**	*e*P	**P**	**16 20 39.4**	**+0.9**
ZEA				*e*S	**S**	**16 25 00.3**	**-5.0**
ZEA				pmax	pmax		
	comp=N,90nm,0.9s						
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,170nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,300nm,6.0s						
ZEA				smax	smax		
	comp=N,600nm,6.9s						
ZEA				smax	smax		
	comp=E,1µm,7.7s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
HHC	**Hu-ho-hao-te**	**26.78**	**301**	*e*P	**P**	**16 20 48.3**	**-0.9**
HHC				PP	**PnPn**	**16 21 34.4**	**+3.5**
HHC				S	**S**	**16 25 21.9**	**-2.1**
HHC				sS	sS	16 25 33.4	+0.9
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,440nm,8.3s						
HHC				LR	LR		
	comp=Z,3µm,14.0s						
HHC				LR	LR		
	comp=Z,5µm,15.4s						
HHC				LR	LR		
	comp=Z,7µm,16.2s						
BTO	**Baotou**	**27.88**	**300**	*e*P	**P**	**16 20 59.1**	**+0.1**
DAV	**Davao City (W)**	**27.98**	**217**	LR	LR	16 30 38.0	
	comp=Z,1µm,20.9s,baz=54,slow=33						
ENH	**Enshi**	**28.11**	**278**	P	**P**	**16 20 58.1**	**-3.1**
XAN	**Xi'an**	**28.24**	**286**	P	**P**	**16 21 01.0**	**-1.2**
XAN				pP	sP	16 21 10.6	+1.0
XAN				PP	**PnPn**	**16 21 50.4**	**-0.3**
XAN				S	**S**	**16 25 42.9**	**-4.0**
XAN				pmax	pmax		
	comp=Z,46nm,1.1s						
XAN				pmax	pmax		
	comp=Z,460nm,11.8s						
XAN				LR	LR		
	comp=Z,2µm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,14.2s						
XAN				LR	LR		
	comp=Z,2µm,15.2s						
MA2	**Magadan**	**29.68**	**9**	*ce*P	**P**	**16 21 14.6**	**-0.1**
MA2				pmax	pmax		
	comp=Z,32nm,1.3s						
MA2	**Magadan**	**29.68**	**9**	P	**P**	**16 21 13.6**	**-1.1**
MA2				IAmb	IAmb	16 21 19.0	
	comp=Z,30nm,1.1s						
CIT	**Chita**	**30.09**	**324**	*e*P	**P**	**16 21 20.5**	**+2.0**
CIT				*e*		16 21 33.8	
CIT				*e*		16 22 38.2	
CIT				pmax	pmax		
	comp=Z,186nm,2.6s						
QIZ	**Qiongzhong**	**31.35**	**256**	P	**P**	**16 21 27.6**	**-2.3**
QIZ				S	**S**	**16 26 33.6**	**-2.3**
QIZ				LR	LR		
	comp=Z,1µm,12.2s						
QIZ				LR	LR		
	comp=Z,710nm,13.3s						
QIZ				LR	LR		
	comp=Z,1µm,15.6s						
GYA	**Guiyang**	**31.35**	**272**	⇑P	**P**	**16 21 31.0**	**+1.0**
GYA				PP	**PnPn**	**16 22 34.1**	**+1.4**
GYA				S	**S**	**16 26 31.6**	**-4.5**
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GYA				LR	LR		
	comp=Z,990nm,13.9s						
GYA				LR	LR		
	comp=Z,1µm,19.0s						
GYA				LR	LR		
	comp=Z,2µm,17.5s						
ULN	**Ulaanbaatar**	**31.91**	**313**	*ce*P	**P**	**16 21 35.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,82nm,1.7s						
ULN	**Ulaanbaatar**	**31.91**	**313**	P	**P**	**16 21 35.0**	**+0.2**
ULN	**Ulaanbaatar**	**31.91**	**313**	P	**P**	**16 21 36.3**	**+1.5**
ULN				P	**P**	**16 21 36.3**	**+1.5**
ULN				P	**P**	**16 21 36.3**	**+1.5**
ULN				S	**S**	**16 26 49.1**	**+4.5**
ULN				S	**S**	**16 26 49.1**	**+4.5**
ULN				S	**S**	**16 26 49.1**	**+4.5**
SONM	**Songino Array**	**32.32**	**313**	P	**P**	**16 21 39.4**	**+1.1**
	comp=Z,15nm,0.8s,baz=118,slow=7.7,SNR=48						
SONM				LR	LR	16 35 31.2	
	comp=Z,4µm,18.0s,baz=112,slow=38						
SONM	**Songino Array**	**32.32**	**313**	P	**P**	**16 21 38.1**	**-0.2**
SONM				pmax	pmax		
	comp=Z,16nm,0.9s						
SONM	**Songino Array**	**32.32**	**313**	P	**P**	**16 21 38.1**	**-0.2**
LZH	**Lanzhou**	**32.34**	**290**	*e*P	**P**	**16 21 38.8**	**+0.1**
LZH				pP	pP	16 21 44.8	+1.1
LZH				sP	sP	16 21 48.6	+2.5
LZH				PP	**PnPn**	**16 22 46.0**	**+0.5**
LZH				S	**S**	**16 26 48.6**	**-2.9**
LZH				sS	sS	16 27 05.4	+5.4
LZH				SS	**SnSn**	**16 28 41.4**	**-2.9**
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH				pmax	pmax		
	comp=Z,240nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,13.4s						
LZH				LR	LR		
	comp=Z,3µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
YAK	**Yakutsk**	**32.60**	**349**	P	**P**	**16 21 40.6**	**+0.3**
	comp=Z,7.7nm,0.5s,baz=162,slow=2.9,SNR=14						
YAK	**Yakutsk**	**32.60**	**349**	*e*P	**P**	**16 21 39.4**	**-0.9**
YAK				*e**PP	**pwP**	**16 21 52.2**	**-1.7**
YAK				*e*		16 22 52.1	
YAK				*e*		16 24 30.6	
YAK				*e*S	**S**	**16 26 56.2**	**+1.7**
YAK				*e**SS	sS	16 27 11.6	+9.4
YAK				*e*SS	**SnSn**	**16 28 53.3**	**+3.8**
YAK				*e*		16 32 06.4	
YAK				pmax	pmax		
	comp=Z,45nm,1.0s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,147nm,3.4s						
YAK				pmax	pmax		
	comp=E,101nm,3.1s						
YAK				pmax	pmax		
	comp=N,127nm,2.3s						
YAK				smax	smax		
	comp=N,195nm,3.4s						
YAK				smax	smax		
	comp=E,128nm,3.2s						
YAK				MLR	MLR		
	comp=Z,2µm,16.0s						
YAK				MLR	MLR		
	comp=N,1µm,16.0s						
YAK				MLR	MLR		
	comp=E,835nm,16.0s						
YAK	**Yakutsk**	**32.60**	**349**	P	**P**	**16 21 38.3**	**-2.1**
YAK				IAmb	IAmb	16 21 44.6	
	comp=Z,39nm,1.0s						
JAY	**Jayapura**	**32.83**	**183**	LR	LR	16 33 07.2	
	comp=Z,1µm,19.2s,baz=356,slow=33						
SIJI	**Sorong**	**32.84**	**200**	P	**P**	**16 21 42.6**	**-0.4**
	comp=Z,9.7nm,0.7s,baz=357,slow=18,SNR=7.4						
SIJI				LR	LR	16 34 05.9	
	comp=Z,1µm,18.1s,baz=18,slow=35						
CD2	**Chengdu**	**32.89**	**281**	P	**P**	**16 21 41.8**	**-1.6**
CD2				pP	pP	16 21 50.3	+1.7
CD2				S	**S**	**16 26 57.6**	**-2.3**
CD2				sS	sS	16 27 13.1	+4.8
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,410nm,6.3s						
CD2				LR	LR		
	comp=Z,4µm,13.2s						
CD2				LR	LR		
	comp=Z,5µm,16.2s						
CD2				LR	LR		
	comp=Z,5µm,20.1s						
SEY	**Seymchan**	**33.14**	**9**	P	**P**	**16 21 45.6**	**+0.6**
	comp=Z,15nm,0.9s,baz=189,slow=9.2,SNR=25						
SEY	**Seymchan**	**33.14**	**9**	⇑*i*P	**P**	**16 21 46.1**	**+1.0**
BOD	**Bodaibo**	**33.52**	**333**	*e*P	**P**	**16 21 48.8**	**+0.4**
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						
MYLDM	**Lahad Datu**	**33.59**	**226**	P	**P**	**16 21 50.2**	**+0.7**
FAKI	**Fak Fak**	**34.52**	**198**	P	**P**	**16 21 56.0**	**-1.6**
ZAK	**Zakamensk**	**35.10**	**316**	*e*P	**P**	**16 22 02.9**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,33nm,1.4s						
KMI	**Kunming**	**35.12**	**271**	*e*P	**P**	**16 22 02.5**	**-0.5**
KMI				pP	sP	16 22 10.6	+0.2
KMI				sP	pwP	16 22 13.8	-1.9
KMI				PP	**PnPn**	**16 23 19.8**	**-0.9**
KMI				S	**S**	**16 27 31.3**	**-3.6**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.9s						
KMI				pmax	pmax		

	comp=Z,290nm,4.9s						
KMI				LR	LR		
	comp=Z,1µm,15.8s						
KMI				LR	LR		
	comp=Z,2µm,14.4s						
KMI				LR	LR		
	comp=Z,2µm,13.3s						
IRK	**Irkutsk**	**35.21**	**319**	*e*P	**P**	**16 22 03.2**	**0.0**
IRK				*e*		16 23 19.4	
IRK				pmax	pmax		
	comp=Z,133nm,2.8s						
TLY	**Talaya**	**35.35**	**318**	P	**P**	**16 22 04.5**	**+0.1**
	comp=Z,23nm,0.8s,baz=161,slow=2.9,SNR=16						
TLY	**Talaya**	**35.35**	**318**	*e*P	**P**	**16 22 05.4**	**+1.0**
TLY				*e*PPP	PPP	16 23 40.4	
TLY				*e*S	**S**	**16 27 44.0**	**+6.6**
TLY				*e*SS	**SnSn**	**16 29 57.2**	**+0.7**
TLY				pmax	pmax		
	comp=Z,78nm,0.8s						
TLY				MLR	MLR		
	comp=Z,7µm,14.0s						
TLY	**Talaya**	**35.35**	**318**	P	**P**	**16 22 03.6**	**-0.9**
TLY				IAmb	IAmb	16 22 10.9	
	comp=Z,43nm,0.9s						
TLY	**Talaya**	**35.35**	**318**	P	**P**	**16 22 07.2**	**+2.8**
TLY				P	**P**	**16 22 07.2**	**+2.8**
TLY				P	**P**	**16 22 07.2**	**+2.8**
TLY				S	**S**	**16 27 38.6**	**+1.1**
TLY				S	**S**	**16 27 38.6**	**+1.1**
TLY				S	**S**	**16 27 38.6**	**+1.1**
MRSI	**Marisa**	**35.47**	**216**	P	**P**	**16 22 05.8**	**+0.1**
	comp=Z,868nmcomp=Z,42nm,1.2s						
GTA	**Gaotai**	**35.55**	**296**	⇑P	**P**	**16 22 04.3**	**-2.1**
GTA				pP	sP	16 22 13.4	-0.1
GTA				sP	pwP	16 22 17.6	-2.1
GTA				PP	**PnPn**	**16 23 26.8**	**+1.2**
GTA				PcP	**PcP**	**16 24 36.5**	**+1.3**
GTA				S	S	16 27 30.3	-11
GTA				sS	sS	16 27 51.6	+2.2
GTA				pmax	pmax		
	comp=Z,15nm,2.0s						
GTA				pmax	pmax		
	comp=Z,300nm,5.5s						
GTA				LR	LR		
	comp=Z,1µm,17.8s						
GTA				LR	LR		
	comp=Z,3µm,17.4s						
GTA				LR	LR		
	comp=Z,4µm,17.4s						
LUWI	**Luwuk**	**36.36**	**214**	P	**P**	**16 22 11.4**	**-1.9**
LUWI				IAmb	IAmb	16 22 28.9	
	comp=Z,22nm,0.7s						
UBPT	**Khong Chiam**	**36.81**	**254**	P	**P**	**16 22 14.6**	**-2.7**
UBPT				IAmb	IAmb	16 22 21.3	
	comp=Z,35nm,1.4s						
MOY	**Mondy**	**36.89**	**317**	*e*P	**P**	**16 22 19.0**	**+1.3**
MOY				pmax	pmax		
	comp=Z,116nm,3.8s						
ADK	**Adak**	**36.99**	**43**	P	**P**	**16 22 16.1**	**-2.3**
ADK				pmax	pmax		
	comp=Z,47nm,1.2s						
ADK	**Adak**	**36.99**	**43**	P	**P**	**16 22 16.1**	**-2.3**
ADK				IAmb	IAmb	16 22 44.0	
	comp=Z,47nm,1.1s						
KHON	**Khomkaen**	**38.51**	**258**	P	P	16 22 36.5	+4.9
	comp=Z,56nm,0.9s						
CHAI	**Chaiyaphum**	**39.42**	**258**	P	**P**	**16 22 40.0**	**+0.6**
	comp=Z,749nmcomp=Z,70nm,0.6s						
UTTA	**Uttaradit**	**39.79**	**261**	P	**P**	**16 22 44.5**	**+2.2**
	comp=Z,18nm,0.9s						
PMG	**Port Moresby**	**39.94**	**172**	P	**P**	**16 22 43.1**	**-0.4**
	comp=Z,9.1nm,0.9s,baz=357,slow=4.3,SNR=4.9						
PMG				PcP	**PcP**	**16 24 50.0**	**+1.3**
	comp=Z,9.9nm,0.8s,baz=351,slow=8.4,SNR=4.0						
PMG	**Port Moresby**	**39.94**	**172**	IAmb	IAmb	16 22 47.0	
	comp=Z,12nm,0.9s						
LAMP	**Lampang**	**40.24**	**263**	P	**P**	**16 22 48.1**	**+2.0**
	comp=Z,16nm,0.9s						
SRAK	**Srakaew**	**40.31**	**255**	P	**P**	**16 22 44.1**	**-2.6**
	comp=Z,5µmcomp=Z,750nm,0.7s						
CM34	**Chiang Mai Arr**	**40.51**	**264**	P	**P**	**16 22 48.0**	**-0.4**
CM35	**Chiang Mai Arr**	**40.58**	**263**	P	**P**	**16 22 48.0**	**-0.9**
CM36	**Chiang Mai Arr**	**40.70**	**263**	P	**P**	**16 22 51.0**	**+1.1**
CM33	**Chiang Mai Arr**	**40.70**	**264**	P	**P**	**16 22 49.0**	**-0.9**
CMMT	**Chiang Mai**	**40.70**	**264**	P	**P**	**16 22 49.6**	**-0.3**
	comp=Z,8.6nm,1.1s						
CHTO	**Chiang Mai**	**40.71**	**264**	P	**P**	**16 22 48.4**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,21nm,1.2s						
CHTO	**Chiang Mai**	**40.71**	**264**	P	**P**	**16 22 48.4**	**-1.6**
CHTO	**Chiang Mai**	**40.71**	**264**	P	**P**	**16 22 48.7**	**-1.3**
CHTO				P	**P**	**16 22 48.7**	**-1.3**
CM09	**Chiang Mai Arr**	**40.82**	**263**	P	**P**	**16 22 52.8**	**+1.8**
	comp=Z,5.7nm,0.7s						
CM04	**Chiang Mai Arr**	**40.85**	**263**	P	**P**	**16 22 52.7**	**+1.5**
	comp=Z,73nmcomp=Z,7.7nm,0.8s						
CM32	**Chiang Mai Arr**	**40.86**	**264**	P	**P**	**16 22 53.0**	**+1.8**
CM31	**Chiang Mai Arr**	**40.86**	**263**	P	**P**	**16 22 51.6**	**+0.4**
	comp=Z,3µmcomp=Z,249nm,0.8s						
CM31	**Chiang Mai Arr**	**40.86**	**263**	P	**P**	**16 22 50.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**40.86**	**263**	P	**P**	**16 22 50.5**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=56,slow=7.3,SNR=24						
CMAR				PcP	**PcP**	**16 24 52.8**	**+1.0**
	comp=Z,8.3nm,1.1s,baz=39,slow=0.6,SNR=13						
CMAR				LR	LR	16 41 49.0	
	comp=Z,2µm,18.3s,baz=111,slow=39						
CM01	**Chiang Mai Arr**	**40.86**	**263**	P	**P**	**16 22 53.2**	**+2.0**
	comp=Z,69nmcomp=Z,5.2nm,0.7s						
CM02	**Chiang Mai Arr**	**40.87**	**263**	P	**P**	**16 22 54.0**	**+2.7**
	comp=Z,62nmcomp=Z,9.2nm,0.8s						
CM15	**Chiang Mai Arr**	**40.88**	**263**	P	**P**	**16 22 51.8**	**+0.4**
	comp=Z,56nmcomp=Z,6.7nm,0.8s						
CM05	**Chiang Mai Arr**	**40.88**	**263**	P	**P**	**16 22 51.0**	**-0.4**
	comp=Z,56nmcomp=Z,5.2nm,0.9s						
CM13	**Chiang Mai Arr**	**40.91**	**263**	P	**P**	**16 22 52.0**	**+0.4**
	comp=Z,60nmcomp=Z,6.2nm,0.8s						
KAPI	**Kappang**	**41.28**	**215**	P	**P**	**16 22 54.8**	**+0.3**
	comp=Z,5.0nm,0.6s,baz=258,slow=12,SNR=2.0						
KAPI				LR	LR	16 37 44.2	
	comp=Z,367nm,21.7s,baz=38,slow=33						
KAPI	**Kappang**	**41.28**	**215**	S	**S**	**16 29 07.3**	**-0.3**
KSM	**Kuching**	**41.73**	**232**	P	**P**	**16 22 57.9**	**-0.5**
KSM	**Kuching**	**41.73**	**232**	P	**P**	**16 23 00.0**	**+1.6**
UTHA	**Uthaitani**	**41.74**	**259**	P	**P**	**16 23 00.4**	**+2.0**
	comp=Z,250nmcomp=Z,21nm,0.8s						
MHMT	**Maesarieng**	**41.85**	**263**	P	**P**	**16 23 01.5**	**+2.2**
	comp=Z,446nmcomp=Z,14nm,1.4s						
TIXI	**Tiksi**	**41.86**	**354**	⇑*i*P	**P**	**16 22 58.3**	**-0.5**
TIXI	**Tiksi**	**41.86**	**354**	P	**P**	**16 22 58.2**	**-0.5**
MMRI	**Maumere**	**43.32**	**209**	P	**P**	**16 23 09.2**	**-2.1**
MMRI				IAmb	IAmb	16 23 35.8	
	comp=Z,22nm,0.8s						
UNV	**Unalaska Valle**	**43.46**	**42**	P	**P**	**16 23 09.2**	**-2.8**
UNV				IAmb	IAmb	16 23 20.5	
	comp=Z,50nm,1.3s						
LSA	**Lhasa**	**43.81**	**282**	P	**P**	**16 23 16.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,16nm,1.6s						
LSA	**Lhasa**	**43.81**	**282**	P	**P**	**16 23 15.1**	**-0.6**
LSA	**Lhasa**	**43.81**	**282**	P	**P**	**16 23 13.2**	**-2.5**
LSA				pmax	pmax		
	comp=Z,17nm,1.5s						
LSA	**Lhasa**	**43.81**	**282**	P	**P**	**16 23 13.2**	**-2.5**
BATI	**Baumata**	**44.17**	**207**	P	**P**	**16 23 18.1**	**0.0**
	comp=Z,25nm,0.6s,baz=292,slow=0.9,SNR=7.9						
BATI				LR	LR	16 38 58.2	
	comp=Z,599nm,21.5s,baz=4.0,slow=32						
WMQ	**Urumqi**	**44.63**	**303**	P	**P**	**16 23 22.6**	**+1.0**
WMQ				sP	pwP	16 23 35.3	+0.3
WMQ				S	**S**	**16 29 56.3**	**-0.2**
WMQ				sS	sS	16 30 10.0	+4.8
WMQ				pmax	pmax		
	comp=Z,72nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,900nm,4.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.7s						
WMQ				LR	LR		
	comp=Z,2µm,17.7s						
WMQ				LR	LR		
	comp=Z,1µm,16.1s						
WMQ	**Urumqi**	**44.63**	**303**	P	**P**	**16 23 21.4**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,96nm,1.3s						
WMQ	**Urumqi**	**44.63**	**303**	P	**P**	**16 23 21.4**	**-0.2**
DGZ	**Jazzator, Alta**	**44.95**	**311**	*c i*P	**P**	**16 23 25.2**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,53nm,0.8s						
TRTT	**Trang**	**45.60**	**249**	P	**P**	**16 23 33.4**	**+3.9**
KULM	**Kulim**	**46.34**	**246**	P	**P**	**16 23 35.0**	**-0.4**
KULM				IAmb	IAmb	16 23 39.8	
	comp=Z,19nm,0.9s						
KULM	**Kulim**	**46.34**	**246**	P	**P**	**16 23 36.0**	**+0.6**
IPM	**Ipoh**	**46.55**	**245**	P	**P**	**16 23 36.1**	**-0.9**
IPM				IAmb	IAmb	16 23 40.3	
	comp=Z,52nm,1.5s						
IPM	**Ipoh**	**46.55**	**245**	P	**P**	**16 23 37.0**	**0.0**
ZSN	**Zaisan**	**46.57**	**308**	*e*P	**P**	**16 23 35.7**	**-1.2**
	baz=308						
ZSN	**Zaisan**	**46.57**	**308**	*e*P	**P**	**16 23 35.6**	**-1.2**
ZAA0	**Zalesovo Array**	**46.95**	**317**	P	**P**	**16 23 39.9**	**+0.2**
ZALV	**Zalesovo Beam**	**46.95**	**317**	P	**P**	**16 23 40.2**	**+0.5**
	comp=Z,8.6nm,0.7s,baz=97,slow=7.5,SNR=27						
ZALV				PcP	**PcP**	**16 25 12.2**	**+0.3**
	comp=Z,15nm,0.9s,baz=105,slow=3.8,SNR=10						
ZALV				LR	LR	16 44 18.3	
	comp=Z,2µm,18.5s,baz=94,slow=37						
ZALV	**Zalesovo Beam**	**46.95**	**317**	P	**P**	**16 23 39.4**	**-0.2**
ANM	**Nome**	**46.99**	**28**	P	**P**	**16 23 40.3**	**+0.5**
ANM				pmax	pmax		
	comp=Z,43nm,1.1s						
ANM	**Nome**	**46.99**	**28**	P	**P**	**16 23 40.3**	**+0.5**
TAPN	**Taplejung**	**47.36**	**280**	*e*P	**P**	**16 23 42.5**	**-1.1**
	comp=Z,11nm,0.5s						
CNBA	**Chernabura Isl**	**47.61**	**42**	P	**P**	**16 23 44.7**	**-0.1**
ODAN	**Odare**	**47.78**	**280**	*e*P	**P**	**16 23 46.4**	**-0.4**
	comp=Z,24nm,0.6s						
PWJI	**Pagerwojo**	**48.08**	**222**	P	**P**	**16 23 47.7**	**-1.2**
	comp=Z,42nm,1.4s						
MK31	**Makanchi Array**	**48.34**	**307**	*i* P	**P**	**16 23 50.7**	**0.0**
MK31				pmax	pmax		
	comp=Z,12nm,0.6s						
MK31	**Makanchi Array**	**48.34**	**307**	P	**P**	**16 23 51.0**	**+0.3**
MK31				IAmb	IAmb	16 23 55.7	
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**48.34**	**307**	P	**P**	**16 23 51.0**	**+0.4**
	comp=Z,14nm,0.7s,baz=91,slow=9.8,SNR=87						
MKAR				LR	LR	16 45 21.2	
	comp=Z,1µm,19.1s,baz=88,slow=38						
MKAR	**Makanchi Array**	**48.34**	**307**	P	**P**	**16 23 50.9**	**+0.3**
MKAR	**Makanchi Array**	**48.34**	**307**	P	**P**	**16 23 50.9**	**+0.3**
RAMN	**Ramite**	**48.42**	**280**	*e*P	**P**	**16 23 51.5**	**-0.3**
	comp=Z,30nm,0.6s						
MAKZ	**Makanchi**	**48.56**	**307**	P	**P**	**16 23 52.1**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,18nm,0.6s						
MAKZ	**Makanchi**	**48.56**	**307**	P	**P**	**16 23 52.1**	**-0.2**
MAKZ				IAmb	IAmb	16 23 55.8	
	comp=Z,18nm,0.6s						
GUN	**Gumba**	**48.74**	**282**	*e*P	**P**	**16 23 54.6**	**+0.2**
	comp=Z,37nm,0.5s						
RDOG	**Red Dog Mine**	**49.16**	**24**	P	**P**	**16 23 54.6**	**-2.0**
RDOG				IAmb	IAmb	16 24 02.4	
	comp=Z,23nm,1.1s						
PSI	**Prapat**	**49.23**	**245**	LR	LR	16 44 46.4	
	comp=Z,470nm,18.9s,baz=89,slow=36						
PKI	**Pulchoki**	**49.24**	**282**	*e*P	**P**	**16 23 56.7**	**-1.5**
	comp=Z,15nm,0.6s						
PKIN	**Phulchoki**	**49.25**	**282**	*e*P	**P**	**16 23 56.9**	**-1.3**
	comp=Z,10nm,0.5s						
KPJI	**Karang Pucung**	**49.26**	**226**	P	**P**	**16 23 56.8**	**-1.1**
	comp=Z,61nm,0.9s						
KKN	**Kakani**	**49.28**	**282**	*e*P	**P**	**16 23 58.6**	**+0.2**
	comp=Z,61nm,0.9s						
DMN	**Daman**	**49.48**	**282**	*e*P	**P**	**16 23 59.0**	**-1.0**
SEM	**Semipalatinsk**	**49.60**	**312**	*e*P	**P**	**16 23 59.1**	**-1.4**
	comp=Z,3.4nm,0.7s,baz=312						
SEM				*e*S	**S**	**16 31 06.7**	**-0.8**
	baz=312						
SEM				LR	LR	16 44 35.7	
	comp=Z,787nm,16.9s,baz=312						
SEM	**Semipalatinsk**	**49.60**	**312**	*e*P	**P**	**16 23 59.0**	**-1.4**
SEM				*e*S	**S**	**16 31 06.6**	**-0.8**
SEM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SEM				MLR	MLR		
	comp=Z,787nm,17.0s						
LEM	**Lembang**	**49.69**	**228**	P	**P**	**16 24 01.3**	**-0.2**
	comp=Z,61nm,0.7s,baz=14,slow=6.0,SNR=13						
LEM				LR	LR	16 45 46.2	
	comp=Z,248nm,20.4s,baz=24,slow=37						
SDSI	**Sungai Dareh**	**49.74**	**239**	P	**P**	**16 24 00.9**	**-0.7**
	comp=Z,19nm,1.2s						
CBJI	**Citeko**	**49.88**	**229**	P	**P**	**16 24 03.5**	**+0.8**
MNSI	**Mandailing Nat**	**49.99**	**242**	P	**P**	**16 24 03.2**	**-0.4**
KLSI		**50.01**	**232**	P	**P**	**16 24 02.1**	**-1.6**
	comp=Z,26nm,1.2s						
DBJI	**Dramaga**	**50.05**	**229**	P	**P**	**16 24 03.5**	**-0.5**
	comp=Z,12nm,0.4s						
CISI	**Cisompet, Garu**	**50.13**	**227**	P	**P**	**16 24 03.6**	**-1.1**
BLSI	**Bandar Lampung**	**50.16**	**231**	P	**P**	**16 24 05.4**	**+0.6**
	comp=Z,1µmcomp=Z,84nm,0.9s						
LHSI	**Lahat**	**50.23**	**234**	P	**P**	**16 24 05.8**	**+0.5**
	comp=Z,966nmcomp=Z,46nm,0.9s						
TPTI		**50.31**	**246**	P	**P**	**16 24 06.7**	**+0.6**
	comp=Z,4.2nm,1.7s						
DANN	**Dangsing**	**50.40**	**283**	*e*P	**P**	**16 24 06.3**	**-0.6**
	comp=Z,50nm,0.5s						
CTA	**Charters Tower**	**50.43**	**175**	P	**P**	**16 24 07.6**	**+0.9**
	comp=Z,4.6nm,0.6s,baz=357,slow=7.1,SNR=13						
CTAO	**Charters Tower**	**50.43**	**175**	P	**P**	**16 24 06.0**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,26nm,1.4s						
CTAO	**Charters Tower**	**50.43**	**175**	P	**P**	**16 24 06.0**	**-0.7**
CTAO				IAmb	IAmb	16 24 24.8	
	comp=Z,26nm,1.4s						
WB0	**Warramunga Arr**	**50.50**	**189**	P	**P**	**16 24 06.8**	**-0.5**
WB0				IAmb	IAmb	16 24 08.7	
	comp=Z,31nm,0.9s						
TTA	**Tatalina**	**50.58**	**31**	P	**P**	**16 24 06.9**	**-0.7**
TTA				pmax	pmax		
	comp=Z,15nm,1.3s						
TTA	**Tatalina**	**50.58**	**31**	P	**P**	**16 24 06.8**	**-0.7**
KURK	**Kurchatov**	**50.63**	**313**	P	**P**	**16 24 07.9**	**-0.1**
KURK				P	**P**	**16 24 07.9**	**-0.1**
KURK				S	**S**	**16 31 19.2**	**-2.1**
KURK				S	**S**	**16 31 19.2**	**-2.1**
SHLS	**Shalkode**	**50.65**	**303**	*e*P	**P**	**16 24 05.0**	**-3.5**
	comp=Z,22nm,1.5s,baz=303						
SHLS	**Shalkode**	**50.65**	**303**	*e*P	**P**	**16 24 04.9**	**-3.5**
SHLS				pmax	pmax		
	comp=Z,22nm,1.5s						
WR0	**Warramunga Arr**	**50.67**	**189**	P	**P**	**16 24 08.1**	**-0.4**
WR0				IAmb	IAmb	16 24 20.5	
	comp=Z,19nm,0.7s						
WRAB	**Tennant Creek**	**50.67**	**189**	P	**P**	**16 24 07.1**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**50.67**	**189**	P	**P**	**16 24 07.1**	**-1.5**
WRAB				IAmb	IAmb	16 24 10.1	
	comp=Z,24nm,0.8s						
WB2	**Warramunga Arr**	**50.68**	**189**	P	**P**	**16 24 08.3**	**-0.3**
WB2				IAmb	IAmb	16 24 21.0	
	comp=Z,28nm,0.9s						
WRA	**Warramunga Arr**	**50.68**	**189**	P	**P**	**16 24 08.4**	**-0.3**
	comp=Z,12nm,0.7s,baz=6.3,slow=7.5,SNR=115						
WRA				LR	LR	16 44 43.3	
	comp=Z,865nm,20.1s,baz=15,slow=35						
WRA	**Warramunga Arr**	**50.68**	**189**	P	**P**	**16 24 07.5**	**-1.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	**Warramunga Arr**	**50.68**	**189**	P	**P**	**16 24 07.5**	**-1.1**
LWLI	**Liwa**	**50.71**	**233**	P	**P**	**16 24 08.6**	**-0.5**
	comp=Z,3µmcomp=Z,52nm,0.8s						
KASI	**Kota Agung**	**50.78**	**232**	P	**P**	**16 24 10.0**	**+0.5**
	comp=Z,40nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.83**	**200**	P	**P**	**16 24 09.7**	**-0.1**
	comp=Z,7.8nm,0.8s,baz=13,slow=8.1,SNR=17						
FITZ				LR	LR	16 44 28.9	
	comp=Z,320nm,21.9s,baz=24,slow=35						
MNAI	**Manna**	**51.00**	**234**	P	**P**	**16 24 11.0**	**-0.2**
KPKS	**Kokpek**	**51.18**	**303**	*e*P	**P**	**16 24 11.3**	**-1.1**
	comp=Z,14nm,1.4s,baz=303						
KPKS	**Kokpek**	**51.18**	**303**	*e*P	**P**	**16 24 11.2**	**-1.1**
KPKS				pmax	pmax		
	comp=Z,15nm,1.4s						
TDK	**Taldyqorghan**	**51.19**	**305**	*e*P	**P**	**16 24 11.9**	**-0.4**
	comp=Z,20nm,1.5s,baz=305						
TDK				*e*S	**S**	**16 31 29.9**	**+0.5**
	baz=305						
TDK				LR	LR	16 46 34.4	
	comp=Z,927nm,14.5s,baz=305						
TDK	**Taldyqorghan**	**51.19**	**305**	*e*P	**P**	**16 24 11.9**	**-0.4**
TDK				*e*S	**S**	**16 31 29.8**	**+0.5**
TDK				pmax	pmax		
	comp=Z,20nm,1.5s						
TDK				MLR	MLR		
	comp=Z,927nm,15.0s						
GSI	**Gunungsitoli**	**51.21**	**244**	P	**P**	**16 24 12.1**	**-0.7**
GSI	**Gunungsitoli**	**51.21**	**244**	P	**P**	**16 24 12.1**	**-0.7**
	comp=Z,72nm,1.1s						
OHAK	**Old Harbor**	**51.32**	**39**	P	**P**	**16 24 12.6**	**-0.5**
OHAK				IAmb	IAmb	16 24 19.4	
	comp=Z,41nm,1.2s						
SATY	**Saty**	**51.43**	**303**	*e*P	**P**	**16 24 13.2**	**-1.1**
	baz=303						
SATY				*e*S	**S**	**16 31 32.9**	**-0.1**
	baz=303						
SATY	**Saty**	**51.43**	**303**	*e*P	**P**	**16 24 13.2**	**-1.1**
SATY				*e*S	**S**	**16 31 32.8**	**-0.1**
SANVU	**Saraoutou**	**51.65**	**149**	P	**P**	**16 24 15.5**	**-0.4**
SANVU				IAmb	IAmb	16 24 20.9	
	comp=Z,23nm,0.8s						
KDAK	**Kodiak Island**	**51.73**	**38**	P	**P**	**16 24 16.2**	**+0.1**
	comp=Z,33nm,1.0s,baz=311,slow=10.0,SNR=23						
KDAK	**Kodiak Island**	**51.73**	**38**	P	**P**	**16 24 15.7**	**-0.4**
KDAK				pmax	pmax		
	comp=Z,28nm,0.9s						
KDAK	**Kodiak Island**	**51.73**	**38**	P	**P**	**16 24 15.7**	**-0.4**
KDAK				IAmb	IAmb	16 24 19.1	
	comp=Z,28nm,0.8s						
RSO	**Redoubt South**	**51.81**	**35**	P	**P**	**16 24 16.9**	**0.0**
PPLA	**Purkeypile**	**52.31**	**32**	P	**P**	**16 24 21.3**	**+0.8**
PPLA				IAmb	IAmb	16 24 26.4	
	comp=Z,20nm,1.0s						
CHKK	**Chushkaly**	**52.34**	**304**	*e*P	**P**	**16 24 19.7**	**-1.3**
	baz=304						
CHKK	**Chushkaly**	**52.34**	**304**	*e*P	**P**	**16 24 19.7**	**-1.3**
MDOK	**Medeo**	**52.40**	**303**	*e*P	**P**	**16 24 20.4**	**-1.2**
	baz=303						
MDOK				LR	LR	16 46 32.5	
	comp=Z,895nm,13.6s,baz=303						
MDOK	**Medeo**	**52.40**	**303**	*e*P	**P**	**16 24 20.3**	**-1.2**
MDOK				MLR	MLR		
	comp=Z,895nm,14.0s						
AAA	**Alma-Ata**	**52.49**	**303**	*e*P	**P**	**16 24 22.2**	**+0.1**
	comp=Z,36nm,1.0s,baz=303						
AAA				LR	LR	16 46 14.8	
	comp=Z,947nm,16.3s,baz=303						
AAA	**Alma-Ata**	**52.49**	**303**	*e*P	**P**	**16 24 22.2**	**+0.1**
AAA				pmax	pmax		
	comp=Z,36nm,1.0s						
AAA				MLR	MLR		
	comp=Z,947nm,16.0s						
TNSS	**Tian-Shan**	**52.49**	**303**	*e*P	**P**	**16 24 21.9**	**-0.7**
	baz=303						
TNSS	**Tian-Shan**	**52.49**	**303**	*e*P	**P**	**16 24 21.8**	**-0.7**
CNPM	**China Poot**	**52.51**	**36**	P	**P**	**16 24 21.6**	**-0.4**
CNPM				IAmb	IAmb	16 24 38.5	
	comp=Z,35nm,1.3s						
SKT	**Skwentna**	**52.53**	**33**	P	**P**	**16 24 21.2**	**-0.9**
BRLK	**Bradley Lake**	**52.70**	**36**	P	**P**	**16 24 23.2**	**-0.1**
BRLK				IAmb	IAmb	16 24 26.0	
	comp=Z,42nm,1.4s						
MTBS	**Maitube**	**52.85**	**303**	*e*P	**P**	**16 24 24.2**	**-0.6**
	baz=303						
MTBS	**Maitube**	**52.85**	**303**	*e*P	**P**	**16 24 24.2**	**-0.6**
SUA	**Susitna One**	**52.86**	**34**	P	**P**	**16 24 24.4**	**-0.2**
KTH	**Kantishna Hill**	**52.95**	**31**	P	**P**	**16 24 24.7**	**-0.5**
BPAW	**Bear Paw Mtn.**	**52.97**	**30**	P	**P**	**16 24 25.1**	**-0.2**
ULHL	**Ulahol**	**53.14**	**302**	P	**P**	**16 24 28.1**	**+1.0**
	SNR=8.5						
CUT	**Chulitna**	**53.15**	**33**	P	**P**	**16 24 27.1**	**+0.6**
	baz=266						
MLY	**Manley**	**53.18**	**29**	P	**P**	**16 24 28.0**	**+1.1**
	baz=264,SNR=20						
TRF	**Thorofare Moun**	**53.22**	**31**	P	**P**	**16 24 26.9**	**-0.5**
TRF				IAmb	IAmb	16 24 46.5	
	comp=Z,24nm,1.3s						
RC01	**Rabbit Creek A**	**53.33**	**34**	P	**P**	**16 24 28.1**	**+0.2**
	baz=267						
SEW	**Seward**	**53.43**	**35**	P	**P**	**16 24 28.3**	**-0.3**
SEW				IAmb	IAmb	16 24 33.0	
	comp=Z,55nm,1.4s						
TKM2	**Tokmak 2**	**53.49**	**303**	P	**P**	**16 24 31.5**	**+1.8**
	SNR=22						
TKM2	**Tokmak 2**	**53.49**	**303**	*i* P	**P**	**16 24 30.4**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,14nm,0.6s						
PMR	**Palmer**	**53.64**	**34**	P	**P**	**16 24 29.3**	**-0.9**
PMR				pmax	pmax		
	comp=Z,25nm,1.2s						
PMR	**Palmer**	**53.64**	**34**	P	**P**	**16 24 29.3**	**-0.9**
PMR				IAmb	IAmb	16 24 33.0	
	comp=Z,25nm,1.2s						
COLD	**Coldfoot**	**53.67**	**27**	P	**P**	**16 24 31.1**	**+0.8**
	baz=262						
COLD	**Coldfoot**	**53.67**	**27**	P	**P**	**16 24 28.9**	**-1.4**
GHO	**Glory Hole Cre**	**53.75**	**33**	P	**P**	**16 24 29.5**	**-1.6**
GHO				IAmb	IAmb	16 24 35.8	
	comp=Z,22nm,1.1s						
I23K	**Minto, Yukon-K**	**53.77**	**29**	P	**P**	**16 24 32.1**	**+1.0**
	baz=265,SNR=11						
I23K	**Minto, Yukon-K**	**53.77**	**29**	P	**P**	**16 24 30.5**	**-0.6**
I23K				IAmb	IAmb	16 24 36.8	
	comp=Z,28nm,1.1s						
MCK	**McKinley**	**53.85**	**31**	P	**P**	**16 24 32.3**	**+0.5**
	baz=266,SNR=18						
NEA2	**Nenana**	**53.85**	**30**	P	**P**	**16 24 32.2**	**+0.5**
	baz=265,SNR=22						
KSH	**Kashi**	**53.86**	**299**	P	**P**	**16 24 36.3**	**+4.0**
KSH				sP	pwP	16 24 47.1	+1.3
KSH				S	**S**	**16 32 10.8**	**+4.6**
KSH				sS	sS	16 32 22.3	+7.5
KSH				pmax	pmax		
	comp=Z,140nm,1.3s						
KSH				pmax	pmax		
	comp=Z,690nm,4.0s						
KSH				LR	LR		
	comp=Z,1µm,11.9s						
KSH				LR	LR		
	comp=Z,1µm,12.8s						
KSH				LR	LR		
	comp=Z,910nm,9.6s						
RND	**Reindeer**	**53.86**	**31**	P	**P**	**16 24 30.5**	**-1.4**
RND				pmax	pmax		
	comp=Z,30nm,1.4s						
RND	**Reindeer**	**53.86**	**31**	P	**P**	**16 24 30.5**	**-1.4**
RND				IAmb	IAmb	16 24 34.9	
	comp=Z,30nm,1.4s						
KNK	**Knik Glacier**	**53.96**	**34**	P	**P**	**16 24 31.9**	**-0.7**
KNK				IAmb	IAmb	16 24 36.7	
	comp=Z,31nm,1.1s						
KBK	**Karagaybulak**	**54.01**	**303**	P	**P**	**16 24 34.2**	**+0.7**
	SNR=28						
SML	**Sawmill**	**54.03**	**33**	P	**P**	**16 24 31.9**	**-1.2**
SML				IAmb	IAmb	16 24 36.3	
	comp=Z,26nm,1.0s						
CHMS	**Chumysh**	**54.09**	**303**	P	**P**	**16 24 34.9**	**+1.1**
	SNR=13						
SGDS	**Sogindy**	**54.09**	**304**	*e*P	**P**	**16 24 33.2**	**-0.8**
	baz=304						
SGDS	**Sogindy**	**54.09**	**304**	*e*P	**P**	**16 24 33.1**	**-0.8**
USP	**Ospenovka**	**54.22**	**304**	P	**P**	**16 24 36.2**	**+1.4**
	SNR=15						
MDM	**Murphy Dome**	**54.24**	**29**	P	**P**	**16 24 34.3**	**-0.3**
MDM				IAmb	IAmb	16 24 40.6	
	comp=Z,40nm,1.2s						
BTLS	**Baital**	**54.24**	**306**	*e*P	**P**	**16 24 33.9**	**-1.0**
	baz=306						
BTLS	**Baital**	**54.24**	**306**	*e*P	**P**	**16 24 33.9**	**-1.0**
WRH	**Wood River Hil**	**54.26**	**30**	P	**P**	**16 24 34.5**	**-0.2**
AAK	**Ala-Archa**	**54.34**	**303**	P	**P**	**16 24 37.2**	**+1.4**
	SNR=13						
AAK	**Ala-Archa**	**54.34**	**303**	*i* P	**P**	**16 24 34.8**	**-1.0**
	SNR=19						
AAK	**Ala-Archa**	**54.34**	**303**	*i* P	**P**	**16 24 35.7**	**-0.1**
AAK				pmax	pmax		
	comp=Z,26nm,0.9s						
AAK	**Ala-Archa**	**54.34**	**303**	P	**P**	**16 24 35.2**	**-0.6**
AAK	**Ala-Archa**	**54.34**	**303**	P	**P**	**16 24 36.5**	**+0.7**
AAK				P	**P**	**16 24 36.5**	**+0.7**
TCOL	**CIGO, UAF Yank**	**54.39**	**30**	P	**P**	**16 24 37.1**	**+1.5**
	baz=266						
COLA	**College**	**54.39**	**30**	*i* P	**P**	**16 24 36.8**	**+1.2**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						

UCH	Uchtor	54.40	302	P	P	16 24 37.7	+1.0
	SNR=19						
AS31	Alice Springs	54.40	189	P	P	16 24 35.9	-0.4
ASAR	Alice Springs	54.41	189	P	P	16 24 36.0	-0.2
	comp=Z,3.5nm,0.5s,baz=0.5,slow=5.4,SNR=84						
ASAR				LR	LR	16 46 58.9	
	comp=Z,1µm,20.4s,baz=18,slow=35						
ASAR	Alice Springs	54.41	189	P	P	16 24 35.8	-0.5
BRZS	Berezniki	54.48	312	*e*P	P	16 24 35.6	-1.0
	comp=Z,7.3nm,1.0s,baz=312						
BRZS	Berezniki	54.48	312	*e*P	P	16 24 35.5	-1.0
BRZS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SCM	Sheep Creek Mo	54.51	33	P	P	16 24 36.3	-0.4
SCM				pmax	pmax		
	comp=Z,33nm,1.0s						
SCM	Sheep Creek Mo	54.51	33	P	P	16 24 36.2	-0.4
SCM				IAmb	IAmb	16 24 40.1	
	comp=Z,33nm,1.0s						
POKR	Poker Plat Res	54.58	29	P	P	16 24 37.7	+0.7
	baz=267						
POKR	Poker Plat Res	54.58	29	P	P	16 24 36.0	-1.0
HDA	Harding Lake	54.76	30	P	P	16 24 37.7	-0.6
	baz=268						
HDA	Harding Lake	54.76	30	P	P	16 24 37.5	-0.8
HDA				IAmb	IAmb	16 24 43.5	
	comp=Z,12nm,0.8s						
IL31		54.80	30	P	P	16 24 37.8	-0.7
IL31				IAmb	IAmb	16 24 59.0	
	comp=Z,18nm,1.0s						
ILAR	Eielson Array	54.80	30	P	P	16 24 38.3	-0.3
	comp=Z,13nm,1.0s,baz=262,slow=5.4,SNR=55						
ILAR				LR	LR	16 46 00.7	
	comp=Z,461nm,21.9s,baz=275,slow=34						
ILAR	Eielson Array	54.80	30	P	P	16 24 37.7	-0.9
AML	Almayashu	55.02	302	P	P	16 24 42.2	+1.1
	SNR=33						
M24K	Tolsona, Glenn	55.05	33	P	P	16 24 41.6	+1.0
	baz=270						
M24K	Tolsona, Glenn	55.05	33	P	P	16 24 41.1	+0.6
M24K				IAmb	IAmb	16 25 10.1	
	comp=Z,31nm,1.0s						
KLU	Klutina	55.17	34	P	P	16 24 41.3	-0.2
KLU				IAmb	IAmb	16 24 45.2	
	comp=Z,20nm,1.1s						
EYAK	Cordova Ski Ar	55.27	35	P	P	16 24 42.0	-0.1
EYAK				IAmb	IAmb	16 25 04.2	
	comp=Z,21nm,1.2s						
PAX	Paxson	55.38	32	P	P	16 24 43.1	+0.1
PAX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PAX	Paxson	55.38	32	P	P	16 24 43.0	+0.1
PRP	Porcupine Dome	55.40	29	P	P	16 24 42.9	-0.2
FYU	Fort Yukon	55.56	28	P	P	16 24 44.3	+0.3
BRVK	Borovoye	55.62	316	*i* P	P	16 24 45.9	+1.2
BRVK				pmax	pmax		
	comp=Z,28nm,1.4s						
BRVK	Borovoye	55.62	316	P	P	16 24 44.4	-0.3
BRVK				IAmb	IAmb	16 24 50.1	
	comp=Z,31nm,1.4s						
BRVK	Borovoye	55.62	316	P	P	16 24 45.4	+0.7
BRVK				P	P	16 24 45.4	+0.7
BRVK				S	S	16 32 32.3	+3.1
BRVK				S	S	16 32 32.3	+3.1
N25K	Chitina, Valde	55.81	34	P	P	16 24 47.6	+1.6
	baz=272						
N25K	Chitina, Valde	55.81	34	P	P	16 24 44.5	-1.5
RAGM	Ragged Mountai	55.81	35	P	P	16 24 44.8	-1.2
RAGM				IAmb	IAmb	16 24 58.5	
	comp=Z,35nm,1.4s						
DOT	Dot Lake	56.01	31	P	P	16 24 46.5	-0.9
DOT				IAmb	IAmb	16 24 53.1	
	comp=Z,22nm,1.4s						
SCRK	Sand Creek	56.04	31	P	P	16 24 47.8	+0.1
	baz=270,SNR=13						
MENT	Mentasta	56.18	32	P	P	16 24 47.9	-0.8
MENT				IAmb	IAmb	16 24 54.4	
	comp=Z,16nm,1.1s						
GLB	Gilahina Butte	56.19	34	P	P	16 24 48.3	-0.4
VRDI	Verde Repeater	56.37	34	P	P	16 24 50.4	+0.2
VRDI				IAmb	IAmb	16 24 54.1	
	comp=Z,26nm,1.5s						
CRQM	Cirque	56.55	35	P	P	16 24 51.4	-0.1
CRQM				IAmb	IAmb	16 24 55.3	
	comp=Z,35nm,1.1s						
MCARA	McCarthy VSAT	56.57	34	P	P	16 24 50.6	-0.7
MCARA				IAmb	IAmb	16 25 11.4	
	comp=Z,26nm,1.1s						
DZA	Taraz	56.57	304	*e*P	P	16 24 51.5	-0.3
	comp=Z,12nm,1.1s,baz=304						
DZA	Taraz	56.57	304	*e*P	P	16 24 51.4	-0.3
DZA				pmax	pmax		
	comp=Z,12nm,1.1s						
TGL	Tana Glacier	56.70	35	P	P	16 24 52.5	+0.1
TGL				IAmb	IAmb	16 25 12.4	
	comp=Z,24nm,1.3s						
POHA	Pohakuloa	56.84	85	P	P	16 24 53.9	-0.3
K27K	Chicken	56.88	31	P	P	16 24 54.6	+1.0
	baz=272						
K27K	Chicken	56.88	31	P	P	16 24 54.1	+0.5
K27K				IAmb	IAmb	16 24 59.8	
	comp=Z,26nm,1.1s						
BALM	Baldy	56.92	34	P	P	16 24 53.1	-0.9
ISLE	Juniper Island	56.95	35	P	P	16 24 54.4	+0.1
ISLE				IAmb	IAmb	16 25 16.1	
	comp=Z,17nm,1.0s						
KK31	Karatay Array	57.11	304	P	P	16 24 55.6	0.0
KK31				pmax	pmax		
	comp=Z,35nm,0.9s						
KK31	Karatay Array	57.11	304	P	P	16 24 55.5	0.0
KKAR	Karatay Array	57.11	304	P	P	16 24 55.4	-0.2
KKAR				pmax	pmax		
	comp=Z,35nm,0.9s						
KKAR	Karatay Array	57.11	304	P	P	16 24 56.0	+0.4
KKAR	Karatay Array	57.11	304	P	P	16 24 55.4	-0.2
KKAR				IAmb	IAmb	16 25 00.8	
	comp=Z,35nm,0.9s						
NOUC	Port Laguerre	57.20	153	P	P	16 24 59.9	+3.7
DZM	Mont Dzumac	57.23	153	*e*P	P	16 24 58.2	+1.6
	comp=Z,58nm,1.1s						
DZM				*e*S	S	16 32 49.7	-1.5
	comp=Z,1µm,30.1s						
DZM				*e*LR	LR	16 41 41.0	
	comp=Z,898nm,22.6s						
DZM	Mont Dzumac	57.23	153	P	P	16 24 55.2	-1.4
DZM				IAmb	IAmb	16 25 03.2	
	comp=Z,19nm,0.9s						
DZM	Mont Dzumac	57.23	153	P	P	16 24 59.6	+3.0
EGAK	Eagle	57.25	30	P	P	16 24 55.6	-0.6
NIL	Nilore	57.46	293	P	P	16 24 58.9	+0.7
NIL	Nilore	57.46	293	P	P	16 24 58.9	+0.7
NIL	Nilore	57.46	293	P	P	16 24 59.2	+1.0
NIL				P	P	16 24 59.2	+1.0
IUG	Iuzhnay	57.67	303	*e*P	P	16 24 58.2	-1.4
	comp=Z,25nm,1.1s,baz=303						
IUG	Iuzhnay	57.67	303	*e*P	P	16 24 58.2	-1.4
IUG				pmax	pmax		
	comp=Z,25nm,1.1s						
DAWY	Dawson	58.06	31	P	P	16 25 01.5	-0.4
DAWY				IAmb	IAmb	16 25 07.7	
	comp=Z,29nm,1.1s						
HYB	Hyderabad	58.87	273	*i* P	P	16 25 08.0	-0.3
EPYK	Eagle Plains	58.98	28	P	P	16 25 09.1	+0.8
	baz=276						
HYT	Haines Junctio	59.29	34	P	P	16 25 10.0	-0.6
INK	Inuvik	60.00	25	P	P	16 25 16.0	+0.8
	comp=Z,8.4nm,0.9s,baz=280,slow=7.6,SNR=15						
INK	Inuvik	60.00	25	P	P	16 25 14.7	-0.5
INK				pmax	pmax		
	comp=Z,14nm,1.2s						
INK	Inuvik	60.00	25	P	P	16 25 14.7	-0.5
INK				IAmb	IAmb	16 25 20.1	
	comp=Z,14nm,1.1s						
KBL	Kabul	60.52	295	P	P	16 25 18.7	-0.9
KBL				pmax	pmax		
	comp=Z,23nm,0.9s						
KBL	Kabul	60.52	295	P	P	16 25 18.7	-0.9
KBL				IAmb	IAmb	16 25 24.4	
	comp=Z,23nm,0.9s						
KBL	Kabul	60.52	295	P	P	16 25 20.0	+0.4
	SNR=15						
KBL				P	P	16 25 20.0	+0.4
	SNR=15						
SVE	Sverdlovsk	60.55	321	*e*P	P	16 25 20.1	+1.0
SVE				*e*S	S	16 33 37.0	+3.6
SVE				pmax	pmax		
	comp=Z,62nm,1.5s						
SVE				MLR	MLR		
	comp=Z,943nm,16.0s						
WHY	Whitehorse	60.59	34	P	P	16 25 20.1	+0.5
ARU	Arti	61.75	321	*c i*P	P	16 25 27.7	+0.4
ARU						16 26 08.7	
ARU						16 27 41.9	
ARU				S	S	16 33 50.9	+2.1
ARU				SS	SS	16 37 53.6	+3.5
ARU				pmax	pmax		
	comp=Z,60nm,1.3s						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s						
ARU	Arti	61.75	321	P	P	16 25 26.8	-0.5
PALK	Pallekele	61.76	261	P	P	16 25 27.3	-0.8
PALK				pmax	pmax		
	comp=Z,20nm,1.1s						
PALK	Pallekele	61.76	261	P	P	16 25 27.3	-0.8
PALK				IAmb	IAmb	16 25 30.5	
	comp=Z,20nm,1.1s						
PALK	Pallekele	61.76	261	P	P	16 25 28.3	+0.2
STKA	Stephens Creek	62.01	181	P	P	16 25 30.4	+1.1
	comp=Z,3.5nm,0.6s,baz=350,slow=6.9,SNR=9.1						
STKA				LR	LR	16 51 54.6	
	comp=Z,980nm,20.9s,baz=7.7,slow=36						
STKA	Stephens Creek	62.01	181	P	P	16 25 29.3	+0.1
STKA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
STKA	Stephens Creek	62.01	181	P	P	16 25 29.3	+0.1
POO	Poona	62.45	276	*e*P	P	16 25 32.0	-0.6
ABKAR	Akbulak array	62.73	313	P	P	16 25 33.8	-0.2
ABKAR	Akbulak array	62.73	313	P	P	16 25 33.4	-0.6
C36M	Paulatuk	63.16	23	P	P	16 25 36.0	-0.5
	baz=285						
C36M	Paulatuk	63.16	23	P	P	16 25 35.4	-1.1
C36M				IAmb	IAmb	16 25 55.9	
	comp=Z,10nm,0.8s						
HRA	Herat	65.85	297	P	P	16 25 54.4	-0.6
KIRV	Kirov	65.89	325	*ce*P	P	16 25 55.5	+1.0
EUNU	Eureka	66.58	8	P	P	16 25 56.9	-1.8
EUNU				IAmb	IAmb	16 26 03.2	
	comp=Z,14nm,0.8s						
NWAO	Narrogin (SRO)	67.32	203	P	P	16 26 04.4	+0.6
	comp=Z,23nm,0.8s,baz=33,slow=5.3,SNR=11						
NWAO	Narrogin (SRO)	67.32	203	P	P	16 26 02.4	-1.5
NWAO				pmax	pmax		
	comp=Z,30nm,0.9s						
NWAO	Narrogin (SRO)	67.32	203	P	P	16 26 02.3	-1.5
NWAO	Narrogin (SRO)	67.32	203	P	P	16 26 02.4	-1.5
NWAO				IAmb	IAmb	16 26 07.6	
	comp=Z,30nm,0.8s						
GEYT	Alibeck	67.66	302	P	P	16 26 07.2	+1.0
	comp=Z,16nm,1.0s,baz=18,slow=1.9,SNR=19						
GEYT				LR	LR	16 58 54.7	
	comp=Z,680nm,18.7s,baz=60,slow=39						
GEYT	Alibeck	67.66	302	P	P	16 26 06.5	+0.2
HSPB	Hornsund (broa	67.98	349	*e*P	P	16 26 08.5	+1.0
RES	Resolute Bay	68.80	14	P	P	16 26 12.5	-0.2
RES				pmax	pmax		
	comp=Z,13nm,1.2s						
RES	Resolute Bay	68.80	14	P	P	16 26 12.5	-0.2
RES				IAmb	IAmb	16 26 17.1	
	comp=Z,13nm,1.1s						
TMCR	Tamitsa	68.81	333	*e*P	P	16 26 13.6	+0.7
TMCR				pmax	pmax		
	comp=Z,41nm,1.1s						
APA	Apatity	68.92	337	⇓*i*P	P	16 26 14.0	+0.4
APA				pmax	pmax		
	comp=Z,22nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,17.0s						
BELG	Belogornoye	69.07	319	P	P	16 26 15.5	+0.8
	comp=Z,54nm,1.1s,baz=10,slow=1.9,SNR=11						
BELG	Belogornoye	69.07	319	*i* P	P	16 26 15.5	+0.8
BELG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	69.21	29	P	P	16 26 15.5	+0.1
	comp=Z,7.7nm,0.8s,baz=294,slow=5.8,SNR=55						
YKA				PKP2bc		16 54 24.5	
	comp=Z,1.3nm,1.2s,baz=90,slow=3.0,SNR=5.2						
KLMR	Klimovskoe	69.65	329	*e*P	P	16 26 16.9	-1.2
KLMR				*e*		16 28 49.0	
KLMR				pmax	pmax		
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	69.65	329	*e*P	P	16 26 17.0	-1.2
KLMR				AMP		16 26 20.1	
	comp=Z,49nm,1.4s						
KLMR				*e*PP	PP	16 28 49.1	-2.7
KLMR				LQ	LQ	16 51 19.1	
KLMR				LQ	LQ	16 51 19.1	
KLMR				LR	LR	16 56 41.4	
KEV	Kevo	69.79	340	P	P	16 26 18.9	0.0
KEV				pmax	pmax		
	comp=Z,30nm,1.2s						
KEV	Kevo	69.79	340	P	P	16 26 18.9	0.0
KEV				IAmb	IAmb	16 26 41.7	
	comp=Z,30nm,1.2s						
ARCES	ARCESS Array B	70.35	340	P	P	16 26 21.8	-0.6
	comp=Z,17nm,0.9s,baz=54,slow=6.2,SNR=9.7						
ARCES				LR	LR	17 02 43.6	
	comp=Z,988nm,18.1s,baz=55,slow=41						
ARCES	ARCESS Array B	70.35	340	P	P	16 26 21.3	-1.1
ARCES				pmax	pmax		
	comp=Z,23nm,1.0s						
ARCES	ARCESS Array B	70.35	340	P	P	16 26 21.3	-1.1
TULEG	Thule	71.51	7	P	P	16 26 28.4	-0.9
TULEG				IAmb	IAmb	16 26 34.3	
	comp=Z,23nm,1.0s						
TULEG	Thule	71.51	7	*i* P	P	16 26 29.5	+0.2
TULEG				IAmb	IAmb	16 26 33.4	
	comp=Z,29nm,1.1s						
DAG	Danmarks Havn	72.34	355	*i* P	P	16 26 35.0	+0.7
DAG				pmax	pmax		
	comp=Z,44nm,1.4s						
DAG	Danmarks Havn	72.34	355	*i* P	P	16 26 35.0	+0.7
	comp=Z,44nm,1.4s						
DAG	Danmarks Havn	72.34	355	*i* P	P	16 26 35.0	+0.7
DAG				IAmb	IAmb	16 26 36.9	
	comp=Z,44nm,1.4s						
VRH	Novokhopyorsk	72.89	320	*e*P	P	16 26 37.9	-0.1
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
MOS	Moscow	72.91	325	*e*P	P	16 26 38.1	+0.1
MOS				*e*		16 29 21.0	
MOS				*e*S	S	16 36 04.4	+1.5
MOS				*e*SSS	SSS	16 43 55.7	
MOS				pmax	pmax		
	comp=Z,37nm,0.8s						
MOS				MLR	MLR		
	comp=Z,2µm,19.0s						
MAK	Makhachkala	73.05	310	*ce*P	P	16 26 38.4	-0.6
MAK				*e*		16 29 21.9	
MAK				*e*PPP	PPP	16 31 08.4	
MAK				*e*S	S	16 36 04.3	-0.6
MAK				pmax	pmax		
	comp=Z,166nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3µm,16.0s						
JLN	Jalan Bani Buh	73.11	286	P	P	16 26 40.6	+0.8
JLN				P	P	16 26 40.6	+0.8
I04A	Tendick Farm,	73.23	49	P	P	16 26 40.1	-0.1
	baz=296						
WBK	Wadi Bani Khal	73.27	287	P	P	16 26 42.0	+1.3
WBK				P	P	16 26 42.0	+1.3
AKT	Akhty	73.55	309	*e*P	P	16 26 43.6	+1.4
AKT				*e*		16 26 58.8	
AKT				pmax	pmax		
	comp=Z,80nm,1.4s						
BIDO	Bidbid	73.56	288	P	P	16 26 44.2	+1.9
	SNR=6.2						
I05D	Terrebonne, OR	73.68	48	P	P	16 26 43.9	+1.0
	baz=297						
OBN	Obninsk	73.74	325	⇑*i*P	P	16 26 44.6	+1.7
OBN				*e*		16 26 53.0	
OBN				*e*		16 26 59.3	
OBN				*e*S	S	16 36 14.2	+1.9
OBN				*e*		16 36 54.9	
OBN				pmax	pmax		
	comp=Z,29nm,1.0s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
OBN	Obninsk	73.74	325	P	P	16 26 41.7	-1.2
LPSR	Galich'ya Gora	73.76	322	*e*P	P	16 26 43.2	+0.2
LPSR				pmax	pmax		
	comp=Z,40nm,1.7s						
SMDO	Samad	73.83	287	P	P	16 26 45.4	+1.3
	SNR=6.4						
SMDO				P	P	16 26 45.4	+1.3
	SNR=6.4						
BANOM	Banah	73.98	291	*i* P	P	16 26 45.5	+0.7
	SNR=6.1						
BANOM	Banah	73.98	291	P	P	16 26 46.7	+1.8
	SNR=5.1						
L04D	Klamath Falls	74.00	50	P	P	16 26 45.8	+0.9
	baz=297						
M02C	Callahan	74.00	51	P	P	16 26 44.1	-0.7
	baz=297						
SHME	Shamm	74.05	291	*i* P	P	16 26 47.0	+1.7
	SNR=40						
SHME				*i* P	P	16 26 47.0	+1.7
	SNR=12						
SHME	Shamm	74.05	291	P	P	16 26 47.0	+1.7
	SNR=19						
SHME				P	P	16 26 47.0	+1.7
	SNR=19						
JMDO	Jabal Madar	74.09	287	P	P	16 26 46.5	+1.0
	SNR=5.9						
JMDO				P	P	16 26 46.5	+1.0
	SNR=5.9						
PINE	Pine Mountain	74.19	48	P	P	16 26 45.2	-0.8
PINE				IAmb	IAmb	16 26 52.1	
	comp=Z,31nm,1.0s						
HOQ	Hoqain	74.20	288	P	P	16 26 48.0	+1.8
	SNR=13						
HOQ				P	P	16 26 48.0	+1.8
	SNR=13						
J05D	Fort Rock, OR	74.22	49	P	P	16 26 48.5	+2.4
	baz=297						
MDH	Madha	74.26	290	P	P	16 26 47.0	+0.6
N02D	Trinity Center	74.29	52	P	P	16 26 47.2	+0.7
	baz=297						
VSR	Storozhevoye	74.31	320	*e*P	P	16 26 46.4	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MASF	Masafi	74.34	290	P	P	16 26 48.4	+1.4
MASF				P	P	16 26 48.4	+1.4
MSFE	Esma-Masafi	74.34	290	P	P	16 26 47.9	+0.9
NEW	Newport	74.47	43	P	P	16 26 48.6	+1.2
	baz=298						
UOSS	Minazif	74.49	290	P	P	16 26 48.1	+0.2
UOSS	Minazif	74.49	290	P	P	16 26 45.8	-2.0
UOSS				IAmb	IAmb	16 26 51.8	
	comp=Z,20nm,0.9s						
M04C	Macdoel	74.51	51	P	P	16 26 48.6	+0.8
	baz=297						
WDC	Whiskeytown Da	74.58	52	P	P	16 26 48.1	0.0
WDC				pmax	pmax		
	comp=Z,17nm,1.2s						
WDC	Whiskeytown Da	74.58	52	P	P	16 26 48.1	0.0
SOHO	SOHO	74.59	289	*i* P	P	16 26 48.7	+0.3
	SNR=17						
SOHO	SOHO	74.59	289	P	P	16 26 49.4	+1.0
SOHO				P	P	16 26 49.4	+1.0
HATD	Hatta, Dubai	74.61	290	*i* P	P	16 26 49.4	+0.9
	SNR=9.2						
HATD	Hatta, Dubai	74.61	290	P	P	16 26 49.7	+1.2
	SNR=8.7						
HATD				P	P	16 26 49.7	+1.2
	SNR=8.7						
BSY	Bisya	74.67	288	P	P	16 26 50.0	+1.0
	SNR=7.6						
BSY				P	P	16 26 50.0	+1.0
	SNR=7.6						
K05A	Summer Lake	74.70	49	P	P	16 26 48.1	-0.9
K05A				IAmb	IAmb	16 26 53.0	
	comp=Z,35nm,1.0s						
ASHO	Ashiyiah	74.73	290	*i* P	P	16 26 49.8	+0.5
	SNR=12						
ASHO	Ashiyiah	74.73	290	P	P	16 26 50.2	+1.0
	SNR=11						
ASHO				P	P	16 26 50.2	+1.0
	SNR=11						
MHTO	MHTO	74.83	286	P	P	16 26 50.7	+0.9
	SNR=11						
MHTO				P	P	16 26 50.7	+0.9
	SNR=11						
DBG	Daneborg	74.83	355	*i* P	P	16 26 49.4	+0.4
DBG				IAmb	IAmb	16 26 53.9	
	comp=Z,11nm,1.0s						
FIA1	FINESS Array S	74.91	333	P	P	16 26 49.2	-0.4
FIA1				IAmb	IAmb	16 26 54.1	
	comp=Z,36nm,1.1s						
FINES	FINESS Array B	74.91	333	P	P	16 26 50.0	+0.4
	comp=Z,18nm,0.8s,baz=67,slow=5.3,SNR=39						
FINES	FINESS Array B	74.91	333	P	P	16 26 50.0	+0.4
FINES	FINESS Array B	74.91	333	P	P	16 26 49.5	-0.1
NAZ	Nazwa, Dubai	74.91	290	*i* P	P	16 26 50.9	+0.6
	SNR=6.5						
NAZ	Nazwa, Dubai	74.91	290	P	P	16 26 52.0	+1.7
	SNR=9.1						
NAZ				P	P	16 26 52.0	+1.7
	SNR=9.1						
ARQ	Araqi	74.96	288	P	P	16 26 52.0	+1.4
	SNR=11						
ARQ				P	P	16 26 52.0	+1.4
	SNR=11						
GOF	Gofitskoye	74.97	314	⇑*e*P	P	16 26 56.2	+6.0
GOF				pmax	pmax		
	comp=Z,29nm,0.8s						
FAQ	Al Faqa, Dubai	75.08	290	*i* P	P	16 26 51.5	+0.2
	SNR=7.4						
FAQ	Al Faqa, Dubai	75.08	290	P	P	16 26 51.7	+0.4
	SNR=7.0						
FAQ				P	P	16 26 51.7	+0.4
	SNR=7.0						
O03E	Paynes Creek	75.21	52	P	P	16 26 51.5	-0.4
	baz=298						
ALNE	Al Ain	75.26	289	P	P	16 26 53.6	+1.3
	SNR=11						
ALNE				P	P	16 26 53.6	+1.3
	SNR=11						
ASUD	Al Ashush, Dub	75.35	290	*i* P	P	16 26 53.6	+0.8
	SNR=11						
ASUD	Al Ashush, Dub	75.35	290	P	P	16 26 53.7	+1.0
	SNR=8.8						
ASUD				P	P	16 26 53.7	+1.0
	SNR=8.8						
NCK	Nalchik	75.35	312	*i* P	P	16 26 54.1	+1.6
NCK				pmax	pmax		
	comp=Z,13nm,0.9s						
ZEI	Tsey	75.49	311	*e*P	P	16 26 52.5	-1.0
ZEI				pmax	pmax		
	comp=Z,26nm,1.4s						
F10A	Beach Ranch, E	75.50	45	P	P	16 26 52.0	-1.5
F10A				IAmb	IAmb	16 26 53.3	
	comp=Z,14nm,0.9s						
AJN	Ajban	75.65	290	*i* P	P	16 26 55.0	+0.4
	SNR=5.3						
KBZ	Khabaz	75.69	312	P	P	16 26 54.6	+0.2
	comp=Z,8.9nm,0.7s,baz=85,slow=5.8,SNR=26						
KBZ				LR	LR	17 02 49.7	
	comp=Z,850nm,18.6s,baz=66,slow=38						
KBZ	Khabaz	75.69	312	*ce*P	P	16 26 55.5	+1.1
KBZ				pmax	pmax		
	comp=Z,37nm,1.0s						
KIV	Kislovodsk	75.72	313	*i* P	P	16 26 55.8	+1.2
	SNR=7.3						
KIV	Kislovodsk	75.72	313	*e*P	P	16 26 56.0	+1.3
KIV				*e*S	S	16 36 37.1	+2.0
KIV				*e*SS	SS	16 41 29.0	+2.9
KIV				pmax	pmax		
	comp=Z,96nm,1.0s						
KIV				pmax	pmax		
	comp=Z,294nm,4.3s						
KIV				MLR	MLR		
	comp=Z,1µm,18.0s						
KIV	Kislovodsk	75.72	313	P	P	16 26 52.9	-1.8
KIV				IAmb	IAmb	16 27 02.1	
	comp=Z,28nm,1.0s						
ORV	Oroville	75.76	52	P	P	16 26 54.2	-0.7
ORV				pmax	pmax		
	comp=Z,11nm,1.1s						
ORV	Oroville	75.76	52	P	P	16 26 54.2	-0.7
RAR	Rarotonga	75.87	125	LR	LR	16 54 15.4	
	comp=Z,696nm,19.4s,baz=288,slow=31						
WALA	Waterton Lakes	75.93	41	P	P	16 26 56.6	+0.7
WALA				IAmb	IAmb	16 27 01.6	
	comp=Z,25nm,0.8s						
BMO	Blue Mountains	75.99	46	P	P	16 26 55.4	-0.8
BMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						

BMO	Blue Mountains	75.99	46	P	P	16 26 55.4	-0.8
GNI	Garni	76.17	308	P	P	16 26 59.3	+1.8
GNI	Garni	76.17	308ce	P	P	16 26 59.1	+1.6
GNI				pmax	pmax		
	comp=Z,47nm,1.3s						
GNI	Garni	76.17	308	P	P	16 26 57.2	-0.3
UMZA	Um Al Zommool	76.36	288	P	P	16 26 58.8	+0.2
JTMT	Jette	76.38	42	P	P	16 26 59.1	+0.7
BEKR	Beckworth	76.39	52	P	P	16 26 58.9	+0.2
BEKR				IAmb	IAmb	16 27 02.2	
	comp=Z,15nm,0.8s						
VSU	Vasula	76.43	331	iP	P	16 26 59.4	+1.1
VSU				pmax	pmax		
	comp=Z,140nm,1.1s						
MSO	Missoula	77.05	43	P	P	16 27 02.8	+0.6
	baz=301,SNR=8.2						
MSO	Missoula	77.05	43	P	P	16 27 01.1	-1.1
MSO				IAmb	IAmb	16 27 06.6	
	comp=Z,27nm,1.5s						
PAHR	Pah Rah Range	77.13	52	P	P	16 27 01.0	-1.8
SUMG	Summit	77.23	0	P	P	16 27 03.9	+0.8
SUMG				pmax	pmax		
	comp=Z,38nm,1.2s						
SUMG	Summit	77.23	0	P	P	16 27 03.9	+0.8
SUMG	Summit	77.23	0	iP	P	16 27 04.0	+0.8
SUMG	Summit	77.23	0	iP	P	16 27 04.0	+0.8
CMB	Columbia Colle	77.25	53	P	P	16 27 03.2	-0.2
CMB				pmax	pmax		
	comp=Z,12nm,0.9s						
CMB	Columbia Colle	77.25	53	P	P	16 27 03.2	-0.2
CMB				IAmb	IAmb	16 27 06.7	
	comp=Z,12nm,0.8s						
PNTR	Pine Nut	77.28	52	P	P	16 27 03.4	-0.4
PNTR				IAmb	IAmb	16 27 07.3	
	comp=Z,11nm,0.8s						
THZ	Tophouse	77.28	157	P	P	16 27 02.9	-0.4
THZ				IAmb	IAmb	16 27 16.0	
	comp=Z,21nm,1.0s						
GUZR	Guzeripl'	77.31	314	iP	P	16 27 05.4	+1.7
GUZR				pmax	pmax		
	comp=Z,18nm,0.8s						
MFID	Camas Ranch	77.63	47	P	P	16 27 05.2	-0.4
MFID				IAmb	IAmb	16 27 11.3	
	comp=Z,12nm,0.9s						
WAKR	Walker	77.67	53	P	P	16 27 05.3	-0.7
SOC	Sochi	77.77	313c	iP	P	16 27 06.1	-0.1
SOC				e		16 29 59.0	
SOC				ePPP	PPP	16 31 46.6	
SOC				eS	S	16 36 58.0	+0.7
SOC				pmax	pmax		
	comp=Z,17nm,0.9s						
SOC				MLR	MLR		
	comp=Z,516nm,13.0s						
KHZ	Kahutara	78.08	157	P	P	16 27 07.5	0.0
SHAO	Shalim	78.15	284	P	P	16 27 09.3	+0.6
GEVA	Gevas	78.20	307	P	P	16 27 07.8	-1.1
GEVA				IAmb	IAmb	16 27 15.9	
	comp=Z,36nm,1.3s						
RYN	Ryan	78.24	52	P	P	16 27 08.5	-0.6
RYN				IAmb	IAmb	16 27 12.5	
	comp=Z,10nm,0.7s						
MNK	Minsk	78.28	327	iP	P	16 27 11.1	+2.4
	comp=E,6.0nm,1.3s						
MNK				iP	P	16 27 11.1	+2.4
	comp=N,38nm,1.3s						
MNK				iP	P	16 27 11.1	+2.4
	comp=Z,64nm,1.4s						
MNK				iPP	PP	16 30 11.2	+5.9
MNK				iPPP	PPP	16 31 59.9	
MNK				iS	S	16 37 11.5	+9.1
MNK				iSS	SS	16 42 21.6	+18
MNK				iSSS	SSS	16 45 47.3	
MNK				iLQ	LQ	16 59 07.6	
MNK				iLR	LR	17 03 12.8	
MNK				iLRM	MLR	17 04 18.8	
	comp=E,107nm,18.0s						
MNK				iLRM	MLR	17 04 18.8	
	comp=N,830nm,19.4s						
MNK				iLRM	MLR	17 04 18.8	
	comp=Z,806nm,17.2s						
MNK	Minsk	78.28	327	eP	P	16 27 10.0	+1.2
MDPB	Devils Postpil	78.34	53	P	P	16 27 09.3	-0.5
HRY	Holter Researc	78.35	42	P	P	16 27 10.0	+0.5
LHV	Little Huntoon	78.44	52	P	P	16 27 10.0	+0.1
LHV				IAmb	IAmb	16 27 20.3	
	comp=Z,15nm,0.9s						
HLID	Hailey	78.44	46	P	P	16 27 10.4	+0.3
	baz=301						
HLID	Hailey	78.44	46	P	P	16 27 09.1	-1.0
RPZ	Rata Peaks	78.44	159	P	P	16 27 11.3	+1.7
RPZ				IAmb	IAmb	16 27 12.3	
	comp=Z,32nm,1.2s						
NVAR	Mina Array Bea	78.48	52	P	P	16 27 11.4	+0.9
	comp=Z,8.9nm,0.6s,baz=293,slow=5.8,SNR=63						
NVAR				LR	LR	16 58 59.6	
	comp=Z,668nm,19.0s,baz=278,slow=34						
NVAR	Mina Array Bea	78.48	52	P	P	16 27 11.0	+0.5
NACGM	Naroch	78.55	328	iP	P	16 27 11.8	+1.6
NACGM				iP	P	16 27 11.8	+1.6
NACGM				iP	P	16 27 11.8	+1.6
NACGM				iPP	PP	16 30 18.4	+11
NACGM				iPPP	PPP	16 32 35.1	
NACGM				iS	S	16 37 09.1	+3.9
NACGM				iSS	SS	16 42 11.1	+3.2
NACGM				iSSS	SSS	16 45 24.4	
NACGM				iLQ	LQ	16 56 37.6	
NACGM				iLR	LR	17 01 41.5	
ANN	Anapa	78.56	315	eP	P	16 27 12.7	+2.2
ANN				eS	S	16 37 05.1	-0.5
ANN				pmax	pmax		
	comp=Z,98nm,1.2s						
NV11	Mina Array Sit	78.58	52	P	P	16 27 11.7	+0.7
DLMT	Dillon	78.61	44	P	P	16 27 11.9	+0.9
DLMT				IAmb	IAmb	16 27 15.0	
	comp=Z,15nm,1.0s						
SCO	Scoresbysund	78.68	355	P	P	16 27 12.3	+1.6
SCO				pmax	pmax		
	comp=Z,24nm,1.1s						
SCO	Scoresbysund	78.68	355	P	P	16 27 12.3	+1.6
SCO				IAmb	IAmb	16 27 16.5	
	comp=Z,24nm,1.1s						
SCO	Scoresbysund	78.68	355	iP	P	16 27 12.0	+1.3
SCO	Scoresbysund	78.68	355	iP	P	16 27 12.0	+1.3
EGMT	Eagleton	78.83	41	P	P	16 27 12.8	+0.7
	baz=303						
FFC	Flin Flon	78.91	32	P	P	16 27 11.7	-0.6
FFC				pmax	pmax		
	comp=Z,14nm,1.0s						
FFC	Flin Flon	78.91	32	P	P	16 27 11.7	-0.6
BOZ	Bozeman (W)	79.06	43	P	P	16 27 12.9	-0.6
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOZ	Bozeman (W)	79.06	43	P	P	16 27 13.5	+0.1
	baz=302						
BOZ	Bozeman (W)	79.06	43	P	P	16 27 12.9	-0.6
UMR	Umm Al-Rimmam	79.06	298	eP		16 27 12.8	
DOK	Doka	79.12	285	P	P	16 27 14.5	+0.5
	SNR=6.2						
DOK				P	P	16 27 14.5	+0.5
	SNR=6.2						
PKM	Mcpherson Peak	79.17	56	P	P	16 27 15.5	+1.1
	baz=300						
VES	Vestal, Richgr	79.22	55	P	P	16 27 14.3	-0.1
	baz=300						
MIB	Mutribah	79.23	298	eP		16 27 14.4	
ELK	Elko	79.36	49	P	P	16 27 14.0	-1.3
ELK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ELK	Elko	79.36	49	P	P	16 27 13.9	-1.3
TPH	Tonopah	79.40	52	P	P	16 27 14.8	-0.7
TPH				pmax	pmax		
	comp=Z,60nm,1.2s						
TPH	Tonopah	79.40	52	P	P	16 27 14.8	-0.7
RDF	Al-Radifah	79.49	297	eP		16 27 16.0	
FCC	Fort Churchill	79.60	26	P	P	16 27 14.8	-1.1
FCC				pmax	pmax		
	comp=Z,31nm,1.4s						
FCC	Fort Churchill	79.60	26	P	P	16 27 14.8	-1.1
FCC				IAmb	IAmb	16 27 19.6	
	comp=Z,31nm,1.4s						
CWC	Cottonwood Cre	79.63	54	P	P	16 27 16.5	-0.3
	baz=300						
RST	Umm Al-Ruwaisa	79.64	298	eP		16 27 16.4	
YHL	Hebgen Lake	79.73	44	P	P	16 27 17.2	-0.1
ISA	Isabella, Lake	79.74	55	P	P	16 27 17.6	+0.3
	baz=300						
YHB	Horse Butte	79.78	44	P	P	16 27 17.0	-0.5
GRAC	Grapevine Rang	79.84	53	P	P	16 27 18.9	+1.1
	baz=300						
AKASG	Malin Array Be	79.88	323	P	P	16 27 17.7	+0.1
	comp=Z,7.4nm,0.7s,baz=50,slow=5.8,SNR=23						
AKASG				PP	PP	16 30 19.7	+1.1
	comp=Z,1.1nm,0.6s,baz=48,slow=8.8,SNR=5.0						
AKASG				LR	LR	17 05 46.8	
	comp=Z,2µm,18.7s,baz=60,slow=38						
AKASG	Malin Array Be	79.88	323	P	P	16 27 17.4	-0.2
AKBB	Malin Array Si	79.88	323ce	P	P	16 27 18.9	+1.3
AKBB	Malin Array Si	79.88	323	P	P	16 27 17.0	-0.6
AKBB				IAmb	IAmb	16 27 24.1	
	comp=Z,15nm,0.8s						
GCMT	Greycliff	80.11	42	P	P	16 27 15.9	-3.2
MPMC	Manual Prospec	80.23	54	P	P	16 27 20.4	+0.3
	baz=301,SNR=8.0						
NC405	NORSAR Array S	80.25	338	P	P	16 27 19.1	-0.4
MARD	Mardin	80.26	308	P	P	16 27 19.2	-0.9
MARD				IAmb	IAmb	16 27 26.4	
	comp=Z,17nm,0.7s						
NC303	NORSAR Array S	80.28	338	P	P	16 27 19.2	-0.4
H17A	Grant Village	80.34	44	P	P	16 27 23.5	+2.9
	baz=303,SNR=15						
YNE	Yellowstone No	80.34	43	P	P	16 27 19.6	-1.0
R11A	Troy Canyon, C	80.37	51	P	P	16 27 21.3	+0.6
	baz=301,SNR=10						
R11A	Troy Canyon, C	80.37	51	P	P	16 27 20.8	0.0
LRMC	Laurel Mtn Rad	80.39	55	P	P	16 27 20.9	+0.1
	baz=301,SNR=9.7						
NC204	NORSAR Array S	80.43	338	P	P	16 27 20.2	-0.3
NB201	NORSAR Array S	80.43	338	P	P	16 27 20.1	-0.3
FLWY	Flagg Ranch	80.44	44	P	P	16 27 20.1	-0.9
FLWY				IAmb	IAmb	16 27 26.2	
	comp=Z,16nm,0.9s						
FURC	Furnace Creek,	80.46	53	P	P	16 27 21.7	+0.7
	baz=301						
NB2	NORSAR Subarra	80.47	338	P	P	16 27 20.6	0.0
	comp=Z,30nm,1.1s,baz=41,slow=5.3						
NB2	NORSAR Subarra	80.47	338	P	P	16 27 20.6	0.0
	baz=41,slow=5.3						
NOA	NORSAR Array B	80.47	338	P	P	16 27 20.0	-0.6
	comp=Z,14nm,0.9s,baz=40,slow=5.2,SNR=25						
NOA				LR	LR	17 09 22.7	
	comp=Z,890nm,18.3s,baz=30,slow=40						
EDW2	Edwards Air Fo	80.47	55	P	P	16 27 22.0	+0.8
	baz=300,SNR=13						
MOOW	Moose Ponds	80.59	45	P	P	16 27 20.4	-1.5
NBO00	NORSAR Array S	80.61	338	P	P	16 27 21.1	-0.3
NBO00				IAmb	IAmb	16 27 49.9	
	comp=Z,34nm,1.2s						
TPNV	Topopah Spring	80.64	53	P	P	16 27 21.2	-1.0
TPNV				pmax	pmax		
	comp=Z,12nm,0.9s						
TPNV	Topopah Spring	80.64	53	P	P	16 27 22.5	+0.3
	baz=301,SNR=16						
TPNV	Topopah Spring	80.64	53	P	P	16 27 21.2	-1.0
RLMT	Red Lodge	80.71	43	P	P	16 27 24.0	+1.5
	baz=304,SNR=5.3						
RLMT	Red Lodge	80.71	43	P	P	16 27 22.5	-0.1
RLMT				IAmb	IAmb	16 27 26.4	
	comp=Z,14nm,0.8s						
NAO01	NORSAR Array S	80.72	338	P	P	16 27 22.3	+0.3
ICESG	Greenland Ices	80.72	1	iP	P	16 27 24.1	+1.8
ICESG				IAmb	IAmb	16 27 27.4	
	comp=Z,42nm,1.0s						
REDW	Red Top Meadow	80.74	45	P	P	16 27 23.1	+0.4
REDW				IAmb	IAmb	16 27 29.5	
	comp=Z,28nm,1.3s						
BFSC	Mount Baldy Ra	81.04	56	P	P	16 27 24.7	+0.3
	baz=301						
GSC	Goldstone, Bar	81.10	54	P	P	16 27 24.6	0.0
GSC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GSC	Goldstone, Bar	81.10	54	P	P	16 27 25.2	+0.6
	baz=301						
GSC	Goldstone, Bar	81.10	54	P	P	16 27 24.6	0.0
PPT	Papeete	81.19	116	LR	LR	16 58 42.0	
	comp=Z,366nm,18.4s,baz=338,slow=32						
PPT2	Papeete2	81.20	116	eS	S	16 37 31.3	-3.1
	comp=Z,86nm,22.9s						
PPT2	Papeete2	81.20	116	eLR	LR	16 52 21.8	
	comp=Z,519nm,22.8s,baz=297						
PRN	Pahroc Range	81.22	52	P	P	16 27 25.2	-0.1
DUG	Dugway, Tooele	81.22	48	P	P	16 27 25.5	+0.2
DUG				pmax	pmax		
	comp=Z,28nm,1.5s						
DUG	Dugway, Tooele	81.22	48	P	P	16 27 26.2	+1.0
	baz=303,SNR=15						
DUG	Dugway, Tooele	81.22	48	P	P	16 27 25.5	+0.2
DUG				IAmb	IAmb	16 27 30.4	
	comp=Z,28nm,1.4s						
PSUT	Pine Spring	81.43	50	P	P	16 27 26.0	-0.5
LAO	LASA Array	81.56	40	P	P	16 27 28.0	+1.2
	baz=306						
LAO	LASA Array	81.56	40	P	P	16 27 25.8	-1.0
LAO				IAmb	IAmb	16 27 32.0	
	comp=Z,19nm,0.9s						
SHPR	Sheep Range	81.62	53	P	P	16 27 27.6	+0.2
TCUT	Toone Canyon	81.62	47	P	P	16 27 26.9	-0.6
CTU	Camp Tracy	81.64	48	P	P	16 27 27.3	-0.2
HEC	Hector,Ludlow	81.67	55	P	P	16 27 28.1	+0.5
	baz=301,SNR=12						
MURC	Murrieta	81.69	56	P	P	16 27 28.3	+0.6
	baz=301,SNR=6.8						
BW06	Boulder Array	81.86	45	P	P	16 27 29.1	+0.4
	baz=304,SNR=12						
BW06	Boulder Array	81.86	45	P	P	16 27 28.4	-0.3
PD31	Pinedale Array	81.86	45	P	P	16 27 28.4	-0.3
PDAR	Pinedale Array	81.86	45	P	P	16 27 29.1	+0.4
	comp=Z,7.0nm,0.7s,baz=310,slow=1.9,SNR=44						
PDAR				LR	LR	17 01 17.8	
	comp=Z,501nm,19.5s,baz=316,slow=34						
PDAR	Pinedale Array	81.86	45	P	P	16 27 28.3	-0.3
SORM	Soroca	81.87	322	⇑P	P	16 27 29.0	+0.7
JLU	Jordanelle	81.88	48	P	P	16 27 28.8	0.0
MPU	Maple Canyon	82.08	48	P	P	16 27 29.0	-0.9
GMRC	Granite Mounta	82.17	54	P	P	16 27 30.6	+0.3
	baz=302,SNR=12						
PFO	Pinyon Flats O	82.22	56	iP	P	16 27 31.3	+0.7
PFO				pmax	pmax		
	comp=Z,19nm,0.9s						
PFO	Pinyon Flats O	82.22	56	P	P	16 27 30.9	+0.3
	baz=301,SNR=17						
PFO	Pinyon Flats O	82.22	56	P	P	16 27 30.0	-0.5
PFO				IAmb	IAmb	16 27 33.6	
	comp=Z,13nm,0.8s						
CCUT	Cedar City	82.28	51	P	P	16 27 29.5	-1.5
BELC	Belle Mtn. Jos	82.34	55	P	P	16 27 31.3	+0.1
	baz=302,SNR=19						
SOCY	Socotra	82.34	280	P	P	16 27 30.0	-1.4
SZCU	Shurtz Canyon	82.44	51	P	P	16 27 31.1	-0.7
MVU	Marysvale	82.53	50	P	P	16 27 31.6	-0.7
BAR	Barrett	82.55	57	P	P	16 27 29.9	-2.3
MSU	Marysvale	82.55	50	P	P	16 27 32.2	-0.2
MSU	Marysvale	82.55	50	P	P	16 27 32.2	-0.2
MONP2	Monument Peak	82.61	56	P	P	16 27 32.3	-0.5
	baz=302,SNR=7.2						
LCMT	Little Creek M	82.65	51	P	P	16 27 33.2	+0.4
TMUT	Trail Mountain	82.75	49	P	P	16 27 32.3	-1.2
MTPU	Mount Pierson	82.80	50	P	P	16 27 32.5	-1.3
IRM	Iron Mountain	82.86	55	P	P	16 27 34.3	+0.5
	baz=302,SNR=7.7						
BC3	Big Chuckawall	82.91	55	P	P	16 27 34.6	+0.5
	baz=302,SNR=14						
KNB	Kanab	82.93	51	P	P	16 27 33.9	-0.4
KNB				pmax	pmax		
	comp=Z,24nm,1.1s						
KNB	Kanab	82.93	51	P	P	16 27 33.9	-0.4
P17A	Butcher Ranch,	82.95	48	P	P	16 27 34.5	+0.1
IKP	In-Ko-Pah, Jac	82.97	56	P	P	16 27 35.1	+0.7
	baz=302,SNR=6.2						
Q16A	Castle Valley	82.98	49	P	P	16 27 32.7	-1.8
LVV	L'vov	83.05	325	eP	P	16 27 32.8	-1.6
LVV				e		16 37 49.3	
LVV				MLR	MLR		
	comp=Z,2µm,18.0s						
RDMU	Red Mountain	83.09	47	P	P	16 27 34.4	-0.7
W13A	Hualapai Mount	83.24	53	P	P	16 27 34.6	-1.4
SRU	San Rafael Swe	83.30	48	P	P	16 27 34.9	-1.3
SRU				pmax	pmax		
	comp=Z,44nm,1.5s						
SRU	San Rafael Swe	83.30	48	P	P	16 27 34.9	-1.3
ESJX	Sierra Juarez	83.42	57	P	P	16 27 35.6	-1.3
PDMCI	Parker Dam,Lak	83.49	54	P	P	16 27 38.4	+1.5
	baz=302						
U15A	North Rim	83.61	51	P	P	16 27 36.4	-1.6
U15A				IAmb	IAmb	16 27 43.2	
	comp=Z,10nm,1.1s						
GLA	Glamis	83.67	55	P	P	16 27 39.2	+1.2
	baz=302						
BR131	Keskin Array S	83.68	313c	iP	P	16 27 38.8	+0.7
BR131	Keskin Array S	83.68	313	P	P	16 27 37.9	-0.2
BRTR	Keskin Array B	83.68	313	P	P	16 27 38.7	+0.7
	comp=Z,11nm,0.8s,baz=99,slow=3.6,SNR=48						
BRTR				LR	LR	17 09 16.9	
	comp=Z,304nm,18.9s,baz=54,slow=39						
BRTR	Keskin Array B	83.68	313	P	P	16 27 37.7	-0.4
RAYN	Ar Rayn	83.75	293	iP	P	16 27 39.5	+0.9
	SNR=31						
RAYN	Ar Rayn	83.75	293	P	P	16 27 38.8	+0.2
RAYN				pmax	pmax		
	comp=Z,32nm,0.9s						
RAYN	Ar Rayn	83.75	293	P	P	16 27 38.8	+0.2
K22A	Casper	83.76	44	P	P	16 27 39.6	+1.2
	baz=306						
CFR	Carcaliu	83.78	319	⇓P	P	16 27 39.4	+1.2
TESR	Tescani	83.78	321	⇑P	P	16 27 39.0	+0.7
BIZ	Bicaz	83.80	322	⇑P	P	16 27 39.2	+0.8
TPGR	Topolog	83.81	319	⇓P	P	16 27 39.5	+1.0
KWP	Kalwaria Pacla	83.82	325	P	P	16 27 38.9	+0.5
KWP				pmax	pmax		
	comp=Z,42nm,0.9s						
KWP	Kalwaria Pacla	83.82	325	P	P	16 27 38.9	+0.5
BUR08	Bucovina Ar. S	83.84	323	P	P	16 27 38.9	+0.3
BUR08				IAmb	IAmb	16 27 42.9	
	comp=Z,25nm,1.2s						
BURAR	Bucovina Array	83.85	323	P	P	16 27 38.9	+0.2
PETR	Petresti	83.94	320	⇑P	P	16 27 40.5	+1.4
ODBI	Odobesti	84.02	320	⇓P	P	16 27 41.3	+1.9
TAOE	Nuku Hiva Isla	84.02	104	eS	S	16 38 00.6	-2.8
	comp=Z,204nm,26.7s						
TAOE	Nuku Hiva Isla	84.02	104	eLR	LR	16 53 54.8	
	comp=Z,546nm,21.1s						
VRI	Vrincioaia	84.13	321	⇓P	P	16 27 41.2	+1.1
O20A	White River Ci	84.17	47	P	P	16 27 42.1	+1.5
	baz=305,SNR=7.6						
O20A	White River Ci	84.17	47	P	P	16 27 39.5	-1.1
PLOR	Plostina	84.19	321	⇑P	P	16 27 42.7	+2.3
HARR	Harsova	84.19	319	⇓P	P	16 27 41.2	+0.8
GOET	G??ttrup	84.19	336	iP	P	16 27 42.8	+2.8
GOET	G??ttrup	84.19	336	iP	P	16 27 42.9	+2.8
RSSD	Black Hills	84.33	41	P	P	16 27 40.3	-1.1
RSSD				pmax	pmax		
	comp=Z,20nm,1.2s						
RSSD	Black Hills	84.33	41	P	P	16 27 41.9	+0.5
	baz=308						
RSSD	Black Hills	84.33	41	P	P	16 27 40.3	-1.1
RSSD				IAmb	IAmb	16 27 45.9	
	comp=Z,20nm,1.2s						
BISRR	Bisoca	84.34	320	⇓P	P	16 27 43.4	+2.2
MDND	Maddock	84.40	37	P	P	16 27 40.1	-1.3
KOLS	Kolonicke sedl	84.50	325	eP	P	16 27 43.5	+1.6
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KOLS	Kolonicke sedl	84.50	325	eP	P	16 27 43.5	+1.6
OZUR		84.50	321	⇑P	P	16 27 43.1	+1.1
PV23	Carpenter Ridg	84.64	48	P	P	16 27 42.4	-0.8
ULM	Lac du Bonnet	84.65	33	P	P	16 27 42.4	-0.2
	comp=Z,2.7nm,0.7s,baz=331,slow=3.0,SNR=6.3						
ULM				LR	LR	17 04 10.0	
	comp=Z,499nm,21.5s,baz=313,slow=35						
ULM	Lac du Bonnet	84.65	33	IAmb	IAmb	16 27 44.8	
	comp=Z,8.2nm,1.1s						
TBI	Tubuai	84.66	121	eS	S	16 38 05.8	-3.4
	comp=Z,275nm,25.0s						
TBI	Tubuai	84.66	121	eLR	LR	16 54 07.2	
	comp=Z,672nm,23.0s,baz=306						
MUD	Monsted U'grnd	84.66	336	iP	P	16 27 43.6	+1.2
MUD				pmax	pmax		
	comp=Z,26nm,1.0s						
MUD	Monsted U'grnd	84.66	336	iP	P	16 27 43.6	+1.2
	comp=Z,26nm,1.0s						
MUD	Monsted U'grnd	84.66	336	iP	P	16 27 43.7	+1.2
MUD				IAmb	IAmb	16 27 47.8	
	comp=Z,26nm,1.0s						
PV10	Paradox Valley	84.67	48	P	P	16 27 42.3	-1.0
PV14	Lion Creek, Pa	84.68	48	P	P	16 27 41.8	-1.6
UZH	Uzhgorod	84.69	325	eP	P	16 27 43.6	+0.8
UZH				e		16 28 02.1	
UZH				eS	S	16 38 10.0	+1.1
UZH				MLR	MLR		
	comp=N,300nm,18.0s						
UZH				MLR	MLR		
	comp=E,300nm,18.0s						
UZH				MLR	MLR		
	comp=Z,200nm,18.0s						
WUAZ	Wupatki	84.73	52	P	P	16 27 44.9	+1.4
	baz=304,SNR=11						
WUAZ	Wupatki	84.73	52	P	P	16 27 41.9	-1.6
WUAZ				IAmb	IAmb	16 27 49.2	
	comp=Z,14nm,0.9s						
PV20	West Nyswonger	84.73	48	P	P	16 27 42.5	-1.0
PV22	Blue Mesa, Par	84.74	48	P	P	16 27 42.0	-1.5
PV22				IAmb	IAmb	16 28 02.8	
	comp=Z,15nm,0.9s						
PV19	Morning Glory	84.74	48	P	P	16 27 41.7	-1.9
PV04	Paradox Valley	84.75	48	P	P	16 27 42.3	-1.2
PV17	East Wray Mesa	84.78	48	P	P	16 27 43.3	-0.5
MDUB	Mudurnu	84.78	314	P	P	16 27 43.4	-0.2
PV16	Nyswonger Mesa	84.78	48	P	P	16 27 43.7	-0.1
MLR	Muntele Rosu	84.80	321	⇑P	P	16 27 45.4	+1.8
MLR	Muntele Rosu	84.80	321	P	P	16 27 43.4	-0.2
MLR				pmax	pmax		
	comp=Z,12nm,1.1s						
MLR	Muntele Rosu	84.80	321	P	P	16 27 43.4	-0.2
MLR				IAmb	IAmb	16 27 50.5	
	comp=Z,12nm,1.1s						
DOPR	Dopca	84.80	321	⇑P	P	16 27 44.3	+0.9
PV11	David Mesa, Pa	84.82	48	P	P	16 27 43.2	-0.7
PV18	Skein Mesa, Pa	84.83	48	P	P	16 27 41.8	-2.2
PV18				IAmb	IAmb	16 27 49.4	
	comp=Z,18nm,0.9s						
OJC	Ojcow	84.83	327	eP	P	16 27 44.5	+1.0
OJC	Ojcow	84.83	327	P	P	16 27 42.9	-0.6
OJC				pmax	pmax		
	comp=Z,34nm,1.2s						
OJC	Ojcow	84.83	327	P	P	16 27 42.9	-0.6
PV12	Saucer Basin,	84.86	48	P	P	16 27 43.0	-1.2
PV03	Paradox Valley	84.86	48	P	P	16 27 43.7	-0.5
PV03				IAmb	IAmb	16 27 47.5	
	comp=Z,16nm,0.9s						
CRVS	Cervenica-Dubn	84.92	325	eP	P	16 27 45.1	+1.1
CRVS				pmax	pmax		
	comp=Z,55nm,1.5s						
CRVS	Cervenica-Dubn	84.92	325	eP	P	16 27 45.0	+1.1
PV02	Paradox Valley	84.96	48	P	P	16 27 43.8	-0.9
PV02				IAmb	IAmb	16 27 50.0	
	comp=Z,16nm,1.0s						
PV01	Paradox Valley	85.11	48	P	P	16 27 44.3	-1.2
PV01				IAmb	IAmb	16 27 48.6	
	comp=Z,13nm,0.8s						
NIE	Niedzica	85.14	326	eP	P	16 27 46.2	+1.1
N23A	Red Feather La	85.14	45	P	P	16 27 46.5	+0.9
	baz=307						
N23A	Red Feather La	85.14	45	P	P	16 27 44.8	-0.9
PHWY	Pilot Hill	85.20	44	P	P	16 27 43.2	-2.7
X16A	Lo Mia Camp, P	85.30	53	P	P	16 27 46.2	-0.2
VOIR		85.32	321	⇓P	P	16 27 47.6	+1.5
SMCO	Snowmass	85.52	47	P	P	16 27 46.8	-0.9
SMCO				IAmb	IAmb	16 27 51.9	
	comp=Z,32nm,1.4s						
ARR	Arges	85.59	321	⇑P	P	16 27 48.9	+1.4
DRGR		85.68	323	⇑P	P	16 27 49.4	+1.5
MVCO	Mesa Verde	85.69	49	P	P	16 27 49.8	+1.4
	baz=305						
MVCO	Mesa Verde	85.69	49	P	P	16 27 46.5	-1.9
MVCO				IAmb	IAmb	16 27 53.6	
	comp=Z,17nm,1.1s						
214A	Organ Pipe Nat	85.69	55	P	P	16 27 49.5	+1.2
	baz=303						
LANS	Liptovska Anna	85.72	326	eP	P	16 27 49.9	+1.9
LANS				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LANS	Liptovska Anna	85.72	326	eP	P	16 27 49.9	+1.9
AGMN	Agassiz Nation	85.98	35	P	P	16 27 49.5	+0.2
	baz=313						

KSP	**Ksiaz**	**86.00**	**329**	eP	**P**	**16 27 50.2**	**+0.9**
MORC	**Moravsky Berou**	**86.19**	**328**	⇑P	**P**	**16 27 51.6**	**+1.3**
MORC	**Moravsky Berou**	**86.19**	**328**	eP	**P**	**16 27 51.0**	**+0.7**
OSTC	**Ostas**	**86.24**	**329**	eP	**P**	**16 27 51.3**	**+0.8**
X18A	**Snowflake**	**86.25**	**52**	P	**P**	**16 27 49.2**	**-1.9**
CHVC	**Chvalec**	**86.29**	**329**	eP	**P**	**16 27 52.5**	**+1.7**
KRLC	**Kraliky**	**86.33**	**328**	eP	**P**	**16 27 52.0**	**+1.0**
KRLC	**Kraliky**	**86.33**	**328**	eP	**P**	**16 27 52.0**	**+1.0**
DPC	**Dobruska-Polom**	**86.34**	**329**	eP	**P**	**16 27 52.3**	**+1.2**
DPC				e		16 28 05.6	
DPC	**Dobruska-Polom**	**86.34**	**329**	eP	**P**	**16 27 52.3**	**+1.2**
DPC				ex	x	16 28 05.6	
PSZ	**Piszkesteto**	**86.35**	**325**	eP	**P**	**16 27 51.8**	**+0.5**
S22A	**4UR Ranch, Cre**	**86.45**	**48**	P	**P**	**16 27 53.4**	**+1.2**
	baz=306						
S22A	**4UR Ranch, Cre**	**86.45**	**48**	P	**P**	**16 27 51.6**	**-0.6**
S22A				IAmb	IAmb	16 27 57.5	
	comp=Z,10nm,1.1s						
VYHS	**Vyhne**	**86.47**	**326**	eP	**P**	**16 27 53.0**	**+1.3**
VYHS				pmax	pmax		
	comp=Z,14nm,1.2s						
VYHS	**Vyhne**	**86.47**	**326**	eP	**P**	**16 27 53.0**	**+1.3**
CSS	**Mathiatis**	**86.60**	**309**	P	**P**	**16 27 52.0**	**-0.6**
CSS				IAmb	IAmb	16 28 02.2	
	comp=Z,13nm,0.9s						
JAVC	**Velka Javorina**	**86.77**	**327**	eP	**P**	**16 27 54.8**	**+1.6**
Q24A	**Divide**	**86.79**	**46**	P	**P**	**16 27 55.1**	**+1.2**
	baz=307						
TUC	**Tucson**	**86.93**	**54**	P	**P**	**16 27 52.9**	**-1.5**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	**Tucson**	**86.93**	**54**	P	**P**	**16 27 55.9**	**+1.5**
	baz=304						
TUC	**Tucson**	**86.93**	**54**	P	**P**	**16 27 52.9**	**-1.5**
VRAC	**Vranov**	**86.96**	**328**	⇓P	**P**	**16 27 54.7**	**+0.6**
VRAC	**Vranov**	**86.96**	**328**	eP	**P**	**16 27 54.7**	**+0.6**
BRG	**Berggiesshubel**	**87.01**	**330**	eP	**P**	**16 27 54.9**	**+0.6**
BRG				Amp		16 28 00.4	
	comp=Z,4.1nm,0.9s						
BRG	**Berggiesshubel**	**87.01**	**330**	eP	**P**	**16 27 54.8**	**+0.6**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG	**Berggiesshubel**	**87.01**	**330**	eP	**P**	**16 27 54.9**	**+0.6**
BRG				Amp		16 28 00.4	
	comp=Z,4.1nm,0.9s						
CLL	**Collm**	**87.08**	**331**	i P	**P**	**16 27 54.8**	**+0.2**
	comp=Z,20nm,1.4s						
CLL				ePP	**PP**	**16 31 16.0**	**-1.4**
CLL				eS	**S**	**16 38 30.0**	**-2.3**
CLL				ePS	**PnS**	**16 39 28.0**	**-5.2**
CLL				ePPS	PPS	16 40 00.0	
CLL				eSS	**SS**	**16 44 18.0**	**+3.6**
CLL				eSSS	SSS	16 47 42.0	
CLL				e		16 49 24.0	
CLL				eSSSS		16 50 48.0	
CLL	**Collm**	**87.08**	**331**	i P	**P**	**16 27 54.8**	**+0.2**
CLL				eS	**S**	**16 38 26.0**	**-6.3**
CLL				pmax	pmax		
	comp=Z,20nm,1.4s						
CLL	**Collm**	**87.08**	**331**	P	**P**	**16 27 53.9**	**-0.7**
CLL				IAmb	IAmb	16 27 56.5	
	comp=Z,26nm,1.5s						
KRUC	**Moravsky**	**87.22**	**328**	eP	**P**	**16 27 55.3**	**-0.1**
MODS	**Modra-Piesok**	**87.30**	**327**	eP	**P**	**16 27 57.0**	**+1.2**
MODS	**Modra-Piesok**	**87.30**	**327**	eP	**P**	**16 27 57.0**	**+1.2**
SDCO	**Great Sand Dun**	**87.30**	**47**	P	**P**	**16 27 57.6**	**+1.3**
	baz=307						
SDCO	**Great Sand Dun**	**87.30**	**47**	P	**P**	**16 27 55.8**	**-0.5**
PRU	**Pruhonice**	**87.39**	**329**	eP	**P**	**16 27 58.2**	**+2.1**
PRU	**Pruhonice**	**87.39**	**329**	eP	**P**	**16 27 58.2**	**+2.1**
F33A	**5 Mile Ranch,**	**87.44**	**37**	P	**P**	**16 27 55.0**	**-1.5**
CSKK	**Cskako**	**87.54**	**326**	eP	**P**	**16 27 55.2**	**-1.7**
MPLH	**Magyarpolny**	**88.02**	**326**	eP	**P**	**16 27 59.5**	**+0.2**
NKC	**Novy Kostel**	**88.12**	**330**	eP	**P**	**16 28 01.2**	**+1.5**
NKC	**Novy Kostel**	**88.12**	**330**	eP	**P**	**16 28 01.2**	**+1.5**
SOP	**Sopron**	**88.13**	**327**	eP	**P**	**16 28 01.1**	**+1.3**
VTS	**Vitosha**	**88.14**	**320**	⇑P	**P**	**16 28 00.8**	**+0.7**
MORH	**Mrgy, Hungar**	**88.14**	**325**	eP	**P**	**16 27 58.4**	**-1.4**
CONA	**Conrad Observa**	**88.28**	**327**	eP	**P**	**16 27 59.3**	**-1.2**
	comp=Z,6.2nm,1.0s						
EYMN	**Ely**	**88.32**	**33**	P	**P**	**16 28 01.2**	**+0.5**
	baz=316						
EYMN	**Ely**	**88.32**	**33**	P	**P**	**16 27 59.6**	**-1.0**
ANMO	**Albuquerque**	**88.35**	**50**	ceP	**P**	**16 28 02.6**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ANMO	**Albuquerque**	**88.35**	**50**	P	**P**	**16 28 01.6**	**+0.3**
	baz=307						
ANMO	**Albuquerque**	**88.35**	**50**	P	**P**	**16 28 00.4**	**-0.9**
T25A	**Trinidad**	**88.36**	**47**	P	**P**	**16 28 02.0**	**+0.7**
	baz=308						
KHC	**Kasperske Hory**	**88.45**	**329**	ceP	**P**	**16 28 03.5**	**+2.2**
KHC				pmax	pmax		
	comp=Z,22nm,1.3s						
KHC	**Kasperske Hory**	**88.45**	**329**	eP	**P**	**16 28 01.4**	**+0.1**
KHC	**Kasperske Hory**	**88.45**	**329**	P	**P**	**16 28 00.6**	**-0.7**
GERES	**GERESS Array B**	**88.60**	**329**	P	**P**	**16 28 01.8**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=28,slow=6.0,SNR=7.6						
GERES				PP	**PP**	**16 31 30.5**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=60,slow=5.8,SNR=2.3						
GERES	**GERESS Array B**	**88.60**	**329**	P	**P**	**16 28 01.0**	**-1.1**
GERES	**GERESS Array B**	**88.60**	**329**	P	**P**	**16 28 01.0**	**-1.1**
ECSD	**EROS Data Cent**	**88.69**	**38**	P	**P**	**16 28 03.0**	**+0.5**
	baz=312						
ECSD	**EROS Data Cent**	**88.69**	**38**	P	**P**	**16 28 01.8**	**-0.7**
ECSD				IAmb	IAmb	16 28 05.2	
	comp=Z,7.8nm,0.9s						
F36A	**Milaca**	**88.82**	**35**	P	**P**	**16 28 02.5**	**-0.5**
F36A				IAmb	IAmb	16 28 08.4	
	comp=Z,16nm,1.1s						
121A	**Cookes Peak, D**	**88.88**	**53**	P	**P**	**16 28 06.1**	**+2.3**
	baz=306						
ARSA	**Arzberg**	**88.93**	**327**	eP	**P**	**16 28 03.7**	**+0.2**
	comp=Z,5.1nm,1.3s						
MOA	**Molln**	**89.08**	**328**	eP	**P**	**16 28 03.1**	**-1.2**
	comp=Z,3.3nm,1.0s						
E38A	**The Farm, Brul**	**89.26**	**34**	P	**P**	**16 28 05.0**	**-0.1**
GROS	**Grobnik**	**89.51**	**326**	i P	**P**	**16 28 06.8**	**+0.5**
PERS	**Pernice**	**89.57**	**327**	i P	**P**	**16 28 07.2**	**+0.7**
SOKA	**Soboth**	**89.58**	**327**	eP	**P**	**16 28 06.9**	**+0.2**
	comp=Z,11nm,0.9s						
SPMN	**Marine on St.**	**89.63**	**35**	P	**P**	**16 28 08.8**	**+1.9**
	baz=315						
SPMN	**Marine on St.**	**89.63**	**35**	P	**P**	**16 28 06.6**	**-0.3**
OBKA	**Obir**	**89.93**	**327**	eP	**P**	**16 28 07.7**	**-0.6**
	comp=Z,4.1nm,0.9s						
PDKS	**Podkum**	**90.04**	**326**	eP	**P**	**16 28 09.1**	**+0.3**
KBA	**Koelnbreinsper**	**90.07**	**328**	eP	**P**	**16 28 07.5**	**-1.6**
	comp=Z,3.9nm,1.0s						
MYKA	**Terra Mystica**	**90.27**	**327**	eP	**P**	**16 28 09.2**	**-0.7**
	comp=Z,4.1nm,0.9s						
ZOU	**Zoufplan**	**90.63**	**328**	P	**P**	**16 28 10.9**	**-0.8**
ZOU				IAmb	IAmb	16 28 18.4	
	comp=Z,19nm,1.4s						
WATA	**Walderalm**	**90.68**	**329**	eP	**P**	**16 28 11.8**	**-0.1**
ABTA	**Abfaltersbach**	**90.70**	**328**	eP	**P**	**16 28 10.2**	**-1.7**
	comp=Z,8.6nm,1.1s						
WTTA	**Wattenberg**	**90.71**	**329**	eP	**P**	**16 28 11.0**	**-1.1**
	comp=Z,6.4nm,1.1s						
SANT	**Santorini**	**90.85**	**314**	P	**P**	**16 28 09.1**	**-3.7**
SANT				IAmb	IAmb	16 28 14.8	
	comp=Z,20nm,1.2s						
MOTA	**Moosalm**	**90.88**	**329**	eP	**P**	**16 28 11.4**	**-1.4**
	comp=Z,6.6nm,1.0s						
RETA	**Reutte**	**90.93**	**329**	eP	**P**	**16 28 13.4**	**+0.5**
	comp=Z,13nm,1.2s						
SQTA	**Sankt Quirin**	**90.93**	**329**	eP	**P**	**16 28 11.1**	**-1.9**
	comp=Z,9.7nm,1.0s						
STAL	**STALIGIAL**	**90.97**	**328**	P	**P**	**16 28 11.7**	**-1.4**
FETA	**Feichten**	**91.30**	**329**	eP	**P**	**16 28 15.0**	**+0.2**
	comp=Z,7.4nm,0.9s						
BFO	**Black Forest**	**91.31**	**331**	P	**P**	**16 28 13.6**	**-1.0**
BFO				pmax	pmax		
	comp=Z,22nm,1.3s						
BFO	**Black Forest**	**91.31**	**331**	P	**P**	**16 28 13.6**	**-1.0**
BFO				IAmb	IAmb	16 28 17.6	
	comp=Z,22nm,1.3s						
DAVA	**Damuels**	**91.47**	**330**	eP	**P**	**16 28 15.1**	**-0.4**
	comp=Z,16nm,1.3s						
KSU1	**Kansas State U**	**91.81**	**42**	P	**P**	**16 28 18.1**	**+0.9**
	baz=312						
DAVOX	**Davos/Dischmat**	**91.85**	**329**	P	**P**	**16 28 17.4**	**0.0**
	comp=Z,6.2nm,0.8s,baz=59,slow=8.7,SNR=7.0						
P38A	**Dawn**	**93.19**	**40**	P	**P**	**16 28 22.2**	**-1.2**
WMOK	**Wichita Mounta**	**93.41**	**46**	P	**P**	**16 28 25.8**	**+1.2**
	baz=311						
LSQQ	**Lebel-sur-Quev**	**93.48**	**25**	P	**P**	**16 28 25.1**	**+0.5**
	baz=327						
TXAR	**Lajitas Array**	**93.62**	**53**	P	**P**	**16 28 27.1**	**+1.3**
	comp=Z,8.4nm,0.8s,baz=328,slow=4.4,SNR=28						
TXAR				LR	LR	17 09 05.2	
	comp=Z,798nm,18.9s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**93.62**	**53**	P	**P**	**16 28 25.4**	**-0.4**
TXAR	**Lajitas Array**	**93.62**	**53**	P	**P**	**16 28 25.4**	**-0.4**
ABTX	**Abilene, Hawle**	**94.24**	**48**	P	**P**	**16 28 29.6**	**+1.1**
	baz=310						
ABTX	**Abilene, Hawle**	**94.24**	**48**	P	**P**	**16 28 27.6**	**-0.9**
R40A	**Maddies Statio**	**94.83**	**40**	P	**P**	**16 28 30.3**	**-0.7**
R40A				IAmb	IAmb	16 28 35.5	
	comp=Z,10nm,0.9s						
Z35A	**Perchaven, San**	**95.29**	**46**	P	**P**	**16 28 32.8**	**-0.4**
JCT	**Junction City**	**95.51**	**50**	P	**P**	**16 28 34.7**	**+0.3**
	baz=310						
CCM	**Cathedral Cave**	**95.56**	**40**	P	**P**	**16 28 36.1**	**+1.8**
	baz=316						
RKT	**Rikitea**	**95.67**	**113**	eS	**S**	**16 39 47.0**	**-4.1**
	comp=Z,441nm,29.8s						
RKT	**Rikitea**	**95.67**	**113**	eLR	LR	16 59 12.0	
	comp=Z,496nm,31.5s						
U40A	**Yellville**	**95.86**	**42**	P	**P**	**16 28 36.5**	**+0.8**
	baz=315						
WHTX	**Lake Whitney,**	**96.05**	**47**	P	**P**	**16 28 36.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**122.30**	**313**	PKP	**PKPdf**	**16 34 04.3**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=17,slow=2.0,SNR=5.4						
TORD				PP	**PP**	**16 35 40.5**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=57,slow=5.5,SNR=4.1						
SDV	**Santo Domingo**	**129.79**	**44**	eP	**PKiKP**	**16 34 21.5**	**+1.4**
DBIC	**Dimbokro**	**131.37**	**314**	PKP	**PKPdf**	**16 34 22.8**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=16,slow=2.6,SNR=4.2						
VNA2	**Neumayer--Watz**	**136.15**	**194**	PKiKP	**PKiKP**	**16 34 31.9**	**+0.9**
VNA3	**Neumayer Olymp**	**136.35**	**193**	PKiKP	**PKiKP**	**16 34 33.8**	**+2.3**
VNA1	**Neumayer--Stat**	**136.55**	**194**	PKiKP	**PKiKP**	**16 34 39.1**	**+7.4**
PMSA	**Palmer Station**	**141.99**	**162**	eP	**PKPdf**	**16 34 42.0**	**+1.9**
PTGA	**Pitinga**	**143.73**	**39**	eP	PKPbc	16 34 43.8	+1.4
MACA	**Manacapuru-AM**	**145.31**	**43**	eP	**PKPdf**	**16 34 49.5**	**+1.9**
ETMB	**Extrema**	**146.55**	**58**	eP	**PKPbc**	**16 34 51.5**	**+0.5**
MCPB	**Macapa, AP**	**147.16**	**27**	eP	**PKPbc**	**16 34 52.5**	**-0.3**
MALB	**Monte Alegre**	**147.57**	**32**	eP	**PKPbc**	**16 34 54.7**	**+0.7**
SAML	**Samuel**	**148.11**	**53**	PKP2	**PKPdf**	**16 34 54.2**	**+2.0**
SAML	**Samuel**	**148.11**	**53**		**PKPdf**	**16 34 54.2**	**+2.0**
SAML	**Samuel**	**148.11**	**53**	eP	**PKPbc**	**16 34 54.6**	**-0.8**
ITTB	**Itaituba**	**149.04**	**36**	eP	**PKPdf**	**16 34 56.1**	**+2.4**
TA01	**Diego Aracena**	**149.31**	**79**	PKPbc	**PKPbc**	**16 34 57.0**	**-1.3**
PATCX	**Punta Patache**	**149.44**	**79**		**PKPbc**	**16 34 59.0**	**+0.3**
LVC	**Limon Verde**	**151.22**	**82**	eP	**PKPdf**	**16 35 00.1**	**+2.7**
NPGB	**Novo Progresso**	**151.50**	**39**	eP	**PKPdf**	**16 34 60.0**	**+2.4**
GO02	**Mina Guanaco**	**151.51**	**87**		**PKPbc**	**16 35 02.4**	**-1.4**
LCO	**Las Campanas**	**151.51**	**95**	PKIKP	**PKPbc**	**16 35 01.5**	**-2.2**
LCO	**Las Campanas**	**151.51**	**95**		**PKPbc**	**16 35 01.5**	**-2.2**
PLCA	**Paso Flores**	**151.67**	**120**	PKPbc	**PKiKP**	**16 35 04.7**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=237,slow=3.9,SNR=3.5						
PLCA	**Paso Flores**	**151.67**	**120**	PKIKP	**PKPbc**	**16 35 01.5**	**-2.0**
PLCA	**Paso Flores**	**151.67**	**120**		**PKPbc**	**16 35 01.5**	**-2.0**
PLCA	**Paso Flores**	**151.67**	**120**	eP	**PKPdf**	**16 34 59.0**	**+1.9**
AC05	**El Transito**	**151.84**	**95**	PKPdf	**PKPdf**	**16 34 55.1**	**-2.7**
AC05					**PKPbc**	**16 35 04.7**	**+0.4**
ROSB	**Rosrio**	**151.94**	**13**	eP	**PKPdf**	**16 35 00.7**	**+2.4**
BO02	**Sierra Bellavi**	**152.03**	**108**		**PKPbc**	**16 35 04.0**	**-0.5**
VILB	**Vilhena**	**152.99**	**55**	eP	**PKPdf**	**16 35 01.9**	**+2.1**
PRPB	**Parauapebas**	**153.35**	**27**	eP	**PKPdf**	**16 35 03.0**	**+2.6**
PTLB	**Pontes e Lacer**	**155.43**	**57**	eP	**PKPdf**	**16 35 05.5**	**+2.4**
SMTB	**Santa Maria do**	**156.66**	**25**	eP	**PKPdf**	**16 35 07.0**	**+2.1**
SNDB	**Serra Nova Dou**	**157.78**	**37**	eP	**PKPdf**	**16 35 08.5**	**+2.3**
PEXB	**Peixe**	**159.32**	**30**	eP	**PKPdf**	**16 35 10.3**	**+2.2**
PP1B	**Ponte de Pedra**	**159.90**	**54**	eP	**PKPdf**	**16 35 10.9**	**+2.2**
ARAG	**Araguaiana, MT**	**160.52**	**44**	eP	**PKPdf**	**16 35 11.2**	**+1.8**
SDBA	**SAO DESIDERIO**	**160.88**	**21**	eP	**PKPdf**	**16 35 11.6**	**+1.7**
AQDB	**Aquidauana**	**161.10**	**62**	eP	**PKPdf**	**16 35 11.7**	**+1.8**
CPUP	**Villa Florida**	**162.39**	**81**	eP	**PKPdf**	**16 35 13.0**	**+1.9**
BDFB	**Brasilia**	**162.55**	**34**	PKPab	**PKPab**	**16 36 01.5**	**+2.0**
	comp=Z,1.5nm,0.5s,baz=301,slow=5.9,SNR=3.6						
JANB	**Januaria**	**163.56**	**23**	eP	**PKPdf**	**16 35 13.9**	**+1.4**
ITQB	**Itaqui**	**163.74**	**92**	eP	**PKPdf**	**16 35 14.0**	**+1.7**
IPMB	**Ipameri, GO**	**164.41**	**39**	eP	**PKPdf**	**16 35 14.5**	**+1.2**
PCMB	**Pacaembu**	**165.09**	**57**	eP	**PKPdf**	**16 35 16.0**	**+2.3**
CPSB	**Cacapava Do Su**	**166.57**	**94**	eP	**PKPdf**	**16 35 16.7**	**+2.0**
BB19B	**Bebedouro**	**166.60**	**48**	eP	**PKPdf**	**16 35 16.4**	**+1.4**
FRTB	**Fartura**	**167.39**	**59**	eP	**PKPdf**	**16 35 18.1**	**+2.5**
BSFB	**Barra de Sao F**	**168.10**	**14**	eP	**PKPdf**	**16 35 18.6**	**+2.5**

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*IDC **18** 16:18:14.7±0.5, 30°.42N×142°.15E, h0km, mb4.2/23, mb1 4.4/28, mb1mx4.2/54, mbtmp4.2/28, ML3.3/5, Error ellipse: s-maj=17.0km s-min=13.1km az=93.0*

*NEIC **18** 16:18:16.1±1.6, 30°.43N±0°.05×142°.11E±0°.08, h10km±1km, mb4.7/78, Error ellipse: s-maj=13.5km s-min=6.9km az=58.0*

ISC 18 16:18:14.8±3.9**, 30°.46N**±0°.05×**142°.11E**±0°.07**, h2**km±24km**, n133,** $\sigma 1^{s}$**01**/141**, mb4.6**/51**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.28**	**324**	Pn	**Pn**	**16 19 08.5**	**+1.3**
JHJ	**Hachijo jima 2**	**3.31**	**324**	Pn	**Pn**	**16 19 07.1**	**-0.4**
	19nm,0.3s,baz=170,slow=13,SNR=1.2						
JHJ				Sn	**Sn**	**16 19 45.8**	**-1.7**
	69nm,0.3s,baz=76,slow=21,SNR=2.7						
JCJ	**Chichijima**	**3.36**	**179**	Pn	**Pn**	**16 19 07.5**	**-0.7**
	26nm,0.3s,baz=259,slow=22,SNR=1.3						
JCJ				Sn	**Sn**	**16 19 48.2**	**-0.6**
	54nm,0.3s,baz=191,slow=23,SNR=3.4						
JYT	**Yasato**	**5.97**	**345**	Pn	**Pn**	**16 19 42.1**	**-2.1**
INU	**Inuyama**	**6.48**	**320**	Pn	**Pn**	**16 19 52.5**	**+1.3**
JGF	**Kuroka**	**6.49**	**323**	Pn	**Pn**	**16 19 53.2**	**+1.8**
MJAR	**Matsushiro Arr**	**6.88**	**333**	Pn	**Pn**	**16 19 57.5**	**+0.8**
	1.2nm,0.3s,baz=162,slow=11,SNR=6.9						
MJAR	**Matsushiro Arr**	**6.88**	**333**		**Pn**	**16 19 57.0**	**+0.3**
MAJO	**Matsushiro**	**6.88**	**333**	Pn	**Pn**	**16 19 57.6**	**+0.9**
MAT	**Matsushiro**	**6.88**	**333**	P	**Pn**	**16 19 57.8**	**+1.1**
MAT				S	**Sn**	**16 21 13.2**	**-2.4**
MJB9	**Matsu-Tunnel**	**6.89**	**333**	Pn	**Pn**	**16 19 57.9**	**+1.1**
JWT	**Wachi**	**7.41**	**312**	Pn	**Pn**	**16 20 05.5**	**+1.6**
JMM	**Marumori**	**7.46**	**352**	Pn	**Pn**	**16 20 02.9**	**-1.8**
JSD	**Sado**	**8.20**	**338**	Pn	**Pn**	**16 20 13.9**	**-0.9**
JTM	**Tenmabayashi**	**10.34**	**356**	Pn	**Pn**	**16 20 45.3**	**+1.3**
ASAJ	**Asahikawa**	**13.63**	**1**	Pn	**Pn**	**16 21 26.1**	**-3.0**
	0.4nm,0.3s,baz=69,slow=14,SNR=1.4						
ASAJ				Sn	Sn	16 23 48.9	-12
	0.2nm,0.3s,baz=276,slow=18,SNR=2.0						
KSRS	**Korea Array**	**13.68**	**304**	Pn	**Pn**	**16 21 32.9**	**+3.2**
	0.0nm,0.3s,baz=114,slow=13,SNR=2.2						
USA0B	**Ussuriysk Arra**	**15.88**	**332**	Pn	**Pn**	**16 22 00.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**15.88**	**332**	Pn	**Pn**	**16 21 59.8**	**+0.5**
	baz=144,slow=7.1,SNR=2.4						
USRK	**Ussuriysk Ar.**	**15.88**	**332**	Pn	**Pn**	**16 22 00.2**	**+0.9**
TATO	**Taipei**	**19.05**	**258**	P	**Pn**	**16 22 39.3**	**+0.3**
YHNB	**Yeheng**	**19.25**	**258**	P	**P**	**16 22 41.3**	**+0.6**
YHNB				IAmb	IAmb	16 22 50.2	
	comp=Z,61nm,1.4s						
NACB	**Ninganchiao**	**19.26**	**256**	P	**P**	**16 22 40.8**	**+0.2**
NACB				IAmb	IAmb	16 22 49.6	
	comp=Z,25nm,0.9s						
YULB	**Yu-li**	**19.83**	**254**	P	**P**	**16 22 47.7**	**+0.7**
YULB				IAmb	IAmb	16 22 51.1	
	comp=Z,18nm,0.6s						
SSLB	**Suanglung**	**19.95**	**256**	P	**Pn**	**16 22 49.5**	**-0.4**
SSLB				IAmb	IAmb	16 22 50.6	
	comp=Z,27nm,0.9s						
TWG	**Pinlang**	**20.27**	**253**	P	**P**	**16 22 52.6**	**+0.9**
TWG				IAmb	IAmb	16 23 07.1	
	comp=Z,28nm,1.0s						
KLR	**Kul'dur**	**20.32**	**340**	P	**P**	**16 22 51.8**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=115,slow=18,SNR=1.4						
BJT	**Baijiatuau**	**23.16**	**301**	P	**P**	**16 23 21.2**	**-1.3**
WAKE	**Wake Island**	**24.84**	**111**	P	**P**	**16 23 41.1**	**+2.4**
HIA	**Hailar**	**25.28**	**324**	P	**P**	**16 23 43.6**	**+1.1**
HIA				IAmb	IAmb	16 23 57.8	
	comp=Z,12nm,1.0s						
ENH	**Enshi**	**28.10**	**278**	P	**P**	**16 24 05.9**	**-2.1**
ULN	**Ulaanbaatar**	**31.91**	**313**	P	**P**	**16 24 42.5**	**+0.8**
ULN				IAmb	IAmb	16 24 44.0	
	comp=Z,5.7nm,0.7s						
SONM	**Songino Array**	**32.31**	**313**	P	**P**	**16 24 45.1**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=124,slow=7.9,SNR=5.0						
SONM				PcP	**PcP**	**16 27 32.8**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=116,slow=8.4,SNR=1.8						
SONM	**Songino Array**	**32.31**	**313**	IAmb	IAmb	16 24 52.3	
	comp=Z,3.0nm,0.8s						
MYLDM	**Lahad Datu**	**33.57**	**226**	P	**P**	**16 24 58.3**	**+1.9**
TLY	**Talaya**	**35.34**	**318**	P	**P**	**16 25 12.4**	**+0.9**
	comp=Z,2.8nm,0.4s,baz=42,slow=23,SNR=1.8						
TOLI2	**Tolitoli**	**35.52**	**219**	P	**P**	**16 25 12.7**	**-0.6**
TOLI2				IAmb	IAmb	16 25 31.7	
	comp=Z,8.3nm,0.8s						
PMG	**Port Moresby**	**39.94**	**172**	PcP	**PcP**	**16 27 56.1**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=174,slow=5.7,SNR=1.7						
PMG	**Port Moresby**	**39.94**	**172**	P	**P**	**16 25 49.3**	**-1.3**
CHTO	**Chiang Mai**	**40.69**	**264**	P	**P**	**16 25 55.4**	**-1.6**
CMAR	**Chiang Mai Arr**	**40.84**	**263**	P	**P**	**16 25 57.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=59,slow=6.2,SNR=4.6						
CMAR				PcP	**PcP**	**16 28 00.7**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=46,slow=2.6,SNR=2.5						
KSM	**Kuching**	**41.72**	**232**	P	**P**	**16 26 06.1**	**+0.7**
TIXI	**Tiksi**	**41.87**	**354**	P	**P**	**16 26 04.3**	**-1.6**
UNV	**Unalaska Valle**	**43.48**	**42**	P	**P**	**16 26 19.5**	**+0.2**
UNV				IAmb	IAmb	16 26 45.1	
	comp=Z,17nm,1.1s						
IPM	**Ipoh**	**46.53**	**245**	P	**P**	**16 26 43.5**	**-0.5**
ZALV	**Zalesovo Beam**	**46.95**	**317**	P	**P**	**16 26 47.1**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=97,slow=6.8,SNR=1.6						
ZALV				PcP	**PcP**	**16 28 19.1**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=96,slow=2.9,SNR=6.1						
ZALV	**Zalesovo Beam**	**46.95**	**317**	P	**P**	**16 26 48.7**	**+1.9**
ZALV					**PcP**	**16 28 19.4**	**+0.1**
ANM	**Nome**	**47.01**	**28**	P	**P**	**16 26 48.1**	**+1.0**
ANM				IAmb	IAmb	16 26 58.9	
	comp=Z,6.0nm,1.1s						
MK31	**Makanchi Array**	**48.33**	**307**	P	**P**	**16 26 58.1**	**+0.3**
MKAR	**Makanchi Array**	**48.33**	**307**	P	**P**	**16 26 58.2**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=82,slow=10,SNR=6.7						
MKAR				PcP	**PcP**	**16 28 26.4**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=85,slow=5.7,SNR=1.9						
MKAR	**Makanchi Array**	**48.33**	**307**	P	**P**	**16 26 57.9**	**+0.2**
MAKZ	**Makanchi**	**48.55**	**307**	P	**P**	**16 26 59.3**	**-0.1**
LEM	**Lembang**	**49.68**	**228**	P	**P**	**16 27 08.7**	**+0.2**
	comp=Z,25nm,0.8s,baz=328,slow=21,SNR=3.8						
CTAO	**Charters Tower**	**50.42**	**175**	P	**P**	**16 27 14.1**	**+0.3**
WB0	**Warramunga Arr**	**50.49**	**189**	P	**P**	**16 27 14.4**	**0.0**
KURK	**Kurchatov**	**50.62**	**313**	P	**P**	**16 27 16.6**	**+1.5**
KURK				IAmb	IAmb	16 27 28.9	
	comp=Z,10nm,1.1s						
WR0	**Warramunga Arr**	**50.66**	**189**	P	**P**	**16 27 15.6**	**-0.1**
WR0				IAmb	IAmb	16 27 21.0	
	comp=Z,7.3nm,0.6s						
WB2	**Warramunga Arr**	**50.67**	**189**	P	**P**	**16 27 15.8**	**+0.1**
WB2				IAmb	IAmb	16 27 18.4	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**50.67**	**189**	P	**P**	**16 27 15.3**	**-0.5**
	comp=Z,4.3nm,0.5s,baz=6.7,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**50.67**	**189**	P	**P**	**16 27 15.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**50.82**	**200**	P	**P**	**16 27 15.9**	**-0.9**
	comp=Z,5.4nm,1.0s,baz=32,slow=8.3,SNR=3.7						
GSI	**Gunungsitoli**	**51.19**	**244**	P	**P**	**16 27 19.3**	**-0.6**
OHAK	**Old Harbor**	**51.34**	**39**	P	**P**	**16 27 19.8**	**-0.6**
OHAK				IAmb	IAmb	16 27 35.1	
	comp=Z,12nm,1.2s						
KDAK	**Kodiak Island**	**51.74**	**38**	P	**P**	**16 27 23.2**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=242,slow=5.9,SNR=5.8						
KDAK	**Kodiak Island**	**51.74**	**38**	P	**P**	**16 27 23.0**	**-0.4**
KDAK				IAmb	IAmb	16 27 49.7	
	comp=Z,15nm,1.2s						
RSO	**Redoubt South**	**51.83**	**35**	P	**P**	**16 27 24.0**	**-0.2**
IMAR	**Indian Mountai**	**52.09**	**28**	P	**P**	**16 27 26.2**	**+0.2**
PPLA	**Purkeypile**	**52.33**	**32**	P	**P**	**16 27 28.8**	**+0.9**
PPLA				IAmb	IAmb	16 27 43.9	
	comp=Z,18nm,1.5s						
CNPM	**China Poot**	**52.53**	**36**	P	**P**	**16 27 29.1**	**-0.1**
SKT	**Skwentna**	**52.54**	**33**	P	**P**	**16 27 29.4**	**+0.1**
GHO	**Glory Hole Cre**	**53.76**	**33**	P	**P**	**16 27 40.1**	**+1.7**
GHO				IAmb	IAmb	16 27 40.8	
	comp=Z,11nm,1.1s						
I23K	**Minto, Yukon-K**	**53.79**	**29**	P	**P**	**16 27 39.6**	**+1.2**
I23K				IAmb	IAmb	16 28 06.4	
	comp=Z,7.3nm,1.2s						
RND	**Reindeer**	**53.88**	**31**	P	**P**	**16 27 39.3**	**+0.1**
RND				IAmb	IAmb	16 27 40.3	
	comp=Z,10nm,1.4s						
MDM	**Murphy Dome**	**54.25**	**29**	P	**P**	**16 27 42.8**	**+0.9**
MDM				IAmb	IAmb	16 27 47.2	
	comp=Z,6.5nm,1.2s						
AAK	**Ala-Archa**	**54.33**	**303**	P	**P**	**16 27 43.6**	**+0.6**
AAK				IAmb	IAmb	16 27 45.2	
	comp=Z,3.8nm,0.7s						
AS31	**Alice Springs**	**54.39**	**189**	P	**P**	**16 27 44.3**	**+1.0**
ASAR	**Alice Springs**	**54.39**	**189**	P	**P**	**16 27 43.2**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=4.7,slow=6.0,SNR=6.1						
ASAR	**Alice Springs**	**54.39**	**189**	P	**P**	**16 27 42.5**	**-0.8**
CCB	**Clear Creek Bu**	**54.41**	**30**	P	**P**	**16 27 43.5**	**+0.5**
SCM	**Sheep Creek Mo**	**54.52**	**33**	P	**P**	**16 27 44.2**	**+0.2**
HDA	**Harding Lake**	**54.77**	**30**	P	**P**	**16 27 45.1**	**-0.5**
HDA				IAmb	IAmb	16 27 59.6	
	comp=Z,11nm,1.4s						
IL31		**54.81**	**30**	P	**P**	**16 27 45.4**	**-0.4**
IL31				IAmb	IAmb	16 28 12.8	
	comp=Z,4.8nm,1.0s						
ILAR	**Eielson Array**	**54.81**	**30**	P	**P**	**16 27 45.3**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=259,slow=6.1,SNR=5.4						
ILAR	**Eielson Array**	**54.81**	**30**	P	**P**	**16 27 44.9**	**-1.1**
DOT	**Dot Lake**	**56.03**	**31**	P	**P**	**16 27 54.5**	**-0.3**
BCAR	**Beaver Creek A**	**57.08**	**32**	P	**P**	**16 28 02.7**	**+0.5**
KK31	**Karatay Array**	**57.10**	**304**	P	**P**	**16 28 02.4**	**-0.3**
KKAR	**Karatay Array**	**57.10**	**304**	P	**P**	**16 28 02.3**	**-0.5**
KKAR	**Karatay Array**	**57.10**	**304**	P	**P**	**16 28 02.6**	**-0.1**
KKAR				IAmb	IAmb	16 28 05.3	
	comp=Z,17nm,1.4s						
NIL	**Nilore**	**57.45**	**293**	P	**P**	**16 28 04.9**	**-0.4**
DAWY	**Dawson**	**58.08**	**31**	P	**P**	**16 28 10.1**	**+0.8**
EPYK	**Eagle Plains**	**59.00**	**28**	P	**P**	**16 28 14.9**	**-0.7**
EPYK				IAmb	IAmb	16 28 18.0	
	comp=Z,8.3nm,1.0s						
HYT	**Haines Junctio**	**59.31**	**34**	P	**P**	**16 28 19.4**	**+1.4**
HYT				IAmb	IAmb	16 28 28.3	
	comp=Z,10.0nm,1.5s						
INK	**Inuvik**	**60.01**	**25**	P	**P**	**16 28 22.8**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=254,slow=6.8,SNR=2.3						
INK	**Inuvik**	**60.01**	**25**	P	**P**	**16 28 20.4**	**-2.1**
INK				IAmb	IAmb	16 28 33.9	
	comp=Z,5.2nm,1.2s						
ARU	**Arti**	**61.75**	**321**	P	**P**	**16 28 34.5**	**0.0**
STKA	**Stephens Creek**	**62.00**	**180**	P	**P**	**16 28 35.7**	**-0.7**
ABKAR	**Akbulak array**	**62.73**	**313**	P	**P**	**16 28 41.2**	**0.0**
ABKAR				IAmb	IAmb	16 28 45.1	
	comp=Z,7.8nm,1.2s						
C36M	**Paulatuk**	**63.18**	**23**	P	**P**	**16 28 43.2**	**-0.7**
C36M				IAmb	IAmb	16 29 02.1	
	comp=Z,3.7nm,0.8s						
HRA	**Herat**	**65.84**	**297**	P	**P**	**16 29 01.3**	**-0.9**
HRA				IAmb	IAmb	16 29 03.9	
	comp=Z,4.2nm,0.6s						
EUNU	**Eureka**	**66.59**	**8**	P	**P**	**16 29 06.3**	**+0.3**
EUNU				IAmb	IAmb	16 29 34.4	
	comp=Z,6.7nm,1.4s						
GEYT	**Alibeck**	**67.65**	**302**	P	**P**	**16 29 15.0**	**+1.6**
	comp=Z,1.3nm,0.5s,baz=66,slow=3.6,SNR=2.0						
YKA	**Yellowknife Ar**	**69.23**	**29**	P	**P**	**16 29 22.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=293,slow=5.7,SNR=6.5						
YKA				PcP	**PcP**	**16 29 47.9**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=305,slow=5.0,SNR=4.3						
ARCES	**ARCESS Array B**	**70.35**	**340**	P	**P**	**16 29 30.3**	**+0.7**
E08A	**Dider Farm, El**	**74.15**	**45**	P	**P**	**16 29 52.3**	**-0.5**
K05A	**Summer Lake**	**74.72**	**49**	P	**P**	**16 29 57.3**	**+0.9**
FIA1	**FINESS Array S**	**74.91**	**333**	P	**P**	**16 29 56.4**	**-0.4**
FIA1				IAmb	IAmb	16 29 57.7	
	comp=Z,11nm,1.1s						
FINES	**FINESS Array B**	**74.91**	**333**	P	**P**	**16 29 57.1**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=76,slow=6.2,SNR=5.9						
FINES	**FINESS Array B**	**74.91**	**333**	P	**P**	**16 29 56.9**	**0.0**
MCCM	**Marconi Confer**	**75.47**	**54**	P	**P**	**16 29 59.0**	**-1.5**
KBZ	**Khabaz**	**75.68**	**312**	P	**P**	**16 30 04.1**	**+2.5**
	comp=Z,3.9nm,0.7s,baz=64,slow=7.4,SNR=3.6						
BMO	**Blue Mountains**	**76.01**	**46**	P	**P**	**16 30 04.3**	**+0.6**
JTMT	**Jette**	**76.40**	**42**	P	**P**	**16 30 06.5**	**+0.6**
JTMT				IAmb	IAmb	16 30 07.9	
	comp=Z,11nm,1.3s						
BEKR	**Beckworth**	**76.41**	**52**	P	**P**	**16 30 06.6**	**+0.5**
BEKR				IAmb	IAmb	16 30 06.9	
	comp=Z,4.4nm,1.0s						
CMB	**Columbia Colle**	**77.26**	**53**	P	**P**	**16 30 11.2**	**+0.4**
RYN	**Ryan**	**78.26**	**52**	P	**P**	**16 30 16.4**	**-0.1**
HRY	**Holter Researc**	**78.36**	**42**	P	**P**	**16 30 17.2**	**+0.3**
LHV	**Little Huntoon**	**78.45**	**52**	P	**P**	**16 30 18.6**	**+1.3**

LHV				IAmb	IAmb	16 30 26.5	
	comp=Z,7.8nm,1.3s						
NVAR	Mina Array Bea	78.50	52	P	P	16 30 18.8	+0.8
	comp=Z,1.7nm,0.5s,baz=285,slow=6.0,SNR=13						
NV11	Mina Array Sit	78.60	52	P	P	16 30 18.9	+0.5
BOZ	Bozeman (W)	79.08	43	P	P	16 30 21.6	+0.7
BOZ				IAmb	IAmb	16 30 31.5	
	comp=Z,6.2nm,0.8s						
YHB	Horse Butte	79.79	44	P	P	16 30 25.0	+0.1
AKASG	Malin Array Be	79.87	323	P	P	16 30 25.1	+0.2
	comp=Z,0.5nm,0.4s,baz=51,slow=5.6,SNR=3.3						
NB2	NORSAR Subarra	80.47	338	P	P	16 30 27.9	-0.1
	comp=Z,0.6nm,0.5s,baz=42,slow=5.3						
NOA	NORSAR Array B	80.47	338	P	P	16 30 27.9	-0.1
	comp=Z,1.2nm,0.7s,baz=40,slow=5.2,SNR=3.7						
PDAR	Pinedale Array	81.88	45	P	P	16 30 36.4	+0.3
	comp=Z,0.6nm,0.5s,baz=340,slow=1.3,SNR=3.7						
BR131	Keskin Array S	83.67	313	P	P	16 30 45.9	+0.6
BRTR	Keskin Array B	83.67	313	P	P	16 30 45.7	+0.3
	comp=Z,1.5nm,0.7s,baz=86,slow=5.3,SNR=4.2						
BRTR	Keskin Array B	83.67	313	P	P	16 30 45.4	0.0
RAYN	Ar Rayn	83.74	293		P	16 30 46.1	+0.2
RAYN				IAmb	IAmb	16 30 55.0	
	comp=Z,4.2nm,0.7s						
TXAR	Lajitas Array	93.64	53	P	P	16 31 33.7	+0.5
	comp=Z,0.9nm,0.7s,baz=254,slow=1.9,SNR=5.1						
TXAR	Lajitas Array	93.64	53	P	P	16 31 32.9	-0.4
TORD	Torodi Ar. Bea	122.29	313	PKP	PKPdf	16 37 11.6	-0.6
	comp=Z,0.5nm,0.7s,baz=38,slow=2.6,SNR=1.0						

TUL ***18*** *16:23:04.6±1.1, 36°.72N±0°.03×97°.83W±0°.07, h5^{km}±7^{km}, ML2.9, mb_Lg3.0/60(NEIC), Error ellipse: s-maj=8.1km s-min=2.4km az=70.0*

NEIC 18 16:23:04.5±0.8**, 36°.70N**±0°.02×**97°.82W**±0°.07**, h5**^{km}±7^{km}**, Error ellipse: s-maj=8.3km s-min=2.5km az=70.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.24	213		Pg	16 23 09.7	+0.7
CROK				Sg	Sg	16 23 13.4	+1.2
KAN14	Manchester OK	0.28	336	Pg	Pg	16 23 10.1	+0.2
KAN14					Sg	16 23 13.9	+0.3
KAN13	South Haven SW	0.41	42		Pg	16 23 12.7	+0.2
KAN13				Sg	Sg	16 23 18.3	+0.3
KAN01	Argonia South	0.45	6		Pg	16 23 13.3	+0.1
KAN01				Sg	Sg	16 23 19.4	+0.2
KAN10	Anthony SW Sta	0.47	333		Pg	16 23 13.6	0.0
KAN10				Sg	Sg	16 23 20.1	+0.3
KAN08	Anthony NE Sta	0.54	347		Pg	16 23 14.8	0.0
KAN12	Harper NE Stat	0.61	347	Pg	Pg	16 23 16.1	-0.1
OK029	Liberty Lake	0.95	162		Pg	16 23 22.8	+0.1
U32A	Winter Ranch,	1.00	252		Pg	16 23 23.5	-0.2
U32A	Winter Ranch,	1.00	252	P		16 23 23.5	
	baz=70						
U32A				S		16 23 37.3	
	baz=70						
QUOK	Quay	1.04	120		Pg	16 23 24.5	0.0
BCOK	Bluff Creek, N	1.06	171		Pg	16 23 24.7	0.0
T35A	Sooner Cattle	1.07	78		Pg	16 23 24.8	-0.2
T35B	Sooner Cattle	1.07	78	P		16 23 24.8	
	baz=260,SNR=60						
OK031	S. Brethren Rd	1.09	133	Pg	Pg	16 23 25.3	-0.1
OK030	Cody Creek RV	1.14	132		Pg	16 23 26.2	-0.2
OK025	Westminster Rd	1.19	161		Pg	16 23 27.1	-0.2
OKCFA	Oklahoma City	1.32	167		Pn	16 23 29.4	-0.2
OKCSW	OKLAHOMA CITY	1.33	166		Pn	16 23 29.7	0.0
FNO	Franklin	1.48	167		Pn	16 23 32.0	+0.2
FNO				IAmb_Lg		16 23 54.9	
	comp=Z,80nm,0.9s						
W35A	Tecumseh	1.73	153		Pn	16 23 35.9	+0.7
TUL1	Leonard	1.82	115		Pn	16 23 37.2	+0.8
TUL1				IAmb_Lg		16 24 05.6	
	comp=Z,77nm,0.8s						
TUL1	Leonard	1.82	115	P		16 23 37.6	
	baz=297,SNR=38						
TUL1				S		16 24 02.3	
	baz=297						
R32A	Long Quarter,	1.86	338		Pn	16 23 37.7	+0.7
R32A	Long Quarter,	1.86	338	P		16 23 37.8	
	baz=157,SNR=17						
R32A				S		16 24 02.2	
	baz=157						
WMOK	Wichita Mounta	2.11	202		Pn	16 23 40.9	+0.4
WMOK	Wichita Mounta	2.11	202	P		16 23 41.3	
	baz=21,SNR=42						
KSU1	Kansas State U	2.58	21		Pn	16 23 46.8	-0.1
CBKS	Cedar Bluff	2.60	325		Pn	16 23 46.4	-0.8
U38A	Gravette	2.78	94		Pn	16 23 50.3	+0.7
U38A	Gravette	2.78	94	P		16 23 50.8	
	baz=277,SNR=16						
X37A	Clayton	2.90	136	Pn	Pn	16 23 52.1	+0.8
HHAR	Hobbs	3.16	97		Pn	16 23 55.4	+0.6
W39A	Magazine	3.60	113	IAmb_Lg		16 25 08.6	
	comp=Z,36nm,0.7s						
AMTX	Amarillo	3.62	241	IAmb_Lg		16 25 06.6	
	comp=Z,28nm,0.9s						
S39A	Bolivar	3.73	73	Pn	Pn	16 24 02.8	+0.1
S39A	Bolivar	3.73	73	P		16 24 03.4	
	baz=256,SNR=7.4						
U40A	Yellville	4.02	93	Pn	Pn	16 24 07.0	+0.3
U40A				IAmb_Lg		16 25 14.3	
	comp=Z,39nm,0.9s						
U40A	Yellville	4.02	93	P		16 24 07.3	
	baz=277,SNR=6.0						
U40A				P		16 24 07.3	
	baz=277,SNR=6.0						
N33A	J Bar K, Exete	4.04	4	Pn	Pn	16 24 06.3	-0.7
N33A				IAmb_Lg		16 25 17.4	
	comp=Z,29nm,1.0s						
MIAR	Mount Ida	4.07	121	Pn	Pn	16 24 08.0	+0.6
Z38A	Mt. Pleasant	4.15	145	IAmb_Lg		16 25 19.2	
	comp=Z,44nm,0.8s						
KSCO	Kaye Shedlock’	4.45	303	Pn	Pn	16 24 12.3	-0.4
KSCO				IAmb_Lg		16 25 30.9	
	comp=Z,20nm,0.8s						
P38A	Dawn	4.46	48	Pn	Pn	16 24 13.0	+0.2
P38A				IAmb_Lg		16 25 34.0	
	comp=Z,25nm,0.8s						
MGMO	Mountain Grove	4.47	83		Pn	16 24 13.6	+0.6
MGMO				IAmb_Lg		16 25 29.3	
	comp=Z,19nm,0.7s						
N35A	Tabor	4.49	22	Pn	Pn	16 24 11.8	-1.3
X40A	Basin Creek Fa	4.63	117	Pn	Pn	16 24 15.2	+0.2
X40A				IAmb_Lg		16 25 31.6	
	comp=Z,23nm,0.8s						
FCAR	Ozark Folk Cen	4.67	98	Pn	Pn	16 24 15.2	-0.4
R40A	Maddies Statio	4.69	69	Pn	Pn	16 24 15.8	-0.1
R40A				IAmb_Lg		16 25 35.5	
	comp=Z,22nm,0.8s						
BGNE	Belgrade	4.71	357	Pn	Pn	16 24 16.1	-0.1
BGNE				IAmb_Lg		16 25 42.1	
	comp=Z,30nm,0.8s						
BGNE	Belgrade	4.71	357	P		16 24 16.2	
	baz=177,SNR=6.7						
W41B	Gary Mavity, V	4.77	107	IAmb_Lg		16 25 46.7	
	comp=Z,21nm,0.9s						
WLAR	White Oak Lake	4.89	127	IAmb_Lg		16 25 52.9	
	comp=Z,20nm,0.9s						
T25A	Trinidad	5.30	277	Pn	Pn	16 24 24.8	+0.4
P40A	Paris	5.36	56	Pn	Pn	16 24 25.4	+0.4
L34A	Svendsen Farm,	5.38	12	Pn	Pn	16 24 25.1	-0.2
T42A	Van Buren	5.41	85	Pn	Pn	16 24 25.7	0.0
CCM	Cathedral Cave	5.41	74	IAmb_Lg		16 26 02.7	
	comp=Z,19nm,0.7s						
PBMO	Poplar Bluff	5.94	87	IAmb_Lg		16 26 14.2	
	comp=Z,18nm,1.0s						
K31A	O'Neill	5.96	353	IAmb_Lg		16 26 22.0	
	comp=Z,24nm,0.7s						
SCIA	State Center	6.30	33	IAmb_Lg		16 26 31.0	
	comp=Z,29nm,0.8s						
SLM	Saint Louis	6.32	70	IAmb_Lg		16 26 26.0	
	comp=Z,28nm,0.7s						
JCT	Junction City	6.42	195	IAmb_Lg		16 26 40.5	
	comp=Z,12nm,0.9s						
S44A	Carbondale	6.91	79	IAmb_Lg		16 27 01.7	
	comp=Z,18nm,0.7s						
SIUC	Southern Illin	6.94	79	IAmb_Lg		16 26 41.6	
	comp=Z,17nm,0.9s						
ECSD	EROS Data Cent	7.08	7	Pn	Pn	16 24 47.6	-1.2
O20A	White River Ci	8.87	296	IAmb_Lg		16 27 43.9	
	comp=Z,13nm,0.9s						
PV12	Saucer Basin,	8.87	284	IAmb_Lg		16 27 52.3	
	comp=Z,15nm,0.9s						
PV11	David Mesa, Pa	8.93	284	IAmb_Lg		16 27 47.4	
	comp=Z,23nm,0.9s						
PV18	Skein Mesa, Pa	8.95	283	IAmb_Lg		16 27 59.0	
	comp=Z,16nm,0.9s						
PV16	Nyswonger Mesa	8.96	284	IAmb_Lg		16 27 47.2	
	comp=Z,12nm,0.8s						
PV17	East Wray Mesa	8.99	283	IAmb_Lg		16 27 46.7	
	comp=Z,25nm,1.0s						
PV20	West Nyswonger	9.01	284	IAmb_Lg		16 27 46.5	
	comp=Z,19nm,1.0s						
PV14	Lion Creek, Pa	9.05	284	IAmb_Lg		16 27 46.2	
	comp=Z,23nm,1.0s						
PV23	Carpenter Ridg	9.05	284	IAmb_Lg		16 27 51.1	
	comp=Z,29nm,1.1s						
PV10	Paradox Valley	9.07	284	IAmb_Lg		16 27 49.5	
	comp=Z,27nm,0.9s						
SPMN	Marine on St.	9.32	22	IAmb_Lg		16 28 09.8	
	comp=Z,16nm,1.1s						

DJA ***18*** *16:25:31.3±0.3, 2°S±4°×12°6E±°, h18^{km}±3^{km}, M4.2/16, mb4.3/7, mB4.9/3, MLv4.1/16, Mw(mB)4.2/3*

NEIC ***18*** *16:25:32.4±1.3, 2°.17S±0°.07×125°.91E±0°.03, h42^{km}±9^{km}, mb4.1/12, Error ellipse: s-maj=10.7km s-min=1.4km az=160.0*

IDC ***18*** *16:25:33.2±2.7, 2°.16S×125°.95E, h42^{km}±29^{km}, mb3.4/2, mb1 3.8/5, mb1mx3.3/40, mbtmp3.9/5, ML3.8/3, MS4.1/1, Ms1 4.1/1, ms1mx3.1/31, Error ellipse: s-maj=24.5km s-min=19.9km az=160.0*

ISC 18 16:25:31.2±0.8**, 2°.09S**±0°.07×**125°.89E**±0°.06**, h29**^{km}±6^{km}**, n41, σ1^{s}19**/44**, mb4.1**/7**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	0.10	69	P	Pb	16 25 36.3	-0.1
SANI				S	Sb	16 25 39.6	-0.3
NLAI	Namlea	1.66	133	P	Pn	16 25 58.6	+0.1
TNTI	Ternate	3.20	27	Pn	Pn	16 26 21.2	+1.5
KMSI	Cibinong	3.26	324	P	Pn	16 26 19.8	-0.7
MSAI	Masohi	3.28	112	P	Pn	16 26 23.1	+2.3
LUWI	Luwuk	3.29	288	Pn	Pn	16 26 20.6	-0.3
LUWI	Luwuk	3.29	288	P	Pn	16 26 21.1	+0.3
APSI	Ampana	4.40	285	P	Pn	16 26 37.1	+1.0
BNDI	Bandanaira	4.68	121	P	Pn	16 26 41.9	+1.9
MRSI	Marisa	4.70	303	P	Pn	16 26 40.8	+0.5
SWI	Sorong	5.50	77	P	Pn	16 26 52.5	+1.1
	0.1nm14nm,0.7s						
SIJI	Sorong	5.51	77	P	Pn	16 26 52.6	+1.2
	3.0nm,0.3s,baz=64,slow=19,SNR=37						
SIJI				S	Sn	16 27 53.6	-0.3
	0.6nm,0.3s,baz=138,slow=24,SNR=1.3						
TOLI2	Tolitoli	6.01	302	Pn	Pn	16 27 01.0	+2.6
BNSI	Bone	6.21	248	P	Pn	16 27 01.8	+0.7
	0.1nm10nm,1.6s						
SPSI	Sidrap Palu	6.39	253	P	Pn	16 27 05.5	+2.0
	0.2nm32nm,0.6s						
FAKI	Fak Fak	6.41	98	Pn	Pn	16 27 03.6	-0.2
FAKI	Fak Fak	6.41	98	P	Pn	16 27 04.3	+0.5
	0.2nm35nm,1.3s						
BKSI	Bulukumba	6.59	241	P	Pn	16 27 08.5	+2.2
	0.4nm1µm89nm,0.5s						
BSSI	Bau Bau, Buton	6.72	233	P	Pn	16 27 09.3	+1.2
	0.2nm799nm28nm,0.7s						
KAPI	Kappang	6.78	244	P	Pn	16 27 10.9	+2.0
	8.2nm,0.3s,baz=100,slow=8.8,SNR=47						
KAPI				S	Sn	16 28 24.4	-0.8
	0.2nm,0.3s,baz=212,slow=20,SNR=0.9						
KAPI	Kappang	6.78	244		Pn	16 27 10.7	+1.7
EDFI	Ende, Flores	7.83	212	P	Pn	16 27 25.2	+1.8
CISI	Cisompet, Garu	18.80	253	P	P	16 29 47.6	-1.2
WB0	Warramunga Arr	19.44	155	P	P	16 29 54.0	-1.6
WRA	Warramunga Arr	19.57	156	P	P	16 29 57.7	+0.6
	0.2nm,0.3s,baz=331,slow=12,SNR=7.6						
WRA	Warramunga Arr	19.57	156	P	P	16 29 55.8	-1.3
WB2	Warramunga Arr	19.58	156	Pn	P	16 29 58.0	+0.8
WB2				IAmb	IAmb	16 30 06.5	
	comp=Z,6.8nm,1.1s						
WR0	Warramunga Arr	19.67	155	P	P	16 29 56.9	-1.3
ASAR	Alice Springs	22.81	161	P	P	16 30 30.9	-1.2
	comp=Z,0.8nm,0.7s,baz=343,slow=12,SNR=6.6						
ASAR				PcP	PcP	16 34 23.0	0.0
	comp=Z,0.5nm,1.0s,baz=349,slow=2.0,SNR=2.5						
SSLB	Suanglung	26.16	350	P	P	16 31 03.3	0.0
SSLB				IAmb	IAmb	16 31 15.6	
	comp=Z,17nm,1.2s						
CTA	Charters Tower	26.75	133	LR	LR	16 44 12.0	
	comp=Z,395nm,20.7s,baz=349,slow=42						
DZM	Mont Dzumac	44.12	120	P	P	16 33 36.7	-0.9
DZM				IAmb	IAmb	16 33 45.9	
	comp=Z,6.1nm,1.1s						
SONM	Songino Array	52.56	344	P	P	16 34 43.0	+0.7
MK31	Makanchi Array	61.91	328	P	P	16 35 48.6	+0.4
MK31				IAmb	IAmb	16 35 49.7	
	comp=Z,1.0nm,0.9s						
MKAR	Makanchi Array	61.91	328	P	P	16 35 48.9	+0.7
	comp=Z,0.8nm,0.6s,baz=126,slow=8.5,SNR=13						
MKAR	Makanchi Array	61.91	328	P	P	16 35 48.6	+0.3
MAKZ	Makanchi	62.08	327	P	P	16 35 49.5	+0.1
MAKZ				IAmb	IAmb	16 35 51.6	
	comp=Z,1.4nm,0.9s						
YAK	Yakutsk	64.01	2	P	P	16 36 02.0	+0.1
KURK	Kurchatov	66.22	329	P	P	16 36 16.3	-0.2
KURK				IAmb	IAmb	16 36 19.2	
	comp=Z,2.5nm,0.9s						
KKAR	Karatay Array	66.97	319	P	P	16 36 22.2	+0.7
ABKAR	Akbulak array	76.14	322	P	P	16 37 16.0	-0.6

GEN ***18*** *16:32:19.9, 44°.57N×9°.47E, h7^{km}±4^{km}, Ml3.0*

STR ***18*** *16:32:19.7±0.9, 44°N±4°×°±°, h10^{km}, MLv3.3/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

PRU ***18*** *16:32:19.9±0.0, 44°.67N×9°.16E, h10^{km}*

ROM ***18*** *16:32:19.3±0.1, 44°.539N±0°.005×9°.443E±0°.006, h8^{km}, ML3.1/39, Error ellipse: s-maj=0.5km s-min=0.3km az=224.0*

BGR ***18*** *16:32:20.6±0.6, 44°.42N×9°.27E, h10^{km}, ML3.4/9, Error ellipse: s-maj=11.1km s-min=10.0km az=105.0*

LDG ***18*** *16:32:20.7±0.1, 44°.46N×9°.48E, h7^{km}, Md3.2/2, Ml3.3/40, Error ellipse: s-maj=1.9km s-min=1.5km az=37.0*

IDC ***18*** *16:32:24.2±1.5, 44°.73N×10°.01E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.3/39, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=37.8km s-min=16.3km az=114.0*

ISC 18 16:32:20.0±0.8**, 44°.55N**±0°.02×**9°.44E**±0°.01**, h11**^{km}±5^{km}**, n198, σ1^{s}95**/289**, mb3.5**/3**, 7C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GORR	Gorreto	0.12	298	P	Pg	16 32 22.8	-0.3
GORR				S	Sg	16 32 25.0	-0.2
GORR	Gorreto	0.12	298	⇑*e*P	Pg	16 32 22.8	-0.3
GORR				S	Sg	16 32 25.0	-0.2
GORR				AML	AML		
	comp=E,33100µm,0.6s						
GORR				AML	AML		
	comp=N,32750µm,0.3s						
GORR				AML	AML		
	comp=E,33100µm,0.6s						
BOB	Bobbio (Coli)	0.22	2	⇑*i*P	Pg	16 32 24.4	-0.3
BOB				S	Sg	16 32 27.8	0.0
BOB				AML	AML		
	comp=E,10390µm,0.4s						
BOB				AML	AML		
	comp=N,18200µm,0.5s						
BOB				AML	AML		
	comp=N,18900µm,0.5s						
BOB				AML	AML		
	comp=E,10360µm,0.4s						
BOB				AML	AML		
	comp=E,11850µm,0.8s						
BOB				AML	AML		
	comp=N,18200µm,0.5s						
BOB				AML	AML		
	comp=N,18900µm,0.5s						
BOB				AML	AML		
	comp=E,10380µm,0.4s						
MSSA	Maissana	0.24	166	⇑*e*P	Pg	16 32 24.7	-0.4
MSSA				S	Sg	16 32 28.8	+0.3
MSSA				AML	AML		
	comp=E,7825µm,0.5s						
MSSA				AML	AML		
	comp=N,8120µm,0.5s						
GRAM	Graiana	0.45	97	P	Pg	16 32 28.4	-0.6
GRAM				S	Sg	16 32 34.2	-0.8
GRAM	Graiana	0.45	97	⇑*e*P	Pg	16 32 28.4	-0.6
GRAM				S	Sg	16 32 35.0	+0.1
GRAM				AML	AML		
	comp=E,2325µm,0.3s						
GRAM				AML	AML		
	comp=N,3280µm,0.3s						
PLMA	Palmaria, Port	0.58	149	P	Pg	16 32 30.5	-0.8
PLMA				S	Sb	16 32 39.5	-0.9
PLMA				AML	AML		
	comp=E,1275µm,0.7s						
PLMA				AML	AML		
	comp=N,1138µm,0.4s						
FIVI	Fivizzano	0.58	122	P	Pb	16 32 31.8	-0.5
PCP	Piancastagn	0.64	269	P	Pg	16 32 32.2	-0.3
PCP				S	Sg	16 32 41.1	+0.3
PCP	Piancastagn	0.64	269	P	Pg	16 32 32.0	-0.5
PCP				S	Sg	16 32 41.0	+0.2
PCP				AML	AML		
	comp=N,2745µm,0.2s						
PCP				AML	AML		
	comp=E,2055µm,0.3s						
EQUI	Equi	0.64	127	P	Pg	16 32 31.9	-0.6
EQUI				S	Sg	16 32 40.3	-0.6
EQUI	Equi	0.64	127	P	Pg	16 32 31.9	-0.6
EQUI				S	Sg	16 32 40.6	-0.3
EQUI				AML	AML		
	comp=E,465µm,0.3s						
EQUI				AML	AML		
	comp=N,482µm,0.7s						
SARO	Sassorosso	0.78	118	P	Pg	16 32 34.1	-1.0
VLC	Villacollemand	0.79	120	AML	AML		
	comp=N,492µm,0.8s						
VLC				AML	AML		
	comp=E,448µm,0.7s						
VLC				AML	AML		
	comp=N,494µm,0.8s						
VLC				AML	AML		
	comp=E,441µm,0.9s						
VLC				AML	AML		
	comp=N,492µm,0.8s						
VLC				AML	AML		
	comp=E,440µm,0.9s						
VLC				AML	AML		
	comp=N,494µm,0.8s						
VLC				AML	AML		
	comp=E,447µm,0.7s						
QLNO	Quiliano	0.81	254	P	Pg	16 32 35.1	-0.6
QLNO				S	Sg	16 32 46.7	+0.3
QLNO				AML	AML		
	comp=N,1630µm,0.5s						
QLNO				AML	AML		
	comp=E,1175µm,0.5s						
ROTM	Rocchetta Tana	0.83	291	AML	AML		
	comp=N,3935µm,0.5s						
ROTM				AML	AML		
	comp=N,3930µm,0.5s						
ROTM				AML	AML		
	comp=E,2730µm,0.5s						
FINB	Finale Ligure	0.88	245	P	Pg	16 32 36.5	-0.5
FINB				S	Sg	16 32 49.1	+0.6
FINB				AML	AML		
	comp=E,3720µm,0.3s						
FINB				AML	AML		
	comp=N,2305µm,0.2s						
CARD	Cardoso	0.92	125	P	Pg	16 32 36.9	-0.7
CARD				S	Sb	16 32 49.8	-0.3
CARD				AML	AML		
	comp=E,1029µm,0.6s						
CARD				AML	AML		
	comp=N,1135µm,0.4s						
CARD				AML	AML		
	comp=E,1030µm,0.6s						
BDI	Bagni Di Lucca	0.96	120	AML	AML		
	comp=N,640µm,0.9s						
BDI				AML	AML		
	comp=E,657µm,1.0s						
MAIM	Mastiano	0.99	130	P	Pg	16 32 38.2	-0.9
MAIM				AML	AML		
	comp=E,536µm,0.5s						
MAIM				AML	AML		
	comp=N,568µm,0.7s						
POPM	Popiglio	1.07	118	AML	AML		
	comp=E,626µm,0.4s						
POPM				AML	AML		
	comp=N,745µm,0.7s						
RORO	Rocca Rossa	1.08	246	P	Pg	16 32 39.6	-1.1
RORO				S	Sg	16 32 54.2	-0.6
RORO				AML	AML		
	comp=N,1087µm,0.5s						
RORO				AML	AML		
	comp=E,952µm,0.3s						
PII	Pisa	1.14	136	P	Pg	16 32 40.2	-1.7
PII				AML	AML		
	comp=N,528µm,0.3s						
PII				AML	AML		
	comp=E,663µm,0.7s						
GROG	Isola di Gorgo	1.17	164	P	Pg	16 32 41.2	-1.4
GBOS	Grotte di Boss	1.19	255	P	Pg	16 32 41.5	-1.3
GBOS				AML	AML		
	comp=E,486µm,0.6s						
GBOS				AML	AML		
	comp=N,670µm,1.4s						
MONC	Moncucco Torin	1.20	296	AML	AML		
	comp=E,1890µm,0.4s						
MONC				AML	AML		
	comp=N,1570µm,0.4s						
MDI	Monti di Nese	1.24	9	P	Pg	16 32 43.9	0.0
MDI				AML	AML		
	comp=E,1690µm,0.3s						
MDI				AML	AML		
	comp=N,1084µm,1.3s						
MDI				AML	AML		
	comp=N,1032µm,1.0s						
MDI				AML	AML		
	comp=E,1750µm,0.3s						
MDI				AML	AML		
	comp=N,1032µm,1.0s						
MGRO	Montegrosso	1.28	247	P	Pn	16 32 42.8	-1.2
MGRO				S	Sb	16 32 59.5	-1.2
MGRO				AML	AML		
	comp=E,734µm,0.8s						
MGRO				AML	AML		
	comp=E,733µm,0.8s						
MGRO				AML	AML		
	comp=N,726µm,0.3s						
IMI	Imperia	1.28	241	P	Pn	16 32 42.5	-1.4
IMI				AML	AML		
	comp=E,588µm,1.6s						
IMI				AML	AML		
	comp=N,1215µm,0.8s						
SALO	Salr	1.31	35	P	Pg	16 32 45.2	-0.1
SALO				AML	AML		
	comp=E,848µm,0.5s						
SALO				AML	AML		
	comp=N,1384µm,0.6s						
SALO				AML	AML		
	comp=N,3195µm,0.6s						
SALO				AML	AML		
	comp=E,2340µm,0.5s						
MUGIO	Muggio	1.40	349	⇑P	Pn	16 32 46.1	+0.5
MUGIO				AML	AML		
	comp=E,700µm,0.5s						
MUGIO				AML	AML		
	comp=E,700µm,0.5s						
MUGIO				AML	AML		
	comp=N,818µm,0.4s						
FIU	Minerbio Fiu	1.47	86	AML	AML		
	comp=N,2515µm,0.6s						
FIU				AML	AML		
	comp=E,1900µm,0.3s						
FIU				AML	AML		
	comp=N,2520µm,0.6s						
FIU				AML	AML		
	comp=E,1895µm,0.3s						
ENR	Entracque	1.48	258	P	Pn	16 32 46.0	-0.7
ENR				AML	AML		
	comp=N,623µm,1.6s						
ENR				AML	AML		
	comp=N,622µm,1.6s						
ENR				AML	AML		
	comp=E,404µm,0.9s						
MAGA	Magasa	1.49	34	⇑P	Pn	16 32 47.0	+0.2
MAGA				AML	AML		
	comp=N,1400µm,0.4s						

MAGA				AML	AML		
	comp=E,3300µm,0.4s						
MAGA				AML	AML		
	comp=N,1395µm,0.4s						
TRAV	**Traversella**	**1.54**	**309**	P	**Pn**	**16 32 48.1**	**+0.7**
TRAV				AML	AML		
	comp=E,499µm,0.3s						
TRAV				AML	AML		
	comp=N,371µm,0.7s						
STV	**Sant Anna di V**	**1.54**	**259**	P	**Pn**	**16 32 46.7**	**-0.8**
STV				AML	AML		
	comp=N,319µm,1.6s						
STV				AML	AML		
	comp=E,280µm,0.4s						
TURF	**col de Turini**	**1.58**	**249**	Pn	**Pn**	**16 32 47.2**	**-0.9**
TURF				Sn	**Sn**	**16 33 07.6**	**-0.9**
ROVR	**Rover Verones**	**1.59**	**46**	P	**Pn**	**16 32 48.5**	**+0.2**
ROVR				AML	AML		
	comp=E,222µm,0.4s						
ROVR				AML	AML		
	comp=N,389µm,0.4s						
SBF	**Sospel**	**1.60**	**245**	*e*Pn	**Pn**	**16 32 47.8**	**-0.4**
SBF				*e*Sn	**Sn**	**16 33 07.4**	**-1.5**
	comp=N,238nm,0.3s						
ESCA	**l'Escarene**	**1.65**	**245**	Pn	**Pn**	**16 32 48.9**	**-0.1**
ESCA				Sn	**Sn**	**16 33 09.5**	**-0.6**
RSP	**Reno Superiore**	**1.66**	**292**	P	**Pn**	**16 32 49.5**	**+0.4**
RSP				AML	AML		
	comp=N,230µm,0.5s						
RSP				AML	AML		
	comp=E,284µm,0.4s						
MARN	**Marana (Italy)**	**1.66**	**49**⇑	*e*Pg	**Pn**	**16 32 49.3**	**+0.2**
MARN				*e*Sg	**Sb**	**16 33 11.7**	**+0.1**
PZZ	**Stroppo**	**1.66**	**269**	P	**Pn**	**16 32 49.2**	**0.0**
PZZ				AML	AML		
	comp=N,1025µm,0.6s						
PZZ				AML	AML		
	comp=E,858µm,0.3s						
MABI	**Malga Bissina**	**1.68**	**26**	P	**Pn**	**16 32 49.9**	**+0.3**
MABI				AML	AML		
	comp=N,298µm,0.4s						
MABI				AML	AML		
	comp=E,317µm,0.4s						
CIRO	**Champorcher**	**1.69**	**309**	P	**Pn**	**16 32 49.8**	**+0.1**
CIRO				AML	AML		
	comp=E,186µm,0.3s						
CIRO				AML	AML		
	comp=N,209µm,1.0s						
ISO	**Isola**	**1.75**	**259**	Pn	**Pn**	**16 32 51.1**	**+0.8**
ISO				Sn	**Sn**	**16 33 11.8**	**-0.9**
TEOL	**Teolo**	**1.78**	**62**	*e*Pn	**Pn**	**16 32 51.1**	**+0.4**
DOSS	**Dosso del Somm**	**1.82**	**42**	*e*Pn	**Pn**	**16 32 51.8**	**+0.4**
DOSS				*e*Sn	**Sn**	**16 33 15.1**	**+0.7**
LSD	**Lago del Serru**	**1.87**	**300**	P	**Pn**	**16 32 52.5**	**+0.3**
LSD				AML	AML		
	comp=N,132µm,1.0s						
LSD				AML	AML		
	comp=E,132µm,1.5s						
MBDF	**Montbardon**	**1.91**	**276**	*e*Pn	**Pn**	**16 32 52.6**	**-0.1**
MBDF	**Montbardon**	**1.91**	**276**	*e*Pg	**Pb**	**16 32 55.5**	**+0.5**
MBDF				*e*Sn	**Sn**	**16 33 15.8**	**-1.0**
	comp=E,122nm,0.4s						
MBDF				*e*Sg	**Sg**	**16 33 21.8**	**+0.3**
	comp=E,67nm,0.3s						
CALF	**Calern**	**1.98**	**247**	Pn	**Pn**	**16 32 53.6**	**+0.1**
CALF				Sn	**Sn**	**16 33 16.5**	**-1.9**
FUSIO	**Fusio**	**1.98**	**344**	AML	AML		
	comp=E,264µm,0.3s						
FUSIO				AML	AML		
	comp=N,162µm,0.8s						
PGF	**Pioggiola**	**2.03**	**189**	*e*Pn	**Pn**	**16 32 52.8**	**-1.4**
PGF	**Pioggiola**	**2.03**	**189**	*e*Pg	**Pb**	**16 32 56.9**	**0.0**
PGF				*e*Sn	**Sn**	**16 33 16.0**	**-3.6**
	comp=N,27nm,0.3s						
PGF	**Pioggiola**	**2.03**	**189**	AML	AML		
	comp=E,75µm,0.7s						
PGF				AML	AML		
	comp=N,79µm,1.5s						
OGAG	**Argentiere**	**2.08**	**268**	Pn	**Pn**	**16 32 55.7**	**+0.8**
MRGE	**Morge**	**2.08**	**307**	AML	AML		
	comp=N,188µm,0.4s						
MRGE				AML	AML		
	comp=E,182µm,0.8s						
LPG	**La Plagne**	**2.13**	**297**	*e*Pn	**Pn**	**16 32 56.4**	**+0.7**
LPG	**La Plagne**	**2.13**	**297**	*e*Pg	**Pg**	**16 33 00.7**	**-0.1**
LPG				*e*Sn	**Sn**	**16 33 22.2**	**-0.1**
	comp=E,55nm,0.4s						
LPG				*e*Sg	**Sg**	**16 33 29.1**	**+0.7**
	comp=E,62nm,0.4s						
LPL	**La Plagne**	**2.15**	**298**	*e*P	**Pn**	**16 32 58.0**	**+2.0**
LPL	**La Plagne**	**2.15**	**298**	*e*Pg	**Pg**	**16 33 01.1**	**-0.1**
LPL				*e*Sn	**Sn**	**16 33 22.6**	**-0.1**
	comp=E,82nm,0.4s						
LPL				*e*Sg	**Sg**	**16 33 29.7**	**+0.7**
	comp=E,91nm,0.4s						
MOSI	**Grossmontoni**	**2.21**	**20**	AML	AML		
	comp=E,448µm,0.8s						
MOSI				AML	AML		
	comp=N,546µm,0.5s						
FRF	**La Foret Royal**	**2.24**	**245**	*e*Pn	**Pn**	**16 32 55.8**	**-1.3**
FRF				*e*Sn	**Sn**	**16 33 20.4**	**-4.3**
	comp=N,111nm,0.4s						
DAVOX	**Davos/Dischmat**	**2.25**	**8**	Pn	**Pb**	**16 32 59.6**	**-1.2**
	comp=N,4.6nm,0.3s,baz=189,slow=13,SNR=27						
DAVOX				Sn	**Sb**	**16 33 28.1**	**-0.6**
	comp=N,12nm,0.3s,baz=100,slow=22,SNR=9.9						
DAVOX	**Davos/Dischmat**	**2.25**	**8**	AML	AML		
	comp=N,174µm,0.7s						
DAVOX				AML	AML		
	comp=E,152µm,0.7s						
KOSI	**Kohlern**	**2.35**	**35**	AML	AML		
	comp=E,284µm,0.5s						
KOSI				AML	AML		
	comp=N,228µm,0.4s						
BNALP	**Bannalp**	**2.42**	**343**	AML	AML		
	comp=E,204µm,0.9s						
BNALP				AML	AML		
	comp=N,166µm,0.6s						
LMR	**La Mourre**	**2.44**	**241**	*e*Pn	**Pn**	**16 32 58.7**	**-1.1**
LMR				*e*Sn	**Sn**	**16 33 26.9**	**-2.7**
LMR				*e*Sg	**Sb**	**16 33 36.2**	**+2.3**
	comp=N,26nm,0.2s						
PLONS	**Plons/SG**	**2.50**	**359**	*e*Pn	**Pb**	**16 33 03.3**	**-1.7**
BLAF	**les Blancs**	**2.51**	**257**	Pn	**Pn**	**16 33 01.5**	**+0.7**
ORIF	**Oris-en-Rattie**	**2.56**	**279**	*e*P	**Pn**	**16 33 04.2**	**+2.7**
ORIF	**Oris-en-Rattie**	**2.56**	**279**	*e*Pg	**Pg**	**16 33 08.6**	**-0.5**
ORIF				*e*Sn	**Sn**	**16 33 31.5**	**-1.2**
	comp=N,117nm,0.6s						
FETA	**Feichten**	**2.63**	**20**	*e*Pn	**Pb**	**16 33 06.5**	**-0.7**
	comp=N,12nm,0.5s,SNR=20						
FETA				*e*Sn	**Sb**	**16 33 40.4**	**+0.8**
	comp=N,20nm,0.8s						
DAVA	**Damuels**	**2.75**	**6**	Pn	**Pn**	**16 33 06.6**	**+2.3**
	comp=N,1.4nm,0.2s,SNR=13						
DAVA				*e*Sn	**Sb**	**16 33 41.3**	**-1.9**
	comp=N,41nm,0.3s						
DAVA	**Damuels**	**2.75**	**6**	*e*Pn	**Pn**	**16 33 06.3**	**+2.1**
BSTF	**la Bastide-des**	**2.81**	**257**	Pn	**Pn**	**16 33 05.6**	**+0.7**
SMRF	**Simiane la Rot**	**2.83**	**260**	*e*Pn	**Pn**	**16 33 05.9**	**+0.7**
SMRF				*e*Sn	**Sn**	**16 33 37.1**	**-2.3**
	comp=N,68nm,0.5s						
SMRF				*e*Sg	**Sg**	**16 33 49.6**	**-1.4**
	comp=N,90nm,0.6s						
WILA	**Wila**	**2.89**	**353**	*e*Pn	**Pn**	**16 33 07.2**	**+1.2**
OBER	**Oberstdorf**	**2.92**	**11**	*e*Pn	**Pn**	**16 33 08.9**	**+2.4**
OBER				*e*Sn	**Sn**	**16 33 43.2**	**+1.7**
SQTA	**Sankt Quirin**	**2.94**	**24**	Pn	**Pn**	**16 33 09.9**	**+3.1**
	comp=N,13nm,0.4s,SNR=17						
SQTA				*e*Sn	**Sb**	**16 33 46.6**	**-1.9**
	comp=N,16nm,0.3s						
ASEAF	**Site Antares,**	**2.95**	**235**	Pn	**Pn**	**16 33 06.6**	**+0.1**
ASEAF				Sn	**Sn**	**16 33 40.5**	**-1.3**
MOTA	**Moosalm**	**3.03**	**22**	Pn	**Pn**	**16 33 10.7**	**+2.7**
	comp=N,25nm,0.6s,SNR=31						
MOTA				*e*Sn	**Sn**	**16 33 47.8**	**+3.5**
	comp=N,25nm,0.7s						
RISI	**Rein**	**3.03**	**37**	AML	AML		
	comp=E,240µm,1.2s						
RISI				AML	AML		
	comp=N,394µm,0.4s						
BALST	**Balsthal**	**3.04**	**337**	*e*Pn	**Pn**	**16 33 09.6**	**+1.5**
ABTA	**Abfaltersbach**	**3.08**	**43**	*e*Pn	**Pn**	**16 33 10.5**	**+1.9**
	comp=N,24nm,0.6s						
ABTA				*e*Sn	**Sn**	**16 33 47.2**	**+1.7**
	comp=N,12nm,0.3s						
RETA	**Reutte**	**3.08**	**17**	Pn	**Pn**	**16 33 10.7**	**+2.1**
	comp=N,9.1nm,0.4s,SNR=25						
RETA				*e*Sn	**Sn**	**16 33 48.5**	**+3.1**
	comp=N,9.2nm,0.4s						
SULZ	**Cheisacher**	**3.12**	**343**	*e*Pn	**Pn**	**16 33 10.3**	**+1.2**
WTTA	**Wattenberg**	**3.12**	**29**	Pn	**Pn**	**16 33 11.5**	**+2.3**
	comp=N,7.8nm,0.2s,SNR=17						
WTTA				*e*Sn	**Sb**	**16 33 51.2**	**-2.4**
	comp=N,19nm,0.4s						
WTTA	**Wattenberg**	**3.12**	**29**	*e*Pn	**Pn**	**16 33 11.9**	**+2.7**
WTTA	**Wattenberg**	**3.12**	**29**	AML	AML		
	comp=E,116µm,0.6s						
WTTA				AML	AML		
	comp=N,106µm,0.6s						
CABF	**La Chapelle**	**3.13**	**312**	*e*Pn	**Pn**	**16 33 09.9**	**+0.6**
CABF	**La Chapelle**	**3.13**	**312**	*e*P	**Pn**	**16 33 12.9**	**+3.6**
CABF				*e*Sn	**Sn**	**16 33 46.0**	**-0.7**
	comp=N,26nm,0.4s						
WATA	**Walderalm**	**3.16**	**27**	Pn	**Pn**	**16 33 12.3**	**+2.5**
	comp=N,2.6nm,0.2s,SNR=11						
WATA				*e*Sn	**Sn**	**16 33 51.2**	**+3.6**
	comp=N,13nm,0.3s						
UBR	**Ueberruh**	**3.16**	**8**	*e*Pn	**Pn**	**16 33 11.3**	**+1.5**
UBR				*e*Sn	**Sn**	**16 33 50.1**	**+2.5**
SLE	**Schleitheim**	**3.28**	**349**	*e*Pn	**Pn**	**16 33 11.8**	**+0.4**
ROBS	**Robic**	**3.33**	**58**	*e*Pn	**Pn**	**16 33 12.1**	**+0.1**
SKDS	**Skadanscina**	**3.39**	**71**	*i* Pn	**Pn**	**16 33 12.5**	**-0.4**
VIVF	**Saint-Julien-l**	**3.41**	**277**	*e*P	**Pn**	**16 33 14.5**	**+1.3**
VIVF				*e*Sn	**Sn**	**16 33 51.7**	**-1.9**
	comp=N,17nm,0.5s						
JAVS	**Javornik**	**3.53**	**66**	*i* Pn	**Pn**	**16 33 14.8**	**-0.1**
KIZ	**Kirchzarten**	**3.56**	**343**	Pn	**Pn**	**16 33 15.8**	**+0.5**
KIZ				Sn	**Sn**	**16 33 56.5**	**-0.8**
BE1	**Monatshausen**	**3.58**	**20**	*e*Pn	**Pn**	**16 33 17.1**	**+1.6**
BE1				*e*Sn	**Sn**	**16 33 58.7**	**+0.9**
MYKA	**Terra Mystica**	**3.61**	**53**	*e*Pn	**Pn**	**16 33 17.0**	**+1.1**
	comp=N,0.8nm,0.3s						
MYKA				*e*Sn	**Sn**	**16 34 00.0**	**+1.5**
	comp=N,4.9nm,0.3s						
RIY	**Rijeka**	**3.67**	**76**	*e*Pn	**Pn**	**16 33 16.3**	**-0.3**
RIY				Sn	**Sn**	**16 33 57.6**	**-2.2**
MOF	**Molkenrain**	**3.67**	**335**	Pn	**Pn**	**16 33 18.1**	**+1.3**
KBA	**Koelnbreinsper**	**3.72**	**46**	*e*Pn	**Pn**	**16 33 19.6**	**+2.0**
	comp=N,4.8nm,0.4s						
KBA				*e*Sn	**Sn**	**16 34 02.6**	**+1.1**
	comp=N,5.7nm,0.3s						
KBA	**Koelnbreinsper**	**3.72**	**46**	*e*Pn	**Pn**	**16 33 19.4**	**+1.9**
HINF	**Hinteralfeld**	**3.73**	**332**	*e*Pn	**Pn**	**16 33 18.9**	**+1.4**
HINF	**Hinteralfeld**	**3.73**	**332**	*e*P	**Pn**	**16 33 21.3**	**+3.8**
HINF				*e*Sn	**Sn**	**16 34 00.7**	**-0.7**
	comp=N,19nm,0.4s						
BFO	**Black Forest**	**3.86**	**349**	*e*Pn	**Pn**	**16 33 19.3**	**0.0**
BFO				*e*Sn	**Sn**	**16 34 01.8**	**-2.7**
NVLJ	**Novalja**	**3.88**	**88**	*e*Pn	**Pn**	**16 33 20.9**	**+1.3**
NVLJ				Sn	**Sn**	**16 34 05.0**	**-0.1**
RJOB	**Jochberg**	**3.95**	**35**	*e*Pn	**Pn**	**16 33 22.2**	**+1.6**
RJOB				*e*Sn	**Sn**	**16 34 10.2**	**+3.3**
LASF	**Ste Croix**	**4.03**	**265**	*e*Pn	**Pn**	**16 33 21.0**	**-0.7**
LASF				*e*Sn	**Sn**	**16 34 06.0**	**-2.9**
	comp=N,6.2nm,0.3s						
OPP	**Oppenau**	**4.04**	**348**	Pn	**Pn**	**16 33 22.3**	**+0.5**
OPP				Sn	**Sn**	**16 34 07.0**	**-2.1**
HAU	**Haudompre**	**4.07**	**329**	*e*Pn	**Pn**	**16 33 23.4**	**+1.3**
HAU	**Haudompre**	**4.07**	**329**	*e*P	**Pn**	**16 33 26.0**	**+3.9**
HAU				*e*Sn	**Sn**	**16 34 09.0**	**-0.7**
	comp=N,101nm,0.5s						
DUGI	**Dugi Otok**	**4.08**	**96**	*e*Pn	**Pn**	**16 33 23.1**	**+0.8**
DUGI				Sn	**Sn**	**16 34 08.8**	**-1.1**
OBKA	**Obir**	**4.09**	**60**	*e*Pn	**Pn**	**16 33 23.8**	**+1.3**
	comp=N,0.5nm,0.2s						
OBKA				*e*Sn	**Sg**	**16 34 31.9**	**+0.5**
	comp=N,15nm,0.7s						
OBKA	**Obir**	**4.09**	**60**	*e*Pn	**Pn**	**16 33 23.9**	**+1.3**
CDF	**Champ du Feu**	**4.14**	**340**	*e*Pn	**Pn**	**16 33 23.4**	**+0.2**
CDF	**Champ du Feu**	**4.14**	**340**	*e*P	**Pn**	**16 33 26.6**	**+3.4**
CDF				*e*Sn	**Sn**	**16 34 10.4**	**-1.2**
	comp=N,17nm,0.5s						
NORI	**Noerdlinger Ri**	**4.25**	**11**	*e*Sn	**Sn**	**16 34 12.4**	**-1.8**
OZLJ	**Ozalj**	**4.40**	**74**	Sn	**Sn**	**16 34 16.8**	**-1.1**
SMF	**Signal de Mont**	**4.45**	**300**	*e*Pn	**Pn**	**16 33 27.9**	**+0.5**
SMF	**Signal de Mont**	**4.45**	**300**	*e*P	**Pn**	**16 33 30.8**	**+3.4**
SMF				*e*Sn	**Sn**	**16 34 17.1**	**-2.1**
	comp=N,18nm,0.3s						
SOKA	**Soboth**	**4.46**	**60**	*i* Pn	**Pn**	**16 33 28.3**	**+0.7**
	comp=N,0.9nm,0.4s,SNR=4.4						
SOKA				*e*Sn	**Sn**	**16 34 19.9**	**+0.3**
	comp=N,3.8nm,0.5s						
UDBI	**Udbina**	**4.52**	**88**	*e*Pn	**Pn**	**16 33 30.2**	**+1.7**
UDBI				Sn	**Sn**	**16 34 21.1**	**0.0**
MORI	**Morici**	**4.56**	**96**	*e*Pn	**Pn**	**16 33 30.5**	**+1.6**
MORI				Sn	**Sn**	**16 34 21.1**	**-0.7**
ZIRJ	**Zirje**	**4.56**	**99**	*e*Pn	**Pn**	**16 33 30.3**	**+1.4**
ZIRJ				Sn	**Sn**	**16 34 21.3**	**-0.5**
MOA	**Molln**	**4.70**	**44**	*e*Pn	**Pn**	**16 33 32.5**	**+1.6**
	comp=N,1.0nm,0.3s						
MOA				*e*Sn	**Sn**	**16 34 28.2**	**+2.8**
	comp=N,2.7nm,0.3s						
MOA	**Molln**	**4.70**	**44**	*e*Pn	**Pn**	**16 33 32.6**	**+1.7**
LOR	**Lormes**	**4.75**	**307**	*e*Pn	**Pn**	**16 33 31.1**	**-0.4**
	baz=127						
LOR	**Lormes**	**4.75**	**307**	*e*P	**Pn**	**16 33 35.7**	**+4.2**
LOR	**Lormes**	**4.75**	**307**	*e*Pg	**Pg**	**16 33 49.1**	**-1.8**
LOR				*e*Sn	**Sn**	**16 34 24.6**	**-1.9**
	comp=N,42nm,0.4s						
PAGF	**Fort de Pagny**	**4.75**	**329**	*e*Pn	**Pn**	**16 33 32.4**	**+0.8**
	baz=148						
PAGF	**Fort de Pagny**	**4.75**	**329**	*e*P	**Pn**	**16 33 35.6**	**+4.0**
PAGF				*e*Sn	**Sn**	**16 34 25.0**	**-1.6**
	comp=N,8.2nm,0.3s						
SFTF	**Sexfontaines**	**4.76**	**322**	*e*Pn	**Pn**	**16 33 32.3**	**+0.7**
	baz=142						
SFTF	**Sexfontaines**	**4.76**	**322**	*e*P	**Pn**	**16 33 36.0**	**+4.4**
SFTF				*e*Sn	**Sn**	**16 34 25.3**	**-1.4**
	comp=N,12nm,0.6s						
PTJ	**Puntijarka**	**4.81**	**71**	*e*Pn	**Pn**	**16 33 33.3**	**+0.9**
PTJ				Sn	**Sn**	**16 34 26.4**	**-1.7**
AVF	**Avril sur Loir**	**4.82**	**300**	*e*Pn	**Pn**	**16 33 33.1**	**+0.7**
AVF	**Avril sur Loir**	**4.82**	**300**	*e*P	**Pn**	**16 33 36.3**	**+3.9**
AVF				*e*Sn	**Sn**	**16 34 25.6**	**-2.6**
	comp=N,3.3nm,0.2s						
SSF	**Saint Saulge**	**4.85**	**303**	*e*Pn	**Pn**	**16 33 33.7**	**+0.8**
SSF	**Saint Saulge**	**4.85**	**303**	*e*P	**Pn**	**16 33 36.5**	**+3.6**
SSF				*e*Sn	**Sn**	**16 34 26.3**	**-2.7**
	comp=N,9.5nm,0.4s						
MEZF	**Maizieres J'vi**	**4.98**	**324**	*e*Pn	**Pn**	**16 33 34.4**	**-0.2**
	baz=149						
MEZF				*e*Sn	**Sn**	**16 34 30.1**	**-2.0**
	comp=N,15nm,0.4s						
ARSA	**Arzberg**	**5.03**	**55**	*e*Pn	**Pn**	**16 33 35.4**	**0.0**
	comp=N,0.9nm,0.2s						
ARSA				*e*Sn	**Sn**	**16 34 32.8**	**-0.8**
	comp=N,2.4nm,0.6s						
ARSA	**Arzberg**	**5.03**	**55**	*e*Pn	**Pn**	**16 33 36.4**	**+1.0**
KIJV	**Kijevo**	**5.03**	**94**	*e*Pn	**Pn**	**16 33 36.3**	**+0.9**
KIJV				Sn	**Sn**	**16 34 32.9**	**-0.7**
SAVF	**Savonnieres en**	**5.04**	**325**	*e*Pn	**Pn**	**16 33 36.5**	**+1.1**
	baz=144						
SAVF	**Savonnieres en**	**5.04**	**325**	*e*P	**Pn**	**16 33 39.5**	**+4.1**
SAVF				*e*Sn	**Sn**	**16 34 32.0**	**-1.6**
	comp=N,7.8nm,0.3s						
BGF	**Bois d'Agland**	**5.04**	**296**	*e*Pn	**Pn**	**16 33 36.5**	**+0.9**
BGF				*e*Sn	**Sn**	**16 34 31.6**	**-2.2**
	comp=N,26nm,0.4s						
WET	**Wettzell**	**5.16**	**26**	*e*Pn	**Pn**	**16 33 37.2**	**-0.1**
WET				*e*Sn	**Sn**	**16 34 34.8**	**-2.0**
KALN	**Kalnik**	**5.19**	**70**	*e*Pn	**Pn**	**16 33 37.6**	**0.0**
KALN				Sn	**Sn**	**16 34 36.5**	**-1.0**
GEC2	**GERESS Array S**	**5.20**	**33**	*e*Pn	**Pn**	**16 33 37.7**	**-0.1**
GEC2				*e*Sn	**Sn**	**16 34 34.9**	**-2.9**
GERES	**GERESS Array B**	**5.20**	**33**	Pn	**Pn**	**16 33 37.7**	**-0.1**
	comp=N,1.1nm,0.3s,baz=208,slow=12,SNR=41						
GERES				Sn	**Sn**	**16 34 35.0**	**-2.7**
	comp=N,3.9nm,0.3s,baz=211,slow=23,SNR=22						
HVAR	**Hvar**	**5.25**	**103**	*e*Pn	**Pn**	**16 33 39.6**	**+1.2**
HVAR				Sn	**Sn**	**16 34 38.5**	**-0.4**
CAF	**Calviac**	**5.27**	**277**	*e*Pn	**Pn**	**16 33 39.0**	**+0.3**
CAF	**Calviac**	**5.27**	**277**	*e*P	**Pn**	**16 33 42.0**	**+3.3**
MTLF	**Montolieu**	**5.35**	**259**	*e*Pn	**Pn**	**16 33 39.1**	**-0.7**
MTLF				*e*Sn	**Sn**	**16 34 37.0**	**-4.4**
	comp=N,3.3nm,0.3s						
TCF	**Toulx Ste Croi**	**5.38**	**291**	*e*Pn	**Pn**	**16 33 40.4**	**+0.2**
TCF	**Toulx Ste Croi**	**5.38**	**291**	*e*P	**Pn**	**16 33 43.7**	**+3.5**
TCF				*e*Sn	**Sn**	**16 34 39.5**	**-2.5**
	comp=N,6.1nm,0.3s						
KHC	**Kasperske Hory**	**5.39**	**30**	*e*PN	**Pn**	**16 33 39.8**	**-0.5**
KHC				*e*SN	**Sn**	**16 34 40.0**	**-2.4**
KHC				*e*SG	**Sg**	**16 35 10.5**	**-2.4**
HYF	**Humbligny**	**5.47**	**302**	*e*P	**Pn**	**16 33 44.2**	**+2.8**
HYF				*e*Sn	**Sn**	**16 34 42.0**	**-2.2**
ROTZ	**Rotzenmuhle**	**5.55**	**19**	*e*Pn	**Pn**	**16 33 42.3**	**-0.2**
ROTZ				*e*Sn	**Sn**	**16 34 42.0**	**-4.3**
CONA	**Conrad Observa**	**5.59**	**51**	*e*Pn	**Pn**	**16 33 44.1**	**+1.0**
	comp=N,0.8nm,0.2s						
CONA				*e*Sn	**Sn**	**16 34 48.9**	**+1.5**
	comp=N,5.7nm,0.7s						
MAKA	**Makarska**	**5.62**	**100**	*e*Pn	**Pn**	**16 33 45.0**	**+1.5**
MAKA				Sn	**Sn**	**16 34 48.1**	**+0.2**
RICI	**Ricice**	**5.65**	**98**	*e*Pn	**Pn**	**16 33 45.2**	**+1.4**
RICI				Sn	**Sn**	**16 34 49.2**	**+0.5**
RJF	**Les Rejaudoux**	**5.67**	**280**	*e*P	**Pn**	**16 33 47.7**	**+3.5**
RJF				*e*Sn	**Sn**	**16 34 45.7**	**-3.7**
	comp=N,0.4nm,0.2s						
PBCC	**Pribram**	**6.00**	**30**	*e*PN	**Pn**	**16 33 48.7**	**0.0**
NKC	**Novy Kostel**	**6.04**	**19**	*e*PN	**Pn**	**16 33 48.4**	**-0.8**
NKC				*e*SN	**Sn**	**16 34 53.8**	**-4.5**
GUNZ	**Gunzen**	**6.14**	**18**	*e*Sn	**Sn**	**16 34 56.5**	**-4.2**
WERD	**Werda**	**6.21**	**17**	*e*Sn	**Sn**	**16 34 57.5**	**-5.1**
TANN	**Tannenbergstha**	**6.21**	**18**	*e*Pn	**Pn**	**16 33 50.6**	**-1.0**
TANN				*e*Sn	**Sn**	**16 34 58.8**	**-3.9**
MOX	**Moxa**	**6.27**	**13**	*e*Sn	**Sn**	**16 35 00.7**	**-3.3**
PRU	**Pruhonice**	**6.45**	**31**	*e*PN	**Pn**	**16 33 55.2**	**+0.3**
PRU				*e*SN	**Sn**	**16 35 04.5**	**-3.9**
BAIF	**Baives**	**6.56**	**329**	*e*Pn	**Pn**	**16 33 56.8**	**+0.5**
BAIF	**Baives**	**6.56**	**329**	*e*P	**Pn**	**16 34 00.9**	**+4.6**
BAIF				*e*Sn	**Sn**	**16 35 07.6**	**-3.4**
	comp=N,1.0nm,0.3s						
MODS	**Modra-Piesok**	**6.63**	**52**	*e*PN	**Pn**	**16 33 56.6**	**-0.7**
EPF	**Esparros**	**6.76**	**260**	*e*P	**Pn**	**16 34 02.9**	**+3.8**
SMOL	**Smolenice**	**6.79**	**51**	*e*PN	**Pn**	**16 34 00.2**	**+0.7**
BRG	**Berggiesshubel**	**7.02**	**24**	Sn	**Sn**	**16 35 19.8**	**-2.5**
BRG				*e*x	x	16 35 33.9	
BRG				Amp		16 36 33.8	
	comp=Z,2.6nm,0.8s						
BRG				Amp		17 11 00.0	
	comp=N,1.0nm,14.1s						
BRG				Amp		17 11 02.0	
	comp=Z,1.4nm,15.1s						
BRG				Amp		17 11 39.0	
	comp=E,0.8nm,15.1s						
BRG	**Berggiesshubel**	**7.02**	**24**	Sn	**Sn**	**16 35 19.8**	**-2.5**
BRG				*e*x	x	16 35 33.9	
BRG				Amp		16 36 33.8	
	comp=Z,2.6nm,0.8s						
BRG				Amp		17 11 00.0	
	comp=N,1.0nm,14.1s						
BRG				Amp		17 11 02.0	
	comp=Z,1.4nm,15.1s						
BRG				Amp		17 11 39.0	
	comp=E,0.8nm,15.1s						
MFF	**Saint Martin d**	**7.03**	**290**	*e*Pn	**Pn**	**16 34 03.1**	**+0.3**
MFF				*e*Sn	**Sn**	**16 35 18.6**	**-4.1**
	comp=E,1.0nm,0.4s						
CLL	**Collm**	**7.17**	**18**	*e*Pg	**Pg**	**16 34 33.0**	**-4.2**
CLL				*e*Sn	**Sn**	**16 35 24.0**	**-2.1**
CLL				*e*Sg	**Sg**	**16 36 06.0**	**-4.0**
ETSF	**Etsaut**	**7.43**	**261**	*e*P	**Pn**	**16 34 13.0**	**+4.6**
ETSF				*e*Sn	**Sn**	**16 35 28.1**	**-4.5**
	comp=E,1.4nm,0.3s						
DPC	**Dobruska-Polom**	**7.44**	**36**	*e*SN	**Sn**	**16 35 29.6**	**-3.3**
KRLC	**Kraliky**	**7.44**	**39**	*e*PN	**Pn**	**16 34 07.8**	**-0.7**
KRLC				*e*SN	**Sn**	**16 35 30.2**	**-2.7**
CHVC	**Chvalec**	**7.51**	**34**	*e*PN	**Pn**	**16 34 08.8**	**-0.7**
OSTC	**Ostas**	**7.55**	**35**	*e*PN	**Pn**	**16 34 08.6**	**-1.4**
VYHS	**Vyhne**	**7.59**	**55**	*e*PN	**Pn**	**16 34 10.1**	**-0.4**
VYHS				*e*SN	**Sn**	**16 35 32.9**	**-3.5**
SJPF	**Ste Jean**	**7.84**	**263**	*e*P	**Pn**	**16 34 17.4**	**+3.4**
FLN	**La Foliniere**	**8.02**	**305**	*e*Pn	**Pn**	**16 34 16.8**	**+0.5**
	baz=126						
GRR	**Gorron**	**8.08**	**302**	*e*Sn	**Sn**	**16 35 46.3**	**-2.1**
	comp=E,9.1nm,0.8s						
SGMF	**Saint Gilles**	**9.08**	**298**	*e*Pn	**Pn**	**16 34 30.9**	**0.0**
SGMF				*e*Sn	**Sn**	**16 36 07.6**	**-5.4**
	comp=E,1.1nm,0.3s						
QUIF	**Quistinic**	**9.36**	**296**	*e*Pn	**Pn**	**16 34 35.7**	**+1.0**
ROSF	**Rostrenen**	**9.56**	**298**	*e*Pg	Pn	16 35 17.7	+40
TORD	**Torodi Ar. Bea**	**31.99**	**194**	P	P	16 38 55.6	+9.4
	comp=E,0.6nm,0.5s,baz=19,slow=9.2,SNR=2.1						
MKAR	**Makanchi Array**	**49.24**	**60**	P	**P**	**16 41 10.4**	**+2.0**
	comp=E,0.4nm,0.9s,baz=293,slow=7.5,SNR=2.8						
ILAR	**Eielson Array**	**69.45**	**349**	P	**P**	**16 43 32.5**	**+4.8**
	comp=E,0.2nm,0.5s,baz=34,slow=6.6,SNR=1.9						

IDC 18 16:55:44.2±1.9**, 30°.62S**×**177°.99W, h0**^{km}**, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.7**/35**, mbtmp3.8**/3**, Error ellipse: s-maj=44.6km s-min=26.5km az=90.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.36**	**2**	Pn	Pb	16 56 10.6	0.0
	57nm,0.3s,baz=4.8,slow=22,SNR=2.7						
RAO				Sn	Sg	16 56 22.8	-5.2
	144nm,0.3s,baz=189,slow=23,SNR=7.2						
ASAR	**Alice Springs**	**43.11**	**267**	P	P	17 03 46.4	-0.1
	0.2nm,0.4s,baz=105,slow=7.3,SNR=13						
WRA	**Warramunga Arr**	**44.12**	**272**	P	P	17 03 54.5	-0.2
	0.5nm,0.4s,baz=110,slow=8.1,SNR=12						
VNDA	**Vanda**	**47.88**	**186**	P	P	17 04 23.4	-0.1
	1.6nm,0.4s,baz=20,slow=6.1,SNR=22						

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*NEIC **18** 16:57:46.5±2.5, 17°.9S±0°.1×178°.1W±0°.1, h576^{km}±7^{km}, mb4.5/29, Error ellipse: s-maj=16.7km s-min=14.5km az=163.0*

*IDC **18** 16:57:49.9±1.0, 17°.85S×178°.35W, h597^{km}±9^{km}, mb3.3/21, mb1 3.4/23, mb1mx3.3/44, mbtmp4.2/23, Error ellipse: s-maj=14.8km s-min=12.5km az=126.0*

ISC 18 16:57:48.2±0.4**, 17°.88S**±0°.08×**178°.18W**±0°.07**, h590**^{km}**, n84, **σ1^{s}.**34**/86**, mb4.3**/31**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.59**	**272**	P	**P**	**16 59 10.4**	**+0.1**
	13nm,0.3s,baz=113,slow=3.9,SNR=126						
MSVF				S	**S**	**17 00 19.0**	**+1.8**
	baz=98,slow=23,SNR=7.3						
MSVF	**Nonsavu**	**3.59**	**272**	P	**P**	**16 59 10.1**	**-0.2**
AFI	**Afiamalu**	**7.31**	**58**	P	**P**	**16 59 37.8**	**-3.1**
RAO	**Raoul Island**	**11.33**	**179**	P	**P**	**17 00 21.5**	**+1.5**
	23nm,0.3s,baz=275,slow=23,SNR=1.6						
RAO	**Raoul Island**	**11.33**	**179**	P	**P**	**17 00 18.6**	**-1.4**
SANVU	**Saraoutou**	**14.21**	**278**	P	**P**	**17 00 48.6**	**-0.8**
DZM	**Mont Dzumac**	**15.04**	**251**	P	**P**	**17 00 57.9**	**+0.6**
	0.4nm,0.3s,baz=92,slow=18,SNR=8.4						
DZM	**Mont Dzumac**	**15.04**	**251**	IAmb	IAmb	17 01 01.2	
	comp=Z,5.7nm,0.9s						
OUZ	**Omahuta**	**18.76**	**201**	P	**P**	**17 01 32.5**	**+1.5**
OUZ				IAmb	IAmb	17 01 59.7	
	comp=Z,14nm,1.2s						
QRZ	**Quartz Range**	**24.23**	**197**	P	**P**	**17 02 20.3**	**+0.3**
PLWZ	**Palliser**	**24.28**	**192**	P	**P**	**17 02 20.4**	**0.0**
NNZ	**Nelson**	**24.37**	**196**	P	**P**	**17 02 21.6**	**+0.5**
PPTF	**Pamatai, Papee**	**27.25**	**94**	P	**P**	**17 02 43.7**	**-3.2**
WKZ	**Wanaka**	**28.93**	**199**	P	**P**	**17 02 59.3**	**-1.8**
MLZ	**Mavora Lakes**	**29.70**	**200**	P	**P**	**17 03 06.5**	**-1.2**
CTA	**Charters Tower**	**33.67**	**260**	P	**P**	**17 03 41.1**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=95,slow=12,SNR=9.1						
CTAO	**Charters Tower**	**33.67**	**260**	P	**P**	**17 03 40.9**	**-0.9**
CTAO				IAmb	IAmb	17 03 49.1	
	comp=Z,15nm,1.4s						
CAN	**Canberra**	**33.90**	**233**	P	**P**	**17 03 43.4**	**-0.1**
CAN				IAmb	IAmb	17 03 52.0	
	comp=Z,23nm,1.2s						
PMG	**Port Moresby**	**34.67**	**279**	P	**P**	**17 03 50.8**	**+0.6**
	comp=Z,7.5nm,0.8s,baz=113,slow=8.9,SNR=2.3						
PMG	**Port Moresby**	**34.67**	**279**	IAmb	IAmb	17 03 52.0	
	comp=Z,7.0nm,0.8s						
STKA	**Stephens Creek**	**38.84**	**241**	P	**P**	**17 04 24.2**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=93,slow=10,SNR=13						
STKA	**Stephens Creek**	**38.84**	**241**	P	**P**	**17 04 23.7**	**-0.3**
JAY	**Jayapura**	**43.11**	**286**	P	**P**	**17 04 56.8**	**-1.3**
	comp=Z,8.0nm,0.7s,baz=83,slow=8.1,SNR=2.3						
JCUZ	**Jacuzzi**	**43.41**	**33**	P	**P**	**17 04 58.9**	**-1.5**
WR0	**Warramunga Arr**	**44.66**	**259**	P	**P**	**17 05 08.7**	**-1.3**
WB0	**Warramunga Arr**	**44.82**	**260**	P	**P**	**17 05 09.8**	**-1.3**
WB0				IAmb	IAmb	17 05 10.8	
	comp=Z,5.6nm,0.5s						
WB2	**Warramunga Arr**	**44.84**	**259**	P	**P**	**17 05 09.8**	**-1.5**

WB2				IAmb	IAmb	17 05 11.0	
	comp=Z,5.7nm,0.6s						
WRAB	Tennant Creek	44.84	259	P	P	17 05 10.0	-1.3
WRA	Warramunga Arr	44.85	259	P	P	17 05 10.4	-1.0
	comp=Z,3.3nm,0.5s,baz=96,slow=7.0,SNR=47						
WRA				PcP	PcP	17 06 40.5	+0.2
	comp=Z,0.5nm,0.3s,baz=91,slow=3.5,SNR=5.6						
AS31	Alice Springs	45.01	254	P	P	17 05 11.7	-0.9
AS31				IAmb	IAmb	17 05 13.1	
	comp=Z,7.1nm,0.5s						
ASAR	Alice Springs	45.01	254	P	P	17 05 12.1	-0.5
	comp=Z,26nm,0.6s,baz=87,slow=8.8,SNR=340						
ASAR				PcP	PcP	17 06 41.0	+0.2
	comp=Z,1.4nm,0.5s,baz=106,slow=3.9,SNR=7.2						
ASAR				ScP	ScP	17 09 38.2	+0.5
	comp=Z,0.4nm,0.9s,baz=81,slow=6.1,SNR=2.8						
ASAR	Alice Springs	45.01	254	P	P	17 05 11.2	-1.5
PTCN	Pitcairn Islan	45.13	108	P	P	17 05 13.5	0.0
SAUI	Saumlaki	50.08	275	P	P	17 05 50.5	+0.1
SIJI	Sorong	52.44	283	P	P	17 06 07.8	+0.3
	comp=Z,9.1nm,0.5s,baz=128,slow=6.5,SNR=8.7						
FITZ	Fitzroy Crossi	53.25	260	P	P	17 06 12.8	-0.4
	comp=Z,1.0nm,0.3s,baz=128,slow=5.2,SNR=9.8						
SOEI	Soe	56.29	270	P	P	17 06 35.2	+0.6
SOEI				IAmb	IAmb	17 06 36.6	
	comp=Z,13nm,0.8s						
MBWA	Marble Bar	58.29	256	P	P	17 06 45.8	-2.2
MMRI	Maumere	58.52	271	P	P	17 06 48.5	-1.1
MMRI				IAmb	IAmb	17 06 49.5	
	comp=Z,21nm,1.0s						
NWAO	Narrogin (SRO)	59.42	242	P	P	17 06 55.5	+0.2
NWAO				IAmb	IAmb	17 06 57.9	
	comp=Z,40nm,1.4s						
VNDA	Vanda	60.49	185	P	P	17 07 03.8	+2.1
	comp=Z,0.6nm,0.3s,baz=38,slow=8.6,SNR=13						
MJAR	Matsushiro Arr	68.01	323	P	P	17 07 49.8	0.0
	comp=Z,1.3nm,0.5s,baz=148,slow=5.9,SNR=6.5						
JMN	Monobe	68.71	318	P	P	17 07 54.5	+0.5
UGM	Wanagama	69.86	268	P	P	17 08 01.0	-0.4
JHS	Saijyo	70.02	319	P	P	17 08 01.2	-0.6
JHS				IAmb	IAmb	17 08 18.6	
	comp=Z,52nm,1.3s						
QSPA	South Pole Qui	72.18	180	P	P	17 08 14.9	+0.9
	comp=Z,1.8nm,0.8s						
QSPA	South Pole Qui	72.18	180	P	P	17 08 14.2	+0.2
SSLB	Suanglung	72.40	303	P	P	17 08 15.3	-0.7
SSLB				IAmb	IAmb	17 08 43.8	
	comp=Z,20nm,1.2s						
KSM	Kuching	72.90	277	P	P	17 08 17.0	-2.0
KSM				IAmb	IAmb	17 08 34.9	
	comp=Z,33nm,1.1s						
PETK	Petropavlovsk-	73.70	345	P	P	17 08 23.6	+0.9
	comp=Z,2.4nm,0.9s,baz=78,slow=7.7,SNR=5.2						
PETK	Petropavlovsk-	73.70	345	P	P	17 08 23.5	+0.8
KSRS	Korea Array	74.82	318	P	P	17 08 31.3	+2.0
	comp=Z,1.4nm,0.9s,baz=119,slow=4.3,SNR=2.0						
USRK	Ussuriysk Ar.	76.71	326	P	P	17 08 42.0	+2.4
	comp=Z,0.7nm,0.5s,baz=111,slow=5.3,SNR=2.3						
USRK	Ussuriysk Ar.	76.71	326	P	P	17 08 41.0	+1.4
NVAR	Mina Array Bea	79.25	44	P	P	17 08 55.3	+1.6
	comp=Z,0.2nm,0.5s,baz=233,slow=8.7,SNR=2.9						
TXAR	Lajitas Array	85.79	58	P	P	17 09 29.1	+2.5
	comp=Z,0.3nm,0.7s,baz=211,slow=4.4,SNR=3.8						
ILAR	Eielson Array	85.81	13	P	P	17 09 25.4	-0.3
	comp=Z,0.4nm,0.4s,baz=220,slow=5.0,SNR=13						
PDAR	Pinedale Array	87.18	43	P	P	17 09 34.1	+1.1
	comp=Z,0.4nm,0.6s,baz=224,slow=4.1,SNR=5.5						
CMAR	Chiang Mai Arr	89.08	290	P	P	17 09 43.7	+1.7
	comp=Z,0.9nm,0.8s,baz=118,slow=3.4,SNR=6.9						
INK	Inuvik	91.80	15	P	P	17 09 53.3	-0.1
	comp=Z,0.8nm,0.8s,baz=204,slow=8.1,SNR=3.2						
YKA	Yellowknife Ar	94.21	25	P	P	17 10 04.9	+0.4
	comp=Z,0.1nm,0.5s,baz=238,slow=3.7,SNR=2.7						
MKAR	Makanchi Array	109.27	314	PKiKP	PKiKP	17 15 11.5	-0.6
	comp=Z,0.4nm,0.5s,baz=180,slow=0.8,SNR=8.6						
KURK	Kurchatov	111.95	318	PKiKP	PKiKP	17 15 15.2	-1.8
KURBB	Kurchatov Arra	112.00	318	PKiKP	PKiKP	17 15 16.3	-0.7
	comp=Z,0.3nm,0.6s,baz=105,slow=1.6,SNR=5.4						
BVAR	Borovoye Array	116.96	321	PKP	PKPdf	17 15 25.9	-0.7
	comp=Z,0.4nm,0.5s,baz=132,slow=2.2,SNR=5.2						
ARCES	ARCESS Array B	126.32	350	PKP	PKPdf	17 15 44.0	0.0
	comp=Z,1.7nm,0.8s,baz=17,slow=1.2,SNR=0.9						
BR131	Keskin Array S	144.91	315	PKPbc	PKPdf	17 16 20.1	+0.7
BRTR	Keskin Array B	144.91	315	PKP	PKPdf	17 16 20.2	+0.9
	comp=Z,1.7nm,0.7s,baz=122,slow=4.1,SNR=13						
BRTR	Keskin Array B	144.91	315	PKPbc	PKPdf	17 16 20.1	+0.7
OSTC	Ostas	145.42	344	*e*PKP	PKPbc	17 16 21.8	+0.7
CLL	Collm	145.48	348	*i* PKPbc	PKPdf	17 16 21.0	+1.2
	comp=Z,6.0nm,0.9s						
DPC	Dobruska-Polom	145.58	344	*e*PKP	PKPbc	17 16 22.1	+0.5
KHC	Kasperske Hory	147.40	346	*e*PKP	PKPbc	17 16 26.8	+0.2
GERES	GERESS Array B	147.64	345	PKPbc	PKPbc	17 16 27.8	+0.5
	comp=Z,1.5nm,0.5s,baz=21,slow=3.4,SNR=22						
CONA	Conrad Observa	147.90	342	*e*P	PKPdf	17 16 27.0	+3.0
	comp=Z,8.4nm,2.0s						
ARSA	Arzberg	148.61	342	*e*P	PKPdf	17 16 26.4	+1.3
	comp=Z,2.8nm,1.3s						
WATA	Walderalm	149.54	347	*e*P	PKPdf	17 16 28.1	+1.3
	comp=Z,1.5nm,0.4s						
RETA	Reutte	149.57	348	*e*P	PKPdf	17 16 29.3	+2.6
	comp=Z,1.1nm,0.5s						
WTTA	Wattenberg	149.60	347	*e*P	PKPdf	17 16 29.2	+2.3
	comp=Z,4.7nm,0.6s						
MOTA	Moosalm	149.63	347	*e*P	PKPdf	17 16 28.1	+1.2
	comp=Z,3.9nm,1.1s						
MYKA	Terra Mystica	149.71	344	*e*P	PKPdf	17 16 29.5	+2.5
	comp=Z,2.4nm,0.6s						
SQTA	Sankt Quirin	149.73	347	*e*P	PKPdf	17 16 29.7	+2.6
	comp=Z,1.8nm,0.5s						
ABTA	Abfaltersbach	149.88	345	*e*P	PKPdf	17 16 28.5	+1.3
	comp=Z,2.5nm,0.6s						
FETA	Feichten	150.02	348	*e*P	PKPdf	17 16 29.2	+1.7
	comp=Z,2.2nm,0.8s						

*NEIC **18** 16:59:19.9±1.2, 6°.8S±0°.2×154°.24E±0°.09, h60^{km}±10^{km}, mb4.0/9, Error ellipse: s-maj=25.0km s-min=13.1km az=184.0*

*IDC **18** 16:59:20.9±3.6, 6°.73S×154°.21E, h64^{km}±35^{km}, mb3.5/12, mb1 3.7/15, mb1mx3.5/46, mbtmp3.9/15, ML3.0/3, Error ellipse: s-maj=28.0km s-min=18.4km az=1.0*

ISC 18 16:59:19.4±0.7**, 6°.5S**±0°.1×**154°.22E**±0°.06**, h48**^{km}**, n29,** σ**1^{s}.53**/31**, mb3.9**/14**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.36	117	P	Pn	17 00 51.7	+1.1
	1.4nm,0.3s,baz=264,slow=5.6,SNR=1.3						
HNR				S	Sn	17 02 06.2	+4.3
	1.8nm,0.3s,baz=333,slow=10.0,SNR=1.5						
HNR	Honiara	6.36	117		Pn	17 00 49.4	-1.2
PMG	Port Moresby	7.56	247	P	Pn	17 01 06.5	-0.5
	1.5nm,0.3s,baz=51,slow=9.9,SNR=18						
PMG				S	Sn	17 02 34.2	+2.8
	0.9nm,0.3s,baz=165,slow=19,SNR=3.6						
PMG	Port Moresby	7.56	247		Pn	17 01 06.0	-1.0
DZM	Mont Dzumac	19.44	144	P	P	17 03 41.5	-0.7
	0.3nm,0.3s,baz=320,slow=16,SNR=1.9						
DZM	Mont Dzumac	19.44	144	P	P	17 03 39.9	-2.2
DZM				IAmb	IAmb	17 04 00.4	
	comp=Z,13nm,1.4s						
WR0	Warramunga Arr	23.31	233	P	P	17 04 21.6	-1.8
WR0				IAmb	IAmb	17 04 33.0	
	comp=Z,5.2nm,1.1s						
WB0	Warramunga Arr	23.33	234	P	P	17 04 21.9	-1.6
WB0				IAmb	IAmb	17 04 45.4	
	comp=Z,6.3nm,1.2s						
WRAB	Tennant Creek	23.45	233	P	P	17 04 22.9	-1.8
WB2	Warramunga Arr	23.45	233	P	P	17 04 23.4	-1.3
WRA	Warramunga Arr	23.46	233	P	P	17 04 23.4	-1.5
	comp=Z,1.1nm,0.7s,baz=61,slow=10,SNR=10						
MSVF	Nonsavu	25.78	118	P	P	17 04 45.4	-0.8
	comp=Z,1.9nm,0.7s,baz=294,slow=20,SNR=1.6						
MSVF	Nonsavu	25.78	118	P	P	17 04 44.8	-1.3
MSVF				IAmb	IAmb	17 05 02.3	
	comp=Z,8.9nm,1.0s						
ASAR	Alice Springs	25.92	227	P	P	17 04 46.0	-1.3
	comp=Z,0.6nm,0.7s,baz=58,slow=9.0,SNR=13						
FITZ	Fitzroy Crossi	30.14	245	P	P	17 05 24.2	-0.8
	comp=Z,2.2nm,0.7s,baz=55,slow=8.7,SNR=3.2						
KSM	Kuching	44.55	279	P	P	17 07 27.8	+0.8
CMAR	Chiang Mai Arr	59.89	296	P	P	17 09 22.2	+1.3
	comp=Z,0.2nm,0.7s,baz=101,slow=4.8,SNR=2.1						
SONM	Songino Array	68.53	328	P	P	17 10 18.2	+1.1
	comp=Z,0.3nm,0.4s,baz=138,slow=5.6,SNR=5.6						
SONM	Songino Array	68.53	328	P	P	17 10 17.6	+0.6
MKAR	Makanchi Array	82.55	319	P	P	17 11 38.1	+0.8
	comp=Z,0.8nm,0.5s,baz=107,slow=4.8,SNR=17						
MKAR	Makanchi Array	82.55	319	P	P	17 11 37.4	+0.1
ZALV	Zalesovo Beam	83.37	326	P	P	17 11 40.9	-0.4
	comp=Z,0.9nm,0.5s,baz=117,slow=5.6,SNR=5.6						
ZALV	Zalesovo Beam	83.37	326	P	P	17 11 41.1	-0.2
KURBB	Kurchatov Arra	86.03	322	P	P	17 11 54.9	+0.1
	comp=Z,0.3nm,0.6s,baz=92,slow=4.9,SNR=6.6						
AAK	Ala-Archa	86.88	313	P	P	17 12 00.7	+1.3
	comp=Z,0.5nm,0.4s						
AAK	Ala-Archa	86.88	313	P	P	17 12 00.0	+0.7
BVAR	Borovoye Array	91.47	323	P	P	17 12 19.4	-1.2
	comp=Z,0.2nm,0.5s,baz=294,slow=34,SNR=2.8						
NVAR	Mina Array Bea	92.04	52	P	P	17 12 23.1	-0.7
	comp=Z,0.8nm,0.8s,baz=238,slow=5.2,SNR=6.1						
NVAR	Mina Array Bea	92.04	52	P	P	17 12 21.6	-2.2

*IDC **18** 17:07:07.3±0.5, 55°.60S×27°.61W, h0^{km}, mb4.5/11, mb1 4.6/12, mb1mx4.4/23, mbtmp4.5/12, ML4.8/1, MS4.0/12, Ms1 3.9/12, ms1mx3.9/20, Error ellipse: s-maj=21.8km s-min=16.3km az=63.0*

*NEIC **18** 17:07:09.8±1.6, 55°.6S±0°.1×27°.6W±0°.2, h18^{km}±5^{km}, mb4.9/26, Error ellipse: s-maj=20.2km s-min=14.3km az=199.0*

ISC 18 17:07:08.6±0.4**, 55°.57S**±0°.09×**27°.59W**±0°.09**, h10**^{km}**, n75,** σ**1^{s}.21**/70**, mb4.8**/20**, MS4.0**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.29	280		Pn	17 08 28.3	+0.7
VNA1	Neumayer--Stat	17.33	158	P	P	17 11 13.2	+1.6
VNA3	Neumayer Olymp	17.52	161	P	Pn	17 11 14.3	+1.6
VNA2	Neumayer--Watz	17.73	158	P	Pn	17 11 16.5	+1.3
	baz=315,slow=14						
EFI	East Falkland	18.41	270	P	P	17 11 23.6	-0.1
EFI				IAmb	IAmb	17 11 35.4	
	comp=Z,240nm,1.9s						
SNAA	Sanae	19.27	156	P	P	17 11 33.3	+0.2
SNAA	Sanae	19.27	156	P	P	17 11 33.4	+0.3
	comp=Z,2.6nm,0.3s,baz=304,slow=9.6,SNR=54						
SNAA				LR	LR	17 17 35.1	
	comp=Z,357nm,21.1s,baz=359,slow=33						
SNAA	Sanae	19.27	156		P	17 11 33.0	-0.1
PMSA	Palmer Station	20.05	228	LR	LR	17 18 13.4	
	comp=Z,172nm,19.1s,baz=78,slow=33						
PLCA	Paso Flores	31.69	280	P	P	17 13 31.8	-0.4
	comp=Z,2.3nm,0.9s,baz=163,slow=12,SNR=4.0						
PLCA	Paso Flores	31.69	280	P	P	17 13 30.1	-2.1
PLCA				IAmb	IAmb	17 14 28.3	
	comp=Z,27nm,1.9s						
GO07	Milladeo Hill,	31.89	273	P	P	17 13 32.7	-1.1
QSPA	South Pole Qui	34.68	180	P	P	17 13 58.3	+0.1
	comp=Z,11nm,0.6s,baz=18,slow=2.5,SNR=68						
QSPA	South Pole Qui	34.68	180	P	P	17 13 58.8	+0.7
QSPA				IAmb	IAmb	17 13 59.7	
	comp=Z,16nm,0.9s						
BO02	Sierra Bellavi	36.07	287	P	P	17 14 08.6	-1.7
CPUP	Villa Florida	36.32	311	P	P	17 14 12.5	+0.1
	comp=Z,8.7nm,0.9s,baz=154,slow=8.2,SNR=15						
CPUP				LR	LR	17 27 57.2	
	comp=Z,236nm,20.6s,baz=202,slow=34						
CPUP	Villa Florida	36.32	311	P	P	17 14 11.5	-0.9
PEL	Peldehue	37.26	289	P	P	17 14 20.7	+0.3
PEL				IAmb	IAmb	17 14 21.9	
	comp=Z,35nm,1.3s						
MT02	Curacav	37.42	288	P	P	17 14 21.4	-0.3
MT02				IAmb	IAmb	17 14 22.8	
	comp=Z,29nm,1.3s						
ZON	Zonda	37.44	293	P	P	17 14 21.2	-0.7
ZON				IAmb	IAmb	17 14 22.7	
	comp=Z,21nm,0.7s						
VA03	San Esteban	37.48	289	P	P	17 14 22.9	+0.6
ROC1	El Roble	37.57	289	P	P	17 14 22.9	-0.3
CO03	El Pedregal	39.05	291	P	P	17 14 36.1	+0.6
CO01	Juntas del Tor	39.42	293	P	P	17 14 40.4	+1.5
CO01				IAmb	IAmb	17 14 41.5	
	comp=Z,20nm,0.7s						
GO04	Tololo Observa	39.64	292	P	P	17 14 40.6	0.0
GO04				IAmb	IAmb	17 14 41.9	
	comp=Z,31nm,1.2s						
AC05	El Transito	40.42	293	P	P	17 14 46.2	-0.9
AC05				IAmb	IAmb	17 14 49.0	
	comp=Z,30nm,0.8s						
LCO	Las Campanas	40.51	293	P	P	17 14 48.4	+0.5
LCO				IAmb	IAmb	17 14 49.1	
	comp=Z,16nm,0.8s						
MAW	Mawson	40.67	144	P	P	17 14 48.4	-0.1
	comp=Z,5.9nm,0.6s,baz=218,slow=5.9,SNR=3.8						
MAW				LR	LR	17 29 02.2	
	comp=Z,241nm,21.8s,baz=240,slow=32						
MAW	Mawson	40.67	144	P	P	17 14 47.3	-1.2
SUR	Sutherland	40.74	76	P	P	17 14 50.7	+1.0
	comp=Z,7.3nm,0.9s,baz=180,slow=8.1,SNR=2.3						
SUR	Sutherland	40.74	76	P	P	17 14 49.7	+0.1
AC04	Llanos de Chal	41.35	293	P	P	17 14 55.5	+1.0
AC01	Pan de Azucar	42.77	295	P	P	17 15 06.3	+0.1
AC01				IAmb	IAmb	17 15 08.2	
	comp=Z,23nm,0.9s						
BDFB	Brasilia	42.83	330	P	P	17 15 08.7	+1.9
	comp=Z,3.2nm,0.9s,baz=180,slow=9.1,SNR=3.3						
BDFB				LR	LR	17 30 43.4	
	comp=Z,277nm,20.1s,baz=121,slow=33						
GO02	Mina Guanaco	43.07	297	P	P	17 15 10.3	+1.4
GO02				IAmb	IAmb	17 15 21.2	
	comp=Z,22nm,0.7s						
BOSA	Boshof	46.08	77	P	P	17 15 33.0	+0.3
	comp=Z,7.0nm,0.8s,baz=217,slow=6.9,SNR=11						
BOSA				LR	LR	17 30 35.2	
	comp=Z,245nm,19.8s,baz=209,slow=30						
BOSA	Boshof	46.08	77	P	P	17 15 32.6	-0.1
VNDA	Vanda	47.04	183	P	P	17 15 40.4	+0.8
	comp=Z,4.6nm,0.6s,baz=188,slow=6.3,SNR=20						
VNDA				LR	LR	17 32 27.8	
	comp=Z,146nm,21.8s,baz=167,slow=32						
VNDA	Vanda	47.04	183	P	P	17 15 40.3	+0.7
VNDA				IAmb	IAmb	17 15 41.4	
	comp=Z,19nm,1.4s						
TA01	Diego Aracena	47.21	300	P	P	17 15 40.4	-1.1
H10N1	ASCENSION HYDR	48.72	17	T	T	18 08 38.3	
	baz=189,slow=75,SNR=24						
H10N3	ASCENSION HYDR	48.72	17	T	T	18 08 39.1	
	baz=189,slow=75,SNR=39						
H10N2	ASCENSION HYDR	48.74	17	T	T	18 08 33.8	
	baz=189,slow=75,SNR=34						
LBTB	Lobatse	49.09	74	P	P	17 15 55.2	-0.9
SAML	Samuel	54.30	315	P	P	17 16 34.9	-0.1
SAML				IAmb	IAmb	17 16 37.1	
	comp=Z,10nm,1.0s						
TORD	Torodi Ar. Bea	72.75	30	P	P	17 18 37.9	+1.1
	comp=Z,2.2nm,0.5s,baz=199,slow=6.7,SNR=6.4						
TORD	Torodi Ar. Bea	72.75	30	P	P	17 18 37.5	+0.7
SJG	San Juan	80.32	323	LR	LR	17 54 39.8	
	comp=Z,95nm,21.3s,baz=125,slow=36						
CMIG	Matias Romero	91.76	298	LR	LR	17 56 49.2	
	comp=Z,44nm,19.9s,baz=64,slow=32						
PPT	Papeete	92.30	234	LR	LR	17 53 47.2	
	comp=Z,31nm,19.1s,baz=188,slow=30						
STKA	Stephens Creek	92.41	171	P	P	17 20 19.8	+0.4
	comp=Z,1.2nm,0.6s,baz=195,slow=8.3,SNR=1.4						
STKA				LR	LR	18 01 11.5	
	comp=Z,153nm,18.4s,baz=206,slow=35						
ASAR	Alice Springs	99.52	163	P	Pdif	17 20 51.1	-0.7
	comp=Z,0.9nm,0.7s,baz=187,slow=4.1,SNR=19						
ASAR				PP	PP	17 24 50.4	-4.1
	comp=Z,0.6nm,0.8s,baz=191,slow=7.9,SNR=5.9						
ASAR				LR	LR	18 05 50.6	
	comp=Z,47nm,18.1s,baz=174,slow=35						
WRA	Warramunga Arr	103.23	163	Pdiff	Pdif	17 21 09.1	+0.7
	comp=Z,0.4nm,1.0s,baz=192,slow=4.4,SNR=2.1						
FINES	FINESS Array B	124.06	28	PKP	PKPdf	17 26 05.3	-0.4
	comp=Z,1.6nm,0.5s,baz=170,slow=1.4,SNR=16						
CMAR	Chiang Mai Arr	125.45	111	PKP	PKPdf	17 26 08.7	-1.1
	comp=Z,0.7nm,0.8s,baz=231,slow=3.8,SNR=6.3						
AKTO	Aktyubinsk	127.22	53	PKP	PKPdf	17 26 11.5	-0.6
	comp=Z,1.1nm,0.7s,baz=202,slow=4.3,SNR=2.8						
ARCES	ARCESS Array B	130.58	22	PKP	PKPdf	17 26 17.9	0.0
	comp=Z,1.9nm,0.8s,baz=225,slow=2.7,SNR=8.2						
KMI	Kunming	132.90	109	*e*PKP	PKPdf	17 26 20.3	-3.7
BVAR	Borovoye Array	134.71	57	PKP	PKPdf	17 26 27.4	+1.2
	comp=Z,0.4nm,0.5s,baz=253,slow=1.5,SNR=5.1						
YKA	Yellowknife Ar	135.66	318	PKP	PKPdf	17 26 27.3	-0.3
	comp=Z,0.8nm,0.7s,baz=123,slow=2.6,SNR=11						
YKA				SKPbc	SKPbc	17 29 55.1	-3.6
	comp=Z,1.2nm,0.9s,baz=123,slow=2.6,SNR=7.1						
MKAR	Makanchi Array	136.95	71	PKP	PKPdf	17 26 29.1	-1.5
	comp=Z,0.3nm,0.6s,baz=225,slow=2.1,SNR=3.0						
KURBB	Kurchatov Arra	137.30	64	PKP	PKPdf	17 26 30.4	-0.7
	comp=Z,0.3nm,0.8s,baz=245,slow=3.3,SNR=2.1						
CD2	Chengdu	138.01	105	PKP	PKPdf	17 26 31.5	-1.6
WMQ	Urumqi	138.03	78	*e*PKP	PKPdf	17 26 33.3	+0.5
LZH	Lanzhou	141.92	100	*e*PKP	PKPdf	17 26 39.5	-0.7
LZH				sPKP		17 26 55.3	
GTA	Gaotai	141.97	93	PKP	PKiKP	17 26 43.8	+0.7
ZALV	Zalesovo Beam	142.36	63	PKP	PKPdf	17 26 42.4	+2.3
	comp=Z,1.1nm,0.6s,baz=204,slow=3.2,SNR=5.6						
INK	Inuvik	145.29	321	PKPbc	PKPbc	17 26 45.0	+0.3
	comp=Z,7.3nm,0.9s,baz=185,slow=1.4,SNR=13						
NJ2	Nanjing	146.78	121	*e*PKPbc	PKPdf	17 26 49.8	+1.2
HHC	Hu-ho-hao-te	149.57	102	*e*PKPbc	PKPdf	17 26 53.8	+0.8
ILAR	Eielson Array	149.62	312	PKPbc	PKPbc	17 26 56.6	-0.2
	comp=Z,5.0nm,0.8s,baz=133,slow=1.9,SNR=40						
CCB	Clear Creek Bu	149.99	312		PKPbc	17 26 57.7	0.0
WRH	Wood River Hil	150.07	312		PKPbc	17 26 58.2	+0.3
TRF	Thorofare Moun	150.82	309		PKPbc	17 27 00.5	+0.5
SONM	Songino Array	150.92	86	PKPbc	PKPbc	17 27 00.3	-0.3
	comp=Z,4.9nm,0.8s,baz=221,slow=3.3,SNR=26						

*IDC **18** 17:14:38.0±1.1, 0°.36N×92°.38E, h0^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.6/51, mbtmp3.7/12, ML3.9/3, Error ellipse: s-maj=35.3km s-min=17.0km az=49.0*

*NEIC **18** 17:14:42.1±2.1, 0°.4N±0°.1×92°.6E±0°.1, h16^{km}±5^{km}, mb4.2/5, Error ellipse: s-maj=21.4km s-min=17.7km az=201.0*

*DJA **18** 17:14:43.0±0.7, 1°N±10°×9°3E±°, h10^{km}, M4.5/9, mB4.9/4, mb4.5/9, MLv4.5/7, Mw(mB)4.1/4*

ISC 18 17:14:40.4±0.8**, 0°.6N**±0°.1×**92°.52E**±0°.07**, h10**^{km}**, n29,** σ**1^{s}.73**/32**, mb3.9**/11**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	4.21	64	P	Pn	17 15 45.6	+0.9
GSI	Gunungsitoli	5.10	82		Pn	17 15 58.1	+1.1
GSI	Gunungsitoli	5.10	82	P	Pn	17 15 58.4	+1.4
	0.4nm108nm,0.8s						
GSI				S	Sn	17 16 53.5	-2.5
	0.4nm108nm,0.8s						
TPTI		5.36	60	P	Pn	17 16 00.7	+0.2
	0.1nm434nm21nm,0.9s						
LHMI	Lhok Sumawe	6.39	44	P	Pn	17 16 14.8	+0.2
	0.4nm104nm,0.9s						
PSI	Prapat	6.77	71	Pn	Pn	17 16 21.3	+1.4
	2.0nm,0.3s,baz=180,slow=10.0,SNR=5.1						
PSI				Sn	Sn	17 17 32.4	-4.8
	baz=0.2,slow=19,SNR=1.2						
MNSI	Mandailing Nat	7.06	88	P	Pn	17 16 25.4	+1.5
	1.1nm4μm228nm,0.5s						
BKNI	Bangkinang	8.52	92	Pn	Pn	17 16 42.6	-1.4
BKNI	Bangkinang	8.52	92	P	Pn	17 16 45.9	+2.0
	42nm,0.7s						
SDSI	Sungai Dareh	9.03	100	P	Pn	17 16 52.9	+2.0
	11nm,0.6s						
KULM	Kulim	9.37	60	Pn	Pn	17 16 56.9	+1.3
PALK	Pallekele	13.53	300	Pn	Pn	17 17 49.2	-3.4
	0.5nm,0.3s,baz=154,slow=18,SNR=1.5						
PALK				Sn	Sn	17 20 05.3	-18
	1.1nm,0.3s,baz=130,slow=8.7,SNR=4.1						
CMAR	Chiang Mai Arr	18.85	19	P	Pn	17 19 03.0	+1.7
	0.2nm,0.3s,baz=216,slow=12,SNR=12						
UBPT	Khong Chiam	19.41	41	P	P	17 19 07.6	+0.7
UBPT				IAmb	IAmb	17 19 18.8	
	comp=Z,12nm,1.2s						
KKM	Kota Kinabalu	24.26	77	P	P	17 19 59.0	+0.9
FITZ	Fitzroy Crossi	37.49	121	P	P	17 21 53.5	-1.1
	comp=Z,3.6nm,0.9s,baz=95,slow=7.4,SNR=3.7						
WB0	Warramunga Arr	45.74	119	P	P	17 23 01.3	-1.1
WB0				IAmb	IAmb	17 23 03.9	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	45.76	119	P	P	17 23 01.9	-0.6
	comp=Z,0.4nm,0.4s,baz=296,slow=8.5,SNR=7.0						
WR0	Warramunga Arr	45.94	119	P	P	17 23 03.6	-0.3
WR0				IAmb	IAmb	17 23 23.5	
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	46.85	124	P	P	17 23 09.9	-1.1
	comp=Z,0.3nm,0.7s,baz=298,slow=7.9,SNR=7.0						
ASAR				PcP	PcP	17 24 42.7	-1.4
	comp=Z,0.3nm,0.8s,baz=301,slow=3.5,SNR=1.9						
MK31	Makanchi Array	46.89	350	P	P	17 23 11.7	+0.8
MKAR	Makanchi Array	46.89	350	P	P	17 23 09.8	-1.1
	comp=Z,0.8nm,0.7s,baz=167,slow=9.1,SNR=9.9						
SONM	Songino Array	48.58	12	P	P	17 23 25.8	+1.6
	comp=Z,1.0nm,0.6s,baz=191,slow=9.0,SNR=9.7						
SONM	Songino Array	48.58	12	P	P	17 23 27.2	+3.0
KURBB	Kurchatov Arra	51.26	349	P	P	17 23 45.5	+1.2
	comp=Z,0.6nm,0.9s,baz=172,slow=7.6,SNR=4.7						
ZALV	Zalesovo Beam	53.57	354	P	P	17 24 02.1	+0.7
	comp=Z,1.1nm,0.7s,baz=172,slow=4.5,SNR=5.1						
BRTR	Keskin Array B	66.11	314	P	P	17 25 28.5	+0.3
	comp=Z,0.2nm,0.5s,baz=85,slow=4.9,SNR=1.9						
GERES	GERESS Array B	82.20	319	P	P	17 27 02.8	+0.8
	comp=Z,0.7nm,0.8s,baz=114,slow=5.0,SNR=5.9						
TXAR	Lajitas Array	146.47	26	PKPbc	PKPdf	17 34 21.4	0.0
	comp=Z,0.3nm,0.7s,baz=37,slow=2.3,SNR=1.8						

*MAN **18** 17:18:55.9, 12°.14N×125°.84E, h92^{km}, MS3.6*

*IDC **18** 17:18:55.1±0.8, 11°.78N×125°.78E, h0^{km}, mb3.9/15, mb1 4.0/15, mb1mx3.8/44, mbtmp3.9/15, MS3.6/2, Ms1 3.6/2, ms1mx2.7/41, Error ellipse: s-maj=42.5km s-min=13.3km az=71.0*

*NEIC **18** 17:19:00.5±1.1, 11°.9N±0°.2×125°.8E±0°.5, h35^{km}±2^{km}, mb4.2/9, Error ellipse: s-maj=82.6km s-min=4.0km az=66.0*

ISC 18 17:18:59.2±0.6**, 11°.87N**±0°.05×**125°.86E**±0°.06**, h28**^{km}**, n40,** σ**1^{s}.08**/45**, mb4.1**/20**, 2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	1.47	237	*e*P	Pn	17 19 23.8	-0.1
OCLP				*e*S	Sb	17 19 46.0	+1.8
MSLP	Maasin	1.98	210	*e*P	Pn	17 19 31.9	+1.1
MSLP				*e*S	Sb	17 19 59.2	+0.3
GLSP	General Luna,	2.08	173	*e*P	Pn	17 19 32.7	+0.4
GLSP				*e*S	Sn	17 19 56.0	-1.3
BUTP	Butuan	2.89	185	*e*P	Pn	17 19 45.0	+1.6
BUTP				*e*S	Sn	17 20 16.9	-0.3
GUIM	Jordan	3.44	249	*e*P	Pn	17 19 50.6	-0.4
GUIM				*e*S	Sn	17 20 30.1	-0.6
CGP	Cagayan de Oro	3.58	199⇓	*e*P	Pb	17 20 02.3	+0.5
CGP				*e*S	Sn	17 20 37.0	+2.8
CNOP	Candoni, Negro	3.76	238	*e*P	Pn	17 19 54.8	-0.5
CNOP				*e*S	Sn	17 20 39.1	+0.4
BUKP	Musuan	4.04	191	*e*P	Pn	17 20 01.5	+2.3
BUKP				*e*S	Sb	17 20 55.8	-2.4
DAV	Davao City (W)	4.77	183	LR	LR	17 22 29.0	
	comp=Z,230nm,21.0s,baz=8.0,slow=46						
KCP	Kidapawan	4.88	189⇓	*e*P	Pb	17 20 22.1	-2.0
GUMO	Guam	18.62	83	LR	LR	17 29 25.2	
	comp=Z,494nm,19.3s,baz=312,slow=34						
BATI	Baumata	22.04	186	P	P	17 23 50.1	-1.7
	8.5nm,0.4s,baz=348,slow=1.8,SNR=5.8						
KSRS	Korea Array	25.55	4	P	P	17 24 26.3	+0.7
	1.3nm,0.7s,baz=183,slow=8.8,SNR=3.8						
CMAR	Chiang Mai Arr	26.77	287	P	P	17 24 36.7	-0.3
	1.0nm,0.8s,baz=102,slow=7.9,SNR=8.8						
FITZ	Fitzroy Crossi	29.77	180	P	P	17 25 03.1	-0.5
	0.9nm,0.4s,baz=343,slow=9.1,SNR=1.4						
WB0	Warramunga Arr	32.54	165	P	P	17 25 27.4	-0.5
WB0				IAmb	IAmb	17 25 38.9	
	comp=Z,3.0nm,1.1s						
WRA	Warramunga Arr	32.69	165	P	P	17 25 28.0	-1.4
	comp=Z,0.2nm,0.7s,baz=345,slow=9.5,SNR=1.8						
WRA				PcP	PcP	17 28 15.0	+0.2
	comp=Z,0.3nm,0.7s,baz=343,slow=2.7,SNR=2.7						
AS31	Alice Springs	36.18	167	P	P	17 26 00.8	+1.3
ASAR	Alice Springs	36.18	167	P	P	17 25 59.1	-0.4
	comp=Z,0.5nm,0.4s,baz=352,slow=7.2,SNR=13						
ASAR				PcP	PcP	17 28 24.9	+0.1
	comp=Z,0.3nm,0.4s,baz=343,slow=3.0,SNR=6.9						
ASAR	Alice Springs	36.18	167	P	P	17 26 01.3	+1.8
SONM	Songino Array	39.40	339	P	P	17 26 27.0	+0.4
	comp=Z,0.3nm,0.4s,baz=158,slow=10,SNR=6.3						
H11N1	WAKE ISLAND Hy	40.16	74	T	T	18 09 43.4	
	baz=266,slow=74,SNR=5.2						

H11N2	WAKE ISLAND Hy	40.17	73	T	T	18 09 42.7	
	baz=266,slow=74,SNR=3.6						
H11N3	WAKE ISLAND Hy	40.18	74	T	T	18 09 46.6	
	baz=266,slow=74,SNR=5.7						
NWAO	Narrogin (SRO)	45.30	190	P	P	17 27 14.6	0.0
STKA	Stephens Creek	46.03	161	P	P	17 27 21.1	+0.6
	comp=Z,1.3nm,0.6s,baz=341,slow=13,SNR=1.9						
STKA	Stephens Creek	46.03	161	P	P	17 27 20.3	-0.1
MK31	Makanchi Array	50.53	322	P	P	17 27 55.5	+0.5
MK31				IAmb	IAmb	17 27 57.3	
	comp=Z,2.9nm,1.1s						
MKAR	Makanchi Array	50.53	322	P	P	17 27 56.1	+1.1
	comp=Z,2.3nm,0.8s,baz=118,slow=8.6,SNR=14						
MKAR	Makanchi Array	50.53	322	P	P	17 27 55.3	+0.3
ZALV	Zalesovo Beam	53.05	331	P	P	17 28 13.8	+0.2
	comp=Z,0.5nm,0.6s,baz=120,slow=8.5,SNR=1.8						
KURK	Kurchatov	54.54	325	P	P	17 28 25.3	+0.7
KURBB	Kurchatov Arra	54.54	325	P	P	17 28 25.4	+0.7
	comp=Z,2.5nm,0.8s,baz=122,slow=7.4,SNR=16						
KK31	Karatay Array	56.86	314	P	P	17 28 41.6	+0.1
KK31				IAmb	IAmb	17 28 53.3	
	comp=Z,2.6nm,1.1s						
KKAR	Karatay Array	56.86	314	P	P	17 28 41.6	+0.1
KKAR				IAmb	IAmb	17 28 53.3	
	comp=Z,2.6nm,1.1s						
BVAR	Borovoye Array	60.14	325	P	P	17 29 05.3	+1.1
	comp=Z,0.3nm,0.5s,baz=71,slow=5.5,SNR=4.7						
BRVK	Borovoye	60.21	325	P	P	17 29 04.6	0.0
BRVK				IAmb	IAmb	17 29 06.0	
	comp=Z,2.8nm,0.9s						
BRTR	Keskin Array B	84.22	309	P	P	17 31 27.7	-0.9
	comp=Z,0.5nm,0.7s,baz=98,slow=5.3,SNR=5.0						
FINES	FINESS Array B	84.31	332	P	P	17 31 28.4	+0.1
	comp=Z,2.9nm,0.9s,baz=141,slow=3.9,SNR=5.2						
AKASG	Malin Array Be	85.08	321	P	P	17 31 31.7	-0.8
	comp=Z,1.2nm,0.6s,baz=60,slow=4.8,SNR=4.6						

IDC 18 17:28:02.3±1.7**, 8°.72N×124°.84E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/37**, mbtmp3.5**/4**, Error ellipse: s-maj=162.9km s-min=26.8km az=76.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	26.66	178	P	P	17 33 42.9	-0.1
	0.5nm,0.3s,baz=346,slow=7.6,SNR=13						
WRA	Warramunga Arr	29.98	162	P	P	17 34 12.4	-0.2
	0.4nm,0.7s,baz=343,slow=9.9,SNR=2.9						
ASAR	Alice Springs	33.38	165	P	P	17 34 42.9	+0.2
	0.1nm,0.4s,baz=340,slow=7.1,SNR=10						
SONM	Songino Array	42.00	341	P	P	17 35 55.3	-0.1
	0.3nm,0.7s,baz=138,slow=6.9,SNR=2.3						

IDC 18 17:31:25.2±2.1, 6°.95S×129°.61E, h153^{km}±25^{km}, mb3.2/2, mb1 3.5/7, mb1mx3.2/31, mbtmp3.9/7, Error ellipse: s-maj=34.9km s-min=19.4km az=92.0

ISC 18 17:31:23.1±0.8**, 7°.07S**±0°.06×**129°.78E**±0°.10**, h150^{km}, n7, σ2^{s}98**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.33	14	P	Pn	17 32 55.5	+1.1
	2.6nm,0.3s,baz=207,slow=16,SNR=33						
SIJI				S	Sn	17 34 02.1	-3.7
	3.9nm,0.3s,baz=99,slow=24,SNR=15						
BATI	Baumata	6.80	242	P	Pn	17 33 02.6	+2.0
	1.9nm,0.3s,baz=166,slow=18,SNR=2.2						
BATI				S	Sn	17 34 15.4	-1.7
	7.1nm,0.3s,baz=59,slow=21,SNR=14						
FITZ	Fitzroy Crossi	11.68	200	P	Pn	17 34 07.2	+2.0
	0.6nm,0.3s,baz=20,slow=15,SNR=14						
FITZ				S	Sn	17 36 08.9	-5.6
	0.6nm,0.3s,baz=65,slow=23,SNR=4.5						
WRA	Warramunga Arr	13.54	161	P	P	17 34 31.6	-1.6
	0.8nm,0.3s,baz=342,slow=13,SNR=20						
WRA				S	Sn	17 36 58.0	-1.3
	0.9nm,0.3s,baz=334,slow=23,SNR=7.0						
ASAR	Alice Springs	16.97	167	P	Pn	17 35 16.6	+4.9
	0.5nm,0.3s,baz=346,slow=9.4,SNR=51						
ASAR				S	Sn	17 38 20.7	-0.9
	0.2nm,0.3s,baz=353,slow=22,SNR=2.5						
ASAR				ScP	ScP	17 43 08.6	-1.5
	0.0nm,0.3s,baz=359,slow=1.9,SNR=1.5						
CMAR	Chiang Mai Arr	39.61	310	P	P	17 38 39.9	-0.3
	0.3nm,0.4s,baz=136,slow=7.2,SNR=2.7						
MKAR	Makanchi Array	68.16	327	P	P	17 42 07.8	+0.7
	0.5nm,0.5s,baz=128,slow=6.9,SNR=11						

IDC 18 17:33:18.6±2.0, 0°.44N×92°.41E, h0^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.3/40, mbtmp3.4/7, ML3.4/1, Error ellipse: s-maj=46.9km s-min=30.1km az=39.0

ISC 18 17:33:21.2±1.5**, 0°.6N**±0°.2×**92°.7E**±0°.1**, h10^{km}, n8, σ1^{s}96**/8**, mb3.6**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.61	71	Pn	Pn	17 34 59.9	+1.2
	0.6nm,0.3s,baz=0.1,slow=13,SNR=1.7						
PSI				Sn	Sn	17 36 11.7	-2.5
	baz=0.0,slow=21,SNR=1.3						
PALK	Pallekele	13.64	299	Pn	Pn	17 36 26.4	-8.6
	0.3nm,0.3s,baz=152,slow=18,SNR=1.3						
PALK				Sn	Sn	17 38 44.0	-23
	0.8nm,0.3s,baz=155,slow=12,SNR=4.6						
CMAR	Chiang Mai Arr	18.77	19	P	P	17 37 40.5	-0.2
	baz=216,slow=12,SNR=6.2						
WRA	Warramunga Arr	45.64	119	P	P	17 41 42.7	+0.3
	0.3nm,0.6s,baz=298,slow=8.6,SNR=2.6						
MKAR	Makanchi Array	46.88	350	P	P	17 41 52.3	+0.6
	0.2nm,0.5s,baz=169,slow=9.9,SNR=3.5						
SONM	Songino Array	48.52	12	P	P	17 42 06.3	+1.7
	0.4nm,0.6s,baz=191,slow=8.2,SNR=3.9						
ZALV	Zalesovo Beam	53.55	354	P	P	17 42 42.8	+0.8
	0.5nm,0.7s,baz=186,slow=5.8,SNR=2.7						
BRTR	Keskin Array B	66.19	314	P	P	17 44 06.9	-2.7
	0.4nm,0.7s,baz=74,slow=5.2,SNR=2.8						

UPA 18 17:50:35.6±0.9, 9°.91N×78°.30W, h33^{km}±13^{km}, MW4.2

ISC 18 17:50:34.3±1.4**, 9°.96N**±0°.08×**78°.25W**±0°.03**, h48^{km}**±36^{km}**, n50, σ0^{s}96**/94**, 1C-12D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNTA3	Canitas, Panam	0.97	221	⇓*i*P	Pn	17 50 51.7	+0.1
CNTA3				*e*S	Sn	17 51 03.9	-0.4
CNTA3	Canitas, Panam	0.97	221	⇓*i*P	Pn	17 50 51.7	+0.1
CNTA3				*e*S	Sn	17 51 03.9	-0.4
CHPO	Chepo, Panama	1.16	228	⇓*i*P	Pn	17 50 54.5	+0.3
CHPO				*e*S	Sn	17 51 08.0	-1.0
CHPO	Chepo, Panama	1.16	228	⇓*i*P	Pn	17 50 54.5	+0.3
CHPO				*e*S	Sn	17 51 08.0	-1.0
UPD2	Meteti	1.42	171	⇓*i*P	Pn	17 50 58.3	+0.5
UPD2				*e*S	Sn	17 51 16.3	+1.0
UPD2	Meteti	1.42	171	⇓*i*P	Pn	17 50 58.3	+0.5
UPD2				*e*S	Sn	17 51 16.3	+1.0
MAD3	Madden Dam	1.54	241	*e*P	Pn	17 50 59.8	+0.4
MAD3				*e*S	Sn	17 51 17.7	-0.6
MAD3	Madden Dam	1.54	241	*e*P	Pn	17 50 59.8	+0.4
MAD3				*e*S	Sn	17 51 17.7	-0.6
CAP2	Capurgana	1.57	146	*e*P	Pn	17 51 00.2	+0.4
CAP2				*e*S	Sn	17 51 20.0	+1.0
CAP2	Capurgana	1.57	146	*e*P	Pn	17 51 00.2	+0.4
CAP2				*e*S	Sn	17 51 20.0	+1.0
CAPC	Capurgana	1.59	146	*e*P	Pn	17 51 00.0	0.0
CAPC				*e*S	Sn	17 51 19.2	-0.2
CAPC				*i*		17 51 23.4	
	comp=Z,282nm,0.2s						
UPA	Univ. de Panam	1.60	233	*e*P	Pn	17 51 00.8	+0.6
UPA				*e*S	Sn	17 51 19.0	-0.7
UPA	Univ. de Panam	1.60	233	*e*P	Pn	17 51 00.8	+0.6
UPA				*e*S	Sn	17 51 19.0	-0.7
FRIJ	El Hiral	1.63	243	*e*P	Pn	17 51 00.8	+0.1
FRIJ	El Hiral	1.63	243	*e*P	Pn	17 51 00.8	+0.1
FLAM	Flamenco Islan	1.65	231	*e*P	Pn	17 51 01.3	+0.5
FLAM				*e*S	Sn	17 51 20.4	-0.4
FLAM	Flamenco Islan	1.65	231	*e*P	Pn	17 51 01.3	+0.5
FLAM				*e*S	Sn	17 51 20.4	-0.4
GAMB1	Gamboa	1.67	240	*e*P	Pn	17 51 01.5	+0.3
GAMB1				*e*S	Sn	17 51 20.3	-1.0
GAMB1	Gamboa	1.67	240	*e*P	Pn	17 51 01.5	+0.3
GAMB1				*e*S	Sn	17 51 20.3	-1.0
TABO3	Taboga, Panama	1.73	228	*e*P	Pn	17 51 02.6	+0.6
TABO3				*e*S	Sn	17 51 23.0	0.0
TABO3	Taboga, Panama	1.73	228	*e*P	Pn	17 51 02.6	+0.6
TABO3				*e*S	Sn	17 51 23.0	0.0
BCIP	Isla Barro Col	1.76	243	⇓*i*P	Pn	17 51 02.9	+0.6
BCIP				*e*S	Sn	17 51 22.4	-1.1
BCIP	Isla Barro Col	1.76	243	⇓*i*P	Pn	17 51 02.9	+0.6
BCIP				*e*S	Sn	17 51 22.4	-1.1
BCIP	Isla Barro Col	1.76	243	*e*P	Pn	17 51 02.9	+0.6
BCIP				*e*S	Sn	17 51 21.5	-2.0
BCIP				*i*		17 51 28.3	
	comp=Z,342nm,1.3s						
SPIL	Cristobal, Col	1.80	247	*e*P	Pn	17 51 03.6	+0.7
SPIL				*e*S	Sn	17 51 24.9	+0.3
SPIL	Cristobal, Col	1.80	247	*e*P	Pn	17 51 03.6	+0.7
SPIL				*e*S	Sn	17 51 24.9	+0.3
CHOR3	La Chorrera	1.83	235	⇑*e*P	Pn	17 51 04.8	+1.4
CHOR3				*e*S	Sn	17 51 25.1	-0.4
CHOR3	La Chorrera	1.83	235	⇓*e*P	Pn	17 51 04.7	+1.3
CHOR3				*e*S	Sn	17 51 25.1	-0.4
ZANG	Zanguenga, Cho	1.89	238	*e*P	Pn	17 51 05.7	+1.6
ZANG				*e*S	Sn	17 51 27.7	+1.0
ZANG	Zanguenga, Cho	1.89	238	*e*P	Pn	17 51 05.7	+1.6
ZANG				*e*S	Sn	17 51 27.7	+1.0
VTON	El Valle, Cocl	2.28	234	*e*P	Pn	17 51 09.6	0.0
VTON				*e*S	Sn	17 51 36.2	-0.3
VTON	El Valle, Cocl	2.28	234	*e*P	Pn	17 51 09.6	0.0
VTON				*e*S	Sn	17 51 36.2	-0.3
PNME	Penonome	2.52	235	*e*P	Pn	17 51 13.6	+0.7
PNME				*e*S	Sn	17 51 41.7	-0.7
PNME	Penonome	2.52	235	*e*P	Pn	17 51 13.6	+0.7
PNME				*e*S	Sn	17 51 41.7	-0.7
AZU	Azuero	2.94	223	⇓*i*P	Pn	17 51 19.3	+0.7
AZU				*e*S	Sn	17 51 51.9	-0.8
AZU	Azuero	2.94	223	⇓*i*P	Pn	17 51 19.3	+0.7
AZU				*e*S	Sn	17 51 51.9	-0.8
AZU	Azuero	2.94	223	⇓*e*P	Pn	17 51 19.4	+0.7
AZU				*e*S	Sn	17 51 51.6	-1.1
AZU				*i*		17 51 55.1	
	comp=Z,367nm,0.4s						
SJCC	San Jacinto, C	3.02	91	*e*P	Pn	17 51 21.9	+2.1
SJCC				*e*S	Sn	17 51 54.7	0.0
UREC	San Jos de Ur	3.46	129	*e*P	Pn	17 51 25.6	-0.2
UREC				*e*S	Sn	17 52 04.4	-1.2
UREC				*i*		17 52 10.1	
	comp=Z,52nm,0.4s						
DBBC	Dabeiba	3.55	145	*e*P	Pn	17 51 26.6	-0.4
DBBC				*i*		17 52 26.1	
	comp=Z,76nm,0.7s						
CACAO	El Cacao, Vera	3.67	225	*e*P	Pn	17 51 29.6	+1.1
CACAO	El Cacao, Vera	3.67	225	*e*P	Pn	17 51 29.6	+1.1
GMAL	Guarumal, Vera	3.67	234	*e*P	Pn	17 51 29.4	+0.8
GMAL				*e*S	Sn	17 52 10.3	-0.4
GMAL	Guarumal, Vera	3.67	234	*e*P	Pn	17 51 29.4	+0.8
GMAL				*e*S	Sn	17 52 10.3	-0.4
ZARC	Zaragoza, Cauc	4.15	126	*e*P	Pn	17 51 35.5	+0.2
ZARC				*e*S	Sn	17 52 21.6	-1.0
ZARC				*i*		17 52 24.9	
	comp=Z,85nm,0.3s						
CBOC	Ciudad Bolivar	4.63	151	*e*P	Pn	17 51 44.5	+2.6
CBOC				*e*S	Sn	17 52 36.4	+1.8
CBOC				*i*		17 52 43.7	
	comp=Z,7.5nm,0.4s						
PTBC	PUERTO BERRIO,	5.06	132	*e*P	Pn	17 51 44.8	-3.0
PTBC				*e*S	Sn	17 52 43.0	-1.9
PTBC				*i*		17 52 46.7	
	comp=Z,20nm,0.4s						
OCAC	Ocana	5.16	109	*e*P	Pn	17 51 50.1	+1.0
OCAC				*e*S	Sn	17 52 47.0	-0.5
OCAC				*i*		17 52 51.4	
	comp=Z,44nm,0.4s						
PAMC	Pamplona, Colo	6.07	115	*e*P	Pn	17 52 01.8	-0.2
PAMC				*e*S	Sn	17 53 09.5	-1.0
PAMC				*i*		17 53 16.1	
	comp=Z,22nm,0.4s						
SDV	Santo Domingo	7.59	97	*e*P	Pn	17 52 29.8	+7.2
SDV				*e*S	Sn	17 53 44.8	-2.6
SDV				*i*		17 53 48.1	
	comp=Z,18nm,0.5s						

IDC 18 17:54:51.4±0.5, 51°.33N×178°.90W, h0^{km}, mb4.3/33, mb1 4.5/34, mb1mx4.4/51, mbtmp4.3/34, ML4.7/1, MS3.6/10, Ms1 3.6/10, ms1mx3.2/51, Error ellipse: s-maj=17.2km s-min=10.3km az=161.0

AEIC 18 17:54:56.0±2.4, 51°.09N±0°.08×178°.89W±0°.04, h28^{km}±5^{km}, ML4.4/43, mb4.5/83(NEIC), Error ellipse: s-maj=11.9km s-min=3.1km az=167.0

MOS 18 17:54:55.7±1.0, 51°.38N×178°.91W, h37^{km}, mb4.6/17, Error ellipse: s-maj=10.3km s-min=7.2km az=90.3

NEIC 18 17:54:57.6±1.8, 51°.23N±0°.09×178°.90W±0°.05, h40^{km}±7^{km}, Error ellipse: s-maj=12.5km s-min=4.7km az=174.0

ISC 18 17:54:56.8±0.4**, 51°.20N**±0°.08×**178°.90W**±0°.03**, h35^{km}, n282, σ1^{s}19**/290**, mb4.5**/92**, MS3.7**/11**, 13C-19D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GALAA	Gareloi Lava P	0.57	8		Pn	17 55 09.0	+0.5
GAEA	Gareloi East	0.59	9		Pn	17 55 09.1	+0.3
TASE	Tanaga Southea	0.84	40		Pn	17 55 12.7	+0.5
TAFP	Tanaga Falls P	0.91	39		Pn	17 55 13.5	+0.4
CERAA	Semis' Rag'd T	1.13	309		Pn	17 55 16.7	+0.5
AMKA	Amchitka	1.14	280		Pn	17 55 15.3	-0.9
AMKA					Sn	17 55 31.8	+1.1
CERB	Semis' Cerberu	1.17	309		Pn	17 55 17.3	+0.6
KIMD	Kanaga Island	1.19	61		Pn	17 55 17.2	+0.3
CESW	Semis' Southwe	1.19	307		Pn	17 55 17.3	+0.4
CEAP	Semis' Anvil P	1.24	311		Pn	17 55 18.7	+1.0
CETU	Semis' Tuman	1.26	308		Pn	17 55 18.8	+0.8
KIKV	Kanaga Island	1.28	57		Pn	17 55 18.7	+0.6
KICM	Kanaga Island	1.29	55		Pn	17 55 19.4	+1.1
KICM					Sn	17 55 36.2	+1.9
ADK	Adak	1.55	63	P	Pn	17 55 22.3	+0.5
ADK	Adak	1.55	63		Pn	17 55 22.3	+0.5
ADAG	Mount Adagdak	1.64	60		Pn	17 55 24.6	+1.5
LSPA	Little Sitkin	1.75	297		Pn	17 55 25.4	+0.8
LSPA					Sn	17 55 49.4	+3.8
LSSA	Little Sitkin	1.78	296		Pn	17 55 26.1	+1.1
LSNW	Little Sitkin	1.79	297		Pn	17 55 25.6	+0.5
GSTD	Great Sitkin T	1.92	62		Pn	17 55 28.3	+1.2
GSTD					Sn	17 55 52.0	+2.0
GSMY	Great Sitkin M	1.97	63		Pn	17 55 28.8	+1.2
GSTR	Great Sitkin T	1.99	62		Pn	17 55 29.3	+1.4
ATKA	Atka Island	3.10	69		Pn	17 55 44.6	+1.5
ATKA					Sn	17 56 21.1	+2.2
KOWE	Korovin West	3.12	66		Pn	17 55 45.4	+1.9
KOFP	Korovin Flat P	3.18	68		Pn	17 55 46.3	+2.0
SMY	Shemya	4.59	292		Pn	17 56 05.5	+1.9
SMY					Sn	17 56 59.4	+3.8
NIKH	Nikolski High	6.44	70		Pn	17 56 31.6	+2.5
NIKH					Sn	17 57 44.7	+3.4
OKSP	Okmok Steeple	6.84	68		Pn	17 56 37.2	+2.7
MAPS	Pakushin South	7.75	66		Pn	17 56 49.2	+2.1
MGOD	Makushin Gods	7.79	66		Pn	17 56 50.1	+2.5
SPIA	Saint Paul Isl	7.85	37		Pn	17 56 51.0	+2.7
MREP	Makushin Rep't	7.87	66		Pn	17 56 51.5	+2.9
MNAT	Makushin Natee	7.92	65		Pn	17 56 51.9	+2.5
UNV	Unalaska Valle	8.01	66		Pn	17 56 53.2	+2.6
AKBBA	Akutan Broad B	8.41	65		Pn	17 56 59.1	+3.2
PETK	Petropavlovsk-	14.48	287	Pn	Pn	17 58 22.2	+3.2
	0.4nm,0.3s,baz=98,slow=19,SNR=9.6						
PETK				LR	LR	18 03 40.9	
	comp=Z,202nm,21.6s,baz=87,slow=37						
ANM	Nome	15.16	23	P	P	17 58 31.1	-1.6
ANM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ANM	Nome	15.16	23	Pn	P	17 58 31.1	-1.6
KDAK	Kodiak Island	16.58	56	Pn	Pn	17 58 44.3	-2.0
	comp=Z,2.9nm,0.3s,baz=259,slow=5.8,SNR=50						
KDAK				Sn	Sn	18 01 44.2	-4.7
	comp=Z,0.3nm,0.3s,baz=165,slow=22,SNR=1.8						
KDAK	Kodiak Island	16.58	56	P	Pn	17 58 44.2	-2.0
KDAK				pmax	pmax		
	comp=Z,45nm,1.6s						
KDAK	Kodiak Island	16.58	56	P	Pn	17 58 44.2	-2.0
KDAK				IAmb	IAmb	17 59 07.2	
	comp=Z,45nm,1.6s						
TTA	Tatalina	17.00	38	P	P	17 58 53.6	+0.5
TTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TTA	Tatalina	17.00	38	P	P	17 58 53.6	+0.5
CNPM	China Poot	17.69	51		Pn	17 59 00.5	+0.4
CNPM				IAmb	IAmb	17 59 19.4	
	comp=Z,38nm,1.3s						
BRLK	Bradley Lake	17.92	51		Pn	17 59 03.2	+0.2
SKT	Skwentna	18.38	44	P	Pn	17 59 09.7	+1.1
SKT				IAmb	IAmb	17 59 14.4	
	comp=Z,45nm,1.3s						
PPLA	Purkeypile	18.49	40	Pn	Pn	17 59 12.6	+2.5
SUA	Susitna One	18.53	45	P	P	17 59 10.3	+0.2
SEW	Seward	18.71	50		P	17 59 11.7	-0.3
KTH	Kantishna Hill	19.30	39		P	17 59 19.3	+0.8
KTH				IAmb	IAmb	17 59 23.3	
	comp=Z,24nm,0.7s						
SEY	Seymchan	19.34	318	P	P	17 59 19.6	+0.9
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=4.3						
GHO	Glory Hole Cre	19.45	46	P	P	17 59 20.7	+0.5
TRF	Thorofare Moun	19.51	40	P	P	17 59 20.9	0.0
TRF				IAmb	IAmb	17 59 27.8	
	comp=Z,28nm,1.2s						
BPAW	Bear Paw Mtn.	19.53	38	P	P	17 59 22.0	+1.1
KNK	Knik Glacier	19.55	47	P	P	17 59 21.1	0.0
IMAR	Indian Mountai	19.56	31	P	P	17 59 21.9	+0.6
SML	Sawmill	19.73	46		P	17 59 22.8	-0.4
SML				IAmb	IAmb	18 00 08.9	
	comp=Z,13nm,0.8s						
GLI	Glacier Island	20.04	49	P	P	17 59 26.7	+0.2
GLI				IAmb	IAmb	17 59 30.3	
	comp=Z,45nm,1.5s						
RND	Reindeer	20.08	41	P	P	17 59 27.0	0.0
RND				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RND	Reindeer	20.08	41	P	P	17 59 27.0	0.0
BWN	Browne	20.16	39	P	P	17 59 28.6	+0.8
BWN				IAmb	IAmb	17 59 35.8	
	comp=Z,33nm,1.0s						
SCM	Sheep Creek Mo	20.19	46	P	P	17 59 26.9	-1.3
SCM				pmax	pmax		
	comp=Z,27nm,1.2s						
SCM	Sheep Creek Mo	20.19	46	P	P	17 59 26.9	-1.3
SCM				IAmb	IAmb	17 59 51.3	
	comp=Z,27nm,1.2s						
FID	Port Fidalgo	20.30	49	P	P	17 59 29.4	+0.1
FID				IAmb	IAmb	18 00 13.8	
	comp=Z,23nm,1.2s						
DHY	Denali Highway	20.58	43	P	P	17 59 32.1	-0.4
DHY				IAmb	IAmb	17 59 36.4	
	comp=Z,21nm,0.7s						
I23K	Minto, Yukon-K	20.65	36	P	P	17 59 33.3	+0.3
I23K				IAmb	IAmb	17 59 37.4	
	comp=Z,13nm,0.7s						
M24K	Tolsona, Glenn	20.80	46	P	P	17 59 34.3	-0.5
M24K				IAmb	IAmb	18 00 18.1	
	comp=Z,20nm,0.8s						
WRH	Wood River Hil	20.83	39	P	P	17 59 34.4	-0.6
MDM	Murphy Dome	20.99	37	P	P	17 59 36.3	-0.5
MDM				IAmb	IAmb	17 59 51.0	
	comp=Z,16nm,1.0s						
CCB	Clear Creek Bu	21.02	38	P	P	17 59 36.1	-0.8
COLA	College	21.09	38	*i* P	P	17 59 38.9	+1.1
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HDA	Harding Lake	21.25	39	P	P	17 59 39.8	+0.2
HDA				IAmb	IAmb	17 59 42.1	
	comp=Z,8.0nm,0.4s						
PAX	Paxson	21.36	44	P	P	17 59 40.3	-0.6
PAX				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PAX	Paxson	21.36	44	P	P	17 59 40.3	-0.6
PAX				IAmb	IAmb	17 59 50.7	
	comp=Z,9.2nm,0.7s						
N25K	Chitina, Valde	21.39	48	P	P	17 59 41.0	-0.1
N25K				IAmb	IAmb	17 59 56.0	
	comp=Z,10nm,0.8s						
IL31		21.43	38	P	P	17 59 40.0	-1.3
ILAR	Eielson Array	21.43	38	P	P	17 59 40.5	-0.9
	comp=Z,1.5nm,0.4s,baz=242,slow=8.8,SNR=41						
ILAR				PcP	PcP	18 03 42.6	-0.8
	comp=Z,0.8nm,0.4s,baz=278,slow=3.3,SNR=11						
ILAR				ScP	ScP	18 07 18.3	+0.8
	comp=Z,0.4nm,0.7s,baz=291,slow=2.8,SNR=5.5						
ILAR	Eielson Array	21.43	38	P	P	17 59 40.2	-1.2
COLD	Coldfoot	21.44	31	P	P	17 59 42.1	+0.5
GLB	Gilahina Butte	21.72	48	P	P	17 59 44.6	0.0
GLB				IAmb	IAmb	17 59 50.4	
	comp=Z,11nm,0.6s						
RIDG	Independent Ri	21.88	42	P	P	17 59 46.2	0.0
RIDG				IAmb	IAmb	17 59 48.6	
	comp=Z,13nm,0.4s						
MENT	Mentasta	22.12	44	P	P	17 59 49.9	+1.0
DOT	Dot Lake	22.18	42	P	P	17 59 48.4	-1.2
DOT				IAmb	IAmb	17 59 50.6	
	comp=Z,10nm,0.6s						
BARN	Barnard Glacie	22.67	50	P	P	17 59 54.4	-0.6
BARN				IAmb	IAmb	18 00 20.9	
	comp=Z,30nm,1.8s						
FYU	Fort Yukon	22.81	35	P	P	17 59 55.9	-0.2
FYU				IAmb	IAmb	17 59 59.6	
	comp=Z,10nm,0.7s						
BCAR	Beaver Creek A	23.01	45	P	P	17 59 57.1	-1.2
K27K	Chicken	23.13	42	P	P	17 59 58.8	-0.7
K27K				IAmb	IAmb	17 59 59.9	
	comp=Z,22nm,1.5s						
BMAR	Burnt Mountain	23.42	33	P	P	17 59 59.4	-2.9
EGAK	Eagle	23.73	41	P	P	18 00 04.3	-0.9
EGAK				IAmb	IAmb	18 00 05.5	
	comp=Z,12nm,0.7s						
TYV	Tymovskoe	24.00	284	*e*P	P	18 00 08.9	+1.0
TYV				*e*S	S	18 04 21.3	-1.0
TYV				pmax	pmax		
	comp=Z,11nm,1.0s						
TYV				pmax	pmax		
	comp=Z,500nm,5.8s						
TYV				smax	smax		
	comp=N,600nm,6.6s						
DAWY	Dawson	24.28	43	P	P	18 00 09.8	-0.7
YSS	Yuzh-Sakhalins	25.27	275	*ce*P	P	18 00 20.2	+0.7
YSS				pmax	pmax		
	comp=Z,85nm,2.5s						
EPYK	Eagle Plains	25.94	38	P	P	18 00 24.1	-1.3
ASAJ	Asahikawa	26.64	270	P	P	18 00 33.0	+1.1
	comp=Z,11nm,0.8s,baz=40,slow=6.2,SNR=8.2						
ASAJ	Asahikawa	26.64	270	P	P	18 00 33.0	+1.1
INK	Inuvik	27.64	35	P	P	18 00 39.8	-0.8
	comp=Z,1.5nm,0.5s,baz=251,slow=5.3,SNR=8.0						
INK				PcP	PcP	18 03 56.0	-0.9
	comp=Z,1.1nm,0.5s,baz=194,slow=4.2,SNR=4.1						
INK	Inuvik	27.64	35	P	P	18 00 39.7	-1.0
INK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
INK	Inuvik	27.64	35	P	P	18 00 39.6	-1.0
YAK	Yakutsk	29.49	312	*i* P	P	18 00 55.2	-1.9
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR	Kul'dur	31.17	286	P	P	18 01 11.9	-0.2
	comp=Z,9.6nm,0.7s,baz=64,slow=7.1,SNR=41						
KLR	Kul'dur	31.17	286	*ce*P	P	18 01 11.5	-0.6
KLR				pmax	pmax		
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	33.25	277	P	P	18 01 30.2	-0.2
	comp=Z,5.2nm,0.9s,baz=44,slow=6.3,SNR=6.9						
H11N2	WAKE ISLAND Hy	33.34	205	T	T	18 37 22.6	
	baz=16,slow=76,SNR=82						
H11N3	WAKE ISLAND Hy	33.35	205	T	T	18 37 17.6	
	baz=16,slow=76,SNR=120						
H11N1	WAKE ISLAND Hy	33.36	205	T	T	18 37 25.4	
	baz=16,slow=76,SNR=83						
MJAR	Matsushiro Arr	33.69	261	P	P	18 01 35.1	+0.7
	comp=Z,2.1nm,0.8s,baz=51,slow=9.5,SNR=5.4						
MJAR				LR	LR	18 13 23.2	
	comp=Z,55nm,21.7s,baz=55,slow=33						
H11S1	WAKE ISLAND Hy	34.56	205	T	T	18 38 57.7	
	baz=16,slow=76,SNR=97						
H11S2	WAKE ISLAND Hy	34.57	205	T	T	18 38 49.1	
	baz=16,slow=76,SNR=83						
H11S3	WAKE ISLAND Hy	34.58	205	T	T	18 38 52.0	
	baz=16,slow=76,SNR=51						
YKA	Yellowknife Ar	35.40	46	P	P	18 01 48.1	-0.7
	comp=Z,0.8nm,0.3s,baz=276,slow=8.1,SNR=25						
YKA				PcP	PcP	18 04 18.2	+0.3
	comp=Z,1.3nm,0.8s,baz=289,slow=2.1,SNR=9.9						
YKA				ScP	ScP	18 08 01.0	+0.2
	comp=Z,0.5nm,0.8s,baz=297,slow=2.4,SNR=6.3						
HAWA	Hanford	38.48	73	P	P	18 02 15.3	+0.1
HAWA				IAmb	IAmb	18 02 18.2	

	comp=Z,13nm,1.1s						
NEW	Newport	39.01	69	P	P	18 02 18.8	-0.9
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEW	Newport	39.01	69	P	P	18 02 18.8	-0.9
NEW				IAmb	IAmb	18 02 20.6	
	comp=Z,6.4nm,0.7s						
KSRS	Korea Array	39.58	271	P	P	18 02 25.7	+1.3
	comp=Z,3.3nm,0.8s,baz=59,slow=10,SNR=6.7						
KSRS				LR	LR	18 19 31.5	
	comp=Z,6.4nm,19.2s,baz=165,slow=37						
JNU	Nakatsue	40.49	263	P	P	18 02 33.1	+1.1
	comp=Z,19nm,1.0s,baz=50,slow=7.9,SNR=3.3						
BMO	Blue Mountains	40.61	74	P	P	18 02 33.8	+0.8
BMO				pmax	pmax		
	comp=Z,26nm,2.0s						
BMO	Blue Mountains	40.61	74	P	P	18 02 33.8	+0.8
BMO				IAmb	IAmb	18 02 42.6	
	comp=Z,26nm,1.9s						
MSO	Missoula	41.59	70	P	P	18 02 41.1	0.0
MSO				IAmb	IAmb	18 02 42.2	
	comp=Z,9.9nm,1.2s						
BCYI	Bear Canyon	43.25	72	P	P	18 02 55.5	+0.7
NVAR	Mina Array Bea	43.64	83	P	P	18 02 59.2	+1.2
	comp=Z,0.9nm,0.6s,baz=303,slow=6.8,SNR=6.0						
YHL	Hebgen Lake	44.27	71	P	P	18 03 03.8	+0.7
HVU	Hansel Valley	45.06	75	P	P	18 03 09.4	+0.2
HVU				pmax	pmax		
	comp=Z,14nm,1.3s						
HVU	Hansel Valley	45.06	75	P	P	18 03 09.4	+0.2
HVU				IAmb	IAmb	18 03 11.4	
	comp=Z,14nm,1.3s						
R11A	Troy Canyon, C	45.38	81	P	P	18 03 12.6	+0.8
R11A				IAmb	IAmb	18 03 16.2	
	comp=Z,5.0nm,1.2s						
LAO	LASA Array	46.16	66	P	P	18 03 18.0	+0.3
ULN	Ulaanbaatar	46.28	296	*ce*P	P	18 03 18.3	-0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	46.28	296	P	P	18 03 18.9	+0.1
ULN				IAmb	IAmb	18 03 19.3	
	comp=Z,3.7nm,0.8s						
BW06	Boulder Array	46.43	72	P	P	18 03 20.6	+0.5
BW06				IAmb	IAmb	18 03 22.1	
	comp=Z,11nm,1.1s						
PD31	Pinedale Array	46.43	72	P	P	18 03 20.7	+0.6
PD31				IAmb	IAmb	18 03 22.1	
	comp=Z,11nm,1.2s						
PDAR	Pinedale Array	46.43	72	P	P	18 03 20.4	+0.3
	comp=Z,5.2nm,0.4s,baz=312,slow=3.4,SNR=80						
PDAR	Pinedale Array	46.43	72	P	P	18 03 20.6	+0.6
SONM	Songino Array	46.67	297	P	P	18 03 22.1	+0.3
	comp=Z,2.2nm,0.6s,baz=64,slow=6.3,SNR=19						
SONM				PcP	PcP	18 04 55.5	+0.5
	comp=Z,0.6nm,0.5s,baz=92,slow=2.8,SNR=2.8						
SONM				ScP	ScP	18 08 49.9	+4.2
	comp=Z,0.3nm,0.8s,baz=46,slow=6.2,SNR=2.3						
SONM				LR	LR	18 24 02.4	
	comp=Z,99nm,18.7s,baz=16,slow=38						
SONM	Songino Array	46.67	297	P	P	18 03 22.2	+0.4
SONM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SONM	Songino Array	46.67	297	P	P	18 03 22.2	+0.4
SONM				IAmb	IAmb	18 03 23.1	
	comp=Z,6.2nm,1.3s						
RDMU	Red Mountain	47.72	74	P	P	18 03 31.4	+1.2
U15A	North Rim	48.63	81	P	P	18 03 38.6	+1.3
U15A				IAmb	IAmb	18 03 55.1	
	comp=Z,4.8nm,0.8s						
RSSD	Black Hills	48.89	67	P	P	18 03 38.8	-0.4
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RSSD	Black Hills	48.89	67	P	P	18 03 38.8	-0.4
RSSD				IAmb	IAmb	18 03 39.5	
	comp=Z,5.4nm,0.6s						
ULM	Lac du Bonnet	49.84	56	P	P	18 03 44.9	-1.1
	comp=Z,0.8nm,0.3s,baz=307,slow=10,SNR=2.1						
PV01	Paradox Valley	49.84	76	P	P	18 03 46.5	0.0
PV01				IAmb	IAmb	18 03 48.9	
	comp=Z,5.6nm,0.7s						
ANMO	Albuquerque	53.20	78	*ce*P	P	18 04 20.4	+8.8
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ZALV	Zalesovo Beam	54.11	314	P	P	18 04 17.4	-0.3
	comp=Z,0.3nm,0.4s,baz=41,slow=6.8,SNR=2.7						
ZALV				PcP	PcP	18 05 22.2	+0.1
	comp=Z,3.4nm,0.7s,baz=38,slow=3.7,SNR=15						
DGZ	Jazzator, Alta	55.60	308	*i* P	P	18 04 28.1	-0.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
P38A	Dawn	57.80	65	P	P	18 04 43.4	-0.9
ARCES	ARCESS Array B	58.26	350	P	P	18 04 45.5	-1.7
	comp=Z,4.2nm,0.9s,baz=19,slow=7.6,SNR=13						
ARCES				PcP	PcP	18 05 37.0	-1.0
	comp=Z,1.8nm,0.7s,baz=46,slow=5.2,SNR=1.2						
ARCES				LR	LR	18 32 01.9	
	comp=Z,32nm,19.6s,baz=190,slow=38						
ARCES	ARCESS Array B	58.26	350	P	P	18 04 46.5	-0.6
ARCES				pmax	pmax		
	comp=Z,27nm,1.5s						
ARCES	ARCESS Array B	58.26	350	P	P	18 04 46.5	-0.6
P40A	Paris	58.71	65	P	P	18 04 49.9	-0.8
TXAR	Lajitas Array	58.75	81	P	P	18 04 50.5	-0.7
	comp=Z,0.5nm,0.4s,baz=292,slow=4.8,SNR=4.1						
KURK	Kurchatov	59.10	314	P	P	18 04 51.9	-1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	59.10	314	P	P	18 04 51.9	-1.3
KURK				IAmb	IAmb	18 05 42.7	
	comp=Z,3.6nm,1.1s						
KURBB	Kurchatov Arra	59.20	314	P	P	18 04 52.5	-1.4
	comp=Z,1.4nm,0.6s,baz=43,slow=6.5,SNR=16						
KURBB				PcP	PcP	18 05 41.7	-0.3
	comp=Z,0.6nm,0.4s,baz=33,slow=3.4,SNR=6.0						
R40A	Maddies Statio	59.42	66	P	P	18 04 54.4	-1.2
P43A	Skaggs, Pawnee	60.06	63	P	P	18 04 59.7	-0.3
MK31	Makanchi Array	60.09	308	P	P	18 04 58.4	-1.8
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	60.09	308	P	P	18 04 58.4	-1.8
MKAR	Makanchi Array	60.09	308	P	P	18 04 58.5	-1.8
	comp=Z,0.7nm,0.3s,baz=46,slow=6.9,SNR=24						
MKAR				PcP	PcP	18 05 45.6	-0.1
	comp=Z,0.9nm,0.6s,baz=42,slow=4.4,SNR=4.9						
MKAR				LR	LR	18 30 58.6	
	comp=Z,67nm,21.3s,baz=345,slow=36						
MKAR	Makanchi Array	60.09	308	P	P	18 04 58.9	-1.4
MAKZ	Makanchi	60.24	309	P	P	18 04 59.5	-1.7
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.7s						
MAKZ	Makanchi	60.24	309	P	P	18 04 59.5	-1.7
MAKZ				IAmb	IAmb	18 05 16.1	
	comp=Z,7.7nm,1.7s						
BVAR	Borovoye Array	60.98	320	P	P	18 05 05.0	-1.2
	comp=Z,1.5nm,0.4s,baz=40,slow=12,SNR=11						
BVAR				PcP	PcP	18 05 48.5	-0.7
	comp=Z,1.0nm,0.4s,baz=74,slow=6.3,SNR=5.6						
BRVK	Borovoye	61.00	320	*i* P	P	18 05 07.2	+0.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
P48A	Milroy	62.45	61	P	P	18 05 15.1	-1.2
ARU	Arti	62.72	328	LR	LR	18 34 04.7	
	comp=Z,161nm,20.8s,baz=84,slow=38						
ARU	Arti	62.72	328	*c i*P	P	18 05 16.2	-1.5
ARU						18 05 55.3	
ARU				S	S	18 13 32.7	-11
ARU				pmax	pmax		
	comp=Z,4.0nm,1.4s						
WCI	Wyandotte Cave	62.84	62	P	P	18 05 18.5	-0.3
WCI				pmax	pmax		
	comp=Z,19nm,1.1s						
WCI	Wyandotte Cave	62.84	62	P	P	18 05 18.5	-0.3
PLAL	Pickwick Lake	64.14	66	P	P	18 05 27.4	-0.1
CLTN	Cedars of Leba	64.34	64	P	P	18 05 29.2	+0.5
U49A	Red Boiling Sp	64.35	63	P	P	18 05 28.6	-0.2
T50A	Nancy	64.52	62	P	P	18 05 30.1	+0.2
L56A	Greenwood	64.69	54	P	P	18 05 30.9	-0.2
Z47A	Carrollton	65.42	67	P	P	18 05 35.7	-0.1
W50A	Signal Mountai	65.56	64	P	P	18 05 36.8	0.0
FPAL	Fort Paine	65.87	65	P	P	18 05 38.7	0.0
FINES	FINESS Array B	65.95	347	P	P	18 05 37.9	-0.8
	comp=Z,4.7nm,0.6s,baz=12,slow=7.2,SNR=36						
FINES	FINESS Array B	65.95	347	P	P	18 05 37.5	-1.2
SIJI	Sorong	66.79	236	P	P	18 05 44.8	0.0
	comp=Z,13nm,0.7s,baz=18,slow=11,SNR=7.2						
AAK	Ala-Archa	66.93	310	P	P	18 05 46.4	+0.8
	comp=Z,4.0nm,0.6s,baz=127,slow=3.8,SNR=23						
AAK	Ala-Archa	66.93	310	*ce*P	P	18 05 45.3	-0.3
AAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AAK	Ala-Archa	66.93	310	P	P	18 05 46.1	+0.6
AAK				IAmb	IAmb	18 05 47.2	
	comp=Z,4.5nm,0.6s						
AKTO	Aktyubinsk	67.79	325	LR	LR	18 36 45.4	
	comp=Z,49nm,21.8s,baz=43,slow=37						
NB2	NORSAR Subarra	67.82	355	P	P	18 05 49.8	-0.9
	comp=Z,0.6nm,0.6s,baz=4.7,slow=6.2						
NOA	NORSAR Array B	67.82	355	P	P	18 05 49.2	-1.6
	comp=Z,0.5nm,0.7s,baz=13,slow=5.4,SNR=6.3						
KK31	Karatay Array	68.46	313	P	P	18 05 55.6	+0.6
KK31	Karatay Array	68.46	313	P	P	18 05 55.6	+0.6
KKAR	Karatay Array	68.46	313	P	P	18 05 55.7	+0.7
KKAR	Karatay Array	68.46	313	P	P	18 05 55.7	+0.7
OBN	Obninsk	70.02	339	⇓*e*P	P	18 06 04.4	0.0
OBN				*PP	sP	18 06 23.0	+3.9
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,70nm,16.0s						
CMAR	Chiang Mai Arr	70.97	276	P	P	18 06 10.8	0.0
	comp=Z,1.7nm,0.5s,baz=26,slow=6.7,SNR=16						
TAPN	Taplejung	71.21	290	*e*P	P	18 06 13.0	+0.5
	comp=Z,31nm,0.7s						
GUN	Gumba	71.86	292	*e*P	P	18 06 17.1	+0.6
	comp=Z,42nm,0.4s						
RAMN	Ramite	72.16	291	*e*P	P	18 06 18.5	+0.3
	comp=Z,53nm,0.5s						
KKN	Kakani	72.30	292	*e*P	P	18 06 19.4	+0.4
	comp=Z,15nm,0.4s						
PKI	Pulchoki	72.39	292	*e*P	P	18 06 19.9	+0.2
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	72.39	292	*e*P	P	18 06 19.8	+0.2
	comp=Z,20nm,0.5s						
DMN	Daman	72.54	292	*e*P	P	18 06 20.6	+0.1
DANN	Dangsing	72.76	294	*e*P	P	18 06 22.0	+0.2
	comp=Z,50nm,0.9s						
NIL	Nilore	74.46	304	P	P	18 06 32.3	+0.9
NIL				pmax	pmax		
	comp=Z,15nm,0.6s						
NIL	Nilore	74.46	304	P	P	18 06 32.3	+0.9
AKASG	Malin Array Be	75.70	342	P	P	18 06 36.8	-1.3
	comp=Z,1.7nm,0.4s,baz=22,slow=6.1,SNR=19						
AKASG				LR	LR	18 45 48.0	
	comp=Z,26nm,18.8s,baz=60,slow=40						
AKASG	Malin Array Be	75.70	342	P	P	18 06 37.1	-1.0
AKBB	Malin Array Si	75.70	342	P	P	18 06 36.9	-1.3
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AKBB	Malin Array Si	75.70	342	P	P	18 06 36.9	-1.3
AKBB				IAmb	IAmb	18 06 38.4	
	comp=Z,8.5nm,1.0s						
KWP	Kalwaria Pacla	77.87	346	P	P	18 06 50.5	0.0
KWP				pmax	pmax		
	comp=Z,12nm,0.8s						
KWP	Kalwaria Pacla	77.87	346	P	P	18 06 50.5	0.0
DPC	Dobruska-Polom	78.00	350	*e*P	P	18 06 50.8	-0.4
DPC	Dobruska-Polom	78.00	350	*e*P	P	18 06 50.8	-0.4
GEYT	Alibeck	78.17	317	LR	LR	18 44 10.0	
	comp=Z,71nm,19.7s,baz=100,slow=38						
KRLC	Kraliky	78.22	350	*e*P	P	18 06 51.8	-0.6
KRLC	Kraliky	78.22	350	*e*P	P	18 06 51.8	-0.6
SORM	Soroca	78.32	342	⇑P	P	18 06 52.0	-0.9
SORM	Soroca	78.32	342	⇑P	P	18 06 52.0	-0.9
NKC	Novy Kostel	78.48	353	*e*P	P	18 06 53.3	-0.6
NKC	Novy Kostel	78.48	353	*e*P	P	18 06 53.3	-0.6
KIV	Kislovodsk	78.59	331	*e*P	P	18 06 54.6	-0.1
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KOLS	Kolonicke sedl	78.61	346	*e*P	P	18 06 54.5	-0.1
KOLS	Kolonicke sedl	78.61	346	*e*P	P	18 06 54.5	-0.1
KBZ	Khabaz	78.73	330	P	P	18 06 54.7	-0.6
	comp=Z,2.1nm,0.9s,baz=70,slow=1.6,SNR=4.1						
KBZ	Khabaz	78.73	330	*ce*P	P	18 06 55.3	0.0
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CRVS	Cervenica-Dubn	78.77	346	*e*P	P	18 06 55.3	-0.1
CRVS	Cervenica-Dubn	78.77	346	*e*P	P	18 06 55.3	-0.1
BUR08	Bucovina Ar. S	79.38	344	P	P	18 06 59.1	+0.1
BUR08				IAmb	IAmb	18 07 00.4	
	comp=Z,5.7nm,0.9s						
BURAR	Bucovina Array	79.41	344	⇓P	P	18 06 58.9	-0.2
BURAR	Bucovina Array	79.41	344	⇓P	P	18 06 58.9	-0.2
BURAR	Bucovina Array	79.41	344	P	P	18 06 58.6	-0.4
KHC	Kasperske Hory	79.48	352	*ce*P	P	18 06 58.0	-1.4
KHC				pmax	pmax		
	comp=Z,18nm,2.5s						
KHC	Kasperske Hory	79.48	352	*e*P	P	18 06 58.9	-0.5
VYHS	Vyhne	79.53	348	*e*P	P	18 06 59.4	-0.2
VYHS	Vyhne	79.53	348	*e*P	P	18 06 59.4	-0.2
GERES	GERESS Array B	79.75	352	P	P	18 07 00.0	-0.9
	comp=Z,0.9nm,0.6s,baz=27,slow=6.0,SNR=10						
GERES	GERESS Array B	79.75	352	P	P	18 06 59.9	-1.0
BIZ	Bicaz	79.90	343	⇑P	P	18 07 01.7	0.0
ARCR	ARCALIA	80.07	344	⇑P	P	18 07 02.4	-0.1
CONA	Conrad Observa	80.44	350	*e*P	P	18 07 04.7	+0.1
	comp=Z,6.4nm,1.6s						
DRGR		80.63	345	⇓P	P	18 07 05.2	-0.4
DRGR		80.63	345	⇓P	P	18 07 05.2	-0.4
MOA	Molln	80.69	351	*e*P	P	18 07 04.4	-1.4
	comp=Z,3.4nm,1.3s						
OZUR		80.77	343	⇓P	P	18 07 06.0	-0.3
VRI	Vrincioaia	80.81	342	⇓P	P	18 07 06.8	+0.2
VRI	Vrincioaia	80.81	342	⇓P	P	18 07 06.8	+0.2
DOPR	Dopca	80.97	343	⇓P	P	18 07 07.9	+0.5
ARSA	Arzberg	81.15	350	*e*P	P	18 07 07.2	-1.2
	comp=Z,2.5nm,0.8s						
CFR	Carcaliu	81.19	341	⇓P	P	18 07 07.6	-1.0
CFR	Carcaliu	81.19	341	⇓P	P	18 07 07.6	-1.0
MLR	Muntele Rosu	81.32	343	⇓P	P	18 07 08.2	-1.2
MLR	Muntele Rosu	81.32	343	⇓P	P	18 07 08.2	-1.2
WATA	Walderalm	81.43	353	*e*P	P	18 07 08.3	-1.7
	comp=Z,5.3nm,1.2s						
MOTA	Moosalm	81.46	353	*e*P	P	18 07 09.3	-0.9
	comp=Z,7.6nm,1.4s						
WTTA	Wattenberg	81.50	353	*e*P	P	18 07 09.7	-0.7
	comp=Z,4.9nm,0.7s						
KBA	Koelnbreinsper	81.54	352	*e*P	P	18 07 10.9	+0.3
	comp=Z,10nm,0.8s						
VOIR		81.54	343	⇓P	P	18 07 10.8	+0.3
VOIR		81.54	343	⇓P	P	18 07 10.8	+0.3
SQTA	Sankt Quirin	81.58	353	*e*P	P	18 07 04.7	-6.0
	comp=Z,4.3nm,1.0s						
SOKA	Soboth	81.77	350	*e*P	P	18 07 11.6	-0.1
	comp=Z,7.4nm,1.2s						
FETA	Feichten	81.81	353	*e*P	P	18 07 11.2	-0.8
	comp=Z,3.6nm,0.9s						
TLBR	Topalu	81.82	341	⇓P	P	18 07 11.7	-0.2
WRA	Warramunga Arr	81.84	224	P	P	18 07 11.6	-0.6
	comp=Z,1.0nm,0.7s,baz=33,slow=6.2,SNR=9.6						
ABTA	Abfaltersbach	81.94	352	*e*P	P	18 07 12.1	-0.5
	comp=Z,3.4nm,0.8s						
MYKA	Terra Mystica	81.95	351	*e*P	P	18 07 16.9	+4.2
	comp=Z,5.4nm,1.1s						
GZR	Gura Zlata	81.98	345	⇓P	P	18 07 12.2	-0.6
GZR	Gura Zlata	81.98	345	⇓P	P	18 07 12.2	-0.6
OBKA	Obir	81.98	351	*e*P	P	18 07 11.7	-1.1
	comp=Z,8.4nm,1.1s						
HERR	Herculane	82.54	345	⇓P	P	18 07 14.6	-1.0
MDVR	Moldovita	82.75	345	⇑P	P	18 07 15.8	-1.0
PSI	Prapat	82.92	266	P	P	18 07 17.8	-0.4
	comp=Z,3.1nm,0.3s,baz=359,slow=4.6,SNR=4.9						
BR131	Keskin Array S	85.08	335	P	P	18 07 28.4	-0.6
BR131				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR131	Keskin Array S	85.08	335	P	P	18 07 28.4	-0.6
BRTR	Keskin Array B	85.08	335	P	P	18 07 28.2	-0.7
	comp=Z,4.0nm,0.7s,baz=43,slow=2.9,SNR=31						
BRTR				LR	LR	18 50 55.1	
	comp=Z,19nm,18.2s,baz=252,slow=40						
BRTR	Keskin Array B	85.08	335	P	P	18 07 28.4	-0.6
ASAR	Alice Springs	85.31	222	P	P	18 07 30.1	+0.1
	comp=Z,1.6nm,0.7s,baz=23,slow=5.7,SNR=26						
ASAR	Alice Springs	85.31	222	P	P	18 07 29.9	0.0
ASAR	Alice Springs	85.31	222	P	P	18 07 29.9	0.0
ESDC	Sonseca Array	89.40	4	P	P	18 07 48.4	-1.3
	comp=Z,1.3nm,0.6s,baz=344,slow=4.9,SNR=9.5						
STKA	Stephens Creek	89.74	213	P	P	18 07 52.0	+1.1
	comp=Z,3.5nm,0.7s,baz=359,slow=5.1,SNR=7.8						
TORD	Torodi Ar. Bea	115.92	359	PKP	PKiKP	18 13 34.8	-1.2
	comp=Z,0.6nm,0.7s,baz=350,slow=2.4,SNR=2.4						
H03N2	Juan Fernandez	121.16	106	T	T	20 26 51.7	
	baz=317,slow=77,SNR=56						
H03N1	Juan Fernandez	121.17	106	T	T	20 26 53.0	
	baz=317,slow=77,SNR=87						
H03N3	Juan Fernandez	121.17	106	T	T	20 26 52.3	
	baz=317,slow=77,SNR=83						
DBIC	Dimbokro	122.14	7	PKP	PKPdf	18 13 45.7	-2.2
	comp=Z,0.9nm,0.3s,baz=325,slow=2.9,SNR=6.5						
PLCA	Paso Flores	130.98	107	PKP	PKPdf	18 14 04.2	+0.2
	comp=Z,1.8nm,0.8s,baz=243,slow=4.3,SNR=3.9						
BOSA	Boshof	151.05	312	PKPbc	PKPbc	18 14 45.6	-0.3
	comp=Z,2.6nm,0.4s,baz=20,slow=3.3,SNR=14						

GUC 18 18:07:18.4±0.4**, 23°.97S**×**67°.14W, h250**^{km}±7^{km}**, ML3.7, 7C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.11	309	⇓*i*P	Pn	18 08 02.0	-0.4
LVC				*i* S	S	18 08 35.5	-1.5
GO02	Mina Guanaco	2.52	241	⇑*i*P	Pn	18 08 06.3	+0.1
GO02				*i* S	S	18 08 43.3	-0.7
GO02				IAML		18 08 44.2	
	comp=N,252nm,0.3s						
PB09	IPOC Station P	2.90	318	⇑*i*P	Pn	18 08 10.5	+0.4
PB09				*i* S	S	18 08 49.8	-1.1
PB09				IAML		18 08 52.5	
	comp=N,40nm,0.2s						
PB05	IPOC Station P	3.02	291	⇑*i*P	Pn	18 08 11.8	+0.5
PB05				*i* S	S	18 08 51.8	-1.3
PB14	IPOC Station P	3.04	257	*e*P	Pn	18 08 12.5	+0.8
PB14				*i* S	S	18 08 53.1	-0.7
PB03	IPOC Station P	3.07	308	⇑*i*P	Pn	18 08 12.2	+0.3
PB03				*i* S	S	18 08 52.5	-1.7
PB10	IPOC Station P	3.16	278	⇑*i*P	Pn	18 08 13.9	+1.2
PB10				*e*S	S	18 08 55.2	-0.3
PB04	IPOC Station P	3.21	300	⇑*i*P	Pn	18 08 14.0	+0.6
PB04				*i* S	S	18 08 55.5	-1.4
PB07	IPOC Station P	3.37	311	⇑*i*P	Pn	18 08 15.5	+0.3
PB07				*i* S	S	18 08 58.3	-1.9
PB02	IPOC Station P	3.66	316	⇓*i*P	Pn	18 08 18.5	0.0
PB02				*i* S	S	18 09 03.5	-2.6
AC01	Pan de Azucar	3.81	235	*e*P	Pn	18 08 19.8	-0.2
AC01				*i* S	S	18 09 07.4	-1.5
PATCX	Punta Patache	4.19	318	⇓*i*P	Pn	18 08 24.3	-0.3
PATCX				*e*S	S	18 09 14.7	-2.5
PB08	IPOC Station P	4.24	334	*e*P	Pn	18 08 25.9	+0.4
PB08				*i* S	S	18 09 17.4	-1.4
TA01	Diego Aracena	4.40	320	*e*P	Pn	18 08 26.9	-0.2
TA01				*i* S	S	18 09 19.0	-2.6
HMBC	Humberstone	4.47	325	*e*P	Pn	18 08 26.9	-1.1
HMBC				*i* S	S	18 09 19.7	-3.6
TA02	Huaiquique	4.61	322	*e*P	Pn	18 08 29.6	+0.1
GO01	Chusmiza	4.69	336	*e*P	Pn	18 08 31.7	+0.8
GO01				*i* S	S	18 09 27.2	-1.4
PSGC	Pisagua	5.16	327	⇓*i*P	Pn	18 08 35.0	-1.3
PSGC				*i* S	S	18 09 34.4	-4.0
MNMC	Minye Minye	5.33	334	*e*P	Pn	18 08 38.8	+0.2
MNMC				*i* S	S	18 09 39.5	-3.0

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*UPA **18** 18:09:34.3±0.7, 9°.50N×85°.33W, h14^{km}±21^{km}, MW4.4*
*UCR **18** 18:09:34.0±1.3, 9°.38N×85°.25W, h5^{km}, MW4.2*
ISC 18 18:09:35.1±1.2**, 9°.49N**±0°.05×**85°.19W**±0°.05**, h10**^{km}**, n46, σ0^{s}80**/58**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAFE	Finca La Fe, P	0.42	41	*e*P	Pg	18 09 43.5	+0.1
LAFE				*e*S	Sb	18 09 49.8	-1.2
JACO	JACO, Garabito	0.55	72	*e*P	Pb	18 09 46.4	-0.4
JACO				*e*S	Sb	18 09 56.4	+1.6
DUNO	Dulce Nombre,	0.66	333	*e*P	Pb	18 09 48.7	0.0
JTS	Las Juntas de	0.83	16	*e*P	Pg	18 09 50.6	-0.5
JTS				*e*S	Sb	18 10 02.9	0.0
JTS	Las Juntas de	0.83	16	*e*P	Pg	18 09 50.8	-0.3
GUAI	GUAI	0.84	338	*e*P	Pb	18 09 51.9	+0.1
GUAI				*e*S	Sn	18 10 04.7	-0.6
PLVR	Palo Verde	0.87	349	*e*P	Pb	18 09 52.1	-0.2
ORTG	Ortega, Santa	0.91	343	*e*P	Pb	18 09 53.0	0.0
SRA1	San Ramn	0.91	50	*e*P	Pb	18 09 53.1	0.0
SRA1				*e*S	Sn	18 10 06.9	-0.6
CASO	Castillo	1.04	25	*i* P	Pb	18 09 55.1	-0.2
CASO				*i* S	Sn	18 10 11.5	+1.1
ARE1	Arenal 1	1.07	26	*e*P	Pn	18 09 55.8	-0.4
FORC	Fortuna	1.09	28	*i* P	Pn	18 09 56.4	-0.2
CEDE	Laguna Cedeo	1.10	26	*e*P	Pn	18 09 56.4	-0.2
ACAL	Aguas Claras	1.15	8	*i* P	Pb	18 09 56.8	-0.3
CUI	Cuipilapa	1.16	1	*e*P	Pg	18 09 57.1	-0.3
COLC	Colonia	1.17	359	*i* P	Pb	18 09 57.1	-0.3
HDC	Heredia	1.17	64	*e*P	Pb	18 09 57.5	-0.1
HDC				*e*S	Sn	18 10 14.3	+0.4
HDC	Heredia	1.17	64	*e*P	Pn	18 09 58.1	+0.4
HDC3	Heredia 3	1.18	64	*e*P	Pn	18 09 58.1	+0.4
LCR2	La Lucha 2	1.19	78	*e*P	Pb	18 09 57.0	-1.0
LIM1	Limonal	1.20	357	*i* P	Pb	18 09 57.7	-0.3
SJS	Escuela Geolog	1.20	68	*e*P	Pb	18 09 57.8	-0.3
HORNC	Hornillas	1.21	0	*i* P	Pb	18 09 57.8	-0.4
PTEN	Parque Tenorio	1.23	9	*i* P	Pg	18 09 58.6	-0.2
GPS2	Hotel Rincn d	1.26	353	*i* P	Pb	18 09 58.9	-0.2
GPS3	Bodega del ICE	1.27	352	*e*P	Pg	18 10 00.2	+0.8
HZTE	Horizontes, Gu	1.28	342	*e*P	Pg	18 10 00.2	+0.5
GPS1	Guardaparques	1.28	353	*i* P	Pn	18 09 59.0	-0.2
LAPC	Finca la Perla	1.29	349	*i* P	Pn	18 09 58.9	-0.3
GBS3	Finca Las Img	1.31	348	*e*P	Pn	18 09 59.3	-0.2
EDDO	Dominical	1.33	100	*e*P	Pn	18 09 58.2	-1.5
GB1A	Borinquen Arri	1.33	351	*i* P	Pg	18 10 00.3	-0.5
RIMA	Rio Macho	1.33	78	*e*P	Pn	18 09 58.9	-1.1
BUAI	Buenos Aires	1.38	354	*i* P	Pn	18 10 00.5	0.0
CVTR	Volcan Turrial	1.50	69	*e*P	Pg	18 10 04.4	+0.4
EDPN	Palmar Norte	1.79	107	*e*P	Pn	18 10 05.4	-0.7
RIOS	Rincon, Osa	1.83	115	*e*P	Pn	18 10 05.4	-1.3
EDBA	Buenos Aires	1.92	100	*e*P	Pn	18 10 06.8	-1.1
DRK0	Durika	1.93	97	*e*P	Pn	18 10 07.7	-0.5
DRK0				*e*S	Sb	18 10 34.6	-0.2
DRK0	Durika	1.93	97	*e*P	Pn	18 10 07.6	-0.6
POTG	Potrero Grande	2.09	102	*e*P	Pn	18 10 09.9	-0.4
PTJ1	Puerto Jimnez	2.09	117	*e*P	Pn	18 10 10.8	+0.5
PTJ1				*e*S	Sb	18 10 40.7	+1.5
PIRO	Carate, Puerto	2.12	120	*e*P	Pn	18 10 09.8	-0.9
PIRO				*e*S	Sb	18 10 39.7	-0.5
BRU2	Volcan	2.56	106	*e*P	Pn	18 10 17.8	+0.9
BRU2				*e*S	Sn	18 10 49.8	+1.6
BCO2	Palmira	2.74	106	*e*P	Pn	18 10 16.7	-2.6
BCO2				*e*S	Sn	18 10 54.5	+1.9
ESPN	Las Esperanzas	2.82	18	*e*P	Pn	18 10 20.4	+0.1

IDC 18 18:18:07.5±3.6**, 16°.24S**×**173°.33W, h0**^{km}**, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.7**/33**, mbtmp3.7**/4**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/36**, Error ellipse: s-maj=190.2km s-min=29.4km az=145.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	26.90	281	LR	LR	18 32 48.2	
	comp=Z,61nm,18.5s,baz=335,slow=33						
WRA	Warramunga Arr	49.72	257	P	P	18 27 01.4	-0.5
	0.4nm,0.4s,baz=94,slow=6.5,SNR=5.7						
ASAR	Alice Springs	49.91	253	P	P	18 27 03.1	-0.2
	1.0nm,0.5s,baz=90,slow=7.6,SNR=23						
SIJI	Sorong	56.66	280	LR	LR	18 51 30.5	
	comp=Z,34nm,18.3s,baz=109,slow=35						
PDAR	Pinedale Array	82.85	42	P	P	18 30 34.2	0.0
	0.2nm,0.7s,baz=224,slow=3.8,SNR=2.7						
ILAR	Eielson Array	83.26	11	P	P	18 30 34.7	-0.7
	0.2nm,0.6s,baz=216,slow=4.5,SNR=6.8						
BRTR	Keskin Array B	146.85	320	PKPbc	PKPbc	18 37 52.7	+0.5
	0.9nm,0.8s,baz=140,slow=3.5,SNR=7.8						

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*NNC **18** 18:29:32.0±1.1, 39°.42N×75°.42E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=7.7km s-min=7.3km az=144.0*
*KRNET **18** 18:29:38.8±0.1, 39°.42N×75°.29E, mb2.9*
ISC 18 18:29:41.9±2.3**, 39°.4N**±0°.1×**75°.23E**±0°.06**, h10**^{km}**, n35, σ0^{s}88**/50**, 29C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	1.48	296	⇑*i*P	Pn	18 30 07.7	-1.1
	baz=94						

SFK				⇑iS	Sb	18 30 28.0	-0.5
	baz=94						
OHH	Osh	2.20	302	⇑iP	Pn	18 30 19.1	+0.5
	baz=1.0						
OHH				⇑iS	Sb	18 30 48.2	-1.0
	baz=1.0						
ARLS	Aral	2.58	345	⇑iP	Pn	18 30 23.4	-0.5
	baz=44						
ARLS				⇑iS	Sn	18 30 55.7	+0.4
	baz=44						
ARSB	Arslanbob	2.59	319	⇑iP	Pn	18 30 24.5	+0.4
	baz=18						
ARSB				⇑iS	Sn	18 30 57.1	+1.3
	baz=18						
DRK	Karamyk	2.66	273	⇑iP	Pn	18 30 26.5	+1.4
	baz=72						
DRK				⇑iS	Sb	18 31 00.0	-2.6
	baz=72						
UCH	Uchtor	2.90	349	⇑iP	Pn	18 30 28.2	-0.4
	baz=48						
UCH				⇑iS	Sn	18 31 04.8	+1.1
	baz=48						
UCH	Uchtor	2.90	349	P	Pn	18 30 28.4	-0.2
	SNR=8.7						
ULHL	Ulahol	2.97	15	⇑iP	Pn	18 30 28.5	-0.8
	baz=14						
ULHL				⇑iS	Sn	18 31 05.4	+0.3
	baz=14						
AML	Almayashu	2.99	338	⇑iP	Pn	18 30 29.7	0.0
	baz=36						
AML				⇑iS	Sn	18 31 06.9	+1.1
	baz=36						
AML	Almayashu	2.99	338	P	Pn	18 30 29.9	+0.2
	SNR=11						
KDJ	Kajisay	3.12	28	⇓iP	Pn	18 30 31.1	-0.3
	baz=28						
KDJ				⇓iS	Sn	18 31 09.2	+0.3
	baz=28						
BOOM	Boomskoye usch	3.16	10	⇓eP	Pn	18 30 31.5	-0.4
	baz=9.0						
BOOM				⇓iS	Sn	18 31 09.8	+0.1
	baz=9.0						
KBK	Karagaybulak	3.28	356	⇑iP	Pn	18 30 33.5	-0.1
	baz=56						
KBK				⇑iS	Sn	18 31 13.7	+0.9
	baz=56						
KBK	Karagaybulak	3.28	356	P	Pn	18 30 33.6	-0.1
	SNR=9.2						
AAK	Ala-Archa	3.30	351	⇑iP	Pn	18 30 33.5	-0.4
	baz=50						
AAK				⇑iS	Sn	18 31 14.1	+0.8
	baz=50						
AAK	Ala-Archa	3.30	351	P	Pn	18 30 34.2	+0.3
	SNR=12						
AAK	Ala-Archa	3.30	351	⇓Pg	Pn	18 30 32.4	-1.5
	4.5nm,0.6s,baz=160						
AAK				⇓Lg	Lg	18 31 16.8	
	14nm,0.7s						
EKS2	Erkin-Say	3.46	342	⇑iP	Pn	18 30 35.8	-0.2
	baz=41						
EKS2				⇑iS	Sn	18 31 18.1	+1.0
	baz=41						
TKM2	Tokmak 2	3.55	4	⇑iP	Pn	18 30 36.7	-0.6
	baz=4.0						
TKM2				⇑iS	Sn	18 31 19.5	0.0
	baz=4.0						
TKM2	Tokmak 2	3.55	4	P	Pn	18 30 36.9	-0.4
	SNR=5.5						
TKM2	Tokmak 2	3.55	4	⇓Pg	Pn	18 30 36.6	-0.7
	2.2nm,0.5s						
TKM2				⇑Lg	Lg	18 31 23.1	
	7.8nm,0.5s						
CHMS	Chumysh	3.64	354	⇑iP	Pn	18 30 38.3	0.0
	baz=54						
CHMS				⇑iS	Sn	18 31 21.9	+0.6
	baz=54						
CHMS	Chumysh	3.64	354	P	Pn	18 30 38.4	0.0
	SNR=6.2						
MRKS	Merke	3.69	336	Pg	Pn	18 30 39.9	+0.8
	2.8nm,0.5s						
MRKS				Lg	Lg	18 31 30.8	
	4.0nm,0.4s						
KST	Kastek	3.70	8	Pg	Pn	18 30 38.5	-0.9
	4.0nm,0.5s						
KST				Lg	Lg	18 31 28.5	
	8.0nm,0.6s						
TNSS	Tian-Shan	3.88	19	Pg	Pn	18 30 41.3	-0.7
	2.4nm,0.3s						
TNSS				Lg	Lg	18 31 33.5	
	4.1nm,0.8s						
DGS	Degeres	3.88	6	Pg	Pn	18 30 41.3	-0.5
	4.8nm,0.5s						
DGS				Lg	Lg	18 31 33.5	
	9.9nm,0.8s						
USP	Ospenovka	3.92	352	⇑iP	Pn	18 30 42.2	-0.1
	baz=51						
USP				⇑iS	Sn	18 31 28.9	+0.5
	baz=51						
USP	Ospenovka	3.92	352	P	Pn	18 30 42.4	+0.1
	SNR=5.6						
MDOK	Medeo	4.02	19	⇓Pg	Pn	18 30 44.6	+0.8
	1.7nm,0.6s						
MDOK				Lg	Lg	18 31 37.1	
	6.4nm,0.7s						
MDOK	Medeo	4.02	19	Pg	Pn	18 30 43.4	-0.4
	2.1nm,0.7s						
MDOK				Lg	Lg	18 31 37.5	
	5.3nm,0.9s						
SGDS	Sogindy	4.10	354	Pg	Pn	18 30 44.9	+0.2
	1.8nm,0.4s						
SGDS				Lg	Lg	18 31 39.4	
	2.0nm,0.7s						
KRBS	Karabastau	4.33	4	Pg	Pn	18 30 49.3	+1.4
	0.8nm,0.7s						
KRBS				Lg	Lg	18 31 47.2	
	9.2nm,0.3s						
CHKK	Chushkaly	4.66	16	Pg	Pn	18 30 55.1	+2.7
	0.4nm,0.1s						
CHKK				Lg	Lg	18 31 57.3	
	6.3nm,0.5s						
KK31	Karatay Array	5.15	318	⇓Lg	Lg	18 32 17.9	
	1.2nm,0.7s						

*NEIC **18** 18:32:59.3±2.8, 17°.9S±0°.2×177°.2W±0°.1, h388km±9km, mb4.5/16, Error ellipse: s-maj=24.6km s-min=15.3km az=164.0*

*NOU **18** 18:33:00.2, 17°.75S×177°.03W, h409km, mb4.6, Fiji Islands Region*

*IDC **18** 18:33:03.4±1.2, 17°.97S×177°.32W, h422km±11km, mb3.7/18, mb1 3.9/20, mb1mx3.8/37, mbtmp4.5/20, Error ellipse: s-maj=13.4km s-min=9.8km az=137.0*

ISC 18 18:33:00.1±0.4**, 17°.91S**±0°.08×**177°.13W**±0°.06**, h400**km**, n114,** σ1ˢ.**24**/115**, mb4.4**/32**, 6C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.60	271	P	Pn	18 34 19.9	+1.7
	41nm,0.3s,baz=115,slow=15,SNR=343						
MSVF				S	S	18 35 24.2	+2.7
	baz=315,slow=22,SNR=0.7						
MSVF	Nonsavu	4.60	271		Pn	18 34 19.8	+1.6
MSVF	Nonsavu	4.60	271	P	Pn	18 34 20.1	+1.9
AFI	Afiamalu	6.50	53		Pn	18 34 35.6	-2.8
NIUE	Niue	6.93	101	P	P	18 34 44.0	+0.3
RAO	Raoul Island	11.32	184	S	S	18 37 36.1	-1.7
	22nm,0.3s,baz=267,slow=23,SNR=1.4						
DVP	Devils Point	13.99	268	P	Pn	18 36 04.0	-0.4
	44µm,0.6s						
MARNC	Mare, Loyalty	14.42	253	P	P	18 36 07.6	+1.2
LIFNC	LIFOU	15.03	257	P	P	18 36 12.8	-0.2
SANVU	Saraoutou	15.21	277		P	18 36 14.5	-0.5
SANVU	Saraoutou	15.21	277	P	P	18 36 15.4	+0.4
PINNC	Pines Island,	15.21	250	P	P	18 36 16.3	+1.4
YATNC	Mamie plateau,	15.58	252	P	P	18 36 20.0	+1.0
OUENC	Ouen Island, N	15.71	251	P	P	18 36 21.1	+0.8
DZM	Mont Dzumac	15.99	252	P	P	18 36 23.9	+0.5
	0.9nm,0.3s,baz=90,slow=22,SNR=14						
DZM	Mont Dzumac	15.99	252		P	18 36 22.7	-0.7
DZM				IAmb	IAmb	18 36 29.5	
	comp=Z,21nm,0.7s						
DZM	Mont Dzumac	15.99	252	P	P	18 36 24.1	+0.7
NOUC	Port Laguerre	16.12	252	P	P	18 36 26.1	+1.3
URZ	Urewera	20.90	193	P	P	18 37 13.3	+0.7
	comp=Z,7.0nm,0.3s,baz=279,slow=2.3,SNR=16						
URZ				S	S	18 40 35.8	-2.7
	comp=Z,3.9nm,0.6s,baz=216,slow=19,SNR=1.3						
BKZ	Black Stump Fm	21.90	193	P	P	18 37 21.7	-0.1
HNR	Honiara	23.79	288	P	P	18 37 40.0	+0.8
	comp=Z,61nm,0.8s,baz=191,slow=1.2,SNR=8.2						
HNR	Honiara	23.79	288	P	P	18 37 38.8	-0.4
CTAO	Charters Tower	34.65	260	P	P	18 39 13.8	-0.3
CTAO				IAmb	IAmb	18 39 14.8	
	comp=Z,18nm,0.9s						
CAN	Canberra	34.68	233	P	P	18 39 15.4	+1.2
CAN				IAmb	IAmb	18 39 16.4	
	comp=Z,24nm,1.1s						
STKA	Stephens Creek	39.70	241	P	P	18 39 57.0	+1.2
	comp=Z,23nm,0.5s,baz=90,slow=9.9,SNR=56						
STKA	Stephens Creek	39.70	241	P	P	18 39 56.6	+0.8
JAY	Jayapura	44.08	285	P	P	18 40 31.9	+0.8
	comp=Z,12nm,0.5s,baz=107,slow=6.2,SNR=9.8						
WR0	Warramunga Arr	45.64	259	P	P	18 40 41.9	-1.2
WB0	Warramunga Arr	45.80	260		P	18 40 43.2	-1.2
WB0				IAmb	IAmb	18 40 47.9	
	comp=Z,20nm,0.5s						
WB2	Warramunga Arr	45.82	259		P	18 40 43.5	-1.0
WB2				IAmb	IAmb	18 40 44.6	
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	45.82	259	P	P	18 40 43.4	-1.1
WRAB				IAmb	IAmb	18 40 44.5	
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	45.83	259	P	P	18 40 43.6	-1.0
	comp=Z,9.4nm,0.3s,baz=96,slow=7.2,SNR=134						
WRA				PcP	PcP	18 42 13.7	-0.6
	comp=Z,0.6nm,0.4s,baz=104,slow=2.8,SNR=1.9						
WRA				S	S	18 46 57.0	-1.1
	comp=Z,0.4nm,0.7s,baz=98,slow=13,SNR=2.2						
WRA	Warramunga Arr	45.83	259	P	P	18 40 42.8	-1.8
AS31	Alice Springs	45.97	254	P	P	18 40 45.4	-0.2
ASAR	Alice Springs	45.97	254	P	P	18 40 45.7	+0.1
	comp=Z,135nm,0.4s,baz=90,slow=8.2,SNR=6207						
ASAR				PcP	PcP	18 42 15.0	+0.2
	comp=Z,1.6nm,0.6s,baz=94,slow=3.7,SNR=2.2						
ASAR				S	S	18 46 56.9	-3.1
	comp=Z,1.4nm,0.8s,baz=91,slow=16,SNR=8.9						
ASAR	Alice Springs	45.97	254	P	P	18 40 44.5	-1.1
SIJI	Sorong	53.42	283	P	P	18 41 41.2	0.0
	comp=Z,23nm,0.6s,baz=131,slow=4.9,SNR=20						
SWI	Sorong	53.43	283	P	P	18 41 40.6	-0.6
	comp=Z,52nm,0.9s						
SOEI	Soe	57.29	270	P	P	18 42 08.0	-0.5
SOEI				IAmb	IAmb	18 42 19.9	
	comp=Z,32nm,0.9s						
SOEI	Soe	57.29	270	P	P	18 42 09.8	+1.3
	comp=Z,35nm,1.1s						
SANI	Sanana	57.95	279	P	P	18 42 13.0	+0.1
	comp=Z,19nm,0.8s						
MMRI	Maumere	59.52	270	P	P	18 42 22.4	-1.2
MMRI				IAmb	IAmb	18 42 29.5	
	comp=Z,16nm,1.1s						
EDFI	Ende, Flores	60.01	270	P	P	18 42 27.7	+0.7
VNDA	Vanda	60.55	185	P	P	18 42 31.0	+1.6
	comp=Z,1.2nm,0.7s,baz=358,slow=7.8,SNR=2.1						
LUWI	Luwuk	61.31	279	P	P	18 42 34.4	-1.2
LUWI				IAmb	IAmb	18 42 37.1	
	comp=Z,9.8nm,0.7s						
MJAR	Matsushiro Arr	68.64	323	P	P	18 43 20.9	-0.8
	comp=Z,3.6nm,0.7s,baz=156,slow=6.0,SNR=4.2						
MAT	Matsushiro	68.64	323	P	P	18 43 21.1	-0.6
PETK	Petropavlovsk-	73.99	345	P	P	18 43 53.0	0.0
	comp=Z,2.8nm,0.7s,baz=92,slow=10.0,SNR=7.2						
KSRS	Korea Array	75.52	318	P	P	18 44 03.0	+1.0
	comp=Z,1.9nm,0.7s,baz=124,slow=6.5,SNR=6.6						
USRK	Ussuriysk Ar.	77.31	325	P	P	18 44 13.1	+1.4
	comp=Z,1.0nm,0.6s,baz=177,slow=3.3,SNR=4.1						
NVAR	Mina Array Bea	78.58	43	P	P	18 44 21.4	+2.2
	comp=Z,1.8nm,0.8s,baz=226,slow=9.6,SNR=16						
NJ2	Nanjing	78.88	309	eP	P	18 44 16.8	-3.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KLR	Kul'dur	80.73	329	P	P	18 44 30.4	+0.5
	comp=Z,0.6nm,0.5s,baz=99,slow=7.1,SNR=4.1						
TXAR	Lajitas Array	84.97	57	P	P	18 44 55.6	+3.6
	comp=Z,2.3nm,0.9s,baz=224,slow=5.2,SNR=12						
ILAR	Eielson Array	85.61	13	P	P	18 44 54.5	+0.3
	comp=Z,0.4nm,0.5s,baz=222,slow=5.3,SNR=10.0						
PDAR	Pinedale Array	86.51	43	P	P	18 45 00.7	+1.2
	comp=Z,0.2nm,0.4s,baz=242,slow=3.2,SNR=3.0						
HHC	Hu-ho-hao-te	88.14	314	eP	P	18 45 02.1	-4.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.8s						
KMI	Kunming	88.92	297	⇓eP	P	18 45 09.8	-1.3
KMI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CMAR	Chiang Mai Arr	90.03	289	P	P	18 45 17.4	+1.2
	comp=Z,0.9nm,0.9s,baz=101,slow=3.0,SNR=7.5						
LZH	Lanzhou	91.86	307	⇑P	P	18 45 17.1	-7.3
LZH				pP	pP	18 46 51.3	-4.9
LZH				sP	sP	18 47 32.5	-4.7
LZH				PP	PP	18 49 07.3	-3.1
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,65nm,9.2s						
SONM	Songino Array	94.35	319	P	P	18 45 35.8	+0.3
	comp=Z,0.4nm,0.5s,baz=120,slow=3.8,SNR=4.4						
MKAR	Makanchi Array	110.01	314	PKiKP	PKiKP	18 50 44.1	-0.7
	comp=Z,0.2nm,0.5s,baz=81,slow=1.0,SNR=4.6						
ARU	Arti	123.52	327	PKP	PKPdf	18 51 10.5	+0.1
	comp=Z,1.0nm,0.4s,baz=153,slow=4.6,SNR=6.0						
ARCES	ARCESS Array B	126.52	350	PKP	PKiKP	18 51 16.6	+0.2
	comp=Z,4.7nm,1.0s,baz=57,slow=0.8,SNR=13						
FINES	FINESS Array B	133.51	345	PKP	PKiKP	18 51 30.4	-0.1
	comp=Z,5.2nm,1.1s,baz=122,slow=2.5,SNR=4.3						
AKASG	Malin Array Be	141.12	333	PKhKP	PKPpre	18 51 37.4	
	comp=Z,0.3nm,0.4s,baz=43,slow=4.1,SNR=4.2						
AKASG				PKP	PKiKP	18 51 45.3	-1.1
	comp=Z,0.2nm,0.4s,baz=39,slow=3.1,SNR=2.7						
VASR	Vaslui	144.73	330	⇓P	PKPab	18 51 50.7	+0.3
BURAR	Bucovina Array	145.17	333	⇓P	PKPab	18 51 52.9	+0.8
BURAR	Bucovina Array	145.17	333	PKPdf	PKPab	18 51 52.9	+0.8
KOLS	Kolonicke sedl	145.28	337	ePKP	PKPab	18 51 52.8	+0.4
BIZ	Bicaz	145.30	332	⇓P	PKPab	18 51 53.1	+0.6
TESR	Tescani	145.36	331	⇑P	PKPbc	18 51 52.4	+0.5
CRVS	Cervenica-Dubn	145.60	338	ePKP	PKPab	18 51 54.5	+0.9
BR131	Keskin Array S	145.64	316	PKPdf	PKPbc	18 51 53.5	+0.2
BRTR	Keskin Array B	145.64	316	PKPbc	PKPbc	18 51 53.4	+0.2
	comp=Z,2.7nm,0.6s,baz=125,slow=4.1,SNR=17						
CLL	Collm	145.71	349	i PKPbc	PKPbc	18 51 53.5	+0.7
	comp=Z,10.0nm,0.8s						
OSTC	Ostas	145.72	345	ePKP	PKPab	18 51 53.9	-0.1
CHVC	Chvalec	145.73	345	ePKP	PKPbc	18 51 53.6	+0.6
DPC	Dobruska-Polom	145.88	345	ePKP	PKPab	18 51 54.3	-0.4
BRG	Berggiesshubel	145.94	347	i PKP	PKPab	18 51 54.4	-0.5
BRG				Amp		18 51 56.2	
	comp=Z,4.0nm,0.8s						
BRG	Berggiesshubel	145.94	347	i PKP	PKPab	18 51 54.4	-0.5
BRG				Amp		18 51 56.2	
	comp=Z,4.0nm,0.8s						
KRLC	Kraliky	146.02	344	ePKP	PKPab	18 51 54.8	-0.4
HARR	Harsova	146.04	327	⇓P	PKPab	18 51 55.0	-0.4
LANS	Liptovska Anna	146.06	340	ePKP	PKPab	18 51 55.8	+0.4
MORC	Moravsky Berou	146.08	343	ePKP	PKPbc	18 51 54.8	+0.8
MLR	Muntele Rosu	146.45	330	⇓P	PKPbc	18 51 55.8	+0.5
VYHS	Vyhne	146.84	340	ePKP	PKPbc	18 51 56.4	+0.3
JAVC	Velka Javorina	146.87	342	ePKP	PKiKP	18 51 58.2	-0.2
VOIR		146.91	331	⇑P	PKPbc	18 51 57.4	+0.9
KRUC	Moravsky	147.04	344	ePKP	PKPbc	18 51 57.1	+0.5
ARR	Arges	147.15	331	⇑P	PKiKP	18 51 59.3	+0.2
MODS	Modra-Piesok	147.42	342	ePKP	PKPbc	18 51 58.3	+0.6
KHC	Kasperske Hory	147.67	347	ePKP	PKPbc	18 51 59.1	+0.8
GERES	GERESS Array B	147.91	346	PKPbc	PKiKP	18 52 00.1	-0.5
	comp=Z,2.5nm,0.7s,baz=15,slow=2.8,SNR=24						
GERES	GERESS Array B	147.91	346		PKPbc	18 51 59.8	+0.7
GZR	Gura Zlata	147.96	333	⇑P	PKPbc	18 51 59.6	+0.3
CONA	Conrad Observa	148.23	343	i P	PKPdf	18 51 47.6	-8.5
	comp=Z,4.1nm,0.6s,SNR=6.9						
BZS	Buzias	148.27	335	⇓P	PKPbc	18 52 00.5	+0.6
HERR	Herculane	148.52	333	⇓P	PKPbc	18 52 01.4	+0.8
MOA	Molln	148.71	345	eP	PKPdf	18 51 47.4	-9.3
	comp=Z,3.3nm,1.2s						
ARSA	Arzberg	148.94	343	eP	PKPdf	18 51 52.8	-4.3
	comp=Z,3.3nm,1.0s						
SOKA	Soboth	149.60	343	eP	PKPdf	18 51 56.1	-2.2
	comp=Z,2.0nm,0.6s						
KBA	Koelnbreinsper	149.65	346	eP	PKPdf	18 51 56.5	-1.9
	comp=Z,4.6nm,0.5s						
WATA	Walderalm	149.79	348	i P	PKPdf	18 51 50.4	-8.2
	comp=Z,3.7nm,0.5s,SNR=7.1						
RETA	Reutte	149.79	349	eP	PKPbc	18 52 01.9	-1.9
	comp=Z,2.4nm,0.5s						
WTTA	Wattenberg	149.85	348	i P	PKPdf	18 51 59.3	+0.6
	comp=Z,9.6nm,0.5s,SNR=15						
MOTA	Moosalm	149.87	349	eP	PKPdf	18 51 50.5	-8.3
	comp=Z,5.5nm,0.9s						
OBKA	Obir	149.88	344	eP	PKPbc	18 52 04.3	+0.3
	comp=Z,3.1nm,0.8s						
VTS	Vitosha	149.89	329	⇑P	PKiKP	18 52 05.3	+0.4
SQTA	Sankt Quirin	149.97	349	eP	PKiKP	18 52 05.1	+0.1
	comp=Z,2.7nm,0.6s						
MYKA	Terra Mystica	150.00	345	i P	PKPbc	18 52 04.1	-0.2
	comp=Z,3.9nm,0.5s,SNR=6.5						
DAVA	Damuels	150.14	350	eP	PKiKP	18 52 06.1	+0.8
	comp=Z,7.9nm,1.0s						
ABTA	Abfaltersbach	150.16	347	i P	PKPbc	18 52 05.0	+0.4
	comp=Z,6.8nm,0.5s,SNR=13						
FETA	Feichten	150.25	349	eP	PKiKP	18 52 05.8	+0.3
	comp=Z,4.6nm,0.8s						

*NNC **18** 18:35:17.8±0.7, 49°.28N×87°.42E, h2km±3km, mb3.8, mpv3.4, Error ellipse: s-maj=6.3km s-min=2.5km az=107.0*

*ASRS **18** 18:35:17.8±0.4, 49°N±2°×8°8E±°, h10km, MLh3.5/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 18 18:35:16.1±1.4**, 49°.23N**±0°.04×**87°.72E**±0°.03**, h3**km±12km**, n30,** σ1ˢ.**69**/54**, 7C-5D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	Jazzator, Alta	0.51	338	Pg	Pg	18 35 25.9	+0.1
DGZ				Sg	Sg	18 35 33.2	+0.8
CUR	Chagan-Uzun	0.96	25	Pg	Pg	18 35 34.1	-0.4
CUR				Sg	Sg	18 35 47.6	+0.6
CHBI	Chibit, Altay	1.09	353	Pg	Pg	18 35 37.0	-0.1
CHBI				Sg	Sn	18 35 52.8	-1.3
ULGR	Ulagan, Altay	1.40	6	Pg	Pn	18 35 42.1	-0.6
ULGR				Sg	Sg	18 36 02.2	+1.1
TEL	Teeli	2.40	41	Pg	Pb	18 35 59.8	-0.1
TEL				Sg	Sg	18 36 33.3	+0.2
UKR	Ust'-Kan	2.56	313	Pg	Pb	18 36 01.6	-1.0
UKR				Sg	Sg	18 36 36.5	-1.6
ARTR	Artybash	2.59	354	Pg	Pb	18 36 03.9	+0.8
ARTR				Sg	Sg	18 36 37.7	-1.4
ZSN	Zaisan	2.61	228	Pg	Pn	18 36 00.5	+1.3
	22nm,0.3s						
ZSN				Lg	Lg	18 36 32.5	
	140nm,0.5s						
GALT	Gorno-Altaysk,	2.96	338	Pg	Pb	18 36 10.7	+1.3
GALT				Sg	Sg	18 36 48.9	-2.2
TASR	Tashtagol	3.54	2	Pg	Pb	18 36 19.9	+0.7
TASR				Sg	Sg	18 37 08.9	-0.7
ELT	Eltsovka	4.14	348	Pg	Pb	18 36 31.8	+2.3
ELT				Sg	Sg	18 37 28.0	-1.1
TBTR	Tabat	4.16	26	Pg	Pb	18 36 32.2	+2.4
TBTR				Sg	Sg	18 37 29.4	-0.2
DJO	Djoy, Khakassi	4.19	30	Pg	Pb	18 36 32.6	+2.2
DJO				Sg	Sg	18 37 29.2	-1.2
DJOS	Djoyskaya Sosn	4.26	32	Pg	Pg	18 36 35.9	-1.7
DJOS				Sg	Sg	18 37 32.5	-0.3
CERR	Cheremushki	4.31	31	Pg	Pb	18 36 36.0	+3.5
CERR				Sg	Sg	18 37 32.5	-2.0
VEH	Verkhnyaya Baz	4.35	21	Pg	Pb	18 36 36.2	+3.1
VEH				Sg	Sg	18 37 31.5	-4.1
MK31	Makanchi Array	4.38	238	Pn	Pn	18 36 23.9	+0.3
	0.1nm,0.1s,baz=51,slow=14,SNR=84						
MK31				⇑Pg	Pb	18 36 34.8	+1.1
	8.1nm,0.6s						
MK31				⇓Sn	Sn	18 37 14.8	-0.4
	5.5nm,0.5s,baz=56,slow=22,SNR=4.0						
MK31				Lg	Lg	18 37 32.8	
	10nm,0.5s,baz=45,slow=29,SNR=11						
MKAR	Makanchi Array	4.38	238	Pn	Pn	18 36 24.6	+1.1
LUZB	Luzhba, Kemero	4.50	9	Pg	Pb	18 36 37.5	+1.9
LUZB				Sg	Sg	18 37 41.2	+0.8
MAKZ	Makanchi	4.55	240	Pn	Pn	18 36 26.1	+0.2
MAKZ				Pg	Pb	18 36 37.9	+1.3
MAKZ				⇑Lg	Lg	18 37 38.0	
	28nm,0.6s						
BLRR	Bol'shaya Rech	4.83	36	Pg	Pb	18 36 44.9	+3.6
BLRR				Sg	Sg	18 37 50.7	-0.4
ARDR	Aradan	4.93	45	Pg	Pb	18 36 45.1	+2.1
ARDR				Sg	Sg	18 37 53.1	-1.2
ERNS	Erzin	4.93	75	Sg	Sg	18 37 52.2	-2.1
KZLR	Kyzyl	4.96	57	Pg	Pb	18 36 48.4	+4.9
SEM	Semipalatinsk	4.98	287	Pg	Pb	18 36 46.1	+2.1
	2.9nm,0.2s						
SEM				Lg	Lg	18 37 50.4	
	16nm,0.3s						
ZAA0	Zalesovo Array	5.06	340	⇓Pn	Pn	18 36 33.2	+0.4
	0.5nm,0.5s						
ZAA0				⇑Pg	Pb	18 36 47.7	+2.5
	1.0nm,0.7s						
ZAA0				⇓Sn	Sn	18 37 31.8	+0.1
	1.5nm,0.5s						
ZAA0				⇑Lg	Lg	18 37 54.7	
	5.7nm,0.8s						
SHRR	Shira	5.48	15	Pg	Pb	18 36 55.2	+2.8
SHRR				Sg	Sg	18 38 13.2	+1.2
KURBB	Kurchatov Arra	6.10	287	⇑Pn	Pn	18 36 46.3	-0.8
	1.7nm,0.2s						
KURBB				⇓Sn	Sn	18 37 55.1	-2.1
	17nm,0.6s						
KURBB				⇑Lg	Lg	18 38 24.7	
	48nm,0.6s						
KAPS	Kapalarasan	6.92	238	Pg	Pb	18 37 15.8	-1.3
	1.7nm,0.2s						
KAPS				Lg	Lg	18 38 42.6	
	7.6nm,0.5s						
PDGK	Podgornoye	8.20	227	⇑Pn	Pn	18 37 16.0	-0.1
	2.0nm,0.9s						
PDGK				⇓Lg	Lg	18 39 34.2	
	6.5nm,0.7s						

IDC 18 18:37:35.2±10.0**, 25°.65N**×**123°.01E, h496**km±143km**, mb2.6**/6**, mb1 2.8**/6**, mb1mx2.5**/40**, mbtmp3.4**/6**, Error ellipse: s-maj=60.1km s-min=22.4km az=78.0, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	23.40	257	P	P	18 42 03.8	-1.1
	0.1nm,0.4s,baz=69,slow=7.6,SNR=4.1						
SONM	Songino Array	25.73	334	P	P	18 42 24.7	-0.7
	0.4nm,0.6s,baz=146,slow=9.8,SNR=3.0						
MKAR	Makanchi Array	38.48	314	P	P	18 44 15.5	+1.6
	0.3nm,0.5s,baz=100,slow=9.2,SNR=4.4						
ZALV	Zalesovo Beam	39.96	325	P	P	18 44 25.5	-0.2
	0.4nm,0.5s,baz=106,slow=9.2,SNR=2.0						
WRA	Warramunga Arr	46.63	165	P	P	18 45 18.9	+0.5
	0.5nm,0.4s,baz=349,slow=8.5,SNR=2.2						
YKA	Yellowknife Ar	80.98	23	P	P	18 48 56.6	-0.6
	0.1nm,0.5s,baz=302,slow=5.2,SNR=5.7						

*IDC **18** 18:54:53.5±0.8, 16°.89S×14°.32W, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.1/33, mbtmp4.2/14, MS3.8/23, Ms1 3.8/23, ms1mx3.7/36, Error ellipse: s-maj=26.9km s-min=18.4km az=131.0*

*NEIC **18** 18:54:54.7±1.2, 16°.8S±0°.2×14°.4W±0°.2, h10km±1km, mb4.7/16, Error ellipse: s-maj=31.1km s-min=21.4km az=144.0*

*GCMT **18** 18:54:56.7±0.3, 16°.95S±0°.05×14°.27W±0°.04, h19km±1km, MW4.8/82, Moment Tensor Solution. s13,c13; s82,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.29±.21; $M_{\theta\theta}$0.48±.12; $M_{\phi\phi}$1.81±.14; $M_{r\theta}$-0.42±.39; $M_{\theta\phi}$-0.27±.08; $M_{\phi r}$-1.00±.30; Best double couple: $M_0$2.32400×10^{16} NP1:ϕ_s161.00000°,δ34.00000°,λ-108.00000°. NP2: ϕ_s2.00000°,δ58.00000°,λ-78.00000°. Principal axes: T 2.0570, Plg12.0000°, Azm84.0000°; N 0.5360, Plg10.0000°, Azm176.0000°; P -2.5920, Plg74.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 18:54:54.9±0.8**, 16°.9S**±0°.2×**14°.4W**±0°.1**, h10**km**, n49,** σ1ˢ.**23**/34**, mb4.5**/20**, MS3.9**/23**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N1	ASCENSION HYDR	9.02	359	T	T	19 06 17.4	
	baz=186,slow=78,SNR=11						
H10N3	ASCENSION HYDR	9.02	359	T	T	19 06 11.6	
	baz=186,slow=78,SNR=20						
H10N2	ASCENSION HYDR	9.03	359	T	T	19 06 14.1	
	baz=186,slow=78,SNR=10						
RCBR	Riachuelo	23.78	295	P	P	19 00 08.9	+1.0
	13nm,0.9s,baz=83,slow=7.6,SNR=4.6						
RCBR				LR	LR	19 07 42.2	
	comp=Z,254nm,18.8s,baz=138,slow=32						
RCBR	Riachuelo	23.78	295	P	P	19 00 08.5	+0.5
RCBR				IAmb	IAmb	19 00 13.3	
	comp=Z,27nm,1.1s						
LIC	Lamto	24.78	23	eP	P	19 00 21.7	+4.6
	comp=Z,1.9nm,0.3s						
KIC	Kosan Boka	25.01	23	eP	P	19 00 18.8	-0.4
	comp=Z,96nm,1.5s						
TIC	Toumodi	25.17	22	eP	P	19 00 21.2	+0.5
DBIC	Dimbokro	25.25	23	P	P	19 00 20.5	-1.0
	comp=Z,11nm,1.1s,baz=182,slow=9.4,SNR=5.2						
DBIC				LR	LR	19 07 51.5	
	comp=Z,163nm,20.0s,baz=184,slow=31						
DBIC	Dimbokro	25.25	23	P	P	19 00 20.4	-1.0
DBIC				IAmb	IAmb	19 00 29.2	
	comp=Z,27nm,1.1s						
BDFB	Brasilia	32.30	267	P	P	19 01 23.2	-1.2
	comp=Z,0.9nm,0.4s,baz=109,slow=10,SNR=2.3						
BDFB				LR	LR	19 11 47.0	
	comp=Z,502nm,21.6s,baz=122,slow=31						
BDFB	Brasilia	32.30	267	P	P	19 01 23.5	-1.0
BDFB				IAmb	IAmb	19 01 25.2	
	comp=Z,8.7nm,1.4s						
KOWA	Kowa	32.84	19	P	P	19 01 28.5	-0.5
	comp=Z,6.2nm,0.8s,baz=199,slow=6.6,SNR=8.8						
KOWA	Kowa	32.84	19	P	P	19 01 28.2	-0.8
KOWA				IAmb	IAmb	19 01 35.9	
	comp=Z,9.9nm,1.0s						
TOA0	Torodi Ar. Sit	33.83	29	P	P	19 01 36.4	-1.2
TORD	Torodi Ar. Bea	33.83	29	P	P	19 01 36.5	-1.1
	comp=Z,6.0nm,0.9s,baz=214,slow=8.6,SNR=13						
TORD				LR	LR	19 13 19.1	
	comp=Z,259nm,18.3s,baz=200,slow=33						
TORD	Torodi Ar. Bea	33.83	29	P	P	19 01 36.1	-1.5
BOSA	Boshof	38.19	115	LR	LR	19 15 08.4	
	comp=Z,189nm,20.1s,baz=275,slow=32						
CPUP	Villa Florida	40.86	249	P	P	19 02 39.0	+1.7
	comp=Z,0.6nm,0.5s,baz=140,slow=10,SNR=3.0						
CPUP				LR	LR	19 18 06.7	
	comp=Z,161nm,18.4s,baz=70,slow=34						
CPUP	Villa Florida	40.86	249	P	P	19 02 37.4	+0.2
SAML	Samuel	48.12	273	P	P	19 03 36.0	+0.5
SAML				IAmb	IAmb	19 03 43.7	
	comp=Z,7.0nm,1.1s						
CO01	Juntas del Tor	52.30	245	P	P	19 04 07.9	+0.6
CO01				IAmb	IAmb	19 04 16.5	
	comp=Z,8.8nm,1.1s						
PB07	IPOC Station P	52.38	255	P	P	19 04 05.6	-2.3
PB07				IAmb	IAmb	19 04 10.2	
	comp=Z,9.6nm,0.9s						
GO03	Copiap	52.41	248	P	P	19 04 07.5	-0.4
GO03				IAmb	IAmb	19 04 25.4	
	comp=Z,5.4nm,0.7s						
PB14	IPOC Station P	52.65	252	P	P	19 04 09.9	-0.2
PATCX	Punta Patache	52.71	256	P	P	19 04 10.2	-0.1
GO04	Tololo Observa	52.91	245	P	P	19 04 11.6	-0.3
PLCA	Paso Flores	53.64	232	LR	LR	19 24 37.5	
	comp=Z,213nm,19.5s,baz=146,slow=33						
KEST	Kesra	56.98	23	P	P	19 04 41.9	+1.0
	comp=Z,5.4nm,1.0s,baz=188,slow=7.1,SNR=2.8						
KEST				LR	LR	19 27 50.6	
	comp=Z,86nm,20.1s,baz=284,slow=35						
ESDC	Sonseca Array	57.13	10	P	P	19 04 42.7	+0.9
	comp=Z,0.8nm,0.9s,baz=188,slow=7.5,SNR=2.7						
ESDC				LR	LR	19 26 59.7	
	comp=Z,44nm,19.7s,baz=160,slow=34						
VAE	Valguarnera	60.51	26	LR	LR	19 29 43.8	
	comp=Z,749nm,20.7s,baz=166,slow=35						
ROSC	El Rosal	63.03	285	LR	LR	19 31 31.9	
	comp=Z,206nm,19.4s,baz=78,slow=35						
ATAH	Atahualpa	63.14	270	LR	LR	19 32 01.8	
	comp=Z,146nm,18.0s,baz=138,slow=35						
MAW	Mawson	69.63	157	P	P	19 06 04.3	+0.1
	comp=Z,3.8nm,0.3s,baz=77,slow=3.1,SNR=25						
MAW				LR	LR	19 28 27.1	
	comp=Z,121nm,19.8s,baz=242,slow=29						
MAW	Mawson	69.63	157	P	P	19 06 04.6	+0.4
GERES	GERESS Array B	70.07	19	P	P	19 06 06.8	-0.4
	comp=Z,0.2nm,0.5s,baz=218,slow=7.2,SNR=2.2						
BR131	Keskin Array S	71.95	37	P	P	19 06 18.8	-0.1
BR131				IAmb	IAmb	19 06 27.0	
	comp=Z,6.4nm,0.9s						
BRTR	Keskin Array B	71.95	37	P	P	19 06 20.0	+1.1
	comp=Z,0.9nm,0.8s,baz=205,slow=6.1,SNR=9.0						
BRTR				LR	LR	19 38 33.4	
	comp=Z,8.4nm,20.7s,baz=231,slow=36						
BRTR	Keskin Array B	71.95	37	P	P	19 06 18.7	-0.1
AKASG	Malin Array Be	77.43	27	P	P	19 06 49.2	-0.9
	comp=Z,1.2nm,0.7s,baz=222,slow=4.8,SNR=5.8						
AKASG				LR	LR	19 42 28.4	
	comp=Z,21nm,18.8s,baz=190,slow=37						
KBZ	Khabaz	79.86	38	P	P	19 07 02.9	-0.8
	comp=Z,1.5nm,0.9s,baz=248,slow=5.4,SNR=2.4						
KBZ				LR	LR	19 43 06.9	
	comp=Z,29nm,18.4s,baz=165,slow=36						
NOA	NORSAR Array B	80.35	12	LR	LR	19 42 39.2	
	comp=Z,20nm,18.2s,baz=145,slow=36						
TKL	Tuckaleechee C	83.89	310	LR	LR	19 43 30.0	
	comp=Z,29nm,18.0s,baz=117,slow=35						
FINES	FINESS Array B	84.47	18	LR	LR	19 46 25.5	
	comp=Z,41nm,18.1s,baz=218,slow=37						
SADO	Sadowa	84.97	320	LR	LR	19 37 12.0	
	comp=Z,36nm,21.0s,baz=128,slow=30						
VNDA	Vanda	85.73	179	LR	LR	19 43 13.8	
	comp=Z,34nm,19.0s,baz=190,slow=34						
GEYT	Alibeck	87.09	49	LR	LR	19 46 49.9	
	comp=Z,40nm,18.1s,baz=45,slow=36						
ARCES	ARCESS Array B	90.71	13	LR	LR	19 49 21.9	
	comp=Z,39nm,18.2s,baz=285,slow=36						
TXAR	Lajitas Array	97.50	298	P	P	19 08 29.6	-0.1
	comp=Z,0.4nm,0.8s,baz=100,slow=5.0,SNR=4.0						

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*IDC **18** 18:58:24.1±4.6, 19°.99S×169°.27E, h0^{km}, mb3.0/2, mb1 3.4/3, mb1mx3.3/31, mbtmp3.2/3, ML3.7/1, Error ellipse: s-maj=151.2km s-min=43.3km az=135.0*

*NOU **18** 18:58:29.2, 20°.74S×169°.40E, h11^{km}, MLv4.0, Vanuatu Islands*

ISC 18 18:58:28.8±2.0**, 20°.8S**±0°.1×**169°.6E**±0°.2**, h35^{km}, n12, σ1^{s}57**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.58	243	P	Pn	18 58 55.4	+1.1
LIFNC	LIFOU	2.16	270	P	Pn	18 59 02.7	+0.5
PINNC	Pines Island,	2.67	227	P	Pn	18 59 10.7	+1.4
YATNC	Mamie plateau,	2.78	242	P	Pn	18 59 11.9	+1.1
OUENC	Ouen Island, N	3.00	237	P	Pn	18 59 15.7	+1.9
DZM	Mont Dzumac	3.16	245	Pn	Pn	18 59 17.5	+1.4
	7.6nm,0.3s,baz=116,slow=16,SNR=346						
DZM				Sn	Sn	18 59 51.9	-0.8
	23nm,0.3s,baz=112,slow=17,SNR=10						
DZM	Mont Dzumac	3.16	245	P	Pn	18 59 18.0	+1.8
NOUC	Port Laguerre	3.29	246	P	Pn	18 59 19.8	+1.9
DVP	Devils Point	3.30	337	P	Pn	18 59 19.6	+1.7
WRA	Warramunga Arr	32.98	265	P	P	19 05 00.4	-0.2
	0.1nm,0.7s,baz=90,slow=8.4,SNR=1.5						
ASAR	Alice Springs	33.07	258	P	P	19 05 00.1	-1.2
	0.2nm,0.6s,baz=89,slow=9.4,SNR=1.7						
GERES	GERESS Array B	145.97	331	PKPbc	PKPdf	19 18 02.5	-1.6
	0.6nm,0.6s,baz=30,slow=3.4,SNR=7.1						

IDC 18 19:06:10.5±35.0**, 59°.31S**×**148°.08E, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/25**, mbtmp4.0**/3**, Error ellipse: s-maj=609.7km s-min=208.8km az=151.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	27.78	348	P	P	19 12 01.8	+0.9
	2.7nm,0.7s,baz=148,slow=11,SNR=4.7						
H01W1	Cape Leeuwin H	33.00	303	T	T	19 46 11.3	
	baz=144,slow=75,SNR=27						
H01W2	Cape Leeuwin H	33.00	303	T	T	19 46 12.3	
	baz=144,slow=75,SNR=32						
H01W3	Cape Leeuwin H	33.01	303	T	T	19 46 13.1	
	baz=144,slow=75,SNR=23						
ASAR	Alice Springs	37.00	338	P	P	19 13 21.2	-0.4
	1.0nm,0.8s,baz=164,slow=9.4,SNR=10						
WRA	Warramunga Arr	40.55	340	P	P	19 13 51.0	-0.4
	1.5nm,0.7s,baz=166,slow=7.6,SNR=24						
H08S2	Diego Garcia H	76.11	279	T	T	20 41 05.5	
	baz=147,slow=76,SNR=11						
H08S1	Diego Carcia H	76.12	279	T	T	20 41 02.4	
	baz=147,slow=76,SNR=9.9						
H08S3	Diego Garcia H	76.13	279	T	T	20 41 07.0	
	baz=147,slow=76,SNR=9.6						

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*NEIC **18** 19:07:11.7±0.5, 17°.6S±0°.1×171°.7W±0°.1, h23^{km}±6^{km}, mb4.7/6, Error ellipse: s-maj=17.8km s-min=13.7km az=162.0*

*IDC **18** 19:07:18.1±2.5, 17°.60S×172°.17W, h48^{km}±21^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/39, mbtmp4.2/11, ML4.9/1, MS3.7/17, Ms1 3.7/17, ms1mx3.5/37, Error ellipse: s-maj=24.2km s-min=13.4km az=137.0*

ISC 18 19:07:12.6±0.6**, 17°.6S**±0°.1×**171°.97W**±0°.09**, h15^{km}, n50, σ1^{s}45**/38**, mb4.3**/14**, MS3.7**/17**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.67	3	Pn	Pn	19 08 07.1	-1.8
MSVF	Nonsavu	9.52	268	P	Pn	19 09 30.7	+1.5
	0.4nm,0.3s,baz=117,slow=12,SNR=12						
MSVF				LR	LR	19 12 42.9	
	comp=Z,759nm,19.4s,baz=62,slow=35						
MSVF	Nonsavu	9.52	268	Pn	Pn	19 09 30.9	+1.6
RAR	Rarotonga	12.05	109	P	Pn	19 09 58.6	-5.3
	4.5nm,0.3s,baz=258,slow=6.1,SNR=11						
RAR				S	Sn	19 12 02.5	-16
	0.6nm,0.3s,baz=193,slow=24,SNR=2.5						
RAR				LR	LR	19 13 35.3	
	comp=Z,175nm,21.5s,baz=282,slow=31						
RAR	Rarotonga	12.05	109		Pn	19 09 59.4	-4.6
DZM	Mont Dzumac	20.79	254	P	Pn	19 11 57.4	+1.6
	6.1nm,0.9s,baz=73,slow=21,SNR=6.4						
DZM				LR	LR	19 18 39.4	
	comp=Z,286nm,19.2s,baz=90,slow=33						
DZM	Mont Dzumac	20.79	254	eLQ	LQ	19 16 07.2	
	749nm,28.3s						
DZM				eLR	LR	19 16 57.7	
	comp=Z,543nm,26.2s						
PAE	Paea	21.34	94	eT	T	19 31 38.4	
	2.5nm,0.3s						
PPT2	Papeete2	21.34	93	eS	S	19 15 52.8	-3.5
	110nm,29.8s						
PPT2				eLQ	LQ	19 16 08.2	
	444nm,39.2s						
PPT2				eLR	LR	19 16 56.8	
	comp=Z,441nm,25.8s,baz=265						
PPT	Papeete	21.35	93	LR	LR	19 17 49.9	
	comp=Z,120nm,20.0s,baz=238,slow=29						
TBI	Tubuai	21.84	109	eLQ	LQ	19 16 20.3	
	562nm,26.5s						
TBI				eLR	LR	19 17 16.9	
	comp=Z,330nm,29.5s						
URZ	Urewera	22.70	203	P	P	19 12 13.4	-0.3
	11nm,0.8s,baz=16,slow=7.4,SNR=4.5						
URZ				S	S	19 16 20.5	-1.1
	8.8nm,0.8s,baz=179,slow=14,SNR=2.6						
URZ				LR	LR	19 23 06.2	
	comp=Z,78nm,19.1s,baz=30,slow=42						
HNR	Honiara	28.46	283	LR	LR	19 22 48.2	
	comp=Z,88nm,19.9s,baz=155,slow=33						
CTA	Charters Tower	39.55	260	P	P	19 14 43.0	-0.4
	6.3nm,0.8s,baz=89,slow=10,SNR=10						
CTAO	Charters Tower	39.55	260	P	P	19 14 42.7	-0.6
STKA	Stephens Creek	44.18	242	P	P	19 15 20.9	-0.2
	3.2nm,0.8s,baz=75,slow=12,SNR=4.6						
STKA				LR	LR	19 32 04.9	
	comp=Z,93nm,18.6s,baz=36,slow=34						
WB0	Warramunga Arr	50.69	259	P	P	19 16 11.4	-0.5
WB0				IAmb	IAmb	19 16 13.5	
	comp=Z,9.2nm,0.9s						
WB2	Warramunga Arr	50.70	258	P	P	19 16 10.8	-1.3
WRAB	Tennant Creek	50.71	258	P	P	19 16 11.3	-0.8
WRAB				IAmb	IAmb	19 16 13.7	
	comp=Z,5.6nm,0.8s						
WRA	Warramunga Arr	50.72	258	P	P	19 16 11.1	-1.1
	comp=Z,5.2nm,0.8s,baz=94,slow=7.5,SNR=36						
WRA				LR	LR	19 36 12.2	
	comp=Z,128nm,20.9s,baz=120,slow=34						
WRA	Warramunga Arr	50.72	258	P	P	19 16 11.1	-1.1
AS31	Alice Springs	50.77	254	P	P	19 16 12.0	-0.6
AS31				IAmb	IAmb	19 16 15.7	
	comp=Z,7.2nm,0.8s						
ASAR	Alice Springs	50.77	254	P	P	19 16 12.1	-0.5
	comp=Z,26nm,0.7s,baz=92,slow=7.4,SNR=98						
ASAR				S	S	19 23 24.0	-4.1
	comp=Z,1.3nm,0.9s,baz=86,slow=16,SNR=8.7						
ASAR				LR	LR	19 36 59.3	
	comp=Z,54nm,19.0s,baz=102,slow=35						
FITZ	Fitzroy Crossi	59.12	259	P	P	19 17 14.4	+1.4
	comp=Z,1.7nm,0.7s,baz=45,slow=4.3,SNR=2.5						
VNDA	Vanda	61.35	186	P	P	19 17 29.1	+1.8
	comp=Z,2.3nm,0.9s,baz=0.2,slow=7.4,SNR=3.0						
NWAO	Narrogin (SRO)	64.76	241	LR	LR	19 42 16.2	
	comp=Z,90nm,20.0s,baz=50,slow=32						
MJAR	Matsushiro Arr	71.49	320	LR	LR	19 44 18.8	
	comp=Z,26nm,21.8s,baz=150,slow=31						
LPIG	La Paz	73.04	57	LR	LR	19 42 34.8	
	comp=Z,54nm,18.8s,baz=22,slow=29						
PFO	Pinyon Flats O	73.43	46	LR	LR	19 42 56.9	
	comp=Z,52nm,19.5s,baz=231,slow=29						
NVAR	Mina Array Bea	75.06	41	P	P	19 18 56.4	+2.3
	comp=Z,0.9nm,0.8s,baz=228,slow=11,SNR=5.7						
TXAR	Lajitas Array	80.71	55	P	P	19 19 26.5	+0.8
	comp=Z,0.3nm,0.4s,baz=215,slow=7.7,SNR=2.4						
TXAR				LR	LR	19 50 33.6	
	comp=Z,41nm,18.3s,baz=0.0,slow=32						
PDAR	Pinedale Array	82.99	41	P	P	19 19 38.8	+1.2
	comp=Z,0.8nm,0.8s,baz=241,slow=3.1,SNR=5.6						
PDAR				LR	LR	19 48 52.5	
	comp=Z,42nm,20.1s,baz=121,slow=30						
SEY	Seymchan	84.99	344	P	P	19 19 48.0	+1.1
	comp=Z,1.0nm,0.5s,baz=96,slow=6.2,SNR=6.1						
PLCA	Paso Flores	87.03	132	LR	LR	19 49 13.9	
	comp=Z,39nm,20.9s,baz=162,slow=29						
YKA	Yellowknife Ar	91.56	23	LR	LR	19 53 16.7	
	comp=Z,93nm,21.3s,baz=0.0,slow=30						
AKASG	Malin Array Be	142.88	338	PKP	PKPdf	19 26 45.4	-0.1
	comp=Z,0.4nm,0.5s,baz=46,slow=5.3,SNR=2.4						
KMBO	Kilima Mbogo	145.73	240	PKPbc	PKPab	19 26 53.6	+0.9
	comp=Z,5.6nm,0.9s,baz=134,slow=1.3,SNR=14						
GERES	GERESS Array B	148.49	353	PKPbc	PKPbc	19 26 57.4	-1.5
	comp=Z,0.5nm,0.3s,baz=70,slow=12,SNR=8.8						
BRTR	Keskin Array B	148.72	320	PKPbc	PKiKP	19 27 00.8	-0.5
	comp=Z,1.4nm,0.8s,baz=140,slow=2.9,SNR=10						
MOA	Molln	149.40	352	eP	PKPbc	19 26 59.7	-1.4
	comp=Z,5.2nm,1.2s						
WATA	Walderalm	150.20	355	eP	PKiKP	19 27 04.1	0.0
	comp=Z,1.0nm,0.7s						
MOTA	Moosalm	150.22	356	eP	PKiKP	19 27 04.6	+0.4
	comp=Z,5.7nm,0.9s						
WTTA	Wattenberg	150.26	355	eP	PKiKP	19 27 04.4	+0.1
	comp=Z,4.0nm,0.6s						
SQTA	Sankt Quirin	150.34	356	eP	PKPdf	19 26 59.9	+1.6
	comp=Z,3.2nm,1.1s						
DAVA	Damuels	150.35	357	eP	PKiKP	19 27 05.7	+1.3
	comp=Z,4.3nm,0.9s						
SOKA	Soboth	150.43	350	eP	PKiKP	19 27 04.9	+0.5
	comp=Z,3.4nm,1.0s						
FETA	Feichten	150.57	356	eP	PKiKP	19 27 05.0	+0.1
	comp=Z,2.5nm,0.9s						
OBKA	Obir	150.67	351	eP	PKPbc	19 27 01.9	-2.4
	comp=Z,11nm,1.9s						
MYKA	Terra Mystica	150.68	352	eP	PKPab	19 27 10.5	-0.6
	comp=Z,3.4nm,1.1s						
ABTA	Abfaltersbach	150.69	354	eP	PKPbc	19 27 04.6	+0.2
	comp=Z,3.1nm,0.7s						

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*SCB **18** 19:12:11.2±2.0, 21°.47S×67°.22W, h181^{km}±14^{km}, ML3.4/3, Error ellipse: s-maj=8.4km s-min=5.9km az=0.0*

*GUC **18** 19:12:11.1±0.7, 21°.41S×67°.46W, h217^{km}±6^{km}, ML4.0*

ISC 18 19:12:08.2±1.7**, 21°.44S**±0°.05×**67°.21W**±0°.05**, h199^{km}**±15^{km}**, n31, σ1^{s}51**/52**, 7D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.47	83	P	Pn	19 12 43.2	+1.1
MOCB				S	Sn	19 13 05.9	-2.3
MOCB				IAML		19 13 09.9	
	173nm,0.4s						
YJA	Yavi	1.74	115	P	Pn	19 12 45.6	+1.1
PB09	IPOC Station P	1.93	259	iP	Pn	19 12 48.1	+2.0
PB09				eS	Sn	19 13 16.7	+1.3
PB09				IAML		19 13 20.6	
	comp=N,174nm,0.2s						
PB09	IPOC Station P	1.93	259	P	Pn	19 12 46.9	+0.8
PB09				S	Sn	19 13 12.9	-2.5
PB09				IAML		19 13 20.3	
	comp=N,138nm,0.5s						
LVC	Limon Verde	1.96	233	⇓iP	Pn	19 12 48.8	+2.1
LVC				eS	Sn	19 13 17.8	+1.3
PB08	IPOC Station P	2.23	305	⇓iP	Pn	19 12 51.3	+1.8
PB08				iS	Sn	19 13 22.0	+0.5
PB08	IPOC Station P	2.23	305	P	Pn	19 12 50.5	+1.0
PB02	IPOC Station P	2.51	272	iP	Pn	19 12 53.3	+1.1
PB02				eS	Sn	19 13 25.2	-1.2
PB02				iS	Sn	19 13 25.4	-1.1
PB02				IAML		19 13 26.0	
	comp=N,1µm,0.4s						
PB02	IPOC Station P	2.51	272	P	Pn	19 12 53.1	+0.9
PB02				S	Sn	19 13 23.6	-2.9
PB02				IAML		19 13 26.2	
	comp=N,258nm,0.5s						
PB07	IPOC Station P	2.51	263	⇓iP	Pn	19 12 53.4	+1.1
PB07				iS	Sn	19 13 25.7	-1.0
GO01	Chusmiza	2.56	313	⇓iP	Pn	19 12 54.6	+1.4
GO01				iS	Sn	19 13 28.6	+0.3
GO01				IAML		19 13 35.1	
	comp=N,397nm,0.1s						
HMBC	Humberstone	2.76	294	⇓iP	Pn	19 12 55.5	+0.4
HMBC				iS	Sn	19 13 29.9	-1.7
HMBC				IAML		19 13 30.9	
	comp=N,437nm,0.2s						
PATCX	Punta Patache	2.82	282	iP	Pn	19 12 56.4	+0.7
PATCX				iS	Sn	19 13 30.8	-2.0
PATCX				IAML		19 13 33.6	
	comp=E,472nm,0.2s						
PB04	IPOC Station P	2.88	251	eP	Pn	19 12 57.5	+1.0
PB04				iS	Sn	19 13 32.8	-1.4
PB04				IAML		19 13 36.5	
	comp=N,280nm,0.1s						
PB04	IPOC Station P	2.88	251	P	Pn	19 12 57.2	+0.7
TA01	Diego Aracena	2.91	287	iP	Pn	19 12 57.0	+0.3
TA01				eS	Sn	19 13 32.0	-2.6
TA01				IAML		19 13 32.8	
	comp=E,129nm,0.2s						
TA02	Huaiquique	2.97	292	iP	Pn	19 12 58.0	+0.5
TA02				iS	Sn	19 13 33.3	-2.5
TA02				IAML		19 13 36.5	
	comp=N,858nm,0.1s						
PB05	IPOC Station P	3.11	243	iP	Pn	19 13 00.4	+1.1
PB05				eS	Sn	19 13 38.0	-1.2
PB05				IAML		19 13 39.1	
	comp=N,174nm,0.4s						
MNMC	Minye Minye	3.21	315	⇓iP	Pn	19 13 01.9	+1.3
MNMC				eS	Sn	19 13 40.6	-0.9
MNMC	Minye Minye	3.21	315	P	Pn	19 13 01.7	+1.1
PSGC	Pisagua	3.29	303	iP	Pn	19 13 01.2	-0.2
PSGC				iS	Sn	19 13 40.0	-2.9
PSGC	Pisagua	3.29	303	P	Pn	19 13 02.1	+0.7
SLA	San Lorenzo	3.63	155	P	Pn	19 13 05.9	+0.4
PB10	IPOC Station P	3.72	236	eP	Pn	19 13 07.6	+1.1
PB10				iS	Sn	19 13 50.4	-1.8
PB10	IPOC Station P	3.72	236	P	Pn	19 13 07.3	+0.8
PB16	IPOC Station P	3.77	325	⇓iP	Pn	19 13 09.8	+2.1
PB16				iS	Sn	19 13 54.5	+0.3
PB14	IPOC Station P	4.33	222	iP	Pn	19 13 16.0	+1.6
PB14				eS	Sn	19 14 04.3	-2.1
BBOE	La Paz, Chanca	4.66	351	P	Pn	19 13 20.0	+1.2
BBOD	La Paz, Gloria	4.95	344	P	Pn	19 13 23.9	+1.4
SIV	San Ignacio	7.94	48	P	Pn	19 14 01.1	+0.3
LCO	Las Campanas	8.18	202	P	Pn	19 14 03.8	-0.2

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*IDC **18** 19:16:33.6±1.0, 63°.81N×148°.95W, h118^{km}±13^{km}, mb3.5/6, mb1 3.5/9, mb1mx3.2/52, mbtmp3.9/9, MS3.4/2, Ms1 3.4/2, ms1mx2.6/49, Error ellipse: s-maj=35.4km s-min=12.3km az=116.0*

*ANF **18** 19:16:35.8±0.3, 63°.95N×148°.84W, h113^{km}±3^{km}, ML3.3/16, Error ellipse: s-maj=2.7km s-min=2.0km az=86.0*

*NEIC **18** 19:16:35.1±0.9, 63°.94N±0°.03×148°.86W±0°.07, h120^{km}±2^{km}, Error ellipse: s-maj=5.0km s-min=4.5km az=141.0*

*AEIC **18** 19:16:35±1.1, 63°.93N±0°.03×148°.83W±0°.08, h112^{km}±4^{km}, ML3.3, mb3.8/2(NEIC), ML3.5/101(NEIC), Error ellipse: s-maj=4.8km s-min=4.6km az=88.0*

ISC 18 19:16:34.8±0.7**, 63°.94N**±0°.03×**148°.87W**±0°.03**, h121^{km}**±5^{km}**, n183, σ0^{s}81**/181**, mb4.0**/5**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCK	McKinley	0.21	187	P	Pn	19 16 52.0	+0.4
	baz=13,SNR=343						
MCK				S	Sn	19 17 04.2	-0.1
	baz=13						
MCK	McKinley	0.21	187		Pn	19 16 52.0	+0.4
MCK					Sn	19 17 04.3	0.0
BWN	Browne	0.35	312		Pn	19 16 52.5	+0.4
BWN					Sn	19 17 05.1	-0.1
BWN	Browne	0.35	312	IAML		19 17 05.4	
	comp=E,809nm,0.9s						
RND	Reindeer	0.54	179		Pn	19 16 53.3	+0.2
RND					Sn	19 17 06.6	-0.4
RND	Reindeer	0.54	179	IAML		19 17 07.0	
	comp=E,1µm,0.7s						
RND				IAML		19 17 07.6	
	comp=N,742nm,0.5s						
WRH	Wood River Hil	0.64	32		Pn	19 16 54.0	+0.3
WRH					Sn	19 17 08.1	0.0
NEA2	Nenana	0.66	353	P	Pn	19 16 54.3	+0.3
	baz=171,SNR=126						
NEA2				S	Sn	19 17 08.0	-0.5
	baz=171						
NEA2	Nenana	0.66	353		Pn	19 16 54.3	+0.3
NEA2					Sn	19 17 08.2	-0.2
TRF	Thorofare Moun	0.80	233		Pn	19 16 55.7	+0.5
TRF					Sn	19 17 10.7	0.0
TRF	Thorofare Moun	0.80	233	IAML		19 17 12.1	
	comp=E,706nm,0.8s						
TRF				IAML		19 17 12.1	
	comp=N,540nm,0.9s						
CCB	Clear Creek Bu	0.85	33		Pn	19 16 55.9	+0.4
CCB					Sn	19 17 11.0	-0.1
CCB	Clear Creek Bu	0.85	33	IAML		19 17 11.5	
	comp=N,740nm,0.7s						
BPAW	Bear Paw Mtn.	0.94	281		Pn	19 16 56.6	+0.3
BPAW					Sn	19 17 12.2	-0.5
BPAW	Bear Paw Mtn.	0.94	281	IAML		19 17 12.7	
	comp=E,400nm,0.8s						
BPAW				IAML		19 17 12.8	
	comp=N,784nm,0.6s						
HDA	Harding Lake	0.97	60	P	Pn	19 16 57.0	+0.4
	baz=240,SNR=174						
HDA				S	Sn	19 17 12.6	-0.5
	baz=240						
HDA				S	Sn	19 17 12.6	-0.5
	baz=240						
HDA	Harding Lake	0.97	60		Pn	19 16 56.9	+0.4
HDA					Sn	19 17 12.9	-0.2
HDA	Harding Lake	0.97	60	IAML		19 17 13.8	
	comp=E,514nm,0.8s						
HDA				IAML		19 17 13.8	
	comp=N,713nm,0.8s						
WAT2	Susitna Watana	0.99	172		Pn	19 16 57.0	+0.1
WAT2					Sn	19 17 13.2	-0.4
KTH	Kantishna Hill	0.99	248		Pn	19 16 57.4	+0.5
KTH					Sn	19 17 13.4	-0.2
KTH	Kantishna Hill	0.99	248	IAML		19 17 13.9	
	comp=N,891nm,0.6s						
KTH				IAML		19 17 13.9	
	comp=E,926nm,0.7s						
HUR	Hurricane	1.02	200		Pn	19 16 57.5	+0.4
TCOL	CIGO, UAF Yank	1.04	25	P	Pn	19 16 57.8	+0.6
	baz=204,SNR=61						
TCOL				S	Sn	19 17 14.1	-0.1
	baz=204						

TCOL	CIGO, UAF Yank	1.04	25		Pn	19 16 57.8	+0.6
TCOL					Sn	19 17 14.2	-0.1
TCOL	CIGO, UAF Yank	1.04	25	IAML		19 17 15.1	
	comp=E,825nm,0.6s						
TCOL				IAML		19 17 15.9	
	comp=N,866nm,0.8s						
COLA	College	1.04	25		Pn	19 16 57.6	+0.4
COLA					Sn	19 17 14.1	-0.1
COLA	College	1.04	25	IAML		19 17 15.0	
	comp=N,881nm,0.6s						
COLA				IAML		19 17 15.9	
	comp=N,907nm,0.8s						
MDM	Murphy Dome	1.06	15		Pn	19 16 58.0	+0.5
PS08	TAPS Pump Stn8	1.08	55		Pn	19 16 58.0	+0.3
DHY	Denali Highway	1.10	142		Pn	19 16 58.4	+0.3
DHY					Sn	19 17 16.4	+0.8
DHY	Denali Highway	1.10	142	IAML		19 17 17.1	
	comp=N,972nm,0.3s						
DHY				IAML		19 17 17.2	
	comp=E,602nm,0.2s						
WAT7	Susitna Watana	1.11	179		Pn	19 16 58.1	0.0
WAT1	Susitna Watana	1.12	172		Pn	19 16 58.2	0.0
IL31		1.20	45		Pn	19 16 58.9	0.0
ILAR	Eielson Array	1.20	45	P	Pn	19 16 58.8	-0.1
	comp=E,13nm,0.3s,baz=229,slow=11,SNR=839						
ILAR				S	Sn	19 17 17.9	+0.6
	comp=E,19nm,0.3s,baz=236,slow=19,SNR=8.3						
I23K	Minto, Yukon-K	1.23	350	P	Pn	19 16 60.0	+0.7
	baz=169,SNR=49						
I23K				S	Sn	19 17 17.9	+0.1
	baz=169						
I23K	Minto, Yukon-K	1.23	350		Pn	19 16 59.9	+0.7
POKR	Poker Plat Res	1.34	27	P	Pn	19 17 01.0	+0.6
	baz=207,SNR=22						
POKR				S	Sn	19 17 19.7	-0.2
	baz=207						
POKR	Poker Plat Res	1.34	27		Pn	19 17 01.0	+0.6
MLY	Manley	1.36	324	P	Pn	19 17 01.2	+0.5
	baz=142,SNR=53						
MLY				S	Sn	19 17 20.1	-0.3
	baz=142						
MLY	Manley	1.36	324		Pn	19 17 01.2	+0.5
WAT6	Susitna Watana	1.46	159		Pn	19 17 02.2	+0.3
CHUM	Lake Minchumin	1.52	269		Pn	19 17 02.9	+0.5
CUT	Chulitna	1.67	203	P	Pn	19 17 04.4	+0.3
	baz=22,SNR=69						
CUT				S	Sn	19 17 26.7	+0.2
	baz=22						
CUT	Chulitna	1.67	203		Pn	19 17 04.4	+0.3
RIDG	Independent Ri	1.80	95		Pn	19 17 06.1	+0.3
RIDG	Independent Ri	1.80	95	IAML		19 17 30.4	
	comp=N,548nm,0.7s						
PAX	Paxson	1.81	121		Pn	19 17 06.6	+0.6
PPLA	Purkeypile	1.82	236		Pn	19 17 06.7	+0.5
PS06	TAPS Pump Stn6	1.96	350		Pn	19 17 08.7	+1.0
PRP	Porcupine Dome	2.14	41		Pn	19 17 10.5	+0.4
SML	Sawmill	2.15	173		Pn	19 17 11.0	+0.7
SML	Sawmill	2.15	173	IAML		19 17 44.4	
	comp=N,405nm,0.6s						
SML				IAML		19 17 44.9	
	comp=E,495nm,0.4s						
DOT	Dot Lake	2.16	96		Pn	19 17 10.5	+0.3
SCRK	Sand Creek	2.16	87	P	Pn	19 17 10.6	+0.3
	baz=271,SNR=122						
SCRK				S	Sn	19 17 36.8	-0.7
	baz=271						
SCRK	Sand Creek	2.16	87		Pn	19 17 10.6	+0.3
GHO	Glory Hole Cre	2.18	181		Pn	19 17 11.1	+0.6
M24K	Tolsona, Glenn	2.21	145	P	Pn	19 17 11.7	+0.7
	baz=328,SNR=68						
M24K				S	Sn	19 17 40.9	+2.2
	baz=328						
M24K	Tolsona, Glenn	2.21	145		Pn	19 17 11.7	+0.7
M24K	Tolsona, Glenn	2.21	145	IAML		19 17 52.0	
	comp=N,358nm,0.8s						
M24K				IAML		19 17 52.2	
	comp=E,418nm,0.6s						
SCM	Sheep Creek Mo	2.23	161		Pn	19 17 11.6	+0.4
SCM	Sheep Creek Mo	2.23	161	IAML		19 17 45.8	
	comp=E,448nm,0.5s						
SKT	Skwentna	2.31	213		Pn	19 17 11.9	-0.2
SKT	Skwentna	2.31	213	IAML		19 17 48.7	
	comp=N,338nm,0.3s						
SKT				IAML		19 17 49.2	
	comp=E,310nm,0.4s						
PMR	Palmer	2.36	183		Pn	19 17 14.0	+1.3
PMR	Palmer	2.36	183	IAML		19 17 48.1	
	comp=N,281nm,0.7s						
PMR				IAML		19 17 50.2	
	comp=E,365nm,0.6s						
PS11	TAPS Pump St11	2.43	139		Pn	19 17 14.4	+0.8
MENT	Mentasta	2.52	111		Pn	19 17 15.7	+0.8
MENT	Mentasta	2.52	111	IAML		19 17 49.2	
	comp=N,208nm,0.7s						
MENT				IAML		19 17 49.5	
	comp=E,248nm,0.5s						
KNK	Knik Glacier	2.54	175		Pn	19 17 15.8	+0.7
SUA	Susitna One	2.63	200		Pn	19 17 17.6	+1.2
STLK	Strandline Lak	2.80	210		Pn	19 17 18.7	+0.1
KLU	Klutina	2.81	150		Pn	19 17 18.5	-0.1
KLU	Klutina	2.81	150	IAML		19 17 54.5	
	comp=N,236nm,0.4s						
KLU				IAML		19 17 54.9	
	comp=E,168nm,0.5s						
RC01	Rabbit Creek A	2.89	188	P	Pn	19 17 20.6	+1.1
	baz=8.0,SNR=45						
RC01	Rabbit Creek A	2.89	188		Pn	19 17 20.9	+1.3
IM03		2.92	317		Pn	19 17 20.3	+0.4
IMAR	Indian Mountai	2.92	317		Pn	19 17 20.1	+0.2
PS05	TAPS Pump Stn5	2.98	346		Pn	19 17 21.5	+0.8
K27K	Chicken	3.00	85	P	Pn	19 17 21.3	+0.3
	baz=271						
K27K				S	Sn	19 17 55.8	-0.8
	baz=271						
K27K	Chicken	3.00	85		Pn	19 17 21.2	+0.3
K27K				IAML		19 17 59.5	
	comp=N,164nm,0.5s						
K27K				IAML		19 17 60.0	
	comp=E,127nm,0.4s						
PS12	TAPS Pump St12	3.01	144		Pn	19 17 21.4	+0.2
SPCG	Spurr Capps Gl	3.03	210		Pn	19 17 21.7	+0.2
FYU	Fort Yukon	3.05	29		Pn	19 17 22.1	+0.5
N25K	Chitina, Valde	3.06	138	P	Pn	19 17 22.3	+0.4
	baz=322,SNR=20						
N25K				S	Sn	19 17 59.2	+1.1
	baz=322						
N25K	Chitina, Valde	3.06	138		Pn	19 17 22.6	+0.8
SPCP	Crater Peak Br	3.08	211		Pn	19 17 22.9	+0.6
PWL	Port Wells	3.10	175		Pn	19 17 22.3	0.0
SPCN	Chakachatna No	3.12	211		Pn	19 17 23.9	+1.2
SPBG	Spurr Blockage	3.14	213		Pn	19 17 24.5	+1.6
SPCR	Spurr Chakacha	3.15	211		Pn	19 17 23.9	+0.8
DIV	Divide	3.17	152		Pn	19 17 22.7	-0.5
GLI	Glacier Island	3.18	164		Pn	19 17 23.3	-0.1
BC03		3.30	102		Pn	19 17 25.1	+0.2
BCAR	Beaver Creek A	3.30	102		Pn	19 17 24.6	-0.3
COLD	Coldfoot	3.35	351	P	Pn	19 17 26.2	+0.7
	baz=170,SNR=14						
COLD	Coldfoot	3.35	351		Pn	19 17 26.3	+0.7
CAPN	Captain Cook N	3.35	199	P	Pn	19 17 28.8	+3.1
	baz=18						
CAPN	Captain Cook N	3.35	199		Pn	19 17 28.7	+3.1
TTA	Tatalina	3.36	256		Pn	19 17 25.8	-0.1
TT01	Tatalina	3.38	255		Pn	19 17 25.9	0.0
FID	Port Fidalgo	3.39	160		Pn	19 17 26.2	0.0
GLB	Gilahina Butte	3.42	135		Pn	19 17 27.5	+0.8
GLB	Gilahina Butte	3.42	135	IAML		19 18 08.6	
	comp=E,52nm,0.6s						
EGAK	Eagle	3.46	72		Pn	19 17 27.3	+0.2
EGAK	Eagle	3.46	72	IAML		19 18 08.6	
	comp=E,81nm,0.9s						
EGAK				IAML		19 18 09.3	
	comp=E,116nm,0.7s						
SLKM	Skilak Lake	3.50	191		Pn	19 17 28.3	+0.7
BMRM	Bremner River	3.58	144		Pn	19 17 28.5	-0.2
VRDI	Verde Repeater	3.70	135		Pn	19 17 30.7	+0.3
VRDI	Verde Repeater	3.70	135	IAML		19 18 16.0	
	comp=E,43nm,0.8s						
EYAK	Cordova Ski Ar	3.70	155		Pn	19 17 30.5	+0.2
MCARA	McCarthy VSAT	3.72	131		Pn	19 17 31.6	+1.1
MCARA	McCarthy VSAT	3.72	131	IAML		19 18 19.3	
	comp=E,84nm,0.9s						
MCARA				IAML		19 18 49.1	
	comp=N,66nm,1.2s						
HIN	Hinchinbrook I	3.73	162		Pn	19 17 30.6	0.0
RDT	Redoubt	3.76	208		Pn	19 17 32.1	+1.0
SEW	Seward	3.86	184		Pn	19 17 32.7	+0.4
NCT	North Crescent	3.88	211		Pn	19 17 34.1	+1.3
GOAT	Goat Mountain	3.89	148		Pn	19 17 32.8	0.0
BM03	Burnt Mountain	3.92	25		Pn	19 17 33.5	+0.4
BMAR	Burnt Mountain	3.93	25		Pn	19 17 30.8	-2.4
RSO	Redoubt South	3.93	209		Pn	19 17 34.6	+1.1
RDSO	Redoubt South	3.94	209		Pn	19 17 34.4	+0.9
RED	Redoubt Volcan	3.98	209		Pn	19 17 34.9	+0.9
PTPK	Patty Peak	4.05	130		Pn	19 17 36.2	+1.1
RAGM	Ragged Mountai	4.07	149		Pn	19 17 35.4	+0.1
CRQM	Cirque	4.16	137		Pn	19 17 36.7	+0.1
CRQM	Cirque	4.16	137	IAML		19 18 28.2	
	comp=E,64nm,0.9s						
CRQM				IAML		19 18 28.7	
	comp=N,79nm,0.5s						
DAWY	Dawson	4.18	84		Pn	19 17 36.6	0.0
DAWY	Dawson	4.18	84	IAML		19 18 41.2	
	comp=E,50nm,0.7s						
BALM	Baldy	4.20	131		Pn	19 17 37.3	+0.2
HMT	Hamilton	4.21	147		Pn	19 17 37.0	-0.1
TGL	Tana Glacier	4.26	136		Pn	19 17 37.5	-0.3
TGL	Tana Glacier	4.26	136	IAML		19 18 56.4	
	comp=N,38nm,0.9s						
TGL				IAML		19 18 58.9	
	comp=E,45nm,0.6s						
KIAG	Kiagna River	4.28	132		Pn	19 17 37.9	-0.2
BRLK	Bradley Lake	4.30	194		Pn	19 17 39.1	+0.8
BRLK	Bradley Lake	4.30	194	IAML		19 18 53.1	
	comp=E,87nm,1.4s						
BRSE	Bradley Lake S	4.30	193		Pn	19 17 38.7	+0.4
BERG	Berg Lake	4.31	143		Pn	19 17 38.3	0.0
NICHA	Nichawak Mount	4.37	146		Pn	19 17 39.5	+0.3
KHIT	Khitrov Hills	4.39	141		Pn	19 17 39.1	-0.3
IVE	Iliamna Volcan	4.39	208		Pn	19 17 40.0	+0.4
BARN	Barnard Glacie	4.42	128		Pn	19 17 40.9	+0.8
YUK3	Moose Creek	4.42	116		Pn	19 17 40.7	+0.6
HOM	Homer	4.49	198	P	Pn	19 17 41.9	+1.1
	baz=16						
HOM				S	Sn	19 18 33.6	+1.5
	baz=16						
HOM	Homer	4.49	198		Pn	19 17 41.7	+0.9
GRIN	Grindle Hills	4.50	142		Pn	19 17 41.3	+0.3
ISLE	Juniper Island	4.53	135		Pn	19 17 41.3	-0.1
ISLE				IAML		19 18 54.0	
	comp=N,42nm,2.2s						
ISLE				IAML		19 19 23.9	
	comp=E,31nm,1.0s						
KAIM	Kayak Island	4.54	150		Pn	19 17 41.2	-0.3
SUCK	Suckling Hills	4.56	146		Pn	19 17 41.7	-0.1
CNPM	China Poot	4.57	195		Pn	19 17 42.5	+0.6
CTGM	Chitina Glacie	4.60	127		Pn	19 17 42.9	+0.5
CTGM	Chitina Glacie	4.60	127	IAML		19 18 24.2	
	comp=N,22nm,4.0s						
GRNC	Granite Creek	4.62	131		Pn	19 17 43.0	+0.2
BGLC	Bering Glacier	4.65	143		Pn	19 17 43.7	+0.8
KULT	Kultieth River	4.70	139		Pn	19 17 43.9	+0.3
OPT	Oil Point	4.77	208		Pn	19 17 45.6	+1.1
LOGN	Logan Glacier	4.81	127		Pn	19 17 46.1	+0.8
MESA	MESA	4.98	136		Pn	19 17 47.2	-0.4
MESA	MESA	4.98	136	IAML		19 19 19.5	
	comp=N,44nm,1.6s						
MESA				IAML		19 20 20.9	
	comp=E,43nm,4.2s						
AU22	Augustine Moun	5.06	207		Pn	19 17 49.2	+0.8
AUL	Augustine Lava	5.06	207		Pn	19 17 49.2	+0.8
AUW	Augustine West	5.08	208		Pn	19 17 49.3	+0.6
YUK4	Talbot Arm	5.39	114		Pn	19 17 52.9	-0.1
PCA	Pinnacle	5.59	130		Pn	19 17 55.7	0.0
EPYK	Eagle Plains	5.67	59	P	Pn	19 17 57.0	+0.3
	baz=250						
EPYK	Eagle Plains	5.67	59		Pn	19 17 56.9	+0.3
KAHC	Katmai Hardscr	6.07	212		Pn	19 18 02.8	+0.6
KDAK	Kodiak Island	6.44	198	P	Pn	19 18 04.3	-2.7
	comp=E,1.3nm,0.3s,baz=49,slow=9.4,SNR=27						
KDAK				S	Sn	19 19 14.8	-4.1
	comp=E,2.7nm,0.3s,baz=296,slow=20,SNR=7.2						
OHAK	Old Harbor	7.08	200		Pn	19 18 13.6	-2.1
INK	Inuvik	7.60	48	P	Pn	19 18 22.9	+0.3
	comp=E,0.8nm,0.3s,baz=234,slow=17,SNR=86						
INK	Inuvik	7.60	48		Pn	19 18 23.2	+0.6
SII	Sitkinak Islan	7.86	202		Pn	19 18 25.9	-0.2
YKA	Yellowknife Ar	15.40	80	P	Pn	19 20 04.0	-1.1
	comp=E,0.3nm,0.3s,baz=292,slow=12,SNR=9.3						
RES	Resolute Bay	20.94	37	P	P	19 21 07.9	+0.6
	comp=E,1.0nm,0.7s,baz=252,slow=13,SNR=2.3						
RES	Resolute Bay	20.94	37	IAmb	IAmb	19 21 28.7	
	comp=Z,3.5nm,0.7s						
SONM	Songino Array	54.03	306	P	P	19 25 46.8	+0.6
	comp=Z,0.4nm,0.5s,baz=17,slow=4.6,SNR=3.6						
SONM	Songino Array	54.03	306	IAmb	IAmb	19 25 48.4	
	comp=Z,0.8nm,0.8s						
KSRS	Korea Array	54.21	283	LR	LR	19 50 14.8	
	comp=Z,16nm,18.2s,baz=160,slow=37						
FINES	FINESS Array B	54.87	3	P	P	19 25 52.0	+0.2
	comp=Z,3.5nm,0.9s,baz=359,slow=7.6,SNR=3.8						
ZALV	Zalesovo Beam	55.32	325	P	P	19 25 54.4	-0.7
	comp=Z,1.0nm,0.5s,baz=15,slow=8.9,SNR=5.4						
MKAR	Makanchi Array	62.51	323	P	P	19 26 43.9	-1.1
	comp=Z,0.8nm,0.4s,baz=42,slow=7.0,SNR=21						
AKASG	Malin Array Be	65.69	1	P	P	19 27 06.0	+0.5
	comp=Z,0.8nm,0.4s,baz=2.3,slow=6.4,SNR=7.8						
PPT	Papeete	81.25	181	LR	LR	19 56 04.9	
	comp=Z,51nm,21.0s,baz=166,slow=29						

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*IDC **18** 19:27:58.3±3.6, 14°.51N×91°.47W, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.6/43, mbtmp3.5/6, ML3.6/2, MS2.5/1, Ms1 2.5/1, ms1mx2.2/27, Error ellipse: s-maj=111.9km s-min=41.4km az=31.0*

*MEX **18** 19:28:05.2±0.4, 14°.35N×92°.07W, h73^{km}±5^{km}, MD4.0*

*UCR **18** 19:28:08.3±0.6, 14°.24N×91°.86W, h14^{km}±6^{km}, ML3.9*

*SNET **18** 19:28:08.1±0.4, 14°.26N×91°.85W, h12^{km}±8^{km}, ML4.1*

*GCG **18** 19:28:25.3±0.4, 14°.03N×92°.44W, h28^{km}±9^{km}, MD4.0*

ISC 18 19:28:05.2±1.5**, 14°.21N**±0°.10×**92°.23W**±0°.07**, h47**^{km}±15^{km}**, n32, σ2^{s}.31**/46**, mb3.6**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.70	357	*e*P	Pn	19 28 17.6	-1.2
THIG				*i* S	Sn	19 28 27.6	-1.0
FUG	Fuego 3	1.37	80	*e*P	Sn	19 28 52.1	+7.0
PCG	Pacaya	1.59	83	*e*P	Sn	19 28 55.6	+5.0
IXG	Ixpaco	1.74	91	*e*P	Pn	19 28 32.4	-0.8
IXG	Ixpaco	1.74	91	*e*P	Pn	19 28 32.4	-0.8
PCIG		1.77	328	*e*P	Pn	19 28 32.1	-1.3
PCIG				*i* S	Sn	19 28 53.0	-1.7
NBG	Las Nubes	1.87	78	*e*P	Sn	19 29 00.8	+3.3
CCIG	Comitan	2.07	3	*e*P	Pn	19 28 39.0	+1.4
CCIG				*i* S	Sn	19 29 01.8	-0.5
CEVE	Cerro Verde	2.56	98	*e*P	Pn	19 28 44.9	+0.4
CEVE				*e*S	Sn	19 29 13.3	-1.3
CEVE				IAML		19 29 28.9	
	comp=Z,1μm,0.4s						
CEVE	Cerro Verde	2.56	98	*e*P	Pn	19 28 44.9	+0.4
CEVE				*e*S	Sn	19 29 13.3	-1.3
CEVE				IAML		19 29 28.9	
	comp=Z,1μm,0.4s						
SNJE	San Jose	2.57	97	*e*P	Pn	19 28 44.8	+0.2
SNJE	San Jose	2.57	97	*e*P	Pn	19 28 44.8	+0.2
MRL	Marmol	2.62	70	*e*P	Pn	19 28 45.1	-0.1
MRL	Marmol	2.62	70	*e*P	Pn	19 28 45.1	-0.1
MRL	Marmol	2.62	70	*e*P	Sn	19 29 10.1	-5.8
TGIG		2.70	342	*e*P	Pn	19 28 45.0	-1.2
TGIG				*i* S	Sn	19 29 15.1	-2.6
JAYA	Jayaque - finc	2.76	101	*e*P	Pn	19 28 46.7	-0.4
JAYA				*e*S	Sn	19 29 17.1	-2.2
JAYA				IAML		19 29 28.1	
	comp=Z,861nm,0.2s						
JAYA	Jayaque - finc	2.76	101	*e*P	Pn	19 28 46.7	-0.4
JAYA				*e*S	Sn	19 29 17.1	-2.2
JAYA				IAML		19 29 28.1	
	comp=Z,861nm,0.2s						
TACO	Tacachico	2.80	94	*e*P	Pn	19 28 47.2	-0.4
TACO	Tacachico	2.80	94	*e*P	Pn	19 28 47.2	-0.4
PMON	Piamonte	2.88	99	*e*P	Pn	19 28 48.8	+0.1
PMON				*e*S	Sn	19 29 20.8	-1.3
PMON	Piamonte	2.88	99	*e*P	Pn	19 28 48.8	+0.1
PMON				*e*S	Sn	19 29 20.8	-1.3
LFRS	El Faro	3.13	100	*e*P	Pn	19 28 52.6	+0.4
LFRS				*e*S	Sn	19 29 27.1	-1.4
LFRS	El Faro	3.13	100	*e*P	Pn	19 28 52.6	+0.4
LFRS				*e*S	Sn	19 29 27.1	-1.4
CMIG	Matias Romero	3.84	319	Pn	Pn	19 29 01.2	-0.6
	comp=Z,2.4nm,0.3s,baz=122,slow=12,SNR=34						
CMIG				Sn	Sn	19 29 53.2	+7.5
	comp=Z,14nm,0.3s,baz=243,slow=21,SNR=3.6						
CMIG				LR	LR	19 30 51.0	
	comp=Z,56nm,20.2s,baz=195,slow=41						
CMIG	Matias Romero	3.84	319	*e*P	Pn	19 29 01.3	-0.6
CMIG				*i* S	Sn	19 29 45.3	-0.4
TXAR	Lajitas Array	18.40	327	P	Pn	19 32 18.1	+1.1
	comp=Z,0.1nm,0.3s,baz=148,slow=14,SNR=4.2						
ANMO	Albuquerque	24.31	331	P	P	19 33 19.8	+1.1
	comp=Z,1.4nm,0.7s,baz=131,slow=11,SNR=6.3						
NVAR	Mina Array Bea	33.37	321	P	P	19 34 41.0	+1.7
	comp=Z,0.7nm,0.7s,baz=133,slow=8.9,SNR=6.3						
YKA	Yellowknife Ar	50.77	347	P	P	19 36 58.5	-1.9
	comp=Z,0.4nm,0.5s,baz=148,slow=7.7,SNR=11						
ILAR	Eielson Array	62.56	337	P	P	19 38 23.6	-0.5
	comp=Z,0.3nm,0.6s,baz=115,slow=6.1,SNR=3.1						
CMAR	Chiang Mai Arr	145.72	341	PKPbc	PKPdf	19 47 39.0	-0.5
	comp=Z,1.0nm,0.8s,baz=334,slow=4.1,SNR=9.3						

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*DJA **18** 19:37:39.2±1.5, 0°N±7°×9°7E±1°4, h10^{km}, M4.0/8, mb4.3/4, MLv3.9/8*

*IDC **18** 19:37:40.6±1.7, 0°.15N×97°.16E, h0^{km}, mb4.0/4, mb1 4.0/6, mb1mx3.5/61, mbtmp3.8/6, ML3.3/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/46, Error ellipse: s-maj=54.2km s-min=25.6km az=59.0*

ISC 18 19:37:44.1±1.3**, 0°.24N**±0°.09×**97°.2E**±0°.2**, h22**^{km}**, n19, σ1^{s}.03**/13**, mb4.1**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	1.13	20	P	Pn	19 38 04.8	+0.2
GSI				S	Sn	19 38 20.5	+1.1
MNSI	Mandailing Nat	2.46	77	P	Pn	19 38 23.1	+0.2
TPTI		3.00	360	P	Pn	19 38 28.8	-1.6
PSI	Prapat	3.08	34	Pn	Pn	19 38 30.7	-0.9
	1.6nm,0.3s,baz=180,slow=14,SNR=4.9						
PSI				LR	LR	19 39 45.5	
	comp=Z,46nm,19.9s,baz=90,slow=40						
SDSI	Sungai Dareh	4.40	105	P	Pn	19 38 50.4	+0.8
MNAI	Manna	7.36	128	P	Pn	19 39 28.5	-1.8
CMAR	Chiang Mai Arr	18.19	5	P	Pn	19 41 55.4	0.0
	0.1nm,0.3s,baz=196,slow=11,SNR=14						
H08S2	Diego Garcia H	25.84	252	T	T	20 10 00.8	
	baz=73,slow=74,SNR=54						
H08S3	Diego Garcia H	25.84	252	T	T	20 10 00.9	
	baz=73,slow=74,SNR=96						
H08S1	Diego Carcia H	25.86	252	T	T	20 10 01.9	
	baz=73,slow=74,SNR=74						
H01W3	Cape Leeuwin H	38.37	157	T	T	20 25 47.1	
	baz=334,slow=76,SNR=8.0						
H01W2	Cape Leeuwin H	38.38	157	T	T	20 25 43.2	
	baz=334,slow=76,SNR=6.4						
H01W1	Cape Leeuwin H	38.38	157	T	T	20 25 47.2	
	baz=334,slow=76,SNR=7.5						
WRA	Warramunga Arr	41.55	121	P	P	19 45 30.1	-0.3
	1.4nm,0.8s,baz=300,slow=9.0,SNR=11						
AAK	Ala-Archa	46.88	337	LR	LR	20 08 37.5	
	comp=Z,46nm,21.9s,baz=127,slow=40						
MKAR	Makanchi Array	48.17	346	P	P	19 46 23.5	+0.8
	0.6nm,0.5s,baz=158,slow=7.7,SNR=10						
ZALV	Zalesovo Beam	54.50	351	P	P	19 47 10.5	+0.5
	2.4nm,0.6s,baz=179,slow=7.7,SNR=13						
ARCES	ARCESS Array B	83.43	340	P	P	19 50 09.9	+0.4
	1.0nm,0.4s,baz=98,slow=6.5,SNR=4.4						
TXAR	Lajitas Array	144.49	32	PKP	PKPdf	19 57 18.7	-1.0
	0.3nm,0.6s,baz=242,slow=1.9,SNR=5.0						

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*TEH **18** 19:58:46.8, 26°.68N×53°.83E, h11^{km}, ML3.4*

*OMAN **18** 19:58:47.7, 26°.73N×53°.83E, h15^{km}, mb5.2/2, ml3.1/15, Mwp4.9/3*

*IDC **18** 19:58:53.5±3.1, 26°.28N×53°.87E, h102^{km}±58^{km}, mb3.3/5, mb1 3.3/8, mb1mx3.0/53, mbtmp3.6/8, Error ellipse: s-maj=81.0km s-min=24.0km az=28.0*

ISC 18 19:58:46.0±1.8**, 26°.67N**±0°.03×**53°.88E**±0°.05**, h1**^{km}±13^{km}**, n48, σ1^{s}.49**/64**, mb3.6**/5**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	Lamerd	0.92	316	*e*		19 59 32.3	
	comp=Z,99nm,0.6s						
LMD1				*e*Pg	Pg	19 59 04.0	+0.3
LAR1	LAR	1.09	24	*e*Sg	Sn	19 59 24.9	+0.7
LAR1				*e*Pg	Pb	19 59 07.2	-0.5
LAR1				*e*		19 59 34.9	
	comp=Z,99nm,0.3s						
JHRM	Jahrom	1.84	352	*e*Pn	Pb	19 59 20.0	-0.6
JHRM				*e*		19 59 55.6	
	comp=Z,99nm,0.4s						
QIR1	Qir	1.94	338	*e*Pn	Pb	19 59 22.0	-0.3
QIR1				*e*		20 00 01.4	
	comp=Z,99nm,0.3s						
SHME	Shamm	2.12	106	P	Pn	19 59 22.2	-0.4
GENO	Geno	2.17	70	*e*Pn	Pb	19 59 25.9	-0.3
GENO				*e*		20 00 03.8	
	comp=E,99nm,0.3s						
BANOM	Banah	2.30	108	*e*Pn	Pn	19 59 24.9	-0.2
BANOM	Banah	2.30	108	P	Pn	19 59 24.9	-0.2
BANOM				S	Sn	19 59 55.1	+1.0
NAZ	Nazwa, Dubai	2.32	136	*e*Pn	Pb	19 59 27.5	-1.2
NAZ	Nazwa, Dubai	2.32	136	P	Pb	19 59 28.2	-0.5
AJN	Ajban	2.33	154	P	Pb	19 59 27.8	-1.0
AJN				P	Pb	19 59 27.8	-1.0
ASUD	Al Ashush, Dub	2.42	147	P	Pb	19 59 29.3	-1.1
ASUD				S	Sb	20 00 01.0	+0.2
MASF	Masafi	2.43	122	P	Pn	19 59 28.3	+1.4
MASF				S	Sn	19 59 59.0	+1.8
MSFE	Esma-Masafi	2.44	122	*e*Pn	Pn	19 59 27.8	+0.8
MDH	Madha	2.57	122	*e*Pn	Pn	19 59 30.0	+1.2
MDH	Madha	2.57	122	P	Pn	19 59 29.8	+0.9
MDH				P	Pn	19 59 29.8	+0.9
MDH				S	Sn	20 00 02.8	+2.0
MDH				S	Sn	20 00 02.8	+2.0
UOSS	Minazif	2.71	129	*e*Pn	Pn	19 59 31.4	+0.6
UOSS	Minazif	2.71	129	P	Pn	19 59 31.8	+1.0
HATD	Hatta, Dubai	2.74	132	*e*Pn	Pn	19 59 32.8	+1.6
HATD	Hatta, Dubai	2.74	132	P	Pn	19 59 32.9	+1.7
ASHO	Ashiyiah	2.79	135	*e*Pn	Pn	19 59 33.5	+1.6
ASHO	Ashiyiah	2.79	135	P	Pn	19 59 33.4	+1.6
	SNR=7.3						
MZWR	Madinat Zayed	2.90	180	P	Pn	19 59 35.2	+1.9
ALNE	Al Ain	3.11	147	*e*Pn	Pn	19 59 39.1	+2.9
ALNE	Al Ain	3.11	147	P	Pn	19 59 38.0	+1.8
ALNE				S	Sn	20 00 16.6	+2.6
SOHO	SOHO	3.49	136	P	Pn	19 59 42.6	+1.2
SOHO				P	Pn	19 59 42.6	+1.2
SOHO				S	Sn	20 00 27.4	+4.1
SOHO				S	Sn	20 00 27.4	+4.1
ARQ	Araqi	4.10	144	S	Sn	20 00 39.1	+0.6
TVBK	TV Kerman	4.17	37	*e*Pn	Pn	19 59 53.0	+1.9
TVBK				*e*		20 00 46.0	
	comp=Z,99nm,0.3s						
KHGB	Koh Gabri	4.34	31	*e*Pn	Pn	19 59 54.3	+0.9
KHGB				*e*		19 59 56.6	
	comp=Z,99nm,0.2s						
HOQ	Hoqain	4.38	134	P	Pn	19 59 54.8	+1.2
HOQ				S	Sn	20 00 45.3	0.0
IMEH	Mehriz	4.74	8	*e*Pn	Pn	19 59 59.3	+0.4
BSY	Bisya	4.94	142	P	Pn	20 00 02.7	+1.3
	SNR=9.8						
BSY				S	Sn	20 00 59.6	+0.4
BIDO	Bidbid	4.97	128	P	Pn	20 00 02.2	+0.4
SMDO	Samad	5.22	133	P	Pn	20 00 06.7	+1.3
IRAM	Ramesheh	5.28	346	*e*Pn	Pn	20 00 06.0	-0.3
WSAR	Wadi Sarin	5.50	127	P	Pn	20 00 09.8	+0.7
	comp=Z,0.7nm,0.3s,baz=325,slow=7.7,SNR=16						
WSAR				S	Sn	20 01 10.3	-2.8
	comp=Z,1.3nm,0.3s,baz=14,slow=19,SNR=8.0						
WBK	Wadi Bani Khal	6.15	130	P	Pn	20 00 18.4	+0.3
	SNR=16						
MHTO	MHTO	6.79	146	P	Pn	20 00 27.9	+1.1
DOK	Doka	8.02	178	P	Pn	20 00 43.5	-0.2
SHAO	Shalim	8.76	169	P	Pn	20 00 53.8	-0.1
DMTO	DMTO	8.97	173	P	Pn	20 00 55.8	-0.9
DMTO				S	Sn	20 02 35.5	-2.9
GNI	Garni	15.44	333	P	P	20 02 30.9	+1.1
	comp=Z,0.6nm,0.3s,baz=63,slow=11,SNR=2.4						
KBZ	Khabaz	19.21	335	P	Pn	20 03 13.0	+0.9
	comp=Z,0.1nm,0.3s,baz=122,slow=13,SNR=2.2						

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BRTR   Keskin Array B    21.30 313  P       P          20 03 35.0 +0.7
       comp=Z,0.4nm,0.7s,baz=144,slow=10.0,SNR=4.5
AKASG  Malin Array Be    30.49 328  P       P          20 04 59.4 -0.9
       comp=Z,0.3nm,0.4s,baz=82,slow=14,SNR=2.3
ZALV   Zalesovo Beam     35.53  32  P       P          20 05 43.0 -1.3
       comp=Z,0.5nm,0.4s,baz=242,slow=9.3,SNR=2.7
FINES  FINESS Array B    39.48 339  P       P          20 06 15.8 -1.9
       comp=Z,0.8nm,0.5s,baz=143,slow=9.9,SNR=7.4
ARCES  ARCESS Array B    45.98 347  P       P          20 07 09.9 -0.5
       comp=Z,2.3nm,0.9s,baz=148,slow=9.9,SNR=6.6
```

NEIC ***18*** *20:10:38.2±1.5, 2°.89N±0°.08×125°.91E±0°.09, h139km±3km, mb4.6/28, Error ellipse: s-maj=13.8km s-min=11.3km az=56.0*

DJA ***18*** *20:10:38.9±0.2, 3°N±3°×12°6E±°, h134km±3km, M4.7/36, mb4.7/36, mB5.4/9, MLv4.7/17, Mw(mB)4.8/9, MwMwp7.5/1, Mwp7.2/1*

IDC ***18*** *20:10:38.8±1.2, 2°.79N×125°.64E, h144km±11km, mb4.0/28, mb1 4.0/32, mb1mx3.9/53, mbtmp4.4/32, Error ellipse: s-maj=17.2km s-min=7.1km az=67.0*

KLM ***18*** *20:10:39, 2°.81N×126°.04E, h140km, mb4.8*

ISC 18 20:10:39.6±0.3**, 2°.87N**±0°.04×**125°.82E**±0°.05**, h150**km**, n147, σ1s.47**/155**, mb4.6**/63**, 2C-1D, Talaud Islands**

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Code   Station Name      Δ°    AZ°   Phase ID            Time      Res
                                    Op      ISC         h  m  s    ISC
SGSI   Sangihe            0.87 340  P       Pn         20 11 02.0 -1.3
TNTI   Ternate            2.59 143  Pn      Pn         20 11 20.0 -1.9
TNTI   Ternate            2.59 143  P       Pn         20 11 20.2 -1.7
KMSI   Cibinong           2.93 219  P       Pn         20 11 25.2 -0.9
DDMP   Don Marcelino,     3.22 358 eP       Pn         20 11 27.8 -2.0
GTOI   Gorontalo          3.58 232  P       Pn         20 11 33.7 -0.7
SKMP   Bagumbayan, Su     3.85 341 eP       Pn         20 11 37.6 -0.3
SKMP                               eS       Sn         20 12 22.4 -0.9
MATI   Mati               4.08   6 eP       Pn         20 11 38.6 -2.3
MATI                               eS       Sn         20 12 30.7 +2.1
KCP    Kidapawan          4.18 350⇑iP       Pn         20 11 42.5 +0.2
DAV    Davao City (W)     4.18 357  P       Pn         20 11 43.0 +0.6
       55nm,0.3s,baz=156,slow=11,SNR=5.2
DAV                                 S       Sn         20 12 32.5 +1.4
       63nm,0.3s,baz=116,slow=19,SNR=2.5
MRSI   Marisa             4.55 239  P       Pn         20 11 47.2 +0.1
SANI   Sanana             4.88 178  P       Pn         20 11 47.5 -4.1
LUWI   Luwuk              4.94 218          Pn         20 11 52.4 +0.1
LUWI   Luwuk              4.94 218  P       Pn         20 11 51.5 -0.7
BUKP   Musuan             5.04 351 eP       Pn         20 11 52.6 -1.1
TOLI2  Tolitoli           5.33 251  Pn      Pn         20 11 56.4 -1.0
PAGZ   Pagadian           5.51 334 eP       Pn         20 11 58.2 -1.7
APSI   Ampana             5.61 228  P       Pn         20 12 00.1 -1.1
       0.3nm882nm90nm,0.7s
CGP    Cagayan de Oro     5.67 349⇓eP       Pn         20 12 07.3 +5.4
BUTP   Butuan             6.07 358 eP       Pn         20 12 08.3 +1.0
NLAI   Namlea             6.20 168  P       Pn         20 12 06.8 -2.2
       1.7nm7µm377nm,0.8s
MPSI   Mapaga             6.43 247  P       Pn         20 12 11.7 -0.4
       0.1nm29nm,1.0s
SIJI   Sorong             6.59 124  P       Pn         20 12 13.2 -1.1
       1.2nm,0.3s,baz=316,slow=16,SNR=6.4
SIJI                                S       Sn         20 13 30.3 +2.0
       0.7nm,0.3s,baz=241,slow=23,SNR=1.2
MSAI   Masohi             6.91 153  P       Pn         20 12 18.1 -0.4
       0.1nm35nm,0.9s
CNOP   Candoni, Negro     7.61 336 eP       Pn         20 12 26.9 -0.9
MYLDM  Lahad Datu         7.66 288  Pn      Pn         20 12 31.1 +2.6
TTSI   Tana Toraja        8.39 226  P       Pn         20 12 37.0 -1.3
       20nm,0.8s
FAKI   Fak Fak            8.62 132          Pn         20 12 40.8 -0.5
FAKI   Fak Fak            8.62 132  P       Pn         20 12 40.3 -1.1
       33nm,0.9s
SPSI   Sidrap Palu        9.09 222  P       Pn         20 12 46.7 -0.9
       18nm,0.6s
BNSI   Bone               9.20 218  P       Pn         20 12 57.2 +8.1
SPMM   Sapulut            9.51 281  P       Pn         20 12 56.0 +2.7
MTKI   Muara Teweh, K    11.56 251  P       Pn         20 13 19.8 -0.4
       14nm,0.9s
SAUI   Saumlaki          12.08 153  P       Pn         20 13 24.5 -2.6
       99nm,1.0s
EDFI   Ende, Flores      12.25 200  P       Pn         20 13 27.7 -1.7
       8.5nm,0.6s
BATI   Baumata           13.16 189  P       Pn         20 13 39.2 -1.8
       0.2nm,0.3s,baz=304,slow=18,SNR=2.5
SBUM   Sibu              13.59 269  P       P          20 13 52.6 +2.3
PLAI   Plampang          14.12 215  P       Pn         20 13 52.5 -0.6
       84nm,0.8s
TWSI   Taliwang, Sumb    14.57 218  P       Pn         20 13 58.8  0.0
       25nm,0.6s
SRBI   Singaraja         15.18 224  P       P          20 14 07.5 -0.4
       61nm,1.2s
GENI   Genyem            15.33 111  P       P          20 14 07.6 -2.0
       56nm,1.0s
KSM    Kuching           15.56 265  P       P          20 14 13.7 +1.5
KSM                                 IAmb    IAmb       20 14 21.3
       comp=Z,33nm,1.0s
KSM    Kuching           15.56 265  P       P          20 14 14.0 +1.8
JAY    Jayapura          15.81 110  P       P          20 14 15.4 +0.5
       comp=Z,0.6nm,0.3s,baz=260,slow=10,SNR=5.1
PWJI   Pagerwojo         17.68 232  P       P          20 14 33.2 -2.3
       comp=Z,28nm,1.4s
UGM    Wanagama          18.64 235  P       P          20 14 43.5 -2.6
UGM                                 IAmb    IAmb       20 15 02.2
       comp=Z,27nm,0.9s
LEM    Lembang           20.56 242  P       P          20 15 05.2 -1.8
       comp=Z,13nm,0.4s,baz=13,slow=14,SNR=3.0
CISI   Cisompet, Garu    20.73 240  P       P          20 15 08.2 -0.5
FITZ   Fitzroy Crossi    20.83 180  P       P          20 15 08.2 -1.4
       comp=Z,7.3nm,0.5s,baz=11,slow=9.4,SNR=35
YULB   Yu-li             20.87 348  P       P          20 15 08.3 -1.7
CBJI   Citeko            21.07 244  P       P          20 15 15.3 +3.1
       comp=Z,107nm,1.1s
DBJI   Dramaga           21.21 244  P       P          20 15 16.4 +2.6
BLSI   Bandar Lampung    22.12 248  P       P          20 15 24.6 +1.3
       comp=Z,121nm,0.9s
CGJI   Cibinong          22.19 245  P       P          20 15 23.6 -0.3
       comp=Z,68nm,0.9s
KLSI                     22.37 250  P       P          20 15 26.8 +1.1
       comp=Z,388nmcomp=Z,32nm,1.0s
KASI   Kota Agung        22.87 249  P       P          20 15 31.3 +0.9
       comp=Z,59nm,0.9s
LWLI   Liwa              23.11 250  P       P          20 15 34.7 +2.0
       comp=Z,57nm,0.9s
WB0    Warramunga Arr    24.02 160  P       P          20 15 40.3 -0.5
WRAB   Tennant Creek     24.16 160  P       P          20 15 41.7 -0.4
WRA    Warramunga Arr    24.16 160  P       P          20 15 41.6 -0.4
       comp=Z,55nm,1.0s,baz=342,slow=10,SNR=143
WRA                                 S       S          20 19 56.6 +7.2
       comp=Z,2.9nm,0.9s,baz=342,slow=19,SNR=4.9
WRA                                 ScP     ScP        20 22 45.4 +1.5
       comp=Z,1.5nm,0.9s,baz=340,slow=3.0,SNR=6.7
WRA    Warramunga Arr    24.16 160  P       P          20 15 41.1 -1.0
WB2    Warramunga Arr    24.16 160  P       P          20 15 42.0 -0.1
WR0    Warramunga Arr    24.25 160  P       P          20 15 42.3 -0.5
PMG    Port Moresby      24.51 120  P       P          20 15 46.0 +0.7
       comp=Z,24nm,0.9s,baz=330,slow=5.2,SNR=10.0
KULM   Kulim             25.22 276  P       P          20 15 55.0 +3.2
SRAK   Srakaew           25.96 297  P       P          20 15 55.2 -3.3
       comp=Z,148nm,0.8s
CHAI   Chaiyaphum        26.80 300  P       P          20 16 07.1 +1.2
       comp=Z,24nm,0.7s
RABL   Rabaul            27.24 105  P       P          20 16 12.8 +2.8
AS31   Alice Springs     27.52 164  P       P          20 16 12.4 +0.1
ASAR   Alice Springs     27.52 164  P       P          20 16 12.2 -0.1
       comp=Z,5.4nm,0.6s,baz=347,slow=11,SNR=110
ASAR                                S       S          20 20 41.8 -0.7
       comp=Z,1.2nm,0.9s,baz=348,slow=22,SNR=4.1
GSI    Gunungsitoli      28.27 267  P       P          20 16 18.2 -0.9
GSI                                 IAmb    IAmb       20 16 19.2
       comp=Z,13nm,0.7s
UTHA   Uthaitani         28.88 298  P       P          20 16 25.6 +1.1
       comp=Z,16nm,0.8s
NANT   Nan               29.24 305  P       P          20 16 29.0 +1.3
       comp=Z,55µmcomp=Z,657nm,0.5s
CTAO   Charters Tower    30.38 140  P       P          20 16 37.5 -0.1
CTAO                                IAmb    IAmb       20 16 40.0
       comp=Z,8.4nm,0.9s
CM05   Chiang Mai Arr    30.52 302  P       P          20 16 42.2 +3.2
       comp=Z,2.4nm,0.7s
CMAR   Chiang Mai Arr    30.55 302  P       P          20 16 39.1 -0.1
       comp=Z,1.3nm,0.8s,baz=127,slow=7.3,SNR=12
CMAR                                ScP     ScP        20 23 04.8 +1.5
       comp=Z,0.4nm,0.8s,baz=162,slow=3.4,SNR=4.4
CM34   Chiang Mai Arr    30.55 303  P       P          20 16 39.0 -0.3
CMMT   Chiang Mai        30.70 303  P       P          20 16 41.6 +1.0
       comp=Z,5.4nm,0.6s
CHTO   Chiang Mai        30.71 303  P       P          20 16 40.9 +0.2
CHTO                                IAmb    IAmb       20 16 42.9
       comp=Z,6.1nm,0.6s
MHMT   Maesarieng        31.28 301  P       P          20 16 49.0 +3.4
ENH    Enshi             31.34 332  P       P          20 16 45.6 -0.5
ENH                                 IAmb    IAmb       20 16 46.6
       comp=Z,11nm,0.7s
KSRS   Korea Array       34.48   3  P       P          20 17 14.1 +1.0
       comp=Z,0.7nm,0.5s,baz=177,slow=10,SNR=4.5
STKA   Stephens Creek    37.66 158  P       P          20 17 41.0 +0.7
       comp=Z,17nm,0.7s,baz=328,slow=8.6,SNR=35
STKA   Stephens Creek    37.66 158  P       P          20 17 41.1 +0.7
USRK   Ussuriysk Ar.     41.52   7  P       P          20 18 13.9 +1.8
       comp=Z,0.5nm,0.4s,baz=186,slow=6.5,SNR=1.8
LSA    Lhasa             42.34 313  P       P          20 18 20.8 +1.2
LSA                                 pmax    pmax
       comp=Z,43nm,1.0s
LSA    Lhasa             42.34 313  P       P          20 18 20.7 +1.1
LSA                                 IAmb    IAmb       20 18 21.3
       comp=Z,8.5nm,0.6s
GTA    Gaotai            43.38 330 ⇑P       P          20 18 27.0 -0.4
GTA                                 pmax    pmax
       comp=Z,4.0nm,0.9s
TAPN   Taplejung         43.81 308 eP       P          20 18 30.8 -0.4
       comp=Z,18nm,0.7s
ODAN   Odare             43.84 307 eP       P          20 18 31.2 -0.2
       comp=Z,49nm,0.8s
RAMN   Ramite            44.52 306 eP       P          20 18 36.9 +0.1
       comp=Z,43nm,0.8s
GUN    Gumba             45.51 307 eP       P          20 18 44.5 -0.3
       comp=Z,43nm,0.5s
PKI    Pulchoki          45.74 307 eP       P          20 18 45.8 -0.7
       comp=Z,23nm,0.7s
PKIN   Phulchoki         45.75 307 eP       P          20 18 45.8 -0.8
       comp=Z,12nm,0.5s
KKN    Kakani            45.94 307 eP       P          20 18 47.3 -0.7
       comp=Z,16nm,0.5s
DMN    Daman             46.00 306 eP       P          20 18 48.2 -0.3
       comp=Z,34nm,0.8s
KLR    Kul'dur           46.47   5  P       P          20 18 52.2 +0.7
       comp=Z,1.2nm,0.7s,baz=149,slow=12,SNR=5.2
DANN   Dangsing          47.39 307 eP       P          20 18 58.8 -0.5
       comp=Z,108nm,0.7s
ULN    Ulaanbaatar       47.66 343  P       P          20 19 00.6 -0.4
SONM   Songino Array     47.83 342  P       P          20 19 02.1 -0.2
       comp=Z,2.4nm,0.9s,baz=161,slow=7.8,SNR=16
SONM   Songino Array     47.83 342  P       P          20 19 01.6 -0.7
HYB    Hyderabad         48.56 291 i P      P          20 19 07.5 -0.7
TLY    Talaya            52.07 343  P       P          20 19 35.5 +1.5
       comp=Z,2.2nm,0.4s,baz=233,slow=5.1,SNR=3.5
ZSN    Zaisan            56.74 328 eP       P          20 20 06.9 -0.9
       baz=328
SHLS   Shalkode          57.44 321 eP       P          20 20 10.3 -2.6
       comp=Z,3.9nm,0.8s,baz=321
MK31   Makanchi Array    57.75 326  P       P          20 20 14.7 -0.3
MK31                                IAmb    IAmb       20 20 16.2
       comp=Z,5.7nm,0.5s
MKAR   Makanchi Array    57.75 326  P       P          20 20 14.5 -0.5
       comp=Z,6.6nm,0.4s,baz=123,slow=7.6,SNR=90
MKAR                                PcP     sP         20 21 06.4 +0.9
       comp=Z,2.4nm,0.8s,baz=103,slow=3.9,SNR=6.2
MKAR                                ScP     ScP        20 24 52.5 +0.4
       comp=Z,0.3nm,0.6s,baz=118,slow=7.8,SNR=3.1
MAKZ   Makanchi          57.94 326  P       P          20 20 15.5 -0.7
MAKZ                                IAmb    IAmb       20 20 17.4
       comp=Z,7.1nm,0.5s
SATY   Saty              58.05 321 eP       P          20 20 16.5 -0.8
       comp=Z,4.1nm,0.7s,baz=320
KPKS   Kokpek            58.08 321 eP       P          20 20 16.5 -0.9
       comp=Z,5.5nm,0.6s,baz=321
MDOK   Medeo             58.97 320 eP       P          20 20 22.1 -1.6
       baz=320
TDK    Taldyqorghan      59.04 322 eP       P          20 20 23.3 -0.6
       baz=322
CHKK   Chushkaly         59.34 321 eP       P          20 20 24.9 -1.1
       baz=321
AAK    Ala-Archa         60.39 318  P       P          20 20 32.8 -0.6
       comp=Z,1.1nm,0.7s,baz=130,slow=4.1,SNR=5.8
AAK                                 PcP     PcP        20 21 16.7 -0.2
       comp=Z,0.9nm,0.5s,baz=197,slow=4.2,SNR=4.0
ZALV   Zalesovo Beam     60.95 334  P       P          20 20 34.5 -2.2
       comp=Z,1.4nm,0.6s,baz=116,slow=6.8,SNR=8.1
KBL    Kabul             61.33 308  P       P          20 20 38.8 -1.1
KBL                                 IAmb    IAmb       20 20 39.9
       comp=Z,5.4nm,0.7s
KURBB  Kurchatov Arra    61.98 328  P       P          20 20 43.0 -0.7
       comp=Z,8.0nm,0.6s,baz=128,slow=5.1,SNR=16
KURK   Kurchatov         61.98 328  P       P          20 20 43.2 -0.5
IUG    Iuzhnay           63.21 316 eP       P          20 20 51.2 -0.9
       comp=Z,2.1nm,0.6s,baz=316
KKAR   Karatay Array     63.25 318  P       P          20 20 52.3  0.0
BRZS   Berezniki         64.87 325 eP       P          20 21 01.1 -1.6
       baz=325
BVAR   Borovoye Array    67.55 327  P       P          20 21 19.1 -0.6
       comp=Z,1.0nm,0.5s,baz=116,slow=8.2,SNR=14
BRVK   Borovoye          67.62 327  P       P          20 21 19.8 -0.4
BRVK                                IAmb    IAmb       20 21 20.8
       comp=Z,4.1nm,0.6s
TIXI   Tiksi             68.72   1  P       P          20 21 26.6  0.0
GEYT   Alibeck           70.73 309  P       P          20 21 39.2 -0.5
       comp=Z,1.9nm,0.6s,baz=169,slow=5.6,SNR=5.7
ABKAR  Akbulak array     72.25 321  P       P          20 21 47.6 -0.8
AKTO   Aktyubinsk        73.77 322  P       P          20 21 56.4 -1.0
       comp=Z,2.1nm,0.4s,baz=110,slow=7.5,SNR=12
ARU    Arti              75.18 328  P       P          20 22 04.3 -1.1
       comp=Z,2.1nm,0.6s,baz=141,slow=3.5,SNR=15
ARU    Arti              75.18 328  P       P          20 22 04.6 -0.8
ARU                                 IAmb    IAmb       20 22 06.6
       comp=Z,5.7nm,0.6s
KBZ    Khabaz            82.91 314  P       P          20 22 46.2 -1.5
       comp=Z,1.5nm,0.9s,baz=95,slow=8.5,SNR=3.2
KLMR   Klimovskoe        85.71 331 eP       P          20 23 00.5 -1.0
KLMR                                AMP                20 23 02.1
       comp=Z,12nm,0.7s
KMBO   Kilima Mbogo      88.63 269  P       P          20 23 16.8 -0.1
       comp=Z,1.1nm,0.4s,baz=20,slow=9.3,SNR=5.3
MMAI   Mount Meron Ar    88.81 303  P       P          20 23 17.5 +0.4
       comp=Z,0.3nm,0.3s,baz=66,slow=7.0,SNR=3.4
BRTR   Keskin Array B    89.87 310  P       P          20 23 20.4 -1.6
       comp=Z,0.3nm,0.3s,baz=134,slow=5.6,SNR=5.4
ARCES  ARCESS Array B    90.94 340  P       P          20 23 26.0 -0.2
       comp=Z,4.9nm,1.0s,baz=76,slow=5.1,SNR=7.7
SPITS  Spitsbergen Ar    91.15 349  P       P          20 23 27.2 +0.2
       comp=Z,6.5nm,0.9s,baz=93,slow=7.7,SNR=5.5
AKASG  Malin Array Be    91.99 321  P       P          20 23 29.9 -1.4
       comp=Z,1.5nm,0.4s,baz=68,slow=5.0,SNR=6.2
FINES  FINESS Array B    92.16 332  P       P          20 23 31.0 -0.9
       comp=Z,1.9nm,0.7s,baz=52,slow=7.5,SNR=9.8
FINES  FINESS Array B    92.16 332  P       P          20 23 31.1 -0.8
MLR    Muntele Rosu      94.89 316  P       P          20 23 44.4 -0.6
       comp=Z,1.8nm,0.7s,baz=73,slow=1.2,SNR=4.3
BURAR  Bucovina Array    95.04 318  P       P          20 23 45.6  0.0
BUR08  Bucovina Ar. S    95.04 318  P       P          20 23 45.9 +0.2
BUR08                               IAmb    IAmb       20 23 46.3
       comp=Z,3.4nm,0.6s
KOLS   Kolonicke sedl    96.72 320 ePDIFF   P          20 23 54.4 +1.3
CRVS   Cervenica-Dubn    97.25 320 ePDIFF   Pdif       20 23 56.3 +0.7
GERES  GERESS Array B   102.19 321  P       Pdif       20 24 17.0 -0.7
       comp=Z,0.1nm,0.3s,baz=54,slow=6.8,SNR=3.5
TORD   Torodi Ar. Bea   122.32 287  PKP     PKiKP      20 29 17.6 -0.6
       comp=Z,0.7nm,0.6s,baz=87,slow=2.3,SNR=2.7
PLCA   Paso Flores      139.51 161  PKP     PKiKP      20 29 50.8 -1.4
       comp=Z,1.5nm,0.8s,baz=353,slow=4.1,SNR=3.3
```

GUC 18 20:18:59.3±0.5**, 23°.83S**×**67°.30W, h235**km±7km**, ML3.9, 10C-2D, Chile-Argentina border region**

```
Code   Station Name      Δ°    AZ°   Phase ID            Time      Res
                                    Op      ISC         h  m  s    ISC
LVC    Limon Verde        1.92 309⇓iP       Pn         20 19 39.5 -0.7
LVC                                i S      S          20 20 10.6 -1.5
GO02   Mina Guanaco       2.47 237⇑iP       Pn         20 19 43.8 -1.8
GO02                               i S      S          20 20 18.9 -2.9
PB09   IPOC Station P     2.70 318⇑iP       Pn         20 19 48.4 +0.5
PB09                               i S      S          20 20 25.8 -0.2
PB09                                IAML               20 20 28.9
       comp=E,119nm,0.2s
PB05   IPOC Station P     2.84 290⇑iP       Pn         20 19 49.5 +0.2
PB05                               i S      S          20 20 27.1 -1.4
PB05                               e                   20 20 27.9
PB05                                IAML               20 20 29.2
       comp=E,251nm,0.2s
PB03   IPOC Station P     2.87 308⇑iP       Pn         20 19 49.9 +0.1
PB03                               eS       S          20 20 28.2 -1.1
PB14   IPOC Station P     2.94 254⇑iP       Pn         20 19 49.5 -1.0
PB14                               i S      S          20 20 28.2 -2.5
PB10   IPOC Station P     3.00 275⇑iP       Pn         20 19 51.1 +0.2
PB10                               i S      S          20 20 30.9 -0.5
PB04   IPOC Station P     3.02 299⇓iP       Pn         20 19 51.7 +0.4
PB04                               i S      S          20 20 31.1 -1.0
PB07   IPOC Station P     3.17 311⇑iP       Pn         20 19 53.2 +0.2
PB07                               i S      S          20 20 34.4 -1.0
PB02   IPOC Station P     3.46 316 eP       Pn         20 19 56.6 +0.3
PB02                               i S      S          20 20 39.6 -1.6
AC01   Pan de Azucar      3.78 232⇑iP       Pn         20 19 57.2 -2.6
AC01                               i S      S          20 20 43.0 -4.6
PATCX  Punta Patache      3.99 318 eP       Pn         20 20 03.0 +0.4
PATCX                              i S      S          20 20 50.9 -1.6
PB08   IPOC Station P     4.05 335⇑iP       Pn         20 20 04.3 +0.7
PB08                               i S      S          20 20 54.4 +0.1
TA01   Diego Aracena      4.21 320 eP       Pn         20 20 05.4 +0.4
TA01                               i S      S          20 20 55.7 -1.2
HMBC   Humberstone        4.27 325 eP       Pn         20 20 05.0 -0.9
HMBC                               i S      S          20 20 56.8 -1.8
GO01   Chusmiza           4.50 337 eP       Pn         20 20 09.5 +0.4
GO01                               i S      S          20 21 03.7 -0.5
GO03   Copiap             4.59 215⇑iP       Pn         20 20 05.8 -3.7
GO03                               i S      S          20 20 59.7 -5.6
PSGC   Pisagua            4.96 328 eP       Pn         20 20 13.3 -1.0
PSGC                               eS       S          20 21 11.3 -2.5
MNMC   Minye Minye        5.14 335 eP       Pn         20 20 16.6 -0.2
MNMC                               i S      S          20 21 17.1 -1.1
AC04   Llanos de Chal     5.52 217 eP       Pn         20 20 17.3 -3.8
AC05   El Transito        5.65 208 eP       Pn         20 20 19.5 -3.4
```

MDD ***18*** *20:36:53.6±0.7, 36°.49N×7°.17W, h30km, mbLg2.4/10, Error ellipse: s-maj=7.7km s-min=3.9km az=18.0, PRXIMO*

MDD EMS: I-II INTENSIDAD MAXIMA.

INMG ***18*** *20:36:53.8±1.4, 36°.46N×7°.19W, h31km±9km, ML2.1, Error ellipse: s-maj=3.4km s-min=3.2km az=37.0*

SFS ***18*** *20:36:53.0, 36°.48N×7°.18W, h41km, ML4.2, GOLFO DE CADIZ*

IGIL ***18*** *20:36:54.6, 36°.46N×7°.18W, h31km, ML1.9*

ISC 18 20:36:52.2±5.7**, 36°.50N**±0°.05×**7°.15W**±0°.03**, h37**km±6km**, n61, σ1s.22**/106**, 3D, Strait of Gibraltar**

```
Code   Station Name      Δ°    AZ°   Phase ID            Time      Res
                                    Op      ISC         h  m  s    ISC
PBDV   Barranco-do-Ve     0.97 320  P       Pn         20 37 10.1 +0.7
PBDV                                S       Sn         20 37 22.1 +0.1
       14nm,0.1s
PBDV   Barranco-do-Ve     0.97 320 eP       Pn         20 37 10.1 +0.7
PBDV                               eS       Sn         20 37 22.1 +0.1
PBDV                                A       A          20 37 23.5
       14nm,0.1s
PVAQ   Vaqueiros          1.01 334  P       Pn         20 37 10.9 +1.0
PVAQ                                S       Sn         20 37 23.5 +0.6
       40nm,0.2s
PVAQ   Vaqueiros          1.01 334⇓iP       Pn         20 37 10.9 +1.0
PVAQ                               eS       Sn         20 37 23.5 +0.6
PVAQ                                A       A          20 37 24.7
       40nm,0.2s
EGRO   El Granado         1.07 346  P       Pn         20 37 11.9 +1.3
       2.0nm,0.0s,SNR=13
EGRO                                S       Sn         20 37 25.2 +1.0
       24nm,0.1s,SNR=22
ESPR   Espera             1.10  70  P       Pn         20 37 12.4 +1.3
       12nm,0.2s,SNR=20
ESPR                                S       Sn         20 37 26.7 +1.6
       29nm,0.2s,SNR=7.4
EMIN   Mina Concepcio     1.32  17  P       Pn         20 37 15.3 +1.2
       1.4nm,0.1s,SNR=18
EMIN                                S       Sn         20 37 31.0 +0.4
       13nm,0.1s,SNR=15
PCVE   Castro Verde       1.34 328  P       Pn         20 37 15.4 +1.1
PCVE                                S       Sn         20 37 31.4 +0.5
       19nm,0.2s
PCVE   Castro Verde       1.34 328 eP       Pn         20 37 15.4 +1.1
PCVE                               eS       Sn         20 37 31.4 +0.5
PCVE                                A       A          20 37 32.4
       19nm,0.2s
MORF   Marmelete          1.45 304 eP       Pn         20 37 16.4 +0.5
MORF                               eS       Sn         20 37 32.9 -0.8
MORF                                AML     AML        20 37 34.9
       comp=E,13nm,0.2s
MORF   Marmelete          1.45 304  P       Pn         20 37 16.4 +0.5
MORF                                S       Sn         20 37 32.9 -0.8
       comp=E,13nm,0.2s
MORF   Marmelete          1.45 304 eP       Pn         20 37 16.4 +0.5
MORF                               eS       Sn         20 37 32.9 -0.8
MORF                                A       A          20 37 39.4
       comp=E,7.4nm,0.2s
PFVI   Vila Bisbo         1.49 296  P       Pn         20 37 16.7 +0.3
       comp=E,1.4nm,0.0s,SNR=7.9
PFVI                                S       Sn         20 37 33.7 -0.9
       comp=E,9.4nm,0.1s,SNR=7.9
PFVI   Vila Bisbo         1.49 296 eP       Pn         20 37 16.7 +0.3
PFVI                               eS       Sn         20 37 33.7 -0.9
PFVI                                A       A          20 37 39.0
       comp=E,9.7nm,0.9s
ECEU   Ceuta              1.55 112  P       Pn         20 37 18.3 +1.0
       comp=E,1.0nm,0.1s,SNR=7.9
MESJ   Messejana          1.59 328 eP       Pn         20 37 18.8 +1.0
MESJ                               eS       Sn         20 37 36.7 -0.4
MESJ                                AML     AML        20 37 38.8
       comp=N,10nm,0.2s
MESJ   Messejana          1.59 328  P       Pn         20 37 18.8 +1.0
MESJ                                S       Sn         20 37 36.7 -0.4
       comp=N,10nm,0.2s
MESJ   Messejana          1.59 328⇓iP       Pn         20 37 18.8 +1.0
MESJ                               eS       Sn         20 37 37.0 -0.1
MESJ                                A       A          20 37 38.8
       comp=N,9.4nm,0.2s
PBEJ   Beja               1.63 340  P       Pn         20 37 19.6 +1.2
PBEJ                                S       Sn         20 37 38.1  0.0
       comp=N,3.1nm,0.2s
PBEJ   Beja               1.63 340 eP       Pn         20 37 19.6 +1.2
PBEJ                                S       Sn         20 37 38.1  0.0
PBEJ                                A       A          20 37 39.9
       comp=N,6.1nm,0.2s
PTEO   Sao Teotonio       1.64 310  P       Pn         20 37 19.3 +0.8
PTEO                                S       Sn         20 37 38.3  0.0
       comp=N,5.5nm,0.7s
PTEO   Sao Teotonio       1.64 310 eP       Pn         20 37 19.3 +0.8
PTEO                                S       Sn         20 37 38.3  0.0
PTEO                                A       A          20 37 56.4
       comp=N,11nm,0.7s
PBAR   Barrancos          1.68   3  P       Pn         20 37 20.5 +1.5
PBAR                                S       Sn         20 37 40.1 +0.8
       comp=N,6.7nm,0.6s
PBAR   Barrancos          1.68   3 eP       Pn         20 37 20.5 +1.5
PBAR                                S       Sn         20 37 40.1 +0.8
PBAR                                A       A          20 37 49.8
       comp=N,6.7nm,0.6s
PNCL   Nicolau / Gran     1.95 326  P       Pn         20 37 23.6 +0.8
PNCL                                S       Sn         20 37 45.4 -0.6
       comp=N,6.2nm,0.6s
PNCL   Nicolau / Gran     1.95 326⇓iPn      Pn         20 37 23.6 +0.8
PNCL                               eSn      Sn         20 37 45.4 -0.6
PNCL                                A       A          20 37 55.6
       comp=N,6.2nm,0.6s
ECAB   El Cabril          2.10  41  P       Pn         20 37 25.7 +0.9
       comp=N,0.5nm,0.1s,SNR=20
ECAB                                S       Sn         20 37 48.4 -1.2
       comp=N,1.4nm,0.1s,SNR=8.8
EVO    Evora              2.15 342  P       Pn         20 37 26.6 +1.2
EVO                                 S       Sn         20 37 50.3 -0.5
       comp=N,11nm,0.2s
EVO    Evora              2.15 342 eP       Pn         20 37 26.6 +1.2
EVO                                eS       Sn         20 37 50.3 -0.5
EVO    Evora              2.15 342 ePn      Pn         20 37 26.6 +1.2
EVO                                eSn      Sn         20 37 50.3 -0.5
EVO                                 A       A          20 37 52.4
       comp=N,11nm,0.2s
PESTR  Estremoz           2.39 352 ePn      Pn         20 37 29.9 +1.0
PESTR                              eSn      Sn         20 37 56.8 -0.1
PESTR                               A       A          20 38 10.4
       comp=N,3.2nm,0.5s
EADA   Adamuz             2.64  50  P       Pn         20 37 33.6 +1.3
       comp=N,1.6nm,0.1s,SNR=22
EADA                                S       Sn         20 38 02.3 -0.9
       comp=N,1.7nm,0.1s,SNR=7.9
PMTG   Montargil          2.71 342  P       Pn         20 37 34.2 +1.1
PMTG                                S       Sn         20 38 04.2 -0.4
       comp=N,3.6nm,0.4s
PMTG   Montargil          2.71 342 ePn      Pn         20 37 34.2 +1.1
PMTG                               eSn      Sn         20 38 04.2 -0.4
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PMTG                                A      A        20 38 06.7
       comp=N,3.6nm,0.4s
ELGU   Los Guajares,      2.86  81  P      Pn       20 37 36.7 +1.4
       comp=N,0.5nm,0.2s,SNR=7.9
ELGU                                S      Sn       20 38 08.9 +0.5
       comp=N,0.8nm,0.1s,SNR=7.9
PMRV   Marv??o            2.93 356  P      Pn       20 37 37.5 +1.2
PMRV                                S      Sn       20 38 09.2 -1.1
       comp=N,4.8nm,0.3s
PMRV   Marv??o            2.93 356  ePn    Pn       20 37 37.5 +1.2
PMRV                                eSn    Sn       20 38 09.2 -1.1
PMRV                                A      A        20 38 11.2
       comp=N,4.8nm,0.3s
EQUE   Quentar            3.06  76  P      Pn       20 37 40.1 +2.0
       comp=N,0.3nm,0.1s,SNR=7.9
EQUE                                S      Sn       20 38 13.1 -0.3
       comp=N,0.2nm,0.1s,SNR=4.0
PSBE   So Bento           3.28 337  ePn    Pn       20 37 42.6 +1.5
PCBR   Castelo Branco     3.35 356  P      Pn       20 37 43.3 +1.3
PCBR                                S      Sn       20 38 19.1 -1.4
       comp=N,3.1nm,0.4s
PCBR   Castelo Branco     3.35 356  ePn    Pn       20 37 43.3 +1.3
PCBR                                eSn    Sn       20 38 19.1 -1.4
PCBR                                A      A        20 38 21.6
       comp=N,6.2nm,0.4s
EQES   Quesada            3.51  67  P      Pn       20 37 44.4 +0.1
       comp=N,0.3nm,0.1s,SNR=7.9
EQES                                S      Sn       20 38 24.6  0.0
       comp=N,0.1nm,0.1s,SNR=7.9
EPLA   Plasencia          3.66  13  P      Pn       20 37 48.0 +1.7
       comp=N,0.5nm,0.1s,SNR=7.3
EPLA                                S      Sn       20 38 27.4 -0.8
       comp=N,2.7nm,0.1s,SNR=7.9
PAB    San Pablo          3.76  35  P      Pn       20 37 49.1 +1.4
       comp=N,0.3nm,0.1s,SNR=7.9
PAB                                 S      Sn       20 38 28.1 -2.7
       comp=N,0.4nm,0.2s,SNR=7.9
MTE    Manteigas          3.91 356  S      Sn       20 38 33.5 -0.9
       comp=N,2.6nm,0.6s
MTE    Manteigas          3.91 356  eSn    Sn       20 38 33.5 -0.9
MTE                                 A      A        20 38 38.1
       comp=N,5.1nm,0.6s
SESP   Santiago Espad     4.01  65  S      Sn       20 38 34.8 -2.3
       comp=N,2.5nm,0.3s,SNR=7.9
ESDC   Sonseca Array      4.05  37  S      Sn       20 38 35.2 -2.6
       baz=221,slow=23,SNR=7.9
PVIS   Viseu              4.25 352  S      Sn       20 38 43.1 +0.3
       comp=N,2.2nm,0.3s
PVIS   Viseu              4.25 352  eSn    Sn       20 38 43.1 +0.3
PVIS                                A      A        20 38 44.1
       comp=N,4.3nm,0.3s
MVO    Moncorvo           4.66   1  eSn    Sn       20 38 51.3 -1.7
MVO                                 A      A        20 38 53.7
       comp=N,5.5nm,0.3s
GUD    Guadarrama         4.76  29  P      Pn       20 38 03.3 +1.9
       comp=N,0.8nm,0.1s,SNR=8.0
GUD                                 S      Sn       20 38 52.9 -2.5
       comp=N,0.7nm,0.3s,SNR=7.9
PVRL   Vila Real          4.79 355  S      Sn       20 38 55.4 -0.7
       comp=N,2.2nm,0.1s
PVRL   Vila Real          4.79 355  eSn    Sn       20 38 55.4 -0.7
PVRL                                A      A        20 38 58.2
       comp=N,4.3nm,0.1s
POLO   Lamas de Olo       4.90 354  S      Sn       20 38 56.6 -2.2
       comp=N,1.3nm,0.3s
POLO   Lamas de Olo       4.90 354  eSn    Sn       20 38 56.6 -2.2
POLO                                A      A        20 38 59.5
       comp=N,1.3nm,0.3s
ETOB   Tobarra            4.94  63  P      Pn       20 38 04.2 +0.2
       comp=N,0.6nm,0.1s,SNR=16
ETOB                                S      Sn       20 38 56.7 -3.1
       comp=N,0.5nm,0.1s,SNR=7.9
PBRG   Braganca           5.31   3  S      Sn       20 39 06.6 -2.3
PBRG   Braganca           5.31   3  eSn    Sn       20 39 06.6 -2.3
ELOB   Lobios             5.41 353  S      Sn       20 39 08.9 -2.5
       comp=N,1.4nm,0.3s,SNR=7.9
ETOR   Torete             5.88  41  P      Pn       20 38 18.5 +1.7
       comp=N,5.4nm,0.2s,SNR=14
ETOR                                S      Sn       20 39 21.4 -1.5
       comp=N,2.0nm,0.2s,SNR=7.9
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*BJI **18** 20:40:44.0±0.0, 18°.00S×174°.60W, h320km, mB5.0/20, mb4.7/37*

*NOU **18** 20:41:12.2, 19°.27S×177°.20W, h612km, mb4.9, Fiji Islands Region*

*NEIC **18** 20:41:17.8±1.8, 19°.6S±0°.1×178°.0W±0°.1, h591km±6km, mb4.9/57, Error ellipse: s-maj=18.0km s-min=16.5km az=94.0*

*IDC **18** 20:41:18.5±0.9, 19°.65S×178°.11W, h590km±9km, mb4.2/31, mb1 4.2/33, mb1mx4.1/43, mbtmp5.1/33, Error ellipse: s-maj=10.4km s-min=9.3km az=128.0*

ISC 18 20:41:18.5±0.3**, 19°.74S**±0°.05×**178°.04W**±0°.06**, h600**km**, n402, σ1§12**/437**, mb4.9**/98**, 29C-36D, Fiji Islands region**

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Code   Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op     ISC        h  m  s     ISC
MSVF   Nonsavu            4.21 298  P      P        20 42 45.8 +0.2
       18nm,0.3s,baz=140,slow=9.2,SNR=120
MSVF                                S      S        20 43 59.3 +2.8
       baz=1.8,slow=22,SNR=0.6
MSVF   Nonsavu            4.21 298  P      P        20 42 46.6 +1.0
NIUE   Niue               7.68  86  P      P        20 43 14.9  0.0
       baz=7.6,SNR=21
AFI    Afiamalu           8.34  47  P      P        20 43 18.9 -2.4
RAO    Raoul Island       9.47 179  S      S        20 45 19.8 -1.7
       17nm,0.3s,baz=265,slow=24,SNR=1.4
GLKZ   Green Lake         9.48 179  P      P        20 43 31.7 -0.4
GLKZ                                S      S        20 45 20.2 -1.4
DVP    Devils Point      13.20 276  P      P        20 44 09.9 +0.4
       563µm,0.8s
YATNC  Mamie plateau,    14.27 258  P      P        20 44 20.0 -0.1
OUENC  Ouen Island, N    14.36 257  P      P        20 44 23.4 +2.5
DZM    Mont Dzumac       14.69 258  P      P        20 44 22.4 -1.5
       7.5nm,0.3s,baz=101,slow=16,SNR=79
DZM    Mont Dzumac       14.69 258  eP     P        20 44 25.5 +1.5
       100nm,1.1s
DZM    Mont Dzumac       14.69 258  P      P        20 44 25.8 +1.8
DZM    Mont Dzumac       14.69 258  P      P        20 44 26.0 +2.0
SANVU  Saraoutou         14.70 285  P      P        20 44 23.5 -0.6
SANVU  Saraoutou         14.70 285  P      P        20 44 24.5 +0.4
NOUC   Port Laguerre     14.82 258  P      P        20 44 26.1 +1.0
KOUNC  Koumac, New Ca    16.62 264  P      P        20 44 43.6 +2.0
OUZ    Omahuta           17.10 204  P      P        20 44 47.9 +2.1
OUZ    Omahuta           17.10 204  P      P        20 44 48.9 +3.1
GRZ    Great Barrier     17.41 198  P      P        20 44 50.7 +2.1
MXZ    Matakaoa Point    18.04 189  P      P        20 44 53.7 -0.7
MYRZ   Mayor Island      18.18 195  P      P        20 44 56.5 +0.9
WMGZ   Waiomatatini S    18.28 189  P      P        20 44 57.1 +0.6
HAZ    Te Kaha           18.32 191  P      P        20 44 56.8  0.0
PKGZ   Pakihiroa         18.40 190  P      P        20 44 57.1 -0.6
RUGZ   Raukumara Rang    18.54 191  P      P        20 44 58.4 -0.6
RUGZ                                S      S        20 47 51.9 -5.9
WHRZ   Whale Island      18.57 192  P      P        20 44 59.8 +0.6
OPRZ   Ohinepanea        18.64 193  P      P        20 45 00.9 +1.0
TWGZ   Tauwhareparae     18.70 190  P      P        20 44 59.7 -0.7
TOZ    Tahuroa Road      18.79 196  P      P        20 45 02.9 +1.7
MWZ    Matawai           18.93 191  P      P        20 45 01.0 -1.4
MWZ                                 S      S        20 47 59.8 -4.0
URZ    Urewera           18.93 192  P      P        20 45 00.4 -2.0
       7.8nm,0.3s,baz=2.8,slow=5.3,SNR=46
URZ                                 S      S        20 47 58.9 -4.9
       0.6nm,0.3s,baz=200,slow=22,SNR=2.0
URZ                                 ScP    ScP      20 51 37.0 -0.7
       1.4nm,0.3s,baz=309,slow=6.8,SNR=5.8
URZ    Urewera           18.93 192  P      P        20 45 00.2 -2.2
URZ                                 S      S        20 47 59.3 -4.5
CNGZ   Carnagh Statio    18.96 189  P      P        20 45 01.9 -0.8
RAGZ   Rawiri            19.10 191  P      P        20 45 03.0 -1.1
RRRZ   Republican Roa    19.13 193  P      P        20 45 04.8 +0.5
RIGZ   Rimuhau           19.25 190  P      P        20 45 04.2 -1.2
TLZ    Tolley Road       19.35 195  P      P        20 45 08.3 +2.0
SNGZ   Shannon Statio    19.39 191  P      P        20 45 05.7 -1.0
MTHZ   Maungataniwha     19.56 192  P      P        20 45 07.0 -1.2
RAHZ   Arahi             19.57 191  P      P        20 45 08.2 -0.1
HIZ    Hauiti            19.70 197  P      P        20 45 10.5 +1.1
BKZ    Black Stump Fm    19.93 193  P      P        20 45 09.2 -2.3
BKZ                                 IAmb   IAmb     20 45 22.8
       comp=Z,31nm,1.2s
BFZ    Birch Farm        21.44 192  P      P        20 45 23.1 -1.9
BFZ                                 IAmb   IAmb     20 45 24.5
       comp=Z,50nm,1.2s
MSWZ   Moikau Station    22.35 193  P      P        20 45 31.3 -1.9
SNZO   South Karori      22.38 194  P      P        20 45 32.2 -1.1
BHW    Baring Head       22.43 194  P      P        20 45 32.6 -1.2
TUWZ   Tuamarina         22.67 196  P      P        20 45 34.7 -1.3
THZ    Tophouse          23.26 197  P      P        20 45 41.2 -0.1
THZ                                 IAmb   IAmb     20 45 43.0
       comp=Z,28nm,0.7s
HNR    Honiara           23.61 293  P      P        20 45 44.5 -0.2
       comp=Z,47nm,0.6s,baz=193,slow=6.2,SNR=5.4
KHZ    Kahutara          23.70 196  P      P        20 45 43.9 -1.2
LTZ    Lake Taylor       24.39 197  P      P        20 45 49.8 -1.3
RPZ    Rata Peaks        25.59 199  P      P        20 46 01.6 -0.2
       comp=Z,17nm,0.5s,baz=23,slow=7.7,SNR=12
RPZ    Rata Peaks        25.59 199  P      P        20 46 01.9 +0.1
RPZ                                 IAmb   IAmb     20 46 06.2
       comp=Z,20nm,0.7s
MLZ    Mavora Lakes      28.01 201  P      P        20 46 24.0 +1.1
ARMA   Armidale          29.37 243  P      P        20 46 35.0  0.0
       baz=30,SNR=5.2
RMQ    Roma              31.21 251  P      P        20 46 51.7 +1.0
       baz=31,SNR=12
CNB    Canberra Magne    32.63 235  P      P        20 47 04.1 +1.4
       baz=33,SNR=6.4
CTA    Charters Tower    33.53 263  P      P        20 47 10.7 +0.3
       comp=Z,77nm,0.5s,baz=92,slow=10,SNR=192
CTA                                 ScP    ScP      20 52 24.1 +2.6
       comp=Z,5.5nm,0.8s,baz=136,slow=1.8,SNR=6.4
CTAO   Charters Tower    33.53 263  P      P        20 47 10.8 +0.4
CMSA   Cobar Meteorol    34.59 243  P      P        20 47 19.7 +0.7
       baz=35,SNR=30
PMG    Port Moresby      35.14 282  P      P        20 47 23.6 -0.2
       comp=Z,94nm,0.9s,baz=79,slow=7.0,SNR=46
PMG    Port Moresby      35.14 282  P      P        20 47 23.8 -0.1
QLP    Quilpie           35.25 252  P      P        20 47 24.8 +0.2
       baz=35,SNR=28
MTSU   Mount Surprise    35.60 266  P      P        20 47 27.6  0.0
       baz=36,SNR=191
TOO    Toolangi          36.32 233  P      P        20 47 34.2 +1.0
       baz=36,SNR=8.5
STKA   Stephens Creek    38.09 243  P      P        20 47 48.5 +0.7
       baz=38,SNR=25
STKA   Stephens Creek    38.09 243  P      P        20 47 48.5 +0.7
       comp=Z,13nm,0.6s,baz=91,slow=9.5,SNR=37
STKA                                ScP    ScP      20 52 41.0 +2.8
       comp=Z,4.4nm,0.9s,baz=360,slow=3.3,SNR=5.5
STKA   Stephens Creek    38.09 243  P      P        20 47 48.4 +0.7
ARPS   Mount Arapiles    38.88 236  P      P        20 47 54.7 +0.7
       baz=39,SNR=8.0
QIS    Mount Isa         39.69 261  P      P        20 48 00.2 -0.6
       baz=40,SNR=11
HTT    Hallett           40.55 241  P      P        20 48 08.0 +0.6
       baz=41,SNR=14
BBOO   Buckleboo         42.86 243  P      P        20 48 25.7 +0.2
       baz=43,SNR=77
JAY    Jayapura          43.77 288  P      P        20 48 33.1 +0.2
       comp=Z,116nm,0.6s,baz=142,slow=4.2,SNR=94
JAY    Jayapura          43.77 288  P      P        20 48 33.8 +0.9
       comp=Z,914nmcomp=Z,112nm,1.0s
GENI   Genyem            44.22 287  P      P        20 48 37.1 +0.8
       comp=Z,173nm,1.0s
WR0    Warramunga Arr    44.48 261  P      P        20 48 37.6 -0.6
WR0                                 IAmb   IAmb     20 48 39.3
       comp=Z,39nm,1.1s
WB0    Warramunga Arr    44.65 262  P      P        20 48 38.9 -0.6
AS31   Alice Springs     44.66 256  P      P        20 48 39.3 -0.3
AS31                                IAmb   IAmb     20 48 41.2
       comp=Z,13nm,0.6s
ASAR   Alice Springs     44.66 256  P      P        20 48 39.5 -0.1
       comp=Z,52nm,0.7s,baz=89,slow=7.9,SNR=672
ASAR                                PcP    PcP      20 50 09.1 +0.1
       comp=Z,3.7nm,0.5s,baz=108,slow=4.2,SNR=5.0
ASAR                                ScP    ScP      20 53 07.3 +2.5
       comp=Z,1.9nm,0.7s,baz=102,slow=4.9,SNR=6.9
ASAR                                S      S        20 54 31.9 -1.8
       comp=Z,7.0nm,0.7s,baz=91,slow=16,SNR=33
ASAR                                ScS    ScS      20 57 32.6 +1.2
       comp=Z,0.5nm,0.7s,baz=77,slow=6.6,SNR=4.5
ASAR   Alice Springs     44.66 256  P      P        20 48 38.9 -0.8
WB2    Warramunga Arr    44.66 261  P      P        20 48 38.9 -0.7
WB2                                 IAmb   IAmb     20 48 39.5
       comp=Z,32nm,0.7s
WRAB   Tennant Creek     44.66 261  P      P        20 48 38.9 -0.7
WRAB                                IAmb   IAmb     20 48 39.4
       comp=Z,28nm,0.7s
WRA    Warramunga Arr    44.67 261  P      P        20 48 38.9 -0.8
       comp=Z,19nm,0.4s,baz=97,slow=8.1,SNR=435
WRA                                 ScP    ScP      20 53 07.5 +2.6
       comp=Z,1.1nm,0.8s,baz=91,slow=3.8,SNR=3.8
WRA                                 S      S        20 54 30.4 -3.4
       comp=Z,1.6nm,0.8s,baz=95,slow=14,SNR=6.2
WRA    Warramunga Arr    44.67 261  P      P        20 48 38.2 -1.6
KDU    Kakadu            47.90 271  P      P        20 49 03.3 -0.7
       baz=48,SNR=22
MTN    Manton Dam        49.12 270  P      P        20 49 12.4 -0.7
       baz=49,SNR=13
GUMO   Guam              49.29 309  P      P        20 49 13.8 -0.4
       comp=Z,84nm,0.5s,baz=159,slow=6.7,SNR=5.9
GUMO   Guam              49.29 309  P      P        20 49 13.4 -0.9
FORT   Forrest           49.56 246  P      P        20 49 15.8 -0.3
       baz=50,SNR=18
SAUI   Saumlaki          50.38 276  P      P        20 49 23.0 +0.7
       comp=Z,119nm,1.2s
SIJI   Sorong            53.01 284  P      P        20 49 41.1 -0.1
       comp=Z,90nm,0.5s,baz=112,slow=4.7,SNR=59
SWI    Sorong            53.02 284  P      P        20 49 41.1 -0.1
       comp=Z,2µmcomp=Z,199nm,0.8s
FITZ   Fitzroy Crossi    53.09 262  P      P        20 49 41.6 -0.1
       baz=53,SNR=26
MSAI   Masohi            54.20 280  P      P        20 49 50.0 +0.5
       comp=Z,402nmcomp=Z,12nm,0.6s
KMBL   Kambalda          54.84 245  P      P        20 49 53.6 -0.3
       baz=55,SNR=5.6
NLAI   Namlea            55.93 280  P      P        20 50 01.4 -0.2
       comp=Z,2µmcomp=Z,38nm,1.0s
SOEI   Soe               56.44 271  P      P        20 50 06.3 +1.1
       comp=Z,2µmcomp=Z,219nm,1.0s
BATI   Baumata           56.88 271  P      P        20 50 09.1 +1.0
       comp=Z,44nm,0.8s
TNTI   Ternate           57.23 284  P      P        20 50 10.1 -0.4
TNTI                                IAmb   IAmb     20 50 11.3
       comp=Z,65nm,0.8s
TNTI   Ternate           57.23 284  P      P        20 50 10.5  0.0
       comp=Z,746nmcomp=Z,94nm,0.9s
SANI   Sanana            57.40 281  P      P        20 50 10.7 -0.9
       comp=Z,67nm,1.0s
MEEK   Meekatharra       58.13 250  P      P        20 50 15.7 -0.8
       baz=58,SNR=16
KLBR   Kellerberrin      58.35 245  P      P        20 50 17.6 -0.2
       baz=58,SNR=19
VNDA   Vanda             58.66 185  P      P        20 50 20.4 +1.3
       comp=Z,7.6nm,0.8s,baz=350,slow=7.7,SNR=30
VNDA                                ScP    ScP      20 54 07.0 +2.7
       comp=Z,3.8nm,1.1s,baz=331,slow=5.4,SNR=3.3
VNDA   Vanda             58.66 185  P      P        20 50 21.1 +2.0
NWAO   Narrogin (SRO)    58.68 243  P      P        20 50 20.0 +0.1
       baz=59,SNR=5.7
MMRI   Maumere           58.69 272  P      P        20 50 19.4 -0.9
MMRI                                IAmb   IAmb     20 50 20.5
       comp=Z,51nm,0.6s
MMRI   Maumere           58.69 272  P      P        20 50 19.7 -0.6
       comp=Z,1µmcomp=Z,96nm,0.8s
EDFI   Ende, Flores      59.17 271  P      P        20 50 22.7 -0.9
       comp=Z,40nm,0.8s
BLDU   Ballidu           59.33 246  P      P        20 50 23.9 -0.4
       baz=59,SNR=37
MUN    Mundaring         59.62 244  P      P        20 50 26.6 +0.3
       baz=60,SNR=8.7
MORW   Morawa            60.08 247  P      P        20 50 29.2 -0.2
       baz=60,SNR=9.9
KMSI   Cibinong          60.26 282  P      P        20 50 31.1 +0.4
       comp=Z,85nm,0.8s
LUWI   Luwuk             60.76 280  P      P        20 50 34.2 +0.2
LUWI                                IAmb   IAmb     20 50 34.9
       comp=Z,57nm,0.7s
LUWI   Luwuk             60.76 280  P      P        20 50 34.2 +0.2
       comp=Z,1µmcomp=Z,114nm,1.1s
APSI   Ampana            61.85 280  P      P        20 50 41.8 +0.7
       comp=Z,640nmcomp=Z,60nm,1.2s
BNSI   Bone              62.05 276  P      P        20 50 41.5 -0.9
       comp=Z,36nm,1.1s
MRSI   Marisa            62.10 281  P      P        20 50 41.2 -1.5
       comp=Z,37nm,0.9s
KAPI   Kappang           62.18 275  P      P        20 50 43.3  0.0
       comp=Z,9.2nm,0.6s,baz=90,slow=1.0
SPSI   Sidrap Palu       62.52 276  P      P        20 50 44.5 -0.9
       comp=Z,25nm,1.1s
GIRL   Giralia           62.72 254  P      P        20 50 47.6 +1.0
       baz=63,SNR=9.8
PLAI   Plampang          62.83 270  P      P        20 50 47.0 -0.4
       comp=Z,1000nmcomp=Z,116nm,0.8s
TWSI   Taliwang, Sumb    63.70 270  P      P        20 50 52.7 -0.3
       comp=Z,573nmcomp=Z,64nm,0.9s
MPSI   Mapaga            63.94 280  P      P        20 50 54.3 -0.2
       comp=Z,719nmcomp=Z,79nm,0.9s
JHJ    Hachijo jima 2    66.22 322  P      P        20 51 07.6 -0.7
       baz=65,slow=19
BBKI   Banjar Baru       67.31 275  P      P        20 51 16.0 +0.5
       comp=Z,34nm,1.3s
MTKI   Muara Teweh, K    68.13 277  P      P        20 51 20.9 +0.4
       comp=Z,1µmcomp=Z,26nm,1.1s
PWJI   Pagerwojo         68.70 269  P      P        20 51 23.1 -0.8
       comp=Z,49nm,0.9s
TGY    Tagaytay City     68.81 294  P      P        20 51 25.5 +1.0
       comp=Z,100nm,0.3s,baz=217,slow=8.3,SNR=4.6
MJAR   Matsushiro Arr    69.58 324  P      P        20 51 28.1 -0.6
       comp=Z,19nm,0.6s,baz=158,slow=5.8,SNR=69
MJAR   Matsushiro Arr    69.58 324  P      P        20 51 28.0 -0.6
MAJO   Matsushiro        69.58 324  P      P        20 51 28.1 -0.5
MAJO                                IAmb   IAmb     20 51 28.8
       comp=Z,22nm,0.6s
MAT    Matsushiro        69.58 324  P      P        20 51 28.1 -0.5
QSPA   South Pole Qui    70.33 180  P      P        20 51 34.0 +1.2
KPJI   Karang Pucung     71.62 269  P      P        20 51 40.7 -0.4
       comp=Z,53nm,0.8s
JNU    Nakatsue          71.70 317  P      P        20 51 40.7 -0.5
       comp=Z,8.4nm,0.7s,baz=123,slow=11,SNR=4.4
SBUM   Sibu              71.84 279  P      P        20 51 43.0 +0.6
LEM    Lembang           73.02 269  P      P        20 51 50.0 +0.7
       comp=Z,110nm,0.9s,baz=29,slow=5.4,SNR=18
ASAJ   Asahikawa         73.04 331  P      P        20 51 50.0 +1.5
       comp=Z,51nm,0.9s,baz=214,slow=6.5,SNR=28
KSM    Kuching           73.27 278  P      P        20 51 51.0 +0.4
SSLB   Suanglung         73.53 303  P      P        20 51 50.5 -1.4
DBJI   Dramaga           73.92 269  P      P        20 51 54.2 -0.1
       comp=Z,897µmcomp=Z,15µmcomp=Z,82nm,0.9s
CGJI   Cibinong          74.90 268  P      P        20 51 58.3 -1.5
       comp=Z,112nm,0.7s
PETK   Petropavlovsk-    75.53 345  P      P        20 52 02.1 -0.2
       comp=Z,24nm,0.8s,baz=125,slow=7.8,SNR=23
PETK   Petropavlovsk-    75.53 345  P      P        20 52 01.9 -0.5
BLSI   Bandar Lampung    75.72 269  P      P        20 52 03.8 -0.5
       comp=Z,77nm,0.8s
KSRS   Korea Array       76.30 318  P      P        20 52 07.5 +0.6
       comp=Z,4.3nm,0.7s,baz=128,slow=6.1,SNR=12
KASI   Kota Agung        76.37 269  P      P        20 52 06.9 -1.0
       comp=Z,82nm,0.9s
LWLI   Liwa              76.95 269  P      P        20 52 10.2 -1.0
       comp=Z,60nm,0.6s
USA0B  Ussuriysk Arra    78.32 326  P      P        20 52 18.6 +1.0
USA0B                               IAmb   IAmb     20 52 19.7
       comp=Z,33nm,0.9s
USRK   Ussuriysk Ar.     78.32 326  P      P        20 52 18.9 +1.3
       comp=Z,22nm,0.8s,baz=136,slow=3.5,SNR=58
USRK   Ussuriysk Ar.     78.32 326  P      P        20 52 18.4 +0.7
KSI    Kapahiang         78.77 270  P      P        20 52 23.2 +2.3
       comp=Z,54nm,0.9s
NJ2    Nanjing           79.37 310  eP     P        20 52 16.3 -7.2
NJ2                                 PcP    PcP      20 52 22.8 -6.4
NJ2                                 pmax   pmax
       comp=Z,11nm,0.5s
MYKOM  Kota Tinggi       79.42 276  P      P        20 52 25.0 +0.7
YBH    Yreka Blue Hor    79.72  39  P      P        20 52 26.9 +1.6
       comp=Z,2.7nm,0.7s,baz=144,slow=2.0,SNR=7.2
MDJ    Mudanjiang        79.88 325  P      P        20 52 24.9 -1.0
MDJ                                 pmax   pmax
       comp=Z,37nm,0.7s
MDJ                                 pmax   pmax
       comp=Z,240nm,3.5s
MDJ    Mudanjiang        79.88 325  P      P        20 52 26.6 +0.7
MDJ                                 IAmb   IAmb     20 52 27.9
       comp=Z,36nm,0.9s
KDAK   Kodiak Island     80.09  14  P      P        20 52 26.7 +0.1
       comp=Z,10nm,0.8s,baz=238,slow=5.5,SNR=5.7
KDAK   Kodiak Island     80.09  14  P      P        20 52 26.7 +0.1
NVAR   Mina Array Bea    80.50  43  P      P        20 52 30.9 +1.3
       comp=Z,1.9nm,0.8s,baz=227,slow=9.0,SNR=15
SDSI   Sungai Dareh      80.77 272  P      P        20 52 30.9 -0.4
       comp=Z,2µmcomp=Z,13nm,1.1s
CN2    Changchun         81.68 322  eP     P        20 52 35.3 +0.1
CN2                                 pmax   pmax
       comp=Z,20nm,0.9s
MAW    Mawson            82.26 200  P      P        20 52 37.2 -0.6
       baz=82,SNR=11
IPM    Ipoh              83.00 277  P      P        20 52 43.0 +0.4
MA2    Magadan           83.04 345  P      P        20 52 40.1 -1.6
KULM   Kulim             83.63 278  P      P        20 52 47.0 +1.3
SUA    Susitna One       83.83  13  P      P        20 52 45.5 -0.2
SUA                                 IAmb   IAmb     20 52 46.1
       comp=Z,23nm,0.8s
GLI    Glacier Island    84.12  15  P      P        20 52 46.6 -0.4
GLI                                 IAmb   IAmb     20 52 47.5
       comp=Z,28nm,0.8s
TTA    Tatalina          84.20  10  P      P        20 52 47.5 +0.1
KNK    Knik Glacier      84.28  14  P      P        20 52 47.4 -0.4
PMR    Palmer            84.29  13  P      P        20 52 47.3 -0.4
RPSI   Rantau Prapat     84.35 275  P      P        20 52 48.9 -0.4
PSI    Prapat            84.39 275  P      P        20 52 48.9 -0.7
       comp=Z,8.6nm,0.8s,baz=359,slow=1.2,SNR=6.2
GHO    Glory Hole Cre    84.50  13  P      P        20 52 48.8 -0.1
GHO                                 IAmb   IAmb     20 52 49.6
       comp=Z,27nm,0.9s
USHA   Ushuaia           84.78 147  P      P        20 52 53.3 +2.8
       comp=Z,122nm,0.5s,baz=208,slow=0.1,SNR=7.7
SCM    Sheep Creek Mo    84.91  14  P      P        20 52 51.1 +0.2
SCM                                 IAmb   IAmb     20 52 51.8
       comp=Z,26nm,0.8s
GSI    Gunungsitoli      85.15 273  P      P        20 52 54.4 +1.3
       comp=Z,48nm,1.0s
BJI    Beijing           85.33 315  P      P        20 52 53.8 +0.5
BJI                                 pmax   pmax
       comp=Z,17nm,0.9s
N25K   Chitina, Valde    85.36  15  P      P        20 52 53.3 +0.1
GLB    Gilahina Butte    85.42  16  P      P        20 52 52.9 -0.4
KTH    Kantishna Hill    85.69  12  P      P        20 52 53.5 -1.0
TRF    Thorofare Moun    85.72  12  P      P        20 52 54.3 -0.6
TRF                                 IAmb   IAmb     20 52 56.3
       comp=Z,19nm,0.9s
GYA    Guiyang           86.24 300  eP     P        20 52 58.9 +0.7
GYA                                 pmax   pmax
       comp=Z,11nm,1.1s
TXAR   Lajitas Array     86.68  57  P      P        20 53 02.1 +2.0
       comp=Z,2.2nm,0.8s,baz=221,slow=7.8,SNR=27
TXAR   Lajitas Array     86.68  57  P      P        20 53 00.3 +0.2
WRH    Wood River Hil    87.07  13  IAmb   IAmb     20 53 01.4
       comp=Z,22nm,0.9s
HDA    Harding Lake      87.25  13  IAmb   IAmb     20 53 02.2
       comp=Z,15nm,0.7s
CCB    Clear Creek Bu    87.28  13  IAmb   IAmb     20 53 02.1
       comp=Z,20nm,0.8s
BCAR   Beaver Creek A    87.31  16  P      P        20 53 02.5 +0.3
IMAR   Indian Mountai    87.42  10  P      P        20 53 02.4 -0.1
I23K   Minto, Yukon-K    87.42  12  P      P        20 53 01.5 -1.1
SYO    Syowa Base        87.46 193⇑ eP     P        20 53 02.2 -0.7
MDM    Murphy Dome       87.47  12  P      P        20 53 01.8 -1.1
MDM                                 IAmb   IAmb     20 53 03.1
       comp=Z,19nm,0.8s
IL31                     87.58  13  P      P        20 53 02.4 -0.9
IL31                                IAmb   IAmb     20 53 03.7
       comp=Z,11nm,0.9s
ILAR   Eielson Array     87.58  13  P      P        20 53 02.6 -0.8
       comp=Z,6.6nm,0.8s,baz=227,slow=5.6,SNR=50
ILAR                                pP     pwP      20 55 13.3 -1.4
       comp=Z,3.3nm,1.1s,baz=226,slow=5.7,SNR=8.2
XAN    Xi'an             87.64 307  P      P        20 53 05.3 +0.8
XAN                                 pmax   pmax
       comp=Z,41nm,1.1s
XAN                                 pmax   pmax
       comp=Z,150nm,6.1s
K27K   Chicken           88.04  15  P      P        20 53 06.7 +1.2
K27K                                IAmb   IAmb     20 53 07.2
       comp=Z,12nm,1.0s
UTTA   Uttaradit         88.14 289  P      P        20 53 09.3 +2.3
PDAR   Pinedale Array    88.44  43  P      P        20 53 08.3 +0.1
       comp=Z,1.2nm,0.7s,baz=218,slow=3.3,SNR=11
DAWY   Dawson            88.74  16  P      P        20 53 09.0 +0.1
DAWY                                IAmb   IAmb     20 53 10.2
       comp=Z,11nm,0.9s
SNAA   Sanae             88.77 178  P      P        20 53 08.9 -0.2
HHC    Hu-ho-hao-te      88.80 314  eP     P        20 53 00.8 -9.0
EGAK   Eagle             88.88  15  P      P        20 53 09.7 +0.2
EGAK                                IAmb   IAmb     20 53 10.6
       comp=Z,18nm,1.0s
VNA3   Neumayer Olymp    88.90 176  P      P        20 53 09.7  0.0
KMI    Kunming           88.97 297  ⇓P     P        20 53 10.5 -0.6
KMI                                 pmax   pmax
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	comp=Z,20nm,0.9s						
LAMP	Lampang	89.24	290	P	P	20 53 13.0	+0.8
VNA2	Neumayer--Watz	89.34	177	P	P	20 53 12.0	+0.3
	baz=155,slow=6.1						
VNA1	Neumayer--Stat	89.57	177	P	P	20 53 12.9	+0.3
LC01	Cunco	89.69	131	P	P	20 53 15.2	+1.2
CM36	Chiang Mai Arr	89.71	290	P	P	20 53 15.0	+0.6
CM35	Chiang Mai Arr	89.72	290	P	P	20 53 15.0	+0.6
CM04	Chiang Mai Arr	89.77	290	P	P	20 53 16.2	+1.5
CM09	Chiang Mai Arr	89.78	290	P	P	20 53 16.2	+1.6
CM34	Chiang Mai Arr	89.78	290	P	P	20 53 15.0	+0.3
CM01	Chiang Mai Arr	89.80	290	P	P	20 53 16.7	+1.9
CM05	Chiang Mai Arr	89.80	290	P	P	20 53 16.0	+1.2
CM02	Chiang Mai Arr	89.81	290	P	P	20 53 16.4	+1.6
PLCA	Paso Flores	89.82	134	P	P	20 53 16.2	+1.6
	comp=Z,3.2nm,0.9s,baz=253,slow=4.3,SNR=2.8						
CM31	Chiang Mai Arr	89.83	290	P	P	20 53 16.4	+1.5
CMAR	Chiang Mai Arr	89.83	290	P	P	20 53 16.2	+1.3
	comp=Z,11nm,0.9s,baz=116,slow=2.8,SNR=65						
CM15	Chiang Mai Arr	89.84	290	P	P	20 53 16.4	+1.5
CM13	Chiang Mai Arr	89.84	290	P	P	20 53 16.0	+1.0
CMMT	Chiang Mai	89.95	290	P	P	20 53 16.4	+0.9
CM33	Chiang Mai Arr	89.95	290	P	P	20 53 16.0	+0.5
CHTO	Chiang Mai	89.95	290	P	P	20 53 16.2	+0.7
CHTO				IAmb	IAmb	20 53 17.4	
	comp=Z,16nm,0.9s						
CM32	Chiang Mai Arr	89.98	290	P	P	20 53 17.0	+1.4
CD2	Chengdu	90.35	303	eP	P	20 53 10.3	-6.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MHMT	Maesarieng	90.63	289	P	P	20 53 21.8	+3.2
EPYK	Eagle Plains	91.27	15	P	P	20 53 20.5	+0.1
EPYK				IAmb	IAmb	20 53 21.4	
	comp=Z,7.8nm,0.8s						
LZH	Lanzhou	92.28	308	⇓P	P	20 53 26.8	+0.8
LZH				pP	pP	20 54 44.9	-50
LZH				sP	pwP	20 55 16.4	-22
LZH				PP	PP	20 57 17.8	-0.1
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZH				pmax	pmax		
	comp=Z,140nm,9.3s						
INK	Inuvik	93.55	15	P	P	20 53 30.3	-0.5
	comp=Z,3.9nm,1.0s,baz=214,slow=5.7,SNR=10						
SONM	Songino Array	95.16	319	P	P	20 53 38.4	-0.4
	comp=Z,0.5nm,0.4s,baz=128,slow=4.4,SNR=8.1						
YKA	Yellowknife Ar	95.84	25	P	P	20 53 41.1	-0.2
	comp=Z,0.8nm,0.8s,baz=240,slow=4.2,SNR=14						
GTA	Gaotai	96.46	309	P	P	20 53 45.1	+0.2
GTA				sP	pP	20 55 38.8	-16
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZALV	Zalesovo Beam	109.88	321	PKiKP	PKiKP	20 58 40.7	-1.5
	comp=Z,1.0nm,0.5s,baz=22,slow=1.7,SNR=6.3						
ZALV				PP	PP	20 59 24.9	-2.4
	comp=Z,0.2nm,0.4s,baz=103,slow=6.5,SNR=3.8						
ZALV				SKP	SKiKP	21 01 21.9	+0.4
	comp=Z,0.6nm,0.6s,baz=28,slow=1.0,SNR=4.2						
MKAR	Makanchi Array	110.65	314	Pdiff	Pdif	20 54 51.0	+3.3
	comp=Z,0.2nm,0.5s,baz=97,slow=4.1,SNR=5.0						
MKAR				PKiKP	PKiKP	20 58 43.0	-1.0
	comp=Z,1.0nm,0.5s,baz=156,slow=1.3,SNR=21						
MKAR				PP	PP	20 59 31.3	-1.8
	comp=Z,0.6nm,0.9s,baz=91,slow=4.9,SNR=4.0						
MKAR				SKP	SKiKP	21 01 23.6	+0.3
	comp=Z,0.5nm,0.8s,baz=105,slow=1.4,SNR=2.9						
MKAR				PKKPbc	PKKPbc	21 09 44.5	-1.1
	comp=Z,0.5nm,0.8s,baz=278,slow=3.4,SNR=4.9						
KSH	Kashi	114.42	305	PKP	PKPdf	20 58 38.1	-13
KSH				sPKP		21 00 40.6	
SGDS	Sogindy	115.75	309	ePKP	PKPdf	20 58 53.1	-0.8
	baz=310						
BTLS	Baital	116.24	311	ePKP	PKPdf	20 58 53.2	-1.5
	baz=311						
KKAR	Karatay Array	118.74	309	PKPdf	PKPdf	20 58 58.8	-0.8
IUG	Iuzhnay	119.08	308	ePKP	PKPdf	20 58 59.4	-1.0
	baz=308						
KBL	Kabul	119.49	299	PKPdf	PKPdf	20 59 01.3	-0.2
ARU	Arti	124.56	326		PKPdf	20 59 10.2	-0.1
ABKAR	Akbulak array	125.51	317	PKPdf	PKPdf	20 59 11.8	-0.5
ARCES	ARCESS Array B	128.17	350	PKP	PKPdf	20 59 16.3	-0.6
	comp=Z,2.3nm,0.4s,baz=33,slow=1.1,SNR=42						
FINES	FINESS Array B	135.03	344	PKP	PKiKP	20 59 30.9	-0.7
	comp=Z,2.6nm,0.6s,baz=98,slow=3.0,SNR=4.2						
FINES				SKPbc	SKPbc	21 02 04.8	-0.4
	comp=Z,1.3nm,0.5s,baz=43,slow=3.9,SNR=6.4						
NB2	NORSAR Subarra	138.22	353	PKP	PKPdf	20 59 25.8	-10
	comp=Z,0.4nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	138.22	353	PKhKP	PKPpre	20 59 29.3	
	comp=Z,0.4nm,0.7s,baz=16,slow=4.1,SNR=5.6						
NOA				PKP	PKiKP	20 59 37.5	-0.7
	comp=Z,0.7nm,0.5s,baz=14,slow=4.0,SNR=4.5						
KBZ	Khabaz	138.34	314	SKPbc	SKiKP	21 02 17.1	-1.7
	comp=Z,2.8nm,0.9s,baz=149,slow=2.6,SNR=6.2						
AKASG	Malin Array Be	142.33	332	PKhKP	PKPpre	20 59 39.5	
	comp=Z,7.6nm,0.4s,baz=43,slow=4.2,SNR=76						
AKASG				PKP	PKPdf	20 59 43.8	+0.2
	comp=Z,1.9nm,0.5s,baz=36,slow=3.6,SNR=4.9						
AKASG				SKPbc	SKiKP	21 02 26.3	-0.5
	comp=Z,3.9nm,0.7s,baz=39,slow=3.2,SNR=9.8						
AKBB	Malin Array Si	142.33	332	PKPdf	PKPdf	20 59 39.6	-4.0
MUD	Monsted U'grnd	142.94	353	i P	PKPdf	20 59 42.4	-2.0
MUD	Monsted U'grnd	142.94	353	i P	PKPdf	20 59 42.5	-2.0
INVG	Invergeldie, C	143.09	6	eP	PKPab	20 59 42.5	-0.2
LAWE	Loch Awe, Argy	143.12	7	eP	PKPab	20 59 42.7	-0.1
EAB	Aberfoyle	143.30	6	eP	PKPab	20 59 43.2	-0.3
BSD	Bornholm Skovb	143.34	348	i P	PKPab	20 59 43.3	-0.4
	comp=Z,3.5nm,0.4s						
BSD	Bornholm Skovb	143.34	348	i P	PKPab	20 59 43.4	-0.3
BSD				IAmb	IAmb	20 59 44.0	
	comp=Z,3.5nm,0.4s						
LLD	Lille Linde	143.62	350	i P	PKPbc	20 59 44.5	-0.2
LLD	Lille Linde	143.62	350	eP	PKPbc	20 59 44.5	-0.2
EBL	Broad Law	143.82	5	eP	PKPbc	20 59 44.8	-0.6
NEWG	New Galloway	144.37	6	eP	PKPdf	20 59 46.3	-0.7
GKP	Gorka Klasztor	144.51	344	ePKP	PKPbc	20 59 47.5	-0.1
SORM	Soroca	144.54	329	⇓P	PKPdf	20 59 47.4	-0.1
BEL	Belsk	144.73	340	ePKP	PKPbc	20 59 48.6	+0.3
EDMD	Edmundbyers	144.84	4	eP	PKPbc	20 59 48.1	-0.4
BZK	Bozkurt	145.00	316	⇓P	PKPab	20 59 50.1	-0.4
MILM	Milestii Mici	145.14	327	⇑P	PKPdf	20 59 48.9	+0.3
VASR	Vaslui	145.84	328	⇑P	PKPbc	20 59 51.1	-0.6
KWP	Kalwaria Pacla	145.88	336	ePKP	PKPbc	20 59 51.7	-0.1
KWP	Kalwaria Pacla	145.88	336		PKPbc	20 59 52.0	+0.3
PRAR	RASCA	146.10	330	⇓P	PKPbc	20 59 52.0	-0.5
TLCR		146.27	325	⇑P	PKPbc	20 59 52.8	-0.1
BR131	Keskin Array S	146.30	313	PKPdf	PKPbc	20 59 53.2	-0.2
BRTR	Keskin Array B	146.30	313	PKPbc	PKPbc	20 59 53.0	-0.4
	comp=Z,7.6nm,0.6s,baz=135,slow=3.3,SNR=38						
BRTR				SKPbc	SKiKP	21 02 36.0	+0.5
	comp=Z,2.0nm,0.8s,baz=147,slow=2.1,SNR=5.8						
VARL	Varlezi	146.31	327	⇑P	PKPbc	20 59 52.8	-0.2
BUR08	Bucovina Ar. S	146.37	331		PKPbc	20 59 53.8	+0.6
BURAR	Bucovina Array	146.38	331	⇓P	PKPbc	20 59 53.7	+0.4
OJC	Ojcow	146.44	339	ePKP	PKPbc	20 59 53.2	0.0
OJC	Ojcow	146.44	339		PKPbc	20 59 53.2	0.0
BIZ	Bicaz	146.46	330	⇓P	PKPbc	20 59 54.0	+0.6
TESR	Tescani	146.50	328	⇑P	PKPbc	20 59 53.7	+0.1
JURR	Jurilovca	146.50	324	⇑P	PKPbc	20 59 53.0	-0.6
KOLS	Kolonicke sedl	146.61	335	ePKP	PKPbc	20 59 54.2	+0.4
CFR	Carcaliu	146.64	325	⇓P	PKPbc	20 59 53.9	-0.1
TPGR	Topolog	146.70	325	⇓P	PKPbc	20 59 54.4	+0.2
ODBI	Odobesti	146.81	327	⇑P	PKPbc	20 59 55.1	+0.7
VRI	Vrincioaia	146.91	328	⇑P	PKPbc	20 59 54.5	-0.2
CRVS	Cervenica-Dubn	146.95	336	ePKP	PKPbc	20 59 55.1	+0.4
NIE	Niedzica	146.95	338	ePKP	PKPbc	20 59 55.3	+0.7
KSP	Ksiaz	146.96	343	ePKP	PKPbc	20 59 55.1	+0.5
TIRR	Tirgusor	146.96	324	⇓P	PKPbc	20 59 54.4	-0.4
PLOR	Plostina	146.96	328	⇓P	PKPbc	20 59 54.5	-0.3
ASSE	Asse, Remlinge	146.96	350	ePKP	PKPbc	20 59 54.6	+0.1
	baz=17,slow=2.5						
HARR	Harsova	147.07	325	⇑P	PKPbc	20 59 55.3	+0.2
TLBR	Topalu	147.10	325	⇑P	PKPbc	20 59 55.1	-0.1
MFTR	Murfatlar	147.13	324	⇑P	PKPbc	20 59 55.2	0.0
ARCR	ARCALIA	147.17	331	⇓P	PKPbc	20 59 55.4	+0.1
OZUR		147.22	329	⇓P	PKPbc	20 59 55.9	+0.4
OSTC	Ostas	147.24	343	⇑ePKP	PKPbc	20 59 55.9	+0.5
CHVC	Chvalec	147.25	343	⇑ePKP	PKPbc	20 59 55.9	+0.5
MANR	Mangalia	147.26	323	⇓P	PKPbc	20 59 55.4	-0.2
CLZ	Clausthal	147.29	350	ePKP	PKPbc	20 59 55.8	+0.3
	baz=17,slow=2.5						
CLL	Collm	147.32	347	⇓iPKPbc	PKPbc	20 59 55.6	+0.1
	comp=Z,38nm,1.0s						
CLL				⇑iPKPab	PKPab	20 59 59.2	-0.2
	comp=Z,27nm,1.0s						
CLL				epPKPab	pPKPab	21 02 13.0	+0.6
CLL				eSKPbc	SKiKP	21 02 39.0	+1.9
CLL	Collm	147.32	347	ePKP	PKPbc	20 59 55.6	+0.1
	baz=17,slow=2.5						
UPC	Upice	147.34	343	⇑ePKP	PKPbc	20 59 56.0	+0.4
UPC				ePKPAB	PKPab	21 00 00.1	+0.5
DPC	Dobruska-Polom	147.39	343	⇑ePKP	PKPbc	20 59 56.1	+0.3
DPC				ePKPAB	PKPab	21 00 00.2	+0.3
NEHR	Nehoiu	147.43	327	⇓P	PKPbc	20 59 55.8	-0.3
LANS	Liptovska Anna	147.46	338	ePKP	PKiKP	20 59 57.3	-0.3
LANS				e		21 00 01.4	
DOPR	Dopca	147.50	329	⇓P	PKiKP	20 59 57.0	-0.7
KRLC	Kraliky	147.51	342	⇑ePKP	PKPbc	20 59 56.2	+0.1
KRLC				ex	x	21 00 00.4	
BRG	Berggiesshubel	147.52	346	⇓iPKP	PKPbc	20 59 56.3	+0.2
BRG				Amp		20 59 57.5	
	comp=Z,15nm,0.9s						
BRG				i x	x	21 00 00.0	
BRG				Amp		21 00 01.0	
	comp=Z,14nm,0.9s						
BRG				ex	x	21 02 40.1	
BRG				Amp		21 02 40.7	
	comp=Z,3.9nm,0.8s						
BRG	Berggiesshubel	147.52	346	⇓iPKP	PKPbc	20 59 56.3	+0.2
BRG				Amp		20 59 57.5	
	comp=Z,15nm,0.9s						
BRG				i x	x	21 00 00.0	
BRG				Amp		21 00 01.0	
	comp=Z,14nm,0.9s						
BRG				ex	x	21 02 40.1	
BRG				Amp		21 02 40.7	
	comp=Z,3.9nm,0.8s						
BRG	Berggiesshubel	147.52	346	ePKP	PKPbc	20 59 56.3	+0.2
	baz=17,slow=2.5						
MORC	Moravsky Berou	147.55	341	⇑P	PKPbc	20 59 56.3	+0.1
MORC	Moravsky Berou	147.55	341	ePKP	PKPbc	20 59 56.2	0.0
MLR	Muntele Rosu	147.56	328	⇑P	PKPbc	20 59 56.3	-0.2
MLR	Muntele Rosu	147.56	328		PKPbc	20 59 55.9	-0.6
PVCC	Panska Ves	147.69	345	ePKPAB	PKPab	20 59 59.4	-1.6
CJR	Cluj-Napoca	147.79	332	⇑P	PKPbc	20 59 57.3	+0.3
LEHL	Lehliu	147.81	326	⇓P	PKPbc	20 59 57.0	0.0
VOIR		148.05	329	⇓P	PKPbc	20 59 57.3	-0.4
DRGR		148.12	333	⇑P	PKPbc	20 59 58.0	+0.2
PRA	Prague	148.15	345	⇑ePKP	PKPbc	20 59 58.1	+0.5
KASTN	Kahler Asten	148.19	352	ePKP	PKPbc	20 59 57.9	+0.1
	baz=17,slow=2.5						
PRU	Pruhonice	148.19	345	⇑ePKP	PKPbc	20 59 57.3	-0.5
PRU				ePKPAB	PKPab	21 00 03.1	0.0
MOX	Moxa	148.22	348	ePKP	PKPbc	20 59 58.0	+0.1
	baz=17,slow=2.5						
VYHS	Vyhne	148.24	338	ePKP	PKPbc	20 59 58.2	+0.2
VYHS				e		21 00 03.9	
VRAC	Vranov	148.25	342	⇓P	PKPbc	20 59 58.4	+0.4
VRAC	Vranov	148.25	342	ePKP	PKPbc	20 59 58.1	+0.1
VRAC				e		21 00 03.7	
PLN	Plauen	148.27	348	ePKP	PKPbc	20 59 58.1	+0.2
	baz=17,slow=2.5						
WERD	Werda	148.27	347	ePKP	PKPbc	20 59 58.3	+0.2
	baz=17,slow=2.5						
ARR	Arges	148.30	329	⇓P	PKiKP	20 59 59.2	-0.2
JAVC	Velka Javorina	148.31	340	ePKP	PKiKP	20 59 59.3	-0.1
PSZ	Piszkesteto	148.35	337	⇑P	PKPbc	20 59 58.7	+0.4
GUNZ	Gunzen	148.35	347	ePKP	PKPbc	20 59 58.6	+0.4
	baz=17,slow=2.5						
WERN	Wernitzgruen	148.41	347	ePKP	PKPbc	20 59 58.7	+0.4
	baz=17,slow=2.5						
CSS	Mathiatis	148.44	305		PKPbc	20 59 58.2	-0.7
NKC	Novy Kostel	148.45	347	⇑ePKP	PKPbc	20 59 58.7	+0.2
NKC				ePKPAB	PKPab	21 00 03.8	-0.4
KRUC	Moravsky	148.53	342	ePKP	PKPbc	20 59 58.7	+0.1
KRUC				e		21 00 04.4	
PBCC	Pribram	148.61	345	⇑ePKP	PKPbc	20 59 58.8	0.0
PBCC				ePKPAB	PKPab	21 00 05.0	+0.2
SMOL	Smolenice	148.69	340	ePKP	PKiKP	21 00 00.1	0.0
SMOL				e		21 00 06.0	
HUMR	Humele	148.73	327	⇓P	PKPbc	20 59 58.2	-1.1
MODS	Modra-Piesok	148.87	340	ePKP	PKPbc	20 59 59.5	0.0
ROTZ	Rotzenmuhle	148.94	347	ePKP	PKPbc	20 59 60.0	+0.3
	baz=17,slow=2.5						
SIRR	Siria	148.98	333	⇓P	PKPbc	20 59 59.4	-0.5
SRO	Srobarova	149.01	338	ePKP	PKiKP	21 00 00.6	-0.1
SRO				e		21 00 07.4	
MEM	Membach	149.03	355	dx	PKPbc	20 59 59.8	0.0
BTNL	Ternell	149.04	355	dx	PKPbc	20 59 59.9	+0.1
ZST	Bratislava	149.08	340	ePKP	PKiKP	21 00 00.8	-0.1
ZST				e		21 00 08.0	
BSTI	Sart Tilman	149.09	356	dx	PKPbc	21 00 00.3	+0.4
TNS	Taunus Mts	149.15	352	ePKP	PKPbc	21 00 00.4	+0.2
	baz=17,slow=2.5						
GZR	Gura Zlata	149.16	331	⇑P	PKPbc	21 00 00.0	-0.4
KHC	Kasperske Hory	149.23	345	⇑ePKP	PKPbc	21 00 00.2	-0.2
KHC				ePKPAB	PKPab	21 00 07.5	+0.1
SNF	Seneffe	149.24	357	dx	PKPbc	21 00 00.4	+0.2
BGES	Gesves	149.32	356	dPKPbc	PKPdf	20 59 42.5	-13
BMRD	Maredsous	149.42	356	dx	PKPbc	21 00 00.7	-0.1
GEC2	GERESS Array S	149.46	345	ePKP	PKPbc	21 00 01.0	0.0
	baz=17,slow=2.5						
GERES	GERESS Array B	149.46	345	PKPbc	PKPbc	21 00 01.0	0.0
	comp=Z,8.5nm,0.7s,baz=31,slow=3.0,SNR=76						
GERES				PKPab	PKPab	21 00 08.4	-0.1
	comp=Z,2.6nm,0.8s,baz=56,slow=3.4,SNR=6.5						
BZS	Buzias	149.51	332	⇓P	PKPbc	21 00 00.7	-0.4
DOU	Dourbes	149.64	357	dx	PKPbc	21 00 01.3	0.0
CONA	Conrad Observa	149.70	341	i P	PKPbc	21 00 01.8	+0.2
	comp=Z,13nm,0.8s,SNR=9.1						
CONA				eP	PKPab	21 00 10.2	+0.7
	comp=Z,13nm,1.3s						
HERR	Herculane	149.72	330	⇓P	PKPbc	21 00 00.7	-0.9
WLF	Walferdange	149.95	355	dx	PKPbc	21 00 02.7	+0.7
WLF	Walferdange	149.95	355		PKPbc	21 00 02.8	+0.7
WLF	Walferdange	149.95	355	ePKP	PKPbc	21 00 02.8	+0.7
	baz=17,slow=2.5						
MOA	Molln	150.23	343	eP	PKPbc	21 00 02.5	-0.3
	comp=Z,3.0nm,0.5s						
MOA				eP	PKPab	21 00 12.7	+1.0
	comp=Z,12nm,1.4s						
ELL	Elmali	150.27	311		PKPbc	21 00 03.3	-0.1
ARSA	Arzberg	150.41	341	eP	PKPbc	21 00 02.6	-0.6
	comp=Z,3.9nm,0.8s						
VTS	Vitosha	150.98	326	⇓P	PKPbc	21 00 04.8	0.0
BFO	Black Forest	151.01	351		PKiKP	21 00 04.8	-0.1
BFO	Black Forest	151.01	351	ePKP	PKPbc	21 00 04.5	-0.1
	baz=17,slow=2.5						
SOKA	Soboth	151.07	341	eP	PKPbc	21 00 04.1	-0.7
	comp=Z,9.9nm,1.1s						
SOKA				eP	PKPab	21 00 15.4	0.0
	comp=Z,5.8nm,0.9s						
KALN	Kalnik	151.10	339	P	PKPbc	21 00 04.3	-0.5
KBA	Koelnbreinsper	151.19	344	eP	PKPbc	21 00 04.3	-0.9
	comp=Z,4.4nm,0.4s						
KBA				eP	PKPab	21 00 16.6	+0.7
	comp=Z,10nm,0.8s						
OBKA	Obir	151.37	342	eP	PKPbc	21 00 04.2	-1.3
	comp=Z,2.7nm,0.5s						
OBKA				eP	PKPab	21 00 16.2	-0.3
	comp=Z,6.4nm,0.9s						
WATA	Walderalm	151.38	346	eP	PKPbc	21 00 05.0	-0.5
	comp=Z,6.5nm,0.4s						
WATA				eP	PKPab	21 00 17.1	+0.5
	comp=Z,17nm,1.4s						
RETA	Reutte	151.41	347	eP	PKPbc	21 00 05.2	-0.4
	comp=Z,7.9nm,1.1s						
RETA				eP	PKPab	21 00 16.6	-0.1
	comp=Z,9.9nm,1.1s						
WTTA	Wattenberg	151.43	346	i P	PKPbc	21 00 05.4	-0.3
	comp=Z,5.4nm,0.4s,SNR=6.2						
WTTA				eP	PKPab	21 00 17.1	+0.1
	comp=Z,7.4nm,0.6s						
PTJ	Puntijarka	151.46	339	P	PKPbc	21 00 05.0	-0.7
MOTA	Moosalm	151.47	347	eP	PKPbc	21 00 05.4	-0.4
	comp=Z,5.7nm,0.7s						
MOTA				eP	PKPab	21 00 17.0	-0.1
	comp=Z,11nm,1.1s						
MYKA	Terra Mystica	151.52	343	eP	PKPbc	21 00 04.7	-1.1
	comp=Z,4.4nm,0.4s						
MYKA				eP	PKPab	21 00 16.2	-0.9
	comp=Z,4.7nm,0.6s						
SQTA	Sankt Quirin	151.57	347	eP	PKPbc	21 00 05.5	-0.4
	comp=Z,12nm,1.2s						
SQTA				eP	PKPab	21 00 17.7	+0.3
	comp=Z,6.1nm,0.8s						
LEGS	Legarje	151.63	340	i PKPbc	PKPbc	21 00 05.6	-0.4
ABTA	Abfaltersbach	151.71	345	i P	PKPbc	21 00 05.6	-0.7
	comp=Z,9.2nm,0.5s,SNR=5.6						
ABTA				eP	PKPab	21 00 17.6	-0.4
	comp=Z,9.4nm,0.7s						
DAVA	Damuels	151.77	349	eP	PKPbc	21 00 06.3	-0.1
	comp=Z,10.0nm,0.8s						
DAVA				eP	PKPab	21 00 18.2	-0.1
	comp=Z,7.1nm,1.2s						
LJU	Ljubljana	151.80	341	i PKPbc	PKPbc	21 00 06.1	-0.3
FETA	Feichten	151.86	347	eP	PKPbc	21 00 06.6	-0.1
	comp=Z,12nm,1.2s						
FETA				eP	PKPab	21 00 18.6	-0.1
	comp=Z,9.7nm,1.1s						
VISS	Visnje	151.92	341	i PKPbc	PKPbc	21 00 06.3	-0.3
VISS				ePKPab	PKPab	21 00 18.2	-0.6
CEY	Cerknica	152.10	341	i PKPbc	PKPbc	21 00 06.7	-0.4
CEY				ePKPab	PKPab	21 00 18.8	-0.8
CTI	Castel Tesino	152.57	345	PKPab	PKPab	21 00 21.4	-0.3
UDBI	Udbina	152.74	338	P	PKPbc	21 00 08.2	-0.3
KIJV	Kijevo	152.96	337	P	PKPbc	21 00 08.3	-0.6
NVLJ	Novalja	153.01	339	P	PKPbc	21 00 07.9	-1.1
LIT	Litokhoron	153.13	323	PKPab	PKPab	21 00 24.1	-0.1
MAKA	Makarska	153.33	335	P	PKPbc	21 00 08.9	-0.8
MORI	Morici	153.33	337	P	PKPbc	21 00 09.1	-0.7
ESDC	Sonseca Array	159.49	13	PKPab	PKPab	21 00 51.5	-0.2
	comp=Z,2.8nm,1.0s,baz=344,slow=3.2,SNR=6.8						
DBIC	Dimbokro	165.42	152	PKPab	PKPab	21 01 19.7	+1.4
	comp=Z,5.2nm,0.9s,baz=139,slow=4.7,SNR=4.7						
TORD	Torodi Ar. Bea	173.44	178	PKPab	PKPab	21 01 53.6	-0.1
	comp=Z,2.4nm,1.0s,baz=174,slow=3.7,SNR=5.1						
TORD				PP	PP	21 05 46.8	+2.0
	comp=Z,3.3nm,1.3s,baz=207,slow=1.0,SNR=4.5						

IDC 18 21:16:28.3±1.8**, 4°.22S×151°.72E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/30**, mbtmp3.5**/4**, Error ellipse: s-maj=66.2km s-min=28.5km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.05	226	P	P	21 21 34.5	-1.0
	0.7nm,0.5s,baz=51,slow=10,SNR=12						
ASAR	Alice Springs	25.87	220	P	P	21 22 03.3	+1.3
	0.6nm,0.9s,baz=58,slow=8.4,SNR=6.0						
SONM	Songino Array	65.26	328	P	P	21 27 12.3	+0.3
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.4						
NVAR	Mina Array Bea	92.58	52	P	P	21 29 41.4	-1.0
	0.2nm,0.7s,baz=246,slow=7.8,SNR=1.9						

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*IDC **18** 21:25:03.6±1.0, 10°.60N×40°.86W, h0^{km}, mb3.7/10, mb1 3.9/10, mb1mx3.7/30, mbtmp3.7/10, ML4.6/1, MS3.3/13, Ms1 3.3/13, ms1mx3.1/29, Error ellipse: s-maj=38.2km s-min=18.4km az=172.0*

ISC 18 21:25:05.0±0.8**, 10°.6N**±0°.2×**40°.9W**±0°.1**, h10**^{km}**, n20, σ0s.73**/11**, mb3.8**/10**, MS3.4**/11**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	12.87	246	Pn	Pn	21 28 07.9	-0.3
	3.5nm,0.3s,baz=61,slow=14,SNR=149						
MDP				Sn	Sn	21 30 18.9	-13
	0.1nm,0.3s,baz=56,slow=13,SNR=2.0						
MDP				LR	LR	21 32 21.1	
	comp=Z,102nm,19.6s,baz=59,slow=34						
RCBR	Riachuelo	17.00	163	LR	LR	21 34 00.1	
	comp=Z,55nm,21.0s,baz=324,slow=32						
PTGA	Pitinga	22.07	241	P	P	21 30 00.1	-0.3
	2.8nm,0.6s,baz=53,slow=12,SNR=5.0						
PTGA				LR	LR	21 37 23.9	
	comp=Z,92nm,21.5s,baz=60,slow=34						
SJG	San Juan	25.61	290	LR	LR	21 37 53.9	
	comp=Z,28nm,20.8s,baz=157,slow=30						
BDFB	Brasilia	26.98	195	LR	LR	21 40 46.2	
	comp=Z,90nm,21.1s,baz=91,slow=35						
ROSC	El Rosal	33.63	263	LR	LR	21 44 47.9	
	comp=Z,62nm,21.0s,baz=98,slow=35						
DBIC	Dimbokro	35.78	93	P	P	21 32 04.8	+0.1
	2.3nm,0.6s,baz=253,slow=7.6,SNR=5.8						
KOWA	Kowa	36.14	80	P	P	21 32 08.0	+0.2
	0.8nm,0.5s,baz=277,slow=12,SNR=4.3						
CPUP	Villa Florida	40.01	203	LR	LR	21 49 56.3	
	comp=Z,63nm,18.1s,baz=62,slow=37						
TORD	Torodi Ar. Bea	41.69	82	P	P	21 32 54.4	+0.1
	3.5nm,0.8s,baz=280,slow=8.3,SNR=9.2						
ESDC	Sonseca Array	43.72	42	P	P	21 33 09.9	-0.7
	0.8nm,0.8s,baz=238,slow=9.6,SNR=1.5						
ESDC				LR	LR	21 47 16.5	
	comp=Z,53nm,21.6s,baz=190,slow=30						
KEST	Kesra	51.84	53	LR	LR	21 56 05.8	
	comp=Z,40nm,18.8s,baz=235,slow=36						
TXAR	Lajitas Array	61.25	298	P	P	21 35 22.1	+1.2
	0.1nm,0.6s,baz=112,slow=6.9,SNR=1.9						
NOA	NORSAR Array B	63.05	26	LR	LR	21 57 30.2	
	comp=Z,15nm,20.5s,baz=260,slow=31						
PDAR	Pinedale Array	67.29	312	LR	LR	22 01 57.6	
	comp=Z,26nm,21.9s,baz=116,slow=33						
AKASG	Malin Array Be	69.30	40	P	P	21 36 12.6	+0.1
	0.2nm,0.3s,baz=260,slow=5.9,SNR=2.4						
AKASG				LR	LR	22 06 05.2	
	comp=Z,18nm,18.6s,baz=305,slow=36						
FINES	FINESS Array B	69.83	28	LR	LR	22 05 06.3	
	comp=Z,25nm,18.3s,baz=237,slow=34						
BRTR	Keskin Array B	71.42	52	P	P	21 36 26.1	+0.2
	0.6nm,0.8s,baz=298,slow=3.1,SNR=4.1						
YKA	Yellowknife Ar	73.21	332	P	P	21 36 34.7	-1.3
	0.3nm,0.8s,baz=113,slow=5.4,SNR=4.0						
ILAR	Eielson Array	87.25	336	P	P	21 37 52.3	+0.7
	0.5nm,0.9s,baz=52,slow=4.2,SNR=4.6						

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*SOME **18** 21:46:21.8, 39°.32N×72°.20E, h20^{km}*

*KRNET **18** 21:46:24.1±0.1, 39°.51N×72°.02E, h20^{km}, mb3.2*

*NNC **18** 21:46:26.2±1.4, 39°.60N×72°.07E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=11.3km s-min=6.3km az=177.0*

*ISU **18** 21:46:27, 39°.72N×72°.20E, h5^{km}, Hypocentre not reviewed by the ISC*

ISC 18 21:46:24.8±1.2**, 39°.46N**±0°.06×**72°.07E**±0°.03**, h10**^{km}**, n49, σ2s.22**/78**, 26C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.21	275	⇑iP	Pg	21 46 27.8	-1.6
	baz=61						
DRK				⇑iS	Sg	21 46 30.2	-2.3
	baz=61						
BTK	Batken	1.14	302	⇑iP	Pg	21 46 44.6	-2.1
	baz=1.0						
BTK				⇑iS	Sg	21 46 59.5	-2.0
	baz=1.0						
OHH	Osh	1.20	27	⇓iP	Pn	21 46 46.3	-1.4
	baz=30						
OHH				⇓iS	Sb	21 47 02.2	-1.0
	baz=30						
OHH	Osh	1.20	27	eP		21 46 46.0	
OHH				eS		21 47 02.0	
SFK	Sufi-Kurgan	1.23	63	⇓iP	Pn	21 46 47.6	-0.8
	baz=66						
SFK				⇓iS	Sb	21 47 04.6	+0.1
	baz=66						
SFK	Sufi-Kurgan	1.23	63	eP		21 46 48.0	
SFK				eS		21 47 05.0	
FRG	Fergana	1.29	350	eP		21 46 42.0	
FRG				eS		21 46 53.0	
ARSB	Arslanbob	1.99	20	⇑eP	Pn	21 46 59.9	+1.2
	baz=22						
ARSB				⇑iS	Sb	21 47 26.0	-0.1
	baz=22						
ARSB	Arslanbob	1.99	20	eP		21 47 01.0	
ARSB				eS		21 47 29.0	
TRKS	Terek-Say	2.19	341	⇓eP	Pn	21 47 01.4	0.0
	baz=42						
TRKS				⇓iS	Sn	21 47 28.5	-0.1
	baz=42						
CHRV	Charvak	2.71	324	eP		21 47 14.0	
CHRV				eS		21 47 50.0	
AML	Almayashu	2.94	24	⇑iP	Pn	21 47 13.2	+1.2
	baz=25						
AML				⇑iS	Sn	21 47 49.0	+1.5
	baz=25						
AML	Almayashu	2.94	24	P	Pb	21 47 17.7	+0.2
	SNR=18						
ARLS	Aral	2.95	35	⇑iP	Pn	21 47 13.6	+1.7
	baz=36						

ARLS	 baz=36			⇑iS	Sn	21 47 49.9	+2.5
MNAS	**Manas** baz=7.0	**3.04**	**6**	⇑eP	**Pn**	**21 47 14.3**	**+1.1**
MNAS	 baz=7.0			⇑iS	**Sn**	**21 47 51.2**	**+1.5**
IUG	**Iuzhnay** 11nm,0.3s	**3.10**	**331**	eP	**Pb**	**21 47 20.0**	**-0.2**
IUG	 86nm,0.3s			eS	**Sg**	**21 48 01.2**	**-3.1**
IUG	**Iuzhnay** 11nm,0.3s	**3.10**	**331**	Pg	**Pb**	**21 47 20.0**	**-0.2**
IUG	 86nm,0.3s			Lg	Lg	21 48 01.2	
UCH	**Uchtor** baz=34	**3.33**	**33**	⇑eP	**Pn**	**21 47 18.7**	**+1.3**
UCH	 baz=34			⇑iS	**Sn**	**21 47 58.5**	**+1.3**
UCH	**Uchtor** SNR=10.0	**3.33**	**33**	P	**Pb**	**21 47 21.6**	**-2.6**
MRKS	**Merke** 8.2nm,0.4s	**3.40**	**15**	eP	**Pb**	**21 47 26.2**	**+1.1**
MRKS	 17nm,0.7s			eS	**Sg**	**21 48 12.0**	**-1.9**
MRKS	**Merke** 8.2nm,0.4s	**3.40**	**15**	Pg	**Pb**	**21 47 26.2**	**+1.1**
MRKS	 17nm,0.7s			Lg	Lg	21 48 12.0	
CHM	**Chimkent** 5.3nm,0.3s	**3.41**	**328**	eP	**Pg**	**21 47 27.6**	**-2.6**
CHM	 141nm,0.5s			eS	**Sg**	**21 48 14.6**	**+0.1**
EKS2	**Erkin-Say** baz=22	**3.45**	**21**	⇓eP	**Pn**	**21 47 20.2**	**+1.5**
EKS2	 baz=22			⇓iS	**Sn**	**21 48 01.1**	**+1.4**
DZA	**Taraz** 42nm,0.3s	**3.47**	**351**	eP	**Pb**	**21 47 28.1**	**+1.6**
DZA	 76nm,0.3s			eS	**Sg**	**21 48 15.8**	**-0.6**
DZA	**Taraz** 42nm,0.3s	**3.47**	**351**	Pg	**Pb**	**21 47 28.1**	**+1.6**
DZA	 76nm,0.3s			Lg	Lg	21 48 15.8	
AAK	**Ala-Archa** baz=30	**3.66**	**29**	⇓iP	**Pn**	**21 47 23.3**	**+1.5**
AAK	 baz=30			⇓iS	**Sn**	**21 48 06.5**	**+1.4**
AAK	**Ala-Archa** SNR=8.2	**3.66**	**29**	P	**Pb**	**21 47 27.8**	**-2.0**
AAK	**Ala-Archa** 6.4nm,0.5s	**3.66**	**29**	⇑Pn	**Pn**	**21 47 23.3**	**+1.5**
AAK	 21nm,0.8s			⇓Lg	Lg	21 48 18.7	
KK31	**Karatay Array** 9.7nm,0.7s,baz=154,slow=12,SNR=14	**3.83**	**343**	⇓Pn	**Pn**	**21 47 25.9**	**+2.1**
KK31	 14nm,0.6s,baz=152,slow=29,SNR=8.4			⇑Lg	Lg	21 48 21.4	
KBK	**Karagaybulak** baz=34	**3.86**	**33**	⇑iP	**Pn**	**21 47 26.1**	**+1.6**
KBK	 baz=34			⇑iS	**Sn**	**21 48 11.4**	**+1.4**
KBK	**Karagaybulak** SNR=6.2	**3.86**	**33**	P	**Pb**	**21 47 30.5**	**-2.6**
CHMS	**Chumysh** baz=30	**4.07**	**29**	⇑iP	**Pn**	**21 47 29.0**	**+1.8**
CHMS	 baz=30			⇑iS	**Sn**	**21 48 16.3**	**+1.4**
CHMS	**Chumysh** SNR=20	**4.07**	**29**	P	**Pn**	**21 47 31.5**	**+4.3**
ULHL	**Ulahol** baz=48	**4.21**	**47**	⇓iP	**Pn**	**21 47 31.2**	**+1.9**
ULHL	 baz=48			⇓iS	**Sn**	**21 48 20.2**	**+1.5**
USP	**Ospenovka** baz=26	**4.22**	**25**	⇑iP	**Pn**	**21 47 31.0**	**+1.8**
USP	 baz=26			⇑iS	**Sn**	**21 48 19.8**	**+1.2**
USP	**Ospenovka** SNR=18	**4.22**	**25**	P	**Pn**	**21 47 32.8**	**+3.5**
TKM2	**Tokmak 2** baz=37	**4.36**	**36**	⇑iP	**Pn**	**21 47 33.1**	**+1.7**
TKM2	 baz=37			⇑iS	**Sn**	**21 48 23.4**	**+1.1**
TKM2	**Tokmak 2** 2.7nm,0.6s	**4.36**	**36**	⇓Pn	**Pn**	**21 47 32.0**	**+0.6**
TKM2	 8.1nm,0.7s			⇑Lg	Lg	21 48 41.4	
SGDS	**Sogindy** 4.1nm,0.5s	**4.43**	**25**	Pg	**Pb**	**21 47 43.4**	**+0.6**
SGDS	 10nm,0.6s			Lg	Lg	21 48 42.1	
KST	**Kastek** 3.4nm,0.5s	**4.63**	**38**	eP	**Pb**	**21 47 47.2**	**+1.1**
KST	 9.5nm,0.6s			eS	**Sb**	**21 48 48.9**	**+6.9**
KST	**Kastek** 3.4nm,0.5s	**4.63**	**38**	Pg	**Pb**	**21 47 47.2**	**+1.1**
KST	 9.5nm,0.6s			Lg	Lg	21 48 48.9	
DGS	**Degeres** 4.2nm,0.6s	**4.69**	**35**	eP	**Pb**	**21 47 49.5**	**+2.2**
DGS	 9.3nm,0.6s			eS	**Sg**	**21 48 52.8**	**-2.7**
IZV	**Izvestkoviy** 1.7nm,0.6s	**4.95**	**42**	eP	**Pb**	**21 47 54.2**	**+2.5**
IZV	 7.6nm,0.5s			eS	**Sg**	**21 49 00.4**	**-3.2**
IZV	**Izvestkoviy** 1.7nm,0.6s	**4.95**	**42**	Pg	**Pb**	**21 47 54.2**	**+2.5**
IZV	 7.6nm,0.5s			Lg	Lg	21 49 00.4	
KRBS	**Karabastau** 3.3nm,0.3s	**5.02**	**31**	eP	**Pb**	**21 47 56.1**	**+3.3**
KRBS	 4.8nm,0.3s			eS	**Sg**	**21 49 03.6**	**-2.4**
TNSS	**Tian-Shan** 2.0nm,0.3s	**5.12**	**44**	eP	**Pb**	**21 47 57.4**	**+2.6**
TNSS	 2.7nm,0.7s			eS	**Sg**	**21 49 06.0**	**-3.4**
TNSS	**Tian-Shan** 2.0nm,0.3s	**5.12**	**44**	Pg	**Pb**	**21 47 57.4**	**+2.6**
TNSS	 2.7nm,0.7s			Lg	Lg	21 49 05.0	
MDOK	**Medeo** 3.2nm,1.0s	**5.26**	**44**	⇓Pg	**Pg**	**21 48 02.4**	**-3.3**
MDOK	 7.3nm,0.8s			Lg	Lg	21 49 11.1	
KOTS	**Kotyrbulak** 6.5nm,0.6s	**5.35**	**44**	eP	**Pb**	**21 48 01.4**	**+2.9**
KOTS	 8.4nm,0.6s			eS	**Sg**	**21 49 12.9**	**-3.6**
KOTS	**Kotyrbulak** 6.5nm,0.6s	**5.35**	**44**	Pg	**Pb**	**21 48 01.4**	**+2.9**
KOTS	 8.4nm,0.6s			Lg	Lg	21 49 12.9	
KTBS	**Karatobe** 1.5nm,0.6s	**5.48**	**38**	eP	**Pb**	**21 48 03.2**	**+2.6**
KTBS	 12nm,0.8s			eS	**Sg**	**21 49 15.9**	**-4.7**
KTBS	**Karatobe** 1.5nm,0.6s	**5.48**	**38**	Pg	**Pb**	**21 48 03.2**	**+2.6**
KTBS	 12nm,0.8s			Lg	Lg	21 49 15.9	
AB31	**Akbulak array** 0.7nm,0.5s,baz=129,slow=14,SNR=25	**13.07**	**322**	Pn	**Pn**	**21 49 28.3**	**-2.1**
AB31	 0.9nm,0.7s,baz=128,slow=26,SNR=3.2			⇑Sn	**Sn**	**21 51 57.5**	**+1.7**
AKTO	**Aktyubinsk** 2.3nm,0.9s	**14.79**	**323**	⇓Pn	**Pn**	**21 49 54.5**	**+0.6**

*IDC **18** 21:49:38.5±28.0, 25°.92N×127°.06E, h296^{km}±148^{km}, mb3.0/3, mb1 2.9/5, mb1mx2.5/44, mbtmp3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/10, Error ellipse: s-maj=319.7km s-min=75.3km az=157.0*

*JMA **18** 21:49:46.3±0.4, 27°.39N×126°.08E, h209^{km}, M3.3*

ISC 18 21:49:45.1±0.9**, 27°.29N**±0°.09×**126°.12E**±0°.07**, h225**^{km}±10^{km}**, n26,** σ**1^s.66**/41**, mb3.4**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**1.13**	**148**	P	**Pn**	**21 50 19.0**	**+0.7**
JKE				eS	**S**	**21 50 44.2**	**0.0**
JAGN	**Aguni-jima**	**1.22**	**125**	P	**Pn**	**21 50 19.7**	**+0.8**
JAGN				S	**S**	**21 50 44.8**	**-0.4**
JIH	**Iheya**	**1.67**	**98**	P	**Pn**	**21 50 23.3**	**+0.9**
JIH				eS	**S**	**21 50 50.0**	**-1.4**
JNTH	**Nagotoyohara**	**1.86**	**114**	P	**Pn**	**21 50 25.5**	**+1.2**
JNTH				eS	**S**	**21 50 53.4**	**-1.3**
JJT3	**Tamagusuku3**	**1.88**	**127**	P	**Pn**	**21 50 26.4**	**+2.0**
JJT3				eS	**S**	**21 50 55.6**	**+0.7**
JOW	**Kunigami**	**1.98**	**103**	P	**Pn**	**21 50 26.1**	**+0.8**
JOW				S	**S**	**21 50 54.7**	**-1.8**
JYRO	**Yoronjima**	**2.09**	**97**	P	**Pn**	**21 50 27.0**	**+0.6**
JYRO				S	**S**	**21 50 56.4**	**-2.1**
JOKE	**Okinoerabujima**	**2.18**	**88**	P	**Pn**	**21 50 27.8**	**+0.5**
JOKE				S	**S**	**21 50 58.1**	**-2.1**
JIKM	**Ikemajima**	**2.48**	**199**	eS	**S**	**21 51 05.0**	**-0.9**
JTK	**Tokunoshima**	**2.56**	**78**	P	**Pn**	**21 50 31.7**	**+0.5**
JTK				eS	**S**	**21 51 04.3**	**-2.9**
JIRB	**Irabujima**	**2.59**	**199**	P	**Pn**	**21 50 32.0**	**+0.3**
JIRB				eS	**S**	**21 51 06.3**	**-1.7**
JOGS	**Gusukube**	**2.60**	**194**	P	**Pn**	**21 50 32.3**	**+0.6**
JOGS				eS	**S**	**21 51 09.2**	**+1.1**
JMJ2	**Miyako jima3**	**2.64**	**196**	P	**Pn**	**21 50 33.2**	**+1.1**
JAMN	**Amaminishikomi**	**2.87**	**70**	P	**Pn**	**21 50 34.2**	**-0.4**
JAMN				S	**S**	**21 51 10.3**	**-2.9**
JTJ	**Tarama**	**2.93**	**206**	S	**S**	**21 51 13.1**	**-1.5**
JISG	**Ishigakijimahi**	**3.15**	**212**	P	**Pn**	**21 50 37.9**	**+0.1**
JISG				S	**S**	**21 51 16.2**	**-2.8**
JAM	**Amami Oshima**	**3.28**	**69**	eS	**S**	**21 51 19.9**	**-1.8**
JIJ	**Ishigaki jima**	**3.42**	**212**	P	**Pn**	**21 50 40.1**	**-0.8**
JIJ				S	**S**	**21 51 20.2**	**-4.5**
JMZ	**Minamidaito 2**	**4.80**	**107**	P	**Pn**	**21 50 58.4**	**+0.8**
JMZ				S	**S**	**21 51 52.4**	**-2.5**
JKDJ	**Kitadaitoujima**	**4.82**	**105**	P	**Pn**	**21 50 57.1**	**-0.8**
JKDJ				S	**S**	**21 51 54.4**	**-1.0**
KSRS	**Korea Array** 0.2nm,0.3s,baz=199,slow=11,SNR=2.3	**10.25**	**8**	P	**P**	**21 52 14.7**	**+1.1**
USRK	**Ussuriysk Ar.** baz=190,slow=8.5,SNR=7.0	**17.52**	**14**	P	**P**	**21 53 35.4**	**+1.4**
SONM	**Songino Array** 0.3nm,0.6s,baz=136,slow=9.2,SNR=4.1	**25.65**	**328**	P	**P**	**21 54 56.7**	**+2.3**
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=94,slow=10,SNR=17	**39.42**	**311**	P	**P**	**21 56 52.8**	**-0.6**
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=122,slow=9.0,SNR=5.1	**40.27**	**323**	P	**P**	**21 56 59.2**	**-0.8**
WRA	**Warramunga Arr** comp=Z,31nm,19.9s,baz=140,slow=38	**47.62**	**170**	LR	LR	22 18 42.3	

*JMA **18** 21:53:32.6±0.1, 23°.69N×121°.53E, h0^{km}, M3.0*

*TAP **18** 21:53:33.9, 23°.74N×121°.40E, h21^{km}, ML3.8, C*

ISC 18 21:53:34.1±0.9**, 23°.73N**±0°.01×**121°.44E**±0°.02**, h20**^{km}±2^{km}**, n122,** σ**0^s.80**/205**, 8C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=163	**0.06**	**194**	iP	**Pb**	**21 53 37.7**	**-0.2**
EGFH	 baz=163			iS	**Sb**	**21 53 40.6**	**+0.2**
ESL	**Shilin** baz=26	**0.09**	**354**	iP	**Pb**	**21 53 37.8**	**-0.3**
ESL	 baz=26			S	**Sb**	**21 53 40.4**	**-0.4**
HGSD	**Ruisui** baz=181	**0.23**	**184**	⇓iP	**Pb**	**21 53 39.9**	**-0.1**
HGSD	 baz=181			eS	**Sb**	**21 53 43.9**	**-0.2**
EHY	**Hungye** baz=191	**0.25**	**207**	⇓iP	**Pb**	**21 53 39.3**	**-0.9**
EHY	 baz=191			eS	**Sb**	**21 53 43.4**	**-0.9**
HWA	**Hwalien** baz=34	**0.29**	**31**	eP	**Pb**	**21 53 41.1**	**+0.4**
HWA	 baz=34			S	**Sb**	**21 53 45.9**	**+0.7**
YULB	**Yu-li** baz=188	**0.36**	**202**	iP	**Pb**	**21 53 41.3**	**-0.5**
YULB	 baz=188			S	**Sb**	**21 53 46.6**	**-0.3**
TWD	**Chiawan** baz=27	**0.38**	**22**	P	**Pb**	**21 53 41.9**	**-0.2**
TWD	 baz=27			eS	**Sb**	**21 53 47.2**	**-0.2**
EYUL	**Yuli** baz=192	**0.40**	**197**	P	**Pb**	**21 53 42.1**	**-0.2**
EYUL	 baz=192			S	**Sb**	**21 53 48.4**	**+0.5**
TWF1	**Yuli** baz=194	**0.40**	**200**	iP	**Pb**	**21 53 41.9**	**-0.5**
TWF1	 baz=194			S	**Sb**	**21 53 47.9**	**-0.1**
CHGB	**Renai** baz=329	**0.41**	**323**	⇓iP	**Pb**	**21 53 42.4**	**-0.4**
CHGB	 baz=329			S	**Sb**	**21 53 47.7**	**-1.0**
WHF	**Hehuan Shan** baz=342	**0.45**	**339**	⇓iP	**Pb**	**21 53 42.9**	**-0.7**
WHF	 baz=342			S	**Sb**	**21 53 48.6**	**-1.3**
SSLB	**Suanglung** baz=284	**0.45**	**278**	⇑iP	**Pb**	**21 53 42.5**	**-0.9**
SSLB	 baz=284			S	**Sb**	**21 53 47.9**	**-1.8**
NACB	**Ninganchiao** baz=21	**0.47**	**17**	⇑iP	**Pb**	**21 53 42.8**	**-0.9**
NACB	 baz=21			S	**Sb**	**21 53 49.7**	**-0.3**
ETLH	**Xiulin Townshi** baz=13	**0.48**	**4**	P	**Pb**	**21 53 43.2**	**-0.7**
ETLH	 baz=13			eS	**Sb**	**21 53 50.2**	**-0.4**
YUS	**Yu-Shan** baz=240	**0.51**	**242**	⇑iP	**Pb**	**21 53 44.2**	**-0.5**
YUS	 baz=240			eS	**Sb**	**21 53 51.0**	**-0.9**
SMLT	**Sun Moon Lake** baz=291	**0.52**	**287**	⇑iP	**Pb**	**21 53 43.9**	**-0.8**
SMLT	 baz=291			iS	**Sb**	**21 53 50.6**	**-1.3**
WPL	**Puli Township** baz=309	**0.53**	**303**	P	**Pb**	**21 53 44.1**	**-0.7**
WPL	 baz=309			eS	**Sb**	**21 53 50.5**	**-1.5**
WHYT	**Xinyi Township** baz=264	**0.54**	**267**	P	**Pb**	**21 53 44.5**	**-0.5**
WHYT	 baz=264			eS	**Sb**	**21 53 51.5**	**-0.9**
FULB	**Fuli** baz=199	**0.54**	**195**	eP	**Pb**	**21 53 45.5**	**+0.4**
FULB	 baz=199			eS	**Sn**	**21 53 54.5**	**-0.7**
FUSS	**Fushou** baz=343	**0.55**	**341**	⇓iP	**Pb**	**21 53 45.0**	**-0.4**
FUSS	 baz=343			eS	**Sb**	**21 53 52.2**	**-0.7**
DPDB	**Guoxing** baz=309	**0.56**	**303**	iP	**Pb**	**21 53 44.8**	**-0.6**
DPDB	 baz=309			eS	**Sb**	**21 53 52.0**	**-1.1**
TYC	**Yuchr** baz=293	**0.56**	**288**	P	**Pb**	**21 53 44.5**	**-0.9**
TYC	 baz=293			eS	**Sb**	**21 53 51.5**	**-1.6**
TWT	**Tachien** baz=330	**0.58**	**335**	⇓iP	**Pb**	**21 53 45.5**	**-0.3**
TWT	 baz=330			eS	**Sb**	**21 53 52.4**	**-1.2**
TDCB	**Techi** baz=330	**0.58**	**334**	⇓iP	**Pb**	**21 53 45.5**	**-0.4**
TDCB	 baz=330			S	**Sb**	**21 53 52.3**	**-1.5**
ALS	**Alishan** baz=248	**0.62**	**250**	⇑iP	**Pb**	**21 53 46.3**	**-0.3**
ALS	 baz=248			eS	**Sb**	**21 53 54.3**	**-0.8**
CHKT	**Chengkung** baz=172	**0.63**	**187**	eP	**Pb**	**21 53 46.1**	**-0.4**
CHKT	 baz=172			eS	**Sb**	**21 53 55.0**	**+0.1**
WJS	**Zhushan** baz=278	**0.66**	**278**	eP	**Pb**	**21 53 47.4**	**+0.3**
WJS	 baz=278			S	**Sb**	**21 53 57.1**	**+1.2**
ELDTW	**Lidau** baz=206	**0.66**	**216**	P	**Pb**	**21 53 45.8**	**-1.4**
ELDTW	 baz=206			eS	**Sb**	**21 53 55.2**	**-0.8**
NNSB	**Datong** baz=8.0	**0.70**	**355**	⇑iP	**Pb**	**21 53 47.3**	**-0.4**
NNSB	 baz=8.0			eS	**Sb**	**21 53 56.2**	**-0.9**
NNSH	**Datong** baz=6.0	**0.70**	**355**	eP	**Pb**	**21 53 47.2**	**-0.6**
NNSH	 baz=6.0			eS	**Sb**	**21 53 56.7**	**-0.4**
NNS	**Nan Shan** baz=7.0	**0.71**	**355**	⇑iP	**Pb**	**21 53 47.5**	**-0.5**
NNS	 baz=7.0			S	**Sb**	**21 53 57.0**	**-0.4**
WHP	**Taichung City** baz=321	**0.71**	**320**	⇓iP	**Pb**	**21 53 47.5**	**-0.4**
WHP	 baz=321			eS	**Sb**	**21 53 56.9**	**-0.5**
WNT	**Mingjian** baz=283	**0.71**	**282**	P	**Pb**	**21 53 48.4**	**+0.5**
WNT	 baz=283			eS	**Sb**	**21 53 58.3**	**+1.0**
CHN5	**Tsauling** baz=252	**0.71**	**260**	⇑iP	**Pb**	**21 53 48.0**	**+0.1**
CHN5	 baz=252			eS	**Sb**	**21 53 58.0**	**+0.7**
WNT1	**Nantou City** baz=285	**0.72**	**284**	eP	**Pn**	**21 53 49.0**	**-0.2**
WNT1	 baz=285			eS	**Sn**	**21 53 59.5**	**-0.1**
ENA	**Nanau** baz=24	**0.75**	**21**	eP	**Pb**	**21 53 47.2**	**-1.3**
ENA	 baz=24			eS	**Sb**	**21 53 58.7**	**+0.4**
WWF	**Wufeng** baz=296	**0.75**	**295**	eP	**Pb**	**21 53 48.9**	**+0.4**
WWF	 baz=296			eS	**Sb**	**21 53 59.4**	**+1.1**
EDH	**Donghe** baz=187	**0.76**	**190**	eP	**Pb**	**21 53 48.6**	**-0.1**
EDH	 baz=187			eS	**Sn**	**21 53 59.7**	**-0.9**
ENAH	**Nanao** baz=29	**0.79**	**25**	eP	**Pb**	**21 53 48.3**	**-1.0**
WGK	**Gukeng** baz=267	**0.81**	**267**	P	**Pb**	**21 53 49.8**	**+0.3**
WGK	 baz=267			S	**Sn**	**21 54 01.6**	**-0.2**
TCU	**Taichung** baz=302	**0.82**	**301**	eP	**Pb**	**21 53 49.8**	**+0.1**
TCU	 baz=302			eS	**Sn**	**21 54 01.7**	**-0.3**
WDLH	**Douliu** baz=267	**0.83**	**268**	P	**Pn**	**21 53 50.5**	**-0.2**
WDLH	 baz=267			S	**Sn**	**21 54 02.3**	**0.0**
STYT	**Tauyuan** baz=226	**0.84**	**228**	⇓iP	**Pb**	**21 53 49.9**	**-0.2**
STYT	 baz=226			eS	**Sb**	**21 54 00.8**	**-0.2**
CHN4	**Tsaushan** baz=235	**0.87**	**245**	P	**Pn**	**21 53 51.0**	**-0.1**
CHN4	 baz=235			eS	**Sn**	**21 54 03.0**	**-0.2**
LONT	**Longtian** baz=197	**0.87**	**199**	P	**Pn**	**21 53 50.8**	**-0.4**
LONT	 baz=197			eS	**Sn**	**21 54 03.2**	**0.0**
TWQ1	**Liyutan** baz=316	**0.87**	**315**	P	**Pn**	**21 53 51.2**	**-0.1**
TWQ1	 baz=316			eS	**Sn**	**21 54 03.0**	**-0.3**
NDT	**Datong Townshi** baz=12	**0.87**	**4**	eP	**Pb**	**21 53 50.9**	**+0.2**
NDT	 baz=12			eS	**Sb**	**21 54 00.8**	**-1.1**
WCHH	**Zhanghua** baz=294	**0.88**	**294**	eP	**Pn**	**21 53 51.5**	**+0.1**
WCHH	 baz=294			eS	**Sn**	**21 54 04.3**	**+0.7**
WTP	**Ta-pu** baz=237	**0.90**	**238**	P	**Pb**	**21 53 51.3**	**+0.2**
WTP	 baz=237			eS	**Sn**	**21 54 04.0**	**-0.1**
CHN2	**Minshiung** baz=258	**0.91**	**258**	eP	**Pb**	**21 53 51.2**	**0.0**
CHN2	 baz=258			eS	**Sn**	**21 54 04.5**	**+0.2**
ENTT	**Nioudou** baz=17	**0.92**	**7**	P	**Pb**	**21 53 51.2**	**-0.2**
ENTT	 baz=17			eS	**Sb**	**21 54 03.5**	**+0.4**
NSY	**Sanyi** baz=319	**0.93**	**318**	eP	**Pn**	**21 53 52.0**	**0.0**
NSY	 baz=319			eS	**Sn**	**21 54 04.7**	**-0.1**
YHNB	**Yeheng** baz=357	**0.94**	**356**	P	**Pb**	**21 53 51.5**	**-0.4**
YHNB	 baz=357			eS	**Sb**	**21 54 03.5**	**-0.4**
NSK	**Sanguang** baz=357	**0.95**	**355**	P	**Pb**	**21 53 51.8**	**-0.2**
NSK	 baz=357			S	**Sb**	**21 54 03.4**	**-0.7**
TWC	**Suao** baz=24	**0.95**	**23**	eP	**Pb**	**21 53 51.2**	**-0.8**
TWC	 baz=24			eS	**Sn**	**21 54 04.8**	**-0.5**
WDJ	**Dajia District** baz=312	**0.96**	**310**	P	**Pn**	**21 53 52.9**	**+0.4**
CHY	**Chiayi** baz=256	**0.96**	**256**	P	**Pb**	**21 53 52.0**	**-0.1**
CHY	 baz=256			eS	**Sn**	**21 54 06.2**	**+0.7**
TWGBT	**Beinan** baz=186	**0.96**	**200**	eP	**Pb**	**21 53 51.0**	**-1.2**
TWGBT	 baz=186			eS	**Sn**	**21 54 06.2**	**+0.5**
WTK	**Tuku** baz=268	**0.97**	**268**	P	**Pn**	**21 53 53.1**	**+0.5**
WTK	 baz=268			eS	**Sn**	**21 54 06.5**	**+0.8**
NSTT	**Nanjuang** baz=344	**0.99**	**336**	eP	**Pn**	**21 53 52.9**	**0.0**
NSTT	 baz=344			eS	**Sb**	**21 54 04.6**	**-0.6**
TWK	**Hsinying** baz=241	**0.99**	**243**	eP	**Pn**	**21 53 52.8**	**-0.1**
TWK	 baz=241			eS	**Sn**	**21 54 06.4**	**+0.1**
LIOB	**Emei** baz=345	**0.99**	**337**	P	**Pn**	**21 53 53.2**	**+0.2**
LIOB	 baz=345			eS	**Sn**	**21 54 07.0**	**+0.6**
CHN1	**Nanshi** baz=236	**1.00**	**237**	P	**Pn**	**21 53 53.4**	**+0.4**
CHN1	 baz=236			eS	**Sn**	**21 54 07.3**	**+0.8**
NMLH	**Miaoli** baz=324	**1.00**	**324**	P	**Pn**	**21 53 54.0**	**+1.0**
NMLH	 baz=324			eS	**Sn**	**21 54 07.3**	**+0.7**
SNST	**Tainan City** baz=239	**1.00**	**240**	P	**Pn**	**21 53 53.3**	**+0.2**
SNST	 baz=239			eS	**Sn**	**21 54 06.6**	**-0.1**
RLNB	**Erlin** baz=280	**1.01**	**280**	P	**Pb**	**21 53 52.7**	**-0.2**
RLNB	 baz=280			eS	**Sn**	**21 54 07.5**	**+0.8**
TWE	**Neicheng** baz=25	**1.01**	**12**	eP	**Pb**	**21 53 52.7**	**-0.3**
TWE	 baz=25			eS	**Sb**	**21 54 06.2**	**+0.4**
SGST	**Jiashian** baz=238	**1.02**	**231**	P	**Pb**	**21 53 52.3**	**-0.8**
SGST	 baz=238			S	**Sn**	**21 54 08.4**	**+1.4**
SLGT	**Liugui** baz=224	**1.03**	**225**	P	**Pb**	**21 53 53.2**	**-0.1**
SLGT	 baz=224			eS	**Sn**	**21 54 07.2**	**-0.2**
NWLT	**Wulai** baz=14	**1.05**	**3**	eP	**Pb**	**21 53 53.5**	**-0.1**
NWLT	 baz=14			eS	**Sb**	**21 54 07.0**	**+0.1**
LDUT	**Ludao** baz=177	**1.05**	**179**	eP	**Pb**	**21 53 52.9**	**-0.7**
LDUT	 baz=177			eS	**Sb**	**21 54 06.2**	**-0.7**
HSN1	**Hsinchu** baz=332	**1.12**	**340**	eP	**Pb**	**21 53 56.1**	**+1.4**

ICHU	Yijhu	1.13	251	eP	Pb	21 53 55.1	+0.2
	baz=247						
SBCB	Hsinchu	1.14	339	eP	Pb	21 53 56.6	+1.4
	baz=332						
CHN8	Yiju	1.19	252	eP	Pb	21 53 56.1	0.0
	baz=252						
CHN8				eS	Sn	21 54 12.6	+1.4
	baz=252						
SCST	Cishan	1.21	226	eP	Pb	21 53 57.4	+1.0
	baz=225						
SCST				eS	Sn	21 54 14.8	+3.1
	baz=225						
ECL	Taimali	1.21	202	P	Pb	21 53 56.2	-0.2
	baz=192						
ECL				eS	Sb	21 54 10.1	-1.4
	baz=192						
SSD	Sandimen	1.23	218	P	Pb	21 53 56.4	-0.3
	baz=216						
SSD				eS	Sn	21 54 13.6	+1.4
	baz=216						
NHDH	Xindian Distri	1.23	3	eP	Pb	21 53 57.5	+0.8
	baz=17						
TATO	Taipei	1.24	2	eP	Pb	21 53 56.9	-0.1
	baz=20						
TWA	Mucha	1.25	6	eP	Pb	21 53 58.7	+1.5
	baz=19						
TSMG	Majia	1.25	216	P	Pb	21 53 56.9	-0.2
	baz=214						
TSMG				eS	Sb	21 54 14.7	+1.8
	baz=214						
NCUH	Zhongli	1.26	349	eP	Pb	21 53 57.2	0.0
	baz=350						
NCUH				eS	Sb	21 54 15.2	+2.3
	baz=350						
NTY	Taoyuan	1.27	354	eP	Pb	21 53 58.6	+1.1
	baz=359						
NTY				eS	Sb	21 54 16.5	+3.1
	baz=359						
TIPB	Shuangxi	1.29	16	eP	Pb	21 53 57.3	-0.4
	baz=16						
TIPB				eS	Sb	21 54 14.5	+0.7
	baz=16						
TWM1	Shoushan	1.30	226	eP	Pb	21 54 00.5	+2.6
	baz=235						
TAP	Taipei	1.31	2	eP	Pb	21 53 58.7	+0.6
	baz=20						
MASBT	Mashibuluo	1.34	214	eP	Pn	21 53 57.9	+0.2
	baz=205						
TWS1	Kuangyinshan	1.37	359	eP	Pb	21 53 58.9	-0.2
	baz=27						
TWB1	Santiao Chiao	1.37	21	eP	Pb	21 53 58.5	-0.5
	baz=27						
NWF	Wu-fen Shan	1.37	13	eP	Pb	21 53 59.6	+0.4
	baz=28						
WFSB	Wu-fen Shan	1.37	13	eP	Pb	21 53 58.6	-0.5
	baz=28						
YM01	YM01	1.42	5	eP	Pb	21 54 00.2	+0.3
	baz=30						
YM04	YM04	1.42	3	eP	Pb	21 54 00.6	+0.6
	baz=29						
YM10	YM10	1.43	4	eP	Pb	21 54 00.6	+0.5
	baz=30						
NTST	Danshui	1.43	0	eP	Pb	21 54 01.3	+1.1
	baz=27						
YM05	YM05	1.44	4	eP	Pb	21 54 00.1	-0.1
	baz=30						
EAST	Anshuo	1.45	202	eP	Pb	21 54 00.6	+0.2
	baz=185						
TNOU	National Taiwa	1.45	12	eP	Pn	21 53 59.5	+0.3
	baz=32						
YM03	YM03	1.45	3	eP	Pb	21 54 01.2	+0.7
	baz=27						
ANP	Anpu	1.45	3	eP	Pb	21 54 01.5	+0.9
	baz=28						
YM08	YM08	1.46	5	eP	Pn	21 53 59.5	+0.1
	baz=29						
SSPT	Xinbi	1.48	213	eP	Pb	21 54 00.5	-0.4
	baz=191						
JYNG	Yonagunijimaku	1.55	62	P	Pn	21 54 00.8	+0.2
JYNG				eS	Sb	21 54 20.6	-0.7
YOJ	Yonaguni jima	1.61	63	P	Pn	21 54 01.5	+0.1
YOJ				eS	Sb	21 54 22.6	-0.4
YOJ	Yonaguni jima	1.61	63	eP	Pn	21 54 00.7	-0.7
	baz=67						
WLCH	Liuqiu	1.69	216	eP	Pb	21 54 05.1	+0.6
	baz=227						
PHUB	P'eng-hu	1.73	263	eP	Pn	21 54 02.6	-0.4
	baz=244						
PNG	Penghu	1.74	265	eP	Pn	21 54 02.8	-0.4
	baz=262						
IRIF	Iriomote-Funau	2.18	73	P	Pn	21 54 09.4	+0.2
IRIF				eS	Sn	21 54 36.8	+1.3
HATJ	Hateruma jima	2.19	81	eS	Sn	21 54 35.6	-0.2
VWUC	VWUC	2.21	305	eP	Pn	21 54 08.4	-1.3
	baz=305						
PTTC	Pingtan	2.33	320	eP	Pn	21 54 10.3	-1.0
	baz=322						
JKRS	Kuro-shima	2.40	77	P	Pn	21 54 13.1	+0.8
JKRS				eS	Sn	21 54 42.2	+1.1
PTMZ	Houxiangcun	2.49	302	eP	Pn	21 54 11.9	-1.6
	baz=302						
JIJ	Ishigaki jima	2.55	75	P	Pn	21 54 14.1	-0.2
JIJ				eS	Sn	21 54 44.4	-0.3
JISG	Ishigakijimahi	2.75	71	P	Pn	21 54 16.9	-0.3
JISG				eS	Sn	21 54 49.0	-0.8
MATB	Ma-tsu	2.77	331	eP	Pn	21 54 16.7	-0.7
	baz=335						
KNM	Kinmen	2.84	285	eP	Pn	21 54 19.3	+1.1
	baz=270						
KNMB	Chin-men Tao	2.89	285	eP	Pn	21 54 18.2	-0.8
	baz=271						
MHZQ	Yeshan	3.22	318	eP	Pn	21 54 23.1	-0.5
	baz=320						
AXDP	Jialang	3.38	291	eP	Pn	21 54 24.9	-0.8
	baz=289						

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*KRSC **18** 21:55:02.1±1.0, 53°.66N×161°.12E, h47^{km}±17^{km}, ML4.4*
*MOS **18** 21:55:03.8±0.8, 53°.65N×161°.05E, h55^{km}, mb4.0/1, Error ellipse: s-maj=8.1km s-min=4.6km az=76.0*
*IDC **18** 21:55:08.1±1.7, 53°.82N×160°.74E, h77^{km}±16^{km}, mb3.5/17, mb1 3.7/20, mb1mx3.6/42, mbtmp3.8/20, MS3.0/8, Ms1 3.0/8, ms1mx2.8/33, Error ellipse: s-maj=20.0km s-min=12.5km az=149.0*
ISC 18 21:55:04.0±1.1**, 53°.67N**±0°.03×**161°.04E**±0°.04**, h46**^{km}±10^{km}**, n109, σ1^s.46**/136**, mb3.9**/21**, MS3.1**/4**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.84	227	PN	Pn	21 55 19.2	-0.2
SPN				S	Sn	21 55 30.1	-0.5
SPN	Mys Shipunski	0.84	227	eP	Pn	21 55 19.2	-0.2
SPN				eS	Sn	21 55 30.1	-0.5
KII	Karymskiy	1.01	292	PN	Pn	21 55 21.4	-0.5
KII				S	Sn	21 55 33.9	-1.2
KII	Karymskiy	1.01	292	eP	Pn	21 55 21.4	-0.5
KII				eS	Sn	21 55 33.9	-1.2
NLC	Nalytchevo	1.13	245	PN	Pn	21 55 23.5	+0.1
NLC				S	Sn	21 55 37.9	+0.1
NLC	Nalytchevo	1.13	245	eP	Pn	21 55 23.5	+0.1
NLC				eS	Sn	21 55 37.9	+0.1
SDLR	Sedlovina	1.35	254	PN	Pn	21 55 26.8	+0.3
SDLR	Sedlovina	1.35	254	eP	Pn	21 55 26.8	+0.3
SMAR	Somma	1.40	254	PN	Pn	21 55 27.6	+0.3
SMAR				S	Sn	21 55 45.0	+0.3
SMAR	Somma	1.40	254	eP	Pn	21 55 27.6	+0.3
SMAR				eS	Sn	21 55 45.0	+0.3
UGLR	Uglovaya	1.40	252	PN	Pn	21 55 27.8	+0.5
UGLR				S	Sn	21 55 45.5	+0.8
UGLR	Uglovaya	1.40	252	eP	Pn	21 55 27.8	+0.5
UGLR				eS	Sn	21 55 45.5	+0.8
KRER	Koryakskii	1.42	256	PN	Pn	21 55 28.2	+0.7
KRER				S	Sn	21 55 46.5	+1.4
KRER	Koryakskii	1.42	256	eP	Pn	21 55 28.2	+0.7
KRER				eS	Sn	21 55 46.5	+1.4
AVH	Avacha	1.44	255	PN	Pn	21 55 28.4	+0.7
AVH				S	Sn	21 55 46.9	+1.5
AVH	Avacha	1.44	255	eP	Pn	21 55 28.4	+0.7
AVH				eS	Sn	21 55 46.9	+1.5
KRX	Arik	1.46	259	PN	Pn	21 55 28.4	+0.3
KRX	Arik	1.46	259	eP	Pn	21 55 28.4	+0.3
KOK	Koryaka	1.49	256	PN	Pn	21 55 28.9	+0.5
KOK	Koryaka	1.49	256	eP	Pn	21 55 28.9	+0.5
DALK	Dalny	1.51	246	PN	Pn	21 55 29.0	+0.4
DALK				S	Sn	21 55 47.4	+0.3
DALK	Dalny	1.51	246	eP	Pn	21 55 29.0	+0.4
DALK				eS	Sn	21 55 47.4	+0.3
KZV	Kizimen	1.51	343	PN	Pn	21 55 29.0	+0.2
KZV				S	Sn	21 55 47.3	-0.1
KZV	Kizimen	1.51	343	eP	Pn	21 55 29.0	+0.2
KZV				eS	Sn	21 55 47.3	-0.1
PET	Petropavlovsk	1.57	247	PN	Pn	21 55 30.1	+0.7
PET				S	Sn	21 55 49.2	+0.7
PET	Petropavlovsk	1.57	247	eP	Pn	21 55 30.1	+0.7
PET				eS	Sn	21 55 49.2	+0.7
TUMD	Tumrok D	1.58	347	eP	Pn	21 55 29.5	-0.2
TUMD				eS	Sn	21 55 48.4	-0.5
TUMR	Tumrok	1.70	342	PN	Pn	21 55 31.8	+0.5
TUMR				S	Sn	21 55 52.5	+0.5
TUMR	Tumrok	1.70	342	eP	Pn	21 55 31.8	+0.5
TUMR				eS	Sn	21 55 52.5	+0.5
GNL	Ganaly	1.84	272	PN	Pn	21 55 34.2	+0.9
GNL	Ganaly	1.84	272	eP	Pn	21 55 34.2	+0.9
KRMR	Karymshinskiy	1.94	246	PN	Pn	21 55 35.7	+1.2
KRMR				S	Sn	21 55 59.2	+1.6
KRMR	Karymshinskiy	1.94	246	eP	Pn	21 55 35.7	+1.2
KRMR				eS	Sn	21 55 59.2	+1.6
RUS	Russkaya	1.96	232	PN	Pn	21 55 35.1	+0.3
RUS	Russkaya	1.96	232	eP	Pn	21 55 35.1	+0.3
PETK	Petropavlovsk-	2.08	256	P	Pn	21 55 37.5	+1.1
	20nm,0.3s,baz=83,slow=20,SNR=198						
PETK				S	Sn	21 56 03.8	+2.7
	29nm,0.3s,baz=50,slow=42,SNR=6.4						
PETK				LR	LR	21 56 47.0	
	comp=Z,268nm,21.4s,baz=75,slow=51						
MTVR	Mutnovka	2.09	237	PN	Pn	21 55 38.0	+1.3
MTVR				S	Sn	21 56 04.1	+2.5
MTVR	Mutnovka	2.09	237	eP	Pn	21 55 38.0	+1.3
MTVR				eS	Sn	21 56 04.1	+2.5
GRL	Gorelyy	2.11	239	PN	Pn	21 55 38.2	+1.3
GRL				S	Sn	21 56 04.0	+2.0
GRL	Gorelyy	2.11	239	eP	Pn	21 55 38.2	+1.3
GRL				eS	Sn	21 56 04.0	+2.0
KMNR	Kamenistaya	2.15	348	PN	Pn	21 55 38.7	+1.3
KMNR	Kamenistaya	2.15	348	eP	Pn	21 55 38.7	+1.3
BZWR	Bezymyannyi-We	2.32	352	PN	Pn	21 55 42.1	+2.2
BZWR	Bezymyannyi-We	2.32	352	eP	Pn	21 55 42.1	+2.2
KIRR	Kirishev	2.33	350	PN	Pn	21 55 41.5	+1.6
KIRR	Kirishev	2.33	350	eP	Pn	21 55 41.5	+1.6
APC	Apacha	2.45	254	PN	Pn	21 55 43.4	+2.0
APC				S	Sn	21 56 12.5	+2.4
APC	Apacha	2.45	254	eP	Pn	21 55 43.4	+2.0
APC				eS	Sn	21 56 12.5	+2.4
KOZ	Kozyrevsk	2.49	345	PN	Pn	21 55 44.4	+2.4
KOZ	Kozyrevsk	2.49	345	eP	Pn	21 55 44.4	+2.4
KRSR	Krestovskiy	2.57	354	PN	Pn	21 55 45.6	+2.4
KRSR	Krestovskiy	2.57	354	eP	Pn	21 55 45.6	+2.4
KDTR	Khodutka, Kamc	2.59	225	PN	Pn	21 55 45.0	+1.6
KDTR				S	Sn	21 56 15.7	+2.1
KDTR	Khodutka, Kamc	2.59	225	eP	Pn	21 55 45.0	+1.6
KDTR				eS	Sn	21 56 15.7	+2.1
ESO	Esso	2.64	330	PN	Pn	21 55 45.0	+0.9
ESO	Esso	2.64	330	eP	Pn	21 55 45.0	+0.9
KLY	Klyuchi	2.66	355	PN	Pn	21 55 45.5	+1.1
KLY				S	Sn	21 56 16.5	+1.2
KLY	Klyuchi	2.66	355	eP	Pn	21 55 45.5	+1.1
KLY				eS	Sn	21 56 16.5	+1.2
KBTR	Krutoberegovo	2.75	21	PN	Pn	21 55 46.6	+1.1
KBTR				S	Sn	21 56 18.5	+1.1
KBTR	Krutoberegovo	2.75	21	eP	Pn	21 55 46.6	+1.1
KBTR				eS	Sn	21 56 18.5	+1.1
SRDR	Sredinnyy	2.76	344	PN	Pn	21 55 46.3	+0.5
SRDR	Sredinnyy	2.76	344	eP	Pn	21 55 46.3	+0.5
KBG	Krutoberegovo	2.77	20	PN	Pn	21 55 48.6	+2.8
KBG				S	Sn	21 56 22.3	+4.4
KBG	Krutoberegovo	2.77	20	eP	Pn	21 55 48.6	+2.8
KBG				eS	Sn	21 56 22.3	+4.4
BDR	Baidarnaya	2.91	2	PN	Pn	21 55 49.7	+1.9
BDR	Baidarnaya	2.91	2	eP	Pn	21 55 49.7	+1.9
SMKR	Semkarok	2.93	5	PN	Pn	21 55 49.7	+1.5
SMKR				S	Sn	21 56 24.2	+2.1
SMKR	Semkarok	2.93	5	eP	Pn	21 55 49.7	+1.5
SMKR				eS	Sn	21 56 24.2	+2.1
SRKR	Sorokina	2.99	1	PN	Pn	21 55 50.6	+1.6
SRKR	Sorokina	2.99	1	eP	Pn	21 55 50.6	+1.6
BKI	Bering	3.27	60	PN	Pn	21 55 53.2	+0.6
BKI				S	Sn	21 56 27.5	-2.7
BKI	Bering	3.27	60	eP	Pn	21 55 53.2	+0.6
BKI				eS	Sn	21 56 27.5	-2.7
PAU	Pauzhetka	3.39	231	PN	Pn	21 55 57.8	+3.4
PAU	Pauzhetka	3.39	231	eP	Pn	21 55 57.8	+3.4
SKR	Severo-Kuril's	4.26	227	ePN	Pn	21 55 56.4	-10
SKR				eS	Sn	21 56 56.6	+2.0
SKR				smax	smax		
	comp=N,99nm,0.8s						
SKR				smax	smax		
	comp=E,167nm,0.7s						
MA2	Magadan	8.19	320	P	Pn	21 57 02.0	+1.9
	comp=E,0.2nm,0.3s,baz=129,slow=9.4,SNR=5.8						
MA2				LR	LR	22 00 58.7	
	comp=E,54nm,18.9s,baz=129,slow=44						
ASAJ	Asahikawa	15.40	239	P	P	21 58 39.6	-2.3
	comp=E,0.3nm,0.3s,baz=107,slow=17,SNR=2.3						
ASAJ				LR	LR	22 04 01.6	
	comp=E,56nm,21.0s,baz=59,slow=35						
YAK	Yakutsk	18.50	309	LR	LR	22 07 32.3	
	comp=E,47nm,18.2s,baz=80,slow=41						
KLR	Kul'dur	18.72	268	P	Pn	21 59 19.9	+0.6
	comp=E,0.1nm,0.3s,baz=58,slow=12,SNR=4.2						
KLR				LR	LR	22 07 08.4	
	comp=E,28nm,20.6s,baz=62,slow=39						
MJAR	Matsushiro Arr	23.35	232	P	P	22 00 09.2	+1.1
	comp=E,4.6nm,0.9s,baz=21,slow=12,SNR=7.7						
KDAK	Kodiak Island	26.03	62	LR	LR	22 10 47.7	
	comp=E,68nm,20.6s,baz=213,slow=36						
KSRS	Korea Array	27.96	248	LR	LR	22 10 49.4	
	comp=E,20nm,19.5s,baz=85,slow=34						
ILAR	Eielson Array	28.01	46	P	P	22 00 50.8	+0.6
	comp=E,0.9nm,0.8s,baz=264,slow=8.9,SNR=7.2						
INK	Inuvik	33.06	38	P	P	22 01 34.9	+0.2
	comp=E,1.2nm,0.6s,baz=263,slow=9.8,SNR=3.5						
H11N2	WAKE ISLAND Hy	34.17	170	T	T	22 38 25.9	
	baz=354,slow=76,SNR=78						
H11N3	WAKE ISLAND Hy	34.19	170	T	T	22 38 29.9	
	baz=354,slow=76,SNR=70						
H11N1	WAKE ISLAND Hy	34.19	170	T	T	22 38 27.1	
	baz=354,slow=76,SNR=82						
SONM	Songino Array	34.32	283	P	P	22 01 44.4	-1.6
	comp=E,0.3nm,0.6s,baz=76,slow=6.1,SNR=2.5						
H11S1	WAKE ISLAND Hy	35.36	171	T	T	22 39 53.9	
	baz=347						
H11S3	WAKE ISLAND Hy	35.38	171	T	T	22 39 49.3	
	baz=347						
H11S2	WAKE ISLAND Hy	35.38	171	T	T	22 39 47.9	
	baz=347						
YKA	Yellowknife Ar	42.35	43	P	P	22 02 53.3	+0.2
	comp=E,0.5nm,0.6s,baz=303,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	42.95	303	LR	LR	22 21 54.2	
	comp=E,46nm,18.5s,baz=85,slow=38						
MKAR	Makanchi Array	48.42	296	P	P	22 03 38.3	-3.0
	comp=E,0.3nm,0.6s,baz=56,slow=6.1,SNR=4.0						
NVAR	Mina Array Bea	55.02	71	P	P	22 04 33.6	+2.8
	comp=E,0.7nm,0.6s,baz=300,slow=8.1,SNR=8.6						
PDAR	Pinedale Array	56.75	62	P	P	22 04 45.0	+1.8
	comp=E,0.6nm,0.7s,baz=321,slow=4.7,SNR=5.7						
CMAR	Chiang Mai Arr	58.85	259	P	P	22 04 57.8	-0.1
	comp=E,0.7nm,0.3s,baz=31,slow=5.5,SNR=1.5						
CMAR				LR	LR	22 31 30.1	
	comp=E,11nm,19.0s,baz=260,slow=37						
FINES	FINESS Array B	59.82	337	P	P	22 05 03.5	-0.5
	comp=E,1.3nm,0.5s,baz=41,slow=8.6,SNR=11						
NOA	NORSAR Array B	63.15	344	P	P	22 05 26.1	-0.4
	comp=E,0.5nm,0.4s,baz=25,slow=6.6,SNR=4.9						
AKASG	Malin Array Be	68.41	329	P	P	22 05 59.3	-1.1
	comp=E,1.4nm,0.5s,baz=29,slow=6.7,SNR=6.6						
TXAR	Lajitas Array	69.89	68	P	P	22 06 11.1	+0.9
	comp=E,0.8nm,0.6s,baz=311,slow=4.8,SNR=6.6						
GERES	GERESS Array B	74.19	338	P	P	22 06 35.6	0.0
	comp=E,0.8nm,0.7s,baz=28,slow=6.0,SNR=7.3						
WTTA	Wattenberg	76.14	339	eP	P	22 06 45.1	-1.8
	comp=E,7.6nm,1.8s						
ABTA	Abfaltersbach	76.44	338	eP	P	22 06 55.1	+6.6
	comp=E,6.3nm,1.0s						
DAVA	Damuels	76.48	340	eP	P	22 06 42.4	-6.3
	comp=E,8.6nm,1.5s						
FETA	Feichten	76.56	340	eP	P	22 06 46.3	-3.0
	comp=E,9.2nm,2.1s						
WRA	Warramunga Arr	76.84	206	P	P	22 06 50.5	-0.3
	comp=E,0.5nm,0.8s,baz=21,slow=5.8,SNR=3.0						
ASAR	Alice Springs	80.52	205	P	P	22 07 12.5	+1.5
	comp=E,0.5nm,0.8s,baz=21,slow=5.3,SNR=4.9						
ESDC	Sonseca Array	86.13	348	P	P	22 07 40.7	+0.8
	comp=E,0.4nm,0.8s,baz=16,slow=5.5,SNR=1.9						

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*IDC **18** 22:27:50.9±0.5, 64°.59N×17°.54W, h0^{km}, mb3.9/20, mb1 4.1/24, mb1mx3.9/47, mbtmp3.9/24, ML2.5/3, MS3.4/16, Ms1 3.4/16, ms1mx3.2/55, Error ellipse: s-maj=18.2km s-min=8.3km az=13.0*
*MOS **18** 22:27:50.9±1.2, 64°.63N×17°.58W, h10^{km}, mb4.6/18, Error ellipse: s-maj=12.1km s-min=7.4km az=110.1*
*REY **18** 22:27:50.1, 64°.65N×17°.38W, h8^{km}*
*NEIC **18** 22:27:52.5±0.9, 64°.51N±0°.08×17°.8W±0°.1, h9^{km}±4^{km}, mb4.7/68, Error ellipse: s-maj=12.4km s-min=8.4km az=189.0*
ISC 18 22:27:52.4±0.3**, 64°.62N**±0°.02×**17°.48W**±0°.03**, h10**^{km}**, n210, σ1^s.82**/212**, mb4.5**/87**, MS3.5**/14**, 10C-1D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.18	16	P	Pg	22 27 53.1	-3.2
	baz=1.8						
IDYN				S	Sg	22 27 55.8	-3.1
	baz=1.8						
IURH	Urdarhals	0.25	35	P	Pg	22 27 54.3	-3.2
	baz=30						
IURH				S	Sg	22 27 57.8	-3.1
	baz=30						
ISKR	Skrokkalda	0.40	261	P	Pg	22 27 58.5	-1.8
	baz=259						
ISKR				S	Sb	22 28 04.8	-2.9
	baz=259						
IJOK	Jokulheimar	0.45	227	P	Pg	22 27 59.2	-1.9
	baz=228						
IJOK				S	Sb	22 28 06.8	-2.3
	baz=228						
THOR	Thorvaldshraun	0.47	47	P	Pg	22 27 58.0	-3.6
	baz=46						
THOR				S	Sg	22 28 04.9	-2.8
	baz=46						
IKRE	Kreppuhraun	0.50	70	P	Pg	22 27 58.5	-3.6
	baz=72						
IKRE				S	Sg	22 28 05.5	-3.2
	baz=72						
IASK	Askja	0.56	39	P	Pg	22 27 59.4	-4.0
	baz=37						
IIEY	Innrieyrar	0.60	208	P	Pg	22 28 01.9	-2.1
	baz=211						
IIEY				S	Sb	22 28 11.2	-2.2
	baz=211						
IMKO	Mokollar	0.60	53	P	Pg	22 28 00.4	-3.8
	baz=53						
IMKO				S	Sg	22 28 08.7	-3.4
	baz=53						
IKSK	Karasker	0.64	136	P	Pg	22 28 01.1	-3.7
	baz=141						
IKSK				S	Sg	22 28 10.4	-2.7
	baz=141						
IKAL	Kalfafell	0.68	188	P	Pg	22 28 03.0	-2.6
	baz=191						
IKAL				S	Sg	22 28 12.9	-1.5
	baz=191						
ISVA	Svartarkot	0.72	7	P	Pg	22 28 02.4	-4.0
	baz=4.2						
ISVA				S	Sg	22 28 12.2	-3.7
	baz=4.2						
IVSH	V-Sauoahnukur	0.78	75	P	Pg	22 28 03.2	-4.2
	baz=77						
IVSH				S	Sg	22 28 13.7	-3.7
	baz=77						
IFAG	Fagurholsmyri	0.83	154	P	Pg	22 28 04.9	-3.5
	baz=158						
IFAG				S	Sg	22 28 17.2	-2.1
	baz=158						
IADA	Aoalbol	0.91	63	P	Pg	22 28 05.2	-4.7
	baz=64						
IADA				S	Sg	22 28 17.4	-4.2
	baz=64						
IMEL	Melhnausar	1.01	20	P	Pb	22 28 07.0	-5.1
	baz=18						
IMEL				S	Sg	22 28 21.2	-3.8
	baz=18						
ISNB	Snabyli	1.02	210	P	Pg	22 28 09.0	-3.0
	baz=212						
ISNB				S	Sb	22 28 23.8	-1.8
	baz=212						
IREN	Reynihlio	1.06	13	P	Pb	22 28 07.8	-5.0
	baz=11						
IREN				S	Sb	22 28 22.8	-3.9
	baz=11						
IKVO	Krokottuvotn	1.13	13	P	Pb	22 28 09.0	-5.0
	baz=11						
IKVO				S	Sb	22 28 24.9	-3.8
	baz=11						
IFED	Fedgar	1.13	239	P	Pg	22 28 11.3	-2.8
	baz=239						
IRJU	Rjupnafell	1.14	208	P	Pg	22 28 11.1	-3.1
	baz=209						
IRJU				S	Sn	22 28 27.2	-2.7
	baz=209						
IGRS	Grimsstaoir	1.17	29	P	Pn	22 28 09.7	-5.2
	baz=28						
IMJO	Mjoaskard	1.18	235	P	Pg	22 28 12.1	-2.9
	baz=235						
ISKI	Skildingahlsh	1.27	8	P	Pn	22 28 11.2	-4.9
	baz=6.7						
ISKI				S	Sb	22 28 28.8	-4.0
	baz=6.7						
IGHA	Grjothals	1.27	15	P	Pn	22 28 11.2	-5.0
	baz=14						
IGHA				S	Sb	22 28 28.5	-4.5
	baz=14						
BORG	Borgarnes	1.66	276	Pg	Pn	22 28 18.8	-2.7
	22nm,0.3s,baz=93,slow=9.5,SNR=87						
BORG				Lg	Lg	22 28 42.0	
	29nm,0.3s,baz=247,slow=21,SNR=16						
BORG	Borgarnes	1.66	276	P	Pn	22 28 19.1	-2.4
BORG						22 28 40.4	
BORG	Borgarnes	1.66	276		Pn	22 28 19.1	-2.4
BORG				Sn	Sn	22 28 40.4	-2.4
SCO	Scoresbysund	6.13	346	P	Pn	22 29 21.8	-1.1
SCO						22 30 35.2	
SCO	Scoresbysund	6.13	346		Pn	22 29 21.8	-1.1
SCO				Sn	Sn	22 30 35.2	+2.3
SCO	Scoresbysund	6.13	346	e	Pn	22 29 13.5	-9.4
	baz=162,slow=8.6						
SCO				i P	Pn	22 29 21.0	-1.9
SCO				i S	Sn	22 30 34.9	+2.0
SCO				IAML		22 30 48.8	
	comp=Z,1.6nm,0.5s						
SUMG	Summit	10.98	326	e	Pn	22 30 44.3	+15
SUMG				e		22 33 06.2	
EKA	Eskdalemuir Ar	11.72	136	Pn	Pn	22 30 37.6	-1.9
	baz=325,slow=14,SNR=11						
ESK	Eskdalemuir	11.72	136	P	Pn	22 30 39.7	+0.2
ESK	Eskdalemuir	11.72	136	Pn	Pn	22 30 39.7	+0.2
DAG	Danmarks Havn	12.22	359	i P	Pn	22 30 47.5	+1.3
DAG	Danmarks Havn	12.22	359	i P	Pn	22 30 47.5	+1.3
DAG	Danmarks Havn	12.22	359	i P	Pn	22 30 47.5	+1.3
NOA	NORSAR Array B	13.52	92	Pn	Pn	22 31 01.0	-3.1
	comp=Z,0.0nm,0.3s,baz=136,slow=15,SNR=4.1						
NOA				LR	LR	22 36 23.5	
	comp=Z,87nm,18.5s,baz=295,slow=38						
NOA	NORSAR Array B	13.52	92	P	Pn	22 31 01.0	-3.1
SFJD	Kangerlussuaq	13.69	295	LR	LR	22 35 46.0	
	comp=Z,384nm,18.2s,baz=93,slow=35						
SPITS	Spitsbergen Ar	16.91	23	LR	LR	22 36 42.6	
	comp=Z,68nm,18.7s,baz=250,slow=31						
ARCES	ARCESS Array B	17.14	54	P	Pn	22 31 51.1	-0.5
	baz=280,slow=11,SNR=2.3						
ARCES				LR	LR	22 37 12.3	
	comp=Z,131nm,20.4s,baz=315,slow=33						
FINES	FINESS Array B	19.70	79	P	P	22 32 21.5	0.0
	comp=Z,0.0nm,0.3s,baz=317,slow=9.5,SNR=2.8						
FINES				LR	LR	22 39 31.6	
	comp=Z,111nm,21.8s,baz=313,slow=36						
TULEG	Thule	19.89	327	P	P	22 32 23.8	+0.4
CLL	Collm	20.68	116	i P	P	22 32 31.9	-0.2
	comp=Z,26nm,1.5s						
CLL	Collm	20.68	116	P	P	22 32 32.0	-0.2
CLL				pmax	pmax		
	comp=Z,24nm,1.5s						
CLL	Collm	20.68	116	P	P	22 32 32.0	-0.2

GRF	Grafenberg Arr	21.30	121	eP	P	22 32 39.6	+0.7
	comp=Z,28nm,1.5s,baz=325,slow=10						
NKC	Novy Kostel	21.32	118	eP	P	22 32 39.5	+0.4
NKC	Novy Kostel	21.32	118	eP	P	22 32 39.5	+0.4
BRG	Berggiesshubel	21.39	115	eP	P	22 32 40.0	+0.2
BRG				Amp		22 32 42.8	
	comp=Z,38nm,1.5s						
BRG	Berggiesshubel	21.39	115	eP	P	22 32 39.9	+0.2
BRG				pmax	pmax		
	comp=Z,38nm,1.5s						
BRG	Berggiesshubel	21.39	115	eP	P	22 32 40.0	+0.2
BRG				Amp		22 32 42.8	
	comp=Z,38nm,1.5s						
BFO	Black Forest	21.42	127	P	P	22 32 40.3	+0.1
BFO				pmax	pmax		
	comp=Z,28nm,1.4s						
BFO	Black Forest	21.42	127	P	P	22 32 40.3	+0.1
VSU	Vasula	21.56	86	iP	P	22 32 41.6	0.0
FRB	Frobisher Bay	21.77	291	P	P	22 32 42.8	-1.0
	comp=Z,1.1nm,0.7s,baz=36,slow=9.7,SNR=2.2						
FRB				LR	LR	22 40 37.8	
	comp=Z,154nm,21.0s,baz=132,slow=35						
PRU	Pruhonice	22.32	116	eP	P	22 32 49.6	-0.2
PRU	Pruhonice	22.32	116	eP	P	22 32 49.6	-0.2
KSP	Ksiaz	22.34	112	eP	P	22 32 51.1	+1.1
CHVC	Chvalec	22.44	113	eP	P	22 32 52.1	+0.9
KHC	Kasperske Hory	22.65	118	ceP	P	22 32 54.4	+1.0
KHC				pmax	pmax		
	comp=Z,15nm,1.3s						
KHC	Kasperske Hory	22.65	118	eP	P	22 32 56.1	+2.7
KHC	Kasperske Hory	22.65	118	P	P	22 32 54.6	+1.2
DPC	Dobruska-Polom	22.73	113	eP	P	22 32 55.4	+1.1
DPC	Dobruska-Polom	22.73	113	eP	P	22 32 55.4	+1.1
DAVA	Damuels	22.85	126	eP	P	22 32 59.8	+4.2
	comp=Z,9.7nm,1.3s						
GEC2	GERESS Array S	22.93	119	P	P	22 32 57.9	+1.5
GEC2				IAmb	IAmb	22 33 03.7	
	comp=Z,35nm,1.8s						
GERES	GERESS Array B	22.93	119	P	P	22 32 55.9	-0.5
	comp=Z,1.4nm,0.9s,baz=333,slow=7.8,SNR=9.2						
GERES				LR	LR	22 42 22.4	
	comp=Z,112nm,18.7s,baz=308,slow=38						
KRLC	Kraliky	23.13	113	eP	P	22 32 59.7	+1.3
KRLC	Kraliky	23.13	113	eP	P	22 32 59.7	+1.3
MOTA	Moosalm	23.23	124	eP	P	22 33 00.8	+1.3
	comp=Z,12nm,1.3s						
DAVOX	Davos/Dischmat	23.29	127	LR	LR	22 42 53.2	
	comp=Z,70nm,18.8s,baz=15,slow=39						
SQTA	Sankt Quirin	23.37	124	eP	P	22 33 03.1	+2.2
	comp=Z,12nm,1.5s						
FETA	Feichten	23.37	125	eP	P	22 33 04.5	+3.5
	comp=Z,12nm,1.4s						
WATA	Walderalm	23.41	124	eP	P	22 33 02.2	+0.9
	comp=Z,14nm,2.1s						
WTTA	Wattenberg	23.49	124	eP	P	22 33 04.1	+1.9
	comp=Z,11nm,1.2s						
VRAC	Vranov	23.67	114	P	P	22 33 03.9	+0.1
	comp=Z,2.2nm,0.9s,baz=337,slow=9.1,SNR=6.8						
VRAC	Vranov	23.67	114	eP	P	22 33 03.8	+0.1
MORC	Moravsky Berou	23.67	112	eP	P	22 33 03.8	0.0
MORC	Moravsky Berou	23.67	112	P	P	22 33 04.8	+1.0
MORC				pmax	pmax		
	comp=Z,42nm,1.8s						
MORC	Moravsky Berou	23.67	112	P	P	22 33 04.8	+1.0
MORC				IAmb	IAmb	22 33 06.3	
	comp=Z,42nm,1.8s						
EUNU	Eureka	23.71	336	P	P	22 33 04.8	+0.9
EUNU				IAmb	IAmb	22 33 08.3	
	comp=Z,28nm,1.4s						
KRUC	Moravsky	23.79	115	eP	P	22 33 04.9	0.0
NACGM	Naroch	23.81	93	iP	P	22 33 05.3	+0.3
NACGM				iP	P	22 33 05.3	+0.3
NACGM				iP	P	22 33 05.3	+0.3
NACGM				iPP	PnPn	22 33 32.9	+0.4
NACGM				iPPP	PPP	22 33 40.8	
NACGM				iS	S	22 37 18.5	-1.8
NACGM				iSS	SnSn	22 38 02.8	+4.4
NACGM				iSSS	SSS	22 38 16.2	
NACGM				iLQ	LQ	22 40 35.5	
NACGM				iLR	LR	22 42 15.7	
MOA	Molln	23.96	119	eP	P	22 33 07.6	+1.0
	comp=Z,6.5nm,1.4s						
OJC	Ojcow	24.24	109	P	P	22 33 09.1	0.0
OJC				pmax	pmax		
	comp=Z,47nm,1.9s						
OJC	Ojcow	24.24	109	P	P	22 33 09.1	0.0
ABTA	Abfaltersbach	24.24	123	eP	P	22 33 09.6	+0.3
	comp=Z,8.7nm,1.8s						
CONA	Conrad Observa	24.50	117	eP	P	22 33 13.4	+1.8
	comp=Z,2.5nm,1.0s						
CTI	Castel Tesino	24.53	125	P	P	22 33 12.1	+0.1
CTI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTI	Castel Tesino	24.53	125	P	P	22 33 12.1	+0.1
MNK	Minsk	24.55	93	iP	P	22 33 11.5	-0.4
	comp=E,3.0nm,1.1s						
MNK				iP	P	22 33 11.5	-0.4
	comp=N,16nm,1.2s						
MNK				iP	P	22 33 11.5	-0.4
	comp=Z,7.0nm,0.8s						
MNK				iPP	PnPn	22 33 55.6	+13
MNK				iPcP	PcP	22 36 34.7	-15
MNK				iS	S	22 37 33.8	+1.5
MNK				iSS	SnSn	22 38 20.6	+4.0
MNK				iLQ	LQ	22 40 53.4	
MNK				iLR	LR	22 42 45.9	
MNK				iLRM	MLR	22 43 31.2	
	comp=N,322nm,27.8s						
MNK				iLRM	MLR	22 43 38.1	
	comp=E,5.0nm,13.2s						
MNK				iLRM	MLR	22 43 38.1	
	comp=Z,81nm,20.7s						
SMOL	Smolenice	24.64	114	eP	P	22 33 14.8	+2.1
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SMOL	Smolenice	24.64	114	eP	P	22 33 14.8	+2.1
LANS	Liptovska Anna	24.94	111	eP	P	22 33 18.7	+3.2
LANS	Liptovska Anna	24.94	111	eP	P	22 33 18.7	+3.2
OBKA	Obir	25.19	121	eP	P	22 33 20.4	+2.5
	comp=Z,10nm,1.8s						
VYHS	Vyhne	25.21	112	eP	P	22 33 20.9	+3.0
VYHS				pmax	pmax		
	comp=Z,28nm,1.7s						
VYHS	Vyhne	25.21	112	eP	P	22 33 20.9	+3.0
SOKA	Soboth	25.23	120	eP	P	22 33 20.2	+2.0
	comp=Z,8.4nm,1.5s						
KLMR	Klimovskoe	25.61	72	eP	P	22 33 18.8	-2.6
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	25.61	72	eP	P	22 33 18.9	-2.5
KLMR				AMP		22 33 27.7	
	comp=Z,17nm,1.4s						
MPLH	Magyarpolny	25.77	116	eP	P	22 33 24.1	+1.1
KWP	Kalwaria Pacla	25.89	106	P	P	22 33 25.3	+1.2
KWP				pmax	pmax		
	comp=Z,28nm,1.2s						
KWP	Kalwaria Pacla	25.89	106	P	P	22 33 25.3	+1.2
CSKK	Cskako	25.90	115	eP	P	22 33 26.8	+2.7
CRVS	Cervenica-Dubn	25.95	109	eP	P	22 33 26.4	+1.8
CRVS	Cervenica-Dubn	25.95	109	eP	P	22 33 26.4	+1.8
PSZ	Piszkesteto	26.09	112	eP	P	22 33 27.3	+1.3
PSZ	Piszkesteto	26.09	112	P	P	22 33 27.0	+1.0
PSZ				pmax	pmax		
	comp=Z,25nm,1.4s						
PSZ	Piszkesteto	26.09	112	P	P	22 33 27.0	+1.0
PSZ				IAmb	IAmb	22 33 29.6	
	comp=Z,24nm,1.4s						
ESDC	Sonseca Array	26.21	156	P	P	22 33 27.4	+0.3
	comp=Z,1.0nm,0.9s,baz=0.2,slow=7.4,SNR=5.1						
ESDC				LR	LR	22 41 38.7	
	comp=Z,21nm,21.9s,baz=160,slow=32						
KOLS	Kolonicke sedl	26.25	108	eP	P	22 33 29.4	+2.0
KOLS				pmax	pmax		
	comp=Z,13nm,1.4s						
KOLS	Kolonicke sedl	26.25	108	eP	P	22 33 29.4	+2.0
UZH	Uzhgorod	26.50	108	eP	P	22 33 28.2	-1.4
UZH				e		22 33 33.2	
RES	Resolute Bay	26.51	324	P	P	22 33 30.5	+1.1
	comp=Z,3.4nm,1.1s,baz=115,slow=7.2,SNR=4.4						
MORH	Mrgy, Hungar	26.99	116	eP	P	22 33 24.1	-10
AKASG	Malin Array Be	27.83	97	P	P	22 33 40.2	-1.2
	comp=Z,0.7nm,0.8s,baz=324,slow=9.3,SNR=6.0						
AKBB	Malin Array Si	27.83	97	ceP	P	22 33 42.1	+0.6
OBN	Obninsk	27.88	84	LR	LR	22 44 26.7	
	comp=Z,13nm,21.8s,baz=4.0,slow=36						
OBN	Obninsk	27.88	84	⇓eP	P	22 33 40.7	-1.2
OBN				e*PP	pP	22 33 46.3	+0.9
OBN				pmax	pmax		
	comp=Z,26nm,1.7s						
OBN				MLR	MLR		
	comp=Z,37nm,11.0s						
MLR	Muntele Rosu	30.51	108	P	P	22 34 06.0	+0.5
MLR				pmax	pmax		
	comp=Z,30nm,1.9s						
MLR	Muntele Rosu	30.51	108	P	P	22 34 06.0	+0.5
BELG	Belogornoye	34.49	79	iP	P	22 34 40.5	+0.5
BELG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ARU	Arti	36.09	66	P	P	22 34 53.8	0.0
ARU				S	S	22 40 35.3	+2.6
ARU				SS	SnSn	22 42 59.5	+2.3
C36M	Paulatuk	36.87	325	P	P	22 35 01.1	+0.9
C36M				IAmb	IAmb	22 35 04.2	
	comp=Z,16nm,1.4s						
SOC	Sochi	37.85	96	eP	P	22 35 08.4	-0.5
SOC				eS	S	22 41 00.9	+1.1
SOC				eSS	SnSn	22 43 43.6	+3.4
SOC				eSSS	SSS	22 44 04.7	
GOF	Gofitskoye	38.10	91	⇑eP	P	22 35 11.7	+0.7
GOF				pmax	pmax		
	comp=Z,49nm,1.7s						
BR131	Keskin Array S	38.46	105	P	P	22 35 15.3	+1.0
BR131				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BR131	Keskin Array S	38.46	105	P	P	22 35 15.3	+1.0
BRTR	Keskin Array B	38.46	105	P	P	22 35 14.8	+0.5
	comp=Z,1.3nm,0.8s,baz=331,slow=6.6,SNR=7.6						
BRTR	Keskin Array B	38.46	105	iP	P	22 35 16.2	+1.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	Kislovodsk	38.83	92	eP	P	22 35 19.1	+1.8
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,101nm,16.0s						
KBZ	Khabaz	39.10	92	P	P	22 35 20.7	+1.3
	comp=Z,3.6nm,0.9s,baz=324,slow=10,SNR=8.2						
KBZ				LR	LR	22 50 59.1	
	comp=Z,86nm,20.8s,baz=322,slow=36						
KBZ	Khabaz	39.10	92	ceP	P	22 35 20.7	+1.3
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	Yellowknife Ar	39.25	313	P	P	22 35 20.7	+0.3
	comp=Z,3.7nm,1.1s,baz=43,slow=8.4,SNR=14						
YKA				PcP	PcP	22 37 29.0	0.0
	comp=Z,1.0nm,1.0s,baz=50,slow=3.1,SNR=5.4						
YKA				LR	LR	22 51 05.4	
	comp=Z,107nm,18.8s,baz=0.0,slow=36						
INK	Inuvik	39.88	329	P	P	22 35 25.1	-0.5
INK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
INK	Inuvik	39.88	329	P	P	22 35 25.1	-0.5
TIXI	Tiksi	42.07	15	⇑iP	P	22 35 44.5	+0.9
TIXI	Tiksi	42.07	15	P	P	22 35 45.2	+1.6
TIXI				IAmb	IAmb	22 35 48.0	
	comp=Z,17nm,1.2s						
GNI	Garni	42.82	94	ceP	P	22 35 52.0	+1.7
GNI				pmax	pmax		
	comp=Z,24nm,1.7s						
GNI	Garni	42.82	94	P	P	22 35 52.0	+1.7
BRVK	Borovoye	43.15	62	ceP	P	22 35 54.3	+1.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
EGAK	Eagle	44.52	329	P	P	22 36 04.7	+1.2
EGAK				IAmb	IAmb	22 36 06.8	
	comp=Z,10nm,1.2s						
DAWY	Dawson	44.74	328	P	P	22 36 06.5	+1.2
DAWY				IAmb	IAmb	22 36 09.3	
	comp=Z,11nm,1.2s						
IL31		45.73	332	IAmb	IAmb	22 36 19.2	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	45.73	332	P	P	22 36 13.6	+0.6
	comp=Z,4.7nm,1.1s,baz=24,slow=6.3,SNR=18						
ILAR				PcP	PcP	22 37 51.1	+0.5
	comp=Z,1.6nm,1.0s,baz=356,slow=3.8,SNR=7.7						
MDM	Murphy Dome	45.83	333	P	P	22 36 15.1	+1.3
COLA	College	45.83	333	iP	P	22 36 15.2	+1.4
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
I23K	Minto, Yukon-K	45.87	334	IAmb	IAmb	22 36 19.1	
	comp=Z,9.1nm,1.2s						
HDA	Harding Lake	46.06	332	IAmb	IAmb	22 36 19.9	
	comp=Z,9.9nm,1.4s						
DOT	Dot Lake	46.14	330	IAmb	IAmb	22 36 22.5	
	comp=Z,12nm,1.5s						
RIDG	Independent Ri	46.23	331	IAmb	IAmb	22 36 21.1	
	comp=Z,11nm,1.2s						
BPAW	Bear Paw Mtn.	47.13	334	P	P	22 36 25.4	+1.3
ZALV	Zalesovo Beam	47.66	51	P	P	22 36 27.8	-0.5
	comp=Z,1.2nm,0.9s,baz=338,slow=6.4,SNR=5.2						
ZALV	Zalesovo Beam	47.66	51	iP	P	22 36 30.0	+1.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	Kurchatov	48.13	58	P	P	22 36 31.9	-0.1
KURK	Kurchatov	48.13	58	IAmb	IAmb	22 36 33.9	
	comp=Z,7.7nm,1.1s						
KURBB	Kurchatov Arra	48.17	58	P	P	22 36 31.9	-0.4
	comp=Z,3.2nm,0.9s,baz=324,slow=7.3,SNR=18						
ANM	Nome	48.98	342	IAmb	IAmb	22 36 45.8	
	comp=Z,10nm,1.4s						
SKT	Skwentna	49.16	333	IAmb	IAmb	22 36 44.7	
	comp=Z,7.1nm,1.1s						
GEYT	Alibeck	50.42	84	P	P	22 36 50.7	+0.9
	comp=Z,1.6nm,0.7s,baz=309,slow=9.1,SNR=2.7						
GEYT				LR	LR	22 58 58.9	
	comp=Z,53nm,20.6s,baz=95,slow=37						
BOZ	Bozeman (W)	51.63	297	P	P	22 36 58.9	0.0
BOZ				pmax	pmax		
	comp=Z,14nm,1.3s						
BOZ	Bozeman (W)	51.63	297	P	P	22 36 58.9	0.0
BOZ				IAmb	IAmb	22 37 02.9	
	comp=Z,14nm,1.2s						
DGZ	Jazzator, Alta	52.10	53	iP	P	22 37 02.8	+0.5
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SEY	Seymchan	52.53	6	P	P	22 37 04.9	-0.2
	comp=Z,2.7nm,1.0s,baz=346,slow=5.7,SNR=4.9						
MK31	Makanchi Array	52.74	58	ceP	P	22 37 06.5	-0.4
MKAR	Makanchi Array	52.74	58	P	P	22 37 06.7	-0.2
	comp=Z,1.3nm,0.9s,baz=326,slow=6.3,SNR=10						
MKAR	Makanchi Array	52.74	58	iP	P	22 37 06.6	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TORD	Torodi Ar. Bea	53.10	156	P	P	22 37 09.6	-0.3
	comp=Z,1.5nm,0.8s,baz=350,slow=7.8,SNR=4.4						
BW06	Boulder Array	53.20	293	P	P	22 37 09.8	-0.8
BW06				IAmb	IAmb	22 37 14.2	
	comp=Z,11nm,1.3s						
PD31	Pinedale Array	53.20	293	IAmb	IAmb	22 37 14.2	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	53.20	293	P	P	22 37 10.9	+0.2
	comp=Z,3.2nm,0.9s,baz=56,slow=6.0,SNR=20						
PDAR				LR	LR	22 59 15.9	
	comp=Z,102nm,19.7s,baz=22,slow=35						
AAK	Ala-Archa	53.27	67	ceP	P	22 37 11.6	+0.5
AAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AAK	Ala-Archa	53.27	67	P	P	22 37 12.6	+1.5
N23A	Red Feather La	53.33	289	P	P	22 37 11.5	-0.1
N23A				IAmb	IAmb	22 37 16.4	
	comp=Z,12nm,1.1s						
WMOK	Wichita Mounta	55.56	279	P	P	22 37 27.5	-0.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	55.56	279	P	P	22 37 27.5	-0.1
WMOK				IAmb	IAmb	22 37 29.8	
	comp=Z,6.1nm,0.8s						
MA2	Magadan	55.80	7	LR	LR	22 58 20.8	
	comp=Z,24nm,20.7s,baz=252,slow=33						
MA2	Magadan	55.80	7	ceP	P	22 37 31.8	+2.8
MA2				pmax	pmax		
	comp=Z,11nm,1.7s						
PV04	Paradox Valley	56.65	290	IAmb	IAmb	22 37 38.4	
	comp=Z,6.9nm,1.0s						
SRU	San Rafael Swe	56.69	292	P	P	22 37 35.8	-0.1
SRU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SRU	San Rafael Swe	56.69	292	P	P	22 37 35.8	-0.1
PV14	Lion Creek, Pa	56.72	290	IAmb	IAmb	22 37 38.9	
	comp=Z,5.1nm,0.9s						
PV16	Nyswonger Mesa	56.73	290	IAmb	IAmb	22 37 39.8	
	comp=Z,12nm,1.4s						
PV01	Paradox Valley	56.74	289	IAmb	IAmb	22 37 40.0	
	comp=Z,8.1nm,1.2s						
PV02	Paradox Valley	56.74	290	IAmb	IAmb	22 37 39.8	
	comp=Z,7.3nm,1.0s						
PV03	Paradox Valley	56.75	290	IAmb	IAmb	22 37 39.8	
	comp=Z,7.6nm,1.2s						
WMQ	Urumqi	57.25	56	eP	P	22 37 45.3	+5.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,43nm,3.7s						
R11A	Troy Canyon, C	59.35	295	P	P	22 37 54.5	0.0
SONM	Songino Array	59.67	40	P	P	22 37 56.7	+0.1
	comp=Z,1.1nm,0.9s,baz=323,slow=5.1,SNR=6.2						
SONM				PcP	PcP	22 38 44.8	+1.4
	comp=Z,0.2nm,0.6s,baz=343,slow=4.5,SNR=1.7						
U15A	North Rim	59.71	291	IAmb	IAmb	22 38 00.1	
	comp=Z,6.8nm,1.2s						
ULN	Ulaanbaatar	59.83	40	P	P	22 37 59.3	+1.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	Ulaanbaatar	59.83	40	P	P	22 37 59.3	+1.7
ULN				IAmb	IAmb	22 38 00.4	
	comp=Z,7.9nm,1.2s						
WUAZ	Wupatki	60.13	290	P	P	22 37 59.7	-0.2
NVAR	Mina Array Bea	60.33	297	P	P	22 38 01.3	0.0
	comp=Z,1.0nm,0.9s,baz=53,slow=5.0,SNR=5.8						
NVAR				LR	LR	23 04 06.9	
	comp=Z,108nm,18.2s,baz=32,slow=36						
NIL	Nilore	60.45	73	P	P	22 38 02.2	+0.2
NIL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NIL	Nilore	60.45	73	P	P	22 38 02.2	+0.2
NIL				IAmb	IAmb	22 38 04.2	
	comp=Z,8.5nm,1.1s						
X16A	Lo Mia Camp, P	61.11	290	IAmb	IAmb	22 38 10.9	
	comp=Z,7.4nm,1.2s						
TXAR	Lajitas Array	62.30	280	P	P	22 38 14.7	+0.1
	comp=Z,1.1nm,0.9s,baz=48,slow=4.0,SNR=8.4						
TXAR				PcP	PcP	22 38 54.4	+0.1
	comp=Z,1.6nm,1.2s,baz=97,slow=3.0,SNR=2.8						
TXAR	Lajitas Array	62.30	280	P	P	22 38 14.4	-0.2
GTA	Gaotai	65.32	49	P	P	22 38 34.1	-0.3
GTA				pP	pP	22 38 37.3	-0.9
GTA				sP	sP	22 38 40.8	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,98nm,4.7s						
GTA				LR	LR		
	comp=N,120nm,13.8s						
GTA				LR	LR		
	comp=E,110nm,14.5s						
GTA				LR	LR		
	comp=Z,96nm,13.8s						
HHC	Hu-ho-hao-te	67.54	40	eP	P	22 38 49.5	+0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,8.8s						
NJ2	Nanjing	77.77	37	eP	P	22 39 52.1	+2.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	Chiang Mai Arr	84.15	59	P	P	22 40 23.1	-0.5
	comp=Z,1.1nm,0.6s,baz=317,slow=6.0,SNR=6.1						
CMAR	Chiang Mai Arr	84.15	59	iP	P	22 40 25.5	+1.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	135.00	38	PKP	PKPdf	22 47 11.9	+0.6
	comp=Z,0.9nm,0.9s,baz=352,slow=4.7,SNR=3.3						
NVL	N'lazarevskaya	136.62	166	ePKIKP	PKPdf	22 47 09.8	-2.9
NVL				pmax	pmax		
	comp=Z,30nm,0.8s						

IDC 18 22:47:44.8±1.4, 2°.44S×141°.19E, h0^{km}, mb3.3/3, mb1 3.8/4, mb1mx3.5/33, mbtmp3.5/4, ML3.9/1, MS2.6/2, Ms1 2.6/2, ms1mx2.4/22, Error ellipse: s-maj=17.6km s-min=10.9km az=170.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.49	261	Pg	Pg	22 47 55.3	+1.0
	197nm,0.3s,baz=79,slow=6.3,SNR=1006						
JAY				Lg	Lg	22 48 00.2	
	254nm,0.3s,baz=77,slow=23,SNR=18						
JAY				LR	LR	22 48 02.0	
	comp=Z,94nm,18.8s,baz=338,slow=35						
SIJI	Sorong	10.04	279	LR	LR	22 54 18.0	
	comp=Z,56nm,19.1s,baz=4.0,slow=39						
DAV	Davao City (W)	18.22	301	LR	LR	22 59 17.8	
	comp=Z,12nm,19.1s,baz=5.5,slow=38						
WRA	Warramunga Arr	18.64	201	P	P	22 52 03.4	-0.8
	0.4nm,0.3s,baz=20,slow=12,SNR=21						
WRA				S	Sn	22 55 17.7	-16
	0.0nm,0.3s,baz=7.9,slow=10.0,SNR=1.9						
ASAR	Alice Springs	22.25	198	P	P	22 52 42.6	-0.8
	0.8nm,0.6s,baz=29,slow=10,SNR=14						
H11S3	WAKE ISLAND Hy	32.60	49	T	T	23 28 52.4	
	baz=232,slow=76,SNR=51						
H11S2	WAKE ISLAND Hy	32.61	49	T	T	23 28 54.1	
	baz=232,slow=76,SNR=103						
H11S1	WAKE ISLAND Hy	32.62	49	T	T	23 28 53.7	
	baz=232,slow=76,SNR=133						
H11N1	WAKE ISLAND Hy	33.49	48	T	T	23 30 01.8	
	baz=229,slow=76,SNR=10						
H11N2	WAKE ISLAND Hy	33.51	48	T	T	23 30 04.7	
	baz=229,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	33.51	48	T	T	23 30 03.5	
	baz=229,slow=76,SNR=7.4						
MKAR	Makanchi Array	71.11	322	P	P	22 59 04.5	-0.7
	0.2nm,0.8s,baz=96,slow=8.8,SNR=1.4						
ILAR	Eielson Array	84.57	24	P	P	23 00 20.3	+0.6
	0.9nm,1.1s,baz=260,slow=5.4,SNR=4.2						

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*TEH **18** 22:51:39.5, 32°.73N×47°.54E, h10^{km}, ML3.0*

*ISN **18** 22:51:39.9±0.8, 32°.73N×47°.60E, h14^{km}±6^{km}, ML3.0*

*KISR **18** 22:51:46.6±0.8, 31°.92N×46°.98E, h186^{km}±24^{km}, ML3.1, Hypocentre not reviewed by the ISC*

ISC 18 22:51:41.1±1.1, 32°.72N±0°.04×47°.55E±0°.04, h10^{km}, n25, σ1^{s}.04/29, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	0.84	17	ePg	Pg	22 51 55.8	-1.5
IKFM				e		22 52 14.5	
	comp=Z,99nm,0.4s						
IKMR	Kamar-syah	1.06	41	ePg	Pg	22 51 59.7	-1.7
IKMR				eSg	Sg	22 52 15.2	0.0
IKMR				e		22 52 18.2	
	comp=Z,99nm,0.5s						
IBDR	Badra	1.42	286	ePn	Pn	22 52 07.0	+0.1
IBDR				eSg	Sn	22 52 26.0	+0.5
IBDR				AML	AML	22 52 30.2	
	comp=N,384nm,0.3s						
IBDR				AML	AML	22 52 30.7	
	comp=E,217nm,0.6s						
KCHF	Cheshme Sefid,	1.61	345	ePg	Pn	22 52 10.4	+0.7
KCHF				e		22 52 34.9	
	comp=Z,99nm,0.4s						
AHWZ	Ahwaz	1.67	146	ePg	Pn	22 52 11.6	+1.3
KER	Kermanshah	1.70	348	ePn	Pn	22 52 11.0	+0.1
IBZA	Bozab	1.77	8	ePg	Pn	22 52 12.8	+0.8
IBZA				e		22 52 42.9	
	comp=Z,99nm,0.7s						
IGHG	Ghaleghazi	1.80	333	ePg	Pn	22 52 13.3	+0.9
IGHG				e		22 52 50.4	
	comp=Z,99nm,0.7s						
AMIS	Naft Sefid	1.81	125	ePg	Pn	22 52 13.2	+0.9
AMIS				e		22 52 52.6	
	comp=Z,99nm,0.4s						
NSR	Nassriya	2.08	215	ePn	Pn	22 52 16.0	0.0
NSR				eSn	Sn	22 52 42.0	0.0
NSR				AML	AML	22 52 45.4	
	comp=E,111nm,0.5s						
IALM	Almabolaq	2.20	13	ePn	Pn	22 52 19.0	+1.1
IDHR	Dehrash	2.20	334	ePn	Pn	22 52 18.5	+0.6
IDHR				e		22 52 56.2	
	comp=Z,99nm,0.4s						
HSRG	Sareghieh	2.59	13	ePn	Pn	22 52 25.3	+2.0
HSRG				e		22 53 12.2	
	comp=Z,99nm,0.6s						

BHD	**Baghdad**	**2.72**	**283**	*e*Pn	**Pn**	**22 52 26.0**	**+1.2**
BHD				*e*Sn	**Sn**	**22 52 59.0**	**+1.3**
BHD				AML	AML	22 53 19.9	
	comp=E,108nm,0.4s						
IPIR	**Pirpir**	**2.82**	**90**	*e*Pn	**Pn**	**22 52 27.2**	**+0.7**
IPIR				*e*		22 53 07.9	
	comp=Z,99nm,0.6s						
MIB	**Mutribah**	**2.91**	**184**	*e*P		22 52 27.4	
MIB				*e*S		22 52 59.0	
RST	**Umm Al-Ruwaisa**	**3.24**	**189**	*e*P		22 52 31.6	
RST				*e*S		22 53 04.4	
IRAZ	**Razeghan**	**3.33**	**36**	*e*Pn	**Pn**	**22 52 35.2**	**+1.8**
QAM	**Ghamsar**	**3.42**	**71**	*e*Pn	**Pn**	**22 52 35.7**	**+1.0**
QABG	**Abgarm-Qazvin**	**3.42**	**29**	*e*Pn	**Pn**	**22 52 35.0**	**+0.3**
IKLH	**Kolahrood**	**3.44**	**79**	*e*Pn	**Pn**	**22 52 36.4**	**+1.4**
IKLH				*e*		22 52 41.3	
	comp=Z,99nm,0.2s						
IQOM	**Qom**	**3.62**	**53**	*e*Pn	**Pn**	**22 52 37.9**	**+0.5**
RDF	**Al-Radifah**	**3.78**	**180**	*e*P		22 52 38.9	
RDF				*e*S		22 53 17.9	
RDF				IAML		22 53 26.3	
	comp=Z,37nm,0.3s						
KLNJ	**Kolanjah**	**3.84**	**115**	*e*Pn	**Pn**	**22 52 41.1**	**+0.5**
KLNJ				*e*		22 53 52.9	
	comp=Z,99nm,0.9s						
IZEF	**Zefreh**	**4.03**	**86**	*e*Pn	**Pn**	**22 52 44.0**	**+0.9**
KRSH	**Karshahi**	**4.04**	**71**	*e*Pn	**Pn**	**22 52 43.9**	**+0.8**
IVRN	**Varamin**	**4.15**	**56**	*e*Pn	**Pn**	**22 52 44.9**	**+0.3**
IRAM	**Ramesheh**	**4.20**	**101**	*e*Pn	**Pn**	**22 52 46.0**	**+0.7**

SNET 18 22:56:08.9±0.9**, 15°.17N×89°.37W, h6**^{km}±6^{km}**, ML3.4, 1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.31**	**253**	⇓*i*P	Pb	22 56 16.2	-0.9
LLGN	**La Laguna**	**1.09**	**158**	*e*P	Pg	22 56 28.5	-1.3
LLGN				IAML		22 56 46.6	
	comp=Z,1µm,0.5s						
TACO	**Tacachico**	**1.20**	**179**	*i* P	Pg	22 56 30.5	-1.4
TACO				*e*S	Sg	22 56 47.4	0.0
TACO				IAML		22 56 51.2	
	comp=Z,481nm,0.5s						
UNIC	**Universidad Ca**	**1.20**	**188**	*e*S	Sg	22 56 47.4	0.0
QUEZ	**Alcaldia de Qu**	**1.33**	**176**	*e*S	Sb	22 56 51.1	-0.7
SBLS	**San Blas**	**1.35**	**190**	*e*P	Pn	22 56 33.8	-0.8
CEVE	**Cerro Verde**	**1.36**	**190**	*e*P	Pn	22 56 33.9	-0.8
CEVE				IAML		22 57 02.4	
	comp=Z,584nm,0.5s						
CEDA	**San Andres**	**1.36**	**181**	*e*P	Pn	22 56 33.8	-0.8
CEDA				*e*S	Sn	22 56 53.0	0.0
CEDA				IAML		22 57 00.6	
	comp=Z,1µm,0.7s						
BOQS	**Boqueron**	**1.43**	**176**	*e*P	Pn	22 56 34.9	-0.8
PMON	**Piamonte**	**1.45**	**178**	*e*P	Pn	22 56 35.4	-0.5
PMON				*e*S	Sg	22 56 56.3	+0.6
LBRS	**Las Brisas**	**1.46**	**167**	*e*P	Pn	22 56 35.2	-0.7
PAVA	**Las Pavas**	**1.51**	**164**	*e*P	Pn	22 56 36.3	-0.3
PAVA				*e*S	Sb	22 56 57.1	+0.1
PAVA				IAML		22 56 58.9	
	comp=Z,924nm,0.5s						
JAYA	**Jayaque - finc**	**1.51**	**183**	*e*P	Pn	22 56 36.2	-0.5
JAYA				*e*S	Sb	22 56 57.3	+0.2
JAYA				IAML		22 56 58.3	
	comp=Z,492nm,0.2s						
LFRS	**El Faro**	**1.57**	**169**	*e*P	Pn	22 56 37.1	-0.3
LFRS				*e*S	Sg	22 56 59.1	-0.3
UESV	**Universidad de**	**1.63**	**160**	*e*S	Sn	22 56 59.9	+0.4
TECA	**Tecapa**	**1.87**	**153**	*e*P	Pn	22 56 42.0	+0.4
PACA	**Pacayal**	**1.98**	**149**	*e*P	Pn	22 56 42.9	-0.1
PACA				*e*S	Sb	22 57 09.6	-0.7
RANC	**El Ranchito**	**2.02**	**149**	IAML		22 57 21.4	
	comp=Z,161nm,0.4s						
TGUH	**Tegucigalpa,Un**	**2.32**	**118**	*e*P	Pn	22 56 47.3	-0.4
LCND	**La Caada**	**2.35**	**142**	*e*S	Sn	22 57 17.9	+0.7
CNCH	**Conchagua**	**2.41**	**141**	*e*S	Sn	22 57 20.0	+1.1

GCG 18 22:56:35.2±1.3**, 15°.24N×89°.38W, h0**^{km}±24^{km}**, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.33**	**242**	*i* P	Pg	22 56 42.7	+1.1
MRL				*e*S	Sb	22 56 50.4	+0.2
NBG	**Las Nubes**	**1.14**	**235**	*e*P	Pb	22 56 57.7	-0.2
NBG				*e*S	Sn	22 57 14.7	-0.4
PCG	**Pacaya**	**1.46**	**235**	*i* P	Pb	22 57 03.6	+0.2
PCG				*e*S	Sn	22 57 24.8	+1.8
FUG	**Fuego 3**	**1.62**	**241**	*e*P	Pn	22 57 05.4	+0.2
FUG				*e*S	Sg	22 57 29.4	+2.1

*BJI **18** 23:06:15.3±0.0, 56°.14N×113°.99E, h5^{km}, mB4.7/27, mb4.2/34, Ms4.8/34, Ms7 4.4/31*

*MOS **18** 23:06:16.3±1.1, 56°.07N×113°.76E, h8^{km}, mb4.4/6, MS4.2/4, Error ellipse: s-maj=7.2km s-min=5.3km az=62.7*

MOS Felt (III-IV) at Severomuisk.

*IDC **18** 23:06:16.5±0.6, 56°.10N×113°.82E, h0^{km}, mb3.8/19, mb1 4.1/24, mb1mx3.9/45, mbtmp3.9/24, ML3.5/4, MS3.9/18, Ms1 3.9/18, ms1mx3.8/40, Error ellipse: s-maj=16.9km s-min=11.8km az=152.0*

*GCMT **18** 23:06:17.5±0.4, 56°.19N±0°.02×113°.85E±0°.04, h25^{km}±1^{km}, MW4.8/66, Moment Tensor Solution. s12,c12; s66,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.21±.12; M$_{\theta\theta}$1.31±.10; M$_{\phi\phi}$-1.10±.09; M$_{r\theta}$-0.08±.19; M$_{\theta\phi}$1.37±.09; M$_{\phi r}$0.07±.19; Best double couple: M$_0$1.82800×10^{16} NP1:ϕ_s201.00000°, δ87.00000°, λ-178.00000°. NP2: ϕ_s111.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 1.9300, Plg1.0000°, Azm156.0000°; N -0.2080, Plg86.0000°, Azm262.0000°; P -1.7260, Plg4.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BYKL **18** 23:06:17.7±0.2, 56°.12N×113°.73E, h9^{km}±2^{km}, Mw4.6/13(IEC), #STATIONS ALE KDAK MA2 PET MAJO INCN TATO ENH KMI WMQ AAK KURK KEV FELT I=IV MSK at Severomuisk*

*NEIC **18** 23:06:18.5±1.8, 56°.09N±0°.06×113°.9E±0°.1, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=11.8km s-min=8.7km az=53.0*

ISC 18 23:06:17.1±0.9**, 56°.13N**±0°.02×**113°.81E**±0°.02**, h1**^{km}±6^{km}**, n181, σ2^s.53**/251**, mb4.3**/43**, MS4.0**/21**, 13C-19D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.14**	**263**	⇑*i*Pg	**Pg**	**23 06 19.8**	**0.0**
SVKR				*e*Sg	**Sg**	**23 06 21.8**	**+0.2**
SVKR	**Severomuysk**	**0.14**	**263**	⇑*i*PG	**Pg**	**23 06 19.8**	**0.0**
SVKR				*e*S	**Sg**	**23 06 21.6**	**0.0**
UKT	**Uakit**	**0.65**	**189**	⇑*i*Pg	**Pg**	**23 06 29.0**	**-0.7**
UKT				Pmax		23 06 29.3	
	3µm,0.4s						
UKT				*e*Sg	**Sg**	**23 06 37.7**	**-0.4**
UKT				Smax		23 06 38.2	
	51µm,0.8s						
UKT	**Uakit**	**0.65**	**189**	⇑*i*PG	**Pg**	**23 06 28.9**	**-0.7**
UKT				*e*		23 06 37.9	
UKT				pmax	pmax		
	comp=Z,2µm,0.3s						
UKT				smax	smax		
	comp=N,45µm,1.0s						
NLYR	**Nelyaty**	**1.12**	**70**	⇓*i*Pg	**Pg**	**23 06 38.5**	**0.0**
	comp=N,698nm,0.6s						
NLYR				⇓*i*Pg	**Pg**	**23 06 38.5**	**0.0**
	comp=N,621nm,0.6s						
NLYR				⇓*i*Pg	**Pg**	**23 06 38.5**	**0.0**
	comp=N,3µm,0.6s						
NLYR				*e*Pb	**Pn**	**23 06 40.8**	**+0.9**
NLYR				Pmax		23 06 41.0	
	comp=N,5µm,0.4s						
NLYR				*e*Sg	**Sg**	**23 06 53.5**	**+0.6**
NLYR				*e*		23 06 58.2	
NLYR				max		23 06 59.7	
	comp=N,38µm,1.0s						
NLYR	**Nelyaty**	**1.12**	**70**	⇓*i*PG	**Pg**	**23 06 38.5**	**0.0**
NLYR				*e*		23 06 53.2	
NLYR				pmax	pmax		
	comp=Z,5µm,0.8s						
NLYR				smax	smax		
	comp=N,38µm,1.1s						
YOA	**Uoyan**	**1.17**	**271**	⇓*i*Pg	**Pb**	**23 06 38.3**	**-1.7**
YOA				Pmax		23 06 40.8	
	comp=N,9µm,0.5s						
YOA				*e*Sg	**Sb**	**23 06 54.0**	**-1.6**
YOA				*e*		23 06 59.6	
YOA				max		23 07 01.7	
	comp=N,123µm,0.7s						
YOA	**Uoyan**	**1.17**	**271**	⇓*i*PG	**Pb**	**23 06 38.3**	**-1.7**
YOA				*e*		23 06 54.0	
YOA				pmax	pmax		
	comp=Z,7µm,0.3s						
YOA				smax	smax		
	comp=N,123µm,0.6s						
KMO	**Kumora**	**1.48**	**261**	⇓*i*Pg	**Pn**	**23 06 43.6**	**-1.3**
KMO				*e*Pb	**Pb**	**23 06 44.6**	**-0.8**
KMO				max		23 06 46.1	
	comp=N,4µm,0.5s						
KMO				*e*Sg	**Sn**	**23 07 02.7**	**-2.2**
KMO				*e*Sb	**Sb**	**23 07 05.4**	**+0.6**
KMO				max		23 07 06.9	
	comp=N,55µm,0.9s						
KMO	**Kumora**	**1.48**	**261**	⇓*i*PG	**Pn**	**23 06 43.6**	**-1.3**
KMO				*e*		23 07 02.5	
KMO				pmax	pmax		
	comp=Z,4µm,0.5s						
KMO				smax	smax		
	comp=N,55µm,0.9s						
BOD	**Bodaibo**	**1.69**	**4**	⇑*i*Pg	**Pn**	**23 06 48.2**	**+0.4**
BOD				Pmax		23 06 49.2	
	comp=N,3µm,1.2s						
BOD				*e*Sg	**Sn**	**23 07 10.4**	**+0.4**
BOD				Smax		23 07 12.9	
	comp=N,15µm,1.4s						
BOD	**Bodaibo**	**1.69**	**4**	⇑*i*PN	**Pn**	**23 06 48.2**	**+0.4**
BOD				*e*		23 07 10.6	
BOD				pmax	pmax		
	comp=Z,3µm,0.8s						
BOD				smax	smax		
	comp=E,9µm,0.4s						
YLYR	**Ulyunkhan**	**1.96**	**231**	⇓*i*Pn	**Pn**	**23 06 51.5**	**0.0**
YLYR				⇓*i*Pg	**Pb**	**23 06 52.1**	**-1.5**
YLYR				Pmax		23 06 53.0	
	comp=E,5µm,0.3s						
YLYR				*e*Sn	**Sn**	**23 07 15.0**	**-1.7**
YLYR				*e*Sg	**Sb**	**23 07 18.2**	**-0.3**
YLYR				Smax		23 07 20.3	
	comp=E,34µm,0.5s						
YLYR	**Ulyunkhan**	**1.96**	**231**	*e*PN	**Pn**	**23 06 52.2**	**+0.7**
YLYR				*e*		23 07 17.0	
YLYR				pmax	pmax		
	comp=Z,23µm,0.2s						
YLYR				smax	smax		
	comp=N,34µm,0.3s						
NIZ	**Nizh Angarsk**	**2.42**	**263**	⇓*i*Pn	**Pn**	**23 06 57.9**	**+0.1**
NIZ				*e*Pg	**Pb**	**23 07 00.8**	**-0.7**
NIZ				Pmax		23 07 03.2	
	comp=N,1µm,0.5s						
NIZ				*e*Sn	**Sn**	**23 07 26.9**	**-1.2**
NIZ				*e*Sg	**Sb**	**23 07 31.8**	**0.0**
NIZ				*e*		23 07 38.6	
NIZ				max		23 07 39.0	
	comp=N,9µm,0.5s						
NIZ	**Nizh Angarsk**	**2.42**	**263**	*e*PN	**Pn**	**23 06 57.3**	**-0.5**
NIZ				*e*		23 07 00.7	
NIZ				*e*		23 07 32.7	
NIZ				pmax	pmax		
	comp=Z,2µm,1.4s						
NIZ				smax	smax		
	comp=N,9µm,1.6s						
CRS	**Chara**	**2.59**	**71**	⇓*i*Pn	**Pn**	**23 07 01.1**	**+0.9**
CRS				⇓*i*Pg	**Pb**	**23 07 05.5**	**+1.2**
CRS				Pmax		23 07 06.1	
	comp=N,5µm,0.7s						
CRS				*e*		23 07 18.6	
CRS				*e*Sg	**Sg**	**23 07 40.4**	**+0.2**
CRS				Smax		23 07 47.1	
	comp=N,6µm,1.0s						
CRS	**Chara**	**2.59**	**71**	⇓*i*PN	**Pn**	**23 07 01.0**	**+0.9**
CRS				*e*		23 07 05.3	
CRS				*e*		23 07 39.3	
CRS				pmax	pmax		
	comp=Z,5µm,0.6s						
CRS				smax	smax		
	comp=E,6µm,0.9s						
SYVR	**Suvo**	**3.31**	**223**	⇓*i*Pn	**Pn**	**23 07 10.0**	**-0.1**
SYVR				*e*Pg	**Pb**	**23 07 17.2**	**+0.6**
SYVR				Pmax		23 07 20.0	
	comp=E,1µm,1.0s						
SYVR				*e*Sn	**Sn**	**23 07 48.3**	**-1.7**
SYVR				*e*Sg	**Sb**	**23 07 59.4**	**+2.0**
SYVR				Smax		23 08 14.9	
	comp=E,11µm,1.7s						
SYVR	**Suvo**	**3.31**	**223**	⇓*i*PN	**Pn**	**23 07 10.0**	**-0.1**
SYVR				*e*		23 07 18.1	
SYVR				*e*		23 07 58.5	
SYVR				pmax	pmax		
	comp=Z,1µm,0.8s						
SYVR				smax	smax		
	comp=N,11µm,1.8s						
VTMR	**Vitim**	**3.38**	**349**	⇑*i*Pn	**Pn**	**23 07 10.6**	**-0.4**
VTMR				*e*		23 07 19.2	
VTMR				*e*		23 07 52.1	
VTMR				*e*Sg	**Sb**	**23 08 01.7**	**+2.4**
TUP	**Tupik**	**3.91**	**113**	⇓*i*Pn	**Pn**	**23 07 18.4**	**+0.2**
TUP				*e*		23 07 22.3	
TUP				*e*Pg	**Pb**	**23 07 28.8**	**+2.0**
TUP				Pmax		23 07 30.2	
	comp=N,466nm,0.7s						
TUP				*e*Sn	**Sn**	**23 08 03.5**	**-1.2**
TUP				*e*Sg	**Sg**	**23 08 19.7**	**-2.9**
TUP				*e*		23 08 24.4	
TUP				max		23 08 28.1	
	comp=N,12µm,1.6s						
TUP				*e*		23 08 34.8	
TUP	**Tupik**	**3.91**	**113**	⇓*i*PN	**Pn**	**23 07 18.5**	**+0.2**
TUP				*e*		23 07 28.5	
TUP				*e*S	**Sn**	**23 08 03.8**	**-0.9**
TUP				*e*		23 08 19.8	
TUP				pmax	pmax		
	comp=Z,467nm,0.6s						
TUP				smax	smax		
	comp=N,2µm,1.1s						
MXMB	**Maximikha**	**4.11**	**228**	*e*Pn	**Pn**	**23 07 21.5**	**+0.5**
MXMB				*e*Pg	**Pb**	**23 07 32.0**	**+1.8**
MXMB				*e*Sn	**Sn**	**23 08 07.6**	**-2.0**
MXMB				*e*Sg	**Sb**	**23 08 24.5**	**+4.2**
CIT	**Chita**	**4.12**	**182**	*e*Pn	**Pn**	**23 07 21.2**	**0.0**
CIT				*e*Pg	**Pb**	**23 07 31.2**	**+0.8**
CIT				Pmax		23 07 32.8	
	comp=N,1µm,1.2s						
CIT				*e*Sn	**Sn**	**23 08 06.6**	**-3.4**
CIT				*e*Sg	**Sg**	**23 08 25.0**	**-4.5**
CIT				Smax		23 08 31.1	
	comp=N,10µm,0.7s						
CIT	**Chita**	**4.12**	**182**	*e*PN	**Pn**	**23 07 19.8**	**-1.4**
CIT				*e*		23 07 31.2	
CIT				*e*S	**Sn**	**23 08 07.8**	**-2.2**
CIT				*e*		23 08 23.5	
CIT				pmax	pmax		
	comp=Z,1µm,1.5s						
CIT				smax	smax		
	comp=N,12µm,1.4s						
OGRR	**Ongureny**	**4.37**	**238**	⇓*i*Pn	**Pn**	**23 07 25.3**	**+0.7**
OGRR				*e*		23 07 28.0	
OGRR				*e*Pg	**Pb**	**23 07 35.2**	**+0.6**
OGRR				*e*		23 07 37.8	
OGRR				max		23 07 39.6	
	comp=N,1µm,1.8s						
OGRR				*e*Sn	**Sn**	**23 08 14.0**	**-2.0**
OGRR				*e*Sg	**Sb**	**23 08 31.2**	**+3.5**
OGRR				Smax		23 08 42.1	
	comp=N,6µm,1.6s						
OGRR	**Ongureny**	**4.37**	**238**	*e*PN	**Pn**	**23 07 25.2**	**+0.7**
OGRR				*e*		23 07 36.2	
OGRR				*e*		23 08 30.7	
OGRR				pmax	pmax		
	comp=Z,1µm,2.2s						
OGRR				smax	smax		
	comp=N,5µm,1.7s						
YKLR	**Yuktali**	**4.39**	**81**	*e*Pn	**Pn**	**23 07 25.5**	**+0.7**
YKLR				*e*Pg	**Pb**	**23 07 35.8**	**+0.9**
YKLR				*e*Sg	**Sg**	**23 08 35.0**	**-3.0**
TRG	**Tyrgan**	**5.51**	**235**	*e*Pn	**Pn**	**23 07 39.9**	**-0.3**
TRG				*e*Pg	**Pb**	**23 07 55.2**	**+1.2**
TRG				*e*		23 07 59.4	
TRG				max		23 08 01.6	
	comp=N,304nm,1.3s						
TRG				*e*		23 08 23.7	
TRG				*e*Sg	**Sb**	**23 09 05.8**	**+5.3**
TRG				*e*		23 09 15.6	
TRG				max		23 09 19.0	
	comp=N,2µm,1.2s						
TRG	**Tyrgan**	**5.51**	**235**	*e*PN	**Pn**	**23 07 39.5**	**-0.7**
TRG				*e*		23 07 55.0	
TRG				*e*S	**Sn**	**23 08 41.8**	**-2.3**
TRG				*e*		23 09 05.0	
TRG				pmax	pmax		
	comp=Z,304nm,1.5s						
TRG				smax	smax		
	comp=N,2µm,1.0s						
FFNB	**Fofonovo**	**5.82**	**228**	*e*Pn	**Pn**	**23 07 44.6**	**+0.1**
FFNB				*e*Pg	**Pb**	**23 08 01.6**	**+2.2**
FFNB				*e*Sg	**Sb**	**23 09 16.6**	**+7.0**
FFNB				*e*		23 09 25.4	
KAB	**Kabansk**	**5.87**	**229**	*e*Pg	**Pb**	**23 08 02.7**	**+2.6**
KAB				Pmax		23 08 17.8	
	comp=N,962nm,1.2s						
KAB				*e*Sg	**Sg**	**23 09 19.1**	**-6.3**
KAB				Smax		23 09 45.4	
	comp=N,12µm,1.5s						
KAB	**Kabansk**	**5.87**	**229**	*e*PG	**Pb**	**23 08 04.7**	**+4.6**
KAB				*e*		23 09 19.5	
KAB				pmax	pmax		
	comp=Z,525nm,1.6s						
KAB				smax	smax		
	comp=N,12µm,1.7s						
HRMR	**Khuramsha**	**6.06**	**225**	*e*Pn	**Pn**	**23 07 48.1**	**+0.3**
HRMR				*e*Pg	**Pb**	**23 08 05.7**	**+2.2**
HRMR				Pmax		23 08 08.0	
	comp=N,822nm,0.7s						
HRMR				*e*Sg	**Sb**	**23 09 24.6**	**+8.1**
HRMR				Smax		23 09 36.6	
	comp=N,12µm,0.8s						
IENR	**Iengra**	**6.17**	**85**	*e*Pg	**Pb**	**23 08 10.0**	**+4.7**
IENR				*e*Sg	**Sg**	**23 09 30.2**	**-5.0**
BGT	**Bolshoye Golou**	**6.42**	**234**	*e*Pn	**Pn**	**23 07 52.1**	**-0.5**
BGT				*e*Pg	**Pb**	**23 08 11.6**	**+2.2**
BGT				Pmax		23 08 13.9	
	comp=N,72nm,0.7s						
BGT				*e*Sg	**Sb**	**23 09 35.0**	**+8.4**
BGT				Smax		23 09 47.4	
	comp=N,2µm,1.0s						
KPC	**Khapcheranga**	**6.50**	**188**	⇑*i*Pn	**Pn**	**23 07 52.3**	**-1.5**
KPC				*e*Pg	**Pb**	**23 08 14.6**	**+3.7**
KPC				Pmax		23 08 17.5	
	comp=N,105nm,1.1s						
KPC				*e*Sg	**Sg**	**23 09 37.9**	**-7.8**
KPC				Smax		23 09 48.1	
	comp=N,8µm,1.7s						
KPC	**Khapcheranga**	**6.50**	**188**	*e*PN	**Pn**	**23 07 52.3**	**-1.5**
KPC				*e*		23 08 13.7	
KPC				*e*		23 09 37.5	
KPC				pmax	pmax		
	comp=Z,106nm,1.0s						
KPC				smax	smax		
	comp=E,8µm,1.8s						
LSTR	**Listvyanka**	**6.80**	**235**	*e*Pn	**Pn**	**23 07 57.0**	**-0.9**
LSTR				*e*		23 08 09.2	
LSTR				*e*Pg	**Pb**	**23 08 18.8**	**+2.9**
LSTR				Pmax		23 08 22.7	
	comp=E,190nm,1.8s						
LSTR				*e*Sn	**Sn**	**23 09 11.4**	**-4.4**
LSTR				*e*Sg	**Sb**	**23 09 45.9**	**+8.3**
LSTR				Smax		23 09 52.9	
	comp=E,3µm,1.6s						
IRK	**Irkutsk**	**6.82**	**239**	*e*Pg	**Pb**	**23 08 20.3**	**+4.0**
IRK				Pmax		23 08 23.4	
	comp=E,242nm,0.1s						
IRK				*e*Sg	**Sb**	**23 09 46.7**	**+8.6**
IRK				Smax		23 10 09.6	
	comp=E,3µm,1.1s						
IRK	**Irkutsk**	**6.82**	**239**	*e*PG	**Pb**	**23 08 20.4**	**+4.1**
IRK				*e*		23 09 47.5	
IRK				pmax	pmax		
	comp=Z,206nm,0.1s						
IRK				smax	smax		
	comp=E,3µm,0.9s						
TLY	**Talaya**	**7.47**	**238**	Pn	**Pn**	**23 08 06.3**	**-0.8**
	comp=E,0.0nm,0.3s,baz=36,slow=5.0,SNR=10						
TLY				Pg	**Pb**	**23 08 29.9**	**+2.4**
	comp=E,0.1nm,0.3s,baz=30,slow=8.0,SNR=15						
TLY				Sn	**Sn**	**23 09 24.5**	**-8.0**
	comp=E,0.1nm,0.3s,baz=37,slow=5.6,SNR=4.8						
TLY				Lg	Lg	23 10 05.4	
	comp=E,0.3nm,0.3s,baz=299,slow=21,SNR=12						
TLY				LR	LR	23 11 13.3	
	comp=E,1µm,18.8s,baz=38,slow=40						
TLY	**Talaya**	**7.47**	**238**	*i* PN	**Pn**	**23 08 06.7**	**-0.5**
HIA	**Hailar**	**7.76**	**150**	PN	**Pn**	**23 08 08.3**	**-2.8**
HIA	**Hailar**	**7.76**	**150**	Pn	**Pn**	**23 08 08.3**	**-2.8**
ARS	**Arshan**	**7.92**	**243**	*e*Pn	**Pn**	**23 08 13.0**	**-0.3**
ARS				*e*Pg	**Pb**	**23 08 39.4**	**+4.4**
ARS				Pmax		23 08 42.3	
	comp=E,117nm,0.7s						
ARS				*e*		23 09 45.5	
ARS				*e*Sg	Sb	23 10 19.7	+10
ARS				Smax		23 10 37.6	
	comp=E,3µm,0.8s						
ARS	**Arshan**	**7.92**	**243**	*e*PN	**Pn**	**23 08 12.3**	**-1.0**
ARS				*e*		23 08 39.3	
ARS				pmax	pmax		
	comp=Z,116nm,0.8s						
ZEA	**Zeya**	**8.11**	**102**	*e*PN	Pn	23 08 25.6	+10
ZEA				*e*		23 08 42.5	
ZEA				pmax	pmax		
	comp=Z,30nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,400nm,4.0s						
ZAK	**Zakamensk**	**8.54**	**232**	*e*Pn	**Pn**	**23 08 23.8**	**+2.0**
ZAK				*e*Pg	Pg	23 08 50.8	-10
ZAK				Pmax		23 09 02.9	
	comp=Z,40nm,1.0s						
ZAK				*e*Sg	Sg	23 10 39.9	-11
ZAK				Smax		23 11 40.7	
	comp=Z,2µm,1.7s						
ZAK	**Zakamensk**	**8.54**	**232**	*e*PN	**Pn**	**23 08 24.1**	**+2.3**
ZAK				*e*		23 08 49.9	
ZAK				pmax	pmax		
	comp=Z,40nm,1.0s						
MOY	**Mondy**	**8.79**	**245**	*e*Pn	**Pn**	**23 08 24.9**	**-0.3**
MOY				*e*Pg	Pg	23 08 54.6	-11
MOY				Pmax		23 09 14.4	
	comp=Z,121nm,1.4s						
MOY				*e*Sn	**Sn**	**23 09 58.8**	**-6.0**
MOY				*e*Sg	Sg	23 10 47.5	-11
MOY				Smax		23 10 54.3	
	comp=Z,2µm,1.5s						
MOY	**Mondy**	**8.79**	**245**	*e*PN	**Pn**	**23 08 25.2**	**0.0**
MOY				*e*		23 08 55.0	
MOY				*e*S	**Sn**	**23 10 00.4**	**-4.4**
MOY				*e*		23 10 50.1	
ORL	**Orlik**	**8.93**	**252**	*e*Pn	**Pn**	**23 08 26.6**	**-0.6**
ORL				*e*Pg	Pg	23 08 59.0	-9.0
ORL				Pmax		23 09 05.6	
	comp=Z,148nm,1.0s						
ORL				*e*Sn	**Sn**	**23 10 04.0**	**-4.4**
ORL				*e*Sg	Sg	23 10 52.9	-11
ORL				Smax		23 11 02.3	
	comp=Z,1µm,1.4s						
ORL	**Orlik**	**8.93**	**252**	*e*PN	**Pn**	**23 08 25.7**	**-1.5**
ORL				*e*		23 08 55.2	
ORL				*e*S	**Sn**	**23 09 59.8**	**-8.6**
ORL				*e*		23 10 51.9	
ORL				pmax	pmax		
	comp=Z,162nm,0.8s						
ORL				smax	smax		
	comp=E,372nm,1.3s						
ULN	**Ulaanbaatar**	**9.26**	**209**	*ce*P	**Pn**	**23 08 33.4**	**+1.6**
ULN				pmax	pmax		
	comp=Z,14nm,2.5s						
ULN	**Ulaanbaatar**	**9.26**	**209**	Pn	**Pn**	**23 08 32.2**	**+0.3**
SONM	**Songino Array**	**9.48**	**212**	Pn	**Pn**	**23 08 34.9**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=21,slow=13,SNR=38						
SONM				Lg	Lg	23 11 10.8	
	comp=Z,22nm,0.3s,baz=30,slow=26,SNR=9.4						

SONM				LR	LR	23 12 35.2	
	comp=Z,369nm,19.2s,baz=38,slow=40						
YAK	**Yakutsk**	**10.07**	**48**	Sn	**Sn**	**23 10 29.2**	**-6.8**
	comp=Z,0.1nm,0.3s,baz=98,slow=18,SNR=1.2						
YAK				Lg	Lg	23 11 25.6	
	comp=Z,0.2nm,0.3s,baz=158,slow=23,SNR=9.9						
YAK				LR	LR	23 12 36.3	
	comp=Z,622nm,20.2s,baz=252,slow=38						
YAK	**Yakutsk**	**10.07**	**48**	*e*P	**Pn**	**23 08 45.8**	**+3.2**
YAK				*e*S	**Sn**	**23 10 41.4**	**+5.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK				smax	smax		
	comp=E,35nm,0.9s						
YAK				smax	smax		
	comp=N,28nm,0.9s						
YAK				MLR	MLR		
	comp=Z,592nm,10.0s						
YAK	**Yakutsk**	**10.07**	**48**	Pn	**Pn**	**23 08 43.2**	**+0.6**
KLR	**Kul'dur**	**12.87**	**115**	Pn	**Pn**	**23 09 19.5**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=308,slow=13,SNR=20						
KLR				Lg	Lg	23 12 58.8	
	comp=Z,1.5nm,0.3s,baz=252,slow=8.8,SNR=5.1						
KLR	**Kul'dur**	**12.87**	**115**	*ce*P	**Pn**	**23 09 21.6**	**+0.6**
HHC	**Hu-ho-hao-te**	**15.37**	**186**	*e*P	**Pn**	**23 09 56.8**	**+1.8**
HHC				S	**Sn**	**23 12 47.1**	**+1.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,7.4s						
HHC				LR	LR		
	comp=Z,940nm,7.7s						
HHC				LR	LR		
	comp=Z,560nm,7.2s						
HHC				LR	LR		
	comp=Z,640nm,7.2s						
BJI	**Beijing**	**16.18**	**173**	P	**Pn**	**23 10 06.0**	**+0.5**
BJT	**Baijiatuau**	**16.20**	**173**	P	**Pn**	**23 10 05.9**	**+0.1**
BJT				pmax	pmax		
	comp=Z,22nm,1.2s						
BJT	**Baijiatuau**	**16.20**	**173**		**Pn**	**23 10 05.9**	**+0.1**
BJT				IAmb	IAmb	23 10 11.5	
	comp=Z,22nm,1.2s						
USRK	**Ussuriysk Ar.**	**16.62**	**128**	Pn	**Pn**	**23 10 09.1**	**-2.0**
	baz=252,slow=19,SNR=1.8						
USRK				Lg	Lg	23 14 57.9	
	baz=329,slow=26,SNR=10						
USRK				LR	LR	23 16 57.2	
	comp=Z,178nm,18.8s,baz=313,slow=39						
ZAA0	**Zalesovo Array**	**16.70**	**275**	Pn	**Pn**	**23 10 11.1**	**-1.0**
ZALV	**Zalesovo Beam**	**16.70**	**275**	Pn	**Pn**	**23 10 10.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=58,slow=10,SNR=7.9						
ZALV				Lg	Lg	23 14 57.0	
	comp=Z,0.1nm,0.3s,baz=60,slow=21,SNR=2.4						
ZALV				LR	LR	23 17 11.4	
	comp=Z,198nm,21.4s,baz=38,slow=39						
ZALV	**Zalesovo Beam**	**16.70**	**275**	*i* P	**Pn**	**23 10 12.8**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	**Tiksi**	**16.83**	**17**		**Pn**	**23 10 10.3**	**-3.2**
TIXI				IAmb	IAmb	23 10 17.1	
	comp=Z,32nm,0.7s						
DGZ	**Jazzator, Alta**	**17.09**	**259**	*i* P	**Pn**	**23 10 15.0**	**-2.2**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
UGL	**Uglegorsk**	**18.46**	**101**	*e*P	**P**	**23 10 32.8**	**-1.1**
UGL				MLR	MLR		
	comp=Z,1µm,20.0s						
UGL				MLR	MLR		
	comp=N,500nm,13.0s						
UGL				MLR	MLR		
	comp=E,1µm,14.0s						
GTA	**Gaotai**	**19.13**	**215**	P	**P**	**23 10 41.4**	**-0.1**
GTA				pP	sP	23 10 47.8	+5.2
GTA				sP	pP	23 10 51.1	+8.8
GTA				PP	**PnPn**	**23 10 58.6**	**+4.0**
GTA				pmax	pmax		
	comp=E,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=E,150nm,4.7s						
GTA				LR	LR		
	comp=E,2µm,11.3s						
GTA				LR	LR		
	comp=E,4µm,11.6s						
GTA				LR	LR		
	comp=E,760nm,11.6s						
ZSN	**Zaisan**	**19.77**	**256**	*e*P	**P**	**23 10 47.4**	**-1.0**
	baz=255						
ZSN	**Zaisan**	**19.77**	**256**	*e*P	**P**	**23 10 47.3**	**-1.0**
MA2	**Magadan**	**19.79**	**65**	*ce*P	**Pn**	**23 10 52.4**	**+2.5**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MA2	**Magadan**	**19.79**	**65**		**P**	**23 10 48.2**	**-0.3**
MA2				IAmb	IAmb	23 10 54.7	
	comp=Z,10nm,0.8s						
SEY	**Seymchan**	**20.44**	**55**	P	**P**	**23 10 53.4**	**-2.1**
	comp=Z,4.2nm,0.6s,baz=39,slow=16,SNR=5.1						
SEY				Lg	Lg	23 16 52.1	
	comp=Z,3.5nm,0.9s,baz=253,slow=4.6,SNR=5.2						
SEY	**Seymchan**	**20.44**	**55**	*i* P	Pn	23 10 57.3	-0.2
WMQ	**Urumqi**	**20.68**	**244**	*e*P	**P**	**23 10 59.6**	**+1.3**
WMQ				pP	sP	23 11 02.5	+3.1
WMQ				sP	pP	23 11 07.1	+8.1
WMQ				S	**S**	**23 14 47.1**	**-2.7**
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.9s						
WMQ				LR	LR		
	comp=Z,1µm,12.3s						
WMQ				LR	LR		
	comp=Z,1µm,13.1s						
WMQ				LR	LR		
	comp=Z,1µm,14.7s						
WMQ	**Urumqi**	**20.68**	**244**	P	**P**	**23 10 59.3**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,17nm,1.2s						
WMQ	**Urumqi**	**20.68**	**244**	P	**P**	**23 10 59.3**	**+1.0**
WMQ				IAmb	IAmb	23 11 00.7	
	comp=Z,16nm,1.2s						
SEM	**Semipalatinsk**	**20.72**	**268**	*e*P	**P**	**23 10 57.9**	**-1.1**
	baz=267						
SEM	**Semipalatinsk**	**20.72**	**268**	*e*P	**P**	**23 10 57.8**	**-1.1**
KSRS	**Korea Array**	**20.96**	**147**	P	Pn	23 11 03.2	-0.5
	comp=Z,2.3nm,0.8s,baz=336,slow=8.7,SNR=4.6						
KSRS				Lg	Lg	23 17 20.2	
	comp=Z,1.2nm,0.8s,baz=168,slow=37,SNR=2.0						
KSRS				LR	LR	23 19 56.0	
	comp=Z,340nm,18.1s,baz=340,slow=39						
LZH	**Lanzhou**	**21.16**	**203**	*e*P	**P**	**23 11 04.9**	**+1.2**
LZH				sP	sP	23 11 09.8	+5.0
LZH				*e*S	**S**	**23 14 51.9**	**-7.8**
LZH				sS	sS	23 15 03.4	+2.4
LZH				SS	**SnSn**	**23 15 30.0**	**+9.2**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.1s						
LZH				LR	LR		
	comp=Z,2µm,11.4s						
LZH				LR	LR		
	comp=Z,5µm,11.4s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
KURK	**Kurchatov**	**21.49**	**270**	P	**P**	**23 11 06.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
KURK	**Kurchatov**	**21.49**	**270**	P	**P**	**23 11 06.6**	**-0.3**
KURK				IAmb	IAmb	23 11 18.1	
	comp=Z,16nm,0.9s						
MK31	**Makanchi Array**	**21.57**	**258**	P	**P**	**23 11 07.5**	**-0.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**21.57**	**258**	P	**P**	**23 11 07.5**	**-0.4**
MKAR	**Makanchi Array**	**21.57**	**258**	P	**P**	**23 11 07.6**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=52,slow=11,SNR=42						
MKAR				Lg	Lg	23 17 34.9	
	comp=Z,1.3nm,0.8s,baz=36,slow=17,SNR=3.5						
MKAR				LR	LR	23 20 08.6	
	comp=Z,531nm,19.0s,baz=40,slow=39						
KURBB	**Kurchatov Arra**	**21.58**	**270**	P	**P**	**23 11 07.3**	**-0.6**
	comp=Z,9.2nm,0.6s,baz=66,slow=11,SNR=30						
KURBB				Lg	Lg	23 17 28.1	
	comp=Z,0.8nm,0.8s,baz=212,slow=46,SNR=3.1						
MAKZ	**Makanchi**	**21.73**	**258**	P	**P**	**23 11 08.9**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,24nm,1.3s						
MAKZ	**Makanchi**	**21.73**	**258**	P	**P**	**23 11 08.9**	**-0.7**
MAKZ				IAmb	IAmb	23 11 13.6	
	comp=Z,24nm,1.3s						
NJ2	**Nanjing**	**24.33**	**170**	*e*P	**P**	**23 11 38.6**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,300nm,7.1s						
NJ2				LR	LR		
	comp=Z,650nm,7.8s						
NJ2				LR	LR		
	comp=Z,380nm,8.5s						
TDK	**Taldyqorghan**	**24.81**	**258**	*e*P	**P**	**23 11 40.2**	**-0.2**
	comp=Z,7.0nm,1.0s,baz=258						
TDK	**Taldyqorghan**	**24.81**	**258**	*e*P	**P**	**23 11 40.2**	**-0.2**
TDK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BVAR	**Borovoye Array**	**25.04**	**281**	P	**P**	**23 11 43.5**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=60,slow=16,SNR=7.4						
BRVK	**Borovoye**	**25.09**	**281**	*ce*P	**P**	**23 11 42.2**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,1.3s						
BRVK	**Borovoye**	**25.09**	**281**	P	**P**	**23 11 43.2**	**+0.4**
BRVK				IAmb	IAmb	23 12 02.4	
	comp=Z,11nm,0.8s						
BRZS	**Berezniki**	**25.17**	**273**	*e*P	**P**	**23 11 43.1**	**-0.6**
	baz=273						
BRZS				*e*S	**S**	**23 16 09.1**	**-0.3**
	baz=273						
BRZS	**Berezniki**	**25.17**	**273**	*e*P	**P**	**23 11 43.0**	**-0.6**
BRZS				*e*S	**S**	**23 16 09.0**	**-0.3**
PETK	**Petropavlovsk-**	**25.27**	**78**	LR	LR	23 21 46.5	
	comp=Z,260nm,18.5s,baz=292,slow=37						
SHLS	**Shalkode**	**25.45**	**254**	*e*P	**P**	**23 11 44.1**	**-2.2**
	comp=Z,5.3nm,0.8s,baz=253						
SHLS	**Shalkode**	**25.45**	**254**	*e*P	**P**	**23 11 44.1**	**-2.2**
SHLS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KPKS	**Kokpek**	**25.66**	**255**	*e*P	**P**	**23 11 48.3**	**+0.1**
	comp=Z,4.1nm,1.1s,baz=255						
KPKS	**Kokpek**	**25.66**	**255**	*e*P	**P**	**23 11 48.3**	**+0.1**
KPKS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
JNU	**Nakatsue**	**25.88**	**146**	LR	LR	23 21 54.0	
	comp=Z,307nm,21.5s,baz=340,slow=36						
SATY	**Saty**	**26.08**	**255**	*e*P	**P**	**23 11 52.5**	**+0.3**
	baz=254						
SATY	**Saty**	**26.08**	**255**	*e*P	**P**	**23 11 52.4**	**+0.3**
CHKK	**Chushkaly**	**26.33**	**258**	*e*P	**P**	**23 11 54.9**	**+0.7**
	baz=257						
CHKK	**Chushkaly**	**26.33**	**258**	*e*P	**P**	**23 11 54.8**	**+0.7**
MDOK	**Medeo**	**26.75**	**257**	*e*P	**P**	**23 11 58.6**	**+0.5**
	baz=256						
MDOK	**Medeo**	**26.75**	**257**	*e*P	**P**	**23 11 58.6**	**+0.5**
BTLS	**Baital**	**27.19**	**263**	*e*P	**P**	**23 12 01.3**	**-0.7**
	baz=262						
BTLS	**Baital**	**27.19**	**263**	*e*P	**P**	**23 12 01.2**	**-0.7**
AAK	**Ala-Archa**	**28.50**	**258**	P	**P**	**23 12 14.3**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=75,slow=4.4,SNR=5.3						
AAK				LR	LR	23 24 09.5	
	comp=Z,409nm,18.5s,baz=36,slow=38						
AAK	**Ala-Archa**	**28.50**	**258**	*ce*P	**P**	**23 12 15.7**	**+1.9**
AAK				pmax	pmax		
	comp=Z,16nm,1.7s						
AAK	**Ala-Archa**	**28.50**	**258**	P	**P**	**23 12 14.3**	**+0.5**
AAK				IAmb	IAmb	23 12 18.7	
	comp=Z,4.7nm,1.2s						
ARU	**Arti**	**29.97**	**294**	P	**P**	**23 12 27.7**	**+1.1**
ARU						23 13 19.7	
ARU				S	**S**	**23 17 26.1**	**+1.3**
ARU				SS	**SnSn**	**23 18 54.4**	**-0.9**
ARU				MLR	MLR		
	comp=Z,405nm,15.0s						
ARU	**Arti**	**29.97**	**294**	P	**P**	**23 12 28.9**	**+2.3**
KK31	**Karatay Array**	**30.39**	**263**	P	**P**	**23 12 31.2**	**+0.7**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	**Karatay Array**	**30.39**	**263**	P	**P**	**23 12 31.2**	**+0.7**
KKAR	**Karatay Array**	**30.39**	**263**	P	**P**	**23 12 31.2**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KKAR	**Karatay Array**	**30.39**	**263**	P	**P**	**23 12 31.2**	**+0.7**
IUG	**Iuzhnay**	**31.29**	**262**	*e*P	**P**	**23 12 38.3**	**-0.2**
	baz=262						
IUG	**Iuzhnay**	**31.29**	**262**	*e*P	**P**	**23 12 38.2**	**-0.2**
KMI	**Kunming**	**32.02**	**199**	*e*P	**P**	**23 12 44.8**	**-0.3**
KMI				pP	pP	23 12 47.0	+1.1
KMI				sP	sP	23 12 48.1	+1.8
KMI				S	**S**	**23 17 56.1**	**-1.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,190nm,5.2s						
KMI				LR	LR		
	comp=Z,380nm,8.7s						
KMI				LR	LR		
	comp=Z,390nm,9.8s						
KMI				LR	LR		
	comp=Z,470nm,12.2s						
ABKAR	**Akbulak array**	**32.62**	**281**	P	**P**	**23 12 50.9**	**+0.9**
QIZ	**Qiongzhong**	**37.16**	**186**	P	**P**	**23 13 28.6**	**-0.8**
QIZ				S	**S**	**23 19 15.8**	**-0.9**
QIZ				LR	LR		
	comp=Z,370nm,4.0s						
QIZ				LR	LR		
	comp=Z,1µm,10.5s						
QIZ				LR	LR		
	comp=Z,390nm,12.0s						
KLMR	**Klimovskoe**	**37.18**	**309**	*e*P	**P**	**23 13 26.4**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	**Klimovskoe**	**37.18**	**309**	*e*P	**P**	**23 13 26.5**	**-2.7**
KLMR				AMP		23 13 31.4	
	comp=Z,24nm,1.5s						
KLMR				LQ	LQ	23 25 59.7	
KLMR				LQ	LQ	23 25 59.7	
KLMR				LR	LR	23 27 26.0	
ARCES	**ARCESS Array B**	**38.60**	**326**	P	**P**	**23 13 41.9**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=71,slow=12,SNR=3.7						
ARCES				LR	LR	23 32 46.3	
	comp=Z,117nm,18.1s,baz=65,slow=41						
CMAR	**Chiang Mai Arr**	**39.25**	**203**	LR	LR	23 29 41.2	
	comp=Z,172nm,21.6s,baz=76,slow=36						
GEYT	**Alibeck**	**40.82**	**268**	LR	LR	23 33 50.4	
	comp=Z,46nm,20.2s,baz=40,slow=40						
HRA	**Herat**	**41.09**	**260**	P	**P**	**23 14 02.6**	**+0.1**
FINES	**FINESS Array B**	**42.49**	**315**	P	**P**	**23 14 12.1**	**-1.2**
	comp=Z,4.4nm,0.7s,baz=60,slow=6.3,SNR=8.3						
FINES				LR	LR	23 31 50.2	
	comp=Z,119nm,18.8s,baz=62,slow=36						
NIKH	**Nikolski High**	**42.77**	**60**	P	**P**	**23 14 14.9**	**-0.7**
I23K	**Minto, Yukon-K**	**43.71**	**37**	P	**P**	**23 14 23.9**	**+0.8**
I23K				IAmb	IAmb	23 14 30.9	
	comp=Z,3.2nm,0.8s						
TRF	**Thorofare Moun**	**44.41**	**40**	P	**P**	**23 14 29.4**	**+0.4**
TRF				IAmb	IAmb	23 14 39.7	
	comp=Z,4.5nm,0.9s						
WRH	**Wood River Hil**	**44.56**	**38**	P	**P**	**23 14 30.7**	**+0.8**
WRH				IAmb	IAmb	23 14 43.9	
	comp=Z,7.3nm,1.3s						
ILAR	**Eielson Array**	**44.78**	**37**	P	**P**	**23 14 32.6**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=305,slow=10,SNR=15						
KIV	**Kislovodsk**	**45.26**	**286**	*e*P	**P**	**23 14 37.8**	**+2.0**
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
KIV				MLR	MLR		
	comp=Z,666nm,16.0s						
KIV	**Kislovodsk**	**45.26**	**286**	P	**P**	**23 14 36.2**	**+0.4**
KBZ	**Khabaz**	**45.29**	**285**	LR	LR	23 34 53.6	
	comp=Z,338nm,18.9s,baz=28,slow=38						
DHY	**Denali Highway**	**45.68**	**39**	P	**P**	**23 14 39.5**	**+0.4**
MNK	**Minsk**	**45.87**	**306**	*i* P	P	23 14 24.3	-16
	comp=E,3.0nm,1.4s						
MNK				*i* P	P	23 14 24.3	-16
	comp=N,15nm,1.3s						
MNK				*i* P	P	23 14 24.3	-16
	comp=Z,6.0nm,1.5s						
MNK				*i* PP	PcP	23 16 08.6	-8.9
MNK				*i* PPP	PPP	23 16 45.4	
MNK				*i* S	S	23 20 57.1	-28
MNK				*i* SS	ScS	23 24 22.9	-14
MNK				*i* SSS	SSS	23 25 05.2	
MNK				*i* LQ	LQ	23 29 50.1	
MNK				*i* LR	LR	23 33 14.1	
MNK				*i* LRM	MLR	23 34 15.3	
	comp=E,19nm,14.9s						
MNK				*i* LRM	MLR	23 34 33.1	
	comp=N,237nm,18.0s						
MNK				*i* LRM	MLR	23 34 58.3	
	comp=Z,151nm,18.4s						
SML	**Sawmill**	**46.15**	**41**	P	**P**	**23 14 43.0**	**+0.4**
DOT	**Dot Lake**	**46.45**	**37**	P	**P**	**23 14 44.4**	**-0.5**
DOT				IAmb	IAmb	23 14 51.5	
	comp=Z,4.1nm,0.8s						
INK	**Inuvik**	**46.45**	**28**	P	**P**	**23 14 45.1**	**+0.3**
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
INK	**Inuvik**	**46.45**	**28**	P	**P**	**23 14 45.0**	**+0.3**
INK				IAmb	IAmb	23 14 51.6	
	comp=Z,5.8nm,1.2s						
EGAK	**Eagle**	**46.65**	**35**	P	**P**	**23 14 47.4**	**+1.0**
M24K	**Tolsona, Glenn**	**46.73**	**39**	P	**P**	**23 14 47.8**	**+0.5**
MENT	**Mentasta**	**47.04**	**38**	P	**P**	**23 14 48.2**	**-1.4**
SOC	**Sochi**	**47.10**	**287**	*e*P	**P**	**23 14 49.1**	**-1.1**
SOC				*e*		23 16 40.5	
SOC				*e*PPP	PPP	23 17 22.7	
SOC				*e*S	**S**	**23 21 43.3**	**+0.4**
SOC				*e*SSS	SSS	23 26 12.0	
SOC				MLR	MLR		
	comp=Z,129nm,19.0s						
TULEG	**Thule**	**47.58**	**1**	P	**P**	**23 14 54.8**	**+1.2**
TULEG				IAmb	IAmb	23 14 56.6	
	comp=Z,4.1nm,0.8s						
AKASG	**Malin Array Be**	**47.69**	**301**	P	**P**	**23 14 53.5**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=43,slow=8.9,SNR=8.5						
NB2	**NORSAR Subarra**	**48.36**	**321**	P	**P**	**23 14 59.1**	**-0.8**
	comp=Z,5.3nm,1.2s,baz=49,slow=7.9						
NOA	**NORSAR Array B**	**48.36**	**321**	P	**P**	**23 14 58.6**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=38,slow=4.7,SNR=3.0						
NOA				LR	LR	23 36 47.2	
	comp=Z,166nm,20.9s,baz=35,slow=38						
BRTR	**Keskin Array B**	**53.05**	**288**	P	**P**	**23 15 33.9**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=60,slow=8.5,SNR=3.5						
BRTR				LR	LR	23 41 26.9	
	comp=Z,70nm,18.9s,baz=48,slow=40						
DPC	**Dobruska-Polom**	**53.88**	**308**	*e*P	**P**	**23 15 41.7**	**+0.2**
DPC	**Dobruska-Polom**	**53.88**	**308**	*e*P	**P**	**23 15 41.7**	**+0.2**
CLL	**Collm**	**54.61**	**311**	*e*P	**P**	**23 15 46.0**	**-0.7**
CLL				*e*PP	**PP**	**23 17 48.0**	**-0.6**
CLL				*e*SS	**SS**	**23 27 18.0**	**+9.3**
CLL	**Collm**	**54.61**	**311**	*e*P	**P**	**23 15 46.0**	**-0.7**
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**23 15 54.5**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=334,slow=6.7,SNR=18						
KHC	**Kasperske Hory**	**55.98**	**309**	*e*P	**P**	**23 15 57.7**	**+1.0**
KHC	**Kasperske Hory**	**55.98**	**309**	*e*P	**P**	**23 15 57.7**	**+1.0**
GERES	**GERESS Array B**	**56.14**	**308**	P	**P**	**23 15 57.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=42,slow=9.3,SNR=4.7						
GERES				LR	LR	23 41 30.8	
	comp=Z,228nm,18.6s,baz=30,slow=38						
OBKA	**Obir**	**57.52**	**306**	*e*P	**P**	**23 16 10.8**	**+3.1**
	comp=Z,6.6nm,1.0s						
KBA	**Koelnbreinsper**	**57.63**	**307**	*e*P	**P**	**23 16 09.5**	**+0.9**
	comp=Z,4.4nm,1.2s						
WATA	**Walderalm**	**58.21**	**309**	*e*P	**P**	**23 16 15.3**	**+2.7**
	comp=Z,3.0nm,1.0s						
WTTA	**Wattenberg**	**58.24**	**308**	*e*P	**P**	**23 16 17.0**	**+4.1**
	comp=Z,5.6nm,1.1s						
ESDC	**Sonseca Array**	**71.00**	**314**	P	**P**	**23 17 35.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=25,slow=5.8,SNR=12						
PDAR	**Pinedale Array**	**74.88**	**32**	P	**P**	**23 18 00.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=4.3,slow=3.6,SNR=3.1						
NVAR	**Mina Array Bea**	**75.94**	**40**	P	**P**	**23 18 05.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=342,slow=4.7,SNR=2.7						
WRA	**Warramunga Arr**	**77.74**	**160**	P	**P**	**23 18 14.4**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=347,slow=5.7,SNR=5.4						
ASAR	**Alice Springs**	**81.30**	**161**	P	**P**	**23 18 34.0**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=354,slow=4.9,SNR=4.7						
TXAR	**Lajitas Array**	**89.09**	**32**	P	**P**	**23 19 12.5**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=348,slow=4.0,SNR=2.1						
CPUP	**Villa Florida**	**149.54**	**344**	PKPbc	**PKiKP**	**23 26 09.3**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=353,slow=3.7,SNR=3.9						

IDC ***18*** *23:13:33.9±0.6, 35°.18S×105°.97W, h0^{km}, mb4.5/17, mb1 4.6/18, mb1mx4.5/31, mbtmp4.5/18, ML4.3/1, MS4.9/25, Ms1 4.9/25, ms1mx4.8/29, Error ellipse: s-maj=18.6km s-min=17.5km az=141.0*

NEIC ***18*** *23:13:36.7±1.9, 35°.46S±0°.09×105°.8W±0°.1, h8^{km}±3^{km}, mb5.1/221, Ms_20 5.2/178, Mwb5.5/23, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=15.4km s-min=13.5km az=82.0*

NEIC ***18*** *23:13:37.1, 35°.46S×105°.78W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.37; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.71; $M_{r\theta}$0.05; $M_{\theta\phi}$-2.29; $M_{\phi r}$-0.34; Fault plane solution: $M_0$2.50000×10^{17} NP1:ϕ_s100.33000°, δ81.70000°, λ175.60000°. NP2:ϕ_s190.97000°, δ85.65000°, λ8.33000°. Principal axes: T 2.3255, Plg9.0000°, Azm56.0000°; N 0.3264, Plg81.0000°, Azm218.0000°; P -2.6519, Plg3.0000°, Azm325.0000°;*

BJI ***18*** *23:13:37.0±0.0, 35°.40S×105°.80W, h10^{km}, Ms5.4/7, Ms7 5.1/7*

GCMT ***18*** *23:13:40.7±0.1, 35°.31S±0°.01×106°.03W±0°.01, h16^{km}, MW5.7/161, Moment Tensor Solution. s147,c278; s161,c329; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.39±.03; $M_{\theta\theta}$-0.85±.03; $M_{\phi\phi}$1.24±.03; $M_{r\theta}$0.45±.09; $M_{\theta\phi}$-3.36±.03; $M_{\phi r}$-1.16±.10; Best double couple: $M_0$3.70200×10^{17} NP1:ϕ_s98.00000°, δ74.00000°, λ174.00000°. NP2:ϕ_s189.00000°, δ84.00000°, λ16.00000°. Principal axes: T 4.0390, Plg15.0000°, Azm54.0000°; N -0.6730, Plg73.0000°, Azm209.0000°; P -3.3640, Plg7.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *23:13:41, 35°.36S×106°.07W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.49; $M_{\theta\theta}$-0.99; $M_{\phi\phi}$1.48; $M_{r\theta}$0.39; $M_{\theta\phi}$-3.78; $M_{\phi r}$-0.72; Fault plane solution: $M_0$4.08000×10^{17} NP1:ϕ_s99.00000°, δ82.00000°, λ175.00000°. NP2:ϕ_s189.00000°, δ85.00000°, λ8.00000°. Principal axes: T 4.3588, Plg10.0000°, Azm54.0000°; N -0.6253, Plg80.0000°, Azm223.0000°; P -3.7335, Plg2.0000°, Azm324.0000°;*

NEIC ***18*** *23:13:45, 35°.36S×105°.78W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$1.20; $M_{r\theta}$-0.98; $M_{\theta\phi}$-4.11; $M_{\phi r}$0.14; Fault plane solution: $M_0$4.36000×10^{17} NP1:ϕ_s7.00000°, δ77.00000°, λ-1.00000°. NP2:ϕ_s97.00000°, δ89.00000°, λ-166.00000°. Principal axes: T 4.4836, Plg9.0000°, Azm232.0000°; N -0.2561, Plg77.0000°, Azm102.0000°; P -4.2275, Plg10.0000°, Azm323.0000°;*

ISC 18 23:13:36.3±0.3**, 35°.38S**±0°.07×**105°.90W**±0°.06**, h10**^{km}**, n489,** σ**1^{s}83**/361**, mb5.1**/106**, MS5.1**/111**, 8C-4D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.74**	**339**	Pn	Pn	23 15 38.6	-4.2
	3.7nm,0.3s,baz=230,slow=4.5,SNR=4.8						
RPN				LR	LR	23 18 09.2	
	comp=Z,16µm,20.9s,baz=149,slow=32						
RPN	**Rapa Nui**	**8.74**	**339**	Pn	**Pn**	**23 15 45.2**	**+2.4**
H03S2	**Juan Fernandez**	**22.23**	**94**	T	T	23 41 49.7	
	baz=282,slow=76,SNR=22						
H03S1	**Juan Fernandez**	**22.25**	**94**	T	T	23 41 51.1	
	baz=282,slow=76,SNR=45						
H03S3	**Juan Fernandez**	**22.25**	**94**	T	T	23 41 49.8	
	baz=282,slow=76,SNR=58						
H03N2	**Juan Fernandez**	**22.31**	**93**	T	T	23 41 51.4	
	baz=248,slow=72,SNR=13						
H03N3	**Juan Fernandez**	**22.31**	**93**	T	T	23 41 53.5	
	baz=248,slow=72,SNR=11						
H03N1	**Juan Fernandez**	**22.32**	**93**	T	T	23 41 50.9	
	baz=248,slow=72,SNR=12						
VA04	**Juan Fernndez**	**22.35**	**93**	P	**P**	**23 18 34.8**	**+0.3**
GO07	**Milladeo Hill,**	**26.01**	**117**	P	**P**	**23 19 10.1**	**+0.6**
GO07				IAMs_20	IAMs_20	23 26 30.5	
	comp=Z,9µm,20.0s						
BI03	**Tigo**	**26.53**	**103**	P	**P**	**23 19 15.3**	**+1.2**
BI03				IAmb	IAmb	23 19 27.7	
	comp=Z,57nm,1.3s						
LC01	**Cunco**	**27.25**	**108**	P	**P**	**23 19 17.2**	**-3.5**
BI02	**San Fabin de**	**27.95**	**103**	P	**P**	**23 19 26.9**	**-0.1**
BI02				IAmb	IAmb	23 19 36.7	
	comp=Z,56nm,1.8s						

RKT	Rikitea	28.05	288	*e*LQ	LQ	23 25 14.0	
	comp=Z,5µm,28.5s						
PLCA	Paso Flores	28.21	112	P	P	23 19 28.9	-0.5
	comp=Z,7.6nm,0.9s,baz=278,slow=8.8,SNR=10						
PLCA				LR	LR	23 27 34.2	
	comp=Z,2µm,21.5s,baz=282,slow=30						
PLCA	Paso Flores	28.21	112	P	P	23 19 28.4	-1.0
PLCA				IAmb	IAmb	23 19 34.0	
	comp=Z,43nm,1.6s						
PLCA	Paso Flores	28.21	112	*e*P	P	23 19 31.7	+2.4
BO02	Sierra Bellavi	28.65	99	P	P	23 19 32.7	-0.6
MT02	Curacav	28.70	96	P	P	23 19 32.4	-1.3
MT02				IAmb	IAmb	23 20 09.1	
	comp=Z,37nm,1.4s						
GO09	Cerro Castillo	28.80	134	P	P	23 19 34.8	+0.4
GO09				IAmb	IAmb	23 19 48.8	
	comp=Z,58nm,1.2s						
ROC1	El Roble	28.87	95	P	P	23 19 35.1	-0.3
PEL	Peldehue	29.10	96	P	P	23 19 37.5	+0.3
PEL				IAmb	IAmb	23 19 53.2	
	comp=Z,80nm,1.8s						
VA03	San Esteban	29.30	95	P	P	23 19 39.1	0.0
CO02	Combarbal	29.37	92	P	P	23 19 40.3	+0.5
CO03	El Pedregal	29.74	91	P	P	23 19 43.0	0.0
CO03				IAmb	IAmb	23 20 03.1	
	comp=Z,73nm,1.9s						
GO04	Tololo Observa	29.86	90	P	P	23 19 44.0	-0.3
GO04				IAmb	IAmb	23 19 46.1	
	comp=Z,57nm,1.2s						
AC04	Llanos de Chal	30.34	86	P	P	23 19 47.5	-0.7
AC04				IAmb	IAmb	23 20 06.0	
	comp=Z,64nm,1.9s						
LCO	Las Campanas	30.34	88	P	P	23 19 48.8	+0.2
LCO				IAmb	IAmb	23 19 54.1	
	comp=Z,56nm,1.7s						
CO01	Juntas del Tor	30.50	90	P	P	23 19 49.6	-0.3
CO01				IAmb	IAmb	23 20 56.7	
	comp=Z,62nm,1.8s						
AC05	El Transito	30.75	88	P	P	23 19 52.4	+0.3
AC05				IAMs_20	IAMs_20	23 28 32.3	
	comp=Z,3µm,22.0s						
ZON	Zonda	31.16	94	P	P	23 19 55.9	+0.4
ZON				IAmb	IAmb	23 19 57.8	
	comp=Z,22nm,1.1s						
GO03	Copiap	31.26	86	P	P	23 19 56.9	+0.5
GO03				IAMs_20	IAMs_20	23 28 44.7	
	comp=Z,3µm,22.0s						
AC01	Pan de Azucar	31.56	83	P	P	23 19 59.8	+0.7
AC01				IAmb	IAmb	23 20 19.6	
	comp=Z,41nm,1.6s						
PB14	IPOC Station P	32.40	80	P	P	23 20 03.3	-3.4
AC02	Maricunga	32.47	85	P	P	23 20 08.2	+0.7
AC02				IAMs_20	IAMs_20	23 29 22.7	
	comp=Z,3µm,22.0s						
MG01	Puerto William	32.75	139	IAMs_20	IAMs_20	23 30 07.5	
	comp=Z,6µm,19.0s						
PB10	IPOC Station P	32.80	79	P	P	23 20 07.8	-2.1
PB10				IAmb	IAmb	23 20 15.0	
	comp=Z,47nm,1.2s						
GO02	Mina Guanaco	32.81	82		P	23 20 09.9	-0.4
PB04	IPOC Station P	33.71	77	P	P	23 20 18.0	-0.1
PB04				IAmb	IAmb	23 21 32.6	
	comp=Z,21nm,0.8s						
PB04				IAMs_20	IAMs_20	23 29 54.2	
	comp=Z,4µm,22.0s						
PB15	IPOC Station P	33.82	79	P	P	23 20 19.3	+0.2
PB15				IAmb	IAmb	23 20 29.8	
	comp=Z,45nm,1.3s						
PB06	IPOC Station P	33.99	78	P	P	23 20 19.7	-0.8
PB06				IAmb	IAmb	23 20 33.6	
	comp=Z,18nm,0.9s						
PB07	IPOC Station P	34.23	76	P	P	23 20 22.4	-0.3
PB07				IAMs_20	IAMs_20	23 30 09.0	
	comp=Z,4µm,21.0s						
PATCX	Punta Patache	34.50	75	P	P	23 20 25.1	+0.3
PATCX				IAMs_20	IAMs_20	23 30 31.1	
	comp=Z,3µm,20.0s						
LVC	Limon Verde	34.56	78	P	P	23 20 25.6	-0.1
	comp=Z,12nm,1.0s,baz=245,slow=8.3,SNR=9.7						
LVC				LR	LR	23 30 43.4	
	comp=Z,3µm,21.9s,baz=250,slow=30						
LVC	Limon Verde	34.56	78	P	P	23 20 26.4	+0.7
LVC				IAmb	IAmb	23 20 37.0	
	comp=Z,23nm,1.1s						
LVC	Limon Verde	34.56	78	IAMs_20	IAMs_20	23 30 32.6	
	comp=Z,2µm,19.0s						
TA01	Diego Aracena	34.62	74	IAMs_20	IAMs_20	23 30 17.2	
	comp=Z,3µm,19.0s						
PB09	IPOC Station P	34.71	77	P	P	23 20 27.7	+0.9
PB09				IAMs_20	IAMs_20	23 30 42.6	
	comp=Z,3µm,21.0s						
PSGCX	Pisagua	35.19	73	IAMs_20	IAMs_20	23 30 34.6	
	comp=Z,3µm,20.0s						
PB08	IPOC Station P	35.65	75	P	P	23 20 35.5	+0.3
PB08				IAMs_20	IAMs_20	23 30 50.7	
	comp=Z,3µm,21.0s						
GO01	Chusmiza	35.88	74	IAMs_20	IAMs_20	23 30 57.8	
	comp=Z,3µm,20.0s						
PAYG	Puerto Ayora	37.47	26	IAMs_20	IAMs_20	23 31 54.4	
	comp=Z,5µm,20.0s						
EFI	East Falkland	37.57	131	IAMs_20	IAMs_20	23 33 13.0	
	comp=Z,4µm,21.0s						
ATAH	Atahualpa	37.78	48	P	P	23 20 51.2	-2.1
	comp=Z,3.6nm,0.6s,baz=257,slow=6.7,SNR=7.9						
ATAH				LR	LR	23 32 29.7	
	comp=Z,4µm,19.5s,baz=243,slow=30						
PMSA	Palmer Station	38.59	153	IAMs_20	IAMs_20	23 32 26.7	
	comp=Z,3µm,21.0s						
TBI	Tubuai	39.52	276	*e*S	S	23 27 04.5	-5.4
	comp=Z,156nm,24.8s						
TBI				*e*LQ	LQ	23 30 14.9	
	comp=Z,9µm,33.2s						
TBI				*e*LR	LR	23 31 50.5	
	comp=Z,3µm,27.0s,baz=106						
TBI	Tubuai	39.52	276	*e*T	T	00 02 25.8	
	comp=Z,9.6nm,0.4s						
TAOE	Nuku Hiva Isla	40.92	302	*e*LQ	LQ	23 30 47.9	
	comp=Z,10µm,26.7s						
TAOE				*e*LR	LR	23 32 39.5	
	comp=Z,4µm,27.6s,baz=143						
TAOE	Nuku Hiva Isla	40.92	302	*e*T	T	00 04 06.0	
	comp=Z,71nm,0.3s						
ITQB	Itaqui	41.59	96	*e*P	P	23 21 25.1	+0.6
CPUP	Villa Florida	42.30	92	P	P	23 21 29.6	-0.7
	comp=Z,2.6nm,0.8s,baz=257,slow=10,SNR=6.6						
CPUP				LR	LR	23 36 20.0	
	comp=Z,915nm,20.0s,baz=252,slow=32						
CPUP	Villa Florida	42.30	92	P	P	23 21 29.2	-1.1
CPUP	Villa Florida	42.30	92	*e*P	P	23 21 30.1	-0.2
TIAR	Tiarei	42.37	283	*e*T	T	00 06 08.1	
	comp=Z,3.6nm,0.3s						
PPT2	Papeete2	42.54	283	*e*S	S	23 27 50.1	-4.9
	comp=Z,473nm,26.2s						
PPT2				*e*LQ	LQ	23 31 16.4	
PLTB	Pedras Altas	43.31	101	*e*P	P	23 21 38.4	-0.1
OTAV	Otavalo	43.71	42	P	P	23 21 42.2	-0.1
OTAV	Otavalo	43.71	42	P	P	23 21 42.2	-0.1
OTAV				IAmb	IAmb	23 21 43.4	
	comp=Z,68nm,1.9s						
OTAV	Otavalo	43.71	42	MLR	MLR		
	comp=Z,2µm,22.0s						
OTAV	Otavalo	43.71	42	pmax	pmax		
	comp=Z,68nm,2.0s						
CPSB	Cacapava Do Su	43.91	99	*e*P	P	23 21 43.4	+0.1
SIV	San Ignacio	44.34	76	P	P	23 21 46.6	-0.3
	comp=Z,20nm,0.9s,baz=250,slow=7.4,SNR=69						
GCUF	Volcan Galeras	45.14	42	*e*P	P	23 21 50.6	-3.2
PTLB	Pontes e Lacer	46.18	77	*e*P	P	23 22 01.4	-0.1
CNLB	Canela	46.40	99	*e*P	P	23 22 04.0	+0.8
PCON	Cinco Dias	46.58	43	*e*P	P	23 21 57.3	-7.9
VILB	Vilhena	46.78	73	*e*P	P	23 22 06.3	+0.1
GARC	Garzon, Huila	46.97	44	*e*P	P	23 22 00.2	-7.7
SAML	Samuel	46.98	66	P	P	23 22 06.3	-1.5
SAML	Samuel	46.98	66	IAMs_20	IAMs_20	23 38 14.3	
	comp=Z,4µm,21.0s						
SAML	Samuel	46.98	66	*e*P	P	23 22 06.8	-0.9
MARP	Paez Belalcaza	47.25	43	*e*P	P	23 22 01.2	-9.0
PTGB	Pitanga	47.29	92	*e*P	P	23 22 09.6	-0.7
BETC	Betania	47.40	43	*e*P	P	23 22 11.5	+0.4
TRCB	Terra Rica	47.69	90	*e*P	P	23 22 13.5	+0.2
MACC	Macarena, Meta	47.88	46	*e*P	P	23 22 04.1	-11
ORTC	Ortega, Tolima	48.52	43	*e*P	P	23 22 09.8	-10
ANIL	Santa Ana	48.92	42	*e*P	P	23 22 21.2	-1.9
TOLC	Tolima	49.04	42	*e*P	P	23 22 18.4	-5.6
RREF	El Recreo	49.29	42	*e*P	P	23 22 18.4	-7.9
PCMB	Pacaembu	49.37	89	*e*P	P	23 22 26.7	+0.4
JTS	Las Juntas de	49.55	28	P	P	23 22 26.7	-0.9
	comp=Z,8.5nm,0.9s,baz=190,slow=6.6,SNR=4.3						
JTS				LR	LR	23 38 10.9	
	comp=Z,4µm,20.1s,baz=265,slow=30						
JTS	Las Juntas de	49.55	28	P	P	23 22 27.4	-0.2
JTS				IAmb	IAmb	23 22 28.4	
	comp=Z,43nm,1.4s						
ROSC	El Rosal	49.80	43	P	P	23 22 27.5	-2.5
	comp=Z,17nm,0.8s,baz=189,slow=5.4,SNR=11						
ROSC				LR	LR	23 39 36.7	
	comp=Z,4µm,21.8s,baz=227,slow=31						
ROSC	El Rosal	49.80	43	P	P	23 22 30.0	0.0
ROSC				IAmb	IAmb	23 22 34.4	
	comp=Z,30nm,1.1s						
ROSC				IAMs_20	IAMs_20	23 39 25.7	
	comp=Z,3µm,21.0s						
ROSC	El Rosal	49.80	43	*e*P	P	23 22 19.4	-11
HELC	Santa Helena	50.27	41	*e*P	P	23 22 19.4	-14
BCIP	Isla Barro Col	50.68	34	IAMs_20	IAMs_20	23 38 25.5	
	comp=Z,2µm,19.0s						
ACON	Acoyapa	51.02	26	P	P	23 22 36.6	-2.0
ACON				IAmb	IAmb	23 22 38.4	
	comp=Z,58nm,1.6s						
ITRB	Iturama	51.03	88	*e*P	P	23 22 38.9	0.0
CRIN	San Cristobal	51.04	24	IAMs_20	IAMs_20	23 38 37.5	
	comp=Z,2µm,18.0s						
PTBC	PUERTO BERRIO,	51.13	42	*e*P	P	23 22 30.0	-10
RUSC	La Rusia	51.36	44	*e*P	P	23 22 30.9	-11
PET01	Itanhaem-SP	51.39	94	*e*P	P	23 22 42.3	+0.8
ESPN	Las Esperanzas	51.55	27	P	P	23 22 41.3	-1.2
ESPN				IAmb	IAmb	23 22 45.6	
	comp=Z,17nm,0.8s						
UREC	San Jos de Ur	51.58	40	*e*P	P	23 22 30.0	-13
BB19B	Bebedouro	51.87	90	*e*P	P	23 22 45.2	+0.1
ARAG	Araguaiana, MT	51.92	82	*e*P	P	23 22 45.7	+0.2
BRRC	Barranca, Sant	52.01	42	*e*P	P	23 22 43.7	-2.5
TGUH	Tegucigalpa,Un	52.24	23	P	P	23 22 47.1	-0.8
TGUH				IAmb	IAmb	23 23 00.4	
	comp=Z,25nm,1.1s						
TLIG	Tlapa	53.11	9	P	P	23 22 55.3	+1.1
TLIG				IAmb	IAmb	23 23 06.7	
	comp=Z,25nm,1.2s						
CMIG	Matias Romero	53.22	13	LR	LR	23 39 19.3	
	comp=Z,1µm,20.9s,baz=184,slow=29						
SJCC	San Jacinto, C	53.58	39	*e*P	P	23 22 51.1	-6.7
IPMB	Ipameri, GO	53.66	87	*e*P	P	23 22 57.4	-1.1
H06S1	SOCORRO T	54.03	354	T	T	00 21 13.2	
	SNR=13						
H06E1	SOCORRO T-PHAS	54.08	354	T	T	00 21 13.0	
PETF	Flores	54.19	19	P	P	23 23 03.7	+1.6
PETF				IAmb	IAmb	23 23 14.2	
	comp=Z,30nm,1.4s						
SNDB	Serra Nova Dou	54.41	79	*e*P	P	23 23 03.7	-0.2
MAN01	Angra dos Reis	54.74	95	*e*P	P	23 23 07.7	+1.4
QSPA	South Pole Qui	54.82	180	P	P	23 23 06.5	+0.1
	comp=Z,12nm,0.9s,baz=137,slow=3.4,SNR=19						
QSPA	South Pole Qui	54.82	180	P	P	23 23 07.1	+0.7
QSPA				IAmb	IAmb	23 23 16.3	
	comp=Z,15nm,0.8s						
PTGA	Pitinga	54.86	61	P	P	23 23 04.8	-2.3
	comp=Z,1.8nm,0.5s,baz=319,slow=22,SNR=1.3						
BSCB	Bom Sucesso	54.97	92	*e*P	P	23 23 09.6	+1.7
BDFB	Brasilia	55.04	85	P	P	23 23 08.5	-0.1
	comp=Z,6.3nm,0.9s,baz=258,slow=6.7,SNR=7.5						
BDFB				LR	LR	23 45 11.5	
	comp=Z,1µm,18.1s,baz=243,slow=34						
BDFB	Brasilia	55.04	85	P	P	23 23 07.3	-1.3
BDFB				IAmb	IAmb	23 23 29.4	
	comp=Z,20nm,1.4s						
BDFB				IAMs_20	IAMs_20	23 44 59.8	
	comp=Z,1µm,19.0s						
SMRC	Santa Marta, M	55.14	39	*e*P	P	23 22 58.7	-10
SDV	Santo Domingo	55.19	44	P	P	23 23 06.8	-2.9
	comp=Z,4.8nm,0.7s,baz=227,slow=7.5,SNR=5.5						
SDV				LR	LR	23 43 18.8	
	comp=Z,909nm,21.4s,baz=224,slow=32						
SDV	Santo Domingo	55.19	44	P	P	23 23 07.2	-2.5
SDV	Santo Domingo	55.19	44	IAMs_20	IAMs_20	23 44 57.3	
	comp=Z,1µm,18.0s						
SDV	Santo Domingo	55.19	44	*e*P	P	23 23 07.0	-2.7
ITTB	Itaituba	55.56	68	*e*P	P	23 23 10.6	-1.6
VNDA	Vanda	56.24	195	LR	LR	23 42 34.6	
	comp=Z,658nm,19.3s,baz=94,slow=31						
PEXB	Peixe	56.74	81	*e*P	P	23 23 20.9	+0.2
TEIG	Tepich	57.77	20	P	P	23 23 28.1	+0.4
TEIG				IAmb	IAmb	23 24 05.0	
	comp=Z,29nm,1.3s						
ZAIG	Zacatecas	57.92	4	P	P	23 23 29.7	+0.7
MALB	Monte Alegre	58.30	67	*e*P	P	23 23 29.6	-2.1
JANB	Januaria	58.37	86	*e*P	P	23 23 31.8	-0.4
ALF01	Guarapari-ES	58.45	94	*e*P	P	23 23 34.9	+2.2
VNA3	Neumayer Olymp	58.88	158	P	P	23 23 35.0	+0.1
PRPB	Parauapebas	59.01	74	*e*P	P	23 23 35.3	-1.3
SMTB	Santa Maria do	59.17	78	*e*P	P	23 23 38.1	+0.3
BSFB	Barra de Sao F	59.24	92	*e*P	P	23 23 40.8	+2.7
SDBA	SAO DESIDERIO	59.33	83	*e*P	P	23 23 39.1	+0.2
RIB01	Linhares ES	59.37	93	*e*P	P	23 23 40.2	+1.2
MXZ	Matakaoa Point	59.39	244	IAMs_20	IAMs_20	23 42 37.7	
	comp=Z,2µm,20.0s						
VNA1	Neumayer--Stat	59.52	157	P	P	23 23 40.4	+1.1
VNA2	Neumayer--Watz	59.69	158	P	P	23 23 39.6	-0.9
MTDJ	Mount Denham	59.72	32	IAMs_20	IAMs_20	23 43 09.1	
	comp=Z,1µm,22.0s						
PCRV	Puerto La Cruz	59.77	49	LR	LR	23 46 54.5	
	comp=Z,2µm,21.3s,slow=34						
URZ	Urewera	59.98	242	IAMs_20	IAMs_20	23 42 54.0	
	comp=Z,2µm,21.0s						
NAN01	Guarapari, ES	60.33	92	*e*P	P	23 23 48.0	+2.3
SNZO	South Karori	60.51	238	P	P	23 23 45.2	-1.4
SNAA	Sanae	60.76	159	P	P	23 23 47.5	-0.5
SNAA	Sanae	60.76	159	P	P	23 23 47.5	-0.5
SNAA	Sanae	60.76	159	P	P	23 23 47.5	-0.5
SNAA				IAmb	IAmb	23 24 05.2	
	comp=Z,18nm,1.1s						
SNAA				IAMs_20	IAMs_20	23 45 10.8	
	comp=Z,1µm,19.0s						
SNAA	Sanae	60.76	159	MLR	MLR		
	comp=Z,1µm,19.0s						
SNAA	Sanae	60.76	159	pmax	pmax		
	comp=Z,19nm,1.1s						
MCPB	Macapa, AP	60.94	67	*e*P	P	23 23 48.6	-1.2
TUWZ	Tuamarina	60.99	238	P	P	23 23 50.9	+1.1
GTBY	Guantanamo Bay	62.28	33	P	P	23 23 57.2	-1.4
GTBY				IAMs_20	IAMs_20	23 44 37.8	
	comp=Z,2µm,22.0s						
GDU01	Guandu, BA	62.95	88	*e*P	P	23 24 03.1	-0.3
GRGR	Grenville	63.12	50	IAMs_20	IAMs_20	23 48 49.2	
	comp=Z,1µm,20.0s						
SDDR	Presa de Saban	63.25	37	P	P	23 24 05.2	0.0
SDDR				IAmb	IAmb	23 24 28.3	
	comp=Z,15nm,1.0s						
SDD	Santo Domingo	63.50	39	P	P	23 24 05.7	-1.0
OUZ	Omahuta	63.81	244	P	P	23 24 08.5	-0.3
OUZ				IAmb	IAmb	23 24 11.5	
	comp=Z,24nm,1.1s						
OUZ				IAMs_20	IAMs_20	23 44 37.0	
	comp=Z,2µm,20.0s						
SC01	Santiago de lo	63.91	37	IAMs_20	IAMs_20	23 44 50.7	
	comp=Z,1µm,21.0s						
SVB	Belmont	64.24	49	IAMs_20	IAMs_20	23 48 59.9	
	comp=Z,2µm,22.0s						
TX31	Lajitas Ar. Si	64.40	2	P	P	23 24 14.4	+1.7
TX32	Lajitas Array	64.40	2	P	P	23 24 14.8	+2.1
TXAR	Lajitas Array	64.40	2	P	P	23 24 11.0	-1.6
	comp=Z,1.9nm,0.7s,baz=191,slow=8.2,SNR=10						
TXAR				LR	LR	23 47 37.4	
	comp=Z,363nm,19.8s,baz=0.0,slow=32						
OBIP	Obispado Ponce	64.90	42	P	P	23 24 15.8	-0.2
SJG	San Juan	65.20	42	P	P	23 24 14.9	-3.0
	comp=Z,9.3nm,0.7s,baz=146,slow=2.5,SNR=4.5						
SJG				LR	LR	23 51 16.1	
	comp=Z,721nm,18.2s,baz=224,slow=35						
SJG	San Juan	65.20	42	P	P	23 24 18.2	+0.3
SJG				IAmb	IAmb	23 24 19.2	
	comp=Z,13nm,0.8s						
SJG	San Juan	65.20	42	IAMs_20	IAMs_20	23 51 04.7	
	comp=Z,925nm,19.0s						
FDF	Fort de France	65.43	48	IAMs_20	IAMs_20	23 52 49.5	
	comp=Z,1µm,19.0s						
GRTK	Grand Turk	65.48	36	P	P	23 24 19.2	-0.5
MTP	Monte Pirata	65.52	43	P	P	23 24 19.3	-0.7
HKT	Hockley	65.67	10	P	P	23 24 21.6	+1.0
HKT				IAmb	IAmb	23 24 45.5	
	comp=Z,28nm,1.6s						
JCT	Junction City	65.76	6	P	P	23 24 21.1	-0.3
JCT				IAmb	IAmb	23 24 32.9	
	comp=Z,16nm,1.1s						
435B	Jarrell	66.28	8	P	P	23 24 24.5	-0.2
435B				IAmb	IAmb	23 24 36.7	
	comp=Z,23nm,1.1s						
SEUS	St. Eustatius	66.49	45	IAMs_20	IAMs_20	23 49 48.7	
	comp=Z,2µm,22.0s						
SKI	Saint Kitts	66.50	45	P	P	23 24 24.8	-1.6
SKI				IAMs_20	IAMs_20	23 49 52.1	
	comp=Z,2µm,21.0s						
SPX	San Pedro Mart	66.68	351	P	P	23 24 27.1	-0.6
SPX				IAmb	IAmb	23 24 59.9	
	comp=Z,18nm,1.5s						
MNTX	Cornudas Mount	66.73	0	P	P	23 24 28.0	+0.5
	baz=180						
214A	Organ Pipe Nat	67.30	354	P	P	23 24 32.7	+1.5
	baz=174						
WHTX	Lake Whitney,	67.49	8	P	P	23 24 32.3	0.0
TUC	Tucson	67.49	356	P	P	23 24 35.2	+2.7
	baz=176						
TUC	Tucson	67.49	356	P	P	23 24 33.4	+0.9
121A	Cookes Peak, D	67.58	358	P	P	23 24 35.5	+2.3
121A				IAmb	IAmb	23 25 16.7	
	comp=Z,22nm,1.5s						
NATX	Nacogdoches	67.62	10	P	P	23 24 35.7	+2.6
	baz=190						
NATX	Nacogdoches	67.62	10	P	P	23 24 32.9	-0.3
342A	Flagon Creek P	67.62	13	P	P	23 24 32.9	-0.3
ESJX	Sierra Juarez	67.69	351	P	P	23 24 33.9	0.0
237A	Washetta, Mont	67.69	9	P	P	23 24 35.3	+1.7
ABTX	Abilene, Hawle	67.90	6	P	P	23 24 34.4	-0.6
ABTX				IAmb	IAmb	23 24 47.4	
	comp=Z,27nm,1.5s						
656A	Willston	68.07	22	IAMs_20	IAMs_20	23 57 45.6	
	comp=Z,802nm,20.0s						
CBX	Cerro Bola	68.09	350	P	P	23 24 37.2	+0.9
RMX	La Rumorosa	68.30	351	P	P	23 24 38.6	+1.0
IKP	In-Ko-Pah, Jac	68.35	351	P	P	23 24 40.9	+3.0
	baz=171						
BAR	Barrett	68.46	350	P	P	23 24 39.8	+1.3
BAR				IAmb	IAmb	23 25 01.2	
	comp=Z,16nm,1.4s						
MONP2	Monument Peak	68.63	350	P	P	23 24 41.9	+2.1
	baz=171						
MSVF	Nonsavu	68.76	263	P	P	23 24 40.8	-0.1
MSVF				IAmb	IAmb	23 25 02.4	
	comp=Z,22nm,1.2s						
Z35A	Perchaven, San	68.83	8	P	P	23 24 40.1	-0.7
Z35A				IAmb	IAmb	23 25 00.5	
	comp=Z,20nm,1.0s						
Z38A	Mt. Pleasant	69.05	10	P	P	23 24 42.9	+0.8
MSTX	Muleshoe	69.05	3	P	P	23 24 42.3	+0.1
MSTX				IAmb	IAmb	23 24 58.7	
	comp=Z,16nm,1.2s						
143A	Socs Landing,	69.08	13	P	P	23 24 42.6	+0.3
BNM	Barren Site	69.17	359	P	P	23 24 45.0	+1.9
BC3	Big Chuckawall	69.26	351	P	P	23 24 46.1	+2.5
	baz=172						
PFO	Pinyon Flats O	69.34	351	P	P	23 24 47.8	+3.7
	baz=171						
PFO	Pinyon Flats O	69.34	351	P	P	23 24 45.6	+1.5
Z41A	Richland Creek	69.38	12	P	P	23 24 44.8	+0.7
SNCC	San Nicolas Is	69.46	348	P	P	23 24 42.3	-2.4
250A	Grady	69.50	18	P	P	23 24 46.2	+1.3
X16A	Lo Mia Camp, P	69.63	355	P	P	23 24 46.9	+1.0
X18A	Snowflake	69.65	356	P	P	23 24 47.3	+1.2
BELC	Belle Mtn. Jos	69.67	351	P	P	23 24 49.2	+3.1
	baz=171						
WLAR	White Oak Lake	69.75	11	P	P	23 24 46.5	+0.2
WLAR				IAmb	IAmb	23 25 10.8	
	comp=Z,26nm,1.2s						
ANMO	Albuquerque	69.97	360	LR	LR	23 51 01.3	
	comp=Z,665nm,18.0s,baz=173,slow=32						
ANMO	Albuquerque	69.97	360	P	P	23 24 50.7	+2.7
	baz=179						
ANMO	Albuquerque	69.97	360	P	P	23 24 49.6	+1.6
AMTX	Amarillo	70.01	4	P	P	23 24 47.0	-1.2
AMTX				IAmb	IAmb	23 25 00.2	
	comp=Z,26nm,1.4s						
WMOK	Wichita Mounta	70.07	6	P	P	23 24 50.0	+1.5
WMOK				IAmb	IAmb	23 24 54.0	
	comp=Z,26nm,1.9s						
BFSC	Mount Baldy Ra	70.13	350	P	P	23 24 51.4	+2.5
	baz=170						
PASC	Pasadena Art C	70.14	349	P	P	23 24 49.5	+0.7
PASC				IAmb	IAmb	23 25 21.3	
	comp=Z,30nm,1.6s						
MWC	Mount Wilson	70.17	349	P	P	23 24 50.0	+0.8
MWC				IAmb	IAmb	23 25 11.2	
	comp=Z,27nm,1.4s						
CCAR	Cane Creek	70.19	12	P	P	23 24 48.1	-1.1
MIAR	Mount Ida	70.51	11	P	P	23 24 52.4	+1.3
MIAR				IAmb	IAmb	23 25 10.2	
	comp=Z,22nm,1.5s						
W13A	Hualapai Mount	70.51	353	P	P	23 24 53.2	+1.8
HEC	Hector,Ludlow	70.53	351	P	P	23 24 54.2	+2.9
	baz=171						
152A	Waverly Hall	70.55	19	P	P	23 24 52.2	+0.9
OSI	Osito Audit: C	70.66	349	P	P	23 24 53.2	+1.2
OSI				IAmb	IAmb	23 25 27.0	
	comp=Z,31nm,1.6s						
WUAZ	Wupatki	70.72	355	P	P	23 24 54.3	+1.7
FNO	Franklin	70.72	7	P	P	23 24 54.6	+2.2
EDW2	Edwards Air Fo	70.81	349	P	P	23 24 55.9	+2.9
	baz=170						
OKCFA	Oklahoma City	70.87	7	P	P	23 24 54.0	+0.7
154A	Montrose	70.94	20	P	P	23 24 53.6	-0.1
OK025	Westminster Rd	71.05	7	P	P	23 24 56.3	+2.0
OK025				IAmb	IAmb	23 24 59.5	
	comp=Z,13nm,0.8s						
GSC	Goldstone, Bar	71.05	351	P	P	23 24 57.6	+3.1
	baz=170						
GSC	Goldstone, Bar	71.05	351	P	P	23 24 56.6	+2.1
BCOK	Bluff Creek, N	71.10	7	P	P	23 24 55.0	+0.3
PKM	Mcpherson Peak	71.11	348	P	P	23 24 57.7	+2.8
	baz=168						
W39A	Magazine	71.12	10	P	P	23 24 57.1	+2.3
	baz=190						
OK029	Liberty Lake	71.25	7	P	P	23 24 56.9	+1.3
W41B	Gary Mavity, V	71.34	12	P	P	23 24 58.3	+2.2
	baz=192						
W41B	Gary Mavity, V	71.34	12	P	P	23 24 56.2	+0.1
W41B				IAmb	IAmb	23 25 19.8	
	comp=Z,42nm,1.6s						
LRMC	Laurel Mtn Rad	71.35	350	P	P	23 24 59.1	+2.7
	baz=170						
OK031	S. Brethren Rd	71.47	8	P	P	23 24 57.9	+1.0
OK031				IAmb	IAmb	23 25 27.0	
	comp=Z,41nm,1.5s						
TUL1	Leonard	71.55	9	IAmb	IAmb	23 25 16.9	
	comp=Z,13nm,0.8s						
ISA	Isabella, Lake	71.65	349	P	P	23 25 00.8	+2.7
	baz=169						
ISA	Isabella, Lake	71.65	349	P	P	23 24 59.3	+1.2
ISA				IAmb	IAmb	23 25 06.6	
	comp=Z,27nm,1.6s						
U15A	North Rim	71.69	355	P	P	23 25 00.6	+2.0
QUOK	Quay	71.70	8	P	P	23 24 59.6	+1.3
QUOK				IAmb	IAmb	23 25 02.8	
	comp=Z,24nm,1.3s						
HDBT	Hernando Brdge	71.71	14	IAMs_20	IAMs_20	23 46 26.5	
	comp=Z,1µm,20.0s						
MPMC	Manual Prospec	71.89	350	P	P	23 25 02.8	+3.1
	baz=170						
VES	Vestal, Richgr	71.92	349	P	P	23 25 02.1	+2.5
	baz=169						
PAGB	Antelope Grade	72.00	348	IAMs_20	IAMs_20	23 48 50.2	
	comp=Z,822nm,21.0s						
SHPR	Sheep Range	72.04	352	P	P	23 25 02.7	+2.1
SHPR				IAmb	IAmb	23 25 33.3	
	comp=Z,27nm,1.8s						
HHAR	Hobbs	72.16	10	P	P	23 25 00.6	-0.5
HHAR				IAmb	IAmb	23 25 11.9	
	comp=Z,9.0nm,0.7s						
T25A	Trinidad	72.17	1	P	P	23 25 02.7	+1.4
T25A				IAmb	IAmb	23 25 07.6	
	comp=Z,48nm,1.9s						
U38A	Gravette	72.25	10	IAmb	IAmb	23 25 14.0	
	comp=Z,21nm,1.1s						
MVCO	Mesa Verde	72.27	358	P	P	23 25 04.2	+2.2
	baz=178						
U40A	Yellville	72.40	11	P	P	23 25 04.5	+2.1
	baz=191						
U40A	Yellville	72.40	11	P	P	23 25 03.2	+0.7

U40A				IAmb	IAmb	23 25 04.5	
	comp=Z,35nm,1.7s						
LCAR	Lake Charles	72.40	12	P	P	23 25 04.6	+2.1
KAN13	South Haven SW	72.45	7	P	P	23 25 03.8	+1.0
T35A	Sooner Cattle	72.46	8	P	P	23 25 02.9	0.0
T35A				IAmb	IAmb	23 25 27.0	
	comp=Z,51nm,1.8s						
KAN10	Anthony SW Sta	72.50	7	P	P	23 25 04.9	+1.9
KAN01	Argonia South	72.56	7	P	P	23 25 03.1	-0.3
TPNV	Topopah Spring	72.61	351	P	P	23 25 07.3	+3.4
	baz=171						
TPNV	Topopah Spring	72.61	351	P	P	23 25 05.2	+1.3
KAN08	Anthony NE Sta	72.62	7	P	P	23 25 03.8	+0.1
SWET	Sewanee	72.67	17	P	P	23 25 05.3	+1.2
KAN12	Harper NE Stat	72.68	7	P	P	23 25 03.8	-0.4
HODGE	Hodges	72.70	20	P	P	23 25 05.2	+0.9
PKCU	Pink Cliffs	72.70	355	P	P	23 25 05.5	+0.8
SDCO	Great Sand Dun	72.76	0	P	P	23 25 07.8	+2.9
	baz=180						
SDCO	Great Sand Dun	72.76	0	P	P	23 25 05.7	+0.7
GRAC	Grapevine Rang	72.80	350	P	P	23 25 08.5	+3.6
	baz=170						
SYO	Syowa Base	72.84	168	⇑eP	P	23 25 03.8	-1.0
SZCU	Shurtz Canyon	72.92	354	P	P	23 25 07.9	+2.1
PRN	Pahroc Range	72.92	352	P	P	23 25 07.8	+2.1
TIN	Tinemaha, Big	72.98	350	P	P	23 25 10.0	+4.0
	baz=169						
WVT	Waverly	73.11	15	P	P	23 25 08.2	+1.5
	baz=195						
PV01	Paradox Valley	73.19	358	IAMs_20	IAMs_20	23 53 50.2	
	comp=Z,714nm,20.0s						
PBMO	Poplar Bluff	73.22	13	P	P	23 25 06.5	-0.8
PBMO				IAmb	IAmb	23 25 12.0	
	comp=Z,21nm,1.3s						
PV02	Paradox Valley	73.27	358	P	P	23 25 09.5	+1.6
PV02				IAmb	IAmb	23 25 28.1	
	comp=Z,17nm,1.4s						
MTPU	Mount Pierson	73.29	355	P	P	23 25 09.1	+0.9
PV18	Skein Mesa, Pa	73.31	358	P	P	23 25 09.1	+1.0
T42A	Van Buren	73.35	12	IAmb	IAmb	23 25 31.7	
	comp=Z,52nm,1.8s						
PV16	Nyswonger Mesa	73.38	358	P	P	23 25 10.6	+2.1
PV19	Morning Glory	73.38	357	P	P	23 25 11.7	+3.2
PV12	Saucer Basin,	73.38	358	IAmb	IAmb	23 25 27.5	
	comp=Z,29nm,1.4s						
PV15	Paradox Valley	73.39	358	P	P	23 25 09.3	+0.7
PV20	West Nyswonger	73.41	357	P	P	23 25 09.3	+0.6
PV20				IAmb	IAmb	23 25 24.5	
	comp=Z,18nm,1.4s						
PV14	Lion Creek, Pa	73.44	357	P	P	23 25 09.7	+0.8
PV14				IAmb	IAmb	23 25 29.8	
	comp=Z,18nm,1.3s						
PV04	Paradox Valley	73.46	358	IAmb	IAmb	23 25 21.1	
	comp=Z,13nm,1.0s						
PV22	Blue Mesa, Par	73.60	358	IAMs_20	IAMs_20	23 59 05.0	
	comp=Z,828nm,21.0s						
TKL	Tuckaleechee C	73.62	19	LR	LR	23 54 01.8	
	comp=Z,298nm,19.6s,baz=200,slow=33						
OMMB	Old Mammoth Mi	73.64	349	P	P	23 25 11.7	+1.6
MVU	Marysvale	73.75	355	P	P	23 25 11.8	+1.1
KMSC	Kings Mountain	73.81	21	P	P	23 25 13.1	+2.3
	baz=200						
KMSC	Kings Mountain	73.81	21	P	P	23 25 10.3	-0.6
TPH	Tonopah	73.84	351	P	P	23 25 11.9	+0.7
TCRU	Three Creeks R	73.87	355	P	P	23 25 13.9	+2.5
V53A	Saluda	73.89	19	P	P	23 25 12.1	+0.7
V53A				IAmb	IAmb	23 25 44.3	
	comp=Z,41nm,1.4s						
R11A	Troy Canyon, C	73.91	352	P	P	23 25 14.7	+3.1
	baz=172						
PSUT	Pine Spring	73.92	354	P	P	23 25 14.0	+2.4
CBKS	Cedar Bluff	74.05	5	IAMs_20	IAMs_20	23 52 46.6	
	comp=Z,769nm,20.0s						
KSCO	Kaye Shedlock’	74.08	3	P	P	23 25 13.9	+1.4
LHV	Little Huntoon	74.19	350	P	P	23 25 15.0	+2.0
SMCO	Snowmass	74.20	359	P	P	23 25 14.3	+0.8
SRU	San Rafael Swe	74.25	356	P	P	23 25 15.4	+1.9
CMB	Columbia Colle	74.27	348	P	P	23 25 15.3	+1.8
CMB				IAMs_20	IAMs_20	23 50 13.0	
	comp=Z,969nm,22.0s						
CCM	Cathedral Cave	74.32	12	P	P	23 25 16.9	+3.2
	baz=192						
CCM	Cathedral Cave	74.32	12	P	P	23 25 16.1	+2.3
S44A	Carbondale	74.33	14	P	P	23 25 14.3	+0.5
S44A				IAmb	IAmb	23 25 21.9	
	comp=Z,36nm,1.6s						
NVAR	Mina Array Bea	74.34	350	P	P	23 25 12.8	-1.4
	comp=Z,3.9nm,0.8s,baz=183,slow=6.0,SNR=29						
NVAR				LR	LR	23 51 33.3	
	comp=Z,539nm,19.0s,baz=176,slow=31						
TMUT	Trail Mountain	74.47	356	P	P	23 25 16.7	+1.7
TZTN	Tazewell	74.52	19	P	P	23 25 17.9	+2.9
	baz=199						
RYN	Ryan	74.56	350	P	P	23 25 15.9	+0.5
WAKR	Walker	74.58	349	P	P	23 25 17.8	+2.3
KSU1	Kansas State U	74.61	7	P	P	23 25 15.9	+0.5
KSU1				IAmb	IAmb	23 25 27.2	
	comp=Z,11nm,0.8s						
P17A	Butcher Ranch,	74.62	356	P	P	23 25 16.9	+1.2
CASY	Casey	74.86	194	IAMs_20	IAMs_20	23 53 20.4	
	comp=Z,913nm,19.0s						
PNTR	Pine Nut	75.18	349	P	P	23 25 18.1	-0.9
NLU	North Lily Min	75.18	355	P	P	23 25 20.4	+1.4
AFDM	Forest Hills D	75.26	348	P	P	23 25 20.8	+1.5
AFDM				IAmb	IAmb	23 25 48.2	
	comp=Z,20nm,1.5s						
AFDM				IAMs_20	IAMs_20	23 50 57.4	
	comp=Z,912nm,21.0s						
WCI	Wyandotte Cave	75.46	16	P	P	23 25 21.6	+1.3
WCI				IAmb	IAmb	23 26 43.7	
	comp=Z,52nm,1.8s						
DUG	Dugway, Tooele	75.47	355	P	P	23 25 21.3	+0.7
DUG				IAmb	IAmb	23 25 52.8	
	comp=Z,25nm,1.9s						
P38A	Dawn	75.50	10	P	P	23 25 21.8	+1.2
P38A				IAmb	IAmb	23 26 33.9	
	comp=Z,29nm,1.6s						
Q44A	Meyer Farm, Va	75.55	14	P	P	23 25 21.2	+0.4
Q44A				IAmb	IAmb	23 25 25.9	
	comp=Z,40nm,1.4s						
RDMU	Red Mountain	75.66	357	P	P	23 25 22.6	+0.9
DZM	Mont Dzumac	75.74	253	eS	S	23 34 58.3	-6.4
	comp=Z,757nm,27.1s						
DZM				eSS	SS	23 39 43.6	-12
	comp=Z,491nm,27.8s						
DZM				eLR	LR	23 48 29.9	
	comp=Z,2µm,24.1s						
DZM	Mont Dzumac	75.74	253	P	P	23 25 23.4	+0.8
DZM				IAmb	IAmb	23 26 37.6	
	comp=Z,15nm,1.2s						
DZM				IAMs_20	IAMs_20	23 50 31.7	
	comp=Z,1µm,22.0s						
PAHR	Pah Rah Range	75.75	349	P	P	23 25 24.4	+2.2
PAHR				IAmb	IAmb	23 25 30.0	
	comp=Z,33nm,1.8s						
R49A	Shelbyville	75.78	17	P	P	23 25 23.5	+1.3
JLU	Jordanelle	75.78	356	P	P	23 25 22.9	+0.4
CTU	Camp Tracy	75.89	355	P	P	23 25 24.2	+1.2
N23A	Red Feather La	75.90	360	IAMs_20	IAMs_20	23 53 56.0	
	comp=Z,832nm,18.0s						
ORV	Oroville	75.94	348	P	P	23 25 24.8	+1.7
ORV				IAmb	IAmb	23 25 51.6	
	comp=Z,20nm,1.6s						
BEKR	Beckworth	76.06	349	P	P	23 25 26.3	+2.3
BEKR				IAmb	IAmb	23 26 05.5	
	comp=Z,17nm,1.2s						
P43A	Skaggs, Pawnee	76.17	13	P	P	23 25 23.9	-0.4
BGU	Big Grassy Mou	76.22	354	P	P	23 25 26.7	+1.9
ELK	Elko	76.24	353	P	P	23 25 26.2	+1.1
PHWY	Pilot Hill	76.31	0	P	P	23 25 26.6	+1.1
PHWY				IAmb	IAmb	23 25 31.5	
	comp=Z,49nm,2.0s						
N35A	Tabor	76.45	8	P	P	23 25 26.2	+0.3
KCPM	Cahto Peak	76.46	346	P	P	23 25 27.3	+1.2
SPUT	South Promonto	76.56	355	P	P	23 25 28.7	+1.9
Q51A	Peebles	76.92	18	IAmb	IAmb	23 25 37.7	
	comp=Z,24nm,1.0s						
MAW	Mawson	76.98	176	LR	LR	23 59 11.4	
	comp=Z,630nm,18.1s,baz=196,slow=36						
WDC	Whiskeytown Da	77.13	347	P	P	23 25 30.0	+0.2
WDC				IAmb	IAmb	23 26 11.2	
	comp=Z,17nm,1.2s						
R58B	Mineral	77.46	22	P	P	23 25 32.4	+0.7
P52A	Corning	77.80	19	P	P	23 25 36.0	+2.5
	baz=200						
P52A	Corning	77.80	19	P	P	23 25 34.9	+1.3
P53A	Whipple	77.86	19	P	P	23 25 34.2	+0.3
MOD	Modoc Plateau	78.04	349	P	P	23 25 37.5	+2.5
MOD				IAmb	IAmb	23 25 56.6	
	comp=Z,10nm,0.8s						
L40A	Anamosa	78.24	11	P	P	23 25 36.8	+0.9
L40A				IAmb	IAmb	23 25 39.1	
	comp=Z,15nm,1.0s						
YBH	Yreka Blue Hor	78.28	347	LR	LR	23 52 43.1	
	comp=Z,642nm,20.1s,baz=169,slow=30						
WVOR	Wild Horse Val	78.31	350	P	P	23 25 38.5	+2.0
HLID	Hailey	78.95	354	IAmb	IAmb	23 26 00.5	
	comp=Z,14nm,0.9s						
ECSD	EROS Data Cent	79.19	7	P	P	23 25 43.5	+2.3
	baz=188						
ECSD	EROS Data Cent	79.19	7	IAmb	IAmb	23 25 53.9	
	comp=Z,38nm,1.6s						
FLWY	Flagg Ranch	79.21	356	P	P	23 25 42.7	+1.2
M50A	Fremont	79.24	17	P	P	23 25 42.1	+0.7
M50A				IAmb	IAmb	23 25 52.6	
	comp=Z,18nm,0.9s						
BCYI	Bear Canyon	79.61	355	P	P	23 25 46.0	+2.3
I37A	Lemond, Waseca	79.84	9	P	P	23 25 46.1	+1.4
I37A				IAmb	IAmb	23 25 50.5	
	comp=Z,18nm,1.0s						
PINE	Pine Mountain	79.98	349	P	P	23 25 47.6	+1.9
PINE				IAmb	IAmb	23 25 55.7	
	comp=Z,28nm,1.1s						
YHL	Hebgen Lake	80.00	356	P	P	23 25 48.4	+2.5
I07A	Izee	80.05	350	IAmb	IAmb	23 25 56.1	
	comp=Z,18nm,1.0s						
I40A	Norwalk	80.12	11	P	P	23 25 48.7	+2.5
I40A				IAmb	IAmb	23 27 24.9	
	comp=Z,74nm,2.0s						
BOZ	Bozeman (W)	80.77	356	P	P	23 25 53.0	+3.1
	baz=175						
BOZ	Bozeman (W)	80.77	356	P	P	23 25 51.5	+1.6
G08A	Pilot Rock	81.16	351	P	P	23 25 52.7	+0.8
G08A				IAmb	IAmb	23 26 11.9	
	comp=Z,19nm,1.3s						
F36A	Milaca	81.64	9	P	P	23 25 55.2	+0.9
F36A				IAmb	IAmb	23 25 59.3	
	comp=Z,20nm,1.2s						
NEW	Newport	83.88	352	LR	LR	23 57 36.3	
	comp=Z,400nm,18.6s,baz=184,slow=32						
NEW	Newport	83.88	352	IAmb	IAmb	23 26 15.5	
	comp=Z,13nm,1.1s						
ULM	Lac du Bonnet	85.72	6	P	P	23 26 11.4	-3.6
	comp=Z,2.3nm,0.7s,baz=13,slow=14,SNR=2.5						
MOQ	Mont Orford	85.89	23	P	P	23 26 16.5	+0.4
HNR	Honiara	87.97	260	LR	LR	23 59 29.5	
	comp=Z,225nm,19.2s,baz=160,slow=31						
HNR	Honiara	87.97	260	IAMs_20	IAMs_20	23 56 28.4	
	comp=Z,909nm,21.0s						
FFC	Flin Flon	89.81	2	P	P	23 26 35.7	+1.2
CTA	Charters Tower	92.21	244	LR	LR	00 03 13.2	
	comp=Z,1µm,19.5s,baz=118,slow=32						
FCC	Fort Churchill	94.31	6	IAMs_20	IAMs_20	00 00 58.6	
	comp=Z,705nm,21.0s						
YKA	Yellowknife Ar	97.79	356	P	P	23 27 08.2	-2.8
	comp=Z,0.3nm,0.8s,baz=198,slow=40,SNR=1.5						
YKA				LR	LR	00 08 06.1	
	comp=Z,310nm,18.2s,baz=0.0,slow=34						
PMG	Port Moresby	98.13	252	LR	LR	00 01 56.6	
	comp=Z,380nm,21.4s,baz=122,slow=30						
PMG	Port Moresby	98.13	252	IAMs_20	IAMs_20	00 07 44.9	
	comp=Z,567nm,20.0s						
ASAR	Alice Springs	98.44	233	P	P	23 27 12.6	-2.7
	comp=Z,0.9nm,1.0s,baz=131,slow=5.1,SNR=3.1						
ASAR				LR	LR	00 07 29.3	
	comp=Z,2µm,18.1s,baz=140,slow=33						
WR0	Warramunga Arr	100.58	236	IAMs_20	IAMs_20	00 10 18.8	
	comp=Z,829nm,18.0s						
WR8	Warramunga Arr	100.61	236	IAMs_20	IAMs_20	00 10 21.6	
	comp=Z,849nm,18.0s						
WR6	Warramunga Arr	100.64	236	IAMs_20	IAMs_20	00 10 11.5	
	comp=Z,714nm,20.0s						
H01W1	Cape Leeuwin H	100.72	213	T	T	01 20 15.3	
	baz=145,slow=75,SNR=12						
H01W2	Cape Leeuwin H	100.72	213	T	T	01 20 12.2	
	baz=145,slow=75,SNR=14						
WB2	Warramunga Arr	100.72	236	IAMs_20	IAMs_20	00 06 19.5	
	comp=Z,688nm,21.0s						
WC2	Warramunga Arr	100.72	236	IAMs_20	IAMs_20	00 02 54.6	
	comp=Z,630nm,22.0s						
WRAB	Tennant Creek	100.73	236	IAMs_20	IAMs_20	00 06 19.5	
	comp=Z,656nm,21.0s						
WR1	Warramunga Arr	100.73	236	IAMs_20	IAMs_20	00 06 16.7	
	comp=Z,518nm,19.0s						
WRA	Warramunga Arr	100.73	236	P	Pdif	23 27 22.8	-2.6
	comp=Z,0.8nm,1.0s,baz=145,slow=4.6,SNR=4.2						
H01W3	Cape Leeuwin H	100.73	213	T	T	01 20 19.0	
	baz=145,slow=75,SNR=14						
WB3	Warramunga Arr	100.73	236	IAMs_20	IAMs_20	00 16 02.8	
	comp=Z,477nm,18.0s						
WC1	Warramunga Arr	100.74	236	IAMs_20	IAMs_20	00 06 21.1	
	comp=Z,675nm,21.0s						
WB8	Warramunga Arr	100.79	236	IAMs_20	IAMs_20	00 09 42.3	
	comp=Z,731nm,18.0s						
WB0	Warramunga Arr	100.81	236	IAMs_20	IAMs_20	00 10 43.0	
	comp=Z,852nm,18.0s						
FID	Port Fidalgo	101.38	341	IAMs_20	IAMs_20	00 02 21.0	
	comp=Z,730nm,20.0s						
GLI	Glacier Island	101.66	341	IAMs_20	IAMs_20	00 01 34.9	
	comp=Z,572nm,20.0s						
GHO	Glory Hole Cre	102.89	341	IAMs_20	IAMs_20	00 03 07.6	
	comp=Z,761nm,21.0s						
RDOG	Red Dog Mine	111.53	340	IAMs_20	IAMs_20	00 08 32.8	
	comp=Z,421nm,21.0s						
TORD	Torodi Ar. Bea	111.77	89	PP	PKiKP	23 32 57.0	+45
	comp=Z,2.3nm,1.0s,baz=254,slow=5.9,SNR=4.8						
TOB1	Torodi Ar. Sit	111.78	89	IAMs_20	IAMs_20	00 14 21.1	
	comp=Z,671nm,21.0s						
FAKI	Fak Fak	113.67	248	IAMs_20	IAMs_20	00 18 11.4	
	comp=Z,840nm,20.0s						
ESDC	Sonseca Array	119.80	60	PKP	PKPdf	23 32 25.8	-1.0
	comp=Z,0.7nm,0.6s,baz=267,slow=1.7,SNR=8.8						
TAM	Tamanrasset	119.83	82	IAMs_20	IAMs_20	00 19 50.0	
	comp=Z,740nm,20.0s						
KAPI	Kappang	121.27	236	IAMs_20	IAMs_20	00 22 52.3	
	comp=Z,690nm,19.0s						
LUWI	Luwuk	121.95	242	IAMs_20	IAMs_20	00 22 28.9	
	comp=Z,569nm,20.0s						
CISI	Cisompet, Garu	126.77	223	IAMs_20	IAMs_20	00 21 44.9	
	comp=Z,581nm,18.0s						
CASP	Castiglione de	131.38	61	IAMs_20	IAMs_20	00 25 12.3	
	comp=Z,495nm,20.0s						
KKM	Kota Kinabalu	131.54	243	IAMs_20	IAMs_20	00 29 54.2	
	comp=Z,349nm,20.0s						
DAVA	Damuels	131.62	55	eP	PKiKP	23 32 51.4	+1.2
	comp=Z,7.7nm,1.1s						
FETA	Feichten	132.14	56	eP	PKiKP	23 32 52.9	+1.6
	comp=Z,2.9nm,0.8s						
PMBI	Palembang	132.28	224	IAMs_20	IAMs_20	00 26 22.4	
	comp=Z,656nm,22.0s						
KSM	Kuching	132.37	233	IAMs_20	IAMs_20	00 26 24.6	
	comp=Z,625nm,19.0s						
MOTA	Moosalm	132.45	55	eP	PKiKP	23 32 53.2	+1.3
	comp=Z,1.7nm,0.6s						
SQTA	Sankt Quirin	132.50	55	eP	PKiKP	23 32 53.4	+1.5
	comp=Z,3.4nm,0.7s						
WATA	Walderalm	132.76	55	eP	PKPdf	23 32 51.8	+0.5
	comp=Z,8.8nm,1.4s						
WTTA	Wattenberg	132.79	55	eP	PKPdf	23 32 52.3	+0.9
	comp=Z,0.4nm,0.5s						
NRCA	Norcia	133.00	62	IAMs_20	IAMs_20	00 25 23.2	
	comp=Z,563nm,22.0s						
INTR	Introdacqua	133.39	63	IAMs_20	IAMs_20	00 22 39.7	
	comp=Z,617nm,21.0s						
PAOL	Paolisi	133.66	64	IAMs_20	IAMs_20	00 25 35.7	
	comp=Z,590nm,18.0s						
CEL	Celeste	133.98	68	IAMs_20	IAMs_20	00 20 30.0	
	comp=Z,419nm,19.0s						
CLL	Collm	134.16	50	ePKPdf	PKiKP	23 32 57.0	+2.1
CLL				eSP	SP	23 45 39.0	-4.2
CLL				e		23 47 00.0	
CLL				eSS	SS	23 53 30.0	+16
CLL				eSSS	SSS	23 58 06.0	
CLL				eSSSS		00 01 42.0	
CLL				LmV		00 24 00.0	
	comp=Z,300nm,20.8s						
KHC	Kasperske Hory	134.33	53	ePKP	PKiKP	23 32 56.8	+1.4
KHC				ex	x	23 33 03.5	
GERES	GERESS Array B	134.38	53	PKP	PKPdf	23 32 53.9	-0.4
	comp=Z,1.2nm,0.9s,baz=158,slow=0.7,SNR=6.4						
MOA	Molln	134.64	55	eP	PKPdf	23 32 54.1	-0.6
	comp=Z,8.2nm,1.8s						
TIP	Timpagrande	134.86	67	IAMs_20	IAMs_20	00 31 11.4	
	comp=Z,538nm,20.0s						
CONA	Conrad Observa	135.71	55	eP	PKiKP	23 32 58.7	+0.4
	comp=Z,3.0nm,1.6s						
OSTC	Ostas	136.14	51	ePKP	PKiKP	23 33 00.1	+1.0
OSTC				ex	x	23 33 04.9	
KRLC	Kraliky	136.48	52	ePKP	PKiKP	23 33 02.0	+2.2
YAK	Yakutsk	136.56	326	IAMs_20	IAMs_20	00 24 57.5	
	comp=Z,570nm,22.0s						
BZS	Buzias	139.45	59	⇓P	PKiKP	23 33 05.7	-0.2
FINES	FINESS Array B	140.19	34	PKhKP	PKPpre	23 32 58.2	
	comp=Z,0.9nm,0.8s,baz=286,slow=35,SNR=1.1						
IPM	Ipoh	140.45	225	IAMs_20	IAMs_20	00 37 51.8	
	comp=Z,512nm,19.0s						
KULM	Kulim	141.33	225	IAMs_20	IAMs_20	00 30 14.0	
	comp=Z,542nm,21.0s						
ARR	Arges	141.55	60	⇑P	PKPdf	23 33 00.1	-7.4
BURAR	Bucovina Array	142.00	56	⇑P	PKPdf	23 33 05.9	-2.4
BIZ	Bicaz	142.61	57	⇑P	PKPdf	23 33 08.1	-1.2
NJ2	Nanjing	142.87	278	ePKP	PKPdf	23 33 10.4	+0.2
VRI	Vrincioaia	143.04	59	⇓P	PKPdf	23 33 08.2	-1.9
ATD	Arta Tunnel	143.04	122	IAMs_20	IAMs_20	00 33 09.7	
	comp=Z,490nm,20.0s						
CFR	Carcaliu	144.02	60	⇓P	PKPdf	23 33 12.8	+1.0
SORM	Soroca	144.09	55	⇑P	PKPdf	23 33 11.6	-0.2
AKASG	Malin Array Be	144.40	50	PKP	PKPab	23 33 11.2	+0.7
	comp=Z,2.6nm,0.6s,baz=278,slow=3.5,SNR=16						
MILM	Milestii Mici	144.47	57	⇓P	PKPdf	23 33 12.8	+0.3
WHN	Wuhan	146.05	273	PKPbc	PKiKP	23 33 25.4	+5.4
KLMR	Klimovskoe	146.30	30	e	PKiKP	23 33 19.8	+0.3
KLMR				AMP		23 33 35.6	
	comp=Z,50nm,1.4s						
BJI	Beijing	146.62	291	PKPbc	PKPab	23 33 20.9	+1.8
OBN	Obninsk	147.57	41	⇑P	PKPab	23 33 22.5	+0.1
OBN	Obninsk	147.57	41		PKPab	23 33 22.5	+0.1
BRTR	Keskin Array B	147.82	70	PKPbc	PKPdf	23 33 20.9	+2.2
	comp=Z,5.8nm,0.9s,baz=201,slow=4.1,SNR=21						
HHC	Hu-ho-hao-te	150.18	292	ePKPbc	PKPdf	23 33 19.4	-3.0
HHC				LR	LR		
	comp=Z,220nm,16.2s						
HHC				LR	LR		
	comp=Z,240nm,17.0s						
HHC				LR	LR		
	comp=Z,340nm,18.7s						
SOCY	Socotra	150.59	137	IAMs_20	IAMs_20	00 37 06.4	
	comp=Z,492nm,19.0s						
UTTA	Uttaradit	150.67	240	P	PKPab	23 33 43.1	+7.1
GYA	Guiyang	150.79	261	⇑P	PKPbc	23 33 30.3	+0.9
GYA				pP	sPKPab	23 33 50.1	+11
GYA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SUKH	Sukhothai	151.15	238	P	PKPab	23 33 46.0	+8.0
LAMP	Lampang	151.84	240	P	PKPab	23 33 47.3	+6.5
CM04	Chiang Mai Arr	152.22	239	P	PKPab	23 33 45.0	+2.5
CM02	Chiang Mai Arr	152.27	239	P	PKPab	23 33 46.3	+3.6
CM35	Chiang Mai Arr	152.28	240	P	PKiKP	23 33 37.5	+4.3
CMAR	Chiang Mai Arr	152.28	239	PKP	PKPdf	23 33 25.2	-0.9
	comp=Z,0.7nm,0.3s,baz=158,slow=15,SNR=1.4						
CMAR				PKPbc	PKPbc	23 33 34.1	+1.3
	comp=Z,1.8nm,0.7s,baz=191,slow=1.9,SNR=9.1						
CM15	Chiang Mai Arr	152.29	239	P	PKPab	23 33 49.0	+6.2
CM34	Chiang Mai Arr	152.40	240	P	PKiKP	23 33 38.0	+4.6
CM32	Chiang Mai Arr	152.48	239	P	PKPab	23 33 49.0	+5.4
CMMT	Chiang Mai	152.52	240	P	PKPab	23 33 45.7	+1.9
CHTO	Chiang Mai	152.52	240	PKPab	PKPab	23 33 45.3	+1.6
CHTO	Chiang Mai	152.52	240	IAMs_20	IAMs_20	00 40 12.7	
	comp=Z,390nm,22.0s						
CM33	Chiang Mai Arr	152.52	240	P	PKPab	23 33 45.0	+1.3
RAYN	Ar Rayn	152.53	108	PKPdf	PKPdf	23 33 25.3	-1.1
RAYN				PKPab	PKPab	23 33 42.8	-1.0
RAYN				IAMs_20	IAMs_20	00 36 35.6	
	comp=Z,446nm,20.0s						
KTUT	Trabzon	152.55	68	⇑P	PKPdf	23 33 26.8	+1.0
ULN	Ulaanbaatar	152.61	307	IAMs_20	IAMs_20	00 33 28.4	
	comp=Z,442nm,22.0s						
SONM	Songino Array	153.04	307	PKPbc	PKPbc	23 33 31.5	-2.4
	comp=Z,4.7nm,0.9s,baz=147,slow=2.5,SNR=13						
KMI	Kunming	153.32	255	IAMs_20	IAMs_20	00 43 50.7	
	comp=Z,381nm,22.0s						
KBZ	Khabaz	154.65	61	PKP	PKPdf	23 33 28.1	-0.7
	comp=Z,2.4nm,1.0s,baz=87,slow=14,SNR=4.2						
KBZ				PKPbc	PKPbc	23 33 37.6	+0.4
	comp=Z,1.8nm,0.7s,baz=248,slow=12,SNR=7.2						
CD2	Chengdu	154.82	268	PKPbc	PKPdf	23 33 29.3	-0.2
LZH	Lanzhou	155.89	280	ePKP	PKPdf	23 33 31.3	+0.4
LZH				pPKP	pPKPdf	23 33 34.5	+1.2
LZH				LR	LR		
	comp=Z,150nm,17.9s						
LZH				LR	LR		
	comp=Z,150nm,18.1s						
LZH				LR	LR		
	comp=Z,200nm,20.0s						
GTA	Gaotai	159.21	289	PKP	PKPdf	23 33 43.6	+8.7
ZALV	Zalesovo Beam	159.97	341	PKP	PKPdf	23 33 34.2	-0.9
	comp=Z,0.5nm,0.5s,baz=240,slow=2.9,SNR=3.5						
SHL	Shillong	161.84	242	PKPab	PKPab	23 34 24.7	+0.7
BRVK	Borovoye	162.12	8	PKPab	PKPab	23 34 28.5	+4.5
WMQ	Urumqi	166.56	313	ePKP	PKPdf	23 33 42.5	+0.7
WMQ				LR	LR		
	comp=Z,420nm,18.1s						
WMQ				LR	LR		
	comp=Z,430nm,23.1s						
MKAR	Makanchi Array	167.04	334	PKP	PKPdf	23 33 40.1	-1.9
	comp=Z,0.0nm,0.4s,baz=289,slow=36,SNR=1.7						
KSH	Kashi	175.61	341	PKP	PKPdf	23 33 49.8	+3.1

UCR ***18*** *23:32:47.3±1.2, 12°.01N×89°.60W, h15km, ML3.1, mb4.6(NEIC)*

SNET ***18*** *23:32:47.4±1.2, 12°.16N×89°.51W, h15km±9km, ML3.1*

INET ***18*** *23:32:53.7, 12°.38N×89°.38W, h16km, ML3.0*

IDC ***18*** *23:32:57.7±2.2, 12°.75N×89°.09W, h49km±21km, mb3.9/10, mb1 4.1/13, mb1mx3.8/43, mbtmp4.1/13, ML3.2/3, Error ellipse: s-maj=32.6km s-min=13.7km az=47.0*

NEIC ***18*** *23:32:57.2±1.9, 12°.53N±0°.08×89°.28W±0°.07, h58km±8km, mb4.6/107, Error ellipse: s-maj=13.9km s-min=8.0km az=216.0*

GCG ***18*** *23:33:11.0±2.9, 11°.85N×89°.29W, h0km±902km, MD4.3*

ISC 18 23:32:56.1±0.6**, 12°.53N**±0°.07×**89°.31W**±0°.06**, h47km, n159,** σ**0s.99**/147**, mb4.6**/53**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	El Faro	1.12	13	eP	Pn	23 33 15.3	-0.2
LFRS	El Faro	1.12	13	eP	Pn	23 33 15.3	-0.2
BOQS	Boqueron	1.20	1	eP	Pn	23 33 16.6	-0.1
BOQS	Boqueron	1.20	1	eP	Pn	23 33 16.6	-0.1
LFU	La Fuente	1.23	9	eP	Pn	23 33 17.9	+0.8
LFU	La Fuente	1.23	9	eP	Pn	23 33 17.9	+0.8
LBRS	Las Brisas	1.23	12	eP	Pn	23 33 17.6	+0.6
LBRS	Las Brisas	1.23	12	eP	Pn	23 33 17.6	+0.6
TECA	Tecapa	1.24	39	eP	Pn	23 33 18.1	+0.8
TECA	Tecapa	1.24	39	eP	Pn	23 33 18.1	+0.8
LCY	Lacayo	1.33	48	eP	Pn	23 33 19.4	+1.0
LCY	Lacayo	1.33	48	eP	Pn	23 33 19.4	+1.0
SBLS	San Blas	1.34	347	eP	Pn	23 33 18.0	-0.6
SBLS	San Blas	1.34	347	eP	Pn	23 33 18.0	-0.6
PACA	Pacayal	1.34	46	eP	Pn	23 33 19.1	+0.5
PACA				IAML		23 33 54.2	
	comp=Z,180nm,0.4s						
PACA	Pacayal	1.34	46	eP	Pn	23 33 19.1	+0.5
PACA				IAML		23 33 54.2	
	comp=Z,180nm,0.4s						
SNJE	San Jose	1.36	348	eP	Pn	23 33 18.7	-0.3
SNJE	San Jose	1.36	348	eP	Pn	23 33 18.7	-0.3
RTR	El Retiro	1.40	347	eP	Pn	23 33 20.1	+0.7
RTR	El Retiro	1.40	347	eP	Pn	23 33 20.1	+0.7
CNCH	Conchagua	1.62	62	eP	Pn	23 33 22.1	-0.3
CNCH				eS	Sn	23 33 49.7	+7.5
CNCH	Conchagua	1.62	62	eP	Pn	23 33 22.1	-0.3
CNCH				eS	Sn	23 33 49.7	+7.5
ESQI	Esquipulas	2.02	359	Pn	Pn	23 33 27.6	-0.2
CRIN	San Cristobal	2.21	85	Pn	Pn	23 33 30.0	-0.5
NBG	Las Nubes	2.28	334	eP	Pn	23 33 59.3	+28
NBG				eS	Sn	23 34 36.3	+38
FUG	Fuego 3	2.42	322	eP	Pn	23 34 00.4	+27
FUG				eS	Sn	23 34 38.1	+36
TGUH	Tegucigalpa,Un	2.50	52	Pn	Pn	23 33 34.8	+0.3
MRL	Marmol	2.56	352	eP	Pn	23 34 03.4	+28
MRL				eS	Sn	23 34 44.6	+39
RTAL	Retalhuleu	3.05	311	Pn	Pn	23 33 43.9	+2.0
ACON	Acoyapa	4.08	97	Pn	Pn	23 33 56.6	+0.5

CCIG	**Comitan**	**4.63**	**324**	Pn	**Pn**	**23 34 05.0**	**+1.3**
JTS	**Las Juntas de**	**4.82**	**117**	P	**Pn**	**23 34 06.5**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=191,slow=23,SNR=6.0						
JTS				S	**Sn**	**23 35 01.1**	**+0.4**
	comp=Z,3.1nm,0.3s,baz=342,slow=13,SNR=3.9						
JTS	**Las Juntas de**	**4.82**	**117**		**Pn**	**23 34 07.0**	**+0.8**
ESPN	**Las Esperanzas**	**4.91**	**93**	Pn	**Pn**	**23 34 08.7**	**+1.3**
CMIG	**Matias Romero**	**7.04**	**311**	P	**Pn**	**23 34 37.0**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=147,slow=9.7,SNR=6.4						
CMIG				S	**Sn**	**23 35 51.5**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=263,slow=23,SNR=1.2						
TEIG	**Tepich**	**7.72**	**7**	Pn	**Pn**	**23 34 47.5**	**+1.6**
TLIG	**Tlapa**	**10.24**	**300**	Pn	**Pn**	**23 35 21.9**	**+1.2**
FSCY	**Frank Sound, G**	**10.32**	**48**		**Pn**	**23 35 21.4**	**-0.3**
ZAIG	**Zacatecas**	**16.21**	**311**	Pn	**Pn**	**23 36 41.8**	**+0.7**
ROSC	**El Rosal**	**16.66**	**116**	Pn	**Pn**	**23 36 46.8**	**-0.1**
HKT	**Hockley**	**18.36**	**342**	P	**Pn**	**23 37 07.7**	**+0.4**
SDV	**Santo Domingo**	**18.70**	**99**	P	**Pn**	**23 37 11.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=294,slow=7.3,SNR=2.0						
TIGA	**Tifton**	**19.55**	**15**	P	**Pn**	**23 37 20.8**	**-0.7**
250A	**Grady**	**19.56**	**8**	P	**Pn**	**23 37 21.6**	**-0.1**
250A				IAmb	IAmb	23 37 22.8	
	comp=Z,29nm,1.4s						
SDD	**Santo Domingo**	**19.59**	**70**	P	**P**	**23 37 19.4**	**-1.1**
VBMS	**Vicksburg**	**19.63**	**357**	P	**Pn**	**23 37 22.5**	**0.0**
435B	**Jarrell**	**19.71**	**338**	P	**P**	**23 37 22.8**	**+1.1**
NATX	**Nacogdoches**	**19.77**	**346**		**Pn**	**23 37 23.6**	**-0.5**
NATX				IAmb	IAmb	23 37 24.8	
	comp=Z,28nm,0.8s						
237A	**Washetta, Mont**	**20.28**	**344**	P	**P**	**23 37 29.1**	**+1.2**
237A				IAmb	IAmb	23 37 30.0	
	comp=Z,49nm,1.5s						
JCT	**Junction City**	**20.33**	**333**		**P**	**23 37 29.5**	**+1.0**
JCT				IAmb	IAmb	23 37 30.0	
	comp=Z,14nm,0.8s						
LRAL	**Lakeview Retre**	**20.52**	**6**	P	Pn	23 37 32.5	-0.6
Z47A	**Carrollton**	**20.61**	**3**	P	**P**	**23 37 32.3**	**+0.9**
Z47A				IAmb	IAmb	23 37 34.2	
	comp=Z,20nm,0.9s						
WHTX	**Lake Whitney,**	**20.77**	**340**	P	**P**	**23 37 33.7**	**+0.5**
154A	**Montrose**	**20.79**	**15**	P	**P**	**23 37 33.9**	**+0.6**
154A				IAmb	IAmb	23 37 37.9	
	comp=Z,40nm,0.9s						
Z41A	**Richland Creek**	**20.88**	**352**	P	**P**	**23 37 35.7**	**+1.3**
Z41A				IAmb	IAmb	23 37 42.7	
	comp=Z,29nm,1.1s						
HPIG		**21.00**	**315**	P	**P**	**23 37 37.6**	**+1.6**
Z51A	**Franklin**	**21.04**	**10**	P	**P**	**23 37 36.7**	**+0.6**
Z51A				IAmb	IAmb	23 37 40.4	
	comp=Z,15nm,0.8s						
Y45A	**Yeager Farm, C**	**21.24**	**359**	P	**P**	**23 37 39.1**	**+0.9**
Y45A				IAmb	IAmb	23 37 43.9	
	comp=Z,28nm,0.9s						
WLAR	**White Oak Lake**	**21.35**	**351**	P	**P**	**23 37 40.7**	**+1.4**
WLAR				IAmb	IAmb	23 37 44.3	
	comp=Z,24nm,0.9s						
TXAR	**Lajitas Array**	**21.40**	**324**	P	**P**	**23 37 42.5**	**+2.4**
	comp=Z,5.1nm,0.7s,baz=142,slow=10,SNR=64						
TX31	**Lajitas Ar. Si**	**21.40**	**324**	P	**P**	**23 37 41.4**	**+1.3**
TX31				IAmb	IAmb	23 37 43.2	
	comp=Z,26nm,0.9s						
TX32	**Lajitas Array**	**21.40**	**324**	P	**P**	**23 37 42.6**	**+2.6**
Y49A	**Blount Mountai**	**21.40**	**7**	P	**P**	**23 37 40.6**	**+0.7**
CCAR	**Cane Creek**	**21.41**	**354**	P	**P**	**23 37 40.0**	**-0.1**
CCAR				IAmb	IAmb	23 37 45.9	
	comp=Z,22nm,0.6s						
H06E1	**SOCORRO T-PHAS**	**21.71**	**289**	T	T	00 00 01.7	
OXF	**Oxford**	**21.89**	**360**	P	**P**	**23 37 46.0**	**+0.9**
X48A	**Hartselle**	**21.92**	**5**	P	**P**	**23 37 45.8**	**+0.2**
Z35A	**Perchaven, San**	**21.94**	**342**	P	**P**	**23 37 45.5**	**-0.3**
Z35A				IAmb	IAmb	23 37 47.0	
	comp=Z,26nm,0.8s						
X40A	**Basin Creek Fa**	**22.10**	**352**	P	**P**	**23 37 48.4**	**+1.0**
ABTX	**Abilene, Hawle**	**22.13**	**336**	P	**P**	**23 37 48.2**	**+0.4**
ABTX				IAmb	IAmb	23 37 50.4	
	comp=Z,17nm,1.1s						
FPAL	**Fort Paine**	**22.17**	**8**	P	**P**	**23 37 48.2**	**-0.1**
FPAL				IAmb	IAmb	23 37 50.2	
	comp=Z,20nm,1.1s						
MIAR	**Mount Ida**	**22.26**	**351**	IAmb	IAmb	23 37 52.7	
	comp=Z,24nm,0.9s						
X51A	**Calhoun**	**22.31**	**10**	P	**P**	**23 37 48.9**	**-0.8**
X51A				IAmb	IAmb	23 38 03.7	
	comp=Z,53nm,1.4s						
ICMP	**Isla Caja de M**	**22.61**	**74**	P	**P**	**23 37 53.5**	**+0.4**
ICMP				IAmb	IAmb	23 37 59.7	
	comp=Z,23nm,0.9s						
X37A	**Clayton**	**22.64**	**347**	P	**P**	**23 37 54.6**	**+1.3**
X37A				IAmb	IAmb	23 37 57.1	
	comp=Z,18nm,0.9s						
W41B	**Gary Mavity, V**	**22.70**	**354**	P	**P**	**23 37 55.4**	**+1.5**
WHAR	**Wooly Hollow**	**22.82**	**354**	P	**P**	**23 37 55.9**	**+0.7**
W39A	**Magazine**	**22.93**	**351**	P	**P**	**23 37 57.5**	**+1.2**
W39A				IAmb	IAmb	23 37 59.0	
	comp=Z,18nm,0.9s						
HBAR	**Harrisburg**	**22.96**	**357**	P	**P**	**23 37 56.8**	**+0.3**
LPAR	**Lepanto**	**22.99**	**358**	P	**P**	**23 37 57.4**	**+0.5**
GNAR	**Gosnell**	**23.35**	**359**	P	**P**	**23 38 00.8**	**+0.5**
Y59A	**Loris**	**23.39**	**22**	P	**P**	**23 38 00.3**	**-0.4**
FCAR	**Ozark Folk Cen**	**23.40**	**354**	P	**P**	**23 38 01.4**	**+0.5**
FCAR				IAmb	IAmb	23 38 02.9	
	comp=Z,23nm,1.0s						
PEBM	**Pemiscott Bayo**	**23.49**	**359**	P	**P**	**23 38 02.0**	**+0.3**
LCAR	**Lake Charles**	**23.50**	**356**	P	**P**	**23 38 02.8**	**+1.0**
LCAR				IAmb	IAmb	23 38 04.0	
	comp=Z,16nm,0.8s						
W35A	**Tecumseh**	**23.55**	**344**	P	**P**	**23 38 01.5**	**-0.8**
TKL	**Tuckaleechee C**	**23.57**	**11**	P	**P**	**23 38 02.8**	**+0.3**
	comp=Z,8.7nm,0.8s,baz=189,slow=11,SNR=10.0						
CLTN	**Cedars of Leba**	**23.62**	**6**	P	**P**	**23 38 03.4**	**+0.5**
GLAT	**Glass**	**23.64**	**0**	P	**P**	**23 38 01.5**	**-1.6**
WMOK	**Wichita Mounta**	**23.73**	**340**	P	**P**	**23 38 03.3**	**-0.7**
FNO	**Franklin**	**23.79**	**343**	P	**P**	**23 38 05.0**	**+0.5**
U40A	**Yellville**	**23.94**	**353**	IAmb	IAmb	23 38 08.8	
	comp=Z,16nm,0.8s						
TUL1	**Leonard**	**24.01**	**347**	P	**P**	**23 38 05.4**	**-1.1**
HHAR	**Hobbs**	**24.02**	**351**	P	**P**	**23 38 06.6**	**0.0**
PARMO	**Parma**	**24.04**	**359**	P	**P**	**23 38 07.4**	**+0.6**
OK025	**Westminster Rd**	**24.07**	**344**	P	**P**	**23 38 06.0**	**-1.2**
OK025				IAmb	IAmb	23 38 08.5	
	comp=Z,18nm,0.8s						
U49A	**Red Boiling Sp**	**24.09**	**7**	P	**P**	**23 38 06.5**	**-0.8**
MNTX	**Cornudas Mount**	**24.14**	**325**	P	**P**	**23 38 07.9**	**0.0**
PBMO	**Poplar Bluff**	**24.17**	**358**	P	**P**	**23 38 08.7**	**+0.7**
BCOK	**Bluff Creek, N**	**24.22**	**343**	P	**P**	**23 38 08.1**	**-0.4**
U38A	**Gravette**	**24.24**	**350**	P	**P**	**23 38 08.6**	**-0.1**
OK030	**Cody Creek RV**	**24.26**	**345**	P	**P**	**23 38 08.2**	**-0.7**
OK030				IAmb	IAmb	23 38 09.7	
	comp=Z,17nm,0.8s						
OK031	**S. Brethren Rd**	**24.29**	**345**	P	**P**	**23 38 08.7**	**-0.5**
OK031				IAmb	IAmb	23 38 10.1	
	comp=Z,19nm,0.9s						
OK029	**Liberty Lake**	**24.31**	**344**	P	**P**	**23 38 08.8**	**-0.5**
OK029				IAmb	IAmb	23 38 10.4	
	comp=Z,26nm,1.0s						
T42A	**Van Buren**	**24.45**	**357**	IAmb	IAmb	23 38 12.5	
	comp=Z,24nm,0.8s						
QUOK	**Quay**	**24.47**	**345**	P	**P**	**23 38 10.7**	**-0.1**
MSTX	**Muleshoe**	**24.62**	**332**	P	**P**	**23 38 11.2**	**-1.1**
MSTX				IAmb	IAmb	23 38 14.3	
	comp=Z,15nm,1.1s						
MGMO	**Mountain Grove**	**24.67**	**354**	IAmb	IAmb	23 38 15.2	
	comp=Z,23nm,0.9s						
U54A	**Nelsons Funny**	**24.82**	**14**	P	**P**	**23 38 14.8**	**+0.7**
U54A				IAmb	IAmb	23 38 16.3	
	comp=Z,19nm,1.0s						
S44A	**Carbondale**	**25.06**	**0**	P	**P**	**23 38 15.6**	**-0.6**
S44A				IAmb	IAmb	23 38 17.4	
	comp=Z,23nm,0.9s						
SIUC	**Southern Illin**	**25.08**	**0**	P	**P**	**23 38 17.0**	**+0.7**
SIUC				IAmb	IAmb	23 38 17.5	
	comp=Z,18nm,0.9s						
S39A	**Bolivar**	**25.32**	**353**	P	**P**	**23 38 18.1**	**-0.3**
KAN13	**South Haven SW**	**25.46**	**345**	P	**P**	**23 38 19.1**	**-0.6**
CCM	**Cathedral Cave**	**25.48**	**356**	P	**P**	**23 38 20.1**	**+0.2**
KAN01	**Argonia South**	**25.67**	**344**	P	**P**	**23 38 21.4**	**-0.2**
WCI	**Wyandotte Cave**	**25.74**	**5**	P	**P**	**23 38 22.1**	**-0.1**
WCI				IAmb	IAmb	23 38 23.0	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**25.79**	**355**	IAmb	IAmb	23 38 26.9	
	comp=Z,12nm,0.8s						
KAN12	**Harper NE Stat**	**25.87**	**344**	P	**P**	**23 38 23.4**	**-0.1**
121A	**Cookes Peak, D**	**26.14**	**323**	P	**P**	**23 38 27.7**	**+1.5**
Q44A	**Meyer Farm, Va**	**26.27**	**1**	P	**P**	**23 38 27.2**	**+0.1**
Q44A				IAmb	IAmb	23 38 27.9	
	comp=Z,18nm,0.8s						
BNM	**Barren Site**	**26.68**	**327**	P	**P**	**23 38 32.2**	**+1.1**
P40A	**Paris**	**27.00**	**355**	IAmb	IAmb	23 38 37.3	
	comp=Z,11nm,1.0s						
KSU1	**Kansas State U**	**27.25**	**348**	P	**P**	**23 38 35.6**	**-0.3**
KSU1				IAmb	IAmb	23 38 37.1	
	comp=Z,18nm,0.8s						
CBKS	**Cedar Bluff**	**27.77**	**342**	P	**P**	**23 38 40.1**	**-0.5**
CBKS				IAmb	IAmb	23 38 41.7	
	comp=Z,15nm,1.0s						
SFIN	**Lafayette**	**27.81**	**4**	P	**P**	**23 38 39.5**	**-1.3**
SFIN				IAmb	IAmb	23 38 41.9	
	comp=Z,25nm,1.2s						
TUC	**Tucson**	**27.86**	**318**	P	**P**	**23 38 41.2**	**-0.3**
N41A	**Harden Midland**	**28.11**	**358**	P	**P**	**23 38 42.8**	**-0.7**
L42A	**Oliver, Polo**	**29.37**	**359**	P	**P**	**23 38 54.5**	**-0.2**
L42A				IAmb	IAmb	23 38 55.4	
	comp=Z,18nm,0.9s						
S22A	**4UR Ranch, Cre**	**29.59**	**331**	P	**P**	**23 38 58.1**	**+1.0**
X16A	**Lo Mia Camp, P**	**29.65**	**321**	P	**P**	**23 38 58.5**	**+0.9**
JFWS	**Jewell Farm**	**30.29**	**359**	IAmb	IAmb	23 39 05.5	
	comp=Z,9.8nm,0.7s						
PV12	**Saucer Basin,**	**31.00**	**329**	P	**P**	**23 39 10.8**	**+1.3**
PV12				IAmb	IAmb	23 39 12.4	
	comp=Z,7.9nm,0.8s						
PV17	**East Wray Mesa**	**31.05**	**329**	P	**P**	**23 39 10.5**	**+0.6**
PV17				IAmb	IAmb	23 39 25.9	
	comp=Z,11nm,1.4s						
PV16	**Nyswonger Mesa**	**31.05**	**329**	P	**P**	**23 39 11.1**	**+1.2**
PV16				IAmb	IAmb	23 39 24.1	
	comp=Z,12nm,1.0s						
K31A	**O'Neill**	**31.09**	**346**	P	**P**	**23 39 10.8**	**+0.8**
PV20	**West Nyswonger**	**31.10**	**329**	P	**P**	**23 39 11.5**	**+1.2**
PV20				IAmb	IAmb	23 39 24.0	
	comp=Z,6.9nm,0.8s						
Q16A	**Castle Valley**	**32.67**	**327**	P	**P**	**23 39 25.3**	**+1.2**
SPMN	**Marine on St.**	**32.72**	**355**	P	**P**	**23 39 23.7**	**-0.5**
SADO	**Sadowa**	**33.29**	**13**	P	**P**	**23 39 28.2**	**-1.0**
	comp=Z,6.0nm,0.7s,baz=226,slow=7.5,SNR=4.0						
REDW	**Red Top Meadow**	**35.91**	**333**	P	**P**	**23 39 53.0**	**+0.8**
REDW				IAmb	IAmb	23 40 03.4	
	comp=Z,10nm,1.1s						
SNOW	**Snow King Moun**	**35.95**	**333**	P	**P**	**23 39 52.4**	**-0.1**
SNOW				IAmb	IAmb	23 39 56.4	
	comp=Z,6.4nm,0.8s						
AGMN	**Agassiz Nation**	**36.08**	**353**	IAmb	IAmb	23 39 53.3	
	comp=Z,6.9nm,0.7s						
NVAR	**Mina Array Bea**	**36.46**	**320**	P	**P**	**23 39 59.7**	**+2.8**
	comp=Z,2.4nm,0.9s,baz=132,slow=9.0,SNR=15						
NVAR				PcP	**PcP**	**23 42 22.3**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=125,slow=3.4,SNR=5.1						
LHV	**Little Huntoon**	**36.48**	**320**	P	**P**	**23 39 55.2**	**-1.6**
LHV				IAmb	IAmb	23 40 01.1	
	comp=Z,5.6nm,0.9s						
DGMT	**Dagmar**	**37.92**	**344**	P	**P**	**23 40 09.0**	**+0.1**
ULM	**Lac du Bonnet**	**38.00**	**353**	P	**P**	**23 40 07.3**	**-2.2**
	comp=Z,4.7nm,0.7s,baz=177,slow=8.0,SNR=9.6						
PATCX	**Punta Patache**	**38.12**	**150**	P	**P**	**23 40 08.2**	**-2.7**
YKA	**Yellowknife Ar**	**53.07**	**346**	P	**P**	**23 42 08.0**	**-0.4**
	comp=Z,3.4nm,0.8s,baz=141,slow=8.1,SNR=37						
DLBC	**Dease Lake**	**55.07**	**335**	P	**P**	**23 42 23.0**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=232,slow=3.9,SNR=2.0						
DLBC	**Dease Lake**	**55.07**	**335**	IAmb	IAmb	23 42 30.9	
	comp=Z,6.7nm,1.1s						
PLCA	**Paso Flores**	**55.77**	**163**	P	**P**	**23 42 29.5**	**+1.2**
	comp=Z,2.7nm,1.0s,baz=302,slow=8.0,SNR=2.9						
INK	**Inuvik**	**62.59**	**343**	P	**P**	**23 43 14.3**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=158,slow=5.8,SNR=4.4						
INK	**Inuvik**	**62.59**	**343**	IAmb	IAmb	23 43 24.1	
	comp=Z,3.6nm,1.1s						
ILAR	**Eielson Array**	**65.22**	**337**	P	**P**	**23 43 31.7**	**-0.7**
	comp=Z,1.2nm,1.0s,baz=132,slow=3.4,SNR=7.6						
ILAR	**Eielson Array**	**65.22**	**337**	P	**P**	**23 43 32.5**	**0.0**
SONM	**Songino Array**	**118.30**	**348**	PKP	**PKiKP**	**23 51 39.8**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=32,slow=3.3,SNR=2.3						
MKAR	**Makanchi Array**	**120.47**	**7**	PKP	**PKiKP**	**23 51 43.6**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=38,slow=2.6,SNR=1.8						
LZH	**Lanzhou**	**130.08**	**346**	*e*PKP	**PKPdf**	**23 52 00.3**	**-1.3**
LZH				pPKP	pPKPdf	23 52 18.5	+3.1
LZH				sPKP		23 52 25.8	
CMAR	**Chiang Mai Arr**	**148.15**	**345**	PKPbc	**PKPbc**	**23 52 38.6**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=336,slow=3.6,SNR=16						

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*IDC **18** 23:38:02.5±11.0, 12°.93N×89°.20W, h89km±70km, mb3.2/4, mb1 3.6/5, mb1mx3.3/37, mbtmp3.5/5, ML2.8/1, Error ellipse: s-maj=101.1km s-min=62.5km az=154.0*

ISC 18 23:37:50.2±2.1**, 12°.1N**±0°.2×**88°.8W**±0°.2**, h35**km**, n7, σ0ˢ.90**/8**, mb3.5**/4**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**2.49**	**348**	*i* P	**Pn**	**23 38 28.5**	**+0.2**
ESQI				*i* S	**Sn**	**23 38 57.2**	**-0.3**
CMIG	**Matias Romero**	**7.68**	**311**	P	**Pn**	**23 39 40.3**	**+0.7**
	0.2nm,0.3s,baz=124,slow=15,SNR=1.5						
TXAR	**Lajitas Array**	**22.02**	**323**	P	**P**	**23 42 41.1**	**-0.6**
	1.1nm,0.8s,baz=141,slow=10,SNR=9.6						
TKL	**Tuckaleechee C**	**23.88**	**10**	P	**P**	**23 43 02.1**	**+1.5**
	3.1nm,0.8s,baz=198,slow=12,SNR=2.1						
NVAR	**Mina Array Bea**	**37.09**	**320**	P	**P**	**23 44 57.5**	**0.0**
	0.2nm,0.5s,baz=124,slow=7.7,SNR=2.6						
YKA	**Yellowknife Ar**	**53.59**	**345**	P	**P**	**23 47 06.9**	**-0.7**
	0.6nm,0.8s,baz=140,slow=8.0,SNR=7.8						
CMAR	**Chiang Mai Arr**	**148.68**	**346**	PKPbc	**PKPab**	**23 57 37.7**	**-0.5**
	0.8nm,0.4s,baz=348,slow=4.0,SNR=1.4						

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*IDC **18** 23:45:38.8±1.1, 6°.38N×145°.26E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/39, mbtmp3.9/10, ML4.7/2, MS3.6/5, Ms1 3.6/5, ms1mx3.3/30, Error ellipse: s-maj=40.2km s-min=16.7km az=87.0*

*NEIC **18** 23:45:38.4±1.8, 6°.32N±0°.09×145°.5E±0°.1, h10km±1km, mb4.4/15, Error ellipse: s-maj=22.2km s-min=13.8km az=107.0*

ISC 18 23:45:42.8±0.7**, 6°.43N**±0°.07×**145°.4E**±0°.2**, h35**km**, n41, σ1ˢ.54**/38**, mb4.2**/18**, MS3.4**/4**, Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.13**	**356**	Pn	**Pn**	**23 47 24.1**	**-0.6**
	13nm,0.3s,baz=94,slow=8.1,SNR=4.1						
GUMO				Sn	**Sn**	**23 48 40.0**	**-4.5**
	10nm,0.3s,baz=28,slow=22,SNR=1.9						
GUMO				LR	LR	23 50 22.1	
	comp=Z,197nm,18.3s,baz=192,slow=40						
GUMO	**Guam**	**7.13**	**356**	Pn	**Pn**	**23 47 24.2**	**-0.4**
JAY	**Jayapura**	**10.04**	**208**	Pn	**Pn**	**23 48 01.4**	**-3.2**
	6.9nm,0.3s,baz=10,slow=6.0,SNR=46						
JAY				Sn	Sn	23 49 44.4	-12
	1.6nm,0.3s,baz=172,slow=23,SNR=3.0						
FAKI	**Fak Fak**	**16.06**	**235**	Pn	**Pn**	**23 49 23.9**	**-2.3**
JCJ	**Chichijima**	**20.77**	**352**	LR	LR	23 57 33.9	
	comp=Z,155nm,21.1s,baz=200,slow=34						
CTA	**Charters Tower**	**26.37**	**178**	P	**P**	**23 51 18.0**	**+2.1**
	2.2nm,0.7s,baz=326,slow=8.4,SNR=4.7						
WB0	**Warramunga Arr**	**28.19**	**202**	P	**P**	**23 51 32.9**	**+0.6**
WB0				IAmb	IAmb	23 51 39.7	
	comp=Z,5.5nm,0.8s						
WR0	**Warramunga Arr**	**28.31**	**202**	P	**P**	**23 51 32.8**	**-0.5**
WR0				IAmb	IAmb	23 51 48.9	
	comp=Z,5.3nm,1.1s						
WRAB	**Tennant Creek**	**28.36**	**202**	P	**P**	**23 51 33.7**	**0.0**
WRAB				IAmb	IAmb	23 51 50.1	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**28.37**	**202**	P	**P**	**23 51 34.0**	**+0.2**
WB2				IAmb	IAmb	23 51 38.6	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**28.37**	**202**	P	**P**	**23 51 33.8**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=24,slow=9.5,SNR=9.0						
WC3	**Warramunga Arr**	**28.37**	**202**	P	**P**	**23 51 32.8**	**-1.1**
WC3				IAmb	IAmb	23 51 50.1	
	comp=Z,8.1nm,1.2s						
JNU	**Nakatsue**	**29.78**	**335**	LR	LR	00 02 29.7	
	comp=Z,116nm,20.4s,baz=181,slow=34						
ASAR	**Alice Springs**	**31.94**	**200**	P	**P**	**23 52 05.4**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=202,slow=38,SNR=1.7						
KSRS	**Korea Array**	**34.73**	**335**	LR	LR	00 07 45.2	
	comp=Z,33nm,18.1s,baz=102,slow=38						
USRK	**Ussuriysk Ar.**	**39.40**	**345**	P	**P**	**23 53 10.6**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=179,slow=10,SNR=3.2						
CMAR	**Chiang Mai Arr**	**46.75**	**289**	P	**P**	**23 54 10.2**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=101,slow=5.8,SNR=8.7						
PETK	**Petropavlovsk-**	**47.61**	**10**	LR	LR	00 13 13.1	
	comp=Z,769nm,22.0s,baz=125,slow=35						
SONM	**Songino Array**	**52.93**	**328**	P	**P**	**23 54 57.5**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=138,slow=8.0,SNR=5.3						
MKAR	**Makanchi Array**	**67.05**	**318**	P	**P**	**23 56 33.4**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=99,slow=7.5,SNR=6.8						
MAKZ	**Makanchi**	**67.26**	**318**	P	**P**	**23 56 33.9**	**0.0**
MAKZ				IAmb	IAmb	23 56 40.1	
	comp=Z,5.3nm,1.4s						
ZALV	**Zalesovo Beam**	**67.76**	**326**	P	**P**	**23 56 37.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=98,slow=6.6,SNR=4.5						
KURK	**Kurchatov**	**70.41**	**322**	P	**P**	**23 56 54.5**	**+1.2**
PRP	**Porcupine Dome**	**75.59**	**24**	P	**P**	**23 57 24.8**	**+0.9**
PRP				IAmb	IAmb	23 57 27.4	
	comp=Z,4.0nm,1.0s						
HRA	**Herat**	**80.74**	**304**	P	**P**	**23 57 53.6**	**+0.4**
HRA				IAmb	IAmb	23 57 57.3	
	comp=Z,3.3nm,1.0s						
AB06	**Akbulak array**	**82.17**	**319**	P	**P**	**23 58 01.2**	**+1.0**
AB07	**Akbulak array**	**82.18**	**319**	P	**P**	**23 58 00.1**	**-0.1**
AB02	**Akbulak array**	**82.19**	**319**	P	**P**	**23 58 00.0**	**-0.2**
AB01	**Akbulak array**	**82.19**	**319**	P	**P**	**23 57 59.9**	**-0.3**
AB03	**Akbulak array**	**82.19**	**319**	P	**P**	**23 58 00.5**	**+0.2**
AB05	**Akbulak array**	**82.19**	**319**	P	**P**	**23 58 00.6**	**+0.3**
AB31	**Akbulak array**	**82.19**	**319**	P	**P**	**23 58 00.2**	**-0.1**
ABKAR	**Akbulak array**	**82.19**	**319**	P	**P**	**23 58 00.9**	**+0.6**
AB04	**Akbulak array**	**82.19**	**319**	P	**P**	**23 57 59.4**	**-0.9**
AB08	**Akbulak array**	**82.20**	**319**	P	**P**	**23 58 00.4**	**+0.1**
AB09	**Akbulak array**	**82.20**	**319**	P	**P**	**23 57 60.0**	**-0.3**
YKA	**Yellowknife Ar**	**88.95**	**27**	P	**P**	**23 58 36.1**	**+2.5**
	comp=Z,0.3nm,0.9s,baz=294,slow=5.2,SNR=2.8						
MOD	**Modoc Plateau**	**88.96**	**48**	P	**P**	**23 58 33.4**	**-1.0**
ISA	**Isabella, Lake**	**91.27**	**54**	P	**P**	**23 58 42.1**	**-3.0**
ISA				IAmb	IAmb	23 58 54.7	
	comp=Z,1.5nm,0.9s						
MWC	**Mount Wilson**	**91.83**	**55**	P	**P**	**23 58 44.3**	**-3.6**
CPUP	**Villa Florida**	**150.67**	**135**	PKPbc	**PKiKP**	**00 05 32.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=50,slow=9.8,SNR=1.5						

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*SNET **18** 23:50:30.5±0.7, 11°.07N×86°.10W, h54km±230km, ML3.6*
*INET **18** 23:50:31.7, 11°.35N×85°.97W, h99km, ML3.6*
*UCR **18** 23:50:31.7±1.6, 11°.32N×85°.99W, h94km±6km, ML3.4, MW3.9*

ISC 18 23:50:32.9±1.4**, 11°.29N**±0°.08×**86°.02W**±0°.08**, h87**km±14km**, n36, σ0ˢ.75**/47**, 3C, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.71**	**144**	*e*P	**Pn**	**23 50 49.5**	**+0.3**
GBS3	**Finca Las Img**	**0.75**	**133**	*i* P	**Pn**	**23 50 49.0**	**-0.7**
GBS3				*i* S	**Sn**	**23 51 02.4**	**+0.2**
GB1A	**Borinquen Arri**	**0.77**	**128**	*e*P	**Pn**	**23 50 49.7**	**-0.3**
GB1A				*e*S	**Sn**	**23 51 03.7**	**+1.0**
BUEV	**Buena Vista**	**0.77**	**129**	⇑*i*P	**Pn**	**23 50 49.4**	**-0.6**
LAPC	**Finca la Perla**	**0.77**	**132**	⇑*i*P	**Pn**	**23 50 49.3**	**-0.7**
LAPC				*i* S	**Sn**	**23 51 02.8**	**+0.1**
BUAI	**Buenos Aires**	**0.79**	**121**	⇑*i*P	**Pn**	**23 50 49.5**	**-0.7**
BUAI				*i* S	**Sn**	**23 51 03.4**	**+0.5**
GPS2	**Hotel Rincn d**	**0.84**	**129**	*e*P	**Pn**	**23 50 50.5**	**-0.3**
GPS2				*i* S	**Sn**	**23 51 04.3**	**+0.2**
HORNC	**Hornillas**	**1.00**	**125**	*i* P	**Pn**	**23 50 51.8**	**-0.8**
COLC	**Colonia**	**1.01**	**128**	*i* P	**Pn**	**23 50 52.3**	**-0.3**
CUI	**Cuipilapa**	**1.05**	**127**	*e*P	**Pn**	**23 50 52.5**	**-0.6**
CUI				*e*S	**Sn**	**23 51 09.2**	**+1.1**
ORTG	**Ortega, Santa**	**1.07**	**149**	*e*P	**Pn**	**23 50 53.1**	**-0.3**
GUAI	**GUAI**	**1.13**	**154**	*i* P	**Pn**	**23 50 53.7**	**-0.2**
GUAI				*i* S	**Sn**	**23 51 09.9**	**+0.1**
PLVR	**Palo Verde**	**1.14**	**145**	*e*P	**Pn**	**23 50 53.7**	**-0.6**
PTEN	**Parque Tenorio**	**1.16**	**119**	*i* P	**Pn**	**23 50 53.6**	**-0.8**
PTEN				*i* S	**Sn**	**23 51 11.0**	**+0.5**
ACAL	**Aguas Claras**	**1.16**	**124**	*i* P	**Pn**	**23 50 53.7**	**-0.8**
DUNO	**Dulce Nombre,**	**1.31**	**157**	*e*P	**Pn**	**23 50 56.0**	**-0.2**
DUNO				*e*S	**Sn**	**23 51 13.2**	**-0.4**
JTS	**Las Juntas de**	**1.44**	**133**	*e*P	**Pn**	**23 50 56.7**	**-1.1**
ARE1	**Arenal 1**	**1.52**	**123**	*e*P	**Pn**	**23 50 58.4**	**-0.4**
LAFE	**Finca La Fe, P**	**1.83**	**144**	*e*P	**Pn**	**23 51 02.1**	**-0.7**
JACO	**JACO, Garabito**	**2.10**	**140**	*e*P	**Pn**	**23 51 05.9**	**-0.4**
LCR2	**La Lucha 2**	**2.51**	**128**	*e*P	**Pn**	**23 51 10.3**	**-1.7**
CNCH	**Conchagua**	**2.66**	**318**	*e*P	**Pn**	**23 51 12.8**	**-1.1**
CNCH				*e*S	**Sn**	**23 51 46.7**	**+1.3**
CNCH	**Conchagua**	**2.66**	**318**	*e*P	**Pn**	**23 51 12.8**	**-1.1**
CNCH				*e*S	**Sn**	**23 51 46.7**	**+1.3**
LCND	**La Caada**	**2.72**	**318**	*e*P	**Pn**	**23 51 13.4**	**-1.2**
LCND				IAML		23 51 49.1	
	comp=Z,177nm,0.4s						
LCND	**La Caada**	**2.72**	**318**	*e*P	**Pn**	**23 51 13.4**	**-1.2**
LCND				IAML		23 51 49.1	
	comp=Z,177nm,0.4s						
TGUH	**Tegucigalpa,Un**	**3.01**	**336**	*e*P	**Pn**	**23 51 18.3**	**-0.4**
TGUH	**Tegucigalpa,Un**	**3.01**	**336**	*e*P	**Pn**	**23 51 18.3**	**-0.4**
RANC	**El Ranchito**	**3.08**	**314**	*e*P	**Pn**	**23 51 19.3**	**-0.3**
RANC				IAML		23 51 59.6	
	comp=Z,186nm,0.2s						
RANC	**El Ranchito**	**3.08**	**314**	*e*P	**Pn**	**23 51 19.3**	**-0.3**
RANC				IAML		23 51 59.6	
	comp=Z,186nm,0.2s						
DRK0	**Durika**	**3.39**	**126**	*e*P	**Pn**	**23 51 24.1**	**+0.3**
EDPN	**Palmar Norte**	**3.42**	**132**	*e*P	**Pn**	**23 51 24.8**	**+0.7**
PIRO	**Carate, Puerto**	**3.90**	**137**	*e*P	**Pn**	**23 51 30.7**	**+0.1**
PMON	**Piamonte**	**4.02**	**307**	*e*S	**Sn**	**23 52 18.8**	**+0.4**
PMON	**Piamonte**	**4.02**	**307**	*e*S	**Sn**	**23 52 18.8**	**+0.4**
TACO	**Tacachico**	**4.21**	**310**	*e*P	**Pn**	**23 51 34.2**	**-0.6**
TACO	**Tacachico**	**4.21**	**310**	*e*P	**Pn**	**23 51 34.2**	**-0.6**

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*ISN **18** 23:52:11.0±1.0, 35°.24N×44°.58E, h14km±24km, ML3.4*
*TEH **18** 23:52:12.9, 35°.31N×44°.87E, h15km, ML3.3*

ISC 18 23:52:12.0±1.5**, 35°.26N**±0°.05×**44°.61E**±0°.08**, h10**km**, n21, σ0ˢ.55**/25**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**1.57**	**111**	*e*Pg	**Pn**	**23 52 39.9**	**-0.2**
IDHR				*e*		23 53 04.7	
	comp=Z,99nm,0.2s						
MAHB	**Mahabad**	**1.75**	**30**	*e*Pg	**Pn**	**23 52 42.3**	**-0.2**
MAHB				*e*		23 53 09.2	
	comp=Z,99nm,0.5s						
IGHG	**Ghaleghazi**	**1.87**	**119**	*e*Pg	**Pn**	**23 52 44.8**	**+0.6**
IGHG				*e*Sg	**Sn**	**23 53 08.4**	**+0.4**
IGHG				*e*		23 53 20.5	
	comp=Z,99nm,0.7s						
ILIN	**Lien**	**1.96**	**99**	*e*Pg	**Pn**	**23 52 46.0**	**+0.4**
ILIN				*e*		23 53 14.6	
	comp=Z,99nm,0.4s						
BHD	**Baghdad**	**2.00**	**185**	*e*Pg	**Pn**	**23 52 46.0**	**+0.2**
BHD				*e*Sg	**Sb**	**23 53 13.0**	**-0.3**
BHD				AML	AML	23 53 17.7	
	comp=E,450nm,0.4s						
KCHF	**Cheshme Sefid,**	**2.23**	**116**	*e*Pn	**Pn**	**23 52 49.3**	**+0.1**
KCHF				*e*		23 53 29.2	
	comp=Z,99nm,0.3s						
KER	**Kermanshah**	**2.26**	**112**	*e*Pn	**Pn**	**23 52 50.3**	**+0.8**
IBDR	**Badra**	**2.41**	**153**	*e*Pn	**Pn**	**23 52 52.0**	**+0.5**
IBDR				*e*Sn	**Sn**	**23 53 21.0**	**-0.1**
IBZA	**Bozab**	**2.79**	**106**	*e*Pn	**Pn**	**23 52 57.3**	**+0.3**
IALM	**Almabolaq**	**2.95**	**97**	*e*Pn	**Pn**	**23 52 59.7**	**+0.5**
HSRG	**Sareghieh**	**3.01**	**89**	*e*Pn	**Pn**	**23 53 00.6**	**+0.6**
IKFM	**Kafar-mosalman**	**3.19**	**122**	*e*Pn	**Pn**	**23 53 01.6**	**-0.6**
IKFM				*e*		23 53 18.0	
	comp=Z,99nm,0.2s						
ITBZ	**Tabriz**	**3.21**	**22**	*e*		23 53 13.7	
	comp=Z,99nm,0.4s						
ITBZ				*e*Pn	**Pn**	**23 53 02.6**	**-0.1**
ISRB	**Sarab**	**3.55**	**43**	*e*		23 53 17.4	
	comp=Z,99nm,0.6s						
ISRB				*e*Pn	**Pn**	**23 53 07.5**	**+0.1**
IMRD	**Marand**	**3.55**	**14**	*e*Pn	**Pn**	**23 53 08.2**	**+0.8**
IMRD				*e*		23 54 12.7	
	comp=Z,99nm,0.6s						
IKMR	**Kamar-syah**	**3.58**	**118**	*e*		23 53 53.9	
	comp=Z,99nm,0.2s						
IKMR				*e*Pn	**Pn**	**23 53 08.3**	**+0.8**
IHRS	**Heris**	**3.62**	**32**	*e*Pn	**Pn**	**23 53 08.3**	**-0.1**
NSR	**Nassriya**	**4.43**	**163**	*e*Pn	**Pn**	**23 53 20.0**	**+0.7**
NSR				*e*Sn	**Sn**	**23 54 10.0**	**-1.0**
QAM	**Ghamsar**	**5.84**	**103**	*e*Pn	**Pn**	**23 53 39.2**	**+0.4**
IKLH	**Kolahrood**	**6.09**	**107**	*e*Pn	**Pn**	**23 53 41.5**	**-0.8**
KRSH	**Karshahi**	**6.34**	**100**	*e*Pn	**Pn**	**23 53 45.5**	**-0.2**

SKHL ***19*** *00:05:02.2±0.2, 44°.08N×147°.81E, h43km±4km, mb4.0/1*
JMA ***19*** *00:05:02.1±0.2, 43°.79N×147°.64E, h14km±5km, M3.6*
ISC 19 00:04:58.7±2.9**, 44°.1N**±0°.1×**147°.7E**±0°.1**, h5**km±18km**, n11, σ1.s21**/20**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.16	5	eP	Pg	00 05 21.0	+0.1
KUR				eS	Sg	00 05 35.0	-1.0
KUR				A	A	00 05 39.2	
	310nm,0.2s						
KUR				A	A	00 05 39.2	
	270nm,0.2s						
YUK	Yuzh-Kuril'sk	1.35	269	eP	Pn	00 05 24.8	+0.6
YUK				AMB	AMB	00 05 27.0	
	30nm,0.2s						
YUK				eS	Sg	00 05 41.7	-0.4
YUK				A	A	00 05 44.0	
	630nm,0.2s						
YUK				A	A	00 05 44.0	
	447nm,0.2s						
GRPR	Tuman	1.42	267	eP	Pn	00 05 25.8	+0.6
GRPR				eS	Sn	00 05 43.7	-0.5
GRPR				A	A	00 05 44.0	
	537nm,0.3s						
GRPR				A	A	00 05 44.0	
	298nm,0.3s						
NEM2	Nemuro 2	1.61	244	P	Pn	00 05 28.0	+0.2
NEM2				eS	Sn	00 05 46.7	-2.2
NMR	Nemuro--Hokkai	1.62	245	eP	Pn	00 05 28.3	+0.4
NMR				eS	Sn	00 05 48.0	-1.1
JKHN	Kushirohamanak	2.12	243	P	Pn	00 05 35.6	+0.8
JKHN				eS	Sn	00 05 59.9	-1.6
JNK	Nakash	2.24	258	P	Pn	00 05 38.1	+1.7
JNK				eS	Sn	00 06 04.3	-0.2
JAK	Akkeshi	2.46	245	P	Pn	00 05 40.4	+0.9
JAK				eS	Sn	00 06 08.4	-1.5
JAR	Ashorobuto	2.98	256	eS	Sn	00 06 23.8	+1.0
JOB	Onbets	3.07	249	P	Pn	00 05 49.9	+2.0
JOB				eS	Sn	00 06 25.2	+0.2
JCH	Churui	3.51	247	eS	Sn	00 06 35.0	-0.8

NEIC ***19*** *00:50:06.5±2.1, 21°.2S±0°.2×178°.39W±0°.09, h604km±12km, mb4.1/11, Error ellipse: s-maj=22.9km s-min=10.6km az=159.0*
IDC ***19*** *00:50:10.2±6.6, 21°.07S×178°.72W, h624km±35km, mb3.0/3, mb1 3.2/4, mb1mx2.7/46, mbtmp4.0/4, Error ellipse: s-maj=141.7km s-min=30.0km az=135.0*
ISC 19 00:50:06.3±0.7**, 21°.3S**±0°.1×**178°.4W**±0°.1**, h600**km**, n24, σ1.s32**/24**, mb4.1**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.88	316	P	P	00 51 40.9	+2.4
	3.7nm,0.3s,baz=153,slow=6.8,SNR=55						
MSVF	Nonsavu	4.88	316	P	P	00 51 40.2	+1.8
AFI	Afiamalu	9.65	42	P	P	00 52 20.0	-1.8
DZM	Mont Dzumac	14.14	264	P	P	00 53 05.1	-1.6
RAR	Rarotonga	17.34	93	P	P	00 53 38.2	+2.2
RAR				IAmb	IAmb	00 53 45.9	
	comp=Z,12nm,1.1s						
TUWZ	Tuamarina	21.12	196	P	P	00 54 10.8	+0.9
CMWZ	Cape Campbell	21.35	195	P	P	00 54 10.6	-1.4
WHZ	Wether Hill Ro	26.99	201	P	P	00 55 02.3	+0.5
PPT	Papeete	27.39	87	P	P	00 55 05.0	-0.7
PPTF	Pamatai, Papee	27.39	87	P	P	00 55 04.9	-0.9
WR0	Warramunga Arr	43.97	263	P	P	00 57 22.3	+0.2
WR0				IAmb	IAmb	00 57 39.2	
	comp=Z,8.9nm,1.5s						
ASAR	Alice Springs	44.01	258	P	P	00 57 22.9	+0.6
	comp=Z,0.8nm,0.5s,baz=101,slow=7.5,SNR=9.5						
WC3	Warramunga Arr	44.12	263	P	P	00 57 23.1	-0.2
WC3				IAmb	IAmb	00 57 24.2	
	comp=Z,8.9nm,1.4s						
WB0	Warramunga Arr	44.14	263	P	P	00 57 23.3	-0.1
WB2	Warramunga Arr	44.15	263	P	P	00 57 23.2	-0.2
WRAB	Tennant Creek	44.15	263	P	P	00 57 23.4	0.0
WRAB				IAmb	IAmb	00 57 27.6	
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	44.16	263	P	P	00 57 23.3	-0.3
	comp=Z,0.4nm,0.3s,baz=97,slow=7.8,SNR=19						
JCJ	Chichijima	61.40	320	P	P	00 59 24.6	-1.0
PETK	Petropavlovsk-	76.93	345	P	P	01 00 58.6	+0.9
	comp=Z,2.8nm,0.8s,baz=131,slow=6.5,SNR=3.5						
CNBA	Chernabura Isl	77.47	11	P	P	01 00 59.6	-1.0
OHAK	Old Harbor	80.98	14	P	P	01 01 17.9	-1.1
OHAK				IAmb	IAmb	01 01 27.8	
	comp=Z,10nm,1.2s						
TRF	Thorofare Moun	87.27	12	P	P	01 01 52.1	+2.1
TRF				IAmb	IAmb	01 02 07.0	
	comp=Z,3.7nm,1.2s						
RND	Reindeer	87.52	13	P	P	01 01 52.7	+1.7
RND				IAmb	IAmb	01 02 09.4	
	comp=Z,5.4nm,1.3s						
AKASG	Malin Array Be	143.51	330	PKP	PKPdf	01 08 33.0	-0.4
	comp=Z,0.7nm,0.4s,baz=45,slow=4.2,SNR=7.7						

NEIC ***19*** *00:58:41.6±1.4, 17°.8S±0°.2×179°.6W±0°.2, h643km±10km, mb4.0/21, Error ellipse: s-maj=26.2km s-min=16.4km az=141.0*
IDC ***19*** *00:58:43.0±1.6, 17°.52S×179°.85W, h636km±18km, mb3.1/9, mb1 3.4/11, mb1mx3.1/43, mbtmp4.1/11, Error ellipse: s-maj=73.6km s-min=13.6km az=152.0*
ISC 19 00:58:42.2±0.6**, 17°.8S**±0°.1×**179°.6W**±0°.1**, h650**km**, n41, σ1.s17**/40**, mb3.9**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.21	270	P	P	01 00 00.7	-1.3
	18nm,0.3s,baz=128,slow=3.8,SNR=80						
AFI	Afiamalu	8.47	64	P	P	01 00 45.2	-2.5
FUNA	Funafuti	9.23	353	P	P	01 00 54.0	-0.9
SANVU	Saraoutou	12.82	278	P	P	01 01 28.6	+0.1
DZM	Mont Dzumac	13.78	250	P	P	01 01 38.8	+1.4
	0.6nm,0.3s,baz=73,slow=19,SNR=6.6						
DZM	Mont Dzumac	13.78	250	P	P	01 01 37.9	+0.5
CMWZ	Cape Campbell	24.50	191	P	P	01 03 13.0	-0.5
BSWZ	Blackbirch Sta	24.53	192	P	P	01 03 13.7	0.0
CTA	Charters Tower	32.32	260	P	P	01 04 21.6	+0.3
	3.8nm,0.6s,baz=83,slow=9.6,SNR=11						
CTAO	Charters Tower	32.32	260	P	P	01 04 20.7	-0.6
CTAO				IAmb	IAmb	01 04 22.0	
	comp=Z,4.7nm,0.8s						
STKA	Stephens Creek	37.69	241	P	P	01 05 06.0	+0.8
	comp=Z,3.8nm,0.6s,baz=66,slow=10.0,SNR=8.3						
STKA	Stephens Creek	37.69	241	IAmb	IAmb	01 05 06.7	
	comp=Z,1.6nm,1.1s						
WR0	Warramunga Arr	43.33	260	P	P	01 05 49.5	-0.3
WR0				IAmb	IAmb	01 05 50.7	
	comp=Z,1.3nm,0.4s						
WB0	Warramunga Arr	43.48	260	P	P	01 05 51.0	-0.1
WB0				IAmb	IAmb	01 05 51.7	
	comp=Z,3.8nm,0.8s						
WC3	Warramunga Arr	43.48	259	P	P	01 05 51.0	-0.1
WC3				IAmb	IAmb	01 05 52.0	
	comp=Z,3.7nm,0.5s						
WB2	Warramunga Arr	43.50	260	P	P	01 05 51.0	-0.2
WB2				IAmb	IAmb	01 05 51.8	
	comp=Z,4.4nm,0.5s						
WRA	Warramunga Arr	43.52	260	P	P	01 05 51.1	-0.2
	comp=Z,2.7nm,0.6s,baz=95,slow=6.9,SNR=63						
AS31	Alice Springs	43.71	254	P	P	01 05 53.2	+0.4
ASAR	Alice Springs	43.71	254	P	P	01 05 53.3	+0.5
	comp=Z,27nm,0.5s,baz=88,slow=8.2,SNR=174						
FITZ	Fitzroy Crossi	51.91	261	P	P	01 06 54.5	+1.0
	comp=Z,4.0nm,0.9s,baz=92,slow=5.6,SNR=8.7						
NWAO	Narrogin (SRO)	58.26	242	P	P	01 07 35.2	-1.9
NWAO				IAmb	IAmb	01 07 54.6	
	comp=Z,8.1nm,1.1s						
UGM	Wanagama	68.49	268	P	P	01 08 41.7	-0.6
UNV	Unalaska Valle	72.19	8	P	P	01 09 02.2	-0.8
SAO	San Andreas Ge	77.12	44	P	P	01 09 30.2	-0.7
SAO				IAmb	IAmb	01 09 33.5	
	comp=Z,5.6nm,0.8s						
PMPB	Monarch Peak	77.25	45	P	P	01 09 31.8	0.0
PMPB				IAmb	IAmb	01 09 49.7	
	comp=Z,11nm,1.1s						
HOPS	Hopland Field	77.33	42	P	P	01 09 32.3	+0.3
HOPS				IAmb	IAmb	01 09 40.7	
	comp=Z,2.9nm,0.9s						
JCC	Jacoby Creek,	77.80	40	P	P	01 09 35.1	+0.7
OHAK	Old Harbor	77.86	14	P	P	01 09 35.9	+1.5
OHAK				IAmb	IAmb	01 09 54.4	
	comp=Z,6.3nm,1.2s						
YBH	Yreka Blue Hor	79.14	40	P	P	01 09 43.8	+2.1
	comp=Z,1.2nm,0.5s,baz=194,slow=4.2,SNR=5.9						
YBH	Yreka Blue Hor	79.14	40	P	P	01 09 43.6	+2.0
MDPB	Devils Postpil	79.18	45	P	P	01 09 43.5	+1.3
SRIG	Santa Rosalia	79.18	57	P	P	01 09 41.6	-0.5
WAKR	Walker	79.41	44	P	P	01 09 44.9	+1.6
BEKR	Beckworth	79.55	42	P	P	01 09 45.5	+1.5
NVAR	Mina Array Bea	80.12	44	P	P	01 09 49.0	+2.0
	comp=Z,1.1nm,0.8s,baz=224,slow=8.3,SNR=8.9						
CNPM	China Poot	80.41	14	P	P	01 09 47.9	+0.1
CNPM				IAmb	IAmb	01 09 50.5	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	86.00	13	P	P	01 10 15.8	+0.6
	comp=Z,0.6nm,0.8s,baz=240,slow=6.2,SNR=6.4						
TXAR	Lajitas Array	86.89	58	P	P	01 10 22.9	+2.4
	comp=Z,1.8nm,0.9s,baz=260,slow=5.0,SNR=4.2						
PDAR	Pinedale Array	88.04	44	P	P	01 10 27.1	+1.5
	comp=Z,0.3nm,0.7s,baz=243,slow=4.0,SNR=2.4						
CLL	Collm	145.04	346	i PKPbc	PKPab	01 17 09.5	+0.1
GERES	GERESS Array B	147.14	344	PKPbc	PKPbc	01 17 15.4	+1.2
	comp=Z,0.1nm,0.3s,baz=35,slow=3.6,SNR=6.3						

IDC ***19*** *01:01:03.6±0.9, 36°.92N×97°.93W, h0km, mb3.4/1, mb1 3.7/6, mb1mx3.4/44, mbtmp3.4/6, ML2.8/4, Error ellipse: s-maj=11.6km s-min=10.2km az=161.0*
ANF ***19*** *01:01:03.6±0.3, 36°.78N×97°.71W, h5km, ML4.4/17, Error ellipse: s-maj=4.3km s-min=3.4km az=24.0*
TUL ***19*** *01:01:03.3±1.6, 36°.82N±0°.02×97°.71W±0°.05, h5km±6km, ML3.8, mb_Lg3.6/111(NEIC), Error ellipse: s-maj=6.6km s-min=1.8km az=62.0*
NEIC ***19*** *01:01:03.6±1.2, 36°.80N±0°.02×97°.70W±0°.05, h4km±7km, Error ellipse: s-maj=5.8km s-min=1.9km az=64.0*
ISC 19 01:01:04.0±0.9**, 36°.82N**±0°.02×**97°.67W**±0°.02**, h11**km±6km**, n170, σ1.s53**/178**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.25	38		Pg	01 01 09.1	-0.1
KAN13				Sg	Sg	01 01 13.0	+0.3
KAN14	Manchester OK	0.27	301		Pg	01 01 08.6	-1.0
KAN14				Sg	Sg	01 01 12.2	-1.1
KAN01	Argonia South	0.34	348		Pg	01 01 10.4	-0.5
KAN01				Sg	Sg	01 01 15.2	-0.3
CROK	Carrier	0.40	219	Pg	Pg	01 01 11.1	-0.7
CROK				Sg	Sg	01 01 16.6	-0.6
KAN10	Anthony SW Sta	0.46	312		Pg	01 01 12.2	-0.8
KAN10				Sg	Sg	01 01 18.4	-0.7
KS21	Milan North St	0.47	1		Pg	01 01 12.8	-0.4
KAN08	Anthony NE Sta	0.47	330		Pg	01 01 12.7	-0.6
KAN08				Sg	Sg	01 01 19.0	-0.6
KAN12	Harper NE Stat	0.55	332		Pg	01 01 14.0	-0.7
KAN12				Sg	Sg	01 01 21.3	-0.7
T35A	Sooner Cattle	0.94	83	Pg	Pg	01 01 21.7	-0.3
T35A				Sg	Sg	01 01 34.4	+0.2
T35B	Sooner Cattle	0.94	83	P		01 01 21.5	
	baz=264,SNR=134						
T35B				S		01 01 34.5	
	baz=264						
QUOK	Quay	1.01	129		Pg	01 01 22.9	-0.5
QUOK				Sg	Sg	01 01 36.3	-0.2
OK029	Liberty Lake	1.03	170		Pg	01 01 23.0	-0.8
OK029				Sg	Sg	01 01 36.9	-0.3
OK031	S. Brethren Rd	1.09	142		Pb	01 01 24.4	-0.5
OK031				Sg	Sg	01 01 39.0	-0.2
OK030	Cody Creek RV	1.14	141		Pb	01 01 25.2	-0.5
U32A	Winter Ranch,	1.15	248		Pb	01 01 24.6	-1.4
U32A	Winter Ranch,	1.15	248	P		01 01 24.5	
	baz=67						
U32A				S		01 01 40.0	
	baz=67						
BCOK	Bluff Creek, N	1.16	177		Pb	01 01 25.2	-0.8
OK009	Oakdale Elemen	1.25	171		Pn	01 01 26.9	-0.4
OK025	Westminster Rd	1.26	168		Pn	01 01 27.2	-0.3
OKCFA	Oklahoma City	1.41	173		Pn	01 01 29.6	0.0
OKCSW	OKLAHOMA CITY	1.42	172		Pn	01 01 29.7	0.0
FNO	Franklin	1.57	172		Pn	01 01 32.1	+0.4
TUL1	Leonard	1.77	120	Pn	Pn	01 01 35.5	+1.0
	baz=301,SNR=172						
TUL1				Pb	Pb	01 01 36.9	+0.6
	baz=301						
TUL1				S	Sb	01 01 59.6	+1.1
	baz=301						
TUL1	Leonard	1.77	120		Pn	01 01 35.6	+1.2
TUL1	Leonard	1.77	120	P		01 01 35.6	
	baz=301,SNR=188						
TUL1				S		01 01 59.7	
	baz=301						
W35A	Tecumseh	1.78	158		Pn	01 01 35.2	+0.6
R32A	Long Quarter,	1.80	333	Pn	Pn	01 01 36.0	+1.0
R32A	Long Quarter,	1.80	333	P		01 01 36.3	
	baz=153,SNR=37						
R32A				S		01 01 59.7	
	baz=153						
WMOK	Wichita Mounta	2.26	204	P	Pn	01 01 41.4	+0.1
	baz=22						
WMOK				S	Sn	01 02 10.7	+1.6
	baz=22						
WMOK	Wichita Mounta	2.26	204	Pn	Pn	01 01 41.7	+0.4
WMOK	Wichita Mounta	2.26	204	P		01 01 41.3	
	baz=22,SNR=154						
WMOK				S		01 02 10.8	
	baz=22						
KSU1	Kansas State U	2.43	20	P	Pn	01 01 44.4	+0.7
	baz=201,SNR=96						
KSU1	Kansas State U	2.43	20		Pn	01 01 44.5	+0.9
KSU1	Kansas State U	2.43	20	P		01 01 44.4	
	baz=201,SNR=33						
CBKS	Cedar Bluff	2.58	321	P	Pn	01 01 46.1	+0.4
	baz=141						
CBKS				Sb	Sb	01 02 22.9	+0.9
	baz=141						
CBKS	Cedar Bluff	2.58	321	Pn	Pn	01 01 46.3	+0.6
CBKS	Cedar Bluff	2.58	321	P		01 01 46.1	
	baz=141,SNR=27						
CBKS				S		01 02 22.7	
	baz=141						
U38A	Gravette	2.67	97		Pn	01 01 48.2	+1.4
U38A	Gravette	2.67	97	P		01 01 48.2	
	baz=279,SNR=35						
X37A	Clayton	2.91	139		Pn	01 01 51.5	+1.4
X37A				IAmb_Lg		01 02 44.2	
	comp=Z,214nm,0.8s						
X37A	Clayton	2.91	139	P		01 01 51.3	
	baz=320						
X37A				Sb		01 02 34.2	
	baz=320						
HHAR	Hobbs	3.05	99		Pn	01 01 53.2	+1.1
HHAR				IAmb_Lg		01 02 47.5	
	comp=Z,255nm,0.9s						
HHAR	Hobbs	3.05	99	P		01 01 53.6	
	baz=281						
Z35A	Perchaven, San	3.49	174		Pn	01 01 58.9	+0.7
Z35A				IAmb_Lg		01 02 59.3	
	comp=Z,115nm,1.1s						
Z35A	Perchaven, San	3.49	174	P		01 01 59.0	
	baz=354,SNR=19						
W39A	Magazine	3.54	116	Sb	Sb	01 02 53.2	+3.6
	baz=298						
W39A	Magazine	3.54	116	Pn	Pn	01 01 59.8	+0.9
S39A	Bolivar	3.58	75	Pn	Pn	01 02 00.3	+0.9
S39A				IAmb_Lg		01 03 05.9	
	comp=Z,138nm,0.8s						
S39A	Bolivar	3.58	75	P		01 02 00.0	
	baz=257,SNR=23						
AMTX	Amarillo	3.78	241	P	Pn	01 02 03.1	+0.8
	baz=58						
AMTX				S	Sn	01 02 47.3	+0.5
	baz=58						
AMTX	Amarillo	3.78	241	Pn	Pn	01 02 03.2	+1.0
AMTX				IAmb_Lg		01 03 07.9	
	comp=Z,104nm,0.7s						
AMTX	Amarillo	3.78	241	P		01 02 03.1	
	baz=58,SNR=6.6						
AMTX				S		01 02 47.2	
	baz=58						
U40A	Yellville	3.91	95	P	Pn	01 02 04.7	+0.8
	baz=278,SNR=16						
U40A				S	Sn	01 02 51.1	+1.4
	baz=278						
U40A	Yellville	3.91	95	Pn	Pn	01 02 04.6	+0.7
U40A				IAmb_Lg		01 03 09.8	
	comp=Z,158nm,0.8s						
U40A	Yellville	3.91	95	P		01 02 04.3	
	baz=278,SNR=41						
U40A				P		01 02 04.3	
	baz=278,SNR=41						
U40A				S		01 02 51.0	
	baz=278						
U40A				S		01 02 51.0	
	baz=278						
N33A	J Bar K, Exete	3.92	2	Pn	Pn	01 02 04.4	+0.3
N33A				IAmb_Lg		01 03 16.4	
	comp=Z,77nm,0.8s						
MIAR	Mount Ida	4.03	123	P	Pn	01 02 07.2	+1.6
	baz=305,SNR=15						
MIAR				S	Sn	01 02 54.3	+1.5
	baz=305						
MIAR	Mount Ida	4.03	123	Pn	Pn	01 02 06.9	+1.3
MIAR				IAmb_Lg		01 03 15.2	
	comp=Z,182nm,0.8s						
Z38A	Mt. Pleasant	4.18	147	Pn	Pn	01 02 09.2	+1.6
P38A	Dawn	4.30	48	Pn	Pn	01 02 10.6	+1.3
P38A				IAmb_Lg		01 03 31.6	
	comp=Z,71nm,0.8s						
P38A	Dawn	4.30	48	P		01 02 10.1	
	baz=231,SNR=9.7						
MGMO	Mountain Grove	4.34	84	Pn	Pn	01 02 11.4	+1.6
MGMO				IAmb_Lg		01 03 20.0	
	comp=Z,186nm,0.7s						
N35A	Tabor	4.34	21	Pn	Pn	01 02 10.4	+0.6
N35A	Tabor	4.34	21	P		01 02 10.3	
	baz=202,SNR=12						
ABTX	Abilene, Hawle	4.49	202	P	Pn	01 02 12.2	+0.3
	baz=20						
ABTX				S	Sn	01 03 03.1	-0.9
	baz=20						
ABTX	Abilene, Hawle	4.49	202	Pn	Pn	01 02 12.2	+0.3
KSCO	Kaye Shedlock'	4.49	301	P	Pn	01 02 12.2	+0.2
	baz=118						
KSCO	Kaye Shedlock'	4.49	301	Pn	Pn	01 02 12.5	+0.4
KSCO				IAmb_Lg		01 03 36.7	
	comp=Z,174nm,1.1s						
KSCO	Kaye Shedlock'	4.49	301	P		01 02 12.0	
	baz=118,SNR=28						
R40A	Maddies Statio	4.54	69	Pn	Pn	01 02 13.2	+0.6
R40A				IAmb_Lg		01 03 39.4	
	comp=Z,67nm,0.8s						
R40A	Maddies Statio	4.54	69	P		01 02 13.3	
	baz=253,SNR=23						
FCAR	Ozark Folk Cen	4.57	100	Pn	Pn	01 02 14.6	+1.6
FCAR				IAmb_Lg		01 03 34.4	
	comp=Z,71nm,0.7s						
X40A	Basin Creek Fa	4.57	119	P	Pn	01 02 14.3	+1.2
	baz=302,SNR=5.3						
X40A	Basin Creek Fa	4.57	119	Pn	Pn	01 02 14.2	+1.2
X40A				IAmb_Lg		01 03 40.4	
	comp=Z,76nm,0.9s						
X40A	Basin Creek Fa	4.57	119	P		01 02 13.8	
	baz=302,SNR=22						
X40A				P		01 02 13.8	
	baz=302,SNR=22						
BGNE	Belgrade	4.60	356	P	Pn	01 02 13.6	+0.1
	baz=176,SNR=8.1						
BGNE	Belgrade	4.60	356	Pn	Pn	01 02 13.9	+0.4
BGNE	Belgrade	4.60	356	P		01 02 13.6	
	baz=176,SNR=25						
WHAR	Wooly Hollow	4.62	108	Pn	Pn	01 02 14.1	+0.4
WHAR				IAmb_Lg		01 03 32.4	
	comp=Z,126nm,1.0s						
WHTX	Lake Whitney,	4.81	178	P	Pn	01 02 16.5	+0.2
	baz=358						
WHTX				S	Sn	01 03 11.5	-0.7
	baz=358						
WHTX	Lake Whitney,	4.81	178	Pn	Pn	01 02 16.6	+0.3
WHTX	Lake Whitney,	4.81	178	P		01 02 16.4	
	baz=358,SNR=36						
WLAR	White Oak Lake	4.86	129	IAmb_Lg		01 03 45.7	
	comp=Z,82nm,0.8s						
MSTX	Muleshoe	5.04	237	P	Pn	01 02 19.5	0.0
	baz=54,SNR=7.2						
MSTX				Sb	Sb	01 03 38.2	+5.4
	baz=54						
MSTX	Muleshoe	5.04	237	Pn	Pn	01 02 19.7	+0.1
MSTX				IAmb_Lg		01 03 50.3	
	comp=Z,62nm,0.7s						
237A	Washetta, Mont	5.04	162	Pn	Pn	01 02 19.1	-0.4
237A				IAmb_Lg		01 03 56.4	
	comp=Z,124nm,1.2s						
237A	Washetta, Mont	5.04	162	P		01 02 19.5	
	baz=342						
P40A	Paris	5.19	57	Pn	Pn	01 02 24.0	+2.4
P40A				IAmb_Lg		01 03 56.6	
	comp=Z,108nm,0.8s						
L34A	Svendsen Farm,	5.24	11	Pn	Pn	01 02 23.7	+1.5
CCM	Cathedral Cave	5.26	74	Pn	Pn	01 02 22.7	+0.1
CCM				IAmb_Lg		01 03 58.7	
	comp=Z,113nm,0.9s						
CCM	Cathedral Cave	5.26	74	P		01 02 22.8	
	baz=258						
N38A	Joes South For	5.27	40		Pn	01 02 23.6	+0.9
N38A	Joes South For	5.27	40	P		01 02 23.3	
	baz=223						
T42A	Van Buren	5.28	86	Pn	Pn	01 02 23.7	+1.0
T42A				IAmb_Lg		01 03 59.5	
	comp=Z,69nm,1.0s						
LCAR	Lake Charles	5.31	96	Pn	Pn	01 02 24.0	+0.9
Z41A	Richland Creek	5.34	130	S	Sn	01 03 23.3	-1.8
	baz=313						
Z41A	Richland Creek	5.34	130	IAmb_Lg		01 04 02.7	
	comp=Z,86nm,0.9s						
OGNE	Ogallala	5.34	322	P	Pn	01 02 25.3	+1.6
	baz=139,SNR=5.7						
OGNE	Ogallala	5.34	322	Pn	Pn	01 02 25.0	+1.2
OGNE				IAmb_Lg		01 04 04.9	
	comp=Z,104nm,0.8s						
T25A	Trinidad	5.41	275	P	Pn	01 02 24.4	-0.2
	baz=91,SNR=13						
T25A				Sb	Sb	01 03 48.8	+5.3
	baz=91						
T25A	Trinidad	5.41	275	Pn	Pn	01 02 24.1	-0.5
CCAR	Cane Creek	5.62	119	Pn	Pn	01 02 29.9	+2.4
CCAR				IAmb_Lg		01 04 11.7	
	comp=Z,64nm,0.7s						
NATX	Nacogdoches	5.62	153	IAmb_Lg		01 04 17.1	
	comp=Z,94nm,0.8s						
HBAR	Harrisburg	5.81	100	IAmb_Lg		01 04 17.8	
	comp=Z,112nm,0.8s						
PBMO	Poplar Bluff	5.81	88	IAmb_Lg		01 04 09.5	
	comp=Z,94nm,0.7s						
K31A	O'Neill	5.86	352	Pn	Pn	01 02 32.8	+2.1
X43A	Marvell	5.98	111	Sb	Sb	01 04 06.8	+7.0
	baz=294						
X43A	Marvell	5.98	111	IAmb_Lg		01 04 15.3	
	comp=Z,70nm,1.2s						
435B	Jarrell	6.02	179	P	Pn	01 02 32.5	-0.4
	baz=359						
435B				S	Sn	01 03 39.9	-1.9
	baz=359						
435B	Jarrell	6.02	179		Pn	01 02 32.2	-0.7
435B				IAmb_Lg		01 04 21.3	
	comp=Z,96nm,0.9s						
435B	Jarrell	6.02	179	P		01 02 32.3	
	baz=359,SNR=7.2						
LPAR	Lepanto	6.08	99	IAmb_Lg		01 04 23.3	
	comp=Z,100nm,0.8s						
SCIA	State Center	6.15	33	P	Pn	01 02 35.3	+0.6
	baz=216,SNR=9.1						
SCIA	State Center	6.15	33		Pn	01 02 35.6	+1.0
GNAR	Gosnell	6.23	96	IAmb_Lg		01 04 30.1	
	comp=Z,114nm,0.8s						
Q24A	Divide	6.29	292	Pn	Pn	01 02 36.8	-0.1
	baz=108						
Q24A				Pb	Pb	01 02 56.8	+3.1
	baz=108,SNR=6.2						
Q24A	Divide	6.29	292	Pn	Pn	01 02 36.7	-0.3
SDCO	Great Sand Dun	6.31	281	Pn	Pn	01 02 37.8	+0.6
	baz=96						
SDCO				Pb	Pb	01 02 57.6	+3.6
	baz=96,SNR=10						
SDCO	Great Sand Dun	6.31	281	Pn	Pn	01 02 37.3	+0.1
SDCO	Great Sand Dun	6.31	281	P		01 02 37.8	
	baz=96,SNR=7.9						
PEBM	Pemiscott Bayo	6.33	94	IAmb_Lg		01 04 24.0	
	comp=Z,113nm,0.8s						
PVMO	Portageville	6.42	91	IAmb_Lg		01 04 45.3	
	comp=Z,100nm,0.8s						
JCT	Junction City	6.56	196	P	Pn	01 02 39.9	-0.6

	baz=15						
JCT	Junction City	6.56	196	Pn	Pn	01 02 40.1	-0.4
143A	Socs Landing,	6.59	127	IAmb_Lg		01 04 50.2	
	comp=Z,52nm,0.9s						
N41A	Harden Midland	6.59	52	Pn	Pn	01 02 41.9	+1.1
S44A	Carbondale	6.77	80	Pn	Pn	01 02 43.9	+0.7
ISCO	Idaho Springs	6.92	298	P	Pn	01 02 45.4	-0.1
	baz=113						
ISCO	Idaho Springs	6.92	298	Pn	Pn	01 02 45.3	-0.2
ISCO	Idaho Springs	6.92	298	P		01 02 45.4	
	baz=113,SNR=11						
K38A	Parkersburg	6.94	31		Pn	01 02 44.9	-0.6
K38A				IAmb_Lg		01 05 04.0	
	comp=Z,72nm,0.8s						
ECSD	EROS Data Cent	6.96	6	P	Pn	01 02 44.9	-0.9
	baz=187						
ECSD				S	Sn	01 04 02.2	-2.7
	baz=187						
ECSD	EROS Data Cent	6.96	6	Pn	Pn	01 02 45.1	-0.7
ECSD	EROS Data Cent	6.96	6	P		01 02 44.8	
	baz=187,SNR=15						
P43A	Skaggs, Pawnee	7.01	64	Pn	Pn	01 02 48.5	+2.1
W45A	Hickory Valley	7.08	101	IAmb_Lg		01 04 58.3	
	comp=Z,97nm,0.9s						
OXF	Oxford	7.11	106	P	Pn	01 02 49.2	+1.3
	baz=291						
OXF	Oxford	7.11	106		Pn	01 02 49.2	+1.3
OXF				IAmb_Lg		01 05 03.7	
	comp=Z,53nm,1.0s						
Q44A	Meyer Farm, Va	7.16	70	Pn	Pn	01 02 49.7	+1.1
Q44A	Meyer Farm, Va	7.16	70	P		01 02 48.9	
	baz=256						
T45A	Paducah	7.24	86	IAmb_Lg		01 05 13.4	
	comp=Z,105nm,0.7s						
L40A	Anamosa	7.24	42		Pn	01 02 49.2	-0.4
L40A				IAmb_Lg		01 04 57.0	
	comp=Z,80nm,0.8s						
Y45A	Yeager Farm, C	7.26	112	IAmb_Lg		01 05 00.9	
	comp=Z,41nm,0.8s						
S22A	4UR Ranch, Cre	7.36	280	Pn	Pn	01 02 53.8	+2.2
ANMO	Albuquerque	7.37	258	Pn	Pn	01 02 48.3	-3.4
	comp=Z,0.0nm,0.3s,baz=129,slow=6.6,SNR=1.8						
ANMO				Lg	Lg	01 04 52.4	
	comp=Z,4.3nm,0.3s,baz=328,slow=14,SNR=9.7						
ANMO	Albuquerque	7.37	258		Pn	01 02 52.5	+0.8
PHWY	Pilot Hill	7.53	309	Pn	Pn	01 02 53.6	-0.3
HDIL	Hopedale	7.54	58	Pn	Pn	01 02 54.8	+1.0
HDIL				IAmb_Lg		01 05 06.3	
	comp=Z,100nm,0.7s						
N23A	Red Feather La	7.63	305	P	Pn	01 02 55.9	+0.6
	baz=120						
N23A	Red Feather La	7.63	305	Pn	Pn	01 02 55.6	+0.3
N23A				IAmb_Lg		01 05 22.8	
	comp=Z,64nm,0.8s						
SUSD	Miller	7.68	353	S	Sn	01 04 19.9	-2.8
	baz=172						
SUSD	Miller	7.68	353	IAmb_Lg		01 05 16.1	
	comp=Z,82nm,0.8s						
SMCO	Snowmass	7.71	291	Pn	Pn	01 02 57.3	+0.8
I37A	Lemond, Waseca	7.89	23	IAmb_Lg		01 05 22.6	
	comp=Z,36nm,0.8s						
WVT	Waverly	7.96	92	P	Pn	01 03 00.1	+0.6
	baz=278						
WVT				S	Sn	01 04 26.2	-3.4
	baz=278						
WVT	Waverly	7.96	92	Pn	Pn	01 02 59.6	0.0
Y22D	IRIS PASSCAL I	8.03	253	IAmb_Lg		01 05 39.6	
	comp=Z,82nm,0.8s						
L42A	Oliver, Polo	8.07	48	Pn	Pn	01 03 01.7	+0.6
L42A				IAmb_Lg		01 05 28.0	
	comp=Z,67nm,0.8s						
MNTX	Cornudas Mount	8.17	234	P	Pn	01 03 02.2	-0.3
	baz=49						
MNTX				S	Sn	01 04 31.4	-3.4
	baz=49						
MNTX	Cornudas Mount	8.17	234	Pn	Pn	01 03 01.9	-0.6
MNTX	Cornudas Mount	8.17	234	P		01 03 02.4	
	baz=49						
JFWS	Jewell Farm	8.35	41	P	Pn	01 03 04.5	-0.3
	baz=226						
JFWS				S	Sn	01 04 35.9	-3.1
	baz=226						
JFWS	Jewell Farm	8.35	41	Pn	Pn	01 03 04.7	-0.1
JFWS				IAmb_Lg		01 05 33.9	
	comp=Z,67nm,0.8s						
JFWS	Jewell Farm	8.35	41	P		01 03 04.9	
	baz=226,SNR=7.5						
RSSD	Black Hills	8.76	328	P	Pn	01 03 11.6	+0.9
	baz=144						
RSSD	Black Hills	8.76	328	Pn	Pn	01 03 11.0	+0.3
M44A	Midewin, Midew	8.77	56	IAmb_Lg		01 05 43.4	
	comp=Z,54nm,0.7s						
RWWY	Rawlins	8.85	306	IAmb_Lg		01 06 00.1	
	comp=Z,34nm,0.9s						
I40A	Norwalk	8.88	35		Pn	01 03 11.5	-0.7
I40A				IAmb_Lg		01 05 53.9	
	comp=Z,38nm,0.9s						
K22A	Casper	8.97	313	IAmb_Lg		01 05 56.8	
	comp=Z,38nm,0.8s						
TX31	Lajitas Ar. Si	8.99	216	Pn	Pn	01 03 12.4	-1.5
TX32	Lajitas Array	8.99	216		Pn	01 03 12.4	-1.5
TXAR	Lajitas Array	8.99	216	Pn	Pn	01 03 12.8	-1.1
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=17						
TXAR				Lg	Lg	01 05 40.8	
	comp=Z,0.6nm,0.3s,baz=33,slow=23,SNR=2.7						
SFIN	Lafayette	9.01	64	IAmb_Lg		01 05 52.0	
	comp=Z,68nm,0.8s						
F33A	5 Mile Ranch,	9.08	6		Pn	01 03 14.2	-0.7
F33A				IAmb_Lg		01 05 58.3	
	comp=Z,30nm,1.0s						
PV17	East Wray Mesa	9.08	283	Pn	Pn	01 03 16.0	+0.8
PV14	Lion Creek, Pa	9.14	283		Pn	01 03 17.1	+1.1
WCI	Wyandotte Cave	9.15	78	Pn	Pn	01 03 17.6	+1.7
WCI				IAmb_Lg		01 05 52.3	
	comp=Z,53nm,0.8s						
CLTN	Cedars of Leba	9.17	91	IAmb_Lg		01 06 03.4	
	comp=Z,32nm,1.1s						
SPMN	Marine on St.	9.17	22	Pn	Pn	01 03 17.8	+1.7
K43A	Burlington	9.29	48	Pn	Pn	01 03 18.5	+0.8
F36A	Milaca	9.56	18	Pn	Pn	01 03 21.0	-0.4
I42A	Draeger Farm,	9.72	41	Pn	Pn	01 03 23.3	-0.4
I42A				IAmb_Lg		01 06 12.7	
	comp=Z,31nm,0.8s						
G40A	Rib Lake	10.15	31	Pn	Pn	01 03 30.7	+1.1
CPCT	Cooper Cave	10.72	93	Pn	Pn	01 03 38.9	+1.5
V51A	Loudon	10.80	91	Pn	Pn	01 03 41.2	+2.7
PD31	Pinedale Array	10.90	307	Pn	Pn	01 03 39.0	-1.0
PDAR	Pinedale Array	10.90	307	Pn	Pn	01 03 38.8	-1.3
	comp=Z,0.3nm,0.3s,baz=121,slow=15,SNR=10						
PDAR				Lg	Lg	01 06 35.9	
	comp=Z,0.4nm,0.3s,baz=104,slow=34,SNR=2.3						
BW06	Boulder Array	10.90	307	Pn	Pn	01 03 39.2	-0.9
O49A	Covington	10.98	68	Pn	Pn	01 03 39.9	-1.0
S51A	Beattyville	11.26	82	Pn	Pn	01 03 45.7	+0.9
TKL	Tuckaleechee C	11.29	92	Pn	Pn	01 03 48.1	+2.9
	comp=Z,0.3nm,0.3s,baz=283,slow=14,SNR=4.4						
TKL				Sn	Sn	01 05 54.4	+3.2
	comp=Z,0.4nm,0.3s,baz=324,slow=8.7,SNR=1.7						
TKL				Lg	Lg	01 06 56.3	
	comp=Z,1.7nm,0.3s,baz=192,slow=15,SNR=7.5						
V52A	Sevierville	11.40	91	Pn	Pn	01 03 47.5	+0.8
L48A	N Adams	11.45	59	Pn	Pn	01 03 46.5	-0.8
AGMN	Agassiz Nation	11.55	6	P	Pn	01 03 46.4	-2.3
	baz=187						
AGMN				S	Sn	01 05 48.9	-8.7
	baz=187						
B35A	Bob, Littlefor	11.90	13	Pn	Pn	01 03 51.7	-1.8
EYMN	Ely	12.02	20	Pn	Pn	01 03 53.1	-2.0
E43A	Lone Tree Farm	12.44	37	Pn	Pn	01 03 59.5	-1.4
ULM	Lac du Bonnet	13.49	5	Pn	Pn	01 04 10.8	-4.4
	comp=Z,0.2nm,0.3s,baz=183,slow=14,SNR=2.1						
ULM				Sn	Sn	01 06 32.2	-13
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=2.2						
ULM				Lg	Lg	01 07 58.4	
	comp=Z,0.2nm,0.3s,baz=331,slow=19,SNR=3.0						
ULM	Lac du Bonnet	13.49	5		Pn	01 04 12.0	-3.2
ILAR	Eielson Array	40.20	330	P	P	01 08 40.7	+0.7
	comp=Z,0.3nm,0.6s,baz=106,slow=7.3,SNR=5.2						

TRN ***19*** *01:07:26.6, 18°.12N×63°.54W, h106^{km}, MD3.8*
RSPR ***19*** *01:07:27.9, 17°.90N×63°.64W, h130^{km}±4^{km}, MD3.8/5*
NEIC ***19*** *01:07:28.3±1.1, 18°.0N±0°.2×63°.61W±0°.10, h114^{km}±15^{km}, Error ellipse: s-maj=33.8km s-min=3.9km az=202.0*
ISC 19 01:07:28.4±1.6**, 18°.0N**±0°.1×**63°.59W**±0°.05**, h110**^{km}±13^{km}**, n59, σ0^s.68**/78**, 18C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKI	Saint Kitts	1.04	129	*e*P	Pn	01 07 49.0	-1.1
SKI	Saint Kitts	1.04	129		Pn	01 07 50.8	+0.7
TBVI	Tortola	1.06	293	⇓*e*P	Pn	01 07 50.9	+0.6
TBVI				*e*S	Sn	01 08 06.8	+0.1
TBVI	Tortola	1.06	293	⇓*e*P	Pn	01 07 50.9	+0.6
TBVI	Tortola	1.06	293		Pn	01 07 50.9	+0.6
TBVI					Sn	01 08 06.8	+0.1
CDVI	St. Croix	1.14	258	*i* P	Pn	01 07 51.0	-0.1
CDVI				*e*S	Sn	01 08 08.1	-0.3
CDVI	St. Croix	1.14	258	⇑*e*P	Pn	01 07 51.1	-0.1
CDVI	St. Croix	1.14	258	*e*S	Sn	01 08 07.9	-0.5
CDVI	St. Croix	1.14	258	Pn	Pn	01 07 50.7	-0.5
CDVI					Sn	01 08 08.2	-0.2
CDVI				IAML		01 08 09.2	
	comp=N,176nm,0.7s						
MLYT	Lee's Yard	1.84	133	*e*P	Pn	01 07 59.3	-0.1
MTP	Monte Pirata	1.87	273	⇑*e*P	Pn	01 07 59.7	0.0
MTP				*e*S	Sn	01 08 24.2	+0.6
MTP	Monte Pirata	1.87	273	⇑*e*P	Pn	01 07 59.7	0.0
MTP	Monte Pirata	1.87	273		Pn	01 07 59.5	-0.3
MTP					Sn	01 08 24.8	+1.1
MTP				IAML		01 08 25.7	
	comp=E,67nm,0.2s						
MTP				IAML		01 08 26.4	
	comp=N,47nm,0.2s						
ANBD	Bethesda, Anti	1.98	118	*e*P	Pn	01 08 00.9	-0.2
ANBD				*e*S	Sn	01 08 24.7	-1.5
ANBD	Bethesda, Anti	1.98	118		Pn	01 08 00.9	-0.2
ANBD					Sn	01 08 24.7	-1.5
HUMP	Col San Antoni	2.15	274	⇑*e*P	Pn	01 08 03.8	+0.5
HUMP				*e*S	Sn	01 08 31.4	+1.3
HUMP	Col San Antoni	2.15	274	⇑*e*P	Pn	01 08 03.8	+0.5
HUMP	Col San Antoni	2.15	274		Pn	01 08 03.4	0.0
HUMP					Sn	01 08 30.4	+0.2
HUMP				IAML		01 08 33.0	
	comp=N,38nm,0.2s						
CBYP	Canovanas	2.17	278	⇑*e*P	Pn	01 08 03.8	+0.2
CBYP				*e*S	Sn	01 08 30.7	0.0
CBYP	Canovanas	2.17	278	⇑*e*P	Pn	01 08 03.8	+0.2
CBYP	Canovanas	2.17	278		Pn	01 08 03.2	-0.4
CBYP					Sn	01 08 30.4	-0.2
GCPR	Guaynabo City	2.39	278	⇑*e*P	Pn	01 08 06.5	+0.1
GCPR	Guaynabo City	2.39	278	Pn	Pn	01 08 05.8	-0.6
IGPR	InterUniversit	2.39	270	⇑*e*P	Pn	01 08 06.1	-0.4
SJG	San Juan	2.44	273		Pn	01 08 07.0	0.0
ABD	La Joyeuse, An	2.52	127	*e*P	Pn	01 08 08.3	+0.3
ABD				*e*S	Sn	01 08 38.4	-0.1
ABD	La Joyeuse, An	2.52	127		Pn	01 08 08.3	+0.3
ABD					Sn	01 08 38.4	-0.1
CBE	Ff, Capester	2.69	135	*e*P	Pn	01 08 09.8	-0.7
CBE	Ff, Capester	2.69	135		Pn	01 08 09.8	-0.7
CBE					Sn	01 08 43.9	+1.1
TBG	Guadaloupe-3	2.83	139	*e*	Pn	01 08 14.0	+1.8
TBG				*e*S	Sn	01 08 46.4	+0.5
TBG	Guadaloupe-3	2.83	139		Sn	01 08 46.4	+0.5
TDBA	Terre de Bas,	2.84	138	*e*P	Pn	01 08 12.6	+0.3
TDBA	Terre de Bas,	2.84	138	*e*S	Sn	01 08 46.5	+0.4
TDBA	Terre de Bas,	2.84	138		Pn	01 08 12.6	+0.3
TDBA					Sn	01 08 46.5	+0.4
TDBA	Terre de Bas,	2.84	138	*e*	Pn	01 08 27.6	+15
CELP	Cerrillos	2.84	272	⇑*e*P	Pn	01 08 12.2	-0.2
CELP	Cerrillos	2.84	272	⇑*e*P	Pn	01 08 12.2	-0.2
CELP	Cerrillos	2.84	272		Pn	01 08 12.2	-0.2
OBIP	Obispado Ponce	2.87	271	Pn	Pn	01 08 12.6	-0.1
OBIP				IAML		01 10 08.7	
	comp=N,25nm,3.5s						
OBIP				IAML		01 10 10.8	
	comp=E,23nm,3.9s						
MAGL	Barre de l'ile	3.00	132	*e*P	Pn	01 08 15.3	+0.8
MAGL				*e*S	Sn	01 08 49.7	-0.3
MAGL	Barre de l'ile	3.00	132		Pn	01 08 15.3	+0.8
MAGL					Sn	01 08 49.7	-0.3
AOPR	Arecibo Observ	3.03	277	*e*P	Pn	01 08 14.7	-0.1
AOPR	Arecibo Observ	3.03	277	⇑*e*P	Pn	01 08 14.5	-0.3
AOPR	Arecibo Observ	3.03	277	Pn	Pn	01 08 14.6	-0.1
AOPR	Arecibo Observ	3.03	277		Sn	01 08 50.0	-0.6
AOPR	Arecibo Observ	3.03	277	IAML		01 08 52.9	
	comp=E,59nm,0.3s						
AOPR				IAML		01 08 55.1	
	comp=N,40nm,0.4s						
DSLB	Salisbury	3.28	140	*e*P	Pn	01 08 19.0	+0.8
DSLB				*e*S	Sn	01 08 57.5	+0.8
DSLB	Salisbury	3.28	140		Pn	01 08 19.0	+0.8
DSLB					Sn	01 08 57.5	+0.8
MLPR	Magueyes Islan	3.29	270	Pn	Pn	01 08 15.8	-2.4
MLPR				IAML		01 08 58.2	
	comp=N,24nm,3.3s						
MLPR				IAML		01 10 26.1	
	comp=E,32nm,2.6s						
LSP	Las Mesas	3.33	274	⇑*e*P	Pn	01 08 18.6	-0.2
LSP	Las Mesas	3.33	274	⇑*e*P	Pn	01 08 18.6	-0.2
LSP	Las Mesas	3.33	274		Pn	01 08 18.6	-0.2
CRPR	Cabo Rojo, PR	3.35	271	⇑*e*P	Pn	01 08 18.0	-1.0
CRPR	Cabo Rojo, PR	3.35	271	⇑*e*P	Pn	01 08 18.0	-1.0
CRPR	Cabo Rojo, PR	3.35	271	Pn	Pn	01 08 17.7	-1.3
CRPR				IAML		01 09 04.2	
	comp=E,31nm,3.1s						
AGPR	Aguadilla, PR	3.38	279	⇑*e*P	Pn	01 08 19.5	+0.1
AGPR	Aguadilla, PR	3.38	279	⇑*e*P	Pn	01 08 19.5	+0.1
MPOM	Morne Pois Mar	4.40	143	*e*S	Sn	01 09 22.8	-0.6
MPOM	Morne Pois Mar	4.40	143		Sn	01 09 22.8	-0.6

IDC ***19*** *01:15:47.7±4.1, 6°.27S×149°.71E, h53^{km}±38^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.8/30, mbtmp4.0/10, ML3.0/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/38, Error ellipse: s-maj=24.6km s-min=23.3km az=101.0*
ISC 19 01:15:47.6±0.9**, 6°.3S**±0°.1×**149°.6E**±0°.2**, h49**^{km}**, n13, σ2^s.37**/14**, mb3.9**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.96	218	P	Pn	01 16 47.6	+1.7
	71nm,0.3s,baz=40,slow=12,SNR=39						
PMG				S	Sn	01 17 32.7	+1.6
	67nm,0.3s,baz=310,slow=21,SNR=14						
PMG				LR	LR	01 18 27.6	
	comp=Z,164nm,20.4s,baz=326,slow=40						
WRA	Warramunga Arr	20.13	226	P	P	01 20 18.2	+0.4
	2.9nm,0.4s,baz=52,slow=11,SNR=36						
WRA				S	S	01 23 54.4	-7.0
	0.7nm,0.9s,baz=38,slow=23,SNR=4.4						
DZM	Mont Dzumac	22.59	136	P	P	01 20 43.5	-0.8
	4.4nm,0.6s,baz=312,slow=16,SNR=7.5						
ASAR	Alice Springs	22.98	220	P	P	01 20 48.2	0.0
	1.7nm,0.6s,baz=57,slow=8.7,SNR=16						
FITZ	Fitzroy Crossi	26.19	241	P	P	01 21 17.6	-0.2
	6.5nm,0.7s,baz=63,slow=8.8,SNR=28						
STKA	Stephens Creek	26.56	195	P	P	01 21 22.2	+1.2
	3.9nm,0.9s,baz=19,slow=11,SNR=5.1						
MJAR	Matsushiro Arr	43.91	347	LR	LR	01 40 22.8	
	comp=Z,29nm,20.0s,baz=210,slow=34						
PETK	Petropavlovsk-	59.55	6	P	P	01 25 44.7	-1.3
	3.0nm,0.9s,baz=156,slow=5.5,SNR=6.3						
SONM	Songino Array	65.94	330	P	P	01 26 29.3	+0.5
	0.4nm,0.5s,baz=151,slow=5.9,SNR=5.5						
MKAR	Makanchi Array	79.38	320	P	P	01 27 49.1	+0.5
	0.2nm,0.6s,baz=105,slow=4.1,SNR=3.0						
ZALV	Zalesovo Beam	80.65	327	P	P	01 27 55.7	+0.6
	0.9nm,0.8s,baz=110,slow=6.7,SNR=2.8						
TORD	Torodi Ar. Bea	147.69	285	PKPbc	PKPdf	01 35 26.2	+1.1
	0.7nm,0.4s,baz=72,slow=3.8,SNR=6.8						
BDFB	Brasilia	152.08	141	PKPbc	PKPbc	01 35 37.7	-1.0
	1.4nm,0.3s,baz=292,slow=2.0,SNR=3.8						

NNC ***19*** *01:17:01.7±0.6, 43°.18N×78°.57E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=4.5km s-min=3.7km az=171.0*
SOME ***19*** *01:17:01.8, 43°.22N×78°.55E, h5^{km}*
ISC 19 01:17:01.7±0.9**, 43°.20N**±0°.03×**78°.56E**±0°.02**, h7**^{km}±9^{km}**, n16, σ0^s.35**/31**, 4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	Zhinishke	0.10	253	*e*P	Pg	01 17 03.9	-0.1
	13nm,0.1s						
ZHN				*e*S	Sg	01 17 05.3	-0.3
	78nm,0.1s						
SATY	Saty	0.18	220	⇓*e*P	Pg	01 17 05.5	+0.2
	26nm,0.1s						
SATY				*e*S	Sg	01 17 08.3	+0.5
	34nm,0.1s						
SATY	Saty	0.18	220	P	Pg	01 17 05.5	+0.2
	26nm,0.1s						
SATY				S	Sg	01 17 08.3	+0.5
	42nm,0.1s						
KPKS	Kokpek	0.28	18	⇓*e*P	Pg	01 17 07.2	-0.1
	13nm,0.1s						
KPKS				*e*S	Sg	01 17 11.2	0.0
	6.9nm,0.2s						
UZB	Uzynbulak	0.34	98	*e*P	Pg	01 17 08.3	-0.1
	6.5nm,0.1s						
UZB				*e*S	Sg	01 17 12.9	0.0
	13nm,0.1s						
UZB	Uzynbulak	0.34	98	P	Pg	01 17 08.3	-0.1
	6.5nm,0.1s						
UZB				S	Sg	01 17 12.9	0.0
	23nm,0.1s						
KURS	Kuram	0.41	316	*e*P	Pg	01 17 09.6	-0.1
	1.5nm,0.1s						
KURS				*e*S	Sg	01 17 15.4	+0.4
	3.7nm,0.1s						
KURS	Kuram	0.41	316	P	Pg	01 17 09.5	-0.1
	1.4nm,0.1s						
KURS				S	Sg	01 17 15.4	+0.4
	3.6nm,0.2s						
PDGK	Podgornoye	0.69	79	⇓P	Pg	01 17 15.3	+0.2
	0.4nm,0.3s						
PDGK				⇓S	Sg	01 17 23.6	-0.4
	0.7nm,0.3s						
MNBS	Baschi	0.89	353	*e*P	Pg	01 17 18.6	-0.2
	0.7nm,0.1s						
MNBS				*e*S	Sg	01 17 30.7	+0.3
	1.9nm,0.2s						
MNBS	Baschi	0.89	353	P	Pg	01 17 18.8	0.0
	0.8nm,0.1s						
MNBS				S	Sg	01 17 30.9	+0.5
	2.6nm,0.1s						
TNSS	Tian-Shan	1.19	263	*e*P	Pg	01 17 24.2	-0.4
	0.6nm,0.1s						
TNSS				*e*S	Sg	01 17 40.2	+0.1
	1.7nm,0.2s						
KTBS	Karatobe	1.46	291	*e*P	Pn	01 17 28.6	0.0
	0.7nm,0.2s						
KTBS				*e*S	Sb	01 17 47.9	-0.3
	1.2nm,0.1s						
KTBS	Karatobe	1.46	291	P	Pn	01 17 28.6	0.0
	2.2nm,0.2s						
KTBS				S	Sb	01 17 47.9	-0.3
	2.1nm,0.3s						
KAPS	Kapalarasan	2.17	15	*e*P	Pb	01 17 41.2	-0.2
	0.3nm,0.2s						
KAPS				*e*S	Sb	01 18 09.5	+1.1
	0.6nm,0.1s						
KAPS	Kapalarasan	2.17	15	Pg	Pb	01 17 41.0	-0.3
	0.5nm,0.2s						
KAPS				Lg	Lg	01 18 09.2	
	0.6nm,0.2s						

IDC ***19*** *01:32:14.6±0.9, 30°.45N×142°.17E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.5/49, mbtmp3.6/12, ML3.2/2, Error ellipse: s-maj=31.9km s-min=18.3km az=77.0*
JMA ***19*** *01:32:14.4±0.1, 30°.55N×142°.30E, h49^{km}, M4.0*
ISC 19 01:32:17.7±0.8**, 30°.49N**±0°.06×**142°.1E**±0°.2**, h23**^{km}**, n17, σ1^s.90**/21**, mb3.7**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.39	178	*e*S	Sn	01 33 46.5	-2.2
JCJ	Chichijima	3.39	178	Pn	Pn	01 33 08.1	-1.1
	4.7nm,0.3s,baz=5.3,slow=15,SNR=1.3						
JCJ				Sn	Sn	01 33 45.9	-2.8
	14nm,0.3s,baz=309,slow=18,SNR=2.1						
BSO1	Boso 1	4.25	348	P	Pn	01 33 18.4	-2.1
BSO4	Boso 4	4.71	343	P	Pn	01 33 25.4	-1.9
BSO4				*e*S	Sn	01 34 19.0	-2.2
JHU	Hanno	5.83	337	*e*S	Sn	01 34 45.7	-3.1
JAG	Ashikaga	6.30	341	P	Pn	01 33 47.3	-1.9
JAG				*e*S	Sn	01 34 56.8	-3.7
MJAR	Matsushiro Arr	6.83	333	Pn	Pn	01 33 56.7	+0.1
	0.2nm,0.3s,baz=162,slow=11,SNR=8.9						
SONM	Songino Array	32.26	313	P	P	01 38 46.1	+1.5
	0.4nm,0.5s,baz=102,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	48.28	307	P	P	01 40 58.2	+1.2
	0.3nm,0.4s,baz=79,slow=7.8,SNR=5.8						
MKAR				PcP	PcP	01 42 25.3	+1.6
	0.3nm,0.8s,baz=129,slow=3.3,SNR=4.0						
KURBB	Kurchatov Arra	50.63	312	P	P	01 41 15.7	+0.9
	0.3nm,0.3s,baz=84,slow=6.8,SNR=4.8						
WRA	Warramunga Arr	50.69	189	P	P	01 41 15.3	-0.2
	0.5nm,0.5s,baz=5.9,slow=7.4,SNR=7.2						
ASAR	Alice Springs	54.41	189	P	P	01 41 43.6	+0.5
	0.3nm,0.4s,baz=3.7,slow=6.5,SNR=5.1						
BVAR	Borovoye Array	55.50	316	P	P	01 41 51.9	+1.2
	0.5nm,0.5s,baz=51,slow=9.6,SNR=3.0						
YKA	Yellowknife Ar	69.22	29	P	P	01 43 22.8	+0.5
	0.2nm,0.7s,baz=297,slow=5.6,SNR=5.0						
FINES	FINESS Array B	74.86	333	P	P	01 43 57.0	+0.8
	2.2nm,0.9s,baz=28,slow=6.3,SNR=5.5						
NVAR	Mina Array Bea	78.52	52	P	P	01 44 18.0	+0.5
	0.4nm,0.7s,baz=316,slow=4.1,SNR=4.0						
BRTR	Keskin Array B	83.62	313	P	P	01 44 45.8	+1.1
	0.6nm,0.8s,baz=63,slow=6.6,SNR=5.0						

SOME ***19*** *01:42:57.9, 39°.70N×74°.08E, h5^{km}*
IDC ***19*** *01:42:59.7±1.2, 39°.61N×73°.93E, h0^{km}, mb3.8/14, mb1 3.8/22, mb1mx3.7/57, mbtmp3.7/22, ML3.1/8, MS3.1/7, Ms1 3.1/7, ms1mx2.8/48, Error ellipse: s-maj=20.4km s-min=11.3km az=141.0*
ISU ***19*** *01:42:59, 39°.80N×74°.00E, h5^{km}, Hypocentre not reviewed by the ISC*
KRNET ***19*** *01:42:59.4±0.1, 39°.71N×73°.92E, h11^{km}, mb4.3*
BJI ***19*** *01:43:00.9±0.0, 39°.83N×73°.94E, h15^{km}, mb3.9/2, ML3.6/5*
NNC ***19*** *01:43:04.0±2.2, 40°.02N×73°.84E, h0^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=19.1km s-min=11.1km az=169.0*
MOS ***19*** *01:43:05.2±1.5, 39°.88N×73°.72E, h31^{km}, mb4.4/5, Error ellipse: s-maj=8.0km s-min=4.6km az=77.2*
NEIC ***19*** *01:43:08.7±2.4, 39°.86N±0°.06×73°.83E±0°.08, h60^{km}±9^{km}, mb4.5/9, Error ellipse: s-maj=11.5km s-min=5.3km az=139.0*
ISC 19 01:43:03.2±1.1**, 39°.94N**±0°.03×**73°.89E**±0°.02**, h8**^{km}±7^{km}**, n176, σ2^s.01**/203**, mb3.9**/22**, 38C-23D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.30	284	⇑*i*P	Pg	01 43 08.4	-0.9
	baz=14						
SFK				⇑*i*S	Sb	01 43 14.5	-1.9
	baz=14						
SFK	Sufi-Kurgan	0.30	284	*e*P		01 43 08.0	
SFK				*e*S		01 43 15.0	
OHH	Osh	1.02	305	⇑*i*P	Pg	01 43 22.1	-0.8
	baz=14						
OHH				⇑*i*S	Sn	01 43 38.6	-0.1
	baz=14						
OHH	Osh	1.02	305	*e*P		01 43 22.0	
OHH				*e*S		01 44 39.0	
ARSB	Arslanbob	1.54	334	⇓*i*P	Pg	01 43 32.5	-0.4
	baz=36						
ARSB				⇓*i*S	Sg	01 43 56.2	+3.3
	baz=36						
ARSB	Arslanbob	1.54	334	*e*P		01 43 32.0	
ARSB				*e*S		01 44 00.0	
KSH	Kashi	1.66	104	Pg	Pn	01 43 26.1	-6.8
KSH				Sg	Sn	01 43 45.9	-8.6
KSH				smax	smax		
	comp=N,580nm,0.8s						
KSH				smax	smax		
	comp=E,1μm,1.3s						
DRK	Karamyk	1.67	255	⇑*e*P	Pn	01 43 30.7	-2.5
	baz=63						
DRK				⇑*i*S	Sn	01 43 53.4	-1.6
	baz=63						
FRG	Fergana	1.79	297	*i* P		01 43 33.0	
FRG				*i* S		01 44 00.0	
ARLS	Aral	1.95	10	⇑*i*P	Pb	01 43 39.2	+0.1
	baz=8.0						
ARLS				⇑*i*S	Sg	01 44 08.1	+2.3
	baz=8.0						
AML	Almayashu	2.19	356	⇓*i*P	Pb	01 43 43.2	-0.2
	baz=56						

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AML                                ⇓iS     Sg       01 44 14.5 +0.7
      baz=56
AML   Almayashu          2.19 356   P      Pb       01 43 43.2 -0.2
      SNR=518
UCH   Uchtor             2.33  12⇓iP       Pb       01 43 45.4 -0.5
      baz=10.0
UCH                                ⇓iS     Sg       01 44 17.2 -1.1
      baz=10.0
UCH   Uchtor             2.33  12   P      Pb       01 43 45.7 -0.1
      SNR=102
BTK   Batken             2.36 274⇓iP       Pn       01 43 42.3 -0.1
      baz=79
BTK                                ⇓iS     Sb       01 44 13.5 -1.9
      baz=79
BTK   Batken             2.36 274  eP               01 43 45.0
BTK                                eS               01 44 21.0
TRKS  Terek-Say          2.62 308⇓iP       Pn       01 43 46.7 +0.6
      baz=11
TRKS                               ⇓iS     Sb       01 44 21.3 -1.7
      baz=11
EKS2  Erkin-Say          2.72 358⇑iP       Pb       01 43 50.7 -1.5
      baz=58
EKS2                               ⇑iS     Sg       01 44 26.6 -4.0
      baz=58
EKS2  Erkin-Say          2.72 358   P      Pb       01 43 51.0 -1.2
      SNR=34
AAK   Ala-Archa          2.73   9   Pn     Pb       01 43 51.3 -1.2
      22nm,0.3s,baz=166,slow=7.3,SNR=206
AAK                                 Sn     Sg       01 44 31.6 +0.6
      34nm,0.3s,baz=90,slow=20,SNR=15
AAK                                 LR     LR       01 45 10.0
      comp=Z,319nm,18.8s,baz=234,slow=43
AAK   Ala-Archa          2.73   9⇑iP       Pb       01 43 50.9 -1.6
      baz=8.0
AAK                                ⇑iS     Sb       01 44 27.0 +0.8
      baz=8.0
AAK   Ala-Archa          2.73   9   P      Pb       01 43 51.2 -1.3
      SNR=146
AAK   Ala-Archa          2.73   9 ⇓Pn      Pb       01 43 51.1 -1.4
      87nm,0.5s
AAK                               ⇓Lg      Lg       01 44 30.4
      257nm,0.6s
MNAS  Manas              2.75 338⇑iP       Pb       01 43 50.1 -2.7
      baz=39
MNAS                               ⇑iS     Sb       01 44 26.8 +0.1
      baz=39
KBK   Karagaybulak       2.83  16⇑iP       Pb       01 43 51.8 -2.3
      baz=14
KBK                                ⇑iS     Sb       01 44 29.8 +0.8
      baz=14
KBK   Karagaybulak       2.83  16   P      Pb       01 43 53.0 -1.2
      SNR=108
MRKS  Merke              2.85 350  eP      Pb       01 43 55.2 +0.8
      154nm,0.4s
MRKS                               eS      Sg       01 44 36.5 +1.9
      194nm,0.5s
MRKS  Merke              2.85 350   Pg     Pb       01 43 52.5 -1.9
      297nm,0.4s
MRKS                                Lg     Lg       01 44 31.3
      194nm,0.4s
MRKS  Merke              2.85 350  ePN     Pb       01 43 55.2 +0.8
MRKS                               eS      Sg       01 44 36.6 +1.9
ULHL  Ulahol             2.91  37⇑iP       Pn       01 43 51.9 +1.8
      baz=34
ULHL                               ⇑iS     Sb       01 44 30.1 -1.3
      baz=34
ULHL  Ulahol             2.91  37   P      Pb       01 43 54.8 -0.8
      SNR=39
FRU1  Bishkek            2.92  11⇓iP       Pn       01 43 52.3 +2.2
      baz=9.0
FRU1                               ⇓iS     Sb       01 44 30.9 -0.6
      baz=9.0
BOOM  Boomskoye usch     2.98  31⇑iP       Pn       01 43 53.0 +2.0
      baz=28
BOOM                               ⇑iS     Sb       01 44 31.8 -1.6
      baz=28
CHMS  Chumysh            3.12  12⇑eP       Pb       01 43 56.0 -3.1
      baz=10.0
CHMS                               ⇑iS     Sb       01 44 37.0 -0.3
      baz=10.0
CHMS  Chumysh            3.12  12   P      Pb       01 43 57.0 -2.1
      SNR=27
TKM2  Tokmak 2           3.24  23⇑iP       Pn       01 43 57.3 +2.6
      baz=21
TKM2                               ⇑iS     Sb       01 44 39.2 -1.8
      baz=21
TKM2  Tokmak 2           3.24  23   P      Pb       01 43 58.6 -2.6
      SNR=29
TKM2  Tokmak 2           3.24  23 ⇓Pn      Pb       01 43 58.7 -2.6
      20nm,0.3s
TKM2                              ⇓Lg      Lg       01 44 47.9
      134nm,0.7s
TKM2  Tokmak 2           3.24  23 ⇓PN      Pb       01 43 58.7 -2.5
KDJ   Kajisay            3.31  48⇑iP       Pn       01 43 57.0 +1.4
      baz=45
KDJ                                ⇑iS     Sb       01 44 39.4 -3.6
      baz=45
USP   Ospenovka          3.35   8⇑eP       Pn       01 43 59.0 +2.9
      baz=7.0
USP                                ⇑iS     Sb       01 44 41.8 -2.2
      baz=7.0
USP   Ospenovka          3.35   8   P      Pb       01 43 59.7 -3.3
      SNR=19
KST   Kastek             3.47  26  eP      Pb       01 44 05.0  0.0
      41nm,0.7s
KST                                eS      Sg       01 44 53.3 -1.4
      222nm,0.9s
KST   Kastek             3.47  26   Pg     Pb       01 44 02.0 -3.0
      41nm,0.5s
KST                                 Lg     Lg       01 44 48.4
      223nm,0.7s
KST   Kastek             3.47  26  ePN     Pb       01 44 05.0  0.0
KST                                eS      Sg       01 44 53.3 -1.4
DZA   Taraz              3.52 328  eP      Pg       01 44 09.4 -1.3
      90nm,0.1s
DZA                                eS      Sg       01 45 00.9 +4.6
      293nm,0.5s
DZA   Taraz              3.52 328  eP      Pn       01 44 00.3 +2.0
      baz=333
SGDS  Sogindy            3.55   9  eP      Pb       01 44 03.9 -2.5
      baz=9.0
SGDS  Sogindy            3.55   9   Pg     Pg       01 44 08.4 -2.9
      138nm,0.5s
SGDS                                Lg     Lg       01 44 58.6
      135nm,0.8s
SGDS  Sogindy            3.55   9  ePN     Pb       01 44 03.8 -2.6
IUG   Iuzhnay            3.66 308  eP      Pg       01 44 11.9 -1.4
      119nm,0.5s
IUG                                eS      Sg       01 45 04.9 +4.3
      288nm,0.5s
IUG   Iuzhnay            3.66 308  eP      Pn       01 44 00.1 -0.1
      baz=315
IUG   Iuzhnay            3.66 308   Pg     Pn       01 44 03.5 +3.3
      117nm,0.4s
IUG                                 Lg     Lg       01 44 51.2
      316nm,0.6s
IUG   Iuzhnay            3.66 308  ePN     Pn       01 44 00.1 -0.1
IZV   Izvestkoviy        3.71  33  eP      Pb       01 44 06.8 -2.3
      81nm,0.7s
IZV                                eS      Sb       01 44 56.2 +1.9
      110nm,0.6s
IZV   Izvestkoviy        3.71  33  ePN     Pb       01 44 06.8 -2.3
IZV                                eS      Sb       01 44 56.2 +1.9
MTBS  Maitube            3.71  30  eP      Pb       01 44 05.2 -4.0
      baz=28
MTBS  Maitube            3.71  30  ePN     Pb       01 44 05.2 -4.0
TNSS  Tian-Shan          3.85  36  eP      Pb       01 44 13.0 +1.2
      55nm,0.6s
TNSS                               eS      Sg       01 45 06.5 -0.5
      40nm,0.6s
TNSS  Tian-Shan          3.85  36  eP      Pn       01 44 06.1 +2.9
      baz=33
TNSS  Tian-Shan          3.85  36   Pg     Pb       01 44 12.4 +0.7
      54nm,0.3s
TNSS                                Lg     Lg       01 45 05.8
      56nm,0.5s
TNSS  Tian-Shan          3.85  36  ePN     Pb       01 44 13.0 +1.2
TNSS                               eS      Sg       01 45 06.5 -0.5
AAA   Alma-Ata           3.98  34  eP      Pb       01 44 15.3 +1.6
      61nm,0.3s
AAA                                eS      Sg       01 45 11.1 +0.1
      148nm,0.5s
AAA   Alma-Ata           3.98  34  eP      Pn       01 44 08.7 +4.0
      baz=31
AAA   Alma-Ata           3.98  34   Pg     Pb       01 44 15.0 +1.4
      65nm,0.4s
AAA                                 Lg     Lg       01 45 11.6
      158nm,0.5s
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AAA   Alma-Ata           3.98  34  ePN     Pb       01 44 15.3 +1.6
AAA                                eS      Sg       01 45 11.1 +0.1
MDOK  Medeo              4.00  35  eP      Pb       01 44 14.9 +0.9
      42nm,0.5s
MDOK                               eS      Sg       01 45 10.1 -1.5
      70nm,1.1s
MDOK  Medeo              4.00  35  eP      Pn       01 44 08.1 +3.0
      baz=32
MDOK                               eS      Sb       01 45 00.4 -2.2
      baz=32
MDOK  Medeo              4.00  35 ⇑Pg      Pb       01 44 14.6 +0.5
      34nm,0.6s
MDOK                              ⇑Lg      Lg       01 45 10.5
      93nm,0.8s
MDOK  Medeo              4.00  35   Pg     Pb       01 44 14.2 +0.1
      42nm,0.4s
MDOK                                Lg     Lg       01 45 09.5
      68nm,0.8s
MDOK  Medeo              4.00  35  ePN     Pn       01 44 08.0 +3.0
MDOK                               eS      Sb       01 45 00.4 -2.2
KNDC  Almaty             4.01  34 ⇑Pg      Pb       01 44 15.5 +1.4
      101nm,0.4s
KNDC                              ⇑Lg      Lg       01 45 11.7
      263nm,0.5s
CHM   Chimkent           4.01 308  eP      Pg       01 44 17.3 -2.8
      107nm,0.2s
CHM                                eS      Sg       01 45 14.5 +2.4
      346nm,0.3s
ANVS  Anan'yevo          4.02  44⇑iP       Pn       01 44 07.0 +1.7
      baz=41
ANVS                               ⇑iS     Sn       01 44 55.9 +3.2
      baz=41
KK31  Karatay Array      4.05 322   Pn     Pn       01 44 07.7 +2.2
      2.8nm,0.3s,baz=129,slow=11,SNR=175
KK31                              ⇓Pg      Pg       01 44 17.1 -3.7
      12nm,0.4s,baz=142,slow=16,SNR=25
KK31                              ⇑Lg      Lg       01 45 16.2
      31nm,0.4s,baz=115,slow=28,SNR=4.0
KK31  Karatay Array      4.05 322   PN     Pn       01 44 07.8 +2.2
KK31  Karatay Array      4.05 322          Pn       01 44 07.8 +2.2
KKAR  Karatay Array      4.05 322   PN     Pn       01 44 07.6 +2.0
KKAR  Karatay Array      4.05 322          Pn       01 44 07.6 +2.0
KTBS  Karatobe           4.31  28   Pg     Pb       01 44 20.6 +1.3
      41nm,0.6s
KTBS                                Lg     Lg       01 45 20.0
      195nm,0.5s
CHKK  Chushkaly          4.54  30  eP      Pb       01 44 25.3 +2.0
      23nm,0.8s
CHKK                               eS      Sg       01 45 27.9 -1.3
      74nm,0.7s
CHKK  Chushkaly          4.54  30  eP      Pn       01 44 16.5 +4.1
      baz=28
CHKK  Chushkaly          4.54  30   Pg     Pb       01 44 25.5 +2.2
      24nm,0.8s
CHKK                                Lg     Lg       01 45 28.4
      72nm,0.7s
CHKK  Chushkaly          4.54  30  ePN     Pn       01 44 16.4 +4.1
SATY  Saty               4.61  46  eP      Pb       01 44 26.1 +1.7
      22nm,0.5s
SATY                               eS      Sg       01 45 28.9 -2.2
      85nm,1.1s
SATY  Saty               4.61  46  eP      Pn       01 44 15.4 +2.1
      baz=42
SATY                                LR     LR       01 45 28.3
      31nm,8.0s,baz=42
SATY  Saty               4.61  46   Pg     Pb       01 44 25.9 +1.5
      24nm,0.6s
SATY                                Lg     Lg       01 45 28.9
      85nm,1.3s
SATY  Saty               4.61  46  ePN     Pn       01 44 15.3 +2.0
SATY                                MLR    MLR
      comp=Z,31nm,8.0s
ZHN   Zhinishke          4.69  45  eP      Pb       01 44 27.0 +1.1
      comp=Z,2.2nm,0.6s
ZHN                                eS      Sg       01 45 31.1 -2.8
      comp=Z,28nm,1.2s
ZHN   Zhinishke          4.69  45   Pg     Pb       01 44 26.6 +0.7
      comp=Z,93nm,0.3s
ZHN                                 Lg     Lg       01 45 31.0
      comp=Z,28nm,1.0s
ZHN   Zhinishke          4.69  45  ePN     Pb       01 44 27.0 +1.1
ZHN                                eS      Sg       01 45 31.1 -2.8
KURS  Kuram              4.78  41  eP      Pb       01 44 28.6 +1.3
      comp=Z,24nm,0.9s
KURS                               eS      Sg       01 45 33.5 -3.1
      comp=Z,45nm,1.4s
KURS  Kuram              4.78  41   Pg     Pb       01 44 29.2 +1.9
      comp=Z,24nm,0.6s
KURS                                Lg     Lg       01 45 33.7
      comp=Z,46nm,1.3s
KURS  Kuram              4.78  41  ePN     Pb       01 44 28.6 +1.3
KURS                               eS      Sg       01 45 33.5 -3.1
KPKS  Kokpek             5.03  44  eP      Pb       01 44 34.1 +2.5
      comp=Z,22nm,0.5s
KPKS                               eS      Sg       01 45 42.9 -1.8
      comp=Z,149nm,0.8s
KPKS  Kokpek             5.03  44  eP      Pn       01 44 20.9 +1.8
      baz=41
KPKS  Kokpek             5.03  44  ePN     Pn       01 44 20.9 +1.8
BTLS  Baital             5.10   1  eP      Pg       01 44 36.3 -4.6
      comp=Z,16nm,0.6s
BTLS                               eS      Sg       01 45 46.6 -0.3
      comp=Z,24nm,0.7s
SHLS  Shalkode           5.27  51  eP      Pn       01 44 28.3 +5.8
      baz=49
SHLS  Shalkode           5.27  51  ePN     Pn       01 44 28.2 +5.7
PDGK  Podgornoye         5.39  49 ⇑Pn      Pn       01 44 25.6 +1.5
      comp=Z,8.1nm,0.7s
PDGK                              ⇓Pg      Pb       01 44 39.7 +1.9
      comp=Z,38nm,1.1s
PDGK                              ⇑Lg      Lg       01 45 52.3
      comp=Z,93nm,1.1s
PDGK  Podgornoye         5.39  49   PN     Pn       01 44 25.0 +0.9
TDK   Taldyqorghan       6.06  32  eP      Pn       01 44 35.3 +2.1
      baz=30
TDK   Taldyqorghan       6.06  32   Pg     Pb       01 44 52.0 +2.9
      comp=Z,32nm,0.4s
TDK                                 Lg     Lg       01 46 15.2
      comp=Z,88nm,0.9s
TDK   Taldyqorghan       6.06  32  ePN     Pn       01 44 35.3 +2.1
NIL   Nilore             6.30 185   PN     Pn       01 44 37.3 +0.8
NIL   Nilore             6.30 185          Pn       01 44 37.3 +0.8
KBL   Kabul              6.63 217   PN     Pn       01 44 43.0 +1.8
KBL   Kabul              6.63 217          Pn       01 44 43.0 +1.8
KAPS  Kapalarasan        6.69  35   Pg     Pb       01 45 04.2 +4.3
      comp=Z,6.3nm,0.4s
KAPS                                Lg     Lg       01 46 34.2
      comp=Z,18nm,0.7s
MAKZ  Makanchi           9.04  38 ⇓Pn      Pn       01 45 20.8 +6.8
      comp=Z,5.8nm,1.4s
MAKZ                              ⇓Lg      Lg       01 47 47.7
      comp=Z,7.6nm,1.1s
MAKZ  Makanchi           9.04  38   P      Pn       01 45 19.0 +4.9
MAKZ  Makanchi           9.04  38          Pn       01 45 19.0 +4.9
MK31  Makanchi Array     9.18  39 ⇑Pn      Pn       01 45 19.6 +3.6
      comp=Z,1.8nm,0.7s,baz=207,slow=8.7,SNR=5.9
MK31                              ⇓Pg               01 45 48.5
      comp=Z,1.7nm,0.5s,baz=224,slow=14,SNR=2.7
MK31                              ⇓Lg      Lg       01 47 54.4
      comp=Z,17nm,1.2s
MK31  Makanchi Array     9.18  39   P      Pn       01 45 20.2 +4.2
MK31  Makanchi Array     9.18  39          Pn       01 45 20.2 +4.2
MKAR  Makanchi Array     9.18  39   Pn     Pn       01 45 19.2 +3.2
      comp=Z,0.1nm,0.3s,baz=206,slow=13,SNR=7.0
MKAR                                Lg     Lg       01 47 51.7
      comp=Z,0.2nm,0.3s,baz=221,slow=28,SNR=2.8
MKAR                                LR     LR       01 49 10.8
      comp=Z,75nm,19.4s,baz=210,slow=39
BRZS  Berezniki         10.08 356  eP      Pn       01 45 29.4 +1.1
      comp=Z,0.8nm,0.7s,baz=356
BRZS  Berezniki         10.08 356  eP      Pn       01 45 29.3 +1.1
BRZS                                pmax   pmax
      comp=Z,1.0nm,0.7s
HRA   Herat             10.81 243   Pn     Pn       01 45 38.8 +0.2
WMQ   Urumqi            11.00  65  eP      Pn       01 45 40.8 -0.2
KURBB Kurchatov Arra    11.17  15   Pn     Pn       01 45 44.6 +1.5
      comp=Z,0.0nm,0.3s,baz=206,slow=12,SNR=3.4
KURBB                               Lg     Lg       01 48 57.2
      comp=Z,0.1nm,0.3s,baz=200,slow=27,SNR=4.0
KURK  Kurchatov         11.28  16   P      Pn       01 45 48.9 +4.3
KURK  Kurchatov         11.28  16          Pn       01 45 48.9 +4.3
GEYT  Alibeck           12.45 266   Pn     Pn       01 45 57.7 -3.0
      comp=Z,0.6nm,0.3s,baz=91,slow=14,SNR=3.6
GEYT                                Sn     Sn       01 48 19.2 -0.4
      comp=Z,0.6nm,0.3s,baz=99,slow=17,SNR=4.2
GYA0B ALIBECK ARRAY     12.45 266   Pn     Pn       01 46 02.0 +1.3
BVAR  Borovoye Array    13.31 351   Pn     Pn       01 46 12.5 +0.1
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      comp=Z,0.5nm,0.3s,baz=157,slow=15,SNR=6.7
BRVK  Borovoye          13.35 351   P      Pn       01 46 13.9 +1.0
BRVK  Borovoye          13.35 351          Pn       01 46 13.9 +1.0
ABKAR Akbulak array     13.60 318          Pn       01 46 15.6 -0.7
DGZ   Jazzator, Alta    13.68  40  i P     Pn       01 46 20.6 +3.0
PYUN  Piuthan           14.01 145  eP      Pn       01 46 14.8 -7.4
      comp=Z,17nm,0.4s
DANN  Dangsing          14.15 142  eP      Pn       01 46 16.4 -7.8
KOLN  Koldanda          14.56 144  eP      Pn       01 46 22.5 -7.4
      comp=Z,5.6nm,0.5s
GKN   Gorkha            14.86 140  eP      Pn       01 46 26.2 -7.7
      comp=Z,7.1nm,0.4s
AKTO  Aktyubinsk        15.30 319   Pn     Pn       01 46 38.8 -0.7
      comp=Z,0.3nm,0.3s,baz=124,slow=15,SNR=11
AKTO                                Sn     Sn       01 49 24.5 -4.7
      comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=1.6
AKTO                                LR     LR       01 53 02.2
      comp=Z,70nm,19.4s,baz=166,slow=39
GUN   Gumba             15.57 137  eP      Pn       01 46 35.4 -8.1
      comp=Z,9.3nm,0.4s
ZALV  Zalesovo Beam     15.85  24   Pn     Pn       01 46 47.9 +1.4
      comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=6.1
ZALV                                LR     LR       01 52 59.9
      comp=Z,33nm,18.7s,baz=221,slow=37
RAMN  Ramite            16.72 137  eP      Pn       01 46 49.2 -9.0
      comp=Z,5.7nm,0.3s
TAPN  Taplejung         17.01 133  eP      Pn       01 46 52.5 -9.3
      comp=Z,10nm,0.8s
ODAN  Odare             17.21 135  eP      Pn       01 46 54.6  -10
      comp=Z,21nm,0.7s
ARU   Arti              19.33 334   P      Pn       01 47 30.4 +0.6
      comp=Z,0.0nm,0.3s,baz=152,slow=14,SNR=4.2
ARU                                 LR     LR       01 55 30.5
      comp=Z,66nm,18.9s,baz=162,slow=38
ARU   Arti              19.33 334   P      P        01 47 27.9 -0.9
LKRN  Lenkeran, Azer    19.45 274   P      P        01 47 29.2 -1.0
SEKA  Sheki             20.29 282   P      P        01 47 39.9 +0.4
ZKTA  Zakatala          20.68 284   P      Pn       01 47 46.0  0.0
GNI   Garni             22.27 280   P      P        01 47 59.9 -1.1
      comp=Z,1.2nm,0.5s,baz=27,slow=18,SNR=1.9
GNI   Garni             22.27 280   P      P        01 48 00.9 -0.1
GNI                                 pmax   pmax
      comp=Z,5.0nm,0.9s
GNI   Garni             22.27 280   P      P        01 48 00.9 -0.1
KBZ   Khabaz            23.33 290   P      P        01 48 11.4 -0.3
      comp=Z,1.5nm,1.0s,baz=37,slow=10,SNR=2.3
KVAR  Kislovodsk Arr    23.47 290   P      P        01 48 13.7 +0.4
      comp=Z,1.4nm,0.8s,baz=193,slow=14,SNR=1.2
KIV   Kislovodsk        23.47 290  eP      P        01 48 09.1 -4.3
KIV                                 pmax   pmax
      comp=Z,8.0nm,1.0s
SONM  Songino Array     24.58  61   P      P        01 48 23.0 -0.8
      comp=Z,0.8nm,0.7s,baz=261,slow=8.2,SNR=5.2
ULN   Ulaanbaatar       25.03  61  i P     P        01 48 24.7 -3.1
ULN                                 pmax   pmax
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr    30.42 127   LR     LR       02 01 34.8
      comp=Z,33nm,18.5s,baz=194,slow=37
BRTR  Keskin Array B    30.73 283   P      P        01 49 18.5 -0.4
      comp=Z,0.8nm,0.9s,baz=70,slow=6.8,SNR=4.4
AKASG Malin Array Be    32.73 304   P      P        01 49 36.1 -0.1
      comp=Z,0.2nm,0.4s,baz=84,slow=7.6,SNR=7.5
MLR   Muntele Rosu      35.23 295   P      P        01 49 57.3 -1.0
      comp=Z,2.5nm,0.9s,baz=94,slow=19,SNR=4.7
MLR   Muntele Rosu      35.23 295   P      P        01 49 58.1 -0.1
MLR                                 pmax   pmax
      comp=Z,4.0nm,1.0s
MLR   Muntele Rosu      35.23 295   P      P        01 49 58.1 -0.1
FIA1  FINESS Array S    36.01 323   P      P        01 50 04.5  0.0
FINES FINESS Array B    36.01 323   P      P        01 50 04.4 -0.1
      comp=Z,2.4nm,0.4s,baz=114,slow=9.2,SNR=37
KWP   Kalwaria Pacla    36.95 303   P      P        01 50 13.7 +1.0
KWP                                 pmax   pmax
      comp=Z,13nm,1.4s
KWP   Kalwaria Pacla    36.95 303   P      P        01 50 13.7 +1.0
KWP                                 IAmb   IAmb     01 50 28.0
      comp=Z,13nm,1.4s
ZEA   Zeya              38.10  51  eP      P        01 50 26.1 +3.7
ZEA                                 pmax   pmax
      comp=N,10.0nm,0.4s
ZEA                                 pmax   pmax
      comp=Z,10.0nm,0.6s
ARCES ARCESS Array B    38.90 335   P      P        01 50 28.9 -0.1
      comp=Z,1.6nm,0.6s,baz=112,slow=9.3,SNR=13
ARCES ARCESS Array B    38.90 335  eP      P        01 50 30.3 +1.3
ARCES                               pmax   pmax
      comp=Z,2.0nm,0.6s
KLR   Kul'dur           41.32  57   LR     LR       02 09 23.7
      comp=Z,34nm,19.0s,baz=173,slow=38
GERES GERESS Array B    42.90 303   P      P        01 51 01.8 -0.4
      comp=Z,0.8nm,0.6s,baz=65,slow=7.6,SNR=9.3
NC303 NORSAR Array S    43.01 321   P      P        01 51 02.8  0.0
NB201 NORSAR Array S    43.04 321          P        01 51 02.8 -0.3
NB2   NORSAR Subarra    43.08 321   P      P        01 51 02.8 -0.7
      comp=Z,0.9nm,0.5s,baz=91,slow=7.9
NOA   NORSAR Array B    43.08 321   P      P        01 51 03.0 -0.5
      comp=Z,1.5nm,0.6s,baz=91,slow=7.9,SNR=10.0
NOA   NORSAR Array B    43.08 321   P      P        01 51 03.0 -0.5
NC204 NORSAR Array S    43.30 321   P      P        01 51 06.2 +1.0
NC204                               IAmb   IAmb     01 51 10.8
      comp=Z,15nm,1.2s
ESDC  Sonseca Array     57.89 297   P      P        01 52 54.2 -1.6
      comp=Z,0.6nm,0.6s,baz=57,slow=6.9,SNR=2.2
TOA0  Torodi Ar. Sit    68.06 269   P      P        01 54 00.9 -2.7
TOA0                                IAmb   IAmb     01 54 17.2
      comp=Z,5.7nm,1.4s
TORD  Torodi Ar. Bea    68.06 269   P      P        01 54 01.0 -2.7
      comp=Z,0.9nm,0.5s,baz=49,slow=5.4,SNR=8.1
I23K  Minto, Yukon-K    69.95  18   P      P        01 54 10.3 -4.2
I23K                                IAmb   IAmb     01 54 12.5
      comp=Z,4.1nm,0.7s
YKA   Yellowknife Ar    77.68   4   P      P        01 54 58.4 -1.6
      comp=Z,0.3nm,0.6s,baz=0.3,slow=5.4,SNR=10
WB2   Warramunga Arr    81.97 124   P      P        01 55 21.1 -2.7
WB2                                 IAmb   IAmb     01 55 36.1
      comp=Z,5.4nm,1.1s
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*NEIC **19** 01:43:26.9±1.6, 2.°8S±0.°1×138.°96E±0.°03, h50km±7km, mb4.4/22, Error ellipse: s-maj=15.7km s-min=3.3km az=175.0*

*IDC **19** 01:43:27.0±2.0, 2.°83S×138.°98E, h54km±19km, mb3.7/9, mb1 4.0/11, mb1mx3.7/41, mbtmp4.1/11, ML4.1/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/35, Error ellipse: s-maj=14.9km s-min=11.7km az=106.0*

*DJA **19** 01:43:27.1±0.3, 3°S±4°×13°9E±°, h40km±10km, M4.5/6, mb4.7/6, mB5.1/4, MLv4.5/6, Mw(mB)4.4/4*

ISC 19 01:43:26.7±0.5**, 2.°78S**±0.°06×**138.°88E**±0.°05**, h46**km**, n53, σ1ˢ67**/54**, mb4.3**/18**, Irian Jaya**

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Code  Station Name         Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
SMPI  Sarmi              0.80 348   P      Pn       01 43 40.5 -1.1
SMPI                                S      Sn       01 43 51.1 -1.4
GENI  Genyem             1.30  82   P      Pn       01 43 48.5 +0.1
JAY   Jayapura           1.84  82   P      Pn       01 43 55.0 -1.0
      57nm,0.3s,baz=235,slow=8.8,SNR=59
JAY                                 S      Sn       01 44 16.3 -1.8
      96nm,0.3s,baz=319,slow=20,SNR=6.3
JAY                                 LR     LR       01 44 41.2
      comp=Z,355nm,20.6s,baz=196,slow=42
JAY   Jayapura           1.84  82   P      Pn       01 43 54.9 -1.0
BAKI  Biak               3.19 300   P      Pn       01 44 14.4 +0.1
FAKI  Fak Fak            6.62 269   Pn     Pn       01 45 02.9 +1.4
FAKI  Fak Fak            6.62 269   P      Pn       01 45 02.7 +1.2
      0.2nm804nm49nm,0.6s
SIJI  Sorong             7.84 284   P      Pn       01 45 20.6 +2.4
      11nm,0.3s,baz=187,slow=22,SNR=19
SIJI                                S      Sn       01 46 45.0 -0.7
      2.1nm,0.3s,baz=253,slow=19,SNR=1.8
SIJI                                LR     LR       01 48 36.1
      comp=Z,142nm,21.6s,baz=106,slow=39
SWI   Sorong             7.85 284   P      Pn       01 45 18.1 -0.2
      0.2nm59nm,0.5s
PMG   Port Moresby      10.54 129   P      Pn       01 45 58.5 +3.3
      1.0nm,0.3s,baz=308,slow=17,SNR=1.5
PMG                                 LR     LR       01 51 29.2
      comp=Z,90nm,19.9s,baz=188,slow=46
NLAI  Namlea            11.77 267   P      Pn       01 46 13.1 +1.0
      2µm47nm,0.9s
SANI  Sanana            12.90 273   P      Pn       01 46 28.7 +1.2
      51nm,1.1s
SGSI  Sangihe           14.81 296   P      P        01 47 05.7 +7.4
SOEI  Soe               16.09 244          P        01 47 14.4 +1.8
SOEI                                IAmb   IAmb     01 47 29.0
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      comp=Z,30nm,0.8s
SOEI  Soe              16.09 244  P      P       01 47 14.4 +1.8
      comp=Z,46nm,0.8s
BATI  Baumata          16.81 243  P      P       01 47 23.9 +3.3
      comp=Z,4.1nm,0.3s,baz=154,slow=1.2,SNR=2.7
BATI  Baumata          16.81 243  P      P       01 47 29.6 +9.0
WB0   Warramunga Arr   17.44 194         Pn      01 47 26.7 -0.1
WR0   Warramunga Arr   17.59 194  Pn     Pn      01 47 27.9 -0.8
WB2   Warramunga Arr   17.62 194  P      P       01 47 29.7 +0.2
WRA   Warramunga Arr   17.63 194  P      Pn      01 47 28.4 -0.6
      comp=Z,0.4nm,0.3s,baz=18,slow=12,SNR=13
WRA                               S      Sn      01 50 33.7  -11
      comp=Z,0.1nm,0.3s,baz=10,slow=22,SNR=5.7
FITZ  Fitzroy Crossi   20.01 220  P      P       01 47 55.9 +0.2
      comp=Z,1.8nm,0.7s,baz=53,slow=15,SNR=2.2
FITZ                              S      S       01 51 29.5 -8.8
      comp=Z,2.2nm,0.6s,baz=21,slow=18,SNR=3.0
AS31  Alice Springs    21.31 193         P       01 48 10.8 +1.0
ASAR  Alice Springs    21.32 193  P      P       01 48 09.4 -0.4
      comp=Z,1.1nm,0.5s,baz=17,slow=9.6,SNR=9.9
ASAR                              S      S       01 52 02.3 -1.9
      comp=Z,1.7nm,0.8s,baz=14,slow=25,SNR=5.1
STKA  Stephens Creek   29.06 175  LR     LR      02 01 25.1
      comp=Z,42nm,19.7s,baz=27,slow=37
KSRS  Korea Array      41.30 347  LR     LR      02 07 09.6
      comp=Z,15nm,19.2s,baz=175,slow=34
KLR   Kul'dur          52.17 354  P      P       01 52 32.6  0.0
      comp=Z,2.4nm,0.6s,baz=163,slow=7.1,SNR=15
ULN   Ulaanbaatar      57.60 335  P      P       01 53 13.1 +1.0
ULN                               IAmb   IAmb    01 53 20.4
      comp=Z,2.9nm,1.1s
SONM  Songino Array    57.85 335  P      P       01 53 13.8  0.0
      comp=Z,0.5nm,0.4s,baz=154,slow=7.2,SNR=2.4
MK31  Makanchi Array   69.94 322  P      P       01 54 33.6 +0.4
MKAR  Makanchi Array   69.94 322  P      P       01 54 33.5 +0.2
      comp=Z,1.5nm,0.4s,baz=114,slow=7.7,SNR=23
MAKZ  Makanchi         70.14 322  P      P       01 54 34.7 +0.2
ZALV  Zalesovo Beam    72.08 330  P      P       01 54 45.4 -0.6
      comp=Z,0.5nm,0.4s,baz=104,slow=6.0,SNR=3.0
KURK  Kurchatov        73.87 325  P      P       01 54 56.0 -0.6
KURK                              IAmb   IAmb    01 55 11.0
      comp=Z,5.6nm,1.4s
KURBB Kurchatov Arra   73.88 325  P      P       01 54 56.4 -0.4
      comp=Z,1.2nm,0.8s,baz=110,slow=5.2,SNR=7.0
VNDA  Vanda            75.70 175  P      P       01 55 06.8  0.0
      comp=Z,2.4nm,0.8s,baz=328,slow=6.6,SNR=8.4
VNDA  Vanda            75.70 175  P      P       01 55 07.8 +1.1
VNDA                              IAmb   IAmb    01 55 18.2
      comp=Z,4.0nm,1.2s
OHAK  Old Harbor       80.53  31  P      P       01 55 34.1 +0.3
KDAK  Kodiak Island    81.08  30  P      P       01 55 37.0 +0.3
TTA   Tatalina         81.40  25  P      P       01 55 38.7 +0.2
BRLK  Bradley Lake     82.56  29  P      P       01 55 44.3 -0.3
SKT   Skwentna         82.99  26  P      P       01 55 45.6 -1.2
SKT                               IAmb   IAmb    01 55 47.8
      comp=Z,2.6nm,1.0s
PPLA  Purkeypile       83.01  26  P      P       01 55 46.5 -0.5
PPLA                              IAmb   IAmb    01 55 58.1
      comp=Z,8.7nm,1.4s
KTH   Kantishna Hill   83.77  25  P      P       01 55 49.9 -0.9
KTH                               IAmb   IAmb    01 55 51.1
      comp=Z,5.7nm,1.2s
TRF   Thorofare Moun   84.01  25  P      P       01 55 51.0 -1.1
TRF                               IAmb   IAmb    01 55 56.9
      comp=Z,5.9nm,1.4s
RND   Reindeer         84.61  26  P      P       01 55 53.9 -1.2
ABKAR Akbulak array    84.88 320  P      P       01 55 56.3 -0.4
ABKAR                             IAmb   IAmb    01 56 14.7
      comp=Z,1.8nm,1.0s
I23K  Minto, Yukon-K   84.92  24  P      P       01 55 56.6 +0.1
I23K                              IAmb   IAmb    01 55 57.3
      comp=Z,2.3nm,0.8s
DHY   Denali Highway   85.16  26  P      P       01 55 57.8 -0.1
DHY                               IAmb   IAmb    01 55 58.4
      comp=Z,3.4nm,0.8s
WRH   Wood River Hil   85.24  25  P      P       01 55 57.6 -0.6
WRH                               IAmb   IAmb    01 55 57.8
      comp=Z,3.0nm,0.8s
ILAR  Eielson Array    85.83  24  P      P       01 55 59.7 -1.3
      comp=Z,2.6nm,0.6s,baz=265,slow=4.4,SNR=46
CPUP  Villa Florida   147.09 153  PKPbc  PKPbc   02 03 05.8 +0.4
      comp=Z,3.5nm,1.1s,baz=214,slow=3.6,SNR=5.2
CPUP  Villa Florida   147.09 153         PKPbc   02 03 04.6 -0.8
```

IDC ***19*** *01:49:06.0±11.0, 14°.20N×91°.33W, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.6/38, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=233.1km s-min=70.5km az=10.0*

NEIC ***19*** *01:49:15.1±1.7, 14°.11N±0°.09×92°.22W±0°.06, h33km±17km, Error ellipse: s-maj=14.1km s-min=7.3km az=160.0*

MEX ***19*** *01:49:16.7±0.7, 14°.06N×92°.32W, h15km, MD4.1*

UCR ***19*** *01:49:17.3±1.1, 14°.17N×91°.96W, h20km, ML3.7, mb3.9(NEIC)*

SNET ***19*** *01:49:17.0±1.4, 14°.23N×91°.79W, h20km±100km, ML3.8*

ISC 19 01:49:15.1±1.5**, 14°.09N**±0°.08×**92°.21W**±0°.06**, h43**km±16km**, n45, σ0s.97**/64**, mb3.7**/5**, 1C, Near coast of Chiapas**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time     Res
                                  Op     ISC      h  m  s    ISC
RTAL  Retalhuleu        0.67  49  Pg     Pn      01 49 27.8 -0.4
THIG                    0.82 357  eP     Pn      01 49 29.8 -0.5
THIG                              eS     Sn      01 49 40.9 -0.4
THIG                    0.82 357         Pn      01 49 29.8 -0.5
THIG                                     Sn      01 49 40.9 -0.4
HUEH  Huehuetenango     1.41  29         Pn      01 49 38.6 +0.1
PCIG                    1.88 329  eP     Pn      01 49 44.5 -0.2
PCIG                              eS     Sn      01 50 05.7 -1.6
PCIG                    1.88 329         Pn      01 49 44.5 -0.2
PCIG                                     Sn      01 50 05.7 -1.6
CCIG  Comitan           2.19   2  eP     Pn      01 49 50.3 +1.2
CCIG                              eS     Sn      01 50 16.5 +1.4
CCIG  Comitan           2.19   2         Pn      01 49 50.3 +1.2
CCIG                                     Sn      01 50 16.5 +1.4
RTR   El Retiro         2.50  94  eP     Pn      01 49 54.2 +0.8
RTR                               eS     Sn      01 50 22.0 -0.8
RTR   El Retiro         2.50  94  eP     Pn      01 49 54.2 +0.8
RTR                               eS     Sn      01 50 22.0 -0.8
SBLS  San Blas          2.53  95  eP     Pn      01 49 53.9  0.0
SBLS  San Blas          2.53  95  eP     Pn      01 49 53.9  0.0
CEVE  Cerro Verde       2.53  95  eP     Pn      01 49 54.8 +0.9
CEVE                              eS     Sn      01 50 23.2 -0.4
CEVE                              IAML           01 50 33.2
      comp=Z,699nm,0.2s
CEVE  Cerro Verde       2.53  95  eP     Pn      01 49 54.8 +0.9
CEVE                              eS     Sn      01 50 23.2 -0.4
CEVE                              IAML           01 50 33.2
      comp=Z,699nm,0.2s
SNJE  San Jose          2.54  95  eP     Pn      01 49 55.2 +1.2
SNJE  San Jose          2.54  95  eP     Pn      01 49 55.2 +1.2
MRL   Marmol            2.64  68  eP     Pn      01 49 55.2 -0.2
MRL   Marmol            2.64  68  eP     Pn      01 49 55.2 -0.2
JAYA  Jayaque - finc    2.72  99  eP     Pn      01 49 56.5 +0.1
JAYA                              eS     Sn      01 50 27.8 -0.4
JAYA                              IAML           01 50 31.4
      comp=Z,451nm,0.2s
JAYA  Jayaque - finc    2.72  99  eP     Pn      01 49 56.5 +0.1
JAYA                              eS     Sn      01 50 27.8 -0.4
JAYA                              IAML           01 50 31.4
      comp=Z,451nm,0.2s
TACO  Tacachico         2.78  92  eP     Pn      01 49 57.1  0.0
TACO                              eS     Sn      01 50 29.3 -0.2
TACO  Tacachico         2.78  92  eP     Pn      01 49 57.1  0.0
TACO                              eS     Sn      01 50 29.3 -0.2
TGIG                    2.82 342  eP     Pn      01 49 57.5 -0.2
TGIG                             ⇑iS     Sn      01 50 31.3 +0.8
TGIG                    2.82 342         Pn      01 49 57.5 -0.2
TGIG                                     Sn      01 50 31.3 +0.8
PMON  Piamonte          2.84  97  eS     Sn      01 50 31.8 +0.7
PMON  Piamonte          2.84  97  eS     Sn      01 50 31.8 +0.7
PETF  Flores            3.61  38  Pn     Pn      01 50 09.0 +0.5
CMIG  Matias Romero     3.94 320  Pn     Pn      01 50 13.7 +0.5
      comp=Z,1.7nm,0.3s,baz=130,slow=9.7,SNR=27
CMIG                              Sn     Sn      01 50 57.1 -1.1
      comp=Z,9.1nm,0.3s,baz=270,slow=20,SNR=6.0
CMIG  Matias Romero     3.94 320  eP     Pn      01 50 13.4 +0.2
CMIG                              i S    Sn      01 50 58.6 +0.5
CMIG  Matias Romero     3.94 320         Pn      01 50 13.4 +0.2
CMIG                                     Sn      01 50 58.6 +0.5
TEIG  Tepich            7.17  31  Pn     Pn      01 50 56.4 -1.1
545A  Edgard           15.96   5  Pn     Pn      01 52 57.4 +0.8
344A  Westbrook Farm   17.34   4         Pn      01 53 14.3 +0.3
344A                              IAmb   IAmb    01 53 18.8
      comp=Z,7.9nm,0.8s
TX32  Lajitas Array    18.51 327  P      Pn      01 53 29.2 +0.7
TXAR  Lajitas Array    18.51 327  P      Pn      01 53 28.9 +0.4
      comp=Z,0.1nm,0.3s,baz=151,slow=11,SNR=7.7
TXAR  Lajitas Array    18.51 327  P      Pn      01 53 30.2 +1.8
TX31  Lajitas Ar. Si   18.51 327  P      Pn      01 53 29.4 +1.0
TX31                              IAmb   IAmb    01 53 41.3
      comp=Z,11nm,1.5s
FPAL  Fort Paine       21.22  15  P      P       01 53 55.6 -1.7
FPAL                              IAmb   IAmb    01 53 58.9
      comp=Z,19nm,1.5s
MNTX  Cornudas Mount   21.28 328  P      P       01 53 58.1 +0.2
ANMO  Albuquerque      24.43 331  P      P       01 54 29.9  0.0
      comp=Z,1.2nm,0.7s,baz=143,slow=10,SNR=5.1
ANMO  Albuquerque      24.43 331  P      P       01 54 29.4 -0.5
ANMO                              IAmb   IAmb    01 54 30.9
      comp=Z,0.9nm,0.8s
SMCO  Snowmass         28.18 335  P      P       01 55 07.2 +3.2
PV03  Paradox Valley   28.23 332  P      P       01 55 05.2 +1.0
PV03                              IAmb   IAmb    01 55 15.5
      comp=Z,3.7nm,1.4s
NVAR  Mina Array Bea   33.48 321  P      P       01 55 52.0 +1.5
      comp=Z,0.5nm,0.6s,baz=130,slow=8.5,SNR=6.9
YKA   Yellowknife Ar   50.90 347  P      P       01 58 08.8 -2.8
      comp=Z,0.4nm,0.5s,baz=144,slow=8.1,SNR=18
```

MAN ***19*** *02:31:09.4, 5°.27N×125°.44E, h181km, mb4.7, ML3.6, MS3.5*

IDC ***19*** *02:31:23.1±1.4, 4°.83N×125°.26E, h349km±16km, mb3.2/10, mb1 3.4/11, mb1mx3.1/41, mbtmp3.9/11, Error ellipse: s-maj=34.4km s-min=10.7km az=70.0*

ISC 19 02:31:23.2±0.7**, 4°.89N**±0°.10×**125°.4E**±0°.2**, h350**km**, n13, σ1s.19**/13**, mb3.4**/10**, Talaud Islands**

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Code  Station Name      Δ°   AZ°   Phase ID         Time     Res
                                  Op     ISC      h  m  s    ISC
DAV   Davao City (W)    2.17   5  P      Pn      02 32 16.7 +0.9
      64nm,0.3s,baz=127,slow=23,SNR=8.7
KAPI  Kappang          11.35 210  P      P       02 33 58.9 +1.2
      3.3nm,0.3s,baz=161,slow=15,SNR=4.5
FITZ  Fitzroy Crossi   22.85 179  P      P       02 35 57.2  0.0
      1.8nm,0.3s,baz=4.3,slow=7.5,SNR=22
WRA   Warramunga Arr   26.20 161  P      P       02 36 26.4 -0.9
      0.4nm,0.3s,baz=333,slow=11,SNR=15
CMAR  Chiang Mai Arr   29.15 300  P      P       02 36 53.5 +0.1
      1.2nm,0.3s,baz=95,slow=7.7,SNR=4.5
ASAR  Alice Springs    29.57 164  P      P       02 36 57.0 -0.2
      0.5nm,0.3s,baz=338,slow=6.8,SNR=12
STKA  Stephens Creek   39.69 158  P      P       02 38 21.4 -1.3
      2.1nm,0.8s,baz=337,slow=7.4,SNR=4.1
SONM  Songino Array    45.79 342  P      P       02 39 10.0 -1.3
      0.3nm,0.7s,baz=151,slow=6.3,SNR=2.4
MKAR  Makanchi Array   55.85 325  P      P       02 40 24.4 -1.0
      0.8nm,0.6s,baz=118,slow=7.3,SNR=13
ILAR  Eielson Array    84.63  25  P      P       02 43 19.2 +1.3
      0.2nm,0.4s,baz=254,slow=5.1,SNR=6.0
BRTR  Keskin Array B   88.27 310  P      P       02 43 36.6 +0.5
      0.2nm,0.4s,baz=148,slow=2.4,SNR=1.9
FINES FINESS Array B   90.19 332  P      P       02 43 43.3 -1.0
      3.2nm,1.1s,baz=46,slow=5.5,SNR=4.5
TXAR  Lajitas Array   121.92  51  PKP    PKiKP   02 49 39.2 +1.9
      0.2nm,0.8s,baz=318,slow=3.6,SNR=2.4
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BJI ***19*** *02:33:36.3±0.0, 6°.10S×145°.49E, h134km, mB5.2/37, mb4.9/58*

IDC ***19*** *02:33:37.3±1.3, 6°.20S×145°.31E, h117km±12km, mb4.4/21, mb1 4.5/27, mb1mx4.5/36, mbtmp4.8/27, MS3.4/7, Ms1 3.4/7, ms1mx3.2/20, Error ellipse: s-maj=13.4km s-min=8.4km az=67.0*

DJA ***19*** *02:33:37.4±0.3, 6°S±2°×14°5E±°, h122km±4km, M4.8/47, mb4.9/47, mB5.3/13, MLv5.1/4, Mw(mB)4.7/13, MwMwp5.4/3, Mwp5.5/3*

NEIC ***19*** *02:33:38.5±2.2, 6°.16S±0°.08×145°.23E±0°.09, h130km±5km, mb5.0/108, Error ellipse: s-maj=14.3km s-min=9.7km az=56.0*

GCMT ***19*** *02:33:39.5±0.2, 6°.03S±0°.02×145°.28E±0°.02, h128km±2km, MW5.0/98, Moment Tensor Solution. s34,c38; s98,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.93±.10; $M_{\theta\theta}$3.37±.12; $M_{\phi\phi}$-0.44±.12; $M_{r\theta}$-1.31±.10; $M_{\theta\phi}$-0.14±.17; $M_{\phi r}$0.65±.09; Best double couple: $M_0$3.48600×10^{16} NP1:ϕ_s260.00000°, δ35.00000°, λ-110.00000°. NP2: ϕ_s103.00000°, δ58.00000°, λ-77.00000°. Principal axes: T 3.6500, Plg12.0000°, Azm184.0000°; N -0.3290, Plg11.0000°, Azm276.0000°; P -3.3220, Plg74.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***19*** *02:33:41.1, 6°.25S×145°.19E, h141km, mb4.8, New Guinea, Papua New Guinea*

ISC 19 02:33:35.2±0.3**, 6°.16S**±0°.05×**145°.26E**±0°.05**, h100**km**, n351, σ1s.56**/353**, mb5.0**/129**, 5C-7D, New Guinea**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time     Res
                                  Op     ISC      h  m  s    ISC
PMG   Port Moresby      3.73 150  P      Pn      02 34 34.1 +3.3
      212nm,0.3s,baz=346,slow=6.2,SNR=439
PMG                               S      Sn      02 35 14.7 +0.9
      143nm,0.3s,baz=142,slow=20,SNR=11
JAY   Jayapura          5.81 308  P      Pn      02 35 00.5 +1.5
      3.9nm,0.3s,baz=32,slow=4.0,SNR=9.6
JAY   Jayapura          5.81 308  P      Pn      02 34 57.7 -1.3
      0.2nm692nm41nm,1.0s
GENI  Genyem            6.19 305  P      Pn      02 35 03.3 -0.9
      1.5nm4µm4µm181nm,1.0s
BAKI  Biak             10.38 298  P      Pn      02 35 59.6 -1.6
      94nm,0.8s
FAKI  Fak Fak          13.37 283  P      P       02 36 46.0 -0.9
CTA   Charters Tower   13.88 176  P      Pn      02 36 49.7 +2.1
      0.2nm,0.3s,baz=353,slow=14,SNR=25
CTAO  Charters Tower   13.88 176  Pn     P       02 36 50.6 -2.0
SAUI  Saumlaki         13.97 262         P       02 36 54.5 +0.8
SAUI  Saumlaki         13.97 262  P      P       02 36 53.2 -0.5
      346nm,0.9s
SIJI  Sorong           14.92 290  P      Pn      02 37 03.5 +2.3
      1.5nm,0.3s,baz=84,slow=9.6,SNR=11
SWI   Sorong           14.93 290  P      Pn      02 37 00.4 -0.8
      85nm,1.2s
WB0   Warramunga Arr   17.16 217  P      P       02 37 29.6 +0.5
WR0   Warramunga Arr   17.22 216  P      P       02 37 30.3 +0.6
WR0                               IAmb   IAmb    02 37 32.2
      comp=Z,65nm,0.9s
WRAB  Tennant Creek    17.32 217  P      P       02 37 31.6 +0.9
WRAB                              IAmb   IAmb    02 37 33.2
      comp=Z,66nm,0.8s
WB2   Warramunga Arr   17.32 217  P      P       02 37 31.2 +0.4
WB2                               IAmb   IAmb    02 37 33.4
      comp=Z,55nm,0.8s
WRA   Warramunga Arr   17.33 217  P      P       02 37 31.6 +0.7
      comp=Z,2.9nm,0.3s,baz=41,slow=12,SNR=125
WRA                               S      Sn      02 40 42.0 -1.9
      baz=31,slow=21,SNR=8.1
WRA                               PcP    PcP     02 42 07.3 -0.7
      comp=Z,0.3nm,0.3s,baz=6.3,slow=1.5,SNR=5.9
WRA   Warramunga Arr   17.33 217  P      P       02 37 30.9  0.0
NLAI  Namlea           18.33 278  P      P       02 37 43.4 +1.5
      comp=Z,35nm,0.6s
PATS  Pohnpei          18.34  45  P      Pn      02 37 43.3 +0.1
GUMO  Guam             19.63 359  P      P       02 37 56.5 +0.5
      comp=Z,8.0nm,0.3s,baz=220,slow=11,SNR=5.5
GUMO  Guam             19.63 359  P      Pn      02 37 57.1 -1.2
SANI  Sanana           19.65 281  P      P       02 37 57.2 +0.9
      comp=Z,1µmcomp=Z,41nm,0.7s
AS31  Alice Springs    20.55 211  P      P       02 38 07.1 +1.2
ASAR  Alice Springs    20.55 211  P      P       02 38 06.6 +0.6
      comp=Z,31nm,1.0s,baz=39,slow=10.0,SNR=102
ASAR                              PcP    PcP     02 42 13.7 +0.2
      comp=Z,3.5nm,0.7s,baz=39,slow=1.6,SNR=5.9
ASAR  Alice Springs    20.55 211  P      P       02 38 06.4 +0.4
SOEI  Soe              21.09 259         P       02 38 14.0 +2.0
SOEI  Soe              21.09 259  P      P       02 38 13.2 +1.2
      comp=Z,63nm,0.8s
BATI  Baumata          21.75 258  P      P       02 38 20.4 +1.6
      comp=Z,53nm,0.7s,baz=317,slow=2.1,SNR=7.2
BATI  Baumata          21.75 258  P      P       02 38 20.6 +1.7
      comp=Z,39nm,1.0s
FITZ  Fitzroy Crossi   22.52 236  P      P       02 38 26.4 -0.5
      comp=Z,30nm,0.8s,baz=88,slow=7.4,SNR=32
MMRI  Maumere          22.96 262  P      P       02 38 31.7 +0.3
MMRI                              IAmb   IAmb    02 38 33.1
      comp=Z,118nm,1.1s
MMRI  Maumere          22.96 262  P      P       02 38 30.3 -1.1
      comp=Z,102nm,0.9s
LUWI  Luwuk            23.01 282  P      P       02 38 33.3 +1.4
LUWI                              IAmb   IAmb    02 39 19.9
      comp=Z,46nm,0.8s
LUWI  Luwuk            23.01 282  P      P       02 38 31.9 +0.1
      comp=Z,2µmcomp=Z,36nm,0.5s
GTOI  Gorontalo        23.22 286  P      P       02 38 36.2 +2.4
      comp=Z,538nmcomp=Z,65nm,0.9s
SANVU Saraoutou        23.42 115  P      P       02 38 36.7 +1.1
SANVU                             IAmb   IAmb    02 38 38.3
      comp=Z,47nm,0.7s
SANVU Saraoutou        23.42 115  P      P       02 38 37.8 +2.2
EDFI  Ende, Flores     23.51 262  P      P       02 38 33.9 -2.7
      comp=Z,17nm,0.8s
APSI  Ampana           24.13 282  P      P       02 38 43.1 +1.0
      comp=Z,663nmcomp=Z,28nm,0.9s
MRSI  Marisa           24.20 285  P      P       02 38 43.8 +1.1
BSSI  Bau Bau, Buton   24.63 269  P      P       02 38 45.6 -1.0
      comp=Z,37nm,1.3s
BASI  Baing, Sumba     24.76 259  P      P       02 38 47.2 -0.6
      comp=Z,100nm,1.0s
BKSI  Bulukumba        25.03 271  P      P       02 38 49.0 -1.2
      comp=Z,19nm,0.6s
BNSI  Bone             25.11 273  P      P       02 38 51.6 +0.6
      comp=Z,22nm,0.4s
KAPI  Kappang          25.41 271  P      P       02 38 57.2 +3.5
      comp=Z,40nm,1.1s,baz=89,slow=4.0,SNR=6.6
STKA  Stephens Creek   25.81 187  P      P       02 38 57.7 +0.6
      comp=Z,19nm,0.7s,baz=4.0,slow=11,SNR=30
STKA                              LR     LR      02 48 58.2
      comp=Z,175nm,20.6s,baz=5.7,slow=36
STKA  Stephens Creek   25.81 187  P      P       02 38 57.0 -0.1
WBSI  Waikabubak, Su   25.85 261  P      P       02 38 58.7 +0.9
      comp=Z,113nm,1.0s
DZM   Mont Dzumac      25.86 130  P      P       02 38 58.1 +0.3
      comp=Z,11nm,0.7s,baz=189,slow=21,SNR=9.6
DZM   Mont Dzumac      25.86 130  P      P       02 38 57.6 -0.2
DZM   Mont Dzumac      25.86 130  P      P       02 38 58.4 +0.6
PLAI  Plampang         27.38 263  P      P       02 39 07.1 -4.3
KKM   Kota Kinabalu    31.43 292  P      P       02 39 47.2 -0.2
KKM                               IAmb   IAmb    02 40 59.4
      comp=Z,24nm,1.0s
PBKI  Pangkalan Bun    33.66 274  P      P       02 40 10.7 +3.9
MSVF  Nonsavu          34.01 113  P      P       02 40 11.6 +1.7
      comp=Z,8.6nm,0.8s,baz=281,slow=7.4,SNR=7.6
MSVF  Nonsavu          34.01 113  P      P       02 40 11.3 +1.4
MSVF  Nonsavu          34.01 113  P      P       02 40 11.6 +1.7
TWG   Pinlang          37.28 321  P      P       02 40 37.4 -0.3
YULB  Yu-li            37.56 322  P      P       02 40 41.5 +1.4
NACB  Ninganchiao      37.97 323  P      P       02 40 45.3 +1.8
SSLB  Suanglung        38.07 322  P      P       02 40 45.5 +1.2
OUZ   Omahuta          38.94 142  P      P       02 40 54.0 +2.5
HIZ   Hauiti           41.89 145  P      P       02 41 18.6 +2.8
QRZ   Quartz Range     42.26 149  P      P       02 41 21.2 +2.5
QRZ                               IAmb   IAmb    02 42 28.5
      comp=Z,69nm,1.3s
JWT   Wachi            42.26 348  P      P       02 41 19.1 +0.4
MJAR  Matsushiro Arr   42.99 352  P      P       02 41 24.0 -0.7
      comp=Z,1.7nm,0.4s,baz=177,slow=7.7,SNR=5.5
MJAR                              PcP    PcP     02 43 13.1 -0.3
      comp=Z,2.2nm,0.3s,baz=189,slow=3.6,SNR=4.0
MJAR                              LR     LR      02 59 19.8
      comp=Z,48nm,19.0s,baz=175,slow=36
MAT   Matsushiro       42.99 352  P      P       02 41 24.6 -0.1
URZ   Urewera          43.06 143  P      P       02 41 26.4 +1.2
URZ                               IAmb   IAmb    02 42 49.6
      comp=Z,72nm,1.9s
BKZ   Black Stump Fm   43.28 144  P      P       02 41 28.5 +1.4
BKZ                               IAmb   IAmb    02 42 08.5
      comp=Z,30nm,1.2s
LTZ   Lake Taylor      43.59 151  P      P       02 41 30.7 +1.2
BSWZ  Blackbirch Sta   43.60 149  P      P       02 41 30.5 +1.0
RPZ   Rata Peaks       43.73 153  P      P       02 41 32.1 +1.5
RPZ                               IAmb   IAmb    02 42 06.5
      comp=Z,74nm,1.5s
MLZ   Mavora Lakes     43.82 157  P      P       02 41 32.7 +1.4
LBZ   Lake Benmore     43.88 154  P      P       02 41 32.4 +0.6
SDSI  Sungai Dareh     44.04 275  P      P       02 41 30.5 -3.0
      comp=Z,17nm,1.3s
BFZ   Birch Farm       44.15 146  P      P       02 41 33.8 -0.2
BFZ                               IAmb   IAmb    02 42 46.0
      comp=Z,54nm,1.1s
IPM   Ipoh             45.42 282  P      P       02 41 45.7 +1.3
IPM                               IAmb   IAmb    02 41 46.5
      comp=Z,26nm,0.8s
NJ2   Nanjing          45.58 328  eP     P       02 41 47.8 +2.4
NJ2                               pmax   pmax
      comp=Z,35nm,0.8s
KULM  Kulim            45.97 283  P      P       02 41 49.6 +0.8
KULM                              IAmb   IAmb    02 41 51.1
      comp=Z,22nm,0.9s
KSRS  Korea Array      46.31 341  P      P       02 41 51.9 +0.8
      comp=Z,4.3nm,0.8s,baz=159,slow=9.5,SNR=8.3
KSRS                              LR     LR      03 01 26.3
      comp=Z,22nm,19.1s,baz=188,slow=36
JTM   Tenmabayashi     46.88 356  P      P       02 41 55.8 +0.5
WHN   Wuhan            47.00 323 ⇑P      P       02 41 59.5 +3.0
WHN                               pmax   pmax
      comp=Z,58nm,0.9s
NONG  Nongkai          48.03 301  P      P       02 42 06.6 +2.0
      comp=Z,40nm,1.3s
CHAI  Chaiyaphum       48.12 298  P      P       02 42 06.3 +0.9
      comp=Z,624nmcomp=Z,53nm,0.5s
SURT  Suratani         48.69 288  P      P       02 42 16.0 +6.1
      comp=Z,0.8nm,1.1s
TPTI                   48.92 280  P      P       02 42 10.3 -1.3
      comp=Z,20nm,0.9s
GYA   Guiyang          49.51 313 ⇑P      P       02 42 18.3 +2.2
GYA                               pP     pP      02 42 47.0 +6.3
GYA                               sP     sP      02 43 07.4  +15
GYA                               S      S       02 49 13.5 -3.0
GYA                               sS     sS      02 50 10.4  +12
GYA                               SS     SS      02 52 38.3  -12
GYA                               pmax   pmax
      comp=Z,14nm,1.1s
GYA                               pmax   pmax
      comp=Z,260nm,4.6s
ASAJ  Asahikawa        50.10 357  P      P       02 42 22.1 +2.0
      comp=Z,7.6nm,0.6s,baz=218,slow=7.9,SNR=7.4
JKA   Kamikawa-asahi   50.10 358  P      P       02 42 23.8 +3.8
UTTA  Uttaradit        50.12 299  P      P       02 42 23.0 +2.3
      comp=Z,17nm,0.8s
UTHA  Uthaitani        50.25 296  P      P       02 42 23.9 +2.2
      comp=Z,29nm,0.8s
NANT  Nan              50.44 300  P      P       02 42 26.5 +3.4
      comp=Z,20µmcomp=Z,284nm,0.5s
SUKH  Sukhothai        50.82 298  P      P       02 42 29.0 +3.1
      comp=Z,17nm,1.2s
LAMP  Lampang          51.24 300  P      P       02 42 32.3 +3.2
PAYA  Payao            51.38 301  P      P       02 42 32.0 +1.8
      comp=Z,5µmcomp=Z,430nm,1.0s
USRK  Ussuriysk Ar.    51.54 348  P      P       02 42 31.7 +0.8
      comp=Z,15nm,0.6s,baz=172,slow=7.1,SNR=62
USA0B Ussuriysk Arra   51.54 348  P      P       02 42 31.7 +0.8
USA0B                             IAmb   IAmb    02 42 32.7
      comp=Z,20nm,0.7s
KMI   Kunming          51.74 309  eP     P       02 42 35.4 +2.4
KMI                               pP     pP      02 43 03.0 +5.2
KMI                               pmax   pmax
      comp=Z,15nm,0.8s
KMI                               pmax   pmax
      comp=Z,200nm,5.5s
CM04  Chiang Mai Arr   51.76 299  P      P       02 42 35.0 +2.0
      comp=Z,220nmcomp=Z,27nm,1.1s
CM09  Chiang Mai Arr   51.76 299  P      P       02 42 35.4 +2.3
      comp=Z,274nmcomp=Z,32nm,1.1s
CM01  Chiang Mai Arr   51.78 299  P      P       02 42 35.0 +1.8
      comp=Z,26nm,1.1s
CM05  Chiang Mai Arr   51.79 299  P      P       02 42 35.1 +2.0
      comp=Z,198nmcomp=Z,20nm,1.1s
CM02  Chiang Mai Arr   51.80 299  P      P       02 42 35.0 +1.7
      comp=Z,250nmcomp=Z,27nm,1.1s
CM31  Chiang Mai Arr   51.81 299  P      P       02 42 36.0 +2.7
      comp=Z,1µm,0.6s
CM31  Chiang Mai Arr   51.81 299  P      P       02 42 35.6 +2.2
CMAR  Chiang Mai Arr   51.81 299  P      P       02 42 35.5 +2.1
      comp=Z,13nm,0.6s,baz=123,slow=5.9,SNR=50
CMAR                              LR     LR      03 05 56.8
      comp=Z,16nm,20.2s,baz=172,slow=37
CM15  Chiang Mai Arr   51.83 299  P      P       02 42 35.6 +2.2
      comp=Z,29nm,1.0s
CM13  Chiang Mai Arr   51.83 299  P      P       02 42 35.5 +2.1
      comp=Z,220nmcomp=Z,22nm,1.0s
CMMT  Chiang Mai       51.95 300  P      P       02 42 36.4 +2.0
      comp=Z,9.9nm,1.0s
CHTO  Chiang Mai       51.95 300  P      P       02 42 35.9 +1.4
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CHTO				IAmb	IAmb	02 42 37.3	
	comp=Z,36nm,1.4s						
MHMT	**Maesarieng**	**52.58**	**298**	P	**P**	**02 42 41.8**	**+2.7**
XAN	**Xi'an**	**52.72**	**322**	P	**P**	**02 42 40.8**	**+0.9**
XAN				pmax	pmax		
	comp=Z,27nm,1.5s						
BJT	**Baijiatuau**	**53.21**	**332**	P	**P**	**02 42 44.3**	**+1.0**
BJT				IAmb	IAmb	02 42 45.2	
	comp=Z,25nm,1.2s						
BJI	**Beijing**	**53.22**	**332**	P	**P**	**02 42 43.9**	**+0.6**
BJI				pmax	pmax		
	comp=Z,18nm,1.2s						
CD2	**Chengdu**	**54.16**	**315**	*e*P	**P**	**02 42 52.0**	**+1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**56.08**	**330**	*e*P	**P**	**02 43 05.8**	**+1.6**
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,70nm,6.6s						
KLR	**Kul'dur**	**56.41**	**349**	P	**P**	**02 43 06.9**	**+0.7**
	comp=Z,7.9nm,0.5s,baz=178,slow=5.5,SNR=46						
LZH	**Lanzhou**	**57.22**	**320**	⇑P	**P**	**02 43 13.6**	**+1.2**
LZH				pP	sP	02 43 45.4	-3.9
LZH				sP	PcP	02 44 00.8	-5.0
LZH				PP	**PP**	**02 45 19.8**	**-0.8**
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,6.4s						
HIA	**Hailar**	**59.52**	**341**	P	**P**	**02 43 28.8**	**+0.8**
PEA0B	**Petropavlovsk-**	**59.98**	**9**	P	**P**	**02 43 31.7**	**+0.7**
PETK	**Petropavlovsk-**	**59.98**	**9**	P	**P**	**02 43 31.5**	**+0.5**
	comp=Z,5.6nm,0.7s,baz=175,slow=7.1,SNR=6.6						
PETK				LR	LR	03 04 35.5	
	comp=Z,28nm,20.9s,baz=209,slow=31						
SHL	**Shillong**	**60.66**	**304**	P	**P**	**02 43 36.8**	**+0.3**
GTA	**Gaotai**	**61.77**	**321**	⇓P	**P**	**02 43 45.1**	**+1.5**
GTA				pP	sP	02 44 16.8	-3.9
GTA				sP	PcP	02 44 31.8	+7.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,66nm,4.7s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
GTA				LR	LR		
	comp=Z,92nm,14.9s						
GTA				LR	LR		
	comp=Z,68nm,14.5s						
LSA	**Lhasa**	**62.96**	**308**	P	**P**	**02 43 53.8**	**+1.6**
LSA				pmax	pmax		
	comp=Z,74nm,0.9s						
LSA	**Lhasa**	**62.96**	**308**	P	**P**	**02 43 53.4**	**+1.3**
ULN	**Ulaanbaatar**	**63.43**	**332**	P	**P**	**02 43 55.5**	**+1.0**
ULN				IAmb	IAmb	02 43 57.3	
	comp=Z,17nm,0.8s						
SONM	**Songino Array**	**63.72**	**332**	P	**P**	**02 43 57.6**	**+1.3**
	comp=Z,9.2nm,0.6s,baz=160,slow=5.6,SNR=42						
SONM				PKP2bc		03 12 58.1	
	comp=Z,2.1nm,0.9s,baz=285,slow=2.1,SNR=9.1						
STCH	**Steam Cracks**	**63.92**	**65**	P	**P**	**02 43 58.3**	**+0.1**
AMKA	**Amchitka**	**64.32**	**23**	P	**P**	**02 44 01.6**	**+1.6**
PPT	**Papeete**	**64.51**	**106**	LR	LR	03 09 17.0	
	comp=Z,47nm,19.5s,baz=10.0,slow=33						
CASY	**Casey**	**64.65**	**195**	P	**P**	**02 44 02.1**	**+0.1**
TAPN	**Taplejung**	**64.80**	**304**	*e*P	**P**	**02 44 05.3**	**+1.2**
	comp=Z,30nm,0.5s						
ODAN	**Odare**	**64.88**	**303**	*e*P	**P**	**02 44 05.4**	**+0.9**
	comp=Z,34nm,0.6s						
RAMN	**Ramite**	**65.57**	**303**	*e*P	**P**	**02 44 10.0**	**+1.0**
	comp=Z,11nm,0.4s						
MA2	**Magadan**	**65.67**	**3**	P	**P**	**02 44 09.3**	**+0.6**
MA2				IAmb	IAmb	02 44 10.2	
	comp=Z,10nm,0.7s						
ADK	**Adak**	**66.32**	**25**	P	**P**	**02 44 13.8**	**+0.9**
GUN	**Gumba**	**66.52**	**304**	*e*P	**P**	**02 44 16.3**	**+1.1**
	comp=Z,54nm,0.6s						
PKI	**Pulchoki**	**66.78**	**303**	*e*P	**P**	**02 44 17.4**	**+0.6**
	comp=Z,13nm,0.6s						
PKIN	**Phulchoki**	**66.80**	**303**	*e*P	**P**	**02 44 17.3**	**+0.4**
	comp=Z,36nm,1.1s						
KKN	**Kakani**	**66.97**	**304**	*e*P	**P**	**02 44 18.6**	**+0.7**
	comp=Z,33nm,0.7s						
DMN	**Daman**	**67.05**	**303**	*e*P	**P**	**02 44 19.5**	**+1.1**
	comp=Z,29nm,0.5s						
GKN	**Gorkha**	**67.58**	**304**	*e*P	**P**	**02 44 22.4**	**+0.8**
	comp=Z,32nm,0.5s						
ATKA	**Atka Island**	**67.61**	**26**	P	**P**	**02 44 21.2**	**+0.1**
TLY	**Talaya**	**67.71**	**333**	P	**P**	**02 44 23.6**	**+1.9**
TLY				IAmb	IAmb	02 44 24.5	
	comp=Z,34nm,1.6s						
KOLN	**Koldanda**	**68.36**	**303**	*e*P	**P**	**02 44 27.5**	**+0.9**
	comp=Z,34nm,0.7s						
DANN	**Dangsing**	**68.42**	**304**	*e*P	**P**	**02 44 27.5**	**+0.4**
	comp=Z,28nm,0.6s						
PYUN	**Piuthan**	**68.98**	**303**	*e*P	**P**	**02 44 30.9**	**+0.4**
	comp=Z,33nm,0.6s						
HYB	**Hyderabad**	**69.90**	**291**	*i* P	**P**	**02 44 36.0**	**-0.1**
WMQ	**Urumqi**	**71.80**	**320**	P	**P**	**02 44 48.8**	**+1.7**
WMQ				pP	sP	02 45 21.4	-3.2
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
WMQ	**Urumqi**	**71.80**	**320**	P	**P**	**02 44 48.1**	**+1.0**
WMQ				IAmb	IAmb	02 44 49.5	
	comp=Z,35nm,1.2s						
VNDA	**Vanda**	**71.86**	**176**	P	**P**	**02 44 46.9**	**0.0**
	comp=Z,9.3nm,0.8s,baz=322,slow=7.2,SNR=19						
VNDA	**Vanda**	**71.86**	**176**	P	**P**	**02 44 47.6**	**+0.8**
UNV	**Unalaska Valle**	**72.15**	**28**	P	**P**	**02 44 48.7**	**-0.2**
UNV				IAmb	IAmb	02 44 50.4	
	comp=Z,80nm,1.7s						
AKUT	**Akutan**	**72.67**	**28**	P	**P**	**02 44 52.1**	**+0.2**
ZSN	**Zaisan**	**75.22**	**322**	*e*P	**P**	**02 45 07.3**	**+0.2**
	baz=322						
CNBA	**Chernabura Isl**	**76.00**	**29**	P	**P**	**02 45 11.6**	**+0.3**
MK31	**Makanchi Array**	**76.53**	**321**	P	**P**	**02 45 15.5**	**+1.0**
MKAR	**Makanchi Array**	**76.53**	**321**	P	**P**	**02 45 15.4**	**+0.9**
	comp=Z,4.0nm,0.3s,baz=96,slow=8.7,SNR=174						
MAKZ	**Makanchi**	**76.73**	**321**	P	**P**	**02 45 16.6**	**+0.9**
MAKZ				IAmb	IAmb	02 45 17.7	
	comp=Z,44nm,1.4s						
SHLS	**Shalkode**	**76.96**	**317**	*e*P	**P**	**02 45 16.1**	**-1.1**
	comp=Z,19nm,1.4s,baz=317						
CHGN	**Chignik**	**77.36**	**28**	P	**P**	**02 45 19.0**	**+0.2**
KPKS	**Kokpek**	**77.60**	**317**	*e*P	**P**	**02 45 20.6**	**-0.1**
	comp=Z,12nm,1.1s,baz=317						
SATY	**Saty**	**77.65**	**316**	*e*P	**P**	**02 45 21.5**	**+0.4**
	comp=Z,18nm,1.4s,baz=316						
KSH	**Kashi**	**78.20**	**312**	P	**P**	**02 45 26.4**	**+2.2**
KSH				pmax	pmax		
	comp=Z,18nm,1.0s						
KSH				pmax	pmax		
	comp=Z,180nm,6.0s						
ZAA0	**Zalesovo Array**	**78.23**	**328**	P	**P**	**02 45 23.5**	**-0.3**
ZALV	**Zalesovo Beam**	**78.23**	**328**	P	**P**	**02 45 23.6**	**-0.2**
	comp=Z,5.7nm,0.5s,baz=112,slow=6.2,SNR=35						
NIL	**Nilore**	**78.62**	**306**	P	**P**	**02 45 27.2**	**+0.8**
MDOK	**Medeo**	**78.62**	**316**	*e*P	**P**	**02 45 27.1**	**+0.7**
	baz=316						
TNSS	**Tian-Shan**	**78.65**	**316**	*e*P	**P**	**02 45 27.4**	**+0.5**
	baz=316						
AAA	**Alma-Ata**	**78.73**	**316**	*e*P	**P**	**02 45 27.3**	**+0.4**
	baz=316						
CHKK	**Chushkaly**	**78.89**	**317**	*e*P	**P**	**02 45 27.5**	**-0.2**
	baz=317						
SEM	**Semipalatinsk**	**79.23**	**324**	*e*P	**P**	**02 45 28.8**	**-0.9**
	baz=324						
ANM	**Nome**	**79.43**	**19**	P	**P**	**02 45 30.7**	**+0.5**
ANM				IAmb	IAmb	02 45 31.8	
	comp=Z,46nm,1.8s						
TKM2	**Tokmak 2**	**79.55**	**316**	P	**P**	**02 45 32.5**	**+0.9**
	SNR=14						
KBK	**Karagaybulak**	**79.92**	**315**	P	**P**	**02 45 34.4**	**+0.9**
	SNR=6.4						
UCH	**Uchtor**	**80.09**	**315**	P	**P**	**02 45 36.2**	**+1.4**
	SNR=17						
CHMS	**Chumysh**	**80.16**	**315**	P	**P**	**02 45 35.0**	**+0.4**
	SNR=7.7						
AAK	**Ala-Archa**	**80.23**	**315**	P	**P**	**02 45 36.3**	**+1.1**
	SNR=7.4						
AAK	**Ala-Archa**	**80.23**	**315**	P	**P**	**02 45 36.5**	**+1.3**
OHAK	**Old Harbor**	**80.27**	**29**	P	**P**	**02 45 35.0**	**+0.2**
OHAK				IAmb	IAmb	02 47 48.1	
	comp=Z,76nm,1.8s						
KURK	**Kurchatov**	**80.31**	**324**	P	**P**	**02 45 36.0**	**+0.8**
KURK				IAmb	IAmb	02 45 36.9	
	comp=Z,37nm,1.4s						
SGDS	**Sogindy**	**80.38**	**316**	*e*P	**P**	**02 45 35.7**	**-0.1**
	baz=316						
USP	**Ospenovka**	**80.42**	**316**	P	**P**	**02 45 36.6**	**+0.6**
	SNR=17						
AML	**Almayashu**	**80.64**	**314**	P	**P**	**02 45 39.1**	**+1.4**
	SNR=20						
EKS2	**Erkin-Say**	**80.74**	**315**	P	**P**	**02 45 38.9**	**+1.0**
	SNR=10						
KDAK	**Kodiak Island**	**80.87**	**29**	P	**P**	**02 45 38.2**	**+0.3**
BTLS	**Baital**	**81.27**	**317**	*e*P	**P**	**02 45 40.3**	**-0.1**
	comp=Z,19nm,1.5s,baz=317						
MAW	**Mawson**	**81.44**	**203**	P	**P**	**02 45 40.0**	**-0.8**
	comp=Z,8.4nm,0.8s,baz=74,slow=1.9,SNR=5.1						
MAW	**Mawson**	**81.44**	**203**	P	**P**	**02 45 41.5**	**+0.6**
TTA	**Tatalina**	**81.88**	**23**	P	**P**	**02 45 43.5**	**+0.2**
KBL	**Kabul**	**82.22**	**306**	P	**P**	**02 45 45.7**	**-0.3**
CNPM	**China Poot**	**82.28**	**27**	P	**P**	**02 45 45.2**	**-0.2**
CNPM				IAmb	IAmb	02 46 04.1	
	comp=Z,23nm,1.0s						
DZA	**Taraz**	**82.53**	**315**	*e*P	**P**	**02 45 47.4**	**+0.2**
	baz=314						
KK31	**Karatay Array**	**83.17**	**315**	P	**P**	**02 45 50.3**	**-0.1**
KK31				IAmb	IAmb	02 45 52.2	
	comp=Z,10nm,0.7s						
KKAR	**Karatay Array**	**83.17**	**315**	P	**P**	**02 45 50.6**	**+0.2**
KKAR				IAmb	IAmb	02 45 52.2	
	comp=Z,10nm,0.7s						
IUG	**Iuzhnay**	**83.27**	**314**	*e*P	**P**	**02 45 51.3**	**+0.2**
	baz=314						
SEW	**Seward**	**83.34**	**27**	P	**P**	**02 45 50.5**	**-0.3**
SEW				IAmb	IAmb	02 46 07.9	
	comp=Z,21nm,1.2s						
PPLA	**Purkeypile**	**83.39**	**24**	P	**P**	**02 45 50.5**	**-0.8**
PPLA				IAmb	IAmb	02 47 25.0	
	comp=Z,48nm,1.9s						
RC01	**Rabbit Creek A**	**83.63**	**26**	P	**P**	**02 45 51.4**	**-0.9**
	baz=245						
BRZS	**Berezniki**	**83.64**	**322**	*e*P	**P**	**02 45 52.9**	**+0.1**
	comp=Z,20nm,1.5s,baz=322						
QSPA	**South Pole Qui**	**83.81**	**180**	P	**P**	**02 45 53.1**	**-0.3**
QSPA				IAmb	IAmb	02 45 54.2	
	comp=Z,22nm,0.8s						
PMR	**Palmer**	**84.10**	**26**	P	**P**	**02 45 53.7**	**-1.0**
KTH	**Kantishna Hill**	**84.20**	**24**	P	**P**	**02 45 54.3**	**-1.0**
GHO	**Glory Hole Cre**	**84.27**	**26**	P	**P**	**02 45 54.8**	**-0.9**
GHO				IAmb	IAmb	02 45 57.6	
	comp=Z,61nm,2.0s						
KNK	**Knik Glacier**	**84.32**	**26**	P	**P**	**02 45 55.9**	**0.0**
TRF	**Thorofare Moun**	**84.41**	**24**	P	**P**	**02 45 54.6**	**-1.8**
BPAW	**Bear Paw Mtn.**	**84.41**	**23**	P	**P**	**02 45 55.1**	**-1.2**
BPAW				IAmb	IAmb	02 45 57.7	
	comp=Z,28nm,1.8s						
SML	**Sawmill**	**84.54**	**26**	P	**P**	**02 45 56.3**	**-0.7**
SML				IAmb	IAmb	02 45 57.5	
	comp=Z,22nm,1.0s						
MLY	**Manley**	**84.92**	**23**	P	**P**	**02 45 58.5**	**-0.4**
	baz=244						
RND	**Reindeer**	**84.97**	**24**	P	**P**	**02 45 57.6**	**-1.6**
RND				IAmb	IAmb	02 45 58.9	
	comp=Z,20nm,0.8s						
SCM	**Sheep Creek Mo**	**84.99**	**26**	P	**P**	**02 45 58.9**	**-0.4**
SCM				IAmb	IAmb	02 45 59.5	
	comp=Z,14nm,0.9s						
MCK	**McKinley**	**85.08**	**24**	P	**P**	**02 45 58.4**	**-1.2**
	baz=246						
NEA2	**Nenana**	**85.38**	**23**	P	**P**	**02 45 60.0**	**-1.2**
	baz=245						
DHY	**Denali Highway**	**85.45**	**25**	P	**P**	**02 46 01.0**	**-0.7**
DHY				IAmb	IAmb	02 46 02.2	
	comp=Z,12nm,0.8s						
KLU	**Klutina**	**85.48**	**27**	P	**P**	**02 46 01.7**	**-0.1**
KLU				IAmb	IAmb	02 46 02.7	
	comp=Z,15nm,1.0s						
I23K	**Minto, Yukon-K**	**85.50**	**23**	P	**P**	**02 46 01.5**	**-0.2**
	baz=245						
I23K	**Minto, Yukon-K**	**85.50**	**23**	P	**P**	**02 46 01.1**	**-0.6**
I23K				IAmb	IAmb	02 46 03.5	
	comp=Z,32nm,1.9s						
M24K	**Tolsona, Glenn**	**85.60**	**26**	P	**P**	**02 46 02.6**	**+0.3**
	baz=248						
WRH	**Wood River Hil**	**85.72**	**24**	P	**P**	**02 46 01.3**	**-1.5**
CCB	**Clear Creek Bu**	**85.90**	**23**	P	**P**	**02 46 01.8**	**-1.9**
CCB				IAmb	IAmb	02 46 03.1	
	comp=Z,13nm,0.8s						
TCOL	**CIGO, UAF Yank**	**85.97**	**23**	P	**P**	**02 46 03.3**	**-0.7**
	baz=246						
TCOL	**CIGO, UAF Yank**	**85.97**	**23**	P	**P**	**02 46 02.5**	**-1.4**
TCOL				IAmb	IAmb	02 46 03.5	
	comp=Z,14nm,1.0s						
COLA	**College**	**85.97**	**23**	P	**P**	**02 46 02.8**	**-1.2**
COLA				IAmb	IAmb	02 46 03.5	
	comp=Z,16nm,1.1s						
COLD	**Coldfoot**	**86.09**	**21**	P	**P**	**02 46 04.9**	**+0.3**
	baz=244						
COLD	**Coldfoot**	**86.09**	**21**	P	**P**	**02 46 04.3**	**-0.3**
N25K	**Chitina, Valde**	**86.11**	**27**	P	**P**	**02 46 05.2**	**+0.3**
	baz=250						
HDA	**Harding Lake**	**86.15**	**24**	P	**P**	**02 46 03.6**	**-1.3**
	baz=247						
HDA	**Harding Lake**	**86.15**	**24**	P	**P**	**02 46 03.4**	**-1.5**
IL31		**86.31**	**23**	P	**P**	**02 46 03.4**	**-2.3**
ILAR	**Eielson Array**	**86.31**	**23**	P	**P**	**02 46 03.9**	**-1.8**
	comp=Z,6.5nm,0.7s,baz=251,slow=5.4,SNR=57						
ILAR				PKKPbc	**PKKPdf**	**03 04 02.6**	**+3.7**
	comp=Z,0.5nm,0.7s,baz=19,slow=2.2,SNR=5.6						
ILAR	**Eielson Array**	**86.31**	**23**	P	**P**	**02 46 03.4**	**-2.3**
GLB	**Gilahina Butte**	**86.41**	**27**	P	**P**	**02 46 05.8**	**-0.5**
CRQM	**Cirque**	**86.49**	**28**	P	**P**	**02 46 07.3**	**+0.4**
CRQM				IAmb	IAmb	02 46 07.9	
	comp=Z,18nm,1.0s						
RIDG	**Independent Ri**	**86.76**	**25**	P	**P**	**02 46 07.2**	**-0.7**
BALM	**Baldy**	**86.95**	**28**	P	**P**	**02 46 08.7**	**-0.4**
BALM				IAmb	IAmb	02 46 09.9	
	comp=Z,12nm,0.9s						
MENT	**Mentasta**	**86.96**	**26**	P	**P**	**02 46 08.8**	**-0.2**
DOT	**Dot Lake**	**87.05**	**25**	P	**P**	**02 46 08.7**	**-0.7**
DOT				IAmb	IAmb	02 46 10.0	
	comp=Z,14nm,1.0s						
SCRK	**Sand Creek**	**87.20**	**25**	P	**P**	**02 46 09.8**	**-0.4**
	baz=250						
BARN	**Barnard Glacie**	**87.27**	**28**	P	**P**	**02 46 10.2**	**-0.5**
BARN				IAmb	IAmb	02 46 11.9	
	comp=Z,15nm,0.8s						
CTGM	**Chitina Glacie**	**87.39**	**28**	P	**P**	**02 46 11.3**	**0.0**
CTGM				IAmb	IAmb	02 46 12.5	
	comp=Z,15nm,0.8s						
FYU	**Fort Yukon**	**87.62**	**22**	P	**P**	**02 46 12.7**	**+0.7**
FYU				IAmb	IAmb	02 46 14.3	
	comp=Z,49nm,1.8s						
HRA	**Herat**	**87.71**	**305**	P	**P**	**02 46 13.5**	**+0.1**
HRA				IAmb	IAmb	02 46 14.7	
	comp=Z,23nm,1.2s						
K27K	**Chicken**	**88.01**	**25**	P	**P**	**02 46 14.6**	**+0.7**
	baz=252						
K27K	**Chicken**	**88.01**	**25**	P	**P**	**02 46 13.5**	**-0.4**
K27K				IAmb	IAmb	02 46 15.6	
	comp=Z,14nm,0.9s						
EGAK	**Eagle**	**88.62**	**24**	P	**P**	**02 46 16.1**	**-0.7**
EGAK				IAmb	IAmb	02 46 17.6	
	comp=Z,47nm,2.0s						
DAWY	**Dawson**	**89.15**	**25**	P	**P**	**02 46 18.7**	**-0.6**
DAWY				IAmb	IAmb	02 46 20.5	
	comp=Z,9.0nm,0.8s						
SYO	**Syowa Base**	**89.84**	**200**	⇑*i*P	**P**	**02 46 22.6**	**+0.2**
EPYK	**Eagle Plains**	**90.82**	**23**	P	**P**	**02 46 27.0**	**-0.1**
	baz=257						
EPYK	**Eagle Plains**	**90.82**	**23**	P	**P**	**02 46 25.9**	**-1.1**
GEYT	**Alibeck**	**91.50**	**308**	P	**P**	**02 46 30.6**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=124,slow=4.5,SNR=6.5						
ABKAR	**Akbulak array**	**91.57**	**319**	P	**P**	**02 46 29.4**	**-1.4**
ABKAR				IAmb	IAmb	02 46 30.4	
	comp=Z,5.5nm,0.8s						
INK	**Inuvik**	**92.44**	**22**	P	**P**	**02 46 33.3**	**-1.1**
NVAR	**Mina Array Bea**	**98.83**	**52**	P	**P**	**02 47 03.3**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=273,slow=6.2,SNR=2.8						
NVAR				LR	LR	03 25 03.1	
	comp=Z,23nm,19.9s,baz=320,slow=31						
YKA	**Yellowknife Ar**	**100.12**	**28**	P	**Pdif**	**02 47 08.5**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=274,slow=4.2,SNR=12						
YKA				PKKPbc	**PKKPbc**	**03 03 26.0**	**-3.9**
	comp=Z,0.7nm,0.6s,baz=93,slow=3.7,SNR=21						
PDAR	**Pinedale Array**	**105.30**	**47**	PKiKP	**PKiKP**	**02 51 46.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=108,slow=1.3,SNR=4.3						
ARCES	**ARCESS Array B**	**105.86**	**341**	Pdiff	**Pdif**	**02 47 34.5**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=68,slow=8.0,SNR=13						
ARCES				PKKPbc	**PKKPbc**	**03 03 09.2**	**-3.9**
	comp=Z,3.0nm,0.8s,baz=235,slow=3.2,SNR=7.9						
FINES	**FINESS Array B**	**109.06**	**334**	Pdiff	**Pdif**	**02 47 48.0**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=96,slow=8.5,SNR=3.0						
FINES				PKiKP	**PKiKP**	**02 51 50.6**	**-2.3**
	comp=Z,2.9nm,1.1s,baz=122,slow=1.8,SNR=4.1						
FINES				PKKPbc	**PKKPbc**	**03 02 59.6**	**-3.2**
	comp=Z,2.7nm,1.1s,baz=202,slow=2.1,SNR=4.4						
TXAR	**Lajitas Array**	**111.35**	**61**	PKiKP	**PKiKP**	**02 51 57.1**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=288,slow=1.3,SNR=7.8						
TXAR				PKKPab	**PKKPab**	**03 03 04.2**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=114,slow=6.4,SNR=5.6						
SORM	**Soroca**	**112.37**	**320**	⇓P	**PKiKP**	**02 51 58.9**	**-0.7**
ULM	**Lac du Bonnet**	**112.95**	**38**	PKiKP	**PKiKP**	**02 51 59.2**	**-1.5**
	comp=Z,1.6nm,0.5s,baz=306,slow=2.8,SNR=4.8						
ECSD	**EROS Data Cent**	**114.41**	**45**	P	PKPdf	02 52 02.4	-1.2
	baz=286						
NEHR	**Nehoiu**	**114.51**	**317**	⇑P	PKPdf	02 52 03.4	-0.4
BURAR	**Bucovina Array**	**114.54**	**320**	⇓P	**PKiKP**	**02 52 05.0**	**+1.1**
JCT	**Junction City**	**114.56**	**59**	P	PKPdf	02 52 03.9	-0.6
	baz=278						
MLR	**Muntele Rosu**	**114.72**	**318**	⇓P	**PKiKP**	**02 52 03.6**	**-0.8**
WMOK	**Wichita Mounta**	**114.77**	**55**	P	PKPdf	02 52 04.2	-0.4
	baz=280						
KOLS	**Kolonicke sedl**	**115.92**	**322**	*e*PKP	**PKPdf**	**02 52 06.7**	**+0.3**
DRGR		**116.43**	**320**	⇓P	**PKPdf**	**02 52 07.1**	**-0.4**
HERR	**Herculane**	**117.28**	**318**	⇓P	**PKPdf**	**02 52 08.0**	**-1.2**
BZS	**Buzias**	**117.56**	**319**	⇓P	**PKPdf**	**02 52 09.3**	**-0.3**
P38A	**Dawn**	**117.75**	**48**	PKPdf	**PKPdf**	**02 52 08.3**	**-1.9**
S39A	**Bolivar**	**118.43**	**50**	PKPdf	**PKPdf**	**02 52 10.1**	**-1.5**
W39A	**Magazine**	**118.69**	**53**	P	**PKPdf**	**02 52 11.6**	**-0.5**
	baz=284						
KRLC	**Kraliky**	**118.70**	**325**	*e*PKPDF	**PKPdf**	**02 52 10.5**	**-1.3**
CHVC	**Chvalec**	**118.87**	**326**	*e*PKPDF	**PKPdf**	**02 52 11.9**	**-0.2**
MIAR	**Mount Ida**	**119.00**	**54**	P	**PKPdf**	**02 52 12.6**	**-0.2**
	baz=284						
U40A	**Yellville**	**119.14**	**52**	P	**PKPdf**	**02 52 12.2**	**-0.8**
	baz=285						
U40A	**Yellville**	**119.14**	**52**	PKPdf	**PKPdf**	**02 52 12.2**	**-0.8**
CCM	**Cathedral Cave**	**119.91**	**49**	P	**PKPdf**	**02 52 13.5**	**-0.9**
	baz=287						
W41B	**Gary Mavity, V**	**119.91**	**53**	P	**PKPdf**	**02 52 13.6**	**-0.9**
	baz=285						
PRU	**Pruhonice**	**120.01**	**326**	*e*PKPDF	**PKPdf**	**02 52 14.2**	**0.0**
CLL	**Collm**	**120.18**	**327**	*e*PKPdf	**PKPdf**	**02 52 12.0**	**-2.5**
	comp=Z,82nm,2.5s						
CLL				*e*PP	**PP**	**02 53 41.0**	**+0.3**
CONA	**Conrad Observa**	**120.22**	**323**	*e*P	**PKPdf**	**02 52 14.3**	**-0.6**
	comp=Z,3.1nm,1.0s						
P43A	**Skaggs, Pawnee**	**120.70**	**47**	PKPdf	**PKPdf**	**02 52 14.7**	**-1.2**
ARSA	**Arzberg**	**120.74**	**322**	*e*P	**PKPdf**	**02 52 15.6**	**-0.2**
	comp=Z,1.8nm,0.5s						
KHC	**Kasperske Hory**	**120.98**	**325**	*e*PKPDF	**PKPdf**	**02 52 16.0**	**-0.2**
GERES	**GERESS Array B**	**121.05**	**325**	PKP	**PKPdf**	**02 52 16.2**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=80,slow=1.5,SNR=19						
GERES				PKKPab	**PKKPab**	**03 02 18.2**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=234,slow=4.6,SNR=5.9						
MOA	**Molln**	**121.21**	**324**	*e*P	**PKiKP**	**02 52 17.1**	**+0.3**
	comp=Z,1.1nm,0.6s						
SOKA	**Soboth**	**121.30**	**322**	*e*P	**PKPdf**	**02 52 16.5**	**-0.4**
	comp=Z,3.1nm,0.9s						
OBKA	**Obir**	**121.67**	**322**	*e*P	**PKPdf**	**02 52 17.8**	**+0.1**
	comp=Z,6.1nm,1.3s						
KBA	**Koelnbreinsper**	**122.13**	**323**	*e*P	**PKPdf**	**02 52 17.6**	**-1.1**
	comp=Z,6.7nm,1.3s						
MYKA	**Terra Mystica**	**122.17**	**323**	*e*P	**PKPdf**	**02 52 17.6**	**-1.0**
	comp=Z,2.7nm,0.9s						
SFIN	**Lafayette**	**122.19**	**46**	P	**PKPdf**	**02 52 18.4**	**-0.3**
	baz=292						
P46A	**Rosedale**	**122.38**	**46**	PKPdf	**PKPdf**	**02 52 17.8**	**-1.4**
ABTA	**Abfaltersbach**	**122.79**	**323**	*e*P	**PKPdf**	**02 52 18.7**	**-1.1**
	comp=Z,7.6nm,1.2s						
PLCA	**Paso Flores**	**122.92**	**148**	PKP	**PKiKP**	**02 52 20.8**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=248,slow=2.3,SNR=9.3						
BLO	**Bloomington**	**123.04**	**47**	PKPdf	**PKPdf**	**02 52 18.7**	**-1.7**
WATA	**Walderalm**	**123.04**	**324**	*e*P	**PKPdf**	**02 52 19.7**	**-0.7**
	comp=Z,2.9nm,0.6s						
WTTA	**Wattenberg**	**123.05**	**324**	*e*P	**PKPdf**	**02 52 19.9**	**-0.5**
	comp=Z,5.9nm,0.8s						
146A	**Union**	**123.13**	**55**	PKPdf	**PKPdf**	**02 52 20.2**	**-0.6**
MOTA	**Moosalm**	**123.31**	**324**	*e*P	**PKPdf**	**02 52 20.1**	**-0.8**
	comp=Z,6.1nm,0.8s						
SQTA	**Sankt Quirin**	**123.32**	**324**	*e*P	**PKPdf**	**02 52 20.8**	**0.0**
	comp=Z,9.2nm,1.1s						
L48A	**N Adams**	**123.42**	**43**	PKPdf	**PKPdf**	**02 52 19.9**	**-1.2**
FETA	**Feichten**	**123.70**	**324**	*e*P	**PKPdf**	**02 52 21.4**	**-0.3**
	comp=Z,5.1nm,0.9s						
N49A	**Columbus Grove**	**124.02**	**44**		**PKPdf**	**02 52 21.3**	**-0.9**
DAVA	**Damuels**	**124.05**	**325**	*e*P	**PKPdf**	**02 52 21.2**	**-1.1**
	comp=Z,6.7nm,0.8s						
P49A	**Miami Univ. Ec**	**124.20**	**46**	P	**PKPdf**	**02 52 21.9**	**-0.7**
	baz=293						
CLTN	**Cedars of Leba**	**124.25**	**50**	PKPdf	**PKPdf**	**02 52 21.2**	**-1.6**
LSQQ	**Lebel-sur-Quev**	**124.37**	**32**	P	**PKPdf**	**02 52 21.7**	**-1.0**
	baz=306						
LRAL	**Lakeview Retre**	**124.69**	**54**	P	**PKPdf**	**02 52 23.1**	**-0.6**
	baz=287						
ALGO	**Algonquin Park**	**125.53**	**36**	P	**PKPdf**	**02 52 24.3**	**-0.6**
	baz=303						
H53A	**Bobcaygeon**	**125.95**	**38**	P	**PKPdf**	**02 52 25.4**	**-0.4**
	baz=302						
P52A	**Corning**	**125.98**	**45**	P	**PKPdf**	**02 52 25.5**	**-0.6**
	baz=295						
Z51A	**Franklin**	**126.06**	**53**	PKPdf	**PKPdf**	**02 52 25.4**	**-1.0**
N53A	**Lisbon**	**126.35**	**43**	PKPdf	**PKPdf**	**02 52 26.2**	**-0.5**
S54A	**Dingess, Beckl**	**127.34**	**46**	P	**PKPdf**	**02 52 28.7**	**-0.1**
	baz=295						
TIGA	**Tifton**	**127.92**	**55**	P	**PKiKP**	**02 52 30.3**	**-0.2**
	baz=288						
GO04	**Tololo Observa**	**130.00**	**138**		**PKPdf**	**02 52 33.7**	**-0.6**
KEST	**Kesra**	**130.02**	**312**	PKP	**PKPdf**	**02 52 34.2**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=225,slow=4.3,SNR=6.4						
LCO	**Las Campanas**	**130.80**	**137**	PKPdf	**PKiKP**	**02 52 36.5**	**-0.3**
AC05	**El Transito**	**131.20**	**137**		**PKPdf**	**02 52 36.8**	**+0.3**
GCUF	**Volcan Galeras**	**137.22**	**95**	*e*P	PKPpre	02 52 37.3	
YOTC	**Yotoco, Valle**	**138.51**	**91**	*e*P	**PKPdf**	**02 52 48.8**	**-1.7**
CBOC	**Ciudad Bolivar**	**138.96**	**88**	*e*P	**PKPdf**	**02 52 47.6**	**-3.8**
RREF	**El Recreo**	**139.57**	**90**	*e*P	**PKPdf**	**02 52 48.3**	**-4.8**
TOLC	**Tolima**	**139.57**	**90**	*e*P	**PKPdf**	**02 52 46.3**	**-6.4**
ORTC	**Ortega, Tolima**	**139.59**	**91**	*e*P	PKPpre	02 52 42.6	
ZARC	**Zaragoza, Cauc**	**140.15**	**86**	*e*P	**PKPdf**	**02 52 46.3**	**-7.0**
PTBC	**PUERTO BERRIO,**	**140.53**	**87**	*e*P	PKPpre	02 52 44.8	
ROSC	**El Rosal**	**140.58**	**90**	PKP	**PKPdf**	**02 52 54.3**	**-0.3**
	comp=Z,5.4nm,0.4s,baz=189,slow=17,SNR=4.6						
SPBC	**San Pablo de B**	**140.88**	**89**	*e*P	PKPpre	02 52 46.5	
CPUP	**Villa Florida**	**140.97**	**147**	PKhKP	PKPpre	02 52 46.4	
	comp=Z,1.6nm,0.7s,baz=280,slow=7.1,SNR=5.1						
CPUP				PKP	**PKPdf**	**02 52 55.1**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=228,slow=2.3,SNR=6.5						
CHIC	**Chingaza**	**141.16**	**90**	*e*P	**PKPdf**	**02 52 48.4**	**-7.3**
OCAC	**Ocana**	**141.68**	**85**	*e*P	**PKPdf**	**02 52 51.7**	**-4.6**
BARC	**Barichara**	**141.80**	**87**	*e*P	PKPdf	02 52 45.9	-11
RUSC	**La Rusia**	**141.87**	**88**	*e*P	**PKPdf**	**02 52 50.6**	**-6.4**
PAMC	**Pamplona, Colo**	**142.29**	**86**	*e*P	PKPdf	02 52 49.1	-8.7
TORD	**Torodi Ar. Bea**	**143.45**	**284**	PKP	PKPab	02 52 56.5	+1.0
	comp=Z,3.8nm,0.7s,baz=78,slow=3.1,SNR=16						
SDV	**Santo Domingo**	**144.32**	**83**	*e*P	PKPbc	02 52 59.5	0.0
MLPR	**Magueyes Islan**	**146.37**	**67**	PKPdf	**PKPdf**	**02 53 03.4**	**-0.7**
OBIP	**Obispado Ponce**	**146.75**	**66**		**PKPdf**	**02 53 01.2**	**-3.5**
SJG	**San Juan**	**147.14**	**66**	*e*P	**PKPdf**	**02 53 04.9**	**-0.5**
MTP	**Monte Pirata**	**147.69**	**66**	PKPdf	**PKPdf**	**02 53 05.2**	**-1.1**
KOWA	**Kowa**	**148.70**	**288**		**PKPbc**	**02 53 11.4**	**-0.5**
KIC	**Kosan Boka**	**150.18**	**272**	*e*PKIKP	**PKPbc**	**02 53 15.4**	**-0.3**
	comp=Z,35nm,0.9s						
DBIC	**Dimbokro**	**150.30**	**273**	PKPbc	**PKPbc**	**02 53 15.4**	**-0.5**
	comp=Z,13nm,0.9s,baz=78,slow=3.1,SNR=16						
LIC	**Lamto**	**150.47**	**272**	*e*PKIKP	**PKPbc**	**02 53 15.8**	**-0.5**
	comp=Z,90nm,1.0s						
TIC	**Toumodi**	**150.47**	**273**	*e*PKIKP	**PKPbc**	**02 53 15.9**	**-0.5**
BDFB	**Brasilia**	**154.66**	**149**	PKPbc	**PKPbc**	**02 53 25.9**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=195,slow=2.0,SNR=12						
BDFB				PKPab	**PKPab**	**02 53 39.5**	**-1.2**
	comp=Z,4.7nm,0.8s,baz=211,slow=3.2,SNR=4.7						
BDFB	**Brasilia**	**154.66**	**149**	PKPbc	**PKPbc**	**02 53 24.9**	**-0.9**

IDC 19 03:01:01.2±4.0,**20°.09S**×**172°.42W,h0**km,**mb3.8**/5,
mb1 4.1/5,**mb1mx3.7**/38,**mbtmp3.8**/5,**MS3.2**/1,**Ms1 3.2**/1,
ms1mx2.6/31,**Error ellipse: s-maj=202.1km**
s-min=26.2km az=150.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	28.69	288	LR	LR	03 18 25.5	
	comp=Z,39nm,18.6s,baz=322,slow=36						
CTA	Charters Tower	38.74	263	P	P	03 08 27.9	+0.3
	1.4nm,0.3s,baz=78,slow=9.3,SNR=3.9						
ASAR	Alice Springs	49.70	256	P	P	03 09 54.5	-1.0
	0.6nm,0.7s,baz=103,slow=8.5,SNR=5.6						
WRA	Warramunga Arr	49.84	260	P	P	03 09 56.6	+0.1
	0.4nm,0.3s,baz=89,slow=5.9,SNR=14						
NVAR	Mina Array Bea	77.21	41	P	P	03 12 57.6	+0.1
	0.4nm,0.7s,baz=224,slow=3.8,SNR=3.7						
ILAR	Eielson Array	86.85	11	P	P	03 13 47.2	0.0
	0.3nm,0.8s,baz=211,slow=6.3,SNR=3.3						

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*IDC **19** 03:02:50.3±2.1, 1°.95N×126°.90E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.5/33, mbtmp3.6/3, Error ellipse: s-maj=170.3km s-min=24.9km az=66.0*

*DJA **19** 03:02:54.2±0.4, 2°N±3°×12°6E±°, h10^{km}, M3.6/7, MLv3.6/7*

ISC 19 03:02:56.6±1.1, **1°.78N**±0°.07×**126°.46E**±0°.08, **h47**^{km}, **n7**, σ**1s.88**/9, **mb3.5**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.35	138	P	Pn	03 03 19.1	0.0
SGSI	Sangihe	2.11	334	P	Pn	03 03 27.9	-1.6
SGSI				S	Sn	03 03 55.7	+1.2
KMSI	Cibinong	2.75	244	P	Pn	03 03 39.1	+0.8
KMSI				S	Sn	03 04 06.8	-3.5
GTOI	Gorontalo	3.63	252	P	Pn	03 03 51.9	+1.6
WRA	Warramunga Arr	22.93	161	P	P	03 07 56.0	-0.9
	1.0nm,0.5s,baz=340,slow=11,SNR=20						
ASAR	Alice Springs	26.31	164	P	P	03 08 28.9	+0.7
	0.3nm,0.3s,baz=346,slow=7.9,SNR=8.1						
MKAR	Makanchi Array	59.00	326	P	P	03 12 52.5	+0.8
	0.3nm,0.4s,baz=119,slow=7.0,SNR=6.7						

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*NIED **19** 03:14:57.4, 40°.17N×142°.18E, h21^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.22; $M_{\theta\theta}$3.17; $M_{\phi\phi}$-3.40; $M_{r\theta}$1.96; $M_{\theta\phi}$-3.08; $M_{\phi r}$-3.02; Fault plane solution: $M_0$5.75000×10^{14} NP1: ϕ_s157.00000°, δ87.00000°, λ38.00000°. NP2: ϕ_s64.00000°, δ52.00000°, λ176.00000°.*

*JMA **19** 03:14:57.4, 40°.17N×142°.18E, h21^{km}±1^{km}, M3.8*

JMA Felt II J1.

*IDC **19** 03:14:58.5±0.9, 40°.40N×141°.93E, h0^{km}, mb3.9/9, mb1 3.9/12, mb1mx3.7/34, mbtmp3.8/12, ML3.0/2, MS2.8/6, Ms1 2.8/6, ms1mx2.6/38, Error ellipse: s-maj=28.4km s-min=17.2km az=84.0*

*NEIC **19** 03:15:02.7±2.6, 40°.44N±0°.07×141°.98E±0°.10, h32^{km}±7^{km}, mb4.6/8, Error ellipse: s-maj=12.9km s-min=7.4km az=133.0*

ISC 19 03:14:57.8±1.2, **40°.22N**±0°.03×**142°.13E**±0°.05, **h9**^{km}±7^{km}, **n49**, σ**2s.01**/51, **mb4.2**/12, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.32	268	P	Pb	03 15 04.9	-0.8
JKEN				S	Sb	03 15 10.2	-0.8
JTH	Tanohata	0.35	216	P	Pg	03 15 04.7	+0.1
JTH				S	Sg	03 15 09.8	+0.6
JANG	Nango	0.49	288	P	Pb	03 15 07.9	-0.8
JANG				S	Sn	03 15 15.5	+1.6
JKZ	Kuzumaki	0.66	249	P	Pg	03 15 10.3	-0.2
JKZ				*e*S	Sb	03 15 19.1	-1.6
MIYJ	Miyakonagasawa	0.68	201	P	Pg	03 15 09.7	-1.2
MIYJ				S	Sg	03 15 18.5	-1.4
JARK	Aomorirokkasho	0.98	324	P	Pg	03 15 15.9	-0.7
JARK				*e*S	Sn	03 15 29.2	-2.5
JOM	Ohasama	0.98	221	P	Pb	03 15 15.4	-1.6
JOM				*e*S	Sb	03 15 28.0	-2.1
JTM	Tenmabayashi	0.99	305	P	Pn	03 15 16.5	-1.4
JTM				S	Sn	03 15 30.3	-1.7
JTM	Tenmabayashi	0.99	305	Pn	Pn	03 15 16.6	-1.2
JAH	Hinai	1.15	269	P	Pb	03 15 18.9	-0.8
JAH				S	Sn	03 15 34.2	-1.6
OFUJ	Ofunato	1.19	198	P	Pn	03 15 17.7	-2.9
OFUJ				*e*S	Sb	03 15 32.8	-3.2
ERM	Erimo	1.96	23	Pn	Pn	03 15 30.7	-0.4
JEW	Eniwo	2.67	349	Pn	Pn	03 15 41.7	+0.7
ASAJ	Asahikawa	3.91	5	Pn	Pn	03 15 59.4	+1.3
	1.6nm,0.3s,baz=200,slow=12,SNR=4.6						
ASAJ				Sn	Sb	03 16 50.5	-3.9
	4.3nm,0.3s,baz=175,slow=33,SNR=6.4						
ASAJ				LR	LR	03 17 12.4	
	comp=Z,30nm,21.4s,baz=344,slow=36						
JKA	Kamikawa-asahi	3.91	5	Pn	Pn	03 15 58.8	+0.8
MJAR	Matsushiro Arr	4.79	221	Pn	Pn	03 16 13.2	+3.1
	0.2nm,0.3s,baz=28,slow=9.7,SNR=9.8						
MJAR				LR	LR	03 18 04.5	
	comp=Z,81nm,21.8s,baz=20,slow=38						
MAJO	Matsushiro	4.79	221	Pn	Pn	03 16 13.0	+2.9
MAT	Matsushiro	4.79	221	P	Pn	03 16 11.3	+1.1
MAT				*e*S	Sn	03 17 07.5	+1.7
JGF	Kuroka	5.96	221	Pn	Pn	03 16 31.7	+5.5
JWT	Wachi	7.26	229	Pn	Pn	03 16 46.9	+2.9
USA0B	Ussuriysk Arra	8.51	301	Pn	Pn	03 17 02.6	+1.4
USRK	Ussuriysk Ar.	8.51	301	Pn	Pn	03 17 01.9	+0.7
	baz=113,slow=14,SNR=2.5						
KSRS	Korea Array	11.42	261	LR	LR	03 21 48.7	
	comp=Z,34nm,19.4s,baz=100,slow=36						
PETK	Petropavlovsk-	16.70	34	LR	LR	03 24 59.0	
	comp=Z,38nm,21.9s,baz=143,slow=36						
SONM	Songino Array	26.61	299	P	P	03 20 34.9	-1.7
	0.3nm,0.6s,baz=91,slow=8.6,SNR=2.8						
SONM				LR	LR	03 32 12.6	
	comp=Z,60nm,18.2s,baz=44,slow=39						
H11N2	WAKE ISLAND Hy	29.45	127	T	T	03 51 49.1	
	baz=320,slow=75,SNR=406						
H11N1	WAKE ISLAND Hy	29.46	127	T	T	03 51 51.6	
	baz=320,slow=75,SNR=482						
H11N3	WAKE ISLAND Hy	29.46	127	T	T	03 51 50.4	
	baz=320,slow=75,SNR=283						
H11S1	WAKE ISLAND Hy	30.26	128	T	T	03 52 50.9	
	baz=321,slow=76,SNR=206						
H11S3	WAKE ISLAND Hy	30.26	128	T	T	03 52 53.8	
	baz=321,slow=76,SNR=167						
H11S2	WAKE ISLAND Hy	30.28	128	T	T	03 52 52.1	
	baz=321,slow=76,SNR=196						
ZAA0	Zalesovo Array	40.25	310	P	P	03 22 37.8	+3.1
ZALV	Zalesovo Beam	40.25	310	P	P	03 22 34.0	-0.7
	1.5nm,0.4s,baz=96,slow=8.1,SNR=14						
MK31	Makanchi Array	42.98	299	P	P	03 22 56.5	-0.7
MKAR	Makanchi Array	42.98	299	P	P	03 22 56.4	-0.8
	0.5nm,0.6s,baz=84,slow=9.2,SNR=8.0						
MKAR				LR	LR	03 41 10.3	
	comp=Z,30nm,18.5s,baz=274,slow=37						
RSO	Redoubt South	44.09	40	P	P	03 23 03.8	-2.4
KURK	Kurchatov	44.47	306	P	P	03 23 08.5	-0.6
KURK				IAmb	IAmb	03 23 14.0	
	comp=Z,10nm,0.8s						
INK	Inuvik	51.31	28	P	P	03 24 01.6	-0.2
	comp=Z,0.6nm,0.6s,baz=278,slow=6.4,SNR=2.4						
INK	Inuvik	51.31	28	P	P	03 24 02.3	+0.5
INK				IAmb	IAmb	03 25 13.5	
	comp=Z,20nm,2.0s						
ABKAR	Akbulak array	56.35	309	P	P	03 24 38.3	-0.7
ABKAR				IAmb	IAmb	03 24 44.1	
	comp=Z,2.3nm,0.7s						
WB0	Warramunga Arr	60.11	188	P	P	03 25 08.9	+3.4
WR0	Warramunga Arr	60.28	188	P	P	03 25 10.1	+3.4
WR0				IAmb	IAmb	03 25 52.7	
	comp=Z,11nm,1.6s						
WB2	Warramunga Arr	60.29	188	P	P	03 25 10.2	+3.5
WRA	Warramunga Arr	60.29	188	P	P	03 25 09.8	+3.1
	comp=Z,2.5nm,0.8s,baz=6.3,slow=6.7,SNR=15						
ASAR	Alice Springs	64.02	188	P	P	03 25 35.0	+3.4
	comp=Z,0.6nm,0.4s,baz=356,slow=5.8,SNR=8.4						
FINES	FINESS Array B	66.27	332	P	P	03 25 46.8	+0.8
	comp=Z,1.8nm,0.6s,baz=26,slow=11,SNR=8.9						
NB2	NORSAR Subarra	71.47	337	P	P	03 26 23.1	+4.7
	comp=Z,1.7nm,0.8s,baz=36,slow=6.5						
NOA	NORSAR Array B	71.47	337	P	P	03 26 20.5	+2.1
	comp=Z,1.0nm,0.7s,baz=38,slow=6.1,SNR=4.5						
AKASG	Malin Array Be	72.13	322	P	P	03 26 24.2	+1.8
	comp=Z,1.3nm,0.6s,baz=47,slow=6.2,SNR=7.2						

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*IDC **19** 03:23:21.6±0.4, 33°.57N×139°.82E, h134^{km}±5^{km}, mb3.2/13, mb1 3.5/15, mb1mx3.4/33, mbtmp3.6/15, Error ellipse: s-maj=20.2km s-min=14.4km az=84.0*

*JMA **19** 03:23:22.0±0.1, 33°.65N×140°.08E, h129^{km}±1^{km}, M3.5*

ISC 19 03:23:21.2±0.7, **33°.60N**±0°.04×**140°.07E**±0°.05, **h133**^{km}±5^{km}, **n40**, σ**1s.28**/57, **mb3.5**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMKN	Mikurajimanish	0.49	306	P	Pn	03 23 40.8	+0.3
JMKN				*e*S	Sn	03 23 54.9	-0.3
JHJ2	Mitsune	0.53	203	P	Pn	03 23 41.5	+0.7
JHJ2				*e*S	Sn	03 23 56.7	+1.1
JHJ	Hachijo jima 2	0.54	206	P	Pn	03 23 41.6	+0.8
	324nm,0.3s,baz=327,slow=19,SNR=60						
JHJ				S	Sn	03 23 56.8	+1.1
	427nm,0.3s,baz=72,slow=19,SNR=23						
JHCJ	Hachijojimakas	0.58	203	P	Pn	03 23 41.8	+0.7
JHCJ				*e*S	Sn	03 23 56.7	+0.6
JKO	Kozu shima	0.97	307	P	Pn	03 23 44.7	+0.7
JKO				*e*S	Sn	03 24 01.7	+0.2
JNIO	Niijimaoohara	1.00	319	P	Pn	03 23 45.0	+0.7
JNIO				*e*S	Sn	03 24 02.0	+0.1
JTHY	Toshimahigashi	1.12	325	P	Pn	03 23 46.3	+0.8
JTHY				*e*S	Sn	03 24 04.3	+0.2
JAOM	Aogashimamukai	1.17	193	P	Pn	03 23 47.4	+1.4
JAOM				*e*S	Sn	03 24 06.5	+1.7
JIM2	Oshima 3	1.23	335	P	Pn	03 23 47.0	+0.4
JIM2				*e*S	Sn	03 24 05.8	-0.2
BSO3	Boso 3	1.25	17	P	Pn	03 23 47.5	+1.0
BSO3				*e*S	Sn	03 24 06.6	+0.7
BSO2	Boso 2	1.28	26	*e*S	Sn	03 24 06.6	+0.3
BSO1	Boso 1	1.29	36	P	Pn	03 23 47.9	+1.3
BSO1				*e*S	Sn	03 24 07.3	+1.2
JIZS	Izushimoda	1.48	319	P	Pn	03 23 49.7	+0.4
JIZS				*e*S	Sn	03 24 10.8	0.0
JOD2	Odawara 2	1.84	334	P	Pn	03 23 53.7	+0.3
JOD2				S	Sn	03 24 17.5	-0.7
JFNN	Fujinakano	1.95	325	P	Pn	03 23 55.5	+0.8
JFNN				*e*S	Sn	03 24 21.0	+0.5
TK02	Tokai 2	1.95	281	P	Pn	03 23 55.5	+1.0
TK02				*e*S	Sn	03 24 20.6	+0.5
TK04	Tokai 4	1.98	294	P	Pn	03 23 55.9	+1.0
TK04				*e*S	Sn	03 24 21.7	+0.9
SHZ3	Shizuoka 3	2.12	314	P	Pn	03 23 57.6	+0.8
SHZ3				S	Sn	03 24 25.1	+1.0
JYN	Shimob	2.27	327	P	Pn	03 23 59.5	+0.8
JYN				*e*S	Sn	03 24 28.1	+0.6
MJAR	Matsushiro Arr	3.30	333	P	Pn	03 24 11.6	-0.2
	1.7nm,0.3s,baz=166,slow=12,SNR=50						
MAT	Matsushiro	3.30	333	P	Pn	03 24 11.7	-0.1
MAT				S	Sn	03 24 49.8	-1.2
JCJ	Chichijima	6.74	164	P	Pn	03 24 55.7	-2.0
	12nm,0.3s,baz=8.5,slow=18,SNR=10						
JCJ				S	Sn	03 26 07.8	-5.3
	7.1nm,0.3s,baz=287,slow=19,SNR=1.5						
ASAJ	Asahikawa	10.68	10	P	Pn	03 25 47.1	-3.2
	0.8nm,0.3s,baz=224,slow=14,SNR=6.0						
KLR	Kul'dur	16.79	341	P	Pn	03 27 06.2	-2.1
	0.2nm,0.3s,baz=156,slow=13,SNR=4.5						
H11N2	WAKE ISLAND Hy	27.57	113	T	T	03 58 02.2	
	baz=306,slow=74,SNR=8.0						
H11N1	WAKE ISLAND Hy	27.58	113	T	T	03 58 01.4	
	baz=306,slow=74,SNR=11						
H11N3	WAKE ISLAND Hy	27.59	113	T	T	03 58 01.5	
	baz=306,slow=74,SNR=7.1						
ZALV	Zalesovo Beam	43.49	315	P	P	03 31 10.8	-0.1
	0.4nm,0.4s,baz=97,slow=12,SNR=2.6						
MKAR	Makanchi Array	45.09	305	P	P	03 31 23.0	-0.8
	0.3nm,0.6s,baz=86,slow=9.9,SNR=5.4						
ILAR	Eielson Array	52.99	31	P	P	03 32 25.0	+1.4
	0.9nm,0.7s,baz=275,slow=7.0,SNR=10.0						
WRA	Warramunga Arr	53.53	187	P	P	03 32 27.6	-0.5
	0.2nm,0.3s,baz=3.3,slow=8.2,SNR=6.3						
ASAR	Alice Springs	57.25	187	P	P	03 32 54.9	+0.1
	0.2nm,0.5s,baz=17,slow=12,SNR=5.7						
INK	Inuvik	57.94	26	P	P	03 33 00.7	+1.7
	0.9nm,0.4s,baz=279,slow=6.7,SNR=7.1						
YKA	Yellowknife Ar	67.33	29	P	P	03 34 01.1	-0.2
	0.1nm,0.3s,baz=309,slow=4.9,SNR=6.4						
FINES	FINESS Array B	71.33	332	P	P	03 34 25.8	-0.1
	1.2nm,0.6s,baz=96,slow=7.7,SNR=5.7						
NOA	NORSAR Array B	76.91	337	P	P	03 34 58.5	+0.1
	0.5nm,0.6s,baz=49,slow=4.5,SNR=2.9						
NVAR	Mina Array Bea	77.94	52	P	P	03 35 06.3	+1.4
	0.3nm,0.6s,baz=305,slow=6.4,SNR=3.3						
PDAR	Pinedale Array	80.87	44	P	P	03 35 22.3	+1.7
	0.2nm,0.5s,baz=284,slow=3.6,SNR=3.2						
GERES	GERESS Array B	85.03	328	P	P	03 35 41.0	-0.7
	0.2nm,0.5s,baz=37,slow=6.7,SNR=3.0						
TXAR	Lajitas Array	93.10	52	P	P	03 36 22.2	+1.9
	0.3nm,0.6s,baz=284,slow=3.3,SNR=6.3						

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*BJI **19** 03:48:30.5±0.0, 22°.87N×121°.62E, h110^{km}, mB4.6/21, mb4.2/29*

*NEIC **19** 03:48:32.2±1.7, 22°.76N±0°.07×121°.48E±0°.06, h127^{km}±4^{km}, mb4.4/52, Error ellipse: s-maj=10.7km s-min=8.0km az=190.0*

*JMA **19** 03:48:32.5±0.3, 22°.84N×121°.48E, h123^{km}±4^{km}, M4.1*

*TAP **19** 03:48:33.7, 22°.87N×121°.58E, h118^{km}, ML5.0, C*

*IDC **19** 03:48:38.3±3.7, 22°.80N×121°.62E, h188^{km}±36^{km}, mb3.7/20, mb1 3.9/21, mb1mx3.7/43, mbtmp4.2/21, MS3.3/2, Ms1 3.3/2, ms1mx2.7/36, Error ellipse: s-maj=14.7km s-min=9.1km az=73.0*

ISC 19 03:48:33.0±0.5, **22°.86N**±0°.03×**121°.54E**±0°.03, **h130**^{km}±4^{km}, **n282**, σ**1s.05**/422, **mb4.3**/59, **3C-59D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.19	199	*i* P	Pn	03 48 50.5	-0.3
	baz=207						
LDUT				*i* S	Sn	03 49 03.1	-1.2
	baz=207						
EDH	Donghe	0.24	298	⇓*i*P	Pn	03 48 50.8	-0.1
	baz=293						
EDH				S	Sn	03 49 04.2	-0.3
	baz=293						
CHKT	Chengkung	0.29	327	⇑*i*P	Pn	03 48 51.1	0.0
	baz=321						
CHKT				*e*S	Sn	03 49 04.6	-0.2
	baz=321						
TTN	Taitung	0.38	254	P	Pn	03 48 51.5	+0.1
	baz=267						
TTN				*e*S	Sn	03 49 05.9	+0.6
	baz=267						
LONT	Longtian	0.38	278	⇓*i*P	Pn	03 48 51.1	-0.4
	baz=281						
LONT				*e*S	Sn	03 49 03.5	-2.0
	baz=281						
FULB	Fuli	0.41	327	*i* P	Pn	03 48 51.6	0.0
	baz=321						
FULB				*e*S	Sn	03 49 06.3	+0.5
	baz=321						
TWGBT	Beinan	0.42	265	⇓*i*P	Pn	03 48 51.1	-0.6
	baz=264						
TWGBT				*i* S	Sn	03 49 04.5	-1.3
	baz=264						
TWG	Pinlang	0.43	265	⇓*i*P	Pn	03 48 51.2	-0.5
	baz=264						
TWG				S	Sn	03 49 04.3	-1.6
	baz=264						
TWG	Pinlang	0.43	265		Pn	03 48 51.0	-0.8
TWG				Sn	Sn	03 49 04.3	-1.6
EYUL	Yuli	0.53	338	⇓P	Pn	03 48 51.8	-0.5
	baz=327						
EYUL				*e*S	Sn	03 49 06.5	-0.4
	baz=327						
TWF1	Yuli	0.54	336	⇓*i*P	Pn	03 48 51.9	-0.5
	baz=327						
TWF1				*e*S	Sn	03 49 05.3	-1.7
	baz=327						
YULB	Yu-li	0.58	337	⇓*i*P	Pn	03 48 52.0	-0.5
	baz=329						
YULB				S	Sn	03 49 05.7	-1.7
	baz=329						
YULB	Yu-li	0.58	337	Pn	Pn	03 48 51.8	-0.8
YULB				Sn	Sn	03 49 05.5	-1.9
ELDTW	Lidau	0.58	305	⇓*i*P	Pn	03 48 52.9	+0.1
	baz=302						
ELDTW				*e*S	Sn	03 49 06.8	-0.9
	baz=302						
ECL	Taimali	0.60	245	P	Pn	03 48 52.4	-0.3
	baz=251						
ECL				*e*S	Sn	03 49 05.8	-1.7
	baz=251						
HGSD	Ruisui	0.64	351	⇓*i*P	Pn	03 48 53.1	+0.1
	baz=341						
HGSD				*e*S	Sn	03 49 09.2	+1.0
	baz=341						
EHY	Hungye	0.68	343	⇓*i*P	Pn	03 48 52.8	-0.4
	baz=336						
EHY				*e*S	Sn	03 49 06.9	-1.7
	baz=336						
TAW	Tawu	0.77	230	*e*P	Pn	03 48 53.9	0.0
	baz=226						
TAW				*e*S	Sn	03 49 09.8	0.0
	baz=226						
STYT	Tauyuan	0.78	293	⇓*i*P	Pn	03 48 54.3	+0.2
	baz=283						
STYT				*e*S	Sn	03 49 09.8	-0.3
	baz=283						
EAST	Anshuo	0.79	234	P	Pn	03 48 54.0	-0.1
	baz=234						
EAST				*e*S	Sn	03 49 09.8	-0.3
	baz=234						
LAY	Lan-yu	0.81	179	*e*P	Pn	03 48 53.7	-0.7
	baz=186						
LAY				*e*S	Sn	03 49 09.4	-1.1
	baz=186						
EGFH	Guangfu	0.81	353	*i* P	Pn	03 48 54.0	-0.3
	baz=350						
EGFH				*e*S	Sn	03 49 09.6	-0.9
	baz=350						
SLGT	Liugui	0.83	280	*i* P	Pn	03 48 55.1	+0.7
	baz=269						
SLGT				*e*S	Sn	03 49 10.6	-0.1
	baz=269						
TSMG	Majia	0.84	260	⇓*i*P	Pn	03 48 54.9	+0.4
	baz=259						
TSMG				*e*S	Sn	03 49 09.8	-0.9
	baz=259						
SSD	Sandimen	0.84	263	⇓*i*P	Pn	03 48 54.9	+0.4
	baz=262						
SSD				*e*S	Sn	03 49 10.1	-0.7
	baz=262						
MASBT	Mashibuluo	0.87	254	⇓*i*P	Pn	03 48 55.2	+0.5
	baz=254						
MASBT				*e*S	Sn	03 49 10.0	-1.2
	baz=254						
SGST	Jiashian	0.91	284	⇓*i*P	Pn	03 48 54.5	-0.6
	baz=275						
SGST				*e*S	Sn	03 49 11.2	-0.6
	baz=275						
WTP	Ta-pu	0.94	295	⇓*i*P	Pn	03 48 55.5	+0.1
	baz=303						
WTP				*e*S	Sn	03 49 13.1	+0.7
	baz=303						
ALS	Alishan	0.94	314	⇓*i*P	Pn	03 48 55.8	+0.1
	baz=303						
ALS				*e*S	Sn	03 49 13.0	+0.1
	baz=303						
ESL	Shilin	0.96	354	⇓*i*P	Pn	03 48 55.1	-0.4
	baz=352						
ESL				*e*S	Sn	03 49 11.6	-1.0
	baz=352						
SCST	Cishan	0.96	272	*e*P	Pn	03 48 56.3	+0.8
	baz=271						
SCST				*e*S	Sn	03 49 13.6	+0.9
	baz=271						
SSPT	Xinbi	0.97	248	⇓*i*P	Pn	03 48 56.3	+0.7
	baz=254						
SSPT				*e*S	Sn	03 49 13.3	+0.5
	baz=254						
SGLT	Jiouru	0.97	262	*e*P	Pn	03 48 57.2	+1.5
	baz=262						
SGLT				*e*S	Sn	03 49 13.5	+0.7
	baz=262						
TSPT	Pingtung City	0.98	260	*e*P	Pn	03 48 56.6	+1.0
	baz=259						
TSPT				*e*S	Sn	03 49 14.5	+1.6
	baz=259						
CHN1	Nanshi	0.99	290	⇓*i*P	Pn	03 48 56.0	+0.2
	baz=297						
CHN1				*e*S	Sn	03 49 13.0	-0.1
	baz=297						
CHN4	Tsaushan	1.00	300	⇓*i*P	Pn	03 48 56.0	+0.1
	baz=298						
CHN4				*e*S	Sn	03 49 13.1	-0.2
	baz=298						
SNST	Tainan City	1.02	291	⇓*i*P	Pn	03 48 56.3	+0.2
	baz=298						
SNST				*e*S	Sn	03 49 13.1	-0.6
	baz=298						
TWM1	Shoushan	1.03	268	⇓*i*P	Pn	03 48 57.5	+1.3
	baz=268						
TWM1				*e*S	Sn	03 49 15.5	+1.7
	baz=268						
WHYT	Xinyi Township	1.05	323	*e*P	Pn	03 48 55.9	-0.5
	baz=313						
WHYT				*e*S	Sn	03 49 13.5	-0.7
	baz=313						
TWK	Hsinying	1.05	293	⇓*i*P	Pn	03 48 56.5	+0.1
	baz=292						
TWK				*e*S	Sn	03 49 13.8	-0.5
	baz=292						
SSLB	Suanglung	1.07	330	⇓*i*P	Pn	03 48 56.8	+0.2
	baz=318						
SSLB				*e*S	Sn	03 49 13.8	-0.8
	baz=318						
SSLB	Suanglung	1.07	330	Pn	Pn	03 48 56.6	0.0
SSLB				Sn	Sn	03 49 14.1	-0.5
CHN5	Tsauling	1.08	313	⇓*i*P	Pn	03 48 56.9	+0.1
	baz=302						
CHN5				*e*S	Sn	03 49 14.6	-0.2
	baz=302						
CHN3	Shinhua	1.10	282	*i* P	Pn	03 48 58.2	+1.3
	baz=274						
CHN3				*e*S	Sn	03 49 16.9	+1.9
	baz=274						
SNJT	Kaohsiung City	1.11	265	P	Pn	03 48 57.9	+1.0
	baz=264						
SNJT				*e*S	Sn	03 49 17.1	+1.9
	baz=264						
HWA	Hwalien	1.12	3	P	Pn	03 48 57.6	+0.6
	baz=8.0						
HWA				*e*S	Sn	03 49 16.2	+0.9
	baz=8.0						
TSEB	Hengchuen, Pin	1.12	212	*e*P	Pn	03 48 58.0	+0.9
	baz=217						
TSEB				*e*S	Sn	03 49 15.6	+0.3
	baz=217						
HEN	Hengchun	1.12	221	*e*P	Pn	03 48 58.0	+0.9
	baz=222						
HEN				*e*S	Sn	03 49 15.6	+0.1
	baz=222						
TWKBT	Hengchun	1.13	217	*e*P	Pn	03 48 57.5	+0.3
	baz=218						
TWKBT				*e*S	Sn	03 49 14.8	-0.7
	baz=218						
TWK1	Hengchun	1.13	217	P	Pn	03 48 57.7	+0.5
	baz=216						
TWK1				*e*S	Sn	03 49 15.2	-0.3
	baz=216						
SNW	Nanwan	1.15	219	*e*P	Pn	03 48 58.5	+1.1
	baz=220						
SNW				*e*S	Sn	03 49 16.6	+0.7
	baz=220						
KAU	Kaohsiung	1.17	256	*e*P	Pn	03 48 58.5	+0.9
	baz=249						
KAU				*e*S	Sn	03 49 17.7	+1.5
	baz=249						
SMLT	Sun Moon Lake	1.18	330	⇓*i*P	Pn	03 48 58.0	+0.2
	baz=320						
SMLT				*e*S	Sn	03 49 18.0	+1.3
	baz=320						
WLCH	Liuqiu	1.18	245	P	Pn	03 48 59.4	+1.7
	baz=253						
WLCH				*e*S	Sn	03 49 18.9	+2.5
	baz=253						
CHN2	Minshiung	1.19	305	P	Pn	03 48 58.0	+0.3
	baz=296						
CHN2				*e*S	Sn	03 49 16.4	-0.1
	baz=296						
TWP	Hsiaoliuchiu	1.20	245	P	Pn	03 48 59.3	+1.4
	baz=253						
TWP				*e*S	Sn	03 49 18.8	+2.0
	baz=253						
CHY	Chiayi	1.21	302	⇓P	Pn	03 48 58.0	+0.1
	baz=301						
CHY				S	Sn	03 49 16.8	-0.1
	baz=301						
TYC	Yuchr	1.22	329	⇓*i*P	Pn	03 48 58.1	+0.1

	baz=319						
TYC				*e*S	Sn	03 49 17.2	+0.1
	baz=319						
WJS	**Zhushan**	**1.22**	**322**	*i* P	**Pn**	**03 48 58.3**	**+0.3**
	baz=320						
WJS				*e*S	**Sn**	**03 49 18.6**	**+1.5**
	baz=320						
TWD	**Chiawan**	**1.22**	**2**	⇓*i*P	**Pn**	**03 48 58.1**	**+0.1**
	baz=350						
TWD				S	**Sn**	**03 49 16.5**	**-0.7**
	baz=350						
WGK	**Gukeng**	**1.22**	**313**	⇓*i*P	**Pn**	**03 48 58.4**	**+0.4**
	baz=303						
WGK				*e*S	**Sn**	**03 49 17.1**	**0.0**
	baz=303						
TAI1	**Yung-k'ang**	**1.22**	**279**	*e*P	**Pn**	**03 48 58.9**	**+0.9**
	baz=272						
TAI1				*e*S	**Sn**	**03 49 17.5**	**+0.5**
	baz=272						
WDLH	**Douliu**	**1.24**	**312**	⇓*i*P	**Pn**	**03 48 58.6**	**+0.4**
	baz=302						
WDLH				*e*S	**Sn**	**03 49 18.0**	**+0.5**
	baz=302						
CHGB	**Renai**	**1.24**	**344**	⇓*i*P	**Pn**	**03 48 59.5**	**+0.9**
	baz=337						
CHGB				*e*S	**Sn**	**03 49 18.8**	**+0.8**
	baz=337						
ICHU	**Yijhu**	**1.26**	**294**	⇓*i*P	**Pn**	**03 48 58.9**	**+0.4**
	baz=299						
ICHU				*e*S	**Sn**	**03 49 18.2**	**+0.3**
	baz=299						
WPL	**Puli Township**	**1.27**	**335**	⇓P	**Pn**	**03 48 59.0**	**+0.5**
	baz=325						
WPL				*e*S	**Sn**	**03 49 18.4**	**+0.3**
	baz=325						
SCLT	**Jiali**	**1.28**	**285**	⇓*i*P	**Pn**	**03 48 59.1**	**+0.5**
	baz=284						
SCLT				S	**Sn**	**03 49 18.5**	**+0.3**
	baz=284						
WNT	**Mingjian**	**1.28**	**322**	⇓*i*P	**Pn**	**03 48 59.1**	**+0.4**
	baz=315						
WNT				*e*S	**Sn**	**03 49 18.4**	**+0.1**
	baz=315						
WLGB	**Puzi**	**1.30**	**299**	⇓*i*P	**Pn**	**03 48 58.2**	**-0.6**
	baz=297						
WLGB				S	**Sn**	**03 49 17.3**	**-1.2**
	baz=297						
DPDB	**Guoxing**	**1.30**	**334**	⇓*i*P	**Pn**	**03 48 59.4**	**+0.5**
	baz=325						
DPDB				*e*S	**Sn**	**03 49 18.4**	**-0.4**
	baz=325						
WHF	**Hehuan Shan**	**1.31**	**349**	⇓*i*P	**Pn**	**03 48 60.0**	**+0.5**
	baz=352						
WHF				*e*S	**Sn**	**03 49 19.4**	**-0.2**
	baz=352						
WNT1	**Nantou City**	**1.31**	**323**	P	**Pn**	**03 48 59.5**	**+0.5**
	baz=316						
WNT1				*e*S	**Sn**	**03 49 19.0**	**+0.2**
	baz=316						
CHN8	**Yiju**	**1.32**	**292**	⇓*i*P	**Pn**	**03 48 59.3**	**+0.3**
	baz=296						
CHN8				S	**Sn**	**03 49 18.9**	**0.0**
	baz=296						
WTK	**Tuku**	**1.34**	**308**	⇓P	**Pn**	**03 48 59.5**	**+0.2**
	baz=300						
WTK				*i* S	**Sn**	**03 49 19.2**	**-0.2**
	baz=300						
ETLH	**Xiulin Townshi**	**1.34**	**358**	⇓*i*P	**Pn**	**03 48 59.4**	**-0.1**
	baz=356						
ETLH				*e*S	**Sn**	**03 49 18.7**	**-1.0**
	baz=356						
WWF	**Wufeng**	**1.41**	**327**	⇓P	**Pn**	**03 49 00.7**	**+0.6**
	baz=320						
WWF				*e*S	**Sn**	**03 49 21.6**	**+0.9**
	baz=320						
FUSS	**Fushou**	**1.41**	**349**	⇓P	**Pn**	**03 49 01.6**	**+1.2**
	baz=355						
FUSS				S	**Sn**	**03 49 22.5**	**+1.3**
	baz=355						
TDCB	**Techi**	**1.43**	**346**	⇓*i*P	**Pn**	**03 49 01.1**	**+0.6**
	baz=337						
TDCB				*e*S	**Sn**	**03 49 21.3**	**-0.2**
	baz=337						
WSF	**Szhu**	**1.44**	**303**	P	**Pn**	**03 49 00.4**	**0.0**
	baz=302						
WSF				S	**Sn**	**03 49 20.5**	**-0.7**
	baz=302						
RLNB	**Erlin**	**1.49**	**314**	⇓*i*P	**Pn**	**03 49 01.2**	**+0.2**
	baz=308						
RLNB				*e*S	**Sn**	**03 49 22.3**	**-0.1**
	baz=308						
TCU	**Taichung**	**1.51**	**329**	⇓P	**Pn**	**03 49 01.6**	**+0.4**
	baz=327						
TCU				*e*S	**Sn**	**03 49 23.1**	**+0.3**
	baz=327						
WCHH	**Zhanghua**	**1.51**	**324**	⇓P	**Pn**	**03 49 01.6**	**+0.4**
	baz=315						
WCHH				*e*S	**Sn**	**03 49 23.4**	**+0.6**
	baz=315						
WHP	**Taichung City**	**1.52**	**339**	⇓*i*P	**Pn**	**03 49 01.5**	**+0.1**
	baz=337						
WHP				*e*S	**Sn**	**03 49 22.8**	**-0.2**
	baz=337						
WMLT	**Mailiao**	**1.53**	**308**	P	**Pn**	**03 49 01.5**	**+0.1**
	baz=301						
WMLT				*e*S	**Sn**	**03 49 23.2**	**0.0**
	baz=301						
NNSB	**Datong**	**1.57**	**355**	⇓*i*P	**Pn**	**03 49 02.8**	**+0.7**
	baz=353						
NNSB				S	**Sn**	**03 49 23.6**	**-0.7**
	baz=353						
ENA	**Nanau**	**1.57**	**7**	P	**Pn**	**03 49 02.2**	**+0.3**
	baz=11						
ENA				*e*S	**Sn**	**03 49 23.4**	**-0.7**
	baz=11						
NNS	**Nan Shan**	**1.58**	**355**	⇓*i*P	**Pn**	**03 49 03.0**	**+0.8**
	baz=353						
NNS				*e*S	**Sn**	**03 49 25.1**	**+0.6**
	baz=353						
WDJ	**Dajia District**	**1.70**	**331**	*e*P	**Pn**	**03 49 03.4**	**+0.1**
	baz=329						
WDJ				*e*S	**Sn**	**03 49 26.5**	**-0.1**
	baz=329						
NSY	**Sanyi**	**1.71**	**335**	*e*P	**Pn**	**03 49 03.5**	**0.0**
	baz=334						
NSY				*e*S	**Sn**	**03 49 27.8**	**+1.0**
	baz=334						
NDT	**Datong Townshi**	**1.74**	**359**	⇓*i*P	**Pn**	**03 49 04.5**	**+0.7**
	baz=352						
NDT				*e*S	**Sn**	**03 49 26.2**	**-1.2**
	baz=352						
TWC	**Suao**	**1.77**	**9**	⇓*i*P	**Pn**	**03 49 04.8**	**+0.6**
	baz=14						
TWC				*e*S	**Sn**	**03 49 28.6**	**+0.5**
	baz=14						
ENTT	**Nioudou**	**1.77**	**1**	⇓*i*P	**Pn**	**03 49 05.0**	**+0.7**
	baz=5.0						
ENTT				*e*S	**Sn**	**03 49 27.8**	**-0.5**
	baz=5.0						
WDGT	**Dungji**	**1.78**	**283**	⇓P	**Pn**	**03 49 04.0**	**-0.3**
	baz=277						
WDGT				*e*S	**Sn**	**03 49 26.1**	**-2.0**
	baz=277						
NMLH	**Miaoli**	**1.81**	**338**	P	**Pn**	**03 49 04.7**	**+0.1**
	baz=327						
NMLH				*e*S	**Sn**	**03 49 27.7**	**-1.2**
	baz=327						
YHNB	**Yeheng**	**1.81**	**355**	⇓*i*P	**Pn**	**03 49 05.5**	**+0.8**
	baz=353						
YHNB				*e*S	**Sn**	**03 49 27.4**	**-1.7**
	baz=353						
YHNB	**Yeheng**	**1.81**	**355**	Pn	**Pn**	**03 49 05.5**	**+0.8**
YHNB				Sn	**Sn**	**03 49 29.2**	**+0.1**
NSK	**Sanguang**	**1.82**	**355**	P	**Pn**	**03 49 05.7**	**+0.8**
	baz=353						
NSK				*e*S	**Sn**	**03 49 30.1**	**+0.8**
	baz=353						
NSTT	**Nanjuang**	**1.83**	**345**	P	**Pn**	**03 49 04.5**	**-0.5**
	baz=333						
NSTT				*e*S	**Sn**	**03 49 28.2**	**-1.3**
	baz=333						
LIOB	**Emei**	**1.84**	**345**	*e*P	**Pn**	**03 49 04.9**	**-0.2**
	baz=334						
LIOB				*e*S	**Sn**	**03 49 28.4**	**-1.3**
	baz=334						
TWE	**Neicheng**	**1.86**	**4**	P	**Pn**	**03 49 05.9**	**+0.7**
	baz=2.0						
TWE				*e*S	**Sn**	**03 49 30.6**	**+0.7**
	baz=2.0						
NWLT	**Wulai**	**1.91**	**359**	⇓P	**Pn**	**03 49 06.9**	**+0.9**
	baz=357						
NWLT				*e*S	**Sn**	**03 49 32.5**	**+1.3**
	baz=357						
PHUB	**P'eng-hu**	**1.92**	**290**	*i* P	**Pn**	**03 49 05.4**	**-0.6**
	baz=289						
PHUB				*e*S	**Sn**	**03 49 29.4**	**-1.9**
	baz=289						
PNG	**Penghu**	**1.96**	**292**	⇑*i*P	**Pn**	**03 49 06.3**	**-0.1**
	baz=291						
PNG				*e*S	**Sn**	**03 49 30.4**	**-1.6**
	baz=291						
HSN1	**Hsinchu**	**1.97**	**346**	P	**Pn**	**03 49 06.8**	**+0.1**
	baz=335						
HSN1				*e*S	**Sn**	**03 49 32.3**	**-0.1**
	baz=335						
VCHM	**Qimei**	**1.97**	**281**	P	**Pn**	**03 49 06.1**	**-0.5**
	baz=280						
VCHM				*e*S	**Sn**	**03 49 29.9**	**-2.5**
	baz=280						
SBCB	**Hsinchu**	**1.99**	**345**	P	**Pn**	**03 49 06.8**	**-0.1**
	baz=335						
SBCB				*e*S	**Sn**	**03 49 33.2**	**+0.3**
	baz=335						
HSN	**Hsinchu**	**2.00**	**345**	P	**Pn**	**03 49 07.1**	**+0.1**
	baz=335						
HSN				*e*S	**Sn**	**03 49 32.2**	**-0.9**
	baz=335						
NTC	**Toucheng**	**2.01**	**8**	P	**Pn**	**03 49 08.2**	**+1.2**
	baz=355						
NTC				*e*S	**Sn**	**03 49 34.1**	**+1.0**
	baz=355						
EGS		**2.01**	**10**	*e*P	**Pn**	**03 49 08.0**	**+0.9**
	baz=18						
EGS				*e*S	**Sn**	**03 49 33.1**	**-0.1**
	baz=18						
JYNG	**Yonagunijimaku**	**2.04**	**39**	P	**Pn**	**03 49 08.6**	**+1.1**
JYNG				*e*S	**Sn**	**03 49 35.6**	**+1.6**
YOJ	**Yonaguni jima**	**2.09**	**40**	P	**Pn**	**03 49 09.1**	**+1.0**
YOJ				*e*S	**Sn**	**03 49 36.3**	**+1.3**
YOJ	**Yonaguni jima**	**2.09**	**40**	*e*P	**Pn**	**03 49 08.9**	**+0.8**
	baz=45						
YOJ				*e*S	**Sn**	**03 49 32.0**	**-3.0**
	baz=45						
YOJ	**Yonaguni jima**	**2.09**	**40**	Pn	**Pn**	**03 49 08.8**	**+0.7**
YOJ				Sn	**Sn**	**03 49 36.0**	**+1.0**
NHDH	**Xindian Distri**	**2.10**	**360**	P	**Pn**	**03 49 08.8**	**+0.6**
	baz=358						
NHDH				*e*S	**Sn**	**03 49 34.8**	**-0.4**
	baz=358						
TATO	**Taipei**	**2.11**	**359**	P	**Pn**	**03 49 08.8**	**+0.5**
	baz=357						
TATO				*e*S	**Sn**	**03 49 36.0**	**+0.5**
	baz=357						
TATO	**Taipei**	**2.11**	**359**	Pn	**Pn**	**03 49 08.5**	**+0.2**
TATO				Sn	**Sn**	**03 49 35.4**	**0.0**
TWA	**Mucha**	**2.11**	**1**	P	**Pn**	**03 49 09.1**	**+0.7**
	baz=351						
TWA				*e*S	**Sn**	**03 49 35.5**	**0.0**
	baz=351						
TIPB	**Shuangxi**	**2.12**	**7**	P	**Pn**	**03 49 09.7**	**+1.2**
	baz=356						
TIPB				*e*S	**Sn**	**03 49 36.6**	**+0.9**
	baz=356						
NCUH	**Zhongli**	**2.13**	**351**	P	**Pn**	**03 49 08.6**	**+0.1**
	baz=340						
NCUH				*e*S	**Sn**	**03 49 34.4**	**-1.4**
	baz=340						
NCU	**National Centr**	**2.13**	**351**	*e*P	**Pn**	**03 49 08.2**	**-0.3**
	baz=340						
NCU				*e*S	**Sn**	**03 49 34.6**	**-1.3**
	baz=340						
NTY	**Taoyuan**	**2.15**	**354**	*e*P	**Pn**	**03 49 08.8**	**+0.1**
	baz=343						
NTY				*e*S	**Sn**	**03 49 35.6**	**-0.5**
	baz=343						
TAP	**Taipei**	**2.17**	**359**	*e*P	**Pn**	**03 49 08.3**	**-0.7**
	baz=357						
TAP				*e*S	**Sn**	**03 49 36.4**	**-0.4**
	baz=357						
TWB1	**Santiao Chiao**	**2.18**	**11**	*e*P	**Pn**	**03 49 09.7**	**+0.5**
	baz=18						
TWB1				*e*S	**Sn**	**03 49 36.3**	**-0.6**
	baz=18						
NWF	**Wu-fen Shan**	**2.21**	**6**	*e*P	**Pn**	**03 49 10.6**	**+0.9**
	baz=353						
NWF				*e*S	**Sn**	**03 49 38.4**	**+0.5**
	baz=353						
WFSB	**Wu-fen Shan**	**2.21**	**6**	P	**Pn**	**03 49 10.2**	**+0.6**
	baz=353						
WFSB				*e*S	**Sn**	**03 49 38.3**	**+0.6**
	baz=353						
TWS1	**Kuangyinshan**	**2.24**	**357**	P	**Pn**	**03 49 10.1**	**+0.2**
	baz=355						
TWS1				*e*S	**Sn**	**03 49 38.4**	**+0.2**
	baz=355						
YM01	**YM01**	**2.28**	**1**	P	**Pn**	**03 49 10.9**	**+0.4**
	baz=359						
YM01				*e*S	**Sn**	**03 49 38.7**	**-0.5**
	baz=359						
YM04	**YM04**	**2.29**	**360**	P	**Pn**	**03 49 10.7**	**+0.2**
	baz=359						
YM04				*e*S	**Sn**	**03 49 38.7**	**-0.7**
	baz=359						
YM10	**YM10**	**2.29**	**1**	P	**Pn**	**03 49 10.9**	**+0.3**
	baz=359						
YM10				*e*S	**Sn**	**03 49 37.5**	**-1.9**
	baz=359						
TNOU	**National Taiwa**	**2.29**	**5**	*e*P	**Pn**	**03 49 09.1**	**-1.5**
	baz=354						
TNOU				*e*S	**Sn**	**03 49 38.1**	**-1.3**
	baz=354						
YM05	**YM05**	**2.30**	**1**	P	**Pn**	**03 49 10.9**	**+0.2**
	baz=359						
YM05				*e*S	**Sn**	**03 49 39.2**	**-0.5**
	baz=359						
NTST	**Danshui**	**2.30**	**358**	P	**Pn**	**03 49 10.8**	**+0.1**
	baz=356						
NTST				*e*S	**Sn**	**03 49 39.5**	**-0.1**
	baz=356						
YM11	**YM11**	**2.30**	**1**	P	**Pn**	**03 49 11.3**	**+0.5**
	baz=359						
YM11				*e*S	**Sn**	**03 49 36.9**	**-2.8**
	baz=359						
YM03	**YM03**	**2.31**	**0**	P	**Pn**	**03 49 11.2**	**+0.4**
	baz=358						
YM03				*e*S	**Sn**	**03 49 40.0**	**0.0**
	baz=358						
ANP	**Anpu**	**2.32**	**360**	P	**Pn**	**03 49 11.4**	**+0.4**
	baz=358						
ANP				*e*S	**Sn**	**03 49 40.0**	**-0.3**
	baz=358						
YM08	**YM08**	**2.32**	**1**	*e*P	**Pn**	**03 49 10.8**	**-0.2**
	baz=351						
YM08				*e*S	**Sn**	**03 49 39.6**	**-0.6**
	baz=351						
HATJ	**Hateruma jima**	**2.40**	**60**	P	**Pn**	**03 49 12.3**	**+0.4**
HATJ				*e*S	**Sn**	**03 49 43.0**	**+1.2**
TWY	**Chenhua**	**2.41**	**1**	P	**Pn**	**03 49 12.8**	**+0.7**
	baz=352						
IRIF	**Iriomote-Funau**	**2.49**	**53**	P	**Pn**	**03 49 13.7**	**+0.7**
IRIF				*e*S	**Sn**	**03 49 45.0**	**+1.1**
JKRS	**Kuro-shima**	**2.65**	**58**	P	**Pn**	**03 49 15.8**	**+0.7**
PCYT	**Pengchaiyu**	**2.80**	**10**	*e*P	**Pn**	**03 49 17.0**	**0.0**
	baz=8.0						
JIJ	**Ishigaki jima**	**2.82**	**57**	P	**Pn**	**03 49 17.3**	**0.0**
VWUC	**VWUC**	**2.86**	**318**	*e*P	**Pn**	**03 49 16.6**	**-1.1**
	baz=317						
JISG	**Ishigakijimahi**	**3.07**	**55**	P	**Pn**	**03 49 19.7**	**-0.8**
JISG				*e*S	**Sn**	**03 49 58.0**	**+0.8**
PTTC	**Pingtan**	**3.09**	**329**	*e*P	**Pn**	**03 49 19.9**	**-0.8**
	baz=328						
PTMZ	**Houxiangcun**	**3.10**	**315**	*e*P	**Pn**	**03 49 20.3**	**-0.6**
	baz=314						
KNM	**Kinmen**	**3.24**	**299**	*e*P	**Pn**	**03 49 23.5**	**+0.7**
	baz=297						
KNMB	**Chin-men Tao**	**3.30**	**300**	*e*P	**Pn**	**03 49 22.8**	**-0.8**
	baz=299						
KNMB	**Chin-men Tao**	**3.30**	**300**	Pn	**Pn**	**03 49 22.6**	**-0.9**
KNMB				Sn	**Sn**	**03 49 59.4**	**-3.1**
JTJ	**Tarama**	**3.40**	**58**	P	**Pn**	**03 49 25.1**	**+0.3**
JTJ				S	**Sn**	**03 50 06.4**	**+1.5**
QZH	**Quanzhou**	**3.40**	**308**	⇑*i*P	**Pn**	**03 49 24.1**	**-0.7**
QZH				S	**Sn**	**03 50 02.6**	**-2.4**
QZH				smax	smax		
	comp=N,320nm,0.4s						
QZH				smax	smax		
	comp=E,280nm,0.4s						
MATB	**Ma-tsu**	**3.59**	**336**	*e*P	**Pn**	**03 49 26.1**	**-1.2**
	baz=334						
MSUT	**Lienchiang**	**3.61**	**336**	*e*P	**Pn**	**03 49 26.6**	**-1.0**
	baz=335						
AXDP	**Jialang**	**3.85**	**303**	*e*P	**Pn**	**03 49 30.2**	**-0.5**
	baz=302						
JIRB	**Irabujima**	**3.86**	**59**	P	**Pn**	**03 49 31.4**	**+0.5**
JMJ2	**Miyako jima3**	**3.94**	**61**	P	**Pn**	**03 49 32.7**	**+0.7**
JMJ	**Miyako jima 2**	**3.95**	**60**	*e*P	**Pn**	**03 49 33.1**	**+1.0**
	baz=59						
MHZQ	**Yeshan**	**3.96**	**325**	*e*P	**Pn**	**03 49 31.1**	**-1.1**
	baz=324						
JIKM	**Ikemajima**	**3.97**	**58**	P	**Pn**	**03 49 32.7**	**+0.4**
LYJJ	**Jianjiangzhen**	**4.02**	**337**	*e*P	**Pn**	**03 49 31.8**	**-1.2**
	baz=334						
XPSS	**Dashiqiu**	**4.24**	**343**	*e*P	**Pn**	**03 49 34.5**	**-1.3**
	baz=341						
JMZ	**Minamidaito 2**	**9.31**	**70**	Pn	**Pn**	**03 50 43.1**	**-0.9**
WHN	**Wuhan**	**9.99**	**322**	P	**Pn**	**03 50 55.0**	**+1.8**
GYA	**Guiyang**	**13.99**	**288**	⇓P	**Pn**	**03 51 46.9**	**+1.2**
GYA				sP	P	03 52 15.6	+26
GYA				S	**Sn**	**03 54 18.6**	**-1.8**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GYA				LR	LR		
	comp=N,250nm,3.8s						
GYA				LR	LR		
	comp=E,310nm,4.5s						
GYA				LR	LR		
	comp=Z,170nm,4.7s						
XAN	**Xi'an**	**15.71**	**318**	P	**P**	**03 52 09.6**	**+1.2**
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
JHS	**Saijyo**	**15.77**	**37**	Pn	**Pn**	**03 52 06.5**	**-1.3**
JHS				IAmb	IAmb	03 52 09.1	
	comp=Z,54nm,1.4s						
SLVN	**Son La**	**16.41**	**268**	P	**P**	**03 52 17.6**	**+1.3**
KMI	**Kunming**	**17.33**	**281**	*e*P	**Pn**	**03 52 29.4**	**+2.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,4.5s						
NONG	**Nongkai**	**17.88**	**258**	P	**Pn**	**03 52 37.7**	**+4.2**
	comp=Z,27nm,1.0s						
JGF	**Kuroka**	**18.73**	**44**	P	**Pn**	**03 52 44.2**	**+0.7**
JGF				IAmb	IAmb	03 52 55.6	
	comp=Z,37nm,1.3s						
HHC	**Hu-ho-hao-te**	**19.81**	**337**	*e*P	**Pn**	**03 52 56.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,7.6s						
MAT	**Matsushiro**	**19.85**	**43**	P	**Pn**	**03 52 56.1**	**-0.5**
MJAR	**Matsushiro Arr**	**19.85**	**43**	P	**Pn**	**03 52 56.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=236,slow=7.9,SNR=12						
SRAK	**Srakaew**	**20.46**	**248**	P	**P**	**03 52 59.2**	**-1.3**
	comp=Z,182nm,0.9s						
PHIT	**Phitsanulok**	**20.62**	**258**	P	Pn	03 53 05.5	-0.3
	comp=Z,64nm,0.9s						
CM35	**Chiang Mai Arr**	**21.33**	**263**	P	**P**	**03 53 12.0**	**+2.2**
CM33	**Chiang Mai Arr**	**21.49**	**263**	P	**P**	**03 53 14.0**	**+2.5**
CMMT	**Chiang Mai**	**21.49**	**263**	P	**P**	**03 53 15.4**	**+3.9**
	comp=Z,322nmcomp=Z,5.3nm,1.6s						
CM01	**Chiang Mai Arr**	**21.58**	**262**	P	**P**	**03 53 16.0**	**+3.5**
	comp=Z,144nmcomp=Z,8.2nm,1.2s						
CMAR	**Chiang Mai Arr**	**21.58**	**262**	P	**P**	**03 53 13.9**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=68,slow=8.4,SNR=12						
CM13	**Chiang Mai Arr**	**21.63**	**262**	P	**P**	**03 53 14.0**	**+1.0**
TOLI2	**Tolitoli**	**21.63**	**182**	P	**P**	**03 53 11.8**	**-1.2**
TOLI2				IAmb	IAmb	03 53 13.9	
	comp=Z,25nm,1.2s						
GTOI	**Gorontalo**	**22.13**	**176**	P	**P**	**03 53 14.9**	**-3.3**
	comp=Z,27nm,0.7s						
SBUM	**Sibu**	**22.21**	**205**	P	**P**	**03 53 18.1**	**-0.9**
SBUM				IAmb	IAmb	03 53 19.3	
	comp=Z,44nm,1.5s						
MRSI	**Marisa**	**22.25**	**179**	P	**P**	**03 53 19.9**	**+0.5**
	comp=Z,37nm,0.5s						
MPSI	**Mapaga**	**22.44**	**184**	P	**P**	**03 53 19.7**	**-1.6**
	comp=Z,22nm,0.5s						
USRK	**Ussuriysk Ar.**	**22.96**	**20**	P	**P**	**03 53 27.3**	**+1.3**
	comp=Z,2.6nm,0.7s,baz=141,slow=3.1,SNR=7.2						
APSI	**Ampana**	**23.62**	**180**	P	**P**	**03 53 28.7**	**-3.6**
	comp=Z,41nm,0.8s						
LUWI	**Luwuk**	**23.79**	**177**	P	**P**	**03 53 32.7**	**-1.1**
LUWI	**Luwuk**	**23.79**	**177**	P	**P**	**03 53 30.6**	**-3.2**
	comp=Z,5µmcomp=Z,87nm,1.2s						
JTM	**Tenmabayashi**	**24.30**	**38**	P	**P**	**03 53 38.5**	**+0.3**
JTM				IAmb	IAmb	03 53 40.8	
	comp=Z,33nm,1.2s						
BKB	**Balikpapan**	**24.39**	**191**	P	**P**	**03 53 37.7**	**-1.6**
	comp=Z,64nm,0.5s						
GTA	**Gaotai**	**24.76**	**317**	*e*P	**P**	**03 53 44.4**	**+1.7**
GTA				pP	pP	03 54 12.1	+1.6
GTA				sP	sP	03 54 24.9	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,180nm,5.5s						
GTA				LR	LR		
	comp=Z,160nm,13.5s						
GTA				LR	LR		
	comp=Z,130nm,13.4s						
GTA				LR	LR		
	comp=Z,140nm,14.2s						
SANI	**Sanana**	**25.13**	**169**	P	P	03 53 37.6	-8.4
SIJI	**Sorong**	**25.41**	**157**	P	**P**	**03 53 48.4**	**-0.3**
	comp=Z,9.5nm,0.4s,baz=252,slow=20,SNR=4.4						
JEM	**Erimo**	**26.29**	**38**	P	P	03 54 03.8	+7.6
NLAI	**Namlea**	**26.50**	**167**	P	**P**	**03 53 58.2**	**-0.2**
	comp=Z,100nm,0.7s						
KLR	**Kul'dur**	**27.53**	**15**	P	**P**	**03 54 08.1**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=157,slow=7.7,SNR=3.8						
FAKI	**Fak Fak**	**27.67**	**156**	P	**P**	**03 54 06.9**	**-1.9**
SONM	**Songino Array**	**27.71**	**338**	P	**P**	**03 54 09.0**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=159,slow=9.6,SNR=6.4						
EDFI	**Ende, Flores**	**31.41**	**180**	P	**P**	**03 54 39.2**	**-2.8**
	comp=Z,22nm,0.7s						
TWSI	**Taliwang, Sumb**	**31.73**	**189**	P	P	03 54 37.4	-7.3
PWJI	**Pagerwojo**	**32.13**	**198**	P	**P**	**03 54 47.9**	**-0.3**
	comp=Z,19nm,1.8s						
WMQ	**Urumqi**	**34.81**	**315**	*e*P	**P**	**03 55 12.4**	**+1.1**
ZSN	**Zaisan**	**38.21**	**319**	*e*P	**P**	**03 55 39.9**	**-0.1**
	baz=319						
MK31	**Makanchi Array**	**39.52**	**317**	P	**P**	**03 55 51.4**	**+0.4**
MK31				IAmb	IAmb	03 55 52.2	
	comp=Z,4.7nm,0.8s						
MKAR	**Makanchi Array**	**39.52**	**317**	P	**P**	**03 55 51.4**	**+0.5**
	comp=Z,5.3nm,0.6s,baz=111,slow=9.8,SNR=86						
MAKZ	**Makanchi**	**39.72**	**317**	P	**P**	**03 55 53.0**	**+0.3**
MAKZ				IAmb	IAmb	03 55 54.0	
	comp=Z,6.4nm,0.8s						
SHLS	**Shalkode**	**40.16**	**311**	*e*P	**P**	**03 55 54.3**	**-2.2**
	comp=Z,1.3nm,0.7s,baz=311						
KPKS	**Kokpek**	**40.79**	**311**	*e*P	**P**	**03 56 01.1**	**-0.5**
	baz=311						
SATY	**Saty**	**40.88**	**310**	*e*P	**P**	**03 56 02.7**	**+0.4**
	baz=310						
TDK	**Taldyqorghan**	**41.43**	**313**	*e*P	**P**	**03 56 06.8**	**+0.1**
	baz=313						
ZAA0	**Zalesovo Array**	**41.53**	**328**	P	**P**	**03 56 06.3**	**-1.0**
ZAA0				IAmb	IAmb	03 56 08.5	
	comp=Z,4.5nm,0.9s						
ZALV	**Zalesovo Beam**	**41.53**	**328**	P	**P**	**03 56 07.0**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=114,slow=7.2,SNR=21						
ZALV				LR	LR	04 15 33.1	
	comp=Z,33nm,19.0s,baz=60,slow=39						
MDOK	**Medeo**	**41.86**	**310**	*e*P	**P**	**03 56 11.0**	**+0.6**
	baz=310						
KSH	**Kashi**	**41.90**	**304**	P	**P**	**03 56 14.3**	**+3.6**
KSH				PP	**PnPn**	**03 57 59.5**	**+2.9**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TNSS	**Tian-Shan**	**41.91**	**310**	*e*P	**P**	**03 56 11.8**	**+0.7**
	baz=310						
AAA	**Alma-Ata**	**41.97**	**310**	*e*P	**P**	**03 56 11.1**	**-0.1**
	baz=310						
CHKK	**Chushkaly**	**42.08**	**311**	*e*P	**P**	**03 56 11.9**	**-0.1**
	baz=311						
SEM	**Semipalatinsk**	**42.24**	**321**	*e*P	**P**	**03 56 12.6**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=321						
KURK	**Kurchatov**	**43.32**	**321**	P	**P**	**03 56 21.5**	**-0.3**
KURK				IAmb	IAmb	03 56 22.7	
	comp=Z,4.0nm,0.8s						

NIL	Nilore	43.53	295	P	P	03 56 24.0	+0.1
NIL				IAmb	IAmb	03 56 25.1	
	comp=Z,10nm,1.0s						
AAK	Ala-Archa	43.57	308	P	P	03 56 25.4	+1.1
SGDS	Sogindy	43.65	310	*e*P	P	03 56 24.9	+0.2
	comp=Z,1.5nm,0.8s,baz=310						
WB0	Warramunga Arr	44.18	163	P	P	03 56 26.9	-2.2
WB0				IAmb	IAmb	03 56 27.8	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	44.34	163	P	P	03 56 28.3	-2.0
	comp=Z,11nm,0.7s,baz=344,slow=8.7,SNR=76						
WRA	Warramunga Arr	44.34	163	P	P	03 56 28.6	-1.7
WB2	Warramunga Arr	44.34	163	P	P	03 56 28.6	-1.7
WR0	Warramunga Arr	44.41	162	P	P	03 56 29.0	-1.8
BTLS	Baital	44.42	312	*e*P	P	03 56 30.6	-0.2
	baz=312						
DZA	Taraz	45.91	308	*e*P	P	03 56 43.0	+0.4
	baz=308						
KK31	Karatay Array	46.54	308	P	P	03 56 48.0	+0.5
KKAR	Karatay Array	46.54	308	P	P	03 56 48.2	+0.7
BRZS	Berezniki	46.63	318	*e*P	P	03 56 48.3	+0.2
	baz=318						
IUG	Iuzhnay	46.75	307	*e*P	P	03 56 49.6	+0.3
	comp=Z,2.7nm,0.9s,baz=307						
AS31	Alice Springs	47.78	165	P	P	03 56 56.1	-1.1
ASAR	Alice Springs	47.78	165	P	P	03 56 56.0	-1.3
	comp=Z,2.7nm,0.3s,baz=338,slow=7.2,SNR=52						
ASAR				PcP	PcP	03 58 22.7	-1.6
	comp=Z,0.9nm,0.7s,baz=332,slow=2.2,SNR=4.3						
CTAO	Charters Tower	49.03	149	P	P	03 57 06.9	0.0
CTAO				IAmb	IAmb	03 57 06.9	
	comp=Z,3.0nm,0.7s						
ABKAR	Akbulak array	54.60	315	P	P	03 57 48.2	+0.4
STKA	Stephens Creek	57.71	160	P	P	03 58 09.3	-0.8
	comp=Z,13nm,0.6s,baz=340,slow=6.8,SNR=55						
STKA	Stephens Creek	57.71	160	P	P	03 58 09.5	-0.6
STKA				IAmb	IAmb	03 58 10.0	
	comp=Z,2.9nm,0.6s						
ANM	Nome	62.34	28	P	P	03 58 41.9	+0.6
ANM				IAmb	IAmb	03 58 57.6	
	comp=Z,5.2nm,1.3s						
DZM	Mont Dzumac	62.50	132	P	P	03 58 43.2	+0.1
DZM				IAmb	IAmb	03 58 43.8	
	comp=Z,6.5nm,0.9s						
CAN	Canberra	63.45	155	P	P	03 58 49.0	0.0
SOCY	Socotra	64.82	273	P	P	03 58 57.5	-1.1
TTA	Tatalina	66.49	30	P	P	03 59 08.5	+0.1
KBZ	Khabaz	66.56	309	P	P	03 59 09.4	+0.3
	comp=Z,1.0nm,0.7s,baz=117,slow=2.3,SNR=3.7						
PPLA	Purkeypile	68.24	29	P	P	03 59 19.3	-0.2
PPLA				IAmb	IAmb	03 59 25.6	
	comp=Z,7.5nm,1.3s						
OHAK	Old Harbor	68.51	36	P	P	03 59 20.1	-1.0
OHAK				IAmb	IAmb	03 59 24.5	
	comp=Z,18nm,1.3s						
BPAW	Bear Paw Mtn.	68.60	28	P	P	03 59 21.7	+0.1
KDAK	Kodiak Island	68.80	35	P	P	03 59 21.9	-0.9
	comp=Z,2.5nm,0.5s,baz=318,slow=12,SNR=5.7						
KDAK	Kodiak Island	68.80	35	P	P	03 59 22.3	-0.6
TRF	Thorofare Moun	69.01	29	P	P	03 59 24.6	+0.3
TRF				IAmb	IAmb	03 59 27.4	
	comp=Z,4.7nm,1.3s						
SUA	Susitna One	69.12	31	P	P	03 59 24.4	-0.5
SUA				IAmb	IAmb	03 59 40.8	
	comp=Z,8.7nm,1.5s						
MDM	Murphy Dome	69.64	27	P	P	03 59 28.1	+0.2
WRH	Wood River Hil	69.79	28	P	P	03 59 28.7	-0.2
ILAR	Eielson Array	70.24	27	P	P	03 59 28.9	-2.8
	comp=Z,0.6nm,1.1s,baz=275,slow=4.9,SNR=4.8						
DHY	Denali Highway	70.37	29	P	P	03 59 33.5	+0.8
SCM	Sheep Creek Mo	70.65	30	P	P	03 59 33.9	-0.4
SCM				IAmb	IAmb	03 59 34.8	
	comp=Z,10nm,1.2s						
SPA0	Spitsbergen Ar	70.84	348	P	P	03 59 35.0	-0.1
ARCES	ARCESS Array B	70.89	338	P	P	03 59 35.5	0.0
	comp=Z,5.3nm,1.1s,baz=73,slow=8.1,SNR=4.1						
M24K	Tolsona, Glenn	71.12	30	P	P	03 59 37.4	+0.3
M24K				IAmb	IAmb	03 59 37.9	
	comp=Z,16nm,1.4s						
KLU	Klutina	71.38	30	P	P	03 59 38.5	-0.2
KLU				IAmb	IAmb	03 59 55.7	
	comp=Z,6.1nm,1.3s						
GLB	Gilahina Butte	72.38	30	P	P	03 59 44.2	-0.3
GLB				IAmb	IAmb	03 59 46.9	
	comp=Z,5.7nm,0.9s						
EGAK	Eagle	72.62	26	P	P	03 59 44.9	-1.0
FIA1	FINESS Array S	72.75	330	P	P	03 59 47.9	+1.2
FINES	FINESS Array B	72.75	330	P	P	03 59 46.6	-0.1
	comp=Z,1.8nm,0.6s,baz=38,slow=7.0,SNR=11						
CTGM	Chitina Glacie	73.66	30	P	P	03 59 52.9	+0.6
CTGM				IAmb	IAmb	04 00 09.5	
	comp=Z,9.3nm,1.1s						
BR131	Keskin Array S	74.22	307	P	P	03 59 56.0	+0.1
BR131				IAmb	IAmb	04 00 13.9	
	comp=Z,6.0nm,1.5s						
BRTR	Keskin Array B	74.22	307	P	P	03 59 55.8	-0.2
	comp=Z,0.3nm,0.4s,baz=120,slow=3.1,SNR=6.8						
INK	Inuvik	74.33	22	P	P	03 59 54.7	-1.1
	comp=Z,1.3nm,0.8s,baz=270,slow=7.9,SNR=3.9						
BUR08	Bucovina Ar. S	77.55	317	P	P	04 00 15.3	+0.7
ELL	Elmali	77.94	305	P	P	04 00 17.0	0.0
KOLS	Kolonicke sedl	78.91	318	*e*P	P	04 00 26.9	+4.9
NC405	NORSAR Array S	79.30	332	P	P	04 00 23.7	-0.1
NB201	NORSAR Array S	79.51	332	P	P	04 00 24.9	-0.1
NB2	NORSAR Subarra	79.55	332	P	P	04 00 24.6	-0.6
	comp=Z,0.7nm,0.5s,baz=60,slow=5.1						
NOA	NORSAR Array B	79.55	332	P	P	04 00 24.4	-0.9
	comp=Z,0.9nm,0.5s,baz=62,slow=5.4,SNR=6.0						
NOA				LR	LR	04 40 59.7	
	comp=Z,18nm,20.2s,baz=285,slow=39						
LIT	Litokhoron	82.15	310	P	P	04 00 39.7	+0.2
LIT				IAmb	IAmb	04 00 56.7	
	comp=Z,9.4nm,1.2s						
AGG	Agios Georgios	82.69	309	P	P	04 00 40.9	-1.4
YKA	Yellowknife Ar	84.06	23	P	P	04 00 47.5	-1.2
	comp=Z,0.7nm,0.7s,baz=317,slow=4.4,SNR=14						
GERES	GERESS Array B	84.07	321	P	P	04 00 49.6	+0.3
	comp=Z,0.4nm,0.4s,baz=69,slow=4.9,SNR=5.6						

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*IDC **19** 03:50:46.2±12.0, 11.°33N×88.°88W, h0^{km}, mb3.2/3, mb1 3.7/3, mb1mx3.3/39, mbtmp3.2/3, Error ellipse: s-maj=264.8km s-min=111.0km az=10.0*

*SNET **19** 03:50:57.9±1.1, 12.°24N×89.°37W, h66^{km}±97^{km}, ML3.3*

ISC 19 03:50:59.5±2.0**, 12.°3N**±0.°2×**89.°34W**±0.°09**, h35**^{km}**, n11, **σ**1.^{s}18**/12**, mb3.3**/3**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	1.40	356	*e*P	Pn	03 51 21.9	-0.9
JAYA				IAML		03 51 42.2	
	comp=Z,290nm,0.2s						
PMON	Piamonte	1.45	1	*e*P	Pn	03 51 22.1	-1.3
PAVA	Las Pavas	1.50	15	*e*P	Pn	03 51 23.2	-0.9
PAVA				*e*S	Sn	03 51 44.0	+1.3
PAVA				IAML		03 51 51.2	
	comp=Z,323nm,0.3s						
CEDA	San Andres	1.54	358	IAML		03 51 54.1	
	comp=Z,389nm,0.5s						
CEVE	Cerro Verde	1.59	350	IAML		03 51 51.8	
	comp=Z,530nm,0.3s						
TACO	Tacachico	1.71	360	*e*P	Pn	03 51 25.7	-1.2
LCND	La Caada	1.76	53	*e*P	Pn	03 51 27.5	-0.1
LCND				*e*S	Sn	03 51 48.7	-0.1
LCND				*e*S	Sn	03 51 49.3	+0.5
TGUH	Tegucigalpa,Un	2.70	48	*e*P	Pn	03 51 39.6	-1.0
TXAR	Lajitas Array	21.60	324	P	P	03 55 48.7	+2.1
	comp=Z,0.3nm,0.5s,baz=144,slow=10,SNR=7.9						
NVAR	Mina Array Bea	36.65	320	P	P	03 58 03.2	0.0
	comp=Z,0.3nm,0.8s,baz=125,slow=7.8,SNR=2.5						
YKA	Yellowknife Ar	53.33	346	P	P	04 00 14.3	-0.6
	comp=Z,0.2nm,0.6s,baz=142,slow=7.1,SNR=4.5						

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*JMA **19** 03:51:47.0±0.2, 23.°98N×122.°42E, h25^{km}±4^{km}, M2.2*

*TAP **19** 03:51:47.3, 24.°07N×122.°44E, h40^{km}±1^{km}, ML2.8, D*

ISC 19 03:51:47.0±1.0**, 24.°03N**±0.°03×**122.°42E**±0.°02**, h30**^{km}±11^{km}**, n46, **σ**0.^{s}68**/90**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.63	49	P	Pn	03 51 59.9	-0.1
JYNG				*e*S	Sb	03 52 08.3	0.0
YOJ	Yonaguni jima	0.69	52	P	Pb	03 52 00.7	+0.2
YOJ				S	Sb	03 52 09.9	+0.2
YOJ	Yonaguni jima	0.69	52	P	Pn	03 51 59.6	-1.1
	baz=61						
YOJ				S	Sb	03 52 09.9	+0.2
	baz=61						
ENAH	Nanao	0.69	307	*e*P	Pn	03 51 60.0	-0.9
	baz=302						
ENAH				*e*S	Sb	03 52 10.3	+0.4
	baz=302						
ENA	Nanau	0.73	302	P	Pn	03 52 01.5	+0.1
	baz=307						
ENA				*e*S	Sb	03 52 11.1	0.0
	baz=307						
TWD	Chiawan	0.76	274	*e*P	Pb	03 52 01.9	+0.2
	baz=270						
TWD				*e*S	Sn	03 52 12.0	-0.1
	baz=270						
TWC	Suao	0.77	318	*e*P	Pn	03 52 01.6	-0.4
	baz=307						
TWC				*e*S	Sn	03 52 10.5	-2.1
	baz=307						
ETLH	Xiulin Townshi	0.88	282	P	Pn	03 52 03.4	0.0
	baz=278						
ETLH				S	Sn	03 52 14.9	-0.3
	baz=278						
ESL	Shilin	0.93	257	*e*P	Pb	03 52 04.5	-0.1
	baz=247						
ESL				*e*S	Sb	03 52 16.8	+0.2
	baz=247						
ILA	Ilan	0.95	320	*e*P	Pn	03 52 04.0	-0.4
	baz=308						
ILA				*e*S	Sb	03 52 17.8	+0.6
	baz=308						
TWE	Neicheng	0.97	315	*e*P	Pn	03 52 04.7	0.0
	baz=312						
TWE				S	Sb	03 52 17.9	+0.2
	baz=312						
NTC	Toucheng	0.98	327	*e*P	Pn	03 52 04.9	+0.1
	baz=324						
NTC				*e*S	Sb	03 52 18.2	+0.2
	baz=324						
NDT	Datong Townshi	1.00	305	P	Pn	03 52 05.6	+0.5
	baz=291						
NDT				*e*S	Sn	03 52 18.5	+0.2
	baz=291						
NNSB	Datong	1.03	293	*e*P	Pn	03 52 05.5	0.0
	baz=290						
NNSB				*e*S	Sb	03 52 19.6	+0.1
	baz=290						
NNSH	Datong	1.03	293	*e*P	Pn	03 52 06.0	+0.4
	baz=290						
NNSH				*e*S	Sb	03 52 20.0	+0.5
	baz=290						
NNS	Nan Shan	1.04	293	*e*P	Pn	03 52 05.4	-0.4
	baz=290						
NNS				*e*S	Sn	03 52 19.5	+0.2
	baz=290						
TWB1	Santiao Chiao	1.05	338	*e*P	Pn	03 52 06.3	+0.6
	baz=336						
HGSD	Ruisui	1.06	240	*e*P	Pn	03 52 05.9	0.0
	baz=238						
HGSD				*e*S	Sn	03 52 20.0	+0.3
	baz=238						
WHF	Hehuan Shan	1.06	276	*e*P	Pn	03 52 06.3	0.0
	baz=273						
WHF				*e*S	Sn	03 52 20.1	-0.2
	baz=273						
TIPB	Shuangxi	1.08	330	P	Pn	03 52 06.5	+0.3
	baz=321						
TIPB				*e*S	Sn	03 52 19.7	-0.5
	baz=321						
FUSS	Fushou	1.10	281	*e*P	Pn	03 52 06.9	+0.3
	baz=278						
FUSS				*e*S	Sn	03 52 21.2	+0.3
	baz=278						
NWLT	Wulai	1.12	312	*e*P	Pn	03 52 07.2	+0.5
	baz=309						
NWLT				*e*S	Sb	03 52 22.1	+0.1
	baz=309						
EHY	Hungye	1.14	243	*e*P	Pn	03 52 07.5	+0.5
	baz=253						
EHY				*e*S	Sn	03 52 22.0	+0.4
	baz=253						
CHGB	Renai	1.14	272	*e*P	Pn	03 52 07.8	+0.6
	baz=269						
CHGB				*e*S	Sn	03 52 22.5	+0.5
	baz=269						
YHNB	Yeheng	1.14	304	*e*P	Pb	03 52 07.9	-0.4
	baz=301						
YHNB				*e*S	Sn	03 52 22.1	+0.3
	baz=301						
NSK	Sanguang	1.16	304	*e*P	Pb	03 52 08.2	-0.4
	baz=289						
NSK				*e*S	Sn	03 52 22.0	-0.3
	baz=289						
TDCB	Techi	1.17	281	*e*P	Pb	03 52 08.4	-0.5
	baz=268						
TDCB				*e*S	Sn	03 52 23.0	+0.3
	baz=268						
WFSB	Wu-fen Shan	1.19	331	*e*P	Pn	03 52 07.3	-0.3
	baz=329						
WFSB				*e*S	Sn	03 52 23.4	+0.7
	baz=329						
YULB	Yu-li	1.21	238	*e*P	Pn	03 52 08.2	+0.2
	baz=250						
YULB				*e*S	Sn	03 52 24.0	+0.5
	baz=250						
EYUL	Yuli	1.22	236	*e*P	Pn	03 52 08.2	+0.1
	baz=225						
EYUL				*e*S	Sb	03 52 25.2	+0.3
	baz=225						
IRIF	Iriomote-Funau	1.23	76	P	Pb	03 52 09.4	-0.3
IRIF				*e*S	Sb	03 52 25.8	+0.6
TWF1	Yuli	1.23	237	*e*P	Pn	03 52 08.7	+0.4
	baz=226						
TWF1				*e*S	Sn	03 52 24.6	+0.7
	baz=226						
FULB	Fuli	1.33	231	*e*P	Pn	03 52 09.8	+0.2
	baz=230						
FULB				S	Sn	03 52 27.1	+0.9
	baz=230						
YM10	YM10	1.36	325	*e*P	Pn	03 52 10.6	+0.5
	baz=336						
YM10				*e*S	Sn	03 52 28.2	+1.0
	baz=336						
SSLB	Suanglung	1.36	260	*e*P	Pn	03 52 10.4	+0.3
	baz=258						
SSLB				*e*S	Sn	03 52 27.9	+0.6
	baz=258						
WHP	Taichung City	1.37	280	*e*P	Pn	03 52 11.2	+1.0
	baz=268						
WHP				*e*S	Sn	03 52 28.5	+1.1
	baz=268						
SMLT	Sun Moon Lake	1.40	264	*e*P	Pn	03 52 11.7	+1.0
	baz=254						
SMLT				*e*S	Sn	03 52 28.4	+0.2
	baz=254						
TYC	Yuchr	1.44	265	*e*P	Pb	03 52 12.8	-0.4
	baz=263						
TYC				*e*S	Sn	03 52 29.8	+0.8
	baz=263						
EDH	Donghe	1.47	224	*e*P	Pn	03 52 12.0	+0.4
	baz=216						
EDH				*e*S	Sn	03 52 28.4	-1.4
	baz=216						
JIJ	Ishigaki jima	1.61	78	P	Pb	03 52 14.7	-1.4
JIJ				*e*S	Sb	03 52 34.5	-1.5
CHN5	Tsauling	1.65	255	*e*P	Pb	03 52 15.6	-1.3
	baz=245						
CHN5				*e*S	Sb	03 52 36.6	-0.9
	baz=245						
CHN4	Tsaushan	1.81	248	P	Pb	03 52 18.6	-0.9
	baz=246						
CHN4				*e*S	Sb	03 52 41.4	-0.4
	baz=246						
JISG	Ishigakijimahi	1.81	72	P	Pn	03 52 17.6	+1.4
JISG				*e*S	Sn	03 52 39.6	+1.4
WTP	Ta-pu	1.83	245	*e*P	Pb	03 52 19.1	-0.9
	baz=243						
WTP				S	Sb	03 52 42.2	-0.3
	baz=243						
SLGT	Liugui	1.93	238	*e*S	Sb	03 52 43.8	-1.4
	baz=229						
MASBT	Mashibuluo	2.17	230	*e*P	Pn	03 52 22.0	+0.9
	baz=225						
MASBT				*e*S	Sn	03 52 48.6	+1.5
	baz=225						

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*PGC **19** 04:00:47.5±0.1, 49.°16N×129.°63W, h10^{km}, MLSn3.2/28, Mw3.9/28, 233km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **19** 04:00:50.9±1.4, 49.°43N×129.°18W, h0^{km}, mb3.5/4, mb1 3.9/14, mb1mx3.8/41, mbtmp3.7/14, ML3.8/9, MS3.2/13, Ms1 3.2/13, ms1mx3.0/41, Error ellipse: s-maj=23.9km s-min=9.2km az=66.0*

*NEIC **19** 04:00:55.3±2.9, 49.°50N±0.°08×129.°0W±0.°2, h23^{km}±8^{km}, mb4.1/31, Mwr3.9(OTT), Error ellipse: s-maj=17.6km s-min=9.9km az=69.0*

ISC 19 04:00:52.2±4.1**, 49.°41N**±0.°05×**129.°24W**±0.°06**, h12**^{km}±29^{km}**, n152, **σ**1.^{s}70**/155**, mb4.0**/8**, MS3.3**/6**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.43	30	Pn	Pn	04 01 16.0	-2.0
HOLB				Sn	Sn	04 01 36.0	-0.7
EDB	Eliza Dome	1.46	70	Pn	Pn	04 01 16.1	-2.2
EDB				Sn	Sb	04 01 36.1	-1.5
KEMF	NEPTUNE Canada	1.46	176	P	Pn	04 01 08.5	-10
KEMF				S	Sn	04 01 23.0	-14
FHRB	Fair Harbour	1.52	64	Pn	Pn	04 01 17.6	-1.6
MAYB	Maynard	1.67	52	Pn	Pn	04 01 19.6	-1.8
PHC	Port Hardy	1.75	41	Pn	Pn	04 01 20.8	-1.5
PHC				Sn	Sn	04 01 43.7	-0.8
WOSB	Woss	1.89	65	Pn	Pn	04 01 23.2	-1.2
NC27	ODP1027	1.92	149	Pn	Pn	04 01 17.3	-7.0
TLCB	Telegraph Cove	1.93	53	Pn	Pn	04 01 23.8	-1.0
TLCB				Sn	Sb	04 01 50.0	-1.2
GDR	Gold River	2.12	79	Pn	Pn	04 01 25.8	-1.6
TOFB	Tofino	2.20	95	Pn	Pn	04 01 25.7	-2.8
TOFB				Sn	Sn	04 01 53.6	-1.9
NCRB	Newcastle Ridg	2.29	63	Pn	Pn	04 01 29.5	-0.4
BTB	Buttle Lake	2.43	87	Pn	Pn	04 01 29.9	-2.0
OZB	Mount Ozzard	2.50	99	Pn	Pn	04 01 29.8	-2.9
CBB	Campbell River	2.59	75	Pn	Pn	04 01 32.9	-1.1
CBB				Sn	Sn	04 02 06.3	+1.0
BFSB	Bamfield	2.76	100	Pn	Pn	04 01 33.2	-2.9
BFSB				Sn	Sn	04 02 05.7	-3.6
B928	Bamfield	2.76	100	Pn	Pn	04 01 33.2	-3.0
B928				Sn	Sn	04 02 05.7	-3.6
BBB	Bella Bella	2.87	14	Pn	Pn	04 01 36.2	-1.6
	39nm,0.3s,baz=228,slow=7.5,SNR=318						
BBB				Sn	Sn	04 02 11.1	-1.1
	12nm,0.3s,baz=159,slow=14,SNR=1.4						
BBB				LR	LR	04 02 29.0	
	comp=Z,141nm,18.9s,baz=259,slow=34						
BBB	Bella Bella	2.87	14	Pn	Pn	04 01 36.2	-1.6
BBB				Sn	Sn	04 02 09.1	-3.1
B927	Port Alberni	2.90	92	Pn	Pn	04 01 36.5	-1.6
MGB	Mount Grey	3.01	96	Pn	Pn	04 01 37.3	-2.5
MGB				Sn	Sn	04 02 13.8	-2.1
TXB	Texada	3.14	83	Pn	Pn	04 01 40.5	-1.0
HG4B	Hotspring	3.15	338	Pn	Pn	04 01 36.9	-4.7
OCP	Olym-Cheeka Pk	3.24	108	Pn	Pn	04 01 40.3	-2.6
GHNB	Nanoose	3.27	90	Pn	Pn	04 01 42.0	-1.3
GHNB				Sn	Sn	04 02 23.1	+1.1
B926	Mesachie Lake	3.41	98	Pn	Pn	04 01 42.9	-2.2
NLLB	Nanaimo Lost L	3.44	91	Pn	Pn	04 01 45.1	-0.4
NLLB				Sn	Sn	04 02 27.1	+0.9
SHB	Sechelt	3.50	85	Pn	Pn	04 01 45.3	-1.2
SHB				Sn	Sn	04 02 28.7	+0.7
OBC	Olympics--Boni	3.68	110	Pn	Pn	04 01 47.0	-2.0
GOBB	Galiano Island	3.79	95	Pn	Pn	04 01 49.6	-0.7
BIB	Bowen Island	3.88	88	Pn	Pn	04 01 50.5	-1.0
B009	North Saanich	3.88	99	Pn	Pn	04 01 49.2	-2.5
B010	North Saanich	3.88	99	Pn	Pn	04 01 49.5	-2.1
B010				Sn	Sn	04 02 34.8	-2.3
PGC	Sidney	3.88	99	Pn	Pn	04 01 49.3	-2.4
PGC				Sn	Sn	04 02 34.8	-2.3
PGC	Sidney	3.88	99	Pn	Pn	04 01 49.5	-2.1
PA12	PA12 Sannich	3.88	99	Pn	Pn	04 01 49.5	-2.1
B011	North Saanich	3.89	99	Pn	Pn	04 01 49.6	-2.0
PA01	PA01 North	3.89	99	Pn	Pn	04 01 49.6	-2.0
STW	Striped Peak	3.89	107	Pn	Pn	04 01 49.5	-2.3
WPB	Watts Point	3.94	84	Pn	Pn	04 01 52.1	-0.3
VGZ	Gonzales	4.03	102	Pn	Pn	04 01 51.0	-2.5
NLWA	Neilton Lookou	4.11	117	Pn	Pn	04 01 52.2	-2.6
WSLR	Whistler	4.16	78	Pn	Pn	04 01 56.1	+0.6
BNAB	Bonilla	4.19	348	Pn	Pn	04 01 52.8	-3.0
DIB	Dawson Inlet,	4.31	333	Pn	Pn	04 01 54.4	-3.1
GRNB	Grenville Isla	4.47	355	Pn	Pn	04 01 57.7	-2.0
HDW	Hoodsport	4.47	111	Pn	Pn	04 01 58.5	-1.4
VDB	Vedder Mountai	4.69	92	Pn	Pn	04 02 02.1	-0.7
KITB	Kitimat	4.70	4	Pn	Pn	04 02 01.4	-1.3
A05A	Maple Falls	4.71	92	Pn	Pn	04 02 02.6	-0.4
CMW	Cultus Mountai	4.80	99	Pn	Pn	04 02 03.5	-0.8
MBW	Mount Baker	4.86	95	Pn	Pn	04 02 04.8	-0.4
LLLB	Lillooet	4.90	73	Pn	Pn	04 02 05.8	+0.2
RUBB	Prince Rupert	4.97	353	Pn	Pn	04 02 04.9	-1.6
JCW	Jim Creek	4.98	101	Pn	Pn	04 02 05.7	-1.0
HOPB	Hope	5.11	87	Pn	Pn	04 02 08.2	-0.2
RPW	Rockport	5.18	98	Pn	Pn	04 02 08.5	-1.1
B06A	Marblemount	5.19	97	Pn	Pn	04 02 08.2	-1.4
D05A	Enumclaw	5.32	112	Pn	Pn	04 02 10.0	-1.4
FMW	Mount Fremont	5.63	113	Pn	Pn	04 02 15.2	-0.7
LON	Longmire	5.64	115	Pn	Pn	04 02 14.7	-1.2
FSB	Fort Saint Jam	5.92	29	Pn	Pn	04 02 20.0	+0.4
LTY	Liberty	6.11	107	Pn	Pn	04 02 21.8	-0.5
LTY	Liberty	6.11	107	Pn	Pn	04 02 21.8	-0.5
PNT	Penticton	6.29	87	Pn	Pn	04 02 24.3	-0.4
COR	Corvallis	6.30	138	Pn	Pn	04 02 24.5	-0.4
B08A	Colville Reser	6.62	95	Pn	Pn	04 02 28.7	-0.6
B08A	Colville Reser	6.62	95	Pn	Pn	04 02 28.5	-0.8
H04A	Detroit Lake	6.75	132	Pn	Pn	04 02 30.6	-0.4
E07A	Sunnyside	6.91	111	Pn	Pn	04 02 33.4	+0.1
D08A	Wollman Farm,	7.28	105	Pn	Pn	04 02 37.6	-0.7
MNB	Mounoet Dainar	7.43	64	Pn	Pn	04 02 41.7	+1.1
C09A	Chrisman Ranch	7.45	98	Pn	Pn	04 02 39.5	-1.1
BMBC	Bull Mountain	7.92	30	Pn	Pn	04 02 48.7	+1.5
NEW	Newport	8.08	94	Pn	Pn	04 02 49.7	+0.4
	2.1nm,0.3s,baz=292,slow=12,SNR=29						
NEW				LR	LR	04 06 00.8	
	comp=Z,315nm,20.9s,baz=273,slow=38						
NEW	Newport	8.08	94	Pn	Pn	04 02 49.8	+0.5
HUMO	Hull Mountain	8.08	145	Pn	Pn	04 02 50.3	+0.9
NBC4	NorthernBC 4	8.18	36	Pn	Pn	04 02 52.1	+1.5
YBH	Yreka Blue Hor	8.93	147	Pn	Pn	04 03 03.3	+2.3
	0.2nm,0.3s,baz=290,slow=2.4,SNR=10						
NBC5	NorthernBC 5	9.02	23	Pn	Pn	04 03 03.4	+1.2
DLBC	Dease Lake	9.06	357	Pn	Pn	04 03 02.1	-0.6
	0.4nm,0.3s,baz=182,slow=11,SNR=6.8						
DLBC				LR	LR	04 06 14.8	
	comp=Z,190nm,18.0s,baz=198,slow=36						
DLBC	Dease Lake	9.06	357	Pn	Pn	04 03 03.5	+0.7
DLBC	Dease Lake	9.06	357	Pn	Pn	04 03 03.5	+0.7
BMO	Blue Mountains	9.32	115	Pn	Pn	04 03 05.5	-0.9
PRDA	Priddis	9.71	76	Pn	Pn	04 03 12.7	+1.0
WDC	Whiskeytown Da	10.01	149	Pn	Pn	04 03 19.1	+3.3
WALA	Waterton Lakes	10.04	86	Pn	Pn	04 03 16.5	+0.3
WALA	Waterton Lakes	10.04	86	Pn	Pn	04 03 17.6	+1.4
JTMT	Jette	10.05	94	Pn	Pn	04 03 16.5	+0.1
JTMT	Jette	10.05	94	Pn	Pn	04 03 17.2	+0.7
FBMT	Ferry Basin	10.06	96	Pn	Pn	04 03 16.5	0.0
FNBB	Fort Nelson	10.18	19	Pn	Pn	04 03 18.0	0.0
NBC6	NorthernBC 6	10.30	24	Pn	Pn	04 03 21.1	+1.5
SWMT	Swartz Lake	10.30	95	Pn	Pn	04 03 19.6	-0.3
MSO	Missoula	10.55	98	Pn	Pn	04 03 21.9	-1.3
VCNR	Virginia City	12.21	142	Pn	Pn	04 03 52.3	+6.3
HYT	Haines Junctio	12.37	341	Pn	Pn	04 03 47.8	-0.2
PNTR	Pine Nut	12.40	143	Pn	Pn	04 03 53.6	+4.9
YHL	Hebgen Lake	13.11	103	Pn	Pn	04 03 59.8	+1.4
ELK	Elko	13.13	126	Pn	Pn	04 04 01.7	+3.1
	0.1nm,0.3s,baz=346,slow=19,SNR=2.3						
ELK				LR	LR	04 08 53.4	
	comp=Z,68nm,21.7s,baz=328,slow=37						
NVAR	Mina Array Bea	13.49	140	Pn	Pn	04 04 05.4	+1.8
	0.1nm,0.3s,baz=316,slow=12,SNR=9.8						
LHV	Little Huntoon	13.56	141	Pn	P	04 04 09.4	-4.0
AHID	Auburn Hatcher	14.21	111	P	P	04 04 20.9	+0.1
SPUT	South Promonto	14.29	118	P	P	04 04 23.6	+2.0
DUG	Dugway, Tooele	14.83	122	P	P	04 04 29.6	+2.0
PD31	Pinedale Array	15.16	109	Pn	Pn	04 04 28.0	+1.7
PDAR	Pinedale Array	15.16	109	Pn	Pn	04 04 27.9	+1.6
	0.1nm,0.3s,baz=309,slow=11,SNR=13						
PDAR				LR	LR	04 11 13.4	
	comp=Z,69nm,18.9s,baz=303,slow=41						
YKA	Yellowknife Ar	15.41	26	Pn	Pn	04 04 27.0	-2.2
	0.8nm,0.3s,baz=208,slow=12,SNR=94						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSUT	Pine Spring	15.48	129	P	P	04 04 36.0	+1.0
PRN	Pahroc Range	15.78	134	P	P	04 04 39.1	+0.9
KDAK	Kodiak Island	16.13	310	LR	LR	04 08 24.7	
	comp=Z,66nm,20.3s,baz=137,slow=28						
MTPU	Mount Pierson	16.72	126	P	P	04 04 49.7	+0.8
SRU	San Rafael Swe	16.86	121	P	P	04 04 54.2	+4.0
K22A	Casper	17.12	105	P	P	04 04 54.2	+1.2
K22A				IAmb	IAmb	04 04 55.7	
	comp=Z,10nm,1.1s						
FFC	Flin Flon	17.52	62	P	P	04 04 58.8	+1.6
FFC				IAmb	IAmb	04 05 01.1	
	comp=Z,14nm,0.8s						
U15A	North Rim	17.90	130	P	P	04 05 02.6	+0.8
ILAR	Eielson Array	18.03	335	P	P	04 05 02.7	0.0
	comp=Z,0.0nm,0.3s,baz=148,slow=12,SNR=7.4						
PV23	Carpenter Ridg	18.17	119	P	P	04 05 06.6	+1.9
PV23				IAmb	IAmb	04 05 13.9	
	comp=Z,23nm,1.2s						
PV10	Paradox Valley	18.20	120	P	P	04 05 06.1	+1.0
PV10				IAmb	IAmb	04 05 15.0	
	comp=Z,18nm,0.9s						
PV14	Lion Creek, Pa	18.21	120	P	P	04 05 05.7	+0.5
PV22	Blue Mesa, Par	18.24	119	P	P	04 05 08.0	+2.5
PV04	Paradox Valley	18.27	119	P	P	04 05 07.3	+1.6
PV04				IAmb	IAmb	04 05 15.0	
	comp=Z,18nm,1.0s						
PV20	West Nyswonger	18.27	120	P	P	04 05 07.0	+1.3
PV02	Paradox Valley	18.49	120	P	Pn	04 05 09.6	+1.3
PV02				IAmb	IAmb	04 05 16.9	
	comp=Z,14nm,1.1s						
PHWY	Pilot Hill	18.52	107	P	Pn	04 05 08.7	-0.1
PHWY				IAmb	IAmb	04 05 16.6	
	comp=Z,7.1nm,0.8s						
INK	Inuvik	19.08	355	P	Pn	04 05 14.4	-0.5
	comp=Z,0.1nm,0.3s,baz=168,slow=12,SNR=6.7						
INK				LR	LR	04 11 57.2	
	comp=Z,83nm,19.8s,baz=152,slow=35						
INK	Inuvik	19.08	355	P	Pn	04 05 14.7	-0.3
INK				IAmb	IAmb	04 05 16.4	
	comp=Z,14nm,1.4s						
MVCO	Mesa Verde	19.33	121	P	Pn	04 05 19.7	+1.2
MVCO				IAmb	IAmb	04 05 30.4	
	comp=Z,8.0nm,0.9s						
S22A	4UR Ranch, Cre	19.90	117	P	Pn	04 05 27.5	+2.1
X16A	Lo Mia Camp, P	19.92	132	P	Pn	04 05 27.5	+2.0
W18A	Petrified Fore	20.22	128	P	Pn	04 05 29.9	+0.9
W18A				IAmb	IAmb	04 05 37.7	
	comp=Z,11nm,1.0s						
X18A	Snowflake	20.57	129	P	Pn	04 05 34.2	+1.1
X18A				IAmb	IAmb	04 05 38.3	
	comp=Z,10nm,1.1s						
ULM	Lac du Bonnet	21.44	75	P	P	04 05 39.3	-0.7
	comp=Z,4.3nm,0.7s,baz=255,slow=12,SNR=3.0						
ULM				LR	LR	04 14 14.8	
	comp=Z,222nm,19.6s,baz=284,slow=38						
ULM	Lac du Bonnet	21.44	75	P	P	04 05 39.2	-0.9
KSCO	Kaye Shedlock’	21.61	109	P	P	04 05 42.6	+0.5
AGMN	Agassiz Nation	21.89	80	P	P	04 05 44.5	-0.4
ANMO	Albuquerque	22.11	122	P	P	04 05 49.2	+1.8
	comp=Z,1.5nm,0.8s,baz=325,slow=13,SNR=5.0						
ANMO				LR	LR	04 15 31.1	
	comp=Z,56nm,19.3s,baz=309,slow=40						
ANMO	Albuquerque	22.11	122	P	P	04 05 51.0	+3.5
FCC	Fort Churchill	22.40	52	P	P	04 05 50.6	+0.4
ECSD	EROS Data Cent	23.02	92	P	P	04 05 57.4	+0.5
ECSD				IAmb	IAmb	04 06 09.8	
	comp=Z,5.3nm,1.1s						
B35A	Bob, Littlefor	23.25	79	P	P	04 05 58.6	-0.6
B35A				IAmb	IAmb	04 06 10.9	
	comp=Z,6.2nm,0.9s						
EYMN	Ely	24.80	79	P	P	04 06 14.8	+1.0
TXAR	Lajitas Array	27.93	126	P	P	04 06 41.2	-1.1
	comp=Z,0.3nm,0.9s,baz=12,slow=4.7,SNR=3.3						
TXAR				LR	LR	04 19 08.6	
	comp=Z,62nm,19.6s,baz=0.0,slow=39						
FCAR	Ozark Folk Cen	30.13	103	P	P	04 07 01.4	-0.3
FCAR				IAmb	IAmb	04 07 13.9	
	comp=Z,5.2nm,1.2s						
LCAR	Lake Charles	30.64	101	P	P	04 07 05.3	-0.9
LCAR				IAmb	IAmb	04 07 11.5	
	comp=Z,1.8nm,0.8s						
TKL	Tuckaleechee C	35.66	95	LR	LR	04 22 57.5	
	comp=Z,98nm,18.8s,baz=322,slow=37						
H11N2	WAKE ISLAND Hy	58.32	264	T	T	05 13 43.6	
	baz=43,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	58.32	264	T	T	05 13 42.7	
	baz=43,slow=75,SNR=27						
H11N1	WAKE ISLAND Hy	58.34	264	T	T	05 13 42.1	
	baz=43,slow=75,SNR=17						
KSRS	Korea Array	69.94	304	LR	LR	04 41 36.9	
	comp=Z,6.6nm,20.7s,baz=240,slow=35						
ARU	Arti	74.33	356	LR	LR	04 45 37.0	
	comp=Z,20nm,19.5s,baz=246,slow=36						
MKAR	Makanchi Array	80.35	339	P	P	04 13 05.2	+2.2
	comp=Z,0.3nm,0.6s,baz=54,slow=4.8,SNR=4.0						

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*SKHL **19** 04:03:08.1±0.2, 44°.16N×148°.84E, h40^{km}±8^{km}, mb4.0/3*

*JMA **19** 04:03:09.4±0.3, 44°.64N×147°.93E, h158^{km}, M3.0*

*IDC **19** 04:03:12.8±15.0, 45°.63N×147°.74E, h181^{km}±141^{km}, mb3.3/4, mb1 3.4/4, mb1mx2.9/39, mbtmp3.8/4, Error ellipse: s-maj=102.5km s-min=24.0km az=179.0*

ISC 19 04:03:07.0±1.0, **44°.8N**±0°.1×**148°.0E**±0°.1, **h162**^{km}±7^{km}, **n27**, σ**1^{s}.99**/29, **mb3.6**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.45	348	*i* P	Pn	04 03 29.0	-0.5
KUR				AMB	AMB	04 03 29.0	
	23nm,0.3s						
KUR				*i* S	Sn	04 03 44.5	-2.3
KUR				A	A	04 03 46.0	
	344nm,0.3s						
KUR				A	A	04 03 46.0	
	229nm,0.3s						
YUK	Yuzh-Kuril'sk	1.71	244	*e*P	Pn	04 03 41.3	+1.7
YUK				AMB	AMB	04 03 44.0	
	14nm,0.3s						
YUK				*e*S	Sn	04 04 06.1	+1.4
YUK				A	A	04 04 08.0	
	282nm,0.3s						
YUK				A	A	04 04 08.0	
	139nm,0.3s						
GRPR	Tuman	1.78	244	*e*P	Pn	04 03 42.2	+1.8
GRPR				AMB	AMB	04 03 42.9	
	42nm,0.3s						
GRPR				*e*S	Sn	04 04 07.9	+1.7
GRPR				A	A	04 04 09.0	
	322nm,0.3s						
GRPR				A	A	04 04 09.0	
	218nm,0.3s						
NEM2	Nemuro 2	2.16	229	P	Pn	04 03 45.6	+0.9
NEM2				*e*S	Sn	04 04 13.4	-0.4
NMR	Nemuro--Hokkai	2.17	230	*i* P	Pn	04 03 45.0	+0.2
NMR				*i* S	Sn	04 04 12.7	-1.2
JRA	Rausu	2.23	249	P	Pn	04 03 47.0	+1.5
JNK	Nakash	2.65	244	P	Pn	04 03 52.3	+1.8
JKHN	Kushirohamanak	2.67	231	P	Pn	04 03 51.9	+1.2
JKHN				*e*S	Sn	04 04 24.5	0.0
JAK	Akkeshi	2.99	234	P	Pn	04 03 55.7	+1.1
JAK				*e*S	Sn	04 04 31.1	-0.4
JTKR	Abashiri--Toko	3.04	256	P	Pn	04 03 57.0	+1.6
JAR	Ashorobuto	3.40	245	P	Pn	04 04 01.6	+1.8
JKK2	Kamakawa 2	3.88	258	P	Pn	04 04 07.8	+1.8
JCH	Churui	4.00	239	*e*S	Sn	04 04 53.8	-1.0
JWK2	Keihoku	4.35	279	P	Pn	04 04 14.0	+1.9
JNBK	Urakawa-nobuka	4.56	238	P	Pn	04 04 15.4	+0.5
JNBK				*e*S	Sn	04 05 04.7	-3.2
JKB	Kayabe	5.85	243	*e*S	Sn	04 05 34.5	-3.7
JOT	Ohata	6.12	239	*e*S	Sn	04 05 39.5	-5.2
H11N2	WAKE ISLAND Hy	29.52	142	T	T	04 40 16.3	
	baz=334,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	29.53	142	T	T	04 40 19.0	
	baz=334,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	29.53	142	T	T	04 40 17.9	
	baz=334,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	30.51	143	T	T	04 41 37.0	
	baz=334,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	30.52	143	T	T	04 41 40.4	
	baz=334,slow=76,SNR=27						
H11S2	WAKE ISLAND Hy	30.53	143	T	T	04 41 36.2	
	baz=334,slow=76,SNR=17						
KDAK	Kodiak Island	38.10	48	P	P	04 10 10.1	+0.4
	1.8nm,0.7s,baz=253,slow=4.5,SNR=5.1						
MKAR	Makanchi Array	44.65	297	P	P	04 11 02.8	-0.5
	0.7nm,0.8s,baz=76,slow=9.3,SNR=7.9						
FINES	FINESS Array B	64.22	333	P	P	04 13 22.3	-1.7
	1.9nm,0.9s,baz=35,slow=7.0,SNR=8.7						
TXAR	Lajitas Array	81.57	57	P	P	04 15 08.8	+2.0
	0.3nm,0.5s,baz=292,slow=3.9,SNR=7.3						

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*IDC **19** 04:15:11.3±4.4, 2°.10N×95°.28E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/28, mbtmp3.6/4, MS2.9/2, Ms1 3.0/2, ms1mx2.6/30, Error ellipse: s-maj=168.3km s-min=27.8km az=57.0*

*DJA **19** 04:15:18.7±1.0, 3°N±7°×9°6E±°, h33^{km}±8^{km}, M3.2/4, MLv3.2/4*

ISC 19 04:15:18.3±1.3, **2°.59N**±0°.09×**95°.9E**±0°.1, **h25**^{km}, **n12**, σ**1^{s}.76**/10, **mb3.6**/4, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.44	114	P	Pb	04 15 27.7	+0.2
SNSI				S	Sb	04 15 37.0	+3.1
TPTI		1.42	62	P	Pn	04 15 41.1	-1.5
TPTI				S	Sn	04 15 59.1	-1.4
MLSI	Meulaboh, Aceh	1.74	16	P	Pn	04 15 47.2	+0.3
GSI	Gunungsitoli	2.09	128	P	Pn	04 15 50.8	-0.9
CMAR	Chiang Mai Arr	16.05	10	LR	LR	04 25 01.4	
	comp=Z,25nm,18.6s,baz=85,slow=35						
H08S2	Diego Garcia H	25.49	246	T	T	04 46 57.2	
	baz=67,slow=76,SNR=40						
H08S3	Diego Garcia H	25.49	246	T	T	04 46 57.8	
	baz=67,slow=76,SNR=46						
H08S1	Diego Carcia H	25.50	246	T	T	04 46 56.6	
	baz=67,slow=76,SNR=19						
WRA	Warramunga Arr	43.85	122	P	P	04 23 21.8	-1.0
	0.7nm,1.0s,baz=301,slow=9.7,SNR=2.7						
MKAR	Makanchi Array	45.60	347	P	P	04 23 34.8	-1.6
	0.4nm,0.4s,baz=161,slow=8.6,SNR=12						
SONM	Songino Array	45.97	10	P	P	04 23 41.0	+1.5
	0.5nm,0.7s,baz=189,slow=9.7,SNR=5.2						
ZALV	Zalesovo Beam	52.00	352	P	P	04 24 26.2	+0.8
	0.6nm,0.5s,baz=182,slow=7.1,SNR=3.2						
ZALV				LR	LR	04 49 28.1	
	comp=Z,19nm,18.6s,baz=106,slow=39						

TEH 19 04:27:58.7, 37°.60N×50°.15E, h16^{km}, ML3.6, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGZV	Ghazvin	1.21	177	*e*Pg	Pg	04 28 22.1	0.0
QALM	Alamut, Qazvin	1.23	161	*e*Pg	Pb	04 28 21.7	-0.1
QABG	Abgarm-Qazvin	1.94	194	*e*	Sb	04 28 57.6	-0.4
	comp=Z,99nm,0.2s						
IMHD	Mahdasht	1.96	167	*e*Pn	Pb	04 28 34.2	+0.1
IMHD				*e*		04 29 01.7	
	comp=Z,99nm,0.1s						
ISRB	Sarab	1.98	277	*e*Pn	Pb	04 28 33.7	-0.8
ISRB				*e*		04 28 45.8	
	comp=Z,99nm,0.1s						
IRAZ	Razeghan	2.20	185	*e*Pn	Pn	04 28 36.3	+1.5
IRAZ				*e*		04 29 07.3	
	comp=Z,99nm,0.3s						
IPRN	Peran	2.22	127	*e*Pn	Pn	04 28 36.5	+1.5
IHSH	Hashtrud	2.31	264	*e*Pn	Pn	04 28 37.9	+0.4
IHSB	Hasanabad	2.34	157	*e*Pn	Pb	04 28 39.8	-0.8
IHSB				*e*		04 28 41.2	
	comp=Z,99nm,0.3s						
IDMV	Damavand	2.52	143	*e*Pn	Pb	04 28 42.5	-1.4
IDMV				*e*		04 28 43.7	
	comp=Z,99nm,0.2s						
IHRS	Heris	2.56	287	*e*Pn	Pn	04 28 41.6	+1.8
HSRG	Sareghieh	2.79	213	*e*Pn	Pn	04 28 45.2	+2.1
IFIR	Firoozkooh	2.87	132	*e*Pn	Pb	04 28 47.6	-2.1
IFIR				*e*		04 28 49.3	
	comp=Z,99nm,0.1s						
IVRN	Varamin	2.90	153	*e*Pn	Pb	04 28 47.5	-2.6
ISHM	Shahmirzad	3.10	124	*e*Pn	Pn	04 28 49.4	+2.2
ISHM				*e*		04 29 26.0	
	comp=Z,99nm,0.2s						
IGLO	Ghaloghah	3.14	109	*e*Pn	Pn	04 28 49.7	+1.9
IGLO				*e*		04 29 35.3	
	comp=Z,99nm,0.2s						
ILAS	Lasjerd	3.17	133	*e*Pn	Pn	04 28 51.3	+3.1
IMRD	Marand	3.67	289	*e*Pn	Pn	04 28 58.3	+3.2
KRSH	Karshahi	3.97	155	*e*Pn	Pn	04 29 01.5	+2.4
IZEF	Zefreh	5.02	159	*e*Pn	Pn	04 29 16.4	+2.7
ANAR	Anarak	5.28	145	*e*Pn	Pn	04 29 19.7	+2.5

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*DRS **19** 04:34:19.2±0.0, 41°.55N×45°.46E, h16^{km}, ML2.2/4*

*MOS **19** 04:34:19.8±0.0, 41°.58N×45°.71E, h20^{km}, MPVA3.3*

*NORS **19** 04:34:20.8±0.0, 41°.50N×45°.67E, h13^{km}, MPVA3.3*

*TIF **19** 04:34:22.8, 41°.36N×45°.58E, h28^{km}±4^{km}*

ISC 19 04:34:21.9±1.2, **41°.54N**±0°.04×**45°.71E**±0°.02, **h25**^{km}±15^{km}, **n18**, σ**1^{s}.09**/34, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.32	106	P	Pn	04 34 32.0	+0.9
DDFL				S	Sn	04 34 35.9	-1.2
BTNK	Botanikuri	0.70	283	P	Pn	04 34 36.6	+0.5
BTNK				S	Sn	04 34 46.0	-0.1
SEAG	Tbilisi Sea	0.71	289	P	Pb	04 34 35.1	-0.7
SEAG				S	Sb	04 34 45.3	+0.1
KZRT	Kazreti	0.99	262	P	Pn	04 34 39.7	-0.6
KZRT				S	Sn	04 34 53.1	-0.4
DMNI	Dmanisi	1.16	260	P	Pn	04 34 42.4	-0.3
BTLR	Botlikh	1.19	19	*e*Pg	Pn	04 34 42.6	-0.5
BTLR				*e*Sg	Sn	04 34 58.1	-0.4
GNBR	Gunib	1.27	47	*i* Pg	Pb	04 34 44.0	-1.1
GNBR				*e*Sg	Sb	04 35 00.7	-0.4
BRNG	Burnasheti	1.41	274	P	Pb	04 34 47.5	-0.2
DVE	Vedeno	1.45	12	*e*Pg	Pb	04 34 47.8	-0.6
DVE				*e*Sg	Sb	04 35 09.1	+2.6
AKT	Akhty	1.52	91	*e*Pg	Pb	04 34 49.1	-0.4
AKT				*e*Sg	Sb	04 35 09.8	+1.3
KRNR	Karanay	1.57	34	*e*Pg	Pb	04 34 49.0	-1.3
KRNR				*e*Sg	Sb	04 35 08.6	-1.2
BKRG	Bakuriani	1.65	279	P	Pb	04 34 50.7	-1.1
BKRG				S	Sb	04 35 13.3	+1.1
LACR	Lac	1.66	321	*e*Pg	Pn	04 34 50.1	+0.5
LACR				*e*Sg	Sb	04 35 12.2	-0.3
GROC	Groznyy	1.67	2	*e*Pg	Pb	04 34 52.0	0.0
GROC				*e*Sg	Sb	04 35 14.3	+1.8
DBC	Dubki	1.70	29	*e*Pg	Pb	04 34 52.1	-0.5
DBC				*e*Sg	Sb	04 35 15.4	+1.8
ZEI	Tsey	1.83	314	*e*Pg	Pn	04 34 53.3	+1.2
ZEI				*e*Sg	Sb	04 35 17.8	+0.2
DIGR	Digorskoe uzhe	2.08	312	*e*Pg	Pb	04 34 57.8	-1.4
DIGR				*e*Sg	Sb	04 35 24.2	-0.6
ABS	Abastumani	2.18	277	P	Pn	04 34 58.4	+1.7
ABS				S	Sb	04 35 28.9	+1.5

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*IDC **19** 04:56:35.5±2.8, 7°.66S×118°.36E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.2/35, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=266.1km s-min=25.5km az=52.0*

*DJA **19** 04:56:38.6±0.7, 9°S±8°×11°9E±°, h62^{km}±15^{km}, M3.1/7, MLv3.1/7*

ISC 19 04:56:34.5±1.3, **8°.8S**±0°.1×**119°.23E**±0°.07, **h10**^{km}, **n9**, σ**0^{s}.48**/7, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.83	169	P	Pn	04 56 52.6	+0.2
WSI	Waingapu	1.35	129	P	Pg	04 57 00.7	+0.2
PLAI	Plampang	1.43	270	P	Pn	04 57 01.0	+0.4
PLAI				S	Sn	04 57 18.7	-0.8
BASI	Baing, Sumba	1.93	136	P	Pn	04 57 07.3	-0.1
TWSI	Taliwang, Sumb	2.32	272	P	Pn	04 57 13.0	+0.2
EDFI	Ende, Flores	2.44	88	P	Pb	04 57 18.5	-0.1
WRA	Warramunga Arr	18.33	129	P	P	05 01 06.6	+17
	0.2nm,0.3s,baz=305,slow=13,SNR=6.5						
ASAR	Alice Springs	20.38	138	P	Pn	05 01 29.8	+16
	0.4nm,0.4s,baz=314,slow=8.7,SNR=12						
MKAR	Makanchi Array	64.40	333	P	P	05 07 04.2	-6.7
	0.3nm,0.4s,baz=158,slow=5.8,SNR=9.0						

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*IDC **19** 05:01:14.4±1.6, 34°.79N×26°.39E, h0^{km}, mb3.8/2, mb1 3.5/5, mb1mx3.3/36, mbtmp3.5/5, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/32, Error ellipse: s-maj=44.5km s-min=24.6km az=137.0*

*ATH **19** 05:01:15.8, 35°.40N×26°.05E, h12^{km}±2^{km}, ML3.3/8, Error ellipse: s-maj=3.1km s-min=0.9km az=176.0*

*ISK **19** 05:01:15.3, 35°.37N×26°.06E, h15^{km}, ML3.0/15*

*THE **19** 05:01:16.1, 35°.37N×26°.04E, h10^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=1.7km s-min=0.5km az=173.0*

*NIC **19** 05:01:17.2±0.0, 35°.60N×26°.08E, h9^{km}±4^{km}, Ml4.0/3*

*DDA **19** 05:01:20.0, 35°.68N×26°.00E, h27^{km}±15^{km}, ML3.0*

ISC 19 05:01:15.7±0.9, **35°.43N**±0°.03×**26°.02E**±0°.02, **h11**^{km}±7^{km}, **n87**, σ**1^{s}.91**/114, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.23	166	P	Pg	05 01 20.2	-0.3
STIA				S	Sg	05 01 23.1	-0.7
ZKR	Zakros	0.35	153	P	Pg	05 01 21.9	-0.8
ZKR				S	Sg	05 01 26.1	-1.3
ZKR				AML	AML	05 01 26.4	
	comp=N,8168µm,0.2s						
ZKR				AML	AML	05 01 26.4	
	comp=E,36653µm,0.3s						
ZKR	Zakros	0.35	153	P	Pg	05 01 21.9	-0.8
ZKR				S	Sg	05 01 26.2	-1.2
	comp=E,11µm,0.3s						
ZKR	Zakros	0.35	153	PG	Pg	05 01 21.7	-1.0
ZKR				SG	Sg	05 01 26.2	-1.2
NPS	Neapolis	0.38	244	P	Pg	05 01 23.8	+0.7
NPS				S	Sg	05 01 28.8	+0.6
NPS				AML	AML	05 01 29.2	
	comp=E,13260µm,0.6s						
NPS				AML	AML	05 01 29.5	
	comp=N,9462µm,0.3s						
NPS	Neapolis	0.38	244	P	Pg	05 01 23.9	+0.7
NPS				S	Sg	05 01 28.8	+0.6
	comp=N,6µm,0.4s						
HRKL	Herakleio	0.76	262	P	Pg	05 01 31.1	+0.6
HRKL	Herakleio	0.76	262	PG	Pg	05 01 31.1	+0.6
HRKL				SG	Sb	05 01 42.4	+0.9
KSTL	Kastelli Herak	0.79	261	P	Pg	05 01 28.1	-2.9
KSTL				S	Sg	05 01 36.3	-5.0
KARP	Karpathos	0.94	82	P	Pg	05 01 33.4	-0.4
KARP				S	Sb	05 01 46.0	-0.5
KARP				AML	AML	05 01 48.3	
	comp=E,4883µm,0.2s						
KARP				AML	AML	05 01 49.1	
	comp=N,3086µm,0.2s						
KARP	Karpathos	0.94	82	P	Pg	05 01 33.7	-0.1
KARP				S	Sn	05 01 47.1	-1.2
	comp=N,2µm,0.2s						
KARP	Karpathos	0.94	82	PG	Pg	05 01 33.6	-0.1
KARP	Karpathos	0.94	82	P	Pg	05 01 33.6	-0.1
KARP				S	Sn	05 01 47.2	-1.2
KARP				AML	AML	05 01 47.7	
	comp=N,3.8nm,0.4s						
KARP				AML	AML	05 01 47.7	
	comp=N,3.8nm,0.4s						
KARP				AML	AML	05 01 48.0	
	comp=N,4.8nm,0.2s						
KARP				AML	AML	05 01 48.0	
	comp=N,4.8nm,0.2s						
ANAF	Anafi Island	0.95	348	P	Pb	05 01 34.6	+0.4
ANAF				S	Sg	05 01 47.6	+1.2
ANAF				AML	AML	05 01 51.5	
	comp=N,9911µm,0.2s						
ANAF				AML	AML	05 01 51.6	
	comp=E,9560µm,0.3s						
ANAF	Anafi Island	0.95	348	P	Pb	05 01 34.8	+0.5
ANAF				S	Sb	05 01 48.6	+1.7
	comp=E,5µm,0.2s						
SANT	Santorini	1.05	334	P	Pb	05 01 35.9	0.0
SANT				S	Sb	05 01 50.3	+0.6
SANT				AML	AML	05 01 54.0	
	comp=N,1150µm,0.2s						
SANT				AML	AML	05 01 54.1	
	comp=E,3416µm,0.3s						
SANT	Santorini	1.05	334	P	Pb	05 01 36.0	0.0
SANT	Santorini	1.05	334	PN	Pb	05 01 36.9	+0.9
SANT	Santorini	1.05	334	*i* P	Pb	05 01 35.7	-0.3
SANT				*i* S	Sb	05 01 46.4	-3.4
THR6	Thira Island,	1.06	331	P	Pb	05 01 36.5	+0.4
THR6	Thira Island,	1.06	331	P	Pb	05 01 36.4	+0.3
THR8	Santorini-Mono	1.07	336	P	Pb	05 01 36.2	-0.2
THR8	Santorini-Mono	1.07	336	P	Pb	05 01 36.2	-0.2
SIVA	Sivas	1.07	248	P	Pb	05 01 36.2	-0.2
SIVA				S	Sb	05 01 50.2	-0.2
SIVA				AML	AML	05 01 56.4	
	comp=N,1679µm,0.7s						
SIVA				AML	AML	05 01 59.1	
	comp=E,3106µm,0.9s						
SIVA	Sivas	1.07	248	P	Pb	05 01 36.0	-0.4
SIVA				S	Sb	05 01 50.7	+0.2
	comp=E,1µm,0.4s						
SNT1	Gialos, Santor	1.10	334	P	Pb	05 01 36.3	-0.5
SNT1	Gialos, Santor	1.10	334	P	Pb	05 01 36.5	-0.3
SNT5	Nea Kammeni, S	1.10	333	P	Pb	05 01 36.7	-0.1
SNT5	Nea Kammeni, S	1.10	333	P	Pb	05 01 36.9	+0.1
THR3	Thira Island,	1.10	333	P	Pb	05 01 37.1	+0.2
THR3	Thira Island,	1.10	333	P	Pb	05 01 37.0	+0.2
THR5	Thira Island,	1.13	331	P	Pb	05 01 37.3	-0.1
THR5	Thira Island,	1.13	331	P	Pb	05 01 37.2	-0.1
SAP3	Santorini-Thir	1.15	331	P	Pn	05 01 37.4	-0.4
SAP3	Santorini-Thir	1.15	331	P	Pn	05 01 37.2	-0.6
PRNS	Prines Rethymn	1.25	268	P	Pn	05 01 39.0	-0.1
NISR	Nisiros	1.48	37	P	Pb	05 01 43.5	+0.2
NISR				S	Sn	05 02 02.0	+0.2
NISR				AML	AML	05 02 07.7	
	comp=N,1250µm,0.3s						
NISR				AML	AML	05 02 10.0	
	comp=E,1855µm,0.3s						
VAM	Vamos	1.49	270	P	Pn	05 01 42.9	+0.4
VAM				S	Sb	05 02 03.2	+0.8
VAM				AML	AML	05 02 05.4	
	comp=E,865µm,0.4s						
VAM				AML	AML	05 02 09.2	
	comp=N,1517µm,0.3s						
VAM	Vamos	1.49	270	P	Pn	05 01 41.3	-1.2
IMMV	Iera Moni Meta	1.67	272	P	Pn	05 01 44.9	0.0
IMMV	Iera Moni Meta	1.67	272	P	Pn	05 01 44.7	-0.3
IMMV	Iera Moni Meta	1.67	272	PN	Pn	05 01 45.3	+0.3
APE	Apeiranthos	1.69	346	P	Pn	05 01 45.0	-0.3
APE	Apeiranthos	1.69	346	P	Pn	05 01 44.9	-0.3
APE	Apeiranthos	1.69	346	PN	Pn	05 01 45.2	-0.1
APE	Apeiranthos	1.69	346	*i* P	Pn	05 01 45.0	-0.3
APE				*i* S	Sn	05 02 00.0	-6.9
APE	Apeiranthos	1.69	346	P	Pn	05 01 44.9	-0.3
APE				S	Sn	05 02 05.4	-1.5
GVDS	Gavdos	1.69	250	PN	Pn	05 01 45.7	+0.5
GVD	Gavdhos	1.69	250	P	Pb	05 01 47.4	+0.5
GVD	Gavdhos	1.69	250	PN	Pn	05 01 45.3	0.0
MHLO	Agia Marina, M	1.82	314	P	Pn	05 01 48.2	+1.1
ARG	Arkhangelos	1.88	65	P	Pn	05 01 48.3	+0.4
ARG	Arkhangelos	1.88	65	P	Pn	05 01 46.5	-1.4
ARG	Arkhangelos	1.88	65	PN	Pn	05 01 47.9	0.0
ARG	Arkhangelos	1.88	65	P	Pn	05 01 47.9	0.0
ARG				S	Sn	05 02 12.0	+0.3
BODT	Bodrum	1.93	32	PN	Pn	05 01 48.8	+0.2
BDRM	Kayabasi	2.00	35	*i* P	Pn	05 01 50.4	+0.9
BDRM				*i* S	Sn	05 02 12.9	-1.7
TURN	Turunc	2.25	53	PN	Pn	05 01 53.0	+0.1
TURN	Turunc	2.25	53	*i* P	Pn	05 01 51.3	-1.6
TURN				*i* S	Sn	05 02 15.1	-5.5
MLSB	Milas	2.34	37	PN	Pn	05 01 54.5	+0.3
YER	Yerkesik	2.50	46	PN	Pn	05 01 56.7	+0.3
DALY	Dalyan (Mula)	2.54	56	PN	Pn	05 01 57.2	+0.3
KTHA	Kythira Island	2.54	290	PN	Pn	05 01 58.2	+1.2
MULA	Mugla, Merkez-	2.60	45	*i* P	Pn	05 01 59.2	+1.3
MULA				*i* S	Sn	05 02 27.2	-2.4
FETY	Fethiye	2.76	63	PN	Pn	05 02 00.4	+0.4
KSL	Kastellorizon	2.98	75	P	Pn	05 02 04.4	+1.3
AKAS	Kas	3.02	74	PN	Pn	05 02 03.8	+0.1
AKAS	Kas	3.02	74	*i* P	Pn	05 02 04.9	+1.2
AKAS				*i* S	Sn	05 02 29.9	-10
TAVA	DENIZLI_Tavas	3.09	48	*i* P	Pn	05 02 06.0	+1.4
TAVA				*i* S	Sn	05 02 33.1	-8.5
CAEL	Denizli, Camel	3.15	57	*i* P	Pn	05 02 08.6	+3.0
CAEL				*i* S	Sn	05 02 40.6	-2.7
CAEL				IAML		05 03 00.0	
	comp=N,52nm,0.7s						
CAEL				IAML		05 03 16.0	
	comp=E,67nm,0.6s						
GOLH	Golhisar	3.38	57	*i* P	Pn	05 02 09.8	+1.3
GOLH				*i* S	Sn	05 02 44.7	-4.1

GOLH				IAML		05 03 02.0	
	comp=E,26nm,0.5s						
ELL	Elmali	3.41	66	PN	Pn	05 02 09.3	+0.3
AKUM	Antalya-Kumluc	3.62	74	*i* P	Pn	05 02 12.9	+1.1
AKUM				*i* S	Sn	05 02 41.3	-13
ITM	Ithomi	3.74	299	PN	Pn	05 02 15.0	+1.5
KHAL	Karahalli	4.04	42	*i* P	Pn	05 02 18.9	+1.1
KHAL				*i* S	Sn	05 02 57.9	-7.3
USAK	Uak-Merkez	4.06	35	*i* P	Pn	05 02 20.0	+2.1
USAK				*i* S	Sn	05 02 53.5	-12
USAK				IAML		05 03 02.0	
	comp=E,69nm,1.2s						
USAK				IAML		05 04 21.0	
	comp=N,26nm,3.6s						
BUCA	Burdur, Bucak-	4.12	61	*i* P	Pn	05 02 21.2	+2.5
BUCA				*i* S	Sn	05 02 56.1	-11
OSC1	CSNet OBS 1	4.75	112	P	Pn	05 02 29.8	+2.6
AKMS	Akamas	5.18	93	P	Pn	05 02 32.7	-0.6
AKMS				AML	AML	05 03 30.1	
	comp=N,0.5nm,0.4s						
AKMS				AML	AML	05 03 30.6	
	comp=N,0.3nm,0.3s						
SZAC	Souni	5.66	95	P	Pn	05 02 41.0	+1.1
SZAC				AML	AML	05 03 42.9	
	comp=N,0.2nm,0.3s						
SZAC				AML	AML	05 03 44.6	
	comp=N,0.2nm,0.4s						
ASGA	Asgata	5.96	94	P	Pn	05 02 46.1	+2.2
BRTR	Keskin Array B	7.41	52	Pn	Pn	05 03 10.2	+6.2
	comp=N,0.1nm,0.3s,baz=223,slow=14,SNR=5.6						
MMAI	Mount Meron Ar	8.13	105	LR	LR	05 06 56.5	
	comp=N,37nm,18.7s,baz=190,slow=44						
AKASG	Malin Array Be	15.44	8	Pn	P	05 05 01.3	+3.3
	comp=N,0.6nm,0.3s,baz=197,slow=11,SNR=6.7						
GERES	GERESS Array B	16.20	330	Pn	P	05 05 11.6	+5.1
	comp=N,0.1nm,0.3s,baz=142,slow=8.2,SNR=3.7						
TORD	Torodi Ar. Bea	31.20	231	P	P	05 07 34.5	-0.7
	comp=N,1.1nm,0.4s,baz=34,slow=8.6,SNR=5.5						
MKAR	Makanchi Array	43.04	57	P	P	05 09 15.4	0.0
	comp=N,0.4nm,0.5s,baz=267,slow=8.2,SNR=9.2						

KRNET ***19*** *05:59:42.5±0.1, 39°.08N×70°.38E, mb2.3*

NNC ***19*** *05:59:53.3±89.0, 39°.05N×71°.78E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=677.9km s-min=412.3km az=172.0*

ISC 19 05:59:34.2±3.6**, 38°.9N**±0°.1×**70°.1E**±0°.1**, h4**^{km}±13^{km}**, n10, σ1^s.49**/14**, 8C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.33	25	⇑*i*P	Pg	06 00 01.5	+1.7
	baz=19						
BTK				⇑*i*S	Sg	06 00 15.9	-1.1
	baz=19						
DRK	Karamyk	1.48	65	⇓*i*P	Pg	06 00 04.4	+1.8
	baz=69						
DRK				⇓*i*S	Sb	06 00 20.6	-1.1
	baz=69						
OHH	Osh	2.68	51	⇑*i*P	Pb	06 00 23.0	+0.3
	baz=51						
OHH				⇑*i*S	Sn	06 00 52.3	+1.3
	baz=51						
TRKS	Terek-Say	2.79	17	⇓*i*P	Pb	06 00 24.7	0.0
	baz=14						
TRKS				⇓*i*S	Sn	06 00 55.5	+1.5
	baz=14						
SFK	Sufi-Kurgan	2.90	65	⇑*i*P	Pb	06 00 26.3	-0.2
	baz=68						
SFK				⇑*i*S	Sn	06 00 58.4	+1.7
	baz=68						
ARSB	Arslanbob	3.33	41	⇓*i*P	Pb	06 00 32.4	-1.4
	baz=41						
ARSB				⇓*i*S	Sn	06 01 08.5	+1.4
	baz=41						
KK31	Karatay Array	4.26	4	Lg	Lg	06 01 54.0	
	1.7nm,0.5s,baz=180,slow=28,SNR=4.8						
AAK	Ala-Archa	5.05	40	⇓Pg	Pg	06 01 30.1	+19
	3.8nm,0.7s						
AAK				⇑Lg	Lg	06 02 10.9	
	5.6nm,0.6s						
TKM2	Tokmak 2	5.83	44	⇓Pg	Pg	06 01 25.5	-0.4
	1.9nm,0.5s						
TKM2				⇑Lg	Lg	06 02 05.5	
	7.8nm,0.6s						
PDGK	Podgornoye	8.40	55	⇓Pg	Pn	06 01 35.2	-1.5
	2.2nm,0.3s						
PDGK				⇓Lg	Lg	06 02 24.4	
	13nm,0.7s						

IDC 19 06:26:07.6±5.1**, 55°.53N**×**86°.09E, h0**^{km}**, mb1 2.8**/2**, mb1mx2.8**/46**, mbtmp2.8**/2**, ML2.3**/2**, Error ellipse: s-maj=50.6km s-min=26.3km az=32.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	205	*i*		06 37 00.0	
	baz=24,slow=345,SNR=2.3						
ZALV	Zalesovo Beam	1.75	205	Pn	Pn	06 26 38.2	-0.9
	2.0nm,0.3s,baz=23,slow=17,SNR=22						
ZALV				Sn	Sg	06 27 04.8	+1.1
	2.3nm,0.3s,baz=28,slow=23,SNR=13						
KURBB	Kurchatov Arra	6.70	226	Pn	Pn	06 27 47.0	-0.2
	0.1nm,0.3s,baz=43,slow=14,SNR=9.3						
MKAR	Makanchi Array	9.07	197	Pn	Pn	06 28 20.2	+0.6
	0.0nm,0.3s,baz=20,slow=14,SNR=4.0						
MKAR				Lg	Lg	06 30 53.5	
	0.1nm,0.3s,baz=20,slow=25,SNR=3.0						

NAO ***19*** *06:31:13.8±376.0, 73°.25N×6°.40E, h14^{km}±242^{km}, ML4.1*

MOS ***19*** *06:31:13.4±1.1, 73°.34N×6°.37E, h10^{km}, mb4.6/35, Error ellipse: s-maj=23.8km s-min=5.4km az=97.0*

IDC ***19*** *06:31:13.4±0.5, 73°.17N×6°.15E, h0^{km}, mb4.1/21, mb1 4.2/27, mb1mx4.1/46, mbtmp4.1/27, ML3.7/6, MS3.5/27, Ms1 3.5/27, ms1mx3.4/40, Error ellipse: s-maj=14.6km s-min=9.2km az=39.0*

IEPN ***19*** *06:31:13.5, 73°.15N×6°.37E, h10^{km}*

NEIC ***19*** *06:31:14.9±2.2, 73°.26N±0°.05×6°.3E±0°.2, h10^{km}±1^{km}, mb4.6/78, Error ellipse: s-maj=11.6km s-min=3.3km az=138.0*

BER ***19*** *06:31:15.2±2.6, 73°.33N×6°.47E, h10^{km}, ML2.5, ML4.1(NAO), Confirmed Earthquake*

DNK ***19*** *06:31:16.2±1.6, 73°.58N×5°.50E, h0^{km}±46^{km}*

ISC 19 06:31:14.9±0.7**, 73°.31N**±0°.05×**6°.46E**±0°.04**, h10**^{km}±4^{km}**, h10**^{km}**:pP-P, n327, σ1^s.71**/324**, mb4.5**/100**, MS3.6**/30**, 10C-2D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.69	65	Pn	Pn	06 32 10.3	-1.5
BJO1	Bjornoya	3.69	65	⇑*i*P	Pn	06 32 10.1	-1.8
BJO1				*e*S	Sn	06 32 52.0	-3.2
BJO1				IAML		06 33 01.6	
	comp=Z,22nm,0.7s						
BJO1	Bjornoya	3.69	65	*e*P	Pn	06 32 10.3	-1.5
HSPB	Hornsund (broa	4.38	28	*e*P	Pn	06 32 20.3	-0.9
HSPB	Hornsund (broa	4.38	28	Pn	Pn	06 32 20.4	-0.9
HSPB	Hornsund (broa	4.38	28	⇑*i*P	Pn	06 32 20.4	-0.9
HSPB	Hornsund (broa	4.38	28	*e*P	Pn	06 32 20.2	-1.1
HSPB				S	Sn	06 33 08.8	-3.4
JNE	Jan Mayen East	5.09	250	⇑*i*P	Pn	06 32 30.0	-1.1
JNW	Jan Mayen West	5.11	251	⇑*i*P	Pn	06 32 30.2	-1.1
BRBA	Barentsburg A	5.14	18	Pn	Pn	06 32 31.2	-0.6
BRBA	Barentsburg A	5.14	18	*e*P	Pn	06 32 31.1	-0.6
JMIC	Jan Mayen	5.15	250	Pn	Pn	06 32 30.4	-1.5
	baz=74,slow=5.1,SNR=11						
JMIC	Jan Mayen	5.15	250	Pn	Pn	06 32 30.7	-1.2
JMIC	Jan Mayen	5.15	250	⇑*i*P	Pn	06 32 30.6	-1.3
JMIC				*e*		06 33 19.4	
JMIC				IAML		06 33 28.0	
	comp=Z,17nm,0.5s						
JMIC				*e*		06 33 30.9	
JMI	Jan Mayen	5.25	250	⇑*i*P	Pn	06 32 32.3	-0.9
TRO	Tromso	5.42	127	Pn	Pn	06 32 33.9	-1.6
TRO	Tromso	5.42	127	*e*P	Pn	06 32 34.2	-1.3
SPA2	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.7	-0.4
SPA3	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.7	-0.4
SPB2	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.7	-0.4
SPB4	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.8	-0.3
SPA0	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.6	-0.5
	baz=194,slow=14						
SPA0	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.7	-0.4
SPA0	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.6	-0.5
	baz=194,slow=14						
SPA0	Spitsbergen Ar	5.46	22	*e*P	Pn	06 32 35.8	-0.4
SPA0				*e*S	Sn	06 33 37.8	-1.1
SPITS	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.8	-0.4
	baz=206,slow=17,SNR=178						
SPA1	Spitsbergen Ar	5.46	22	Pn	Pn	06 32 35.7	-0.5
SPB1	Spitsbergen Ar	5.47	22	Pn	Pn	06 32 35.8	-0.4
SPB5	Spitsbergen Ar	5.47	22	Pn	Pn	06 32 35.9	-0.4
LOF	Lofoten	5.70	152	Pn	Pn	06 32 36.6	-2.8
LOF	Lofoten	5.70	152	*e*P	Pn	06 32 37.5	-1.9
LOF				*e*		06 33 32.1	
LOF				IAML		06 33 47.2	
	comp=Z,13nm,0.6s						
HOPEN	Hopen	5.79	48	Pn	Pn	06 32 39.0	-1.6
HOPEN	Hopen	5.79	48	*e*P	Pn	06 32 38.7	-1.9
HOPEN				*e*S	Sn	06 33 39.4	-7.6
HOPEN				IAML		06 33 59.6	
	comp=Z,6.0nm,0.9s						
HOPEN	Hopen	5.79	48	*e*P	Pn	06 32 38.4	-2.3
HOPEN				*e*S	Sn	06 33 42.5	-4.4
KBS	Kingsbay	5.80	11	*i* P	Pn	06 32 39.4	-1.3
KBS	Kingsbay	5.80	11	Pn	Pn	06 32 40.9	+0.2
KBS	Kingsbay	5.80	11	Pn	Pn	06 32 40.1	-0.6
KBS	Kingsbay	5.80	11	*e*P	Pn	06 32 39.4	-1.3
KBS	Kingsbay	5.80	11	*e*P	Pn	06 32 40.0	-0.6
KBS				*e*S	Sn	06 33 46.2	-0.9
KBS	Kingsbay	5.80	11	*i* P	Pn	06 32 40.8	+0.1
JETT	Jettan, Norway	5.83	123	Pn	Pn	06 32 39.4	-1.8
N2SV	S¸rv¥gen	5.86	155	*e*P	Pn	06 32 39.5	-2.1
HAMF	Hammerfest	5.97	108	Pn	Pn	06 32 40.4	-2.7
HAMF	Hammerfest	5.97	108	*e*P	Pn	06 32 40.3	-2.7
HAMF				IAML		06 33 47.6	
	comp=Z,13nm,0.7s						
STEI	Steigen	6.14	147	Pn	Pn	06 32 44.0	-1.3
STEI	Steigen	6.14	147	*e*P	Pn	06 32 43.8	-1.6
STEI				*e*		06 33 46.6	
STEI				IAML		06 33 50.0	
	comp=Z,6.2nm,0.5s						
N2IH	Innhavet	6.22	145	*e*P	Pn	06 32 44.3	-2.1
KIF	Kilpisjarvi	6.33	126	Pn	Pn	06 32 46.2	-1.8
KIF	Kilpisjarvi	6.33	126	⇑*i*P	Pn	06 32 46.3	-1.7
FAUS	Fauske	6.65	149	*e*P	Pn	06 32 50.5	-1.9
FAUS				IAML		06 34 06.6	
	comp=Z,6.5nm,0.6s						
NBB30	Finnes	6.83	155	*e*P	Pn	06 32 53.3	-1.5
KTK1	Kautokeino	6.92	120	*e*P	Pn	06 32 54.7	-1.4
NBB17	Glomfjord B¥r	7.00	155	*e*P	Pn	06 32 55.7	-1.5
ARD8	ARCESS Array S	7.13	113	Pn	Pn	06 32 58.5	-0.5
ARD9	ARCESS Array S	7.13	113	Pn	Pn	06 32 58.3	-0.7
ARD1	ARCESS Array S	7.13	112	Pn	Pn	06 32 57.9	-1.2
ARC7	ARCESS Array S	7.13	113	Pn	Pn	06 32 57.9	-1.2
ARD7	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.4	-0.8
ARC6	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.2	-0.9
ARC1	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.4	-0.7
ARB5	ARCESS Array S	7.14	113	Pn	Pn	06 32 57.9	-1.3
ARB1	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.4	-0.8
ARA1	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.5	-0.7
ARA3	ARCESS Array S	7.14	113	Pn	Pn	06 32 57.7	-1.5
ARA0	ARCESS Array S	7.14	113	Pn	Pn	06 32 57.2	-2.0
	baz=316,slow=14						
ARA0	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.5	-0.7
ARA0	ARCESS Array S	7.14	113	Pn	Pn	06 32 57.2	-2.0
	baz=316,slow=14						
ARA0				IAML		06 34 27.8	
	comp=Z,4.8nm,0.7s						
ARCES	ARCESS Array B	7.14	113	Pn	Pn	06 32 57.0	-2.2
	baz=325,slow=11,SNR=66						
ARC5	ARCESS Array S	7.14	113	Pn	Pn	06 32 57.8	-1.4
ARB3	ARCESS Array S	7.14	113	Pn	Pn	06 32 58.5	-0.7
ARC4	ARCESS Array S	7.15	113	Pn	Pn	06 32 58.5	-0.7
ARD5	ARCESS Array S	7.15	113	Pn	Pn	06 32 57.9	-1.4
KONS	Konsvik	7.21	158	*e*P	Pn	06 32 58.3	-1.8
KONS				*e*S	Sn	06 34 10.4	-11
KONS				IAML		06 34 16.4	
	comp=Z,8.4nm,0.4s						
DAG	Danmarks Havn	7.31	310	*i* P	Pn	06 32 58.1	-3.4
DAG	Danmarks Havn	7.31	310	*e*P	Pn	06 32 57.7	-3.8
DAG				*e*S	Sn	06 34 13.0	-11
DAG	Danmarks Havn	7.31	310	*i* P	Pn	06 32 58.1	-3.4
DAG	Danmarks Havn	7.31	310	*i* P	Pn	06 32 58.1	-3.4
STOK	Stokkvaagen	7.36	159	*e*P	Pn	06 33 00.8	-1.4
KEV	Kevo	7.41	109	P	Pn	06 33 00.2	-2.6
KEV	Kevo	7.41	109	Pn	Pn	06 33 00.2	-2.6
DBG	Daneborg	7.49	290	Pn	Pn	06 32 59.4	-4.5
DBG	Daneborg	7.49	290	*e*	Pn	06 32 58.1	-5.7
	baz=82,slow=12						
DBG				*i* P	Pn	06 32 59.4	-4.5
DBG				*i* S	Sn	06 34 17.6	-11
MOR8	Moi Rana	7.68	155	*e*P	Pn	06 33 05.8	-0.8
MOR8				*e*S	Sn	06 34 22.3	-11
MOR8				IAML		06 34 27.7	
	comp=Z,9.4nm,0.5s						
NSS	Namsos	9.04	165	*e*P	Pn	06 33 24.4	-0.7
SCO	Scoresbysund	9.22	266	*i* P	Pn	06 33 25.3	-2.3
SCO	Scoresbysund	9.22	266	Pn	Pn	06 33 25.3	-2.3
SCO	Scoresbysund	9.22	266	*i* P	Pn	06 33 25.4	-2.3
SCO	Scoresbysund	9.22	266	*i* P	Pn	06 33 25.3	-2.3
SCO	Scoresbysund	9.22	266	*i* P	Pn	06 33 25.4	-2.3
NOD	Norderasen	10.37	159	*e*P	Pn	06 33 42.6	-0.8
APA0	Apatity Array	10.47	110	Pn	Pn	06 33 41.9	-2.9
	baz=315,slow=9.3						
APA0	Apatity Array	10.47	110	Pn	Pn	06 33 41.9	-2.9
	baz=315,slow=9.3						
LVZ	Lovozero	10.73	106	⇓*e*P	Pn	06 33 44.3	-4.0
LVZ				pmax	pmax		
	comp=Z,106nm,0.8s						
LVZ	Lovozero	10.73	106	Pn	Pn	06 33 45.0	-3.3
MOL	Molde	10.80	177	*e*P	Pn	06 33 47.7	-1.5
AKN	Aaknes	11.19	179	Pn	Pn	06 33 54.2	-0.3
AKN	Aaknes	11.19	179	Pn	Pn	06 33 54.2	-0.3
DOMB	Dombas	11.36	174	*e*P	Pn	06 33 54.7	-2.3
ZFI	Zemlya Franca-	11.53	32	*e*P	Pn	06 33 58.7	-0.4
ZFI2	Zemlya Franca-	11.53	32	*e*P	Pn	06 33 58.2	-0.9
NC204	NORSAR Array S	12.20	170		Pn	06 34 07.6	-0.8
NC303	NORSAR Array S	12.28	169	Pn	Pn	06 34 07.9	-1.6
NB201	NORSAR Array S	12.45	169	Pn	Pn	06 34 10.7	-1.2
NB2	NORSAR Subarra	12.46	169	Pn	Pn	06 34 10.8	-1.2
	baz=355,slow=16						
NB2	NORSAR Subarra	12.46	169	Pn	Pn	06 34 10.8	-1.2
	baz=355,slow=16						
NOA	NORSAR Array B	12.46	169	Pn	Pn	06 34 09.8	-2.1
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=6.2						
NC602	NORSAR Array S	12.78	169	Pn	Pn	06 34 14.3	-1.9
NRA0	NORESS Array S	12.78	169	Pn	Pn	06 34 13.7	-2.6
	baz=4.6,slow=14						
NRA0	NORESS Array S	12.78	169	Pn	Pn	06 34 13.7	-2.6
	baz=4.6,slow=14						
SUMG	Summit	12.96	289	P	Pn	06 34 18.1	-1.1
SUMG	Summit	12.96	289	Pn	Pn	06 34 18.1	-1.1
SLVR	Solovky	13.14	114	*e*P	Pn	06 34 13.8	-7.3
FIA1	FINESS Array S	13.98	138	Pn	Pn	06 34 30.4	-2.3
FIA0	FINESS Array S	13.98	138	Pn	Pn	06 34 30.0	-2.7
	baz=342,slow=14						
FIA0	FINESS Array S	13.98	138	Pn	Pn	06 34 30.0	-2.7
	baz=342,slow=14						
FINES	FINESS Array B	13.98	138	Pn	Pn	06 34 29.7	-3.0
	comp=Z,0.5nm,0.3s,baz=334,slow=13,SNR=20						
TMCR	Tamitsa	14.44	113	*e*P	Pn	06 34 40.9	+2.0
TMCR				*e*		06 37 24.8	
TMCR				pmax	pmax		
	comp=Z,18nm,0.8s						
TMCR	Tamitsa	14.44	113	*e*P	Pn	06 34 34.4	-4.5
LSH	Leshukonskoye	16.01	102	*e*P	Pn	06 34 52.8	-6.9
AMDE	Amderma	17.28	74	P	Pn	06 35 15.2	-0.6
KLMR	Klimovskoe	17.57	118	*e*P	Pn	06 35 16.5	-2.9
KLMR				pmax	pmax		
	comp=Z,40nm,1.5s						
KLMR	Klimovskoe	17.57	118	*e*Pn	Pn	06 35 16.6	-2.9
KLMR				AMP		06 35 25.7	
	comp=Z,40nm,1.5s						
KLMR	Klimovskoe	17.57	118	*e*P	Pn	06 35 17.2	-2.2
	comp=Z,38nm,1.8s						
KLMR				S	Sn	06 38 21.7	-13
EKA	Eskdalemuir Ar	18.47	198	P	P	06 35 26.4	-4.0
	baz=8.2,slow=11,SNR=4.2						
TULEG	Thule	18.58	315	P	P	06 35 29.9	-1.5
EUNU	Eureka	19.91	329	P	P	06 35 46.4	+0.3
EUNU				IAmb	IAmb	06 35 49.4	
	comp=Z,38nm,1.2s						
NACGM	Naroch	20.27	145	*i* P	P	06 35 50.4	+0.3
NACGM				*i* P	P	06 35 50.4	+0.3
NACGM				*i* P	P	06 35 50.4	+0.3
NACGM				*i* Pb	pwP	06 35 56.6	+0.9
	comp=Z,26nm,0.9s						
NACGM				*i* PP	PnPn	06 36 08.5	+1.9
NACGM				*i* PPP	PPP	06 36 15.6	
NACGM				*i* S	Sn	06 39 47.3	+7.3
NACGM				*i* SS	SnSn	06 40 14.8	+21
NACGM				*i* SSS	SSS	06 40 28.6	
NACGM				*i* LQ	LQ	06 41 42.0	
NACGM				*i* LR	LR	06 42 49.4	
MOS	Moscow	21.66	128	*e*P	P	06 36 02.9	-2.2
OBN	Obninsk	22.00	130	LR	LR	06 44 25.0	
	comp=Z,49nm,21.8s,baz=358,slow=36						
OBN	Obninsk	22.00	130	*i* P	P	06 36 08.3	-0.4
OBN				*i*		06 36 35.6	
OBN				*i*		06 40 06.6	
OBN				pmax	pmax		
	comp=Z,17nm,0.3s						
OBN				MLR	MLR		
	comp=Z,160nm,18.0s						
KIRV	Kirov	22.14	109	P	P	06 36 08.8	-1.3
	comp=Z,16nm,0.8s,baz=332,slow=5.7,SNR=3.9						
KIRV				LR	LR	06 45 04.7	
	comp=Z,94nm,19.1s,baz=334,slow=38						
CLL	Collm	22.26	169	*e*P	P	06 36 11.0	-0.5
CLL				*i* pP	sP	06 36 15.1	+0.2
	comp=Z,24nm,1.2s						
CLL				*i*		06 36 25.9	
CLL				Lm	MLR	06 44 00.0	
	comp=N,200nm,18.0s						
CLL				Lm	MLR	06 44 00.0	
	comp=E,100nm,20.6s						
CLL				Lm	MLR	06 44 00.0	
	comp=Z,300nm,19.0s						
CLL	Collm	22.26	169	*e*P	P	06 36 11.0	-0.5
CLL				*i*		06 36 15.1	
CLL				MLR	MLR		
	comp=Z,300nm,19.0s						
BRG	Berggiesshubel	22.75	168	*e*P	P	06 36 18.6	+1.9
BRG				Amp		06 36 23.4	
	comp=Z,8.4nm,1.0s						
BRG	Berggiesshubel	22.75	168	*e*P	P	06 36 18.6	+1.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRG	Berggiesshubel	22.75	168	*e*P	P	06 36 18.6	+1.9
BRG				Amp		06 36 23.4	
	comp=Z,8.4nm,1.0s						
CHVC	Chvalec	23.18	164	*e*P	P	06 36 21.8	+0.5
NKC	Novy Kostel	23.30	170	*e*P	P	06 36 23.4	+0.9
NKC				*e*		06 36 28.4	
NKC	Novy Kostel	23.30	170	*e*P	P	06 36 23.4	+0.9
NKC				*e*pP	pwP	06 36 28.4	-0.1
DPC	Dobruska-Polom	23.44	164	*e*P	P	06 36 24.8	+0.9
DPC				*e*		06 36 29.5	
DPC	Dobruska-Polom	23.44	164	*e*P	P	06 36 24.8	+0.9
DPC				*e*pP	pwP	06 36 29.5	+0.1
PRU	Pruhonice	23.67	167	*e*P	P	06 36 28.5	+2.4
PRU	Pruhonice	23.67	167	*e*P	P	06 36 28.5	+2.4
KRLC	Kraliky	23.75	163	*e*P	P	06 36 27.1	+0.2
KRLC	Kraliky	23.75	163	*e*P	P	06 36 27.1	+0.2
OJC	Ojcow	23.89	159	P	P	06 36 29.0	+0.7
OJC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OJC	Ojcow	23.89	159	P	P	06 36 28.9	+0.7
OJC				IAmb	IAmb	06 36 33.2	
	comp=Z,8.7nm,0.8s						
MORC	Moravsky Berou	24.11	162	*e*P	P	06 36 30.4	+0.1
MORC	Moravsky Berou	24.11	162	P	P	06 36 30.4	+0.1
MORC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	24.11	162	P	P	06 36 30.4	+0.1
KHC	Kasperske Hory	24.46	169	*e*P	P	06 36 35.5	+1.9
KHC				*e*		06 36 41.1	
KHC	Kasperske Hory	24.46	169	*e*P	P	06 36 35.5	+1.9
KHC				*e*pP	pwP	06 36 41.1	+2.0
VRAC	Vranov	24.50	164	P	P	06 36 33.9	+0.1
	comp=Z,5.1nm,0.5s,baz=353,slow=12,SNR=6.5						
VRAC	Vranov	24.50	164	*e*P	P	06 36 33.7	-0.1
KRUC	Moravsky	24.72	164	*e*P	P	06 36 38.1	+2.2
AKASG	Malin Array Be	24.73	144	P	P	06 36 34.9	-1.0
	comp=Z,3.1nm,0.7s,baz=345,slow=9.6,SNR=6.4						
AKASG				LR	LR	06 46 09.2	
	comp=Z,379nm,19.3s,baz=340,slow=36						
AKBB	Malin Array Si	24.73	144	*ce*P	P	06 36 34.8	-1.1
AKBB	Malin Array Si	24.73	144	P	P	06 36 35.2	-0.7
AKBB				IAmb	IAmb	06 36 57.6	
	comp=Z,11nm,1.1s						
GEC2	GERESS Array S	24.76	169	P	P	06 36 35.8	-0.5
GEC2				IAmb	IAmb	06 36 39.1	
	comp=Z,16nm,1.3s						
GEC2B	GERESS ARRAY S	24.76	169	P	P	06 36 35.4	-0.9
GERES	GERESS Array B	24.76	169	P	P	06 36 36.7	+0.4
	comp=Z,2.2nm,0.7s,baz=10,slow=8.3,SNR=18						
RES	Resolute Bay	24.80	322	LR	LR	06 46 54.0	
	comp=Z,198nm,18.7s,baz=68,slow=38						
KWP	Kalwaria Pacla	24.81	154	P	P	06 36 36.8	+0.2
KWP				pmax	pmax		
	comp=Z,27nm,1.1s						
KWP	Kalwaria Pacla	24.81	154	P	P	06 36 36.8	+0.2
KWP				IAmb	IAmb	06 36 57.5	
	comp=Z,26nm,1.1s						
LPSR	Galich'ya Gora	24.86	129	*e*P	P	06 36 34.3	-2.7
LPSR				pmax	pmax		
	comp=Z,50nm,0.9s						
LANS	Liptovska Anna	24.91	159	*e*P	P	06 36 38.5	+0.9
LANS	Liptovska Anna	24.91	159	*e*P	P	06 36 38.5	+0.9
JAVC	Velka Javorina	25.03	162	*e*P	P	06 36 38.7	0.0
BFO	Black Forest	25.08	177	P	P	06 36 40.1	+1.0
BFO				pmax	pmax		
	comp=Z,28nm,1.5s						
BFO	Black Forest	25.08	177	P	P	06 36 40.0	+1.0
BFO				IAmb	IAmb	06 36 44.9	
	comp=Z,28nm,1.5s						
ECH	Echery	25.18	179	P	P	06 36 40.4	+0.4
ECH				pmax	pmax		
	comp=Z,12nm,0.9s						
ECH	Echery	25.18	179	P	P	06 36 40.4	+0.4
ECH				IAmb	IAmb	06 36 46.3	
	comp=Z,12nm,0.9s						
CRVS	Cervenica-Dubn	25.37	157	*e*P	P	06 36 42.6	+0.8
CRVS				pmax	pmax		
	comp=Z,41nm,1.4s						
CRVS	Cervenica-Dubn	25.37	157	*e*P	P	06 36 42.6	+0.8
KOLS	Kolonicke sedl	25.44	155	*e*P	P	06 36 43.1	+0.7
KOLS				pmax	pmax		
	comp=Z,16nm,1.2s						
KOLS	Kolonicke sedl	25.44	155	*e*P	P	06 36 43.1	+0.7
MODS	Modra-Piesok	25.48	163	*e*P	P	06 36 43.0	+0.3
MODS				pmax	pmax		
	comp=Z,28nm,1.4s						
MODS	Modra-Piesok	25.48	163	*e*P	P	06 36 43.0	+0.3
VYHS	Vyhne	25.50	161	*e*P	P	06 36 43.5	+0.6
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VYHS	Vyhne	25.50	161	*e*P	P	06 36 43.5	+0.6
UZH	Uzhgorod	25.74	155	*e*P	P	06 36 44.8	-0.2
UZH				*e*		06 36 53.0	
UZH				*i*		06 37 22.4	
MOA	Molln	25.78	168	*e*P	P	06 36 44.4	-1.1
	comp=Z,9.0nm,1.6s						
CONA	Conrad Observa	25.81	165	*e*P	P	06 36 46.6	+0.8
	comp=Z,9.4nm,1.0s						
RETA	Reutte	25.98	173	*e*P	P	06 36 50.0	+2.7
	comp=Z,3.0nm,0.7s						
MOTA	Moosalm	26.13	173	*e*P	P	06 36 50.9	+2.1
	comp=Z,13nm,2.0s						
DAVA	Damuels	26.15	175	*e*P	P	06 36 51.7	+2.6
	comp=Z,14nm,1.2s						
WATA	Walderalm	26.16	172	*e*P	P	06 36 52.7	+3.6
	comp=Z,2.6nm,0.4s						
PSZ	Piszkesteto	26.18	159	P	P	06 36 48.7	-0.4
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PSZ	Piszkesteto	26.18	159	P	P	06 36 48.7	-0.4
PSZ				IAmb	IAmb	06 37 04.7	
	comp=Z,7.5nm,1.0s						
VSR	Storozhevoye	26.20	130	*e*P	P	06 36 47.4	-1.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WTTA	Wattenberg	26.23	172	*e*P	P	06 36 56.2	+6.4
	comp=Z,14nm,1.4s						
SQTA	Sankt Quirin	26.26	173	*e*P	P	06 36 53.4	+3.5
	comp=Z,3.4nm,0.9s						
FETA	Feichten	26.44	173	*e*P	P	06 36 49.9	-1.8

	comp=Z,8.2nm,2.0s						
ARSA	Arzberg	26.46	166	*e*P	P	06 36 50.2	-1.4
	comp=Z,6.9nm,1.1s						
KBA	Koelnbreinsper	26.50	169	*e*P	P	06 36 55.7	+3.5
	comp=Z,4.1nm,1.1s						
ARU	Arti	26.54	101	P	P	06 36 53.1	+0.8
	comp=Z,0.6nm,0.3s,baz=333,slow=4.5,SNR=2.2						
ARU	Arti	26.54	101	*d i*P	P	06 36 53.5	+1.3
ARU						06 37 30.6	
ARU				S	S	06 41 30.8	+4.7
ARU				pmax	pmax		
	comp=Z,18nm,1.6s						
ARU	Arti	26.54	101	P	P	06 36 52.9	+0.7
ARU				IAmb	IAmb	06 37 11.4	
	comp=Z,18nm,1.1s						
DAVOX	Davos/Dischmat	26.66	175	LR	LR	06 47 20.5	
	comp=Z,190nm,18.2s,baz=344,slow=36						
VRH	Novokhopyorsk	26.80	126	*e*P	P	06 36 51.0	-3.6
VRH				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SOKA	Soboth	27.00	167	*e*P	P	06 37 00.4	+3.8
	comp=Z,3.0nm,1.1s						
FRB	Frobisher Bay	27.04	289	P	P	06 36 55.3	-1.3
	comp=Z,1.5nm,0.8s,baz=351,slow=5.1,SNR=5.3						
FRB				LR	LR	06 46 35.4	
	comp=Z,70nm,18.3s,baz=10.0,slow=34						
BUR08	Bucovina Ar. S	27.09	151	P	P	06 36 57.4	0.0
OBKA	Obir	27.14	168	*e*P	P	06 36 59.9	+2.1
	comp=Z,9.9nm,1.3s						
BELG	Belogornoye	27.15	118	LR	LR	06 47 45.9	
	comp=Z,88nm,18.6s,baz=229,slow=36						
BELG	Belogornoye	27.15	118	*i* P	P	06 36 56.9	-0.8
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MLR	Muntele Rosu	29.30	151	LR	LR	06 49 11.0	
	comp=Z,411nm,18.4s,baz=338,slow=37						
TIXI	Tiksi	30.80	31	*i* P	P	06 37 31.7	+1.7
TIXI	Tiksi	30.80	31	P	P	06 37 31.9	+1.9
TIXI				IAmb	IAmb	06 37 37.5	
	comp=Z,9.4nm,1.5s						
AKTO	Aktyubinsk	31.69	108	P	P	06 37 38.3	+0.2
	comp=Z,5.6nm,1.0s,baz=297,slow=4.7,SNR=6.4						
AKTO				LR	LR	06 51 09.0	
	comp=Z,59nm,19.7s,baz=345,slow=38						
BRVK	Borovoye	32.84	93	P	P	06 37 49.0	+0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	32.84	93	P	P	06 37 49.0	+0.9
BRVK				IAmb	IAmb	06 37 54.5	
	comp=Z,4.4nm,0.9s						
AB05	Akbulak array	33.28	106	P	P	06 37 52.3	+0.3
AB09	Akbulak array	33.28	106	P	P	06 37 52.3	+0.3
AB31	Akbulak array	33.29	106	P	P	06 37 51.1	-0.9
AB31				IAmb	IAmb	06 37 58.2	
	comp=Z,4.4nm,0.8s						
ABKAR	Akbulak array	33.29	106	P	P	06 37 51.4	-0.6
ABKAR				IAmb	IAmb	06 37 58.2	
	comp=Z,4.4nm,0.8s						
AB07	Akbulak array	33.31	106	P	P	06 37 52.3	0.0
KIV	Kislovodsk	33.85	130	*e*P	P	06 37 55.5	-1.6
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV				MLR	MLR		
	comp=Z,230nm,15.0s						
ESDC	Sonseca Array	34.09	194	P	P	06 38 00.3	+1.1
	comp=Z,2.1nm,1.0s,baz=344,slow=11,SNR=4.2						
ESDC				LR	LR	06 52 37.4	
	comp=Z,41nm,18.7s,baz=220,slow=38						
KBZ	Khabaz	34.11	130	P	P	06 38 00.3	+1.2
	comp=Z,3.3nm,0.8s,baz=331,slow=5.9,SNR=6.4						
KBZ				LR	LR	06 52 17.7	
	comp=Z,137nm,18.9s,baz=346,slow=37						
KBZ	Khabaz	34.11	130	*i* P	P	06 37 59.7	+0.5
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.9s						
ZEI	Tsey	35.23	129	*e*P	P	06 38 09.0	-0.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GROC	Groznyy	35.27	127	*e*P	P	06 38 08.5	-0.7
GROC				*e*		06 39 26.5	
GROC				*e*		06 40 39.0	
GROC				pmax	pmax		
	comp=Z,46nm,1.2s						
BRTR	Keskin Array B	36.13	143	P	P	06 38 16.9	+0.1
	comp=Z,0.8nm,0.7s,baz=356,slow=8.7,SNR=4.6						
BRTR				LR	LR	06 53 58.9	
	comp=Z,50nm,20.0s,baz=20,slow=38						
BRTR	Keskin Array B	36.13	143	*i* P	P	06 38 17.2	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	36.23	78	P	P	06 38 18.9	+1.5
	comp=Z,2.9nm,0.8s,baz=334,slow=9.9,SNR=5.7						
ZALV				LR	LR	06 57 39.5	
	comp=Z,24nm,19.3s,baz=80,slow=44						
KURK	Kurchatov	37.32	87	*i* P	P	06 38 27.3	+0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKT	Akhty	37.35	125	*e*P	P	06 38 26.7	-0.5
AKT				*e*		06 39 51.9	
AKT				*e*		06 40 43.6	
AKT				pmax	pmax		
	comp=Z,19nm,0.9s						
KEST	Kesra	37.68	176	LR	LR	06 53 44.9	
	comp=Z,99nm,18.7s,baz=292,slow=36						
FCC	Fort Churchill	37.86	303	P	P	06 38 31.5	+0.4
FCC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FCC	Fort Churchill	37.86	303	P	P	06 38 31.5	+0.4
YKA	Yellowknife Ar	38.86	321	P	P	06 38 39.5	0.0
	comp=Z,1.2nm,0.8s,baz=25,slow=9.1,SNR=20						
YKA				PcP	PcP	06 40 50.1	0.0
	comp=Z,0.2nm,0.7s,baz=2.9,slow=2.5,SNR=3.4						
YKA				LR	LR	06 54 38.3	
	comp=Z,195nm,18.5s,baz=0.0,slow=36						
PRP	Porcupine Dome	40.19	342	P	P	06 38 53.4	+2.6
DGZ	Jazzator, Alta	40.76	79⇑	*e*P	P	06 39 00.7	+5.1
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.8s						
DAWY	Dawson	41.01	338	P	P	06 38 56.7	-0.7
IL31		41.04	343	P	P	06 38 58.6	+1.0
ILAR	Eielson Array	41.04	343	P	P	06 38 58.6	+1.0
	comp=Z,1.6nm,0.8s,baz=4.3,slow=6.8,SNR=20						
IL18	Eielson Array	41.04	343	P	P	06 38 59.0	+1.3
CCB	Clear Creek Bu	41.24	344	P	P	06 39 00.2	+0.9
K27K	Chicken	41.32	340	P	P	06 39 00.9	+0.9
DOT	Dot Lake	41.89	341	P	P	06 39 06.0	+1.3
KK31	Karatay Array	41.89	99	P	P	06 39 05.6	+0.7
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	41.89	99	P	P	06 39 05.6	+0.7
KKAR	Karatay Array	41.89	99	P	P	06 39 04.6	-0.3
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	41.89	99	P	P	06 39 04.6	-0.3
MK31	Makanchi Array	41.91	86	*ce*P	P	06 39 06.1	+1.1
MK31	Makanchi Array	41.91	86	P	P	06 39 05.7	+0.7
MKAR	Makanchi Array	41.91	86	P	P	06 39 06.7	+1.7
	comp=Z,0.7nm,0.6s,baz=342,slow=7.6,SNR=5.5						
MKAR				LR	LR	07 01 33.4	
	comp=Z,25nm,18.1s,baz=304,slow=43						
MKAR	Makanchi Array	41.91	86	*i* P	P	06 39 06.5	+1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BPAW	Bear Paw Mtn.	42.02	345	P	P	06 39 06.4	+0.7
MOY	Mondy	42.71	66	*e*P	P	06 39 15.1	+3.5
MOY				pmax	pmax		
	comp=Z,26nm,1.8s						
GYB4	ALIBECK ARRAY	43.29	115	P	P	06 39 15.7	-0.6
GYB4				IAmb	IAmb	06 39 27.2	
	comp=Z,9.5nm,0.8s						
GYB2	ALIBECK ARRAY	43.30	115	P	P	06 39 16.8	+0.5
GEYT	Alibeck	43.30	115	P	P	06 39 17.8	+1.4
	comp=Z,4.1nm,0.9s,baz=316,slow=10,SNR=3.9						
GEYT				LR	LR	06 59 52.4	
	comp=Z,88nm,18.7s,baz=330,slow=40						
GYA0B	ALIBECK ARRAY	43.30	115	P	P	06 39 17.4	+1.0
GYA0B				IAmb	IAmb	06 39 27.7	
	comp=Z,8.7nm,0.8s						
PPLA	Purkeypile	43.30	346	P	P	06 39 17.0	+0.7
PPLA				IAmb	IAmb	06 39 33.8	
	comp=Z,12nm,1.4s						
FFC	Flin Flon	43.38	307	P	P	06 39 17.0	+0.2
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FFC	Flin Flon	43.38	307	P	P	06 39 17.0	+0.2
FFC				IAmb	IAmb	06 39 17.5	
	comp=Z,5.6nm,0.8s						
AAK	Ala-Archa	43.46	96	*i* P	P	06 39 18.7	+0.9
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TRQ	Mont Tremblant	43.92	279	P	P	06 39 20.8	-0.5
SUA	Susitna One	44.62	345	P	P	06 39 27.1	+0.3
SUA				IAmb	IAmb	06 39 28.6	
	comp=Z,6.8nm,0.8s						
CRQM	Cirque	44.64	339	P	P	06 39 27.9	+0.8
ULM	Lac du Bonnet	46.02	299	P	P	06 39 37.5	-0.4
	comp=Z,5.2nm,0.8s,baz=20,slow=5.5,SNR=12						
ULM				LR	LR	06 58 36.3	
	comp=Z,64nm,19.0s,baz=338,slow=36						
ULM	Lac du Bonnet	46.02	299	P	P	06 39 37.7	-0.2
ULM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULM	Lac du Bonnet	46.02	299	P	P	06 39 37.7	-0.2
ULM				IAmb	IAmb	06 39 38.6	
	comp=Z,5.9nm,0.8s						
WMQ	Urumqi	46.18	83	*e*P	P	06 39 42.8	+3.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.7s						
KSH	Kashi	46.77	96	P	P	06 39 45.1	+1.1
KSH				pP	pwP	06 39 49.4	-0.8
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,510nm,4.8s						
SONM	Songino Array	47.64	64	P	P	06 39 53.1	+2.4
	comp=Z,2.5nm,1.0s,baz=329,slow=4.9,SNR=11						
SONM				LR	LR	07 03 35.5	
	comp=Z,51nm,18.6s,baz=325,slow=41						
ULN	Ulaanbaatar	47.78	63	*i* P	P	06 39 53.4	+1.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ULN	Ulaanbaatar	47.78	63	P	P	06 39 51.5	-0.3
ULN				IAmb	IAmb	06 39 58.9	
	comp=Z,4.7nm,0.9s						
AGMN	Agassiz Nation	47.82	298	P	P	06 39 52.1	+0.1
AGMN				IAmb	IAmb	06 39 53.0	
	comp=Z,7.0nm,0.8s						
KDAK	Kodiak Island	48.41	345	P	P	06 39 57.2	+0.8
KDAK				pmax	pmax		
	comp=Z,33nm,1.5s						
KDAK	Kodiak Island	48.41	345	P	P	06 39 57.2	+0.8
M54A	Oil Creek Stat	49.70	281	P	P	06 40 07.4	+0.9
SPMN	Marine on St.	49.88	294	P	P	06 40 08.7	+1.0
SPMN				IAmb	IAmb	06 40 08.8	
	comp=Z,8.0nm,0.6s						
F33A	5 Mile Ranch,	50.21	297	P	P	06 40 10.4	+0.1
I37A	Lemond, Waseca	51.16	294	P	P	06 40 18.5	+1.0
I37A				IAmb	IAmb	06 40 24.2	
	comp=Z,9.4nm,0.8s						
PETK	Petropavlovsk-	52.34	21	LR	LR	07 03 01.2	
	comp=Z,40nm,18.6s,baz=349,slow=36						
MSO	Missoula	53.45	312	IAmb	IAmb	06 40 36.3	
	comp=Z,6.9nm,1.1s						
GTA	Gaotai	53.69	74	P	P	06 40 42.8	+6.4
GTA				pP	pwP	06 40 47.3	+4.8
GTA				sP	sP	06 40 49.8	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,74nm,5.1s						
GTA				LR	LR		
	comp=N,120nm,14.2s						
GTA				LR	LR		
	comp=E,170nm,15.6s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
RLMT	Red Lodge	54.03	308	IAmb	IAmb	06 40 40.6	
	comp=Z,6.9nm,1.2s						
YHL	Hebgen Lake	54.72	309	P	P	06 40 44.2	+0.1
T50A	Nancy	55.34	283	P	P	06 40 48.2	-0.2
T50A				IAmb	IAmb	06 40 50.2	
	comp=Z,6.4nm,0.8s						
HHC	Hu-ho-hao-te	55.49	63	*e*P	P	06 40 51.4	+1.9
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,98nm,6.6s						
BMO	Blue Mountains	56.04	315	IAmb	IAmb	06 40 58.9	
	comp=Z,4.8nm,1.5s						
CCM	Cathedral Cave	56.15	290	P	P	06 40 53.8	-0.3
CCM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CCM	Cathedral Cave	56.15	290	P	P	06 40 53.8	-0.3
CCM				IAmb	IAmb	06 40 54.2	
	comp=Z,7.8nm,0.9s						
BW06	Boulder Array	56.33	307	P	P	06 40 55.7	+0.1
BW06				IAmb	IAmb	06 40 56.9	
	comp=Z,12nm,1.4s						
PD31	Pinedale Array	56.33	307	IAmb	IAmb	06 40 57.0	
	comp=Z,10nm,1.4s						
PDAR	Pinedale Array	56.33	307	P	P	06 40 55.0	-0.6
	comp=Z,2.4nm,1.0s,baz=35,slow=5.4,SNR=14						
PDAR				LR	LR	07 06 37.1	
	comp=Z,18nm,21.9s,baz=12,slow=38						
USRK	Ussuriysk Ar.	57.02	44	LR	LR	07 08 37.1	
	comp=Z,43nm,18.5s,baz=340,slow=39						
PBMO	Poplar Bluff	57.12	288	P	P	06 41 00.1	-0.9
MGMO	Mountain Grove	57.27	290	P	P	06 41 02.5	+0.4
LZH	Lanzhou	57.91	71	*e*P	P	06 41 07.4	+0.6
LZH				pP	sP	06 41 10.6	+0.5
LZH				sP	pwP	06 41 12.3	-0.6
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,7.6s						
ISCO	Idaho Springs	58.22	303	P	P	06 41 09.1	0.0
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ISCO	Idaho Springs	58.22	303	P	P	06 41 09.1	0.0
U38A	Gravette	58.51	292	P	P	06 41 10.0	-0.8
U38A				IAmb	IAmb	06 41 10.1	
	comp=Z,7.6nm,1.0s						
O20A	White River Ci	58.53	305	P	P	06 41 12.5	+1.4
OK030	Cody Creek RV	59.63	294	P	P	06 41 18.1	-0.5
MIAR	Mount Ida	60.08	290	P	P	06 41 22.5	+0.8
MIAR				pmax	pmax		
	comp=Z,21nm,1.4s						
MIAR	Mount Ida	60.08	290	P	P	06 41 22.4	+0.8
TOA0	Torodi Ar. Sit	60.20	185	P	P	06 41 23.5	+0.8
TOA0				IAmb	IAmb	06 41 28.3	
	comp=Z,6.3nm,0.9s						
TORD	Torodi Ar. Bea	60.20	185	P	P	06 41 22.6	-0.1
	comp=Z,4.3nm,0.7s,baz=354,slow=7.0,SNR=11						
TORD				LR	LR	07 07 23.7	
	comp=Z,48nm,19.9s,baz=335,slow=36						
PV12	Saucer Basin,	60.39	305	IAmb	IAmb	06 41 37.9	
	comp=Z,12nm,1.4s						
PV01	Paradox Valley	60.51	305	P	P	06 41 24.7	-0.2
PV13	Radium Mtn., P	60.54	305	IAmb	IAmb	06 41 26.6	
	comp=Z,12nm,1.3s						
WLAR	White Oak Lake	60.76	290	P	P	06 41 26.6	+0.3
MVCO	Mesa Verde	61.37	304	P	P	06 41 31.3	+0.6
PAHR	Pah Rah Range	61.40	315	P	P	06 41 30.8	0.0
PAHR				IAmb	IAmb	06 41 33.3	
	comp=Z,8.2nm,1.4s						
R11A	Troy Canyon, C	61.90	311	P	P	06 41 34.0	-0.2
CCUT	Cedar City	62.17	309	P	P	06 41 37.9	+1.7
NVAR	Mina Array Bea	62.41	313	P	P	06 41 38.8	+1.1
	comp=Z,0.8nm,0.8s,baz=18,slow=6.1,SNR=6.9						
NVAR				LR	LR	07 12 07.8	
	comp=Z,44nm,18.1s,baz=355,slow=39						
KSRS	Korea Array	62.63	50	LR	LR	07 12 31.2	
	comp=Z,40nm,18.8s,baz=10,slow=40						
ANMO	Albuquerque	63.03	302	P	P	06 41 41.9	0.0
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ANMO	Albuquerque	63.03	302	P	P	06 41 41.9	0.0
ANMO				IAmb	IAmb	06 41 47.9	
	comp=Z,4.4nm,1.4s						
MJAR	Matsushiro Arr	65.64	41	LR	LR	07 12 20.6	
	comp=Z,35nm,19.2s,baz=275,slow=38						
NJ2	Nanjing	65.67	60	*e*P	P	06 41 58.3	-0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
TUC	Tucson	66.59	305	P	P	06 42 05.7	+0.8
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	Tucson	66.59	305	P	P	06 42 05.7	+0.8
TUC				IAmb	IAmb	06 42 07.6	
	comp=Z,3.2nm,1.1s						
TX31	Lajitas Ar. Si	67.68	298	P	P	06 42 11.9	0.0
TX31				IAmb	IAmb	06 42 30.6	
	comp=Z,6.1nm,1.2s						
TX32	Lajitas Array	67.68	298	P	P	06 42 11.8	-0.1
TXAR	Lajitas Array	67.68	298	P	P	06 42 12.0	+0.1
	comp=Z,0.7nm,0.6s,baz=47,slow=5.3,SNR=13						
TXAR				LR	LR	07 11 20.4	
	comp=Z,30nm,19.2s,baz=0.0,slow=36						
CMAR	Chiang Mai Arr	73.18	82	P	P	06 42 46.8	+1.3
	comp=Z,1.8nm,0.3s,baz=328,slow=5.1,SNR=5.0						
CMAR	Chiang Mai Arr	73.18	82	*i* P	P	06 42 46.2	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	119.44	58	PKP	PKiKP	06 50 04.0	0.0
	comp=Z,0.4nm,0.7s,baz=316,slow=2.4,SNR=4.7						
ASAR	Alice Springs	122.91	60	PKP	PKPdf	06 50 09.9	-0.5
	comp=Z,1.2nm,0.7s,baz=354,slow=1.9,SNR=16						
ASAR	Alice Springs	122.91	60	PKIKP	PKPdf	06 50 10.0	-0.5

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*IDC **19** 06:35:32.0±8.3, 31°.71S×179°.76E, h402^{km}±99^{km}, mb2.8/2, mb1 3.2/3, mb1mx3.0/20, mbtmp3.8/3, Error ellipse: s-maj=104.3km s-min=40.8km az=6.0*

*WEL **19** 06:35:37.1±1.1, 32°S±12°×18°0E±3°2, h309^{km}±20^{km}, M4.3/11, mB4.6/5, MLv4.5/11, Mw(mB)3.8/5, Error ellipse: s-maj=0.0km s-min=0.0km az=109.7*

ISC 19 06:35:30.4±1.0**, 31°.52S**±0°.09×**179°.9W**±0°.2**, h400**^{km}**, n17, σ2^{s}.31**/27**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.84	38	P	Pn	06 36 33.9	+1.4
GLKZ				S	S	06 37 19.1	-3.4
MXZ	Matakaoa Point	6.20	193	P	Pn	06 37 07.2	+2.1
MXZ				S	S	06 38 19.3	-3.1
WMGZ	Waiomatatini S	6.43	192	P	P	06 37 10.5	+2.8
WMGZ				S	S	06 38 26.1	-0.9
HAZ	Te Kaha	6.50	196	P	P	06 37 10.8	+1.8
HAZ				S	S	06 38 27.0	-1.4
PKGZ	Pakihiroa	6.56	194	P	P	06 37 12.1	+2.3
WIAZ	Waiheke Island	6.66	216	P	P	06 37 13.8	+3.0
PUZ	Puketiti	6.71	192	P	P	06 37 12.3	+1.0
PUZ				S	S	06 38 30.2	-2.4
RUGZ	Raukumara Rang	6.73	196	P	Pn	06 37 12.5	+1.5
TWGZ	Tauwhareparae	6.86	194	P	P	06 37 16.3	+3.2
TWGZ				S	S	06 38 34.9	-1.0
MWZ	Matawai	7.11	196	P	Pn	06 37 16.7	+1.4
MWZ				S	S	06 38 38.6	-2.5
TKGZ	Te Karaka	7.14	194	P	P	06 37 17.6	+1.4
TKGZ				S	S	06 38 39.1	-2.4
URZ	Urewera	7.15	199	P	Pn	06 37 15.0	-0.7
	6.0nm,0.3s,baz=323,slow=2.3,SNR=31						
URZ				S	S	06 38 37.6	-4.1
	4.4nm,0.3s,baz=84,slow=22,SNR=14						
URZ	Urewera	7.15	199	P	Pn	06 37 15.8	+0.1
URZ				S	S	06 38 37.7	-4.0
RAGZ	Rawiri	7.29	197	P	Pn	06 37 18.1	+0.8
ASAR	Alice Springs	41.41	269	P	P	06 42 39.4	-0.6
	0.2nm,0.5s,baz=101,slow=7.0,SNR=4.1						
WRA	Warramunga Arr	42.50	274	P	P	06 42 48.0	-0.7
	0.5nm,0.3s,baz=111,slow=8.2,SNR=16						
FINES	FINESS Array B	145.59	338	PKPbc	PKPab	06 54 22.8	-0.4
	2.8nm,0.9s,baz=74,slow=5.1,SNR=7.2						

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*IDC **19** 06:38:40.2±0.6, 73°.20N×6°.22E, h0^{km}, mb3.9/15, mb1 4.0/20, mb1mx3.9/44, mbtmp3.9/20, ML3.1/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/39, Error ellipse: s-maj=17.6km s-min=10.8km az=43.0*

*NEIC **19** 06:38:41.4±1.8, 73°.22N±0°.08×6°.33E±0°.07, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=13.7km s-min=3.1km az=174.0*

*BER **19** 06:38:42.4±2.2, 73°.32N×6°.28E, h10^{km}, ML2.2, ML2.6(DNK), Confirmed Earthquake*

ISC 19 06:38:41.2±0.5**, 73°.26N**±0°.05×**6°.68E**±0°.06**, h10**^{km}**, n88, σ1^{s}.84**/90**, mb4.1**/31**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.66	64	*e*P	Pn	06 39 37.3	-0.4
HSPB	Hornsund (broa	4.40	27	*e*P	Pn	06 39 46.8	-1.1
JNW	Jan Mayen West	5.15	252	*e*P	Pn	06 39 57.3	-0.9
JMIC	Jan Mayen	5.20	251	Pn	Pn	06 39 56.1	-2.8
	baz=22,slow=8.0,SNR=3.5						
JMIC	Jan Mayen	5.20	251	*e*P	Pn	06 39 57.6	-1.2
JMI	Jan Mayen	5.29	251	*e*P	Pn	06 39 59.4	-0.7
TRO	Tromso	5.33	127	*e*P	Pn	06 40 00.5	-0.2
SPA3	Spitsbergen Ar	5.49	21	Pn	Pn	06 40 03.4	+0.6
SPA0	Spitsbergen Ar	5.49	21		Pn	06 40 03.6	+0.7
SPA0	Spitsbergen Ar	5.49	21	*e*P	Pn	06 40 02.9	0.0
SPA0				*e*S	Sn	06 41 03.5	-2.4
SPITS	Spitsbergen Ar	5.49	21	Pn	Pn	06 40 02.5	-0.4
	baz=196,slow=14,SNR=43						
SPA1	Spitsbergen Ar	5.49	21	Pn	Pn	06 40 03.6	+0.7
LOF	Lofoten	5.63	153	*e*P	Pn	06 40 04.6	-0.1
LOF				*e*S	Sn	06 41 03.2	-6.0
LOF				IAML		06 41 10.0	
	comp=Z,11nm,0.6s						
HOPEN	Hopen	5.78	47	*e*P	Pn	06 40 05.9	-0.9
HOPEN				*e*S	Sn	06 41 08.4	-4.7
HOPEN				IAML		06 41 13.5	
	comp=Z,5.1nm,0.6s						
KBS	Kingsbay	5.84	10	Pn	Pn	06 40 07.3	-0.3
KBS	Kingsbay	5.84	10	*e*P	Pn	06 40 07.7	+0.1
STEI	Steigen	6.06	148	*e*P	Pn	06 40 10.9	+0.2
STEI				*e*S	Sn	06 41 15.2	-4.7
STEI				IAML		06 41 21.2	
	comp=Z,4.2nm,0.6s						
KIF	Kilpisjarvi	6.25	126	*e*P	Pn	06 40 13.1	-0.2
ARD1	ARCESS Array S	7.05	112	Pn	Pn	06 40 25.8	+1.5
ARD7	ARCESS Array S	7.06	113	Pn	Pn	06 40 24.9	+0.5
ARC1	ARCESS Array S	7.06	113	Pn	Pn	06 40 26.0	+1.6
ARB1	ARCESS Array S	7.06	113	Pn	Pn	06 40 26.0	+1.6
ARA0	ARCESS Array S	7.06	113	*e*P	Pn	06 40 24.7	+0.3
ARCES	ARCESS Array B	7.06	113	Pn	Pn	06 40 24.3	-0.2
	baz=324,slow=11,SNR=10						
ARCES				LR	LR	06 43 18.2	
	comp=Z,50nm,20.8s,baz=285,slow=39						
KONS	Konsvik	7.14	159	*e*P	Pn	06 40 25.2	-0.3
KONS				*e*S	Sn	06 41 36.8	-10
KONS				IAML		06 41 44.7	
	comp=Z,6.6nm,0.4s						
STOK	Stokkvaagen	7.29	159	*e*P	Pn	06 40 27.6	+0.1
KEV	Kevo	7.33	109	Pn	Pn	06 40 28.7	+0.6
DAG	Danmarks Havn	7.40	310	*e*P	Pn	06 40 25.9	-3.1
DAG				*e*S	Sn	06 41 40.6	-12
DAG				IAML		06 41 43.0	
	comp=Z,6.5nm,0.4s						
DAG	Danmarks Havn	7.40	310	*i* P	Pn	06 40 25.7	-3.3
DAG	Danmarks Havn	7.40	310	*i* P	Pn	06 40 25.7	-3.3
DAG				IAML		06 41 43.0	
	comp=Z,6.5nm,0.4s						
DBG	Daneborg	7.56	291	*e*	Pn	06 40 25.4	-5.9
	baz=72,slow=11						
DBG				*i* P	Pn	06 40 26.0	-5.3
DBG				*i* S	Sn	06 41 43.9	-13
DBG				IAML		06 41 46.7	
	comp=Z,0.7nm,0.4s						
SCO	Scoresbysund	9.28	267	Pn	Pn	06 40 53.1	-1.7
SCO	Scoresbysund	9.28	267	*i* P	Pn	06 40 43.7	-11
SCO				*i* S	Pn	06 40 52.8	-2.0
SCO	Scoresbysund	9.28	267	*e*P	Pn	06 40 43.7	-11
SCO				*i* S	Pn	06 40 52.9	-2.0
SCO				IAML		06 40 54.5	
	comp=Z,3.3nm,0.3s						
LVZ	Lovozero	10.65	106	Pn	Pn	06 41 11.9	-1.7
NC204	NORSAR Array S	12.13	171	Pn	Pn	06 41 33.9	0.0
NOA	NORSAR Array B	12.39	170	Pn	Pn	06 41 37.5	+0.1
	comp=Z,0.0nm,0.3s,baz=351,slow=13,SNR=3.7						
FINES	FINESS Array B	13.90	138	Pn	Pn	06 41 57.0	-1.0
	comp=Z,0.2nm,0.3s,baz=338,slow=14,SNR=5.0						
KLMR	Klimovskoe	17.49	118	*e*	Pn	06 42 43.8	-1.0
KLMR				AMP		06 42 52.5	
	comp=Z,24nm,1.3s						
EUNU	Eureka	19.99	329	P	P	06 43 14.0	+0.7
CLL	Collm	22.20	169	*e*P	P	06 43 39.0	+1.8
BRG	Berggiesshubel	22.68	168	*e*P	P	06 43 44.5	+2.0
BRG				Amp		06 43 53.8	
	comp=Z,20nm,1.6s						
BRG	Berggiesshubel	22.68	168	*e*P	P	06 43 44.5	+2.0

BRG				Amp		06 43 53.8	
	comp=Z,20nm,1.6s						
MORC	**Moravsky Berou**	**24.04**	**163**	*e*P	**P**	**06 43 56.9**	**+0.8**
MORC	**Moravsky Berou**	**24.04**	**163**	P	**P**	**06 43 55.5**	**-0.5**
MORC				IAmb	IAmb	06 44 11.6	
	comp=Z,13nm,1.4s						
VRAC	**Vranov**	**24.43**	**164**	P	**P**	**06 44 00.5**	**+1.0**
	comp=Z,7.9nm,0.9s,baz=342,slow=9.3,SNR=6.1						
VRAC	**Vranov**	**24.43**	**164**	*e*P	**P**	**06 44 00.8**	**+1.2**
AKASG	**Malin Array Be**	**24.65**	**144**	P	**P**	**06 44 03.1**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=337,slow=9.3,SNR=8.0						
AKBB	**Malin Array Si**	**24.65**	**144**	P	**P**	**06 44 02.1**	**+0.6**
AKBB				IAmb	IAmb	06 44 20.3	
	comp=Z,7.1nm,0.9s						
GEC2	**GERESS Array S**	**24.69**	**169**	P	**P**	**06 43 58.6**	**-3.5**
GEC2				IAmb	IAmb	06 44 05.9	
	comp=Z,7.2nm,1.0s						
GERES	**GERESS Array B**	**24.69**	**169**	P	**P**	**06 44 02.8**	**+0.7**
	comp=Z,4.2nm,1.0s,baz=2.5,slow=9.3,SNR=16						
LANS	**Liptovska Anna**	**24.84**	**160**	*e*P	**P**	**06 44 04.8**	**+1.5**
ECH	**Echery**	**25.12**	**179**	P	**P**	**06 44 06.8**	**+0.9**
SMOL	**Smolenice**	**25.28**	**163**	*e*P	**P**	**06 44 09.7**	**+2.4**
CRVS	**Cervenica-Dubn**	**25.30**	**157**	*e*P	**P**	**06 44 10.1**	**+2.6**
KOLS	**Kolonicke sedl**	**25.36**	**156**	*e*P	**P**	**06 44 09.6**	**+1.6**
MODS	**Modra-Piesok**	**25.41**	**163**	*e*P	**P**	**06 44 10.8**	**+2.3**
VYHS	**Vyhne**	**25.43**	**161**	*e*P	**P**	**06 44 11.2**	**+2.6**
MOA	**Molln**	**25.72**	**168**	*e*P	**P**	**06 44 11.2**	**-0.1**
	comp=Z,7.1nm,1.8s						
CONA	**Conrad Observa**	**25.74**	**166**	*e*P	**P**	**06 44 13.1**	**+1.5**
	comp=Z,6.3nm,1.3s						
RETA	**Reutte**	**25.92**	**174**	*e*P	**P**	**06 44 16.1**	**+3.0**
	comp=Z,5.2nm,1.1s						
MOTA	**Moosalm**	**26.07**	**173**	*e*P	**P**	**06 44 15.4**	**+0.8**
	comp=Z,4.5nm,0.9s						
DAVA	**Damuels**	**26.09**	**175**	*e*P	**P**	**06 44 17.4**	**+2.5**
	comp=Z,14nm,1.2s						
WATA	**Walderalm**	**26.10**	**172**	*e*P	**P**	**06 44 15.2**	**+0.4**
	comp=Z,8.0nm,1.1s						
WTTA	**Wattenberg**	**26.17**	**172**	*e*P	**P**	**06 44 15.9**	**+0.3**
	comp=Z,9.8nm,1.3s						
SQTA	**Sankt Quirin**	**26.20**	**173**	*e*P	**P**	**06 44 18.9**	**+3.1**
	comp=Z,3.0nm,0.7s						
FETA	**Feichten**	**26.38**	**174**	*e*P	**P**	**06 44 17.7**	**+0.3**
	comp=Z,4.0nm,1.6s						
ARSA	**Arzberg**	**26.39**	**166**	*e*P	**P**	**06 44 19.3**	**+1.9**
	comp=Z,4.1nm,1.3s						
ARU	**Arti**	**26.47**	**101**	P	**P**	**06 44 19.7**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=323,slow=7.5,SNR=4.4						
ARU	**Arti**	**26.47**	**101**	IAmb	IAmb	06 44 30.5	
	comp=Z,12nm,1.1s						
ABTA	**Abfaltersbach**	**26.73**	**171**	*e*P	**P**	**06 44 20.3**	**-0.2**
	comp=Z,3.4nm,0.9s						
MYKA	**Terra Mystica**	**26.90**	**169**	*e*P	**P**	**06 44 26.5**	**+4.5**
	comp=Z,10nm,1.7s						
SOKA	**Soboth**	**26.93**	**167**	*e*P	**P**	**06 44 22.1**	**-0.2**
	comp=Z,4.1nm,1.2s						
BUR08	**Bucovina Ar. S**	**27.01**	**152**	P	**P**	**06 44 23.1**	**0.0**
BUR08				IAmb	IAmb	06 44 37.0	
	comp=Z,10nm,1.4s						
AKTO	**Aktyubinsk**	**31.61**	**108**	P	**P**	**06 45 05.0**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=322,slow=10,SNR=4.1						
BVAR	**Borovoye Array**	**32.83**	**93**	P	**P**	**06 45 16.4**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=239,slow=31,SNR=4.2						
ABKAR	**Akbulak array**	**33.22**	**107**	P	**P**	**06 45 18.3**	**+0.6**
KURK	**Kurchatov**	**37.26**	**87**	P	**P**	**06 45 53.5**	**+1.0**
YKA	**Yellowknife Ar**	**38.94**	**321**	P	**P**	**06 46 06.4**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=25,slow=8.9,SNR=7.5						
ILAR	**Eielson Array**	**41.11**	**343**	P	**P**	**06 46 25.2**	**+0.7**
	comp=Z,1.3nm,1.0s,baz=3.0,slow=6.2,SNR=11						
MKAR	**Makanchi Array**	**41.85**	**86**	P	**P**	**06 46 33.9**	**+3.1**
	comp=Z,2.1nm,1.1s,baz=330,slow=8.3,SNR=7.2						
GEYT	**Alibeck**	**43.22**	**115**	P	**P**	**06 46 44.4**	**+2.3**
	comp=Z,1.8nm,0.5s,baz=255,slow=5.8,SNR=3.6						
ULM	**Lac du Bonnet**	**46.10**	**300**	P	**P**	**06 47 04.4**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=7.0,slow=11,SNR=4.9						
PDAR	**Pinedale Array**	**56.42**	**308**	P	**P**	**06 48 22.2**	**-0.4**
	comp=Z,1.1nm,1.0s,baz=45,slow=4.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**60.16**	**186**	P	**P**	**06 48 49.1**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=356,slow=5.5,SNR=4.5						
NVAR	**Mina Array Bea**	**62.49**	**313**	P	**P**	**06 49 05.2**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=347,slow=4.7,SNR=4.2						
TXAR	**Lajitas Array**	**67.76**	**298**	P	**P**	**06 49 39.0**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=44,slow=5.3,SNR=2.7						
ASAR	**Alice Springs**	**122.88**	**60**	PKP	**PKPdf**	**06 57 36.8**	**0.0**
	comp=Z,0.7nm,0.7s,baz=354,slow=1.9,SNR=6.2						

IDC 19 06:43:26.9±3.0**,18°.09S**×**177°.78W,h0**^{km}**,mb3.7**/3**, mb1 4.0**/3**,mb1mx3.7**/23**,mbtmp3.7**/3**,Error ellipse: s-maj=356.8km s-min=32.9km az=159.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.19**	**260**	P	P	06 51 45.3	-0.6
	0.3nm,0.5s,baz=96,slow=6.8,SNR=4.5						
ASAR	**Alice Springs**	**45.32**	**254**	P	P	06 51 47.2	+0.2
	2.5nm,0.5s,baz=88,slow=8.2,SNR=40						
TXAR	**Lajitas Array**	**85.58**	**57**	P	P	06 56 07.7	+0.1
	0.2nm,0.6s,baz=203,slow=5.9,SNR=4.9						

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*IDC **19** 06:50:26.2±1.5,25°.16S×175°.34W,h0^{km},mb3.5/4, mb1 4.0/5,mb1mx3.8/20,mbtmp3.7/5,ML5.5/1,MS2.9/3, Ms1 2.9/3,ms1mx2.6/23,Error ellipse: s-maj=61.6km s-min=26.7km az=164.0*

ISC 19 06:50:28.6±1.2**,25°.1S**±0°.3×**175°.3W**±0°.2**,h10**^{km}**,n10, σ1.s33**/7**,mb3.8**/5**,South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**9.61**	**319**	Pn	**Pn**	**06 52 47.0**	**-0.1**
	1.6nm,0.3s,baz=292,slow=22,SNR=9.8						
RAR	**Rarotonga**	**14.83**	**78**	Pn	Pn	06 53 50.8	-7.7
	3.2nm,0.3s,baz=229,slow=8.6,SNR=7.8						
RAR				LR	LR	06 57 17.3	
	comp=Z,32nm,21.8s,baz=243,slow=28						
DZM	**Mont Dzumac**	**16.98**	**277**	LR	LR	06 59 23.9	
	comp=Z,46nm,20.1s,baz=40,slow=32						
HNR	**Honiara**	**28.23**	**299**	LR	LR	07 06 39.2	
	comp=Z,31nm,18.1s,baz=338,slow=34						
ASAR	**Alice Springs**	**46.03**	**261**	P	**P**	**06 58 52.5**	**-0.3**
	0.3nm,0.4s,baz=91,slow=7.0,SNR=6.5						
WRA	**Warramunga Arr**	**46.56**	**266**	P	**P**	**06 58 55.2**	**-1.7**
	0.6nm,0.6s,baz=104,slow=7.8,SNR=7.6						
NVAR	**Mina Array Bea**	**82.77**	**42**	P	**P**	**07 02 53.0**	**-0.2**
	0.8nm,0.8s,baz=220,slow=8.6,SNR=7.6						
TXAR	**Lajitas Array**	**87.53**	**56**	P	**P**	**07 03 16.6**	**-0.6**
	0.1nm,0.7s,baz=238,slow=5.2,SNR=3.1						
CMAR	**Chiang Mai Arr**	**93.95**	**288**	P	**P**	**07 03 49.0**	**+1.9**
	1.2nm,0.4s,baz=106,slow=3.2,SNR=5.1						
AKASG	**Malin Array Be**	**148.25**	**330**	PKPbc	**PKPdf**	**07 10 11.9**	**+0.6**
	0.7nm,0.5s,baz=36,slow=2.7,SNR=4.2						

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*IDC **19** 07:05:30.4±1.4,1°.72N×122°.76E,h0^{km},mb3.3/4, mb1 3.4/4,mb1mx3.2/39,mbtmp3.3/4,Error ellipse: s-maj=153.8km s-min=25.7km az=64.0*

*DJA **19** 07:05:56.4±1.4,2°N±12°×12°5E±°,h236^{km}±12^{km},M4.1/6, MLv4.1/6*

ISC 19 07:05:56.2±1.0**,2°.3N**±0°.1×**124°.69E**±0°.10**,h250**^{km}**,n9, σ1.s47**/10**,mb3.0**/4**,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**2.38**	**225**	P	**Pn**	**07 06 42.2**	**-0.1**
TNTI	**Ternate**	**3.10**	**120**	P	**Pn**	**07 06 49.9**	**+0.1**
TNTI				S	**S**	**07 07 31.0**	**-1.1**
LUWI	**Luwuk**	**3.87**	**210**	P	**Pn**	**07 06 58.7**	**+0.2**
SANI	**Sanana**	**4.55**	**163**	P	**Pn**	**07 07 05.7**	**-0.9**
NLAI	**Namlea**	**6.04**	**156**	P	**Pn**	**07 07 25.7**	**+0.8**
WRA	**Warramunga Arr**	**24.08**	**157**	P	**P**	**07 10 50.5**	**+1.2**
	0.3nm,0.2s,baz=333,slow=11,SNR=7.6						
SONM	**Songino Array**	**48.00**	**343**	P	**P**	**07 14 12.2**	**+1.9**
	0.3nm,0.5s,baz=144,slow=9.2,SNR=1.6						
MKAR	**Makanchi Array**	**57.56**	**327**	P	**P**	**07 15 17.3**	**-2.7**
	0.2nm,0.4s,baz=123,slow=8.0,SNR=5.0						
KURBB	**Kurchatov Arra**	**61.83**	**329**	P	**P**	**07 15 48.4**	**-0.5**
	0.1nm,0.4s,baz=140,slow=5.9,SNR=4.3						

IDC 19 07:12:36.2±2.8**,54°.07N**×**86°.52E,h0**^{km}**,mb1 2.9**/2**, mb1mx2.8**/46**,mbtmp2.9**/2**,ML2.6**/2**,Error ellipse: s-maj=23.1km s-min=13.7km az=57.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**264**	*i*		07 19 47.9	
	baz=83,slow=332,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.01**	**264**	Pg	Pg	07 12 54.5	-1.1
	0.9nm,0.3s,baz=86,slow=17,SNR=9.6						
ZALV				Lg	Lg	07 13 10.4	
	1.6nm,0.3s,baz=81,slow=29,SNR=8.8						
KURBB	**Kurchatov Arra**	**5.99**	**238**	Pn	Pn	07 14 06.4	+0.3
	0.1nm,0.3s,baz=56,slow=14,SNR=6.1						
MKAR	**Makanchi Array**	**7.77**	**202**	Pn	Pn	07 14 32.0	+1.5
	0.2nm,0.3s,baz=25,slow=14,SNR=7.2						

IDC 19 07:14:42.7±2.7**,54°.13N**×**86°.47E,h0**^{km}**,mb1 2.8**/2**, mb1mx2.7**/46**,mbtmp2.8**/2**,ML2.5**/2**,Error ellipse: s-maj=20.6km s-min=11.9km az=64.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**260**	*i*		07 21 33.3	
	baz=81,slow=330						
ZALV	**Zalesovo Beam**	**0.99**	**260**	Pg	Pg	07 15 00.5	-1.2
	0.6nm,0.3s,baz=76,slow=16,SNR=5.9						
ZALV				Lg	Lg	07 15 15.2	
	1.8nm,0.3s,baz=77,slow=29,SNR=16						
ZALV				Rg	Rg	07 15 20.8	
	39nm,1.2s,baz=74,slow=28,SNR=17						
KURBB	**Kurchatov Arra**	**6.00**	**237**	Pn	Pn	07 16 14.1	+1.4
	0.1nm,0.3s,baz=54,slow=13,SNR=8.7						
KURBB				Lg	Lg	07 17 53.9	
	0.0nm,0.3s,baz=60,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	**7.81**	**202**	Pn	Pn	07 16 38.1	+0.6
	0.1nm,0.3s,baz=22,slow=14,SNR=4.0						
MKAR				Sn	Sn	07 18 06.2	-0.5
	0.1nm,0.3s,baz=22,slow=28,SNR=4.6						
MKAR				Lg	Lg	07 18 50.1	
	0.0nm,0.3s,baz=23,slow=33,SNR=3.5						

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*ISN **19** 07:49:02.4±2.6,35°.26N×44°.77E,h15^{km},ML2.3*

*TEH **19** 07:49:03.5,35°.35N×44°.83E,h10^{km},ML3.1*

ISC 19 07:49:00.9±1.4**,35°.29N**±0°.05×**44°.63E**±0°.07**,h10**^{km}**,n9, σ1.s19**/12**,Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**1.56**	**112**	*e*Pg	**Pg**	**07 49 30.8**	**0.0**
IDHR				*e*Sg	**Sg**	**07 49 51.9**	**+0.8**
IDHR				*e*		07 49 55.8	
	comp=Z,99nm,0.2s						
MAHB	**Mahabad**	**1.71**	**30**	*e*Pg	**Pg**	**07 49 33.2**	**-0.5**
MAHB				*e*Sg	**Sg**	**07 49 57.1**	**+1.2**
MAHB				*e*		07 50 00.6	
	comp=Z,99nm,0.4s						
IGHG	**Ghaleghazi**	**1.86**	**121**	*e*Pg	**Pg**	**07 49 37.0**	**+0.4**
IGHG				*e*		07 50 04.7	
	comp=Z,99nm,0.6s						
ILIN	**Lien**	**1.95**	**100**	*e*Pg	**Pg**	**07 49 37.3**	**-1.0**
ILIN				*e*		07 50 05.6	
	comp=Z,99nm,0.4s						
BHD	**Baghdad**	**2.03**	**186**	*e*Pg	**Pb**	**07 49 37.0**	**-0.8**
	baz=9.0						
BHD				*e*Sg	**Sg**	**07 50 07.0**	**+0.9**
BHD				AML	AML	07 50 24.6	
	comp=E,29nm,0.8s						
KCHF	**Cheshme Sefid,**	**2.23**	**116**	*e*Pn	**Pb**	**07 49 41.3**	**-0.1**
KCHF				*e*		07 50 13.3	
	comp=Z,99nm,0.2s						
KER	**Kermanshah**	**2.25**	**113**	*e*Pn	**Pb**	**07 49 41.1**	**-0.6**
IALM	**Almabolaq**	**2.94**	**97**	*e*Pn	**Pn**	**07 49 48.8**	**+1.0**
IKFM	**Kafar-mosalman**	**3.19**	**123**	*e*Pn	**Pb**	**07 49 55.1**	**-2.5**
IKFM				*e*		07 50 55.6	
	comp=Z,99nm,0.6s						

MAN 19 07:52:01.2,6°.68N×**126°.06E,h23**^{km}**,mb4.3,ML3.1,MS2.8, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.67**	**211**	*e*P	Pb	07 52 14.3	+0.1
DDMP				*e*S	Sn	07 52 25.8	+0.8
KCP	**Kidapawan**	**1.02**	**289**	⇓*e*P	Pn	07 52 19.1	-1.0

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*DDA **19** 08:08:09.8,35°.95N×35°.76E,h14^{km}±1^{km},ML3.0*

*ISK **19** 08:08:10.2,35°.90N×35°.77E,h9^{km},ML2.9/15*

*GII **19** 08:08:12.2±0.0,35°.82N×35°.68E,h6^{km},Mm2.3/2*

ISC 19 08:08:10.5±1.3**,35°.93N**±0°.03×**35°.77E**±0°.03**,h8**^{km}±10^{km}**, n48,**σ**1.s07**/72**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**1.08**	**359**	PN	**Pn**	**08 08 32.3**	**+0.4**
CEYT				SN	**Sn**	**08 08 47.7**	**+0.6**
DED	**Mersin**	**1.29**	**323**	*i* P	**Pn**	**08 08 33.3**	**-1.6**
DED				*i* S	**Sg**	**08 08 52.7**	**+0.6**
KUZU	**Kuzuini**	**1.35**	**51**	*i* P	**Pn**	**08 08 35.5**	**-0.3**
KUZU				*i* S	**Sg**	**08 08 54.4**	**+0.3**
KUZU				IAML		08 08 55.0	
	comp=E,575nm,0.3s						
KUZU				IAML		08 08 56.0	
	comp=N,630nm,0.6s						
EREN	**Erenkoy**	**1.36**	**253**	PN	**Pg**	**08 08 35.8**	**-0.8**
EREN	**Erenkoy**	**1.36**	**253**	*i* P	**Pg**	**08 08 35.9**	**-0.6**
EREN				*i* S	**Sg**	**08 08 58.5**	**+4.4**
KIZK	**Mersin**	**1.42**	**293**	PN	**Pb**	**08 08 37.1**	**-0.2**
KIZK	**Mersin**	**1.42**	**293**	*i* P	**Pb**	**08 08 37.0**	**-0.3**
KIZK				*i* S	**Sg**	**08 08 56.1**	**-0.2**
KARA	**Karaisali**	**1.45**	**337**	PN	**Pn**	**08 08 37.2**	**+0.2**
KARA				SN	**Sg**	**08 08 57.6**	**+0.5**
KAMA	**Osmaniye**	**1.45**	**30**	*i* P	**Pn**	**08 08 37.0**	**-0.1**
KAMA				*i* S	**Sn**	**08 08 56.1**	**-0.3**
SLFK	**Silifke-Mersin**	**1.54**	**288**	PN	**Pb**	**08 08 38.7**	**-0.6**
KOZT	**Kozan**	**1.55**	**2**	PN	**Pb**	**08 08 39.1**	**-0.4**
SILI	**Silifke-Mersin**	**1.55**	**287**	PN	**Pb**	**08 08 38.9**	**-0.6**
SILI				SN	**Sg**	**08 08 59.9**	**-0.6**
HCB	**Kahramanmara**	**1.69**	**33**	*i* P	**Pn**	**08 08 39.9**	**-0.4**
HCB				*i* S	**Sn**	**08 09 00.9**	**-1.2**
HCB				IAML		08 09 15.0	
	comp=E,126nm,0.6s						
GAZ	**Gaziantep**	**1.70**	**43**	PN	**Pn**	**08 08 41.1**	**+0.5**
GAZ				SN	**Sb**	**08 09 03.7**	**0.0**
TISA	**Tisan-Mersin**	**1.71**	**279**	PN	**Pb**	**08 08 41.0**	**-1.1**
IKL	**Isikli**	**1.71**	**281**	PN	**Pn**	**08 08 41.0**	**+0.4**
IKL				SN	**Sb**	**08 09 03.6**	**-0.3**
ANDN	**Andirin**	**1.71**	**16**	*i* P	**Pn**	**08 08 41.0**	**+0.3**
ANDN				*i* S	**Sb**	**08 09 04.3**	**+0.3**
YESI	**Yesilovacik-Me**	**1.74**	**279**	PN	**Pb**	**08 08 41.5**	**-1.2**
AKKU	**Akkuyu-Mersin**	**1.81**	**278**	PN	**Pn**	**08 08 42.5**	**+0.6**
AKK1	**Akkuyu-Mersin**	**1.82**	**277**	PN	**Pn**	**08 08 42.5**	**+0.5**
GULN	**MERSIN_Gulnar**	**1.82**	**279**	*i* P	**Pn**	**08 08 41.6**	**-0.5**
GULN				*i* S	**Sn**	**08 09 03.2**	**-2.1**
KMRS	**Kahramanmaras**	**1.82**	**30**	PN	**Pn**	**08 08 42.8**	**+0.6**
CMRD	**Camardi-Nigde**	**1.84**	**340**	PN	**Pn**	**08 08 43.2**	**+0.7**
KHMN	**Narli-Kahraman**	**1.84**	**37**	PN	**Pn**	**08 08 42.9**	**+0.5**
KAHM	**Kahramanmaras,**	**1.87**	**31**	*i* P	**Pn**	**08 08 42.9**	**+0.1**
KAHM				*i* S	**Sn**	**08 09 05.1**	**-1.4**
TEVE	**Tevekalti-Mers**	**1.95**	**286**	PN	**Pn**	**08 08 44.5**	**+0.6**
KERG	**Konya-Eregli**	**1.99**	**319**	*i* P	**Pb**	**08 08 45.9**	**-1.1**
KERG				*i* S	**Sb**	**08 09 12.2**	**+0.3**
GZT	**Gaziantep**	**2.03**	**45**	*i* P	**Pn**	**08 08 46.4**	**+1.3**
GZT				*i* S	**Sb**	**08 09 14.6**	**+1.4**
GZT				IAML		08 09 21.0	
	comp=N,82nm,0.4s						
BERE	**Bereket-Mersin**	**2.10**	**282**	PN	**Pn**	**08 08 46.7**	**+0.6**
YAHY	**KAYSERI_Yahyal**	**2.19**	**352**	*i* P	**Pn**	**08 08 48.0**	**+0.7**
YAHY				*i* S	**Sb**	**08 09 16.9**	**-0.8**
CSS	**Mathiatis**	**2.21**	**245**	Pn	**Pn**	**08 08 47.4**	**-0.1**
NIDE	**Nigde/Merkez-G**	**2.21**	**339**	*i* P	**Pn**	**08 08 48.0**	**+0.4**
NIDE				*i* S	**Sb**	**08 09 18.6**	**+0.1**
NIDE				IAML		08 09 21.0	
	comp=E,108nm,0.4s						
NIDE				IAML		08 09 23.0	
	comp=N,66nm,0.3s						
YESY	**Yesilyurt**	**2.46**	**319**	PN	**Pn**	**08 08 52.1**	**+1.1**
SURC	**SANLIURFA_SURC**	**2.49**	**67**	*i* P	**Pn**	**08 08 51.7**	**+0.4**
SURC				*i* S	**Sb**	**08 09 26.7**	**+0.5**
SURC				IAML		08 09 33.0	
	comp=N,132nm,0.4s						
SURC				IAML		08 09 34.0	
	comp=E,116nm,0.5s						
SARI	**SarD1z-Kayseri**	**2.53**	**12**	PN	**Pn**	**08 08 53.4**	**+1.4**
KKBE	**Karaman, Kazim**	**2.61**	**300**	*i* P	**Pn**	**08 08 54.0**	**+0.9**
KKBE				*i* S	**Sb**	**08 09 28.4**	**-1.6**
NATI	**Neve Ativ**	**2.66**	**181**	Pn	**Pn**	**08 08 53.7**	**+0.1**
NATI				Sn	**Sn**	**08 09 26.1**	**+0.1**
GEM	**Giv'at Ha'Em**	**2.71**	**182**	Pn	**Pn**	**08 08 53.9**	**-0.5**
GAZI	**Gazipasa**	**2.81**	**277**	*i* P	**Pn**	**08 08 53.8**	**-1.9**
GAZI				*i* S	**Sn**	**08 09 31.1**	**+1.3**
SULT	**Sultanhani-AKS**	**2.90**	**322**	PN	**Pn**	**08 08 58.3**	**+1.3**
MMA0B	**Mount Meron ar**	**2.92**	**186**	Pn	**Pn**	**08 08 57.0**	**-0.3**
MMA0B				Sn	**Sn**	**08 09 32.2**	**-0.4**
AKCD	**Akcadag**	**2.93**	**35**	*i* P	**Pn**	**08 08 58.5**	**+1.1**
DARE	**Darende-Malaty**	**2.97**	**27**	PN	**Pn**	**08 08 58.9**	**+0.8**
ALIN	**Konya, Altinte**	**3.31**	**317**	*i* P	**Pn**	**08 09 03.6**	**+1.0**
KEPZ	**Antalya-Kepez**	**3.49**	**287**	*i* P	**Pn**	**08 09 07.9**	**+2.8**
KEPZ				*i* S	**Sn**	**08 09 49.4**	**+2.6**
HMDT	**Nahal Hemdat**	**3.67**	**183**	Pn	**Pn**	**08 09 07.9**	**+0.4**
DSI	**Dead Sea**	**4.36**	**184**	Pn	**Pn**	**08 09 17.5**	**+0.5**
YTIR	**Yattir**	**4.58**	**187**	Pn	**Pn**	**08 09 21.0**	**+0.8**

IDC 19 08:09:53.7±815.0**,37°.96N**×**110°.55E,h0**^{km}**,Error ellipse: s-maj=335.5km s-min=193.1km az=8.0,Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**10.30**	**344**	*i*		09 10 09.3	
	baz=160,slow=337						
I45RU	**USSURIYSK INFR**	**17.30**	**62**	*i*		09 53 20.0	
	baz=254,slow=335,SNR=1.9						
I44RU	**PETROPAVLOVSK**	**35.65**	**49**	*i*		11 52 00.0	
	baz=265,slow=336,SNR=2.2						

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*IDC **19** 08:15:23.4±1.0,31°.76N×104°.53E,h0^{km},mb3.4/6, mb1 3.7/7,mb1mx3.5/46,mbtmp3.5/7,ML4.6/1,MS2.9/2, Ms1 3.0/2,ms1mx2.4/47,Error ellipse: s-maj=55.7km s-min=18.6km az=61.0*

*NEIC **19** 08:15:28.8±0.8,31°.8N±0°.1×104°.3E±0°.1,h40^{km}±8^{km}, mb4.5/5,Error ellipse: s-maj=21.2km s-min=15.7km az=207.0*

ISC 19 08:15:24.9±0.8**,31°.8N**±0°.1×**104°.3E**±0°.1**,h10**^{km}**,n15, σ1.s36**/15**,mb3.7**/9**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**4.74**	**108**	Pn	**Pn**	**08 16 37.2**	**+0.7**
ENH				Sn	**Sn**	**08 17 32.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**14.15**	**201**	Pn	**Pn**	**08 18 45.6**	**+0.1**
	0.9nm,0.3s,baz=13,slow=9.3,SNR=8.7						
CMAR				LR	LR	08 24 36.8	
	comp=Z,29nm,20.8s,baz=230,slow=39						
MKAR	**Makanchi Array**	**22.53**	**318**	P	**P**	**08 20 27.6**	**+2.7**
	0.3nm,0.5s,baz=130,slow=8.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.14**	**333**	P	**P**	**08 21 00.1**	**+1.1**
	0.4nm,0.4s,baz=137,slow=7.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**26.75**	**322**	P	**P**	**08 21 06.0**	**+1.4**
	0.4nm,0.7s,baz=129,slow=8.7,SNR=5.4						
MA2	**Magadan**	**41.42**	**34**	LR	LR	08 41 59.2	
	comp=Z,31nm,19.6s,baz=138,slow=39						
TIXI	**Tiksi**	**42.02**	**11**	P	**P**	**08 23 14.1**	**-2.0**
WB0	**Warramunga Arr**	**58.87**	**146**	P	**P**	**08 25 23.1**	**-1.0**
WRA	**Warramunga Arr**	**58.99**	**147**	P	**P**	**08 25 23.9**	**-1.1**
	0.3nm,0.4s,baz=325,slow=9.3,SNR=8.2						
WB2	**Warramunga Arr**	**59.00**	**147**	P	**P**	**08 25 24.2**	**-0.7**
WB2				IAmb	IAmb	08 25 32.9	
	comp=Z,5.4nm,1.2s						
WR0	**Warramunga Arr**	**59.10**	**146**	P	**P**	**08 25 25.0**	**-0.7**
WR0				IAmb	IAmb	08 25 39.8	
	comp=Z,5.4nm,1.2s						
ASAR	**Alice Springs**	**62.03**	**149**	P	**P**	**08 25 44.3**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=338,slow=7.0,SNR=3.8						
PPLA	**Purkeypile**	**67.97**	**29**	P	**P**	**08 26 23.8**	**-0.1**
PPLA				IAmb	IAmb	08 26 35.7	
	comp=Z,6.0nm,1.4s						
RSO	**Redoubt South**	**68.84**	**31**	P	**P**	**08 26 28.9**	**-0.7**
YKA	**Yellowknife Ar**	**80.97**	**17**	P	**P**	**08 27 39.8**	**+0.4**
	comp=Z,0.1nm,0.6s,baz=338,slow=4.9,SNR=2.6						

IDC 19 08:19:23.0±999.0**,37°.52N**×**87°.14E,h0**^{km}**,Error ellipse: s-maj=547.4km s-min=271.1km az=23.0,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**16.51**	**355**	*i*		10 08 20.0	
	baz=175,slow=318,SNR=1.7						
I34MN	**SONGINO INFRAS**	**17.46**	**48**	*i*		10 03 30.0	
	baz=243,slow=316,SNR=2.7						
I45RU	**USSURIYSK INFR**	**34.22**	**64**	*i*		12 00 30.0	
	baz=274,slow=323,SNR=1.9						

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*NCEDC **19** 08:19:52.2±2.8,40°.21N±0°.02×121°.16W±0°.03,h5^{km}±6^{km}, ML3.0/24,ML2.9/50(NEIC),Error ellipse: s-maj=3.4km s-min=2.5km az=82.0*

*NEIC **19** 08:19:52.8±2.6,40°.17N±0°.01×121°.17W±0°.04,h9^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=1.7km az=81.0*

*ANF **19** 08:19:54.8±1.4,40°.10N×121°.46W,h17^{km}±7^{km},ML3.0/6, Error ellipse: s-maj=15.8km s-min=9.9km az=7.0*

ISC 19 08:19:53.2±1.1**,40°.14N**±0°.03×**121°.31W**±0°.04**,h12**^{km}±9^{km}**, n52,**σ**1.s48**/53**,Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCMM	**Colby Mountain**	**0.16**	**271**		**Pg**	**08 19 58.3**	**+1.1**
O03E	**Paynes Creek**	**0.41**	**292**	P	**Pg**	**08 20 01.7**	**+0.3**
	baz=100						
LMEM	**Manzanita Entr**	**0.44**	**333**		**Pg**	**08 20 01.5**	**-0.5**
ORV	**Oroville**	**0.61**	**194**		**Pg**	**08 20 05.0**	**-0.1**
ORV	**Oroville**	**0.61**	**194**		**Sb**	**08 20 14.3**	**+0.1**
ORV				IAML		08 20 14.7	
	comp=E,457nm,0.3s						
ORV	**Oroville**	**0.61**	**194**	Pg	**Pg**	**08 20 04.9**	**-0.2**
LTCM	**Tuscan Springs**	**0.63**	**276**		**Pb**	**08 20 06.4**	**+0.3**
HATC	**Hat Creek Radi**	**0.68**	**350**		**Pg**	**08 20 05.0**	**-1.5**
HATC					**Sg**	**08 20 14.3**	**-1.2**
SUTB	**Sutter Butte**	**0.99**	**202**		**Pb**	**08 20 12.1**	**-0.1**
WDC	**Whiskeytown Da**	**1.04**	**295**		**Pb**	**08 20 12.0**	**-1.1**
WDC	**Whiskeytown Da**	**1.04**	**295**		**Pb**	**08 20 12.2**	**-0.9**
WDC				IAML		08 20 30.7	
	comp=N,117nm,0.6s						
WDC				IAML		08 20 31.3	
	comp=E,111nm,0.4s						
O02D	**Mt. Diablo Mer**	**1.14**	**272**	P	**Pg**	**08 20 14.8**	**-0.3**
	baz=88						
N02D	**Trinity Center**	**1.35**	**308**	P	**Pn**	**08 20 16.9**	**-1.1**
	baz=123						
N02D				S	**Sn**	**08 20 35.8**	**-0.1**
	baz=123						
LGBM	**Gray Butte**	**1.38**	**331**		**Pn**	**08 20 17.7**	**-0.8**
RUBR	**Rubicon Trail**	**1.41**	**140**		**Pn**	**08 20 18.0**	**-0.9**
VCNR	**Virginia City**	**1.53**	**123**		**Pn**	**08 20 19.7**	**-0.8**
VCNR				IAML		08 20 46.6	
	comp=E,181nm,0.7s						
VCNR				IAML		08 20 48.1	
	comp=N,183nm,0.8s						
MNRC	**McLaughlin Min**	**1.54**	**215**		**Pb**	**08 20 21.2**	**-0.5**
PAHR	**Pah Rah Range**	**1.54**	**106**		**Pn**	**08 20 18.7**	**-1.9**
PAHR				IAML		08 20 42.4	
	comp=N,123nm,0.6s						
PAHR				IAML		08 20 43.6	
	comp=E,169nm,0.5s						
LHEM	**Herd Peak**	**1.64**	**335**		**Pn**	**08 20 22.8**	**+0.8**
GSGM	**Seigler Mounta**	**1.68**	**221**		**Pg**	**08 20 24.2**	**-1.2**
M04C	**Macdoel**	**1.69**	**346**	P	**Pn**	**08 20 22.9**	**+0.3**
	baz=162						
PNTR	**Pine Nut**	**1.69**	**128**		**Pn**	**08 20 22.4**	**-0.3**
PNTR				IAML		08 20 51.7	
	comp=N,226nm,0.9s						
M02C	**Callahan**	**1.71**	**317**	P	**Pn**	**08 20 23.4**	**+0.5**
	baz=132						
GCRM	**Castle Rock Sp**	**1.75**	**219**		**Pb**	**08 20 24.1**	**-1.1**
GDXM	**Geysers**	**1.76**	**221**		**Pb**	**08 20 24.7**	**-0.8**
KBSM	**Bell Springs**	**1.77**	**263**		**Pg**	**08 20 26.2**	**-1.0**
HOPS	**Hopland Field**	**1.78**	**230**		**Pb**	**08 20 24.6**	**-1.3**
KCPM	**Cahto Peak**	**1.81**	**256**		**Pg**	**08 20 28.2**	**+0.2**
KCPM				IAML		08 20 56.1	
	comp=N,74nm,2.9s						
KCPM				IAML		08 21 09.6	
	comp=E,94nm,1.0s						

YBH	Yreka Blue Hor	1.91	327		Pn	08 20 26.4	+0.8
YBH	Yreka Blue Hor	1.91	327	Pn	Pn	08 20 24.9	-0.7
MOD	Modoc Plateau	1.91	23	Pn	Pn	08 20 24.8	-1.0
KHMM	Horse Mountain	1.99	292	Pn	Pg	08 20 30.8	-0.6
KHMM				IAML		08 21 08.3	
	comp=E,67nm,2.9s						
KHMM				IAML		08 21 16.6	
	comp=N,79nm,4.2s						
CVS	Carmenet Viney	2.01	207		Pb	08 20 28.1	-1.6
GNAM	Navarro Ridge	2.03	243		Pb	08 20 28.6	-1.4
WAKR	Walker	2.19	138		Pn	08 20 30.2	+0.6
WAKR				IAML		08 21 05.2	
	comp=E,95nm,0.7s						
WAKR				IAML		08 21 10.3	
	comp=N,71nm,1.0s						
L04D	Klamath Falls	2.20	340	P	Pn	08 20 30.8	+1.1
	baz=156						
CMB	Columbia Colle	2.23	161		Pn	08 20 30.9	+1.0
CMB	Columbia Colle	2.23	161		Pn	08 20 31.5	+1.6
CMB				IAML		08 21 06.2	
	comp=N,79nm,0.5s						
CMB				IAML		08 21 07.4	
	comp=E,101nm,0.5s						
RYN	Ryan	2.63	124		Pn	08 20 35.0	-0.7
RYN				IAML		08 21 20.1	
	comp=N,42nm,1.1s						
RYN				IAML		08 21 27.6	
	comp=E,35nm,0.9s						
LHV	Little Huntoon	2.88	130		Pn	08 20 39.3	+0.4
LHV				IAML		08 21 37.4	
	comp=N,44nm,0.7s						
LHV				IAML		08 21 38.3	
	comp=E,58nm,1.0s						
WVOR	Wild Horse Val	3.05	40		Pn	08 20 40.8	-0.5
WVOR				IAML		08 21 27.8	
	comp=E,49nm,0.6s						
WVOR				IAML		08 21 29.9	
	comp=E,45nm,1.1s						
MDPB	Devils Postpil	3.05	145		Pn	08 20 43.1	+1.6
OMMB	Old Mammoth Mi	3.10	144	Pn	Pn	08 20 44.0	+1.8
OMMB				IAML		08 21 32.8	
	comp=N,52nm,0.6s						
OMMB				IAML		08 21 38.3	
	comp=E,38nm,1.0s						
J05D	Fort Rock, OR	3.14	1	P	Pn	08 20 46.9	+4.3
	baz=179						
PINE	Pine Mountain	3.66	4		Pn	08 20 50.9	+1.2
PINE				IAML		08 21 13.0	
	comp=N,27nm,4.4s						
TPH	Tonopah	3.79	122		Pn	08 20 51.4	-0.2
TPH	Tonopah	3.79	122	IAML		08 21 51.8	
	comp=E,14nm,4.7s						
TPH				IAML		08 21 55.4	
	comp=N,13nm,0.6s						
ELK	Elko	4.67	81	Pn	Pn	08 21 03.8	+0.1
R11A	Troy Canyon, C	4.79	110	Sb	Sb	08 22 21.0	+6.1
	baz=295						
R11A	Troy Canyon, C	4.79	110	Pn	Pn	08 21 05.3	0.0
R11A				IAML		08 22 28.4	
	comp=E,6.9nm,4.8s						
PRN	Pahroc Range	5.60	117		Pn	08 21 14.0	-2.4
SHPR	Sheep Range	6.04	125	Pn	Pn	08 21 20.5	-2.1

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*NEIC **19** 08:29:46.9±2.8, 24°.21N±0°.04×127°.50E±0°.07, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=12.5km s-min=4.9km az=66.0*

*IDC **19** 08:29:46.1±0.8, 24°.29N×127°.65E, h0^{km}, mb3.8/10, mb1 4.0/13, mb1mx3.7/58, mbtmp4.0/13, ML4.0/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/50, Error ellipse: s-maj=29.9km s-min=14.6km az=79.0*

*NIED **19** 08:29:49.3, 24°.45N×127°.27E, h95^{km}, MW4.3, Moment Tensor Solution. s1 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.54; $M_{\theta\theta}$1.53; $M_{\phi\phi}$0.01; $M_{r\theta}$2.46; $M_{\theta\phi}$0.19; $M_{\phi r}$0.30; Fault plane solution: $M_0$2.92000×10^{15} NP1: ϕ_s263.00000°, δ74.00000°, λ-90.00000°. NP2: ϕ_s83.00000°, δ16.00000°, λ-90.00000°.*

*JMA **19** 08:29:49.2±0.2, 24°.45N×127°.27E, h95^{km}, M3.7*

ISC 19 08:29:44.8±3.0**, 24°.32N**±0°.06×**127°.36E**±0°.04**, h1**^{km}±19^{km}**, n52,** σ**2^{s}.48**/74**, mb3.9**/15**, MS3.0**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.83	284	P	Pb	08 30 18.8	-0.4
JOGS				*e*S	Sn	08 30 41.2	-0.1
JJT3	Tamagusuku3	1.86	12	P	Pb	08 30 18.7	-0.8
JJT3				*e*S	Sn	08 30 40.6	-1.3
JMJ2	Miyako jima3	1.90	283	P	Pb	08 30 19.3	-1.0
JMJ2				*e*S	Sn	08 30 41.5	-1.5
JIKM	Ikemajima	2.02	288	P	Pb	08 30 21.1	-1.2
JIKM				*e*S	Sn	08 30 44.9	-0.9
JIRB	Irabujima	2.06	285	P	Pn	08 30 21.3	+0.8
JIRB				S	Sn	08 30 44.7	-2.1
JKE	Kume jima 2	2.06	345	P	Pb	08 30 21.6	-1.5
JKE				*e*S	Sn	08 30 45.2	-1.8
JAGN	Aguni-jima	2.26	357	P	Pn	08 30 24.4	+1.1
JAGN				S	Sn	08 30 50.3	-1.6
JNTH	Nagotoyohara	2.27	15	P	Pn	08 30 24.2	+0.8
JNTH				*e*S	Sn	08 30 49.0	-3.1
JTJ	Tarama	2.44	278	P	Pn	08 30 26.6	+0.7
JTJ				*e*S	Sn	08 30 53.8	-2.6
JOW	Kunigami	2.63	18	Pn	Pn	08 30 28.7	+0.2
	13nm,0.3s,baz=154,slow=20,SNR=54						
JOW				Sn	Sn	08 30 57.8	-3.3
	30nm,0.3s,baz=197,slow=21,SNR=6.6						
JOW	Kunigami	2.63	18	P	Pn	08 30 29.5	+1.0
JOW				*e*S	Sn	08 30 57.5	-3.6
JOW	Kunigami	2.63	18	Pn	Pn	08 30 30.2	+1.8
JIH	Iheya	2.76	11	*e*S	Sn	08 31 01.4	-2.7
JISG	Ishigakijimahi	2.79	276	P	Pn	08 30 31.3	+0.6
JISG				*e*S	Sn	08 31 02.0	-3.0
JYRO	Yoronjima	2.87	20	P	Pn	08 30 32.6	+0.9
JYRO				S	Sn	08 31 03.9	-2.9
JIJ	Ishigaki jima	2.94	272	P	Pn	08 30 33.1	+0.5
JIJ				*e*S	Sn	08 31 05.5	-3.1
JKRS	Kuro-shima	3.06	269	P	Pn	08 30 35.3	+1.0
JKRS				S	Sn	08 31 08.3	-3.3
JOKE	Okinoerabujima	3.22	20	P	Pn	08 30 37.6	+1.1
JOKE				*e*S	Sn	08 31 12.6	-2.9
HATJ	Hateruma jima	3.26	266	P	Pn	08 30 37.4	+0.3
HATJ				S	Sn	08 31 11.9	-4.6
IRIF	Iriomote-Funau	3.31	271	P	Pn	08 30 38.2	+0.4
IRIF				*e*S	Sn	08 31 15.2	-2.6
JTK	Tokunoshima	3.73	22	P	Pn	08 30 44.8	+1.2
JTK				*e*S	Sn	08 31 23.8	-4.5
JMZ	Minamidaito 2	3.80	66	P	Pn	08 30 45.1	+0.6
JMZ				S	Sn	08 31 24.5	-5.4
JMZ	Minamidaito 2	3.80	66	Pn	Pn	08 30 43.3	-1.3
JMZ				Sn	Sn	08 31 26.1	-3.9
JAMN	Amaminishikomi	4.23	22	P	Pn	08 30 51.4	+1.0
JAMN				*e*S	Sn	08 31 36.7	-3.8
JAM	Amami Oshima	4.54	26	P	Pn	08 30 55.7	+1.0
JAM				*e*S	Sn	08 31 43.5	-4.7
NACB	Ninganchiao	5.27	270		Pn	08 31 04.3	-0.4
YHNB	Yeheng	5.46	275		Pn	08 31 09.4	+2.0
YULB	Yu-li	5.63	262		Pn	08 31 08.3	-1.4
YULB				Sn	Sn	08 32 07.7	-7.3
SSLB	Suanglung	5.88	266		Pn	08 31 13.0	-0.2
SSLB				Sn	Sn	08 32 17.6	-3.8
TWG	Pinlang	5.96	257	Pn	Pn	08 31 15.5	+1.2
TWG				Sn	Sn	08 32 16.0	-7.2
TPUB	Ta-pu	6.25	262		Pn	08 31 18.8	+0.6
TPUB				Sn	Sn	08 32 28.0	-2.4
JNU	Nakatsue	9.30	19	Pn	Pn	08 32 01.8	+1.7
	1.6nm,0.3s,baz=199,slow=12,SNR=11						
JHJ	Hachijo jima 2	13.98	48	Pn	Pn	08 33 01.3	-2.7
	19nm,0.3s,baz=72,slow=19,SNR=3.8						
GUMO	Guam	19.68	120	LR	LR	08 40 26.0	
	comp=Z,24nm,21.8s,baz=200,slow=33						
KLR	Kul'dur	25.10	7	P	P	08 35 13.3	+2.3
	1.2nm,0.9s,baz=164,slow=3.4,SNR=5.1						
SONM	Songino Array	28.77	330	P	P	08 35 48.1	+3.9
	0.5nm,0.4s,baz=149,slow=11,SNR=6.3						
TLY	Talaya	32.81	332	LR	LR	08 49 42.9	
	comp=Z,18nm,21.7s,baz=166,slow=36						
MKAR	Makanchi Array	42.25	314	P	P	08 37 41.2	+1.5
	0.4nm,0.5s,baz=97,slow=9.8,SNR=8.7						
MKAR				LR	LR	08 58 52.9	
	comp=Z,29nm,19.4s,baz=92,slow=41						
ZALV	Zalesovo Beam	43.31	324	P	P	08 37 50.2	+2.1
	0.8nm,0.4s,baz=116,slow=8.8,SNR=2.7						
ZALV				LR	LR	08 56 34.7	
	comp=Z,22nm,21.6s,baz=34,slow=37						
WB0	Warramunga Arr	44.35	171		P	08 37 57.2	+0.4
WB0				IAmb	IAmb	08 38 17.0	
	comp=Z,6.2nm,1.3s						
WRA	Warramunga Arr	44.52	171	P	P	08 37 58.8	+0.7
	comp=Z,2.2nm,0.7s,baz=351,slow=8.7,SNR=12						
WB2	Warramunga Arr	44.52	171	P	P	08 37 57.4	-0.7
WB2				IAmb	IAmb	08 37 59.5	
	comp=Z,5.2nm,0.9s						
WR0	Warramunga Arr	44.56	170		P	08 37 59.2	+0.7
WR0				IAmb	IAmb	08 38 04.5	
	comp=Z,6.5nm,1.2s						
KURBB	Kurchatov Arra	45.72	318	P	P	08 38 11.1	+3.7
	comp=Z,1.2nm,0.9s,baz=108,slow=8.1,SNR=7.5						
ASAR	Alice Springs	48.12	172	P	P	08 38 27.3	+0.8
	comp=Z,0.6nm,0.6s,baz=356,slow=14,SNR=13						
BVAR	Borovoye Array	51.19	319	P	P	08 38 52.8	+3.1
	comp=Z,0.4nm,0.4s,baz=168,slow=15,SNR=3.6						
ABKAR	Akbulak array	57.39	314	P	P	08 39 35.9	+1.0
ABKAR				IAmb	IAmb	08 39 40.3	
	comp=Z,5.4nm,1.5s						
STKA	Stephens Creek	57.51	166	P	P	08 39 36.6	+0.9
	comp=Z,1.3nm,0.4s,baz=332,slow=5.5,SNR=6.0						
STKA	Stephens Creek	57.51	166	P	P	08 39 36.3	+0.5
CCB	Clear Creek Bu	66.11	28	P	P	08 40 31.5	-1.8
CCB				IAmb	IAmb	08 40 32.0	
	comp=Z,2.3nm,1.1s						
FIA1	FINESS Array S	74.13	331	P	P	08 41 25.1	+2.5
YKA	Yellowknife Ar	80.58	25	P	P	08 41 59.8	+1.1
	comp=Z,0.2nm,0.7s,baz=312,slow=4.5,SNR=8.6						

IDC 19 08:34:58.5±2.1**, 2°.52N**×**127°.21E, h0**^{km}**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/50**, mbtmp3.2**/3**, Error ellipse: s-maj=156.1km s-min=25.7km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.39	163	P	P	08 40 09.4	+0.2
	0.2nm,0.3s,baz=342,slow=10,SNR=4.6						
ASAR	Alice Springs	26.83	166	P	P	08 40 40.1	-0.8
	0.2nm,0.7s,baz=350,slow=6.8,SNR=4.2						
MKAR	Makanchi Array	58.82	325	P	P	08 44 59.2	+0.3
	0.2nm,0.6s,baz=116,slow=6.6,SNR=3.5						

IDC 19 08:36:47.2±71.0**, 18°.81S**×**175°.68W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=1334.0km s-min=185.9km az=82.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.49	243	P	P	08 44 28.3	+0.3
	0.8nm,0.3s,baz=70,slow=11,SNR=4.2						
WRA	Warramunga Arr	47.02	260	P	P	08 45 20.6	-0.1
	0.3nm,0.3s,baz=98,slow=8.2,SNR=10						
ASAR	Alice Springs	47.05	255	P	P	08 45 20.4	-0.5
	0.6nm,0.6s,baz=99,slow=7.4,SNR=8.1						

IDC 19 08:48:19.9±3.2**, 53°.61N**×**87°.92E, h0**^{km}**, mb1 2.9**/2**, mb1mx2.8**/48**, mbtmp2.9**/2**, ML2.6**/2**, 3C, Error ellipse: s-maj=33.2km s-min=18.3km az=84.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.87	282	*i*		09 00 50.0	
	baz=99,slow=328,SNR=2.3						
ZALV	Zalesovo Beam	1.87	282	Pn	Pn	08 48 52.8	-0.3
	1.3nm,0.3s,baz=97,slow=14,SNR=15						
ZALV				Sn	Sb	08 49 18.5	-0.2
	5.7nm,0.3s,baz=96,slow=28,SNR=23						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	08 49 57.3	+0.6
	0.1nm,0.3s,baz=60,slow=14,SNR=4.7						
KURBB				Lg	Lg	08 51 44.8	
	0.0nm,0.3s,baz=64,slow=35,SNR=6.0						
MK31	Makanchi Array	7.72	210	⇑Pn	Pn	08 50 17.6	+4.1
	0.1nm,0.2s,baz=29,slow=14,SNR=6.9						
MK31				⇑Sn	Sn	08 51 40.9	-0.7
	0.1nm,0.3s,baz=258,slow=49,SNR=4.1						
MK31				⇑Lg	Lg	08 52 22.6	
	0.8nm,0.7s,baz=32,slow=31,SNR=4.3						
MKAR	Makanchi Array	7.72	210	Pn	Pn	08 50 14.8	+1.4
	0.2nm,0.3s,baz=27,slow=13,SNR=8.4						
MKAR				Sn	Sn	08 51 40.9	-0.6
	0.1nm,0.3s,baz=31,slow=22,SNR=4.1						
MKAR				Lg	Lg	08 52 25.2	
	0.1nm,0.3s,baz=28,slow=32,SNR=5.1						

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*DJA **19** 08:51:24.3±0.7, 2°N±5°×9°8E±°, h17^{km}±9^{km}, M3.5/7, MLv3.5/7*

*IDC **19** 08:51:36.1±0.8, 2°.97N×98°.90E, h96^{km}±12^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.3/43, mbtmp4.2/4, Error ellipse: s-maj=37.4km s-min=20.8km az=32.0*

ISC 19 08:51:21.8±0.9**, 1°.91N**±0°.06×**97°.5E**±0°.1**, h10**^{km}**, n9,** σ**0^{s}.97**/10**, mb4.3**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.61	172	P	Pn	08 51 36.8	+0.2
GSI				S	Sb	08 51 43.9	+0.7
TPTI		1.38	347	P	Pg	08 51 49.9	+1.6
PSI	Prapat	1.68	58	P	Pn	08 51 51.0	-0.4
	5.2nm,0.3s,baz=360,slow=8.5,SNR=15						
PBSI	Pulau Batu	2.11	158	P	Pn	08 51 56.7	-0.4
MNSI	Mandailing Nat	2.36	118	P	Pn	08 52 01.3	+0.6
WRA	Warramunga Arr	42.17	123	P	P	08 59 15.1	+0.1
	0.3nm,0.4s,baz=308,slow=9.2,SNR=5.0						
MKAR	Makanchi Array	46.63	346	P	P	08 59 50.1	-0.2
	1.3nm,0.5s,baz=161,slow=8.6,SNR=17						
ZALV	Zalesovo Beam	52.91	351	P	P	09 00 36.8	-1.2
	1.7nm,0.3s,baz=157,slow=6.3,SNR=6.4						
ARCES	ARCESS Array B	81.97	340	P	P	09 03 40.5	-1.1
	3.2nm,0.8s,baz=90,slow=3.8,SNR=3.7						

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*NEIC **19** 09:02:59.1±1.5, 25°.9S±0°.1×179°.8W±0°.1, h455^{km}±6^{km}, mb4.7/27, Error ellipse: s-maj=17.6km s-min=11.2km az=217.0*

*IDC **19** 09:03:00.1±1.0, 25°.91S×179°.91W, h454^{km}±11^{km}, mb3.7/9, mb1 3.9/12, mb1mx3.6/28, mbtmp4.6/12, Error ellipse: s-maj=13.9km s-min=13.6km az=174.0*

*NOU **19** 09:03:03.4, 26°.25S×179°.99E, h481^{km}, mb4.5, South of Fiji Islands*

ISC 19 09:02:59.1±0.5**, 25°.82S**±0°.06×**179°.70W**±0°.08**, h450**^{km}**, n81,** σ**1^{s}.75**/86**, mb4.3**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.76	156	P	P	09 04 16.0	+3.9
RIZ				S	S	09 05 14.6	+3.1
RAO	Raoul Island	3.77	156	P	P	09 04 15.2	+3.1
	213nm,0.3s,baz=86,slow=6.2,SNR=19						
RAO				S	S	09 05 11.6	-0.1
	100nm,0.3s,baz=73,slow=19,SNR=2.7						
RAO	Raoul Island	3.77	156	P	P	09 04 15.5	+3.4
RAO	Raoul Island	3.77	156	P	P	09 04 16.4	+4.2
GLKZ	Green Lake	3.78	156	P	P	09 04 16.1	+3.9
GLKZ				S	S	09 05 13.6	+1.8
MSVF	Nonsavu	8.31	345	P	P	09 04 59.8	+1.7
	8.0nm,0.3s,baz=192,slow=7.5,SNR=58						
MSVF	Nonsavu	8.31	345	P	P	09 04 59.4	+1.3
OUZ	Omahuta	11.01	210		P	09 05 28.4	+1.4
NIUE	Niue	11.25	55	P	P	09 05 40.0	+10
KUZ	Kuaotunu	11.57	199	P	P	09 05 35.3	+2.1
WIAZ	Waiheke Island	11.80	201	P	P	09 05 38.1	+2.5
MXZ	Matakaoa Point	11.83	188	P	P	09 05 36.4	+0.5
MXZ				S	S	09 07 44.8	-0.7
MBAZ	Motutapu North	11.85	202	P	P	09 05 38.9	+2.7
HBAZ	Herne Bay Bore	11.98	202	P	P	09 05 39.6	+2.1
ETAZ	East Tamaki Re	12.01	201	P	P	09 05 40.5	+2.6
MARNC	Mare, Loyalty	12.04	288	P	P	09 05 40.6	+2.1
WMGZ	Waiomatatini S	12.07	187	P	P	09 05 38.7	+0.1
WMGZ				S	S	09 07 52.5	+2.3
WTAZ	Waiatarua	12.11	202	P	P	09 05 41.2	+2.2
AWAZ	Awhitu Peninsu	12.20	202	P	P	09 05 42.2	+2.2
TWGZ	Tauwhareparae	12.48	188	P	P	09 05 43.8	+0.8
TWGZ				S	S	09 07 58.4	+0.1
URZ	Urewera	12.70	191	P	P	09 05 43.4	-1.9
	9.2nm,0.3s,baz=276,slow=3.6,SNR=61						
URZ				S	S	09 08 00.9	-1.6
	0.9nm,0.3s,baz=292,slow=19,SNR=2.7						
OUENC	Ouen Island, N	12.75	283	P	P	09 05 48.9	+2.8
CNGZ	Carnagh Statio	12.75	187	P	P	09 05 43.4	-2.5
CNGZ				S	S	09 08 05.6	+1.8
YATNC	Mamie plateau,	12.82	284	P	P	09 05 49.1	+2.2
LIFNC	LIFOU	13.00	290	P	P	09 05 50.7	+1.8
DZM	Mont Dzumac	13.21	284	P	P	09 05 53.9	+2.7
	2.5nm,0.3s,baz=98,slow=14,SNR=45						
DZM	Mont Dzumac	13.21	284	P	P	09 05 52.5	+1.3
DZM	Mont Dzumac	13.21	284	P	P	09 05 53.8	+2.7
NOUC	Port Laguerre	13.32	283	P	P	09 05 54.6	+2.3
HIZ	Hauiti	13.47	199	P	P	09 05 54.4	+0.7
BKZ	Black Stump Fm	13.69	193	P	P	09 05 54.0	-2.1
BFZ	Birch Farm	15.21	192	P	P	09 06 10.5	-1.7
BFZ				IAmb	IAmb	09 06 12.6	
	comp=Z,41nm,1.0s						
KOUNC	Koumac, New Ca	15.63	286	P	P	09 06 19.6	+2.6
BHW	Baring Head	16.19	195	P	P	09 06 19.6	-3.0
PLWZ	Palliser	16.26	194	P	P	09 06 21.2	-2.2
QRZ	Quartz Range	16.30	201	P	P	09 06 22.8	-1.1
NNZ	Nelson	16.40	199	P	P	09 06 23.1	-1.7
TUWZ	Tuamarina	16.44	197	P	P	09 06 21.9	-3.4
BSWZ	Blackbirch Sta	16.72	197	P	P	09 06 26.8	-1.5
THZ	Tophouse	17.04	199	P	P	09 06 30.0	-1.7
THZ				IAmb	IAmb	09 06 38.0	
	comp=Z,20nm,0.9s						
KHZ	Kahutara	17.47	197	P	P	09 06 33.7	-2.4
KHZ				IAmb	IAmb	09 06 56.0	
	comp=Z,50nm,1.3s						
LTZ	Lake Taylor	18.16	199	P	P	09 06 41.3	-2.0
LTZ				IAmb	IAmb	09 06 43.7	
	comp=Z,24nm,0.9s						
OXZ	Oxford	18.73	199	P	P	09 06 45.8	-2.9
OXZ				IAmb	IAmb	09 06 48.9	
	comp=Z,60nm,1.4s						
MQZ	McQueen’s Vall	18.90	197	P	P	09 06 48.5	-1.7
RPZ	Rata Peaks	19.38	201	P	P	09 06 53.2	-1.5
	comp=Z,2.3nm,0.3s,baz=238,slow=0.8,SNR=13						
RPZ	Rata Peaks	19.38	201	P	P	09 06 53.5	-1.2
RPZ				IAmb	IAmb	09 06 55.4	
	comp=Z,42nm,0.8s						
FOZ	Fox Glacier	19.64	203	P	P	09 06 55.8	-1.2
LBZ	Lake Benmore	20.26	201	P	P	09 07 02.6	0.0
LBZ				IAmb	IAmb	09 07 03.5	
	comp=Z,20nm,1.1s						
ODZ	Otahua Downs	20.71	200	P	P	09 07 05.8	-0.9
ODZ				IAmb	IAmb	09 07 08.7	
	comp=Z,20nm,1.1s						
WKZ	Wanaka	21.05	203	P	P	09 07 09.2	-0.6
WHZ	Wether Hill Ro	22.34	203	P	P	09 07 20.1	-1.4
WHZ				IAmb	IAmb	09 07 27.7	
	comp=Z,22nm,1.0s						
CTAO	Charters Tower	31.81	273	P	P	09 08 45.2	-0.1
CTAO				IAmb	IAmb	09 08 46.6	
	comp=Z,25nm,0.9s						
STKA	Stephens Creek	34.31	251	P	P	09 09 06.4	-0.1
	comp=Z,2.2nm,0.5s,baz=98,slow=13,SNR=11						
STKA				PcP	PcP	09 11 31.0	+0.6
	comp=Z,0.7nm,0.4s,baz=110,slow=6.1,SNR=4.0						
STKA	Stephens Creek	34.31	251	P	P	09 09 06.3	-0.2
PMG	Port Moresby	35.41	291	P	P	09 09 15.8	-0.1
	comp=Z,6.0nm,0.6s,baz=136,slow=8.8,SNR=7.1						
PMG	Port Moresby	35.41	291	P	P	09 09 15.6	-0.4
PMG				IAmb	IAmb	09 09 17.2	
	comp=Z,16nm,0.8s						
AS31	Alice Springs	42.02	263	P	P	09 10 08.6	-1.3
ASAR	Alice Springs	42.03	263	P	P	09 10 08.9	-0.9
	comp=Z,8.6nm,0.4s,baz=93,slow=7.7,SNR=264						
ASAR				S	S	09 15 53.2	-2.3
	comp=Z,2.9nm,0.9s,baz=102,slow=16,SNR=16						
WR0	Warramunga Arr	42.40	268	P	P	09 10 11.3	-1.5
WB2	Warramunga Arr	42.57	268	P	P	09 10 12.8	-1.4
WB2				IAmb	IAmb	09 10 14.8	
	comp=Z,12nm,0.5s						
WRAB	Tennant Creek	42.58	268	P	P	09 10 11.5	-2.7
WRAB				IAmb	IAmb	09 10 14.7	
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	42.58	268	P	P	09 10 12.9	-1.4
	comp=Z,4.1nm,0.3s,baz=106,slow=6.0,SNR=70						
WRA				S	S	09 16 00.0	-3.5
	comp=Z,0.6nm,0.9s,baz=100,slow=13,SNR=5.0						
WB0	Warramunga Arr	42.58	268	P	P	09 10 12.1	-2.2
PTCN	Pitcairn Islan	44.58	100	P	P	09 10 28.2	-1.7
FAKI	Fak Fak	51.42	288	P	P	09 11 20.3	-1.2
QSPA	South Pole Qui	64.28	180	P	P	09 12 49.5	+0.8
	comp=Z,7.3nm,1.0s,baz=19,slow=2.1,SNR=16						
QSPA	South Pole Qui	64.28	180	P	P	09 12 49.9	+1.3
BELA	Belgrano 2	74.51	173	P	P	09 13 49.9	-0.1
PETK	Petropavlovsk-	81.02	346	P	P	09 14 25.9	+0.4
	comp=Z,3.0nm,0.8s,baz=116,slow=10,SNR=3.7						
NVAR	Mina Array Bea	85.94	44	P	P	09 14 52.4	+1.6
	comp=Z,0.4nm,0.8s,baz=230,slow=7.0,SNR=3.8						
CMAR	Chiang Mai Arr	90.44	290	P	P	09 15 13.2	+1.2
	comp=Z,0.8nm,0.3s,baz=168,slow=4.6,SNR=4.5						
ILAR	Eielson Array	93.82	13	P	P	09 15 26.6	+0.1
	comp=Z,0.2nm,0.7s,baz=267,slow=5.2,SNR=2.5						
WALA	Waterton Lakes	94.77	37	P	P	09 15 31.1	-0.2
WALA				IAmb	IAmb	09 15 37.5	
	comp=Z,8.4nm,1.1s						
ARCES	ARCESS Array B	133.81	348	PKP	PKiKP	09 21 23.8	-0.7
	comp=Z,4.0nm,0.9s,baz=64,slow=2.1,SNR=6.4						
FINES	FINESS Array B	140.34	341	PKhKP	PKPpre	09 21 27.8	
	comp=Z,0.7nm,0.4s,baz=66,slow=6.5,SNR=6.6						
FINES				PKP	PKiKP	09 21 37.1	-0.8
	comp=Z,2.4nm,0.9s,baz=48,slow=2.8,SNR=4.2						
NC303	NORSAR Array S	143.81	351		PKPdf	09 21 40.1	-1.4
NB2	NORSAR Subarra	144.01	351	PKP	PKPab	09 21 40.3	-0.7
	comp=Z,1.5nm,0.4s,baz=29,slow=2.7						
NOA	NORSAR Array B	144.01	351	PKP	PKPdf	09 21 40.6	-1.3
	comp=Z,2.0nm,0.5s,baz=7.1,slow=3.7,SNR=7.1						
AKASG	Malin Array Be	146.71	326	PKPbc	PKPbc	09 21 48.6	-0.6
	comp=Z,1.4nm,0.4s,baz=47,slow=4.2,SNR=8.2						
BRTR	Keskin Array B	148.92	305	PKPbc	PKPbc	09 21 54.8	-0.7
	comp=Z,0.9nm,0.5s,baz=135,slow=2.7,SNR=6.0						
TORD	Torodi Ar. Bea	167.33	186	PKPab	PKPab	09 23 20.8	-0.3
	comp=Z,0.7nm,0.8s,baz=164,slow=4.0,SNR=1.6						

IDC 19 09:04:00.2±1.1**, 26°.51N**×**141°.58E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/31**, mbtmp3.7**/4**, MS3.6**/1**, Ms1 3.5**/1**, ms1mx2.4**/32**, Error ellipse: s-maj=78.5km s-min=24.4km az=99.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.70	189	P	P	09 12 31.5	+0.5
	1.4nm,0.7s,baz=9.4,slow=8.6,SNR=7.5						
ASAR	Alice Springs	50.43	189	P	P	09 12 59.0	-0.7
	0.3nm,0.7s,baz=1.8,slow=5.6,SNR=3.2						
STKA	Stephens Creek	58.06	180	LR	LR	09 38 48.7	
	comp=Z,43nm,18.4s,baz=200,slow=36						
YKA	Yellowknife Ar	72.91	28	P	P	09 15 30.9	-0.1
	0.2nm,0.5s,baz=298,slow=5.4,SNR=11						
FINES	FINESS Array B	78.23	334	P	P	09 16 01.6	+0.2
	0.9nm,0.7s,baz=57,slow=5.1,SNR=6.3						

ISC 19 09:14:56.7±1.1**, 49°.17N**±0°.08×**18°.94E**±0°.05**, h10**^{km}**, n5,** σ**0^{s}.30**/9**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	0.35	93	*e*PG	Pb	09 15 04.9	-0.1
LANS				*e*SG	Sb	09 15 10.9	+0.3
LANS				*e*LG	Lg	09 15 13.3	
VYHS	Vyhne	0.68	186	*e*PG	Pg	09 15 09.5	-0.3
KOLL	Kolacno	0.69	211	*e*PG	Pg	09 15 09.7	-0.2
KOLL				*e*SG	Sg	09 15 19.4	+0.5
JAVC	Velka Javorina	0.89	250	*e*PG	Pn	09 15 15.3	0.0
JAVC				*e*SG	Sg	09 15 25.4	0.0
MORC	Moravsky Berou	1.09	304	*e*PG	Pb	09 15 17.6	-0.1
MORC				*e*SG	Sb	09 15 32.3	+0.3

IDC 19 09:25:01.5±3.5**, 53°.71N**×**88°.22E, h0**^{km}**, mb1 2.9**/3**, mb1mx2.8**/52**, mbtmp2.9**/3**, ML2.3**/3**, Error ellipse: s-maj=33.1km s-min=20.6km az=81.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.03	278	*i*		09 38 30.0	
	baz=94,slow=330,SNR=5.2						

ZALV	**Zalesovo Beam**	**2.03**	**278**	Pn	Pn	09 25 36.4	-0.5
	1.5nm,0.3s,baz=93,slow=14,SNR=26						
ZALV				Sn	Sb	09 26 05.0	-0.1
	5.0nm,0.3s,baz=96,slow=25,SNR=18						
KURBB	**Kurchatov Arra**	**6.72**	**246**	Pn	Pn	09 26 42.3	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=6.8						
KURBB				Sn	Sn	09 27 56.6	-1.8
	0.0nm,0.3s,baz=62,slow=22,SNR=2.2						
MKAR	**Makanchi Array**	**7.90**	**211**	Pn	Pn	09 26 58.3	+0.8
	0.1nm,0.3s,baz=28,slow=14,SNR=5.2						
MKAR				Sn	Sn	09 28 27.5	0.0
	0.1nm,0.3s,baz=35,slow=27,SNR=2.4						

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*TEH **19** 09:25:59.2, 35°.34N×44°.88E, h8^{km}, ML3.2*
*ISN **19** 09:26:00.5±1.2, 35°.29N×44°.82E, h21^{km}±9^{km}, ML1.8*
ISC 19 09:26:00.4±1.4**, 35°.32N**±0°.05×**44°.85E**±0°.08**, h10^{km}, n9, σ0ˢ.76**/13**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**1.41**	**116**	*e*Pg	**Pn**	**09 26 26.5**	**+0.2**
IDHR				*e*Sg	**Sg**	**09 26 46.4**	**+0.6**
IDHR				*e*		09 26 51.2	
	comp=Z,99nm,0.2s						
MAHB	**Mahabad**	**1.60**	**26**	*e*Pg	**Pn**	**09 26 28.9**	**0.0**
MAHB				*e*Sg	**Sg**	**09 26 52.6**	**+0.7**
MAHB				*e*		09 26 55.4	
	comp=Z,99nm,0.4s						
IGHG	**Ghaleghazi**	**1.73**	**124**	*e*Pn	**Pb**	**09 26 31.8**	**-0.6**
IGHG				*e*		09 27 05.7	
	comp=Z,99nm,0.6s						
ILIN	**Lien**	**1.78**	**102**	*e*Pg	**Pb**	**09 26 32.5**	**-0.8**
ILIN				*e*		09 27 01.1	
	comp=Z,99nm,0.4s						
BHD	**Baghdad**	**2.08**	**191**	*e*Pg	**Pn**	**09 26 36.0**	**+0.6**
	baz=10.0						
BHD				*e*Sg	**Sb**	**09 27 04.0**	**-0.2**
KCHF	**Cheshme Sefid,**	**2.09**	**119**	*e*Pn	**Pb**	**09 26 37.2**	**-1.3**
KCHF				*e*		09 27 15.7	
	comp=Z,99nm,0.4s						
IBDR	**Badra**	**2.38**	**158**	*e*Pn	**Pn**	**09 26 40.0**	**+0.5**
IBDR				*e*Sn	**Sn**	**09 27 09.0**	**+0.2**
IBDR				AML	AML	09 27 17.9	
	comp=E,7.0nm,0.7s						
IBDR				AML	AML	09 27 25.1	
	comp=N,6.6nm,0.8s						
IALM	**Almabolaq**	**2.76**	**99**	*e*Pn	**Pn**	**09 26 45.2**	**+0.2**
HSRG	**Sareghieh**	**2.81**	**91**	*e*Pn	**Pn**	**09 26 46.9**	**+1.2**

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*NNC **19** 09:27:14.4±6.1, 53°.76N×87°.36E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=43.2km s-min=25.6km az=5.0, Suspected Mining explosion.*
IDC 19 09:27:06.4±3.0**, 54°.21N×87°.39E, h0^{km}, mb1 3.0**/2**, mb1mx2.9**/51**, mbtmp3.0**/2**, ML2.6**/2**, 2C-2D, Error ellipse: s-maj=23.6km s-min=16.6km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**261**	*i*		09 36 00.0	
	baz=80,slow=319,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.54**	**261**	Pg	Pn	09 27 32.9	-2.2
	0.6nm,0.3s,baz=77,slow=15,SNR=5.1						
ZALV				Lg	Lg	09 27 55.7	
	1.6nm,0.3s,baz=81,slow=26,SNR=8.3						
KURK	**Kurchatov**	**6.40**	**240**	⇓Lg	Lg	09 30 32.1	
	3.6nm,0.8s						
KURBB	**Kurchatov Arra**	**6.50**	**240**	Pn	Pn	09 28 43.7	+0.4
	0.1nm,0.3s,baz=55,slow=14,SNR=4.8						
KURBB				Sn	Sn	09 29 57.1	-1.0
	0.0nm,0.3s,baz=31,slow=18,SNR=1.9						
KURBB				Lg	Lg	09 30 34.4	
	0.0nm,0.3s,baz=53,slow=33,SNR=6.5						
KURBB	**Kurchatov Arra**	**6.50**	**240**	⇑Lg	Lg	09 30 31.5	
	3.6nm,0.7s						
MK31	**Makanchi Array**	**8.11**	**206**	⇑Pn	Pn	09 29 07.7	+2.4
	0.6nm,0.6s,baz=28,slow=14,SNR=6.1						
MK31				Sn	Sn	09 30 37.0	-0.6
	0.6nm,0.6s,baz=26,slow=26,SNR=4.7						
MK31				⇓Lg	Lg	09 31 19.1	
	2.4nm,0.8s,baz=27,slow=28,SNR=4.5						
MKAR	**Makanchi Array**	**8.11**	**206**	Pn	Pn	09 29 06.9	+1.6
	0.2nm,0.3s,baz=28,slow=12,SNR=6.2						
MKAR				Sn	Sn	09 30 37.6	0.0
	0.2nm,0.3s,baz=27,slow=29,SNR=10						
MKAR				Lg	Lg	09 31 21.6	
	0.1nm,0.3s,baz=26,slow=27,SNR=2.0						

IDC 19 09:43:14.8±5.5**, 15°.10S×173°.62W, h0^{km}, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.6**/47**, mbtmp3.5**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/28**, Error ellipse: s-maj=425.1km s-min=32.6km az=150.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.42**	**251**	LR	LR	09 48 04.5	
	comp=Z,87nm,18.6s,baz=171,slow=34						
WRA	**Warramunga Arr**	**49.71**	**257**	P	P	09 52 09.2	+0.1
	0.3nm,0.5s,baz=91,slow=6.8,SNR=5.5						
ASAR	**Alice Springs**	**50.01**	**252**	P	P	09 52 11.1	-0.3
	0.3nm,0.4s,baz=88,slow=7.4,SNR=9.0						
NVAR	**Mina Array Bea**	**74.24**	**42**	P	P	09 54 54.2	+0.1
	0.7nm,1.0s,baz=229,slow=9.1,SNR=3.8						

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*IDC **19** 09:47:28.4±1.8, 32°.28S×178°.56W, h0^{km}, mb4.1/3, mb1 4.4/4, mb1mx3.9/46, mbtmp4.1/4, ML3.9/1, MS3.8/4, Ms1 3.8/4, ms1mx3.1/32, Error ellipse: s-maj=58.0km s-min=32.5km az=147.0*
*WEL **19** 09:47:35.1±0.7, 33°S±5°×17°8W±1°3, h33^{km}, M4.4/22, mB4.8/7, ML4.9/21, MLv4.7/22, Mw(mB)4.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=108.6*
ISC 19 09:47:32.7±1.1**, 32°.57S**±0°.07×**178°.0W**±0°.1**, h35^{km}, n44, σ2ˢ.18**/52**, mb3.9**/3**, MS4.0**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.29**	**2**	P	**Pn**	**09 48 21.7**	**-0.1**
GLKZ				S	**Sn**	**09 48 59.4**	**-0.4**
MXZ	**Matakaoa Point**	**5.82**	**210**	P	**Pn**	**09 48 59.2**	**+2.7**
MXZ				S	**Sn**	**09 50 03.7**	**+1.7**
WMGZ	**Waiomatatini S**	**6.00**	**208**	P	**Pn**	**09 49 01.6**	**+2.6**
WMGZ				S	**Sn**	**09 50 06.4**	**0.0**
HAZ	**Te Kaha**	**6.21**	**212**	P	**Pn**	**09 49 03.5**	**+1.6**
HAZ				S	**Sn**	**09 50 13.7**	**+2.0**
PUZ	**Puketiti**	**6.28**	**208**	P	**Pn**	**09 49 04.2**	**+1.4**
PUZ				S	**Sn**	**09 50 14.9**	**+1.6**
RUGZ	**Raukumara Rang**	**6.43**	**212**	P	**Pn**	**09 49 07.0**	**+2.0**
RUGZ				S	**Sn**	**09 50 18.5**	**+1.3**
TWGZ	**Tauwhareparae**	**6.48**	**209**	P	**Pn**	**09 49 07.0**	**+1.4**
TWGZ				S	**Sn**	**09 50 20.1**	**+1.8**
KUZ	**Kuaotunu**	**6.63**	**229**	P	**Pn**	**09 49 11.8**	**+4.2**
CNGZ	**Carnagh Statio**	**6.66**	**206**	P	**Pn**	**09 49 10.4**	**+2.4**
TKGZ	**Te Karaka**	**6.76**	**209**	P	**Pn**	**09 49 13.2**	**+3.8**
TKGZ				S	**Sn**	**09 50 22.5**	**-2.6**
MWZ	**Matawai**	**6.80**	**211**	P	**Pn**	**09 49 11.9**	**+1.8**
MWZ				S	**Sn**	**09 50 25.1**	**-1.2**
OPRZ	**Ohinepanea**	**6.88**	**219**	P	**Pn**	**09 49 14.9**	**+3.8**
OPRZ				S	**Sn**	**09 50 27.8**	**-0.4**
URZ	**Urewera**	**6.93**	**214**	Pn	**Pn**	**09 49 11.2**	**-0.5**
	2.2nm,0.3s,baz=263,slow=4.1,SNR=22						
URZ				Sn	**Sn**	**09 50 26.0**	**-3.3**
	3.3nm,0.3s,baz=74,slow=23,SNR=10.0						
URZ	**Urewera**	**6.93**	**214**	P	**Pn**	**09 49 11.9**	**+0.1**
URZ				S	**Sn**	**09 50 26.8**	**-2.5**
RIGZ	**Rimuhau**	**7.02**	**208**	P	**Pn**	**09 49 15.7**	**+2.6**
RIGZ				S	**Sn**	**09 50 29.7**	**-1.9**
WCZ	**Waipu Caves**	**7.16**	**240**	P	**Pn**	**09 49 17.8**	**+3.0**
PRGZ	**Paritu Road**	**7.16**	**206**	P	**Pn**	**09 49 17.6**	**+2.7**
PRGZ				S	**Sn**	**09 50 33.7**	**-1.3**
SNGZ	**Shannon Statio**	**7.26**	**210**	P	**Pn**	**09 49 19.2**	**+2.9**
SNGZ				S	**Sn**	**09 50 36.4**	**-1.0**
MUGZ	**Murupara**	**7.26**	**214**	P	**Pn**	**09 49 18.2**	**+1.9**
KNZ	**Kokohu**	**7.33**	**207**	P	**Pn**	**09 49 16.9**	**-0.3**
KNZ				S	**Sn**	**09 50 36.7**	**-2.3**
MHGZ	**Mahia Peninsul**	**7.35**	**206**	P	**Pn**	**09 49 19.0**	**+1.4**
MHGZ				S	**Sn**	**09 50 37.0**	**-2.8**
OUZ	**Omahuta**	**7.45**	**247**	P	**Pn**	**09 49 20.3**	**+1.4**
RAHZ	**Arahi**	**7.48**	**211**	P	**Pn**	**09 49 22.4**	**+3.1**
RAHZ				S	**Sn**	**09 50 41.9**	**-0.9**
MTHZ	**Maungataniwha**	**7.53**	**212**	P	**Pn**	**09 49 23.6**	**+3.5**
MTHZ				S	**Sn**	**09 50 44.2**	**0.0**
NMHZ	**Naumai**	**7.75**	**211**	P	**Pn**	**09 49 24.8**	**+1.7**
BKZ	**Black Stump Fm**	**7.95**	**212**	P	**Pn**	**09 49 26.6**	**+0.8**
MCHZ	**McNeill Hill**	**8.09**	**210**	P	**Pn**	**09 49 29.1**	**+1.4**
TMVZ	**Te Maari**	**8.28**	**216**	P	**Pn**	**09 49 32.6**	**+2.2**
KAHZ	**Kahuranaki**	**8.31**	**208**	P	**Pn**	**09 49 30.2**	**-0.4**
DZM	**Mont Dzumac**	**17.29**	**303**	LR	LR	09 56 20.5	
	comp=Z,115nm,18.7s,baz=163,slow=32						
PPT	**Papeete**	**29.66**	**67**	LR	LR	10 05 05.2	
	comp=Z,10.0nm,19.2s,baz=128,slow=35						
ASAR	**Alice Springs**	**43.01**	**269**	P	**P**	**09 55 25.9**	**-3.2**
	1.3nm,0.6s,baz=106,slow=7.3,SNR=13						
WRA	**Warramunga Arr**	**44.20**	**274**	P	**P**	**09 55 35.7**	**-2.8**
	2.5nm,0.4s,baz=115,slow=7.8,SNR=18						
H03S2	**Juan Fernandez**	**79.30**	**123**	T	T	11 28 07.9	
	baz=236,slow=74,SNR=9.2						
H03S1	**Juan Fernandez**	**79.31**	**123**	T	T	11 28 02.3	
	baz=236,slow=74,SNR=10						
H03S3	**Juan Fernandez**	**79.31**	**123**	T	T	11 28 06.3	
	baz=236,slow=74,SNR=8.4						
H03N3	**Juan Fernandez**	**79.50**	**123**	T	T	11 28 25.0	
	baz=240,slow=72,SNR=30						
H03N2	**Juan Fernandez**	**79.50**	**123**	T	T	11 28 22.0	
	baz=240,slow=72,SNR=11						
H03N1	**Juan Fernandez**	**79.52**	**123**	T	T	11 28 18.9	
	baz=240,slow=72,SNR=46						
NVAR	**Mina Array Bea**	**89.84**	**43**	P	**P**	**10 00 29.4**	**+1.4**
	0.6nm,0.9s,baz=225,slow=5.0,SNR=3.4						
BBB	**Bella Bella**	**95.01**	**28**	LR	LR	10 32 32.6	
	comp=Z,31nm,21.8s,baz=258,slow=28						
NEW	**Newport**	**97.13**	**36**	LR	LR	10 35 17.7	
	comp=Z,108nm,20.9s,baz=36,slow=30						
ILAR	**Eielson Array**	**100.03**	**13**	LR	LR	10 38 05.1	
	comp=Z,74nm,21.8s,baz=82,slow=30						
FINES	**FINESS Array B**	**147.16**	**339**	PKPbc	**PKPbc**	**10 07 11.1**	**-0.2**
	2.9nm,0.8s,baz=35,slow=5.1,SNR=6.5						

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*IDC **19** 09:54:30.9±0.8, 37°.32N×97°.84W, h0^{km}, mb3.1/2, mb1 3.8/7, mb1mx3.6/43, mbtmp3.5/7, ML2.3/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/20, Error ellipse: s-maj=10.8km s-min=9.7km az=177.0*
*NEIC **19** 09:54:31.7±1.3, 37°.22N±0°.04×97°.87W±0°.06, h5^{km}±2^{km}, mb_Lg3.9/163, Mwr3.5/16, Error ellipse: s-maj=8.7km s-min=6.3km az=242.0*
*ANF **19** 09:54:31.9±0.3, 37°.19N×97°.87W, h5^{km}, ML4.8/18, Error ellipse: s-maj=4.1km s-min=2.9km az=42.0*
*NEIC **19** 09:54:32, 37°.19N×97°.89W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.49; M$_{\theta\theta}$1.62; M$_{\phi\phi}$-1.13; M$_{r\theta}$-1.11; M$_{\theta\phi}$1.11; M$_{\phi r}$1.23; Fault plane solution: M$_0$2.46000×10^{14} NP1:φ$_s$212.28000°, δ51.38000°, λ-164.22000°. NP2:φ$_s$112.28000°, δ77.73000°, λ-39.70000°. Principal axes: T 2.2077, Plg17.0000°, Azm168.0000°; N 0.4404, Plg49.0000°, Azm278.0000°; P -2.6481, Plg36.0000°, Azm65.0000°;*
ISC 19 09:54:32.0±0.7**, 37°.20N**±0°.02×**97°.86W**±0°.02**, h13^{km}**±4^{km}**, n162, σ1ˢ.63**/168**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	**Argonia South**	**0.09**	**122**		**Pg**	**09 54 34.6**	**-0.3**
KAN01				Sg	**Sg**	**09 54 36.1**	**-0.9**
KAN08	**Anthony NE Sta**	**0.09**	**285**		**Pg**	**09 54 34.0**	**-1.0**
KAN08					**Sg**	**09 54 35.2**	**-1.9**
KAN12	**Harper NE Stat**	**0.15**	**310**		**Pg**	**09 54 34.9**	**-0.8**
KAN12				Sg	**Sg**	**09 54 36.8**	**-1.4**
KS21	**Milan North St**	**0.18**	**61**		**Pg**	**09 54 36.1**	**0.0**
KS21				Sg	**Sg**	**09 54 37.5**	**-1.5**
KAN10	**Anthony SW Sta**	**0.21**	**248**		**Pg**	**09 54 35.7**	**-0.9**
KAN10				Sg	**Sg**	**09 54 38.4**	**-1.3**
KAN14	**Manchester OK**	**0.26**	**199**		**Pg**	**09 54 37.0**	**-0.5**
KAN14				Sg	**Sg**	**09 54 40.3**	**-0.8**
KAN13	**South Haven SW**	**0.36**	**122**		**Pg**	**09 54 39.3**	**0.0**
KAN13				Sg	**Sg**	**09 54 44.6**	**+0.5**
CROK	**Carrier**	**0.70**	**188**	Pg	**Pg**	**09 54 45.0**	**-0.7**
CROK				Sg	**Sg**	**09 54 54.2**	**-0.8**
T35A	**Sooner Cattle**	**1.11**	**104**	Pg	**Pg**	**09 54 53.0**	**-0.5**
T35B	**Sooner Cattle**	**1.11**	**104**	P		09 54 53.0	
	baz=284,SNR=162						
T35B				S		09 55 08.1	
	baz=284						
U32A	**Winter Ranch,**	**1.23**	**229**		**Pg**	**09 54 54.2**	**-1.5**
U32A	**Winter Ranch,**	**1.23**	**229**	P		09 54 54.3	
	baz=48						
U32A				S		09 55 11.3	
	baz=48						
QUOK	**Quay**	**1.38**	**138**		**Pn**	**09 54 57.4**	**+0.3**
R32A	**Long Quarter,**	**1.39**	**331**	Pn	**Pn**	**09 54 57.3**	**0.0**
R32A	**Long Quarter,**	**1.39**	**331**	P		09 54 57.3	
	baz=152,SNR=314						
R32A				S		09 55 17.5	
	baz=152						
OK029	**Liberty Lake**	**1.44**	**167**		**Pn**	**09 54 58.3**	**+0.4**
OK031	**S. Brethren Rd**	**1.49**	**146**		**Pn**	**09 54 59.0**	**+0.5**
OK030	**Cody Creek RV**	**1.54**	**146**		**Pn**	**09 54 59.9**	**+0.7**
BCOK	**Bluff Creek, N**	**1.56**	**173**		**Pn**	**09 55 00.0**	**+0.6**
OK025	**Westminster Rd**	**1.67**	**165**		**Pn**	**09 55 01.8**	**+0.7**
OKCFA	**Oklahoma City**	**1.81**	**169**		**Pn**	**09 55 03.7**	**+0.7**
OKCSW	**OKLAHOMA CITY**	**1.82**	**169**		**Pn**	**09 55 03.9**	**+0.7**
FNO	**Franklin**	**1.98**	**169**		**Pn**	**09 55 05.8**	**+0.6**
TUL1	**Leonard**	**2.10**	**127**	P	**Pn**	**09 55 08.2**	**+1.2**
	baz=308,SNR=77						
TUL1				S	**Sb**	**09 55 37.6**	**+1.5**
	baz=308						
TUL1	**Leonard**	**2.10**	**127**		**Pn**	**09 55 08.2**	**+1.2**
TUL1				IAmb_Lg		09 55 42.8	
	comp=Z,518nm,0.8s						
TUL1	**Leonard**	**2.10**	**127**	P		09 55 08.2	
	baz=308,SNR=42						
TUL1				S		09 55 37.4	
	baz=308						
KSU1	**Kansas State U**	**2.13**	**27**	P	**Pn**	**09 55 08.8**	**+1.3**
	baz=208,SNR=61						
KSU1				S	**Sb**	**09 55 38.3**	**+1.3**
	baz=208						
KSU1	**Kansas State U**	**2.13**	**27**	Pn	**Pn**	**09 55 08.9**	**+1.5**
KSU1	**Kansas State U**	**2.13**	**27**	P		09 55 08.8	
	baz=208,SNR=70						
KSU1				S		09 55 36.3	
	baz=208						
CBKS	**Cedar Bluff**	**2.19**	**318**	P	**Pn**	**09 55 09.0**	**+0.8**
	baz=138,SNR=83						
CBKS				S	**Sb**	**09 55 39.4**	**+0.8**
	baz=138						
CBKS	**Cedar Bluff**	**2.19**	**318**	Pn	**Pn**	**09 55 09.1**	**+0.8**
CBKS	**Cedar Bluff**	**2.19**	**318**	P		09 55 09.0	
	baz=138,SNR=98						
CBKS				S		09 55 36.7	
	baz=138						
W35A	**Tecumseh**	**2.19**	**158**	Pn	**Pn**	**09 55 09.1**	**+0.9**
WMOK	**Wichita Mounta**	**2.57**	**197**	P	**Pn**	**09 55 14.2**	**+0.8**
	baz=16,SNR=38						
WMOK				S	**Sn**	**09 55 48.1**	**+3.5**
	baz=16						
WMOK	**Wichita Mounta**	**2.57**	**197**	Pn	**Pn**	**09 55 14.0**	**+0.6**
WMOK	**Wichita Mounta**	**2.57**	**197**	P		09 55 14.1	
	baz=16,SNR=57						
U38A	**Gravette**	**2.89**	**104**		**Pn**	**09 55 19.1**	**+1.3**
U38A				IAmb_Lg		09 56 10.9	
	comp=Z,342nm,0.8s						
U38A	**Gravette**	**2.89**	**104**	P		09 55 19.3	
	baz=286,SNR=71						
HHAR	**Hobbs**	**3.28**	**105**		**Pn**	**09 55 24.6**	**+1.5**
HHAR	**Hobbs**	**3.28**	**105**	P		09 55 24.6	
	baz=287						
X37A	**Clayton**	**3.30**	**142**	Pn	**Pn**	**09 55 24.8**	**+1.4**
X37A				IAmb_Lg		09 56 22.4	
	comp=Z,545nm,0.9s						
X37A	**Clayton**	**3.30**	**142**	P		09 55 24.2	
	baz=323						
N33B	**J Bar K, Exete**	**3.54**	**5**	P		09 55 26.9	
	baz=186,SNR=20						
N33B				S		09 56 09.4	
	baz=186						
N33A	**J Bar K, Exete**	**3.54**	**5**		**Pn**	**09 55 27.2**	**+0.4**
S39A	**Bolivar**	**3.64**	**81**	Pn	**Pn**	**09 55 29.2**	**+1.1**
S39A				IAmb_Lg		09 56 36.8	
	comp=Z,206nm,0.7s						
S39A	**Bolivar**	**3.64**	**81**	P		09 55 29.0	
	baz=264,SNR=77						
W39A	**Magazine**	**3.85**	**120**	Pn	**Pn**	**09 55 32.4**	**+1.4**
	baz=302,SNR=14						
W39A				Pb	**Pb**	**09 55 41.0**	**+1.1**
	baz=302						
W39A				S	**Sn**	**09 56 18.1**	**+1.9**
	baz=302						
W39A				Sb	**Sg**	**09 56 32.2**	**-3.6**
	baz=302						
W39A	**Magazine**	**3.85**	**120**	P		09 55 32.2	
	baz=302,SNR=12						
W39A				S		09 56 18.1	
	baz=302						
AMTX	**Amarillo**	**3.87**	**234**	P	**Pn**	**09 55 32.5**	**+1.2**
	baz=52						
AMTX				Sb	**Sb**	**09 56 30.7**	**+3.8**
	baz=52						
AMTX	**Amarillo**	**3.87**	**234**	Pn	**Pn**	**09 55 32.5**	**+1.2**
AMTX				IAmb_Lg		09 56 41.6	
	comp=Z,364nm,0.8s						
AMTX	**Amarillo**	**3.87**	**234**	P		09 55 32.4	
	baz=52,SNR=34						
Z35A	**Perchaven, San**	**3.89**	**173**		**Pn**	**09 55 32.3**	**+0.7**
Z35A				IAmb_Lg		09 56 39.9	
	comp=Z,253nm,1.2s						
Z35A	**Perchaven, San**	**3.89**	**173**	P		09 55 32.5	
	baz=353,SNR=9.2						
N35A	**Tabor**	**4.04**	**25**	P		09 55 34.4	
	baz=206,SNR=14						
N35A				S		09 56 23.1	
	baz=206						
U40A	**Yellville**	**4.10**	**100**	P	**Pn**	**09 55 35.9**	**+1.4**
	baz=283,SNR=17						
U40A				S	**Sn**	**09 56 23.3**	**+0.9**
	baz=283						
U40A	**Yellville**	**4.10**	**100**	Pn	**Pn**	**09 55 35.7**	**+1.2**
U40A	**Yellville**	**4.10**	**100**	P		09 55 35.4	
	baz=283,SNR=44						
U40A				P		09 55 35.4	
	baz=283,SNR=44						
P38A	**Dawn**	**4.17**	**53**	Pn	**Pn**	**09 55 36.4**	**+1.1**
P38A				IAmb_Lg		09 56 43.6	
	comp=Z,275nm,0.7s						
P38A	**Dawn**	**4.17**	**53**	P		09 55 36.3	
	baz=236,SNR=25						
KSCO	**Kaye Shedlock’**	**4.17**	**297**	P	**Pn**	**09 55 36.5**	**+0.9**
	baz=114						
KSCO	**Kaye Shedlock’**	**4.17**	**297**	Pn	**Pn**	**09 55 36.4**	**+0.8**
KSCO				IAmb_Lg		09 56 48.0	
	comp=Z,262nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.17**	**297**	P		09 55 36.6	
	baz=114,SNR=9.7						
BGNE	**Belgrade**	**4.21**	**357**	P	**Pn**	**09 55 36.4**	**+0.5**
	baz=177						
BGNE				S	**Sn**	**09 56 24.9**	**0.0**
	baz=177						
BGNE	**Belgrade**	**4.21**	**357**	Pn	**Pn**	**09 55 36.3**	**+0.5**
BGNE				IAmb_Lg		09 56 49.1	
	comp=Z,421nm,0.7s						
BGNE	**Belgrade**	**4.21**	**357**	P		09 55 36.4	
	baz=177,SNR=48						
MIAR	**Mount Ida**	**4.37**	**126**	P	**Pn**	**09 55 39.7**	**+1.5**
	baz=308						
MIAR				S	**Sn**	**09 56 30.1**	**+1.2**
	baz=308						
MIAR	**Mount Ida**	**4.37**	**126**	Pn	**Pn**	**09 55 39.5**	**+1.3**
MIAR				IAmb_Lg		09 56 54.1	
	comp=Z,222nm,0.8s						
MIAR	**Mount Ida**	**4.37**	**126**	P		09 55 39.1	
	baz=308,SNR=31						
MIAR				S		09 56 30.9	
	baz=308						
MGMO	**Mountain Grove**	**4.46**	**89**		**Pn**	**09 55 40.8**	**+1.4**
MGMO				IAmb_Lg		09 56 55.7	
	comp=Z,349nm,0.8s						
R40A	**Maddies Statio**	**4.56**	**75**	Pn	**Pn**	**09 55 41.8**	**+1.0**
R40A	**Maddies Statio**	**4.56**	**75**	P		09 55 41.6	
	baz=258,SNR=87						
Z38A	**Mt. Pleasant**	**4.58**	**148**	Pn	**Pn**	**09 55 41.7**	**+0.7**
Z38A				IAmb_Lg		09 57 02.6	
	comp=Z,232nm,0.8s						
Z38A	**Mt. Pleasant**	**4.58**	**148**	P		09 55 41.6	
	baz=330,SNR=26						
ABTX	**Abilene, Hawle**	**4.80**	**198**	P	**Pn**	**09 55 44.2**	**+0.1**
	baz=17						
ABTX	**Abilene, Hawle**	**4.80**	**198**	IAmb_Lg		09 57 03.3	
	comp=Z,183nm,1.0s						
FCAR	**Ozark Folk Cen**	**4.80**	**104**	Pn	**Pn**	**09 55 44.6**	**+0.6**
FCAR				IAmb_Lg		09 57 01.9	
	comp=Z,196nm,0.8s						
WHAR	**Wooly Hollow**	**4.89**	**111**	Pn	**Pn**	**09 55 46.4**	**+1.2**
WHAR				IAmb_Lg		09 57 07.2	
	comp=Z,250nm,1.0s						
L34A	**Svendsen Farm,**	**4.89**	**13**	Pn	**Pn**	**09 55 45.0**	**-0.3**
X40A	**Basin Creek Fa**	**4.90**	**122**	P	**Pn**	**09 55 46.7**	**+1.4**
	baz=305						
X40A	**Basin Creek Fa**	**4.90**	**122**	Pn	**Pn**	**09 55 46.9**	**+1.6**
X40A				IAmb_Lg		09 57 17.9	
	comp=Z,349nm,1.1s						
X40A	**Basin Creek Fa**	**4.90**	**122**	P		09 55 46.7	
	baz=305,SNR=22						
X40A				P		09 55 46.7	
	baz=305,SNR=22						
OGNE	**Ogallala**	**4.95**	**320**	P	**Pn**	**09 55 48.0**	**+1.8**
	baz=138						
OGNE				Sn	**Sn**	**09 56 44.9**	**+1.5**
	baz=138						
OGNE				Sb	**Sb**	**09 57 03.9**	**+5.8**
	baz=138						
W41B	**Gary Mavity, V**	**4.97**	**112**	P	**Pn**	**09 55 47.3**	**+1.0**
	baz=296						
W41B				Sn	**Sn**	**09 56 43.3**	**-0.3**
	baz=296						
W41B				Sb	**Sb**	**09 57 05.0**	**+6.5**
	baz=296						
W41B	**Gary Mavity, V**	**4.97**	**112**	Pn	**Pn**	**09 55 47.3**	**+1.0**
W41B				IAmb_Lg		09 57 08.9	
	comp=Z,305nm,0.9s						
N38A	**Joes South For**	**5.08**	**44**		**Pn**	**09 55 48.7**	**+0.8**
N38A	**Joes South For**	**5.08**	**44**	P		09 55 48.5	
	baz=227,SNR=32						
P40A	**Paris**	**5.12**	**61**		**Pn**	**09 55 49.8**	**+1.4**
P40A				IAmb_Lg		09 57 23.6	
	comp=Z,252nm,0.8s						
P40A	**Paris**	**5.12**	**61**	P		09 55 49.5	
	baz=245,SNR=16						
MSTX	**Muleshoe**	**5.14**	**233**	P	**Pn**	**09 55 49.8**	**+0.9**
	baz=50						
MSTX				Sb	**Sb**	**09 57 10.1**	**+6.4**
	baz=50						
MSTX	**Muleshoe**	**5.14**	**233**	P		09 55 49.7	
	baz=50,SNR=11						
WHTX	**Lake Whitney,**	**5.21**	**176**	P	**Pn**	**09 55 49.8**	**+0.1**
	baz=356,SNR=11						
WHTX				S	**Sn**	**09 56 48.5**	**-1.1**
	baz=356						
WHTX	**Lake Whitney,**	**5.21**	**176**	Pn	**Pn**	**09 55 49.6**	**-0.1**
WLAR	**White Oak Lake**	**5.22**	**131**		**Pn**	**09 55 51.1**	**+1.2**
WLAR				IAmb_Lg		09 57 31.7	
	comp=Z,158nm,0.8s						
T25A	**Trinidad**	**5.24**	**271**	P	**Pn**	**09 55 51.2**	**+0.9**
	baz=88						
T25A				Sb	**Sb**	**09 57 12.1**	**+5.7**
	baz=88						
CCM	**Cathedral Cave**	**5.32**	**79**	P	**Pn**	**09 55 52.3**	**+1.1**
	baz=263						
CCM	**Cathedral Cave**	**5.32**	**79**		**Pn**	**09 55 51.7**	**+0.5**
CCM				IAmb_Lg		09 57 28.2	
	comp=Z,155nm,0.8s						
CCM	**Cathedral Cave**	**5.32**	**79**	P		09 55 52.3	
	baz=263,SNR=14						
T42A	**Van Buren**	**5.41**	**90**		**Pn**	**09 55 53.2**	**+0.8**
T42A				IAmb_Lg		09 57 28.7	
	comp=Z,212nm,0.8s						
T42A	**Van Buren**	**5.41**	**90**	P		09 55 53.2	
	baz=274,SNR=20						
237A	**Washetta, Mont**	**5.46**	**161**	Pn	**Pn**	**09 55 53.0**	**-0.1**
237A				IAmb_Lg		09 57 39.6	
	comp=Z,151nm,0.9s						
K31A	**O'Neill**	**5.46**	**353**	Pn	**Pn**	**09 55 53.9**	**+0.8**
K31A				IAmb_Lg		09 57 35.7	
	comp=Z,294nm,0.8s						
K31A	**O'Neill**	**5.46**	**353**	P		09 55 54.1	
	baz=173,SNR=19						
LCAR	**Lake Charles**	**5.51**	**100**	Pn	**Pn**	**09 55 54.4**	**+0.7**
LCAR				IAmb_Lg		09 57 27.2	
	comp=Z,151nm,0.7s						
Z41A	**Richland Creek**	**5.71**	**132**	P	**Pn**	**09 55 57.1**	**+0.6**
	baz=315						
Z41A				S	**Sn**	**09 57 00.7**	**-1.2**

	baz=315						
Z41A	**Richland Creek**	**5.71**	**132**	Pn	**Pn**	**09 55 57.1**	**+0.6**
Z41A				IAmb_Lg		09 57 46.0	
	comp=Z,234nm,1.0s						
SCIA	**State Center**	**5.91**	**36**	P	**Pn**	**09 56 00.5**	**+1.2**
	baz=219						
SCIA	**State Center**	**5.91**	**36**	Pn	**Pn**	**09 56 00.3**	**+1.0**
CCAR	**Cane Creek**	**5.94**	**122**	IAmb_Lg		09 57 47.3	
	comp=Z,176nm,0.8s						
PBMO	**Poplar Bluff**	**5.96**	**92**	Pn	**Pn**	**09 56 00.7**	**+0.7**
Q24A	**Divide**	**6.01**	**289**	P	**Pn**	**09 56 01.2**	**+0.2**
	baz=105						
Q24A				S	**Sn**	**09 57 08.1**	**-1.9**
	baz=105						
Q24A	**Divide**	**6.01**	**289**	Pn	**Pn**	**09 56 01.3**	**+0.2**
NATX	**Nacogdoches**	**6.04**	**153**	P	**Pn**	**09 56 01.1**	**0.0**
	baz=335,SNR=6.2						
NATX				S	**Sn**	**09 57 08.0**	**-2.0**
	baz=335						
NATX	**Nacogdoches**	**6.04**	**153**	Pn	**Pn**	**09 56 01.2**	**+0.1**
SDCO	**Great Sand Dun**	**6.10**	**277**	P	**Pn**	**09 56 02.9**	**+0.7**
	baz=93						
SLM	**Saint Louis**	**6.19**	**74**	Pn	**Pn**	**09 56 03.7**	**+0.6**
SLM				IAmb_Lg		09 57 46.3	
	comp=Z,202nm,0.9s						
X43A	**Marvell**	**6.26**	**113**	P	**Pn**	**09 56 05.6**	**+1.4**
	baz=297						
X43A	**Marvell**	**6.26**	**113**	IAmb_Lg		09 58 07.1	
	comp=Z,265nm,1.0s						
435B	**Jarrell**	**6.41**	**178**	P	**Pn**	**09 56 06.2**	**0.0**
	baz=358						
435B				S	**Sn**	**09 57 17.2**	**-2.0**
	baz=358						
435B	**Jarrell**	**6.41**	**178**	Pn	**Pn**	**09 56 06.2**	**0.0**
435B				IAmb_Lg		09 58 05.8	
	comp=Z,175nm,0.8s						
435B	**Jarrell**	**6.41**	**178**	P		09 56 06.1	
	baz=358,SNR=6.2						
N41A	**Harden Midland**	**6.48**	**55**	Pn	**Pn**	**09 56 07.8**	**+0.6**
ECSD	**EROS Data Cent**	**6.59**	**8**	P		09 56 08.3	
	baz=189,SNR=17						
ECSD	**EROS Data Cent**	**6.59**	**8**	P	**Pn**	**09 56 08.5**	**-0.2**
	baz=189						
ECSD				S	**Sn**	**09 57 22.4**	**-1.3**
	baz=189						
ECSD	**EROS Data Cent**	**6.59**	**8**	Pn	**Pn**	**09 56 08.3**	**-0.4**
ISCO	**Idaho Springs**	**6.61**	**295**	P	**Pn**	**09 56 10.2**	**+1.0**
	baz=111						
S44A	**Carbondale**	**6.86**	**83**		**Pn**	**09 56 12.9**	**+0.5**
S44A				IAmb_Lg		09 58 24.3	
	comp=Z,195nm,0.7s						
S44A	**Carbondale**	**6.86**	**83**	P		09 56 12.9	
	baz=268,SNR=21						
SIUC	**Southern Illin**	**6.89**	**83**		**Pn**	**09 56 13.1**	**+0.3**
SIUC				IAmb_Lg		09 58 13.2	
	comp=Z,220nm,0.8s						
JCT	**Junction City**	**6.90**	**194**	P	**Pn**	**09 56 12.4**	**-0.5**
	baz=13						
JCT				Sb	**Sg**	**09 58 06.6**	**-6.9**
	baz=13						
JCT	**Junction City**	**6.90**	**194**	IAmb_Lg		09 58 16.5	
	comp=Z,165nm,0.8s						
143A	**Socs Landing,**	**6.94**	**128**	IAmb_Lg		09 58 32.8	
	comp=Z,109nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.98**	**67**	Pn	**Pn**	**09 56 14.4**	**+0.4**
P43A				IAmb_Lg		09 58 18.5	
	comp=Z,186nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.98**	**67**	P		09 56 14.5	
	baz=252,SNR=20						
L40A	**Anamosa**	**7.05**	**44**	Pn	**Pn**	**09 56 15.4**	**+0.5**
Q44A	**Meyer Farm, Va**	**7.18**	**74**	Pn	**Pn**	**09 56 17.1**	**+0.4**
Q44A				IAmb_Lg		09 58 25.2	
	comp=Z,218nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.18**	**74**	P		09 56 17.1	
	baz=259,SNR=16						
SUSD	**Miller**	**7.28**	**354**	P	**Pn**	**09 56 18.4**	**+0.3**
	baz=173						
SUSD				S	**Sn**	**09 57 38.4**	**-2.2**
	baz=173						
SUSD	**Miller**	**7.28**	**354**	IAmb_Lg		09 58 26.3	
	comp=Z,95nm,0.8s						
N23A	**Red Feather La**	**7.29**	**303**	P	**Pn**	**09 56 19.7**	**+1.1**
	baz=118						
ANMO	**Albuquerque**	**7.32**	**255**	Pn	**Pn**	**09 56 20.9**	**+2.1**
	comp=Z,0.0nm,0.3s,baz=70,slow=14,SNR=2.4						
ANMO				Pg	Pb	09 56 45.3	+6.3
	comp=Z,1.1nm,0.3s,baz=74,slow=15,SNR=22						
ANMO				Lg	Lg	09 58 18.2	
	comp=Z,1.5nm,0.3s,baz=29,slow=13,SNR=2.6						
ANMO				LR	LR	09 59 19.3	
	comp=Z,75nm,21.6s,baz=60,slow=39						
ANMO	**Albuquerque**	**7.32**	**255**	Sb	Sg	09 58 17.3	-10
	baz=70						
ANMO	**Albuquerque**	**7.32**	**255**	IAmb_Lg		09 58 34.5	
	comp=Z,32nm,1.0s						
ANMO				IAmb_Lg		09 58 34.5	
	comp=Z,31nm,1.0s						
T45A	**Paducah**	**7.36**	**89**	IAmb_Lg		09 58 40.7	
	comp=Z,211nm,0.7s						
OXF	**Oxford**	**7.37**	**109**	P	**Pn**	**09 56 19.6**	**+0.4**
	baz=294						
OXF	**Oxford**	**7.37**	**109**	IAmb_Lg		09 58 38.0	
	comp=Z,159nm,0.7s						
HKT	**Hockley**	**7.43**	**166**	IAmb_Lg		09 58 43.7	
	comp=Z,8.6nm,0.8s						
HDIL	**Hopedale**	**7.47**	**61**	P	**Pn**	**09 56 20.7**	**0.0**
	baz=246,SNR=9.9						
HDIL				S	**Sn**	**09 57 43.9**	**-1.4**
	baz=246						
HDIL	**Hopedale**	**7.47**	**61**	Pn	**Pn**	**09 56 20.7**	**0.0**
HDIL				IAmb_Lg		09 58 35.9	
	comp=Z,195nm,0.8s						
HDIL	**Hopedale**	**7.47**	**61**	P		09 56 20.7	
	baz=246,SNR=24						
441A	**DeRidder**	**7.51**	**148**	P		09 56 22.2	
	baz=330,SNR=12						
Y45A	**Yeager Farm, C**	**7.55**	**114**	IAmb_Lg		09 58 41.6	
	comp=Z,207nm,0.8s						
I37A	**Lemond, Waseca**	**7.60**	**25**	IAmb_Lg		09 58 52.3	
	comp=Z,149nm,0.8s						
O44A	**Mansfield**	**7.91**	**65**	IAmb_Lg		09 58 56.2	
	comp=Z,119nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.01**	**250**	IAmb_Lg		09 59 03.4	
	comp=Z,142nm,1.1s						
USIN	**University of**	**8.13**	**82**	IAmb_Lg		09 58 54.1	
	comp=Z,186nm,1.2s						
WVT	**Waverly**	**8.13**	**95**	P	**Pn**	**09 56 29.8**	**+0.1**
	baz=280						
WVT				S	**Sn**	**09 57 58.8**	**-2.7**
	baz=280						
WVT	**Waverly**	**8.13**	**95**	Pn	**Pn**	**09 56 29.5**	**-0.2**
WVT				IAmb_Lg		09 58 49.0	
	comp=Z,85nm,0.8s						
JFWS	**Jewell Farm**	**8.16**	**43**	P	**Pn**	**09 56 30.0**	**-0.1**
	baz=228						
JFWS				S	**Sn**	**09 57 58.9**	**-3.2**
	baz=228						
JFWS	**Jewell Farm**	**8.16**	**43**	Pn	**Pn**	**09 56 30.1**	**-0.1**
JFWS				IAmb_Lg		09 58 51.4	
	comp=Z,145nm,0.9s						
JFWS	**Jewell Farm**	**8.16**	**43**	P		09 56 29.7	
	baz=228,SNR=12						
PLAL	**Pickwick Lake**	**8.22**	**103**	Pn	**Pn**	**09 56 31.0**	**0.0**
MNTX	**Cornudas Mount**	**8.29**	**231**	P	**Pn**	**09 56 32.3**	**+0.3**
	baz=46						
MNTX				S	**Sn**	**09 58 03.0**	**-2.5**
	baz=46						
MNTX	**Cornudas Mount**	**8.29**	**231**	P		09 56 32.0	
	baz=46,SNR=7.0						
735A	**Kenedy**	**8.32**	**180**	IAmb_Lg		09 59 14.4	
	comp=Z,82nm,0.9s						
RSSD	**Black Hills**	**8.35**	**328**	P	**Pn**	**09 56 35.4**	**+2.4**
	baz=144						
MVCO	**Mesa Verde**	**8.49**	**273**	Sb	Sg	09 58 55.2	-9.3
	baz=87						
RWWY	**Rawlins**	**8.51**	**305**	IAmb_Lg		09 59 07.1	
	comp=Z,89nm,1.0s						
146A	**Union**	**8.54**	**120**	IAmb_Lg		09 59 15.3	
	comp=Z,108nm,0.8s						
K22A	**Casper**	**8.60**	**312**	P	**Pn**	**09 56 37.2**	**+0.9**
	baz=127						
K22A	**Casper**	**8.60**	**312**	IAmb_Lg		09 59 16.4	
	comp=Z,103nm,1.1s						
I40A	**Norwalk**	**8.66**	**37**	Pn	**Pn**	**09 56 37.8**	**+0.8**
I40A				IAmb_Lg		09 59 20.1	
	comp=Z,74nm,0.9s						
M44A	**Midewin, Midew**	**8.68**	**58**	Pn	**Pn**	**09 56 37.9**	**+0.7**
F33A	**5 Mile Ranch,**	**8.71**	**7**	Pn	**Pn**	**09 56 37.3**	**-0.4**
833A	**Chaparral WMA,**	**8.95**	**189**	IAmb_Lg		09 59 36.5	
	comp=Z,72nm,1.1s						
Z47A	**Carrollton**	**8.95**	**114**	IAmb_Lg		09 59 27.5	
	comp=Z,105nm,0.9s						
SFIN	**Lafayette**	**8.98**	**66**	IAmb_Lg		09 59 17.5	
	comp=Z,109nm,0.8s						
V48A	**Smith Brothers**	**9.01**	**96**	IAmb_Lg		09 59 23.2	
	comp=Z,73nm,0.9s						
L44A	**Lake County Fo**	**9.13**	**54**	P	**Pn**	**09 56 43.3**	**-0.2**
	baz=240						
L44A				S	**Sn**	**09 58 22.2**	**-3.9**
	baz=240						
L44A	**Lake County Fo**	**9.13**	**54**	Pn	**Pn**	**09 56 43.2**	**-0.2**
L44A				IAmb_Lg		09 59 37.5	
	comp=Z,100nm,0.9s						
BLO	**Bloomington**	**9.14**	**74**	Pn	**Pn**	**09 56 43.1**	**-0.4**
BLO				IAmb_Lg		09 59 37.6	
	comp=Z,88nm,0.8s						
K43A	**Burlington**	**9.14**	**50**	Pn	**Pn**	**09 56 43.3**	**-0.4**
K43A				IAmb_Lg		09 59 34.9	
	comp=Z,96nm,0.7s						
WCI	**Wyandotte Cave**	**9.22**	**80**	P	**Pn**	**09 56 44.5**	**-0.3**
	baz=267						
WCI	**Wyandotte Cave**	**9.22**	**80**	IAmb_Lg		09 59 32.6	
	comp=Z,80nm,0.8s						
TXAR	**Lajitas Array**	**9.23**	**213**	Pn	**Pn**	**09 56 44.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=37,slow=10.0,SNR=16						
TXAR				Pg		09 57 20.0	
	comp=Z,0.8nm,0.3s,baz=32,slow=13,SNR=5.4						
TXAR				Lg	Lg	09 59 21.9	
	comp=Z,2.3nm,0.3s,baz=45,slow=28,SNR=9.3						
TXAR	**Lajitas Array**	**9.23**	**213**		**Pn**	**09 56 44.9**	**-0.1**
I42A	**Draeger Farm,**	**9.53**	**43**	IAmb_Lg		09 59 39.9	
	comp=Z,83nm,0.9s						
E28A	**Huff**	**9.60**	**348**	IAmb_Lg		10 00 02.6	
	comp=Z,88nm,1.1s						
LRAL	**Lakeview Retre**	**9.82**	**112**	IAmb_Lg		09 59 46.7	
	comp=Z,78nm,1.2s						
SWET	**Sewanee**	**9.84**	**98**	IAmb_Lg		09 59 49.1	
	comp=Z,68nm,1.0s						
Y49A	**Blount Mountai**	**9.91**	**106**	IAmb_Lg		09 59 46.4	
	comp=Z,72nm,0.8s						
SRU	**San Rafael Swe**	**10.16**	**285**		**Pn**	**09 56 57.7**	**0.0**
PDAR	**Pinedale Array**	**10.55**	**305**	Pn	**Pn**	**09 57 02.4**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=114,slow=14,SNR=12						
PDAR				Pg		09 57 47.2	
	comp=Z,0.7nm,0.3s,baz=119,slow=20,SNR=6.6						
PDAR				Lg	Lg	09 59 59.8	
	comp=Z,1.0nm,0.3s,baz=111,slow=29,SNR=8.1						
PDAR				LR	LR	10 00 53.5	
	comp=Z,54nm,19.9s,baz=330,slow=36						
P49A	**Miami Univ. Ec**	**10.58**	**73**	P	**Pn**	**09 57 02.1**	**-1.2**
	baz=261						
L48A	**N Adams**	**11.39**	**61**	P		09 57 13.2	
	baz=250,SNR=12						
L48A				P		09 57 13.2	
	baz=250,SNR=12						
TKL	**Tuckaleechee C**	**11.45**	**94**	Pn	**Pn**	**09 57 14.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=297,slow=11,SNR=12						
TKL				Sn	**Sn**	**09 59 18.7**	**-4.4**
	comp=Z,0.8nm,0.3s,baz=292,slow=5.4,SNR=2.9						
TKL				Lg	Lg	10 00 26.9	
	comp=Z,3.1nm,0.3s,baz=183,slow=20,SNR=6.8						
P52A	**Corning**	**12.57**	**74**	P	**Pn**	**09 57 29.8**	**-0.7**
	baz=264						
U54A	**Nelsons Funny**	**12.86**	**88**	P	**Pn**	**09 57 34.5**	**-0.2**
	baz=278						
U54A	**Nelsons Funny**	**12.86**	**88**	P		09 57 34.0	
	baz=278,SNR=6.0						
U54A				P		09 57 34.0	
	baz=278,SNR=6.0						
Q53A	**Leroy**	**12.98**	**78**	P	**Pn**	**09 57 34.8**	**-1.5**
	baz=268						
ULM	**Lac du Bonnet**	**13.12**	**6**	Pn	Pn	09 57 32.7	-5.3
	comp=Z,0.3nm,0.3s,baz=183,slow=14,SNR=4.1						
ULM				Sn	Sn	09 59 52.7	-11
	comp=Z,0.6nm,0.3s,baz=110,slow=18,SNR=2.9						
ULM				Lg	Lg	10 01 15.4	
	comp=Z,0.2nm,0.3s,baz=100,slow=12,SNR=2.1						
ULM	**Lac du Bonnet**	**13.12**	**6**		LR	10 01 15.4	
YKA	**Yellowknife Ar**	**27.35**	**343**	P	**P**	**10 00 16.7**	**+0.2**
	comp=Z,0.2nm,0.9s,baz=140,slow=8.8,SNR=3.4						
ILAR	**Eielson Array**	**39.80**	**330**	P	**P**	**10 02 04.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=119,slow=5.6,SNR=3.3						

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*IDC **19** 09:55:45.4±0.6, 0°.30S×125°.15E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.2/32, mbtmp4.2/14, ML3.2/1, MS3.3/10, Ms1 3.3/10, ms1mx3.0/42, Error ellipse: s-maj=29.8km s-min=14.3km az=73.0*

*DJA **19** 09:55:52.0±0.2, 0°S±3°×12°5E±°, h43km±8km, M4.6/16, mb4.8/8, mB5.3/3, MLv4.5/16, Mw(mB)4.7/3*

*NEIC **19** 09:55:53.5±1.5, 0°.37S±0°.09×125°.28E±0°.04, h70km±8km, mb4.4/19, Error ellipse: s-maj=13.2km s-min=6.2km az=174.0*

ISC 19 09:55:52.5±0.4**, 0°.33S**±0°.06×**125°.31E**±0°.06**, h57km, n73,** σ**1s.22**/76**, mb4.3**/30**, MS3.3**/6**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.60**	**304**	P	**Pn**	**09 56 16.3**	**-2.2**
KMSI				S	**Sn**	**09 56 37.2**	**-1.0**
SANI	**Sanana**	**1.83**	**158**	P	**Pn**	**09 56 19.9**	**-1.8**
TNTI	**Ternate**	**2.33**	**62**		**Pn**	**09 56 30.4**	**+1.9**
TNTI	**Ternate**	**2.33**	**62**	P	**Pn**	**09 56 27.7**	**-0.8**
LUWI	**Luwuk**	**2.63**	**254**	Pn	**Pn**	**09 56 33.6**	**+1.0**
LUWI	**Luwuk**	**2.63**	**254**	P	**Pn**	**09 56 32.9**	**+0.3**
NLAI	**Namlea**	**3.40**	**148**	P	**Pn**	**09 56 41.4**	**-1.6**
MRSI	**Marisa**	**3.46**	**283**	P	**Pn**	**09 56 41.7**	**-2.2**
APSI	**Ampana**	**3.70**	**261**	P	**Pn**	**09 56 47.2**	**0.0**
MSAI	**Masohi**	**4.70**	**130**	P	**Pn**	**09 57 02.1**	**+1.2**
TOLI2	**Tolitoli**	**4.75**	**288**	Pn	**Pn**	**09 57 02.3**	**+0.7**
MPSI	**Mapaga**	**5.45**	**277**	P	**Pn**	**09 57 11.7**	**+0.5**
	1.0nm2μm65nm,0.9s						
SIJI	**Sorong**	**5.98**	**95**	Pn	**Pn**	**09 57 19.9**	**+1.3**
	2.0nm,0.3s,baz=106,slow=3.1,SNR=20						
TTSI	**Tana Toraja**	**6.11**	**244**	P	**Pn**	**09 57 20.7**	**+0.4**
	0.5nm3μm72nm,0.7s						
BNDI	**Bandanaira**	**6.20**	**132**	P	**Pn**	**09 57 21.2**	**-0.2**
	0.5nm106nm,0.6s						
BNSI	**Bone**	**6.58**	**232**	P	**Pn**	**09 57 27.3**	**+0.6**
	0.2nm36nm,0.6s						
SPSI	**Sidrap Palu**	**6.61**	**237**	P	**Pn**	**09 57 28.3**	**+1.3**
	0.4nm2μm96nm,0.5s						
KAPI	**Kappang**	**7.24**	**230**	Pn	**Pn**	**09 57 38.1**	**+2.4**
DAV	**Davao City (W)**	**7.36**	**2**	LR	LR	10 00 52.3	
	comp=Z,285nm,20.9s,baz=188,slow=42						
FAKI	**Fak Fak**	**7.40**	**110**	Pn	**Pn**	**09 57 37.2**	**-0.7**
MYLDM	**Lahad Datu**	**8.73**	**309**	Pn	**Pn**	**09 57 57.1**	**+0.9**
BATI	**Baumata**	**9.94**	**189**	LR	LR	10 02 57.8	
	comp=Z,188nm,21.2s,baz=342,slow=43						
JAGI	**Jajag, Banyuwa**	**13.74**	**234**	Pn	**Pn**	**09 59 04.0**	**-0.6**
JAGI					P	09 59 04.5	-7.0
TGY	**Tagaytay City**	**14.98**	**343**	LR	LR	10 06 56.0	
	comp=Z,72nm,18.6s,baz=168,slow=45						
KSM	**Kuching**	**15.11**	**277**	Pn	**Pn**	**09 59 22.6**	**0.0**
KSM				IAmb	IAmb	09 59 36.6	
	comp=Z,41nm,1.3s						
FITZ	**Fitzroy Crossi**	**17.66**	**179**	P	**Pn**	**09 59 51.8**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=356,slow=13,SNR=2.0						
FITZ				LR	LR	10 08 43.2	
	comp=Z,71nm,18.2s,baz=348,slow=44						
KPJI	**Karang Pucung**	**17.75**	**247**	P	**P**	**09 59 58.6**	**+2.7**
	comp=Z,91nm,0.9s						
LEM	**Lembang**	**18.79**	**250**	LR	LR	10 08 04.4	
	comp=Z,188nm,19.5s,baz=46,slow=40						
CISI	**Cisompet, Garu**	**18.86**	**247**	P	**P**	**10 00 08.4**	**+0.2**
WB0	**Warramunga Arr**	**21.27**	**156**	P	**P**	**10 00 34.5**	**+0.3**
WRAB	**Tennant Creek**	**21.40**	**156**	P	**P**	**10 00 35.8**	**+0.1**
WRAB				IAmb	IAmb	10 00 43.2	
	comp=Z,8.9nm,0.7s						
WRA	**Warramunga Arr**	**21.40**	**156**	P	**P**	**10 00 35.5**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=336,slow=11,SNR=9.7						
WRA				LR	LR	10 10 58.0	
	comp=Z,55nm,20.0s,baz=140,slow=42						
WB2	**Warramunga Arr**	**21.41**	**156**	P	**P**	**10 00 34.8**	**-0.9**
WB2				IAmb	IAmb	10 00 43.7	
	comp=Z,11nm,0.7s						
WR0	**Warramunga Arr**	**21.50**	**156**	P	**P**	**10 00 36.2**	**-0.5**
TPUB	**Ta-pu**	**23.93**	**349**	P	**P**	**10 01 00.4**	**-1.0**
AS31	**Alice Springs**	**24.65**	**161**	P	**P**	**10 01 08.8**	**+0.8**
ASAR	**Alice Springs**	**24.65**	**161**	P	**P**	**10 01 08.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=340,slow=9.3,SNR=26						
ASAR				PcP	**PcP**	**10 04 46.3**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=348,slow=1.9,SNR=6.7						
PSI	**Prapat**	**26.56**	**277**	LR	LR	10 13 36.9	
	comp=Z,86nm,18.1s,baz=90,slow=41						
CMAR	**Chiang Mai Arr**	**31.94**	**307**	P	**P**	**10 02 12.6**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=145,slow=7.4,SNR=7.0						
CMAR				PcP	**PcP**	**10 05 02.4**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=154,slow=1.1,SNR=4.9						
CMAR				LR	LR	10 15 03.0	
	comp=Z,44nm,20.4s,baz=172,slow=36						
GYA	**Guiyang**	**32.13**	**327**	*e*P	**P**	**10 02 15.5**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
STKA	**Stephens Creek**	**34.95**	**155**	P	**P**	**10 02 41.0**	**+1.9**
	comp=Z,3.5nm,0.9s,baz=332,slow=9.8,SNR=6.1						
STKA	**Stephens Creek**	**34.95**	**155**	P	**P**	**10 02 40.7**	**+1.5**
MJAR	**Matsushiro Arr**	**38.60**	**17**	P	**P**	**10 03 09.4**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=179,slow=9.2,SNR=6.3						
USRK	**Ussuriysk Ar.**	**44.74**	**7**	P	**P**	**10 04 00.9**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=192,slow=6.7,SNR=5.3						
GTA	**Gaotai**	**45.92**	**332**	*e*P	**P**	**10 04 11.1**	**+1.2**
GTA				pP	pP	10 04 18.3	-5.7
GTA				sP	pwP	10 04 21.9	-5.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	**Songino Array**	**50.72**	**344**	P	**P**	**10 04 46.4**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=156,slow=7.6,SNR=13						
SHLS	**Shalkode**	**59.62**	**323**	*e*P	**P**	**10 05 49.0**	**-1.9**
	comp=Z,1.7nm,0.9s,baz=323						
PEA0B	**Petropavlovsk-**	**59.70**	**22**	P	**P**	**10 05 52.4**	**+1.3**
PETK	**Petropavlovsk-**	**59.70**	**22**	P	**P**	**10 05 52.9**	**+1.8**
	comp=Z,6.5nm,0.8s,baz=221,slow=4.7,SNR=9.6						
MK31	**Makanchi Array**	**60.12**	**327**	P	**P**	**10 05 54.1**	**-0.1**
MK31				IAmb	IAmb	10 05 56.4	
	comp=Z,2.2nm,0.7s						
MKAR	**Makanchi Array**	**60.12**	**327**	P	**P**	**10 05 54.3**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=120,slow=8.3,SNR=34						
MKAR				LR	LR	10 33 29.0	
	comp=Z,39nm,19.1s,baz=106,slow=38						
SATY	**Saty**	**60.21**	**322**	*e*P	**P**	**10 05 54.9**	**0.0**
	comp=Z,2.7nm,0.7s,baz=322						
MAKZ	**Makanchi**	**60.30**	**327**	P	**P**	**10 05 55.2**	**-0.2**
MAKZ				IAmb	IAmb	10 05 57.2	
	comp=Z,8.2nm,1.4s						
TNSS	**Tian-Shan**	**61.10**	**321**	*e*P	**P**	**10 06 01.6**	**+0.2**
	baz=321						
MDOK	**Medeo**	**61.11**	**321**	*e*P	**P**	**10 06 01.2**	**+0.1**
	baz=322						
CHKK	**Chushkaly**	**61.51**	**322**	*e*P	**P**	**10 06 03.5**	**0.0**
	baz=322						
KUU	**Kurty**	**61.93**	**322**	*e*P	**P**	**10 06 06.1**	**-0.4**
	comp=Z,7.5nm,0.7s,baz=322						
AAK	**Ala-Archa**	**62.46**	**320**	LR	LR	10 35 14.8	
	comp=Z,23nm,20.7s,baz=100,slow=38						
AAK	**Ala-Archa**	**62.46**	**320**	P	**P**	**10 06 09.8**	**-0.4**
AAK				IAmb	IAmb	10 06 14.3	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**63.59**	**335**	P	**P**	**10 06 15.8**	**-1.3**
	comp=Z,2.2nm,0.9s,baz=118,slow=5.4,SNR=5.9						
BTLS	**Baital**	**63.92**	**322**	*e*P	**P**	**10 06 19.5**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=322						
KURK	**Kurchatov**	**64.43**	**329**	P	**P**	**10 06 22.8**	**0.0**
KURK				IAmb	IAmb	10 06 25.1	
	comp=Z,6.0nm,0.7s						
IUG	**Iuzhnay**	**65.18**	**318**	*e*P	**P**	**10 06 27.9**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=318						
KK31	**Karatay Array**	**65.27**	**319**	P	**P**	**10 06 27.9**	**-0.6**
KK31				IAmb	IAmb	10 06 30.8	
	comp=Z,2.6nm,0.7s						
KKAR	**Karatay Array**	**65.27**	**319**	P	**P**	**10 06 28.1**	**-0.4**
KKAR				IAmb	IAmb	10 06 30.8	
	comp=Z,2.6nm,0.7s						
SOCY	**Socotra**	**71.82**	**283**	P	**P**	**10 07 06.1**	**-3.9**
ABKAR	**Akbulak array**	**74.41**	**322**	P	**P**	**10 07 24.2**	**-0.2**
ABKAR				IAmb	IAmb	10 07 27.3	
	comp=Z,2.7nm,0.8s						
KBZ	**Khabaz**	**84.73**	**314**	P	**P**	**10 08 21.4**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=180,slow=6.7,SNR=5.6						
KMBO	**Kilima Mbogo**	**88.05**	**269**	P	**P**	**10 08 38.0**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=61,slow=8.9,SNR=5.1						
ILAR	**Eielson Array**	**89.36**	**25**	P	**P**	**10 08 42.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=229,slow=5.2,SNR=5.2						
MNK	**Minsk**	**94.59**	**325**	*i* P	**P**	**10 09 06.6**	**-0.4**
	comp=E,2.0nm,1.1s						
MNK				*i* P	**P**	**10 09 06.6**	**-0.4**
	comp=N,12nm,0.8s						
MNK				*i* P	**P**	**10 09 06.6**	**-0.4**
	comp=Z,6.0nm,0.8s						
MNK				*i* PP	**PP**	**10 12 54.4**	**-1.0**
MNK				*i* PPP	PPP	10 14 56.0	
MNK				*i* S	**SKSac**	**10 19 38.9**	**+1.4**
MNK				*i* SKS		10 21 35.0	
MNK				*i* SS	**SS**	**10 26 40.6**	**+1.5**
MNK				*i* SSS	SSS	10 30 23.5	
MNK				*i* SKKS	**SKKSdf**	**10 33 11.2**	**-1.9**
MNK				*i* LQ	LQ	10 45 52.8	
MNK				*i* LR	LR	10 48 41.8	
MNK				*i* LRM	MLR	10 52 04.4	
	comp=E,7.0nm,10.2s						
MNK				*i* LRM	MLR	10 52 05.0	
	comp=Z,34nm,8.6s						
MNK				*i* LRM	MLR	10 52 06.3	
	comp=N,46nm,9.9s						
TORD	**Torodi Ar. Bea**	**122.72**	**285**	PKP	**PKiKP**	**10 14 43.9**	**+0.6**
	comp=N,0.8nm,0.7s,baz=58,slow=1.9,SNR=4.2						
TXAR	**Lajitas Array**	**125.17**	**54**	PKP	**PKiKP**	**10 14 49.8**	**+1.9**
	comp=N,0.2nm,0.5s,baz=256,slow=3.6,SNR=3.4						

IDC 19 10:19:06.4±432.0**, 53°.22N×101°.71E, h0km, Error ellipse: s-maj=170.4km s-min=113.4km az=150.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**6.19**	**149**	*i*		11 00 50.0	
	baz=333,slow=331,SNR=1.1						
I46RU	**ZALESOVO INFRA**	**10.07**	**281**	*i*		11 21 10.0	
	baz=87,slow=338,SNR=1.3						
I45RU	**USSURIYSK INFR**	**21.77**	**102**	*i*		12 31 00.0	
	baz=300,slow=334,SNR=1.7						

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*TUL **19** 10:19:20.2±1.3, 36°.80N±0°.01×98°.20W±0°.02, h4km±7km, ML3.9, mb_Lg4.1/158(NEIC), Mwr3.8/68(NEIC), Error ellipse: s-maj=2.1km s-min=1.9km az=138.0*

*NEIC **19** 10:19:20.2, 36°.80N×98°.20W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.25; $M_{\theta\theta}$2.95; $M_{\phi\phi}$-1.70; $M_{r\theta}$-0.57; $M_{\theta\phi}$4.29; $M_{\phi r}$2.54; Fault plane solution: $M_0$5.64000×10^{14} NP1:ϕ_s197.94000°, δ75.08000°, λ-152.85000°. NP2:ϕ_s100.42000°, δ63.84000°, λ-16.67000°. Principal axes: T 5.6085, Plg7.0000°, Azm327.0000°; N 0.0540, Plg59.0000°, Azm225.0000°; P -5.6625, Plg30.0000°, Azm62.0000°;*

*NEIC **19** 10:19:20.2±0.9, 36°.75N±0°.02×98°.19W±0°.03, h2km±6km Error ellipse: s-maj=3.8km s-min=2.3km az=82.0*

*IDC **19** 10:19:20.3±0.8, 36°.89N×98°.19W, h0km, mb3.5/2, mb1 3.9/10, mb1mx3.6/63, mbtmp3.7/10, ML4.0/6, MS3.1/6, Ms1 3.1/6, ms1mx2.8/36, Error ellipse: s-maj=10.8km s-min=9.4km az=161.0*

*ANF **19** 10:19:21.1±0.3, 36°.78N×98°.16W, h8km, ML5.1/17, Error ellipse: s-maj=2.9km s-min=2.5km az=69.0*

ISC 19 10:19:19.9±0.9**, 36°.77N**±0°.02×**98°.21W**±0°.02**, h11**km±7km**, n174,** σ**2s.18**/170**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.27**	**46**		**Pg**	**10 19 25.4**	**-0.1**
KAN14				Sg	**Sg**	**10 19 29.5**	**+0.2**
CROK	**Carrier**	**0.32**	**145**	Pg	**Pg**	**10 19 27.2**	**+0.9**
KAN10	**Anthony SW Sta**	**0.37**	**14**		**Pg**	**10 19 27.2**	**0.0**
KAN10				Sg	**Sg**	**10 19 32.0**	**-0.2**
KAN08	**Anthony NE Sta**	**0.50**	**23**		**Pg**	**10 19 29.5**	**-0.1**
KAN08				Sg	**Sg**	**10 19 35.8**	**-0.4**
KAN01	**Argonia South**	**0.53**	**43**		**Pg**	**10 19 30.1**	**-0.1**
KAN01				Sg	**Sg**	**10 19 36.7**	**-0.5**
KAN12	**Harper NE Stat**	**0.56**	**18**		**Pg**	**10 19 31.0**	**+0.3**
KAN12				Sg	**Sg**	**10 19 38.2**	**+0.1**
KAN13	**South Haven SW**	**0.64**	**67**		**Pg**	**10 19 32.0**	**-0.2**
KAN13				Sg	**Sg**	**10 19 40.5**	**-0.1**
KS21	**Milan North St**	**0.68**	**40**		**Pg**	**10 19 32.7**	**-0.3**
KS21				Sg	**Sg**	**10 19 41.3**	**-0.7**
U32A	**Winter Ranch,**	**0.74**	**239**		**Pg**	**10 19 35.2**	**+0.9**
U32A	**Winter Ranch,**	**0.74**	**239**	P		10 19 35.2	

	baz=60						
OK029	Liberty Lake	1.15	148		Pb	10 19 42.0	+0.3
OK029				Sg	Sn	10 19 59.0	+1.4
BCOK	Bluff Creek, N	1.21	156		Pb	10 19 43.0	+0.2
BCOK				IAmb_Lg		10 19 59.9	
	comp=Z,973nm,0.8s						
QUOK	Quay	1.35	116		Pb	10 19 45.3	+0.1
T35A	Sooner Cattle	1.37	83		Pb	10 19 45.4	-0.2
T35B	Sooner Cattle	1.37	83	P		10 19 45.2	
	baz=264,SNR=601						
T35B				S		10 20 03.6	
	baz=264						
OK031	S. Brethren Rd	1.37	126		Pb	10 19 45.6	0.0
OK025	Westminster Rd	1.38	149		Pb	10 19 46.2	+0.5
OK030	Cody Creek RV	1.42	126		Pb	10 19 46.5	0.0
OKCFA	Oklahoma City	1.48	155		Pb	10 19 47.8	+0.3
OKCSW	OKLAHOMA CITY	1.50	155		Pb	10 19 48.0	+0.3
FNO	Franklin	1.64	156		Pb	10 19 50.4	+0.2
R32A	Long Quarter,	1.70	347	Pn	Pb	10 19 51.0	-0.2
R32A				IAmb_Lg		10 20 16.8	
	comp=Z,1µm,0.9s						
R32A	Long Quarter,	1.70	347	P		10 19 51.0	
	baz=166,SNR=538						
R32A				S		10 20 13.8	
	baz=166						
W35A	Tecumseh	1.94	146	Pn	Pb	10 19 54.8	-0.5
WMOK	Wichita Mounta	2.08	193	P	Pn	10 19 56.7	+1.9
	baz=13,SNR=127						
WMOK				Sb	Sg	10 20 26.6	-0.1
	baz=13						
WMOK	Wichita Mounta	2.08	193	Pn	Pb	10 19 57.2	-0.5
WMOK	Wichita Mounta	2.08	193	P		10 19 56.8	
	baz=13,SNR=293						
WMOK				Sb		10 20 26.5	
	baz=13						
TUL1	Leonard	2.13	113	P	Pb	10 19 57.2	-1.3
	baz=295,SNR=145						
TUL1				Sb	Sg	10 20 26.6	-1.7
	baz=295						
TUL1	Leonard	2.13	113		Pb	10 19 58.4	-0.1
TUL1				IAmb_Lg		10 20 28.5	
	comp=Z,950nm,1.1s						
TUL1	Leonard	2.13	113	P		10 19 56.8	
	baz=295,SNR=121						
TUL1				Sb		10 20 27.0	
	baz=295						
CBKS	Cedar Bluff	2.38	330	P	Pn	10 20 00.8	+1.9
	baz=148,SNR=260						
CBKS				Sb	Sb	10 20 33.7	+1.6
	baz=148						
CBKS	Cedar Bluff	2.38	330	Pn	Pn	10 20 00.9	+2.1
CBKS				IAmb_Lg		10 20 38.2	
	comp=Z,609nm,0.7s						
CBKS	Cedar Bluff	2.38	330	P		10 20 00.5	
	baz=148						
CBKS				S		10 20 33.7	
	baz=148						
KSU1	Kansas State U	2.65	28	P	Pn	10 20 04.1	+1.5
	baz=208,SNR=110						
KSU1				Sb	Sb	10 20 41.5	+1.5
	baz=208						
KSU1	Kansas State U	2.65	28	Pn	Pn	10 20 04.1	+1.5
KSU1				IAmb_Lg		10 20 49.5	
	comp=Z,615nm,0.8s						
KSU1	Kansas State U	2.65	28	P		10 20 04.1	
	baz=208,SNR=64						
U38A	Gravette	3.09	95		Pn	10 20 09.7	+0.9
U38A				IAmb_Lg		10 21 03.0	
	comp=Z,535nm,0.7s						
U38A	Gravette	3.10	95	P		10 20 10.3	
	baz=277,SNR=121						
X37A	Clayton	3.17	132	IAmb_Lg		10 21 07.8	
	comp=Z,518nm,0.8s						
X37A	Clayton	3.17	132	P		10 20 11.5	
	baz=314						
AMTX	Amarillo	3.39	237	Pn	Pn	10 20 16.0	+3.1
	baz=56						
AMTX				Pb	Pb	10 20 23.2	+3.1
	baz=56						
AMTX				Sb	Sg	10 21 07.8	-1.0
	baz=56						
AMTX	Amarillo	3.39	237	IAmb_Lg		10 21 16.3	
	comp=Z,459nm,0.8s						
AMTX	Amarillo	3.39	237	P		10 20 15.7	
	baz=56						
HHAR	Hobbs	3.47	97	IAmb_Lg		10 21 15.6	
	comp=Z,448nm,0.9s						
HHAR	Hobbs	3.47	97	P		10 20 15.4	
	baz=279						
W39A	Magazine	3.92	112	P	Pn	10 20 21.5	+1.5
	baz=295,SNR=20						
W39A				Sb	Sg	10 21 22.8	-2.8
	baz=295						
W39A	Magazine	3.92	112	P		10 20 21.5	
	baz=295,SNR=14						
N33B	J Bar K, Exete	4.01	8	P		10 20 22.0	
	baz=188,SNR=34						
S39A	Bolivar	4.01	75	IAmb_Lg		10 21 27.4	
	comp=Z,330nm,1.0s						
S39A	Bolivar	4.01	75	P		10 20 22.3	
	baz=258,SNR=111						
N33A	J Bar K, Exete	4.01	8		Pn	10 20 22.0	+0.7
N33A				IAmb_Lg		10 21 35.2	
	comp=Z,373nm,0.8s						
KSCO	Kaye Shedlock’	4.15	304	Pn	Pn	10 20 25.3	+1.9
	baz=121,SNR=12						
KSCO				Pb	Pb	10 20 36.1	+3.1
	baz=121						
KSCO	Kaye Shedlock’	4.15	304	IAmb_Lg		10 21 38.7	
	comp=Z,356nm,0.8s						
ABTX	Abilene, Hawle	4.30	196	P	Pn	10 20 27.4	+2.1
	baz=16						
ABTX				S	Sn	10 21 19.5	+4.0
	baz=16						
ABTX	Abilene, Hawle	4.30	196	Pn	Pn	10 20 27.4	+2.1
ABTX				IAmb_Lg		10 21 43.6	
	comp=Z,375nm,0.9s						
ABTX	Abilene, Hawle	4.30	196	P		10 20 27.1	
	baz=16,SNR=7.1						
U40A	Yellville	4.33	94	P	Pn	10 20 27.1	+1.3
	baz=277,SNR=11						
U40A	Yellville	4.33	94	P		10 20 26.8	
	baz=277,SNR=55						
U40A				P		10 20 26.8	
	baz=277,SNR=55						
MIAR	Mount Ida	4.38	119	P	Pn	10 20 28.1	+1.8
	baz=302,SNR=13						
MIAR				S	Sn	10 21 19.6	+2.3
	baz=302						
MIAR	Mount Ida	4.38	119	Pn	Pn	10 20 28.4	+2.1
MIAR				IAmb_Lg		10 21 51.2	
	comp=Z,383nm,0.9s						
MIAR	Mount Ida	4.38	119	P		10 20 28.1	
	baz=302,SNR=90						
Z38A	Mt. Pleasant	4.39	142	IAmb_Lg		10 21 46.0	
	comp=Z,359nm,0.8s						
Z38A	Mt. Pleasant	4.39	142	P		10 20 28.2	
	baz=324,SNR=9.5						
BGNE	Belgrade	4.63	1	P	Pn	10 20 30.9	+1.0
	baz=180,SNR=24						
BGNE				Sb	Sg	10 21 43.8	-4.9
	baz=180						
BGNE	Belgrade	4.63	1	P		10 20 30.9	
	baz=180,SNR=113						
MSTX	Muleshoe	4.66	235	Pn	Pn	10 20 32.8	+2.5
	baz=52,SNR=7.7						
MSTX				Pb	Pb	10 20 43.8	+2.1
	baz=52						
MSTX				Sb	Sg	10 21 46.0	-3.4
	baz=52						
MSTX	Muleshoe	4.66	235	Pn	Pn	10 20 32.6	+2.3
MSTX	Muleshoe	4.66	235	P		10 20 33.0	
	baz=52,SNR=14						
P38A	Dawn	4.66	51	IAmb_Lg		10 21 48.5	
	comp=Z,401nm,1.1s						
P38A	Dawn	4.66	51	P		10 20 31.0	
	baz=233,SNR=63						
MGMO	Mountain Grove	4.77	84	IAmb_Lg		10 21 60.0	
	comp=Z,383nm,0.9s						
WHTX	Lake Whitney,	4.80	172	P	Pn	10 20 34.1	+1.9
	baz=353,SNR=31						
WHTX				Sn	Sn	10 21 29.7	+1.8
	baz=353						
WHTX				Sb	Sb	10 21 47.9	+5.9
	baz=353						
WHTX	Lake Whitney,	4.80	172	P		10 20 33.8	
	baz=353,SNR=50						
X40A	Basin Creek Fa	4.93	116	P	Pn	10 20 35.6	+1.6
	baz=299,SNR=8.5						
X40A	Basin Creek Fa	4.93	116	IAmb_Lg		10 22 01.1	
	comp=Z,485nm,0.8s						
X40A	Basin Creek Fa	4.93	116	P		10 20 35.6	
	baz=299,SNR=45						
X40A				P		10 20 35.6	
	baz=299,SNR=45						
R40A	Maddies Statio	4.96	70	P		10 20 35.0	
	baz=254,SNR=98						
T25A	Trinidad	4.98	276	P	Pn	10 20 37.9	+3.0
	baz=92						
T25A				Sb	Sb	10 21 53.9	+6.7
	baz=92						
FCAR	Ozark Folk Cen	4.99	98		Pn	10 20 36.2	+1.4
FCAR				IAmb_Lg		10 21 59.3	
	comp=Z,399nm,1.1s						
WHAR	Wooly Hollow	5.02	105	Pn	Pn	10 20 36.5	+1.3
WHAR				IAmb_Lg		10 22 04.8	
	comp=Z,443nm,1.2s						
W41B	Gary Mavity, V	5.09	106	P	Pn	10 20 37.4	+1.2
	baz=290						
W41B				S	Sn	10 21 36.2	+1.3
	baz=290						
W41B	Gary Mavity, V	5.09	106	P		10 20 36.9	
	baz=290,SNR=23						
OGNE	Ogallala	5.13	326	P	Pn	10 20 39.3	+2.6
	baz=143,SNR=16						
OGNE				Sn	Sn	10 21 38.0	+2.0
	baz=143						
OGNE				Sb	Sb	10 21 57.9	+6.5
	baz=143						
OGNE	Ogallala	5.13	326	IAmb_Lg		10 22 03.4	
	comp=Z,393nm,0.8s						
OGNE	Ogallala	5.13	326	P		10 20 39.1	
	baz=143,SNR=16						
237A	Washetta, Mont	5.15	157	Pn	Pn	10 20 37.6	+0.6
237A	Washetta, Mont	5.15	157	P		10 20 37.9	
	baz=338,SNR=29						
WLAR	White Oak Lake	5.18	125	IAmb_Lg		10 22 15.4	
	comp=Z,228nm,0.7s						
L34A	Svendsen Farm,	5.38	15	P		10 20 40.1	
	baz=196,SNR=20						
P40A	Paris	5.58	59	IAmb_Lg		10 22 17.7	
	comp=Z,244nm,0.9s						
P40A	Paris	5.58	59	P		10 20 43.4	
	baz=242,SNR=10						
N38A	Joes South For	5.59	43		Pn	10 20 43.6	+0.6
N38A				IAmb_Lg		10 22 26.2	
	comp=Z,339nm,0.7s						
N38A	Joes South For	5.59	43	P		10 20 43.7	
	baz=225,SNR=24						
Z41A	Richland Creek	5.65	127	P	Pn	10 20 44.7	+0.9
	baz=310						
Z41A				S	Sn	10 21 48.4	-0.3
	baz=310						
Z41A	Richland Creek	5.65	127		Pn	10 20 44.1	+0.3
CCM	Cathedral Cave	5.69	75	P	Pn	10 20 45.8	+1.4
	baz=259						
CCM	Cathedral Cave	5.69	75	IAmb_Lg		10 22 26.2	
	comp=Z,258nm,0.8s						
CCM	Cathedral Cave	5.69	75	P		10 20 44.9	
	baz=259,SNR=14						
T42A	Van Buren	5.71	85		Pn	10 20 45.9	+1.3
T42A				IAmb_Lg		10 22 30.1	
	comp=Z,262nm,1.2s						
T42A	Van Buren	5.71	85	P		10 20 46.2	
	baz=269,SNR=13						
LCAR	Lake Charles	5.73	95	IAmb_Lg		10 22 21.3	
	comp=Z,261nm,0.9s						
NATX	Nacogdoches	5.79	149	S	Sn	10 21 52.4	+0.1
	baz=331						
NATX	Nacogdoches	5.79	149	Pn	Pn	10 20 48.0	+2.2
K31A	O'Neill	5.86	356	P		10 20 48.4	
	baz=176,SNR=32						
SDCO	Great Sand Dun	5.90	282	P	Pn	10 20 50.9	+3.4
	baz=97						
Q24A	Divide	5.91	294	P	Pn	10 20 49.9	+2.2
	baz=110						
Q24A				S	Sn	10 21 56.8	+1.1
	baz=110						
Q24A	Divide	5.91	294		Pn	10 20 50.9	+3.2
CCAR	Cane Creek	5.98	116	IAmb_Lg		10 22 43.5	
	comp=Z,284nm,0.9s						
435B	Jarrell	5.99	175	P	Pn	10 20 50.1	+1.6
	baz=356						
435B	Jarrell	5.99	175	IAmb_Lg		10 22 38.1	
	comp=Z,281nm,0.8s						
PBMO	Poplar Bluff	6.25	88		Pn	10 20 52.9	+0.9
JCT	Junction City	6.41	192	P	Pn	10 20 56.1	+1.8
	baz=12						
JCT				Sb	Sg	10 22 39.2	-6.5
	baz=12						
SCIA	State Center	6.43	35	P	Pn	10 20 55.5	+1.0
	baz=218						
SCIA				S	Sn	10 22 07.2	-0.6
	baz=218						
SCIA	State Center	6.43	35		Pn	10 20 55.2	+0.7
ISCO	Idaho Springs	6.56	300	P	Pn	10 20 58.6	+1.9
	baz=115						
SLM	Saint Louis	6.59	71	IAmb_Lg		10 22 48.8	
	comp=Z,189nm,0.8s						
PVMO	Portageville	6.86	90	IAmb_Lg		10 23 13.8	
	comp=Z,258nm,0.9s						
MET	Memphis--Engin	6.91	101	IAmb_Lg		10 23 14.3	
	comp=Z,293nm,0.7s						
143A	Socs Landing,	6.92	124	IAmb_Lg		10 23 10.1	
	comp=Z,232nm,1.0s						
ANMO	Albuquerque	6.94	257	Pn	Pn	10 21 04.7	+3.0
	comp=Z,0.3nm,0.3s,baz=86,slow=15,SNR=11						
ANMO				Pg	Pg	10 21 29.0	-3.8
	comp=Z,3.9nm,0.3s,baz=75,slow=16,SNR=15						
ANMO				Lg	Lg	10 22 56.8	
	comp=Z,5.0nm,0.3s,baz=170,slow=21,SNR=3.7						
ANMO				LR	LR	10 23 58.3	
	comp=Z,159nm,21.5s,baz=70,slow=40						
ANMO	Albuquerque	6.94	257	Sb	Sg	10 22 54.8	-7.8
	baz=72						
ANMO	Albuquerque	6.94	257	Pn	Pn	10 21 04.8	+3.1
S22A	4UR Ranch, Cre	6.94	281	Sb	Sg	10 22 57.7	-5.1
	baz=96						
N41A	Harden Midland	6.96	53		Pn	10 21 02.5	+0.7
N41A				IAmb_Lg		10 23 10.2	
	comp=Z,310nm,0.9s						
ECSD	EROS Data Cent	7.07	9	P	Pn	10 21 03.5	+0.2
	baz=190						
ECSD				Sn	Sn	10 22 21.8	-1.8
	baz=190						
ECSD				Sb	Sg	10 22 59.9	-6.7
	baz=190						
ECSD	EROS Data Cent	7.07	9	Pn	Pn	10 21 03.3	0.0
ECSD				IAmb_Lg		10 23 03.6	
	comp=Z,154nm,0.8s						
ECSD	EROS Data Cent	7.07	9	P		10 21 02.9	
	baz=190,SNR=43						
HKT	Hockley	7.08	163	Pn	Pn	10 21 04.8	+1.4
HKT	Hockley	7.08	163	P		10 21 05.1	
	baz=345,SNR=12						
GLAT	Glass	7.20	91	Pn	Pn	10 21 06.2	+1.1
S44A	Carbondale	7.20	80	IAmb_Lg		10 23 07.2	
	comp=Z,255nm,0.9s						
K38A	Parkersburg	7.21	34		Pn	10 21 06.3	+1.0
PHWY	Pilot Hill	7.23	311	Pn	Pn	10 21 07.4	+1.6
PHWY				IAmb_Lg		10 23 23.6	
	comp=Z,160nm,0.8s						
SIUC	Southern Illin	7.24	80	Pn	Pn	10 21 06.2	+0.6
SIUC				IAmb_Lg		10 23 11.8	
	comp=Z,272nm,0.9s						
N23A	Red Feather La	7.31	307	Pn	Pn	10 21 09.7	+2.8
	baz=122,SNR=14						
N23A				Pg	Pg	10 21 39.3	-0.5
	baz=122						
N23A	Red Feather La	7.31	307	IAmb_Lg		10 23 25.4	
	comp=Z,277nm,0.8s						
BNM	Barren Site	7.35	252	Pn	Pn	10 21 09.9	+2.5
P43A	Skaggs, Pawnee	7.42	65	Pn	Pn	10 21 08.1	0.0
P43A				IAmb_Lg		10 23 14.1	
	comp=Z,278nm,0.9s						
P43A	Skaggs, Pawnee	7.42	65	P		10 21 08.3	
	baz=250,SNR=24						
W45A	Hickory Valley	7.49	100	Pn	Pn	10 21 09.7	+0.6
OXF	Oxford	7.51	105	P	Pn	10 21 10.5	+1.1
	baz=290						
OXF	Oxford	7.51	105	Pn	Pn	10 21 09.0	-0.3
L40A	Anamosa	7.56	43	IAmb_Lg		10 23 37.2	
	comp=Z,230nm,0.8s						
Q44A	Meyer Farm, Va	7.58	71	Pn	Pn	10 21 10.6	+0.2
Y22D	IRIS PASSCAL I	7.60	252	Pg	Pg	10 21 42.7	-2.7
	baz=67						
Y22D				Sb	Sg	10 23 19.2	-4.6
	baz=67						
Y45A	Yeager Farm, C	7.65	110	IAmb_Lg		10 23 31.3	
	comp=Z,260nm,0.9s						
SUSD	Miller	7.69	356	S	Sn	10 22 36.2	-2.7
	baz=175						
SUSD	Miller	7.69	356	IAmb_Lg		10 23 28.1	
	comp=Z,185nm,0.9s						
MNTX	Cornudas Mount	7.80	232	P	Pn	10 21 15.7	+2.4
	baz=48,SNR=12						
MNTX	Cornudas Mount	7.80	232	P		10 21 15.0	
	baz=48,SNR=20						
735A	Kenedy	7.90	177	IAmb_Lg		10 23 49.7	
	comp=Z,177nm,1.0s						
HDIL	Hopedale	7.93	59	P	Pn	10 21 15.0	-0.2
	baz=244,SNR=30						
HDIL				S	Sn	10 22 42.5	-2.4
	baz=244						
HDIL	Hopedale	7.93	59	P		10 21 15.6	
	baz=244,SNR=13						
I37A	Lemond, Waseca	8.12	25	IAmb_Lg		10 23 48.1	
	comp=Z,215nm,0.7s						
344A	Westbrook Farm	8.16	128	Pn	Pn	10 21 19.1	+0.8
O44A	Mansfield	8.36	63		Pn	10 21 20.6	-0.4
O44A				IAmb_Lg		10 23 55.7	
	comp=Z,137nm,0.7s						
PLAL	Pickwick Lake	8.42	99	Pn	Pn	10 21 23.4	+1.5
L42A	Oliver, Polo	8.43	49	IAmb_Lg		10 23 52.8	
	comp=Z,226nm,0.9s						
L42A	Oliver, Polo	8.43	49	P		10 21 22.4	
	baz=234,SNR=8.1						
RWWY	Rawlins	8.54	308	IAmb_Lg		10 23 54.4	
	comp=Z,145nm,1.1s						
RSSD	Black Hills	8.58	331	P	Pn	10 21 26.8	+2.6
	baz=147						
RSSD	Black Hills	8.58	331	Pn	Pn	10 21 26.4	+2.2
RSSD				IAmb_Lg		10 24 02.3	
	comp=Z,118nm,0.7s						
RSSD	Black Hills	8.58	331	P		10 21 26.9	
	baz=147,SNR=20						
146A	Union	8.59	116	IAmb_Lg		10 24 12.0	
	comp=Z,121nm,0.9s						
JFWS	Jewell Farm	8.67	42	P	Pn	10 21 25.2	-0.1
	baz=227,SNR=7.9						
JFWS				S	Sn	10 22 58.1	-4.9
	baz=227						
JFWS	Jewell Farm	8.67	42	IAmb_Lg		10 23 58.5	
	comp=Z,168nm,0.7s						
K22A	Casper	8.69	315	P	Pn	10 21 26.9	+1.2
	baz=130,SNR=9.1						
K22A	Casper	8.69	315	IAmb_Lg		10 24 05.7	
	comp=Z,118nm,0.9s						
TX31	Lajitas Ar. Si	8.71	213	Pn	Pn	10 21 27.3	+1.3
TXAR	Lajitas Array	8.71	213	Pn	Pn	10 21 27.4	+1.5
	comp=Z,0.8nm,0.3s,baz=32,slow=10,SNR=37						
TXAR				Lg	Lg	10 23 52.8	
	comp=Z,5.5nm,0.3s,baz=32,slow=24,SNR=7.5						
TXAR				LR	LR	10 24 58.0	
	comp=Z,83nm,18.4s,baz=0.0,slow=38						
Z47A	Carrollton	9.05	110	IAmb_Lg		10 24 21.7	
	comp=Z,132nm,1.1s						
P46A	Rosedale	9.12	68		Pn	10 21 31.2	-0.2
P46A				IAmb_Lg		10 24 11.4	
	comp=Z,202nm,0.9s						
M44A	Midewin, Midew	9.15	57	IAmb_Lg		10 24 20.4	
	comp=Z,134nm,1.0s						
I40A	Norwalk	9.18	37	IAmb_Lg		10 24 12.1	
	comp=Z,128nm,1.1s						
F33A	5 Mile Ranch,	9.18	8	IAmb_Lg		10 24 15.2	
	comp=Z,137nm,1.0s						
V48A	Smith Brothers	9.26	93	IAmb_Lg		10 24 09.9	
	comp=Z,140nm,1.1s						
X48A	Hartselle	9.38	101	IAmb_Lg		10 24 17.2	
	comp=Z,131nm,1.0s						
SPMN	Marine on St.	9.38	24	IAmb_Lg		10 24 27.2	
	comp=Z,143nm,1.1s						
SFIN	Lafayette	9.42	64	P	Pn	10 21 35.2	-0.3
	baz=251						
SFIN	Lafayette	9.42	64		Pn	10 21 35.3	-0.2
SFIN				IAmb_Lg		10 24 22.7	
	comp=Z,132nm,0.9s						
HQIL	Hanson Quary C	9.47	55	IAmb_Lg		10 24 25.1	
	comp=Z,162nm,1.0s						
BLO	Bloomington	9.54	72	IAmb_Lg		10 24 40.5	
	comp=Z,141nm,0.8s						
WCI	Wyandotte Cave	9.58	78	P	Pn	10 21 38.8	+1.0
	baz=265						
WCI	Wyandotte Cave	9.58	78		Pn	10 21 38.5	+0.7
WCI				IAmb_Lg		10 24 28.3	
	comp=Z,112nm,0.8s						
CLTN	Cedars of Leba	9.60	90	IAmb_Lg		10 24 22.2	
	comp=Z,133nm,1.1s						
L44A	Lake County Fo	9.62	53	P	Pn	10 21 38.2	0.0
	baz=239						
L44A				S	Sn	10 23 21.0	-5.3
	baz=239						
K43A	Burlington	9.64	49	Pn	Pn	10 21 38.8	+0.2
K43A				IAmb_Lg		10 24 37.7	
	comp=Z,181nm,1.0s						
F36A	Milaca	9.74	20		Pn	10 21 40.1	+0.2
E28A	Huff	9.97	350		Pn	10 21 43.9	+0.8
E28A				IAmb_Lg		10 24 44.5	
	comp=Z,165nm,1.1s						
I42A	Draeger Farm,	10.04	42	Pn	Pn	10 21 44.0	-0.1
G40A	Rib Lake	10.42	33		Pn	10 21 49.2	-0.1
PD31	Pinedale Array	10.59	308		Pn	10 21 52.0	+0.3
PDAR	Pinedale Array	10.59	308	Pn	Pn	10 21 52.0	+0.3
	comp=Z,0.4nm,0.3s,baz=118,slow=14,SNR=16						
PDAR				Pg		10 22 35.2	
	comp=Z,1.9nm,0.3s,baz=112,slow=17,SNR=5.9						
PDAR				Lg	Lg	10 24 50.0	
	comp=Z,1.1nm,0.3s,baz=104,slow=29,SNR=2.2						
PDAR				LR	LR	10 26 44.3	
	comp=Z,62nm,21.6s,baz=118,slow=42						
O49A	Covington	11.40	68		Pn	10 22 01.5	-1.2
AGMN	Agassiz Nation	11.65	8	S	Sn	10 24 06.9	-9.2
	baz=189						
N49A	Columbus Grove	11.70	65	Pn	Pn	10 22 05.1	-1.6
TKL	Tuckaleechee C	11.72	91	Pn	Pn	10 22 07.7	+0.7
	comp=Z,0.4nm,0.3s,baz=312,slow=6.0,SNR=6.4						
TKL				Sn	Sn	10 24 14.3	-3.5
	comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=3.9						
TKL				Lg	Lg	10 25 21.7	
	comp=Z,0.8nm,0.3s,baz=167,slow=20,SNR=4.5						
TKL				LR	LR	10 26 42.3	
	comp=Z,81nm,18.6s,baz=317,slow=38						
TKL	Tuckaleechee C	11.72	91	Pn	Pn	10 22 07.8	+0.8
V52A	Sevierville	11.83	90	Pn	Pn	10 22 09.1	+0.5
L48A	N Adams	11.85	60	P		10 22 07.8	
	baz=248,SNR=7.5						
L48A				P		10 22 07.8	
	baz=248,SNR=7.5						
B35A	Bob, Littlefor	12.04	14	Pn	Pn	10 22 09.2	-2.3
EYMN	Ely	12.22	22	S	Sn	10 24 25.3	-4.7
	baz=206						
EYMN	Ely	12.22	22	Pn	Pn	10 22 11.0	-2.9
ACSO	Alum Creek Sta	12.42	69	P		10 22 15.3	
	baz=259,SNR=9.7						
DGMT	Dagmar	12.49	341	Pn	Pn	10 22 16.6	-1.0
P52A	Corning	12.97	72	P	Pn	10 22 23.7	-0.4
	baz=262						
P52A				S	Sn	10 24 44.1	-4.2
	baz=262						
N51A	Ashland	13.02	67	Pn	Pn	10 22 23.7	-1.1
N51A	Ashland	13.02	67	P		10 22 24.1	
	baz=256,SNR=10						
N51A				P		10 22 24.1	
	baz=256,SNR=10						
Q53A	Leroy	13.36	76	P	Pn	10 22 28.4	-1.1
	baz=266						
ULM	Lac du Bonnet	13.58	6	Pn	Pn	10 22 27.7	-4.7
	comp=Z,0.3nm,0.3s,baz=194,slow=12,SNR=6.4						
ULM				Sn	Sn	10 24 50.8	-13
	comp=Z,1.0nm,0.3s,baz=281,slow=18,SNR=3.6						
ULM				Lg	Lg	10 26 18.2	
	comp=Z,0.7nm,0.3s,baz=96,slow=21,SNR=4.9						
N54A	Moraine State	14.80	68	P	Pn	10 22 47.5	-1.6
	baz=259						
NVAR	Mina Array Bea	16.01	282	Pn	P	10 23 09.0	+0.1
	comp=Z,0.0nm,0.3s,baz=89,slow=11,SNR=3.3						
LPIG	La Paz	16.36	223	LR	LR	10 29 57.7	
	comp=Z,118nm,18.6s,baz=38,slow=39						
SADO	Sadowa	16.48	55	Pn	Pn	10 23 08.5	-2.5
	comp=Z,0.4nm,0.3s,baz=288,slow=17,SNR=1.8						
SADO				Sn	Sn	10 25 57.4	-17

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             comp=Z,0.5nm,0.3s,baz=19,slow=11,SNR=1.3
SADO                                Lg      Lg          10 27 49.7
             comp=Z,0.3nm,0.3s,baz=273,slow=14,SNR=3.8
SADO                                LR      LR          10 29 42.2
             comp=Z,115nm,21.1s,baz=291,slow=38
NEW    Newport           18.01 316  P       P           10 23 32.4 +1.7
             comp=Z,0.1nm,0.3s,baz=148,slow=8.4,SNR=6.0
YKA    Yellowknife Ar    27.68 344  P       P           10 25 08.9 +1.3
             comp=Z,0.3nm,0.5s,baz=144,slow=9.0,SNR=12
ILAR   Eielson Array     40.03 330  P       P           10 26 56.6 +2.0
             comp=Z,0.7nm,0.8s,baz=104,slow=6.0,SNR=7.7
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*IDC **19** 10:36:10.8±0.7, 62°.36N×151°.18W, h0^{km}, mb3.8/13, mb1 4.0/16, mb1mx3.8/45, mbtmp3.8/16, ML3.5/3, MS3.3/5, Ms1 3.3/5, ms1mx2.9/52, Error ellipse: s-maj=14.4km s-min=11.6km az=108.0*

*ANF **19** 10:36:10.6±0.5, 62°.15N×150°.76W, h6^{km}±2^{km}, ML4.5/16, Error ellipse: s-maj=4.5km s-min=1.8km az=96.0*

*AEIC **19** 10:36:11.6±2.0, 62°.18N±0°.01×150°.57W±0°.03, h8^{km}±3^{km}, ML4.0/124, ML4.2/106(NEIC), Mwr3.9/81(NEIC), Error ellipse: s-maj=2.4km s-min=1.9km az=132.0*

*NEIC **19** 10:36:11, 62°.19N×150°.58W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}6.00; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-5.83; $M_{r\theta}$3.41; $M_{\theta\phi}$-6.01; $M_{\phi r}$0.85; Fault plane solution: $M_0$9.14000×10^{14} NP1:ϕ_s57.86000°, δ60.55000°, λ124.34000°. NP2:ϕ_s183.61000°, δ44.02000°, λ45.03000°. Principal axes: T 7.7916, Plg59.0000°, Azm18.0000°; N 2.2709, Plg29.0000°, Azm219.0000°; P -10.0625, Plg9.0000°, Azm124.0000°;*

*NEIC **19** 10:36:14.5±3.1, 62°.16N±0°.02×150°.56W±0°.05, h35^{km}±2^{km} Error ellipse: s-maj=3.9km s-min=3.7km az=130.0*

ISC 19 10:36:11.5±1.0**, 62°.19N**±0°.02×**150°.58W**±0°.02**, h10**^{km}±6^{km}**, n175, σ1ˢ.41**/195**, mb4.0**/14**, Central Alaska**

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Code   Station Name       Δ°   AZ°   Phase ID            Time     Res
                                     Op      ISC        h  m  s    ISC
CUT    Chulitna          0.26  33   P       Pg          10 36 17.5 +0.7
       baz=214,SNR=1000
CUT                                 S       Sb          10 36 22.4 -0.4
       baz=214
CUT    Chulitna          0.26  33           Pb          10 36 17.9 -0.3
CUT                                         Sb          10 36 22.4 -0.4
SKT    Skwentna          0.50 245   Pg      Pg          10 36 21.1  0.0
SKT                                 Sg      Sg          10 36 27.4 -0.3
SUA    Susitna One       0.73 186           Pg          10 36 25.8 +0.1
SUA    Susitna One       0.73 186   Sg      Sb          10 36 36.1 -0.5
SUA                                 IAML                10 36 39.1
       comp=N,8µm,0.6s
SUA                                 IAML                10 36 39.3
       comp=E,8µm,0.8s
GHO    Glory Hole Cre    0.89 118           Pg          10 36 28.3 -0.2
GHO                                 Sg      Sg          10 36 39.6 -0.4
GHO                                 IAML                10 36 42.3
       comp=N,6µm,0.4s
HUR    Hurricane         0.90  28           Pg          10 36 28.9 +0.1
PMR    Palmer            0.91 131           Pg          10 36 28.7 -0.3
PMR                                         Sb          10 36 41.2 -0.3
PMR    Palmer            0.91 131   IAML                10 36 42.1
       comp=E,7µm,0.3s
STLK   Strandline Lak    0.92 221           Pg          10 36 28.5 -0.6
WAT7   Susitna Watana    1.03  50           Pg          10 36 30.8 -0.5
WAT7                                        Sg          10 36 44.6 -0.1
PPLA   Purkeypile        1.03 314           Pg          10 36 31.5 +0.2
PPLA   Purkeypile        1.03 314           Sg          10 36 45.3 +0.6
FIS    Fire Island       1.06 171           Pn          10 36 32.7 +0.3
SML    Sawmill           1.13 109           Pg          10 36 32.5 -0.6
SML                                 Sg      Sg          10 36 46.9 -0.8
SML                                 IAML                10 36 48.5
       comp=N,5µm,0.3s
SML                                 IAML                10 36 49.0
       comp=E,6µm,1.0s
SPCG   Spurr Capps Gl    1.13 218           Pg          10 36 32.3 -1.0
WAT1   Susitna Watana    1.14  55           Pg          10 36 32.5 -0.8
RC01   Rabbit Creek A    1.18 160   P       Pb          10 36 32.9 -0.9
       baz=340,SNR=378
RC01                                S       Sg          10 36 48.7 -0.6
       baz=340
RC01   Rabbit Creek A    1.18 160           Pb          10 36 33.0 -0.9
RC01                                        Sg          10 36 48.7 -0.6
SPCP   Crater Peak Br    1.19 220           Pg          10 36 33.5 -0.9
SPCP                                        Sn          10 36 50.6 -0.2
WAT2   Susitna Watana    1.20  49           Pb          10 36 33.9 -0.6
WAT2                                        Sg          10 36 50.0 -0.2
SPCN   Chakachatna No    1.23 219           Pb          10 36 35.0 +0.1
SPCR   Spurr Chakacha    1.26 219           Pn          10 36 34.4 -0.9
SPBG   Spurr Blockage    1.27 223           Pn          10 36 34.5 -0.9
KNK    Knik Glacier      1.27 127           Pn          10 36 34.9 -0.5
KNK                                 Sg      Sb          10 36 51.5 -0.5
KNK                                 IAML                10 36 56.4
       comp=E,3µm,0.6s
TRF    Thorofare Moun    1.27   6           Pn          10 36 35.8 +0.3
TRF                                 Sg      Sb          10 36 52.6 +0.5
KTH    Kantishna Hill    1.38 354           Pn          10 36 37.4 +0.5
KTH                                         Sb          10 36 55.0 -0.1
KTH    Kantishna Hill    1.38 354   IAML                10 36 57.2
       comp=E,5µm,0.6s
KTH                                 IAML                10 37 00.6
       comp=N,5µm,0.6s
WAT6   Susitna Watana    1.38  72           Pn          10 36 36.1 -0.9
CAST   Castle Rocks      1.42 331           Pn          10 36 37.7 +0.3
CAPN   Captain Cook N    1.45 191   P       Pg          10 36 39.7 +0.3
       baz=11,SNR=89
CAPN                                S       Sg          10 37 00.7 +2.6
       baz=11
CAPN   Captain Cook N    1.45 191           Pg          10 36 39.4 +0.1
RND    Reindeer          1.46  32   Pn      Pn          10 36 38.1 +0.2
RND                                         Sb          10 36 58.0 +0.7
RND                                 IAML                10 36 58.6
       comp=N,3µm,1.0s
SCM    Sheep Creek Mo    1.57 102           Pn          10 36 39.6  0.0
SCM                                 Sn      Sn          10 37 00.5 +0.5
SCM                                 IAML                10 37 01.6
       comp=E,4µm,0.6s
SCM                                 IAML                10 37 07.1
       comp=N,3µm,0.9s
SLKM   Skilak Lake       1.70 174           Pn          10 36 40.6 -0.6
SLKM                                        Sn          10 37 03.3 +0.4
PWL    Port Wells        1.71 140           Pn          10 36 41.2 -0.2
MCK    McKinley          1.72  25   P       Pn          10 36 42.1 +0.5
       baz=207,SNR=832
MCK                                 S       Sb          10 37 04.9  0.0
       baz=207
MCK    McKinley          1.72  25           Pn          10 36 42.0 +0.5
CHUM   Lake Minchumin    1.88 336           Pn          10 36 44.1 +0.5
BPAW   Bear Paw Mtn.     1.93 355           Pn          10 36 44.6 +0.2
BPAW   Bear Paw Mtn.     1.93 355   Sn      Sb          10 37 12.4 +1.5
BPAW                                IAML                10 37 12.7
       comp=N,2µm,0.4s
NCT    North Crescent    1.99 216           Pn          10 36 45.2 -0.1
NCT                                         Sb          10 37 12.9 +0.2
RSO    Redoubt South     2.03 212           Pn          10 36 46.6 +0.7
BWN    Browne            2.05  14           Pn          10 36 46.8 +0.7
BWN                                 IAML                10 37 23.5
       comp=E,2µm,0.5s
M24K   Tolsona, Glenn    2.07  90   P       Pn          10 36 47.9 +1.5
       baz=274,SNR=373
M24K                                S       Sb          10 37 15.0 +0.1
       baz=274
M24K   Tolsona, Glenn    2.07  90           Pn          10 36 47.7 +1.4
M24K   Tolsona, Glenn    2.07  90   Sn      Sb          10 37 14.8 -0.1
RED    Redoubt Volcan    2.07 212           Pn          10 36 46.7 +0.3
GLI    Glacier Island    2.12 127           Pn          10 36 48.6 +1.6
GLI    Glacier Island    2.12 127   IAML                10 37 20.7
       comp=N,2µm,0.8s
GLI                                 IAML                10 37 24.4
       comp=E,2µm,0.7s
SEW    Seward            2.16 165           Pn          10 36 48.6 +1.0
KLU    Klutina           2.31 106           Pn          10 36 50.7 +1.0
KLU    Klutina           2.31 106   IAML                10 37 24.7
       comp=E,934nm,0.6s
KLU                                 IAML                10 37 27.1
       comp=N,1µm,0.6s
PS11   TAPS Pump St11    2.40  90           Pb          10 36 53.3 -1.4
BRLK   Bradley Lake      2.44 184           Pn          10 36 52.9 +1.4
BRLK   Bradley Lake      2.44 184   IAML                10 37 37.4
       comp=E,934nm,0.6s
FID    Port Fidalgo      2.44 125   Pn      Pn          10 36 52.5 +1.1
FID                                 IAML                10 37 28.7
       comp=E,1µm,0.6s
FID                                 IAML                10 37 28.9
       comp=N,1µm,0.6s
BRSE   Bradley Lake S    2.46 182           Pn          10 36 52.6 +0.9
BRSE                                        Lg          10 37 25.1
IVE    Iliamna Volcan    2.48 210           Pn          10 36 51.7 -0.4
PAX    Paxson            2.49  69           Pn          10 36 53.1 +1.0
NEA2   Nenana            2.51  15   P       Pn          10 36 52.2 -0.1
       baz=196,SNR=402
NEA2   Nenana            2.51  15           Pn          10 36 52.3 -0.1
DIV    Divide            2.53 113           Pn          10 36 53.2 +0.6
ILS    Iliamna Low So    2.55 210           Pn          10 36 54.8 +1.9
WRH    Wood River Hil    2.55  25           Pn          10 36 53.1 +0.2
HOM    Homer             2.59 192   Pb      Pb          10 36 56.1 -1.9
       baz=11,SNR=19
HOM                                 Sb      Sb          10 37 30.8 +0.9
       baz=11
TT01   Tatalina          2.62 288           Pn          10 36 53.7 -0.2
TTA    Tatalina          2.62 289           Pn          10 36 53.7 -0.3
TTA    Tatalina          2.62 289   IAML                10 37 36.9
       comp=E,984nm,0.7s
HIN    Hinchinbrook I    2.67 131   Pn      Pn          10 36 55.7 +1.2
HIN                                 IAML                10 37 39.9
       comp=N,1µm,0.8s
HIN                                 IAML                10 37 42.4
       comp=E,1µm,0.8s
CNPM   China Poot        2.69 187   Pn      Pn          10 36 56.5 +1.7
CNPM                                IAML                10 37 46.3
       comp=E,802nm,0.7s
CCB    Clear Creek Bu    2.76  26   Pn      Pn          10 36 55.9 +0.1
HDA    Harding Lake      2.77  35   P       Pn          10 36 56.1 +0.2
       baz=218,SNR=97
HDA                                 Sb      Sb          10 37 37.2 +2.4
       baz=218
HDA                                 Sb      Sb          10 37 37.2 +2.4
       baz=218
HDA    Harding Lake      2.77  35           Pn          10 36 56.2 +0.3
HDA    Harding Lake      2.77  35   IAML                10 37 42.5
       comp=E,785nm,0.6s
HDA                                 IAML                10 37 44.5
       comp=N,991nm,0.7s
EYAK   Cordova Ski Ar    2.85 123           Pn          10 36 58.5 +1.5
MLY    Manley            2.85 359   P       Pn          10 36 57.4 +0.3
       baz=178,SNR=213
MLY                                 Sb      Sb          10 37 39.5 +2.0
       baz=178
MLY    Manley            2.85 359           Pn          10 36 57.4 +0.3
OPT    Oil Point         2.86 208           Pn          10 36 59.4 +2.3
N25K   Chitina, Valde    2.89  99   P       Pn          10 36 59.8 +2.1
       baz=284,SNR=153
N25K                                S       Sb          10 37 36.4 -2.1
       baz=284
N25K   Chitina, Valde    2.89  99   Pn      Pn          10 36 59.7 +2.0
N25K                                IAML                10 37 41.6
       comp=N,619nm,0.7s
PS08   TAPS Pump Stn8    2.91  34           Pn          10 36 58.0 +0.2
TCOL   CIGO, UAF Yank    2.96  23   P       Pn          10 36 58.8 +0.4
       baz=206,SNR=99
TCOL                                Sb      Sg          10 37 45.4 -0.9
       baz=206
TCOL   CIGO, UAF Yank    2.96  23           Pn          10 36 58.9 +0.4
COLA   College           2.96  23           Pn          10 36 58.8 +0.4
MDM    Murphy Dome       2.97  20           Pn          10 36 59.0 +0.3
MDM    Murphy Dome       2.97  20   IAML                10 37 46.0
       comp=E,519nm,0.8s
I23K   Minto, Yukon-K    3.02  10   P       Pn          10 36 59.5 +0.2
       baz=191,SNR=86
I23K                                Sb      Sb          10 37 44.9 +2.8
       baz=191
I23K   Minto, Yukon-K    3.02  10           Pn          10 36 59.5 +0.2
I23K   Minto, Yukon-K    3.02  10   IAML                10 37 47.3
       comp=E,947nm,0.5s
RIDG   Independent Ri    3.04  57           Pn          10 37 01.6 +1.8
RIDG                                IAML                10 37 53.2
       comp=N,969nm,0.8s
IL31                     3.07  31           Pn          10 37 00.1 +0.1
ILAR   Eielson Array     3.07  31   Pn      Pn          10 37 00.0 -0.1
       comp=N,17nm,0.3s,baz=222,slow=12,SNR=523
ILAR                                Lg      Lg          10 37 48.1
       comp=N,67nm,0.3s,baz=213,slow=28,SNR=13
POKR   Poker Plat Res    3.25  24   P       Pn          10 37 03.0 +0.4
       baz=207,SNR=27
POKR                                Sb      Sg          10 37 53.3 -2.6
       baz=207
POKR   Poker Plat Res    3.25  24   Pn      Pn          10 37 02.5 -0.1
POKR                                IAML                10 37 56.3
       comp=E,395nm,0.8s
MENT   Mentasta          3.26  74           Pn          10 37 05.5 +2.8
GLB    Gilahina Butte    3.30 100   Pn      Pn          10 37 05.5 +2.2
GLB                                 IAML                10 37 51.1
       comp=N,420nm,0.8s
RAGM   Ragged Mountai    3.37 120           Pn          10 37 03.5 -0.7
SCRK   Sand Creek        3.49  56   P       Pn          10 37 06.6 +0.7
       baz=242,SNR=84
SCRK                                Sb      Sb          10 37 59.5 +3.6
       baz=242
SCRK   Sand Creek        3.49  56           Pn          10 37 06.8 +0.8
VRDI   Verde Repeater    3.53 103           Pn          10 37 07.3 +0.8
HMT    Hamilton          3.57 119           Pn          10 37 07.8 +0.9
HMT                                 IAML                10 38 16.0
       comp=N,645nm,0.7s
MCARA  McCarthy VSAT     3.68  99           Pn          10 37 10.1 +1.7
PS06   TAPS Pump Stn6    3.70   5           Pn          10 37 09.0 +0.4
KAIM   Kayak Island      3.76 124           Pn          10 37 10.9 +1.4
KAIM                                IAML                10 38 16.9
       comp=N,276nm,0.9s
CRQM   Cirque            3.85 109           Pn          10 37 13.4 +2.5
CRQM                                IAML                10 38 09.4
       comp=E,505nm,0.8s
SUCK   Suckling Hills    3.92 120           Pn          10 37 10.9 -0.9
SUCK                                IAML                10 38 17.3
       comp=N,290nm,0.6s
SUCK                                IAML                10 38 29.8
       comp=E,287nm,1.3s
KHIT   Khitrov Hills     3.94 113           Pn          10 37 14.0 +1.9
TGL    Tana Glacier      3.98 108           Pn          10 37 14.2 +1.5
TGL    Tana Glacier      3.98 108   IAML                10 38 17.9
       comp=N,318nm,0.8s
PTPK   Patty Peak        3.99 101           Pn          10 37 15.1 +2.2
GRIN   Grindle Hills     4.00 115           Pn          10 37 14.9 +2.2
PRP    Porcupine Dome    4.02  32           Pn          10 37 13.4 +0.2
PRP                                 IAML                10 38 23.9
       comp=E,266nm,0.7s
PRP                                 IAML                10 38 33.7
       comp=N,230nm,0.6s
IM03                     4.05 341           Pn          10 37 14.2 +0.6
BALM   Baldy             4.10 103           Pn          10 37 15.7 +1.5
BALM   Baldy             4.10 103   IAML                10 38 20.4
       comp=E,206nm,1.1s
BALM                                IAML                10 38 20.4
       comp=N,267nm,0.9s
KIAG   Kiagna River      4.13 104           Pn          10 37 16.0 +1.3
BC03                     4.15  74           Pn          10 37 17.1 +2.3
KULT   Kultieth River    4.27 114           Pn          10 37 18.2 +1.7
ISLE   Juniper Island    4.27 108           Pn          10 37 17.6 +1.0
ISLE   Juniper Island    4.27 108   IAML                10 38 29.6
       comp=E,295nm,0.8s
ISLE                                IAML                10 38 33.6
       comp=N,361nm,1.0s
K27K   Chicken           4.28  61   P       Pn          10 37 18.3 +1.7
       baz=248
K27K                                Sb      Sb          10 38 22.4 +4.0
       baz=248
K27K   Chicken           4.28  61           Pn          10 37 18.3 +1.7
K27K                                IAML                10 38 29.8
       comp=N,375nm,1.1s
BARN   Barnard Glacie    4.40 101           Pn          10 37 20.5 +2.0
BARN   Barnard Glacie    4.40 101   IAML                10 38 26.3
       comp=N,185nm,0.9s
GRNC   Granite Creek     4.48 105           Pn          10 37 20.9 +1.4
KDAK   Kodiak Island     4.54 194   Pn      Pn          10 37 20.6 +0.5
       comp=N,1.4nm,0.3s,baz=46,slow=8.5,SNR=49
KDAK                                Sn      Sn          10 38 12.8  0.0
       comp=N,2.9nm,0.3s,baz=12,slow=20,SNR=3.5
KDAK                                Lg      Lg          10 38 32.7
       comp=N,5.9nm,0.3s,baz=315,slow=20,SNR=1.9
KDAK                                LR      LR          10 39 22.4
       comp=N,264nm,20.2s,baz=34,slow=41
KDAK   Kodiak Island     4.54 194           Pn          10 37 20.6 +0.5
CTGM   Chitina Glacie    4.58 101           Pn          10 37 22.1 +1.1
CTGM                                IAML                10 38 35.5
       comp=N,193nm,1.4s
MESA   MESA              4.64 112           Pn          10 37 23.5 +1.8
MESA                                IAML                10 38 39.2
       comp=E,212nm,0.9s
YAH    Yahtse            4.64 109           Pn          10 37 24.1 +2.3
YAH                                 IAML                10 38 44.4
       comp=E,187nm,0.9s
YAH                                 IAML                10 38 45.7
       comp=N,221nm,1.0s
PS05   TAPS Pump Stn5    4.64 360           Pn          10 37 22.5 +0.9
LOGN   Logan Glacier     4.79 102           Pn          10 37 25.6 +1.8
RKAV   Rock Avalanche    4.84 109           Pn          10 37 26.2 +1.7
TABL   Table Mountain    4.87 107           Pn          10 37 26.3 +1.3
TABL   Table Mountain    4.87 107   IAML                10 38 48.4
       comp=N,160nm,1.5s
TABL                                IAML                10 38 50.0
       comp=E,138nm,1.1s
EGAK   Eagle             4.95  54           Pn          10 37 27.5 +1.6
FYU    Fort Yukon        4.97  25           Pn          10 37 26.7 +0.6
FYU                                 IAML                10 39 07.7
       comp=E,194nm,1.3s
COLD   Coldfoot          5.06   2   P       Pn          10 37 28.0 +0.7
       baz=182,SNR=71
COLD                                Sn      Sn          10 38 26.7 +0.9
       baz=182
COLD                                Sb      Sg          10 38 48.0 -5.8
       baz=182
COLD   Coldfoot          5.06   2           Pn          10 37 28.1 +0.7
OHAK   Old Harbor        5.17 197           Pn          10 37 29.4 +0.6
DAWY   Dawson            5.41  65           Pn          10 37 33.9 +1.7
PCA    Pinnacle          5.42 108           Pn          10 37 34.1 +1.7
YUK4   Talbot Arm        5.73  93           Pn          10 37 39.2 +2.5
BCPM   Bancas Point      5.76 108           Pn          10 37 37.4 +0.4
BM03   Burnt Mountain    5.83  23           Pn          10 37 38.6 +0.6
HYT    Haines Junctio    6.40  97           Pn          10 37 47.0 +1.1
ANM    Nome              7.06 296           Pn          10 37 55.2 +0.4
EPYK   Eagle Plains      7.33  49   P       Pn          10 37 59.2 +0.6
       baz=242
EPYK   Eagle Plains      7.33  49           Pn          10 37 58.4 -0.2
WHY    Whitehorse        7.68  95           Pn          10 38 04.0 +0.6
RDOG   Red Dog Mine      7.84 324           Pn          10 38 08.1 +2.6
INK    Inuvik            9.39  42   Pn      Pn          10 38 25.5 -1.2
       comp=E,0.6nm,0.3s,baz=234,slow=16,SNR=34
INK                                 Sn      Sn          10 40 07.4 -4.8
       comp=E,0.4nm,0.3s,baz=140,slow=17,SNR=1.4
INK                                 Lg      Lg          10 41 05.1
       comp=E,0.3nm,0.3s,baz=254,slow=15,SNR=3.8
INK                                 LR      LR          10 42 35.5
       comp=E,160nm,19.9s,baz=288,slow=41
INK    Inuvik            9.39  42           Pn          10 38 26.8 +0.1
DLBC   Dease Lake       10.84 101   Pn      Pn          10 38 47.7 +1.0
       comp=E,0.3nm,0.3s,baz=287,slow=7.6,SNR=8.3
DLBC                                Lg      Lg          10 41 59.3
       comp=E,0.1nm,0.3s,baz=116,slow=18,SNR=3.0
DLBC                                LR      LR          10 43 20.9
       comp=E,180nm,19.1s,baz=96,slow=39
C36M   Paulatuk         12.93  45           Pn          10 39 13.7 -1.3
YKA    Yellowknife Ar   16.57  73   Pn      P           10 40 06.4 +0.3
       comp=E,0.2nm,0.3s,baz=287,slow=9.1,SNR=12
YKA                                 ScP     ScP         10 48 27.5 -0.3
       comp=E,0.0nm,0.3s,baz=308,slow=1.7,SNR=4.2
NEW    Newport          23.28 111   P       P           10 41 22.1 +3.0
       comp=E,0.4nm,0.3s,baz=294,slow=20,SNR=2.4
SEY    Seymchan         25.57 297   P       P           10 41 38.1 -2.1
       comp=E,0.3nm,0.3s,baz=17,slow=22,SNR=1.7
NVAR   Mina Array Bea   30.89 125   P       P           10 42 30.4 +2.2
       comp=E,0.3nm,0.5s,baz=309,slow=10,SNR=4.6
PDAR   Pinedale Array   30.89 110   P       P           10 42 29.9 +1.8
       comp=E,0.2nm,0.4s,baz=310,slow=13,SNR=2.1
TXAR   Lajitas Array    44.74 115   P       P           10 44 29.3 +4.3
       comp=E,0.2nm,0.6s,baz=332,slow=5.6,SNR=3.9
ARCES  ARCESS Array B   48.53   2   P       P           10 44 52.5 -1.5
       comp=E,5.8nm,0.9s,baz=22,slow=6.8,SNR=3.8
TLY    Talaya           52.29 311   LR      LR          11 10 25.8
       comp=E,30nm,19.5s,baz=46,slow=40
SONM   Songino Array    54.45 306   P       P           10 45 39.0 +0.3
       comp=E,1.0nm,0.8s,baz=40,slow=7.3,SNR=6.4
ZALV   Zalesovo Beam    56.29 324   P       P           10 45 50.2 -1.5
       comp=E,1.7nm,0.5s,baz=29,slow=7.3,SNR=9.8
FINES  FINESS Array B   56.66   2   P       P           10 45 52.7 -1.6
       comp=E,1.7nm,0.8s,baz=338,slow=10,SNR=3.6
KLMR   Klimovskoe       57.04 354   eP      P           10 45 53.9 -3.0
KLMR                                AMP                 10 46 01.0
       comp=Z,17nm,1.5s
HHC    Hu-ho-hao-te     58.21 298   eP      P           10 46 07.3 +1.7
HHC                                 pmax    pmax
       comp=Z,13nm,0.8s
HHC                                 pmax    pmax
       comp=Z,83nm,6.6s
MKAR   Makanchi Array   63.44 322   P       P           10 46 39.4 -1.6
       comp=Z,0.7nm,0.6s,baz=42,slow=6.1,SNR=9.3
WMQ    Urumqi           64.48 317   eP      P           10 46 50.6 +2.7
AKASG  Malin Array Be   67.46   0   P       P           10 47 05.3 -1.5
       comp=Z,2.2nm,0.4s,baz=1.1,slow=6.5,SNR=5.2
VRAC   Vranov           68.38   9   LR      LR          11 19 41.4
       comp=Z,28nm,18.2s,baz=213,slow=38
ESDC   Sonseca Array    74.97  26   P       P           10 47 52.4 -0.2
       comp=Z,2.3nm,0.8s,baz=343,slow=6.1,SNR=7.8
CMAR   Chiang Mai Arr   82.98 296   P       P           10 48 36.0 -0.8
       comp=Z,0.2nm,0.3s,baz=0.8,slow=6.3,SNR=1.2
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*IDC **19** 10:47:49.3±1.2, 1°.32N×125°.28E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.4/41, mbtmp3.5/5, Error ellipse: s-maj=137.5km s-min=19.5km az=66.0*

*DJA **19** 10:47:53.9±2.8, 2°N±4°×12°7E±°, h24^{km}±29^{km}, M3.6/7, MLv3.6/7*

ISC 19 10:47:55.1±1.0**, 1°.91N**±0°.09×**126°.6E**±0°.1**, h47**^{km}**, n8, σ1ˢ.82**/9**, mb3.5**/5**, Northern Molucca Sea**

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Code   Station Name       Δ°   AZ°   Phase ID            Time     Res
                                     Op      ISC        h  m  s    ISC
TNTI   Ternate           1.37 145   P       Pn          10 48 17.3 -0.5
TNTI                                S       Sn          10 48 35.6 +0.8
SGSI   Sangihe           2.06 329   P       Pn          10 48 26.0 -1.2
GTOI   Gorontalo         3.79 251   P       Pn          10 48 50.9 -0.1
WRA    Warramunga Arr   23.01 161   P       P           10 52 54.3 -1.8
       0.7nm,0.3s,baz=337,slow=11,SNR=11
ASAR   Alice Springs    26.40 165   P       P           10 53 26.7 -0.7
       0.4nm,0.4s,baz=343,slow=11,SNR=9.1
SONM   Songino Array    48.97 342   P       P           10 56 40.3 +3.3
       0.3nm,0.7s,baz=151,slow=9.2,SNR=2.1
MKAR   Makanchi Array   58.97 326   P       P           10 57 48.9 -1.0
       0.3nm,0.3s,baz=118,slow=7.8,SNR=14
KURBB  Kurchatov Arra   63.19 328   P       P           10 58 17.0 -1.3
       0.4nm,0.4s,baz=120,slow=6.4,SNR=5.0
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*IGIL **19** 10:58:53.8, 39°.02N×12°.50W, h10^{km}*

*MDD **19** 10:58:55.7±2.6, 39°.16N×12°.17W, h0^{km}, mb4.1/1, Error ellipse: s-maj=24.2km s-min=16.3km az=74.0, PRXIMO*

*INMG **19** 10:58:59.7±1.2, 38°.77N×12°.48W, h10^{km}, ML2.0, Error ellipse: s-maj=21.7km s-min=14.5km az=165.0*

ISC 19 10:58:52.1±3.5**, 39°.14N**±0°.07×**12°.4W**±0°.2**, h10**^{km}**, n20, σ2ˢ.31**/33**, North Atlantic Ocean**

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Code   Station Name       Δ°   AZ°   Phase ID            Time     Res
                                     Op      ISC        h  m  s    ISC
PMAFR  Mafra             2.39  94   P       Pn          10 59 33.8 +2.3
       1.6nm,0.0s,SNR=4.0
PMAFR                               S       Sn          11 00 01.0 +0.2
       2.6nm,0.0s,SNR=7.9
PMAFR  Mafra             2.39  94   eSn     Sn          11 00 00.9 +0.1
PMAFR                               A       A           11 00 03.9
       11nm,0.3s
PNCL   Nicolau / Gran    3.16 108   P       Pn          10 59 44.2 +2.2
PNCL                                S       Sn          11 00 16.1 -3.7
       2.2nm,0.2s
PNCL   Nicolau / Gran    3.16 108   ePn     Pn          10 59 44.2 +2.2
PNCL                                eSn     Sn          11 00 16.1 -3.7
PNCL                                A       A           11 00 20.3
       2.2nm,0.2s
PMTG   Montargil         3.21  90   P       Pn          10 59 45.5 +2.9
PMTG                                S       Sn          11 00 20.8 -0.1
       1.4nm,0.1s
PMTG   Montargil         3.21  90   ePn     Pn          10 59 45.5 +2.9
PMTG                                eSn     Sn          11 00 20.8 -0.1
PMTG                                A       A           11 00 23.7
       1.4nm,0.1s
MESJ   Messejana         3.49 111   eP      Pn          10 59 47.5 +1.0
MESJ   Messejana         3.49 111   P       Pn          10 59 47.8 +1.3
MESJ                                S       Sn          11 00 24.9 -2.9
       2.2nm,0.3s
MESJ   Messejana         3.49 111   ePn     Pn          10 59 47.8 +1.3
MESJ                                eSn     Sn          11 00 24.9 -2.9
MESJ                                A       A           11 00 32.0
       2.2nm,0.3s
PCVE   Castro Verde      3.71 113   P       Pn          10 59 51.2 +1.8
PCVE                                S       Sn          11 00 30.7 -2.5
       2.1nm,0.3s
PCVE   Castro Verde      3.71 113   ePn     Pn          10 59 51.2 +1.8
PCVE                                eSn     Sn          11 00 30.7 -2.5
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PCVE				A	A	11 00 35.5	
	2.1nm,0.3s						
PESTR	Estremoz	3.72	93	*e*Pn	Pn	10 59 52.3	+2.7
PESTR				*e*Sn	Sn	11 00 32.4	-1.1
PESTR				A	A	11 00 44.6	
	3.7nm,0.7s						
PMRV	Marv??o	3.86	84	S	Sn	11 00 35.7	-1.2
	1.5nm,0.3s						
PMRV	Marv??o	3.86	84	*e*Sn	Sn	11 00 35.7	-1.2
PMRV				A	A	11 00 41.8	
	1.5nm,0.3s						
PVAQ	Vaqueiros	4.04	114	S	Sn	11 00 38.9	-2.4
PVAQ	Vaqueiros	4.04	114	*e*Sn	Sn	11 00 38.9	-2.4
ELOB	Lobios	4.25	49	S	Sn	11 00 44.9	-1.8
	0.7nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.66	105	P	Pn	11 00 04.5	+1.9
	0.2nm,0.1s,SNR=4.0						
EMIN				S	Sn	11 00 54.2	-2.5
	0.3nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	4.87	40	P	Pn	11 00 06.8	+1.3
	0.3nm,0.1s,SNR=7.9						
EAGO				S	Sn	11 00 57.5	-4.5
	0.7nm,0.1s,SNR=7.9						
ECAL	Calabor	5.11	55	P	Pn	11 00 09.5	+0.8
	0.4nm,0.2s,SNR=7.9						
ECAL				S	Sn	11 01 06.8	-1.0
	0.7nm,0.2s,SNR=7.9						

TEH ***19*** *11:05:48.7, 35°.33N×44°.80E, h10^{km}, ML3.1*

ISN ***19*** *11:05:51.2±1.3, 35°.31N×44°.78E, h18^{km}±10^{km}, ML2.7*

ISC 19 11:05:51.0±1.7**, 35°.32N**±0°.05×**44°.81E**±0°.07**, h15**^{km}±17^{km}**,**
n12, σ1^{s}.05/17**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	1.44	115	*e*Pg	Pn	11 06 16.8	+0.2
IDHR				*e*Sg	Sg	11 06 38.1	+0.7
IDHR				*e*		11 06 41.2	
	comp=Z,99nm,0.2s						
MAHB	Mahabad	1.62	27	*e*Pg	Pn	11 06 19.4	+0.3
MAHB				*e*Sg	Sg	11 06 43.0	-0.2
MAHB				*e*		11 06 46.0	
	comp=Z,99nm,0.4s						
IGHG	Ghaleghazi	1.75	124	*e*Pg	Pb	11 06 22.6	-0.4
IGHG				*e*		11 07 08.1	
	comp=Z,99nm,0.9s						
ILIN	Lien	1.81	102	*e*Pg	Pb	11 06 23.0	-1.0
ILIN				*e*		11 06 24.0	
	comp=Z,99nm,0.2s						
ILIN				*e*Sg	Sg	11 06 49.4	0.0
BHD	Baghdad	2.07	190	*e*Pg	Pb	11 06 27.0	-1.2
	baz=9.0						
BHD				*e*Sg	Sb	11 06 55.0	+1.2
KCHF	Cheshme Sefid,	2.11	119	*e*Pn	Pn	11 06 26.3	+0.4
KCHF				*e*		11 07 06.7	
	comp=Z,99nm,0.4s						
KER	Kermanshah	2.13	115	*e*Pn	Pn	11 06 26.8	+0.8
IBDR	Badra	2.39	157	*e*Pn	Pn	11 06 31.0	+1.5
IBDR				*e*Sn	Sb	11 07 01.0	-2.0
IBDR				AML	AML	11 07 12.8	
	comp=N,61nm,0.3s						
IBDR				AML	AML	11 07 16.4	
	comp=E,67nm,0.3s						
IALM	Almabolaq	2.79	98	*e*Pn	Pn	11 06 36.6	+1.2
HSRG	Sareghieh	2.84	91	*e*Pn	Pn	11 06 37.2	+1.2
IKFM	Kafar-mosalman	3.09	125	*e*Pn	Pn	11 06 39.2	+0.1
IKFM				*e*		11 06 53.9	
	comp=Z,99nm,0.3s						
IMRD	Marand	3.46	12	*e*	Pg	11 06 57.5	+0.2
	comp=Z,99nm,0.3s						

ATH ***19*** *11:08:03.5, 40°.08N×20°.81E, h17^{km}±2^{km}, ML1.9/3, Error ellipse: s-maj=3.5km s-min=1.1km az=110.0*

TIR ***19*** *11:08:03.3, 40°.21N×20°.78E, h2^{km}±1^{km}, Md2.9, Ml2.4*

ISC 19 11:08:03.4±1.1**, 40°.14N**±0°.03×**20°.81E**±0°.03**, h6**^{km}±13^{km}**,**
n12, σ0^{s}.93/20**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSK	Leskovik	0.16	273	P	Pg	11 08 06.8	+0.1
	baz=248						
LSK				S	Sg	11 08 09.3	+0.4
	baz=248						
LSK				AMP			
	comp=E,4.3nm,0.7s,baz=248						
PENT	Pentalofos	0.26	77	P	Pg	11 08 09.2	+0.8
PENT				S	Sb	11 08 14.0	-1.2
PENT				AML	AML	11 08 14.2	
	comp=E,996μm,0.3s						
PENT				AML	AML	11 08 16.1	
	comp=N,690μm,0.3s						
NEST	Nestorio	0.33	33	P	Pb	11 08 11.1	-0.6
NEST				S	Sb	11 08 17.3	0.0
NEST				AML	AML	11 08 19.6	
	comp=N,361μm,0.3s						
NEST				AML	AML	11 08 21.6	
	comp=E,422μm,0.4s						
KPRO	Kipourio	0.46	113	P	Pg	11 08 12.2	0.0
KBN	Korca	0.48	358	P	Pg	11 08 12.2	-0.5
	baz=1.0						
KBN				S	Sg	11 08 19.1	0.0
	baz=1.0						
JAN	Janina	0.48	176	P	Pg	11 08 11.6	-1.1
JAN				S	Sg	11 08 18.3	-0.7
JAN				AML	AML	11 08 21.4	
	comp=N,614μm,0.2s						
JAN				AML	AML	11 08 23.5	
	comp=E,360μm,0.2s						
SRN	Sarande	0.68	248	P	Pb	11 08 17.2	-0.3
	baz=242						
SRN				S	Sb	11 08 27.8	+0.6
	baz=242						
IGT	Igoumenitsa	0.71	211	P	Pg	11 08 16.3	-0.7
KZN	Kozani	0.75	77	P	Pg	11 08 18.3	+0.5
FNA	Florina	0.77	34	P	Pg	11 08 18.8	+0.6
FNA				S	Sb	11 08 30.6	+0.5
FNA	Florina	0.77	34	P	Pg	11 08 18.6	+0.4
	baz=38						
FNA				S	Sb	11 08 30.5	+0.4
	baz=38						
LKD2	Lefkada island	1.35	185	P	Pg	11 08 32.0	+2.7
	baz=184						

SOME ***19*** *11:13:01.5, 44°.15N×81°.92E, h5^{km}*

NNC ***19*** *11:13:03.5±1.2, 44°.15N×81°.88E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=11.2km s-min=5.3km az=132.0*

ISC 19 11:12:56.9±1.6**, 43°.95N**±0°.06×**82°.24E**±0°.06**, h3**^{km}±13^{km}**,**
n39, σ1^{s}.47/55**, 8C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.81	283	*e*P	Pg	11 13 31.9	+0.5
	18nm,0.1s						
DJR				*e*S	Sb	11 13 54.1	+0.3
	41nm,0.2s						
DJR	Jarkent	1.81	283	P	Pg	11 13 32.2	+0.8
	18nm,0.1s						
DJR				S	Sb	11 13 54.1	+0.3
	41nm,0.2s						
PDGK	Podgornoye	2.09	254	⇑Pn	Pg	11 13 37.6	+0.7
	4.8nm,0.5s						
PDGK				⇑Lg	Lg	11 14 04.0	
	20nm,0.5s						
SHLS	Shalkode	2.17	250	*e*P	Pb	11 13 35.6	-1.3
	10.0nm,0.1s						
SHLS				*e*S	Sn	11 14 00.5	-1.0
	29nm,0.2s						
SHLS	Shalkode	2.17	250	P	Pb	11 13 36.0	-0.8
	10.0nm,0.1s						
SHLS				S	Sn	11 14 00.4	-1.2
	29nm,0.2s						
KAPS	Kapalarasan	2.46	304	*e*P	Pg	11 13 43.3	-0.6
	29nm,0.2s						
KAPS				*e*S	Sb	11 14 13.5	+1.1
	56nm,0.4s						
KAPS	Kapalarasan	2.46	304	Pg	Pg	11 13 43.4	-0.6
	29nm,0.2s						
KAPS				Lg	Lg	11 14 13.3	
	56nm,0.4s						
UZB	Uzynbulak	2.47	252	*e*P	Pg	11 13 44.9	+0.7
	1.6nm,0.1s						
UZB				*e*S	Sg	11 14 16.3	0.0
	11nm,0.2s						
UZB	Uzynbulak	2.47	252	Pg	Pg	11 13 44.8	+0.5
	1.6nm,0.1s						
UZB				Lg	Lg	11 14 15.5	
	11nm,0.2s						
KPKS	Kokpek	2.62	261	*e*P	Pb	11 13 44.9	+0.3
	11nm,0.1s						
KPKS				*e*S	Sb	11 14 15.8	-1.4
	56nm,0.4s						
MNBS	Baschi	2.77	274	*e*P	Pb	11 13 47.8	+0.6
	5.8nm,0.1s						
MNBS				*e*S	Sb	11 14 21.6	0.0
	62nm,0.4s						
MNBS	Baschi	2.77	274	Pg	Pb	11 13 48.3	+1.1
	5.8nm,0.1s						
MNBS				Lg	Lg	11 14 21.5	
	62nm,0.4s						
MK31	Makanchi Array	2.85	1	⇑Pn	Pb	11 13 46.6	-1.8
	0.1nm,0.1s,baz=224,slow=12,SNR=217						
MK31				⇑Pg	Pg	11 13 50.6	-0.9
	1.0nm,0.2s,baz=184,slow=15,SNR=28						
MK31				⇑Lg	Lg	11 14 25.1	
	4.7nm,0.3s,baz=184,slow=29,SNR=6.8						
MAKZ	Makanchi	2.87	356	⇓Pg	Pg	11 13 54.8	+2.9
	0.9nm,0.2s						
MAKZ				⇑Lg	Lg	11 14 28.9	
	7.4nm,0.5s						
ZHN	Zhinishke	2.87	256	*e*P	Pg	11 13 53.0	+1.1
	1.3nm,0.0s						
ZHN				*e*S	Sg	11 14 30.6	+1.5
	11nm,0.2s						
ZHN	Zhinishke	2.87	256	Pg	Pg	11 13 53.8	+1.9
	1.3nm,0.0s						
SATY	Saty	2.93	254	*e*P	Pg	11 13 52.6	-0.4
	2.7nm,0.1s						
SATY				*e*S	Sg	11 14 29.4	-1.5
	27nm,0.1s						
SATY	Saty	2.93	254	Pg	Pg	11 13 52.8	-0.2
	2.7nm,0.1s						
SATY				Lg	Lg	11 14 29.4	
	27nm,0.1s						
TDK	Taldyqorghan	2.94	292	*e*P	Pb	11 13 51.3	+1.3
	48nm,0.4s						
TDK				*e*S	Sb	11 14 27.6	+1.3
	47nm,0.2s						
TDK	Taldyqorghan	2.94	292	Pg	Pb	11 13 50.9	+0.9
	31nm,0.2s						
TDK				Lg	Lg	11 14 25.7	
	47nm,0.2s						
ARXS	Arharly	3.19	276	*e*P	Pb	11 13 55.6	+1.3
	4.6nm,0.2s						
ARXS				*e*S	Sb	11 14 34.5	+0.9
	21nm,0.3s						
ARXS	Arharly	3.19	276	Pg	Pb	11 13 55.8	+1.6
	4.6nm,0.2s						
ARXS				Lg	Lg	11 14 34.5	
	21nm,0.3s						
KOTS	Kotyrbulak	3.79	261	*e*P	Pg	11 14 08.8	-0.7
	4.9nm,0.3s						
KOTS				*e*S	Sg	11 14 57.1	-1.6
	17nm,0.3s						
KOTS	Kotyrbulak	3.79	261	Pg	Pg	11 14 09.2	-0.3
	4.9nm,0.3s						
KOTS				Lg	Lg	11 14 57.0	
	17nm,0.3s						
CHKK	Chushkaly	3.80	270	*e*P	Pb	11 14 06.7	+2.1
	3.4nm,0.2s						
CHKK				*e*S	Sb	11 14 54.1	+3.1
	18nm,0.2s						
CHKK	Chushkaly	3.80	270	Pg	Pb	11 14 06.5	+2.0
	1.5nm,0.1s						
CHKK				Lg	Lg	11 14 52.5	
	31nm,0.2s						
MDOK	Medeo	3.85	260	*e*P	Pg	11 14 11.4	+0.7
	3.2nm,0.3s						
MDOK				*e*S	Sg	11 15 02.0	+1.4
	4.8nm,0.2s						
MDOK	Medeo	3.85	260	⇑Pg	Pg	11 14 10.6	-0.1
	3.3nm,0.4s						
MDOK				⇓Lg	Lg	11 15 02.6	
	23nm,0.9s						
MDOK	Medeo	3.85	260	Pg	Pg	11 14 12.3	+1.5
	3.2nm,0.3s						
ZSN	Zaisan	3.96	27	*e*P	Pg	11 14 12.5	-0.2
	3.5nm,0.3s						
ZSN				*e*S	Sg	11 15 03.9	-0.1
	25nm,0.4s						
ZSN	Zaisan	3.96	27	Pg	Pg	11 14 13.5	+0.8
	3.5nm,0.3s						
ZSN				Lg	Lg	11 15 04.3	
	25nm,0.4s						
KUU	Kurty	4.26	271	*e*P	Pg	11 14 16.6	-2.0
	1.2nm,0.1s						
KUU				*e*S	Sg	11 15 10.9	-2.9
	22nm,0.5s						
KUU	Kurty	4.26	271	Lg	Lg	11 15 06.5	
	9.1nm,0.4s						
KST	Kastek	4.65	261	Pg	Pg	11 14 26.0	-0.1
	1.8nm,0.2s						
KRBS	Karabastau	4.76	269	*e*P	Pg	11 14 25.4	-2.7
	1.3nm,0.3s						
KRBS				*e*S	Sg	11 15 26.0	-3.6
	2.6nm,0.3s						
KRBS	Karabastau	4.76	269	Pg	Pb	11 14 23.7	+2.7
	1.3nm,0.4s						
KRBS				Lg	Lg	11 15 21.9	
	2.3nm,0.2s						
TKM2	Tokmak 2	4.95	260	⇓Pg	Pg	11 14 31.3	-0.3
	2.7nm,1.0s						
TKM2				⇓Lg	Lg	11 15 33.5	
	7.5nm,0.8s						
KURBB	Kurchatov Arra	7.14	341	⇑Lg	Lg	11 16 44.7	
	5.9nm,0.7s						
KURK	Kurchatov	7.20	341	⇓Lg	Lg	11 16 44.0	
	6.5nm,0.9s						

IDC 19 11:24:37.3±1.7**, 1°.30S**×**138°.58E, h0**^{km}**, mb3.2**/2**,**
mb1 3.5/4**, mb1mx3.3**/35**, mbtmp3.4**/4**, ML3.6**/2**, MS3.1**/1**,**
Ms1 3.1/1**, ms1mx2.3**/23**, Error ellipse: s-maj=42.5km**
s-min=27.6km az=65.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.45	120	Pn	Pn	11 25 18.3	-0.3
	15nm,0.3s,baz=218,slow=9.5,SNR=33						
JAY				Sn	Sn	11 25 40.9	-8.4
	11nm,0.3s,baz=89,slow=19,SNR=6.2						
WRA	Warramunga Arr	18.99	192	P	P	11 29 00.5	-0.1
	0.2nm,0.3s,baz=13,slow=12,SNR=2.3						
WRA				LR	LR	11 37 08.3	
	comp=Z,50nm,18.9s,baz=345,slow=40						
ASAR	Alice Springs	22.70	191	P	P	11 29 41.4	+0.6
	0.3nm,0.5s,baz=18,slow=10.0,SNR=10.0						
MKAR	Makanchi Array	68.60	322	P	P	11 35 42.0	-0.2
	0.3nm,0.6s,baz=123,slow=6.8,SNR=4.5						

NOU 19 11:26:10.4, 20°.99S×**170°.08E, h23**^{km}**, MLv3.7, Vanuatu**
Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.97	255	P	Pn	11 26 42.8	+0.4
LIFNC	LIFOU	2.66	274	P	Pn	11 26 51.2	-0.7
PINNC	Pines Island,	2.93	236	P	Pn	11 26 56.1	+0.5
YATNC	Mamie plateau,	3.15	250	P	Pn	11 26 57.8	-0.9
OUENC	Ouen Island, N	3.33	244	P	Pn	11 27 00.3	-0.8
DZM	Mont Dzumac	3.55	252	P	Pn	11 27 04.6	+0.4
NOUC	Port Laguerre	3.69	252	P	Pn	11 27 06.6	+0.6
KOUNC	Koumac, New Ca	5.44	274	P	Pn	11 27 30.8	+0.7

MAN 19 11:26:31.2, 9°.88N×**126°.42E, h3**^{km}**, mb4.4, ML3.3, MS3.1,**
1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.30	252	*e*P	Pg	11 26 37.8	+0.8
GLSP				*e*S	Sb	11 26 42.8	-1.8
BUTP	Butuan	1.20	221	*e*P	Pg	11 26 52.6	-1.5
BUTP				*e*S	Sb	11 27 10.9	+0.5
MSLP	Maasin	1.56	280	*e*P	Pn	11 26 58.1	-1.7
MSLP				*e*S	Sn	11 27 16.8	-3.6
CGP	Cagayan de Oro	2.21	230	⇓*e*P	Pb	11 27 10.6	-1.3
CGP				*i* S	Sn	11 27 37.3	+0.6
BUKP	Musuan	2.40	214	*e*P	Pn	11 27 12.0	+0.6
BUKP				*e*S	Sn	11 27 42.9	+1.6
LLP	Lapu-Lapu	2.45	280	*e*P	Pn	11 27 12.8	+0.6
LLP				*e*S	Sn	11 27 44.2	+1.5

IDC 19 11:33:25.8±2.1**, 1°.34N**×**125°.33E, h0**^{km}**, mb3.6**/3**,**
mb1 3.9/3**, mb1mx3.5**/43**, mbtmp3.6**/3**, Error ellipse:**
s-maj=199.6km s-min=27.4km az=64.0, Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.92	158	P	P	11 38 30.7	-0.9
	1.0nm,0.3s,baz=336,slow=10,SNR=13						
ASAR	Alice Springs	26.21	162	P	P	11 39 03.0	+0.5
	0.9nm,0.4s,baz=340,slow=9.9,SNR=39						
MKAR	Makanchi Array	58.74	327	P	P	11 43 25.7	+0.1
	0.1nm,0.4s,baz=120,slow=8.3,SNR=2.3						

IDC ***19*** *11:33:52.4±2.1, 20°.12S×177°.89W, h519^{km}±16^{km}, mb3.3/13, mb1 3.5/15, mb1mx3.3/38, mbtmp4.2/15, Error ellipse: s-maj=39.7km s-min=12.1km az=151.0*

NEIC ***19*** *11:33:53.1±0.7, 20°.8S±0°.3×178°.2W±0°.3, h487^{km}±23^{km}, mb4.1/11, Error ellipse: s-maj=51.5km s-min=23.1km az=51.0*

ISC 19 11:33:49.9±0.6**, 20°.40S**±0°.10×**177°.68W**±0°.09**, h500**^{km}**,**
n33, σ1^{s}.01/36**, mb3.9**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.83	303	P	P	11 35 16.8	+1.3
	11nm,0.3s,baz=53,slow=23,SNR=53						
MSVF				S	S	11 36 24.8	-0.5
	baz=108,slow=20,SNR=0.8						
MSVF	Nonsavu	4.83	303	P	P	11 35 16.9	+1.4
RAO	Raoul Island	8.81	181	P	P	11 35 53.4	-1.2
DZM	Mont Dzumac	14.89	261	P	P	11 37 00.8	+1.6
	0.2nm,0.3s,baz=131,slow=20,SNR=2.7						
URZ	Urewera	18.36	193	P	P	11 37 32.7	-0.6
BKZ	Black Stump Fm	19.36	194	P	P	11 37 41.7	-0.9
CTA	Charters Tower	33.80	264	P	P	11 39 50.1	+0.3
	3.3nm,0.4s,baz=87,slow=11,SNR=8.3						
CTAO	Charters Tower	33.80	264	P	P	11 39 49.0	-0.9
CTAO				IAmb	IAmb	11 39 50.9	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	38.10	244	P	P	11 40 25.9	+0.5
	comp=Z,2.4nm,0.9s,baz=100,slow=13,SNR=3.9						
JAY	Jayapura	44.30	288	P	P	11 41 13.8	-1.3
	comp=Z,5.5nm,0.5s,baz=135,slow=1.4,SNR=2.2						
WR0	Warramunga Arr	44.72	262	P	P	11 41 17.7	-0.5
WR0				IAmb	IAmb	11 41 25.7	
	comp=Z,10.0nm,1.4s						
AS31	Alice Springs	44.83	257	P	P	11 41 18.5	-0.5
ASAR	Alice Springs	44.83	257	P	P	11 41 19.1	0.0
	comp=Z,4.5nm,0.8s,baz=100,slow=7.5,SNR=53						
ASAR				PcP	pP	11 42 50.4	-0.4
	comp=Z,1.4nm,0.8s,baz=105,slow=3.7,SNR=7.2						
ASAR				S	S	11 47 17.6	-2.2
	comp=Z,0.6nm,0.8s,baz=89,slow=16,SNR=5.8						
WB0	Warramunga Arr	44.89	262	P	P	11 41 18.9	-0.6
WB0				IAmb	IAmb	11 41 23.3	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	44.90	262	P	P	11 41 19.2	-0.4
WB2				IAmb	IAmb	11 41 19.4	
	comp=Z,3.3nm,0.8s						
WRAB	Tennant Creek	44.90	262	P	P	11 41 19.3	-0.3
WRA	Warramunga Arr	44.91	262	P	P	11 41 19.1	-0.5
	comp=Z,1.0nm,0.5s,baz=97,slow=7.4,SNR=18						
WRA				PcP	PcP	11 42 50.4	-0.4
	comp=Z,0.5nm,0.8s,baz=76,slow=3.3,SNR=3.1						
FITZ	Fitzroy Crossi	53.34	262	P	P	11 42 22.0	-0.1
	comp=Z,2.1nm,0.9s,baz=76,slow=4.2,SNR=2.4						
SOEI	Soe	56.80	272	P	P	11 42 47.7	+1.1
CASY	Casey	64.18	205	P	P	11 43 35.1	+0.7
QSPA	South Pole Qui	69.67	180	P	P	11 44 10.3	+1.8
QSPA				IAmb	IAmb	11 44 10.6	
	comp=Z,3.9nm,0.7s						
PETK	Petropavlovsk-	76.25	345	P	P	11 44 45.5	-0.7
	comp=Z,1.0nm,0.6s,baz=142,slow=5.4,SNR=1.6						
KDAK	Kodiak Island	80.65	13	P	P	11 45 09.0	-0.7
	comp=Z,4.2nm,0.8s,baz=219,slow=6.5,SNR=2.1						
NVAR	Mina Array Bea	80.75	43	P	P	11 45 10.8	-0.2
	comp=Z,1.0nm,0.9s,baz=228,slow=7.6,SNR=6.2						
TXAR	Lajitas Array	86.75	57	P	P	11 45 42.0	+1.2
	comp=Z,0.7nm,0.7s,baz=221,slow=6.2,SNR=11						
ILAR	Eielson Array	88.15	13	P	P	11 45 45.1	-1.3
	comp=Z,0.5nm,0.7s,baz=224,slow=6.1,SNR=8.8						
PDAR	Pinedale Array	88.69	43	P	P	11 45 49.8	0.0
	comp=Z,0.5nm,0.6s,baz=245,slow=3.1,SNR=5.9						
CMAR	Chiang Mai Arr	90.36	289	P	P	11 45 59.1	+1.4
	comp=Z,0.7nm,0.4s,baz=123,slow=3.0,SNR=8.7						
MKAR	Makanchi Array	111.35	313	PKiKP	PKiKP	11 51 24.8	-1.9
	comp=Z,0.3nm,0.7s,baz=90,slow=0.3,SNR=2.8						
AKASG	Malin Array Be	143.07	331	PKhKP	PKPab	11 52 22.8	-0.8
	comp=Z,0.3nm,0.3s,baz=42,slow=4.2,SNR=6.7						
BRTR	Keskin Array B	146.99	313	PKPbc	PKPbc	11 52 35.7	-0.7
	comp=Z,1.2nm,0.6s,baz=141,slow=3.1,SNR=7.1						
MMAI	Mount Meron Ar	148.02	300	PKPbc	PKPbc	11 52 39.4	+0.2
	comp=Z,0.5nm,0.3s,baz=41,slow=9.5,SNR=4.9						
GERES	GERESS Array B	150.19	345	PKPbc	PKPbc	11 52 44.0	0.0
	comp=Z,1.3nm,0.9s,baz=29,slow=3.0,SNR=6.7						

IDC ***19*** *11:37:17.7±7.7, 12°.47S×166°.71E, h141^{km}±79^{km}, mb3.6/9, mb1 3.8/10, mb1mx3.5/34, mbtmp4.0/10, Error ellipse: s-maj=58.3km s-min=27.8km az=151.0*

ISC 19 11:37:18.6±1.1**, 12°.51S**±0°.09×**166°.7E**±0°.2**, h150**^{km}**, n11,**
σ1^{s}.30/12**, mb3.8**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.51	182	P	Pn	11 39 33.8	+1.7
	1.3nm,0.3s,baz=324,slow=11,SNR=24						
DZM				S	Sn	11 41 15.7	-1.9
	0.5nm,0.3s,baz=344,slow=20,SNR=1.9						
STKA	Stephens Creek	30.07	226	P	P	11 43 14.9	+1.1
	2.5nm,0.6s,baz=70,slow=9.0,SNR=7.5						
WRA	Warramunga Arr	31.91	252	P	P	11 43 28.3	-1.8
	0.3nm,0.8s,baz=82,slow=7.6,SNR=2.5						
ASAR	Alice Springs	33.02	246	P	P	11 43 39.0	-0.8
	1.4nm,0.7s,baz=69,slow=9.6,SNR=13						
FITZ	Fitzroy Crossi	39.94	257	P	P	11 44 38.7	+0.2
	3.5nm,1.1s,baz=80,slow=12,SNR=2.7						
CMAR	Chiang Mai Arr	73.56	294	P	P	11 48 37.1	+1.3
	0.6nm,0.3s,baz=139,slow=6.0,SNR=5.6						
SONM	Songino Array	80.40	324	P	P	11 49 13.8	+0.3
	0.7nm,0.7s,baz=134,slow=5.5,SNR=5.3						
ILAR	Eielson Array	84.60	18	P	P	11 49 33.6	-1.1
	0.2nm,0.5s,baz=260,slow=5.4,SNR=4.3						
MKAR	Makanchi Array	95.23	317	P	P	11 50 25.5	+0.2
	1.3nm,0.6s,baz=80,slow=7.4,SNR=14						
ZALV	Zalesovo Beam	95.29	324	P	P	11 50 24.6	-0.7
	0.7nm,0.6s,baz=142,slow=5.1,SNR=3.5						
ARCES	ARCESS Array B	117.98	346	PKP	PKiKP	11 55 47.1	+0.1
	3.7nm,0.9s,baz=79,slow=1.9,SNR=1.7						

IDC ***19*** *11:53:50.1±1.8, 37°.69N×46°.63E, h0^{km}, mb3.4/7, mb1 3.7/11, mb1mx3.5/61, mbtmp3.6/11, ML3.2/3, MS3.0/3, Ms1 3.0/3, ms1mx2.4/45, Error ellipse: s-maj=32.5km s-min=13.8km az=31.0*

ISN ***19*** *11:53:51.5±1.2, 37°.97N×46°.80E, h15^{km}±253^{km}, ML3.6*

TEH ***19*** *11:53:52.2, 37°.93N×46°.59E, h10^{km}, ML3.8*

NEIC ***19*** *11:53:53.8±2.8, 38°.02N±0°.03×46°.62E±0°.02, h10^{km}±1^{km}, mb3.8/5, mb_Lg4.0(TEH), ML3.5(THR), Error ellipse: s-maj=5.8km s-min=3.2km az=182.0*

THR ***19*** *11:53:53.0±0.3, 37°.90N×46°.65E, h14^{km}±8^{km}, ML3.6*

NSSP ***19*** *11:53:54.8, 38°.00N×46°.50E, h10^{km}, Ms3.8*

DDA ***19*** *11:53:57.9, 37°.76N×46°.65E, h7^{km}±4^{km}, MW3.8*

ISC 19 11:53:54.1±1.0**, 38°.02N**±0°.03×**46°.60E**±0°.02**, h16**^{km}±7^{km}**,**
n90, σ1^{s}.76/107**, mb3.6**/9**, 3C-1D, Iran-Armenia-Azerbaijan**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TABZ	Tabriz	0.22	281	*e*Pg	Pg	11 53 58.5	-0.8
ITBZ	Tabriz	0.42	301	Pg	Pg	11 54 00.8	-1.9
ITBZ	Tabriz	0.42	301	*e*Pg	Pg	11 54 00.8	-1.9
ITBZ				*e*Sg	Sg	11 54 07.5	-1.1
IHRS	Heris	0.46	49	Pg	Pg	11 54 02.9	-0.5
IHRS	Heris	0.46	49	*e*Pg	Pg	11 54 03.0	-0.5
ISRB	Sarab	0.86	102	Pg	Pg	11 54 08.7	-2.2
ISRB	Sarab	0.86	102	*e*Pg	Pg	11 54 09.0	-1.9
IHSH	Hashtrud	0.88	143	Pg	Pn	11 54 07.8	-0.5
IHSH	Hashtrud	0.88	143	*e*Pg	Pn	11 54 07.9	-0.4

IMRD	Marand	0.99	315	Pg	Pb	11 54 12.1	-1.0
IMRD				Sg	Sg	11 54 26.6	+0.1
IMRD	Marand	0.99	315	*e*Pg	Pb	11 54 12.2	-0.9
IMRD				*e*Sg	Sg	11 54 26.5	+0.1
GRMI	Germi	1.29	52	*e*Pg	Pn	11 54 17.6	0.0
GRMI				*e*Sg	Sg	11 54 35.7	-0.1
GRMI				IAML		11 54 40.9	
	comp=E,856nm,0.5s						
GRMI	Germi	1.29	52		Pn	11 54 17.6	0.0
GRMI	Germi	1.29	52		Sn	11 54 35.0	+0.4
GRMI	Germi	1.29	52	*e*Pg	Pn	11 54 17.6	0.0
MAHB	Mahabad	1.44	210		Pn	11 54 17.7	-2.0
MAHB	Mahabad	1.44	210	*e*Pg	Pn	11 54 17.9	-1.8
MAHB				*e*		11 54 38.1	
	comp=Z,99nm,0.6s						
YOVA	Hakkari_Yksek	1.88	258	*i* P	Pb	11 54 26.9	-1.5
YOVA				*i* S	Sb	11 54 51.0	-0.7
YOVA	Hakkari_Yksek	1.88	258	*e*Pn	Pb	11 54 26.8	-1.5
MAKU	Maku	2.01	312	*e*Pn	Pb	11 54 30.1	-0.4
MAKU				IAML		11 55 03.2	
	comp=N,300nm,0.2s						
MAKU	Maku	2.01	312	Pn	Pb	11 54 30.0	-0.4
MAKU	Maku	2.01	312	*e*Pn	Pb	11 54 30.1	-0.4
BASK	Baskale_VAN	2.05	272	*i* P	Pg	11 54 35.2	+1.7
BASK				*i* S	Sg	11 55 01.2	+1.0
ZNJK	Zanjan	2.13	128	*e*Pn	Pn	11 54 29.0	-0.4
ZNJK	Zanjan	2.13	128	Pn	Pn	11 54 29.0	-0.4
ZNJK	Zanjan	2.13	128	*e*Pn	Pn	11 54 29.0	-0.4
OZAP	Van, Ozalp-Mer	2.15	288	*i* P	Pb	11 54 33.8	+0.8
OZAP				*i* S	Sg	11 55 10.2	+6.8
HAKT	HAKKARI	2.34	260	*i* P	Pb	11 54 36.6	+0.5
HAKT				*i* S	Sb	11 55 05.6	+0.8
CLDR	Caldiran	2.39	299	*i* P	Pb	11 54 35.5	-1.5
CLDR	Caldiran	2.39	299	*e*Pn	Pb	11 54 35.4	-1.5
NRKZ	NAREK	2.49	323	*e*P	Pb	11 54 38.9	+0.2
NRKZ				*e*S	Sb	11 55 10.2	+1.0
CUKT	Cukurca	2.50	253	*i* P	Pb	11 54 39.5	+0.7
CUKT				*i* S	Sg	11 55 17.9	+3.5
TVAN	Van	2.57	282	*i* P	Pg	11 54 42.2	-1.2
TVAN				*i* S	Sb	11 55 14.1	+2.6
VMUR	Van-Muradiye	2.57	293	*i* P	Pb	11 54 40.7	+0.7
VMUR				*i* S	Sb	11 55 12.9	+1.5
GNI	Garni	2.58	326	Pn	Pb	11 54 41.3	+1.2
	comp=N,44nm,0.3s,baz=134,slow=1.3,SNR=99						
GNI				Lg	Lg	11 55 20.0	
	comp=N,58nm,0.3s,baz=137,slow=24,SNR=8.3						
GNI	Garni	2.58	326	⇓*i*P	Pb	11 54 40.5	+0.4
GNI				⇑*i*S	Sg	11 55 15.6	-1.4
GNI	Garni	2.58	326		Pb	11 54 41.0	+0.9
KAPZ	Kaputan	2.74	328	⇑*i*P	Pb	11 54 43.8	+0.9
KAPZ				⇑*i*S	Sb	11 55 18.7	+2.4
GEVA	Gevas	2.81	277	Pg	Pb	11 54 44.1	0.0
METS	Metsamor	2.90	318	*e*P	Pb	11 54 46.4	+0.8
METS				*e*S	Sb	11 55 23.4	+2.6
VNNZ	Vanand	3.00	315	*e*P	Pg	11 54 50.2	-1.6
VNNZ				*e*S	Sg	11 55 29.8	-0.9
HSRG	Sareghieh	3.08	154	Pn	Pn	11 54 42.5	+0.1
HSRG	Sareghieh	3.08	154	*e*Pn	Pn	11 54 43.0	+0.6
ILIN	Lien	3.10	175	*e*Pn	Pn	11 54 42.5	-0.2
ILIN				*e*		11 55 41.7	
	comp=Z,99nm,0.8s						
KOTA	Agri, Merkez-K	3.19	305	*i* P	Pb	11 54 51.1	+0.5
IDHR	Dehrash	3.31	183	*e*Pn	Pn	11 54 45.6	0.0
IDHR				*e*		11 54 54.9	
	comp=Z,99nm,0.7s						
IGZV	Ghazvin	3.31	118	*e*	Sg	11 55 46.9	+6.3
	comp=Z,99nm,0.8s						
QABG	Abgarm-Qazvin	3.32	133	*e*Pn	Pn	11 54 44.1	-1.6
IALM	Almabolaq	3.39	158	*e*Pn	Pn	11 54 47.1	+0.4
EAK	Akyaka	3.54	320	*i* P	Pb	11 54 57.2	+0.7
QALM	Alamut, Qazvin	3.59	115	*e*Pn	Pn	11 54 49.8	+0.3
QALM				*e*		11 55 48.0	
	comp=Z,99nm,0.8s						
IGHG	Ghaleghazi	3.68	180	*e*	Pg	11 55 02.3	-2.3
	comp=Z,99nm,1.0s						
IBZA	Bozab	3.68	164	*e*Pn	Pn	11 54 51.9	+1.2
SRTM	Siirt_Merkez	3.70	271	*i* P	Pg	11 55 06.2	+1.2
SRTM				*i* S	Sg	11 55 54.5	+1.6
EATA	Eleskirt	3.70	301	*i* P	Pg	11 55 02.3	-2.8
IRAZ	Razeghan	3.73	133	*e*Pn	Pn	11 54 51.2	-0.1
THKV	Tehran--Karaj	4.01	120	IAML		11 56 04.9	
	comp=N,92nm,0.5s						
MUSM	Mu-Merkez	4.06	282	*i* P	Pg	11 55 11.2	-0.8
HOMI	Horasan	4.18	300	*i* P	Pg	11 55 11.6	-2.7
BTMN	Batman	4.22	270	*i* P	Pg	11 55 12.7	-2.2
BTMN				*i* S	Sg	11 56 05.7	-3.8
ASAO	Ashtian	4.43	140	*e*Pn	Pn	11 55 00.4	-0.5
ASAO	Ashtian	4.43	140	Pn	Pn	11 55 00.0	-0.9
ASAO	Ashtian	4.43	140	*e*Pn	Pn	11 55 00.4	-0.5
MARD	Mardin	4.67	263	*i* P	Pg	11 55 22.6	-1.0
MARD				*i* S	Sb	11 56 16.3	+4.4
MARD	Mardin	4.67	263		Pn	11 55 08.2	+4.0
IBDR	Badra	4.92	187	*e*Pn	Pn	11 55 07.0	-0.5
	baz=8.0						
IBDR				*e*Sn	Sn	11 56 02.0	-2.2
IBDR				AML	AML	11 56 31.7	
	comp=E,43nm,0.2s						
IBDR				AML	AML	11 56 42.9	
	comp=N,49nm,0.3s						
BHD	Baghdad	5.07	202	*e*Pn	Pn	11 55 09.5	0.0
BHD				*e*Sn	Sn	11 56 05.0	-2.7
BHD				AML	AML	11 56 07.7	
	comp=E,455nm,0.5s						
IGLO	Ghaloghah	5.96	102	*e*Pn	Pn	11 55 22.3	+0.4
KBZ	Khabaz	6.36	335	Pg	Pb	11 55 48.1	+3.7
	comp=E,0.4nm,0.3s,baz=157,slow=12,SNR=8.3						
KBZ				Lg	Lg	11 57 19.2	
	baz=192,slow=17,SNR=1.2						
GEYT	Alibeck	9.09	87	Pn	Pn	11 56 01.6	-3.2
	comp=E,0.5nm,0.3s,baz=276,slow=17,SNR=1.6						
IPAY	Payeh	10.01	95	*e*Pn	Pn	11 56 18.3	+0.8
BRTR	Keskin Array B	10.25	284	LR	LR	12 00 55.9	
	comp=E,42nm,18.6s,baz=108,slow=41						
EIL	Elat	12.76	233	LR	LR	12 02 34.6	
	comp=E,58nm,21.9s,baz=272,slow=42						
ABKAR	Akbulak array	14.79	36		Pn	11 57 21.1	-1.4
AKTO	Aktyubinsk	14.85	30	Pn	Pn	11 57 22.7	-0.6
	comp=E,0.3nm,0.3s,baz=227,slow=11,SNR=2.7						
AKASG	Malin Array Be	17.70	321	P	Pn	11 57 59.5	-0.3
	baz=125,slow=13,SNR=1.8						
KK31	Karatay Array	18.84	67	P	Pn	11 58 14.5	+0.6
KKAR	Karatay Array	18.84	67	P	Pn	11 58 14.5	+0.6
KKAR				IAmb	IAmb	11 58 22.6	
	comp=Z,6.0nm,1.4s						
KOLS	Kolonicke sedl	20.67	310	*e*P	Pn	11 58 35.7	+0.2
CRVS	Cervenica-Dubn	21.15	309	*e*P	P	11 58 41.2	+2.8
AAK	Ala-Archa	21.71	69	P	P	11 58 43.6	-1.0
	comp=Z,0.3nm,0.3s,baz=221,slow=20,SNR=1.2						
BRVK	Borovoye	22.24	40	P	P	11 58 50.0	-0.1
BRVK				IAmb	IAmb	11 58 57.3	
	comp=Z,2.6nm,0.8s						
BVAR	Borovoye Array	22.28	40	P	P	11 58 50.5	0.0
	comp=Z,0.7nm,0.7s,baz=236,slow=12,SNR=5.2						
OJC	Ojcow	22.65	311	P	P	11 58 56.0	+1.5
KURBB	Kurchatov Arra	25.87	51	P	P	11 59 25.8	+0.8
	comp=Z,1.0nm,0.7s,baz=258,slow=9.8,SNR=7.8						
KURK	Kurchatov	25.95	50	P	P	11 59 26.8	+1.1
KURK				IAmb	IAmb	11 59 37.2	
	comp=Z,3.6nm,1.2s						
GERES	GERESS Array B	26.04	305	P	P	11 59 25.5	-1.2
	comp=Z,0.9nm,0.7s,baz=108,slow=7.2,SNR=6.5						
ZALV	Zalesovo Beam	30.51	46	P	P	12 00 05.8	-0.6
	comp=Z,0.3nm,0.5s,baz=257,slow=13,SNR=1.5						
ZALV				LR	LR	12 14 55.7	
	comp=Z,51nm,18.1s,baz=102,slow=41						
CMAR	Chiang Mai Arr	49.38	98	P	P	12 02 42.4	-0.8
	comp=Z,0.3nm,0.4s,baz=306,slow=7.6,SNR=1.6						
YKA	Yellowknife Ar	78.70	351	P	P	12 05 54.8	-0.4
	comp=Z,0.3nm,0.6s,baz=22,slow=5.4,SNR=5.2						

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*MAN **19** 11:57:23.2, 9°.91N×126°.35E, h9^{km}, mb4.8, ML3.7, MS3.7*
MAN INTENSITY II - GENERAL LUNA AND SOCORRO.
*NEIC **19** 11:57:27.5±0.6, 9°.90N±0°.07×126°.2E±0°.1, h72^{km}±8^{km}, mb4.4/9, Error ellipse: s-maj=19.5km s-min=8.9km az=70.0*
*IDC **19** 11:57:31.6±2.9, 9°.75N×126°.16E, h104^{km}±28^{km}, mb3.6/19, mb1 3.7/21, mb1mx3.6/54, mbtmp4.0/21, MS3.4/11, Ms1 3.4/11, ms1mx3.1/53, Error ellipse: s-maj=25.7km s-min=12.0km az=71.0*
ISC 19 11:57:19.1±1.6, **10°.00N**±0°.03×**126°.43E**±0°.05, **h3**^{km}±9^{km}, **n74, σ1^{s}.73**/77, **mb4.0**/22, **MS3.3**/9, **3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	General Luna,	0.37	235	*e*P	Pb	11 57 28.8	+0.4
GLSP				*e*S	Sb	11 57 33.7	-0.9
BUTP	Butuan	1.30	218	*e*P	Pg	11 57 43.6	-0.5
BUTP				*e*S	Sn	11 58 01.6	-0.5
MSLP	Maasin	1.56	275	*e*P	Pg	11 57 49.7	+0.7
MSLP				*e*S	Sg	11 58 10.1	+0.9
OCLP	Ormoc	2.08	300	*e*P	Pg	11 57 59.5	+0.6
OCLP				*e*S	Sg	11 58 31.2	+5.2
CGP	Cagayan de Oro	2.30	228	⇑*e*P	Pb	11 58 01.1	-0.3
CGP				*e*S	Sb	11 58 28.9	-1.3
LLP	Lapu-Lapu	2.45	278	⇑*e*P	Pb	11 58 04.8	+0.9
LLP				*e*S	Sg	11 58 36.3	-1.6
BUKP	Musuan	2.51	213	*e*P	Pb	11 58 03.0	-1.9
BUKP				*e*S	Sb	11 58 33.8	-2.4
DAV	Davao City (W)	3.03	196	P	Pb	11 58 14.0	+0.2
	145nm,0.3s,baz=56,slow=7.6,SNR=3.2						
DAV				S	Sg	11 58 56.3	-0.3
	59nm,0.3s,baz=302,slow=23,SNR=7.7						
MATI	Mati	3.04	183	*e*P	Pn	11 58 09.6	+1.4
MATI				*e*S	Sb	11 58 54.1	+2.6
KCP	Kidapawan	3.26	204	⇓*i*P	Pn	11 58 14.1	+2.9
KCP				*i* S	Sn	11 58 53.5	+2.9
PAGZ	Pagadian	3.70	235	*e*P	Pn	11 58 19.0	+1.8
PAGZ				*e*S	Sn	11 59 03.3	+1.9
CNOP	Candoni, Negro	3.74	268	*e*P	Pn	11 58 20.4	+2.5
CNOP				*e*S	Sn	11 59 03.8	+1.3
PVCP	Virac	4.21	328	*e*P	Pb	11 58 29.9	-4.0
PVCP				*e*S	Sg	11 59 34.2	-0.4
JAP	San Jose, Anti	4.48	280	⇑*e*P	Pb	11 58 34.6	-3.9
LQP	Lukban	6.29	311	*e*P	Pn	11 59 00.1	+7.0
MYLDM	Lahad Datu	9.21	239	Pn	Pn	11 59 34.3	+1.4
FAKI	Fak Fak	14.08	155		P	12 00 44.7	-3.0
TPUB	Ta-pu	14.34	338		P	12 00 47.0	-3.6
JOW	Kunigami	16.83	6	LR	LR	12 09 34.1	
	comp=Z,61nm,18.5s,baz=27,slow=42						
GUMO	Guam	18.39	77	LR	LR	12 09 09.9	
	comp=Z,105nm,18.7s,baz=211,slow=37						
SOEI	Soe	19.74	186	P	P	12 01 49.7	-0.7
SOEI				IAmb	IAmb	12 02 19.0	
	comp=Z,20nm,0.8s						
BATI	Baumata	20.26	188	P	P	12 01 55.7	-0.3
	comp=Z,2.8nm,0.3s,baz=98,slow=7.1,SNR=7.8						
JAGI	Jajag, Banyuwa	22.05	214	P	P	12 02 14.4	-0.9
JCJ	Chichijima	22.59	39	LR	LR	12 12 00.5	
	comp=Z,69nm,19.0s,baz=160,slow=38						
JNU	Nakatsue	23.37	9	LR	LR	12 12 19.2	
	comp=Z,77nm,19.5s,baz=296,slow=38						
KSRS	Korea Array	27.37	3	P	P	12 03 11.2	+5.5
	comp=Z,1.6nm,0.9s,baz=190,slow=8.3,SNR=3.1						
KSRS				LR	LR	12 13 56.0	
	comp=Z,47nm,21.2s,baz=158,slow=36						
CMAR	Chiang Mai Arr	27.91	291	P	P	12 03 11.8	+0.9
	comp=Z,0.5nm,0.3s,baz=100,slow=7.1,SNR=12						
CMAR				LR	LR	12 14 01.0	
	comp=Z,74nm,18.6s,baz=166,slow=36						
MJAR	Matsushiro Arr	28.50	20	LR	LR	12 15 37.0	
	comp=Z,70nm,18.3s,baz=220,slow=38						
WB0	Warramunga Arr	30.60	165	P	P	12 03 34.2	-0.4
WRAB	Tennant Creek	30.75	165	P	P	12 03 36.1	+0.2
WRA	Warramunga Arr	30.75	165	P	P	12 03 36.1	+0.1
	comp=Z,0.5nm,0.5s,baz=343,slow=9.4,SNR=7.9						
WB2	Warramunga Arr	30.76	165	P	P	12 03 35.8	-0.2
WR0	Warramunga Arr	30.82	165	P	P	12 03 36.0	-0.6
ASAR	Alice Springs	34.25	168	P	P	12 04 05.3	-1.3
	comp=Z,0.6nm,0.6s,baz=352,slow=7.5,SNR=14						
ASAR				PcP	PcP	12 06 43.0	-0.4
	comp=Z,0.5nm,0.7s,baz=352,slow=3.2,SNR=2.4						
CTAO	Charters Tower	35.70	147	P	P	12 04 19.6	+0.4
KLR	Kul'dur	39.36	5	P	P	12 04 52.8	+3.0
	comp=Z,0.9nm,0.7s,baz=191,slow=12,SNR=2.1						
KLR				LR	LR	12 22 58.3	
	comp=Z,40nm,18.1s,baz=166,slow=38						
H11N1	WAKE ISLAND Hy	40.19	71	T	T	12 48 20.6	
	baz=265,slow=74,SNR=19						
H11N2	WAKE ISLAND Hy	40.19	71	T	T	12 48 21.1	
	baz=265,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	40.20	71	T	T	12 48 21.9	
	baz=265,slow=74,SNR=14						
ULN	Ulaanbaatar	41.13	340	P	P	12 05 05.1	+0.4
SONM	Songino Array	41.33	340	P	P	12 05 08.3	+1.9
	comp=Z,1.0nm,0.6s,baz=161,slow=9.2,SNR=7.0						
NWAO	Narrogin (SRO)	43.58	191	LR	LR	12 28 36.3	
	comp=Z,59nm,18.9s,baz=316,slow=43						
NWAO	Narrogin (SRO)	43.58	191	P	P	12 05 23.4	-1.2
NWAO	Narrogin (SRO)	43.58	191	P	P	12 05 23.6	-1.1
NWAO				IAmb	IAmb	12 05 25.9	
	comp=Z,15nm,0.9s						
STKA	Stephens Creek	44.10	161	P	P	12 05 28.2	-0.6
	comp=Z,1.7nm,0.6s,baz=340,slow=7.3,SNR=5.1						
STKA	Stephens Creek	44.10	161	P	P	12 05 28.6	-0.2
TLY	Talaya	45.54	340	P	P	12 05 39.7	-0.4
PETK	Petropavlovsk-	49.81	24	P	P	12 06 16.3	+3.0
	comp=Z,2.1nm,0.7s,baz=242,slow=6.2,SNR=2.0						
PETK				LR	LR	12 28 31.2	
	comp=Z,37nm,18.5s,baz=93,slow=37						
DZM	Mont Dzumac	50.55	129	P	P	12 06 19.9	+0.5
MK31	Makanchi Array	52.34	323	P	P	12 06 32.2	-0.3
MKAR	Makanchi Array	52.34	323	P	P	12 06 32.9	+0.4
	comp=Z,1.8nm,0.6s,baz=122,slow=8.0,SNR=15						
MAKZ	Makanchi	52.53	323	P	P	12 06 33.4	-0.5
MAKZ				IAmb	IAmb	12 06 34.9	
	comp=Z,7.7nm,1.4s						
ZALV	Zalesovo Beam	54.94	331	P	P	12 06 50.9	-0.4
	comp=Z,0.8nm,0.5s,baz=126,slow=6.4,SNR=4.3						
AAK	Ala-Archa	55.63	315	LR	LR	12 32 10.7	
	comp=Z,46nm,19.4s,baz=98,slow=37						
KURK	Kurchatov	56.38	326	P	P	12 07 01.1	-0.6
KURBB	Kurchatov Arra	56.39	325	P	P	12 07 01.8	0.0
	comp=Z,1.4nm,0.6s,baz=124,slow=7.2,SNR=9.5						
KKAR	Karatay Array	58.55	315	P	P	12 07 16.2	-1.1
KKAR				IAmb	IAmb	12 07 33.4	
	comp=Z,2.9nm,1.3s						
BKZ	Black Stump Fm	67.47	140	P	P	12 08 16.7	0.0
ARU	Arti	69.54	327	P	P	12 08 28.2	-1.1
	comp=Z,0.8nm,0.4s,baz=100,slow=7.8,SNR=3.5						
SOCY	Socotra	70.94	279	P	P	12 08 36.4	-2.3
SUA	Susitna One	77.85	29	P	P	12 09 18.4	+0.3
TRF	Thorofare Moun	78.11	27	P	P	12 09 19.4	-0.2
HDA	Harding Lake	79.59	26	P	P	12 09 27.1	-0.5
ILAR	Eielson Array	79.61	26	P	P	12 09 27.9	+0.3
	comp=Z,0.3nm,0.6s,baz=248,slow=4.8,SNR=4.8						
GLI	Glacier Island	79.62	30	P	P	12 09 27.8	+0.1
DOT	Dot Lake	80.90	27	P	P	12 09 34.4	-0.2
K27K	Chicken	81.74	26	P	P	12 09 39.3	+0.2
K27K				IAmb	IAmb	12 09 51.8	
	comp=Z,3.2nm,0.9s						
INK	Inuvik	84.47	22	P	P	12 09 54.5	+1.5
	comp=Z,0.6nm,0.7s,baz=274,slow=2.8,SNR=1.9						
ARCES	ARCESS Array B	84.50	340	P	P	12 09 53.7	+0.5
	comp=Z,4.4nm,0.9s,baz=60,slow=5.9,SNR=4.5						
BRTR	Keskin Array B	85.83	309	P	P	12 10 00.5	-0.2
	comp=Z,0.4nm,0.5s,baz=120,slow=8.8,SNR=1.9						
FINES	FINESS Array B	86.20	332	P	P	12 10 01.1	-0.7
	comp=Z,1.8nm,0.6s,baz=72,slow=6.2,SNR=7.2						
AKASG	Malin Array Be	86.87	321	P	P	12 10 04.8	-0.6
	comp=Z,0.4nm,0.4s,baz=63,slow=4.3,SNR=2.7						
YKA	Yellowknife Ar	93.94	24	P	P	12 10 39.4	+1.2
	comp=Z,0.7nm,0.8s,baz=303,slow=4.0,SNR=11						
PLCA	Paso Flores	145.90	157	PKPbc	PKPdf	12 16 58.6	-1.4
	comp=Z,1.5nm,1.0s,baz=187,slow=2.1,SNR=1.6						

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*IDC **19** 12:09:38.7±0.7, 53°.16S×159°.29E, h0^{km}, mb4.4/9, mb1 4.6/11, mb1mx4.3/37, mbtmp4.5/11, ML4.2/2, MS3.9/11, Ms1 3.9/11, ms1mx3.6/23, Error ellipse: s-maj=28.8km s-min=16.6km az=70.0*
*NEIC **19** 12:09:39.5±2.4, 53°.1S±0°.1×159°.4E±0°.2, h10^{km}±6^{km}, mb4.6/8, Error ellipse: s-maj=22.9km s-min=7.4km az=130.0*
ISC 19 12:09:39.9±0.6, **52°.98S**±0°.09×**160°.07E**±0°.10, **h11**^{km}, **n70, σ2^{s}.56**/57, **mb4.4**/11, **MS3.8**/12, **Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ	The Paps	8.00	43	P	Pn	12 11 34.8	-1.1
APZ				S	Sn	12 13 01.2	-5.2
SYZ	Scrubby Hill	8.71	46	P	Pn	12 11 45.2	-0.6
SYZ				S	Sn	12 13 18.2	-5.7
WHZ	Wether Hill Ro	8.75	39		Pn	12 11 46.6	+0.3
WHZ	Wether Hill Ro	8.75	39	P	Pn	12 11 45.5	-0.8
WHZ				S	Sn	12 13 23.6	-1.2
DCZ	Deep Cove	8.83	34	Pn	Pn	12 11 53.4	+6.0
DCZ	Deep Cove	8.83	34	P	Pn	12 11 52.5	+5.2
MLZ	Mavora Lakes	9.26	38		Pn	12 11 56.9	+3.6
MLZ	Mavora Lakes	9.26	38	P	Pn	12 11 54.0	+0.7
MLZ				S	Sn	12 13 36.9	-0.5
TUZ	Tuapeka	9.38	45	P	Pn	12 11 54.8	-0.2
TUZ				S	Sn	12 13 36.0	-4.4
MSZ	Milford Sound	9.79	35	P	Pn	12 12 08.7	+8.2
EAZ	Earnscleugh	9.83	42	P	Pn	12 12 00.3	-0.8
EAZ				S	Sn	12 13 49.3	-2.1
HHSZ	Highcliff Hill	9.86	48	P	Pn	12 12 02.4	+0.9
WKZ	Wanaka	10.05	39	P	Pn	12 12 05.2	+1.0
ODZ	Otahua Downs	10.54	45	P	Pn	12 12 09.5	-1.3
ODZ				S	Sn	12 14 06.1	-2.6
JCZ	Jackson Bay	10.61	36	P	Pn	12 12 15.1	+3.2
LBZ	Lake Benmore	10.88	42	P	Pn	12 12 16.8	+1.3
LBZ				S	Sn	12 14 12.1	-5.1
TMZ	Timaru	11.22	44	P	Pn	12 12 21.3	+1.1
ARCZ	Arundel	11.65	44	P	Pn	12 12 26.1	+0.1
RPZ	Rata Peaks	11.79	43	Pn	Pn	12 12 32.4	+4.5
	3.3nm,0.3s,baz=174,slow=4.1,SNR=12						
RPZ				Sn	Sn	12 14 34.5	-4.9
	0.9nm,0.3s,baz=259,slow=22,SNR=1.8						
RPZ				LR	LR	12 16 27.6	
	comp=Z,649nm,18.9s,baz=200,slow=33						
RPZ	Rata Peaks	11.79	43		Pn	12 12 33.4	+5.5
RPZ	Rata Peaks	11.79	43	P	Pn	12 12 32.5	+4.6
WACZ	Wakanui South	11.93	45	P	Pn	12 12 29.0	-0.8
RACZ	Rakaia	12.24	46	P	Pn	12 12 33.0	-1.0
AKCZ	Akaroa Harbour	12.46	48	P	Pn	12 12 38.0	+0.9
MQZ	McQueen’s Vall	12.48	47	P	Pn	12 12 37.8	+0.5
OXZ	Oxford	12.52	44		Pn	12 12 43.2	+5.3
AMCZ	Amberley	12.90	46	P	Pn	12 12 45.8	+2.7
BKZ	Black Stump Fm	17.84	46		P	12 13 54.2	+5.4
BKZ				IAmb	IAmb	12 13 55.9	
	comp=Z,26nm,1.0s						
CTZ	Chatham Island	17.97	68	P	P	12 13 53.9	+3.8
URZ	Urewera	18.87	46	P	Pn	12 14 04.3	+3.8
	comp=Z,0.3nm,0.3s,baz=205,slow=23,SNR=2.4						
URZ				LR	LR	12 21 16.3	
	comp=Z,682nm,19.1s,baz=211,slow=36						
CAN	Canberra	19.32	332	P	P	12 14 03.1	-1.9
VNDA	Vanda	24.65	179	LR	LR	12 22 38.8	
	comp=Z,288nm,21.4s,baz=5.5,slow=32						
STKA	Stephens Creek	24.97	320	P	P	12 15 02.8	-0.5
	comp=Z,12nm,0.9s,baz=150,slow=11,SNR=14						
STKA				LR	LR	12 23 10.2	
	comp=Z,345nm,18.1s,baz=182,slow=33						
STKA	Stephens Creek	24.97	320	P	P	12 15 02.6	-0.8
DZM	Mont Dzumac	31.24	11	*e*LR	LR	12 23 24.3	
	comp=Z,263nm,25.1s						
ASAR	Alice Springs	35.36	316	P	P	12 16 34.1	-1.2
	comp=Z,9.8nm,0.8s,baz=152,slow=8.4,SNR=77						
ASAR				PcP	PcP	12 19 05.0	-0.4
	comp=Z,0.7nm,0.9s,baz=147,slow=3.8,SNR=2.3						
ASAR				LR	LR	12 30 04.6	
	comp=Z,139nm,18.4s,baz=150,slow=35						
AS31	Alice Springs	35.36	316	P	P	12 16 34.2	-1.2
H01W1	Cape Leeuwin H	36.93	281	T	T	12 55 43.1	
	baz=134,slow=76,SNR=1261						
H01W2	Cape Leeuwin H	36.94	281	T	T	12 55 43.4	
	baz=134,slow=76,SNR=1464						
H01W3	Cape Leeuwin H	36.95	281	T	T	12 55 44.9	
	baz=134,slow=76,SNR=1326						
QSPA	South Pole Qui	37.13	180	P	P	12 16 49.6	-0.7
	comp=Z,13nm,1.0s,baz=352,slow=3.7,SNR=22						
QSPA	South Pole Qui	37.13	180	P	P	12 16 49.1	-1.2
QSPA				IAmb	IAmb	12 16 50.6	
	comp=Z,23nm,1.1s						
WR0	Warramunga Arr	38.41	319	P	P	12 16 59.5	-1.9
WR0				IAmb	IAmb	12 17 00.4	
	comp=Z,12nm,0.9s						
WB2	Warramunga Arr	38.51	319	P	P	12 16 59.6	-2.5
WB2				IAmb	IAmb	12 17 01.0	
	comp=Z,8.9nm,1.0s						
WRA	Warramunga Arr	38.51	319	P	P	12 17 00.0	-2.1
	comp=Z,5.8nm,0.8s,baz=154,slow=7.6,SNR=23						
WRA				PcP	PcP	12 19 15.7	+0.8
	comp=Z,1.1nm,1.0s,baz=159,slow=2.5,SNR=3.3						
WRA				LR	LR	12 31 54.4	
	comp=Z,156nm,18.6s,baz=135,slow=35						
FITZ	Fitzroy Crossi	43.92	309	P	P	12 17 44.5	-2.1
	comp=Z,3.7nm,0.7s,baz=163,slow=9.1,SNR=7.2						
FITZ				LR	LR	12 35 00.8	
	comp=Z,88nm,18.2s,baz=154,slow=35						
MAW	Mawson	45.04	212	LR	LR	12 34 19.5	
	comp=Z,106nm,18.1s,baz=62,slow=33						
TBI	Tubuai	48.12	72	*e*LR	LR	12 32 05.9	
	comp=Z,332nm,27.8s						
PPT2	Papeete2	52.61	68	*e*S	S	12 26 04.4	-17
	comp=Z,75nm,28.2s						
PPT2				*e*LR	LR	12 34 08.0	
	comp=Z,174nm,24.5s						
PPT	Papeete	52.63	68	LR	LR	12 38 53.0	
	comp=Z,52nm,18.2s,baz=205,slow=33						
JAY	Jayapura	52.80	335	LR	LR	12 40 07.5	
	comp=Z,68nm,19.0s,baz=148,slow=35						
SNAA	Sanae	55.06	187	P	P	12 19 08.6	-2.5
	comp=Z,7.4nm,1.1s,baz=165,slow=9.4,SNR=7.2						
SNAA	Sanae	55.06	187	P	P	12 19 08.8	-2.3
PLCA	Paso Flores	76.93	143	P	P	12 21 33.8	+1.6
	comp=Z,1.9nm,0.9s,baz=237,slow=18,SNR=2.9						
PLCA				LR	LR	12 48 04.3	
	comp=Z,67nm,18.7s,baz=165,slow=30						
H03S2	Juan Fernandez	79.50	133	T	T	13 49 50.0	
	baz=210,slow=74,SNR=278						
H03S1	Juan Fernandez	79.50	134	T	T	13 49 51.4	
	baz=210,slow=74,SNR=267						
H03S3	Juan Fernandez	79.52	133	T	T	13 49 54.2	
	baz=210,slow=74,SNR=304						
H03N3	Juan Fernandez	79.83	133	T	T	13 50 19.4	
	baz=217,slow=77,SNR=183						
H03N2	Juan Fernandez	79.84	133	T	T	13 50 13.4	
	baz=217,slow=77,SNR=286						
H03N1	Juan Fernandez	79.84	133	T	T	13 50 13.8	
	baz=217,slow=77,SNR=170						
H08S2	Diego Garcia H	82.50	267	T	T	13 52 41.6	
	baz=142,slow=76,SNR=510						
H08S1	Diego Carcia H	82.51	267	T	T	13 52 40.7	
	baz=142,slow=76,SNR=311						
H08S3	Diego Garcia H	82.52	267	T	T	13 52 43.1	
	baz=142,slow=76,SNR=930						
CMAR	Chiang Mai Arr	88.48	304	P	P	12 22 31.8	-0.4
	comp=Z,0.6nm,0.5s,baz=134,slow=2.6,SNR=2.9						
BOSA	Boshof	89.73	219	P	P	12 22 35.9	-2.4
	comp=Z,1.6nm,0.7s,baz=46,slow=2.9,SNR=3.7						
NVAR	Mina Array Bea	115.08	59	PKP	PKiKP	12 28 22.6	+1.9
	comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=2.5						
KURBB	Kurchatov Arra	123.87	311	PKP	PKiKP	12 28 38.7	+1.6
	comp=Z,0.9nm,1.0s,baz=119,slow=1.4,SNR=5.3						
TORD	Torodi Ar. Bea	136.69	212	PKP	PKPdf	12 29 02.6	+0.3
	comp=Z,0.3nm,0.5s,baz=138,slow=1.7,SNR=1.9						
AKASG	Malin Array Be	150.02	286	PKPbc	PKPdf	12 29 28.0	+3.6
	comp=Z,0.2nm,0.2s,baz=98,slow=2.9,SNR=5.2						
SPITS	Spitsbergen Ar	151.62	345	PKPbc	PKiKP	12 29 34.7	+1.8
	comp=Z,14nm,1.0s,baz=37,slow=3.6,SNR=1.8						

IDC 19 12:23:06.7±6.4, **11°.78N**×**91°.56E**, **h0**^{km}, **mb3.4**/2, **mb1 3.7**/3, **mb1mx3.2**/62, **mbtmp3.4**/3, **ML3.8**/1, **Error ellipse: s-maj=133.9km s-min=47.2km az=102.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.74	46	Pn	Pn	12 25 27.4	-0.8
	0.3nm,0.3s,baz=237,slow=14,SNR=11						
WRA	Warramunga Arr	52.60	126	P	P	12 32 22.3	-0.4
	0.2nm,0.5s,baz=298,slow=10,SNR=2.4						
ASAR	Alice Springs	54.37	131	P	P	12 32 36.0	+0.4
	0.2nm,0.4s,baz=310,slow=6.7,SNR=7.1						

IDC 19 12:30:43.9±1.5, **73°.21N**×**6°.58E**, **h0**^{km}, **mb3.4**/3, **mb1 3.7**/6, **mb1mx3.3**/45, **mbtmp3.6**/6, **ML3.5**/3, **Error ellipse: s-maj=25.5km s-min=22.0km az=108.0, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	5.15	252	Pn	Pn	12 32 01.2	-0.9
	baz=126,slow=5.2,SNR=1.2						
SPITS	Spitsbergen Ar	5.54	21	Pn	Pn	12 32 06.3	-1.3
	baz=206,slow=16,SNR=46						
ARCES	ARCESS Array B	7.07	112	Pn	Pn	12 32 28.0	-0.5

	baz=323,slow=11,SNR=9.9						
AKASG	Malin Array Be	24.63	144	P	P	12 36 04.8	-0.8
	0.2nm,0.3s,baz=342,slow=8.9,SNR=1.9						
GERES	GERESS Array B	24.65	169	P	P	12 36 06.3	+0.4
	0.4nm,0.5s,baz=342,slow=6.2,SNR=4.1						
TORD	Torodi Ar. Bea	60.10	185	P	P	12 40 53.1	+0.4
	0.7nm,0.9s,baz=358,slow=7.2,SNR=2.2						

VIE 19 12:31:31.0±0.6**,46°.69N×13°.81E,h0^{km},ml0.8**/2**,Error ellipse: s-maj=7.8km s-min=1.1km az=173.0 4 km S of Afritz Suspected Mining explosion.,Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYKA	Terra Mystica	0.13	241	*e*Pg	Pg	12 31 33.4	-0.1
	0.8nm,0.1s						
MYKA				*e*Sg	Sg	12 31 35.6	+0.4
	3.1nm,0.1s						
OBKA	Obir	0.54	109	*e*Pg	Pg	12 31 41.8	+0.3
	0.3nm,0.1s						
OBKA				*e*Sg	Sg	12 31 49.0	+0.6
	0.7nm,0.2s						

NAO ***19*** *12:31:48.5±1.3, 73°.25N×6°.41E, ML4.6*

BJI ***19*** *12:31:48.0±0.0, 73°.30N×6°.40E, h5^{km}, mB5.3/39, mb4.9/57, Ms5.0/19, Ms7 4.6/20*

IDC ***19*** *12:31:49.8±0.4, 73°.27N×6°.42E, h0^{km}, mb4.5/36, mb1 4.6/41, mb1mx4.6/47, mbtmp4.5/41, ML4.3/5, MS4.4/10, Ms1 4.4/10, ms1mx3.9/48, Error ellipse: s-maj=11.5km s-min=8.0km az=43.0*

MOS ***19*** *12:31:49.7±1.0, 73°.25N×6°.24E, h10^{km}, mb5.1/99, MS4.3/14, Error ellipse: s-maj=14.2km s-min=3.9km az=96.9*

GCMT ***19*** *12:31:51.6±0.3, 73°.25N±0°.01×6°.25E±0°.07, h12^{km}, MW5.0/102, Moment Tensor Solution. s16,c18; s102,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.12±.08; M$_{\theta\theta}$-2.34±.07; M$_{\phi\phi}$1.22±.08; M$_{r\theta}$1.72±.23; M$_{\theta\phi}$-0.37±.07; M$_{\phi r}$2.39±.25; Best double couple: M$_0$3.58600×10^{16} NP1:ϕ_s299.00000°,δ32.00000°, λ160.00000°. NP2:ϕ_s46.00000°,δ80.00000°,λ59.00000°. Principal axes: T 3.7190, Plg46.0000°, Azm284.0000°; N -0.2650, Plg30.0000°, Azm52.0000°; P -3.4540, Plg28.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *12:31:51.6±1.4, 73°.21N±0°.07×6°.4E±0°.2, h10^{km}±1^{km}, mb5.0/302 Error ellipse: s-maj=12.3km s-min=10.9km az=201.0*

BER ***19*** *12:31:52.1±3.4, 73°.35N×6°.51E, h10^{km}, MS4.2, ML4.6(NAO), Confirmed Earthquake*

DNK ***19*** *12:31:56.9±3.3, 73°.54N×4°.90E, h63^{km}±50^{km}, mb4.7*

BGR ***19*** *12:31:58.0±0.0, 72°.62N×7°.99E, h10^{km}, mb5.0, Ms4.2*

UPP ***19*** *12:32:00.3±3.3, 72°.59N×7°.45E, h0^{km}, ML3.2, Suspected explosion*

ISC 19 12:31:51.5±0.2**,73°.28N**±0°.03×**6°.43E**±0°.03**,h10^{km},n926,** σ**1^{s}.51**/985**,mb5.0**/284**,MS4.4**/28**,32C-33D,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	Bjornoya	3.71	65	Pn	Pn	12 32 46.5	-2.2
BJO1	Bjornoya	3.71	65	*e*P	Pn	12 32 46.6	-2.2
BJO1				*e*S	Sn	12 33 27.3	-5.0
BJO1				IVMs_BB	IVMs_BB	12 33 55.4	
	comp=Z,4μm,5.1s						
HSPB	Hornsund (broa	4.41	28	*e*P	Pn	12 32 56.6	-1.6
HSPB	Hornsund (broa	4.41	28	Pn	Pn	12 32 56.8	-1.6
HSPB	Hornsund (broa	4.41	28	*e*P	Pn	12 32 56.7	-1.6
HSPB				IVMs_BB	IVMs_BB	12 34 19.5	
	comp=Z,4μm,14.7s						
JNE	Jan Mayen East	5.08	250	*e*P	Pn	12 33 06.9	-0.6
JNW	Jan Mayen West	5.09	251	*e*P	Pn	12 33 06.9	-0.8
JMIC	Jan Mayen	5.13	251	Pn	Pn	12 33 07.3	-1.0
	baz=96,slow=3.6,SNR=37						
JMIC	Jan Mayen	5.13	251	Pn	Pn	12 33 07.7	-0.5
JMIC	Jan Mayen	5.13	251	*e*P	Pn	12 33 07.1	-1.2
BRBA	Barentsburg A	5.17	18	Pn	Pn	12 33 07.1	-1.7
BRBA	Barentsburg A	5.17	18	*e*P	Pn	12 33 07.7	-1.1
BRBA				*e*S	Sn	12 34 01.9	-6.4
BRBA				IVMs_BB	IVMs_BB	12 35 03.2	
	comp=Z,5μm,12.0s						
JMI	Jan Mayen	5.23	251	*e*P	Pn	12 33 09.1	-0.5
TRO	Tromso	5.41	126	Pn	Pn	12 33 10.4	-1.6
TRO	Tromso	5.41	126	*e*P	Pn	12 33 10.5	-1.6
SPA0	Spitsbergen Ar	5.49	22	Pn	Pn	12 33 12.3	-0.8
	baz=207,slow=14						
SPA0	Spitsbergen Ar	5.49	22		Pn	12 33 12.5	-0.7
SPA0	Spitsbergen Ar	5.49	22	Pn	Pn	12 33 12.3	-0.8
	baz=207,slow=14						
SPITS	Spitsbergen Ar	5.49	22	Pn	Pn	12 33 12.3	-0.8
	baz=201,slow=16,SNR=110						
SPITS				Sn	Sn	12 34 09.7	-6.5
	baz=124,slow=26,SNR=0.7						
SPITS				LR	LR	12 35 03.5	
	comp=Z,5μm,19.2s,baz=210,slow=35						
N2VI	Vinje	5.60	149	*e*P	Pn	12 33 12.6	-2.1
LOF	Lofoten	5.68	152	Pn	Pn	12 33 13.8	-2.0
LOF	Lofoten	5.68	152	*e*P	Pn	12 33 14.8	-1.0
LOF				*e*S	Sn	12 34 13.8	-7.2
LOF				IVMsBB		12 34 54.9	
	comp=Z,2μm,5.0s						
HOPEN	Hopen	5.82	48	Pn	Pn	12 33 15.3	-2.3
HOPEN	Hopen	5.82	48	*e*P	Pn	12 33 15.9	-1.7
HOPEN				*e*S	Sn	12 34 17.8	-6.4
HOPEN				IVMs_BB	IVMs_BB	12 34 58.8	
	comp=Z,2μm,3.3s						
JETT	Jettan, Norway	5.82	123	Pn	Pn	12 33 16.6	-1.2
KBS	Kingsbay	5.83	11	⇑*e*P	Pn	12 33 16.0	-1.7
KBS	Kingsbay	5.83	11	Pn	Pn	12 33 16.3	-1.4
KBS	Kingsbay	5.83	11		Pn	12 33 16.4	-1.4
KBS	Kingsbay	5.83	11	*e*P	Pn	12 33 16.3	-1.4
KBS				IVMs_BB	IVMs_BB	12 35 08.3	
	comp=Z,5μm,12.9s						
KBS	Kingsbay	5.83	11	*i* P	Pn	12 33 18.0	+0.3
N2SV	S¸rv¥gen	5.84	155	*e*P	Pn	12 33 16.2	-1.8
HAMF	Hammerfest	5.97	108	Pn	Pn	12 33 17.3	-2.4
HAMF	Hammerfest	5.97	108	*e*P	Pn	12 33 17.5	-2.2
HAMF				*e*S	Sn	12 34 19.9	-8.1
STEI	Steigen	6.12	147	Pn	Pn	12 33 19.9	-1.9
STEI	Steigen	6.12	147	*e*P	Pn	12 33 20.4	-1.4
STEI				IVMs_BB	IVMs_BB	12 35 16.6	
	comp=Z,2μm,4.1s						
N2IH	Innhavet	6.20	145	*e*P	Pn	12 33 21.1	-1.8
KIF	Kilpisjarvi	6.32	126	Pn	Pn	12 33 22.7	-1.9
KIF	Kilpisjarvi	6.32	126	*e*P	Pn	12 33 23.0	-1.5
FAUS	Fauske	6.63	149	*e*P	Pn	12 33 28.5	-0.3
NBB05	Inndyr	6.78	154	*e*P	Pn	12 33 29.2	-1.7
KOVU	Salmi	6.80	132	P	Pn	12 33 31.5	+0.4
NBB30	Finnes	6.80	155	*e*P	Pn	12 33 29.8	-1.3
NIKU	Nikkaluokta	6.86	136	P	Pn	12 33 30.5	-1.5
NIKU				S	Sn	12 34 41.8	-8.1
KTK1	Kautokeino	6.91	120	*e*P	Pn	12 33 31.8	-0.9
RATU	Laukkuluspa	7.01	135	P	Pn	12 33 32.2	-1.8
KUA	Kurravaara	7.05	132	P	Pn	12 33 32.8	-1.9
KUA				S	Sn	12 34 43.4	-11
ARA0	ARCESS Array S	7.14	112	Pn	Pn	12 33 33.5	-2.3
	baz=318,slow=12						
ARA0	ARCESS Array S	7.14	112	Pn	Pn	12 33 33.5	-2.3
	baz=318,slow=12						
ARCES	ARCESS Array B	7.14	112	Pn	Pn	12 33 33.8	-2.0
	baz=321,slow=12,SNR=50						
ARCES				Sn	Sn	12 34 42.5	-14
	baz=305,slow=19,SNR=2.0						
NBB40	Tonnes	7.17	158	*e*P	Pn	12 33 34.6	-1.5
SALU	Saltoluokta	7.18	140	P	Pn	12 33 35.0	-1.3
KONS	Konsvik	7.19	158	*e*P	Pn	12 33 35.0	-1.4
KONS				*e*S	Sn	12 34 48.7	-9.3
DAG	Danmarks Havn	7.32	310	*i* P	Pn	12 33 35.0	-3.3
DAG	Danmarks Havn	7.32	310	*e*P	Pn	12 33 34.8	-3.5
DAG				*e*S	Sn	12 34 50.0	-11
DAG	Danmarks Havn	7.32	310	*i* P	Pn	12 33 35.0	-3.3
DAG	Danmarks Havn	7.32	310	*i* P	Pn	12 33 35.0	-3.3
STOK	Stokkvaagen	7.34	159	*e*P	Pn	12 33 37.2	-1.3
LANU	Lannavaara	7.34	128	P	Pn	12 33 37.0	-1.6
KEV	Kevo	7.41	108	P	Pn	12 33 37.6	-1.8
KEV	Kevo	7.41	108	Pn	Pn	12 33 37.6	-1.8
DBG	Daneborg	7.49	291	Pn	Pn	12 33 36.0	-4.5
DBG	Daneborg	7.49	291	*e*P	Pn	12 33 36.1	-4.4
DBG				*e*S	Sn	12 34 53.7	-12
DBG				*i* S	Sn	12 34 54.5	-11
DBG	Daneborg	7.49	291	*e*P	Pn	12 33 36.2	-4.4
DBG				*i* S	Sn	12 34 54.5	-11
MOR8	Moi Rana	7.66	155	*e*P	Pn	12 33 42.2	-0.7
MOR8				*e*S	Sn	12 34 58.0	-12
DUNU	Dundret	7.81	135	P	Pn	12 33 42.6	-2.3
MASU	Masugnsbyn	7.83	131	P	Pn	12 33 43.9	-1.3
PAJU	Pajala	8.43	130	P	Pn	12 33 52.2	-1.3
NSS	Namsos	9.01	165	*e*P	Pn	12 34 01.0	-0.4
SCO	Scoresbysund	9.21	266	P	Pn	12 34 01.8	-2.3
SCO	Scoresbysund	9.21	266	Pn	Pn	12 34 01.8	-2.3
SCO	Scoresbysund	9.21	266	*i* P	Pn	12 34 01.0	-3.1
SCO				*i* P	Pn	12 34 01.0	-3.1
SCO				IAmb	IAmb	12 34 04.4	
	comp=Z,24nm,0.5s						
SCO	Scoresbysund	9.21	266	*i* P	Pn	12 34 01.0	-3.1
	comp=Z,24nm,0.5s						
SCO	Scoresbysund	9.21	266	*i* P	Pn	12 34 01.0	-3.1
SCO				*i* P	Pn	12 34 01.0	-3.1
SCO				IAmb	IAmb	12 34 04.4	
	comp=Z,24nm,0.5s						
NOD	Norderasen	10.35	158	*e*P	Pn	12 34 19.2	-0.5
APA0	Apatity Array	10.47	110	Pn	Pn	12 34 17.9	-3.5
	baz=315,slow=11						
APA0				Sn	Sn	12 36 06.7	-12
	baz=319,slow=28						
APA0	Apatity Array	10.47	110	Pn	Pn	12 34 17.9	-3.5
	baz=315,slow=11						
APA0				Sn	Sn	12 36 06.7	-12
	baz=319,slow=28						
LVZ	Lovozero	10.73	106	⇑*i*P	Pn	12 34 21.3	-3.7
LVZ				pmax	pmax		
	comp=Z,374nm,1.3s						
LVZ	Lovozero	10.73	106	Pn	Pn	12 34 21.3	-3.7
MOL	Molde	10.77	177	*e*P	Pn	12 34 23.4	-2.1
AKN	Aaknes	11.16	179	Pn	Pn	12 34 29.1	-1.7
AKN	Aaknes	11.16	179	Pn	Pn	12 34 29.1	-1.7
DOMB	Dombas	11.34	174	*e*P	Pn	12 34 31.2	-2.1
NC204	NORSAR Array S	12.17	170		Pn	12 34 43.0	-1.7
NC303	NORSAR Array S	12.26	169		Pn	12 34 45.1	-0.7
NC405	NORSAR Array S	12.39	168	Pn	Pn	12 34 46.9	-0.7
NBO00	NORSAR Array S	12.42	170	Pn	Pn	12 34 47.4	-0.7
NB201	NORSAR Array S	12.43	169		Pn	12 34 47.0	-1.2
NB2	NORSAR Subarra	12.43	169	Pn	Pn	12 34 47.1	-1.1
	baz=349,slow=14						
NB2	NORSAR Subarra	12.43	169	Pn	Pn	12 34 47.1	-1.1
	baz=349,slow=14						
NOA	NORSAR Array B	12.43	169	Pn	Pn	12 34 46.0	-2.3
	comp=Z,0.1nm,0.3s,baz=349,slow=13,SNR=13						
NOA				LR	LR	12 39 27.1	
	comp=Z,1μm,18.2s,baz=350,slow=37						
NAO01	NORSAR Array S	12.61	170		Pn	12 34 49.2	-1.4
SKAR	Skarslia	12.68	176	*e*P	Pn	12 34 49.8	-1.9
NC602	NORSAR Array S	12.75	169		Pn	12 34 52.0	-0.5
NRA0	NORESS Array S	12.75	169	Pn	Pn	12 34 50.7	-1.9
	baz=352,slow=14						
NRA0	NORESS Array S	12.75	169	Pn	Pn	12 34 50.7	-1.9
	baz=352,slow=14						
SUMG	Summit	12.96	289	*i* P	Pn	12 34 54.0	-1.8
SUMG	Summit	12.96	289	*i* P	Pn	12 34 54.0	-1.8
SUMG	Summit	12.96	289	*i* P	Pn	12 34 54.0	-1.8
SUMG	Summit	12.96	289	*i* P	Pn	12 34 54.0	-1.8
KONO	Kongsberg	13.75	173	⇑*e*P	Pn	12 35 07.2	+1.0
KONO				pmax	pmax		
	comp=Z,85nm,2.2s						
FIA1	FINESS Array S	13.97	138	Pn	Pn	12 35 04.9	-4.2
FIA0	FINESS Array S	13.97	138	Pn	Pn	12 35 06.0	-3.1
	baz=339,slow=12						
FIA0	FINESS Array S	13.97	138	Pn	Pn	12 35 06.0	-3.1
	baz=339,slow=12						
FINES	FINESS Array B	13.97	138	Pn	Pn	12 35 06.2	-2.9
	comp=Z,0.9nm,0.3s,baz=335,slow=9.8,SNR=19						
FINES				LR	LR	12 40 11.9	
	comp=Z,2μm,19.9s,baz=356,slow=36						
TMCR	Tamitsa	14.44	113	*e*P	Pn	12 35 14.0	-1.5
TMCR				*e*		12 37 53.3	
TMCR				pmax	pmax		
	comp=Z,47nm,0.7s						
VSU	Vasula	16.87	141	*e*P	Pn	12 35 44.5	-2.8
VSU	Vasula	16.87	141	⇓*e*P	Pn	12 35 44.8	-2.5
VSU				pmax	pmax		
	comp=Z,196nm,1.3s						
MUD	Monsted U'grnd	16.93	175	*e*P	P	12 35 53.0	+2.9
MUD				pmax	pmax		
	comp=Z,87nm,1.5s						
MUD	Monsted U'grnd	16.93	175	*e*P	P	12 35 53.1	+2.9
MUD				IAmb	IAmb	12 36 06.1	
	comp=Z,87nm,1.5s						
MUD	Monsted U'grnd	16.93	175	*i* P	P	12 35 53.0	+2.9
	comp=Z,87nm,1.5s						
MUD	Monsted U'grnd	16.93	175	*e*P	P	12 35 53.1	+2.9
MUD				IAmb	IAmb	12 36 06.1	
	comp=Z,87nm,1.5s						
KLMR	Klimovskoe	17.57	118	*e*P	Pn	12 35 53.4	-2.6
KLMR				pmax	pmax		
	comp=Z,222nm,1.5s						
KLMR	Klimovskoe	17.57	118	*e*Pn	Pn	12 35 53.5	-2.6
KLMR				AMP		12 35 58.8	
	comp=Z,222nm,1.5s						
PBUR	Paburge	18.43	152	*e*P	P	12 36 06.4	-0.2
EKA	Eskdalemuir Ar	18.45	197	P	P	12 36 04.3	-2.4
	baz=12,slow=10,SNR=10						
TULEG	Thule	18.59	315	P	P	12 36 06.4	-1.9
TULEG	Thule	18.59	315	*e*P	P	12 36 03.0	-5.2
TULEG				*i* P	Pn	12 36 06.6	-1.9
TULEG	Thule	18.59	315	*e*P	P	12 36 03.0	-5.2
TULEG				*i* P	Pn	12 36 06.6	-1.9
PABE	Paberze	19.23	149	*e*P	P	12 36 14.9	-0.4
ISAL	Salakas	19.51	145	*e*P	P	12 36 18.5	+0.1
SFJD	Kangerlussuaq	19.60	281	LR	LR	12 42 54.2	
	comp=Z,1μm,18.1s,baz=94,slow=34						
SFJD	Kangerlussuaq	19.60	281	P	Pn	12 36 20.2	-0.5
SFJD				pmax	pmax		
	comp=Z,47nm,1.3s						
SFJD	Kangerlussuaq	19.60	281		Pn	12 36 20.2	-0.5
IIGN	Ignalina	19.74	145	*e*P	P	12 36 20.8	-0.1
IDID	Didziasalis	19.86	144	*e*P	P	12 36 22.4	+0.2
EUNU	Eureka	19.93	329	P	P	12 36 23.2	+0.3
LNIZ	Loecknitz	20.13	166	*e*P	P	12 36 25.9	+0.6
	comp=Z,397nm,2.0s,baz=357,slow=10						
NACGM	Naroch	20.26	145	*i* P	P	12 36 25.0	-1.6
NACGM				*i* P	P	12 36 25.0	-1.6
NACGM				*i* P	P	12 36 25.0	-1.6
NACGM				*i* Pb	pP	12 36 28.8	+0.1
	comp=Z,42nm,1.2s						
NACGM				*i* PP	pwP	12 36 35.5	+3.2
NACGM				*i* PPP	PPP	12 36 45.6	
NACGM				*i* S	Sn	12 40 17.3	+1.0
NACGM				*i* SS	SnSn	12 40 38.8	+8.3
NACGM				*i* SSS	SSS	12 40 51.8	
NACGM				*i* LQ	LQ	12 41 56.4	
NACGM				*i* LR	LR	12 43 12.1	
GKP	Gorka Klasztor	20.60	161	*e*P	P	12 36 30.5	+0.2
GKP	Gorka Klasztor	20.60	161	*e*P	P	12 36 30.1	-0.2
MNK	Minsk	20.83	143	*i* P	P	12 36 31.7	-1.1
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	12 36 31.7	-1.1
	comp=N,69nm,1.5s						
MNK				*i* P	P	12 36 31.7	-1.1
	comp=Z,32nm,1.1s						
MNK				*i* PP	PnPn	12 36 49.8	-1.0
MNK				*i* PPP	PPP	12 36 57.7	
MNK				*i* S	S	12 40 24.2	-0.6
MNK				*i* PcP	PcP	12 40 40.3	-0.5
MNK				*i* SS	SnSn	12 40 46.0	+1.5
MNK				*i* SSS	SSS	12 40 59.1	
MNK				*i* LQ	LQ	12 42 32.2	
MNK				*i* LR	LR	12 43 37.5	
MNK				*i* LRM	MLR	12 44 22.7	
	comp=N,992nm,15.8s						
MNK				*i* LRM	MLR	12 44 24.4	
	comp=Z,1μm,17.4s						
MNK				*i* LRM	MLR	12 44 31.2	
	comp=E,60nm,15.1s						
MNK	Minsk	20.83	143	*e*P	P	12 36 32.0	-0.8
MNK				*e*S	S	12 40 18.0	-6.8
NRDL	Niedersach Rie	20.93	174	*e*P	P	12 36 34.1	+0.3
	comp=E,212nm,1.9s,baz=357,slow=10						
NRDL	Niedersach Rie	20.93	174	*e*P	P	12 36 33.9	+0.1
	comp=E,212nm,1.9s,baz=358,slow=10						
IBBN	Ibbenburen	21.06	178	*e*P	P	12 36 35.2	-0.1
	comp=E,210nm,1.9s,baz=357,slow=10						
IBBN	Ibbenburen	21.06	178	*e*P	P	12 36 35.1	-0.2
	comp=E,210nm,1.9s,baz=358,slow=10						
FLTG	Flechtingen	21.13	172	*e*P	P	12 36 35.5	-0.6
	comp=E,178nm,1.9s,baz=357,slow=10						
FLTG	Flechtingen	21.13	172	*e*P	P	12 36 35.4	-0.6
	comp=E,178nm,1.9s,baz=358,slow=10						
CLZ	Clausthal	21.59	173	*e*P	P	12 36 41.0	0.0
	comp=E,142nm,1.6s,baz=357,slow=10						
CLZ	Clausthal	21.59	173	*e*P	P	12 36 40.7	-0.3
	comp=E,120nm,1.6s,baz=358,slow=10						
MOS	Moscow	21.66	127	*e*P	P	12 36 37.6	-4.0
MOS				*e*S	S	12 40 37.0	-4.0
MOS				*e*		12 41 07.6	
MOS				pmax	pmax		
	comp=Z,225nm,1.4s						
MOS				pmax	pmax		
	comp=Z,500nm,2.0s						
MOS				MLR	MLR		
	comp=Z,800nm,20.0s						
GTTG	Gottingen	21.87	174	*e*P	P	12 36 44.2	+0.2
	comp=Z,389nm,2.4s,baz=357,slow=10						
GTTG	Gottingen	21.87	174	*e*P	P	12 36 44.1	+0.1
	comp=Z,389nm,2.4s,baz=358,slow=10						
BUG	Bochum--Univer	21.93	179	*e*P	P	12 36 44.7	+0.2
	comp=Z,138nm,1.6s,baz=357,slow=10						
BUG	Bochum--Univer	21.93	179	*e*P	P	12 36 44.5	0.0
	comp=Z,138nm,1.6s,baz=358,slow=10						
OBN	Obninsk	21.99	130	P	P	12 36 44.3	-0.9
	comp=Z,6.1nm,0.4s,baz=330,slow=4.5,SNR=17						
OBN				LR	LR	12 45 04.3	
	comp=Z,222nm,21.1s,baz=356,slow=36						
OBN	Obninsk	21.99	130	⇑P	P	12 36 45.6	+0.4
OBN	Obninsk	21.99	130	*d* *i*P	P	12 36 43.6	-1.6
OBN				pmax	pmax		
	comp=Z,128nm,1.3s						
OBN				MLR	MLR		
	comp=Z,906nm,21.0s						
OBN	Obninsk	21.99	130	P	P	12 36 44.4	-0.8
KIRV	Kirov	22.14	109	P	P	12 36 45.1	-1.6
	comp=Z,46nm,0.9s,baz=330,slow=7.3,SNR=27						
KIRV	Kirov	22.14	109	*d* *i*P	P	12 36 45.5	-1.3
KASTN	Kahler Asten	22.18	177	*e*P	P	12 36 47.4	+0.1
	comp=Z,103nm,1.6s,baz=357,slow=10						
KASTN	Kahler Asten	22.18	177	*e*P	P	12 36 47.4	+0.1
	comp=Z,64nm,1.2s,baz=358,slow=10						
CLL	Collm	22.24	169	*i* P	P	12 36 47.0	-0.9
	comp=Z,174nm,2.2s						
CLL				*e*pP	sP	12 36 51.0	+0.1
CLL				*e*S	S	12 40 53.0	+0.7
CLL				*e*(SS)		12 41 21.0	
CLL				Lm	MLR	12 45 00.0	
	comp=N,900nm,18.3s						
CLL				Lm	MLR	12 45 00.0	
	comp=E,200nm,20.9s						
CLL	Collm	22.24	169	*i* P	P	12 36 47.0	-0.9
CLL				*e*		12 36 51.0	
CLL				*e*S	S	12 40 53.0	+0.7
CLL				pmax	pmax		
	comp=Z,174nm,2.2s						
CLL	Collm	22.24	169	P	P	12 36 46.9	-1.1
CLL				IAmb	IAmb	12 36 58.0	
	comp=Z,61nm,1.3s						
CLL	Collm	22.24	169	*e*P	P	12 36 47.2	-0.8
	comp=Z,91nm,1.6s,baz=357,slow=10						
CLL	Collm	22.24	169	*e*P	P	12 36 46.8	-1.1
	comp=Z,91nm,1.6s,baz=358,slow=10						
NEUB	Neuenburg	22.28	171	*e*P	P	12 36 48.2	-0.2
	comp=Z,165nm,1.2s,baz=357,slow=10						
NEUB	Neuenburg	22.28	171	*e*P	P	12 36 48.0	-0.3
	comp=Z,165nm,1.2s,baz=358,slow=10						
BEL	Belsk	22.39	156	*e*P	P	12 36 49.7	+0.2
UBBA	Unterbreizbach	22.60	174	*e*P	P	12 36 51.4	-0.3
	comp=Z,78nm,1.7s,baz=357,slow=10						
UBBA	Unterbreizbach	22.60	174	*e*P	P	12 36 51.1	-0.6
	comp=Z,128nm,1.9s,baz=358,slow=10						
FBE	Freiberg	22.64	169	*e*P	P	12 36 51.3	-1.0
	comp=Z,79nm,1.4s,baz=357,slow=10						
FBE	Freiberg	22.64	169	*e*P	P	12 36 51.2	-1.0
	comp=Z,56nm,1.1s,baz=358,slow=10						
BRG	Berggiesshubel	22.73	168	*i* P	P	12 36 52.1	-1.1
BRG				Amp		12 36 54.8	
	comp=Z,59nm,1.6s						
BRG				*e*x	x	12 36 58.7	
BRG				Amp		12 37 03.2	
	comp=Z,54nm,1.4s						
BRG	Berggiesshubel	22.73	168	S	S	12 41 05.0	+3.6
BRG				Amp		12 45 42.0	
	comp=Z,1.7nm,18.1s						
BRG				Amp		12 45 50.0	
	comp=E,1.3nm,23.7s						
BRG				Amp		12 45 56.0	
	comp=N,0.9nm,23.7s						
BRG	Berggiesshubel	22.73	168	*i* P	P	12 36 52.0	-1.1
BRG				*e*		12 36 58.6	
BRG				S	S	12 41 05.0	+3.6
BRG				pmax	pmax		
	comp=Z,59nm,1.7s						
BRG				pmax	pmax		
	comp=Z,54nm,1.4s						
BRG				smax	smax		
	comp=Z,2μm,18.1s						
BRG				MLR	MLR		
	comp=E,1μm,23.7s						
BRG				MLR	MLR		
	comp=N,900nm,23.7s						
BRG	Berggiesshubel	22.73	168	*i* P	P	12 36 52.1	-1.1
BRG				Amp		12 36 54.8	
	comp=Z,59nm,1.6s						
BRG				*e*x	x	12 36 58.7	
BRG				Amp		12 37 03.2	
	comp=Z,54nm,1.4s						
BRG	Berggiesshubel	22.73	168	S	S	12 41 05.0	+3.6
BRG				Amp		12 45 42.0	
	comp=Z,1.7nm,18.1s						
BRG				Amp		12 45 50.0	
	comp=E,1.3nm,23.7s						
BRG				Amp		12 45 56.0	
	comp=N,0.9nm,23.7s						
BRG	Berggiesshubel	22.73	168	*e*P	P	12 36 51.9	-1.3
	comp=N,54nm,1.4s,baz=357,slow=10						
BRG	Berggiesshubel	22.73	168	*e*P	P	12 36 52.3	-0.9
	comp=N,54nm,1.4s,baz=358,slow=10						
MEM	Membach	22.76	181	*d*P	P	12 36 53.7	+0.3
BTNL	Ternell	22.78	180	*d*P	P	12 36 54.0	+0.3
BTNL				*d*PnPn	PnPn	12 37 15.7	-1.8
BSTI	Sart Tilman	22.79	181	*d*x	P	12 36 59.8	+6.0
AHRW	Bad Neuenahr-A	22.83	179	*e*P	P	12 36 54.0	-0.2
	comp=N,92nm,1.2s,baz=358,slow=10						
MOX	Moxa	22.83	171	*e*P	P	12 36 54.0	-0.3
	comp=N,33nm,1.0s,baz=357,slow=10						
MOX	Moxa	22.83	171	*e*P	P	12 36 53.8	-0.5
	comp=N,51nm,1.4s,baz=358,slow=10						
SNF	Seneffe	22.88	184	*d*x	P	12 36 56.4	+1.7
KSP	Ksiaz	22.93	164	*e*P	P	12 36 54.6	-0.6
BCLA	Clavier	22.95	182	*d*x	P	12 36 57.6	+2.1
BCLA				*d*x	x	12 37 04.6	
BGES	Gesves	22.99	182	*d*P	P	12 36 56.4	+0.5
BHOU	Houvegnez	23.01	181	*d*P	P	12 36 55.9	-0.3
BHOU				*d*pP	pP	12 36 57.9	-0.3
PLN	Plauen	23.02	171	*e*P	P	12 36 55.6	-0.6
	comp=N,64nm,1.5s,baz=358,slow=10						
WERD	Werda	23.06	170	*e*P	P	12 36 55.9	-0.8
	comp=N,27nm,1.4s,baz=357,slow=10						
WERD	Werda	23.06	170	*e*P	P	12 36 55.8	-0.8
	comp=N,43nm,1.5s,baz=358,slow=10						
BMRD	Maredsous	23.07	183	*d*P	P	12 36 56.7	-0.1
BMRD				*d*x	x	12 37 05.4	
PVCC	Panska Ves	23.11	167	AMS	AMS	12 46 00.0	
	comp=N,1μm,15.6s						
GUNZ	Gunzen	23.15	170	*e*P	P	12 36 56.6	-0.9
	comp=N,80nm,1.8s,baz=357,slow=10						
GUNZ	Gunzen	23.15	170	*e*P	P	12 36 56.5	-1.0
	comp=N,80nm,1.8s,baz=358,slow=10						
CHVC	Chvalec	23.16	164	*e*P	P	12 36 57.7	0.0
CHVC				*e*x	x	12 37 03.5	
OSTC	Ostas	23.20	164	*e*P	P	12 36 58.3	+0.2
OSTC				AMS	AMS	12 46 10.0	
	comp=N,2μm,10.7s						
NKC	Novy Kostel	23.28	170	*e*P	P	12 37 00.4	+1.5
NKC				MLR	MLR		
	comp=Z,2μm,18.6s						
NKC	Novy Kostel	23.28	170	*e*P	P	12 37 00.4	+1.5
NKC				AMS	AMS	12 46 20.0	
	comp=Z,2μm,18.6s						
DOU	Dourbes	23.28	183	*d*P	P	12 36 59.2	+0.3
DPC	Dobruska-Polom	23.42	164	*e*P	P	12 37 00.3	0.0

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DPC                                  MLR    MLR
      comp=Z,2µm,19.8s
DPC   Dobruska-Polom    23.42 164   eP     P       12 37 00.3   0.0
DPC                                  AMS    AMS     12 46 00.0
      comp=Z,2µm,19.8s
PRU   Pruhonice         23.65 167   eP     P       12 37 03.5 +1.0
PRU                                 e               12 37 10.7
PRU                                  MLR    MLR
      comp=Z,1µm,18.8s
PRU   Pruhonice         23.65 167   eP     P       12 37 03.5 +1.0
PRU                                 ex     x       12 37 10.7
PRU                                  AMS    AMS     12 46 00.0
      comp=Z,1µm,18.8s
WLF   Walferdange       23.70 180   dP     P       12 37 03.1 +0.1
WLF   Walferdange       23.70 180    P     P       12 37 03.2 +0.1
WLF                                  pmax   pmax
      comp=Z,74nm,1.5s
WLF   Walferdange       23.70 180    P     P       12 37 03.2 +0.1
WLF                                  IAmb   IAmb    12 37 06.7
      comp=Z,74nm,1.5s
WLF   Walferdange       23.70 180   eP     P       12 37 03.2 +0.1
      comp=Z,226nm,2.1s,baz=357,slow=10
KRLC  Kraliky           23.73 163   eP     P       12 37 02.8  -0.6
KRLC  Kraliky           23.73 163   eP     P       12 37 02.8  -0.6
ROTZ  Rotzenmuhle       23.74 171   eP     P       12 37 03.2  -0.2
      comp=Z,203nm,2.1s,baz=357,slow=10
ROTZ  Rotzenmuhle       23.74 171   eP     P       12 37 03.2  -0.2
      comp=Z,203nm,2.1s,baz=358,slow=10
GRA1  Grafenberg Arr    23.77 172    P     P       12 37 03.4  -0.3
GRF   Grafenberg Arr    23.77 172    P     P       12 37 03.4  -0.3
GRF                                  pmax   pmax
      comp=Z,34nm,1.2s
GRF   Grafenberg Arr    23.77 172   eP     P       12 37 03.4  -0.3
      comp=Z,338nm,2.2s,baz=357,slow=10
GRF   Grafenberg Arr    23.77 172   eP     P       12 37 03.7   0.0
      comp=Z,338nm,2.2s,baz=358,slow=10
OJC   Ojcow             23.87 158   eP     P       12 37 04.5  -0.2
OJC   Ojcow             23.87 158    P     P       12 37 04.1  -0.6
OJC                                  pmax   pmax
      comp=Z,85nm,1.4s
OJC   Ojcow             23.87 158    P     P       12 37 04.1  -0.6
OJC                                  IAmb   IAmb    12 37 07.7
      comp=Z,85nm,1.4s
PBCC  Pribram           23.91 168   eP     P       12 37 06.6 +1.5
MORC  Moravsky Berou    24.09 162  ⇑P     P       12 37 06.9 +0.1
MORC  Moravsky Berou    24.09 162   eP     P       12 37 06.0  -0.7
MORC  Moravsky Berou    24.09 162    P     P       12 37 06.1  -0.7
MORC                                 pmax   pmax
      comp=Z,51nm,1.2s
MORC  Moravsky Berou    24.09 162    P     P       12 37 06.1  -0.7
MORC                                 IAmb   IAmb    12 37 09.8
      comp=Z,50nm,1.2s
WET   Wettzell          24.39 170   eP     P       12 37 10.4 +0.8
      comp=Z,211nm,2.2s,baz=357,slow=10
WET   Wettzell          24.39 170   eP     P       12 37 10.1 +0.5
      comp=Z,211nm,2.2s,baz=358,slow=10
KHC   Kasperske Hory    24.44 169d iP     P       12 37 10.6 +0.6
KHC                                  pmax   pmax
      comp=Z,152nm,2.5s
KHC   Kasperske Hory    24.44 169   eP     P       12 37 11.1 +1.1
KHC                                 ex     x       12 37 34.0
KHC                                  AMS    AMS     12 46 40.0
      comp=Z,2µm,20.2s
KHC   Kasperske Hory    24.44 169    P     P       12 37 09.9  -0.1
VRAC  Vranov            24.47 164    P     P       12 37 10.6 +0.3
      comp=Z,34nm,0.9s,baz=356,slow=12,SNR=24
VRAC                                 LR     LR      12 46 51.7
      comp=Z,971nm,19.3s,baz=354,slow=37
VRAC  Vranov            24.47 164  ⇑P     P       12 37 11.3 +1.0
VRAC  Vranov            24.47 164   eP     P       12 37 10.4 +0.1
KRUC  Moravsky          24.70 164   eP     P       12 37 11.8  -0.5
AKASG Malin Array Be    24.71 144    P     P       12 37 11.2  -1.2
      comp=Z,24nm,1.0s,baz=345,slow=9.5,SNR=43
AKASG                                LR     LR      12 46 47.1
      comp=Z,2µm,18.5s,baz=335,slow=36
AKBB  Malin Array Si    24.71 144⇓eP     P       12 37 11.3  -1.1
AKBB  Malin Array Si    24.71 144    P     P       12 37 11.5  -0.9
AKBB                                 IAmb   IAmb    12 37 13.6
      comp=Z,69nm,1.3s
NIE   Niedzica          24.71 158   eP     P       12 37 13.2 +0.7
GEC2  GERESS Array S    24.73 168    P     P       12 37 13.6 +0.8
GEC2                                 IAmb   IAmb    12 37 15.9
      comp=Z,74nm,1.4s
GEC2  GERESS Array S    24.73 168   eP     P       12 37 13.6 +0.8
      comp=Z,79nm,1.4s,baz=358,slow=10
GERES GERESS Array B    24.73 168    P     P       12 37 13.3 +0.6
      comp=Z,16nm,1.0s,baz=1.6,slow=9.3,SNR=48
GERES                                LR     LR      12 47 15.3
      comp=Z,978nm,18.9s,baz=356,slow=37
LVV   L'vov             24.78 152   eP     P       12 37 12.5  -0.5
LVV                                 eS     S       12 41 31.0  -3.9
LVV                                  MLR    MLR
      comp=Z,2µm,15.0s
KWP   Kalwaria Pacla    24.79 154   eP     P       12 37 13.4 +0.3
KWP   Kalwaria Pacla    24.79 154    P     P       12 37 12.3  -0.8
KWP                                  pmax   pmax
      comp=Z,142nm,1.4s
KWP   Kalwaria Pacla    24.79 154    P     P       12 37 12.2  -0.8
RES   Resolute Bay      24.81 322    P     P       12 37 12.6  -0.5
      comp=Z,1.7nm,0.8s,baz=50,slow=10,SNR=6.8
RES                                  LR     LR      12 46 50.3
      comp=Z,1µm,18.8s,baz=52,slow=36
RES   Resolute Bay      24.81 322    P     P       12 37 15.6 +2.5
LPSR  Galich'ya Gora    24.85 129   eP     P       12 37 13.3  -0.3
LPSR                                 pmax   pmax
      comp=Z,110nm,1.1s
LANS  Liptovska Anna    24.89 159   eP     P       12 37 15.2 +1.1
LANS  Liptovska Anna    24.89 159   eP     P       12 37 15.2 +1.1
JAVC  Velka Javorina    25.01 162   eP     P       12 37 15.3 +0.1
BFO   Black Forest      25.05 177    P     P       12 37 14.4  -1.1
BFO                                  pmax   pmax
      comp=Z,93nm,1.4s
BFO   Black Forest      25.05 177    P     P       12 37 14.4  -1.1
ECH   Echery            25.15 179    P     P       12 37 16.4  -0.1
ECH                                  pmax   pmax
      comp=Z,46nm,1.1s
ECH   Echery            25.15 179    P     P       12 37 16.4  -0.1
ECH                                  IAmb   IAmb    12 37 23.9
      comp=Z,46nm,1.1s
SMOL  Smolenice         25.33 163   eP     P       12 37 19.3 +1.2
SMOL  Smolenice         25.33 163   eP     P       12 37 19.2 +1.2
CRVS  Cervenica-Dubn    25.35 156   eP     P       12 37 19.2 +1.0
CRVS                                 pmax   pmax
      comp=Z,1µm,2.9s
CRVS  Cervenica-Dubn    25.35 156   eP     P       12 37 19.2 +1.0
CLF   Chambon-Foret     25.41 187    P     P       12 37 18.9 +0.2
KOLS  Kolonicke sedl    25.42 155   eP     P       12 37 19.4 +0.6
KOLS                                 pmax   pmax
      comp=Z,60nm,1.2s
KOLS  Kolonicke sedl    25.42 155   eP     P       12 37 19.4 +0.6
MODS  Modra-Piesok      25.46 163   eP     P       12 37 19.5 +0.3
MODS                                 pmax   pmax
      comp=Z,107nm,1.5s
MODS  Modra-Piesok      25.46 163   eP     P       12 37 19.5 +0.3
VYHS  Vyhne             25.48 161   eP     P       12 37 19.7 +0.3
VYHS                                 pmax   pmax
      comp=Z,58nm,1.5s
VYHS  Vyhne             25.48 161   eP     P       12 37 19.7 +0.3
ZST   Bratislava        25.62 163   eP     P       12 37 22.0 +1.4
ZST                                  pmax   pmax
      comp=Z,258nm,1.7s
ZST   Bratislava        25.62 163   eP     P       12 37 22.0 +1.4
KECS  Kecovo            25.66 158   eP     P       12 37 22.2 +1.2
KECS                                 pmax   pmax
      comp=Z,15nm,1.1s
KECS  Kecovo            25.66 158   eP     P       12 37 22.2 +1.2
UZH   Uzhgorod          25.72 155⇑iP     P       12 37 21.2  -0.3
UZH                                 i               12 37 24.4
UZH                                 e               12 37 26.6
UZH                                 eS     S       12 41 47.7  -2.2
UZH                                  MLR    MLR
      comp=N,250nm,14.0s
UZH                                  MLR    MLR
      comp=E,180nm,14.0s
UZH                                  MLR    MLR
      comp=Z,500nm,14.0s
UBR   Ueberruh          25.74 174   eP     P       12 37 22.5 +0.7
      comp=Z,69nm,1.7s,baz=357,slow=10
UBR   Ueberruh          25.74 174   eP     P       12 37 21.7  -0.1
      comp=Z,69nm,1.7s,baz=358,slow=10
MOA   Molln             25.76 168   i P    P       12 37 22.9 +1.0
      comp=Z,25nm,1.4s,SNR=8.1
VORR  Voronezh          25.78 129   eP     P       12 37 20.0  -2.0
VORR                                 pmax   pmax
      comp=Z,250nm,1.6s
CONA  Conrad Observa    25.79 165   i P    P       12 37 22.9 +0.6
      comp=Z,29nm,1.1s,SNR=13
RETA  Reutte            25.95 173   eP     P       12 37 25.2 +1.5
      comp=Z,20nm,1.5s
SOP   Sopron            26.09 164   eP     P       12 37 25.7 +0.8
SRO   Srobarova         26.11 162   eP     P       12 37 26.3 +1.2
SRO   Srobarova         26.11 162   eP     P       12 37 26.2 +1.2
MOTA  Moosalm           26.11 173   eP     P       12 37 27.0 +1.7
      comp=Z,25nm,1.4s
DAVA  Damuels           26.13 175   i P    P       12 37 26.6 +1.2
      comp=Z,44nm,1.3s,SNR=10
WATA  Walderalm         26.14 172   i P    P       12 37 27.2 +1.8
      comp=Z,34nm,1.5s,SNR=5.2
PSZ   Piszkesteto       26.15 159  ⇑P     P       12 37 27.1 +1.6
PSZ   Piszkesteto       26.15 159   eP     P       12 37 26.7 +1.1
PSZ   Piszkesteto       26.15 159    P     P       12 37 23.9  -1.7
PSZ                                  pmax   pmax
      comp=Z,53nm,1.4s
PSZ   Piszkesteto       26.15 159    P     P       12 37 23.9  -1.7
PSZ                                  IAmb   IAmb    12 37 27.9
      comp=Z,53nm,1.4s
VSR   Storozhevoye      26.20 130   eP     P       12 37 23.0  -2.8
VSR                                  pmax   pmax
      comp=Z,50nm,1.2s
WTTA  Wattenberg        26.21 172   i P    P       12 37 27.1 +0.9
      comp=Z,32nm,1.3s,SNR=5.4
SQTA  Sankt Quirin      26.24 173   eP     P       12 37 28.4 +2.1
      comp=Z,19nm,1.1s
EGYH  Egyhazaskeszo     26.41 163   eP     P       12 37 25.7  -2.1
FETA  Feichten          26.42 173   eP     P       12 37 29.8 +1.7
      comp=Z,13nm,2.0s
ARSA  Arzberg           26.44 166   i P    P       12 37 29.6 +1.5
      comp=Z,18nm,1.2s,SNR=5.7
VORD  Divnogorie        26.46 130   eP     P       12 37 26.5  -1.7
VORD                                 pmax   pmax
      comp=Z,60nm,1.3s
BUD   Budapest          26.50 161   eP     P       12 37 31.3 +2.8
ARU   Arti              26.54 101    P     P       12 37 28.7  -0.2
      comp=Z,9.2nm,0.9s,baz=330,slow=7.8,SNR=18
ARU   Arti              26.54 101d iP     P       12 37 29.1 +0.2
ARU                                                 12 38 08.7
ARU                                                 12 40 48.2
ARU                                  S      S       12 42 05.9 +3.1
ARU                                  SS     SnSn    12 43 10.3 +6.1
ARU                                  pmax   pmax
      comp=Z,73nm,1.2s
ARU                                  MLR    MLR
      comp=Z,425nm,17.0s
ARU   Arti              26.54 101    P     P       12 37 28.0  -0.9
CSKK  Cskako            26.55 162   eP     P       12 37 30.3 +1.3
DAVOX Davos/Dischmat    26.63 175    P     P       12 37 30.5 +0.5
      comp=Z,3.5nm,0.7s,baz=332,slow=5.0,SNR=4.5
DAVOX                                LR     LR      12 47 59.4
      comp=Z,638nm,20.7s,baz=348,slow=36
ABTA  Abfaltersbach     26.76 171   eP     P       12 37 31.8 +0.7
      comp=Z,11nm,1.2s
VRH   Novokhopyorsk     26.79 126   eP     P       12 37 28.9  -2.3
VRH                                  pmax   pmax
      comp=Z,60nm,1.5s
SVE   Sverdlovsk        26.80  98   eP     P       12 37 30.6  -0.6
SVE                                  pmax   pmax
      comp=Z,39nm,1.5s
LTVH  Ltavrtes, Hu      26.90 156   eP     P       12 37 30.7  -1.5
MYKA  Terra Mystica     26.94 169   eP     P       12 37 33.8 +1.1
      comp=Z,16nm,1.4s
SOKA  Soboth            26.98 167   i P    P       12 37 34.2 +1.2
      comp=Z,15nm,1.2s,SNR=5.2
ZOU   Zoufplan          26.98 170    P     P       12 37 33.3 +0.1
ZOU                                  IAmb   IAmb    12 37 50.7
      comp=Z,33nm,1.3s
SENIN Lac Senin/Sane    27.01 179    P     P       12 37 33.1  -0.3
FRB   Frobisher Bay     27.04 289    P     P       12 37 32.2  -1.0
      comp=Z,1.8nm,0.9s,baz=25,slow=9.4,SNR=2.3
SORM  Soroca            27.06 147  ⇑P     P       12 37 33.4  -0.2
BUR08 Bucovina Ar. S    27.07 151    P     P       12 37 34.2 +0.3
BUR08                                IAmb   IAmb    12 37 46.5
      comp=Z,36nm,1.3s
BURAR Bucovina Array    27.10 151  ⇑P     P       12 37 34.3 +0.2
OBKA  Obir              27.11 168   eP     P       12 37 35.7 +1.5
      comp=Z,26nm,1.3s
BELG  Belogornoye       27.14 118    P     P       12 37 33.5  -0.8
      comp=Z,60nm,1.1s,baz=333,slow=2.3,SNR=15
BELG  Belogornoye       27.14 118⇓iP     P       12 37 33.5  -0.8
BELG                                 pmax   pmax
      comp=Z,17nm,1.1s
BEHE  Becsehely         27.31 164   eP     P       12 37 40.0 +4.1
CTI   Castel Tesino     27.43 172    P     P       12 37 36.3  -0.8
CTI                                  pmax   pmax
      comp=Z,22nm,1.1s
CTI   Castel Tesino     27.43 172    P     P       12 37 36.3  -0.8
DRGR                    27.58 155  ⇑P     P       12 37 38.4   0.0
MORH  Mrgy, Hungar      27.72 162   eP     P       12 37 25.3  -14
AMBH  Ambrzfalva        27.79 158   eP     P       12 37 41.0 +0.8
BIZ   Bicaz             27.88 150  ⇑P     P       12 37 41.6 +0.5
SIRR  Siria             27.98 157  ⇑P     P       12 37 43.2 +1.3
BZS   Buzias            28.61 157  ⇑P     P       12 37 48.7 +1.2
DOPR  Dopca             28.74 152  ⇑P     P       12 37 48.0  -0.6
GZR   Gura Zlata        28.97 156  ⇑P     P       12 37 52.1 +1.3
VRI   Vrincioaia        29.02 150  ⇓P     P       12 37 51.7 +0.6
PLOR  Plostina          29.03 150  ⇑P     P       12 37 52.2 +0.9
VOIR                    29.21 153  ⇑P     P       12 37 53.7 +0.8
ARR   Arges             29.22 153  ⇑P     P       12 37 54.4 +1.3
MLR   Muntele Rosu      29.28 151    P     P       12 37 51.8  -1.8
      comp=Z,1.5nm,0.6s,baz=3.9,slow=8.0,SNR=3.7
MLR   Muntele Rosu      29.28 151  ⇑P     P       12 37 53.1  -0.5
MLR   Muntele Rosu      29.28 151    P     P       12 37 54.3 +0.7
MLR                                  pmax   pmax
      comp=Z,29nm,1.5s
MLR   Muntele Rosu      29.28 151    P     P       12 37 54.3 +0.7
MLR                                  IAmb   IAmb    12 38 10.4
      comp=Z,29nm,1.5s
HERR  Herculane         29.43 157  ⇑P     P       12 37 56.0 +1.2
CFR   Carcaliu          29.91 148  ⇑P     P       12 37 58.8  -0.1
OSSC  Osservatorio P    29.93 173    P     P       12 37 57.7  -1.6
OSSC                                 IAmb   IAmb    12 38 09.7
      comp=Z,38nm,1.3s
MURB  Monte Urbino      30.24 171    P     P       12 37 59.2  -2.8
TPGR  Topolog           30.26 148  ⇑P     P       12 38 02.4 +0.2
NRCA  Norcia            30.70 170    P     P       12 38 06.5 +0.4
TIXI  Tiksi             30.82  31d iP     P       12 38 09.6 +2.8
TIXI                                 pmax   pmax
      comp=Z,113nm,1.7s
TIXI  Tiksi             30.82  31    P     P       12 38 08.4 +1.6
TIXI                                 IAmb   IAmb    12 38 16.6
      comp=Z,14nm,0.9s
LATE  Laterza           30.86 172    P     P       12 38 04.7  -2.8
AKTO  Aktyubinsk        31.69 107    P     P       12 38 14.2  -0.5
      comp=Z,16nm,1.1s,baz=334,slow=9.5,SNR=20
AKTO                                 PP     PP      12 39 16.2  -10
      comp=Z,7.9nm,0.9s,baz=342,slow=11,SNR=4.0
VTS   Vitosha           31.76 156  ⇑P     P       12 38 15.5   0.0
BRVK  Borovoye          32.84  93ceP     P       12 38 25.4 +0.6
BRVK                                 pmax   pmax
      comp=Z,18nm,1.0s
BRVK  Borovoye          32.84  93    P     P       12 38 24.5  -0.3
BRVK                                 IAmb   IAmb    12 38 27.0
      comp=Z,32nm,1.4s
GOF   Gofitskoye        32.87 129⇑iP     P       12 38 25.7 +0.6
GOF                                  pmax   pmax
      comp=Z,104nm,1.1s
BVAR  Borovoye Array    32.90  92    P     P       12 38 25.1  -0.2
      comp=Z,1.2nm,0.8s,baz=350,slow=38,SNR=6.2
BVAR                                 PP     PP      12 39 34.5  -4.9
      comp=Z,2.2nm,0.7s,baz=342,slow=17,SNR=3.8
ABKAR Akbulak array     33.29 106    P     P       12 38 27.9  -0.8
ABKAR                                IAmb   IAmb    12 38 30.2
      comp=Z,44nm,1.4s
FNA   Florina           33.37 159    P     P       12 38 29.4  -0.1
FNA                                  pmax   pmax
      comp=Z,21nm,0.9s
FNA   Florina           33.37 159    P     P       12 38 29.4  -0.1
FNA                                  IAmb   IAmb    12 38 36.9
      comp=Z,21nm,0.9s
SOC   Sochi             33.55 134   eP     P       12 38 30.2  -0.8
SOC                                 e               12 39 40.7
SOC                                 eS     S       12 43 53.6 +0.8
SOC                                 eSS    SnSn    12 45 56.3 +1.3
SOC                                 eSSS   SSS     12 46 17.6
SOC                                  MLR    MLR
      comp=Z,434nm,13.0s
KIV   Kislovodsk        33.84 130   eP     P       12 38 33.8 +0.2
KIV                                 eS     S       12 43 58.8 +1.4
KIV                                  pmax   pmax
      comp=Z,48nm,1.1s
KIV                                  MLR    MLR
      comp=Z,1µm,15.0s
KIV   Kislovodsk        33.84 130    P     P       12 38 32.5  -1.1
KIV                                  IAmb   IAmb    12 38 36.5
      comp=Z,22nm,1.2s
KVAR  Kislovodsk Arr    33.84 130    P     P       12 38 34.3 +0.6
      comp=Z,19nm,1.2s,baz=334,slow=7.3,SNR=12
ESDC  Sonseca Array     34.07 194    P     P       12 38 35.5  -0.2
      comp=Z,0.6nm,0.5s,baz=30,slow=39,SNR=5.0
C36M  Paulatuk          34.08 331    P     P       12 38 34.7  -0.6
      baz=23
C36M  Paulatuk          34.08 331    P     P       12 38 34.9  -0.5
KBZ   Khabaz            34.10 130    P     P       12 38 36.5 +0.7
      comp=Z,9.5nm,1.1s,baz=329,slow=6.9,SNR=17
KBZ   Khabaz            34.10 130d iP     P       12 38 36.2 +0.4
KBZ                                  pmax   pmax
      comp=Z,34nm,1.5s
LIT   Litokhoron        34.16 158    P     P       12 38 35.2  -1.2
LIT                                  pmax   pmax
      comp=Z,36nm,1.4s
LIT   Litokhoron        34.16 158    P     P       12 38 35.2  -1.2
LIT                                  IAmb   IAmb    12 38 38.0
      comp=Z,36nm,1.4s
NCK   Nalchik           34.48 129⇑iP     P       12 38 40.7 +1.6
NCK                                  pmax   pmax
      comp=Z,104nm,1.4s
ILGA  Ilgaz             34.84 143    P     P       12 38 43.5 +1.1
ILGA                                 IAmb   IAmb    12 38 46.2
      comp=Z,29nm,1.2s
ZEI   Tsey              35.22 129   eP     P       12 38 45.6  -0.1
ZEI                                  pmax   pmax
      comp=Z,13nm,1.2s
BR131 Keskin Array S    36.12 143    P     P       12 38 52.7  -0.7
BR131                                pmax   pmax
      comp=Z,21nm,1.4s
BR131 Keskin Array S    36.12 143    P     P       12 38 52.7  -0.7
BR131                                IAmb   IAmb    12 38 55.1
      comp=Z,21nm,1.4s
BRTR  Keskin Array B    36.12 143    P     P       12 38 54.1 +0.7
      comp=Z,4.9nm,1.1s,baz=327,slow=5.9,SNR=13
BRTR                                 PP     PP      12 40 15.0  -0.2
      comp=Z,2.5nm,1.1s,baz=343,slow=12,SNR=2.0
BRTR  Keskin Array B    36.12 143   i P    P       12 38 54.7 +1.3
BRTR                                 pmax   pmax
      comp=Z,5.0nm,1.1s
ZAA0  Zalesovo Array    36.24  78    P     P       12 38 54.3 +0.2
ZALV  Zalesovo Beam     36.24  78    P     P       12 38 54.1  -0.1
      comp=Z,7.5nm,0.8s,baz=330,slow=8.6,SNR=25
ZALV                                 PP     PP      12 40 18.6 +2.3
      comp=Z,3.2nm,1.1s,baz=352,slow=8.7,SNR=1.7
ZALV                                 PcP    PcP     12 41 20.0 +1.1
      comp=Z,0.6nm,0.5s,baz=339,slow=3.6,SNR=3.2
ZALV  Zalesovo Beam     36.24  78   i P    P       12 38 54.7 +0.6
ZALV                                 pmax   pmax
      comp=Z,8.0nm,0.9s
BRZS  Berezniki         36.27  93   eP     P       12 38 53.6  -0.8
      comp=Z,15nm,1.4s,baz=94
BRZS                                eS     S       12 44 35.0 +0.5
      baz=94
BRZS  Berezniki         36.27  93   eP     P       12 38 53.6  -0.8
BRZS                                eS     S       12 44 35.0 +0.5
BRZS                                 pmax   pmax
      comp=Z,15nm,1.4s
INK   Inuvik            36.27 336    P     P       12 38 54.0  -0.2
INK                                  pmax   pmax
      comp=Z,13nm,1.2s
INK   Inuvik            36.27 336    P     P       12 38 54.0  -0.2
KURK  Kurchatov         37.33  86d iP     P       12 39 03.7 +0.3
KURK                                 pmax   pmax
      comp=Z,20nm,1.0s
KURK  Kurchatov         37.33  86    P     P       12 39 03.2  -0.3
AKT   Akhty             37.35 125   eP     P       12 39 03.9 +0.1
AKT                                 e               12 40 28.6
AKT                                  pmax   pmax
      comp=Z,76nm,1.2s
KEST  Kesra             37.66 176    P     P       12 39 06.9 +0.5
      comp=Z,2.1nm,0.6s,baz=64,slow=9.4,SNR=1.8
FCC   Fort Churchill    37.87 303    P     P       12 39 07.5  -0.4
FCC                                  pmax   pmax
      comp=Z,18nm,1.5s
FCC   Fort Churchill    37.87 303    P     P       12 39 07.5  -0.4
GNI   Garni             37.92 129    P     P       12 39 09.6 +0.9
      comp=Z,7.2nm,0.8s,baz=297,slow=3.3,SNR=15
GNI                                  PP     PP      12 40 33.7  -1.5
      comp=Z,2.8nm,0.3s,baz=114,slow=22,SNR=1.2
GNI   Garni             37.92 129d iP     P       12 39 09.9 +1.1
GNI                                  pmax   pmax
      comp=Z,69nm,1.7s
GNI   Garni             37.92 129    P     P       12 39 09.1 +0.3
SEM   Semipalatinsk     38.08  85   eP     P       12 39 09.0  -1.1
      comp=Z,7.5nm,1.3s,baz=86
SEM   Semipalatinsk     38.08  85   eP     P       12 39 08.9  -1.1
SEM                                  pmax   pmax
      comp=Z,7.0nm,1.3s
EPYK  Eagle Plains      38.50 337    P     P       12 39 13.1  -0.1
      baz=16
EPYK  Eagle Plains      38.50 337    P     P       12 39 11.4  -1.7
EPYK                                 IAmb   IAmb    12 39 23.8
      comp=Z,35nm,1.4s
RDOG  Red Dog Mine      38.73 354    P     P       12 39 16.4 +1.4
YKA   Yellowknife Ar    38.88 321    P     P       12 39 15.2  -1.2
      comp=Z,3.4nm,1.0s,baz=25,slow=8.8,SNR=37
YKA                                  PP     PP      12 40 44.9  -0.1
      comp=Z,4.6nm,1.2s,baz=21,slow=10,SNR=2.5
YKA                                  PcP    PcP     12 41 27.1 +0.3
      comp=Z,1.4nm,1.1s,baz=20,slow=2.9,SNR=3.7
YKA   Yellowknife Ar    38.88 321   i P    P       12 39 16.0  -0.3
YKA                                  pmax   pmax
      comp=Z,3.0nm,1.0s
COLD  Coldfoot          38.90 346    P     P       12 39 16.8 +0.3
      baz=11,SNR=9.3
COLD  Coldfoot          38.90 346    P     P       12 39 16.7 +0.3
FYU   Fort Yukon        39.16 342    P     P       12 39 19.6 +1.0
YAK   Yakutsk           39.71  38   eP     P       12 39 21.4  -1.8
YAK                                 eS     S       12 45 25.1  -1.1
YAK                                  pmax   pmax
      comp=Z,10.0nm,1.3s
YAK                                  pmax   pmax
      comp=N,9.0nm,1.5s
YAK                                  pmax   pmax
      comp=E,5.0nm,1.3s
YAK                                  pmax   pmax
      comp=Z,154nm,5.3s
YAK                                  pmax   pmax
      comp=N,279nm,6.4s
YAK                                  pmax   pmax
      comp=E,101nm,5.8s
YAK                                  smax   smax
      comp=E,204nm,6.4s
YAK                                  smax   smax
      comp=N,106nm,5.3s
YAK                                  MLR    MLR
      comp=Z,484nm,27.0s
YAK                                  MLR    MLR
      comp=N,316nm,20.0s
YAK                                  MLR    MLR
      comp=E,329nm,23.0s
PRP   Porcupine Dome    40.21 342    P     P       12 39 28.4 +0.8
EGAK  Eagle             40.52 339    P     P       12 39 30.2 +0.2
POKR  Poker Plat Res    40.77 343    P     P       12 39 34.1 +2.1
      baz=11
POKR  Poker Plat Res    40.77 343    P     P       12 39 33.5 +1.4
DGZ   Jazzator, Alta    40.77  79⇓iP     P       12 39 33.4 +1.0
DGZ                                  pmax   pmax
      comp=Z,12nm,1.1s
I23K  Minto, Yukon-K    40.89 345    P     P       12 39 34.7 +1.7
      baz=10,SNR=8.2
I23K  Minto, Yukon-K    40.89 345    P     P       12 39 34.5 +1.5
MDM   Murphy Dome       40.99 344    P     P       12 39 35.0 +1.1
DAWY  Dawson            41.03 338    P     P       12 39 30.9  -3.3
COLA  College           41.04 344⇑iP     P       12 39 35.6 +1.4
COLA                                 pmax   pmax
      comp=Z,29nm,1.9s
COLA  College           41.04 344    P     P       12 39 35.2 +1.0
TCOL  CIGO, UAF Yank    41.04 344    P     P       12 39 35.7 +1.5
      baz=11
TCOL  CIGO, UAF Yank    41.04 344    P     P       12 39 36.0 +1.7
IL31                    41.06 343    P     P       12 39 35.1 +0.8
ILAR  Eielson Array     41.06 343    P     P       12 39 35.6 +1.2
      comp=Z,3.6nm,1.0s,baz=2.7,slow=7.4,SNR=29
MLY   Manley            41.11 345    P     P       12 39 36.4 +1.5
      baz=9.9,SNR=6.2
BTLS  Baital            41.13  95   eP     P       12 39 34.7  -0.5
      comp=Z,12nm,1.3s,baz=96
BTLS  Baital            41.13  95   eP     P       12 39 34.7  -0.5
BTLS                                 pmax   pmax
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	comp=Z,12nm,1.3s						
CCB	Clear Creek Bu	41.26	344	P	P	12 39 36.8	+0.7
K27K	Chicken	41.34	340	P	P	12 39 38.1	+1.4
	baz=13						
K27K	Chicken	41.34	340	P	P	12 39 36.9	+0.2
NEA2	Nenana	41.41	344	P	P	12 39 38.5	+1.1
	baz=10						
HDA	Harding Lake	41.42	343	P	P	12 39 38.4	+0.9
	baz=11,SNR=5.1						
HDA	Harding Lake	41.42	343	P	P	12 39 37.9	+0.5
WRH	Wood River Hil	41.46	344	P	P	12 39 39.9	+2.2
MATQ	Matagami	41.58	284	P	P	12 39 38.7	-0.1
	baz=26						
SCRK	Sand Creek	41.58	341	P	P	12 39 39.9	+1.1
	baz=12,SNR=5.1						
BRLS	Borolday	41.77	100	eP	P	12 39 42.5	+2.0
	baz=101						
BRLS	Borolday	41.77	100	eP	P	12 39 42.5	+2.0
MAKZ	Makanchi	41.82	86	P	P	12 39 41.3	+0.4
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
MAKZ	Makanchi	41.82	86	P	P	12 39 41.2	+0.4
RIDG	Independent Ri	41.89	341	P	P	12 39 42.0	+0.6
DOT	Dot Lake	41.91	341	P	P	12 39 40.9	-0.6
DOT				IAmb	IAmb	12 39 43.6	
	comp=Z,32nm,1.5s						
MK31	Makanchi Array	41.92	86	P	P	12 39 42.2	+0.5
MK31				pmax	pmax		
	comp=Z,19nm,1.3s						
MK31	Makanchi Array	41.92	86	P	P	12 39 42.2	+0.5
MKAR	Makanchi Array	41.92	86	P	P	12 39 42.4	+0.6
	comp=Z,16nm,1.1s,baz=347,slow=5.0,SNR=50						
MKAR				PP	PP	12 41 21.2	+2.8
	comp=Z,6.1nm,1.0s,baz=342,slow=9.1,SNR=5.8						
MKAR	Makanchi Array	41.92	86	iP	P	12 39 42.5	+0.8
MKAR				pmax	pmax		
	comp=Z,16nm,1.1s						
LSQQ	Lebel-sur-Quev	42.03	283	P	P	12 39 42.7	+0.2
	baz=26						
BPAW	Bear Paw Mtn.	42.05	345	P	P	12 39 43.7	+1.2
SEY	Seymchan	42.14	22	⇓iP	P	12 39 44.8	+1.5
MCK	McKinley	42.25	344	P	P	12 39 45.4	+1.2
	baz=10						
ANM	Nome	42.30	355	P	P	12 39 45.0	+0.5
ANM				pmax	pmax		
	comp=Z,21nm,1.4s						
ANM	Nome	42.30	355	P	P	12 39 45.0	+0.5
DZA	Taraz	42.32	99	eP	P	12 39 45.5	+0.5
	baz=100						
DZA	Taraz	42.32	99	eP	P	12 39 45.5	+0.5
LATQ	La Tuque	42.35	278	P	P	12 39 45.7	+0.6
	baz=25						
TDK	Taldyqorghan	42.43	91	eP	P	12 39 46.2	+0.3
	comp=Z,25nm,1.4s,baz=91						
TDK				eS	S	12 46 08.4	+1.2
	baz=91						
TDK	Taldyqorghan	42.43	91	eP	P	12 39 46.2	+0.3
TDK				eS	S	12 46 08.3	+1.2
TDK				pmax	pmax		
	comp=Z,25nm,1.4s						
RND	Reindeer	42.57	344	P	P	12 39 47.5	+0.6
RND				pmax	pmax		
	comp=Z,11nm,1.0s						
RND	Reindeer	42.57	344	P	P	12 39 47.5	+0.6
MENT	Mentasta	42.57	340	P	P	12 39 48.2	+1.4
KTH	Kantishna Hill	42.59	345	P	P	12 39 48.8	+1.8
D58A	Chemin du LacG	42.64	278	P	P	12 39 48.4	+0.8
	baz=25						
IUG	Iuzhnay	42.64	100	eP	P	12 39 48.0	+0.3
	comp=Z,25nm,1.4s,baz=101						
IUG				eS	S	12 46 11.8	+1.3
	baz=101						
IUG	Iuzhnay	42.64	100	eP	P	12 39 48.0	+0.3
IUG				eS	S	12 46 11.7	+1.3
IUG				pmax	pmax		
	comp=Z,25nm,1.4s						
MOY	Mondy	42.73	66	eP	P	12 39 50.1	+1.7
MOY				pmax	pmax		
	comp=Z,17nm,1.3s						
SGDS	Sogindy	42.76	95	eP	P	12 39 48.9	+0.3
	comp=Z,18nm,1.5s,baz=96						
SGDS	Sogindy	42.76	95	eP	P	12 39 48.9	+0.3
SGDS				pmax	pmax		
	comp=Z,18nm,1.5s						
KUU	Kurty	42.85	93	eP	P	12 39 48.8	-0.5
	comp=Z,51nm,1.4s,baz=94						
KUU	Kurty	42.85	93	eP	P	12 39 48.7	-0.5
KUU				pmax	pmax		
	comp=Z,51nm,1.4s						
USP	Ospenovka	42.89	95	P	P	12 39 51.7	+2.0
	SNR=9.9						
IRK	Irkutsk	43.07	63	eP	P	12 39 50.4	-0.5
IRK				pmax	pmax		
	comp=Z,90nm,2.3s						
CHKK	Chushkaly	43.07	93	eP	P	12 39 50.6	-0.5
	baz=93						
CHKK	Chushkaly	43.07	93	eP	P	12 39 50.6	-0.5
D56A	ZEC Mazanza, M	43.22	279	P	P	12 39 52.6	+0.4
	baz=25						
GEYT	Alibeck	43.30	115	P	P	12 39 54.0	+1.0
	comp=Z,12nm,0.9s,baz=294,slow=7.4,SNR=15						
GEYT				PP	PP	12 41 32.9	-0.5
	comp=Z,5.0nm,0.9s,baz=270,slow=19,SNR=4.0						
GYA0B	ALIBECK ARRAY	43.30	115	P	P	12 39 53.8	+0.8
GYA0B				IAmb	IAmb	12 39 56.0	
	comp=Z,18nm,0.9s						
FFC	Flin Flon	43.39	307	P	P	12 39 52.4	-1.1
FFC				pmax	pmax		
	comp=Z,26nm,1.4s						
FFC	Flin Flon	43.39	307	P	P	12 39 52.4	-1.1
FFC				IAmb	IAmb	12 39 54.2	
	comp=Z,26nm,1.4s						
E58A	La Victoria	43.41	278	P	P	12 39 55.1	+1.4
	baz=24						
TLY	Talaya	43.41	64	eP	P	12 39 54.7	+0.9
TLY				eS	S	12 46 29.2	+7.8
TLY				eSS	SnSn	12 49 49.5	-3.0
TLY				pmax	pmax		
	comp=Z,56nm,2.3s						
TLY	Talaya	43.41	64	P	P	12 39 55.3	+1.5
AAK	Ala-Archa	43.47	96	deP	P	12 39 53.7	-0.8
AAK				pmax	pmax		
	comp=Z,13nm,0.6s						
TKM2	Tokmak 2	43.52	94	P	P	12 39 56.6	+1.6
	SNR=8.6						
TKM2	Tokmak 2	43.52	94	iP	P	12 39 56.0	+1.0
TKM2				pmax	pmax		
	comp=Z,16nm,1.1s						
TTA	Tatalina	43.54	348	P	P	12 39 56.1	+1.4
TTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TTA	Tatalina	43.54	348	P	P	12 39 56.0	+1.4
AAA	Alma-Ata	43.64	93	eP	P	12 39 56.4	+0.6
	baz=94						
AAA	Alma-Ata	43.64	93	eP	P	12 39 56.3	+0.6
MDOK	Medeo	43.72	93	eP	P	12 39 56.7	+0.1
	baz=94						
MDOK	Medeo	43.72	93	eP	P	12 39 56.6	+0.1
E56A	St. Veronique	43.76	279	P	P	12 39 56.8	+0.3
	baz=24						
TNSS	Tian-Shan	43.81	93	eP	P	12 39 58.8	+1.3
	baz=94						
TNSS	Tian-Shan	43.81	93	eP	P	12 39 58.7	+1.3
TRQ	Mont Tremblant	43.91	279	P	P	12 39 58.4	+0.5
KPKS	Kokpek	43.92	91	eP	P	12 39 57.7	-0.3
	comp=Z,31nm,1.3s,baz=92						
KPKS	Kokpek	43.92	91	eP	P	12 39 57.6	-0.4
KPKS				pmax	pmax		
	comp=Z,31nm,1.3s						
SATY	Saty	44.21	92	eP	P	12 40 00.2	-0.2
	comp=Z,14nm,1.3s,baz=92						
SATY	Saty	44.21	92	eP	P	12 40 00.2	-0.2
SATY				pmax	pmax		
	comp=Z,14nm,1.3s						
SHLS	Shalkode	44.42	91	eP	P	12 40 03.2	+1.1
	comp=Z,55nm,1.6s,baz=91						
SHLS	Shalkode	44.42	91	eP	P	12 40 03.2	+1.1
SHLS				pmax	pmax		
	comp=Z,55nm,1.6s						
ZAK	Zakamensk	44.50	65	eP	P	12 40 03.4	+0.8
ZAK				e		12 41 46.4	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SUA	Susitna One	44.64	345	P	P	12 40 03.7	+0.1
SUA				IAmb	IAmb	12 40 19.1	
	comp=Z,26nm,1.0s						
G57A	Newington	45.06	278	P	P	12 40 04.6	-2.4
	baz=24						
MA2	Magadan	45.23	25	⇓eP	P	12 40 09.4	+1.2
MA2				pmax	pmax		
	comp=Z,22nm,1.7s						
MA2	Magadan	45.23	25	P	P	12 40 08.6	+0.4
MA2				IAmb	IAmb	12 40 10.4	
	comp=Z,22nm,1.4s						
DLBC	Dease Lake	45.27	329	P	P	12 40 08.6	-0.1
DLBC				IAmb	IAmb	12 40 14.4	
	comp=Z,19nm,1.5s						
G54A	Lake Saint Pet	45.67	281	P	P	12 40 10.7	-1.1
	baz=24						
ULM	Lac du Bonnet	46.03	299	P	P	12 40 13.5	-1.1
	comp=Z,7.5nm,1.1s,baz=29,slow=8.6,SNR=9.6						
ULM	Lac du Bonnet	46.03	299	P	P	12 40 13.7	-0.8
ULM				IAmb	IAmb	12 40 16.8	
	comp=Z,26nm,1.4s						
WMQ	Urumqi	46.19	82	P	P	12 40 17.8	+1.8
WMQ				pP	pwP	12 40 22.8	+1.0
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.5s						
WMQ	Urumqi	46.19	82	P	P	12 40 17.2	+1.2
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ	Urumqi	46.19	82	P	P	12 40 17.2	+1.2
WMQ				IAmb	IAmb	12 40 19.4	
	comp=Z,17nm,0.9s						
SADO	Sadowa	46.55	282	P	P	12 40 18.0	-0.7
KSH	Kashi	46.77	96	P	P	12 40 22.6	+1.9
KSH				pP	pwP	12 40 26.1	-0.3
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,860nm,5.2s						
ZEA	Zeya	47.01	44	eP	P	12 40 24.0	+1.8
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,100nm,4.2s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.8s						
ZEA				MLR	MLR		
	comp=N,200nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,18.0s						
B35A	Bob, Littlefor	47.22	297	P	P	12 40 23.6	-0.3
B35A				IAmb	IAmb	12 40 33.4	
	comp=Z,13nm,1.1s						
SONM	Songino Array	47.66	64	P	P	12 40 28.0	+0.5
	comp=Z,8.8nm,1.0s,baz=324,slow=6.8,SNR=28						
SONM				PcP	PcP	12 41 57.6	+0.9
	comp=Z,4.2nm,1.1s,baz=294,slow=3.9,SNR=4.6						
HRA	Herat	47.73	112	P	P	12 40 28.1	-0.3
HRA				IAmb	IAmb	12 40 30.9	
	comp=Z,29nm,1.4s						
ULN	Ulaanbaatar	47.80	63	deP	P	12 40 29.9	+1.2
ULN				pmax	pmax		
	comp=Z,26nm,1.3s						
ULN	Ulaanbaatar	47.80	63	P	P	12 40 29.6	+0.9
ULN				IAmb	IAmb	12 40 31.9	
	comp=Z,18nm,1.0s						
AGMN	Agassiz Nation	47.83	298	P	P	12 40 28.3	-0.3
	baz=22,SNR=7.5						
AGMN	Agassiz Nation	47.83	298	P	P	12 40 27.9	-0.8
AGMN				IAmb	IAmb	12 40 29.5	
	comp=Z,27nm,1.2s						
KDAK	Kodiak Island	48.43	345	⇑eP	P	12 40 33.8	+0.6
KDAK				pmax	pmax		
	comp=Z,86nm,1.8s						
KDAK	Kodiak Island	48.43	345	P	P	12 40 33.2	0.0
KDAK				IAmb	IAmb	12 40 34.7	
	comp=Z,26nm,1.2s						
L56A	Greenwood	48.52	279	P	P	12 40 35.6	+1.4
	baz=23						
WVNY	West Valley, N	48.57	280	P	P	12 40 34.6	+0.1
G40A	Rib Lake	49.14	292	P	P	12 40 38.4	-0.5
G40A				IAmb	IAmb	12 40 39.5	
	comp=Z,27nm,1.4s						
MDND	Maddock	49.18	301	P	P	12 40 39.2	+0.1
	baz=22						
MDND	Maddock	49.18	301	P	P	12 40 38.9	-0.3
F36A	Milaca	49.48	295	P	P	12 40 40.7	-0.6
F36A				IAmb	IAmb	12 40 42.2	
	comp=Z,22nm,1.4s						
HIA	Hailar	49.59	52	P	P	12 40 43.0	+0.7
HIA				pmax	pmax		
	comp=Z,15nm,1.2s						
HIA	Hailar	49.59	52	P	P	12 40 43.0	+0.7
HIA				IAmb	IAmb	12 40 50.9	
	comp=Z,15nm,1.2s						
M54A	Oil Creek Stat	49.70	281	P	P	12 40 43.8	+0.7
	baz=22						
DGMT	Dagmar	49.71	305	P	P	12 40 44.2	+1.1
	baz=21						
DGMT	Dagmar	49.71	305	P	P	12 40 44.1	+0.9
N57A	Milroy	49.79	278	P	P	12 40 45.4	+1.5
	baz=22						
O59A	Robesonia	49.81	277	P	P	12 40 44.4	+0.4
	baz=22						
SPMN	Marine on St.	49.88	294	P	P	12 40 45.1	+0.7
	baz=22						
SPMN	Marine on St.	49.88	294	P	P	12 40 44.3	-0.1
M53A	WI Miller and	50.05	282	P	P	12 40 45.9	+0.1
	baz=22						
M53A	WI Miller and	50.05	282	P	P	12 40 46.9	+1.1
M53A				IAmb	IAmb	12 40 56.1	
	comp=Z,16nm,0.9s						
I42A	Draeger Farm,	50.07	290	P	P	12 40 46.5	+0.6
I42A				IAmb	IAmb	12 40 47.1	
	comp=Z,20nm,1.1s						
M52A	Chesterland	50.15	282	P	P	12 40 47.1	+0.5
O58A	Lewisberry	50.20	278	P	P	12 40 48.2	+1.3
	baz=22						
F33A	5 Mile Ranch,	50.22	297	P	P	12 40 46.4	-0.5
N54A	Moraine State	50.30	281	P	P	12 40 49.3	+1.6
	baz=22						
N54A	Moraine State	50.30	281	P	P	12 40 47.6	-0.1
N54A				IAmb	IAmb	12 40 54.0	
	comp=Z,21nm,1.1s						
O57A	Amberson	50.32	278	P	P	12 40 48.9	+1.0
	baz=22						
TAM	Tamanrasset	50.52	181	P	P	12 40 50.9	+1.1
TAM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TAM	Tamanrasset	50.52	181	P	P	12 40 50.9	+1.1
I40A	Norwalk	50.53	292	P	P	12 40 49.4	-0.1
I40A				IAmb	IAmb	12 40 50.6	
	comp=Z,20nm,1.2s						
O56A	Blue Knob Stat	50.53	279	P	P	12 40 48.8	-0.8
	baz=22						
O56A	Blue Knob Stat	50.53	279	P	P	12 40 50.7	+1.2
N51A	Ashland	51.01	283	P	P	12 40 53.0	-0.1
N51A				IAmb	IAmb	12 40 56.1	
	comp=Z,24nm,1.1s						
I37A	Lemond, Waseca	51.16	294	P	P	12 40 54.6	+0.4
O53A	New Philadelph	51.30	282	P	P	12 40 56.3	+1.0
	baz=22						
O53A	New Philadelph	51.30	282	P	P	12 40 56.0	+0.7
WALA	Waterton Lakes	51.33	313	P	P	12 40 55.7	+0.2
WALA				IAmb	IAmb	12 40 58.0	
	comp=Z,31nm,1.4s						
JFWS	Jewell Farm	51.34	291	P	P	12 40 55.0	-0.5
	baz=22						
EGMT	Eagleton	51.41	310	P	P	12 40 56.7	+0.6
	baz=19,SNR=5.9						
EGMT	Eagleton	51.41	310	P	P	12 40 56.5	+0.4
EGMT				IAmb	IAmb	12 40 57.0	
	comp=Z,40nm,1.4s						
MCWV	Mont Chateau	51.47	280	P	P	12 40 57.6	+1.2
MCWV				IAmb	IAmb	12 40 58.3	
	comp=Z,8.5nm,0.4s						
NIL	Nilore	51.47	101	P	P	12 40 56.5	-0.1
NIL				pmax	pmax		
	comp=Z,43nm,1.5s						
NIL	Nilore	51.47	101	P	P	12 40 56.5	-0.1
NIL				IAmb	IAmb	12 40 58.3	
	comp=Z,43nm,1.5s						
N49A	Columbus Grove	51.52	285	P	P	12 40 56.6	-0.2
N49A				IAmb	IAmb	12 40 58.6	
	comp=Z,25nm,1.1s						
GRNR	Gornyy	51.59	38	⇑iP	P	12 40 58.4	+1.1
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GRNR				MLR	MLR		
	comp=E,140nm,17.0s						
GRNR				MLR	MLR		
	comp=N,160nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,310nm,16.0s						
O52A	Adamsville	51.61	282	P	P	12 40 57.5	0.0
O52A				IAmb	IAmb	12 41 00.4	
	comp=Z,33nm,1.1s						
ACSO	Alum Creek Sta	51.82	283	P	P	12 40 59.8	+0.7
	baz=22						
ACSO	Alum Creek Sta	51.82	283	P	P	12 40 59.8	+0.7
ACSO				IAmb	IAmb	12 41 00.8	
	comp=Z,37nm,1.2s						
Q56A	Snyder Ridge,	51.85	279	P	P	12 41 00.8	+1.4
	baz=22						
Q56A	Snyder Ridge,	51.85	279	P	P	12 41 00.5	+1.2
Q56A				IAmb	IAmb	12 41 26.7	
	comp=Z,25nm,1.5s						
LAO	LASA Array	51.86	306	P	P	12 41 01.2	+1.7
	baz=20						
LAO	LASA Array	51.86	306	P	P	12 41 00.4	+1.0
P53A	Whipple	52.06	281	P	P	12 41 01.3	+0.3
M44A	Midewin, Midew	52.16	288	P	P	12 41 02.1	+0.5
KLR	Kul'dur	52.18	43	⇑eP	P	12 41 04.0	+2.3
KLR				pmax	pmax		
	comp=Z,13nm,1.8s						
R58A	Rapidan	52.20	278	P	P	12 41 04.2	+2.3
	baz=21						
ECSD	EROS Data Cent	52.26	297	P	P	12 41 02.7	+0.4
	baz=21,SNR=16						
ECSD	EROS Data Cent	52.26	297	P	P	12 41 02.8	+0.4
Q54A	Coxs Mills	52.37	281	P	P	12 41 03.7	+0.4
Q54A				IAmb	IAmb	12 41 13.8	
	comp=Z,23nm,1.1s						
L40A	Anamosa	52.40	291	P	P	12 41 02.7	-0.6
L40A				IAmb	IAmb	12 41 06.6	
	comp=Z,32nm,1.3s						
R56A	Bull Pasture M	52.50	279	P	P	12 41 04.9	+0.6
	baz=21						
P51A	Williamsport	52.54	283	P	P	12 41 04.8	+0.4
P51A				IAmb	IAmb	12 41 05.8	
	comp=Z,34nm,1.3s						
Q53A	Leroy	52.69	281	P	P	12 41 04.8	-0.8
	baz=21						
NEW	Newport	52.75	316	P	P	12 41 06.3	+0.3
NEW	Newport	52.75	316	P	P	12 41 06.8	+0.8
	baz=18,SNR=6.6						
NEW	Newport	52.75	316	P	P	12 41 06.3	+0.3
NEW				IAmb	IAmb	12 41 09.2	
	comp=Z,20nm,1.4s						
Q52A	Bidwell	52.80	282	P	P	12 41 06.2	-0.1
Q52A				IAmb	IAmb	12 41 09.0	
	comp=Z,27nm,1.2s						
SFIN	Lafayette	52.84	287	P	P	12 41 06.7	+0.1
	baz=21						
SFIN	Lafayette	52.84	287	P	P	12 41 07.2	+0.5
SFIN				IAmb	IAmb	12 41 20.9	
	comp=Z,21nm,1.3s						
P49A	Miami Univ. Ec	52.96	284	P	P	12 41 07.6	+0.1
	baz=21						
P49A	Miami Univ. Ec	52.96	284	IAmb	IAmb	12 41 08.2	
	comp=Z,40nm,1.3s						
P49A				P	P	12 41 08.4	+0.8
Q51A	Peebles	53.05	283	P	P	12 41 09.2	+0.9
Q51A				IAmb	IAmb	12 41 09.9	
	comp=Z,38nm,1.2s						
SCIA	State Center	53.08	293	P	P	12 41 09.2	+0.8
B08A	Colville Reser	53.10	317	P	P	12 41 08.2	-0.3
B08A				IAmb	IAmb	12 41 09.6	
	comp=Z,20nm,1.4s						
P48A	Milroy	53.23	285	P	P	12 41 09.1	-0.5
O44A	Mansfield	53.42	288	P	P	12 41 12.3	+1.4
MSO	Missoula	53.46	312	P	P	12 41 11.9	+0.6
	baz=18,SNR=15						
MSO	Missoula	53.46	312	P	P	12 41 11.8	+0.5
MSO				IAmb	IAmb	12 41 12.4	
	comp=Z,35nm,1.4s						
N41A	Harden Midland	53.56	290	P	P	12 41 12.0	+0.1
GTA	Gaotai	53.70	74	⇓P	P	12 41 13.9	+0.7
GTA				pP	pwP	12 41 17.8	-1.2
GTA				sP	sP	12 41 19.9	+3.5
GTA				pmax	pmax		
	comp=Z,14nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,5.5s						
GTA				LR	LR		
	comp=Z,420nm,16.0s						
GTA				LR	LR		
	comp=Z,430nm,15.3s						
GTA				LR	LR		
	comp=Z,280nm,17.1s						
RSSD	Black Hills	53.76	303	P	P	12 41 13.0	-0.7
RSSD				pmax	pmax		
	comp=Z,31nm,1.5s						
RSSD	Black Hills	53.76	303	P	P	12 41 14.2	+0.6
	baz=20						
RSSD	Black Hills	53.76	303	P	P	12 41 13.0	-0.7
RSSD				IAmb	IAmb	12 41 16.5	
	comp=Z,31nm,1.4s						
K31A	O'Neill	53.85	298	P	P	12 41 14.1	0.0
R50A	Paris	54.02	283	P	P	12 41 15.3	-0.1
RLMT	Red Lodge	54.04	308	P	P	12 41 16.4	+0.7
	baz=19,SNR=9.7						
RLMT	Red Lodge	54.04	308	P	P	12 41 16.5	+0.7
RLMT				IAmb	IAmb	12 41 17.3	
	comp=Z,30nm,1.5s						
RAYN	Ar Rayn	54.12	134	P	P	12 41 16.6	+0.3
RAYN				pmax	pmax		
	comp=Z,23nm,1.3s						
RAYN	Ar Rayn	54.12	134	P	P	12 41 16.6	+0.3
RAYN				IAmb	IAmb	12 41 18.2	
	comp=Z,23nm,1.3s						
N38A	Joes South For	54.12	293	P	P	12 41 15.4	-0.7
BOZ	Bozeman (W)	54.12	310	P	P	12 41 17.3	+1.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BOZ	Bozeman (W)	54.12	310	P	P	12 41 15.9	-0.3
	baz=18						
BOZ	Bozeman (W)	54.12	310	P	P	12 41 17.3	+1.1
P43A	Skaggs, Pawnee	54.19	289	P	P	12 41 16.6	+0.1
R49A	Shelbyville	54.24	284	P	P	12 41 17.2	+0.2
DLMT	Dillon	54.56	311	P	P	12 41 20.1	+0.7
YMP	Mirror Lake Pl	54.61	309	P	P	12 41 20.8	+0.8
D03D	Eldon	54.61	320	P	P	12 41 20.8	+1.3
	baz=16						
WCI	Wyandotte Cave	54.62	285	P	P	12 41 19.9	+0.2
WCI				pmax	pmax		
	comp=Z,35nm,1.2s						
WCI	Wyandotte Cave	54.62	285	P	P	12 41 19.9	+0.2
N35A	Tabor	54.70	295	P	P	12 41 20.2	-0.1
YHL	Hebgen Lake	54.73	309	P	P	12 41 21.1	+0.3
Q44A	Meyer Farm, Va	54.74	288	P	P	12 41 20.6	0.0
QLMT	Earthquake Lak	54.81	310	P	P	12 41 21.8	+0.5
LKWY	Lake	54.83	309	P	P	12 41 24.0	+2.5
LKWY				pmax	pmax		
	comp=Z,13nm,1.4s						
LKWY	Lake	54.83	309	P	P	12 41 24.0	+2.5
YHB	Horse Butte	54.83	309	P	P	12 41 21.1	-0.3
E08A	Dider Farm, El	54.84	317	P	P	12 41 21.2	0.0
E08A				IAmb	IAmb	12 41 22.4	
	comp=Z,36nm,1.5s						
YMR	Madison River	54.86	309	P	P	12 41 22.3	+0.6
E07A	Sunnyside	54.93	317	P	P	12 41 22.6	+0.7
E07A				IAmb	IAmb	12 41 23.3	
	comp=Z,20nm,1.2s						
HAWA	Hanford	55.02	317	P	P	12 41 22.8	+0.2
HAWA				IAmb	IAmb	12 41 26.6	
	comp=Z,17nm,1.3s						
H17A	Grant Village	55.03	309	P	P	12 41 25.1	+2.1
	baz=18,SNR=11						
H17A	Grant Village	55.03	309	P	P	12 41 23.6	+0.6
LON	Longmire	55.12	319	P	P	12 41 23.8	+0.4
LON				pmax	pmax		
	comp=Z,24nm,1.5s						
LON	Longmire	55.12	319	P	P	12 41 23.8	+0.4
LON				IAmb	IAmb	12 41 43.6	
	comp=Z,24nm,1.5s						
MCMT	McKenzie Canyo	55.12	311	P	P	12 41 24.0	+0.4
YPP	Pitchstone Pla	55.20	309	P	P	12 41 26.0	+1.7
V56A	Mocksville	55.23	279	P	P	12 41 25.7	+1.5
	baz=21						
P38A	Dawn	55.29	292	P	P	12 41 23.6	-1.0

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P38A                              IAmb  IAmb   12 41 24.6
      comp=Z,23nm,1.4s
T50A  Nancy            55.34 283  P     P      12 41 24.8 -0.2
T50A                              IAmb  IAmb   12 41 25.8
      comp=Z,32nm,1.4s
FLWY  Flagg Ranch      55.35 309  P     P      12 41 26.6 +1.3
HHC   Hu-ho-hao-te     55.51  63 eP     P      12 41 28.5 +2.3
HHC                               pmax  pmax
      comp=Z,11nm,0.9s
HHC                               pmax  pmax
      comp=Z,140nm,7.6s
MOOW  Moose Ponds      55.68 309  P     P      12 41 28.0 +0.4
BCYI  Bear Canyon      55.74 311  P     P      12 41 28.6 +0.6
K22A  Casper           55.74 305  P     P      12 41 27.5 -0.5
      baz=19,SNR=15
K22A  Casper           55.74 305  P     P      12 41 27.2 -0.8
LOHW  Long Hollow      55.78 309  P     P      12 41 28.9 +0.6
LOHW                              IAmb  IAmb   12 41 30.0
      comp=Z,23nm,1.5s
SIUC  Southern Illin   55.91 288  P     P      12 41 29.9 +0.9
S44A  Carbondale       55.94 288  P     P      12 41 28.9 -0.3
SNOW  Snow King Moun   55.95 309  P     P      12 41 30.9 +1.3
SNOW                              IAmb  IAmb   12 41 38.0
      comp=Z,21nm,1.3s
G08A  Pilot Rock       55.97 316  P     P      12 41 30.1 +0.6
G08A                              IAmb  IAmb   12 41 38.1
      comp=Z,15nm,1.3s
V53A  Saluda           56.03 281  P     P      12 41 28.5 -1.4
V53A                              IAmb  IAmb   12 41 44.1
      comp=Z,26nm,1.5s
CN2   Changchun        56.05  50 eP     P      12 41 30.8 +0.9
CN2                               sP    pwP    12 41 36.9 +1.0
CN2                               S     S      12 49 15.6 -2.3
CN2                               pmax  pmax
      comp=Z,20nm,1.0s
CN2                               LR    LR
      comp=Z,270nm,15.0s
CN2                               LR    LR
      comp=Z,470nm,15.0s
CN2                               LR    LR
      comp=Z,480nm,16.0s
BMO   Blue Mountains   56.05 315  P     P      12 41 29.4 -0.7
BMO                               pmax  pmax
      comp=Z,22nm,1.5s
BMO   Blue Mountains   56.05 315  P     P      12 41 29.4 -0.7
BMO                               IAmb  IAmb   12 41 32.7
      comp=Z,22nm,1.5s
REDW  Red Top Meadow   56.07 309  P     P      12 41 30.5 +0.1
REDW                              IAmb  IAmb   12 41 40.8
      comp=Z,25nm,1.5s
U49A  Red Boiling Sp   56.08 284  P     P      12 41 30.1 -0.1
V52A  Sevierville      56.09 282  P     P      12 41 30.3  0.0
KMSC  Kings Mountain   56.10 279  P     P      12 41 31.1 +0.7
      baz=20
KMSC  Kings Mountain   56.10 279  P     P      12 41 30.5 +0.1
KMSC                              IAmb  IAmb   12 41 50.1
      comp=Z,22nm,1.3s
CCM   Cathedral Cave   56.15 290  P     P      12 41 29.9 -0.8
CCM                               pmax  pmax
      comp=Z,38nm,1.5s
CCM   Cathedral Cave   56.15 290  P     P      12 41 29.8 -1.0
      baz=20
CCM   Cathedral Cave   56.15 290  P     P      12 41 29.9 -0.8
R40A  Maddies Statio   56.20 291  P     P      12 41 30.3 -0.8
R40A                              IAmb  IAmb   12 41 33.6
      comp=Z,29nm,1.4s
OGNE  Ogallala         56.26 300  P     P      12 41 31.9 +0.3
      baz=19
OGNE  Ogallala         56.26 300  P     P      12 41 31.5 -0.1
TKL   Tuckaleechee C   56.31 282  P     P      12 41 32.2 +0.3
TKL                               pmax  pmax
      comp=Z,20nm,1.1s
TKL   Tuckaleechee C   56.31 282  P     P      12 41 32.2 +0.3
TKL                               IAmb  IAmb   12 41 46.2
      comp=Z,20nm,1.1s
V51A  Loudon           56.34 282  P     P      12 41 33.0 +0.9
V51A                              IAmb  IAmb   12 41 40.9
      comp=Z,28nm,1.3s
BW06  Boulder Array    56.34 307  P     P      12 41 32.9 +0.5
      baz=18,SNR=20
BW06  Boulder Array    56.34 307  P     P      12 41 32.7 +0.3
BW06                              IAmb  IAmb   12 41 35.7
      comp=Z,16nm,1.2s
PD31  Pinedale Array   56.34 307  P     P      12 41 32.7 +0.3
PD31                              IAmb  IAmb   12 41 38.2
      comp=Z,25nm,1.5s
PDAR  Pinedale Array   56.34 307  P     P      12 41 32.3 -0.1
      comp=Z,8.6nm,1.1s,baz=34,slow=5.6,SNR=28
YSS   Yuzh-Sakhalins   56.36  35 eP     P      12 41 34.5 +2.4
YSS                               MLR   MLR
      comp=Z,500nm,14.0s
ECR   Eagle Creek      56.48 309  P     P      12 41 34.9 +1.5
KSU1  Kansas State U   56.60 295  P     P      12 41 33.3 -0.7
      baz=20
KSU1  Kansas State U   56.60 295  P     P      12 41 33.2 -0.7
KSU1                              IAmb  IAmb   12 41 52.5
      comp=Z,21nm,1.1s
CLTN  Cedars of Leba   56.62 284  P     P      12 41 34.5 +0.4
CLTN                              IAmb  IAmb   12 41 42.1
      comp=Z,18nm,1.2s
HLID  Hailey           56.67 312  P     P      12 41 35.1 +0.4
      baz=17,SNR=11
HLID  Hailey           56.67 312  P     P      12 41 35.0 +0.4
AHID  Auburn Hatcher   56.70 309  P     P      12 41 35.5 +0.6
AHID                              IAmb  IAmb   12 41 39.3
      comp=Z,20nm,1.5s
CPCT  Cooper Cave      56.72 282  P     P      12 41 35.9 +1.1
CPCT                              IAmb  IAmb   12 41 56.2
      comp=Z,16nm,1.3s
PHWY  Pilot Hill       56.76 303  P     P      12 41 35.7 +0.2
PHWY                              IAmb  IAmb   12 41 37.9
      comp=Z,23nm,1.4s
W52A  Murphy           56.88 282  P     P      12 41 36.5 +0.4
W52A                              IAmb  IAmb   12 42 03.2
      comp=Z,22nm,1.4s
WVT   Waverly          57.01 286  P     P      12 41 36.3 -0.5
WVT                               pmax  pmax
      comp=Z,19nm,1.5s
WVT   Waverly          57.01 286  P     P      12 41 36.4 -0.5
      baz=20
WVT   Waverly          57.01 286  P     P      12 41 36.3 -0.5
WVT                               IAmb  IAmb   12 41 44.6
      comp=Z,19nm,1.5s
USRK  Ussuriysk Ar.    57.05  44  P     P      12 41 35.5 -1.5
      comp=Z,2.0nm,0.8s,baz=336,slow=4.2,SNR=4.7
S39A  Bolivar          57.05 291  P     P      12 41 37.3 +0.1
S39A                              IAmb  IAmb   12 41 44.1
      comp=Z,22nm,1.4s
T42A  Van Buren        57.06 289  P     P      12 41 36.8 -0.5
V48A  Smith Brothers   57.09 285  P     P      12 41 37.4  0.0
V48A                              IAmb  IAmb   12 41 39.4
      comp=Z,16nm,1.4s
MFID  Camas Ranch      57.11 313  P     P      12 41 35.3 -2.4
PBMO  Poplar Bluff     57.12 288  P     P      12 41 37.3 -0.3
I07A  Izee             57.23 316  P     P      12 41 39.2 +0.6
I07A                              IAmb  IAmb   12 41 47.5
      comp=Z,13nm,1.2s
N23A  Red Feather La   57.27 304  P     P      12 41 39.8 +0.8
      baz=19,SNR=14
N23A  Red Feather La   57.27 304  P     P      12 41 39.2 +0.2
MGMO  Mountain Grove   57.27 290  P     P      12 41 38.2 -0.6
SWET  Sewanee          57.33 284  P     P      12 41 37.8 -1.4
SWET                              IAmb  IAmb   12 41 48.0
      comp=Z,13nm,1.3s
CBKS  Cedar Bluff      57.69 297  P     P      12 41 41.2 -0.5
CBKS                              pmax  pmax
      comp=Z,40nm,1.3s
CBKS  Cedar Bluff      57.69 297  P     P      12 41 41.9 +0.2
      baz=19,SNR=7.6
CBKS  Cedar Bluff      57.69 297  P     P      12 41 41.2 -0.5
R32A  Long Quarter,    57.79 296  P     P      12 41 41.7 -0.7
FPAL  Fort Paine       57.88 283  P     P      12 41 43.4 +0.3
FPAL                              IAmb  IAmb   12 42 01.1
      comp=Z,36nm,1.4s
HWUT  Hardware Ranch   57.90 309  P     P      12 41 44.4 +1.1
LZH   Lanzhou          57.92  71 eP     P      12 41 41.4 -2.1
LZH                               pP    pP     12 41 44.6 -1.3
LZH                               sP    sP     12 41 47.0 +0.2
LZH                               PP    PP     12 43 48.9 -2.6
LZH                               pmax  pmax
      comp=Z,23nm,1.3s
LZH                               pmax  pmax
      comp=Z,97nm,7.4s
LZH                               LR    LR
      comp=Z,230nm,16.1s
LZH                               LR    LR
      comp=Z,240nm,16.0s
LZH                               LR    LR
      comp=Z,370nm,18.2s
LCAR  Lake Charles     57.98 289  P     P      12 41 43.2 -0.5
LCAR                              IAmb  IAmb   12 41 43.8
      comp=Z,19nm,1.4s
HVU   Hansel Valley    58.01 310  P     P      12 41 43.8 -0.3
HVU                               pmax  pmax
      comp=Z,3.0nm,1.1s
HVU   Hansel Valley    58.01 310  P     P      12 41 43.8 -0.3
Y52A  Lilburn          58.07 281  P     P      12 41 44.7 +0.3
Y52A                              IAmb  IAmb   12 41 47.8
      comp=Z,14nm,1.1s
PLAL  Pickwick Lake    58.15 285  P     P      12 41 43.6 -1.3
PLAL                              IAmb  IAmb   12 41 44.6
      comp=Z,23nm,1.4s
U40A  Yellville        58.18 290  P     P      12 41 44.3 -0.8
      baz=20,SNR=10
U40A  Yellville        58.18 290  P     P      12 41 44.3 -0.8
U40A                              IAmb  IAmb   12 41 45.2
      comp=Z,30nm,1.4s
ISCO  Idaho Springs    58.22 303  P     P      12 41 46.2 +0.4
ISCO                              pmax  pmax
      comp=Z,8.0nm,1.1s
ISCO  Idaho Springs    58.22 303  P     P      12 41 46.6 +0.8
      baz=18,SNR=8.9
ISCO  Idaho Springs    58.22 303  P     P      12 41 46.2 +0.4
KSCO  Kaye Shedlock’   58.23 300  P     P      12 41 46.3 +0.6
      baz=19
KSCO  Kaye Shedlock’   58.23 300  P     P      12 41 45.8 +0.1
GOGA  Godfrey          58.33 281  P     P      12 41 46.5 +0.3
GOGA                              pmax  pmax
      comp=Z,20nm,1.1s
GOGA  Godfrey          58.33 281  P     P      12 41 46.7 +0.6
      baz=20
GOGA  Godfrey          58.33 281  P     P      12 41 46.5 +0.3
GOGA                              IAmb  IAmb   12 41 56.9
      comp=Z,20nm,1.1s
TCUT  Toone Canyon     58.33 308  P     P      12 41 46.3 -0.2
J05D  Fort Rock, OR    58.34 317  P     P      12 41 48.7 +2.3
      baz=16,SNR=6.0
X48A  Hartselle        58.36 284  P     P      12 41 45.1 -1.3
X48A                              IAmb  IAmb   12 41 55.2
      comp=Z,11nm,1.2s
SPUT  South Promonto   58.39 309  P     P      12 41 47.1 +0.4
FCAR  Ozark Folk Cen   58.42 290  P     P      12 41 46.3 -0.5
FCAR                              IAmb  IAmb   12 41 46.9
      comp=Z,26nm,1.4s
U38A  Gravette         58.51 292  P     P      12 41 47.4 -0.1
U38A                              IAmb  IAmb   12 41 54.5
      comp=Z,18nm,1.2s
O20A  White River Ci   58.53 305  P     P      12 41 49.1 +1.3
      baz=18,SNR=26
HHAR  Hobbs            58.54 291  P     P      12 41 44.8 -2.9
J04D  Umpqua Nationa   58.56 318  P     P      12 41 49.4 +1.5
      baz=15
T35A  Sooner Cattle    58.63 294  P     P      12 41 47.8 -0.5
KAN01 Argonia South    58.74 295  P     P      12 41 49.0  0.0
KAN13 South Haven SW   58.80 295  P     P      12 41 49.9 +0.5
K05A  Summer Lake      58.81 317  P     P      12 41 50.2 +0.5
K05A                              IAmb  IAmb   12 41 59.3
      comp=Z,21nm,1.2s
JLU   Jordanelle       58.84 308  P     P      12 41 51.0 +1.0
KAN10 Anthony SW Sta   58.85 295  P     P      12 41 49.6 -0.3
Q24A  Divide           58.90 302  P     P      12 41 50.7 +0.2
      baz=18
Q24A  Divide           58.90 302  P     P      12 41 51.0 +0.4
Q24A                              IAmb  IAmb   12 41 58.3
      comp=Z,22nm,1.5s
OXF   Oxford           58.97 287  P     P      12 41 49.8 -0.8
OXF                               pmax  pmax
      comp=Z,58nm,1.4s
OXF   Oxford           58.97 287  P     P      12 41 50.1 -0.5
      baz=20
OXF   Oxford           58.97 287  P     P      12 41 49.8 -0.8
KAN14 Manchester OK    58.98 295  P     P      12 41 50.7  0.0
WHAR  Wooly Hollow     59.03 289  P     P      12 41 50.4 -0.6
WHAR                              IAmb  IAmb   12 41 53.4
      comp=Z,20nm,1.3s
W41B  Gary Mavity, V   59.12 289  P     P      12 41 51.1 -0.6
SMCO  Snowmass         59.14 304  P     P      12 41 52.7 +0.4
SMCO                              IAmb  IAmb   12 41 55.7
      comp=Z,29nm,1.5s
X43A  Marvell          59.37 288  P     P      12 41 54.0 +0.6
QUOK  Quay             59.38 294  P     P      12 41 53.6 +0.1
CROK  Carrier          59.41 295  P     P      12 41 54.1 +0.4
MPU   Maple Canyon     59.44 308  P     P      12 41 54.4 +0.4
DANN  Dangsing         59.46  93 eP     P      12 41 54.8 +0.3
      comp=Z,64nm,1.3s
MOD   Modoc Plateau    59.49 316  P     P      12 41 54.8 +0.4
MOD                               IAmb  IAmb   12 41 58.2
      comp=Z,22nm,1.4s
W39A  Magazine         59.52 291  P     P      12 41 54.6 +0.2
      baz=19,SNR=5.2
W39A  Magazine         59.52 291  P     P      12 41 54.4 -0.1
W39A                              IAmb  IAmb   12 41 59.5
      comp=Z,13nm,1.2s
DUG   Dugway, Tooele   59.53 309  P     P      12 41 55.6 +0.9
DUG                               pmax  pmax
      comp=Z,9.0nm,1.5s
DUG   Dugway, Tooele   59.53 309  P     P      12 41 56.1 +1.4
      baz=17,SNR=5.2
DUG   Dugway, Tooele   59.53 309  P     P      12 41 55.6 +0.9
ELK   Elko             59.54 311  P     P      12 41 55.4 +0.6
ELK                               pmax  pmax
      comp=Z,12nm,1.4s
ELK   Elko             59.54 311  P     P      12 41 55.4 +0.6
ELK                               IAmb  IAmb   12 41 56.5
      comp=Z,12nm,1.4s
L04D  Klamath Falls    59.58 318  P     P      12 41 55.8 +0.8
      baz=15
NLU   North Lily Min   59.59 308  P     P      12 41 56.5 +1.3
OK031 S. Brethren Rd   59.63 294  P     P      12 41 54.9 -0.3
P17A  Butcher Ranch,   59.75 307  P     P      12 41 56.2  0.0
M04C  Macdoel          59.91 317  P     P      12 41 57.9 +0.7
      baz=15
X40A  Basin Creek Fa   59.93 290  P     P      12 41 57.5 +0.3
      baz=19
X40A  Basin Creek Fa   59.93 290  P     P      12 41 57.2 -0.1
OK029 Liberty Lake     59.94 294  P     P      12 41 58.2 +0.9
TMUT  Trail Mountain   60.02 307  P     P      12 41 59.0 +0.7
SRU   San Rafael Swe   60.04 307  P     P      12 41 58.6 +0.3
SRU                               pmax  pmax
      comp=Z,19nm,1.4s
SRU   San Rafael Swe   60.04 307  P     P      12 41 58.6 +0.3
MIAR  Mount Ida        60.08 290  P     P      12 41 58.5 +0.2
MIAR                              pmax  pmax
      comp=Z,50nm,1.5s
MIAR  Mount Ida        60.08 290  P     P      12 41 58.7 +0.4
      baz=19,SNR=14
MIAR  Mount Ida        60.08 290  P     P      12 41 58.5 +0.2
SDCO  Great Sand Dun   60.14 302  P     P      12 41 58.9 -0.2
      baz=18,SNR=9.6
SDCO  Great Sand Dun   60.14 302  P     P      12 41 58.6 -0.5
TOA0  Torodi Ar. Sit   60.18 185  P     P      12 41 58.5 -0.6
TOA0                              IAmb  IAmb   12 42 05.9
      comp=Z,18nm,1.0s
TORD  Torodi Ar. Bea   60.18 185  P     P      12 41 58.6 -0.6
      comp=Z,7.6nm,0.9s,baz=354,slow=7.4,SNR=22
PV22  Blue Mesa, Par   60.19 305  P     P      12 41 59.6 +0.4
PV22                              IAmb  IAmb   12 42 00.5
      comp=Z,19nm,1.4s
PV07  Paradox Valley   60.24 305  P     P      12 41 59.9 +0.2
PV07                              IAmb  IAmb   12 42 00.9
      comp=Z,17nm,1.3s
PV15  Paradox Valley   60.30 305  P     P      12 42 00.5 +0.4
PV15                              IAmb  IAmb   12 42 16.6
      comp=Z,13nm,1.1s
LSA   Lhasa            60.33  86  P     P      12 42 01.4 +0.7
LSA                               pmax  pmax
      comp=Z,21nm,1.3s
LSA   Lhasa            60.33  86  P     P      12 42 01.4 +0.7
LSA                               IAmb  IAmb   12 42 03.8
      comp=Z,21nm,1.3s
W35A  Tecumseh         60.39 293  P     P      12 42 00.1 -0.3
KKN   Kakani           60.43  92 eP     P      12 42 01.2 +0.2
T25A  Trinidad         60.45 301  P     P      12 42 00.7 -0.4
      baz=18
S22A  4UR Ranch, Cre   60.47 303  P     P      12 42 02.0 +0.7
      baz=18,SNR=17
S22A  4UR Ranch, Cre   60.47 303  P     P      12 42 01.7 +0.4
S22A                              IAmb  IAmb   12 42 09.9
      comp=Z,24nm,1.4s
GUN   Gumba            60.49  91 eP     P      12 42 02.2 +0.6
      comp=Z,76nm,1.1s
X37A  Clayton          60.52 292  P     P      12 42 01.5 +0.1
X37A                              IAmb  IAmb   12 42 10.9
      comp=Z,22nm,1.4s
DMN   Daman            60.55  92 eP     P      12 42 02.3 +0.4
      comp=Z,66nm,1.4s
KRMB  Red Mountain     60.56 319  P     P      12 42 03.2 +1.5
PKIN  Phulchoki        60.66  92 eP     P      12 42 02.8 +0.1
PKI   Pulchoki         60.67  92 eP     P      12 42 02.8  0.0
      comp=Z,38nm,1.3s
PV05  Paradox Valley   60.70 305  P     P      12 42 03.1 +0.3
WLAR  White Oak Lake   60.76 290  P     P      12 42 03.3 +0.4
N02D  Trinity Center   60.86 318  P     P      12 42 04.4 +0.8
      baz=15
MSU   Marysvale        60.99 308  P     P      12 42 05.6 +0.8
MSU   Marysvale        60.99 308  P     P      12 42 05.6 +0.8
XAN   Xi'an            61.23  68  P     P      12 42 06.3 +0.1
XAN                               pP    pwP    12 42 11.3 -0.8
XAN                               pmax  pmax
      comp=Z,13nm,1.6s
WMOK  Wichita Mounta   61.29 295  P     P      12 42 05.8 -0.8
WMOK                              pmax  pmax
      comp=Z,28nm,1.5s
WMOK  Wichita Mounta   61.29 295  P     P      12 42 06.8 +0.2
      baz=19,SNR=11
WMOK  Wichita Mounta   61.29 295  P     P      12 42 05.8 -0.8
WMOK                              IAmb  IAmb   12 42 14.7
      comp=Z,28nm,1.4s
O03E  Paynes Creek     61.34 317  P     P      12 42 07.4 +0.5
      baz=15,SNR=6.0
PSUT  Pine Spring      61.35 309  P     P      12 42 08.0 +0.8
MVCO  Mesa Verde       61.38 304  P     P      12 42 08.6 +1.2
      baz=17,SNR=23
MVCO  Mesa Verde       61.38 304  P     P      12 42 07.7 +0.2
PAHR  Pah Rah Range    61.42 315  P     P      12 42 08.0 +0.4
PAHR                              IAmb  IAmb   12 42 16.5
      comp=Z,16nm,1.5s
MTPU  Mount Pierson    61.45 308  P     P      12 42 09.4 +1.3
BEKR  Beckworth        61.46 315  P     P      12 42 08.8 +0.9
TAPN  Taplejung        61.55  90 eP     P      12 42 08.9 +0.2
      comp=Z,54nm,1.4s
RAMN  Ramite           61.60  91 eP     P      12 42 09.1  0.0
      comp=Z,41nm,1.2s
O02D  Mt. Diablo Mer   61.65 318  P     P      12 42 09.4 +0.4
      baz=15
VCNR  Virginia City    61.87 315  P     P      12 42 09.8 -0.8
VCNR                              IAmb  IAmb   12 42 12.5
      comp=Z,11nm,1.1s
R11A  Troy Canyon, C   61.91 311  P     P      12 42 11.5 +0.6
      baz=16,SNR=6.1
R11A  Troy Canyon, C   61.91 311  P     P      12 42 11.1 +0.1
ODAN  Odare            61.92  90 eP     P      12 42 11.7 +0.5
      comp=Z,110nm,1.3s
ORV   Oroville         61.99 316  P     P      12 42 11.9 +0.7
ORV                               pmax  pmax
      comp=Z,4.0nm,1.5s
ORV   Oroville         61.99 316  P     P      12 42 11.9 +0.7
PKCU  Pink Cliffs      62.05 308  P     P      12 42 13.9 +1.9
PNTR  Pine Nut         62.05 315  P     P      12 42 13.0 +1.1
PNTR                              IAmb  IAmb   12 42 13.8
      comp=Z,16nm,1.2s
SZCU  Shurtz Canyon    62.08 309  P     P      12 42 13.4 +1.3
CCUT  Cedar City       62.18 309  P     P      12 42 13.6 +0.8
344A  Westbrook Farm   62.21 287  P     P      12 42 13.1 +0.4
RYN   Ryan             62.27 314  P     P      12 42 13.8 +0.4
NV11  Mina Array Sit   62.39 313  P     P      12 42 14.0 -0.1
NVAR  Mina Array Bea   62.42 313  P     P      12 42 14.8 +0.4
      comp=Z,1.7nm,0.9s,baz=39,slow=5.3,SNR=9.3
AFDM  Forest Hills D   62.47 316  P     P      12 42 14.1 -0.4
AFDM                              IAmb  IAmb   12 42 15.5
      comp=Z,13nm,1.4s
TPH   Tonopah          62.53 312  P     P      12 42 14.5 -0.6
TPH                               pmax  pmax
      comp=Z,47nm,1.4s
TPH   Tonopah          62.53 312  P     P      12 42 14.5 -0.6
KNB   Kanab            62.57 308  P     P      12 42 16.2 +0.8
KNB                               pmax  pmax
      comp=Z,6.0nm,1.2s
KNB   Kanab            62.57 308  P     P      12 42 16.2 +0.8
LHV   Little Huntoon   62.63 313  P     P      12 42 16.1 +0.7
KSRS  Korea Array      62.66  50  P     P      12 42 15.3 -0.4
      comp=Z,1.4nm,0.9s,baz=103,slow=31,SNR=4.3
LCMT  Little Creek M   62.67 308  P     P      12 42 16.9 +0.9
PRN   Pahroc Range     62.70 310  P     P      12 42 16.6 +0.4
PRN                               IAmb  IAmb   12 42 18.4
      comp=Z,22nm,1.5s
CD2   Chengdu          62.77  73  P     P      12 42 17.0 +0.4
GDXM  Geysers          62.97 317  P     P      12 42 19.6 +1.8
U15A  North Rim        63.01 307  P     P      12 42 18.2 -0.3
U15A                              IAmb  IAmb   12 42 27.4
      comp=Z,12nm,1.4s
ANMO  Albuquerque      63.04 302⇑eP     P      12 42 18.9 +0.4
ANMO  Albuquerque      63.04 302  P     P      12 42 19.1 +0.6
      baz=17
ANMO  Albuquerque      63.04 302  P     P      12 42 18.8 +0.2
MSTX  Muleshoe         63.05 298  P     P      12 42 18.9 +0.4
      baz=18,SNR=5.4
MSTX  Muleshoe         63.05 298  P     P      12 42 19.0 +0.4
MSTX                              IAmb  IAmb   12 42 33.4
      comp=Z,17nm,1.4s
MLAC  Mammoth, Mammo63.30 313  P     P      12 42 22.3 +2.1
      baz=15
MDPB  Devils Postpil   63.35 314  P     P      12 42 22.2 +1.6
OMMB  Old Mammoth Mi   63.35 314  P     P      12 42 22.2 +1.5
OMMB                              IAmb  IAmb   12 42 31.0
      comp=Z,11nm,1.5s
TPNV  Topopah Spring   63.40 311  P     P      12 42 20.8 -0.1
TPNV                              pmax  pmax
      comp=Z,10.0nm,1.4s
TPNV  Topopah Spring   63.40 311  P     P      12 42 20.9 +0.1
      baz=16
TPNV  Topopah Spring   63.40 311  P     P      12 42 20.8 -0.1
TPNV                              IAmb  IAmb   12 42 32.2
      comp=Z,9.6nm,1.4s
ABTX  Abilene, Hawle   63.51 295  P     P      12 42 21.4 -0.1
      baz=18
ABTX  Abilene, Hawle   63.51 295  P     P      12 42 21.6 +0.1
SHPR  Sheep Range      63.59 310  P     P      12 42 22.7 +0.6
SHPR                              IAmb  IAmb   12 42 28.5
      comp=Z,10nm,1.4s
WUAZ  Wupatki          63.67 306  P     P      12 42 23.8 +1.1
      baz=17,SNR=8.2
WUAZ  Wupatki          63.67 306  P     P      12 42 23.0 +0.3
BNM   Barren Site      63.84 302  P     P      12 42 24.3 +0.4
CWC   Cottonwood Cre   64.29 312  P     P      12 42 28.1 +1.4
      baz=15
MPMC  Manual Prospec   64.53 312  P     P      12 42 29.6 +1.3
      baz=15,SNR=9.7
W13A  Hualapai Mount   64.65 308  P     P      12 42 29.7 +0.5
X16A  Lo Mia Camp, P   64.74 306  P     P      12 42 30.7 +1.0
X16A                              IAmb  IAmb   12 42 33.4
      comp=Z,11nm,1.4s
HKT   Hockley          65.03 291  P     P      12 42 31.8 +0.5
HKT                               pmax  pmax
      comp=Z,13nm,1.4s
HKT   Hockley          65.03 291  P     P      12 42 31.8 +0.5
HKT                               IAmb  IAmb   12 42 32.7
      comp=Z,13nm,1.4s
GSC   Goldstone, Bar   65.11 311  P     P      12 42 33.3 +1.3
GSC                               pmax  pmax
      comp=Z,8.0nm,1.3s
GSC   Goldstone, Bar   65.11 311  P     P      12 42 33.5 +1.6
      baz=16
GSC   Goldstone, Bar   65.11 311  P     P      12 42 33.3 +1.3
ISA   Isabella, Lake   65.12 313  P     P      12 42 32.9 +0.9
ISA                               pmax  pmax
      comp=Z,25nm,1.5s
ISA   Isabella, Lake   65.12 313  P     P      12 42 33.1 +1.1
      baz=15,SNR=6.8
ISA   Isabella, Lake   65.12 313  P     P      12 42 32.9 +0.9
ISA                               IAmb  IAmb   12 42 35.8
      comp=Z,25nm,1.5s
LRMC  Laurel Mtn Rad   65.12 312  P     P      12 42 32.3 +0.1
      baz=15
GMRC  Granite Mounta   65.35 310  P     P      12 42 34.8 +1.2
      baz=16,SNR=8.4
PDMCI Parker Dam,Lak   65.47 308  P     P      12 42 35.7 +1.5
      baz=16
JCT   Junction City    65.59 294  P     P      12 42 35.5 +0.4
JCT                               pmax  pmax
      comp=Z,20nm,1.5s
JCT   Junction City    65.59 294  P     P      12 42 35.6 +0.4
      baz=18
JCT   Junction City    65.59 294  P     P      12 42 35.5 +0.4
JCT                               IAmb  IAmb   12 42 36.0
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	comp=Z,20nm,1.5s						
MJAR	**Matsushiro Arr**	65.66	41	P	P	12 42 35.4	-0.1
	comp=Z,3.5nm,1.0s,baz=346,slow=9.0,SNR=5.3						
121A	**Cookes Peak, D**	65.67	302	P	P	12 42 36.5	+0.7
	baz=17,SNR=7.9						
121A	**Cookes Peak, D**	65.67	302	P	P	12 42 36.2	+0.5
121A				IAmb	IAmb	12 42 42.4	
	comp=Z,16nm,1.4s						
EDW2	**Edwards Air Fo**	65.77	312	P	P	12 42 36.5	+0.2
	baz=15						
IRM	**Iron Mountain**	65.84	309	P	P	12 42 38.3	+1.6
	baz=16						
MNTX	**Cornudas Mount**	65.87	300	P	P	12 42 37.4	+0.6
	baz=17						
MNTX	**Cornudas Mount**	65.87	300	P	P	12 42 37.5	+0.6
BELC	**Belle Mtn. Jos**	66.18	310	P	P	12 42 39.7	+0.8
	baz=16						
BFSC	**Mount Baldy Ra**	66.31	311	P	P	12 42 41.1	+1.2
	baz=15						
BC3	**Big Chuckawall**	66.39	309	P	P	12 42 41.7	+1.4
	baz=16						
MWC	**Mount Wilson**	66.42	312	P	P	12 42 40.6	+0.1
MWC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MWC	**Mount Wilson**	66.42	312	P	P	12 42 40.6	+0.1
TUC	**Tucson**	66.60	305	P	P	12 42 42.7	+1.1
TUC				pmax	pmax		
	comp=Z,12nm,1.5s						
TUC	**Tucson**	66.60	305	P	P	12 42 43.2	+1.6
	baz=16						
TUC	**Tucson**	66.60	305	P	P	12 42 42.7	+1.1
TUC				IAmb	IAmb	12 42 55.8	
	comp=Z,12nm,1.4s						
RMX	**La Rumorosa**	67.54	310	P	P	12 42 47.3	-0.4
RMX				IAmb	IAmb	12 42 50.2	
	comp=Z,10.0nm,1.4s						
TX31	**Lajitas Ar. Si**	67.68	298	P	P	12 42 48.8	+0.2
TX32	**Lajitas Array**	67.68	298	P	P	12 42 48.3	-0.2
TX32				IAmb	IAmb	12 42 56.4	
	comp=Z,12nm,1.4s						
TXAR	**Lajitas Array**	67.68	298	P	P	12 42 48.3	-0.2
	comp=Z,1.2nm,0.8s,baz=38,slow=5.4,SNR=9.6						
GYA	**Guiyang**	67.79	72	⇓P	P	12 42 50.3	+1.0
GYA				PP	PP	12 45 21.3	+3.0
GYA				S	S	12 51 45.9	-1.1
GYA				SKS	SKKSac	12 52 47.3	+0.1
GYA				SS	SS	12 56 09.4	+1.8
GYA				pmax	pmax		
	comp=Z,16nm,1.1s						
GYA				pmax	pmax		
	comp=Z,370nm,4.8s						
KMI	**Kunming**	67.96	76	*e*P	P	12 42 51.3	+0.8
KMI				pP	sP	12 42 54.9	+1.2
KMI				sP	pwP	12 43 03.5	+7.1
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
KMI				pmax	pmax		
	comp=Z,220nm,4.1s						
HYB	**Hyderabad**	68.31	102	*i* P	P	12 42 52.0	-0.5
BANI	**BANI**	68.71	263	P	P	12 42 55.3	+0.2
SLVN	**Son La**	71.88	77	P	P	12 43 13.5	-0.9
SLVN				IAmb	IAmb	12 43 20.4	
	comp=Z,9.8nm,1.1s						
PAYA	**Payao**	72.60	81	P	P	12 43 19.9	+1.2
CHTO	**Chiang Mai**	72.86	82	P	P	12 43 20.0	-0.2
CHTO				pmax	pmax		
	comp=Z,14nm,1.1s						
CHTO	**Chiang Mai**	72.86	82	P	P	12 43 20.0	-0.2
CHTO				IAmb	IAmb	12 43 22.2	
	comp=Z,14nm,1.1s						
CMMT	**Chiang Mai**	72.86	82	P	P	12 43 20.0	-0.2
CM34	**Chiang Mai Arr**	72.88	82	P	P	12 43 21.0	+0.7
CM36	**Chiang Mai Arr**	73.18	82	P	P	12 43 22.0	-0.1
CM15	**Chiang Mai Arr**	73.19	82	P	P	12 43 24.0	+1.8
CM31	**Chiang Mai Arr**	73.19	82	P	P	12 43 24.6	+2.4
CMAR	**Chiang Mai Arr**	73.19	82	P	P	12 43 21.4	-0.8
	comp=Z,6.5nm,1.0s,baz=325,slow=6.3,SNR=34						
CMAR	**Chiang Mai Arr**	73.19	82	*i* P	P	12 43 22.7	+0.5
CMAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CM02	**Chiang Mai Arr**	73.22	82	P	P	12 43 23.7	+1.4
CM13	**Chiang Mai Arr**	73.22	82	P	P	12 43 24.1	+1.8
CM09	**Chiang Mai Arr**	73.22	82	P	P	12 43 23.7	+1.3
CM01	**Chiang Mai Arr**	73.23	82	P	P	12 43 23.8	+1.4
CM05	**Chiang Mai Arr**	73.25	82	P	P	12 43 23.9	+1.4
CM04	**Chiang Mai Arr**	73.26	82	P	P	12 43 24.2	+1.7
LAMP	**Lampang**	73.33	81	P	P	12 43 25.0	+2.0
SSLB	**Suanglung**	74.11	60	P	P	12 43 29.1	+1.6
KMBO	**Kilima Mbogo**	76.72	148	P	P	12 43 42.5	-0.3
	comp=Z,1.4nm,0.5s,baz=206,slow=2.8,SNR=4.4						
KMBO	**Kilima Mbogo**	76.72	148	*i* P	P	12 43 45.5	+2.7
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SDV	**Santo Domingo**	77.82	260	P	P	12 43 49.1	+0.1
SDV				IAmb	IAmb	12 43 52.2	
	comp=Z,20nm,1.4s						
SDV	**Santo Domingo**	77.82	260	*e*P	P	12 43 50.1	+1.1
PTBC	**PUERTO BERRIO,**	81.15	263	*e*P	P	12 44 06.4	-0.5
DBBC	**Dabeiba**	81.20	265	*e*P	P	12 44 08.7	+1.4
RUSC	**La Rusia**	81.37	262	*e*P	P	12 44 05.8	-2.9
HELC	**Santa Helena**	81.79	264	*e*P	P	12 44 11.5	+0.8
SPBC	**San Pablo de B**	81.88	263	*e*P	P	12 44 11.5	+0.6
NORC	**Norcasia**	82.20	263	*e*P	P	12 44 13.1	+0.7
CBOC	**Ciudad Bolivar**	82.24	264	*e*P	P	12 44 14.7	+1.9
TMAB	**Tom-Au,PA,Br**	82.62	235	*e*P	P	12 44 16.1	+1.6
ROSC	**El Rosal**	82.73	263	P	P	12 44 16.7	+1.1
	comp=Z,6.0nm,0.3s,baz=141,slow=14,SNR=3.8						
CHIC	**Chingaza**	82.76	262	*e*P	P	12 44 16.2	+0.4
RREF	**El Recreo**	82.96	264	*e*P	P	12 44 16.5	-0.6
PLMC	**San Jos del P**	83.23	264	*e*P	P	12 44 19.9	+2.0
TOLC	**Tolima**	83.26	263	*e*P	P	12 44 20.2	+1.9
ORTC	**Ortega, Tolima**	83.88	263	*e*P	P	12 44 21.7	+0.5
ITTB	**Itaituba**	86.42	242	*e*P	P	12 44 35.5	+1.7
OTAV	**Otavalo**	88.29	265	P	P	12 44 44.8	+1.4
OTAV				pmax	pmax		
	comp=Z,16nm,1.2s						
OTAV	**Otavalo**	88.29	265	P	P	12 44 44.8	+1.4
OTAV	**Otavalo**	88.29	265	*e*P	P	12 44 45.0	+1.5
OTAV	**Otavalo**	88.29	265	*e*P	P	12 44 45.2	+1.8
SMTB	**Santa Maria do**	88.76	233	*e*P	P	12 44 48.1	+3.1
NPGB	**Novo Progresso**	88.90	241	*e*P	P	12 44 47.0	+1.3
WRA	**Warramunga Arr**	119.46	58	PKP	PKPdf	12 50 40.0	-0.6
	comp=Z,1.3nm,1.0s,baz=339,slow=2.2,SNR=5.5						
ASAR	**Alice Springs**	122.92	60	PKP	PKPdf	12 50 46.2	-1.0
	comp=Z,2.5nm,1.0s,baz=357,slow=1.5,SNR=21						
VNA1	**Neumayer--Stat**	144.01	188	P	PKPab	12 51 22.0	-0.4
	baz=73,slow=6.4						
VNA2	**Neumayer--Watz**	144.25	188	P	PKPdf	12 51 24.6	-0.8
	baz=73,slow=6.4						
SNAA	**Sanae**	144.85	185	P	PKPbc	12 51 25.8	+0.1
	baz=73,slow=6.4						

PRU 19 12:32:20.8±0.0**,50°.26N×18°.85E,h0^{km},Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.61	93	*e*Pg	Pg	12 32 32.7	+0.2
OJC				*e*Sg	Sg	12 32 40.0	-0.4
KRLC	**Kraliky**	1.34	263	*e*SG	Sg	12 33 03.3	-0.6
DPC	**Dobruska-Polom**	1.62	274	*e*SG	Sn	12 33 12.0	-0.3
CHVC	**Chvalec**	1.82	281	*e*SG	Sb	12 33 18.4	+0.1

NAO ***19*** *12:36:17.8±1.3,73°.26N×6°.41E,ML4.0*

IDC ***19*** *12:36:18.7±0.6,73°.19N×6°.30E,h0^{km},mb4.1/22, mb1 4.2/27,mb1mx4.1/47,mbtmp4.1/27,ML3.9/5,MS3.6/1, Ms1 3.6/1,ms1mx3.0/47,Error ellipse: s-maj=15.7km s-min=10.5km az=41.0*

NEIC ***19*** *12:36:20.4±1.0,73°.16N±0°.06×6°.5E±0°.2,h10^{km}±1^{km}, mb4.4/20,Error ellipse: s-maj=14.2km s-min=3.2km az=229.0*

BER ***19*** *12:36:22.2±3.0,73°.36N×6°.51E,h23^{km}±32^{km},ML3.0, ML4.0(NAO),Confirmed Earthquake*

ISC 19 12:36:20.0±0.5**,73°.22N**±0°.05×**6°.57E**±0°.05**,h10^{km},n129,** σ**1^{s}.76**/133**,mb4.3**/30**,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	3.70	64	Pn	Pn	12 37 16.1	-1.0
BJO1	**Bjornoya**	3.70	64	*e*P	Pn	12 37 16.1	-1.0
BJO1				*e*S	Sn	12 37 55.3	-5.4
BJO1				IAML		12 38 10.7	
	comp=Z,18nm,0.3s						
HSPB	**Hornsund (broa**	4.45	27	Pn	Pn	12 37 25.4	-1.9
HSPB	**Hornsund (broa**	4.45	27	*e*P	Pn	12 37 25.4	-1.9
JNE	**Jan Mayen East**	5.09	251	*e*P	Pn	12 37 35.9	-0.3
JNW	**Jan Mayen West**	5.11	252	*e*P	Pn	12 37 36.1	-0.2
JMIC	**Jan Mayen**	5.15	252	Pn	Pn	12 37 35.9	-1.1
	baz=71,slow=6.1,SNR=13						
JMIC				LR	LR	12 39 14.8	
	comp=Z,683nm,21.9s,baz=75,slow=35						
JMIC	**Jan Mayen**	5.15	252	Pn	Pn	12 37 36.5	-0.4
JMIC	**Jan Mayen**	5.15	252	*e*P	Pn	12 37 36.6	-0.4
BRBA	**Barentsburg A**	5.22	18	Pn	Pn	12 37 36.1	-1.8
BRBA	**Barentsburg A**	5.22	18	*e*P	Pn	12 37 36.2	-1.8
JMI	**Jan Mayen**	5.25	252	*e*P	Pn	12 37 38.2	-0.1
TRO	**Tromso**	5.34	126	Pn	Pn	12 37 39.4	-0.2
TRO	**Tromso**	5.34	126	*e*P	Pn	12 37 39.1	-0.4
N2VI	**Vinje**	5.52	149	*e*P	Pn	12 37 41.6	-0.4
SPA0	**Spitsbergen Ar**	5.54	21	Pn	Pn	12 37 41.0	-1.3
	baz=199,slow=14						
SPA0	**Spitsbergen Ar**	5.54	21	Pn	Pn	12 37 41.3	-1.0
SPA0	**Spitsbergen Ar**	5.54	21	Pn	Pn	12 37 41.0	-1.3
	baz=199,slow=14						
SPITS	**Spitsbergen Ar**	5.54	21	Pn	Pn	12 37 40.3	-2.0
	baz=196,slow=15,SNR=39						
LOF	**Lofoten**	5.61	152	Pn	Pn	12 37 44.4	+1.2
LOF	**Lofoten**	5.61	152	*e*P	Pn	12 37 43.7	+0.5
LOF				*e*		12 38 18.6	
LOF				IAML		12 38 43.4	
	comp=Z,99nm,0.8s						
JETT	**Jettan, Norway**	5.75	123	Pn	Pn	12 37 45.2	0.0
N2SV	**S¸rv¥gen**	5.76	155	*e*P	Pn	12 37 45.6	+0.2
HOPEN	**Hopen**	5.83	47	Pn	Pn	12 37 44.7	-1.6
HOPEN	**Hopen**	5.83	47	*e*P	Pn	12 37 44.5	-1.8
KBS	**Kingsbay**	5.88	10	Pn	Pn	12 37 47.1	+0.1
KBS	**Kingsbay**	5.88	10	Pn	Pn	12 37 47.0	+0.1
KBS	**Kingsbay**	5.88	10	*e*P	Pn	12 37 44.1	-2.9
HAMF	**Hammerfest**	5.91	108	Pn	Pn	12 37 45.8	-1.6
HAMF	**Hammerfest**	5.91	108	*e*P	Pn	12 37 46.5	-0.9
HAMF				*e*S	Sn	12 38 48.2	-6.8
HAMF				IAML		12 38 52.5	
	comp=Z,13nm,0.5s						
STEI	**Steigen**	6.04	147	Pn	Pn	12 37 50.0	+0.8
STEI	**Steigen**	6.04	147	*e*P	Pn	12 37 50.0	+0.8
STEI				*e*		12 38 28.9	
STEI				IAML		12 38 59.8	
	comp=Z,77nm,0.4s						
N2IH	**Innhavet**	6.12	145	*e*P	Pn	12 37 51.9	+1.6
KIF	**Kilpisjarvi**	6.25	126	Pn	Pn	12 37 52.0	-0.1
KIF	**Kilpisjarvi**	6.25	126	*e*P	Pn	12 37 51.9	-0.1
FAUS	**Fauske**	6.55	149	*e*P	Pn	12 37 57.6	+1.4
FAUS				IAML		12 39 20.1	
	comp=Z,55nm,0.5s						
NBB05	**Inndyr**	6.70	154	*e*P	Pn	12 37 59.1	+0.9
NBB30	**Finnes**	6.73	155	*e*P	Pn	12 37 59.0	+0.5
KTK1	**Kautokeino**	6.84	120	*e*P	Pn	12 38 00.5	+0.3
ARA0	**ARCESS Array S**	7.08	112	Pn	Pn	12 38 02.9	-0.5
	baz=320,slow=12						
ARA0	**ARCESS Array S**	7.08	112	Pn	Pn	12 38 02.9	-0.5
	baz=320,slow=12						
ARCES	**ARCESS Array B**	7.08	112	Pn	Pn	12 38 03.3	-0.1
	baz=325,slow=12,SNR=23						
ARCES				Sn	Sn	12 39 12.8	-11
	baz=274,slow=17,SNR=1.9						
NBB40	**Tonnes**	7.09	159	*e*P	Pn	12 38 04.1	+0.6
KONS	**Konsvik**	7.11	158	*e*P	Pn	12 38 04.4	+0.5
KONS				*e*		12 38 59.9	
KONS				*e*S	Sn	12 39 16.8	-7.8
KONS				IAML		12 39 54.5	
	comp=Z,17nm,0.7s						
STOK	**Stokkvaagen**	7.26	159	*e*P	Pn	12 38 06.7	+0.8
KEV	**Kevo**	7.35	108	Pn	Pn	12 38 05.4	-1.7
DAG	**Danmarks Havn**	7.40	310	*e*P	Pn	12 38 03.9	-3.9
DAG				*e*S	Sn	12 39 18.8	-13
DBG	**Daneborg**	7.55	291	Pn	Pn	12 38 05.2	-4.6
DBG	**Daneborg**	7.55	291	*e*P	Pn	12 38 05.2	-4.6
DBG				*e*S	Sn	12 39 24.9	-10
MOR8	**Moi Rana**	7.58	155	*e*P	Pn	12 38 10.8	+0.4
NSS	**Namsos**	8.94	165	*e*P	Pn	12 38 29.4	+0.6
SCO	**Scoresbysund**	9.25	267	Pn	Pn	12 38 31.1	-2.0
NOD	**Norderasen**	10.27	159	*e*P	Pn	12 38 48.3	+1.2
APA0	**Apatity Array**	10.41	109	Pn	Pn	12 38 47.2	-1.9
	baz=325,slow=14						
APA0	**Apatity Array**	10.41	109	Pn	Pn	12 38 47.2	-1.9
	baz=325,slow=14						
LVZ	**Lovozero**	10.67	106	Pn	Pn	12 38 50.3	-2.3
MOL	**Molde**	10.70	178	*e*P	Pn	12 38 53.2	+0.1
AKN	**Aaknes**	11.09	179	Pn	Pn	12 38 58.6	+0.2
AKN	**Aaknes**	11.09	179	Pn	Pn	12 38 58.6	+0.2
DOMB	**Dombas**	11.26	174	*e*P	Pn	12 39 00.8	0.0
NC204	**NORSAR Array S**	12.10	170	Pn	Pn	12 39 11.9	-0.2
NC303	**NORSAR Array S**	12.18	169	Pn	Pn	12 39 13.1	-0.2
NC405	**NORSAR Array S**	12.31	168	Pn	Pn	12 39 14.9	-0.2
NBO00	**NORSAR Array S**	12.34	170	Pn	Pn	12 39 15.2	-0.3
NB201	**NORSAR Array S**	12.35	169	Pn	Pn	12 39 15.7	+0.1
NOA	**NORSAR Array B**	12.36	169	Pn	Pn	12 39 14.2	-1.5
	comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=3.8						
NAO01	**NORSAR Array S**	12.54	170	Pn	Pn	12 39 17.1	-1.0
NRA0	**NORESS Array S**	12.68	169	Pn	Pn	12 39 20.1	+0.1
	baz=341,slow=12						
NRA0	**NORESS Array S**	12.68	169	Pn	Pn	12 39 20.1	+0.1
	baz=341,slow=12						
SUMG	**Summit**	13.02	289	Pn	Pn	12 39 23.8	-1.2
FIA0	**FINESS Array S**	13.89	138	Pn	Pn	12 39 35.5	-1.1
	baz=346,slow=12						
FIA0	**FINESS Array S**	13.89	138	Pn	Pn	12 39 35.5	-1.1
	baz=346,slow=12						
FIA1	**FINESS Array S**	13.89	138	Pn	Pn	12 39 36.4	-0.2
FINES	**FINESS Array B**	13.89	138	Pn	Pn	12 39 35.8	-0.7
	comp=Z,0.3nm,0.3s,baz=331,slow=11,SNR=3.9						
KLMR	**Klimovskoe**	17.50	118	*e*Pn	Pn	12 40 23.8	+0.2
KLMR				AMP		12 40 32.6	
	comp=Z,82nm,1.4s						
EKA	**Eskdalemuir Ar**	18.39	198	P	P	12 40 33.5	-1.2
	baz=358,slow=8.5,SNR=2.3						
EUNU	**Eureka**	20.01	330	P	Pn	12 40 53.1	-0.9
OBN	**Obninsk**	21.92	130	P	P	12 41 13.0	+0.1
	comp=Z,6.8nm,0.4s,baz=25,slow=21,SNR=2.1						
OBN	**Obninsk**	21.92	130	P	P	12 41 14.3	+1.4
KIRV	**Kirov**	22.08	109	P	P	12 41 14.7	0.0
	comp=Z,13nm,0.7s,baz=15,slow=4.4,SNR=2.7						
CLL	**Collm**	22.16	169	*e*P	P	12 41 19.0	+3.4
	comp=Z,21nm,1.3s						
CLL				*i*		12 41 25.8	
CLL	**Collm**	22.16	169	P	P	12 41 15.2	-0.4
CLL				IAmb	IAmb	12 41 22.0	
	comp=Z,20nm,1.3s						
CHVC	**Chvalec**	23.08	164	*e*P	P	12 41 26.7	+1.3
NKC	**Novy Kostel**	23.21	170	*e*P	P	12 41 29.9	+3.2
DPC	**Dobruska-Polom**	23.34	164	*e*P	P	12 41 30.1	+2.1
PRU	**Pruhonice**	23.57	167	*e*P	P	12 41 33.9	+3.7
MORC	**Moravsky Berou**	24.01	162	*e*P	P	12 41 37.7	+3.2
MORC	**Moravsky Berou**	24.01	162	P	P	12 41 35.0	+0.4
MORC				IAmb	IAmb	12 41 52.1	
	comp=Z,13nm,1.2s						
KHC	**Kasperske Hory**	24.37	169	*e*P	P	12 41 47.8	+10
KHC	**Kasperske Hory**	24.37	169	P	P	12 41 37.1	-0.8
VRAC	**Vranov**	24.40	164	P	P	12 41 38.1	0.0
	comp=Z,9.3nm,0.7s,baz=355,slow=11,SNR=6.1						
VRAC	**Vranov**	24.40	164	*e*P	P	12 41 41.2	+3.1
KRUC	**Moravsky**	24.63	164	*e*P	P	12 41 43.3	+3.2
AKASG	**Malin Array Be**	24.64	144	P	P	12 41 40.1	0.0
	comp=Z,2.7nm,0.6s,baz=345,slow=9.4,SNR=7.8						
AKBB	**Malin Array Si**	24.64	144	P	P	12 41 40.4	+0.3
GEC2	**GERESS Array S**	24.66	169	P	P	12 41 40.6	+0.1
GEC2				IAmb	IAmb	12 41 49.6	
	comp=Z,6.6nm,1.0s						
GERES	**GERESS Array B**	24.66	169	P	P	12 41 40.0	-0.5
	comp=Z,0.2nm,0.3s,baz=287,slow=28,SNR=3.4						
JAVC	**Velka Javorina**	24.93	162	*e*P	P	12 41 46.5	+3.5
BFO	**Black Forest**	24.98	177	P	P	12 41 43.7	+0.3
BFO				IAmb	IAmb	12 41 48.5	
	comp=Z,16nm,1.2s						
ECH	**Echery**	25.09	179	P	P	12 41 43.9	-0.4
CLF	**Chambon-Foret**	25.35	187	P	P	12 41 47.0	+0.4
PSZ	**Piszkesteto**	26.08	159	P	P	12 41 53.5	+0.2
PSZ				IAmb	IAmb	12 41 56.0	
	comp=Z,11nm,1.2s						
ARU	**Arti**	26.49	101	P	P	12 41 58.1	+1.2
	comp=Z,1.5nm,0.7s,baz=308,slow=12,SNR=2.7						
ARU	**Arti**	26.49	101	P	P	12 41 58.0	+1.0
BELG	**Belogornoye**	27.08	118	P	P	12 42 02.6	+0.5
	comp=Z,25nm,1.1s,baz=49,slow=5.4,SNR=4.1						
TIXI	**Tiksi**	30.86	31	P	P	12 42 37.1	+1.4
TIXI				IAmb	IAmb	12 42 49.9	
	comp=Z,3.0nm,0.8s						
AKTO	**Aktyubinsk**	31.63	108	P	P	12 42 43.0	+0.3
	comp=Z,4.2nm,1.0s,baz=231,slow=1.7,SNR=4.1						
BRVK	**Borovoye**	32.80	93	P	P	12 42 54.1	+1.3
BRVK				IAmb	IAmb	12 43 00.3	
	comp=Z,8.8nm,1.2s						
BVAR	**Borovoye Array**	32.86	92	P	P	12 42 53.9	+0.5
	comp=Z,1.3nm,0.7s,baz=353,slow=22,SNR=6.3						
ABKAR	**Akbulak array**	33.23	106	P	P	12 42 57.3	+0.6
KBZ	**Khabaz**	34.03	130	P	P	12 43 05.6	+2.0
	comp=Z,4.6nm,1.2s,baz=26,slow=11,SNR=3.0						
BRTR	**Keskin Array B**	36.04	143	P	P	12 43 23.4	+2.2
	comp=Z,1.3nm,0.9s,baz=347,slow=5.1,SNR=4.0						
ZAA0	**Zalesovo Array**	36.22	78	P	P	12 43 23.2	+0.8
ZALV	**Zalesovo Beam**	36.22	78	P	P	12 43 24.0	+1.6
	comp=Z,2.5nm,0.8s,baz=332,slow=8.5,SNR=6.2						
KURK	**Kurchatov**	37.30	87	P	P	12 43 32.6	+1.0
KURK				IAmb	IAmb	12 43 39.2	
	comp=Z,10nm,0.9s						
YKA	**Yellowknife Ar**	38.95	321	P	P	12 43 44.8	-0.6
	comp=Z,0.7nm,0.8s,baz=24,slow=9.0,SNR=9.5						
PRP	**Porcupine Dome**	40.29	342	P	P	12 43 57.8	+1.1
ILAR	**Eielson Array**	41.14	343	P	P	12 44 04.6	+1.1
	comp=Z,1.0nm,0.9s,baz=9.4,slow=6.8,SNR=7.2						
KKAR	**Karatay Array**	41.84	99	P	P	12 44 10.6	+1.0
KKAR				IAmb	IAmb	12 44 17.9	
	comp=Z,7.1nm,0.9s						
MK31	**Makanchi Array**	41.89	86	P	P	12 44 10.6	+0.7
MKAR	**Makanchi Array**	41.89	86	P	P	12 44 11.9	+2.0
	comp=Z,4.1nm,1.1s,baz=344,slow=6.1,SNR=6.1						
MKAR				PP	PP	12 45 45.7	-0.8
	comp=Z,1.3nm,1.0s,baz=316,slow=12,SNR=3.3						
GEYT	**Alibeck**	43.23	115	P	P	12 44 21.4	+0.4
	comp=Z,8.9nm,0.9s,baz=305,slow=10,SNR=5.5						
ULM	**Lac du Bonnet**	46.09	300	P	P	12 44 43.2	-0.4
	comp=Z,1.9nm,0.8s,baz=25,slow=15,SNR=3.4						
SONM	**Songino Array**	47.65	64	P	P	12 44 56.5	+0.6
	comp=Z,2.5nm,0.9s,baz=323,slow=9.3,SNR=7.8						
SONM				PcP	PcP	12 46 24.6	-0.6
	comp=Z,0.8nm,0.8s,baz=37,slow=5.6,SNR=2.2						
PDAR	**Pinedale Array**	56.42	307	P	P	12 46 01.1	-0.3
	comp=Z,1.0nm,0.9s,baz=55,slow=5.6,SNR=5.4						
TORD	**Torodi Ar. Bea**	60.11	185	P	P	12 46 27.5	+0.4
	comp=Z,3.1nm,0.9s,baz=353,slow=6.7,SNR=5.9						
NVAR	**Mina Array Bea**	62.49	313	P	P	12 46 44.0	+0.6
	comp=Z,1.2nm,0.9s,baz=37,slow=3.7,SNR=6.0						
CMAR	**Chiang Mai Arr**	73.16	82	P	P	12 47 52.5	+2.1
	comp=Z,1.0nm,0.5s,baz=327,slow=7.1,SNR=6.7						
ASAR	**Alice Springs**	122.92	60	PKP	PKPdf	12 55 15.1	-0.6
	comp=Z,0.9nm,0.7s,baz=3.1,slow=2.0,SNR=9.7						

IDC 19 12:39:00.4±1.4**,73°.14N×6°.40E,h0^{km},mb3.2**/2**,mb1 3.6**/4**, mb1mx3.3**/44**,mbtmp3.5**/4**,ML3.9**/2**,Error ellipse: s-maj=38.3km s-min=25.3km az=101.0,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	5.08	252	Pn	Pn	12 40 17.5	-0.2
	baz=63,slow=11,SNR=1.5						
SPITS	**Spitsbergen Ar**	5.63	21	Pn	Pn	12 40 23.7	-1.5
	baz=200,slow=15,SNR=7.8						
GERES	**GERESS Array B**	24.59	168	P	P	12 44 22.1	+0.2
	0.4nm,0.3s,baz=355,slow=9.7,SNR=4.5						
YKA	**Yellowknife Ar**	38.98	321	P	P	12 46 27.8	+0.1
	0.1nm,0.2s,baz=26,slow=8.9,SNR=1.9						
ASAR	**Alice Springs**	123.00	60	PKP	PKPdf	12 57 57.4	-0.6
	1.0nm,1.2s,baz=349,slow=1.9,SNR=4.4						

DNK ***19*** *12:45:09.4±4.0,73°.32N×6°.25E,h0^{km}±213^{km},mb5.2, ML4.0,Ms4.9*

BJI ***19*** *12:45:09.0±0.0,73°.30N×6°.30E,h5^{km},mB5.5/56, mb5.1/74,Ms5.4/70,Ms7 5.1/68*

NAO ***19*** *12:45:09.8±1.1,73°.26N×6°.44E,ML4.9*

IEPN ***19*** *12:45:09.0,73°.07N×5°.28E,h10^{km}*

MOS ***19*** *12:45:11.3±1.0,73°.27N×6°.40E,h10^{km},mb5.6/126, MS4.8/31,Error ellipse: s-maj=12.5km s-min=3.2km az=95.8*

IDC ***19*** *12:45:11.3±0.3,73°.26N×6°.51E,h0^{km},mb4.9/40, mb1 5.0/47,mb1mx5.0/50,mbtmp4.9/47,ML4.4/7,MS4.9/43, Ms1 4.9/43,ms1mx4.9/49,Error ellipse: s-maj=9.8km s-min=7.4km az=42.0*

NEIC ***19*** *12:45:12.8±1.4,73°.22N±0°.07×6°.5E±0°.2,h10^{km}±1^{km}, mb5.5/502,Mww5.4,Mwc5.4(GCMT),Error ellipse: s-maj=11.4km s-min=10.5km az=23.0*

GCMT ***19*** *12:45:13.9±0.1,73°.22N±0°.01×6°.35E±0°.02,h12^{km}, MW5.4/143,Moment Tensor Solution. s85,c136; s143,c305; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.40±.02; $M_{\theta\theta}$0.02±.02; $M_{\phi\phi}$1.38±.02; $M_{r\theta}$0.03±.06; $M_{\theta\phi}$0.93±.02; $M_{\phi r}$-0.41±.05; Best double couple: $M_0$1.68700×10^{17} NP1:ϕ_s219.00000°,δ40.00000°, λ-72.00000°. NP2:ϕ_s16.00000°,δ52.00000°, λ-105.00000°. Principal axes: T 1.8920, Plg6.0000°, Azm116.0000°; N -0.4120, Plg12.0000°, Azm25.0000°; P -1.4820, Plg77.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BER ***19*** *12:45:13.2±2.5,73°.34N×6°.52E,h10^{km},ML3.6,MS4.6, ML4.9(NAO),Confirmed Earthquake*

NEIC ***19*** *12:45:15,73°.13N×6°.44E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.22; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$1.29; $M_{r\theta}$0.95; $M_{\theta\phi}$0.90; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.83000×10^{17} NP1:ϕ_s358.00000°, δ42.00000°,λ-137.00000°. NP2:ϕ_s233.00000°, δ63.00000°,λ-56.00000°. Principal axes: T 1.8660, Plg12.0000°, Azm300.0000°; N -0.0834, Plg29.0000°, Azm37.0000°; P -1.7826, Plg58.0000°, Azm190.0000°;*

NEIC ***19*** *12:45:16,73°.23N×6°.37E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.37; $M_{\theta\theta}$0.00; $M_{\phi\phi}$1.37; $M_{r\theta}$0.02; $M_{\theta\phi}$0.95; $M_{\phi r}$-0.44; Fault plane solution: $M_0$1.72000×10^{17} NP1:ϕ_s220.00000°, δ40.00000°,λ-71.00000°. NP2:ϕ_s16.00000°,δ53.00000°, λ-105.00000°. Principal axes: T 1.9017, Plg7.0000°, Azm116.0000°; N -0.4393, Plg12.0000°, Azm25.0000°; P -1.4624, Plg76.0000°, Azm235.0000°;*

ISC 19 12:45:11.8±0.6**,73°.26N**±0°.03×**6°.68E**±0°.03**,h3^{km}**±3^{km}**, n1574,**σ**1^{s}.59**/1684**,mb5.5**/449**,MS4.9**/97**,86C-59D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	3.65	64	Pn	Pn	12 46 07.7	-1.5
BJO1	**Bjornoya**	3.65	64	⇑*i*P	Pn	12 46 07.6	-1.5
BJO1				*e*S	Sn	12 46 48.0	-4.6
BJO1				IVMs_BB	IVMs_BB	12 47 09.9	
	comp=Z,5μm,7.5s						
HSPB	**Hornsund (broa**	4.39	27	*e*P	Pn	12 46 17.6	-1.7
HSPB	**Hornsund (broa**	4.39	27	Pn	Pn	12 46 17.7	-1.6
HSPB	**Hornsund (broa**	4.39	27	⇓*i*P	Pn	12 46 17.6	-1.7
HSPB				*e*S	Sn	12 47 02.4	-8.5
HSPB				IVMs_BB	IVMs_BB	12 47 39.4	
	comp=Z,8μm,16.3s						
HSPB	**Hornsund (broa**	4.39	27	⇓*i*P	Pn	12 46 17.5	-1.7
HSPB				S	Sn	12 47 07.2	-3.7
JNE	**Jan Mayen East**	5.14	251	⇑*i*P	Pn	12 46 28.1	-1.5
JNW	**Jan Mayen West**	5.15	252	⇑*i*P	Pn	12 46 28.2	-1.5
BRBA	**Barentsburg A**	5.17	18	Pn	Pn	12 46 28.5	-1.4
BRBA	**Barentsburg A**	5.17	18	⇑Pn	Pn	12 46 28.5	-1.4
JMIC	**Jan Mayen**	5.20	251	Pn	Pn	12 46 28.2	-2.1
	baz=81,slow=3.5,SNR=66						
JMIC				LR	LR	12 47 56.2	
	comp=Z,11μm,20.1s,baz=46,slow=32						
JMIC	**Jan Mayen**	5.20	251	Pn	Pn	12 46 28.5	-1.9
JMIC	**Jan Mayen**	5.20	251	⇓*i*P	Pn	12 46 28.2	-2.1
JMIC				IVMs_BB	IVMs_BB	12 48 48.1	
	comp=Z,30μm,5.8s						
JMI	**Jan Mayen**	5.29	251	⇑*i*P	Pn	12 46 30.4	-1.2
TRO	**Tromso**	5.33	127	Pn	Pn	12 46 31.4	-0.8
TRO	**Tromso**	5.33	127	⇑*e*P	Pn	12 46 31.4	-0.8
TRO				*e*S	Sn	12 47 29.2	-4.9
TRO				IVMs_BB	IVMs_BB	12 48 05.2	
	comp=Z,6μm,19.9s						
SPA0	**Spitsbergen Ar**	5.49	21	Pn	Pn	12 46 33.2	-1.0
	baz=191,slow=16						
SPA0	**Spitsbergen Ar**	5.49	21	Pn	Pn	12 46 33.6	-0.7
SPA0	**Spitsbergen Ar**	5.49	21	⇓*e*	Pn	12 46 33.2	-1.2
SPA0				⇑Pn	Pn	12 46 33.2	-1.0

	baz=191,slow=16						
SPA0	Spitsbergen Ar	5.49	21	⇑iP	Pn	12 46 33.1	-1.2
SPITS	Spitsbergen Ar	5.49	21	Pn	Pn	12 46 33.1	-1.2
	baz=193,slow=14,SNR=110						
SPITS				LR	LR	12 48 31.5	
	comp=Z,15µm,18.7s,baz=205,slow=36						
N2VI	Vinje	5.54	150	⇑eP	Pn	12 46 34.0	-1.0
LOF	Lofoten	5.63	153	Pn	Pn	12 46 36.7	+0.5
LOF	Lofoten	5.63	153	⇑iP	Pn	12 46 35.4	-0.8
LOF				eS	Sn	12 47 34.4	-6.8
LOF				IVMs_BB	IVMs_BB	12 48 19.3	
	comp=Z,7µm,11.5s						
JETT	Jettan, Norway	5.74	124	Pn	Pn	12 46 37.4	-0.5
JETT				Sn	Sn	12 47 39.0	-5.2
HOPEN	Hopen	5.78	47	Pn	Pn	12 46 36.8	-1.5
HOPEN	Hopen	5.78	47	eP	Pn	12 46 36.8	-1.5
HOPEN				eS	Sn	12 47 39.5	-5.4
HOPEN				IVMs_BB	IVMs_BB	12 49 14.7	
	comp=Z,6µm,9.2s						
HOPEN	Hopen	5.78	47	eP	Pn	12 46 36.6	-1.7
HOPEN				eS	Sn	12 47 40.3	-4.6
N2SV	S¸rv¥gen	5.79	156	⇑iP	Pn	12 46 37.8	-0.6
N2SV				eS	Sn	12 47 36.7	-8.5
KBS	Kingsbay	5.84	10	⇓eP	Pn	12 46 37.5	-1.5
KBS	Kingsbay	5.84	10	Pn	Pn	12 46 37.5	-1.5
KBS	Kingsbay	5.84	10		Pn	12 46 37.7	-1.3
KBS	Kingsbay	5.84	10	eP	Pn	12 46 37.4	-1.7
KBS				IVMs_BB	IVMs_BB	12 48 23.1	
	comp=Z,12µm,11.4s						
KBS	Kingsbay	5.84	10	eP	Pn	12 46 37.3	-1.8
KBS				S	Sn	12 47 43.2	-3.2
KBS	Kingsbay	5.84	10	i P	Pn	12 46 37.4	-1.7
HAMF	Hammerfest	5.89	108	Pn	Pn	12 46 37.9	-1.9
HAMF	Hammerfest	5.89	108	⇑eP	Pn	12 46 37.9	-1.9
HAMF				eS	Sn	12 47 42.8	-4.9
HAMF				IVMs_BB	IVMs_BB	12 48 36.2	
	comp=Z,6µm,22.5s						
STEI	Steigen	6.06	148	Pn	Pn	12 46 41.5	-0.6
STEI				Sn	Sn	12 47 46.1	-5.7
STEI	Steigen	6.06	148	⇑eP	Pn	12 46 41.6	-0.6
STEI				eS	Sn	12 47 46.0	-5.9
STEI				IVMs_BB	IVMs_BB	12 48 23.8	
	comp=Z,7µm,18.5s						
N2IH	Innhavet	6.14	145	⇑iP	Pn	12 46 43.3	+0.1
N2IH				eS	Sn	12 47 47.3	-6.5
N2IH				IVMs_BB	IVMs_BB	12 48 27.5	
	comp=Z,7µm,20.4s						
KIF	Kilpisjarvi	6.25	126	Pn	Pn	12 46 44.2	-0.5
KIF	Kilpisjarvi	6.25	126	eP	Pn	12 46 44.0	-0.7
N2TV	T¥rnvik	6.38	150	⇑eP	Pn	12 46 46.9	+0.4
FAUS	Fauske	6.57	150	⇑iP	Pn	12 46 49.3	+0.2
FAUS				eS	Sn	12 47 56.8	-7.7
FAUS				IVMs_BB	IVMs_BB	12 48 49.9	
	comp=Z,7µm,20.0s						
NBB28	Valnes	6.64	153	⇑eP	Pn	12 46 49.9	-0.2
NBB05	Inndyr	6.73	155	⇑eP	Pn	12 46 49.5	-1.8
NBB30	Finnes	6.75	156	⇑iP	Pn	12 46 50.6	-1.0
NBB30				eS	Sn	12 48 00.8	-8.1
KTK1	Kautokeino	6.83	120	⇑eP	Pn	12 46 52.4	-0.3
NBB15	Halsa Church	6.95	157	⇑eP	Pn	12 46 54.0	-0.4
ARA0	ARCESS Array S	7.06	113	Pn	Pn	12 46 54.7	-1.2
	baz=318,slow=12						
ARA0				Sn	Sn	12 48 10.4	-6.2
	baz=308,slow=22						
ARA0	ARCESS Array S	7.06	113	Pn	Pn	12 46 54.7	-1.2
	baz=318,slow=12						
ARA0				Sn	Sn	12 48 10.4	-6.2
	baz=308,slow=22						
ARCES	ARCESS Array B	7.06	113	Pn	Pn	12 46 54.8	-1.1
	baz=322,slow=12,SNR=73						
ARCES				Sn	Sn	12 48 06.1	-10
	baz=304,slow=20,SNR=2.6						
NBB40	Tonnes	7.12	159	⇑eP	Pn	12 46 56.2	-0.4
NBB40				eS	Sn	12 48 10.0	-7.8
KONS	Konsvik	7.14	159	eP	Pn	12 46 56.2	-0.7
KONS				eS	Sn	12 48 09.3	-9.1
STOK	Stokkvaagen	7.29	159	eP	Pn	12 46 58.9	-0.1
STOK				eS	Sn	12 48 13.7	-8.5
KEV	Kevo	7.33	109	P	Pn	12 46 59.9	+0.4
KEV	Kevo	7.33	109		Pn	12 46 59.9	+0.4
DAG	Danmarks Havn	7.40	310	i P	Pn	12 46 55.9	-4.6
DAG	Danmarks Havn	7.40	310	⇑eP	Pn	12 46 55.5	-5.0
DAG				eS	Sn	12 48 10.8	-14
DAG				IAML		12 48 14.8	
	comp=Z,77nm,0.4s						
DAG	Danmarks Havn	7.40	310	i P	Pn	12 46 55.9	-4.6
DAG	Danmarks Havn	7.40	310	i P	Pn	12 46 55.9	-4.6
DAG				IAML		12 48 14.8	
	comp=Z,77nm,0.4s						
DBG	Daneborg	7.57	291	Pn	Pn	12 46 57.2	-5.5
DBG				Sn	Sn	12 48 16.6	-12
DBG	Daneborg	7.57	291	⇑eP	Pn	12 46 57.4	-5.3
DBG				eS	Sn	12 48 17.1	-12
DBG	Daneborg	7.57	291	i P	Pn	12 46 57.6	-5.2
MOR8	Moi Rana	7.61	156	⇑iP	Pn	12 47 02.8	-0.5
MOR8				eS	Sn	12 48 18.9	-11
MOR8				IVMs_BB	IVMs_BB	12 49 17.6	
	comp=Z,5µm,20.7s						
NSS	Namsos	8.97	165	⇑eP	Pn	12 47 22.4	+0.4
NSS				eS	Sn	12 48 56.1	-7.3
SCO	Scoresbysund	9.28	267	P	Pn	12 47 23.4	-2.9
SCO	Scoresbysund	9.28	267	Pn	Pn	12 47 23.4	-2.9
SCO	Scoresbysund	9.28	267	i P	Pn	12 47 23.0	-3.3
SCO	Scoresbysund	9.28	267	i P	Pn	12 47 23.2	-3.1
SCO	Scoresbysund	9.28	267	i P	Pn	12 47 23.0	-3.3
SCO				i P	Pn	12 47 23.3	-3.1
TBLU	Trondheim	10.14	171	⇑eP	Pn	12 47 34.6	-3.4
NOD	Norderasen	10.30	159	⇑eP	Pn	12 47 40.6	+0.4
APA0	Apatity Array	10.40	110	Pn	Pn	12 47 38.7	-2.9
	baz=329,slow=12						
APA0	Apatity Array	10.40	110	Pn	Pn	12 47 38.7	-2.9
	baz=329,slow=12						
LVZ	Lovozero	10.65	106	deP	Pn	12 47 41.9	-3.2
LVZ				pmax	pmax		
	comp=Z,823nm,1.0s						
LVZ	Lovozero	10.65	106	Pn	Pn	12 47 42.4	-2.6
MOL	Molde	10.74	178	⇑eP	Pn	12 47 44.0	-2.3
AKN	Aaknes	11.13	179	Pn	Pn	12 47 50.2	-1.5
AKN	Aaknes	11.13	179	eP	Pn	12 47 50.1	-1.5
DOMB	Dombas	11.30	174	⇑eP	Pn	12 47 52.5	-1.5
ZFI	Zemlya Franca-	11.53	32	i P	Pn	12 47 55.9	-1.1
ZFI2	Zemlya Franca-	11.53	32	eP	Pn	12 47 54.7	-2.3
ZFI2				S	Sn	12 49 58.1	-8.0
NC204	NORSAR Array S	12.13	171		Pn	12 48 03.9	-1.5
HYA	Hoyanger	12.15	181	eP	Pn	12 48 03.2	-2.3
NC303	NORSAR Array S	12.22	169		Pn	12 48 05.9	-0.6
SUE	Sulen	12.28	184	⇑eP	Pn	12 48 05.6	-1.7
NC405	NORSAR Array S	12.35	169	Pn	Pn	12 48 06.9	-1.4
NBO00	NORSAR Array S	12.38	171	Pn	Pn	12 48 07.0	-1.7
NBO00	NORSAR Array S	12.38	171	⇑eP	Pn	12 48 08.2	-0.5
NB201	NORSAR Array S	12.39	169		Pn	12 48 07.4	-1.4
NB2	NORSAR Subarra	12.39	170	Pn	Pn	12 48 08.4	-0.5
	baz=354,slow=14						
NB2	NORSAR Subarra	12.39	170	Pn	Pn	12 48 08.4	-0.5
	baz=354,slow=14						
NOA	NORSAR Array B	12.39	170	Pn	Pn	12 48 07.5	-1.4
	comp=Z,0.3nm,0.3s,baz=331,slow=22,SNR=22						
NOA				Sn	Sn	12 50 16.1	-11
	comp=Z,0.1nm,0.3s,baz=220,slow=23,SNR=4.1						
NOA				LR	LR	12 52 37.5	
	comp=Z,3µm,19.8s,baz=350,slow=36						
NAO01	NORSAR Array S	12.57	171		Pn	12 48 09.6	-1.7
SKAR	Skarslia	12.65	176	⇓eP	Pn	12 48 10.9	-1.5
NC602	NORSAR Array S	12.71	169		Pn	12 48 12.6	-0.7
NC602	NORSAR Array S	12.71	169	⇑eP	Pn	12 48 11.6	-1.7
NRA0	NORESS Array S	12.71	169	Pn	Pn	12 48 12.5	-0.8
	baz=351,slow=12						
NRA0	NORESS Array S	12.71	169	Pn	Pn	12 48 12.5	-0.8
	baz=351,slow=12						
BER	Bergen	12.94	183	⇑eP	Pn	12 48 14.0	-2.3
BORG	Borgarnes	13.01	243	Pn	Pn	12 48 17.8	+0.5
	comp=Z,0.4nm,0.3s,baz=198,slow=12,SNR=1.0						
BORG				LR	LR	12 51 53.4	
	comp=Z,5µm,19.3s,baz=29,slow=31						
SUMG	Summit	13.04	289	i P	Pn	12 48 16.0	-2.0
SUMG				pmax	pmax		
	comp=Z,770nm,1.4s						
SUMG	Summit	13.04	289	Pn	Pn	12 48 15.6	-2.4
SUMG	Summit	13.04	289	i P	Pn	12 48 16.0	-2.0
SUMG				IAmb	IAmb	12 48 20.1	
	comp=Z,774nm,1.4s						
SUMG	Summit	13.04	289	i P	Pn	12 48 16.0	-2.0
	comp=Z,774nm,1.4s						
SUMG	Summit	13.04	289	i P	Pn	12 48 16.0	-2.0
SUMG				IAmb	IAmb	12 48 20.1	
	comp=Z,774nm,1.4s						
SLVR	Solovky	13.05	114	eP	Pn	12 48 13.6	-4.2
ODD1	Odda	13.41	180	⇑eP	Pn	12 48 22.4	-0.4
HFS	Hagfors	13.45	165	Pn	Pn	12 48 21.0	-2.3
	comp=Z,2.5nm,0.3s,baz=357,slow=13,SNR=34						
HFS				Sn	Sn	12 50 40.8	-12
	comp=Z,0.5nm,0.3s,baz=352,slow=20,SNR=4.8						
HFS				LR	LR	12 53 11.1	
	comp=Z,7µm,19.1s,baz=351,slow=36						
HFS	Hagfors	13.45	165	Pn	Pn	12 48 21.7	-1.6
	baz=356,slow=12						
HFS	Hagfors	13.45	165	Pn	Pn	12 48 21.7	-1.6
	baz=356,slow=12						
OSL	Oslo	13.47	171	⇑eP	Pn	12 48 21.7	-1.8
KONO	Kongsberg	13.72	174	⇓eP	Pn	12 48 24.6	-2.3
KONO	Kongsberg	13.72	174	Pn	Pn	12 48 25.4	-1.5
KONO	Kongsberg	13.72	174	eP	Pn	12 48 25.0	-1.9
FIA0	FINESS Array S	13.90	138	Pn	Pn	12 48 27.5	-1.9
	baz=341,slow=14						
FIA0	FINESS Array S	13.90	138	Pn	Pn	12 48 27.5	-1.9
	baz=341,slow=14						
FIA1	FINESS Array S	13.90	138	Pn	Pn	12 48 27.0	-2.4
FINES	FINESS Array B	13.90	138	Pn	Pn	12 48 27.5	-1.9
	comp=Z,1.3nm,0.3s,baz=342,slow=12,SNR=28						
FINES				LR	LR	12 53 31.1	
	comp=Z,9µm,20.2s,baz=334,slow=36						
AAL	Aland	14.09	152	eP	P	12 48 40.4	+0.5
KMY	Karmoy	14.12	183	⇑eP	Pn	12 48 31.0	-1.4
TMCR	Tamitsa	14.36	113	eP	Pn	12 48 34.7	-0.9
TMCR				e		12 51 15.2	
TMCR				pmax	pmax		
	comp=Z,143nm,0.5s						
TMCR	Tamitsa	14.36	113	eP	Pn	12 48 33.9	-1.7
TMCR				eS	Sn	12 51 10.4	-4.7
SNART	Snartemo	14.99	179	⇑eP	Pn	12 48 42.6	-1.6
SNART	Snartemo	14.99	179	i P	Pn	12 48 40.0	-4.2
SNART				i P	Pn	12 48 40.6	-3.5
HOMB	Homborsund	15.07	176	i P	Pn	12 48 43.0	-2.3
HOMB	Homborsund	15.07	176	i P	Pn	12 48 43.0	-2.3
ICESG	Greenland Ices	15.18	277	i P	Pn	12 48 44.4	-2.6
ICESG	Greenland Ices	15.18	277	i P	Pn	12 48 44.4	-2.6
BORU	Boraas	15.88	168	eP	Pn	12 48 55.6	-0.3
LSH	Leshukonskoye	15.93	102	eP	Pn	12 48 52.5	-4.1
LSH				eS	Sn	12 51 43.3	-10
MTSE	Matsula	16.06	146	eP	Pn	12 48 56.0	-2.3
ONAU	Onsala	16.07	170	eP	Pn	12 48 58.0	-0.3
PUL	Pulkovo	16.29	134	⇑eP	Pn	12 49 00.6	-0.5
PUL				pmax	pmax		
	comp=Z,508nm,1.1s						
GOET	G??ttrup	16.32	175	eP	P	12 49 02.8	-1.8
GOET	G??ttrup	16.32	175	i P	P	12 49 04.1	-0.5
GOET	G??ttrup	16.32	175	eP	P	12 49 02.8	-1.8
GOET				i P	P	12 49 04.1	-0.5
FABU	Falkenberg	16.50	168	eP	Pn	12 49 02.9	-1.0
KAC	Achnashellach	16.53	203	eP	P	12 49 05.3	-1.7
KPL	Plockton	16.73	204	eP	P	12 49 07.9	-1.2
KPL				IAmb	IAmb	12 49 12.1	
	comp=Z,226nm,1.2s						
VSU	Vasula	16.80	141	eP	Pn	12 49 04.9	-2.8
VSU	Vasula	16.80	141	ceP	Pn	12 49 06.5	-1.2
VSU				pmax	pmax		
	comp=Z,605nm,1.2s						
DRUM	Mains of Drumt	16.82	198	eP	P	12 49 08.3	-1.9
DRUM				IAmb	IAmb	12 49 12.5	
	comp=Z,274nm,1.1s						
SLIT	Slitere, Latvi	16.87	150	eP	Pn	12 49 07.6	-1.0
MUD	Monsted U'grnd	16.90	175	eP	P	12 49 09.8	-1.3
MUD	Monsted U'grnd	16.90	175	eP	P	12 49 09.8	-1.3
MUD	Monsted U'grnd	16.90	175	i P	P	12 49 09.8	-1.3
MUD	Monsted U'grnd	16.90	175	eP	P	12 49 09.8	-1.3
DEL	Delary	17.11	166	i P	P	12 49 12.0	-1.3
AMDE	Amderma	17.23	74	eP	Pn	12 49 09.8	-3.3
KLMR	Klimovskoe	17.49	118	eP	Pn	12 49 15.5	-0.8
KLMR				pmax	pmax		
	comp=Z,1µm,1.5s						
KLMR	Klimovskoe	17.49	118	ePn	Pn	12 49 15.5	-0.8
KLMR				AMP		12 49 24.2	
	comp=Z,1µm,1.5s						
KLMR	Klimovskoe	17.49	118	⇑iP	Pn	12 49 12.3	-4.0
KLMR				i S	Sn	12 52 16.8	-14
EAB	Aberfoyle	17.71	201	eP	P	12 49 19.1	-0.9
LAWE	Loch Awe, Argy	17.76	203	eP	P	12 49 20.1	-0.4
COP	Copenhagen	17.80	169	i P	Pn	12 49 18.1	-2.1
COP				pmax	pmax		
	comp=Z,270nm,1.2s						
COP	Copenhagen	17.80	169	i P	Pn	12 49 18.1	-2.1
COP				IAmb	IAmb	12 49 23.9	
	comp=Z,271nm,1.2s						
COP	Copenhagen	17.80	169	i P	Pn	12 49 18.1	-2.1
	comp=Z,270nm,1.2s						
COP	Copenhagen	17.80	169	i P	Pn	12 49 18.1	-2.1
COP				IAmb	IAmb	12 49 23.9	
	comp=Z,271nm,1.2s						
ESY	Stoneypath	17.82	197	eP	P	12 49 21.5	+0.2
EDI	Edinburgh	17.86	198	eP	P	12 49 20.9	-0.8
EDI				IAmb	IAmb	12 49 21.7	
	comp=Z,190nm,1.2s						
LUNU	Lund	17.91	167	i P	P	12 49 20.9	-1.3
EBL	Broad Law	18.00	198	eP	P	12 49 22.3	-0.9
PGBU	Glenifferbraes	18.10	201	eP	P	12 49 23.5	-0.8
PGBU				IAmb	IAmb	12 49 27.0	
	comp=Z,256nm,1.3s						
LLD	Lille Linde	18.14	170	i P	P	12 49 23.6	-1.1
LLD	Lille Linde	18.14	170	i P	P	12 49 23.6	-1.1
LLD	Lille Linde	18.14	170	i P	P	12 49 23.6	-1.1
LLD	Lille Linde	18.14	170	i P	P	12 49 23.6	-1.1
PBUR	Paburge	18.38	152	eP	P	12 49 28.1	+0.7
EKA	Eskdalemuir Ar	18.45	198	P	Pn	12 49 27.4	-0.7
	baz=8.4,slow=9.7,SNR=48						
EKA	Eskdalemuir Ar	18.45	198	P	Pn	12 49 27.8	-0.4
EKA	Eskdalemuir Ar	18.45	198	P	Pn	12 49 27.8	-0.4
ESK	Eskdalemuir	18.47	198	eP	Pn	12 49 28.3	-0.1
ESK				IAmb	IAmb	12 49 31.1	
	comp=Z,163nm,1.2s						
ESK	Eskdalemuir	18.47	198	P	P	12 49 27.0	-1.4
ESK				pmax	pmax		
	comp=Z,135nm,1.1s						
ESK	Eskdalemuir	18.47	198		P	12 49 27.0	-1.4
BSD	Bornholm Skovb	18.53	165	eP	Pn	12 49 29.2	+0.1
BSD	Bornholm Skovb	18.53	165	i P	Pn	12 49 29.7	+0.6
BSD				pmax	pmax		
	comp=Z,200nm,1.2s						
BSD				MLR	MLR		
	comp=Z,5µm,19.0s						
BSD	Bornholm Skovb	18.53	165	i P	Pn	12 49 29.7	+0.6
BSD				IAmb	IAmb	12 49 32.2	
	comp=Z,197nm,1.2s						
BSD				IAMs_20	IAMs_20	12 55 59.2	
	comp=Z,5µm,18.7s						
BSD	Bornholm Skovb	18.53	165	i P	Pn	12 49 29.7	+0.6
	comp=Z,196nm,1.2s						
	comp=Z,5µm,19.0s						
BSD	Bornholm Skovb	18.53	165	i P	Pn	12 49 29.7	+0.6
BSD				IAmb	IAmb	12 49 32.2	
	comp=Z,197nm,1.2s						
BSD				IAMs_20	IAMs_20	12 55 59.2	
	comp=Z,5µm,18.7s						
TULEG	Thule	18.66	315	P	P	12 49 25.9	-4.5
TULEG	Thule	18.66	315	i P	P	12 49 26.4	-4.0
TULEG				IAmb	IAmb	12 49 32.4	
	comp=Z,168nm,1.2s						
TULEG	Thule	18.66	315	i P	P	12 49 26.4	-4.0
TULEG				IAmb	IAmb	12 49 32.4	
	comp=Z,168nm,1.2s						
NEWG	New Galloway	18.76	200	eP	Pn	12 49 31.5	-0.4
NEWG				IAmb	IAmb	12 49 33.4	
	comp=Z,289nm,1.3s						
RGN	Rugen	18.99	168		Pn	12 49 34.1	-0.5
CLGH	Cloghs, Cushen	18.99	203	eP	Pn	12 49 33.5	-1.2
CLGH				IAmb	IAmb	12 49 37.8	
	comp=Z,233nm,1.5s						
GAL1	Galloway	19.05	200	eP	Pn	12 49 35.1	-0.4
GAL1				IAmb	IAmb	12 49 37.1	
	comp=Z,255nm,1.3s						
HLG	Helgoland	19.16	178	eP	Pn	12 49 36.7	-0.1
	comp=Z,2µm,2.6s,baz=356,slow=10						
PABE	Paberze	19.17	149	eP	Pn	12 49 36.7	-0.2
KESW	Keswick, Cumbr	19.18	198	eP	Pn	12 49 35.7	-1.3
KESW				IAmb	IAmb	12 49 38.3	
	comp=Z,356nm,1.2s						
ISAL	Salakas	19.45	145	eP	Pn	12 49 40.0	-0.2
IIGN	Ignalina	19.67	145	eP	Pn	12 49 43.1	+0.2
SFJD	Kangerlussuaq	19.68	281	P	P	12 49 40.3	-1.2
	comp=Z,0.7nm,0.3s,baz=57,slow=9.3,SNR=8.3						
SFJD				LR	LR	12 56 21.6	
	comp=Z,13µm,18.8s,baz=50,slow=34						
SFJD	Kangerlussuaq	19.68	281	P	Pn	12 49 43.2	+0.3
SFJD				pmax	pmax		
	comp=Z,149nm,1.2s						
SFJD	Kangerlussuaq	19.68	281		Pn	12 49 43.2	+0.3
IDID	Didziasalis	19.79	145	eP	Pn	12 49 44.3	-0.1
EUNU	Eureka	19.99	329	P	Pn	12 49 45.1	-1.4
NACGM	Naroch	20.20	145	i P	P	12 49 47.0	-0.3
NACGM				i P	Pn	12 49 47.2	-1.9
NACGM				i P	Pn	12 49 47.2	-1.9
NACGM				i Pb	pwP	12 49 51.8	+1.2
	comp=Z,235nm,1.6s						
NACGM				i PP	PnPn	12 49 58.7	-4.6
NACGM				i PPP	PPP	12 50 07.7	
NACGM				i S	S	12 53 30.5	-3.6
NACGM				i SS	SnSn	12 53 46.6	-3.9
NACGM				i SSS	SSS	12 54 18.7	
NACGM				i LQ	LQ	12 54 57.7	
NACGM				i LR	LR	12 56 10.4	
LBWR	Ladybower, Pea	20.25	195	eP	Pn	12 49 48.0	-1.7
LBWR				IAmb	IAmb	12 49 50.0	
	comp=Z,611nm,1.2s						
GKP	Gorka Klasztor	20.55	162	eP	Pn	12 49 53.6	+0.3
GKP				eL	L	12 57 07.0	
	comp=Z,5µm,20.8s						
GKP	Gorka Klasztor	20.55	162	eP	Pn	12 49 52.1	-1.2
YLL	Llanberis	20.71	199	eP	P	12 49 52.4	-0.4
MNK	Minsk	20.77	143	i P	P	12 49 52.3	-1.1
	comp=E,9.0nm,1.1s						
MNK				i P	P	12 49 52.3	-1.1
	comp=N,146nm,1.1s						
MNK				i P	P	12 49 52.3	-1.1
	comp=Z,118nm,1.1s						
MNK				i PP	PnPn	12 50 10.7	-0.4
MNK				i PPP	PPP	12 50 18.5	
MNK				i S	S	12 53 44.9	-0.6
MNK				i PcP	PcP	12 54 00.3	-1.9
MNK				i SS	SnSn	12 54 07.5	+3.0
MNK				i SSS	SSS	12 54 20.7	
MNK				i LQ	LQ	12 56 12.8	
MNK				i LQ	LQ	12 56 12.8	
MNK				i LR	LR	12 57 48.1	
MNK				i LRM	MLR	12 59 21.1	
	comp=Z,1µm,10.2s						
MNK				i LRM	MLR	12 59 24.4	
	comp=N,1µm,10.8s						
MNK				i LRM	MLR	12 59 32.5	
	comp=E,77nm,11.6s						
MNK	Minsk	20.77	143	⇑iP	Pn	12 49 54.0	-1.8
MNK				ePPP	PPP	12 50 18.0	
MNK				eS	S	12 53 41.0	-4.5
MNK				eSS	SnSn	12 54 04.0	-0.5
MNK				pmax	pmax		
	comp=Z,3µm,6.0s						
MNK				pmax	pmax		
	comp=N,2µm,1.5s						
MNK				pmax	pmax		
	comp=E,500nm,1.5s						
MNK				pmax	pmax		
	comp=Z,2µm,1.5s						
MNK				smax	smax		
	comp=E,3µm,8.0s						
MNK				MLR	MLR		
	comp=N,9µm,18.0s						
MNK				MLR	MLR		
	comp=E,6µm,18.0s						
MNK				MLR	MLR		
	comp=Z,12µm,18.0s						
DSB	Dublin	20.83	202	P	P	12 49 53.9	-0.2
NRDL	Niedersach Rie	20.89	174	eP	Pn	12 49 55.5	-1.7
	comp=Z,350nm,1.4s,baz=356,slow=10						
LLW	Llanuwychllyn	20.95	198	eP	P	12 49 55.0	-0.4
IBBN	Ibbenburen	21.04	178	eP	P	12 49 56.9	+0.5
	comp=Z,602nm,1.7s,baz=356,slow=10						
RUE	Ruedersdorf	21.07	168	eP	P	12 49 56.9	+0.2
	comp=Z,512nm,1.6s,baz=356,slow=10						
FLTG	Flechtingen	21.10	172	eP	P	12 49 57.0	0.0
	comp=Z,455nm,1.4s,baz=356,slow=10						
ASSE	Asse, Remlinge	21.28	173	eP	P	12 49 59.6	+0.7
	comp=Z,419nm,1.7s,baz=356,slow=10						
MOS	Moscow	21.58	128	eP	P	12 49 59.9	-2.3
MOS				eS	S	12 53 59.0	-2.5
MOS				pmax	pmax		
	comp=Z,438nm,1.6s						
MOS				pmax	pmax		
	comp=Z,1µm,2.1s						
MOS				smax	smax		
	comp=E,2µm,5.1s						
MOS				smax	smax		
	comp=N,4µm,6.0s						
MOS				MLR	MLR		
	comp=Z,6µm,22.0s						
MCH1	Michaelchurch	21.74	196	eP	P	12 50 03.2	-0.7
MCH1				IAmb	IAmb	12 50 06.3	
	comp=Z,312nm,1.5s						
GTTG	Gottingen	21.84	174	eP	P	12 50 05.8	+0.7
	comp=Z,312nm,1.3s,baz=356,slow=10						
STRD	Stroud	21.89	195	eP	P	12 50 05.4	-0.2
STRD				IAmb	IAmb	12 50 08.2	
	comp=Z,510nm,1.1s						
BUG	Bochum--Univer	21.90	179	eP	P	12 50 06.2	+0.5
	comp=Z,466nm,1.3s,baz=356,slow=10						
OBN	Obninsk	21.92	130	P	P	12 50 04.2	-1.6
	comp=Z,11nm,0.6s,baz=334,slow=6.8,SNR=15						
OBN				LR	LR	12 58 23.0	
	comp=Z,2µm,21.6s,baz=341,slow=36						
OBN	Obninsk	21.92	130	⇓P	P	12 50 05.6	-0.2
OBN	Obninsk	21.92	130	c iP	P	12 50 05.5	-0.3
OBN				i		12 54 08.2	
OBN				pmax	pmax		
	comp=Z,345nm,1.5s						
OBN				MLR	MLR		
	comp=Z,8µm,20.0s						
OBN	Obninsk	21.92	130	P	P	12 50 05.3	-0.5
RSBS	Rosebush, Pemb	21.94	199	eP	P	12 50 04.9	-1.2
RSBS				IAmb	IAmb	12 50 07.1	
	comp=Z,211nm,1.3s						
OLDB	Oldbury-Upon-S	22.04	195	eP	P	12 50 06.9	-0.2
OLDB				IAmb	IAmb	12 50 08.7	
	comp=Z,418nm,1.4s						
KIRV	Kirov	22.06	109	P	P	12 50 06.9	-0.4
	comp=Z,100nm,0.8s,baz=358,slow=5.8,SNR=20						
KIRV				LR	LR	12 58 37.5	
	comp=Z,8µm,21.9s,baz=337,slow=36						
KIRV	Kirov	22.06	109	deP	P	12 50 06.7	-0.6
SWN1	Swindon	22.13	194	eP	P	12 50 08.6	+0.5
SWN1				IAmb	IAmb	12 50 10.2	
	comp=Z,484nm,1.4s						
KASTN	Kahler Asten	22.15	177	eP	P	12 50 09.2	+0.8
	comp=Z,304nm,1.1s,baz=356,slow=10						
CLL	Collm	22.20	169	eP	P	12 50 09.0	+0.1
CLL				⇓ipP	sP	12 50 11.7	+2.9
	comp=Z,186nm,1.3s						
CLL				ePmax		12 50 14.0	
CLL				i		12 50 15.6	
CLL				i		12 50 20.2	
	comp=Z,340nm,1.4s						
CLL				eS	S	12 54 16.0	+2.4
CLL				Lmax		12 59 00.0	
CLL	Collm	22.20	169	⇓eP	P	12 50 09.0	+0.1
CLL				i		12 50 11.7	
CLL				i		12 50 15.6	
CLL				eS	S	12 54 16.0	+2.4
CLL	Collm	22.20	169	P	P	12 50 08.5	-0.4
CLL				IAmb	IAmb	12 50 21.6	
	comp=Z,357nm,1.4s						
CLL	Collm	22.20	169	eP	P	12 50 08.3	-0.5
	comp=Z,340nm,1.4s,baz=356,slow=10						
NEUB	Neuenburg	22.24	172	eP	P	12 50 09.7	+0.4
	comp=Z,579nm,1.1s,baz=356,slow=10						
BEL	Belsk	22.34	157	eP	P	12 50 10.9	+0.6
BEL				eL	L	12 58 19.1	
	comp=Z,4µm,21.5s						
BEBN	Eben Emael	22.55	182	dP	P	12 50 12.8	+0.2
BEBN				dPnPn	PnPn	12 50 35.0	-0.5
UCC	Uccle	22.57	184	dP	P	12 50 13.5	+0.7
UCC	Uccle	22.57	184	P	P	12 50 12.9	+0.1
UCC				pmax	pmax		
	comp=Z,308nm,1.2s						
UCC	Uccle	22.57	184	P	P	12 50 12.9	+0.1
UCC				IAmb	IAmb	12 50 16.2	
	comp=Z,308nm,1.2s						

UBBA	**Unterbreizbach**	**22.57**	**175**	*e*P	**P**	**12 50 12.8**	**+0.1**
	comp=Z,442nm,1.6s,baz=356,slow=10						
NRS	**Narsarsuaq**	**22.58**	**265**	P	**P**	**12 50 14.5**	**+1.7**
NRS				pmax	pmax		
	comp=Z,293nm,1.5s						
NRS	**Narsarsuaq**	**22.58**	**265**	P	**P**	**12 50 14.5**	**+1.7**
NRS				IAmb	IAmb	12 50 38.0	
	comp=Z,293nm,1.5s						
FBE	**Freiberg**	**22.61**	**169**	*e*P	**P**	**12 50 13.0**	**-0.2**
	comp=Z,397nm,1.2s,baz=356,slow=10						
BRG	**Berggiesshubel**	**22.69**	**168**	*i* P	**P**	**12 50 13.6**	**-0.5**
BRG				Amp		12 50 18.0	
	comp=Z,177nm,1.2s						
BRG				*e*x	x	12 50 25.4	
BRG				Amp		12 50 27.6	
	comp=Z,270nm,1.4s						
BRG	**Berggiesshubel**	**22.69**	**168**	S	**S**	**12 54 25.0**	**+2.3**
BRG				Amp		12 59 06.0	
	comp=N,2.4nm,19.0s						
BRG				Amp		12 59 13.0	
	comp=E,1.4nm,18.1s						
BRG				Amp		12 59 27.0	
	comp=Z,4.3nm,18.1s						
BRG	**Berggiesshubel**	**22.69**	**168**	*i* P	**P**	**12 50 13.6**	**-0.5**
BRG				S	**S**	**12 54 25.0**	**+2.3**
BRG				pmax	pmax		
	comp=Z,177nm,1.2s						
BRG				pmax	pmax		
	comp=Z,270nm,1.4s						
BRG				smax	smax		
	comp=N,2µm,19.0s						
BRG				MLR	MLR		
	comp=E,1µm,18.1s						
BRG				MLR	MLR		
	comp=Z,4µm,18.1s						
BRG	**Berggiesshubel**	**22.69**	**168**	*i* P	**P**	**12 50 13.6**	**-0.5**
BRG				Amp		12 50 18.0	
	comp=Z,177nm,1.2s						
BRG				*e*x	x	12 50 25.4	
BRG				Amp		12 50 27.6	
	comp=Z,270nm,1.4s						
BRG	**Berggiesshubel**	**22.69**	**168**	S	**S**	**12 54 25.0**	**+2.3**
BRG				Amp		12 59 06.0	
	comp=N,2.4nm,19.0s						
BRG				Amp		12 59 13.0	
	comp=E,1.4nm,18.1s						
BRG				Amp		12 59 27.0	
	comp=Z,4.3nm,18.1s						
BRG	**Berggiesshubel**	**22.69**	**168**	*e*P	**P**	**12 50 13.2**	**-0.8**
	comp=Z,268nm,1.4s,baz=356,slow=10						
MEM	**Membach**	**22.73**	**181**	*d*P	**P**	**12 50 14.5**	**0.0**
	comp=Z,193nm,1.2s						
BTNL	**Ternell**	**22.76**	**181**	*d*P	**P**	**12 50 14.9**	**+0.1**
BSTI	**Sart Tilman**	**22.76**	**182**	*d*P	**P**	**12 50 15.8**	**+0.9**
MOX	**Moxa**	**22.80**	**172**	*e*P	**P**	**12 50 15.2**	**-0.1**
	comp=Z,210nm,1.1s,baz=356,slow=10						
MOX				*e*L	L	12 59 39.5	
	comp=Z,1µm,18.7s						
MOX	**Moxa**	**22.80**	**172**	*e*L	L	12 58 06.2	
	comp=Z,773nm,22.0s						
MOX	**Moxa**	**22.80**	**172**	*e*L	L	12 59 39.6	
	comp=Z,1µm,18.7s						
AHRW	**Bad Neuenahr-A**	**22.80**	**179**	*e*P	**P**	**12 50 15.8**	**+0.6**
	comp=Z,448nm,1.1s,baz=356,slow=10						
SNF	**Seneffe**	**22.86**	**184**	*d*P	**P**	**12 50 15.2**	**-0.6**
KSP	**Ksiaz**	**22.88**	**164**	*e*P	**P**	**12 50 15.8**	**-0.3**
KSP				*e*S	**S**	**12 54 26.6**	**+0.3**
KSP				*e*L	L	12 58 50.4	
	comp=Z,3µm,19.0s						
BCLA	**Clavier**	**22.93**	**182**	*d*P	**P**	**12 50 17.2**	**+0.6**
BGES	**Gesves**	**22.97**	**183**	*d*P	**P**	**12 50 17.3**	**+0.3**
BGES				*d*PnPn	**PnPn**	**12 50 41.8**	**+0.5**
PLN	**Plauen**	**22.98**	**171**	*e*P	**P**	**12 50 16.8**	**-0.4**
	comp=Z,200nm,1.1s,baz=356,slow=10						
BHOU	**Houvegnez**	**22.99**	**181**	*d*P	**P**	**12 50 17.3**	**0.0**
BHOU				*d*PnPn	**PnPn**	**12 50 39.0**	**-2.6**
WERD	**Werda**	**23.02**	**171**	*e*P	**P**	**12 50 17.3**	**-0.4**
	comp=Z,210nm,1.6s,baz=356,slow=10						
BMRD	**Maredsous**	**23.05**	**183**	*d*P	**P**	**12 50 18.1**	**+0.2**
TANN	**Tannenbergstha**	**23.06**	**171**	*e*P	**P**	**12 50 17.8**	**-0.3**
	comp=Z,290nm,1.5s,baz=356,slow=10						
PVCC	**Panska Ves**	**23.07**	**167**	AMS	AMS	12 59 10.0	
	comp=Z,3µm,15.2s						
GUNZ	**Gunzen**	**23.11**	**171**	*e*P	**P**	**12 50 18.3**	**-0.3**
	comp=Z,419nm,1.8s,baz=356,slow=10						
CHVC	**Chvalec**	**23.11**	**165**	*e*P	**P**	**12 50 18.6**	**0.0**
CHVC				*e*S	**S**	**12 54 32.4**	**+2.1**
CHVC				AMS	AMS	12 59 40.0	
	comp=Z,3µm,16.8s						
TNS	**Taunus Mts**	**23.13**	**177**	*e*P	**P**	**12 50 20.1**	**+1.3**
	comp=Z,460nm,1.3s,baz=356,slow=10						
OSTC	**Ostas**	**23.16**	**164**	*e*P	**P**	**12 50 19.2**	**+0.2**
OSTC				*e*S	**S**	**12 54 32.3**	**+1.2**
UPC	**Upice**	**23.19**	**165**	*e*P	**P**	**12 50 20.0**	**+0.6**
UPC				*e*S	**S**	**12 54 31.4**	**-0.2**
UPC				MLR	MLR		
	comp=Z,4µm,18.5s						
UPC	**Upice**	**23.19**	**165**	*e*P	**P**	**12 50 20.0**	**+0.6**
UPC				*e*S	**S**	**12 54 31.4**	**-0.2**
UPC				AMS	AMS	12 59 40.0	
	comp=Z,4µm,18.5s						
RCHB	**Rochefort**	**23.19**	**182**	*d*P	**P**	**12 50 21.3**	**+2.0**
RCHB				*d*PnPn	**PnPn**	**12 50 46.6**	**+2.3**
NKC	**Novy Kostel**	**23.25**	**171**	*e*P	**P**	**12 50 20.8**	**+0.9**
NKC				MLR	MLR		
	comp=Z,4µm,12.5s						
NKC	**Novy Kostel**	**23.25**	**171**	*e*P	**P**	**12 50 20.8**	**+0.9**
NKC				AMS	AMS	12 59 30.0	
	comp=Z,4µm,12.5s						
DOU	**Dourbes**	**23.26**	**183**	*d*P	**P**	**12 50 20.5**	**+0.4**
DOU				*d*x	x	12 50 26.8	
DPC	**Dobruska-Polom**	**23.37**	**164**	*e*P	**P**	**12 50 21.4**	**+0.2**
DPC				*e*S	**S**	**12 54 33.5**	**-1.1**
DPC				MLR	MLR		
	comp=Z,3µm,15.3s						
DPC	**Dobruska-Polom**	**23.37**	**164**	*e*P	**P**	**12 50 21.4**	**+0.2**
DPC				*e*S	**S**	**12 54 33.5**	**-1.1**
DPC				AMS	AMS	12 59 50.0	
	comp=Z,3µm,15.3s						
PRA	**Prague**	**23.52**	**167**	*e*P	**P**	**12 50 24.6**	**+2.0**
PRA				*e*S	**S**	**12 54 37.1**	**+0.2**
PRA				MLR	MLR		
	comp=Z,2µm,18.0s						
PRA	**Prague**	**23.52**	**167**	*e*P	**P**	**12 50 24.6**	**+2.0**
PRA				*e*S	**S**	**12 54 37.1**	**+0.2**
PRA				AMS	AMS	12 59 30.0	
	comp=Z,2µm,18.0s						
PRU	**Pruhonice**	**23.61**	**167**	*e*P	**P**	**12 50 23.8**	**+0.3**
PRU				*e*S	**S**	**12 54 39.2**	**+0.9**
PRU				MLR	MLR		
	comp=Z,4µm,17.0s						
PRU	**Pruhonice**	**23.61**	**167**	*e*P	**P**	**12 50 23.8**	**+0.3**
PRU				*e*S	**S**	**12 54 39.2**	**+0.9**
PRU				AMS	AMS	12 59 30.0	
	comp=Z,4µm,17.0s						
WLF	**Walferdange**	**23.68**	**181**	*d*P	**P**	**12 50 24.2**	**0.0**
	comp=Z,218nm,1.8s						
WLF	**Walferdange**	**23.68**	**181**	P	**P**	**12 50 25.0**	**+0.8**
WLF				pmax	pmax		
	comp=Z,291nm,1.2s						
WLF	**Walferdange**	**23.68**	**181**	P	**P**	**12 50 25.0**	**+0.8**
WLF	**Walferdange**	**23.68**	**181**	*e*P	**P**	**12 50 25.0**	**+0.8**
	comp=Z,478nm,1.5s,baz=356,slow=10						
KRLC	**Kraliky**	**23.68**	**164**	*e*P	**P**	**12 50 25.4**	**+1.1**
KRLC				MLR	MLR		
	comp=Z,3µm,16.9s						
KRLC	**Kraliky**	**23.68**	**164**	*e*P	**P**	**12 50 25.4**	**+1.1**
KRLC				AMS	AMS	13 00 00.0	
	comp=Z,3µm,16.9s						
ROTZ	**Rotzenmuhle**	**23.70**	**171**	*e*P	**P**	**12 50 25.1**	**+0.7**
	comp=Z,289nm,1.5s,baz=356,slow=10						
GRA1	**Grafenberg Arr**	**23.73**	**173**	P	**P**	**12 50 25.2**	**+0.4**
GRF	**Grafenberg Arr**	**23.73**	**173**	P	**P**	**12 50 25.2**	**+0.4**
GRF				pmax	pmax		
	comp=Z,371nm,1.6s						
GRF	**Grafenberg Arr**	**23.73**	**173**	*e*L	L	12 58 34.7	
	comp=Z,1µm,21.5s						
GRF	**Grafenberg Arr**	**23.73**	**173**	*e*L	L	12 58 34.7	
	comp=Z,1µm,21.5s						
GRF	**Grafenberg Arr**	**23.73**	**173**	*e*L	L	12 58 34.7	
	comp=Z,1µm,21.5s						
OJC	**Ojcow**	**23.82**	**159**	*e*P	**P**	**12 50 25.7**	**+0.1**
OJC				*e*S	**S**	**12 54 48.0**	**+6.2**
OJC				*e*L	L	12 59 15.0	
	comp=Z,4µm,22.0s						
OJC	**Ojcow**	**23.82**	**159**	P	**P**	**12 50 25.3**	**-0.3**
OJC				pmax	pmax		
	comp=Z,390nm,1.4s						
OJC	**Ojcow**	**23.82**	**159**	P	**P**	**12 50 25.2**	**-0.3**
PBCC	**Pribram**	**23.87**	**168**	*e*P	**P**	**12 50 27.5**	**+1.4**
OKC	**Ostrava-Krasne**	**24.04**	**162**	*e*P	**P**	**12 50 30.0**	**+2.4**
OKC				*e*S	**S**	**12 54 47.3**	**+2.2**
OKC				MLR	MLR		
	comp=N,3µm,13.6s						
OKC	**Ostrava-Krasne**	**24.04**	**162**	*e*P	**P**	**12 50 30.0**	**+2.4**
OKC				*e*S	**S**	**12 54 47.3**	**+2.2**
OKC				AMS	AMS	12 59 40.0	
	comp=N,3µm,13.6s						
MORC	**Moravsky Berou**	**24.04**	**163**	⇓P	**P**	**12 50 28.1**	**+0.3**
MORC	**Moravsky Berou**	**24.04**	**163**	*e*P	**P**	**12 50 27.7**	**-0.1**
MORC				*e*S	**S**	**12 54 48.8**	**+3.5**
MORC	**Moravsky Berou**	**24.04**	**163**	P	**P**	**12 50 27.6**	**-0.2**
MORC				pmax	pmax		
	comp=Z,407nm,1.7s						
MORC	**Moravsky Berou**	**24.04**	**163**	P	**P**	**12 50 27.6**	**-0.2**
TREC	**Trest**	**24.36**	**166**	*e*P	**P**	**12 50 32.4**	**+1.7**
TREC				MLR	MLR		
	comp=Z,4µm,17.4s						
TREC	**Trest**	**24.36**	**166**	*e*P	**P**	**12 50 32.4**	**+1.7**
TREC				AMS	AMS	13 00 00.0	
	comp=Z,4µm,17.4s						
KHC	**Kasperske Hory**	**24.40**	**169**	*e*P	**P**	**12 50 32.1**	**+1.0**
KHC				*e*		12 50 39.5	
KHC				MLR	MLR		
	comp=Z,3µm,17.0s						
KHC	**Kasperske Hory**	**24.40**	**169**	*e*P	**P**	**12 50 32.1**	**+1.0**
KHC				*e*x	x	12 50 39.5	
KHC				*e*S	**S**	**12 54 57.8**	**+6.7**
KHC				AMS	AMS	13 00 10.0	
	comp=Z,3µm,17.0s						
KHC	**Kasperske Hory**	**24.40**	**169**	P	**P**	**12 50 31.3**	**+0.2**
KHC				IAmb	IAmb	12 50 40.3	
	comp=Z,310nm,1.8s						
VRAC	**Vranov**	**24.43**	**164**	P	**P**	**12 50 32.1**	**+0.8**
	comp=Z,135nm,1.0s,baz=359,slow=10,SNR=36						
VRAC				LR	LR	13 00 11.5	
	comp=Z,3µm,19.2s,baz=350,slow=37						
VRAC	**Vranov**	**24.43**	**164**	⇑P	**P**	**12 50 32.6**	**+1.3**
VRAC	**Vranov**	**24.43**	**164**	*e*P	**P**	**12 50 31.6**	**+0.3**
VRAC				*e*S	**S**	**12 54 52.2**	**+0.7**
STU	**Stuttgart**	**24.60**	**176**	P	**P**	**12 50 34.0**	**+1.2**
STU				pmax	pmax		
	comp=Z,217nm,1.2s						
STU	**Stuttgart**	**24.60**	**176**	P	**P**	**12 50 34.0**	**+1.2**
STU				IAmb	IAmb	12 50 36.2	
	comp=Z,217nm,1.2s						
STU	**Stuttgart**	**24.60**	**176**	*e*P	**P**	**12 50 33.7**	**+0.9**
	comp=Z,237nm,1.3s,baz=356,slow=10						
AKASG	**Malin Array Be**	**24.65**	**144**	P	**P**	**12 50 32.6**	**-0.7**
	comp=Z,28nm,0.7s,baz=344,slow=9.5,SNR=34						
AKASG				LR	LR	12 59 57.0	
	comp=Z,10µm,19.9s,baz=335,slow=36						
AKASG	**Malin Array Be**	**24.65**	**144**	*i* P	**P**	**12 50 32.5**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,30nm,0.7s						
AKBB	**Malin Array Si**	**24.65**	**144**	*d i*P	**P**	**12 50 32.6**	**-0.7**
AKBB	**Malin Array Si**	**24.65**	**144**	P	**P**	**12 50 32.5**	**-0.7**
AKBB				IAmb	IAmb	12 50 46.5	
	comp=Z,197nm,1.2s						
KRUC	**Moravsky**	**24.66**	**165**	*e*P	**P**	**12 50 34.0**	**+0.7**
KRUC				*e*S	**S**	**12 55 00.7**	**+5.5**
NIE	**Niedzica**	**24.66**	**158**	*e*P	**P**	**12 50 34.6**	**+1.2**
NIE				*e*L	L	12 59 52.5	
	comp=Z,2µm,21.6s						
GEC2	**GERESS Array S**	**24.70**	**169**	P	**P**	**12 50 34.7**	**+0.9**
GERES	**GERESS Array B**	**24.70**	**169**	P	**P**	**12 50 34.2**	**+0.4**
	comp=Z,113nm,1.1s,baz=3.4,slow=6.7,SNR=105						
GERES				LR	LR	13 00 24.2	
	comp=Z,1µm,18.6s,baz=356,slow=37						
LVV	**L'vov**	**24.72**	**152**	*e*P	**P**	**12 50 33.0**	**-0.9**
LVV				*e*S	**S**	**12 54 53.3**	**-2.8**
LVV				pmax	pmax		
	comp=Z,1µm,1.8s						
LVV				MLR	MLR		
	comp=Z,5µm,14.3s						
KWP	**Kalwaria Pacla**	**24.73**	**155**	*e*P	**P**	**12 50 34.8**	**+0.8**
KWP				*e*L	L	12 59 56.8	
	comp=Z,6µm,19.4s						
KWP	**Kalwaria Pacla**	**24.73**	**155**	P	**P**	**12 50 34.0**	**0.0**
KWP				pmax	pmax		
	comp=Z,495nm,1.2s						
KWP	**Kalwaria Pacla**	**24.73**	**155**	P	**P**	**12 50 34.0**	**0.0**
LPSR	**Galich'ya Gora**	**24.77**	**129**	*e*P	**P**	**12 50 34.5**	**+0.2**
LPSR				*e*S	**S**	**12 54 58.1**	**+1.1**
LPSR				pmax	pmax		
	comp=Z,360nm,1.0s						
LPSR				smax	smax		
	comp=E,1µm,10.8s						
LPSR				MLR	MLR		
	comp=Z,5µm,18.0s						
LANS	**Liptovska Anna**	**24.84**	**160**	*e*P	**P**	**12 50 37.2**	**+2.1**
LANS				pmax	pmax		
	comp=Z,58nm,1.1s						
LANS	**Liptovska Anna**	**24.84**	**160**	*e*P	**P**	**12 50 37.1**	**+2.0**
RES	**Resolute Bay**	**24.88**	**322**	P	**P**	**12 50 34.4**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=57,slow=5.8,SNR=4.7						
RES				LR	LR	13 00 48.8	
	comp=Z,6µm,18.1s,baz=50,slow=38						
RES	**Resolute Bay**	**24.88**	**322**	P	**P**	**12 50 34.8**	**-0.3**
RES				pmax	pmax		
	comp=Z,38nm,1.1s						
RES	**Resolute Bay**	**24.88**	**322**	P	**P**	**12 50 34.8**	**-0.3**
JAVC	**Velka Javorina**	**24.96**	**163**	*e*P	**P**	**12 50 37.2**	**+1.0**
BFO	**Black Forest**	**25.02**	**177**	P	**P**	**12 50 37.3**	**+0.6**
BFO				pmax	pmax		
	comp=Z,409nm,1.3s						
BFO	**Black Forest**	**25.02**	**177**	P	**P**	**12 50 37.3**	**+0.6**
BFO	**Black Forest**	**25.02**	**177**	*e*P	**P**	**12 50 37.7**	**+1.0**
	comp=Z,479nm,1.4s,baz=356,slow=10						
ECH	**Echery**	**25.13**	**179**	P	**P**	**12 50 38.0**	**+0.4**
ECH				pmax	pmax		
	comp=Z,380nm,1.2s						
ECH	**Echery**	**25.13**	**179**	P	**P**	**12 50 38.0**	**+0.4**
SMOL	**Smolenice**	**25.29**	**163**	*e*P	**P**	**12 50 40.9**	**+1.9**
SMOL				pmax	pmax		
	comp=Z,189nm,1.4s						
SMOL	**Smolenice**	**25.29**	**163**	*e*P	**P**	**12 50 40.9**	**+1.9**
CRVS	**Cervenica-Dubn**	**25.30**	**157**	*e*P	**P**	**12 50 40.7**	**+1.5**
CRVS				pmax	pmax		
	comp=Z,340nm,1.3s						
CRVS	**Cervenica-Dubn**	**25.30**	**157**	*e*P	**P**	**12 50 40.7**	**+1.5**
CRVS				*e*S	**S**	**12 55 10.0**	**+4.5**
KOLS	**Kolonicke sedl**	**25.37**	**156**	*e*P	**P**	**12 50 40.8**	**+1.1**
KOLS				pmax	pmax		
	comp=Z,222nm,1.2s						
KOLS	**Kolonicke sedl**	**25.37**	**156**	*e*P	**P**	**12 50 40.8**	**+1.1**
CLF	**Chambon-Foret**	**25.39**	**187**	P	**P**	**12 50 40.0**	**+0.1**
MODS	**Modra-Piesok**	**25.41**	**163**	*e*P	**P**	**12 50 40.8**	**+0.6**
MODS				pmax	pmax		
	comp=Z,333nm,1.3s						
MODS	**Modra-Piesok**	**25.41**	**163**	*e*P	**P**	**12 50 40.8**	**+0.6**
MODS				*e*S	**S**	**12 55 15.2**	**+7.9**
VYHS	**Vyhne**	**25.43**	**161**	*e*P	**P**	**12 50 41.2**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,203nm,1.3s						
VYHS	**Vyhne**	**25.43**	**161**	*e*P	**P**	**12 50 41.2**	**+0.9**
VYHS				*e*S	S	12 55 18.3	+11
ZST	**Bratislava**	**25.57**	**164**	*e*P	**P**	**12 50 43.6**	**+2.0**
ZST				pmax	pmax		
	comp=Z,810nm,1.6s						
ZST	**Bratislava**	**25.57**	**164**	*e*P	**P**	**12 50 43.6**	**+2.0**
ZST				*e*S	S	12 55 24.2	+14
KECS	**Kecovo**	**25.61**	**158**	*e*P	**P**	**12 50 43.3**	**+1.4**
KECS				pmax	pmax		
	comp=Z,70nm,1.3s						
KECS	**Kecovo**	**25.61**	**158**	*e*P	**P**	**12 50 43.3**	**+1.4**
UZH	**Uzhgorod**	**25.67**	**156**	⇑*i*P	**P**	**12 50 44.0**	**+1.6**
UZH				*e*		12 50 47.1	
UZH				*e*		12 50 50.6	
UZH				*e*S	**S**	**12 55 10.6**	**-0.6**
UZH				MLR	MLR		
	comp=N,500nm,16.0s						
UZH				MLR	MLR		
	comp=E,1µm,16.0s						
UZH				MLR	MLR		
	comp=Z,100nm,16.0s						
VORR	**Voronezh**	**25.70**	**129**	*e*P	**P**	**12 50 41.0**	**-1.8**
VORR				pmax	pmax		
	comp=Z,800nm,1.6s						
UBR	**Ueberruh**	**25.71**	**175**	*e*P	**P**	**12 50 44.2**	**+1.2**
	comp=Z,254nm,1.2s,baz=356,slow=10						
MOA	**Molln**	**25.72**	**168**	*i* P	**P**	**12 50 44.1**	**+1.1**
	comp=Z,100nm,1.2s,SNR=40						
CONA	**Conrad Observa**	**25.75**	**166**	*i* P	**P**	**12 50 44.3**	**+1.0**
	comp=Z,141nm,1.4s,SNR=68						
RJOB	**Jochberg**	**25.75**	**170**	*e*P	**P**	**12 50 43.8**	**+0.5**
	comp=Z,1µm,1.5s,baz=356,slow=10						
RETA	**Reutte**	**25.92**	**174**	*i* P	**P**	**12 50 45.6**	**+0.7**
	comp=Z,62nm,1.5s,SNR=17						
SRO	**Srobarova**	**26.06**	**162**	*e*P	**P**	**12 50 48.2**	**+2.2**
SRO				pmax	pmax		
	comp=Z,100nm,1.3s						
SRO	**Srobarova**	**26.06**	**162**	*e*P	**P**	**12 50 48.2**	**+2.2**
MOTA	**Moosalm**	**26.07**	**173**	*i* P	**P**	**12 50 47.4**	**+1.1**
	comp=Z,76nm,1.3s,SNR=23						
DAVA	**Damuels**	**26.10**	**175**	*i* P	**P**	**12 50 48.1**	**+1.5**
	comp=Z,276nm,1.3s,SNR=61						
WATA	**Walderalm**	**26.10**	**172**	*i* P	**P**	**12 50 47.9**	**+1.3**
	comp=Z,144nm,1.4s,SNR=28						
PSZ	**Piszkesteto**	**26.11**	**160**	⇑P	**P**	**12 50 48.1**	**+1.6**
PSZ	**Piszkesteto**	**26.11**	**160**	P	**P**	**12 50 46.6**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,241nm,1.4s						
PSZ	**Piszkesteto**	**26.11**	**160**	P	**P**	**12 50 46.6**	**+0.1**
VSR	**Storozhevoye**	**26.12**	**130**	*e*P	**P**	**12 50 45.2**	**-1.4**
VSR				*e*S	**S**	**12 55 16.2**	**-2.2**
VSR				pmax	pmax		
	comp=Z,360nm,1.6s						
VSR				smax	smax		
	comp=E,570nm,7.2s						
VSR				MLR	MLR		
	comp=Z,5µm,22.0s						
WTTA	**Wattenberg**	**26.18**	**172**	*i* P	**P**	**12 50 48.8**	**+1.5**
	comp=Z,172nm,1.3s,SNR=43						
SQTA	**Sankt Quirin**	**26.20**	**173**	*i* P	**P**	**12 50 49.0**	**+1.5**
	comp=Z,112nm,1.8s,SNR=16						
VORD	**Divnogorie**	**26.39**	**130**	*e*P	**P**	**12 50 47.9**	**-1.0**
VORD				pmax	pmax		
	comp=Z,290nm,1.5s						
FETA	**Feichten**	**26.39**	**174**	*i* P	**P**	**12 50 50.6**	**+1.4**
	comp=Z,32nm,1.2s,SNR=13						
ARSA	**Arzberg**	**26.40**	**166**	*i* P	**P**	**12 50 50.8**	**+1.6**
	comp=Z,91nm,1.2s,SNR=23						
ARU	**Arti**	**26.47**	**101**	P	**P**	**12 50 49.6**	**-0.1**
	comp=Z,9.1nm,0.8s,baz=334,slow=5.3,SNR=29						
ARU				LR	LR	13 01 47.4	
	comp=Z,2µm,18.7s,baz=325,slow=38						
ARU	**Arti**	**26.47**	**101**	*d i*P	**P**	**12 50 50.4**	**+0.8**
ARU				PPP	PPP	12 51 38.9	
ARU						12 54 12.2	
ARU				S	**S**	**12 55 26.7**	**+3.0**
ARU				SS	**SnSn**	**12 56 27.5**	**+3.6**
ARU				pmax	pmax		
	comp=Z,52nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,18.0s						
ARU	**Arti**	**26.47**	**101**	P	**P**	**12 50 49.9**	**+0.2**
DAVOX	**Davos/Dischmat**	**26.60**	**175**	P	**P**	**12 50 51.0**	**-0.2**
	comp=Z,46nm,1.2s,baz=338,slow=10,SNR=21						
DAVOX				LR	LR	13 00 56.9	
	comp=Z,1µm,20.4s,baz=346,slow=36						
DAVOX	**Davos/Dischmat**	**26.60**	**175**	P	**P**	**12 50 51.0**	**-0.2**
SVE	**Sverdlovsk**	**26.72**	**99**	⇓*e*P	**P**	**12 50 53.1**	**+1.2**
SVE				*e*S	**S**	**12 55 34.0**	**+6.3**
SVE				pmax	pmax		
	comp=Z,164nm,1.6s						
SVE				MLR	MLR		
	comp=Z,3µm,17.0s						
VRH	**Novokhopyorsk**	**26.72**	**127**	*e*P	**P**	**12 50 51.5**	**-0.4**
VRH				*e*S	**S**	**12 55 34.2**	**+6.5**
VRH				pmax	pmax		
	comp=Z,190nm,1.3s						
VRH				smax	smax		
	comp=E,330nm,6.9s						
VRH				MLR	MLR		
	comp=Z,2µm,13.0s						
ABTA	**Abfaltersbach**	**26.73**	**171**	*i* P	**P**	**12 50 53.8**	**+1.6**
	comp=Z,86nm,1.2s,SNR=33						
BMR	**Baia Mare**	**26.76**	**154**	⇑P	**P**	**12 50 52.7**	**+0.4**
MYKA	**Terra Mystica**	**26.90**	**169**	*i* P	**P**	**12 50 55.3**	**+1.6**
	comp=Z,94nm,1.4s,SNR=28						
SOKA	**Soboth**	**26.93**	**167**	*i* P	**P**	**12 50 55.1**	**+1.1**
	comp=Z,76nm,1.3s,SNR=27						
ZOU	**Zoufplan**	**26.94**	**170**	P	**P**	**12 50 54.7**	**+0.5**
PERS	**Pernice**	**26.98**	**167**	*i* P	**P**	**12 50 56.2**	**+1.7**
SENIN	**Lac Senin/Sane**	**26.98**	**179**	P	**P**	**12 50 55.0**	**+0.3**
SENIN				IAmb	IAmb	12 50 58.9	
	comp=Z,173nm,1.6s						
SORM	**Soroca**	**27.00**	**147**	⇑P	**P**	**12 50 54.5**	**0.0**
BUR08	**Bucovina Ar. S**	**27.01**	**152**	P	**P**	**12 50 56.3**	**+1.6**
BUR08				IAmb	IAmb	12 51 38.5	
	comp=Z,169nm,1.3s						
BURAR	**Bucovina Array**	**27.04**	**152**	⇑P	**P**	**12 50 55.7**	**+0.7**
BELG	**Belogornoye**	**27.07**	**118**	P	**P**	**12 50 54.8**	**-0.2**
	comp=Z,98nm,1.0s,baz=135,slow=2.4,SNR=24						
BELG				LR	LR	13 01 30.9	
	comp=Z,4µm,20.1s,baz=332,slow=36						
BELG	**Belogornoye**	**27.07**	**118**	*d i*P	**P**	**12 50 54.5**	**-0.5**
BELG				pmax	pmax		
	comp=Z,38nm,1.0s						
OBKA	**Obir**	**27.07**	**168**	*i* P	**P**	**12 50 57.0**	**+1.7**
	comp=Z,140nm,1.2s,SNR=31						
FRB	**Frobisher Bay**	**27.12**	**289**	P	**P**	**12 50 54.3**	**-1.1**
	comp=Z,3.8nm,0.9s,baz=23,slow=9.4,SNR=6.8						
FRB				LR	LR	13 01 15.5	
	comp=Z,3µm,18.4s,baz=36,slow=36						
KOGS	**Kog**	**27.25**	**165**	*i* P	**P**	**12 50 58.4**	**+1.7**
KOGS				*i*		12 50 59.6	
BEHE	**Becsehely**	**27.26**	**165**	*e*P	**P**	**12 51 00.4**	**+3.5**
CTI	**Castel Tesino**	**27.39**	**172**	P	**P**	**12 50 58.7**	**+0.5**
CTI				pmax	pmax		
	comp=Z,159nm,1.3s						
CTI	**Castel Tesino**	**27.39**	**172**	P	**P**	**12 50 58.7**	**+0.5**
CTI				IAmb	IAmb	12 51 01.7	
	comp=Z,159nm,1.3s						
PRAR	**RASCA**	**27.43**	**150**	⇑P	**P**	**12 50 58.8**	**+0.4**
ARCR	**ARCALIA**	**27.44**	**153**	⇑P	**P**	**12 51 00.1**	**+1.6**
DRGR		**27.53**	**156**	⇓P	**P**	**12 51 00.4**	**+1.0**
LJU	**Ljubljana**	**27.54**	**168**	*e*P	**P**	**12 51 00.4**	**+1.1**
PDKS	**Podkum**	**27.55**	**167**	*i* P	**P**	**12 51 00.9**	**+1.4**
PDKS				*i*		12 51 02.2	
MORH	**Mrgy, Hungar**	**27.67**	**162**	*e*P	**P**	**12 51 00.9**	**+0.4**
CJR	**Cluj-Napoca**	**27.71**	**155**	⇑P	**P**	**12 51 02.6**	**+1.6**
CRES	**Cresnjev**	**27.81**	**167**	*e*P	**P**	**12 51 01.6**	**-0.2**
BIZ	**Bicaz**	**27.82**	**151**	⇑P	**P**	**12 51 03.0**	**+1.1**
TRI	**Trieste**	**27.83**	**169**	P	**P**	**12 51 02.0**	**+0.1**
TRI				pmax	pmax		
	comp=Z,79nm,1.2s						
TRI	**Trieste**	**27.83**	**169**	P	**P**	**12 51 01.9**	**+0.1**
TRI				IAmb	IAmb	12 51 04.8	
	comp=Z,79nm,1.2s						
CEY	**Cerknica**	**27.83**	**168**	*e*P	**P**	**12 51 03.0**	**+1.0**
SIRR	**Siria**	**27.92**	**157**	⇑P	**P**	**12 51 04.5**	**+1.6**
TEOL	**Teolo**	**28.08**	**173**	P	**P**	**12 51 04.2**	**0.0**
TEOL				IAmb	IAmb	12 51 07.0	
	comp=Z,127nm,1.2s						
SSB	**Saint Sauveur**	**28.08**	**183**	P	**P**	**12 51 04.5**	**+0.2**
SSB				pmax	pmax		
	comp=Z,102nm,1.3s						
SSB	**Saint Sauveur**	**28.08**	**183**	P	**P**	**12 51 04.5**	**+0.2**
SSB				IAmb	IAmb	12 51 06.9	
	comp=Z,102nm,1.3s						
KIS	**Kishinev**	**28.18**	**147**	*e*P	**P**	**12 51 02.0**	**-3.0**
KIS				*e*S	**S**	**12 55 45.0**	**-5.8**
KIS				*e*LQ	LQ	12 59 10.0	
	comp=Z,2µm,25.0s						
KIS				*e*LR	LR	13 01 29.0	
	comp=Z,1µm,21.0s						
KIS	**Kishinev**	**28.18**	**147**	*e*P	**P**	**12 51 02.0**	**-3.0**
KIS				*e*S	**S**	**12 55 45.0**	**-5.8**
KIS				MLR	MLR		
	comp=Z,1µm,16.0s						
RIY	**Rijeka**	**28.25**	**168**	*e*P	**P**	**12 51 06.4**	**+0.7**
MILM	**Milestii Mici**	**28.25**	**147**	⇑P	**P**	**12 51 06.6**	**+1.0**
BNI	**Bardonecchia**	**28.29**	**180**	P	**P**	**12 51 06.0**	**-0.3**
BNI				pmax	pmax		
	comp=Z,119nm,1.4s						
BNI	**Bardonecchia**	**28.29**	**180**	P	**P**	**12 51 06.0**	**-0.3**
BNI				IAmb	IAmb	12 51 25.1	
	comp=Z,119nm,1.4s						
TESR	**Tescani**	**28.32**	**150**	⇑P	**P**	**12 51 07.0**	**+0.7**
BZS	**Buzias**	**28.56**	**158**	⇓P	**P**	**12 51 09.9**	**+1.4**
OZUR		**28.61**	**152**	⇑P	**P**	**12 51 10.2**	**+1.2**
DOPR	**Dopca**	**28.68**	**152**	⇑P	**P**	**12 51 11.0**	**+1.4**

FRGS	Fruska Gora	28.83	161	eP	P	12 51 11.8	+0.9
GZR	Gura Zlata	28.91	156	⇓P	P	12 51 13.2	+1.5
VRI	Vrincioaia	28.96	150	⇑P	P	12 51 12.9	+0.8
PLOR	Plostina	28.97	150	⇑P	P	12 51 13.4	+1.3
BLY	Banja Luka	29.01	164	eP	P	12 51 13.6	+1.2
MSSA	Maissana	29.06	176	P	P	12 51 13.3	+0.3
ZCCA	Zocca	29.06	174	P	P	12 51 12.1	-0.9
VOIR		29.15	153	⇑P	P	12 51 15.2	+1.3
ARR	Arges	29.17	154	⇑P	P	12 51 15.6	+1.6
MLR	Muntele Rosu	29.22	152	P	P	12 51 13.7	-0.8
	comp=Z,5.1nm,1.0s,baz=324,slow=11,SNR=8.3						
MLR				LR	LR	13 03 08.2	
	comp=Z,7µm,18.3s,baz=358,slow=37						
MLR	Muntele Rosu	29.22	152	⇑P	P	12 51 16.0	+1.5
MLR	Muntele Rosu	29.22	152	P	P	12 51 15.6	+1.1
MLR				pmax	pmax		
	comp=Z,89nm,1.3s						
MLR	Muntele Rosu	29.22	152	P	P	12 51 15.6	+1.1
MLR				IAmb	IAmb	12 51 49.1	
	comp=Z,89nm,1.3s						
VLC	Villacollemand	29.24	175	P	P	12 51 14.7	+0.1
HERR	Herculane	29.38	157	⇑P	P	12 51 17.2	+1.5
MDVR	Moldovita	29.40	158	⇑P	P	12 51 17.8	+1.8
TEKS	Tekeris	29.41	161	eP	P	12 51 17.2	+1.2
HAPS	Han Pijesak,Bl	29.81	162	eP	P	12 51 19.4	-0.3
CFR	Carcaliu	29.84	149	⇑P	P	12 51 20.2	+0.4
DIVS	Divibare	29.90	161	eP	P	12 51 21.5	+1.0
DIVS	Divibare	29.90	161	P	P	12 51 20.9	+0.4
DIVS				IAmb	IAmb	12 51 30.1	
	comp=Z,124nm,1.4s						
OSSC	Osservatorio P	29.90	173	P	P	12 51 20.8	+0.4
OSSC				IAmb	IAmb	12 51 31.6	
	comp=Z,129nm,1.2s						
HUMR	Humele	30.04	153	⇑P	P	12 51 23.8	+2.2
BBLS	Lazići	30.07	161	eP	P	12 51 23.4	+1.4
TPGR	Topolog	30.20	148	⇓P	P	12 51 23.3	+0.3
MURB	Monte Urbino	30.21	172	P	P	12 51 24.2	+1.1
HARR	Harsova	30.29	149	⇑P	P	12 51 24.2	+0.4
JURR	Jurilovca	30.36	148	⇑P	P	12 51 26.3	+1.9
COPA	Copaceanca	30.46	153	⇑P	P	12 51 26.1	+0.9
TIRR	Tirgusor	30.59	149	⇑P	P	12 51 27.3	+0.9
TIRR	Tirgusor	30.59	149	P	P	12 51 26.2	-0.2
TIRR				pmax	pmax		
	comp=Z,195nm,1.2s						
TIRR	Tirgusor	30.59	149	P	P	12 51 26.2	-0.2
CASP	Castiglione de	30.62	174	P	P	12 51 26.9	+0.2
CASP				IAmb	IAmb	12 51 29.3	
	comp=Z,108nm,1.2s						
NRCA	Norcia	30.66	171	P	P	12 51 28.0	+0.8
SJES	Sjenica	30.72	161	eP	P	12 51 28.8	+1.0
TIXI	Tiksi	30.81	32	diP	P	12 51 30.8	+2.7
TIXI				pmax	pmax		
	comp=Z,148nm,1.3s						
TIXI	Tiksi	30.81	32	P	P	12 51 29.2	+1.1
TIXI				IAmb	IAmb	12 51 38.9	
	comp=Z,85nm,1.2s						
LATE	Laterza	30.82	173	P	P	12 51 29.2	+0.6
STON	Ston	30.91	164	eP	P	12 51 28.6	-0.7
BRY	Bratogost	30.95	163	eP	P	12 51 31.9	+2.1
PDG	Podgorica	31.48	162	eP	P	12 51 34.6	+0.3
INTR	Introdacqua	31.52	170	P	P	12 51 34.2	-0.6
INTR				IAmb	IAmb	12 51 51.0	
	comp=Z,127nm,1.4s						
AKTO	Aktyubinsk	31.61	108	P	P	12 51 35.5	0.0
	comp=Z,27nm,1.1s,baz=327,slow=10,SNR=28						
AKTO				LR	LR	13 04 41.0	
	comp=Z,5µm,21.4s,baz=342,slow=37						
VTS	Vitosha	31.70	156	⇑P	P	12 51 36.8	+0.3
ANN	Anapa	31.85	136	eP	P	12 51 33.2	-4.3
ANN				e*PP	pP	12 51 37.4	-0.1
ANN				e		12 52 38.6	
ANN				eS	S	12 56 42.2	-6.2
ANN				eSS	SnSn	12 58 31.1	-4.2
ANN				pmax	pmax		
	comp=Z,132nm,1.5s						
ANN				MLR	MLR		
	comp=Z,3µm,15.0s						
ANN				MLR	MLR		
	comp=E,1µm,14.0s						
ANN				MLR	MLR		
	comp=N,903nm,14.0s						
SKO	Skopje	32.15	159	iP	P	12 51 41.7	+1.5
PBRG	Braganca	32.18	199	eP	P	12 51 41.5	+0.9
	comp=N,91nm,1.5s						
STIP	Stip	32.50	158	iP	P	12 51 42.7	-0.6
PAOL	Paolisi	32.53	169	P	P	12 51 44.1	+0.5
PAOL				IAmb	IAmb	12 51 47.7	
	comp=Z,107nm,1.3s						
POLO	Lamas de Olo	32.71	200	eP	P	12 51 46.1	+0.8
	comp=Z,64nm,1.4s						
BRVK	Borovoye	32.77	93	diP	P	12 51 46.4	+0.9
BRVK				pmax	pmax		
	comp=Z,34nm,1.7s						
BRVK	Borovoye	32.77	93	P	P	12 51 45.0	-0.5
GOF	Gofitskoye	32.80	129	⇑iP	P	12 51 47.0	+1.1
GOF				pmax	pmax		
	comp=Z,166nm,0.9s						
BVAR	Borovoye Array	32.83	93	P	P	12 51 46.3	+0.3
	comp=Z,8.5nm,0.8s,baz=325,slow=7.2,SNR=46						
MVO	Moncorvo	32.84	199	eP	P	12 51 48.0	+1.6
	comp=Z,103nm,1.6s						
VAY	Valandovo	32.91	158	iP	P	12 51 47.2	+0.3
OHR	Ohrid	32.93	160	iP	P	12 51 47.3	+0.1
NVR	Nevrokopi	33.03	156	P	P	12 51 49.5	+1.5
KNT	Kendrikon	33.10	157	P	P	12 51 50.6	+2.0
ABKAR	Akbulak array	33.21	107	P	P	12 51 48.9	-0.6
ABKAR				IAmb	IAmb	12 51 57.0	
	comp=Z,48nm,1.1s						
SRS	Serrai	33.23	156	P	P	12 51 49.5	-0.2
GRG	Griva	33.25	158	P	P	12 51 50.8	+0.9
FNA	Florina	33.32	159	P	P	12 51 50.6	+0.1
FNA	Florina	33.32	159	P	P	12 51 50.3	-0.2
FNA				pmax	pmax		
	comp=Z,113nm,1.0s						
FNA	Florina	33.32	159	P	P	12 51 50.3	-0.2
PVIS	Viseu	33.37	200	eP	P	12 51 52.6	+1.6
	comp=Z,122nm,1.6s						
RDO	Rodhopi	33.44	154	P	P	12 51 51.7	+0.2
KAVA	Kavala	33.46	155	P	P	12 51 50.9	-0.7
SOC	Sochi	33.48	134	eP	P	12 51 51.5	-0.3
SOC				e		12 53 01.8	
SOC				eS	S	12 57 14.6	+0.8
SOC				eSS	SnSn	12 59 18.2	+3.2
SOC				pmax	pmax		
	comp=Z,15nm,0.8s						
SOC				MLR	MLR		
	comp=Z,5µm,21.0s						
CTYL	Yalikoy Yolu	33.49	150	eP	P	12 51 53.2	+1.3
SOH	Sokhos	33.49	157	P	P	12 51 52.3	+0.3
MTE	Manteigas	33.65	200	eP	P	12 51 54.9	+1.5
	comp=Z,109nm,1.6s						
MTE	Manteigas	33.65	200	P	P	12 51 53.6	+0.2
MTE				IAmb	IAmb	12 51 56.2	
	comp=Z,72nm,1.1s						
CTKS	Kestanelik-??a	33.76	150	eP	P	12 51 55.7	+1.5
KIV	Kislovodsk	33.76	130	iP	P	12 51 55.4	+1.0
	SNR=15						
KIV	Kislovodsk	33.76	130	eP	P	12 51 55.8	+1.4
KIV				eS	S	12 57 20.4	+2.0
KIV				eSS	SnSn	12 59 25.8	+3.8
KIV				pmax	pmax		
	comp=Z,115nm,1.1s						
KIV				pmax	pmax		
	comp=Z,661nm,4.3s						
KIV				MLR	MLR		
	comp=Z,7µm,15.0s						
KIV	Kislovodsk	33.76	130	P	P	12 51 54.9	+0.5
KIV				IAmb	IAmb	12 52 43.7	
	comp=Z,62nm,1.2s						
KVAR	Kislovodsk Arr	33.77	130	P	P	12 51 54.5	+0.1
	comp=Z,39nm,1.2s,baz=268,slow=20,SNR=5.3						
KURC	Kurucasile-Bar	33.83	144	eP	P	12 51 54.7	-0.2
VSL	Villasalto	33.87	176	P	P	12 51 52.5	-2.8
VSL				IAmb	IAmb	12 51 58.2	
	comp=Z,73nm,1.2s						
BZK	Bozkurt	33.94	142	eP	P	12 51 57.6	+1.8
ISK	Istanbul-Kandi	34.01	149	P	P	12 51 57.3	+0.9
ISK	Istanbul-Kandi	34.01	149	eP	P	12 51 58.4	+2.0
KAVV	Kandilli-Istan	34.01	149	eP	P	12 51 57.8	+1.4
SILT	Sile	34.01	148	eP	P	12 51 58.4	+2.0
KBZ	Khabaz	34.03	130	P	P	12 51 58.2	+1.7
	comp=Z,22nm,1.1s,baz=339,slow=8.9,SNR=22						
KBZ				LR	LR	13 05 54.3	
	comp=Z,5µm,21.2s,baz=340,slow=36						
KBZ	Khabaz	34.03	130	deP	P	12 51 57.9	+1.4
KBZ				pmax	pmax		
	comp=Z,58nm,1.3s						
ESBB	Sonseca Array	34.06	195	P	P	12 51 57.0	0.0
ESBB				IAmb	IAmb	12 51 59.8	
	comp=Z,87nm,1.4s						
ESDC	Sonseca Array	34.06	195	P	P	12 51 56.6	-0.4
	comp=Z,27nm,1.1s,baz=3.3,slow=7.6,SNR=38						
SNOP	Sinop	34.10	141	eP	P	12 51 57.8	+0.6
LIT	Litokhoron	34.11	158	P	P	12 51 59.5	+2.1
LIT	Litokhoron	34.11	158	P	P	12 51 57.5	+0.1
LIT				pmax	pmax		
	comp=Z,165nm,1.4s						
LIT	Litokhoron	34.11	158	P	P	12 51 57.5	+0.1
C36M	Paulatuk	34.14	331	P	P	12 51 56.8	-0.4
	baz=23,SNR=11						
C36M	Paulatuk	34.14	331	P	P	12 51 56.9	-0.4
C36M				IAmb	IAmb	12 52 07.4	
	comp=Z,86nm,1.8s						
PCBR	Castelo Branco	34.20	200	eP	P	12 51 59.4	+1.3
	comp=Z,94nm,1.5s						
PAB	San Pablo	34.22	195	P	P	12 51 57.4	-1.0
PAB				pmax	pmax		
	comp=Z,87nm,1.2s						
PAB	San Pablo	34.22	195	P	P	12 51 57.4	-1.0
PAB				IAmb	IAmb	12 52 01.3	
	comp=Z,87nm,1.2s						
NCK	Nalchik	34.40	129	⇑eP	P	12 52 02.0	+2.1
NCK				pmax	pmax		
	comp=Z,169nm,1.6s						
PAIG	Paliouri	34.41	157	P	P	12 52 00.2	+0.3
ARMT	Armutlu	34.47	149	eP	P	12 52 00.9	+0.5
TIP	Timpagrande	34.51	166	P	P	12 52 00.4	-0.6
PMRV	Marv??o	34.60	199	eP	P	12 52 02.4	+0.8
	comp=Z,140nm,1.3s						
ILGA	Ilgaz	34.77	143	P	P	12 52 04.8	+1.4
GULT	Gulveren	34.85	147	eP	P	12 52 05.9	+2.1
MDUB	Mudurnu	34.92	146	eP	P	12 52 07.6	+3.1
MDUB	Mudurnu	34.92	146	P	P	12 52 06.5	+2.0
CAVI	Cavuskoy	34.97	148	eP	P	12 52 07.4	+2.6
PMTG	Montargil	35.04	200	eP	P	12 52 06.0	+0.7
	comp=Z,65nm,1.6s						
YUVA	Yuva-Kibriscik	35.08	146	eP	P	12 52 08.1	+2.3
ZEI	Tsey	35.15	129	eP	P	12 52 06.7	+0.2
ZEI				pmax	pmax		
	comp=Z,47nm,1.7s						
MAKR	Makrakomi, Fth	35.15	159	P	P	12 52 06.7	+0.3
AGG	Agios Georgios	35.16	159	P	P	12 52 07.0	+0.5
AGG	Agios Georgios	35.16	159	P	P	12 52 06.8	+0.3
AGG				pmax	pmax		
	comp=Z,154nm,1.3s						
AGG	Agios Georgios	35.16	159	P	P	12 52 06.8	+0.3
KVT	Kavak	35.17	140	eP	P	12 52 08.8	+2.3
CANT	Cankiri	35.19	143	eP	P	12 52 09.4	+2.6
EVR	Evrytania	35.21	159	P	P	12 52 09.5	+2.5
SRCK	Saricakaya, Es	35.25	147	eP	P	12 52 09.4	+2.2
PMAFR	Mafra	35.26	202	eP	P	12 52 07.6	+0.3
	comp=Z,221nm,1.8s						
AUBOZ	BOZOYUK	35.28	148	eP	P	12 52 10.0	+2.4
CEL	Celeste	35.37	167	P	P	12 52 06.5	-1.8
CEL				IAmb	IAmb	12 52 09.3	
	comp=Z,62nm,1.1s						
ANX	Ano Chora	35.54	159	P	P	12 52 12.9	+3.1
AUMIH	MIHALICIK	35.55	146	eP	P	12 52 11.6	+1.6
CORL	Corleone	35.59	171	P	P	12 52 11.7	+1.5
TVSB	Tavsanli	35.65	149	eP	P	12 52 12.3	+1.5
EFP	Efpalio	35.70	159	P	P	12 52 14.1	+3.0
SERG	Sergoula	35.73	159	P	P	12 52 13.6	+2.2
LOD	Lodumlu	35.74	145	eP	P	12 52 14.8	+3.3
KALE	Kalithea	35.76	159	P	P	12 52 11.7	0.0
TRIZ	Trizonia	35.78	159	P	P	12 52 13.5	+1.8
CORM	Corum	35.78	142	eP	P	12 52 15.9	+4.0
BATM	Batumi	35.79	133	eP	P	12 52 08.9	-3.0
PBAR	Barrancos	35.81	199	eP	P	12 52 12.2	+0.2
	comp=Z,107nm,1.8s						
MAK	Makhachkala	35.81	125	eP	P	12 52 11.4	-0.6
MAK				e		12 53 29.0	
MAK				eS	S	12 57 49.9	+0.1
MAK				pmax	pmax		
	comp=Z,458nm,1.6s						
MAK				MLR	MLR		
	comp=Z,2µm,12.0s						
ESPY	Espiye-Giresun	35.84	137	eP	P	12 52 13.5	+1.2
SVRH	Sivrihisar-ESK	35.97	146	eP	P	12 52 16.1	+2.6
AUSIV	SIVRIHISAR	35.98	146	eP	P	12 52 16.4	+2.8
CIFT	Cifteler, Eski	35.98	147	iP	P	12 52 15.3	+1.7
KTUT	Trabzon	35.98	135	eP	P	12 52 15.3	+1.8
TOKT	Tokat	36.00	140	eP	P	12 52 16.6	+2.9
PBEJ	Beja	36.03	200	eP	P	12 52 15.5	+1.6
	comp=Z,23nm,1.4s						
BR131	Keskin Array S	36.05	144	P	P	12 52 15.1	+0.8
BR131				pmax	pmax		
	comp=Z,95nm,1.5s						
BR131	Keskin Array S	36.05	144	P	P	12 52 15.1	+0.8
BR131				IAmb	IAmb	12 52 24.7	
	comp=Z,95nm,1.4s						
BRTR	Keskin Array B	36.05	144	P	P	12 52 15.5	+1.2
	comp=Z,20nm,1.1s,baz=339,slow=5.5,SNR=39						
BRTR				LR	LR	13 08 08.3	
	comp=Z,978nm,21.6s,baz=358,slow=38						
BRTR	Keskin Array B	36.05	144	eP	P	12 52 16.5	+2.2
VAE	Valguarnera	36.06	170	P	P	12 52 15.3	+1.1
	comp=Z,8.4nm,0.4s,baz=62,slow=23,SNR=1.6						
RSDY	Resadiye-TOKAT	36.07	139	eP	P	12 52 16.8	+2.5
ZAA0	Zalesovo Array	36.18	79	P	P	12 52 14.9	-0.1
ZALV	Zalesovo Beam	36.18	79	P	P	12 52 15.9	+0.9
	comp=Z,12nm,0.7s,baz=330,slow=9.2,SNR=41						
ZALV				PcP	PcP	12 54 41.1	+0.9
	comp=Z,6.1nm,1.0s,baz=290,slow=4.3,SNR=4.7						
ZALV				LR	LR	13 09 48.7	
	comp=Z,2µm,21.5s,baz=326,slow=41						
ZALV	Zalesovo Beam	36.18	79	iP	P	12 52 15.8	+0.8
ZALV				pmax	pmax		
	comp=Z,12nm,0.7s						
BRZS	Berezniki	36.19	93	eP	P	12 52 15.3	+0.1
	comp=Z,9.9nm,0.9s,baz=93						
BRZS				eS	S	12 57 57.0	+1.5
	baz=93						
BRZS	Berezniki	36.19	93	eP	P	12 52 15.3	+0.1
BRZS				eS	S	12 57 57.0	+1.5
BRZS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AFSR	Afar-Bala (An	36.23	144	eP	P	12 52 17.9	+2.2
MESJ	Messejana	36.25	200	eP	P	12 52 17.2	+1.4
	comp=Z,109nm,1.6s						
RAFF	Raffo Rosso	36.32	170	P	P	12 52 16.9	+0.6
INK	Inuvik	36.33	336	P	P	12 52 14.9	-1.2
INK				pmax	pmax		
	comp=Z,74nm,1.3s						
INK	Inuvik	36.33	336	P	P	12 52 14.9	-1.2
INK				IAmb	IAmb	12 52 27.2	
	comp=Z,74nm,1.3s						
PCVE	Castro Verde	36.44	200	eP	P	12 52 19.0	+1.6
KULA	Kula-Manisa	36.45	150	P	P	12 52 18.4	+0.8
MANT	Manisa	36.46	151	P	P	12 52 18.8	+0.9
SHUT	Suhut-Afyon	36.69	148	P	P	12 52 21.5	+1.8
CMAH	Djebel Manchou	36.71	179	P	P	12 52 21.4	+1.6
DFRA	Djebel Bou Aff	36.79	181	P	P	12 52 23.1	+2.5
SERE	Sereflikochisa	36.80	144	eP	P	12 52 22.7	+2.1
YAYX	Yaylak	36.85	144	eP	P	12 52 23.4	+2.4
CKFL	Kef-Lekhel	36.94	180	P	P	12 52 23.2	+1.4
CHBY	Cihanbeyli	37.04	145	eP	P	12 52 24.7	+2.1
ILIC	ilic-Erzincan	37.23	137	P	P	12 52 27.1	+2.9
KURK	Kurchatov	37.26	87	deP	P	12 52 24.7	+0.5
KURK				pmax	pmax		
	comp=Z,59nm,1.7s						
KURK	Kurchatov	37.26	87	P	P	12 52 24.9	+0.6
KURK				IAmb	IAmb	12 52 33.5	
	comp=Z,76nm,1.2s						
AKT	Akhty	37.27	125	eP	P	12 52 25.3	+0.7
AKT				e		12 53 48.1	
AKT				e		12 54 42.7	
AKT				pmax	pmax		
	comp=Z,37nm,1.0s						
BNN	Bunyan	37.29	141	eP	P	12 52 28.2	+3.4
CKHR	Kef el Ahmar	37.32	182	P	P	12 52 20.1	-5.0
LADK	Ladik-KONYA	37.33	146	eP	P	12 52 26.5	+1.4
APE	Apeiranthos	37.45	155	P	P	12 52 28.0	+1.9
SULT	Sultanhani-AKS	37.52	144	eP	P	12 52 29.7	+3.0
KONT	Konya--Tatoy	37.57	146	eP	P	12 52 29.6	+2.5
KEST	Kesra	37.63	176	P	P	12 52 26.9	-0.7
	comp=Z,23nm,1.0s,baz=318,slow=5.3,SNR=11						
KEST				LR	LR	13 08 22.2	
	comp=Z,695nm,19.1s,baz=314,slow=37						
KEST	Kesra	37.63	176	P	P	12 52 27.3	-0.3
KEST				IAmb	IAmb	12 52 31.9	
	comp=Z,136nm,1.6s						
YEDI	Yedisu-Bingol	37.63	135	eP	P	12 52 29.8	+2.1
YER	Yerkesik	37.75	151	P	P	12 52 29.6	+1.0
SARI	SarD1z-Kayseri	37.83	141	eP	P	12 52 31.5	+2.1
GNI	Garni	37.85	130	P	P	12 52 28.9	-0.7
	comp=Z,42nm,1.1s,baz=232,slow=1.9,SNR=27						
GNI	Garni	37.85	130	diP	P	12 52 30.9	+1.3
GNI				pmax	pmax		
	comp=Z,154nm,1.7s						
GNI	Garni	37.85	130	P	P	12 52 30.5	+0.9
KARO	Karliova-Bingo	37.86	134	P	P	12 52 32.8	+3.1
DARE	Darende-Malaty	37.87	139	eP	P	12 52 33.0	+3.3
FCC	Fort Churchill	37.95	304	P	P	12 52 28.8	-1.1
FCC				pmax	pmax		
	comp=Z,33nm,1.3s						
FCC	Fort Churchill	37.95	304	P	P	12 52 28.8	-1.1
SEM	Semipalatinsk	38.00	85	eP	P	12 52 30.8	-0.1
	baz=85						
SEM				eS	S	12 58 24.1	+0.6
	baz=85						
SEM				LR	LR	13 08 49.5	
	comp=Z,772nm,15.3s,baz=85						
SEM	Semipalatinsk	38.00	85	eP	P	12 52 30.7	-0.1
SEM				eS	S	12 58 24.1	+0.6
SEM				MLR	MLR		
	comp=Z,772nm,15.0s						
BNGB	Bingl	38.09	135	eP	P	12 52 34.5	+2.9
CMRD	Camardi-Nigde	38.30	143	eP	P	12 52 34.3	+1.0
MALT	Malatya	38.30	138	eP	P	12 52 35.4	+2.1
FETY	Fethiye	38.35	150	P	P	12 52 36.5	+2.8
ELL	Elmali	38.36	149	P	P	12 52 34.8	+0.9
ELL				pmax	pmax		
	comp=Z,221nm,1.2s						
ELL	Elmali	38.36	149	P	P	12 52 34.8	+0.9
EPYK	Eagle Plains	38.55	337	P	P	12 52 34.4	-0.6
	baz=16						
EPYK	Eagle Plains	38.55	337	P	P	12 52 34.8	-0.2
EPYK				IAmb	IAmb	12 52 45.0	
	comp=Z,111nm,1.4s						
KOZT	Kozan	38.62	142	eP	P	12 52 38.0	+2.1
KARA	Karaisali	38.70	143	eP	P	12 52 38.7	+2.2
RDOG	Red Dog Mine	38.76	354	P	P	12 52 37.1	+0.3
KMRS	Kahramanmaras	38.79	140	eP	P	12 52 38.7	+1.3
AKAS	Kas	38.83	150	P	P	12 52 38.0	+0.3
COLD	Coldfoot	38.94	346	P	P	12 52 38.4	+0.1
	baz=10,SNR=17						
COLD	Coldfoot	38.94	346	P	P	12 52 39.2	+1.0
YKA	Yellowknife Ar	38.94	321	P	P	12 52 37.3	-1.0
	comp=Z,13nm,1.0s,baz=22,slow=8.5,SNR=54						
YKA				PP	PP	12 54 10.8	+3.8
	comp=Z,11nm,1.2s,baz=19,slow=11,SNR=3.7						
YKA				PcP	PcP	12 54 47.1	-1.4
	comp=Z,2.4nm,0.8s,baz=37,slow=3.4,SNR=6.5						
YKA				LR	LR	13 08 50.9	
	comp=Z,5µm,18.9s,baz=0.0,slow=36						
CEYT	Ceyhan	39.06	142	P	P	12 52 39.9	+0.3
GAZ	Gaziantep	39.17	140	eP	P	12 52 42.4	+1.8
GAZ	Gaziantep	39.17	140	P	P	12 52 41.4	+0.8
GAZ				IAmb	IAmb	12 52 57.1	
	comp=Z,188nm,1.6s						
FYU	Fort Yukon	39.20	343	P	P	12 52 41.6	+1.2
FYU				IAmb	IAmb	12 52 47.1	
	comp=Z,252nm,1.9s						
GEVA	Gevas	39.24	132	P	P	12 52 42.9	+1.5
YAK	Yakutsk	39.68	38	eP	P	12 52 43.9	-0.5
YAK				eS	S	12 58 47.8	-0.2
YAK				eSS	SS	13 01 32.9	-10
YAK				pmax	pmax		
	comp=Z,65nm,1.8s						
YAK				pmax	pmax		
	comp=N,53nm,1.6s						
YAK				pmax	pmax		
	comp=E,24nm,1.9s						
YAK				pmax	pmax		
	comp=Z,177nm,4.2s						
YAK				pmax	pmax		
	comp=E,36nm,1.8s						
YAK				pmax	pmax		
	comp=N,166nm,3.0s						
YAK				smax	smax		
	comp=N,227nm,4.5s						
YAK				smax	smax		
	comp=E,123nm,3.4s						
YAK				MLR	MLR		
	comp=Z,1µm,25.0s						
YAK				MLR	MLR		
	comp=N,1µm,25.0s						
YAK				MLR	MLR		
	comp=E,899nm,22.0s						
YAK	Yakutsk	39.68	38	P	P	12 52 45.1	+0.7
YAK				IAmb	IAmb	12 52 53.0	
	comp=Z,135nm,1.6s						
PRP	Porcupine Dome	40.26	343	P	P	12 52 49.7	+0.3
BOD	Bodaibo	40.33	52	eP	P	12 52 50.4	+0.5
BOD				pmax	pmax		
	comp=Z,40nm,1.4s						
EGAK	Eagle	40.57	339	P	P	12 52 51.3	-0.5
CSS	Mathiatis	40.65	146	P	P	12 52 53.4	+0.6
CSS				IAmb	IAmb	12 53 07.2	
	comp=Z,124nm,1.3s						
DGZ	Jazzator, Alta	40.70	79	⇑eP	P	12 52 55.3	+2.0
DGZ				pmax	pmax		
	comp=Z,51nm,1.9s						
POKR	Poker Plat Res	40.81	344	P	P	12 52 54.4	+0.6
	baz=11,SNR=7.4						
POKR	Poker Plat Res	40.81	344	P	P	12 52 54.3	+0.5
I23K	Minto, Yukon-K	40.93	345	P	P	12 52 55.8	+1.0
	baz=10,SNR=14						
I23K	Minto, Yukon-K	40.93	345	P	P	12 52 55.8	+1.0
MDM	Murphy Dome	41.03	344	P	P	12 52 56.1	+0.4
BTLS	Baital	41.06	95	eP	P	12 52 56.1	0.0
	baz=95						
BTLS				eS	S	12 59 10.0	+1.1
	baz=95						
BTLS	Baital	41.06	95	diP	P	12 52 57.1	+1.0
DAWY	Dawson	41.08	338	P	P	12 52 56.6	+0.5
COLA	College	41.09	344	diP	P	12 52 57.5	+1.5
COLA				pmax	pmax		
	comp=Z,34nm,1.4s						
COLA	College	41.09	344	P	P	12 52 58.0	+2.0
TCOL	CIGO, UAF Yank	41.09	344	P	P	12 52 57.0	+1.0
	baz=11,SNR=9.7						
TCOL	CIGO, UAF Yank	41.09	344	P	P	12 52 57.3	+1.2
IL31		41.11	343	P	P	12 52 56.7	+0.5
ILAR	Eielson Array	41.11	343	P	P	12 52 56.9	+0.6
	comp=Z,20nm,0.9s,baz=3.5,slow=6.8,SNR=91						
ILAR				PcP	PcP	12 54 53.6	-1.8
	comp=Z,3.2nm,1.0s,baz=347,slow=2.4,SNR=5.4						
MLY	Manley	41.15	346	P	P	12 52 57.6	+0.9
	baz=9.8,SNR=14						
CCB	Clear Creek Bu	41.31	344	P	P	12 52 59.3	+1.5
K27K	Chicken	41.39	340	P	P	12 52 59.2	+0.6
	baz=13						
K27K	Chicken	41.39	340	P	P	12 52 58.6	0.0
NEA2	Nenana	41.46	344	P	P	12 53 00.9	+1.7
	baz=10,SNR=6.9						
HDA	Harding Lake	41.47	343	P	P	12 52 59.9	+0.7
	baz=11,SNR=11						
WRH	Wood River Hil	41.50	344	P	P	12 52 59.7	+0.2
SCRK	Sand Creek	41.63	341	P	P	12 53 01.3	+0.6
	baz=12,SNR=13						
MATQ	Matagami	41.66	284	P	P	12 53 00.0	-0.9
	baz=26						
BRLS	Borolday	41.69	100	eP	P	12 53 03.5	+2.2
	baz=101						
BRLS	Borolday	41.69	100	eP	P	12 53 03.5	+2.2
MAKZ	Makanchi	41.74	86	P	P	12 53 02.1	+0.4
MAKZ				pmax	pmax		
	comp=Z,133nm,1.8s						
MAKZ	Makanchi	41.74	86	P	P	12 53 02.1	+0.4
MAKZ				IAmb	IAmb	12 53 11.2	
	comp=Z,133nm,1.8s						
KK31	Karatay Array	41.82	100	P	P	12 53 03.3	+0.9
KK31				pmax	pmax		
	comp=Z,78nm,1.3s						
KK31	Karatay Array	41.82	100	P	P	12 53 03.3	+0.9
KKAR	Karatay Array	41.82	100	P	P	12 53 03.3	+0.9
KKAR				pmax	pmax		
	comp=Z,78nm,1.3s						
KKAR	Karatay Array	41.82	100	P	P	12 53 03.3	+0.9
D61A	St Aubert, Com	41.84	275	P	P	12 53 03.6	+1.2
	baz=25						
MK31	Makanchi Array	41.85	86	deP	P	12 53 03.2	+0.6

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MK31  Makanchi Array   41.85  86   P     P      12 53 03.9 +1.3
MKAR  Makanchi Array   41.85  86   P     P      12 53 03.3 +0.7
      comp=Z,11nm,0.9s,baz=326,slow=6.7,SNR=41
MKAR                               PP    PnPn   12 54 42.2 -1.8
      comp=Z,8.7nm,1.2s,baz=339,slow=7.7,SNR=1.9
MKAR                               LR    LR     13 13 15.6
      comp=Z,2µm,20.1s,baz=328,slow=40
BWN   Browne           41.91 345   P     P      12 53 03.6 +0.8
RIDG  Independent Ri   41.94 342   P     P      12 53 04.0 +0.8
DOT   Dot Lake         41.96 341   P     P      12 53 03.6 +0.4
BPAW  Bear Paw Mtn.    42.09 346   P     P      12 53 05.0 +0.6
LSQQ  Lebel-sur-Quev   42.11 283   P     P      12 53 03.8 -0.8
      baz=25
SEY   Seymchan         42.14  23⇓ eP     P      12 53 06.0 +1.3
DZA   Taraz            42.25  99  eP     P      12 53 07.3 +1.4
      baz=99
DZA   Taraz            42.25  99  eP     P      12 53 07.2 +1.4
MCK   McKinley         42.30 344   P     P      12 53 07.1 +1.1
      baz=10,SNR=7.5
D60A  Saint Jean D'O   42.32 276   P     P      12 53 06.1 -0.2
      baz=25
ANM   Nome             42.33 355   P     P      12 53 06.6 +0.3
ANM                                pmax  pmax
      comp=Z,44nm,1.0s
ANM   Nome             42.33 355   P     P      12 53 06.6 +0.3
TDK   Taldyqorghan     42.35  91  eP     P      12 53 08.0 +1.2
      baz=91
TDK                               eS     S      12 59 30.4 +2.1
      baz=91
TDK                                LR    LR     13 10 59.9
      comp=Z,584nm,13.3s,baz=91
TDK   Taldyqorghan     42.35  91  eP     P      12 53 07.9 +1.2
TDK                               eS     S      12 59 30.3 +2.1
TDK                                MLR   MLR
      comp=Z,584nm,13.0s
LATQ  La Tuque         42.43 278   P     P      12 53 06.6 -0.6
      baz=25
IUG   Iuzhnay          42.56 101  eP     P      12 53 09.2 +0.7
      comp=Z,15nm,1.4s,baz=101
IUG   Iuzhnay          42.56 101  eP     P      12 53 09.1 +0.6
IUG                                pmax  pmax
      comp=Z,15nm,1.4s
RND   Reindeer         42.62 344   P     P      12 53 10.0 +1.3
RND                                pmax  pmax
      comp=Z,23nm,1.2s
RND   Reindeer         42.62 344   P     P      12 53 10.0 +1.3
MENT  Mentasta         42.62 341   P     P      12 53 09.5 +0.8
KTH   Kantishna Hill   42.63 345   P     P      12 53 09.2 +0.4
E61A  Lac Etchemin     42.63 275   P     P      12 53 09.1 +0.1
      baz=25
MOY   Mondy            42.67  66  eP     P      12 53 11.7 +2.4
MOY                                pmax  pmax
      comp=Z,161nm,1.9s
SGDS  Sogindy          42.68  95  eP     P      12 53 09.8 +0.3
      comp=Z,9.5nm,1.0s,baz=95
SGDS  Sogindy          42.68  95  eP     P      12 53 09.7 +0.3
SGDS                               pmax  pmax
      comp=Z,9.0nm,1.0s
TRF   Thorofare Moun   42.68 345   P     P      12 53 08.6 -0.7
D58A  Chemin du LacG   42.72 278   P     P      12 53 09.1 -0.5
      baz=25
PAX   Paxson           42.76 342   P     P      12 53 09.6 -0.2
PAX                                pmax  pmax
      comp=Z,22nm,1.0s
PAX   Paxson           42.76 342   P     P      12 53 09.6 -0.2
KUU   Kurty            42.77  93  eP     P      12 53 10.0 -0.2
      comp=Z,21nm,0.8s,baz=93
KUU   Kurty            42.77  93  eP     P      12 53 09.9 -0.2
KUU                                pmax  pmax
      comp=Z,21nm,0.8s
USP   Ospenovka        42.81  96   P     P      12 53 11.7 +1.2
      SNR=21
E60A  Ste Agathe de    42.96 276   P     P      12 53 11.2 -0.4
      baz=25
CHKK  Chushkaly        42.99  93  eP     P      12 53 12.6 +0.6
      baz=93
CHKK  Chushkaly        42.99  93  eP     P      12 53 12.5 +0.6
IRK   Irkutsk          43.01  63  eP     P      12 53 12.7 +0.8
IRK                                pmax  pmax
      comp=Z,124nm,1.6s
VLDQ  Val d'Or         43.10 283   P     P      12 53 12.2 -0.5
CHMS  Chumysh          43.13  95   P     P      12 53 14.7 +1.6
      SNR=10
EKS2  Erkin-Say        43.16  97   P     P      12 53 15.0 +1.6
      SNR=18
F61A  St Evariste      43.19 275   P     P      12 53 13.3 -0.2
      baz=24
GEYT  Alibeck          43.22 115   P     P      12 53 15.1 +1.3
      comp=Z,28nm,0.8s,baz=302,slow=8.6,SNR=33
GEYT                               PP    PP     12 54 58.7 +4.8
      comp=Z,24nm,1.2s,baz=316,slow=10,SNR=5.2
GEYT                               LR    LR     13 13 18.3
      comp=Z,5µm,20.1s,baz=20,slow=39
GYA0B ALIBECK ARRAY    43.22 115   P     P      12 53 15.1 +1.3
D56A  ZEC Mazanza, M   43.30 280   P     P      12 53 13.5 -0.8
      baz=25
PKME  Peaks-Kenny Pk   43.35 273   P     P      12 53 14.6 -0.1
      baz=24
TLY   Talaya           43.36  64c iP     P      12 53 17.3 +2.5
TLY                               e             12 55 03.1
TLY                               eS     S      12 59 51.5 +8.7
TLY                                pmax  pmax
      comp=Z,83nm,1.7s
TLY   Talaya           43.36  64   P     P      12 53 16.7 +1.9
PPLA  Purkeypile       43.37 346   P     P      12 53 14.2 -0.7
AAK   Ala-Archa        43.39  96   P     P      12 53 17.1 +1.8
      SNR=12
AAK   Ala-Archa        43.39  96  i P    P      12 53 17.1 +1.8
      SNR=21
AAK   Ala-Archa        43.39  96deP     P      12 53 16.8 +1.5
AAK                                pmax  pmax
      comp=Z,67nm,1.3s
AAK   Ala-Archa        43.39  96   P     P      12 53 16.6 +1.3
TKM2  Tokmak 2         43.45  95   P     P      12 53 17.7 +1.9
      SNR=16
TKM2  Tokmak 2         43.45  95  i P    P      12 53 16.7 +0.9
TKM2                               pmax  pmax
      comp=Z,69nm,1.9s
FFC   Flin Flon        43.47 307   P     P      12 53 14.4 -1.2
FFC                                pmax  pmax
      comp=Z,30nm,1.0s
FFC   Flin Flon        43.47 307   P     P      12 53 14.4 -1.2
E58A  La Victoria      43.49 278   P     P      12 53 15.1 -0.7
      baz=24
KBK   Karagaybulak     43.50  95   P     P      12 53 19.8 +3.6
      SNR=15
AAA   Alma-Ata         43.56  93  eP     P      12 53 16.8 +0.2
      baz=93
AAA                                LR    LR     13 11 18.9
      comp=Z,383nm,11.8s,baz=93
AAA   Alma-Ata         43.56  93  eP     P      12 53 16.8 +0.2
AAA                                MLR   MLR
      comp=Z,383nm,12.0s
TTA   Tatalina         43.58 349   P     P      12 53 17.4 +0.9
TTA                                pmax  pmax
      comp=Z,28nm,1.3s
TTA   Tatalina         43.58 349   P     P      12 53 17.4 +0.9
AML   Almayashu        43.62  97   P     P      12 53 19.5 +2.0
      SNR=33
MDOK  Medeo            43.64  93  eP     P      12 53 17.5 +0.1
      baz=93
MDOK                               LR    LR     13 11 23.9
      comp=Z,537nm,12.9s,baz=93
MDOK  Medeo            43.64  93  eP     P      12 53 17.4 +0.1
MDOK                               MLR   MLR
      comp=Z,537nm,13.0s
M24K  Tolsona, Glenn   43.67 342   P     P      12 53 16.6 -0.6
      baz=11
M24K  Tolsona, Glenn   43.67 342   P     P      12 53 16.4 -0.8
CUT   Chulitna         43.72 345   P     P      12 53 18.4 +0.9
      baz=9.6
TNSS  Tian-Shan        43.73  93  eP     P      12 53 19.1 +0.7
      baz=93
TNSS  Tian-Shan        43.73  93  eP     P      12 53 19.0 +0.7
UCH   Uchtor           43.77  96   P     P      12 53 21.2 +2.5
      SNR=16
E56A  St. Veronique    43.83 280   P     P      12 53 18.3 -0.3
      baz=24
KPKS  Kokpek           43.84  91  eP     P      12 53 19.2 +0.4
      comp=Z,15nm,0.9s,baz=91
KPKS  Kokpek           43.84  91  eP     P      12 53 19.1 +0.3
KPKS                               pmax  pmax
      comp=Z,15nm,0.9s
WHY   Whitehorse       43.85 334   P     P      12 53 18.2 -0.6
G61A  St-Isidore-de-   43.98 276   P     P      12 53 20.1 +0.3
      baz=24
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TRQ   Mont Tremblant   43.99 279   P     P      12 53 19.1 -0.9
HYT   Haines Junctio   44.02 336   P     P      12 53 22.0 +1.9
N25K  Chitina, Valde   44.02 341   P     P      12 53 21.6 +1.5
      baz=12,SNR=7.1
N25K  Chitina, Valde   44.02 341   P     P      12 53 20.8 +0.8
SCM   Sheep Creek Mo   44.04 343   P     P      12 53 20.6 +0.4
SCM                                pmax  pmax
      comp=Z,42nm,1.0s
SCM   Sheep Creek Mo   44.04 343   P     P      12 53 20.6 +0.4
MCARA McCarthy VSAT    44.08 340   P     P      12 53 20.6 +0.2
GLB   Gilahina Butte   44.10 340   P     P      12 53 21.2 +0.5
H63A  New Sharon       44.11 274   P     P      12 53 21.1 +0.2
      baz=24
SATY  Saty             44.13  92  eP     P      12 53 21.4 +0.2
      comp=Z,9.0nm,0.9s,baz=92
SATY  Saty             44.13  92  eP     P      12 53 21.4 +0.2
SATY                               pmax  pmax
      comp=Z,9.0nm,0.9s
SML   Sawmill          44.15 343   P     P      12 53 21.2 +0.1
SKT   Skwentna         44.23 345   P     P      12 53 20.1 -1.5
GHO   Glory Hole Cre   44.24 344   P     P      12 53 21.2 -0.6
GHO                                IAmb  IAmb   12 53 30.3
      comp=Z,143nm,2.0s
BARN  Barnard Glacie   44.26 339   P     P      12 53 21.2 -0.8
ULHL  Ulahol           44.26  94   P     P      12 53 25.3 +3.0
      SNR=7.2
VRDI  Verde Repeater   44.27 340   P     P      12 53 21.9 -0.3
CTGM  Chitina Glacie   44.31 338   P     P      12 53 23.6 +1.1
CTGM                               IAmb  IAmb   12 53 32.8
      comp=Z,102nm,1.9s
SHLS  Shalkode         44.35  91  eP     P      12 53 24.7 +1.8
      comp=Z,29nm,0.9s,baz=90
SHLS  Shalkode         44.35  91  eP     P      12 53 24.7 +1.8
SHLS                               pmax  pmax
      comp=Z,29nm,0.9s
BALM  Baldy            44.35 339   P     P      12 53 23.6 +0.9
PMR   Palmer           44.43 344   P     P      12 53 24.1 +0.9
PMR                                pmax  pmax
      comp=Z,16nm,1.1s
PMR   Palmer           44.43 344   P     P      12 53 24.1 +0.9
ZAK   Zakamensk        44.45  65  eP     P      12 53 25.1 +1.5
ZAK                               e             12 55 07.3
ZAK                                pmax  pmax
      comp=Z,16nm,1.5s
ZAK                                pmax  pmax
      comp=Z,16nm,1.4s
KNK   Knik Glacier     44.55 343   P     P      12 53 24.1 -0.1
TGL   Tana Glacier     44.67 339   P     P      12 53 26.5 +1.2
SUA   Susitna One      44.69 345   P     P      12 53 25.5 +0.1
SUA                                IAmb  IAmb   12 53 28.4
      comp=Z,64nm,0.9s
CRQM  Cirque           44.71 339   P     P      12 53 26.0 +0.4
ISLE  Juniper Island   44.77 339   P     P      12 53 26.1 -0.1
G58A  Ormstown         44.83 278   P     P      12 53 27.3 +0.8
      baz=24
YAH   Yahtse           44.95 338   P     P      12 53 28.0 +0.4
GLI   Glacier Island   44.96 342   P     P      12 53 27.1 -0.3
RC01  Rabbit Creek A   44.98 344   P     P      12 53 29.7 +2.1
      baz=9.5,SNR=5.1
FRNY  Flat Rock        44.98 277   P     P      12 53 27.7 -0.1
FRNY                               IAmb  IAmb   12 53 38.2
      comp=Z,79nm,1.4s
G57A  Newington        45.13 279   P     P      12 53 29.4 +0.4
      baz=24,SNR=9.4
H59A  Cadyville        45.18 277   P     P      12 53 29.1 -0.3
      baz=24
MA2   Magadan          45.22  25⇑ eP     P      12 53 30.9 +1.4
MA2                                pmax  pmax
      comp=Z,1.0nm,0.4s
MA2   Magadan          45.22  25   P     P      12 53 31.1 +1.6
MA2                                IAmb  IAmb   12 53 43.1
      comp=Z,145nm,1.9s
ALGO  Algonquin Park   45.23 282   P     P      12 53 29.4 -0.4
      baz=24
DLBC  Dease Lake       45.33 330   P     P      12 53 31.2 +0.6
DLBC                               IAmb  IAmb   12 53 41.4
      comp=Z,92nm,1.6s
LONY  Lake Ozonia      45.46 278   P     P      12 53 31.1 -0.5
      baz=24
LONY  Lake Ozonia      45.46 278   P     P      12 53 30.9 -0.7
LONY                               IAmb  IAmb   12 53 42.0
      comp=Z,99nm,1.6s
G54A  Lake Saint Pet   45.75 282   P     P      12 53 33.5 -0.4
      baz=24
PLVO  Plevna           45.79 281   P     P      12 53 34.4 +0.2
PLVO                               IAmb  IAmb   12 53 37.4
      comp=Z,97nm,1.5s
RSO   Redoubt South    45.83 346   P     P      12 53 34.8 +0.2
SEW   Seward           45.93 344   P     P      12 53 36.3 +1.2
SEW                                IAmb  IAmb   12 53 38.3
      comp=Z,51nm,1.0s
ULM   Lac du Bonnet    46.10 300   P     P      12 53 35.4 -1.3
      comp=Z,19nm,0.8s,baz=26,slow=6.7,SNR=34
ULM                                PcP   PcP    12 55 12.6  0.0
      comp=Z,7.0nm,1.0s,baz=29,slow=4.9,SNR=2.5
ULM                                LR    LR     13 12 48.3
      comp=Z,5µm,18.5s,baz=29,slow=36
ULM   Lac du Bonnet    46.10 300   P     P      12 53 35.1 -1.6
WMQ   Urumqi           46.12  83  eP     P      12 53 39.9 +3.0
WMQ                                pP    pwP    12 53 42.3 +1.9
WMQ                                sP    sP     12 53 45.8 +8.9
WMQ                                PcP   PcP    12 55 14.5 +1.6
WMQ                                S     S      13 00 25.6 +2.5
WMQ                                pmax  pmax
      comp=Z,40nm,1.1s
WMQ                                pmax  pmax
      comp=Z,380nm,4.7s
WMQ                                LR    LR
      comp=Z,2µm,19.1s
WMQ                                LR    LR
      comp=Z,5µm,21.3s
WMQ                                LR    LR
      comp=Z,2µm,24.7s
WMQ   Urumqi           46.12  83   P     P      12 53 38.6 +1.7
WMQ                                pmax  pmax
      comp=Z,32nm,0.9s
WMQ   Urumqi           46.12  83   P     P      12 53 38.6 +1.7
DELO  Deloro Mine      46.42 281   P     P      12 53 39.0 -0.2
DELO                               IAmb  IAmb   12 53 42.7
      comp=Z,48nm,1.3s
J59A  Piesco           46.50 277   P     P      12 53 40.2 +0.4
      baz=23
E46A  Sault Ste Mari   46.61 288   P     P      12 53 40.5 -0.1
SADO  Sadowa           46.62 282   P     P      12 53 40.1 -0.7
H53A  Bobcaygeon       46.65 282   P     P      12 53 41.1 +0.1
      baz=23
KSH   Kashi            46.70  96   P     P      12 53 45.5 +3.9
KSH                                sP    pwP    12 53 51.3 +6.3
KSH                                PP    PP     12 55 35.1 +4.1
KSH                                S     S      13 00 33.8 +2.2
KSH                                sS    sS     13 00 40.5 +8.9
KSH                                pmax  pmax
      comp=Z,23nm,0.7s
KSH                                pmax  pmax
      comp=Z,810nm,5.5s
KSH                                LR    LR
      comp=Z,2µm,13.4s
KSH                                LR    LR
      comp=Z,2µm,10.8s
KSH                                LR    LR
      comp=Z,2µm,19.3s
J58A  Remsen           46.82 278   P     P      12 53 42.7 +0.4
      baz=23
ZEA   Zeya             46.97  44  eP     P      12 53 45.7 +2.3
ZEA                               eS     S      13 00 41.0 +6.1
ZEA                                pmax  pmax
      comp=E,10.0nm,1.0s
ZEA                                pmax  pmax
      comp=Z,50nm,1.1s
ZEA                                pmax  pmax
      comp=Z,200nm,6.3s
ZEA                                pmax  pmax
      comp=N,100nm,6.3s
ZEA                                pmax  pmax
      comp=Z,200nm,6.1s
ZEA                                smax  smax
      comp=E,200nm,8.7s
ZEA                                MLR   MLR
      comp=N,500nm,17.0s
ZEA                                MLR   MLR
      comp=Z,600nm,17.0s
EYMN  Ely              47.10 295   P     P      12 53 43.9 -0.6
      baz=23
EYMN  Ely              47.10 295   P     P      12 53 44.5  0.0
EYMN                               IAmb  IAmb   12 53 47.6
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      comp=Z,60nm,1.4s
K59A  Cooperstown      47.23 277   P     P      12 53 46.2 +0.6
      baz=23
B35A  Bob, Littlefor   47.30 297   P     P      12 53 44.8 -1.2
B35A                               IAmb  IAmb   12 53 49.2
      comp=Z,88nm,1.6s
E43A  Lone Tree Farm   47.34 290   P     P      12 53 45.4 -0.9
E43A                               IAmb  IAmb   12 53 49.5
      comp=Z,44nm,1.1s
SONM  Songino Array    47.60  64   P     P      12 53 49.7 +1.2
      comp=Z,11nm,0.9s,baz=327,slow=7.0,SNR=42
SONM                               PcP   PcP    12 55 18.8 +0.6
      comp=Z,5.1nm,0.9s,baz=281,slow=2.6,SNR=4.9
SONM                               LR    LR     13 17 51.2
      comp=Z,555nm,18.4s,baz=340,slow=41
HRA   Herat            47.65 113   P     P      12 53 49.3 +0.1
ULN   Ulaanbaatar      47.74  63⇓ eP     P      12 53 50.7 +1.0
ULN                                pmax  pmax
      comp=Z,36nm,1.3s
ULN   Ulaanbaatar      47.74  63   P     P      12 53 51.2 +1.5
ULN                                IAmb  IAmb   12 54 00.4
      comp=Z,58nm,1.2s
L59A  Walton           47.83 277   P     P      12 53 51.3 +1.1
      baz=23
AGMN  Agassiz Nation   47.90 299   P     P      12 53 50.0 -0.7
      baz=22,SNR=18
AGMN  Agassiz Nation   47.90 299   P     P      12 53 50.0 -0.7
AGMN                               IAmb  IAmb   12 53 54.1
      comp=Z,46nm,1.1s
K56A  Middlesex        48.01 279   P     P      12 53 52.0 +0.4
      baz=23
I51A  Listowel         48.05 283   P     P      12 53 51.8  0.0
      baz=23
BINY  Binghamton       48.09 278   P     P      12 53 53.0 +0.7
      baz=23
L58A  Harry Jones Me   48.19 278   P     P      12 53 53.4 +0.3
      baz=23
E38A  The Farm, Brul   48.35 294   P     P      12 53 53.2 -1.0
E38A                               IAmb  IAmb   12 53 57.0
      comp=Z,67nm,1.4s
KDAK  Kodiak Island    48.47 345ceP     P      12 53 54.9 -0.1
KDAK                               pmax  pmax
      comp=Z,140nm,1.1s
KDAK  Kodiak Island    48.47 345   P     P      12 53 54.7 -0.2
L57A  Andrews Acres    48.52 279   P     P      12 53 56.0 +0.4
      baz=23
M59A  Waymart          48.54 277   P     P      12 53 56.3 +0.6
      baz=22
L56A  Greenwood        48.60 279   P     P      12 53 56.7 +0.5
      baz=23
L56A  Greenwood        48.60 279   P     P      12 53 56.4 +0.2
WVNY  West Valley, N   48.65 280   P     P      12 53 56.6  0.0
M58A  Price's Panora   48.99 278   P     P      12 53 59.5 +0.3
      baz=22
OHAK  Old Harbor       49.08 346   P     P      12 53 59.7 +0.1
OHAK                               IAmb  IAmb   12 54 03.1
      comp=Z,72nm,1.1s
N59A  State Game Lan   49.21 277   P     P      12 54 02.5 +1.6
      baz=22
M57A  Sunshine Farm,   49.21 279   P     P      12 54 00.5 -0.3
      baz=22
M57A  Sunshine Farm,   49.21 279   P     P      12 53 59.6 -1.2
M57A                               IAmb  IAmb   12 54 09.2
      comp=Z,64nm,1.3s
G40A  Rib Lake         49.22 292   P     P      12 54 00.3 -0.7
G40A                               IAmb  IAmb   12 54 04.7
      comp=Z,63nm,1.1s
MDND  Maddock          49.26 301   P     P      12 54 00.6 -0.5
      baz=22,SNR=8.8
MDND  Maddock          49.26 301   P     P      12 53 59.9 -1.3
D32A  Dogwood Acres,   49.27 299   P     P      12 54 00.4 -0.8
D32A                               IAmb  IAmb   12 54 04.8
      comp=Z,53nm,0.9s
ERPA  Erie             49.31 282   P     P      12 54 01.6  0.0
      baz=22
ERPA  Erie             49.31 282   P     P      12 54 01.6  0.0
ERPA                               IAmb  IAmb   12 54 05.0
      comp=Z,121nm,1.6s
KBL   Kabul            49.37 106   P     P      12 54 02.1 -0.3
KBL                                pmax  pmax
      comp=Z,23nm,1.1s
KBL   Kabul            49.37 106   P     P      12 54 02.1 -0.3
KBL   Kabul            49.37 106   P     P      12 54 03.8 +1.4
      SNR=14
KBL                                P     P      12 54 03.8 +1.4
      SNR=14
M56A  Emporium         49.38 280   P     P      12 54 01.9 -0.3
      baz=22
K50A  Casco            49.44 284   P     P      12 54 02.4 -0.2
K50A                               IAmb  IAmb   12 54 06.8
      comp=Z,104nm,1.3s
L53A  Girard           49.53 282   P     P      12 54 03.4 +0.1
      baz=22
HIA   Hailar           49.55  52⇓ eP     P      12 54 04.4 +1.0
HIA                                pmax  pmax
      comp=Z,12nm,0.8s
HIA   Hailar           49.55  52   P     P      12 54 04.2 +0.8
N58A  Sunbury          49.55 278   P     P      12 54 03.1 -0.3
      baz=22
N58A  Sunbury          49.55 278   P     P      12 54 03.0 -0.5
N58A                               IAmb  IAmb   12 54 13.6
      comp=Z,52nm,1.2s
F36A  Milaca           49.55 295   P     P      12 54 02.5 -1.0
M55A  Ridgway          49.56 280   P     P      12 54 03.5  0.0
M55A                               IAmb  IAmb   12 54 11.7
      comp=Z,86nm,1.5s
O60A  Telford          49.66 276   P     P      12 54 04.6 +0.4
      baz=22
M54A  Oil Creek Stat   49.78 281   P     P      12 54 05.3 +0.1
      baz=22
M54A  Oil Creek Stat   49.78 281   P     P      12 54 05.2  0.0
M54A                               IAmb  IAmb   12 54 13.3
      comp=Z,80nm,1.4s
ALLY  Alegheny Colle   49.78 281   P     P      12 54 05.2  0.0
DGMT  Dagmar           49.79 305   P     P      12 54 05.3  0.0
      baz=21
DGMT  Dagmar           49.79 305   P     P      12 54 04.9 -0.3
SII   Sitkinak Islan   49.80 346   P     P      12 54 07.3 +2.1
SII                                IAmb  IAmb   12 54 08.8
      comp=Z,84nm,1.0s
N57A  Milroy           49.87 279   P     P      12 54 06.0 +0.1
      baz=22
SPMN  Marine on St.    49.96 294   P     P      12 54 06.0 -0.5
      baz=22,SNR=11
SPMN  Marine on St.    49.96 294   P     P      12 54 05.0 -1.5
SPMN                               IAmb  IAmb   12 54 10.7
      comp=Z,38nm,0.9s
SSPA  Standing Stone   50.08 279   P     P      12 54 07.5  0.0
      baz=22
SSPA  Standing Stone   50.08 279   P     P      12 54 07.1 -0.4
SSPA                               IAmb  IAmb   12 54 11.1
      comp=Z,113nm,1.7s
PAGS  Pennsylvania G   50.12 278   P     P      12 54 08.8 +1.0
M53A  WI Miller and    50.13 282   P     P      12 54 07.4 -0.4
      baz=22
M53A  WI Miller and    50.13 282   P     P      12 54 07.4 -0.4
M53A                               IAmb  IAmb   12 54 19.2
      comp=Z,72nm,1.1s
I42A  Draeger Farm,    50.15 290   P     P      12 54 07.7 -0.3
I42A                               IAmb  IAmb   12 54 12.2
      comp=Z,61nm,1.0s
M52A  Chesterland      50.23 283   P     P      12 54 08.3 -0.3
O58A  Lewisberry       50.28 278   P     P      12 54 09.8 +0.8
      baz=22
F33A  5 Mile Ranch,    50.29 298   P     P      12 54 08.7 -0.4
F33A                               IAmb  IAmb   12 54 13.1
      comp=Z,78nm,1.1s
N54A  Moraine State    50.38 281   P     P      12 54 10.2 +0.5
      baz=22,SNR=12
N54A  Moraine State    50.38 281   P     P      12 54 09.7  0.0
N54A                               IAmb  IAmb   12 54 21.4
      comp=Z,81nm,1.1s
O57A  Amberson         50.40 278   P     P      12 54 10.2 +0.3
      baz=22
TAM   Tamanrasset      50.50 181   P     P      12 54 11.8 +0.8
TAM                                pmax  pmax
      comp=Z,62nm,1.2s
TAM   Tamanrasset      50.50 181   P     P      12 54 11.8 +0.8
TAM                                IAmb  IAmb   12 54 15.1
      comp=Z,62nm,1.2s
I40A  Norwalk          50.61 292   P     P      12 54 10.9 -0.6
O56A  Blue Knob Stat   50.61 279   P     P      12 54 11.0 -0.6
      baz=22
O56A  Blue Knob Stat   50.61 279   P     P      12 54 11.8 +0.2
O56A                               IAmb  IAmb   12 54 16.2
      comp=Z,120nm,1.6s
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E28A	Huff	50.72	302	P	P	12 54 12.1	-0.2
E28A				IAmb	IAmb	12 54 23.0	
	comp=Z,142nm,1.6s						
L48A	N Adams	50.72	286	P	P	12 54 11.4	-0.9
N53A	Lisbon	50.76	282	P	P	12 54 12.8	+0.2
N53A				IAmb	IAmb	12 54 20.6	
	comp=Z,51nm,1.2s						
M50A	Fremont	50.83	284	P	P	12 54 13.1	0.0
M50A				IAmb	IAmb	12 54 17.2	
	comp=Z,97nm,1.5s						
SDMD	Soldier's Deli	50.91	277	P	P	12 54 13.0	-0.8
K43A	Burlington	51.09	289	P	P	12 54 14.4	-0.7
K43A				IAmb	IAmb	12 54 27.2	
	comp=Z,71nm,1.0s						
N51A	Ashland	51.09	283	P	P	12 54 14.3	-0.8
L46A	Eue Claire	51.17	287	P	P	12 54 15.7	0.0
L46A				IAmb	IAmb	12 54 23.8	
	comp=Z,61nm,1.1s						
P57A	Homestead Farm	51.18	278	P	P	12 54 15.0	-0.8
O54A	Avella	51.21	281	P	P	12 54 15.5	-0.6
O54A				IAmb	IAmb	12 54 26.1	
	comp=Z,101nm,1.6s						
I37A	Lemond, Waseca	51.24	294	P	P	12 54 15.0	-1.2
O53A	New Philadelph	51.38	282	P	P	12 54 17.5	+0.2
	baz=22,SNR=8.5						
O53A	New Philadelph	51.38	282	P	P	12 54 16.1	-1.3
NIL	Nilore	51.39	102	P	P	12 54 18.0	+0.5
NIL				pmax	pmax		
	comp=Z,58nm,1.2s						
NIL	Nilore	51.39	102	P	P	12 54 18.0	+0.5
NIL				IAmb	IAmb	12 54 35.1	
	comp=Z,58nm,1.1s						
NIL	Nilore	51.39	102	P	P	12 54 19.3	+1.8
NIL				P	P	12 54 19.3	+1.8
P56A	Dayton Farm, R	51.40	279	P	P	12 54 18.2	+0.8
	baz=22						
WALA	Waterton Lakes	51.40	314	P	P	12 54 16.6	-0.9
JFWS	Jewell Farm	51.42	291	P	P	12 54 16.6	-1.0
JFWS				pmax	pmax		
	comp=Z,68nm,1.4s						
JFWS	Jewell Farm	51.42	291	P	P	12 54 17.1	-0.5
	baz=22,SNR=8.4						
JFWS	Jewell Farm	51.42	291	P	P	12 54 16.6	-1.0
JFWS				IAmb	IAmb	12 54 20.7	
	comp=Z,68nm,1.4s						
EGMT	Eagleton	51.48	310	P	P	12 54 18.0	-0.1
	baz=19,SNR=12						
EGMT	Eagleton	51.48	310	P	P	12 54 17.8	-0.3
EGMT				IAmb	IAmb	12 54 27.0	
	comp=Z,66nm,1.1s						
MCWV	Mont Chateau	51.54	280	P	P	12 54 19.1	+0.6
	baz=22						
GRNR	Gornyy	51.56	39⇑	*i*P	P	12 54 19.8	+1.3
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GRNR				MLR	MLR		
	comp=N,360nm,16.0s						
GRNR				MLR	MLR		
	comp=E,430nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,620nm,16.0s						
Q58A	Fox Den Farm,	51.59	278	P	P	12 54 18.6	-0.3
	baz=22						
N49A	Columbus Grove	51.60	285	P	P	12 54 18.1	-0.8
N49A				IAmb	IAmb	12 54 22.9	
	comp=Z,156nm,1.6s						
O52A	Adamsville	51.68	282	P	P	12 54 18.8	-0.8
O52A				IAmb	IAmb	12 54 22.8	
	comp=Z,91nm,1.4s						
Q57A	Strasburg	51.71	279	P	P	12 54 20.6	+0.8
	baz=22						
ACSO	Alum Creek Sta	51.90	283	P	P	12 54 21.4	+0.3
	baz=22,SNR=9.0						
ACSO	Alum Creek Sta	51.90	283	P	P	12 54 20.2	-1.0
ACSO				IAmb	IAmb	12 54 24.3	
	comp=Z,117nm,1.5s						
Q56A	Snyder Ridge,	51.93	279	P	P	12 54 22.0	+0.5
	baz=22,SNR=5.5						
Q56A	Snyder Ridge,	51.93	279	P	P	12 54 21.1	-0.3
Q56A				IAmb	IAmb	12 54 30.7	
	comp=Z,163nm,1.8s						
LAO	LASA Array	51.94	306	P	P	12 54 22.2	+0.7
	baz=20,SNR=11						
LAO	LASA Array	51.94	306	P	P	12 54 21.5	+0.1
N47A	Urbana	52.06	286	P	P	12 54 21.1	-1.2
N47A				IAmb	IAmb	12 54 26.0	
	comp=Z,66nm,1.2s						
L42A	Oliver, Polo	52.11	290	P	P	12 54 22.2	-0.5
L42A				IAmb	IAmb	12 54 25.8	
	comp=Z,87nm,1.4s						
P53A	Whipple	52.14	282	P	P	12 54 22.7	-0.3
P53A				IAmb	IAmb	12 54 33.9	
	comp=Z,98nm,1.4s						
KLR	Kul'dur	52.15	43⇑	*e*P	P	12 54 23.6	+0.7
KLR				pmax	pmax		
	comp=Z,17nm,1.3s						
P52A	Corning	52.22	282	P	P	12 54 23.4	-0.2
	baz=22						
P52A	Corning	52.22	282	P	P	12 54 22.8	-0.8
P52A				IAmb	IAmb	12 54 33.8	
	comp=Z,56nm,1.2s						
M44A	Midewin, Midew	52.24	288	P	P	12 54 22.9	-0.7
SUSD	Miller	52.27	299	P	P	12 54 23.9	-0.1
	baz=21						
SUSD	Miller	52.27	299	P	P	12 54 23.5	-0.4
R58A	Rapidan	52.28	278	P	P	12 54 23.5	-0.5
	baz=21,SNR=5.4						
O49A	Covington	52.32	285	P	P	12 54 23.5	-0.8
O49A				IAmb	IAmb	12 54 28.2	
	comp=Z,79nm,1.3s						
ECSD	EROS Data Cent	52.34	297	P	P	12 54 24.0	-0.5
	baz=21,SNR=31						
ECSD	EROS Data Cent	52.34	297	P	P	12 54 23.2	-1.2
ECSD				IAmb	IAmb	12 54 32.1	
	comp=Z,77nm,1.1s						
K38A	Parkersburg	52.34	293	P	P	12 54 23.4	-1.1
K38A				IAmb	IAmb	12 54 31.8	
	comp=Z,70nm,1.2s						
PEA0B	Petropavlovsk-	52.36	22⇓	*e*P	P	12 54 26.6	+2.2
PETK	Petropavlovsk-	52.36	22	P	P	12 54 24.5	+0.1
	comp=Z,9.3nm,1.0s,baz=71,slow=9.6,SNR=6.8						
PETK				LR	LR	13 17 27.8	
	comp=Z,636nm,18.9s,baz=348,slow=37						
R57A	Stanardsville	52.43	278	P	P	12 54 24.1	-1.0
	baz=21						
Q54A	Coxs Mills	52.45	281	P	P	12 54 24.7	-0.6
L40A	Anamosa	52.47	292	P	P	12 54 24.5	-1.0
L40A				IAmb	IAmb	12 54 29.2	
	comp=Z,82nm,1.2s						
TYV	Tymovskoe	52.53	34	*e*P	P	12 54 30.4	+4.7
TYV				pmax	pmax		
	comp=Z,200nm,3.3s						
TYV				pmax	pmax		
	comp=Z,27nm,1.4s						
R56A	Bull Pasture M	52.58	279	P	P	12 54 27.1	+0.7
	baz=21						
P51A	Williamsport	52.62	283	P	P	12 54 26.2	-0.3
P51A				IAmb	IAmb	12 54 37.3	
	comp=Z,59nm,1.2s						
JTMT	Jette	52.73	313	P	P	12 54 27.2	-0.2
Q53A	Leroy	52.76	281	P	P	12 54 27.8	+0.1
	baz=21,SNR=6.2						
NEW	Newport	52.82	316	P	P	12 54 27.4	-0.6
NEW				pmax	pmax		
	comp=Z,45nm,1.4s						
NEW	Newport	52.82	316	P	P	12 54 28.1	+0.1
	baz=18,SNR=14						
NEW	Newport	52.82	316	P	P	12 54 27.4	-0.6
Q52A	Bidwell	52.88	282	P	P	12 54 28.1	-0.3
Q52A				IAmb	IAmb	12 54 38.6	
	comp=Z,80nm,1.5s						
R55A	Marlinton	52.90	280	P	P	12 54 28.4	-0.3
	baz=21						
SFIN	Lafayette	52.91	287	P	P	12 54 28.4	-0.3
	baz=21						
SFIN	Lafayette	52.91	287	P	P	12 54 28.2	-0.5
SFIN				IAmb	IAmb	12 54 36.3	
	comp=Z,72nm,1.2s						
S58A	Poland Farm, P	52.93	278	P	P	12 54 29.1	+0.3
	baz=21						
P49A	Miami Univ. Ec	53.04	285	P	P	12 54 28.8	-0.8
	baz=21						
P49A	Miami Univ. Ec	53.04	285	P	P	12 54 28.9	-0.8
P49A				IAmb	IAmb	12 54 33.1	
	comp=Z,90nm,1.4s						
S57A	Dark Hollow, R	53.05	279	P	P	12 54 29.6	-0.1
	baz=21						
S57A	Dark Hollow, R	53.05	279	P	P	12 54 29.6	-0.1
S57A				IAmb	IAmb	12 55 51.6	
	comp=Z,92nm,1.7s						
Q51A	Peebles	53.12	283	P	P	12 54 30.0	-0.3
Q51A				IAmb	IAmb	12 54 34.0	
	comp=Z,111nm,1.4s						
SCIA	State Center	53.15	293	P	P	12 54 30.2	-0.3
	baz=21						
SCIA	State Center	53.15	293	P	P	12 54 29.7	-0.7
B08A	Colville Reser	53.17	318	P	P	12 54 29.9	-0.6
B08A				IAmb	IAmb	12 54 48.7	
	comp=Z,91nm,1.8s						
HRY	Holter Researc	53.18	311	P	P	12 54 30.3	-0.4
R54A	Victor	53.24	281	P	P	12 54 31.2	0.0
	baz=21						
P48A	Milroy	53.30	285	P	P	12 54 30.6	-1.0
HDIL	Hopedale	53.35	289	P	P	12 54 31.7	-0.3
	baz=21						
HDIL	Hopedale	53.35	289	P	P	12 54 31.4	-0.5
HDIL				IAmb	IAmb	12 54 39.7	
	comp=Z,67nm,1.2s						
R53A	Hurricane	53.38	282	P	P	12 54 31.3	-0.8
R53A				IAmb	IAmb	12 54 40.4	
	comp=Z,60nm,1.3s						
T59A	Double "B" Far	53.38	277	P	P	12 54 33.5	+1.3
	baz=21						
T59A	Double "B" Far	53.38	277	P	P	12 54 32.6	+0.4
T59A				IAmb	IAmb	12 54 41.9	
	comp=Z,60nm,1.3s						
C09A	Chrisman Ranch	53.49	317	P	P	12 54 31.7	-1.2
O44A	Mansfield	53.50	288	P	P	12 54 32.5	-0.5
MSO	Missoula	53.53	313	P	P	12 54 33.1	-0.2
	baz=18,SNR=26						
MSO	Missoula	53.53	313	P	P	12 54 32.9	-0.4
MSO				IAmb	IAmb	12 54 41.3	
	comp=Z,74nm,1.2s						
DHRM	DHARAMSHALA	53.57	99	*e*P	P	12 54 36.4	+2.5
DHRM				IAmb	IAmb	12 54 47.0	
	comp=Z,75nm,1.3s						
GCMT	Greycliff	53.58	309	P	P	12 54 33.2	-0.5
GTA	Gaotai	53.63	74	⇓P	P	12 54 35.1	+0.9
GTA				pP	pwP	12 54 40.1	+2.4
GTA				sP	sP	12 54 44.3	+10
GTA				PcP	PcP	12 55 42.1	+1.6
GTA				S	S	13 02 06.6	-1.6
GTA				sS	sS	13 02 15.9	+7.7
GTA				SS	SKiKP	13 05 46.9	-2.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,210nm,5.1s						
GTA				LR	LR		
	comp=Z,940nm,19.3s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,830nm,17.8s						
N41A	Harden Midland	53.64	291	P	P	12 54 32.8	-1.2
P46A	Rosedale	53.65	287	P	P	12 54 33.6	-0.5
P46A				IAmb	IAmb	12 54 41.6	
	comp=Z,67nm,1.2s						
PGC	Sidney	53.67	321	P	P	12 54 34.1	0.0
PGC				IAmb	IAmb	12 54 43.0	
	comp=Z,76nm,1.2s						
T58A	Grand View Acr	53.69	278	P	P	12 54 35.8	+1.3
	baz=21						
RSSD	Black Hills	53.83	303	P	P	12 54 34.1	-1.6
RSSD				pmax	pmax		
	comp=Z,44nm,1.4s						
RSSD	Black Hills	53.83	303	P	P	12 54 35.5	-0.2
	baz=20						
RSSD	Black Hills	53.83	303	P	P	12 54 34.1	-1.6
T57A	Hurt	53.85	279	P	P	12 54 33.8	-1.8
T57A				IAmb	IAmb	12 54 45.6	
	comp=Z,85nm,1.6s						
BLO	Bloomington	53.88	286	P	P	12 54 34.7	-1.1
BLO				pmax	pmax		
	comp=Z,71nm,1.2s						
BLO	Bloomington	53.88	286	P	P	12 54 34.7	-1.1
BLO				IAmb	IAmb	12 54 46.5	
	comp=Z,71nm,1.2s						
K31A	O'Neill	53.93	298	P	P	12 54 35.6	-0.5
K31A				IAmb	IAmb	12 54 40.5	
	comp=Z,74nm,0.9s						
BLA	Blacksburg	53.98	280	P	P	12 54 36.0	-0.7
BLA				pmax	pmax		
	comp=Z,77nm,1.3s						
BLA	Blacksburg	53.98	280	P	P	12 54 37.0	+0.4
	baz=21						
BLA	Blacksburg	53.98	280	P	P	12 54 36.0	-0.7
BLA				IAmb	IAmb	12 54 53.7	
	comp=Z,77nm,1.3s						
T56A	Rocky Mt	54.04	279	P	P	12 54 38.5	+1.4
	baz=21						
RAYN	Ar Rayn	54.05	135	*i* P	P	12 54 38.2	+0.9
	SNR=6.9						
RAYN	Ar Rayn	54.05	135	P	P	12 54 37.4	+0.1
RAYN				pmax	pmax		
	comp=Z,86nm,1.4s						
RAYN	Ar Rayn	54.05	135	P	P	12 54 37.4	+0.1
RAYN				IAmb	IAmb	12 54 40.8	
	comp=Z,86nm,1.4s						
R50A	Paris	54.09	284	P	P	12 54 36.5	-0.9
R50A				IAmb	IAmb	12 54 40.3	
	comp=Z,87nm,1.4s						
RLMT	Red Lodge	54.12	308	P	P	12 54 37.9	+0.1
	baz=19,SNR=16						
RLMT	Red Lodge	54.12	308	P	P	12 54 37.9	+0.1
RLMT				IAmb	IAmb	12 54 46.2	
	comp=Z,87nm,1.4s						
BOZ	Bozeman (W)	54.20	310	P	P	12 54 37.7	-0.6
BOZ				pmax	pmax		
	comp=Z,52nm,1.9s						
BOZ	Bozeman (W)	54.20	310	P	P	12 54 37.6	-0.6
	baz=18,SNR=11						
BOZ	Bozeman (W)	54.20	310	P	P	12 54 37.6	-0.6
N38A	Joes South For	54.20	293	P	P	12 54 37.0	-1.1
N38A				IAmb	IAmb	12 54 45.8	
	comp=Z,67nm,1.3s						
U58A	Oxford	54.21	278	P	P	12 54 37.7	-0.5
	baz=21						
P43A	Skaggs, Pawnee	54.27	289	P	P	12 54 37.2	-1.4
R49A	Shelbyville	54.32	284	P	P	12 54 38.4	-0.7
R49A				IAmb	IAmb	12 54 46.5	
	comp=Z,75nm,1.3s						
D08A	Wollman Farm,	54.34	317	P	P	12 54 39.9	+0.9
YNE	Yellowstone No	54.39	309	P	P	12 54 39.5	-0.3
U57A	Blanch	54.40	278	P	P	12 54 41.1	+1.5
	baz=21						
S51A	Beattyville	54.49	283	P	P	12 54 39.9	-0.3
S51A				IAmb	IAmb	12 54 47.8	
	comp=Z,77nm,1.4s						
DLMT	Dillon	54.63	311	P	P	12 54 41.1	-0.4
DLMT				IAmb	IAmb	12 54 50.7	
	comp=Z,95nm,2.0s						
D03D	Eldon	54.67	320	P	P	12 54 41.4	-0.1
	baz=16						
MASF	Masafi	54.67	123	P	P	12 54 43.4	+1.7
MASF				P	P	12 54 43.4	+1.7
MSFE	Esma-Masafi	54.69	123	*i* P	P	12 54 42.6	+0.7
	SNR=8.9						
WCI	Wyandotte Cave	54.70	285	P	P	12 54 40.5	-1.2
WCI				pmax	pmax		
	comp=Z,46nm,1.1s						
WCI	Wyandotte Cave	54.70	285	P	P	12 54 41.0	-0.7
	baz=21						
WCI	Wyandotte Cave	54.70	285	P	P	12 54 40.5	-1.2
WCI				IAmb	IAmb	12 54 49.1	
	comp=Z,46nm,1.1s						
E09A	Wood Farm, Sta	54.70	316	P	P	12 54 41.4	-0.2
N35A	Tabor	54.77	295	P	P	12 54 41.5	-0.8
N35A				IAmb	IAmb	12 54 49.6	
	comp=Z,80nm,1.1s						
MDH	Madha	54.78	122	P	P	12 54 42.7	+0.2
MDH				P	P	12 54 42.7	+0.2
YHL	Hebgen Lake	54.81	310	P	P	12 54 43.0	+0.2
Q44A	Meyer Farm, Va	54.82	288	P	P	12 54 41.9	-0.8
Q44A				IAmb	IAmb	12 54 50.0	
	comp=Z,75nm,1.1s						
SMLA	Simla	54.87	99	*e*P	P	12 54 44.2	+1.1
SMLA				IAmb	IAmb	12 54 51.2	
	comp=Z,178nm,1.5s						
QLMT	Earthquake Lak	54.88	310	P	P	12 54 43.5	+0.2
LKWY	Lake	54.90	309	P	P	12 54 44.5	+1.0
LKWY				pmax	pmax		
	comp=Z,90nm,1.6s						
LKWY	Lake	54.90	309	P	P	12 54 44.5	+1.0
LKWY				IAmb	IAmb	12 54 53.0	
	comp=Z,90nm,1.6s						
E08A	Dider Farm, El	54.90	317	P	P	12 54 43.3	+0.2
E08A				IAmb	IAmb	12 54 51.4	
	comp=Z,140nm,1.8s						
YHB	Horse Butte	54.90	310	P	P	12 54 43.4	-0.1
YMR	Madison River	54.93	309	P	P	12 54 43.9	+0.3
V58A	Windy Hill, Pi	54.93	278	P	P	12 54 43.3	-0.2
	baz=21						
V58A	Windy Hill, Pi	54.93	278	P	P	12 54 42.5	-0.9
V58A				IAmb	IAmb	12 54 58.3	
	comp=Z,71nm,1.4s						
E07A	Sunnyside	55.00	317	P	P	12 54 43.3	-0.6
U54A	Nelsons Funny	55.03	281	P	P	12 54 44.6	+0.3
	baz=21						
U54A	Nelsons Funny	55.03	281	P	P	12 54 44.6	+0.3
U54A				IAmb	IAmb	12 55 01.0	
	comp=Z,112nm,1.5s						
F10A	Beach Ranch, E	55.03	315	P	P	12 54 43.5	-0.7
V57A	Coltrane Farms	55.03	279	P	P	12 54 45.4	+1.2
	baz=21						
P40A	Paris	55.06	291	P	P	12 54 43.3	-1.1
P40A				IAmb	IAmb	12 54 50.9	
	comp=Z,62nm,1.6s						
HAWA	Hanford	55.09	317	P	P	12 54 44.3	-0.2
HAWA				IAmb	IAmb	12 54 53.0	
	comp=Z,117nm,1.8s						
UOSS	Minazif	55.09	123	P	P	12 54 44.8	0.0
UOSS	Minazif	55.09	123	P	P	12 54 45.9	+1.2
UOSS				IAmb	IAmb	12 54 53.3	
	comp=Z,107nm,1.4s						
UOSS	Minazif	55.09	123	P	P	12 54 46.4	+1.6
UOSS				P	P	12 54 46.4	+1.6
H17A	Grant Village	55.10	309	P	P	12 54 46.3	+1.3
	baz=18,SNR=16						
H17A	Grant Village	55.10	309	P	P	12 54 46.1	+1.2
H17A				IAmb	IAmb	12 55 04.5	
	comp=Z,52nm,1.3s						
FAQ	Al Faqa, Dubai	55.14	123	P	P	12 54 44.9	-0.2
LON	Longmire	55.19	319	P	P	12 54 44.8	-0.5
LON				pmax	pmax		
	comp=Z,106nm,1.8s						
LON	Longmire	55.19	319	P	P	12 54 44.8	-0.5
LON				IAmb	IAmb	12 54 49.2	
	comp=Z,106nm,1.8s						
HATD	Hatta, Dubai	55.19	123	*i* P	P	12 54 46.0	+0.5
	SNR=8.6						
HATD	Hatta, Dubai	55.19	123	P	P	12 54 47.4	+1.9
HATD				P	P	12 54 47.4	+1.9
MCMT	McKenzie Canyo	55.20	311	P	P	12 54 45.0	-0.6
YPP	Pitchstone Pla	55.27	309	P	P	12 54 47.2	+1.0
ASHO	Ashiyiah	55.31	123	P	P	12 54 48.0	+1.6
ASHO				P	P	12 54 48.0	+1.6
V56A	Mocksville	55.31	279	P	P	12 54 46.1	-0.2
	baz=21,SNR=5.8						
USIN	University of	55.32	287	P	P	12 54 45.4	-0.9
USIN				IAmb	IAmb	12 54 56.0	
	comp=Z,60nm,1.1s						
P38A	Dawn	55.37	293	P	P	12 54 45.5	-1.1
P38A				IAmb	IAmb	12 54 49.0	
	comp=Z,98nm,1.7s						
T50A	Nancy	55.41	284	P	P	12 54 46.3	-0.7
T50A				IAmb	IAmb	12 54 48.8	
	comp=Z,45nm,0.9s						
FLWY	Flagg Ranch	55.43	309	P	P	12 54 48.2	+0.9
HHC	Hu-ho-hao-te	55.45	63	*e*P	P	12 54 49.4	+2.1
HHC				sP	pwP	12 54 57.3	+6.5
HHC				S	S	13 02 35.3	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,7.6s						
HHC				LR	LR		
	comp=Z,2µm,15.9s						
HHC				LR	LR		
	comp=Z,680nm,17.1s						
HHC				LR	LR		
	comp=Z,2µm,15.7s						
TZTN	Tazewell	55.50	282	P	P	12 54 48.3	+0.7
	baz=21						
TZTN	Tazewell	55.50	282	P	P	12 54 47.6	0.0
E04D	Cinebar	55.52	320	P	P	12 54 49.2	+1.6
	baz=16						
F07A	Phinny Hill Vi	55.65	317	P	P	12 54 48.9	+0.4
W58A	Raeford	55.69	278	P	P	12 54 50.0	+1.1
	baz=20						
MOOW	Moose Ponds	55.76	309	P	P	12 54 49.4	-0.2
MOOW				IAmb	IAmb	12 54 58.4	
	comp=Z,51nm,1.4s						
W57A	Gilead	55.78	278	P	P	12 54 51.0	+1.4
	baz=20						
BCYI	Bear Canyon	55.81	311	P	P	12 54 49.3	-0.7
K22A	Casper	55.82	305	P	P	12 54 49.1	-1.0
	baz=19,SNR=31						
K22A	Casper	55.82	305	P	P	12 54 48.4	-1.7
ALNE	Al Ain	55.84	123	P	P	12 54 51.8	+1.6
ALNE				P	P	12 54 51.8	+1.6
LOHW	Long Hollow	55.85	309	P	P	12 54 50.3	0.0
LOHW				IAmb	IAmb	12 55 08.8	
	comp=Z,90nm,1.6s						
SOHO	SOHO	55.95	123	*i* P	P	12 54 51.9	+1.0
	SNR=6.8						
SOHO	SOHO	55.95	123	P	P	12 54 52.4	+1.4
SOHO				P	P	12 54 52.4	+1.4
F05D	White Salmon	55.95	318	P	P	12 54 51.2	+0.5
	baz=16						
W56A	Indian Trail	55.97	279	P	P	12 54 52.3	+1.3
	baz=20						
SIUC	Southern Illin	55.99	288	P	P	12 54 50.5	-0.6
CN2	Changchun	56.00	50	*e*P	P	12 54 51.4	+0.3
CN2				sP	pwP	12 54 58.4	+3.8
CN2				S	S	13 02 36.4	-3.2
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				LR	LR		
	comp=Z,570nm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
S44A	Carbondale	56.02	288	P	P	12 54 50.6	-0.6
SNOW	Snow King Moun	56.03	309	P	P	12 54 51.6	0.0
SNOW				IAmb	IAmb	12 55 00.7	
	comp=Z,101nm,1.6s						
G08A	Pilot Rock	56.03	316	P	P	12 54 51.7	+0.2
G08A				IAmb	IAmb	12 55 00.3	
	comp=Z,80nm,1.5s						
V53A	Saluda	56.10	281	P	P	12 54 51.9	-0.1
V53A				IAmb	IAmb	12 55 01.8	
	comp=Z,106nm,1.5s						
BMO	Blue Mountains	56.12	315	P	P	12 54 51.1	-1.0
BMO				pmax	pmax		
	comp=Z,64nm,1.6s						
BMO	Blue Mountains	56.12	315	P	P	12 54 51.1	-1.0
BMO				IAmb	IAmb	12 54 59.8	
	comp=Z,64nm,1.6s						
MDJ	Mudanjiang	56.12	46	P	P	12 54 52.4	+0.5
MDJ				pmax	pmax		
	comp=Z,410nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.3s						
REDW	Red Top Meadow	56.15	309	P	P	12 54 52.4	0.0
REDW				IAmb	IAmb	12 55 01.1	
	comp=Z,104nm,1.6s						
U49A	Red Boiling Sp	56.16	284	P	P	12 54 52.1	-0.2
U49A				IAmb	IAmb	12 55 08.3	
	comp=Z,92nm,1.7s						
V52A	Sevierville	56.17	282	P	P	12 54 51.9	-0.5
V52A				IAmb	IAmb	12 55 02.8	
	comp=Z,54nm,1.4s						
KMSC	Kings Mountain	56.18	280	P	P	12 54 52.5	0.0
	baz=20						
KMSC	Kings Mountain	56.18	280	P	P	12 54 52.7	+0.3
KMSC				IAmb	IAmb	12 55 00.2	
	comp=Z,128nm,1.8s						
CCM	Cathedral Cave	56.22	290	P	P	12 54 50.9	-1.8
CCM				pmax	pmax		
	comp=Z,42nm,1.1s						
CCM	Cathedral Cave	56.22	290	P	P	12 54 51.2	-1.6
	baz=20						

CCM	Cathedral Cave	56.22	290	P	P	12 54 50.9	-1.8
CCM				IAmb	IAmb	12 54 59.2	
	comp=Z,42nm,1.1s						
R40A	Maddies Statio	56.28	291	P	P	12 54 51.4	-1.8
R40A				IAmb	IAmb	12 54 55.4	
	comp=Z,69nm,1.4s						
OGNE	Ogallala	56.33	300	P	P	12 54 53.5	-0.1
	baz=19						
OGNE	Ogallala	56.33	300	P	P	12 54 53.3	-0.3
YSS	Yuzh-Sakhalins	56.34	35	eP	P	12 54 55.6	+2.2
YSS				eS	S	13 02 46.4	+2.4
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
YSS				MLR	MLR		
	comp=N,400nm,19.0s						
YSS	Yuzh-Sakhalins	56.34	35	P	P	12 54 54.5	+1.0
YSS				IAmb	IAmb	12 55 02.7	
	comp=Z,81nm,1.2s						
TKL	Tuckaleechee C	56.39	282	P	P	12 54 53.8	-0.2
TKL				pmax	pmax		
	comp=Z,171nm,1.7s						
TKL	Tuckaleechee C	56.39	282	P	P	12 54 53.8	-0.2
BIRD	Birdtown, Kers	56.39	279	P	P	12 54 53.3	-0.7
BIRD				IAmb	IAmb	12 55 03.1	
	comp=Z,104nm,1.6s						
V51A	Loudon	56.42	283	P	P	12 54 53.2	-0.9
V51A				IAmb	IAmb	12 55 02.0	
	comp=Z,64nm,1.3s						
BW06	Boulder Array	56.42	308	P	P	12 54 53.8	-0.6
	baz=18,SNR=36						
BW06	Boulder Array	56.42	308	P	P	12 54 53.7	-0.7
BW06				IAmb	IAmb	12 55 02.8	
	comp=Z,68nm,1.3s						
PD31	Pinedale Array	56.42	308	P	P	12 54 53.4	-1.0
PD31				IAmb	IAmb	12 55 02.9	
	comp=Z,56nm,1.2s						
PDAR	Pinedale Array	56.42	308	P	P	12 54 53.5	-1.0
	comp=Z,10nm,0.9s,baz=35,slow=5.4,SNR=39						
PDAR				LR	LR	13 19 04.0	
	comp=Z,2µm,19.1s,baz=22,slow=36						
HOQ	Hoqain	56.67	122	P	P	12 54 56.7	+0.6
KSU1	Kansas State U	56.68	295	P	P	12 54 55.1	-0.9
	baz=20,SNR=7.3						
KSU1	Kansas State U	56.68	295	P	P	12 54 54.4	-1.6
KSU1				IAmb	IAmb	12 55 03.0	
	comp=Z,74nm,1.1s						
CLTN	Cedars of Leba	56.70	285	P	P	12 54 54.8	-1.4
ARQ	Araqi	56.72	123	P	P	12 54 57.7	+1.2
ARQ				P	P	12 54 57.7	+1.2
HLID	Hailey	56.74	312	P	P	12 54 55.9	-0.7
	baz=17,SNR=25						
HLID	Hailey	56.74	312	P	P	12 54 56.3	-0.3
HLID				IAmb	IAmb	12 55 04.7	
	comp=Z,55nm,1.4s						
AHID	Auburn Hatcher	56.77	309	P	P	12 54 56.0	-0.9
BG3	Lake Jocassee	56.77	281	P	P	12 54 56.0	-0.7
BG3				IAmb	IAmb	12 55 06.5	
	comp=Z,76nm,1.7s						
CPCT	Cooper Cave	56.80	283	P	P	12 54 56.9	0.0
CPCT				IAmb	IAmb	12 55 13.4	
	comp=Z,58nm,1.4s						
PHWY	Pilot Hill	56.84	304	P	P	12 54 57.1	-0.4
PHWY				IAmb	IAmb	12 55 05.8	
	comp=Z,47nm,1.2s						
BIDO	Bidbid	56.93	121	P	P	12 54 59.4	+1.5
G03D	McMinnville, O	56.95	320	P	P	12 54 58.2	+0.4
	baz=15						
JSC	Jenkinsville	56.96	279	P	P	12 54 57.6	-0.4
JSC				pmax	pmax		
	comp=Z,58nm,1.9s						
JSC	Jenkinsville	56.96	279	P	P	12 54 57.6	-0.4
W52A	Murphy	56.96	282	P	P	12 54 57.7	-0.4
W52A				IAmb	IAmb	12 55 14.6	
	comp=Z,81nm,1.6s						
USRK	Ussuriysk Ar.	57.01	44	P	P	12 54 57.6	-0.7
	comp=Z,3.7nm,0.8s,baz=335,slow=6.0,SNR=7.7						
USRK				PcP	PcP	12 55 53.8	+0.6
	comp=Z,7.2nm,1.0s,baz=0.0,slow=2.9,SNR=3.3						
USRK				LR	LR	13 21 28.7	
	comp=Z,1µm,18.3s,baz=332,slow=38						
WVT	Waverly	57.09	286	P	P	12 54 57.3	-1.6
WVT				pmax	pmax		
	comp=Z,66nm,1.6s						
WVT	Waverly	57.09	286	P	P	12 54 57.4	-1.5
	baz=20						
WVT	Waverly	57.09	286	P	P	12 54 57.3	-1.6
WVT				IAmb	IAmb	12 55 05.5	
	comp=Z,66nm,1.6s						
TEY	Ternei	57.11	40⇑	eP	P	12 54 59.4	+0.5
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
T42A	Van Buren	57.14	289	P	P	12 54 57.7	-1.6
T42A				IAmb	IAmb	12 55 08.7	
	comp=Z,47nm,1.0s						
V48A	Smith Brothers	57.17	285	P	P	12 54 57.9	-1.6
MFID	Camas Ranch	57.19	313	P	P	12 54 59.1	-0.6
PBMO	Poplar Bluff	57.20	289	P	P	12 54 58.3	-1.4
PBMO				IAmb	IAmb	12 55 06.6	
	comp=Z,56nm,1.1s						
W50A	Signal Mountai	57.25	283	P	P	12 54 59.4	-0.7
W50A				IAmb	IAmb	12 55 10.0	
	comp=Z,70nm,1.4s						
HODGE	Hodges	57.29	280	P	P	12 54 59.9	-0.5
I07A	Izee	57.30	316	P	P	12 54 59.3	-1.3
I07A				IAmb	IAmb	12 55 09.7	
	comp=Z,54nm,1.2s						
N23A	Red Feather La	57.34	304	P	P	12 55 00.9	-0.1
	baz=18,SNR=30						
N23A	Red Feather La	57.34	304	P	P	12 55 00.6	-0.4
MGMO	Mountain Grove	57.35	290	P	P	12 54 59.3	-1.5
SMDO	Samad	57.36	121	P	P	12 55 02.4	+1.3
SMDO				P	P	12 55 02.4	+1.3
BJI	Beijing	57.38	59	P	P	12 55 03.0	+2.1
BJI				PcP	PcP	12 55 56.3	+1.5
BJI				S	S	13 02 52.3	-5.6
BJI				pmax	pmax		
	comp=Z,19nm,1.2s						
BJI				LR	LR		
	comp=Z,560nm,13.9s						
BJI				LR	LR		
	comp=Z,2µm,17.8s						
SWET	Sewanee	57.41	284	P	P	12 55 00.1	-1.2
SWET				IAmb	IAmb	12 55 09.7	
	comp=Z,74nm,1.5s						
I05D	Terrebonne, OR	57.42	318	P	P	12 55 00.6	-0.7
	baz=16						
BSY	Bisya	57.45	122	P	P	12 55 02.2	+0.6
	SNR=5.7						
BSY				P	P	12 55 02.2	+0.6
	SNR=5.7						
SNY	Shenyang	57.46	52	⇓P	P	12 55 07.8	+6.4
SNY				S	S	13 03 07.6	+8.7
SNY				pmax	pmax		
	comp=Z,20nm,1.4s						
SNY				pmax	pmax		
	comp=Z,220nm,5.9s						
SNY				LR	LR		
	comp=N,1µm,15.6s						
SNY				LR	LR		
	comp=E,320nm,10.3s						
SNY				LR	LR		
	comp=Z,2µm,15.7s						
LNXT	Lenox	57.58	287	P	P	12 55 01.1	-1.3
X51A	Calhoun	57.72	283	P	P	12 55 02.7	-0.7
X51A				IAmb	IAmb	12 55 10.9	
	comp=Z,64nm,1.2s						
CBKS	Cedar Bluff	57.76	298	P	P	12 55 03.3	-0.4
CBKS				pmax	pmax		
	comp=Z,95nm,1.1s						
CBKS	Cedar Bluff	57.76	298	P	P	12 55 03.3	-0.4
	baz=19,SNR=12						
CBKS	Cedar Bluff	57.76	298	P	P	12 55 03.3	-0.4
LZH	Lanzhou	57.86	72	eP	P	12 55 06.4	+1.8
LZH				sP	pwP	12 55 11.3	+3.2
LZH				PP	PP	12 57 11.4	-0.9
LZH				S	S	13 03 05.9	+1.2
LZH				sS	sS	13 03 11.8	+7.2
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,6.5s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
LZH				LR	LR		
	comp=Z,2µm,17.2s						
R32A	Long Quarter,	57.87	297	P	P	12 55 02.8	-1.6
PINE	Pine Mountain	57.87	317	P	P	12 55 04.3	-0.2
PINE				IAmb	IAmb	12 55 14.2	
	comp=Z,73nm,1.8s						
FPAL	Fort Paine	57.95	283	P	P	12 55 03.9	-1.2
FPAL				IAmb	IAmb	12 55 12.0	
	comp=Z,61nm,1.3s						
HWUT	Hardware Ranch	57.98	309	P	P	12 55 04.7	-0.7
JMDO	Jabal Madar	58.03	121	P	P	12 55 07.1	+1.4
JMDO				P	P	12 55 07.1	+1.4
LCAR	Lake Charles	58.06	289	P	P	12 55 04.7	-1.1
HVU	Hansel Valley	58.08	310	P	P	12 55 05.4	-0.7
HVU				pmax	pmax		
	comp=Z,37nm,1.5s						
HVU	Hansel Valley	58.08	310	P	P	12 55 05.4	-0.7
Y52A	Lilburn	58.15	282	P	P	12 55 05.7	-0.7
Y52A				IAmb	IAmb	12 55 16.0	
	comp=Z,83nm,1.4s						
I04A	Tendick Farm,	58.15	319	P	P	12 55 06.4	0.0
	baz=15						
PLAL	Pickwick Lake	58.23	286	P	P	12 55 05.3	-1.6
PLAL				IAmb	IAmb	12 55 22.3	
	comp=Z,93nm,1.9s						
U40A	Yellville	58.26	291	P	P	12 55 05.9	-1.2
	baz=20,SNR=22						
U40A	Yellville	58.26	291	P	P	12 55 05.5	-1.6
U40A				IAmb	IAmb	12 55 17.2	
	comp=Z,74nm,1.2s						
ISCO	Idaho Springs	58.30	303	P	P	12 55 07.2	-0.6
ISCO				pmax	pmax		
	comp=Z,41nm,1.2s						
ISCO	Idaho Springs	58.30	303	P	P	12 55 07.8	0.0
	baz=18,SNR=24						
ISCO	Idaho Springs	58.30	303	P	P	12 55 07.2	-0.6
ISCO				IAmb	IAmb	12 55 17.0	
	comp=Z,41nm,1.2s						
KSCO	Kaye Shedlock’	58.31	300	P	P	12 55 07.3	-0.3
	baz=19						
KSCO	Kaye Shedlock’	58.31	300	P	P	12 55 06.5	-1.2
W45A	Hickory Valley	58.38	287	P	P	12 55 07.3	-0.7
GOGA	Godfrey	58.41	281	P	P	12 55 07.0	-1.2
GOGA				pmax	pmax		
	comp=Z,60nm,1.4s						
GOGA	Godfrey	58.41	281	P	P	12 55 07.6	-0.6
	baz=20						
GOGA	Godfrey	58.41	281	P	P	12 55 07.0	-1.2
GOGA				IAmb	IAmb	12 55 17.5	
	comp=Z,60nm,1.4s						
TCUT	Toone Canyon	58.41	309	P	P	12 55 08.6	+0.1
J05D	Fort Rock, OR	58.41	317	P	P	12 55 09.0	+0.7
	baz=16						
X48A	Hartselle	58.44	285	P	P	12 55 07.3	-1.2
X48A				IAmb	IAmb	12 55 16.5	
	comp=Z,57nm,1.5s						
SPUT	South Promonto	58.46	309	P	P	12 55 08.8	+0.1
FCAR	Ozark Folk Cen	58.50	290	P	P	12 55 08.2	-0.6
FCAR				IAmb	IAmb	12 55 18.4	
	comp=Z,40nm,1.0s						
U38A	Gravette	58.59	292	P	P	12 55 07.6	-1.9
U38A				IAmb	IAmb	12 55 18.3	
	comp=Z,40nm,1.1s						
O20A	White River Ci	58.61	305	P	P	12 55 10.2	+0.3
	baz=18,SNR=47						
O20A	White River Ci	58.61	305	P	P	12 55 09.3	-0.5
HHAR	Hobbs	58.62	292	P	P	12 55 08.6	-1.1
J04D	Umpqua Nationa	58.63	318	P	P	12 55 10.7	+0.8
	baz=15,SNR=6.2						
TIY	Taiyuan	58.63	63	eP	P	12 55 12.3	+2.5
TIY				pmax	pmax		
	comp=Z,22nm,0.5s						
TIY				LR	LR		
	comp=Z,340nm,9.9s						
TIY				LR	LR		
	comp=Z,1µm,15.9s						
TIY				LR	LR		
	comp=Z,1µm,23.3s						
T35A	Sooner Cattle	58.71	294	P	P	12 55 09.1	-1.3
WVOR	Wild Horse Val	58.71	315	P	P	12 55 10.6	+0.2
WVOR				pmax	pmax		
	comp=Z,12nm,1.3s						
WVOR	Wild Horse Val	58.71	315	P	P	12 55 10.6	+0.2
KAN12	Harper NE Stat	58.74	296	P	P	12 55 10.2	-0.4
KAN08	Anthony NE Sta	58.80	295	P	P	12 55 09.6	-1.4
KAN01	Argonia South	58.81	295	P	P	12 55 10.7	-0.4
KAN13	South Haven SW	58.87	295	P	P	12 55 09.7	-1.8
K05A	Summer Lake	58.88	317	P	P	12 55 11.6	-0.1
CTU	Camp Tracy	58.89	309	P	P	12 55 11.1	-0.7
JLU	Jordanelle	58.91	308	P	P	12 55 10.9	-1.0
KAN10	Anthony SW Sta	58.93	296	P	P	12 55 10.6	-1.2
Q24A	Divide	58.98	302	P	P	12 55 12.2	-0.4
	baz=18						
Q24A	Divide	58.98	302	P	P	12 55 11.9	-0.7
Q24A				IAmb	IAmb	12 55 21.1	
	comp=Z,48nm,1.1s						
Z51A	Franklin	58.98	282	P	P	12 55 11.3	-1.0
Z51A				IAmb	IAmb	12 55 19.4	
	comp=Z,88nm,1.6s						
OXF	Oxford	59.04	287	P	P	12 55 11.7	-0.9
OXF				pmax	pmax		
	comp=Z,85nm,1.2s						
OXF	Oxford	59.04	287	P	P	12 55 11.8	-0.9
	baz=20,SNR=7.1						
OXF	Oxford	59.04	287	P	P	12 55 11.7	-0.9
J01E	Myrtle Point	59.05	320	P	P	12 55 15.1	+2.5
	baz=15						
KAN14	Manchester OK	59.05	295	P	P	12 55 11.4	-1.3
KOWA	Kowa	59.08	192	P	P	12 55 12.9	-0.1
WHAR	Wooly Hollow	59.10	290	P	P	12 55 12.2	-0.9
WHAR				IAmb	IAmb	12 55 20.2	
	comp=Z,50nm,1.3s						
K04D	Chiloquin, OR	59.15	318	P	P	12 55 14.7	+1.3
	baz=15						
W41B	Gary Mavity, V	59.20	290	P	P	12 55 12.9	-0.8
	baz=19						
W41B	Gary Mavity, V	59.20	290	P	P	12 55 12.8	-1.0
W41B				IAmb	IAmb	12 55 21.1	
	comp=Z,94nm,1.7s						
SMCO	Snowmass	59.22	304	P	P	12 55 13.5	-0.8
SMCO				IAmb	IAmb	12 55 22.7	
	comp=Z,66nm,1.2s						
MHTO	MHTO	59.33	122	P	P	12 55 15.0	+0.3
	SNR=11						
DANN	Dangsing	59.39	93	eP	P	12 55 16.0	+0.5
	comp=Z,84nm,0.9s						
X43A	Marvell	59.45	288	P	P	12 55 15.9	+0.5
	baz=20						
X43A	Marvell	59.45	288	P	P	12 55 15.2	-0.1
K02D	Willamette Mer	59.45	319	P	P	12 55 16.2	+0.8
	baz=15						
152A	Waverly Hall	59.46	282	P	P	12 55 14.8	-0.7
152A				IAmb	IAmb	12 55 33.7	
	comp=Z,49nm,1.4s						
QUOK	Quay	59.46	294	P	P	12 55 14.4	-1.1
TUL1	Leonard	59.47	293	P	P	12 55 14.4	-1.1
TUL1				IAmb	IAmb	12 55 22.2	
	comp=Z,50nm,1.5s						
CROK	Carrier	59.49	295	P	P	12 55 14.4	-1.3
MPU	Maple Canyon	59.51	308	P	P	12 55 16.3	+0.2
MOD	Modoc Plateau	59.56	316	P	P	12 55 16.5	+0.1
MOD				IAmb	IAmb	12 55 25.3	
	comp=Z,36nm,1.1s						
W39A	Magazine	59.60	291	P	P	12 55 15.5	-1.0
	baz=19,SNR=7.1						
W39A	Magazine	59.60	291	P	P	12 55 15.8	-0.6
DUG	Dugway, Tooele	59.61	309	P	P	12 55 15.8	-0.8
DUG				pmax	pmax		
	comp=Z,41nm,1.4s						
DUG	Dugway, Tooele	59.61	309	P	P	12 55 16.9	+0.3
	baz=17						
DUG	Dugway, Tooele	59.61	309	P	P	12 55 15.8	-0.8
DUG				IAmb	IAmb	12 55 25.3	
	comp=Z,41nm,1.4s						
ELK	Elko	59.61	312	P	P	12 55 15.8	-1.0
ELK				pmax	pmax		
	comp=Z,28nm,1.4s						
ELK	Elko	59.61	312	P	P	12 55 15.8	-1.0
L04D	Klamath Falls	59.65	318	P	P	12 55 17.0	0.0
	baz=15						
NLU	North Lily Min	59.67	309	P	P	12 55 17.4	+0.2
Y45A	Yeager Farm, C	59.69	287	P	P	12 55 16.2	-0.9
OK031	S. Brethren Rd	59.70	294	P	P	12 55 16.4	-0.8
OK030	Cody Creek RV	59.71	294	P	P	12 55 16.2	-1.1
LRAL	Lakeview Retre	59.76	284	P	P	12 55 18.5	+0.9
	baz=20						
LRAL	Lakeview Retre	59.76	284	P	P	12 55 14.7	-2.9
P17A	Butcher Ranch,	59.82	307	P	P	12 55 17.7	-0.5
U32A	Winter Ranch,	59.87	296	P	P	12 55 18.2	-0.2
U32A				IAmb	IAmb	12 55 26.1	
	comp=Z,54nm,1.1s						
L02E	Cave Junction	59.96	319	P	P	12 55 18.7	-0.2
	baz=15						
M04C	Macdoel	59.98	317	P	P	12 55 19.5	+0.3
	baz=15						
X40A	Basin Creek Fa	60.01	290	P	P	12 55 18.4	-0.9
	baz=19,SNR=7.5						
X40A	Basin Creek Fa	60.01	290	P	P	12 55 17.9	-1.4
X40A				IAmb	IAmb	12 55 26.4	
	comp=Z,46nm,1.4s						
OK029	Liberty Lake	60.02	294	P	P	12 55 18.2	-1.1
TMUT	Trail Mountain	60.10	308	P	P	12 55 20.3	0.0
SRU	San Rafael Swe	60.12	307	P	P	12 55 20.0	-0.3
SRU				pmax	pmax		
	comp=Z,29nm,1.2s						
SRU	San Rafael Swe	60.12	307	P	P	12 55 20.0	-0.3
MIAR	Mount Ida	60.16	291	P	P	12 55 19.7	-0.6
MIAR	Mount Ida	60.16	291	P	P	12 55 19.8	-0.6
	baz=19,SNR=19						
MIAR	Mount Ida	60.16	291	P	P	12 55 19.7	-0.6
TOA0	Torodi Ar. Sit	60.16	186	P	P	12 55 20.4	-0.1
TORD	Torodi Ar. Bea	60.16	186	P	P	12 55 20.4	-0.1
	comp=Z,43nm,0.8s,baz=354,slow=6.1,SNR=103						
BCOK	Bluff Creek, N	60.19	295	P	P	12 55 19.7	-0.8
OK025	Westminster Rd	60.19	294	P	P	12 55 19.7	-0.8
OK025				IAmb	IAmb	12 55 27.9	
	comp=Z,62nm,1.1s						
SDCO	Great Sand Dun	60.22	302	P	P	12 55 20.6	-0.5
	baz=18,SNR=15						
SDCO	Great Sand Dun	60.22	302	P	P	12 55 21.5	+0.4
SDCO				IAmb	IAmb	12 55 29.1	
	comp=Z,49nm,1.4s						
DQM	DQM	60.23	123	P	P	12 55 21.6	+0.6
DQM				P	P	12 55 21.6	+0.6
LSA	Lhasa	60.26	86	P	P	12 55 23.8	+2.2
LSA				pmax	pmax		
	comp=Z,82nm,1.6s						
LSA	Lhasa	60.26	86	P	P	12 55 23.2	+1.6
LSA				pmax	pmax		
	comp=Z,23nm,1.1s						
LSA	Lhasa	60.26	86	P	P	12 55 23.2	+1.6
PV22	Blue Mesa, Par	60.26	305	P	P	12 55 21.3	0.0
PV22				IAmb	IAmb	12 55 29.5	
	comp=Z,49nm,1.1s						
PV07	Paradox Valley	60.32	305	P	P	12 55 21.2	-0.5
PV07				IAmb	IAmb	12 55 29.9	
	comp=Z,38nm,1.2s						
KKN	Kakani	60.35	92	eP	P	12 55 22.0	0.0
	comp=Z,133nm,1.2s						
PV15	Paradox Valley	60.37	305	P	P	12 55 22.1	0.0
PV15				IAmb	IAmb	12 55 32.3	
	comp=Z,41nm,1.0s						
PV23	Carpenter Ridg	60.39	306	P	P	12 55 21.6	-0.6
GUN	Gumba	60.41	92	eP	P	12 55 23.3	+0.7
	comp=Z,201nm,1.3s						
PV04	Paradox Valley	60.42	305	P	P	12 55 22.5	+0.2
PV04				IAmb	IAmb	12 55 30.8	
	comp=Z,66nm,1.3s						
W35A	Tecumseh	60.47	294	P	P	12 55 21.5	-1.0
PV12	Saucer Basin,	60.47	305	P	P	12 55 22.3	-0.4
PV12				IAmb	IAmb	12 55 31.3	
	comp=Z,88nm,1.5s						
PV14	Lion Creek, Pa	60.47	306	P	P	12 55 22.6	-0.2
PV14				IAmb	IAmb	12 55 31.2	
	comp=Z,57nm,1.2s						
DMN	Daman	60.47	92	eP	P	12 55 23.3	+0.4
	comp=Z,104nm,1.3s						
PV20	West Nyswonger	60.49	305	P	P	12 55 21.3	-1.5
PV16	Nyswonger Mesa	60.51	305	P	P	12 55 23.0	+0.1
PV11	David Mesa, Pa	60.51	305	P	P	12 55 22.8	-0.1
FNO	Franklin	60.51	294	P	P	12 55 21.8	-1.0
PV19	Morning Glory	60.52	305	P	P	12 55 22.9	-0.1
T25A	Trinidad	60.53	301	P	P	12 55 23.0	-0.1
	baz=18						
T25A	Trinidad	60.53	301	P	P	12 55 22.7	-0.4
T25A				IAmb	IAmb	12 55 30.9	
	comp=Z,47nm,1.6s						
S22A	4UR Ranch, Cre	60.54	303	P	P	12 55 23.3	0.0
	baz=18,SNR=24						
S22A	4UR Ranch, Cre	60.54	303	P	P	12 55 22.8	-0.5
S22A				IAmb	IAmb	12 55 32.0	
	comp=Z,62nm,1.3s						
250A	Grady	60.55	283	P	P	12 55 22.2	-0.8
M02C	Callahan	60.55	318	P	P	12 55 23.2	+0.1
	baz=15,SNR=6.3						
PKIN	Phulchoki	60.59	92	eP	P	12 55 23.2	-0.5
	comp=Z,330nm,2.0s						
PKI	Pulchoki	60.60	92	eP	P	12 55 23.6	-0.2
	comp=Z,221nm,1.8s						
X37A	Clayton	60.60	292	P	P	12 55 22.0	-1.4
X37A				IAmb	IAmb	12 55 30.9	
	comp=Z,63nm,1.3s						
KRMB	Red Mountain	60.63	319	P	P	12 55 23.0	-0.6
KRMB				IAmb	IAmb	12 55 27.0	
	comp=Z,73nm,1.3s						
DOK	Doka	60.69	127	P	P	12 55 23.7	-0.4
	SNR=12						
DOK				P	P	12 55 23.7	-0.4
	SNR=12						
WLAR	White Oak Lake	60.84	290	P	P	12 55 24.3	-0.7
N02D	Trinity Center	60.93	318	P	P	12 55 26.0	+0.4
	baz=15						
MSU	Marysvale	61.07	308	P	P	12 55 27.2	+0.4
MSU	Marysvale	61.07	308	P	P	12 55 27.1	+0.4
Z41A	Richland Creek	61.16	289	P	P	12 55 27.3	+0.2
	baz=19						
Z41A	Richland Creek	61.16	289	P	P	12 55 27.1	0.0
XAN	Xi'an	61.17	68	P	P	12 55 28.3	+1.0
XAN				pP	pwP	12 55 33.3	+2.5
XAN				PP	PP	12 57 41.3	-0.2
XAN				S	S	13 03 48.5	+1.3
XAN				SS	SS	13 07 45.8	-0.5
XAN				pmax	pmax		
	comp=Z,21nm,1.4s						
XAN				pmax	pmax		
	comp=Z,300nm,4.3s						
XAN				LR	LR		
	comp=Z,930nm,21.6s						
XAN				LR	LR		
	comp=Z,2µm,18.6s						
XAN				LR	LR		
	comp=Z,2µm,18.6s						
TIA	Tai'an	61.24	60	P	P	12 55 29.4	+1.7
TIA				S	S	13 03 56.1	+8.1
TIA				pmax	pmax		
	comp=Z,14nm,1.1s						
TIA				LR	LR		
	comp=Z,440nm,17.1s						
TIA				LR	LR		
	comp=Z,1µm,19.2s						
TIA				LR	LR		
	comp=Z,260nm,7.1s						
WDC	Whiskeytown Da	61.28	318	P	P	12 55 26.7	-1.2
WDC				pmax	pmax		
	comp=Z,53nm,1.6s						
WDC	Whiskeytown Da	61.28	318	P	P	12 55 26.7	-1.2
WDC				IAmb	IAmb	12 55 36.5	
	comp=Z,53nm,1.6s						
WHFO	Wadi Hawf	61.28	127	P	P	12 55 29.1	+0.9
	SNR=7.5						
WHFO				P	P	12 55 29.1	+0.9
	SNR=7.5						
143A	Socs Landing,	61.30	288	P	P	12 55 27.8	-0.3
WMOK	Wichita Mounta	61.36	295	P	P	12 55 28.6	0.0
WMOK				pmax	pmax		
	comp=Z,58nm,1.4s						
WMOK	Wichita Mounta	61.36	295	P	P	12 55 28.1	-0.5
	baz=19,SNR=23						
WMOK	Wichita Mounta	61.36	295	P	P	12 55 28.6	0.0
WMOK				IAmb	IAmb	12 55 36.6	
	comp=Z,58nm,1.4s						
O03E	Paynes Creek	61.41	317	P	P	12 55 29.9	+1.0
	baz=15						
PSUT	Pine Spring	61.43	310	P	P	12 55 29.8	+0.6
MVCO	Mesa Verde	61.45	305	P	P	12 55 29.8	+0.3
	baz=17,SNR=31						

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MVCO Mesa Verde      61.45 305   P      P       12 55 29.0  -0.4
TAPN Taplejung       61.47  90  eP      P       12 55 31.3  +1.6
PAHR Pah Rah Range   61.49 315   P      P       12 55 29.3  -0.2
PAHR                             IAmb   IAmb    12 55 46.2
     comp=Z,74nm,1.6s
VBMS Vicksburg       61.51 287   P      P       12 55 30.2  +0.7
     baz=19
VBMS Vicksburg       61.51 287   P      P       12 55 29.5   0.0
MTPU Mount Pierson   61.52 308   P      P       12 55 30.4  +0.4
RAMN Ramite          61.53  91  eP      P       12 55 30.2  +0.2
     comp=Z,91nm,1.2s
BEKR Beckworth       61.53 316   P      P       12 55 29.4  -0.5
BEKR                             IAmb   IAmb    12 55 38.5
     comp=Z,43nm,1.5s
SHAO Shalim          61.61 125   P      P       12 55 29.8  -0.5
SHAO                             P      P       12 55 29.8  -0.5
ABTO Aybut           61.71 128   P      P       12 55 32.2  +1.1
     SNR=11
O02D Mt. Diablo Mer  61.72 318   P      P       12 55 30.6  -0.3
     baz=15
Z38A Mt. Pleasant    61.75 291   P      P       12 55 30.8  -0.4
ODAN Odare           61.84  91  eP      P       12 55 33.1  +1.0
     comp=Z,294nm,1.5s
VCNR Virginia City   61.94 315   P      P       12 55 32.8  +0.2
AMTX Amarillo        61.98 298   P      P       12 55 35.1  +2.3
     baz=18
AMTX Amarillo        61.98 298   P      P       12 55 34.2  +1.4
AMTX                             IAmb   IAmb    12 55 40.9
     comp=Z,60nm,1.7s
R11A Troy Canyon, C  61.99 311   P      P       12 55 32.9   0.0
     baz=16,SNR=14
R11A Troy Canyon, C  61.99 311   P      P       12 55 33.6  +0.7
R11A                             IAmb   IAmb    12 55 41.4
     comp=Z,54nm,1.7s
ORV  Oroville        62.06 317   P      P       12 55 33.2   0.0
ORV                              pmax   pmax
     comp=Z,34nm,1.9s
ORV  Oroville        62.06 317   P      P       12 55 33.2   0.0
PKCU Pink Cliffs     62.12 308   P      P       12 55 34.2  +0.2
PNTR Pine Nut        62.13 315   P      P       12 55 34.1  +0.2
PNTR                             IAmb   IAmb    12 55 44.9
     comp=Z,46nm,1.2s
SZCU Shurtz Canyon   62.15 309   P      P       12 55 33.7  -0.4
CCUT Cedar City      62.26 309   P      P       12 55 34.9  +0.1
RUBR Rubicon Trail   62.27 315   P      P       12 55 34.1  -0.8
344A Westbrook Farm  62.29 287   P      P       12 55 34.0  -0.8
Z35A Perchaven, San  62.29 293   P      P       12 55 34.1  -0.7
Z35A                             IAmb   IAmb    12 55 44.9
     comp=Z,45nm,1.1s
RYN  Ryan            62.35 314   P      P       12 55 34.1  -1.2
BHPL Bhopal          62.39 101  eP      P       12 55 36.8  +1.2
NV11 Mina Array Sit  62.46 313   P      P       12 55 36.3  +0.3
NVAR Mina Array Bea  62.49 313   P      P       12 55 36.5  +0.1
     comp=Z,4.2nm,0.9s,baz=29,slow=4.3,SNR=25
NVAR                             LR     LR      13 23 34.2
     comp=Z,1µm,18.6s,baz=4.5,slow=37
AFDM Forest Hills D  62.54 316   P      P       12 55 36.1  -0.3
AFDM                             IAmb   IAmb    12 55 44.5
     comp=Z,43nm,1.5s
TPH  Tonopah         62.60 312   P      P       12 55 37.3  +0.2
TPH                              pmax   pmax
     comp=Z,154nm,1.6s
TPH  Tonopah         62.60 312   P      P       12 55 37.3  +0.2
KSRS Korea Array     62.62  50   P      P       12 55 36.5  -0.4
     comp=Z,2.8nm,0.7s,baz=349,slow=6.8,SNR=9.1
KSRS                             PP     PP      12 57 57.3  +3.3
     comp=Z,1.7nm,0.9s,baz=353,slow=8.8,SNR=4.3
KSRS                             LR     LR      13 26 09.9
     comp=Z,668nm,18.6s,baz=346,slow=39
KNB  Kanab           62.65 308   P      P       12 55 37.7  +0.3
KNB                              pmax   pmax
     comp=Z,63nm,1.5s
KNB  Kanab           62.65 308   P      P       12 55 37.7  +0.3
WAKR Walker          62.66 314   P      P       12 55 36.7  -0.8
LHV  Little Huntoon  62.70 314   P      P       12 55 37.5   0.0
LHV                              IAmb   IAmb    12 55 48.5
     comp=Z,66nm,2.0s
CD2  Chengdu         62.71  74   P      P       12 55 38.8  +1.1
CD2                              sP     pwP     12 55 45.1  +4.0
CD2                              S      S       13 04 05.9  -0.8
CD2                              sS     sS      13 04 13.4  +6.7
CD2                              pmax   pmax
     comp=Z,60nm,0.6s
CD2                              LR     LR
     comp=Z,2µm,15.9s
CD2                              LR     LR
     comp=Z,3µm,20.4s
CD2                              LR     LR
     comp=Z,2µm,20.8s
LCMT Little Creek M  62.75 309   P      P       12 55 38.2  +0.2
PRN  Pahroc Range    62.77 310   P      P       12 55 37.5  -0.7
PRN                              IAmb   IAmb    12 55 48.4
     comp=Z,77nm,1.7s
342A Flagon Creek P  62.80 288   P      P       12 55 38.7  +0.5
GDXM Geysers         63.04 317   P      P       12 55 40.5  +0.7
GDXM                             IAmb   IAmb    12 55 44.9
     comp=Z,53nm,1.5s
ZIRO ZIRO            63.08  84  eP      P       12 55 42.2  +1.8
ZIRO                             IAmb   IAmb    12 55 51.0
     comp=Z,40nm,0.8s
U15A North Rim       63.09 308   P      P       12 55 40.0  -0.5
U15A                             IAmb   IAmb    12 55 48.5
     comp=Z,46nm,1.5s
ANMO Albuquerque     63.12 302⇑eP      P       12 55 39.9  -0.6
ANMO                             pmax   pmax
     comp=Z,33nm,1.7s
ANMO Albuquerque     63.12 302   P      P       12 55 40.6  +0.1
     baz=17
ANMO Albuquerque     63.12 302   P      P       12 55 39.3  -1.3
ANMO                             IAmb   IAmb    12 55 49.0
     comp=Z,44nm,1.5s
MSTX Muleshoe        63.12 299   P      P       12 55 40.5  +0.1
     baz=18,SNR=9.7
MSTX Muleshoe        63.12 299   P      P       12 55 39.6  -0.9
MSTX                             IAmb   IAmb    12 55 51.1
     comp=Z,30nm,1.0s
CMB  Columbia Colle  63.30 315   P      P       12 55 41.2  -0.3
CMB                              pmax   pmax
     comp=Z,10.0nm,1.2s
CMB  Columbia Colle  63.30 315   P      P       12 55 41.2  -0.3
MLAC Mammoth, Mammo  63.37 314   P      P       12 55 43.5  +1.3
     baz=15
MDPB Devils Postpil  63.42 314   P      P       12 55 42.7  +0.1
OMMB Old Mammoth Mi  63.42 314   P      P       12 55 43.0  +0.3
OMMB                             IAmb   IAmb    12 55 52.3
     comp=Z,42nm,1.5s
TPNV Topopah Spring  63.48 311   P      P       12 55 42.6  -0.3
TPNV                             pmax   pmax
     comp=Z,56nm,1.6s
TPNV Topopah Spring  63.48 311   P      P       12 55 42.4  -0.4
     baz=16,SNR=18
TPNV Topopah Spring  63.48 311   P      P       12 55 42.6  -0.3
TPNV                             IAmb   IAmb    12 55 50.8
     comp=Z,56nm,1.6s
TJN  Taejon          63.52  51⇓eP      P       12 55 45.0  +2.1
ABTX Abilene, Hawle  63.59 295   P      P       12 55 43.6  +0.1
     baz=18,SNR=5.8
ABTX Abilene, Hawle  63.59 295   P      P       12 55 43.0  -0.5
ABTX                             IAmb   IAmb    12 56 01.1
     comp=Z,47nm,1.2s
WHTX Lake Whitney,   63.61 293   P      P       12 55 42.9  -0.7
WHTX                             IAmb   IAmb    12 55 52.2
     comp=Z,100nm,1.9s
TEZP TEZPUR          63.64  85  eP      P       12 55 45.8  +2.0
TEZP                             IAmb   IAmb    12 55 47.7
     comp=Z,88nm,1.4s
SHPR Sheep Range     63.66 310   P      P       12 55 44.8  +0.7
W18A Petrified Fore  63.74 305   P      P       12 55 45.0  +0.3
     baz=17
WUAZ Wupatki         63.75 307   P      P       12 55 44.8  +0.1
     baz=17,SNR=9.8
WUAZ Wupatki         63.75 307   P      P       12 55 44.1  -0.5
WUAZ                             IAmb   IAmb    12 55 53.1
     comp=Z,50nm,1.4s
BNM  Barren Site     63.92 302   P      P       12 55 45.6  -0.2
FURC Furnace Creek,  64.07 312   P      P       12 55 48.5  +1.9
     baz=16
BOK  Bokaro          64.30  93  eP      P       12 55 49.7  +1.5
CWC  Cottonwood Cre  64.36 313   P      P       12 55 49.6  +0.9
     baz=15
SHL  Shillong        64.36  87   P      P       12 55 49.0  +0.2
SHL                              pmax   pmax
     comp=Z,116nm,1.7s
SHL  Shillong        64.36  87  eP      P       12 55 50.1  +1.3
SHL                              IAmb   IAmb    12 55 55.6
     comp=Z,33nm,1.2s
SHL  Shillong        64.36  87   P      P       12 55 49.0  +0.2
SHL  Shillong        64.36  87   P      P       12 55 50.7  +1.9
     SNR=16
MOKO MOKOCHONG       64.41  84⇑eP      P       12 55 51.8  +2.7
MOKO                             IAmb   IAmb    12 55 53.6
     comp=Z,120nm,1.4s
SHOC Shoshone, Teco  64.49 311   P      P       12 55 50.0  +0.7
     baz=16
MPMC Manual Prospec  64.60 312   P      P       12 55 50.8  +0.5
     baz=15,SNR=13
W13A Hualapai Mount  64.72 309   P      P       12 55 50.8  -0.4
435B Jarrell         64.79 293   P      P       12 55 50.6  -0.8
435B                             IAmb   IAmb    12 55 59.3
     comp=Z,78nm,1.6s
X16A Lo Mia Camp, P  64.81 306   P      P       12 55 51.3  -0.4
X16A                             IAmb   IAmb    12 56 00.6
     comp=Z,39nm,1.6s
NGP  Nagpur          64.83 101  eP      P       12 55 53.3  +1.6
NGP                              IAmb   IAmb    12 56 00.6
     comp=Z,27nm,1.1s
KOHI KOHIMA          64.86  85   IAmb   IAmb    12 56 28.2
     comp=Z,30nm,1.1s
ENH  Enshi           64.88  69   P      P       12 55 52.5  +0.6
ENH                              IAmb   IAmb    12 56 12.0
     comp=Z,43nm,1.3s
HKT  Hockley         65.11 291⇓eP      P       12 55 53.3   0.0
HKT                              pmax   pmax
     comp=Z,31nm,1.7s
HKT  Hockley         65.11 291   P      P       12 55 52.7  -0.6
GSC  Goldstone, Bar  65.18 311   P      P       12 55 53.5  -0.4
GSC                              pmax   pmax
     comp=Z,37nm,1.7s
GSC  Goldstone, Bar  65.18 311   P      P       12 55 54.1  +0.2
     baz=16
GSC  Goldstone, Bar  65.18 311   P      P       12 55 53.5  -0.4
ISA  Isabella, Lake  65.19 313   P      P       12 55 53.8  -0.2
ISA                              pmax   pmax
     comp=Z,27nm,1.1s
ISA  Isabella, Lake  65.19 313   P      P       12 55 54.4  +0.4
     baz=15,SNR=13
ISA  Isabella, Lake  65.19 313   P      P       12 55 53.8  -0.2
ISA                              IAmb   IAmb    12 56 02.8
     comp=Z,27nm,1.1s
LRMC Laurel Mtn Rad  65.20 312   P      P       12 55 54.2  +0.1
     baz=15
ATD  Arta Tunnel     65.20 140   P      P       12 55 53.5  -0.7
ATD                              IAmb   IAmb    12 55 58.2
     comp=Z,62nm,1.7s
GDL2 Guadalupe Moun  65.21 299   P      P       12 55 53.6  -0.6
GMRC Granite Mounta  65.42 310   P      P       12 55 56.0  +0.4
     baz=16,SNR=9.3
PAGB Antelope Grade  65.50 314   P      P       12 55 55.8  -0.1
PAGB                             IAmb   IAmb    12 56 06.2
     comp=Z,26nm,1.0s
PDMCI Parker Dam,Lak 65.55 309   P      P       12 55 56.9  +0.7
     baz=16,SNR=7.4
MAJO Matsushiro      65.63  41⇑eP      P       12 55 58.3  +1.6
MAJO                             pmax   pmax
     comp=Z,25nm,1.3s
MAT  Matsushiro      65.63  41   P      P       12 55 57.4  +0.7
MJAR Matsushiro Arr  65.63  41   P      P       12 55 57.4  +0.7
     comp=Z,6.0nm,0.9s,baz=332,slow=6.8,SNR=8.0
MJAR                             LR     LR      13 25 23.8
     comp=Z,619nm,21.8s,baz=355,slow=37
NJ2  Nanjing         65.63  60  eP      P       12 55 56.8   0.0
NJ2                              S      S       13 04 44.0  +1.2
NJ2                              pmax   pmax
     comp=Z,22nm,0.7s
NJ2                              pmax   pmax
     comp=Z,260nm,4.3s
NJ2                              LR     LR
     comp=Z,760nm,15.6s
NJ2                              LR     LR
     comp=Z,850nm,14.0s
NJ2                              LR     LR
     comp=Z,1µm,14.3s
JCT  Junction City   65.67 295   P      P       12 55 56.8  -0.3
JCT                              pmax   pmax
     comp=Z,82nm,1.5s
JCT  Junction City   65.67 295   P      P       12 55 56.8  -0.3
     baz=18
JCT  Junction City   65.67 295   P      P       12 55 56.8  -0.3
121A Cookes Peak, D  65.74 303   P      P       12 55 59.6  +1.9
     baz=17,SNR=8.0
121A Cookes Peak, D  65.74 303   P      P       12 55 58.0  +0.3
121A                             IAmb   IAmb    12 56 08.4
     comp=Z,68nm,1.6s
EDW2 Edwards Air Fo  65.84 312   P      P       12 55 58.9  +0.7
     baz=15
POO  Poona           65.86 107  eP      P       12 55 57.5  -0.9
IRM  Iron Mountain   65.91 309   P      P       12 55 59.1  +0.4
     baz=16
MNTX Cornudas Mount  65.94 300   P      P       12 55 59.1  +0.3
     baz=17,SNR=8.6
MNTX Cornudas Mount  65.94 300   P      P       12 55 59.4  +0.5
PKM  Mcpherson Peak  66.22 314   P      P       12 56 01.6  +0.8
     baz=15
BELC Belle Mtn. Jos  66.25 310   P      P       12 56 01.3  +0.4
     baz=16
BFSC Mount Baldy Ra  66.39 312   P      P       12 56 02.2  +0.4
     baz=15
BC3  Big Chuckawall  66.46 310   P      P       12 56 03.4  +1.2
     baz=16
MWC  Mount Wilson    66.49 312   P      P       12 56 02.7  +0.2
MWC                              pmax   pmax
     comp=Z,30nm,1.2s
MWC  Mount Wilson    66.49 312   P      P       12 56 02.7  +0.2
MWC                              IAmb   IAmb    12 56 11.4
     comp=Z,30nm,1.2s
TUC  Tucson          66.68 305   P      P       12 56 03.4  -0.2
TUC                              pmax   pmax
     comp=Z,82nm,1.7s
TUC  Tucson          66.68 305   P      P       12 56 04.3  +0.7
     baz=16
TUC  Tucson          66.68 305   P      P       12 56 03.4  -0.2
TUC                              IAmb   IAmb    12 56 14.7
     comp=Z,82nm,1.7s
PFO  Pinyon Flats O  66.73 310⇓eP      P       12 56 04.7  +0.7
PFO                              pmax   pmax
     comp=Z,35nm,3.8s
PFO  Pinyon Flats O  66.73 310   P      P       12 56 04.9  +0.9
     baz=15
PFO  Pinyon Flats O  66.73 310   P      P       12 56 03.9   0.0
TPFO Pinon Flats     66.73 310   P      P       12 56 04.6  +0.6
     baz=15
SOCY Socotra         66.86 129   P      P       12 56 02.4  -2.5
DBIC Dimbokro        66.89 192   P      P       12 56 04.0  -0.9
     comp=Z,19nm,1.2s,baz=340,slow=5.9,SNR=6.7
DBIC                             LR     LR      13 28 53.9
     comp=Z,238nm,18.2s,baz=351,slow=39
DBIC Dimbokro        66.89 192   P      P       12 56 05.1  +0.1
DBIC                             pmax   pmax
     comp=Z,79nm,1.6s
DBIC Dimbokro        66.89 192   P      P       12 56 05.1  +0.1
DBIC                             IAmb   IAmb    12 56 07.0
     comp=Z,78nm,1.6s
GLA  Glamis          66.90 309   P      P       12 56 04.6  -0.4
GLA                              pmax   pmax
     comp=Z,59nm,1.6s
GLA  Glamis          66.90 309   P      P       12 56 04.6  -0.4
GLA                              IAmb   IAmb    12 56 14.3
     comp=Z,59nm,1.6s
TIC  Toumodi         66.92 193  eP      P       12 56 04.8  -0.4
SSE  Sheshan         67.12  58   P      P       12 56 13.4  +7.1
SSE                              S      S       13 05 09.1  +8.2
SSE                              pmax   pmax
     comp=Z,25nm,0.7s
SSE                              pmax   pmax
     comp=Z,110nm,3.9s
SSE                              LR     LR
     comp=N,290nm,17.3s
SSE                              LR     LR
     comp=E,730nm,17.5s
KIC  Kosan Boka      67.19 192  eP      P       12 56 06.7  -0.2
     comp=E,239nm,1.7s
319A Douglas         67.21 303   P      P       12 56 07.7  +0.6
319A                             IAmb   IAmb    12 56 37.4
     comp=Z,90nm,1.9s
SWSC Sam W. Stewart  67.22 310   P      P       12 56 07.6  +0.6
     baz=15
LIC  Lamto           67.34 193  eP      P       12 56 06.1  -1.7
     comp=Z,200nm,1.9s
MONP2 Monument Peak  67.41 310   P      P       12 56 08.9  +0.4
     baz=15
IKP  In-Ko-Pah, Jac  67.58 310   P      P       12 56 10.0  +0.7
     baz=15
SAIH SAIHA           67.59  87  eP      P       12 56 10.4  +0.9
SAIH                             IAmb   IAmb    12 56 12.3
     comp=Z,53nm,1.1s
833A Chaparral WMA,  67.61 294   P      P       12 56 09.5   0.0
     baz=18
833A Chaparral WMA,  67.61 294   P      P       12 56 08.9  -0.5
CBYP Canovanas       67.61 259   P      P       12 56 09.4  -0.2
CBYP                             IAmb   IAmb    12 56 12.1
     comp=Z,66nm,1.5s
RMX  La Rumorosa     67.61 310   P      P       12 56 08.6  -1.0
RMX                              IAmb   IAmb    12 56 19.3
     comp=Z,49nm,1.6s
GCPR Guaynabo City   67.64 259   P      P       12 56 09.9  +0.2
MTP  Monte Pirata    67.69 258   P      P       12 56 09.8  -0.2
GYA  Guiyang         67.72  73 ⇓P      P       12 56 11.9  +1.6
GYA                              S      S       13 05 11.3  +2.8
GYA                              SS     SS      13 09 34.3  +5.6
GYA                              pmax   pmax
     comp=Z,26nm,0.9s
GYA                              pmax   pmax
     comp=Z,420nm,3.9s
GYA                              LR     LR
     comp=Z,800nm,19.9s
GYA                              LR     LR
     comp=Z,630nm,17.9s
GYA                              LR     LR
     comp=Z,1µm,24.1s
HUMP Col San Antoni  67.73 259   P      P       12 56 10.3   0.0
HUMP                             IAmb   IAmb    12 56 23.0
     comp=Z,28nm,1.1s
TX31 Lajitas Ar. Si  67.76 298   P      P       12 56 09.3  -1.2
TX32 Lajitas Array   67.76 298   P      P       12 56 09.0  -1.6
TXAR Lajitas Array   67.76 298   P      P       12 56 09.6  -0.9
     comp=Z,2.9nm,0.8s,baz=45,slow=4.4,SNR=20
TXAR                             LR     LR      13 25 47.9
     comp=Z,3µm,19.3s,baz=0.0,slow=36
KMI  Kunming         67.89  77 i P      P       12 56 12.1  +0.6
KMI                              pP     pwP     12 56 15.1  +0.1
KMI                              sP     sP      12 56 21.5   +10
KMI                              S      S       13 05 11.4  +0.7
KMI                              sS     sS      13 05 22.9   +12
KMI                              pmax   pmax
     comp=Z,17nm,1.1s
KMI                              pmax   pmax
     comp=Z,180nm,3.8s
KMI                              LR     LR
     comp=Z,930nm,20.5s
KMI                              LR     LR
     comp=Z,600nm,22.6s
KMI                              LR     LR
     comp=Z,1µm,22.6s
DR12 Loma Pena Alta  68.13 262   P      P       12 56 12.1  -0.7
HYB  Hyderabad       68.23 102 i P      P       12 56 13.0  -0.5
HYB  Hyderabad       68.23 102⇑eP      P       12 56 13.5   0.0
HYB                              IAmb   IAmb    12 56 24.2
     comp=Z,17nm,0.9s
SDDR Presa de Saban  68.49 264   P      P       12 56 14.4  -0.7
SDDR Presa de Saban  68.49 264  eP      P       12 56 16.1  +0.9
HSIG                 69.87 304   P      P       12 56 24.4  +0.9
HSIG                             IAmb   IAmb    12 56 32.3
     comp=Z,103nm,2.0s
HPIG                 70.56 299   P      P       12 56 27.1  -1.0
SLVN Son La          71.81  77   P      P       12 56 35.7  +0.2
LODK Lodwar          71.91 150   P      P       12 56 38.0  +1.9
     SNR=15
CHTO Chiang Mai      72.78  82   P      P       12 56 41.9  +0.6
CHTO                             pmax   pmax
     comp=Z,38nm,1.3s
CHTO Chiang Mai      72.78  82   P      P       12 56 41.9  +0.6
CMAR Chiang Mai Arr  73.12  82   P      P       12 56 44.0  +0.7
     comp=Z,11nm,1.0s,baz=324,slow=6.6,SNR=48
CMAR                             LR     LR      13 33 38.8
     comp=Z,343nm,21.8s,baz=10,slow=40
CMAR Chiang Mai Arr  73.12  82 i P      P       12 56 45.0  +1.7
CMAR                             pmax   pmax
     comp=Z,11nm,1.0s
ZAIG Zacatecas       73.73 295   P      P       12 56 47.4  +0.2
SSLB Suanglung       74.05  60   P      P       12 56 49.8  +1.1
MBAR Mbarara         75.25 155ceP      P       12 56 58.2  +2.4
MBAR                             pmax   pmax
     comp=Z,43nm,1.7s
MBAR Mbarara         75.25 155   P      P       12 56 56.9  +1.0
QIZ  Qiongzhong      75.66  72   P      P       12 56 57.8  -0.2
QIZ                              S      S       13 06 39.8   0.0
QIZ                              LR     LR
     comp=Z,850nm,11.8s
QIZ                              LR     LR
     comp=Z,1µm,13.6s
QIZ                              LR     LR
     comp=Z,990nm,15.1s
CRJC Cerrejon, Guaj  76.51 263  eP      P       12 57 03.7  +0.7
KMBO Kilima Mbogo    76.66 148   P      P       12 57 05.1  +1.2
     comp=Z,2.0nm,0.3s,baz=349,slow=10,SNR=7.7
KMBO                             LR     LR      13 34 35.8
     comp=Z,179nm,18.4s,baz=314,slow=39
TLIG Tlapa           77.62 290   P      P       12 57 09.5  +0.2
SDV  Santo Domingo   77.89 260   P      P       12 57 11.2  +0.2
SDV                              IAmb   IAmb    12 57 13.8
     comp=Z,94nm,1.6s
SDV  Santo Domingo   77.89 260  eP      P       12 57 10.8  -0.1
SDV  Santo Domingo   77.89 260  eP      P       12 57 11.7  +0.8
ARGC Ariguani, Magd  78.01 264  eP      P       12 57 12.3  +1.0
SJCC San Jacinto, C  78.24 265  eP      P       12 57 14.2  +1.5
SMLC San Martn de    78.96 264  eP      P       12 57 16.0  -0.5
ACON Acoyapa         79.16 275   P      P       12 57 17.1  -0.6
PAMC Pamplona, Colo  79.95 262  eP      P       12 57 21.5  -1.1
UREC San Jos de Ur   80.38 265  eP      P       12 57 23.8  -0.5
ZARC Zaragoza, Cauc  80.43 264  eP      P       12 57 22.2  -2.3
BRRC Barranca, Sant  80.47 263  eP      P       12 57 24.9  +0.1
PTBC PUERTO BERRIO,  81.22 263  eP      P       12 57 29.2  +0.4
DBBC Dabeiba         81.27 265  eP      P       12 57 30.0  +0.8
RUSC La Rusia        81.44 262  eP      P       12 57 30.5   0.0
PTAC Punta Ardita,   81.61 267  eP      P       12 57 31.3  +0.4
MCPB Macapa, AP      81.70 240  eP      P       12 57 33.1  +1.8
HELC Santa Helena    81.86 264  eP      P       12 57 32.9  +0.3
SPBC San Pablo de B  81.95 263  eP      P       12 57 33.4  +0.7
ROSB Rosrio          82.25 231  eP      P       12 57 35.2  +1.1
NORC Norcasia        82.27 264  eP      P       12 57 34.4   0.0
CBOC Ciudad Bolivar  82.31 265  eP      P       12 57 35.3  +0.6
TMAB Tom-Au,PA,Br    82.66 235  eP      P       12 57 38.8  +2.5
PTGC Puerto Gaitan,  82.78 260  eP      P       12 57 38.1  +1.1
ROSC El Rosal        82.80 263   P      P       12 57 38.8  +1.2
     comp=Z,24nm,0.6s,baz=65,slow=4.1,SNR=13
ROSC                             LR     LR      13 30 42.9
     comp=Z,378nm,21.3s,baz=344,slow=33
ROSC El Rosal        82.80 263   P      P       12 57 37.7  +0.2
ROSC                             pmax   pmax
     comp=Z,71nm,1.2s
ROSC El Rosal        82.80 263   P      P       12 57 37.7  +0.2
ROSC El Rosal        82.80 263  eP      P       12 57 37.9  +0.3
CHIC Chingaza        82.83 262  eP      P       12 57 37.1  -0.6
RREF El Recreo       83.03 264  eP      P       12 57 40.1  +1.0
PLMC San Jos del P   83.30 265  eP      P       12 57 39.7  -0.1
TOLC Tolima          83.33 264  eP      P       12 57 41.1  +0.9
RCBR Riachuelo       83.35 223  eP      P       12 57 43.2  +3.3
ANIL Santa Ana       83.44 264  eP      P       12 57 42.1  +1.3
PIZC Pizarro, Choco  83.56 266  eP      P       12 57 42.6  +1.6
MALB Monte Alegre    83.69 242  eP      P       12 57 43.4  +1.8
ORTC Ortega, Tolima  83.95 263  eP      P       12 57 42.7  -0.3
PTGA Pitinga         84.10 247   P      P       12 57 43.7  -0.1
YOTC Yotoco, Valle   84.19 264  eP      P       12 57 41.7  -2.7
MALC Bahia Malaga    84.45 265  eP      P       12 57 49.6  +4.0
MARP Paez Belalcaza  85.17 264  eP      P       12 57 49.7  +0.2
BETC Betania         85.17 263  eP      P       12 57 49.8  +0.6
MACC Macarena, Meta  85.23 262  eP      P       12 57 47.8  -1.7
GARC Garzon, Huila   85.66 263  eP      P       12 57 52.3  +0.4
PCON Cinco Dias      85.78 264  eP      P       12 57 52.3  -0.6
ITTB Itaituba        86.48 242  eP      P       12 57 56.6  +1.0
PRPB Parauapebas     86.74 236  eP      P       12 57 58.6  +1.7
TUMC Tumaco          86.94 266  eP      P       12 58 00.5  +2.7
GCUF Volcan Galeras  87.11 265  eP      P       12 58 00.4  +1.1
PSI  Prapat          87.99  87   LR     LR      13 42 38.3
     comp=Z,613nm,21.9s,baz=271,slow=39
OTAV Otavalo         88.37 265   P      P       12 58 06.6  +1.3
OTAV                             pmax   pmax
     comp=Z,88nm,1.3s
OTAV Otavalo         88.37 265   P      P       12 58 06.6  +1.3
OTAV Otavalo         88.37 265  eP      P       12 58 04.3  -1.0
OTAV Otavalo         88.37 265  eP      P       12 58 06.7  +1.3
SMTB Santa Maria do  88.81 233  eP      P       12 58 08.6  +1.9
NPGB Novo Progresso  88.95 241  eP      P       12 58 08.6  +1.2
GSI  Gunungsitoli    89.02  89   P      P       12 58 08.5  +0.7
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GSI				IAmb	IAmb	12 58 17.0	
	comp=Z,46nm,1.3s						
MYLDM	Lahad Datu	91.23	68	P	P	12 58 18.2	0.0
DAV	Davao City (W)	91.26	60	LR	LR	13 44 28.5	
	comp=Z,276nm,20.8s,baz=350,slow=39						
SDBA	SAO DESIDERIO	91.63	230	eP	P	12 58 21.7	+1.8
JANB	Januaria	94.06	229	eP	P	12 58 32.9	+1.7
BDFB	Brasilia	95.45	232	P	P	12 58 38.7	+1.1
	comp=Z,11nm,1.0s,baz=12,slow=9.3,SNR=8.0						
BDFB				LR	LR	13 35 08.1	
	comp=Z,432nm,19.6s,baz=343,slow=31						
BDFB	Brasilia	95.45	232	P	P	12 58 38.7	+1.1
BDFB				IAmb	IAmb	12 58 40.5	
	comp=Z,26nm,1.3s						
MPSI	Mapaga	96.24	68	P	P	12 58 49.8	+8.6
ARAG	Araguaiana, MT	96.41	236	eP	P	12 58 44.0	+2.3
IPMB	Ipameri, GO	97.76	232	eP	Pdif	12 58 49.1	+1.1
PTLB	Pontes e Lacer	97.98	243	eP	Pdif	12 58 51.4	+2.5
LEM	Lembang	99.65	81	LR	LR	13 51 33.1	
	comp=Z,451nm,20.0s,baz=316,slow=40						
WRA	Warramunga Arr	119.41	59	PKP	PKiKP	13 04 00.9	-1.3
	comp=Z,3.1nm,0.9s,baz=333,slow=2.5,SNR=15						
WRA				PKKPab	PKKPab	13 14 15.0	-0.9
	comp=Z,3.4nm,1.1s,baz=170,slow=3.2,SNR=11						
PPT2	Papeete2	122.72	333	eSS	SS	13 22 18.8	-10
	comp=Z,579nm,32.8s						
PPT2	Papeete2	122.72	333	eLR	LR	13 41 43.9	
	comp=Z,730nm,21.8s						
AS31	Alice Springs	122.87	60	PKPdf	PKiKP	13 04 07.5	-1.4
ASAR	Alice Springs	122.87	60	PKP	PKiKP	13 04 07.5	-1.3
	comp=Z,7.5nm,0.8s,baz=354,slow=1.8,SNR=52						
ASAR				PKKPab	PKKPab	13 14 02.1	+1.2
	comp=Z,2.0nm,1.0s,baz=149,slow=3.6,SNR=8.3						
LC01	Cunco	123.62	247	PKPdf	PKiKP	13 04 09.8	0.0
PLCA	Paso Flores	124.99	245	PKP	PKiKP	13 04 12.3	-0.3
	comp=Z,6.6nm,1.0s,baz=347,slow=3.7,SNR=9.0						
PLCA	Paso Flores	124.99	245	PKPdf	PKiKP	13 04 13.6	+1.0
PLCA	Paso Flores	124.99	245	eP	PKiKP	13 04 15.0	+2.4
RKT	Rikitea	125.66	315	eSS	SS	13 22 57.0	-8.7
	comp=Z,384nm,38.2s						
RKT	Rikitea	125.66	315	eLR	LR	13 43 07.6	
	comp=Z,358nm,37.2s						
LL01	San Ignacio de	127.02	246		PKiKP	13 04 16.6	+0.2
DZM	Mont Dzumac	127.58	24	eLR	LR	13 43 53.7	
	comp=Z,434nm,24.2s						
TBI	Tubuai	128.38	332	eSS	SS	13 23 31.7	-7.7
	comp=Z,348nm,35.5s						
TBI	Tubuai	128.38	332	eLR	LR	13 44 21.5	
	comp=Z,690nm,24.8s						
SYO	Syowa Base	143.62	161	⇓ePdiff	Pdif	13 02 13.4	+2.9
NVL	N'lazarevskaya	143.84	177	ePKIKP	PKiKP	13 04 50.8	+1.1
NVL				pmax	pmax		
	comp=Z,12nm,1.0s						
VNA1	Neumayer--Stat	144.00	188	P	PKPbc	13 04 43.6	-0.9
	baz=73,slow=6.4						
VNA2	Neumayer--Watz	144.24	188	P	PKPbc	13 04 44.8	-0.5
	baz=73,slow=6.4						
URZ	Urewera	144.60	13	PKP	PKPab	13 04 46.0	-1.2
	comp=Z,8.1nm,0.8s,baz=235,slow=2.4,SNR=2.8						
VNA3	Neumayer Olymp	144.65	189	P	PKPdf	13 04 46.2	-1.5
	baz=73,slow=6.4						
SNAA	Sanae	144.83	185	P	PKPab	13 04 45.8	-1.4
	baz=73,slow=6.4						
SNAA	Sanae	144.83	185	PKP	PKPab	13 04 45.5	-1.6
	comp=Z,31nm,0.9s,baz=30,slow=1.6,SNR=30						
SNAA	Sanae	144.83	185	PKIKP	PKPbc	13 04 46.2	-1.0
SNAA	Sanae	144.83	185	PKPdf	PKPbc	13 04 46.1	-1.1
MAW	Mawson	145.31	146	PKPbc	PKPab	13 04 48.2	-0.7
	comp=Z,31nm,1.0s,baz=323,slow=7.2,SNR=12						
MAW	Mawson	145.31	146		PKiKP	13 04 50.0	-2.7
PMSA	Palmer Station	145.46	226	eP	PKiKP	13 04 50.9	-2.3
BKZ	Black Stump Fm	145.47	14	PKPdf	PKPdf	13 04 48.6	-1.5
BFZ	Birch Farm	146.96	15		PKiKP	13 04 55.3	-1.8
TUWZ	Tuamarina	147.51	18		PKPbc	13 04 54.5	-1.5
OXZ	Oxford	149.20	21		PKPbc	13 04 59.0	-1.4
RPZ	Rata Peaks	149.48	23	PKPbc	PKiKP	13 05 01.5	-0.7
	comp=Z,31nm,1.0s,baz=191,slow=7.3,SNR=5.0						
RPZ	Rata Peaks	149.48	23		PKiKP	13 05 02.0	-0.2
LBZ	Lake Benmore	150.04	24		PKiKP	13 05 03.5	+0.1
QSPA	South Pole Qui	163.21	180	PKPab	PKPab	13 06 05.2	+0.8
	comp=Z,6.7nm,0.9s,baz=249,slow=3.4,SNR=5.7						
QSPA	South Pole Qui	163.21	180	PKPdf	PKPdf	13 05 12.0	-1.7
QSPA					pPKPab	13 06 05.0	+0.7

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*NAO **19** 12:59:33.6±455.0, 73°.23N×6°.04E, h10^{km}±737^{km}, ML3.6*
*IDC **19** 12:59:34.0±0.7, 73°.17N×6°.38E, h0^{km}, mb3.6/10, mb1 3.9/15, mb1mx3.7/50, mbtmp3.7/15, ML3.2/4, Error ellipse: s-maj=18.5km s-min=13.0km az=53.0*
*BER **19** 12:59:36.5±2.8, 73°.31N×6°.49E, h10^{km}, ML2.3, ML3.6(NAO), Confirmed Earthquake*
*DNK **19** 12:59:37.5±2.4, 73°.52N×5°.33E, h0^{km}±68^{km}, ML2.4*
ISC 19 12:59:34.8±0.6**, 73°.17N**±0°.05×**6°.85E**±0°.06**, h10^{km}, n62, σ2^{s}.63**/71**, mb3.6**/10**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.65	63	Pn	Pn	13 00 31.8	+0.6
BJO1	Bjornoya	3.65	63	eP	Pn	13 00 32.1	+0.9
HSPB	Hornsund (broa	4.45	26	Pn	Pn	13 00 40.8	-1.4
HSPB	Hornsund (broa	4.45	26	eP	Pn	13 00 41.1	-1.1
JMIC	Jan Mayen	5.22	253	Pn	Pn	13 00 50.6	-2.1
	baz=309,slow=20,SNR=1.4						
JMIC	Jan Mayen	5.22	253	eP	Pn	13 00 51.0	-1.8
BRBA	Barentsburg A	5.24	17	Pn	Pn	13 00 52.1	-1.0
BRBA	Barentsburg A	5.24	17	eP	Pn	13 00 51.7	-1.3
TRO	Tromso	5.24	127	eP	Pn	13 00 55.4	+2.3
TRO				eS	Sn	13 01 49.2	-4.2
TRO				IAML		13 01 54.4	
	comp=Z,11nm,0.3s						
LOF	Lofoten	5.53	153	Pn	Pn	13 00 59.9	+2.9
LOF				Sn	Sn	13 01 54.2	-6.2
LOF	Lofoten	5.53	153	eP	Pn	13 00 59.2	+2.2
LOF				eS	Sn	13 01 55.7	-4.8
LOF				IAML		13 02 01.4	
	comp=Z,12nm,0.6s						
SPA0	Spitsbergen Ar	5.55	21	Pn	Pn	13 00 56.7	-0.6
	baz=198,slow=14						
SPA0	Spitsbergen Ar	5.55	21	Pn	Pn	13 00 56.7	-0.6
	baz=198,slow=14						
SPITS	Spitsbergen Ar	5.55	21	Pn	Pn	13 00 57.0	-0.3
	baz=204,slow=16,SNR=98						
JETT	Jettan, Norway	5.65	123	Pn	Pn	13 01 02.0	+3.3
HOPEN	Hopen	5.80	46	Pn	Pn	13 01 01.0	+0.3
HOPEN	Hopen	5.80	46	eP	Pn	13 01 01.1	+0.3
HOPEN				eS	Sn	13 02 01.1	-6.1
HOPEN				IAML		13 02 09.0	
	comp=Z,3.2nm,0.9s						
HAMF	Hammerfest	5.82	108	Pn	Pn	13 01 01.8	+0.9
HAMF	Hammerfest	5.82	108	eP	Pn	13 01 01.6	+0.6
HAMF				eS	Sn	13 02 03.3	-4.3
HAMF				IAML		13 02 06.7	
	comp=Z,8.4nm,0.8s						
KBS	Kingsbay	5.91	10	Pn	Pn	13 01 00.8	-1.5
KBS	Kingsbay	5.91	10	Pn	Pn	13 01 00.8	-1.5
KBS				eP	Pn	13 01 00.8	-1.5
KBS	Kingsbay	5.91	10	i P	Pn	13 01 03.4	+1.1
STEI	Steigen	5.96	148	Pn	Pn	13 01 04.6	+1.7
STEI	Steigen	5.96	148	eP	Pn	13 01 05.1	+2.2
STEI				eS	Sn	13 02 06.8	-4.2
STEI				IAML		13 02 10.6	
	comp=Z,8.3nm,0.5s						
KIF	Kilpisjarvi	6.16	126	Pn	Pn	13 01 07.3	+1.7
KIF				Sn	Sn	13 02 12.1	-3.8
KIF	Kilpisjarvi	6.16	126	eP	Pn	13 01 07.1	+1.5
KIF				eS	Sn	13 02 12.4	-3.6
FAUS	Fauske	6.47	150	eP	Pn	13 01 12.1	+2.1
FAUS				eS	Sn	13 02 18.3	-5.4
FAUS				IAML		13 02 24.6	
	comp=Z,7.0nm,0.5s						
KTK1	Kautokeino	6.75	120	eP	Pn	13 01 17.9	+4.1
ARA0	ARCESS Array S	6.98	112	Pn	Pn	13 01 18.3	+1.3
	baz=315,slow=12						
ARA0				Sn	Sn	13 02 32.2	-4.2
	baz=310,slow=22						
ARA0	ARCESS Array S	6.98	112	Pn	Pn	13 01 18.3	+1.3
	baz=315,slow=12						
ARA0				eP	Pn	13 01 19.1	+2.1
ARA0				Sn	Sn	13 02 32.2	-4.2
	baz=310,slow=22						
ARCES	ARCESS Array B	6.98	112	Pn	Pn	13 01 18.6	+1.7
	baz=320,slow=12,SNR=34						
ARCES				Sn	Sn	13 02 30.9	-5.5
	baz=22,slow=20,SNR=4.0						
KONS	Konsvik	7.04	159	eP	Pn	13 01 19.2	+1.4
KONS				eS	Sn	13 02 30.7	-7.0
KONS				IAML		13 02 37.0	
	comp=Z,8.4nm,0.5s						
STOK	Stokkvaagen	7.19	160	eP	Pn	13 01 22.0	+2.2
STOK				eS	Sn	13 02 36.1	-5.3
DAG	Danmarks Havn	7.49	310	eP	Pn	13 01 18.6	-5.3
DAG				eS	Sn	13 02 33.1	-16
DAG				IAML		13 02 35.6	
	comp=Z,3.1nm,0.3s						
DAG	Danmarks Havn	7.49	310	i P	Pn	13 01 18.6	-5.3
DAG				i S	Sn	13 02 33.7	-15
DAG	Danmarks Havn	7.49	310	i P	Pn	13 01 18.7	-5.2
DAG				i S	Sn	13 02 33.8	-15
DAG				IAML		13 02 35.6	
	comp=Z,3.1nm,0.3s						
MOR8	Moi Rana	7.50	156	eP	Pn	13 01 25.9	+1.7
DBG	Daneborg	7.64	291	Pn	Pn	13 01 20.0	-6.0
DBG	Daneborg	7.64	291	eP	Pn	13 01 20.4	-5.6
DBG				eS	Sn	13 02 37.4	-15
DBG				IAML		13 02 44.1	
	comp=Z,0.6nm,0.4s						
DBG	Daneborg	7.64	291	i P	Pn	13 01 19.7	-6.2
DBG				i S	Sn	13 02 38.7	-14
DBG				IAML		13 02 44.1	
	comp=Z,0.6nm,0.4s						
SCO	Scoresbysund	9.33	267	i P	Pn	13 01 46.2	-2.8
SCO	Scoresbysund	9.33	267	i P	Pn	13 01 46.2	-2.8
SCO	Scoresbysund	9.33	267	i P	Pn	13 01 46.2	-2.8
APA0	Apatity Array	10.32	110	Pn	Pn	13 02 04.5	+1.8
	baz=321,slow=16						
APA0	Apatity Array	10.32	110	Pn	Pn	13 02 04.5	+1.8
	baz=321,slow=16						
HFS	Hagfors	13.36	165	Pn	Pn	13 02 45.3	+1.1
	comp=Z,0.2nm,0.3s,baz=355,slow=15,SNR=1.8						
HFS	Hagfors	13.36	165	Pn	Pn	13 02 45.5	+1.3
	baz=352,slow=14						
HFS	Hagfors	13.36	165	Pn	Pn	13 02 45.5	+1.3
	baz=352,slow=14						
FIA0	FINESS Array S	13.80	138	Pn	Pn	13 02 51.1	+1.0
	baz=337,slow=14						
FIA0	FINESS Array S	13.80	138	Pn	Pn	13 02 51.1	+1.0
	baz=337,slow=14						
FINES	FINESS Array B	13.80	138	Pn	Pn	13 02 51.0	+0.8
	comp=Z,0.2nm,0.3s,baz=342,slow=12,SNR=5.4						
AKASG	Malin Array Be	24.55	144	P	P	13 04 55.4	+1.1
	comp=Z,0.6nm,0.5s,baz=348,slow=9.7,SNR=3.2						
GERES	GERESS Array B	24.60	169	P	P	13 04 56.5	+1.6
	comp=Z,1.8nm,0.8s,baz=355,slow=9.9,SNR=8.2						
AKTO	Aktyubinsk	31.54	108	P	P	13 05 58.4	+1.7
	comp=Z,0.8nm,0.6s,baz=288,slow=16,SNR=2.4						
ZALV	Zalesovo Beam	36.15	79	P	P	13 06 37.7	+1.1
	comp=Z,0.3nm,0.3s,baz=70,slow=35,SNR=2.1						
YKA	Yellowknife Ar	39.04	321	P	P	13 07 00.3	-0.7
	comp=Z,1.0nm,1.0s,baz=21,slow=8.7,SNR=8.4						
ILAR	Eielson Array	41.20	343	P	P	13 07 19.8	+0.8
	comp=Z,0.7nm,0.8s,baz=2.8,slow=6.2,SNR=10						
MKAR	Makanchi Array	41.81	86	P	P	13 07 26.5	+2.4
	comp=Z,0.6nm,0.8s,baz=332,slow=6.9,SNR=4.6						
SONM	Songino Array	47.59	64	P	P	13 08 12.4	+2.0
	comp=Z,0.5nm,0.7s,baz=325,slow=12,SNR=2.8						
PDAR	Pinedale Array	56.51	308	P	P	13 09 17.3	+0.4
	comp=Z,0.5nm,0.8s,baz=37,slow=6.1,SNR=3.2						
TORD	Torodi Ar. Bea	60.08	186	P	P	13 09 43.0	+1.2
	comp=Z,1.7nm,0.8s,baz=352,slow=6.9,SNR=5.9						
ASAR	Alice Springs	122.87	61	PKP	PKPdf	13 18 29.8	-0.7
	comp=Z,0.5nm,0.6s,baz=349,slow=1.6,SNR=12						

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*SOME **19** 13:04:00.1, 43°.27N×76°.07E, h15^{km}*
*NNC **19** 13:04:00.6±0.4, 43°.28N×76°.14E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=2.8km s-min=2.1km az=138.0*
*KRNET **19** 13:04:00.1±0.1, 43°.25N×76°.08E, h23^{km}, mb2.4*
ISC 19 13:04:00.1±0.9**, 43°.26N**±0°.02×**76°.09E**±0°.02**, h18^{km}**±5^{km}**, n40, σ0^{s}.73**/78**, 21C-12D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KST	Kastek	0.24	203	⇑eP	Pb	13 04 06.3	+0.4
	baz=3.0						
KST				⇑eS	Sg	13 04 10.4	+0.8
	baz=3.0						
KST	Kastek	0.24	203	⇑eP	Pb	13 04 06.2	+0.4
	24nm,0.1s						
KST				eS	Sg	13 04 10.3	+0.8
	123nm,0.1s						
KST	Kastek	0.24	203	P	Pb	13 04 06.3	+0.4
	24nm,0.1s						
KST				S	Sg	13 04 10.3	+0.8
	123nm,0.1s						
MTBS	Maitube	0.28	118	eP	Pb	13 04 06.4	-0.3
	baz=15						
MTBS				eS	Sb	13 04 10.7	-0.4
	baz=15						
MTBS	Maitube	0.28	118	eP	Pb	13 04 06.4	-0.3
	12nm,0.1s						
MTBS				eS	Sb	13 04 10.7	-0.4
	192nm,0.2s						
MTBS	Maitube	0.28	118	P	Pb	13 04 06.4	-0.3
	12nm,0.1s						
MTBS				S	Sg	13 04 10.3	-0.4
	192nm,0.2s						
IZV	Izvestkoviy	0.45	120	⇓eP	Pg	13 04 09.0	-0.2
	baz=18						
IZV				⇓eS	Sg	13 04 15.3	-0.1
	baz=18						
IZV	Izvestkoviy	0.45	120	⇓eP	Pg	13 04 09.0	-0.2
	6.1nm,0.1s						
IZV				eS	Sg	13 04 15.3	-0.1
	62nm,0.1s						
IZV	Izvestkoviy	0.45	120	P	Pg	13 04 09.0	-0.2
	6.1nm,0.1s						
IZV				S	Sg	13 04 14.6	-0.8
	62nm,0.1s						
TKM2	Tokmak 2	0.50	227	⇑iP	Pb	13 04 10.2	-0.3
	baz=28						
TKM2				⇑iS	Sb	13 04 17.2	-0.3
	baz=28						
TKM2	Tokmak 2	0.50	227	⇑P	Pb	13 04 10.5	+0.1
	1.3nm,0.1s						
TKM2				⇑S	Sb	13 04 17.7	+0.2
	21nm,0.1s						
KUU	Kurty	0.66	16	eP	Pg	13 04 12.5	-0.6
	baz=16						
KUU				eS	Sg	13 04 21.5	-0.4
	baz=16						
KUU	Kurty	0.66	16	eP	Pg	13 04 12.5	-0.6
	2.4nm,0.1s						
KUU				eS	Sg	13 04 21.5	-0.4
	15nm,0.2s						
KUU	Kurty	0.66	16	P	Pb	13 04 13.3	+0.1
	2.4nm,0.1s						
KUU				S	Sb	13 04 21.9	0.0
	15nm,0.2s						
TNSS	Tian-Shan	0.67	109	⇓eP	Pg	13 04 12.9	-0.5
	baz=8.0						
TNSS				⇓eS	Sg	13 04 22.0	-0.4
	baz=8.0						
TNSS	Tian-Shan	0.67	109	⇓eP	Pg	13 04 12.9	-0.5
	2.8nm,0.1s						
TNSS				eS	Sg	13 04 22.0	-0.4
	13nm,0.2s						
TNSS	Tian-Shan	0.67	109	P	Pg	13 04 12.9	-0.5
	2.8nm,0.1s						
TNSS				S	Sg	13 04 21.3	-1.1
	13nm,0.2s						
MDOK	Medeo	0.71	98	eP	Pg	13 04 13.7	-0.4
	baz=96						
MDOK				eS	Sg	13 04 23.2	-0.3
	baz=96						
MDOK	Medeo	0.71	98	eP	Pg	13 04 13.7	-0.4
	1.6nm,0.1s						
MDOK				eS	Sg	13 04 23.2	-0.3
	6.6nm,0.1s						
MDOK	Medeo	0.71	98	Pg	Pb	13 04 14.0	-0.1
	1.6nm,0.1s						
MDOK				Lg	Lg	13 04 23.1	
	6.6nm,0.1s						
BOOM	Boomskoye usch	0.78	188	⇑iP	Pg	13 04 14.7	-0.7
	baz=88						
BOOM				⇑iS	Sg	13 04 24.6	-1.1
	baz=88						
CHKK	Chushkaly	0.88	47	P	Pb	13 04 17.1	+0.1
	2.1nm,0.1s						
CHKK				S	Sg	13 04 28.5	-0.5
	20nm,0.2s						
CHMS	Chumysh	1.01	255	⇑iP	Pg	13 04 18.8	-1.0
	baz=56						
CHMS				⇑iS	Sb	13 04 32.9	+0.7
	baz=56						
ULHL	Ulahol	1.02	174	⇓iP	Pg	13 04 18.5	-1.5
	baz=73						
ULHL				⇓iS	Sg	13 04 31.8	-1.6
	baz=73						
KBK	Karagaybulak	1.03	235	⇑iP	Pg	13 04 19.0	-1.2
	baz=35						
KBK				⇑iS	Sb	13 04 33.3	+0.4
	baz=35						
USP	Ospenovka	1.16	271	⇓iP	Pb	13 04 21.5	-0.2
	baz=72						
USP				⇓iS	Sg	13 04 37.1	-0.7
	baz=72						
ANVS	Anan'yevo	1.25	112	⇑iP	Pn	13 04 22.8	-0.1
	baz=11						
ANVS				⇑iS	Sb	13 04 39.5	+0.3
	baz=11						
AAK	Ala-Archa	1.33	243	⇑iP	Pn	13 04 24.2	+0.3
	baz=43						
AAK				⇑iS	Sn	13 04 42.1	+0.8
	baz=43						
KDJ	Kajisay	1.39	144	⇑iP	Pn	13 04 25.3	+0.5
	baz=43						
KDJ				⇑iS	Sb	13 04 43.5	+0.4
	baz=43						
UCH	Uchtor	1.55	229	⇑iP	Pn	13 04 28.0	+0.7
	baz=29						
UCH				⇑iS	Sb	13 04 48.6	+0.4
	baz=29						
SATY	Saty	1.71	96	eP	Pb	13 04 31.6	+0.5
	baz=96						
SATY				eS	Sg	13 04 54.1	-1.1
	baz=96						
SATY	Saty	1.71	96	eP	Pb	13 04 31.6	+0.5
	1.6nm,0.1s						
SATY				eS	Sg	13 04 54.1	-1.1
	10nm,0.1s						
SATY	Saty	1.71	96	P	Pb	13 04 31.6	+0.5
	1.6nm,0.1s						
SATY				S	Sb	13 04 53.4	+1.2
	10nm,0.1s						
EKS2	Erkin-Say	1.80	251	⇓iP	Pn	13 04 31.5	+1.1
	baz=52						
EKS2				⇓iS	Sb	13 04 54.8	-0.1
	baz=52						
MNBS	Baschi	1.87	63	eP	Pb	13 04 34.5	+0.7
	1.0nm,0.1s						
MNBS				eS	Sg	13 04 58.8	-1.5
	5.2nm,0.2s						
MNBS	Baschi	1.87	63	P	Pg	13 04 34.9	-1.1
	1.0nm,0.1s						
MNBS				S	Sg	13 04 59.1	-1.2
	5.2nm,0.2s						
KPKS	Kokpek	1.90	83	eP	Pb	13 04 34.9	+0.5
	baz=83						
KPKS				eS	Sb	13 04 59.5	+1.6
	baz=83						
KPKS	Kokpek	1.90	83	eP	Pb	13 04 34.9	+0.5
	1.5nm,0.2s						
KPKS				eS	Sb	13 04 59.5	+1.6
	6.7nm,0.2s						
UZB	Uzynbulak	2.15	92	eP	Pb	13 04 38.8	+0.2
	0.7nm,0.2s						
UZB				eS	Sb	13 05 06.2	+1.2
	2.3nm,0.2s						
UZB	Uzynbulak	2.15	92	Pg	Pb	13 04 39.1	+0.5
	0.7nm,0.2s						
UZB				Lg	Lg	13 05 06.1	
	2.3nm,0.2s						

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*NAO **19** 13:09:34.6±470.0, 73°.16N×6°.04E, h11^{km}±890^{km}, ML4.2*
*IDC **19** 13:09:35.3±0.5, 73°.13N×6°.12E, h0^{km}, mb4.2/26, mb1 4.3/33, mb1mx4.2/50, mbtmp4.2/33, ML3.6/7, MS4.1/20, Ms1 4.1/20, ms1mx3.8/49, Error ellipse: s-maj=13.2km s-min=8.9km az=45.0*
*MOS **19** 13:09:35.3±1.0, 73°.28N×6°.15E, h10^{km}, mb4.7/40, Error ellipse: s-maj=18.5km s-min=5.4km az=94.9*
*NEIC **19** 13:09:36.3±1.9, 73°.20N±0°.07×6°.3E±0°.2, h10^{km}±1^{km}, mb4.6/76, Error ellipse: s-maj=12.5km s-min=10.9km az=189.0*
*GCMT **19** 13:09:37.3±0.3, 73°.31N±0°.03×6°.44E±0°.09, h12^{km}, MW4.8/91, Moment Tensor Solution. s17,c18; s91,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.65±.06; $M_{\theta\theta}$0.66±.06; $M_{\phi\phi}$0.98±.06; $M_{r\theta}$0.56±.29; $M_{\theta\phi}$0.78±.05; $M_{\phi r}$-0.68±.26; Best double couple: $M_0$1.82600×10^{16} NP1:ϕ_s239.00000°, δ46.00000°, λ-58.00000°. NP2: ϕ_s17.00000°, δ53.00000°, λ-119.00000°. Principal axes: T 1.6320, Plg4.0000°, Azm127.0000°; N 0.3900, Plg23.0000°, Azm36.0000°; P -2.0210, Plg67.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DNK **19** 13:09:38.8±2.3, 73°.54N×5°.28E, h0^{km}±65^{km}, ML2.9*
*BER **19** 13:09:39.2±4.2, 73°.30N×6°.49E, h29^{km}±83^{km}, ML2.6, ML4.2(NAO), Confirmed Earthquake*
*UPP **19** 13:09:44.6±3.1, 72°.78N×7°.73E, h0^{km}, ML2.1, Suspected explosion*
ISC 19 13:09:36.5±0.3**, 73°.19N**±0°.04×**6°.32E**±0°.04**, h10^{km}, n350, σ2^{s}.62**/375**, mb4.5**/104**, MS4.1**/17**, 9C-11D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.78	64	Pn	Pn	13 10 32.8	-1.9
BJO1				Sn	Sn	13 11 13.7	-5.4
BJO1	Bjornoya	3.78	64	eP	Pn	13 10 32.9	-1.8
BJO1				eS	Sn	13 11 13.2	-5.9
BJO1				IAML		13 11 24.7	
	comp=Z,20nm,0.4s						
HSPB	Hornsund (broa	4.50	27	eP	Pn	13 10 42.4	-2.2
HSPB	Hornsund (broa	4.50	27	Pn	Pn	13 10 42.9	-1.7
HSPB	Hornsund (broa	4.50	27	eP	Pn	13 10 42.9	-1.7
HSPB				eS	Sn	13 11 31.5	-5.5
HSPB				IAML		13 11 33.8	
	comp=Z,5.7nm,0.8s						
HSPB	Hornsund (broa	4.50	27	eP	Pn	13 10 42.4	-2.2
JNE	Jan Mayen East	5.02	251	eP	Pn	13 10 51.5	-0.2
JNW	Jan Mayen West	5.03	252	eP	Pn	13 10 51.8	-0.1
JMIC	Jan Mayen	5.08	251	Pn	Pn	13 10 52.0	-0.5
	baz=104,slow=5.1,SNR=6.7						
JMIC	Jan Mayen	5.08	251	eP	Pn	13 10 52.0	-0.5
JMI	Jan Mayen	5.17	251	eP	Pn	13 10 53.8	0.0
BRBA	Barentsburg A	5.27	18	Pn	Pn	13 10 53.2	-1.9
BRBA	Barentsburg A	5.27	18	eP	Pn	13 10 53.4	-1.8
TRO	Tromso	5.38	125	Pn	Pn	13 10 55.6	-1.0
TRO	Tromso	5.38	125	eP	Pn	13 10 55.9	-0.7
TRO				eS	Sn	13 11 53.0	-5.5
TRO				IAML		13 12 00.9	
	comp=Z,30nm,0.6s						
SPA2	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.6	-0.9
SPA3	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.7	-0.8
SPB2	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.6	-0.9
SPB4	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.4	-1.1
SPA0	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.6	-0.9
	baz=184,slow=12						
SPA0	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.1	-1.4
SPA0	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.6	-0.9
	baz=184,slow=12						
SPA0	Spitsbergen Ar	5.59	22	eP	Pn	13 10 58.7	-0.9
SPITS	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.2	-1.4
	baz=200,slow=16,SNR=97						
SPITS				Sn	Sn	13 11 59.7	-4.0
	baz=195,slow=27,SNR=0.6						
SPITS				LR	LR	13 12 51.3	
	comp=Z,1µm,18.9s,baz=215,slow=35						
SPA1	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 57.8	-1.8
SPB1	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 58.0	-1.6
SPB5	Spitsbergen Ar	5.59	22	Pn	Pn	13 10 57.8	-1.8
LOF	Lofoten	5.62	151	Pn	Pn	13 10 58.9	-1.0
LOF				Sn	Sn	13 11 56.4	-8.0
LOF	Lofoten	5.62	151	eP	Pn	13 10 59.3	-0.6
LOF				eS	Sn	13 11 56.4	-8.0
LOF				IAML		13 11 57.2	
	comp=Z,31nm,0.6s						
N2SV	S¸rv¥gen	5.77	154	eP	Pn	13 11 01.3	-0.7
N2SV				eS	Sn	13 12 00.9	-7.2
JETT	Jettan, Norway	5.79	122	Pn	Pn	13 11 02.2	-0.1
JETT				Sn	Sn	13 12 01.8	-7.0
HOPEN	Hopen	5.90	47	Pn	Pn	13 11 01.5	-2.3
HOPEN	Hopen	5.90	47	eP	Pn	13 11 01.7	-2.1

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HOPEN                                IAML             13 12 17.1
       comp=Z,4.8nm,0.8s
HOPEN  Hopen              5.90  47  eP       Pn       13 11 01.2  -2.6
HOPEN                               eS       Sn       13 12 05.3  -6.0
KBS    Kingsbay           5.92  11   P       Pn       13 11 02.7  -1.4
KBS    Kingsbay           5.92  11   Pn      Pn       13 11 03.7  -0.4
KBS    Kingsbay           5.92  11   Pn      Pn       13 11 02.7  -1.4
KBS    Kingsbay           5.92  11  eP       Pn       13 11 03.4  -0.7
KBS    Kingsbay           5.92  11  eP       Pn       13 10 59.3  -4.8
KBS    Kingsbay           5.92  11  i P      Pn       13 11 04.1   0.0
HAMF   Hammerfest         5.97 107   Pn      Pn       13 11 02.4  -2.3
HAMF   Hammerfest         5.97 107  eP       Pn       13 11 02.4  -2.3
HAMF                                 IAML             13 12 07.4
       comp=Z,12nm,0.3s
STEI   Steigen            6.06 146  eP       Pn       13 11 05.9   0.0
STEI                                eS       Sn       13 12 08.4  -6.8
STEI                                 IAML             13 12 11.5
       comp=Z,11nm,0.5s
N2IH   Innhavet           6.14 144  eP       Pn       13 11 06.8  -0.3
N2IH                                eS       Sn       13 12 09.6  -7.6
KIF    Kilpisjarvi        6.29 125  eP       Pn       13 11 08.4  -0.8
KIF                                 eS       Sn       13 12 13.2  -7.8
FAUS   Fauske             6.57 148  eP       Pn       13 11 12.2  -0.7
FAUS                                 IAML             13 12 33.6
       comp=Z,7.5nm,0.5s
NBB30  Finnes             6.73 154  eP       Pn       13 11 14.6  -0.6
NBB30                               eS       Sn       13 12 23.6  -8.2
KOVU   Salmi              6.76 131   P       Pn       13 11 15.1  -0.5
KOVU                                 S       Sn       13 12 25.3  -7.2
NIKU   Nikkaluokta        6.81 135   P       Pn       13 11 15.2  -1.1
NIKU                                 S       Sn       13 12 27.2  -6.6
KTK1   Kautokeino         6.89 119  eP       Pn       13 11 17.4   0.0
KTK1                                eS       Sn       13 12 29.3  -6.4
KTK1                                e                 13 12 33.7
KTK1                                 IAML             13 12 37.4
       comp=Z,5.2nm,0.5s
RATU   Laukkuluspa        6.96 134   P       Pn       13 11 17.9  -0.5
KUA    Kurravaara         7.01 132   P       Pn       13 11 18.3  -0.8
KUA                                  S       Sn       13 12 29.9  -8.9
NBB40  Tonnes             7.09 158  eP       Pn       13 11 19.1  -1.0
KONS   Konsvik            7.11 157  eP       Pn       13 11 20.1  -0.3
KONS                                eS       Sn       13 12 32.6  -8.6
KONS                                 IAML             13 12 38.0
       comp=Z,21nm,0.4s
ARD8   ARCESS Array S     7.12 111   Pn      Pn       13 11 19.4  -1.2
SALU   Saltoluokta        7.13 139   P       Pn       13 11 20.4  -0.3
SALU   Saltoluokta        7.13 139  eP       Pn       13 11 20.4  -0.3
ARD7   ARCESS Array S     7.13 112   Pn      Pn       13 11 19.6  -1.1
ARA1   ARCESS Array S     7.13 111   Pn      Pn       13 11 19.5  -1.2
ARA0   ARCESS Array S     7.13 111   Pn      Pn       13 11 19.6  -1.2
       baz=313,slow=12
ARA0   ARCESS Array S     7.13 111   Pn      Pn       13 11 19.6  -1.2
       baz=313,slow=12
ARCES  ARCESS Array B     7.13 111   Pn      Pn       13 11 19.6  -1.1
       baz=321,slow=11,SNR=52
ARCES                                Sn      Sn       13 12 33.8  -7.9
       baz=318,slow=23,SNR=6.8
ARA2   ARCESS Array S     7.13 111   Pn      Pn       13 11 19.6  -1.2
STOK   Stokkvaagen        7.26 158  eP       Pn       13 11 22.7  +0.2
STOK                                eS       Sn       13 12 36.2  -8.7
LANU   Lannavaara         7.31 127   P       Pn       13 11 21.9  -1.2
DAG    Danmarks Havn      7.36 311  i P      Pn       13 11 20.0  -3.8
DAG    Danmarks Havn      7.36 311  eP       Pn       13 11 20.2  -3.6
DAG                                 eS       Sn       13 12 35.2   -12
DAG                                  IAML             13 12 39.8
       comp=Z,13nm,0.4s
DAG    Danmarks Havn      7.36 311  i P      Pn       13 11 20.0  -3.8
DAG                                 i S      Sn       13 12 35.4   -12
DAG    Danmarks Havn      7.36 311  i P      Pn       13 11 20.0  -3.8
DAG                                 i P      Pn       13 11 20.0  -3.8
DAG                                 i S      Sn       13 12 35.5   -12
DAG                                  IAML             13 12 39.8
       comp=Z,13nm,0.4s
KEV    Kevo               7.41 107   P       Pn       13 11 22.3  -2.1
KEV    Kevo               7.41 107   Pn      Pn       13 11 22.3  -2.1
DBG    Daneborg           7.49 291   Pn      Pn       13 11 21.4  -4.2
DBG    Daneborg           7.49 291  eP       Pn       13 11 20.6  -5.0
DBG                                 eS       Sn       13 12 38.4   -12
DBG                                  IAML             13 12 52.8
       comp=Z,2.2nm,0.4s
DBG    Daneborg           7.49 291  i P      Pn       13 11 21.2  -4.4
DBG                                 i S      Sn       13 12 38.4   -12
DBG                                  IAML             13 12 52.8
       comp=Z,2.2nm,0.4s
MOR8   Moi Rana           7.59 154  eP       Pn       13 11 27.7  +0.7
MOR8                                eS       Sn       13 12 44.1  -8.7
MOR8                                 IAML             13 12 47.7
       comp=Z,18nm,0.5s
DUNU   Dundret            7.76 135   P       Pn       13 11 28.3  -1.0
MASU   Masugnsbyn         7.79 130   P       Pn       13 11 29.2  -0.6
PAJU   Pajala             8.39 129   P       Pn       13 11 37.7  -0.4
ERTU   Ertsjaerv          8.59 133   P       Pn       13 11 39.7  -0.9
NSS    Namsos             8.93 164  eP       Pn       13 11 45.6  +0.3
NSS                                 eS       Sn       13 13 16.9  -8.9
NSS                                  IAML             13 13 25.7
       comp=Z,13nm,0.5s
SCO    Scoresbysund       9.17 267  i P      Pn       13 11 47.9  -0.7
SCO    Scoresbysund       9.17 267   Pn      Pn       13 11 46.9  -1.7
SCO    Scoresbysund       9.17 267  i P      Pn       13 11 47.9  -0.7
SCO    Scoresbysund       9.17 267  i P      Pn       13 11 47.9  -0.7
SCO    Scoresbysund       9.17 267  i P      Pn       13 11 47.9  -0.7
NOD    Norderasen        10.27 158  eP       Pn       13 12 04.4  +0.7
APA0   Apatity Array     10.47 109   Pn      Pn       13 12 03.0  -3.4
       baz=330,slow=12
APA0   Apatity Array     10.47 109   Pn      Pn       13 12 03.0  -3.4
       baz=330,slow=12
LVZ    Lovozero          10.73 105⇓eP       Pn       13 12 07.0  -3.0
LVZ                                  pmax    pmax
       comp=Z,109nm,0.9s
LVZ    Lovozero          10.73 105   Pn      Pn       13 12 06.8  -3.2
AKN    Aaknes            11.07 178  e        Pn       13 12 01.4   -13
ZFI    Zemlya Franca-    11.65  32  eP       Pn       13 12 21.4  -1.0
       comp=Z,90nm,1.3s
ZFI2   Zemlya Franca-    11.65  32  eP       Pn       13 12 20.7  -1.7
       comp=Z,40nm,1.2s
NC204  NORSAR Array S    12.09 170   Pn      Pn       13 12 26.6  -1.9
NC303  NORSAR Array S    12.17 168   Pn      Pn       13 12 27.0  -2.7
NC405  NORSAR Array S    12.30 168   Pn      Pn       13 12 31.6  +0.1
NBO00  NORSAR Array S    12.33 170   Pn      Pn       13 12 31.3  -0.5
NB201  NORSAR Array S    12.34 169   Pn      Pn       13 12 31.3  -0.7
NOA    NORSAR Array B    12.35 169   Pn      Pn       13 12 31.6  -0.5
       comp=Z,0.1nm,0.3s,baz=356,slow=13,SNR=3.3
NOA                                  LR      LR       13 17 00.9
       comp=Z,529nm,19.5s,baz=345,slow=36
NAO01  NORSAR Array S    12.52 170   Pn      Pn       13 12 33.8  -0.7
BORG   Borgarnes         12.89 243   LR      LR       13 16 15.7
       comp=Z,349nm,21.6s,baz=3.1,slow=31
SUMG   Summit            12.96 289   P       Pn       13 12 37.2  -3.6
SUMG   Summit            12.96 289   Pn      Pn       13 12 37.2  -3.6
SUMG   Summit            12.96 289  eP       Pn       13 12 40.2  -0.6
SUMG   Summit            12.96 289  eP       Pn       13 12 40.2  -0.6
HFS    Hagfors           13.42 164   Pn      Pn       13 12 45.6  -1.0
       comp=Z,0.7nm,0.3s,baz=348,slow=14,SNR=8.2
HFS                                  LR      LR       13 17 33.9
       comp=Z,971nm,20.0s,baz=3.5,slow=36
HFS    Hagfors           13.42 164   Pn      Pn       13 12 45.5  -1.2
HFS    Hagfors           13.42 164   Pn      Pn       13 12 45.5  -1.2
FIA1   FINESS Array S    13.92 138           Pn       13 12 51.5  -2.0
FIA0   FINESS Array S    13.92 138   Pn      Pn       13 12 51.6  -1.9
       baz=344,slow=14
FIA0   FINESS Array S    13.92 138   Pn      Pn       13 12 51.6  -1.9
       baz=344,slow=14
FINES  FINESS Array B    13.92 138   Pn      Pn       13 12 51.6  -1.9
       comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=13
FINES                                LR      LR       13 17 54.6
       comp=Z,1µm,21.4s,baz=330,slow=36
TMCR   Tamitsa           14.43 112  eP       Pn       13 12 59.5  -0.9
TMCR                                e                 13 15 38.4
TMCR   Tamitsa           14.43 112   P       Pn       13 12 59.9  -0.5
LSH    Leshukonskoye     16.02 101  eP       Pn       13 13 14.8  -6.8
       comp=Z,63nm,1.3s
AMDE   Amderma           17.35  74  eP       Pn       13 13 36.4  -1.9
       comp=Z,6.7nm,1.0s
KLMR   Klimovskoe        17.55 117  eP       Pn       13 13 39.3  -1.5
KLMR                                 pmax    pmax
       comp=Z,110nm,1.5s
KLMR   Klimovskoe        17.55 117  ePn      Pn       13 13 39.4  -1.4
KLMR                                 AMP              13 13 45.9
       comp=Z,110nm,1.5s
KLMR   Klimovskoe        17.55 117  eP       Pn       13 13 36.5  -4.3
       comp=Z,87nm,1.4s
EKA    Eskdalemuir Ar    18.35 197   P       P        13 13 50.9  +0.2
       baz=15,slow=9.6,SNR=3.8
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TULEG  Thule             18.63 315   P       P        13 13 51.6  -2.1
SFJD   Kangerlussuaq     19.59 281   LR      LR       13 20 42.3
       comp=Z,687nm,18.6s,baz=50,slow=34
EUNU   Eureka            19.99 329   P       P        13 14 07.0  -1.6
NACGM  Naroch            20.20 144  i P      P        13 14 11.7  +0.7
NACGM                               i P      P        13 14 11.7  +0.7
NACGM                               i P      P        13 14 11.7  +0.7
NACGM                               i Pb     pwP      13 14 19.2  +2.7
       comp=Z,30nm,1.1s
NACGM                               i PP     PnPn     13 14 31.7  +4.5
NACGM                               i S      Sn       13 18 06.6  +6.7
NACGM                               i SS     SnSn     13 18 24.9   +11
NACGM                               i SSS    SSS      13 18 45.1
NACGM                               i LQ     LQ       13 20 30.4
NACGM                               i LR     LR       13 21 13.2
MNK    Minsk             20.77 143  eP       Pn       13 14 19.0  -0.6
MOS    Moscow            21.62 127  eP       P        13 14 24.2  -2.1
MOS                                 e                 13 14 55.4
MOS                                  pmax    pmax
       comp=Z,72nm,1.3s
OBN    Obninsk           21.95 129   P       P        13 14 29.7  -0.2
       comp=Z,6.0nm,0.4s,baz=348,slow=10.0,SNR=12
OBN                                  LR      LR       13 22 45.9
       comp=Z,143nm,21.7s,baz=355,slow=36
OBN    Obninsk           21.95 129  i P      P        13 14 28.1  -1.7
OBN                                 i                 13 14 52.5
OBN                                  pmax    pmax
       comp=Z,52nm,1.3s
OBN                                  MLR     MLR
       comp=Z,634nm,20.0s
OBN    Obninsk           21.95 129   P       P        13 14 28.8  -1.0
KIRV   Kirov             22.14 108   P       P        13 14 31.9  +0.1
       comp=Z,26nm,0.8s,baz=330,slow=15,SNR=9.6
KIRV                                 LR      LR       13 22 58.9
       comp=Z,593nm,19.9s,baz=303,slow=36
KIRV   Kirov             22.14 108⇓iP       P        13 14 31.7  -0.1
CLL    Collm             22.15 169  i P      P        13 14 34.2  +2.2
       comp=Z,42nm,1.6s
CLL    Collm             22.15 169   P       P        13 14 31.6  -0.4
CLL                                  pmax    pmax
       comp=Z,30nm,1.3s
CLL    Collm             22.15 169   P       P        13 14 31.6  -0.4
CLL                                  IAmb    IAmb     13 14 42.9
       comp=Z,30nm,1.3s
BRG    Berggiesshubel    22.64 167  eP       P        13 14 39.7  +2.4
BRG                                  Amp              13 14 48.7
       comp=Z,52nm,1.8s
BRG    Berggiesshubel    22.64 167  eP       P        13 14 39.6  +2.4
BRG                                  pmax    pmax
       comp=Z,52nm,1.8s
BRG    Berggiesshubel    22.64 167  eP       P        13 14 39.7  +2.4
BRG                                  Amp              13 14 48.7
       comp=Z,52nm,1.8s
BTNL   Ternell           22.68 180  dP       P        13 14 39.4  +1.6
BTNL                                dPnPn    PnPn     13 15 00.6  -0.6
OSTC   Ostas             23.12 164  eP       P        13 14 49.2  +6.9
NKC    Novy Kostel       23.19 170  eP       P        13 14 45.3  +2.3
NKC                                 e                 13 14 50.8
NKC    Novy Kostel       23.19 170  eP       P        13 14 45.3  +2.3
NKC                                 epP      pwP      13 14 50.8  +2.1
DPC    Dobruska-Polom    23.33 164  eP       P        13 14 48.1  +3.6
DPC    Dobruska-Polom    23.33 164  eP       P        13 14 48.1  +3.6
PRU    Pruhonice         23.56 167  eP       P        13 14 54.5  +7.8
PRU    Pruhonice         23.56 167  eP       P        13 14 54.5  +7.8
KRLC   Kraliky           23.65 163  eP       P        13 14 48.0  +0.4
KRLC                                e                 13 14 54.6
KRLC   Kraliky           23.65 163  eP       P        13 14 48.0  +0.4
KRLC                                epP      pwP      13 14 54.6  +1.4
OJC    Ojcow             23.79 158  eP       P        13 14 55.5  +6.5
MORC   Moravsky Berou    24.01 162  eP       P        13 14 53.1  +2.1
MORC   Moravsky Berou    24.01 162   P       P        13 14 51.1   0.0
MORC                                 pmax    pmax
       comp=Z,15nm,1.2s
MORC   Moravsky Berou    24.01 162   P       P        13 14 51.1   0.0
MORC                                 IAmb    IAmb     13 15 06.0
       comp=Z,15nm,1.2s
KHC    Kasperske Hory    24.36 168  eP       P        13 15 01.5  +7.2
KHC    Kasperske Hory    24.36 168  eP       P        13 15 01.5  +7.2
VRAC   Vranov            24.39 164   P       P        13 14 55.7  +1.1
       comp=Z,5.6nm,0.8s,baz=351,slow=9.0,SNR=5.3
VRAC                                 LR      LR       13 23 40.0
       comp=Z,552nm,19.5s,baz=8.5,slow=35
VRAC   Vranov            24.39 164  eP       P        13 14 56.7  +2.2
KRUC   Moravsky          24.62 164  eP       P        13 14 58.2  +1.6
GEC2   GERESS Array S    24.65 168   P       P        13 14 56.0  -1.0
GERES  GERESS Array B    24.65 168   P       P        13 14 56.6  -0.3
       comp=Z,1.4nm,0.6s,baz=0.0,slow=7.2,SNR=12
GERES                                LR      LR       13 25 06.5
       comp=Z,432nm,18.1s,baz=352,slow=38
AKASG  Malin Array Be    24.66 144   P       P        13 14 57.0  +0.1
       comp=Z,2.6nm,0.6s,baz=344,slow=9.9,SNR=11
AKASG                                LR      LR       13 24 29.9
       comp=Z,926nm,19.1s,baz=330,slow=36
AKASG  Malin Array Be    24.66 144   P       P        13 14 57.0  +0.1
AKBB   Malin Array Si    24.66 144⇑eP       P        13 14 59.0  +2.1
AKBB                                 pmax    pmax
       comp=Z,16nm,0.9s
AKBB   Malin Array Si    24.66 144   P       P        13 14 56.1  -0.8
AKBB                                 IAmb    IAmb     13 15 06.8
       comp=Z,14nm,0.9s
LVV    L'vov             24.71 152  eP       P        13 14 58.2  +0.8
LVV                                 eS       S        13 19 14.7  -4.1
LVV                                  MLR     MLR
       comp=Z,600nm,14.0s
KWP    Kalwaria Pacla    24.72 154   P       P        13 14 56.3  -1.2
KWP                                  pmax    pmax
       comp=Z,40nm,1.2s
KWP    Kalwaria Pacla    24.72 154   P       P        13 14 56.3  -1.2
LPSR   Galich'ya Gora    24.82 128  eP       P        13 14 59.2  +0.9
LPSR                                 pmax    pmax
       comp=Z,40nm,0.7s
RES    Resolute Bay      24.87 322   LR      LR       13 25 09.3
       comp=Z,392nm,19.1s,baz=87,slow=38
JAVC   Velka Javorina    24.93 162  eP       P        13 15 02.1  +2.6
SMOL   Smolenice         25.25 163  eP       P        13 15 05.9  +3.6
SMOL   Smolenice         25.25 163  eP       P        13 15 05.9  +3.6
CRVS   Cervenica-Dubn    25.28 156  eP       P        13 15 06.3  +3.7
CRVS                                 pmax    pmax
       comp=Z,292nm,3.0s
CRVS   Cervenica-Dubn    25.28 156  eP       P        13 15 06.3  +3.7
KOLS   Kolonicke sedl    25.35 155  eP       P        13 15 06.4  +3.2
KOLS                                 pmax    pmax
       comp=Z,10.0nm,1.2s
KOLS   Kolonicke sedl    25.35 155  eP       P        13 15 06.4  +3.2
VYHS   Vyhne             25.40 160  eP       P        13 15 06.0  +2.3
VYHS   Vyhne             25.40 160  eP       P        13 15 06.0  +2.3
ZST    Bratislava        25.54 163  eP       P        13 15 07.4  +2.5
ZST    Bratislava        25.54 163  eP       P        13 15 07.4  +2.5
UZH    Uzhgorod          25.65 155  eP       P        13 15 08.0  +2.1
MOA    Molln             25.67 168  eP       P        13 15 12.6  +6.4
       comp=Z,5.7nm,1.0s
CONA   Conrad Observa    25.70 165  eP       P        13 15 08.5  +1.9
       comp=Z,6.1nm,0.9s
RETA   Reutte            25.86 173  eP       P        13 15 11.0  +3.0
       comp=Z,3.3nm,1.1s
MOTA   Moosalm           26.02 173  eP       P        13 15 11.6  +2.1
       comp=Z,20nm,1.7s
DAVA   Damuels           26.04 174  eP       P        13 15 12.7  +3.0
       comp=Z,14nm,1.0s
WATA   Walderalm         26.05 172  eP       P        13 15 14.9  +5.2
       comp=Z,6.1nm,0.9s
PSZ    Piszkesteto       26.08 159   P       P        13 15 10.5  +0.6
PSZ                                  pmax    pmax
       comp=Z,25nm,1.4s
PSZ    Piszkesteto       26.08 159   P       P        13 15 10.5  +0.6
PSZ                                  IAmb    IAmb     13 15 19.5
       comp=Z,24nm,1.4s
WTTA   Wattenberg        26.12 172  eP       P        13 15 14.7  +4.3
       comp=Z,1.6nm,0.6s
SQTA   Sankt Quirin      26.15 172  eP       P        13 15 16.5  +5.9
       comp=Z,3.8nm,0.8s
VSR    Storozhevoye      26.16 129  eP       P        13 15 12.2  +1.7
VSR                                  pmax    pmax
       comp=Z,10.0nm,0.8s
FETA   Feichten          26.33 173  eP       P        13 15 12.8  +0.5
       comp=Z,7.5nm,2.0s
ARSA   Arzberg           26.36 166  eP       P        13 15 15.0  +2.7
       comp=Z,1.7nm,0.6s
VORD   Divnogorie        26.42 129  eP       P        13 15 13.9  +1.1
VORD                                 pmax    pmax
       comp=Z,10.0nm,0.7s
DAVOX  Davos/Dischmat    26.54 175   LR      LR       13 25 58.8
       comp=Z,203nm,21.1s,baz=40,slow=37
ARU    Arti              26.56 101   P       P        13 15 15.2  +1.2
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       comp=Z,5.2nm,0.9s,baz=337,slow=9.0,SNR=8.0
ARU    Arti              26.56 101d iP      P        13 15 15.7  +1.7
ARU                                                   13 15 54.4
ARU                                  S       S        13 19 53.1  +5.1
ARU                                  SS      SnSn     13 20 54.5  +5.0
ARU                                  pmax    pmax
       comp=Z,15nm,0.9s
ARU    Arti              26.56 101   P       P        13 15 15.1  +1.0
ARU                                  IAmb    IAmb     13 15 24.3
       comp=Z,23nm,1.0s
ABTA   Abfaltersbach     26.68 170  eP       P        13 15 16.4  +1.1
       comp=Z,6.7nm,1.2s
VRH    Novokhopyorsk     26.76 126  eP       P        13 15 16.9  +1.0
VRH                                  pmax    pmax
       comp=Z,10.0nm,0.7s
MYKA   Terra Mystica     26.85 169  eP       P        13 15 23.7  +6.8
       comp=Z,9.0nm,1.2s
SOKA   Soboth            26.89 167  eP       P        13 15 19.9  +2.7
       comp=Z,2.2nm,0.7s
BUR08  Bucovina Ar. S    27.00 151   P       P        13 15 15.6  -2.7
BUR08                                IAmb    IAmb     13 15 31.6
       comp=Z,20nm,1.4s
BELG   Belogornoye       27.13 117   P       P        13 15 20.1  +0.9
       comp=Z,22nm,0.9s,baz=265,slow=5.5,SNR=3.7
BELG   Belogornoye       27.13 117⇑eP       P        13 15 20.5  +1.3
BELG                                 pmax    pmax
       comp=Z,4.0nm,0.9s
OSSC   Osservatorio P    29.84 173   P       P        13 15 41.8  -1.6
OSSC                                 IAmb    IAmb     13 15 51.0
       comp=Z,8.9nm,0.8s
TIXI   Tiksi             30.92  31⇑eP       P        13 15 54.6  +1.9
TIXI   Tiksi             30.92  31   P       P        13 15 53.3  +0.6
TIXI                                 IAmb    IAmb     13 16 01.0
       comp=Z,13nm,1.1s
AKTO   Aktyubinsk        31.69 107   P       P        13 16 00.4  +0.7
       comp=Z,6.6nm,1.0s,baz=305,slow=8.8,SNR=12
BRVK   Borovoye          32.87  92⇑eP       P        13 16 10.6  +0.6
BRVK                                 pmax    pmax
       comp=Z,16nm,2.2s
BRVK   Borovoye          32.87  92   P       P        13 16 10.8  +0.8
BVAR   Borovoye Array    32.93  92   P       P        13 16 11.8  +1.2
       comp=Z,1.5nm,0.9s,baz=348,slow=24,SNR=3.6
ABKAR  Akbulak array     33.30 106   P       P        13 16 14.3  +0.5
ABKAR                                IAmb    IAmb     13 16 17.5
       comp=Z,9.3nm,1.0s
KIV    Kislovodsk        33.80 130  eP       P        13 16 21.3  +3.0
KIV                                  pmax    pmax
       comp=Z,17nm,1.0s
KIV                                  MLR     MLR
       comp=Z,641nm,15.0s
ESDC   Sonseca Array     33.97 194   P       P        13 16 20.0  +0.2
       comp=Z,1.0nm,0.9s,baz=359,slow=12,SNR=2.6
KBZ    Khabaz            34.06 130   P       P        13 16 22.7  +2.2
       comp=Z,4.2nm,0.9s,baz=318,slow=3.2,SNR=12
KBZ                                  LR      LR       13 30 37.9
       comp=Z,395nm,18.3s,baz=333,slow=37
KBZ    Khabaz            34.06 130⇑iP       P        13 16 23.3  +2.9
KBZ                                  pmax    pmax
       comp=Z,4.0nm,0.9s
BRTR   Keskin Array B    36.06 143   P       P        13 16 37.0  -0.8
       comp=Z,1.7nm,0.9s,baz=345,slow=4.2,SNR=6.0
BRZS   Berezniki         36.29  92  eP       P        13 16 40.1  +0.4
       comp=Z,2.0nm,0.9s,baz=93
BRZS   Berezniki         36.29  92  eP       P        13 16 40.0  +0.4
BRZS                                 pmax    pmax
       comp=Z,2.0nm,0.9s
ZALV   Zalesovo Beam     36.30  78   P       P        13 16 40.1  +0.5
       comp=Z,1.7nm,0.8s,baz=325,slow=10.0,SNR=6.0
ZALV                                 PcP     PcP      13 19 04.3  +0.3
       comp=Z,0.4nm,0.3s,baz=333,slow=2.3,SNR=5.1
INK    Inuvik            36.35 336   LR      LR       13 31 31.5
       comp=Z,175nm,20.3s,baz=24,slow=36
INK    Inuvik            36.35 336   P       P        13 16 40.8  +0.9
INK                                  pmax    pmax
       comp=Z,10.0nm,1.4s
INK    Inuvik            36.35 336   P       P        13 16 40.8  +0.9
INK                                  IAmb    IAmb     13 16 44.6
       comp=Z,10nm,1.4s
AKT    Akhty             37.32 125  eP       P        13 16 50.4  +1.8
AKT                                 e                 13 18 16.8
AKT                                  pmax    pmax
       comp=Z,19nm,1.1s
KURK   Kurchatov         37.37  86⇓eP       P        13 16 49.0  +0.3
KURK                                 pmax    pmax
       comp=Z,14nm,1.9s
KURK   Kurchatov         37.37  86   P       P        13 16 49.0  +0.3
KEST   Kesra             37.56 176   LR      LR       13 31 18.6
       comp=Z,114nm,19.5s,baz=321,slow=35
GNI    Garni             37.89 129   P       P        13 16 54.8  +1.4
       comp=Z,2.9nm,0.4s,baz=342,slow=20,SNR=1.5
GNI    Garni             37.89 129⇓eP       P        13 16 55.3  +1.8
GNI                                  pmax    pmax
       comp=Z,9.0nm,1.2s
GNI    Garni             37.89 129   P       P        13 16 53.1  -0.4
GNI                                  IAmb    IAmb     13 17 07.2
       comp=Z,9.3nm,1.1s
SEM    Semipalatinsk     38.12  85  eP       P        13 16 55.3  -0.1
       baz=85
SEM    Semipalatinsk     38.12  85  eP       P        13 16 55.2  -0.1
EPYK   Eagle Plains      38.57 337   P       P        13 16 57.4  -1.4
RDOG   Red Dog Mine      38.82 354   P       P        13 17 00.6  -0.2
RDOG                                 IAmb    IAmb     13 17 08.6
       comp=Z,13nm,1.0s
YKA    Yellowknife Ar    38.93 321   P       P        13 17 01.7  -0.1
       comp=Z,1.3nm,0.8s,baz=19,slow=8.5,SNR=13
YKA                                  PcP     PcP      13 19 12.2  +0.3
       comp=Z,2.9nm,1.2s,baz=23,slow=3.0,SNR=8.8
YKA                                  LR      LR       13 33 11.4
       comp=Z,492nm,18.7s,baz=0.0,slow=36
YAK    Yakutsk           39.80  38⇓eP       P        13 17 07.2  -1.8
YAK                                  pmax    pmax
       comp=Z,13nm,1.4s
YAK    Yakutsk           39.80  38   P       P        13 17 08.3  -0.7
YAK                                  IAmb    IAmb     13 17 09.4
       comp=Z,11nm,1.2s
PRP    Porcupine Dome    40.29 342   P       P        13 17 14.7  +1.5
DGZ    Jazzator, Alta    40.82  79⇑eP       P        13 17 17.7  -0.1
DGZ                                  pmax    pmax
       comp=Z,7.0nm,1.8s
MDM    Murphy Dome       41.07 344   P       P        13 17 20.1  +0.5
DAWY   Dawson            41.10 338   P       P        13 17 20.4  +0.5
COLA   College           41.12 344⇑eP       P        13 17 23.2  +3.3
COLA                                 pmax    pmax
       comp=Z,7.0nm,1.2s
IL31                     41.14 343   P       P        13 17 20.3  +0.2
ILAR   Eielson Array     41.14 343   P       P        13 17 21.6  +1.5
       comp=Z,3.2nm,1.1s,baz=1.6,slow=6.0,SNR=21
ILAR                                 PcP     PcP      13 19 19.8  +0.7
       comp=Z,0.8nm,1.1s,baz=354,slow=4.1,SNR=5.1
BTLS   Baital            41.16  95  eP       P        13 17 21.3  +0.8
       baz=95
BTLS   Baital            41.16  95  eP       P        13 17 21.3  +0.8
WRH    Wood River Hil    41.54 344   P       P        13 17 24.7  +1.4
MAKZ   Makanchi          41.86  86   P       P        13 17 26.9  +0.7
MAKZ                                 pmax    pmax
       comp=Z,12nm,1.5s
MAKZ   Makanchi          41.86  86   P       P        13 17 26.9  +0.7
KK31   Karatay Array     41.91  99   P       P        13 17 27.1  +0.4
KK31                                 pmax    pmax
       comp=Z,6.0nm,1.0s
KK31   Karatay Array     41.91  99   P       P        13 17 27.1  +0.4
KKAR   Karatay Array     41.91  99   P       P        13 17 27.1  +0.4
KKAR                                 pmax    pmax
       comp=Z,6.0nm,1.0s
KKAR   Karatay Array     41.91  99   P       P        13 17 27.1  +0.4
MK31   Makanchi Array    41.96  86⇑eP       P        13 17 28.4  +1.3
MK31   Makanchi Array    41.96  86   P       P        13 17 27.6  +0.6
MKAR   Makanchi Array    41.96  86   P       P        13 17 27.9  +0.9
       comp=Z,6.0nm,1.1s,baz=343,slow=6.3,SNR=19
MKAR                                 PP      PP       13 19 09.2  +5.3
       comp=Z,1.2nm,1.0s,baz=328,slow=9.2,SNR=5.4
MKAR   Makanchi Array    41.96  86   P       P        13 17 28.0  +0.9
DOT    Dot Lake          41.99 341   P       P        13 17 28.4  +1.3
DOT                                  IAmb    IAmb     13 17 31.6
       comp=Z,16nm,1.4s
SEY    Seymchan          42.24  22⇓eP       P        13 17 30.0  +0.9
TDK    Taldyqorghan      42.46  90  eP       P        13 17 32.3  +1.1
       baz=91
TDK    Taldyqorghan      42.46  90  eP       P        13 17 32.2  +1.1
IUG    Iuzhnay           42.65 100  eP       P        13 17 34.1  +1.3
       baz=100
IUG    Iuzhnay           42.65 100  eP       P        13 17 34.1  +1.3
TRF    Thorofare Moun    42.72 345   P       P        13 17 34.8  +1.6
TRF                                  IAmb    IAmb     13 17 59.4
       comp=Z,13nm,1.5s
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MOY	**Mondy**	**42.80**	**66**	*e*P	**P**	**13 17 35.6**	**+1.7**
MOY				pmax	pmax		
	comp=Z,30nm,3.3s						
KUU	**Kurty**	**42.87**	**93**	*e*P	**P**	**13 17 35.7**	**+1.1**
	comp=Z,5.2nm,1.1s,baz=93						
KUU	**Kurty**	**42.87**	**93**	*e*P	**P**	**13 17 35.6**	**+1.1**
KUU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHKK	**Chushkaly**	**43.10**	**92**	*e*P	**P**	**13 17 36.6**	**+0.3**
	baz=93						
CHKK	**Chushkaly**	**43.10**	**92**	*e*P	**P**	**13 17 36.6**	**+0.3**
GEYT	**Alibeck**	**43.29**	**115**	P	**P**	**13 17 39.5**	**+1.6**
	comp=Z,6.0nm,0.7s,baz=320,slow=5.8,SNR=10						
FFC	**Flin Flon**	**43.42**	**307**	P	**P**	**13 17 38.7**	**-0.1**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FFC	**Flin Flon**	**43.42**	**307**	P	**P**	**13 17 38.7**	**-0.1**
AAK	**Ala-Archa**	**43.49**	**96**	⇑*e*P	**P**	**13 17 41.9**	**+2.2**
AAK				pmax	pmax		
	comp=Z,14nm,1.1s						
AAK	**Ala-Archa**	**43.49**	**96**	P	**P**	**13 17 39.2**	**-0.5**
TRQ	**Mont Tremblant**	**43.90**	**279**	P	**P**	**13 17 43.2**	**+0.5**
KPKS	**Kokpek**	**43.95**	**91**	*e*P	**P**	**13 17 44.0**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=91						
KPKS	**Kokpek**	**43.95**	**91**	*e*P	**P**	**13 17 44.0**	**+0.8**
KPKS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SATY	**Saty**	**44.24**	**91**	*e*P	**P**	**13 17 46.5**	**+0.8**
	comp=Z,3.2nm,1.1s,baz=92						
SATY	**Saty**	**44.24**	**91**	*e*P	**P**	**13 17 46.4**	**+0.8**
SATY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SKT	**Skwentna**	**44.27**	**345**	P	**P**	**13 17 45.6**	**0.0**
SKT				IAmb	IAmb	13 17 48.9	
	comp=Z,9.1nm,1.0s						
BARN	**Barnard Glacie**	**44.28**	**338**	P	**P**	**13 17 46.6**	**+0.7**
BARN				IAmb	IAmb	13 18 00.5	
	comp=Z,11nm,1.3s						
KLU	**Klutina**	**44.28**	**341**	P	**P**	**13 17 46.6**	**+0.9**
KLU				IAmb	IAmb	13 18 10.4	
	comp=Z,14nm,1.5s						
CTGM	**Chitina Glacie**	**44.34**	**338**	P	**P**	**13 17 44.1**	**-2.1**
CTGM				IAmb	IAmb	13 17 46.5	
	comp=Z,6.8nm,1.1s						
SHLS	**Shalkode**	**44.45**	**90**	*e*P	**P**	**13 17 49.8**	**+2.4**
	comp=Z,7.0nm,1.0s,baz=90						
SHLS	**Shalkode**	**44.45**	**90**	*e*P	**P**	**13 17 49.7**	**+2.4**
SHLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KNK	**Knik Glacier**	**44.59**	**343**	P	**P**	**13 17 49.0**	**+0.9**
KNK				IAmb	IAmb	13 18 12.7	
	comp=Z,20nm,1.5s						
SUA	**Susitna One**	**44.72**	**345**	P	**P**	**13 17 49.9**	**+0.6**
ULM	**Lac du Bonnet**	**46.05**	**299**	P	**P**	**13 17 59.2**	**-0.6**
	comp=Z,4.6nm,1.0s,baz=60,slow=6.5,SNR=6.0						
ULM				LR	LR	13 37 18.2	
	comp=Z,449nm,18.1s,baz=46,slow=36						
ULM	**Lac du Bonnet**	**46.05**	**299**	P	**P**	**13 17 59.7**	**0.0**
ULM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULM	**Lac du Bonnet**	**46.05**	**299**	P	**P**	**13 17 59.7**	**0.0**
ULM				IAmb	IAmb	13 18 00.9	
	comp=Z,6.9nm,1.1s						
WMQ	**Urumqi**	**46.23**	**82**	*e*P	**P**	**13 18 02.9**	**+1.5**
J59A	**Piesco**	**46.40**	**277**	P	**P**	**13 18 04.3**	**+1.6**
ZEA	**Zeya**	**47.10**	**44**	*e*P	**P**	**13 18 09.7**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
E43A	**Lone Tree Farm**	**47.26**	**290**	P	**P**	**13 18 10.2**	**+0.9**
SONM	**Songino Array**	**47.73**	**64**	P	**P**	**13 18 14.6**	**+1.5**
	comp=Z,2.9nm,1.0s,baz=329,slow=6.9,SNR=11						
SONM				PcP	**PcP**	**13 19 42.7**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=347,slow=3.3,SNR=5.2						
ULN	**Ulaanbaatar**	**47.87**	**63**	⇓*e*P	**P**	**13 18 15.5**	**+1.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ULN	**Ulaanbaatar**	**47.87**	**63**	P	**P**	**13 18 13.3**	**-0.9**
ULN				IAmb	IAmb	13 18 18.5	
	comp=Z,5.0nm,0.9s						
KDAK	**Kodiak Island**	**48.52**	**345**	P	**P**	**13 18 19.5**	**+0.7**
KDAK				pmax	pmax		
	comp=Z,33nm,1.5s						
KDAK	**Kodiak Island**	**48.52**	**345**	P	**P**	**13 18 19.5**	**+0.7**
HIA	**Hailar**	**49.68**	**52**	⇓*e*P	**P**	**13 18 28.7**	**+0.8**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
F33A	**5 Mile Ranch,**	**50.23**	**297**	P	**P**	**13 18 32.2**	**+0.1**
R61A	**Willards**	**51.38**	**275**	P	**P**	**13 18 40.2**	**-0.7**
ECSD	**EROS Data Cent**	**52.28**	**297**	P	**P**	**13 18 47.8**	**+0.3**
ECSD				IAmb	IAmb	13 18 50.1	
	comp=Z,8.2nm,1.1s						
PETK	**Petropavlovsk-**	**52.46**	**21**	P	**P**	**13 18 49.7**	**+0.9**
	comp=Z,7.5nm,1.1s,baz=354,slow=2.9,SNR=3.2						
MSO	**Missoula**	**53.50**	**312**	P	**P**	**13 18 56.6**	**0.0**
MSO				IAmb	IAmb	13 19 03.9	
	comp=Z,8.4nm,1.3s						
GCMT	**Greycliff**	**53.53**	**309**	P	**P**	**13 18 56.4**	**-0.5**
U61A	**Possum Corner**	**53.56**	**275**	P	**P**	**13 18 56.6**	**-0.4**
GTA	**Gaotai**	**53.76**	**73**	*e*P	**P**	**13 18 59.6**	**+1.0**
GTA				pP	sP	13 19 03.0	+1.2
GTA				sP	pwP	13 19 06.4	+1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,220nm,4.7s						
GTA				LR	LR		
	comp=N,290nm,15.3s						
GTA				LR	LR		
	comp=E,260nm,16.4s						
GTA				LR	LR		
	comp=Z,330nm,15.3s						
RSSD	**Black Hills**	**53.78**	**303**	P	**P**	**13 18 58.8**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RSSD	**Black Hills**	**53.78**	**303**	P	**P**	**13 18 58.8**	**-0.1**
RSSD				IAmb	IAmb	13 19 02.2	
	comp=Z,6.5nm,1.1s						
RLMT	**Red Lodge**	**54.08**	**308**	P	**P**	**13 19 00.8**	**-0.2**
YHL	**Hebgen Lake**	**54.77**	**309**	P	**P**	**13 19 05.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**55.58**	**63**	*e*P	**P**	**13 19 13.4**	**+1.6**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
K22A	**Casper**	**55.77**	**305**	P	**P**	**13 19 12.8**	**-0.5**
K22A				IAmb	IAmb	13 19 13.9	
	comp=Z,8.6nm,0.9s						
BCYI	**Bear Canyon**	**55.77**	**311**	P	**P**	**13 19 12.5**	**-0.8**
S44A	**Carbondale**	**55.94**	**288**	P	**P**	**13 19 13.3**	**-0.9**
BW06	**Boulder Array**	**56.38**	**307**	P	**P**	**13 19 17.3**	**-0.3**
BW06				IAmb	IAmb	13 19 21.5	
	comp=Z,7.5nm,1.2s						
PD31	**Pinedale Array**	**56.38**	**307**	P	**P**	**13 19 17.3**	**-0.3**
PD31				IAmb	IAmb	13 19 21.5	
	comp=Z,7.0nm,1.2s						
PDAR	**Pinedale Array**	**56.38**	**307**	P	**P**	**13 19 17.4**	**-0.2**
	comp=Z,4.3nm,1.1s,baz=39,slow=5.7,SNR=14						
PDAR				LR	LR	13 44 04.7	
	comp=Z,125nm,19.2s,baz=59,slow=37						
HLID	**Hailey**	**56.71**	**312**	P	**P**	**13 19 19.4**	**-0.5**
T42A	**Van Buren**	**57.07**	**289**	P	**P**	**13 19 22.0**	**-0.3**
T42A				IAmb	IAmb	13 19 22.8	
	comp=Z,6.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**57.14**	**44**	LR	LR	13 47 26.6	
	comp=Z,260nm,18.8s,baz=293,slow=40						
MGMO	**Mountain Grove**	**57.27**	**290**	P	**P**	**13 19 23.1**	**-0.7**
MGMO				IAmb	IAmb	13 19 25.1	
	comp=Z,6.6nm,0.8s						
N23A	**Red Feather La**	**57.29**	**304**	P	**P**	**13 19 23.9**	**-0.3**
BJT	**Baijiatuau**	**57.53**	**59**	P	**P**	**13 19 25.8**	**+0.3**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BJT	**Baijiatuau**	**57.53**	**59**	P	**P**	**13 19 25.8**	**+0.3**
ISCO	**Idaho Springs**	**58.25**	**303**	P	**P**	**13 19 30.6**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ISCO	**Idaho Springs**	**58.25**	**303**	P	**P**	**13 19 30.6**	**-0.4**
ISCO				IAmb	IAmb	13 19 39.5	
	comp=Z,6.5nm,1.2s						
O20A	**White River Ci**	**58.56**	**305**	P	**P**	**13 19 33.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**60.08**	**185**	P	**P**	**13 19 43.4**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=353,slow=7.1,SNR=14						
PV12	**Saucer Basin,**	**60.42**	**305**	P	**P**	**13 19 46.1**	**+0.2**
PV12				IAmb	IAmb	13 19 49.8	
	comp=Z,8.4nm,1.3s						
PV11	**David Mesa, Pa**	**60.46**	**305**	P	**P**	**13 19 45.9**	**-0.2**
PV11				IAmb	IAmb	13 19 47.6	
	comp=Z,6.6nm,1.1s						
PV03	**Paradox Valley**	**60.50**	**305**	P	**P**	**13 19 46.3**	**-0.1**
PV03				IAmb	IAmb	13 19 56.7	
	comp=Z,6.7nm,1.4s						
PV01	**Paradox Valley**	**60.54**	**305**	P	**P**	**13 19 46.7**	**-0.1**
PV01				IAmb	IAmb	13 19 51.1	
	comp=Z,8.2nm,1.1s						
PV05	**Paradox Valley**	**60.72**	**305**	P	**P**	**13 19 47.1**	**-0.9**
PV05				IAmb	IAmb	13 19 52.0	
	comp=Z,6.0nm,1.1s						
PSUT	**Pine Spring**	**61.39**	**309**	P	**P**	**13 19 52.6**	**+0.2**
MVCO	**Mesa Verde**	**61.41**	**304**	P	**P**	**13 19 53.2**	**+0.5**
R11A	**Troy Canyon, C**	**61.95**	**311**	P	**P**	**13 19 55.6**	**-0.6**
NVAR	**Mina Array Bea**	**62.46**	**313**	P	**P**	**13 20 00.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=20,slow=4.7,SNR=4.8						
NJ2	**Nanjing**	**65.76**	**59**	*e*P	**P**	**13 20 19.1**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
TX31	**Lajitas Ar. Si**	**67.70**	**298**	P	**P**	**13 20 32.9**	**-0.8**
TX32	**Lajitas Array**	**67.70**	**298**	P	**P**	**13 20 33.0**	**-0.7**
TX32				IAmb	IAmb	13 20 36.2	
	comp=Z,5.5nm,1.5s						
TXAR	**Lajitas Array**	**67.70**	**298**	P	**P**	**13 20 33.8**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=64,slow=6.0,SNR=7.0						
CHTO	**Chiang Mai**	**72.90**	**82**	P	**P**	**13 21 05.2**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CHTO	**Chiang Mai**	**72.90**	**82**	P	**P**	**13 21 05.2**	**-0.3**
CHTO				IAmb	IAmb	13 21 06.8	
	comp=Z,10nm,1.2s						
CMAR	**Chiang Mai Arr**	**73.24**	**82**	P	**P**	**13 21 08.2**	**+0.7**
	comp=Z,2.8nm,1.1s,baz=326,slow=6.2,SNR=11						
OTAV	**Otavalo**	**88.25**	**265**	P	**P**	**13 22 28.4**	**+0.1**
OTAV				pmax	pmax		
	comp=Z,18nm,1.4s						
OTAV	**Otavalo**	**88.25**	**265**	P	**P**	**13 22 28.4**	**+0.1**
WRA	**Warramunga Arr**	**119.54**	**58**	PKP	**PKPdf**	**13 28 24.9**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=340,slow=2.4,SNR=3.2						
ASAR	**Alice Springs**	**123.00**	**60**	PKP	**PKPdf**	**13 28 31.6**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=354,slow=1.8,SNR=34						

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*IDC **19** 13:11:26.8±0.7, 73°.14N×6°.46E, h0^{km}, mb3.6/7, mb1 3.8/13, mb1mx3.6/48, mbtmp3.7/13, ML3.2/6, Error ellipse: s-maj=21.5km s-min=13.5km az=52.0*

*NAO **19** 13:11:27.4±3.6, 73°.24N×6°.76E, ML3.4*

*BER **19** 13:11:29.3±2.1, 73°.25N×6°.49E, h10^{km}, ML2.4, ML3.4(NAO), Confirmed Earthquake*

ISC 19 13:11:27.6±0.6**, 73°.20N**±0°.05×**6°.90E**±0°.07**, h10^{km}, n48, σ2ˢ.00**/59**, mb3.8**/7**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.62**	**63**	Pn	**Pn**	**13 12 24.4**	**+0.9**
BJO1	**Bjornoya**	**3.62**	**63**	*e*P	**Pn**	**13 12 24.5**	**+0.9**
BJO1				*e*S	**Sn**	**13 13 06.1**	**-0.2**
BJO1				IAML		13 13 22.1	
	comp=Z,20nm,0.9s						
HSPB	**Hornsund (broa**	**4.42**	**26**	Pn	**Pn**	**13 12 34.8**	**+0.3**
HSPB	**Hornsund (broa**	**4.42**	**26**	*e*P	**Pn**	**13 12 34.5**	**0.0**
HSPB				*e*S	**Sn**	**13 13 20.3**	**-5.5**
JNE	**Jan Mayen East**	**5.18**	**252**	*e*P	**Pn**	**13 12 42.9**	**-2.1**
JNW	**Jan Mayen West**	**5.20**	**253**	*e*P	**Pn**	**13 12 43.2**	**-2.0**
BRBA	**Barentsburg A**	**5.21**	**17**	Pn	**Pn**	**13 12 45.0**	**-0.4**
BRBA	**Barentsburg A**	**5.21**	**17**	*e*P	**Pn**	**13 12 44.9**	**-0.4**
JMIC	**Jan Mayen**	**5.24**	**252**	Pn	**Pn**	**13 12 43.5**	**-2.3**
	baz=157,slow=22,SNR=2.2						
JMIC	**Jan Mayen**	**5.24**	**252**	*e*P	**Pn**	**13 12 43.6**	**-2.2**
JMIC				*e*P	**Pn**	**13 12 43.7**	**-2.2**
TRO	**Tromso**	**5.25**	**127**	Pn	**Pn**	**13 12 47.6**	**+1.6**
TRO	**Tromso**	**5.25**	**127**	*e*P	**Pn**	**13 12 47.2**	**+1.3**
TRO				*e*S	**Sn**	**13 13 42.2**	**-4.2**
TRO				IAML		13 13 46.3	
	comp=Z,11nm,0.3s						
JMI	**Jan Mayen**	**5.33**	**252**	*e*P	**Pn**	**13 12 45.2**	**-1.8**
SPA0	**Spitsbergen Ar**	**5.51**	**21**	Pn	**Pn**	**13 12 50.3**	**+0.7**
	baz=195,slow=14						
SPA0	**Spitsbergen Ar**	**5.51**	**21**	Pn	**Pn**	**13 12 50.3**	**+0.7**
	baz=195,slow=14						
SPA0				*e*S	**Sn**	**13 13 48.9**	**-4.0**
SPITS	**Spitsbergen Ar**	**5.51**	**21**	Pn	**Pn**	**13 12 50.0**	**+0.4**
	baz=196,slow=15,SNR=7.1						
SPITS				Sn	**Sn**	**13 13 51.8**	**-1.2**
	baz=183,slow=7.2,SNR=1.2						
LOF	**Lofoten**	**5.55**	**153**	Pn	**Pn**	**13 12 51.2**	**+1.2**
LOF	**Lofoten**	**5.55**	**153**	*e*P	**Pn**	**13 12 52.0**	**+1.9**
LOF				IAML		13 13 49.0	
	comp=Z,15nm,0.6s						
JETT	**Jettan, Norway**	**5.66**	**124**	Pn	**Pn**	**13 12 54.2**	**+2.6**
HOPEN	**Hopen**	**5.77**	**47**	Pn	**Pn**	**13 12 53.5**	**+0.4**
HOPEN	**Hopen**	**5.77**	**47**	*e*P	**Pn**	**13 12 53.5**	**+0.4**
HAMF	**Hammerfest**	**5.81**	**108**	Pn	**Pn**	**13 12 54.5**	**+0.9**
HAMF	**Hammerfest**	**5.81**	**108**	*e*P	**Pn**	**13 12 54.1**	**+0.5**
KBS	**Kingsbay**	**5.88**	**10**	Pn	**Pn**	**13 12 54.7**	**+0.2**
KBS	**Kingsbay**	**5.88**	**10**	*e*P	**Pn**	**13 12 54.8**	**+0.2**
STEI	**Steigen**	**5.98**	**148**	Pn	**Pn**	**13 12 57.4**	**+1.5**
STEI				Sn	**Sn**	**13 14 00.6**	**-3.7**
STEI	**Steigen**	**5.98**	**148**	*e*P	**Pn**	**13 12 57.7**	**+1.8**
STEI				*e*S	**Sn**	**13 14 00.7**	**-3.6**
STEI				IAML		13 14 03.4	
	comp=Z,4.8nm,0.8s						
KIF	**Kilpisjarvi**	**6.16**	**126**	*e*P	**Pn**	**13 13 00.2**	**+1.7**
KIF				*e*S	**Sn**	**13 14 04.9**	**-4.0**
NBB30	**Finnes**	**6.67**	**156**	*e*P	**Pn**	**13 13 05.4**	**-0.1**
KTK1	**Kautokeino**	**6.75**	**120**	*e*P	**Pn**	**13 13 09.0**	**+2.4**
ARA0	**ARCESS Array S**	**6.98**	**113**	Pn	**Pn**	**13 13 11.3**	**+1.6**
	baz=316,slow=12						
ARA0				Sn	**Sn**	**13 14 25.9**	**-3.1**
	baz=310,slow=22						
ARA0	**ARCESS Array S**	**6.98**	**113**	Pn	**Pn**	**13 13 11.3**	**+1.6**
	baz=316,slow=12						
ARA0				Sn	**Sn**	**13 14 25.9**	**-3.1**
	baz=310,slow=22						
ARCES	**ARCESS Array B**	**6.98**	**113**	Pn	**Pn**	**13 13 10.8**	**+1.1**
	baz=320,slow=11,SNR=7.1						
ARCES				Sn	**Sn**	**13 14 25.4**	**-3.7**
	baz=315,slow=24,SNR=2.4						
KONS	**Konsvik**	**7.07**	**159**	*e*P	**Pn**	**13 13 12.1**	**+1.3**
STOK	**Stokkvaagen**	**7.22**	**160**	*e*P	**Pn**	**13 13 14.2**	**+1.3**
DAG	**Danmarks Havn**	**7.48**	**310**	*e*S	Sn	13 14 28.1	-13
DBG	**Daneborg**	**7.64**	**291**	*e*S	Sn	13 14 30.2	-15
NOA	**NORSAR Array B**	**12.33**	**170**	Pn	**Pn**	**13 14 23.8**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=354,slow=12,SNR=1.5						
HFS	**Hagfors**	**13.38**	**165**	Pn	**Pn**	**13 14 37.9**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=339,slow=15,SNR=2.1						
FINES	**FINESS Array B**	**13.82**	**139**	Pn	**Pn**	**13 14 43.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=355,slow=15,SNR=2.1						
AKASG	**Malin Array Be**	**24.57**	**144**	P	**P**	**13 16 48.9**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=345,slow=9.8,SNR=3.1						
YKA	**Yellowknife Ar**	**39.03**	**321**	P	**P**	**13 18 54.0**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=17,slow=9.0,SNR=2.7						
YKA				PcP	**PcP**	**13 21 04.6**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=32,slow=3.6,SNR=2.8						
ILAR	**Eielson Array**	**41.18**	**343**	P	**P**	**13 19 12.7**	**+1.2**
	comp=Z,0.7nm,1.0s,baz=7.5,slow=6.9,SNR=4.5						
PDAR	**Pinedale Array**	**56.50**	**308**	P	**P**	**13 21 10.0**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=42,slow=6.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**60.11**	**186**	P	**P**	**13 21 35.7**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=348,slow=7.3,SNR=4.3						
TXAR	**Lajitas Array**	**67.84**	**298**	P	**P**	**13 22 25.7**	**0.0**
	comp=Z,0.2nm,0.7s,baz=46,slow=3.9,SNR=2.1						
CMAR	**Chiang Mai Arr**	**73.07**	**83**	P	**P**	**13 22 59.6**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=331,slow=7.2,SNR=2.6						
ASAR	**Alice Springs**	**122.84**	**61**	PKP	**PKPdf**	**13 30 23.1**	**0.0**
	comp=Z,0.5nm,0.6s,baz=7.7,slow=2.0,SNR=8.9						

BUC 19 13:12:18.7±0.7**, 44°.44N**×**28°.54E, h8^{km}**±3^{km}**, ml1.4**/2**, 10C-4D, Error ellipse: s-maj=6.3km s-min=2.8km az=97.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIRR	**Tirgusor**	**0.09**	**283**	⇓P	Pg	13 12 20.7	-0.2
TIRR				⇑S	Sg	13 12 22.8	+0.3
TIRR	**Tirgusor**	**0.09**	**283**	⇓P	Pg	13 12 20.7	-0.2
TIRR				⇑S	Sg	13 12 22.8	+0.3
TPGR	**Topolog**	**0.43**	**349**	⇑P	Pg	13 12 27.3	+0.3
TPGR				⇑S	Sg	13 12 33.0	+0.3
TPGR	**Topolog**	**0.43**	**349**	⇑P	Pg	13 12 27.3	+0.3
TPGR				⇑S	Sg	13 12 33.0	+0.3
HARR	**Harsova**	**0.50**	**300**	⇓P	Pg	13 12 28.4	0.0
HARR	**Harsova**	**0.50**	**300**	⇓P	Pg	13 12 28.4	0.0
CFR	**Carcaliu**	**0.79**	**339**	⇑P	Pg	13 12 33.8	-0.1
CFR				⇑S	Sb	13 12 45.1	-0.6
CFR	**Carcaliu**	**0.79**	**339**	⇑P	Pg	13 12 33.8	-0.1
CFR				⇑S	Sb	13 12 45.1	-0.6

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*NEIC **19** 13:22:53.5±1.9, 15°.41N±0°.06×93°.38W±0°.06, h85^{km}±7^{km}, mb4.5/4, Md4.0/24(MEX), Error ellipse: s-maj=10.3km s-min=6.4km az=215.0*

*MEX **19** 13:22:55.1±0.7, 15°.46N×93°.36W, h88^{km}±5^{km}, MD4.0*

ISC 19 13:22:53.6±0.9**, 15°.45N**±0°.05×**93°.37W**±0°.04**, h87^{km}**±7^{km}**, n28, σ0ˢ.67**/42**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.30**	**30**	*i* P	**Pn**	**13 23 06.4**	**-0.3**
PCIG				*i* S	**Sn**	**13 23 16.3**	**-0.1**
PCIG		**0.30**	**30**		**Pn**	**13 23 06.4**	**-0.3**
PCIG					**Sn**	**13 23 16.3**	**-0.1**
THIG		**1.20**	**116**	*i* P	**Pn**	**13 23 15.4**	**0.0**
THIG				*i* S	**Sn**	**13 23 32.0**	**+0.1**
THIG		**1.20**	**116**		**Pn**	**13 23 15.4**	**0.0**
THIG					**Sn**	**13 23 32.0**	**+0.1**
TGIG		**1.35**	**10**	*i* P	**Pn**	**13 23 17.6**	**+0.2**
TGIG				*i* S	**Sn**	**13 23 34.5**	**-0.8**
TGIG		**1.35**	**10**		**Pn**	**13 23 17.6**	**+0.2**
TGIG					**Sn**	**13 23 34.5**	**-0.8**
TGBT	**Tuxtla Gutierr**	**1.35**	**12**	*i* P	**Pn**	**13 23 17.6**	**+0.3**
TGBT				*i* S	**Sn**	**13 23 34.6**	**-0.6**
TGBT	**Tuxtla Gutierr**	**1.35**	**12**		**Pn**	**13 23 17.6**	**+0.3**
TGBT					**Sn**	**13 23 34.6**	**-0.6**
CCIG	**Comitan**	**1.45**	**55**	*i* P	**Pn**	**13 23 19.6**	**+0.8**
CCIG				*i* S	**Sn**	**13 23 37.5**	**-0.3**
CCIG	**Comitan**	**1.45**	**55**		**Pn**	**13 23 19.6**	**+0.8**
CCIG					**Sn**	**13 23 37.5**	**-0.3**
HUEH	**Huehuetenango**	**1.81**	**94**	Pn	**Pn**	**13 23 23.6**	**+0.1**
RTAL	**Retalhuleu**	**1.86**	**119**	Pn	**Pn**	**13 23 24.0**	**0.0**
CMIG	**Matias Romero**	**2.19**	**319**	*i* P	**Pn**	**13 23 29.2**	**+1.0**
CMIG				*i* S	**Sn**	**13 23 55.1**	**+0.4**
CMIG	**Matias Romero**	**2.19**	**319**		**Pn**	**13 23 29.2**	**+1.0**
CMIG					**Sn**	**13 23 55.1**	**+0.4**
HUIG	**Huatulco**	**2.66**	**277**	*i* P	**Pn**	**13 23 34.3**	**-0.1**
HUIG				*e*S	**Sn**	**13 24 05.3**	**-0.5**
HUIG	**Huatulco**	**2.66**	**277**		**Pn**	**13 23 34.3**	**-0.1**
HUIG					**Sn**	**13 24 05.3**	**-0.5**
PETF	**Flores**	**3.67**	**66**		**Pn**	**13 23 48.8**	**+0.6**
ESQI	**Esquipulas**	**3.99**	**102**	Pn	**Pn**	**13 23 51.3**	**-1.4**
TGUH	**Tegucigalpa,Un**	**6.06**	**102**	Pn	**Pn**	**13 24 22.4**	**+1.5**
TEIG	**Tepich**	**6.79**	**45**		**Pn**	**13 24 29.5**	**-1.2**
833A	**Chaparral WMA,**	**13.97**	**337**	P	**P**	**13 26 12.8**	**-0.1**
BCIP	**Isla Barro Col**	**14.62**	**114**	Pn	**Pn**	**13 26 16.6**	**+0.4**
545A	**Edgard**	**14.77**	**10**	P	**P**	**13 26 21.2**	**-0.5**
MTDJ	**Mount Denham**	**15.41**	**77**	Pn	**Pn**	**13 26 27.2**	**+0.9**
MTDJ				IAmb	IAmb	13 26 55.7	
	comp=Z,77nm,1.5s						
250A	**Grady**	**17.68**	**20**	P	**P**	**13 26 54.5**	**+0.5**
250A				IAmb	IAmb	13 27 04.1	
	comp=Z,24nm,1.3s						
WMOK	**Wichita Mounta**	**19.82**	**347**	P	**P**	**13 27 17.7**	**+0.4**
LENM	**Lemitar**	**22.31**	**329**	P	**P**	**13 27 43.3**	**-1.0**
BGNE	**Belgrade**	**26.20**	**352**	P	**P**	**13 28 19.3**	**-0.9**

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*IDC **19** 13:27:41.8±5.5, 73°.20N×6°.30E, h0^{km}, mb3.6/1, mb1 3.6/3, mb1mx3.1/37, mbtmp3.6/3, ML2.7/2, MS3.8/1, Ms1 3.7/1, ms1mx2.7/50, Error ellipse: s-maj=95.1km s-min=36.2km az=173.0*

*BER **19** 13:27:43.6±1.7, 73°.30N×6°.02E, h3^{km}±25^{km}, ML2.0, Confirmed Earthquake*

ISC 19 13:27:41.0±1.0**, 73°.36N**±0°.10×**5°.65E**±0°.09**, h10^{km}, n17, σ1ˢ.72**/18**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRBA	**Barentsburg A**	**5.17**	**20**	*e*P	**Pn**	**13 29 00.2**	**+1.9**
SPA0	**Spitsbergen Ar**	**5.50**	**24**	*e*P	**Pn**	**13 29 05.2**	**+2.3**
TRO	**Tromso**	**5.64**	**125**	*e*P	**Pn**	**13 29 04.0**	**-0.7**
LOF	**Lofoten**	**5.86**	**150**	*e*P	**Pn**	**13 29 08.0**	**+0.2**
HOPEN	**Hopen**	**5.93**	**49**	*e*P	**Pn**	**13 29 08.1**	**-0.6**
HAMF	**Hammerfest**	**6.21**	**107**	*e*P	**Pn**	**13 29 10.7**	**-1.8**
STEI	**Steigen**	**6.31**	**145**	*e*P	**Pn**	**13 29 12.4**	**-1.5**
STEI				*e*S	Sn	13 30 16.8	-9.1
STEI				IAML		13 30 20.3	
	comp=Z,2.9nm,0.6s						
KIF	**Kilpisjarvi**	**6.55**	**124**	*e*P	**Pn**	**13 29 15.7**	**-1.5**
DAG	**Danmarks Havn**	**7.10**	**310**	*e*P	**Pn**	**13 29 25.8**	**+1.1**
DAG				*e*S	**Sn**	**13 30 42.7**	**-2.6**
DBG	**Daneborg**	**7.25**	**290**	*e*P	**Pn**	**13 29 29.0**	**+2.2**
DBG				*e*S	**Sn**	**13 30 46.8**	**-2.2**
KONS	**Konsvik**	**7.35**	**156**	*e*P	**Pn**	**13 29 27.8**	**-0.4**
ARA0	**ARCESS Array S**	**7.38**	**112**	*e*P	**Pn**	**13 29 27.9**	**-0.6**
ARCES	**ARCESS Array B**	**7.38**	**112**	Pn	**Pn**	**13 29 26.7**	**-1.9**
	baz=320,slow=10,SNR=10						
ARCES				Sn	Sn	13 30 41.5	-11
	baz=305,slow=21,SNR=1.7						
STOK	**Stokkvaagen**	**7.50**	**157**	*e*P	**Pn**	**13 29 29.7**	**-0.5**
FINES	**FINESS Array B**	**14.18**	**137**	Pn	**Pn**	**13 30 59.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=340,slow=15,SNR=1.6						
ULM	**Lac du Bonnet**	**45.79**	**299**	LR	LR	13 56 20.6	
	comp=Z,96nm,18.5s,baz=82,slow=37						
TORD	**Torodi Ar. Bea**	**60.24**	**184**	P	**P**	**13 37 50.3**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=357,slow=6.8,SNR=2.1						

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*IDC **19** 13:37:02.3±0.9, 73°.20N×6°.49E, h0^{km}, mb3.4/8, mb1 3.7/12, mb1mx3.5/51, mbtmp3.5/12, ML3.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/39, Error ellipse: s-maj=23.0km s-min=14.0km az=57.0*

*NAO **19** 13:37:03.2±3.3, 73°.23N×6°.84E, ML3.2*

*DNK **19** 13:37:04.6±2.2, 73°.53N×5°.48E, h0^{km}±79^{km}, ML2.9*

*BER **19** 13:37:04.7±3.3, 73°.32N×6°.53E, h10^{km}, ML2.2, ML3.2(NAO), Confirmed Earthquake*

ISC 19 13:37:01.6±0.6**, 73°.31N**±0°.06×**5°.87E**±0°.05**, h10^{km}, n49, σ2ˢ.86**/55**, mb3.4**/8**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.84**	**66**	*e*P	**Pn**	**13 38 00.8**	**+0.1**
HSPB	**Hornsund (broa**	**4.46**	**29**	*e*P	**Pn**	**13 38 09.1**	**0.0**
SPA0	**Spitsbergen Ar**	**5.53**	**23**	Pn	**Pn**	**13 38 24.9**	**+1.1**
	baz=195,slow=14						
SPA0	**Spitsbergen Ar**	**5.53**	**23**	Pn	**Pn**	**13 38 24.9**	**+1.1**
	baz=195,slow=14						
SPITS	**Spitsbergen Ar**	**5.53**	**23**	Pn	**Pn**	**13 38 24.6**	**+0.9**
	baz=201,slow=16,SNR=22						
SPITS				Sn	**Sn**	**13 39 23.4**	**-3.8**
	baz=225,slow=28,SNR=1.4						
TRO	**Tromso**	**5.55**	**125**	*e*P	**Pn**	**13 38 23.3**	**-0.8**
TRO				*e*S	**Sn**	**13 39 19.1**	**-8.8**
TRO				IAML		13 39 23.2	
	comp=Z,8.1nm,0.4s						
LOF	**Lofoten**	**5.79**	**150**	*e*P	**Pn**	**13 38 28.0**	**+0.7**
LOF				IAML		13 39 29.8	
	comp=Z,6.2nm,0.7s						
KBS	**Kingsbay**	**5.83**	**12**	*e*P	**Pn**	**13 38 30.0**	**+2.2**
KBS	**Kingsbay**	**5.83**	**12**	*e*P	**Pn**	**13 38 30.0**	**+2.2**
HOPEN	**Hopen**	**5.92**	**48**	*e*P	**Pn**	**13 38 28.6**	**-0.4**
HOPEN				*e*S	**Sn**	**13 39 30.3**	**-6.5**
HOPEN				IAML		13 39 31.5	
	comp=Z,3.2nm,1.0s						
HAMF	**Hammerfest**	**6.13**	**107**	Pn	**Pn**	**13 38 29.5**	**-2.4**
HAMF				Sn	Sn	13 39 31.0	-11
HAMF	**Hammerfest**	**6.13**	**107**	*e*P	**Pn**	**13 38 29.6**	**-2.4**
HAMF				*e*S	Sn	13 39 30.6	-11
HAMF				IAML		13 39 56.0	
	comp=Z,5.8nm,0.8s						
STEI	**Steigen**	**6.23**	**145**	*e*P	**Pn**	**13 38 33.1**	**-0.3**
STEI				IAML		13 39 31.0	
	comp=Z,3.8nm,1.0s						
KIF	**Kilpisjarvi**	**6.47**	**124**	*e*P	**Pn**	**13 38 35.6**	**-1.0**
KIF				*e*S	Sn	13 39 40.6	-10
FAUS	**Fauske**	**6.74**	**147**	*e*P	**Pn**	**13 38 41.6**	**+1.2**
KTK1	**Kautokeino**	**7.06**	**119**	*e*P	**Pn**	**13 38 44.7**	**-0.1**
DAG	**Danmarks Havn**	**7.18**	**310**	*e*P	**Pn**	**13 38 46.7**	**+0.2**
DAG				*e*S	**Sn**	**13 40 02.5**	**-5.5**
DAG				IAML		13 40 04.9	
	comp=Z,4.5nm,0.4s						
DAG	**Danmarks Havn**	**7.18**	**310**	*i* P	**Pn**	**13 38 46.0**	**-0.4**
DAG				*i* S	**Sn**	**13 40 02.1**	**-5.8**
DAG	**Danmarks Havn**	**7.18**	**310**	*i* P	**Pn**	**13 38 46.0**	**-0.4**

DAG				*i* S	Sn	13 40 02.2	-5.8
DAG				IAML		13 40 04.9	
	comp=Z,4.5nm,0.4s						
KONS	**Konsvik**	7.28	156	*e*P	Pn	13 38 47.5	-0.2
KONS				IAML		13 40 00.2	
	comp=Z,5.1nm,1.0s						
KONS				*e*S	Sn	13 40 00.4	-10
ARA0	**ARCESS Array S**	7.30	112	Pn	Pn	13 38 46.7	-1.4
	baz=325,slow=12						
ARA0				Sn	Sn	13 40 00.1	-11
	baz=311,slow=22						
ARA0	**ARCESS Array S**	7.30	112	Pn	Pn	13 38 46.7	-1.4
	baz=325,slow=12						
ARA0				Sn	Sn	13 40 00.1	-11
	baz=311,slow=22						
ARCES	**ARCESS Array B**	7.30	112	Pn	Pn	13 38 46.7	-1.4
	baz=323,slow=12,SNR=18						
ARCES				Sn	Sn	13 39 59.8	-11
	baz=314,slow=21,SNR=1.8						
DBG	**Daneborg**	7.33	290	*e*P	Pn	13 38 48.7	+0.3
DBG				*e*S	Sn	13 40 05.5	-6.0
DBG	**Daneborg**	7.33	290	*i* P	Pn	13 38 48.1	-0.3
STOK	**Stokkvaagen**	7.42	157	*e*P	Pn	13 38 49.1	-0.6
MOR8	**Moi Rana**	7.75	153	*e*P	Pn	13 38 54.1	-0.2
SCO	**Scoresbysund**	9.05	265	*i* P	Pn	13 39 14.2	+2.2
SCO	**Scoresbysund**	9.05	265	*i* P	Pn	13 39 14.2	+2.2
SCO	**Scoresbysund**	9.05	265	*i* P	Pn	13 39 14.2	+2.2
APA0	**Apatity Array**	10.63	109	Pn	Pn	13 39 32.2	-1.5
	baz=305,slow=12						
APA0	**Apatity Array**	10.63	109	Pn	Pn	13 39 32.2	-1.5
	baz=305,slow=12						
HFS	**Hagfors**	13.57	163	Pn	Pn	13 40 13.8	0.0
	comp=Z,0.2nm,0.3s,baz=354,slow=12,SNR=5.2						
HFS	**Hagfors**	13.57	163	Pn	Pn	13 40 14.5	+0.7
	baz=351,slow=12						
HFS	**Hagfors**	13.57	163	Pn	Pn	13 40 14.5	+0.7
	baz=351,slow=12						
FIA0	**FINESS Array S**	14.10	137	Pn	Pn	13 40 20.7	-0.3
	baz=342,slow=14						
FIA0	**FINESS Array S**	14.10	137	Pn	Pn	13 40 20.7	-0.3
	baz=342,slow=14						
FINES	**FINESS Array B**	14.10	137	Pn	Pn	13 40 19.4	-1.5
	comp=Z,0.1nm,0.3s,baz=334,slow=13,SNR=4.4						
SFJD	**Kangerlussuaq**	19.44	280	*i* P	P	13 41 22.4	-5.2
SFJD	**Kangerlussuaq**	19.44	280	*i* P	P	13 41 22.5	-5.2
SFJD				IAML		13 41 42.5	
	comp=Z,0.1nm,0.3s						
RES	**Resolute Bay**	24.69	321	LR	LR	13 51 14.8	
	comp=Z,110nm,19.4s,baz=106,slow=34						
GERES	**GERESS Array B**	24.79	168	P	P	13 42 25.1	+1.8
	comp=Z,0.2nm,0.3s,baz=7.0,slow=8.9,SNR=4.5						
AKASG	**Malin Array Be**	24.83	143	P	P	13 42 23.0	-0.6
	comp=Z,0.3nm,0.2s,baz=355,slow=10,SNR=2.2						
YKA	**Yellowknife Ar**	38.75	320	P	P	13 44 28.6	+3.2
	comp=Z,0.1nm,0.3s,baz=25,slow=8.9,SNR=4.0						
ILAR	**Eielson Array**	40.99	343	P	P	13 44 47.8	+3.9
	comp=Z,0.5nm,0.9s,baz=12,slow=6.6,SNR=4.6						
MKAR	**Makanchi Array**	42.08	85	P	P	13 44 53.9	+0.8
	comp=Z,0.2nm,0.8s,baz=340,slow=6.6,SNR=2.4						
GEYT	**Alibeck**	43.45	115	P	P	13 45 05.1	+0.7
	comp=Z,1.7nm,0.6s,baz=306,slow=12,SNR=2.6						
TORD	**Torodi Ar. Bea**	60.19	185	P	P	13 47 11.4	+2.1
	comp=Z,0.5nm,0.6s,baz=360,slow=6.0,SNR=2.3						
TXAR	**Lajitas Array**	67.53	297	P	P	13 48 01.2	+3.6
	comp=Z,0.3nm,0.9s,baz=35,slow=6.6,SNR=2.0						

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*IDC **19** 13:38:27.9±1.0, 1°.40N×126°.07E, h0^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.6/39, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=59.2km s-min=19.1km az=77.0*

*DJA **19** 13:38:32.9±1.1, 1°N±3°×12°6E±°, h29^{km}±11^{km}, M4.2/12, mb4.4/7, mB4.8/1, MLv4.1/12, Mw(mB)4.1/1*

*NEIC **19** 13:38:33.9±2.0, 1°.35N±0°.06×126°.42E±0°.08, h38^{km}±7^{km}, mb4.2/9, Error ellipse: s-maj=11.7km s-min=8.7km az=68.0*

ISC 19 13:38:33.7±0.7**, 1°.43N**±0°.06×**126°.32E**±0°.06**, h35**^{km}**, n34, σ1ˢ.54**/37**, mb4.1**/10**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.23	122		Pn	13 38 53.9	-0.6
TNTI	**Ternate**	1.23	122	P	Pn	13 38 54.1	-0.4
SGSI	**Sangihe**	2.38	341	P	Pn	13 39 09.2	-1.1
SGSI				S	Sn	13 39 38.0	-0.2
KMSI	**Cibinong**	2.49	250	P	Pn	13 39 12.2	+0.5
KMSI				S	Sn	13 39 41.6	+0.7
GTOI	**Gorontalo**	3.40	257	P	Pn	13 39 24.0	-0.3
SANI	**Sanana**	3.47	185	P	Pn	13 39 25.0	-0.3
LUWI	**Luwuk**	4.31	235	Pn	Pn	13 39 38.1	+1.3
LUWI	**Luwuk**	4.31	235	P	Pn	13 39 38.0	+1.1
MRSI	**Marisa**	4.48	258	P	Pn	13 39 39.1	0.0
APSI	**Ampana**	5.22	244	P	Pn	13 39 46.0	-3.3
	0.4nm957nm85nm,1.2s						
TOLI2	**Tolitoli**	5.54	267	Pn	Pn	13 39 53.1	-0.7
KCP	**Kidapawan**	5.68	348	⇑*i*P	Pn	13 39 58.4	+2.6
MPSI	**Mapaga**	6.51	260	P	Pn	13 40 07.2	+0.1
	0.1nm15nm,0.9s						
TTSI	**Tana Toraja**	7.87	236	P	Pn	13 40 24.9	-0.9
	0.1nm24nm,0.8s						
SPSI	**Sidrap Palu**	8.46	231	P	Pn	13 40 31.2	-2.6
	18nm,1.0s						
BNSI	**Bone**	8.49	227	P	Pn	13 40 33.3	-1.0
	27nm,0.8s						
MYLDM	**Lahad Datu**	8.65	296		Pn	13 40 38.3	+1.8
BAKI	**Biak**	10.13	105	P	Pn	13 41 00.0	+3.2
KKM	**Kota Kinabalu**	11.07	295	Pn	Pn	13 41 13.1	+3.3
FITZ	**Fitzroy Crossi**	19.41	182	P	P	13 42 55.4	-1.7
	0.1nm,0.3s,baz=6.1,slow=12,SNR=2.2						
WB0	**Warramunga Arr**	22.50	160	P	P	13 43 29.6	-0.9
WRAB	**Tennant Creek**	22.64	160	P	P	13 43 30.7	-1.3
WRA	**Warramunga Arr**	22.65	160	P	P	13 43 31.1	-0.9
	3.2nm,0.6s,baz=340,slow=11,SNR=26						
WB2	**Warramunga Arr**	22.65	160	P	P	13 43 30.1	-1.9
WB2				IAmb	IAmb	13 43 33.2	
	comp=Z,17nm,1.4s						
WR0	**Warramunga Arr**	22.73	160	P	P	13 43 31.1	-1.8
WR0				IAmb	IAmb	13 43 33.0	
	comp=Z,7.2nm,1.1s						
AS31	**Alice Springs**	26.01	164	P	P	13 44 02.1	-1.6
ASAR	**Alice Springs**	26.01	164	P	P	13 44 03.3	-0.4
	comp=Z,0.9nm,0.5s,baz=344,slow=11,SNR=20						
ASAR				PcP	PcP	13 47 31.0	-0.4
	comp=Z,0.2nm,0.7s,baz=359,slow=2.2,SNR=1.9						
NWAO	**Narrogin (SRO)**	35.23	193	P	P	13 45 25.4	+0.5
STKA	**Stephens Creek**	36.15	158	P	P	13 45 33.3	+0.4
	comp=Z,1.3nm,0.6s,baz=326,slow=11,SNR=3.8						
PETK	**Petropavlovsk-**	57.70	22	P	P	13 48 21.3	+0.5
	comp=Z,3.4nm,1.1s,baz=168,slow=4.3,SNR=6.2						
MK31	**Makanchi Array**	59.21	326	P	P	13 48 29.8	-1.7
MK31				IAmb	IAmb	13 48 34.6	
	comp=Z,1.7nm,1.0s						
MKAR	**Makanchi Array**	59.21	326	P	P	13 48 30.0	-1.5
	comp=Z,0.4nm,0.4s,baz=124,slow=8.2,SNR=8.3						
KURK	**Kurchatov**	63.46	328	P	P	13 48 59.2	-0.9
KURK				IAmb	IAmb	13 49 02.9	
	comp=Z,3.6nm,1.2s						
TIXI	**Tiksi**	70.13	1	P	P	13 49 41.1	-1.0
TIXI				IAmb	IAmb	13 49 41.9	
	comp=Z,1.9nm,0.8s						

IDC 19 13:42:13.6±4.4**, 13°.80N**×**91°.29W, h0**^{km}**, mb3.2**/3**, mb1 3.6**/4**, mb1mx3.5**/26**, mbtmp3.2**/4**, ML3.3**/1**, Error ellipse: s-maj=148.9km s-min=72.5km az=45.0, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	19.25	325	P	P	13 46 38.9	-0.8
	0.0nm,0.3s,baz=139,slow=12,SNR=5.0						
PDAR	**Pinedale Array**	32.89	335	P	P	13 48 51.3	+1.6
	0.2nm,0.8s,baz=141,slow=9.1,SNR=1.7						
NVAR	**Mina Array Bea**	34.26	321	P	P	13 49 01.3	-0.4
	0.2nm,0.7s,baz=132,slow=8.7,SNR=2.1						
YKA	**Yellowknife Ar**	51.38	346	P	P	13 51 19.3	-0.5
	0.3nm,0.7s,baz=142,slow=8.2,SNR=8.7						
CMAR	**Chiang Mai Arr**	146.40	342	PKPbc	PKPdf	14 01 56.6	+0.3
	0.4nm,0.4s,baz=335,slow=4.0,SNR=2.0						

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*IDC **19** 13:48:06.0±11.0, 16°.46N×93°.31W, h0^{km}, mb3.3/2, mb1 3.9/3, mb1mx3.6/27, mbtmp3.4/3, ML3.9/1, Error ellipse: s-maj=225.2km s-min=117.0km az=7.0*

*NEIC **19** 13:48:18.7±1.9, 16°.35N±0°.07×94°.26W±0°.02, h96^{km}±9^{km}, mb3.9/5, Md4.2/38(MEX), Error ellipse: s-maj=9.6km s-min=2.9km az=186.0*

*MEX **19** 13:48:19.3±0.9, 16°.34N×94°.27W, h103^{km}±7^{km}, MD4.2*

ISC 19 13:48:18.8±0.8**, 16°.33N**±0°.05×**94°.27W**±0°.03**, h95**^{km}±9^{km}**, n36, σ0ˢ.82**/56**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.96	322	*i* P	Pn	13 48 38.8	+0.4
CMIG				*i* S	Sn	13 48 53.7	+0.6
CMIG	**Matias Romero**	0.96	322		Pn	13 48 38.8	+0.4
CMIG					Sn	13 48 53.7	+0.6
PCIG		1.19	121	*i* P	Pn	13 48 40.9	-0.1
PCIG				*i* S	Sn	13 48 58.1	+0.5
PCIG		1.19	121		Pn	13 48 40.9	-0.1
PCIG					Sn	13 48 58.1	+0.5
TGIG		1.19	68	*i* P	Pn	13 48 40.8	-0.3
TGIG				*i* S	Sn	13 48 57.1	-0.8
TGIG		1.19	68		Pn	13 48 40.8	-0.3
TGIG					Sn	13 48 57.1	-0.8
TGBT	**Tuxtla Gutierr**	1.22	68	*i* P	Pn	13 48 41.2	-0.2
TGBT				*i* S	Sn	13 48 57.1	-1.3
TGBT	**Tuxtla Gutierr**	1.22	68		Pn	13 48 41.2	-0.2
TGBT					Sn	13 48 57.1	-1.3
HUIG	**Huatulco**	1.85	253	*i* P	Pn	13 48 48.1	-1.1
HUIG				*i* S	Sn	13 49 11.8	-0.6
HUIG	**Huatulco**	1.85	253		Pn	13 48 48.1	-1.1
HUIG					Sn	13 49 11.8	-0.6
CCIG	**Comitan**	2.05	91	*i* P	Pn	13 48 52.1	+0.1
CCIG				*i* S	Sn	13 49 16.8	-0.6
CCIG	**Comitan**	2.05	91		Pn	13 48 52.1	+0.1
CCIG					Sn	13 49 16.8	-0.6
VHO	**Vista Hermosa**	2.47	288	*i* P	Pn	13 48 57.3	-0.2
VHO				*i* S	Sn	13 49 26.6	-0.7
PEIG	**Puerto Escondi**	2.78	264	*i* P	Pn	13 49 00.5	-1.0
PEIG				*i* S	Sn	13 49 34.1	-0.3
HUEH	**Huehuetenango**	2.85	110	Pn	Pn	13 49 03.8	+1.2
RTAL	**Retalhuleu**	3.06	125	Pn	Pn	13 49 06.1	+0.8
YOIG	**Yosondua**	3.18	280	*i* P	Pn	13 49 07.3	+0.2
YOIG				*e*S	Sn	13 49 44.0	-0.4
TOIG	**Toxpalan**	3.19	304	*i* P	Pn	13 49 07.1	-0.1
TOIG				*i* S	Sn	13 49 43.5	-1.0
PNIG	**Pinotepa**	3.70	272	*e*P	Pn	13 49 13.6	-0.3
PNIG				*i* S	Sn	13 49 56.7	+0.2
PNIG	**Pinotepa**	3.70	272		Pn	13 49 13.6	-0.3
PNIG					Sn	13 49 56.7	+0.2
PETF	**Flores**	4.26	81		Pn	13 49 21.0	-0.5
TLIG	**Tlapa**	4.29	287		Pn	13 49 23.3	+1.3
TEIG	**Tepich**	6.89	55	*i* P	Pn	13 49 56.6	-0.6
TEIG				*i* S	Sn	13 51 12.8	-1.3
TEIG	**Tepich**	6.89	55		Pn	13 49 56.6	-0.6
TEIG					Sn	13 51 12.8	-1.3
JTS	**Las Juntas de**	10.87	122	Pn	Pn	13 50 51.6	+0.1
KVTX	**Kingsville**	11.66	344	Pn	Pn	13 51 02.2	+0.3
LCCY	**Blossom Villag**	13.90	74	Pn	Pn	13 51 32.1	+0.3
TXAR	**Lajitas Array**	15.56	328	Pn	P	13 51 54.3	-1.0
	0.1nm,0.3s,baz=146,slow=13,SNR=17						
TX31	**Lajitas Ar. Si**	15.56	328	P	P	13 51 54.2	-1.0
TX31				IAmb	IAmb	13 52 05.5	
	comp=Z,8.3nm,1.2s						
TX32	**Lajitas Array**	15.56	328	P	P	13 51 54.2	-1.1
SLBS	**Sierra La Lagu**	16.44	299	Pn	Pn	13 52 02.3	-1.6
SLBS				IAmb	IAmb	13 52 31.6	
	comp=Z,14nm,1.4s						
AMTX	**Amarillo**	19.64	342	P	P	13 52 39.6	-0.4
121A	**Cookes Peak, D**	20.25	325	P	P	13 52 47.6	+0.7
121A				IAmb	IAmb	13 52 50.6	
	comp=Z,6.9nm,1.1s						
BNM	**Barren Site**	20.94	330	P	P	13 52 55.5	+1.3
NVAR	**Mina Array Bea**	30.49	321	P	P	13 54 25.3	+2.2
	comp=Z,0.3nm,0.5s,baz=142,slow=10,SNR=4.3						
YKA	**Yellowknife Ar**	48.28	348	P	P	13 56 49.2	-0.8
	comp=Z,0.2nm,0.6s,baz=142,slow=8.1,SNR=3.2						

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*IDC **19** 13:56:25.9±1.5, 24°.57N×141°.35E, h149^{km}±12^{km}, mb3.6/13, mb1 3.7/16, mb1mx3.5/46, mbtmp4.0/16, Error ellipse: s-maj=20.1km s-min=13.8km az=110.0*

*NEIC **19** 13:56:26.4±1.3, 24°.47N±0°.08×141°.3E±0°.2, h154^{km}±4^{km}, mb4.3/26, Error ellipse: s-maj=21.4km s-min=11.4km az=101.0*

*JMA **19** 13:56:30.3±0.1, 25°.01N×140°.70E, h124^{km}, M4.5*

ISC 19 13:56:25.3±0.5**, 24°.47N**±0°.06×**141°.4E**±0°.1**, h150**^{km}**, n52, σ1ˢ.33**/54**, mb4.1**/23**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	2.27	19	P	Pn	13 57 05.4	+1.7
JHH2				S	Sn	13 57 32.3	-1.0
JCJ	**Chichijima**	2.71	16	P	Pn	13 57 10.1	+1.0
	99nm,0.3s,baz=200,slow=5.7,SNR=58						
JCJ				S	Sn	13 57 41.6	-1.3
	165nm,0.3s,baz=240,slow=20,SNR=23						
CBIJ	**Chichi jima**	2.72	16	P	Pn	13 57 10.5	+1.4
CBIJ				*e*S	Sn	13 57 40.9	-2.0
ANA2	**Anatahan**	9.06	152	Pn	Pn	13 58 30.6	-2.3
BSO3	**Boso 3**	10.32	356	P	Pn	13 58 47.3	-1.9
BSO4	**Boso 4**	10.52	355	P	Pn	13 58 51.2	-0.8
JYT	**Yasato**	11.76	355	Pn	Pn	13 59 05.3	-3.0
JHO	**Hitachi**	12.12	357	P	Pn	13 59 10.4	-2.6
MJAR	**Matsushiro Arr**	12.33	348	P	Pn	13 59 13.1	-2.6
	0.1nm,0.3s,baz=158,slow=10,SNR=6.8						
MAJO	**Matsushiro**	12.33	348	Pn	Pn	13 59 14.3	-1.5
JMM	**Marumori**	13.36	358		Pn	13 59 26.6	-2.4
JTM	**Tenmabayashi**	16.27	359	P	Pn	14 00 03.7	-1.5
ASAJ	**Asahikawa**	19.62	3	P	P	14 00 43.3	+1.3
	0.3nm,0.3s,baz=210,slow=8.0,SNR=1.8						
JKA	**Kamikawa-asahi**	19.62	3	P	P	14 00 43.3	+1.3
JKA	**Kamikawa-asahi**	19.62	3	IAmb	IAmb	14 00 49.4	
	comp=Z,35nm,1.4s						
TNTI	**Ternate**	27.18	212	P	P	14 01 53.6	-1.4
FAKI	**Fak Fak**	28.63	199	P	P	14 02 06.4	-1.5
QIZ	**Qiongzhong**	29.73	266	P	P	14 02 16.7	-0.9
SEY	**Seymchan**	39.15	8	P	P	14 03 39.1	+1.2
	comp=Z,0.6nm,0.3s,baz=180,slow=20,SNR=4.5						
CMAR	**Chiang Mai Arr**	39.81	270	P	P	14 03 45.5	+1.5
	comp=Z,0.6nm,0.4s,baz=55,slow=8.5,SNR=7.3						
WR0	**Warramunga Arr**	44.66	189	P	P	14 04 23.6	+0.4
WRAB	**Tennant Creek**	44.66	189	P	P	14 04 24.1	+0.8
WRAB				IAmb	IAmb	14 04 25.6	
	comp=Z,4.6nm,0.6s						
WB2	**Warramunga Arr**	44.67	189	P	P	14 04 24.1	+0.8
WB2				IAmb	IAmb	14 04 26.0	
	comp=Z,4.8nm,0.6s						
WRA	**Warramunga Arr**	44.67	189	P	P	14 04 24.1	+0.8
	comp=Z,3.5nm,0.5s,baz=9.1,slow=8.8,SNR=32						
MK31	**Makanchi Array**	51.60	311	P	P	14 05 16.8	+0.5
MKAR	**Makanchi Array**	51.60	311	P	P	14 05 16.7	+0.5
	comp=Z,1.0nm,0.4s,baz=87,slow=9.8,SNR=17						
MAKZ	**Makanchi**	51.81	311	P	P	14 05 18.2	+0.4
STKA	**Stephens Creek**	56.03	180	P	P	14 05 49.6	+1.2
	comp=Z,1.8nm,0.7s,baz=356,slow=14,SNR=3.5						
TRF	**Thorofare Moun**	58.73	29	P	P	14 06 06.8	-0.4
TRF				IAmb	IAmb	14 06 32.0	
	comp=Z,3.3nm,1.2s						
KNK	**Knik Glacier**	59.35	32	P	P	14 06 12.4	+1.0
KNK				IAmb	IAmb	14 06 22.9	
	comp=Z,5.7nm,1.1s						
I23K	**Minto, Yukon-K**	59.36	27	P	P	14 06 11.0	-0.3
I23K				IAmb	IAmb	14 06 40.2	
	comp=Z,3.0nm,1.2s						
RND	**Reindeer**	59.37	29	P	P	14 06 11.2	-0.3
RND				IAmb	IAmb	14 06 27.7	
	comp=Z,4.3nm,1.2s						
MDM	**Murphy Dome**	59.81	28	P	P	14 06 16.1	+1.6
MDM				IAmb	IAmb	14 06 44.0	
	comp=Z,3.7nm,1.4s						
SCM	**Sheep Creek Mo**	59.92	31	P	P	14 06 16.8	+1.4
ILAR	**Eielson Array**	60.37	28	P	P	14 06 18.2	0.0
	comp=Z,0.2nm,0.7s,baz=261,slow=5.2,SNR=4.4						
RIDG	**Independent Ri**	61.18	29	P	P	14 06 25.1	+1.3
RIDG				IAmb	IAmb	14 06 49.2	
	comp=Z,6.6nm,1.5s						
DOT	**Dot Lake**	61.52	29	P	P	14 06 27.2	+1.1
DOT				IAmb	IAmb	14 06 36.3	
	comp=Z,3.1nm,1.1s						
CTGM	**Chitina Glacie**	62.79	32	P	P	14 06 35.2	+0.5
INK	**Inuvik**	65.72	24	P	P	14 06 53.9	+0.5
	comp=Z,1.5nm,0.4s,baz=292,slow=5.8,SNR=17						
INK	**Inuvik**	65.72	24	P	P	14 06 53.7	+0.3
INK				IAmb	IAmb	14 06 54.9	
	comp=Z,5.1nm,1.3s						
WHY	**Whitehorse**	65.97	32	P	P	14 06 57.5	+2.1
WHY				IAmb	IAmb	14 07 06.0	
	comp=Z,9.5nm,1.4s						
ABKAR	**Akbulak array**	66.40	315	P	P	14 06 58.2	+0.1
C36M	**Paulatuk**	68.94	22	P	P	14 07 13.9	+0.3
BKZ	**Black Stump Fm**	71.33	152	P	P	14 07 29.1	+0.4
NNZ	**Nelson**	71.80	155	P	P	14 07 31.4	+0.1
YKA	**Yellowknife Ar**	74.80	28	P	P	14 07 49.0	+0.3
	comp=Z,0.9nm,0.4s,baz=298,slow=4.9,SNR=29						
ARCES	**ARCESS Array B**	75.76	341	P	P	14 07 53.5	-0.6
	comp=Z,3.3nm,0.8s,baz=76,slow=8.5,SNR=3.5						
KBZ	**Khabaz**	79.24	313	P	P	14 08 14.2	+0.2
	comp=Z,1.5nm,0.8s,baz=67,slow=6.7,SNR=5.0						
FINES	**FINESS Array B**	79.96	334	P	P	14 08 16.1	-1.3
	comp=Z,1.3nm,0.5s,baz=76,slow=4.9,SNR=6.9						
NVAR	**Mina Array Bea**	82.73	51	P	P	14 08 34.0	+1.2
	comp=Z,0.2nm,0.6s,baz=283,slow=5.5,SNR=2.4						
PDAR	**Pinedale Array**	86.60	44	P	P	14 08 52.0	-0.2
	comp=Z,0.1nm,0.4s,baz=329,slow=1.1,SNR=2.3						
PLCA	**Paso Flores**	148.83	129	PKPbc	PKiKP	14 15 56.1	-0.6
	comp=Z,1.3nm,0.9s,baz=198,slow=6.4,SNR=2.1						

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*NEIC **19** 13:57:15.7±1.5, 17°.7S±0°.1×178°.95W±0°.08, h554^{km}±9^{km}, mb4.6/13, Error ellipse: s-maj=20.2km s-min=9.1km az=161.0*

*IDC **19** 13:57:16.6±1.1, 17°.92S×178°.85W, h566^{km}±8^{km}, mb3.4/10, mb1 3.5/12, mb1mx3.3/34, mbtmp4.3/12, Error ellipse: s-maj=18.6km s-min=15.6km az=125.0*

ISC 19 13:57:16.4±0.7**, 17°.8S**±0°.1×**178°.94W**±0°.10**, h562**^{km}**, n28, σ1ˢ.08**/31**, mb4.5**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	2.87	270	P	P	13 58 31.5	-0.3
	5.0nm,0.3s,baz=108,slow=4.3,SNR=66						
MSVF				S	S	13 59 35.7	+2.6
	3.5nm,0.3s,baz=99,slow=19,SNR=48						
SANVU	**Saraoutou**	13.48	278	P	P	14 00 08.9	-1.4
DZM	**Mont Dzumac**	14.40	250	P	P	14 00 19.6	-0.1
	0.3nm,0.3s,baz=84,slow=18,SNR=6.7						
DZM	**Mont Dzumac**	14.40	250	P	P	14 00 19.1	-0.6
URZ	**Urewera**	20.71	189	P	P	14 01 16.8	-1.3
	13nm,1.1s,baz=311,slow=13,SNR=9.0						
URZ				S	S	14 04 30.8	-2.7
	5.0nm,1.0s,baz=6.6,slow=19,SNR=1.5						
BKZ	**Black Stump Fm**	21.69	190	P	P	14 01 26.2	-0.8
BKZ				IAmb	IAmb	14 01 38.5	
	comp=Z,26nm,1.3s						
PLWZ	**Palliser**	24.24	191	P	P	14 01 48.9	-0.8
PPTF	**Pamatai, Papee**	27.97	94	P	P	14 02 22.2	-0.6
MLZ	**Mavora Lakes**	29.57	199	P	P	14 02 37.2	+0.9
MLZ				IAmb	IAmb	14 02 46.3	
	comp=Z,19nm,1.2s						
CTA	**Charters Tower**	32.97	260	P	P	14 03 05.5	-0.2
	comp=Z,3.9nm,0.8s,baz=86,slow=11,SNR=7.0						
CTAO	**Charters Tower**	32.97	260	P	P	14 03 04.6	-1.1
PATS	**Pohnpei**	33.20	315	P	P	14 03 07.3	-0.3
PMG	**Port Moresby**	33.94	280	P	P	14 03 14.8	+0.9
	comp=Z,6.0nm,0.5s,baz=109,slow=14,SNR=3.7						
PMG	**Port Moresby**	33.94	280	P	P	14 03 13.8	-0.1
PMG				IAmb	IAmb	14 03 16.1	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	38.26	241	P	P	14 03 50.5	+1.2
	comp=Z,4.3nm,0.6s,baz=100,slow=12,SNR=12						
STKA	**Stephens Creek**	38.26	241	P	P	14 03 50.5	+1.2
WRA	**Warramunga Arr**	44.16	259	P	P	14 04 35.6	-0.6
	comp=Z,1.9nm,0.6s,baz=94,slow=7.1,SNR=20						
AS31	**Alice Springs**	44.34	254	P	P	14 04 37.8	+0.3
AS31				IAmb	IAmb	14 04 38.6	
	comp=Z,5.8nm,0.6s						
ASAR	**Alice Springs**	44.34	254	P	P	14 04 38.0	+0.4
	comp=Z,17nm,0.7s,baz=88,slow=7.9,SNR=400						
ASAR				PcP	PcP	14 06 09.4	+0.1
	comp=Z,0.4nm,0.7s,baz=104,slow=3.6,SNR=2.5						
SIJI	**Sorong**	51.71	283	P	P	14 05 32.5	0.0
	comp=Z,16nm,0.7s,baz=83,slow=5.3,SNR=5.8						
SOEI	**Soe**	55.57	270	P	P	14 05 59.4	-0.5
SOEI				IAmb	IAmb	14 06 02.6	
	comp=Z,18nm,0.8s						
UGM	**Wanagama**	69.15	268	P	P	14 07 27.9	+0.3
YULB	**Yu-li**	71.27	303	P	P	14 07 39.1	-0.7
YULB				IAmb	IAmb	14 07 47.2	
	comp=Z,29nm,1.3s						
TPUB	**Ta-pu**	71.76	303	P	P	14 07 42.1	-0.7
TPUB				IAmb	IAmb	14 08 09.3	
	comp=Z,108nm,1.4s						
QSPA	**South Pole Qui**	72.29	180	P	P	14 07 46.7	+1.5
NVAR	**Mina Array Bea**	79.67	44	P	P	14 08 26.5	+0.1
	comp=Z,0.3nm,0.7s,baz=235,slow=8.7,SNR=3.6						
TXAR	**Lajitas Array**	86.34	58	P	P	14 09 01.1	+1.2
	comp=Z,0.4nm,0.6s,baz=224,slow=7.0,SNR=4.0						
PDAR	**Pinedale Array**	87.60	44	P	P	14 09 04.6	-1.0
	comp=Z,0.3nm,0.6s,baz=217,slow=5.3,SNR=4.8						

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*NNC **19** 13:58:55.7±7.4, 36°.45N×70°.77E, h147^{km}±160^{km}, mb2.9, mpv3.6, Error ellipse: s-maj=70.7km s-min=52.5km az=165.0*

ISC 19 13:58:55.2±3.4**, 36°.5N**±0°.2×**70°.6E**±0°.2**, h150**^{km}**, n11, σ0ˢ.44**/14**, 6C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	6.14	22	P	Pn	14 00 24.0	-0.1
	SNR=25						
UCH	**Uchtor**	6.51	27	P	Pn	14 00 29.0	0.0
	SNR=6.0						
KK31	**Karatay Array**	6.61	360	⇑P	Pn	14 00 30.5	+0.5
	0.9nm,0.3s,baz=178,slow=13,SNR=28						
KK31				⇓S	Sn	14 01 43.7	-0.6
	2.3nm,0.4s,baz=173,slow=21,SNR=4.1						
EKS2	**Erkin-Say**	6.65	21	P	Pn	14 00 30.5	-0.2
	SNR=7.5						
AAK	**Ala-Archa**	6.86	25	P	Pn	14 00 33.6	+0.2
	SNR=11						
AAK	**Ala-Archa**	6.86	25	⇑P	Pn	14 00 33.4	0.0
	3.1nm,0.4s						
AAK				⇑S	Sn	14 01 50.2	-0.2
	4.8nm,0.6s						
CHMS	**Chumysh**	7.27	25	P	Pn	14 00 38.6	-0.1
	SNR=5.3						
USP	**Ospenovka**	7.42	23	P	Pn	14 00 40.3	-0.5
	SNR=8.4						
TKM2	**Tokmak 2**	7.51	30	P	Pn	14 00 42.0	-0.2
	SNR=5.0						
TKM2	**Tokmak 2**	7.51	30	⇑P	Pn	14 00 41.9	-0.3
	1.5nm,0.3s						
TKM2				⇑S	Sn	14 02 07.2	+1.0
	1.9nm,0.6s						
AB31	**Akbulak array**	14.93	332	⇑P	P	14 02 20.4	0.0
	0.7nm,0.6s,baz=144,slow=13,SNR=19						

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*INET **19** 14:18:19.9, 14°.59N×84°.99W, h30^{km}, MW3.8*

UCR 19 14:18:23.0±2.0**, 14°.47N**×**84°.68W, h0**^{km}±999^{km}**, MW4.1, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	3.63	190	*i* P	Pn	14 19 20.9	+0.3
BUEV	**Buena Vista**	3.72	191	*i* P	Pn	14 19 22.0	+0.1
COLC	**Colonia**	3.82	188	*i* P	Pn	14 19 23.7	+0.5
CUI	**Cuipilapa**	3.82	187	*i* P	Pn	14 19 24.1	+0.8
ACAL	**Aguas Claras**	3.83	185	*i* P	Pn	14 19 24.3	+0.9
ACAL				*i* S	Sn	14 20 10.6	+1.3

JMA 19 14:27:37.3±0.1**, 32°.10N**×**140°.01E, h15**^{km}**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	0.42	330	P	Pg	14 27 45.6	-0.1
JAOM				S	Sg	14 27 51.1	-0.4
JHCJ	**Hachijojimakas**	0.99	350	P	Pb	14 27 55.5	-0.6
JIM2	**Oshima 3**	2.66	350	P	Pn	14 28 21.6	+2.0
BSO1	**Boso 1**	2.67	17	P	Pn	14 28 19.7	+0.4
JOD2	**Odawara 2**	3.25	347	P	Pn	14 28 30.1	+2.4
JAG	**Ashikaga**	4.34	354	P	Pn	14 28 44.5	+1.8
MAT	**Matsushiro**	4.68	342	P	Pn	14 28 52.7	+5.3
MAT				S	Sb	14 29 49.0	-6.1

MAN 19 14:31:57.4, 15°.37N×119°.78E, h33^{km}, mb4.8, ML3.7,

MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**1.17**	**48**	*e*P	Pn	14 32 17.6	+0.2
SMPP				*e*S	Sn	14 32 32.1	-0.2
MACP	**Maragondon, Ca**	**1.43**	**140**	*e*P	Pn	14 32 20.9	-0.1
MACP				*e*S	Sn	14 32 38.9	+0.4

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*IDC **19** 14:35:41.6±5.5, 3°.33N×97°.06E, h120^{km}±37^{km}, mb3.3/5, mb1 3.4/6, mb1mx3.2/62, mbtmp3.7/6, Error ellipse: s-maj=86.2km s-min=17.4km az=59.0*

ISC 19 14:35:38.6±1.8, 3°.2N±0°.2×96°.8E±0°.2, h100^{km}, n10, σ0^{s}84/8, mb3.5/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.21**	**101**	P	**Pn**	**14 36 15.3**	**+1.3**
	5.1nm,0.3s,baz=360,slow=14,SNR=12						
PSI				S	**Sn**	**14 36 40.4**	**-0.8**
	8.9nm,0.3s,baz=180,slow=6.8,SNR=6.9						
CMAR	**Chiang Mai Arr**	**15.28**	**8**	P	**P**	**14 39 11.0**	**-0.6**
	0.1nm,0.3s,baz=196,slow=12,SNR=12						
H08S2	**Diego Garcia H**	**26.51**	**246**	T	T	15 07 59.2	
	baz=66						
H08S3	**Diego Garcia H**	**26.51**	**246**	T	T	15 07 59.8	
	baz=66						
H08S1	**Diego Carcia H**	**26.52**	**246**	T	T	15 08 00.9	
	baz=66						
WRA	**Warramunga Arr**	**43.50**	**124**	P	**P**	**14 43 31.7**	**-0.8**
	0.5nm,0.7s,baz=301,slow=9.5,SNR=3.6						
ASAR	**Alice Springs**	**44.98**	**128**	P	**P**	**14 43 44.0**	**-0.4**
	0.5nm,0.7s,baz=299,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**45.18**	**346**	P	**P**	**14 43 45.6**	**+0.2**
	1.0nm,0.8s,baz=162,slow=8.3,SNR=10						
SONM	**Songino Array**	**45.21**	**9**	P	**P**	**14 43 45.7**	**-0.1**
	0.3nm,0.5s,baz=185,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**51.49**	**351**	P	**P**	**14 44 34.3**	**+0.5**
	1.1nm,0.5s,baz=177,slow=6.9,SNR=4.8						

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*TUL **19** 14:48:13.4±1.1, 36°.29N±0°.02×96°.81W±0°.02, h4^{km}±7^{km}, ML3.3, mb_Lg3.4/99(NEIC), Error ellipse: s-maj=2.9km s-min=1.4km az=134.0*

*NEIC **19** 14:48:13.7±1.0, 36°.29N±0°.02×96°.82W±0°.03, h9^{km}±5^{km}, Error ellipse: s-maj=4.4km s-min=2.1km az=62.0*

*ANF **19** 14:48:13.3±0.3, 36°.30N×96°.81W, h0^{km}, ML4.1/11, Error ellipse: s-maj=3.6km s-min=2.7km az=11.0*

ISC 19 14:48:13.4±0.9, 36°.26N±0°.02×96°.88W±0°.03, h11^{km}±7^{km}, n118, σ1^{s}22/104, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	**Quay**	**0.17**	**123**		**Pg**	**14 48 16.8**	**-0.2**
QUOK				Sg	**Sg**	**14 48 18.8**	**-0.8**
OK031	**S. Brethren Rd**	**0.31**	**174**		**Pg**	**14 48 20.4**	**+0.8**
OK031				Sg	**Sg**	**14 48 24.8**	**+1.0**
OK030	**Cody Creek RV**	**0.34**	**167**		**Pg**	**14 48 20.9**	**+0.7**
OK030				Sg	**Sg**	**14 48 25.7**	**+0.9**
OK029	**Liberty Lake**	**0.66**	**225**		**Pb**	**14 48 27.4**	**+0.5**
T35A	**Sooner Cattle**	**0.72**	**24**	Pg	**Pg**	**14 48 26.4**	**-0.9**
T35B	**Sooner Cattle**	**0.72**	**24**	P		14 48 26.3	
	baz=201,SNR=123						
T35B				S		14 48 35.2	
	baz=201						
OK025	**Westminster Rd**	**0.78**	**209**		**Pg**	**14 48 29.2**	**+0.9**
OK025				Sg	**Sb**	**14 48 39.9**	**+0.5**
BCOK	**Bluff Creek, N**	**0.85**	**225**		**Pn**	**14 48 30.6**	**-0.7**
BCOK				Sg	**Sn**	**14 48 42.6**	**-1.1**
KAN13	**South Haven SW**	**0.89**	**327**	Pg	**Pb**	**14 48 30.6**	**-0.2**
CROK	**Carrier**	**0.92**	**286**	Pg	**Pn**	**14 48 31.9**	**-0.4**
CROK				Sg	**Sn**	**14 48 44.8**	**-0.8**
TUL1	**Leonard**	**0.95**	**111**	P	**Pb**	**14 48 30.8**	**-1.1**
	baz=295						
TUL1				S	**Sb**	**14 48 42.7**	**-1.8**
	baz=295						
TUL1	**Leonard**	**0.95**	**111**	Pg	**Pb**	**14 48 30.8**	**-1.1**
TUL1	**Leonard**	**0.95**	**111**	P		14 48 30.5	
	baz=295,SNR=283						
TUL1				S		14 48 42.7	
	baz=295						
OKCFA	**Oklahoma City**	**0.96**	**209**	Pg	**Pg**	**14 48 32.3**	**+0.4**
OKCFA				Sg	**Sn**	**14 48 46.3**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.97**	**208**	Pg	**Pg**	**14 48 32.4**	**+0.4**
FNO	**Franklin**	**1.09**	**203**	Pg	**Pn**	**14 48 34.3**	**-0.3**
W35A	**Tecumseh**	**1.11**	**180**	Pg	**Pb**	**14 48 34.4**	**-0.2**
W35A				Sg	**Sn**	**14 48 49.5**	**-0.6**
KAN14	**Manchester OK**	**1.11**	**309**	Pg	**Pg**	**14 48 34.9**	**+0.2**
KAN01	**Argonia South**	**1.14**	**322**	Pg	**Pn**	**14 48 35.2**	**-0.1**
KAN10	**Anthony SW Sta**	**1.30**	**312**		**Pb**	**14 48 38.2**	**+0.3**
KAN08	**Anthony NE Sta**	**1.30**	**318**	Pn	**Pb**	**14 48 38.2**	**+0.3**
KAN12	**Harper NE Stat**	**1.37**	**319**		**Pb**	**14 48 39.2**	**+0.2**
U32A	**Winter Ranch,**	**1.72**	**275**		**Pb**	**14 48 45.3**	**+0.3**
U32A	**Winter Ranch,**	**1.72**	**275**	P		14 48 45.6	
	baz=92						
U32A				S		14 49 09.9	
	baz=92						
U38A	**Gravette**	**2.02**	**84**		**Pn**	**14 48 48.4**	**+0.9**
U38A	**Gravette**	**2.02**	**84**	P		14 48 48.5	
	baz=266,SNR=22						
U38A				S		14 49 15.3	
	baz=266						
X37A	**Clayton**	**2.08**	**143**	Pn	**Pn**	**14 48 49.4**	**+1.2**
X37A				IAmb_Lg		14 49 22.1	
	comp=Z,137nm,0.7s						
X37A	**Clayton**	**2.08**	**143**	P		14 48 49.6	
	baz=326						
WMOK	**Wichita Mounta**	**2.17**	**226**	P	**Pb**	**14 48 51.6**	**-1.2**
	baz=45						
WMOK	**Wichita Mounta**	**2.17**	**226**	Pn	**Pb**	**14 48 51.5**	**-1.2**
WMOK	**Wichita Mounta**	**2.17**	**226**	P		14 48 51.6	
	baz=45						
HHAR	**Hobbs**	**2.38**	**89**		**Pn**	**14 48 53.2**	**+0.9**
HHAR	**Hobbs**	**2.38**	**89**	P		14 48 53.3	
	baz=271						
R32A	**Long Quarter,**	**2.60**	**326**		**Pn**	**14 48 56.5**	**+1.0**
W39A	**Magazine**	**2.73**	**112**	P	**Pn**	**14 48 58.2**	**+1.0**
	baz=295						
W39A				Sb	**Sb**	**14 49 37.6**	**+1.8**
	baz=295						
W39A	**Magazine**	**2.73**	**112**		**Pn**	**14 48 57.1**	**-0.1**
W39A	**Magazine**	**2.73**	**112**	P		14 48 58.0	
	baz=295,SNR=44						
KSU1	**Kansas State U**	**2.84**	**4**	Sb	**Sb**	**14 49 40.9**	**+2.0**
	baz=183						
KSU1	**Kansas State U**	**2.84**	**4**	Pn	**Pn**	**14 48 58.4**	**-0.3**
Z35A	**Perchaven, San**	**2.94**	**186**	Pn	**Pn**	**14 49 01.6**	**+1.5**
Z35A	**Perchaven, San**	**2.94**	**186**	P		14 49 02.2	
	baz=6.9						
S39A	**Bolivar**	**3.19**	**62**		**Pn**	**14 49 04.3**	**+0.8**
S39A				IAmb_Lg		14 50 00.6	
	comp=Z,72nm,0.8s						
S39A	**Bolivar**	**3.19**	**62**	P		14 49 04.7	
	baz=244,SNR=27						
MIAR	**Mount Ida**	**3.20**	**121**	P	**Pn**	**14 49 04.7**	**+1.2**
	baz=304						
MIAR	**Mount Ida**	**3.20**	**121**	Pn	**Pn**	**14 49 04.3**	**+0.7**
MIAR	**Mount Ida**	**3.20**	**121**	P		14 49 04.7	
	baz=304,SNR=33						
U40A	**Yellville**	**3.25**	**87**	P	**Pn**	**14 49 05.1**	**+0.7**
	baz=270						
U40A	**Yellville**	**3.25**	**87**	Pn	**Pn**	**14 49 04.3**	**-0.1**
U40A	**Yellville**	**3.25**	**87**	P		14 49 04.9	
	baz=270,SNR=54						
U40A				P		14 49 04.9	
	baz=270,SNR=54						
Z38A	**Mt. Pleasant**	**3.38**	**152**	Pn	**Pn**	**14 49 07.2**	**+1.2**
Z38A				IAmb_Lg		14 50 06.9	
	comp=Z,109nm,0.9s						
CBKS	**Cedar Bluff**	**3.41**	**319**	Pn	**Pn**	**14 49 07.6**	**+1.0**
CBKS				IAmb_Lg		14 50 07.0	
	comp=Z,63nm,0.8s						
X40A	**Basin Creek Fa**	**3.75**	**117**	P	**Pn**	**14 49 12.7**	**+1.5**
	baz=300						
X40A	**Basin Creek Fa**	**3.75**	**117**		**Pn**	**14 49 11.8**	**+0.6**
X40A	**Basin Creek Fa**	**3.75**	**117**	P		14 49 12.6	
	baz=300,SNR=5.9						
X40A				P		14 49 12.6	
	baz=300,SNR=5.9						
MGMO	**Mountain Grove**	**3.81**	**75**		**Pn**	**14 49 12.3**	**+0.2**
MGMO				IAmb_Lg		14 50 20.0	
	comp=Z,58nm,0.8s						
WHAR	**Wooly Hollow**	**3.86**	**103**	Pn	**Pn**	**14 49 12.9**	**+0.3**
WHAR				IAmb_Lg		14 50 16.1	
	comp=Z,140nm,0.8s						
FCAR	**Ozark Folk Cen**	**3.87**	**94**	Pn	**Pn**	**14 49 13.0**	**+0.1**
W41B	**Gary Mavity, V**	**3.92**	**105**	Sb	**Sb**	**14 50 15.1**	**+5.0**
	baz=288						
W41B	**Gary Mavity, V**	**3.92**	**105**		**Pn**	**14 49 13.7**	**+0.1**
W41B				IAmb_Lg		14 50 21.2	
	comp=Z,116nm,1.0s						
W41B	**Gary Mavity, V**	**3.92**	**105**	P		14 49 13.8	
	baz=288,SNR=27						
W41B				S		14 50 00.1	
	baz=288						
WLAR	**White Oak Lake**	**4.02**	**129**	Pn	**Pn**	**14 49 15.1**	**+0.2**
WLAR				IAmb_Lg		14 50 19.2	
	comp=Z,57nm,0.9s						
AMTX	**Amarillo**	**4.15**	**252**	P	**Pn**	**14 49 19.5**	**+2.8**
	baz=69						
AMTX				Sb	**Sg**	**14 50 23.0**	**-3.5**
	baz=69						
AMTX	**Amarillo**	**4.15**	**252**	Pn	**Pn**	**14 49 18.0**	**+1.2**
AMTX				IAmb_Lg		14 50 35.9	
	comp=Z,62nm,0.8s						
AMTX	**Amarillo**	**4.15**	**252**	P		14 49 19.5	
	baz=69						
R40A	**Maddies Statio**	**4.20**	**60**		**Pn**	**14 49 17.2**	**-0.1**
R40A	**Maddies Statio**	**4.20**	**60**	P		14 49 18.2	
	baz=242						
P38A	**Dawn**	**4.27**	**37**	Pn	**Pn**	**14 49 18.9**	**+0.5**
WHTX	**Lake Whitney,**	**4.29**	**187**	P	**Pn**	**14 49 20.5**	**+1.9**
	baz=6.9						
WHTX				Sb	**Sg**	**14 50 26.1**	**-4.9**
	baz=6.9						
WHTX	**Lake Whitney,**	**4.29**	**187**	Pn	**Pn**	**14 49 19.5**	**+0.9**
ABTX	**Abilene, Hawle**	**4.29**	**213**	Pn	**Pn**	**14 49 19.2**	**+0.6**
237A	**Washetta, Mont**	**4.34**	**168**	Pn	**Pn**	**14 49 19.9**	**+0.5**
237A	**Washetta, Mont**	**4.34**	**168**	S		14 50 10.9	
	baz=349						
Z41A	**Richland Creek**	**4.50**	**131**	Pn	**Pn**	**14 49 21.4**	**-0.1**
Z41A				IAmb_Lg		14 50 43.1	
	comp=Z,47nm,0.7s						
LCAR	**Lake Charles**	**4.64**	**91**	Pn	**Pn**	**14 49 22.8**	**-0.6**
LCAR				IAmb_Lg		14 50 43.0	
	comp=Z,79nm,0.8s						
N35A	**Tabor**	**4.69**	**12**	Pn	**Pn**	**14 49 21.9**	**-2.2**
T42A	**Van Buren**	**4.72**	**79**		**Pn**	**14 49 24.5**	**0.0**
T42A				IAmb_Lg		14 50 41.5	
	comp=Z,73nm,0.7s						
T42A	**Van Buren**	**4.72**	**79**	P		14 49 25.0	
	baz=263,SNR=32						
CCAR	**Cane Creek**	**4.80**	**118**	IAmb_Lg		14 50 50.9	
	comp=Z,78nm,0.9s						
CCM	**Cathedral Cave**	**4.84**	**67**	Pn	**Pn**	**14 49 26.2**	**0.0**
CCM				IAmb_Lg		14 50 51.6	
	comp=Z,68nm,1.0s						
P40A	**Paris**	**5.02**	**48**	Pn	**Pn**	**14 49 29.2**	**+0.5**
P40A				IAmb_Lg		14 50 53.6	
	comp=Z,48nm,0.8s						
X43A	**Marvell**	**5.20**	**108**	IAmb_Lg		14 51 09.5	
	comp=Z,75nm,0.7s						
PBMO	**Poplar Bluff**	**5.22**	**82**	IAmb_Lg		14 51 02.4	
	comp=Z,70nm,0.7s						
BGNE	**Belgrade**	**5.23**	**349**	P	**Pn**	**14 49 32.1**	**+0.5**
	baz=168						
BGNE	**Belgrade**	**5.23**	**349**	Pn	**Pn**	**14 49 31.8**	**+0.2**
BGNE	**Belgrade**	**5.23**	**349**	P		14 49 32.2	
	baz=168,SNR=5.7						
KSCO	**Kaye Shedlock'**	**5.32**	**303**	Pn	**Pn**	**14 49 34.5**	**+1.6**
MSTX	**Muleshoe**	**5.34**	**246**	Pn	**Pn**	**14 49 34.5**	**+1.3**
N38A	**Joes South For**	**5.35**	**31**		**Pn**	**14 49 33.6**	**+0.4**
N38A				IAmb_Lg		14 51 05.5	
	comp=Z,96nm,0.9s						
N38A	**Joes South For**	**5.35**	**31**	P		14 49 34.0	
	baz=213,SNR=5.2						
435B	**Jarrell**	**5.50**	**186**	IAmb_Lg		14 51 18.0	
	comp=Z,43nm,0.9s						
L34A	**Svendsen Farm,**	**5.71**	**4**	IAmb_Lg		14 51 25.9	
	comp=Z,81nm,0.8s						
143A	**Socs Landing,**	**5.75**	**127**	IAmb_Lg		14 51 23.4	
	comp=Z,40nm,0.8s						
PARMO	**Parma**	**5.76**	**84**	Pn	**Pn**	**14 49 38.3**	**-0.5**
SLM	**Saint Louis**	**5.79**	**64**	IAmb_Lg		14 51 13.8	
	comp=Z,67nm,0.9s						
T25A	**Trinidad**	**6.11**	**280**	IAmb_Lg		14 51 34.7	
	comp=Z,57nm,0.9s						
HALT	**Halls**	**6.12**	**91**	IAmb_Lg		14 51 34.2	
	comp=Z,77nm,0.7s						
OGNE	**Ogallala**	**6.17**	**321**	Pn	**Pn**	**14 49 45.4**	**+0.8**
OGNE				IAmb_Lg		14 51 37.8	
	comp=Z,38nm,0.8s						
JCT	**Junction City**	**6.26**	**204**	Pn	**Pn**	**14 49 46.6**	**+0.8**
JCT				IAmb_Lg		14 51 50.1	
	comp=Z,38nm,0.8s						
S44A	**Carbondale**	**6.27**	**75**		**Pn**	**14 49 45.6**	**-0.1**
SIUC	**Southern Illin**	**6.30**	**74**		**Pn**	**14 49 46.2**	**-0.1**
SIUC				IAmb_Lg		14 51 33.9	
	comp=Z,78nm,0.8s						
SCIA	**State Center**	**6.32**	**26**	Pn	**Pn**	**14 49 46.8**	**+0.3**
SCIA				IAmb_Lg		14 51 33.6	
	comp=Z,63nm,0.7s						
OXF	**Oxford**	**6.35**	**104**	Pn	**Pn**	**14 49 46.5**	**-0.4**
OXF				IAmb_Lg		14 51 34.7	
	comp=Z,71nm,0.7s						
Y45A	**Yeager Farm, C**	**6.47**	**110**	IAmb_Lg		14 51 51.3	
	comp=Z,38nm,0.8s						
N41A	**Harden Midland**	**6.48**	**45**	Pn	**Pn**	**14 49 49.2**	**+0.5**
K31A	**O'Neill**	**6.52**	**348**	Pn	**Pn**	**14 49 49.7**	**+0.5**
P43A	**Skaggs, Pawnee**	**6.72**	**58**		**Pn**	**14 49 51.6**	**-0.4**
P43A				IAmb_Lg		14 51 49.5	
	comp=Z,48nm,0.8s						
Q44A	**Meyer Farm, Va**	**6.78**	**65**	Pn	**Pn**	**14 49 51.7**	**-1.0**
SDCO	**Great Sand Dun**	**7.06**	**285**	Pn	**Pn**	**14 49 58.3**	**+1.4**
Q24A	**Divide**	**7.10**	**295**	Pn	**Pn**	**14 49 58.6**	**+1.2**
Q24A				IAmb_Lg		14 52 02.0	
	comp=Z,36nm,0.7s						
L40A	**Anamosa**	**7.27**	**35**	Pn	**Pn**	**14 49 59.1**	**-0.5**
L40A				IAmb_Lg		14 52 01.9	
	comp=Z,25nm,0.7s						
PLAL	**Pickwick Lake**	**7.28**	**98**	IAmb_Lg		14 52 06.5	
	comp=Z,28nm,0.8s						
WVT	**Waverly**	**7.32**	**88**	Pn	**Pn**	**14 49 59.7**	**-0.5**
WVT				IAmb_Lg		14 52 03.5	
	comp=Z,25nm,0.8s						
ECSD	**EROS Data Cent**	**7.46**	**1**	Pn	**Pn**	**14 50 01.7**	**-0.5**
O44A	**Mansfield**	**7.68**	**57**	IAmb_Lg		14 52 27.6	
	comp=Z,41nm,0.8s						
ISCO	**Idaho Springs**	**7.74**	**300**	Pn	**Pn**	**14 50 07.4**	**+1.1**
L42A	**Oliver, Polo**	**8.02**	**42**	IAmb_Lg		14 52 27.7	
	comp=Z,34nm,0.8s						
V48A	**Smith Brothers**	**8.17**	**91**	IAmb_Lg		14 52 32.7	
	comp=Z,24nm,0.8s						
X48A	**Hartselle**	**8.23**	**100**	IAmb_Lg		14 52 33.6	
	comp=Z,27nm,1.0s						
BNM	**Barren Site**	**8.25**	**258**	Pn	**Pn**	**14 50 15.3**	**+2.1**
P46A	**Rosedale**	**8.34**	**63**	IAmb_Lg		14 52 40.0	
	comp=Z,34nm,0.8s						
JFWS	**Jewell Farm**	**8.38**	**36**	IAmb_Lg		14 52 42.1	
	comp=Z,28nm,0.7s						
MNTX	**Cornudas Mount**	**8.40**	**240**		**Pn**	**14 50 16.4**	**+1.4**
N23A	**Red Feather La**	**8.47**	**306**	IAmb_Lg		14 52 46.2	
	comp=Z,28nm,0.9s						
M44A	**Midewin, Midew**	**8.59**	**51**	Pn	**Pn**	**14 50 17.0**	**-0.6**
M44A				IAmb_Lg		14 52 42.0	
	comp=Z,47nm,1.2s						
WCI	**Wyandotte Cave**	**8.67**	**74**	IAmb_Lg		14 52 48.8	
	comp=Z,46nm,1.1s						
SFIN	**Lafayette**	**8.72**	**59**	IAmb_Lg		14 53 02.5	
	comp=Z,24nm,0.9s						
U49A	**Red Boiling Sp**	**8.96**	**85**	Pn	**Pn**	**14 50 21.2**	**-1.5**
TX31	**Lajitas Ar. Si**	**8.96**	**221**	Pn	**Pn**	**14 50 22.9**	**+0.1**
TX32	**Lajitas Array**	**8.96**	**221**	Pn	**Pn**	**14 50 23.0**	**+0.1**
SWET	**Sewanee**	**8.96**	**93**	IAmb_Lg		14 52 54.1	
	comp=Z,28nm,1.1s						
I40A	**Norwalk**	**9.00**	**30**	IAmb_Lg		14 53 07.2	
	comp=Z,20nm,0.7s						
K43A	**Burlington**	**9.22**	**43**	Pn	**Pn**	**14 50 24.2**	**-2.1**
FPAL	**Fort Paine**	**9.36**	**97**	IAmb_Lg		14 53 25.1	
	comp=Z,21nm,0.8s						
W50A	**Signal Mountai**	**9.47**	**93**	IAmb_Lg		14 53 24.1	
	comp=Z,32nm,1.0s						
R49A	**Shelbyville**	**9.55**	**74**	IAmb_Lg		14 53 12.0	
	comp=Z,20nm,1.1s						
RSSD	**Black Hills**	**9.57**	**327**	Pn	**Pn**	**14 50 31.9**	**+0.6**
P48A	**Milroy**	**9.60**	**67**	IAmb_Lg		14 53 16.0	
	comp=Z,25nm,0.7s						
S51A	**Beattyville**	**10.72**	**79**	Pn	**Pn**	**14 50 46.9**	**0.0**

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*NAO **19** 15:05:46.2±1.2, 73°.22N×6°.29E, ML4.2*

*MOS **19** 15:05:47.2±1.1, 73°.23N×6°.11E, h10^{km}, mb4.8/71, MS4.2/6, Error ellipse: s-maj=15.9km s-min=4.0km az=95.8*

*IDC **19** 15:05:47.7±0.4, 73°.16N×6°.27E, h0^{km}, mb4.3/26, mb1 4.4/33, mb1mx4.3/41, mbtmp4.3/33, ML3.9/7, MS4.1/33, Ms1 4.1/33, ms1mx3.9/54, Error ellipse: s-maj=12.2km s-min=8.7km az=47.0*

*NEIC **19** 15:05:48.3±1.7, 73°.18N±0°.07×6°.3E±0°.2, h10^{km}±1^{km}, mb4.8/127, Error ellipse: s-maj=11.7km s-min=10.5km az=189.0*

*GCMT **19** 15:05:49.3±0.2, 73°.29N±0°.02×6°.44E±0°.06, h12^{km}, MW4.9/103, Moment Tensor Solution. s24,c25; s103,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.43±.07; $M_{\theta\theta}$0.56±.07; $M_{\phi\phi}$1.87±.07; $M_{r\theta}$0.63±.30; $M_{\theta\phi}$1.21±.06; $M_{\phi r}$-1.11±.27; Best double couple: $M_0$2.81000×10^{16} NP1:ϕ_s230.00000°, δ42.00000°, λ-57.00000°. NP2:ϕ_s10.00000°, δ56.00000°, λ-116.00000°. Principal axes: T 2.6770, Plg8.0000°, Azm118.0000°; N 0.2680, Plg21.0000°, Azm25.0000°; P -2.9420, Plg68.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **19** 15:05:51.4±0.0, 73°.06N×7°.13E, h10^{km}, mb4.9, Ms3.6*

*BER **19** 15:05:51.1±3.4, 73°.30N×6°.38E, h25^{km}, ML3.0, ML4.2(NAO), Confirmed Earthquake*

*DNK **19** 15:05:52.7±2.0, 73°.81N×4°.83E, h0^{km}±54^{km}, ML3.4*

ISC 19 15:05:48.1±0.9, 73°.19N±0°.04×6°.35E±0°.04, h7^{km}±5^{km}, n501, σ1^{s}86/525, mb4.7/166, MS4.2/34, 14C-25D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.77**	**64**	Pn	**Pn**	**15 06 44.7**	**-1.9**
BJO1	**Bjornoya**	**3.77**	**64**	*e*P	**Pn**	**15 06 44.7**	**-1.9**
HSPB	**Hornsund (broa**	**4.50**	**27**	*e*P	**Pn**	**15 06 54.9**	**-1.7**
HSPB	**Hornsund (broa**	**4.50**	**27**	Pn	**Pn**	**15 06 54.9**	**-1.7**
HSPB	**Hornsund (broa**	**4.50**	**27**	⇓*e*P	**Pn**	**15 06 54.9**	**-1.7**
JNE	**Jan Mayen East**	**5.03**	**251**	⇑*i*P	**Pn**	**15 07 04.0**	**+0.2**
JNW	**Jan Mayen West**	**5.04**	**252**	*e*P	**Pn**	**15 07 04.3**	**+0.3**
JMIC	**Jan Mayen**	**5.09**	**251**	Pn	**Pn**	**15 07 04.0**	**-0.6**
	baz=15,slow=6.7,SNR=35						
JMIC				LR	LR	15 08 30.5	
	comp=Z,1μm,20.1s,baz=98,slow=32						
JMIC	**Jan Mayen**	**5.09**	**251**	Pn	**Pn**	**15 07 04.1**	**-0.5**
JMIC	**Jan Mayen**	**5.09**	**251**	⇑*e*P	**Pn**	**15 07 04.5**	**-0.1**
JMI	**Jan Mayen**	**5.18**	**251**	⇑*i*P	**Pn**	**15 07 06.3**	**+0.4**
BRBA	**Barentsburg A**	**5.26**	**18**	Pn	**Pn**	**15 07 05.4**	**-1.6**
BRBA	**Barentsburg A**	**5.26**	**18**	*e*P	**Pn**	**15 07 05.5**	**-1.6**
TRO	**Tromso**	**5.37**	**126**	Pn	**Pn**	**15 07 08.0**	**-0.6**
TRO	**Tromso**	**5.37**	**126**	*e*P	**Pn**	**15 07 09.4**	**+0.8**
TRO				*e*S	**Sn**	**15 08 05.3**	**-5.3**
TRO				IAML		15 08 08.9	
	comp=Z,26nm,0.9s						
N2VI	**Vinje**	**5.54**	**148**	*e*P	**Pn**	**15 07 10.6**	**-0.2**
N2VI				*e*S	**Sn**	**15 08 06.4**	**-8.2**
N2VI				IAML		15 08 07.8	
	comp=Z,39nm,0.5s						
SPA3	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.2**	**-1.2**
SPB2	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.1**	**-1.3**
SPA2	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.2**	**-1.2**
SPA0	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.2**	**-1.2**
	baz=191,slow=14						
SPA0	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 09.9**	**-1.5**
SPA0	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.2**	**-1.2**
	baz=191,slow=14						
SPA0				*e*S	**Sn**	**15 08 08.2**	**-7.5**
SPITS	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.6**	**-0.9**
	baz=196,slow=15,SNR=125						
SPITS				LR	LR	15 09 03.8	
	comp=Z,1μm,19.4s,baz=210,slow=35						
SPA1	**Spitsbergen Ar**	**5.58**	**22**	Pn	**Pn**	**15 07 10.2**	**-1.3**
LOF	**Lofoten**	**5.62**	**151**	Pn	**Pn**	**15 07 11.5**	**-0.4**
LOF				Sn	**Sn**	**15 08 07.7**	**-8.8**
LOF	**Lofoten**	**5.62**	**151**	*e*P	**Pn**	**15 07 11.8**	**-0.1**
LOF				IAML		15 08 15.9	
	comp=Z,51nm,0.5s						
N2SV	**S¸rv¥gen**	**5.77**	**154**	*e*P	**Pn**	**15 07 13.9**	**-0.1**
JETT	**Jettan, Norway**	**5.79**	**122**	Pn	**Pn**	**15 07 14.4**	**+0.1**
HOPEN	**Hopen**	**5.89**	**47**	Pn	**Pn**	**15 07 14.1**	**-1.6**
HOPEN	**Hopen**	**5.89**	**47**	*e*P	**Pn**	**15 07 14.2**	**-1.6**
KBS	**Kingsbay**	**5.92**	**11**	⇑*i*P	**Pn**	**15 07 14.8**	**-1.2**
KBS	**Kingsbay**	**5.92**	**11**	Pn	**Pn**	**15 07 14.2**	**-1.8**
KBS	**Kingsbay**	**5.92**	**11**	Pn	**Pn**	**15 07 14.1**	**-1.8**
KBS	**Kingsbay**	**5.92**	**11**	*e*P	**Pn**	**15 07 14.9**	**-1.2**
KBS	**Kingsbay**	**5.92**	**11**	*i* P	**Pn**	**15 07 15.1**	**-1.0**
HAMF	**Hammerfest**	**5.96**	**107**	Pn	**Pn**	**15 07 14.7**	**-1.9**
HAMF	**Hammerfest**	**5.96**	**107**	*e*P	**Pn**	**15 07 14.7**	**-1.9**
HAMF				*e*S	**Sn**	**15 08 18.4**	**-6.6**
STEI	**Steigen**	**6.06**	**146**	Pn	**Pn**	**15 07 17.2**	**-0.7**
STEI				Sn	**Sn**	**15 08 20.3**	**-7.1**
STEI	**Steigen**	**6.06**	**146**	*e*P	**Pn**	**15 07 18.5**	**+0.6**
STEI				IAML		15 08 23.6	
	comp=Z,23nm,0.4s						
KIF	**Kilpisjarvi**	**6.29**	**125**	*e*P	**Pn**	**15 07 20.8**	**-0.4**
N2TV	**T¥rnvik**	**6.37**	**148**	*e*P	**Pn**	**15 07 23.6**	**+1.3**
FAUS	**Fauske**	**6.57**	**148**	*e*P	**Pn**	**15 07 24.1**	**-0.8**
FAUS				IAML		15 08 39.3	
	comp=Z,15nm,0.4s						
NBB05	**Inndyr**	**6.71**	**153**	*e*P	**Pn**	**15 07 28.4**	**+1.5**
NBB30	**Finnes**	**6.73**	**154**	*e*P	**Pn**	**15 07 27.4**	**+0.2**
NBB30				IAML		15 08 41.1	
	comp=Z,22nm,0.6s						
KTK1	**Kautokeino**	**6.88**	**119**	*e*P	**Pn**	**15 07 31.0**	**+1.7**
NBB40	**Tonnes**	**7.09**	**158**	*e*P	**Pn**	**15 07 32.4**	**+0.3**
ARD9	**ARCESS Array S**	**7.11**	**111**	Pn	**Pn**	**15 07 31.6**	**-0.9**
KONS	**Konsvik**	**7.12**	**158**	*e*P	**Pn**	**15 07 32.7**	**+0.2**
KONS				IAML		15 08 48.5	
	comp=Z,34nm,0.3s						
ARD1	**ARCESS Array S**	**7.12**	**111**	Pn	**Pn**	**15 07 31.6**	**-1.0**
ARD7	**ARCESS Array S**	**7.12**	**112**	Pn	**Pn**	**15 07 31.6**	**-0.9**
ARB1	**ARCESS Array S**	**7.12**	**112**	Pn	**Pn**	**15 07 31.9**	**-0.8**
ARA0	**ARCESS Array S**	**7.13**	**112**	Pn	**Pn**	**15 07 31.7**	**-0.9**
	baz=315,slow=12						
ARA0				Sn	**Sn**	**15 08 45.7**	**-8.1**
	baz=308,slow=22						
ARA0	**ARCESS Array S**	**7.13**	**112**	Pn	**Pn**	**15 07 31.7**	**-0.9**
	baz=315,slow=12						
ARA0				Sn	**Sn**	**15 08 45.7**	**-8.1**
	baz=308,slow=22						
ARCES	**ARCESS Array B**	**7.13**	**112**	Pn	**Pn**	**15 07 32.1**	**-0.6**
	baz=323,slow=12,SNR=15						
ARCES				Sn	**Sn**	**15 08 45.5**	**-8.3**
	baz=302,slow=19,SNR=2.8						
ARD2	**ARCESS Array S**	**7.13**	**111**	Pn	**Pn**	**15 07 32.0**	**-0.7**
ARC3	**ARCESS Array S**	**7.13**	**112**	Pn	**Pn**	**15 07 31.7**	**-1.0**
STOK	**Stokkvaagen**	**7.26**	**158**	*e*P	**Pn**	**15 07 34.6**	**+0.1**
DAG	**Danmarks Havn**	**7.37**	**311**	*i* P	**Pn**	**15 07 31.9**	**-4.0**
DAG	**Danmarks Havn**	**7.37**	**311**	*e*P	**Pn**	**15 07 32.1**	**-3.7**
DAG				*e*S	Sn	15 08 48.0	-12
DAG				IAML		15 08 50.6	
	comp=Z,48nm,0.3s						
DAG	**Danmarks Havn**	**7.37**	**311**	*i* P	**Pn**	**15 07 31.9**	**-4.0**
DAG				*e*S	Sn	15 08 41.4	-18
DAG	**Danmarks Havn**	**7.37**	**311**	*i* P	Pn	15 07 31.0	-4.9
DAG				*i* P	**Pn**	**15 07 31.9**	**-4.0**
DAG				*e*S	Sn	15 08 41.4	-18
DAG				IAML		15 08 50.6	
	comp=Z,48nm,0.3s						
KEV	**Kevo**	**7.40**	**108**	P	**Pn**	**15 07 34.5**	**-1.9**
KEV	**Kevo**	**7.40**	**108**	Pn	**Pn**	**15 07 34.5**	**-1.9**
DBG	**Daneborg**	**7.50**	**291**	Pn	**Pn**	**15 07 33.7**	**-4.0**
DBG				Sn	Sn	15 08 50.8	-12
DBG	**Daneborg**	**7.50**	**291**	*e*P	**Pn**	**15 07 33.6**	**-4.2**
DBG				*e*S	Sn	15 08 50.9	-12
DBG				IAML		15 08 54.8	
	comp=Z,5.2nm,0.3s						
DBG	**Daneborg**	**7.50**	**291**	*i* P	**Pn**	**15 07 33.2**	**-4.5**
DBG				*e*S	Sn	15 08 49.2	-14
DBG				IAML		15 08 54.8	
	comp=Z,5.2nm,0.3s						
MOR8	**Moi Rana**	**7.59**	**154**	*e*P	**Pn**	**15 07 39.4**	**+0.5**
NSS	**Namsos**	**8.93**	**164**	*e*P	**Pn**	**15 07 58.2**	**+0.8**
NSS				IAML		15 09 38.9	
	comp=Z,21nm,0.7s						
SCO	**Scoresbysund**	**9.18**	**267**	*i* P	**Pn**	**15 07 59.4**	**-1.4**
SCO	**Scoresbysund**	**9.18**	**267**	Pn	**Pn**	**15 07 58.9**	**-1.9**
SCO	**Scoresbysund**	**9.18**	**267**	*i* P	**Pn**	**15 07 59.0**	**-1.8**
SCO				*i* P		15 07 59.5	

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SCO    Scoresbysund        9.18 267  i P     Pn      15 07 59.4 -1.4
SCO    Scoresbysund        9.18 267  i P     Pn      15 07 59.0 -1.8
SCO                                  i P             15 07 59.5
TBLU   Trondheim          10.09 170  eP      Pn      15 08 10.9 -2.3
NOD    Norderasen         10.27 158  eP      Pn      15 08 16.5 +0.8
APA0   Apatity Array      10.46 109   Pn     Pn      15 08 15.8 -2.5
       baz=339,slow=14
APA0   Apatity Array      10.46 109   Pn     Pn      15 08 15.8 -2.5
       baz=339,slow=14
MOL    Molde              10.68 177  eP      Pn      15 08 21.3 -0.1
LVZ    Lovozero           10.73 105⇓eP       Pn      15 08 19.9 -2.0
LVZ                                   pmax   pmax
       comp=Z,199nm,1.3s
LVZ    Lovozero           10.73 105   Pn     Pn      15 08 18.9 -3.0
AKN    Aaknes             11.07 178   Pn     Pn      15 08 26.5 -0.2
AKN    Aaknes             11.07 178   Pn     Pn      15 08 26.5 -0.2
DOMB   Dombas             11.25 173  eP      Pn      15 08 28.5 -0.6
HYA    Hoyanger           12.08 180  eP      Pn      15 08 39.8 -0.7
NC204  NORSAR Array S     12.09 170          Pn      15 08 39.1 -1.4
NC303  NORSAR Array S     12.17 168          Pn      15 08 41.6 -0.1
SUE    Sulen              12.21 184  eP      Pn      15 08 41.9 -0.2
NC405  NORSAR Array S     12.30 168   Pn     Pn      15 08 42.9 -0.7
NBO00  NORSAR Array S     12.33 170   Pn     Pn      15 08 43.6 -0.3
NB201  NORSAR Array S     12.34 169   Pn     Pn      15 08 43.7 -0.3
NOA    NORSAR Array B     12.35 169   Pn     Pn      15 08 45.2 +1.1
       comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=11
NOA                                   Sn     Sn      15 10 46.3  -16
       comp=Z,0.0nm,0.3s,baz=341,slow=19,SNR=1.0
NOA                                   LR     LR      15 13 12.7
       comp=Z,591nm,19.8s,baz=355,slow=36
NAO01  NORSAR Array S     12.52 170   Pn     Pn      15 08 46.0 -0.5
SKAR   Skarslia           12.59 176  eP      Pn      15 08 47.1 -0.4
NC602  NORSAR Array S     12.67 168   Pn     Pn      15 08 47.8 -0.7
NRA0   NORESS Array S     12.67 168   Pn     Pn      15 08 47.5 -1.0
       baz=347,slow=16
NRA0   NORESS Array S     12.67 168   Pn     Pn      15 08 47.5 -1.0
       baz=347,slow=16
BORG   Borgarnes          12.90 243   LR     LR      15 12 28.2
       comp=Z,572nm,21.0s,baz=342,slow=31
SUMG   Summit             12.97 289   P      Pn      15 08 51.3 -1.6
SUMG   Summit             12.97 289   Pn     Pn      15 08 51.3 -1.6
SUMG   Summit             12.97 289  i P     Pn      15 08 51.0 -1.9
SUMG   Summit             12.97 289  i P     Pn      15 08 51.0 -1.9
SUMG   Summit             12.97 289  i P     Pn      15 08 51.0 -1.9
ODD1   Odda               13.34 179  eP      Pn      15 08 56.3 -1.4
HFS    Hagfors            13.42 164   Pn     Pn      15 08 58.4 -0.4
       comp=Z,1.3nm,0.3s,baz=353,slow=13,SNR=27
HFS                                   Sn     Sn      15 11 19.1 -8.8
       comp=Z,0.5nm,0.3s,baz=350,slow=23,SNR=6.5
HFS                                   LR     LR      15 13 46.0
       comp=Z,1µm,19.2s,baz=348,slow=36
HFS    Hagfors            13.42 164   Pn     Pn      15 08 58.3 -0.4
       baz=3.2,slow=12
HFS    Hagfors            13.42 164   Pn     Pn      15 08 58.3 -0.4
       baz=3.2,slow=12
FIA0   FINESS Array S     13.92 138   Pn     Pn      15 09 03.9 -1.5
       baz=340,slow=14
FIA0   FINESS Array S     13.92 138   Pn     Pn      15 09 03.9 -1.5
       baz=340,slow=14
FIA1   FINESS Array S     13.92 138   Pn     Pn      15 09 03.3 -2.1
FINES  FINESS Array B     13.92 138   Pn     Pn      15 09 04.5 -1.0
       comp=Z,0.7nm,0.3s,baz=339,slow=12,SNR=25
FINES                                 LR     LR      15 14 06.1
       comp=Z,1µm,20.2s,baz=359,slow=36
TMCR   Tamitsa            14.42 112  eP      Pn      15 09 13.3 +1.0
TMCR                                 e               15 11 52.4
TMCR                                  pmax   pmax
       comp=Z,30nm,0.8s
ANGG   Ammassalik, Gr     16.80 266          P       15 09 45.1 -0.6
VSU    Vasula             16.81 141  eP      P       15 09 47.7 +1.9
VSU    Vasula             16.81 141⇓eP       P       15 09 46.3 +0.5
VSU                                   pmax   pmax
       comp=Z,118nm,1.4s
KLMR   Klimovskoe         17.55 117  eP      Pn      15 09 51.5 -1.3
KLMR                                  pmax   pmax
       comp=Z,156nm,1.4s
KLMR   Klimovskoe         17.55 117  ePn     Pn      15 09 51.5 -1.3
KLMR                                  AMP            15 09 59.0
       comp=Z,156nm,1.4s
EKA    Eskdalemuir Ar     18.35 197   P      P       15 10 02.8 -0.1
       baz=5.2,slow=10,SNR=9.5
EKA    Eskdalemuir Ar     18.35 197   P      P       15 10 03.3 +0.4
EKA    Eskdalemuir Ar     18.35 197   P      P       15 10 03.3 +0.4
PBUR   Paburge            18.37 151  eP      P       15 10 04.5 +1.5
ESK    Eskdalemuir        18.37 198   P      P       15 10 02.8 -0.3
ESK                                   pmax   pmax
       comp=Z,32nm,1.2s
ESK    Eskdalemuir        18.37 198   P      P       15 10 02.8 -0.3
BSD    Bornholm Skovb     18.49 164  eP      Pn      15 10 05.4 +0.9
TULEG  Thule              18.64 315   P      P       15 10 03.7 -2.2
PABE   Paberze            19.16 148  eP      Pn      15 10 13.0 +0.3
ISAL   Salakas            19.45 145  eP      Pn      15 10 17.2 +1.1
IIGN   Ignalina           19.68 145  eP      Pn      15 10 19.9 +1.2
IDID   Didziasalis        19.80 144  eP      Pn      15 10 20.6 +0.5
EUNU   Eureka             19.99 329   P      P       15 10 20.6 -0.2
NACGM  Naroch             20.20 144  i P     P       15 10 23.5 +0.5
NACGM                                i P     P       15 10 23.5 +0.5
NACGM                                i P     P       15 10 23.5 +0.5
NACGM                                i Pb    pwP     15 10 27.1 -0.4
       comp=Z,29nm,1.2s
NACGM                                i PP    PnPn    15 10 34.3 -4.9
NACGM                                i PPP   PPP     15 10 41.8
NACGM                                i S     Sn      15 14 15.9 +3.8
NACGM                                i SS    SnSn    15 14 35.8  +10
NACGM                                i SSS   SSS     15 14 50.4
NACGM                                i LQ    LQ      15 16 00.7
NACGM                                i LR    LR      15 17 05.4
GKP    Gorka Klasztor     20.52 161  eP      Pn      15 10 28.7  0.0
MNK    Minsk              20.77 143  i P     P       15 10 29.6 +0.3
       comp=E,3.0nm,1.9s
MNK                                  i P     P       15 10 29.6 +0.3
       comp=N,14nm,1.0s
MNK                                  i P     P       15 10 29.6 +0.3
       comp=Z,22nm,1.4s
MNK                                  i PP    PnPn    15 10 47.7 +0.7
MNK                                  i PPP   PPP     15 10 55.6
MNK                                  i S     S       15 14 22.8 +1.8
MNK                                  i PcP   PcP     15 14 38.1 +0.2
MNK                                  i SS    SnSn    15 14 43.9 +3.7
MNK                                  i SSS   SSS     15 14 57.1
MNK                                  i LQ    LQ      15 15 53.1
MNK                                  i LR    LR      15 17 01.4
MNK                                  i LRM   MLR     15 17 53.6
       comp=E,42nm,13.5s
MNK                                  i LRM   MLR     15 18 00.7
       comp=Z,801nm,19.3s
MNK                                  i LRM   MLR     15 18 04.5
       comp=N,843nm,20.6s
MNK    Minsk              20.77 143  eP      P       15 10 29.0 -0.3
CLZ    Clausthal          21.50 173  eP      P       15 10 38.5 +1.3
       comp=N,57nm,1.4s,baz=357,slow=9.9
MOS    Moscow             21.62 127  eP      P       15 10 37.7 -0.6
MOS                                  e               15 10 42.8
MOS                                  e               15 11 07.7
MOS                                   pmax   pmax
       comp=Z,61nm,0.8s
OBN    Obninsk            21.95 129   P      P       15 10 43.0 +1.1
       comp=Z,3.4nm,0.4s,baz=338,slow=11,SNR=7.7
OBN                                   LR     LR      15 18 58.0
       comp=Z,246nm,21.6s,baz=20,slow=36
OBN    Obninsk            21.95 129  i P     P       15 10 42.6 +0.7
OBN                                  i               15 11 05.4
OBN                                   pmax   pmax
       comp=Z,73nm,1.3s
OBN                                   MLR    MLR
       comp=Z,923nm,20.0s
OBN    Obninsk            21.95 129   P      P       15 10 41.1 -0.8
KASTN  Kahler Asten       22.09 177  eP      P       15 10 45.4 +1.9
       comp=Z,43nm,1.1s,baz=357,slow=9.9
KIRV   Kirov              22.13 108   P      P       15 10 44.9 +1.1
       comp=Z,13nm,0.7s,baz=294,slow=10.0,SNR=7.0
KIRV                                  LR     LR      15 19 45.9
       comp=Z,608nm,18.6s,baz=341,slow=38
KIRV   Kirov              22.13 108⇑eP       P       15 10 43.6 -0.2
CLL    Collm              22.15 169  i P     P       15 10 45.1 +1.0
       comp=Z,26nm,1.2s
CLL                                  i (sP)  pwP     15 10 50.4 +1.7
       comp=Z,69nm,1.8s
CLL                                  i PP    PnPn    15 11 08.5 +2.5
CLL                                  eS      S       15 14 52.0 +3.9
CLL                                  eSSS    SSS     15 15 30.0
CLL    Collm              22.15 169  i P     P       15 10 45.1 +1.0
CLL                                  i               15 10 50.4
CLL                                  eS      S       15 14 52.0 +3.9
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CLL                                   pmax   pmax
       comp=Z,26nm,1.2s
CLL    Collm              22.15 169   P      P       15 10 43.6 -0.5
CLL                                   IAmb   IAmb    15 10 56.4
       comp=Z,53nm,1.5s
NEUB   Neuenburg          22.19 171  eP      P       15 10 45.7 +1.2
       comp=Z,90nm,1.1s,baz=357,slow=9.9
NRS    Narsarsuaq         22.47 265   P      P       15 10 46.1 -1.4
NRS                                   pmax   pmax
       comp=Z,33nm,1.1s
NRS    Narsarsuaq         22.47 265   P      P       15 10 46.0 -1.4
NRS                                   IAmb   IAmb    15 11 03.3
       comp=Z,33nm,1.1s
FBE    Freiberg           22.56 168  eP      P       15 10 50.1 +1.7
       comp=Z,45nm,1.1s,baz=357,slow=9.9
BRG    Berggiesshubel     22.64 167  i P     P       15 10 50.4 +1.0
BRG                                   Amp            15 10 52.5
       comp=Z,23nm,1.2s
BRG    Berggiesshubel     22.64 167  i P     P       15 10 50.4 +1.0
BRG                                   pmax   pmax
       comp=Z,23nm,1.2s
BRG    Berggiesshubel     22.64 167  i P     P       15 10 50.4 +1.0
BRG                                   Amp            15 10 52.5
       comp=Z,23nm,1.2s
MEM    Membach            22.67 181  dP      P       15 10 50.4 +0.7
       comp=Z,30nm,1.0s
MEM                                  dPnPn   PnPn    15 11 12.8 -0.2
BTNL   Ternell            22.69 180  dP      P       15 10 49.4 -0.5
       comp=Z,33nm,1.1s
AHRW   Bad Neuenahr-A     22.74 179  eP      P       15 10 51.6 +1.2
       comp=Z,64nm,1.0s,baz=357,slow=9.9
MOX    Moxa               22.75 171  eP      P       15 10 51.0 +0.5
       comp=Z,28nm,1.0s,baz=357,slow=9.9
MOX                                  eL      L       15 18 27.9
       comp=Z,174nm,21.5s
KSP    Ksiaz              22.84 164  eP      P       15 10 52.0 +0.5
BCLA   Clavier            22.86 182  dP      P       15 10 53.0 +1.3
BGES   Gesves             22.90 182  dP      P       15 10 53.5 +1.4
BHOU   Houvegnez          22.92 181  dP      P       15 10 53.9 +1.6
WERD   Werda              22.98 170  eP      P       15 10 53.4 +0.5
       comp=Z,25nm,1.4s,baz=357,slow=9.9
BMRD   Maredsous          22.98 183  dP      P       15 10 54.3 +1.3
TANN   Tannenbergstha     23.02 170  eP      P       15 10 55.0 +1.6
       comp=Z,63nm,1.9s,baz=357,slow=9.9
OSTC   Ostas              23.12 164  eP      P       15 10 56.9 +2.5
WERN   Wernitzgruen       23.14 170  eP      P       15 10 56.5 +1.9
       comp=Z,39nm,1.0s,baz=357,slow=9.9
UPC    Upice              23.16 164  eP      P       15 10 56.2 +1.5
UPC    Upice              23.16 164  eP      P       15 10 56.2 +1.5
NKC    Novy Kostel        23.20 170  eP      P       15 10 57.1 +1.9
NKC    Novy Kostel        23.20 170  eP      P       15 10 57.1 +1.9
DPC    Dobruska-Polom     23.34 164  eP      P       15 10 58.3 +1.7
DPC    Dobruska-Polom     23.34 164  eP      P       15 10 58.3 +1.7
PRU    Pruhonice          23.56 167  eP      P       15 11 00.5 +1.7
PRU                                   MLR    MLR
       comp=Z,700nm,16.4s
PRU    Pruhonice          23.56 167  eP      P       15 11 00.5 +1.7
PRU                                   AMS    AMS     15 20 10.0
       comp=Z,700nm,16.4s
WLF    Walferdange        23.61 180  dP      P       15 11 00.5 +1.2
WLF    Walferdange        23.61 180   P      P       15 10 58.9 -0.4
WLF                                   pmax   pmax
       comp=Z,35nm,1.1s
WLF    Walferdange        23.61 180   P      P       15 10 58.9 -0.4
WLF                                   IAmb   IAmb    15 11 02.2
       comp=Z,35nm,1.1s
KRLC   Kraliky            23.65 163  eP      P       15 11 01.7 +2.0
KRLC   Kraliky            23.65 163  eP      P       15 11 01.7 +2.0
ROTZ   Rotzenmuhle        23.65 171  eP      P       15 11 01.0 +1.3
       comp=Z,125nm,2.2s,baz=357,slow=9.9
GRA1   Grafenberg Arr     23.68 172   P      P       15 10 59.6 -0.4
GRF    Grafenberg Arr     23.68 172   P      P       15 10 59.6 -0.4
GRF                                   pmax   pmax
       comp=Z,15nm,0.9s
GRF    Grafenberg Arr     23.68 172  eP      P       15 11 00.8 +0.8
       comp=Z,95nm,1.9s,baz=357,slow=9.9
GRF                                  eL      L       15 19 20.5
       comp=Z,236nm,18.5s
OJC    Ojcow              23.80 158  eP      P       15 11 03.1 +2.1
OJC    Ojcow              23.80 158   P      P       15 11 01.4 +0.3
OJC                                   pmax   pmax
       comp=Z,52nm,1.4s
OJC    Ojcow              23.80 158   P      P       15 11 01.4 +0.3
OJC                                   IAmb   IAmb    15 11 14.2
       comp=Z,52nm,1.4s
MORC   Moravsky Berou     24.01 162  eP      P       15 11 04.1 +0.9
MORC   Moravsky Berou     24.01 162   P      P       15 11 03.4 +0.2
MORC                                  pmax   pmax
       comp=Z,19nm,1.1s
MORC   Moravsky Berou     24.01 162   P      P       15 11 03.4 +0.2
MORC                                  IAmb   IAmb    15 11 12.8
       comp=Z,20nm,1.1s
WET    Wettzell           24.31 170  eP      P       15 11 07.5 +1.6
       comp=Z,45nm,1.6s,baz=357,slow=9.9
KHC    Kasperske Hory     24.36 168⇓eP       P       15 11 09.7 +3.3
KHC                                   pmax   pmax
       comp=Z,36nm,1.6s
KHC    Kasperske Hory     24.36 168  eP      P       15 11 08.4 +2.0
KHC    Kasperske Hory     24.36 168   P      P       15 11 07.2 +0.8
VRAC   Vranov             24.39 164   P      P       15 11 07.5 +0.8
       comp=Z,21nm,0.9s,baz=352,slow=9.6,SNR=16
VRAC                                  LR     LR      15 20 46.3
       comp=Z,511nm,18.5s,baz=351,slow=37
VRAC   Vranov             24.39 164  eP      P       15 11 07.9 +1.2
STU    Stuttgart          24.54 175   P      P       15 11 09.1 +1.1
STU                                   pmax   pmax
       comp=Z,24nm,0.9s
STU    Stuttgart          24.54 175   P      P       15 11 09.1 +1.1
STU                                   IAmb   IAmb    15 11 10.9
       comp=Z,24nm,0.9s
KRUC   Moravsky           24.62 164  eP      P       15 11 09.6 +0.9
NIE    Niedzica           24.64 158  eP      P       15 11 10.7 +1.8
GEC2   GERESS Array S     24.65 168   P      P       15 11 10.7 +1.5
GEC2                                  IAmb   IAmb    15 11 13.7
       comp=Z,32nm,1.1s
GEC2   GERESS Array S     24.65 168  eP      P       15 11 10.3 +1.2
       comp=Z,36nm,1.2s,baz=357,slow=9.9
GERES  GERESS Array B     24.65 168   P      P       15 11 10.8 +1.7
       comp=Z,13nm,0.9s,baz=2.5,slow=8.8,SNR=33
GERES                                 LR     LR      15 21 08.9
       comp=Z,428nm,18.1s,baz=354,slow=37
AKASG  Malin Array Be     24.66 144   P      P       15 11 09.0  0.0
       comp=Z,9.8nm,0.8s,baz=345,slow=9.7,SNR=23
AKASG                                 LR     LR      15 20 32.1
       comp=Z,1µm,19.9s,baz=330,slow=36
AKASG  Malin Array Be     24.66 144   P      P       15 11 09.0  0.0
AKBB   Malin Array Si     24.66 144⇓eP       P       15 11 08.8 -0.2
AKBB                                  pmax   pmax
       comp=Z,15nm,0.9s
AKBB   Malin Array Si     24.66 144   P      P       15 11 08.5 -0.5
AKBB                                  IAmb   IAmb    15 11 31.2
       comp=Z,46nm,1.4s
LVV    L'vov              24.71 152  eP      P       15 11 09.8 +0.3
LVV                                  eS      S       15 15 27.7 -3.5
LVV                                   MLR    MLR
       comp=Z,600nm,14.0s
KWP    Kalwaria Pacla     24.72 154  eP      P       15 11 10.8 +1.2
KWP    Kalwaria Pacla     24.72 154   P      P       15 11 09.9 +0.3
KWP                                   pmax   pmax
       comp=Z,92nm,1.4s
KWP    Kalwaria Pacla     24.72 154   P      P       15 11 09.9 +0.3
LPSR   Galich'ya Gora     24.81 128  eP      P       15 11 10.8 +0.4
LPSR                                  pmax   pmax
       comp=Z,70nm,0.8s
RES    Resolute Bay       24.87 322   P      P       15 11 15.8 +5.0
       comp=Z,1.6nm,0.8s,baz=41,slow=11,SNR=2.0
RES                                   LR     LR      15 21 01.5
       comp=Z,526nm,19.6s,baz=19,slow=37
RES    Resolute Bay       24.87 322   P      P       15 11 15.8 +5.0
RES                                   pmax   pmax
       comp=Z,12nm,1.5s
JAVC   Velka Javorina     24.93 162  eP      P       15 11 12.6 +1.0
BFO    Black Forest       24.96 177   P      P       15 11 12.7 +0.9
BFO                                   pmax   pmax
       comp=Z,38nm,1.2s
BFO    Black Forest       24.96 177   P      P       15 11 12.7 +0.9
BFO    Black Forest       24.96 177  eP      P       15 11 13.1 +1.3
       comp=Z,50nm,1.3s,baz=357,slow=9.9
ECH    Echery             25.06 179   P      P       15 11 13.6 +0.8
ECH                                   pmax   pmax
       comp=Z,39nm,1.1s
ECH    Echery             25.06 179   P      P       15 11 13.6 +0.8
SMOL   Smolenice          25.25 163  eP      P       15 11 16.7 +2.3
SMOL                                  pmax   pmax
       comp=Z,20nm,1.3s
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SMOL   Smolenice          25.25 163  eP      P       15 11 16.7 +2.3
CRVS   Cervenica-Dubn     25.28 156  eP      P       15 11 17.1 +2.4
CRVS                                  pmax   pmax
       comp=Z,55nm,1.4s
CRVS   Cervenica-Dubn     25.28 156  eP      P       15 11 17.1 +2.4
CLF    Chambon-Foret      25.32 186   P      P       15 11 14.7 -0.3
KOLS   Kolonicke sedl     25.35 155  eP      P       15 11 17.0 +1.7
KOLS                                  pmax   pmax
       comp=Z,32nm,1.1s
KOLS   Kolonicke sedl     25.35 155  eP      P       15 11 17.0 +1.7
MODS   Modra-Piesok       25.38 163  eP      P       15 11 17.2 +1.6
MODS                                  pmax   pmax
       comp=Z,52nm,1.4s
MODS   Modra-Piesok       25.38 163  eP      P       15 11 17.2 +1.6
VYHS   Vyhne              25.40 160  eP      P       15 11 17.1 +1.3
VYHS                                  pmax   pmax
       comp=Z,31nm,1.4s
VYHS   Vyhne              25.40 160  eP      P       15 11 17.1 +1.3
ZST    Bratislava         25.54 163  eP      P       15 11 19.2 +2.2
ZST    Bratislava         25.54 163  eP      P       15 11 19.2 +2.2
UZH    Uzhgorod           25.65 155⇓iP       P       15 11 19.3 +1.3
UZH                                  i               15 11 25.2
UBR    Ueberruh           25.65 174  eP      P       15 11 20.0 +1.8
       comp=Z,44nm,1.2s,baz=357,slow=9.9
MOA    Molln              25.68 168  eP      P       15 11 20.0 +1.7
       comp=Z,18nm,1.6s
CONA   Conrad Observa     25.71 165  eP      P       15 11 20.7 +2.1
       comp=Z,18nm,1.0s
RETA   Reutte             25.87 173  eP      P       15 11 22.1 +2.0
       comp=Z,12nm,1.2s
SOP    Sopron             26.00 164  eP      P       15 11 22.8 +1.6
MOTA   Moosalm            26.02 173  i P     P       15 11 23.6 +2.0
       comp=Z,14nm,1.3s
DAVA   Damuels            26.04 175  eP      P       15 11 24.2 +2.4
       comp=Z,29nm,1.0s
WATA   Walderalm          26.05 172  i P     P       15 11 24.0 +2.1
       comp=Z,24nm,1.3s
PSZ    Piszkesteto        26.08 159  eP      P       15 11 24.7 +2.6
PSZ    Piszkesteto        26.08 159   P      P       15 11 21.3 -0.7
PSZ                                   pmax   pmax
       comp=Z,31nm,1.3s
PSZ    Piszkesteto        26.08 159   P      P       15 11 21.3 -0.7
PSZ                                   IAmb   IAmb    15 11 30.9
       comp=Z,31nm,1.3s
WTTA   Wattenberg         26.12 172  eP      P       15 11 24.8 +2.2
       comp=Z,18nm,1.2s
SQTA   Sankt Quirin       26.15 172  eP      P       15 11 25.0 +2.2
       comp=Z,14nm,1.3s
VSR    Storozhevoye       26.16 129  eP      P       15 11 22.4 -0.2
VSR                                   pmax   pmax
       comp=Z,40nm,1.5s
EGYH   Egyhazaskeszo      26.33 163  eP      P       15 11 28.4 +4.2
FETA   Feichten           26.33 173  eP      P       15 11 26.6 +2.2
       comp=Z,13nm,1.4s
ARSA   Arzberg            26.36 166  eP      P       15 11 26.4 +1.9
       comp=Z,12nm,1.4s
KBA    Koelnbreinsper     26.39 169  eP      P       15 11 27.5 +2.5
       comp=Z,6.6nm,1.1s
CSKK   Cskako             26.47 162  eP      P       15 11 28.1 +2.7
DAVOX  Davos/Dischmat     26.55 175   P      P       15 11 26.5 +0.1
       comp=Z,5.8nm,1.1s,baz=333,slow=7.9,SNR=3.4
DAVOX                                 LR     LR      15 22 04.0
       comp=Z,225nm,19.2s,baz=351,slow=37
ARU    Arti               26.55 101   P      P       15 11 26.6 +0.5
       comp=Z,2.6nm,0.9s,baz=317,slow=10,SNR=8.3
ARU    Arti               26.55 101c iP      P       15 11 27.4 +1.3
ARU                                   PPP    PPP     15 12 17.2
ARU                                                  15 14 51.1
ARU                                   S      S       15 16 04.0 +3.7
ARU                                   SS     SnSn    15 17 04.8 +3.3
ARU                                   pmax   pmax
       comp=Z,14nm,1.1s
ARU                                   MLR    MLR
       comp=Z,132nm,9.0s
ARU    Arti               26.55 101   P      P       15 11 26.0 -0.1
ARU                                   IAmb   IAmb    15 11 47.4
       comp=Z,19nm,0.9s
MPLH   Magyarpolny        26.59 163  eP      P       15 11 29.7 +3.1
ABTA   Abfaltersbach      26.68 171  eP      P       15 11 29.5 +2.1
       comp=Z,19nm,1.3s
VRH    Novokhopyorsk      26.76 126  eP      P       15 11 27.0 -1.0
VRH                                   pmax   pmax
       comp=Z,10.0nm,0.7s
LTVH   Ltavrtes, Hu       26.83 156  eP      P       15 11 35.0 +6.4
MYKA   Terra Mystica      26.86 169  eP      P       15 11 31.4 +2.3
       comp=Z,21nm,1.6s
ZOU    Zoufplan           26.89 170   P      P       15 11 28.7 -0.8
ZOU                                   IAmb   IAmb    15 11 36.6
       comp=Z,31nm,1.3s
SOKA   Soboth             26.89 167  eP      P       15 11 31.5 +2.1
       comp=Z,10nm,1.2s
BUR08  Bucovina Ar. S     27.00 151   P      P       15 11 28.6 -1.7
BUR08                                 IAmb   IAmb    15 11 50.2
       comp=Z,22nm,1.2s
OBKA   Obir               27.03 167  eP      P       15 11 33.1 +2.4
       comp=Z,19nm,1.2s
FRB    Frobisher Bay      27.05 289   P      P       15 11 31.4 +1.0
       comp=Z,3.2nm,0.9s,baz=67,slow=10.0,SNR=3.1
FRB                                   LR     LR      15 21 12.6
       comp=Z,319nm,21.2s,baz=40,slow=34
BELG   Belogornoye        27.12 118   P      P       15 11 31.8 +0.6
       comp=Z,28nm,0.9s,baz=294,slow=3.1,SNR=8.8
BELG                                  LR     LR      15 22 05.7
       comp=Z,469nm,20.3s,baz=328,slow=36
BELG   Belogornoye        27.12 118deP       P       15 11 31.2  0.0
BELG                                  pmax   pmax
       comp=Z,7.0nm,1.0s
CTI    Castel Tesino      27.34 172   P      P       15 11 33.3 -0.1
CTI                                   pmax   pmax
       comp=Z,18nm,1.3s
CTI    Castel Tesino      27.34 172   P      P       15 11 33.3 -0.1
CTI                                   IAmb   IAmb    15 11 42.4
       comp=Z,18nm,1.3s
MORH   Mrgy, Hungar       27.64 161  eP      P       15 11 39.0 +3.0
MLR    Muntele Rosu       29.21 151   P      P       15 11 52.8 +2.7
       comp=Z,2.2nm,0.6s,baz=298,slow=5.5,SNR=3.6
MLR                                   LR     LR      15 23 43.6
       comp=Z,1µm,18.6s,baz=354,slow=37
DIVS   Divibare           29.87 160   P      P       15 11 55.0 -0.9
DIVS                                  IAmb   IAmb    15 12 20.5
       comp=Z,15nm,1.4s
CASP   Castiglione de     30.56 173   P      P       15 12 01.5 -0.5
CASP                                  IAmb   IAmb    15 12 04.0
       comp=Z,20nm,1.2s
NRCA   Norcia             30.61 170   P      P       15 12 01.2 -1.3
LATE   Laterza            30.77 172   P      P       15 12 03.0 -0.9
LATE                                  IAmb   IAmb    15 12 08.4
       comp=Z,18nm,1.5s
TIXI   Tiksi              30.91  31⇓eP       P       15 12 06.2 +1.4
TIXI                                  pmax   pmax
       comp=Z,71nm,2.5s
TIXI   Tiksi              30.91  31   P      P       15 12 03.5 -1.2
TIXI                                  IAmb   IAmb    15 12 13.7
       comp=Z,17nm,1.1s
GOF    Gofitskoye         32.83 129⇑eP       P       15 12 23.3 +1.4
BRVK   Borovoye           32.86  92⇓eP       P       15 12 23.3 +1.2
BRVK                                  pmax   pmax
       comp=Z,6.0nm,1.3s
BRVK   Borovoye           32.86  92   P      P       15 12 22.2 +0.1
ABKAR  Akbulak array      33.29 106   P      P       15 12 25.8 -0.1
ABKAR                                 IAmb   IAmb    15 12 27.6
       comp=Z,7.8nm,0.9s
FNA    Florina            33.29 159   P      P       15 12 26.0  0.0
FNA                                   pmax   pmax
       comp=Z,24nm,1.1s
FNA    Florina            33.29 159   P      P       15 12 26.0  0.0
SOC    Sochi              33.51 134  eP      P       15 12 26.5 -1.3
SOC                                  e               15 13 35.2
SOC                                  ePPP    PPP     15 13 57.5
SOC                                  eS      S       15 17 49.1 -0.4
SOC                                  eSS     SnSn    15 19 55.4 +4.3
SOC                                   MLR    MLR
       comp=Z,380nm,16.0s
KIV    Kislovodsk         33.80 130  eP      P       15 12 32.7 +2.3
KIV                                   pmax   pmax
       comp=Z,26nm,1.1s
KIV                                   MLR    MLR
       comp=Z,892nm,15.0s
ESDC   Sonseca Array      33.98 194   P      P       15 12 32.2 +0.3
       comp=Z,2.8nm,1.0s,baz=358,slow=9.4,SNR=6.2
KBZ    Khabaz             34.06 130   P      P       15 12 33.6 +1.1
       comp=Z,4.7nm,1.0s,baz=290,slow=2.0,SNR=9.2
KBZ                                   LR     LR      15 26 29.4
       comp=Z,635nm,21.4s,baz=340,slow=36
KBZ    Khabaz             34.06 130⇑iP       P       15 12 34.9 +2.4
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KBZ                                   pmax   pmax
       comp=Z,8.0nm,1.1s
LIT    Litokhoron          34.09 158  P      P       15 12 32.4 -0.4
LIT                                   pmax   pmax
       comp=Z,10.0nm,1.2s
LIT    Litokhoron          34.09 158  P      P       15 12 32.4 -0.4
LIT                                   IAmb   IAmb    15 12 56.1
       comp=Z,9.9nm,1.2s
AGG    Agios Georgios      35.13 158  P      P       15 12 41.1 -0.9
AGG                                   pmax   pmax
       comp=Z,21nm,1.1s
AGG    Agios Georgios      35.13 158  P      P       15 12 41.1 -0.9
AGG                                   IAmb   IAmb    15 12 57.6
       comp=Z,21nm,1.1s
ZEI    Tsey                35.18 129 eP      P       15 12 43.9 +1.4
ZEI                                   pmax   pmax
       comp=Z,6.0nm,1.1s
GROC   Groznyy             35.22 126 eP      P       15 12 43.9 +1.3
GROC                                 e               15 14 01.6
GROC                                  pmax   pmax
       comp=Z,64nm,1.2s
BRTR   Keskin Array B      36.06 143  P      P       15 12 51.0 +1.0
       comp=Z,2.3nm,0.9s,baz=310,slow=4.7,SNR=9.8
BRTR                                  LR     LR      15 29 52.8
       comp=Z,188nm,18.4s,baz=7.5,slow=40
BRTR   Keskin Array B      36.06 143 i P     P       15 12 51.9 +1.9
BRTR                                  pmax   pmax
       comp=Z,2.0nm,0.9s
BRZS   Berezniki           36.28  92 eP      P       15 12 52.1 +0.3
       comp=Z,3.3nm,0.8s,baz=93
BRZS   Berezniki           36.28  92 eP      P       15 12 52.0 +0.3
BRZS                                  pmax   pmax
       comp=Z,3.0nm,0.8s
ZALV   Zalesovo Beam       36.28  78  P      P       15 12 52.6 +1.0
       comp=Z,1.5nm,0.6s,baz=327,slow=10,SNR=7.8
ZALV                                  PcP    PcP     15 15 16.8 +0.6
       comp=Z,0.5nm,0.3s,baz=289,slow=4.4,SNR=5.3
ZALV                                  LR     LR      15 30 34.6
       comp=Z,236nm,21.0s,baz=326,slow=41
ZALV   Zalesovo Beam       36.28  78 i P     P       15 12 52.5 +0.9
ZALV                                  pmax   pmax
       comp=Z,2.0nm,0.6s
INK    Inuvik              36.35 336  LR     LR      15 29 48.9
       comp=Z,219nm,18.1s,baz=18,slow=40
INK    Inuvik              36.35 336  P      P       15 12 51.5 -0.5
INK                                   pmax   pmax
       comp=Z,9.0nm,1.1s
INK    Inuvik              36.35 336  P      P       15 12 51.5 -0.5
KOPT   Kop Dagi            37.09 134  P      P       15 12 57.1 -1.9
KOPT                                  IAmb   IAmb    15 13 11.5
       comp=Z,18nm,1.2s
AKT    Akhty               37.31 125 eP      P       15 13 01.7 +1.1
AKT                                  e               15 14 28.6
AKT                                  e               15 15 20.5
AKT                                   pmax   pmax
       comp=Z,28nm,1.0s
KURK   Kurchatov           37.36  86deP      P       15 13 01.5 +0.7
KURK                                  pmax   pmax
       comp=Z,8.0nm,1.0s
KURK   Kurchatov           37.36  86  P      P       15 12 59.1 -1.7
KEST   Kesra               37.57 176  LR     LR      15 28 37.7
       comp=Z,152nm,19.4s,baz=275,slow=36
GNI    Garni               37.88 129⇓iP      P       15 13 07.4 +1.8
GNI                                   pmax   pmax
       comp=Z,20nm,1.7s
SANT   Santorini           38.12 155  P      P       15 13 07.7 +0.3
EPYK   Eagle Plains        38.57 337  P      P       15 13 10.5 -0.4
RDOG   Red Dog Mine        38.82 354  P      P       15 13 12.6 -0.4
RDOG                                  IAmb   IAmb    15 13 17.7
       comp=Z,14nm,0.8s
YKA    Yellowknife Ar      38.93 321  P      P       15 13 14.3 +0.4
       comp=Z,1.5nm,0.6s,baz=25,slow=8.9,SNR=19
YKA                                   PcP    PcP     15 15 24.6 +0.5
       comp=Z,0.5nm,0.6s,baz=38,slow=3.3,SNR=5.9
YKA                                   LR     LR      15 29 24.2
       comp=Z,609nm,18.8s,baz=0.0,slow=36
COLD   Coldfoot            38.98 346  P      P       15 13 14.1 -0.2
YAK    Yakutsk             39.79  38⇓eP      P       15 13 23.8 +2.7
YAK                                   pmax   pmax
       comp=Z,21nm,1.6s
DGZ    Jazzator, Alta      40.81  79⇓eP      P       15 13 31.3 +1.5
DGZ                                   pmax   pmax
       comp=Z,5.0nm,1.6s
POKR   Poker Plat Res      40.85 343  P      P       15 13 28.9 -1.0
COLA   College             41.12 344⇓eP      P       15 13 34.0 +2.0
COLA                                  pmax   pmax
       comp=Z,9.0nm,1.5s
IL31                       41.14 343  P      P       15 13 32.9 +0.7
ILAR   Eielson Array       41.14 343  P      P       15 13 33.4 +1.1
       comp=Z,1.7nm,0.9s,baz=5.7,slow=6.5,SNR=18
ILAR                                  PcP    PcP     15 15 31.6 +0.4
       comp=Z,0.9nm,0.8s,baz=333,slow=3.7,SNR=7.4
BTLS   Baital              41.15  95 eP      P       15 13 33.0 +0.4
       baz=95
BTLS   Baital              41.15  95 eP      P       15 13 32.9 +0.4
CCB    Clear Creek Bu      41.34 343  P      P       15 13 34.4 +0.5
K27K   Chicken             41.42 340  P      P       15 13 34.6  0.0
WRH    Wood River Hil      41.54 344  P      P       15 13 35.7 +0.2
MAKZ   Makanchi            41.85  86  P      P       15 13 38.0 -0.3
MAKZ                                  pmax   pmax
       comp=Z,8.0nm,1.4s
MAKZ   Makanchi            41.85  86  P      P       15 13 38.0 -0.3
MK31   Makanchi Array      41.95  86  P      P       15 13 39.0 -0.1
MK31                                  pmax   pmax
       comp=Z,8.0nm,1.4s
MK31   Makanchi Array      41.95  86  P      P       15 13 39.0 -0.1
MKAR   Makanchi Array      41.95  86  P      P       15 13 40.0 +0.9
       comp=Z,3.4nm,1.1s,baz=329,slow=8.6,SNR=15
MKAR                                  PP     PP      15 15 13.4 -2.4
       comp=Z,1.4nm,1.1s,baz=330,slow=8.3,SNR=1.6
MKAR                                  LR     LR      15 33 50.7
       comp=Z,229nm,20.7s,baz=323,slow=40
MKAR   Makanchi Array      41.95  86 i P     P       15 13 40.0 +0.9
MKAR                                  pmax   pmax
       comp=Z,3.0nm,1.1s
RIDG   Independent Ri      41.97 341  P      P       15 13 38.6 -0.5
DOT    Dot Lake            41.99 341  P      P       15 13 40.1 +0.9
ZSN    Zaisan              42.10  83 eP      P       15 13 40.7 +0.3
       baz=83
ZSN    Zaisan              42.10  83 eP      P       15 13 40.6 +0.3
BPAW   Bear Paw Mtn.       42.13 345  P      P       15 13 40.1 -0.3
SEY    Seymchan            42.24  22⇑iP      P       15 13 41.9 +0.7
TDK    Taldyqorghan        42.45  90 eP      P       15 13 44.7 +1.4
       baz=90
TDK    Taldyqorghan        42.45  90 eP      P       15 13 44.6 +1.4
IUG    Iuzhnay             42.65 100 eP      P       15 13 45.6 +0.6
       comp=Z,6.1nm,1.5s,baz=100
IUG    Iuzhnay             42.65 100 eP      P       15 13 45.5 +0.6
IUG                                   pmax   pmax
       comp=Z,6.0nm,1.5s
MENT   Mentasta            42.65 340  P      P       15 13 44.5 -0.2
TRF    Thorofare Moun      42.72 345  P      P       15 13 44.4 -1.0
SGDS   Sogindy             42.77  95 eP      P       15 13 46.5 +0.6
       baz=95
SGDS   Sogindy             42.77  95 eP      P       15 13 46.4 +0.6
PAX    Paxson              42.79 341  P      P       15 13 45.3 -0.5
PAX                                   pmax   pmax
       comp=Z,4.0nm,1.1s
PAX    Paxson              42.79 341  P      P       15 13 45.2 -0.5
MOY    Mondy               42.79  66 eP      P       15 13 47.5 +1.5
MOY                                   pmax   pmax
       comp=Z,27nm,2.2s
KUU    Kurty               42.86  93 eP      P       15 13 47.2 +0.7
       comp=Z,4.5nm,0.8s,baz=93
KUU    Kurty               42.86  93 eP      P       15 13 47.2 +0.7
KUU                                   pmax   pmax
       comp=Z,4.0nm,0.8s
CHKK   Chushkaly           43.09  92 eP      P       15 13 49.1 +0.7
       baz=92
CHKK   Chushkaly           43.09  92 eP      P       15 13 49.1 +0.7
IRK    Irkutsk             43.13  63 eP      P       15 13 48.4 -0.2
IRK                                   pmax   pmax
       comp=Z,41nm,2.6s
GEYT   Alibeck             43.28 115  P      P       15 13 51.4 +1.4
       comp=Z,9.6nm,0.8s,baz=312,slow=9.3,SNR=15
GEYT                                  LR     LR      15 33 53.3
       comp=Z,525nm,20.3s,baz=345,slow=39
GYA0B  ALIBECK ARRAY       43.28 115  P      P       15 13 49.9 -0.1
GYA0B                                 IAmb   IAmb    15 13 52.6
       comp=Z,13nm,0.8s
TLY    Talaya              43.47  64⇑eP      P       15 13 52.5 +1.1
TLY                                   pmax   pmax
       comp=Z,9.0nm,2.8s
AAK    Ala-Archa           43.48  96⇓eP      P       15 13 53.5 +1.8
AAK                                   pmax   pmax
       comp=Z,17nm,1.3s
MDOK   Medeo               43.74  93 eP      P       15 13 54.7 +0.9
       baz=93
MDOK   Medeo               43.74  93 eP      P       15 13 54.7 +0.9
KPKS   Kokpek              43.94  91 eP      P       15 13 56.5 +1.1
       comp=Z,6.3nm,0.7s,baz=91
KPKS   Kokpek              43.94  91 eP      P       15 13 56.4 +1.1
KPKS                                  pmax   pmax
       comp=Z,6.0nm,0.7s
N25K   Chitina, Valde      44.05 340  P      P       15 13 54.9 -1.0
SCM    Sheep Creek Mo      44.07 342  P      P       15 13 55.8 -0.4
SCM                                   pmax   pmax
       comp=Z,22nm,1.3s
SCM    Sheep Creek Mo      44.07 342  P      P       15 13 55.8 -0.4
SCM                                   IAmb   IAmb    15 14 16.7
       comp=Z,22nm,1.3s
SATY   Saty                44.23  91 eP      P       15 13 58.4 +0.7
       comp=Z,5.3nm,1.1s,baz=92
SATY   Saty                44.23  91 eP      P       15 13 58.4 +0.7
SATY                                  pmax   pmax
       comp=Z,5.0nm,1.1s
SKT    Skwentna            44.27 345  P      P       15 13 57.0 -0.6
SHLS   Shalkode            44.45  90 eP      P       15 14 01.8 +2.3
       comp=Z,7.0nm,1.0s,baz=90
SHLS   Shalkode            44.45  90 eP      P       15 14 01.7 +2.3
SHLS                                  pmax   pmax
       comp=Z,7.0nm,1.0s
SUA    Susitna One         44.72 345  P      P       15 14 01.5 +0.1
SUA                                   IAmb   IAmb    15 14 05.2
       comp=Z,12nm,0.8s
DLBC   Dease Lake          45.34 329  LR     LR      15 33 23.9
       comp=Z,333nm,21.5s,baz=3.0,slow=36
RSO    Redoubt South       45.87 346  P      P       15 14 10.5 -0.1
ULM    Lac du Bonnet       46.05 299  P      P       15 14 12.3 +0.4
       comp=Z,2.5nm,0.6s,baz=5.1,slow=7.5,SNR=4.9
ULM                                   LR     LR      15 33 22.2
       comp=Z,523nm,18.5s,baz=14,slow=36
ULM    Lac du Bonnet       46.05 299  IAmb   IAmb    15 14 13.0
       comp=Z,8.0nm,1.1s
WMQ    Urumqi              46.23  82 eP      P       15 14 14.9 +1.4
WMQ                                   pmax   pmax
       comp=Z,11nm,1.1s
WMQ                                   pmax   pmax
       comp=Z,170nm,5.5s
WMQ                                   LR     LR
       comp=E,690nm,20.5s
WMQ                                   LR     LR
       comp=Z,140nm,24.1s
E46A   Sault Ste Mari      46.53 287  P      P       15 14 15.2 -0.5
SADO   Sadowa              46.54 282  LR     LR      15 32 38.9
       comp=Z,324nm,19.1s,baz=28,slow=35
KSH    Kashi               46.79  96  P      P       15 14 19.8 +1.8
KSH                                   pP     pwP     15 14 23.5 +0.5
KSH                                   pmax   pmax
       comp=Z,5.0nm,0.5s
KSH                                   pmax   pmax
       comp=Z,650nm,5.9s
ZEA    Zeya                47.09  44 eP      P       15 14 20.8 +0.8
ZEA                                   pmax   pmax
       comp=Z,10.0nm,1.1s
SONM   Songino Array       47.72  64  P      P       15 14 26.3 +1.2
       comp=Z,2.7nm,0.9s,baz=326,slow=7.0,SNR=16
SONM                                  PcP    PcP     15 15 55.1 +0.9
       comp=Z,1.5nm,0.9s,baz=319,slow=4.3,SNR=4.1
ULN    Ulaanbaatar         47.86  63⇑iP      P       15 14 28.2 +1.9
ULN                                   pmax   pmax
       comp=Z,21nm,2.5s
F33A   5 Mile Ranch,       50.24 297  P      P       15 14 43.8 -0.5
F33A                                  IAmb   IAmb    15 14 47.9
       comp=Z,12nm,1.1s
TAM    Tamanrasset         50.43 181  P      P       15 14 45.1 -1.1
TAM                                   pmax   pmax
       comp=Z,11nm,1.3s
TAM    Tamanrasset         50.43 181  P      P       15 14 45.1 -1.1
TAM                                   IAmb   IAmb    15 14 49.6
       comp=Z,11nm,1.3s
BBB    Bella Bella         51.06 326  LR     LR      15 37 36.2
       comp=Z,297nm,18.8s,baz=39,slow=37
N49A   Columbus Grove      51.52 285  P      P       15 14 53.3 -0.7
N49A                                  IAmb   IAmb    15 14 56.0
       comp=Z,13nm,1.1s
O52A   Adamsville          51.60 282  P      P       15 14 53.1 -1.5
O52A                                  IAmb   IAmb    15 15 08.9
       comp=Z,21nm,1.4s
KLR    Kul'dur             52.26  43  LR     LR      15 39 23.2
       comp=Z,184nm,18.3s,baz=300,slow=38
KLR    Kul'dur             52.26  43⇓eP      P       15 15 03.2 +3.7
KLR                                   pmax   pmax
       comp=Z,6.0nm,1.4s
ECSD   EROS Data Cent      52.28 297  P      P       15 14 59.5 -0.2
ECSD                                  IAmb   IAmb    15 15 07.3
       comp=Z,11nm,1.1s
NEW    Newport             52.80 316  LR     LR      15 37 44.2
       comp=Z,467nm,19.1s,baz=21,slow=36
P49A   Miami Univ. Ec      52.96 284  P      P       15 15 04.3 -0.5
N41A   Harden Midland      53.57 290  P      P       15 15 08.9 -0.3
GTA    Gaotai              53.75  74 ⇓P      P       15 15 11.8 +1.1
GTA                                   pP     pwP     15 15 17.3 +1.6
GTA                                   sP     sP      15 15 20.3 +7.9
GTA                                   pmax   pmax
       comp=Z,5.0nm,1.2s
GTA                                   pmax   pmax
       comp=Z,150nm,5.5s
GTA                                   LR     LR
       comp=N,420nm,15.6s
GTA                                   LR     LR
       comp=E,690nm,14.5s
GTA                                   LR     LR
       comp=Z,450nm,15.3s
RSSD   Black Hills         53.79 303  P      P       15 15 11.0 -0.1
RSSD                                  pmax   pmax
       comp=Z,9.0nm,1.2s
RSSD   Black Hills         53.79 303  P      P       15 15 11.0 -0.1
RSSD                                  IAmb   IAmb    15 15 18.1
       comp=Z,9.4nm,1.1s
K31A   O'Neill             53.87 298  P      P       15 15 11.1 -0.3
R50A   Paris               54.02 283  P      P       15 15 12.7 +0.2
R50A                                  IAmb   IAmb    15 15 19.5
       comp=Z,12nm,1.0s
RAYN   Ar Rayn             54.07 134  P      P       15 15 12.6 -0.5
RAYN   Ar Rayn             54.07 134  P      P       15 15 12.6 -0.5
RAYN                                  IAmb   IAmb    15 15 15.4
       comp=Z,10nm,1.3s
RLMT   Red Lodge           54.08 308  P      P       15 15 12.6 -0.6
RLMT                                  IAmb   IAmb    15 15 18.0
       comp=Z,12nm,1.2s
P43A   Skaggs, Pawnee      54.20 289  P      P       15 15 13.5 -0.3
YMP    Mirror Lake Pl      54.65 309  P      P       15 15 15.6 -1.8
YHL    Hebgen Lake         54.77 309  P      P       15 15 18.2 -0.1
H17A   Grant Village       55.07 309  P      P       15 15 19.7 -0.7
H17A                                  IAmb   IAmb    15 15 29.2
       comp=Z,11nm,1.2s
MCMT   McKenzie Canyo      55.17 311  P      P       15 15 21.2 +0.1
LON    Longmire            55.18 319  P      P       15 15 21.5 +0.6
LON                                   pmax   pmax
       comp=Z,12nm,1.3s
LON    Longmire            55.18 319  P      P       15 15 21.5 +0.6
LON                                   IAmb   IAmb    15 15 27.3
       comp=Z,12nm,1.2s
HHC    Hu-ho-hao-te        55.57  63 eP      P       15 15 25.4 +1.6
HHC                                   pmax   pmax
       comp=Z,5.0nm,0.8s
HHC                                   pmax   pmax
       comp=Z,220nm,7.6s
MOOW   Moose Ponds         55.72 309  P      P       15 15 24.1 -1.0
K22A   Casper              55.78 305  P      P       15 15 24.5 -0.9
K22A                                  IAmb   IAmb    15 15 32.3
       comp=Z,12nm,0.9s
BCYI   Bear Canyon         55.78 311  P      P       15 15 24.1 -1.4
SIUC   Southern Illin      55.91 288  P      P       15 15 24.8 -1.4
S44A   Carbondale          55.95 288  P      P       15 15 24.7 -1.8
BMO    Blue Mountains      56.10 314  P      P       15 15 26.9 -0.7
BMO                                   pmax   pmax
       comp=Z,11nm,1.5s
BMO    Blue Mountains      56.10 314  P      P       15 15 26.9 -0.7
BMO                                   IAmb   IAmb    15 15 34.3
       comp=Z,11nm,1.4s
CN2    Changchun           56.12  50 eP      P       15 15 28.0 +0.4
CN2                                  epP     pwP     15 15 32.6 -0.1
CN2                                   pmax   pmax
       comp=Z,10.0nm,0.9s
BW06   Boulder Array       56.38 307  P      P       15 15 27.4 -2.4
BW06                                  IAmb   IAmb    15 15 36.6
       comp=Z,16nm,1.4s
PD31   Pinedale Array      56.38 307  P      P       15 15 27.5 -2.3
PD31                                  IAmb   IAmb    15 15 36.6
       comp=Z,16nm,1.4s
PDAR   Pinedale Array      56.38 307  P      P       15 15 30.5 +0.7
       comp=Z,7.6nm,1.2s,baz=42,slow=4.6,SNR=20
PDAR                                  LR     LR      15 39 37.8
       comp=Z,216nm,20.5s,baz=19,slow=36
HLID   Hailey              56.71 312  P      P       15 15 31.6 -0.5
PHWY   Pilot Hill          56.80 303  P      P       15 15 31.0 -1.8
PHWY                                  IAmb   IAmb    15 15 35.1
       comp=Z,10nm,1.2s
WVT    Waverly             57.01 286  P      P       15 15 33.3 -0.8
WVT                                   pmax   pmax
       comp=Z,8.0nm,1.1s
WVT    Waverly             57.01 286  P      P       15 15 33.3 -0.8
WVT                                   IAmb   IAmb    15 15 34.9
       comp=Z,7.6nm,1.1s
T42A   Van Buren           57.07 289  P      P       15 15 33.0 -1.4
MGMO   Mountain Grove      57.28 290  P      P       15 15 34.6 -1.4
N23A   Red Feather La      57.30 304  P      P       15 15 35.4 -1.0
CBKS   Cedar Bluff         57.71 297  P      P       15 15 38.7 -0.3
CBKS                                  pmax   pmax
       comp=Z,22nm,1.2s
CBKS   Cedar Bluff         57.71 297  P      P       15 15 38.7 -0.3
FPAL   Fort Paine          57.88 283  P      P       15 15 39.3 -0.9
HWUT   Hardware Ranch      57.94 309  P      P       15 15 39.1 -1.7
LZH    Lanzhou             57.97  71 eP      P       15 15 41.3 +0.3
LZH                                   pP     sP      15 15 44.5 +1.7
LZH                                   sP     pwP     15 15 46.3 +0.2
LZH                                  ePP     PP      15 17 51.0 +2.0
LZH                                   pmax   pmax
       comp=Z,23nm,1.3s
LZH                                   pmax   pmax
       comp=Z,86nm,7.8s
ISCO   Idaho Springs       58.25 303  P      P       15 15 42.9 -0.3
ISCO                                  pmax   pmax
       comp=Z,10.0nm,1.2s
ISCO   Idaho Springs       58.25 303  P      P       15 15 42.9 -0.3
ISCO                                  IAmb   IAmb    15 15 50.8
       comp=Z,9.6nm,1.1s
FCAR   Ozark Folk Cen      58.43 289  P      P       15 15 43.0 -1.0
FCAR                                  IAmb   IAmb    15 15 45.7
       comp=Z,15nm,1.2s
O20A   White River Ci      58.57 305  P      P       15 15 44.0 -1.2
T35A   Sooner Cattle       58.65 294  P      P       15 15 44.7 -0.8
Q24A   Divide              58.93 302  P      P       15 15 48.0 +0.1
Q24A                                  IAmb   IAmb    15 15 55.0
       comp=Z,9.2nm,1.1s
MOD    Modoc Plateau       59.54 316  P      P       15 15 51.2 -0.7
MOD                                   IAmb   IAmb    15 16 03.2
       comp=Z,6.2nm,0.9s
Y45A   Yeager Farm, C      59.62 286  P      P       15 15 50.9 -1.3
TOA0   Torodi Ar. Sit      60.09 185  P      P       15 15 53.2 -2.5
TORD   Torodi Ar. Bea      60.09 185  P      P       15 15 56.2 +0.5
       comp=Z,8.4nm,0.8s,baz=357,slow=7.1,SNR=29
TORD                                  LR     LR      15 43 40.0
       comp=Z,85nm,18.1s,baz=35,slow=38
MIAR   Mount Ida           60.09 290  P      P       15 15 55.6 +0.1
MIAR                                  pmax   pmax
       comp=Z,25nm,1.3s
MIAR   Mount Ida           60.09 290  P      P       15 15 55.6 +0.1
SDCO   Great Sand Dun      60.17 302  P      P       15 15 56.4  0.0
SDCO                                  IAmb   IAmb    15 15 59.1
       comp=Z,6.0nm,1.2s
PV15   Paradox Valley      60.33 305  P      P       15 15 57.3 -0.2
PV15                                  IAmb   IAmb    15 16 12.5
       comp=Z,7.5nm,0.8s
LSA    Lhasa               60.36  86  P      P       15 15 57.5 -0.5
LSA                                   pmax   pmax
       comp=Z,8.0nm,1.2s
LSA    Lhasa               60.36  86  P      P       15 15 57.5 -0.5
LSA                                   IAmb   IAmb    15 16 01.2
       comp=Z,8.1nm,1.2s
PV12   Saucer Basin,       60.43 305  P      P       15 15 57.8 -0.3
PV12                                  IAmb   IAmb    15 16 02.8
       comp=Z,9.0nm,1.1s
PV14   Lion Creek, Pa      60.43 305  P      P       15 15 58.0 -0.2
PV14                                  IAmb   IAmb    15 16 01.8
       comp=Z,15nm,1.5s
PV16   Nyswonger Mesa      60.46 305  P      P       15 15 59.1 +0.8
PV16                                  IAmb   IAmb    15 16 12.2
       comp=Z,6.7nm,1.0s
PV11   David Mesa, Pa      60.47 305  P      P       15 15 57.7 -0.6
PV11                                  IAmb   IAmb    15 16 05.9
       comp=Z,10nm,1.1s
S22A   4UR Ranch, Cre      60.50 303  P      P       15 15 58.9 +0.2
S22A                                  IAmb   IAmb    15 16 06.7
       comp=Z,8.5nm,1.2s
PV03   Paradox Valley      60.50 305  P      P       15 15 58.7 +0.1
PV03                                  IAmb   IAmb    15 16 06.7
       comp=Z,9.8nm,1.3s
PV02   Paradox Valley      60.52 305  P      P       15 15 59.0 +0.2
PV01   Paradox Valley      60.55 305  P      P       15 15 59.6 +0.6
PV01                                  IAmb   IAmb    15 16 07.2
       comp=Z,11nm,1.0s
PV13   Radium Mtn., P      60.59 305  P      P       15 15 59.6 +0.4
PV05   Paradox Valley      60.73 305  P      P       15 16 00.1 -0.1
MSU    Marysvale           61.03 308  P      P       15 16 02.9 +0.6
MSU    Marysvale           61.03 308  P      P       15 16 02.9 +0.6
WMOK   Wichita Mounta      61.30 295  P      P       15 16 03.8  0.0
WMOK                                  pmax   pmax
       comp=Z,10.0nm,1.3s
WMOK   Wichita Mounta      61.30 295  P      P       15 16 03.8  0.0
WMOK                                  IAmb   IAmb    15 16 06.6
       comp=Z,10.0nm,1.3s
PSUT   Pine Spring         61.39 309  P      P       15 16 02.7 -2.0
MVCO   Mesa Verde          61.41 304  P      P       15 16 04.8  0.0
BEKR   Beckworth           61.51 315  P      P       15 16 05.5 +0.2
R11A   Troy Canyon, C      61.96 311  P      P       15 16 08.9 +0.5
R11A                                  IAmb   IAmb    15 16 16.0
       comp=Z,6.0nm,1.4s
NVAR   Mina Array Bea      62.47 313  P      P       15 16 12.5 +0.6
       comp=Z,0.8nm,0.7s,baz=0.0,slow=4.4,SNR=7.4
LCMT   Little Creek M      62.71 308  P      P       15 16 13.3 -0.1
KSRS   Korea Array         62.73  50  P      P       15 16 14.5 +1.2
       comp=Z,1.5nm,1.0s,baz=346,slow=7.3,SNR=4.4
ANMO   Albuquerque         63.07 302⇑eP      P       15 16 16.8 +0.9
ANMO                                  pmax   pmax
       comp=Z,10.0nm,1.7s
ANMO   Albuquerque         63.07 302  P      P       15 16 15.3 -0.6
TPNV   Topopah Spring      63.45 311  P      P       15 16 17.9 -0.4
TPNV                                  pmax   pmax
       comp=Z,9.0nm,1.3s
TPNV   Topopah Spring      63.45 311  P      P       15 16 17.9 -0.4
TPNV                                  IAmb   IAmb    15 16 25.5
       comp=Z,8.7nm,1.3s
MAJO   Matsushiro          65.74  41⇑eP      P       15 16 36.8 +3.7
MAJO                                  pmax   pmax
       comp=Z,19nm,1.3s
MJAR   Matsushiro Arr      65.74  41  P      P       15 16 34.7 +1.6
       comp=Z,1.3nm,0.8s,baz=339,slow=6.5,SNR=2.0
NJ2    Nanjing             65.75  59 eP      P       15 16 31.4 -1.8
NJ2                                   pmax   pmax
       comp=Z,7.0nm,0.5s
DBIC   Dimbokro            66.80 192  LR     LR      15 46 17.5
       comp=Z,43nm,18.2s,baz=8.0,slow=36
TX31   Lajitas Ar. Si      67.71 298  P      P       15 16 45.5 -0.3
TX31                                  IAmb   IAmb    15 16 56.5
       comp=Z,8.3nm,0.9s
TX32   Lajitas Array       67.71 298  P      P       15 16 45.8 -0.1
TXAR   Lajitas Array       67.71 298  P      P       15 16 46.4 +0.6
       comp=Z,1.0nm,0.9s,baz=39,slow=4.5,SNR=7.5
GYA    Guiyang             67.83  72 ⇑P      P       15 16 47.4 +0.7
GYA                                   pmax   pmax
       comp=Z,11nm,0.9s
MTDJ   Mount Denham        70.92 270  P      P       15 17 04.8 -1.1
CM33   Chiang Mai Arr      72.89  82  P      P       15 17 18.0 +0.4
CMMT   Chiang Mai          72.89  82  P      P       15 17 18.3 +0.7
CM34   Chiang Mai Arr      72.91  82  P      P       15 17 18.0 +0.3
CM32   Chiang Mai Arr      73.01  82  P      P       15 17 20.0 +1.7
CM35   Chiang Mai Arr      73.08  82  P      P       15 17 19.0 +0.3
CM36   Chiang Mai Arr      73.21  82  P      P       15 17 20.0 +0.5
CMAR   Chiang Mai Arr      73.23  82  P      P       15 17 20.1 +0.5
       comp=Z,2.3nm,1.0s,baz=327,slow=7.2,SNR=19
CM02   Chiang Mai Arr      73.25  82  P      P       15 17 21.8 +2.0
CM13   Chiang Mai Arr      73.25  82  P      P       15 17 32.0  +12
CM09   Chiang Mai Arr      73.25  82  P      P       15 17 21.8 +2.0
CM01   Chiang Mai Arr      73.27  82  P      P       15 17 21.0 +1.2
CM05   Chiang Mai Arr      73.28  82  P      P       15 17 21.0 +1.1
CM04   Chiang Mai Arr      73.29  82  P      P       15 17 21.4 +1.4
SUKH   Sukhothai           74.35  82  P      P       15 17 28.0 +1.9
NONG   Nongkai             74.80  78  P      P       15 17 35.6 +6.8
WRA    Warramunga Arr     119.53  58  PKP    PKPdf   15 24 37.3 -0.7
       comp=Z,0.8nm,0.7s,baz=326,slow=2.6,SNR=6.4
ASAR   Alice Springs      122.99  60  PKP    PKPdf   15 24 43.9 -0.6
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	comp=Z,2.3nm,0.6s,baz=354,slow=1.8,SNR=55						
SNAA	**Sanae**	**144.76**	**185**	PKP	**PKPdf**	**15 25 23.1**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=48,slow=3.6,SNR=10						
SNAA	**Sanae**	**144.76**	**185**	PKIKP	**PKPdf**	**15 25 23.4**	**-0.2**
SNAA	**Sanae**	**144.76**	**185**		**PKPdf**	**15 25 23.4**	**-0.2**

VIE 19 15:09:58.7±0.2**, 48°.86N**×**15°.56E, h0^{km}, mb1.2**/1**, ml1.1**/2**, Error ellipse: s-maj=2.4km s-min=1.5km az=164.0 6 km SSW of Vratenin Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUC	**Moravsky**	**0.58**	**70**	*e*PG	Pg	15 10 10.0	+0.1
KRUC				*e*SG	Sg	15 10 17.5	0.0
CONA	**Conrad Observa**	**0.95**	**168**	*i* Pg	Pg	15 10 17.1	+0.1
	0.2nm,0.1s						
CONA				*e*Sg	Sb	15 10 30.4	-1.0
	0.4nm,0.1s						

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*IDC **19** 15:17:06.5±0.6, 16°.88S×176°.84E, h0^{km}, mb4.2/14, mb1 4.4/15, mb1mx4.2/44, mbtmp4.2/15, ML3.1/1, MS4.1/24, Ms1 4.1/24, ms1mx4.1/30, Error ellipse: s-maj=21.1km s-min=15.8km az=174.0*

*NEIC **19** 15:17:07.9±2.0, 16°.77S±0°.05×176°.92E±0°.08, h10^{km}±1^{km}, mb4.7/14, Error ellipse: s-maj=13.3km s-min=7.4km az=75.0*

*GCMT **19** 15:17:12.9±0.2, 16°.47S±0°.01×176°.77E±0°.01, h21^{km}, MW5.2/120, Moment Tensor Solution. s71,c107; s120,c213; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.54±.17; $M_{\theta\theta}$-1.13±.15; $M_{\phi\phi}$1.67±.14; $M_{r\theta}$1.52±.26; $M_{\theta\phi}$7.48±.13; $M_{\phi r}$-0.34±.23; Best double couple: $M_0$7.77700×10^{16} NP1:ϕ_s355.00000°, δ79.00000°, λ-176.00000°. NP2:ϕ_s264.00000°, δ86.00000°, λ-11.00000°. Principal axes: T 7.9400, Plg5.0000°, Azm310.0000°; N -0.3220, Plg78.0000°, Azm63.0000°; P -7.6130, Plg11.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 15:17:08.2±0.4**, 16°.77S**±0°.08×**176°.84E**±0°.06**, h10^{km}, n83, σ1^{s}68**/72**, mb4.4**/28**, MS4.2**/29**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.50**	**130**	Pn	**Pn**	**15 17 34.4**	**-0.9**
	2µm,0.3s,baz=283,slow=19,SNR=353						
MSVF				Sn	**Sg**	**15 17 54.5**	**-2.0**
	1µm,0.3s,baz=287,slow=19,SNR=3.0						
MSVF				LR	LR	15 18 08.0	
	comp=Z,6µm,19.5s,baz=318,slow=43						
MSVF	**Nonsavu**	**1.50**	**130**	Pn	**Pn**	**15 17 34.2**	**-1.0**
SANVU	**Saraoutou**	**9.36**	**277**	Pn	**Pn**	**15 19 23.7**	**+0.5**
DZM	**Mont Dzumac**	**11.13**	**240**	Pn	**Pn**	**15 19 48.3**	**+0.6**
	0.1nm,0.3s,baz=323,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**11.13**	**240**	*e*Pn	**Pn**	**15 19 52.2**	**+4.5**
	77nm,1.4s						
DZM				*e*LR	LR	15 22 27.7	
	comp=Z,3µm,24.9s						
DZM	**Mont Dzumac**	**11.13**	**240**	Pn	**Pn**	**15 19 48.6**	**+0.9**
RAO	**Raoul Island**	**13.32**	**160**	LR	LR	15 24 05.4	
	comp=Z,2µm,21.7s,baz=335,slow=32						
HNR	**Honiara**	**17.99**	**292**	LR	LR	15 27 31.7	
	comp=Z,1µm,18.7s,baz=130,slow=35						
URZ	**Urewera**	**21.41**	**179**	P	**P**	**15 21 59.8**	**+3.6**
	18nm,1.0s,baz=132,slow=2.8,SNR=5.5						
URZ				LR	LR	15 28 55.5	
	comp=Z,545nm,19.9s,baz=27,slow=33						
BKZ	**Black Stump Fm**	**22.32**	**181**	P	**P**	**15 22 04.5**	**-1.5**
BKZ				IAmb	IAmb	15 22 30.6	
	comp=Z,30nm,1.4s						
RAR	**Rarotonga**	**22.54**	**105**	LR	LR	15 30 44.3	
	comp=Z,127nm,18.9s,baz=276,slow=36						
QRZ	**Quartz Range**	**24.26**	**188**	P	**P**	**15 22 23.7**	**-1.8**
NNZ	**Nelson**	**24.55**	**186**	P	**P**	**15 22 26.9**	**-1.1**
PLWZ	**Palliser**	**24.75**	**183**	P	**P**	**15 22 27.2**	**-2.8**
RPZ	**Rata Peaks**	**27.30**	**189**	LR	LR	15 31 47.2	
	comp=Z,415nm,21.8s,baz=359,slow=32						
MLZ	**Mavora Lakes**	**29.43**	**193**	P	**P**	**15 23 13.2**	**+1.1**
PPT2	**Papeete2**	**32.07**	**96**	*e*S	**S**	**15 28 51.1**	**+3.0**
	comp=Z,98nm,25.5s						
PPT2				*e*LQ	LQ	15 30 42.0	
	comp=Z,3µm,28.0s						
PPT2				*e*LR	LR	15 32 06.6	
	comp=Z,2µm,28.5s,baz=258						
PPT	**Papeete**	**32.07**	**96**	LR	LR	15 33 20.8	
	comp=Z,139nm,19.1s,baz=263,slow=30						
TBI	**Tubuai**	**32.27**	**107**	*e*S	**S**	**15 28 53.4**	**+2.5**
	comp=Z,200nm,25.2s						
TBI				*e*LQ	LQ	15 30 50.6	
	comp=Z,3µm,26.5s						
TBI				*e*LR	LR	15 32 06.3	
	comp=Z,1µm,31.5s,baz=275						
STKA	**Stephens Creek**	**35.28**	**238**	P	**P**	**15 24 03.3**	**-0.1**
	comp=Z,16nm,1.0s,baz=60,slow=10.0,SNR=9.1						
STKA				LR	LR	15 37 33.4	
	comp=Z,643nm,18.4s,baz=62,slow=35						
STKA	**Stephens Creek**	**35.28**	**238**	P	**P**	**15 24 03.8**	**+0.3**
JAY	**Jayapura**	**38.24**	**288**	LR	LR	15 40 05.7	
	comp=Z,549nm,18.9s,baz=99,slow=36						
WR0	**Warramunga Arr**	**40.20**	**259**	P	**P**	**15 24 43.0**	**-2.2**
WB0	**Warramunga Arr**	**40.35**	**259**	P	**P**	**15 24 44.1**	**-2.3**
WB0				IAmb	IAmb	15 24 57.6	
	comp=Z,14nm,1.3s						
WB2	**Warramunga Arr**	**40.38**	**259**	P	**P**	**15 24 44.6**	**-2.1**
WB2				IAmb	IAmb	15 24 53.8	
	comp=Z,7.5nm,0.8s						
WRA	**Warramunga Arr**	**40.39**	**259**	P	**P**	**15 24 44.5**	**-2.3**
	comp=Z,2.3nm,0.8s,baz=93,slow=9.0,SNR=9.9						
WRA				LR	LR	15 39 35.6	
	comp=Z,240nm,18.1s,baz=120,slow=33						
ASAR	**Alice Springs**	**40.75**	**253**	P	**P**	**15 24 48.7**	**-1.1**
	comp=Z,4.9nm,0.8s,baz=82,slow=8.4,SNR=13						
ASAR				LR	LR	15 41 26.7	
	comp=Z,306nm,18.1s,baz=86,slow=36						
TAOE	**Nuku Hiva Isla**	**42.60**	**85**	*e*S	**S**	**15 31 29.9**	**+1.7**
	comp=Z,199nm,26.0s						
TAOE				*e*LR	LR	15 36 49.8	
	comp=Z,934nm,26.9s						
RKT	**Rikitea**	**45.57**	**106**	*e*LQ	LQ	15 36 20.7	
	comp=Z,521nm,28.5s						
RKT				*e*LR	LR	15 38 17.1	
	comp=Z,945nm,29.8s						
FITZ	**Fitzroy Crossi**	**48.74**	**260**	P	**P**	**15 25 53.5**	**-0.1**
	comp=Z,4.8nm,1.1s,baz=95,slow=11,SNR=2.8						
DAV	**Davao City (W)**	**55.95**	**291**	LR	LR	15 47 10.1	
	comp=Z,213nm,20.8s,baz=123,slow=32						
VNDA	**Vanda**	**61.24**	**184**	LR	LR	15 49 36.9	
	comp=Z,109nm,21.4s,baz=18,slow=32						
TGY	**Tagaytay City**	**63.15**	**296**	LR	LR	15 53 33.0	
	comp=Z,162nm,18.3s,baz=118,slow=35						
MJAR	**Matsushiro Arr**	**64.36**	**326**	LR	LR	15 52 28.3	
	comp=Z,87nm,21.7s,baz=245,slow=33						
PETK	**Petropavlovsk-**	**71.53**	**348**	P	**P**	**15 28 30.6**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=122,slow=5.2,SNR=1.8						
PETK				LR	LR	15 54 01.6	
	comp=Z,188nm,20.7s,baz=155,slow=31						
USRK	**Ussuriysk Ar.**	**73.19**	**328**	P	**P**	**15 28 41.6**	**+2.4**
	comp=Z,3.1nm,0.9s,baz=126,slow=7.3,SNR=3.5						
USRK				LR	LR	15 56 07.2	
	comp=Z,103nm,21.5s,baz=125,slow=32						
QSPA	**South Pole Qui**	**73.27**	**180**	P	**P**	**15 28 39.4**	**-0.2**
NJ2	**Nanjing**	**73.75**	**311**	*e*P	**P**	**15 28 42.4**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GYA	**Guiyang**	**80.55**	**301**	*e*P	P	15 29 27.9	+6.5
GYA				pmax	pmax		
	comp=Z,11nm,1.3s						
SEY	**Seymchan**	**81.72**	**349**	P	**P**	**15 29 27.5**	**+0.9**
	comp=Z,2.5nm,1.0s,baz=148,slow=9.3,SNR=4.4						
NVAR	**Mina Array Bea**	**81.82**	**46**	P	**P**	**15 29 28.0**	**0.0**
	comp=Z,1.3nm,1.0s,baz=225,slow=7.4,SNR=6.7						
NVAR				LR	LR	15 57 32.6	
	comp=Z,270nm,21.6s,baz=224,slow=30						
XAN	**Xi'an**	**82.00**	**309**	P	**P**	**15 29 31.6**	**+2.8**
XAN				pP	pwP	15 29 35.4	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**83.28**	**316**	*e*P	**P**	**15 29 34.0**	**-1.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,7.6s						
MAW	**Mawson**	**83.35**	**201**	LR	LR	16 01 41.7	
	comp=Z,91nm,20.6s,baz=176,slow=32						
BELA	**Belgrano 2**	**83.83**	**174**	P	**P**	**15 29 36.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**84.24**	**291**	P	**P**	**15 29 40.8**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=120,slow=3.4,SNR=9.8						
CMAR				LR	LR	16 03 33.6	
	comp=Z,71nm,21.7s,baz=154,slow=33						
WRH	**Wood River Hil**	**85.33**	**14**	P	**P**	**15 29 43.1**	**-2.0**
WRH				IAmb	IAmb	15 29 53.1	
	comp=Z,6.3nm,0.8s						
DOT	**Dot Lake**	**85.69**	**16**	P	**P**	**15 29 45.0**	**-1.9**
DOT				IAmb	IAmb	15 29 54.7	
	comp=Z,8.8nm,1.0s						
MDM	**Murphy Dome**	**85.71**	**14**	P	**P**	**15 29 44.3**	**-2.7**
MDM				IAmb	IAmb	15 29 54.1	
	comp=Z,5.4nm,0.9s						
IL31		**85.88**	**15**	P	**P**	**15 29 45.9**	**-1.9**
IL31				IAmb	IAmb	15 29 55.1	
	comp=Z,5.3nm,0.8s						
ILAR	**Eielson Array**	**85.88**	**15**	P	**P**	**15 29 46.5**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=232,slow=6.0,SNR=11						
LZH	**Lanzhou**	**86.63**	**309**	*e*P	**P**	**15 29 50.0**	**-2.4**
LZH				pP	PcP	15 29 53.3	-1.5
LZH				sP	sP	15 29 56.0	+0.1
LZH				*e*PP	**PP**	**15 33 15.3**	**+0.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,8.6s						
LZH				LR	LR		
	comp=N,120nm,17.0s						
LZH				LR	LR		
	comp=E,130nm,16.8s						
LZH				LR	LR		
	comp=Z,160nm,19.3s						
TXAR	**Lajitas Array**	**89.27**	**59**	P	**P**	**15 30 05.1**	**0.0**
	comp=Z,0.5nm,0.8s,baz=256,slow=4.8,SNR=4.1						
TXAR				LR	LR	16 02 46.9	
	comp=Z,153nm,19.2s,baz=0.0,slow=31						
PDAR	**Pinedale Array**	**89.70**	**45**	P	**P**	**15 30 07.5**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=275,slow=4.4,SNR=3.7						
PDAR				LR	LR	16 02 11.1	
	comp=Z,111nm,21.8s,baz=281,slow=30						
SONM	**Songino Array**	**89.76**	**321**	P	**P**	**15 30 06.9**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=119,slow=3.1,SNR=5.4						
SONM				LR	LR	16 04 40.6	
	comp=Z,90nm,20.8s,baz=122,slow=32						
GTA	**Gaotai**	**90.84**	**311**	*e*P	**P**	**15 30 08.3**	**-4.0**
GTA				pP	PcP	15 30 12.3	-1.0
GTA				sP	pP	15 30 15.0	+0.2
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=N,140nm,16.0s						
GTA				LR	LR		
	comp=E,140nm,16.0s						
GTA				LR	LR		
	comp=Z,130nm,16.0s						
YKA	**Yellowknife Ar**	**95.24**	**26**	P	**P**	**15 30 31.8**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=244,slow=4.3,SNR=6.1						
YKA				LR	LR	16 08 40.2	
	comp=Z,77nm,19.2s,baz=0.0,slow=32						
PLCA	**Paso Flores**	**95.36**	**135**	LR	LR	16 04 43.5	
	comp=Z,53nm,20.8s,baz=218,slow=30						
MKAR	**Makanchi Array**	**105.11**	**315**	Pdiff	**Pdif**	**15 31 18.8**	**+2.4**
	comp=Z,0.5nm,0.9s,baz=74,slow=5.1,SNR=1.7						
AKASG	**Malin Array Be**	**137.37**	**330**	PKP	**PKiKP**	**15 36 33.9**	**0.0**
	comp=Z,0.1nm,0.2s,baz=52,slow=1.8,SNR=2.1						
CRVS	**Cervenica-Dubn**	**142.20**	**333**	*e*PKP	**PKiKP**	**15 36 44.5**	**+0.6**
DPC	**Dobruska-Polom**	**143.01**	**339**	*e*PKP	**PKiKP**	**15 36 44.5**	**-1.1**
CLL	**Collm**	**143.21**	**343**	*e*PKPdf	**PKPdf**	**15 36 42.0**	**-0.6**
CLL				*e*pPKiKP	**sPKPdf**	**15 36 49.0**	**+2.8**
CLL				*i* (sPKiKP)		15 36 52.0	
CLL				L	L	16 34 00.0	
	comp=Z,100nm,22.0s						
VYHS	**Vyhne**	**143.61**	**335**	*e*PKP	**PKPdf**	**15 36 43.1**	**-0.3**
MODS	**Modra-Piesok**	**144.32**	**336**	*e*PKP	**PKiKP**	**15 36 46.5**	**-1.8**
KHC	**Kasperske Hory**	**144.97**	**341**	*e*PKP	**PKiKP**	**15 36 47.4**	**-2.2**
GERES	**GERESS Array B**	**145.18**	**340**	PKPbc	**PKPab**	**15 36 45.7**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=31,slow=3.1,SNR=22						
CONA	**Conrad Observa**	**145.22**	**337**	*e*P	**PKPab**	**15 36 45.8**	**-0.2**
	comp=Z,14nm,0.8s						
MEM	**Membach**	**145.45**	**350**	*d*x	**PKiKP**	**15 36 53.2**	**+2.8**
MOA	**Molln**	**145.85**	**339**	*e*P	**PKPbc**	**15 36 47.7**	**-0.2**
	comp=Z,22nm,0.9s						
ARSA	**Arzberg**	**145.91**	**337**	*e*P	**PKPbc**	**15 36 47.7**	**-0.4**
	comp=Z,13nm,0.9s						
SOKA	**Soboth**	**146.57**	**337**	*e*P	**PKPbc**	**15 36 49.4**	**-0.7**
	comp=Z,7.5nm,1.1s						
KBA	**Koelnbreinsper**	**146.84**	**339**	*e*P	**PKPdf**	**15 36 49.2**	**-0.1**
	comp=Z,14nm,1.1s						
MYKA	**Terra Mystica**	**147.12**	**338**	*e*P	**PKPbc**	**15 36 51.4**	**-0.3**
	comp=Z,17nm,1.6s						
WATA	**Walderalm**	**147.18**	**341**	*e*P	**PKPbc**	**15 36 52.1**	**+0.2**
	comp=Z,13nm,1.2s						
WTTA	**Wattenberg**	**147.23**	**341**	*e*P	**PKPbc**	**15 36 51.3**	**-0.8**
	comp=Z,23nm,1.6s						
RETA	**Reutte**	**147.29**	**342**	*e*P	**PKPbc**	**15 36 52.7**	**+0.6**
	comp=Z,14nm,1.0s						
MOTA	**Moosalm**	**147.31**	**342**	*e*P	**PKPbc**	**15 36 52.4**	**+0.1**
	comp=Z,21nm,1.1s						
SQTA	**Sankt Quirin**	**147.40**	**342**	*e*P	**PKPbc**	**15 36 52.4**	**-0.1**
	comp=Z,25nm,1.6s						
ABTA	**Abfaltersbach**	**147.40**	**340**	*e*P	**PKPbc**	**15 36 52.1**	**-0.4**
	comp=Z,13nm,1.0s						
FETA	**Feichten**	**147.72**	**342**	*e*P	**PKiKP**	**15 36 54.3**	**-1.2**
	comp=Z,20nm,1.1s						
DAVA	**Damuels**	**147.72**	**343**	*e*P	**PKPbc**	**15 36 52.8**	**-0.6**
	comp=Z,21nm,1.4s						
TORD	**Torodi Ar. Bea**	**174.09**	**233**	PKP	**PKPdf**	**15 37 19.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=259,slow=1.5,SNR=2.6						

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*IDC **19** 15:30:47.8±0.6, 25°.95N×99°.83E, h0^{km}, mb4.1/22, mb1 4.2/23, mb1mx4.0/74, mbtmp4.1/23, ML4.0/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/51, Error ellipse: s-maj=23.7km s-min=11.9km az=68.0*

*BJI **19** 15:30:48.5±0.0, 25°.93N×99°.71E, h14^{km}, mB4.8/17, mb4.4/29, ML4.2/13, Ms4.2/26, Ms7 3.9/22*

*NEIC **19** 15:30:49.7±0.7, 26°.00N±0°.08×99°.71E±0°.07, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=13.9km s-min=9.6km az=213.0*

ISC 19 15:30:50.6±0.4**, 26°.09N**±0°.04×**99°.70E**±0°.04**, h10^{km}, n99, σ1^{s}83**/103**, mb4.3**/32**, MS3.6**/7**, 1C-1D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.91**	**109**	⇑*i*Pn	**Pn**	**15 31 36.1**	**-1.1**
KMI				Pg	**Pb**	**15 31 41.8**	**-1.0**
KMI				Sg	**Sb**	**15 32 20.1**	**+1.5**
KMI				smax	smax		
	comp=N,700nm,1.0s						
KMI				smax	smax		
	comp=E,610nm,1.1s						
KMI	**Kunming**	**2.91**	**109**	Pn	**Pn**	**15 31 35.7**	**-1.6**
CD2	**Chengdu**	**5.98**	**36**	Pn	**Pn**	**15 32 19.8**	**+0.5**
CD2				Sn	**Sn**	**15 33 32.4**	**+4.4**
CD2				Sg	**Sg**	**15 34 01.6**	**-1.2**
CD2				smax	smax		
	comp=N,180nm,1.1s						
CD2				smax	smax		
	comp=E,320nm,1.6s						
CD2				LR	LR		
	comp=N,6µm,9.4s						
CD2				LR	LR		
	comp=E,6µm,8.4s						
CD2				LR	LR		
	comp=Z,1µm,6.7s						
GYA	**Guiyang**	**6.26**	**85**	⇓Pn	**Pn**	**15 32 23.4**	**+0.1**
GYA				Sn	**Sn**	**15 33 37.9**	**+2.9**
GYA				smax	smax		
	comp=N,41nm,1.3s						
GYA				smax	smax		
	comp=E,44nm,1.6s						
GYA				LR	LR		
	comp=N,1µm,5.4s						
GYA				LR	LR		
	comp=E,1µm,6.7s						
GYA				LR	LR		
	comp=Z,1µm,8.5s						
PAYA	**Payao**	**6.70**	**179**	P	**Pb**	**15 32 51.9**	**+4.6**
	5µm602nm,1.0s						
SHL	**Shillong**	**7.06**	**267**	Pn	**Pn**	**15 32 33.0**	**-1.2**
CM34	**Chiang Mai Arr**	**7.22**	**184**	P	**Pn**	**15 32 36.0**	**-0.4**
CM33	**Chiang Mai Arr**	**7.27**	**186**	P	**Pn**	**15 32 40.0**	**+3.0**
CHTO	**Chiang Mai**	**7.28**	**186**	Pn	**Pn**	**15 32 34.9**	**-2.2**
CMMT	**Chiang Mai**	**7.28**	**186**	P	**Pn**	**15 32 37.0**	**-0.1**
	276nm15nm,0.8s						
NANT	**Nan**	**7.32**	**173**	P	**Pb**	**15 33 00.3**	**+2.5**
	18µm543nm,1.1s						
CM35	**Chiang Mai Arr**	**7.40**	**184**	P	**Pn**	**15 32 39.0**	**+0.3**
CM32	**Chiang Mai Arr**	**7.45**	**186**	P	**Pn**	**15 32 43.0**	**+3.6**
CM31	**Chiang Mai Arr**	**7.63**	**185**	P	**Pn**	**15 32 43.2**	**+1.3**
	10µm728nm,0.9s						
CM31	**Chiang Mai Arr**	**7.63**	**185**	Pn	**Pn**	**15 32 39.3**	**-2.7**
CMAR	**Chiang Mai Arr**	**7.63**	**185**	Pn	**Pn**	**15 32 39.6**	**-2.4**
	0.7nm,0.3s,baz=2.0,slow=12,SNR=28						
CMAR				Pg	**Pb**	**15 33 05.8**	**+2.7**
	1.0nm,0.3s,baz=358,slow=17,SNR=24						
CMAR				Lg	Lg	15 34 46.4	
	0.9nm,0.3s,baz=22,slow=16,SNR=5.1						
CMAR				LR	LR	15 35 42.5	
	comp=Z,471nm,18.8s,baz=29,slow=39						
CM15	**Chiang Mai Arr**	**7.64**	**186**	P	**Pn**	**15 32 44.4**	**+2.3**
	314nm42nm,0.9s						
CM09	**Chiang Mai Arr**	**7.64**	**185**	P	**Pn**	**15 32 43.0**	**+0.9**
	488nm20nm,0.9s						
CM02	**Chiang Mai Arr**	**7.65**	**185**	P	**Pn**	**15 32 43.1**	**+0.9**
	380nm38nm,0.8s						
CM01	**Chiang Mai Arr**	**7.67**	**185**	P	**Pn**	**15 32 43.7**	**+1.3**
	353nm31nm,0.8s						
CM13	**Chiang Mai Arr**	**7.67**	**186**	P	**Pn**	**15 32 43.0**	**+0.5**
	252nm15nm,0.9s						
CM04	**Chiang Mai Arr**	**7.68**	**185**	P	**Pn**	**15 32 43.0**	**+0.3**
	332nm31nm,0.8s						
CM05	**Chiang Mai Arr**	**7.69**	**185**	P	**Pn**	**15 32 43.6**	**+0.9**
	239nm19nm,0.9s						
LSA	**Lhasa**	**8.37**	**297**	P	**Pn**	**15 32 53.8**	**+1.3**
LSA				pP	Pb	15 32 56.5	-20
LSA				S	Sn	15 34 34.8	+7.4
LSA				pmax	pmax		
	comp=Z,19nm,0.6s						
LSA				LR	LR		
	comp=N,1µm,8.5s						
LSA				LR	LR		
	comp=E,2µm,7.1s						
LSA				LR	LR		
	comp=Z,2µm,6.4s						
LSA	**Lhasa**	**8.37**	**297**	Pn	**Pn**	**15 32 52.0**	**-0.5**
NONG	**Nongkai**	**8.61**	**158**	P	Pg	15 33 28.0	-7.4
	58nm,1.0s						
ENH	**Enshi**	**9.59**	**62**	Pn	**Pn**	**15 33 07.2**	**-1.6**
LZH	**Lanzhou**	**10.58**	**19**	*e*P	**Pn**	**15 33 25.8**	**+3.4**
LZH				pP		15 33 28.1	
LZH				sP		15 33 30.0	
LZH				PP	**PnPn**	**15 33 34.3**	**+4.0**
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,6.8s						
LZH				LR	LR		
	comp=E,1µm,8.7s						
LZH				LR	LR		
	comp=Z,530nm,10.4s						
TAPN	**Taplejung**	**10.79**	**279**	*e*P	**Pn**	**15 33 23.8**	**-1.7**
	57nm,0.5s						
ODAN	**Odare**	**11.05**	**277**	*e*P	**Pn**	**15 33 27.6**	**-1.5**
	48nm,0.6s						
QIZ	**Qiongzhong**	**11.71**	**125**	P	**Pn**	**15 33 37.6**	**-0.3**
QIZ				S	**Sn**	**15 35 48.9**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,18nm,1.1s						
QIZ				LR	LR		
	comp=E,600nm,13.2s						
QIZ				LR	LR		
	comp=Z,340nm,6.7s						
RAMN	**Ramite**	**11.76**	**277**	*e*P	**Pn**	**15 33 37.4**	**-1.4**
	70nm,0.6s						
GUN	**Gumba**	**12.46**	**281**	*e*P	**Pn**	**15 33 46.5**	**-1.8**
	37nm,0.5s						
BOK	**Bokaro**	**12.74**	**263**	*e*P	**Pn**	**15 33 50.3**	**-1.6**
PKI	**Pulchoki**	**12.85**	**280**	*e*P	**Pn**	**15 33 51.2**	**-2.5**
	51nm,0.5s						
PKIN	**Phulchoki**	**12.86**	**280**	*e*P	**Pn**	**15 33 51.3**	**-2.5**
	46nm,0.5s						
KKN	**Kakani**	**12.97**	**281**	*e*P	**Pn**	**15 33 53.2**	**-2.1**
	89nm,0.8s						
DMN	**Daman**	**13.12**	**280**	*e*P	**Pn**	**15 33 54.3**	**-3.0**
	18nm,0.6s						
GTA	**Gaotai**	**13.28**	**0**	*e*P	**P**	**15 34 08.8**	**-0.5**
GTA				pP	Pn	15 34 12.6	+13
GTA				sP		15 34 15.4	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,20nm,5.5s						
GTA				LR	LR		
	comp=N,400nm,15.3s						
GTA				LR	LR		
	comp=E,680nm,14.2s						
GTA				LR	LR		
	comp=Z,460nm,15.6s						
DANN	**Dangsing**	**14.36**	**283**	*e*P	Pn	15 34 09.2	-5.1
	comp=Z,25nm,0.5s						
HHC	**Hu-ho-hao-te**	**17.71**	**31**	*e*P	**P**	**15 34 58.9**	**+0.5**
HHC				S	**Sn**	**15 38 10.0**	**-4.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
HHC				LR	LR		
	comp=Z,470nm,14.2s						
HHC				LR	LR		
	comp=Z,350nm,14.8s						
WMQ	**Urumqi**	**20.20**	**334**	*e*P	Pn	15 35 27.1	-0.4
WMQ				pP	sP	15 35 30.0	-0.7
WMQ				sP	pP	15 35 36.1	+7.0
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.1s						
WMQ				LR	LR		
	comp=Z,290nm,8.1s						
WMQ				LR	LR		
	comp=Z,200nm,13.1s						
WMQ	**Urumqi**	**20.20**	**334**	P	**P**	**15 35 25.6**	**0.0**
WMQ				IAmb	IAmb	15 35 27.5	
	comp=Z,11nm,0.9s						
SMLA	**Simla**	**20.40**	**289**	*e*P	**P**	**15 35 27.4**	**-0.3**
SMLA				IAmb	IAmb	15 35 40.2	
	comp=Z,26nm,1.0s						
BHPL	**Bhopal**	**20.44**	**267**	*e*P	**P**	**15 35 26.4**	**-1.9**
BHPL				IAmb	IAmb	15 35 32.4	
	comp=Z,21nm,1.0s						
DHRM	**DHARAMSHALA**	**21.31**	**292**	*e*P	**P**	**15 35 36.9**	**-1.1**
DHRM				IAmb	IAmb	15 35 42.6	
	comp=Z,23nm,1.4s						
HYB	**Hyderabad**	**21.43**	**250**	*i* P	**P**	**15 35 37.0**	**-2.1**
SONM	**Songino Array**	**22.34**	**12**	P	**P**	**15 35 49.3**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=197,slow=11,SNR=6.4						
ULN	**Ulaanbaatar**	**22.49**	**13**	P	**P**	**15 35 50.9**	**+0.5**
PSI	**Prapat**	**23.17**	**182**	P	**P**	**15 35 56.7**	**-1.0**
	comp=Z,5.1nm,0.8s,baz=360,slow=9.9,SNR=4.7						
PSI				LR	LR	15 45 04.8	
	comp=Z,185nm,18.9s,baz=274,slow=37						
RPSI	**Rantau Prapat**	**23.27**	**182**	P	**P**	**15 35 56.7**	**-1.9**
KSH	**Kashi**	**23.93**	**310**	P	**P**	**15 36 07.8**	**+2.8**
KSH				pP	sP	15 36 10.1	-0.5
KSH				PP	**PnPn**	**15 36 39.4**	**+6.2**
KSH				pmax	pmax		
	comp=Z,28nm,0.9s						
KSH				pmax	pmax		
	comp=Z,490nm,6.0s						
NIL	**Nilore**	**24.09**	**294**	P	**P**	**15 36 04.9**	**-1.7**
NIL				IAmb	IAmb	15 36 08.3	
	comp=Z,27nm,1.2s						
MK31	**Makanchi Array**	**24.85**	**331**	P	**P**	**15 36 12.6**	**-0.7**
MK31				IAmb	IAmb	15 36 21.2	
	comp=Z,7.9nm,1.0s						
MKAR	**Makanchi Array**	**24.85**	**331**	P	**P**	**15 36 13.8**	**+0.5**
	comp=Z,7.4nm,0.8s,baz=135,slow=10.0,SNR=49						
MAKZ	**Makanchi**	**25.00**	**330**	P	**P**	**15 36 14.3**	**-0.3**
ULHL	**Ulahol**	**25.11**	**316**	P	**P**	**15 36 17.0**	**+1.2**
	SNR=9.0						
TLY	**Talaya**	**25.73**	**6**	LR	LR	15 47 33.9	
	comp=Z,216nm,21.2s,baz=190,slow=39						
KBK	**Karagaybulak**	**26.14**	**315**	P	**P**	**15 36 26.9**	**+1.8**
	SNR=14						

AAK	Ala-Archa	26.41	315	P	P	15 36 29.0	+1.4
	comp=Z,3.9nm,0.6s,baz=148,slow=8.2,SNR=18						
AAK				LR	LR	15 47 33.2	
	comp=Z,92nm,20.6s,baz=304,slow=38						
AAK	Ala-Archa	26.41	315	P	P	15 36 29.2	+1.6
	SNR=8.9						
AAK	Ala-Archa	26.41	315	P	P	15 36 27.8	+0.2
AAK				IAmb	IAmb	15 36 31.5	
	comp=Z,6.3nm,0.8s						
AML	Almayashu	26.68	313	P	P	15 36 31.0	+0.7
	SNR=14						
USP	Ospenovka	26.73	316	P	P	15 36 31.4	+1.0
	SNR=7.6						
EKS2	Erkin-Say	26.88	315	P	P	15 36 30.1	-1.7
	SNR=8.0						
CN2	Changchun	27.36	43	*e*P	P	15 36 36.9	+1.0
KBL	Kabul	27.69	295	P	P	15 36 40.0	+0.8
KBL				IAmb	IAmb	15 36 47.8	
	comp=Z,8.8nm,0.9s						
KURBB	Kurchatov Arra	29.38	332	P	P	15 36 54.0	+0.2
	comp=Z,0.9nm,0.6s,baz=142,slow=9.8,SNR=5.3						
KURK	Kurchatov	29.41	332	P	P	15 36 54.0	-0.1
KURK	Kurchatov	29.41	332	IAmb	IAmb	15 37 01.1	
	comp=Z,4.8nm,1.2s						
ZALV	Zalesovo Beam	29.94	342	P	P	15 36 58.7	0.0
	comp=Z,0.8nm,0.5s,baz=141,slow=9.3,SNR=3.6						
ZALV				LR	LR	15 50 29.5	
	comp=Z,58nm,19.1s,baz=92,slow=39						
KLR	Kul'dur	33.91	39	LR	LR	15 51 52.1	
	comp=Z,109nm,19.4s,baz=226,slow=37						
BVAR	Borovoye Array	34.69	329	P	P	15 37 40.4	0.0
	comp=Z,1.1nm,0.7s,baz=99,slow=8.9,SNR=8.9						
BRVK	Borovoye	34.76	329	P	P	15 37 40.6	-0.4
BRVK				IAmb	IAmb	15 37 43.9	
	comp=Z,5.4nm,0.7s						
GEYT	Alibeck	36.90	299	P	P	15 38 01.0	+1.3
	comp=Z,2.1nm,0.6s,baz=226,slow=8.0,SNR=5.1						
ABKAR	Akbulak array	38.42	318	P	P	15 38 11.8	-0.5
ABKAR				IAmb	IAmb	15 38 15.4	
	comp=Z,4.9nm,0.8s						
AKTO	Aktyubinsk	40.02	319	P	P	15 38 26.4	+0.7
	comp=Z,2.1nm,0.7s,baz=115,slow=8.0,SNR=5.6						
ARU	Arti	42.27	327	P	P	15 38 44.1	+0.1
	comp=Z,1.7nm,0.6s,baz=111,slow=8.3,SNR=9.5						
ARU	Arti	42.27	327	P	P	15 38 43.8	-0.3
ARU				IAmb	IAmb	15 38 47.1	
	comp=Z,4.5nm,0.6s						
BELG	Belogornoye	46.81	318	P	P	15 39 20.5	+0.1
	comp=Z,9.4nm,0.8s,baz=124,slow=3.6,SNR=4.2						
TIXI	Tiksi	48.42	12	P	P	15 39 32.9	+0.2
TIXI				IAmb	IAmb	15 39 36.4	
	comp=Z,2.1nm,0.7s						
BRTR	Keskin Array B	55.95	302	P	P	15 40 28.7	-0.6
	comp=Z,1.0nm,0.7s,baz=114,slow=11,SNR=3.9						
ANTO	Ankara	56.58	302	P	P	15 40 33.2	-0.5
WRA	Warramunga Arr	56.79	140	P	P	15 40 32.1	-3.1
	comp=Z,5.8nm,1.1s,baz=328,slow=7.7,SNR=13						
AKASG	Malin Array Be	58.08	315	P	P	15 40 42.7	-1.3
	comp=Z,2.3nm,0.7s,baz=80,slow=6.9,SNR=17						
AKASG				LR	LR	16 07 06.8	
	comp=Z,47nm,18.2s,baz=55,slow=37						
AKBB	Malin Array Si	58.08	315	P	P	15 40 42.5	-1.5
AKBB				IAmb	IAmb	15 40 45.5	
	comp=Z,4.0nm,0.7s						
ELL	Elmali	59.33	299	P	P	15 40 51.1	-2.0
ASAR	Alice Springs	59.52	143	P	P	15 40 51.2	-3.1
	comp=Z,1.5nm,0.9s,baz=329,slow=6.8,SNR=9.9						
FINES	FINESS Array B	59.64	328	P	P	15 40 54.4	-0.2
	comp=Z,3.4nm,1.0s,baz=109,slow=8.0,SNR=3.6						
MLR	Muntele Rosu	60.80	309	P	P	15 41 03.2	+0.1
	comp=Z,4.5nm,0.7s,baz=113,slow=8.6,SNR=7.8						
MLR	Muntele Rosu	60.80	309	P	P	15 41 02.9	-0.2
KWP	Kalwaria Pacla	62.36	314	P	P	15 41 12.8	-0.6
LIT	Litokhoron	64.32	304	P	P	15 41 25.9	-0.6
GERES	GERESS Array B	68.29	315	P	P	15 41 51.4	-0.6
	comp=Z,0.8nm,0.5s,baz=61,slow=5.9,SNR=8.1						
NRCA	Norcia	70.38	309	P	P	15 42 04.5	-0.5
NRCA				IAmb	IAmb	15 42 28.0	
	comp=Z,11nm,1.4s						
DAVOX	Davos/Dischmat	71.35	314	P	P	15 42 10.2	-0.8
	comp=Z,2.0nm,0.5s,baz=40,slow=7.9,SNR=5.4						
ILAR	Eielson Array	75.99	24	P	P	15 42 35.8	-1.8
	comp=Z,0.5nm,1.0s,baz=297,slow=4.0,SNR=3.2						
INK	Inuvik	78.12	18	P	P	15 42 50.5	+1.0
	comp=Z,3.7nm,1.0s,baz=316,slow=5.6,SNR=5.1						
YKA	Yellowknife Ar	87.56	15	P	P	15 43 39.2	+0.6
	comp=Z,0.4nm,0.8s,baz=336,slow=4.4,SNR=4.2						

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*NOU **19** 15:32:53.9, 1°.42S×153°.53E, h326^{km}, mb4.2, New Ireland Region, P.N.G.*

*NEIC **19** 15:33:10.0±1.0, 3°.4S±0°.1×152°.8E±0°.1, h319^{km}±10^{km}, mb4.5/13, Error ellipse: s-maj=18.8km s-min=15.6km az=121.0*

*IDC **19** 15:33:10.1±3.5, 3°.40S×152°.82E, h315^{km}±36^{km}, mb3.3/9, mb1 3.4/11, mb1mx3.1/49, mbtmp3.9/11, Error ellipse: s-maj=42.1km s-min=17.7km az=109.0*

ISC 19 15:33:08.2±0.6**, 3°.45S**±0°.09×**152°.8E**±0°.1**, h300^{km}, n28,** σ1^s.**24**/29**, mb4.3**/16**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.98	221	P	Pn	15 33 52.1	+3.5
PMG	Port Moresby	8.15	223	P	Pn	15 35 05.6	+1.8
	2.1nm,0.3s,baz=35,slow=7.1,SNR=9.7						
PMG	Port Moresby	8.15	223	Pn	Pn	15 35 05.2	+1.4
PATS	Pohnpei	11.60	28		P	15 35 47.3	-0.5
CTA	Charters Tower	17.73	201	P	Pn	15 36 57.7	-1.0
	0.3nm,0.3s,baz=325,slow=11,SNR=2.2						
WB0	Warramunga Arr	24.20	227	P	P	15 37 59.3	+0.9
WR0	Warramunga Arr	24.22	226	P	P	15 37 59.4	+0.8
WR0				IAmb	IAmb	15 38 00.5	
	comp=Z,24nm,1.4s						
WRAB	Tennant Creek	24.34	226	P	P	15 38 00.4	+0.7
WRAB				IAmb	IAmb	15 38 01.4	
	comp=Z,9.0nm,0.5s						
WB2	Warramunga Arr	24.35	226	P	P	15 38 00.5	+0.8
WB2				IAmb	IAmb	15 38 01.5	
	comp=Z,9.4nm,0.5s						
WRA	Warramunga Arr	24.36	226	P	P	15 38 00.8	+1.1
	comp=Z,5.4nm,0.4s,baz=47,slow=9.3,SNR=106						
AS31	Alice Springs	27.16	221	P	P	15 38 25.4	+0.6
ASAR	Alice Springs	27.16	221	P	P	15 38 25.7	+0.9
	comp=Z,3.2nm,0.3s,baz=50,slow=8.5,SNR=232						
ASAR				S	S	15 42 37.8	-3.2
	comp=Z,0.5nm,0.6s,baz=50,slow=14,SNR=8.6						
MYLDM	Lahad Datu	35.32	284	P	P	15 39 36.2	+0.3
MYLDM				IAmb	IAmb	15 39 46.3	
	comp=Z,22nm,1.5s						
KNTN	Kanton	35.43	90	P	P	15 39 36.4	-0.5
NACB	Ninganchiao	40.94	314	P	P	15 40 22.2	-0.1
NACB				IAmb	IAmb	15 40 41.2	
	comp=Z,28nm,1.0s						
TPUB	Ta-pu	41.12	312	P	P	15 40 22.4	-1.4
SSLB	Suanglung	41.17	313	P	P	15 40 24.2	-0.1
SSLB				IAmb	IAmb	15 40 36.0	
	comp=Z,54nm,1.5s						
BKZ	Black Stump Fm	41.57	152	P	P	15 40 27.1	-0.2
CISI	Cisompet, Garu	44.95	263	P	P	15 40 53.5	-1.1
CISI				IAmb	IAmb	15 41 19.8	
	comp=Z,52nm,1.4s						
BKNI	Bangkinang	51.87	273	P	P	15 41 46.5	-0.5
KLR	Kul'dur	55.56	343	P	P	15 42 12.9	0.0
	comp=Z,1.0nm,0.7s,baz=129,slow=4.6,SNR=3.6						
PETK	Petropavlovsk-	56.50	4	P	P	15 42 20.1	+0.6
	comp=Z,2.3nm,1.1s,baz=170,slow=7.3,SNR=6.6						
CMAR	Chiang Mai Arr	57.31	294	P	P	15 42 26.9	+1.0
	comp=Z,0.5nm,0.6s,baz=105,slow=5.7,SNR=6.3						
SONM	Songino Array	65.19	327	P	P	15 43 18.1	+0.1
	comp=Z,1.2nm,0.6s,baz=146,slow=5.7,SNR=9.8						
MKAR	Makanchi Array	79.31	319	P	P	15 44 40.8	-0.2
	comp=Z,0.2nm,0.5s,baz=106,slow=4.5,SNR=4.1						
ZALV	Zalesovo Beam	80.04	326	P	P	15 44 44.2	-0.5
	comp=Z,0.3nm,0.3s,baz=96,slow=2.9,SNR=2.0						
ILAR	Eielson Array	80.91	22	P	P	15 44 48.7	-0.4
	comp=Z,0.1nm,0.6s,baz=246,slow=5.6,SNR=1.2						
TORD	Torodi Ar. Bea	149.87	290	PKPbc	PKPbc	15 52 23.8	-0.3
	comp=Z,0.5nm,0.5s,baz=86,slow=1.9,SNR=5.3						

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*IDC **19** 15:35:05.2±1.1, 35°.35N×137°.83E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/61, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=36.8km s-min=12.1km az=100.0*

*JMA **19** 15:35:09.5, 35°.76N×139°.23E, h55^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s20.00000°, δ38.00000°, λ47.00000°. NP2: ϕ_s250.00000°, δ63.00000°, λ118.00000°. Principal axes: T Plg61.0000°, Azm204.0000°; N Plg25.0000°, Azm57.0000°; P Plg14.0000°, Azm320.0000°;*

JMA Felt I J1.

*NEIC **19** 15:35:09.5±0.6, 35°.84N±0°.06×139°.21E±0°.06, h78^{km}±3^{km}, mb4.4/4 Error ellipse: s-maj=8.3km s-min=7.1km az=155.0*

ISC 19 15:35:08.2±0.8**, 35°.79N**±0°.03×**139°.23E**±0°.05**, h59^{km}**±5^{km}**, n31,** σ1^s.**52**/40**, mb4.2**/5**, 3C-1D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	Hanno	0.08	32	⇑P	Pn	15 35 18.0	+0.9
JHU				S	Sn	15 35 23.9	+0.4
JSGW	Sagamiharawaka	0.18	185	⇑P	Pn	15 35 18.2	+0.8
JSGW				S	Sn	15 35 24.4	+0.3
JRY	Ryogami san	0.35	311	⇑P	Pn	15 35 19.6	+0.9
JRY				S	Sn	15 35 27.2	+0.9
JOD2	Odawara 2	0.53	193	⇓P	Pn	15 35 20.8	+0.3
JOD2				S	Sn	15 35 29.2	-0.1
JYN	Shimob	0.63	243	P	Pn	15 35 22.3	+0.7
JYN				S	Sn	15 35 31.7	+0.4
JAG	Ashikaga	0.66	16	P	Pn	15 35 23.3	+1.3
JFNN	Fujinakano	0.74	217	P	Pn	15 35 23.9	+1.1
JFNN				S	Sn	15 35 34.5	+1.0
JYT	Yasato	0.90	60	Pn	Pn	15 35 26.2	+1.3
JKT	Katashina	0.98	1	P	Pn	15 35 27.3	+1.3
JKT				S	Sn	15 35 40.6	+1.4
MJAR	Matsushiro Arr	1.12	313	Pg	Pn	15 35 28.6	+0.9
	1.6nm,0.3s,baz=148,slow=9.4,SNR=4.3						
MJAR				Lg	Lg	15 35 44.9	
	7.0nm,0.3s,baz=145,slow=25,SNR=9.9						
MAJO	Matsushiro	1.12	313		Pn	15 35 29.6	+1.8
MAT	Matsushiro	1.12	313	P	Pn	15 35 29.5	+1.7
MAT				S	Sn	15 35 44.7	+2.3
MJB9	Matsu-Tunnel	1.12	313		Pn	15 35 29.4	+1.6
JSG	Sagara	1.40	218		Pn	15 35 34.2	+2.7
JGF	Kuroka	1.54	264		Pn	15 35 35.2	+1.9
INU	Inuyama	1.85	257		Pn	15 35 39.1	+1.4
JSD	Sado	2.38	341	Pn	Pn	15 35 45.8	+1.1
JMM	Marumori	2.43	31	Pn	Pn	15 35 48.0	+2.6
JHJ	Hachijo jima 2	2.70	170	Pn	Pn	15 35 51.6	+2.4
	72nm,0.3s,baz=323,slow=20,SNR=15						
JHJ				Sn	Sn	15 36 22.8	+2.2
	32nm,0.3s,baz=73,slow=19,SNR=1.7						
JHJ2	Mitsune	2.71	170	Pn	Pn	15 35 51.5	+2.2
JWT	Wachi	3.16	262	Pn	Pn	15 35 57.0	+1.6
JMN	Monobe	4.86	247	Pn	Pn	15 36 20.4	+1.6
JHS	Saijyo	5.05	263	Pn	Pn	15 36 22.7	+1.3
MKAR	Makanchi Array	43.30	303	P	P	15 43 03.0	-1.0
	0.4nm,0.9s,baz=94,slow=10,SNR=1.8						
WB2	Warramunga Arr	55.61	186	P	P	15 44 38.2	+0.3
WB2				IAmb	IAmb	15 44 58.4	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	55.62	186	P	P	15 44 38.3	+0.3
	comp=Z,0.9nm,0.4s,baz=2.8,slow=7.6,SNR=15						
WR0	Warramunga Arr	55.62	185	P	P	15 44 38.2	+0.2
WR0				IAmb	IAmb	15 44 43.9	
	comp=Z,4.8nm,1.2s						
CTAO	Charters Tower	55.96	172	P	P	15 44 39.0	-1.5
ASAR	Alice Springs	59.34	186	P	P	15 45 05.7	+1.5
	comp=Z,0.2nm,0.5s,baz=21,slow=11,SNR=12						
STKA	Stephens Creek	67.34	178	P	P	15 45 56.1	-0.8
SUMG	Summit	71.92	359	P	P	15 46 22.9	-2.2

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*NAO **19** 15:37:00.0±1.9, 73°.14N×6°.12E, ML3.0*

*IDC **19** 15:37:02.0±1.5, 73°.18N×6°.57E, h0^{km}, mb3.5/4, mb1 3.6/8, mb1mx3.3/55, mbtmp3.5/8, ML2.8/4, MS2.8/3, Ms1 2.8/3, ms1mx2.6/34, Error ellipse: s-maj=29.3km s-min=16.4km az=92.0*

*BER **19** 15:37:03.7±2.2, 73°.25N×6°.51E, h10^{km}, ML2.4, ML3.0(NAO), Confirmed Earthquake*

ISC 19 15:37:03.0±0.9**, 73°.15N**±0°.06×**6°.97E**±0°.10**, h10^{km}, n41,** σ1^s.**68**/40**, mb3.5**/4**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	4.46	26	*e*P	Pn	15 38 09.6	-0.8
TRO	Tromso	5.20	127	Pn	Pn	15 38 21.7	+1.0
TRO	Tromso	5.20	127	*e*P	Pn	15 38 22.1	+1.4
JMIC	Jan Mayen	5.25	253	*e*P	Pn	15 38 18.9	-2.4
LOF	Lofoten	5.49	153	*e*P	Pn	15 38 25.8	+1.1
LOF				IAML		15 39 26.6	
	comp=Z,8.2nm,0.4s						
SPA0	Spitsbergen Ar	5.56	20	Pn	Pn	15 38 24.6	-0.9
	baz=196,slow=12						
SPA0	Spitsbergen Ar	5.56	20	Pn	Pn	15 38 24.6	-0.9
	baz=196,slow=12						
SPITS	Spitsbergen Ar	5.56	20	Pn	Pn	15 38 24.7	-0.9
	baz=193,slow=14,SNR=18						
SPITS				Sn	Sn	15 39 27.9	-1.5
	baz=292,slow=12,SNR=1.1						
JETT	Jettan, Norway	5.61	123	Pn	Pn	15 38 27.9	+1.5
HAMF	Hammerfest	5.78	108	Pn	Pn	15 38 28.4	-0.1
HAMF	Hammerfest	5.78	108	*e*P	Pn	15 38 28.6	+0.1
HOPEN	Hopen	5.79	46	Pn	Pn	15 38 27.9	-0.9
HOPEN	Hopen	5.79	46	*e*P	Pn	15 38 27.9	-0.9
STEI	Steigen	5.92	148	*e*P	Pn	15 38 31.1	+0.6
STEI				IAML		15 39 37.7	
	comp=Z,6.8nm,0.5s						
KBS	Kingsbay	5.93	9	Pn	Pn	15 38 31.3	+0.6
KBS	Kingsbay	5.93	9	*e*P	Pn	15 38 29.8	-0.9
KIF	Kilpisjarvi	6.12	126	Pn	Pn	15 38 34.6	+1.3
KIF	Kilpisjarvi	6.12	126	*e*P	Pn	15 38 34.5	+1.3
FAUS	Fauske	6.43	150	*e*P	Pn	15 38 37.9	+0.2
KTK1	Kautokeino	6.71	120	*e*P	Pn	15 38 43.0	+1.7
ARA0	ARCESS Array S	6.94	112	Pn	Pn	15 38 45.5	+0.9
	baz=309,slow=12						
ARA0	ARCESS Array S	6.94	112	Pn	Pn	15 38 45.5	+0.9
	baz=309,slow=12						
ARCES	ARCESS Array B	6.94	112	Pn	Pn	15 38 45.6	+1.1
	baz=310,slow=13,SNR=35						
ARCES				Sn	Sn	15 40 01.1	-2.3
	baz=310,slow=20,SNR=1.9						
KONS	Konsvik	7.01	159	*e*P	Pn	15 38 46.4	+1.0
KONS				*e*S	Sn	15 39 58.2	-6.9
KONS				IAML		15 40 02.0	
	comp=Z,9.0nm,0.3s						
STOK	Stokkvaagen	7.16	160	*e*P	Pn	15 38 48.8	+1.3
MOR8	Moi Rana	7.47	156	*e*P	Pn	15 38 52.3	+0.5
DAG	Danmarks Havn	7.53	311	*e*P	Pn	15 38 46.3	-6.3
DAG				*e*S	Sn	15 40 02.2	-16
DBG	Daneborg	7.68	292	Pn	Pn	15 38 48.1	-6.6
DBG	Daneborg	7.68	292	*e*P	Pn	15 38 48.2	-6.5
DBG				*e*S	Sn	15 40 05.3	-16
APA0	Apatity Array	10.28	110	Pn	Pn	15 39 29.5	-0.8
	baz=314,slow=11						
APA0	Apatity Array	10.28	110	Pn	Pn	15 39 29.5	-0.8
	baz=314,slow=11						
NOA	NORSAR Array B	12.27	170	Pn	Pn	15 39 59.6	+2.0
	comp=Z,0.0nm,0.3s,baz=341,slow=14,SNR=1.7						
NOA				LR	LR	15 44 24.7	
	comp=Z,33nm,18.3s,baz=285,slow=36						
HFS	Hagfors	13.33	165	Pn	Pn	15 40 13.1	+1.2
	baz=350,slow=11						
HFS	Hagfors	13.33	165	Pn	Pn	15 40 13.1	+1.2
	baz=350,slow=11						
FINES	FINESS Array B	13.76	139	Pn	Pn	15 40 18.7	+0.9
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=4.8						
FINES				LR	LR	15 45 18.8	
	comp=Z,84nm,19.4s,baz=36,slow=36						
OBN	Obninsk	21.78	130	LR	LR	15 50 08.5	
	comp=Z,16nm,20.2s,baz=356,slow=36						
AKASG	Malin Array Be	24.51	145	P	P	15 42 23.8	+1.7
	comp=Z,1.6nm,0.8s,baz=344,slow=9.1,SNR=3.2						
GERES	GERESS Array B	24.57	169	P	P	15 42 24.4	+1.6
	comp=Z,0.7nm,0.8s,baz=359,slow=9.9,SNR=3.4						
KURBB	Kurchatov Arra	37.24	87	P	P	15 44 16.2	+2.0
	comp=Z,0.2nm,0.5s,baz=336,slow=6.5,SNR=1.9						
TORD	Torodi Ar. Bea	60.06	186	P	P	15 47 10.8	+1.0
	comp=Z,0.9nm,0.7s,baz=356,slow=7.5,SNR=2.3						
ASAR	Alice Springs	122.85	61	PKP	PKPdf	15 55 58.0	-0.5
	comp=Z,0.2nm,0.7s,baz=354,slow=1.4,SNR=4.9						

IDC 19 15:46:23.0±1.7**, 2°.44S**×**139°.14E, h0^{km}, mb3.1**/2**, mb1 3.3**/3**, mb1mx3.2**/22**, mbtmp3.2**/3**, ML3.1**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.7**/14**, Error ellipse: s-maj=31.2km s-min=16.0km az=177.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.57	93	Pg	Pn	15 46 51.4	-0.8
	4.1nm,0.3s,baz=224,slow=11,SNR=24						
JAY				Lg	Lg	15 47 12.9	
	4.4nm,0.3s,baz=162,slow=20,SNR=2.7						
WRA	Warramunga Arr	18.02	195	P	Pn	15 50 35.1	0.0
	0.1nm,0.3s,baz=16,slow=11,SNR=2.1						
ASAR	Alice Springs	21.71	193	P	P	15 51 15.7	-0.2
	0.3nm,0.8s,baz=28,slow=9.8,SNR=7.1						
MSVF	Nonsavu	41.09	114	LR	LR	16 08 15.8	
	comp=Z,65nm,19.1s,baz=20,slow=32						
MKAR	Makanchi Array	69.83	322	P	P	15 57 35.6	+0.1
	0.1nm,0.3s,baz=123,slow=5.3,SNR=3.1						

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*JMA **19** 15:52:11.4, 23°.89N×121°.51E, h20^{km}±1^{km}, M3.0*

*TAP **19** 15:52:12.1, 23°.95N×121°.46E, h25^{km}, ML3.5, C*

ISC 19 15:52:12.3±0.9**, 23°.92N**±0°.01×**121°.50E**±0°.02**, h24^{km}**±5^{km}**, n125,** σ**0^s.93**/202**, 4C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.12	61	P	Pb	15 52 17.4	+0.4
	baz=79						
HWA				*e*S	Sb	15 52 21.9	+1.9
	baz=79						
ESL	Shilin	0.12	208	⇓*i*P	Pb	15 52 16.8	-0.2
	baz=186						
ESL				*i* S	Sb	15 52 20.3	+0.2
	baz=186						
TWD	Chiawan	0.18	30	⇓*i*P	Pb	15 52 17.5	-0.2
	baz=45						
TWD				S	Sb	15 52 21.4	+0.2
	baz=45						
EGFH	Guangfu	0.26	194	*e*P	Pb	15 52 18.4	-0.2
	baz=181						
EGFH				*e*S	Sb	15 52 23.3	+0.4
	baz=181						
NACB	Ninganchiao	0.27	20	P	Pb	15 52 18.2	-0.6
	baz=29						
NACB				*i* S	Sb	15 52 22.5	-0.7
	baz=29						
ETLH	Xiulin Townshi	0.28	358	*i* P	Pb	15 52 18.6	-0.5
	baz=10.0						
ETLH				*e*S	Sb	15 52 23.2	-0.5
	baz=10.0						
WHF	Hehuan Shan	0.31	317	⇑*i*P	Pb	15 52 19.0	-0.7
	baz=314						
WHF				*e*S	Sb	15 52 23.4	-1.2
	baz=314						
CHGB	Renai	0.33	295	⇑*i*P	Pb	15 52 19.4	-0.4
	baz=298						
CHGB				S	Sb	15 52 23.9	-1.0
	baz=298						
FUSS	Fushou	0.40	325	⇑*i*P	Pb	15 52 20.7	-0.3
	baz=327						
FUSS				S	Sb	15 52 26.2	-0.7
	baz=327						
HGSD	Ruisui	0.43	189	P	Pb	15 52 21.1	-0.2
	baz=190						
HGSD				S	Sn	15 52 29.7	-0.5
	baz=190						
TWT	Tachien	0.44	319	P	Pb	15 52 21.5	-0.2
	baz=315						
TWT				*i* S	Sb	15 52 27.1	-0.8
	baz=315						
EHY	Hungye	0.44	201	*e*P	Pb	15 52 20.6	-1.0
	baz=195						
EHY				*e*S	Sb	15 52 28.1	+0.3
	baz=195						
TDCB	Techi	0.45	317	P	Pb	15 52 21.4	-0.3
	baz=315						
TDCB				S	Sb	15 52 27.1	-1.2
	baz=315						
WPL	Puli Township	0.50	281	P	Pb	15 52 21.9	-0.6
	baz=274						
WPL				*e*S	Sb	15 52 28.4	-1.0
	baz=274						
SSLB	Suanglung	0.51	255	P	Pb	15 52 22.0	-0.7
	baz=253						
SSLB				*e*S	Sb	15 52 28.2	-1.6
	baz=253						
NNSB	Datong	0.52	349	P	Pb	15 52 22.3	-0.5
	baz=355						
NNSB				*e*S	Sb	15 52 29.0	-1.0
	baz=355						
NNSH	Datong	0.52	349	*e*P	Pb	15 52 22.3	-0.6
	baz=354						
NNSH				*e*S	Sb	15 52 28.9	-1.1
	baz=354						
NNS	Nan Shan	0.53	348	*e*P	Pb	15 52 22.7	-0.4
	baz=358						
NNS				*e*S	Sb	15 52 29.2	-1.1
	baz=358						
DPDB	Guoxing	0.53	282	P	Pb	15 52 22.7	-0.4
	baz=276						
DPDB				*e*S	Sb	15 52 30.3	-0.1
	baz=276						
SMLT	Sun Moon Lake	0.55	266	*i* P	Pb	15 52 22.8	-0.5
	baz=261						
SMLT				*e*S	Sb	15 52 30.1	-0.7
	baz=261						
ENA	Nanau	0.55	24	*e*P	Pb	15 52 22.3	-1.1
	baz=29						
YULB	Yu-li	0.56	199	*e*P	Pb	15 52 23.5	0.0
	baz=185						
YULB				*e*S	Sb	15 52 31.2	+0.1
	baz=185						
TYC	Yuchr	0.58	268	⇑*i*P	Pb	15 52 23.4	-0.5
	baz=265						
TYC				S	Sb	15 52 31.1	-0.7
	baz=265						
EYUL	Yuli	0.59	196	P	Pn	15 52 24.4	-0.9
	baz=192						
EYUL				*e*S	Sn	15 52 33.8	-0.4
	baz=192						
TWF1	Yuli	0.59	198	P	Pb	15 52 24.0	-0.1
	baz=193						
TWF1				S	Sn	15 52 33.9	-0.3
	baz=193						
ENAH	Nanao	0.60	29	*e*P	Pb	15 52 24.1	-0.1
	baz=32						
ENAH				*e*S	Sb	15 52 31.9	-0.4
	baz=32						
WHP	Taichung City	0.61	305	P	Pb	15 52 24.0	-0.5
	baz=302						
WHP				S	Sb	15 52 32.1	-0.7
	baz=302						
WHYT	Xinyi Township	0.63	249	*e*P	Pn	15 52 24.8	-1.0
	baz=245						
WHYT				*e*S	Sb	15 52 32.9	-0.2
	baz=245						
NDT	Datong Townshi	0.68	1	P	Pn	15 52 25.7	-0.8
	baz=4.0						
NDT				*e*S	Sb	15 52 33.9	-0.6
	baz=4.0						
WJS	Zhushan	0.71	262	P	Pn	15 52 26.7	-0.1
	baz=259						
WJS				*e*S	Sn	15 52 36.4	-0.7
	baz=259						
ENTT	Nioudou	0.72	5	P	Pn	15 52 26.2	-0.8
	baz=15						
ENTT				*e*S	Sb	15 52 35.9	+0.2
	baz=15						
WWF	Wufeng	0.74	280	*e*P	Pn	15 52 26.8	-0.5
	baz=280						
FULB	Fuli	0.74	194	*e*P	Pn	15 52 26.9	-0.5
	baz=191						
WNT	Mingjian	0.74	267	*i* P	Pn	15 52 27.0	-0.4
	baz=263						
WNT				S	Sn	15 52 37.7	-0.2
	baz=263						
WNT1	Nantou City	0.75	269	P	Pn	15 52 27.2	-0.2
	baz=252						
WNT1				S	Sn	15 52 37.9	0.0
	baz=252						
ALS	Alishan	0.75	237	P	Pn	15 52 27.0	-0.7
	baz=223						
ALS				*e*S	Sb	15 52 36.5	-0.4
	baz=223						
YHNB	Yeheng	0.75	352	P	Pb	15 52 26.2	-0.6
	baz=356						
TWC	Suao	0.76	25	P	Pn	15 52 27.0	-0.6
	baz=29						
TWC				*e*S	Sb	15 52 37.1	+0.3
	baz=29						

NSK	Sanguang baz=354	0.76	351	P	Pb	15 52 26.6	-0.3
NSK	baz=354			eS	Sb	15 52 36.0	-1.0
TCU	Taichung baz=285	0.78	287	eP	Pn	15 52 28.0	+0.1
TCU	baz=285			eS	Sn	15 52 38.8	-0.1
TWQ1	Liyutan baz=310	0.79	303	P	Pn	15 52 27.7	-0.3
TWQ1	baz=310			eS	Sb	15 52 37.4	-0.2
TWE	Neicheng baz=15	0.81	11	eP	Pb	15 52 27.3	-0.5
TWE	baz=15			eS	Sb	15 52 38.1	-0.3
CHN5	Tsauling baz=242	0.81	247	P	Pn	15 52 28.1	-0.3
CHN5	baz=242			eS	Sn	15 52 39.6	-0.2
CHKT	Chengkung baz=176	0.83	188	eP	Pn	15 52 29.4	+0.9
CHKT	baz=176			eS	Sn	15 52 39.0	-0.9
NSY	Sanyi baz=314	0.83	306	P	Pn	15 52 28.7	+0.1
NSY	baz=314			eS	Sn	15 52 39.8	-0.3
NSTT	Nanjuang baz=323	0.84	328	eP	Pn	15 52 28.0	-0.6
NSTT	baz=323			eS	Sb	15 52 38.4	-0.7
LIOB	Emei baz=324	0.84	329	P	Pn	15 52 28.7	0.0
LIOB	baz=324			eS	Sb	15 52 39.2	0.0
ELDTW	Lidau baz=208	0.85	211	P	Pn	15 52 28.1	-0.8
ELDTW	baz=208			S	Sn	15 52 39.6	-1.1
NWLT	Wulai baz=12	0.85	0	P	Pn	15 52 28.5	-0.3
NWLT	baz=12			eS	Sb	15 52 38.3	-1.3
WCHH	Zhanghua baz=278	0.87	281	P	Pn	15 52 28.9	-0.2
WCHH	baz=278			eS	Sn	15 52 42.4	+1.4
WGK	Gukeng baz=250	0.89	255	eP	Pn	15 52 29.6	+0.3
NMLH	Miaoli baz=314	0.89	314	P	Pn	15 52 29.4	0.0
NMLH	baz=314			eS	Sn	15 52 41.8	+0.3
WDJ	Dajia District baz=297	0.89	299	P	Pn	15 52 29.6	+0.3
WDJ	baz=297			S	Sn	15 52 42.4	+0.9
WDLH	Douliu baz=251	0.91	255	eP	Pn	15 52 29.6	0.0
WDLH	baz=251			eS	Sn	15 52 42.0	+0.1
HSN1	Hsinchu baz=329	0.96	333	eP	Pn	15 52 31.3	+1.0
HSN1	baz=329			eS	Sn	15 52 44.5	+1.3
EDH	Donghe baz=189	0.96	191	eP	Pn	15 52 30.6	+0.3
EDH	baz=189			eS	Sn	15 52 42.5	-0.7
NTC	Toucheng baz=21	0.98	18	eP	Pn	15 52 30.7	+0.1
NTC	baz=21			eS	Sn	15 52 43.3	-0.4
SBCB	Hsinchu baz=324	0.98	332	eP	Pn	15 52 31.8	+1.1
HSN	Hsinchu baz=320	1.00	331	eP	Pn	15 52 31.8	+0.9
HSN	baz=320			eS	Sn	15 52 45.2	+1.0
CHN4	Tsaushan baz=231	1.00	236	P	Pn	15 52 31.8	+0.9
CHN4	baz=231			eS	Sn	15 52 45.8	+1.5
TPUB	Ta-pu baz=222	1.01	232	P	Pn	15 52 31.5	+0.5
TPUB	baz=222			eS	Sn	15 52 45.7	+1.3
CHN2	Minshiung baz=243	1.01	248	eP	Pn	15 52 32.6	+1.6
STYT	Tauyuan baz=211	1.01	222	P	Pn	15 52 31.5	+0.4
STYT	baz=211			eS	Sn	15 52 45.0	+0.4
NHDH	Xindian Distri baz=10.0	1.04	2	eP	Pb	15 52 31.5	-0.1
RLNB	Erlin baz=265	1.04	269	P	Pb	15 52 31.4	-0.2
RLNB	baz=265			eS	Sn	15 52 46.4	+1.2
WTK	Tuku baz=253	1.04	257	eP	Pb	15 52 32.0	+0.4
WTK	baz=253			eS	Sn	15 52 46.4	+1.2
TATO	Taipei baz=14	1.05	360	eP	Pb	15 52 31.6	-0.2
WTP	Ta-pu baz=219	1.05	230	P	Pb	15 52 32.3	+0.4
WTP	baz=219			eS	Sn	15 52 47.8	+2.2
TWA	Mucha baz=7.0	1.06	4	P	Pb	15 52 33.0	+1.0
TWA	baz=7.0			eS	Sn	15 52 46.9	+1.2
LONT	Longtian baz=185	1.06	198	eP	Pn	15 52 31.1	-0.7
CHY	Chiayi baz=242	1.07	247	eP	Pb	15 52 33.2	+1.1
CHY	baz=242			eS	Sn	15 52 47.5	+1.6
NCUH	Zhongli baz=347	1.08	345	eP	Pb	15 52 32.6	+0.3
NCUH	baz=347			eS	Sn	15 52 48.0	+1.8
NCU	National Centr baz=1.0	1.08	345	eP	Pb	15 52 33.3	+1.0
NTY	Taoyuan baz=356	1.09	351	eP	Pb	15 52 32.9	+0.4
NTY	baz=356			eS	Sn	15 52 48.8	+2.4
TIPB	Shuangxi baz=19	1.09	16	eP	Pn	15 52 31.8	-0.3
TIPB	baz=19			eS	Sn	15 52 46.7	+0.2
TAP	Taipei baz=15	1.11	1	eP	Pb	15 52 33.0	+0.2
TAP1	Taipei baz=15	1.11	1	eP	Pb	15 52 33.8	+0.9
TWK	Hsinying baz=230	1.13	235	P	Pb	15 52 33.8	+0.6
TWK	baz=230			eS	Sn	15 52 50.5	+3.0
CHN1	Nanshi baz=225	1.15	231	eP	Pb	15 52 34.5	+1.0
SNST	Tainan City baz=227	1.15	233	eP	Pb	15 52 34.3	+0.8
TWG	Pinlang baz=184	1.16	200	eP	Pn	15 52 31.9	-1.2
TWGBT	Beinan baz=184	1.16	199	eP	Pn	15 52 30.7	-2.4
TWB1	Santiao Chiao baz=25	1.17	22	eP	Pb	15 52 34.8	+0.9
NWF	Wu-fen Shan baz=24	1.17	13	eP	Pb	15 52 34.6	+0.6
NWF	baz=24			eS	Sn	15 52 50.6	+1.9
WFSB	Wu-fen Shan baz=23	1.17	13	eP	Pb	15 52 34.7	+0.8
WFSB	baz=23			eS	Sn	15 52 50.0	+1.5
TWS1	Kuangyinshan baz=359	1.18	357	P	Pb	15 52 34.1	+0.1
TWS1	baz=359			eS	Sb	15 52 51.4	+2.6
WLGB	Puzi baz=243	1.18	248	eP	Pb	15 52 33.4	-0.6
SGST	Jiashian baz=209	1.18	225	eP	Pb	15 52 33.6	-0.5
WSF	Szhu baz=252	1.20	257	eP	Pb	15 52 34.5	+0.1
WSF	baz=252			eS	Sb	15 52 50.6	+1.2
SLGT	Liugui baz=216	1.21	220	eP	Pb	15 52 35.2	+0.7
YM01	YM01 baz=7.0	1.22	3	eP	Pb	15 52 34.3	-0.5
YM04	YM04 baz=21	1.23	2	eP	Pb	15 52 34.4	-0.5
YM10	YM10 baz=22	1.23	3	eP	Pb	15 52 34.6	-0.3
NTST	Danshui baz=17	1.24	358	eP	Pb	15 52 35.1	+0.1
YM05	YM05 baz=7.0	1.24	3	eP	Pb	15 52 35.2	+0.1
YM11	YM11 baz=8.0	1.24	3	eP	Pb	15 52 34.8	-0.4
ICHU	Yijhu baz=238	1.25	244	eP	Pb	15 52 35.2	0.0
YM03	YM03 baz=21	1.25	2	eP	Pb	15 52 35.7	+0.3
ANP	Anpu baz=20	1.26	1	eP	Pb	15 52 34.6	-0.9
YM08	YM08 baz=8.0	1.26	4	eP	Pn	15 52 34.2	-0.3
SCST	Cishan baz=218	1.38	222	eP	Pb	15 52 38.6	+1.2
SCST	baz=218			eS	Sb	15 52 58.9	+4.3
ECL	Taimali baz=188	1.41	201	eP	Pb	15 52 36.7	-1.3
SSD	Sandimen baz=211	1.41	214	eP	Pb	15 52 37.6	-0.4
TSMG	Majia baz=217	1.44	213	eP	Pb	15 52 38.6	+0.2
TWM1	Shoushan baz=217	1.47	222	eP	Pb	15 52 40.3	+1.3
YOJ	Yonaguni jima	1.48	68	P	Pn	15 52 37.8	+0.3
YOJ				eS	Sb	15 52 57.2	-0.5
MASBT	Mashibuluo baz=222	1.52	211	eP	Pb	15 52 38.6	-1.3
MASBT	baz=222			eS	Sb	15 52 59.6	+0.8
EAST	Anshuo baz=190	1.64	201	eP	Pb	15 52 40.4	-1.6
SSPT	Xinbi baz=209	1.67	211	eP	Pb	15 52 41.3	-1.0
PHUB	P'eng-hu baz=250	1.81	257	eP	Pn	15 52 41.3	-0.6
PNG	Penghu baz=252	1.81	259	eP	Pn	15 52 41.6	-0.4
IRIF	Iriomote-Funau	2.08	78	P	Pn	15 52 46.1	+0.3
IRIF				eS	Sn	15 53 11.6	+0.6
HATJ	Hateruma jima	2.12	86	eS	Sn	15 53 12.5	+0.7
VWUC	VWUC baz=301	2.15	300	eP	Pn	15 52 45.0	-1.6
PTTC	Pingtan baz=320	2.22	315	eP	Pn	15 52 47.2	-0.5
JKRS	Kuro-shima	2.32	82	P	Pb	15 52 50.9	-2.5
JKRS				eS	Sn	15 53 18.6	+1.8
PTMZ	Houxiangcun baz=297	2.43	298	eP	Pn	15 52 49.1	-1.5
JIJ	Ishigaki jima	2.46	79	P	Pn	15 52 51.4	+0.5
JIJ				eS	Sn	15 53 19.7	-0.5
MATB	Ma-tsu baz=336	2.63	328	eP	Pn	15 52 52.5	-0.7
JISG	Ishigakijimahi	2.65	75	P	Pn	15 52 53.8	+0.2
JISG				S	Sn	15 53 24.2	-0.9
KNM	Kinmen baz=274	2.84	281	eP	Pn	15 52 57.2	+1.1
KNMB	Chin-men Tao baz=276	2.89	281	eP	Pn	15 52 56.0	-0.9
JTJ	Tarama	3.01	76	P	Pn	15 52 59.2	+0.7
JTJ				eS	Sn	15 53 35.2	+1.3
LYJJ	Jianjiangzhen baz=339	3.05	329	eP	Pn	15 52 58.1	-1.0
AXDP	Jialang baz=283	3.36	288	eP	Pn	15 53 02.2	-1.1

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*SOME **19** 16:39:51.8, 46°.82N×90°.42E, h15^{km}*
*IDC **19** 16:39:57.5±1.5, 45°.97N×90°.09E, h0^{km}, mb3.5/1, mb1 3.5/5, mb1mx3.2/43, mbtmp3.5/5, ML3.0/4, MS3.4/2, Ms1 3.4/2, ms1mx2.5/48, Error ellipse: s-maj=27.4km s-min=14.3km az=27.0*
*NNC **19** 16:40:01.9±2.5, 46°.18N×89°.88E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=22.2km s-min=15.6km az=123.0*
*ASRS **19** 16:40:03.9±0.4, 46°N±2°×9°0E±°, h10^{km}, MLh4.1/8, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 19 16:39:59.7±1.1, **45°.96N**±0°.07×**90°.11E**±0°.05, **h10^{km}, n31,** σ**2^{s}.35**/47, **9C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan 5.8nm,0.3s	3.90	294	eP	Pb	16 41 07.1	-1.5
ZSN	95nm,0.4s			eS	Sg	16 42 03.0	-2.0
DGZ	Jazzator, Alta	4.15	335	P	Pn	16 41 06.1	+2.8
DGZ				S	Sn	16 41 55.8	+3.8
CUR	Chagan-Uzun	4.31	345	P	Pn	16 41 06.0	+0.6
CHBI	Chibit, Altay	4.69	339	P	Pn	16 41 12.8	+2.1
CHBI				S	Sn	16 41 59.8	-5.4
ULGR	Ulagan, Altay	4.88	344	P	Pn	16 41 16.3	+3.1
ULGR				S	Sn	16 42 08.2	-1.6
TEL	Teeli	5.06	1	P	Pn	16 41 16.3	+0.6
MK31	Makanchi Array 0.3nm,0.2s,baz=102,slow=13,SNR=42	5.47	282	⇑Pn	Pn	16 41 22.0	+0.7
MK31	1.9nm,0.4s,baz=99,slow=18,SNR=10			⇓Pg	Pb	16 41 39.4	+4.0
MK31	4.7nm,0.3s,baz=87,slow=35,SNR=4.7			⇓Lg	Lg	16 42 53.4	
MKAR	Makanchi Array 0.7nm,0.3s,baz=93,slow=15,SNR=63	5.47	282	Pn	Pn	16 41 21.4	+0.1
MKAR	0.7nm,0.3s,baz=96,slow=17,SNR=9.9			Pg	Pb	16 41 33.5	-1.9
MKAR	2.2nm,0.3s,baz=98,slow=29,SNR=6.3			Sn	Sn	16 42 25.2	+0.9
MKAR	2.8nm,0.3s,baz=99,slow=28,SNR=3.7			Lg	Lg	16 42 50.9	
MKAR	Makanchi Array	5.47	282	P	Pn	16 41 21.2	-0.1
MKAR				S	Sn	16 42 26.9	+2.5
MAKZ	Makanchi	5.69	281	P	Pn	16 41 24.9	+0.6
MAKZ				S	Sn	16 42 32.6	+2.9
MAKZ	Makanchi 0.7nm,0.3s	5.69	281	⇑Pn	Pn	16 41 24.9	+0.6
MAKZ	2.9nm,0.6s			⇑Pg	Pb	16 41 41.8	+2.7
MAKZ	19nm,0.8s			⇓Lg	Lg	16 42 58.6	
UKR	Ust'-Kan	6.11	326	P	Pn	16 41 31.8	+1.7
UKR				S	Sn	16 42 37.5	-2.7
ARTR	Artybash	6.13	343	S	Sn	16 42 43.9	+3.5
TASR	Tashtagol	6.96	349	S	Sn	16 43 04.1	+3.3
ARDR	Aradan	6.97	17	P	Pn	16 41 41.2	-0.7
ARDR				S	Sn	16 43 02.8	+1.5
BLRR	Bol’shaya Rech	7.24	11	P	Pn	16 41 44.3	-1.3
BLRR				S	Sn	16 43 05.6	-2.2
TDJR	Todzha	7.54	29	P	Pn	16 41 57.8	+8.0
KAPS	Kapalarasan 1.1nm,0.2s	7.57	269	eP	Pb	16 42 17.4	+6.3
KAPS	11nm,0.8s			eS	Sg	16 44 04.0	+1.5
ELT	Eltsovka	7.73	342	P	Pn	16 41 54.9	+2.7
ELT				S	Sn	16 43 24.2	+4.5
PDGK	Podgornoye 1.9nm,0.3s	8.02	255	⇑Pn	Pn	16 41 59.8	+3.5
PDGK	11nm,0.8s			⇑Sn	Sn	16 43 27.9	+0.9
ZAA0	Zalesovo Array 0.7nm,0.5s	8.69	339	⇓Pn	Pn	16 42 05.4	0.0
ZAA0	2.9nm,0.8s			⇑Lg	Lg	16 44 26.9	
ZALV	Zalesovo Beam 1.9nm,0.3s,baz=156,slow=14,SNR=25	8.69	339	Pn	Pn	16 42 05.0	-0.4
ZALV	0.4nm,0.3s,baz=151,slow=21,SNR=3.3			Sn	Sn	16 43 41.1	-2.2
ZALV	0.5nm,0.3s,baz=157,slow=30,SNR=2.4			Lg	Lg	16 44 23.7	
KURK	Kurchatov	9.01	306	P	Pn	16 42 10.2	+0.5
KURK				S	Sn	16 43 51.2	+0.1
KURK	Kurchatov 0.5nm,0.4s	9.01	306	⇑Pn	Pn	16 42 08.9	-0.8
KURK	4.3nm,0.8s			⇑Sn	Sn	16 43 48.8	-2.3
KURK	20nm,0.8s			⇑Lg	Lg	16 44 42.9	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=111,slow=13,SNR=5.1	9.02	305	Pn	Pn	16 42 09.3	-0.5
KURBB	0.1nm,0.3s,baz=102,slow=30,SNR=2.2			Sn	Sn	16 43 50.1	-1.2
KURBB	0.2nm,0.3s,baz=117,slow=30,SNR=3.5			Lg	Lg	16 44 40.0	
TLY	Talaya 0.0nm,0.3s,baz=58,slow=13,SNR=2.1	10.60	52	Lg	Lg	16 45 28.5	
SONM	Songino Array 0.3nm,0.3s,baz=19,slow=30,SNR=8.8	11.30	75	Sn	Sn	16 44 49.4	+1.7
SONM	0.1nm,0.3s,baz=278,slow=33,SNR=2.5			Lg	Lg	16 45 47.6	
AAK	Ala-Archa 0.1nm,0.3s,baz=71,slow=10,SNR=1.3	11.67	259	Pn	Pn	16 42 44.8	-1.6
AAK	0.1nm,0.3s,baz=146,slow=11,SNR=1.5			Sn	Sn	16 44 52.2	-4.6
USRK	Ussuriysk Ar. comp=Z,51nm,20.5s,baz=140,slow=37	29.38	78	LR	LR	16 57 57.8	
HFS	Hagfors comp=Z,84nm,21.8s,baz=263,slow=40	45.38	317	LR	LR	17 10 13.1	
ASAR	Alice Springs 0.2nm,0.5s,baz=332,slow=5.2,SNR=11	79.88	140	P	P	16 52 08.1	-0.5

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*IDC **19** 16:47:42.9±2.4, 22°.44S×175°.12E, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/32, mbtmp3.8/6, ML5.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/38, Error ellipse: s-maj=85.8km s-min=21.9km az=148.0*
*NEIC **19** 16:47:49.8±0.9, 22°.2S±0°.1×174°.9E±0°.1, h43^{km}±7^{km}, mb4.4/3, Error ellipse: s-maj=21.9km s-min=9.5km az=149.0*
ISC 19 16:47:48.9±1.0, **22°.2S**±0°.1×**174°.93E**±0°.10, **h35^{km}, n11,** σ**0^{s}.95**/12, **mb3.7**/6, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu 7.5nm,0.3s,baz=239,slow=18,SNR=24	5.36	34	Pn	Pn	16 49 05.8	-0.6
MSVF	3.4nm,0.3s,baz=266,slow=23,SNR=2.0			Sn	Sn	16 50 07.6	+0.6
MSVF	comp=Z,126nm,20.1s,baz=219,slow=34			LR	LR	16 50 45.0	
MSVF	Nonsavu	5.36	34		Pn	16 49 05.6	-0.8
DZM	Mont Dzumac 0.2nm,0.3s,baz=80,slow=17,SNR=2.1	7.86	270	Pn	Pn	16 49 42.5	+1.7
DZM	baz=120,slow=20,SNR=1.5			Sn	Sn	16 51 07.3	-1.4
HNR	Honiara	19.20	309	P	P	16 52 10.4	+0.5
HNR	comp=Z,47nm,0.9s			IAmb	IAmb	16 52 20.8	
RPZ	Rata Peaks comp=Z,93nm,20.0s,baz=46,slow=33	21.66	188	LR	LR	16 59 28.9	
STKA	Stephens Creek	31.09	245	P	P	16 54 02.8	-1.2
STKA	comp=Z,2.3nm,1.4s			IAmb	IAmb	16 54 15.4	
ASAR	Alice Springs comp=Z,0.5nm,0.8s,baz=95,slow=9.8,SNR=8.8	37.71	260	P	P	16 55 01.3	-0.1
WRA	Warramunga Arr comp=Z,0.2nm,0.6s,baz=99,slow=8.3,SNR=2.2	37.86	266	P	P	16 55 02.8	+0.2
QSPA	South Pole Qui	67.83	180	P	P	16 58 43.8	+0.4
QSPA	comp=Z,6.5nm,1.4s			IAmb	IAmb	17 00 35.0	
NVAR	Mina Array Bea comp=Z,0.2nm,0.6s,baz=247,slow=4.4,SNR=1.9	86.90	46	P	P	17 00 30.6	+0.2
ILAR	Eielson Array comp=Z,1.2nm,0.7s,baz=227,slow=5.1,SNR=16	91.60	15	P	P	17 00 51.5	-0.1

MEX 19 16:54:00.5±1.1, **14°.61N**×**92°.74W, h54^{km}**±17^{km}, **MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.55	57	i P	Pn	16 54 11.3	-1.2
THIG				i S	Sn	16 54 20.4	-0.9
PCIG		1.19	337	i P	Pn	16 54 19.4	-1.5
PCIG				i S	Sn	16 54 34.0	-2.0
CCIG	Comitan	1.76	19	i P	Pn	16 54 28.3	-0.5
CCIG				i S	Sn	16 54 49.1	-1.2
TGIG		2.19	350	eP	Pn	16 54 32.9	-1.7
TGIG				i S	Sn	16 54 58.0	-2.6
CMIG	Matias Romero	3.22	320	eP	Pn	16 54 47.9	-0.8
CMIG				i S	Sn	16 55 23.8	-2.0

IDC 19 17:00:09.6±2.1, **6°.57S**×**128°.72E, h0^{km}, mb3.6**/1, **mb1 3.6**/3, **mb1mx3.3**/41, **mbtmp3.4**/3, **ML3.4**/2, **Error ellipse: s-maj=126.5km s-min=33.0km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.2nm,0.3s,baz=337,slow=13,SNR=3.2	14.37	158	Pn	Pn	17 03 34.6	+0.1
WRA	0.4nm,0.3s,baz=337,slow=22,SNR=7.3			Sn	Sn	17 06 00.1	-15
ASAR	Alice Springs 0.2nm,0.3s,baz=342,slow=9.7,SNR=30	17.71	164	Pn	Pn	17 04 17.9	-0.1
ASAR	0.1nm,0.3s,baz=337,slow=19,SNR=2.1			Sn	Sn	17 07 23.9	-12
MKAR	Makanchi Array 0.3nm,0.5s,baz=114,slow=7.4,SNR=6.0	67.18	327	P	P	17 11 05.6	0.0

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*IDC **19** 17:04:41.3±1.1, 73°.15N×6°.58E, h0^{km}, mb3.3/8, mb1 3.5/12, mb1mx3.4/56, mbtmp3.4/12, ML2.8/4, MS2.8/4, Ms1 2.8/4, ms1mx2.5/44, Error ellipse: s-maj=24.8km s-min=14.8km az=68.0*
*BER **19** 17:04:44.1±1.3, 73°.27N×6°.21E, h10^{km}, ML2.2, Confirmed Earthquake*
ISC 19 17:04:41.4±0.7, **73°.25N**±0°.08×**5°.78E**±0°.07, **h10^{km}, n32,** σ**2^{s}.15**/32, **mb3.4**/8, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	4.95	250	eP	Pn	17 05 58.5	+2.9
BRBA	Barentsburg A	5.26	19	eP	Pn	17 05 59.2	-0.8
TRO	Tromso	5.54	124	eP	Pn	17 06 02.3	-1.5
SPA0	Spitsbergen Ar	5.59	23	eP	Pn	17 06 04.5	0.0
SPITS	Spitsbergen Ar baz=196,slow=15,SNR=51	5.59	23	Pn	Pn	17 06 04.3	-0.2
LOF	Lofoten	5.75	150	eP	Pn	17 06 04.6	-2.0
LOF	comp=Z,6.6nm,0.7s			IAML		17 07 17.1	
KBS	Kingsbay	5.89	12	eP	Pn	17 06 09.8	+1.2
HOPEN	Hopen	5.98	48	eP	Pn	17 06 07.9	-1.8
STEI	Steigen	6.20	145	eP	Pn	17 06 11.7	-1.0
STEI	comp=Z,3.7nm,0.8s			IAML		17 07 20.1	
KIF	Kilpisjarvi	6.46	124	eP	Pn	17 06 14.2	-2.1
FAUS	Fauske	6.70	147	eP	Pn	17 06 18.7	-1.0
KTK1	Kautokeino	7.06	118	eP	Pn	17 06 23.6	-1.0
DAG	Danmarks Havn	7.20	311	eS	Sn	17 07 42.5	-5.7
KONS	Konsvik	7.23	156	eP	Pn	17 06 26.3	-0.6
KONS	comp=Z,3.0nm,1.1s			IAML		17 07 42.3	
SALU	Saltoluokta	7.28	138	eP	Pn	17 06 27.0	-0.6
ARA0	ARCESS Array S	7.30	111	eP	Pn	17 06 27.4	-0.5
ARCES	ARCESS Array B baz=319,slow=12,SNR=14	7.30	111	Pn	Pn	17 06 25.9	-2.0
ARCES	baz=322,slow=22,SNR=1.4			Sn	Sn	17 07 40.7	-10
ARCES	comp=Z,66nm,18.9s,baz=290,slow=33			LR	LR	17 08 34.9	
DBG	Daneborg	7.33	291	eP	Pn	17 06 28.0	-0.2
DBG				eS	Sn	17 07 46.0	-5.2
STOK	Stokkvaagen	7.38	157	eP	Pn	17 06 28.9	-0.1
MOR8	Moi Rana	7.71	153	eP	Pn	17 06 33.7	+0.2
NOA	NORSAR Array B comp=Z,0.0nm,0.3s,baz=344,slow=14,SNR=1.5	12.44	168	Pn	Pn	17 07 37.2	-1.0
NOA	comp=Z,27nm,18.6s,baz=290,slow=36			LR	LR	17 12 06.5	
FINES	FINESS Array B comp=Z,0.2nm,0.3s,baz=336,slow=17,SNR=1.3	14.07	137	Pn	Pn	17 07 57.2	-3.2
VRAC	Vranov comp=Z,1.4nm,0.5s,baz=353,slow=16,SNR=1.6	24.49	163	P	P	17 10 01.3	+1.0
VRAC	comp=Z,32nm,19.0s,baz=314,slow=36			LR	LR	17 19 29.4	
GERES	GERESS Array B comp=Z,0.4nm,0.8s,baz=353,slow=9.4,SNR=4.6	24.74	167	P	P	17 10 04.0	+1.3
AKASG	Malin Array Be	24.80	143	P	P	17 10 01.9	-1.1

	comp=Z,0.5nm,0.3s,baz=350,slow=9.8,SNR=6.5						
DAVOX	Davos/Dischmat	26.62	174	LR	LR	17 22 10.0	
	comp=Z,20nm,18.6s,baz=285,slow=40						
ARU	Arti	26.72	100	P	P	17 10 17.9	-2.5
	comp=Z,0.3nm,0.3s,baz=330,slow=10,SNR=1.8						
YKA	Yellowknife Ar	38.78	320	P	P	17 12 09.2	+3.7
	comp=Z,0.1nm,0.8s,baz=29,slow=7.9,SNR=1.7						
ILAR	Eielson Array	41.04	343	P	P	17 12 26.8	+2.6
	comp=Z,0.2nm,0.7s,baz=10,slow=6.5,SNR=2.8						
MKAR	Makanchi Array	42.11	85	P	P	17 12 33.1	-0.1
	comp=Z,0.6nm,1.0s,baz=345,slow=4.5,SNR=3.8						
SONM	Songino Array	47.84	63	P	P	17 13 19.4	+0.6
	comp=Z,0.5nm,1.0s,baz=344,slow=4.8,SNR=2.4						
ASAR	Alice Springs	123.10	59	PKP	PKPdf	17 23 37.6	+0.1
	comp=Z,0.4nm,0.9s,baz=356,slow=1.5,SNR=4.6						

BJI ***19*** *17:19:40.2±0.0, 4°.30N×119°.89E, h5^{km}, mB5.6/78, mb5.4/88, Ms5.4/97, Ms7 5.2/91*

IDC ***19*** *17:19:44.0±0.3, 4°.61N×119°.75E, h0^{km}, mb5.4/48, mb1 5.4/50, mb1mx5.4/52, mbtmp5.4/50, ML5.4/2, MS4.9/31, Ms1 4.9/31, ms1mx4.8/41, Error ellipse: s-maj=11.4km s-min=7.4km az=64.0*

MOS ***19*** *17:19:44.6±1.1, 4°.74N×119°.66E, h10^{km}, mb6.1/67, MS5.0/44, Error ellipse: s-maj=6.5km s-min=3.7km az=110.5*

NEIC ***19*** *17:19:45.2, 4°.64N×119°.76E, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.83; M$_{\theta\theta}$0.18; M$_{\phi\phi}$-2.01; M$_{r\theta}$-0.49; M$_{\theta\phi}$0.39; M$_{\phi r}$0.70; Fault plane solution: M$_0$2.14000×10^{17} NP1:ϕ_s181.90000°, δ35.27000°, λ108.63000°. NP2:ϕ_s339.46000°, δ56.83000°, λ77.27000°. Principal axes: T 2.0487, Plg75.0000°, Azm213.0000°; N 0.1737, Plg11.0000°, Azm347.0000°; P -2.2224, Plg11.0000°, Azm79.0000°;*

NEIC ***19*** *17:19:45.6±1.5, 4°.61N±0°.05×119°.76E±0°.05, h11^{km}±1^{km}, mb5.8/259, Ms_20 5.0/96, Mwb5.5/24, Mww5.5, Mwc5.6(GCMT) Error ellipse: s-maj=9.4km s-min=8.5km az=217.0*

MAN ***19*** *17:19:46.9, 4°.76N×119°.82E, h35^{km}, mb6.0, ML5.1, MS5.6*

MAN INTENSITY IV - SIMULUL BONAGO AND PANGLIMA.

GCMT ***19*** *17:19:48.7±0.1, 4°.81N±0°.01×119°.83E±0°.01, h18^{km}, MW5.6/145, Moment Tensor Solution. s138,c249; s145,c288; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.65±.04; M$_{\theta\theta}$0.70±.03; M$_{\phi\phi}$-3.35±.03; M$_{r\theta}$-1.30±.09; M$_{\theta\phi}$0.36±.02; M$_{\phi r}$1.26±.07; Best double couple: M$_0$3.56700×10^{17} NP1:ϕ_s198.00000°, δ37.00000°, λ128.00000°. NP2:ϕ_s334.00000°, δ61.00000°, λ65.00000°. Principal axes: T 3.4420, Plg64.0000°, Azm200.0000°; N 0.2470, Plg22.0000°, Azm346.0000°; P -3.6930, Plg13.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *17:19:49, 4°.78N×119°.84E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.71; M$_{\theta\theta}$0.71; M$_{\phi\phi}$-3.42; M$_{r\theta}$-0.94; M$_{\theta\phi}$0.34; M$_{\phi r}$1.70; Fault plane solution: M$_0$3.70000×10^{17} NP1:ϕ_s193.00000°, δ33.00000°, λ119.00000°. NP2:ϕ_s340.00000°, δ62.00000°, λ73.00000°. Principal axes: T 3.4070, Plg68.0000°, Azm216.0000°; N 0.5230, Plg15.0000°, Azm349.0000°; P -3.9300, Plg15.0000°, Azm83.0000°;*

DJA ***19*** *17:19:49.2±0.3, 5°N±2°×12°0E±°, h37^{km}±4^{km}, M5.5/97, mB6.0/87, mb5.7/97, MLv6.1/15, Mw(mB)5.5/87, MwMwp5.4/55, Mwp5.6/55*

KLM ***19*** *17:19:50, 4°.69N×119°.98E, h10^{km}, mb5.7*

NOU ***19*** *17:19:50.4, 4°.63N×119°.78E, h32^{km}, ML5.4, Sulu Archipelago, Philippines*

NEIC ***19*** *17:19:52, 4°.62N×119°.76E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.27; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-2.36; M$_{r\theta}$-0.47; M$_{\theta\phi}$0.48; M$_{\phi r}$0.38; Fault plane solution: M$_0$2.44000×10^{17} NP1:ϕ_s179.00000°, δ40.00000°, λ105.00000°. NP2:ϕ_s340.00000°, δ51.00000°, λ77.00000°. Principal axes: T 2.3805, Plg79.0000°, Azm198.0000°; N 0.1144, Plg10.0000°, Azm348.0000°; P -2.4948, Plg6.0000°, Azm79.0000°;*

BGR ***19*** *17:20:44.0±0.0, 4°.45N×118°.49E, h33^{km}, mb5.8, Ms5.0*

ISC 19 17:19:47.4±0.3, **4°.63N**±0°.03×**119°.78E**±0°.03, **h21**^{km}±3^{km}, **n1635,** σ**1^{s}40**/1746, **mb5.8**/306, **MS5.0**/135, **61C-45D, Fault plane solution: NP1:**ϕ_s348.40384°, δ63.54939°, λ80.82901°. **NP2:**ϕ_s188.32694°, δ27.88675°, λ107.76342°. **Principal axes:** T Plg70.0444°, Azm239.1221°; N Plg8.2039°, Azm352.5170°; P Plg18.0610°, Azm85.2117°;

Sulu Archipelago

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYLDM	Lahad Datu	1.39	293	Pn	Pn	17 20 11.7	+0.2
ZCP	Zamboanga City	3.24	45	⇓iP	Pn	17 20 36.1	-0.9
ZCP				iS	Sb	17 21 25.2	+2.0
SPMM	Sapulut	3.30	272	P	Pn	17 20 39.0	+1.1
TOLI2	Tolitoli	3.63	164	Pn	Pn	17 20 41.0	-1.5
KKM	Kota Kinabalu	3.81	292	Pn	Pn	17 20 45.4	+0.3
MPSI	Mapaga	4.26	178	P	Pn	17 20 50.3	-0.8
MPSI				S	Sn	17 21 37.8	-2.5
BATP	Bataraza	4.58	335	eP	Pn	17 20 55.0	-0.5
BATP				eS	Sn	17 21 48.7	+0.5
MRSI	Marisa	4.66	152	P	Pn	17 20 56.7	+0.2
MRSI				S	Sn	17 21 48.8	-1.1
PAGZ	Pagadian	4.80	48	eP	Pn	17 20 57.1	-1.5
PAGZ				eS	Sn	17 22 00.9	+7.3
SKMP	Bagumbayan, Su	5.10	68	eP	Pn	17 20 58.7	-4.0
SKMP				eS	Sn	17 21 55.0	-6.0
GTOI	Gorontalo	5.11	141	P	Pn	17 20 59.8	-3.0
KCP	Kidapawan	5.79	66	⇓iP	Pn	17 21 11.7	-0.6
APSI	Ampana	5.81	161	P	Pn	17 21 12.5	+0.1
	11nm9µm40µm3µm,1.0s						
SGSI	Sangihe	5.81	99	P	Pn	17 21 09.6	-2.9
	16nm21µm1µm,0.7s						
KMSI	Cibinong	5.82	134	P	Pn	17 21 12.0	-0.5
	20nm993nm45µm7µm,0.8s						
CNOP	Candoni, Negro	5.90	29	eP	Pn	17 21 12.2	-1.4
CNOP				eS	Sn	17 22 18.2	-2.3
DDMP	Don Marcelino,	6.09	76	eP	Pn	17 21 14.3	-1.9
DDMP				eS	Sn	17 22 20.9	-4.4
BUKP	Musuan	6.17	58	eP	Pn	17 21 17.7	+0.3
BUKP				eS	Sn	17 22 27.8	+0.5
CGP	Cagayan de Oro	6.19	52	⇓iP	Pn	17 21 19.9	+2.2
DAV	Davao City (W)	6.26	67	Pn	Pn	17 21 20.1	+1.5
	134nm,0.3s,baz=246,slow=5.8,SNR=16						
DAV				Sn	Sn	17 22 30.4	+0.8
	19nm,0.3s,baz=226,slow=22,SNR=1.4						
LUWI	Luwuk	6.38	152	Pn	Pn	17 21 22.1	+1.9
LUWI	Luwuk	6.38	152	P	Pn	17 21 22.1	+1.9
	47nm16µm122µm13µm,0.7s						
BKB	Balikpapan	6.52	206	Pn	Pn	17 21 21.1	-1.0
BKB	Balikpapan	6.52	206	P	Pn	17 21 21.4	-0.7
	4.7nm29µm12µm1µm,0.6s						
ENPP	El Nido	6.55	357	eP	Pn	17 21 21.5	-1.0
ENPP				eS	Sn	17 22 34.1	-2.5
GUIM	Jordan	6.58	25	eP	Pn	17 21 22.3	-0.7
GUIM				eS	Sn	17 22 35.4	-2.0
MATI	Mati	6.85	70	eP	Pn	17 21 24.9	-1.7
MATI				eS	Sn	17 22 43.7	-0.4
LLP	Lapu-Lapu	7.01	36	⇓iP	Pn	17 21 29.0	0.0
LLP				eS	Sn	17 22 39.9	-8.3
BUTP	Butuan	7.23	53	eP	Pn	17 21 34.6	+2.7
BUSP	Coron	7.34	3	eP	Pn	17 21 33.3	-0.1
BUSP				eS	Sn	17 22 53.0	-3.1
MTKI	Muara Teweh, K	7.37	222	P	Pn	17 21 34.4	+0.5
	2.2nm11µm6µm668nm,0.7s						
MSLP	Maasin	7.44	42	eP	Pn	17 21 35.1	+0.3
TTSI	Tana Toraja	7.62	180	P	Pn	17 21 39.4	+2.1
	5.0nm6µm14µm1µm,0.6s						
SBUM	Sibu	7.84	254	Pn	Pn	17 21 41.9	+1.5
SBUM	Sibu	7.84	254	P	Pn	17 21 44.0	+3.6
OTRP	Odiongan	8.00	16	eP	Pn	17 21 43.3	+0.8
OTRP				eS	Sn	17 23 11.4	-1.0
TNTI	Ternate	8.49	117	Pn	Pn	17 21 50.5	+1.2
TNTI	Ternate	8.49	117	P	Pn	17 21 50.2	+0.9
	10µm4µm388nm,1.5s						
SPSI	Sidrap Palu	8.53	180	P	Pn	17 21 50.7	+0.9
	7µm689nm,1.1s						
KBKI	Kotabaru	8.66	205	P	Pn	17 21 51.5	-0.1
	9µm842nm,0.9s						
PGP	Puerto Galera	8.89	7	⇓eP	Pn	17 21 56.5	+1.7
BNSI	Bone	8.97	178	P	Pn	17 21 54.4	-1.5
	6µm561nm,0.7s						
BOAC	Boac	9.01	13	eP	Pn	17 21 57.1	+0.8
BOAC				eS	Sn	17 23 38.0	+0.7
SANI	Sanana	9.08	137	P	Pn	17 21 55.2	-2.2
	8µm6µm884nm,1.0s						
BBKI	Banjar Baru	9.43	212	P	Pn	17 22 02.4	+0.3
	5µm338nm,1.0s						
STKI	Sintang	9.45	242	P	Pn	17 22 04.6	+2.2
	2µm51nm,1.2s						
TGY	Tagaytay City	9.48	7	Pn	Pn	17 22 04.1	+1.2
	19nm,0.3s,baz=151,slow=19,SNR=1.8						
TGY				Sn	Sn	17 23 50.2	+1.2
	2.8nm,0.3s,baz=109,slow=24,SNR=0.9						
KAPI	Kappang	9.58	180	Pn	Pn	17 22 05.4	+1.2
	22nm,0.3s,baz=354,slow=9.5,SNR=27						
KAPI				LR	LR	17 26 13.6	
	comp=Z,10µm,21.1s,baz=18,slow=41						
KAPI	Kappang	9.58	180	P	Pn	17 22 05.0	+0.9
KAPI	Kappang	9.58	180		Pn	17 22 05.0	+0.9
KAPI	Kappang	9.58	180	P	Pn	17 22 06.3	+2.1
BKSI	Bulukumba	9.89	178	P	Pn	17 22 08.5	+0.1
	3µm3µm278nm,0.7s						
KSM	Kuching	9.96	252		Pn	17 22 10.1	+0.7
KSM	Kuching	9.96	252	P	Pn	17 22 14.0	+4.6
NLAI	Namlea	10.71	137	P	Pn	17 22 19.1	-0.5
	4µm402nm,0.6s						
BSSI	Bau Bau, Buton	10.72	176	P	Pn	17 22 18.7	-1.2
	2µm2µm178nm,0.6s						
PBKI	Pangkalan Bun	10.89	228	P	Pn	17 22 24.3	+2.1
	4µm266nm,1.2s						
MSAI	Masohi	12.10	131	P	Pn	17 22 39.1	+0.4
	3µm362nm,1.1s						
BWJI	Bawean	12.60	214	P	Pn	17 22 46.2	+0.6
	679nm,1.0s						
SWI	Sorong	12.70	115	P	Pn	17 22 48.3	+1.3
	9µm3µm213nm,1.0s						
SIJI	Sorong	12.71	115	Pn	Pn	17 22 49.2	+2.1
	1.4nm,0.3s,baz=300,slow=12,SNR=14						
SIJI				LR	LR	17 28 39.4	
	comp=Z,2µm,18.9s,baz=292,slow=42						
KMMI	Kalianget	12.97	207	P	Pn	17 22 51.8	+1.2
	8µm6µm178nm,1.4s						
DLV	T Lat	13.32	304		Pn	17 22 51.9	-3.7
MMRI	Maumere	13.40	169		Pn	17 22 57.1	+0.6
MMRI	Maumere	13.40	169	P	Pn	17 22 56.0	-0.5
	3µm4µm306nm,1.1s						
SRBI	Singaraja	13.42	200	P	Pn	17 22 57.4	+0.6
	7µm4µm244nm,1.4s						
EDFI	Ende, Flores	13.43	172	P	Pn	17 22 56.3	-0.6
	2µm2µm134nm,1.1s						
PLAI	Plampang	13.51	188	P	Pn	17 22 57.0	-1.0
	4µm5µm421nm,1.1s						
GRJI	Gresik	13.58	212	P	Pn	17 22 56.8	-2.2
	2µm193nm,0.7s						
TWSI	Taliwang, Sumb	13.59	192	P	Pn	17 22 58.8	-0.2
	2µm1µm86nm,1.2s						
BNDI	Bandanaira	13.60	132	P	Pn	17 22 59.3	+0.1
	7µm14µm1µm,1.2s						
TBJI	Tambak Boyo	13.85	215	P	Pn	17 23 01.5	-1.2
	5µm302nm,1.3s						
DNP	Denpasar	13.98	199	P	Pn	17 23 05.3	+0.9
	8µm25µm671nm,0.9s						
TPI	Tanjungpandan	14.16	239	P	Pn	17 23 07.4	+0.5
	13µm4µm155nm,1.1s						
JAGI	Jajag, Banyuwa	14.17	203		Pn	17 23 07.6	+0.6
JAGI	Jajag, Banyuwa	14.17	203	P	Pn	17 23 07.1	+0.1
	5µm7µm381nm,1.1s						
WBSI	Waikabubak, Su	14.18	182	P	Pn	17 23 08.7	+1.5
	4µm332nm,0.8s						
WSI	Waingapu	14.21	178	P	Pn	17 23 07.7	+0.1
	9µm495nm,1.2s						
FAKI	Fak Fak	14.54	121		Pn	17 23 12.8	+0.7
FAKI	Fak Fak	14.54	121	P	Pn	17 23 09.1	-3.1
	7µm3µm246nm,0.8s						
BASI	Baing, Sumba	14.77	177	P	Pn	17 23 17.3	+2.1
	3µm5µm392nm,1.1s						
PWJI	Pagerwojo	14.87	212	P	Pn	17 23 17.2	+0.6
	3µm149nm,1.4s						
I39PW	PALAU INFRASON	14.97	78	i		18 56 10.0	
	baz=262,slow=312,SNR=0.7						
SOEI	Soe	14.97	163	P	P	17 23 21.4	-2.0
SOEI	Soe	14.97	163	P	Pn	17 23 20.4	+2.3
	8µm8µm496nm,1.2s						
PPBI	Pangkal Pinang	15.21	244	P	P	17 23 24.4	-1.5
	11µm11µm1µm,0.9s						
BATI	Baumata	15.24	165	Pn	P	17 23 23.9	-2.4
	8.2nm,0.3s,baz=333,slow=1.7,SNR=23						
BATI				LR	LR	17 29 56.9	
	comp=Z,6µm,21.9s,baz=8.0,slow=40						
BATI	Baumata	15.24	165	P	Pn	17 23 22.9	+1.4
	5µm4µm483nm,1.1s						
UGM	Wanagama	15.50	217	P	Pn	17 23 26.6	+1.6
UGM				IAmb	IAmb	17 23 46.5	
	comp=Z,643nm,1.2s						
UGM	Wanagama	15.50	217	P	Pn	17 23 24.1	-0.9
	comp=Z,9µmcomp=Z,334nm,1.4s						
KPJI	Karang Pucung	16.07	222	P	P	17 23 35.1	-0.4
	comp=Z,7µmcomp=Z,462nm,1.1s						
MYKOM	Kota Tinggi	16.15	260	P	P	17 23 35.6	-0.8
MYKOM	Kota Tinggi	16.15	260	P	P	17 23 36.0	-0.4
LEM	Lembang	16.64	227	Pn	P	17 23 43.3	+1.4
	comp=Z,4.1nm,0.3s,baz=95,slow=18,SNR=16						
LEM				LR	LR	17 31 04.1	
	comp=Z,18µm,18.0s,baz=30,slow=41						
LEM	Lembang	16.64	227	P	P	17 23 41.1	-0.8
	comp=Z,7µmcomp=Z,3µmcomp=Z,140nm,1.0s						
CMJI	Cimerak	16.72	223	P	P	17 23 43.1	+0.3
	comp=Z,9µmcomp=Z,6µmcomp=Z,445nm,1.5s						
PMBI	Palembang	16.76	244	P	P	17 23 43.8	+0.6
PMBI				IAmb	IAmb	17 23 49.8	
	comp=Z,1µm,1.5s						
PMBI	Palembang	16.76	244	P	P	17 23 45.4	+2.2
	comp=Z,14µmcomp=Z,14µmcomp=Z,591nm,1.3s						
CBJI	Citeko	16.94	230	P	P	17 23 51.0	+5.9
CISI	Cisompet, Garu	17.00	225	P	P	17 23 45.9	+0.1
CISI				IAmb	IAmb	17 23 51.8	
	comp=Z,916nm,0.8s						
CISI	Cisompet, Garu	17.00	225	P	P	17 23 46.5	+0.7
	comp=Z,16µmcomp=Z,17µmcomp=Z,1µm,0.8s						
SAUI	Saumlaki	17.00	137	P	Pn	17 23 43.7	-0.4
SAUI	Saumlaki	17.00	137	P	P	17 23 45.1	-0.7
	comp=Z,9µmcomp=Z,7µmcomp=Z,232nm,0.7s						
DBJI	Dramaga	17.10	230	P	P	17 23 49.6	+2.6
	comp=Z,13µmcomp=Z,9µmcomp=Z,330nm,1.3s						
JMBI	JAMBI	17.28	249	P	P	17 23 50.8	+1.9
	comp=Z,8µmcomp=Z,280nm,1.9s						
QIZ	Qiongzhong	17.29	327	P	P	17 23 49.6	+0.6
QIZ				S	Sn	17 27 01.3	+1.7
QIZ				pmax	pmax		
	comp=Z,84nm,2.1s						
QIZ				pmax	pmax		
	comp=Z,3µm,7.8s						
QIZ				LR	LR		
	comp=Z,7µm,15.1s						
QIZ				LR	LR		
	comp=Z,3µm,14.1s						
QIZ				LR	LR		
	comp=Z,7µm,16.7s						
QIZ	Qiongzhong	17.29	327		Pn	17 23 45.4	-2.2
BAKI	Biak	17.31	109	P	P	17 23 49.5	+0.2
	comp=Z,6µmcomp=Z,362nm,1.4s						
UBPT	Khong Chiam	17.61	308	P	P	17 23 55.0	+2.5
	comp=Z,3µmcomp=Z,126nm,1.3s						
UBPT	Khong Chiam	17.61	308	P	P	17 23 53.0	+0.5
KLSI		17.65	239	P	P	17 23 54.7	+1.7
	comp=Z,4µmcomp=Z,2µmcomp=Z,92nm,1.0s						
CGJI	Cibinong	17.95	232	P	P	17 23 58.2	+1.8
	comp=Z,17µmcomp=Z,11µmcomp=Z,695nm,0.8s						
TWG	Pinlang	18.13	4	P	Pn	17 23 57.9	-0.1
LHSI	Lahat	18.28	243	P	P	17 24 01.5	+1.5
	comp=Z,18µmcomp=Z,10µmcomp=Z,310nm,1.3s						
KASI	Kota Agung	18.29	237	P	P	17 24 02.1	+2.0
	comp=Z,16µmcomp=Z,8µmcomp=Z,330nm,0.9s						
LWLI	Liwa	18.39	239	P	Pn	17 24 04.1	+2.7
	comp=Z,6µmcomp=Z,467nm,0.8s						
TPUB	Ta-pu	18.58	2	P	P	17 24 02.5	-0.8
IPM	Ipoh	18.69	270	P	P	17 24 04.5	0.0
IPM	Ipoh	18.69	270	P	Pn	17 24 07.0	+2.0
YULB	Yu-li	18.71	4	P	P	17 24 04.4	-0.3
MNAI	Manna	19.03	242		Pn	17 24 09.1	+0.1
MNAI	Manna	19.03	242	P	Pn	17 24 11.0	+2.0
	comp=Z,20µmcomp=Z,26µmcomp=Z,3µm,1.1s						
KSI	Kapahiang	19.04	245	P	Pn	17 24 11.5	+2.3
	comp=Z,13µmcomp=Z,537nm,1.9s						
KULM	Kulim	19.07	273	P	P	17 24 08.3	-0.3
KULM	Kulim	19.07	273	P	Pn	17 24 12.0	+2.5
SSLB	Suanglung	19.08	3	P	P	17 24 08.8	0.0
SDSI	Sungai Dareh	19.14	254	P	Pn	17 24 10.6	+0.2
	comp=Z,27µmcomp=Z,6µmcomp=Z,231nm,0.8s						
BKNI	Bangkinang	19.20	258	P	Pn	17 24 12.1	+1.0
BKNI	Bangkinang	19.20	258	P	Pn	17 24 12.0	+1.0
	comp=Z,17µmcomp=Z,12µmcomp=Z,1µm,1.1s						
NACB	Ninganchiao	19.51	5	P	P	17 24 12.4	-1.0
SRAK	Srakaew	19.81	299	P	P	17 24 12.0	-4.8
	comp=Z,16µmcomp=Z,2µm,1.3s						
YOJ	Yonaguni jima	19.96	9	P	Pn	17 24 19.4	-0.7
YOJ				pmax	pmax		
	comp=Z,525nm,1.4s						
YOJ	Yonaguni jima	19.96	9	P	Pn	17 24 19.4	-0.7
YOJ				IAmb	IAmb	17 24 21.2	
	comp=Z,525nm,1.4s						
YHNB	Yeheng	19.99	4	P	P	17 24 19.3	+0.6
PDSI	Padang	20.07	255	P	Pn	17 24 22.1	+0.6
	comp=Z,8µmcomp=Z,4µmcomp=Z,258nm,0.9s						
TRTT	Trang	20.22	280	P	Pn	17 24 23.9	+0.6
	comp=Z,6µmcomp=Z,218nm,1.0s						
QZH	Quanzhou	20.23	357	⇑iP	P	17 24 21.8	+0.6
QZH				S	Sn	17 28 10.5	-0.1
QZH				pmax	pmax		
	comp=Z,130nm,1.4s						
QZH				pmax	pmax		
	comp=Z,2µm,5.2s						
QZH				LR	LR		
	comp=Z,5µm,16.8s						
QZH				LR	LR		
	comp=Z,3µm,17.8s						
QZH				LR	LR		
	comp=Z,6µm,16.8s						
TATO	Taipei	20.30	4	P	P	17 24 21.7	-0.3
TATO				IAmb	IAmb	17 24 34.9	
	comp=Z,410nm,1.1s						
KHON	Khomkaen	20.31	306	P	Pn	17 24 24.5	+0.2
	comp=Z,5µmcomp=Z,415nm,1.6s						
PATY	Pattaya	20.41	295	P	Pn	17 24 25.5	+0.1
	comp=Z,3µmcomp=Z,326nm,0.9s						
XMI	Christmas Isla	20.52	223	P	Pn	17 24 27.6	+0.8
	comp=Z,538nm,1.1s						
MNSI	Mandailing Nat	20.53	260	P	P	17 24 25.1	+0.5
	comp=Z,6µmcomp=Z,505nm,1.2s						
XMIS	Christmas Isla	20.57	223	P	Pn	17 24 28.0	+0.7
	comp=Z,425nm,1.4s						
MTN	Manton Dam	20.70	147	P	P	17 24 26.2	-0.3
	baz=21,SNR=21						
CHAI	Chaiyaphum	20.76	304	P	P	17 24 27.5	+0.4
	comp=Z,4µmcomp=Z,497nm,1.0s						
PSI	Prapat	20.89	266	P	P	17 24 29.5	+0.9
	comp=Z,134nm,1.0s,baz=1.3,slow=2.2,SNR=68						
PSI				PcP	PcP	17 28 37.5	+0.7
	comp=Z,18nm,0.8s,baz=180,slow=6.5,SNR=5.0						
PSI				ScP	ScP	17 32 14.1	+1.6
	comp=Z,1.8nm,0.4s,baz=180,slow=21,SNR=7.5						
PSI				LR	LR	17 33 13.2	
	comp=Z,3µm,21.8s,baz=90,slow=39						
RPSI	Rantau Prapat	20.90	265	P	P	17 24 29.5	+0.9
RPSI					ScP	17 32 14.1	+1.7
NONG	Nongkai	21.05	311	P	P	17 24 30.4	+0.3
	comp=Z,335nm,1.0s						
TSI	Tuntungan	21.19	268	P	P	17 24 33.0	+1.3
	comp=Z,11µmcomp=Z,10µmcomp=Z,831nm,1.2s						
SURT	Suratani	21.27	283	P	P	17 24 36.7	+4.1
	comp=Z,79nmcomp=Z,8.1nm,1.1s						
KDU	Kakadu	21.33	144	P	P	17 24 32.1	-1.1
	baz=21,SNR=25						
PKDT	Phuket	21.55	280	P	P	17 24 38.7	+3.0
	comp=Z,4µmcomp=Z,172nm,1.3s						
GENI	Genyem	21.60	109	P	P	17 24 37.2	+1.0
	comp=Z,9µmcomp=Z,6µmcomp=Z,482nm,1.3s						
JAY	Jayapura	22.08	108	P	P	17 24 41.0	-0.4
	comp=Z,104nm,0.8s,baz=258,slow=8.7,SNR=16						
JAY	Jayapura	22.08	108	P	P	17 24 41.0	-0.4
JAY	Jayapura	22.08	108	P	P	17 24 39.7	-1.7
	comp=Z,960nmcomp=Z,81nm,0.8s						
GSI	Gunungsitoli	22.41	262	P	P	17 24 43.8	-1.1
GSI	Gunungsitoli	22.41	262	P	P	17 24 44.2	-0.7
	comp=Z,10µmcomp=Z,13µmcomp=Z,1µm,1.4s						
SRDT	SRDT	22.52	297	P	P	17 24 48.0	+1.9
	comp=Z,25µmcomp=Z,144nm,1.6s						
TPTI		22.58	267	P	P	17 24 46.0	-0.7
	comp=Z,1µmcomp=Z,58nm,1.8s						
SLVN	Son La	22.65	319	P	P	17 24 47.1	-0.3
SLVN				IAMs_20	IAMs_20	17 33 52.6	
	comp=Z,5µm,21.0s						
PHIT	Phitsanulok	22.71	305	P	P	17 24 49.0	+1.0
	comp=Z,5µmcomp=Z,510nm,0.9s						
UTHA	Uthaitani	22.75	300	P	P	17 24 49.9	+1.5
	comp=Z,3µmcomp=Z,249nm,1.2s						
LHMI	Lhok Sumawe	22.75	272	P	P	17 24 49.0	+0.5
LHMI				IAmb	IAmb	17 25 04.3	
	comp=Z,318nm,1.1s						
UTTA	Uttaradit	22.89	306	P	P	17 24 51.7	+1.9
	comp=Z,978nmcomp=Z,87nm,1.0s						
MLSI	Meulaboh, Aceh	23.30	270	P	P	17 24 52.3	-1.9
	comp=Z,7µmcomp=Z,4µmcomp=Z,280nm,1.1s						
FITZ	Fitzroy Crossi	23.31	166	P	P	17 24 52.3	-1.9
	baz=23,SNR=41						
FITZ	Fitzroy Crossi	23.31	166	P	P	17 24 52.2	-1.9
	comp=Z,79nm,1.1s,baz=357,slow=7.4,SNR=30						
FITZ				LR	LR	17 35 37.6	
	comp=Z,3µm,18.3s,baz=358,slow=41						
SUKH	Sukhothai	23.50	304	P	P	17 24 57.0	+0.9
	comp=Z,2µmcomp=Z,166nm,1.1s						
JOW	Kunigami	23.53	19	P	P	17 24 56.9	+0.7
	comp=Z,108nm,0.8s,baz=217,slow=9.2,SNR=11						
JOW				LR	LR	17 33 33.1	
	comp=Z,6µm,21.6s,baz=144,slow=35						
JOW	Kunigami	23.53	19	P	P	17 24 56.1	-0.2
JMZ	Minamidaito 2	23.76	26	P	P	17 24 57.1	-1.4
LAMP	Lampang	24.04	307	P	P	17 25 02.0	+0.7
	comp=Z,957nmcomp=Z,97nm,0.9s						
CM36	Chiang Mai Arr	24.47	306	P	P	17 25 05.0	-0.2
CM04	Chiang Mai Arr	24.50	306	P	P	17 25 06.0	+0.5
	comp=Z,634nmcomp=Z,80nm,1.1s						
CM35	Chiang Mai Arr	24.51	306	P	P	17 25 06.0	+0.4
CM09	Chiang Mai Arr	24.52	306	P	P	17 25 07.2	+1.5
	comp=Z,638nmcomp=Z,86nm,1.0s						
CM01	Chiang Mai Arr	24.53	306	P	P	17 25 07.2	+1.5
	comp=Z,500nmcomp=Z,61nm,1.1s						
CM05	Chiang Mai Arr	24.53	306	P	P	17 25 06.8	+1.0
	comp=Z,476nmcomp=Z,55nm,1.1s						
CM02	Chiang Mai Arr	24.55	306	P	P	17 25 07.3	+1.4
	comp=Z,471nmcomp=Z,62nm,1.0s						
CM31	Chiang Mai Arr	24.56	306	P	P	17 25 07.1	+1.0
	comp=Z,19µmcomp=Z,2µm,1.0s						
CM31	Chiang Mai Arr	24.56	306	P	P	17 25 05.2	-0.8
CMAR	Chiang Mai Arr	24.56	306	P	P	17 25 06.5	+0.4
	comp=Z,8.9nm,0.9s,baz=133,slow=7.8,SNR=46						
CMAR				PcP	PcP	17 28 45.5	+1.4
	comp=Z,22nm,1.0s,baz=162,slow=0.7,SNR=18						
CMAR				LR	LR	17 36 10.4	
	comp=Z,4µm,19.4s,baz=154,slow=40						
CMAR				PKiKP	PKiKP	17 36 25.7	-0.6
	comp=Z,2.4nm,0.9s,baz=296,slow=1.3,SNR=14						
CMAR	Chiang Mai Arr	24.56	306	P	P	17 25 04.7	-1.4
CMAR					PcP	17 28 44.3	+0.2
CM13	Chiang Mai Arr	24.57	306	P	P	17 25 07.0	+0.8
	comp=Z,507nmcomp=Z,66nm,1.1s						
CM15	Chiang Mai Arr	24.58	306	P	P	17 25 07.2	+1.0
	comp=Z,387nmcomp=Z,53nm,1.1s						
CM34	Chiang Mai Arr	24.60	307	P	P	17 25 06.0	-0.4
CM32	Chiang Mai Arr	24.74	306	P	P	17 25 08.0	+0.3
CMMT	Chiang Mai	24.75	306	P	P	17 25 08.3	+0.6
	comp=Z,1µmcomp=Z,55nm,1.2s						
CHTO	Chiang Mai	24.75	306	P	P	17 25 06.5	-1.2
CHTO						17 28 46.1	
CHTO				pmax	pmax		
	comp=Z,132nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,5µm,19.0s						
CHTO	Chiang Mai	24.75	306	P	P	17 25 06.5	-1.2
CHTO					PcP	17 28 46.1	+1.6
CHTO	Chiang Mai	24.75	306	IAMs_20	IAMs_20	17 36 05.3	
	comp=Z,5µm,19.0s						
CHTO	Chiang Mai	24.75	306	P	P	17 25 07.8	+0.1
CHTO				P	P	17 25 07.8	+0.1
CM33	Chiang Mai Arr	24.75	306	P	P	17 25 08.0	+0.3
GYA	Guiyang	25.07	331	⇑P	P	17 25 12.3	+1.6
GYA				PcP	PcP	17 28 46.9	+1.7
GYA				S	S	17 29 28.9	-5.3
GYA				pmax	pmax		
	comp=Z,46nm,1.5s						
GYA				pmax	pmax		
	comp=Z,1µm,6.5s						
GYA				LR	LR		
	comp=Z,4µm,15.9s						

GYA				LR	LR		
	comp=Z,3µm,15.2s						
GYA				LR	LR		
	comp=Z,6µm,15.4s						
MBWA	**Marble Bar**	**25.63**	**180**	P	**P**	**17 25 18.1**	**+2.5**
MBWA				P	**P**	**17 25 18.1**	**+2.5**
KMI	**Kunming**	**26.14**	**323**	⇑iP	**P**	**17 25 21.8**	**+1.3**
KMI				pP	pP	17 25 25.3	-1.3
KMI				sP	sP	17 25 28.8	-0.7
KMI				PP	**PnPn**	**17 26 00.8**	**+1.6**
KMI				S	**S**	**17 29 51.3**	**0.0**
KMI				sS	pS	17 29 57.5	-1.2
KMI				pmax	pmax		
	comp=Z,40nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1µm,6.6s						
KMI				LR	LR		
	comp=Z,4µm,15.8s						
KMI				LR	LR		
	comp=Z,2µm,15.3s						
KMI				LR	LR		
	comp=Z,4µm,17.3s						
KMI	**Kunming**	**26.14**	**323**	P	**P**	**17 25 20.0**	**-0.5**
KMI				pmax	pmax		
	comp=Z,54nm,1.2s						
KMI				MLR	MLR		
	comp=Z,4µm,19.0s						
KMI	**Kunming**	**26.14**	**323**	P	**P**	**17 25 20.0**	**-0.5**
KMI	**Kunming**	**26.14**	**323**	IAMs_20	IAMs_20	17 37 26.1	
	comp=Z,4µm,19.0s						
WHN	**Wuhan**	**26.28**	**349**	P	**P**	**17 25 22.3**	**+0.8**
WHN				sP	**sP**	**17 25 30.6**	**+0.2**
WHN				PcP	**PcP**	**17 28 49.1**	**+1.4**
WHN				pmax	pmax		
	comp=Z,130nm,1.0s						
WHN				pmax	pmax		
	comp=Z,3µm,6.0s						
WHN				LR	LR		
	comp=Z,7µm,13.3s						
WHN				LR	LR		
	comp=Z,6µm,14.2s						
WHN				LR	LR		
	comp=Z,11µm,14.6s						
GUMO	**Guam**	**26.30**	**69**	P	**P**	**17 25 22.6**	**+0.7**
	comp=Z,116nm,0.8s,baz=109,slow=1.8,SNR=7.3						
GUMO				LR	LR	17 34 25.7	
	comp=Z,2µm,21.9s,baz=225,slow=34						
SSE	**Sheshan**	**26.36**	**3**	P	**P**	**17 25 23.8**	**+1.6**
SSE				S	**S**	**17 29 59.3**	**+5.0**
SSE				pmax	pmax		
	comp=Z,66nm,0.9s						
SSE				pmax	pmax		
	comp=Z,400nm,3.6s						
SSE				LR	LR		
	comp=Z,910nm,18.0s						
SSE				LR	LR		
	comp=Z,1µm,18.7s						
SSE	**Sheshan**	**26.36**	**3**	P	**P**	**17 25 23.4**	**+1.2**
SSE	**Sheshan**	**26.36**	**3**	IAMs_20	IAMs_20	17 35 13.7	
	comp=Z,4µm,22.0s						
ENH	**Enshi**	**27.30**	**340**	P	**P**	**17 25 30.1**	**-0.5**
NJ2	**Nanjing**	**27.30**	**358**	eP	**P**	**17 25 32.5**	**+1.9**
NJ2				pP	**pP**	**17 25 34.4**	**-2.0**
NJ2				sP	**pwP**	**17 25 37.6**	**-1.5**
NJ2				S	**S**	**17 30 07.5**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,46nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.9s						
NJ2				LR	LR		
	comp=Z,2µm,16.1s						
NJ2				LR	LR		
	comp=Z,3µm,17.7s						
NJ2				LR	LR		
	comp=Z,3µm,17.9s						
GIRL	**Giralia**	**27.64**	**191**	P	**P**	**17 25 34.4**	**+0.6**
	baz=28,SNR=10						
ANA2	**Anatahan**	**27.99**	**63**	P	**P**	**17 25 36.7**	**-0.3**
ANA2				IAmb	IAmb	17 25 41.6	
	comp=Z,262nm,1.1s						
COCO	**West Island**	**28.27**	**234**	P	**P**	**17 25 39.7**	**+0.2**
COCO				pmax	pmax		
	comp=Z,141nm,0.7s						
COCO	**West Island**	**28.27**	**234**	P	**P**	**17 25 39.7**	**+0.2**
COCO				IAmb	IAmb	17 25 45.3	
	comp=Z,141nm,0.7s						
WRAB	**Tennant Creek**	**28.30**	**150**	c iP	**P**	**17 25 38.1**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,90nm,1.7s						
WRAB	**Tennant Creek**	**28.30**	**150**	P	**P**	**17 25 38.7**	**-1.0**
WRA	**Warramunga Arr**	**28.30**	**150**	P	**P**	**17 25 38.6**	**-1.1**
	comp=Z,30nm,1.0s,baz=331,slow=9.7,SNR=52						
WRA				PcP	**PcP**	**17 28 53.7**	**+1.0**
	comp=Z,4.5nm,0.7s,baz=334,slow=2.9,SNR=5.0						
WRA	**Warramunga Arr**	**28.30**	**150**	i P	**P**	**17 25 38.2**	**-1.6**
WRA				pmax	pmax		
	comp=Z,31nm,1.0s						
WRA	**Warramunga Arr**	**28.30**	**150**	P	**P**	**17 25 37.5**	**-2.3**
WB2	**Warramunga Arr**	**28.31**	**150**	P	**P**	**17 25 38.4**	**-1.4**
	baz=28						
JSU	**Suzuyama**	**28.56**	**19**	P	**P**	**17 25 41.0**	**-0.9**
JSU				IAMs_20	IAMs_20	17 37 01.0	
	comp=Z,4µm,20.0s						
CD2	**Chengdu**	**30.18**	**332**	P	**P**	**17 25 56.8**	**+0.4**
CD2				sP	sP	17 26 05.0	-0.4
CD2				PP	**PP**	**17 27 00.5**	**-4.2**
CD2				S	**S**	**17 30 56.8**	**+2.2**
CD2				sS	pS	17 31 03.3	+1.3
CD2				pmax	pmax		
	comp=Z,60nm,0.7s						
CD2				pmax	pmax		
	comp=Z,960nm,6.3s						
CD2				LR	LR		
	comp=Z,5µm,14.7s						
CD2				LR	LR		
	comp=Z,5µm,14.9s						
CD2				LR	LR		
	comp=Z,5µm,14.1s						
JNU	**Nakatsue**	**30.18**	**19**	P	**P**	**17 25 55.8**	**-0.5**
PMG	**Port Moresby**	**30.65**	**117**	P	**P**	**17 25 59.6**	**-0.9**
	comp=Z,72nm,0.9s,baz=317,slow=6.6,SNR=21						
PMG				PcP	**PcP**	**17 29 00.5**	**+1.7**
	comp=Z,41nm,1.1s,baz=180,slow=2.0,SNR=5.0						
PMG	**Port Moresby**	**30.65**	**117**	P	**P**	**17 25 59.7**	**-0.9**
PMG				pmax	pmax		
	comp=Z,97nm,1.0s						
PMG	**Port Moresby**	**30.65**	**117**	IAmb	IAmb	17 26 02.7	
	comp=Z,97nm,1.0s						
JCJ	**Chichijima**	**30.93**	**41**	P	**P**	**17 26 02.6**	**-0.4**
	comp=Z,123nm,0.8s,baz=281,slow=16,SNR=2.8						
JCJ	**Chichijima**	**30.93**	**41**	IAMs_20	IAMs_20	17 36 45.9	
	comp=Z,4µm,20.0s						
XAN	**Xi'an**	**30.96**	**342**	P	**P**	**17 26 02.3**	**-0.9**
XAN				sP	pP	17 26 09.0	-0.4
XAN				PP	**PnPn**	**17 27 04.9**	**+0.6**
XAN				PcP	**PcP**	**17 28 59.8**	**+0.5**
XAN				S	**S**	**17 31 03.9**	**-2.8**
XAN				SS	**ScP**	**17 32 50.8**	**+10**
XAN				pmax	pmax		
	comp=Z,77nm,1.4s						
XAN				pmax	pmax		
	comp=Z,810nm,5.7s						
XAN				LR	LR		
	comp=Z,3µm,16.1s						
XAN				LR	LR		
	comp=Z,4µm,15.5s						
XAN				LR	LR		
	comp=Z,6µm,15.7s						
JTU	**Tsushima**	**31.06**	**16**	IAMs_20	IAMs_20	17 37 44.3	
	comp=Z,4µm,21.0s						
MEEK	**Meekatharra**	**31.10**	**182**	P	**P**	**17 26 03.8**	**-0.7**
	baz=31,SNR=35						
AS31	**Alice Springs**	**31.32**	**154**	P	**P**	**17 26 05.7**	**-0.8**
ASAR	**Alice Springs**	**31.32**	**154**	P	**P**	**17 26 05.5**	**-0.9**
	comp=Z,13nm,1.0s,baz=333,slow=7.0,SNR=63						
ASAR				PcP	**PcP**	**17 29 01.9**	**+1.4**
	comp=Z,18nm,0.8s,baz=344,slow=3.0,SNR=13						
ASAR				LR	LR	17 39 30.1	
	comp=Z,1µm,20.7s,baz=314,slow=38						
ASAR				P3KP		17 59 04.0	
	comp=Z,1.1nm,1.0s,baz=99,slow=2.3,SNR=4.8						
ASAR	**Alice Springs**	**31.32**	**154**	P	**P**	**17 26 05.4**	**-1.1**
ASAR					**PcP**	**17 28 59.2**	**-1.2**
TIA	**Tai'an**	**31.53**	**356**	P	**P**	**17 26 07.3**	**-0.8**
TIA				PP	**PP**	**17 27 15.8**	**-3.8**
TIA				S	**S**	**17 31 16.8**	**+1.3**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIA				pmax	pmax		
	comp=Z,620nm,5.2s						
TIA				LR	LR		
	comp=Z,2µm,17.1s						
TIA				LR	LR		
	comp=Z,2µm,12.8s						
TIA				LR	LR		
	comp=Z,3µm,17.0s						
QIS	**Mount Isa**	**31.71**	**143**	P	**P**	**17 26 09.6**	**-0.3**
	baz=32,SNR=35						
JMN	**Monobe**	**31.79**	**23**	P	**P**	**17 26 11.8**	**+1.3**
JMN				IAMs_20	IAMs_20	17 39 22.7	
	comp=Z,5µm,21.0s						
TJN	**Taejon**	**32.36**	**11**	⇓eP	**P**	**17 26 16.9**	**+1.5**
JHS	**Saijyo**	**32.65**	**21**	P	**P**	**17 26 18.9**	**+0.9**
JHS				IAmb	IAmb	17 26 22.1	
	comp=Z,165nm,0.9s						
JHS				IAMs_20	IAMs_20	17 39 02.3	
	comp=Z,3µm,21.0s						
MTSU	**Mount Surprise**	**33.13**	**134**	P	**P**	**17 26 22.1**	**-0.3**
	baz=33,SNR=12						
INCN	**Inchon**	**33.30**	**10**	IAMs_20	IAMs_20	17 41 02.2	
	comp=Z,2µm,20.0s						
KSRS	**Korea Array**	**33.51**	**12**	P	**P**	**17 26 25.4**	**-0.1**
	comp=Z,26nm,1.1s,baz=192,slow=9.3,SNR=29						
KSRS				PcP	**PcP**	**17 29 07.4**	**+1.3**
	comp=Z,6.0nm,1.0s,baz=186,slow=3.8,SNR=5.7						
KSRS				LR	LR	17 42 31.3	
	comp=Z,2µm,18.4s,baz=186,slow=41						
RABL	**Rabaul**	**33.52**	**105**	P	**P**	**17 26 27.6**	**+1.7**
KS19	**Wonju Array Si**	**33.55**	**12**	P	**P**	**17 26 26.0**	**+0.2**
TIY	**Taiyuan**	**33.61**	**349**	eP	**P**	**17 26 27.9**	**+1.5**
TIY				PcP	**PcP**	**17 29 04.9**	**-1.7**
TIY				S	**S**	**17 31 48.6**	**+0.6**
TIY				pmax	pmax		
	comp=Z,67nm,0.9s						
TIY				pmax	pmax		
	comp=Z,860nm,6.6s						
TIY				LR	LR		
	comp=Z,4µm,16.7s						
TIY				LR	LR		
	comp=Z,770nm,11.8s						
TIY				LR	LR		
	comp=Z,4µm,18.8s						
MORW	**Morawa**	**33.69**	**186**	P	**P**	**17 26 26.7**	**-0.5**
	baz=34,SNR=25						
JWT	**Wachi**	**33.75**	**23**	P	**P**	**17 26 27.7**	**+0.1**
JWT				IAMs_20	IAMs_20	17 40 12.6	
	comp=Z,4µm,19.0s						
DL2	**Dalian**	**34.16**	**3**	P	**P**	**17 26 30.6**	**-0.5**
DL2				S	**S**	**17 31 57.4**	**+1.1**
DL2				pmax	pmax		
	comp=Z,110nm,1.1s						
DL2				pmax	pmax		
	comp=Z,640nm,7.5s						
DL2				LR	LR		
	comp=Z,2µm,21.7s						
DL2				LR	LR		
	comp=Z,3µm,19.3s						
DL2				LR	LR		
	comp=Z,2µm,16.0s						
INU	**Inuyama**	**34.47**	**25**	P	**P**	**17 26 34.4**	**+0.6**
INU				IAmb	IAmb	17 26 35.5	
	comp=Z,108nm,1.3s						
INU				IAMs_20	IAMs_20	17 40 56.8	
	comp=Z,3µm,19.0s						
LZH	**Lanzhou**	**34.58**	**337**	⇑P	**P**	**17 26 35.0**	**0.0**
LZH				sP	pP	17 26 40.3	-0.9
LZH				PcP	**PcP**	**17 29 11.5**	**+2.0**
LZH				S	**S**	**17 32 04.0**	**+0.8**
LZH				PcS	**PcS**	**17 32 56.8**	**+0.7**
LZH				SS	**SS**	**17 34 20.0**	**-13**
LZH				pmax	pmax		
	comp=Z,170nm,1.2s						
LZH				pmax	pmax		
	comp=Z,780nm,6.2s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,13.6s						
LZH				LR	LR		
	comp=Z,4µm,16.3s						
JGF	**Kuroka**	**34.83**	**26**	P	**P**	**17 26 36.8**	**-0.2**
JGF				IAMs_20	IAMs_20	17 40 59.2	
	comp=Z,3µm,19.0s						
BLDU	**Ballidu**	**35.16**	**185**	P	**P**	**17 26 39.1**	**-0.7**
	baz=35,SNR=22						
BJT	**Baijiatuau**	**35.38**	**355**	P	**P**	**17 26 41.9**	**+0.3**
BJT				pmax	pmax		
	comp=Z,108nm,1.0s						
BJT				MLR	MLR		
	comp=Z,3µm,19.0s						
BJT	**Baijiatuau**	**35.38**	**355**	P	**P**	**17 26 41.9**	**+0.3**
BJT				IAmb	IAmb	17 26 44.2	
	comp=Z,108nm,1.0s						
BJT	**Baijiatuau**	**35.38**	**355**	IAMs_20	IAMs_20	17 42 20.5	
	comp=Z,3µm,19.0s						
BJI	**Beijing**	**35.40**	**355**	P	**P**	**17 26 43.1**	**+1.3**
BJI				PcP	**PcP**	**17 29 10.5**	**-1.0**
BJI				S	**S**	**17 32 18.4**	**+3.0**
BJI				pmax	pmax		
	comp=Z,110nm,1.0s						
BJI				pmax	pmax		
	comp=Z,890nm,7.7s						
BJI				LR	LR		
	comp=Z,2µm,17.8s						
BJI				LR	LR		
	comp=Z,1µm,18.6s						
BJI				LR	LR		
	comp=Z,2µm,18.6s						
CTA	**Charters Tower**	**35.78**	**134**	P	**P**	**17 26 45.1**	**-0.3**
	comp=Z,15nm,1.0s,baz=317,slow=9.7,SNR=12						
CTA				PcP	**PcP**	**17 29 14.3**	**+1.2**
	comp=Z,2.6nm,0.3s,baz=333,slow=2.5,SNR=4.7						
CTAO	**Charters Tower**	**35.78**	**134**	P	**P**	**17 26 45.9**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,47nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s						
CTAO	**Charters Tower**	**35.78**	**134**	P	**P**	**17 26 45.9**	**+0.5**
KMBL	**Kambalda**	**35.85**	**177**	P	**P**	**17 26 45.4**	**-0.4**
	baz=36,SNR=64						
MAJO	**Matsushiro**	**36.00**	**26**	c iP	**P**	**17 26 46.3**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,105nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,2µm,17.0s						
MAJO	**Matsushiro**	**36.00**	**26**	P	**P**	**17 26 46.5**	**-0.5**
MAJO	**Matsushiro**	**36.00**	**26**	IAMs_20	IAMs_20	17 40 25.0	
	comp=Z,3µm,19.0s						
MAT	**Matsushiro**	**36.00**	**26**	P	**P**	**17 26 46.4**	**-0.6**
MAT				S	**S**	**17 32 24.4**	**-0.3**
MJAR	**Matsushiro Arr**	**36.00**	**26**	P	**P**	**17 26 47.0**	**0.0**
	comp=Z,23nm,1.0s,baz=196,slow=8.0,SNR=28						
MJAR				PcP	**PcP**	**17 29 14.8**	**+1.4**
	comp=Z,13nm,0.8s,baz=182,slow=2.8,SNR=7.5						
MJAR				LR	LR	17 40 45.9	
	comp=Z,2µm,19.4s,baz=210,slow=35						
MJAR	**Matsushiro Arr**	**36.00**	**26**	P	**P**	**17 26 46.7**	**-0.3**
MJB9	**Matsu-Tunnel**	**36.00**	**26**	IAMs_20	IAMs_20	17 40 26.0	
	comp=Z,3µm,22.0s						
KLBR	**Kellerberrin**	**36.07**	**183**	P	**P**	**17 26 48.4**	**+0.7**
	baz=36,SNR=6.5						
FORT	**Forrest**	**36.09**	**168**	P	**P**	**17 26 48.6**	**+0.9**
	baz=36,SNR=6.6						
MUN	**Mundaring**	**36.56**	**185**	P	**P**	**17 26 51.6**	**-0.3**
	baz=37,SNR=6.2						
JYT	**Yasato**	**36.63**	**28**	P	**P**	**17 26 50.6**	**-1.8**
JYT				IAMs_20	IAMs_20	17 38 44.9	
	comp=Z,3µm,22.0s						
LSA	**Lhasa**	**36.80**	**316**	P	**P**	**17 26 54.9**	**+0.4**
LSA				PP	**PP**	**17 28 23.9**	**+5.4**
LSA				S	**S**	**17 32 31.6**	**-6.4**
LSA				pmax	pmax		
	comp=Z,170nm,1.6s						
LSA				LR	LR		
	comp=Z,2µm,17.1s						
LSA				LR	LR		
	comp=Z,3µm,14.2s						
LSA				LR	LR		
	comp=Z,5µm,12.8s						
LSA	**Lhasa**	**36.80**	**316**	P	**P**	**17 26 54.8**	**+0.3**
LSA	**Lhasa**	**36.80**	**316**	P	**P**	**17 26 54.6**	**+0.1**
LSA				pmax	pmax		
	comp=Z,109nm,1.4s						
LSA				MLR	MLR		
	comp=Z,1µm,21.0s						
LSA	**Lhasa**	**36.80**	**316**	P	**P**	**17 26 54.6**	**+0.1**
HHC	**Hu-ho-hao-te**	**36.81**	**350**	eP	**P**	**17 26 55.1**	**+1.1**
HHC				pP	pP	17 26 59.4	-0.6
HHC				S	**S**	**17 32 45.1**	**+7.9**
HHC				SS	**SnSn**	**17 35 08.4**	**-1.1**
HHC				pmax	pmax		
	comp=Z,69nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,8.5s						
HHC				LR	LR		
	comp=Z,3µm,18.6s						
HHC				LR	LR		
	comp=Z,3µm,19.0s						
BTO	**Baotou**	**36.88**	**348**	eP	**P**	**17 26 55.5**	**+0.9**
SNY	**Shenyang**	**37.20**	**5**	⇑P	**P**	**17 26 57.5**	**+0.4**
SNY				PP	**PnPn**	**17 28 26.8**	**+4.2**
SNY				S	**S**	**17 32 40.5**	**-2.3**
SNY				pmax	pmax		
	comp=Z,60nm,1.8s						
SNY				pmax	pmax		
	comp=Z,780nm,5.3s						
SNY				LR	LR		
	comp=Z,2µm,17.1s						
SNY				LR	LR		
	comp=Z,1µm,16.1s						
SNY				LR	LR		
	comp=Z,3µm,16.4s						
NWAO	**Narrogin (SRO)**	**37.43**	**184**	P	**P**	**17 26 59.3**	**+0.1**
	baz=38,SNR=37						
NWAO	**Narrogin (SRO)**	**37.43**	**184**	P	**P**	**17 26 59.0**	**-0.1**
	comp=Z,61nm,0.7s,baz=3.2,slow=7.1,SNR=33						
NWAO	**Narrogin (SRO)**	**37.43**	**184**	P	**P**	**17 26 58.8**	**-0.4**
NWAO				IAmb	IAmb	17 27 01.6	
	comp=Z,101nm,0.9s						
NWAO	**Narrogin (SRO)**	**37.43**	**184**	P	**P**	**17 26 58.6**	**-0.6**
NWAO				IAmb	IAmb	17 27 01.6	
	comp=Z,75nm,0.8s						
NWAO	**Narrogin (SRO)**	**37.43**	**184**	P	**P**	**17 27 00.1**	**+0.9**
NWAO				P	**P**	**17 27 00.1**	**+0.9**
ODAN	**Odare**	**38.00**	**309**	eP	**P**	**17 27 04.8**	**+0.3**
	comp=Z,714nm,1.5s						
TAPN	**Taplejung**	**38.00**	**310**	eP	**P**	**17 27 04.1**	**-0.5**
	comp=Z,199nm,1.0s						
JMM	**Marumori**	**38.24**	**27**		**P**	**17 27 05.7**	**-0.4**
JMM				IAMs_20	IAMs_20	17 40 22.5	
	comp=Z,3µm,22.0s						
PATS	**Pohnpei**	**38.40**	**85**	P	**P**	**17 27 09.0**	**+1.3**
	baz=38,SNR=4.5						
PATS	**Pohnpei**	**38.40**	**85**	P	**P**	**17 27 08.7**	**+1.0**
PATS				IAmb	IAmb	17 27 20.9	
	comp=Z,364nm,1.2s						
RAMN	**Ramite**	**38.66**	**309**	eP	**P**	**17 27 10.5**	**+0.4**
	comp=Z,696nm,1.4s						
PALK	**Pallekele**	**38.94**	**276**	LR	LR	17 42 19.0	
	comp=Z,137nm,19.7s,baz=195,slow=35						
PALK	**Pallekele**	**38.94**	**276**	P	**P**	**17 27 13.9**	**+1.6**
PALK	**Pallekele**	**38.94**	**276**	P	**P**	**17 27 10.7**	**-1.7**
PALK				P	**P**	**17 27 11.2**	**-1.2**
QLP	**Quilpie**	**39.03**	**144**	P	**P**	**17 27 13.2**	**+0.4**
	baz=39,SNR=37						
GTA	**Gaotai**	**39.06**	**335**	⇑P	**P**	**17 27 12.8**	**-0.3**
GTA				pP	pP	17 27 17.1	-2.3
GTA				sP	sP	17 27 19.8	-2.1
GTA				PP	**PnPn**	**17 28 50.0**	**+4.7**
GTA				PcP	**PcP**	**17 29 24.6**	**+1.7**
GTA				PcS	**PcS**	**17 33 11.8**	**-0.8**
GTA				S	**S**	**17 33 13.8**	**+2.4**
GTA				ScS	**ScS**	**17 37 23.0**	**+1.3**
GTA				pmax	pmax		
	comp=Z,43nm,1.7s						
GTA				pmax	pmax		
	comp=Z,820nm,5.5s						
GTA				LR	LR		
	comp=Z,2µm,16.0s						
GTA				LR	LR		
	comp=Z,1µm,16.4s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
CN2	**Changchun**	**39.33**	**6**	eP	**P**	**17 27 14.9**	**-0.2**
CN2				pP	pP	17 27 19.9	-1.2
CN2				S	**S**	**17 33 11.8**	**-3.3**
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
GUN	**Gumba**	**39.69**	**309**	eP	**P**	**17 27 17.1**	**-1.7**
	comp=Z,490nm,1.1s						
PKI	**Pulchoki**	**39.89**	**309**	eP	**P**	**17 27 20.0**	**-0.4**
	comp=Z,488nm,1.6s						
PKIN	**Phulchoki**	**39.90**	**309**	eP	**P**	**17 27 20.0**	**-0.4**
	comp=Z,274nm,1.3s						
KKN	**Kakani**	**40.09**	**309**	eP	**P**	**17 27 20.9**	**-1.1**
	comp=Z,600nm,1.6s						
DMN	**Daman**	**40.14**	**308**	eP	**P**	**17 27 22.5**	**+0.1**
	comp=Z,489nm,1.5s						
BBOO	**Buckleboo**	**40.31**	**159**	P	**P**	**17 27 23.0**	**-0.4**
	baz=40,SNR=7.8						
MDJ	**Mudanjiang**	**40.75**	**11**	P	**P**	**17 27 28.1**	**+1.2**
MDJ				pP	pP	17 27 31.6	-1.3
MDJ				S	**S**	**17 33 40.0**	**+3.7**
MDJ				pmax	pmax		
	comp=Z,190nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,690nm,4.5s						
MDJ				LR	LR		
	comp=Z,1µm,21.4s						
MDJ				LR	LR		
	comp=Z,2µm,19.2s						
MDJ				LR	LR		
	comp=Z,3µm,19.9s						
MDJ	**Mudanjiang**	**40.75**	**11**	P	**P**	**17 27 26.9**	**0.0**
MDJ				IAmb	IAmb	17 27 29.4	
	comp=Z,204nm,1.1s						
MDJ				IAMs_20	IAMs_20	17 43 19.7	
	comp=Z,2µm,19.0s						
JTM	**Tenmabayashi**	**40.77**	**25**	P	**P**	**17 27 26.5**	**-0.6**
JTM				IAmb	IAmb	17 27 29.4	
	comp=Z,224nm,1.1s						
USA0B	**Ussuriysk Arra**	**40.85**	**13**	⇑eP	**P**	**17 27 28.0**	**+0.3**
USA0B	**Ussuriysk Arra**	**40.85**	**13**	P	**P**	**17 27 28.1**	**+0.3**
USRK	**Ussuriysk Ar.**	**40.85**	**13**	P	**P**	**17 27 28.9**	**+1.1**
	comp=Z,18nm,0.8s,baz=195,slow=6.8,SNR=35						
USRK				LR	LR	17 43 52.3	
	comp=Z,1µm,21.7s,baz=184,slow=35						
USRK	**Ussuriysk Ar.**	**40.85**	**13**	P	**P**	**17 27 27.8**	**+0.1**
DANN	**Dangsing**	**41.54**	**309**	eP	**P**	**17 27 32.6**	**-1.4**
	comp=Z,917nm,1.5s						
RMQ	**Roma**	**41.76**	**139**	P	**P**	**17 27 35.9**	**+0.4**
	baz=42,SNR=11						
STKA	**Stephens Creek**	**41.83**	**152**	P	**P**	**17 27 36.0**	**+0.2**
	baz=42,SNR=51						
STKA	**Stephens Creek**	**41.83**	**152**	P	**P**	**17 27 35.9**	**0.0**
	comp=Z,60nm,0.9s,baz=316,slow=8.1,SNR=23						
STKA				LR	LR	17 48 06.4	
	comp=Z,790nm,18.7s,baz=325,slow=41						
STKA	**Stephens Creek**	**41.83**	**152**	⇓eP	**P**	**17 27 35.5**	**-0.4**
STKA	**Stephens Creek**	**41.83**	**152**	P	**P**	**17 27 35.4**	**-0.4**
HTT	**Hallett**	**41.97**	**156**	P	**P**	**17 27 37.4**	**+0.3**
	baz=42,SNR=41						
HYB	**Hyderabad**	**42.30**	**291**	i P	**P**	**17 27 39.0**	**-1.0**
	comp=Z,286nm,1.2s						
EIDS	**Eidsvold**	**42.58**	**136**	P	**P**	**17 27 42.0**	**-0.1**
	baz=43,SNR=12						
JEW	**Eniwo**	**42.64**	**24**	P	**P**	**17 27 44.2**	**+1.8**
JEW				IAmb	IAmb	17 27 45.5	
	comp=Z,261nm,1.1s						
ERM	**Erimo**	**42.67**	**26**	⇓eP	**P**	**17 27 43.8**	**+1.2**
ERM				pmax	pmax		
	comp=Z,70nm,1.0s						
ERM				MLR	MLR		
	comp=Z,3µm,19.0s						
ERM	**Erimo**	**42.67**	**26**	P	**P**	**17 27 43.9**	**+1.3**
TEY	**Ternei**	**42.86**	**18**	⇑iP	**P**	**17 27 45.3**	**+1.2**
TEY				e		17 27 50.7	
TEY				e		17 30 03.5	
TEY				pmax	pmax		
	comp=Z,400nm,2.2s						
TEY				pmax	pmax		
	comp=N,80nm,1.1s						

TEY					pmax	pmax		
	comp=E,30nm,1.1s							
TEY					pmax	pmax		
	comp=Z,180nm,1.0s							
CMSA	Cobar Meteorol	43.63	147		P	P	17 27 51.4	+0.9
	baz=44,SNR=41							
ASAJ	Asahikawa	44.16	24		P	P	17 27 55.3	+0.6
ASAJ					pmax	pmax		
	comp=Z,92nm,0.9s							
ASAJ					MLR	MLR		
	comp=Z,2µm,20.0s							
JKA	Kamikawa-asahi	44.17	24		P	P	17 27 55.3	+0.6
JKA					IAmb	IAmb	17 27 57.2	
	comp=Z,92nm,0.9s							
JKA					IAMs_20	IAMs_20	17 46 33.1	
	comp=Z,2µm,20.0s							
ULN	Ulaanbaatar	44.44	348	c	iP	P	17 27 56.6	-0.4
ULN					pmax	pmax		
	comp=Z,287nm,1.3s							
ULN					MLR	MLR		
	comp=Z,2µm,18.0s							
ULN	Ulaanbaatar	44.44	348		P	P	17 27 56.5	-0.5
ULN					IAmb	IAmb	17 27 59.7	
	comp=Z,212nm,1.1s							
ULN	Ulaanbaatar	44.44	348		IAMs_20	IAMs_20	17 48 59.9	
	comp=Z,2µm,20.0s							
HIA	Hailar	44.48	360		P	P	17 27 57.5	+0.4
HIA					pmax	pmax		
	comp=Z,45nm,1.5s							
HIA					MLR	MLR		
	comp=Z,2µm,19.0s							
HIA	Hailar	44.48	360		P	P	17 27 57.5	+0.4
HIA	Hailar	44.48	360		IAMs_20	IAMs_20	17 47 55.3	
	comp=Z,2µm,19.0s							
SONM	Songino Array	44.56	347		P	P	17 27 57.9	0.0
	comp=Z,99nm,0.9s,baz=163,slow=8.7,SNR=207							
SONM					LR	LR	17 49 25.9	
	comp=Z,2µm,18.2s,baz=158,slow=40							
SONM	Songino Array	44.56	347		P	P	17 27 57.4	-0.5
YUK	Yuzh-Kuril'sk	45.48	26		eP	P	17 28 03.6	-1.5
YUK					eSS	SS	17 38 07.6	-1.9
YUK					pmax	pmax		
	comp=Z,221nm,1.0s							
YUK					pmax	pmax		
	comp=N,192nm,1.2s							
YUK					pmax	pmax		
	comp=E,110nm,1.2s							
KLR	Kul'dur	45.59	11		LR	LR	17 47 24.4	
	comp=E,885nm,19.5s,baz=186,slow=36							
KLR	Kul'dur	45.59	11	d	iP	P	17 28 05.5	-0.5
KLR					pmax	pmax		
	comp=Z,71nm,1.2s							
KLR					MLR	MLR		
	comp=Z,1µm,21.0s							
ARPS	Mount Arapiles	46.05	155		P	P	17 28 10.1	+0.3
	baz=46,SNR=32							
ARMA	Armidale	46.29	141		P	P	17 28 13.9	+2.0
	baz=46,SNR=43							
YSS	Yuzh-Sakhalins	46.60	22		eP	P	17 28 13.0	-0.9
YSS					e		17 30 07.4	
YSS					eS	S	17 35 04.0	+2.2
YSS					MLR	MLR		
	comp=Z,1µm,17.0s							
YSS					MLR	MLR		
	comp=E,600nm,15.0s							
YSS	Yuzh-Sakhalins	46.60	22		P	P	17 28 13.8	-0.1
POO	Poona	46.91	291	⇑	iP	P	17 28 14.5	-2.4
	comp=E,160nm,1.8s							
YNG	Young	47.20	147		P	P	17 28 20.5	+1.7
	baz=47,SNR=7.4							
KUR	Kuril'sk	47.31	27		eP	P	17 28 21.8	+2.4
KUR					S	S	17 35 12.9	+1.1
KUR					MLR	MLR		
	comp=Z,1µm,15.0s							
CIT	Chita	47.52	355		eP	P	17 28 21.1	0.0
CIT					e		17 29 52.1	
CIT					e		17 30 12.8	
CIT					pmax	pmax		
	comp=Z,277nm,1.4s							
ZAK	Zakamensk	47.67	346		eP	P	17 28 21.4	-0.9
ZAK					pmax	pmax		
	comp=Z,96nm,1.2s							
MGCD	Mangrove Creek	47.93	144		P	P	17 28 23.9	-0.6
	baz=48,SNR=7.1							
GRNR	Gornyy	48.06	14	⇓	iP	P	17 28 25.6	+0.3
GRNR					eS	S	17 35 27.3	+4.8
GRNR					pmax	pmax		
	comp=N,20nm,1.0s							
GRNR					pmax	pmax		
	comp=Z,30nm,0.9s							
GRNR					smax	smax		
	comp=N,1.0nm,0.9s							
GRNR					MLR	MLR		
	comp=E,540nm,15.0s							
GRNR					MLR	MLR		
	comp=N,610nm,19.0s							
GRNR					MLR	MLR		
	comp=Z,790nm,18.0s							
WMQ	Urumqi	48.19	329		P	P	17 28 27.8	+1.3
WMQ					pP	pP	17 28 33.1	+0.2
WMQ					sP	sP	17 28 38.8	+3.3
WMQ					PcP	PcP	17 29 55.5	+1.9
WMQ					S	S	17 35 26.8	+2.1
WMQ					pmax	pmax		
	comp=Z,110nm,1.1s							
WMQ					pmax	pmax		
	comp=Z,1µm,4.5s							
WMQ					LR	LR		
	comp=Z,3µm,16.1s							
WMQ					LR	LR		
	comp=Z,2µm,17.5s							
WMQ					LR	LR		
	comp=Z,1µm,17.1s							
WMQ	Urumqi	48.19	329		P	P	17 28 26.8	+0.3
WMQ					pmax	pmax		
	comp=Z,110nm,1.1s							
WMQ					MLR	MLR		
	comp=Z,1µm,19.0s							
WMQ	Urumqi	48.19	329		P	P	17 28 26.8	+0.3
WMQ					IAmb	IAmb	17 28 29.6	
	comp=Z,110nm,1.1s							
WMQ	Urumqi	48.19	329		IAMs_20	IAMs_20	17 50 48.7	
	comp=Z,1µm,19.0s							
TOO	Toolangi	48.32	153		P	P	17 28 29.3	+1.8
	baz=48,SNR=6.2							
CNB	Canberra Magne	48.49	147		P	P	17 28 30.4	+1.5
	baz=49,SNR=8.7							
DGAR	Diego Garcia	48.71	256		P	P	17 28 30.2	-0.6
TLY	Talaya	48.79	347		P	P	17 28 31.4	+0.5
	comp=Z,64nm,0.8s,baz=204,slow=5.1,SNR=66							
TLY	Talaya	48.79	347	c	iP	P	17 28 30.9	0.0
TLY					e		17 30 23.5	
TLY					eS	S	17 35 32.3	-0.4
TLY					e		17 38 23.2	
TLY					pmax	pmax		
	comp=Z,257nm,1.1s							
TLY					MLR	MLR		
	comp=Z,3µm,16.0s							
TLY	Talaya	48.79	347		P	P	17 28 30.5	-0.3
TLY					IAmb	IAmb	17 28 33.9	
	comp=Z,126nm,0.9s							
TLY					IAMs_20	IAMs_20	17 52 19.1	
	comp=Z,1µm,19.0s							
IRK	Irkutsk	49.17	347		eP	P	17 28 33.8	0.0
IRK					pmax	pmax		
	comp=Z,194nm,1.8s							
ZEA	Zeya	49.34	6		eP	P	17 28 34.8	-0.2
ZEA					e		17 29 57.8	
ZEA					e		17 30 29.9	
ZEA					ePPP	PPP	17 31 28.8	
ZEA					eS	S	17 35 43.2	+2.9
ZEA					e		17 38 26.8	
ZEA					pmax	pmax		
	comp=N,30nm,1.1s							
ZEA					pmax	pmax		
	comp=Z,50nm,1.1s							
ZEA					pmax	pmax		
	comp=N,200nm,3.6s							
ZEA					pmax	pmax		
	comp=Z,300nm,5.4s							
ZEA					pmax	pmax		
	comp=N,200nm,9.4s							
ZEA					pmax	pmax		
	comp=Z,300nm,6.7s							
ZEA					smax	smax		
	comp=E,200nm,8.4s							
ZEA					MLR	MLR		
	comp=N,1µm,15.0s							
ZEA					MLR	MLR		
	comp=Z,800nm,18.0s							
MOY	Mondy	49.43	345		eP	P	17 28 35.8	-0.1
MOY					pmax	pmax		
	comp=Z,285nm,1.7s							
TYV	Tymovskoe	49.91	19		eP	P	17 28 40.8	+1.4
TYV					pmax	pmax		
	comp=Z,31nm,1.5s							
KOUNC	Koumac, New Ca	50.34	121		P	P	17 28 45.1	+1.9
SANVU	Saraoutou	51.02	114		P	P	17 28 48.9	+0.5
SANVU					IAmb	IAmb	17 28 52.0	
	comp=Z,182nm,0.9s							
SANVU	Saraoutou	51.02	114		P	P	17 28 49.6	+1.3
NKL	Nikolayevsk	51.33	16		eP	P	17 28 48.7	-1.4
NKL					eS	S	17 36 14.5	+6.5
NKL					pmax	pmax		
	comp=N,16nm,0.8s							
NKL					pmax	pmax		
	comp=E,40nm,0.8s							
NKL					pmax	pmax		
	comp=Z,97nm,1.2s							
NKL					smax	smax		
	comp=E,93nm,2.0s							
NKL					smax	smax		
	comp=N,21nm,2.3s							
NKL					MLR	MLR		
	comp=E,2µm,17.0s							
NKL					MLR	MLR		
	comp=N,193nm,19.0s							
NKL					MLR	MLR		
	comp=Z,1µm,18.0s							
LHI	Lord Howe Isla	51.89	137		P	P	17 28 55.0	+0.3
	baz=52,SNR=3.4							
LHI	Lord Howe Isla	51.89	137		P	P	17 28 57.1	+2.5
NIL	Nilore	51.95	310		P	P	17 28 54.6	-0.6
NIL					pmax	pmax		
	comp=Z,603nm,1.0s							
NIL	Nilore	51.95	310		P	P	17 28 54.6	-0.6
NIL	Nilore	51.95	310		P	P	17 28 56.6	+1.4
ZSN	Zaisan	52.15	331		eP	P	17 28 54.4	-1.9
	comp=Z,78nm,1.2s,baz=330							
ZSN	Zaisan	52.15	331		eP	P	17 28 54.4	-1.9
ZSN					pmax	pmax		
	comp=Z,78nm,1.2s							
SHLS	Shalkode	52.35	323		eP	P	17 28 53.8	-4.4
	baz=323							
SHLS	Shalkode	52.35	323		eP	P	17 28 53.7	-4.4
DGZ	Jazzator, Alta	52.57	334	c	iP	P	17 28 59.8	+0.2
DGZ					pmax	pmax		
	comp=Z,318nm,1.4s							
DGZ					MLR	MLR		
	comp=Z,2µm,17.0s							
KSH	Kashi	52.61	318		P	P	17 29 01.3	+1.3
KSH					pP	pP	17 29 06.8	+0.3
KSH					PcP	PcP	17 30 12.8	+2.7
KSH					S	S	17 36 27.4	+1.0
KSH					sS	sS	17 36 36.8	-0.5
KSH					pmax	pmax		
	comp=Z,370nm,1.1s							
KSH					pmax	pmax		
	comp=Z,2µm,7.9s							
KSH					LR	LR		
	comp=Z,1µm,14.5s							
KSH					LR	LR		
	comp=Z,1µm,12.0s							
KSH					LR	LR		
	comp=Z,3µm,13.6s							
DZM	Mont Dzumac	52.80	122		P	P	17 29 01.7	-0.1
	comp=Z,16nm,1.0s,baz=136,slow=22,SNR=4.6							
DZM	Mont Dzumac	52.80	122		eP	P	17 29 04.0	+2.3
	comp=Z,114nm,1.4s							
DZM					eS	S	17 36 28.0	-1.4
	comp=Z,3µm,26.3s							
DZM					eLR	LR	17 44 18.2	
	comp=Z,1µm,32.8s							
DZM	Mont Dzumac	52.80	122		P	P	17 29 01.6	-0.1
DZM	Mont Dzumac	52.80	122		P	P	17 29 03.7	+2.0
SATY	Saty	52.93	323		eP	P	17 29 00.3	-2.1
	comp=Z,114nm,1.2s,baz=322							
SATY					eS	S	17 36 30.7	0.0
	baz=322							
SATY	Saty	52.93	323		eP	P	17 29 00.2	-2.1
SATY					eS	S	17 36 30.7	0.0
SATY					pmax	pmax		
	comp=Z,114nm,1.2s							
KPKS	Kokpek	52.99	323		eP	P	17 29 00.5	-2.4
	comp=Z,152nm,1.4s,baz=323							
KPKS					eS	S	17 36 30.7	-0.8
	baz=323							
KPKS	Kokpek	52.99	323		eP	P	17 29 00.4	-2.4
KPKS					eS	S	17 36 30.7	-0.8
KPKS					pmax	pmax		
	comp=Z,152nm,1.4s							
MK31	Makanchi Array	53.01	328	c	iP	P	17 29 02.3	-0.4
MK31	Makanchi Array	53.01	328		P	P	17 29 02.4	-0.4
MK31					IAmb	IAmb	17 29 04.9	
	comp=Z,84nm,1.1s							
MKAR	Makanchi Array	53.01	328		P	P	17 29 02.5	-0.2
	comp=Z,45nm,0.7s,baz=127,slow=7.8,SNR=192							
MKAR					PcP	PcP	17 30 12.3	+1.1
	comp=Z,28nm,0.8s,baz=162,slow=3.1,SNR=7.8							
MKAR					LR	LR	17 54 32.9	
	comp=Z,1µm,19.6s,baz=114,slow=39							
MKAR					SKKP		17 54 42.9	
	comp=Z,0.3nm,0.9s,baz=264,slow=1.4,SNR=1.8							
MKAR					PKPPKP	P'P'df	17 59 29.6	-0.1
	comp=Z,1.5nm,1.2s,baz=274,slow=3.3,SNR=4.1							
MKAR	Makanchi Array	53.01	328		P	P	17 29 01.9	-0.8
YATNC	Mamie plateau,	53.18	122		P	P	17 29 06.7	+2.4
MAKZ	Makanchi	53.18	328		P	P	17 29 03.6	-0.4
MAKZ					pmax	pmax		
	comp=Z,139nm,1.2s							
MAKZ					MLR	MLR		
	comp=Z,2µm,20.0s							
MAKZ	Makanchi	53.18	328		P	P	17 29 03.6	-0.4
MAKZ					IAmb	IAmb	17 29 07.6	
	comp=Z,138nm,1.2s							
MAKZ					IAMs_20	IAMs_20	17 54 18.1	
	comp=Z,1µm,20.0s							
BOD	Bodaibo	53.24	356		eP	P	17 29 04.1	-0.1
BOD					pmax	pmax		
	comp=Z,207nm,1.4s							
MDOK	Medeo	53.81	322		eP	P	17 29 07.0	-2.0
	baz=322							
MDOK					eS	S	17 36 41.8	-1.0
	baz=322							
MDOK	Medeo	53.81	322		eP	P	17 29 06.9	-2.0
MDOK					eS	S	17 36 41.7	-1.0
ULHL	Ulahol	53.83	321		P	P	17 29 09.4	+0.4
	SNR=123							
AAA	Alma-Ata	53.92	322		eP	P	17 29 08.7	-0.9
	comp=Z,190nm,0.9s,baz=322							
AAA					eS	S	17 36 44.9	+0.8
	baz=322							
AAA	Alma-Ata	53.92	322		eP	P	17 29 08.6	-0.9
AAA					eS	S	17 36 44.8	+0.8
AAA					pmax	pmax		
	comp=Z,190nm,0.9s							
TDK	Taldyqorghan	54.04	325		eP	P	17 29 08.5	-1.9
	comp=Z,433nm,1.5s,baz=324							
TDK					eS	S	17 36 45.6	+0.1
	baz=324							
TDK	Taldyqorghan	54.04	325		eP	P	17 29 08.4	-1.9
TDK					eS	S	17 36 45.6	+0.1
TDK					pmax	pmax		
	comp=Z,433nm,1.5s							
CHKK	Chushkaly	54.23	323		eP	P	17 29 09.8	-2.0
	baz=322							
CHKK	Chushkaly	54.23	323		eP	P	17 29 09.8	-2.0
TKM2	Tokmak 2	54.59	321		P	P	17 29 14.8	+0.2
	SNR=140							
TKM2	Tokmak 2	54.59	321		i P	P	17 29 14.8	+0.2
TKM2					pmax	pmax		
	comp=Z,236nm,1.3s							
KUU	Kurty	54.65	322		eP	P	17 29 11.9	-2.9
	comp=Z,503nm,1.2s,baz=322							
KUU	Kurty	54.65	322		eP	P	17 29 11.9	-2.9
KUU					pmax	pmax		
	comp=Z,503nm,1.2s							
KBK	Karagaybulak	54.86	321		P	P	17 29 16.9	+0.3
	SNR=222							
UCH	Uchtor	54.92	320		P	P	17 29 17.9	+0.6
	SNR=159							
SKR	Severo-Kuril's	55.07	27		eP	P	17 29 08.6	-9.0
SKR					pmax	pmax		
	comp=Z,900nm,5.4s							
SKR					pmax	pmax		
	comp=Z,400nm,4.4s							
SKR					pmax	pmax		
	comp=Z,62nm,1.1s							
SKR					MLR	MLR		
	comp=Z,800nm,17.0s							
SKR					MLR	MLR		
	comp=Z,500nm,20.0s							
AAK	Ala-Archa	55.14	320		P	P	17 29 18.8	+0.3
	comp=Z,137nm,1.0s,baz=139,slow=4.9,SNR=162							
AAK	Ala-Archa	55.14	320		P	P	17 29 19.0	+0.5
	SNR=170							
AAK	Ala-Archa	55.14	320		i P	P	17 29 18.7	+0.2
	SNR=239							
AAK	Ala-Archa	55.14	320	c	iP	P	17 29 19.1	+0.5
AAK					pmax	pmax		
	comp=Z,824nm,1.3s							
AAK					MLR	MLR		
	comp=Z,3µm,20.0s							
AAK	Ala-Archa	55.14	320		P	P	17 29 18.6	0.0
AAK					IAMs_20	IAMs_20	17 56 07.9	
	comp=Z,1µm,20.0s							
AAK	Ala-Archa	55.14	320		P	P	17 29 20.9	+2.3
AAK					P	P	17 29 20.9	+2.3
CHMS	Chumysh	55.16	321		P	P	17 29 18.9	+0.4
	SNR=52							
AML	Almayashu	55.40	319		P	P	17 29 23.0	+2.3
	SNR=190							
USP	Ospenovka	55.45	321		P	P	17 29 20.7	+0.1
	SNR=162							
SGDS	Sogindy	55.47	321		eP	P	17 29 19.0	-1.9
	comp=Z,60nm,1.3s,baz=321							
SGDS					eS	S	17 37 04.7	-0.1
	baz=321							
SGDS	Sogindy	55.47	321		eP	P	17 29 18.9	-1.9
SGDS					eS	S	17 37 04.6	-0.1
SGDS					pmax	pmax		
	comp=Z,60nm,1.3s							
KBL	Kabul	55.52	309		P	P	17 29 20.4	-1.1
KBL					pmax	pmax		
	comp=Z,344nm,1.0s							
KBL					MLR	MLR		
	comp=Z,800nm,19.0s							
KBL	Kabul	55.52	309		P	P	17 29 20.4	-1.1
KBL	Kabul	55.52	309		P	P	17 29 22.5	+0.9
EKS2	Erkin-Say	55.61	320		P	P	17 29 22.4	+0.6
	SNR=178							
SEM	Semipalatinsk	56.39	331		eP	P	17 29 24.9	-2.6
	comp=Z,120nm,2.0s,baz=330							
SEM					eS	S	17 37 16.1	-1.0
	baz=330							
SEM	Semipalatinsk	56.39	331		eP	P	17 29 24.8	-2.7
SEM					eS	S	17 37 16.1	-1.0
SEM					pmax	pmax		
	comp=Z,120nm,2.0s							
ZAA0	Zalesovo Array	56.80	336		P	P	17 29 28.7	-1.3
ZAA0					IAMs_20	IAMs_20	17 55 44.6	
	comp=Z,906nm,18.0s							
ZALV	Zalesovo Beam	56.80	336		P	P	17 29 28.9	-1.1
	comp=Z,71nm,1.0s,baz=122,slow=5.9,SNR=137							
ZALV					LR	LR	17 55 56.3	
	comp=Z,944nm,18.1s,baz=139,slow=38							
ZALV					PKP2bc		17 59 29.9	
	comp=Z,0.7nm,0.3s,baz=270,slow=1.5,SNR=4.6							
ZALV	Zalesovo Beam	56.80	336		P	P	17 29 28.0	-2.0
DZA	Taraz	57.30	319		eP	P	17 29 32.3	-1.6
	baz=319							
DZA	Taraz	57.30	319		eP	P	17 29 32.2	-1.6
KURBB	Kurchatov Arra	57.37	330		P	P	17 29 33.6	-0.5
	comp=Z,82nm,0.9s,baz=123,slow=8.4,SNR=198							
KURK	Kurchatov	57.39	330	c	iP	P	17 29 33.8	-0.4
KURK					pmax	pmax		
	comp=Z,534nm,1.7s							
KURK					MLR	MLR		
	comp=Z,801nm,19.0s							
KURK	Kurchatov	57.39	330		P	P	17 29 33.4	-0.8
PEA0B	Petropavlovsk-	57.45	26	c	iP	P	17 29 35.9	+1.2
PEA0B	Petropavlovsk-	57.45	26		P	P	17 29 35.2	+0.5
PEA0B					IAmb	IAmb	17 29 36.8	
	comp=Z,75nm,0.9s							
PETK	Petropavlovsk-	57.45	26		P	P	17 29 34.8	+0.1
	comp=Z,43nm,0.7s,baz=203,slow=3.1,SNR=60							
PETK					LR	LR	17 54 48.8	
	comp=Z,773nm,19.6s,baz=218,slow=37							
PETK	Petropavlovsk-	57.45	26		P	P	17 29 34.2	-0.5
YAK	Yakutsk	57.75	6		P	P	17 29 35.9	-0.6
	comp=Z,50nm,0.7s,baz=193,slow=2.4,SNR=43							
YAK	Yakutsk	57.75	6		eP	P	17 29 35.9	-0.6
YAK					e*PP	sP	17 29 44.5	-1.1
YAK					e		17 30 23.2	
YAK					e		17 31 42.6	
YAK					eS	S	17 37 33.1	-1.1
YAK					e		17 39 17.8	
YAK					eSSS	SSS	17 43 44.6	
YAK					pmax	pmax		
	comp=Z,234nm,1.4s							
YAK					pmax	pmax		
	comp=N,89nm,1.5s							
YAK					pmax	pmax		
	comp=E,39nm,1.6s							
YAK					pmax	pmax		
	comp=E,192nm,4.2s							
YAK					pmax	pmax		
	comp=Z,322nm,4.7s							
YAK					pmax	pmax		
	comp=N,340nm,5.2s							
YAK					smax	smax		
	comp=N,573nm,5.3s							
YAK					smax	smax		
	comp=E,468nm,6.3s							
YAK					MLR	MLR		
	comp=Z,2µm,28.0s							
YAK					MLR	MLR		
	comp=N,1µm,24.0s							
YAK					MLR	MLR		
	comp=E,843nm,20.0s							
YAK	Yakutsk	57.75	6		P	P	17 29 35.4	-1.1
YAK					IAmb	IAmb	17 29 38.2	
	comp=Z,155nm,0.9s							
YAK					IAMs_20	IAMs_20	17 55 14.2	
	comp=Z,1µm,20.0s							
PET	Petropavlovsk	57.82	27		eP	P	17 29 38.4	+1.2
PET					eS	S	17 37 34.8	-0.6
PET					pmax	pmax		
	comp=Z,118nm,1.9s							
PET					pmax	pmax		
	comp=Z,1µm,5.6s							
PET					pmax	pmax		
	comp=Z,700nm,6.4s							
PET	Petropavlovsk	57.82	27		P	P	17 29 37.0	-0.2
PET					IAMs_20	IAMs_20	17 52 01.3	
	comp=Z,2µm,21.0s							
IUG	Iuzhnay	57.82	318		eP	P	17 29 36.2	-1.5
	comp=Z,147nm,1.0s,baz=318							
IUG	Iuzhnay	57.82	318		eP	P	17 29 36.1	-1.5
IUG					pmax	pmax		
	comp=Z,147nm,1.0s							
KK31	Karatay Array	57.93	319		P	P	17 29 37.8	-0.5
KK31					pmax	pmax		
	comp=Z,144nm,1.0s							
KK31	Karatay Array	57.93	319		P	P	17 29 37.8	-0.5
KK31					IAmb	IAmb	17 29 40.8	
	comp=Z,144nm,1.0s							
KKAR	Karatay Array	57.93	319		P	P	17 29 37.5	-0.7
KKAR					pmax	pmax		
	comp=Z,144nm,1.0s							
KKAR	Karatay Array	57.93	319		P	P	17 29 37.4	-0.9
KKAR	Karatay Array	57.93	319		P	P	17 29 37.5	-0.7
KKAR					IAmb	IAmb	17 29 40.8	
	comp=Z,144nm,1.0s							
BRLS	Borolday	58.34	319		eP	P	17 29 40.1	-1.1
	comp=Z,108nm,1.2s,baz=318							
BRLS	Borolday	58.34	319		eP	P	17 29 40.0	-1.1
BRLS					pmax	pmax		
	comp=Z,108nm,1.2s							
MA2	Magadan	59.74	18	c	eP	P	17 29 50.4	-0.1
MA2					pmax	pmax		
	comp=Z,241nm,1.7s							
MA2					MLR	MLR		
	comp=Z,641nm,20.0s							
MA2	Magadan	59.74	18		P	P	17 29 49.9	-0.6
MA2					IAMs_20	IAMs_20	17 54 05.1	
	comp=Z,1µm,22.0s							
BRZS	Berezniki	60.05	327		eP	P	17 29 51.3	-1.5

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      comp=Z,123nm,1.3s,baz=327
BRZS                           eS        S          17 38 04.9 +0.4
      baz=327
BRZS  Berezniki         60.05 327 eP     P          17 29 51.3 -1.5
BRZS                           eS        S          17 38 04.9 +0.4
BRZS                            pmax     pmax
      comp=Z,123nm,1.3s
HRA   Herat             60.82 307  P     P          17 29 57.8 -0.9
HRA                             IAmb     IAmb       17 30 00.0
      comp=Z,69nm,1.2s
JLN   Jalan Bani Buh    60.86 293  P     P          17 29 58.6 -0.3
WBK   Wadi Bani Khal    61.32 293  P     P          17 30 01.6 -0.4
MSVF  Nonsavu           61.62 113  P     P          17 30 05.2 +1.1
      comp=Z,10.0nm,0.9s,baz=283,slow=6.7,SNR=5.4
MSVF  Nonsavu           61.62 113⇑eP     P          17 30 05.9 +1.8
MSVF                            pmax     pmax
      comp=Z,50nm,2.1s
MSVF  Nonsavu           61.62 113  P     P          17 30 02.2 -1.9
MSVF                            IAmb     IAmb       17 30 29.3
      comp=Z,21nm,0.3s
MHTO  MHTO              62.06 291  P     P          17 30 08.0 +1.1
      SNR=8.8
JMDO  Jabal Madar       62.09 293  P     P          17 30 06.4 -0.7
BIDO  Bidbid            62.21 294  P     P          17 30 07.6 -0.3
SMDO  Samad             62.22 294  P     P          17 30 07.4 -0.8
DQM   DQM               62.35 290  P     P          17 30 10.0 +1.1
      SNR=12
BVAR  Borovoye Array    62.88 329  P     P          17 30 12.8 +0.9
      comp=Z,12nm,0.8s,baz=133,slow=12,SNR=45
SEY   Seymchan          62.91  16  P     P          17 30 12.5 +0.7
      comp=Z,46nm,0.9s,baz=230,slow=9.1
BRVK  Borovoye          62.95 329ceP     P          17 30 11.6 -0.8
BRVK                            pmax     pmax
      comp=Z,365nm,1.7s
BRVK                            MLR      MLR
      comp=Z,997nm,18.0s
BRVK  Borovoye          62.95 329  P     P          17 30 11.6 -0.8
BRVK  Borovoye          62.95 329  IAMs_20 IAMs_20  18 00 57.5
      comp=Z,1µm,19.0s
BRVK  Borovoye          62.95 329  P     P          17 30 13.6 +1.3
HOQ   Hoqain            62.96 294  P     P          17 30 12.5 -0.5
BSY   Bisya             62.96 293  P     P          17 30 12.8 -0.2
ARQ   Araqi             63.65 294  P     P          17 30 16.7 -0.8
SOHO  SOHO              63.73 295 i P    P          17 30 16.9 -1.1
      SNR=12
SOHO  SOHO              63.73 295  P     P          17 30 17.3 -0.7
SHAO  Shalim            64.01 288 i P    P          17 30 20.3 +0.2
      SNR=9.2
SHAO  Shalim            64.01 288  P     P          17 30 20.2 +0.2
MDH   Madha             64.09 296  P     P          17 30 18.9 -1.5
UOSS  Minazif           64.13 295  P     P          17 30 20.4 -0.3
UOSS                            IAmb     IAmb       17 30 30.5
      comp=Z,71nm,1.2s
UOSS  Minazif           64.13 295  P     P          17 30 20.5 -0.1
BANOM Banah             64.17 296 i P    P          17 30 20.9 -0.1
      SNR=6.8
BANOM Banah             64.17 296  P     P          17 30 21.2 +0.3
HATD  Hatta, Dubai      64.18 295 i P    P          17 30 21.1 +0.1
      SNR=17
HATD  Hatta, Dubai      64.18 295  P     P          17 30 22.0 +1.0
      SNR=7.0
MSFE  Esma-Masafi       64.22 296  P     P          17 30 21.1 -0.3
ASHO  Ashiyiah          64.23 295 i P    P          17 30 21.5 +0.1
      SNR=16
ASHO  Ashiyiah          64.23 295  P     P          17 30 23.0 +1.6
      SNR=5.6
ALNE  Al Ain            64.43 294 i P    P          17 30 22.7  0.0
      SNR=16
ALNE  Al Ain            64.43 294  P     P          17 30 24.1 +1.4
      SNR=6.9
NAZ   Nazwa, Dubai      64.62 295  P     P          17 30 23.5 -0.4
DMTO  DMTO              64.64 287  P     P          17 30 23.1 -1.0
FAQ   Al Faqa, Dubai    64.66 295  P     P          17 30 23.8 -0.3
ASHT  Ashkhabad         64.76 310  P     P          17 30 26.6 +2.1
ASHT                            pmax     pmax
      comp=Z,445nm,1.4s
ASHT  Ashkhabad         64.76 310  P     P          17 30 26.6 +2.1
ASUD  Al Ashush, Dub    64.88 295  P     P          17 30 24.1 -1.4
ASUD  Al Ashush, Dub    64.88 295  P     P          17 30 25.5 -0.1
GEYT  Alibeck           64.96 310  P     P          17 30 27.0 +1.1
      comp=Z,30nm,1.0s,baz=104,slow=3.1,SNR=55
GEYT                            PKPPKP P'P'df       17 59 10.8 -1.4
      comp=Z,4.7nm,1.0s,baz=299,slow=1.5,SNR=7.2
GEYT                            LR       LR         18 01 38.4
      comp=Z,627nm,20.7s,baz=60,slow=39
GEYT  Alibeck           64.96 310  P     P          17 30 25.7 -0.3
GYA0B ALIBECK ARRAY     64.96 310  P     P          17 30 25.7 -0.2
GYA0B                           IAmb     IAmb       17 30 29.9
      comp=Z,144nm,1.4s
DCZ   Deep Cove         65.29 145  P     P          17 30 27.9 +0.2
RBK   Rabkut            65.33 287  P     P          17 30 30.0 +1.3
      SNR=7.3
SMY   Shemya            65.34  33  P     P          17 30 29.5 +1.5
SMY                             pmax     pmax
      comp=Z,241nm,1.1s
SMY   Shemya            65.34  33  P     P          17 30 29.5 +1.5
SOCY  Socotra           65.39 281  P     P          17 30 26.9 -2.2
SOCY                            IAmb     IAmb       17 30 30.1
      comp=Z,95nm,0.9s
SOCY                            IAMs_20  IAMs_20    18 01 42.7
      comp=Z,1µm,19.0s
SOCY  Socotra           65.39 281  P     P          17 30 29.3 +0.2
      SNR=7.9
DOK   Doka              65.47 288  P     P          17 30 30.0 +0.5
      SNR=14
WHFO  Wadi Hawf         65.77 287  P     P          17 30 32.0 +0.5
      SNR=9.6
WHFO                            P        P          17 30 32.0 +0.5
      SNR=9.6
MLZ   Mavora Lakes      65.78 145  P     P          17 30 31.8 +0.8
MLZ                             IAmb     IAmb       17 30 34.0
      comp=Z,74nm,1.0s
WHZ   Wether Hill Ro    65.99 145  P     P          17 30 32.7 +0.4
WHZ                             IAmb     IAmb       17 30 35.2
      comp=Z,136nm,1.1s
QRZ   Quartz Range      66.07 139  P     P          17 30 34.1 +1.1
ABTO  Aybut             66.19 287  P     P          17 30 36.0 +1.7
      SNR=10.0
LBZ   Lake Benmore      66.45 143  P     P          17 30 34.8 -0.5
RPZ   Rata Peaks        66.61 142  P     P          17 30 36.5 +0.2
      comp=Z,134nm,1.1s,baz=42,slow=0.6,SNR=15
RPZ   Rata Peaks        66.61 142  P     P          17 30 36.2 -0.2
LTZ   Lake Taylor       66.89 141  P     P          17 30 39.3 +1.1
LTZ                             IAmb     IAmb       17 30 41.5
      comp=Z,101nm,1.2s
OXZ   Oxford            67.02 141  P     P          17 30 38.8 -0.2
OXZ                             IAmb     IAmb       17 30 43.8
      comp=Z,96nm,1.3s
ABKAR Akbulak array     67.12 322  P     P          17 30 38.6 -0.9
ABKAR Akbulak array     67.12 322  P     P          17 30 38.7 -0.9
ABKAR                           IAmb     IAmb       17 30 41.9
      comp=Z,129nm,1.1s
TIXI  Tiksi             67.18   3ceP     P          17 30 37.8 -1.7
TIXI  Tiksi             67.18   3  P     P          17 30 37.4 -2.0
TUWZ  Tuamarina         67.30 139  P     P          17 30 40.1 -0.6
MCQ   Macquarie Isla    67.32 156  P     P          17 30 41.1 +0.5
      baz=67,SNR=8.9
MCQ   Macquarie Isla    67.32 156  P     P          17 30 43.6 +3.0
      comp=Z,222nm,1.1s
KHZ   Kahutara          67.51 140  P     P          17 30 43.2 +1.1
MQZ   McQueen's Vall    67.60 141  P     P          17 30 43.7 +1.1
MQZ                             IAMs_20  IAMs_20    17 59 41.9
      comp=Z,1µm,21.0s
SNZO  South Karori      67.74 138  P     P          17 30 43.3 -0.2
BHW   Baring Head       67.90 138  P     P          17 30 43.9 -0.6
BKZ   Black Stump Fm    67.99 135  P     P          17 30 45.3 +0.1
BKZ                             IAmb     IAmb       17 30 48.0
      comp=Z,109nm,1.0s
URZ   Urewera           68.03 134  P     P          17 30 45.8 +0.4
      comp=Z,26nm,1.0s,baz=286,slow=5.2,SNR=8.1
MSWZ  Moikau Station    68.15 138  P     P          17 30 45.4 -0.8
BFZ   Birch Farm        68.49 137  P     P          17 30 47.2 -1.1
BFZ                             IAmb     IAmb       17 30 50.7
      comp=Z,116nm,1.2s
AKTO  Aktyubinsk        68.70 323  P     P          17 30 48.9 -0.5
      comp=Z,59nm,0.9s,baz=108,slow=5.9,SNR=93
SVE   Sverdlovsk        69.63 330⇑eP     P          17 30 54.7 -0.4
SVE                            eS        S          17 40 06.3 +4.1
SVE                             pmax     pmax
      comp=Z,224nm,1.5s
SVE                             MLR      MLR
      comp=Z,912nm,19.0s
ARU   Arti              70.53 329  P     P          17 30 59.8 -0.8
      comp=Z,20nm,0.8s,baz=149,slow=2.8,SNR=66
ARU   Arti              70.53 329c iP    P          17 30 59.4 -1.2
ARU                                                 17 31 18.2
ARU                             S        S          17 40 11.9 -0.9
ARU                             SS       SS         17 44 44.2  0.0
ARU                             pmax     pmax
      comp=Z,141nm,1.1s
ARU                             MLR      MLR
      comp=Z,555nm,16.0s
ARU   Arti              70.53 329  P     P          17 30 59.1 -1.5
ARU                             IAmb     IAmb       17 31 02.3
      comp=Z,114nm,1.0s
CASY  Casey             71.05 184  P     P          17 31 02.9 -0.5
CASY                            IAmb     IAmb       17 31 06.1
      comp=Z,58nm,0.9s
ATKA  Atka Island       71.80  36  P     P          17 31 08.8 +0.5
ATKA                            IAmb     IAmb       17 31 09.9
      comp=Z,128nm,1.0s
QRN   Al-Qurain         71.89 299 eP                17 31 08.8
KBD   Kabd              72.12 299 eP                17 31 10.3
UMR   Umm Al-Rimmam     72.13 299 eP                17 31 10.5
RDF   Al-Radifah        72.22 299 eP                17 31 10.5
MIB   Mutribah          72.48 300 eP                17 31 12.1
RST   Umm Al-Ruwaisa    72.75 299 eP                17 31 13.6
AKT   Akhty             73.52 312 eP     P          17 31 18.1 -0.9
AKT                            e                    17 31 33.9
AKT                            e                    17 34 02.0
AKT                             pmax     pmax
      comp=Z,125nm,0.9s
RAYN  Ar Rayn           73.75 293 i P    P          17 31 20.6  0.0
      SNR=14
RAYN  Ar Rayn           73.75 293  P     P          17 31 19.7 -1.0
RAYN                            pmax     pmax
      comp=Z,107nm,1.1s
RAYN  Ar Rayn           73.75 293  P     P          17 31 19.7 -1.0
RAYN                            IAmb     IAmb       17 31 22.7
      comp=Z,107nm,1.1s
MAK   Makhachkala       73.90 313 eP     P          17 31 18.6 -2.4
MAK                            e                    17 34 03.0
MAK                            ePPP      PPP        17 35 45.0
MAK                            eS        S          17 40 50.9 -1.0
MAK                            eSS       SS         17 45 35.6 -0.8
MAK                            eSSS      SSS        17 48 54.3
MAK                             pmax     pmax
      comp=Z,195nm,1.1s
MAK                             MLR      MLR
      comp=Z,852nm,19.0s
ABPO  Ambohimpanom      75.12 249  P     P          17 31 29.2 +0.4
ABPO                            pmax     pmax
      comp=Z,39nm,1.0s
ABPO  Ambohimpanom      75.12 249  P     P          17 31 29.2 +0.4
NIKH  Nikolski High     75.14  36  P     P          17 31 28.5 +0.4
NIKH                            IAmb     IAmb       17 31 29.6
      comp=Z,164nm,1.0s
GROC  Groznyy           75.18 313 eP     P          17 31 26.3 -2.2
GROC                           e                    17 31 40.3
GROC                           e                    17 34 17.9
GROC                            pmax     pmax
      comp=Z,337nm,1.3s
BELG  Belogornoye       75.49 323  P     P          17 31 29.9 -0.1
      comp=Z,130nm,1.1s,baz=346,slow=0.6,SNR=22
BELG  Belogornoye       75.49 323deP     P          17 31 29.5 -0.5
BELG                            pmax     pmax
      comp=Z,52nm,1.4s
BELG                            MLR      MLR
      comp=Z,161nm,20.0s
GNI   Garni             75.59 310  P     P          17 31 32.7 +1.5
GNI   Garni             75.59 310 eP     P          17 31 32.8 +1.6
GNI   Garni             75.59 310c iP    P          17 31 32.9 +1.7
GNI                             pmax     pmax
      comp=Z,165nm,1.7s
GNI   Garni             75.59 310  P     P          17 31 31.6 +0.5
GNI                             IAmb     IAmb       17 31 34.6
      comp=Z,191nm,1.5s
KIRV  Kirov             75.89 329  P     P          17 31 32.6 +0.4
      comp=Z,75nm,0.8s,baz=114,slow=3.1,SNR=42
KIRV  Kirov             75.89 329⇓eP     P          17 31 31.3 -0.9
TASB  TASBURUN-IGDIR    75.96 310 eP     P          17 31 34.9 +1.8
VOI   Vohitsoka         76.04 246  P     P          17 31 35.4 +1.4
      SNR=5.9
CLDR  Caldiran          76.13 309 eP     P          17 31 36.0 +1.7
CUKT  Cukurca           76.20 307 eP     P          17 31 35.4 +0.7
ATD   Arta Tunnel       76.30 281  P     P          17 31 35.2 -0.3
ATD                             IAmb     IAmb       17 31 38.5
      comp=Z,84nm,0.9s
GAMB  Gambell           76.47  25  P     P          17 31 36.3 +0.9
GAMB                            IAmb     IAmb       17 31 38.2
      comp=Z,80nm,0.9s
VANB  Van               76.49 308 eP     P          17 31 38.3 +2.1
ZEI   Tsey              76.51 313 eP     P          17 31 33.1 -3.3
ZEI                             pmax     pmax
      comp=Z,266nm,1.3s
UNV   Unalaska Valle    76.69  36  P     P          17 31 36.9 +0.1
UNV                             IAmb     IAmb       17 31 38.4
      comp=Z,95nm,0.8s
GEVA  Gevas             76.72 308  P     P          17 31 38.7 +1.1
GEVA                            IAmb     IAmb       17 31 40.5
      comp=Z,119nm,1.3s
AKDM  Akdamar-Van       76.79 308 eP     P          17 31 39.0 +1.0
NCK   Nalchik           76.81 313⇓eP     P          17 31 38.8 +1.0
NCK                             pmax     pmax
      comp=Z,163nm,1.0s
AGRB  Hanur-Agry        76.88 309 eP     P          17 31 38.8 +0.3
SIRT  Sirnak            77.15 307 eP     P          17 31 36.4 -3.6
AKUT  Akutan            77.17  36  P     P          17 31 39.3 -0.2
MLAZ  Malazgirt-MUS     77.19 309 eP     P          17 31 42.1 +1.9
KBZ   Khabaz            77.33 314  P     P          17 31 40.5 -0.2
      comp=Z,110nm,0.9s,baz=120,slow=3.6,SNR=151
KBZ                             LR       LR         18 11 09.7
      comp=Z,482nm,20.6s,baz=85,slow=40
KBZ   Khabaz            77.33 314ceP     P          17 31 40.4 -0.3
KBZ                             pmax     pmax
      comp=Z,194nm,1.0s
GOF   Gofitskoye        77.37 315⇑iP     P          17 31 42.2 +1.3
GOF                             pmax     pmax
      comp=Z,206nm,1.2s
SENK  Senkaya-Erzuru    77.45 310 eP     P          17 31 43.8 +2.1
KIV   Kislovodsk        77.51 314 ⇓P     P          17 31 43.9 +2.0
KIV   Kislovodsk        77.51 314 i P    P          17 31 41.7 -0.2
      SNR=26
KIV   Kislovodsk        77.51 314 eP     P          17 31 42.9 +1.1
KIV   Kislovodsk        77.51 314 eP     P          17 31 42.3 +0.5
KIV                            eS        S          17 41 34.4 +2.4
KIV                             pmax     pmax
      comp=Z,440nm,1.0s
KIV                             pmax     pmax
      comp=Z,568nm,4.3s
KIV                             MLR      MLR
      comp=Z,2µm,18.0s
KIV   Kislovodsk        77.51 314  P     P          17 31 41.8 -0.1
KIV                             IAmb     IAmb       17 31 45.3
      comp=Z,150nm,1.0s
GURO  Guroymak-BITLI    77.55 308 eP     P          17 31 42.3 +0.1
CHVG  Ch'k'valeri       77.83 313 ⇓P     P          17 31 46.1 +2.6
CHVG  Ch'k'valeri       77.83 313 ⇓P     P          17 31 46.2 +2.6
SVAN  Silvan-Diyarba    78.17 308 eP     P          17 31 47.1 +1.5
KARO  Karliova-Bingo    78.36 309 eP     P          17 31 47.5 +0.7
MARD  Mardin            78.46 307  P     P          17 31 46.4 -0.9
BNGB  Bingl             78.63 309 eP     P          17 31 48.4 +0.2
FALS  False Pass        78.64  35  P     P          17 31 47.4 -0.3
KOPT  Kop Dagi          78.83 310  P     P          17 31 50.5 +1.1
KOPT                            IAmb     IAmb       17 31 53.3
      comp=Z,184nm,1.4s
VRH   Novokhopyorsk     78.92 321 eP     P          17 31 48.8 -0.5
VRH                             pmax     pmax
      comp=Z,170nm,1.0s
DYBB  Diyarbakir        79.00 308 eP     P          17 31 50.2  0.0
BAYT  Aydıntepe-Bayb    79.12 310 eP     P          17 31 53.2 +2.3
ANM   Nome              79.35  25  P     P          17 31 51.9 +0.5
ANM                             pmax     pmax
      comp=Z,48nm,0.9s
ANM   Nome              79.35  25  P     P          17 31 51.9 +0.5
KTUT  Trabzon           79.44 311 ⇑P     P          17 31 53.3 +0.9
KTUT  Trabzon           79.44 311 eP     P          17 31 53.8 +1.4
SOC   Sochi             79.62 313 eP     P          17 31 51.4 -2.0
SOC                            e                    17 34 53.9
SOC                            eS        S          17 41 54.3 -0.2
SOC                            eSSS      SSS        17 50 19.4
SOC                             pmax     pmax
      comp=Z,176nm,1.0s
ESPY  Espiye-Giresun    80.22 311 eP     P          17 31 57.9 +1.2
ILIC  ilic-Erzincan     80.29 309 eP     P          17 31 59.1 +1.9
MALT  Malatya           80.36 308 eP     P          17 31 59.5 +1.9
SDPT  Sand Point        80.38  35  P     P          17 31 57.2  0.0
SDPT                            IAmb     IAmb       17 31 58.5
      comp=Z,131nm,0.8s
VORD  Divnogorie        80.43 321 eP     P          17 31 57.8 +0.3
VORD                            pmax     pmax
      comp=Z,160nm,1.2s
FURI  Furi              80.52 278  IAMs_20 IAMs_20  18 06 38.7
      comp=Z,906nm,20.0s
VSR   Storozhevoye      80.53 321 eP     P          17 31 57.1 -1.0
VSR                             pmax     pmax
      comp=Z,160nm,1.1s
VORR  Voronezh          80.54 321 eP     P          17 31 57.0 -1.1
VORR                            pmax     pmax
      comp=Z,500nm,1.2s
LPSR  Galich'ya Gora    80.78 322 eP     P          17 31 59.6 +0.2
LPSR                            pmax     pmax
      comp=Z,230nm,1.1s
CNBA  Chernabura Isl    80.84  35  P     P          17 32 00.3 +0.7
CNBA                            IAmb     IAmb       17 32 01.4
      comp=Z,67nm,1.0s
RDOG  Red Dog Mine      81.00  22  P     P          17 32 00.8 +0.5
RDOG                            IAmb     IAmb       17 32 05.4
      comp=Z,79nm,1.2s
DARE  Darende-Malaty    81.11 308 eP     P          17 32 03.4 +1.8
KLMR  Klimovskoe        81.23 331 eP     P          17 31 57.8 -3.8
KLMR                           e                    17 35 05.7
KLMR                           eS        S          17 42 06.6 -4.0
KLMR                            pmax     pmax
      comp=Z,243nm,1.4s
KLMR  Klimovskoe        81.23 331 eP     P          17 31 57.8 -3.8
KLMR                            AMP                 17 32 03.0
      comp=Z,243nm,1.4s
KLMR                           ePP       PP         17 35 05.7 -1.3
KLMR                           eS        S          17 42 06.7 -3.9
KLMR                           eS        S          17 42 06.7 -3.9
KLMR                            LQ       LQ         18 02 09.5
KLMR                            LQ       LQ         18 02 09.5
KLMR                            LR       LR         18 08 06.3
RSDY  Resadiye-TOKAT    81.27 310 eP     P          17 32 03.2 +0.9
GAZ   Gaziantep         81.30 307 eP     P          17 32 02.6  0.0
GAZ   Gaziantep         81.30 307  P     P          17 32 02.7  0.0
GAZ                             IAmb     IAmb       17 32 05.9
      comp=Z,213nm,1.4s
ANN   Anapa             81.33 314 eP     P          17 32 02.1 -0.3
ANN                            e*PP      PcP        17 32 07.0 -1.6
ANN                            e                    17 35 09.4
ANN                            eS        S          17 42 14.5 +2.3
ANN                            eSS       SS         17 47 24.0 -4.1
ANN                             pmax     pmax
      comp=Z,258nm,1.1s
KMRS  Kahramanmaras     81.55 307 eP     P          17 32 03.7 -0.2
CHGN  Chignik           81.62  34  P     P          17 32 04.0 +0.3
CHGN                            IAmb     IAmb       17 32 09.3
      comp=Z,102nm,1.0s
MOS   Moscow            81.77 326 eP     P          17 32 02.4 -2.2
MOS                            e                    17 35 09.8
MOS                             pmax     pmax
      comp=Z,167nm,1.3s
MOS                             pmax     pmax
      comp=Z,600nm,2.5s
MOS                             MLR      MLR
      comp=Z,900nm,19.0s
TOKT  Tokat             81.87 310 eP     P          17 32 05.5  0.0
TOKA  Tokat             81.92 310  P     P          17 32 06.2 +0.4
SARI  SarD1z-Kayseri    81.94 308 eP     P          17 32 07.9 +1.8
KIBK  Kibwezi           81.95 267  P     P          17 32 08.1 +1.6
      SNR=12
TMCR  Tamitsa           82.25 334 eP     P          17 32 05.5 -1.4
TMCR                           eS        S          17 42 19.1 -1.9
TMCR                            pmax     pmax
      comp=Z,81nm,0.9s
KVT   Kavak             82.25 311 eP     P          17 32 07.8 +0.3
MAW   Mawson            82.27 199  P     P          17 32 06.8 -0.1
      comp=Z,18nm,1.2s,baz=58,slow=8.1,SNR=4.8
MAW                             LR       LR         18 04 47.1
      comp=Z,464nm,20.6s,baz=52,slow=33
MAW   Mawson            82.27 199  P     P          17 32 08.3 +1.5
MAW                             pmax     pmax
      comp=Z,18nm,1.5s
MAW   Mawson            82.27 199  P     P          17 32 08.3 +1.5
OBN   Obninsk           82.34 325 eP     P          17 32 06.6 -0.9
OBN                            i                    17 32 13.2
OBN                            i S       S          17 42 18.7 -3.5
OBN                             pmax     pmax
      comp=Z,182nm,1.3s
OBN                             MLR      MLR
      comp=Z,931nm,19.0s
OBN   Obninsk           82.34 325  P     P          17 32 07.4 -0.2
OBN                             IAmb     IAmb       17 32 09.2
      comp=Z,153nm,1.1s
BNN   Bunyan            82.39 308 eP     P          17 32 09.7 +1.3
KOZT  Kozan             82.41 307 eP     P          17 32 09.7 +1.3
CEYT  Ceyhan            82.47 307 eP     P          17 32 08.8 +0.1
QRWL  Qaraoun           82.55 303 eP     P          17 32 09.1 -0.1
BHL   Bhannes           82.56 303 eP     P          17 32 09.7 +0.3
KMBO  Kilima Mbogo      82.64 268  P     P          17 32 10.5 +0.2
      comp=Z,37nm,0.9s,baz=55,slow=7.8,SNR=58
KMBO                            LR       LR         18 07 10.4
      comp=Z,532nm,19.9s,baz=96,slow=34
KRTS  Karatas           82.77 306 eP     P          17 32 12.2 +2.0
MMLI  Mount Malkishu    82.78 302 eP     P          17 32 11.0 +0.6
KARA  Karaisali         83.02 307 eP     P          17 32 12.1 +0.5
CMRD  Camardi-Nigde     83.07 307 eP     P          17 32 11.8 -0.2
HRFI  Mount Harif       83.16 300 eP     P          17 32 12.7 +0.3
CHIR  Chirikof Islan    83.16  34  P     P          17 32 13.6 +1.8
EIL   Elat              83.24 299 eP     P          17 32 15.3 +2.5
TTA   Tatalina          83.27  27  P     P          17 32 12.6 +0.2
TTA                             pmax     pmax
      comp=Z,164nm,1.5s
TTA   Tatalina          83.27  27  P     P          17 32 12.6 +0.2
TTA                             IAmb     IAmb       17 32 16.3
      comp=Z,164nm,1.5s
CORM  Corum             83.33 310 eP     P          17 32 14.2 +0.9
AIN   Ainahou           83.55  71  P     P          17 32 17.9 +3.0
A21K  Barrow            83.59  19  P     P          17 32 15.4 +1.6
      baz=265,SNR=9.2
A21K  Barrow            83.59  19  P     P          17 32 14.6 +0.8
MLH   Mauna Loa         83.62  71  P     P          17 32 15.1 -0.1
GULA  Gulagac           83.66 308 eP     P          17 32 15.7 +0.7
SIM   Simferopol'       83.69 315c iP    P          17 32 14.8  0.0
SIM                            e                    17 32 19.0
SIM                             pmax     pmax
      comp=Z,209nm,0.6s
SDHHI Sand Hill         83.71  71  P     P          17 32 16.5 +0.9
RSD   Rainshed          83.72  71  P     P          17 32 15.0 -0.6
UWB   Uwekahuna B       83.72  71  P     P          17 32 15.0 -0.6
UWB                             IAmb     IAmb       17 32 19.2
      comp=Z,99nm,1.2s
RIM   Rim               83.73  71  P     P          17 32 17.1 +1.4
KKO   Keanakako`i       83.73  71  P     P          17 32 15.1 -0.6
HATHI Halema‘uma‘u T    83.74  71  P     P          17 32 14.4 -1.3
HATHI                           IAmb     IAmb       17 32 19.3
      comp=Z,110nm,1.1s
EREN  Erenkoy           83.76 305 eP     P          17 32 16.8 +1.4
KIZK  Mersin            83.76 306 eP     P          17 32 16.4 +1.0
PUH   Pauahi            83.78  71  P     P          17 32 15.3 -0.7
BZK   Bozkurt           83.79 312 ⇑P     P          17 32 16.9 +1.5
BZK   Bozkurt           83.79 312 eP     P          17 32 16.7 +1.3
LVZ   Lovozero          83.90 338⇑eP     P          17 32 16.2 +0.7
LVZ                             pmax     pmax
      comp=Z,172nm,1.4s
LVZ                             MLR      MLR
      comp=Z,1µm,19.0s
LVZ   Lovozero          83.90 338  P     P          17 32 16.1 +0.6
SILI  Silifke-Mersin    83.94 306 eP     P          17 32 17.5 +1.2
YAYX  Yaylak            83.98 309 eP     P          17 32 16.0 -0.6
SII   Sitkinak Islan    83.98  34  P     P          17 32 17.1 +1.0
ILGA  Ilgaz             84.02 311  P     P          17 32 17.3 +0.4
ILGA                            IAmb     IAmb       17 32 19.0
      comp=Z,73nm,1.0s
CANT  Cankiri           84.10 310 eP     P          17 32 18.3 +1.2
BR131 Keskin Array S    84.10 309  P     P          17 32 16.6 -0.6
BR131                           pmax     pmax
      comp=Z,112nm,0.9s
BR131 Keskin Array S    84.10 309  P     P          17 32 16.6 -0.6
BRTR  Keskin Array B    84.10 309  P     P          17 32 16.4 -0.9
      comp=Z,44nm,0.8s,baz=122,slow=4.7,SNR=126
BRTR                            LR       LR         18 14 58.2
      comp=Z,229nm,21.3s,baz=96,slow=39
BRTR  Keskin Array B    84.10 309 eP     P          17 32 16.3 -0.9
BRTR  Keskin Array B    84.10 309  P     P          17 32 15.4 -1.8
KEBE  Keben-Mersin      84.11 306 eP     P          17 32 17.1 -0.2
IKL   Isikli            84.14 306 eP     P          17 32 18.4 +1.1
LODK  Lodwar            84.17 273  P     P          17 32 18.6 +0.6
      SNR=14
SERE  Sereflikochisa    84.17 309 eP     P          17 32 18.4 +0.8
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SULT	Sultanhani-AKS	84.23	308	eP	P	17 32 19.0	+1.2
AKKU	Akkuyu-Mersin	84.25	306	eP	P	17 32 18.9	+1.0
TEVE	Tevekalti-Mers	84.33	306	eP	P	17 32 19.8	+1.4
CSS	Mathiatis	84.46	305	eP	P	17 32 18.7	-0.3
CSS	Mathiatis	84.46	305	P	P	17 32 18.8	-0.3
OHAK	Old Harbor	84.48	33	P	P	17 32 18.9	+0.3
BERE	Bereket-Mersin	84.51	306	eP	P	17 32 20.7	+1.3
AFSR	Afar-Bala (An	84.54	309	eP	P	17 32 19.3	-0.1
TEKE	Tekeli-Mersin	84.60	306	eP	P	17 32 20.7	+1.0
CHBY	Cihanbeyli	84.71	308	eP	P	17 32 19.2	-1.1
KURC	Kurucasile-Bar	84.73	311	eP	P	17 32 20.2	0.0
RSO	Redoubt South	84.76	30	P	P	17 32 20.7	+0.5
BR231	Keskin MP Arra	84.76	309	P	P	17 32 20.6	+0.1
LOD	Lodumlu	84.77	310	eP	P	17 32 20.1	-0.4
LEF	Lefka	84.82	305	⇑P	P	17 32 23.1	+2.3
LEF	Lefka	84.82	305	eP	P	17 32 21.8	+1.0
KDAK	Kodiak Island	84.86	33c	iP	P	17 32 21.6	+1.2
KDAK				pmax	pmax		
	comp=Z,219nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,870nm,19.0s						
KDAK	Kodiak Island	84.86	33	P	P	17 32 20.8	+0.4
PPLA	Purkeypile	85.02	27	P	P	17 32 21.6	+0.2
LADK	Ladik-KONYA	85.13	308	eP	P	17 32 21.1	-1.3
KONT	Konya--Tatoy	85.15	308	eP	P	17 32 21.4	-1.0
GAZI	Gazipasa	85.25	306	eP	P	17 32 21.9	-1.0
VNDA	Vanda	85.25	172	P	P	17 32 20.8	-1.3
	comp=Z,14nm,0.8s,baz=312,slow=5.9,SNR=20						
VNDA				LR	LR	18 10 43.0	
	comp=Z,527nm,18.9s,baz=333,slow=36						
VNDA	Vanda	85.25	172	P	P	17 32 23.2	+1.2
VNDA				pmax	pmax		
	comp=Z,31nm,1.0s						
VNDA	Vanda	85.25	172	P	P	17 32 23.2	+1.2
SKT	Skwentna	85.33	28	P	P	17 32 21.9	-0.9
CNPM	China Poot	85.53	31	P	P	17 32 23.7	-0.1
CNPM				IAmb	IAmb	17 32 25.4	
	comp=Z,93nm,1.0s						
BPAW	Bear Paw Mtn.	85.54	26	P	P	17 32 23.5	-0.3
CAPN	Captain Cook N	85.54	29	P	P	17 32 26.1	+2.3
	baz=272						
YUVA	Yuva-Kibriscik	85.58	310	eP	P	17 32 24.1	-0.5
KTH	Kantishna Hill	85.58	27	P	P	17 32 24.3	+0.2
KTH				IAmb	IAmb	17 32 27.1	
	comp=Z,145nm,1.3s						
MLY	Manley	85.62	25	P	P	17 32 24.5	+0.2
	baz=272,SNR=91						
BRLK	Bradley Lake	85.70	30	P	P	17 32 23.5	-1.2
SUA	Susitna One	85.72	29	P	P	17 32 24.1	-0.7
KDZE	Karadeniz Ereo	85.72	311	⇓P	P	17 32 26.0	+0.8
SVRH	Sivrihisar-ESK	85.74	309	eP	P	17 32 24.8	-0.6
PUL	Pulkovo	85.76	330	⇓eP	P	17 32 26.0	+1.1
PUL				pmax	pmax		
	comp=Z,283nm,1.3s						
COLD	Coldfoot	85.78	23	P	P	17 32 25.7	+0.8
	baz=272,SNR=59						
COLD	Coldfoot	85.78	23	P	P	17 32 25.4	+0.5
COLD				IAmb	IAmb	17 32 28.4	
	comp=Z,100nm,1.0s						
TRF	Thorofare Moun	85.87	27	P	P	17 32 25.6	0.0
CUT	Chulitna	85.91	28	P	P	17 32 26.6	+1.0
	baz=272						
MDUB	Mudurnu	85.95	310	eP	P	17 32 25.2	-1.2
MDUB	Mudurnu	85.95	310	P	P	17 32 26.0	-0.5
CIFT	Cifteler, Eski	86.10	309	eP	P	17 32 26.5	-0.7
I23K	Minto, Yukon-K	86.20	25	P	P	17 32 27.6	+0.6
	baz=273,SNR=73						
I23K	Minto, Yukon-K	86.20	25	P	P	17 32 27.3	+0.3
I23K				IAmb	IAmb	17 32 30.9	
	comp=Z,82nm,0.8s						
BWN	Browne	86.20	26	P	P	17 32 28.1	+1.0
BWN				IAmb	IAmb	17 32 30.9	
	comp=Z,71nm,1.0s						
RC01	Rabbit Creek A	86.22	29	P	P	17 32 27.7	+0.5
	baz=273,SNR=13						
NEA2	Nenana	86.35	26	P	P	17 32 28.3	+0.5
	baz=273,SNR=47						
SRCK	Saricakaya, Es	86.41	310	eP	P	17 32 27.5	-1.1
SEW	Seward	86.41	30	P	P	17 32 28.4	+0.3
SEW				IAmb	IAmb	17 32 31.6	
	comp=Z,110nm,1.2s						
MCK	McKinley	86.46	26	P	P	17 32 28.6	+0.3
	baz=273,SNR=44						
GULT	Gulveren	86.47	310	eP	P	17 32 27.9	-1.1
PMR	Palmer	86.49	29	P	P	17 32 28.6	+0.2
PMR				pmax	pmax		
	comp=Z,64nm,1.0s						
PMR	Palmer	86.49	29	P	P	17 32 28.6	+0.2
PMR				IAmb	IAmb	17 32 30.9	
	comp=Z,64nm,1.0s						
RND	Reindeer	86.51	27	P	P	17 32 28.6	-0.1
RND				pmax	pmax		
	comp=Z,50nm,1.1s						
RND				MLR	MLR		
	comp=Z,600nm,21.0s						
RND	Reindeer	86.51	27	P	P	17 32 28.6	-0.1
RND				IAmb	IAmb	17 32 29.6	
	comp=Z,50nm,1.1s						
RND				IAMs_20	IAMs_20	18 06 38.9	
	comp=Z,563nm,21.0s						
SHUT	Suhut-Afyon	86.54	308	eP	P	17 32 28.8	-0.6
BCK	Bucak	86.57	307	eP	P	17 32 29.3	-0.2
GHO	Glory Hole Cre	86.58	28	P	P	17 32 28.6	-0.4
GHO				IAmb	IAmb	17 32 34.9	
	comp=Z,44nm,1.0s						
GHO				IAMs_20	IAMs_20	18 10 26.7	
	comp=Z,626nm,20.0s						
SAUV	Serdivan-Sakar	86.59	310	eP	P	17 32 29.7	+0.2
ISP	Isparta	86.61	308	eP	P	17 32 28.5	-1.2
ISP	Isparta	86.61	308	P	P	17 32 29.8	+0.1
ISP				pmax	pmax		
	comp=Z,299nm,1.1s						
ISP	Isparta	86.61	308	P	P	17 32 29.8	+0.1
SPNC	Sapanca-Adapaz	86.61	310	eP	P	17 32 30.1	+0.5
KEV	Kevo	86.65	340	P	P	17 32 29.7	+0.6
KEV				pmax	pmax		
	comp=Z,113nm,1.0s						
KEV	Kevo	86.65	340	P	P	17 32 29.7	+0.6
KEV				IAmb	IAmb	17 32 30.8	
	comp=Z,113nm,1.0s						
MDM	Murphy Dome	86.69	25	P	P	17 32 29.1	-0.4
MDM				IAmb	IAmb	17 32 33.1	
	comp=Z,43nm,1.0s						
WRH	Wood River Hil	86.78	26	P	P	17 32 29.5	-0.4
WRH				IAmb	IAmb	17 32 32.4	
	comp=Z,45nm,1.0s						
AKASG	Malin Array Be	86.80	320	P	P	17 32 30.1	-0.2
	comp=Z,19nm,0.8s,baz=81,slow=4.8,SNR=75						
AKASG				PP	PP	17 35 58.7	+5.9
	comp=Z,1.8nm,0.9s,baz=77,slow=7.5,SNR=4.9						
AKASG				LR	LR	18 16 38.6	
	comp=Z,713nm,18.9s,baz=65,slow=39						
AKASG	Malin Array Be	86.80	320	P	P	17 32 27.9	-2.4
AKBB	Malin Array Si	86.80	320	P	P	17 32 29.6	-0.7
AKBB				pmax	pmax		
	comp=Z,122nm,1.5s						
AKBB	Malin Array Si	86.80	320	P	P	17 32 29.6	-0.7
AKBB				IAmb	IAmb	17 32 31.7	
	comp=Z,122nm,1.4s						
KNK	Knik Glacier	86.82	29	P	P	17 32 30.8	+0.6
KNK				IAmb	IAmb	17 32 32.2	
	comp=Z,75nm,0.9s						
KNK				IAMs_20	IAMs_20	18 09 50.2	
	comp=Z,722nm,20.0s						
TCOL	CIGO, UAF Yank	86.85	25	P	P	17 32 30.5	+0.3
	baz=274						
TCOL	CIGO, UAF Yank	86.85	25	P	P	17 32 29.9	-0.3
SML	Sawmill	86.85	28	P	P	17 32 30.9	+0.6
SML				IAmb	IAmb	17 32 32.2	
	comp=Z,88nm,0.8s						
COLA	College	86.86	25	⇓eP	P	17 32 29.6	-0.6
COLA				pmax	pmax		
	comp=Z,21nm,0.9s						
COLA				MLR	MLR		
	comp=Z,300nm,21.0s						
COLA	College	86.86	25	P	P	17 32 29.9	-0.2
CCB	Clear Creek Bu	86.89	26	P	P	17 32 30.1	-0.3
BASM	Basmaki-Afyon	86.97	308	eP	P	17 32 30.4	-1.1
CAVI	Cavuskoy	87.00	310	eP	P	17 32 30.7	-0.8
POKR	Poker Plat Res	87.02	25	P	P	17 32 33.0	+2.0
	baz=274,SNR=9.8						
POKR	Poker Plat Res	87.02	25	P	P	17 32 31.8	+0.7
ADVT	Abdulvahap	87.06	310	eP	P	17 32 32.4	+0.6
SILT	Sile	87.09	311	eP	P	17 32 31.9	0.0
HRT	Hereke	87.09	311	eP	P	17 32 30.9	-1.1
ELL	Elmali	87.16	306	eP	P	17 32 33.1	+0.6
ELL	Elmali	87.16	306	P	P	17 32 31.9	-0.6
ELL				pmax	pmax		
	comp=Z,564nm,1.0s						
ELL	Elmali	87.16	306	P	P	17 32 31.9	-0.6
ARCES	ARCESS Array B	87.20	339	P	P	17 32 30.6	-1.2
	comp=Z,80nm,0.9s,baz=72,slow=4.0,SNR=43						
ARCES	ARCESS Array B	87.20	339	P	P	17 32 30.8	-1.0
ARCES				pmax	pmax		
	comp=Z,114nm,1.0s						
ARCES	ARCESS Array B	87.20	339	P	P	17 32 30.8	-1.0
IL31		87.28	25	P	P	17 32 31.1	-1.2
ILAR	Eielson Array	87.28	25	P	P	17 32 31.7	-0.6
	comp=Z,14nm,0.7s,baz=267,slow=4.0,SNR=90						
ILAR				PKKP	PKKPdf	17 50 16.4	-2.5
	comp=Z,1.3nm,0.8s,baz=324,slow=1.4,SNR=13						
ILAR				LR	LR	18 12 31.9	
	comp=Z,306nm,20.5s,baz=288,slow=36						
HDA	Harding Lake	87.28	26	P	P	17 32 31.0	-1.3
	baz=275,SNR=51						
HDA	Harding Lake	87.28	26	P	P	17 32 31.2	-1.1
HDA				IAmb	IAmb	17 32 33.7	
	comp=Z,46nm,0.8s						
KIS	Kishinev	87.31	317	eP	P	17 32 39.0	+6.2
KIS	Kishinev	87.31	317	ePP	PP	17 36 02.0	+5.1
KIS				eLR	LR	18 14 14.0	
	comp=Z,800nm,25.0s						
KIS	Kishinev	87.31	317	eP	P	17 32 33.0	+0.2
KIS				e		17 36 02.0	
MILM	Milestii Mici	87.31	317	⇓P	P	17 32 33.1	+0.2
SCM	Sheep Creek Mo	87.33	28	P	P	17 32 33.5	+0.8
SCM				pmax	pmax		
	comp=Z,92nm,1.4s						
SCM	Sheep Creek Mo	87.33	28	P	P	17 32 33.5	+0.8
SCM				IAmb	IAmb	17 32 36.8	
	comp=Z,92nm,1.4s						
TVSB	Tavsanli	87.34	309	eP	P	17 32 32.3	-1.0
MNK	Minsk	87.37	324	iP	P	17 32 32.8	-0.1
	comp=E,17nm,1.6s						
MNK				iP	P	17 32 32.8	-0.1
	comp=N,9.0nm,0.7s						
MNK				iP	P	17 32 32.8	-0.1
	comp=Z,111nm,1.1s						
MNK				iPP	PP	17 35 56.9	-0.3
MNK				iPPP	PPP	17 37 51.6	
MNK				iS	SKSac	17 42 59.9	+0.5
MNK				iSS	SS	17 48 59.5	+2.7
MNK				iSSS	SSS	17 52 32.6	
MNK				iLQ	LQ	18 06 01.4	
MNK				iLR	LR	18 12 40.5	
MNK				iLRM	MLR	18 15 12.7	
	comp=Z,665nm,24.3s						
MNK				iLRM	MLR	18 15 19.1	
	comp=E,94nm,21.7s						
MNK				iLRM	MLR	18 15 45.9	
	comp=N,382nm,12.1s						
MNK	Minsk	87.37	324	⇑eP	P	17 32 32.0	-0.9
MNK				pmax	pmax		
	comp=Z,380nm,1.0s						
GEDZ	Gediz	87.40	309	eP	P	17 32 32.4	-1.2
JURR	Jurilovca	87.42	315	⇑P	P	17 32 33.8	+0.4
TLCR		87.43	315	⇓P	P	17 32 34.3	+0.9
TLCR		87.43	315	⇓P	P	17 32 34.3	+0.9
AKAS	Kas	87.44	306	eP	P	17 32 33.5	-0.3
AKAS	Kas	87.44	306	P	P	17 32 33.8	0.0
AKAS				IAmb	IAmb	17 32 51.9	
	comp=Z,58nm,1.0s						
KSL	Kastellorizon	87.46	306	P	P	17 32 33.6	-0.2
TRML	Termal-Yalova	87.48	310	eP	P	17 32 33.7	-0.1
GLI	Glacier Island	87.52	29	P	P	17 32 33.4	-0.1
GLI				IAmb	IAmb	17 32 35.3	
	comp=Z,38nm,0.8s						
KAVV	Kandilli-Istan	87.53	311	eP	P	17 32 34.6	+0.6
ISK	Istanbul-Kandi	87.53	311	P	P	17 32 34.4	+0.4
ISK	Istanbul-Kandi	87.53	311	eP	P	17 32 34.4	+0.4
KLYT	Kilyos	87.53	311	eP	P	17 32 34.5	+0.5
SORM	Soroca	87.54	318	⇑P	P	17 32 33.1	-0.8
SORM	Soroca	87.54	318	⇑P	P	17 32 33.1	-0.8
VSU	Vasula	87.69	328	eP	P	17 32 34.5	+0.2
VSU	Vasula	87.69	328	⇓eP	P	17 32 33.8	-0.5
VSU				pmax	pmax		
	comp=Z,162nm,1.5s						
VSU				MLR	MLR		
	comp=Z,2µm,22.0s						
MDNY	Mudanya-Bursa	87.72	310	eP	P	17 32 35.2	+0.3
ARMT	Armutlu	87.72	310	eP	P	17 32 35.2	+0.2
SIMA	Simav-Kutahya	87.73	309	eP	P	17 32 33.9	-1.3
TPGR	Topolog	87.73	315	⇓P	P	17 32 35.9	+0.9
FIA1	FINESS Array S	87.74	331	P	P	17 32 34.1	-0.5
FINES	FINESS Array B	87.74	331	P	P	17 32 34.5	0.0
	comp=Z,17nm,0.7s,baz=90,slow=5.7,SNR=36						
FINES				PKiKP	PKiKP	17 37 37.3	-0.2
	comp=Z,2.4nm,0.8s,baz=243,slow=0.9,SNR=4.0						
FINES				LR	LR	18 15 26.2	
	comp=Z,944nm,20.2s,baz=82,slow=38						
FINES	FINESS Array B	87.74	331	iP	P	17 32 34.0	-0.5
FINES				pmax	pmax		
	comp=Z,17nm,0.7s						
FINES	FINESS Array B	87.74	331	P	P	17 32 34.1	-0.5
TIRR	Tirgusor	87.77	314	⇑P	P	17 32 34.7	-0.3
TIRR	Tirgusor	87.77	314	⇑P	P	17 32 34.7	-0.3
TIRR	Tirgusor	87.77	314	P	P	17 32 35.5	+0.4
PRP	Porcupine Dome	87.78	25	P	P	17 32 34.7	-0.1
FYU	Fort Yukon	87.78	23	P	P	17 32 35.5	+0.9
FYU				IAmb	IAmb	17 32 39.0	
	comp=Z,72nm,1.5s						
FETY	Fethiye	87.83	306	P	P	17 32 34.5	-1.1
FID	Port Fidalgo	87.83	29	P	P	17 32 36.0	+0.9
FID				IAmb	IAmb	17 32 36.9	
	comp=Z,60nm,1.0s						
M24K	Tolsona, Glenn	87.84	28	P	P	17 32 35.5	+0.4
	baz=276,SNR=9.2						
M24K	Tolsona, Glenn	87.84	28	P	P	17 32 36.4	+1.3
HIN	Hinchinbrook I	87.86	30	P	P	17 32 35.9	+0.7
HIN				IAmb	IAmb	17 32 37.5	
	comp=Z,56nm,1.0s						
CFR	Carcaliu	87.91	315	⇓P	P	17 32 35.8	+0.1
CFR	Carcaliu	87.91	315	⇓P	P	17 32 35.8	+0.1
CTKS	Kestanelik-??a	87.94	311	eP	P	17 32 35.9	0.0
IDID	Didziasalis	87.96	325	eP	P	17 32 37.0	+1.2
NACGM	Naroch	87.97	325	iP	P	17 32 34.4	-1.4
NACGM				iP	P	17 32 34.4	-1.4
NACGM				iP	P	17 32 34.4	-1.4
NACGM				iPP	PP	17 35 46.8	-15
NACGM				iPPP	PPP	17 37 53.6	
NACGM				iS	SKSac	17 42 58.5	-4.5
NACGM				iPS		17 46 01.8	
NACGM				iSS	SS	17 49 13.9	+8.3
NACGM				iSSS	SSS	17 53 00.6	
NACGM				iLQ	LQ	18 05 11.5	
NACGM				iLR	LR	18 12 44.0	
TLBR	Topalu	88.02	314	⇓P	P	17 32 37.3	+1.1
KULA	Kula-Manisa	88.02	308	P	P	17 32 36.0	-0.6
KULA	Kula-Manisa	88.02	308	eP	P	17 32 36.4	-0.1
PAX	Paxson	88.08	27	P	P	17 32 36.0	-0.3
PAX				pmax	pmax		
	comp=Z,37nm,0.9s						
PAX	Paxson	88.08	27	P	P	17 32 36.0	-0.3
PAX				IAmb	IAmb	17 32 38.4	
	comp=Z,37nm,0.9s						
CTYL	Yalikoy Yolu	88.08	311	eP	P	17 32 37.1	+0.5
HARR	Harsova	88.09	314	⇓P	P	17 32 37.6	+1.0
HARR	Harsova	88.09	314	⇓P	P	17 32 37.6	+1.0
MANT	Manisa	88.11	308	P	P	17 32 36.6	-0.6
KCTX	Karacabey (Bur	88.13	310	eP	P	17 32 37.0	+0.1
DALY	Dalyan (Mula)	88.16	307	eP	P	17 32 37.7	+0.6
EYAK	Cordova Ski Ar	88.21	30	P	P	17 32 38.2	+1.4
EYAK				IAmb	IAmb	17 32 39.1	
	comp=Z,77nm,1.2s						
SPA0	Spitsbergen Ar	88.24	348	P	P	17 32 37.5	+0.8
IIGN	Ignalina	88.25	325	eP	P	17 32 38.2	+1.1
RIDG	Independent Ri	88.27	26	P	P	17 32 36.3	-0.9
ISAL	Salakas	88.29	325	eP	P	17 32 38.6	+1.4
YER	Yerkesik	88.43	307	P	P	17 32 38.2	-0.3
TURN	Turunc	88.49	307	eP	P	17 32 39.7	+1.1
EDC	Edincik	88.50	310	eP	P	17 32 38.9	+0.3
BALB	Balikesir	88.54	309	eP	P	17 32 39.3	+0.5
SCRK	Sand Creek	88.62	26	P	P	17 32 38.7	-0.1
	baz=278,SNR=21						
DOT	Dot Lake	88.63	26	P	P	17 32 39.2	+0.4
DOT				IAmb	IAmb	17 32 41.2	
	comp=Z,34nm,1.0s						
ARG	Arkhangelos	88.63	306	eP	P	17 32 40.2	+0.9
N25K	Chitina, Valde	88.64	28	P	P	17 32 39.4	+0.4
	baz=277,SNR=15						
N25K	Chitina, Valde	88.64	28	P	P	17 32 39.8	+0.8
N25K				IAmb	IAmb	17 32 41.4	
	comp=Z,59nm,1.1s						
PHSR	Pinarhisar	88.64	311	eP	P	17 32 39.9	+0.6
MRMT	Marmara Adasi	88.68	310	eP	P	17 32 39.8	+0.2
RAGM	Ragged Mountai	88.76	30	P	P	17 32 40.7	+1.2
RAGM				IAmb	IAmb	17 32 41.8	
	comp=Z,91nm,1.2s						
MLSB	Milas	88.82	307	eP	P	17 32 43.4	+3.1
TESR	Tescani	88.83	316	⇑P	P	17 32 39.8	-0.3
VRI	Vrincioaia	88.84	316	⇓P	P	17 32 41.4	+1.3
VRI	Vrincioaia	88.84	316	eP	P	17 32 41.1	+1.0
VRI	Vrincioaia	88.84	316	⇓P	P	17 32 41.4	+1.3
MENT	Mentasta	88.88	27	P	P	17 32 40.9	+0.9
MENT				IAmb	IAmb	17 32 46.1	
	comp=Z,37nm,0.9s						
MAR4	Marsite Statio	88.89	311	eP	P	17 32 40.9	+0.3
PLOR	Plostina	88.89	316	⇑P	P	17 32 41.5	+1.1
PLOR	Plostina	88.89	316	⇑P	P	17 32 41.5	+1.1
KRBG	Karabiga-Canak	88.92	310	eP	P	17 32 40.8	+0.2
KAIM	Kayak Island	88.94	30	P	P	17 32 41.0	+0.8
HMT	Hamilton	88.97	30	P	P	17 32 41.5	+1.0
HMT				IAmb	IAmb	17 32 42.6	
	comp=Z,45nm,1.0s						
RKY	Sarkoy-Tekirda	88.99	311	eP	P	17 32 41.4	+0.4
PRAR	RASCA	89.04	317	⇓P	P	17 32 41.3	+0.2
GLB	Gilahina Butte	89.04	29	P	P	17 32 41.8	+1.0
GLB				IAmb	IAmb	17 32 43.0	
	comp=Z,58nm,1.1s						
GLB				IAMs_20	IAMs_20	18 10 01.8	
	comp=Z,752nm,19.0s						
MBAR	Mbarara	89.09	269	⇓eP	P	17 32 42.1	-0.1
MBAR				pmax	pmax		
	comp=Z,65nm,1.5s						
MBAR	Mbarara	89.09	269	P	P	17 32 41.7	-0.5
MBAR				IAmb	IAmb	17 32 44.9	
	comp=Z,72nm,1.2s						
BIZ	Bicaz	89.16	317	⇓P	P	17 32 42.5	+0.9
MTSE	Matsula	89.18	329	eP	P	17 32 40.6	-0.7
NEHR	Nehoiu	89.18	315	⇓P	P	17 32 43.1	+1.3
EDRB	Edirne	89.20	312	P	P	17 32 41.0	-0.9
EDRB	Edirne	89.20	312	eP	P	17 32 42.2	+0.3
BODT	Bodrum	89.21	307	eP	P	17 32 42.4	+0.3
GCAM	G?zelcaml?	89.21	308	eP	P	17 32 43.1	+1.1
VRDI	Verde Repeater	89.24	29	P	P	17 32 42.8	+0.9
VRDI				IAmb	IAmb	17 32 44.0	
	comp=Z,43nm,1.2s						
MLR	Muntele Rosu	89.42	315	⇑P	P	17 32 43.7	+0.6
MLR	Muntele Rosu	89.42	315	⇑P	P	17 32 43.7	+0.6
MLR	Muntele Rosu	89.42	315	P	P	17 32 42.8	-0.3
MLR				IAmb	IAmb	17 32 47.0	
	comp=Z,93nm,1.3s						
MCARA	McCarthy VSAT	89.42	29	P	P	17 32 43.8	+1.3
MCARA				IAmb	IAmb	17 32 53.1	
	comp=Z,39nm,0.9s						
K27K	Chicken	89.44	26	P	P	17 32 43.2	+0.7
	baz=279						
K27K	Chicken	89.44	26	P	P	17 32 43.7	+1.1
K27K				IAmb	IAmb	17 32 45.8	
	comp=Z,72nm,1.1s						
CRQM	Cirque	89.46	29	P	P	17 32 44.0	+1.0
CRQM				IAmb	IAmb	17 32 45.2	
	comp=Z,53nm,1.0s						
KARP	Karpathos	89.47	305	P	P	17 32 44.6	+1.2
KARP	Karpathos	89.47	305	eP	P	17 32 44.4	+1.0
KARP	Karpathos	89.47	305	P	P	17 32 44.4	+1.0
ERIK	Erikli-Kesan	89.49	311	eP	P	17 32 41.8	-1.5
PABE	Paberze	89.51	326	eP	P	17 32 43.8	+0.8
GELI	Tayfur-Gelibol	89.55	310	eP	P	17 32 43.6	0.0
TGL	Tana Glacier	89.61	29	P	P	17 32 44.6	+1.1
TGL				IAmb	IAmb	17 32 45.8	
	comp=Z,46nm,0.9s						
URLA	Izmir	89.65	308	eP	P	17 32 44.7	+0.5
BURAR	Bucovina Array	89.69	318	⇑P	P	17 32 44.3	+0.1
BURAR	Bucovina Array	89.69	318	⇑P	P	17 32 44.3	+0.1
BUR08	Bucovina Ar. S	89.70	318	P	P	17 32 44.1	-0.2
EGAK	Eagle	89.71	25	P	P	17 32 43.9	+0.2
EZN	Ezine	89.72	310	eP	P	17 32 44.7	+0.3
DOPR	Dopca	89.76	316	⇑P	P	17 32 44.8	+0.3
BALM	Baldy	89.80	29	P	P	17 32 45.6	+1.2
BALM				IAmb	IAmb	17 32 46.9	
	comp=Z,46nm,1.0s						
ISLE	Juniper Island	89.87	29	P	P	17 32 46.3	+1.4
ISLE				IAmb	IAmb	17 32 47.1	
	comp=Z,82nm,1.2s						
GADA	Gvkgeada	90.01	310	eP	P	17 32 45.9	+0.2
VOIR		90.05	315	⇓P	P	17 32 46.3	+0.4
VOIR		90.05	315	⇓P	P	17 32 46.3	+0.4
COPA	Copaceanca	90.08	314	⇓P	P	17 32 46.7	+0.8
BARN	Barnard Glacie	90.12	29	P	P	17 32 46.8	+0.7
BARN				IAmb	IAmb	17 32 48.9	
	comp=Z,53nm,0.8s						
MESA	MESA	90.13	30	P	P	17 32 47.0	+0.9
MESA				IAmb	IAmb	17 32 50.0	
	comp=Z,45nm,1.0s						
RDO	Rodhopi	90.18	311	P	P	17 32 45.0	-1.5
RDO	Rodhopi	90.18	311	eP	P	17 32 46.3	-0.2
YAH	Yahtse	90.20	29	P	P	17 32 47.5	+1.0
YAH				IAmb	IAmb	17 32 49.3	
	comp=Z,77nm,1.0s						
LVV	L'vov	90.20	320	eP	P	17 32 46.6	+0.2
LVV				e		17 43 21.3	
LVV				eS	S	17 43 35.5	-3.7
LVV				MLR	MLR		
	comp=Z,400nm,19.0s						
ZKR	Zakros	90.28	305	eP	P	17 32 48.1	+1.0
CTGM	Chitina Glacie	90.30	29	P	P	17 32 47.7	+0.9
CTGM				IAmb	IAmb	17 32 49.7	
	comp=Z,86nm,1.0s						
ARCR	ARCALIA	90.34	317	⇑P	P	17 32 48.1	+1.0
TABL	Table Mountain	90.48	29	P	P	17 32 49.2	+1.4
TABL				IAmb	IAmb	17 32 50.5	
	comp=Z,82nm,1.2s						
DAWY	Dawson	90.60	26	P	P	17 32 49.2	+1.2
DAWY				IAmb	IAmb	17 32 50.4	
	comp=Z,43nm,1.1s						
DAWY				IAMs_20	IAMs_20	18 12 41.8	
	comp=Z,848nm,21.0s						
NPS	Neapolis	90.75	305	P	P	17 32 50.5	+1.2
SANT	Santorini	90.76	306	eP	P	17 32 48.9	-0.5
SYO	Syowa Base	90.77	201	⇓eP	P	17 32 47.6	-1.0
SYO	Syowa Base	90.77	201	⇓iPcP	PcP	17 32 50.4	+0.8
LAST	Lasithi	90.87	305	P	P	17 32 49.9	-0.1
LOT	Lotru	90.95	316	⇓P	P	17 32 50.9	+0.7
PCA	Pinnacle	90.98	30	P	P	17 32 51.0	+1.1
PCA				IAmb	IAmb	17 32 52.5	
	comp=Z,72nm,1.1s						
KWP	Kalwaria Pacla	91.08	320	eP	P	17 32 51.3	+0.7
KWP				eL	L	18 22 10.8	
	comp=Z,732nm,19.5s						
KWP	Kalwaria Pacla	91.08	320	P	P	17 32 51.1	+0.5
KWP				pmax	pmax		
	comp=Z,48nm,1.1s						
KWP	Kalwaria Pacla	91.08	320	P	P	17 32 51.0	+0.5
KWP				IAmb	IAmb	17 32 52.6	
	comp=Z,48nm,1.1s						
EPYK	Eagle Plains	91.17	23	P	P	17 32 50.3	-0.3
	baz=284						
KOLS	Kolonicke sedl	91.47	319	eP	P	17 32 53.2	+0.9
KOLS				pmax	pmax		
	comp=Z,33nm,1.3s						
KOLS	Kolonicke sedl	91.47	319	eP	P	17 32 53.2	+0.9
UZH	Uzhgorod	91.50	319	⇓iP	P	17 32 50.7	-1.7
UZH				i		17 32 58.4	
UZH				i		17 43 22.8	
UZH				eS	SKKSac	17 43 45.1	+5.4
UZH				MLR	MLR		
	comp=N,150nm,20.0s						
UZH				MLR	MLR		
	comp=E,180nm,20.0s						
UZH				MLR	MLR		
	comp=Z,100nm,20.0s						
GZR	Gura Zlata	91.65	316	⇓P	P	17 32 54.1	+0.8
GZR	Gura Zlata	91.65	316	⇓P	P	17 32 54.1	+0.8
VTS	Vitosha	91.70	313	⇑P	P	17 32 53.2	-0.6
VTS	Vitosha	91.70	313	⇑P	P	17 32 53.2	-0.6
INK	Inuvik	91.84	21	P	P	17 32 53.0	-0.6
	comp=Z,26nm,1.1s,baz=278,slow=5.0						
INK				PKKP	PKKPdf	17 50 03.3	-7.7
	comp=Z,1.6nm,0.7s,baz=23,slow=1.3,SNR=5.1						

INK	Inuvik	91.84	21	P	P	17 32 53.6	0.0
INK				pmax	pmax		
	comp=Z,56nm,1.3s						
INK	Inuvik	91.84	21	P	P	17 32 53.6	0.0
INK				IAmb	IAmb	17 32 55.5	
	comp=Z,56nm,1.3s						
VAM	Vamos	91.89	306	P	P	17 32 54.7	+0.1
LTVH	Ltavrtes, Hu	91.95	318	eP	P	17 32 55.2	+0.7
HERR	Herculane	91.97	315	⇓P	P	17 32 54.3	-0.5
PPT	Papeete	91.99	107	LR	LR	18 09 49.9	
	comp=Z,116nm,21.9s,baz=278,slow=33						
PPT2	Papeete2	92.00	107	ePP	PP	17 36 33.9	-1.4
	comp=Z,90nm,22.5s						
PPT2				eS	S	17 43 56.8	-0.1
	comp=Z,470nm,27.0s						
PPT2				eSP	SP	17 45 05.0	-1.5
	comp=Z,922nm,26.2s						
PPT2				eSS	SS	17 50 06.3	+0.2
	comp=Z,579nm,28.2s						
PPT2				eLQ	LQ	17 58 24.0	
	comp=Z,1µm,28.8s						
PPT2				eLR	LR	18 02 23.5	
	comp=Z,559nm,26.2s						
CRVS	Cervenica-Dubn	92.00	319	eP	P	17 32 55.9	+1.1
CRVS				pmax	pmax		
	comp=Z,131nm,1.4s						
CRVS	Cervenica-Dubn	92.00	319	eP	P	17 32 55.9	+1.1
IMMV	Iera Moni Meta	92.06	306	P	P	17 32 55.1	-0.3
IMMV	Iera Moni Meta	92.06	306	eP	P	17 32 56.3	+0.9
HORT	Hortiatis	92.08	311	eP	P	17 32 54.6	-0.9
KNT	Kendrikon	92.15	311	P	P	17 32 53.4	-2.3
KNT	Kendrikon	92.15	311	eP	P	17 32 55.1	-0.6
HYT	Haines Junctio	92.16	29	P	P	17 32 56.3	+0.9
HYT				IAmb	IAmb	17 32 58.3	
	comp=Z,57nm,1.0s						
VILL	Villia	92.24	308	P	P	17 32 55.1	-1.1
VAY	Valandovo	92.38	312	i P	P	17 32 56.5	-0.2
BZS	Buzias	92.42	316	⇑P	P	17 32 57.3	+0.5
BZS	Buzias	92.42	316	⇑P	P	17 32 57.3	+0.5
MDVR	Moldovita	92.48	315	⇑P	P	17 32 56.7	-0.5
TBI	Tubuai	92.51	113	eS	S	17 43 57.7	-3.4
	comp=Z,571nm,28.8s						
TBI				eSP	SP	17 45 10.4	-1.5
	comp=Z,595nm,28.5s						
TBI				eSS	SS	17 50 14.1	+1.0
	comp=Z,746nm,30.0s						
TBI				eLQ	LQ	17 58 42.4	
	comp=Z,688nm,38.5s						
TBI				eLR	LR	18 02 38.0	
	comp=Z,646nm,40.8s						
STIP	Stip	92.61	312	i P	P	17 32 55.7	-2.1
LIT	Litokhoron	92.61	310	P	P	17 32 55.7	-2.2
LIT	Litokhoron	92.61	310	P	P	17 32 57.0	-0.8
LIT				pmax	pmax		
	comp=Z,76nm,1.0s						
LIT	Litokhoron	92.61	310	P	P	17 32 57.0	-0.8
NIE	Niedzica	92.66	320	eP	P	17 32 59.2	+1.3
NIE				eL	L	18 18 10.9	
	comp=Z,359nm,20.5s						
KECS	Kecovo	92.71	319	eP	P	17 32 59.0	+0.9
KECS				pmax	pmax		
	comp=Z,14nm,1.0s						
KECS	Kecovo	92.71	319	eP	P	17 32 59.0	+0.9
LSZ	Lusaka	92.73	255	P	P	17 32 57.8	-1.2
LSZ				pmax	pmax		
	comp=Z,54nm,1.0s						
LSZ	Lusaka	92.73	255	P	P	17 32 57.8	-1.2
LSZ				IAmb	IAmb	17 33 00.6	
	comp=Z,54nm,1.0s						
LSZ	Lusaka	92.73	255	P	P	17 32 58.6	-0.4
KTHR	Kythira	92.74	307	P	P	17 32 58.8	+0.3
OJC	Ojcow	92.84	321	eP	P	17 32 59.2	+0.5
OJC				eL	L	18 19 39.7	
	comp=Z,1µm,19.8s						
OJC	Ojcow	92.84	321	P	P	17 32 59.0	+0.4
OJC				pmax	pmax		
	comp=Z,45nm,1.3s						
OJC	Ojcow	92.84	321	P	P	17 32 59.0	+0.4
OJC				IAmb	IAmb	17 33 00.5	
	comp=Z,45nm,1.3s						
AGG	Agios Georgios	92.89	309	eP	P	17 32 57.1	-2.1
AGG	Agios Georgios	92.89	309	P	P	17 32 58.0	-1.2
AGG				pmax	pmax		
	comp=Z,71nm,1.2s						
AGG	Agios Georgios	92.89	309	P	P	17 32 58.0	-1.2
AGG				IAmb	IAmb	17 32 59.1	
	comp=Z,71nm,1.2s						
AMBH	Ambrzfalva	92.91	317	eP	P	17 33 00.8	+1.7
KLV	Kalavryta, Ach	93.17	308	P	P	17 32 58.6	-1.9
SERG	Sergoula	93.19	309	P	P	17 32 58.5	-2.1
PSZ	Piszkesteto	93.20	318	eP	P	17 33 01.0	+0.5
PSZ	Piszkesteto	93.20	318	P	P	17 33 00.7	+0.3
PSZ				pmax	pmax		
	comp=Z,30nm,1.2s						
PSZ	Piszkesteto	93.20	318	P	P	17 33 00.7	+0.3
PSZ				IAmb	IAmb	17 33 01.6	
	comp=Z,30nm,1.2s						
LANS	Liptovska Anna	93.25	320	eP	P	17 33 02.3	+1.7
LANS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LANS	Liptovska Anna	93.25	320	eP	P	17 33 02.3	+1.7
ANX	Ano Chora	93.27	309	P	P	17 33 00.4	-0.6
FNA	Florina	93.35	311	P	P	17 33 00.0	-1.3
FNA				pmax	pmax		
	comp=Z,18nm,0.9s						
FNA	Florina	93.35	311	P	P	17 32 60.0	-1.3
WHY	Whitehorse	93.45	28	P	P	17 33 01.8	+0.4
DRO	Drossia	93.53	308	P	P	17 33 00.6	-1.5
SKAG	Skagway	93.55	30	P	P	17 33 02.3	+0.6
SKAG				IAmb	IAmb	17 33 04.7	
	comp=Z,46nm,0.9s						
OHR	Ohrid	93.73	312	i P	P	17 33 01.4	-1.6
AXS	Araxos	93.75	309	P	P	17 33 03.8	+0.7
VYHS	Vyhne	93.78	319	eP	P	17 33 03.4	+0.3
VYHS				pmax	pmax		
	comp=Z,21nm,1.3s						
VYHS	Vyhne	93.78	319	eP	P	17 33 03.4	+0.3
DIVS	Divibare	93.81	315	P	P	17 33 02.1	-1.3
DIVS				IAmb	IAmb	17 33 05.0	
	comp=Z,46nm,1.2s						
BUD	Budapest	93.86	318	eP	P	17 33 04.3	+1.0
OKC	Ostrava-Krasne	93.96	321	AMS	AMS	18 20 00.0	
	comp=Z,1µm,19.1s						
BESE	Bessie Mountai	94.02	30	P	P	17 33 05.4	+1.5
JIS	Juneau Island	94.34	31	P	P	17 33 07.1	+1.8
JIS				IAmb	IAmb	17 33 08.4	
	comp=Z,86nm,1.2s						
MORC	Moravsky Berou	94.35	321	⇑P	P	17 33 06.7	+1.0
MORC	Moravsky Berou	94.35	321	eP	P	17 33 05.9	+0.2
MORC				ePP	PP	17 36 55.8	+3.1
MORC	Moravsky Berou	94.35	321	⇑P	P	17 33 06.7	+1.0
MORC	Moravsky Berou	94.35	321	P	P	17 33 06.3	+0.6
MORH	Mrgy, Hungar	94.36	317	eP	P	17 33 05.9	+0.2
CSKK	Cskako	94.39	318	eP	P	17 33 06.3	+0.5
EUNU	Eureka	94.39	4	P	P	17 33 05.7	+0.4
JAVC	Velka Javorina	94.47	320	eP	P	17 33 07.5	+1.3
QSPA	South Pole Qui	94.53	180	P	P	17 33 06.1	0.0
	comp=Z,39nm,0.9s,baz=314,slow=1.3,SNR=80						
QSPA	South Pole Qui	94.53	180	P	P	17 33 06.2	0.0
QSPA				IAmb	IAmb	17 33 08.6	
	comp=Z,47nm,0.9s						
NC405	NORSAR Array S	94.59	332	P	P	17 33 05.7	-0.8
NC405				IAmb	IAmb	17 33 08.2	
	comp=Z,73nm,1.2s						
PDG	Podgorica	94.64	313	⇑P	P	17 33 06.1	-0.9
PDG	Podgorica	94.64	313	P	P	17 33 06.8	-0.2
PDG				IAmb	IAmb	17 33 08.1	
	comp=Z,44nm,0.8s						
C36M	Paulatuk	94.64	19	P	P	17 33 05.8	-0.6
	baz=296						
C36M	Paulatuk	94.64	19	P	P	17 33 06.6	+0.1
NC303	NORSAR Array S	94.71	333	P	P	17 33 06.5	-0.5
NC303				IAmb	IAmb	17 33 07.7	
	comp=Z,54nm,1.2s						
TIH	Tihany	94.73	318	eP	P	17 33 08.1	+0.7
KRLC	Kraliky	94.77	321	eP	P	17 33 08.5	+0.9
KRLC				MLR	MLR		
	comp=Z,900nm,17.9s						
KRLC	Kraliky	94.77	321	eP	P	17 33 08.5	+0.9
KRLC				AMS	AMS	18 20 30.0	
	comp=Z,900nm,17.9s						
MODS	Modra-Piesok	94.83	319	eP	P	17 33 07.7	-0.1
MODS				pmax	pmax		
	comp=Z,20nm,1.2s						
MODS	Modra-Piesok	94.83	319	eP	P	17 33 07.7	-0.1
NB2	NORSAR Subarra	94.84	332	P	P	17 33 06.5	-1.2
	comp=Z,19nm,1.2s,baz=74,slow=4.4						
NB2	NORSAR Subarra	94.84	332	P	P	17 33 06.5	-1.2
	baz=74,slow=4.4						
NOA	NORSAR Array B	94.84	332	P	P	17 33 05.8	-1.9
	comp=Z,9.9nm,1.1s,baz=73,slow=4.6,SNR=7.8						
NOA				PP	PP	17 36 47.5	-8.7
	comp=Z,2.3nm,1.0s,baz=74,slow=7.9,SNR=4.9						
NOA				LR	LR	18 19 00.9	
	comp=Z,559nm,19.6s,baz=60,slow=38						
KSP	Ksiaz	94.90	322	eP	P	17 33 09.1	+1.0
KSP				eL	L	18 19 49.9	
	comp=Z,781nm,21.0s						
MPLH	Magyarpolny	94.91	318	eP	P	17 33 09.7	+1.4
DPC	Dobruska-Polom	94.99	321	eP	P	17 33 09.4	+0.8
DPC				MLR	MLR		
	comp=Z,1µm,19.4s						
DPC	Dobruska-Polom	94.99	321	eP	P	17 33 09.4	+0.8
DPC				AMS	AMS	18 19 00.0	
	comp=Z,1µm,19.4s						
EGYH	Egyhazaskeszo	94.99	318	eP	P	17 33 04.3	-4.3
OSTC	Ostas	95.01	322	eP	P	17 33 08.6	-0.1
OSTC				AMS	AMS	18 20 00.0	
	comp=Z,1µm,18.9s						
NBO00	NORSAR Array S	95.05	332	P	P	17 33 07.7	-0.9
NBO00				IAmb	IAmb	17 33 09.1	
	comp=Z,50nm,1.2s						
VRAC	Vranov	95.06	320	eP	P	17 33 09.5	+0.6
VRAC				ePP	PP	17 37 00.9	+2.7
CHVC	Chvalec	95.10	322	eP	P	17 33 08.6	-0.5
UPC	Upice	95.15	321	AMS	AMS	18 20 00.0	
	comp=Z,1µm,19.6s						
KRUC	Moravsky	95.24	320	eP	P	17 33 10.0	+0.3
DAG	Danmarks Havn	95.38	351	i P	P	17 33 09.0	-0.8
DAG				pmax	pmax		
	comp=Z,120nm,1.3s						
DAG	Danmarks Havn	95.38	351	i P	P	17 33 09.0	-0.8
	comp=Z,117nm,1.3s						
DAG	Danmarks Havn	95.38	351	i P	P	17 33 09.0	-0.8
DAG				IAmb	IAmb	17 33 10.6	
	comp=Z,117nm,1.3s						
SOP	Sopron	95.45	319	eP	P	17 33 04.5	-6.1
LNIZ	Loecknitz	95.48	325	eP	P	17 33 11.7	+1.0
	comp=Z,398nm,2.6s,baz=74,slow=4.5						
BEHE	Becsehely	95.57	317	eP	P	17 33 02.7	-8.5
LBTB	Lobatse	95.72	245	P	P	17 33 11.3	-1.2
LBTB				pmax	pmax		
	comp=Z,50nm,1.1s						
LBTB	Lobatse	95.72	245	P	P	17 33 11.2	-1.2
LBTB				IAmb	IAmb	17 33 14.0	
	comp=Z,50nm,1.1s						
TREC	Trest	95.77	320	AMS	AMS	18 21 20.0	
	comp=Z,1µm,19.6s						
CONA	Conrad Observa	95.85	319	eP	P	17 33 12.1	-0.5
	comp=Z,15nm,1.6s						
CONA				eP	PP	17 37 07.3	+2.8
	comp=Z,17nm,1.3s						
WRAK	Wrangell Islan	95.94	32	P	P	17 33 14.4	+1.7
PVCC	Panska Ves	96.04	322	eP	P	17 33 14.3	+1.0
PVCC	Panska Ves	96.04	322	eP	P	17 33 14.3	+1.0
BOSA	Boshof	96.16	242	P	P	17 33 14.4	-0.1
	comp=Z,8.1nm,1.0s,baz=114,slow=4.4,SNR=5.4						
PRU	Pruhonice	96.19	321	eP	P	17 33 14.6	+0.6
PRU	Pruhonice	96.19	321	eP	P	17 33 14.6	+0.6
ARSA	Arzberg	96.23	318	eP	P	17 33 14.4	+0.1
	comp=Z,11nm,1.1s						
ARSA				eP	PP	17 37 11.2	+3.8
	comp=Z,9.6nm,1.1s						
BRG	Berggiesshubel	96.33	322	i P	P	17 33 15.2	+0.5
BRG				Amp		17 33 18.2	
	comp=Z,57nm,1.6s						
BRG				ex	x	17 36 37.8	
BRG				Amp		17 36 45.9	
	comp=Z,4.6nm,1.2s						
BRG				PP	PP	17 37 03.6	-4.4
BRG				Amp		17 37 13.6	
	comp=Z,38nm,1.8s						
BRG	Berggiesshubel	96.33	322	S	S	17 44 44.0	+10
BRG	Berggiesshubel	96.33	322	i P	P	17 33 15.1	+0.5
BRG						17 37 03.5	
BRG				pmax	pmax		
	comp=Z,57nm,1.6s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,39nm,1.8s						
BRG	Berggiesshubel	96.33	322	i P	P	17 33 15.2	+0.5
BRG				Amp		17 33 18.2	
	comp=Z,57nm,1.6s						
BRG				ex	x	17 36 37.8	
BRG				Amp		17 36 45.9	
	comp=Z,4.6nm,1.2s						
BRG				PP	PP	17 37 03.6	-4.4
BRG				Amp		17 37 13.6	
	comp=Z,38nm,1.8s						
BRG	Berggiesshubel	96.33	322	S	S	17 44 44.0	+10
BRG	Berggiesshubel	96.33	322	eP	P	17 33 15.0	+0.4
	comp=Z,57nm,1.6s,baz=74,slow=4.5						
DLBC	Dease Lake	96.48	30	P	P	17 33 16.9	+1.7
DLBC				IAmb	IAmb	17 33 18.3	
	comp=Z,51nm,1.2s						
SOKA	Soboth	96.69	318	eP	P	17 33 16.5	+0.1
	comp=Z,13nm,1.4s,SNR=5.4						
SOKA				eP	PP	17 37 11.3	+0.3
	comp=Z,21nm,1.5s						
CLL	Collm	96.79	323	⇑iP	P	17 33 16.5	-0.2
	comp=Z,57nm,1.9s						
CLL				ePP	PP	17 37 08.0	-3.5
	comp=Z,28nm,1.6s						
CLL				eS	S	17 44 35.0	-2.4
CLL				ePS	PS	17 45 59.0	-1.6
CLL				ePPS	PPS	17 46 38.0	
CLL				e		17 48 42.0	
CLL				ePKKPdf	PKKPbc	17 49 58.0	-2.7
CLL				e		17 50 59.0	
CLL				eSS	SS	17 51 12.0	-0.2
CLL				e		17 51 54.0	
CLL				eSSS	SSS	17 54 54.0	
CLL				eSSSS		17 58 00.0	
CLL				LmH		18 24 00.0	
	comp=Z,700nm,20.3s						
CLL				LmV		18 25 00.0	
	comp=Z,700nm,18.5s						
CLL	Collm	96.79	323	⇑iP	P	17 33 16.5	-0.2
CLL				e		17 37 08.0	
CLL				eS	S	17 44 35.0	-2.4
CLL				pmax	pmax		
	comp=Z,57nm,1.9s						
CLL				pmax	pmax		
	comp=Z,28nm,1.6s						
CLL				MLR	MLR		
	comp=Z,700nm,18.5s						
CLL	Collm	96.79	323	P	P	17 33 16.4	-0.2
CLL				IAmb	IAmb	17 33 18.3	
	comp=Z,26nm,1.4s						
CLL	Collm	96.79	323	eP	P	17 33 16.6	0.0
	comp=Z,57nm,1.9s,baz=74,slow=4.5						
BOJS	Bojanci	96.82	317	i P	P	17 33 18.1	+1.1
BOJS				ePP	PP	17 37 15.8	+3.9
MOA	Molln	96.91	319	eP	P	17 33 17.9	+0.5
	comp=Z,19nm,1.1s,SNR=8.2						
MOA				eP	PP	17 37 16.9	+4.3
	comp=Z,16nm,1.2s						
GEC2	GERESS Array S	97.02	320	P	Pdif	17 33 18.1	+0.1
GEC2	GERESS Array S	97.02	320	eP	Pdif	17 33 18.1	+0.1
	comp=Z,110nm,2.4s,baz=74,slow=4.5						
GERES	GERESS Array B	97.02	320	P	Pdif	17 33 18.1	+0.1
	comp=Z,6.0nm,1.0s,baz=72,slow=4.3,SNR=28						
GERES				PP	PP	17 37 11.1	-2.4
	comp=Z,0.2nm,0.3s,baz=73,slow=4.6,SNR=3.7						
GERES				PKKPbc	PKKPbc	17 50 00.7	+0.5
	comp=Z,0.5nm,0.7s,baz=255,slow=3.0,SNR=4.3						
GERES				LR	LR	18 22 42.6	
	comp=Z,998nm,19.4s,baz=76,slow=39						
KHC	Kasperske Hory	97.02	321	⇑eP	Pdif	17 33 18.2	+0.3
KHC				pmax	pmax		
	comp=Z,50nm,2.5s						
KHC				MLR	MLR		
	comp=Z,1µm,19.0s						
KHC	Kasperske Hory	97.02	321	eP	P	17 33 17.0	-0.8
KHC				ex	x	17 37 16.5	
KHC				AMS	AMS	18 21 50.0	
	comp=Z,1µm,18.1s						
KHC	Kasperske Hory	97.02	321	P	Pdif	17 33 18.4	+0.5
OBKA	Obir	97.06	318	eP	P	17 33 17.7	-0.4
	comp=Z,11nm,1.2s						
LJU	Ljubljana	97.19	317	eP	Pdif	17 33 19.4	+0.7
TANN	Tannenbergstha	97.36	322	eP	Pdif	17 33 19.5	0.0
	comp=Z,21nm,1.3s,baz=74,slow=4.5						
WERD	Werda	97.45	322	eP	Pdif	17 33 20.0	+0.1
	comp=Z,15nm,1.2s,baz=74,slow=4.5						
WET	Wettzell	97.46	321	eP	Pdif	17 33 20.3	+0.4
	comp=Z,18nm,1.3s,baz=74,slow=4.5						
GUNZ	Gunzen	97.46	322	eP	Pdif	17 33 20.3	+0.4
	comp=Z,37nm,1.5s,baz=74,slow=4.5						
DBG	Daneborg	97.51	350	i P	Pdif	17 33 19.5	0.0
DBG				IAmb	IAmb	17 33 21.3	
	comp=Z,43nm,1.1s						
PLN	Plauen	97.53	322	eP	Pdif	17 33 20.4	+0.3
	comp=Z,43nm,1.8s,baz=74,slow=4.5						
BSEG	Bad Segeberg	97.57	326	eP	Pdif	17 33 21.2	+1.1
	comp=Z,48nm,1.4s,baz=74,slow=4.5						
MYKA	Terra Mystica	97.63	318	eP	P	17 33 19.8	-0.9
	comp=Z,5.5nm,0.9s						
ROTZ	Rotzenmuhle	97.71	321	eP	Pdif	17 33 21.6	+0.6
	comp=Z,22nm,1.3s,baz=74,slow=4.5						
KBA	Koelnbreinsper	97.71	319	eP	P	17 33 20.6	-0.6
	comp=Z,6.2nm,1.0s						
MOX	Moxa	97.82	322	eP	Pdif	17 33 21.6	+0.1
	comp=Z,17nm,1.2s,baz=74,slow=4.5						
MOX				eL	L	18 25 51.0	
	comp=Z,468nm,20.9s						
ASSE	Asse, Remlinge	97.93	324	eP	Pdif	17 33 22.4	+0.6
	comp=Z,38nm,1.8s,baz=74,slow=4.5						
CEL	Celeste	97.98	309	P	Pdif	17 33 23.8	+1.3
RES	Resolute Bay	98.08	9	P	P	17 33 21.7	-0.3
RES				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RES	Resolute Bay	98.08	9	P	P	17 33 21.7	-0.3
CLZ	Clausthal	98.20	324	eP	Pdif	17 33 23.5	+0.4
	comp=Z,33nm,1.4s,baz=74,slow=4.5						
GRF	Grafenberg Arr	98.34	322	eP	Pdif	17 33 24.0	+0.2
	comp=Z,43nm,1.7s,baz=74,slow=4.5						
GRF				eL	L	18 20 15.3	
	comp=Z,646nm,20.5s						
ABTA	Abfaltersbach	98.35	318	eP	P	17 33 23.1	-0.9
	comp=Z,13nm,1.3s						
STAL	STALIGIAL	98.35	318	P	P	17 33 23.3	-0.6
STAL				IAmb	IAmb	17 33 24.6	
	comp=Z,18nm,1.1s						
GTTG	Gottingen	98.53	324	eP	Pdif	17 33 25.1	+0.6
	comp=Z,33nm,1.4s,baz=74,slow=4.5						
WTTA	Wattenberg	98.78	319	i P	P	17 33 25.8	-0.2
	comp=Z,23nm,1.1s,SNR=6.6						
WTTA				eP	PP	17 37 22.6	-4.5
	comp=Z,9.4nm,1.4s						
WATA	Walderalm	98.80	319	i P	P	17 33 25.8	-0.2
	comp=Z,22nm,1.3s						
WATA				eP	PP	17 37 20.3	-6.9
	comp=Z,15nm,1.8s						
TULEG	Thule	98.80	2	P	Pdif	17 33 25.4	+0.2
TULEG				IAmb	IAmb	17 33 27.0	
	comp=Z,34nm,1.4s						
NRCA	Norcia	98.97	314	P	Pdif	17 33 27.0	+0.2
SQTA	Sankt Quirin	99.07	319	eP	Pdif	17 33 26.9	-0.3
	comp=Z,22nm,1.3s,SNR=6.3						
MOTA	Moosalm	99.11	319	i P	Pdif	17 33 26.8	-0.6
	comp=Z,19nm,1.0s,SNR=6.7						
MOTA				eP	PP	17 37 24.9	-4.6
	comp=Z,6.3nm,1.1s						
MURB	Monte Urbino	99.28	315	IAMs_20	IAMs_20	18 27 44.2	
	comp=Z,579nm,21.0s						
RETA	Reutte	99.29	319	eP	Pdif	17 33 28.9	+0.8
	comp=Z,9.8nm,1.4s						
RETA				P	PP	17 37 28.2	-2.6
	comp=Z,18nm,1.5s						
FETA	Feichten	99.45	319	eP	Pdif	17 33 28.9	-0.1
	comp=Z,15nm,1.2s						
FETA				eP	PP	17 37 34.1	+2.0
	comp=Z,7.8nm,1.1s						
DAVA	Damuels	99.92	319	eP	Pdif	17 33 31.0	0.0
	comp=Z,11nm,1.1s						
LATE	Laterza	99.96	315	Pdif	Pdif	17 33 31.2	0.0
CORL	Corleone	100.06	310	IAMs_20	IAMs_20	18 25 27.3	
	comp=Z,517nm,19.0s						
TAOE	Nuku Hiva Isla	100.64	98	eLR	LR	18 06 19.3	
	comp=Z,871nm,27.8s						
YKA	Yellowknife Ar	101.45	23	P	Pdif	17 33 37.3	0.0
	comp=Z,5.0nm,0.9s,baz=305,slow=4.0,SNR=39						
YKA				PKiKP	PKiKP	17 37 59.9	-1.4
	comp=Z,1.5nm,1.0s,baz=318,slow=1.6,SNR=6.6						
YKA				PKKPbc	PKKPbc	17 49 38.4	-10
	comp=Z,1.8nm,0.8s,baz=98,slow=3.5,SNR=14						
SUMG	Summit	101.68	353	i P	Pdif	17 33 40.0	+1.4
SUMG	Summit	101.68	353	i P	Pdif	17 33 40.0	+1.4
SUMG	Summit	101.68	353	i P	Pdif	17 33 40.0	+1.4
KEST	Kesra	103.68	308	Pdiff	Pdif	17 33 47.7	-0.2
	comp=Z,5.6nm,1.0s,baz=39,slow=7.7,SNR=3.5						
KEST				PKiKP	PP	17 38 04.7	+0.3
	comp=Z,9.6nm,1.0s,baz=10,slow=3.2,SNR=5.1						
RKT	Rikitea	105.82	113	eLR	LR	18 08 47.3	
	comp=Z,577nm,41.5s						
J05D	Fort Rock, OR	107.34	42	PKiKP	PKiKP	17 38 14.8	+1.9
	baz=294						
MSO	Missoula	110.29	36	PKiKP	PKiKP	17 38 18.2	0.0
	baz=301						
NVAR	Mina Array Bea	111.37	46	Pdiff	Pdif	17 34 23.5	+1.2
	comp=Z,2.8nm,1.0s,baz=281,slow=4.9,SNR=12						
NVAR				PKiKP	PKiKP	17 38 20.1	-0.6
	comp=Z,5.4nm,1.0s,baz=271,slow=2.0,SNR=19						
NVAR				PKKPbc	PKKPbc	17 49 16.2	-0.8
	comp=Z,2.0nm,0.6s,baz=131,slow=3.7,SNR=20						
HLID	Hailey	111.65	39	PKiKP	PKiKP	17 38 21.2	+0.2
	baz=300						
EGMT	Eagleton	112.02	33	PKiKP	PKiKP	17 38 21.6	+0.1
	baz=305						
ESDC	Sonseca Array	112.11	316	PKiKP	PKiKP	17 38 21.5	-0.4
	comp=Z,5.0nm,1.2s,baz=17,slow=3.1,SNR=6.7						
ESDC				PP	PP	17 39 01.8	-3.9
	comp=Z,13nm,1.2s,baz=54,slow=6.4,SNR=9.8						
ES16	SONSECA Array	112.12	316	IAMs_20	IAMs_20	18 10 17.0	
	comp=Z,427nm,19.0s						
BOZ	Bozeman (W)	112.30	36	PKiKP	PKiKP	17 38 22.8	+0.6
	baz=303,SNR=13						
CWC	Cottonwood Cre	112.35	48	PKiKP	PKiKP	17 38 23.9	+1.4
	baz=294						
ISA	Isabella, Lake	112.37	48	PKiKP	PKiKP	17 38 24.2	+1.7
	baz=294						
GRAC	Grapevine Rang	112.64	47	PKiKP	PKiKP	17 38 25.0	+2.1
	baz=295						
MPMC	Manual Prospec	112.94	48	PKiKP	PKiKP	17 38 25.2	+1.4
	baz=294,SNR=18						
LRMC	Laurel Mtn Rad	113.04	48	PKiKP	PKiKP	17 38 25.4	+1.6
	baz=294,SNR=9.0						
EDW2	Edwards Air Fo	113.04	49	PKiKP	PKiKP	17 38 25.8	+2.1
	baz=294,SNR=9.5						
FURC	Furnace Creek,	113.23	47	PKiKP	PKiKP	17 38 26.5	+2.6
	baz=295						
R11A	Troy Canyon, C	113.33	45	PKiKP	PKiKP	17 38 26.4	+2.0
	baz=297						
TPNV	Topopah Spring	113.47	46	PKiKP	PKiKP	17 38 26.1	+1.5
	baz=296,SNR=5.9						
BFSC	Mount Baldy Ra	113.55	50	PKiKP	PKiKP	17 38 25.9	+1.0
	baz=294						
H17A	Grant Village	113.58	37	PKiKP	PKiKP	17 38 27.5	+2.7
	baz=303,SNR=6.5						
GSC	Goldstone, Bar	113.76	48	PKiKP	PKiKP	17 38 26.4	+1.2
	baz=295,SNR=12						
HEC	Hector,Ludlow	114.31	49	P	PKiKP	17 38 28.0	+1.8
	baz=295						
DUG	Dugway, Tooele	114.35	42	P	PKPdf	17 38 28.0	+1.8
	baz=300						
DGMT	Dagmar	114.68	31	P	PKPdf	17 38 27.7	+1.2
	baz=310						
PFO	Pinyon Flats O	114.72	50	P	PKPdf	17 38 28.8	+1.7
	baz=294						
TPFO	Pinon Flats	114.72	50	P	PKPdf	17 38 28.9	+1.8
	baz=294,SNR=5.5						
LAO	LASA Array	114.74	33	P	PKPdf	17 38 28.5	+1.8
	baz=308						
GMRC	Granite Mounta	114.83	48	P	PKPdf	17 38 28.2	+0.9
	baz=295,SNR=27						
BELC	Belle Mtn. Jos	114.91	49	P	PKPdf	17 38 28.3	+0.8
	baz=295,SNR=10						
MONP2	Monument Peak	115.04	51	P	PKPdf	17 38 29.6	+1.8
	baz=294,SNR=9.5						
BW06	Boulder Array	115.09	38	P	PKPdf	17 38 28.4	+0.7
	baz=304,SNR=7.4						
PDAR	Pinedale Array	115.09	38	PKP	PKiKP	17 38 27.1	-0.6
	comp=Z,7.6nm,1.2s,baz=180,slow=0.6,SNR=16						
PDAR				PKKPbc	PKKPbc	17 49 00.9	-3.7
	comp=Z,2.3nm,1.0s,baz=108,slow=4.8,SNR=9.5						

IKP	In-Ko-Pah, Jac	115.38	51	P	PKPdf	17 38 30.1	+1.8
	baz=294,SNR=7.7						
TCRU	Three Creeks R	115.38	43		PKiKP	17 38 27.4	-0.9
RMX	La Rumorosa	115.42	51		PKPdf	17 38 29.4	+0.8
SZCU	Shurtz Canyon	115.42	45		PKiKP	17 38 28.4	-0.1
BC3	Big Chuckawall	115.46	49	P	PKPdf	17 38 29.5	+1.0
	baz=295,SNR=12						
IRM	Iron Mountain	115.48	49	P	PKPdf	17 38 30.4	+1.9
	baz=296,SNR=15						
SWSC	Sam W. Stewart	115.50	50	P	PKPdf	17 38 29.7	+1.3
	baz=294,SNR=5.1						
LCMT	Little Creek M	115.59	45		PKPdf	17 38 28.9	+0.2
MSU	Marysvale	115.61	43	PKIKP	PKPdf	17 38 28.9	+0.1
MSU	Marysvale	115.61	43		PKPdf	17 38 28.9	+0.1
ESJX	Sierra Juarez	115.77	51		PKPdf	17 38 30.2	+1.0
MTPU	Mount Pierson	115.84	44		PKPdf	17 38 30.6	+1.1
TMUT	Trail Mountain	115.87	42		PKiKP	17 38 29.3	-0.1
KNB	Kanab	115.89	45	PKIKP	PKPdf	17 38 30.0	+0.7
KNB	Kanab	115.89	45		PKPdf	17 38 30.0	+0.7
UABX	UABC, Campus M	115.90	50	IAMs_20	IAMs_20	18 34 01.8	
	comp=Z,539nm,20.0s						
W13A	Hualapai Mount	116.00	47		PKPdf	17 38 29.8	+0.1
TOA0	Torodi Ar. Sit	116.04	287		PKPdf	17 38 28.3	-1.6
TORD	Torodi Ar. Bea	116.04	287	PKP	PKPdf	17 38 28.9	-1.0
	comp=Z,16nm,0.7s,baz=34,slow=1.9,SNR=52						
TORD				PKKPbc	PKKPbc	17 48 58.8	-1.4
	comp=Z,2.8nm,0.8s,baz=292,slow=4.6,SNR=6.5						
TORD	Torodi Ar. Bea	116.04	287		PKPdf	17 38 28.3	-1.6
PKCU	Pink Cliffs	116.04	44		PKiKP	17 38 27.6	-2.2
Q16A	Castle Valley	116.09	42		PKPdf	17 38 30.1	+0.4
PDMCI	Parker Dam,Lak	116.17	48	P	PKiKP	17 38 30.4	+0.8
	baz=296,SNR=8.0						
GLA	Glamis	116.19	50	P	PKiKP	17 38 31.7	+1.8
	baz=295						
SRU	San Rafael Swe	116.42	42	PKIKP	PKiKP	17 38 31.3	+1.0
SRU	San Rafael Swe	116.42	42		PKiKP	17 38 31.2	+1.0
SPX	San Pedro Mart	116.53	52	PKPdf	PKiKP	17 38 31.5	+0.6
SPX				IAMs_20	IAMs_20	18 15 28.7	
	comp=Z,370nm,20.0s						
U15A	North Rim	116.54	45	PKPdf	PKiKP	17 38 31.1	+0.4
K22A	Casper	117.00	37	P	PKPdf	17 38 30.8	-0.5
	baz=306						
K22A	Casper	117.00	37		PKPdf	17 38 30.6	-0.7
SFX	San Felipe	117.01	52	PKPdf	PKPdf	17 38 31.2	-0.1
RWWY	Rawlins	117.14	38		PKiKP	17 38 31.9	+0.2
ULM	Lac du Bonnet	117.29	25	PKP	PKPdf	17 38 30.7	-0.7
	comp=Z,9.1nm,0.9s,baz=325,slow=2.8,SNR=14						
ULM				PKKPbc	PKKPbc	17 48 51.0	-5.8
	comp=Z,4.8nm,0.9s,baz=141,slow=4.0,SNR=6.3						
ULM	Lac du Bonnet	117.29	25	PKPdf	PKPdf	17 38 31.1	-0.3
ULM				PKKPbc	PKKPbc	17 48 52.1	-4.7
O20A	White River Ci	117.37	40	P	PKiKP	17 38 33.3	+1.1
	baz=304,SNR=10						
O20A	White River Ci	117.37	40	PKPdf	PKPdf	17 38 31.7	-0.4
MDND	Maddock	117.37	29	P	PKiKP	17 38 32.3	+0.7
	baz=315						
MDND	Maddock	117.37	29	PKPdf	PKiKP	17 38 31.8	+0.1
RSSD	Black Hills	117.55	34	PKIKP	PKPdf	17 38 31.1	-1.3
RSSD	Black Hills	117.55	34	P	PKPdf	17 38 31.9	-0.5
	baz=309						
RSSD	Black Hills	117.55	34	PKPdf	PKPdf	17 38 31.1	-1.3
WUAZ	Wupatki	117.63	46	P	PKiKP	17 38 34.4	+1.6
	baz=299,SNR=11						
WUAZ	Wupatki	117.63	46		PKiKP	17 38 32.8	+0.1
PV23	Carpenter Ridg	117.78	42		PKiKP	17 38 33.1	0.0
PV14	Lion Creek, Pa	117.81	42		PKPdf	17 38 32.8	-0.3
PV20	West Nyswonger	117.86	42	PKPdf	PKPdf	17 38 33.0	-0.1
PV19	Morning Glory	117.87	42		PKPdf	17 38 33.1	0.0
PV04	Paradox Valley	117.88	42		PKiKP	17 38 33.4	+0.2
PV22	Blue Mesa, Par	117.88	42		PKPdf	17 38 32.8	-0.4
PV17	East Wray Mesa	117.90	42		PKPdf	17 38 32.7	-0.5
PV16	Nyswonger Mesa	117.91	42		PKPdf	17 38 33.0	-0.3
PV05	Paradox Valley	117.92	42		PKiKP	17 38 33.6	+0.3
PV11	David Mesa, Pa	117.95	42		PKPdf	17 38 33.2	-0.1
PV18	Skein Mesa, Pa	117.95	42	PKPdf	PKiKP	17 38 33.7	+0.4
PV12	Saucer Basin,	117.99	42		PKiKP	17 38 33.8	+0.4
PV03	Paradox Valley	117.99	42		PKPdf	17 38 33.0	-0.4
PV07	Paradox Valley	118.03	42	PKPdf	PKiKP	17 38 33.5	0.0
PV13	Radium Mtn., P	118.06	42		PKPdf	17 38 32.9	-0.6
PV02	Paradox Valley	118.09	42		PKPdf	17 38 33.5	-0.1
X16A	Lo Mia Camp, P	118.10	47	PKPdf	PKiKP	17 38 33.8	+0.1
PV15	Paradox Valley	118.19	42		PKPdf	17 38 33.4	-0.4
214A	Organ Pipe Nat	118.20	50	P	PKiKP	17 38 34.8	+1.1
	baz=296						
214A	Organ Pipe Nat	118.20	50	PKPdf	PKPdf	17 38 33.6	-0.1
PV01	Paradox Valley	118.24	42		PKPdf	17 38 33.7	-0.2
PHWY	Pilot Hill	118.44	37		PKPdf	17 38 34.2	0.0
SMCO	Snowmass	118.71	40		PKiKP	17 38 35.3	+0.2
AGMN	Agassiz Nation	118.77	26	P	PKPdf	17 38 34.1	-0.2
	baz=319						
AGMN	Agassiz Nation	118.77	26		PKPdf	17 38 33.9	-0.4
MVCO	Mesa Verde	118.78	43	P	PKiKP	17 38 35.5	+0.5
	baz=302,SNR=17						
MVCO	Mesa Verde	118.78	43	PKPdf	PKPdf	17 38 34.8	-0.2
W18A	Petrified Fore	118.99	45	P	PKiKP	17 38 36.7	+1.3
	baz=300,SNR=15						
W18A	Petrified Fore	118.99	45		PKiKP	17 38 35.9	+0.5
X18A	Snowflake	119.13	46		PKiKP	17 38 35.9	+0.2
ISCO	Idaho Springs	119.22	39	PKIKP	PKiKP	17 38 36.0	+0.1
ISCO	Idaho Springs	119.22	39	P	PKiKP	17 38 36.1	+0.1
	baz=306						
ISCO	Idaho Springs	119.22	39	PKPdf	PKiKP	17 38 36.0	+0.1
TUC	Tucson	119.58	49	PKIKP	PKiKP	17 38 37.1	+0.6
TUC	Tucson	119.58	49	P	PKiKP	17 38 37.4	+0.9
	baz=298						
TUC	Tucson	119.58	49	PKPdf	PKiKP	17 38 37.1	+0.6
S22A	4UR Ranch, Cre	119.61	41	P	PKiKP	17 38 37.2	+0.5
	baz=304,SNR=9.7						
S22A	4UR Ranch, Cre	119.61	41	PKPdf	PKiKP	17 38 37.1	+0.5
Q24A	Divide	120.00	39	P	PKiKP	17 38 37.7	+0.2
	baz=306						
Q24A	Divide	120.00	39		PKiKP	17 38 37.4	0.0
F33A	5 Mile Ranch,	120.39	28	PKPdf	PKiKP	17 38 37.7	+0.1
SDCO	Great Sand Dun	120.48	41	P	PKiKP	17 38 38.5	+0.1
	baz=305,SNR=20						
SDCO	Great Sand Dun	120.48	41	PKPdf	PKPdf	17 38 37.9	-0.3
OGNE	Ogallala	120.70	36	P	PKPdf	17 38 37.7	-0.7
	baz=310						
OGNE	Ogallala	120.70	36		PKPdf	17 38 37.9	-0.5
EYMN	Ely	120.89	24	P	PKiKP	17 38 38.5	0.0
	baz=323						
HSIG		120.93	52		PKiKP	17 38 39.2	+0.1
KOWA	Kowa	121.13	290	PKPdf	PKPdf	17 38 38.6	-1.1
319A	Douglas	121.14	49	PKPdf	PKiKP	17 38 39.7	+0.1
ANMO	Albuquerque	121.38	44	PKKPbc	PKKPbc	17 48 40.2	-1.4
	comp=Z,1.8nm,0.7s,baz=148,slow=9.9,SNR=5.5						
ANMO	Albuquerque	121.38	44	PKIKP	PKiKP	17 38 40.3	+0.2
ANMO	Albuquerque	121.38	44	P	PKiKP	17 38 40.6	+0.5
	baz=303						
ANMO	Albuquerque	121.38	44	PKPdf	PKiKP	17 38 40.3	+0.2
ANMO					PKKPbc	17 48 37.7	-3.9
K31A	O'Neill	121.43	33	PKPdf	PKPdf	17 38 39.2	-0.5
LENM	Lemitar	121.43	45		PKiKP	17 38 40.2	0.0
T25A	Trinidad	121.53	41	P	PKiKP	17 38 40.7	+0.3
	baz=306,SNR=20						
T25A	Trinidad	121.53	41	PKPdf	PKPdf	17 38 39.5	-0.8
KSCO	Kaye Shedlock’	121.55	38	P	PKPdf	17 38 39.9	-0.2
	baz=308						
KSCO	Kaye Shedlock’	121.55	38	PKPdf	PKPdf	17 38 39.8	-0.2
F36A	Milaca	121.66	27	PKPdf	PKiKP	17 38 40.0	-0.1
BNM	Barren Site	121.69	45	PKPdf	PKPdf	17 38 40.5	-0.2
121A	Cookes Peak, D	121.69	47	P	PKiKP	17 38 41.5	+0.7
	baz=300,SNR=18						
121A	Cookes Peak, D	121.69	47	PKPdf	PKPdf	17 38 40.6	0.0
ECSD	EROS Data Cent	121.77	30	P	PKPdf	17 38 40.1	-0.2
	baz=316,SNR=19						
ECSD	EROS Data Cent	121.77	30	PKPdf	PKPdf	17 38 39.7	-0.5
E38A	The Farm, Brul	121.94	25	PKPdf	PKPdf	17 38 40.1	-0.3
SPMN	Marine on St.	122.47	27	P	PKiKP	17 38 41.7	0.0
	baz=321						
SPMN	Marine on St.	122.47	27		PKiKP	17 38 41.7	0.0
BGNE	Belgrade	122.59	33	P	PKPdf	17 38 41.9	0.0
	baz=314,SNR=11						
BGNE	Belgrade	122.59	33	PKPdf	PKPdf	17 38 41.0	-0.9
D41A	Chassel	122.77	23	PKPdf	PKPdf	17 38 42.0	0.0
I37A	Lemond, Waseca	123.12	28	PKPdf	PKiKP	17 38 43.0	-0.1
L34A	Svendsen Farm,	123.15	32		PKPdf	17 38 42.8	-0.1
CBKS	Cedar Bluff	123.42	37	PKIKP	PKiKP	17 38 43.9	+0.1
CBKS	Cedar Bluff	123.42	37	P	PKPdf	17 38 43.4	-0.1
	baz=311						
CBKS	Cedar Bluff	123.42	37	PKPdf	PKiKP	17 38 43.9	+0.1
N33A	J Bar K, Exete	123.44	33		PKPdf	17 38 43.2	-0.3
KIC	Kosan Boka	123.54	281	*e*PKIKP	PKPdf	17 38 44.3	-0.1
	comp=Z,64nm,1.0s						
G40A	Rib Lake	123.57	25		PKPdf	17 38 43.0	-0.6
DBIC	Dimbokro	123.60	281	PKP	PKPdf	17 38 43.7	-0.8
	comp=Z,30nm,1.0s,baz=55,slow=2.4,SNR=21						
MATQ	Matagami	123.77	14	P	PKPdf	17 38 43.4	-0.4
	baz=339						
TIC	Toumodi	123.77	281	*e*PKIKP	PKPdf	17 38 44.7	-0.2
LIC	Lamto	123.85	281	*e*PKIKP	PKPdf	17 38 44.8	-0.2
	comp=Z,125nm,1.2s						
MNTX	Cornudas Mount	123.86	47	P	PKiKP	17 38 44.9	0.0
	baz=302,SNR=32						
MNTX	Cornudas Mount	123.86	47	PKPdf	PKPdf	17 38 44.2	-0.4
E43A	Lone Tree Farm	123.94	22	PKPdf	PKiKP	17 38 45.0	+0.4
R32A	Long Quarter,	124.28	36	PKPdf	PKPdf	17 38 44.8	-0.4
N35A	Tabor	124.33	32		PKPdf	17 38 44.5	-0.7
GDL2	Guadalupe Moun	124.33	46		PKPdf	17 38 45.7	0.0
MSTX	Muleshoe	124.45	43	P	PKiKP	17 38 46.6	+0.5
	baz=305,SNR=19						
MSTX	Muleshoe	124.45	43	PKPdf	PKPdf	17 38 45.8	0.0
K38A	Parkersburg	124.46	29		PKPdf	17 38 44.6	-0.8
I40A	Norwalk	124.49	26		PKPdf	17 38 45.1	-0.3
LSQQ	Lebel-sur-Quev	124.58	13	P	PKiKP	17 38 45.7	0.0
	baz=340						
AMTX	Amarillo	124.65	41	P	PKiKP	17 38 46.6	+0.1
	baz=307						
AMTX	Amarillo	124.65	41	PKPdf	PKiKP	17 38 46.4	-0.1
SCIA	State Center	124.80	30	P	PKiKP	17 38 46.8	+0.4
	baz=319						
SCIA	State Center	124.80	30		PKPdf	17 38 45.0	-1.1
E46A	Sault Ste Mari	124.91	20	PKPdf	PKPdf	17 38 45.4	-0.7
KSU1	Kansas State U	125.03	34	P	PKPdf	17 38 46.3	-0.3
	baz=314						
KSU1	Kansas State U	125.03	34	PKPdf	PKPdf	17 38 46.0	-0.6
I42A	Draeger Farm,	125.23	25	PKPdf	PKPdf	17 38 46.7	-0.1
VLDQ	Val d'Or	125.35	14	PKPdf	PKPdf	17 38 46.1	-0.8
JFWS	Jewell Farm	125.43	27	PKIKP	PKPdf	17 38 46.3	-1.0
JFWS	Jewell Farm	125.43	27	P	PKPdf	17 38 46.7	-0.6
	baz=322						
JFWS	Jewell Farm	125.43	27	PKPdf	PKPdf	17 38 46.3	-1.0
U32A	Winter Ranch,	125.44	38		PKiKP	17 38 47.7	-0.1
KAN10	Anthony SW Sta	125.50	37		PKiKP	17 38 48.2	+0.3
KAN08	Anthony NE Sta	125.51	37		PKiKP	17 38 48.7	+0.7
N38A	Joes South For	125.62	31		PKPdf	17 38 47.8	+0.1
L40A	Anamosa	125.64	28		PKPdf	17 38 47.0	-0.7
KAN01	Argonia South	125.69	37		PKPdf	17 38 47.8	-0.1
KAN13	South Haven SW	125.95	37		PKPdf	17 38 48.4	0.0
CROK	Carrier	125.98	38	PKPdf	PKiKP	17 38 49.1	+0.2
HPIG		126.03	52	PKPdf	PKPdf	17 38 48.8	-0.3
P38A	Dawn	126.33	32	PKPdf	PKPdf	17 38 48.0	-1.0
TX31	Lajitas Ar. Si	126.36	48	PKPdf	PKPdf	17 38 49.5	-0.1
TX32	Lajitas Array	126.36	48	PKPdf	PKPdf	17 38 49.4	-0.1
TXAR	Lajitas Array	126.36	48	PKP	PKPdf	17 38 48.2	-1.4
	comp=Z,16nm,1.0s,baz=259,slow=1.3,SNR=52						
TXAR				PKKPab	PKKPab	17 48 20.0	-0.9
	comp=Z,0.7nm,0.8s,baz=103,slow=4.0,SNR=4.2						
L42A	Oliver, Polo	126.41	27	PKPdf	PKPdf	17 38 48.9	-0.2
K43A	Burlington	126.44	26		PKiKP	17 38 49.8	+0.2
T35A	Sooner Cattle	126.58	36	PKPdf	PKPdf	17 38 49.6	-0.1
WMOK	Wichita Mounta	126.62	40	PKIKP	PKPdf	17 38 48.2	-1.6
WMOK	Wichita Mounta	126.62	40	P	PKPdf	17 38 49.6	-0.2
	baz=309,SNR=23						
WMOK	Wichita Mounta	126.62	40	PKPdf	PKPdf	17 38 48.2	-1.6
BCOK	Bluff Creek, N	126.76	38		PKPdf	17 38 50.2	+0.2
OK029	Liberty Lake	126.77	38		PKiKP	17 38 50.3	-0.2
N41A	Harden Midland	126.87	29	PKPdf	PKPdf	17 38 49.8	-0.3
D56A	ZEC Mazanza, M	126.97	12	P	PKPdf	17 38 48.8	-1.2
	baz=342						
QUOK	Quay	126.97	37		PKiKP	17 38 50.9	0.0
OK025	Westminster Rd	126.98	38		PKPdf	17 38 50.7	+0.2
OK031	S. Brethren Rd	127.04	37		PKiKP	17 38 50.9	-0.1
LATQ	La Tuque	127.04	11	P	PKPdf	17 38 49.7	-0.5
	baz=344,SNR=7.6						
LATQ	La Tuque	127.04	11	PKPdf	PKPdf	17 38 50.3	+0.2
L44A	Lake County Fo	127.05	26	P	PKiKP	17 38 50.9	0.0
	baz=325						
OK030	Cody Creek RV	127.09	37		PKPdf	17 38 50.4	-0.2
FNO	Franklin	127.15	38		PKPdf	17 38 50.7	-0.1
P40A	Paris	127.17	31		PKPdf	17 38 50.9	+0.2
ALGO	Algonquin Park	127.20	16	P	PKPdf	17 38 50.6	+0.1
	baz=338						
D58A	Chemin du LacG	127.30	11	P	PKPdf	17 38 50.9	+0.2
	baz=344,SNR=8.2						
ABTX	Abilene, Hawle	127.36	42	P	PKiKP	17 38 52.6	+0.7
	baz=307,SNR=7.8						
ABTX	Abilene, Hawle	127.36	42	PKPdf	PKiKP	17 38 51.9	+0.1
HQIL	Hanson Quary C	127.38	26	PKPdf	PKPdf	17 38 51.2	+0.2
E56A	St. Veronique	127.39	13	P	PKiKP	17 38 51.3	-0.1
	baz=341						
J47A	Sunmer	127.42	23		PKiKP	17 38 51.4	-0.2
W35A	Tecumseh	127.55	38	PKPdf	PKPdf	17 38 51.5	-0.1
M44A	Midewin, Midew	127.63	26	PKPdf	PKiKP	17 38 52.0	0.0
D61A	St Aubert, Com	127.65	9	P	PKPdf	17 38 51.3	0.0
	baz=348						
TUL1	Leonard	127.69	37	P	PKiKP	17 38 53.2	+0.9
	baz=313						
TUL1	Leonard	127.69	37		PKiKP	17 38 52.5	+0.1
G54A	Lake Saint Pet	127.70	16	P	PKiKP	17 38 52.0	-0.1
	baz=337						
HDIL	Hopedale	127.73	28	P	PKiKP	17 38 52.3	0.0
	baz=322						
HDIL	Hopedale	127.73	28		PKiKP	17 38 52.2	0.0
TRQ	Mont Tremblant	127.80	13		PKiKP	17 38 52.4	0.0
D60A	Saint Jean D’O	127.81	9	P	PKPdf	17 38 51.8	+0.2
	baz=346						
S39A	Bolivar	127.85	33	PKPdf	PKPdf	17 38 51.1	-0.9
E58A	La Victoria	127.92	11	P	PKiKP	17 38 52.3	-0.1
	baz=344						
D62A	Allapoint, All	127.93	8	P	PKiKP	17 38 52.4	0.0
	baz=349						
SADO	Sadowa	127.98	17	PKPdf	PKPdf	17 38 52.2	+0.2
BATG	Bathurst New B	128.06	5	PKPdf	PKiKP	17 38 52.9	+0.1
U38A	Gravette	128.15	35		PKPdf	17 38 51.9	-0.7
I51A	Listowel	128.27	19	P	PKPdf	17 38 52.5	-0.2
	baz=333						
H53A	Bobcaygeon	128.32	17	P	PKPdf	17 38 53.0	+0.3
	baz=336						
P43A	Skaggs, Pawnee	128.34	29	PKPdf	PKPdf	17 38 53.2	+0.3
E61A	Lac Etchemin	128.35	9	P	PKiKP	17 38 53.7	+0.3
	baz=347						
Z35A	Perchaven, San	128.49	40		PKPdf	17 38 53.5	+0.1
HHAR	Hobbs	128.52	35		PKPdf	17 38 53.1	-0.3
JCT	Junction City	128.52	45	PKIKP	PKPdf	17 38 53.7	+0.1
JCT				MLR	MLR		
	comp=Z,500nm,20.0s						
JCT	Junction City	128.52	45	P	PKiKP	17 38 54.1	-0.1
	baz=306,SNR=29						
JCT	Junction City	128.52	45	PKPdf	PKPdf	17 38 53.7	+0.1
F60A	Warwick	128.56	10	P	PKPdf	17 38 52.9	-0.2
	baz=345						
E63A	Oxbow	128.66	7	P	PKiKP	17 38 53.8	-0.1
	baz=350						
L48A	N Adams	128.67	23		PKPdf	17 38 53.1	-0.4
CCM	Cathedral Cave	128.69	31	PKIKP	PKPdf	17 38 53.1	-0.5
CCM	Cathedral Cave	128.69	31	P	PKiKP	17 38 54.0	-0.3
	baz=319						
CCM	Cathedral Cave	128.69	31	PKPdf	PKPdf	17 38 53.1	-0.5
F61A	St Evariste	128.72	10	P	PKPdf	17 38 53.6	+0.2
	baz=346						
E64A	Bridgewater	128.73	7	P	PKiKP	17 38 53.8	-0.3
	baz=350						
G57A	Newington	128.76	13	P	PKiKP	17 38 54.5	+0.4
	baz=341						
MGMO	Mountain Grove	128.82	33		PKPdf	17 38 53.8	-0.2
X37A	Clayton	128.84	38	PKPdf	PKPdf	17 38 53.1	-0.9
SFIN	Lafayette	128.87	26	P	PKiKP	17 38 54.9	+0.3
	baz=325						
SFIN	Lafayette	128.87	26		PKPdf	17 38 52.8	-1.1
N47A	Urbana	129.06	25		PKPdf	17 38 54.3	+0.1
U40A	Yellville	129.08	34	P	PKiKP	17 38 55.6	+0.5
	baz=316,SNR=27						
U40A	Yellville	129.08	34	PKPdf	PKPdf	17 38 53.0	-1.4
Q44A	Meyer Farm, Va	129.16	29	PKPdf	PKiKP	17 38 55.0	-0.2
WHTX	Lake Whitney,	129.21	42	P	PKiKP	17 38 56.8	+1.3
	baz=309,SNR=11						
WHTX	Lake Whitney,	129.21	42	PKPdf	PKPdf	17 38 54.2	-0.6
F63A	Nahmakanta, Br	129.27	8	P	PKiKP	17 38 55.9	+0.6
	baz=349						
LONY	Lake Ozonia	129.31	13	P	PKiKP	17 38 55.7	+0.4
	baz=341						
W39A	Magazine	129.37	36	P	PKiKP	17 38 56.4	+0.7
	baz=315,SNR=7.6						
W39A	Magazine	129.37	36		PKPdf	17 38 54.5	-0.5
P46A	Rosedale	129.44	27		PKPdf	17 38 55.3	+0.3
H59A	Cadyville	129.48	12	P	PKiKP	17 38 56.0	+0.3
	baz=343						
T42A	Van Buren	129.54	32		PKPdf	17 38 55.2	0.0
H58A	Gabriels	129.59	13	P	PKiKP	17 38 56.2	+0.3
	baz=342						
N49A	Columbus Grove	129.64	24	PKPdf	PKPdf	17 38 55.7	+0.3
M50A	Fremont	129.67	22		PKPdf	17 38 55.5	+0.1
I57A	Carthage	129.70	14	P	PKiKP	17 38 56.1	0.0
	baz=340						
G64A	Maxfield	129.76	8	P	PKiKP	17 38 56.2	0.0
	baz=349						
G63A	Kingsbury	129.77	9	P	PKiKP	17 38 56.8	+0.6
	baz=348						
FCAR	Ozark Folk Cen	129.82	34		PKPdf	17 38 55.1	-0.7
435B	Jarrell	129.87	43	P	PKiKP	17 38 58.6	+1.8
	baz=308						
MIAR	Mount Ida	129.94	36	PKIKP	PKPdf	17 38 55.6	-0.5
MIAR	Mount Ida	129.94	36	P	PKiKP	17 38 58.4	+1.6
	baz=314						
MIAR	Mount Ida	129.94	36	PKPdf	PKPdf	17 38 55.5	-0.5
H61A	Lyndonville	129.95	11	P	PKiKP	17 38 56.8	+0.2
	baz=345						
S44A	Carbondale	129.99	30		PKPdf	17 38 55.9	-0.1
SIUC	Southern Illin	129.99	30		PKPdf	17 38 55.8	-0.2
833A	Chaparral WMA,	130.05	47	P	PKiKP	17 38 58.6	+1.3
	baz=305						
PBMO	Poplar Bluff	130.08	32		PKPdf	17 38 55.8	-0.4
I58A	Old Forge	130.10	14	P	PKiKP	17 38 57.8	+0.8
	baz=341						
BLO	Bloomington	130.11	27	PKIKP	PKPdf	17 38 55.9	-0.4
BLO	Bloomington	130.11	27		PKPdf	17 38 55.9	-0.4
WHAR	Wooly Hollow	130.16	35	PKPdf	PKPdf	17 38 56.5	+0.1
L53A	Girard	130.18	20	P	PKiKP	17 38 57.5	+0.4
	baz=334						
O49A	Covington	130.20	24		PKPdf	17 38 56.8	+0.3
LCAR	Lake Charles	130.22	33		PKPdf	17 38 56.2	-0.3
I59A	Olmsteadville	130.25	13	P	PKiKP	17 38 57.7	+0.4
	baz=342						
W41B	Gary Mavity, V	130.27	35	P	PKiKP	17 38 58.0	+0.5
	baz=316						
W41B	Gary Mavity, V	130.27	35		PKiKP	17 38 57.4	-0.2
I60A	Shoreham	130.33	12	P	PKiKP	17 38 57.8	+0.5
	baz=343						
N51A	Ashland	130.34	22	PKPdf	PKPdf	17 38 55.2	-1.5
P48A	Milroy	130.35	26	PKPdf	PKPdf	17 38 56.1	-0.7
H65A	Eastbrook	130.38	8	P	PKiKP	17 38 58.2	+0.8
	baz=350						
J59A	Piesco	130.42	14	P	PKiKP	17 38 58.4	+0.8
	baz=341,SNR=6.0						
J59A	Piesco	130.42	14		PKiKP	17 38 58.2	+0.5
ZAIG	Zacatecas	130.48	55	PKPdf	PKPdf	17 38 57.7	-0.1
M53A	WI Miller and	130.49	20	P	PKiKP	17 38 57.9	+0.1
	baz=333						
M53A	WI Miller and	130.49	20		PKPdf	17 38 57.2	+0.2
PARMO	Parma	130.52	31		PKPdf	17 38 56.2	-0.9
P49A	Miami Univ. Ec	130.59	25	P	PKiKP	17 38 58.0	-0.1
	baz=327						
P49A	Miami Univ. Ec	130.59	25	PKPdf	PKPdf	17 38 56.2	-1.0
ACSO	Alum Creek Sta	130.70	23	P	PKiKP	17 38 58.5	+0.2
	baz=330,SNR=9.7						
ACSO	Alum Creek Sta	130.70	23		PKPdf	17 38 57.4	0.0
WCI	Wyandotte Cave	130.98	27	PKIKP	PKiKP	17 38 58.6	-0.2
WCI	Wyandotte Cave	130.98	27	P	PKiKP	17 38 60.0	+1.1
	baz=325						
WCI	Wyandotte Cave	130.98	27	PKPdf	PKiKP	17 38 58.6	-0.2
N53A	Lisbon	131.00	21		PKPdf	17 38 57.6	-0.3
N54A	Moraine State	131.15	20	P	PKiKP	17 38 59.8	+0.6
	baz=334						
O52A	Adamsville	131.24	22		PKPdf	17 38 58.3	-0.2
M56A	Emporium	131.27	18	PKPdf	PKiKP	17 38 59.0	-0.4
P51A	Williamsport	131.32	24		PKiKP	17 38 59.5	0.0
O53A	New Philadelph	131.35	21	P	PKiKP	17 38 59.9	+0.4
	baz=332						
R49A	Shelbyville	131.43	26		PKiKP	17 38 59.6	-0.2
P52A	Corning	131.55	23	P	PKiKP	17 39 00.4	+0.5
	baz=330,SNR=6.8						
P52A	Corning	131.55	23		PKPdf	17 38 58.8	-0.2
HKT	Hockley	131.57	42	PKIKP	PKiKP	17 39 00.2	0.0
HKT	Hockley	131.57	42	PKPdf	PKiKP	17 39 00.2	0.0
Q51A	Peebles	131.59	24		PKPdf	17 38 58.6	-0.5
O54A	Avella	131.71	21	PKPdf	PKPdf	17 38 59.1	-0.3
R50A	Paris	131.81	26		PKPdf	17 38 58.5	-1.0
WVT	Waverly	131.92	30	PKIKP	PKPdf	17 38 58.9	-0.9
WVT	Waverly	131.92	30	P	PKPdf	17 38 59.8	0.0
	baz=322						
WVT	Waverly	131.92	30	PKPdf	PKPdf	17 38 58.9	-0.9
P53A	Whipple	131.96	22	PKPdf	PKPdf	17 38 59.9	+0.1
W45A	Hickory Valley	131.97	32		PKPdf	17 38 60.0	0.0
Q52A	Bidwell	132.08	23		PKPdf	17 39 00.0	0.0
O56A	Blue Knob Stat	132.25	19		PKPdf	17 39 00.7	+0.3
OXF	Oxford	132.33	33	PKIKP	PKPdf	17 39 00.8	+0.2
OXF	Oxford	132.33	33	P	PKPdf	17 39 01.1	+0.5
	baz=319						
OXF	Oxford	132.33	33	PKPdf	PKPdf	17 39 00.8	+0.2
T50A	Nancy	132.63	27	PKPdf	PKPdf	17 39 00.5	-0.7
S51A	Beattyville	132.66	25		PKPpre	17 38 51.6	
PLAL	Pickwick Lake	132.68	31	PKPdf	PKPdf	17 39 00.2	-1.1
CLTN	Cedars of Leba	132.69	29	PKPdf	PKPdf	17 39 00.7	-0.6
V48A	Smith Brothers	132.73	30		PKPdf	17 39 00.6	-0.7
BRNJ	Basking Ridge	133.03	15	PKPdf	PKPdf	17 39 01.4	-0.3
S54A	Dingess, Beckl	133.46	23	P	PKPdf	17 39 03.3	+0.6
	baz=330						
P60A	Greenville	133.56	16		PKPpre	17 38 50.7	
SWET	Sewanee	133.58	29		PKPdf	17 39 02.5	-0.5
TZTN	Tazewell	133.60	26	P	PKiKP	17 39 03.8	-0.5
	baz=327						
X48A	Hartselle	133.63	31	PKPdf	PKPdf	17 39 02.4	-0.7
R56A	Bull Pasture M	133.64	21	P	PKiKP	17 39 04.0	-0.4
	baz=333						
Q58A	Fox Den Farm,	133.74	19	P	PKiKP	17 39 04.0	-0.4
	baz=336						
V51A	Loudon	133.85	27	PKPdf	PKPdf	17 39 03.6	+0.1
W50A	Signal Mountai	133.89	29		PKPpre	17 38 49.3	
R57A	Stanardsville	134.04	20	P	PKiKP	17 39 06.0	+0.9
	baz=334						
CPCT	Cooper Cave	134.06	28		PKPpre	17 38 51.0	
V52A	Sevierville	134.16	27		PKPdf	17 39 04.5	+0.4
TKL	Tuckaleechee C	134.24	27	PKIKP	PKPdf	17 39 03.5	-0.7
TKL	Tuckaleechee C	134.24	27	PKPdf	PKPdf	17 39 03.5	-0.7
BLA	Blacksburg	134.32	23	PKIKP	PKPdf	17 39 02.6	-1.8
BLA	Blacksburg	134.32	23	P	PKPdf	17 39 04.5	+0.2
	baz=331						
BLA	Blacksburg	134.32	23		PKPdf	17 39 02.5	-1.8
Y49A	Blount Mountai	134.42	31	PKPdf	PKPdf	17 39 04.5	-0.1
R58B	Mineral	134.56	20	P	PKiKP	17 39 05.5	-0.6
	baz=335						
R58B	Mineral	134.56	20		PKPdf	17 39 05.0	+0.3
T56A	Rocky Mt	134.62	22	P	PKPdf	17 39 05.4	+0.6
	baz=332						
W52A	Murphy	134.63	28		PKPdf	17 39 05.0	0.0
V53A	Saluda	134.66	26		PKPdf	17 39 05.5	+0.4
LRAL	Lakeview Retre	134.75	32	P	PKiKP	17 39 06.0	-0.7
	baz=321						
LRAL	Lakeview Retre	134.75	32	PKPdf	PKPdf	17 39 04.9	-0.3
JSRW	J. Sargeant Re	134.80	20		PKPdf	17 39 05.5	+0.4
S58A	Poland Farm, P	134.82	20	P	PKiKP	17 39 06.3	-0.4
	baz=335						
S59A	Mechanicsville	134.94	19	P	PKiKP	17 39 06.7	-0.2
	baz=336						
T57A	Hurt	134.94	22		PKPdf	17 39 05.9	+0.4
BG3	Lake Jocassee	135.17	27		PKPdf	17 39 04.8	-1.2
S60A	Water View	135.19	19	P	PKiKP	17 39 07.8	+0.4
	baz=336						
T58A	Grand View Acr	135.25	21	P	PKiKP	17 39 06.8	-0.7
	baz=334						
U57A	Blanch	135.41	22	P	PKPdf	17 39 06.8	+0.4
	baz=332						
Z51A	Franklin	135.47	30		PKPdf	17 39 06.6	+0.1
V56A	Mocksville	135.51	24	P	PKiKP	17 39 07.4	-0.7
	baz=331						
T59A	Double "B" Far	135.57	20	P	PKPdf	17 39 06.9	+0.3
	baz=335						
T59A	Double "B" Far	135.57	20	PKPdf	PKPdf	17 39 07.2	+0.6
Y52A	Lilburn	135.58	29	PKPdf	PKPdf	17 39 07.1	+0.3
V57A	Coltrane Farms	135.72	23	P	PKPdf	17 39 07.3	+0.4
	baz=332						
U58A	Oxford	135.74	21	P	PKiKP	17 39 08.6	+0.1
	baz=333						
KMSC	Kings Mountain	135.74	25	P	PKiKP	17 39 08.2	-0.4
	baz=329						
KMSC	Kings Mountain	135.74	25		PKPdf	17 39 07.3	+0.3
PAULI	Pauline	135.81	26	PKPdf	PKPdf	17 39 07.5	+0.3
250A	Grady	135.96	32		PKPdf	17 39 08.1	+0.6
HODGE	Hodges	136.11	27		PKPdf	17 39 07.6	-0.1
BRAL	Brewton	136.15	34	P	PKiKP	17 39 10.6	+1.1

	baz=320						
TLIG	Tlapa	136.20	59	PKPdf	PKPdf	17 39 08.2	-0.3
152A	Waverly Hall	136.22	30		PKPdf	17 39 08.8	+0.8
GOGA	Godfrey	136.23	29	P	PKiKP	17 39 10.0	+0.3
	baz=326						
W57A	Gilead	136.28	24	P	PKiKP	17 39 09.8	+0.1
	baz=331						
BIRD	Birdtown, Kers	136.53	24		PKPdf	17 39 08.0	-0.5
V61A	Roper	136.97	20	P	PKiKP	17 39 11.3	+0.3
	baz=336						
LL02	Futaleuf	140.24	167	*e*P	PKPdf	17 39 16.0	+1.0
PLCA	Paso Flores	142.87	167	PKP	PKPdf	17 39 18.1	-1.9
	comp=Z,19nm,1.2s,baz=302,slow=1.9,SNR=12						
PLCA	Paso Flores	142.87	167	PKIKP	PKPdf	17 39 18.5	-1.5
PLCA	Paso Flores	142.87	167	PKPdf	PKPdf	17 39 18.4	-1.5
PLCA	Paso Flores	142.87	167	*e*P	PKPdf	17 39 21.2	+1.3
TEIG	Tepich	142.99	47	PKPdf	PKPdf	17 39 19.5	-1.1
TEIG	Tepich	142.99	47	*e*P	PKPdf	17 39 19.1	-1.5
PETF	Flores	143.72	53		PKPbc	17 39 20.6	+1.2
ESQI	Esquipulas	145.41	56		PKPbc	17 39 24.4	-0.5
BI03	Tigo	145.85	162	*e*P	PKPdf	17 39 25.3	+0.2
BI03	Tigo	145.85	162	IAMs_20	IAMs_20	18 28 47.5	
	comp=Z,317nm,21.0s						
VA04	Juan Fernndez	146.33	151		PKPdf	17 39 26.4	+0.4
BI02	San Fabin de	146.54	164	*e*P	PKPbc	17 39 27.6	-0.3
BI02	San Fabin de	146.54	164	PKPdf	PKPbc	17 39 27.3	-0.5
BO02	Sierra Bellavi	148.43	163	*e*P	PKPdf	17 39 30.9	+1.3
BO02	Sierra Bellavi	148.43	163	PKPdf	PKPdf	17 39 30.2	+0.6
FSCY	Frank Sound, G	148.51	40		PKPdf	17 39 30.9	+0.9
LCCY	Blossom Villag	148.95	38		PKPdf	17 39 29.8	-0.9
CBCY	The Bluff, Cay	149.09	38		PKPdf	17 39 31.8	+0.9
MT09	Talagante	149.32	162	*e*P	PKPdf	17 39 29.8	-1.3
LMEL	Las Melosas	149.48	164	*e*P	PKPbc	17 39 35.5	-0.4
MT02	Curacav	149.75	162		PKPdf	17 39 31.9	+0.2
MT05	Renca	149.75	162		PKPdf	17 39 30.6	-1.2
PEL	Peldehue	150.00	162	*e*P	PKPbc	17 39 36.7	-0.3
PEL	Peldehue	150.00	162	PKIKP	PKPbc	17 39 36.5	-0.6
PEL	Peldehue	150.00	162		PKPbc	17 39 36.5	-0.6
ROC1	El Roble	150.05	162		PKPbc	17 39 36.6	-0.9
ROCH	El Roble	150.05	162	*e*P	PKPdf	17 39 33.2	+0.8
ROCH				*e*P	PKPbc	17 39 35.0	-2.4
ACON	Acoyapa	150.21	56		PKPdf	17 39 32.9	0.0
VA03	San Esteban	150.39	162		PKPdf	17 39 33.8	+1.0
VA03				IAMs_20	IAMs_20	18 44 19.6	
	comp=Z,399nm,22.0s						
JTS	Las Juntas de	151.26	59	PKIKP	PKPdf	17 39 34.0	-0.5
JTS	Las Juntas de	151.26	59	PKPdf	PKPdf	17 39 34.0	-0.5
GTBY	Guantanamo Bay	151.55	30	PKPdf	PKPdf	17 39 35.1	+0.3
GTBY	Guantanamo Bay	151.55	30	*e*P	PKiKP	17 39 42.0	+0.6
MTDJ	Mount Denham	151.59	36	PKPdf	PKPdf	17 39 34.8	-0.2
MTDJ				IAMs_20	IAMs_20	18 41 28.2	
	comp=Z,386nm,21.0s						
ZON	Zonda	152.07	164	PKIKP	PKPdf	17 39 35.4	0.0
ZON	Zonda	152.07	164		PKPdf	17 39 35.4	0.0
CO03	El Pedregal	152.12	160	PKPdf	PKPdf	17 39 35.8	+0.3
PRVC	Isla de Provid	152.42	49	*e*P	PKPbc	17 39 43.0	-0.1
CO01	Juntas del Tor	153.12	161		PKPdf	17 39 37.8	+0.6
CPSB	Cacapava Do Su	153.57	193	*e*P	PKPdf	17 39 39.3	+1.8
LCO	Las Campanas	153.79	159	PKIKP	PKPdf	17 39 38.4	+0.2
LCO	Las Campanas	153.79	159	PKPdf	PKPdf	17 39 38.4	+0.2
AC05	El Transito	154.10	159		PKPdf	17 39 38.0	-0.5
SDDR	Presa de Saban	154.13	25	PKPdf	PKPdf	17 39 38.8	+0.1
DR12	Loma Pena Alta	155.04	21	PKPdf	PKPdf	17 39 40.9	+0.9
GO03	Copiap	155.25	158		PKPdf	17 39 40.7	+0.7
BCIP	Isla Barro Col	156.13	55	*e*P	PKPdf	17 39 40.6	-0.9
SJG	San Juan	156.66	14	PKIKP	PKPdf	17 39 41.8	-0.2
SJG	San Juan	156.66	14		PKPdf	17 39 41.8	-0.2
HUMP	Col San Antoni	156.71	14	PKPdf	PKPdf	17 39 42.1	0.0
ICMP	Isla Caja de M	156.78	15	PKPdf	PKPdf	17 39 42.2	+0.1
GO02	Mina Guanaco	157.69	157	PKPdf	PKPdf	17 39 43.1	-0.5
CPUP	Villa Florida	158.24	187	PKP	PKPdf	17 39 43.2	-0.6
	comp=Z,3.0nm,0.8s,baz=175,slow=4.2,SNR=4.9						
CPUP				PKPab	PKPab	17 40 18.3	+0.8
	comp=Z,19nm,0.9s,baz=164,slow=3.7,SNR=16						
CPUP	Villa Florida	158.24	187	PKPdf	PKPdf	17 39 43.8	0.0
SMRC	Santa Marta, M	159.02	42	*e*P	PKPdf	17 39 45.8	+0.7
SJCC	San Jacinto, C	159.26	46	*e*P	PKPdf	17 39 46.8	+1.4
PB15	IPOC Station P	159.48	155		PKPdf	17 39 45.1	-0.5
MOTC	Monteria, Cord	159.64	49	*e*P	PKPdf	17 39 46.8	+1.0
PB06	IPOC Station P	159.88	154		PKPdf	17 39 46.0	0.0
CRJC	Cerrejon, Guaj	159.99	39	*e*P	PKPdf	17 39 46.7	+0.4
BB19B	Bebedouro	160.10	214	*e*P	PKPdf	17 39 45.9	-0.3
LVC	Limon Verde	160.25	156	PKIKP	PKPdf	17 39 46.5	-0.2
LVC	Limon Verde	160.25	156	PKPdf	PKPdf	17 39 46.5	-0.2
LVC	Limon Verde	160.25	156	*e*P	PKPdf	17 39 46.5	-0.2
DBBC	Dabeiba	160.29	54	*e*P	PKPdf	17 39 47.5	+0.8
UREC	San Jos de Ur	160.39	51	*e*P	PKPdf	17 39 47.3	+0.6
PIZC	Pizarro, Choco	160.41	61	*e*P	PKPdf	17 39 46.4	-0.3
PB07	IPOC Station P	160.59	152		PKPdf	17 39 46.4	-0.5
FDF	Fort de France	160.74	3	PKIKP	PKPdf	17 39 47.4	+0.4
FDF	Fort de France	160.74	3	PKPdf	PKPdf	17 39 47.4	+0.4
SMLC	San Martn de	160.80	46	*e*P	PKPdf	17 39 46.5	-0.6
PB09	IPOC Station P	160.82	154		PKPdf	17 39 47.2	+0.1
MALC	Bahia Malaga	160.87	64	*e*P	PKPdf	17 39 48.9	+1.7
ZARC	Zaragoza, Cauc	161.07	51	*e*P	PKPdf	17 39 47.9	+0.5
CBOC	Ciudad Bolivar	161.10	57	*e*P	PKPdf	17 39 48.4	+0.8
OTAV	Otavalo	161.16	76	PKIKP	PKPdf	17 39 48.0	-0.1
OTAV	Otavalo	161.16	76	PKPdf	PKPdf	17 39 48.0	-0.1
OTAV	Otavalo	161.16	76	*e*P	PKPdf	17 39 49.0	+1.0
OTAV	Otavalo	161.16	76	*e*P	PKPdf	17 39 48.0	-0.1
JANB	Januaria	161.22	235	*e*P	PKPdf	17 39 48.8	+1.3
HELC	Santa Helena	161.32	55	*e*P	PKPdf	17 39 47.8	-0.3
PLMC	San Jos del P	161.37	60	*e*P	PKPdf	17 39 48.9	+1.1
OCAC	Ocana	161.73	46	*e*P	PKPdf	17 39 48.7	+0.4
YOTC	Yotoco, Valle	161.76	62	*e*P	PKPdf	17 39 48.4	+0.1
GCUF	Volcan Galeras	161.93	72	*e*P	PKPdf	17 39 50.4	+1.5
PTBC	PUERTO BERRIO,	161.97	52	*e*P	PKPdf	17 39 46.5	-1.9
NNA	Nana	162.01	115	PKIKP	PKPdf	17 39 47.6	-0.8
NNA	Nana	162.01	115	PKPdf	PKPdf	17 39 47.6	-0.8
RREF	El Recreo	162.17	58	*e*P	PKPdf	17 39 50.2	+0.8
BRRC	Barranca, Sant	162.19	49	*e*P	PKPdf	17 39 49.3	+0.7
NORC	Norcasia	162.21	55	*e*P	PKPdf	17 39 48.5	-0.1
PSGCX	Pisagua	162.26	148	PKPdf	PKPdf	17 39 48.5	0.0
IPMB	Ipameri, GO	162.27	221	*e*P	PKPdf	17 39 49.4	+0.9
PB08	IPOC Station P	162.30	151		PKPdf	17 39 49.5	+0.5
ANIL	Santa Ana	162.34	59	*e*P	PKPdf	17 39 49.7	+0.6
TOLC	Tolima	162.36	59	*e*P	PKPdf	17 39 48.8	-0.3
PCON	Cinco Dias	162.43	67	*e*P	PKPdf	17 39 51.0	+1.5
MARP	Paez Belalcaza	162.62	65	*e*P	PKPdf	17 39 50.4	+1.1
GO01	Chusmiza	162.68	150		PKPdf	17 39 49.3	-0.2
ORTC	Ortega, Tolima	162.76	61	*e*P	PKPdf	17 39 46.7	-2.5
PAMC	Pamplona, Colo	162.79	46	*e*P	PKPdf	17 39 50.0	+0.3
SPBC	San Pablo de B	162.81	54	*e*P	PKPdf	17 39 48.9	-0.4
BARC	Barichara	162.93	49	*e*P	PKPdf	17 39 49.6	0.0
MNMC	Minye Minye	162.93	148		PKPdf	17 39 49.8	+0.3
SDBA	SAO DESIDERIO	163.00	242	*e*P	PKPdf	17 39 50.3	+1.0
SDV	Santo Domingo	163.03	38	PKPab	PKPab	17 40 39.4	+0.4
	baz=314,slow=2.4						
SDV	Santo Domingo	163.03	38		PKPdf	17 39 48.4	-1.2
SDV	Santo Domingo	163.03	38	*e*P	PKPdf	17 39 49.9	+0.3
SDV	Santo Domingo	163.03	38	*e*P	PKPdf	17 39 50.0	+0.4
ROSC	El Rosal	163.07	56	PKP	PKPdf	17 39 49.6	-0.3
	comp=Z,29nm,0.8s,baz=132,slow=4.1,SNR=17						
ROSC	El Rosal	163.07	56	*e*P	PKPdf	17 39 51.0	+1.1
BETC	Betania	163.15	65	*e*P	PKPdf	17 39 50.8	+1.2
GARC	Garzon, Huila	163.31	66	*e*P	PKPdf	17 39 51.0	+1.0
RUSC	La Rusia	163.44	51	*e*P	PKPdf	17 39 50.5	+0.1
PB16	IPOC Station P	163.63	147		PKPdf	17 39 51.0	+0.4
CHIC	Chingaza	163.67	56	*e*P	PKPdf	17 39 50.8	+0.3
BDFB	Brasilia	163.76	227	PKP	PKPdf	17 39 50.1	0.0
	comp=Z,19nm,1.0s,baz=187,slow=3.2,SNR=17						
BDFB				PKPab	PKPab	17 40 42.7	+0.5
	comp=Z,38nm,1.1s,baz=85,slow=3.8,SNR=9.3						
BDFB	Brasilia	163.76	227		PKPdf	17 39 50.9	+0.7
VILC	Villavicencio,	163.99	57	*e*P	PKPdf	17 39 50.2	-0.3
MACC	Macarena, Meta	164.82	64	*e*P	PKPdf	17 39 51.1	0.0
PTGC	Puerto Gaitan,	165.22	54	*e*P	PKPdf	17 39 50.5	-0.9
ARAG	Araguaiana, MT	166.23	216	*e*P	PKPdf	17 39 53.9	+1.8
CZSB	Cruzeiro do Su	167.22	105	*e*P	PKPdf	17 39 53.3	+0.4
TMAB	Tom-Au,PA,Br	167.69	280	*e*P	PKPdf	17 39 53.9	+0.6
SNDB	Serra Nova Dou	168.54	230	*e*P	PKPdf	17 39 54.8	+1.0
SIV	San Ignacio	168.68	176	PKP	PKPdf	17 39 54.2	+0.4
	comp=Z,20nm,1.1s,baz=234,slow=0.8						
SIV				PKPab	PKPab	17 41 03.9	+0.5
	comp=Z,38nm,1.0s,baz=201,slow=4.3,SNR=16						
SIV				PP	PP	17 44 50.8	-0.2
	comp=Z,11nm,1.1s,baz=182,slow=5.5,SNR=12						
VILB	Vilhena	171.73	180	*e*P	PKPdf	17 39 57.8	+2.1
SAML	Samuel	174.80	146	PKP2	PKPab	17 41 31.2	+0.4
SAML						18 39 55.6	
SAML	Samuel	174.80	146		PKPdf	17 39 55.6	-1.2
SAML				PKPab	PKPab	17 41 31.1	+0.4
SAML	Samuel	174.80	146	*e*P	PKPdf	17 39 55.0	-1.8
SAML	Samuel	174.80	146	*e*P	PKPdf	17 39 57.8	+0.9
PTGA	Pitinga	176.12	356	PKP	PKPdf	17 39 57.1	-0.1
	comp=Z,12nm,1.0s,baz=53,slow=0.9,SNR=14						
PTGA				PKPab	PKPab	17 41 36.8	+0.3
	comp=Z,18nm,1.0s,baz=15,slow=5.7,SNR=12						
PTGA	Pitinga	176.12	356		PKPdf	17 39 55.8	-1.5
PTGA				PKPab	PKPab	17 41 36.0	-0.5

MAN 19 17:22:03.6, 14°.30N×120°.90E, h33^{km}, mb4.6, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LQP	Lukban	0.65	106⇑	*e*P	Pb	17 22 16.8	0.0
BALP	Baler	1.58	24	*e*P	Pn	17 22 30.2	+0.9
BALP				*e*S	Sn	17 22 48.6	+0.1
SMPP	San Manuel, Pa	1.85	354	*e*P	Pn	17 22 32.8	-0.3
SMPP				*e*S	Sn	17 22 43.0	-12
CAUP	Cauayan	2.78	19	*e*P	Pn	17 22 47.3	+1.5
CAUP				*e*S	Sn	17 23 13.5	-4.7
APYP	Conner	3.56	5	*e*P	Pn	17 22 55.9	-0.7

IDC 19 17:27:18.0±11.0, 1°.97N×127°.66E, h75^{km}±131^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.1/46, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=202.2km s-min=29.6km az=73.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.58	128	P	Pn	17 28 24.9	+0.1
	1.4nm,0.3s,baz=284,slow=18,SNR=5.9						
WRA	Warramunga Arr	22.74	164	P	P	17 32 12.7	-1.4
	2.2nm,0.8s,baz=342,slow=10,SNR=2.0						
ASAR	Alice Springs	26.20	167	P	P	17 32 46.4	+0.5
	0.5nm,0.5s,baz=350,slow=9.3,SNR=1.6						
H11S3	WAKE ISLAND Hy	41.62	64	T	T	18 20 29.2	
	baz=252,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	41.63	64	T	T	18 20 28.9	
	baz=252,slow=75,SNR=8.7						
H11S1	WAKE ISLAND Hy	41.63	64	T	T	18 20 30.4	
	baz=252,slow=75,SNR=5.6						
H11N1	WAKE ISLAND Hy	42.20	62	T	T	18 20 38.9	
	baz=255,slow=75						
H11N2	WAKE ISLAND Hy	42.21	62	T	T	18 20 39.4	
	baz=255,slow=75						
H11N3	WAKE ISLAND Hy	42.22	63	T	T	18 20 39.9	
	baz=255,slow=75						
MKAR	Makanchi Array	59.52	325	P	P	17 37 14.1	+0.6
	1.0nm,0.9s,baz=118,slow=8.3,SNR=3.1						

PRU 19 17:31:50.0±0.0, 51°.46N×16°.13E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.63	170	*e*Pg	Pg	17 32 02.0	0.0
KSP				*e*Sg	Sg	17 32 10.5	+0.4
CHVC	Chvalec	0.87	183	*e*PG	Pg	17 32 06.5	-0.2
CHVC				*e*SG	Sg	17 32 18.6	+0.6
OSTC	Ostas	0.91	177	*e*PG	Pg	17 32 07.5	+0.2
OSTC				*e*SG	Sg	17 32 19.3	+0.2
UPC	Upice	0.96	185	*e*PG	Pg	17 32 08.6	+0.3
UPC				*e*SG	Sg	17 32 20.8	+0.1
DPC	Dobruska-Polom	1.12	174	*e*PG	Pg	17 32 10.9	-0.5
DPC				*e*SG	Sg	17 32 25.2	-0.7
PVCC	Panska Ves	1.36	227	*e*PG	Pg	17 32 15.5	-0.5
PVCC				*e*SG	Sg	17 32 33.7	+0.1
	comp=Z,9.9nm,0.3s						
KRLC	Kraliky	1.45	163	*e*PG	Pn	17 32 16.7	-0.8
KRLC				*e*SG	Sg	17 32 35.9	-0.5
BRG	Berggiesshubel	1.50	248	Pg	Pn	17 32 17.2	-0.9
BRG				Sg	Sg	17 32 36.8	-1.3
BRG				Amp		17 32 40.4	
	comp=Z,4.6nm,0.4s						
BRG	Berggiesshubel	1.50	248	Pg	Pn	17 32 17.2	-0.9
BRG				Sg	Sg	17 32 36.8	-1.3
BRG				Amp		17 32 40.4	
	comp=Z,4.6nm,0.4s						
MORC	Moravsky Berou	1.91	151	*e*PN	Pn	17 32 23.0	-0.8
MORC				*e*SG	Sb	17 32 49.6	-0.5
NKC	Novy Kostel	2.64	244	*e*PG	Pb	17 32 39.1	+1.0
KHC	Kasperske Hory	2.85	216	*e*PN	Pn	17 32 36.1	-0.6
KHC				*e*PG	Pb	17 32 41.4	-0.3
KHC				*e*SG	Sg	17 33 20.9	-0.6

ANF 19 17:38:13.2±0.2, 40°.75N×76°.50W, h11^{km}±1^{km}, ML2.6/36, Error ellipse: s-maj=1.4km s-min=1.2km az=14.0, Pennsylvania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
N58A	Sunbury	0.19	299	P	Pg	17 38 17.1	-0.2
	baz=119,SNR=288						
N58A				S	Sg	17 38 20.1	0.0
	baz=119						
O59A	Robesonia	0.50	151	P	Pg	17 38 23.3	+0.4
	baz=332						
O59A				S	Sg	17 38 30.3	+0.8
	baz=332						
N59A	State Game Lan	0.58	73	P	Pg	17 38 24.1	-0.4
	baz=253,SNR=44						
N59A				S	Sg	17 38 32.7	+0.6
	baz=253						
M58A	Price's Panora	0.62	3	P	Pg	17 38 25.7	+0.4
	baz=183,SNR=7.4						
M58A				S	Sg	17 38 33.8	+0.3
	baz=183						
O58A	Lewisberry	0.70	207	S	Sb	17 38 37.0	-0.1
	baz=27						
M57A	Sunshine Farm,	0.76	321	S	Sg	17 38 37.7	0.0
	baz=141						
N57A	Milroy	0.80	271	S	Sb	17 38 40.2	+0.3
	baz=90						
O60A	Telford	0.94	117	P	Pg	17 38 31.3	0.0
	baz=298						
O60A				S	Sb	17 38 44.4	+0.5
	baz=298						
O57A	Amberson	1.02	239	P	Pn	17 38 33.2	-0.2
	baz=58,SNR=10						
O57A				S	Sn	17 38 47.2	-0.5
	baz=58						
SSPA	Standing Stone	1.06	264	P	Pb	17 38 33.3	-0.2
	baz=83						
SSPA				S	Sg	17 38 47.7	+0.3
	baz=83						
N60A	Cedar Hill Far	1.07	83	S	Sg	17 38 47.8	+0.1
	baz=264						
M59A	Waymart	1.13	45	P	Pn	17 38 35.6	+0.7
	baz=226						
P59A	Jarrettsville	1.14	177	S	Sb	17 38 49.5	-0.1
	baz=358						
P60A	Greenville	1.15	145	P	Pg	17 38 35.2	0.0
	baz=325						
P60A				S	Sg	17 38 50.1	-0.1
	baz=325						
L57A	Andrews Acres	1.28	348	P	Pg	17 38 38.1	+0.3
	baz=168						
L57A				S	Sb	17 38 53.8	+0.1
	baz=168						
L58A	Harry Jones Me	1.38	20	P	Pb	17 38 38.8	-0.3
	baz=201						
L58A				S	Sb	17 38 56.7	0.0
	baz=201						
P58A	Pank, Wackersv	1.40	206	S	Sg	17 38 58.4	+0.1
	baz=26						
M56A	Emporium	1.47	301	Pb	Pb	17 38 40.4	-0.1
	baz=120						
M56A				S	Sg	17 38 59.9	-0.6
	baz=120						
BINY	Binghamton	1.50	15	Pb	Pb	17 38 41.2	+0.1
	baz=195,SNR=28						
BINY				S	Sb	17 39 00.2	+0.2
	baz=195						
BINY	Binghamton	1.50	15	PKPdf	Sb	17 38 60.0	-0.1
M60A	Port Jervis	1.53	67	P	Pn	17 38 40.9	+0.5
	baz=248,SNR=13						
M60A				Sn	Sb	17 39 00.9	0.0
	baz=248						
M60A				Sg	Sg	17 39 03.8	+1.4
	baz=248						
L56A	Greenwood	1.60	330	Pb	Pb	17 38 42.9	+0.2
	baz=150						
L56A				Sb	Sg	17 39 04.7	+0.1
	baz=150						
O61A	Allentown	1.62	113	Sg	Sg	17 39 07.1	+1.7
	baz=294						
O56A	Blue Knob Stat	1.65	254	P	Pb	17 38 42.9	-0.7
	baz=72						
O56A				S	Sb	17 39 05.2	+0.8
	baz=72						
L59A	Walton	1.81	37	P	Pb	17 38 45.3	-1.0
	baz=218,SNR=18						
L59A				S	Sb	17 39 08.9	0.0
	baz=218						
K57A	Scipio Center	1.98	360	Pb	Pb	17 38 49.6	+0.4
	baz=180						
K57A				Sb	Sb	17 39 14.7	+0.8
	baz=180						
PAL	Palisades	1.98	82	Pb	Pb	17 38 48.7	-0.5
	baz=263						
PAL				Sb	Sb	17 39 14.7	+0.9
	baz=263						
Q58A	Fox Den Farm,	2.02	207	Sb	Sb	17 39 16.0	+1.0
	baz=26						
K56A	Middlesex	2.04	343	Pb	Pb	17 38 50.0	-0.3
	baz=162,SNR=8.1						
K56A				Sb	Sg	17 39 17.3	-1.5
	baz=162						
L60A	Shokan	2.11	53	Pb	Pb	17 38 51.1	-0.4
	baz=235,SNR=6.2						
L60A				Sb	Sb	17 39 18.9	+1.2
	baz=235						
P56A	Dayton Farm, R	2.18	236	Sb	Sb	17 39 21.0	+1.3
	baz=54						
Q57A	Strasburg	2.26	221	Pb	Pb	17 38 54.1	+0.2
	baz=40,SNR=6.5						
Q57A				Sb	Sg	17 39 24.3	-1.4
	baz=40						
K59A	Cooperstown	2.37	31	S	Sb	17 39 23.5	-1.6
	baz=212						
J56A	Wolcott	2.54	354	Sb	Sb	17 39 31.2	+1.3
	baz=174						
R59A	King George, V	2.59	191	S	Sb	17 39 29.4	-1.9
	baz=10						
CBN	Corbin Frederi	2.63	195	S	Sn	17 39 28.6	+1.2
	baz=15						
L61A	Hillsdale 1, H	2.64	56	Pb	Pb	17 38 60.0	-0.5
	baz=238						
L61A				Sb	Sb	17 39 34.2	+1.3
	baz=238						
Q56A	Snyder Ridge,	2.68	231	Sb	Sb	17 39 35.6	+1.6
	baz=50						

IDC 19 18:08:46.7±7.6, 7°.46N×93°.80E, h0^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.3/43, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=152.8km s-min=70.4km az=143.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.03	24	Pn	Pn	18 11 39.6	+0.1
	0.1nm,0.3s,baz=214,slow=14,SNR=4.7						
H08S3	Diego Garcia H	26.00	235	T	T	18 41 03.7	
	baz=55,slow=76,SNR=27						
H08S2	Diego Garcia H	26.01	235	T	T	18 41 01.9	
	baz=55,slow=76,SNR=35						
H08S1	Diego Carcia H	26.02	235	T	T	18 41 05.1	
	baz=55,slow=76,SNR=17						
MKAR	Makanchi Array	40.42	348	P	P	18 16 26.1	-0.6
	0.5nm,0.5s,baz=162,slow=8.2,SNR=14						
KURBB	Kurchatov Arra	44.87	346	P	P	18 17 02.8	0.0
	0.8nm,0.5s,baz=171,slow=7.2,SNR=13						
ZALV	Zalesovo Beam	46.92	353	P	P	18 17 19.3	+0.3
	0.5nm,0.3s,baz=188,slow=8.7,SNR=2.5						
FINES	FINESS Array B	72.92	332	P	P	18 20 17.7	+0.1
	1.8nm,0.9s,baz=103,slow=17,SNR=3.7						

IDC 19 18:27:55.0±3.1, 6°.06S×128°.48E, h0^{km}, mb3.2/1, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=313.0km s-min=32.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.93	158	Pn	Pn	18 31 26.9	-0.6
	0.3nm,0.3s,baz=334,slow=13,SNR=7.3						
WRA				Sn	Sn	18 33 59.1	-15
	0.3nm,0.3s,baz=338,slow=23,SNR=4.1						
ASAR	Alice Springs	18.27	164	P	Pn	18 32 10.2	0.0
	0.2nm,0.3s,baz=347,slow=10,SNR=32						
ASAR				S	Sn	18 35 23.0	-12
	0.1nm,0.3s,baz=0.6,slow=27,SNR=2.9						
MKAR	Makanchi Array	66.62	327	P	P	18 38 47.4	+0.1
	0.1nm,0.5s,baz=114,slow=7.1,SNR=2.1						

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*IDC **19** 18:35:22.5±2.4, 57°.45S×26°.73W, h129^{km}±21^{km}, mb4.2/11, mb1 4.2/12, mb1mx4.1/19, mbtmp4.5/12, Error ellipse: s-maj=17.7km s-min=14.0km az=72.0*

*NEIC **19** 18:35:23.0±1.1, 57°.5S±0°.1×26°.7W±0°.2, h138^{km}±3^{km}, mb4.5/13, Error ellipse: s-maj=20.1km s-min=15.4km az=222.0*

ISC 19 18:35:22.9±0.5, 57°.65S±0°.07×26°.58W±0°.10, h141^{km}, n44, σ2^{s}.34/46, mb4.4/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.51	297	Pn	Pn	18 36 55.6	-0.5
VNA1	Neumayer--Stat	15.18	156	P	P	18 38 53.2	+2.0
VNA3	Neumayer Olymp	15.37	159	P	Pn	18 38 52.6	+0.7
VNA2	Neumayer--Watz	15.58	156	P	P	18 38 56.4	+0.6
	baz=338,slow=9.2						
VNA2	Neumayer--Watz	15.58	156	S	Sn	18 41 39.2	-8.1
SNAA	Sanae	17.14	154	P	Pn	18 39 14.9	+1.4
SNAA	Sanae	17.14	154	S	S	18 42 19.1	-5.1
SNAA	Sanae	17.14	154	P	Pn	18 39 15.1	+1.5
	2.3nm,0.3s,baz=298,slow=10,SNR=32						
SNAA				S	S	18 42 19.7	-4.5
	0.4nm,0.3s,baz=179,slow=24,SNR=3.2						
SNAA	Sanae	17.14	154	P	Pn	18 39 14.8	+1.2
SNAA				IAmb	IAmb	18 39 17.8	
	comp=Z,15nm,0.7s						
BELA	Belgrano 2	20.50	185	P	P	18 39 50.7	+1.4
QSPA	South Pole Qui	32.59	180	P	P	18 41 43.4	+2.8
	comp=Z,24nm,0.5s,baz=207,slow=2.4,SNR=170						
QSPA	South Pole Qui	32.59	180	P	P	18 41 42.9	+2.3
PLCA	Paso Flores	32.64	282	P	P	18 41 40.6	-0.5
	comp=Z,2.5nm,0.8s,baz=148,slow=12,SNR=7.1						
PLCA	Paso Flores	32.64	282	P	P	18 41 40.3	-0.9
CPUP	Villa Florida	38.13	312	P	P	18 42 26.3	-1.7
	comp=Z,1.3nm,0.4s,baz=165,slow=7.8,SNR=4.5						
MAW	Mawson	38.66	142	P	P	18 42 34.2	+2.1
	comp=Z,9.7nm,0.7s,baz=238,slow=9.5,SNR=9.4						
MAW	Mawson	38.66	142	P	P	18 42 34.2	+2.1
MAW				IAmb	IAmb	18 42 36.7	
	comp=Z,9.2nm,1.5s						
SUR	Sutherland	40.77	72	P	P	18 42 51.7	+1.6
	comp=Z,15nm,1.0s,baz=78,slow=1.7,SNR=3.3						
SUR	Sutherland	40.77	72	P	P	18 42 50.8	+0.7
BDFB	Brasilia	44.92	330	P	P	18 43 23.3	-0.3
	comp=Z,2.0nm,0.3s,baz=104,slow=6.1,SNR=3.6						
BDFB	Brasilia	44.92	330	P	P	18 43 22.5	-1.0
VNDA	Vanda	44.98	183	P	P	18 43 26.3	+3.1
	comp=Z,2.2nm,0.5s,baz=178,slow=7.9,SNR=11						
VNDA	Vanda	44.98	183	P	P	18 43 25.7	+2.4
VNDA				IAmb	IAmb	18 43 40.9	
	comp=Z,16nm,1.3s						
BOSA	Boshof	46.07	74	P	P	18 43 33.0	+0.5
	comp=Z,3.9nm,0.6s,baz=209,slow=6.4,SNR=8.0						
LBTB	Lobatse	49.18	71	P	P	18 43 57.1	+0.6
LBTB				IAmb	IAmb	18 43 58.0	
	comp=Z,11nm,1.0s						
SAML	Samuel	56.17	315	P	P	18 44 46.7	-1.2
SAML				IAmb	IAmb	18 44 47.6	
	comp=Z,2.8nm,0.6s						
LSZ	Lusaka	58.66	67	P	P	18 45 05.5	0.0
LSZ				IAmb	IAmb	18 45 07.0	
	comp=Z,7.6nm,0.8s						
DBIC	Dimbokro	66.50	24	P	P	18 45 57.0	-0.1
	comp=Z,1.4nm,0.4s,baz=144,slow=9.4,SNR=5.5						
TOA0	Torodi Ar. Sit	74.30	29	P	P	18 46 44.8	+0.3
TOA0				IAmb	IAmb	18 46 45.9	
	comp=Z,5.2nm,0.7s						
TORD	Torodi Ar. Bea	74.30	29	P	P	18 46 45.1	+0.7
	comp=Z,4.3nm,0.6s,baz=198,slow=6.4,SNR=19						
TORD	Torodi Ar. Bea	74.30	29	P	P	18 46 44.7	+0.2

ASAR	Alice Springs	97.36	162	P	Pdif	18 48 40.9	+0.7
	comp=Z,1.0nm,0.8s,baz=183,slow=4.6,SNR=7.8						
ASAR	Alice Springs	97.36	162	P	P	18 48 40.4	+0.3
WRA	Warramunga Arr	101.08	162	P	Pdif	18 48 58.9	+2.2
	comp=Z,0.5nm,0.8s,baz=196,slow=4.2,SNR=2.8						
CMAR	Chiang Mai Arr	124.18	111	PKP	PKiKP	18 54 05.3	+0.6
	comp=Z,0.6nm,0.6s,baz=216,slow=4.5,SNR=7.5						
CMAR	Chiang Mai Arr	124.18	111		PKPdf	18 54 04.8	+0.3
FINES	FINESS Array B	125.64	28	PKP	PKPdf	18 54 05.7	-0.1
	comp=Z,1.6nm,0.8s,baz=116,slow=3.2,SNR=5.5						
FINES	FINESS Array B	125.64	28		PKPdf	18 54 06.0	+0.1
ARCES	ARCESS Array B	132.31	22	PKP	PKPdf	18 54 18.3	-0.1
	comp=Z,2.1nm,0.8s,baz=205,slow=1.9,SNR=5.1						
MKAR	Makanchi Array	137.06	73	PKhKP	PKPdf	18 54 21.7	-6.3
	comp=Z,0.1nm,0.5s,baz=238,slow=1.8,SNR=1.7						
MKAR				SKPbc	SKPbc	18 57 47.2	-0.4
	comp=Z,0.3nm,0.6s,baz=245,slow=1.3,SNR=2.8						
YKA	Yellowknife Ar	137.58	317	PKP	PKPdf	18 54 28.8	+0.4
	comp=Z,0.3nm,0.5s,baz=124,slow=2.8,SNR=7.9						
YKA				SKPbc	SKPbc	18 57 49.2	+0.7
	comp=Z,1.3nm,1.0s,baz=122,slow=3.7,SNR=8.8						
ZALV	Zalesovo Beam	142.75	65	PKhKP	PKPdf	18 54 34.0	-4.0
	comp=Z,0.6nm,0.3s,baz=192,slow=4.7,SNR=4.5						
SONM	Songino Array	150.46	89	PKPbc	PKPbc	18 54 57.4	+0.6
	comp=Z,3.4nm,0.6s,baz=220,slow=3.7,SNR=45						
ILAR	Eielson Array	151.41	309	PKPbc	PKiKP	18 54 59.0	+0.2
	comp=Z,2.3nm,0.6s,baz=144,slow=4.8,SNR=46						

IDC 19 18:54:02.2±7.1**,55°.51S**×**151°.33W,h0**^{km}**,mb3.6**/1**,mb1 3.8**/1**,mb1mx3.5**/27**,mbtmp3.6**/1**,MS3.3**/1**,Ms1 3.3**/1**,ms1mx2.9**/14**,Error ellipse: s-maj=615.5km s-min=67.3km az=163.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	27.28	296	LR	LR	19 08 30.9	
	comp=Z,68nm,21.2s,baz=211,slow=32						
H03S2	Juan Fernandez	53.20	98	T	T	20 00 17.3	
	baz=219,slow=74,SNR=5.1						
H03S1	Juan Fernandez	53.21	98	T	T	20 00 20.2	
	baz=219,slow=74,SNR=5.5						
H03S3	Juan Fernandez	53.22	98	T	T	20 00 18.4	
	baz=219,slow=74,SNR=6.5						
H03N3	Juan Fernandez	53.49	97	T	T	20 00 35.4	
	baz=222,slow=72,SNR=9.2						
H03N2	Juan Fernandez	53.49	97	T	T	20 00 34.3	
	baz=222,slow=72,SNR=14						
H03N1	Juan Fernandez	53.50	97	T	T	20 00 33.7	
	baz=222,slow=72,SNR=14						
ASAR	Alice Springs	62.27	268	P	P	19 04 25.9	0.0
	0.3nm,0.4s,baz=138,slow=6.7,SNR=9.2						
ILAR	Eielson Array	120.00	2	PKP	PKPdf	19 12 52.9	-0.2
	0.4nm,0.9s,baz=258,slow=0.8,SNR=2.6						
MKAR	Makanchi Array	146.04	278	PKPbc	PKPdf	19 13 42.2	0.0
	1.4nm,0.8s,baz=118,slow=4.4,SNR=17						
ZALV	Zalesovo Beam	148.28	291	PKPbc	PKPbc	19 13 48.2	-0.8
	0.5nm,0.5s,baz=132,slow=2.1,SNR=3.7						

*ANF **19** 18:56:05.3±1.4,31°.46N×114°.36W,h0^{km},ML4.0/14,Error ellipse: s-maj=19.4km s-min=5.2km az=5.0*

*NEIC **19** 18:56:07.1±3.0,31°.28N±0°.05×114°.34W±0°.03,h10^{km}±2^{km}, Error ellipse: s-maj=9.3km s-min=3.2km az=169.0*

*ECX **19** 18:56:08.6±0.7,31°.47N×114°.44W,h19^{km}±5^{km},MD3.8, ML4.0*

*PAS **19** 18:56:08.6±3.6,31°.39N±0°.04×114°.37W±0°.03,h21^{km}±2^{km}, Error ellipse: s-maj=7.3km s-min=3.7km az=170.0*

*MEX **19** 18:56:09.4±0.7,31°.14N×114°.28W,h10^{km},MD4.2*

*IDC **19** 18:56:09.2±1.9,31°.55N×114°.24W,h0^{km},mb3.3/3, mb1 3.5/8,mb1mx3.4/36,mbtmp3.2/8,ML3.4/5,MS3.1/5, Ms1 3.1/5,ms1mx2.9/23,Error ellipse: s-maj=35.1km s-min=10.8km az=30.0*

ISC 19 18:56:07.8±1.1**,31°.33N**±0°.03×**114°.37W**±0°.02**,h13**^{km}±9^{km}**,n130,**σ**1**^{s}.**63**/140**,mb3.1**/3**,4C-11D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.51	235		Pb	18 56 18.8	+0.3
SFX	San Felipe	0.51	235		Sb	18 56 26.1	+0.4
SFX	San Felipe	0.51	235	⇓*e*P	Pb	18 56 18.9	+0.3
SFX				*e*S	Sb	18 56 26.2	+0.4
PIX	Pinacate	0.81	73		Pg	18 56 23.0	-0.5
PIX	Pinacate	0.81	73		Sb	18 56 33.8	-0.7
PIX	Pinacate	0.81	73	⇓*e*P	Pg	18 56 22.9	-0.5
PIX				*e*S	Sb	18 56 35.0	+0.5
SPIG	San Pedro Mart	0.98	254	*i* P	Pg	18 56 26.2	-0.7
SPIG				*i* S	Sg	18 56 39.8	0.0
SPIG	San Pedro Mart	0.98	254		Pg	18 56 26.2	-0.7
SPIG					Sg	18 56 39.8	0.0
SPIG	San Pedro Mart	0.98	254	⇓*e*P	Pg	18 56 26.2	-0.7
SPIG				*e*S	Sg	18 56 38.7	-1.1
SPX	San Pedro Mart	0.99	253		Pg	18 56 26.2	-0.6
SPX	San Pedro Mart	0.99	253		Sg	18 56 39.4	-0.4
SPX	San Pedro Mart	0.99	253	⇓*e*P	Pg	18 56 26.2	-0.6
SPX				IAML		18 56 40.6	
	comp=N,7μm,0.4s						
SPX				⇑*e*		18 56 40.6	
SPX				IAML		18 56 42.1	
	comp=E,4μm,0.6s						
SPX				⇑*e*		18 56 42.1	
VTX	Valle De La Tr	1.22	273	*e*P	Pn	18 56 28.2	-2.4
VTX				⇓*e*		18 56 46.3	
VTX				IAML		18 56 46.3	
	comp=E,6μm,0.6s						
VTX				IAML		18 56 53.9	
	comp=N,3μm,0.5s						
VTX				⇑*e*		18 56 53.9	
YMD	Yuma Desert	1.23	353		Pn	18 56 28.2	-2.5
MBIG	Mexicali	1.29	327	*e*P	Pg	18 56 33.0	+0.4
MBIG				*i* S	Sg	18 56 50.2	+0.8
MBIG	Mexicali	1.29	327		Pg	18 56 33.0	+0.4
MBIG					Sg	18 56 50.2	+0.8
CPBX	Cerro Prieto	1.35	324	Pn	Pn	18 56 31.8	-0.6
CPBX	Cerro Prieto	1.35	324	⇓*e*		18 57 07.6	
CPBX				IAML		18 57 07.6	
	comp=E,8μm,0.5s						
CPBX				⇓*e*		18 57 18.4	
CPBX				IAML		18 57 18.4	
	comp=N,8μm,0.8s						
SJX	San Joaquin	1.43	288	*e*P	Pn	18 56 31.3	-2.0
SJX				IAML		18 57 01.0	
	comp=E,1μm,0.8s						
SJX				⇓*e*		18 57 01.0	
SJX				IAML		18 57 09.8	
	comp=N,799nm,0.6s						
SJX				⇓*e*		18 57 09.8	
214A	Organ Pipe Nat	1.47	64	P	Pn	18 56 32.4	-1.5
	baz=250,SNR=880						
214A				S	Sn	18 56 51.3	-1.8
	baz=250						
214A	Organ Pipe Nat	1.47	64	*e*P	Pn	18 56 32.6	-1.4
214A				*e*S	Sn	18 56 51.3	-1.8
214A	Organ Pipe Nat	1.47	64	Pn	Pn	18 56 32.4	-1.5
214A	Organ Pipe Nat	1.47	64		Sn	18 56 51.3	-1.8
SQX	San Quintin	1.50	240	⇓*e*P	Pn	18 56 34.4	+0.1
EMSC	East Mesa	1.50	340		Pn	18 56 31.8	-2.6
ESJX	Sierra Juarez	1.51	297	Pn	Pn	18 56 31.1	-3.6
ESJX	Sierra Juarez	1.51	297		Sn	18 56 52.9	-1.4
SGL	Mount Signal	1.75	319		Pn	18 56 35.0	-2.8
GLA	Glamis	1.76	347	P	Pn	18 56 35.4	-2.7
	baz=167,SNR=92						
GLA	Glamis	1.76	347	Pn	Pn	18 56 35.2	-2.8
GLA	Glamis	1.76	347	⇓*e*P	Pn	18 56 35.4	-2.7
RMX	La Rumorosa	1.93	312	Pn	Pn	18 56 36.5	-4.0
RMX	La Rumorosa	1.93	312	*e*P	Pn	18 56 36.8	-3.7
IKP	In-Ko-Pah, Jac	1.98	312	P	Pn	18 56 38.1	-3.0
	baz=129,SNR=49						
SWSC	Sam W. Stewart	2.02	323	P	Pn	18 56 41.0	-0.6
	baz=141						
CCX	Cicese	2.04	286	Pn	Pn	18 56 40.7	-1.0
CCX	Cicese	2.04	286	⇑*e*P	Pn	18 56 43.3	+1.6
CBX	Cerro Bola	2.19	297	Pn	Pn	18 56 42.8	-1.2
CBX	Cerro Bola	2.19	297	*e*P	Pn	18 56 42.5	-1.5
TJIG	Tijuana	2.25	300	*e*P	Pn	18 56 45.0	+0.3
TJIG				*e*S	Sb	18 57 15.1	-1.1
TJIG	Tijuana	2.25	300		Pn	18 56 45.0	+0.3
TJIG					Sb	18 57 15.1	-1.1
TKX	Tecate	2.27	304		Pn	18 56 45.0	-0.1
MONP2	Monument Peak	2.34	312	P	Pn	18 56 43.4	-2.8
	baz=130,SNR=25						
BAR	Barrett	2.38	305	Pn	Pn	18 56 44.5	-2.0
BAR	Barrett	2.38	305	*e*P	Pn	18 56 44.6	-2.0
BC3	Big Chuckawall	2.50	339	P	Pn	18 56 45.7	-2.5
	baz=158,SNR=33						
TJX	Tijuana	2.57	298		Pn	18 56 49.4	+0.3
109C	Camp Elliot, M	2.80	305	P	Pn	18 56 51.3	-0.9
	baz=121,SNR=10						
109C				S	Sn	18 57 23.4	-2.5
	baz=121						
109C	Camp Elliot, M	2.80	305	Pn	Pn	18 56 51.0	-1.3
PFO	Pinyon Flats O	2.89	323	Pn	Pn	18 56 52.6	-1.0
	comp=N,0.6nm,0.3s,baz=141,slow=14,SNR=4.3						
PFO				Pg	Pb	18 56 58.9	-0.3
	comp=N,2.3nm,0.3s,baz=141,slow=13,SNR=11						
PFO				Lg	Lg	18 57 48.0	
	comp=N,12nm,0.3s,baz=89,slow=20,SNR=6.0						
PFO				LR	LR	18 58 07.3	
	comp=N,212nm,20.3s,baz=52,slow=42						
PFO	Pinyon Flats O	2.89	323	Pb	Pb	18 56 59.2	0.0
	baz=141,SNR=21						
PFO	Pinyon Flats O	2.89	323		Pb	18 56 56.6	-2.6
IRM	Iron Mountain	2.90	347	P	Pn	18 56 51.6	-2.0
	baz=167,SNR=20						
BELC	Belle Mtn. Jos	3.00	333	P	Pn	18 56 54.4	-0.8
	baz=152						
TUC	Tucson	3.20	71	P	Pn	18 56 56.8	-1.0
	baz=255						
TUC	Tucson	3.20	71	*e*P	Pn	18 56 56.9	-1.0
TUC				*i* S	Sn	18 57 34.4	-1.5
TUC	Tucson	3.20	71	Pn	Pn	18 56 54.7	-3.2
TUC	Tucson	3.20	71		Sn	18 57 34.4	-1.5
GMRC	Granite Mounta	3.62	343	P	Pn	18 57 02.0	-1.6
	baz=162,SNR=6.6						
W13A	Hualapai Mount	3.78	6		Pn	18 57 05.8	-0.2
X16A	Lo Mia Camp, P	3.94	38		Pn	18 57 07.4	-0.8
MWC	Mount Wilson	4.25	314		Pb	18 57 25.0	+2.6
PASC	Pasadena Art C	4.29	312		Pn	18 57 12.3	-0.5
319A	Douglas	4.35	88		Pn	18 57 12.7	-1.0
GSC	Goldstone, Bar	4.46	333	Pn	Pn	18 57 16.6	+1.4
WUAZ	Wupatki	4.87	30	P	Pn	18 57 21.3	+0.4
	baz=213,SNR=29						
WUAZ	Wupatki	4.87	30		Pn	18 57 21.0	+0.1
X18A	Snowflake	4.90	48		Pn	18 57 21.5	+0.2
U15A	North Rim	5.37	18	Pn	Pn	18 57 28.6	+0.7
W18A	Petrified Fore	5.42	44	P	Pn	18 57 29.7	+1.3
	baz=228,SNR=8.5						
W18A	Petrified Fore	5.42	44		Pn	18 57 29.3	+0.8
121A	Cookes Peak, D	5.72	76	P	Pn	18 57 33.7	+1.1
	baz=261,SNR=6.8						
121A	Cookes Peak, D	5.72	76		Pn	18 57 32.7	+0.1
LCMT	Little Creek M	5.75	9		Pn	18 57 33.3	+0.4
KNB	Kanab	5.82	12	Pn	Pn	18 57 34.7	+0.8
TPNV	Topopah Spring	5.82	345	Pn	Pn	18 57 36.2	+2.2
CCUT	Cedar City	6.26	7		Pn	18 57 40.6	+0.5
PKCU	Pink Cliffs	6.33	15		Pn	18 57 41.6	+0.5
SZCU	Shurtz Canyon	6.34	9		Pn	18 57 41.8	+0.7
LENM	Lemitar	6.84	64		Pn	18 57 46.0	-2.0
MTPU	Mount Pierson	6.94	14	Pn	Pn	18 57 51.8	+2.4
R11A	Troy Canyon, C	7.08	352	P	Pn	18 57 51.5	+0.2
	baz=172						
R11A	Troy Canyon, C	7.08	352	Pn	Pn	18 57 51.0	-0.2
PSUT	Pine Spring	7.20	3		Pn	18 57 55.4	+2.4
MSU	Marysvale	7.39	13	Pn	Pn	18 57 57.4	+1.8
TCRU	Three Creeks R	7.43	12	Pn	Pn	18 57 56.9	+0.7
ANMO	Albuquerque	7.55	59	Pn	Pn	18 57 58.1	+0.4
	comp=N,0.3nm,0.3s,baz=248,slow=9.8,SNR=2.8						
ANMO				Lg	Lg	19 00 03.4	
	comp=N,0.1nm,0.3s,baz=276,slow=18,SNR=0.9						
ANMO	Albuquerque	7.55	59	Pn	Pn	18 57 57.5	-0.2
MVCO	Mesa Verde	7.62	38	P	Pn	18 58 00.2	+1.5
	baz=222,SNR=26						
MVCO	Mesa Verde	7.62	38	Pn	Pn	18 57 59.5	+0.8
MNTX	Cornudas Mount	7.68	85	P	Pn	18 58 00.8	+1.5
	baz=270,SNR=7.2						
MNTX	Cornudas Mount	7.68	85		Pn	18 58 00.4	+1.1
NV11	Mina Array Sit	7.74	337	Pn	Pn	18 58 02.3	+2.0
NVAR	Mina Array Bea	7.79	337	Pn	Pn	18 58 00.4	-0.6
PV05	Paradox Valley	8.01	31	Pn	Pn	18 58 05.4	+1.4
Q16A	Castle Valley	8.01	18	Pn	Pn	18 58 04.6	+0.5
LPIG	La Paz	8.04	152	LR	LR	19 01 12.8	
	comp=N,87nm,20.9s,baz=18,slow=37						
PV13	Radium Mtn., P	8.20	32	Pn	Pn	18 58 05.8	-0.9
PV18	Skein Mesa, Pa	8.23	32	Pn	Pn	18 58 08.0	+0.9
PV17	East Wray Mesa	8.24	31		Pn	18 58 09.6	+2.4
PV19	Morning Glory	8.25	31	Pn	Pn	18 58 06.6	-0.7
PV03	Paradox Valley	8.27	32		Pn	18 58 08.1	+0.5
PV02	Paradox Valley	8.28	32	Pn	Pn	18 58 10.0	+2.3
PV10	Paradox Valley	8.28	30	Pn	Pn	18 58 05.8	-2.0
PV16	Nyswonger Mesa	8.28	31	Pn	Pn	18 58 06.5	-1.3
PV20	West Nyswonger	8.28	31	Pn	Pn	18 58 06.1	-1.7
PV14	Lion Creek, Pa	8.29	31	Pn	Pn	18 58 07.5	-0.3
PV01	Paradox Valley	8.30	33	Pn	Pn	18 58 04.9	-3.1
PV12	Saucer Basin,	8.34	32	Pn	Pn	18 58 09.6	+1.0
PV04	Paradox Valley	8.36	31	Pn	Pn	18 58 09.9	+1.2
PV23	Carpenter Ridg	8.36	30		Pn	18 58 07.0	-1.9
TMUT	Trail Mountain	8.36	17	Pn	Pn	18 58 07.9	-1.0
SRU	San Rafael Swe	8.38	21	Pn	Pn	18 58 07.8	-1.3
PV07	Paradox Valley	8.51	32	Pn	Pn	18 58 08.3	-2.6
PV22	Blue Mesa, Par	8.52	31		Pn	18 58 12.2	+1.1
P17A	Butcher Ranch,	8.65	19	Pn	Pn	18 58 13.9	+1.1
NLU	North Lily Min	8.81	12	Pn	Pn	18 58 15.4	+0.4
S22A	4UR Ranch, Cre	8.92	42	Pn	Pn	18 58 15.8	-0.8
ELK	Elko	9.43	356	Pn	Pn	18 58 27.1	+3.6
	comp=N,0.1nm,0.3s,baz=171,slow=9.3,SNR=4.4						
ELK				Lg	Lg	19 01 09.9	
	baz=242,slow=19,SNR=1.6						
ELK	Elko	9.43	356		Pn	18 58 23.1	-0.3
TX31	Lajitas Ar. Si	9.46	99	Pn	Pn	18 58 20.8	-3.0
TX32	Lajitas Array	9.46	99	Pn	Pn	18 58 21.1	-2.7
TXAR	Lajitas Array	9.46	99	Pn	Pn	18 58 27.4	+3.6
	comp=N,0.3nm,0.3s,baz=283,slow=11,SNR=11						
TXAR				Lg	Lg	19 01 09.5	
	comp=N,0.4nm,0.3s,baz=276,slow=28,SNR=5.8						
TXAR				LR	LR	19 01 15.8	
	comp=N,54nm,20.9s,baz=0.0,slow=33						
PDAR	Pinedale Array	12.04	17	Pn	Pn	18 59 00.9	+1.6
	comp=N,0.1nm,0.3s,baz=163,slow=13,SNR=2.6						
PDAR				Lg	Lg	19 02 28.0	
	baz=194,slow=25,SNR=2.5						
PDAR	Pinedale Array	12.04	17		Pn	18 58 57.5	-1.8
YBH	Yreka Blue Hor	12.36	329	LR	LR	19 03 46.5	
	comp=N,156nm,18.8s,baz=351,slow=37						
ULM	Lac du Bonnet	23.41	31	P	P	19 01 15.8	-0.5
	comp=N,2.7nm,0.8s,baz=224,slow=9.9,SNR=5.6						
TKL	Tuckaleechee C	25.82	72	LR	LR	19 12 27.4	
	comp=N,180nm,21.3s,baz=96,slow=38						
YKA	Yellowknife Ar	31.18	360	P	P	19 02 27.2	+1.0
	comp=N,0.1nm,0.4s,baz=176,slow=8.9,SNR=2.5						
ILAR	Eielson Array	39.04	339	P	P	19 03 36.0	+2.1
	comp=N,0.3nm,0.7s,baz=148,slow=7.2,SNR=5.0						

*ECX **19** 19:12:30.5±0.8,31°.47N×114°.44W,h20^{km}±15^{km},MD2.6, ML2.6*

*MEX **19** 19:12:36.6±0.4,31°.21N×114°.77W,h0^{km}±17^{km},MD3.8*

ISC 19 19:12:27.7±1.6**,31°.5N**±0°.1×**114°.45W**±0°.06**,h3**^{km}±15^{km}**,n8,**σ**0**^{s}.**65**/15**,1C-3D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.54	220	*e*P	Pb	19 12 40.8	+1.1
SFX				*e*S	Sb	19 12 48.2	+0.4
PIX	Pinacate	0.85	82	*e*P	Pb	19 12 45.1	-0.1
PIX				*e*S	Sb	19 12 56.5	-0.5
SPIG	San Pedro Mart	0.96	245	⇓*e*P	Pn	19 12 48.1	-0.3
	baz=74,slow=12						
SPIG				*i* S	Sg	19 12 57.2	-1.4
SPIG	San Pedro Mart	0.96	245	*e*P	Pn	19 12 48.0	-0.4
SPIG				*e*S	Sb	19 13 00.6	+0.2
SPX	San Pedro Mart	0.96	245	*e*P	Pn	19 12 48.1	-0.3
SPX				*e*S	Sb	19 13 00.8	+0.3
SPX				⇑*e*		19 13 02.5	
SPX				IAML		19 13 02.5	
	comp=N,175nm,0.4s						
SQX	San Quintin	1.50	235	*e*P	Pb	19 12 56.4	+0.2
SQX				*e*S	Sn	19 13 15.2	-0.5
CBX	Cerro Bola	2.07	295	*e*P	Pn	19 13 03.8	+0.3
CBX				⇓*e*		19 13 39.8	
CBX				IAML		19 13 39.8	
	comp=N,69nm,0.6s						
CBX				IAML		19 13 44.2	
	comp=E,62nm,0.7s						
CBX				⇓*e*		19 13 44.2	
TUC	Tucson	3.23	74	*i* P	Pg	19 13 29.8	+0.1
TUC				*i* S	Sg	19 14 12.3	+0.6

IDC 19 19:30:35.0±14.0**,39°.34N**×**49°.33E,h0**^{km}**,mb3.3**/3**,mb1 3.4**/4**,mb1mx3.2**/33**,mbtmp3.2**/4**,ML2.3**/1**,Error ellipse: s-maj=293.3km s-min=24.3km az=14.0,Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBZ	Khabaz	6.52	314	Pn	Pn	19 32 14.8	+2.7
	0.1nm,0.3s,baz=204,slow=3.6,SNR=1.7						
KURBB	Kurchatov Arra	23.38	52	P	P	19 35 45.1	-0.1
	0.3nm,0.7s,baz=255,slow=11,SNR=2.1						
MKAR	Makanchi Array	25.07	62	P	P	19 36 00.9	-0.2
	0.5nm,0.7s,baz=269,slow=7.9,SNR=4.6						
FINES	FINESS Array B	26.35	335	P	P	19 36 13.3	+0.8
	1.4nm,0.8s,baz=147,slow=7.9,SNR=3.8						

*IDC **19** 19:32:45.8±1.6,56°.14N×113°.97E,h0^{km},mb3.3/3, mb1 3.5/5,mb1mx3.2/37,mbtmp3.4/5,ML3.1/2,Error ellipse: s-maj=42.2km s-min=23.7km az=151.0*

*MOS **19** 19:32:45.9±1.1,56°.12N×113°.79E,h7^{km},mb3.6/1,Error ellipse: s-maj=14.5km s-min=8.5km az=69.8*

*BYKL **19** 19:32:47.3±0.2,56°.15N×113°.78E,h3^{km}±2^{km}*

ISC 19 19:32:47.5±0.6**,56°.16N**±0°.03×**113°.81E**±0°.02**,h10**^{km}**,n42,**σ**2**^{s}.**32**/82**,mb3.4**/3**,8C-5D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	Severomuysk	0.15	252	⇑*i*Pg	Pg	19 32 49.2	-1.6
SVKR				*e*Sg	Sg	19 32 51.3	-1.8
SVKR				Pmax			
	3μm,0.1s						
SVKR				Smax			
	46μm,0.4s						
SVKR	Severomuysk	0.15	252	⇑*i*PG	Pg	19 32 49.1	-1.7
SVKR				*e*		19 32 51.0	
SVKR				pmax	pmax		
	comp=Z,8μm,0.3s						
SVKR				smax	smax		
	comp=N,36μm,0.8s						
UKT	Uakit	0.68	189	⇑*i*Pg	Pg	19 32 58.6	-2.1
UKT				*e*Sg	Sg	19 33 07.8	-1.8
UKT				Pmax			
	comp=N,165nm,0.4s						
UKT				Smax			
	comp=N,1μm,1.2s						
UKT	Uakit	0.68	189	⇑*i*PG	Pg	19 32 58.6	-2.1
UKT				*e*		19 33 08.4	
UKT				pmax	pmax		
	comp=Z,119nm,0.3s						
UKT				smax	smax		
	comp=N,543nm,0.4s						
NLYR	Nelyaty	1.11	72	⇓*i*Pg	Pb	19 33 07.6	-1.1
NLYR				*e*Pb	Pn	19 33 10.1	+1.0
NLYR				*e*Sg	Sg	19 33 23.3	+0.2
NLYR				*e*Sb	Sn	19 33 27.4	+3.0
NLYR				max			
	comp=N,1μm,0.3s						
NLYR				max			
	comp=N,2μm,0.6s						
NLYR	Nelyaty	1.11	72	⇓*i*PG	Pb	19 33 07.6	-1.1
NLYR				*e*		19 33 23.0	
NLYR				pmax	pmax		
	comp=Z,1μm,0.4s						
NLYR				smax	smax		
	comp=E,2μm,1.1s						
YOA	Uoyan	1.17	269	*e*Pg	Pb	19 33 08.2	-1.5
YOA				*e*Sg	Sb	19 33 24.2	-0.7
YOA				*e*		19 33 29.3	
YOA				Pmax			
	comp=E,317nm,0.4s						
YOA				max			
	comp=E,2μm,0.3s						
YOA	Uoyan	1.17	269	*e*PG	Pb	19 33 08.0	-1.7
YOA				*i*		19 33 24.4	
YOA				pmax	pmax		
	comp=Z,308nm,0.3s						
YOA				smax	smax		
	comp=N,2μm,0.3s						
KMO	Kumora	1.49	260	⇓*i*Pg	Pn	19 33 13.5	-0.8
KMO				*e*Sg	Sn	19 33 33.3	-0.5
KMO				*e*		19 33 36.3	
KMO				Pmax			
	comp=N,378nm,0.4s						
KMO				max			
	comp=N,823nm,0.7s						
KMO	Kumora	1.49	260	⇓*i*PG	Pn	19 33 13.5	-0.8
KMO				*e*		19 33 33.3	
KMO				pmax	pmax		
	comp=Z,381nm,0.4s						
KMO				smax	smax		
	comp=N,817nm,0.7s						
BOD	Bodaibo	1.66	4	⇑*i*Pn	Pn	19 33 17.5	+0.8
BOD				*e*Pg	Pb	19 33 17.8	-0.4
BOD				*e*Sg	Sn	19 33 39.7	+1.6
BOD				*e*		19 33 41.9	
BOD				Pmax			
	comp=N,106nm,0.2s						
BOD				max			
	comp=N,893nm,0.2s						
BOD	Bodaibo	1.66	4	⇑*i*PN	Pn	19 33 17.5	+0.8
BOD				*e*		19 33 39.8	
BOD				pmax	pmax		
	comp=Z,247nm,0.6s						
BOD				smax	smax		
	comp=E,894nm,0.2s						
YLYR	Ulyunkhan	1.98	230	⇑*i*Pn	Pn	19 33 21.7	+0.6
YLYR				*e*Pg	Pb	19 33 22.5	-1.1
YLYR				*e*Sg	Sb	19 33 48.5	+0.2
YLYR				Pmax			
	comp=E,354nm,0.3s						
YLYR				Smax			
	comp=E,793nm,0.3s						
NIZ	Nizh Angarsk	2.43	263	*e*Pn	Pn	19 33 28.3	+1.1
NIZ				*e*Pg	Pb	19 33 31.1	-0.1
NIZ				*e*Sg	Sb	19 34 03.0	+1.8
NIZ				Pmax			
	comp=E,64nm,0.5s						
NIZ				Smax			
	comp=E,259nm,0.6s						
CRS	Chara	2.58	72	⇓*i*Pn	Pn	19 33 30.7	+1.4
CRS				⇑*i*Pg	Pb	19 33 34.8	+1.0
CRS				*e*Sn	Sn	19 34 01.5	+0.8
CRS				*e*Sg	Sb	19 34 08.3	+2.7
CRS				Pmax			
	comp=E,357nm,0.7s						
CRS				Smax			
	comp=E,358nm,0.8s						
CRS	Chara	2.58	72	*e*PN	Pn	19 33 30.6	+1.3
CRS				*e*		19 33 34.7	
CRS				*e*		19 34 08.2	
CRS				pmax	pmax		
	comp=Z,207nm,0.5s						
CRS				smax	smax		
	comp=E,355nm,0.5s						
SYVR	Suvo	3.34	223	*e*Pn	Pn	19 33 40.1	+0.4
SYVR				*e*Pg	Pb	19 33 46.6	-0.1
SYVR				*e*PgPg	Pg	19 33 48.9	-2.4
SYVR				*e*Sg	Sb	19 34 29.5	+2.2
SYVR				max			
	comp=E,105nm,0.8s						
SYVR				Smax			
	comp=E,305nm,1.1s						
SYVR	Suvo	3.34	223	*e*PN	Pn	19 33 40.0	+0.4
SYVR				*e*		19 33 46.5	
SYVR				*e*		19 34 29.5	
SYVR				pmax	pmax		
	comp=Z,106nm,0.8s						
SYVR				smax	smax		
	comp=E,307nm,0.9s						
VTMR	Vitim	3.35	349	*e*Pn	Pn	19 33 40.4	+0.5
VTMR				*e*Sn	Sn	19 34 19.5	-0.2
VTMR				*e*Sg	Sb	19 34 30.9	+3.1
TUP	Tupik	3.92	114	*e*Pn	Pn	19 33 48.1	+0.4
TUP				*e*Pg	Pb	19 33 58.7	+2.0
TUP				*e*Sn	Sn	19 34 33.4	-0.4
TUP				*e*Sg	Sg	19 34 49.5	-3.8
TUP				Pmax			
	comp=E,49nm,0.4s						
TUP				Smax			
	comp=E,377nm,1.0s						
TUP	Tupik	3.92	114	*e*PN	Pn	19 33 48.4	+0.7
TUP				*e*		19 33 58.3	

TUP				*e*S	**Sn**	**19 34 33.8**	**0.0**
TUP				*e*		19 34 49.3	
TUP				pmax	pmax		
	comp=Z,49nm,0.4s						
TUP				smax	smax		
	comp=N,378nm,1.0s						
MXMB	**Maximikha**	**4.13**	**227**	*e*Pn	**Pn**	**19 33 52.1**	**+1.5**
MXMB				*e*Pg	**Pb**	**19 34 00.9**	**+0.7**
MXMB				*e*Sn	**Sn**	**19 34 38.0**	**-0.9**
MXMB				*e*Sg	**Sb**	**19 34 54.9**	**+4.8**
CIT	**Chita**	**4.15**	**182**	*e*Pg	**Pb**	**19 34 01.3**	**+0.7**
CIT				*e*Sg	**Sb**	**19 34 54.8**	**+4.0**
CIT				Pmax			
	comp=N,34nm,0.3s						
CIT				Smax			
	comp=N,233nm,0.7s						
CIT	**Chita**	**4.15**	**182**	*e*PN	**Pn**	**19 33 51.3**	**+0.4**
CIT				*e*		19 34 01.7	
CIT				*e*S	**Sn**	**19 34 39.2**	**-0.3**
CIT				*e*		19 34 54.4	
CIT				pmax	pmax		
	comp=Z,40nm,0.8s						
CIT				smax	smax		
	comp=E,289nm,1.5s						
OGRR	**Ongureny**	**4.38**	**237**	*e*Pn	**Pn**	**19 33 55.6**	**+1.5**
OGRR				*e*Pg	**Pb**	**19 34 06.5**	**+2.0**
OGRR				*e*Sn	**Sn**	**19 34 44.0**	**-1.2**
OGRR				*e*Sg	**Sb**	**19 35 02.8**	**+5.4**
OGRR				Pmax			
	comp=E,36nm,0.8s						
OGRR				Smax			
	comp=E,104nm,1.2s						
OGRR	**Ongureny**	**4.38**	**237**	*e*PN	**Pn**	**19 33 55.7**	**+1.6**
OGRR				*e*		19 34 06.9	
OGRR				*e*		19 35 02.1	
OGRR				pmax	pmax		
	comp=Z,36nm,1.4s						
OGRR				smax	smax		
	comp=E,104nm,1.6s						
YKLR	**Yuktali**	**4.38**	**81**	*e*Pn	**Pn**	**19 33 54.9**	**+0.8**
YKLR				*e*Pg	**Pb**	**19 34 05.3**	**+0.8**
YKLR				*e*Sn	**Sn**	**19 34 44.3**	**-0.9**
YKLR				*e*Sg	**Sg**	**19 35 03.3**	**-4.8**
ZRHB	**Zarechye**	**5.31**	**230**	*e*Pg	**Pb**	**19 34 22.7**	**+2.4**
ZRHB				*e*Sg	**Sb**	**19 35 30.8**	**+6.7**
ZRHB				Pmax			
	comp=E,46nm,0.8s						
ZRHB				Smax			
	comp=E,349nm,1.1s						
TRG	**Tyrgan**	**5.53**	**235**	*e*Pn	**Pn**	**19 34 11.3**	**+1.5**
TRG				*e*Pg	**Pb**	**19 34 25.8**	**+1.8**
TRG				*e*Sg	**Sb**	**19 35 37.8**	**+7.5**
TRG				Pmax			
	comp=E,14nm,0.8s						
TRG				Smax			
	comp=E,52nm,1.0s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*Pn	**Pn**	**19 34 23.2**	**-0.4**
KPC				*e*Pg	**Pb**	**19 34 44.5**	**+3.4**
KPC				*e*Sn	**Sn**	**19 35 36.7**	**-1.4**
KPC				*e*Sg	**Sg**	**19 36 08.5**	**-8.4**
KPC				Pmax			
	comp=E,6.0nm,0.8s						
KPC				Smax			
	comp=E,157nm,1.2s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*PN	**Pn**	**19 34 23.0**	**-0.6**
KPC				*e*		19 34 44.5	
KPC				*e*		19 36 08.9	
KPC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KPC				smax	smax		
	comp=E,157nm,1.2s						
TLY	**Talaya**	**7.49**	**237**	Pg	Pb	19 34 51.1	-6.4
	comp=E,0.0nm,0.3s,baz=53,slow=5.5,SNR=1.6						
TLY				Lg	Lg	19 36 39.5	
	comp=E,0.0nm,0.3s,baz=148,slow=3.3,SNR=9.1						
ARS	**Arshan**	**7.93**	**242**	*e*PG	Pb	19 35 11.0	+6.0
ARS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZEA	**Zeya**	**8.11**	**102**	*e*PG	Pg	19 35 18.0	-4.6
ZEA				*e*S	**Sn**	**19 36 17.8**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				smax	smax		
	comp=N,20nm,0.7s						
MOY	**Mondy**	**8.80**	**245**	*e*PN	**Pn**	**19 34 56.6**	**+1.9**
MOY				*e*		19 35 25.0	
MOY				*e*S	**Sn**	**19 36 32.6**	**-1.3**
MOY				*e*		19 37 16.7	
MOY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MOY				smax	smax		
	comp=E,59nm,1.5s						
SONM	**Songino Array**	**9.51**	**212**	Pn	**Pn**	**19 35 05.3**	**+0.8**
	comp=E,0.2nm,0.3s,baz=22,slow=14,SNR=6.3						
SONM				Lg	Lg	19 37 42.9	
	comp=E,0.9nm,0.3s,baz=22,slow=20,SNR=4.7						
YAK	**Yakutsk**	**10.05**	**48**	Lg	Lg	19 37 58.0	
	comp=E,0.0nm,0.3s,baz=44,slow=22,SNR=6.5						
KLR	**Kul'dur**	**12.88**	**115**	Pn	**Pn**	**19 35 48.3**	**-2.2**
	comp=E,0.1nm,0.3s,baz=340,slow=15,SNR=2.1						
KLR				Lg	Lg	19 39 31.2	
	comp=E,0.2nm,0.3s,baz=39,slow=15,SNR=6.6						
KURK	**Kurchatov**	**21.49**	**270**	P	**P**	**19 37 38.2**	**+2.2**
MKAR	**Makanchi Array**	**21.58**	**258**	P	**P**	**19 37 37.3**	**+0.2**
	comp=E,0.1nm,0.5s,baz=57,slow=8.8,SNR=4.4						
KURBB	**Kurchatov Arra**	**21.58**	**270**	P	**P**	**19 37 38.2**	**+1.2**
	comp=E,2.0nm,0.8s,baz=69,slow=12,SNR=12						
YKA	**Yellowknife Ar**	**55.83**	**25**	P	**P**	**19 42 23.9**	**-0.3**
	comp=E,0.3nm,0.7s,baz=334,slow=6.1,SNR=5.0						

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*MOS **19** 19:33:44.4±1.2,56°.13N×113°.84E,h7^{km},mb3.8/1,Error ellipse: s-maj=16.2km s-min=12.1km az=73.6*

*IDC **19** 19:33:45.4±1.7,56°.23N×113°.83E,h0^{km},mb3.4/3,mb1 3.6/5,mb1mx3.3/37,mbtmp3.5/5,ML3.3/2,Error ellipse: s-maj=43.8km s-min=26.8km az=156.0*

*BYKL **19** 19:33:45.8±0.2,56°.15N×113°.76E,h3^{km}±3^{km}*

ISC 19 19:33:46.4±0.6,56°.16N±0°.03×113°.76E±0°.02,h10^{km},n33,σ2^{s}.29/63,mb3.5/3,2C,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**248**	⇑*i*Pg	**Pg**	**19 33 47.8**	**-1.5**
SVKR				*e*Sg	**Sg**	**19 33 49.8**	**-1.6**
SVKR				Pmax			
	7µm,0.2s						
SVKR				Smax			
	57µm,0.6s						
SVKR	**Severomuysk**	**0.12**	**248**	⇑*i*PG	**Pg**	**19 33 47.8**	**-1.5**
SVKR				*e*		19 33 49.7	
SVKR				pmax	pmax		
	comp=Z,9µm,0.5s						
SVKR				smax	smax		
	comp=N,48µm,0.8s						
UKT	**Uakit**	**0.68**	**186**	*e*Pg	**Pg**	**19 33 57.6**	**-1.9**
UKT				*e*Sg	**Sg**	**19 34 06.0**	**-2.4**
UKT				Pmax			
	comp=N,179nm,0.3s						
UKT				Smax			
	comp=N,975nm,0.4s						
UKT	**Uakit**	**0.68**	**186**	*e*PG	**Pg**	**19 33 57.7**	**-1.8**
UKT				*e*		19 34 06.9	
UKT				pmax	pmax		
	comp=Z,164nm,0.5s						
UKT				smax	smax		
	comp=E,1µm,1.6s						
NLYR	**Nelyaty**	**1.13**	**72**	*e*Pg	**Pb**	**19 34 06.4**	**-1.7**
NLYR				*e*Pb	**Pn**	**19 34 08.7**	**+0.4**
NLYR				*e*Sg	**Sg**	**19 34 21.9**	**-1.0**
NLYR				*e*		19 34 26.5	
NLYR				max			
	comp=E,2µm,0.3s						
NLYR				max			
	comp=E,2µm,0.9s						
NLYR	**Nelyaty**	**1.13**	**72**	*e*PG	**Pb**	**19 34 06.2**	**-1.9**
NLYR				*e*		19 34 21.7	
NLYR				pmax	pmax		
	comp=Z,2µm,0.4s						
NLYR				smax	smax		
	comp=E,2µm,1.1s						
YOA	**Uoyan**	**1.14**	**269**	*e*Pg	**Pb**	**19 34 06.9**	**-1.3**
YOA				*e*Sg	**Sb**	**19 34 21.8**	**-1.2**
YOA				*e*		19 34 27.9	
YOA				Pmax			
	comp=E,682nm,0.3s						
YOA				max			
	comp=E,5µm,0.3s						
YOA	**Uoyan**	**1.14**	**269**	*e*PG	**Pb**	**19 34 08.1**	**-0.1**
YOA				*i*		19 34 22.9	
YOA				pmax	pmax		
	comp=Z,756nm,0.3s						
YOA				smax	smax		
	comp=E,5µm,0.4s						
KMO	**Kumora**	**1.46**	**260**	*e*Pg	**Pn**	**19 34 12.2**	**-0.6**
KMO				*e*		19 34 14.8	
KMO				*e*Sg	**Sn**	**19 34 31.0**	**-1.0**
KMO				*e*		19 34 33.9	
KMO				max			
	comp=E,450nm,0.3s						
KMO				max			
	comp=E,1µm,0.5s						
KMO	**Kumora**	**1.46**	**260**	*e*PG	**Pn**	**19 34 13.0**	**+0.2**
KMO				*e*		19 34 32.0	
KMO				pmax	pmax		
	comp=Z,447nm,0.4s						
KMO				smax	smax		
	comp=N,1µm,0.5s						
BOD	**Bodaibo**	**1.67**	**5**	*e*Pg	**Pn**	**19 34 16.0**	**+0.4**
BOD				*e*Sg	**Sn**	**19 34 37.5**	**+0.4**
BOD				*e*		19 34 39.7	
BOD				Pmax			
	comp=N,355nm,0.6s						
BOD				max			
	comp=N,919nm,0.3s						
BOD	**Bodaibo**	**1.67**	**5**	*e*PN	**Pn**	**19 34 15.4**	**-0.2**
BOD				*e*		19 34 38.2	
BOD				pmax	pmax		
	comp=Z,251nm,0.5s						
BOD				smax	smax		
	comp=E,920nm,0.3s						
YLYR	**Ulyunkhan**	**1.96**	**230**	*e*Pn	**Pn**	**19 34 20.8**	**+1.1**
YLYR				*e*Pg	**Pb**	**19 34 21.6**	**-0.6**
YLYR				*e*		19 34 24.9	
YLYR				*e*Sg	**Sb**	**19 34 47.1**	**+0.5**
YLYR				*e*		19 34 48.9	
YLYR				Pmax			
	comp=E,523nm,0.5s						
YLYR				max			
	comp=E,1µm,0.7s						
NIZ	**Nizh Angarsk**	**2.40**	**262**	*e*Pg	**Pb**	**19 34 29.2**	**-0.5**
NIZ				*e*Sg	**Sb**	**19 35 00.8**	**+1.5**
NIZ				Pmax			
	comp=E,99nm,0.6s						
NIZ				Smax			
	comp=E,435nm,0.5s						
CRS	**Chara**	**2.61**	**72**	*e*Pn	**Pn**	**19 34 29.0**	**+0.4**
CRS				*e*Pg	**Pb**	**19 34 33.1**	**-0.1**
CRS				*e*Sn	**Sn**	**19 35 01.0**	**+0.7**
CRS				*e*Sg	**Sg**	**19 35 07.4**	**-2.7**
CRS				Pmax			
	comp=E,518nm,1.0s						
CRS				Smax			
	comp=E,528nm,0.6s						
SYVR	**Suvo**	**3.32**	**222**	*e*Pg	**Pb**	**19 34 44.8**	**-0.5**
SYVR				*e*Sn	**Sn**	**19 35 17.6**	**-0.2**
SYVR				*e*Sg	**Sb**	**19 35 28.1**	**+2.4**
SYVR				Pmax			
	comp=E,136nm,0.6s						
SYVR				Smax			
	comp=E,442nm,1.2s						
VTMR	**Vitim**	**3.35**	**349**	*e*Pn	**Pn**	**19 34 40.0**	**+1.3**
VTMR				*e*		19 34 47.3	
VTMR				*e*Sn	**Sn**	**19 35 18.1**	**-0.4**
VTMR				*e*Sg	**Sb**	**19 35 29.1**	**+2.5**
TUP	**Tupik**	**3.95**	**114**	*e*Pn	**Pn**	**19 34 46.6**	**-0.4**
TUP				*e*Pg	**Pb**	**19 34 56.4**	**+0.4**
TUP				*e*Sn	**Sn**	**19 35 32.2**	**-1.1**
TUP				*e*Sg	**Sg**	**19 35 48.2**	**-4.8**
TUP				Pmax			
	comp=E,243nm,1.2s						
TUP				Smax			
	comp=E,490nm,1.0s						
TUP	**Tupik**	**3.95**	**114**	*e*PN	**Pn**	**19 34 46.8**	**-0.2**
TUP				*e*		19 34 56.7	
TUP				*e*S	**Sn**	**19 35 33.1**	**-0.2**
TUP				*e*		19 35 48.2	
TUP				pmax	pmax		
	comp=Z,224nm,0.9s						
TUP				smax	smax		
	comp=N,489nm,1.0s						
MXMB	**Maximikha**	**4.11**	**227**	*e*Pg	**Pb**	**19 35 00.1**	**+1.3**
MXMB				*e*Sn	**Sn**	**19 35 36.8**	**-0.5**
MXMB				*e*Sg	**Sb**	**19 35 52.9**	**+4.5**
CIT	**Chita**	**4.15**	**182**	*e*Sg	**Sb**	**19 35 54.1**	**+4.4**
CIT				Smax			
	comp=N,392nm,0.5s						
OGRR	**Ongureny**	**4.36**	**237**	*e*Pg	**Pb**	**19 35 04.5**	**+1.4**
OGRR				*e*Sn	**Sn**	**19 35 42.1**	**-1.4**
OGRR				*e*Sg	**Sb**	**19 35 59.9**	**+4.2**
OGRR				Pmax			
	comp=N,118nm,1.4s						
OGRR				Smax			
	comp=N,158nm,0.7s						
YKLR	**Yuktali**	**4.41**	**81**	*e*Pg	**Pb**	**19 35 05.4**	**+1.5**
YKLR				*e*Sn	**Sn**	**19 35 44.1**	**-0.6**
YKLR				*e*Sg	**Sb**	**19 36 01.6**	**+4.5**
TRG	**Tyrgan**	**5.50**	**235**	*e*Pg	**Pb**	**19 35 24.4**	**+1.9**
TRG				*e*Sn	**Sn**	**19 36 10.3**	**-1.4**
TRG				*e*Sg	**Sb**	**19 36 34.8**	**+6.3**
TRG				Pmax			
	comp=N,34nm,0.7s						
TRG				Smax			
	comp=N,67nm,0.6s						
KPC	**Khapcheranga**	**6.52**	**188**	*e*Pn	**Pn**	**19 35 22.8**	**+0.4**
KPC				*e*Pg	**Pb**	**19 35 43.6**	**+3.7**
KPC				*e*Sn	**Sn**	**19 36 35.1**	**-1.7**
KPC				*e*Sg	**Sg**	**19 37 07.0**	**-8.6**
KPC				*e*		19 37 21.3	
KPC				Pmax			
	comp=N,76nm,1.0s						
KPC				max			
	comp=N,227nm,1.2s						
TLY	**Talaya**	**7.47**	**237**	Lg	Lg	19 37 37.3	
	comp=N,0.0nm,0.3s,baz=273,slow=22,SNR=6.2						
SONM	**Songino Array**	**9.49**	**212**	Pn	**Pn**	**19 36 04.6**	**+1.4**
	comp=N,0.2nm,0.3s,baz=25,slow=13,SNR=2.2						
SONM				Lg	Lg	19 38 43.5	
	comp=N,0.9nm,0.3s,baz=25,slow=28,SNR=3.0						
YAK	**Yakutsk**	**10.07**	**48**	Lg	Lg	19 38 54.1	
	comp=N,0.1nm,0.3s,baz=330,slow=21,SNR=1.6						
KLR	**Kul'dur**	**12.91**	**115**	Pn	**Pn**	**19 36 49.9**	**+0.1**
	comp=N,0.2nm,0.3s,baz=319,slow=16,SNR=2.6						
KLR				Lg	Lg	19 40 28.3	
	comp=N,0.1nm,0.3s,baz=182,slow=20,SNR=2.6						
KURK	**Kurchatov**	**21.46**	**270**	P	**P**	**19 38 37.0**	**+2.4**
MKAR	**Makanchi Array**	**21.55**	**258**	P	**P**	**19 38 36.1**	**+0.4**
	comp=N,1.6nm,0.8s,baz=57,slow=9.8,SNR=8.4						
KURBB	**Kurchatov Arra**	**21.56**	**270**	P	**P**	**19 38 37.0**	**+1.3**
	comp=N,3.5nm,0.9s,baz=66,slow=12,SNR=10						
YKA	**Yellowknife Ar**	**55.84**	**25**	P	**P**	**19 43 23.1**	**-0.1**
	comp=N,0.3nm,0.8s,baz=332,slow=6.7,SNR=3.5						

MEX 19 20:08:12.8±0.4,18°.73N×103°.31W,h10^{km}±41^{km},MD3.8,Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.44**	**184**	*i* P	Pg	20 08 21.1	-0.3
MMIG				*i* S	Sg	20 08 27.3	+0.1
MMIG	**Aquila**	**0.44**	**184**	*i* P	Pg	20 08 21.1	-0.3
MMIG				*i* S	Sg	20 08 27.3	+0.1
ZIIG	**Zihuatanejo**	**2.08**	**122**	*i* P	Pn	20 08 44.3	-3.5
ZIIG				*i* S	Sn	20 09 09.4	-4.4
ZIIG	**Zihuatanejo**	**2.08**	**122**	*i* P	Pn	20 08 46.8	-1.0
ZIIG				*i* S	Sn	20 09 10.4	-3.4
ARIG	**Puente Sto Nin**	**2.85**	**99**	*i* P	Pn	20 08 55.6	-2.8
ARIG				*i* S	Sn	20 09 29.1	-3.7
ARIG	**Puente Sto Nin**	**2.85**	**99**	*i* P	Pn	20 08 58.2	-0.2
ARIG				*i* S	Sn	20 09 31.1	-1.7

IDC 19 20:19:59.5±1.3,0°.94N×129°.05E,h0^{km},mb3.3/4,mb1 3.6/5,mb1mx3.4/40,mbtmp3.4/5,ML3.5/1,MS2.6/1,Ms1 2.6/1,ms1mx2.3/17,Error ellipse: s-maj=74.0km s-min=21.0km az=64.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.85**	**129**	Pn	Pn	20 20 45.9	-0.5
	6.9nm,0.3s,baz=161,slow=23,SNR=30						
SIJI				Sn	Sn	20 21 18.8	-2.6
	3.9nm,0.3s,baz=192,slow=23,SNR=13						
DAV	**Davao City (W)**	**7.00**	**330**	LR	LR	20 24 12.3	
	comp=Z,50nm,20.9s,baz=160,slow=36						
WRA	**Warramunga Arr**	**21.39**	**166**	P	P	20 24 48.6	-0.4
	1.9nm,1.1s						
ASAR	**Alice Springs**	**24.91**	**169**	P	P	20 25 25.1	+0.6
	1.7nm,0.9s,baz=348,slow=9.3,SNR=8.0						
SONM	**Songino Array**	**50.67**	**340**	P	P	20 29 02.0	+1.1
	0.2nm,0.7s,baz=151,slow=6.5,SNR=1.6						
MKAR	**Makanchi Array**	**61.15**	**325**	P	P	20 30 14.9	-1.1
	0.1nm,0.4s,baz=120,slow=5.7,SNR=4.5						

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*NAO **19** 20:30:23.5±1.8,73°.18N×6°.09E,ML2.8*

*IDC **19** 20:30:25.2±1.5,73°.23N×6°.98E,h0^{km},mb3.6/2,mb1 3.7/7,mb1mx3.3/53,mbtmp3.7/7,ML2.9/5,MS3.0/6,Ms1 3.0/6,ms1mx2.7/55,Error ellipse: s-maj=24.5km s-min=17.6km az=74.0*

*BER **19** 20:30:28.0±2.9,73°.29N×6°.57E,h10^{km},ML2.0,ML2.8(NAO),Confirmed Earthquake*

*DNK **19** 20:30:29.4±2.2,73°.65N×5°.47E,h0^{km}±62^{km},ML2.5*

ISC 19 20:30:24.1±0.8,73°.35N±0°.07×6°.41E±0°.06,h10^{km},n47,σ2^{s}.79/55,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**5.11**	**250**	*e*P	**Pn**	**20 31 42.7**	**+2.2**
BRBA	**Barentsburg A**	**5.11**	**18**	*e*P	**Pn**	**20 31 43.5**	**+2.9**
JMIC	**Jan Mayen**	**5.15**	**250**	*e*P	**Pn**	**20 31 42.8**	**+1.7**
JMI	**Jan Mayen**	**5.25**	**250**	*e*P	**Pn**	**20 31 45.0**	**+2.6**
SPA0	**Spitsbergen Ar**	**5.43**	**22**	Pn	**Pn**	**20 31 47.1**	**+2.1**
	baz=206,slow=14						
SPA0	**Spitsbergen Ar**	**5.43**	**22**	Pn	**Pn**	**20 31 47.1**	**+2.1**
	baz=206,slow=14						
SPITS	**Spitsbergen Ar**	**5.43**	**22**	Pn	**Pn**	**20 31 46.4**	**+1.4**
	baz=200,slow=16,SNR=17						
SPITS				LR	LR	20 33 38.7	
	comp=Z,81nm,21.8s,baz=235,slow=35						
TRO	**Tromso**	**5.45**	**127**	Pn	**Pn**	**20 31 45.9**	**+0.7**
TRO	**Tromso**	**5.45**	**127**	*e*P	**Pn**	**20 31 46.2**	**+1.0**
LOF	**Lofoten**	**5.74**	**152**	*e*P	**Pn**	**20 31 50.9**	**+1.7**
LOF				IAML		20 32 50.5	
	comp=Z,5.2nm,0.7s						
KBS	**Kingsbay**	**5.76**	**11**	Pn	**Pn**	**20 31 53.2**	**+3.7**
KBS	**Kingsbay**	**5.76**	**11**	*e*P	**Pn**	**20 31 53.2**	**+3.7**
KBS	**Kingsbay**	**5.76**	**11**	*i* P	**Pn**	**20 31 53.4**	**+3.9**
HOPEN	**Hopen**	**5.78**	**48**	*e*P	**Pn**	**20 31 53.2**	**+3.5**
JETT	**Jettan, Norway**	**5.86**	**124**	Pn	**Pn**	**20 31 51.7**	**+0.9**
JETT				Sn	**Sn**	**20 32 54.0**	**-3.9**
HAMF	**Hammerfest**	**5.99**	**108**	*e*P	**Pn**	**20 31 54.3**	**+1.6**
STEI	**Steigen**	**6.17**	**147**	*e*P	**Pn**	**20 31 56.5**	**+1.3**
STEI				*e*S	**Sn**	**20 32 59.4**	**-6.3**
STEI				IAML		20 33 02.9	
	comp=Z,2.6nm,0.7s						
KIF	**Kilpisjarvi**	**6.36**	**126**	Pn	**Pn**	**20 31 58.6**	**+0.8**
KIF	**Kilpisjarvi**	**6.36**	**126**	Pn	**Pn**	**20 31 58.6**	**+0.8**
KIF				*e*P	**Pn**	**20 31 58.7**	**+0.9**
FAUS	**Fauske**	**6.69**	**149**	*e*P	**Pn**	**20 32 03.2**	**+1.0**
FAUS				IAML		20 33 14.1	
	comp=Z,2.4nm,0.8s						
ARA0	**ARCESS Array S**	**7.17**	**113**	Pn	**Pn**	**20 32 09.1**	**+0.3**
	baz=320,slow=12						
ARA0				Sn	**Sn**	**20 33 24.0**	**-6.1**
	baz=312,slow=22						
ARA0	**ARCESS Array S**	**7.17**	**113**	Pn	**Pn**	**20 32 09.1**	**+0.3**
	baz=320,slow=12						
ARA0				*e*P	**Pn**	**20 32 10.1**	**+1.3**
ARA0				Sn	**Sn**	**20 33 24.0**	**-6.1**
	baz=312,slow=22						
ARCES	**ARCESS Array B**	**7.17**	**113**	Pn	**Pn**	**20 32 08.7**	**0.0**
	baz=321,slow=12,SNR=13						
ARCES				Sn	**Sn**	**20 33 24.0**	**-6.1**
	baz=31,slow=2.8,SNR=1.5						
ARCES				LR	LR	20 34 46.7	
	comp=Z,96nm,21.7s,baz=285,slow=38						
KONS	**Konsvik**	**7.25**	**158**	*e*P	**Pn**	**20 32 11.1**	**+1.2**
KONS				IAML		20 33 30.6	
	comp=Z,4.5nm,0.8s						
DAG	**Danmarks Havn**	**7.28**	**310**	*e*P	**Pn**	**20 32 10.0**	**-0.3**
DAG				*e*S	**Sn**	**20 33 27.2**	**-5.6**
DAG				IAML		20 33 29.1	
	comp=Z,4.0nm,0.4s						
DAG	**Danmarks Havn**	**7.28**	**310**	*i* P	**Pn**	**20 32 10.0**	**-0.3**
DAG				*i* S	Sn	20 33 24.8	-8.0
DAG	**Danmarks Havn**	**7.28**	**310**	*i* P	**Pn**	**20 32 10.0**	**-0.3**
DAG				*i* S	Sn	20 33 24.8	-8.0
DAG				IAML		20 33 29.1	
	comp=Z,4.0nm,0.4s						
STOK	**Stokkvaagen**	**7.40**	**159**	*e*P	**Pn**	**20 32 12.8**	**+0.9**
DBG	**Daneborg**	**7.46**	**290**	Pn	**Pn**	**20 32 11.9**	**-1.0**
DBG	**Daneborg**	**7.46**	**290**	*e*P	**Pn**	**20 32 11.8**	**-1.0**
DBG				*e*S	Sn	20 33 29.8	-7.5
DBG				IAML		20 33 48.4	
	comp=Z,0.7nm,0.4s						
DBG	**Daneborg**	**7.46**	**290**	*i* P	**Pn**	**20 32 11.8**	**-1.0**
DBG				*i* S	**Sn**	**20 33 30.1**	**-7.2**
DBG				IAML		20 33 48.4	
	comp=Z,0.7nm,0.4s						
MOR8	**Moi Rana**	**7.72**	**155**	*e*P	**Pn**	**20 32 16.2**	**-0.1**
NSS	**Namsos**	**9.07**	**165**	*e*P	**Pn**	**20 32 36.4**	**+1.5**
SCO	**Scoresbysund**	**9.21**	**266**	*i* P	**Pn**	**20 32 39.0**	**+2.3**
SCO	**Scoresbysund**	**9.21**	**266**	*i* P	**Pn**	**20 32 39.0**	**+2.3**
SCO	**Scoresbysund**	**9.21**	**266**	*i* P	**Pn**	**20 32 39.0**	**+2.3**
NOA	**NORSAR Array B**	**12.49**	**169**	Pn	**Pn**	**20 33 22.4**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=356,slow=12,SNR=2.5						
NOA				LR	LR	20 37 42.4	
	comp=Z,43nm,18.9s,baz=350,slow=35						
HFS	**Hagfors**	**13.56**	**164**	Pn	**Pn**	**20 33 35.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=328,slow=7.0,SNR=2.1						
HFS				LR	LR	20 38 16.3	
	comp=Z,97nm,18.5s,baz=281,slow=35						
HFS	**Hagfors**	**13.56**	**164**	Pn	**Pn**	**20 33 37.7**	**+1.5**
	baz=354,slow=18						
HFS	**Hagfors**	**13.56**	**164**	Pn	**Pn**	**20 33 37.7**	**+1.5**
	baz=354,slow=18						
FIA0	**FINESS Array S**	**14.02**	**138**	Pn	**Pn**	**20 33 40.4**	**-2.0**
	baz=348,slow=14						
FIA0	**FINESS Array S**	**14.02**	**138**	Pn	**Pn**	**20 33 40.4**	**-2.0**
	baz=348,slow=14						
FINES	**FINESS Array B**	**14.02**	**138**	Pn	**Pn**	**20 33 41.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=357,slow=7.6,SNR=9.5						
FINES				LR	LR	20 38 21.4	
	comp=Z,75nm,19.7s,baz=16,slow=34						
KIRV	**Kirov**	**22.16**	**109**	LR	LR	20 43 41.4	
	comp=Z,78nm,19.1s,baz=335,slow=36						
AKASG	**Malin Array Be**	**24.77**	**144**	P	**P**	**20 35 48.0**	**+2.5**
	comp=Z,0.8nm,0.5s,baz=347,slow=9.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**60.24**	**185**	P	**P**	**20 40 34.6**	**+2.4**
	comp=Z,0.6nm,0.8s,baz=358,slow=7.2,SNR=1.9						
ASAR	**Alice Springs**	**122.90**	**60**	PKP	**PKiKP**	**20 49 21.1**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=350,slow=0.7,SNR=4.1						

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*JMA **19** 20:50:18.3±0.2,37°.58N×144°.61E,h52^{km},M4.0*

*IDC **19** 20:50:25.2±2.8,37°.47N×143°.82E,h0^{km},mb3.5/4,mb1 3.7/6,mb1mx3.3/64,mbtmp3.5/6,ML2.6/2,Error ellipse: s-maj=73.9km s-min=26.0km az=59.0*

ISC 19 20:50:16.8±2.6,37°.6N±0°.1×144°.8E±0°.1,h35^{km},n22,σ2^{s}.07/33,mb3.5/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.76**	**286**	P	**Pn**	**20 50 59.0**	**+0.5**
JIKH				*e*S	**Sn**	**20 51 29.4**	**-1.1**
JIO	**Ouri**	**2.88**	**289**	P	**Pn**	**20 51 00.9**	**+0.7**
JIO				*e*S	**Sn**	**20 51 32.6**	**-1.1**
OFUJ	**Ofunato**	**2.90**	**302**	P	**Pn**	**20 51 01.2**	**+0.8**
JKMT	**Kesennumamotoy**	**2.92**	**296**	P	**Pn**	**20 51 01.4**	**+0.8**
JKMT				*e*S	**Sn**	**20 51 33.4**	**-1.0**
JMK	**Ichinoseki**	**3.15**	**297**	P	**Pn**	**20 51 05.0**	**+1.1**
JMK				*e*S	**Sn**	**20 51 40.2**	**-0.1**
JOM	**Ohasama**	**3.35**	**305**	P	**Pn**	**20 51 08.0**	**+1.3**
JOM				*e*S	**Sn**	**20 51 45.8**	**+0.5**
JFT	**Otama**	**3.57**	**270**	P	**Pn**	**20 51 11.0**	**+1.3**
JFT				S	**Sn**	**20 51 50.2**	**-0.5**
JYK	**Kaneyama**	**3.76**	**292**	P	**Pn**	**20 51 13.9**	**+1.6**
JYK				*e*S	**Sn**	**20 51 56.0**	**+0.6**
JOT	**Ohata**	**4.79**	**323**	P	**Pn**	**20 51 28.0**	**+1.6**

JOT				*e*S	Sn	20 52 19.1	-1.5
JRY	Ryogami san	5.01	254	P	Pn	20 51 29.5	0.0
JRY				S	Sn	20 52 22.1	-4.1
JCH	Churui	5.14	348	P	Pn	20 51 31.5	+0.2
JCH				*e*S	Sn	20 52 27.3	-2.1
JOD2	Odawara 2	5.18	245	P	Pn	20 51 31.6	-0.2
JOD2				S	Sn	20 52 25.9	-4.5
MJAR	Matsushiro Arr	5.40	261	Pn	Pn	20 51 35.7	+0.9
	0.6nm,0.3s,baz=88,slow=15,SNR=28						
MAT	Matsushiro	5.40	261	P	Pn	20 51 36.5	+1.7
MAT				*e*S	Sn	20 52 34.4	-1.4
NEM2	Nemuro 2	5.81	7	P	Pn	20 51 39.1	-1.3
NEM2				S	Sn	20 52 40.7	-5.1
JTKR	Abashiri--Toko	6.41	354	P	Pn	20 51 49.0	+0.3
JTKR				S	Sn	20 52 57.0	-3.6
JHR	Hokuryu	6.59	340	P	Pn	20 51 54.0	+2.9
JHR				*e*S	Sn	20 53 06.8	+1.9
USRK	Ussuriysk Ar.	11.74	308	Pn	Pn	20 53 04.9	+3.2
	baz=115,slow=14,SNR=4.5						
SONM	Songino Array	29.76	302	P	P	20 56 27.0	+7.0
	0.5nm,0.9s,baz=63,slow=33,SNR=2.6						
MKAR	Makanchi Array	46.13	302	P	P	20 58 47.5	+10
	0.4nm,0.7s,baz=81,slow=10,SNR=4.8						
WRA	Warramunga Arr	58.07	192	P	P	21 00 17.8	+11
	0.5nm,0.4s,baz=11,slow=7.2,SNR=5.6						
ASAR	Alice Springs	61.79	191	P	P	21 00 44.0	+12
	0.2nm,0.5s,baz=12,slow=6.6,SNR=1.8						

NAO ***19*** *20:54:11.3±1.8, 73°.19N×5°.96E, ML3.0*
IDC ***19*** *20:54:13.2±2.2, 73°.17N×6°.82E, h0^{km}, mb3.2/3, mb1 3.5/8, mb1mx3.2/61, mbtmp3.4/8, ML2.6/4, Error ellipse: s-maj=39.0km s-min=18.4km az=93.0*
DNK ***19*** *20:54:14.9±1.2, 73°.48N×5°.37E, h0^{km}±35^{km}, ML2.5*
BER ***19*** *20:54:17.1±3.5, 73°.24N×6°.34E, h29^{km}±139^{km}, ML2.0, ML3.0(NAO), Confirmed Earthquake*
ISC 19 20:54:11.8±0.8**, 73°.34N**±0°.08×**5°.49E**±0°.06**, h10**^{km}**, n43, σ2^{s}39**/47**, mb3.2**/3**, 1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSPB	Hornsund (broa	4.49	30	*e*P	Pn	20 55 22.0	+2.2
JMIC	Jan Mayen	4.90	248	*e*P	Pn	20 55 29.8	+4.4
SPA0	Spitsbergen Ar	5.54	24	Pn	Pn	20 55 35.2	+0.9
	baz=202,slow=16						
SPA0	Spitsbergen Ar	5.54	24	Pn	Pn	20 55 35.2	+0.9
	baz=202,slow=16						
SPITS	Spitsbergen Ar	5.54	24	Pn	Pn	20 55 35.1	+0.9
	baz=210,slow=18,SNR=24						
TRO	Tromso	5.66	124	Pn	Pn	20 55 33.8	-2.0
TRO	Tromso	5.66	124	*e*P	Pn	20 55 34.0	-1.8
TRO				IAML		20 56 33.6	
	comp=Z,3.1nm,0.5s						
KBS	Kingsbay	5.83	12	Pn	Pn	20 55 41.1	+3.0
KBS	Kingsbay	5.83	12	*e*P	Pn	20 55 41.1	+3.0
KBS	Kingsbay	5.83	12	*i* P	Pn	20 55 41.0	+3.0
LOF	Lofoten	5.87	149	*e*P	Pn	20 55 37.6	-1.0
LOF				IAML		20 56 40.5	
	comp=Z,5.4nm,0.7s						
HOPEN	Hopen	5.98	49	*e*P	Pn	20 55 41.1	+1.0
JETT	Jettan, Norway	6.08	121	Pn	Pn	20 55 39.9	-1.6
STEI	Steigen	6.32	144	*e*P	Pn	20 55 42.3	-2.5
STEI				IAML		20 56 49.6	
	comp=Z,3.9nm,0.5s						
KIF	Kilpisjarvi	6.58	124	Pn	Pn	20 55 45.9	-2.4
KIF	Kilpisjarvi	6.58	124	*e*P	Pn	20 55 45.7	-2.6
FAUS	Fauske	6.82	146	*e*P	Pn	20 55 49.5	-2.2
FAUS				IAML		20 57 09.0	
	comp=Z,1.7nm,0.4s						
DAG	Danmarks Havn	7.08	310	*e*P	Pn	20 55 58.0	+2.8
DAG				⇓*e*S	Sn	20 57 13.3	-2.4
DAG				IAML		20 57 14.9	
	comp=Z,1.6nm,0.3s						
DAG	Danmarks Havn	7.08	310	*i* P	Pn	20 55 57.0	+1.7
DAG				*i* S	Sn	20 57 11.9	-3.7
DAG	Danmarks Havn	7.08	310	*i* P	Pn	20 55 57.0	+1.7
DAG				*i* S	Sn	20 57 11.9	-3.7
DAG				IAML		20 57 14.9	
	comp=Z,1.6nm,0.3s						
KTK1	Kautokeino	7.17	118	*e*P	Pn	20 55 49.7	-6.9
DBG	Daneborg	7.21	290	Pn	Pn	20 55 58.8	+1.7
DBG	Daneborg	7.21	290	*e*P	Pn	20 55 59.3	+2.2
DBG				*e*S	Sn	20 57 14.9	-4.0
DBG	Daneborg	7.21	290	*i* P	Pn	20 55 58.6	+1.5
DBG				*i* S	Sn	20 57 16.4	-2.5
KONS	Konsvik	7.35	155	*e*P	Pn	20 55 57.9	-1.0
KONS				IAML		20 57 16.9	
	comp=Z,5.4nm,0.8s						
ARA0	ARCESS Array S	7.41	111	Pn	Pn	20 55 57.4	-2.4
	baz=323,slow=11						
ARA0	ARCESS Array S	7.41	111	Pn	Pn	20 55 57.4	-2.4
	baz=323,slow=11						
ARCES	ARCESS Array B	7.41	111	Pn	Pn	20 55 56.5	-3.3
	baz=330,slow=12,SNR=10.0						
STOK	Stokkvaagen	7.49	156	*e*P	Pn	20 56 00.1	-0.8
MOR8	Moi Rana	7.83	152	*e*P	Pn	20 56 03.7	-1.9
SCO	Scoresbysund	8.95	265	*i* P	Pn	20 56 23.3	+2.5
SCO	Scoresbysund	8.95	265	*i* P	Pn	20 56 23.2	+2.5
SCO	Scoresbysund	8.95	265	*i* P	Pn	20 56 23.3	+2.5
APA0	Apatity Array	10.75	108	Pn	Pn	20 56 43.0	-2.5
	baz=337,slow=10						
APA0	Apatity Array	10.75	108	Pn	Pn	20 56 43.0	-2.5
	baz=337,slow=10						
NOA	NORSAR Array B	12.54	167	Pn	Pn	20 57 09.3	-0.8
	comp=Z,0.0nm,0.3s,baz=344,slow=13,SNR=2.0						
HFS	Hagfors	13.63	162	Pn	Pn	20 57 24.2	-0.6
	comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=8.1						
HFS	Hagfors	13.63	162	Pn	Pn	20 57 24.6	-0.2
	baz=4.8,slow=14						
HFS	Hagfors	13.63	162	Pn	Pn	20 57 24.6	-0.2
	baz=4.8,slow=14						
FINES	FINESS Array B	14.19	136	Pn	Pn	20 57 28.6	-3.9
	comp=Z,0.1nm,0.3s,baz=329,slow=9.7,SNR=2.3						
GERES	GERESS Array B	24.84	167	P	P	20 59 36.3	+2.3
	comp=Z,0.5nm,0.6s,baz=16,slow=11,SNR=4.4						
AKASG	Malin Array Be	24.92	143	P	P	20 59 33.5	-1.1
	comp=Z,0.2nm,0.4s,baz=344,slow=9.3,SNR=2.2						
MKAR	Makanchi Array	42.19	85	P	P	21 02 04.1	-0.1
	comp=Z,0.3nm,1.0s,baz=348,slow=6.2,SNR=2.5						

IDC 19 21:08:01.2±10.0**, 20°.30N×145°.13E, h349**^{km}±112^{km}**, mb2.7**/8**, mb1 3.0**/8**, mb1mx2.7**/49**, mbtmp3.5**/8**, Error ellipse: s-maj=34.7km s-min=23.1km az=82.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.37	195	P	P	21 15 14.5	-0.2
	0.7nm,0.9s						
SONM	Songino Array	41.57	321	P	P	21 15 15.5	-0.7
	0.1nm,0.5s,baz=122,slow=6.2,SNR=1.5						
MKAR	Makanchi Array	56.98	313	P	P	21 17 12.2	+0.7
	0.2nm,0.7s,baz=92,slow=10,SNR=2.5						
MKAR				PcP	PcP	21 18 01.2	-1.0
	0.2nm,0.5s,baz=77,slow=3.5,SNR=4.2						
KURBB	Kurchatov Arra	59.78	317	P	P	21 17 30.2	-0.4
	0.2nm,0.4s,baz=88,slow=7.1,SNR=1.8						
ILAR	Eielson Array	62.45	27	P	P	21 17 47.0	-1.0
	0.4nm,0.8s,baz=248,slow=6.2,SNR=4.0						
BVAR	Borovoye Array	64.91	320	P	P	21 18 04.9	+0.7
	0.1nm,0.3s,baz=70,slow=9.8,SNR=3.2						
YKA	Yellowknife Ar	76.83	28	P	P	21 19 16.5	+1.4
	0.3nm,0.6s,baz=295,slow=5.0,SNR=3.7						
FINES	FINESS Array B	85.21	335	P	P	21 19 58.2	-0.7
	1.3nm,0.7s,baz=58,slow=4.7,SNR=5.8						

IDC 19 21:53:51.6±4.9**, 22°.64S×171°.48E, h61**^{km}±37^{km}**, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.5**/25**, mbtmp3.8**/5**, ML5.0**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/22**, Error ellipse: s-maj=103.3km s-min=20.6km az=168.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.70	276	P	Pn	21 54 60.0	-0.1
	1.7nm,0.3s,baz=225,slow=22,SNR=16						
DZM				S	Sn	21 55 53.9	+0.7
	0.3nm,0.3s,baz=326,slow=23,SNR=1.7						
DZM				LR	LR	21 56 47.0	
	comp=Z,144nm,20.4s,baz=72,slow=37						
MSVF	Nonsavu	7.87	53	P	Pn	21 55 43.5	0.0
	0.7nm,0.3s,baz=208,slow=14,SNR=12						
ASAR	Alice Springs	34.50	261	P	P	22 00 35.0	+0.9
	0.7nm,0.8s,baz=89,slow=8.2,SNR=6.7						
WRA	Warramunga Arr	34.66	267	P	P	22 00 34.0	-1.4
	0.2nm,0.3s,baz=97,slow=8.6,SNR=5.9						
CMAR	Chiang Mai Arr	81.80	294	P	P	22 06 04.7	+0.3
	0.4nm,0.3s,baz=111,slow=4.9,SNR=4.4						

MAN 19 22:03:18.5, 8°.80N×126°.94E, h71^{km}, mb4.6, ML3.4, MS3.3, Mindanao

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ASRS ***19*** *22:05:08.4±0.2, 51°N±1°×8°9E±°, h10^{km}, MLh3.4/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
NNC ***19*** *22:05:20.9±3.0, 50°.98N×88°.66E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=31.9km s-min=19.7km az=14.0*
ISC 19 22:05:09.5±0.8**, 51°.21N**±0°.03×**89°.47E**±0°.02**, h10**^{km}**, n24, σ1^{s}25**/44**, 8C, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEL	Teeli	0.50	112	Pg	Pb	22 05 19.6	-0.8
TEL				Sg	Sb	22 05 26.4	-1.4
ULGR	Ulagan, Altay	1.12	239	Pg	Pn	22 05 30.8	-0.6
ULGR				Sg	Sg	22 05 44.5	-1.1
CUR	Chagan-Uzun	1.32	213	Pg	Pg	22 05 34.2	-0.6
CUR				Sg	Sg	22 05 51.2	-0.7
ARTR	Artybash	1.49	294	Pg	Pg	22 05 38.1	0.0
ARTR				Sg	Sg	22 05 56.7	-0.6
CHBI	Chibit, Altay	1.54	235	Pg	Pg	22 05 39.0	+0.1
CHBI				Sg	Sg	22 05 58.0	-0.9
TASR	Tashtagol	1.84	328	Pg	Pg	22 05 44.4	-0.3
TASR				Sg	Sg	22 06 09.1	+0.6
TBTR	Tabat	1.89	24	Pg	Pg	22 05 45.6	-0.1
TBTR				Sg	Sg	22 06 10.3	+0.2
DJO	Djoy, Khakassi	1.91	34	Pg	Pg	22 05 45.6	-0.6
DJO				Sg	Sg	22 06 11.9	+1.0
DJOS	Djoyskaya Sosn	1.99	36	Pg	Pg	22 05 47.2	-0.4
DJOS				Sg	Sg	22 06 14.4	+1.1
DGZ	Jazzator, Alta	1.99	221	Pg	Pg	22 05 47.0	-0.8
DGZ				Sg	Sg	22 06 14.8	+1.3
CERR	Cheremushki	2.04	35	Pg	Pg	22 05 47.9	-0.7
CERR				Sg	Sg	22 06 16.3	+1.3
VEH	Verkhnyaya Baz	2.11	14	Pg	Pg	22 05 49.3	-0.7
VEH				Sg	Sg	22 06 17.7	+0.3
GALT	Gorno-Altaysk,	2.32	290	Pg	Pg	22 05 52.4	-1.5
GALT				Sg	Sg	22 06 23.6	-0.4
LUZB	Luzhba, Kemero	2.48	352	Pg	Pg	22 05 55.4	-1.6
LUZB				Sg	Sg	22 06 29.0	-0.2
BLRR	Bol'shaya Rech	2.59	44	Pg	Pg	22 05 58.0	-1.0
BLRR				Sg	Sg	22 06 32.1	-0.5
ARDR	Aradan	2.81	59	Pg	Pg	22 06 01.3	-2.1
ARDR				Sg	Sg	22 06 39.8	0.0
ELT	Eltsovka	2.86	317	Pg	Pb	22 05 59.7	-0.8
ELT				Sg	Sg	22 06 40.8	-0.4
UKR	Ust'-Kan	2.97	267	Pg	Pg	22 06 04.6	-1.9
UKR				Sg	Sg	22 06 43.6	-1.3
KZLR	Kyzyl	3.16	79	Pg	Pg	22 06 09.2	-0.8
SHRR	Shira	3.32	7	Pg	Pg	22 06 10.1	-2.9
SHRR				Sg	Sg	22 06 56.8	+0.9
POMOR	Pomortsevo, Ku	3.67	332	Pg	Pg	22 06 18.5	-1.2
POMOR				Sg	Sg	22 07 07.6	+0.5
MK31	Makanchi Array	6.46	230	⇑Pn	Pn	22 06 48.6	+3.9
	0.4nm,0.3s,baz=39,slow=14,SNR=6.7						
MK31				⇑Lg	Lg	22 08 31.7	
	4.0nm,0.6s,baz=48,slow=33,SNR=5.6						
KURK	Kurchatov	6.87	270	⇑Pn	Pn	22 06 57.3	+7.1
	0.3nm,0.3s						
KURK				⇑Sn	Sn	22 08 10.3	+1.9
	1.8nm,0.6s						
KURK				⇑Lg	Lg	22 08 43.1	
	7.1nm,0.8s						
KURBB	Kurchatov Arra	6.94	269	⇑Pn	Pn	22 06 56.1	+4.9
	1.3nm,0.4s						
KURBB				⇑Sn	Sn	22 08 12.0	+1.9
	7.9nm,0.7s						
KURBB				⇑Lg	Lg	22 08 44.5	
	10nm,0.7s						

IDC ***19*** *22:19:49.4±2.0, 7°.75S×127°.43E, h160^{km}±22^{km}, mb3.2/4, mb1 3.5/7, mb1mx3.2/34, mbtmp3.9/7, MS2.9/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=22.6km s-min=18.8km az=102.0*
ISC 19 22:19:47.8±0.8**, 7°.97S**±0°.07×**127°.69E**±0°.09**, h150**^{km}**, n9, σ2^{s}68**/13**, mb3.5**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.55	241	P	Pn	22 20 56.0	+0.5
	15nm,0.3s,baz=173,slow=1.6,SNR=20						
BATI				S	Sn	22 21 47.9	-0.2
	33nm,0.3s,baz=114,slow=9.6,SNR=24						
BATI				LR	LR	22 23 03.2	
	comp=Z,151nm,20.2s,baz=72,slow=44						
SIJI	Sorong	7.91	27	P	Pn	22 21 40.6	+0.6
	1.1nm,0.3s,baz=196,slow=22,SNR=6.9						
FITZ	Fitzroy Crossi	10.26	191	P	Pn	22 22 11.8	+0.5
	1.1nm,0.3s,baz=17,slow=12,SNR=46						
FITZ				S	Sn	22 24 02.7	-2.3
	0.9nm,0.3s,baz=90,slow=22,SNR=4.1						
WRA	Warramunga Arr	13.53	152	P	Pn	22 22 55.3	+1.4
	1.1nm,0.3s,baz=322,slow=14,SNR=29						
WRA				S	Sn	22 25 19.0	-4.8
	1.6nm,0.3s,baz=333,slow=22,SNR=12						
ASAR	Alice Springs	16.70	160	P	Pn	22 23 38.0	+4.8
	1.0nm,0.3s,baz=340,slow=11,SNR=52						
ASAR				S	S	22 26 38.2	-0.8
	0.5nm,0.3s,baz=320,slow=19,SNR=5.5						
STKA	Stephens Creek	27.08	153	P	P	22 25 19.8	+3.3
	1.3nm,0.4s,baz=316,slow=11,SNR=4.5						
SONM	Songino Array	58.67	343	P	P	22 29 28.4	-1.2
	0.3nm,1.0s,baz=174,slow=2.9,SNR=1.7						
MKAR	Makanchi Array	67.81	328	P	P	22 30 28.1	-1.6
	0.2nm,0.4s,baz=113,slow=8.8,SNR=6.6						
ZALV	Zalesovo Beam	71.46	335	P	P	22 30 50.2	-1.6
	0.4nm,0.3s,baz=130,slow=8.0,SNR=2.0						

IDC ***19*** *22:32:10.9±4.2, 3°.65S×103°.76E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.4/53, mbtmp3.8/4, Error ellipse: s-maj=235.8km s-min=26.6km az=53.0*
DJA ***19*** *22:32:40.2±0.5, 4°S±6°×10°4E±°, h257^{km}±5^{km}, M3.8/12, mb3.9/1, MLv3.7/12*
ISC 19 22:32:40.1±0.9**, 3°.9S**±0°.1×**103°.9E**±0°.1**, h271**^{km}±8^{km}**, n14, σ1^{s}41**/20**, mb3.5**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHSI	Lahat	0.38	280	P	Pn	22 33 15.9	+0.8
LHSI				S	S	22 33 42.1	-0.6
MNAI	Manna	1.05	244	P	Pn	22 33 19.4	+1.7
MNAI				S	S	22 33 47.8	+0.5
LWLI	Liwa	1.13	172	P	Pn	22 33 19.1	+0.9
LWLI				S	S	22 33 49.0	+0.6
KLSI		1.14	134	P	Pn	22 33 18.5	+0.3
KLSI				S	S	22 33 46.9	-1.3
KSI	Kapahiang	1.33	280	P	Pn	22 33 18.6	-0.8
BLSI	Bandar Lampung	1.98	138	P	Pn	22 33 24.6	+0.4
BLSI				S	S	22 33 59.2	0.0
CGJI	Cibinong	3.24	147	P	Pn	22 33 35.2	-1.2
CGJI				S	S	22 34 17.7	-3.6
DBJI	Dramaga	3.88	133	P	Pn	22 33 43.4	-0.1
MNSI	Mandailing Nat	6.35	317	P	Pn	22 34 11.8	-1.3
MTKI	Muara Teweh, K	11.37	75	P	P	22 35 20.1	+1.4
WRA	Warramunga Arr	33.68	121	P	P	22 38 55.8	-0.5
	0.4nm,0.4s,baz=289,slow=9.8,SNR=15						
ASAR	Alice Springs	35.00	127	P	P	22 39 07.8	+0.3
	0.7nm,0.3s,baz=302,slow=8.4,SNR=14						
STKA	Stephens Creek	45.00	133	P	P	22 40 30.6	+1.4
	1.3nm,0.4s,baz=320,slow=8.0,SNR=3.6						
MKAR	Makanchi Array	53.96	342	P	P	22 41 34.5	-1.9
	0.2nm,0.4s,baz=158,slow=8.2,SNR=5.4						

BJI ***19*** *22:34:44.1±0.0, 37°.18N×138°.58E, h174^{km}, mB5.0/45, mb5.1/76*
MOS ***19*** *22:34:47.3±1.1, 37°.29N×138°.38E, h180^{km}, mb5.1/51, Error ellipse: s-maj=6.4km s-min=4.0km az=108.9*
JMA ***19*** *22:34:48.9±0.1, 37°.16N×138°.51E, h188^{km}±2^{km}, M4.9 Broadband fault plane solution: P waves. NP1: ϕ_s111.00000°, δ44.00000°, λ-159.00000°. NP2: ϕ_s5.00000°, δ75.00000°, λ-48.00000°. Principal axes: T Plg19.0000°, Azm65.0000°; N Plg41.0000°, Azm172.0000°; P Plg43.0000°, Azm316.0000°;*
JMA Felt II J1.
NIED ***19*** *22:34:48.9, 37°.16N×138°.51E, h188^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.94; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.75; $M_{r\theta}$-0.37; $M_{\theta\phi}$-0.95; $M_{\phi r}$-1.33; Fault plane solution: $M_0$1.87000×10^{16} NP1: ϕ_s357.00000°, δ72.00000°, λ-58.00000°. NP2: ϕ_s113.00000°, δ36.00000°, λ-149.00000°.*
IDC ***19*** *22:34:48.8±0.3, 37°.22N×138°.38E, h178^{km}±2^{km}, mb4.4/42, mb1 4.5/47, mb1mx4.4/57, mbtmp4.9/47 Error ellipse: s-maj=8.7km s-min=6.7km az=90.0*
BGR ***19*** *22:34:48.7±0.0, 37°.86N×140°.42E, h33^{km}, mb5.2*
NEIC ***19*** *22:34:49.0±1.6, 37°.21N±0°.05×138°.46E±0°.07, h183^{km}±3^{km}, mb4.8/161, Error ellipse: s-maj=8.6km s-min=6.4km az=120.0*
GCMT ***19*** *22:34:52.0±0.5, 37°.25N±0°.03×138°.35E±0°.03, h180^{km}±4^{km}, MW4.9/85, Moment Tensor Solution. s7,c7; s85,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.50±.10; $M_{\theta\theta}$-0.17±.13; $M_{\phi\phi}$0.67±.14; $M_{r\theta}$-0.12±.08; $M_{\theta\phi}$-1.70±.12; $M_{\phi r}$-1.75±.10; Best double couple: $M_0$2.51000×10^{16} NP1: ϕ_s100.00000°, δ44.00000°, λ-169.00000°. NP2: ϕ_s2.00000°, δ83.00000°, λ-47.00000°. Principal axes: T 2.6120, Plg25.0000°, Azm60.0000°; N -0.2020, Plg43.0000°, Azm175.0000°; P -2.4090, Plg37.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 22:34:49.0±0.3**, 37°.23N**±0°.03×**138°.49E**±0°.03**, h185**^{km}±2^{km}**, h185**^{km}**:pP-P, n653, σ1^{s}35**/718**, mb4.8**/221**, 63C-88D, Fault plane solution: NP1:**ϕ_s195.20419°**,** δ82.41541°, λ27.27613°. **NP2:**ϕ_s101.31091°**,** δ62.98203°**,** λ171.47974°. **Principal axes:** T Plg24.4909°**,** Azm61.5251°**;** N Plg61.7671°**,** Azm209.5628°**;** P Plg13.1727°, Azm325.4048°**; Fault plane solution: NP1:**ϕ_s7.57456°, δ64.43610°, λ-77.21294°. **NP2:**ϕ_s159.83238°, δ28.38997°, λ-114.82979°. **Principal axes:** T Plg18.4777°**,** Azm88.0768°**;** N Plg11.5172°, Azm181.9811°**;** P Plg68.0014°, Azm302.2706°**; Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJN	Nakama	0.29	245	⇓P	Pn	22 35 14.3	+0.7
JJN				S	Sn	22 35 33.7	+1.2
JIZZ	Izumozaki	0.35	30	⇓P	Pn	22 35 14.9	+1.1
JIZZ				S	Sn	22 35 34.4	+1.4
MJB9	Matsu-Tunnel	0.72	199		Pn	22 35 15.3	-0.1
MJB9				Sn	Sn	22 35 35.3	-0.5
MAJO	Matsushiro	0.72	198	*d i*P	Pn	22 35 15.3	-0.1
MAJO	Matsushiro	0.72	198	Pn	Pn	22 35 15.4	-0.1
MAJO				Sn	Sn	22 35 35.3	-0.5
MAT	Matsushiro	0.72	198	P	Pn	22 35 15.3	-0.1
MAT				S	Sn	22 35 35.2	-0.6
MAT	Matsushiro	0.72	198	P	Pn	22 35 15.3	-0.1
MAT				S	Sn	22 35 35.6	-0.2
MJAR	Matsushiro Arr	0.72	198	P	Pn	22 35 15.5	+0.1
	106nm,0.3s,baz=5.6,slow=5.8,SNR=3104						
MJAR				S	Sn	22 35 34.8	-1.0
	38nm,0.3s,baz=337,slow=32,SNR=24						
MJAR	Matsushiro Arr	0.72	198	Pn	Pn	22 35 15.2	-0.3
JSD	Sado	0.83	347	⇓P	Pn	22 35 16.4	+0.5
JSD				S	Sn	22 35 36.6	-0.4
JSD	Sado	0.83	347	Pn	Pn	22 35 16.4	+0.5
JSD				Sn	Sn	22 35 36.4	-0.7
JNS	Sasagawa	0.88	48	⇓P	Pn	22 35 16.8	+0.5
JNS				S	Sn	22 35 37.5	-0.1
JSZ	Suzu	0.92	284	⇑P	Pn	22 35 16.8	+0.2
JSZ				S	Sn	22 35 38.3	+0.4
JAG	Ashikaga	1.11	136	⇓P	Pn	22 35 17.8	-0.2
JRY	Ryogami san	1.25	165	⇓P	Pn	22 35 18.9	-0.3
JAW	Awa shima	1.37	26	⇓P	Pn	22 35 20.9	+0.8
JAW				S	Sn	22 35 45.1	+0.8
JHG	Hegura jima	1.39	297	⇑P	Pn	22 35 20.7	+0.4
JHG				S	Sn	22 35 45.2	+0.6
JFT	Otama	1.50	78	⇓P	Pn	22 35 22.1	+0.8
JFT				*e*S	Sn	22 35 47.4	+1.0
JYT	Yasato	1.69	126	Pn	Pn	22 35 22.3	-0.9
JYN	Shimob	1.73	178	⇓P	Pn	22 35 22.9	-0.8
JYN				S	Sn	22 35 49.4	-1.1
JGF	Kuroka	1.86	210	Pn	Pn	22 35 25.2	+0.2
JGF				Sn	Sn	22 35 52.3	-0.6
JMM	Marumori	1.94	70		Pn	22 35 26.3	+0.6
JMM				Sn	Sn	22 35 54.1	-0.1
JKG	Kaga	1.98	242	⇑P	Pn	22 35 26.7	+0.6
JOD2	Odawara 2	2.02	166	⇓P	Pn	22 35 25.2	-1.4
JOD2				S	Sn	22 35 54.1	-1.8
JFNN	Fujinakano	2.04	175	P	Pn	22 35 26.4	-0.4
JFNN				*e*S	Sn	22 35 56.1	0.0
JYTA	Yamagatataniai	2.16	221	⇑P	Pn	22 35 28.3	+0.2
JYTA				S	Sn	22 35 58.6	+0.1
INU	Inuyama	2.22	213	Pn	Pn	22 35 28.7	-0.1
INU				Sn	Sn	22 35 58.7	-1.0
JYK	Kaneyama	2.24	41	⇑P	Pn	22 35 30.0	+1.0
JYK				*e*S	Sn	22 36 01.8	+1.6
JSG	Sagara	2.56	186	Pn	Pn	22 35 32.6	-0.1
JSG				Sn	Sn	22 36 07.3	+0.7
JWT	Wachi	3.16	233	Pn	Pn	22 35 39.7	-0.1
JWT				Sn	Sn	22 36 18.1	-1.3
JTM	Tenmabayashi	4.08	29	Pn	Pn	22 35 51.8	+0.6
JHJ	Hachijo jima 2	4.23	165	P	Pn	22 35 51.5	-1.7
	431nm,0.3s,baz=334,slow=22,SNR=95						
JHJ				S	Sn	22 36 38.3	-5.3
	388nm,0.3s,baz=77,slow=21,SNR=14						
JHJ2	Mitsune	4.25	165	Pn	Pn	22 35 51.6	-1.8
JHS	Saijyo	4.88	245	Pn	Pn	22 36 01.7	+0.2
JMN	Monobe	5.13	228	Pn	Pn	22 36 03.8	-1.0
ERM	Erimo	5.99	36	*ce*P	Pn	22 36 14.5	-1.2
ERM	Erimo	5.99	36	Pn	Pn	22 36 14.5	-1.2
JEW	Eniwo	6.05	21	Pn	Pn	22 36 16.3	-0.3
JNU	Nakatsue	7.46	239	P	Pn	22 36 35.2	0.0
	9.2nm,0.3s,baz=52,slow=4.9,SNR=80						
JNU	Nakatsue	7.46	239	Pn	Pn	22 36 34.4	-0.8
ASAJ	Asahikawa	7.55	23	P	Pn	22 36 34.4	-1.9
	27nm,0.3s,baz=213,slow=11,SNR=47						
ASAJ				S	Sn	22 37 56.0	-5.3
	18nm,0.3s,baz=336,slow=24,SNR=2.1						
ASAJ	Asahikawa	7.55	23	P	Pn	22 36 34.0	-2.3
JKA	Kamikawa-asahi	7.56	23	Pn	Pn	22 36 34.0	-2.3
JTU	Tsushima	7.86	253	Pn	Pn	22 36 40.0	-0.3
TEY	Ternei	7.93	350	⇑*i*P	Pn	22 36 42.1	+0.9
TEY				pmax	pmax		
	comp=Z,50nm,0.5s						
TEY				pmax	pmax		
	comp=N,120nm,0.9s						
TEY				pmax	pmax		
	comp=Z,110nm,0.7s						
TEY				pmax	pmax		
	comp=E,50nm,0.6s						
NMR	Nemuro--Hokkai	8.26	40	⇑*i*P	Pn	22 36 42.1	-3.4
KSRS	Korea Array	8.42	275	P	Pn	22 36 49.6	+2.0
	comp=E,2.1nm,0.3s,baz=84,slow=13,SNR=78						
KSRS				ScP	ScP	22 46 14.7	+0.6
	comp=E,0.3nm,0.3s,baz=79,slow=1.1,SNR=12						
KSAR	Wonju Array Be	8.45	275	P	Pn	22 36 49.1	+1.0
KSAR	Wonju Array Be	8.45	275	Pn	Pn	22 36 49.1	+1.0
KS19	Wonju Array Si	8.46	275	Pn	Pn	22 36 49.7	+1.4
USA0B	Ussuriysk Arra	8.53	327	P	Pn	22 36 50.0	+0.9
USA0B	Ussuriysk Arra	8.53	327		Pn	22 36 50.0	+0.9
USRK	Ussuriysk Ar.	8.53	327	P	Pn	22 36 50.4	+1.3
	baz=144,slow=13,SNR=169						
USRK	Ussuriysk Ar.	8.53	327		Pn	22 36 49.7	+0.6
RUSJ	Misakicho	8.57	35	⇑*e*P	Pn	22 36 47.6	-2.0
RUSJ				*e*		22 38 18.5	
GRPR	Tuman	8.73	37	*d i*P	Pn	22 36 48.7	-3.1
GRPR				*i* S	Sn	22 38 18.8	-11
GRPR				pmax	pmax		
	comp=Z,2μm,1.1s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.3s						
GRPR				pmax	pmax		
	comp=N,887nm,0.4s						
GRPR				pmax	pmax		
	comp=E,286nm,0.2s						
JSU	Suzuyama	8.75	232	Pn	Pn	22 36 51.9	-0.3

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YUK   Yuzh-Kuril'sk      8.81  37c iP    Pn    22 36 50.2  -2.5
YUK                              i S     Sn    22 38 21.3   -10
YUK                                pmax  pmax
      comp=N,762nm,0.2s
YUK                                pmax  pmax
      comp=Z,3µm,0.2s
YUK                                pmax  pmax
      comp=E,561nm,0.3s
YUK                                pmax  pmax
      comp=Z,1µm,1.3s
TJN   Taejon             8.96 268⇑eP     Pn    22 36 56.5  +1.6
MDJ   Mudanjiang         9.98 320  P     Pn    22 37 09.6  +1.5
MDJ                                pmax  pmax
      comp=Z,790nm,2.9s
MDJ   Mudanjiang         9.98 320  Pn    Pn    22 37 09.2  +1.1
YSS   Yuzh-Sakhalins    10.22  17⇑eP     Pn    22 37 08.7  -2.4
YSS                               eS     Sn    22 38 58.7  -6.1
YSS                                pmax  pmax
      comp=Z,100nm,0.6s
YSS                                pmax  pmax
      comp=Z,200nm,2.7s
YSS                                smax  smax
      comp=E,300nm,2.7s
YSS   Yuzh-Sakhalins    10.22  17  Pn    Pn    22 37 08.6  -2.6
JCJ   Chichijima        10.57 162  P     Pn    22 37 10.2  -5.8
      comp=E,30nm,0.3s,baz=7.7,slow=20,SNR=10
JCJ                                S     Sn    22 38 57.9   -16
      comp=E,46nm,0.3s,baz=127,slow=23,SNR=3.5
JCJ   Chichijima        10.57 162  Pn    Pn    22 37 10.4  -5.6
KUR   Kuril'sk          10.66  38c iP    Pn    22 37 15.1  -1.8
KUR                               eS     Sn    22 39 09.8  -5.6
KUR                                pmax  pmax
      comp=Z,1µm,3.8s
KUR                                pmax  pmax
      comp=Z,394nm,0.6s
KUR                                pmax  pmax
      comp=N,176nm,0.3s
KUR                                pmax  pmax
      comp=E,179nm,0.3s
KUR                                smax  smax
      comp=N,301nm,0.4s
KUR                                smax  smax
      comp=E,168nm,0.4s
KUR                                smax  smax
      comp=E,1µm,2.9s
KUR                                smax  smax
      comp=N,983nm,2.2s
CN2   Changchun         11.89 308⇓iP     Pn    22 37 32.8   0.0
CN2                                sP    P     22 38 17.4   +39
CN2                                pmax  pmax
      comp=N,50nm,1.2s
UGL   Uglegorsk         12.13  11 eP     P     22 37 41.4  +0.7
UGL                                S     Sn    22 39 48.5  -1.9
UGL                                pmax  pmax
      comp=Z,59nm,0.7s
SNY   Shenyang          12.39 296 ⇓P     Pn    22 37 39.9  +0.8
SNY                                sP    P     22 38 24.9   +41
SNY                                S     Sn    22 39 58.9  +2.0
SNY                                pmax  pmax
      comp=Z,100nm,1.2s
SNY                                LR    LR
      comp=Z,220nm,4.2s
SNY                                LR    LR
      comp=Z,150nm,4.3s
SNY                                LR    LR
      comp=Z,220nm,10.3s
KLR   Kul'dur           12.96 340  P     Pn    22 37 46.0  -0.2
      comp=Z,8.1nm,0.3s,baz=146,slow=10,SNR=73
KLR                                ScP   ScP   22 46 20.7  +0.9
      comp=Z,0.1nm,0.3s,baz=94,slow=3.2,SNR=4.0
KLR   Kul'dur           12.96 340deP     Pn    22 37 45.6  -0.6
KLR                                pmax  pmax
      comp=Z,28nm,0.6s
DL2   Dalian            13.39 282  P     Pn    22 37 52.9  +1.1
DL2                                sP    P     22 38 37.8   +43
DL2                                S     Sn    22 40 22.3  +1.4
DL2                                pmax  pmax
      comp=Z,190nm,0.7s
DL2                                pmax  pmax
      comp=Z,300nm,5.5s
JOW   Kunigami          13.50 223  P     Pn    22 37 51.5  -1.8
      comp=Z,2.4nm,0.3s,baz=21,slow=8.4,SNR=7.4
GRNR  Gornyy            13.62 354⇑iP     P     22 37 58.0  +0.7
GRNR                              eS     S     22 40 28.7  -0.1
GRNR                               pmax  pmax
      comp=N,150nm,0.8s
GRNR                               pmax  pmax
      comp=Z,250nm,0.6s
GRNR                               smax  smax
      comp=N,3.0nm,0.9s
GRNR                               MLR   MLR
      comp=E,280nm,15.0s
GRNR                               MLR   MLR
      comp=N,110nm,12.0s
GRNR                               MLR   MLR
      comp=Z,110nm,15.0s
TYV   Tymovskoe         13.95  11 eP     P     22 38 00.2  -0.8
TYV                               eS     Sn    22 40 32.5  -1.5
TYV                                pmax  pmax
      comp=Z,17nm,0.7s
TYV                                smax  smax
      comp=N,15nm,1.2s
NJ2   Nanjing           16.96 258 eP     P     22 38 34.3  -0.1
NJ2                                pmax  pmax
      comp=N,21nm,0.6s
TIA   Tai'an            17.16 273  P     P     22 38 35.8  -0.8
TIA                                pmax  pmax
      comp=N,17nm,0.8s
BJI   Beijing           17.65 286  P     P     22 38 41.0  -0.9
BJI                                pmax  pmax
      comp=N,90nm,1.0s
BJT   Baijiatuau        17.66 286  P     P     22 38 40.9  -1.1
BJT                                pmax  pmax
      comp=Z,65nm,0.7s
BJT   Baijiatuau        17.66 286  P     P     22 38 40.9  -1.1
HIA   Hailar            18.14 317  P     P     22 38 45.5  -1.7
HIA                                pmax  pmax
      comp=Z,37nm,1.0s
HIA   Hailar            18.14 317  P     P     22 38 45.5  -1.7
HIA                                IAmb  IAmb  22 38 46.6
      comp=Z,37nm,1.0s
ZEA   Zeya              18.26 338 eP     P     22 38 46.8  -1.5
ZEA                                pmax  pmax
      comp=N,50nm,1.0s
ZEA                                pmax  pmax
      comp=E,30nm,0.9s
ZEA                                pmax  pmax
      comp=Z,80nm,0.9s
SKR   Severo-Kuril's    18.43  38 eP     P     22 38 45.2  -5.0
SKR                                pmax  pmax
      comp=Z,300nm,5.9s
SKR                                pmax  pmax
      comp=Z,600nm,4.3s
SKR                                pmax  pmax
      comp=Z,63nm,0.6s
SKR                                MLR   MLR
      comp=Z,200nm,15.0s
NACB  Ninganchiao       19.46 233  P     P     22 38 59.4  -2.2
NACB                               IAmb  IAmb  22 39 06.3
      comp=Z,21nm,0.8s
TIY   Taiyuan           20.67 279 eP     P     22 39 12.3  -2.3
TIY                                pmax  pmax
      comp=Z,31nm,0.7s
PEA0B Petropavlovsk-    20.77  34  P     P     22 39 15.5  +0.2
PEA0B                              pmax  pmax
      comp=Z,41nm,1.0s
PEA0B Petropavlovsk-    20.77  34  P     P     22 39 15.5  +0.2
PEA0B                              IAmb  IAmb  22 39 22.2
      comp=Z,41nm,1.0s
PETK  Petropavlovsk-    20.77  34  P     P     22 39 15.8  +0.4
      comp=Z,18nm,0.6s,baz=216,slow=10,SNR=16
PETK                               ScP   ScP   22 46 35.9  +0.3
      comp=Z,3.3nm,0.9s,baz=322,slow=14,SNR=2.3
PETK  Petropavlovsk-    20.77  34  P     P     22 39 14.9  -0.4
PETK  Petropavlovsk-    20.77  34  P     P     22 39 14.9  -0.4
WHN   Wuhan             21.09 259 ⇓P     P     22 39 17.6  -1.4
WHN                                pmax  pmax
      comp=Z,41nm,0.7s
PET   Petropavlovsk     21.14  35⇓eP     P     22 39 19.0  -0.3
PET                                pmax  pmax
      comp=Z,331nm,1.7s
PET   Petropavlovsk     21.14  35  P     P     22 39 18.7  -0.6
PET                                IAmb  IAmb  22 39 20.1
      comp=Z,68nm,1.2s
HHC   Hu-ho-hao-te      21.19 288 eP     P     22 39 17.1  -3.0
HHC                                pmax  pmax
      comp=Z,14nm,1.9s
HHC                                pmax  pmax
      comp=Z,300nm,6.6s
BTO   Baotou            22.36 287 eP     P     22 39 29.8  -2.1
CIT   Chita             22.95 318 eP     P     22 39 34.4  -2.6
CIT                               e            22 40 07.7
CIT                               e            22 40 26.6
CIT                                pmax  pmax
      comp=Z,83nm,1.2s
MA2   Magadan           23.73  16  P     P     22 39 44.6  +0.8
      comp=Z,23nm,0.6s,baz=199,slow=8.6,SNR=25
MA2   Magadan           23.73  16⇑eP     P     22 39 44.9  +1.0
MA2                                pmax  pmax
      comp=Z,26nm,0.7s
MA2   Magadan           23.73  16  P     P     22 39 44.4  +0.5
MA2                                IAmb  IAmb  22 39 46.1
      comp=Z,30nm,0.7s
XAN   Xi'an             24.20 271  P     P     22 39 46.4  -2.1
XAN                                pP    pP    22 40 19.4  -4.5
XAN                                pmax  pmax
      comp=Z,26nm,0.6s
XAN                                pmax  pmax
      comp=Z,230nm,5.4s
ENH   Enshi             25.03 262  P     P     22 39 54.2  -1.9
ULN   Ulaanbaatar       25.32 305d iP    P     22 39 57.7  -1.0
ULN                                pmax  pmax
      comp=Z,83nm,1.3s
ULN   Ulaanbaatar       25.32 305  P     P     22 39 57.5  -1.2
YAK   Yakutsk           25.43 350  P     P     22 39 58.7  -0.6
      comp=Z,47nm,0.5s,baz=310,slow=1.0,SNR=37
YAK   Yakutsk           25.43 350d iP    P     22 39 58.7  -0.6
YAK                               eS     S     22 44 10.7  -1.2
YAK                               e            22 50 33.0
YAK                                pmax  pmax
      comp=Z,134nm,1.1s
YAK                                pmax  pmax
      comp=N,49nm,1.2s
YAK                                pmax  pmax
      comp=E,22nm,1.4s
YAK                                pmax  pmax
      comp=Z,375nm,5.9s
YAK                                pmax  pmax
      comp=N,239nm,5.4s
YAK                                pmax  pmax
      comp=E,156nm,5.0s
YAK                                smax  smax
      comp=N,394nm,2.8s
YAK                                smax  smax
      comp=E,483nm,3.4s
YAK   Yakutsk           25.43 350  P     P     22 39 58.4  -0.9
SONM  Songino Array     25.74 304  P     P     22 40 01.5  -1.0
      comp=E,35nm,0.6s,baz=107,slow=8.8,SNR=347
SONM                               PcP   PcP   22 43 27.8  +0.6
      comp=E,2.4nm,0.7s,baz=141,slow=2.9,SNR=3.7
SONM                               ScP   ScP   22 46 49.2  +0.1
      comp=E,2.7nm,0.9s,baz=126,slow=3.3,SNR=10
SONM  Songino Array     25.74 304  P     P     22 40 01.3  -1.2
SONM                                           22 43 27.6
SONM                               pmax  pmax
      comp=Z,44nm,1.2s
SONM  Songino Array     25.74 304  P     P     22 40 01.3  -1.2
SONM                               PcP   PcP   22 43 27.6  +0.3
BOD   Bodaibo           26.15 330 eP     P     22 40 05.5  -0.3
BOD                                pmax  pmax
      comp=Z,102nm,1.1s
SEY   Seymchan          27.11  14  P     P     22 40 14.9  +0.6
      comp=Z,4.2nm,0.6s,baz=213,slow=9.1,SNR=15
SEY   Seymchan          27.11  14⇓eP     P     22 40 15.0  +0.7
LZH   Lanzhou           27.73 278 ⇓P     P     22 40 19.1  -1.3
LZH                                sP    sP    22 41 18.1  -1.4
LZH                                SS    SS    22 46 26.1   -28
LZH                                pmax  pmax
      comp=Z,29nm,1.0s
LZH                                pmax  pmax
      comp=Z,100nm,4.9s
ZAK   Zakamensk         28.32 309 eP     P     22 40 23.3  -2.1
ZAK                                pmax  pmax
      comp=Z,13nm,0.8s
TLY   Talaya            28.45 312  P     P     22 40 25.8  -0.5
      comp=Z,12nm,0.6s,baz=119,slow=3.9,SNR=21
TLY   Talaya            28.45 312 eP     P     22 40 25.2  -1.2
TLY                                pmax  pmax
      comp=Z,41nm,0.8s
TLY                                MLR   MLR
      comp=Z,153nm,6.0s
TLY   Talaya            28.45 312  P     P     22 40 25.3  -1.1
TLY                                IAmb  IAmb  22 40 28.1
      comp=Z,18nm,0.8s
GYA   Guiyang           28.96 257 ⇑P     P     22 40 30.0  -1.4
GYA                                S     S     22 45 04.4  -4.2
GYA                                pmax  pmax
      comp=Z,21nm,0.9s
GYA                                pmax  pmax
      comp=Z,270nm,4.5s
CD2   Chengdu           29.34 268 eP     P     22 40 34.0  -0.5
CD2                                pmax  pmax
      comp=Z,10.0nm,0.5s
MOY   Mondy             30.04 311 eP     P     22 40 39.1  -1.4
GTA   Gaotai            30.27 286 ⇓P     P     22 40 41.4  -1.3
GTA                                sP    sP    22 41 42.1   0.0
GTA                                PcP   PcP   22 43 39.1  +0.5
GTA                                ScP   ScP   22 47 02.8  -0.5
GTA                                pmax  pmax
      comp=Z,17nm,0.7s
GTA                                pmax  pmax
      comp=Z,140nm,4.7s
GTA                                LR    LR
      comp=Z,130nm,14.5s
GTA                                LR    LR
      comp=Z,170nm,14.2s
GTA                                LR    LR
      comp=Z,110nm,14.5s
KMI   Kunming           32.69 259⇑iP     P     22 41 03.3  -0.9
KMI                                pmax  pmax
      comp=Z,21nm,0.6s
KMI                                pmax  pmax
      comp=Z,210nm,5.5s
KMI                                LR    LR
      comp=Z,200nm,6.2s
KMI                                LR    LR
      comp=Z,200nm,7.1s
KMI                                LR    LR
      comp=Z,170nm,7.5s
KMI   Kunming           32.69 259  IAmb  IAmb  22 41 03.8
      comp=Z,15nm,0.7s
TIXI  Tiksi             34.85 355d iP    P     22 41 21.5  -0.5
TIXI                               pmax  pmax
      comp=Z,113nm,0.8s
TIXI  Tiksi             34.85 355  P     P     22 41 21.5  -0.5
TIXI                               IAmb  IAmb  22 41 23.2
      comp=Z,24nm,0.7s
ATKA  Atka Island       36.11  50  P     P     22 41 33.5  +0.6
UBPT  Khong Chiam       36.52 242  P     P     22 41 37.0  +0.2
UBPT                               IAmb  IAmb  22 41 38.4
      comp=Z,31nm,1.2s
DLV   T  Lat            36.84 235  P     P     22 41 40.5  +0.7
DGZ   Jazzator, Alta    38.38 306d iP    P     22 41 52.2  -0.1
DGZ                                pmax  pmax
      comp=Z,71nm,0.6s
SIJI  Sorong            38.49 192  P     P     22 41 53.6  +0.2
      comp=Z,11nm,0.8s,baz=231,slow=1.5,SNR=4.3
ZIRO  ZIRO              38.62 269 eP     P     22 41 54.5   0.0
MOKO  MOKOCHONG         38.63 267 eP     P     22 41 54.7  +0.1
WMQ   Urumqi            38.66 296  P     P     22 41 54.6   0.0
WMQ                                pP    pP    22 42 33.8   0.0
WMQ                                pmax  pmax
      comp=Z,35nm,0.9s
WMQ                                pmax  pmax
      comp=Z,270nm,4.5s
WMQ   Urumqi            38.66 296  IAmb  IAmb  22 41 56.0
      comp=Z,22nm,0.7s
CHTO  Chiang Mai        39.09 253  P     P     22 41 57.6  -0.8
CHTO                               pmax  pmax
      comp=Z,6.0nm,0.7s
CHTO  Chiang Mai        39.09 253  P     P     22 41 57.6  -0.8
KOHI  KOHIMA            39.23 266⇑eP     P     22 41 58.6  -1.1
KOHI                               IAmb  IAmb  22 42 01.1
      comp=Z,44nm,0.5s
CM31  Chiang Mai Arr    39.30 253  P     P     22 41 59.6  -0.5
CM31                               IAmb  IAmb  22 42 05.7
      comp=Z,8.0nm,0.5s
CMAR  Chiang Mai Arr    39.30 253  P     P     22 41 59.7  -0.4
      comp=Z,1.5nm,0.3s,baz=41,slow=8.1,SNR=13
CMAR                               PcP   PcP   22 44 06.0  +1.0
      comp=Z,2.6nm,0.6s,baz=0.5,slow=2.0,SNR=9.4
CMAR                               ScP   ScP   22 47 36.0   0.0
      comp=Z,0.8nm,0.3s,baz=28,slow=4.1,SNR=4.7
TEZP  TEZPUR            39.86 268 eP     P     22 42 04.2  -0.5
TEZP                               IAmb  IAmb  22 42 05.3
      comp=Z,58nm,0.6s
ZAA0  Zalesovo Array    40.06 312  P     P     22 42 05.5  -0.4
ZAA0                               PcP   PcP   22 44 06.7  -0.1
ZALV  Zalesovo Beam     40.06 312  P     P     22 42 05.2  -0.7
      comp=Z,33nm,0.5s,baz=102,slow=7.7,SNR=100
ZALV                               PcP   PcP   22 44 06.7  -0.1
      comp=Z,15nm,0.6s,baz=100,slow=2.8,SNR=10
ZALV                               ScP   ScP   22 47 37.6  -0.7
      comp=Z,2.2nm,0.6s,baz=93,slow=4.0,SNR=6.4
ZALV  Zalesovo Beam     40.06 312  P     P     22 42 05.3  -0.6
ZALV                               PcP   PcP   22 44 06.5  -0.3
ZSN   Zaisan            40.21 302 eP     P     22 42 05.3  -2.0
      comp=Z,11nm,0.8s,baz=302
ZSN   Zaisan            40.21 302 eP     P     22 42 05.3  -2.0
ZSN                                pmax  pmax
      comp=Z,11nm,0.8s
FAKI  Fak Fak           40.36 190  P     P     22 42 08.8   0.0
FAKI                               IAmb  IAmb  22 42 10.9
      comp=Z,51nm,1.1s
GUWA  GUWAHATI          40.94 268⇑eP     P     22 42 12.5  -1.0
SHL   Shillong          41.08 267 eP     P     22 42 13.9  -0.9
SHL                                IAmb  IAmb  22 42 14.7
      comp=Z,34nm,0.5s
SAIH  SAIHA             41.71 262 eP     P     22 42 18.8  -1.2
MK31  Makanchi Array    42.03 301d iP    P     22 42 21.3  -0.8
MK31  Makanchi Array    42.03 301  P     P     22 42 21.5  -0.7
MK31                               IAmb  IAmb  22 42 23.3
      comp=Z,20nm,0.8s
MKAR  Makanchi Array    42.03 301  P     P     22 42 21.6  -0.6
      comp=Z,23nm,0.8s,baz=88,slow=9.0,SNR=163
MKAR                               PcP   PcP   22 44 13.5   0.0
      comp=Z,5.5nm,0.8s,baz=77,slow=5.0,SNR=6.4
MKAR                               ScP   ScP   22 47 46.1  -0.2
      comp=Z,2.2nm,0.8s,baz=79,slow=6.3,SNR=4.4
MKAR  Makanchi Array    42.03 301  P     P     22 42 21.3  -0.9
MKAR                               PcP   PcP   22 44 13.4   0.0
MAKZ  Makanchi          42.24 302  P     P     22 42 23.4  -0.4
MAKZ                               pmax  pmax
      comp=Z,27nm,0.8s
MAKZ  Makanchi          42.24 302  P     P     22 42 23.4  -0.4
MAKZ                               IAmb  IAmb  22 42 25.1
      comp=Z,27nm,0.8s
SEM   Semipalatinsk     42.96 307 eP     P     22 42 26.8  -3.1
      comp=Z,15nm,0.7s,baz=307
SEM   Semipalatinsk     42.96 307 eP     P     22 42 26.7  -3.1
SEM                                pmax  pmax
      comp=Z,15nm,0.7s
TAPN  Taplejung         43.60 272 eP     P     22 42 35.5  +0.2
      comp=Z,70nm,0.5s
KURK  Kurchatov         43.97 308d iP    P     22 42 37.0  -0.6
KURK                               pmax  pmax
      comp=Z,199nm,0.7s
KURK  Kurchatov         43.97 308  P     P     22 42 37.2  -0.4
KURBB Kurchatov Arra    44.03 308  P     P     22 42 37.6  -0.4
      comp=Z,121nm,0.5s,baz=86,slow=8.1,SNR=834
KURBB                              ScP   ScP   22 47 52.3  -2.0
      comp=Z,0.4nm,0.4s,baz=98,slow=4.5,SNR=1.6
ODAN  Odare             44.07 272 eP     P     22 42 38.9  -0.1
      comp=Z,49nm,0.5s
RAMN  Ramite            44.66 272 eP     P     22 42 43.7   0.0
      comp=Z,71nm,0.6s
SHLS  Shalkode          44.67 297 eP     P     22 42 38.9  -4.6
      comp=Z,15nm,1.0s,baz=296
SHLS  Shalkode          44.67 297 eP     P     22 42 38.8  -4.6
SHLS                               pmax  pmax
      comp=Z,15nm,1.0s
GUN   Gumba             44.81 274 eP     P     22 42 45.0   0.0
      comp=Z,156nm,0.4s
CNBA  Chernabura Isl    44.87  46  P     P     22 42 44.1  -0.5
CNBA                               IAmb  IAmb  22 42 47.9
      comp=Z,25nm,0.6s
UZB   Uzynbulak         44.99 297 eP     P     22 42 45.8  -0.2
      baz=297
UZB   Uzynbulak         44.99 297 eP     P     22 42 45.7  -0.2
TDK   Taldyqorghan      45.01 300 eP     P     22 42 44.9  -1.1
      comp=Z,33nm,0.6s,baz=299
TDK   Taldyqorghan      45.01 300 eP     P     22 42 44.9  -1.1
TDK                                pmax  pmax
      comp=Z,33nm,0.6s
KPKS  Kokpek            45.15 297 eP     P     22 42 45.5  -1.7
      comp=Z,8.7nm,0.6s,baz=297
KPKS  Kokpek            45.15 297 eP     P     22 42 45.5  -1.7
KPKS                               pmax  pmax
      comp=Z,9.0nm,0.6s
PKI   Pulchoki          45.33 274 eP     P     22 42 48.8  -0.3
      comp=Z,48nm,0.6s
KKN   Kakani            45.34 274 eP     P     22 42 49.0   0.0
      comp=Z,140nm,0.6s
PKIN  Phulchoki         45.34 274 eP     P     22 42 48.6  -0.5
      comp=Z,34nm,0.4s
SATY  Saty              45.45 297 eP     P     22 42 47.6  -2.0
      baz=297
SATY  Saty              45.45 297 eP     P     22 42 47.5  -2.0
KAPI  Kappang           45.51 207  P     P     22 42 51.6  +1.5
      comp=Z,6.1nm,0.6s,baz=358,slow=5.0,SNR=2.6
KAPI  Kappang           45.51 207  P     P     22 42 50.8  +0.6
KAPI                               pmax  pmax
      comp=Z,13nm,1.0s
KAPI  Kappang           45.51 207  P     P     22 42 50.8  +0.6
DMN   Daman             45.56 274 eP     P     22 42 50.7  -0.1
      comp=Z,21nm,0.4s
CHKK  Chushkaly         46.26 298 eP     P     22 42 54.2  -1.6
      baz=298
CHKK  Chushkaly         46.26 298 eP     P     22 42 54.1  -1.6
DANN  Dangsing          46.30 276 eP     P     22 42 57.0  +0.3
      comp=Z,405nm,0.6s
MDOK  Medeo             46.38 297 eP     P     22 42 55.6  -1.4
      baz=297
MDOK  Medeo             46.38 297 eP     P     22 42 55.5  -1.4
AAA   Alma-Ata          46.47 298 eP     P     22 42 57.3  -0.1
      comp=Z,25nm,0.6s,baz=297
AAA   Alma-Ata          46.47 298 eP     P     22 42 57.3  -0.1
AAA                                pmax  pmax
      comp=Z,25nm,0.6s
TNSS  Tian-Shan         46.49 297 eP     P     22 42 57.7  -0.3
      baz=297
TNSS  Tian-Shan         46.49 297 eP     P     22 42 57.7  -0.3
KUU   Kurty             46.70 299 eP     P     22 42 56.4  -2.9
      comp=Z,61nm,1.0s,baz=298
KUU   Kurty             46.70 299 eP     P     22 42 56.3  -2.9
KUU                                pmax  pmax
      comp=Z,61nm,1.0s
BOK   Bokaro            46.71 269 eP     P     22 42 59.6  +0.1
BOK                                IAmb  IAmb  22 43 00.9
      comp=Z,69nm,1.1s
MTBS  Maitube           46.83 298 eP     P     22 42 59.4  -0.9
      baz=297
MTBS  Maitube           46.83 298 eP     P     22 42 59.4  -0.9
DGPR  DIGLIPUR          47.09 252 eP     P     22 43 03.1  +0.6
DGPR                               IAmb  IAmb  22 43 04.0
      comp=Z,86nm,0.8s
ULHL  Ulahol            47.20 296  P     P     22 43 04.7  +1.4
      SNR=5.6
TKM2  Tokmak 2          47.47 297  P     P     22 43 06.5  +1.0
      SNR=18
IMAR  Indian Mountai    47.68  31  P     P     22 43 07.2  +0.8
IMAR                               PcP   PcP   22 44 34.5  +1.9
BRZS  Berezniki         47.84 307 eP     P     22 43 06.3  -1.6
      comp=Z,46nm,0.7s,baz=307
BRZS  Berezniki         47.84 307 eP     P     22 43 06.3  -1.6
BRZS                               pmax  pmax
      comp=Z,46nm,0.7s
KBK   Karagaybulak      48.01 297  P     P     22 43 10.1  +0.7
      SNR=157
SGDS  Sogindy           48.02 298 eP     P     22 43 08.2  -1.2
      comp=Z,16nm,0.8s,baz=298
SGDS  Sogindy           48.02 298 eP     P     22 43 08.1  -1.3
SGDS                               pmax  pmax
      comp=Z,16nm,0.8s
CHMS  Chumysh           48.05 298  P     P     22 43 10.2  +0.5
      SNR=50
USP   Ospenovka         48.16 298  P     P     22 43 10.8  +0.4
      SNR=21
KSH   Kashi             48.19 293  P     P     22 43 15.0  +4.2
KSH                                S     S     22 50 03.6  +7.8
KSH                                pmax  pmax
      comp=Z,65nm,0.8s
KSH                                pmax  pmax
      comp=Z,260nm,4.0s
KSH                                LR    LR
      comp=Z,450nm,6.2s
KSH                                LR    LR
      comp=Z,370nm,6.4s
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KSH				LR	LR		
	comp=Z,600nm,5.8s						
RSO	Redoubt South	48.20	38	P	P	22 43 10.3	-0.4
AAK	Ala-Archa	48.33	297	P	P	22 43 12.4	+0.5
	comp=Z,30nm,0.6s,baz=120,slow=5.4,SNR=190						
AAK	Ala-Archa	48.33	297	P	P	22 43 12.5	+0.5
	SNR=65						
AAK	Ala-Archa	48.33	297	d *i*P	P	22 43 12.3	+0.4
AAK				pmax	pmax		
	comp=Z,143nm,0.8s						
AAK	Ala-Archa	48.33	297	P	P	22 43 12.0	+0.1
UCH	Uchtor	48.43	297	P	P	22 43 14.1	+1.0
	SNR=30						
KDAK	Kodiak Island	48.52	42	⇓*i*P	P	22 43 14.0	+1.1
KDAK				pmax	pmax		
	comp=Z,52nm,0.9s						
KDAK	Kodiak Island	48.52	42	P	P	22 43 12.0	-0.9
KDAK				IAmb	IAmb	22 43 14.7	
	comp=Z,35nm,0.9s						
SOEI	Soe	48.60	199	P	P	22 43 12.5	-1.6
SOEI				IAmb	IAmb	22 43 29.3	
	comp=Z,22nm,0.9s						
BVAR	Borovoye Array	48.71	312	P	P	22 43 14.1	-0.4
	comp=Z,18nm,0.4s,baz=133,slow=11,SNR=223						
BRVK	Borovoye	48.76	312	d *i*P	P	22 43 14.8	-0.1
BRVK				pmax	pmax		
	comp=Z,106nm,1.1s						
BRVK	Borovoye	48.76	312	P	P	22 43 15.0	+0.1
EKS2	Erkin-Say	48.83	298	P	P	22 43 16.2	+0.5
	SNR=52						
CNPM	China Poot	49.04	39	IAmb	IAmb	22 43 19.7	
	comp=Z,18nm,0.7s						
AML	Almayashu	49.05	297	P	P	22 43 18.7	+1.0
	SNR=240						
SUA	Susitna One	49.10	37	IAmb	IAmb	22 43 20.8	
	comp=Z,17nm,0.8s						
BRLK	Bradley Lake	49.19	39	IAmb	IAmb	22 43 20.8	
	comp=Z,22nm,0.9s						
BATI	Baumata	49.19	199	P	P	22 43 18.2	-0.3
	comp=Z,42nm,0.6s,baz=266,slow=0.7,SNR=9.5						
I23K	Minto, Yukon-K	49.51	32	P	P	22 43 22.1	+1.9
I23K				PcP	PcP	22 44 41.5	+2.3
BWN	Browne	49.51	33	IAmb	IAmb	22 43 28.9	
	comp=Z,21nm,1.0s						
PMR	Palmer	49.86	37	P	P	22 43 23.6	+0.6
PMR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PMR	Palmer	49.86	37	P	P	22 43 23.6	+0.6
PMR				IAmb	IAmb	22 43 24.8	
	comp=Z,9.1nm,0.7s						
GHO	Glory Hole Cre	49.95	36	IAmb	IAmb	22 43 25.5	
	comp=Z,15nm,0.6s						
WRH	Wood River Hil	50.09	33	P	P	22 43 25.8	+1.1
WRH				PcP	PcP	22 44 42.1	+0.7
KNK	Knik Glacier	50.20	37	IAmb	IAmb	22 43 35.1	
	comp=Z,14nm,0.9s						
SML	Sawmill	50.22	36	IAmb	IAmb	22 43 28.8	
	comp=Z,14nm,0.8s						
MTN	Manton Dam	50.28	189	IAmb	IAmb	22 43 29.6	
	comp=Z,22nm,0.6s						
POKR	Poker Plat Res	50.32	32	IAmb	IAmb	22 43 36.6	
	comp=Z,18nm,0.9s						
BKNI	Bangkinang	50.43	232	P	P	22 43 28.1	+0.2
DZA	Taraz	50.49	299	*e*P	P	22 43 27.2	-0.9
	comp=Z,30nm,0.7s,baz=298						
DZA	Taraz	50.49	299	*e*P	P	22 43 27.2	-0.9
DZA				pmax	pmax		
	comp=Z,30nm,0.7s						
DHRM	DHARAMSHALA	50.55	284	*e*P	P	22 43 28.3	-0.6
DHRM				IAmb	IAmb	22 43 29.7	
	comp=Z,62nm,0.8s						
ILAR	Eielson Array	50.58	32	P	P	22 43 29.1	+0.6
	comp=Z,2.0nm,0.8s,baz=280,slow=6.8,SNR=21						
SCM	Sheep Creek Mo	50.69	36	IAmb	IAmb	22 43 31.7	
	comp=Z,15nm,0.6s						
KKAR	Karatay Array	51.00	299	P	P	22 43 32.1	+0.3
KKAR	Karatay Array	51.00	299	P	P	22 43 32.1	+0.3
KKAR	Karatay Array	51.00	299	IAmb	IAmb	22 43 33.4	
	comp=Z,157nm,1.1s						
PRP	Porcupine Dome	51.09	31	P	P	22 43 33.7	+1.4
BMAR	Burnt Mountain	51.29	29	P	P	22 43 34.0	+0.3
BMAR				PcP	PcP	22 44 48.8	+2.9
KLU	Klutina	51.40	36	IAmb	IAmb	22 43 36.8	
	comp=Z,9.8nm,0.6s						
BRLS	Borolday	51.49	299	*e*P	P	22 43 36.8	+1.2
	comp=Z,35nm,0.8s,baz=299						
BRLS	Borolday	51.49	299	*e*P	P	22 43 36.7	+1.2
BRLS				pmax	pmax		
	comp=Z,35nm,0.8s						
IUG	Iuzhnay	51.63	298	*e*P	P	22 43 34.9	-1.8
	comp=Z,62nm,1.1s,baz=298						
IUG	Iuzhnay	51.63	298	*e*P	P	22 43 34.9	-1.8
IUG				pmax	pmax		
	comp=Z,62nm,1.1s						
GSI	Gunungsitoli	51.93	236	P	P	22 43 38.8	-0.3
MENT	Mentasta	52.20	34	IAmb	IAmb	22 43 50.0	
	comp=Z,15nm,1.2s						
NIL	Nilore	52.33	287	P	P	22 43 42.4	+0.5
NIL				pmax	pmax		
	comp=Z,73nm,1.1s						
NIL	Nilore	52.33	287	P	P	22 43 42.4	+0.5
BCAR	Beaver Creek A	53.05	34	P	P	22 43 48.0	+1.2
SVE	Sverdlovsk	53.45	318	c *i*P	P	22 43 50.6	+1.0
SVE				pmax	pmax		
	comp=Z,158nm,1.1s						
BHPL	Bhopal	53.73	273	*e*P	P	22 43 51.4	-0.8
EPYK	Eagle Plains	54.51	30	IAmb	IAmb	22 44 00.7	
	comp=Z,33nm,1.2s						
ARU	Arti	54.66	318	P	P	22 43 58.8	+0.4
	comp=Z,51nm,0.5s,baz=78,slow=4.5,SNR=313						
ARU	Arti	54.66	318	d *i*P	P	22 43 58.8	+0.4
ARU				*PP	pP	22 44 35.8	-3.9
ARU						22 44 57.8	
ARU						22 46 00.9	
ARU				S	S	22 51 26.1	+2.5
ARU				SS	SS	22 55 05.7	-2.9
ARU				pmax	pmax		
	comp=Z,222nm,0.8s						
ARU	Arti	54.66	318	P	P	22 43 58.7	+0.3
KBL	Kabul	55.16	290	P	P	22 44 02.1	-0.5
KBL				pmax	pmax		
	comp=Z,40nm,0.9s						
KBL	Kabul	55.16	290	P	P	22 44 02.1	-0.5
INK	Inuvik	55.27	27	P	P	22 44 04.2	+1.6
	comp=Z,5.8nm,0.7s,baz=280,slow=6.6,SNR=7.9						
HYT	Haines Junctio	55.53	36	IAmb	IAmb	22 44 15.2	
	comp=Z,12nm,1.1s						
HYB	Hyderabad	55.88	266	*i* P	P	22 44 06.0	-1.7
HYB	Hyderabad	55.88	266	IAmb	IAmb	22 44 08.7	
	comp=Z,45nm,0.7s						
ABKAR	Akbulak array	56.02	309	P	P	22 44 08.0	-0.2
FITZ	Fitzroy Crossi	56.35	195	P	P	22 44 11.2	+0.4
	comp=Z,3.8nm,0.6s,baz=16,slow=6.7,SNR=14						
FITZ	Fitzroy Crossi	56.35	195	IAmb	IAmb	22 44 13.2	
	comp=Z,8.2nm,1.0s						
AKTO	Aktyubinsk	56.80	311	P	P	22 44 13.8	+0.1
	comp=Z,26nm,0.6s,baz=78,slow=14,SNR=66						
WB0	Warramunga Arr	56.82	185	P	P	22 44 13.5	-0.6
WB0				IAmb	IAmb	22 44 16.2	
	comp=Z,13nm,0.9s						
WRAB	Tennant Creek	56.99	185	⇓*e*P	P	22 44 14.9	-0.4
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s						
WB2	Warramunga Arr	57.00	185	IAmb	IAmb	22 44 17.5	
	comp=Z,13nm,0.9s						
WRA	Warramunga Arr	57.00	185	P	P	22 44 15.1	-0.3
	comp=Z,6.9nm,0.7s,baz=0.2,slow=7.5,SNR=62						
WRA	Warramunga Arr	57.00	185	*i* P	P	22 44 15.1	-0.3
WRA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WRA	Warramunga Arr	57.00	185	P	P	22 44 14.2	-1.2
WR0	Warramunga Arr	57.00	184	IAmb	IAmb	22 44 25.1	
	comp=Z,11nm,0.5s						
C36M	Paulatuk	58.23	24	IAmb	IAmb	22 44 25.4	
	comp=Z,15nm,0.6s						
KIRV	Kirov	58.67	322	P	P	22 44 27.1	+0.6
	comp=Z,202nm,0.8s,baz=78,slow=2.0,SNR=76						
KIRV	Kirov	58.67	322	d *i*P	P	22 44 27.0	+0.4
SPA0	Spitsbergen Ar	59.87	348	*e*P	P	22 44 35.5	+0.9
SPITS	Spitsbergen Ar	59.87	348	P	P	22 44 35.0	+0.5
	comp=Z,2.5nm,0.4s,baz=78,slow=6.2,SNR=29						
PALK	Pallekele	60.14	255	P	P	22 44 37.3	-0.1
	comp=Z,14nm,0.8s,baz=144,slow=7.5,SNR=7.0						
EUNU	Eureka	60.33	8	P	P	22 44 37.5	-0.2
EUNU				IAmb	IAmb	22 44 39.0	
	comp=Z,17nm,0.7s						
GOA	Goa	60.71	268	⇑*e*P	P	22 44 41.5	+0.3
AS31	Alice Springs	60.72	185	P	P	22 44 40.4	-0.6
ASAR	Alice Springs	60.72	185	P	P	22 44 41.2	+0.3
	comp=Z,5.7nm,0.7s,baz=11,slow=7.7,SNR=45						
ASAR	Alice Springs	60.72	185	P	P	22 44 41.0	0.0
LVZ	Lovozero	60.96	335	⇑*e*P	P	22 44 44.1	+2.0
TMCR	Tamitsa	61.44	331	*e*P	P	22 44 44.9	-0.4
TMCR				pmax	pmax		
	comp=Z,54nm,1.0s						
GEYT	Alibeck	61.69	298	P	P	22 44 48.1	+0.6
	comp=Z,28nm,0.9s,baz=50,slow=2.3,SNR=50						
GEYT	Alibeck	61.69	298	P	P	22 44 47.5	0.0
BELG	Belogornoye	62.05	316	d *i*P	P	22 44 49.7	+0.1
BELG				pmax	pmax		
	comp=Z,20nm,1.1s						
KLMR	Klimovskoe	62.33	327	*e*P	P	22 44 48.5	-2.8
KLMR				*e*		22 47 06.1	
KLMR				pmax	pmax		
	comp=Z,28nm,0.7s						
KLMR	Klimovskoe	62.33	327	*e*P	P	22 44 48.6	-2.8
KLMR				AMP		22 44 51.9	
	comp=Z,28nm,0.7s						
KLMR				*e*PP	PP	22 47 06.2	-4.1
HAMF	Hammerfest	62.85	340	*e*P	P	22 44 54.3	-0.3
ARA0	ARCESS Array S	62.98	339	*e*P	P	22 44 56.0	+0.5
ARCES	ARCESS Array B	62.98	339	P	P	22 44 55.9	+0.4
	comp=Z,11nm,0.6s,baz=53,slow=7.5,SNR=62						
ARCES	ARCESS Array B	62.98	339	P	P	22 44 55.8	+0.3
ARCES				pmax	pmax		
	comp=Z,13nm,0.8s						
ARCES	ARCESS Array B	62.98	339	P	P	22 44 55.8	+0.3
RES	Resolute Bay	62.98	14	IAmb	IAmb	22 44 56.7	
	comp=Z,16nm,0.8s						
KTK1	Kautokeino	63.94	339	*e*P	P	22 45 02.0	+0.2
TRO	Tromso	64.76	340	*e*P	P	22 45 07.2	+0.2
YKA	Yellowknife Ar	64.80	29	P	P	22 45 08.7	+1.2
	comp=Z,2.1nm,0.7s,baz=305,slow=6.3,SNR=36						
TULEG	Thule	65.20	7	IAmb	IAmb	22 45 10.6	
	comp=Z,17nm,0.8s						
TULEG	Thule	65.20	7	*i* P	P	22 45 09.9	+0.1
DAG	Danmarks Havn	65.37	354	*i* P	P	22 45 11.2	+0.3
DAG				pmax	pmax		
	comp=Z,54nm,0.7s						
DAG	Danmarks Havn	65.37	354	*i* P	P	22 45 11.2	+0.3
	comp=Z,54nm,0.7s						
DAG	Danmarks Havn	65.37	354	*i* P	P	22 45 11.2	+0.3
DAG				IAmb	IAmb	22 45 11.8	
	comp=Z,54nm,0.7s						
MOS	Moscow	65.69	322	*e*P	P	22 45 12.1	-1.1
MOS				*e*		22 45 56.9	
MOS				*e*		22 53 40.7	
MOS				pmax	pmax		
	comp=Z,86nm,1.1s						
MOS				pmax	pmax		
	comp=Z,100nm,1.7s						
VRH	Novokhopyorsk	65.85	317	*e*P	P	22 45 14.1	-0.3
VRH				pmax	pmax		
	comp=Z,100nm,0.6s						
OBN	Obninsk	66.53	322	P	P	22 45 18.1	-0.4
	comp=Z,6.7nm,0.8s,baz=265,slow=23,SNR=11						
OBN	Obninsk	66.53	322	*i* P	P	22 45 18.5	-0.1
OBN				*i*		22 45 45.7	
OBN				pmax	pmax		
	comp=Z,42nm,1.0s						
OBN	Obninsk	66.53	322	P	P	22 45 18.4	-0.2
LPSR	Galich'ya Gora	66.64	319	*e*P	P	22 45 19.1	-0.3
LPSR				pmax	pmax		
	comp=Z,70nm,0.6s						
N2IH	Innhavet	66.68	340	*e*P	P	22 45 19.8	+0.4
STEI	Steigen	66.90	340	*e*P	P	22 45 21.5	+0.8
AKT	Akhty	67.07	305	*e*P	P	22 45 22.7	+0.2
AKT				*e*		22 45 49.2	
AKT				*e**PP	pP	22 46 07.5	+1.9
AKT				*e**SP	sP	22 46 27.6	+2.1
AKT				*e*		22 47 52.0	
AKT				pmax	pmax		
	comp=Z,83nm,1.0s						
N2TV	T¥rnvik	67.18	340	*e*P	P	22 45 23.0	+0.5
LOF	Lofoten	67.22	341	*e*P	P	22 45 23.6	+0.9
VSR	Storozhevoye	67.23	318	*e*P	P	22 45 23.2	+0.1
VSR				pmax	pmax		
	comp=Z,100nm,0.8s						
FAUS	Fauske	67.27	339	*e*P	P	22 45 23.7	+0.6
VORD	Divnogorie	67.29	317	*e*P	P	22 45 23.4	-0.1
VORD				pmax	pmax		
	comp=Z,40nm,0.8s						
GROC	Groznyy	67.45	308	*e*P	P	22 45 23.3	-1.4
GROC				*e*		22 45 49.1	
GROC				*e**PP	pP	22 46 05.8	-2.1
GROC				pmax	pmax		
	comp=Z,29nm,1.5s						
FIA1	FINESS Array S	67.54	331	IAmb	IAmb	22 45 27.8	
	comp=Z,29nm,0.9s						
FINES	FINESS Array B	67.54	331	P	P	22 45 24.8	0.0
	comp=Z,9.9nm,0.5s,baz=55,slow=6.5,SNR=115						
FINES	FINESS Array B	67.54	331	*i* P	P	22 45 24.7	-0.2
FINES				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FINES	FINESS Array B	67.54	331	P	P	22 45 24.6	-0.2
DBG	Daneborg	67.84	354	*i* P	P	22 45 25.4	-1.2
NBB30	Finnes	67.98	340	*e*P	P	22 45 27.9	+0.3
GOF	Gofitskoye	68.21	311	⇑*e*P	P	22 45 29.8	+0.4
GOF				pmax	pmax		
	comp=Z,40nm,0.8s						
MOR8	Moi Rana	68.35	339	*e*P	P	22 45 29.0	-0.9
KONS	Konsvik	68.50	339	*e*P	P	22 45 31.9	+1.2
WSAR	Wadi Sarin	68.55	283	P	P	22 45 31.8	-0.1
	comp=Z,15nm,0.8s,baz=157,slow=3.8,SNR=7.8						
NCK	Nalchik	68.68	309	⇓*e*P	P	22 45 32.5	+0.2
NCK				pmax	pmax		
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	68.81	177	P	P	22 45 33.5	+0.5
	comp=Z,1.7nm,0.4s,baz=346,slow=5.1,SNR=4.6						
ZEI	Tsey	68.86	308	*e*P	P	22 45 31.9	-1.8
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KBZ	Khabaz	68.99	309	P	P	22 45 34.5	+0.4
	comp=Z,16nm,0.8s,baz=53,slow=2.4,SNR=63						
KBZ	Khabaz	68.99	309	d *i*P	P	22 45 34.6	+0.4
KBZ				pmax	pmax		
	comp=Z,25nm,1.0s						
KVAR	Kislovodsk Arr	68.99	310	P	P	22 45 35.0	+0.6
	comp=Z,12nm,0.7s,baz=268,slow=23,SNR=15						
KIV	Kislovodsk	69.00	310	*e*P	P	22 45 34.8	+0.4
KIV				pmax	pmax		
	comp=Z,129nm,1.1s						
KIV				MLR	MLR		
	comp=Z,94nm,17.0s						
KIV	Kislovodsk	69.00	310	P	P	22 45 34.6	+0.2
VSU	Vasula	69.08	328	*e*P	P	22 45 34.8	+0.3
VSU	Vasula	69.08	328	d *i*P	P	22 45 34.8	+0.3
VSU				pmax	pmax		
	comp=Z,164nm,1.7s						
GNI	Garni	69.70	305	d *e*P	P	22 45 40.0	+1.1
GNI				pmax	pmax		
	comp=Z,36nm,1.4s						
GNI	Garni	69.70	305	P	P	22 45 39.7	+0.9
GNI				IAmb	IAmb	22 45 47.3	
	comp=Z,20nm,1.0s						
MTSE	Matsula	70.12	330	*e*P	P	22 45 40.8	0.0
NSS	Namsos	70.26	338	*e*P	P	22 45 42.0	+0.4
B08A	Colville Reser	70.33	44	P	P	22 45 43.6	+1.2
SUMG	Summit	70.47	359	P	P	22 45 44.4	+1.1
SUMG				pmax	pmax		
	comp=Z,26nm,0.8s						
SUMG	Summit	70.47	359	P	P	22 45 44.4	+1.1
SUMG	Summit	70.47	359	*i* P	P	22 45 44.0	+0.7
SUMG	Summit	70.47	359	*i* P	P	22 45 44.0	+0.7
AAL	Aland	70.64	332	*e*P	P	22 45 44.4	+0.4
H04A	Detroit Lake	70.74	48	IAmb	IAmb	22 45 47.5	
	comp=Z,10nm,0.7s						
MNK	Minsk	71.00	325	*i* P	P	22 45 46.2	-0.1
	comp=E,5.0nm,1.0s						
MNK				*i* P	P	22 45 46.2	-0.1
	comp=N,29nm,1.4s						
MNK				*i* P	P	22 45 46.2	-0.1
	comp=Z,47nm,1.5s						
MNK				*i* pP	pP	22 46 29.1	-0.6
MNK				*i* PP	PP	22 48 25.7	+0.1
MNK				*i* PPP	PPP	22 50 09.8	
MNK				*i* S	S	22 54 46.8	-0.1
MNK				*i* sS	sS	22 56 03.0	+1.2
MNK				*i* SS	SS	22 59 25.4	+2.6
MNK				*i* SSS	SSS	23 02 45.5	
MNK				*i* LRM	MLR	23 19 58.0	
	comp=E,2.0nm,6.3s						
MNK				*i* LRM	MLR	23 19 58.0	
	comp=N,97nm,13.5s						
MNK				*i* LRM	MLR	23 20 18.3	
	comp=Z,100nm,16.4s						
MNK	Minsk	71.00	325	*e*P	P	22 45 46.0	-0.3
SOC	Sochi	71.01	311	*e*P	P	22 45 45.2	-1.3
SOC				*e*		22 48 23.5	
SOC				*e*PPP	PPP	22 50 08.4	
SOC				*e*S	S	22 54 45.7	-1.6
SOC				*e*SS	SS	22 59 17.9	-5.6
SOC				*e*SSS	SSS	23 02 38.6	
SOC				pmax	pmax		
	comp=Z,16nm,0.8s						
IDID	Didziasalis	71.02	326	*e*P	P	22 45 46.8	+0.5
ISAL	Salakas	71.14	326	*e*P	P	22 45 47.6	+0.6
IIGN	Ignalina	71.23	326	*e*P	P	22 45 47.8	+0.2
C09A	Chrisman Ranch	71.23	44	IAmb	IAmb	22 45 49.9	
	comp=Z,7.1nm,0.7s						
NACGM	Naroch	71.26	325	*i* P	P	22 45 48.0	+0.2
NACGM				*i* P	P	22 45 48.0	+0.2
NACGM				*i* P	P	22 45 48.0	+0.2
NACGM				*i* Pb	P	22 45 49.3	+1.5
	comp=Z,35nm,1.1s						
NACGM				*i* Pb	P	22 45 50.2	+2.4
	comp=N,19nm,1.4s						
NACGM				*i* Pb	P	22 45 50.4	+2.6
	comp=E,17nm,1.2s						
NACGM				*i* pP	pwP	22 46 35.3	+1.9
NACGM				*i* sP	sP	22 46 57.0	+6.1
NACGM				*i* PP	PP	22 48 30.0	+2.2
NACGM				*i* PPP	PPP	22 50 14.6	
NACGM				*i* S	S	22 54 52.5	+2.8
NACGM				*i* sS	sS	22 56 15.7	+11
NACGM				*i* PS		22 57 31.6	
NACGM				*i* SS	SS	22 59 13.5	-13
NACGM				*i* SSS	SSS	23 03 00.0	
NACGM				*i* LQ	LQ	23 08 57.0	
NACGM				*i* LR	LR	23 13 51.7	
SLIT	Slitere, Latvi	71.44	329	*e*P	P	22 45 47.8	-1.0
NEW	Newport	71.60	43	P	P	22 45 51.4	+1.3
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	Newport	71.60	43	P	P	22 45 51.4	+1.3
SCO	Scoresbysund	71.66	353	*i* P	P	22 45 51.1	+1.2
SCO	Scoresbysund	71.66	353	*i* P	P	22 45 51.1	+1.2
SCO	Scoresbysund	71.66	353	*i* P	P	22 45 51.1	+1.2
ANN	Anapa	71.69	313	*e*P	P	22 45 49.0	-1.6
ANN				*e**PP	pP	22 46 30.5	-3.8
ANN				*e*S	S	22 54 54.7	-0.4
ANN				pmax	pmax		
	comp=Z,115nm,1.3s						
TBLU	Trondheim	71.72	338	*e*P	P	22 45 49.9	-0.5
UPP	Uppsala	71.73	333	*e*P	P	22 45 50.4	-0.1
PABE	Paberze	72.12	327	*e*P	P	22 45 53.1	+0.2
KOPT	Kop Dagi	72.50	307	IAmb	IAmb	22 45 59.6	
	comp=Z,9.1nm,0.9s						
PBUR	Paburge	72.65	328	*e*P	P	22 45 56.0	-0.1
AKASG	Malin Array Be	72.69	321	P	P	22 45 56.2	-0.2
	comp=Z,6.7nm,0.3s,baz=46,slow=6.4,SNR=52						
AKASG	Malin Array Be	72.69	321	P	P	22 45 55.9	-0.5
AKBB	Malin Array Si	72.69	321	IAmb	IAmb	22 45 57.3	
	comp=Z,40nm,1.1s						
NC303	NORSAR Array S	72.89	336	IAmb	IAmb	22 45 58.2	
	comp=Z,26nm,0.8s						
HFS	Hagfors	72.93	335	P	P	22 45 57.5	-0.1
	comp=Z,8.6nm,0.7s,baz=89,slow=1.3,SNR=45						
DOMB	Dombas	73.00	338	*e*P	P	22 45 58.7	+0.6
MOL	Molde	73.04	339	*e*	P	22 45 58.4	+0.2
NC204	NORSAR Array S	73.05	336	*e*P	P	22 45 58.7	+0.2
NB2	NORSAR Subarra	73.08	336	P	P	22 45 58.7	+0.1
	comp=Z,8.8nm,0.6s,baz=40,slow=6.2						
NB2	NORSAR Subarra	73.08	336	P	P	22 45 58.7	+0.1
	baz=40,slow=6.2						
NOA	NORSAR Array B	73.08	336	P	P	22 45 58.6	+0.1
	comp=Z,14nm,0.7s,baz=41,slow=5.9,SNR=59						
NC602	NORSAR Array S	73.21	336	*e*P	P	22 45 58.9	-0.3
UMR	Umm Al-Rimmam	73.37	295	*e*P		22 46 00.6	
JTMT	Jette	73.44	42	IAmb	IAmb	22 46 03.8	
	comp=Z,8.3nm,0.7s						
MIB	Mutribah	73.50	295	*e*P		22 46 01.1	
AKN	Aaknes	73.51	338	*e*P	P	22 46 01.4	+0.4
SIM	Simferopol'	73.53	314	d *e*P	P	22 45 59.4	-2.1
SIM				pmax	pmax		
	comp=Z,138nm,1.7s						
QRN	Al-Qurain	73.67	294	*e*P		22 46 02.5	
RDF	Al-Radifah	73.83	294	*e*P		22 46 03.3	
RST	Umm Al-Ruwaisa	73.92	295	*e*P		22 46 03.0	
ICESG	Greenland Ices	73.99	359	*i* P	P	22 46 04.9	+0.9
OSL	Oslo	74.08	336	*e*P	P	22 46 04.7	+0.4
SKAR	Skarslia	74.28	337	*e*P	P	22 46 06.5	+1.0
HYA	Hoyanger	74.55	338	*e*P	P	22 46 07.0	+0.1
SORM	Soroca	74.74	319	⇑P	P	22 46 08.0	-0.4
FFC	Flin Flon	74.78	32	P	P	22 46 09.2	+0.7
FFC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FFC	Flin Flon	74.78	32	P	P	22 46 09.2	+0.7
FCC	Fort Churchill	74.85	25	P	P	22 46 09.5	+0.7
FCC				pmax	pmax		
	comp=Z,11nm,1.2s						
FCC	Fort Churchill	74.85	25	P	P	22 46 09.5	+0.7
FCC				IAmb	IAmb	22 46 10.6	
	comp=Z,11nm,1.1s						
TOKA	Tokat	74.85	309	IAmb	IAmb	22 46 11.2	
	comp=Z,23nm,1.1s						
SUE	Sulen	75.05	339	*e*P	P	22 46 10.6	+0.8
HRY	Holter Researc	75.40	42	P	P	22 46 13.9	+1.6
ODD1	Odda	75.41	337	*e*P	P	22 46 12.7	+0.7
BER	Bergen	75.42	338	*e*P	P	22 46 12.9	+0.9
EGMT	Eagleton	75.65	40	P	P	22 46 15.0	+1.3
EGMT				IAmb	IAmb	22 46 17.5	
	comp=Z,12nm,0.8s						
LVV	L'vov	75.82	323	*e*P	P	22 46 14.5	0.0
DLMT	Dillon	75.83	43	IAmb	IAmb	22 46 17.5	
	comp=Z,8.1nm,0.8s						
BLS5	Blasjo	75.85	337	*e*P	P	22 46 15.3	+0.8
VASR	Vaslui	75.98	318	⇑P	P	22 46 16.2	+0.7
BEL	Belsk	75.98	326	*e*P	P	22 46 16.4	+1.0
ILGA	Ilgaz	76.10	311	P	P	22 46 17.3	+0.8
BSD	Bornholm Skovb	76.15	330	*e*P	P	22 46 17.6	+1.5
BSD	Bornholm Skovb	76.15	330	*i* P	P	22 46 16.4	+0.2
BSD	Bornholm Skovb	76.15	330	*i* P	P	22 46 16.4	+0.2
BSD	Bornholm Skovb	76.15	330	*i* P	P	22 46 16.4	+0.2
BSD				*i* P	P	22 46 16.5	+0.2
VARL	Varlezi	76.42	318	⇑P	P	22 46 18.8	+0.8
SNART	Snartemo	76.47	336	*e*P	P	22 46 18.9	+0.9
SNART	Snartemo	76.47	336	*e*P	P	22 46 19.4	+1.5
GKP	Gorka Klasztor	76.53	328	*e*P	P	22 46 18.8	+0.4
GKP	Gorka Klasztor	76.53	328	*e*P	P	22 46 18.2	-0.2
KWP	Kalwaria Pacla	76.59	323	*e*P	P	22 46 19.7	+0.9
TESR	Tescani	76.67	319	⇑P	P	22 46 19.9	+0.6
BIZ	Bicaz	76.67	319	⇓P	P	22 46 20.2	+0.8
BUR08	Bucovina Ar. S	76.68	320	IAmb	IAmb	22 46 21.2	
	comp=Z,14nm,0.9s						
BURAR	Bucovina Array	76.69	320	⇑P	P	22 46 20.4	+0.8
BURAR	Bucovina Array	76.69	320	P	P	22 46 19.5	0.0
NVAR	Mina Array Bea	76.72	52	P	P	22 46 21.0	+0.9
	comp=Z,6.8nm,0.7s,baz=278,slow=5.2,SNR=4.0						
CFR	Carcaliu	76.73	317	⇑P	P	22 46 20.1	+0.4
BR131	Keskin Array S	76.95	310	IAmb	IAmb	22 46 22.8	
	comp=Z,29nm,1.1s						
BRTR	Keskin Array B	76.96	310	P	P	22 46 21.6	+0.3
	comp=Z,12nm,0.9s,baz=100,slow=4.3,SNR=39						
BRTR				PP	PP	22 49 13.4	-3.1
	comp=Z,3.6nm,1.0s,baz=60,slow=7.3,SNR=5.5						
BRTR	Keskin Array B	76.96	310	P	P	22 46 21.4	+0.1
VRI	Vrincioaia	77.05	318	⇑P	P	22 46 23.2	+1.7
PLOR	Plostina	77.10	318	⇓P	P	22 46 23.1	+1.3
HARR	Harsova	77.16	317	⇓P	P	22 46 22.5	+0.4
TLBR	Topalu	77.19	317	⇓P	P	22 46 22.8	+0.6
BISRR	Bisoca	77.26	318	⇑P	P	22 46 24.4	+1.6
KOLS	Kolonicke sedl	77.27	323	*e*P	P	22 46 23.3	+0.6
KOLS				pmax	pmax		
	comp=Z,15nm,1.4s						
KOLS	Kolonicke sedl	77.27	323	*e*P	P	22 46 23.2	+0.6
OZUR		77.39	319	⇑P	P	22 46 24.4	+0.9
BR231	Keskin MP Arra	77.41	311	IAmb	IAmb	22 46 25.5	
	comp=Z,25nm,1.2s						
ARCR	ARCALIA	77.48	320	⇓P	P	22 46 25.6	+1.8
OJC	Ojcow	77.55	325	*e*P	P	22 46 24.9	+0.7
OJC	Ojcow	77.55	325	IAmb	IAmb	22 46 27.5	
	comp=Z,27nm,0.8s						

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NEHR  Nehoiu            77.56 318 ⇑P      P      22 46 25.3 +1.0
ICOR  Ion Corvin        77.60 316 ⇑P      P      22 46 25.8 +1.3
CRVS  Cervenica-Dubn    77.68 323 eP      P      22 46 25.7 +0.7
CRVS                               pmax   pmax
      comp=Z,17nm,0.9s
CRVS  Cervenica-Dubn    77.68 323 eP      P      22 46 25.7 +0.7
DOPR  Dopca             77.69 319 ⇑P      P      22 46 26.6 +1.5
MLR   Muntele Rosu      77.71 318 ⇑P      P      22 46 25.9 +0.6
MLR   Muntele Rosu      77.71 318  IAmb   IAmb   22 46 26.8
      comp=Z,22nm,1.3s
NIE   Niedzica          77.88 324 eP      P      22 46 27.4 +1.3
CJR   Cluj-Napoca       78.11 320 ⇓P      P      22 46 28.7 +1.3
VOIR                    78.22 319 ⇑P      P      22 46 28.6 +0.6
SOCY  Socotra           78.40 277  P      P      22 46 27.7 -1.8
RAYN  Ar Rayn           78.41 291  P      P      22 46 29.5  0.0
RAYN                               pmax   pmax
      comp=Z,30nm,1.0s
RAYN  Ar Rayn           78.41 291  P      P      22 46 29.5  0.0
RAYN                               IAmb   IAmb   22 46 30.8
      comp=Z,30nm,0.9s
LANS  Liptovska Anna    78.46 324 eP      P      22 46 30.8 +1.5
LANS                               pmax   pmax
      comp=Z,8.0nm,0.8s
LANS  Liptovska Anna    78.46 324 eP      P      22 46 30.8 +1.5
LANS                              ePP     PP     22 49 30.8 +2.2
ARR   Arges             78.48 319 ⇓P      P      22 46 30.9 +1.4
DRGR                    78.51 321 ⇓P      P      22 46 30.3 +0.7
KSP   Ksiaz             78.68 327 eP      P      22 46 31.2 +0.8
HUMR  Humele            78.86 318 ⇑P      P      22 46 31.3 -0.2
LOT   Lotru             78.88 319 ⇑P      P      22 46 32.5 +0.7
MORC  Moravsky Berou    78.90 325 ⇓P      P      22 46 32.4 +0.8
MORC  Moravsky Berou    78.90 325 eP      P      22 46 32.2 +0.5
MORC                              ePP     PP     22 49 34.0 +1.8
MORC  Moravsky Berou    78.90 325  IAmb   IAmb   22 46 32.9
      comp=Z,11nm,0.9s
OSTC  Ostas             78.92 327 eP      P      22 46 32.5 +0.7
CHVC  Chvalec           78.97 327 eP      P      22 46 32.5 +0.5
COPA  Copaceanca        78.99 318 ⇓P      P      22 46 32.0 -0.2
KRLC  Kraliky           79.02 326 eP      P      22 46 31.9 -0.4
KRLC                              e              22 49 34.7
KRLC  Kraliky           79.02 326 eP      P      22 46 31.9 -0.4
KRLC                              ex      x      22 49 34.7
DPC   Dobruska-Polom    79.03 326 eP      P      22 46 33.3 +0.9
DPC                               e       PcP    22 46 43.2 +3.0
DPC   Dobruska-Polom    79.03 326 eP      P      22 46 33.3 +0.9
DPC   Dobruska-Polom    79.03 326 eSG     PcP    22 46 43.2 +3.0
PSZ   Piszkesteto       79.12 323 ⇑P      P      22 46 34.2 +1.3
PSZ   Piszkesteto       79.12 323 eP      P      22 46 33.4 +0.5
PSZ   Piszkesteto       79.12 323  IAmb   IAmb   22 46 34.3
      comp=Z,12nm,0.9s
PDAR  Pinedale Array    79.17  44  P      P      22 46 34.9 +1.3
      comp=Z,1.6nm,0.5s,baz=324,slow=0.9,SNR=21
PDAR  Pinedale Array    79.17  44  P      P      22 46 34.6 +1.1
VYHS  Vyhne             79.22 324 eP      P      22 46 34.2 +0.8
VYHS                               pmax   pmax
      comp=Z,12nm,1.0s
VYHS  Vyhne             79.22 324 eP      P      22 46 34.2 +0.8
VYHS                              ePP     PP     22 49 35.6 +0.7
GZR   Gura Zlata        79.43 320 ⇑P      P      22 46 35.3 +0.6
JAVC  Velka Javorina    79.50 325 eP      P      22 46 36.5 +1.6
JAVC                              ePP     PP     22 49 39.5 +2.3
VLAD  Vladila           79.52 318 ⇑P      P      22 46 35.6 +0.6
PVCC  Panska Ves        79.66 327 eP      P      22 46 36.3 +0.6
PVCC  Panska Ves        79.66 327 eP      P      22 46 36.3 +0.6
VRAC  Vranov            79.66 326 ⇑P      P      22 46 37.0 +1.2
VRAC  Vranov            79.66 326 eP      P      22 46 36.7 +0.9
VRAC                              ePP     PP     22 49 38.4 -0.1
BRG   Berggiesshubel    79.67 328 i P     P      22 46 36.1 +0.4
BRG                                Amp           22 46 37.3
      comp=Z,14nm,1.0s
BRG   Berggiesshubel    79.67 328 i P     P      22 46 36.1 +0.4
BRG                                pmax   pmax
      comp=Z,14nm,1.0s
BRG   Berggiesshubel    79.67 328 i P     P      22 46 36.1 +0.4
BRG                                Amp           22 46 37.3
      comp=Z,14nm,1.0s
FLTG  Flechtingen       79.68 330 eP      P      22 46 35.5 -0.2
      comp=Z,26nm,1.0s,baz=38,slow=5.2
CLL   Collm             79.74 329 i P     P      22 46 35.9 -0.2
      comp=Z,25nm,1.0s
CLL                               i (PcP) PcP    22 46 41.3 -1.9
CLL                               epP     pP     22 47 19.0 -1.5
CLL   Collm             79.74 329 i P     P      22 46 35.9 -0.2
CLL                               i              22 46 41.3
CLL                               e*PP    pP     22 47 19.0 -1.5
CLL                                pmax   pmax
      comp=Z,25nm,1.0s
CLL   Collm             79.74 329  IAmb   IAmb   22 46 37.2
      comp=Z,24nm,1.0s
CLL   Collm             79.74 329 eP      P      22 46 36.2 +0.1
      comp=Z,25nm,1.0s,baz=38,slow=5.2
SMOL  Smolenice         79.86 325 eP      P      22 46 38.2 +1.4
SMOL                               pmax   pmax
      comp=Z,7.0nm,0.8s
SMOL  Smolenice         79.86 325 eP      P      22 46 38.2 +1.4
SMOL                              ePP     PP     22 49 42.1 +2.0
BZS   Buzias            79.87 321 ⇓P      P      22 46 37.3 +0.4
FBE   Freiberg          79.88 328 eP      P      22 46 37.5 +0.6
      comp=Z,26nm,1.1s,baz=38,slow=5.2
KRUC  Moravsky          79.93 326 eP      P      22 46 37.8 +0.6
KRUC                              ePP     PP     22 49 40.3 -0.4
HERR  Herculane         79.97 320 ⇓P      P      22 46 37.4  0.0
MODS  Modra-Piesok      80.03 325 eP      P      22 46 38.1 +0.3
MODS                               pmax   pmax
      comp=Z,13nm,1.0s
MODS  Modra-Piesok      80.03 325 eP      P      22 46 38.0 +0.3
MODS                              ePP     PP     22 49 42.5 +0.9
PRU   Pruhonice         80.07 327 eP      P      22 46 38.5 +0.6
PRU   Pruhonice         80.07 327 eP      P      22 46 38.5 +0.6
CSS   Mathiatis         80.08 306  P      P      22 46 38.2 -0.1
CSS                                IAmb   IAmb   22 46 39.1
      comp=Z,17nm,0.7s
TREC  Trest             80.17 326 eP      P      22 46 39.0 +0.5
TREC  Trest             80.17 326 eP      P      22 46 39.0 +0.5
ZST   Bratislava        80.24 325 ePP     PP     22 49 45.5 +2.2
CSKK  Cskako            80.29 323 eP      P      22 46 39.8 +0.6
NEUB  Neuenburg         80.32 329 eP      P      22 46 39.6 +0.4
      comp=Z,27nm,1.0s,baz=38,slow=5.2
MDVR  Moldovita         80.40 320 ⇑P      P      22 46 40.3 +0.4
CLZ   Clausthal         80.40 330 eP      P      22 46 40.2 +0.6
      comp=Z,20nm,1.0s,baz=38,slow=5.2
PBCC  Pribram           80.53 327 eP      P      22 46 40.8 +0.4
ULM   Lac du Bonnet     80.60  32  P      P      22 46 41.1 +0.4
      comp=Z,4.2nm,0.9s,baz=298,slow=6.7,SNR=7.9
EGYH  Egyhazaskeszo     80.69 324 eP      P      22 46 38.5 -2.8
WERN  Wernitzgruen      80.77 328 eP      P      22 46 42.2 +0.5
      comp=Z,10nm,0.7s,baz=38,slow=5.2
MPLH  Magyarpolny       80.77 324 eP      P      22 46 42.4 +0.7
NKC   Novy Kostel       80.78 328 eP      P      22 46 42.3 +0.6
NKC   Novy Kostel       80.78 328 eP      P      22 46 42.3 +0.6
TIH   Tihany            80.80 323 eP      P      22 46 42.2 +0.3
MOX   Moxa              80.82 329 eP      P      22 46 42.1 +0.2
      comp=Z,18nm,1.5s,baz=38,slow=5.2
SOP   Sopron            80.86 324 eP      P      22 46 43.2 +1.1
MORH  Mrgy, Hungar      80.93 322 eP      P      22 46 41.6 -0.9
CONA  Conrad Observa    81.00 325 eP      P      22 46 44.1 +1.1
      comp=Z,14nm,1.0s,SNR=5.8
CONA                              eP      PP     22 49 51.3 +1.6
      comp=Z,21nm,1.5s
IBBN  Ibbenburen        81.04 332 eP      P      22 46 43.0  0.0
      comp=Z,28nm,0.8s,baz=38,slow=5.2
VTS   Vitosha           81.08 317 ⇓P      P      22 46 44.8 +1.2
KHC   Kasperske Hory    81.13 327⇓eP      P      22 46 44.1 +0.5
KHC                                pmax   pmax
      comp=Z,22nm,0.6s
KHC   Kasperske Hory    81.13 327 eP      P      22 46 43.9 +0.3
KHC                               ex      x      22 49 42.0
KHC   Kasperske Hory    81.13 327  IAmb   IAmb   22 46 45.1
      comp=Z,11nm,0.8s
GEC2  GERESS Array S    81.29 327  IAmb   IAmb   22 46 45.1
      comp=Z,6.7nm,0.6s
GERES GERESS Array B    81.29 327  P      P      22 46 44.6 +0.1
      comp=Z,6.9nm,0.7s,baz=37,slow=5.9,SNR=59
GERES                              PP     PP     22 49 43.6 -8.4
      comp=Z,0.6nm,0.6s,baz=52,slow=8.6,SNR=4.1
GERES GERESS Array B    81.29 327  P      P      22 46 44.1 -0.5
GERES GERESS Array B    81.29 327  P      P      22 46 44.1 -0.5
UBBA  Unterbreizbach    81.34 330 eP      P      22 46 44.6 +0.1
      comp=Z,5.6nm,0.6s,baz=38,slow=5.2
WET   Wettzell          81.42 327 eP      P      22 46 45.7 +0.5
      baz=38,slow=5.2
INVG  Invergeldie, C    81.44 340 eP      P      22 46 45.3 +0.3
ARSA  Arzberg           81.66 325 eP      P      22 46 47.4 +1.0
      comp=Z,6.2nm,0.8s
KASTN Kahler Asten      81.66 331 eP      P      22 46 46.4  0.0
      comp=Z,7.0nm,0.9s,baz=38,slow=5.2
GRA1  Grafenberg Arr    81.71 329  IAmb   IAmb   22 46 48.4
      comp=Z,24nm,0.9s
GRF   Grafenberg Arr    81.71 329 eP      P      22 46 47.5 +0.8
      comp=Z,53nm,1.4s,baz=38,slow=5.2
GRFO  Grafenberg        81.71 329  P      P      22 46 46.9 +0.3
GRFO                               pmax   pmax
      comp=Z,6.0nm,0.9s
GRFO  Grafenberg        81.71 329  P      P      22 46 46.9 +0.3
DIVS  Divibare          81.76 320  IAmb   IAmb   22 46 48.2
      comp=Z,14nm,1.4s
MOA   Molln             81.78 326 i P     P      22 46 47.0 -0.1
      comp=Z,3.6nm,0.7s
MOA                               eP      PP     22 49 57.4 +1.4
      comp=Z,8.1nm,1.2s
KALN  Kalnik            82.04 323  P      P      22 46 48.2 -0.2
ESK   Eskdalemuir       82.17 339 eP      P      22 46 49.2 +0.3
EDMD  Edmundbyers       82.23 338 eP      P      22 46 49.9 +0.7
STIP  Stip              82.28 317 i P     P      22 46 50.3 +0.6
PERS  Pernice           82.30 325 i P     P      22 46 50.0 +0.2
SOKA  Soboth            82.31 325 eP      P      22 46 50.4 +0.5
      comp=Z,28nm,1.1s,SNR=8.9
SOKA                              i P     PP     22 50 01.1 +0.7
      comp=Z,6.7nm,1.7s
VAY   Valandovo         82.33 317 i P     P      22 46 51.1 +1.1
PTJ   Puntijarka        82.44 324  P      P      22 46 50.1 -0.4
GOLS  Golise            82.52 324 i P     P      22 46 50.9  0.0
OBKA  Obir              82.66 325 eP      P      22 46 52.0 +0.3
      comp=Z,4.9nm,0.9s
OBKA                              eP      PP     22 50 03.1 -0.2
      comp=Z,11nm,1.1s
AHRW  Bad Neuenahr-A    82.71 331 eP      P      22 46 51.6 -0.1
      comp=Z,14nm,1.0s,baz=38,slow=5.2
KBA   Koelnbreinsper    82.78 326 eP      P      22 46 52.8 +0.4
      comp=Z,7.5nm,0.7s
KBA                               eP      PP     22 50 06.2 +1.8
      comp=Z,11nm,0.9s
FUR   Furstenfeldbru    82.86 327 eP      P      22 46 53.1 +0.5
      comp=Z,43nm,1.1s,baz=38,slow=5.2
HPK   Haverah Park      82.88 338 eP      P      22 46 52.8 +0.3
MYKA  Terra Mystica     82.98 325 eP      P      22 46 53.1 -0.3
      comp=Z,9.4nm,1.0s
MYKA                              eP      PP     22 50 05.1 -0.8
      comp=Z,6.0nm,1.0s
BEBN  Eben Emael        83.03 332 dP      P      22 46 53.0 -0.4
MEM   Membach           83.06 332 dP      P      22 46 53.2 -0.3
BSTI  Sart Tilman       83.25 332 dP      P      22 46 54.1 -0.4
BSTI                              dPcP    PcP    22 46 57.7 -0.9
BSTI                              dsP     sP     22 48 01.3 +2.3
BSTI                              dPP     PP     22 50 04.5 -3.3
STU   Stuttgart         83.26 329 eP      P      22 46 54.8 +0.2
      comp=Z,31nm,1.1s,baz=38,slow=5.2
ZOU   Zoufplan          83.34 326  IAmb   IAmb   22 46 56.1
      comp=Z,6.5nm,0.7s
WATA  Walderalm         83.36 327 i P     P      22 46 55.4  0.0
      comp=Z,3.0nm,0.6s
WATA                              eP      PP     22 50 10.7 +1.6
      comp=Z,9.1nm,1.2s
LBWR  Ladybower, Pea    83.38 337 eP      P      22 46 55.5 +0.3
LBWR                               IAmb   IAmb   22 46 57.2
      comp=Z,55nm,1.0s
WTTA  Wattenberg        83.39 327 i P     P      22 46 56.0 +0.4
      comp=Z,4.1nm,0.6s
WTTA                              i P     PP     22 50 12.3 +3.0
      comp=Z,15nm,1.6s
ABTA  Abfaltersbach     83.40 326 eP      P      22 46 55.0 -0.5
      comp=Z,11nm,1.0s,SNR=7.5
ABTA                              eP      PP     22 50 10.3 +1.0
      comp=Z,6.3nm,1.4s
OHR   Ohrid             83.44 318 i P     P      22 46 55.9 +0.2
BCLA  Clavier           83.48 332 dP      P      22 46 55.2 -0.5
BCLA                              dPcP    PcP    22 46 59.4 -0.2
UDBI  Udbina            83.55 323  P      P      22 46 56.1 -0.2
MOTA  Moosalm           83.56 327 i P     P      22 46 56.7 +0.3
      comp=Z,11nm,1.2s
MOTA                              eP      PP     22 50 11.7 +1.0
      comp=Z,8.0nm,1.2s
RIY   Rijeka            83.57 324  P      P      22 46 55.9 -0.4
BGES  Gesves            83.59 332 dP      P      22 46 54.3 -2.0
BGES                              dpP     pP     22 47 42.1 +0.8
RETA  Reutte            83.60 327 eP      P      22 46 56.3 -0.2
      comp=Z,9.2nm,0.6s,SNR=5.3
SQTA  Sankt Quirin      83.61 327 eP      P      22 46 56.6  0.0
      comp=Z,2.5nm,0.5s
SQTA                              eP      PP     22 50 12.8 +1.7
      comp=Z,11nm,1.4s
KIJV  Kijevo            83.62 322  P      P      22 46 56.6  0.0
RICI  Ricice            83.63 321  P      P      22 46 56.3 -0.4
STAL  STALIGIAL         83.68 326  IAmb   IAmb   22 46 58.2
      comp=Z,15nm,0.8s
BMRD  Maredsous         83.77 332 dP      P      22 46 56.9 -0.3
BMRD                              dx      x      22 47 16.1
SNF   Seneffe           83.78 333 dP      P      22 46 57.4 +0.2
SNF                               dpP     pP     22 47 42.0 -0.4
STON  Ston              83.80 321  P      P      22 46 56.7 -0.8
MAKA  Makarska          83.84 321  P      P      22 46 56.9 -0.8
BFO   Black Forest      83.97 329  P      P      22 46 58.0 -0.3
BFO                                pmax   pmax
      comp=Z,13nm,0.8s
BFO   Black Forest      83.97 329  P      P      22 46 58.0 -0.3
BFO                                IAmb   IAmb   22 47 00.5
      comp=Z,13nm,0.8s
BFO   Black Forest      83.97 329 eP      P      22 46 58.3  0.0
      comp=Z,15nm,0.8s,baz=38,slow=5.2
FETA  Feichten          83.98 327 eP      P      22 46 58.0 -0.6
      comp=Z,9.4nm,0.9s
FETA                              eP      PP     22 50 11.7 -2.4
      comp=Z,6.1nm,1.3s
DOU   Dourbes           84.01 332 dP      P      22 46 58.3 -0.1
DOU                               dsP     sP     22 48 00.6 -2.3
MORI  Morici            84.06 322  P      P      22 46 58.3 -0.5
DAVA  Damuels           84.14 328 eP      P      22 46 59.8 +0.5
      comp=Z,12nm,0.7s,SNR=6.8
DAVA                              i P     PP     22 50 13.7 -1.6
      comp=Z,7.4nm,1.4s
WME   Myndd Eilian      84.16 339 eP      P      22 46 59.3 +0.2
ZIRJ  Zirje             84.25 322  P      P      22 46 59.2 -0.5
WLF1  Llynfaes          84.28 339 eP      P      22 47 00.0 +0.4
WLF1                               IAmb   IAmb   22 47 00.1
      comp=Z,82nm,1.0s
DUGI  Dugi Otok         84.29 323  P      P      22 46 59.7 -0.2
ECH   Echery            84.53 330  IAmb   IAmb   22 47 01.9
      comp=Z,14nm,0.9s
TEOL  Teolo             84.84 325  IAmb   IAmb   22 47 05.0
      comp=Z,17nm,0.7s
HMNX  Herstmonceux      84.88 335 eP      P      22 47 03.5 +0.8
HMNX                               IAmb   IAmb   22 47 03.9
      comp=Z,64nm,0.7s
STRD  Stroud            84.92 337 eP      P      22 47 03.2 +0.3
STRD                               IAmb   IAmb   22 47 04.6
      comp=Z,71nm,0.9s
MCH1  Michaelchurch     84.99 337 eP      P      22 47 03.1 -0.2
MCH1                               IAmb   IAmb   22 47 03.1
      comp=Z,48nm,0.9s
WOL   Wolverton         85.02 336 eP      P      22 47 03.0 -0.4
SWN1  Swindon           85.03 336 eP      P      22 47 03.5  0.0
RSBS  Rosebush, Pemb    85.56 338  IAmb   IAmb   22 47 06.0
      comp=Z,56nm,0.9s
RSBS                              eP      P      22 47 06.0  0.0
ZCCA  Zocca             85.93 325  IAmb   IAmb   22 47 14.8
      comp=Z,12nm,0.9s
MURB  Monte Urbino      86.05 324  P      P      22 47 09.1 +0.3
MURB                               IAmb   IAmb   22 47 10.8
      comp=Z,15nm,0.8s
NRCA  Norcia            86.09 323  IAmb   IAmb   22 47 10.4
      comp=Z,16nm,0.8s
OSSC  Osservatorio P    86.44 325  IAmb   IAmb   22 47 10.9
      comp=Z,6.8nm,0.8s
TXAR  Lajitas Array     91.83  51  P      P      22 47 37.9 +1.6
      comp=Z,0.9nm,0.5s,baz=295,slow=2.9,SNR=12
TXAR  Lajitas Array     91.83  51  P      P      22 47 37.2 +0.9
ESDC  Sonseca Array     96.05 332  P      P      22 47 55.1 -0.3
      comp=Z,0.5nm,0.8s,baz=22,slow=3.8,SNR=2.0
LSZ   Lusaka           115.15 270  PKIKP  PKiKP  22 53 09.0 +0.2
LSZ   Lusaka           115.15 270  PKPdf  PKiKP  22 53 09.0 +0.2
TOA0  Torodi Ar. Sit   115.50 312  PKPdf  PKPdf  22 53 08.8 -0.6
TORD  Torodi Ar. Bea   115.50 312  PKP    PKPdf  22 53 08.9 -0.5
      comp=Z,1.1nm,0.5s,baz=19,slow=1.8,SNR=7.6
TORD                               PP     PP     22 54 02.5  -11
      comp=Z,1.6nm,0.7s,baz=32,slow=5.6,SNR=3.6
TORD  Torodi Ar. Bea   115.50 312  PKPdf  PKPdf  22 53 08.5 -0.9
KOWA  Kowa             117.61 318  PKPdf  PKPdf  22 53 13.3 -0.2
LBTB  Lobatse          122.34 262  PKIKP  PKiKP  22 53 22.7 +0.1
LBTB  Lobatse          122.34 262  PKPdf  PKiKP  22 53 22.6 +0.1
BOSA  Boshof           124.32 258  PKP    PKPdf  22 53 25.3 -0.8
      comp=Z,4.0nm,0.8s,baz=318,slow=2.4,SNR=6.3
BOSA  Boshof           124.32 258  PKPdf  PKiKP  22 53 26.3 -0.1
DBIC  Dimbokro         124.51 314  PKP    PKPdf  22 53 26.1 -0.6
      comp=Z,5.5nm,0.6s,baz=21,slow=1.5,SNR=18
DBIC                               PP     PP     22 55 10.6 -4.1
      comp=Z,4.5nm,0.8s,baz=13,slow=9.1,SNR=5.5
DBIC  Dimbokro         124.51 314  PKIKP  PKPdf  22 53 26.5 -0.2
DBIC  Dimbokro         124.51 314  PKPdf  PKPdf  22 53 26.5 -0.2
TIC   Toumodi          124.62 314 ePKIKP  PKPdf  22 53 26.5 -0.5
KIC   Kosan Boka       124.69 314 ePKIKP  PKPdf  22 53 26.7 -0.4
      comp=Z,11nm,0.6s
LIC   Lamto            124.97 314 ePKIKP  PKPdf  22 53 27.2 -0.4
      comp=Z,8.9nm,0.3s
SDV   Santo Domingo    126.62  37  PKPdf  PKiKP  22 53 31.3 -0.2
QSPA  South Pole Qui   126.97 180  PKPdf  PKiKP  22 53 30.5 +0.1
OTAV  Otavalo          129.46  51 eP      PKiKP  22 53 46.8 +9.3
PTGA  Pitinga          139.88  29  PKP    PKPdf  22 53 56.2 +0.5
      comp=Z,2.0nm,0.7s,baz=341,slow=8.9,SNR=4.9
MALB  Monte Alegre     142.89  21 eP      PKiKP  22 54 11.4 +7.1
ETMB  Extrema          144.76  46 eP      PKiKP  22 54 14.9 +6.8
TMAB  Tom-Au,PA,Br     144.79  11 eP      PKiKP  22 54 14.2 +6.0
SAML  Samuel           145.69  40  PKP2   PKPab  22 54 07.2 +0.1
SAML  Samuel           145.69  40  PKPbc  PKPab  22 54 07.2 +0.1
RCBR  Riachuelo        148.33 349  PKPbc  PKPbc  22 54 13.6 -0.3
      comp=Z,12nm,0.7s,baz=316,slow=3.1,SNR=9.2
RCBR  Riachuelo        148.33 349  PKPbc  PKPbc  22 54 14.2 +0.2
PB16  IPOC Station P   149.07  60  PKPbc  PKiKP  22 54 17.8 +0.2
MNMC  Minye Minye      149.55  61  PKPbc  PKiKP  22 54 18.5 +0.4
GO01  Chusmiza         150.19  62  PKPbc  PKiKP  22 54 20.3 +0.6
PB08  IPOC Station P   150.53  62  PKPbc  PKiKP  22 54 20.0 -0.3
SIV   San Ignacio      152.66  45  PKP    PKPdf  22 54 17.7 +0.8
      comp=Z,1.6nm,0.9s,baz=217,slow=1.0,SNR=5.2
SIV                                PKPbc  PKPbc  22 54 24.2 +0.1
      comp=Z,4.0nm,0.8s,baz=329,slow=1.3,SNR=14
LCO   Las Campanas     154.29  80  PKPbc  PKiKP  22 54 28.6 +0.9
PLCA  Paso Flores      157.20 108  PKPab  PKPab  22 54 55.4 +1.0
      comp=Z,1.5nm,0.9s,baz=352,slow=1.3,SNR=3.3
PLCA  Paso Flores      157.20 108  PKP2   PKPab  22 54 54.0 -0.5
PLCA  Paso Flores      157.20 108         PKPab  22 54 54.0 -0.5
BDFB  Brasilia         157.74  17  PKPab  PKPab  22 54 57.3 +0.2
      comp=Z,1.9nm,0.4s,baz=322,slow=6.2,SNR=4.5
BDFB  Brasilia         157.74  17         PKPab  22 54 57.9 +0.7
```

PRU 19 22:45:55.5±0.0, 49°.82N×18°.50E, h0^{km}, Czech and Slovak Republics

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
OKC   Ostrava-Krasne    0.23 275  ePG     Pg      22 45 59.9  0.0
OKC                               eSG     Sg      22 46 03.3 +0.5
MORC  Moravsky Berou    0.62 266  ePG     Pg      22 46 07.3 -0.1
MORC                              eSG     Sg      22 46 15.4 -0.1
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*IDC **19** 22:59:43.7±4.5, 38°.24N×26°.02E, h0^{km}, mb3.6/2, mb1 3.5/4, mb1mx3.3/36, mbtmp3.5/4, ML3.5/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/37, Error ellipse: s-maj=64.2km s-min=30.2km az=20.0*

*ISK **19** 22:59:51.5, 39°.40N×26°.33E, h13^{km}, ML4.1/52*

*ATH **19** 22:59:52.3, 39°.44N×26°.47E, h17^{km}±4^{km}, ML3.8/8, Error ellipse: s-maj=5.7km s-min=1.3km az=184.0*

*NEIC **19** 22:59:52.7±2.0, 39°.40N±0°.05×26°.33E±0°.07, h12^{km}±9^{km}, Error ellipse: s-maj=8.3km s-min=7.1km az=52.0*

*DDA **19** 22:59:53.1, 39°.41N×26°.38E, h9^{km}, MW3.9*

*THE **19** 22:59:53.6, 39°.46N×26°.35E, h12^{km}, ML3.6/11, Error ellipse: s-maj=1.6km s-min=0.6km az=109.0*

*SOF **19** 22:59:55.7, 39°.83N×26°.27E, h5^{km}, MD3.5*

ISC 19 22:59:52.9±0.8, 39°.42N±0°.02×26°.36E±0°.02, h15^{km}±6^{km}, n214, σ0s.76/251, 13C-10D, Turkey

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
PRK   Paraskevi         0.19 202   P      Pb      22 59 57.9 -0.2
PRK                                S      Sg      23 00 01.2 +1.0
PRK                                AML    AML     23 00 05.9
      comp=E,76810µm,0.4s
PRK                                AML    AML     23 00 06.9
PRK   Paraskevi         0.19 202   P      Pb      22 59 57.8 -0.2
PRK                                S      Sg      23 00 01.2 +1.0
      comp=E,47µm,0.3s
KOCA  Canakkale, Ayv    0.19 296  i P     Pg      22 59 57.3 -0.2
KOCA                              i S     Sg      23 00 00.6 +0.1
KOCA                               IAML           23 00 01.0
      comp=N,18µm,0.4s
KOCA                               IAML           23 00 01.0
      comp=E,27µm,0.7s
AYVA  Ayvalik           0.28 113  i P     Pg      22 59 58.5 -0.2
AYVA                               IAML           23 00 11.0
      comp=N,11µm,0.3s
BAYC  CANAKKALE_Bayr    0.35  24  i P     Pg      22 59 59.6 -0.6
BAYC                              i S     Sg      23 00 03.1 -2.0
BAYC                               IAML           23 00 05.0
      comp=E,12µm,0.3s
BAYC                               IAML           23 00 10.0
      comp=N,9µm,0.2s
EZN   Ezine             0.41 356   P      Pg      23 00 00.8 -0.3
EZN                                S      Sg      23 00 06.3 -0.4
      comp=N,9µm,0.4s
EZN   Ezine             0.41 356   PG     Pg      23 00 00.8 -0.3
SIGR  SIGRI             0.45 242   P      Pn      23 00 03.9 -0.9
SIGR                               S      Sb      23 00 10.4 +1.4
SIGR                               AML    AML     23 00 14.2
      comp=E,14137µm,0.5s
SIGR                               AML    AML     23 00 15.2
      comp=N,29134µm,0.5s
SIGR  SIGRI             0.45 242   P      Pn      23 00 04.2 -0.6
SIGR                               S      Sb      23 00 10.1 +1.2
      comp=N,11µm,0.5s
BOZC  Bozcaada          0.49 331   PG     Pg      23 00 02.4 -0.2
BOZC                               SG     Sg      23 00 09.0 -0.1
BOZC  Bozcaada          0.49 331  i P     Pg      23 00 02.4 -0.2
BOZC                              i S     Sg      23 00 07.0 -2.1
BOZC                               IAML           23 00 09.0
      comp=N,9µm,0.2s
BOZC                               IAML           23 00 09.0
      comp=E,6µm,0.3s
DKL   Dikili            0.55 129   PG     Pg      23 00 03.4 -0.3
BUHA  Balikesir, Bur    0.56  81  i P     Pg      23 00 03.6 -0.3
BUHA                              i S     Sg      23 00 10.3 -1.1
ECEA  Canakkale, Ece    0.64 347  i P     Pg      23 00 05.4 -0.1
ECEA                              i S     Sg      23 00 14.2 +0.2
ECEA                               IAML           23 00 16.0
      comp=E,9µm,0.7s
ECEA                               IAML           23 00 17.0
      comp=N,7µm,0.6s
ZEDA  zmir-Bergama      0.71 129  i P     Pg      23 00 06.3 -0.6
ZEDA                              i S     Sg      23 00 15.7 -0.6
ZEDA                               IAML           23 00 19.0
      comp=N,4µm,0.3s
ZEDA                               IAML           23 00 19.0
      comp=E,3µm,0.5s
GOKA  anakkale-Gk       0.85 336  i P     Pg      23 00 08.9 -0.5
GOKA                              i S     Sg      23 00 20.1 -0.4
GOKA                               IAML           23 00 23.0
      comp=E,7µm,0.5s
GADA  Gvkgeada          0.85 335   P      Pg      23 00 08.6 -0.8
GADA                               S      Sg      23 00 20.2 -0.4
      comp=E,4µm,0.4s
GADA  Gvkgeada          0.85 335   PG     Pg      23 00 08.6 -0.8
GADA                               SG     Sg      23 00 20.4 -0.2
GELI  Tayfur-Gelibol    0.98   5   PG     Pb      23 00 10.9 -0.8
GELI                               SG     Sb      23 00 25.6 +1.2
LPK   Lapseki           1.00  18   PG     Pb      23 00 11.5 -0.5
BALY  Balya             1.02  71  i P     Pb      23 00 12.1 -0.3
BALY                              i S     Sb      23 00 25.6  0.0
BALY                               IAML           23 00 29.0
      comp=N,3µm,0.7s
BALY                               IAML           23 00 32.0
      comp=E,2µm,0.6s
LIA   Limnos Island     1.03 298   P      Pg      23 00 12.4 -0.4
LIA                                S      Sb      23 00 26.2 +0.4
LIA                                AML    AML     23 00 26.5
      comp=E,6365µm,0.4s
LIA                                AML    AML     23 00 28.1
      comp=N,5450µm,0.3s
LIA   Limnos Island     1.03 298   P      Pg      23 00 12.4 -0.4
LIA                                S      Sn      23 00 26.9 -0.1
      comp=N,3µm,0.4s
STEP  BALIKESIR_Sava    1.05  92  i P     Pb      23 00 12.7 -0.1
STEP                              i S     Sb      23 00 26.4  0.0
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STEP				IAML		23 00 29.0	
	comp=E,2µm,0.9s						
STEP				IAML		23 00 37.0	
	comp=N,2µm,0.5s						
EFSA	Agios Efstrati	1.07	277	P	Pb	23 00 12.7	-0.4
EFSA				AML	AML	23 00 28.8	
	comp=N,4583µm,0.4s						
EFSA				AML	AML	23 00 30.9	
	comp=E,3034µm,0.4s						
URLA	Izmir	1.07	170	PG	Pb	23 00 12.2	-1.0
URLA				SG	Sb	23 00 27.0	0.0
URLA	Izmir	1.07	170	*i* P	Pb	23 00 12.2	-1.0
URLA				*i* S	Sb	23 00 27.0	0.0
URLA				IAML		23 00 29.0	
	comp=N,3µm,0.5s						
URLA				IAML		23 00 32.0	
	comp=E,2µm,0.5s						
PSRA	Psara	1.07	216	P	Pb	23 00 12.1	-1.1
PSRA				AML	AML	23 00 31.5	
	comp=E,14138µm,0.2s						
PSRA				AML	AML	23 00 32.4	
	comp=N,11939µm,0.3s						
CESE	eme	1.09	183	PG	Pb	23 00 12.2	-1.2
ZEYE	Izmir, Urla-Ze	1.18	175	*i* P	Pb	23 00 13.6	-1.4
ZEYE				*i* S	Sb	23 00 29.0	-1.2
ZEYE				IAML		23 00 34.0	
	comp=N,2µm,0.3s						
ZEYE				IAML		23 00 36.0	
	comp=E,2µm,0.3s						
BALB	Balikesir	1.19	79	PN	Pn	23 00 14.8	-0.3
KRBG	Karabiga-Canak	1.21	36	PN	Pn	23 00 14.9	-0.4
SMTH	Samothraki Isl	1.23	329	P	Pn	23 00 15.2	-0.5
SMTH				S	Sb	23 00 31.5	-0.1
SMTH				AML	AML	23 00 32.8	
	comp=E,6480µm,0.2s						
SMTH				AML	AML	23 00 33.6	
	comp=N,4678µm,0.2s						
SMTH	Samothraki Isl	1.23	329	P	Pn	23 00 15.2	-0.5
SMTH				S	Sb	23 00 31.4	-0.2
	comp=N,3µm,0.2s						
AKHS	Akhisar	1.25	115	*i* P	Pn	23 00 15.3	-0.6
ERIK	Erikli-Kesan	1.26	5	PN	Pn	23 00 15.6	-0.4
CAVK	Edirne/Enez-Ca	1.28	353	*i* P	Pn	23 00 16.4	+0.1
CAVK				*i* S	Sb	23 00 32.5	-0.6
CAVK				IAML		23 00 35.0	
	comp=N,2µm,0.7s						
CAVK				IAML		23 00 39.0	
	comp=E,3µm,0.6s						
ENEZ	Enez	1.33	353	P	Pn	23 00 17.0	0.0
ENEZ				S	Sb	23 00 33.6	-0.7
	comp=E,6µm,0.3s						
ENEZ	Enez	1.33	353	PN	Pn	23 00 16.9	0.0
GOMA	Golmarmara-Man	1.40	120	PN	Pn	23 00 17.3	-0.7
RKY	Sarkoy-Tekirda	1.41	26	PN	Pn	23 00 17.8	-0.4
SART	Tekirdag	1.42	26	*i* P	Pn	23 00 18.0	-0.2
SART				*i* S	Sb	23 00 37.8	+0.8
DGB	zmir	1.42	163	*i* P	Pn	23 00 17.1	-1.1
DGB				*i* S	Sb	23 00 37.5	+0.4
KESN	Edirne-Kesan	1.43	10	*i* P	Pn	23 00 18.4	-0.2
KESN				IAML		23 00 39.0	
	comp=N,2µm,0.4s						
KESN				IAML		23 00 39.0	
	comp=E,2µm,0.4s						
EDC	Edincik	1.48	51	PN	Pn	23 00 18.7	-0.4
ALN	Alexandroupoli	1.50	351	P	Pn	23 00 19.0	-0.3
ALN				S	Sn	23 00 38.7	+0.2
ALN				AML	AML	23 00 41.0	
	comp=E,5571µm,0.4s						
ALN				AML	AML	23 00 42.3	
	comp=N,5291µm,0.6s						
ALN	Alexandroupoli	1.50	351	P	Pn	23 00 19.0	-0.3
ALN				S	Sn	23 00 38.5	-0.1
	comp=N,3µm,0.5s						
ALN	Alexandroupoli	1.50	351	PN	Pn	23 00 18.6	-0.7
ALN	Alexandroupoli	1.50	351	Pn	Pn	23 00 19.4	+0.1
SKY	Skiros Island	1.51	250	P	Pb	23 00 19.8	-0.8
SKY				S	Sb	23 00 39.6	0.0
	comp=N,1µm,0.5s						
MRMT	Marmara Adasi	1.52	38	PN	Pn	23 00 19.6	0.0
MAR4	Marsite Statio	1.55	27	PN	Pn	23 00 19.7	-0.3
DURS	Dursunbey	1.64	83	*i* P	Pn	23 00 21.3	0.0
THAS	Thassos island	1.73	314	P	Pn	23 00 21.3	-1.2
THAS				S	Sn	23 00 42.9	-1.4
SMG	Samos	1.75	168	P	Pb	23 00 24.3	-0.4
SMG				AML	AML	23 00 51.2	
	comp=E,4568µm,0.5s						
SMG				AML	AML	23 00 54.3	
	comp=N,5091µm,0.6s						
SMG	Samos	1.75	168	P	Pb	23 00 24.1	-0.6
SMG				S	Sb	23 00 47.2	+0.8
	comp=N,2µm,0.5s						
KCTX	Karacabey (Bur	1.75	60	PN	Pn	23 00 22.4	-0.4
DST	Dursunbey	1.75	83	PN	Pn	23 00 22.6	-0.3
TKR	Tekirdag	1.81	29	PN	Pn	23 00 23.3	-0.3
RDO	Rodhopi	1.84	340	P	Pn	23 00 24.0	0.0
RDO	Rodhopi	1.84	340	P	Pn	23 00 23.9	0.0
RDO				S	Sn	23 00 46.2	-0.8
	comp=N,640nm,0.4s						
RDO	Rodhopi	1.84	340	PN	Pn	23 00 23.8	-0.2
GCAM	G?zelcaml?	1.85	158	PN	Pn	23 00 23.3	-0.7
GCAM	G?zelcaml?	1.85	158	*i* P	Pg	23 00 27.5	-0.9
GCAM				IAML		23 00 54.0	
	comp=N,801nm,0.5s						
DEMI	Demirci	1.87	101	*i* P	Pn	23 00 24.5	0.0
MANT	Manisa	1.95	118	*i* P	Pn	23 00 25.1	-0.6
MANT	Manisa	1.95	118	Pn	Pn	23 00 24.9	-0.8
KULA	Kula-Manisa	2.01	116	PN	Pn	23 00 25.9	-0.4
OUR	Ouranopolis	2.05	297	P	Pn	23 00 26.5	-0.4
OUR	Ouranopolis	2.05	297	PN	Pn	23 00 26.4	-0.4
ORLT	Orhaneli	2.05	71	PN	Pn	23 00 26.8	-0.1
SIMA	Simav-Kutahya	2.06	99	PN	Pn	23 00 26.8	-0.3
DDIM	Aydin, Didim	2.08	160	*i* P	Pb	23 00 30.3	+0.1
DDIM				*i* S	Sb	23 00 57.3	+1.4
KAVA	Kavala	2.12	319	P	Pn	23 00 27.7	-0.1
PAIG	Paliouri	2.13	285	P	Pn	23 00 27.3	-0.7
PAIG				S	Sn	23 00 53.8	-0.4
MDNY	Mudanya-Bursa	2.16	63	PN	Pn	23 00 28.2	-0.2
USAK	Uak-Merkez	2.18	108	*i* P	Pn	23 00 29.2	+0.5
ARMT	Armutlu	2.23	58	PN	Pn	23 00 29.0	-0.4
SHAP	Saphane-Kutahy	2.25	99	PN	Pn	23 00 29.6	-0.2
SLVT	Silivri	2.29	37	PN	Pn	23 00 30.1	-0.1
DION	Dionisos Attik	2.32	236	P	Pn	23 00 31.4	+0.7
ELBA	Catalca	2.34	42	*i* P	Pn	23 00 30.0	-0.9
PHSR	Pinarhisar	2.38	21	PN	Pn	23 00 31.4	0.0
MLSB	Milas	2.39	152	PN	Pn	23 00 31.2	-0.4
GEDZ	Gediz	2.40	98	PN	Pn	23 00 31.5	-0.2
AVCI	Avcilar-stanb	2.40	48	PN	Pn	23 00 31.7	+0.1
GEMT	Gemlik	2.40	64	PN	Pn	23 00 31.9	+0.2
TVSB	Tavsanli	2.40	88	PN	Pn	23 00 32.1	+0.3
KIRK	Kırklareli	2.43	13	*i* P	Pn	23 00 31.5	-0.5
VIZE	Kirklareli, Vi	2.43	27	*i* P	Pn	23 00 31.5	-0.7
APE	Apeiranthos	2.44	196	P	Pn	23 00 30.7	-1.5
APE	Apeiranthos	2.44	196	PN	Pn	23 00 30.5	-1.7
PLG	Polygyros	2.44	294	P	Pn	23 00 32.3	0.0
GDZ	Gediz	2.44	97	*i* P	Pn	23 00 32.8	+0.4
EDRB	Edirne	2.44	7	P	Pn	23 00 31.9	-0.4
EDRB	Edirne	2.44	7	PN	Pn	23 00 31.8	-0.5
CTKS	Kestanelik-??a	2.45	41	PN	Pn	23 00 31.8	-0.5
TRML	Termal-Yalova	2.46	60	PN	Pn	23 00 32.2	-0.4
BODT	Bodrum	2.47	162	PN	Pn	23 00 32.1	-0.5
BDRM	Kayabasi	2.50	160	*i* P	Pn	23 00 31.3	-1.8
CTYL	Yalikoy Yolu	2.53	35	PN	Pn	23 00 32.8	-0.6
BGKT	Bogazkoy	2.55	46	PN	Pn	23 00 33.6	-0.1
ARMN	Kirklareli, Me	2.57	18	*i* P	Pn	23 00 33.9	-0.3
RZN	Rozhen	2.59	332	*i* P	Pn	23 00 34.7	+0.2
ISK	Istanbul-Kandi	2.64	51	P	Pn	23 00 34.2	-0.8
ISK	Istanbul-Kandi	2.64	51	PN	Pn	23 00 34.2	-0.8
KAVV	Kandilli-Istan	2.64	51	PN	Pn	23 00 34.3	-0.7
KHAL	Karahalli	2.66	112	*i* P	Pn	23 00 34.6	-0.7
SOH	Sokhos	2.70	302	P	Pn	23 00 35.6	-0.3
NVR	Nevrokopi	2.71	316	P	Pn	23 00 36.1	0.0
SRS	Serrai	2.72	310	P	Pn	23 00 35.9	-0.1
YER	Yerkesik	2.73	146	P	Pn	23 00 35.9	-0.5
YER	Yerkesik	2.73	146	PN	Pn	23 00 35.9	-0.5
ANDZ	Kutahya, Merke	2.74	87	*i* P	Pn	23 00 37.3	+0.9
KLYT	Kilyos	2.75	47	PN	Pn	23 00 36.2	-0.2
HORT	Hortiatis	2.77	296	PN	Pn	23 00 36.4	-0.5
ADVT	Abdulvahap	2.79	68	PN	Pn	23 00 37.2	+0.2
CAVI	Cavuskoy	2.79	73	PN	Pn	23 00 37.2	+0.1
TAVA	DENIZLI_Tavas	2.79	133	*i* P	Pn	23 00 37.5	+0.3
BILE	Bilecik/Merkez	2.81	74	*i* P	Pn	23 00 37.7	+0.4
AUBOZ	BOZOYUK	2.88	79	*i* P	Pn	23 00 38.0	-0.2
HRT	Hereke	2.90	60	PN	Pn	23 00 38.2	-0.4
MMB	Musomiste	2.96	318	*i* P	Pn	23 00 39.4	0.0
PLD	Plovdiv	2.96	335	PN	Pn	23 00 39.5	0.0
PLD	Plovdiv	2.96	335	*i* P	Pn	23 00 40.1	+0.6
TURN	Turunc	3.03	150	PN	Pn	23 00 39.7	-0.6
TURN	Turunc	3.03	150	*i* P	Pn	23 00 39.5	-0.8
SILT	Sile	3.05	54	PN	Pn	23 00 40.5	-0.1
JMB	Yambol	3.05	3	*i* P	Pn	23 00 41.3	+0.7
LIT	Litokhoron	3.06	284	Pn	Pn	23 00 40.1	-0.7
SANT	Santorini	3.12	194	PN	Pn	23 00 41.2	-0.5
SANT	Santorini	3.12	194	Pn	Pn	23 00 39.5	-2.2
AGG	Agios Georgios	3.16	264	PN	Pn	23 00 41.5	-0.6
AGG	Agios Georgios	3.16	264	Pn	Pn	23 00 41.2	-0.9
DALY	Dalyan (Mula)	3.16	144	PN	Pn	23 00 42.1	-0.1
KNT	Kendrikon	3.17	304	P	Pn	23 00 42.8	+0.5
KNT	Kendrikon	3.17	304	PN	Pn	23 00 42.2	-0.1
BORA	Eskisehir	3.19	80	*i* P	Pn	23 00 43.5	+0.8
BASM	Basmaki-Afyon	3.25	116	PN	Pn	23 00 43.6	+0.1
SPNC	Sapanca-Adapaz	3.28	66	PN	Pn	23 00 44.3	+0.5
SAUV	Serdivan-Sakar	3.31	65	PN	Pn	23 00 44.8	+0.5
SRCK	Saricakaya, Es	3.34	78	PN	Pn	23 00 45.3	+0.6
GULT	Gulveren	3.35	71	PN	Pn	23 00 45.4	+0.6
KAND	Kocaeli-Kandir	3.37	59	*i* P	Pn	23 00 44.6	-0.5
KAND				IAML		23 01 41.0	
	comp=N,146nm,0.7s						
KAND				IAML		23 01 48.0	
	comp=E,158nm,0.8s						
SHUT	Suhut-Afyon	3.38	104	PN	Pn	23 00 45.7	+0.5
GRG	Griva	3.40	298	P	Pn	23 00 46.5	+1.0
GRG	Griva	3.40	298	PN	Pn	23 00 45.6	+0.1
KAYN	Sakarya, Kayna	3.42	62	*i* P	Pn	23 00 45.6	-0.1
SGAZ	Eskisehir, Sey	3.47	87	*i* P	Pn	23 00 47.2	+0.8
ARG	Arkhangelos	3.49	156	PN	Pn	23 00 46.7	+0.1
KKB	Krupnik	3.49	315	*i* P	Pn	23 00 47.6	+0.9
FETY	Fethiye	3.51	141	PN	Pn	23 00 47.2	+0.2
ISP	Isparta	3.63	115	Pn	Pn	23 00 48.0	-0.6
CIFT	Cifteler, Eski	3.64	89	PN	Pn	23 00 49.4	+0.6
SAHE	Sakarya_HENDEK	3.73	66	*i* P	Pn	23 00 50.1	+0.1
SAHE				IAML		23 01 56.0	
	comp=N,148nm,1.0s						
SAHE				IAML		23 01 57.0	
	comp=E,130nm,0.6s						
BTAS	Taskesti	3.74	71	*i* P	Pn	23 00 49.8	-0.4
BAGO	Egridir - ISPA	3.74	111	*i* P	Pn	23 00 50.9	+0.7
ROIA	ROIAK	3.75	11	*i* P	Pn	23 00 51.0	+0.7
PRD	Provadia	3.86	11	*i* P	Pn	23 00 51.4	-0.3
SZH	Strazhica	3.86	355	*i* P	Pn	23 00 51.8	+0.1
MDUB	Mudurnu	3.86	73		Pn	23 00 51.5	-0.4
ELL	Elmali	3.86	133	PN	Pn	23 00 52.4	+0.5
ELL	Elmali	3.86	133	Pn	Pn	23 00 53.3	+1.3
STIP	Stip	3.91	307	*i* Pn	Pn	23 00 51.8	-0.7
KARP	Karpathos	3.92	170	Pn	Pn	23 00 54.8	+2.2
VTS	Vitosha	3.98	324	⇑P	Pn	23 00 53.7	+0.2
VTS	Vitosha	3.98	324	*i* P	Pn	23 00 54.1	+0.6
FNA	Florina	4.06	291	PN	Pn	23 00 55.5	+0.9
FNA	Florina	4.06	291	Pn	Pn	23 00 55.2	+0.7
AKAS	Kas	4.09	140	Pn	Pn	23 00 56.7	+1.7
KTHA	Kythira Island	4.10	221	PN	Pn	23 00 55.0	0.0
ITM	Ithomi	4.14	239	PN	Pn	23 00 55.4	-0.3
ITM	Ithomi	4.14	239	Pn	Pn	23 00 56.5	+0.9
ICOR	Ion Corvin	4.82	12	⇓P	Pn	23 01 05.7	+0.8
HUMR	Humele	5.21	349	⇓P	Pn	23 01 10.8	+0.5
TIRR	Tirgusor	5.26	16	Pn	Pn	23 01 11.1	+0.1
HARR	Harsova	5.40	12	⇓P	Pn	23 01 13.3	+0.5
BR131	Keskin Array S	5.63	85	Pn	Pn	23 01 16.7	+0.4
BRTR	Keskin Array B	5.63	85	Pn	Pn	23 01 17.5	+1.3
	comp=E,1.1nm,0.3s,baz=255,slow=12,SNR=26						
BRTR				Pg	Pg	23 01 39.4	-1.3
	comp=E,1.0nm,0.3s,baz=263,slow=17,SNR=13						
BRTR				Lg	Lg	23 02 56.6	
	comp=E,0.3nm,0.3s,baz=279,slow=24,SNR=8.0						
BRTR				LR	LR	23 03 56.0	
	comp=E,43nm,19.4s,baz=281,slow=41						
BRTR	Keskin Array B	5.63	85	Pn	Pn	23 01 17.7	+1.5
CFR	Carcaliu	5.90	12	⇑P	Pn	23 01 19.6	-0.2
MLR	Muntele Rosu	6.08	357	⇓P	Pn	23 01 23.6	+1.2
MLR	Muntele Rosu	6.08	357		Pn	23 01 22.9	+0.5
ARR	Arges	6.08	348	⇑P	Pn	23 01 24.0	+1.6
VOIR		6.09	351	⇑P	Pn	23 01 23.5	+1.0
BISRR	Bisoca	6.13	2	⇑P	Pn	23 01 24.9	+1.9
HERR	Herculane	6.20	333	⇓P	Pn	23 01 23.7	-0.1
LOT	Lotru	6.32	343	⇓P	Pn	23 01 25.9	+0.2
MDVR	Moldovita	6.38	329	⇓P	Pn	23 01 26.8	+0.4
PLOR	Plostina	6.43	2	⇓P	Pn	23 01 28.8	+1.7
VRI	Vrincioaia	6.45	2	⇑P	Pn	23 01 29.3	+1.9
GZR	Gura Zlata	6.53	337	⇓P	Pn	23 01 28.5	-0.1
VARL	Varlezi	6.57	9	⇑P	Pn	23 01 30.1	+1.1
DOPR	Dopca	6.58	354	⇓P	Pn	23 01 30.0	+0.8
DIVS	Divibare	6.67	317	Pn	Pn	23 01 30.7	+0.2
OZUR		6.69	357	⇑P	Pn	23 01 31.7	+1.1
TESR	Tescani	7.09	2	⇑P	Pn	23 01 37.0	+0.8
BZS	Buzias	7.12	332	⇑P	Pn	23 01 36.6	+0.1
CSS	Mathiatis	7.12	126	Pn	Pn	23 01 36.3	-0.2
TIP	Timpagrande	7.45	271	Pn	Pn	23 01 40.6	-0.6
MILM	Milestii Mici	7.71	13	⇑P	Pn	23 01 45.2	+0.6
DRGR		7.84	341	⇑P	Pn	23 01 47.8	+1.3
BURAR	Bucovina Array	8.24	355	⇑P	Pn	23 01 54.0	+2.1
BURAR	Bucovina Array	8.24	355	Pn	Pn	23 01 53.0	+1.0
BUR08	Bucovina Ar. S	8.27	355	Pn	Pn	23 01 53.4	+1.1
SGRT	San Giovanni R	8.41	290	Pn	Pn	23 01 53.9	-0.4
RAFF	Raffo Rosso	9.68	261	Pn	Pn	23 02 12.4	+0.7
INTR	Introdacqua	9.81	289	Pn	Pn	23 02 13.4	0.0
NRCA	Norcia	10.56	293	Pn	Pn	23 02 23.7	-0.1
VYHS	Vyhne	10.56	332	*e*PN	Pn	23 02 24.0	+0.3
AKASG	Malin Array Be	11.46	9	Pn	Pn	23 02 45.6	+10
	comp=E,0.3nm,0.3s,baz=192,slow=13,SNR=2.3						
FINES	FINESS Array B	22.05	360	P	P	23 04 50.3	+3.4
	comp=E,2.5nm,0.9s,baz=198,slow=12,SNR=2.0						
MKAR	Makanchi Array	40.74	61	P	P	23 07 33.4	+0.3
	comp=E,0.3nm,0.5s,baz=274,slow=7.7,SNR=4.7						
MKAR	Makanchi Array	40.74	61	P	P	23 07 33.5	+0.4

BJI ***19*** *23:08:52.9±0.0, 15.°00N×147.°41E, h35^{km}, mB5.3/43, mb5.0/69, Ms4.7/29, Ms7 4.3/28*

IDC ***19*** *23:08:56.7±3.3, 15.°08N×147.°03E, h33^{km}±25^{km}, mb4.6/24, mb1 4.6/26, mb1mx4.4/41, mbtmp4.7/26, ML4.1/2, MS3.9/38, Ms1 3.9/38, ms1mx3.8/64, Error ellipse: s-maj=17.6km s-min=11.1km az=97.0*

NEIC ***19*** *23:08:57.8±1.9, 14.°97N±0.°07×147.°06E±0.°08, h46^{km}±5^{km}, mb5.0/211, Error ellipse: s-maj=11.9km s-min=9.6km az=70.0*

GCMT ***19*** *23:08:58.8±0.3, 14.°97N±0.°04×147.°31E±0.°03, h17^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s14,c14; s81,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.16±.19; M$_{\theta\theta}$-0.34±.11; M$_{\phi\phi}$-1.82±.12; M$_{r\theta}$-0.51±.42; M$_{\theta\phi}$-0.35±.07; M$_{\phi r}$1.71±.29; Best double couple: M$_0$2.68500×10^{16} NP1:φ$_s$203.00000°, δ27.00000°, λ116.00000°. NP2: φ$_s$355.00000°, δ66.00000°, λ78.00000°. Principal axes: T 2.9060, Plg67.0000°, Azm242.0000°; N -0.4350, Plg11.0000°, Azm0.0000°; P -2.4650, Plg20.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***19*** *23:09:10.2, 15.°41N×146.°03E, h32^{km}, MLv3.8, Mariana Islands*

ISC 19 23:08:56.3±0.3**, 15.°02N**±0.°05×**147.°09E**±0.°06**, h32^{km}, n390, σ1.07**/341**, mb5.0**/175**, MS4.0**/43**, 2C-2D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	1.87	315		Pn	23 09 27.4	+1.2
ANA2	Anatahan	1.87	315	P	Pn	23 09 27.8	+1.7
GUMO	Guam	2.58	237	Pn	Pn	23 09 36.5	+0.6
	44nm,0.3s,baz=149,slow=5.2,SNR=16						
GUMO				Sn	Sn	23 10 08.3	+2.1
	118nm,0.3s,baz=5.9,slow=18,SNR=6.0						
GUMO	Guam	2.58	237	Pn	Pn	23 09 35.9	-0.1
JCJ	Chichijima	12.86	340	LR	LR	23 16 42.4	
	comp=Z,412nm,19.0s,baz=149,slow=36						
JCJ	Chichijima	12.86	340	Pn	Pn	23 11 57.4	+0.5
PATS	Pohnpei	13.69	125	Pn	Pn	23 12 03.0	-5.3
JAY	Jayapura	18.53	200	P	P	23 13 12.2	+1.8
	0.5nm,0.3s,baz=2.6,slow=5.4,SNR=8.6						
JAY	Jayapura	18.53	200	P	P	23 13 12.2	+1.8
	766nm20nm,1.5s						
GENI	Genyem	18.79	202	P	P	23 13 15.8	+2.6
	68nm,1.3s						
SMPI	Sarmi	18.83	207	P	P	23 13 15.4	+1.8
	2µm25nm,2.1s						
H11S3	WAKE ISLAND Hy	19.08	77	T	T	23 32 41.6	
	baz=49,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	19.09	77	T	T	23 32 58.4	
	baz=49,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	19.09	77	T	T	23 32 53.8	
	baz=49,slow=76,SNR=5.8						
H11N1	WAKE ISLAND Hy	19.46	73	T	T	23 33 32.4	
	baz=251,slow=75,SNR=5.8						
H11N2	WAKE ISLAND Hy	19.47	73	T	T	23 33 22.1	
H11N3	WAKE ISLAND Hy	19.48	73	T	T	23 33 22.1	
	baz=262,slow=75,SNR=3.6						
JOW	Kunigami	21.11	307	P	P	23 13 38.5	0.0
	23nm,0.5s,baz=126,slow=23,SNR=9.0						
JYT	Yasato	22.00	345	P	P	23 13 48.2	+0.3
JYT				IAmb	IAmb	23 14 07.1	
	comp=Z,108nm,1.4s						
JMN	Monobe	22.14	330	P	P	23 13 49.4	0.0
INU	Inuyama	22.17	338	P	P	23 13 50.4	+0.7
INU				IAmb	IAmb	23 13 59.9	
	comp=Z,88nm,1.7s						
SIJI	Sorong	22.23	226	P	P	23 13 52.0	+1.4
	comp=Z,210nm,1.1s,baz=32,slow=10.0,SNR=48						
SWI	Sorong	22.23	226	P	P	23 13 52.6	+2.1
	comp=Z,3µmcomp=Z,260nm,1.3s						
JGF	Kuroka	22.28	339	P	P	23 13 51.0	+0.1
JSU	Suzuyama	22.38	320	P	P	23 13 51.5	-0.5
JSU				IAmb	IAmb	23 13 52.2	
	comp=Z,44nm,0.9s						
JWT	Wachi	22.75	335	P	P	23 13 54.3	-1.6
JWT				IAmb	IAmb	23 14 16.8	
	comp=Z,105nm,1.6s						
MJAR	Matsushiro Arr	22.85	341	P	P	23 13 53.8	-3.2
	comp=Z,3.7nm,0.6s,baz=165,slow=9.0,SNR=10.0						
MJAR				LR	LR	23 21 32.7	
	comp=Z,208nm,21.5s,baz=155,slow=33						
MJAR	Matsushiro Arr	22.85	341	P	P	23 13 54.9	-2.1
MAJO	Matsushiro	22.86	341	P	P	23 13 54.5	-2.5
MAT	Matsushiro	22.86	341	P	P	23 13 54.4	-2.6
FAKI	Fak Fak	23.10	221	P	P	23 14 01.1	+1.4
FAKI	Fak Fak	23.10	221	P	P	23 14 01.0	+1.3
	comp=Z,3µmcomp=Z,317nm,1.0s						
JNU	Nakatsue	23.27	324	P	P	23 13 59.2	-2.0
	comp=Z,16nm,0.8s,baz=94,slow=4.0,SNR=9.0						
JNU				LR	LR	23 21 32.9	
	comp=Z,171nm,21.4s,baz=128,slow=33						
JNU	Nakatsue	23.27	324	P	P	23 14 00.8	-0.4
JMM	Marumori	23.43	347	P	P	23 14 01.9	-0.8
JMM				IAmb	IAmb	23 14 11.0	
	comp=Z,42nm,0.8s						
JHS	Saijyo	23.53	330	P	P	23 14 03.9	+0.1
JSD	Sado	24.22	343	P	P	23 14 09.0	-1.3
PMG	Port Moresby	24.27	180	P	P	23 14 10.1	-0.7
	comp=Z,16nm,0.5s,baz=7.8,slow=7.9,SNR=7.4						
JTU	Tsushima	25.13	324	P	P	23 14 19.3	+0.9
MSAI	Masohi	25.62	226	P	P	23 14 23.2	+0.1
	comp=Z,781nmcomp=Z,47nm,0.9s						
YULB	Yu-li	25.71	293	P	P	23 14 24.6	+0.7
BNDI	Bandanaira	25.83	223	P	P	23 14 24.5	-0.5
	comp=Z,7µmcomp=Z,100nm,1.2s						
YHNB	Yeheng	25.98	296	P	P	23 14 26.4	-0.1
SSLB	Suanglung	26.11	294	P	P	23 14 27.6	0.0
SSLB				IAmb	IAmb	23 14 34.2	
	comp=Z,59nm,1.1s						
JTM	Tenmabayashi	26.20	350	P	P	23 14 28.5	+0.3
TPUB	Ta-pu	26.29	292	P	P	23 14 30.1	+0.9
TPUB				IAmb	IAmb	23 14 47.4	
	comp=Z,101nm,1.3s						
SANI	Sanana	26.91	233	P	P	23 14 31.7	-3.1
	comp=Z,22nm,0.9s						
KMSI	Cibinong	26.97	240	P	P	23 14 33.5	-1.8
	comp=Z,112nm,0.8s						
HNR	Honiara	27.43	152	LR	LR	23 23 25.0	
	comp=Z,243nm,21.5s,baz=324,slow=32						
SAUI	Saumlaki	27.70	215	P	P	23 14 42.7	+0.8
	comp=Z,23µmcomp=Z,69nm,0.7s						
KSRS	Korea Array	28.08	326	P	P	23 14 44.5	-0.6
	comp=Z,10.0nm,0.8s,baz=149,slow=10,SNR=18						
KSRS				LR	LR	23 26 03.0	
	comp=Z,259nm,18.2s,baz=128,slow=37						
KSAR	Wonju Array Be	28.09	326	P	P	23 14 43.9	-1.2
KNMB	Chin-men Tao	28.55	294	P	P	23 14 49.3	-0.1
MRSI	Marisa	28.75	242	P	P	23 14 49.6	-1.6
	comp=Z,24nm,0.8s						
LUWI	Luwuk	28.87	239	P	P	23 14 51.2	-1.1
LUWI	Luwuk	28.87	239	P	P	23 14 50.4	-1.9
	comp=Z,2µmcomp=Z,78nm,0.9s						
JKA	Kamikawa-asahi	29.25	353	P	P	23 14 58.0	+2.6
JKA				IAmb	IAmb	23 15 02.2	
	comp=Z,57nm,1.2s						
ASAJ	Asahikawa	29.25	353	P	P	23 14 56.1	+0.7
	comp=Z,24nm,0.7s,baz=220,slow=19,SNR=8.4						
TOLI2	Tolitoli	29.43	244	P	P	23 14 57.0	-0.2
MPSI	Mapaga	30.57	244	P	P	23 15 07.4	0.0
	comp=Z,11nm,0.7s						
NJ2	Nanjing	30.81	308	*e*P	P	23 15 08.8	-0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
USA0B	Ussuriysk Arra	31.80	339	P	P	23 15 16.6	-1.3
USRK	Ussuriysk Ar.	31.80	339	P	P	23 15 16.8	-1.1
	comp=Z,3.8nm,0.6s,baz=143,slow=9.2,SNR=13						
USRK				LR	LR	23 28 20.9	
	comp=Z,204nm,18.1s,baz=146,slow=37						
TTSI	Tana Toraja	32.43	239	P	P	23 15 24.9	+1.2
	comp=Z,12nm,1.1s						
BNSI	Bone	32.97	236	P	P	23 15 27.6	-0.9
	comp=Z,19nm,1.1s						
MDJ	Mudanjiang	33.03	337	P	P	23 15 29.4	+0.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,270nm,4.8s						
SOEI	Soe	33.43	224	P	P	23 15 31.4	-1.2
SOEI	Soe	33.43	224	P	P	23 15 30.1	-2.5
	comp=Z,1µmcomp=Z,56nm,0.8s						
KAPI	Kappang	33.62	236	P	P	23 15 33.6	-0.5
KAPI				IAmb	IAmb	23 15 35.9	
	comp=Z,12nm,0.8s						
WHN	Wuhan	33.76	303	⇓P	P	23 15 35.6	+0.4
MMRI	Maumere	34.05	228	P	P	23 15 37.3	-0.5
MMRI	Maumere	34.05	228	P	P	23 15 37.2	-0.7
	comp=Z,54nm,1.1s						
TIA	Tai'an	34.06	314	P	P	23 15 37.3	-0.5
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BATI	Baumata	34.16	224	LR	LR	23 29 35.8	
	comp=Z,113nm,21.4s,baz=7.5,slow=36						
BATI	Baumata	34.16	224	P	P	23 15 37.7	-1.2
	comp=Z,32nm,0.9s						
EDFI	Ende, Flores	34.52	228	P	P	23 15 39.2	-2.9
	comp=Z,9.5nm,1.3s						
CTAO	Charters Tower	34.90	181	P	P	23 15 47.0	+1.9
CTAO				IAmb	IAmb	23 15 49.5	
	comp=Z,31nm,1.9s						
BJT	Baijiatuau	36.73	319	P	P	23 16 00.5	-0.1
BJT				IAmb	IAmb	23 16 02.2	
	comp=Z,22nm,1.3s						
BJI	Beijing	36.73	319	P	P	23 16 01.4	+0.7
BJI				pmax	pmax		
	comp=Z,14nm,1.0s						
WB0	Warramunga Arr	36.76	200	P	P	23 16 00.4	-0.7
WB0				IAmb	IAmb	23 16 02.4	
	comp=Z,32nm,0.9s						
WR0	Warramunga Arr	36.89	200	P	P	23 16 02.1	0.0
WRAB	Tennant Creek	36.92	200	P	P	23 16 01.8	-0.7
WB2	Warramunga Arr	36.93	200	P	P	23 16 02.1	-0.4
WRA	Warramunga Arr	36.94	200	P	P	23 16 02.9	+0.3
	comp=Z,30nm,0.8s,baz=21,slow=9.1,SNR=107						
WRA				LR	LR	23 30 51.4	
	comp=Z,55nm,21.6s,baz=350,slow=36						
WRA	Warramunga Arr	36.94	200	P	P	23 16 01.9	-0.7
ENH	Enshi	37.68	300	P	P	23 16 08.7	-0.2
TIY	Taiyuan	38.07	313	*e*P	P	23 16 12.8	+0.6
TIY				pmax	pmax		
	comp=Z,24nm,0.4s						
PETK	Petropavlovsk-	38.92	10	LR	LR	23 31 47.1	
	comp=Z,181nm,19.6s,baz=204,slow=35						
XAN	Xi'an	39.26	306	P	P	23 16 22.0	-0.2
XAN				pP	sP	23 16 34.1	+1.1
XAN				pmax	pmax		
	comp=Z,21nm,1.3s						
XAN				pmax	pmax		
	comp=Z,270nm,5.1s						
GYA	Guiyang	39.33	293	⇓P	P	23 16 24.3	+1.3
GYA				pmax	pmax		

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      comp=Z,25nm,1.1s
UBPT  Khong Chiam       40.13 276  P      P      23 16 30.1 +0.6
UBPT                               IAmb   IAmb   23 16 36.0
      comp=Z,56nm,1.8s
HHC   Hu-ho-hao-te      40.15 317 eP      P      23 16 31.4 +1.8
HHC                                pP     sP     23 16 41.8 +1.2
HHC                                pmax   pmax
      comp=Z,14nm,1.1s
HHC                                pmax   pmax
      comp=Z,140nm,6.6s
EIDS  Eidsvold          40.33 174  P      P      23 16 30.7  -0.3
EIDS                               IAmb   IAmb   23 17 35.2
      comp=Z,60nm,1.9s
AS31  Alice Springs     40.55 199  P      P      23 16 33.9 +1.0
ASAR  Alice Springs     40.55 199  P      P      23 16 33.5 +0.5
      comp=Z,6.3nm,0.8s,baz=19,slow=7.0,SNR=52
ASAR                               LR     LR     23 34 14.8
      comp=Z,94nm,19.2s,baz=14,slow=37
ASAR  Alice Springs     40.55 199  P      P      23 16 33.1 +0.2
BTO   Baotou            41.07 316 eP      P      23 16 38.3 +1.2
SLVN  Son La            41.41 285  P      P      23 16 40.6 +0.4
SLVN                               IAmb   IAmb   23 16 42.3
      comp=Z,24nm,1.0s
DZM   Mont Dzumac       41.46 152  LR     LR     23 32 58.5
      comp=Z,266nm,19.6s,baz=11,slow=35
DZM   Mont Dzumac       41.46 152 eLR     LR     23 28 09.7
      comp=Z,354nm,22.1s
DZM   Mont Dzumac       41.46 152  P      P      23 16 40.2  -0.3
DZM                                IAmb   IAmb   23 17 23.8
      comp=Z,40nm,1.3s
PWJI  Pagerwojo         41.80 239  P      P      23 16 42.3  -1.0
      comp=Z,66nm,1.2s
CD2   Chengdu           42.63 299 eP      P      23 16 50.0   0.0
KMI   Kunming           42.69 291 eP      P      23 16 51.8 +1.0
KMI                                pP     sP     23 17 02.3 +0.6
KMI                                pmax   pmax
      comp=Z,17nm,1.1s
KMI                                pmax   pmax
      comp=Z,250nm,4.6s
KMI                                LR     LR
      comp=Z,250nm,8.6s
KMI                                LR     LR
      comp=Z,250nm,15.6s
KMI                                LR     LR
      comp=Z,230nm,15.1s
KMI   Kunming           42.69 291  P      P      23 16 48.5  -2.3
UGM   Wanagama          42.81 240  P      P      23 16 49.4  -2.2
SMY   Shemya            43.28  24  P      P      23 16 55.6 +0.8
LZH   Lanzhou           43.85 307 ⇑P      P      23 17 01.1 +1.1
LZH                                pP     sP     23 17 10.9   0.0
LZH                                sP     pwP    23 17 17.4 +2.8
LZH                                S      S      23 23 30.3 +1.1
LZH                                sS     sS     23 23 47.6 +5.3
LZH                                pmax   pmax
      comp=Z,110nm,1.3s
LZH                                pmax   pmax
      comp=Z,400nm,4.9s
LZH                                LR     LR
      comp=Z,270nm,14.0s
LZH                                LR     LR
      comp=Z,300nm,14.2s
LZH                                LR     LR
      comp=Z,350nm,16.5s
MA2   Magadan           44.57   3  P      P      23 17 05.8 +0.7
      comp=Z,17nm,0.8s,baz=153,slow=7.2,SNR=11
MA2                                LR     LR     23 32 43.5
      comp=Z,133nm,20.8s,baz=184,slow=32
MA2   Magadan           44.57   3  P      P      23 17 06.3 +1.2
MA2                                IAmb   IAmb   23 17 09.1
      comp=Z,22nm,0.9s
MSVF  Nonsavu           44.62 136  LR     LR     23 33 25.3
      comp=Z,164nm,19.6s,baz=351,slow=33
LEM   Lembang           44.74 244  LR     LR     23 38 14.3
      comp=Z,83nm,18.4s,baz=48,slow=39
PSA00 Pilbara Seismi    45.13 217  P      P      23 17 05.7  -4.4
ARMA  Armidale          45.38 174  P      P      23 17 10.2  -1.8
LAMP  Lampang           45.48 281  P      P      23 17 15.0 +2.0
      comp=Z,21nm,1.0s
CM34  Chiang Mai Arr    45.92 282  P      P      23 17 16.0  -0.4
CM35  Chiang Mai Arr    45.92 282  P      P      23 17 16.0  -0.5
CM09  Chiang Mai Arr    46.09 281  P      P      23 17 18.9 +1.2
      comp=Z,160nmcomp=Z,17nm,1.1s
CM04  Chiang Mai Arr    46.10 281  P      P      23 17 18.9 +1.0
      comp=Z,168nmcomp=Z,20nm,1.2s
CMMT  Chiang Mai        46.11 282  P      P      23 17 18.0   0.0
      comp=Z,6.5nm,1.8s
CM33  Chiang Mai Arr    46.11 282  P      P      23 17 18.0   0.0
CHTO  Chiang Mai        46.11 282  P      P      23 17 17.1  -0.8
CHTO                               IAmb   IAmb   23 17 19.3
      comp=Z,30nm,1.7s
CM01  Chiang Mai Arr    46.12 281  P      P      23 17 19.0 +1.0
      comp=Z,177nmcomp=Z,21nm,1.2s
CM02  Chiang Mai Arr    46.13 281  P      P      23 17 19.0 +0.9
      comp=Z,153nmcomp=Z,18nm,1.1s
CM31  Chiang Mai Arr    46.13 281  P      P      23 17 19.8 +1.7
      comp=Z,394nm,1.2s
CM31  Chiang Mai Arr    46.13 281  P      P      23 17 18.6 +0.4
CM31                               IAmb   IAmb   23 17 20.7
      comp=Z,36nm,1.1s
CMAR  Chiang Mai Arr    46.13 281  P      P      23 17 18.7 +0.6
      comp=Z,17nm,1.1s,baz=75,slow=6.3,SNR=55
CMAR                               PcP    PcP    23 18 55.4 +1.4
      comp=Z,2.9nm,0.7s,baz=90,slow=1.7,SNR=4.8
CMAR                               LR     LR     23 37 02.2
      comp=Z,103nm,18.6s,baz=159,slow=37
CM05  Chiang Mai Arr    46.13 281  P      P      23 17 19.1 +1.0
      comp=Z,126nmcomp=Z,14nm,1.2s
CM15  Chiang Mai Arr    46.15 281  P      P      23 17 19.0 +0.7
      comp=Z,16nm,0.5s
CM13  Chiang Mai Arr    46.17 281  P      P      23 17 19.4 +1.0
CM32  Chiang Mai Arr    46.21 282  P      P      23 17 20.0 +1.2
KLSI                    46.31 248  P      P      23 17 19.0  -0.6
      comp=Z,175nmcomp=Z,16nm,1.3s
CGJI  Cibinong          46.32 245  P      P      23 17 16.9  -2.7
      comp=Z,71nm,1.1s
ULN   Ulaanbaatar       46.49 323  P      P      23 17 20.5  -0.2
IPM   Ipoh              46.50 262  P      P      23 17 19.5  -1.6
IPM                                IAmb   IAmb   23 18 08.9
      comp=Z,29nm,1.5s
KULM  Kulim             46.63 263  P      P      23 17 22.0  -0.1
KULM                               IAmb   IAmb   23 17 26.2
      comp=Z,39nm,1.3s
SONM  Songino Array     46.85 323  P      P      23 17 22.6  -0.9
      comp=Z,3.7nm,0.7s,baz=138,slow=9.5,SNR=32
SONM                               ScP    ScP    23 22 47.8 +0.1
      comp=Z,0.7nm,0.9s,baz=93,slow=3.0,SNR=3.8
SONM                               LR     LR     23 36 24.8
      comp=Z,180nm,21.9s,baz=130,slow=35
SONM  Songino Array     46.85 323  P      P      23 17 22.9  -0.6
STKA  Stephens Creek    46.92 186  P      P      23 17 23.7  -0.3
      comp=Z,2.2nm,0.5s,baz=5.7,slow=12,SNR=2.6
STKA                               LR     LR     23 40 56.9
      comp=Z,133nm,18.1s,baz=17,slow=41
LHSI  Lahat             47.04 250  P      P      23 17 23.7  -1.5
      comp=Z,1µmcomp=Z,18nm,1.2s
LWLI  Liwa              47.06 248  P      P      23 17 19.6  -5.9
      comp=Z,504µmcomp=Z,7µmcomp=Z,112nm,0.9s
KSI   Kapahiang         47.81 251  P      P      23 17 27.7  -3.7
      comp=Z,57nm,0.8s
GTA   Gaotai            47.88 310 ⇑P      P      23 17 31.8 +0.2
GTA                                pP     sP     23 17 43.4 +0.8
GTA                                sP     pwP    23 17 51.3 +5.0
GTA                                PcP    PcP    23 19 00.9 +0.9
GTA                                pmax   pmax
      comp=Z,21nm,1.4s
GTA                                pmax   pmax
      comp=Z,180nm,5.1s
GTA                                LR     LR
      comp=Z,170nm,16.4s
GTA                                LR     LR
      comp=Z,230nm,14.9s
GTA                                LR     LR
      comp=Z,210nm,17.1s
YAK   Yakutsk           48.56 349  P      P      23 17 35.5  -0.8
BBOO  Buckleboo         48.72 192  P      P      23 17 37.5  -0.4
PSI   Prapat            48.99 260  LR     LR     23 40 23.6
      comp=Z,86nm,18.1s,baz=89,slow=38
FORT  Forrest           49.08 202  P      P      23 17 40.1  -0.6
TLY   Talaya            50.34 326  P      P      23 17 49.8  -0.4
TLY                                IAmb   IAmb   23 17 51.6
      comp=Z,37nm,1.5s
GSI   Gunungsitoli      50.73 259  P      P      23 17 52.3  -1.3
GSI                                IAmb   IAmb   23 18 05.6
      comp=Z,16nm,0.6s
TOO   Toolangi          52.33 182  P      P      23 18 05.0  -0.2
SHL   Shillong          52.52 291  P      P      23 18 06.2  -0.9
SHL                                IAmb   IAmb   23 18 07.6
      comp=Z,24nm,0.9s
LSA   Lhasa             53.29 296  P      P      23 18 14.1 +1.0
LSA                                pmax   pmax
      comp=Z,100nm,1.3s
LSA   Lhasa             53.29 296  P      P      23 18 13.8 +0.7
LSA                                IAmb   IAmb   23 18 17.2
      comp=Z,21nm,0.8s
NWAO  Narrogin (SRO)    55.56 211  LR     LR     23 45 38.1
      comp=Z,131nm,18.7s,baz=280,slow=40
TAPN  Taplejung         56.26 293 eP      P      23 18 34.9 +0.5
      comp=Z,103nm,1.1s
ODAN  Odare             56.55 292 eP      P      23 18 36.3  -0.1
      comp=Z,102nm,1.2s
RAMN  Ramite            57.25 293 eP      P      23 18 41.2  -0.2
      comp=Z,48nm,1.0s
TIXI  Tiksi             57.66 353  P      P      23 18 42.4  -0.7
TIXI                               IAmb   IAmb   23 18 47.8
      comp=Z,10nm,0.9s
WMQ   Urumqi            57.74 313  P      P      23 18 45.6 +1.2
WMQ                                pP     sP     23 18 56.5 +1.0
WMQ                                sP     pwP    23 19 01.8 +2.6
WMQ                                pmax   pmax
      comp=Z,46nm,1.3s
WMQ                                pmax   pmax
      comp=Z,300nm,5.1s
WMQ   Urumqi            57.74 313  P      P      23 18 43.8  -0.6
GUN   Gumba             57.88 294 eP      P      23 18 46.1 +0.2
      comp=Z,65nm,0.8s
PKI   Pulchoki          58.30 293 eP      P      23 18 48.4  -0.5
      comp=Z,21nm,0.7s
PKIN  Phulchoki         58.31 293 eP      P      23 18 48.4  -0.5
      comp=Z,32nm,0.9s
KKN   Kakani            58.41 294 eP      P      23 18 49.3  -0.2
      comp=Z,44nm,1.0s
DMN   Daman             58.57 293 eP      P      23 18 50.4  -0.3
      comp=Z,49nm,0.9s
ANM   Nome              59.07  22  P      P      23 18 54.0 +0.9
ANM                                IAmb   IAmb   23 18 57.5
      comp=Z,13nm,0.8s
DANN  Dangsing          59.74 294 eP      P      23 18 58.8   0.0
      comp=Z,90nm,0.7s
ZSN   Zaisan            60.35 316 eP      P      23 19 01.9  -0.4
      comp=Z,3.1nm,0.8s,baz=316
KDAK  Kodiak Island     61.72  32  P      P      23 19 12.5 +1.1
      comp=Z,5.1nm,0.6s,baz=259,slow=5.3,SNR=8.3
ZAA0  Zalesovo Array    61.74 324  P      P      23 19 10.9  -0.7
ZAA0                               IAmb   IAmb   23 19 12.4
      comp=Z,15nm,1.0s
ZALV  Zalesovo Beam     61.74 324  P      P      23 19 10.9  -0.7
      comp=Z,15nm,1.0s,baz=97,slow=6.1,SNR=32
ZALV                               PcP    PcP    23 19 51.6  -1.0
      comp=Z,4.8nm,0.8s,baz=104,slow=6.3,SNR=4.1
ZALV                               LR     LR     23 45 10.8
      comp=Z,95nm,21.4s,baz=68,slow=35
ZALV  Zalesovo Beam     61.74 324  P      P      23 19 10.3  -1.2
RDOG  Red Dog Mine      61.83  19  P      P      23 19 12.3 +0.3
RDOG                               IAmb   IAmb   23 19 16.1
      comp=Z,12nm,1.0s
TTA   Tatalina          61.94  26  P      P      23 19 13.4 +0.6
TTA                                IAmb   IAmb   23 19 24.1
      comp=Z,16nm,1.3s
MK31  Makanchi Array    61.98 315  IAmb   IAmb   23 19 14.6
      comp=Z,9.3nm,0.7s
MKAR  Makanchi Array    61.98 315  P      P      23 19 13.4 +0.1
      comp=Z,11nm,0.6s,baz=91,slow=8.3,SNR=170
MKAR                               PcP    PcP    23 19 51.7  -2.1
      comp=Z,8.0nm,1.0s,baz=93,slow=6.1,SNR=5.2
MKAR                               LR     LR     23 46 36.2
      comp=Z,69nm,20.4s,baz=88,slow=36
MKAR  Makanchi Array    61.98 315  P      P      23 19 13.3  -0.1
MAKZ  Makanchi          62.20 315  P      P      23 19 15.1 +0.2
BRLK  Bradley Lake      63.16  30  P      P      23 19 20.4  -0.7
RAR   Rarotonga         63.37 123  LR     LR     23 39 24.8
      comp=Z,66nm,21.5s,baz=284,slow=29
SKT   Skwentna          63.54  28  IAmb   IAmb   23 19 45.5
      comp=Z,15nm,1.2s
PPLA  Purkeypile        63.55  27  P      P      23 19 24.1 +0.4
SHLS  Shalkode          63.60 311 eP      P      23 19 21.7  -2.6
      comp=Z,7.0nm,1.0s,baz=311
IMAR  Indian Mountai    64.04  23  P      P      23 19 27.6 +0.9
RC01  Rabbit Creek A    64.09  29  P      P      23 19 27.7 +0.6
      baz=253
KPKS  Kokpek            64.19 311 eP      P      23 19 27.1  -1.1
      comp=Z,5.3nm,0.7s,baz=311
KTH   Kantishna Hill    64.31  26  IAmb   IAmb   23 19 34.3
      comp=Z,18nm,1.0s
SATY  Saty              64.37 311 eP      P      23 19 28.6  -0.9
      comp=Z,7.8nm,1.4s,baz=311
BPAW  Bear Paw Mtn.     64.46  25  IAmb   IAmb   23 19 33.3
      comp=Z,18nm,1.3s
TDK   Taldyqorghan      64.49 313 eP      P      23 19 29.6  -0.4
      comp=Z,23nm,0.8s,baz=313
TRF   Thorofare Moun    64.55  26  IAmb   IAmb   23 19 46.4
      comp=Z,11nm,0.9s
MLY   Manley            64.87  24  P      P      23 19 33.5 +1.3
      baz=251
KURK  Kurchatov         64.90 319  P      P      23 19 31.9  -0.6
SML   Sawmill           64.94  28  IAmb   IAmb   23 19 53.5
      comp=Z,21nm,0.9s
RND   Reindeer          65.15  26  IAmb   IAmb   23 19 38.5
      comp=Z,45nm,2.0s
MDOK  Medeo             65.36 311 eP      P      23 19 35.4  -0.6
      baz=311
TNSS  Tian-Shan         65.43 311 eP      P      23 19 36.3  -0.4
      baz=311
CHKK  Chushkaly         65.44 312 eP      P      23 19 35.9  -0.3
      baz=312
I23K  Minto, Yukon-K    65.46  25  P      P      23 19 37.4 +1.4
      baz=252
I23K  Minto, Yukon-K    65.46  25  IAmb   IAmb   23 19 43.5
      comp=Z,36nm,1.5s
AAA   Alma-Ata          65.46 311 eP      P      23 19 36.8 +0.3
      comp=Z,16nm,0.7s,baz=311
HYB   Hyderabad         65.53 283 i P     P      23 19 36.0  -1.3
WRH   Wood River Hil    65.78  25  IAmb   IAmb   23 19 44.4
      comp=Z,24nm,1.5s
COLD  Coldfoot          65.81  22  P      P      23 19 39.6 +1.4
      baz=250
COLD  Coldfoot          65.81  22  P      P      23 19 38.9 +0.7
MDM   Murphy Dome       65.86  25  P      P      23 19 39.8 +1.2
KUU   Kurty             65.91 312 eP      P      23 19 38.3  -1.0
      comp=Z,22nm,0.8s,baz=312
TCOL  CIGO, UAF Yank    65.99  25  P      P      23 19 40.5 +1.2
COLA  College           65.99  25  P      P      23 19 40.8 +1.4
KSH   Kashi             66.10 307  P      P      23 19 44.0 +3.2
KSH                                pP     sP     23 19 53.6 +1.6
KSH                                pmax   pmax
      comp=Z,27nm,0.9s
KSH                                pmax   pmax
      comp=Z,760nm,6.5s
POKR  Poker Plat Res    66.23  25  P      P      23 19 41.2 +0.3
POKR                               IAmb   IAmb   23 19 54.8
      comp=Z,26nm,1.8s
HDA   Harding Lake      66.24  26  P      P      23 19 41.9 +0.9
      baz=255
HDA   Harding Lake      66.24  26  P      P      23 19 41.1 +0.1
ILAR  Eielson Array     66.36  25  P      P      23 19 41.0  -0.8
      comp=Z,1.7nm,0.6s,baz=260,slow=5.9,SNR=17
ILAR  Eielson Array     66.36  25  P      P      23 19 41.0  -0.8
TKM2  Tokmak 2          66.42 311  P      P      23 19 43.2 +0.4
      SNR=9.4
N25K  Chitina, Valde    66.62  29  P      P      23 19 44.9 +1.3
      baz=258
N25K  Chitina, Valde    66.62  29  P      P      23 19 44.2 +0.7
N25K                               IAmb   IAmb   23 19 47.2
      comp=Z,45nm,1.9s
KBK   Karagaybulak      66.89 310  P      P      23 19 46.5 +0.7
      SNR=8.7
GLB   Gilahina Butte    66.95  29  P      P      23 19 46.0 +0.3
RIDG  Independent Ri    66.97  27  P      P      23 19 45.9 +0.2
RIDG                               IAmb   IAmb   23 19 48.7
      comp=Z,28nm,1.4s
VRDI  Verde Repeater    67.08  29  P      P      23 19 47.5 +0.8
VRDI                               IAmb   IAmb   23 20 20.4
      comp=Z,14nm,1.2s
PRP   Porcupine Dome    67.11  25  P      P      23 19 47.5 +0.8
CRQM  Cirque            67.14  30  P      P      23 19 45.8  -1.3
CRQM                               IAmb   IAmb   23 19 51.6
      comp=Z,14nm,0.9s
UCH   Uchtor            67.21 310  P      P      23 19 49.0 +0.8
      SNR=12
AAK   Ala-Archa         67.23 310  P      P      23 19 48.4 +0.5
      SNR=5.1
AAK   Ala-Archa         67.23 310  P      P      23 19 46.7  -1.2
USP   Ospenovka         67.23 311  P      P      23 19 47.9 +0.1
      SNR=13
SCRK  Sand Creek        67.39  26  P      P      23 19 49.4 +0.9
      baz=258
FYU   Fort Yukon        67.49  24  P      P      23 19 49.5 +0.6
EKS2  Erkin-Say         67.76 310  P      P      23 19 51.9 +0.7
      SNR=6.0
AML   Almayashu         67.82 310  P      P      23 19 52.7 +0.7
      SNR=14
BMAR  Burnt Mountain    67.96  23  P      P      23 19 52.4 +0.5
CTGM  Chitina Glacie    68.05  30  P      P      23 19 53.6 +0.8
CTGM                               IAmb   IAmb   23 20 13.8
      comp=Z,20nm,1.2s
TABL  Table Mountain    68.07  31  P      P      23 19 53.7 +0.8
BCAR  Beaver Creek A    68.18  28  P      P      23 19 53.7 +0.3
K27K  Chicken           68.23  27  P      P      23 19 56.5 +2.9
      baz=259
K27K  Chicken           68.23  27  P      P      23 19 54.4 +0.8
K27K                               IAmb   IAmb   23 19 59.5
      comp=Z,29nm,1.9s
PCA   Pinnacle          68.46  31  P      P      23 19 56.4 +1.2
NIL   Nilore            68.51 301  P      P      23 19 56.2 +0.2
DZA   Taraz             69.56 311 eP      P      23 20 01.5  -0.9
      comp=Z,4.7nm,0.7s,baz=310
HYT   Haines Junctio    69.89  30  P      P      23 20 05.7 +1.6
HYT                                IAmb   IAmb   23 20 19.9
      comp=Z,13nm,0.9s
KK31  Karatay Array     70.15 311  IAmb   IAmb   23 20 07.0
      comp=Z,19nm,0.9s
KKAR  Karatay Array     70.15 311  P      P      23 20 06.0 +0.1
KKAR                               IAmb   IAmb   23 20 07.0
      comp=Z,19nm,0.9s
KKAR  Karatay Array     70.15 311  P      P      23 20 05.7  -0.2
BRVK  Borovoye          70.22 321  P      P      23 20 05.6  -0.5
BRVK                               IAmb   IAmb   23 20 09.5
      comp=Z,14nm,0.9s
PPT   Papeete           70.34 115  LR     LR     23 43 14.1
      comp=Z,211nm,20.2s,baz=338,slow=29
PPT2  Papeete2          70.35 115 eLR     LR     23 41 29.0
      comp=Z,277nm,24.2s
EPYK  Eagle Plains      70.81  24  P      P      23 20 10.8 +1.2
      baz=264
SKAG  Skagway           70.88  32  P      P      23 20 08.7  -1.3
SKAG                               IAmb   IAmb   23 20 10.1
      comp=Z,25nm,1.6s
KBL   Kabul             71.91 302  P      P      23 20 16.5  -0.6
INK   Inuvik            72.23  23  P      P      23 20 18.2 +0.2
TBI   Tubuai            72.81 121 eLR     LR     23 42 38.6
      comp=Z,159nm,28.2s
C36M  Paulatuk          75.66  21  P      P      23 20 39.5 +1.5
      baz=274
C36M  Paulatuk          75.66  21  P      P      23 20 37.5  -0.5
TAOE  Nuku Hiva Isla    75.90 103 eLR     LR     23 44 07.0
      comp=Z,367nm,24.9s
TAOE  Nuku Hiva Isla    75.90 103  P      P      23 20 39.5  -1.0
ARU   Arti              76.83 325  P      P      23 20 44.3  -0.6
ARU                                IAmb   IAmb   23 20 45.5
      comp=Z,29nm,1.1s
ABKAR Akbulak array     76.94 318  P      P      23 20 44.7  -1.0
ABKAR Akbulak array     76.94 318  P      P      23 20 44.9  -0.8
ABKAR                              IAmb   IAmb   23 20 46.0
      comp=Z,16nm,1.4s
HRA   Herat             77.49 302  IAmb   IAmb   23 20 50.6
      comp=Z,10nm,0.9s
GEYT  Alibeck           80.14 307  P      P      23 21 03.8 +0.1
      comp=Z,12nm,0.9s,baz=183,slow=2.7,SNR=20
GEYT                               LR     LR     00 01 05.4
      comp=Z,71nm,18.7s,baz=200,slow=39
GEYT  Alibeck           80.14 307  P      P      23 21 04.3 +0.7
GYA0B ALIBECK ARRAY     80.14 307  P      P      23 21 03.5  -0.1
GYA0B                              IAmb   IAmb   23 21 08.7
      comp=Z,26nm,1.1s
YKA   Yellowknife Ar    80.60  28  P      P      23 21 05.8 +0.3
      comp=Z,1.8nm,0.8s,baz=285,slow=5.0,SNR=12
YKA                                LR     LR     23 55 33.9
      comp=Z,83nm,20.7s,baz=0.0,slow=35
MCCM  Marconi Confer    80.91  53  P      P      23 21 08.6 +0.9
J05D  Fort Rock, OR     81.06  48  P      P      23 21 09.6 +1.0
      baz=282
EUNU  Eureka            81.16   8  IAmb   IAmb   23 21 22.1
      comp=Z,21nm,1.4s
PINE  Pine Mountain     81.17  47  P      P      23 21 10.1 +0.8
PINE                               IAmb   IAmb   23 21 12.7
      comp=Z,47nm,1.6s
KIRV  Kirov             81.27 328  LR     LR     23 58 46.0
      comp=Z,89nm,20.6s,baz=14,slow=37
B08A  Colville Reser    81.28  42  P      P      23 21 09.9 +0.4
E07A  Sunnyside         81.32  44  P      P      23 21 06.2  -3.6
E07A                               IAmb   IAmb   23 21 12.9
      comp=Z,28nm,1.6s
ORV   Oroville          81.66  51  P      P      23 21 11.0  -0.8
D08A  Wollman Farm,     81.84  44  P      P      23 21 12.4   0.0
D08A                               IAmb   IAmb   23 21 15.5
      comp=Z,24nm,1.6s
E08A  Dider Farm, El    81.87  44  P      P      23 21 13.1 +0.4
MOD   Modoc Plateau     82.04  49  P      P      23 21 13.6  -0.2
C09A  Chrisman Ranch    82.09  43  P      P      23 21 13.1  -0.7
C09A                               IAmb   IAmb   23 21 20.9
      comp=Z,26nm,1.8s
AFDM  Forest Hills D    82.20  52  P      P      23 21 14.5  -0.1
AFDM                               IAmb   IAmb   23 21 38.0
      comp=Z,33nm,2.0s
E09A  Wood Farm, Sta    82.48  44  P      P      23 21 16.5 +0.7
RES   Resolute Bay      82.67  14  P      P      23 21 17.8 +1.6
RES                                IAmb   IAmb   23 21 40.8
      comp=Z,18nm,1.6s
NEW   Newport           82.73  42  LR     LR     23 51 15.2
      comp=Z,59nm,20.4s,baz=327,slow=31
NEW   Newport           82.73  42  P      P      23 21 18.2 +1.0
      baz=284
NEW   Newport           82.73  42  P      P      23 21 18.0 +0.8
NEW                                IAmb   IAmb   23 21 34.5
      comp=Z,13nm,1.2s
CMB   Columbia Colle    82.85  53  P      P      23 21 18.0   0.0
CMB                                IAmb   IAmb   23 21 21.1
      comp=Z,20nm,1.6s
WVOR  Wild Horse Val    83.12  48  IAmb   IAmb   23 21 22.5
      comp=Z,23nm,1.6s
BELG  Belogornoye       83.91 323  LR     LR     00 00 32.1
      comp=Z,74nm,19.1s,baz=33,slow=37
PKM   Mcpherson Peak    84.05  56  P      P      23 21 25.3 +0.9
      baz=284
NVAR  Mina Array Bea    84.35  52  P      P      23 21 26.9 +1.0
      comp=Z,2.6nm,0.7s,baz=268,slow=5.7,SNR=16
NVAR                               LR     LR     23 53 34.7
      comp=Z,43nm,19.3s,baz=143,slow=32
NVAR  Mina Array Bea    84.35  52  P      P      23 21 26.7 +0.8
NV11  Mina Array Sit    84.46  52  IAmb   IAmb   23 21 29.6
      comp=Z,20nm,1.8s
KLMR  Klimovskoe        85.31 332 eP      P      23 21 27.4  -2.6
KLMR                               AMP           23 21 29.9
      comp=Z,27nm,1.2s
EDW2  Edwards Air Fo    85.50  55  P      P      23 21 33.2 +1.6
      baz=285
LRMC  Laurel Mtn Rad    85.59  55  P      P      23 21 33.9 +1.8
      baz=285
MPMC  Manual Prospec    85.59  54  P      P      23 21 33.1 +0.9
      baz=285
HLID  Hailey            85.81  46  P      P      23 21 34.6 +1.5
      baz=287
TULEG Thule             86.16   8  P      P      23 21 34.8 +0.9
BCYI  Bear Canyon       86.29  45  P      P      23 21 36.3 +0.8
TPNV  Topopah Spring    86.31  53  P      P      23 21 36.9 +1.2
      baz=286
TPNV  Topopah Spring    86.31  53  IAmb   IAmb   23 21 57.1
      comp=Z,27nm,1.8s
ARCES ARCESS Array B    86.38 343  P      P      23 21 35.1  -0.1
      comp=Z,2.5nm,0.6s,baz=72,slow=7.8,SNR=12
ARCES                              LR     LR     00 04 08.7
      comp=Z,58nm,19.5s,baz=50,slow=38
R11A  Troy Canyon, C    86.43  51  P      P      23 21 38.5 +2.2
      baz=286
R11A  Troy Canyon, C    86.43  51  IAmb   IAmb   23 21 39.5
      comp=Z,20nm,1.8s
MCMT  McKenzie Canyo    86.51  45  P      P      23 21 37.2 +0.5
DLMT  Dillon            86.52  44  P      P      23 21 36.9 +0.4
DLMT                               IAmb   IAmb   23 21 59.9
      comp=Z,24nm,1.9s
HRY   Holter Researc    86.61  43  P      P      23 21 37.0 +0.1
PFO   Pinyon Flats O    87.06  56  P      P      23 21 38.2  -1.2
XPFO  Pion Flat         87.06  56  P      P      23 21 39.0  -0.4
BOZ   Bozeman (W)       87.09  44  P      P      23 21 38.5  -0.8
BOZ                                IAmb   IAmb   23 21 57.6
      comp=Z,14nm,1.5s
MONP2 Monument Peak     87.29  57  P      P      23 21 42.2 +1.6
      baz=286
QLMT  Earthquake Lak    87.47  44  P      P      23 21 42.1 +0.9
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HVU	Hansel Valley	87.49	47	P	P	23 21 42.0	+0.7
BGU	Big Grassy Mou	87.57	48	P	P	23 21 41.3	-0.4
YHL	Hebgen Lake	87.63	44	P	P	23 21 41.5	-0.6
YHB	Horse Butte	87.66	44	P	P	23 21 40.8	-1.4
PSUT	Pine Spring	87.68	51	P	P	23 21 42.9	+0.6
YMR	Madison River	87.84	44	P	P	23 21 42.5	-0.5
SPUT	South Promonto	87.87	48	P	P	23 21 43.2	0.0
ESJX	Sierra Juarez	87.92	58	P	P	23 21 42.5	-1.0
DUG	Dugway, Tooele	87.95	49	P	P	23 21 45.3	+1.8
	baz=288						
DUG	Dugway, Tooele	87.95	49	P	P	23 21 43.0	-0.5
H17A	Grant Village	88.19	44	P	P	23 21 45.1	+0.4
FLWY	Flagg Ranch	88.21	45	P	P	23 21 44.5	-0.3
FLWY				IAmb	IAmb	23 22 13.2	
	comp=Z,13nm,1.1s						
LKWY	Lake	88.25	44	P	P	23 21 45.3	+0.2
LKWY				IAmb	IAmb	23 21 52.8	
	comp=Z,13nm,1.4s						
REDW	Red Top Meadow	88.34	46	P	P	23 21 47.1	+1.6
REDW				IAmb	IAmb	23 22 38.8	
	comp=Z,12nm,1.4s						
CCUT	Cedar City	88.34	52	P	P	23 21 46.0	+0.4
AHID	Auburn Hatcher	88.36	46	P	P	23 21 45.5	0.0
HWUT	Hardware Ranch	88.41	47	P	P	23 21 42.9	-2.8
HWUT				IAmb	IAmb	23 22 10.1	
	comp=Z,19nm,1.6s						
GLA	Glamis	88.53	56	P	P	23 21 47.2	+0.9
GLA				IAmb	IAmb	23 21 49.6	
	comp=Z,14nm,1.4s						
SZCU	Shurtz Canyon	88.54	52	P	P	23 21 46.9	+0.4
NLU	North Lily Min	88.56	49	P	P	23 21 47.7	+1.2
CTU	Camp Tracy	88.56	48	P	P	23 21 47.6	+1.1
LCMT	Little Creek M	88.60	52	P	P	23 21 45.9	-0.8
TCUT	Toone Canyon	88.67	48	P	P	23 21 47.2	+0.2
W13A	Hualapai Mount	88.67	54	P	P	23 21 48.1	+0.9
TCRU	Three Creeks R	88.71	50	P	P	23 21 48.6	+1.4
PDMCI	Parker Dam,Lak	88.71	55	P	P	23 21 49.9	+2.9
	baz=287						
JLU	Jordanelle	88.81	48	P	P	23 21 48.7	+1.0
RLMT	Red Lodge	88.82	43	P	P	23 21 48.4	+0.7
MPU	Maple Canyon	88.86	49	P	P	23 21 46.3	-1.6
KNB	Kanab	88.92	52	P	P	23 21 49.6	+1.4
MSU	Marysvale	88.94	50	P	P	23 21 49.7	+1.4
PDAR	Pinedale Array	89.43	46	P	P	23 21 52.5	+1.9
	comp=Z,0.2nm,0.5s,baz=156,slow=31,SNR=2.8						
PDAR				LR	LR	23 55 07.2	
	comp=Z,52nm,19.7s,baz=354,slow=31						
FFC	Flin Flon	89.45	33	P	P	23 21 51.2	+1.1
FFC				IAmb	IAmb	23 22 43.8	
	comp=Z,25nm,1.9s						
U15A	North Rim	89.50	52	P	P	23 21 51.8	+0.7
U15A				IAmb	IAmb	23 22 30.6	
	comp=Z,6.8nm,1.1s						
Q16A	Castle Valley	89.56	50	P	P	23 21 51.6	+0.5
GNI	Garni	89.60	312	P	P	23 21 49.7	-1.6
KBZ	Khabaz	89.68	315	P	P	23 21 49.9	-1.4
	comp=Z,4.4nm,1.0s,baz=75,slow=2.6,SNR=8.9						
KBZ				LR	LR	00 04 33.7	
	comp=Z,59nm,19.6s,baz=340,slow=37						
P17A	Butcher Ranch,	89.69	49	P	P	23 21 51.2	-0.6
KVAR	Kislovodsk Arr	89.74	316	LR	LR	00 04 33.7	
	comp=Z,69nm,20.4s,baz=78,slow=37						
KIV	Kislovodsk	89.74	316	P	P	23 21 51.0	-0.9
KIV				IAmb	IAmb	23 22 10.2	
	comp=Z,8.5nm,1.1s						
RDMU	Red Mountain	90.17	48	P	P	23 21 53.8	-0.2
WUAZ	Wupatki	90.50	53	P	P	23 21 56.9	+1.2
WUAZ				IAmb	IAmb	23 22 13.8	
	comp=Z,14nm,1.3s						
FINES	FINESS Array B	90.77	336	P	P	23 21 54.1	-2.0
	comp=Z,2.5nm,0.6s,baz=79,slow=3.2,SNR=14						
FINES				LR	LR	00 06 20.1	
	comp=Z,78nm,18.1s,baz=332,slow=38						
PV23	Carpenter Ridg	91.30	50	P	P	23 21 59.0	-0.5
PV23				IAmb	IAmb	23 22 27.2	
	comp=Z,9.0nm,1.0s						
PV10	Paradox Valley	91.31	50	P	P	23 21 59.4	-0.1
PV10				IAmb	IAmb	23 22 26.7	
	comp=Z,10nm,1.0s						
PV14	Lion Creek, Pa	91.32	50	P	P	23 21 59.6	+0.1
PV19	Morning Glory	91.37	50	P	P	23 21 59.8	+0.1
PV19				IAmb	IAmb	23 22 17.1	
	comp=Z,14nm,1.3s						
PV17	East Wray Mesa	91.40	50	P	P	23 21 60.0	+0.1
PV17				IAmb	IAmb	23 22 06.8	
	comp=Z,12nm,1.3s						
PV04	Paradox Valley	91.40	50	P	P	23 21 58.9	-0.9
PV16	Nyswonger Mesa	91.42	50	P	P	23 22 00.6	+0.7
PV16				IAmb	IAmb	23 22 26.5	
	comp=Z,15nm,1.5s						
PV11	David Mesa, Pa	91.46	50	P	P	23 21 59.8	-0.3
PV11				IAmb	IAmb	23 22 27.3	
	comp=Z,10.0nm,1.0s						
PV03	Paradox Valley	91.49	50	P	P	23 22 00.7	+0.4
PV03				IAmb	IAmb	23 22 03.2	
	comp=Z,17nm,1.7s						
PV12	Saucer Basin,	91.50	50	P	P	23 22 00.9	+0.5
PV12				IAmb	IAmb	23 22 27.5	
	comp=Z,8.4nm,1.1s						
K22A	Casper	91.56	45	P	P	23 22 01.3	+0.8
W18A	Petrified Fore	91.89	53	P	P	23 22 02.8	+0.7
X18A	Snowflake	91.92	54	P	P	23 22 02.4	+0.1
TUC	Tucson	92.00	56	P	P	23 22 03.1	+0.6
TUC				IAmb	IAmb	23 22 21.0	
	comp=Z,14nm,1.7s						
N23A	Red Feather La	92.62	47	P	P	23 22 06.6	+1.1
RSSD	Black Hills	92.66	43	P	P	23 22 05.7	+0.1
RSSD				IAmb	IAmb	23 25 40.7	
	comp=Z,16nm,1.6s						
KOPT	Kop Dagi	92.69	313	P	P	23 22 05.3	-0.6
KOPT				IAmb	IAmb	23 22 08.2	
	comp=Z,12nm,1.2s						
MARD	Mardin	93.49	310	P	P	23 22 08.6	-0.8
RAYN	Ar Rayn	94.36	296	P	P	23 22 12.3	-1.2
AKASG	Malin Array Be	95.08	326	LR	LR	00 08 13.3	
	comp=Z,99nm,18.4s,baz=295,slow=37						
NOA	NORSAR Array B	96.47	340	LR	LR	00 10 50.0	
	comp=Z,66nm,18.6s,baz=260,slow=38						
BRTR	Keskin Array B	97.62	314	P	P	23 22 26.6	-1.5
	comp=Z,1.7nm,0.9s,baz=177,slow=2.5,SNR=5.4						
BRTR				LR	LR	00 09 58.3	
	comp=Z,28nm,20.3s,baz=340,slow=38						
BRTR	Keskin Array B	97.62	314	P	P	23 22 26.8	-1.4
TXAR	Lajitas Array	98.77	57	LR	LR	00 01 30.1	
	comp=Z,63nm,19.8s,baz=0.0,slow=32						
TORD	Torodi Ar. Bea	135.77	308	PKP	PKPdf	23 28 14.2	-0.5
	comp=Z,1.7nm,0.8s,baz=2.4,slow=3.6,SNR=4.0						
TORD	Torodi Ar. Bea	135.77	308		PKPdf	23 28 13.9	-0.8
GO02	Mina Guanaco	144.21	112	PKPdf	PKPab	23 28 29.8	+1.9
AC02	Maricunga	144.31	115	PKPdf	PKPab	23 28 28.4	-0.1
PB07	IPOC Station P	144.34	106		PKPbc	23 28 31.0	+2.3
DBIC	Dimbokro	144.82	306	PKP	PKPab	23 28 30.1	+0.1
	comp=Z,29nm,0.8s,baz=26,slow=4.0,SNR=32						
DBIC	Dimbokro	144.82	306	PKPdf	PKPab	23 28 30.5	+0.5
PB16	IPOC Station P	144.82	101	PKPdf	PKPbc	23 28 32.8	+2.1
KIC	Kosan Boka	144.92	305	*e*PKP1	PKPab	23 28 30.3	-0.1
	comp=Z,66nm,0.9s						
TIC	Toumodi	144.96	306	*e*PKP1	PKPab	23 28 30.3	-0.3
LIC	Lamto	145.23	305	*e*PKP1	PKPbc	23 28 31.3	-0.2
	comp=Z,138nm,0.8s						
PTGA	Pitinga	149.74	64		PKPbc	23 28 45.0	+0.9
SAML	Samuel	149.80	82		PKPbc	23 28 44.6	+0.5

IDC 19 23:20:54.0±1.9**, 13°07N×125°35E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/49**, mbtmp3.6**/5**, Error ellipse: s-maj=201.6km s-min=21.5km az=69.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.97	165	P	P	23 27 38.9	-0.6
	0.5nm,0.8s,baz=346,slow=9.6,SNR=1.9						
ASAR	Alice Springs	37.45	167	P	P	23 28 09.7	+0.3
	0.4nm,0.5s,baz=352,slow=7.9,SNR=6.5						
SONM	Songino Array	38.10	339	P	P	23 28 15.1	+0.4
	0.7nm,0.9s,baz=154,slow=10,SNR=3.9						
MKAR	Makanchi Array	49.27	322	P	P	23 29 44.8	+0.2
	0.3nm,0.7s,baz=121,slow=8.8,SNR=2.8						
ZALV	Zalesovo Beam	51.76	331	P	P	23 30 02.2	-1.0
	0.8nm,0.4s,baz=133,slow=10,SNR=2.8						

*DDA **19** 23:25:37.7, 36°01N×29°08E, h29^{km}±1^{km}, ML2.8*

*THE **19** 23:25:38.7, 36°00N×29°09E, h8^{km}±2^{km}, ML2.9/3, Error ellipse: s-maj=2.5km s-min=0.7km az=99.0*

*NIC **19** 23:25:38.5±0.0, 35°88N×29°23E, h30^{km}±1^{km}, Ml3.3/4*

*ISK **19** 23:25:38.2, 35°99N×29°16E, h30^{km}, ML3.2/23*

ISC 19 23:25:38.7±1.1**, 35°93N**±0°03×**29°19E**±0°02**, h35**^{km}±4^{km}**, n74, σ1^{s}29**/108**, 5C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.39	55	P	Pb	23 25 47.4	-0.4
KSL				S	Sb	23 25 54.4	+0.5
	3µm,0.7s						
KSL	Kastellorizon	0.39	55	⇓P	Pb	23 25 47.4	-0.4
KSL				S	Sb	23 25 54.5	+0.5
AKAS	Kas	0.45	48	PG	Pb	23 25 48.2	-0.6
AKAS				SG	Sb	23 25 55.7	0.0
AKAS	Kas	0.45	48	*i* P	Pb	23 25 48.1	-0.6
AKAS				*i* S	Sb	23 25 55.7	0.0
AKAS				IAML		23 26 00.0	
	comp=E,683nm,0.5s						
AKAS				IAML		23 26 01.0	
	comp=N,907nm,0.9s						
DEMR	Demre-Antalya	0.65	62	PG	Pn	23 25 51.1	-0.4
DEMR				SG	Sn	23 26 01.1	+0.5
FETY	Fethiye	0.71	353	P	Pn	23 25 50.7	-1.6
FETY				S	Sn	23 26 00.6	-1.4
FETY	Fethiye	0.71	353	PG	Pn	23 25 50.8	-1.6
FETY				SG	Sn	23 26 00.8	-1.2
ARG	Arkhangelos	0.91	289	P	Pn	23 25 54.5	-0.5
ARG				S	Sn	23 26 06.7	-0.2
	comp=N,1µm,0.4s						
ARG	Arkhangelos	0.91	289	PG	Pn	23 25 54.5	-0.5
ARG	Arkhangelos	0.91	289	⇑P	Pn	23 25 54.7	-0.3
ARG				S	Sb	23 26 08.8	+0.8
DALY	Dalyan (Mula)	0.98	334	PG	Pn	23 25 55.1	-1.0
DALY	Dalyan (Mula)	0.98	334	*i* P	Pn	23 25 54.7	-1.3
DALY				*i* S	Sn	23 26 07.5	-1.3
DALY				IAML		23 26 10.0	
	comp=N,382nm,0.3s						
DALY				IAML		23 26 12.0	
	comp=E,289nm,0.4s						
ELL	Elmali	1.00	35	PG	Pn	23 25 56.3	-0.1
ELL	Elmali	1.00	35	P	Pn	23 25 56.6	+0.2
MRSB	Marmaris-Mugla	1.12	315	PG	Pn	23 25 57.3	-0.7
TURN	Turunc	1.14	318	PG	Pn	23 25 57.5	-0.7
TURN	Turunc	1.14	318	*i* P	Pn	23 25 57.2	-0.9
TURN				*i* S	Sn	23 26 11.3	-1.3
TURN				IAML		23 26 15.0	
	comp=N,286nm,0.4s						
TURN				IAML		23 26 16.0	
	comp=E,299nm,0.4s						
CAEL	Denizli, Camel	1.19	5	*i* P	Pn	23 25 58.7	-0.4
CAEL				*i* S	Sn	23 26 14.9	+0.7
CAEL				IAML		23 26 24.0	
	comp=E,247nm,0.7s						
CAEL				IAML		23 26 24.0	
	comp=N,208nm,0.5s						
GOLH	Golhisar	1.34	13	*i* P	Pn	23 26 02.3	+1.2
GOLH				*i* S	Sb	23 26 19.8	-0.4
GOLH				IAML		23 26 27.0	
	comp=E,162nm,0.8s						
GOLH				IAML		23 26 29.0	
	comp=N,169nm,0.5s						
YER	Yerkesik	1.41	329	P	Pn	23 26 01.8	-0.2
YER				S	Sn	23 26 19.6	+0.3
YER	Yerkesik	1.41	329	PN	Pn	23 26 01.8	-0.2
MULA	Mugla, Merkez-	1.50	332	*i* P	Pn	23 26 03.2	0.0
MULA				*i* S	Sn	23 26 22.0	+0.4
MULA				IAML		23 26 26.0	
	comp=E,151nm,0.5s						
ANTB	Antalya	1.52	50	PN	Pn	23 26 04.4	+0.9
TAVA	DENIZLI_Tavas	1.55	352	*i* P	Pn	23 26 04.7	+0.8
TAVA				*i* S	Sn	23 26 22.7	-0.1
TAVA				IAML		23 26 29.0	
	comp=N,232nm,0.5s						
KARP	Karpathos	1.70	258	P	Pn	23 26 06.3	+0.4
KARP				S	Sn	23 26 26.3	-0.1
	comp=N,180nm,0.6s						
KARP	Karpathos	1.70	258	PN	Pn	23 26 06.4	+0.4
KARP	Karpathos	1.70	258	⇑P	Pn	23 26 06.3	+0.4
KARP				S	Sn	23 26 28.3	+1.8
BUCA	Burdur, Bucak-	1.77	38	*i* P	Pn	23 26 09.5	+2.5
MLSB	Milas	1.77	320	PN	Pn	23 26 06.5	-0.5
BDRM	Kayabasi	1.81	309	*i* P	Pn	23 26 07.9	+0.5
BDRM				*i* S	Sn	23 26 31.6	+2.5
BDRM				IAML		23 26 38.0	
	comp=N,158nm,0.4s						
BODT	Bodrum	1.89	307	P	Pn	23 26 07.8	-0.8
BODT				S	Sn	23 26 30.0	-1.2
BODT	Bodrum	1.89	307	PN	Pn	23 26 07.8	-0.8
BRDR	BURDUR-Merkez	1.89	21	*i* P	Pn	23 26 10.4	+1.7
BRDR				*i* S	Sb	23 26 36.1	0.0
BRDR				IAML		23 26 38.0	
	comp=N,84nm,0.4s						
BASM	Basmaki-Afyon	2.10	19	PN	Pn	23 26 11.9	+0.4
KEPZ	Antalya-Kepez	2.17	63	*i* P	Pn	23 26 13.3	+0.8
GCAM	G?zelcaml?	2.36	319	PN	Pn	23 26 15.2	+0.2
GCAM	G?zelcaml?	2.36	319	*i* P	Pn	23 26 15.5	+0.5
GCAM				*i* S	Sn	23 26 40.7	-2.1
GCAM				IAML		23 26 47.0	
	comp=E,66nm,0.4s						
GCAM				IAML		23 26 48.0	
	comp=N,109nm,0.3s						
BAGO	Egridir - ISPA	2.42	31	*i* P	Pn	23 26 18.3	+2.4
KZIL	AFYON_Kizioren	2.44	18	*i* P	Pn	23 26 19.6	+3.4
KHAL	Karahalli	2.45	6	*i* P	Pn	23 26 18.6	+2.3
GAZI	Gazipasa	2.55	82	*i* P	Pn	23 26 16.7	-0.9
GAZI				*i* S	Sn	23 26 41.0	-6.5
SEDI	Konya, Seydise	2.56	53	*i* P	Pn	23 26 20.1	+2.3
SEDI				*i* S	Sn	23 26 49.1	+1.3
SEDI				IAML		23 26 56.0	
	comp=E,45nm,0.6s						
ZKR	Zakros	2.56	252	PN	Pn	23 26 18.6	+0.8
SMG	Samos	2.59	314	P	Pn	23 26 18.3	+0.1
SMG				S	Sn	23 26 49.8	+1.3
MANT	Manisa	2.60	349	*i* P	Pn	23 26 21.2	+2.7
MANT				*i* S	Sn	23 26 47.0	-2.1
KULA	Kula-Manisa	2.61	351	PN	Pn	23 26 18.8	+0.2
STIA	Sitia Lasithi	2.63	255	P	Pn	23 26 20.1	+1.4
STIA				S	Sn	23 26 49.3	-0.1
AKMS	Akamas	2.72	109	P	Pn	23 26 19.9	-0.1
AKMS				S	Sn	23 26 51.4	-0.3
AKMS				AML	AML	23 26 51.9	
	comp=E,0.5nm,0.8s						
AKMS				AML	AML	23 26 51.9	
	comp=E,0.5nm,0.8s						
AKMS				AML	AML	23 26 55.4	
	comp=E,0.2nm,0.7s						
AKMS				AML	AML	23 26 55.4	
	comp=E,0.2nm,0.7s						
DGB	zmir	2.81	320	*i* P	Pn	23 26 19.7	-1.5
DGB				IAML		23 26 55.0	
	comp=N,42nm,1.1s						
SHUT	Suhut-Afyon	2.83	22	PN	Pn	23 26 22.2	+0.6
YVAC	Isparta, Yalva	2.85	34	*i* P	Pn	23 26 23.5	+1.7
ALFC	Alefka	2.88	105	⇑P	Pn	23 26 21.6	-0.6
ALFC				AML	AML	23 26 55.8	
	comp=N,0.3nm,0.7s						
ALFC				AML	AML	23 26 55.8	
	comp=N,0.3nm,0.7s						
ALFC				S	Sn	23 26 56.1	+0.3
ALFC				AML	AML	23 26 56.6	
	comp=N,0.3nm,0.4s						
ALFC				AML	AML	23 26 56.6	
	comp=N,0.3nm,0.4s						
DOGA	KONYA_Doganhis	2.94	42	*i* P	Pn	23 26 24.7	+1.6
DOGA				*i* S	Sn	23 26 57.5	+0.3
DOGA				IAML		23 27 07.0	
	comp=N,27nm,0.4s						
OSC1	CSNet OBS 1	2.97	144	P	Pn	23 26 23.3	-0.1
OSC1				S	Sn	23 26 57.0	-0.9
NATA	Nata	2.99	112	P	Pn	23 26 23.9	+0.2
NPS	Neapolis	2.99	258	P	Pn	23 26 24.2	+0.5
NPS				S	Sn	23 26 58.2	-0.2
ERMK	Ermenek	3.09	76	*i* P	Pn	23 26 26.4	+1.2
ERMK				IAML		23 27 13.0	
	comp=N,29nm,0.5s						
KMER	Konya-Meram	3.14	53	*i* P	Pn	23 26 28.2	+2.4
GDZ	Gediz	3.16	4	*i* P	Pn	23 26 26.1	-0.1
APE	Apeiranthos	3.16	292	PN	Pn	23 26 26.2	+0.1
URLA	Izmir	3.19	320	PN	Pn	23 26 26.7	+0.3
KONT	Konya--Tatoy	3.24	51	PN	Pn	23 26 28.4	+1.3
KONT	Konya--Tatoy	3.24	51	*i* P	Pn	23 26 28.9	+1.8
SZAC	Souni	3.24	110	⇓P	Pn	23 26 27.1	0.0
SZAC				S	Sn	23 27 04.8	+0.4
SZAC				AML	AML	23 27 05.3	
	comp=N,0.3nm,0.5s						
SZAC				AML	AML	23 27 05.3	
	comp=N,0.3nm,0.5s						
SZAC				AML	AML	23 27 05.8	
	comp=N,0.2nm,0.3s						
SZAC				AML	AML	23 27 05.8	
	comp=N,0.2nm,0.3s						
KKBE	Karaman, Kazim	3.28	66	*i* P	Pn	23 26 29.4	+1.6
KKBE				IAML		23 27 10.0	
	comp=N,20nm,0.5s						
ASGA	Asgata	3.51	108	P	Pn	23 26 30.5	-0.2
ASGA				AML	AML	23 27 13.1	
	comp=N,0.1nm,0.5s						
ASGA				AML	AML	23 27 13.2	
	comp=N,0.1nm,0.5s						
CSS	Mathiatis	3.51	105	⇑P	Pn	23 26 30.7	-0.2
TVSB	Tavsanli	3.52	3	PN	Pn	23 26 31.9	+0.9
AKKU	Akkuyu-Mersin	3.54	85	PN	Pn	23 26 32.2	+1.0
KEBE	Keben-Mersin	3.69	81	PN	Pn	23 26 34.7	+1.3
MVOU	Mavrovouni	3.74	103	⇑P	Pn	23 26 33.2	-0.7
OSC2	CSNet OBS 4	3.82	137	P	Pn	23 26 34.2	-0.8
OSC2				S	Sn	23 27 19.0	+0.3
CHBY	Cihanbeyli	3.96	47	PN	Pn	23 26 38.7	+1.6
IMMV	Iera Moni Meta	4.27	265	PN	Pn	23 26 42.7	+1.5

*NOU **19** 23:26:12.6, 38°45S×176°17E, h181^{km}, MLv4.5, North Island, New Zealand*

*IDC **19** 23:26:15.4±0.9, 38°95S×176°32E, h135^{km}±7^{km}, mb3.1/2, mb1 3.5/3, mb1mx3.3/41, mbtmp3.8/3, Error ellipse: s-maj=42.7km s-min=14.0km az=130.0*

*NEIC **19** 23:26:16.3±2.0, 38°73S±0°06×176°16E±0°09, h155^{km}±4^{km}, mb4.1/7, Error ellipse: s-maj=10.6km s-min=8.4km az=62.0*

*WEL **19** 23:26:18.0, 39°S±1°×17°6E±°, h134^{km}±2^{km}, M3.8/74, MLv3.8/74, Error ellipse: s-maj=0.0km s-min=0.0km az=92.2*

ISC 19 23:26:16.5±0.7**, 38°66S**±0°04×**176°06E**±0°04**, h150**^{km}±5^{km}**, n188, σ1^{s}32**/214**, mb3.8**/4**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTZ	Whakaora	0.08	267	P	Pn	23 26 36.8	+0.1
WPRZ	Whakapapatarin	0.17	30	P	Pn	23 26 36.3	-0.5
HATZ	Hinemaiaia	0.23	173	P	Pn	23 26 36.8	-0.1
HATZ				S	Sn	23 26 50.3	-2.2
ALRZ	Allen Road	0.25	66	P	Pn	23 26 36.3	-0.6
ALRZ				S	Sn	23 26 50.0	-2.4
KUTZ	Kaahu Road	0.25	313	P	Pn	23 26 36.6	-0.3
WATZ	Wairara	0.26	260	P	Pn	23 26 36.9	0.0
RATZ	Rangitukua	0.30	227	P	Pn	23 26 37.2	+0.1
PRRZ	Plateau Road	0.31	58	P	Pn	23 26 36.4	-0.7
PRRZ				S	Sn	23 26 50.4	-2.3
GRRZ	Galatos Road	0.32	8	P	Pn	23 26 36.7	-0.5
HRRZ	Handcock Road	0.33	33	P	Pn	23 26 36.6	-0.6
HRRZ				S	Sn	23 26 53.5	+0.6
MRHZ	Matea Rd	0.33	121	P	Pn	23 26 37.0	-0.2
MRHZ				S	Sn	23 26 50.4	-2.6
RITZ	Rihia Road	0.35	206	P	Pn	23 26 37.9	+0.6
HSRZ	Hossack Road	0.38	23	P	Pn	23 26 36.8	-0.5
HSRZ				S	Sn	23 26 51.5	-1.7
KATZ	Kakaramea	0.42	222	P	Pn	23 26 38.0	+0.3
HLRZ	Highlands Stat	0.47	30	P	Pn	23 26 37.8	0.0
RRRZ	Republican Roa	0.48	48	P	Pn	23 26 37.2	-0.6
RRRZ				S	Sn	23 26 51.3	-2.7
UTU	Utuhina	0.50	13	P	Pn	23 26 37.5	-0.4
TLZ	Tolley Road	0.53	309	P	Pn	23 26 37.8	-0.3
TLZ				S	Sn	23 26 52.8	-1.6
TMVZ	Te Maari	0.53	211	P	Pn	23 26 38.7	+0.5
KRVZ	Karewarewa	0.54	217	P	Pn	23 26 38.7	+0.5
ETVZ	East Tongariro	0.54	210	P	Pn	23 26 38.9	+0.6
TARZ	Mount Tarawera	0.55	40	P	Pn	23 26 37.7	-0.5
TARZ				S	Sn	23 26 51.7	-3.1
NGRZ	Ngongotaha	0.57	11	P	Pn	23 26 37.7	-0.6
WTVZ	West Tongariro	0.58	219	P	Pn	23 26 38.9	+0.5
OTVZ	Oturere	0.59	211	P	Pn	23 26 39.1	+0.6
MUGZ	Murupara	0.59	72	P	Pn	23 26 37.7	-0.6
MUGZ				S	Sn	23 26 52.4	-2.5
BKZ	Black Stump Fm	0.61	146	Pn	Pn	23 26 39.0	+0.5
BKZ				Sn	Sn	23 26 54.5	-0.9
BKZ	Black Stump Fm	0.61	146	P	Pn	23 26 39.0	+0.5
BKZ				S	Sn	23 26 53.8	-1.5
OMRZ	Omania	0.61	24	P	Pn	23 26 37.8	-0.8
MKRZ	Makatiti	0.61	32	P	Pn	23 26 38.4	-0.2
NGZ	Ngauruhoe	0.62	215	P	Pn	23 26 39.2	+0.5
TWVZ	Taurewa	0.63	230	P	Pn	23 26 39.2	+0.5
MTHZ	Maungataniwha	0.64	107	P	Pn	23 26 38.9	+0.2
MTHZ				S	Sn	23 26 54.0	-1.6
KARZ	Kaharoa	0.66	13	P	Pn	23 26 38.1	-0.7
TUVZ	Tukino	0.68	207	P	Pn	23 26 39.9	+0.9
FWVZ	Far West T-bar	0.71	213	P	Pn	23 26 39.9	+0.5
WHVZ	Whangaehu Hut	0.72	210	P	Pn	23 26 40.1	+0.7
DRZ	Dome Shelter	0.72	212	P	Pn	23 26 40.6	+1.0
RTZ	Ruatahuna	0.73	87	P	Pn	23 26 39.1	-0.2
NMHZ	Naumai	0.73	127	P	Pn	23 26 40.6	+1.3
NMHZ				S	Sn	23 26 57.9	+1.2
WNVZ	Wahianoa	0.75	208	P	Pn	23 26 40.5	+0.9
EDRZ	Edgecumbe	0.77	44	P	Pn	23 26 38.7	-0.9
MOVZ	Moawhango	0.78	198	P	Pn	23 26 40.3	+0.6
MOVZ				S	Sn	23 26 56.4	-1.0
KWHZ	Kaweka Forest	0.81	160	P	Pn	23 26 40.9	+1.1
KMRZ	Kaimai	0.82	354	P	Pn	23 26 39.3	-0.7
BHHZ	Black Hill Sta	0.83	180	P	Pn	23 26 40.8	+0.8
MARZ	Manawahe	0.83	36	P	Pn	23 26 39.2	-0.8
PKVZ	Pokaka	0.83	221	P	Pn	23 26 41.0	+0.9
RAHZ	Arahi	0.84	108	P	Pn	23 26 40.9	+0.8
MTVZ	Mangateitei	0.85	212	P	Pn	23 26 41.3	+1.1
OPRZ	Ohinepanea	0.91	26	P	Pn	23 26 39.5	-1.0
URZ	Urewera	0.92	64	P	Pn	23 26 39.6	-0.9
	347nm,0.3s,baz=246,slow=6.5,SNR=1422						
URZ				S	Sn	23 26 55.5	-3.4
	735nm,0.3s,baz=244,slow=3.7,SNR=24						
URZ				LR	LR	23 27 13.6	
	comp=Z,228nm,20.1s,baz=30,slow=63						
URZ	Urewera	0.92	64	P	Pn	23 26 39.7	-0.9
MCHZ	McNeill Hill	0.93	148	P	Pn	23 26 42.4	+1.8
TGRZ	Tauranga	0.95	10	P	Pn	23 26 40.0	-0.8
ARHZ	Aropaoanui	0.95	130	P	Pn	23 26 42.2	+1.4
HIZ	Hauiti	0.95	279		Pn	23 26 41.2	+0.4
HIZ				Sn	Sn	23 27 00.4	+1.0
HIZ	Hauiti	0.95	279	P	Pn	23 26 41.3	+0.4
KRHZ	Kereru	1.01	166	P	Pn	23 26 42.7	+1.3
WHHZ	Waihua	1.01	115	P	Pn	23 26 42.5	+1.2
SNGZ	Shannon Statio	1.01	97	P	Pn	23 26 42.1	+0.7
TOZ	Tahuroa Road	1.03	335	P	Pn	23 26 41.1	-0.4
RAGZ	Rawiri	1.08	82	P	Pn	23 26 42.0	-0.1
WHRZ	Whale Island	1.08	42	P	Pn	23 26 41.1	-0.9
VRZ	Vera Road	1.11	245	P	Pn	23 26 43.3	+1.1
MWZ	Matawai	1.20	75	P	Pn	23 26 42.7	-0.4
PNHZ	Pukenui	1.25	175	P	Pn	23 26 44.8	+1.2
CKHZ	Cape Kidnapper	1.27	142	P	Pn	23 26 45.3	+1.6
KAHZ	Kahuranaki	1.30	151	P	Pn	23 26 45.7	+1.6
KNZ	Kokohu	1.31	106	P	Pn	23 26 45.0	+0.9
RIGZ	Rimuhau	1.34	92	P	Pn	23 26 44.9	+0.5
WAZ	Wanganui	1.37	217	P	Pn	23 26 46.3	+1.5
MYRZ	Mayor Island	1.39	6	P	Pn	23 26 44.4	-0.6
TSZ	Takapari Road	1.40	183	P	Pn	23 26 46.3	+1.3
MHEZ	Mangahewa	1.41	252	P	Pn	23 26 47.0	+1.9
TKGZ	Te Karaka	1.42	82	P	Pn	23 26 45.7	+0.5
WPHZ	Waipukurau	1.43	168	P	Pn	23 26 46.7	+1.4
PRGZ	Paritu Road	1.45	101	P	Pn	23 26 46.2	+0.6
RUGZ	Raukumara Rang	1.45	62	P	Pn	23 26 44.3	-1.4
PXZ	Pawanui	1.50	156	P	Pn	23 26 47.4	+1.4
LREZ	Lake Rotokare	1.51	238	P	Pn	23 26 48.1	+1.9
MHGZ	Mahia Peninsul	1.52	109	P	Pn	23 26 47.5	+1.2
DREZ	Durham Road	1.54	249	P	Pn	23 26 48.3	+1.8
TWGZ	Tauwhareparae	1.59	73	P	Pn	23 26 47.2	+0.2
PREZ	Palmer Road	1.63	245	P	Pn	23 26 49.5	+2.0
HAZ	Te Kaha	1.63	57	P	Pn	23 26 46.2	-1.2
DVHZ	Dannevirke	1.64	177	P	Pn	23 26 48.6	+1.1
NEZ	North Egmont	1.64	248	P	Pn	23 26 49.6	+1.9
OHWZ	Ohakea	1.65	200	P	Pn	23 26 49.4	+1.9
PRHZ	Porangahau	1.66	165	P	Pn	23 26 46.8	-1.0
CNGZ	Carnagh Statio	1.70	85	P	Pn	23 26 48.7	+0.6
PKE	Pukeiti	1.70	251	P	Pn	23 26 49.8	+1.6
MKAZ	Moumakai	1.71	335	P	Pn	23 26 48.0	-0.4
KHEZ	Kahui Hut	1.71	248	P	Pn	23 26 50.1	+1.7

POWZ	Post Office Ro	1.74	187	P	Pn	23 26 49.6	+1.0
PKGZ	Pakihiroa	1.77	65	P	Pn	23 26 48.7	-0.3
NBEZ	Newall Road No	1.81	250	P	Pn	23 26 51.0	+1.6
ANWZ	Angora Road	1.82	170	P	Pn	23 26 51.1	+1.5
PUZ	Puketiti	1.83	72	P	Pn	23 26 49.3	-0.3
NMEZ	Namu Road	1.85	245	P	Pn	23 26 51.7	+1.8
PRWZ	Pori Road	1.89	182	P	Pn	23 26 51.7	+1.4
ETAZ	East Tamaki Re	1.93	332	P	Pn	23 26 50.5	-0.3
KUZ	Kuaotunu	1.93	352	P	Pn	23 26 50.2	-0.7
WIAZ	Waiheke Island	2.00	338	P	Pn	23 26 51.3	-0.4
BFZ	Birch Farm	2.02	176		Pn	23 26 52.8	+1.0
BFZ	Birch Farm	2.02	176	P	Pn	23 26 52.9	+1.0
MRZ	Mangatainoka R	2.03	190	P	Pn	23 26 52.8	+0.9
WMGZ	Waiomatatini S	2.04	66	P	Pn	23 26 51.6	-0.5
MXZ	Matakaoa Point	2.09	59	Pn	Pn	23 26 52.2	-0.4
MXZ	Matakaoa Point	2.09	59	P	Pn	23 26 52.4	-0.3
MBAZ	Motutapu North	2.10	334	P	Pn	23 26 52.4	-0.4
TIWZ	Tintock	2.12	184	P	Pn	23 26 53.9	+1.0
CPWZ	Castlepoint	2.25	177	P	Pn	23 26 56.0	+1.5
OGWZ	Otaki Gorge	2.26	197	P	Pn	23 26 55.5	+0.8
HOWZ	Holdsworth Sta	2.27	190	P	Pn	23 26 55.4	+0.6
ABAZ	Army Bay	2.28	334	P	Pn	23 26 54.7	-0.1
KIW	Kapiti Island	2.37	202	P	Pn	23 26 56.4	+0.4
TMWZ	Te Maipa	2.44	183	P	Pn	23 26 57.5	+0.6
GRZ	Great Barrier	2.45	349	P	Pn	23 26 56.6	-0.4
MTW	Mount Morrison	2.53	190	P	Pn	23 26 58.2	+0.3
CAW	Cannon Point	2.56	197	P	Pn	23 26 58.7	+0.4
DUWZ	D'Urville Isla	2.70	217	P	Pn	23 27 00.1	+0.1
TRWZ	Traveller	2.75	186	P	Pn	23 27 00.9	+0.3
PAWZ	Paruwai Farm	2.76	190	P	Pn	23 27 00.9	+0.1
WEL	Wellington	2.80	200	P	Pn	23 27 01.7	+0.4
MSWZ	Moikau Station	2.82	192		Pn	23 27 01.4	-0.1
MSWZ	Moikau Station	2.82	192	P	Pn	23 27 01.6	0.0
SNZO	South Karori	2.84	201		Pn	23 27 01.6	-0.1
SNZO				Sn	Sn	23 27 36.1	-0.7
BHW	Baring Head	2.89	198	Pn	Pn	23 27 02.3	-0.1
BHW	Baring Head	2.89	198	P	Pn	23 27 02.3	-0.1
TCW	Tory Channel	2.89	208	P	Pn	23 27 02.5	+0.1
PLWZ	Palliser	2.97	192		Pn	23 27 03.2	-0.2
PLWZ	Palliser	2.97	192	P	Pn	23 27 03.3	-0.2
WCZ	Waipu Caves	3.04	333	P	Pn	23 27 04.8	+0.4
TUWZ	Tuamarina	3.20	210		Pn	23 27 06.2	-0.1
TUWZ	Tuamarina	3.20	210	P	Pn	23 27 06.3	-0.1
NNZ	Nelson	3.28	218	Pn	Pn	23 27 08.1	+0.8
NNZ	Nelson	3.28	218	P	Pn	23 27 07.4	+0.1
CMWZ	Cape Campbell	3.39	204	Pn	Pn	23 27 08.7	-0.1
CMWZ				Sn	Sn	23 27 51.0	+1.6
QRZ	Quartz Range	3.47	230		Pn	23 27 09.7	-0.1
QRZ				Sn	Sn	23 27 51.1	-0.1
QRZ	Quartz Range	3.47	230	P	Pn	23 27 09.4	-0.4
BSWZ	Blackbirch Sta	3.48	208		Pn	23 27 10.2	+0.3
BSWZ				Sn	Sn	23 27 51.1	-0.3
BSWZ	Blackbirch Sta	3.48	208	P	Pn	23 27 09.7	-0.1
THZ	Tophouse	3.92	217	Pn	Pn	23 27 16.4	+0.6
THZ				Sn	Sn	23 28 02.2	+0.4
OUZ	Omahuta	3.96	329	Pn	Pn	23 27 16.8	+0.6
OUZ	Omahuta	3.96	329	P	Pn	23 27 16.8	+0.6
KHZ	Kahutara	4.21	206	Pn	Pn	23 27 19.2	-0.2
KHZ				Sn	Sn	23 28 06.8	-1.6
KHZ	Kahutara	4.21	206	P	Pn	23 27 19.1	-0.3
DSZ	Denniston Nort	4.48	225	P	Pn	23 27 22.3	-0.7
GVZ	Greta Valley S	4.87	207	P	Pn	23 27 27.2	-0.9
LTZ	Lake Taylor	5.02	214	P	Pn	23 27 28.9	-1.3
AMCZ	Amberley	5.19	209	P	Pn	23 27 32.2	-0.2
INZ	Inchbonnie	5.36	219	P	Pn	23 27 33.5	-1.1
OXZ	Oxford	5.56	212	Sn	Sn	23 28 37.0	-3.4
MQZ	McQueen's Vall	5.65	206	Pn	Pn	23 27 36.5	-2.0
MQZ				Sn	Sn	23 28 37.9	-4.7
RPZ	Rata Peaks	6.30	215	P	Pn	23 27 46.2	-0.9
	9.0nm,0.3s,baz=50,slow=1.7,SNR=11						
RPZ				S	Sn	23 28 52.9	-5.2
	32nm,0.3s,baz=117,slow=23,SNR=30						
RPZ	Rata Peaks	6.30	215	Pn	Pn	23 27 46.8	-0.4
RPZ					Sn	23 28 54.9	-3.3
RPZ	Rata Peaks	6.30	215	P	Pn	23 27 46.6	-0.5
ARCZ	Arundel	6.43	213	P	Pn	23 27 47.6	-1.2
FOZ	Fox Glacier	6.77	222	Pn	Pn	23 27 53.9	+0.5
LBZ	Lake Benmore	7.22	216	Pn	Pn	23 27 58.9	-0.4
LBZ	Lake Benmore	7.22	216	P	Pn	23 27 58.3	-1.0
CTZ	Chatham Island	7.50	135	P	Pn	23 28 06.5	+3.4
ODZ	Otahua Downs	7.55	211	Pn	Pn	23 28 02.6	-1.1
WKZ	Wanaka	8.10	218	Pn	Pn	23 28 09.4	-1.7
WKZ				Sn	Sn	23 29 35.9	-5.4
HHSZ	Highcliff Hill	8.27	208	P	Pn	23 28 12.7	-0.7
TUZ	Tuapeka	8.70	211	P	Pn	23 28 18.6	-0.4
MLZ	Mavora Lakes	8.93	219	Pn	Pn	23 28 22.5	+0.3
MLZ	Mavora Lakes	8.93	219	P	Pn	23 28 21.1	-1.0
SYZ	Scrubby Hill	9.37	211	P	Pn	23 28 27.7	-0.3
WHZ	Wether Hill Ro	9.39	217	Pn	Pn	23 28 27.8	-0.5
WHZ	Wether Hill Ro	9.39	217	P	Pn	23 28 27.7	-0.6
DCZ	Deep Cove	9.48	221	Pn	Pn	23 28 29.3	-0.2
DZM	Mont Dzumac	18.48	331	Pn	Pn	23 30 23.4	+0.4
DZM				IAmb	IAmb	23 30 26.6	
	comp=Z,11nm,1.0s						
MCQ	Macquarie Isla	19.64	211	P	P	23 30 35.0	+1.8
MSVF	Nonsavu	20.93	5	P	Pn	23 30 48.0	-3.9
MSVF				IAmb	IAmb	23 30 59.4	
	comp=Z,4.0nm,0.8s						
COEN	Coen	38.05	301	P	P	23 33 22.9	+2.4
COEN				IAmb	IAmb	23 33 39.9	
	comp=Z,3.8nm,1.1s						
ASAR	Alice Springs	38.69	280	P	P	23 33 29.2	+3.4
	comp=Z,0.5nm,0.5s,baz=114,slow=6.1,SNR=16						
WB2	Warramunga Arr	40.46	285	P	P	23 33 42.6	+2.1
WRA	Warramunga Arr	40.47	285	P	P	23 33 41.2	+0.6
	comp=Z,0.3nm,0.6s,baz=127,slow=6.6,SNR=1.9						
WRA	Warramunga Arr	40.47	285	P	P	23 33 41.6	+1.0
WB0	Warramunga Arr	40.54	286	P	P	23 33 42.7	+1.6
CASY	Casey	45.55	211	P	P	23 34 17.4	-3.4
CASY				IAmb	IAmb	23 34 23.1	
	comp=Z,5.8nm,1.1s						
MKAR	Makanchi Array	119.17	308	PKP	PKiKP	23 44 47.3	+0.1
	comp=Z,0.3nm,0.5s,baz=216,slow=1.7,SNR=7.5						
KBZ	Khabaz	144.76	294	PKPbc	PKPdf	23 45 35.8	+0.8
	comp=Z,1.3nm,0.8s,baz=115,slow=1.7,SNR=3.8						
ARCES	ARCESS Array B	145.30	342	PKPbc	PKiKP	23 45 36.8	-2.4
	comp=Z,4.0nm,0.8s,baz=73,slow=2.8,SNR=9.6						
FINES	FINESS Array B	150.62	331	PKPbc	PKiKP	23 45 50.5	+0.2
	comp=Z,1.6nm,0.5s,baz=53,slow=3.5,SNR=17						
BRTR	Keskin Array B	150.99	284	PKPbc	PKiKP	23 45 52.7	+0.7
	comp=Z,0.3nm,0.4s,baz=306,slow=37,SNR=2.3						

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*PRU **19** 23:53:06.0±0.0, 45°.89N×27°.30E, h36^{km}, M4.1*
*SIGU **19** 23:53:06.5, 45°.89N×27°.18E, h51^{km}, mb3.7*
*IDC **19** 23:53:06.1±0.8, 45°.81N×27°.15E, h35^{km}±9^{km}, mb3.6/12, mb1 3.7/21, mb1mx3.5/54, mbtmp3.8/21, ML3.4/8, Error ellipse: s-maj=9.4km s-min=7.7km az=149.0*
*NEIC **19** 23:53:07.5±1.9, 45°.86N±0°.03×27°.16E±0°.04, h41^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.7km az=151.0*
*SOF **19** 23:53:07.3, 45°.87N×27°.11E, h50^{km}, MD4.3*
*BUC **19** 23:53:07.9±0.1, 45°.88N×27°.15E, h40^{km}±2^{km}, ml3.8/58, Error ellipse: s-maj=1.4km s-min=1.1km az=40.0*
ISC 19 23:53:07.0±0.4**, 45°.88N**±0°.02×**27°.15E**±0°.02**, h35**^{km}**, n392,** σ**1^{s}.32**/487**, mb3.9**/17**, 96C-121D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ODBI	Odobesti	0.13	210	⇓P	Pn	23 53 14.7	+1.4
ODBI				⇓S	Sn	23 53 20.8	+3.2
ODBI	Odobesti	0.13	210	⇓P	Pn	23 53 14.7	+1.4
ODBI				⇓S	Sn	23 53 20.8	+3.2
ODBI	Odobesti	0.13	210		Pn	23 53 14.8	+1.4
ODBI					Sn	23 53 20.8	+3.2
PETR	Petresti	0.17	160	⇓P	Pn	23 53 14.6	+1.1
PETR				⇓S	Sn	23 53 20.5	+2.6
PETR	Petresti	0.17	160	⇓P	Pn	23 53 14.6	+1.1
PETR				⇓S	Sn	23 53 20.5	+2.6
PETR	Petresti	0.17	160		Pn	23 53 14.6	+1.1
PETR					Sn	23 53 20.5	+2.6
VRI	Vrincioaia	0.30	268	⇑P	Pn	23 53 15.1	+0.2
VRI				⇑S	Sn	23 53 20.8	+0.5
VRI	Vrincioaia	0.30	268	⇑P	Pn	23 53 15.1	+0.2
VRI				⇑S	Sn	23 53 20.8	+0.5
VRI	Vrincioaia	0.30	268	P	Pn	23 53 15.2	+0.2
VRI	Vrincioaia	0.30	268		Pn	23 53 15.2	+0.2
VRI					Sn	23 53 20.8	+0.5
PLOR	Plostina	0.35	266	⇓P	Pn	23 53 16.1	+0.4
PLOR	Plostina	0.35	266	⇓P	Pn	23 53 16.1	+0.4
PLOR	Plostina	0.35	266		Pn	23 53 16.1	+0.4
BISRR	Bisoca	0.45	223	⇑P	Pn	23 53 18.0	+1.0
BISRR	Bisoca	0.45	223	⇑P	Pn	23 53 18.0	+1.0
BISRR	Bisoca	0.45	223		Pn	23 53 18.1	+1.0
TUDR		0.46	128	⇓P	Pn	23 53 17.4	+0.3
TUDR				⇓S	Sn	23 53 25.6	+1.6
TUDR		0.46	128	⇓P	Pn	23 53 17.4	+0.3
TUDR				⇓S	Sn	23 53 25.6	+1.6
TUDR		0.46	128		Pn	23 53 17.5	+0.3
TUDR					Sn	23 53 25.6	+1.6
VARL	Varlezi	0.49	87	⇑P	Pn	23 53 18.2	+0.7
VARL				⇓S	Sn	23 53 26.6	+1.8
VARL	Varlezi	0.49	87	⇑P	Pn	23 53 18.2	+0.7
VARL				⇓S	Sn	23 53 26.6	+1.8
VARL	Varlezi	0.49	87		Pn	23 53 18.2	+0.7
VARL					Sn	23 53 26.6	+1.8
BIR	Birlad	0.51	40	⇓P	Pn	23 53 18.5	+0.7
BIR				⇓S	Sn	23 53 26.9	+1.5
BIR	Birlad	0.51	40	⇓P	Pn	23 53 18.5	+0.7
BIR				⇓S	Sn	23 53 26.9	+1.5
BIR	Birlad	0.51	40		Pn	23 53 18.5	+0.7
BIR					Sn	23 53 26.9	+1.5
GRER		0.51	194	⇓P	Pn	23 53 19.5	+1.6
GRER		0.51	194	⇓P	Pn	23 53 19.5	+1.6
GRER		0.51	194		Pn	23 53 19.5	+1.6
SCHL	Schela	0.61	128	⇓P	Pn	23 53 19.2	+0.1
SCHL				⇑S	Sn	23 53 29.1	+1.4
SCHL	Schela	0.61	128	⇓P	Pn	23 53 19.2	+0.1
SCHL				⇑S	Sn	23 53 29.1	+1.4
SCHL	Schela	0.61	128		Pn	23 53 19.2	+0.1
SCHL					Sn	23 53 29.1	+1.4
TESR	Tescani	0.72	331	⇓P	Pn	23 53 21.2	+0.4
TESR				⇓S	Sn	23 53 31.8	+1.2
TESR	Tescani	0.72	331	⇓P	Pn	23 53 21.2	+0.4
TESR				⇓S	Sn	23 53 31.8	+1.2
TESR	Tescani	0.72	331		Pn	23 53 21.3	+0.4
TESR					Sn	23 53 31.8	+1.2
NEHR	Nehoiu	0.75	233	⇓P	Pn	23 53 22.7	+1.5
NEHR	Nehoiu	0.75	233	⇓P	Pn	23 53 22.7	+1.5
NEHR	Nehoiu	0.75	233		Pn	23 53 22.7	+1.5
GISR	Galati	0.77	124	⇓P	Pn	23 53 21.7	+0.3
GISR				⇓S	Sn	23 53 32.7	+1.0
GISR	Galati	0.77	124	⇓P	Pn	23 53 21.7	+0.3
GISR				⇓S	Sn	23 53 32.7	+1.0
GISR	Galati	0.77	124		Pn	23 53 21.7	+0.3
GISR					Sn	23 53 32.7	+1.0
GIUM	Giurgiulesti	0.84	118	⇑P	Pn	23 53 23.1	+0.8
GIUM				⇑S	Sn	23 53 35.2	+1.7
GIUM	Giurgiulesti	0.84	118	⇑P	Pn	23 53 23.1	+0.8
GIUM				⇑S	Sn	23 53 35.2	+1.7
GIUM	Giurgiulesti	0.84	118		Pn	23 53 23.1	+0.8
GIUM					Sn	23 53 35.2	+1.7
GIUM	Giurgiulesti	0.84	118	P	Pn	23 53 23.1	+0.8
GIUM				S	Sn	23 53 35.1	+1.7
ISR	Istrita	0.87	210	⇑P	Pn	23 53 24.4	+1.6
ISR	Istrita	0.87	210	⇑P	Pn	23 53 24.4	+1.6
ISR	Istrita	0.87	210		Pn	23 53 24.4	+1.6
VASR	Vaslui	0.88	30		Pn	23 53 24.3	+1.4
VASR					Sn	23 53 37.0	+2.5
MLR	Muntele Rosu	0.93	246	⇓P	Pn	23 53 25.4	+1.6
MLR				⇓S	Sn	23 53 38.9	+3.0
MLR	Muntele Rosu	0.93	246	Pg	Pn	23 53 25.3	+1.6
	254nm,0.3s,baz=108,slow=3.3,SNR=4728						
MLR				Lg	Lg	23 53 37.5	
	753nm,0.3s,baz=204,slow=17,SNR=33						
MLR				LR	LR	23 53 57.3	
	comp=Z,241nm,21.7s,baz=45,slow=57						
MLR	Muntele Rosu	0.93	246	⇓P	Pn	23 53 25.4	+1.6
MLR				⇓S	Sn	23 53 38.9	+3.0
MLR	Muntele Rosu	0.93	246		Pn	23 53 25.5	+1.7
MLR				Sn	Sn	23 53 38.5	+2.6
OZUR		0.98	283	⇑P	Pn	23 53 24.9	+0.6
OZUR				⇑S	Sn	23 53 39.3	+2.4
OZUR		0.98	283	⇑P	Pn	23 53 24.9	+0.6
OZUR				⇑S	Sn	23 53 39.3	+2.4
OZUR		0.98	283		Pn	23 53 24.9	+0.6
OZUR					Sn	23 53 39.3	+2.4
PGOR	Pogoanele	0.98	187	⇓P	Pn	23 53 25.0	+0.8
PGOR				⇓S	Sn	23 53 38.1	+1.3
PGOR	Pogoanele	0.98	187	⇓P	Pn	23 53 25.0	+0.8
PGOR				⇓S	Sn	23 53 38.1	+1.3
PGOR	Pogoanele	0.98	187		Pn	23 53 25.0	+0.8
PGOR					Sn	23 53 39.5	+2.7
CFR	Carcaliu	0.98	135	⇓P	Pn	23 53 24.0	-0.3
CFR				⇓S	Sn	23 53 37.4	+0.4
CFR	Carcaliu	0.98	135	⇓P	Pn	23 53 24.0	-0.3
CFR				⇓S	Sn	23 53 37.4	+0.4
CFR	Carcaliu	0.98	135		Pn	23 53 24.3	0.0
CFR					Sn	23 53 37.4	+0.4
GIRR	Girov	1.17	338	⇓P	Pn	23 53 27.8	+0.9
GIRR	Girov	1.17	338	⇓P	Pn	23 53 27.8	+0.9
GIRR	Girov	1.17	338		Pn	23 53 27.8	+0.9
DOPR	Dopca	1.23	275	⇓P	Pn	23 53 28.6	+0.8
DOPR	Dopca	1.23	275	⇓P	Pn	23 53 28.6	+0.8
DOPR	Dopca	1.23	275		Pn	23 53 28.6	+0.8
PLAR	PLOIESTI	1.25	220	⇑P	Pn	23 53 29.8	+1.9
PLAR	PLOIESTI	1.25	220	⇑P	Pn	23 53 29.8	+1.9
AMRR	Amara	1.27	174	⇑P	Pn	23 53 29.0	+0.7
AMRR				⇑S	Sn	23 53 45.1	+1.0
AMRR	Amara	1.27	174	⇑P	Pn	23 53 29.0	+0.7
AMRR				⇑S	Sn	23 53 45.1	+1.0
AMRR	Amara	1.27	174		Pn	23 53 29.1	+0.7
AMRR					Sn	23 53 45.1	+1.0
BIZ	Bicaz	1.29	326	⇑P	Pn	23 53 29.5	+1.0
BIZ	Bicaz	1.29	326	⇑P	Pn	23 53 29.5	+1.0
BIZ	Bicaz	1.29	326		Pn	23 53 29.5	+1.0
IAS	Iasi	1.35	12	⇑P	Pn	23 53 30.4	+1.1
IAS				⇓S	Sn	23 53 47.6	+1.7
IAS	Iasi	1.35	12	⇑P	Pn	23 53 30.4	+1.1
IAS				⇓S	Sn	23 53 47.6	+1.7
IAS	Iasi	1.35	12		Pn	23 53 30.4	+1.1
IAS					Sn	23 53 47.6	+1.7
SULR		1.36	208	⇑P	Pn	23 53 30.8	+1.4
SULR				⇓S	Sn	23 53 48.5	+2.3
SULR		1.36	208	⇑P	Pn	23 53 30.8	+1.4
SULR				⇓S	Sn	23 53 48.5	+2.3
SULR		1.36	208		Pn	23 53 30.8	+1.4
SULR					Sn	23 53 48.8	+2.6
TPGR	Topolog	1.36	138	⇑P	Pn	23 53 30.3	+0.8
TPGR				⇓S	Sn	23 53 48.7	+2.4
TPGR	Topolog	1.36	138	⇑P	Pn	23 53 30.3	+0.8
TPGR				⇓S	Sn	23 53 48.7	+2.4
TPGR	Topolog	1.36	138		Sn	23 53 48.7	+2.4
TLCR		1.36	120	⇑P	Pn	23 53 30.8	+1.4
TLCR		1.36	120	⇑P	Pn	23 53 30.8	+1.4
TLCR		1.36	120		Pn	23 53 30.9	+1.4
JOSR	Joseni	1.41	307	⇓P	Pn	23 53 31.0	+0.8
JOSR	Joseni	1.41	307	⇓P	Pn	23 53 31.0	+0.8
JOSR	Joseni	1.41	307		Pn	23 53 31.2	+1.1
LEHL	Lehliu	1.42	190	⇓P	Pn	23 53 31.5	+1.1
LEHL				⇑S	Sn	23 53 50.1	+2.3
LEHL	Lehliu	1.42	190	⇓P	Pn	23 53 31.5	+1.1
LEHL				⇑S	Sn	23 53 50.1	+2.3
LEHL	Lehliu	1.42	190		Pn	23 53 31.4	+1.1
LEHL					Sn	23 53 50.1	+2.3
TLBR	Topalu	1.48	154	⇓P	Pn	23 53 31.5	+0.4
TLBR				⇓S	Sn	23 53 50.4	+1.3
TLBR	Topalu	1.48	154	⇓P	Pn	23 53 31.5	+0.4
TLBR				⇓S	Sn	23 53 50.4	+1.3
TLBR	Topalu	1.48	154		Pn	23 53 31.5	+0.4
TLBR					Sn	23 53 50.4	+1.3
VOIR		1.54	254	⇑P	Pn	23 53 32.7	+0.7
VOIR		1.54	254	⇑P	Pn	23 53 32.7	+0.7
VOIR		1.54	254		Pn	23 53 32.8	+0.7
MILM	Milestii Mici	1.55	47	⇓P	Pn	23 53 33.0	+0.9
MILM				⇓S	Sn	23 53 53.1	+2.1
MILM	Milestii Mici	1.55	47	⇓P	Pn	23 53 33.0	+0.9
MILM				⇓S	Sn	23 53 53.1	+2.1
MILM	Milestii Mici	1.55	47		Pn	23 53 33.1	+0.9
MILM					Sn	23 53 53.1	+2.1
MILM	Milestii Mici	1.55	47	P	Pn	23 53 33.0	+0.9
INCR	INCERC-Sediu C	1.60	206	⇑P	Pn	23 53 33.8	+1.0
INCR				⇓S	Sn	23 53 54.3	+2.1
INCR	INCERC-Sediu C	1.60	206	⇑P	Pn	23 53 33.8	+1.0
INCR				⇓S	Sn	23 53 54.3	+2.1
INCR	INCERC-Sediu C	1.60	206		Pn	23 53 33.8	+1.0
INCR					Sn	23 53 54.2	+2.1
KIS	Kishinev	1.61	45	*e*Pq		23 53 34.0	
KIS	Kishinev	1.61	45	*i* Pn	Pn	23 53 36.2	+3.3
KIS	Kishinev	1.61	45	PM		23 53 36.5	
	150nm,0.1s						
KIS				*e*Sq		23 53 54.8	
KIS				⇓*i*S	Sn	23 53 56.1	+3.7
	3μm,0.4s						
KIS	Kishinev	1.61	45	⇑P	Pn	23 53 34.0	+1.1
KIS				⇑S	Sn	23 53 54.8	+2.4
KIS	Kishinev	1.61	45	⇑P	Pn	23 53 34.0	+1.1
KIS				⇑S	Sn	23 53 54.8	+2.4
KIS	Kishinev	1.61	45		Pn	23 53 34.0	+1.1
KIS					Sn	23 53 54.8	+2.4
KIS	Kishinev	1.61	45	*e*P	Pn	23 53 33.9	+1.1
KIS				Pm		23 53 36.5	
KIS				*e*S	Sn	23 53 54.8	+2.4
KIS				Sm		23 53 57.5	
PRAR	RASCA	1.61	337	⇓P	Pn	23 53 33.7	+0.6
PRAR	RASCA	1.61	337	⇓P	Pn	23 53 33.7	+0.6
PRAR	RASCA	1.61	337		Pn	23 53 33.7	+0.6
JURR	Jurilovca	1.65	132	⇓P	Pn	23 53 35.4	+1.9
JURR	Jurilovca	1.65	132	⇓P	Pn	23 53 35.4	+1.9
RASA	Rasa	1.66	180	⇑P	Pn	23 53 34.1	+0.4
RASA	Rasa	1.66	180	⇑P	Pn	23 53 34.1	+0.4
RASA	Rasa	1.66	180		Pn	23 53 34.1	+0.4
CVDA	Cernavoda	1.67	158	⇓P	Pn	23 53 34.1	+0.4
CVDA				⇑S	Sn	23 53 56.1	+2.2
CVDA	Cernavoda	1.67	158	⇓P	Pn	23 53 34.1	+0.4
CVDA				⇑S	Sn	23 53 56.1	+2.2
CVDA	Cernavoda	1.67	158		Pn	23 53 34.1	+0.4
CVDA					Sn	23 53 56.0	+2.2
TIRR	Tirgusor	1.68	147	⇑P	Pn	23 53 34.5	+0.7
TIRR				⇓S	Sn	23 53 54.5	+0.5
TIRR	Tirgusor	1.68	147	⇑P	Pn	23 53 34.5	+0.7
TIRR				⇓S	Sn	23 53 54.5	+0.5
TIRR	Tirgusor	1.68	147	Pn	Pn	23 53 34.1	+0.2
TIRR	Tirgusor	1.68	147		Pn	23 53 34.6	+0.7
TIRR					Sn	23 53 54.5	+0.5
BUC1	Bucharest	1.73	208	⇑P	Pn	23 53 35.5	+1.0
BUC1				⇑S	Sn	23 53 57.2	+2.0
BUC1	Bucharest	1.73	208	⇑P	Pn	23 53 35.5	+1.0
BUC1				⇑S	Sn	23 53 57.2	+2.0
BUC1	Bucharest	1.73	208		Pn	23 53 35.5	+1.0
BUC1					Sn	23 53 57.2	+2.0
ICOR	Ion Corvin	1.82	165	⇑P	Pn	23 53 36.3	+0.4
ICOR	Ion Corvin	1.82	165	⇑P	Pn	23 53 36.3	+0.4
ICOR	Ion Corvin	1.82	165		Pn	23 53 36.2	+0.4
ARR	Arges	1.84	255	⇑P	Pn	23 53 37.3	+1.2
ARR	Arges	1.84	255	⇑P	Pn	23 53 37.3	+1.2
ARR	Arges	1.84	255		Pn	23 53 37.3	+1.2
SGRR	Singureni	1.85	207	⇓P	Pn	23 53 36.9	+0.7
SGRR	Singureni	1.85	207	⇓P	Pn	23 53 36.9	+0.7
SGRR	Singureni	1.85	207		Pn	23 53 37.0	+0.7
MFTR	Murfatlar	1.92	152	⇓P	Pn	23 53 37.7	+0.5
MFTR	Murfatlar	1.92	152	⇓P	Pn	23 53 37.7	+0.5
MFTR	Murfatlar	1.92	152		Pn	23 53 37.7	+0.5
MDB	Medias	1.95	279	⇓P	Pn	23 53 38.6	+1.0
MDB	Medias	1.95	279	⇓P	Pn	23 53 38.6	+1.0
MDB	Medias	1.95	279		Pn	23 53 38.6	+1.0
TSCT	Constanta Port	2.02	148	⇓P	Pn	23 53 40.1	+1.5
TSCT				⇑S	Sn	23 54 04.7	+2.1
TSCT	Constanta Port	2.02	148	⇓P	Pn	23 53 40.1	+1.5
TSCT				⇑S	Sn	23 54 04.7	+2.1
HUMR	Humele	2.04	229	⇑P	Pn	23 53 39.5	+0.6
HUMR	Humele	2.04	229	⇑P	Pn	23 53 39.5	+0.6
HUMR	Humele	2.04	229		Pn	23 53 39.5	+0.6
EFOR	EFORIE	2.08	149	⇑P	Pn	23 53 40.3	+0.9
EFOR	EFORIE	2.08	149	⇑P	Pn	23 53 40.3	+0.9
EFOR	EFORIE	2.08	149		Pn	23 53 40.6	+1.2
BURAR	Bucovina Array	2.19	323	⇓P	Pn	23 53 43.1	+2.1
BURAR	Bucovina Array	2.19	323	⇓P	Pn	23 53 43.1	+2.1
BURAR	Bucovina Array	2.19	323		Pn	23 53 43.2	+2.1
BURAR	Bucovina Array	2.19	323	Pn	Pn	23 53 41.4	+0.4
BUR08	Bucovina Ar. S	2.22	323	Pn	Pn	23 53 41.8	+0.4
COPA	Copaceanca	2.22	219	⇓P	Pn	23 53 41.5	+0.2
COPA	Copaceanca	2.22	219	⇓P	Pn	23 53 41.5	+0.2
COPA	Copaceanca	2.22	219		Pn	23 53 41.5	+0.2
ARCR	ARCALIA	2.28	303	⇓P	Pn	23 53 42.7	+0.6
ARCR				⇓S	Sn	23 54 09.5	+0.5
ARCR	ARCALIA	2.28	303	⇓P	Pn	23 53 42.7	+0.6
ARCR				⇓S	Sn	23 54 09.5	+0.5
ARCR	ARCALIA	2.28	303		Pn	23 53 43.1	+1.0
ARCR					Sn	23 54 09.5	+0.5
MANR	Mangalia	2.30	153	⇑P	Pn	23 53 43.0	+0.6
MANR	Mangalia	2.30	153	⇑P	Pn	23 53 43.0	+0.6
MANR	Mangalia	2.30	153		Pn	23 53 43.4	+1.0
PSN	Preselentsi	2.31	161	*i* P	Pn	23 53 43.2	+0.6
TSMN	Mangalia Port-	2.32	153	⇑P	Pn	23 53 44.0	+1.4
TSMN				⇓S	Sn	23 54 11.7	+1.8
TSMN	Mangalia Port-	2.32	153	⇑P	Pn	23 53 44.0	+1.4
TSMN				⇓S	Sn	23 54 11.7	+1.8
SORM	Soroca	2.40	20	⇓P	Pn	23 53 44.0	+0.2
SORM	Soroca	2.40	20	⇓P	Pn	23 53 44.0	+0.2
SORM	Soroca	2.40	20		Pn	23 53 44.0	+0.2
SORM	Soroca	2.40	20	P	Pn	23 53 44.0	+0.2
LOT	Lotru	2.41	261	⇑P	Pn	23 53 44.7	+0.7
LOT	Lotru	2.41	261	⇑P	Pn	23 53 44.7	+0.7
LOT	Lotru	2.41	261	*e*P	Pn	23 53 44.6	+0.5
LOT	Lotru	2.41	261		Pn	23 53 44.7	+0.7
ZIMR		2.56	210	⇑P	Pn	23 53 46.0	0.0
ZIMR		2.56	210	⇑P	Pn	23 53 46.0	0.0
ZIMR		2.56	210		Pn	23 53 46.0	0.0
CHRU	Chernivtsi	2.56	341	*e*P	Pn	23 53 43.0	-3.0
CHRU				Pm		23 53 58.5	
CHRU				*i* S	Sn	23 54 12.0	-4.0
CHRU				Sm		23 54 35.0	
CJR	Cluj-Napoca	2.60	290	⇓P	Pn	23 53 47.3	+0.7
CJR				⇑S	Sn	23 54 18.4	+1.3
CJR	Cluj-Napoca	2.60	290	⇓P	Pn	23 53 47.3	+0.7
CJR				⇑S	Sn	23 54 18.4	+1.3
CJR	Cluj-Napoca	2.60	290		Pn	23 53 47.3	+0.7
CJR					Sn	23 54 18.4	+1.3
PRD	Provadia	2.68	176	*i* P	Pn	23 53 48.6	+0.9
VLAD	Vladila	2.71	227	⇓P	Pn	23 53 47.7	-0.4
VLAD				⇓S	Sn	23 54 19.9	+0.3
VLAD	Vladila	2.71	227	⇓P	Pn	23 53 47.7	-0.4
VLAD				⇓S	Sn	23 54 19.9	+0.3
VLAD	Vladila	2.71	227		Pn	23 53 48.2	+0.2
VLAD					Sn	23 54 19.9	+0.3
NDNU	Novodnistrovsk	2.72	3	*i* P	Pn	23 53 48.1	-0.1
NDNU				Pm		23 54 13.3	
NDNU				*e*S	Sn	23 54 18.4	-1.5
NDNU				Sm		23 54 35.9	
KMPD	K-Podol'skiy	2.73	350	*e*P	Pn	23 53 47.9	-0.4
KMPD				*e*S	Sn	23 54 18.1	-1.9
SZH	Strazhica	2.75	199	*i* P	Pn	23 53 48.6	-0.1
ROIA	ROIAK	2.79	177	*i* P	Pn	23 53 50.2	+1.0
PVL	Pavlikeni	2.96	207	*i* P	Pn	23 53 54.0	+2.5
RAKU	Rahkiv	2.97	317	*e*P	Pn	23 53 52.2	+0.6
DEV	Deva	2.97	272	⇓P	Pn	23 53 53.0	+1.4
DEV	Deva	2.97	272	⇓P	Pn	23 53 53.0	+1.4
DEV	Deva	2.97	272		Pn	23 53 53.0	+1.4
SRE	Strehaia	3.04	248	⇓P	Pn	23 53 53.1	+0.5
SRE	Strehaia	3.04	248	⇓P	Pn	23 53 53.1	+0.5
SRE	Strehaia	3.04	248		Pn	23 53 53.1	+0.5
BMR	Baia Mare	3.09	307	⇑P	Pn	23 53 54.1	+0.9
BMR	Baia Mare	3.09	307	⇑P	Pn	23 53 54.1	+0.9
BMR	Baia Mare	3.09	307		Pn	23 53 54.1	+0.9
GZR	Gura Zlata	3.11	263	⇓P	Pn	23 53 54.7	+1.0
GZR	Gura Zlata	3.11	263	⇓P	Pn	23 53 54.7	+1.0
GZR	Gura Zlata	3.11	263		Pn	23 53 54.6	+1.0
DRGR		3.21	288	⇑P	Pn	23 53 55.6	+0.6
DRGR		3.21	288	⇑P	Pn	23 53 55.6	+0.6
DRGR		3.21	288		Pn	23 53 55.6	+0.6
BAIL	Bailesti	3.28	237	⇑P	Pn	23 53 55.7	-0.2
BAIL	Bailesti	3.28	237	⇑P	Pn	23 53 55.7	-0.2
BAIL	Bailesti	3.28	237		Pn	23 53 55.7	-0.2
STNU	Starunia	3.36	328	*e*P	Pn	23 53 57.9	+0.9
HORU	Horodok	3.37	352	⇓*i*P	Pn	23 53 56.8	-0.4
HORU				Pm		23 54 15.0	
HORU				*e*S	Sn	23 54 34.3	-1.7
HORU				Sm		23 55 00.7	
PUNG	Punghina	3.39	243	⇓P	Pn	23 53 57.1	-0.3
PUNG	Punghina	3.39	243	⇓P	Pn	23 53 57.1	-0.3
JMB	Yambol	3.44	187	*i* P	Pn	23 53 57.9	-0.1
HERR	Herculane	3.48	255	⇑P	Pn	23 53 59.6	+0.9
HERR	Herculane	3.48	255	⇑P	Pn	23 53 59.6	+0.9
HERR	Herculane	3.48	255		Pn	23 53 59.6	+0.9
BRIU	Brid	3.74	313	*e*P	Pn	23 54 02.8	+0.5
SIRR	Siria	3.84	278	⇓P	Pn	23 54 04.4	+0.8
SIRR	Siria	3.84	278	⇓P	Pn	23 54 04.4	+0.8
SIRR	Siria	3.84	278		Pn	23 54 04.4	+0.8
BERU	Beregovo	3.88	309	*e*P	Pn	23 54 03.4	-0.7

BZS	Buzias	3.88	268	⇑P	Pn	23 54 04.5	+0.3
BZS	Buzias	3.88	268	⇑P	Pn	23 54 04.5	+0.3
BZS	Buzias	3.88	268		Pn	23 54 04.5	+0.3
LTVH	Ltavrtes, Hu	3.92	295	ePN	Pn	23 54 06.2	+1.5
LTVH				eSN	Sn	23 54 51.0	+1.6
MORS	Morshin	3.93	327	eP	Pn	23 54 06.5	+1.6
MORS				eS	Sn	23 54 51.1	+1.3
PGB	Panagyurishte	3.96	214	i P	Pn	23 54 06.1	+0.8
MDVR	Moldovita	3.99	256	⇑P	Pn	23 54 06.5	+0.8
MDVR	Moldovita	3.99	256	⇑P	Pn	23 54 06.5	+0.8
MDVR	Moldovita	3.99	256		Pn	23 54 06.5	+0.8
EDRB	Edirne	4.04	184	P	Pn	23 54 06.6	+0.2
EDRB	Edirne	4.04	184	eP	Pn	23 54 06.5	+0.2
PLD	Plovdiv	4.17	206	eP	Pn	23 54 07.6	-0.5
PHSR	Pinarhisar	4.25	176	eP	Pn	23 54 09.8	+0.5
VTS	Vitosha	4.31	222	⇑P	Pn	23 54 10.2	+0.1
VTS	Vitosha	4.31	222	⇑P	Pn	23 54 10.2	+0.1
VTS	Vitosha	4.31	222		Pn	23 54 10.4	+0.3
VTS	Vitosha	4.31	222	i P	Pn	23 54 10.3	+0.1
CTYL	Yalikoy Yolu	4.48	169	eP	Pn	23 54 12.2	-0.2
AMBH	Ambrzfalva	4.49	278	ePN	Pn	23 54 14.1	+1.5
KOLS	Kolonicke sedl	4.51	314	eP	Pn	23 54 13.8	+1.0
RZN	Rozhen	4.54	204	i P	Pn	23 54 14.0	+0.5
SLVT	Silivri	4.71	170	eP	Pn	23 54 16.1	+0.6
CTKS	Kestanelik-??a	4.74	168	eP	Pn	23 54 15.3	-0.7
SEV	Sevastopol'	4.79	104	⇑iP	Pn	23 54 17.6	+0.9
SEV				Pm		23 54 21.3	
SEV				i S	Sn	23 55 10.0	-0.9
SEV				Sm		23 55 11.4	
KWP	Kalwaria Pacla	4.80	323		Pn	23 54 17.9	+1.1
KLYT	Kilyos	4.82	163	eP	Pn	23 54 17.2	+0.1
BGKT	Bogazkoy	4.84	165	eP	Pn	23 54 16.8	-0.5
RDO	Rodhopi	4.87	195	P	Pn	23 54 17.5	-0.3
RDO	Rodhopi	4.87	195	eP	Pn	23 54 17.8	0.0
CRVS	Cervenica-Dubn	4.91	310	eP	Pn	23 54 19.4	+1.1
CRVS				eS	Sn	23 55 15.5	+1.7
MMB	Musomiste	4.95	211	i P	Pn	23 54 19.7	+0.8
KKB	Krupnik	4.97	218	i P	Pn	23 54 19.9	+0.7
SIM	Simferopol'	4.99	98	⇑iP	Pn	23 54 19.1	-0.3
SIM				eS	Sn	23 55 14.0	-1.8
ISK	Istanbul-Kandi	5.01	163	P	Pn	23 54 19.7	+0.1
ISK	Istanbul-Kandi	5.01	163	eP	Pn	23 54 19.7	+0.1
KAVV	Kandilli-Istan	5.01	163	eP	Pn	23 54 19.7	0.0
AKASG	Malin Array Be	5.02	15	Pn	Pn	23 54 18.4	-1.4
	6.7nm,0.3s,baz=56,slow=13,SNR=22						
AKASG				Lg	Lg	23 55 38.2	
	90nm,0.3s,baz=198,slow=30,SNR=5.8						
AKASG	Malin Array Be	5.02	15		Pn	23 54 19.4	-0.3
AKBB	Malin Array Si	5.02	15	Pn	Pn	23 54 19.9	+0.1
ALN	Alexandroupoli	5.04	190	P	Pn	23 54 19.9	-0.2
ALN	Alexandroupoli	5.04	190	eP	Pn	23 54 20.3	+0.1
ALN	Alexandroupoli	5.04	190	Pn	Pn	23 54 20.2	+0.1
SILT	Sile	5.06	158	eP	Pn	23 54 20.3	0.0
NVR	Nevrokopi	5.12	209	P	Pn	23 54 21.3	+0.1
YAL	Yalta	5.14	103	⇑iP	Pn	23 54 21.3	-0.2
YAL				eS	Sn	23 55 17.3	-2.2
ENEZ	Enez	5.19	188	eP	Pn	23 54 22.2	0.0
ERIK	Erikli-Kesan	5.23	185	eP	Pn	23 54 22.3	-0.3
KECS	Kecovo	5.24	302	eP	Pn	23 54 23.2	+0.4
KECS				eS	Sn	23 55 20.2	-1.7
KAVA	Kavala	5.24	202	P	Pn	23 54 23.2	+0.3
ALU	Alushta	5.25	101	⇑eP	Pn	23 54 23.2	+0.2
ALU				Pm		23 54 24.4	
ALU				eS	Sn	23 55 20.8	-1.5
ALU				Sm		23 55 27.2	
HRT	Hereke	5.38	159	eP	Pn	23 54 25.0	+0.2
PSZ	Piszkesteto	5.38	295	⇓ePN	Pn	23 54 25.4	+0.6
PSZ				eSN	Sn	23 55 24.6	-0.8
PSZ	Piszkesteto	5.38	295	Pn	Pn	23 54 25.1	+0.4
DIVS	Divibare	5.38	253	Pn	Pn	23 54 24.6	-0.3
SRS	Serrai	5.42	210	P	Pn	23 54 25.4	+0.1
KRBG	Karabiga-Canak	5.48	179	eP	Pn	23 54 25.9	-0.3
GELI	Tayfur-Gelibol	5.50	185	eP	Pn	23 54 26.3	-0.1
LPK	Lapseki	5.51	183	eP	Pn	23 54 26.6	0.0
STIP	Stip	5.51	222	i Pn	Pn	23 54 24.2	-2.4
THAS	Thassos island	5.56	199	P	Pn	23 54 27.1	-0.1
SUDU	Sudak	5.62	97	⇑iP	Pn	23 54 28.3	+0.3
SUDU				Pm		23 54 29.0	
SUDU				i S	Sn	23 55 29.0	-2.2
SUDU				Sm		23 55 31.5	
SAUV	Serdivan-Sakar	5.63	155	eP	Pn	23 54 28.2	0.0
KNT	Kendrikon	5.64	215	P	Pn	23 54 28.7	+0.4
KNT	Kendrikon	5.64	215	eP	Pn	23 54 28.6	+0.3
VAY	Valandovo	5.64	218	i Pn	Pn	23 54 28.9	+0.6
KCTX	Karacabey (Bur	5.68	171	eP	Pn	23 54 28.6	-0.3
GADA	Gvkgeada	5.76	190	eP	Pn	23 54 29.9	-0.1
SOH	Sokhos	5.76	210	P	Pn	23 54 30.2	+0.1
FEO	Feodosiya	5.86	95	eP	Pn	23 54 32.6	+1.3
FEO				Pm		23 54 37.0	
FEO				eS	Sn	23 55 37.1	-0.1
FEO				Sm		23 55 41.9	
MORH	Mrgy, Hungar	5.93	276	⇓ePN	Pn	23 54 32.7	+0.4
MORH				eSN	Sn	23 55 36.6	-2.4
GULT	Gulveren	5.97	155	eP	Pn	23 54 33.6	+0.6
OUR	Ouranopolis	6.01	204	P	Pn	23 54 33.0	-0.3
OUR	Ouranopolis	6.01	204	eP	Pn	23 54 33.1	-0.3
GRG	Griva	6.01	217	P	Pn	23 54 33.4	-0.1
GRG	Griva	6.01	217	eP	Pn	23 54 33.6	+0.1
HORT	Hortiatis	6.05	211	P	Pn	23 54 34.0	0.0
HORT	Hortiatis	6.05	211	eP	Pn	23 54 34.1	0.0
EZN	Ezine	6.08	186	eP	Pn	23 54 33.6	-0.8
BOZC	Bozcaada	6.09	188	eP	Pn	23 54 33.9	-0.6
PLG	Polygyros	6.13	208	P	Pn	23 54 35.4	+0.3
LANS	Liptovska Anna	6.15	305	eP	Pn	23 54 36.5	+1.2
MDUB	Mudurnu	6.16	150	Pn	Pn	23 54 36.2	+0.7
VYHS	Vyhne	6.24	298	eP	Pn	23 54 37.6	+1.0
VYHS				eS	Sn	23 55 48.5	+1.8
BALB	Balikesir	6.26	175	eP	Pn	23 54 37.2	+0.4
SRO	Srobarova	6.36	291	eP	Pn	23 54 39.5	+1.3
SRO				eS	Sn	23 55 49.4	-0.2
SRO				e		00 07 53.5	
PAIG	Paliouri	6.47	204	P	Pn	23 54 39.1	-0.6
KOLL	Kolacno	6.54	298	eP	Pn	23 54 41.4	+0.7
KOLL				eS	Sn	23 55 54.1	+0.1
OJC	Ojcow	6.57	314	Pn	Pn	23 54 42.6	+1.5
FNA	Florina	6.61	222	Pn	Pn	23 54 41.8	+0.1
PDG	Podgorica	6.64	242	Pn	Pn	23 54 41.9	-0.2
LIT	Litokhoron	6.71	212	Pn	Pn	23 54 43.3	+0.2
SMOL	Smolenice	7.13	295	eP	Pn	23 54 50.5	+1.7
XOR	Xorichti	7.13	206	P	Pn	23 54 48.8	-0.1
NEO	Neokhori	7.18	205	P	Pn	23 54 49.2	-0.3
MODS	Modra-Piesok	7.18	294	ePN	Pn	23 54 51.0	+1.5
MODS				e		23 54 57.9	
SOP	Sopron	7.50	288	⇑ePN	Pn	23 54 54.2	+0.5
BR131	Keskin Array S	7.78	140	Pn	Pn	23 54 57.5	-0.4
BRTR	Keskin Array B	7.78	140	Pn	Pn	23 54 57.6	-0.2
	0.3nm,0.3s,baz=2.9,slow=26,SNR=10.0						
ISP	Isparta	8.43	161	Pn	Pn	23 55 06.4	-0.4
TOKA	Tokat	8.79	126	Pn	Pn	23 55 11.9	+0.3
NACGM	Naroch	9.04	359	i P	Pn	23 55 21.2	+6.3
NACGM				i P	Pn	23 55 21.2	+6.3
NACGM				i P	Pn	23 55 21.2	+6.3
NACGM				i S	Sn	23 57 02.9	+7.5
NACGM				i LQ	LQ	23 57 42.4	
NACGM				i LR	LR	23 58 42.5	
SGRT	San Giovanni R	9.22	247	Pn	Pn	23 55 17.1	-0.5
ELL	Elmali	9.35	166	Pn	Pn	23 55 20.6	+1.1
IDID	Didziasalis	9.45	359	eP	Pn	23 55 18.9	-1.7
IIGN	Ignalina	9.50	357	eP	Pn	23 55 19.1	-2.2
IIGN				IAmb	IAmb	23 55 33.2	
	comp=Z,4.4nm,0.5s						
ITM	Ithomi	9.53	206	Pn	Pn	23 55 24.6	+2.9
GERES	GERESS Array B	9.60	293	Pn	Pn	23 55 22.6	-0.1
	comp=Z,0.1nm,0.3s,baz=106,slow=14,SNR=4.4						
ISAL	Salakas	9.73	357	eP	Pn	23 55 22.2	-2.1
ISAL				IAmb	IAmb	23 55 28.0	
	comp=Z,5.7nm,1.0s						
KHC	Kasperske Hory	9.74	294	ePN	Pn	23 55 22.6	-2.0
PABE	Paberze	9.85	349	eP	Pn	23 55 23.7	-2.2
PBUR	Paburge	10.68	344	eP	Pn	23 55 31.9	-5.4
OBN	Obninsk	11.01	29	Pn	Pn	23 55 39.0	-2.8
	comp=Z,0.9nm,0.3s,baz=46,slow=10,SNR=6.3						
OBN				Sn	Sn	23 57 34.0	-10
	comp=Z,1.3nm,0.3s,baz=40,slow=23,SNR=5.8						
OBN				Lg	Lg	23 58 43.2	
	comp=Z,0.6nm,0.3s,baz=217,slow=23,SNR=1.6						
KIV	Kislovodsk	11.19	94	Pn	Pn	23 55 44.4	0.0
KBZ	Khabaz	11.39	95	Pn	Pn	23 55 46.6	-0.6
	comp=Z,0.1nm,0.3s,baz=82,slow=7.2,SNR=2.7						
KBZ				Sn	Sn	23 57 48.2	-4.9
	comp=Z,0.3nm,0.3s,baz=135,slow=23,SNR=1.4						
KOPT	Kop Dagi	11.39	116	Pn	Pn	23 55 45.4	-2.1
BSD	Bornholm Skovb	12.07	324	eP	Pn	23 55 53.5	-2.8
SLIT	Slitere, Latvi	12.14	347	eP	Pn	23 55 54.2	-3.1
VSU	Vasula	12.61	359	eP	Pn	23 56 00.1	-3.5
RAFF	Raffo Rosso	12.89	232	Pn	Pn	23 56 09.6	+1.9
MTSE	Matsula	13.02	352	eP	Pn	23 56 05.7	-3.5
BFO	Black Forest	13.05	288	Pn	Pn	23 56 09.8	-0.1
SENIN	Lac Senin/Sane	13.78	279		P	23 56 27.9	-0.1
AAL	Aland	14.94	346	eP	Pn	23 56 30.6	-4.7
FIA1	FINESS Array S	15.61	358	Pn	Pn	23 56 39.2	-4.9
FIA1				IAmb	IAmb	23 56 42.9	
	comp=Z,5.3nm,0.9s						
FINES	FINESS Array B	15.61	358	Pn	Pn	23 56 37.6	-6.5
	comp=Z,0.3nm,0.3s,baz=172,slow=14,SNR=12						
FINES				Sn	Sn	23 59 18.3	-17
	comp=Z,0.4nm,0.3s,baz=164,slow=22,SNR=1.2						
HFS	Hagfors	16.36	336	Pn	Pn	23 56 48.5	-5.3
	comp=Z,0.2nm,0.3s,baz=143,slow=13,SNR=8.7						
KLMR	Klimovskoe	16.67	21	ePn	Pn	23 56 51.3	-6.3
KLMR				AMP		23 57 04.5	
	comp=Z,12nm,0.9s						
KLMR				eSn	Sn	23 59 50.9	-11
KLMR				eSn	Sn	23 59 50.9	-11
KLMR				⇓Lg	Lg	00 01 39.6	
KLMR				⇓Lg	Lg	00 01 39.6	
KLMR				⇓Lg	Lg	00 01 39.6	
KEST	Kesra	16.83	239		Pn	23 57 02.9	+3.0
NC602	NORSAR Array S	17.49	334	Pn	Pn	23 57 06.8	-1.1
NC602				IAmb	IAmb	23 57 22.2	
	comp=Z,8.6nm,1.1s						
NC405	NORSAR Array S	17.73	335		Pn	23 57 10.2	-0.7
NAO01	NORSAR Array S	17.78	333		Pn	23 57 10.8	-0.6
NB201	NORSAR Array S	17.81	334	Pn	Pn	23 57 08.1	-3.7
NB2	NORSAR Subarra	17.83	334	P	Pn	23 57 09.1	-3.0
	comp=Z,0.6nm,0.3s,baz=139,slow=14						
NOA	NORSAR Array B	17.83	334	P	Pn	23 57 10.8	-1.3
	comp=Z,0.1nm,0.3s,baz=142,slow=11,SNR=9.4						
NC303	NORSAR Array S	17.93	335	Pn	Pn	23 57 09.4	-3.9
NBO00	NORSAR Array S	17.95	334		Pn	23 57 13.3	-0.3
NC204	NORSAR Array S	18.15	334	P	Pn	23 57 14.2	-1.8
NC204				IAmb	IAmb	23 57 20.5	
	comp=Z,16nm,1.1s						
KIRV	Kirov	18.53	39	P	P	23 57 18.0	-2.2
	comp=Z,1.7nm,0.3s,baz=309,slow=3.3,SNR=8.9						
AKTO	Aktyubinsk	21.00	66	P	P	23 57 46.6	-0.6
	comp=Z,1.6nm,0.6s,baz=283,slow=12,SNR=5.5						
EKA	Eskdalemuir Ar	21.28	307	P	P	23 57 48.3	-1.9
	comp=Z,1.6nm,0.9s,baz=133,slow=9.3,SNR=2.0						
ARU	Arti	22.15	50	P	P	23 57 58.3	-1.2
	comp=Z,2.0nm,0.4s,baz=251,slow=8.8,SNR=14						
ARU	Arti	22.15	50	P	P	23 57 58.6	-0.9
ABKAR	Akbulak array	22.28	69	P	P	23 58 00.3	-0.7
ABKAR				IAmb	IAmb	23 58 19.0	
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	22.28	69	P	P	23 58 00.4	-0.6
LVZ	Lovozero	22.42	7	P	P	23 58 03.7	+1.3
CART	Cartagena	22.50	258	P	P	23 58 02.2	-1.1
ESBB	Sonseca Array	23.57	266	P	P	23 58 12.2	-2.1
ESDC	Sonseca Array	23.57	266	P	P	23 58 11.9	-2.4
	comp=Z,0.5nm,0.5s,baz=66,slow=9.2,SNR=8.5						
ARCES	ARCESS Array B	23.74	359	P	P	23 58 14.0	-1.6
	comp=Z,2.2nm,0.6s,baz=79,slow=2.6,SNR=30						
ARCES	ARCESS Array B	23.74	359	P	P	23 58 14.4	-1.2
PAB	San Pablo	23.89	266	P	P	23 58 14.8	-2.6
PAB				IAmb	IAmb	23 58 31.2	
	comp=Z,5.4nm,1.1s						
RAYN	Ar Rayn	26.80	140	P	P	23 58 43.4	-0.5
BVAR	Borovoye Array	28.64	60	P	P	23 59 01.1	+1.1
	comp=Z,0.4nm,0.7s,baz=228,slow=54,SNR=3.5						
ZALV	Zalesovo Beam	37.06	56	P	P	00 00 13.8	+0.4
	comp=Z,0.6nm,0.3s,baz=352,slow=35,SNR=1.7						
MKAR	Makanchi Array	37.42	68	P	P	00 00 17.1	+0.5
	comp=Z,0.2nm,0.5s,baz=288,slow=6.0,SNR=4.2						
TOA0	Torodi Ar. Sit	39.09	222	P	P	00 00 29.8	-1.0
TOA0				IAmb	IAmb	00 00 31.4	
	comp=Z,4.9nm,0.8s						
TORD	Torodi Ar. Bea	39.09	222	P	P	00 00 29.8	-1.1
	comp=Z,5.6nm,0.7s,baz=26,slow=9.1,SNR=21						
TORD	Torodi Ar. Bea	39.09	222	P	P	00 00 29.9	-0.9
WMQ	Urumqi	42.07	70	eP	P	00 00 56.3	+1.0
DBIC	Dimbokro	47.86	225	P	P	00 01 39.7	-1.8
	comp=Z,4.3nm,0.5s,baz=7.4,slow=6.6,SNR=18						
DBIC	Dimbokro	47.86	225	IAmb	IAmb	00 01 40.7	
	comp=Z,3.7nm,0.6s						
SONM	Songino Array	51.93	57	P	P	00 02 12.1	-0.2
	comp=Z,0.1nm,0.3s,baz=350,slow=26,SNR=1.5						
HHC	Hu-ho-hao-te	58.81	62	eP	P	00 03 03.4	+1.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
YKA	Yellowknife Ar	67.73	342	P	P	00 04 00.8	+0.4
	comp=Z,1.1nm,0.6s,baz=35,slow=6.3,SNR=27						
YKA				pP	pP	00 04 12.0	+0.8
	comp=Z,0.3nm,0.5s,baz=32,slow=6.6,SNR=5.3						
JTMT	Jette	80.83	335	P	P	00 05 16.0	-1.1
JTMT				IAmb	IAmb	00 05 21.0	
	comp=Z,2.8nm,0.9s						

DDA 19 23:53:35.7, 38°.92N×27°.80E, h7^{km}±1^{km}, ML1.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.05	163	i P	Pg	23 53 37.8	+0.6
AKHS				IAML		23 53 39.0	
	comp=E,117nm,0.3s						
AKHS				i S	Sg	23 53 39.0	+0.6
STEP	BALIKESIR_Sava	0.46	352	i P	Pg	23 53 45.0	+0.5
STEP				i S	Sb	23 53 51.8	-1.3
STEP				IAML		23 53 52.0	
	comp=E,21nm,0.6s						
ZEDA	zmir-Bergama	0.56	275	i P	Pg	23 53 47.1	+0.6
ZEDA				i S	Sg	23 53 54.8	+0.9
DEMI	Demirci	0.73	80	i P	Pg	23 53 49.6	-0.1
DEMI				i S	Sg	23 53 59.4	+0.3
DEMI				IAML		23 54 04.0	
	comp=N,12nm,0.2s						
DEMI				IAML		23 54 04.0	
	comp=E,7.3nm,0.2s						
MANT	Manisa	0.74	126	i P	Pg	23 53 50.2	+0.3
MANT				i S	Sb	23 54 00.9	-0.5
MANT				IAML		23 54 03.0	
	comp=E,7.5nm,0.4s						
MANT				IAML		23 54 03.0	
	comp=N,9.7nm,0.2s						
BUHA	Balikesir, Bur	0.80	316	i P	Pn	23 53 52.8	-0.7
BUHA				i S	Sb	23 54 02.6	-0.4
BUHA				IAML		23 54 04.0	
	comp=E,6.0nm,0.5s						
BUHA				IAML		23 54 05.0	
	comp=N,10nm,0.9s						
DURS	Dursunbey	0.86	38	i P	Pb	23 53 53.3	+0.3
DURS				i S	Sb	23 54 04.4	-0.3
DURS				IAML		23 54 07.0	
	comp=E,5.0nm,0.6s						

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*IDC **19** 23:59:53.2±1.6, 3°.44S×142°.76E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/24, Error ellipse: s-maj=33.9km s-min=24.6km az=93.0*

ISC 19 23:59:54.5±1.4**, 3°.5S**±0°.1×**142°.8E**±0°.1**, h10^{km}, n10, σ0^{s}.96**/7**, mb3.6**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.28	294	Pn	Pn	00 00 31.7	-0.7
	3.2nm,0.3s,baz=226,slow=5.1,SNR=5.0						
JAY				Sn	Sn	00 01 01.1	+0.5
	11nm,0.3s,baz=209,slow=21,SNR=7.0						
PMG	Port Moresby	7.33	144	LR	LR	00 05 17.6	
	comp=Z,109nm,21.9s,baz=49,slow=44						
WRA	Warramunga Arr	18.33	206	P	Pn	00 04 08.1	-1.1
	0.5nm,0.3s,baz=28,slow=12,SNR=18						
WRA				LR	LR	00 11 42.7	
	comp=Z,50nm,20.2s,baz=195,slow=39						
ASAR	Alice Springs	21.84	202	P	P	00 04 48.6	+1.2
	1.0nm,0.6s,baz=31,slow=10,SNR=9.4						
FITZ	Fitzroy Crossi	22.21	228	P	P	00 04 51.4	0.0
	1.4nm,0.7s,baz=38,slow=9.4,SNR=5.6						
FITZ				LR	LR	00 14 50.3	
	comp=Z,74nm,18.3s,baz=59,slow=40						
H11S3	WAKE ISLAND Hy	32.10	46	T	T	00 39 58.7	
	baz=229,slow=75,SNR=29						
H11S2	WAKE ISLAND Hy	32.11	46	T	T	00 39 55.2	
	baz=229,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	32.12	46	T	T	00 39 53.9	
	baz=229,slow=75,SNR=28						
MKAR	Makanchi Array	72.89	321	P	P	00 11 24.5	+0.5
	0.4nm,0.8s,baz=101,slow=6.3,SNR=4.5						
ILAR	Eielson Array	84.85	24	P	P	00 12 29.0	-0.3
	0.4nm,0.9s,baz=270,slow=3.6,SNR=2.7						

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*VIE **20** 00:07:04.8±0.4, 50°.28N×19°.01E, h0^{km}, mb1.9/2, ml2.6/4, Error ellipse: s-maj=6.7km s-min=1.7km az=170.0 4 km NNE of Katowice Suspected Mining induced.*

*IPEC **20** 00:07:05.7±0.1, 50°.12N×19°.10E, h0^{km}, ML2.2/3, Error ellipse: s-maj=1.3km s-min=0.7km az=174.0*

*PRU **20** 00:07:05.9±0.0, 50°.16N×18°.99E, h0^{km}*

ISC 20 00:07:05.4±0.8**, 50°.09N**±0°.03×**19°.08E**±0°.02**, h0^{km}, n39, σ0^{s}.91**/67**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.48	74	ePg	Pg	00 07 14.8	+0.2
OJC				i Sg	Sg	00 07 21.2	+0.4
OKC	Ostrava-Krasne	0.65	248	ePG	Pg	00 07 18.5	+0.7
OKC				eSG	Sg	00 07 27.4	+1.2
	comp=Z,45nm,0.3s						
LANS	Liptovska Anna	0.97	165	ePG	Pb	00 07 24.5	-0.6
LANS				eSG	Sb	00 07 38.0	-0.5
LANS				eLG	Lg	00 07 42.7	
NIE	Niedzica	1.04	130	ePg	Pg	00 07 25.3	+0.1
NIE				eSg	Sb	00 07 40.5	+0.2
MORC	Moravsky Berou	1.04	253	ePG	Pg	00 07 25.6	+0.3
MORC				eSG	Sb	00 07 39.7	-0.7
MORC	Moravsky Berou	1.04	253	ePg	Pg	00 07 25.6	+0.3
	baz=71						
MORC				eSg	Sb	00 07 39.7	-0.7
	26nm,0.3s,baz=71						
LOSC	Losov	1.20	248	ePg	Pb	00 07 28.7	-0.2
	baz=66						
LIPC	Lipinka	1.33	260	ePg	Pg	00 07 31.0	+0.1
	baz=78						
KRLC	Kraliky	1.48	270	eSG	Sg	00 07 52.4	-0.5
	comp=Z,24nm,0.3s						
JAVC	Velka Javorina	1.53	217	ePG	Pb	00 07 34.4	-0.3
JAVC	Velka Javorina	1.53	217	ePg	Pb	00 07 34.3	-0.4
	baz=36						
VYHS	Vyhne	1.60	186	ePN	Pn	00 07 34.5	-0.4
VYHS				eSN	Sg	00 07 56.5	-0.3
DPC	Dobruska-Polom	1.79	280	ePG	Pn	00 07 37.3	-0.3
DPC				eSG	Sn	00 08 01.2	+0.2
	comp=Z,36nm,0.6s						
VRAC	Vranov	1.79	245	ePN	Pb	00 07 38.8	-0.3
VRAC				eSG	Sb	00 08 02.1	+0.1
VRAC	Vranov	1.79	245	ePn	Pb	00 07 38.7	-0.3
	baz=63						
VRAC				eSg	Sb	00 08 02.1	+0.1
	19nm,0.5s,baz=63						
KECS	Kecovo	1.85	150	eSN	Sb	00 08 03.1	-0.6
KECS				eLG	Lg	00 08 11.2	
OSTC	Ostas	1.89	285	ePG	Pn	00 07 38.8	-0.2
OSTC				eSG	Sn	00 08 04.0	+0.5
	comp=Z,19nm,0.6s						
SMOL	Smolenice	1.91	215	ePN	Pn	00 07 38.8	-0.3
SMOL				eSN	Sn	00 08 03.5	-0.4
SMOL				eLG	Lg	00 08 10.8	
KSP	Ksiaz	1.93	294	ePb	Pn	00 07 39.7	+0.3
KSP				ePg	Pg	00 07 42.5	+0.1
KSP				eSg	Sg	00 08 08.1	+0.7
CRVS	Cervenica-Dubn	1.96	126	ePN	Pb	00 07 42.0	+0.2
CRVS				eSN	Sg	00 08 08.0	-0.1
CRVS				eLG	Lg	00 08 11.0	
CHVC	Chvalec	2.00	286	ePG	Pn	00 07 40.2	-0.2
CHVC				eSG	Sn	00 08 06.3	+0.1
	comp=Z,9.7nm,0.4s						
UPC	Upice	2.01	283	eSG	Sn	00 08 07.4	+1.0
	comp=Z,11nm,0.6s						
KRUC	Moravsky	2.02	241	ePN	Pb	00 07 41.9	-1.1
KRUC				eSG	Sg	00 08 09.4	-1.0
KRUC	Moravsky	2.02	241	ePn	Pb	00 07 41.9	-1.1
	baz=58						
KRUC				eSg	Sb	00 08 09.3	+0.5
	13nm,0.4s,baz=58						
MODS	Modra-Piesok	2.08	215	ePN	Pn	00 07 40.6	-0.9
MODS				eSN	Sn	00 08 08.6	+0.4
PSZ	Piszkesteto	2.24	166	ePN	Pn	00 07 44.3	+0.6
PSZ				ePG	Pg	00 07 48.6	+0.4
PSZ				eSN	Sn	00 08 12.5	+0.5
SRO	Srobarova	2.33	193	eSG	Sg	00 08 22.8	+2.6
SRO				eLG	Lg	00 08 31.2	
KOLS	Kolonicke sedl	2.38	118	ePN	Pb	00 07 48.8	-0.3
KOLS				eSN	Sb	00 08 17.3	-1.7
TREC	Trest	2.46	253	ePG	Pb	00 07 49.5	-1.0
TREC				eSG	Sg	00 08 23.4	-1.0
	comp=Z,12nm,0.6s						
PVCC	Panska Ves	2.92	280	eSG	Sb	00 08 36.9	+2.3
	comp=Z,15nm,0.3s						
PRU	Pruhonice	2.93	270	ePG	Pb	00 07 58.4	0.0
PRU				eSG	Sb	00 08 37.0	+2.3
	comp=Z,12nm,0.9s						
PRA	Prague	2.99	271	eSG	Sg	00 08 39.8	-1.6
	comp=Z,5.4nm,0.9s						
CONA	Conrad Observa	3.02	226	ePn	Pn	00 07 54.7	+0.1
	0.2nm,0.1s						
CONA				eSn	Sn	00 08 31.5	0.0
	0.9nm,0.2s						
BRG	Berggiesshubel	3.37	285	Pg	Pg	00 08 10.2	+0.2
BRG				Sg	Sg	00 08 52.0	-1.7
BRG				Amp		00 08 57.3	
	comp=Z,6.4nm,0.6s						
BRG	Berggiesshubel	3.37	285	Pg	Pg	00 08 10.2	+0.2
BRG				Sg	Sg	00 08 52.0	-1.7
BRG				Amp		00 08 57.3	
	comp=Z,6.4nm,0.6s						
KHC	Kasperske Hory	3.70	257	ePN	Pn	00 08 03.7	-0.1
KHC				eSG	Sg	00 09 03.2	-1.0
	comp=Z,5.6nm,0.4s						
MOA	Molln	3.88	237	eSn	Sn	00 08 54.5	+2.0
	comp=Z,2.4nm,0.3s						
CLL	Collm	4.05	290	eSg	Sg	00 09 16.0	+0.6
	comp=Z,5.0nm,0.7s						
NKC	Novy Kostel	4.26	275	eSG	Sg	00 09 20.5	-1.8
	comp=Z,5.5nm,0.6s						

TIR 20 00:12:18.4, 41°.64N×19°.98E, h1^{km}±1^{km}, Md2.4, Ml2.4, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.30	197	P	Pg	00 12 25.3	+1.0
	baz=198						
TIR				S	Sb	00 12 30.7	-1.5
	baz=198						
TIR				AMP			
	comp=N,0.1nm,0.3s,baz=198						
PHP	Peshkopia	0.34	82	P	Pb	00 12 26.5	-0.9
	baz=82						
PHP				S	Sb	00 12 32.0	-1.4
	baz=82						
PHP				AMP			
	comp=N,0.2nm,0.1s,baz=82						
PUK	Puka	0.41	350	P	Pb	00 12 27.5	-1.0
	baz=351						
PUK				S	Sb	00 12 34.2	-1.0
	baz=351						
PUK				AMP			
	comp=N,0.1nm,0.3s,baz=351						
BCI	Bajram Curri	0.73	5	P	Pb	00 12 33.4	-0.5
	baz=4.0						
BCI				S	Sb	00 12 45.1	+0.6
	baz=4.0						

ROM 20 00:13:44.1±0.1**, 43°.382N**±0°.002×**12°.721E**±0°.006**, h13^{km}, ML0.7**/1**, 1C, Error ellipse: s-maj=0.5km s-min=0.3km az=266.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOSV	Fossato di Vic	0.09	161	P	Pg	00 13 47.3	+0.3
FOSV				S	Sg	00 13 49.5	+0.4
ATFO	Monte Foce - G	0.11	262	P	Pg	00 13 47.6	+0.2
ATFO				S	Sg	00 13 50.1	+0.5
FRON	Frontone	0.14	1	⇑P	Pg	00 13 48.0	+0.4

FRON				S	Sb	00 13 50.9	-0.7
ATCC	AVT- Casa Cast	0.20	197	P	Pg	00 13 49.1	+0.4
ATCC				S	Sb	00 13 52.9	-0.6
ATCC				AML	AML		
	comp=N,23µm,1.6s						
ATCC				AML	AML		
	comp=E,34µm,1.6s						
PIEI	Pieia	0.20	319	P	Pg	00 13 49.0	+0.2
PIEI				S	Sb	00 13 52.8	-0.8
NARO	Abbazia di Nar	0.25	336	P	Pg	00 13 49.8	+0.3
NARO				S	Sb	00 13 54.2	-0.6

IDC 20 00:34:47.2±2.1**, 2°.43N×127°.22E, h0**km**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/42**, mbtmp3.4**/4**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/33**, Error ellipse: s-maj=114.4km s-min=26.0km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.46	184	P	P	00 39 26.4	-0.1
	2.3nm,1.0s,baz=16,slow=7.4,SNR=2.7						
WRA	Warramunga Arr	23.31	163	P	P	00 39 55.0	-1.9
	0.7nm,0.6s,baz=342,slow=10,SNR=8.5						
ASAR	Alice Springs	26.74	166	P	P	00 40 30.4	+1.6
	0.3nm,0.5s,baz=345,slow=13,SNR=4.6						
KSRS	Korea Array	34.86	1	LR	LR	00 57 29.0	
	comp=Z,16nm,20.3s,baz=48,slow=39						
MKAR	Makanchi Array	58.90	325	P	P	00 44 48.2	+0.2
	0.1nm,0.3s,baz=116,slow=7.7,SNR=4.0						

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*IDC **20** 00:50:07.1±1.3, 39°.46N×138°.21E, h229km±13km, mb3.3/14, mb1 3.4/18, mb1mx3.1/76, mbtmp3.9/18, Error ellipse: s-maj=19.6km s-min=16.8km az=73.0*

*JMA **20** 00:50:07.4±0.2, 39°.36N×138°.39E, h241km±2km, M3.7*

*NEIC **20** 00:50:07.5±1.0, 39°.38N±0°.07×138°.3E±0°.1, h232km±5km, mb4.2/30, Error ellipse: s-maj=12.1km s-min=9.3km az=123.0*

ISC 20 00:50:07.8±0.6**, 39°.31N**±0°.05×**138°.45E**±0°.06**, h250**km**, n105, $\sigma 1^{s}34$**/110**, mb3.9**/26**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAW	Awa shima	1.06	144	P	Pn	00 50 42.1	-1.1
JSD	Sado	1.28	187	P	Pn	00 50 43.5	-1.1
JSD				*e*S	S	00 51 11.3	-2.3
JSD	Sado	1.28	187	Pn	Pn	00 50 43.2	-1.4
JYK	Kaneyama	1.54	104	P	Pn	00 50 45.7	-0.7
JYK				*e*S	S	00 51 16.3	-0.4
JNS	Sasagawa	1.64	155	P	Pn	00 50 46.5	-0.8
JSZ	Suzu	2.05	205	P	Pn	00 50 50.2	-0.6
JMK	Ichinoseki	2.18	99	P	Pn	00 50 51.4	-0.6
JOM	Ohasama	2.21	85	P	Pn	00 50 51.6	-0.6
JFT	Otama	2.32	140	P	Pn	00 50 53.3	-0.1
JMM	Marumori	2.33	127	Pn	Pn	00 50 53.2	-0.3
JTM	Tenmabayashi	2.49	53	Pn	Pn	00 50 54.1	-0.8
MAJO	Matsushiro	2.77	184	Pn	Pn	00 50 57.7	-0.3
MAT	Matsushiro	2.77	184	P	Pn	00 50 57.9	-0.1
MAT				*e*S	S	00 51 37.6	0.0
MAT	Matsushiro	2.77	184	P	Pn	00 50 58.2	+0.2
MJAR	Matsushiro Arr	2.77	184	P	Pn	00 50 58.3	+0.4
	3.4nm,0.3s,baz=2.3,slow=12,SNR=90						
MJAR	Matsushiro Arr	2.77	184		Pn	00 50 58.5	+0.6
JOT	Ohata	2.87	43	P	Pn	00 50 57.3	-1.5
JAG	Ashikaga	2.99	164	P	Pn	00 51 00.0	-0.3
JRY	Ryogami san	3.31	174	P	Pn	00 51 03.9	+0.1
JRY				*e*S	S	00 51 48.1	0.0
JYT	Yasato	3.37	155	Pn	Pn	00 51 02.7	-1.7
JGF	Kuroka	3.80	194	Pn	Pn	00 51 10.0	+0.5
JYN	Shimob	3.81	179	P	Pn	00 51 08.8	-0.7
JOD2	Odawara 2	4.07	173	P	Pn	00 51 10.2	-2.4
JOD2				*e*S	S	00 52 00.9	-3.1
INU	Inuyama	4.12	197		Pn	00 51 13.9	+0.8
JEW	Eniwo	4.19	32	Pn	Pn	00 51 13.8	+0.1
JEW					S	00 52 02.5	-3.7
ERM	Erimo	4.48	51	Pn	Pn	00 51 15.9	-1.4
JWT	Wachi	4.70	212	Pn	Pn	00 51 20.2	+0.2
ASAJ	Asahikawa	5.72	32	P	Pn	00 51 30.1	-2.3
	6.0nm,0.3s,baz=223,slow=11,SNR=23						
ASAJ				S	S	00 52 33.1	-6.7
	1.7nm,0.3s,baz=59,slow=32,SNR=6.3						
JKA	Kamikawa-asahi	5.72	32	Pn	Pn	00 51 30.6	-1.7
JHS	Saijyo	6.05	226	Pn	Pn	00 51 34.0	-2.7
JHJ	Hachijo jima 2	6.27	170	P	Pn	00 51 37.4	-2.0
	33nm,0.3s,baz=80,slow=22,SNR=6.1						
JHJ				S	S	00 52 49.5	-3.2
	10nm,0.3s,baz=72,slow=13,SNR=1.7						
JHJ2	Mitsune	6.28	169	Pn	Pn	00 51 37.1	-2.5
JMN	Monobe	6.68	215	Pn	Pn	00 51 42.3	-2.3
USRK	Ussuriysk Ar.	6.87	317	P	Pn	00 51 41.9	-4.9
	baz=131,slow=12,SNR=8.1						
USRK	Ussuriysk Ar.	6.87	317	Pn	Pn	00 51 44.4	-2.3
USA0B	Ussuriysk Arra	6.87	317	Pn	Pn	00 51 44.8	-1.9
KLR	Kul'dur	11.01	336	P	Pn	00 52 37.5	-1.4
	0.3nm,0.3s,baz=182,slow=6.8,SNR=6.3						
PETK	Petropavlovsk-	19.09	37	P	P	00 54 13.5	+1.6
SONM	Songino Array	24.60	301	P	P	00 55 03.3	-2.1
	2.2nm,0.7s,baz=98,slow=9.2,SNR=17						
SONM	Songino Array	24.60	301	P	P	00 55 05.2	-0.2
TLY	Talaya	27.08	309	P	P	00 55 26.4	-1.0
ZALV	Zalesovo Beam	38.66	310	P	P	00 57 05.5	-1.6
	1.0nm,0.3s,baz=83,slow=6.1,SNR=5.8						
MK31	Makanchi Array	40.95	299	P	P	00 57 25.9	-0.2
MKAR	Makanchi Array	40.95	299	P	P	00 57 25.4	-0.8
	0.6nm,0.6s,baz=90,slow=9.3,SNR=8.4						
KURK	Kurchatov	42.70	306	P	P	00 57 39.5	-0.6
KURK				IAmb	IAmb	00 57 40.0	
	comp=Z,5.5nm,0.6s						
KURBB	Kurchatov Arra	42.77	306	P	P	00 57 39.8	-0.9
	comp=Z,4.1nm,0.6s,baz=82,slow=8.4,SNR=32						
CHGN	Chignik	44.01	46	P	P	00 57 55.7	+5.3
IMAR	Indian Mountai	45.92	32	P	P	00 58 07.4	+2.0
PPLA	Purkeypile	46.67	36	P	P	00 58 11.8	+0.4
KTH	Kantishna Hill	47.20	35	P	P	00 58 17.6	+2.2
KTH				IAmb	IAmb	00 59 29.7	
	comp=Z,27nm,1.8s						
BVAR	Borovoye Array	47.32	310	P	P	00 58 15.7	-0.7
	comp=Z,0.7nm,0.5s,baz=40,slow=16,SNR=11						
COLD	Coldfoot	47.33	30	P	P	00 58 18.6	+2.4
COLD				IAmb	IAmb	00 59 58.2	
	comp=Z,17nm,1.9s						
BRVK	Borovoye	47.37	310	P	P	00 58 16.8	0.0
AAK	Ala-Archa	47.38	296	P	P	00 58 17.4	+0.2
GHO	Glory Hole Cre	48.30	37	P	P	00 58 25.4	+1.6
GHO				IAmb	IAmb	00 58 51.5	
	comp=Z,17nm,1.4s						
WRH	Wood River Hil	48.37	34	P	P	00 58 26.0	+1.8
WRH				IAmb	IAmb	01 00 17.4	
	comp=Z,14nm,1.8s						
ILAR	Eielson Array	48.85	33	P	P	00 58 28.6	+0.8
	comp=Z,0.2nm,0.4s,baz=256,slow=6.1,SNR=5.7						
ILAR	Eielson Array	48.85	33	P	P	00 58 29.0	+1.2
IL18	Eielson Array	48.90	33	P	P	00 58 29.4	+1.2
SCM	Sheep Creek Mo	49.04	37	P	P	00 58 31.1	+1.7
SCM				IAmb	IAmb	00 59 18.0	
	comp=Z,29nm,1.6s						
KK05	Karatay Array	49.97	298	P	P	00 58 36.8	+0.2
KK06	Karatay Array	49.98	298	P	P	00 58 36.6	0.0
KK02	Karatay Array	49.98	298	P	P	00 58 36.9	+0.2
KK31	Karatay Array	49.98	298	P	P	00 58 36.9	+0.2
KKAR	Karatay Array	49.98	298	P	P	00 58 36.8	+0.1
KKAR	Karatay Array	49.98	298	P	P	00 58 35.9	-0.9
KKAR				IAmb	IAmb	00 58 37.6	
	comp=Z,4.6nm,1.1s						
KK04	Karatay Array	49.98	298	P	P	00 58 37.2	+0.4
KK09	Karatay Array	49.98	298	P	P	00 58 37.0	+0.2
KK01	Karatay Array	49.99	298	P	P	00 58 36.8	+0.1
KK03	Karatay Array	49.99	298	P	P	00 58 37.0	+0.2
KK07	Karatay Array	49.99	298	P	P	00 58 37.1	+0.2
KK08	Karatay Array	50.00	298	P	P	00 58 37.0	+0.2
KAIM	Kayak Island	50.79	39	P	P	00 58 45.3	+2.9
K27K	Chicken	51.03	34	P	P	00 58 45.9	+1.7
K27K				IAmb	IAmb	01 00 11.5	
	comp=Z,19nm,1.9s						
MCARA	McCarthy VSAT	51.15	37	P	P	00 58 47.2	+2.1
MCARA				IAmb	IAmb	00 59 00.5	
	comp=Z,20nm,1.5s						
BCAR	Beaver Creek A	51.35	35	P	P	00 58 48.4	+1.8
NIL	Nilore	51.72	285	P	P	00 58 50.6	+0.8
NIL				IAmb	IAmb	00 58 51.5	
	comp=Z,7.1nm,0.8s						
BARN	Barnard Glacie	51.86	38	P	P	00 58 52.0	+1.4
BARN				IAmb	IAmb	00 59 42.4	
	comp=Z,20nm,1.7s						
CTGM	Chitina Glacie	52.04	38	P	P	00 58 53.8	+2.0
EPYK	Eagle Plains	52.73	30	P	P	00 58 59.2	+2.5
ARU	Arti	53.11	317	P	P	00 58 59.1	-0.4
	comp=Z,0.5nm,0.4s,baz=144,slow=4.5,SNR=4.5						
ARU	Arti	53.11	317	P	P	00 58 59.2	-0.4
ARU				IAmb	IAmb	00 58 59.8	
	comp=Z,25nm,1.9s						
INK	Inuvik	53.44	28	P	P	00 59 03.4	+1.7
KBL	Kabul	54.45	288	P	P	00 59 10.2	+0.4
AB06	Akbulak array	54.68	308	P	P	00 59 11.1	+0.2
AB05	Akbulak array	54.69	308	P	P	00 59 11.2	+0.2
AB07	Akbulak array	54.69	308	P	P	00 59 11.2	+0.2
AB02	Akbulak array	54.69	308	P	P	00 59 11.3	+0.3
AB01	Akbulak array	54.69	308	P	P	00 59 10.6	-0.5
AB31	Akbulak array	54.69	308	P	P	00 59 11.0	0.0
AB31				IAmb	IAmb	00 59 11.7	
	comp=Z,3.3nm,0.6s						
ABKAR	Akbulak array	54.69	308	P	P	00 59 11.3	+0.2
ABKAR				IAmb	IAmb	00 59 11.7	
	comp=Z,3.3nm,0.6s						
ABKAR	Akbulak array	54.69	308	P	P	00 59 11.3	+0.2
AB03	Akbulak array	54.70	308	P	P	00 59 11.0	-0.1
AB04	Akbulak array	54.70	308	P	P	00 59 11.4	+0.3
AB09	Akbulak array	54.71	308	P	P	00 59 11.4	+0.3
AB08	Akbulak array	54.71	308	P	P	00 59 11.5	+0.3
AKTO	Aktyubinsk	55.42	310	P	P	00 59 17.0	+0.8
	comp=Z,1.1nm,0.6s,baz=74,slow=7.4,SNR=3.1						
WRA	Warramunga Arr	59.07	185	P	P	00 59 43.5	+1.6
	comp=Z,0.2nm,0.4s,baz=1.4,slow=7.4,SNR=1.7						
WRA	Warramunga Arr	59.07	185	P	P	00 59 43.4	+1.4
WR0	Warramunga Arr	59.07	184	P	P	00 59 43.7	+1.7
FINES	FINESS Array B	65.70	331	P	P	01 00 25.6	+0.4
	comp=Z,0.9nm,0.4s,baz=50,slow=7.1,SNR=9.9						
KBZ	Khabaz	67.65	309	P	P	01 00 39.0	+1.1
	comp=Z,0.7nm,0.5s,baz=45,slow=1.4,SNR=2.4						
HFS	Hagfors	71.04	334	P	P	01 00 58.0	-0.3
	comp=Z,1.4nm,0.6s,baz=85,slow=5.2,SNR=9.6						
AKASG	Malin Array Be	71.06	321	P	P	01 00 58.4	-0.2
	comp=Z,0.5nm,0.4s,baz=49,slow=6.1,SNR=8.4						
NOA	NORSAR Array B	71.17	336	P	P	01 00 59.9	+0.7
	comp=Z,0.2nm,0.3s,baz=40,slow=7.6,SNR=7.0						

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*ISK **20** 00:58:30.8, 38°.37N×22°.12E, h9km, ML3.5/16*

*ATH **20** 00:58:31.7, 38°.35N×22°.08E, h11km, ML3.5/28, Error ellipse: s-maj=0.9km s-min=0.6km az=331.0*

*IASPEI **20** 00:58:31.6±0.8, 38°.35N±0°.02×22°.07E±0°.02, h11km±4km, mb4.0/13, Error ellipse: s-maj=2.3km s-min=2.3km az=142.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **20** 00:58:31.8, 38°.35N×22°.08E, h10km, ML3.7/15, Error ellipse: s-maj=0.4km s-min=0.2km az=72.0*

*NEIC **20** 00:58:32.9±2.7, 38°.40N±0°.03×22°.20E±0°.07, h10km±1km, Error ellipse: s-maj=9.8km s-min=4.3km az=92.0*

*IDC **20** 00:58:38.8±2.9, 38°.53N×22°.08E, h67km±28km, mb3.4/9, mb1 3.5/13, mb1mx3.3/53, mbtmp3.6/13, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/37, Error ellipse: s-maj=25.7km s-min=17.1km az=172.0*

ISC 20 00:58:31.9±0.6**, 38°.35N**±0°.02×**22°.08E**±0°.02**, h10**km±3km**, n218, $\sigma 1^{s}41$**/261**, mb4.0**/13**, 5C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.02	355	P	Pg	00 58 33.5	-0.4
TRIZ				S	Sg	00 58 34.8	-0.4
TRIZ	Trizonia	0.02	355	P	Pg	00 58 33.4	-0.4
KALE	Kalithea	0.07	48	P	Pg	00 58 34.1	-0.3
KALE				S	Sg	00 58 35.9	-0.1
KALE				AML	AML	00 58 36.0	
KALE				AML	AML	00 58 36.1	
KALE	Kalithea	0.07	48	P	Pg	00 58 34.0	-0.3
KALE				S	Sg	00 58 35.6	-0.4
	213µm,0.2s						
SERG	Sergoula	0.07	348	P	Pg	00 58 33.9	-0.4
SERG				S	Sg	00 58 35.6	-0.4
SERG				AML	AML	00 58 35.6	
SERG				AML	AML	00 58 35.8	
SERG	Sergoula	0.07	348	P	Pg	00 58 33.9	-0.4
SERG				S	Sg	00 58 35.4	-0.6
	244µm,0.2s						
ALIK	Aliki, Aigiali	0.09	161	P	Pg	00 58 34.7	+0.3
ALIK				S	Sg	00 58 36.2	0.0
EFP	Efpalio	0.16	302	P	Pg	00 58 35.2	-0.2
EFP				S	Sg	00 58 38.0	+0.1
EFP				AML	AML	00 58 38.2	
	comp=E,60221µm,0.3s						
EFP				AML	AML	00 58 38.3	
	comp=N,87051µm,0.4s						
EFP	Efpalio	0.16	302	P	Pg	00 58 35.2	-0.2
EFP				S	Sg	00 58 37.9	+0.1
	comp=N,34µm,0.4s						
ANX	Ano Chora	0.28	334	P	Pg	00 58 37.3	-0.3
ANX				S	Sg	00 58 41.7	+0.3
ANX				AML	AML	00 58 42.0	
ANX				AML	AML	00 58 42.0	
ANX	Ano Chora	0.28	334	P	Pg	00 58 37.3	-0.3
ANX				S	Sg	00 58 41.3	-0.1
	comp=N,56µm,0.3s						
KLV	Kalavryta, Ach	0.31	169	P	Pg	00 58 37.8	-0.3
KLV				S	Sg	00 58 43.0	+0.8
KLV				AML	AML	00 58 44.7	
	comp=N,3390µm,0.1s						
KLV				AML	AML	00 58 48.2	
	comp=E,4821µm,0.6s						
KLV	Kalavryta, Ach	0.31	169	P	Pg	00 58 38.0	-0.1
KLV				S	Sg	00 58 42.7	+0.4
	comp=E,2µm,0.3s						
DLFA	Delphi	0.36	68	P	Pg	00 58 38.5	-0.5
DLFA				S	Sg	00 58 44.0	+0.2
DLFA				AML	AML	00 58 47.4	
	comp=E,15925µm,0.7s						
DLFA				AML	AML	00 58 47.7	
	comp=N,17471µm,0.5s						
DRO	Drossia	0.49	216	P	Pb	00 58 41.3	-1.3
DRO				S	Sb	00 58 48.8	-0.9
DRO				AML	AML	00 58 51.5	
	comp=N,12320µm,0.2s						
DRO				AML	AML	00 58 53.1	
	comp=E,4059µm,0.2s						
DRO	Drossia	0.49	216	P	Pb	00 58 41.4	-1.1
DRO				S	Sb	00 58 48.5	-1.2
	comp=E,4µm,0.2s						
THAL	Thalero	0.56	123	P	Pb	00 58 42.8	-1.0
THAL				AML	AML	00 58 59.7	
	comp=N,10916µm,0.4s						
THAL				AML	AML	00 58 59.8	
	comp=E,8306µm,0.4s						
THAL	Thalero	0.56	123	P	Pb	00 58 42.7	-1.0
THAL				S	Sb	00 58 50.3	-1.4
	comp=E,5µm,0.4s						
RLS	Riolos of Patr	0.56	239	P	Pb	00 58 42.8	-1.0
RLS				S	Sb	00 58 51.3	-0.4
RLS				AML	AML	00 58 53.1	
	comp=E,8568µm,0.3s						
RLS				AML	AML	00 58 53.2	
	comp=N,8603µm,0.2s						
RLS	Riolos of Patr	0.56	239	P	Pb	00 58 42.7	-1.0
RLS				S	Sb	00 58 51.2	-0.6
	comp=N,4µm,0.2s						
AXS	Araxos	0.57	255	P	Pg	00 58 42.8	-0.2
AXS				S	Sb	00 58 51.2	-0.9
AXS				AML	AML	00 58 53.0	
	comp=N,8813µm,0.4s						
AXS				AML	AML	00 58 54.0	
	comp=E,4626µm,0.3s						
AXS	Araxos	0.57	255	P	Pg	00 58 42.9	-0.1
AXS				S	Sb	00 58 51.2	-0.9
	comp=E,3µm,0.3s						
EVR	Evrytania	0.61	340	P	Pg	00 58 43.1	-0.7
EVR				S	Sg	00 58 52.0	+0.2
EVR				AML	AML	00 58 53.8	
	comp=E,17828µm,0.3s						
EVR				AML	AML	00 58 54.8	
	comp=N,26994µm,0.4s						
EVR	Evrytania	0.61	340	P	Pg	00 58 43.1	-0.7
EVR				S	Sg	00 58 51.9	+0.1
	comp=N,11µm,0.3s						
AXAR	Agios Charalam	0.62	47	P	Pg	00 58 43.2	-0.8
AXAR				AML	AML	00 58 55.5	
	comp=E,53995µm,0.3s						
AXAR				AML	AML	00 58 56.1	
	comp=N,54431µm,0.2s						
AXAR	Agios Charalam	0.62	47	P	Pg	00 58 43.3	-0.7
AXAR				S	Sg	00 58 52.2	0.0
	comp=N,28µm,0.2s						
MAKR	Makrakomi, Fth	0.67	4	P	Pg	00 58 44.5	-0.4
MAKR				AML	AML	00 58 57.3	
	comp=E,8673µm,0.4s						
MAKR				AML	AML	00 58 57.5	
	comp=N,7443µm,0.3s						
MAKR	Makrakomi, Fth	0.67	4	P	Pg	00 58 44.2	-0.7
AGG	Agios Georgios	0.70	16	P	Pg	00 58 44.4	-1.2
AGG				S	Sg	00 58 55.1	+0.2
AGG				AML	AML	00 58 57.9	
	comp=E,12294µm,0.2s						
AGG				AML	AML	00 58 59.9	
	comp=N,11370µm,0.5s						
AGG	Agios Georgios	0.70	16	P	Pg	00 58 44.7	-0.9
AGG				S	Sg	00 58 55.2	+0.4
	comp=N,6µm,0.3s						
AGG	Agios Georgios	0.70	16	PG	Pg	00 58 44.4	-1.2
AGG				SG	Sg	00 58 54.4	-0.4
AGG	Agios Georgios	0.70	16	Pg	Pg	00 58 44.2	-1.4
PDO	Prodromos	0.74	290	P	Pg	00 58 45.8	-0.5
PDO				S	Sg	00 58 56.9	+0.9
PDO				AML	AML	00 58 59.5	
	comp=N,21430µm,0.3s						
PDO				AML	AML	00 59 01.8	
	comp=E,12622µm,0.4s						
PDO	Prodromos	0.74	290	P	Pg	00 58 45.9	-0.5
PDO				S	Sg	00 58 57.0	+0.9
	comp=E,12µm,0.4s						
LKR	Lokris	0.79	67	P	Pg	00 58 45.7	-1.4
LKR				AML	AML	00 59 01.4	
	comp=N,8137µm,0.3s						
LKR				AML	AML	00 59 01.9	
	comp=E,8392µm,0.2s						
LKR	Lokris	0.79	67	P	Pg	00 58 46.4	-0.7
LKR				S	Sg	00 58 58.6	+1.2
	comp=E,4µm,0.2s						
LOUT	Loutraki	0.79	116	P	Pg	00 58 46.5	-0.7
LOUT	Loutraki	0.79	116	P	Pb	00 58 47.1	-0.7
AST1	Astakos	0.80	285	P	Pg	00 58 47.1	-0.2
ATAL	Atalanti	0.82	65	P	Pg	00 58 46.2	-1.6
ATAL				AML	AML	00 59 03.4	
	comp=E,5780µm,0.6s						
ATAL				AML	AML	00 59 04.2	
	comp=N,9762µm,0.4s						
ATAL	Atalanti	0.82	65	P	Pg	00 58 46.9	-0.8
ATAL				S	Sg	00 58 59.1	+0.7
	comp=N,4µm,0.5s						
TRIP	Tripoli	0.83	169	P	Pb	00 58 47.1	-1.3
TRIP				AML	AML	00 59 05.2	
	comp=N,4814µm,0.7s						
TRIP				AML	AML	00 59 08.1	
	comp=E,5066µm,0.6s						
TRIP	Tripoli	0.83	169	P	Pb	00 58 47.5	-1.0
AMT	Artemida-Makis	0.86	200	P	Pb	00 58 48.3	-0.7
AMT				AML	AML	00 59 07.1	
	comp=N,3620µm,0.5s						
AMT				AML	AML	00 59 15.7	
	comp=E,3669µm,0.5s						
AMT	Artemida-Makis	0.86	200	P	Pb	00 58 48.1	-0.9
VIL2	Platees	0.95	98	P	Pn	00 58 50.7	-0.6
VIL2				AML	AML	00 59 12.3	
	comp=N,4435µm,0.8s						
VIL2				AML	AML	00 59 13.3	
	comp=E,5376µm,0.9s						
VILL	Villia	0.99	100	P	Pb	00 58 50.6	-0.6
VLX	Vlachokerasia	1.00	166	P	Pb	00 58 50.0	-1.4
VLX				AML	AML	00 59 08.8	
	comp=N,6314µm,0.7s						
VLX				AML	AML	00 59 11.7	
	comp=E,7143µm,0.6s						
VLX	Vlachokerasia	1.00	166	P	Pn	00 58 50.6	-1.5
SMIA	Simia	1.04	59	P	Pg	00 58 50.9	-1.0
SMIA				AML	AML	00 59 10.0	
	comp=N,10220µm,0.3s						
SMIA				AML	AML	00 59 18.5	
	comp=E,8251µm,0.5s						
EPID	Epidavros	1.10	131	P	Pn	00 58 52.9	-0.5
NYDR	Nydri-Lefkada	1.14	289	P	Pb	00 58 52.7	-1.0
NYDR	Nydri-Lefkada	1.14	289	P	Pb	00 58 52.8	-0.9
EVGI	Lefkada island	1.15	284	P	Pb	00 58 52.8	-1.0
EVGI	Lefkada island	1.15	284	P	Pb	00 58 53.0	-0.8
ITM	Ithomi	1.17	186	P	Pn	00 58 53.2	-1.1
ITM	Ithomi	1.17	186	PN	Pn	00 58 53.5	-0.8
ITM				SN	Sn	00 59 11.3	+1.0
ITM	Ithomi	1.17	186		Pn	00 58 53.4	-0.8
VLS	Valsamata	1.18	262	P	Pb	00 58 53.2	-1.2
VLS	Valsamata	1.18	262	P	Pb	00 58 53.2	-1.2
FSK	Fiskardo	1.19	276	P	Pb	00 58 53.2	-1.4
FSK	Fiskardo	1.19	276	P	Pb	00 58 53.7	-0.9
LKD2	Lefkada island	1.20	292	P	Pn	00 58 54.2	-0.5
VLMS	Volimes, Zakyn	1.21	248	P	Pb	00 58 53.6	-1.3
VLMS	Volimes, Zakyn	1.21	248	P	Pb	00 58 53.7	-1.2
THL	Klokotos Trika	1.22	358	P	Pn	00 58 54.2	-0.8
VOL2	Volos	1.23	34	P	Pn	00 58 55.4	+0.3
ARG2	Argostoli	1.26	263	P	Pn	00 58 54.6	-0.9
KEF5	Kardakata, Kep	1.27	267	P	Pn	00 58 54.7	-1.0
KEF5	Kardakata, Kep	1.27	267	P	Pn	00 58 54.8	-0.8
KRND	KRANIDI	1.28	138	P	Pg	00 58 55.8	-0.8
KEF4	Livadi, Kephal	1.30	267	P	Pn	00 58 54.8	-1.2
NEO	Neokhori	1.31	43	P	Pn	00 58 55.1	-1.2
NEO	Neokhori	1.31	43	P	Pn	00 58 55.1	-1.2
XOR	Xorichti	1.34	40	P	Pn	00 58 56.1	-0.6
ATH	Athens Observa	1.35	106	P	Pg	00 58 56.9	-0.9
ATH				AML	AML	00 59 20.6	
	comp=E,2022µm,0.4s						
ATH				AML	AML	00 59 27.3	
	comp=N,2302µm,0.5s						
LRSO	Larissa Observ	1.35	10	P	Pn	00 58 57.0	+0.3
KEF3	Kipouria, Keph	1.37	265	P	Pn	00 58 56.2	-0.8
ATHU	Athens Univers	1.40	105	P	Pb	00 58 57.6	-0.6
ATHU				AML	AML	00 59 21.2	
	comp=N,684µm,0.7s						
ATHU				AML	AML	00 59 25.5	
	comp=E,573µm,0.6s						
PTL	Penteli	1.44	101	P	Pb	00 58 58.5	-0.4
PTL				AML	AML	00 59 26.3	
	comp=N,1295µm,0.7s						
PTL				AML	AML	00 59 27.0	
	comp=E,1269µm,0.6s						
EREA	Eretria	1.46	86	P	Pn	00 58 58.6	+0.3
EREA				AML	AML	00 59 24.2	
	comp=N,1326µm,0.5s						
EREA				AML	AML	00 59 26.7	
	comp=E,1254µm,0.5s						
PYL	PYLOS	1.47	190	P	Pg	00 58 58.4	-1.8
DION	Dionisos Attik	1.49	100	P	Pn	00 58 58.5	-0.2
DION				AML	AML	00 59 27.1	
	comp=N,3456µm,0.4s						
DION				AML	AML	00 59 30.6	
	comp=E,3894µm,0.5s						
KYMI	Kymi, Euboea I	1.61	79	P	Pn	00 59 00.4	0.0
KYMI				AML	AML	00 59 30.9	
	comp=E,724µm,0.6s						
KYMI				AML	AML	00 59 37.4	
	comp=N,885µm,0.7s						
JAN	Janina	1.62	324	P	Pn	00 59 01.8	+1.3
VLI	Veliai	1.76	157	P	Pb	00 59 02.7	-1.6
LIT	Litokhoron	1.78	10	P	Pn	00 59 02.7	0.0
LIT	Litokhoron	1.78	10	Pn	Pn	00 59 02.8	0.0
KTHA	Kythira Island	2.23	159	PN	Pn	00 59 09.2	+0.3
HORT	Hortiatis	2.38	19	PN	Pn	00 59 10.7	-0.4
OUR	Ouranopolis	2.48	36	PN	Pn	00 59 11.9	-0.4
FNA	Florina	2.50	348	PN	Pn	00 59 12.7	+0.1
FNA	Florina	2.50	348	Pn	Pn	00 59 13.8	+1.2
GRG	Griva	2.62	5	PN	Pn	00 59 14.2	-0.1
KNT	Kendrikon	2.88	12	PN	Pn	00 59 18.1	+0.2
OHR	Ohrid	2.93	341	*i* Pn	Pn	00 59 22.3	+3.7
VAY	Valandovo	3.00	7	*i* Pn	Pn	00 59 20.5	+1.1
APE	Apeiranthos	3.02	114	PN	Pn	00 59 20.1	+0.3
SIGR	SIGRI	3.08	73	PN	Pn	00 59 20.4	-0.1
IMMV	Iera Moni Meta	3.26	151	PN	Pn	00 59 24.3	+1.3
SCTE	Santa Cesarea	3.29	303	Pn	Pn	00 59 26.5	+3.0
SANT	Santorini	3.34	125	PN	Pn	00 59 24.7	+0.5
SANT	Santorini	3.34	125	Pn	Pn	00 59 25.2	+1.0
STIP	Stip	3.35	1	*i* Pn	Pn	00 59 25.8	+1.6
BOZC	Bozcaada	3.44	63	PN	Pn	00 59 25.8	+0.3

TIR	Tirane	3.45	331	⇓P	Pn	00 59 28.8	+3.2
TIR	Tirane	3.45	331		Pn	00 59 27.8	+2.1
GADA	Gvkgeada	3.49	57	PN	Pn	00 59 26.2	0.0
URLA	Izmir	3.55	88	PN	Pn	00 59 27.4	+0.3
DKL	Dikili	3.85	78	PN	Pn	00 59 31.5	+0.4
GVD	Gavdhos	3.85	155	PN	Pn	00 59 32.5	+1.3
RDO	Rodhopi	3.87	43	PN	Pn	00 59 31.3	-0.1
HRKL	Herakleio	3.88	140	PN	Pn	00 59 32.3	+0.7
GELI	Tayfur-Gelibol	3.98	58	PN	Pn	00 59 33.2	+0.3
ALN	Alexandroupoli	3.99	49	PN	Pn	00 59 33.4	+0.4
ALN	Alexandroupoli	3.99	49	Pn	Pn	00 59 31.6	-1.4
GCAM	G?zelcaml?	4.12	97	PN	Pn	00 59 36.0	+1.1
LPK	Lapseki	4.16	59	PN	Pn	00 59 35.8	+0.4
TIP	Timpagrande	4.24	283	⇓P	Pn	00 59 39.5	+3.0
TIP	Timpagrande	4.24	283		Pn	00 59 38.4	+1.8
BODT	Bodrum	4.34	106	PN	Pn	00 59 38.7	+0.7
VTS	Vitosha	4.36	11	⇓P	Pn	00 59 40.6	+2.3
DRME	Dracevica, Mon	4.43	331	ePn	Pn	00 59 40.5	+1.4
PDG	Podgorica	4.61	333	⇑P	Pn	00 59 44.0	+2.3
PDG	Podgorica	4.61	333	ePn	Pn	00 59 42.5	+0.9
PDG	Podgorica	4.61	333		Pn	00 59 43.4	+1.8
MATE	Matera	4.75	301	⇑P	Pn	00 59 45.8	+2.3
HCY	Herceg Novi	4.93	327	ePn	Pn	00 59 45.2	-0.7
KARP	Karpathos	4.94	123	Pn	Pn	00 59 48.7	+2.5
SJES	Sjenica	5.16	343	ePn	Pn	00 59 51.4	+2.1
TREB	Trebinje	5.21	328	ePn	Pn	00 59 49.8	0.0
DBRK	Dubrovnik	5.25	327	ePn	Pn	00 59 49.9	-0.6
DBRK				Sn	Sn	01 00 49.1	-1.9
BRY	Bratogost	5.29	331	ePn	Pn	00 59 52.0	+1.0
UPM	Unac-Piva	5.42	335	ePn	Pn	00 59 54.4	+1.6
STON	Ston	5.61	325	ePn	Pn	00 59 54.3	-1.0
STON				Sn	Sn	01 00 57.2	-2.6
STON	Ston	5.61	325	ePn	Pn	00 59 54.6	-0.8
BBLS	Lazići	5.87	341	ePn	Pn	01 00 00.4	+1.4
SGRT	San Giovanni R	5.93	307	Pn	Pn	01 00 01.1	+1.3
SGRT				Sn	Sn	01 01 06.6	-1.3
DIVS	Divibare	5.96	345	ePn	Pn	01 00 01.2	+1.0
DIVS	Divibare	5.96	345		Pn	01 00 01.6	+1.5
HAPS	Han Pijesak,BI	6.20	339	ePn	Pn	01 00 03.2	-0.3
RAFF	Raffo Rosso	6.21	262	Pn	Pn	01 00 06.0	+2.4
MAKA	Makarska	6.25	324	ePn	Pn	01 00 04.4	+0.3
MAKA				Sn	Sn	01 01 12.9	-2.6
RICI	Ricice	6.36	326	ePn	Pn	01 00 05.6	-0.1
RICI				Sn	Sn	01 01 14.6	-3.8
PAOL	Paolisi	6.38	297	Pn	Pn	01 00 08.8	+2.8
ELL	Elmali	6.42	102	Pn	Pn	01 00 07.9	+1.2
MDVR	Moldovita	6.44	358	⇓P	Pn	01 00 09.0	+2.3
HVAR	Hvar	6.45	320	Sn	Sn	01 01 17.0	-3.4
HERR	Herculane	6.54	2	⇑P	Pn	01 00 09.8	+1.8
FRGS	Fruska Gora	7.01	347	ePn	Pn	01 00 14.6	0.0
GZR	Gura Zlata	7.06	4	⇓P	Pn	01 00 16.7	+1.4
KIJV	Kijevo	7.09	325	ePn	Pn	01 00 15.7	0.0
KIJV				Sn	Sn	01 01 32.3	-3.9
ZIRJ	Zirje	7.20	320	ePn	Pn	01 00 17.3	+0.2
ZIRJ				Sn	Sn	01 01 34.7	-4.1
INTR	Introdacqua	7.25	303	Pn	Pn	01 00 20.6	+2.7
BZS	Buzias	7.27	357	⇓P	Pn	01 00 18.9	+0.8
MORI	Morici	7.32	321	ePn	Pn	01 00 18.9	+0.2
MORI				Sn	Sn	01 01 39.1	-2.6
BLY	Banja Luka	7.37	332	ePn	Pn	01 00 18.8	-0.7
VOIR		7.42	16	⇑P	Pn	01 00 22.1	+1.8
MLR	Muntele Rosu	7.70	21	P	Pn	01 00 26.1	+1.9
	comp=N,0.5nm,0.3s,baz=127,slow=7.3,SNR=11						
MLR				LR	LR	01 03 18.4	
	comp=N,89nm,20.6s,baz=289,slow=37						
MLR	Muntele Rosu	7.70	21	⇓P	Pn	01 00 26.2	+2.0
MLR	Muntele Rosu	7.70	21		Pn	01 00 25.7	+1.6
DUGI	Dugi Otok	7.73	319	ePn	Pn	01 00 24.1	-0.3
DUGI				Sn	Sn	01 01 48.0	-4.1
NEHR	Nehoiu	7.74	23	⇑P	Pn	01 00 26.3	+1.6
UDBI	Udbina	7.78	325	ePn	Pn	01 00 25.8	+0.5
UDBI				Sn	Sn	01 01 50.0	-3.4
NRCA	Norcia	8.16	306		Pn	01 00 32.3	+2.0
PLOR	Plostina	8.23	23	⇓P	Pn	01 00 33.3	+1.9
NVLJ	Novalja	8.23	321	ePn	Pn	01 00 31.0	-0.3
NVLJ				Sn	Sn	01 02 00.3	-4.0
MORH	Mrgy, Hungar	8.27	343	⇓ePN	Pn	01 00 31.9	+0.2
MORH				eSN	Sn	01 02 06.3	+1.2
MORH	Mrgy, Hungar	8.27	343	ePn	Pn	01 00 29.9	-1.8
VRI	Vrincioaia	8.27	23	⇓P	Pn	01 00 34.7	+2.9
OZLJ	Ozalj	8.77	328	ePn	Pn	01 00 39.1	+0.4
PTJ	Puntijarka	8.81	331	ePn	Pn	01 00 39.1	-0.3
KALN	Kalnik	8.82	334	ePn	Pn	01 00 39.5	0.0
CRES	Cresnjev	8.95	329	ePn	Pn	01 00 40.1	-1.0
BRTR	Keskin Array B	9.11	78	P	Pn	01 00 46.9	+3.5
	comp=N,0.4nm,0.3s,baz=260,slow=12,SNR=8.0						
BRTR				LR	LR	01 03 56.1	
	comp=N,10nm,21.6s,baz=292,slow=35						
CEY	Cerknica	9.32	325	ePn	Pn	01 00 45.3	-1.0
MPLH	Magyarpolny	9.43	341	ePN	Pn	01 00 48.8	+1.1
MPLH				eSN	Sn	01 02 37.3	+3.6
BURAR	Bucovina Array	9.55	13	Pn	Pn	01 00 51.1	+1.7
BUR08	Bucovina Ar. S	9.57	13	Pn	Pn	01 00 51.2	+1.4
TRI	Trieste	9.61	323	Pn	Pn	01 00 50.4	+0.3
CASP	Castiglione de	9.61	301	Pn	Pn	01 00 52.5	+2.2
OSSC	Osservatorio P	9.69	306	Pn	Pn	01 00 53.9	+2.6
PSZ	Piszkesteto	9.70	351	Pn	Pn	01 00 53.8	+2.3
VSL	Villasalto	9.96	281	Pn	Pn	01 00 57.6	+2.5
ZCCA	Zocca	10.27	309	Pn	Pn	01 01 02.0	+2.6
TEOL	Teolo	10.45	315		Pn	01 01 02.7	+1.0
ZOU	Zoufplan	10.60	324	Pn	Pn	01 01 06.1	+2.1
CTI	Castel Tesino	10.90	318	Pn	Pn	01 01 08.3	+0.3
GERES	GERESS Array B	12.12	333	P	Pn	01 01 26.9	+2.3
	comp=N,0.1nm,0.3s,baz=157,slow=16,SNR=2.2						
DAVOX	Davos/Dischmat	12.31	317	P	Pn	01 01 29.2	+1.8
	baz=140,slow=17						
SENIN	Lac Senin/Sane	13.53	311	Pn	Pn	01 01 46.3	+2.2
CLL	Collm	14.46	337	eP	Pn	01 01 56.0	-0.4
CLL				ePP	PnPn	01 02 05.0	+0.7
CART	Cartagena	18.21	275		P	01 02 45.8	+0.9
CART				IAmb	IAmb	01 02 55.7	
	comp=Z,29nm,1.0s						
ESBB	Sonseca Array	20.26	282	P	P	01 03 08.7	+1.3
ESDC	Sonseca Array	20.26	282	P	P	01 03 08.3	+0.8
	comp=Z,1.4nm,0.6s,baz=75,slow=11,SNR=24						
PAB	San Pablo	20.57	282	P	Pn	01 03 12.6	-0.5
PAB				IAmb	IAmb	01 03 20.0	
	comp=Z,7.2nm,1.1s						
HFS	Hagfors	22.45	349	P	P	01 03 29.7	-1.0
	comp=Z,1.2nm,0.5s,baz=153,slow=10.0,SNR=7.0						
KONO	Kongsberg	22.76	344	P	P	01 03 32.3	-1.8
KONO				IAmb	IAmb	01 03 49.3	
	comp=Z,13nm,1.1s						
MTE	Manteigas	22.94	284	P	P	01 03 37.2	+0.9
FINES	FINESS Array B	23.26	5	P	P	01 03 37.9	-1.3
	comp=Z,1.3nm,1.0s,baz=167,slow=13,SNR=1.0						
NC602	NORSAR Array S	23.37	347	P	P	01 03 39.6	-0.7
NC602				IAmb	IAmb	01 03 49.5	
	comp=Z,10nm,1.1s						
NB201	NORSAR Array S	23.71	347	P	P	01 03 43.6	-0.1
NB201				IAmb	IAmb	01 04 01.7	
	comp=Z,12nm,1.1s						
NB2	NORSAR Subarra	23.71	347	P	P	01 03 42.3	-1.5
	comp=Z,0.1nm,0.5s,baz=141,slow=14						
NOA	NORSAR Array B	23.71	347	P	P	01 03 42.5	-1.3
	comp=Z,0.6nm,0.7s,baz=152,slow=9.1,SNR=5.5						
EKA	Eskdalemuir Ar	24.01	323	P	P	01 03 46.5	-0.1
	comp=Z,3.2nm,0.8s,baz=124,slow=11,SNR=7.7						
NC204	NORSAR Array S	24.02	347	P	P	01 03 46.2	-0.5
ESK	Eskdalemuir	24.02	323	P	P	01 03 46.8	0.0
ESK				IAmb	IAmb	01 03 57.8	
	comp=Z,8.2nm,1.1s						
TOA0	Torodi Ar. Sit	30.95	221	P	P	01 04 52.5	+3.4
TOA0				IAmb	IAmb	01 04 54.5	
	comp=Z,3.5nm,1.1s						
TORD	Torodi Ar. Bea	30.95	221	P	P	01 04 50.6	+1.5
	comp=Z,0.7nm,0.6s,baz=34,slow=9.0,SNR=3.5						
TORD	Torodi Ar. Bea	30.95	221	P	P	01 04 50.7	+1.5
ARCES	ARCESS Array B	31.30	2	LR	LR	01 19 24.5	
	comp=Z,71nm,21.3s,baz=275,slow=40						
SPA0	Spitsbergen Ar	40.01	358	P	P	01 06 07.8	+1.4
KURBB	Kurchatov Arra	41.15	54	P	P	01 06 15.0	-1.0
	comp=Z,0.7nm,0.6s,baz=280,slow=8.8,SNR=6.5						
MK31	Makanchi Array	44.17	59	P	P	01 06 40.2	-0.5
MKAR	Makanchi Array	44.17	59	P	P	01 06 40.2	-0.5
	comp=Z,1.2nm,0.4s,baz=276,slow=7.0,SNR=35						
MKAR	Makanchi Array	44.17	59	P	P	01 06 40.4	-0.3
ZALV	Zalesovo Beam	44.67	48	P	P	01 06 43.4	-1.1
	comp=Z,1.0nm,0.4s,baz=278,slow=8.0,SNR=5.0						
ZALV	Zalesovo Beam	44.67	48	P	P	01 06 44.2	-0.4

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*NAO **20** 00:59:35.4±1.8, 73°.23N×6°.15E, ML3.1*

*IDC **20** 00:59:38.3±1.5, 73°.20N×7°.22E, h0^{km}, mb3.5/3, mb1 3.6/8, mb1mx3.3/53, mbtmp3.5/8, ML2.8/5, MS3.2/8, Ms1 3.2/8, ms1mx2.9/51, Error ellipse: s-maj=23.2km s-min=18.0km az=86.0*

*BER **20** 00:59:40.4±2.6, 73°.31N×6°.54E, h22^{km}±45^{km}, ML2.1, ML3.1(NAO), Confirmed Earthquake*

ISC 20 00:59:37.8±0.9, **73°.23N**±0°.08×**6°.89E**±0°.07, **h10**^{km}, **n43**, σ**1^{s}.77**/40, **mb3.6**/3, **MS3.3**/5, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	3.61	63	eP	Pn	01 00 35.2	+1.5
BRBA	Barentsburg A	5.19	17	eP	Pn	01 00 55.2	-0.1
JNE	Jan Mayen East	5.19	252	eP	Pn	01 00 53.5	-1.8
JNW	Jan Mayen West	5.20	252	eP	Pn	01 00 54.2	-1.3
JMIC	Jan Mayen	5.25	252	Pn	Pn	01 00 54.4	-1.7
	baz=103,slow=11,SNR=2.0						
JMIC	Jan Mayen	5.25	252	eP	Pn	01 00 53.7	-2.4
TRO	Tromso	5.27	127	eP	Pn	01 00 57.4	+1.0
TRO				IAML		01 01 55.7	
	comp=Z,2.7nm,0.6s						
JMI	Jan Mayen	5.34	252	eP	Pn	01 00 55.8	-1.6
SPA0	Spitsbergen Ar	5.50	21	Pn	Pn	01 00 59.0	-0.5
	baz=214,slow=16						
SPA0	Spitsbergen Ar	5.50	21	Pn	Pn	01 00 59.0	-0.5
	baz=214,slow=16						
SPITS	Spitsbergen Ar	5.50	21	Pn	Pn	01 00 59.2	-0.4
	baz=201,slow=16,SNR=15						
LOF	Lofoten	5.57	153	Pn	Pn	01 01 00.9	+0.3
LOF	Lofoten	5.57	153	eP	Pn	01 01 02.2	+1.7
LOF				IAML		01 02 07.3	
	comp=Z,6.5nm,0.9s						
JETT	Jettan, Norway	5.67	124	Pn	Pn	01 01 02.8	+0.7
STEI	Steigen	6.00	148	eP	Pn	01 01 08.1	+1.7
STEI				eS	Sn	01 02 09.5	-5.5
STEI				IAML		01 02 13.6	
	comp=Z,2.4nm,0.6s						
KIF	Kilpisjarvi	6.18	126	eP	Pn	01 01 10.1	+1.2
FAUS	Fauske	6.51	150	eP	Pn	01 01 15.6	+2.1
ARA0	ARCESS Array S	6.99	113	Pn	Pn	01 01 20.6	+0.5
	baz=322,slow=12						
ARA0				Sn	Sn	01 02 36.5	-3.0
	baz=308,slow=22						
ARA0	ARCESS Array S	6.99	113	Pn	Pn	01 01 20.6	+0.5
	baz=322,slow=12						
ARA0				Sn	Sn	01 02 36.5	-3.0
	baz=308,slow=22						
ARCES	ARCESS Array B	6.99	113	Pn	Pn	01 01 20.4	+0.4
	baz=326,slow=12,SNR=21						
ARCES				Sn	Sn	01 02 37.3	-2.2
	baz=317,slow=20,SNR=2.5						
ARCES				LR	LR	01 04 09.3	
	comp=Z,60nm,19.6s,baz=300,slow=39						
KONS	Konsvik	7.09	159	eP	Pn	01 01 22.3	+1.0
KONS				IAML		01 02 36.2	
	comp=Z,5.1nm,0.9s						
STOK	Stokkvaagen	7.24	160	eP	Pn	01 01 24.3	+0.9
DAG	Danmarks Havn	7.46	310	eP	Pn	01 01 19.8	-6.7
DAG				eS	Sn	01 02 37.3	-14
MOR8	Moi Rana	7.55	156	eP	Pn	01 01 28.9	+1.2
MOR8				IAML		01 02 51.0	
	comp=Z,3.4nm,0.6s						
DBG	Daneborg	7.63	291	Pn	Pn	01 01 23.2	-5.6
DBG				Sn	Sn	01 02 40.9	-14
DBG	Daneborg	7.63	291	eP	Pn	01 01 26.4	-2.4
DBG				eS	Sn	01 02 41.3	-14
AKN	Aaknes	11.10	180	Pn	Pn	01 02 16.9	+0.6
AKN	Aaknes	11.10	180	Pn	Pn	01 02 16.9	+0.6
NOA	NORSAR Array B	12.35	170	Pn	Pn	01 02 33.7	+0.3
	comp=Z,0.0nm,0.3s,baz=23,slow=18,SNR=2.1						
NOA				LR	LR	01 07 02.6	
	comp=Z,31nm,20.6s,baz=265,slow=36						
HFS	Hagfors	13.41	165	Pn	Pn	01 02 48.3	+0.5
	comp=Z,0.1nm,0.3s,baz=356,slow=15,SNR=5.2						
HFS				LR	LR	01 07 00.3	
	comp=Z,80nm,20.2s,baz=267,slow=33						
HFS	Hagfors	13.41	165	Pn	Pn	01 02 48.9	+1.1
	baz=347,slow=16						
HFS	Hagfors	13.41	165	Pn	Pn	01 02 48.9	+1.1
	baz=347,slow=16						
FIA0	FINESS Array S	13.84	139	Pn	Pn	01 02 53.9	+0.3
	baz=350,slow=14						
FIA0	FINESS Array S	13.84	139	Pn	Pn	01 02 53.9	+0.3
	baz=350,slow=14						
FINES	FINESS Array B	13.84	139	Pn	Pn	01 02 53.2	-0.4
	comp=Z,0.1nm,0.3s,baz=339,slow=10,SNR=4.7						
VRAC	Vranov	24.38	165	LR	LR	01 15 23.2	
	comp=Z,102nm,18.3s,baz=322,slow=39						
AKASG	Malin Array Be	24.59	144	P	P	01 04 58.8	+1.2
	comp=Z,1.0nm,0.6s,baz=346,slow=9.3,SNR=5.0						
GERES	GERESS Array B	24.65	169	P	P	01 05 01.3	+3.0
	comp=Z,0.1nm,0.3s,baz=357,slow=9.6,SNR=5.0						
BELG	Belogornoye	27.00	118	LR	LR	01 14 20.9	
	comp=Z,62nm,20.4s,baz=166,slow=33						
GNI	Garni	37.78	130	LR	LR	01 21 04.4	
	comp=Z,48nm,21.1s,baz=328,slow=34						
DLBC	Dease Lake	45.39	330	LR	LR	01 30 05.5	
	comp=Z,21nm,18.1s,baz=285,slow=40						
TORD	Torodi Ar. Bea	60.13	186	P	P	01 09 47.8	+2.7
	comp=Z,1.1nm,1.0s,baz=352,slow=8.7,SNR=3.5						
YBH	Yreka Blue Hor	60.26	318	LR	LR	01 35 25.4	
	comp=Z,54nm,18.1s,baz=18,slow=36						

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*IDC **20** 01:04:06.0±1.2, 17°.94S×167°.63E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.8/33, mbtmp3.7/8, ML4.2/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/25, Error ellipse: s-maj=39.2km s-min=24.4km az=146.0*

ISC 20 01:04:09.2±0.8, **18°.00S**±0°.09×**167°.7E**±0°.1, **h23**^{km}, **n15**, σ**0^{s}.84**/13, **mb3.7**/6, **MS3.6**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.21	195	Pn	Pn	01 05 12.6	+0.6
	1.5nm,0.3s,baz=82,slow=11,SNR=16						
DZM				Sn	Sn	01 06 01.0	+0.5
	7.4nm,0.3s,baz=96,slow=20,SNR=6.9						
DZM	Mont Dzumac	4.21	195	ePn	Pn	01 05 12.3	+0.3
	11nm,0.2s						
DZM				eSn	Sn	01 05 59.5	-1.0
	24nm,0.2s						
MSVF	Nonsavu	9.90	90	Pn	Pn	01 06 30.3	0.0
	0.2nm,0.3s,baz=229,slow=19,SNR=1.8						
MSVF				LR	LR	01 09 34.8	
	comp=Z,700nm,18.7s,baz=192,slow=33						
HNR	Honiara	11.34	318	LR	LR	01 10 46.1	
	comp=Z,157nm,19.2s,baz=150,slow=36						
STKA	Stephens Creek	27.28	235	P	P	01 09 52.5	+0.5
	1.3nm,0.6s,baz=63,slow=6.8,SNR=1.9						
STKA				LR	LR	01 19 34.1	
	comp=Z,133nm,18.9s,baz=32,slow=34						
WRA	Warramunga Arr	31.54	261	P	P	01 10 30.8	+0.8
	0.4nm,0.9s,baz=88,slow=5.9,SNR=2.3						
WRA				LR	LR	01 22 58.1	
	comp=Z,76nm,18.0s,baz=115,slow=36						
ASAR	Alice Springs	31.99	254	P	P	01 10 33.4	-0.6
	0.3nm,0.4s,baz=89,slow=7.5,SNR=3.5						
ASAR				LR	LR	01 22 50.3	
	comp=Z,181nm,19.6s,baz=89,slow=35						
FITZ	Fitzroy Crossi	39.88	263	P	P	01 11 40.7	-0.8
	3.5nm,1.0s,baz=84,slow=7.5,SNR=3.8						
PPT2	Papeete2	40.66	96	eLR	LR	01 23 00.3	
	comp=Z,98nm,26.8s						
PPT	Papeete	40.66	96	LR	LR	01 26 45.1	
	comp=Z,83nm,20.4s,baz=195,slow=33						
TAOE	Nuku Hiva Isla	51.44	87	eLR	LR	01 28 06.3	
	comp=Z,231nm,25.5s						
SONM	Songino Array	85.33	324	P	P	01 16 46.0	+1.5
	0.6nm,0.8s,baz=134,slow=6.3,SNR=3.9						
ILAR	Eielson Array	89.51	18	P	P	01 17 03.0	-1.1
	0.2nm,0.7s,baz=234,slow=5.7,SNR=1.9						
ARCES	ARCESS Array B	123.49	345	PKP	PKiKP	01 23 04.5	+0.3
	2.6nm,0.8s,baz=59,slow=2.4,SNR=1.4						
DAVOX	Davos/Dischmat	145.95	332	PKPbc	PKPbc	01 23 47.1	-0.1
	1.3nm,0.5s,baz=207,slow=4.5,SNR=5.4						

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*IDC **20** 01:27:23.2±1.3, 18°.01S×167°.82E, h0^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.0/29, mbtmp4.0/10, ML3.6/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/24, Error ellipse: s-maj=40.2km s-min=20.0km az=128.0*

*NOU **20** 01:27:29.8, 17°.80S×167°.42E, h87^{km}, MLv4.3, Vanuatu Islands*

ISC 20 01:27:28.2±0.6, **17°.84S**±0°.06×**167°.51E**±0°.09, **h23**^{km}, **n34**, σ**1^{s}.34**/29, **mb4.1**/8, **MS3.4**/8, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.40	353	P	Pn	01 28 05.9	-0.2
LIFNC	LIFOU	2.93	185	P	Pn	01 28 14.1	+0.6
MARNC	Mare, Loyalty	3.66	172	P	Pn	01 28 25.3	+1.9
KOUNC	Koumac, New Ca	4.07	228	P	Pn	01 28 29.6	+0.5
YATNC	Mamie plateau,	4.24	188	P	Pn	01 28 33.1	+1.7
DZM	Mont Dzumac	4.33	193	Pn	Pn	01 28 29.6	-3.2
	3.7nm,0.3s,baz=290,slow=18,SNR=24						
DZM				Sn	Sn	01 29 20.1	-2.4
	6.9nm,0.3s,baz=119,slow=23,SNR=6.3						
DZM	Mont Dzumac	4.33	193	ePn	Pn	01 28 30.8	-1.9
	21nm,0.3s						
DZM				eSn	Sn	01 29 12.6	-10
	22nm,0.3s						
DZM	Mont Dzumac	4.33	193	P	Pn	01 28 32.1	-0.6
NOUC	Port Laguerre	4.39	195	P	Pn	01 28 33.6	+0.1
MSVF	Nonsavu	10.05	91	Pn	Pn	01 29 52.1	+0.8
	0.3nm,0.3s,baz=276,slow=6.4,SNR=3.6						
MSVF				LR	LR	01 32 54.2	
	comp=Z,413nm,20.7s,baz=351,slow=34						
HNR	Honiara	11.12	318	LR	LR	01 34 04.8	
	comp=Z,93nm,20.2s,baz=132,slow=35						
CTA	Charters Tower	20.22	260	P	P	01 32 03.9	+2.0
	6.0nm,1.0s,baz=86,slow=12,SNR=6.0						
PMG	Port Moresby	21.46	290	LR	LR	01 39 23.6	
	comp=Z,86nm,18.8s,baz=128,slow=33						
RPZ	Rata Peaks	25.97	174	LR	LR	01 42 40.2	
	comp=Z,146nm,19.4s,baz=58,slow=36						
STKA	Stephens Creek	27.26	234	P	P	01 33 11.7	+0.8
	2.8nm,0.6s,baz=42,slow=11,SNR=4.0						
STKA				LR	LR	01 42 41.1	
	comp=Z,84nm,19.5s,baz=27,slow=34						
WRA	Warramunga Arr	31.42	261	P	P	01 33 47.4	-0.7
	0.7nm,0.8s,baz=86,slow=5.7,SNR=4.9						
WRA				LR	LR	01 45 36.4	
	comp=Z,79nm,21.2s,baz=140,slow=34						
ASAR	Alice Springs	31.90	254	P	P	01 33 51.7	-0.5
	1.8nm,0.9s,baz=80,slow=8.5,SNR=11						
ASAR				LR	LR	01 46 49.4	
	comp=Z,108nm,18.5s,baz=90,slow=36						
PPT2	Papeete2	40.82	96	eLR	LR	01 46 51.0	
	comp=Z,82nm,24.8s						
PPT	Papeete	40.82	96	LR	LR	01 50 46.6	
	comp=Z,16nm,18.5s,baz=322,slow=35						
PETK	Petropavlovsk-	71.16	354	P	P	01 38 45.0	+0.2
	4.4nm,0.8s,baz=148,slow=12,SNR=6.1						
CMAR	Chiang Mai Arr	76.43	295	P	P	01 39 18.9	+2.3
	0.7nm,0.3s,baz=120,slow=5.3,SNR=1.4						
SONM	Songino Array	85.12	324	P	P	01 40 02.6	+0.1
	0.4nm,0.3s,baz=131,slow=7.9,SNR=5.4						
NVAR	Mina Array Bea	89.12	49	P	P	01 40 20.6	-1.7
	0.9nm,0.9s,baz=231,slow=7.6,SNR=4.0						
ILAR	Eielson Array	89.40	18	P	P	01 40 20.6	-2.1
	0.2nm,0.5s,baz=244,slow=5.4,SNR=4.6						
TXAR	Lajitas Array	97.55	62	LR	LR	02 19 29.4	
	comp=Z,53nm,18.6s,baz=0.0,slow=32						
KBA	Koelnbreinsper	143.92	330	iP	PKPdf	01 47 01.7	-0.4
	3.1nm,0.9s						
MYKA	Terra Mystica	144.09	329	iP	PKPdf	01 47 02.2	0.0
	4.3nm,1.2s						
ABTA	Abfaltersbach	144.56	330	eP	PKPdf	01 47 02.5	-0.6
	2.6nm,0.6s						
WATA	Walderalm	144.56	331	iP	PKPdf	01 47 03.1	0.0
	4.1nm,1.3s						
MOTA	Moosalm	144.77	332	iP	PKPdf	01 47 03.8	+0.4
	6.2nm,1.1s						
RETA	Reutte	144.81	332	iP	PKPdf	01 47 04.0	+0.5
	2.8nm,0.7s						
SQTA	Sankt Quirin	144.82	332	iP	PKPdf	01 47 04.0	+0.5
	5.8nm,1.2s						
FETA	Feichten	145.18	332	iP	PKPdf	01 47 04.5	+0.2
	6.4nm,1.0s						
DAVA	Damuels	145.35	333	eP	PKPab	01 47 04.7	+0.2
	5.9nm,1.1s						

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*NNC **20** 01:32:21.0±6.0, 39°.03N×69°.89E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=46.8km s-min=29.7km az=6.0*

ISC 20 01:32:36.7±3.5, **40°.0N**±0°.2×**70°.74E**±0°.08, **h10**^{km}, **n11**, σ**1^{s}.11**/15, **5C-5D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	2.26	346	Pg	Pn	01 33 13.5	-0.6
	3.9nm,0.2s						
IUG				Lg	Lg	01 33 56.6	
	72nm,0.9s						
AML	Almayashu	3.12	45	P	Pn	01 33 26.5	+0.3
	SNR=20						
KK31	Karatay Array	3.15	357	⇓Pn	Pn	01 33 26.6	+0.2
	2.2nm,0.6s,baz=188,slow=11,SNR=4.3						
KK31				⇑Pg	Pg	01 33 37.4	+0.4
	2.4nm,0.6s,baz=187,slow=14,SNR=5.1						
KK31				⇓Lg	Lg	01 34 33.2	
	5.3nm,0.5s,baz=182,slow=28,SNR=3.9						
MRKS	Merke	3.36	33	Pg	Pn	01 33 30.0	+0.7
	5.3nm,0.6s						
MRKS				Lg	Lg	01 34 25.3	
	5.9nm,0.7s						
UCH	Uchtor	3.64	50	P	Pn	01 33 34.8	+1.2
	SNR=10						
AAK	Ala-Archa	3.90	45	P	Pn	01 33 37.8	+1.1
	SNR=11						
AAK	Ala-Archa	3.90	45	⇓Pn	Pn	01 33 37.0	+0.2
	4.0nm,0.5s						
AAK				⇑Pg	Pg	01 33 49.6	-1.7
	4.8nm,0.6s						
AAK				⇑Sn	Sg	01 34 40.4	-1.3
	5.8nm,0.9s						
AAK				⇓Lg	Lg	01 34 59.8	
	8.3nm,1.1s						
KBK	Karagaybulak	4.16	48	P	Pn	01 33 41.4	+1.0
	SNR=15						
USP	Ospenovka	4.35	39	P	Pn	01 33 42.5	-0.3
	SNR=9.3						
TKM2	Tokmak 2	4.70	49	P	Pn	01 33 47.8	-0.1
	SNR=22						
TKM2	Tokmak 2	4.70	49	⇑Pn	Pn	01 33 48.0	+0.1
	8.5nm,0.6s						
TKM2				⇓Sn	Sb	01 34 58.2	+2.2
	4.0nm,0.7s						
TKM2				⇑Lg	Lg	01 35 25.1	
	5.5nm,0.8s						

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*NNC **20** 01:58:00.1±7.5, 39°.04N×69°.92E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=54.4km s-min=36.0km az=14.0*

ISC 20 01:58:18.2±3.4, **40°.0N**±0°.2×**70°.79E**±0°.09, **h10**^{km}, **n12**, σ**1^{s}.42**/15, **4C-5D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	2.18	345	Pg	Pn	01 58 53.7	-1.0
	5.2nm,0.3s						
IUG				Lg	Lg	01 59 37.3	
	54nm,0.7s						
AML	Almayashu	3.03	45	P	Pn	01 59 05.3	-1.2
	SNR=6.6						
KK31	Karatay Array	3.07	356	⇑Pg	Pb	01 59 14.1	+1.2
	0.4nm,0.2s,baz=173,slow=13,SNR=6.0						
KK31				⇑Lg	Lg	02 00 11.4	
	2.4nm,0.5s,baz=183,slow=28,SNR=3.7						
MRKS	Merke	3.27	33	Pg	Pn	01 59 10.1	+0.5
	2.0nm,0.4s						
MRKS				Lg	Lg	02 00 05.9	
	5.5nm,0.9s						
UCH	Uchtor	3.56	51	P	Pn	01 59 14.9	+1.0
	SNR=5.7						
AAK	Ala-Archa	3.81	46	P	Pn	01 59 18.3	+1.2
	SNR=6.0						
AAK	Ala-Archa	3.81	46	⇓Pn	Pn	01 59 17.7	+0.6
	2.6nm,0.5s						
AAK				⇓Pg	Pg	01 59 30.3	-0.9
	2.4nm,0.5s						
AAK				⇓Sn	Sg	02 00 19.4	-1.2
	3.4nm,0.8s						
AAK				⇓Lg	Lg	02 00 36.7	
	7.1nm,1.1s						
KBK	Karagaybulak	4.08	49	P	Pn	01 59 23.1	+2.3
	SNR=10.0						
USP	Ospenovka	4.26	40	P	Pn	01 59 23.0	-0.1
	SNR=6.9						
SGDS	Sogindy	4.46	39	Pg	Pn	01 59 27.1	+1.2
	4.1nm,0.6s						

SGDS				Lg	Lg	02 00 34.4	
	4.5nm,1.0s						
TKM2	**Tokmak 2**	**4.62**	**50**	P	**Pn**	**01 59 26.3**	**-1.9**
	SNR=12						
TKM2	**Tokmak 2**	**4.62**	**50**	⇑Pn	**Pn**	**01 59 26.2**	**-1.9**
	5.0nm,0.6s						
TKM2				⇑Sn	**Sb**	**02 00 36.0**	**+0.8**
	2.6nm,1.1s						
TKM2				⇓Lg	Lg	02 01 02.3	
	4.1nm,0.8s						

KRSC 20 02:43:09.0±2.6, **48.°29N**×**156.°57E**, **h17**^{km}±46^{km}, **ML3.7**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**3.19**	**3**	S	Sb	02 44 41.0	-2.6
MTVR	**Mutnovka**	**4.32**	**13**	P	Pn	02 44 18.4	+4.3
RUS	**Russkaya**	**4.33**	**16**	P	Pn	02 44 18.0	+4.0
RUS				S	Sb	02 45 11.8	-4.7
GRL	**Gorelyy**	**4.38**	**12**	*e*P	Pn	02 44 19.5	+4.8
KRX	**Arik**	**5.25**	**14**	P	Pn	02 44 32.5	+5.8

*THE **20** 02:45:53.6, 36.°50N×20.°29E, h29^{km}±24^{km}, ML3.0/5, Error ellipse: s-maj=28.7km s-min=2.6km az=229.0*

*ATH **20** 02:45:53.6, 36.°68N×20.°49E, h10^{km}±31^{km}, ML2.8/5, Error ellipse: s-maj=31.6km s-min=1.2km az=0.0*

*IDC **20** 02:45:54.5±3.3, 36.°93N×20.°76E, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/40, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=69.0km s-min=29.3km az=174.0*

ISC 20 02:45:54.2±1.8, **36.°71N**±0.°06×**20.°45E**±0.°05, **h16**^{km}±10^{km}, **n53**, σ**2^{s}.00**/67, **mb3.6**/3, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**1.05**	**80**	P	**Pg**	**02 46 12.9**	**-1.6**
PYL				S	**Sb**	**02 46 27.1**	**-0.5**
PYL	**PYLOS**	**1.05**	**80**	P	**Pg**	**02 46 13.0**	**-1.6**
PYL				S	**Sn**	**02 46 29.8**	**+1.2**
	422nm,0.6s						
VLMS	**Volimes, Zakyn**	**1.17**	**8**	P	**Pb**	**02 46 16.2**	**+0.1**
VLMS	**Volimes, Zakyn**	**1.17**	**8**	P	**Pb**	**02 46 16.3**	**+0.1**
ITM	**Ithomi**	**1.27**	**68**	P	**Pn**	**02 46 16.5**	**-0.8**
ITM				S	**Sb**	**02 46 33.4**	**-0.5**
ITM				AML	AML	02 46 42.2	
	comp=E,860µm,0.5s						
ITM				AML	AML	02 46 42.3	
	comp=N,818µm,0.5s						
ITM	**Ithomi**	**1.27**	**68**	P	**Pn**	**02 46 17.1**	**-0.2**
ITM				S	**Sn**	**02 46 36.9**	**+2.8**
	comp=N,420nm,0.5s						
AMT	**Artemida-Makis**	**1.30**	**51**	P	**Pb**	**02 46 18.1**	**-0.2**
AMT				AML	AML	02 46 46.2	
	comp=N,1315µm,0.8s						
AMT				AML	AML	02 46 50.1	
	comp=E,1750µm,0.5s						
AMT	**Artemida-Makis**	**1.30**	**51**	P	**Pg**	**02 46 18.9**	**-0.3**
AMT				S	**Sg**	**02 46 37.5**	**+1.4**
	comp=E,745nm,0.8s						
VLS	**Valsamata**	**1.47**	**4**	P	**Pn**	**02 46 21.1**	**+1.1**
VLS				S	**Sn**	**02 46 40.2**	**+1.3**
VLS				AML	AML	02 46 50.5	
	comp=N,583µm,0.4s						
VLS				AML	AML	02 46 52.2	
	comp=E,620µm,0.6s						
KEF3	**Kipouria, Keph**	**1.49**	**357**	P	**Pb**	**02 46 21.7**	**+0.2**
KEF4	**Livadi, Kephal**	**1.54**	**359**	P	**Pn**	**02 46 22.2**	**+1.2**
RLS	**Riolos of Patr**	**1.57**	**31**	P	**Pb**	**02 46 22.5**	**-0.3**
RLS				AML	AML	02 46 53.0	
	comp=E,254µm,0.7s						
RLS				AML	AML	02 46 59.0	
	comp=N,464µm,0.9s						
RLS	**Riolos of Patr**	**1.57**	**31**	P	**Pb**	**02 46 22.6**	**-0.3**
RLS				S	**Sg**	**02 46 44.7**	**-0.1**
	comp=N,150nm,0.8s						
DRO	**Drossia**	**1.59**	**39**	P	**Pb**	**02 46 22.7**	**-0.5**
DRO	**Drossia**	**1.59**	**39**	P	**Pb**	**02 46 22.8**	**-0.5**
AXS	**Araxos**	**1.65**	**26**	P	**Pb**	**02 46 24.1**	**-0.2**
AXS	**Araxos**	**1.65**	**26**	P	**Pb**	**02 46 23.8**	**-0.5**
TRIP	**Tripoli**	**1.67**	**60**	P	**Pb**	**02 46 24.0**	**-0.6**
TRIP				AML	AML	02 46 58.0	
	comp=N,353µm,1.1s						
TRIP				AML	AML	02 47 01.9	
	comp=E,343µm,0.6s						
TRIP	**Tripoli**	**1.67**	**60**	P	**Pn**	**02 46 23.0**	**+0.2**
TRIP				S	**Sn**	**02 46 37.0**	**-6.9**
	comp=E,182nm,0.9s						
VLX	**Vlachokerasia**	**1.68**	**66**	P	**Pb**	**02 46 23.8**	**-0.9**
FSK	**Fiskardo**	**1.75**	**3**	P	**Pn**	**02 46 25.3**	**+1.5**
KLV	**Kalavryta, Ach**	**1.90**	**45**	P	**Pb**	**02 46 27.4**	**-1.1**
KLV	**Kalavryta, Ach**	**1.90**	**45**	P	**Pb**	**02 46 27.4**	**-1.1**
EVGI	**Lefkada island**	**1.91**	**5**	P	**Pb**	**02 46 28.3**	**-0.4**
PDO	**Prodromos**	**1.97**	**17**	P	**Pb**	**02 46 29.1**	**-0.6**
VLI	**Veliai**	**2.00**	**89**	P	**Pb**	**02 46 28.9**	**-1.2**
VLI				S	**Sb**	**02 46 54.2**	**-0.6**
VLI	**Veliai**	**2.00**	**89**	P	**Pn**	**02 46 28.2**	**+0.9**
NYDR	**Nydri-Lefkada**	**2.01**	**6**	P	**Pn**	**02 46 29.2**	**+1.8**
EFP	**Efpalio**	**2.06**	**34**	P	**Pb**	**02 46 30.6**	**-0.7**
LKD2	**Lefkada island**	**2.08**	**4**	P	**Pb**	**02 46 30.7**	**-0.8**
TRIZ	**Trizonia**	**2.09**	**38**	P	**Pb**	**02 46 31.3**	**-0.5**
SERG	**Sergoula**	**2.12**	**36**	P	**Pb**	**02 46 31.7**	**-0.6**
KALE	**Kalithea**	**2.15**	**38**	P	**Pb**	**02 46 32.1**	**-0.6**
KTHA	**Kythira Island**	**2.15**	**101**	P	**Pb**	**02 46 31.1**	**-1.7**
THAL	**Thalero**	**2.20**	**52**	P	**Pn**	**02 46 31.8**	**+1.7**
ANX	**Ano Chora**	**2.21**	**31**	P	**Pb**	**02 46 32.9**	**-1.0**
EVR	**Evrytania**	**2.45**	**26**	P	**Pb**	**02 46 36.8**	**-1.2**
VAE	**Valguarnera**	**4.89**	**281**	Pn	Pn	02 47 12.8	+5.8
	comp=E,1.3nm,0.3s,baz=142,slow=6.4,SNR=5.0						
DBRK	**Dubrovnik**	**6.21**	**344**	*e*Pn	**Pn**	**02 47 25.5**	**+0.3**
DBRK				Sn	**Sn**	**02 48 31.8**	**-3.9**
STON	**Ston**	**6.50**	**342**	*e*Pn	**Pn**	**02 47 29.3**	**+0.1**
MAKA	**Makarska**	**7.07**	**339**	*e*Pn	**Pn**	**02 47 38.5**	**+1.5**
HVAR	**Hvar**	**7.15**	**336**	*e*Pn	**Pn**	**02 47 37.9**	**-0.2**
RICI	**Ricice**	**7.23**	**340**	*e*Pn	**Pn**	**02 47 39.5**	**+0.3**
RICI				Sn	**Sn**	**02 48 56.1**	**-4.9**
ZIRJ	**Zirje**	**7.85**	**334**	*e*Pn	**Pn**	**02 47 47.7**	**+0.1**
ZIRJ				Sn	**Sn**	**02 49 10.0**	**-6.0**
KIJV	**Kijevo**	**7.91**	**338**	*e*Pn	**Pn**	**02 47 49.4**	**+0.9**
KIJV				Sn	**Sn**	**02 49 14.0**	**-3.7**
MORI	**Morici**	**8.01**	**335**	*e*Pn	**Pn**	**02 47 51.3**	**+1.5**
DUGI	**Dugi Otok**	**8.35**	**332**	*e*Pn	**Pn**	**02 47 55.9**	**+1.3**
DUGI				Sn	**Sn**	**02 49 23.9**	**-4.7**
UDBI	**Udbina**	**8.58**	**337**	*e*Pn	**Pn**	**02 47 59.1**	**+1.3**
UDBI				Sn	**Sn**	**02 49 30.1**	**-4.0**
KBZ	**Khabaz**	**18.49**	**61**	P	**Pn**	**02 50 12.7**	**+3.1**
	comp=E,0.0nm,0.3s,baz=248,slow=4.5,SNR=5.0						
ESDC	**Sonseca Array**	**19.40**	**286**	P	**Pn**	**02 50 24.1**	**+3.3**
	comp=E,0.1nm,0.3s,baz=98,slow=15,SNR=2.2						
HFS	**Hagfors**	**23.84**	**352**	P	**P**	**02 51 07.5**	**+1.1**
	comp=E,4.0nm,0.9s,baz=171,slow=9.9,SNR=2.6						
NOA	**NORSAR Array B**	**25.04**	**349**	P	**P**	**02 51 18.3**	**+0.9**
	comp=E,0.8nm,0.8s,baz=158,slow=8.9,SNR=4.5						
MKAR	**Makanchi Array**	**46.13**	**57**	P	**P**	**02 54 17.9**	**+0.2**
	comp=E,0.4nm,0.5s,baz=274,slow=6.0,SNR=5.8						

*ISK **20** 02:46:41.8, 35.°36N×29.°63E, h20^{km}, ML2.9/20*

*NIC **20** 02:46:43.8±0.0, 35.°38N×29.°56E, h25^{km}±2^{km}, Ml3.0/4*

*DDA **20** 02:46:53.0, 35.°99N×29.°62E, h26^{km}, ML2.2*

ISC 20 02:46:43.5±1.5, **35.°45N**±0.°04×**29.°59E**±0.°03, **h24**^{km}±15^{km}, **n59**, σ**1^{s}.74**/77, **2C-2D**, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.70**	**359**	⇑P	**Pb**	**02 46 58.8**	**+1.8**
KSL				S	**Sn**	**02 47 10.9**	**+3.1**
AKAS	**Kas**	**0.78**	**1**	PG	**Pn**	**02 46 59.2**	**+0.1**
AKAS	**Kas**	**0.78**	**1**	*i* P	**Pn**	**02 46 59.4**	**+0.4**
AKAS				*i* S	**Sb**	**02 47 04.0**	**-4.7**
AKAS				IAML		02 47 22.0	
	comp=N,173nm,0.5s						
FETY	**Fethiye**	**1.25**	**341**	PN	**Pn**	**02 47 06.5**	**+1.1**
ELL	**Elmali**	**1.32**	**11**	PN	**Pn**	**02 47 07.1**	**+0.6**
ELL	**Elmali**	**1.32**	**11**	P	**Pn**	**02 47 07.5**	**+1.1**
ARG	**Arkhangelos**	**1.41**	**303**	PN	**Pn**	**02 47 08.4**	**+0.7**
DALY	**Dalyan (Mula)**	**1.56**	**331**	PN	**Pn**	**02 47 10.5**	**+0.9**
DALY	**Dalyan (Mula)**	**1.56**	**331**	*i* P	**Pb**	**02 47 14.2**	**+2.6**
DALY				*i* S	**Sn**	**02 47 30.7**	**+1.6**
DALY				IAML		02 47 36.0	
	comp=E,64nm,0.3s						
ANTB	**Antalya**	**1.68**	**30**	PN	**Pn**	**02 47 11.8**	**+0.5**
CAEL	**Denizli, Camel**	**1.68**	**353**	*i* P	Pb	02 47 21.1	+7.3
TURN	**Turunc**	**1.71**	**321**	PN	**Pn**	**02 47 13.1**	**+1.4**
TURN	**Turunc**	**1.71**	**321**	*i* P	**Pn**	**02 47 13.3**	**+1.6**
TURN				*i* S	**Sn**	**02 47 27.8**	**-5.0**
GOLH	**Golhisar**	**1.78**	**359**	*i* P	**Pn**	**02 47 14.4**	**+1.6**
YER	**Yerkesik**	**1.98**	**328**	PN	**Pn**	**02 47 16.6**	**+1.0**
KARP	**Karpathos**	**1.99**	**273**	PN	**Pn**	**02 47 15.9**	**+0.3**
KARP	**Karpathos**	**1.99**	**273**	P	**Pn**	**02 47 15.5**	**-0.1**
BUCA	**Burdur, Bucak-**	**2.03**	**22**	*e*P	**Pb**	**02 47 20.3**	**+0.6**
BUCA				*i* S	**Sn**	**02 47 41.4**	**+0.6**
MULA	**Mugla, Merkez-**	**2.07**	**331**	*e*P	**Pb**	**02 47 22.7**	**+2.3**
MULA				*i* S	**Sn**	**02 47 40.1**	**-1.8**
MULA				IAML		02 47 45.0	
	comp=E,16nm,0.7s						
TAVA	**DENIZLI_Tavas**	**2.08**	**345**	*i* P	**Pb**	**02 47 20.3**	**-0.3**
TAVA				*i* S	**Sn**	**02 47 40.6**	**-1.6**
KEPZ	**Antalya-Kepez**	**2.18**	**48**	*i* P	**Pn**	**02 47 19.0**	**+0.8**
KEPZ				*i* S	**Sn**	**02 47 41.9**	**-2.6**
KEPZ				IAML		02 47 50.0	
	comp=N,17nm,0.8s						
BRDR	**BURDUR-Merkez**	**2.27**	**9**	*i* P	**Pb**	**02 47 23.4**	**-0.4**
AKMS	**Akamas**	**2.29**	**100**	⇓P	**Pn**	**02 47 20.1**	**+0.4**
AKMS				AML	AML	02 47 51.8	
	comp=N,0.2nm,0.5s						
AKMS				AML	AML	02 48 01.7	
	comp=N,0.2nm,0.3s						
GAZI	**Gazipasa**	**2.35**	**70**	PN	**Pn**	**02 47 20.2**	**-0.3**
GAZI				SN	**Sn**	**02 47 47.9**	**-0.7**
GAZI	**Gazipasa**	**2.35**	**70**	*i* P	**Pn**	**02 47 20.8**	**+0.3**
GAZI				*i* S	**Sn**	**02 47 44.4**	**-4.1**
GAZI				IAML		02 47 50.0	
	comp=E,20nm,0.3s						
GAZI				IAML		02 47 50.0	
	comp=N,26nm,0.4s						
MLSB	**Milas**	**2.35**	**322**	PN	**Pn**	**02 47 21.8**	**+1.2**
BDRM	**Kayabasi**	**2.37**	**313**	*i* P	**Pb**	**02 47 28.2**	**+2.8**
BDRM				*i* S	**Sn**	**02 47 45.9**	**-3.1**
BDRM				IAML		02 47 48.0	
	comp=N,17nm,0.8s						
OSC1	**CSNet OBS 1**	**2.39**	**144**	P	**Pn**	**02 47 20.8**	**-0.3**
OSC1				S	**Sn**	**02 47 49.8**	**+0.1**
BODT	**Bodrum**	**2.45**	**312**	PN	**Pn**	**02 47 21.9**	**0.0**
ALFC	**Alefka**	**2.48**	**96**	P	**Pn**	**02 47 22.8**	**+0.5**
ALFC				AML	AML	02 47 55.2	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	02 47 56.5	
	comp=N,0.2nm,0.3s						
NATA	**Nata**	**2.53**	**105**	⇑P	**Pn**	**02 47 23.6**	**+0.5**
NATA				AML	AML	02 47 56.9	
	comp=N,0.4nm,0.5s						
NATA				AML	AML	02 47 57.5	
	comp=N,0.4nm,1.0s						
SEDI	**Konya, Seydise**	**2.65**	**41**	*i* P	**Pn**	**02 47 26.4**	**+1.7**
SEDI				*i* S	**Sn**	**02 47 55.8**	**-0.4**
SEDI				IAML		02 48 01.0	
	comp=E,14nm,0.5s						
SEDI				IAML		02 48 03.0	
	comp=N,20nm,0.5s						
BAGO	**Egridir - ISPA**	**2.71**	**20**	*i* P	**Pn**	**02 47 28.0**	**+2.4**
LEF	**Lefka**	**2.72**	**96**	PN	**Pn**	**02 47 24.7**	**-0.9**
ZKR	**Zakros**	**2.78**	**264**	PN	**Pn**	**02 47 27.1**	**+0.6**
SZAC	**Souni**	**2.79**	**104**	P	**Pn**	**02 47 27.0**	**+0.4**
SZAC				AML	AML	02 48 01.4	
	comp=N,0.1nm,0.3s						
SZAC				AML	AML	02 48 01.4	
	comp=N,0.1nm,0.3s						
SZAC				S	**Sn**	**02 48 01.8**	**+2.4**
SZAC				AML	AML	02 48 05.0	
	comp=N,0.1nm,0.2s						
SZAC				AML	AML	02 48 05.0	
	comp=N,0.1nm,0.2s						
GCAM	**G?zelcaml?**	**2.94**	**320**	PN	**Pn**	**02 47 30.2**	**+1.6**
GCAM	**G?zelcaml?**	**2.94**	**320**	*i* P	**Pn**	**02 47 31.7**	**+3.1**
GCAM				*i* S	**Sn**	**02 47 59.2**	**-3.9**
GCAM				IAML		02 48 07.0	
	comp=E,21nm,0.4s						
GCAM				IAML		02 48 08.0	
	comp=N,30nm,0.4s						
ERMK	**Ermenek**	**2.94**	**65**	*i* P	**Pn**	**02 47 31.2**	**+2.3**
ERMK				IAML		02 48 08.0	
	comp=E,35nm,0.4s						
ERMK				IAML		02 48 11.0	
	comp=N,29nm,0.4s						
TEKE	**Tekeli-Mersin**	**2.94**	**75**	PN	**Pn**	**02 47 28.7**	**0.0**
ASGA	**Asgata**	**3.07**	**101**	P	**Pn**	**02 47 31.1**	**+0.6**
BERE	**Bereket-Mersin**	**3.08**	**72**	PN	**Pn**	**02 47 30.8**	**+0.1**
CSS	**Mathiatis**	**3.10**	**98**	PN	**Pn**	**02 47 30.6**	**-0.3**
CSS	**Mathiatis**	**3.10**	**98**	⇓P	**Pn**	**02 47 32.2**	**+1.3**
YVAC	**Isparta, Yalva**	**3.11**	**25**	*i* P	**Pn**	**02 47 33.7**	**+2.7**
YVAC				*i* S	**Sn**	**02 48 06.0**	**-1.5**
DOGA	**KONYA_Doganhis**	**3.13**	**32**	*i* P	**Pn**	**02 47 34.0**	**+2.6**
DOGA				*i* S	**Sn**	**02 48 06.9**	**-1.1**
DOGA				IAML		02 48 17.0	
	comp=N,13nm,0.7s						
SHUT	**Suhut-Afyon**	**3.19**	**14**	PN	**Pn**	**02 47 33.4**	**+1.2**
KKBE	**Karaman, Kazim**	**3.23**	**56**	*i* P	**Pn**	**02 47 33.6**	**+0.9**
KKBE				*i* S	**Sn**	**02 48 11.9**	**+1.5**
KKBE				IAML		02 48 16.0	
	comp=E,12nm,0.7s						
KKBE				IAML		02 48 17.0	
	comp=N,9.3nm,1.4s						
OSC2	**CSNet OBS 4**	**3.25**	**136**	P	**Pn**	**02 47 33.2**	**+0.4**
OSC2				S	**Sn**	**02 48 10.6**	**0.0**
TEVE	**Tevekalti-Mers**	**3.27**	**71**	PN	**Pn**	**02 47 33.4**	**+0.1**
AKKU	**Akkuyu-Mersin**	**3.29**	**76**	PN	**Pn**	**02 47 33.6**	**+0.1**
MVOU	**Mavrovouni**	**3.33**	**96**	P	**Pn**	**02 47 35.1**	**+1.0**
KONT	**Konya--Tatoy**	**3.34**	**41**	PN	**Pn**	**02 47 35.3**	**+1.2**
KONT	**Konya--Tatoy**	**3.34**	**41**	*i* P	**Pn**	**02 47 35.9**	**+1.8**
KONT				IAML		02 48 17.0	
	comp=E,21nm,1.4s						
IKL	**Isikli**	**3.42**	**76**	PN	**Pn**	**02 47 35.6**	**+0.4**
KEBE	**Keben-Mersin**	**3.49**	**72**	PN	**Pn**	**02 47 36.9**	**+0.7**
APE	**Apeiranthos**	**3.66**	**297**	PN	**Pn**	**02 47 40.0**	**+1.5**
KIZK	**Mersin**	**3.83**	**73**	PN	**Pn**	**02 47 41.5**	**+0.6**
CHBY	**Cihanbeyli**	**4.09**	**39**	PN	**Pn**	**02 47 45.9**	**+1.4**

*IDC **20** 02:50:17.9±0.8, 6.°71S×155.°23E, h27^{km}±4^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.0/27, mbtmp4.2/11, ML3.2/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=30.6km s-min=15.8km az=132.0*

*NEIC **20** 02:50:17.9±0.5, 6.°9S±0.°2×155.°3E±0.°1, h36^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=25.7km s-min=14.2km az=154.0*

ISC 20 02:50:17.8±0.6, **6.°9S**±0.°1×**155.°4E**±0.°1, **h35**^{km}, **n45**, σ**0^{s}.85**/52, **mb4.6**/21, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.12**	**120**	LR	LR	02 53 49.7	
	comp=Z,376nm,19.5s,baz=292,slow=39						
PMG	**Port Moresby**	**8.56**	**253**	Pn	**Pn**	**02 52 20.4**	**+1.1**
	4.0nm,0.3s,baz=22,slow=6.6,SNR=3.7						
PMG				Sn	**Sn**	**02 53 57.3**	**+2.6**
	4.0nm,0.3s,baz=289,slow=15,SNR=4.1						
PMG				LR	LR	02 55 42.6	
	comp=Z,128nm,18.1s,baz=64,slow=38						
PMG	**Port Moresby**	**8.56**	**253**	Pn	**Pn**	**02 52 18.3**	**-1.0**
PMG				Sn	**Sn**	**02 53 54.8**	**+0.1**
CTA	**Charters Tower**	**15.84**	**213**	Pn	**P**	**02 54 00.9**	**-0.9**
	0.2nm,0.3s,baz=20,slow=5.0,SNR=4.1						
CTAO	**Charters Tower**	**15.84**	**213**	Pn	**Pn**	**02 53 58.0**	**-0.4**
CTAO				IAmb	IAmb	02 54 06.0	
	comp=Z,11nm,0.9s						
WR0	**Warramunga Arr**	**24.07**	**235**	P	**P**	**02 55 29.7**	**-0.5**
WB0	**Warramunga Arr**	**24.09**	**236**	P	**P**	**02 55 29.7**	**-0.7**
WB0				IAmb	IAmb	02 55 47.1	
	comp=Z,3.9nm,0.7s						
WB2	**Warramunga Arr**	**24.21**	**236**	P	**P**	**02 55 32.0**	**+0.6**
WB2				IAmb	IAmb	02 55 34.5	
	comp=Z,4.3nm,0.7s						
WB2				PcP	**PcP**	**02 59 11.8**	**+0.2**
WRA	**Warramunga Arr**	**24.22**	**236**	P	**P**	**02 55 31.5**	**0.0**
	comp=Z,2.6nm,0.6s,baz=60,slow=9.1,SNR=22						
WRA				pP	**pP**	**02 55 40.5**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=58,slow=9.7,SNR=9.9						
WRA				PcP	**PcP**	**02 59 13.1**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=60,slow=2.3,SNR=8.8						
WRA	**Warramunga Arr**	**24.22**	**236**	P	**P**	**02 55 31.1**	**-0.4**
WRA				PcP	**PcP**	**02 59 12.1**	**+0.4**
AS31	**Alice Springs**	**26.55**	**229**	P	**P**	**02 55 52.0**	**-0.7**
ASAR	**Alice Springs**	**26.56**	**229**	P	**P**	**02 55 53.0**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=62,slow=9.2,SNR=20						
ASAR				pP	**pP**	**02 56 03.0**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=58,slow=9.0,SNR=7.0						
PETK	**Petropavlovsk-**	**59.82**	**2**	P	**P**	**03 00 20.3**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=148,slow=8.7,SNR=4.5						
PETK	**Petropavlovsk-**	**59.82**	**2**	P	**P**	**03 00 19.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**61.14**	**295**	P	**P**	**03 00 29.6**	**+0.3**
	comp=Z,7.2nm,0.8s,baz=118,slow=5.2,SNR=25						
CMAR	**Chiang Mai Arr**	**61.14**	**295**	P	**P**	**03 00 28.5**	**-0.8**
SONM	**Songino Array**	**69.50**	**327**	P	**P**	**03 01 22.4**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=146,slow=5.5,SNR=8.5						
SONM	**Songino Array**	**69.50**	**327**	P	**P**	**03 01 22.3**	**-0.7**
TAPN	**Taplejung**	**73.73**	**301**	*e*P	**P**	**03 01 49.3**	**+0.2**
	comp=Z,12nm,0.7s						
ODAN	**Odare**	**73.86**	**300**	*e*P	**P**	**03 01 49.6**	**-0.2**
	comp=Z,25nm,0.6s						
GUN	**Gumba**	**75.44**	**301**	*e*P	**P**	**03 01 58.9**	**-0.2**
	comp=Z,22nm,0.7s						
PKI	**Pulchoki**	**75.75**	**301**	*e*P	**P**	**03 02 00.4**	**-0.5**
	comp=Z,7.8nm,0.6s						
PKIN	**Phulchoki**	**75.77**	**301**	*e*P	**P**	**03 02 00.4**	**-0.5**
	comp=Z,6.9nm,0.5s						
DMN	**Daman**	**76.02**	**301**	*e*P	**P**	**03 02 02.2**	**-0.1**
	comp=Z,20nm,0.7s						
GKN	**Gorkha**	**76.53**	**301**	*e*P	**P**	**03 02 04.6**	**-0.5**
	comp=Z,14nm,0.8s						
KOLN	**Koldanda**	**77.35**	**300**	*e*P	**P**	**03 02 09.1**	**-0.7**
	comp=Z,11nm,0.8s						
DANN	**Dangsing**	**77.36**	**301**	*e*P	**P**	**03 02 08.8**	**-1.1**
	comp=Z,6.3nm,0.5s						
IMAR	**Indian Mountai**	**81.51**	**19**	P	**P**	**03 02 32.1**	**+0.8**
ILAR	**Eielson Array**	**83.13**	**21**	P	**P**	**03 02 40.0**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=246,slow=5.5,SNR=11						
ILAR	**Eielson Array**	**83.13**	**21**	P	**P**	**03 02 40.5**	**+0.6**
MK31	**Makanchi Array**	**83.63**	**319**	P	**P**	**03 02 42.2**	**-0.6**
MK31				IAmb	IAmb	03 02 59.3	
	comp=Z,1.6nm,1.1s						
MKAR	**Makanchi Array**	**83.63**	**319**	P	**P**	**03 02 41.8**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=106,slow=5.0,SNR=11						
MKAR	**Makanchi Array**	**83.63**	**319**	P	**P**	**03 02 42.4**	**-0.5**
NVAR	**Mina Array Bea**	**91.33**	**52**	P	**P**	**03 03 22.7**	**+2.2**
	comp=Z,1.0nm,0.8s,baz=260,slow=5.9,SNR=5.8						
NVAR	**Mina Array Bea**	**91.33**	**52**	P	**P**	**03 03 20.1**	**-0.4**
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**03 03 42.5**	**+1.1**
	comp=Z,2.6nm,1.0s,baz=262,slow=4.2,SNR=18						
YKA				pP	**pP**	**03 03 51.9**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=265,slow=4.3,SNR=10						
GEYT	**Alibeck**	**99.97**	**307**	LR	LR	03 49 38.0	
	comp=Z,28nm,21.4s,baz=245,slow=36						
GERES	**GERESS Array B**	**127.20**	**329**	PKP	**PKiKP**	**03 09 19.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=84,slow=4.2,SNR=4.0						
GERES	**GERESS Array B**	**127.20**	**329**		**PKPdf**	**03 09 17.6**	**-1.2**
SDV	**Santo Domingo**	**134.35**	**84**	PKP	**PKiKP**	**03 09 35.5**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=11,slow=17,SNR=3.7						
BDFB	**Brasilia**	**147.73**	**134**	PKPbc	**PKiKP**	**03 10 01.8**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=232,slow=4.6,SNR=7.8						
BDFB	**Brasilia**	**147.73**	**134**		**PKPbc**	**03 10 00.3**	**+0.3**
TOA0	**Torodi Ar. Sit**	**153.42**	**286**		**PKPbc**	**03 10 13.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**153.42**	**286**	PKPbc	**PKPbc**	**03 10 11.9**	**-1.7**
	comp=Z,1.5nm,0.6s,baz=85,slow=2.0,SNR=5.8						
TORD				pPKPbc	**sPKPdf**	**03 10 21.8**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=48,slow=2.3,SNR=8.5						
TORD	**Torodi Ar. Bea**	**153.42**	**286**	PKPbc	**PKPbc**	**03 10 12.8**	**-0.8**

*BJI **20** 03:02:12.0±0.0, 5.°63N×127.°26E, h111^{km}, mB5.1/46, mb5.2/68*

*NEIC **20** 03:02:14.9±0.8, 5.°87N±0.°07×127.°05E±0.°07, h104^{km}±3^{km}, mb5.0/148, Error ellipse: s-maj=10.0km s-min=9.3km az=126.0*

*GCMT **20** 03:02:14.9±0.2, 5.°83N±0.°01×127.°06E±0.°01, h87^{km}±1^{km}, MW5.1/121, Moment Tensor Solution. s87,c107; s121,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.65±.12; M$_{\theta\theta}$0.20±.13; M$_{\phi\phi}$-4.85±.15; M$_{r\theta}$0.48±.09; M$_{\theta\phi}$-1.96±.14; M$_{\phi r}$2.88±.11; Best double couple: M$_0$5.86900×10^{16} NP1:φ$_s$206.00000°, δ31.00000°, λ101.00000°. NP2:φ$_s$13.00000°, δ60.00000°, λ84.00000°. Principal axes: T 5.4560, Plg74.0000°, Azm267.0000°; N 0.8300, Plg5.0000°, Azm16.0000°; P -6.2820, Plg15.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MAN **20** 03:02:14.6, 5.°84N×127.°00E, h51^{km}, MS5.0*

*DJA **20** 03:02:15.6±0.4, 6°N±3°×12°7E±°, h95^{km}±3^{km}, M5.0/67, mb5.2/67, mB5.5/37, MLv5.5/8, Mw(mB)5.0/37, MwMwp4.8/5, Mwp5.2/5*

*IDC **20** 03:02:16.5±0.6, 5.°98N×127.°14E, h111^{km}±4^{km}, mb4.5/28, mb1 4.6/31, mb1mx4.6/34, mbtmp4.9/31, MS3.8/16, Ms1 3.8/16, ms1mx3.7/26, Error ellipse: s-maj=10.3km s-min=6.8km az=61.0*

*KLM **20** 03:02:17, 5.°94N×126.°92E, h110^{km}, mb5.2*

*NOU **20** 03:02:17.4, 5.°88N×127.°11E, h110^{km}, ML4.7, Philippine Islands Region*

ISC 20 03:02:16.1±0.4, **5.°89N**±0.°03×**127.°06E**±0.°04, **h112**^{km}±2^{km}, **h112**^{km}**:pP-P**, **n515**, σ**1^{s}.61**/521, **mb5.0**/163, **21C-22D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.32**	**323**	*e*P	**Pn**	**03 02 36.9**	**-4.1**
MATI				*e*S	**Sn**	**03 02 54.9**	**-4.9**
DDMP	**Don Marcelino,**	**1.36**	**279**	*e*P	**Pn**	**03 02 37.5**	**-3.9**
DDMP				*e*S	**Sn**	**03 02 54.0**	**-6.6**
DAV	**Davao City (W)**	**1.89**	**309**	P	**Pn**	**03 02 47.3**	**-0.5**
	908nm,0.3s,baz=111,slow=1.8,SNR=206						
DAV				S	**Sn**	**03 03 13.1**	**+1.2**
	906nm,0.3s,baz=258,slow=23,SNR=12						
DAV				LR	LR	03 03 23.6	
	comp=Z,4µm,19.4s,baz=172,slow=35						
KCP	**Kidapawan**	**2.25**	**300**	⇓*e*P	**Pn**	**03 02 51.2**	**-1.4**
KCP				*i* S	**Sn**	**03 03 21.0**	**+0.6**
SKMP	**Bagumbayan, Su**	**2.58**	**284**	*e*P	**Pn**	**03 02 53.5**	**-3.2**
SKMP				*e*S	**Sn**	**03 03 21.8**	**-6.2**
SGSI	**Sangihe**	**2.67**	**215**	P	**Pn**	**03 02 57.7**	**-0.2**
BUKP	**Musuan**	**2.80**	**315**	*e*P	**Pn**	**03 02 57.7**	**-2.0**
BUKP				*e*S	**Sn**	**03 03 30.1**	**-3.1**
BUTP	**Butuan**	**3.38**	**335**	*e*P	**Pn**	**03 03 07.2**	**-0.1**
BUTP				*e*S	**Sn**	**03 03 46.1**	**-0.6**
CGP	**Cagayan de Oro**	**3.47**	**317**	⇓*e*P	**Pn**	**03 03 08.7**	**+0.2**
CGP				*e*S	**Sn**	**03 03 48.8**	**0.0**
GLSP	**General Luna,**	**3.98**	**347**	*e*P	**Pn**	**03 03 12.1**	**-3.2**
GLSP				*e*S	**Sn**	**03 03 55.1**	**-6.0**
PAGZ	**Pagadian**	**4.14**	**298**	*e*P	**Pn**	**03 03 15.4**	**-2.0**
MSLP	**Maasin**	**4.75**	**333**	*e*P	**Pn**	**03 03 23.6**	**-2.1**
ZCP	**Zamboanga City**	**5.07**	**282**	⇓*i*P	**Pn**	**03 03 30.0**	**+0.1**
TNTI	**Ternate**	**5.09**	**177**	Pn	**Pn**	**03 03 28.6**	**-1.7**
TNTI				Sn	**Sn**	**03 04 27.4**	**-0.6**
TNTI	**Ternate**	**5.09**	**177**	P	**Pn**	**03 03 30.1**	**-0.2**
	2.7nm2µm6µm263nm,0.5s						
LLP	**Lapu-Lapu**	**5.36**	**325**	⇑*e*P	**Pn**	**03 03 33.6**	**-0.3**
LLP				*e*S	**Sn**	**03 04 35.2**	**+0.7**
OCLP	**Ormoc**	**5.67**	**335**	*e*P	**Pn**	**03 03 38.5**	**+0.4**
CNOP	**Candoni, Negro**	**5.88**	**312**	*e*P	**Pn**	**03 03 41.2**	**+0.4**
KMSI	**Cibinong**	**6.11**	**210**	P	**Pn**	**03 03 44.4**	**+0.3**
	2.8nm458nm,0.8s						
GTOI	**Gorontalo**	**6.60**	**218**	P	**Pn**	**03 03 50.1**	**-0.6**
	0.9nm3µm215nm,0.6s						
MRSI	**Marisa**	**7.42**	**224**	P	**Pn**	**03 04 00.7**	**-1.1**
	2.1nm6µm606nm,0.7s						
TOLI2	**Tolitoli**	**7.86**	**233**	Pn	**Pn**	**03 04 06.5**	**-1.3**
TOLI2				Sn	**Sn**	**03 05 32.8**	**-2.4**
SWI	**Sorong**	**7.91**	**148**	P	**Pn**	**03 04 09.1**	**+0.7**
	6µm468nm,0.6s						
SIJI	**Sorong**	**7.92**	**148**	P	**Pn**	**03 04 08.2**	**-0.3**
	54nm,0.3s,baz=353,slow=9.2,SNR=127						
SIJI				S	**Sn**	**03 05 30.3**	**-6.3**
	22nm,0.3s,baz=353,slow=24,SNR=10						
SIJI				LR	LR	03 07 49.7	
	comp=Z,578nm,19.1s,baz=302,slow=42						
SANI	**Sanana**	**7.96**	**188**	P	Pn	03 04 02.5	-6.6
LUWI	**Luwuk**	**8.11**	**212**	Pn	**Pn**	**03 04 10.0**	**-1.2**
LUWI	**Luwuk**	**8.11**	**212**	P	**Pn**	**03 04 13.2**	**+2.0**
	7µm403nm,0.9s						
MYLDM	**Lahad Datu**	**8.55**	**266**	Pn	**Pn**	**03 04 16.1**	**-1.1**
APSI	**Ampana**	**8.65**	**219**	P	**Pn**	**03 04 21.3**	**+2.8**
	3µm222nm,1.3s						
MPSI	**Mapaga**	**9.03**	**233**	P	**Pn**	**03 04 23.0**	**-0.7**
	2µm880nm40nm,0.6s						
NLAI	**Namlea**	**9.07**	**180**	P	**Pn**	**03 04 21.6**	**-2.6**
	4µm118nm,0.4s						
MSAI	**Masohi**	**9.36**	**168**	P	**Pn**	**03 04 32.2**	**+4.1**

	925nm19nm,1.2s						
LQP	**Lukban**	**9.81**	**327**	⇑*e*P	**Pn**	**03 04 34.8**	**+0.3**
TGY	**Tagaytay City**	**10.15**	**324**	LR	LR	03 09 29.8	
	comp=Z,716nm,18.8s,baz=151,slow=43						
FAKI	**Fak Fak**	**10.17**	**149**	Pn	**Pn**	**03 04 37.4**	**-1.7**
FAKI	**Fak Fak**	**10.17**	**149**	P	**Pn**	**03 04 39.3**	**+0.2**
	2μm142nm,0.7s						
SPMM	**Sapulut**	**10.62**	**264**	P	Pn	03 05 00.0	+15
KKM	**Kota Kinabalu**	**10.79**	**271**	Pn	**Pn**	**03 04 46.4**	**-1.2**
BAKI	**Biak**	**11.45**	**128**	P	**Pn**	**03 04 59.4**	**+3.1**
	7μm621nm,1.1s						
TTSI	**Tana Toraja**	**11.45**	**219**	P	**Pn**	**03 04 56.5**	**+0.1**
	90nm,0.7s						
SPSI	**Sidrap Palu**	**12.20**	**217**	P	**Pn**	**03 05 05.1**	**-1.2**
	2μm56nm,0.6s						
BNSI	**Bone**	**12.36**	**214**	P	**Pn**	**03 05 08.4**	**0.0**
	1μm47nm,0.6s						
BKB	**Balikpapan**	**12.39**	**235**		**Pn**	**03 05 06.7**	**-2.1**
BKB	**Balikpapan**	**12.39**	**235**	P	**Pn**	**03 05 11.6**	**+2.8**
	294nm,1.2s						
CVP	**Callao Caves**	**12.81**	**337**	⇓*e*P	**P**	**03 05 21.7**	**+0.9**
KAPI	**Kappang**	**13.06**	**214**	P	**Pn**	**03 05 16.9**	**-0.7**
	4.6nm,0.3s,baz=13,slow=9.5,SNR=31						
KAPI	**Kappang**	**13.06**	**214**	Pn	**Pn**	**03 05 16.6**	**-1.0**
BKSI	**Bulukumba**	**13.12**	**212**	P	**Pn**	**03 05 17.3**	**-1.0**
	1μm29nm,0.7s						
BSSI	**Bau Bau, Buton**	**13.63**	**209**	P	**P**	**03 05 34.1**	**+4.1**
MTKI	**Muara Teweh, K**	**13.92**	**241**	P	**P**	**03 05 34.7**	**+1.6**
	66nm,0.4s						
KBKI	**Kotabaru**	**14.20**	**230**	P	**P**	**03 05 36.6**	**+0.3**
	55nm,0.7s						
SBUM	**Sibu**	**15.19**	**258**	Pn	**Pn**	**03 05 44.2**	**-0.7**
MMRI	**Maumere**	**15.21**	**198**	Pn	**Pn**	**03 05 44.2**	**-0.9**
MMRI				IAmb	IAmb	03 05 58.5	
	comp=Z,79nm,0.6s						
MMRI	**Maumere**	**15.21**	**198**	P	P	03 05 55.2	+7.7
BBKI	**Banjar Baru**	**15.34**	**233**	P	**P**	**03 05 52.8**	**+3.9**
	comp=Z,4μmcomp=Z,64nm,1.5s						
EDFI	**Ende, Flores**	**15.50**	**200**	P	**P**	**03 05 53.4**	**+2.6**
	comp=Z,794nmcomp=Z,38nm,0.6s						
GENI	**Genyem**	**15.56**	**122**	P	**P**	**03 05 56.2**	**+4.8**
SOEI	**Soe**	**15.79**	**190**	Pn	**Pn**	**03 05 51.1**	**-1.3**
SOEI				IAmb	IAmb	03 06 08.3	
	comp=Z,76nm,0.7s						
SOEI	**Soe**	**15.79**	**190**	P	**P**	**03 05 58.1**	**+4.1**
	comp=Z,1μmcomp=Z,102nm,0.7s						
JAY	**Jayapura**	**15.98**	**121**	P	**P**	**03 05 55.4**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=259,slow=6.3,SNR=5.5						
BATI	**Baumata**	**16.34**	**192**	P	**P**	**03 06 01.6**	**+1.5**
	comp=Z,18nm,0.3s,baz=192,slow=0.2,SNR=7.4						
BATI	**Baumata**	**16.34**	**192**	P	P	03 06 10.4	+10
WBSI	**Waikabubak, Su**	**17.22**	**206**	P	**Pn**	**03 06 10.1**	**+0.2**
	comp=Z,1μmcomp=Z,93nm,0.7s						
KSM	**Kuching**	**17.28**	**256**	P	**P**	**03 06 10.2**	**-0.3**
KSM				IAmb	IAmb	03 06 13.0	
	comp=Z,78nm,0.7s						
KSM	**Kuching**	**17.28**	**256**	P	**Pn**	**03 06 12.0**	**+1.3**
PLAI	**Plampang**	**17.30**	**212**	P	**Pn**	**03 06 11.7**	**+0.8**
	comp=Z,965nmcomp=Z,75nm,0.8s						
TPUB	**Ta-pu**	**18.39**	**341**	P	**P**	**03 06 20.8**	**-1.8**
TPUB				IAmb	IAmb	03 06 24.9	
	comp=Z,47nm,0.8s						
SSLB	**Suanglung**	**18.74**	**342**	P	**P**	**03 06 25.5**	**-0.9**
SSLB				IAmb	IAmb	03 06 31.8	
	comp=Z,50nm,0.7s						
MTN	**Manton Dam**	**19.04**	**168**	P	**P**	**03 06 30.1**	**+0.4**
	baz=19,SNR=28						
JAGI	**Jajag, Banyuwa**	**19.21**	**222**		**P**	**03 06 31.4**	**-0.2**
KDU	**Kakadu**	**19.22**	**164**	P	**Pn**	**03 06 32.7**	**-1.1**
	baz=19,SNR=22						
DLV	**T Lat**	**19.31**	**289**	P	**P**	**03 06 32.0**	**-0.8**
DLV				IAmb	IAmb	03 06 35.6	
	comp=Z,82nm,0.8s						
PWJI	**Pagerwojo**	**20.56**	**228**	P	Pn	03 06 58.0	+8.6
JOW	**Kunigami**	**20.86**	**3**	P	**P**	**03 06 48.5**	**-0.7**
	comp=Z,17nm,0.4s,baz=157,slow=9.9,SNR=7.7						
WOJI	**Wonogiri, Jawa**	**21.10**	**230**	P	**P**	**03 06 57.3**	**+5.4**
	comp=Z,40nm,0.7s						
TPI	**Tanjungpandan**	**21.20**	**247**	P	**P**	**03 06 55.1**	**+2.0**
	comp=Z,1μmcomp=Z,85nm,0.9s						
QIZ	**Qiongzhong**	**21.26**	**309**	P	**P**	**03 06 54.6**	**+1.0**
QIZ				sP	**sP**	**03 07 26.8**	**-1.8**
QIZ				S	**S**	**03 10 44.0**	**+0.3**
QIZ				sS	**sS**	**03 11 21.6**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,17nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,240nm,3.4s						
QIZ				LR	LR		
	comp=Z,270nm,8.6s						
QIZ				LR	LR		
	comp=Z,320nm,10.4s						
QIZ				LR	LR		
	comp=Z,340nm,13.7s						
KPJI	**Karang Pucung**	**22.36**	**234**	P	**P**	**03 07 06.6**	**+1.4**
	comp=Z,55nm,0.7s						
PPBI	**Pangkal Pinang**	**22.38**	**250**	P	**P**	**03 07 05.1**	**-0.3**
	comp=Z,14μmcomp=Z,108nm,0.7s						
LEM	**Lembang**	**23.16**	**237**	P	**P**	**03 07 14.5**	**+1.3**
	comp=Z,49nm,0.6s,baz=43,slow=8.1,SNR=8.2						
UBPT	**Khong Chiam**	**23.16**	**295**	P	**P**	**03 07 12.0**	**-1.1**
	comp=Z,14nm,0.7s						
UBPT	**Khong Chiam**	**23.16**	**295**	P	**P**	**03 07 12.8**	**-0.3**
DSRI	**Dabo**	**23.32**	**255**	P	**P**	**03 07 15.5**	**+0.9**
	comp=Z,64nm,1.3s						
CISI	**Cisompet, Garu**	**23.39**	**235**	P	**P**	**03 07 14.3**	**-1.0**
CISI				IAmb	IAmb	03 07 19.5	
	comp=Z,52nm,0.6s						
CISI	**Cisompet, Garu**	**23.39**	**235**	P	**P**	**03 07 14.8**	**-0.5**
	comp=Z,76nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.88**	**183**	P	**P**	**03 07 20.1**	**+0.6**
	baz=24,SNR=53						
FITZ	**Fitzroy Crossi**	**23.88**	**183**	P	**P**	**03 07 20.3**	**+0.8**
	comp=Z,24nm,0.7s,baz=12,slow=8.8,SNR=70						
JMBI	**JAMBI**	**24.55**	**253**	P	**P**	**03 07 28.2**	**+2.4**
KLSI		**24.65**	**245**	P	**P**	**03 07 27.2**	**+0.5**
	comp=Z,333nmcomp=Z,16nm,0.8s						
LHSI	**Lahat**	**25.41**	**248**	P	P	03 07 50.3	+17
JCJ	**Chichijima**	**25.54**	**33**	P	**P**	**03 07 33.4**	**-1.1**
	comp=Z,585nm,0.5s,baz=249,slow=4.1,SNR=36						
JCJ	**Chichijima**	**25.54**	**33**	P	**P**	**03 07 33.9**	**-0.7**
SRAK	**Srakaew**	**25.91**	**290**	P	**P**	**03 07 33.9**	**-4.1**
	comp=Z,5μmcomp=Z,273nm,0.7s						
IPM	**Ipoh**	**25.97**	**268**	P	**P**	**03 07 38.2**	**-0.4**
IPM				IAmb	IAmb	03 07 43.0	
	comp=Z,25nm,0.8s						
IPM	**Ipoh**	**25.97**	**268**	P	**P**	**03 07 38.0**	**-0.7**
KSI	**Kapahiang**	**26.21**	**249**	P	**P**	**03 07 43.0**	**+2.1**
KULM	**Kulim**	**26.29**	**270**	P	**P**	**03 07 41.0**	**-0.5**
KULM	**Kulim**	**26.29**	**270**	P	**P**	**03 07 42.0**	**+0.4**
NONG	**Nongkai**	**26.30**	**299**	P	**P**	**03 07 41.0**	**-0.5**
	comp=Z,16μmcomp=Z,50nm,0.8s						
SDSI	**Sungai Dareh**	**26.48**	**256**	P	**P**	**03 07 42.7**	**-0.5**
	comp=Z,866nmcomp=Z,39nm,0.8s						
WB0	**Warramunga Arr**	**26.50**	**164**	P	**P**	**03 07 42.4**	**-0.9**
CHAI	**Chaiyaphum**	**26.53**	**294**	P	**P**	**03 07 43.8**	**+0.2**
	comp=Z,52nm,0.8s						
BKNI	**Bangkinang**	**26.56**	**259**	P	**P**	**03 07 43.5**	**-0.5**
BKNI	**Bangkinang**	**26.56**	**259**	P	**P**	**03 07 44.1**	**+0.2**
	comp=Z,2μmcomp=Z,148nm,0.7s						
WRA	**Warramunga Arr**	**26.65**	**165**	P	**P**	**03 07 44.8**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=343,slow=11,SNR=36						
WRA				pP	**pwP**	**03 08 10.8**	**-3.3**
	comp=Z,13nm,0.5s,baz=343,slow=10,SNR=6.2						
WRA				S	**S**	**03 12 11.8**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=357,slow=16,SNR=2.3						
WRA				ScP	**ScP**	**03 14 37.7**	**+1.7**
	comp=Z,6.3nm,0.6s,baz=341,slow=3.1,SNR=24						
WRA				LR	LR	03 19 26.0	
	comp=Z,132nm,21.0s,baz=335,slow=38						
WRA	**Warramunga Arr**	**26.65**	**165**	P	**P**	**03 07 44.0**	**-0.6**
WB2	**Warramunga Arr**	**26.65**	**165**	P	**P**	**03 07 45.2**	**+0.6**
	baz=27						
WB2	**Warramunga Arr**	**26.65**	**165**	P	**P**	**03 07 43.8**	**-0.8**
WR0	**Warramunga Arr**	**26.72**	**164**	P	**P**	**03 07 44.6**	**-0.6**
NJ2	**Nanjing**	**27.14**	**345**	*e*P	**P**	**03 07 48.6**	**-0.3**
NJ2				pP	**pwP**	**03 08 17.4**	**-1.3**
NJ2				sP	**sP**	**03 08 29.1**	**+5.1**
NJ2				S	**S**	**03 12 22.8**	**+3.6**
NJ2				sS	**sS**	**03 13 00.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
SLVN	**Son La**	**27.18**	**307**	P	**P**	**03 07 48.9**	**-0.6**
WHN	**Wuhan**	**27.29**	**336**	P	**P**	**03 07 52.8**	**+2.6**
JNU	**Nakatsue**	**27.33**	**7**	P	**P**	**03 07 49.2**	**-1.4**
	comp=Z,20nm,0.7s,baz=179,slow=7.8,SNR=8.8						
JNU	**Nakatsue**	**27.33**	**7**	P	**P**	**03 07 49.8**	**-0.9**
PDSI	**Padang**	**27.41**	**257**	P	**P**	**03 07 50.9**	**-0.7**
	comp=Z,34nm,0.6s						
MNSI	**Mandailing Nat**	**27.89**	**261**	P	**P**	**03 07 54.9**	**-0.9**
PHET	**Kaeng Krachan**	**27.93**	**286**	P	**P**	**03 07 56.7**	**+0.5**
	comp=Z,603nmcomp=Z,78nm,0.7s						
PSI	**Prapat**	**28.22**	**265**	P	**P**	**03 07 58.5**	**-0.5**
	comp=Z,11nm,0.6s,baz=0.5,slow=4.8,SNR=13						
PSI				pP	**pwP**	**03 08 26.1**	**+0.7**
	comp=Z,7.6nm,0.6s,baz=0.3,slow=4.2,SNR=2.9						
GYA	**Guiyang**	**28.23**	**319**	⇓P	**P**	**03 08 00.6**	**+1.7**
GYA				PcP	**PcP**	**03 11 10.9**	**+1.0**
GYA				S	**S**	**03 12 29.0**	**-7.9**
GYA				SS	**SnSn**	**03 14 15.1**	**+8.8**
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GYA				pmax	pmax		
	comp=Z,220nm,4.2s						
GYA				LR	LR		
	comp=Z,350nm,20.8s						
PHIT	**Phitsanulok**	**28.38**	**296**	P	**P**	**03 08 02.0**	**+1.9**
	comp=Z,91nm,0.8s						
JMN	**Monobe**	**28.41**	**12**	P	**P**	**03 07 59.8**	**-0.5**
UTTA	**Uttaradit**	**28.45**	**297**	P	**P**	**03 08 01.7**	**+0.9**
	comp=Z,23nm,0.8s						
UTHA	**Uthaitani**	**28.75**	**292**	P	**P**	**03 08 06.1**	**+2.6**
	comp=Z,34nm,0.8s						
QIS	**Mount Isa**	**29.03**	**155**	P	**P**	**03 08 06.5**	**+0.7**
	baz=29,SNR=20						
SUKH	**Sukhothai**	**29.18**	**296**	P	**P**	**03 08 08.3**	**+1.1**
	comp=Z,26nm,0.7s						
MTSU	**Mount Surprise**	**29.32**	**145**	P	**P**	**03 08 09.6**	**+1.1**
	baz=29,SNR=11						
ENH	**Enshi**	**29.36**	**328**	P	**P**	**03 08 08.1**	**-0.7**
LAMP	**Lampang**	**29.55**	**298**	P	**P**	**03 08 11.6**	**+1.1**
	comp=Z,38nm,0.7s						
PAYA	**Payao**	**29.66**	**299**	P	**P**	**03 08 12.3**	**+0.8**
	comp=Z,3μmcomp=Z,308nm,0.6s						
GSI	**Gunungsitoli**	**29.77**	**262**	P	**P**	**03 08 10.4**	**-2.1**
GSI	**Gunungsitoli**	**29.77**	**262**	P	**P**	**03 08 10.5**	**-2.1**
	comp=Z,199nm,0.7s						
CM36	**Chiang Mai Arr**	**30.02**	**297**	P	**P**	**03 08 15.0**	**+0.3**
CM35	**Chiang Mai Arr**	**30.03**	**298**	P	**P**	**03 08 15.0**	**+0.3**
CM04	**Chiang Mai Arr**	**30.08**	**297**	P	**P**	**03 08 16.0**	**+0.8**
	comp=Z,130nmcomp=Z,19nm,0.8s						
CM09	**Chiang Mai Arr**	**30.09**	**297**	P	**P**	**03 08 16.0**	**+0.7**
	comp=Z,131nmcomp=Z,15nm,0.7s						
CM01	**Chiang Mai Arr**	**30.11**	**297**	P	**P**	**03 08 16.9**	**+1.4**
	comp=Z,122nmcomp=Z,14nm,0.7s						
CM05	**Chiang Mai Arr**	**30.11**	**297**	P	**P**	**03 08 16.0**	**+0.5**
	comp=Z,88nmcomp=Z,12nm,0.7s						
CM02	**Chiang Mai Arr**	**30.12**	**297**	P	**P**	**03 08 16.9**	**+1.3**
	comp=Z,113nmcomp=Z,14nm,0.7s						
AS31	**Alice Springs**	**30.12**	**167**	P	**P**	**03 08 15.0**	**-0.5**
ASAR	**Alice Springs**	**30.12**	**167**	P	**P**	**03 08 15.8**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=352,slow=7.3,SNR=48						
ASAR				PcP	**PcP**	**03 11 15.4**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=346,slow=2.7,SNR=6.7						
ASAR				ScP	**ScP**	**03 14 48.5**	**+1.7**
	comp=Z,4.0nm,0.6s,baz=341,slow=2.8,SNR=19						
ASAR	**Alice Springs**	**30.12**	**167**	P	**P**	**03 08 15.0**	**-0.5**
ASAR					**PcP**	**03 11 14.1**	**-0.4**
CM31	**Chiang Mai Arr**	**30.13**	**297**	P	**P**	**03 08 18.4**	**+2.7**
	comp=Z,459nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.13**	**297**	P	**P**	**03 08 16.7**	**+1.0**
	comp=Z,7.8nm,0.7s,baz=104,slow=7.2,SNR=38						
CMAR				PcP	**PcP**	**03 11 16.6**	**+2.0**
	comp=Z,2.8nm,0.6s,baz=91,slow=0.8,SNR=9.1						
CMAR				ScP	**ScP**	**03 14 49.6**	**+2.7**
	comp=Z,2.4nm,0.5s,baz=106,slow=1.8,SNR=13						
CMAR				LR	LR	03 20 58.9	
	comp=Z,168nm,20.7s,baz=151,slow=37						
CMAR	**Chiang Mai Arr**	**30.13**	**297**	P	**P**	**03 08 14.9**	**-0.8**
CMAR					**PcP**	**03 11 14.3**	**-0.4**
KMI	**Kunming**	**30.15**	**312**	⇑*i*P	**P**	**03 08 16.9**	**+0.9**
KMI				pmax	pmax		
	comp=Z,35nm,0.8s						
KMI				pmax	pmax		
	comp=Z,160nm,4.2s						
KMI				LR	LR		
	comp=Z,190nm,11.5s						
KMI				LR	LR		
	comp=Z,300nm,14.3s						
KMI				LR	LR		
	comp=Z,390nm,15.4s						
KMI	**Kunming**	**30.15**	**312**	P	**P**	**03 08 15.2**	**-0.8**
KMI				IAmb	IAmb	03 08 18.3	
	comp=Z,33nm,0.8s						
CM15	**Chiang Mai Arr**	**30.15**	**297**	P	**P**	**03 08 17.0**	**+1.2**
	comp=Z,20nm,0.6s						
CM13	**Chiang Mai Arr**	**30.15**	**297**	P	**P**	**03 08 17.1**	**+1.2**
	comp=Z,103nmcomp=Z,15nm,0.7s						
JWT	**Wachi**	**30.25**	**14**	P	**P**	**03 08 16.0**	**-0.5**
JWT				IAmb	IAmb	03 08 20.0	
	comp=Z,21nm,0.7s						
CMMT	**Chiang Mai**	**30.26**	**298**	P	**P**	**03 08 17.5**	**+0.7**
	comp=Z,10nm,0.8s						
CM33	**Chiang Mai Arr**	**30.26**	**298**	P	**P**	**03 08 17.0**	**+0.2**
CHTO	**Chiang Mai**	**30.26**	**298**	P	**P**	**03 08 16.1**	**-0.7**
CHTO				IAmb	IAmb	03 08 20.9	
	comp=Z,14nm,0.7s						
CHTO					**PcP**	**03 11 16.8**	**+1.8**
CM32	**Chiang Mai Arr**	**30.29**	**297**	P	**P**	**03 08 18.0**	**+0.9**
INU	**Inuyama**	**30.72**	**16**	P	**P**	**03 08 20.3**	**-0.3**
INU				IAmb	IAmb	03 08 22.5	
	comp=Z,20nm,0.8s						
GIRL	**Giralia**	**31.01**	**203**	P	**P**	**03 08 25.5**	**+2.2**
	baz=31,SNR=3.9						
JGF	**Kuroka**	**31.05**	**16**	P	**P**	**03 08 22.9**	**-0.7**
KSRS	**Korea Array**	**31.43**	**1**	P	**P**	**03 08 26.2**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=180,slow=10.0,SNR=14						
KSRS				LR	LR	03 23 36.2	
	comp=Z,59nm,19.1s,baz=163,slow=41						
TIA	**Tai'an**	**31.53**	**345**	P	**P**	**03 08 27.5**	**-0.2**
TIA				pmax	pmax		
	comp=Z,15nm,0.7s						
MAJO	**Matsushiro**	**32.17**	**17**	P	**P**	**03 08 33.3**	**-0.1**
MAJO				IAmb	IAmb	03 08 38.6	
	comp=Z,18nm,0.8s						
MAT	**Matsushiro**	**32.17**	**17**	P	**P**	**03 08 31.6**	**-1.8**
MJAR	**Matsushiro Arr**	**32.17**	**17**	P	**P**	**03 08 31.6**	**-1.8**
	comp=Z,7.3nm,0.9s,baz=189,slow=9.3,SNR=13						
MJAR				LR	LR	03 22 45.3	
	comp=Z,136nm,19.6s,baz=180,slow=38						
MJAR	**Matsushiro Arr**	**32.17**	**17**	P	**P**	**03 08 33.2**	**-0.2**
XAN	**Xi'an**	**32.67**	**331**	P	**P**	**03 08 37.5**	**-0.3**
XAN				pP	pP	03 09 02.3	+0.8
XAN				PP	**PnPn**	**03 09 48.3**	**-1.9**
XAN				PcP	**PcP**	**03 11 21.9**	**+0.6**
XAN				S	**S**	**03 13 42.3**	**-3.7**
XAN				pmax	pmax		
	comp=Z,62nm,0.8s						
XAN				pmax	pmax		
	comp=Z,200nm,6.5s						
CD2	**Chengdu**	**33.14**	**322**	*e*P	**P**	**03 08 43.0**	**+1.0**
CD2				S	**S**	**03 13 55.8**	**+2.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,530nm,17.7s						
CD2				LR	LR		
	comp=Z,610nm,15.7s						
CD2				LR	LR		
	comp=Z,610nm,25.5s						
MEEK	**Meekatharra**	**33.35**	**194**	P	**P**	**03 08 44.1**	**+0.3**
	baz=34,SNR=17						
JMM	**Marumori**	**34.20**	**20**	P	**P**	**03 08 50.4**	**-0.6**
TIY	**Taiyuan**	**34.37**	**339**	*e*P	**P**	**03 08 53.4**	**+0.9**
TIY				pmax	pmax		
	comp=Z,34nm,0.5s						
BJT	**Baijiatuau**	**35.37**	**345**	P	**P**	**03 09 00.2**	**-0.8**
BJI	**Beijing**	**35.39**	**345**	P	**P**	**03 09 01.0**	**-0.1**
BJI				pmax	pmax		
	comp=Z,50nm,0.7s						
MORW	**Morawa**	**36.34**	**196**	P	**P**	**03 09 09.9**	**+0.5**
	baz=36,SNR=6.8						
FORT	**Forrest**	**36.47**	**179**	P	**P**	**03 09 11.3**	**+0.8**
	baz=37,SNR=30						
SAIH	**SAIHA**	**36.79**	**300**	*e*P	**P**	**03 09 13.4**	**-0.2**
SAIH				IAmb	IAmb	03 09 18.1	
	comp=Z,51nm,0.8s						
LZH	**Lanzhou**	**36.84**	**328**	⇑P	**P**	**03 09 15.1**	**+1.3**
LZH				sP	sP	03 09 48.1	-2.0
LZH				S	**S**	**03 14 49.8**	**-0.5**
LZH				sS	sS	03 15 34.1	+2.4
LZH				SS	**SnSn**	**03 17 29.0**	**-5.4**
LZH				pmax	pmax		
	comp=Z,100nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.9s						
LZH				LR	LR		
	comp=Z,340nm,14.1s						
LZH				LR	LR		
	comp=Z,410nm,13.2s						
LZH				LR	LR		
	comp=Z,470nm,16.4s						
KOHI	**KOHIMA**	**37.16**	**306**	*e*P	**P**	**03 09 14.2**	**-2.4**
KOHI				IAmb	IAmb	03 09 17.1	
	comp=Z,44nm,1.2s						
KMBL	**Kambalda**	**37.38**	**187**	P	**P**	**03 09 18.8**	**+0.7**
	baz=38,SNR=15						
HHC	**Hu-ho-hao-te**	**37.48**	**341**	*e*P	**P**	**03 09 20.6**	**+1.5**
HHC				pmax	pmax		
	comp=Z,24nm,1.4s						
HHC				pmax	pmax		
	comp=Z,240nm,7.9s						
BLDU	**Ballidu**	**37.63**	**195**	P	**P**	**03 09 20.8**	**+0.5**
	baz=38,SNR=31						
KLBR	**Kellerberrin**	**38.31**	**193**	P	**P**	**03 09 26.8**	**+0.7**
	baz=38,SNR=15						
USA0B	**Ussuriysk Arra**	**38.40**	**6**	IAmb	IAmb	03 09 30.6	
	comp=Z,11nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.40**	**6**	P	**P**	**03 09 26.6**	**0.0**
	comp=Z,12nm,0.7s,baz=195,slow=7.4,SNR=18						
USRK				LR	LR	03 27 10.0	
	comp=Z,69nm,19.6s,baz=177,slow=39						
TEZP	**TEZPUR**	**38.61**	**306**	*e*P	**P**	**03 09 28.7**	**+0.1**
MDJ	**Mudanjiang**	**38.64**	**3**	P	**P**	**03 09 30.3**	**+1.7**
MDJ				pP	pP	03 09 54.6	+3.2
MDJ				S	**S**	**03 15 19.8**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.1s						
MDJ				LR	LR		
	comp=Z,460nm,34.3s						
MDJ	**Mudanjiang**	**38.64**	**3**	IAmb	IAmb	03 09 32.5	
	comp=Z,24nm,0.7s						
SHL	**Shillong**	**38.91**	**304**	*e*P	**P**	**03 09 31.4**	**0.0**
SHL	**Shillong**	**38.91**	**304**	P	**P**	**03 09 30.6**	**-0.8**
SHL					**PcP**	**03 11 38.3**	**-1.8**
MUN	**Mundaring**	**39.05**	**195**	P	**P**	**03 09 33.1**	**+0.9**
	baz=39,SNR=14						
BBOO	**Buckleboo**	**39.42**	**168**	P	**P**	**03 09 36.1**	**+0.8**
	baz=40,SNR=25						
NWAO	**Narrogin (SRO)**	**39.72**	**193**	P	**P**	**03 09 38.9**	**+1.2**
	baz=40,SNR=19						
NWAO	**Narrogin (SRO)**	**39.72**	**193**	P	**P**	**03 09 36.4**	**-1.3**
NWAO				IAmb	IAmb	03 09 40.8	
	comp=Z,33nm,0.8s						
NWAO	**Narrogin (SRO)**	**39.72**	**193**	P	**P**	**03 09 37.3**	**-0.4**
NWAO				IAmb	IAmb	03 09 40.8	
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**40.03**	**161**	P	**P**	**03 09 41.0**	**+0.7**
	baz=40,SNR=15						
STKA	**Stephens Creek**	**40.03**	**161**	P	**P**	**03 09 41.3**	**+1.0**
	comp=Z,8.7nm,0.6s,baz=338,slow=8.6,SNR=26						
STKA				LR	LR	03 29 19.7	
	comp=Z,78nm,20.0s,baz=347,slow=40						
STKA	**Stephens Creek**	**40.03**	**161**	P	**P**	**03 09 39.9**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**40.60**	**68**	T	T	03 54 09.1	
	baz=260,slow=72,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**40.61**	**68**	T	T	03 54 13.6	
	baz=260,slow=72,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**40.61**	**68**	T	T	03 54 14.8	
	baz=260,slow=72,SNR=6.1						
HTT	**Hallett**	**40.69**	**165**	P	**P**	**03 09 47.4**	**+1.6**
	baz=41,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**41.07**	**67**	T	T	03 54 51.0	
	SNR=3.2						
LSA	**Lhasa**	**41.30**	**309**	P	**P**	**03 09 52.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,46nm,1.1s						
LSA	**Lhasa**	**41.30**	**309**	P	**P**	**03 09 50.2**	**-1.3**
LSA				IAmb	IAmb	03 09 55.9	
	comp=Z,17nm,0.7s						
LSA					**PcP**	**03 11 46.9**	**-1.3**
GTA	**Gaotai**	**41.45**	**328**	⇑P	**P**	**03 09 52.5**	**+0.4**
GTA				pP	pwP	03 10 23.1	+1.9
GTA				sP	sP	03 10 32.0	+3.2
GTA				PcP	**PcP**	**03 11 49.3**	**+1.3**
GTA				ScP	**ScP**	**03 15 29.6**	**+1.7**
GTA				S	**S**	**03 15 55.1**	**-4.0**
GTA				pmax	pmax		
	comp=Z,50nm,0.7s						
GTA				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA				LR	LR		
	comp=Z,160nm,17.1s						
GTA				LR	LR		
	comp=Z,250nm,17.4s						
GTA				LR	LR		
	comp=Z,350nm,18.5s						
TAPN	**Taplejung**	**43.05**	**304**	*e*P	**P**	**03 10 04.9**	**-0.6**
	comp=Z,89nm,0.8s						
ARMA	**Armidale**	**43.10**	**148**	P	**P**	**03 10 07.1**	**+1.6**
	baz=43,SNR=6.1						
ODAN	**Odare**	**43.13**	**303**	*e*P	**P**	**03 10 05.8**	**-0.3**
	comp=Z,184nm,0.7s						
ODAN	**Odare**	**43.13**	**303**	*e*P	**ScP**	**03 15 36.9**	**+1.8**
	comp=Z,9.8nm,0.6s						
BOK	**Bokaro**	**43.39**	**299**	*e*P	**P**	**03 10 08.6**	**+0.7**
BOK				IAmb	IAmb	03 10 10.0	
	comp=Z,13nm,0.6s						
HIA	**Hailar**	**43.67**	**353**	P	**P**	**03 10 09.4**	**-0.4**
RAMN	**Ramite**	**43.82**	**303**	*e*P	**P**	**03 10 11.6**	**0.0**
	comp=Z,176nm,0.8s						
ARPS	**Mount Arapiles**	**44.63**	**163**	P	**P**	**03 10 19.2**	**+1.7**
	baz=45,SNR=7.8						
GUN	**Gumba**	**44.76**	**304**	*e*P	**P**	**03 10 19.0**	**-0.2**
	comp=Z,239nm,0.7s						
GUN	**Gumba**	**44.76**	**304**	*e*P	**ScP**	**03 15 45.0**	**+3.1**
PKI	**Pulchoki**	**45.03**	**303**	*e*P	**P**	**03 10 20.8**	**-0.5**
	comp=Z,64nm,0.7s						
PKI	**Pulchoki**	**45.03**	**303**	*e*P	**ScP**	**03 15 44.5**	**+1.5**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**45.04**	**303**	*e*P	**P**	**03 10 20.7**	**-0.7**
	comp=Z,63nm,0.7s						
PKIN	**Phulchoki**	**45.04**	**303**	*e*P	**ScP**	**03 15 44.5**	**+1.5**
	comp=Z,14nm,0.7s						
ULN	**Ulaanbaatar**	**45.19**	**341**	P	**P**	**03 10 21.7**	**-0.4**
KKN	**Kakani**	**45.22**	**304**	*e*P	**P**	**03 10 22.0**	**-0.7**
	comp=Z,104nm,0.8s						
KKN	**Kakani**	**45.22**	**304**	*e*P	**ScP**	**03 15 45.2**	**+1.6**
	comp=Z,17nm,0.7s						
DMN	**Daman**	**45.30**	**303**	*e*P	**P**	**03 10 23.0**	**-0.4**
	comp=Z,88nm,0.8s						
DMN	**Daman**	**45.30**	**303**	*e*P	**ScP**	**03 15 45.7**	**+1.7**
	comp=Z,7.6nm,0.6s						
SONM	**Songino Array**	**45.38**	**340**	P	**P**	**03 10 23.5**	**0.0**
	comp=Z,4.9nm,0.7s,baz=156,slow=8.3,SNR=36						
SONM				PcP	**PcP**	**03 12 01.9**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=158,slow=4.4,SNR=3.9						
SONM	**Songino Array**	**45.38**	**340**	P	**P**	**03 10 23.1**	**-0.5**
SONM					**PcP**	**03 11 59.0**	**-2.1**
GKN	**Gorkha**	**45.82**	**304**	*e*P	**P**	**03 10 26.7**	**-0.7**
	comp=Z,59nm,0.7s						
GKN	**Gorkha**	**45.82**	**304**	*e*P	**ScP**	**03 15 47.4**	**+1.3**
	comp=Z,13nm,0.8s						
KOLN	**Koldanda**	**46.60**	**303**	*e*P	**P**	**03 10 33.1**	**-0.5**
	comp=Z,269nm,0.7s						
MDRS	**Chennai**	**46.67**	**282**	⇑*e*P	**P**	**03 10 34.7**	**+0.8**
DANN	**Dangsing**	**46.67**	**304**	*e*P	**P**	**03 10 33.8**	**-0.4**
	comp=Z,327nm,0.7s						
DANN	**Dangsing**	**46.67**	**304**	*e*P	**ScP**	**03 15 51.1**	**+1.3**
	comp=Z,24nm,0.8s						
PYUN	**Piuthan**	**47.22**	**303**	*e*P	**P**	**03 10 38.2**	**-0.2**
	comp=Z,256nm,0.8s						
DZM	**Mont Dzumac**	**47.53**	**127**	*e*LR	LR	03 24 24.0	
	comp=Z,782nm,34.3s						
HYB	**Hyderabad**	**48.74**	**288**	*i* P	**P**	**03 10 50.0**	**0.0**
HYB	**Hyderabad**	**48.74**	**288**	*e*P	**P**	**03 10 49.8**	**-0.1**
HYB				IAmb	IAmb	03 10 51.0	
	comp=Z,17nm,0.7s						
TLY	**Talaya**	**49.60**	**341**	P	**P**	**03 10 55.9**	**-0.1**
TLY				IAmb	IAmb	03 11 05.8	
	comp=Z,10nm,0.7s						
BHPL	**Bhopal**	**50.76**	**295**	*e*P	**P**	**03 11 05.0**	**-0.2**
BHPL				IAmb	IAmb	03 11 06.3	
	comp=Z,67nm,1.0s						
WMQ	**Urumqi**	**51.17**	**324**	P	**P**	**03 11 09.5**	**+1.5**
WMQ				pP	pwP	03 11 36.3	-1.8

WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,260nm,5.1s						
WMQ				LR	LR		
	comp=Z,400nm,27.3s						
WMQ				LR	LR		
	comp=Z,350nm,27.9s						
WMQ	**Urumqi**	**51.17**	**324**	P	**P**	**03 11 07.8**	**-0.3**
WMQ				IAmb	IAmb	03 11 12.1	
	comp=Z,17nm,0.7s						
DDI	**Dehra Dun**	**52.02**	**304**	*e*P	**P**	**03 11 14.8**	**+0.3**
NDI	**New Delhi**	**52.24**	**302**	*e*P	**P**	**03 11 13.0**	**-3.2**
SMLA	**Simla**	**52.99**	**305**	*e*P	**P**	**03 11 21.6**	**0.0**
POO	**Poona**	**53.32**	**289**	*e*P	**P**	**03 11 23.0**	**-1.3**
POO				⇑*e*P	**P**	**03 11 23.3**	**-1.0**
POO				IAmb	IAmb	03 11 24.7	
	comp=Z,30nm,0.8s						
PETK	**Petropavlovsk-**	**53.32**	**23**	P	**P**	**03 11 24.1**	**+0.4**
	comp=Z,10nm,0.8s,baz=199,slow=5.5,SNR=11						
PETK				LR	LR	03 33 01.2	
	comp=Z,51nm,21.8s,baz=202,slow=35						
PETK	**Petropavlovsk-**	**53.32**	**23**	P	**P**	**03 11 23.5**	**-0.1**
DHRM	**DHARAMSHALA**	**54.03**	**306**	*e*P	**P**	**03 11 29.1**	**-0.5**
ZSN	**Zaisan**	**54.90**	**326**	*e*P	**P**	**03 11 34.9**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=326						
MSVF	**Nonsavu**	**55.53**	**116**	P	**P**	**03 11 39.7**	**-0.6**
SHLS	**Shalkode**	**55.92**	**319**	*e*P	**P**	**03 11 40.4**	**-2.5**
	comp=Z,18nm,0.8s,baz=320						
MK31	**Makanchi Array**	**56.00**	**324**	P	**P**	**03 11 42.9**	**-0.3**
MKAR	**Makanchi Array**	**56.00**	**324**	P	**P**	**03 11 43.7**	**+0.6**
	comp=Z,59nm,0.7s,baz=126,slow=8.2,SNR=621						
MKAR				PcP	**PcP**	**03 12 40.5**	**+0.2**
	comp=Z,12nm,0.8s,baz=136,slow=4.7,SNR=4.6						
MKAR				ScP	**ScP**	**03 16 30.1**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=110,slow=4.7,SNR=6.9						
MKAR	**Makanchi Array**	**56.00**	**324**	P	**P**	**03 11 43.0**	**-0.2**
YAK	**Yakutsk**	**56.06**	**1**	P	**P**	**03 11 43.3**	**+0.1**
MAKZ	**Makanchi**	**56.19**	**324**	P	**P**	**03 11 44.4**	**-0.1**
SATY	**Saty**	**56.57**	**319**	*e*P	**P**	**03 11 47.5**	**+0.1**
	comp=Z,23nm,0.9s,baz=319						
KPKS	**Kokpek**	**56.57**	**319**	*e*P	**P**	**03 11 47.1**	**-0.3**
	comp=Z,21nm,0.7s,baz=319						
KSH	**Kashi**	**56.78**	**314**	P	**P**	**03 11 50.8**	**+1.9**
KSH				pmax	pmax		
	comp=Z,52nm,1.1s						
KSH				pmax	pmax		
	comp=Z,610nm,4.7s						
NIL	**Nilore**	**56.90**	**307**	P	**P**	**03 11 49.2**	**-0.6**
TDK	**Taldyqorghan**	**57.45**	**321**	*e*P	**P**	**03 11 54.1**	**+0.6**
	comp=Z,16nm,0.7s,baz=321						
TDK				*e*S	**S**	**03 19 42.5**	**+0.4**
	baz=321						
MDOK	**Medeo**	**57.51**	**318**	*e*P	**P**	**03 11 54.2**	**+0.1**
	baz=318						
TNSS	**Tian-Shan**	**57.52**	**318**	*e*P	**P**	**03 11 54.6**	**+0.1**
	baz=318						
AAA	**Alma-Ata**	**57.62**	**318**	*e*P	**P**	**03 11 54.8**	**+0.1**
	comp=Z,15nm,0.4s,baz=318						
ULHL	**Ulahol**	**57.66**	**317**	P	**P**	**03 11 56.3**	**+1.1**
	SNR=5.2						
CHKK	**Chushkaly**	**57.84**	**319**	*e*P	**P**	**03 11 55.8**	**-0.4**
	baz=319						
MTBS	**Maitube**	**57.90**	**318**	*e*P	**P**	**03 11 56.7**	**0.0**
	baz=318						
KUU	**Kurty**	**58.28**	**319**	*e*P	**P**	**03 11 58.3**	**-1.0**
	comp=Z,35nm,0.8s,baz=319						
KBK	**Karagaybulak**	**58.70**	**317**	P	**P**	**03 12 03.4**	**+1.0**
	SNR=18						
UCH	**Uchtor**	**58.83**	**316**	P	**P**	**03 12 04.5**	**+0.8**
	SNR=53						
ZAA0	**Zalesovo Array**	**58.84**	**332**	P	**P**	**03 12 02.3**	**-0.5**
ZAA0				IAmb	IAmb	03 12 04.2	
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**58.84**	**332**	P	**P**	**03 12 02.5**	**-0.4**
	comp=Z,14nm,0.7s,baz=117,slow=6.4,SNR=55						
ZALV				LR	LR	03 38 32.5	
	comp=Z,80nm,19.9s,baz=121,slow=37						
CHMS	**Chumysh**	**58.97**	**317**	P	**P**	**03 12 04.4**	**+0.2**
	SNR=8.6						
AAK	**Ala-Archa**	**59.01**	**317**	P	**P**	**03 12 05.2**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**59.01**	**317**	P	**P**	**03 12 03.9**	**-0.6**
AAK				IAmb	IAmb	03 12 07.9	
	comp=Z,14nm,1.0s						
SEM	**Semipalatinsk**	**59.07**	**327**	*e*P	**P**	**03 12 03.8**	**-1.1**
	comp=Z,5.6nm,0.7s,baz=327						
SGDS	**Sogindy**	**59.23**	**318**	*e*P	**P**	**03 12 05.3**	**-0.7**
	baz=318						
USP	**Ospenovka**	**59.25**	**318**	P	**P**	**03 12 06.4**	**+0.4**
	SNR=56						
AML	**Almayashu**	**59.36**	**316**	P	**P**	**03 12 08.2**	**+1.0**
	SNR=46						
EKS2	**Erkin-Say**	**59.50**	**317**	P	**P**	**03 12 08.8**	**+0.9**
	SNR=49						
KURK	**Kurchatov**	**60.12**	**327**	P	**P**	**03 12 11.9**	**+0.1**
KBL	**Kabul**	**60.50**	**306**	P	**P**	**03 12 14.4**	**-0.5**
DZA	**Taraz**	**61.27**	**316**	*e*P	**P**	**03 12 20.1**	**+0.3**
	comp=Z,14nm,0.7s,baz=316						
KK31	**Karatay Array**	**61.90**	**316**	P	**P**	**03 12 23.9**	**-0.1**
KKAR	**Karatay Array**	**61.90**	**316**	P	**P**	**03 12 24.1**	**0.0**
KKAR	**Karatay Array**	**61.90**	**316**	P	**P**	**03 12 23.9**	**-0.1**
KKAR				IAmb	IAmb	03 12 25.2	
	comp=Z,30nm,0.8s						
IUG	**Iuzhnay**	**61.92**	**315**	*e*P	**P**	**03 12 24.2**	**-0.1**
	comp=Z,20nm,0.8s,baz=315						
BRZS	**Berezniki**	**63.14**	**324**	*e*P	**P**	**03 12 31.9**	**-0.2**
	comp=Z,17nm,0.7s,baz=324						
RPZ	**Rata Peaks**	**63.33**	**146**	LR	LR	03 38 42.7	
	comp=Z,124nm,21.2s,baz=304,slow=34						
TIXI	**Tiksi**	**65.69**	**1**	P	**P**	**03 12 48.5**	**+0.2**
BRVK	**Borovoye**	**65.78**	**326**	P	**P**	**03 12 49.4**	**+0.1**
HRA	**Herat**	**65.96**	**305**	P	**P**	**03 12 50.5**	**-0.5**
HRA				IAmb	IAmb	03 12 52.1	
	comp=Z,18nm,0.7s						
GEYT	**Alibeck**	**69.82**	**308**	P	**P**	**03 13 15.8**	**+0.9**
	comp=Z,27nm,0.8s,baz=131,slow=6.1,SNR=44						
GEYT	**Alibeck**	**69.82**	**308**	P	**P**	**03 13 14.7**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**69.82**	**308**	P	**P**	**03 13 14.7**	**-0.3**
GYA0B				IAmb	IAmb	03 13 17.2	
	comp=Z,28nm,0.8s						
ABKAR	**Akbulak array**	**70.71**	**320**	P	**P**	**03 13 20.3**	**+0.3**
ABKAR	**Akbulak array**	**70.71**	**320**	P	**P**	**03 13 20.0**	**0.0**
SOCY	**Socotra**	**72.27**	**281**	P	**P**	**03 13 28.9**	**-1.3**
ARU	**Arti**	**73.31**	**327**	P	**P**	**03 13 35.3**	**-0.1**
QRN	**Al-Qurain**	**77.69**	**298**	*e*P		03 14 00.5	
UMR	**Umm Al-Rimmam**	**77.86**	**299**	*e*P		03 14 01.4	
RDF	**Al-Radifah**	**78.01**	**298**	*e*P		03 14 02.2	
MIB	**Mutribah**	**78.19**	**299**	*e*P		03 14 03.3	
RST	**Umm Al-Ruwaisa**	**78.49**	**299**	*e*P		03 14 04.5	
OHAK	**Old Harbor**	**79.47**	**33**	IAmb	IAmb	03 14 13.3	
	comp=Z,16nm,0.7s						
KDAK	**Kodiak Island**	**79.90**	**32**	P	**P**	**03 14 12.5**	**0.0**
KDAK				IAmb	IAmb	03 14 15.3	
	comp=Z,33nm,0.8s						
RAYN	**Ar Rayn**	**79.95**	**293**	P	**P**	**03 14 13.1**	**-0.5**
IMAR	**Indian Mountai**	**80.25**	**24**	P	**P**	**03 14 14.8**	**+0.6**
GNI	**Garni**	**80.37**	**310**	P	**P**	**03 14 15.3**	**-0.3**
GNI				IAmb	IAmb	03 14 34.4	
	comp=Z,29nm,0.8s						
PPLA	**Purkeypile**	**80.57**	**27**	IAmb	IAmb	03 14 19.3	
	comp=Z,12nm,0.6s						
CNPM	**China Poot**	**80.74**	**31**	IAmb	IAmb	03 14 19.8	
	comp=Z,16nm,0.7s						
SKT	**Skwentna**	**80.79**	**28**	P	**P**	**03 14 17.6**	**+0.4**
SKT				IAmb	IAmb	03 14 19.9	
	comp=Z,13nm,0.8s						
BRLK	**Bradley Lake**	**80.94**	**31**	IAmb	IAmb	03 14 23.3	
	comp=Z,22nm,0.8s						
SUA	**Susitna One**	**81.12**	**29**	IAmb	IAmb	03 14 21.9	
	comp=Z,31nm,0.7s						
BPAW	**Bear Paw Mtn.**	**81.21**	**26**	IAmb	IAmb	03 14 22.8	
	comp=Z,21nm,0.7s						
MLY	**Manley**	**81.40**	**25**	P	**P**	**03 14 20.5**	**+0.1**
	baz=265,SNR=28						
TRF	**Thorofare Moun**	**81.47**	**27**	IAmb	IAmb	03 14 24.0	
	comp=Z,18nm,0.9s						
RC01	**Rabbit Creek A**	**81.59**	**29**	P	**P**	**03 14 21.9**	**+0.4**
	baz=267						
KBZ	**Khabaz**	**81.75**	**313**	P	**P**	**03 14 23.0**	**+0.4**
	comp=Z,11nm,0.8s,baz=111,slow=3.2,SNR=31						
COLD	**Coldfoot**	**81.79**	**23**	P	**P**	**03 14 23.4**	**+1.0**
	baz=266,SNR=14						
COLD	**Coldfoot**	**81.79**	**23**	IAmb	IAmb	03 14 26.7	
	comp=Z,22nm,0.9s						
BWN	**Browne**	**81.89**	**26**	IAmb	IAmb	03 14 26.9	
	comp=Z,29nm,0.9s						
KIV	**Kislovodsk**	**81.90**	**313**	P	**P**	**03 14 23.5**	**-0.1**
KIV				IAmb	IAmb	03 14 26.2	
	comp=Z,27nm,0.7s						
PMR	**Palmer**	**81.90**	**29**	IAmb	IAmb	03 14 25.4	
	comp=Z,20nm,0.7s						
I23K	**Minto, Yukon-K**	**81.99**	**25**	P	**P**	**03 14 23.6**	**+0.2**
	baz=267,SNR=15						
I23K	**Minto, Yukon-K**	**81.99**	**25**	P	**P**	**03 14 23.9**	**+0.5**
NEA2	**Nenana**	**82.08**	**26**	P	**P**	**03 14 24.3**	**+0.4**
	baz=267,SNR=18						
MCK	**McKinley**	**82.09**	**27**	P	**P**	**03 14 23.9**	**-0.1**
	baz=267,SNR=19						
KNK	**Knik Glacier**	**82.22**	**29**	IAmb	IAmb	03 14 27.8	
	comp=Z,23nm,0.7s						
SML	**Sawmill**	**82.29**	**28**	P	**P**	**03 14 25.5**	**+0.3**
SML				IAmb	IAmb	03 14 27.8	
	comp=Z,19nm,0.7s						
ABPO	**Ambohimpanom**	**82.35**	**250**	P	**P**	**03 14 25.7**	**-0.8**
ABPO				IAmb	IAmb	03 14 30.1	
	comp=Z,15nm,0.8s						
TCOL	**CIGO, UAF Yank**	**82.61**	**25**	P	**P**	**03 14 27.6**	**+0.9**
	baz=268						
TCOL	**CIGO, UAF Yank**	**82.61**	**25**	IAmb	IAmb	03 14 29.4	
	comp=Z,19nm,1.0s						
COLA	**College**	**82.61**	**25**	P	**P**	**03 14 27.1**	**+0.4**
COLA				IAmb	IAmb	03 14 29.4	
	comp=Z,20nm,1.1s						
SCM	**Sheep Creek Mo**	**82.77**	**28**	IAmb	IAmb	03 14 30.9	
	comp=Z,17nm,0.8s						
POKR	**Poker Plat Res**	**82.80**	**25**	P	**P**	**03 14 27.6**	**-0.1**
	baz=268,SNR=5.4						
POKR	**Poker Plat Res**	**82.80**	**25**	IAmb	IAmb	03 14 31.6	
	comp=Z,11nm,0.7s						
HDA	**Harding Lake**	**82.99**	**26**	P	**P**	**03 14 28.6**	**-0.1**
	baz=269,SNR=24						
HDA	**Harding Lake**	**82.99**	**26**	P	**P**	**03 14 29.2**	**+0.5**
HDA				IAmb	IAmb	03 14 30.5	
	comp=Z,19nm,0.7s						
ILAR	**Eielson Array**	**83.02**	**26**	P	**P**	**03 14 28.2**	**-0.6**
	comp=Z,7.6nm,0.7s,baz=249,slow=5.1,SNR=77						
ILAR				pP	**pP**	**03 14 58.6**	**+3.4**
	comp=Z,2.1nm,0.7s,baz=242,slow=4.3,SNR=2.4						
ILAR	**Eielson Array**	**83.02**	**26**	P	**P**	**03 14 27.7**	**-1.2**
FID	**Port Fidalgo**	**83.17**	**30**	IAmb	IAmb	03 14 32.3	
	comp=Z,19nm,0.8s						
ATD	**Arta Tunnel**	**83.20**	**281**	P	**P**	**03 14 30.1**	**-0.7**
ATD				IAmb	IAmb	03 14 33.7	
	comp=Z,26nm,1.0s						
M24K	**Tolsona, Glenn**	**83.32**	**28**	P	**P**	**03 14 30.9**	**+0.4**
	baz=270,SNR=6.2						
M24K	**Tolsona, Glenn**	**83.32**	**28**	P	**P**	**03 14 30.8**	**+0.3**
KLU	**Klutina**	**83.44**	**29**	IAmb	IAmb	03 14 34.4	
	comp=Z,13nm,0.7s						
KLMR	**Klimovskoe**	**83.70**	**331**	*e*P	**P**	**03 14 31.7**	**-0.6**
KLMR				AMP		03 14 33.3	
	comp=Z,29nm,0.8s						
FYU	**Fort Yukon**	**83.72**	**24**	IAmb	IAmb	03 14 36.2	
	comp=Z,15nm,0.8s						
RIDG	**Independent Ri**	**83.91**	**27**	IAmb	IAmb	03 14 35.9	
	comp=Z,13nm,0.8s						
BMAR	**Burnt Mountain**	**83.97**	**23**	P	**P**	**03 14 34.1**	**+0.4**
N25K	**Chitina, Valde**	**84.07**	**29**	P	**P**	**03 14 34.6**	**+0.2**
	baz=271,SNR=6.2						
N25K	**Chitina, Valde**	**84.07**	**29**	IAmb	IAmb	03 14 37.8	
	comp=Z,8.9nm,0.6s						
SCRK	**Sand Creek**	**84.29**	**26**	P	**P**	**03 14 35.7**	**+0.2**
	baz=272,SNR=6.2						
MENT	**Mentasta**	**84.44**	**27**	IAmb	IAmb	03 14 39.9	
	comp=Z,10nm,0.7s						
GLB	**Gilahina Butte**	**84.45**	**29**	IAmb	IAmb	03 14 39.7	
	comp=Z,21nm,0.7s						
VRDI	**Verde Repeater**	**84.63**	**29**	IAmb	IAmb	03 14 40.5	
	comp=Z,18nm,0.7s						
CRQM	**Cirque**	**84.81**	**30**	IAmb	IAmb	03 15 00.6	
	comp=Z,25nm,1.0s						
MCARA	**McCarthy VSAT**	**84.83**	**29**	IAmb	IAmb	03 14 43.8	
	comp=Z,14nm,0.8s						
TGL	**Tana Glacier**	**84.96**	**30**	IAmb	IAmb	03 14 42.7	
	comp=Z,21nm,0.7s						
K27K	**Chicken**	**85.13**	**26**	P	**P**	**03 14 40.2**	**+0.7**
	baz=273						
BALM	**Baldy**	**85.18**	**29**	IAmb	IAmb	03 14 43.9	
	comp=Z,17nm,0.8s						
ISLE	**Juniper Island**	**85.21**	**30**	IAmb	IAmb	03 14 47.5	
	comp=Z,12nm,0.8s						
BCAR	**Beaver Creek A**	**85.32**	**27**	P	**P**	**03 14 40.9**	**+0.4**
PPT	**Papeete**	**85.46**	**108**	LR	LR	03 46 53.1	
	comp=Z,58nm,20.4s,baz=322,slow=31						
PPT2	**Papeete2**	**85.46**	**108**	*e*S	**S**	**03 25 00.9**	**-4.0**
	comp=Z,111nm,26.0s						
PPT2	**Papeete2**	**85.46**	**108**	*e*LR	LR	03 41 47.3	
	comp=Z,245nm,29.5s						
OBN	**Obninsk**	**85.50**	**325**	P	**P**	**03 14 41.8**	**+0.3**
BARN	**Barnard Glacie**	**85.51**	**29**	IAmb	IAmb	03 14 45.7	
	comp=Z,12nm,0.7s						
VNDA	**Vanda**	**85.51**	**173**	P	**P**	**03 14 41.5**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=270,slow=20,SNR=8.3						
VNDA				LR	LR	03 54 43.7	
	comp=Z,106nm,18.1s,baz=328,slow=37						
VNDA	**Vanda**	**85.51**	**173**	P	**P**	**03 14 42.3**	**+1.2**
YAH	**Yahtse**	**85.52**	**30**	IAmb	IAmb	03 14 45.5	
	comp=Z,8.4nm,0.7s						
CTGM	**Chitina Glacie**	**85.68**	**29**	IAmb	IAmb	03 14 46.2	
	comp=Z,13nm,0.7s						
TABL	**Table Mountain**	**85.81**	**30**	IAmb	IAmb	03 14 48.1	
	comp=Z,14nm,0.7s						
MAW	**Mawson**	**85.88**	**200**	P	**P**	**03 14 43.0**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=99,slow=4.8,SNR=4.0						
MAW				LR	LR	03 53 52.0	
	comp=Z,91nm,18.1s,baz=68,slow=36						
TOKA	**Tokat**	**86.68**	**310**	IAmb	IAmb	03 14 53.6	
	comp=Z,17nm,0.9s						
EPYK	**Eagle Plains**	**87.14**	**24**	P	**P**	**03 14 50.1**	**+0.7**
	baz=278						
ARCES	**ARCESS Array B**	**88.55**	**340**	P	**P**	**03 14 54.9**	**-1.1**
	comp=Z,9.7nm,0.7s,baz=60,slow=4.1,SNR=12						
ARCES	**ARCESS Array B**	**88.55**	**340**	P	**P**	**03 14 56.6**	**+0.6**
BR131	**Keskin Array S**	**88.91**	**310**	IAmb	IAmb	03 15 00.2	
	comp=Z,12nm,0.8s						
BRTR	**Keskin Array B**	**88.91**	**310**	P	**P**	**03 14 58.2**	**-0.3**
	comp=Z,8.1nm,0.8s,baz=115,slow=4.3,SNR=29						
BRTR				LR	LR	04 00 17.4	
	comp=Z,67nm,18.8s,baz=352,slow=39						
BRTR	**Keskin Array B**	**88.91**	**310**	P	**P**	**03 14 57.5**	**-1.0**
KMBO	**Kilima Mbogo**	**89.93**	**269**	P	**P**	**03 15 03.6**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=81,slow=5.8,SNR=9.0						
FIA1	**FINESS Array S**	**90.10**	**332**	IAmb	IAmb	03 15 10.3	
	comp=Z,12nm,0.8s						
FINES	**FINESS Array B**	**90.10**	**332**	P	**P**	**03 15 02.8**	**-0.5**
	comp=Z,9.4nm,0.7s,baz=72,slow=6.2,SNR=19						
FINES	**FINESS Array B**	**90.10**	**332**	P	**P**	**03 15 03.2**	**-0.1**
AKASG	**Malin Array Be**	**90.44**	**321**	P	**P**	**03 15 04.4**	**-0.8**
	comp=Z,8.6nm,0.8s,baz=66,slow=4.7,SNR=22						
AKASG	**Malin Array Be**	**90.44**	**321**	P	**P**	**03 15 04.8**	**-0.4**
AKBB	**Malin Array Si**	**90.44**	**321**	IAmb	IAmb	03 15 07.3	
	comp=Z,9.8nm,0.8s						
C36M	**Paulatuk**	**91.08**	**20**	P	**P**	**03 15 07.9**	**+0.2**
	baz=290						
NACGM	**Naroch**	**91.11**	**325**	*i* P	**P**	**03 15 08.7**	**+0.5**
NACGM				*i* P	**P**	**03 15 08.7**	**+0.5**
NACGM				*i* P	**P**	**03 15 08.7**	**+0.5**
NACGM				*i* pP	**pP**	**03 15 28.9**	**-7.3**
NACGM				*i* sP	**sP**	**03 15 50.5**	**+2.9**
NACGM				*i* PP	PP	03 19 05.5	+19
NACGM				*i* PPP	PPP	03 20 12.0	
NACGM				*i* SKS		03 24 36.7	
NACGM				*i* S	**SKSac**	**03 25 30.7**	**+0.6**
NACGM				*i* sS	pS	03 26 18.4	-14
NACGM				*i* SP	**SP**	**03 26 57.0**	**-7.9**
NACGM				*i* SS	SS	03 32 31.8	+29
NACGM				*i* SSS	SSS	03 36 30.8	
NACGM				*i* LQ	LQ	03 50 24.3	
NACGM				*i* LR	LR	03 56 54.5	
SORM	**Soroca**	**91.45**	**319**	⇓P	**P**	**03 15 08.7**	**-1.2**
TLCR		**91.66**	**316**	⇑P	**P**	**03 15 09.7**	**-1.3**
JURR	**Jurilovca**	**91.68**	**315**	⇓P	**P**	**03 15 10.9**	**-0.2**
TPGR	**Topolog**	**91.99**	**315**	⇓P	**P**	**03 15 12.4**	**-0.2**
TIRR	**Tirgusor**	**92.06**	**315**	⇓P	**P**	**03 15 12.4**	**-0.4**
CFR	**Carcaliu**	**92.13**	**316**	⇑P	**P**	**03 15 12.7**	**-0.4**
HARR	**Harsova**	**92.36**	**315**	⇓P	**P**	**03 15 14.5**	**+0.3**
ICOR	**Ion Corvin**	**92.56**	**315**	⇑P	**P**	**03 15 15.5**	**+0.4**
TESR	**Tescani**	**92.89**	**317**	⇑P	**P**	**03 15 16.3**	**-0.4**
VRI	**Vrincioaia**	**92.97**	**317**	⇑P	**P**	**03 15 17.3**	**+0.2**
PLOR	**Plostina**	**93.03**	**316**	⇓P	**P**	**03 15 15.8**	**-1.6**
BISRR	**Bisoca**	**93.05**	**316**	⇓P	**P**	**03 15 19.1**	**+1.6**
NEHR	**Nehoiu**	**93.36**	**316**	⇑P	**P**	**03 15 16.9**	**-2.0**
OZUR		**93.56**	**317**	⇑P	**P**	**03 15 21.4**	**+1.5**
MLR	**Muntele Rosu**	**93.58**	**316**	⇓P	**P**	**03 15 20.0**	**0.0**
BURAR	**Bucovina Array**	**93.62**	**318**	⇓P	**P**	**03 15 20.4**	**+0.2**
BURAR	**Bucovina Array**	**93.62**	**318**	P	**P**	**03 15 20.1**	**0.0**
BUR08	**Bucovina Ar. S**	**93.62**	**318**	IAmb	IAmb	03 15 27.9	
	comp=Z,7.4nm,0.8s						
VOIR		**94.21**	**316**	⇓P	**P**	**03 15 22.1**	**-0.8**
COPA	**Copaceanca**	**94.38**	**315**	⇓P	**P**	**03 15 23.6**	**+0.1**
HUMR	**Humele**	**94.46**	**315**	⇑P	**P**	**03 15 23.5**	**-0.4**
ARR	**Arges**	**94.51**	**316**	⇓P	**P**	**03 15 24.3**	**0.0**
KWP	**Kalwaria Pacla**	**94.76**	**321**	IAmb	IAmb	03 15 28.7	
	comp=Z,9.8nm,1.0s						
VLAD	**Vladila**	**94.98**	**315**	⇑P	**P**	**03 15 26.6**	**+0.3**
LOT	**Lotru**	**95.09**	**317**	⇑P	**P**	**03 15 27.1**	**+0.2**
KOLS	**Kolonicke sedl**	**95.21**	**320**	*e*PDIFF	**P**	**03 15 29.3**	**+2.0**
DRGR		**95.47**	**318**	⇓P	**P**	**03 15 28.7**	**+0.1**
SRE	**Strehaia**	**95.66**	**316**	⇓P	**P**	**03 15 25.1**	**-4.3**
CRVS	**Cervenica-Dubn**	**95.74**	**320**	*e*PDIFF	**P**	**03 15 30.4**	**+0.7**
QSPA	**South Pole Qui**	**95.78**	**180**	P	**P**	**03 15 29.9**	**+0.4**
PUNG	**Punghina**	**95.94**	**316**	⇓P	**P**	**03 15 30.7**	**0.0**
VTS	**Vitosha**	**96.13**	**314**	⇑P	**P**	**03 15 31.5**	**-0.3**
HERR	**Herculane**	**96.15**	**316**	⇓P	**P**	**03 15 30.0**	**-1.6**
SIRR	**Siria**	**96.31**	**318**	⇑P	**P**	**03 15 32.1**	**-0.3**
MDVR	**Moldovita**	**96.66**	**316**	⇑P	**P**	**03 15 34.3**	**+0.3**
NB2	**NORSAR Subarra**	**97.01**	**334**	P	**P**	**03 15 34.1**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**97.01**	**334**	P	**P**	**03 15 34.1**	**-1.1**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**97.01**	**334**	P	**P**	**03 15 34.4**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=65,slow=4.5,SNR=10.0						
NOA				LR	LR	04 04 31.1	
	comp=Z,24nm,20.1s,baz=70,slow=38						
YKA	**Yellowknife Ar**	**97.41**	**24**	P	**P**	**03 15 36.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=304,slow=3.4,SNR=18						
YKA				PKKPbc	**PKKPbc**	**03 32 13.7**	**-3.1**
	comp=Z,0.7nm,0.6s,baz=114,slow=3.2,SNR=14						
VYHS	**Vyhne**	**97.52**	**320**	*e*PDIFF	Pdif	03 15 39.5	+1.7
MORC	**Moravsky Berou**	**97.93**	**322**	⇓P	**P**	**03 15 39.4**	**-0.2**
MORC	**Moravsky Berou**	**97.93**	**322**	IAmb	IAmb	03 15 40.2	
	comp=Z,2.9nm,0.9s						
DIVS	**Divibare**	**98.03**	**316**	IAmb	IAmb	03 15 42.2	
	comp=Z,7.0nm,0.9s						
KRLC	**Kraliky**	**98.29**	**322**	*e*PDIFF	**P**	**03 15 41.1**	**-0.1**
OSTC	**Ostas**	**98.47**	**323**	*e*PDIFF	Pdif	03 15 43.2	+1.2
DPC	**Dobruska-Polom**	**98.48**	**323**	*e*PDIFF	Pdif	03 15 42.4	+0.3
CHVC	**Chvalec**	**98.56**	**323**	*e*PDIFF	Pdif	03 15 42.8	+0.4
UPC	**Upice**	**98.61**	**323**	*e*PDIFF	**P**	**03 15 42.4**	**-0.2**
VRAC	**Vranov**	**98.67**	**322**	⇑P	Pdif	03 15 43.4	+0.5
PRU	**Pruhonice**	**99.68**	**323**	*e*PDIFF	**Pdif**	**03 15 47.4**	**+0.1**
PRU				*e*x	x	03 16 00.0	
BRG	**Berggiesshubel**	**99.71**	**324**	*e*P	**Pdif**	**03 15 48.9**	**+1.4**
BRG				Amp		03 15 53.2	
	comp=Z,5.9nm,0.8s						
BRG	**Berggiesshubel**	**99.71**	**324**	*e*P	**Pdif**	**03 15 48.9**	**+1.4**
BRG				Amp		03 15 53.2	
	comp=Z,5.9nm,0.8s						
CLL	**Collm**	**100.09**	**324**	*e*Pdif	**Pdif**	**03 15 51.0**	**+1.9**
CLL				*e*PP	**PP**	**03 20 00.0**	**+4.5**
KHC	**Kasperske Hory**	**100.58**	**322**	*e*PDIFF	**Pdif**	**03 15 50.7**	**-0.7**
GERES	**GERESS Array B**	**100.61**	**322**	P	**Pdif**	**03 15 51.5**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=76,slow=5.6,SNR=14						
BOSA	**Boshof**	**103.15**	**242**	Pdiff	**Pdif**	**03 16 04.4**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=168,slow=14,SNR=1.4						
BOSA	**Boshof**	**103.15**	**242**	Pdif	**Pdif**	**03 16 03.0**	**-0.4**
NVAR	**Mina Array Bea**	**105.22**	**48**	Pdiff	**Pdif**	**03 16 15.2**	**+2.7**
	comp=Z,0.6nm,0.6s,baz=292,slow=5.4,SNR=7.6						
NVAR				PP	**PKiKP**	**03 20 25.4**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=269,slow=9.9,SNR=3.6						
NVAR				PKKPbc	**PKKPbc**	**03 31 54.4**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=141,slow=4.5,SNR=10						
PDAR	**Pinedale Array**	**109.52**	**41**	PKKPbc	PKKPbc	03 31 50.8	+10
	comp=Z,1.8nm,0.7s,baz=120,slow=5.3,SNR=18						
ULM	**Lac du Bonnet**	**112.92**	**28**	PKiKP	**PKiKP**	**03 20 40.5**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=256,slow=4.2,SNR=3.0						
121A	**Cookes Peak, D**	**115.42**	**50**	P	**PKiKP**	**03 20 44.7**	**-1.0**
	baz=296						
T25A	**Trinidad**	**115.71**	**44**	P	**PKiKP**	**03 20 45.0**	**-1.2**
	baz=300						
ESDC	**Sonseca Array**	**116.05**	**320**	PKP	**PKPdf**	**03 20 46.1**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=73,slow=0.9,SNR=4.6						
EYMN	**Ely**	**116.59**	**28**	P	**PKPdf**	**03 20 47.2**	**-0.1**
	baz=316						
ECSD	**EROS Data Cent**	**116.83**	**34**	P	**PKPdf**	**03 20 47.6**	**-0.3**
	baz=310						
MNTX	**Cornudas Mount**	**117.62**	**50**	P	**PKPdf**	**03 20 49.3**	**-0.5**
	baz=297						
CBKS	**Cedar Bluff**	**117.93**	**40**	P	**PKPdf**	**03 20 49.0**	**-1.2**
	baz=305						
KSU1	**Kansas State U**	**119.73**	**38**	P	**PKiKP**	**03 20 53.7**	**0.0**
	baz=308						
KSU1	**Kansas State U**	**119.73**	**38**	PKPdf	**PKPdf**	**03 20 53.4**	**-0.2**
TXAR	**Lajitas Array**	**120.01**	**51**	PKP	**PKPdf**	**03 20 54.2**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=244,slow=1.7,SNR=7.5						
TXAR				pPKP	**pPKPdf**	**03 21 26.6**	**+3.9**
	comp=Z,0.4nm,0.7s,baz=14,slow=1.1,SNR=3.1						
TXAR				PKKPbc	**PKKPbc**	**03 31 04.5**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=132,slow=6.5,SNR=11						
PMSA	**Palmer Station**	**120.69**	**174**	PKP	**PKPdf**	**03 20 53.0**	**-1.5**
	comp=Z,22nm,0.6s,baz=82,slow=16,SNR=5.6						
PMSA	**Palmer Station**	**120.69**	**174**		**PKiKP**	**03 20 55.1**	**+0.5**
JFWS	**Jewell Farm**	**120.81**	**31**	P	**PKPdf**	**03 20 54.8**	**-0.7**
	baz=316						
WMOK	**Wichita Mounta**	**120.86**	**43**	P	**PKPdf**	**03 20 54.5**	**-1.4**
	baz=304						
E46A	**Sault Ste Mari**	**120.97**	**25**	PKPdf	**PKiKP**	**03 20 55.8**	**-0.1**
LSQQ	**Lebel-sur-Quev**	**121.39**	**18**	P	**PKPdf**	**03 20 56.2**	**-0.3**
	baz=332						
JCT	**Junction City**	**122.39**	**48**	PKPdf	**PKPdf**	**03 20 58.5**	**-0.5**
L44A	**Lake County Fo**	**122.53**	**30**	P	**PKPdf**	**03 20 58.2**	**-0.6**
	baz=318						
TOA0	**Torodi Ar. Sit**	**122.54**	**290**	PKPdf	**PKPdf**	**03 20 58.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**122.54**	**290**	PKP	**PKiKP**	**03 20 59.9**	**+0.1**
	comp=Z,18nm,0.7s,baz=39,slow=2.1,SNR=55						
TORD	**Torodi Ar. Bea**	**122.54**	**290**		**PKPdf**	**03 20 58.8**	**-0.8**
CCM	**Cathedral Cave**	**123.62**	**36**	P	**PKPdf**	**03 21 00.3**	**-0.8**
	baz=312						
ALGO	**Algonquin Park**	**123.74**	**21**	P	**PKPdf**	**03 21 00.2**	**-0.8**
	baz=330						
U40A	**Yellville**	**123.76**	**39**	P	**PKPdf**	**03 21 01.1**	**-0.4**
	baz=310						
D56A	**ZEC Mazanza, M**	**123.86**	**18**	P	**PKPdf**	**03 21 00.9**	**-0.4**
	baz=334						
W39A	**Magazine**	**123.91**	**40**	P	**PKPdf**	**03 21 01.0**	**-0.7**
	baz=308						
E55A	**Montcerf-Lytto**	**123.98**	**19**	P	**PKPdf**	**03 21 00.8**	**-0.7**
	baz=332						
LATQ	**La Tuque**	**124.13**	**16**	P	**PKPdf**	**03 21 01.3**	**-0.4**
	baz=336						
G54A	**Lake Saint Pet**	**124.20**	**21**	P	**PKPdf**	**03 21 01.4**	**-0.7**
	baz=329						
E56A	**St. Veronique**	**124.23**	**18**	P	**PKPdf**	**03 21 01.4**	**-0.6**
	baz=333						
MIAR	**Mount Ida**	**124.44**	**41**	P	**PKiKP**	**03 21 03.4**	**+0.3**
	baz=308						
MIAR	**Mount Ida**	**124.44**	**41**	PKPdf	**PKPdf**	**03 21 02.5**	**-0.3**
G57A	**Newington**	**125.52**	**19**	P	**PKPdf**	**03 21 04.0**	**-0.5**
	baz=333						
F59A	**Saint Guilaume**	**125.53**	**17**	P	**PKPdf**	**03 21 04.5**	**+0.1**
	baz=336						
H58A	**Gabriels**	**126.39**	**19**	P	**PKPdf**	**03 21 06.3**	**+0.1**
	baz=334						
ACSO	**Alum Creek Sta**	**126.42**	**28**	P	**PKiKP**	**03 21 06.6**	**-0.2**
	baz=322						
M53A	**WI Miller and**	**126.50**	**26**	P	**PKPdf**	**03 21 05.8**	**-0.7**
	baz=325						
M54A	**Oil Creek Stat**	**126.87**	**25**	P	**PKiKP**	**03 21 07.6**	**-0.2**
	baz=326						
WVT	**Waverly**	**126.92**	**35**	P	**PKPdf**	**03 21 07.6**	**+0.2**
	baz=315						
WVT	**Waverly**	**126.92**	**35**		**PKPdf**	**03 21 07.3**	**-0.1**
H61A	**Lyndonville**	**126.98**	**17**	P	**PKPdf**	**03 21 07.4**	**+0.1**
	baz=336						
I59A	**Olmsteadville**	**127.05**	**19**	P	**PKPdf**	**03 21 07.7**	**+0.2**
	baz=334						
K57A	**Scipio Center**	**127.08**	**22**	P	**PKPdf**	**03 21 07.7**	**+0.1**
	baz=330						
OXF	**Oxford**	**127.09**	**38**	P	**PKPdf**	**03 21 07.8**	**0.0**
	baz=312						
J59A	**Piesco**	**127.14**	**20**	P	**PKPdf**	**03 21 07.7**	**0.0**
	baz=333						
LBNH	**Lisbon**	**127.25**	**17**	P	**PKiKP**	**03 21 08.3**	**-0.1**
	baz=336						
P52A	**Corning**	**127.29**	**28**	P	**PKPdf**	**03 21 08.2**	**+0.1**
	baz=322						
KOWA	**Kowa**	**127.43**	**293**	PKPdf	**PKPdf**	**03 21 08.2**	**-0.8**

N56A	West Decatur	127.93	24	P	PKPdf	03 21 08.8	-0.5
	baz=327						
SSPA	Standing Stone	128.34	24	P	PKPdf	03 21 09.5	-0.5
	baz=328						
P56A	Dayton Farm, R	128.88	26	P	PKPdf	03 21 10.6	-0.5
	baz=326						
P57A	Homestead Farm	129.25	25	P	PKiKP	03 21 12.6	0.0
	baz=327						
L63A	North Scituate	129.51	18	P	PKPdf	03 21 11.7	-0.5
	baz=336						
LRAL	Lakeview Retre	129.57	38	P	PKiKP	03 21 13.5	+0.2
	baz=314						
Q58A	Fox Den Farm,	129.85	25	P	PKPdf	03 21 12.9	0.0
	baz=327						
Q59A	Harwood	130.34	24	P	PKiKP	03 21 14.9	+0.2
	baz=328						
KIC	Kosan Boka	130.38	283	*e*PKIKP	PKiKP	03 21 15.4	-0.1
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	130.42	284	PKP	PKiKP	03 21 15.5	-0.1
	comp=Z,6.4nm,0.6s,baz=84,slow=1.8,SNR=16						
DBIC				SKPbc	SKPbc	03 24 29.4	+1.2
	comp=Z,5.9nm,0.8s,baz=83,slow=6.1,SNR=5.4						
TIC	Toumodi	130.59	284	*e*PKIKP	PKiKP	03 21 15.5	-0.4
LIC	Lamto	130.69	283	*e*PKIKP	PKPdf	03 21 15.2	0.0
	comp=Z,30nm,0.8s						
T58A	Grand View Acr	131.13	27	P	PKPdf	03 21 15.1	-0.4
	baz=325						
KMSC	Kings Mountain	131.21	31	P	PKiKP	03 21 16.5	-0.1
	baz=321						
V57A	Coltrane Farms	131.40	29	P	PKPdf	03 21 15.8	-0.1
	baz=323						
W57A	Gilead	131.88	30	P	PKPdf	03 21 16.2	-0.7
	baz=323						
PLCA	Paso Flores	141.88	158	PKP	PKiKP	03 21 36.8	-1.5
	comp=Z,1.7nm,0.7s,baz=312,slow=4.0,SNR=4.9						
PLCA				SKPbc	SKiKP	03 25 05.4	+1.0
	comp=Z,2.1nm,0.9s,baz=277,slow=4.4,SNR=4.1						
BI02	San Fabin de	145.07	154		PKPbc	03 21 40.2	-0.4
PEL	Peldehue	148.25	151		PKPbc	03 21 49.2	-0.7
LCO	Las Campanas	151.52	146		PKPbc	03 21 57.4	-0.8
SDV	Santo Domingo	157.05	50	PKP	PKPdf	03 22 00.7	+0.7
	comp=Z,6.8nm,0.7s,baz=302,slow=0.7,SNR=4.1						
SDV				PKPab	PKPab	03 22 31.7	+0.9
	comp=Z,5.3nm,0.6s,baz=277,slow=5.2,SNR=4.3						
SDV	Santo Domingo	157.05	50	PKPdf	PKPdf	03 21 58.9	-1.1
CPUP	Villa Florida	159.24	169	PKPab	PKPab	03 22 41.1	+1.6
	comp=Z,1.6nm,0.6s,baz=181,slow=5.3,SNR=5.1						
CPUP	Villa Florida	159.24	169		PKPab	03 22 39.3	-0.2
RCBR	Riachuelo	163.05	269	PKPab	PKPab	03 22 57.4	+0.5
	comp=Z,12nm,0.8s,baz=140,slow=4.6,SNR=6.1						
SIV	San Ignacio	167.18	142	PKP	PKPdf	03 22 10.5	+0.6
	comp=Z,1.6nm,0.7s,baz=139,slow=2.0,SNR=10						
BDFB	Brasilia	169.17	206	PKPab	PKPab	03 23 24.4	+0.9
	comp=Z,3.0nm,0.6s,baz=146,slow=4.1,SNR=6.5						

*VAO **20** 03:02:40.0±1.1, 25°.04S×69°.84W, h10^{km}, mb4.2*
*NEIC **20** 03:03:29.7±0.9, 23°.79S±0°.07×66°.6W±0°.2, h235^{km}±12^{km}, mb3.8/3, Md4.0(SJA), Error ellipse: s-maj=25.2km s-min=10.4km az=95.0*
*IDC **20** 03:03:30.1±1.7, 23°.74S×66°.43W, h210^{km}±23^{km}, mb3.6/1, mb1 3.3/4, mb1mx3.0/31, mbtmp3.9/4, Error ellipse: s-maj=32.5km s-min=25.2km az=144.0*
ISC 20 03:03:28.2±0.7**, 23°.80S**±0°.05×**66°.33W**±0°.07**, h200**^{km}**, n37, σ1^s.36**/43**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.65	296	P	Pn	03 04 16.4	+2.2
	16nm,0.3s,baz=128,slow=6.9,SNR=6.7						
LVC				S	Sn	03 04 50.9	+1.1
	26nm,0.3s,baz=276,slow=20,SNR=21						
LVC	Limon Verde	2.65	296	Pn	Pn	03 04 16.6	+2.4
LVC				S	Sn	03 04 50.6	+0.7
PB15	IPOC Station P	2.94	281		Pn	03 04 18.7	+1.4
PB15				S	Sn	03 04 55.4	-0.2
PB06	IPOC Station P	3.17	289		Pn	03 04 21.2	+1.2
PB06				S	Sn	03 04 59.2	-1.2
GO02	Mina Guanaco	3.27	245		Pn	03 04 22.6	+1.4
GO02				S	Sn	03 05 03.5	+0.7
PB09	IPOC Station P	3.34	306		Pn	03 04 23.5	+1.4
PB04	IPOC Station P	3.80	292		Pn	03 04 28.2	+0.5
PB14	IPOC Station P	3.81	257		Pn	03 04 28.3	+0.5
PB07	IPOC Station P	3.87	301		Pn	03 04 29.2	+0.7
PB10	IPOC Station P	3.88	273		Pn	03 04 29.2	+0.8
AC02	Maricunga	3.94	219		Pn	03 04 31.0	+1.2
PB08	IPOC Station P	4.48	324		Pn	03 04 37.1	+0.7
PB08				S	Sn	03 05 29.9	-0.1
AC01	Pan de Azucar	4.52	238		Pn	03 04 37.0	+0.4
PATCX	Punta Patache	4.61	309		Pn	03 04 38.1	+0.3
TA01	Diego Aracena	4.80	311	Pn	Pn	03 04 40.5	+0.4
GO03	Copiap	5.17	222		Pn	03 04 45.5	+0.8
AC04	Llanos de Chal	6.12	223	Pn	Pn	03 04 56.9	-0.1
PB16	IPOC Station P	6.19	331		Pn	03 04 58.4	-0.1
BO02	Sierra Bellavi	11.62	198	P	P	03 06 11.6	-2.0
ARAG	Araguaiana, MT	15.85	62	*e*P	Pn	03 07 04.5	+3.7
CLDB	Colider	16.30	40	*e*P	Pn	03 07 07.3	+1.0
BB19B	Bebedouro	16.68	84	*e*P	Pn	03 07 12.4	+1.6
PLCA	Paso Flores	17.26	191	P	Pn	03 07 17.8	+0.3
	0.1nm,0.3s,baz=2.0,slow=11,SNR=1.4						
PLCA	Paso Flores	17.26	191	Pn	P	03 07 16.8	+0.9
PLCA				IAmb	IAmb	03 07 25.7	
	comp=Z,3.4nm,1.1s						
VAO	Valinhos	17.80	91	*e*P	Pn	03 07 24.0	+0.1
IPMB	Ipameri, GO	17.89	75	*e*P	Pn	03 07 25.3	+0.3
BDFB	Brasilia	19.04	68	P	Pn	03 07 38.0	-0.7
	comp=Z,0.8nm,0.3s,baz=239,slow=6.3,SNR=6.1						
BDFB	Brasilia	19.04	68	P	P	03 07 37.1	+1.6
BDFB				IAmb	IAmb	03 07 40.9	
	comp=Z,4.4nm,1.0s						
NPGB	Novo Progresso	19.71	34	*e*P	P	03 07 41.0	-1.6
ITTB	Itaituba	21.86	30	*e*P	P	03 08 01.0	-4.1
JANB	Januaria	22.49	71	*e*P	P	03 08 11.5	+0.3
SDBA	SAO DESIDERIO	23.27	65	*e*P	P	03 08 18.5	+0.4
SMTB	Santa Maria do	23.28	53	*e*P	P	03 08 19.1	+0.9
PRPB	Parauapebas	23.65	45	*e*P	P	03 08 20.5	-1.0
TORD	Torodi Ar. Bea	75.93	69	P	P	03 14 53.2	-0.1
	comp=Z,0.9nm,0.4s,baz=257,slow=5.4,SNR=6.9						
TORD	Torodi Ar. Bea	75.93	69	P	P	03 14 52.2	-1.1
MKAR	Makanchi Array	145.98	40	PKPbc	PKPab	03 22 45.2	+0.1
	comp=Z,0.5nm,0.4s,baz=306,slow=2.6,SNR=8.3						

*NEIC **20** 03:13:41.8±1.0, 47°.33N±0°.03×124°.24W±0°.03, h24^{km}±7^{km}, Error ellipse: s-maj=3.8km s-min=2.9km az=178.0*
*ANF **20** 03:13:42.1±1.2, 47°.38N×124°.19W, h25^{km}±6^{km}, ML2.5/5, Error ellipse: s-maj=8.4km s-min=5.4km az=72.0*
*SEA **20** 03:13:43.9±1.3, 47°.34N±0°.02×124°.11W±0°.05, h28^{km}±7^{km}, ML2.6/37, ML2.4/12(NEIC), Error ellipse: s-maj=5.8km s-min=0.9km az=61.0*
ISC 20 03:13:42.6±1.1**, 47°.33N**±0°.03×**124°.17W**±0°.04**, h28**^{km}±7^{km}**, n61, σ0^s.50**/74**, Near coast of Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLWA	Neilton Lookou	0.21	73		Pb	03 13 48.8	0.0
NLWA					Sb	03 13 53.0	-0.1
NLWA	Neilton Lookou	0.21	73	IAML		03 13 53.1	
	1μm,0.3s						
NLWA				IAML		03 13 53.2	
	1μm,0.6s						
OLQ	Olympics--Lake	0.31	53		Pb	03 13 50.1	+0.1
OLQ					Sb	03 13 54.8	-0.2
WISH	Wishkah	0.35	128		Pn	03 13 51.3	-0.4
WISH					Sn	03 13 57.6	-0.1
ON2	Olympics--Nort	0.52	149		Pn	03 13 53.8	-0.3
B017	Montesano	0.54	128		Pn	03 13 54.0	-0.3
B017					Sn	03 14 02.8	+0.5
SMW	South Mountain	0.56	91		Pb	03 13 53.6	-0.4
C03A	Quillayute Air	0.67	337		Pn	03 13 56.5	+0.3
C03A					Sn	03 14 06.3	+0.5
OBC	Olympics--Boni	0.71	5		Pn	03 13 56.7	-0.1
P403	Sandy Floe Qua	0.73	2		Pn	03 13 56.8	-0.2
P403					Sn	03 14 06.7	-0.7
D03D	Eldon	0.76	74	P	Pb	03 13 56.7	-0.6
	baz=254,SNR=69						
D03D				S	Sb	03 14 07.1	-0.2
	baz=254						
D03D	Eldon	0.76	74		Pb	03 13 56.6	-0.6
D03D					Sb	03 14 07.4	+0.1
B019	Raymond	0.77	152		Pn	03 13 57.4	0.0
CPW	Capitol Peak	0.79	116		Pb	03 13 57.0	-0.8
HDW	Hoodsport	0.82	67		Pb	03 13 57.9	-0.5
HDW					Sb	03 14 09.1	0.0
B04A	Port Angeles	0.86	32		Pb	03 13 58.4	-0.4
B04A	Port Angeles	0.86	32		Pb	03 13 58.5	-0.4
B04A					Sb	03 14 09.9	0.0
E03A	Lebam	0.89	152		Pb	03 13 58.8	-0.5
E03A	Lebam	0.89	152	IAML		03 14 15.3	
	comp=E,83nm,0.4s						
E03A				IAML		03 14 16.0	
	comp=N,102nm,0.5s						
STW	Striped Peak	0.89	22		Pn	03 13 59.1	-0.1
C04A	Brinnon	0.90	64		Pb	03 13 59.0	-0.6
GNW	Green Mountain	0.94	75		Pn	03 13 59.2	-0.7
D04E	Lakebay	0.96	99	P	Pn	03 14 00.1	-0.1
	baz=281,SNR=17						
D04E				S	Sn	03 14 14.0	+1.0
	baz=281						
GMW	Gold Mountain	0.96	76		Pn	03 13 59.6	-0.7
B013	Quilcene	0.98	60		Pn	03 14 00.2	-0.2
B013					Sb	03 14 13.8	+0.4
B013	Quilcene	0.98	60		Pn	03 14 00.2	-0.2
OCP	Olym-Cheeka Pk	1.02	343		Pb	03 14 01.1	-0.5
BLN	Blyn Mountain	1.06	50		Pn	03 14 01.3	-0.2
BLN					Sn	03 14 17.2	+1.8
SQM	Sequim	1.06	45		Pb	03 14 02.0	-0.3
BMW	Boistfort Moun	1.07	143		Pn	03 14 01.3	-0.4
VGZ	Gonzales	1.23	27		Pn	03 14 03.3	-0.5
E04D	Cinebar	1.34	125	P	Pn	03 14 05.4	0.0
	baz=307,SNR=12						
E04D				S	Sb	03 14 23.8	0.0
	baz=307						
B941	Kapowsin	1.38	104		Pn	03 14 05.3	-0.5
B011	North Saanich	1.41	20		Pn	03 14 05.9	-0.4
PGC	Sidney	1.41	20		Pn	03 14 06.1	-0.2
PGC				IAML		03 14 22.9	
	comp=E,74nm,0.3s						
F04D	Rainier, OR	1.48	147	S	Sb	03 14 27.6	-0.2
	baz=330						
B926	Mesachie Lake	1.49	1		Pn	03 14 07.2	-0.3
D05A	Enumclaw	1.49	95		Pn	03 14 07.6	+0.1
D05A				IAML		03 14 29.3	
	comp=N,39nm,0.5s						
RATT	Rattlesnake La	1.61	86		Pn	03 14 09.0	-0.2
MCW	Mount Constitu	1.62	33		Pn	03 14 09.3	0.0
GSM	Grass Mountain	1.62	94		Pn	03 14 09.3	-0.1
OBSR	Observation Ro	1.67	104		Pn	03 14 10.3	+0.2
REMR	Mount Rainier-	1.67	107		Pn	03 14 10.3	+0.2
B05A	Bryant	1.68	55	P	Pn	03 14 10.0	0.0
	baz=236,SNR=11						
B05A				S	Sn	03 14 30.6	-0.1
	baz=236						
B05A	Bryant	1.68	55		Pn	03 14 10.4	+0.4
FL2	Flat Top 2	1.69	131		Pn	03 14 10.9	+0.6
A04D	Lummi Island	1.70	35	P	Pn	03 14 10.2	-0.2
	baz=215,SNR=12						
A04D				S	Sn	03 14 30.5	-0.7
	baz=215						
A04D	Lummi Island	1.70	35		Pn	03 14 10.8	+0.4
LON	Longmire	1.72	109		Pn	03 14 11.0	+0.4
RCM	Mount Rainier-	1.74	106		Pn	03 14 11.2	0.0
JCW	Jim Creek	1.74	59		Pn	03 14 11.0	0.0
LVP	Lakeview Peak	1.75	135		Pn	03 14 12.2	+1.0
FMW	Mount Fremont	1.75	102		Pn	03 14 11.3	0.0
PANH	Panhandle Gap,	1.79	104		Pn	03 14 11.9	+0.1
MBW	Mount Baker	2.11	45		Pn	03 14 17.0	+0.9
RPW	Rockport	2.11	57		Pn	03 14 16.6	+0.6
B06A	Marblemount	2.16	56		Pn	03 14 17.4	+0.8
B06A	Marblemount	2.16	56	IAML		03 14 31.8	
	comp=N,25nm,2.7s						
B06A				IAML		03 15 05.9	
	comp=E,29nm,0.5s						
GPW	Glacier Peak	2.19	68		Pn	03 14 18.0	+0.6
G03D	McMinnville, O	2.21	163	S	Sn	03 14 44.6	+0.9
	baz=345						
SHB	Sechelt	2.28	5		Pn	03 14 19.1	+0.7

*IDC **20** 03:31:41.0±12.0, 16°.09N×123°.95E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.3/38, mbtmp3.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/40, Error ellipse: s-maj=357.8km s-min=32.4km az=39.0*
*MAN **20** 03:31:59.2, 13°.54N×124°.51E, h2^{km}, MS3.5*
ISC 20 03:32:02.3±1.9**, 13°.5N**±0°.1×**124°.4E**±0°.2**, h7**^{km}±10^{km}**, n10, σ1^s.69**/14**, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.24	306	*e*P	Pg	03 32 06.2	-0.7
PVCP				*e*S	Sg	03 32 11.3	+1.2
CNP	Catarman	0.99	162	*e*P	Pg	03 32 20.2	-1.1
CNP				*e*S	Sn	03 32 35.0	-1.8
JCNP	Jose Panganiba	1.81	297	*e*P	Pn	03 32 32.4	-1.4
JCNP				*e*S	Sn	03 32 54.0	-3.0
GQP	Guinayangan	1.91	284	⇓*e*P	Pn	03 32 35.9	+0.7
GQP				*e*S	Sb	03 33 01.2	-0.2
POLP	Polilio Island	2.66	299	*e*P	Pn	03 32 45.0	-0.5
POLP				*e*S	Sb	03 33 23.9	+0.9
LQP	Lukban	2.81	284	⇑*e*P	Pn	03 32 47.3	-0.5
LQP				*e*S	Sb	03 33 29.0	+1.4
MJAR	Matsushiro Arr	26.13	26	LR	LR	03 44 52.1	
	comp=Z,34nm,21.0s,baz=195,slow=33						
WRA	Warramunga Arr	34.62	163	P	P	03 38 53.2	+1.1
	0.1nm,0.4s,baz=341,slow=8.9,SNR=1.6						
ASAR	Alice Springs	38.06	166	P	P	03 39 24.2	+2.6
	0.2nm,0.3s,baz=347,slow=7.3,SNR=4.8						
ZALV	Zalesovo Beam	50.95	331	LR	LR	04 01 27.9	
	comp=Z,64nm,19.5s,baz=38,slow=37						

IDC 20 04:05:39.1±1.8**, 6°.79S**×**124°.41E, h0**^{km}**, mb3.6**/1**, mb1 3.4**/3**, mb1mx3.3**/38**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=188.8km s-min=29.8km az=60.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.25	145	Pn	Pn	04 09 30.5	+1.5
	0.1nm,0.3s,baz=329,slow=7.6,SNR=1.7						
ASAR	Alice Springs	19.11	152	P	P	04 10 03.0	-0.7
	0.2nm,0.3s,baz=332,slow=12,SNR=5.1						
MKAR	Makanchi Array	65.11	329	P	P	04 16 21.8	0.0
	0.4nm,0.5s,baz=124,slow=8.1,SNR=6.3						

IDC 20 04:12:56.5±3.9**, 41°.64N**×**127°.11E, h0**^{km}**, mb1 2.6**/2**, mb1mx2.6**/45**, mbtmp2.6**/2**, ML1.9**/2**, Error ellipse: s-maj=47.7km s-min=17.0km az=112.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array	4.22	171	Pn	Pn	04 14 01.2	-0.9
	0.2nm,0.3s,baz=356,slow=13,SNR=1.6						
KSRS				Pg	Pb	04 14 14.5	+2.8
	0.5nm,0.3s,baz=350,slow=19,SNR=4.5						
KSRS				Lg	Lg	04 15 10.9	
	1.9nm,0.3s,baz=350,slow=28,SNR=9.1						
I45RU	USSURIYSK INFR	4.40	53	*i*		04 37 50.0	
	baz=234,slow=329,SNR=2.4						
USRK	Ussuriysk Ar.	4.41	53	Pn	Pn	04 14 05.7	+1.1
	baz=236,slow=14,SNR=1.7						
USRK				Pg	Pb	04 14 16.7	+1.9
	baz=238,slow=13,SNR=5.3						
USRK				Lg	Lg	04 15 15.6	
	baz=239,slow=26,SNR=4.6						

*CNRM **20** 04:17:35.3, 36°.43N×7°.59W, h18^{km}, Hypocentre not reviewed by the ISC*
*IGIL **20** 04:17:38.5, 36°.54N×7°.62W, h20^{km}, ML2.8*
*MDD **20** 04:17:38.5±0.8, 36°.55N×7°.57W, h24^{km}±8^{km}, mbLg2.9/34, Error ellipse: s-maj=7.4km s-min=3.0km az=31.0, PRXIMO*
MDD EMS: I-II INTENSIDAD MAXIMA.
*INMG **20** 04:17:38.3±1.1, 36°.52N×7°.60W, h20^{km}±3^{km}, ML2.7, Error ellipse: s-maj=2.2km s-min=2.1km az=45.0*
*SFS **20** 04:17:38.0, 36°.59N×7°.58W, h22^{km}, ML3.0, GOLFO DE CADIZ*
ISC 20 04:17:36.8±1.1**, 36°.59N**±0°.04×**7°.51W**±0°.03**, h22**^{km}±8^{km}**, n98, σ1^s.72**/187**, 2C-6D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	Barranco-do-Ve	0.73	333	P	Pn	04 17 52.5	+0.7
PBDV				S	Sn	04 18 02.5	+0.2
	84nm,0.5s						
PBDV	Barranco-do-Ve	0.73	333	*e*P	Pn	04 17 52.5	+0.7
PBDV				*e*S	Sn	04 18 02.5	+0.2
PBDV				A	A	04 18 13.1	
	84nm,0.5s						
PVAQ	Vaqueiros	0.82	349	P	Pn	04 17 54.0	+0.9
PVAQ				S	Sn	04 18 05.4	+0.8
	222nm,0.2s						
PVAQ	Vaqueiros	0.82	349	*e*P	Pn	04 17 54.0	+0.9
PVAQ				*e*S	Sn	04 18 05.4	+0.8
PVAQ				A	A	04 18 06.6	
	222nm,0.2s						
PVAQ	Vaqueiros	0.82	349	P		04 17 53.9	
EGRO	El Granado	0.94	2	⇓P	Pn	04 17 56.0	+1.4
	18nm,0.1s,SNR=18						
EGRO				S	Sb	04 18 08.2	+1.8
	61nm,0.1s,SNR=20						
PCVE	Castro Verde	1.12	338	P	Pn	04 17 58.2	+1.1
PCVE				S	Sn	04 18 12.8	+0.9
	75nm,0.7s						
PCVE	Castro Verde	1.12	338	*e*P	Pn	04 17 58.2	+1.1
PCVE				*e*S	Sn	04 18 12.8	+0.9
PCVE				A	A	04 18 27.1	
	75nm,0.7s						
MORF	Marmelete	1.16	308	*e*P	Pn	04 17 57.4	-0.3
MORF				*e*S	Sb	04 18 11.5	-1.2
MORF				AML	AML	04 18 17.9	
	comp=E,165nm,0.3s						
MORF	Marmelete	1.16	308	P	Pn	04 17 57.4	-0.3
MORF				S	Sb	04 18 12.4	-0.3
	comp=E,103nm,0.2s						
MORF	Marmelete	1.16	308	*e*P	Pn	04 17 57.4	-0.3
MORF				*e*S	Sb	04 18 12.4	-0.3
MORF				A	A	04 18 17.2	
	comp=E,103nm,0.2s						
PFVI	Vila Bisbo	1.18	297	P	Pn	04 17 57.5	-0.5
	comp=E,14nm,0.1s,SNR=34						
PFVI				S	Sb	04 18 11.7	-1.8
	comp=E,114nm,0.1s,SNR=6.3						
PFVI	Vila Bisbo	1.18	297	*e*P	Pn	04 17 57.5	-0.5
PFVI				*e*S	Sb	04 18 11.6	-1.8
PFVI				A	A	04 18 22.4	
	comp=E,75nm,0.3s						
PFVI	Vila Bisbo	1.18	297	P		04 17 57.5	
EMIN	Mina Concepcio	1.35	30	⇓P	Pn	04 18 01.5	+1.2
	comp=E,6.3nm,0.1s,SNR=18						
EMIN				S	Sn	04 18 18.1	+0.5
	comp=E,37nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	1.36	315	P	Pn	04 18 00.7	+0.3
PTEO				S	Sn	04 18 17.3	-0.4
	comp=E,21nm,0.7s						
PTEO	Sao Teotonio	1.36	315	⇓*e*P	Pn	04 18 00.7	+0.3
PTEO				*e*S	Sn	04 18 17.3	-0.4
PTEO				A	A	04 18 25.3	
	comp=E,43nm,0.7s						
ESPR	Espera	1.36	78	⇓P	Pn	04 18 01.5	+1.1
	comp=E,54nm,0.2s,SNR=18						
ESPR				S	Sn	04 18 18.9	+1.1
	comp=E,160nm,0.3s,SNR=7.9						
MESJ	Messejana	1.36	336	*e*P	Pn	04 18 01.4	+0.9
MESJ	Messejana	1.36	336	P	Pn	04 18 01.5	+0.9
MESJ				S	Sb	04 18 19.7	+1.0
	comp=E,36nm,0.4s						
MESJ	Messejana	1.36	336	*e*P	Pn	04 18 01.5	+0.9
MESJ				*e*S	Sb	04 18 19.7	+1.0
MESJ				A	A	04 18 27.4	
	comp=E,36nm,0.4s						
PBEJ	Beja	1.46	349	P	Pn	04 18 03.0	+1.2
PBEJ				S	Sn	04 18 21.4	+1.2
	comp=E,12nm,0.5s						
PBEJ	Beja	1.46	349	*e*P	Pn	04 18 03.0	+1.2
PBEJ				*e*S	Sn	04 18 21.4	+1.2
PBEJ				A	A	04 18 32.8	
	comp=E,24nm,0.5s						
PBAR	Barrancos	1.62	13	P	Pn	04 18 05.5	+1.4
PBAR				S	Sn	04 18 26.6	+2.3
	comp=E,30nm,0.2s						
PBAR	Barrancos	1.62	13	*e*Pn	Pn	04 18 05.5	+1.4
PBAR				*e*Sn	Sn	04 18 26.6	+2.3
PBAR				A	A	04 18 31.6	
	comp=E,30nm,0.2s						
EJIF	Jimena Fronter	1.65	94	⇑P	Pn	04 18 05.9	+1.4
	SNR=18						
PNCL	Nicolau / Gran	1.72	332	P	Pn	04 18 06.1	+0.7
PNCL				S	Sn	04 18 27.3	+0.7
	comp=E,26nm,0.1s						
PNCL	Nicolau / Gran	1.72	332	*e*Pn	Pn	04 18 06.1	+0.7
PNCL				*e*Sn	Sn	04 18 27.3	+0.7
PNCL				A	A	04 18 37.0	
	comp=E,26nm,0.1s						
ECEU	Ceuta	1.86	111	P	Pn	04 18 08.5	+1.2
	comp=E,16nm,0.1s,SNR=26						
CEU	Ceuta	1.86	111	P	Pn	04 18 09.0	+1.6
CEU				S	Sn	04 18 31.8	+1.6
CEU	Ceuta	1.86	111	⇓*i*P	Pn	04 18 09.0	+1.6
CEU				*e*S	Sn	04 18 31.8	+1.6
EVO	Evora	1.98	349	P	Pn	04 18 10.3	+1.4
EVO				S	Sn	04 18 33.9	+0.9
	comp=E,30nm,0.3s						
EVO	Evora	1.98	349	*e*P	Pn	04 18 10.8	+1.8
EVO				*e*S	Sn	04 18 32.0	-0.9
EVO	Evora	1.98	349	*e*Pn	Pn	04 18 10.3	+1.4
EVO				*e*Sn	Sn	04 18 33.9	+0.9
EVO				A	A	04 18 46.3	
	comp=E,30nm,0.3s						
HORN	Hornachuelos	2.19	55	P		04 18 12.6	
ECAB	El Cabril	2.23	48	⇑P	Pn	04 18 13.6	+1.2
	comp=E,3.7nm,0.1s,SNR=18						
ECAB				S	Sn	04 18 38.7	-0.6
	comp=E,8.4nm,0.1s,SNR=6.9						
PESTR	Estremoz	2.27	358	*e*Pn	Pn	04 18 14.1	+1.1
PESTR				*e*Sn	Sn	04 18 41.0	+0.7
PESTR				A	A	04 18 54.0	
	comp=E,13nm,0.6s						
EMAL	Malaga-Limoner	2.49	85	P	Pn	04 18 17.4	+1.5
EMAL				S	Sn	04 18 46.4	+0.8
EMAL	Malaga-Limoner	2.49	85	*e*P	Pn	04 18 17.4	+1.5
EMAL				*e*S	Sn	04 18 46.4	+0.8
PMTG	Montargil	2.53	347	P	Pn	04 18 17.9	+1.3
PMTG				S	Sn	04 18 47.3	+0.5
	comp=E,9.0nm,0.4s						
PMTG	Montargil	2.53	347	*e*Pn	Pn	04 18 17.9	+1.3
PMTG				*e*Sn	Sn	04 18 47.3	+0.5
PMTG				A	A	04 19 07.9	
	comp=E,9.0nm,0.4s						
PMAFR	Mafra	2.74	330	P	Pn	04 18 20.6	+1.2
	comp=E,6.2nm,0.1s,SNR=15						
PMAFR				S	Sn	04 18 50.9	-1.1
	comp=E,58nm,0.2s,SNR=11						
PMAFR	Mafra	2.74	330	*e*Pn	Pn	04 18 20.7	+1.2
PMAFR				*e*Sn	Sn	04 18 51.6	-0.3
PMAFR				A	A	04 18 53.3	
	comp=E,44nm,0.8s						
EGOR	Sierra Gorda,	2.78	78	P	Pn	04 18 21.7	+1.6
	comp=E,3.2nm,0.2s,SNR=7.9						
EGOR				S	Sn	04 18 53.1	0.0
	comp=E,22nm,0.4s,SNR=7.9						
EADA	Adamuz	2.82	55	⇓P	Pn	04 18 21.9	+1.4
	comp=E,11nm,0.1s,SNR=18						
EADA				S	Sn	04 18 53.6	-0.2
	comp=E,12nm,0.2s,SNR=7.9						
PMRV	Marv??o	2.83	2	P	Pn	04 18 21.9	+1.2
PMRV				S	Sn	04 18 54.6	+0.4
	comp=E,16nm,0.3s						
PMRV	Marv??o	2.83	2	*e*Pn	Pn	04 18 21.9	+1.2
PMRV				*e*Sn	Sn	04 18 54.6	+0.4
PMRV				A	A	04 18 56.3	
	comp=E,16nm,0.3s						
PSBE	So Bento	3.09	341	*e*Pn	Pn	04 18 26.1	+1.9
PSBE				*e*Sn	Sn	04 19 00.3	-0.1
PSBE				A	A	04 19 02.2	
	comp=E,9.7nm,0.5s						
ELGU	Los Guajares,	3.13	84	P	Pn	04 18 25.6	+0.7
	comp=E,6.1nm,0.1s,SNR=7.9						
ELGU				S	Sn	04 19 02.0	+0.2
	comp=E,18nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	3.24	0	P	Pn	04 18 27.6	+1.3
PCBR				S	Sn	04 19 04.3	+0.1
	comp=E,8.9nm,0.2s						
PCBR	Castelo Branco	3.24	0	*e*Pn	Pn	04 18 27.6	+1.3
PCBR				*e*Sn	Sn	04 19 04.3	+0.1
PCBR				A	A	04 19 05.6	
	comp=E,18nm,0.2s						
AVE	Averroes	3.29	179	*e*P	Pn	04 18 25.7	-1.3
AVE				*e*S	Sn	04 19 00.8	-4.6
EQUE	Quentar	3.32	78	P	Pn	04 18 29.1	+1.6

	comp=E,3.1nm,0.1s,SNR=31						
EQUE				S	Sn	04 19 06.2	-0.2
	comp=E,11nm,0.3s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.54**	**348**	P	**Pn**	**04 18 32.4**	**+2.0**
PCAS				S	**Sn**	**04 19 10.8**	**-0.8**
	comp=E,8.7nm,0.8s						
PCAS	**Casmilo, Conde**	**3.54**	**348**	*e*Pn	**Pn**	**04 18 32.4**	**+2.0**
PCAS				*e*Sn	**Sn**	**04 19 10.8**	**-0.8**
PCAS				A	A	04 19 50.9	
	comp=E,8.7nm,0.8s						
IFR	**Ifrane**	**3.64**	**147**	*e*P	**Pn**	**04 18 31.6**	**-0.4**
IFR				*e*S	**Sn**	**04 19 07.8**	**-6.6**
EPLA	**Plasencia**	**3.64**	**18**	P	**Pn**	**04 18 33.0**	**+1.1**
	comp=E,2.1nm,0.1s,SNR=30						
EPLA				S	**Sn**	**04 19 13.8**	**-0.4**
	comp=E,17nm,0.2s,SNR=11						
GORA	**Gorafe**	**3.69**	**75**	P	**Pn**	**04 18 34.0**	**+1.5**
	comp=E,6.4nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**04 19 16.6**	**+1.3**
	comp=E,16nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.73**	**84**	P	**Pn**	**04 18 34.3**	**+1.1**
	comp=E,1.7nm,0.1s,SNR=21						
EBER				S	**Sn**	**04 19 16.8**	**+0.4**
	comp=E,9.3nm,0.4s,SNR=7.9						
EQES	**Quesada**	**3.75**	**70**	P	**Pn**	**04 18 34.5**	**+1.1**
	comp=E,3.3nm,0.1s,SNR=51						
EQES				S	**Sn**	**04 19 14.9**	**-1.9**
	comp=E,5.6nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**3.80**	**360**	P	**Pn**	**04 18 35.1**	**+1.0**
MTE				S	**Sn**	**04 19 17.3**	**-0.8**
	comp=E,8.1nm,0.3s						
MTE	**Manteigas**	**3.80**	**360**	*e*Pn	**Pn**	**04 18 35.1**	**+1.0**
MTE				*e*Sn	**Sn**	**04 19 17.3**	**-0.8**
MTE				A	A	04 19 19.1	
	comp=E,16nm,0.3s						
PAB	**San Pablo**	**3.86**	**39**	P	**Pn**	**04 18 36.6**	**+1.6**
	comp=E,2.9nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**04 19 17.1**	**-2.6**
	comp=E,3.4nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**3.86**	**39**	P		04 18 36.3	
PVIS	**Viseu**	**4.13**	**356**	P	**Pn**	**04 18 39.9**	**+1.4**
PVIS				S	**Sn**	**04 19 25.1**	**-1.0**
	comp=E,4.6nm,0.3s						
PVIS	**Viseu**	**4.13**	**356**	*e*Pn	**Pn**	**04 18 39.9**	**+1.4**
PVIS				*e*Sn	**Sn**	**04 19 25.1**	**-1.0**
PVIS				A	A	04 19 27.0	
	comp=E,9.2nm,0.3s						
ESDC	**Sonseca Array**	**4.16**	**41**	P	**Pn**	**04 18 40.4**	**+1.5**
	comp=E,5.5nm,0.1s,baz=221,slow=13,SNR=66						
ESDC				S	**Sn**	**04 19 23.8**	**-3.2**
	comp=E,1.1nm,0.3s,baz=224,slow=23,SNR=5.8						
SESP	**Santiago Espad**	**4.24**	**67**	P	**Pn**	**04 18 40.7**	**+0.5**
	comp=E,3.1nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**04 19 27.4**	**-1.8**
	comp=E,8.4nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**4.24**	**67**	P		04 18 40.8	
ENIJ	**Nijar**	**4.28**	**83**	P	**Pn**	**04 18 41.4**	**+0.8**
	comp=E,3.3nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**04 19 28.6**	**-1.2**
	comp=E,7.0nm,0.4s,SNR=7.9						
MDT	**Midelt**	**4.47**	**147**	P		04 18 41.9	
MVO	**Moncorvo**	**4.58**	**5**	P	**Pn**	**04 18 45.8**	**+1.0**
	comp=E,1.5nm,0.1s,SNR=7.6						
MVO				S	**Sn**	**04 19 35.6**	**-1.8**
	comp=E,22nm,0.2s,SNR=15						
MVO	**Moncorvo**	**4.58**	**5**	*e*Pn	**Pn**	**04 18 45.8**	**+1.0**
MVO				*e*Sn	**Sn**	**04 19 35.7**	**-1.6**
MVO				A	A	04 19 37.9	
	comp=E,18nm,0.5s						
PTO	**Porto**	**4.62**	**350**	S	**Sn**	**04 19 37.5**	**-0.6**
	comp=E,12nm,0.1s						
PTO	**Porto**	**4.62**	**350**	*e*Sn	**Sn**	**04 19 37.5**	**-0.6**
PTO				A	A	04 19 39.1	
	comp=E,24nm,0.1s						
PVRL	**Vila Real**	**4.68**	**358**	P	**Pn**	**04 18 47.0**	**+0.9**
PVRL				S	**Sn**	**04 19 37.7**	**-2.0**
	comp=E,6.9nm,0.3s						
PVRL	**Vila Real**	**4.68**	**358**	*e*Pn	**Pn**	**04 18 47.0**	**+0.9**
PVRL				*e*Sn	**Sn**	**04 19 37.7**	**-2.0**
PVRL				A	A	04 19 40.3	
	comp=E,14nm,0.3s						
POLO	**Lamas de Olo**	**4.78**	**357**	P	**Pn**	**04 18 48.5**	**+1.0**
POLO				S	**Sn**	**04 19 41.2**	**-1.1**
	comp=E,7.7nm,0.3s						
POLO	**Lamas de Olo**	**4.78**	**357**	*e*Pn	**Pn**	**04 18 48.5**	**+1.0**
POLO				*e*Sn	**Sn**	**04 19 41.2**	**-1.1**
POLO				A	A	04 19 42.9	
	comp=E,7.7nm,0.3s						
GUD	**Guadarrama**	**4.82**	**32**	P	**Pn**	**04 18 49.9**	**+1.7**
	comp=E,3.1nm,0.2s,SNR=38						
GUD				S	**Sn**	**04 19 42.1**	**-1.4**
	comp=E,3.6nm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**5.00**	**41**	P	**Pn**	**04 18 52.5**	**+2.0**
UCM				S	**Sn**	**04 19 45.6**	**-2.0**
UCM	**Universidad Co**	**5.00**	**41**	*e*P	**Pn**	**04 18 52.5**	**+2.0**
UCM				*e*S	**Sn**	**04 19 45.6**	**-2.0**
PCAB	**Cabril**	**5.12**	**356**	P	**Pn**	**04 18 53.6**	**+1.4**
PCAB				S	**Sn**	**04 19 47.7**	**-3.0**
	comp=E,3.6nm,0.3s						
PCAB	**Cabril**	**5.12**	**356**	*e*Pn	**Pn**	**04 18 53.6**	**+1.4**
PCAB				*e*Sn	**Sn**	**04 19 47.7**	**-3.0**
PCAB				A	A	04 19 52.7	
	comp=E,7.1nm,0.3s						
EMUR	**La Murta**	**5.16**	**74**	P	**Pn**	**04 18 54.3**	**+1.6**
	comp=E,2.9nm,0.3s,SNR=5.8						
EMUR				S	**Sn**	**04 19 50.2**	**-1.4**
	comp=E,3.3nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.16**	**65**	P	**Pn**	**04 18 53.1**	**+0.4**
	comp=E,6.9nm,0.1s,SNR=48						
ETOB				S	**Sn**	**04 19 49.7**	**-1.9**
	comp=E,6.4nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.24**	**6**	P	**Pn**	**04 18 54.8**	**+1.0**
PBRG				S	**Sn**	**04 19 51.3**	**-2.2**
	comp=E,1.9nm,0.2s						
PBRG	**Braganca**	**5.24**	**6**	*e*Pn	**Pn**	**04 18 54.8**	**+1.0**
PBRG				*e*Sn	**Sn**	**04 19 51.3**	**-2.2**
PBRG				A	A	04 19 55.1	
	comp=E,3.8nm,0.2s						
ELOB	**Lobios**	**5.28**	**356**	P	**Pn**	**04 18 55.5**	**+1.1**
	comp=E,0.5nm,0.1s,SNR=5.6						
ELOB				S	**Sn**	**04 19 52.2**	**-2.5**
	comp=E,8.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.37**	**6**	P	**Pn**	**04 18 56.6**	**+0.9**
	comp=E,1.0nm,0.1s,SNR=8.7						
ECAL				S	**Sn**	**04 19 54.6**	**-2.4**
	comp=E,9.0nm,0.3s,SNR=7.9						
ECHE	**Chera**	**5.97**	**58**	P	**Pn**	**04 19 05.0**	**+1.2**
	comp=E,1.2nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**04 20 10.5**	**-1.0**
	comp=E,1.9nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.00**	**44**	P	**Pn**	**04 19 06.1**	**+1.8**
	comp=E,31nm,0.2s,SNR=74						
ETOR				S	**Sn**	**04 20 09.2**	**-3.2**
	comp=E,20nm,0.4s,SNR=5.5						
EAGO	**Agolada(Pontev**	**6.22**	**356**	P	**Pn**	**04 19 08.5**	**+1.2**
	comp=E,0.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**04 20 13.1**	**-4.5**
	comp=E,1.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**6.68**	**54**	P	**Pn**	**04 19 15.9**	**+2.1**
	comp=E,1.0nm,0.1s,SNR=15						
EMOS				S	**Sn**	**04 20 25.9**	**-3.4**
	comp=E,1.3nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**6.93**	**14**	S	**Sn**	**04 20 31.2**	**-3.9**
	comp=E,1.3nm,0.3s,SNR=4.0						
ELAN	**Lanestosa**	**7.33**	**24**	P	**Pn**	**04 19 23.3**	**+0.8**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELAN				S	**Sn**	**04 20 40.8**	**-4.3**
	comp=E,1.6nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**7.52**	**52**	P	**Pn**	**04 19 26.6**	**+1.5**
	comp=E,0.3nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.90**	**35**	P	**Pn**	**04 19 32.8**	**+2.4**
	comp=E,1.1nm,0.1s,SNR=13						
EORO				S	**Sn**	**04 20 55.6**	**-3.5**
	comp=E,1.5nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**8.07**	**33**	P	**Pn**	**04 19 34.5**	**+1.9**
	comp=E,0.9nm,0.4s,SNR=7.9						
EALK				S	**Sn**	**04 20 58.8**	**-4.4**
	comp=E,9.0nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**8.21**	**52**	P	**Pn**	**04 19 36.1**	**+1.5**
	comp=E,0.3nm,0.1s,SNR=7.9						
ATE	**Arette**	**8.33**	**37**	P	**Pn**	**04 19 38.7**	**+2.4**
	comp=E,0.7nm,0.1s,SNR=7.9						
ATE				S	**Sn**	**04 21 04.7**	**-5.0**
	comp=E,1.3nm,0.3s,SNR=7.9						
ECHI	**Chisagues Biel**	**8.49**	**42**	P	**Pn**	**04 19 40.4**	**+1.9**
	comp=E,1.5nm,0.2s,SNR=7.9						
ECHI				S	**Sn**	**04 21 10.8**	**-2.9**
	comp=E,1.0nm,0.3s,SNR=7.9						
CSOR	**Sort**	**8.83**	**47**	P	**Pn**	**04 19 44.6**	**+1.4**
	comp=E,0.8nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**9.39**	**48**	P	**Pn**	**04 19 52.6**	**+1.7**
	comp=E,1.0nm,0.3s,SNR=7.9						
CLLI				S	**Sn**	**04 21 30.6**	**-5.2**
	comp=E,0.5nm,0.2s,SNR=4.0						

MAN 20 05:06:11.0, 11°.64N×126°.32E, h7^{km}, MS4.5, Philippine Islands region

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IDC ***20*** *05:21:24.6±0.7, 8°.22S×117°.44E, h0^{km}, mb4.3/15, mb1 4.4/18, mb1mx4.2/44, mbtmp4.4/18, ML4.2/3, MS3.8/16, Ms1 3.8/16, ms1mx3.6/41, Error ellipse: s-maj=24.8km s-min=12.1km az=60.0*

NOU ***20*** *05:21:26.1, 8°.07S×117°.78E, h0^{km}, mb4.9, Sumbawa Region, Indonesia*

NEIC ***20*** *05:21:28.4±1.4, 7°.98S±0°.07×117°.70E±0°.05, h25^{km}±4^{km}, mb4.8/27, Error ellipse: s-maj=10.1km s-min=6.5km az=176.0*

DJA ***20*** *05:21:30.0±0.3, 8°S±2°×11°8E±°, h35^{km}±4^{km}, M5.0/44, mb5.0/44, mB5.4/17, MLv5.2/27, Mw(mB)4.9/17, MwMwp4.9/2, Mwp5.2/2*

ISC 20 05:21:30.0±0.4, **8°.06S**±0°.04×**117°.73E**±0°.04, **h35^{km}**, **n164**, σ**1^{s}61**/159, **mb4.8**/66, **MS3.8**/12, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.77**	**176**	P	**Pn**	**05 21 44.0**	**-0.4**
PLAI				S	**Sn**	**05 21 55.6**	**+0.8**
TWSI	**Taliwang, Sumb**	**1.08**	**231**	P	**Pn**	**05 21 48.1**	**-0.6**
TWSI				S	**Sn**	**05 22 02.8**	**+0.4**
WBSI	**Waikabubak, Su**	**2.28**	**134**	P	**Pn**	**05 22 05.6**	**+0.4**
WBSI				S	**Sn**	**05 22 33.6**	**+1.5**
SRBI	**Singaraja**	**2.49**	**269**	P	**Pn**	**05 22 06.7**	**-1.4**
DNP	**Denpasar**	**2.57**	**256**	P	**Pn**	**05 22 09.5**	**+0.4**
WSI	**Waingapu**	**3.00**	**122**	P	**Pn**	**05 22 15.0**	**-0.2**
BSSI	**Bau Bau, Buton**	**3.34**	**55**	P	**Pn**	**05 22 18.7**	**-1.0**
BASI	**Baing, Sumba**	**3.54**	**128**	P	**Pn**	**05 22 24.3**	**+1.7**
JAGI	**Jajag, Banyuwa**	**3.56**	**263**	Pn	**Pn**	**05 22 21.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**3.56**	**263**	P	**Pn**	**05 22 21.7**	**-1.2**
BKSI	**Bulukumba**	**3.61**	**41**	P	**Pn**	**05 22 22.2**	**-1.3**
KAPI	**Kappang**	**3.63**	**34**	Pn	**Pn**	**05 22 22.4**	**-1.3**
	baz=206,slow=2.7						
KAPI				Sn	**Sn**	**05 23 03.3**	**-2.1**
	101nm,0.3s,baz=191,slow=8.2,SNR=14						
KAPI				LR	LR	05 24 33.3	
	comp=Z,509nm,18.9s,baz=208,slow=48						
KAPI	**Kappang**	**3.63**	**34**	Pn	**Pn**	**05 22 22.6**	**-1.2**
KMMI	**Kalianget**	**3.86**	**285**	P	**Pn**	**05 22 27.0**	**0.0**
EDFI	**Ende, Flores**	**3.98**	**100**	P	**Pn**	**05 22 28.9**	**+0.2**
BNSI	**Bone**	**4.33**	**33**	P	**Pn**	**05 22 33.9**	**+0.4**
MMRI	**Maumere**	**4.50**	**98**	Pn	**Pn**	**05 22 34.8**	**-0.9**
MMRI	**Maumere**	**4.50**	**98**	P	**Pn**	**05 22 34.7**	**-1.1**
SPSI	**Sidrap Palu**	**4.54**	**27**	P	**Pn**	**05 22 39.1**	**+2.8**
KBKI	**Kotabaru**	**4.97**	**342**	P	**Pn**	**05 22 41.1**	**-1.2**
GRJI	**Gresik**	**5.33**	**282**	P	**Pn**	**05 22 46.3**	**-0.8**
	2.1nm5µm598nm,0.7s						
BBKI	**Banjar Baru**	**5.39**	**328**	P	**Pn**	**05 22 46.9**	**-1.1**
	2.8nm4µm443nm,1.0s						
TTSI	**Tana Toraja**	**5.39**	**23**	P	**Pn**	**05 22 47.6**	**-0.5**
PWJI	**Pagerwojo**	**5.87**	**270**	P	**Pn**	**05 22 53.5**	**-1.0**
	1.0nm2µm237nm,0.7s						
TBJI	**Tambak Boyo**	**5.96**	**282**	P	**Pn**	**05 22 55.0**	**-0.8**
	1.0nm248nm,0.8s						
BATI	**Baumata**	**6.24**	**110**	Pn	**Pn**	**05 23 01.5**	**+1.8**
	9.7nm,0.3s,baz=202,slow=1.4,SNR=6.4						
BATI	**Baumata**	**6.24**	**110**	P	**Pn**	**05 23 01.8**	**+2.1**
	0.4nm931nm88nm,0.7s						
SOEI	**Soe**	**6.68**	**105**	Pn	**Pn**	**05 23 05.9**	**0.0**
SOEI	**Soe**	**6.68**	**105**	P	**Pn**	**05 23 10.2**	**+4.4**
	0.9nm2µm222nm,0.9s						
WOJI	**Wonogiri, Jawa**	**6.74**	**271**	P	**Pn**	**05 23 06.9**	**+0.3**
	0.6nm114nm,0.7s						
BKB	**Balikpapan**	**6.80**	**353**	Pn	**Pn**	**05 23 09.2**	**+1.8**
UGM	**Wanagama**	**7.14**	**271**	Pn	**Pn**	**05 23 11.7**	**-0.3**
UGM	**Wanagama**	**7.14**	**271**	P	**Pn**	**05 23 11.9**	**-0.2**
	1.4nm289nm,0.7s						
SMRI	**Semarang**	**7.29**	**277**		**Pn**	**05 23 13.2**	**-1.0**
MTKI	**Muara Teweh, K**	**7.61**	**338**	P	**Pn**	**05 23 19.2**	**+0.7**
	2.7nm15µm74nm,0.7s						
LUWI	**Luwuk**	**8.59**	**36**	P	Pn	05 23 39.8	+7.8
MPSI	**Mapaga**	**8.61**	**15**	P	**Pn**	**05 23 31.6**	**-0.7**
	27nm,0.9s						
KPJI	**Karang Pucung**	**8.75**	**274**	P	**Pn**	**05 23 34.5**	**+0.4**
	1µm80nm,0.7s						
MRSI	**Marisa**	**9.46**	**27**	P	Pn	05 23 48.6	+4.7
	22nm,0.7s						
TOLI2	**Tolitoli**	**9.60**	**19**	Pn	**Pn**	**05 23 44.8**	**-1.0**
CISI	**Cisompet, Garu**	**9.83**	**272**	Pn	**Pn**	**05 23 47.9**	**-1.2**
CISI	**Cisompet, Garu**	**9.83**	**272**	P	**Pn**	**05 23 47.5**	**-1.6**
	105nm,0.6s						
LEM	**Lembang**	**10.10**	**276**	LR	LR	05 28 25.4	
	comp=Z,626nm,20.3s,baz=52,slow=43						
STKI	**Sintang**	**10.19**	**322**	P	**Pn**	**05 23 53.3**	**-0.7**
DBJI	**Dramaga**	**10.99**	**277**	P	**Pn**	**05 24 08.2**	**+3.3**
	156nm,1.1s						
KSM	**Kuching**	**12.02**	**322**	Pn	**Pn**	**05 24 15.0**	**-3.9**
CGJI	**Cibinong**	**12.02**	**276**	P	**Pn**	**05 24 19.7**	**+0.7**
	1µm123nm,1.2s						
FITZ	**Fitzroy Crossi**	**12.61**	**143**	Pn	**Pn**	**05 24 25.5**	**-1.5**
	0.8nm,0.3s,baz=320,slow=7.1,SNR=16						
FITZ				Sn	**Sn**	**05 26 42.0**	**-4.2**
	1.2nm,0.3s,baz=173,slow=20,SNR=6.5						
FITZ				LR	LR	05 30 18.0	
	comp=Z,569nm,18.1s,baz=318,slow=42						
MYLDM	**Lahad Datu**	**13.17**	**3**	Pn	**Pn**	**05 24 34.3**	**-0.4**
KLSI		**13.34**	**284**	P	**Pn**	**05 24 38.6**	**+1.5**
	8.4nm,0.8s						
LWLI	**Liwa**	**13.91**	**282**	P	**Pn**	**05 24 45.4**	**+0.5**
	106nm,0.6s						
KKM	**Kota Kinabalu**	**14.09**	**354**	Pn	**Pn**	**05 24 44.4**	**-2.9**
LHSI	**Lahat**	**14.74**	**286**	P	**P**	**05 24 58.7**	**-3.0**
SWI	**Sorong**	**15.26**	**63**	P	**Pn**	**05 25 04.7**	**+1.7**
	1µm72nm,1.3s						
SIJI	**Sorong**	**15.26**	**63**	Pn	**P**	**05 25 05.8**	**-1.7**
	0.9nm,0.3s,baz=180,slow=9.0,SNR=3.8						
FAKI	**Fak Fak**	**15.32**	**71**	Pn	**Pn**	**05 25 02.2**	**-1.7**
FAKI				IAmb	IAmb	05 25 17.0	
	comp=Z,55nm,0.8s						
FAKI	**Fak Fak**	**15.32**	**71**	P	**Pn**	**05 25 03.3**	**-0.6**
	comp=Z,81nm,0.8s						
KSI	**Kapahiang**	**15.68**	**285**	P	**P**	**05 25 11.0**	**-1.2**
DAV	**Davao City (W)**	**16.94**	**28**	LR	LR	05 32 37.7	
	comp=Z,364nm,19.1s,baz=149,slow=39						
MYKOM	**Kota Tinggi**	**16.95**	**305**	Pn	**Pn**	**05 25 23.0**	**-1.6**
KRJI	**Kerinci**	**17.25**	**289**	P	**P**	**05 25 28.3**	**-1.4**
	comp=Z,9µmcomp=Z,511nm,0.9s						
SDSI	**Sungai Dareh**	**17.71**	**293**	P	**P**	**05 25 33.9**	**-0.8**
	comp=Z,2µmcomp=Z,64nm,1.2s						
PDSI	**Padang**	**18.61**	**292**	P	**Pn**	**05 25 44.2**	**-0.9**
	comp=Z,2µmcomp=Z,28nm,0.5s						
WB0	**Warramunga Arr**	**19.91**	**128**	P	**P**	**05 25 58.5**	**-0.2**
WRA	**Warramunga Arr**	**19.96**	**128**	P	**P**	**05 25 58.1**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=302,slow=13,SNR=32						
WRA				S	**S**	**05 29 38.9**	**-3.4**
	comp=Z,3.3nm,1.0s,baz=307,slow=23,SNR=6.0						
WRA				LR	LR	05 34 25.3	
	comp=Z,311nm,21.1s,baz=295,slow=39						
WRA	**Warramunga Arr**	**19.96**	**128**	P	**P**	**05 25 59.8**	**+0.4**
WB2	**Warramunga Arr**	**19.97**	**128**	P	**P**	**05 25 59.7**	**+0.2**
MNSI	**Mandailing Nat**	**20.12**	**295**	P	**P**	**05 25 58.9**	**-2.2**
	comp=Z,37nm,1.2s						
WR0	**Warramunga Arr**	**20.13**	**128**	P	**P**	**05 26 01.2**	**0.0**
WR0				IAmb	IAmb	05 26 17.9	
	comp=Z,29nm,0.8s						
IPM	**Ipoh**	**20.80**	**306**	P	**P**	**05 26 07.2**	**-1.3**
KULM	**Kulim**	**21.59**	**307**	P	**P**	**05 26 15.9**	**-1.0**
KULM				IAmb	IAmb	05 26 32.2	
	comp=Z,48nm,1.3s						
PSI	**Prapat**	**21.64**	**299**	P	**P**	**05 26 15.5**	**-2.2**
	comp=Z,33nm,1.0s,baz=180,slow=7.3,SNR=18						
PSI				LR	LR	05 35 30.3	
	comp=Z,423nm,19.0s,baz=91,slow=40						
AS31	**Alice Springs**	**21.94**	**137**	P	**P**	**05 26 21.3**	**+0.6**
ASAR	**Alice Springs**	**21.94**	**137**	P	**P**	**05 26 21.1**	**+0.4**
	comp=Z,12nm,0.6s,baz=310,slow=8.8,SNR=97						
ASAR				S	**S**	**05 30 25.9**	**+4.6**
	comp=Z,4.0nm,0.9s,baz=315,slow=22,SNR=4.5						
ASAR				LR	LR	05 35 18.7	
	comp=Z,146nm,21.9s,baz=308,slow=38						
ASAR	**Alice Springs**	**21.94**	**137**	P	**P**	**05 26 20.4**	**-0.3**
GSI	**Gunungsitoli**	**22.14**	**294**	P	**P**	**05 26 22.6**	**-0.4**
GSI	**Gunungsitoli**	**22.14**	**294**	P	**P**	**05 26 23.5**	**+0.5**
	comp=Z,3µmcomp=Z,46nm,0.8s						
TSI	**Tuntungan**	**22.30**	**300**	P	**P**	**05 26 27.0**	**+2.4**
	comp=Z,290nm,0.9s						
GENI	**Genyem**	**22.98**	**78**	P	**P**	**05 26 32.0**	**+0.1**
	comp=Z,62nm,1.2s						
TPTI		**23.38**	**298**	P	**P**	**05 26 34.6**	**-1.2**
	comp=Z,76nm,0.9s						
TRTT	**Trang**	**23.93**	**311**	P	**P**	**05 26 42.0**	**+1.0**
	comp=Z,47nm,1.0s						
NWAO	**Narrogin (SRO)**	**24.75**	**181**	P	**P**	**05 26 46.2**	**-2.2**
	comp=Z,28nm,0.9s,baz=2.7,slow=11,SNR=12						
NWAO				LR	LR	05 35 59.6	
	comp=Z,190nm,21.9s,baz=289,slow=36						
NWAO	**Narrogin (SRO)**	**24.75**	**181**	P	**P**	**05 26 48.4**	**0.0**
NWAO	**Narrogin (SRO)**	**24.75**	**181**	P	**P**	**05 26 48.5**	**+0.1**
NWAO				IAmb	IAmb	05 26 50.5	
	comp=Z,28nm,0.9s						
PMG	**Port Moresby**	**29.12**	**95**	LR	LR	05 40 21.7	
	comp=Z,142nm,19.6s,baz=188,slow=39						
UTHA	**Uthaitani**	**29.64**	**322**	P	**P**	**05 27 35.6**	**+3.1**
	comp=Z,354nmcomp=Z,30nm,0.9s						
CTA	**Charters Tower**	**30.08**	**116**	P	**P**	**05 27 37.8**	**+1.4**
	comp=Z,1.0nm,0.4s,baz=250,slow=8.9,SNR=2.3						
PHIT	**Phitsanulok**	**30.37**	**326**	P	P	05 27 44.0	+5.2
	comp=Z,36nm,0.9s						
UTTA	**Uttaradit**	**30.74**	**327**	P	**P**	**05 27 46.1**	**+4.0**
	comp=Z,208nmcomp=Z,21nm,1.0s						
SUKH	**Sukhothai**	**31.04**	**325**	P	**P**	**05 27 48.5**	**+3.7**
	comp=Z,32nm,0.7s						
CM04	**Chiang Mai Arr**	**32.15**	**325**	P	**P**	**05 27 58.0**	**+3.4**
	comp=Z,12nm,0.9s						
CM05	**Chiang Mai Arr**	**32.17**	**325**	P	**P**	**05 27 58.2**	**+3.5**
	comp=Z,8.3nm,1.0s						
CM01	**Chiang Mai Arr**	**32.17**	**325**	P	**P**	**05 27 58.0**	**+3.2**
	comp=Z,1µmcomp=Z,11nm,0.9s						
CM09	**Chiang Mai Arr**	**32.17**	**325**	P	**P**	**05 27 58.0**	**+3.2**
	comp=Z,9.5nm,0.9s						
CM02	**Chiang Mai Arr**	**32.19**	**325**	P	**P**	**05 27 58.8**	**+3.8**
	comp=Z,8.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**32.21**	**325**	P	**P**	**05 27 55.0**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=149,slow=6.2,SNR=23						
CMAR				LR	LR	05 40 40.3	
	comp=Z,190nm,19.2s,baz=196,slow=36						
CMAR	**Chiang Mai Arr**	**32.21**	**325**	P	**P**	**05 27 54.3**	**-0.8**
STKA	**Stephens Creek**	**32.48**	**140**	P	**P**	**05 27 57.8**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=315,slow=11,SNR=12						
STKA				LR	LR	05 41 19.0	
	comp=Z,181nm,21.4s,baz=339,slow=37						
STKA	**Stephens Creek**	**32.48**	**140**	P	**P**	**05 27 57.9**	**+0.6**
CHTO	**Chiang Mai**	**32.50**	**325**	P	**P**	**05 27 57.3**	**-0.3**
GYA	**Guiyang**	**35.95**	**343**	*e*P	P	05 28 41.9	+14
GYA				sP	PcP	05 30 38.5	-16
GYA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,3.9s						
NJ2	**Nanjing**	**39.90**	**1**	*e*P	**P**	**05 29 03.0**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
XAN	**Xi'an**	**42.69**	**349**	P	P	05 29 33.4	+10
XAN				pP	sP	05 29 40.9	+3.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
JNU	**Nakatsue**	**42.82**	**16**	P	P	05 29 30.0	+5.3
	comp=Z,8.4nm,0.8s,baz=264,slow=1.4,SNR=6.2						
JNU				LR	LR	05 47 43.2	
	comp=Z,132nm,21.5s,baz=308,slow=37						
JHS	**Saijyo**	**45.22**	**18**	P	**P**	**05 29 43.0**	**-1.0**
LSA	**Lhasa**	**45.42**	**327**	P	**P**	**05 29 46.2**	**+0.1**
LSA				IAmb	IAmb	05 29 49.1	
	comp=Z,10nm,0.8s						
ODAN	**Odare**	**45.50**	**321**	*e*P	**P**	**05 29 46.6**	**+0.1**
	comp=Z,63nm,0.9s						
TAPN	**Taplejung**	**45.65**	**322**	*e*P	**P**	**05 29 48.1**	**+0.3**
	comp=Z,62nm,1.0s						
LZH	**Lanzhou**	**45.81**	**344**	*e*P	**P**	**05 29 50.0**	**+1.2**
LZH				pP	sP	05 30 02.3	-0.3
LZH				sP	pP	05 30 06.3	+7.7
LZH				*e*PP	**PP**	**05 31 37.6**	**+1.0**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,6.0s						
RAMN	**Ramite**	**46.06**	**320**	*e*P	**P**	**05 29 51.2**	**+0.2**
	comp=Z,24nm,0.6s						
KSAR	**Wonju Array Be**	**46.25**	**11**	P	**P**	**05 29 53.2**	**+1.2**
KSRS	**Korea Array**	**46.27**	**11**	P	**P**	**05 29 54.5**	**+2.4**
	comp=Z,6.6nm,1.0s,baz=195,slow=9.2,SNR=4.3						
KSRS				LR	LR	05 52 41.9	
	comp=Z,53nm,18.7s,baz=77,slow=40						
GUN	**Gumba**	**47.19**	**320**	*e*P	**P**	**05 30 00.0**	**+0.1**
	comp=Z,83nm,0.8s						
PKI	**Pulchoki**	**47.25**	**320**	*e*P	**P**	**05 30 00.0**	**-0.4**
	comp=Z,18nm,0.6s						
PKIN	**Phulchoki**	**47.26**	**320**	*e*P	**P**	**05 30 00.0**	**-0.4**
	comp=Z,21nm,0.7s						
DMN	**Daman**	**47.47**	**320**	*e*P	**P**	**05 30 01.9**	**-0.2**
	comp=Z,54nm,1.0s						
KKN	**Kakani**	**47.48**	**320**	*e*P	**P**	**05 30 02.1**	**0.0**
	comp=Z,29nm,0.8s						
BJI	**Beijing**	**47.88**	**358**	P	P	05 30 10.4	+5.8
BJI				pmax	pmax		
	comp=Z,12nm,0.8s						
GKN	**Gorkha**	**48.04**	**320**	*e*P	**P**	**05 30 06.0**	**-0.4**
	comp=Z,54nm,1.0s						
MJAR	**Matsushiro Arr**	**48.35**	**22**	P	**P**	**05 30 11.2**	**+2.7**
	comp=Z,2.8nm,0.8s,baz=152,slow=11,SNR=2.9						
MJAR				LR	LR	05 50 06.2	
	comp=Z,35nm,20.2s,baz=230,slow=35						
KOLN	**Koldanda**	**48.56**	**318**	*e*P	**P**	**05 30 10.1**	**-0.3**
	comp=Z,54nm,1.0s						
DANN	**Dangsing**	**48.84**	**319**	*e*P	**P**	**05 30 12.4**	**-0.3**
	comp=Z,53nm,0.6s						
HHC	**Hu-ho-hao-te**	**48.99**	**354**	*e*P	**P**	**05 30 14.4**	**+1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,7.8s						
GTA	**Gaotai**	**50.06**	**342**	*e*P	**P**	**05 30 22.5**	**+0.9**
GTA				pP	pP	05 30 31.8	+0.3
GTA				sP	sP	05 30 36.3	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,74nm,5.5s						
GTA				LR	LR		
	comp=Z,120nm,13.8s						
GTA				LR	LR		
	comp=Z,170nm,15.6s						
GTA				LR	LR		
	comp=Z,140nm,16.4s						
MDJ	**Mudanjiang**	**53.51**	**11**	P	P	05 30 55.4	+8.4
MDJ				pmax	pmax		
	comp=Z,12nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.1s						
MDJ	**Mudanjiang**	**53.51**	**11**	P	**P**	**05 30 44.6**	**-2.4**
USA0B	**Ussuriysk Arra**	**53.59**	**13**	P	**P**	**05 30 47.7**	**+0.1**
USRK	**Ussuriysk Ar.**	**53.59**	**13**	P	**P**	**05 30 47.8**	**+0.2**
	comp=Z,5.0nm,1.1s,baz=180,slow=8.5,SNR=5.3						
USRK	**Ussuriysk Ar.**	**53.59**	**13**	P	**P**	**05 30 46.6**	**-1.0**
ULN	**Ulaanbaatar**	**56.47**	**351**	P	**P**	**05 31 08.4**	**-0.2**
ULN				IAmb	IAmb	05 31 21.0	
	comp=Z,7.7nm,0.9s						
SONM	**Songino Array**	**56.54**	**351**	P	**P**	**05 31 09.1**	**0.0**
	comp=Z,4.0nm,0.8s,baz=166,slow=8.9,SNR=30						
SONM	**Songino Array**	**56.54**	**351**	P	**P**	**05 31 09.1**	**0.0**
KLR	**Kul'dur**	**58.35**	**11**	P	**P**	**05 31 24.4**	**+2.8**
	comp=Z,0.6nm,0.4s,baz=186,slow=2.2,SNR=2.0						
WMQ	**Urumqi**	**58.37**	**335**	*e*P	**P**	**05 31 23.4**	**+1.5**
WMQ				pP	sP	05 31 34.3	-1.8
WMQ				sP	pP	05 31 37.8	+5.6
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.5s						
BKZ	**Black Stump Fm**	**60.87**	**130**	P	**P**	**05 31 40.0**	**+0.6**
KSH	**Kashi**	**61.10**	**324**	P	**P**	**05 31 40.8**	**-0.2**
KSH				sP	sP	05 31 59.0	+3.8
KSH				pmax	pmax		
	comp=Z,23nm,0.9s						
KSH				pmax	pmax		
	comp=Z,570nm,5.7s						

SHLS	Shalkode	61.70	329	eP	P	05 31 42.2	-2.7
	comp=Z,8.5nm,0.8s,baz=329						
KPKS	Kokpek	62.32	329	eP	P	05 31 47.1	-1.9
	comp=Z,12nm,1.0s,baz=329						
ZSN	Zaisan	62.47	335	eP	P	05 31 48.2	-1.6
	baz=335						
MDOK	Medeo	62.96	328	eP	P	05 31 52.0	-1.4
	baz=328						
MK31	Makanchi Array	63.05	333	P	P	05 31 53.3	-0.5
MK31				IAmb	IAmb	05 31 54.6	
	comp=Z,9.7nm,1.1s						
MKAR	Makanchi Array	63.05	333	P	P	05 31 53.7	-0.1
	comp=Z,7.0nm,0.9s,baz=144,slow=7.9,SNR=64						
MKAR				LR	LR	06 03 01.2	
	comp=Z,55nm,18.2s,baz=290,slow=40						
MKAR	Makanchi Array	63.05	333	P	P	05 31 53.0	-0.8
MAKZ	Makanchi	63.20	333	P	P	05 31 54.5	-0.2
MAKZ				IAmb	IAmb	05 31 55.4	
	comp=Z,9.7nm,1.2s						
MTBS	Maitube	63.27	327	eP	P	05 31 54.2	-1.1
	baz=327						
CHKK	Chushkaly	63.47	328	eP	P	05 31 55.3	-1.3
	baz=328						
TDK	Taldyqorghan	63.55	330	eP	P	05 31 56.3	-0.8
	comp=Z,24nm,0.8s,baz=330						
KUU	Kurty	63.84	328	eP	P	05 31 57.6	-1.4
	comp=Z,14nm,1.3s,baz=328						
SGDS	Sogindy	64.46	327	eP	P	05 32 01.9	-1.3
	comp=Z,2.5nm,0.9s,baz=326						
IUG	Iuzhnay	66.26	323	eP	P	05 32 13.6	-1.3
	comp=Z,4.2nm,1.0s,baz=323						
KKAR	Karatay Array	66.56	324	P	P	05 32 15.5	-1.1
SEM	Semipalatinsk	66.68	335	eP	P	05 32 15.8	-1.8
	baz=335						
KURK	Kurchatov	67.60	334	P	P	05 32 22.3	-0.8
KURK				IAmb	IAmb	05 32 23.6	
	comp=Z,10nm,1.2s						
ZAA0	Zalesovo Array	67.72	340	IAmb	IAmb	05 32 34.5	
	comp=Z,7.2nm,0.8s						
ZALV	Zalesovo Beam	67.72	340	P	P	05 32 22.8	-0.9
	comp=Z,5.3nm,0.6s,baz=142,slow=5.1,SNR=20						
ZALV	Zalesovo Beam	67.72	340	P	P	05 32 22.2	-1.5
BRZS	Berezniki	69.80	331	eP	P	05 32 35.8	-1.0
	comp=Z,2.6nm,1.0s,baz=331						
VNDA	Vanda	73.11	171	P	P	05 32 56.8	+0.4
	comp=Z,1.5nm,0.8s,baz=318,slow=3.2,SNR=1.7						
ABKAR	Akbulak array	76.07	325	P	P	05 33 12.9	-1.1
ABKAR				IAmb	IAmb	05 33 23.5	
	comp=Z,8.0nm,0.9s						
TIXI	Tiksi	79.88	4	P	P	05 33 33.4	-1.2
TIXI				IAmb	IAmb	05 33 43.4	
	comp=Z,8.3nm,0.8s						
FINES	FINESS Array B	97.81	331	LR	LR	06 22 54.0	
	comp=Z,127nm,20.0s,baz=271,slow=38						
TXAR	Lajitas Array	135.77	56	PKP	PKPdf	05 40 47.0	-0.8
	comp=Z,0.2nm,0.9s,baz=213,slow=3.1,SNR=2.1						
CPUP	Villa Florida	145.48	188	PKPbc	PKPbc	05 41 03.5	-1.8
	comp=Z,1.7nm,0.5s,baz=120,slow=2.4,SNR=6.1						
CPUP	Villa Florida	145.48	188	PKPdf	PKPab	05 41 05.5	0.0

IDC ***20*** *05:32:06.2±2.9, 27°.23N×55°.65E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.4/42, mbtmp3.7/6, MS3.7/1, Ms1 3.7/1, ms1mx2.7/31, Error ellipse: s-maj=62.8km s-min=29.8km az=160.0*

TEH ***20*** *05:32:07.7, 27°.34N×55°.71E, h5^{km}, ML3.6*

DSN ***20*** *05:32:08.2±0.8, 27°.35N×55°.86E, h10^{km}, ML3.7/6, Error ellipse: s-maj=33.2km s-min=6.3km az=76.0*

OMAN ***20*** *05:32:09.3±4.1, 27°.37N×56°.12E, h10^{km}, ml3.4/7, Error ellipse: s-maj=50.6km s-min=38.8km az=61.0*

ISC 20 05:32:08.3±1.8, 27°.32N±0°.03×55°.81E±0°.06, h10^{km}±14^{km}, n46, σ1^{s}.61/54, mb3.7/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.33	76	ePg	Pb	05 32 15.4	-1.0
SHME	Shamm	1.30	167	P	Pn	05 32 32.2	-0.2
SHME				S	Sg	05 32 51.0	+0.9
SHME	Shamm	1.30	167	P	Pn	05 32 32.4	0.0
	SNR=19						
SHME				S	Sg	05 32 51.1	+1.0
LAR1	LAR	1.32	286	ePg	Pn	05 32 33.4	+0.6
LAR1				eSg	Sn	05 32 51.4	+0.9
LAR1				e		05 32 59.2	
	comp=Z,99nm,0.5s						
BANOM	Banah	1.46	162	P	Pn	05 32 35.0	+0.4
BANOM				S	Sg	05 32 55.1	-0.1
BANOM	Banah	1.46	162	ePn	Pb	05 32 35.5	0.0
BANOM	Banah	1.46	162	P	Pn	05 32 35.0	+0.4
	SNR=34						
BANOM				S	Sg	05 32 55.4	+0.2
MASF	Masafi	1.97	171	P	Pb	05 32 44.0	-0.2
MASF				S	Sb	05 33 08.4	-0.3
MSFE	Esma-Masafi	1.98	171	P	Pn	05 32 42.5	+0.7
MSFE				S	Sb	05 33 08.6	-0.4
MSFE	Esma-Masafi	1.98	171	ePn	Pn	05 32 43.3	+1.5
MDH	Madha	2.06	168	P	Pn	05 32 43.7	+0.8
MDH	Madha	2.06	168	ePn	Pb	05 32 44.6	-1.1
MDH	Madha	2.06	168	P	Pb	05 32 44.9	-0.8
MDH				S	Sb	05 33 11.7	+0.3
JHRM	Jahrom	2.30	301	ePn	Pn	05 32 47.5	+1.2
JHRM				e		05 33 41.2	
	comp=Z,99nm,0.7s						
UOSS	Minazif	2.39	171	P	Pn	05 32 48.2	+0.7
UOSS	Minazif	2.39	171	ePn	Pn	05 32 48.9	+1.4
UOSS	Minazif	2.39	171	P	Pn	05 32 48.7	+1.3
UOSS				S	Sb	05 33 23.2	+2.3
NGRK	Negar Kerman	2.45	19	ePn	Pb	05 32 51.2	-1.5
NGRK				e		05 33 42.0	
	comp=Z,99nm,0.6s						
HATD	Hatta, Dubai	2.50	173	P	Pn	05 32 48.5	-0.5
HATD	Hatta, Dubai	2.50	173	ePn	Pb	05 32 52.2	-1.1
HATD	Hatta, Dubai	2.50	173	P	Pn	05 32 50.4	+1.5
FAQ	Al Faqa, Dubai	2.57	184	P	Pn	05 32 52.3	+2.4
ASUD	Al Ashush, Dub	2.72	189	ePn	Pb	05 32 55.5	-1.4
ASUD	Al Ashush, Dub	2.72	189	P	Pn	05 32 54.1	+2.2
TVBK	TV Kerman	2.79	17	ePn	Pb	05 32 56.6	-1.7
TVBK				e		05 33 40.1	
	comp=Z,99nm,0.6s						
CHMN	Cheshme madani	2.95	31	ePn	Pb	05 32 57.9	-3.3
CHMN				e		05 33 47.3	
	comp=Z,99nm,0.8s						
KHGB	Koh Gabri	3.10	11	ePn	Pb	05 33 00.4	-3.2
KHGB				e		05 33 43.5	
	comp=Z,99nm,0.3s						
SOHO	SOHO	3.24	168	P	Pn	05 32 59.7	+0.6
SOHO	SOHO	3.24	168	ePn	Pn	05 32 59.4	+0.3
IMEH	Mehriz	4.19	346	ePn	Pn	05 33 14.9	+2.5
IBAF	Bafgh	4.26	357	ePn	Pn	05 33 15.9	+2.6
ISAD	Sadrabad	4.94	339	ePn	Pn	05 33 25.5	+2.8
ICHK	Chekchek	5.06	346	ePn	Pn	05 33 27.5	+3.2
KLNJ	Kolanjah	5.21	316	ePn	Pn	05 33 27.8	+1.3
IRAM	Ramesheh	5.38	327	ePn	Pn	05 33 30.2	+1.5
TPRV	Parvadeh(Tabas	5.74	7	ePn	Pn	05 33 37.0	+3.4
IPIR	Pirpir	6.84	323	ePn	Pn	05 33 50.6	+1.7
IKLH	Kolahrood	7.01	330	ePn	Pn	05 33 53.8	+2.6
KRSH	Karshahi	7.34	335	ePn	Pn	05 33 57.8	+2.1
BRTR	Keskin Array B	22.17	310	P	P	05 37 04.0	-0.6
	comp=Z,1.6nm,0.7s,baz=135,slow=14,SNR=4.9						
MKAR	Makanchi Array	28.50	40	P	P	05 38 04.9	+1.3
	comp=Z,0.2nm,0.7s,baz=227,slow=5.7,SNR=1.8						
AKASG	Malin Array Be	30.88	326	P	P	05 38 23.8	-0.8
	comp=Z,0.3nm,0.4s,baz=132,slow=8.2,SNR=2.1						
ZALV	Zalesovo Beam	34.09	31	P	P	05 38 53.4	+0.7
	comp=Z,0.6nm,0.4s,baz=216,slow=7.1,SNR=1.1						
FINES	FINESS Array B	39.50	338	P	P	05 39 38.2	-0.5
	comp=Z,2.0nm,0.9s,baz=147,slow=11,SNR=4.1						
TLY	Talaya	43.19	42	LR	LR	06 00 46.7	
	comp=Z,78nm,18.0s,baz=132,slow=40						
TORD	Torodi Ar. Bea	52.32	266	P	P	05 41 18.9	-1.6
	comp=Z,0.7nm,0.4s,baz=61,slow=8.2,SNR=3.7						

IDC 20 05:39:35.5±2.5, 3°.86N×126°.27E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/34, mbtmp3.3/3, Error ellipse: s-maj=220.6km s-min=27.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.94	162	P	P	05 44 59.1	-1.6
	0.2nm,0.5s,baz=340,slow=11,SNR=5.2						
ASAR	Alice Springs	28.35	165	P	P	05 45 33.1	+1.6
	0.1nm,0.3s,baz=347,slow=13,SNR=4.7						
MKAR	Makanchi Array	57.19	325	P	P	05 49 24.5	0.0
	0.2nm,0.3s,baz=122,slow=8.3,SNR=5.0						

KRNET ***20*** *06:02:44.1±0.1, 41°.44N×70°.83E, h8^{km}, mb2.4*

SOME ***20*** *06:02:44.6, 41°.18N×71°.08E, h10^{km}*

NNC ***20*** *06:02:45.1±2.8, 41°.20N×71°.06E, h0^{km}, mb3.1, mpv3.0, Error ellipse: s-maj=23.6km s-min=8.0km az=13.0*

ISC 20 06:02:46.0±1.2, 41°.39N±0°.03×71°.01E±0°.03, h4^{km}±10^{km}, n24, σ1^{s}.84/42, 19C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.17	36	⇓iP	Pg	06 02 48.9	-0.5
	baz=85						
TRKS				⇓iS	Sg	06 02 53.3	+1.6
	baz=85						
IUG	Iuzhnay	1.05	316	eP	Pn	06 03 07.0	-0.6
	5.3nm,0.6s						
IUG				eS	Sn	06 03 23.1	+0.2
	25nm,0.6s						
IUG	Iuzhnay	1.05	316	P	Pn	06 03 07.0	-0.6
	6.8nm,0.6s						
IUG				S	Sn	06 03 23.1	+0.2
	25nm,0.6s						
BTK	Batken	1.34	186	⇑iP	Pg	06 03 10.4	-1.3
	baz=80						
BTK				⇑iS	Sg	06 03 29.8	+0.8
	baz=80						
ARSB	Arslanbob	1.49	92	⇑iP	Pg	06 03 14.8	+0.3
	baz=93						
ARSB				⇑iS	Sg	06 03 36.7	+2.9
	baz=93						
MNAS	Manas	1.56	45	⇑iP	Pg	06 03 15.0	-1.0
	baz=50						
MNAS				⇑iS	Sg	06 03 37.5	+1.2
	baz=50						
OHH	Osh	1.60	122	⇑iP	Pg	06 03 17.0	+0.3
	baz=21						
OHH				⇑iS	Sg	06 03 40.5	+3.1
	baz=21						
KK31	Karatay Array	1.75	348	⇓Pn	Pg	06 03 21.0	+1.4
	11nm,0.8s,baz=164,slow=14,SNR=58						
KK31				Sn	Sg	06 03 46.8	+4.6
	14nm,0.6s,baz=159,slow=26,SNR=22						
BRLS	Borolday	1.85	332	eP	Pg	06 03 20.6	-1.0
	14nm,0.2s						
BRLS				eS	Sg	06 03 46.1	+0.5
	20nm,0.7s						
BRLS	Borolday	1.85	332	Pg	Pg	06 03 20.6	-1.0
	14nm,0.2s						
BRLS				Lg	Lg	06 03 46.1	
	20nm,0.7s						
MRKS	Merke	2.13	50	eP	Pg	06 03 26.6	-0.3
	3.8nm,0.5s						
MRKS				eS	Sg	06 03 56.9	+2.3
	4.0nm,0.5s						
MRKS	Merke	2.13	50	Pg	Pg	06 03 26.6	-0.3
	3.8nm,0.5s						
MRKS				Lg	Lg	06 03 56.9	
	4.0nm,0.5s						
AML	Almayashu	2.14	69	⇓iP	Pb	06 03 24.1	-1.5
	baz=71						
AML				⇓iS	Sb	06 03 53.2	+0.5
	baz=71						
SFK	Sufi-Kurgan	2.34	125	⇑iP	Pb	06 03 27.8	-1.2
	baz=24						
SFK				⇑iS	Sb	06 03 59.3	+0.9
	baz=24						
EKS2	Erkin-Say	2.42	57	⇑iP	Pb	06 03 28.7	-1.6
	baz=60						
EKS2				⇑iS	Sb	06 04 02.2	+1.7
	baz=60						
ARLS	Aral	2.53	78	⇑iP	Pb	06 03 30.3	-1.8
	baz=80						
ARLS				⇑iS	Sb	06 04 04.5	+0.9
	baz=80						
UCH	Uchtor	2.75	71	⇑eP	Pn	06 03 32.6	+1.2
	baz=73						
UCH				⇑iS	Sn	06 04 07.0	+1.7
	baz=73						
AAK	Ala-Archa	2.88	63	⇑iP	Pb	06 03 34.9	-3.2
	baz=65						
AAK				⇑iS	Sb	06 04 11.8	-2.0
	baz=65						
AAK	Ala-Archa	2.88	63	⇑Pg	Pb	06 03 37.0	-1.1
	1.7nm,0.7s						
AAK				⇓Lg	Lg	06 04 15.8	
	3.7nm,0.7s						
SGDS	Sogindy	3.38	51	Pg	Pg	06 03 48.5	-2.3
	1.7nm,0.4s						
SGDS				Lg	Lg	06 04 33.7	
	1.0nm,0.3s						
DGS	Degeres	3.99	61	eP	Pb	06 03 58.2	+1.3
	1.3nm,0.6s						
DGS				eS	Sg	06 04 50.5	-3.5
	1.7nm,0.5s						
DGS	Degeres	3.99	61	Pg	Pb	06 03 58.2	+1.3
	1.3nm,0.6s						
DGS				Lg	Lg	06 04 50.5	
	1.7nm,0.5s						
KST	Kastek	4.03	64	eP	Pg	06 04 00.5	-2.8
	1.2nm,0.2s						
KST				eS	Sg	06 04 54.6	-1.0
	3.2nm,0.6s						
KST	Kastek	4.03	64	Pg	Pg	06 04 00.5	-2.8
	1.2nm,0.2s						
KST				Lg	Lg	06 04 54.6	
	3.2nm,0.6s						

IDC 20 06:18:56.8±65.0, 14°.70S×166°.63E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/21, mbtmp3.8/3, Error ellipse: s-maj=1095.0km s-min=122.9km az=65.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.54	229	P	P	06 24 54.1	-0.3
	0.9nm,0.3s,baz=69,slow=4.5,SNR=3.0						
WRA	Warramunga Arr	31.23	256	P	P	06 25 18.6	+0.3
	0.1nm,0.3s,baz=86,slow=9.2,SNR=1.9						
ASAR	Alice Springs	32.10	249	P	P	06 25 25.9	-0.1
	0.7nm,0.4s,baz=76,slow=9.2,SNR=13						

MDD ***20*** *06:23:01.2±1.1, 36°.98N×3°.71E, h3^{km}±12^{km}, mb4.3/15, Error ellipse: s-maj=10.7km s-min=7.1km az=180.0, PRXIMO*

CRAAG ***20*** *06:23:01.6, 36°.86N×3°.65E, Ml3.0*

ISC 20 06:23:00.3±1.0, 37°.07N±0°.04×3°.71E±0°.03, h10^{km}, n34, σ1^{s}.89/50, 1C, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.37	210	P	Pg	06 23 06.0	-1.6
ABMS	Boumerdes	0.37	210	P	Pg	06 23 06.0	-1.6
ABA	Alger-Bouzarea	0.61	244	P	Pg	06 23 12.2	+0.2
ABA	Alger-Bouzarea	0.61	244	P	Pg	06 23 12.2	+0.2
EMHD	Djebel Mahouad	1.06	215	P	Pg	06 23 19.2	-1.5
EMHD	Djebel Mahouad	1.06	215	P	Pg	06 23 19.2	-1.5
SET	Setif	1.61	122	P	Pg	06 23 33.0	+1.8
SET	Setif	1.61	122	P	Pg	06 23 33.0	+1.8
DFRA	Djebel Bou Aff	1.81	106	P	Pn	06 23 32.4	+0.7
DFRA	Djebel Bou Aff	1.81	106	P	Pn	06 23 32.4	+0.7
EIBI	Ibiza	2.71	317	S	Sn	06 24 15.6	-1.0
	12nm,0.2s,SNR=7.9						
ETOS	Mallorca	2.78	346	P	Pn	06 23 46.1	+1.2
	10nm,0.2s,SNR=17						
ETOS				S	Sn	06 24 17.2	-1.4
	15nm,0.2s,SNR=29						
MAHO	Mahon	2.85	9	P	Pn	06 23 45.2	-0.6
MAHO				S	Sn	06 24 17.4	-2.8
MAHO	Mahon	2.85	9	eP	Pn	06 23 45.2	-0.6
MAHO				eS	Sn	06 24 17.4	-2.8
MAHO				eCod		06 26 37.1	
CMAH	Djebel Manchou	3.01	97	P	Pn	06 23 47.8	-0.2
CMAH	Djebel Manchou	3.01	97	P	Pn	06 23 47.8	-0.2
AFON	Font Roja	3.72	297	P	Pn	06 24 01.2	+3.3
	3.6nm,0.3s,SNR=4.0						
AFON				S	Sn	06 24 40.7	-1.2
	0.4nm,0.0s,SNR=4.0						
EMUR	La Murta	4.02	283	S	Sn	06 24 49.0	0.0
	3.3nm,0.3s,SNR=7.9						
ETOB	Tobarra	4.45	292	P	Pn	06 24 09.4	+1.5
	11nm,0.6s,SNR=7.1						
ETOB				S	Sn	06 24 59.5	-0.2
	2.7nm,0.3s,SNR=22						
ECHE	Chera	4.46	306	P	Pn	06 24 10.0	+2.0
	4.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.64	316	P	Pn	06 24 12.6	+2.0
	1.9nm,0.3s,SNR=7.9						
EMOS				S	Sn	06 25 02.2	-2.3
	3.1nm,0.4s,SNR=7.9						
EPOB	Poblet	4.74	335	P	Pn	06 24 13.5	+1.7
	4.7nm,0.4s,SNR=6.3						
EPOB				S	Sn	06 25 03.9	-3.0
	3.8nm,0.3s						
CFON	Fontmartina	4.79	348	P	Pn	06 24 14.0	+1.5
	12nm,0.2s,SNR=39						
CFON				S	Sn	06 25 06.4	-1.8
	12nm,0.2s,SNR=6.8						
SESP	Santiago Espad	5.08	284	P	Pn	06 24 18.0	+1.4
	1.3nm,0.2s,SNR=7.9						
SESP				S	Sn	06 25 13.6	-1.8
	3.2nm,0.3s,SNR=7.9						
EMIR	Miracle	5.12	341	P	Pn	06 24 19.7	+2.6
	12nm,0.3s,SNR=7.9						
EMIR				S	Sn	06 25 15.8	-0.6
	18nm,0.4s,SNR=7.9						
EBER	Berja	5.29	270	P	Pn	06 24 22.7	+3.2
	0.5nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.41	354	⇑P	Pn	06 24 23.2	+2.2
	25nm,0.3s,SNR=18						
EJON				S	Sn	06 25 21.5	-1.8
	21nm,0.5s,SNR=7.9						
EJON				S	Sn	06 25 21.5	-1.8
	SNR=7.9						
SJAF	Saint Jean de	5.45	354	P	Pn	06 24 23.6	+2.1
	23nm,0.3s,SNR=7.9						
SJAF				S	Sn	06 25 22.2	-2.0
	8.0nm,0.3s,SNR=7.9						
EQES	Quesada	5.45	280	P	Pn	06 24 23.8	+2.2
	5.7nm,0.6s,SNR=7.9						
EQES				S	Sn	06 25 22.8	-1.7
	4.0nm,0.4s,SNR=7.9						
CLLI	Llivia	5.57	347	P	Pn	06 24 26.1	+2.9
	2.1nm,0.3s,SNR=9.5						
CLLI				S	Sn	06 25 25.9	-1.5
	0.1nm,0.2s,SNR=4.0						
CSOR	Sort	5.66	340	P	Pn	06 24 27.2	+2.6
	1.7nm,0.3s,SNR=7.7						
CSOR				S	Sn	06 25 27.5	-2.1
	2.1nm,0.2s						
ETOR	Torete	5.85	312	P	Pn	06 24 30.4	+3.3
	4.0nm,0.4s,SNR=7.9						
ESDC	Sonseca Array	6.57	296	P	Pn	06 24 38.0	+1.0
	0.6nm,0.3s,baz=112,slow=13,SNR=6.2						
PAB	San Pablo	6.80	294	P	Pn	06 24 40.8	+0.5
	1.5nm,0.4s,SNR=7.9						

TAP 20 06:37:19.5, 24°.79N×121°.67E, h69^{km}, ML2.6, 8C-6D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWE	Neicheng	0.07	181	eP	Pn	06 37 29.9	+0.3
	baz=170						
ILA	Ilan	0.08	111	eP	Pn	06 37 29.1	-0.5
	baz=110						
NWLT	Wulai	0.15	264	P	Pn	06 37 29.9	0.0
	baz=263						
NWLT				S	Sn	06 37 37.6	+0.1
	baz=263						
NTC	Toucheng	0.16	67	eS	Sn	06 37 38.5	+1.1
	baz=67						
TIPB	Shuangxi	0.23	39	P	Pn	06 37 30.4	+0.2
	baz=38						
TIPB				eS	Sn	06 37 38.2	+0.1
	baz=38						
NDT	Datong Townshi	0.24	217	⇑iP	Pn	06 37 30.8	+0.5
	baz=216						
NDT				S	Sn	06 37 38.8	+0.7
	baz=216						
TWC	Suao	0.25	138	⇓eP	Pn	06 37 30.9	+0.6
	baz=136						
TWC				eS	Sn	06 37 38.6	+0.5
	baz=136						
YHNB	Yeheng	0.29	245	P	Pn	06 37 30.6	0.0
	baz=245						
YHNB				S	Sn	06 37 39.0	+0.2
	baz=245						
NWF	Wu-fen Shan	0.29	20	eP	Pn	06 37 30.9	+0.2
	baz=20						
WFSB	Wu-fen Shan	0.29	20	eP	Pn	06 37 30.9	+0.3
	baz=20						
NSK	Sanguang	0.31	248	⇓P	Pn	06 37 30.8	+0.1
	baz=246						
NSK				S	Sn	06 37 39.2	+0.2
	baz=246						
TWB1	Santiao Chiao	0.36	53	⇑P	Pn	06 37 31.3	+0.2
	baz=54						
TWB1				eS	Sn	06 37 40.4	+0.9
	baz=54						
YM01	YM01	0.36	346	⇑P	Pn	06 37 31.3	+0.1
	baz=345						
YM01				eS	Sn	06 37 40.2	+0.6
	baz=345						
ENA	Nanau	0.37	170	⇓eP	Pn	06 37 31.2	+0.1
	baz=168						
ENA				eS	Sn	06 37 39.6	0.0
	baz=168						
YM04	YM04	0.38	341	eS	Sn	06 37 39.8	0.0
	baz=341						
YM05	YM05	0.38	346	eP	Pn	06 37 31.5	+0.1
	baz=345						
YM05				eS	Sn	06 37 40.5	+0.5
	baz=345						
TWS1	Kuangyinshan	0.38	323	⇓P	Pn	06 37 31.7	+0.5
	baz=323						
TWS1				eS	Sn	06 37 41.0	+1.2
	baz=323						
NNS	Nan Shan	0.44	218	eS	Sn	06 37 41.6	+0.6
	baz=216						
NNSH	Datong	0.45	216	eS	Sn	06 37 41.4	+0.3
	baz=215						
ETLH	Xiulin Townshi	0.61	196	eP	Pn	06 37 33.0	-0.4
	baz=196						
ETLH				eS	Sn	06 37 42.9	-0.8
	baz=196						
LIOB	Emei	0.61	256	⇑eP	Pn	06 37 33.9	+0.4
	baz=256						
LIOB				eS	Sn	06 37 44.2	+0.5
	baz=256						
NACB	Ninganchiao	0.62	186	eP	Pn	06 37 33.3	-0.2
	baz=186						
NSTT	Nanjuang	0.63	255	eP	Pn	06 37 34.4	+0.8
	baz=254						
NSTT				eS	Sn	06 37 44.6	+0.7
	baz=254						
FUSS	Fushou	0.67	216	⇑eP	Pn	06 37 34.9	+0.6
	baz=215						
FUSS				eS	Sn	06 37 45.9	+0.8
	baz=215						
TWT	Tachien	0.70	220	⇓eP	Pn	06 37 35.6	+1.0
	baz=220						
TWT				eS	Sn	06 37 47.4	+1.7
	baz=220						
TDCB	Techi	0.71	221	⇓eP	Pn	06 37 35.4	+0.7
	baz=220						
TDCB				eS	Sn	06 37 46.8	+1.0
	baz=220						
WHF	Hehuan Shan	0.74	210	⇑eP	Pn	06 37 35.6	+0.3
	baz=209						
WHF				eS	Sn	06 37 47.6	+0.7
	baz=209						
WHP	Taichung City	0.83	232	eP	Pn	06 37 36.6	+0.6
	baz=232						
WHP				eS	Sn	06 37 49.1	+0.8
	baz=232						
CHGB	Renai	0.86	212	⇑iP	Pn	06 37 37.1	+0.6
	baz=211						
CHGB				S	Sn	06 37 49.3	+0.4
	baz=211						
SMLT	Sun Moon Lake	1.15	218	eP	Pn	06 37 40.3	+0.3
	baz=217						
TYC	Yuchr	1.15	220	eP	Pn	06 37 40.3	+0.4
	baz=219						
TYC				eS	Sn	06 37 55.9	+0.8
	baz=219						
SSLB	Suanglung	1.20	213	⇑iP	Pn	06 37 40.8	+0.3
	baz=213						
SSLB				eS	Sn	06 37 56.5	+0.3
	baz=213						

JMA 20 06:37:58.0±0.2, 23°.74N×123°.31E, h47^{km}±3^{km}, M2.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	0.55	55	P	Pn	06 38 09.6	-0.1
HATJ				S	Sn	06 38 18.1	0.0
IRIF	Iriomote-Funau	0.71	33	P	Pn	06 38 11.8	+0.1
IRIF				eS	Sn	06 38 21.5	-0.1
YOJ	Yonaguni jima	0.77	339	P	Pn	06 38 12.5	-0.1
YOJ				eS	Sn	06 38 23.2	+0.1
JYNG	Yonagunijimaku	0.78	335	P	Pn	06 38 13.1	+0.4
JYNG				eS	Sn	06 38 23.4	0.0
JKRS	Kuro-shima	0.81	52	P	Pn	06 38 13.6	+0.5
JIJ	Ishigaki jima	0.98	51	P	Pn	06 38 15.7	+0.3
JIJ				S	Sn	06 38 28.0	-0.2
JISG	Ishigakijimahi	1.24	47	P	Pn	06 38 19.0	0.0
JTJ	Tarama	1.56	55	P	Pn	06 38 24.2	+1.0

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*VAO **20** 06:51:38.7±0.8, 21°.01S×69°.22W, h139^{km}, mb3.8*
*GUC **20** 06:51:41.8±0.6, 21°.16S×68°.76W, h116^{km}±3^{km}, ML3.6*
ISC 20 06:51:40.6±0.8, 21°.16S±0°.03×68°.89W±0°.07, h131^{km}±9^{km}, n28, σ0^{s}.91/46, 9C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.71	207	eP	Pn	06 52 01.2	-0.2
PB09				i S	Sn	06 52 16.8	-0.4
PB08	IPOC Station P	1.04	346	⇑iP	Pn	06 52 04.8	+0.3
PB08				i S	Sn	06 52 22.2	-0.3
PB07	IPOC Station P	1.09	238	⇑iP	Pn	06 52 05.3	+0.6
PB07				i S	Sn	06 52 23.2	+0.3
PB07				IAML		06 52 25.4	
	comp=N,1µm,0.3s						
PB03	IPOC Station P	1.20	222	⇑iP	Pn	06 52 06.2	+0.5
PB03				i S	Sn	06 52 24.9	+0.1
PB03				IAML		06 52 25.4	
	comp=E,915nm,0.3s						
PATCX	Punta Patache	1.23	286	⇑iP	Pn	06 52 06.9	+1.0
PATCX				eS	Sn	06 52 25.6	+0.4
PATCX				IAML		06 52 28.1	
	comp=E,2µm,0.4s						
HMBC	Humberstone	1.28	313	eP	Pn	06 52 06.7	+0.1
HMBC				i S	Sn	06 52 26.2	-0.1
HMBC				IAML		06 52 27.8	
	comp=N,832nm,0.3s						
TA01	Diego Aracena	1.34	296	⇑iP	Pn	06 52 07.7	+0.6
TA01				i S	Sn	06 52 27.5	+0.3
TA01				IAML		06 52 29.6	
	comp=E,829nm,0.2s						
LVC	Limon Verde	1.45	181	eP	Pn	06 52 08.6	0.0
LVC				i S	Sn	06 52 29.3	-0.5
LVC	Limon Verde	1.45	181	eP	Pn	06 52 09.0	+0.5
TA02	Huaiquique	1.46	307	⇑iP	Pn	06 52 08.9	+0.5
TA02				i S	Sn	06 52 29.4	0.0
TA02				IAML		06 52 33.1	
	comp=N,928nm,0.2s						
PB04	IPOC Station P	1.66	225	⇑iP	Pn	06 52 11.6	+0.8
PB04				i S	Sn	06 52 34.1	+0.4
PB04				IAML		06 52 37.6	
	comp=N,512nm,0.2s						
PB06	IPOC Station P	1.67	202	eP	Pn	06 52 11.6	+0.7
PB06				i S	Sn	06 52 34.2	+0.3
PB06				IAML		06 52 35.3	
	comp=E,744nm,0.2s						
PSGC	Pisagua	1.94	323	i P	Pn	06 52 14.2	+0.2
PSGC				eP	Pn	06 52 14.2	+0.2
PSGC				i S	Sn	06 52 39.6	+0.1
PB05	IPOC Station P	2.08	216	eP	Pn	06 52 16.5	+0.7
PB05				i S	Sn	06 52 42.8	+0.1
PB05				IAML		06 52 44.3	
	comp=E,225nm,0.4s						
PB15	IPOC Station P	2.11	195	eP	Pn	06 52 17.1	+0.9
PB15				i S	Sn	06 52 44.2	+0.7
MNMC	Minye Minye	2.12	342	⇓eP	Pn	06 52 17.1	+0.6
MNMC				i S	Sn	06 52 44.4	+0.5
MNMC				IAML		06 52 47.9	
	comp=E,488nm,0.1s						
PB10	IPOC Station P	2.81	213	⇑iP	Pn	06 52 25.2	+0.4
PB10				i S	Sn	06 52 57.6	-1.2
PB16	IPOC Station P	2.87	348	⇑iP	Pn	06 52 27.5	+1.3
PB16				i S	Sn	06 53 02.1	+1.0
VILB	Vilhena	11.64	47	eP	Pn	06 54 20.6	-2.3
AQDB	Aquidauana	12.35	89	eP	Pn	06 54 34.9	+2.7
TRCB	Terra Rica	15.17	99	eP	Pn	06 55 10.8	+2.7
FRTB	Fartura	18.02	101	eP	P	06 55 41.9	+0.2
BB19B	Bebedouro	19.00	93	eP	P	06 55 52.0	-0.3
SNDB	Serra Nova Dou	19.16	64	eP	P	06 55 53.6	-0.5
NPGB	Novo Progresso	19.19	45	eP	P	06 55 54.1	-0.3
PLCA	Paso Flores	19.57	184	eP	P	06 55 56.9	-1.4
ITTB	Itaituba	21.02	39	eP	P	06 56 13.1	-1.0
JANB	Januaria	24.12	80	eP	P	06 56 44.5	0.0

NNC 20 06:56:17.6±1.2, 38°.91N×75°.55E, h0^{km}, mb3.8, mpv3.4, 5C-1D, Error ellipse: s-maj=11.6km s-min=8.2km az=113.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	3.81	348	Pn	Pn	06 57 16.5	-1.1
	1.4nm,0.6s						
AAK				Pg	Pb	06 57 27.2	+1.5
	5.8nm,0.6s						
AAK				⇓Lg	Lg	06 58 22.5	
	11nm,0.8s						
TKM2	Tokmak 2	4.01	1	⇑Pn	Pn	06 57 21.7	+1.3
	3.2nm,0.8s						
TKM2				⇑Lg	Lg	06 58 23.9	
	8.9nm,0.6s						
KST	Kastek	4.14	4	Pg	Pb	06 57 32.7	+1.3
	4.8nm,0.3s						
KST				Lg	Lg	06 58 28.4	
	16nm,0.7s						
IZV	Izvestkoviy	4.20	11	Pg	Pb	06 57 34.8	+2.3
	4.0nm,0.5s						
IZV				Lg	Lg	06 58 32.4	
	20nm,0.7s						
TNSS	Tian-Shan	4.26	14	Pg	Pb	06 57 35.2	+1.7
	4.0nm,0.4s						
TNSS				Lg	Lg	06 58 32.9	
	7.6nm,0.9s						
DGS	Degeres	4.33	2	Pg	Pb	06 57 36.6	+2.0
	6.4nm,0.7s						
DGS				Lg	Lg	06 58 35.7	
	9.5nm,0.7s						
MDOK	Medeo	4.40	14	Pg	Pb	06 57 35.9	+0.1
	4.7nm,0.4s						
MDOK				Lg	Lg	06 58 36.7	
	11nm,0.6s						
MDOK	Medeo	4.40	14	Pg	Pb	06 57 37.8	+2.0
	8.0nm,0.5s						
MDOK				Lg	Lg	06 58 37.5	
	13nm,1.0s						
KOTS	Kotyrbulak	4.48	15	Pg	Pb	06 57 39.4	+2.2
	4.0nm,0.4s						
KOTS				Lg	Lg	06 58 40.3	
	72nm,0.6s						
SATY	Saty	4.67	27	Pg	Pb	06 57 43.0	+2.5
	7.3nm,0.6s						
SATY				Lg	Lg	06 58 46.5	
	13nm,0.9s						
KTBS	Karatobe	4.87	10	Pg	Pb	06 57 45.4	+1.6
	2.3nm,0.4s						
KTBS				Lg	Lg	06 58 51.0	
	20nm,0.8s						
KURS	Kuram	4.98	23	Pg	Pb	06 57 48.3	+2.6
	3.6nm,0.6s						
KURS				Lg	Lg	06 58 55.3	
	8.2nm,1.2s						
UZB	Uzynbulak	4.98	31	Pg	Pb	06 57 48.8	+3.1
	4.7nm,0.7s						
UZB				Lg	Lg	06 58 56.1	
	7.5nm,1.3s						
KUU	Kurty	5.01	7	Pg	Pb	06 57 48.5	+2.3
	1.2nm,0.3s						
KUU				Lg	Lg	06 58 55.7	
	22nm,0.8s						
CHKK	Chushkaly	5.06	12	Pg	Pb	06 57 49.5	+2.6
	1.9nm,0.1s						
CHKK				Lg	Lg	06 58 57.9	
	10nm,0.4s						
PDGK	Podgornoye	5.32	33	⇑Pn	Pn	06 57 39.6	+1.2
	0.8nm,0.8s						
PDGK				⇑Pg	Pb	06 57 52.3	+0.8
	4.0nm,0.8s						
PDGK				⇑Lg	Lg	06 59 07.0	
	19nm,1.1s						
ARXS	Arharly	5.57	17	Pg	Pb	06 57 58.2	+2.6
	2.3nm,0.3s						
ARXS				Lg	Lg	06 59 12.9	
	9.9nm,0.7s						
MNBS	Baschi	5.59	22	Pg	Pb	06 57 59.9	+3.9
	2.9nm,0.6s						
MNBS				Lg	Lg	06 59 15.4	
	9.6nm,0.7s						

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*UCR **20** 06:59:50.6±2.3, 14°.72N×91°.51W, h163^{km}±7^{km}, ML4.9, MW4.9, mb5.5(NEIC)*
*IDC **20** 06:59:52.4±0.4, 15°.10N×91°.09W, h159^{km}±2^{km}, mb4.6/36, mb1 4.7/38, mb1mx4.6/48, mbtmp5.0/38, MS4.1/17, Ms1 4.1/17, ms1mx3.9/37, Error ellipse: s-maj=11.1km s-min=6.7km az=49.0*
*MOS **20** 06:59:52.5±1.2, 15°.08N×91°.28W, h174^{km}, mb5.2/15, Error ellipse: s-maj=8.8km s-min=5.5km az=110.2*
*NEIC **20** 06:59:52.0±2.4, 14°.98N±0°.06×91°.46W±0°.05, h154^{km}±1^{km}, mb5.6/567, Mwb5.4/13, Mww5.5, Md5.5/31(MEX), Mwc5.5(GCMT), Error ellipse: s-maj=10.7km s-min=8.2km az=213.0*
*SNET **20** 06:59:52.6±1.0, 14°.94N×91°.42W, h138^{km}±4^{km}, ML5.2*
*NEIC **20** 06:59:53, 15°.03N×91°.59W, h157^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.15; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$0.56; $M_{r\theta}$1.15; $M_{\theta\phi}$-0.07; $M_{\phi r}$-1.91; Fault plane solution: $M_0$2.32000×10^{17} NP1:ϕ_s235.00000°, δ14.00000°, λ0.00000°. NP2:ϕ_s325.00000°, δ90.00000°, λ-104.00000°. Principal axes: T 2.4980, Plg43.0000°, Azm69.0000°; N -0.4005, Plg14.0000°, Azm325.0000°; P -2.0975, Plg43.0000°, Azm221.0000°;*
*NEIC **20** 06:59:53, 15°.02N×91°.33W, h149^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.10; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.13; $M_{r\theta}$0.79; $M_{\theta\phi}$0.47; $M_{\phi r}$-1.48; Fault plane solution: $M_0$1.74000×10^{17} NP1:ϕ_s153.58000°, δ85.21000°, λ97.28000°. NP2:ϕ_s276.77000°, δ8.71000°, λ33.50000°. Principal axes: T 1.5215, Plg49.0000°, Azm71.0000°; N 0.3820, Plg7.0000°, Azm333.0000°; P -1.9036, Plg40.0000°, Azm237.0000°;*
*MEX **20** 06:59:53.3±1.1, 14°.85N×91°.77W, h162^{km}±7^{km}, MD5.5*
*GCMT **20** 06:59:53.0±0.1, 15°.03N±0°.01×91°.62W±0°.01, h156^{km}, MW5.5/141, Moment Tensor Solution. s132,c232; s141,c287; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.11±.02; $M_{\theta\theta}$-0.69±.03; $M_{\phi\phi}$0.57±.03; $M_{r\theta}$1.08±.02; $M_{\theta\phi}$-0.12±.03; $M_{\phi r}$-1.83±.02; Best double couple: $M_0$2.19100×10^{17} NP1:ϕ_s232.00000°, δ14.00000°, λ-3.00000°. NP2:ϕ_s325.00000°, δ89.00000°, λ-104.00000°. Principal axes: T 2.4090, Plg42.0000°, Azm69.0000°; N -0.4370, Plg14.0000°, Azm326.0000°; P -1.9720, Plg44.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*INET **20** 06:59:54.5, 14°.98N×91°.13W, h165^{km}, ML5.3*
*NEIC **20** 06:59:55, 15°.02N×91°.55W, h150^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.20; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$0.40; $M_{r\theta}$1.10; $M_{\theta\phi}$-0.07; $M_{\phi r}$-2.04; Fault plane solution: $M_0$2.38000×10^{17} NP1:ϕ_s240.00000°, δ10.00000°, λ1.00000°. NP2:ϕ_s149.00000°, δ90.00000°, λ100.00000°. Principal axes: T 2.5591, Plg44.0000°, Azm69.0000°; N -0.4096, Plg10.0000°, Azm329.0000°; P -2.1495, Plg44.0000°, Azm229.0000°;*
*BGR **20** 06:59:57.1±0.0, 15°.21N×90°.28W, h161^{km}±2^{km}, mb5.4*
ISC 20 06:59:51.1±0.3, 14°.90N±0°.03×91°.50W±0°.03, h157^{km}±2^{km}, h157^{km}:pP-P, n1243, σ1^{s}.54/1229, mb5.5/340, 47C-50D, Fault plane solution: NP1:ϕ_s265.19211°, δ18.98774°, λ13.76999°. NP2:ϕ_s162.14504°, δ85.55827°, λ108.47957°. Principal axes: T Plg46.3354°, Azm91.0876°; N Plg18.4221°, Azm340.6624°; P Plg37.8698°, Azm235.6507°; Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.41	207	⇑eP	Pn	07 00 12.8	-0.1
RTAL				IAML		07 00 14.0	
	comp=Z,98µm,0.6s						
RTAL				eS	Sn	07 00 28.1	-1.3
RTAL	Retalhuleu	0.41	207		Pn	07 00 12.8	-0.1
HUEH	Huehuetenango	0.42	360	⇓eP	Pn	07 00 13.3	+0.2
HUEH				eS	Sn	07 00 28.3	-1.7
HUEH				IAML		07 00 38.3	
	comp=Z,26µm,0.5s						
HUEH	Huehuetenango	0.42	360	Pn	Pn	07 00 13.3	+0.2
THIG		0.74	271	⇑iP	Pn	07 00 14.5	0.0
THIG				eP		07 00 14.6	
THIG				i S	Sn	07 00 31.4	-1.1
THIG		0.74	271		Pn	07 00 14.6	0.0
THIG					Sn	07 00 31.4	-1.1
CCIG	Comitan	1.51	336	i P	Pn	07 00 22.2	+0.7
CCIG				eS	Sn	07 00 44.8	0.0
CCIG	Comitan	1.51	336		Pn	07 00 22.1	+0.7
CCIG	Comitan	1.51	336		Sn	07 00 44.8	0.0
PCIG		1.84	296	i P	Pn	07 00 24.7	-0.1
PCIG				i S	Sn	07 00 48.5	-2.3
PCIG		1.84	296		Pn	07 00 24.7	-0.1
PCIG					Sn	07 00 48.5	-2.3
RTR	El Retiro	2.05	119	eP	Pn	07 00 27.8	+0.3
RTR	El Retiro	2.05	119	eP	Pn	07 00 27.8	+0.3
SBLS	San Blas	2.10	120	eP	Pn	07 00 28.8	+0.7
SBLS	San Blas	2.10	120	eP	Pn	07 00 28.8	+0.7
SNJE	San Jose	2.10	119	eP	Pn	07 00 28.2	+0.2
SNJE	San Jose	2.10	119	eP	Pn	07 00 28.2	+0.2
CEVE	Cerro Verde	2.11	120	⇓iP	Pn	07 00 28.9	+0.8
CEVE				eS	Sn	07 00 57.6	+1.0
CEVE				IAML		07 01 11.3	
	comp=Z,20µm,0.4s						
CEVE	Cerro Verde	2.11	120	⇓iP	Pn	07 00 28.9	+0.8
CEVE				eS	Sn	07 00 57.6	+1.0
CEVE				IAML		07 01 11.3	
	comp=Z,20µm,0.4s						
ESQI	Esquipulas	2.12	99		Pn	07 00 29.1	+1.0
MTO3	Montecristo	2.13	103	⇓eP	Pn	07 00 29.2	+0.8
MTO3				eS	Sn	07 00 57.5	+0.4
MTO3	Montecristo	2.13	103	⇓eP	Pn	07 00 29.2	+0.8
MTO3				eS	Sn	07 00 57.5	+0.4
MTO3	Montecristo	2.13	103		Pn	07 00 29.1	+0.8
TACO	Tacachico	2.27	114	⇓eP	Pn	07 00 30.5	+0.6
TACO				eS	Sn	07 00 58.7	-1.1
TACO	Tacachico	2.27	114	⇓eP	Pn	07 00 30.5	+0.6
TACO				eS	Sn	07 00 58.7	-1.1
CEDA	San Andres	2.31	118	⇓iP	Pn	07 00 30.8	+0.5
CEDA				eS	Sn	07 01 01.2	+0.6
CEDA	San Andres	2.31	118	⇓iP	Pn	07 00 30.8	+0.5
CEDA				eS	Sn	07 01 01.2	+0.6
JAYA	Jayaque - finc	2.34	122	⇓eP	Pn	07 00 31.4	+0.6
JAYA				eS	Sn	07 01 00.5	-0.9
JAYA				IAML		07 01 09.2	
	comp=Z,9µm,0.4s						
JAYA	Jayaque - finc	2.34	122	⇓eP	Pn	07 00 31.4	+0.6
JAYA				eS	Sn	07 01 00.5	-0.9
JAYA				IAML		07 01 09.2	
	comp=Z,9µm,0.4s						
TGIG		2.44	320	⇑eP	Pn	07 00 31.3	-0.6
TGIG				⇑eS	Sn	07 01 01.6	-1.8
TGIG		2.44	320		Pn	07 00 31.3	-0.6
TGIG					Sn	07 01 01.6	-1.8
BOQS	Boqueron	2.44	118	⇓eP	Pn	07 00 33.0	+0.9
BOQS				eS	Sn	07 01 04.4	+0.7
BOQS	Boqueron	2.44	118	⇓eP	Pn	07 00 33.0	+0.9
BOQS				eS	Sn	07 01 04.4	+0.7
UEES	Universidad Ev	2.49	118	eP	Pn	07 00 33.3	+0.8
UEES				eS	Sn	07 01 04.0	-0.5
UEES	Universidad Ev	2.49	118	eP	Pn	07 00 33.3	+0.8
UEES				eS	Sn	07 01 04.0	-0.5
SNET	Serv Nac Est T	2.51	118	eP	Pn	07 00 33.3	+0.5
SNET				eS	Sn	07 01 05.8	+1.0
SNET	Serv Nac Est T	2.51	118	eP	Pn	07 00 33.3	+0.5
SNET				eS	Sn	07 01 05.8	+1.0
SNET	Serv Nac Est T	2.51	118	Pn	Pn	07 00 33.5	+0.8
LALI	Alcalda de L	2.54	123	⇓eP	Pn	07 00 33.7	+0.7
LALI				eS	Sn	07 01 04.8	-0.5
LALI	Alcalda de L	2.54	123	⇓eP	Pn	07 00 33.7	+0.7
LALI				eS	Sn	07 01 04.8	-0.5
PETF	Flores	2.55	38	eP	Pn	07 00 33.2	0.0
PETF	Flores	2.55	38		Pn	07 00 33.1	0.0
LFU	La Fuente	2.58	116	eP	Pn	07 00 34.3	+0.7
LFU	La Fuente	2.58	116	eP	Pn	07 00 34.3	+0.7
LBRS	Las Brisas	2.65	115	eP	Pn	07 00 34.9	+0.4
LBRS	Las Brisas	2.65	115	eP	Pn	07 00 34.9	+0.4
LFRS	El Faro	2.68	118	eP	Pn	07 00 34.9	0.0
LFRS	El Faro	2.68	118	eP	Pn	07 00 34.9	0.0
PAVA	Las Pavas	2.75	115	⇓eP	Pn	07 00 36.8	+1.0
PAVA	Las Pavas	2.75	115	⇓eP	Pn	07 00 36.8	+1.0
COEG	Centro de Oper	2.84	116	⇑eP	Pn	07 00 37.7	+0.9
COEG				eS	Sn	07 01 13.2	+1.0
COEG				IAML		07 01 24.8	
	comp=Z,5µm,0.5s						
COEG	Centro de Oper	2.84	116	⇑eP	Pn	07 00 37.7	+0.9
COEG				eS	Sn	07 01 13.2	+1.0
COEG				IAML		07 01 24.8	
	comp=Z,5µm,0.5s						
COEB	Comit de Eme	3.20	115	eP	Pn	07 00 42.0	+0.7
COEB				IAML		07 01 28.4	
	comp=Z,3µm,0.3s						
COEB	Comit de Eme	3.20	115	eP	Pn	07 00 42.0	+0.7
COEB				IAML		07 01 28.4	
	comp=Z,3µm,0.3s						
TECA	Tecapa	3.23	115	eP	Pn	07 00 42.5	+0.7
TECA	Tecapa	3.23	115	eP	Pn	07 00 42.5	+0.7
PACA	Pacayal	3.39	114	eP	Pn	07 00 44.8	+0.9
PACA	Pacayal	3.39	114	eP	Pn	07 00 44.8	+0.9
LCY	Lacayo	3.44	115	eP	Pn	07 00 46.0	+1.6
LCY	Lacayo	3.44	115	eP	Pn	07 00 46.0	+1.6
VSM	San Miguel	3.45	115	eP	Pn	07 00 45.8	+1.1
VSM	San Miguel	3.45	115	eP	Pn	07 00 45.8	+1.1
LCND	La Caada	3.84	114	⇑iP	Pn	07 00 50.2	+0.7
LCND				IAML		07 01 53.6	
	comp=Z,3µm,0.5s						
LCND	La Caada	3.84	114	⇑iP	Pn	07 00 50.2	+0.7
LCND				IAML		07 01 53.6	
	comp=Z,3µm,0.5s						
CMIG	Matias Romero	3.92	304	P	Pn	07 00 50.2	-0.3
	comp=Z,365nm,0.3s,baz=128,slow=7.8,SNR=3056						
CMIG				S	Sn	07 01 31.3	-5.4
	comp=Z,341nm,0.3s,baz=98,slow=16,SNR=5.1						
CMIG	Matias Romero	3.92	304	⇑eP	Pn	07 00 49.5	-1.0
CMIG				i S	Sn	07 01 33.4	-3.3
CMIG	Matias Romero	3.92	304		Pn	07 00 49.5	-1.0
CMIG					Sn	07 01 33.4	-3.3
TGUH	Tegucigalpa,Un	4.18	101	Pn	Pn	07 00 55.2	+1.2
TUIG	Tuzandepetl	4.19	318	eP	Pn	07 00 52.5	-1.6
TUIG				i S	Sn	07 01 40.9	-2.2
TUIG	Tuzandepetl	4.19	318		Pn	07 00 52.5	-1.6
TUIG					Sn	07 01 40.9	-2.2
HUIG	Huatulco	4.53	282	i P	Pn	07 00 56.7	-1.8
HUIG				i S	Sn	07 01 42.6	-8.3
HUIG	Huatulco	4.53	282		Pn	07 00 56.7	-1.8
HUIG					Sn	07 01 42.6	-8.3
CRIN	San Cristobal	4.84	116		Pn	07 01 04.0	+1.3
TEIG	Tepich	6.13	30	eP	Pn	07 01 20.1	+0.5
TEIG				⇑iS	Sn	07 02 32.6	+3.7
TEIG	Tepich	6.13	30		Pn	07 01 18.9	-0.6
TEIG	Tepich	6.13	30		Sn	07 02 32.6	+3.7
ACON	Acoyapa	6.81	115		Pn	07 01 28.9	+0.2
GBS3	Finca Las Img	7.17	124	⇓eP	Pn	07 01 34.8	+1.2
GB1A	Borinquen Arri	7.20	124	eP	Pn	07 01 34.9	+0.9
LAPC	Finca la Perla	7.20	124	⇓eP	Pn	07 01 34.8	+0.9
BUEV	Buena Vista	7.20	124	eP	Pn	07 01 34.5	+0.4
BUAI	Buenos Aires	7.22	123	⇑eP	Pn	07 01 34.1	-0.1
GPS1	Guardaparques	7.26	124	⇓iP	Pn	07 01 36.4	+1.5
GPS2	Hotel Rincn d	7.28	124	⇓eP	Pn	07 01 36.2	+1.3
TLIG	Tlapa	7.29	292	Pn	Pn	07 01 36.4	+1.3
LIM1	Limonal	7.39	124	⇓eP	Pn	07 01 37.9	+1.5
HORNC	Hornillas	7.44	123	⇓eP	Pn	07 01 38.2	+1.1
GUAI	GUAI	7.44	127	⇑eP	Pn	07 01 38.8	+1.8
COLC	Colonia	7.44	124	⇑eP	Pn	07 01 38.3	+1.1
ESPN	Las Esperanzas	7.50	110		Pn	07 01 38.4	+0.5
PLVR	Palo Verde	7.51	126	eS	Sn	07 02 57.0	-5.5
ACAL	Aguas Claras	7.60	123	eP	Pn	07 01 40.0	+0.7
JTS	Las Juntas de	7.86	125	P	Pn	07 01 42.6	-0.1
	comp=Z,74nm,0.3s,baz=22,slow=6.1,SNR=292						
JTS				S	Sn	07 03 04.2	-6.4
	comp=Z,10nm,0.3s,baz=8.6,slow=23,SNR=1.1						
JTS				LR	LR	07 05 03.7	
	comp=Z,883nm,19.0s,baz=360,slow=41						
JTS	Las Juntas de	7.86	125	c iP	Pn	07 01 43.0	+0.3
JTS	Las Juntas de	7.86	125	⇑eP	Pn	07 01 43.7	+1.0
JTS	Las Juntas de	7.86	125	Pn	Pn	07 01 43.4	+0.6
CEDE	Laguna Cedeo	7.95	123	⇓iP	Pn	07 01 44.9	+0.9
ARE1	Arenal 1	7.95	123	⇑eP	Pn	07 01 44.8	+0.8
CASO	Castillo	7.95	123	eP	Pn	07 01 44.4	+0.4
FORC	Fortuna	7.99	123	⇓iP	Pn	07 01 45.0	+0.6
LAFE	Finca La Fe, P	8.19	127	⇑eP	Pn	07 01 47.9	+0.9
LAFE				eS	Sn	07 03 10.1	-8.2
SRA1	San Ramn	8.36	124	i P	Pn	07 01 50.2	+0.7
JACO	JACO, Garabito	8.47	127	⇑eP	Pn	07 01 52.1	+1.4
JACO				eS	Sn	07 03 17.3	-7.9
UNM	Universidad Na	8.56	302	P	Pn	07 01 55.1	+2.9
UNM	Universidad Na	8.56	302	Pn	Pn	07 01 55.1	+2.9
HDC	Heredia	8.70	123	⇑iP	Pn	07 01 55.0	+1.0
HDC	Heredia	8.70	123		Pn	07 01 55.1	+1.1
SJS	Escuela Geolog	8.78	123	⇓eP	Pn	07 01 56.1	+1.0
LCR2	La Lucha 2	8.94	124	⇑iP	Pn	07 01 57.8	+0.6
CVTR	Volcan Turrial	8.98	122	⇑iP	Pn	07 01 58.4	+0.4
RIMA	Rio Macho	9.04	123	⇑iP	Pn	07 01 59.4	+0.9
BATAN	Batan	9.26	120	⇑eP	Pn	07 02 01.9	+0.7
EDDO	Dominical	9.34	126	i P	Pn	07 02 03.5	+1.1
EDLM	Las Mercedes	9.54	125	i P	Pn	07 02 06.6	+1.5
DRK0	Durika	9.82	124	⇑iP	Pn	07 02 09.7	+0.7
EDPN	Palmar Norte	9.83	126	⇑iP	Pn	07 02 09.8	+0.9
EDBA	Buenos Aires	9.86	124	⇑iP	Pn	07 02 09.8	+0.5
PRVC	Isla de Provid	9.95	97	eP	Pn	07 02 09.8	-0.6
RIOS	Rincon, Osa	9.95	127	⇑iP	Pn	07 02 10.8	+0.4
POTG	Potrero Grande	10.05	124	⇑iP	Pn	07 02 12.6	+0.8
PTJ1	Puerto Jimnez	10.22	127	⇑eP	Pn	07 02 14.7	+0.8
PIRO	Carate, Puerto	10.27	128	eP	Pn	07 02 14.6	-0.1
EDSV	San Vito	10.30	125	eP	Pn	07 02 15.3	+0.1
MOIG	Morelia	10.40	299	Pn	Pn	07 02 19.6	+3.1
CDITO	Canoas	10.53	126	⇑eP	Pn	07 02 17.5	-0.5
BCIP	Isla Barro Col	12.75	115	P	Pn	07 02 46.6	-0.3
BCIP	Isla Barro Col	12.75	115	Pn	Pn	07 02 46.6	-0.3
BCIP	Isla Barro Col	12.75	115	eP	Pn	07 02 45.1	-1.8
ZAIG	Zacatecas	13.07	308	Pn	P	07 02 54.2	-1.6
MCJ	Malvern	13.59	75	i P	P	07 03 04.3	+2.9
MTDJ	Mount Denham	13.79	74	P	P	07 03 03.1	-0.6
KVTX	Kingsville	13.92	336	P	P	07 03 05.8	+1.0
BBJ	Bamboo Saint A	14.07	74	eP	P	07 03 05.3	-1.4
STH	Stony Hill	14.44	75	eP	Pn	07 03 08.7	+0.3
STH				i P	P	07 03 09.7	-1.1
HOJ	Hope	14.48	76	⇓eP	Pn	07 03 09.5	+0.6
MAPC	Malpelo	14.56	137	eP	P	07 03 12.9	+0.7
YHJ	Yallahs	14.71	76	⇑iP	P	07 03 16.0	+2.3
061Z	Ochoppi	14.74	41	P	Pn	07 03 12.4	+0.4
CMJ	Castle Mountai	14.86	75	⇑eP	Pn	07 03 14.1	+0.5
735A	Kenedy	15.07	338	P	P	07 03 19.3	+1.8
CAPC	Capurgana	15.18	113	eP	Pn	07 03 17.2	-0.4
833A	Chaparral WMA,	15.23	333	P	P	07 03 20.0	+0.6
	baz=149,SNR=42						
833A	Chaparral WMA,	15.23	333	IAmb	IAmb	07 03 57.4	
	comp=Z,236nm,1.1s						
PTAC	Punta Ardita,	15.48	118	eP	Pn	07 03 18.6	-2.7
HKT	Hockley	15.51	346	c iP	Pn	07 03 21.7	+0.3
HKT	Hockley	15.51	346		P	07 03 22.8	+0.5
HKT				IAmb	IAmb	07 03 26.9	
	comp=Z,264nm,1.4s						
PAYG	Puerto Ayora	15.52	175	P	P	07 03 26.9	+4.2
PAYG				IAmb	IAmb	07 03 28.3	
	comp=Z,309nm,1.1s						
441A	DeRidder	15.86	355	IAmb	IAmb	07 03 30.6	
	comp=Z,317nm,1.1s						
060A	Indiantown	15.93	39	P	P	07 03 27.8	+0.7
DWPF	Disney Wildern	16.13	34	P	P	07 03 30.0	+0.7
	baz=217						
DWPF	Disney Wildern	16.13	34	P	P	07 03 29.9	+0.5
SOLC	Bahia Solano	16.30	120	eP	Pn	07 03 30.0	-1.4
GTBY	Guantanamo Bay	16.42	70		Pn	07 03 34.7	+2.0
342A	Flagon Creek P	16.42	358	IAmb	IAmb	07 03 37.6	
	comp=Z,706nm,1.4s						
344A	Westbrook Farm	16.50	2	IAmb	IAmb	07 03 44.1	
	comp=Z,284nm,0.9s						
346A	Big Creek Wild	16.52	6	IAmb	IAmb	07 03 55.3	
	comp=Z,553nm,1.1s						

MOTC	Monteria, Cord	16.64	110	*e*P	P	07 03 34.2	-0.9
SJCC	San Jacinto, C	16.70	105	*e*P	P	07 03 35.2	-0.6
BRAL	Brewton	16.70	13	P	Pn	07 03 38.5	+2.6
	baz=195,SNR=49						
435B	Jarrell	16.77	342	P	Pn	07 03 38.2	+1.3
	baz=159,SNR=7.1						
435B				S	S	07 06 34.9	-8.0
	baz=159						
435B	Jarrell	16.77	342	IAmb	IAmb	07 04 30.4	
	comp=Z,370nm,1.4s						
DBBC	Dabeiba	16.92	116	*e*P	P	07 03 38.5	+0.2
NATX	Nacogdoches	17.03	351	P	Pn	07 03 40.8	+0.8
	baz=169,SNR=13						
NATX	Nacogdoches	17.03	351		Pn	07 03 41.0	+1.0
NATX				IAmb	IAmb	07 04 02.2	
	comp=Z,229nm,1.1s						
PIZC	Pizarro, Choco	17.06	124	*e*P	Pn	07 03 42.1	+1.6
UREC	San Jos de Ur	17.18	113	*e*P	P	07 03 39.6	-1.5
SMRC	Santa Marta, M	17.23	100	*e*P	P	07 03 41.7	+0.1
VBMS	Vicksburg	17.27	3	P	Pn	07 03 44.2	+1.5
	baz=183,SNR=13						
VBMS	Vicksburg	17.27	3	P	Pn	07 03 44.3	+1.5
VBMS				IAmb	IAmb	07 04 25.6	
	comp=Z,441nm,1.2s						
JCT	Junction City	17.29	335	P	Pn	07 03 44.5	+1.4
	baz=151,SNR=20						
237A	Washetta, Mont	17.48	348	IAmb	IAmb	07 04 09.0	
	comp=Z,540nm,1.4s						
ARGC	Ariguani, Magd	17.58	105	*e*P	P	07 03 45.1	-0.3
MALC	Bahia Malaga	17.65	126	*e*P	Pn	07 03 47.6	+0.1
CBOC	Ciudad Bolivar	17.67	119	*e*P	Pn	07 03 47.4	-0.6
143A	Socs Landing,	17.73	0	IAmb	IAmb	07 04 26.2	
	comp=Z,374nm,1.1s						
146A	Union	17.80	7	IAmb	IAmb	07 03 51.4	
	comp=Z,484nm,1.2s						
HPIG		17.83	314	P	Pn	07 03 50.2	+0.4
WHTX	Lake Whitney,	17.86	343	P	Pn	07 03 49.7	-0.2
	baz=160,SNR=56						
WHTX	Lake Whitney,	17.86	343	IAmb	IAmb	07 04 02.5	
	comp=Z,722nm,1.6s						
ZARC	Zaragoza, Cauc	17.90	112	*e*P	P	07 03 48.5	-0.5
HELC	Santa Helena	17.91	117	*e*P	P	07 03 49.7	+0.2
PLMC	San Jos del P	17.97	122	*e*P	P	07 03 50.1	+0.4
TIGA	Tifton	17.99	22	P	Pn	07 03 52.3	+1.0
	baz=205,SNR=94						
SMLC	San Martn de	18.10	108	*e*P	P	07 03 49.2	-1.9
TX31	Lajitas Ar. Si	18.24	324	IAmb	IAmb	07 04 28.9	
	comp=Z,653nm,1.7s						
TXAR	Lajitas Array	18.24	324	P	Pn	07 03 55.9	+1.4
	comp=Z,3.9nm,0.3s,baz=152,slow=12,SNR=140						
TXAR				PcP	PcP	07 08 19.3	+1.1
	comp=Z,0.3nm,0.3s,baz=164,slow=4.8,SNR=5.8						
TXAR				ScP	ScP	07 11 39.9	+0.7
	comp=Z,0.3nm,0.3s,baz=134,slow=3.6,SNR=23						
TXAR	Lajitas Array	18.24	324		Pn	07 03 55.2	+0.7
Z41A	Richland Creek	18.32	357	P	Pn	07 03 55.0	-0.2
	baz=176,SNR=31						
Z41A	Richland Creek	18.32	357	IAmb	IAmb	07 03 59.5	
	comp=Z,462nm,1.4s						
YOTC	Yotoco, Valle	18.45	125	*e*P	P	07 03 55.6	+0.5
Z47A	Carrollton	18.49	9	IAmb	IAmb	07 03 58.9	
	comp=Z,594nm,1.2s						
LRAL	Lakeview Retre	18.52	12	P	Pn	07 03 58.0	+0.5
	baz=193,SNR=116						
LRAL	Lakeview Retre	18.52	12	IAmb	IAmb	07 04 01.9	
	comp=Z,503nm,1.4s						
GUY2C	Guyana, Caldas	18.55	120	*e*P	P	07 03 57.4	+0.8
Z38A	Mt. Pleasant	18.55	351	IAmb	IAmb	07 04 02.6	
	comp=Z,468nm,1.2s						
PTBC	PUERTO BERRIO,	18.68	115	*e*P	P	07 03 55.8	-1.6
RREF	El Recreo	18.74	120	*e*P	P	07 03 59.3	+0.5
WLAR	White Oak Lake	18.77	356	IAmb	IAmb	07 04 04.2	
	comp=Z,596nm,1.3s						
NORC	Norcasia	18.80	118	*e*P	P	07 03 58.9	+0.1
ANIL	Santa Ana	18.92	122	*e*P	Pn	07 04 02.2	-0.5
TOLC	Tolima	18.94	121	*e*P	Pn	07 04 02.0	-1.0
CCAR	Cane Creek	18.94	359	IAmb	IAmb	07 04 03.4	
	comp=Z,463nm,1.3s						
OCAC	Ocana	18.99	108	*e*P	P	07 03 59.2	-1.8
BRRC	Barranca, Sant	19.09	112	*e*P	P	07 03 60.0	-1.9
ABTX	Abilene, Hawle	19.14	339	P	Pn	07 04 03.7	-1.2
	baz=155,SNR=82						
ABTX	Abilene, Hawle	19.14	339	IAmb	IAmb	07 04 06.1	
	comp=Z,351nm,1.4s						
Z51A	Franklin	19.22	16	IAmb	IAmb	07 04 09.8	
	comp=Z,509nm,1.4s						
CMBC	Cumbal	19.36	135	*e*P	Pn	07 04 07.7	-0.4
ORTC	Ortega, Tolima	19.38	123	*e*P	P	07 04 05.6	+0.5
SOTA	Rioblanco	19.41	129	*e*P	Pn	07 04 09.5	+0.7
Y49A	Blount Mountai	19.43	13	IAmb	IAmb	07 04 09.0	
	comp=Z,309nm,1.1s						
SPBC	San Pablo de B	19.44	116	*e*P	P	07 04 04.8	-0.9
PCON	Cinco Dias	19.44	129	*e*P	Pn	07 04 08.5	-0.7
MARP	Paez Belalcaza	19.45	127	*e*P	Pn	07 04 08.6	-0.4
OTAV	Otavalo	19.46	137	P	Pn	07 04 09.2	0.0
OTAV				pmax	pmax		
	comp=Z,302nm,1.0s						
OTAV	Otavalo	19.46	137	P	Pn	07 04 09.2	0.0
OTAV				IAmb	IAmb	07 04 13.2	
	comp=Z,302nm,1.0s						
OTAV	Otavalo	19.46	137	*e*P	Pn	07 04 09.0	-0.2
SLBS	Sierra La Lagu	19.46	299	P	Pn	07 04 10.0	+1.2
CCUFI	Cufio, Nario	19.49	133	*e*P	Pn	07 04 10.4	+0.7
GCUF	Volcan Galeras	19.49	133	*e*P	Pn	07 04 09.6	-0.1
CPAS1	Pasto	19.54	133	*e*P	Pn	07 04 09.9	-0.2
X40A	Basin Creek Fa	19.54	357	P	P	07 04 07.3	+0.7
	baz=176,SNR=69						
X40A				S	S	07 07 37.3	-1.6
	baz=176						
X40A	Basin Creek Fa	19.54	357	IAmb	IAmb	07 04 09.2	
	comp=Z,292nm,1.5s						
X43A	Marvell	19.55	2	P	P	07 04 07.6	+1.0
	baz=181,SNR=20						
X43A	Marvell	19.55	2	IAmb	IAmb	07 04 25.8	
	comp=Z,342nm,1.1s						
OXF	Oxford	19.62	5	P	P	07 04 08.2	+0.8
	baz=186,SNR=20						
OXF	Oxford	19.62	5	IAmb	IAmb	07 04 50.7	
	comp=Z,493nm,1.1s						
ROSC	El Rosal	19.64	119	P	P	07 04 09.2	+1.0
	comp=Z,9.3nm,0.3s,baz=0.7,slow=2.6,SNR=78						
ROSC	El Rosal	19.64	119	P	Pn	07 04 10.0	-1.3
ROSC				pmax	pmax		
	comp=Z,293nm,0.9s						
ROSC	El Rosal	19.64	119	P	Pn	07 04 10.0	-1.3
ROSC				IAmb	IAmb	07 04 12.0	
	comp=Z,293nm,0.8s						
MIAR	Mount Ida	19.65	355	P	P	07 04 08.6	+0.8
	baz=174,SNR=124						
MIAR				S	S	07 07 39.7	-1.3
	baz=174						
MIAR	Mount Ida	19.65	355	IAmb	IAmb	07 04 46.2	
	comp=Z,402nm,1.1s						
BARC	Barichara	19.79	113	*e*P	P	07 04 09.0	-0.7
UALR	University of	19.81	358	IAmb	IAmb	07 04 14.6	
	comp=Z,502nm,1.2s						
GOGA	Godfrey	19.82	20	P	Pn	07 04 11.5	-1.4
	baz=203,SNR=267						
X48A	Hartselle	19.88	11	IAmb	IAmb	07 04 17.6	
	comp=Z,270nm,1.1s						
PAMC	Pamplona, Colo	19.91	110	*e*P	P	07 04 10.2	-1.1
X37A	Clayton	19.92	351	IAmb	IAmb	07 04 53.1	
	comp=Z,428nm,1.2s						
LPIG	La Paz	19.93	300	P	Pn	07 04 14.7	+0.4
	comp=Z,71nm,1.0s,baz=134,slow=2.8,SNR=13						
BETC	Betania	19.96	126	*e*P	Pn	07 04 13.1	-1.7
RUSC	La Rusia	20.19	114	*e*P	P	07 04 11.9	-2.4
W41B	Gary Mavity, V	20.20	358	P	P	07 04 14.6	+1.0
	baz=177,SNR=63						
W41B	Gary Mavity, V	20.20	358	IAmb	IAmb	07 04 18.2	
	comp=Z,201nm,1.2s						
GARC	Garzon, Huila	20.23	127	*e*P	P	07 04 16.3	+1.9
CHIC	Chingaza	20.25	118	*e*P	P	07 04 15.3	+0.5
W45A	Hickory Valley	20.28	5	IAmb	IAmb	07 04 58.4	
	comp=Z,292nm,0.9s						
W39A	Magazine	20.32	355	P	P	07 04 15.8	+0.9
	baz=173,SNR=108						
W39A	Magazine	20.32	355	IAmb	IAmb	07 04 53.0	
	comp=Z,309nm,1.3s						
WHAR	Wooly Hollow	20.32	358	IAmb	IAmb	07 04 19.1	
	comp=Z,177nm,1.0s						
X51A	Calhoun	20.48	16	IAmb	IAmb	07 04 21.3	
	comp=Z,585nm,1.4s						
Z56A	Williston	20.52	25	P	P	07 04 18.8	+1.7
	baz=209,SNR=71						
158A	Hollywood	20.52	28	P	P	07 04 18.5	+1.4
	baz=212,SNR=11						
VILC	Villavicencio,	20.55	120	*e*P	P	07 04 18.7	+1.0
WMOK	Wichita Mounta	20.82	343	P	P	07 04 19.7	-0.5
	baz=159,SNR=28						
WMOK				S	S	07 08 03.3	-0.6
	baz=159						
NHSC	New Hope	20.84	28	P	P	07 04 22.2	+1.7
	baz=212,SNR=45						
SWET	Sewanee	20.84	13	IAmb	IAmb	07 05 11.6	
	comp=Z,584nm,1.5s						
FCAR	Ozark Folk Cen	20.91	359	IAmb	IAmb	07 04 24.6	
	comp=Z,353nm,1.2s						
W50A	Signal Mountai	20.97	14	IAmb	IAmb	07 05 22.1	
	comp=Z,121nm,0.9s						
MNTX	Cornudas Mount	20.99	325	P	P	07 04 23.8	+1.6
	baz=139,SNR=48						
MNTX				S	S	07 08 13.1	+5.9
	baz=139						
GNAR	Gosnell	21.02	3	IAmb	IAmb	07 04 52.8	
	comp=Z,452nm,1.2s						
TAMC	Tame, Arauca	21.10	111	*e*P	P	07 04 21.6	-2.0
V48A	Smith Brothers	21.18	11	IAmb	IAmb	07 04 27.0	
	comp=Z,226nm,1.1s						
W52A	Murphy	21.23	17	IAmb	IAmb	07 04 56.9	
	comp=Z,178nm,1.2s						
SDV	Santo Domingo	21.27	104	P	P	07 04 24.0	-1.5
	comp=Z,266nm,0.6s,baz=291,slow=5.8,SNR=199						
SDV				ScP	ScP	07 11 46.8	+0.3
	comp=Z,12nm,0.7s,baz=284,slow=3.7,SNR=9.1						
SDV	Santo Domingo	21.27	104	P	P	07 04 23.1	-2.4
SDV	Santo Domingo	21.27	104	*e*P	P	07 04 22.8	-2.7
SDV	Santo Domingo	21.27	104	*e*P	P	07 04 23.6	-1.9
TUL1	Leonard	21.28	350	P	P	07 04 24.3	-0.9
	baz=168,SNR=11						
TUL1				S	S	07 08 12.5	+0.2
	baz=168						
TUL1	Leonard	21.28	350	IAmb	IAmb	07 05 01.7	
	comp=Z,200nm,1.1s						
Z59A	Georgetown, SC	21.37	29	P	P	07 04 27.2	+1.1
	baz=214,SNR=30						
WVT	Waverly	21.40	8	P	P	07 04 26.1	-0.4
WVT				pmax	pmax		
	comp=Z,111nm,1.1s						
WVT	Waverly	21.40	8	P	P	07 04 26.3	-0.2
	baz=189						
WVT				S	S	07 08 14.0	-0.3
	baz=189						
WVT	Waverly	21.40	8	P	P	07 04 26.1	-0.4
JSC	Jenkinsville	21.40	24	IAmb	IAmb	07 04 29.1	
	comp=Z,189nm,1.0s						
CPCT	Cooper Cave	21.40	16	IAmb	IAmb	07 04 34.0	
	comp=Z,220nm,1.0s						
U40A	Yellville	21.41	357	P	P	07 04 26.9	+0.3
	baz=176,SNR=135						
U40A				S	S	07 08 15.1	+0.6
	baz=176						
U40A	Yellville	21.41	357	IAmb	IAmb	07 05 05.4	
	comp=Z,285nm,1.2s						
HHAR	Hobbs	21.41	355	IAmb	IAmb	07 05 04.5	
	comp=Z,242nm,1.1s						
BG3	Lake Jocassee	21.45	20	IAmb	IAmb	07 04 30.8	
	comp=Z,230nm,1.1s						
OK030	Cody Creek RV	21.47	348	P	P	07 04 26.0	-1.2
OK030				IAmb	IAmb	07 05 05.7	
	comp=Z,333nm,1.1s						
OK031	S. Brethren Rd	21.51	348	IAmb	IAmb	07 05 06.1	
	comp=Z,362nm,1.2s						
Y57A	Sumter	21.52	26	P	P	07 04 28.8	+1.0
	baz=210,SNR=54						
PENMO	Penman	21.53	4	P	P	07 04 28.2	+0.4
MACC	Macarena, Meta	21.54	124	*e*P	P	07 04 28.8	+0.5
MSTX	Muleshoe	21.55	334	P	P	07 04 28.1	-0.2
	baz=149,SNR=17						
MSTX				S	S	07 08 21.2	+3.9
	baz=149						
MSTX	Muleshoe	21.55	334	P	P	07 04 27.6	-0.7
MSTX				IAmb	IAmb	07 05 23.4	
	comp=Z,301nm,1.3s						
CLTN	Cedars of Leba	21.61	11	P	P	07 04 28.8	+0.1
CLTN				IAmb	IAmb	07 04 31.2	
	comp=Z,213nm,1.0s						
U38A	Gravette	21.61	354	P	P	07 04 28.4	-0.3
U38A				IAmb	IAmb	07 04 31.8	
	comp=Z,239nm,1.1s						
PAULI	Pauline	21.67	22	IAmb	IAmb	07 04 32.7	
	comp=Z,300nm,0.9s						
PARMO	Parma	21.73	4	P	P	07 04 30.0	0.0
Y58A	Scranton	21.74	27	P	P	07 04 30.7	+0.6
	baz=212,SNR=16						
Y58A	Scranton	21.74	27	P	P	07 04 29.6	-0.5
V51A	Loudon	21.78	16	IAmb	IAmb	07 04 33.4	
	comp=Z,599nm,1.6s						
TKL	Tuckaleechee C	21.80	17	P	P	07 04 30.3	-0.5
	comp=Z,331nm,1.1s,baz=194,slow=8.7,SNR=146						
TKL	Tuckaleechee C	21.80	17	P	P	07 04 31.5	+0.7
TKL				pmax	pmax		
	comp=Z,1μm,1.4s						
TKL	Tuckaleechee C	21.80	17	P	P	07 04 31.5	+0.7
PBMO	Poplar Bluff	21.81	2	IAmb	IAmb	07 04 33.2	
	comp=Z,238nm,0.8s						
PTGC	Puerto Gaitan,	21.83	117	*e*P	P	07 04 28.5	-2.8
AMTX	Amarillo	21.91	337	P	P	07 04 31.9	0.0
	baz=152						
AMTX				S	S	07 08 25.7	+2.4
	baz=152						
AMTX	Amarillo	21.91	337	IAmb	IAmb	07 05 08.9	
	comp=Z,222nm,0.9s						
X57A	Johnson Farm,	22.03	26	P	P	07 04 34.1	+1.0
	baz=210,SNR=30						
BIRD	Birdtown, Kers	22.04	25	P	P	07 04 33.7	+0.6
T42A	Van Buren	22.05	1	P	P	07 04 32.7	-0.5
T42A				IAmb	IAmb	07 04 35.2	
	comp=Z,221nm,0.6s						
KMSC	Kings Mountain	22.14	23	P	P	07 04 35.4	+1.3
	baz=207,SNR=163						
KMSC				S	S	07 08 27.9	+1.1
	baz=207						
Y59A	Loris	22.18	29	P	P	07 04 34.9	+0.5
	baz=214,SNR=35						
CROK	Carrier	22.28	346	P	P	07 04 34.6	-0.9
GUVC	San Jose del G	22.30	122	*e*P	P	07 04 35.8	-0.2
T35A	Sooner Cattle	22.38	349	IAmb	IAmb	07 05 12.1	
	comp=Z,278nm,1.2s						
W56A	Indian Trail	22.42	24	P	P	07 04 37.9	+1.1
	baz=208,SNR=170						
W56A				S	S	07 08 32.0	+0.7
	baz=208						
U32A	Winter Ranch,	22.42	344	IAmb	IAmb	07 05 14.1	
	comp=Z,182nm,1.1s						
X58A	Rowland	22.44	27	P	P	07 04 37.9	+0.9
	baz=212,SNR=34						
Y60A	Bolivia	22.50	30	P	P	07 04 38.1	+0.6
	baz=215,SNR=8.6						
W57A	Gilead	22.67	25	P	P	07 04 39.9	+0.8
	baz=210,SNR=77						
W57A				S	S	07 08 35.6	+0.2
	baz=210						
TZTN	Tazewell	22.70	17	P	P	07 04 40.6	+1.1
	baz=200,SNR=94						
TZTN				S	S	07 08 36.4	+0.5
	baz=200						
X59A	McDuffie Farm,	22.78	28	P	P	07 04 40.7	+0.5
	baz=214,SNR=25						
V55A	Taylorsville	22.81	22	P	P	07 04 42.0	+1.5
HSIG		22.82	311	P	P	07 04 42.7	+2.0
HSIG				pP	pP	07 05 12.9	+3.1
HSIG				IAmb	IAmb	07 05 15.3	
	comp=Z,203nm,1.3s						
T50A	Nancy	22.82	14	IAmb	IAmb	07 05 32.1	
	comp=Z,243nm,1.4s						
W58A	Raeford	22.88	27	P	P	07 04 42.0	+0.9
	baz=212,SNR=80						
W58A				S	S	07 08 39.7	+0.9
	baz=212						
SRIG	Santa Rosalia	22.92	306	P	P	07 04 44.4	+2.8
SRIG				IAmb	IAmb	07 04 45.6	
	comp=Z,127nm,0.9s						
SRIG				pP	pP	07 05 17.6	+6.6
121A	Cookes Peak, D	22.98	323	P	P	07 04 43.9	+1.7
	baz=136,SNR=9.1						
121A				S	S	07 08 47.9	+7.0
	baz=136						
121A	Cookes Peak, D	22.98	323	IAmb	IAmb	07 05 22.5	
	comp=Z,569nm,1.5s						
V56A	Mocksville	23.04	23	P	P	07 04 43.6	+1.0
	baz=208,SNR=168						
V56A				S	S	07 08 42.2	+0.7
	baz=208						
CCM	Cathedral Cave	23.07	1	P	P	07 04 42.9	+0.1
CCM				pmax	pmax		
	comp=Z,1μm,1.4s						
CCM	Cathedral Cave	23.07	1	P	P	07 04 43.0	+0.2
	baz=180						
CCM				S	S	07 08 43.2	+1.4
	baz=180						
CCM	Cathedral Cave	23.07	1	P	P	07 04 42.9	+0.1
X60A	Albert Glenn T	23.08	29	P	P	07 04 43.7	+0.7
	baz=215,SNR=32						
319A	Douglas	23.10	318	IAmb	IAmb	07 05 20.5	
	comp=Z,399nm,1.4s						
U54A	Nelsons Funny	23.20	20	P	P	07 04 45.4	+1.2
	baz=204,SNR=218						
R40A	Maddies Statio	23.31	358	IAmb	IAmb	07 04 47.5	
	comp=Z,407nm,1.1s						
W59A	Clinton	23.35	28	P	P	07 04 45.7	+0.3
	baz=213						
V57A	Coltrane Farms	23.39	25	P	P	07 04 46.8	+1.0
	baz=209,SNR=139						
V57A				S	S	07 08 47.8	+0.7
	baz=209						
U56A	King	23.56	23	P	P	07 04 48.9	+1.6
	baz=208,SNR=229						
U56A				S	S	07 08 50.7	+0.9
	baz=208						
MPR	Mayaguez	23.58	79	IAmb	IAmb	07 05 23.1	
	comp=Z,143nm,1.1s						
V58A	Windy Hill, Pi	23.59	26	P	P	07 04 48.4	+0.9
	baz=211,SNR=78						
V58A				S	S	07 08 50.5	+0.4
	baz=211						
V58A	Windy Hill, Pi	23.59	26	IAmb	IAmb	07 04 50.2	
	comp=Z,384nm,1.1s						
CRPR	Cabo Rojo, PR	23.59	79	IAmb	IAmb	07 05 25.8	
	comp=Z,279nm,1.3s						
W60A	Pink Hill	23.59	29	P	P	07 04 48.5	+0.9
	baz=215,SNR=34						
Y22D	IRIS PASSCAL I	23.64	327	P	P	07 04 50.2	+1.9
	baz=140						
MLPR	Magueyes Islan	23.65	79	IAmb	IAmb	07 04 50.9	
	comp=Z,252nm,1.1s						
CNNC	Cliffs of the	23.66	29	P	P	07 04 49.2	+1.0
	baz=214,SNR=39						
WCI	Wyandotte Cave	23.69	10	P	P	07 04 48.5	0.0
WCI				pmax	pmax		
	comp=Z,710nm,1.5s						
WCI	Wyandotte Cave	23.69	10	P	P	07 04 48.8	+0.3
	baz=192						
WCI	Wyandotte Cave	23.69	10	P	P	07 04 48.5	0.0
S51A	Beattyville	23.71	16	P	P	07 04 49.2	+0.5
LENM	Lemitar	23.74	327	P	P	07 04 50.1	+0.9
V59A	Middlesex	23.94	27	P	P	07 04 51.5	+0.8
	baz=213,SNR=43						
V59A				S	S	07 08 56.5	+0.6
	baz=213						
AOPR	Arecibo Observ	23.95	78	P	P	07 04 50.5	-0.6
AOPR				IAmb	IAmb	07 05 28.6	
	comp=Z,153nm,0.9s						
R49A	Shelbyville	23.97	12	IAmb	IAmb	07 05 25.9	
	comp=Z,465nm,1.4s						
Q44A	Meyer Farm, Va	24.01	5	IAmb	IAmb	07 04 53.9	
	comp=Z,369nm,1.2s						
W61A	Ground Anchor	24.04	30	P	P	07 04 53.0	+1.3
	baz=216,SNR=30						
U57A	Blanch	24.04	25	P	P	07 04 52.9	+1.2
	baz=210,SNR=245						
U57A				S	S	07 08 58.7	+1.2
	baz=210						
OBIP	Obispado Ponce	24.07	79	P	P	07 04 51.2	-0.9
OBIP				IAmb	IAmb	07 04 55.0	
	comp=Z,136nm,0.9s						
ANMO	Albuquerque	24.08	329	P	P	07 04 54.8	+2.5
	comp=Z,1.9nm,0.5s,baz=144,slow=10,SNR=17						
ANMO				ScP	ScP	07 11 54.1	+0.6
	comp=Z,9.0nm,1.0s,baz=168,slow=6.5,SNR=5.2						
ANMO	Albuquerque	24.08	329	*ce*P	P	07 04 51.8	-0.5
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.9s						
ANMO	Albuquerque	24.08	329	P	P	07 04 54.0	+1.7
	baz=142						
ANMO	Albuquerque	24.08	329	P	P	07 04 53.2	+1.0
ICMP	Isla Caja de M	24.14	79	P	P	07 04 52.3	-0.4
ICMP				IAmb	IAmb	07 04 55.9	
	comp=Z,263nm,0.8s						
T56A	Rocky Mt	24.29	23	P	P	07 04 55.4	+1.4
	baz=208,SNR=42						
T56A				S	S	07 09 02.5	+1.0
	baz=208						
BLA	Blacksburg	24.31	22	P	P	07 04 55.5	+1.3
	baz=206,SNR=85						
U58A	Oxford	24.34	26	P	P	07 04 55.0	+0.6
	baz=211,SNR=38						
U58A				S	S	07 09 02.5	+0.3
	baz=211						
V60A	Jim Taylor Roa	24.39	29	P	P	07 04 55.7	+0.9
	baz=215,SNR=54						
SJG	San Juan	24.51	79	P	P	07 04 55.2	-0.9
	comp=Z,29nm,0.3s,baz=281,slow=6.4,SNR=16						
SJG	San Juan	24.51	79	P	P	07 04 55.1	-1.0
SJG				pmax	pmax		
	comp=Z,104nm,1.0s						
SJG	San Juan	24.51	79	P	P	07 04 55.1	-1.0
SJG				IAmb	IAmb	07 04 59.5	
	comp=Z,104nm,0.9s						
KSU1	Kansas State U	24.53	350	P	P	07 04 56.4	+0.3
	baz=168,SNR=11						
S54A	Dingess, Beckl	24.54	20	P	P	07 04 57.1	+0.9
	baz=204,SNR=30						
S54A	Dingess, Beckl	24.54	20	IAmb	IAmb	07 04 58.3	
	comp=Z,190nm,1.1s						
P40A	Paris	24.54	359	IAmb	IAmb	07 04 57.9	
	comp=Z,301nm,1.1s						
T57A	Hurt	24.57	24	P	P	07 04 57.7	+1.3
	baz=209,SNR=67						
T57A				S	S	07 09 06.5	+0.7
	baz=209						
T57A	Hurt	24.57	24	IAmb	IAmb	07 05 01.3	
	comp=Z,293nm,1.1s						
BLO	Bloomington	24.58	9	IAmb	IAmb	07 05 33.3	
	comp=Z,322nm,1.1s						
U59A	Littleton	24.63	27	P	P	07 04 57.7	+0.7
	baz=213,SNR=40						
U59A				S	S	07 09 09.5	+2.7
	baz=213						
U59A	Littleton	24.63	27	IAmb	IAmb	07 05 02.1	
	comp=Z,232nm,1.1s						
TUC	Tucson	24.68	318	P	P	07 05 00.4	+2.7
TUC				pmax	pmax		
	comp=Z,76nm,1.0s						
TUC	Tucson	24.68	318	P	P	07 05 00.7	+3.0
	baz=130						
TUC	Tucson	24.68	318	P	P	07 05 00.4	+2.7
P38A	Dawn	24.70	356	P	P	07 04 56.8	-0.8
P38A				IAmb	IAmb	07 05 38.2	
	comp=Z,153nm,1.1s						
P43A	Skaggs, Pawnee	24.71	4	IAmb	IAmb	07 05 36.8	
	comp=Z,136nm,0.8s						
V61A	Roper	24.73	30	P	P	07 04 59.3	+1.3
	baz=216,SNR=14						
CBYP	Canovanas	24.80	79	IAmb	IAmb	07 05 33.4	
	comp=Z,230nm,1.1s						
T58A	Grand View Acr	24.81	25	P	P	07 04 59.1	+0.4
	baz=211,SNR=28						
T58A				S	S	07 09 09.7	0.0
	baz=211						
R53A	Hurricane	24.82	18	IAmb	IAmb	07 05 01.0	
	comp=Z,221nm,1.1s						
V62A	Hyde County Ai	24.86	31	P	P	07 05 00.3	+1.2
	baz=218,SNR=5.9						
CBKS	Cedar Bluff	24.91	345	P	P	07 05 00.8	+1.2
	baz=160,SNR=8.9						
CBKS	Cedar Bluff	24.91	345	IAmb	IAmb	07 05 38.5	
	comp=Z,302nm,1.3s						
P46A	Rosedale	24.91	8	IAmb	IAmb	07 05 40.0	
	comp=Z,265nm,0.8s						
T25A	Trinidad	24.95	335	P	P	07 05 01.9	+1.7
	baz=149,SNR=19						
T25A	Trinidad	24.95	335	IAmb	IAmb	07 05 40.4	
	comp=Z,234nm,1.1s						
R54A	Victor	24.99	20	P	P	07 05 00.9	+0.6
	baz=204,SNR=27						
R54A				S	S	07 09 13.4	+0.8
	baz=204						
U60A	Pendleton	25.01	28	P	P	07 05 01.3	+0.8
	baz=214,SNR=35						
S56A	Natural Bridge	25.04	23	P	P	07 05 01.7	+1.0

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      baz=208,SNR=62
S56A                                S       S          07 09 14.2 +0.9
      baz=208
P48A  Milroy           25.05  11    IAmb    IAmb       07 05 38.0
      comp=Z,263nm,0.9s
Q51A  Peebles          25.09  15    IAmb    IAmb       07 05 42.2
      comp=Z,279nm,0.8s
U61A  Possum Corner    25.23  29    P       P          07 05 03.3 +0.8
      baz=216,SNR=14
T59A  Double "B" Far   25.25  27    P       P          07 05 03.4 +0.8
      baz=213,SNR=36
T59A                                S       S          07 09 17.2 +0.6
      baz=213
T59A  Double "B" Far   25.25  27    P       P          07 05 02.7  0.0
T59A                                IAmb    IAmb       07 05 05.0
      comp=Z,410nm,1.4s
P49A  Miami Univ. Ec   25.26  12    P       P          07 05 02.4 -0.3
      baz=195,SNR=16
P49A  Miami Univ. Ec   25.26  12    IAmb    IAmb       07 05 40.4
      comp=Z,161nm,0.9s
O44A  Mansfield        25.30   5    IAmb    IAmb       07 05 45.9
      comp=Z,158nm,1.1s
CUPR  Culebra, Puert   25.34  79    P       P          07 05 03.2 -0.5
CUPR                                pP      pP         07 05 38.1 +1.5
CUPR                                IAmb    IAmb       07 05 39.7
      comp=Z,179nm,0.9s
S57A  Dark Hollow, R   25.34  24    P       P          07 05 04.3 +0.8
      baz=209,SNR=32
S57A  Dark Hollow, R   25.34  24    IAmb    IAmb       07 05 09.0
      comp=Z,106nm,1.1s
R55A  Marlinton        25.38  21    P       P          07 05 05.0 +1.2
      baz=206,SNR=90
Q53A  Leroy            25.44  18    P       P          07 05 05.1 +0.8
      baz=203,SNR=47
ATAH  Atahualpa        25.46 148    P       P          07 05 07.5 +2.4
      comp=Z,82nm,0.9s,baz=337,slow=5.1,SNR=52
ATAH                                PcP     PcP        07 08 35.9 +2.7
      comp=Z,31nm,0.9s,baz=59,slow=0.5,SNR=7.4
S58A  Poland Farm, P   25.58  25    P       P          07 05 06.3 +0.7
      baz=211,SNR=23
S58A  Poland Farm, P   25.58  25    IAmb    IAmb       07 05 07.9
      comp=Z,452nm,1.7s
P51A  Williamsport     25.59  15    IAmb    IAmb       07 05 45.9
      comp=Z,223nm,0.9s
HDIL  Hopedale         25.64   4    P       P          07 05 06.1  0.0
      baz=185,SNR=37
HDIL  Hopedale         25.64   4    IAmb    IAmb       07 05 07.3
      comp=Z,283nm,1.1s
SFIN  Lafayette        25.68   8    P       P          07 05 06.3 -0.2
      baz=190,SNR=25
SFIN  Lafayette        25.68   8    IAmb    IAmb       07 05 47.5
      comp=Z,241nm,1.4s
N41A  Harden Midland   25.72   1    IAmb    IAmb       07 05 10.3
      comp=Z,364nm,1.6s
R56A  Bull Pasture M   25.74  22    P       P          07 05 08.5 +1.3
      baz=208,SNR=36
T60A  Surry            25.75  28    P       P          07 05 08.1 +0.9
      baz=214,SNR=30
CDVI  St. Croix        25.80  80    P       P          07 05 09.2 +1.3
214A  Organ Pipe Nat   25.82 315    P       P          07 05 10.8 +2.9
      baz=126,SNR=21
214A  Organ Pipe Nat   25.82 315    IAmb    IAmb       07 05 47.5
      comp=Z,134nm,1.1s
SDCO  Great Sand Dun   25.92 334    P       P          07 05 10.6 +1.5
      baz=147
SDCO  Great Sand Dun   25.92 334    IAmb    IAmb       07 05 47.7
      comp=Z,102nm,1.1s
KSCO  Kaye Shedlock’   25.94 340    P       P          07 05 09.4 +0.3
      baz=154
KSCO  Kaye Shedlock’   25.94 340    IAmb    IAmb       07 05 44.9
      comp=Z,327nm,1.4s
R58B  Mineral          25.95  25    P       P          07 05 09.9 +1.0
      baz=211,SNR=30
R58B                                S       S          07 09 28.5 +0.9
      baz=211
R58B  Mineral          25.95  25    IAmb    IAmb       07 05 15.6
      comp=Z,251nm,1.4s
W18A  Petrified Fore   25.96 324    P       P          07 05 12.0 +2.6
      baz=136
W18A  Petrified Fore   25.96 324    P       P          07 05 11.9 +2.6
W18A                                IAmb    IAmb       07 06 03.9
      comp=Z,151nm,1.4s
O49A  Covington        25.96  13    IAmb    IAmb       07 05 45.1
      comp=Z,330nm,1.2s
P52A  Corning          25.98  17    P       P          07 05 09.6 +0.4
      baz=201,SNR=10
P52A  Corning          25.98  17    P       P          07 05 09.2  0.0
R57A  Stanardsville    25.98  24    P       P          07 05 10.1 +0.9
      baz=209,SNR=33
S59A  Mechanicsville   26.02  26    P       P          07 05 10.4 +0.8
      baz=212,SNR=16
R58A  Rapidan          26.19  25    P       P          07 05 11.9 +0.9
      baz=210,SNR=28
R58A                                S       S          07 09 33.0 +1.6
      baz=210
S60A  Water View       26.26  27    P       P          07 05 12.8 +1.1
      baz=214,SNR=20
ACSO  Alum Creek Sta   26.32  15    P       P          07 05 12.6 +0.4
      baz=198,SNR=24
ACSO  Alum Creek Sta   26.32  15    IAmb    IAmb       07 06 05.3
      comp=Z,268nm,1.2s
CBN   Corbin Frederi   26.36  26    P       P          07 05 13.8 +1.2
      baz=212,SNR=16
CBN   Corbin Frederi   26.36  26    P       P          07 05 13.2 +0.6
CBN                                 IAmb    IAmb       07 05 48.0
      comp=Z,163nm,0.8s
Q56A  Snyder Ridge,    26.38  22    P       P          07 05 14.2 +1.4
      baz=207,SNR=30
R59A  King George, V   26.47  26    P       P          07 05 14.9 +1.3
      baz=212,SNR=23
S22A  4UR Ranch, Cre   26.51 332    P       P          07 05 15.9 +1.5
      baz=145
O52A  Adamsville       26.51  17    IAmb    IAmb       07 05 52.3
      comp=Z,186nm,1.1s
M44A  Midewin, Midew   26.57   6    P       P          07 05 14.0 -0.4
M44A                                IAmb    IAmb       07 05 15.4
      comp=Z,273nm,1.2s
M44A                                pP      pP         07 05 47.9 +0.5
PCRV  Puerto La Cruz   26.63  97    P       P          07 05 13.6 -1.8
      comp=Z,4.2nm,0.3s,baz=334,slow=5.6,SNR=8.2
Q57A  Strasburg        26.66  23    P       P          07 05 16.5 +1.2
      baz=209,SNR=27
S61A  Accomac          26.68  29    P       P          07 05 17.1 +1.6
      baz=216,SNR=5.8
N49A  Columbus Grove   26.70  12    IAmb    IAmb       07 05 52.5
      comp=Z,228nm,1.1s
MCWV  Mont Chateau     26.70  20    P       P          07 05 16.2 +0.6
      baz=205,SNR=21
MCWV  Mont Chateau     26.70  20    IAmb    IAmb       07 05 18.1
      comp=Z,123nm,1.5s
SFX   San Felipe       26.75 311    P       P          07 05 17.8 +1.6
SFX                                 pP      pP         07 05 51.1 +1.9
R60A  Leonardtown, M   26.76  27    P       P          07 05 17.3 +1.1
      baz=213,SNR=15
O53A  New Philadelph   26.81  18    P       P          07 05 17.3 +0.6
      baz=202,SNR=19
O53A  New Philadelph   26.81  18    IAmb    IAmb       07 06 14.3
      comp=Z,310nm,1.4s
Q24A  Divide           26.82 336    P       P          07 05 18.0 +0.9
      baz=149
Q58A  Fox Den Farm,    26.87  24    P       P          07 05 18.0 +0.9
      baz=210,SNR=10
MVCO  Mesa Verde       26.88 329    P       P          07 05 19.5 +2.0
      baz=141,SNR=9.7
MVCO  Mesa Verde       26.88 329    P       P          07 05 18.3 +0.7
MVCO                                IAmb    IAmb       07 05 57.5
      comp=Z,97nm,1.0s
P56A  Dayton Farm, R   26.92  22    P       P          07 05 18.7 +1.1
      baz=208,SNR=41
113A  Mohawk Valley,   26.95 315    P       P          07 05 20.2 +2.2
SCIA  State Center     26.95 357    P       P          07 05 17.7 -0.2
      baz=176
SCIA  State Center     26.95 357    P       P          07 05 18.2 +0.3
SCIA                                IAmb    IAmb       07 05 19.3
      comp=Z,102nm,1.1s
HQIL  Hanson Quary C   26.99   6    P       P          07 05 18.5 +0.3
O54A  Avella           27.00  19    IAmb    IAmb       07 05 20.2
      comp=Z,223nm,1.2s
BGNE  Belgrade         27.04 349    P       P          07 05 19.9 +1.2
BGNE                                pP      pP         07 05 55.0 +3.2
BGNE                                IAmb    IAmb       07 05 56.9
      comp=Z,165nm,1.1s
L42A  Oliver, Polo     27.06   3    IAmb    IAmb       07 05 20.5
      comp=Z,267nm,1.2s
N51A  Ashland          27.12  15    IAmb    IAmb       07 05 57.6
      comp=Z,190nm,1.1s
WUAZ  Wupatki          27.19 323    P       P          07 05 22.8 +2.5
      baz=134,SNR=9.7
SPX   San Pedro Mart   27.20 310    P       P          07 05 21.5 +0.8
P57A  Homestead Farm   27.21  23    P       P          07 05 21.7 +1.5
      baz=209,SNR=56
P57A  Homestead Farm   27.21  23    IAmb    IAmb       07 05 23.0
      comp=Z,259nm,1.1s
Q59A  Harwood          27.22  26    P       P          07 05 21.6 +1.3
      baz=212,SNR=8.3
L34A  Svendsen Farm,   27.30 352    IAmb    IAmb       07 06 00.7
      comp=Z,204nm,1.0s
L44A  Lake County Fo   27.36   6    P       P          07 05 21.3 -0.2
      baz=187,SNR=6.4
L44A  Lake County Fo   27.36   6    IAmb    IAmb       07 05 58.2
      comp=Z,238nm,1.0s
R61A  Willards         27.36  28    P       P          07 05 22.9 +1.3
      baz=216,SNR=8.6
R61A  Willards         27.36  28    P       P          07 05 22.8 +1.3
L46A  Eue Claire       27.39   8    IAmb    IAmb       07 06 09.1
      comp=Z,154nm,0.9s
M50A  Fremont          27.41  14    IAmb    IAmb       07 05 59.4
      comp=Z,94nm,0.9s
N53A  Lisbon           27.43  18    IAmb    IAmb       07 05 24.1
      comp=Z,183nm,1.1s
P58A  Pank, Wackersv   27.49  24    P       P          07 05 23.7 +1.1
      baz=211,SNR=14
M51A  Elyria           27.55  15    P       P          07 05 23.3 +0.1
      baz=199,SNR=14
PV01  Paradox Valley   27.64 330    P       P          07 05 25.4 +1.1
L48A  N Adams          27.64  11    IAmb    IAmb       07 05 59.3
      comp=Z,180nm,1.1s
K38A  Parkersburg      27.68 358    IAmb    IAmb       07 05 26.3
      comp=Z,157nm,1.2s
Q60A  Greensboro       27.69  27    P       P          07 05 25.6 +1.2
      baz=214,SNR=14
O56A  Blue Knob Stat   27.69  22    P       P          07 05 25.5 +1.0
      baz=207,SNR=51
O56A  Blue Knob Stat   27.69  22    IAmb    IAmb       07 05 26.8
      comp=Z,224nm,1.0s
ISCO  Idaho Springs    27.72 336    P       P          07 05 25.8 +0.6
ISCO                                pP      pP         07 06 00.3 +2.1
SKI   Saint Kitts      27.73  81    P       P          07 05 24.1 -1.0
SKI                                 *PP     pP         07 05 59.2 +0.9
SKI                                 pmax    pmax
      comp=Z,687nm,1.2s
SKI   Saint Kitts      27.73  81    P       P          07 05 24.1 -1.0
SKI                                 pP      pP         07 05 59.1 +0.9
PV15  Paradox Valley   27.76 330    P       P          07 05 27.1 +1.7
Q61A  Milford          27.82  28    P       P          07 05 27.0 +1.4
      baz=215
N54A  Moraine State    27.84  19    P       P          07 05 26.4 +0.7
      baz=204,SNR=57
GLA   Glamis           27.84 315    P       P          07 05 28.9 +2.9
      baz=125,SNR=12
K43A  Burlington       27.84   5    IAmb    IAmb       07 06 03.9
      comp=Z,97nm,0.9s
PV03  Paradox Valley   27.86 330    P       P          07 05 28.4 +2.1
PV03                                IAmb    IAmb       07 06 06.6
      comp=Z,87nm,1.2s
PV18  Skein Mesa, Pa   27.89 330    P       P          07 05 28.8 +2.2
PV18                                pP      pP         07 06 01.7 +2.2
PV12  Saucer Basin,    27.89 330    IAmb    IAmb       07 06 07.1
      comp=Z,119nm,1.0s
PV11  David Mesa, Pa   27.91 330    IAmb    IAmb       07 06 07.0
      comp=Z,161nm,1.5s
PV07  Paradox Valley   27.91 330    P       P          07 05 28.5 +1.7
PV07                                pP      pP         07 06 02.0 +2.3
PV17  East Wray Mesa   27.94 330    IAmb    IAmb       07 06 07.1
      comp=Z,88nm,1.0s
PV16  Nyswonger Mesa   27.94 330    IAmb    IAmb       07 06 07.3
      comp=Z,82nm,1.1s
JFWS  Jewell Farm      27.94   2    P       P          07 05 26.5 -0.1
      baz=182,SNR=34
JFWS  Jewell Farm      27.94   2    IAmb    IAmb       07 05 29.8
      comp=Z,298nm,1.4s
P59A  Jarrettsville    27.94  25    P       P          07 05 27.8 +1.1
      baz=212,SNR=22
M52A  Chesterland      27.97  16    P       P          07 05 27.6 +0.6
M52A                                        pP         07 06 03.1 +3.3
M52A                                IAmb    IAmb       07 06 21.2
      comp=Z,187nm,1.3s
O57A  Amberson         27.98  23    P       P          07 05 27.9 +0.9
      baz=209,SNR=22
PV04  Paradox Valley   28.00 330    IAmb    IAmb       07 06 08.0
      comp=Z,90nm,1.0s
PV14  Lion Creek, Pa   28.04 330    IAmb    IAmb       07 06 08.1
      comp=Z,91nm,1.0s
ESJX  Sierra Juarez    28.05 312    P       P          07 05 29.2 +1.2
PV22  Blue Mesa, Par   28.06 330    P       P          07 05 29.2 +1.2
M53A  WI Miller and    28.07  17    P       P          07 05 28.3 +0.4
      baz=202,SNR=20
M53A  WI Miller and    28.07  17    IAmb    IAmb       07 06 26.9
      comp=Z,327nm,1.6s
PV23  Carpenter Ridg   28.10 330    IAmb    IAmb       07 06 08.7
      comp=Z,75nm,0.9s
PDMCI Parker Dam,Lak   28.12 317    P       P          07 05 31.5 +3.2
      baz=128,SNR=7.4
AAM   Ann Arbor        28.14  12    P       P          07 05 28.1 -0.3
      baz=196
AAM   Ann Arbor        28.14  12    IAmb    IAmb       07 06 21.0
      comp=Z,259nm,1.6s
O58A  Lewisberry       28.18  24    P       P          07 05 29.7 +0.8
      baz=211,SNR=14
SSPA  Standing Stone   28.26  22    P       P          07 05 30.5 +0.9
      baz=208
SSPA  Standing Stone   28.26  22    P       P          07 05 30.3 +0.8
MVL   Millersville     28.30  25    IAmb    IAmb       07 05 31.7
      comp=Z,85nm,0.8s
K31A  O'Neill          28.33 349    IAmb    IAmb       07 06 12.1
      comp=Z,175nm,1.0s
PAGS  Pennsylvania G   28.35  24    P       P          07 05 30.0 -0.3
PAGS                                IAmb    IAmb       07 06 06.4
      comp=Z,157nm,1.5s
U15A  North Rim        28.36 323    P       P          07 05 32.7 +1.9
N56A  West Decatur     28.36  21    P       P          07 05 31.0 +0.6
      baz=207,SNR=43
ALLY  Alegheny Colle   28.41  18    IAmb    IAmb       07 05 32.7
      comp=Z,151nm,1.3s
M54A  Oil Creek Stat   28.43  19    P       P          07 05 31.5 +0.4
      baz=204,SNR=16
M54A  Oil Creek Stat   28.43  19    IAmb    IAmb       07 05 33.0
      comp=Z,111nm,1.1s
P60A  Greenville       28.45  26    P       P          07 05 31.8 +0.6
      baz=213,SNR=11
P60A  Greenville       28.45  26    IAmb    IAmb       07 05 33.2
      comp=Z,141nm,1.2s
SWSC  Sam W. Stewart   28.45 313    P       P          07 05 33.4 +2.1
      baz=123,SNR=7.3
N57A  Milroy           28.49  23    P       P          07 05 32.0 +0.5
      baz=209,SNR=30
IKP   In-Ko-Pah, Jac   28.51 313    P       P          07 05 35.2 +3.1
      baz=122,SNR=7.9
WUPA  West Chester U   28.56  26    P       P          07 05 32.6 +0.4
BC3   Big Chuckawall   28.61 315    P       P          07 05 35.2 +2.3
      baz=125,SNR=18
L53A  Girard           28.66  18    P       P          07 05 33.3 +0.2
      baz=203,SNR=14
M55A  Ridgway          28.69  20    IAmb    IAmb       07 05 35.2
      comp=Z,174nm,1.1s
IRM   Iron Mountain    28.69 316    P       P          07 05 36.0 +2.5
      baz=126,SNR=8.4
P61A  Hammonton        28.70  28    P       P          07 05 34.6 +1.1
      baz=215,SNR=7.6
K50A  Casco            28.81  14    P       P          07 05 34.1 -0.3
K50A                                pP      pP         07 06 08.0 +0.6
MONP2 Monument Peak    28.86 313    P       P          07 05 38.3 +3.0
      baz=122,SNR=10
N58A  Sunbury          28.88  24    P       P          07 05 35.6 +0.6
      baz=210,SNR=13
N58A  Sunbury          28.88  24    IAmb    IAmb       07 05 37.0
      comp=Z,101nm,1.1s
ERPA  Erie             28.89  18    P       P          07 05 35.4 +0.3
      baz=203,SNR=5.6
ERPA  Erie             28.89  18    IAmb    IAmb       07 05 36.8
      comp=Z,128nm,1.2s
M56A  Emporium         28.90  21    P       P          07 05 35.8 +0.5
      baz=207,SNR=28
M56A  Emporium         28.90  21    P       P          07 05 34.6 -0.6
M56A                                IAmb    IAmb       07 05 37.1
      comp=Z,216nm,1.2s
O60A  Telford          28.97  26    P       P          07 05 36.5 +0.8
      baz=213,SNR=11
PHWY  Pilot Hill       28.97 338    P       P          07 05 37.1 +1.0
I42A  Draeger Farm,    28.98   4    IAmb    IAmb       07 05 37.1
      comp=Z,52nm,0.7s
I37A  Lemond, Waseca   29.07 357    IAmb    IAmb       07 05 38.5
      comp=Z,101nm,1.2s
ECSD  EROS Data Cent   29.07 352    P       P          07 05 37.3 +0.5
      baz=170,SNR=18
ECSD  EROS Data Cent   29.07 352    IAmb    IAmb       07 06 14.7
      comp=Z,227nm,1.4s
O20A  White River Ci   29.09 333    P       P          07 05 38.6 +1.4
      baz=145
M57A  Sunshine Farm,   29.15  23    P       P          07 05 38.2 +0.7
      baz=209,SNR=52
O61A  Allentown        29.15  27    P       P          07 05 38.2 +0.8
      baz=215,SNR=7.2
BELC  Belle Mtn. Jos   29.18 315    P       P          07 05 40.9 +2.9
      baz=124
TPFO  Pinon Flats      29.27 314    P       P          07 05 40.6 +1.8
      baz=123,SNR=6.7
PFO   Pinyon Flats O   29.28 314    P       P          07 05 42.3 +3.4
      comp=Z,7.0nm,0.9s,baz=116,slow=11,SNR=12
PFO                                 ScP     ScP        07 12 10.0 +1.0
      comp=Z,8.4nm,1.1s,baz=73,slow=1.4,SNR=7.3
PFO                                 LR      LR         07 18 30.9
      comp=Z,368nm,18.9s,baz=118,slow=38
PFO   Pinyon Flats O   29.28 314  i P       P          07 05 38.4 -0.5
PFO                                 pmax    pmax
      comp=Z,14nm,0.9s
PFO   Pinyon Flats O   29.28 314    P       P          07 05 41.1 +2.3
      baz=123,SNR=6.2
PFO   Pinyon Flats O   29.28 314    P       P          07 05 40.1 +1.3
PFO                                 pP      pP         07 06 14.3 +2.2
N59A  State Game Lan   29.32  25    P       P          07 05 39.7 +0.8
      baz=212,SNR=15
N59A  State Game Lan   29.32  25    IAmb    IAmb       07 05 40.6
      comp=Z,60nm,0.6s
109C  Camp Elliot, M   29.35 312    P       P          07 05 41.2 +1.9
      baz=121
SVB   Belmont          29.37  89    IAmb    IAmb       07 06 15.5
      comp=Z,72nm,0.8s
I45A  Fountain         29.39   8    IAmb    IAmb       07 05 41.2
      comp=Z,194nm,1.4s
GMRC  Granite Mounta   29.41 317    P       P          07 05 43.0 +3.0
      baz=126,SNR=16
M58A  Price’s Panora   29.43  23    P       P          07 05 40.8 +0.9
      baz=210,SNR=37
N60A  Cedar Hill Far   29.55  26    P       P          07 05 41.9 +0.9
      baz=213,SNR=18
WVNY  West Valley, N   29.58  20    IAmb    IAmb       07 05 43.2
      comp=Z,211nm,1.2s
SZCU  Shurtz Canyon    29.62 324    P       P          07 05 44.6 +2.7
BRNJ  Basking Ridge    29.63  27    IAmb    IAmb       07 05 43.3
      comp=Z,96nm,0.8s
L56A  Greenwood        29.69  21    P       P          07 05 42.7 +0.4
      baz=208,SNR=32
L56A  Greenwood        29.69  21    IAmb    IAmb       07 05 44.1
      comp=Z,212nm,1.1s
MSU   Marysvale        29.77 326    P       P          07 05 45.6 +2.4
MSU   Marysvale        29.77 326    P       P          07 05 45.6 +2.4
MURC  Murrieta         29.79 313    P       P          07 05 46.1 +2.9
      baz=122,SNR=5.5
N61A  South Mountain   29.80  27    P       P          07 05 43.8 +0.6
      baz=215,SNR=10
L57A  Andrews Acres    29.83  22    P       P          07 05 43.9 +0.5
      baz=209,SNR=42
HEC   Hector,Ludlow    29.88 316    P       P          07 05 47.6 +3.5
      baz=125
BBSR  BB Station       29.96  50    P       P          07 05 44.9 +0.2
M59A  Waymart          29.98  25    P       P          07 05 45.5 +0.7
      baz=212,SNR=27
CPNY  Central Park     29.98  27    IAmb    IAmb       07 05 45.9
      comp=Z,118nm,1.2s
RDMU  Red Mountain     30.04 332    P       P          07 05 47.1 +1.5
M60A  Port Jervis      30.13  26    P       P          07 05 46.8 +0.7
      baz=214,SNR=17
SHPR  Sheep Range      30.14 320    P       P          07 05 48.8 +2.3
TRNY  Table Rock, Ra   30.15  27    IAmb    IAmb       07 05 48.2
      comp=Z,152nm,1.3s
I51A  Listowel         30.17  15    P       P          07 05 46.2 -0.2
      baz=200,SNR=21
I51A                                S       S          07 10 31.8 -2.1
      baz=200
PAL   Palisades        30.18  27    P       P          07 05 47.1 +0.6
      baz=215,SNR=11
PAL   Palisades        30.18  27    IAmb    IAmb       07 05 47.7
      comp=Z,75nm,0.8s
L58A  Harry Jones Me   30.24  24    P       P          07 05 47.8 +0.7
      baz=211,SNR=32
SPMN  Marine on St.    30.25 358    P       P          07 05 46.9 -0.1
      baz=177,SNR=109
K56A  Middlesex        30.27  21    P       P          07 05 47.9 +0.6
      baz=208,SNR=45
MEDO  Medina           30.31  19    IAmb    IAmb       07 05 49.3
      comp=Z,155nm,1.1s
N62A  Caumsett State   30.31  28    P       P          07 05 48.2 +0.6
      baz=216
BINY  Binghamton       30.32  23    P       P          07 05 48.4 +0.6
      baz=210,SNR=57
J54A  Appleton         30.35  19    IAmb    IAmb       07 05 49.6
      comp=Z,151nm,1.1s
GLMI  Grayling         30.40  10    P       P          07 05 47.6 -0.8
      baz=193,SNR=11
GLMI  Grayling         30.40  10    IAmb    IAmb       07 06 49.9
      comp=Z,247nm,1.1s
NNA   Nana             30.40 151ceP         P          07 05 50.6 +1.8
NNA                                 pmax    pmax
      comp=Z,100nm,0.9s
NNA   Nana             30.40 151    P       P          07 05 50.2 +1.4
G45A  Suttons Bay      30.45   8    IAmb    IAmb       07 06 52.7
      comp=Z,88nm,0.9s
BFSC  Mount Baldy Ra   30.46 314    P       P          07 05 51.7 +2.5
      baz=122,SNR=5.8
GSC   Goldstone, Bar   30.47 316    P       P          07 05 51.5 +2.3
      baz=125
GSC   Goldstone, Bar   30.47 316    P       P          07 05 51.6 +2.3
GSC                                 pP      pP         07 06 24.9 +2.3
M61A  Granite Spring   30.49  27    P       P          07 05 49.8 +0.6
      baz=215,SNR=15
K22A  Casper           30.53 338    P       P          07 05 50.4 +0.6
      baz=150
WSPT  Westport, CT     30.57  28    IAmb    IAmb       07 05 51.6
      comp=Z,219nm,1.2s
K57A  Scipio Center    30.59  22    P       P          07 05 50.5 +0.3
      baz=209,SNR=39
J55A  Hilton           30.61  20    IAmb    IAmb       07 05 51.9
      comp=Z,158nm,1.0s
L59A  Walton           30.68  24    P       P          07 05 51.9 +0.9
      baz=212,SNR=20
L59A  Walton           30.68  24    IAmb    IAmb       07 05 53.0
      comp=Z,198nm,1.1s
N63A  Mattituck        30.79  29    P       P          07 05 52.5 +0.6
      baz=218
L60A  Shokan           30.85  26    P       P          07 05 53.3 +0.8
      baz=214,SNR=15
YLE   Yale             30.86  28    IAmb    IAmb       07 05 54.4
      comp=Z,226nm,1.3s
F42A  Maple Grove Fa   30.89   5    IAmb    IAmb       07 07 02.9
      comp=Z,114nm,1.6s
F36A  Milaca           30.91 357    IAmb    IAmb       07 06 31.6
      comp=Z,183nm,1.8s
K58A  Earlville        30.94  23    P       P          07 05 53.9 +0.7
      baz=211,SNR=51
DECC  Green Verdugo    30.94 313    P       P          07 05 55.7 +2.3
      baz=122
J56A  Wolcott          30.94  21    P       P          07 05 53.8 +0.6
      baz=208,SNR=30
M62A  Hamden           30.98  28    P       P          07 05 54.0 +0.5
      baz=217,SNR=7.6
RSSD  Black Hills      31.02 342    P       P          07 05 54.5 +0.3
      baz=156
RSSD  Black Hills      31.02 342    P       P          07 05 54.5 +0.3
RSSD                                pP      pP         07 06 29.1 +1.5
EDW2  Edwards Air Fo   31.04 315    P       P          07 05 56.5 +2.2
      baz=123,SNR=5.8
TPNV  Topopah Spring   31.10 320    P       P          07 05 57.2 +2.3
      baz=128,SNR=8.2
TPNV  Topopah Spring   31.10 320    IAmb    IAmb       07 06 49.5
      comp=Z,162nm,2.0s
LRMC  Laurel Mtn Rad   31.16 316    P       P          07 05 57.2 +1.9
      baz=124
FURC  Furnace Creek,   31.19 318    P       P          07 05 58.1 +2.6
      baz=127
K59A  Cooperstown      31.25  24    P       P          07 05 56.5 +0.5
      baz=212,SNR=11
SNCC  San Nicolas Is   31.28 311    P       P          07 05 58.4 +2.0
      baz=119
L61A  Hillsdale 1, H   31.30  26    P       P          07 05 57.0 +0.6
      baz=215,SNR=11
DUG   Dugway, Tooele   31.33 328    P       P          07 05 58.7 +1.8
      baz=137
DUG   Dugway, Tooele   31.33 328    pP      pP         07 06 32.0 +1.8
M63A  Gales Ferry      31.34  29    P       P          07 05 57.7 +1.0
      baz=218,SNR=21
MPMC  Manual Prospec   31.36 317    P       P          07 05 59.5 +2.2
      baz=125,SNR=12
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OSI   Osito Audit: C    31.40 314  P      P      07 05 59.4 +2.0
      baz=122
K60A  Five Rivers En    31.51  25  P      P      07 05 58.8 +0.6
      baz=214
H53A  Bobcaygeon        31.55  18  P      P      07 05 58.7 +0.2
      baz=204,SNR=29
L62A  Suffield          31.56  27  P      P      07 05 59.0 +0.4
      baz=216,SNR=5.4
UCCT  U. Connecticut    31.57  28  P      P      07 05 59.4 +0.7
UCCT                                      pP     07 06 33.2 +1.4
SADO  Sadowa            31.57  17  P      P      07 05 58.2 -0.5
      comp=Z,36nm,0.7s,baz=214,slow=9.5,SNR=30
SADO  Sadowa            31.57  17  IAmb   IAmb   07 05 59.9
      comp=Z,145nm,1.2s
J58A  Remsen            31.58  23  P      P      07 05 59.4 +0.5
      baz=211,SNR=29
R11A  Troy Canyon, C    31.59 322  P      P      07 06 01.7 +2.6
      baz=131,SNR=8.5
E43A  Lone Tree Farm    31.61   6  IAmb   IAmb   07 05 59.8
      comp=Z,122nm,1.5s
E38A  The Farm, Brul    31.61 360  IAmb   IAmb   07 05 60.0
      comp=Z,169nm,1.4s
SCZ2  Santa Cruz Isl    31.73 312  P      P      07 06 03.2 +2.9
      baz=120
ARVC  Arvin             31.75 314  P      P      07 06 03.3 +2.9
      baz=122
ISA   Isabella, Lake    31.80 315  P      P      07 06 03.5 +2.6
      baz=123
K61A  Williamstown      31.81  26  P      P      07 06 01.9 +1.0
      baz=215,SNR=24
PDAR  Pinedale Array    31.82 334  P      P      07 06 01.8 +0.6
      comp=Z,0.6nm,0.5s,baz=143,slow=9.1,SNR=8.5
PDAR                               PcP    PcP    07 08 48.2 -0.2
      comp=Z,1.2nm,0.4s,baz=131,slow=5.2,SNR=12
PDAR                               ScP    ScP    07 12 17.7 +0.4
      comp=Z,5.4nm,1.0s,baz=151,slow=3.4,SNR=14
PDAR  Pinedale Array    31.82 334  P      P      07 06 00.4 -0.7
BW06  Boulder Array     31.82 334         pP     07 06 31.6 -3.0
GRAC  Grapevine Rang    31.83 319  P      P      07 06 04.5 +3.4
      baz=127
M64A  Tiverton          31.85  30  P      P      07 06 02.1 +0.9
      baz=219
M64A  Tiverton          31.85  30  IAmb   IAmb   07 06 03.3
      comp=Z,135nm,1.1s
L61B  Northampton       31.89  27  P      P      07 06 01.7 +0.2
      baz=216,SNR=5.2
QUA2  Belchertown       31.89  27  IAmb   IAmb   07 06 02.5
      comp=Z,65nm,0.7s
L63A  North Scituate    31.90  29  P      P      07 06 02.2 +0.5
      baz=218,SNR=9.2
L63A  North Scituate    31.90  29  IAmb   IAmb   07 06 03.5
      comp=Z,178nm,1.1s
E46A  Sault Ste Mari    31.95   9  IAmb   IAmb   07 07 08.7
      comp=Z,113nm,1.2s
CWC   Cottonwood Cre    31.97 317  P      P      07 06 04.7 +2.1
      baz=125
J59A  Piesco            31.97  24  P      P      07 06 02.6 +0.4
      baz=212,SNR=26
J59A  Piesco            31.97  24  IAmb   IAmb   07 06 05.0
      comp=Z,169nm,1.2s
BRYW  Bryant College    31.98  29  P      P      07 06 03.0 +0.7
BRYW                               IAmb   IAmb   07 06 04.2
      comp=Z,170nm,1.1s
I58A  Old Forge         31.98  23  P      P      07 06 03.0 +0.6
      baz=211,SNR=58
M65A  Busby, Falmout    32.13  30  P      P      07 06 04.2 +0.6
      baz=220
D41A  Chassel           32.16   4  IAmb   IAmb   07 06 04.7
      comp=Z,96nm,1.4s
J60A  Lant Hill Farm    32.22  25  P      P      07 06 05.2 +0.8
      baz=214,SNR=16
ACCN  Adirondack Com    32.24  25  IAmb   IAmb   07 06 05.6
      comp=Z,101nm,1.1s
K62A  Royalston         32.26  27  P      P      07 06 05.6 +0.9
      baz=216
K62A  Royalston         32.26  27  IAmb   IAmb   07 06 08.0
      comp=Z,96nm,1.2s
VES   Vestal, Richgr    32.31 315  P      P      07 06 08.1 +2.8
      baz=123
PKM   Mcpherson Peak    32.31 313  P      P      07 06 07.3 +1.8
      baz=121
L64A  Middleborough     32.32  29  P      P      07 06 06.5 +1.3
      baz=219,SNR=23
HRV   Adam Dziewonsk    32.43  28  P      P      07 06 07.1 +0.9
HRV                                pmax   pmax
      comp=Z,173nm,1.1s
HRV   Adam Dziewonsk    32.43  28  P      P      07 06 07.1 +0.9
      baz=218
HRV   Adam Dziewonsk    32.43  28  P      P      07 06 07.1 +0.9
HRV                                IAmb   IAmb   07 06 08.2
      comp=Z,172nm,1.1s
PLVO  Plevna            32.43  19  P      P      07 06 06.2 -0.1
PLVO                               IAmb   IAmb   07 06 07.8
      comp=Z,194nm,1.4s
G54A  Lake Saint Pet    32.45  18  P      P      07 06 06.3 -0.1
      baz=204,SNR=23
D32A  Dogwood Acres,    32.47 353  IAmb   IAmb   07 06 44.1
      comp=Z,121nm,1.7s
H57A  Richville         32.49  22  P      P      07 06 07.4 +0.6
      baz=210
I59A  Olmsteadville     32.50  24  P      P      07 06 06.9 +0.1
      baz=213,SNR=12
HVU   Hansel Valley     32.50 330  P      P      07 06 07.6 +0.5
HVU                                pmax   pmax
      comp=Z,47nm,1.2s
HVU   Hansel Valley     32.50 330  P      P      07 06 07.6 +0.5
E28A  Huff              32.51 348  IAmb   IAmb   07 06 45.9
      comp=Z,223nm,1.3s
K63A  Dunstable         32.59  28  P      P      07 06 08.2 +0.6
      baz=218,SNR=7.5
K63A  Dunstable         32.59  28  IAmb   IAmb   07 06 09.7
      comp=Z,274nm,1.4s
SMMC  Simmler           32.66 314  P      P      07 06 10.2 +1.8
      baz=121
J61A  Chester           32.67  26  P      P      07 06 09.2 +0.9
      baz=215,SNR=6.6
I60A  Shoreham          32.77  25  P      P      07 06 09.8 +0.6
      baz=214,SNR=32
REDW  Red Top Meadow    32.85 334  IAmb   IAmb   07 06 47.5
      comp=Z,124nm,1.0s
J62A  Henniker          32.89  27  P      P      07 06 11.2 +0.9
      baz=217,SNR=5.8
SNOW  Snow King Moun    32.89 334  IAmb   IAmb   07 06 48.4
      comp=Z,117nm,0.8s
H58A  Gabriels          32.90  23  P      P      07 06 10.6 +0.3
      baz=212,SNR=41
LONY  Lake Ozonia       32.92  22  P      P      07 06 10.9 +0.4
      baz=211,SNR=53
LONY  Lake Ozonia       32.92  22  P      P      07 06 09.4 -1.1
LOHW  Long Hollow       32.95 334  P      P      07 06 11.7 +0.7
EYMN  Ely               32.95   0  P      P      07 06 09.9 -0.8
      baz=180,SNR=7.4
ALGO  Algonquin Park    32.96  17  P      P      07 06 10.7 -0.1
      baz=204,SNR=14
ELK   Elko              33.02 326  P      P      07 06 14.9 +3.2
      comp=Z,2.4nm,0.8s,baz=139,slow=7.3,SNR=13
ELK                                pPcP          07 09 33.5
      comp=Z,5.9nm,0.9s,baz=104,slow=22,SNR=7.1
ELK                                ScP    ScP    07 12 22.3 +0.8
      comp=Z,14nm,1.1s,baz=126,slow=2.0,SNR=12
ELK                                LR     LR     07 22 21.7
      comp=Z,227nm,18.4s,baz=142,slow=41
G57A  Newington         33.19  22  P      P      07 06 13.0 +0.2
      baz=210,SNR=21
NV11  Mina Array Sit    33.20 320  IAmb   IAmb   07 07 07.9
      comp=Z,96nm,1.3s
J63A  Strafford         33.26  28  P      P      07 06 13.9 +0.5
      baz=218,SNR=11
H59A  Cadyville         33.28  23  P      P      07 06 13.9 +0.2
      baz=212,SNR=16
I61A  Oroboro, Fairl    33.29  26  P      P      07 06 14.1 +0.4
      baz=215
NVAR  Mina Array Bea    33.29 320  P      P      07 06 17.8 +3.7
      comp=Z,17nm,0.6s,baz=133,slow=8.3,SNR=198
NVAR                               pP     pP     07 06 50.0 +2.4
      comp=Z,42nm,0.9s,baz=134,slow=8.6,SNR=14
NVAR                               PcP    PcP    07 08 54.0 +1.4
      comp=Z,2.3nm,0.5s,baz=172,slow=2.4,SNR=8.7
NVAR                               pPcP          07 09 34.1
      comp=Z,7.3nm,0.8s,baz=129,slow=4.0,SNR=7.9
NVAR                               ScP    ScP    07 12 23.4 +0.9
      comp=Z,19nm,1.1s,baz=137,slow=4.4,SNR=18
NVAR                               LR     LR     07 21 17.1
      comp=Z,345nm,20.2s,baz=136,slow=39
NVAR  Mina Array Bea    33.29 320  P      P      07 06 17.3 +3.2
LHV   Little Huntoon    33.31 319  IAmb   IAmb   07 07 10.0
      comp=Z,125nm,1.3s
MDPB  Devils Postpil    33.31 318  P      P      07 06 16.9 +2.6
B35A  Bob, Littlefor    33.42 357  IAmb   IAmb   07 06 53.1
      comp=Z,224nm,1.9s
FRNY  Flat Rock         33.48  23  IAmb   IAmb   07 06 17.0
      comp=Z,120nm,1.1s
AGMN  Agassiz Nation    33.50 355  P      P      07 06 15.2 -0.2
      baz=172,SNR=20
AGMN  Agassiz Nation    33.50 355  IAmb   IAmb   07 06 53.8
      comp=Z,116nm,1.4s
MDND  Maddock           33.53 350  P      P      07 06 15.6 -0.2
      baz=165,SNR=14
RYN   Ryan              33.55 320  IAmb   IAmb   07 07 10.8
      comp=Z,126nm,1.7s
G58A  Ormstown          33.57  23  P      P      07 06 16.4 +0.3
      baz=211,SNR=17
H60A  Morristown        33.60  25  P      P      07 06 16.7 +0.3
      baz=214,SNR=16
I62A  Tamworth          33.62  27  P      P      07 06 17.1 +0.6
      baz=217,SNR=12
I62A  Tamworth          33.62  27  IAmb   IAmb   07 06 18.6
      comp=Z,259nm,1.4s
LBNH  Lisbon            33.66  26  P      P      07 06 17.5 +0.6
      baz=216,SNR=6.9
LBNH  Lisbon            33.66  26  IAmb   IAmb   07 06 18.8
      comp=Z,120nm,1.4s
RLMT  Red Lodge         33.67 337  P      P      07 06 17.8 +0.6
      baz=148
YMP   Mirror Lake Pl    33.69 336  P      P      07 06 20.4 +2.9
G59A  Clarenceville     33.84  24  P      P      07 06 18.9 +0.5
      baz=213,SNR=14
H61A  Lyndonville       33.90  25  P      P      07 06 19.4 +0.4
      baz=215,SNR=7.0
F57A  Harrington        33.91  21  P      P      07 06 19.4 +0.4
      baz=210,SNR=16
E55A  Montcerf-Lytto    34.02  19  P      P      07 06 19.9  0.0
      baz=207,SNR=11
I63A  Otisfield         34.09  27  P      P      07 06 21.2 +0.6
      baz=218,SNR=13
I63A  Otisfield         34.09  27  IAmb   IAmb   07 06 22.6
      comp=Z,220nm,1.1s
G60A  Masonville        34.19  24  P      P      07 06 22.0 +0.5
      baz=214,SNR=17
H62A  Milan             34.25  26  P      P      07 06 22.1 +0.1
      baz=216
F58A  St-Lin Laurent    34.27  22  P      P      07 06 22.4 +0.2
      baz=211
I64A  Boothbay          34.41  28  P      P      07 06 24.0 +0.6
      baz=219
E56A  St. Veronique     34.43  20  P      P      07 06 24.2 +0.7
      baz=209
PNTR  Pine Nut          34.50 320  P      P      07 06 27.6 +3.1
HLID  Hailey            34.63 330  P      P      07 06 28.2 +2.7
      baz=138,SNR=7.6
F59A  Saint Guilaume    34.64  23  P      P      07 06 25.4 +0.1
      baz=213
G61A  St-Isidore-de-    34.67  25  P      P      07 06 26.1 +0.5
      baz=215,SNR=12
BCYI  Bear Canyon       34.73 332  P      P      07 06 28.5 +2.1
H63A  New Sharon        34.81  27  P      P      07 06 27.4 +0.7
      baz=218,SNR=10.0
PTGA  Pitinga           34.84 114  P      P      07 06 25.7 -1.8
      comp=Z,31nm,0.4s,baz=302,slow=10,SNR=109
PTGA  Pitinga           34.84 114  P      P      07 06 25.6 -1.8
PTGA                               IAmb   IAmb   07 06 26.5
      comp=Z,52nm,0.7s
E58A  La Victoria       34.90  22  P      P      07 06 27.8 +0.3
      baz=212,SNR=27
WVL   Waterville        34.90  28  IAmb   IAmb   07 06 29.6
      comp=Z,146nm,1.1s
D56A  ZEC Mazanza, M    34.96  20  P      P      07 06 28.4 +0.3
      baz=209
BOZ   Bozeman (W)       34.99 335  P      P      07 06 28.6 +0.1
BOZ                                pmax   pmax
      comp=Z,25nm,1.1s
BOZ   Bozeman (W)       34.99 335  P      P      07 06 29.9 +1.4
      baz=144
BOZ   Bozeman (W)       34.99 335  P      P      07 06 28.6 +0.1
G62A  West of Eustis    35.03  26  P      P      07 06 29.4 +0.6
      baz=217,SNR=17
G62A  West of Eustis    35.03  26  IAmb   IAmb   07 06 30.7
      comp=Z,237nm,1.2s
F60A  Warwick           35.06  24  P      P      07 06 29.3 +0.4
      baz=214,SNR=30
DGMT  Dagmar            35.08 345  P      P      07 06 29.8 +0.7
      baz=158,SNR=5.9
DGMT  Dagmar            35.08 345  P      P      07 06 29.6 +0.5
ETMB  Extrema           35.09 133  eP     P      07 06 29.1 -0.5
VLDQ  Val d'Or          35.10  16  IAmb   IAmb   07 07 06.0
      comp=Z,143nm,1.2s
H64A  Troy              35.16  28  P      P      07 06 30.5 +0.7
      baz=219,SNR=9.2
E59A  St. Maurice       35.27  23  P      P      07 06 30.9 +0.2
      baz=213
G63A  Kingsbury         35.35  27  P      P      07 06 31.9 +0.4
      baz=218,SNR=16
MACA  Manacapuru-AM     35.41 118  eP     P      07 06 30.3 -2.0
ULM   Lac du Bonnet     35.44 355  P      P      07 06 31.9 -0.2
      comp=Z,27nm,0.9s,baz=176,slow=8.5,SNR=39
ULM                                ScP    ScP    07 12 28.9 -0.7
      comp=Z,11nm,0.9s,baz=168,slow=4.9,SNR=8.8
ULM                                LR     LR     07 23 04.0
      comp=Z,284nm,21.6s,baz=158,slow=39
ULM   Lac du Bonnet     35.44 355c iP     P      07 06 30.8 -1.3
F61A  St Evariste       35.45  25  P      P      07 06 32.6 +0.4
      baz=216,SNR=6.5
E60A  Ste Agathe de     35.59  24  P      P      07 06 33.8 +0.3
      baz=214,SNR=21
PKME  Peaks-Kenny Pk    35.61  27  P      P      07 06 34.1 +0.5
      baz=219,SNR=14
PKME  Peaks-Kenny Pk    35.61  27  IAmb   IAmb   07 06 35.5
      comp=Z,116nm,0.8s
H65A  Eastbrook         35.65  29  P      P      07 06 34.7 +0.8
      baz=221,SNR=13
D58A  Chemin du LacG    35.66  22  P      P      07 06 34.5 +0.5
      baz=212,SNR=22
G64A  Maxfield          35.84  28  P      P      07 06 36.0 +0.5
      baz=219,SNR=29
LATQ  La Tuque          35.94  22  P      P      07 06 37.0 +0.6
      baz=212,SNR=30
D59A  Saint-Raymond     35.97  23  P      P      07 06 37.0 +0.3
      baz=213,SNR=8.4
E61A  Lac Etchemin      36.03  25  P      P      07 06 37.8 +0.6
      baz=216
F63A  Nahmakanta, Br    36.03  27  P      P      07 06 37.5 +0.3
      baz=218,SNR=15
F63A  Nahmakanta, Br    36.03  27  IAmb   IAmb   07 06 38.7
      comp=Z,178nm,1.2s
LSQQ  Lebel-sur-Quev    36.09  16  P      P      07 06 37.7 +0.1
      baz=204
H66A  Whiting           36.16  30  P      P      07 06 39.1 +0.8
      baz=222,SNR=16
D60A  Saint Jean D'O    36.24  24  P      P      07 06 39.3 +0.3
      baz=215,SNR=34
EGMT  Eagleton          36.32 339  P      P      07 06 40.8 +1.1
      baz=149,SNR=11
EGMT  Eagleton          36.32 339  IAmb   IAmb   07 07 18.4
      comp=Z,101nm,1.2s
G65A  Princeton         36.35  29  P      P      07 06 40.8 +0.9
      baz=221,SNR=12
F64A  Sherman           36.49  28  P      P      07 06 41.6 +0.5
      baz=220,SNR=17
F64A  Sherman           36.49  28  P      P      07 06 41.4 +0.3
F64A                               IAmb   IAmb   07 06 42.9
      comp=Z,170nm,1.1s
MATQ  Matagami          36.56  15  P      P      07 06 41.4 -0.3
      baz=203
O03E  Paynes Creek      36.58 320  P      P      07 06 44.2 +2.1
      baz=125
SAML  Samuel            36.73 128  P      P      07 06 42.2 -1.4
SAML                               pmax   pmax
      comp=Z,212nm,0.9s
SAML  Samuel            36.73 128  P      P      07 06 42.2 -1.4
D61A  St Aubert, Com    36.77  24  P      P      07 06 44.1 +0.6
      baz=216,SNR=29
E63A  Oxbow             36.89  27  P      P      07 06 45.1 +0.6
      baz=219,SNR=23
MSO   Missoula          36.94 334  P      P      07 06 45.8 +0.7
      baz=142
O02D  Mt. Diablo Mer    37.14 319  P      P      07 06 48.0 +1.2
      baz=124
D62A  Allapoint, All    37.14  26  P      P      07 06 47.0 +0.4
      baz=218
E64A  Bridgewater       37.15  27  P      P      07 06 47.3 +0.6
      baz=220,SNR=21
PQI   Presque Isle      37.26  27  IAmb   IAmb   07 06 49.3
      comp=Z,145nm,1.2s
M04C  Macdoel           37.47 322  P      P      07 06 51.3 +1.7
      baz=126
D63A  Stockholm         37.51  26  P      P      07 06 50.2 +0.5
      baz=219,SNR=22
M02C  Callahan          37.86 320  P      P      07 06 53.9 +1.0
      baz=125
HAL   Halifax           37.92  33  IAmb   IAmb   07 06 55.3
      comp=Z,232nm,1.3s
K04D  Chiloquin, OR     37.93 323  P      P      07 06 55.1 +1.7
      baz=127
YBH   Yreka Blue Hor    37.97 321  P      P      07 06 54.4 +0.6
      comp=Z,2.2nm,0.6s,baz=142,slow=3.5,SNR=12
YBH                                ScP    ScP    07 12 39.7 +0.4
      comp=Z,6.9nm,1.1s,baz=90,slow=4.9,SNR=6.3
L04D  Klamath Falls     38.01 322  P      P      07 06 55.7 +1.6
      baz=126
J05D  Fort Rock, OR     38.04 324  P      P      07 06 55.9 +1.5
      baz=129
G08A  Pilot Rock        38.14 328  P      P      07 06 56.4 +1.3
J04D  Umpqua Nationa    38.51 323  P      P      07 06 59.9 +1.5
      baz=128
BATG  Bathurst New B    38.59  28  IAmb   IAmb   07 07 00.5
      comp=Z,139nm,1.0s
I04A  Tendick Farm,     39.02 324  P      P      07 07 04.0 +1.5
      baz=128
NEW   Newport           39.42 333  P      P      07 07 05.7  0.0
      comp=Z,0.7nm,0.4s,baz=101,slow=5.2,SNR=2.0
NEW                                PcP    PcP    07 09 10.8 +0.1
      comp=Z,1.7nm,0.4s,baz=74,slow=3.9,SNR=8.0
NEW                                ScP    ScP    07 12 44.7  0.0
      comp=Z,3.1nm,0.7s,baz=138,slow=6.2,SNR=3.5
MDP   Montagnes des     39.42 100  PcP    PcP    07 09 10.5 -0.7
      comp=Z,5.1nm,0.3s,baz=328,slow=6.1,SNR=11
H04A  Detroit Lake      39.45 325  IAmb   IAmb   07 07 45.8
      comp=Z,86nm,1.1s
PB16  IPOC Station P    39.50 146  P      P      07 07 08.7 +1.5
PB16                               IAmb   IAmb   07 07 10.6
      comp=Z,129nm,0.9s
I03D  Drain, OR         39.51 323  P      P      07 07 07.9 +1.5
      baz=126
GBN   Guysborough       39.54  34  IAmb   IAmb   07 07 08.3
      comp=Z,205nm,1.1s
H04D  Lebanon           39.66 324  P      P      07 07 08.6 +0.9
      baz=128
F05D  White Salmon      39.83 327  P      P      07 07 11.3 +2.1
      baz=131
PSGCX Pisagua           40.22 148  IAmb   IAmb   07 07 15.3
      comp=Z,90nm,0.9s
ITTB  Itaituba          40.28 116  eP     P      07 07 10.0 -3.2
MALB  Monte Alegre      40.44 111  eP     P      07 07 11.8 -2.7
FFC   Flin Flon         40.57 351  P      P      07 07 15.6 +0.6
FFC                                pmax   pmax
      comp=Z,29nm,1.1s
FFC   Flin Flon         40.57 351  P      P      07 07 15.6 +0.6
F04D  Rainier, OR       40.79 326  P      P      07 07 19.0 +2.1
      baz=129
E04D  Cinebar           40.85 327  P      P      07 07 19.0 +1.5
      baz=130
TA01  Diego Aracena     41.00 149  IAmb   IAmb   07 07 21.9
      comp=Z,105nm,0.9s
PB08  IPOC Station P    41.17 147  IAmb   IAmb   07 07 24.0
      comp=Z,78nm,0.9s
PATCX Punta Patache     41.23 149  IAmb   IAmb   07 07 23.8
      comp=Z,127nm,1.1s
VILB  Vilhena           41.54 130  eP     P      07 07 22.8 -0.8
B05A  Bryant            41.74 329  P      P      07 07 24.8 +0.1
      baz=132
MCPB  Macapa, AP        41.84 108  eP     P      07 07 22.5 -3.5
NPGB  Novo Progresso    41.94 119  eP     P      07 07 23.3 -3.5
PB07  IPOC Station P    42.12 149  P      P      07 07 28.8 +0.6
PB07                               IAmb   IAmb   07 07 31.2
      comp=Z,92nm,0.8s
PB09  IPOC Station P    42.50 149  IAmb   IAmb   07 07 34.8
      comp=Z,147nm,1.0s
PB04  IPOC Station P    42.51 150  IAmb   IAmb   07 07 34.3
      comp=Z,128nm,1.4s
PB06  IPOC Station P    43.10 150  IAmb   IAmb   07 07 39.0
      comp=Z,78nm,0.8s
LVC   Limon Verde       43.35 149  P      P      07 07 40.6 +2.2
LVC                                pmax   pmax
      comp=Z,57nm,0.9s
LVC   Limon Verde       43.35 149  P      P      07 07 40.6 +2.2
LVC   Limon Verde       43.35 149  eP     P      07 07 40.5 +2.2
FCC   Fort Churchill    43.83 358  IAmb   IAmb   07 07 42.5
      comp=Z,133nm,1.3s
DRLN  Deer Lake         44.10  32  P      P      07 07 42.9 -0.7
GO02  Mina Guanaco      45.19 152  IAmb   IAmb   07 07 56.0
      comp=Z,98nm,1.1s
RPN   Rapa Nui          45.22 203  P      P      07 07 55.6 +2.9
      comp=Z,136nm,1.1s,baz=358,slow=5.1,SNR=10
RPN   Rapa Nui          45.22 203  P      P      07 07 55.3 +2.6
RPN                                pmax   pmax
      comp=Z,261nm,1.2s
RPN   Rapa Nui          45.22 203  P      P      07 07 55.3 +2.6
RPN                                IAmb   IAmb   07 07 57.1
      comp=Z,261nm,1.1s
TMAB  Tom-Au,PA,Br      46.27 108  eP     P      07 07 58.6 -2.6
PRPB  Parauapebas       46.32 114  eP     P      07 07 58.5 -3.2
AC02  Maricunga         46.83 152  IAmb   IAmb   07 08 09.5
      comp=Z,117nm,1.3s
SNDB  Serra Nova Dou    47.94 122  eP     P      07 08 12.2 -2.0
LCO   Las Campanas      48.06 155  P      P      07 08 16.3 +1.2
LCO                                pmax   pmax
      comp=Z,67nm,1.1s
LCO   Las Campanas      48.06 155  P      P      07 08 16.3 +1.2
AC05  El Transito       48.08 155  P      P      07 08 16.5 +1.4
AC05                               IAmb   IAmb   07 09 43.6
      comp=Z,82nm,0.9s
PP1B  Ponte de Pedra    48.45 131  eP     P      07 08 17.4 -0.6
GO04  Tololo Observa    49.05 156  IAmb   IAmb   07 09 46.8
      comp=Z,74nm,1.0s
SMTB  Santa Maria do    49.52 116  eP     P      07 08 24.1 -2.2
ARAG  Araguaiana, MT    49.62 126  eP     P      07 08 25.4 -1.5
CO03  El Pedregal       49.68 156  IAmb   IAmb   07 08 30.0
      comp=Z,92nm,0.9s
AQDB  Aquidauana        49.73 134  eP     P      07 08 27.1 -0.6
CO02  Combarbal         49.89 157  P      P      07 08 30.2 +1.3
CO02                               IAmb   IAmb   07 08 31.6
      comp=Z,120nm,0.8s
ROSB  Rosrio            50.13 107  eP     P      07 08 28.0 -2.8
YKA   Yellowknife Ar    50.27 346  P      P      07 08 31.1  0.0
      comp=Z,17nm,0.8s,baz=140,slow=8.5,SNR=172
YKA                                pP     pP     07 09 06.7 -0.5
      comp=Z,13nm,0.8s,baz=144,slow=8.0,SNR=6.2
YKA                                ScP    ScP    07 13 28.2 -0.7
      comp=Z,2.4nm,0.8s,baz=139,slow=5.1,SNR=9.0
YKA                                LR     LR     07 33 56.5
      comp=Z,190nm,18.3s,baz=0.0,slow=41
ZON   Zonda             51.11 155  IAmb   IAmb   07 08 41.0
      comp=Z,75nm,1.0s
FRB   Frobisher Bay     51.34  13  P      P      07 08 38.0 -1.1
      comp=Z,16nm,0.7s,baz=214,slow=8.5,SNR=37
FRB                                pP     pP     07 09 15.1 -0.2
      comp=Z,50nm,0.8s,baz=216,slow=8.1,SNR=16
VA03  San Esteban       51.45 157  P      P      07 08 41.9 +1.4
VA03                               IAmb   IAmb   07 08 43.4
      comp=Z,93nm,0.9s
PEL   Peldehue          51.74 158  P      P      07 08 43.8 +1.2
PEL                                pmax   pmax
      comp=Z,29nm,0.9s
PEL   Peldehue          51.74 158  P      P      07 08 43.8 +1.2
MT05  Renca             51.95 158  IAmb   IAmb   07 08 46.9
      comp=Z,155nm,1.2s
DLBC  Dease Lake        52.04 335  LR     LR     07 33 08.9
      comp=Z,114nm,20.1s,baz=137,slow=38
BDFB  Brasilia          52.60 123  P      P      07 08 48.2 -1.1
      comp=Z,26nm,0.7s,baz=303,slow=8.9,SNR=43
BDFB                               LR     LR     07 33 26.3
      comp=Z,186nm,19.5s,baz=315,slow=38
CPUP  Villa Florida     52.76 141  P      P      07 08 49.1 -1.0
      comp=Z,55nm,0.9s,baz=332,slow=7.1,SNR=3.0
CPUP                               ScP    ScP    07 13 42.5 +2.2
      comp=Z,14nm,1.2s,baz=331,slow=5.7,SNR=6.9
CPUP  Villa Florida     52.76 141  IAmb   IAmb   07 08 50.6
      comp=Z,314nm,1.7s
ITRB  Iturama           53.10 129  eP     P      07 08 52.1 -0.7
TRCB  Terra Rica        53.40 134  eP     P      07 08 53.5 -1.4
SDBA  SAO DESIDERIO     53.53 118  eP     P      07 08 53.9 -2.1
PCMB  Pacaembu          53.61 132  eP     P      07 08 55.7 -0.8
TAOE  Nuku Hiva Isla    53.69 247  eP     P      07 08 59.3 +2.0
      comp=Z,264nm,1.2s
TAOE  Nuku Hiva Isla    53.69 247  eLR    LR     07 24 47.5
      comp=Z,496nm,24.6s
IPMB  Ipameri, GO       53.74 126  eP     P      07 08 56.1 -1.4
BI03  Tigo              54.33 162  IAmb   IAmb   07 09 05.1
      comp=Z,109nm,1.1s
BI02  San Fabin de      54.72 160  P      P      07 09 05.9 +1.6
BI02                               IAmb   IAmb   07 09 07.2
      comp=Z,78nm,1.1s
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PTGB	Pitanga	55.05	135	*e*P	P	07 09 05.7	-1.3
BB19B	Bebedouro	55.29	129	*e*P	P	07 09 08.1	-0.6
JANB	Januaria	55.33	120	*e*P	P	07 09 07.6	-1.5
ITQB	Itaqui	55.63	143	*e*P	P	07 09 11.1	+0.2
FRTB	Fartura	55.92	132	*e*P	P	07 09 12.3	-0.8
LC01	Cunco	56.58	162	P	P	07 09 18.3	+0.9
LC01				IAmb	IAmb	07 09 20.4	
	comp=Z,88nm,0.9s						
ITAB	Concordia	56.69	137	*e*P	P	07 09 18.0	-0.4
RKT	Rikitea	56.89	229	*e*S	S	07 17 01.5	-0.1
	comp=Z,318nm,30.2s						
RKT				*e*LR	LR	07 26 13.5	
	comp=Z,446nm,34.8s						
VAO	Valinhos	57.60	130	*e*P	P	07 09 24.7	-0.4
SPB	Sao Paulo	57.62	131	*e*P	P	07 09 24.2	-0.7
CPSB	Cacapava Do Su	58.06	141	*e*P	P	07 09 27.6	-0.4
BSCB	Bom Sucesso	58.11	127	*e*P	P	07 09 28.1	-0.5
C36M	Paulatuk	58.13	347	P	P	07 09 27.4	-0.5
	baz=142						
C36M	Paulatuk	58.13	347	P	P	07 09 28.4	+0.5
PET01	Itanhaem-SP	58.15	131	*e*P	P	07 09 28.2	-0.5
SFJD	Kangerlussuaq	58.52	18	P	P	07 09 29.2	-1.4
SFJD				pmax	pmax		
	comp=Z,72nm,1.4s						
SFJD	Kangerlussuaq	58.52	18	P	P	07 09 29.2	-1.4
SFJD				IAmb	IAmb	07 10 08.1	
	comp=Z,72nm,1.4s						
PLCA	Paso Flores	58.66	161	P	P	07 09 33.7	+1.7
	comp=Z,67nm,0.9s,baz=340,slow=8.0,SNR=95						
PLCA	Paso Flores	58.66	161	P	P	07 09 33.8	+1.7
PLCA				pmax	pmax		
	comp=Z,82nm,1.0s						
PLCA	Paso Flores	58.66	161	P	P	07 09 33.8	+1.7
PLCA				IAmb	IAmb	07 09 35.5	
	comp=Z,82nm,0.9s						
PLCA	Paso Flores	58.66	161	*e*P	P	07 09 33.9	+1.8
GDU01	Guandu, BA	58.72	116	*e*P	P	07 09 31.3	-1.5
PARB	Paraibuna	58.80	130	*e*P	P	07 09 33.3	-0.1
RCBR	Riachuelo	58.82	106	*e*P	P	07 09 31.8	-1.9
CNLB	Canela	58.92	138	*e*P	P	07 09 33.7	-0.4
PLTB	Pedras Altas	58.93	142	*e*P	P	07 09 33.9	-0.1
BCAR	Beaver Creek A	59.42	336	P	P	07 09 36.8	-0.1
EPYK	Eagle Plains	59.45	341	P	P	07 09 36.4	-0.7
	baz=127						
ESAR	Angra dos Reis	59.51	128	*e*P	P	07 09 38.5	+0.4
LL01	San Ignacio de	59.64	164	IAmb	IAmb	07 09 42.7	
	comp=Z,89nm,1.1s						
INK	Inuvik	59.72	343	P	P	07 09 39.1	+0.2
	comp=Z,10nm,0.6s,baz=124,slow=6.2,SNR=64						
INK				pP	pP	07 10 16.2	0.0
	comp=Z,27nm,0.9s,baz=121,slow=8.3,SNR=13						
SJMB	Sao Joao De Ma	59.75	122	*e*P	P	07 09 39.0	-0.9
MAN01	Angra dos Reis	59.78	128	*e*P	P	07 09 40.2	+0.1
RES	Resolute Bay	59.82	359	P	P	07 09 38.6	-0.8
	comp=Z,7.1nm,0.7s,baz=182,slow=9.8,SNR=18						
RES	Resolute Bay	59.82	359	P	P	07 09 39.0	-0.4
RES				pmax	pmax		
	comp=Z,20nm,1.1s						
RES	Resolute Bay	59.82	359	P	P	07 09 39.0	-0.4
VAS01	Vassouras-RJ	59.85	127	*e*P	P	07 09 40.4	-0.1
N25K	Chitina, Valde	59.88	334	P	P	07 09 41.7	+1.6
	baz=116,SNR=6.5						
GO07	Milladeo Hill,	60.00	165	P	P	07 09 43.3	+2.2
K27K	Chicken	60.02	337	P	P	07 09 41.7	+0.7
	baz=120						
EGAK	Eagle	60.07	338	P	P	07 09 41.1	-0.2
BSFB	Barra de Sao F	60.09	122	*e*P	P	07 09 41.5	-0.6
NAN01	Guarapari, ES	60.20	121	*e*P	P	07 09 42.1	-0.8
KLU	Klutina	60.40	333	P	P	07 09 44.9	+1.2
KLU				IAmb	IAmb	07 10 39.4	
	comp=Z,74nm,1.4s						
DUB01	Friburgo-RJ	60.57	126	*e*P	P	07 09 45.1	-0.3
RIB01	Linhares ES	60.70	123	*e*P	P	07 09 45.7	-0.6
SCRK	Sand Creek	60.73	336	P	P	07 09 46.9	+0.9
	baz=118,SNR=6.0						
M24K	Tolsona, Glenn	60.77	334	P	P	07 09 47.3	+1.1
	baz=115						
M24K	Tolsona, Glenn	60.77	334	IAmb	IAmb	07 10 28.4	
	comp=Z,67nm,1.1s						
PAX	Paxson	60.85	335	P	P	07 09 47.1	+0.3
PAX				pmax	pmax		
	comp=Z,22nm,1.1s						
PAX	Paxson	60.85	335	P	P	07 09 47.1	+0.3
CAM01	Campos-RJ	60.99	126	*e*P	P	07 09 47.9	-0.4
ALF01	Guarapari-ES	61.10	124	*e*P	P	07 09 48.5	-0.5
SML	Sawmill	61.57	333	IAmb	IAmb	07 10 33.9	
	comp=Z,79nm,1.4s						
PMR	Palmer	61.84	333	IAmb	IAmb	07 10 34.7	
	comp=Z,79nm,1.6s						
RC01	Rabbit Creek A	61.93	332	P	P	07 09 54.7	+0.8
	baz=111						
HDA	Harding Lake	62.08	336	P	P	07 09 55.0	+0.2
	baz=116,SNR=7.7						
HDA	Harding Lake	62.08	336	IAmb	IAmb	07 10 49.6	
	comp=Z,76nm,1.6s						
ILAR	Eielson Array	62.21	337	P	P	07 09 55.9	+0.1
	comp=Z,7.7nm,0.9s,baz=112,slow=5.9,SNR=71						
ILAR				pP	pP	07 10 33.3	+0.1
	comp=Z,12nm,1.1s,baz=119,slow=4.9,SNR=5.7						
ILAR				LR	LR	07 41 00.4	
	comp=Z,160nm,18.9s,baz=109,slow=40						
KDAK	Kodiak Island	62.22	328	LR	LR	07 40 12.7	
	comp=Z,69nm,18.1s,baz=127,slow=39						
RND	Reindeer	62.43	335	IAmb	IAmb	07 10 54.0	
	comp=Z,58nm,1.2s						
POKR	Poker Plat Res	62.57	337	P	P	07 09 58.1	0.0
	baz=115						
POKR	Poker Plat Res	62.57	337	P	P	07 09 58.5	+0.4
MCK	McKinley	62.59	335	P	P	07 09 58.8	+0.5
	baz=113,SNR=5.9						
BMAR	Burnt Mountain	62.62	340	P	P	07 09 57.0	-1.5
COLA	College	62.63	336	*i* P	P	07 09 57.3	-1.2
COLA				pmax	pmax		
	comp=Z,16nm,1.3s						
COLA	College	62.63	336	P	P	07 09 58.5	+0.1
TCOL	CIGO, UAF Yank	62.63	336	P	P	07 09 58.4	-0.1
	baz=115						
CUT	Chulitna	62.64	333	P	P	07 09 59.3	+0.6
	baz=111,SNR=5.2						
NEA2	Nenana	62.99	336	P	P	07 10 01.2	+0.3
	baz=114,SNR=5.9						
TRF	Thorofare Moun	63.04	334	IAmb	IAmb	07 10 56.6	
	comp=Z,104nm,1.5s						
SKT	Skwentna	63.05	333	IAmb	IAmb	07 10 43.6	
	comp=Z,68nm,1.4s						
ICESG	Greenland Ices	63.07	18	*i* P	P	07 10 00.5	-1.3
RSO	Redoubt South	63.11	331	P	P	07 10 03.0	+1.0
I23K	Minto, Yukon-K	63.33	336	P	P	07 10 03.6	+0.5
	baz=113,SNR=21						
I23K	Minto, Yukon-K	63.33	336	IAmb	IAmb	07 10 59.0	
	comp=Z,75nm,1.2s						
PPLA	Purkeypile	63.65	334	IAmb	IAmb	07 10 48.3	
	comp=Z,71nm,1.6s						
MLY	Manley	63.82	336	P	P	07 10 06.9	+0.5
	baz=112,SNR=33						
COLD	Coldfoot	64.48	338	P	P	07 10 11.7	+1.1
	baz=114,SNR=8.9						
EUNU	Eureka	65.23	1	IAmb	IAmb	07 10 56.0	
	comp=Z,72nm,1.1s						
SUMG	Summit	65.25	15	*i* P	P	07 10 16.0	0.0
SUMG				*i*		07 10 54.3	
SUMG	Summit	65.25	15	IAmb	IAmb	07 10 57.9	
	comp=Z,68nm,1.2s						
SUMG	Summit	65.25	15	*i* P	P	07 10 16.0	0.0
SUMG				*i*		07 10 54.3	
SUMG	Summit	65.25	15	*i* P	P	07 10 16.0	0.0
SUMG				*i*		07 10 54.3	
IMAR	Indian Mountai	65.33	337	P	P	07 10 15.2	-1.0
TIAR	Tiarei	65.53	243	*e*P	P	07 10 20.6	+2.4
	comp=Z,37nm,1.0s						
TVO	Taravao	65.54	242	*e*P	P	07 10 20.7	+2.4
	comp=Z,56nm,1.4s						
PPT	Papeete	65.73	243	LR	LR	07 31 53.4	
	comp=Z,165nm,20.3s,baz=199,slow=29						
PPT2	Papeete2	65.74	243	*e*S	S	07 18 54.3	+0.6
	comp=Z,241nm,30.5s						
PPT2	Papeete2	65.74	243	*e*LR	LR	07 30 00.4	
	comp=Z,258nm,23.8s						
PAE	Paea	65.77	243	*e*P	P	07 10 22.0	+2.3
	comp=Z,40nm,1.4s						
FALS	False Pass	67.55	324	IAmb	IAmb	07 11 10.1	
	comp=Z,62nm,0.8s						
TBI	Tubuai	68.24	237	*e*LR	LR	07 31 22.0	
	comp=Z,408nm,36.2s						
DBG	Daneborg	70.72	16	*i* P	P	07 10 48.3	-1.3
DBG				*i*		07 11 27.7	
DAG	Danmarks Havn	71.68	13⇑	*i*P	P	07 10 54.3	-1.0
DAG				*i* *PP	pP	07 11 33.7	-0.5
DAG				pmax	pmax		
	comp=Z,16nm,0.6s						
DAG	Danmarks Havn	71.68	13⇑	*i*P	P	07 10 54.3	-1.0
	comp=Z,16nm,0.6s						
DAG				*i* pP	pP	07 11 33.7	-0.5
DAG	Danmarks Havn	71.68	13⇑	*i*P	P	07 10 54.3	-1.0
DAG				IAmb	IAmb	07 10 55.3	
	comp=Z,16nm,0.6s						
DAG				*i* pP	pP	07 11 33.7	-0.5
EFI	East Falkland	72.39	159	*i* P	P	07 10 58.7	-1.1
EFI				pmax	pmax		
	comp=Z,112nm,1.9s						
PSBE	So Bento	75.12	53	*e*P	P	07 11 15.3	-0.9
	comp=Z,156nm,1.8s						
PCAS	Casmilo, Conde	75.28	52	*e*P	P	07 11 16.1	-1.0
	comp=Z,94nm,1.8s						
PCAS				*e*pP	pP	07 11 55.1	-0.8
CLGH	Cloghs, Cushen	75.30	36	*e*P	P	07 11 15.4	-1.5
KPL	Plockton	75.37	34	*e*P	P	07 11 16.1	-1.1
MORF	Marmelete	75.52	55	*e*P	P	07 11 17.3	-1.2
MORF				AMb	AMB	07 11 31.7	
	comp=Z,71nm,1.7s						
MORF				*e*pP	pP	07 11 56.8	-0.7
MORF	Marmelete	75.52	55	*e*P	P	07 11 17.3	-1.2
MORF				*e**PP	pP	07 11 56.8	-0.7
MORF				pmax	pmax		
	comp=Z,71nm,1.7s						
MORF	Marmelete	75.52	55	*e*P	P	07 11 17.5	-1.0
	comp=Z,71nm,1.4s						
MORF				*e*pP	pP	07 11 57.1	-0.4
KAC	Achnashellach	75.55	34	*e*P	P	07 11 16.8	-1.4
LAWE	Loch Awe, Argy	75.60	35	*e*P	P	07 11 17.2	-1.3
PMTG	Montargil	75.61	53	*e*P	P	07 11 17.6	-1.4
	comp=Z,54nm,1.3s						
PMTG				*e*pP	pP	07 11 57.1	-0.8
POLO	Lamas de Olo	75.64	51	*e*P	P	07 11 17.7	-1.5
PVIS	Viseu	75.65	51	*e*P	P	07 11 17.6	-1.6
PVIS				*e*pP	pP	07 11 56.6	-1.5
MESJ	Messejana	75.78	54	*e*P	P	07 11 19.0	-1.0
MESJ				AMb	AMB	07 11 23.4	
	comp=Z,60nm,1.9s						
MESJ	Messejana	75.78	54	*e*P	P	07 11 19.0	-1.0
MESJ				pmax	pmax		
	comp=Z,60nm,1.9s						
MESJ	Messejana	75.78	54	*e*P	P	07 11 18.6	-1.4
	comp=Z,60nm,1.6s						
EVO	Evora	75.85	53	*e*P	P	07 11 19.1	-1.2
	comp=Z,45nm,1.7s						
EVO				*e*pP	pP	07 11 58.6	-0.7
MTE	Manteigas	75.96	52	*e*P	P	07 11 19.4	-1.6
PBEJ	Beja	76.03	54	*e*P	P	07 11 20.0	-1.4
	comp=Z,12nm,1.2s						
PCBR	Castelo Branco	76.08	52	*e*P	P	07 11 20.4	-1.2
	comp=Z,54nm,1.7s						
PCBR				*e*pP	pP	07 11 59.3	-1.3
PBDV	Barranco-do-Ve	76.09	55	*e*P	P	07 11 21.2	-0.6
	comp=Z,66nm,1.9s						
PBDV				*e*pP	pP	07 12 00.3	-0.5
GAL1	Galloway	76.13	36	*e*P	P	07 11 20.4	-1.2
PGBU	Glenifferbraes	76.16	35	*e*P	P	07 11 20.6	-1.1
PMRV	Marv??o	76.20	52	*e*P	P	07 11 20.8	-1.6
	comp=Z,55nm,1.6s						
PMRV				*e*pP	pP	07 12 00.3	-1.0
WIM	Isle of Man	76.23	37	*e*P	P	07 11 21.3	-0.9
PVAQ	Vaqueiros	76.24	55	*e*P	P	07 11 22.0	-0.6
	comp=Z,56nm,1.6s						
PVAQ				*e*pP	pP	07 12 01.1	-0.5
MVO	Moncorvo	76.24	51	*e*P	P	07 11 21.2	-1.4
	comp=Z,58nm,2.3s						
MVO				*e*pP	pP	07 12 01.4	-0.2
IOMK	Kirk Michael	76.28	37	*e*P	P	07 11 21.5	-0.9
IOMK				IAmb	IAmb	07 11 22.6	
	comp=Z,91nm,0.4s						
INVG	Invergeldie, C	76.33	35	*e*P	P	07 11 21.6	-1.1
PBRG	Braganca	76.37	50	*e*P	P	07 11 22.0	-1.3
	comp=Z,49nm,1.5s						
PBRG				*e*pP	pP	07 12 00.7	-1.6
NEWG	New Galloway	76.38	36	*e*P	P	07 11 21.7	-1.3
YRC	Rhoscolyn	76.39	38	*e*P	P	07 11 21.9	-1.1
RSBS	Rosebush, Pemb	76.44	39	*e*P	P	07 11 21.8	-1.5
RSBS				IAmb	IAmb	07 11 22.7	
	comp=Z,59nm,1.1s						
PBAR	Barrancos	76.66	54	*e*P	P	07 11 23.6	-1.3
	comp=Z,51nm,1.4s						
PBAR				*e*pP	pP	07 12 03.2	-0.8
ESK	Eskdalemuir	76.94	36	*e*P	P	07 11 24.9	-1.2
ESK				IAmb	IAmb	07 11 25.6	
	comp=Z,49nm,0.4s						
ESK	Eskdalemuir	76.94	36	P	P	07 11 25.0	-1.1
ESK				pmax	pmax		
	comp=Z,101nm,1.2s						
ESK	Eskdalemuir	76.94	36	P	P	07 11 25.0	-1.1
ESK				IAmb	IAmb	07 11 26.0	
	comp=Z,101nm,1.2s						
EKA	Eskdalemuir Ar	76.96	36	P	P	07 11 25.1	-1.2
	comp=Z,16nm,0.3s,baz=273,slow=5.8,SNR=241						
EKA				pP	pP	07 12 04.0	-1.3
	comp=Z,24nm,0.8s,baz=279,slow=5.5,SNR=5.3						
EBL	Broad Law	76.97	35	*e*P	P	07 11 25.1	-1.1
LLW	Llanuwychllyn	76.98	38	*e*P	P	07 11 25.0	-1.4
KESW	Keswick, Cumbr	77.09	37	*e*P	P	07 11 25.6	-1.4
DRUM	Mains of Drumt	77.13	34	*e*P	P	07 11 25.7	-1.5
ESY	Stoneypath	77.19	35	*e*P	P	07 11 26.7	-0.8
MCH1	Michaelchurch	77.50	39	*e*P	P	07 11 27.8	-1.6
MCH1				IAmb	IAmb	07 11 28.0	
	comp=Z,96nm,1.5s						
EDMD	Edmundbyers	77.71	36	*e*P	P	07 11 29.3	-1.1
EDMD				IAmb	IAmb	07 11 29.8	
	comp=Z,55nm,1.2s						
HPK	Haverah Park	78.03	37	*e*P	P	07 11 31.2	-1.1
KBS	Kingsbay	78.04	11	*e*P	P	07 11 32.4	+0.6
STRD	Stroud	78.05	39	*e*P	P	07 11 31.1	-1.3
STRD				IAmb	IAmb	07 11 34.3	
	comp=Z,295nm,1.9s						
LBWR	Ladybower, Pea	78.06	38	*e*P	P	07 11 31.2	-1.2
LBWR				IAmb	IAmb	07 11 31.4	
	comp=Z,108nm,0.9s						
SWN1	Swindon	78.31	40	*e*P	P	07 11 32.9	-0.9
SWN1				IAmb	IAmb	07 11 32.9	
	comp=Z,124nm,0.9s						
GDLE	Glaisdale, N Y	78.43	37	*e*P	P	07 11 33.4	-1.0
JSA	Saint Aubin	78.45	42	*e*P	P	07 11 33.3	-1.3
PAB	San Pablo	78.51	52	P	P	07 11 34.4	-0.9
PAB				pmax	pmax		
	comp=Z,50nm,1.3s						
PAB	San Pablo	78.51	52	P	P	07 11 34.4	-0.9
ESDC	Sonseca Array	78.78	52	P	P	07 11 35.5	-1.2
	comp=Z,18nm,0.9s,baz=289,slow=6.0,SNR=51						
ESDC				pP	pP	07 12 14.5	-1.5
	comp=Z,20nm,1.0s,baz=288,slow=5.5,SNR=7.7						
ESDC	Sonseca Array	78.78	52	P	P	07 11 35.6	-1.1
LMK	Market Rasen	78.88	38	*e*P	P	07 11 36.1	-0.8
SPA0	Spitsbergen Ar	79.12	12	*e*P	P	07 11 37.7	0.0
MDT	Midelt	79.52	59	P	P	07 11 39.7	-1.2
	comp=Z,11nm,0.8s,baz=316,slow=5.3,SNR=11						
SUE	Sulen	80.10	29	*e*P	P	07 11 43.4	+0.1
HYA	Hoyanger	80.75	29	*e*P	P	07 11 47.2	+0.5
KMY	Karmoy	80.76	31	*e*P	P	07 11 45.9	-0.9
BILL	Bilibino	80.81	338*d*	*i*P	P	07 11 47.0	0.0
BILL				*i* *PP	pP	07 12 27.9	+1.4
BILL				*e*		07 14 51.8	
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL	Bilibino	80.81	338	P	P	07 11 47.3	+0.3
AKN	Aaknes	80.88	28	*e*P	P	07 11 47.0	-0.4
ODD1	Odda	81.27	30	*e*P	P	07 11 49.3	-0.3
BLS5	Blasjo	81.31	31	*e*P	P	07 11 49.5	-0.3
HOPEN	Hopen	81.55	12	*e*P	P	07 11 51.2	+0.5
CLF	Chambon-Foret	81.56	43	P	P	07 11 50.5	-0.9
CLF				IAmb	IAmb	07 12 30.8	
	comp=Z,70nm,1.0s						
DOMB	Dombas	81.85	28	*e*P	P	07 11 52.7	+0.1
SKAR	Skarslia	81.87	29	*e*P	P	07 11 52.5	-0.3
SNART	Snartemo	81.96	32	*e*P	P	07 11 52.7	-0.5
KONS	Konsvik	82.17	23	*e*P	P	07 11 54.4	+0.2
SNF	Seneffe	82.28	40	*b*P	P	07 11 53.4	-1.6
SNF				*d*pP	pP	07 12 33.9	-0.6
NSS	Namsos	82.36	25	*e*P	P	07 11 53.3	-1.8
STEI	Steigen	82.46	21	*e*P	P	07 11 55.7	+0.1
DOU	Dourbes	82.57	40	*d*P	P	07 11 55.3	-1.2
DOU				*d*PcP	PcP	07 12 00.1	-1.1
DOU				*d*pP	pP	07 12 35.1	-1.0
BMRD	Maredsous	82.63	40	*b*P	P	07 11 55.6	-1.2
BMRD				*d*pP	pP	07 12 35.0	-1.4
FAUS	Fauske	82.67	22	*e*P	P	07 11 56.7	0.0
MOR8	Moi Rana	82.79	23	*e*P	P	07 11 58.1	+0.7
BGES	Gesves	82.81	40	*b*P	P	07 11 56.7	-1.1
BGES				*d*pP	pP	07 12 36.3	-1.0
BCLA	Clavier	82.93	40	*b*P	P	07 11 57.2	-1.2
BCLA				*d*pP	pP	07 12 36.9	-1.0
TRO	Tromso	83.04	19	*e*P	P	07 11 59.2	+0.6
BSTI	Sart Tilman	83.05	40	*d*pP	pP	07 12 38.1	-0.5
NB2	NORSAR Subarra	83.13	29	P	P	07 11 59.0	-0.3
	comp=Z,20nm,1.2s,baz=288,slow=5.3						
NB2	NORSAR Subarra	83.13	29	P	P	07 11 59.0	-0.3
	baz=288,slow=5.3						
NOA	NORSAR Array B	83.13	29	P	P	07 11 58.2	-1.1
	comp=Z,6.2nm,1.0s,baz=289,slow=5.2,SNR=9.6						
NOA				pP	pP	07 12 38.3	-0.7
	comp=Z,9.1nm,0.9s,baz=290,slow=5.1,SNR=9.0						
HOPE	Hope Point	83.22	151	P	P	07 12 01.1	+1.5
HOPE				pmax	pmax		
	comp=Z,306nm,1.7s						
HOPE	Hope Point	83.22	151	P	P	07 12 01.1	+1.5
MEM	Membach	83.31	39	*b*P	P	07 11 58.7	-1.7
MEM				*d*PcP	PcP	07 12 03.2	-1.3
MEM				*d*pP	pP	07 12 39.1	-0.8
NC602	NORSAR Array S	83.38	29	*e*P	P	07 12 01.1	+0.6
BHOU	Houvegnez	83.38	40	*d*P	P	07 12 00.2	-0.5
BHOU				*d*pP	pP	07 12 40.0	-0.4
WLF	Walferdange	83.66	40	*d*pP	pP	07 12 41.3	-0.5
WLF	Walferdange	83.66	40	*e*P	P	07 12 01.3	-0.9
	comp=Z,24nm,1.2s,baz=288,slow=4.9						
AHRW	Bad Neuenahr-A	83.99	39	*e*P	P	07 12 03.0	-0.8
	comp=Z,62nm,1.6s,baz=288,slow=4.9						
KOWA	Kowa	83.99	77	P	P	07 12 02.8	-1.7
HFS	Hagfors	84.59	29	P	P	07 12 05.5	-1.2
	comp=Z,2.7nm,0.4s,baz=248,slow=1.6,SNR=15						
HFS				pP	pP	07 12 46.3	-0.1
	comp=Z,11nm,0.9s,baz=226,slow=3.9,SNR=6.3						
KASTN	Kahler Asten	84.62	38	*e*P	P	07 12 06.0	-1.1
	comp=Z,42nm,1.6s,baz=288,slow=4.9						
KTK1	Kautokeino	84.69	19	*e*P	P	07 12 06.4	-0.6
BSEG	Bad Segeberg	84.90	36	*e*P	P	07 12 07.9	-0.4
	comp=Z,37nm,1.1s,baz=288,slow=4.9						
BSEG				*e*sP	sP	07 13 04.8	-0.4
TNS	Taunus Mts	84.92	39	*e*P	P	07 12 07.9	-0.8
	comp=Z,42nm,1.3s,baz=288,slow=4.9						
TIC	Toumodi	84.93	84	*e*P	pP	07 12 47.8	-1.3
TIC	Toumodi	84.93	84	*e*P	P	07 12 06.7	-2.6
LIC	Lamto	85.03	85	*e*P	pP	07 12 48.4	-1.1
	comp=Z,91nm,1.0s						
LIC	Lamto	85.03	85	*e*P	P	07 12 06.4	-3.4
	comp=Z,11nm,0.5s						
DBIC	Dimbokro	85.08	84	P	P	07 12 07.8	-2.2
	comp=Z,6.8nm,0.7s,baz=264,slow=3.7,SNR=9.8						
DBIC				pP	pP	07 12 49.1	-0.6
	comp=Z,28nm,1.1s,baz=261,slow=6.7,SNR=7.9						
DBIC				LR	LR	07 49 59.8	
	comp=Z,88nm,18.9s,baz=280,slow=36						
ARA0	ARCESS Array S	85.14	18	*e*P	P	07 12 08.7	-0.5
ARCES	ARCESS Array B	85.14	18	P	P	07 12 08.2	-1.0
	comp=Z,1.8nm,0.3s,baz=272,slow=4.3,SNR=44						
ARCES				pP	pP	07 12 49.2	+0.2
	comp=Z,16nm,0.8s,baz=324,slow=7.8,SNR=5.2						
ARCES				LR	LR	07 51 34.0	
	comp=Z,139nm,18.4s,baz=270,slow=37						
NRDL	Niedersach Rie	85.23	37	*e*P	P	07 12 09.3	-0.6
	comp=Z,57nm,1.6s,baz=288,slow=4.9						
KIC	Kosan Boka	85.27	85	*e*P	pP	07 12 49.7	-1.1
	comp=Z,63nm,1.0s						
KIC	Kosan Boka	85.27	85	*e*P	P	07 12 08.6	-2.4
	comp=Z,14nm,0.8s						
BFO	Black Forest	85.41	41	P	P	07 12 09.9	-1.1
BFO				pmax	pmax		
	comp=Z,15nm,1.0s						
BFO	Black Forest	85.41	41	P	P	07 12 09.9	-1.1
GTTG	Gottingen	85.44	38	*e*P	P	07 12 10.5	-0.6
	comp=Z,37nm,1.0s,baz=288,slow=4.9						
GTTG				*e*sP	sP	07 13 08.0	+0.4
CLZ	Clausthal	85.59	38	*e*P	P	07 12 11.5	-0.3
	comp=Z,33nm,1.2s,baz=288,slow=4.9						
ASSE	Asse, Remlinge	85.67	37	*e*P	P	07 12 11.6	-0.5
	comp=Z,76nm,1.6s,baz=288,slow=4.9						
UBBA	Unterbreizbach	85.69	39	*e*pP	pP	07 12 51.2	-0.8
FLTG	Flechtingen	85.94	37	*e*P	P	07 12 12.2	-1.2
	comp=Z,49nm,1.6s,baz=288,slow=4.9						
FLTG				*e*pP	pP	07 12 52.2	-1.0
NEUB	Neuenburg	86.62	38	*e*P	P	07 12 16.0	-0.8
	comp=Z,22nm,1.1s,baz=288,slow=4.9						
MOX	Moxa	86.71	38	*e*P	P	07 12 16.5	-0.9
	comp=Z,38nm,1.7s,baz=288,slow=4.9						
MOX				*e*sP	sP	07 13 13.8	-0.2
DAVA	Damuels	86.72	42	*e*P	P	07 12 16.6	-1.0
	comp=Z,20nm,0.8s,SNR=8.0						
DAVA				*e*P	pP	07 12 57.1	-0.5
	comp=Z,35nm,1.0s,SNR=6.8						
DAVA				*e*P	PP	07 15 41.4	-0.4
	comp=Z,18nm,1.5s						
UBR	Ueberruh	86.74	42	*e*P	P	07 12 16.6	-1.0
	comp=Z,29nm,1.2s,baz=288,slow=4.9						
UBR				*e*pP	pP	07 12 56.2	-1.3
GRA1	Grafenberg Arr	86.79	39	IAmb	IAmb	07 12 60.0	
	comp=Z,158nm,1.7s						
GRF	Grafenberg Arr	86.79	39	*e*P	P	07 12 16.9	-0.9
	comp=Z,45nm,1.4s,baz=288,slow=4.9						
DAVOX	Davos/Dischmat	86.88	42	P	P	07 12 17.3	-1.2
	comp=Z,8.4nm,0.8s,baz=309,slow=11,SNR=12						
DAVOX				pP	pP	07 12 57.5	-1.0
	comp=Z,15nm,0.8s,baz=176,slow=10,SNR=7.9						
PLN	Plauen	87.09	38	*e*P	P	07 12 18.2	-1.0
	comp=Z,36nm,1.6s,baz=288,slow=4.9						
PLN				*e*pP	pP	07 12 58.5	-0.6
RETA	Reutte	87.22	42	*e*P	P	07 12 19.1	-0.8
	comp=Z,10.0nm,0.5s,SNR=6.2						
RETA				*i* P	pP	07 12 59.6	-0.4
	comp=Z,34nm,0.9s,SNR=8.2						
RETA				*e*P	PP	07 15 44.2	-1.5
	comp=Z,8.3nm,1.3s						
GUNZ	Gunzen	87.24	39	*e*P	P	07 12 19.2	-0.7
	comp=Z,27nm,1.4s,baz=288,slow=4.9						
WERN	Wernitzgruen	87.29	39	*e*P	P	07 12 19.5	-0.7
	comp=Z,31nm,1.4s,baz=288,slow=4.9						
WERN				*e*sP	sP	07 13 16.9	+0.1
TANN	Tannenbergstha	87.30	38	*e*P	P	07 12 19.4	-0.9
	comp=Z,28nm,1.3s,baz=288,slow=4.9						
TANN				*e*pP	pP	07 12 59.4	-0.7
CLL	Collm	87.31	37⇓	*i*P	P	07 12 20.0	-0.2
	comp=Z,23nm,1.4s						
CLL				*i* pP	pP	07 12 59.4	-0.7
	comp=Z,98nm,1.8s						
CLL				*i* sP	sP	07 13 16.7	-0.1
CLL				*e*PP	PP	07 15 43.0	-3.2
CLL	Collm	87.31	37⇓	*e*P	P	07 12 20.0	-0.2
CLL				*i* *PP	pP	07 12 59.4	-0.7
CLL				pmax	pmax		
	comp=Z,23nm,1.4s						
FETA	Feichten	87.35	42	*e*P	P	07 12 20.0	-0.7
	comp=Z,7.4nm,0.5s,SNR=6.1						
FETA				*i* P	pP	07 13 00.4	-0.3
	comp=Z,22nm,0.9s						
FETA				*e*P	PP	07 15 45.4	-1.5
	comp=Z,15nm,1.4s						
NKC	Novy Kostel	87.35	39	*e*pP	pP	07 12 59.8	-0.6
ROTZ	Rotzenmuhle	87.37	39	*e*P	P	07 12 20.0	-0.6
	comp=Z,17nm,1.4s,baz=288,slow=4.9						
ROTZ				*e*sP	sP	07 13 17.0	-0.2
MOTA	Moosalm	87.49	42	*i* P	P	07 12 20.3	-1.1
	comp=Z,12nm,1.0s						
MOTA				*e*P	pP	07 13 00.9	-0.5
	comp=Z,25nm,0.8s,SNR=7.9						
MOTA				*e*P	PP	07 15 47.4	-0.6
	comp=Z,16nm,1.3s						
SQTA	Sankt Quirin	87.60	42	*i* P	P	07 12 20.8	-1.0
	comp=Z,11nm,0.9s						
SQTA				*i* P	pP	07 13 01.4	-0.4
	comp=Z,14nm,0.8s						
SQTA				*e*P	PP	07 15 45.3	-3.5
	comp=Z,15nm,1.1s						
WATA	Walderalm	87.79	42	*e*P	P	07 12 22.5	-0.2
	comp=Z,6.0nm,0.8s						
WATA				*e*P	pP	07 13 02.1	-0.7
	comp=Z,26nm,1.2s						
WATA				*e*P	PP	07 15 48.1	-2.3
	comp=Z,13nm,1.6s						
WET	Wettzell	87.99	40	*e*P	P	07 12 22.5	-1.0
	comp=Z,31nm,1.4s,baz=288,slow=4.9						

WET				esP	sP	07 13 20.3	+0.1
BRG	Berggiesshubel	88.02	38	eP	P	07 12 24.3	+0.7
BRG				Amp		07 12 29.2	
	comp=Z,4.8nm,1.0s						
BRG				pP	pP	07 13 04.2	+0.6
BRG				Amp		07 13 06.6	
	comp=Z,90nm,1.6s						
BRG				PP	PP	07 15 50.7	-1.2
BRG				Amp		07 15 55.9	
	comp=Z,26nm,1.4s						
BRG	Berggiesshubel	88.02	38	eP	P	07 12 24.2	+0.7
BRG						07 13 04.2	
BRG						07 15 50.7	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,90nm,1.6s						
BRG				pmax	pmax		
	comp=Z,27nm,1.4s						
BRG	Berggiesshubel	88.02	38	eP	P	07 12 24.3	+0.7
BRG				Amp		07 12 29.2	
	comp=Z,4.8nm,1.0s						
BRG				pP	pP	07 13 04.2	+0.6
BRG				Amp		07 13 06.6	
	comp=Z,90nm,1.6s						
BRG				PP	PP	07 15 50.7	-1.2
BRG				Amp		07 15 55.9	
	comp=Z,26nm,1.4s						
SEY	Seymchan	88.14	336	i P	P	07 12 22.3	-1.6
CTI	Castel Tesino	88.27	43	IAmb	IAmb	07 13 06.3	
	comp=Z,120nm,1.8s						
ZCCA	Zocca	88.39	44	IAmb	IAmb	07 13 10.3	
	comp=Z,74nm,1.2s						
KHC	Kasperske Hory	88.43	39	eP	P	07 12 24.2	-1.4
KHC				e*PP	pP	07 13 05.3	-0.4
KHC	Kasperske Hory	88.43	39	eP	P	07 12 24.2	-1.4
KHC				epP	pP	07 13 05.3	-0.4
KHC				ex	x	07 15 48.5	
RJOB	Jochberg	88.43	41	epP	pP	07 13 04.6	-1.2
PBCC	Pribram	88.48	39	epP	pP	07 13 07.7	+1.8
ABTA	Abfaltersbach	88.60	42	eP	P	07 12 25.4	-1.1
	comp=Z,20nm,1.1s,SNR=7.5						
ABTA				eP	pP	07 13 06.2	-0.4
	comp=Z,28nm,0.9s,SNR=7.7						
ABTA				eP	PP	07 15 56.2	-0.6
	comp=Z,20nm,1.3s						
GEC2	GERESS Array S	88.61	40	IAmb	IAmb	07 13 08.6	
	comp=Z,60nm,1.4s						
GERES	GERESS Array B	88.61	40	P	P	07 12 25.9	-0.7
	comp=Z,0.8nm,0.4s,baz=308,slow=3.2,SNR=12						
GERES				pP	pP	07 13 06.4	-0.2
	comp=Z,8.6nm,0.9s,baz=282,slow=2.6,SNR=10						
GERES				PP	PP	07 15 56.7	-0.1
	comp=Z,1.9nm,0.8s,baz=296,slow=7.0,SNR=5.3						
GERES	GERESS Array B	88.61	40	P	P	07 12 25.6	-0.9
APA	Apatity	88.65	18	⇓iP	P	07 12 35.9	+10
APA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,900nm,16.0s						
PRU	Pruhonice	88.70	38	eP	P	07 12 26.7	-0.1
PRU				e*PP	pP	07 13 06.9	0.0
PRU	Pruhonice	88.70	38	eP	P	07 12 26.7	-0.1
PRU				epP	pP	07 13 06.9	0.0
KBA	Koelnbreinsper	89.02	41	i P	P	07 12 27.5	-1.1
	comp=Z,7.6nm,1.2s						
KBA				eP	pP	07 13 08.3	-0.5
	comp=Z,19nm,1.2s,SNR=6.6						
MOA	Molln	89.32	40	eP	P	07 12 27.5	-2.3
	comp=Z,5.9nm,0.6s						
MOA				eP	pP	07 13 10.0	+0.1
	comp=Z,5.8nm,0.8s						
MOA				eP	PP	07 16 01.2	-1.2
	comp=Z,18nm,1.4s						
MYKA	Terra Mystica	89.36	42	i P	P	07 12 29.7	-0.4
	comp=Z,6.4nm,0.9s						
MYKA				eP	pP	07 13 09.3	-1.0
	comp=Z,21nm,1.2s						
CHVC	Chvalec	89.37	37	eP	P	07 12 29.1	-0.9
CHVC				epP	pP	07 13 10.0	-0.1
UPC	Upice	89.38	38	epP	pP	07 13 10.5	+0.4
ROBS	Robic	89.42	42	eP	P	07 12 28.8	-1.4
ROBS				epP	pP	07 13 09.6	-0.9
OSTC	Ostas	89.48	37	eP	P	07 12 30.1	-0.4
OSTC				epP	pP	07 13 10.4	-0.2
TIXI	Tiksi	89.48	348	ceP	P	07 12 29.0	-1.0
FINES	FINESS Array B	89.49	25	P	P	07 12 29.2	-0.9
	comp=Z,8.2nm,0.9s,baz=312,slow=2.6,SNR=19						
FINES				pP	pP	07 13 09.2	-1.4
	comp=Z,20nm,1.0s,baz=273,slow=3.2,SNR=8.8						
FINES				PP	PP	07 16 03.5	+0.3
	comp=Z,5.6nm,0.9s,baz=298,slow=4.1,SNR=4.8						
FINES				LR	LR	07 54 07.9	
	comp=Z,278nm,18.6s,baz=282,slow=36						
FINES	FINESS Array B	89.49	25	P	P	07 12 31.8	+1.6
FINES	FINESS Array B	89.49	25	P	P	07 12 31.8	+1.6
DPC	Dobruska-Polom	89.62	38	eP	P	07 12 30.7	-0.5
DPC				e*PP	pP	07 13 11.2	-0.1
DPC	Dobruska-Polom	89.62	38	eP	P	07 12 30.7	-0.5
DPC				epP	pP	07 13 11.2	-0.1
TORD	Torodi Ar. Bea	89.70	77	P	P	07 12 29.1	-3.1
	comp=Z,0.8nm,0.4s,baz=295,slow=3.6,SNR=5.2						
TORD				pP	pP	07 13 09.8	-2.6
	comp=Z,3.5nm,0.8s,baz=301,slow=5.9,SNR=6.2						
TORD				LR	LR	07 51 47.7	
	comp=Z,54nm,20.2s,baz=310,slow=35						
KEST	Kesra	89.97	53	P	P	07 12 31.2	-2.0
	comp=Z,5.7nm,0.4s,baz=138,slow=2.1,SNR=11						
KEST	Kesra	89.97	53	IAmb	IAmb	07 13 16.4	
	comp=Z,56nm,1.2s						
OBKA	Obir	89.99	42	eP	P	07 12 31.6	-1.5
	comp=Z,7.6nm,1.2s						
OBKA				i P	pP	07 13 12.1	-1.2
	comp=Z,9.5nm,1.0s						
KRUC	Moravsky	90.17	39	eP	P	07 12 32.9	-0.8
KRUC				epP	pP	07 13 13.6	-0.2
KRUC				ePP	PP	07 16 07.7	-1.3
VRAC	Vranov	90.19	38	P	P	07 12 33.7	-0.2
	comp=Z,4.6nm,0.5s,baz=248,slow=4.3,SNR=4.0						
VRAC	Vranov	90.19	38	eP	P	07 12 33.3	-0.5
VRAC				epP	pP	07 13 13.7	-0.2
VRAC				ePP	PP	07 16 07.9	-1.3
SOKA	Soboth	90.24	41	eP	P	07 12 32.7	-1.5
	comp=Z,2.9nm,0.4s						
SOKA				eP	pP	07 13 13.3	-1.1
	comp=Z,19nm,1.7s,SNR=7.3						
SOKA				eP	PP	07 16 07.3	-2.5
	comp=Z,12nm,1.3s						
CONA	Conrad Observa	90.28	40	eP	P	07 12 33.7	-0.7
	comp=Z,7.6nm,1.2s						
CONA				eP	pP	07 13 13.3	-1.2
	comp=Z,18nm,1.2s,SNR=8.1						
CONA				eP	PP	07 16 09.0	-1.1
	comp=Z,13nm,1.4s						
ARSA	Arzberg	90.33	41	eP	P	07 12 34.1	-0.4
	comp=Z,5.1nm,1.1s						
ARSA				eP	pP	07 13 14.9	+0.2
	comp=Z,9.6nm,1.2s						
ARSA				eP	PP	07 16 08.8	-1.7
	comp=Z,9.2nm,1.2s						
MORC	Moravsky Berou	90.57	38	eP	P	07 12 35.3	-0.3
MORC				epP	pP	07 13 15.6	-0.1
MORC				ePP	PP	07 16 11.3	-1.0
LEGS	Legarje	90.70	42	eP	P	07 12 35.0	-1.2
LEGS				epP	pP	07 13 15.8	-0.6
MODS	Modra-Piesok	90.98	39	eP	P	07 12 36.8	-0.7
MODS				e		07 13 17.3	
MODS	Modra-Piesok	90.98	39	eP	P	07 12 36.8	-0.7
MODS				e		07 13 17.3	
JAVC	Velka Javorina	91.02	39	eP	P	07 12 38.4	+0.7
JAVC				epP	pP	07 13 18.6	+0.7
VYHS	Vyhne	91.88	39	eP	P	07 12 41.8	+0.2
VYHS				e		07 13 24.5	
VYHS	Vyhne	91.88	39	eP	P	07 12 41.8	+0.2
VYHS				e		07 13 24.4	
PSZ	Piszkesteto	92.76	39	IAmb	IAmb	07 13 28.9	
	comp=Z,52nm,1.5s						
NACGM	Naroch	93.21	31	i P	P	07 12 44.0	-3.6
NACGM				i P	P	07 12 44.0	-3.6
NACGM				i P	P	07 12 44.0	-3.6
NACGM				i PP	PP	07 16 12.9	-20
NACGM				i PPP	PPP	07 18 00.3	
NACGM				i S	S	07 23 50.2	+9.1
NACGM				i SS	SS	07 29 01.1	-58
NACGM				i SSS	SSS	07 33 12.6	
NACGM				i LR	LR	07 52 29.4	
CRVS	Cervenica-Dubn	93.26	37	eP	P	07 12 48.5	+0.5
CRVS				e		07 13 31.1	
CRVS	Cervenica-Dubn	93.26	37	eP	P	07 12 48.5	+0.5
CRVS				e		07 13 31.1	
KOLS	Kolonicke sedl	93.72	37	eP	P	07 12 50.7	+0.6
KOLS				e		07 13 31.8	
KOLS	Kolonicke sedl	93.72	37	eP	P	07 12 50.6	+0.5
KOLS				e		07 13 31.8	
MNK	Minsk	93.97	31	i P	P	07 12 49.2	-1.9
	comp=E,3.0nm,0.8s						
MNK				i P	P	07 12 49.2	-1.9
	comp=N,16nm,0.9s						
MNK				i P	P	07 12 49.2	-1.9
	comp=Z,9.0nm,0.8s						
MNK				i pP	pP	07 13 31.8	+0.6
MNK				i PP	PP	07 16 44.7	+6.1
MNK				i PPP	PPP	07 18 57.8	
MNK				i S	SKSac	07 23 07.0	-4.1
MNK				i sS	pS	07 24 25.1	-14
MNK				i SS	SS	07 30 06.8	-3.1
MNK				i SSS	SSS	07 33 49.0	
MNK				i LRM	MLR	07 56 06.4	
	comp=Z,109nm,10.8s						
MNK				i LRM	MLR	07 56 24.5	
	comp=E,16nm,12.3s						
MNK				i LRM	MLR	07 56 30.2	
	comp=N,117nm,11.6s						
KLMR	Klimovskoe	95.04	22	P	P	07 12 49.7	-6.2
KLMR				e*PP	pP	07 13 34.4	-1.9
KLMR				pmax	pmax		
	comp=Z,16nm,1.4s						
KLMR	Klimovskoe	95.04	22	P	P	07 12 49.7	-6.2
KLMR				AMP		07 12 58.3	
	comp=Z,16nm,1.4s						
KLMR				epP	pP	07 13 34.5	-1.9
KLMR				ePP	PP	07 16 40.7	-5.9
AKASG	Malin Array Be	96.72	33	pP	pP	07 13 42.7	-1.2
	comp=Z,1.8nm,0.7s,baz=296,slow=4.0,SNR=3.1						
AKASG				PP	PP	07 16 59.8	-0.1
	comp=Z,7.1nm,1.0s,baz=311,slow=7.4,SNR=9.7						
AKASG				LR	LR	07 57 56.1	
	comp=Z,138nm,19.4s,baz=290,slow=36						
YAK	Yakutsk	96.76	342	ceP	P	07 13 00.9	-2.7
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MLR	Muntele Rosu	97.58	39	P	P	07 13 05.8	-2.1
	comp=Z,1.9nm,0.5s,baz=356,slow=3.7,SNR=4.9						
MLR	Muntele Rosu	97.58	39	IAmb	IAmb	07 13 50.8	
	comp=Z,53nm,1.7s						
KIRV	Kirov	100.11	20	LR	LR	07 57 34.5	
	comp=Z,108nm,19.2s,baz=302,slow=35						
ZEA	Zeya	104.03	337	eP	Pdif	07 13 44.5	+8.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BRTR	Keskin Array B	105.46	41	PP	PP	07 18 03.4	-2.8
	comp=Z,0.6nm,0.5s,baz=254,slow=8.9,SNR=4.0						
DZM	Mont Dzumac	106.42	251	eLR	LR	07 49 20.0	
	comp=Z,193nm,21.6s						
KBZ	Khabaz	108.32	33	PP	PP	07 18 21.9	-4.8
	comp=Z,0.6nm,0.4s,baz=330,slow=7.2,SNR=4.1						
MJAR	Matsushiro Arr	110.61	319	PKKPbc	PKKPbc	07 29 05.7	-0.1
	comp=Z,2.5nm,0.9s,baz=211,slow=3.1,SNR=4.2						
ZALV	Zalesovo Beam	111.36	2	PKiKP	PKiKP	07 18 05.5	-0.9
	comp=Z,1.7nm,0.3s,baz=239,slow=2.6,SNR=5.6						
CN2	Changchun	112.53	332	eP	PKiKP	07 18 15.5	+6.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KURK	Kurchatov	114.10	7	i PKIKP	PKPdf	07 18 10.8	-0.9
KURK	Kurchatov	114.10	7		PKPdf	07 18 10.8	-0.9
KURBB	Kurchatov Arra	114.18	7	PKiKP	PKiKP	07 18 10.8	-1.1
	comp=Z,1.7nm,0.4s,baz=352,slow=1.7,SNR=7.5						
KURBB				PKKPbc	PKKPbc	07 28 53.8	-0.7
	comp=Z,1.1nm,0.8s,baz=185,slow=3.0,SNR=7.7						
SONM	Songino Array	115.54	347	PKP	PKiKP	07 18 13.6	-1.2
	comp=Z,0.6nm,0.5s,baz=234,slow=1.6,SNR=6.9						
SONM				PP	PP	07 19 19.1	+1.3
	comp=Z,1.6nm,1.1s,baz=359,slow=7.7,SNR=4.3						
SONM				PKKPbc	PKKPbc	07 28 49.0	-1.0
	comp=Z,1.0nm,0.6s,baz=214,slow=4.0,SNR=7.1						
DGZ	Jazzator, Alta	115.68	1	i PKIKP	PKiKP	07 18 14.5	-0.5
KSRS	Korea Array	116.08	326	PKP	PKPdf	07 18 15.7	-0.2
	comp=Z,2.0nm,0.7s,baz=80,slow=1.0,SNR=9.5						
KSRS				PKKPbc	PKKPbc	07 28 47.1	-0.4
	comp=Z,1.5nm,0.8s,baz=220,slow=2.4,SNR=7.6						
KSAR	Wonju Array Be	116.11	326	PKIKP	PKPdf	07 18 15.5	-0.5
KSAR	Wonju Array Be	116.11	326		PKPdf	07 18 15.5	-0.5
MKAR	Makanchi Array	118.34	5	PKP	PKPdf	07 18 18.4	-1.7
	comp=Z,0.8nm,0.3s,baz=331,slow=3.0,SNR=27						
BOSA	Boshof	120.29	115	PKP	PKPdf	07 18 24.3	-0.1
	comp=Z,5.1nm,0.4s,baz=268,slow=2.1,SNR=28						
BOSA	Boshof	120.29	115	PKPdf	PKPdf	07 18 24.4	+0.1
HHC	Hu-ho-hao-te	120.55	340	ePKP	PKPdf	07 18 24.5	-0.1
WMQ	Urumqi	121.56	1	ePKP	PKiKP	07 18 27.1	+0.5
KSH	Kashi	124.62	12	PKP	PKiKP	07 18 32.9	+0.1
KSH				sPKP		07 19 32.5	
KSH				SKKS		07 26 59.8	
KSH				LR	LR		
	comp=Z,530nm,6.8s						
KSH				LR	LR		
	comp=Z,680nm,7.5s						
MAW	Mawson	124.75	168	PKP	PKiKP	07 18 32.4	+0.5
	comp=Z,22nm,1.0s,baz=211,slow=4.2,SNR=8.5						
GTA	Gaotai	124.95	349	PKP	PKiKP	07 18 34.5	+1.0
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
GTA				LR	LR		
	comp=Z,200nm,18.5s						
NJ2	Nanjing	125.00	328	ePKP	PKPdf	07 18 32.9	-0.3
LZH	Lanzhou	127.26	344	⇑PKP	PKPdf	07 18 38.0	+0.3
LZH				sPKP		07 19 35.3	
XAN	Xi'an	127.59	339	PKP	PKPdf	07 18 36.8	-1.4
XAN				sPKP		07 19 35.8	
XAN				AMB	AMB		
	comp=Z,190nm,4.9s						
KMBO	Kilima Mbogo	127.59	80	PKP	PKPdf	07 18 38.6	-0.4
	comp=Z,1.4nm,0.3s,baz=290,slow=23,SNR=1.7						
STKA	Stephens Creek	128.91	241	PKP	PKiKP	07 18 42.6	+1.3
	comp=Z,2.4nm,0.4s,baz=28,slow=2.4,SNR=5.8						
STKA				SKPbc	SKiKP	07 21 49.5	-13
	comp=Z,11nm,1.1s,baz=123,slow=5.9,SNR=5.9						
WSAR	Wadi Sarin	132.14	38	PKP	PKPdf	07 18 46.1	-1.0
	comp=Z,5.2nm,0.6s,baz=264,slow=7.7,SNR=4.2						
CD2	Chengdu	132.15	342	PKP	PKPdf	07 18 45.5	-1.5
SIJI	Sorong	135.52	284	PKP	PKiKP	07 18 55.0	-0.3
	comp=Z,21nm,0.8s,baz=45,slow=7.7,SNR=5.6						
SIJI				SKPbc	SKPbc	07 22 12.8	+2.3
	comp=Z,11nm,0.7s,baz=15,slow=5.2,SNR=6.4						
WRAB	Tennant Creek	136.07	257	PKIKP	PKiKP	07 18 56.6	+0.5
WRAB	Tennant Creek	136.07	257		PKiKP	07 18 56.6	+0.5
WRA	Warramunga Arr	136.08	257	PKhKP	PKPpre	07 18 45.3	
	comp=Z,1.0nm,0.5s,baz=92,slow=3.3,SNR=6.8						
WRA				PKP	PKiKP	07 18 56.2	0.0
	comp=Z,5.8nm,0.5s,baz=87,slow=2.5,SNR=53						
WRA				SKPbc	SKPbc	07 22 14.3	+2.3
	comp=Z,2.4nm,0.8s,baz=72,slow=2.4,SNR=6.9						
ASAR	Alice Springs	136.41	251	PKhKP	PKPpre	07 18 42.9	
	comp=Z,1.0nm,0.6s,baz=100,slow=3.4,SNR=7.9						
ASAR				PKP	PKiKP	07 18 56.6	-0.2
	comp=Z,1.8nm,0.4s,baz=89,slow=2.7,SNR=13						
ASAR				PP	PP	07 21 39.1	+1.0
	comp=Z,2.9nm,1.0s,baz=94,slow=5.6,SNR=5.9						
ASAR				SKPbc	SKPbc	07 22 14.8	+1.8
	comp=Z,6.4nm,0.9s,baz=96,slow=3.3,SNR=8.7						
DANN	Dangsing	136.76	6	eP	PKPdf	07 18 52.9	-3.1
	comp=Z,22nm,0.3s						
GKN	Gorkha	137.19	5	eP	PKPdf	07 18 52.7	-3.9
	comp=Z,17nm,0.4s						
GUN	Gumba	137.37	3	eP	PKPdf	07 18 52.8	-4.4
	comp=Z,11nm,0.3s						
PKIN	Phulchoki	137.67	4	eP	PKPdf	07 18 52.4	-5.3
	comp=Z,12nm,0.4s						
PKI	Pulchoki	137.68	4	eP	PKPdf	07 18 52.8	-5.0
	comp=Z,11nm,0.5s						
KMI	Kunming	137.87	341	⇓ePKP	PKPdf	07 18 59.0	+1.0
KMI				sPKP		07 19 56.8	
KMI				PP	PP	07 21 51.6	+6.1
KMI				SS	SS	07 39 45.9	+3.6
KMI				AMB	AMB		
	comp=Z,210nm,4.9s						
TAPN	Taplejung	138.00	1	eP	PKPdf	07 18 50.6	-7.7
	comp=Z,6.8nm,0.4s						
RAMN	Ramite	138.36	3	eP	PKPdf	07 18 52.8	-6.1
	comp=Z,9.3nm,0.4s						
NONG	Nongkai	144.21	336	P	PKPdf	07 19 10.0	+0.8
FITZ	Fitzroy Crossi	144.28	260	PKP	PKPdf	07 19 09.7	+0.3
	comp=Z,33nm,0.8s						
SOEI	Soe	144.71	274		PKiKP	07 19 12.7	-1.5
CM34	Chiang Mai Arr	144.86	342	P	PKPab	07 19 09.0	-0.8
CM33	Chiang Mai Arr	144.95	343	P	PKPbc	07 19 09.0	-1.1
CMMT	Chiang Mai	144.96	343	P	PKPbc	07 19 09.0	-1.1
CM35	Chiang Mai Arr	145.03	342	P	PKPbc	07 19 10.0	-0.3
CM32	Chiang Mai Arr	145.14	343	P	PKPdf	07 19 11.0	+0.1
CM36	Chiang Mai Arr	145.19	342	P	PKPbc	07 19 10.0	-0.8
CM09	Chiang Mai Arr	145.29	342	P	PKPab	07 19 11.6	+0.2
CM31	Chiang Mai Arr	145.29	342	P	PKPab	07 19 11.5	+0.1
CMAR	Chiang Mai Arr	145.29	342	PKPbc	PKPdf	07 19 10.6	-0.6
	comp=Z,7.5nm,0.4s,baz=346,slow=4.6,SNR=39						
CM15	Chiang Mai Arr	145.31	342	P	PKPab	07 19 11.5	+0.1
CM02	Chiang Mai Arr	145.32	342	P	PKPab	07 19 11.4	0.0
CM01	Chiang Mai Arr	145.33	342	P	PKPab	07 19 11.7	+0.1
CM04	Chiang Mai Arr	145.34	342	P	PKPab	07 19 11.7	+0.1
CM13	Chiang Mai Arr	145.34	342	P	PKPab	07 19 11.5	-0.1
CM05	Chiang Mai Arr	145.35	342	P	PKPbc	07 19 11.4	+0.1
UTTA	Uttaradit	145.46	339	P	PKPab	07 19 11.9	-0.1
UBPT	Khong Chiam	145.64	330		PKPab	07 19 12.9	+0.1
SUKH	Sukhothai	146.00	341	P	PKPab	07 19 14.0	0.0
HYB	Hyderabad	146.43	17	i PKP	PKPdf	07 19 12.0	-1.1
HYB				e		07 19 55.0	
KAPI	Kappang	147.73	284	PKPbc	PKiKP	07 19 20.3	+0.1
	comp=Z,25nm,0.8s,baz=89,slow=0.6,SNR=7.3						
KAPI	Kappang	147.73	284		PKiKP	07 19 19.4	-0.8
NWAO	Narrogin (SRO)	148.34	230	PKIKP	PKPbc	07 19 17.9	-1.5
NWAO	Narrogin (SRO)	148.34	230	PKPdf	PKPbc	07 19 17.9	-1.5
BKB	Balikpapan	148.85	293		PKPbc	07 19 21.6	+0.3

IDC 20 07:08:45.5±3.9**, 30°.17N**×**140°.11E, h0**^{km}**, mb3.5**/2**,**
mb1 3.7/3**, mb1mx3.2**/62**, mbtmp3.4**/3**, ML2.7**/1**, MS3.2**/1**,**
Ms1 3.2/1**, ms1mx2.3**/46 **Error ellipse: s-maj=285.3km**
s-min=33.9km az=84.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.55	346	Pn	Pn	07 10 22.9	-0.2
	0.1nm,0.3s,baz=161,slow=11,SNR=5.3						
DAV	Davao City (W)	26.73	214	LR	LR	07 22 33.5	
	comp=Z,50nm,21.8s,baz=341,slow=31						
WRA	Warramunga Arr	50.13	187	P	P	07 17 42.8	+0.1
	0.4nm,0.5s,baz=5.2,slow=7.4,SNR=6.5						
ASAR	Alice Springs	53.86	187	P	P	07 18 10.1	-0.4
	0.3nm,0.8s,baz=12,slow=13,SNR=1.4						

IDC ***20*** *07:19:23.2±1.2, 40°.74N×48°.54E, h0*^{km}*, mb3.6/7,*
mb1 3.6/13, mb1mx3.5/61, mbtmp3.5/13, ML3.1/5, MS3.6/3,
Ms1 3.6/3, ms1mx3.0/41, Error ellipse: s-maj=23.9km
s-min=12.5km az=160.0
AZER ***20*** *07:19:29.9±0.0, 40°.88N×48°.45E, h34*^{km}*, ml3.8/34, Error*
ellipse: s-maj=1.1km s-min=0.9km az=336.0
THR ***20*** *07:19:30.0±0.4, 40°.50N×48°.83E, h18*^{km}*±15*^{km}*, ML3.3*
ISC 20 07:19:29.6±0.8**, 40°.90N**±0°.02×**48°.50E**±0°.03**, h36**^{km}±1^{km}**,**
n68, σ**2.**^{s}**81**/100**, mb3.6**/7**, 1C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PQL	Pirkuli	0.13	147	P	Pn	07 19 37.1	-3.1
	SNR=794						
PQL				S	Sn	07 19 43.4	-6.8
IML	Ismayilli	0.26	247	P	Pn	07 19 38.2	+0.5
	SNR=95						
IML				S	Sn	07 19 44.9	+0.3
ATGJ	Altiaghaj	0.33	96	P	Pn	07 19 39.4	+1.4
	SNR=149						
ATGJ				S	Sn	07 19 47.3	+2.6
SIZA	Siyzn	0.35	59	P	Pn	07 19 39.8	+1.7
	SNR=114						
SIZA				S	Sn	07 19 48.7	+3.9
XNQ	Khinaliq	0.39	315	P	Pn	07 19 40.0	+1.3
	SNR=301						
XNQ				S	Sn	07 19 47.8	+2.2
QUBA	Quba, Azerbaij	0.46	359	P	Pn	07 19 41.7	+2.1
	SNR=300						
QUBA				S	Sn	07 19 50.3	+3.6
GBS	Qobustan	0.49	137	P	Pn	07 19 42.0	+1.9
	SNR=52						
GBS				S	Sn	07 19 52.3	+4.8
QBL	Gabala	0.51	276	P	Pn	07 19 41.1	+0.7
	SNR=395						
QBL				S	Sn	07 19 50.4	+2.6
KDMR	Kurdemir	0.57	205	P	Pn	07 19 42.1	+0.8
	SNR=37						
KDMR				S	Sn	07 19 52.9	+3.5
QSAR	Qusar	0.65	344	P	Pn	07 19 44.3	+1.9
	SNR=522						
QSAR				S	Sn	07 19 54.6	+3.3
ZRD	Zardab	0.88	226	P	Pn	07 19 46.8	+1.4
	SNR=139						
ZRD				S	Sn	07 20 00.9	+4.0
ALIB	Äli-Bayra	1.01	157	P	Pn	07 19 50.1	+2.9
	SNR=77						
ALIB				S	Sn	07 20 05.2	+5.1
SAAT	Saatly	1.03	183	P	Pn	07 19 48.7	+1.2
	SNR=19						
SAAT				S	Sn	07 20 04.5	+3.7
SEKA	Sheki	1.03	288	P	Pn	07 19 48.9	+1.3
	SNR=178						
SEKA				S	Sn	07 20 04.2	+3.4
GOBA	Gobu	1.06	117	P	Pn	07 19 51.0	+3.1
GOBA				S	Sn	07 20 06.0	+4.6
MNGR	Mingechevir, A	1.08	264	P	Pn	07 19 49.6	+1.5
	SNR=11						
MNGR				S	Sn	07 20 06.5	+4.6
NDR	Nardaran	1.17	105	P	Pn	07 19 52.1	+2.7
NDR				S	Sn	07 20 09.4	+5.3
BRDA	Brd	1.19	238	P	Pn	07 19 52.1	+2.4
	SNR=18						
BRDA				S	Sn	07 20 08.6	+4.0
AGDM	Agdam	1.32	234	Pn	Pn	07 19 52.3	+0.8
	SNR=37						
AGDM				Sn	Sn	07 20 11.1	+3.2
BLQ	Beylaqan	1.38	212	Pn	Pn	07 19 52.8	+0.5
	SNR=22						
BLQ				Sn	Sn	07 20 12.2	+3.0
ZKTA	Zakatala	1.60	298	Pg	Pn	07 19 58.6	+3.3
	SNR=34						
ZKTA				Sg	Sn	07 20 20.5	+5.8
GLBA	Clilabad	1.65	183	Pn	Pn	07 19 56.5	+0.4
	SNR=52						
GLBA				Sn	Sn	07 20 19.7	+3.6
GANJ	Ganja	1.67	262	Pn	Pn	07 19 56.7	+0.3
	SNR=24						
GANJ				Sn	Sn	07 20 18.0	+1.4
QRD	Qoradiz	1.69	213	Pn	Pn	07 19 57.5	+0.9
	SNR=9.0						
QRD				Sn	Sn	07 20 19.8	+2.7
DDFL	Dedoflistskaro	1.88	288	P	Pn	07 20 02.5	+3.3
DDFL				S	Sn	07 20 34.3	+13
LGD	Lagodekhi	1.94	300	P	Pn	07 20 01.8	+1.7
LGD				S	Sn	07 20 31.4	+8.2
YRD	Yardimli	1.99	186	Pn	Pn	07 20 02.2	+1.4
	SNR=97						
YRD				Sn	Sn	07 20 27.6	+3.0
GDB	GEDABAY	2.09	266	Pn	Pn	07 20 02.6	+0.3
	SNR=133						
GDB				Sn	Sn	07 20 28.6	+1.5
GRMI	Germi	2.14	193	ePn	Pn	07 20 02.8	-0.1
GRMI				eSg	Sn	07 20 28.1	-0.1
GRMI				IAML		07 20 30.5	
	comp=N,267nm,0.4s						
GRMI				IAML		07 20 31.9	
	comp=E,279nm,0.3s						
LKRN	Lenkeran, Azer	2.19	174	Pn	Pn	07 20 06.0	+2.5
	SNR=5.1						
LKRN				Sn	Sn	07 20 33.7	+4.4
LRK	Lerik	2.25	183	Pn	Pn	07 20 07.0	+2.5
	SNR=14						
LRK				Sn	Sn	07 20 35.6	+4.5
ASTR	Astara	2.34	174	Pn	Pn	07 20 08.1	+2.6
	SNR=8.0						
ASTR				Sn	Sn	07 20 37.7	+4.7
QZX	Qazax, Azerbai	2.38	275	Pn	Pn	07 20 06.9	+0.9
	SNR=61						
QZX				Sn	Sn	07 20 36.9	+3.0
SBZ	Shahbuz	2.71	237	Pn	Pn	07 20 12.3	+1.6
	SNR=26						
SBZ				Sn	Sn	07 20 44.8	+2.5

ORD	**Ordubad**	**2.75**	**225**	Pn	**Pn**	**07 20 12.5**	**+1.2**
	SNR=25						
ORD				Sn	**Sn**	**07 20 45.3**	**+2.0**
NAX	**Nakhchivan**	**2.88**	**234**	Pn	**Pn**	**07 20 15.2**	**+2.2**
	SNR=5.3						
NAX				Sn	**Sn**	**07 20 49.8**	**+3.5**
BTNK	**Botanikuri**	**2.90**	**287**	P	**Pn**	**07 20 16.2**	**+3.0**
GNI	**Garni**	**2.96**	**257**	Pn	**Pn**	**07 20 15.1**	**+0.9**
	comp=E,4.5nm,0.3s,baz=351,slow=1.5,SNR=7.7						
HYR	**Heyderabad**	**3.03**	**248**	Pn	**Pn**	**07 20 17.0**	**+2.0**
	SNR=7.2						
KZRT	**Kazreti**	**3.14**	**280**	P	**Pn**	**07 20 17.4**	**+0.9**
KZRT				S	**Sn**	**07 20 57.1**	**+4.4**
DMNI	**Dmanisi**	**3.29**	**279**	P	**Pn**	**07 20 19.6**	**+1.0**
BRNG	**Burnasheti**	**3.60**	**283**	P	**Pn**	**07 20 24.4**	**+1.5**
BRNG				S	**Sn**	**07 21 10.8**	**+6.5**
BKRG	**Bakuriani**	**3.85**	**285**	P	**Pn**	**07 20 27.8**	**+1.4**
ZNJK	**Zanjan**	**4.22**	**178**	*e*Pn	**Pn**	**07 20 30.1**	**-1.5**
ABS	**Abastumani**	**4.37**	**283**	P	**Pn**	**07 20 34.0**	**+0.4**
TKB	**Tkibuli**	**4.38**	**291**	P	**Pn**	**07 20 34.1**	**+0.6**
KBZ	**Khabaz**	**5.03**	**306**	Pn	**Pn**	**07 20 45.7**	**+3.3**
	comp=E,0.2nm,0.3s,baz=171,slow=13,SNR=1.6						
THKV	**Tehran--Karaj**	**5.31**	**159**	*e*Pn	**Pn**	**07 20 44.2**	**-2.3**
CHTH	**Charan**	**5.39**	**157**	*e*Pn	**Pn**	**07 20 45.7**	**-1.9**
BJRD	**Bojnurd**	**7.61**	**112**	*e*Pn	**Pn**	**07 21 17.4**	**-0.6**
GEYT	**Alibeck**	**8.01**	**109**	Pn	Pn	07 21 19.3	-4.1
	comp=E,0.5nm,0.3s,baz=297,slow=14,SNR=6.0						
AB31	**Akbulak array**	**11.62**	**40**	Pn	**Pn**	**07 22 10.9**	**-1.8**
	comp=E,0.4nm,0.5s,baz=218,slow=12,SNR=11						
AB31				⇑Sn	Sn	07 24 10.5	-11
	comp=E,1.0nm,0.6s,baz=218,slow=22,SNR=6.9						
AKTO	**Aktyubinsk**	**11.62**	**32**	Pn	**Pn**	**07 22 10.2**	**-2.6**
	comp=E,0.1nm,0.3s,baz=194,slow=18,SNR=1.7						
AKTO	**Aktyubinsk**	**11.62**	**32**	⇓Pn	**Pn**	**07 22 13.8**	**+1.1**
	comp=E,0.7nm,0.5s						
AKTO				⇓Sn	**Sn**	**07 24 16.3**	**-4.8**
	comp=E,2.0nm,0.5s						
EIL	**Elat**	**15.72**	**229**	LR	LR	07 30 08.0	
	comp=E,42nm,18.0s,baz=280,slow=41						
AKASG	**Malin Array Be**	**16.59**	**313**	Pn	**Pn**	**07 23 19.6**	**+0.3**
	comp=E,0.7nm,0.3s,baz=116,slow=13,SNR=1.9						
ARU	**Arti**	**16.88**	**20**	Pn	**Pn**	**07 23 20.6**	**-2.2**
	comp=E,0.0nm,0.3s,baz=168,slow=5.1,SNR=5.3						
KIRV	**Kirov**	**17.72**	**2**	P	**Pn**	**07 23 32.2**	**-0.9**
	comp=E,4.5nm,0.3s,baz=171,slow=3.1,SNR=3.8						
BVAR	**Borovoye Array**	**19.15**	**43**	P	**P**	**07 23 49.1**	**-0.5**
	comp=E,0.2nm,0.3s,baz=251,slow=4.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**22.96**	**55**	P	**P**	**07 24 30.3**	**-0.2**
	comp=E,0.4nm,0.6s,baz=262,slow=8.7,SNR=2.9						
FINES	**FINESS Array B**	**24.68**	**334**	P	**P**	**07 24 45.9**	**-0.9**
	comp=E,1.6nm,0.5s,baz=135,slow=9.8,SNR=9.8						
MKAR	**Makanchi Array**	**24.94**	**65**	P	**P**	**07 24 48.9**	**-0.4**
	comp=E,1.3nm,0.7s,baz=268,slow=8.2,SNR=13						
GERES	**GERESS Array B**	**25.73**	**300**	P	**P**	**07 24 56.5**	**-0.1**
	comp=E,0.4nm,0.7s,baz=96,slow=9.2,SNR=2.0						
HFS	**Hagfors**	**28.82**	**324**	P	**P**	**07 25 22.6**	**-1.4**
	comp=E,2.3nm,0.8s,baz=110,slow=12,SNR=2.4						
NOA	**NORSAR Array B**	**30.32**	**324**	P	**P**	**07 25 36.0**	**-1.3**
	comp=E,0.4nm,0.5s,baz=116,slow=8.3,SNR=1.7						
TORD	**Torodi Ar. Bea**	**49.24**	**250**	P	**P**	**07 28 13.0**	**-1.7**
	comp=E,1.7nm,0.9s,baz=23,slow=8.0,SNR=4.5						
TGY	**Tagaytay City**	**67.67**	**90**	LR	LR	08 02 14.4	
	comp=E,74nm,21.0s,baz=360,slow=38						
BOSA	**Boshof**	**72.44**	**201**	LR	LR	08 07 23.8	
	comp=E,97nm,19.1s,baz=334,slow=40						

SOME ***20*** *07:35:14.0, 42°.10N×84°.65E, h15^{km}, MS4.1*
IDC ***20*** *07:35:16.7±0.5, 42°.14N×84°.58E, h0^{km}, mb4.5/30, mb1 4.6/34, mb1mx4.5/50, mbtmp4.5/34, ML3.8/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/43, Error ellipse: s-maj=13.9km s-min=10.3km az=28.0*
MOS ***20*** *07:35:18.7±1.0, 42°.09N×84°.47E, h28^{km}, mb4.9/33, Error ellipse: s-maj=6.9km s-min=5.0km az=113.8*
BJI ***20*** *07:35:19.3±0.0, 42°.07N×84°.55E, h5^{km}, mB4.7/28, mb4.5/39, ML4.9/11, Ms4.2/23, Ms7 3.9/21*
NEIC ***20*** *07:35:22.0±1.9, 42°.18N±0°.08×84°.51E±0°.09, h37^{km}±6^{km}, mb4.8/55, Error ellipse: s-maj=12.2km s-min=9.2km az=170.0*
NNC ***20*** *07:35:25.4±2.4, 42°.40N×84°.23E, h26^{km}±12^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=15.6km s-min=7.3km az=141.0*
ISC 20 07:35:18.0±0.3**, 42°.14N**±0°.03×**84°.51E**±0°.02**, h10**^{km}**, n347,** σ**1**^{s}**.86**/376**, mb4.8**/93**, MS4.0**/5**, 39C-19D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.88**	**53**	*e*Pn	**Pb**	**07 36 07.8**	**-1.6**
WMQ				Sn	**Sb**	**07 36 45.1**	**+0.4**
WMQ				smax	smax		
	comp=N,3μm,0.9s						
WMQ				smax	smax		
	comp=E,2μm,0.7s						
WMQ	**Urumqi**	**2.88**	**53**	P	**Pb**	**07 36 07.8**	**-1.6**
WMQ	**Urumqi**	**2.88**	**53**		**Pb**	**07 36 07.8**	**-1.6**
KTMS	**Ketmen**	**3.33**	**294**	*e*P	**Pb**	**07 36 16.1**	**-1.0**
	95nm,0.3s						
KTMS				*e*S	**Sb**	**07 37 01.7**	**+4.0**
	2μm,0.6s						
KTMS	**Ketmen**	**3.33**	**294**	Pg	**Pn**	**07 36 11.5**	**+1.3**
	94nm,0.2s						
KTMS				Lg	Lg	07 37 01.1	
	2μm,0.6s						
SHLS	**Shalkode**	**3.86**	**287**	*e*P	**Pn**	**07 36 22.0**	**+4.5**
	197nm,0.4s						
SHLS				*e*S	**Sb**	**07 37 11.0**	**-2.0**
	2μm,0.6s						
SHLS	**Shalkode**	**3.86**	**287**	Pg	**Pn**	**07 36 16.7**	**-0.8**
	233nm,0.5s						
SHLS				Lg	Lg	07 37 09.5	
	2μm,0.6s						
PDGK	**Podgornoye**	**3.88**	**289**	⇑Pn	**Pn**	**07 36 20.5**	**+2.6**
	16nm,0.4s						
PDGK				⇓Pg	**Pg**	**07 36 31.2**	**-1.1**
	125nm,0.8s						
PDGK				⇑Lg	Lg	07 37 20.0	
	462nm,0.5s						
DJR	**Jarkent**	**4.08**	**304**	*e*P	**Pb**	**07 36 30.7**	**+0.7**
	37nm,0.5s						
DJR				*e*S	**Sb**	**07 37 25.9**	**+6.4**
	621nm,0.5s						
DJR	**Jarkent**	**4.08**	**304**	Pg	Pn	07 36 25.7	+5.1
	21nm,0.4s						
DJR				Lg	Lg	07 37 25.8	
	644nm,0.4s						
UZB	**Uzynbulak**	**4.17**	**286**	*e*P	**Pb**	**07 36 32.7**	**+1.1**
	25nm,0.6s						
UZB				*e*S	**Sg**	**07 37 29.9**	**-2.0**
	839nm,1.0s						
UZB	**Uzynbulak**	**4.17**	**286**	Pg	**Pb**	**07 36 28.9**	**-2.7**
	15nm,0.2s						
UZB				Lg	Lg	07 37 30.9	
	839nm,1.0s						
KPKS	**Kokpek**	**4.49**	**289**	*e*P	**Pb**	**07 36 38.2**	**+1.3**
	120nm,0.4s						
KPKS				*e*S	**Sg**	**07 37 40.0**	**-2.0**
	2μm,0.4s						
SATY	**Saty**	**4.60**	**284**	*e*P	**Pb**	**07 36 41.6**	**+2.8**
	78nm,0.6s						
SATY				*e*S	**Sg**	**07 37 46.0**	**+0.4**
	1μm,0.4s						
SATY	**Saty**	**4.60**	**284**	Pg	**Pb**	**07 36 37.7**	**-1.1**
	93nm,0.5s						
SATY				Lg	Lg	07 37 46.0	
	1μm,0.4s						
KURS	**Kuram**	**4.85**	**288**	*e*P	**Pb**	**07 36 46.2**	**+3.1**
	18nm,0.5s						
KURS				*e*S	**Sg**	**07 37 53.9**	**+0.1**
	448nm,1.1s						
KURS	**Kuram**	**4.85**	**288**	Pg	**Pb**	**07 36 42.2**	**-1.0**
	22nm,0.6s						
KURS				Lg	Lg	07 37 53.9	
	448nm,1.1s						
KAPS	**Kapalarasan**	**4.88**	**312**	*e*P	**Pb**	**07 36 44.0**	**+0.4**
	31nm,0.7s						
KAPS				*e*S	**Sb**	**07 37 49.4**	**+7.0**
	891nm,0.6s						
KAPS	**Kapalarasan**	**4.88**	**312**	Pg	Pb	07 36 39.9	-3.7
	24nm,0.3s						
KAPS				Lg	Lg	07 37 49.3	
	891nm,0.6s						
MK31	**Makanchi Array**	**4.92**	**342**	Pg	**Pg**	**07 36 51.4**	**-0.7**
	61nm,0.4s,baz=159,slow=16,SNR=15						
MK31				⇑Lg	Lg	07 37 54.4	
	393nm,0.5s,baz=153,slow=30,SNR=11						
MK31	**Makanchi Array**	**4.92**	**342**	*ce*P	**Pn**	**07 36 34.0**	**+2.1**
MK31	**Makanchi Array**	**4.92**	**342**		**Pn**	**07 36 34.9**	**+3.0**
MKAR	**Makanchi Array**	**4.92**	**342**	Pn	**Pn**	**07 36 34.1**	**+2.1**
	4.0nm,0.3s,baz=151,slow=14,SNR=93						
MKAR				Pg	**Pb**	**07 36 48.9**	**+4.8**
	74nm,0.3s,baz=150,slow=17,SNR=50						
MKAR				Lg	Lg	07 37 51.7	
	129nm,0.3s,baz=155,slow=30,SNR=13						
MKAR	**Makanchi Array**	**4.92**	**342**	*i* P	**Pn**	**07 36 34.0**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MKAR	**Makanchi Array**	**4.92**	**342**	Pn	**Pn**	**07 36 33.7**	**+1.8**
MAKZ	**Makanchi**	**5.00**	**340**	⇑Pn	**Pn**	**07 36 35.2**	**+2.1**
	comp=Z,4.7nm,0.5s						
MAKZ				⇑Pg	**Pg**	**07 36 51.1**	**-2.7**
	comp=Z,66nm,0.5s						
MAKZ				⇓Lg	Lg	07 37 54.8	
	comp=Z,312nm,0.6s						
MAKZ	**Makanchi**	**5.00**	**340**	P	**Pn**	**07 36 35.4**	**+2.2**
MAKZ	**Makanchi**	**5.00**	**340**	Pn	**Pn**	**07 36 35.4**	**+2.2**
TDK	**Taldyqorghan**	**5.28**	**305**	*e*P	**Pb**	**07 36 54.1**	**+3.8**
	comp=Z,88nm,0.3s						
TDK				*e*S	**Sg**	**07 38 06.5**	**-0.8**
	comp=Z,2μm,0.6s						
TDK	**Taldyqorghan**	**5.28**	**305**	Pg	**Pb**	**07 36 49.5**	**-0.8**
	comp=Z,138nm,0.5s						
TDK				Lg	Lg	07 38 06.5	
	comp=Z,2μm,0.6s						
ARXS	**Arharly**	**5.31**	**295**	*e*P	**Pb**	**07 36 52.5**	**+1.6**
	comp=Z,94nm,0.5s						
ARXS				*e*S	**Sg**	**07 38 04.0**	**-4.3**
	comp=Z,727nm,0.7s						
ARXS	**Arharly**	**5.31**	**295**	Pg	**Pb**	**07 36 48.0**	**-2.9**
	comp=Z,88nm,0.5s						
ARXS				Lg	Lg	07 38 04.0	
	comp=Z,727nm,0.7s						
ZSN	**Zaisan**	**5.31**	**3**	*e*P	**Pb**	**07 36 53.5**	**+2.6**
	comp=Z,26nm,0.5s						
ZSN				*e*S	**Sg**	**07 38 06.5**	**-2.0**
	comp=Z,1μm,0.8s						
ZSN	**Zaisan**	**5.31**	**3**	Pg	Pb	07 36 46.5	-4.5
	comp=Z,18nm,0.3s						
ZSN				Lg	Lg	07 38 01.1	
	comp=Z,1μm,0.8s						
MDOK	**Medeo**	**5.60**	**283**	*e*P	**Pb**	**07 37 00.0**	**+4.2**
	comp=Z,9.0nm,0.6s						
MDOK				*e*S	**Sg**	**07 38 15.9**	**-1.7**
	comp=Z,291nm,0.7s						
MDOK	**Medeo**	**5.60**	**283**	Pn	**Pn**	**07 36 44.2**	**+2.8**
	comp=Z,26nm,0.6s						
MDOK				⇑Pg	**Pg**	**07 37 02.6**	**-2.5**
	comp=Z,80nm,0.6s						
MDOK				⇓Lg	Lg	07 38 15.3	
	comp=Z,379nm,0.8s						
MDOK	**Medeo**	**5.60**	**283**	Pg	**Pb**	**07 36 56.2**	**+0.4**
	comp=Z,26nm,0.4s						
MDOK				Lg	Lg	07 38 17.6	
	comp=Z,385nm,0.6s						
TNSS	**Tian-Shan**	**5.66**	**282**	*e*P	**Pb**	**07 37 00.8**	**+3.9**
	comp=Z,32nm,0.6s						
TNSS				*e*S	**Sg**	**07 38 17.7**	**-1.9**
	comp=Z,134nm,0.8s						
TNSS	**Tian-Shan**	**5.66**	**282**	Pg	**Pb**	**07 36 56.3**	**-0.7**
	comp=Z,18nm,0.3s						
TNSS				Lg	Lg	07 38 17.8	
	comp=Z,164nm,0.5s						
KNDC	**Almaty**	**5.66**	**283**	⇑Pg	Pb	07 37 02.5	+5.6
	comp=Z,84nm,0.6s						
KNDC				⇑Lg	Lg	07 38 13.7	
	comp=Z,734nm,1.1s						
CHKK	**Chushkaly**	**5.78**	**290**	Pg	**Pb**	**07 36 57.8**	**-1.0**
	comp=Z,28nm,0.5s						
CHKK				Lg	Lg	07 38 20.2	
	comp=Z,230nm,0.6s						
MTBS	**Maitube**	**6.04**	**282**	Pg	**Pb**	**07 37 04.8**	**+1.4**
	comp=Z,21nm,0.4s						
MTBS				Lg	Lg	07 38 32.3	
	comp=Z,240nm,0.8s						
ULHL	**Ulahol**	**6.14**	**274**	P	**Pn**	**07 36 50.5**	**+1.5**
	SNR=22						
KUU	**Kurty**	**6.24**	**289**	Pg	**Pb**	**07 37 06.7**	**0.0**
	comp=Z,14nm,0.3s						
KUU				Lg	Lg	07 38 35.6	
	comp=Z,247nm,0.8s						
KST	**Kastek**	**6.37**	**281**	Pg	**Pb**	**07 37 07.3**	**-1.7**
	comp=Z,25nm,0.3s						
KST				Lg	Lg	07 38 36.5	
	comp=Z,167nm,0.9s						
TKM2	**Tokmak 2**	**6.63**	**280**	P	**Pn**	**07 36 57.9**	**+2.2**
	SNR=54						
TKM2	**Tokmak 2**	**6.63**	**280**	⇓Pn	**Pn**	**07 36 58.4**	**+2.7**
	comp=Z,36nm,0.9s						
TKM2				⇑Lg	Lg	07 38 48.3	
	comp=Z,210nm,1.1s						
KSH	**Kashi**	**6.99**	**251**	Pn	Pn	07 37 08.8	+8.4
KSH				Sn	Sb	07 38 33.4	-10
KBK	**Karagaybulak**	**7.10**	**277**	P	**Pn**	**07 37 04.2**	**+2.1**
	SNR=21						
UCH	**Uchtor**	**7.43**	**274**	P	**Pn**	**07 37 08.5**	**+1.7**
	SNR=14						
AAK	**Ala-Archa**	**7.43**	**277**	P	**Pn**	**07 37 08.2**	**+1.6**
	SNR=13						
AAK	**Ala-Archa**	**7.43**	**277**	⇓Pn	**Pn**	**07 37 08.5**	**+1.9**
	comp=Z,3.0nm,0.4s						
AAK				⇑Pg	Pg	07 37 36.2	-4.0
	comp=Z,33nm,0.8s						
AAK				⇓Lg	Lg	07 39 12.8	
	comp=Z,134nm,0.9s						
AAK	**Ala-Archa**	**7.43**	**277**	*i* P	**Pn**	**07 37 08.0**	**+1.4**
AAK	**Ala-Archa**	**7.43**	**277**	Pn	**Pn**	**07 37 08.6**	**+2.0**
USP	**Ospenovka**	**7.46**	**282**	P	**Pn**	**07 37 08.8**	**+1.9**
	SNR=11						
DGZ	**Jazzator, Alta**	**7.83**	**14***d*	*i*P	**Pn**	**07 37 15.4**	**+3.4**
EKS2	**Erkin-Say**	**7.96**	**277**	P	**Pn**	**07 37 16.0**	**+2.2**
	SNR=9.7						
KURBB	**Kurchatov Arra**	**9.43**	**336**	Pn	**Pn**	**07 37 34.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=25						
KURBB				Lg	Lg	07 40 16.5	
	comp=Z,2.2nm,0.3s,baz=150,slow=34,SNR=6.8						
KURBB	**Kurchatov Arra**	**9.43**	**336**	⇓Pn	**Pn**	**07 37 33.9**	**0.0**
	comp=Z,9.3nm,0.7s						
KURBB				⇑Pg		07 38 13.0	
	comp=Z,24nm,0.8s						
KURBB				⇓Lg	Lg	07 40 10.3	
	comp=Z,571nm,0.8s						
KURK	**Kurchatov**	**9.49**	**337**	⇑Pn	**Pn**	**07 37 36.2**	**+1.6**
	comp=Z,8.2nm,0.9s						
KURK				⇓Pg		07 38 15.8	
	comp=Z,12nm,0.5s						
KURK				⇑Lg	Lg	07 40 16.6	
	comp=Z,176nm,0.9s						
KURK	**Kurchatov**	**9.49**	**337**	*i* P	**Pn**	**07 37 34.5**	**-0.1**
KURK	**Kurchatov**	**9.49**	**337**	Pn	**Pn**	**07 37 34.7**	**+0.1**
KK31	**Karatay Array**	**10.37**	**280**	⇓Pn	**Pn**	**07 37 48.2**	**+1.5**
	comp=Z,5.1nm,0.9s,baz=83,slow=13,SNR=17						
KK31				Lg	Lg	07 40 52.6	
	comp=Z,20nm,0.7s,baz=72,slow=28,SNR=5.0						
KK31	**Karatay Array**	**10.37**	**280**	P	**Pn**	**07 37 48.2**	**+1.5**
KK31	**Karatay Array**	**10.37**	**280**	Pn	**Pn**	**07 37 48.2**	**+1.5**
KKAR	**Karatay Array**	**10.37**	**280**	P	**Pn**	**07 37 48.6**	**+1.9**
KKAR	**Karatay Array**	**10.37**	**280**		**Pn**	**07 37 48.5**	**+1.9**
KKAR	**Karatay Array**	**10.37**	**280**	Pn	**Pn**	**07 37 48.4**	**+1.7**
ZAA0	**Zalesovo Array**	**11.82**	**1**	Pn	**Pn**	**07 38 05.0**	**-1.5**
ZALV	**Zalesovo Beam**	**11.82**	**1**	Pn	**Pn**	**07 38 05.8**	**-0.6**
	comp=Z,3.7nm,0.3s,baz=181,slow=12,SNR=29						
ZALV				Sn	**Sn**	**07 40 14.1**	**-4.1**
	comp=Z,5.6nm,0.3s,baz=182,slow=26,SNR=6.2						
ZALV				Lg	Lg	07 41 31.9	
	baz=189,slow=25,SNR=3.9						
ZALV	**Zalesovo Beam**	**11.82**	**1**	Pn	**Pn**	**07 38 04.7**	**-1.7**
DHRM	**DHARAMSHALA**	**11.84**	**216**	*e*P	**Pn**	**07 38 08.5**	**+1.4**
DHRM				*e*S	**Sn**	**07 40 11.9**	**-7.4**
DHRM				IAML		07 40 19.5	
	comp=N,234nm,0.8s						
DHRM				IAML		07 40 23.7	
	comp=E,228nm,0.8s						
GTA	**Gaotai**	**11.92**	**98**	⇓P	**Pn**	**07 38 07.3**	**-0.8**
GTA				pP		07 38 16.0	
GTA				sP		07 38 19.8	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,34nm,4.7s						
GTA				LR	LR		
	comp=N,400nm,9.5s						
GTA				LR	LR		
	comp=E,400nm,12.0s						
GTA				LR	LR		
	comp=Z,490nm,13.1s						
THN	**Thein Dam**	**11.95**	**219**	*e*P	**Pn**	**07 38 11.5**	**+3.2**
THN				*e*S	**Sn**	**07 40 17.0**	**-4.6**
NIL	**Nilore**	**12.28**	**230**	P	**Pn**	**07 38 12.5**	**-0.4**
NIL	**Nilore**	**12.28**	**230**	Pn	**Pn**	**07 38 12.5**	**-0.4**
SMLA	**Simla**	**12.47**	**211**	*e*P	**Pn**	**07 38 13.9**	**-1.5**
SMLA				*e*S	Sn	07 40 25.5	-8.8
SMLA				IAML		07 40 34.8	
	comp=N,113nm,0.5s						
SMLA				IAML		07 40 37.4	
	comp=E,77nm,0.5s						
CEP	**Cherat**	**12.94**	**234**	P	**Pn**	**07 38 20.4**	**-1.7**
LSA	**Lhasa**	**13.52**	**155**	P	**Pn**	**07 38 34.0**	**+3.7**
LSA				S	**Sn**	**07 41 04.8**	**+3.9**
LSA				pmax	pmax		
	comp=E,18nm,1.3s						
LSA				pmax	pmax		
	comp=E,310nm,5.0s						
LSA				LR	LR		
	comp=E,680nm,7.1s						
LSA				LR	LR		
	comp=E,560nm,10.7s						
LSA				LR	LR		
	comp=E,750nm,10.0s						
THW	**Thamme Wali**	**13.77**	**231**	P	**Pn**	**07 38 30.6**	**-2.6**
KBL	**Kabul**	**14.30**	**243**	P	**Pn**	**07 38 38.9**	**-1.8**
KBL	**Kabul**	**14.30**	**243**	Pn	**Pn**	**07 38 38.9**	**-1.8**
BVAR	**Borovoye Array**	**14.44**	**324**	Pn	Pn	07 38 36.3	-5.9
	comp=E,0.3nm,0.3s,baz=185,slow=13,SNR=5.7						
BVAR				Lg	Lg	07 42 55.8	
	comp=E,0.8nm,0.3s,baz=191,slow=30,SNR=5.5						
BRVK	**Borovoye**	**14.51**	**324**	⇑P	**Pn**	**07 38 44.0**	**+0.8**
	comp=E,16nm,0.7s						
BRVK	**Borovoye**	**14.51**	**324***c*	*e*P	**Pn**	**07 38 44.0**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**14.51**	**324**	Pn	**Pn**	**07 38 42.8**	**-0.4**
NDI	**New Delhi**	**14.68**	**206**	*e*P	**Pn**	**07 38 47.0**	**+1.3**
ZAK	**Zakamensk**	**15.35**	**51**	*e*P	**Pn**	**07 38 55.8**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,21nm,1.0s						
TLY	**Talaya**	**16.14**	**47**	Pn	**P**	**07 39 06.8**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=231,slow=12,SNR=14						
TLY				Lg	Lg	07 43 50.0	
	baz=316,slow=23,SNR=4.1						
TLY				LR	LR	07 46 03.8	
	comp=Z,86nm,18.9s,baz=202,slow=40						
TLY	**Talaya**	**16.14**	**47***c*	*i*P	**P**	**07 39 09.9**	**+1.8**
TLY				MLR	MLR		
	comp=Z,482nm,10.0s						
TLY	**Talaya**	**16.14**	**47**		**Pn**	**07 39 05.3**	**+0.5**
LZH	**Lanzhou**	**16.16**	**106**	*e*P	**P**	**07 39 09.0**	**+0.4**
LZH				pP	sP	07 39 13.9	+0.5
LZH				sP	pP	07 39 18.0	+6.1
LZH				PP	**PnPn**	**07 39 23.3**	**+9.3**
LZH				*e*S	**Sn**	**07 42 07.8**	**+3.1**
LZH				SS	**S**	**07 42 26.3**	**+8.2**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
LZH				LR	LR		
	comp=Z,430nm,11.0s						
LZH				LR	LR		
	comp=Z,420nm,11.2s						
LZH				LR	LR		
	comp=Z,450nm,13.5s						
SONM	**Songino Array**	**16.47**	**62**	Pn	**Pn**	**07 39 09.8**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=246,slow=13,SNR=35						
SONM				Lg	Lg	07 44 04.1	
	comp=Z,0.1nm,0.3s,baz=261,slow=28,SNR=7.4						
SONM	**Songino Array**	**16.47**	**62**	P	**Pn**	**07 39 08.5**	**-0.7**
SONM				pmax	pmax		
	comp=Z,21nm,1.0s						
SONM	**Songino Array**	**16.47**	**62**	Pn	**Pn**	**07 39 08.5**	**-0.7**
ULN	**Ulaanbaatar**	**16.91**	**63***c*	*e*P	**Pn**	**07 39 15.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,40nm,1.3s						
ULN	**Ulaanbaatar**	**16.91**	**63**	P	**Pn**	**07 39 14.6**	**-0.2**
TEZP	**TEZPUR**	**16.91**	**154**	⇑*e*P	**Pn**	**07 39 14.2**	**-0.6**
SHL	**Shillong**	**17.62**	**157**	*e*P	**P**	**07 39 24.4**	**-0.3**
SHL				IAmb	IAmb	07 39 29.5	
	comp=Z,30nm,0.7s						
AB31	**Akbulak array**	**18.52**	**301**	⇑P	**P**	**07 39 33.1**	**-1.3**
	comp=Z,10nm,0.7s,baz=103,slow=11,SNR=64						
ABKAR	**Akbulak array**	**18.52**	**301**	P	**P**	**07 39 33.0**	**-1.4**
ABKAR	**Akbulak array**	**18.52**	**301**	P	**P**	**07 39 32.6**	**-1.8**
CD2	**Chengdu**	**19.06**	**120**	*e*P	**Pn**	**07 39 41.0**	**-0.2**
HRA	**Herat**	**19.09**	**253**		**P**	**07 39 41.7**	**+0.8**
BTO	**Baotou**	**19.19**	**86**	*e*P	**P**	**07 39 40.3**	**-1.6**
BHPL	**Bhopal**	**19.75**	**200**	⇑*e*P	**P**	**07 39 48.0**	**-0.1**
BHPL				IAmb	IAmb	07 39 53.2	
	comp=Z,15nm,0.7s						
AKTO	**Aktyubinsk**	**20.02**	**304**	P	**P**	**07 39 51.4**	**+0.7**
	comp=Z,12nm,0.9s,baz=101,slow=12,SNR=17						
AKTO	**Aktyubinsk**	**20.02**	**304**	⇑P	**P**	**07 39 51.9**	**+1.2**
	comp=Z,11nm,0.7s						
HHC	**Hu-ho-hao-te**	**20.28**	**85**	*e*P	Pn	07 39 55.6	-0.2
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,7.2s						
GEYT	**Alibeck**	**20.61**	**267**	P	**P**	**07 39 59.2**	**+1.9**
	comp=Z,12nm,0.9s,baz=104,slow=4.7,SNR=13						
GEYT	**Alibeck**	**20.61**	**267**	P	**P**	**07 39 57.1**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**20.61**	**267**	P	**P**	**07 39 58.9**	**+1.6**
XAN	**Xi'an**	**20.80**	**105**	P	**P**	**07 39 59.4**	**0.0**
XAN				pP	sP	07 40 07.3	+3.1
XAN				PP	**PnPn**	**07 40 22.3**	**+4.8**
XAN				S	**S**	**07 43 44.3**	**-7.1**
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
XAN				pmax	pmax		
	comp=Z,130nm,4.5s						
XAN				LR	LR		
	comp=Z,300nm,11.8s						
XAN				LR	LR		
	comp=Z,400nm,14.2s						
XAN				LR	LR		
	comp=Z,410nm,14.7s						
SAIH	**SAIHA**	**20.84**	**157**	*e*P	**P**	**07 40 00.0**	**0.0**
SAIH				IAmb	IAmb	07 40 07.7	
	comp=Z,33nm,0.8s						
ARU	**Arti**	**21.97**	**319**	P	**P**	**07 40 13.1**	**+1.3**
	comp=Z,14nm,0.4s,baz=117,slow=8.3,SNR=32						
ARU	**Arti**	**21.97**	**319***d*	*i*P	**P**	**07 40 11.4**	**-0.3**
ARU				S	**S**	**07 44 11.4**	**-2.7**
ARU				pmax	pmax		
	comp=Z,38nm,0.6s						
ARU	**Arti**	**21.97**	**319**	P	**P**	**07 40 11.5**	**-0.3**
KMI	**Kunming**	**22.69**	**133**	⇑*e*P	**P**	**07 40 20.9**	**+0.9**
KMI				pP	sP	07 40 25.4	+0.5
KMI				sP	pP	07 40 29.5	+6.2
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
KMI				pmax	pmax		
	comp=Z,140nm,4.6s						
KMI				LR	LR		
	comp=Z,130nm,6.6s						
KMI				LR	LR		
	comp=Z,220nm,5.4s						
KMI				LR	LR		
	comp=Z,130nm,7.1s						
KMI	**Kunming**	**22.69**	**133**	P	**P**	**07 40 20.0**	**+0.1**
KMI				pmax	pmax		
	comp=Z,17nm,0.6s						
KMI	**Kunming**	**22.69**	**133**	P	**P**	**07 40 20.0**	**+0.1**
KMI				IAmb	IAmb	07 40 38.5	
	comp=Z,17nm,0.6s						
ENH	**Enshi**	**23.29**	**112**	P	**P**	**07 40 26.0**	**+0.1**
ENH				IAmb	IAmb	07 40 47.5	
	comp=Z,25nm,1.1s						
GYA	**Guiyang**	**23.97**	**124**	⇑P	**P**	**07 40 33.1**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BOD	**Bodaibo**	**24.34**	**40**	*e*P	**P**	**07 40 35.9**	**+0.2**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HYB	**Hyderabad**	**25.16**	**193**	*i* P	**P**	**07 40 43.0**	**-0.5**
HIA	**Hailar**	**25.44**	**62**	*i* P	**P**	**07 40 46.9**	**+1.1**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PAYA	**Payao**	**26.18**	**145**	P	**P**	**07 40 54.2**	**+1.4**

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      comp=Z,3µmcomp=Z,360nm,0.7s
CM33  Chiang Mai Arr   26.29 148   P      P      07 40 54.0 +0.3
CHTO  Chiang Mai       26.29 148   P      P      07 40 53.6 -0.1
CHTO                               pmax   pmax
      comp=Z,14nm,1.2s
CHTO  Chiang Mai       26.29 148   P      P      07 40 53.6 -0.1
CMMT  Chiang Mai       26.30 148   P      P      07 40 54.7 +1.0
      comp=Z,5.4nm,0.9s
CM34  Chiang Mai Arr   26.34 147   P      P      07 40 55.0 +0.8
CM32  Chiang Mai Arr   26.40 148   P      P      07 40 57.0 +2.3
WHN   Wuhan            26.54 106   P      P      07 40 56.4 +0.5
CM15  Chiang Mai Arr   26.61 148   P      P      07 40 58.2 +1.6
      comp=Z,363nmcomp=Z,14nm,0.4s
CM31  Chiang Mai Arr   26.62 148   P      P      07 41 02.3 +5.6
      comp=Z,481nm,0.8s
CM31  Chiang Mai Arr   26.62 148   P      P      07 40 56.6  0.0
CM31                               IAmb   IAmb   07 41 02.7
      comp=Z,13nm,0.8s
CMAR  Chiang Mai Arr   26.62 148   P      P      07 40 57.5 +0.9
      comp=Z,7.2nm,0.7s,baz=323,slow=8.7,SNR=41
CMAR  Chiang Mai Arr   26.62 148   P      P      07 40 55.5 -1.1
CM02  Chiang Mai Arr   26.64 148   P      P      07 40 57.0 +0.2
      comp=Z,206nmcomp=Z,27nm,0.9s
CM01  Chiang Mai Arr   26.66 148   P      P      07 40 58.0 +1.0
      comp=Z,236nmcomp=Z,24nm,1.2s
BELG  Belogornoye      26.77 305 i P      P      07 40 58.0 +0.2
BELG                               pmax   pmax
      comp=Z,7.0nm,1.0s
KIRV  Kirov            27.35 319   P      P      07 41 03.1 +0.3
      comp=Z,12nm,0.4s,baz=125,slow=17,SNR=4.5
SUKH  Sukhothai        27.77 148   P      P      07 41 19.2  +12
NJ2   Nanjing          29.02  99 eP       P      07 41 17.6 -0.4
NJ2                                pmax   pmax
      comp=Z,16nm,0.5s
UTHA  Uthaitani        29.45 150   P      P      07 41 23.9 +1.9
CN2   Changchun        29.79  73 eP       P      07 41 24.8  0.0
CN2                              eS       S      07 46 18.3 -2.8
CN2                                pmax   pmax
      comp=Z,10.0nm,0.6s
CN2                                pmax   pmax
      comp=Z,100nm,5.0s
CN2                                LR     LR
      comp=Z,100nm,11.0s
CN2                                LR     LR
      comp=Z,100nm,11.0s
CN2                                LR     LR
      comp=Z,400nm,12.0s
GNI   Garni            29.83 280 i P      P      07 41 26.3 +0.9
GNI                                pmax   pmax
      comp=Z,4.0nm,0.8s
KBZ   Khabaz           30.28 287   P      P      07 41 30.4 +1.3
      comp=Z,2.1nm,0.6s,baz=104,slow=8.0,SNR=9.0
KBZ   Khabaz           30.28 287ceP       P      07 41 28.6 -0.5
KBZ                                pmax   pmax
      comp=Z,4.0nm,1.0s
KIV   Kislovodsk       30.39 288 eP       P      07 41 27.9 -2.3
KIV                                pmax   pmax
      comp=Z,12nm,1.0s
ZEA   Zeya             30.43  53 eP       P      07 41 31.7 +1.4
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie       31.88 302 eP       P      07 41 42.9 -0.2
VORD                               pmax   pmax
      comp=Z,8.0nm,0.7s
VSR   Storozhevoye     31.95 302 eP       P      07 41 43.8  0.0
VSR                                pmax   pmax
      comp=Z,30nm,1.2s
LPSR  Galich'ya Gora   32.09 305 eP       P      07 41 45.3 +0.4
LPSR                               pmax   pmax
      comp=Z,40nm,0.7s
KLMR  Klimovskoe       32.82 320 eP       P      07 41 50.8 -0.4
KLMR                               pmax   pmax
      comp=Z,18nm,0.8s
KLMR  Klimovskoe       32.82 320 eP       P      07 41 50.9 -0.3
KLMR                               AMP           07 41 54.3
      comp=Z,18nm,0.8s
MOS   Moscow           32.99 311 eP       P      07 41 52.0 -0.8
MOS                                pmax   pmax
      comp=Z,52nm,0.8s
YAK   Yakutsk          33.20  38   P      P      07 41 54.5 -0.1
      comp=Z,8.3nm,0.4s,baz=143,slow=0.5,SNR=4.4
YAK   Yakutsk          33.20  38ceP       P      07 41 54.1 -0.5
YAK                                pmax   pmax
      comp=Z,12nm,0.6s
KLR   Kul'dur          33.30  61   P      P      07 41 56.0 +0.4
      comp=Z,8.3nm,0.5s,baz=276,slow=8.6,SNR=38
KLR   Kul'dur          33.30  61ceP       P      07 41 55.6  0.0
KLR                                pmax   pmax
      comp=Z,7.0nm,0.9s
KSRS  Korea Array      33.41  83   P      P      07 41 56.0 -0.6
      comp=Z,1.1nm,0.4s,baz=285,slow=7.5,SNR=7.2
OBN   Obninsk          33.55 309⇑eP       P      07 41 57.4 -0.3
OBN                              e               07 43 09.2
OBN                              eS       S      07 47 10.8 -8.8
OBN                                pmax   pmax
      comp=Z,33nm,1.3s
OBN                                MLR    MLR
      comp=Z,169nm,14.0s
MARD  Mardin           33.70 277   P      P      07 42 00.5 +1.1
TMCR  Tamitsa          34.38 326 eP       P      07 42 05.8 +1.0
TIXI  Tiksi            36.63  22ceP       P      07 42 23.3 -0.7
TIXI  Tiksi            36.63  22   P      P      07 42 22.1 -1.9
LVZ   Lovozero         36.85 331   P      P      07 42 25.3 -0.7
LVZ                                pmax   pmax
      comp=Z,348nm,2.0s
LVZ   Lovozero         36.85 331   P      P      07 42 25.3 -0.7
RAYN  Ar Rayn          37.27 253   P      P      07 42 30.0 -0.1
RAYN                               pmax   pmax
      comp=Z,8.0nm,1.0s
RAYN  Ar Rayn          37.27 253   P      P      07 42 30.0 -0.1
RAYN                               IAmb   IAmb   07 42 32.0
      comp=Z,8.5nm,1.0s
BR131 Keskin Array S   38.05 284 i P      P      07 42 37.4 +0.8
BRTR  Keskin Array B   38.05 284   P      P      07 42 38.2 +1.6
      comp=Z,3.9nm,0.8s,baz=103,slow=9.0,SNR=16
BRTR  Keskin Array B   38.05 284   P      P      07 42 37.2 +0.6
AKASG Malin Array Be   38.26 302   P      P      07 42 38.6 +0.6
      comp=Z,3.2nm,0.6s,baz=68,slow=8.9,SNR=13
AKBB  Malin Array Si   38.26 302ceP       P      07 42 37.8 -0.3
MNK   Minsk            38.59 309 i P      P      07 42 36.1 -4.7
      comp=E,5.0nm,0.8s
MNK                              i P      P      07 42 36.1 -4.7
      comp=N,23nm,0.8s
MNK                              i P      P      07 42 36.1 -4.7
      comp=Z,15nm,0.7s
MNK                              i PP     PP     07 44 04.3 -4.7
MNK                              i PPP    PPP    07 44 24.4
MNK                              i PcP    PcP    07 44 49.1 -4.0
MNK                              i S      S      07 48 28.9 -7.8
MNK                              i SS     SnSn   07 51 17.4 -6.3
MNK                              i SSS    SSS    07 51 35.4
MNK                              i ScS    ScS    07 52 44.4 -6.7
MNK                              i LR     LR     07 57 16.2
MNK                              i LRM    MLR    08 00 04.8
      comp=E,11nm,14.5s
MNK                              i LRM    MLR    08 00 18.5
      comp=N,252nm,23.9s
MNK                              i LRM    MLR    08 00 27.9
      comp=Z,85nm,15.2s
VSU   Vasula           39.00 315 eP       P      07 42 44.5 +0.3
VSU   Vasula           39.00 315 i P      P      07 42 44.7 +0.5
VSU                                pmax   pmax
      comp=Z,48nm,0.8s
IDID  Didziasalis      39.17 310 eP       P      07 42 47.4 +1.7
NACGM Naroch           39.19 309 i P      P      07 42 47.0 +1.2
NACGM                            i P      P      07 42 47.0 +1.2
NACGM                            i P      P      07 42 47.0 +1.2
NACGM                            i Pb     pP     07 42 48.1 -1.6
      comp=Z,28nm,0.8s
NACGM                            i PP     PP     07 44 13.7 -1.7
NACGM                            i PPP    PPP    07 44 43.8
NACGM                            i S      S      07 48 47.5 +1.8
NACGM                            i PS     PcS    07 49 43.2  +59
NACGM                            i SS     SnSn   07 51 42.0 +3.8
NACGM                            i SSS    SSS    07 52 06.9
NACGM                            i LQ     LQ     07 56 07.0
NACGM                            i LR     LR     07 57 59.2
SORM  Soroca           39.31 299 ⇓P       P      07 42 47.2 +0.3
FIA1  FINESS Array S   39.34 320   P      P      07 42 48.1 +1.0
FIA1                               IAmb   IAmb   07 43 43.8
      comp=Z,44nm,1.6s
FINES FINESS Array B   39.35 320   P      P      07 42 47.8 +0.7
      comp=Z,2.6nm,0.3s,baz=102,slow=10.0,SNR=35
FINES FINESS Array B   39.35 320   P      P      07 42 47.4 +0.3
IIGN  Ignalina         39.47 310 eP       P      07 42 49.5 +1.3
ISAL  Salakas          39.50 310 eP       P      07 42 50.2 +1.8
TPGR  Topolog          40.09 294 ⇓P       P      07 42 54.3 +0.7
ARA0  ARCESS Array S   40.49 332 eP       P      07 42 57.5 +0.9
ARCES ARCESS Array B   40.49 332   P      P      07 42 57.6 +1.1
      comp=Z,10nm,0.7s,baz=90,slow=7.9,SNR=57
ARCES                              PcP    PcP    07 44 59.1 +0.3
      comp=Z,3.9nm,0.9s,baz=104,slow=5.1,SNR=3.8
ARCES ARCESS Array B   40.49 332   P      P      07 42 57.5 +0.9
ARCES                              pmax   pmax
      comp=Z,69nm,1.8s
ARCES ARCESS Array B   40.49 332   P      P      07 42 57.5 +0.9
MTSE  Matsula          40.52 316 eP       P      07 42 55.9 -0.9
PABE  Paberze          40.73 311 eP       P      07 42 59.5 +0.9
TESR  Tescani          40.83 297 ⇓P       P      07 43 00.8 +1.2
VRI   Vrincioaia       40.95 296 ⇑P       P      07 43 01.0 +0.3
KTK1  Kautokeino       41.20 331 eP       P      07 43 03.5 +1.1
ISR   Istrita          41.29 295 ⇑P       P      07 43 04.8 +1.3
BURAR Bucovina Array   41.48 299 ⇑P       P      07 43 07.9 +2.9
BUR08 Bucovina Ar. S   41.48 299   P      P      07 43 06.3 +1.3
MLR   Muntele Rosu     41.58 295 ⇑P       P      07 43 07.4 +1.4
MLR   Muntele Rosu     41.58 295   P      P      07 43 06.7 +0.7
MLR                                pmax   pmax
      comp=Z,4.0nm,0.7s
MLR   Muntele Rosu     41.58 295   P      P      07 43 06.7 +0.7
DOPR  Dopca            41.82 296 ⇓P       P      07 43 09.7 +1.9
VOIR                   42.20 295 ⇑P       P      07 43 12.3 +1.3
TRO   Tromso           42.79 332 eP       P      07 43 16.0 +0.7
MA2   Magadan          43.30  43ceP       P      07 43 19.1 -0.4
MA2                                pmax   pmax
      comp=Z,14nm,1.7s
MA2   Magadan          43.30  43   P      P      07 43 18.7 -0.9
FAUS  Fauske           44.07 329 eP       P      07 43 26.4 +0.8
STEI  Steigen          44.08 329 eP       P      07 43 26.4 +0.7
OJC   Ojcow            44.24 304   P      P      07 43 27.1 -0.2
OJC                                pmax   pmax
      comp=Z,17nm,0.9s
OJC   Ojcow            44.24 304   P      P      07 43 27.1 -0.2
OJC                                IAmb   IAmb   07 43 29.3
      comp=Z,17nm,0.9s
MOR8  Moi Rana         44.45 327 eP       P      07 43 28.6 -0.2
LOF   Lofoten          44.71 330 eP       P      07 43 31.4 +0.6
LANS  Liptovska Anna   44.74 302 eP       P      07 43 38.2 +6.8
LANS  Liptovska Anna   44.74 302 eP       P      07 43 38.2 +6.8
APE   Apeiranthos      44.95 284 ⇓P       P      07 43 32.5 -0.6
KONS  Konsvik          44.96 327 eP       P      07 43 33.3 +0.5
VYHS  Vyhne            45.34 302 eP       P      07 43 38.3 +2.2
VYHS                               pmax   pmax
      comp=Z,12nm,1.6s
VYHS  Vyhne            45.34 302 eP       P      07 43 38.3 +2.2
NSS   Namsos           45.63 325 eP       P      07 43 38.5 +0.3
MORC  Moravsky Berou   45.76 304 ⇑P       P      07 43 40.8 +1.3
MORC  Moravsky Berou   45.76 304 eP       P      07 43 40.6 +1.1
MORC  Moravsky Berou   45.76 304   P      P      07 43 39.5  0.0
MORC                               pmax   pmax
      comp=Z,8.0nm,0.9s
MORC  Moravsky Berou   45.76 304   P      P      07 43 39.5  0.0
MORC                               IAmb   IAmb   07 43 41.8
      comp=Z,7.9nm,0.9s
BSD   Bornholm Skovb   45.88 311 i P      P      07 43 40.5 +0.3
BSD   Bornholm Skovb   45.88 311 i P      P      07 43 40.5 +0.3
BSD   Bornholm Skovb   45.88 311 i P      P      07 43 40.6 +0.3
JAVC  Velka Javorina   45.96 302 eP       P      07 43 43.7 +2.7
DIVS  Divibare         46.04 295   P      P      07 43 41.9 +0.1
DIVS                               IAmb   IAmb   07 43 51.4
      comp=Z,18nm,1.6s
KRLC  Kraliky          46.14 304 eP       P      07 43 43.6 +1.1
KRLC  Kraliky          46.14 304 eP       P      07 43 43.6 +1.1
NC405 NORSAR Array S   46.27 320   P      P      07 43 44.0 +0.7
DPC   Dobruska-Polom   46.34 305 eP       P      07 43 45.4 +1.4
DPC   Dobruska-Polom   46.34 305 eP       P      07 43 45.4 +1.4
CHVC  Chvalec          46.44 305 eP       P      07 43 46.1 +1.4
UPC   Upice            46.49 305 eP       P      07 43 46.5 +1.4
UPC   Upice            46.49 305 eP       P      07 43 46.5 +1.4
VRAC  Vranov           46.49 303 eP       P      07 43 46.7 +1.5
NB2   NORSAR Subarra   46.53 320   P      P      07 43 45.9 +0.6
      comp=Z,5.2nm,0.4s,baz=78,slow=7.9
NB2   NORSAR Subarra   46.53 320   P      P      07 43 45.9 +0.6
      baz=78,slow=7.9
NOA   NORSAR Array B   46.53 320   P      P      07 43 45.8 +0.5
      comp=Z,9.4nm,0.6s,baz=79,slow=8.8,SNR=32
KRUC  Moravsky         46.70 303 eP       P      07 43 48.2 +1.5
NAO01 NORSAR Array S   46.72 320 eP       P      07 43 47.0 +0.3
OSL   Oslo             46.99 319 eP       P      07 43 50.1 +1.3
DOMB  Dombas           47.34 322 eP       P      07 43 52.3 +0.7
CONA  Conrad Observa   47.40 302 eP       P      07 43 55.0 +2.6
      comp=Z,8.4nm,1.2s
PRU   Pruhonice        47.55 305 eP       P      07 43 54.5 +1.2
PRU   Pruhonice        47.55 305 eP       P      07 43 54.5 +1.2
BRG   Berggiesshubel   47.63 306 i P      P      07 43 55.3 +1.3
BRG                                Amp           07 43 57.8
      comp=Z,7.8nm,1.0s
BRG   Berggiesshubel   47.63 306 i P      P      07 43 55.3 +1.3
BRG                                pmax   pmax
      comp=Z,8.0nm,1.0s
BRG   Berggiesshubel   47.63 306 i P      P      07 43 55.3 +1.3
BRG                                Amp           07 43 57.8
      comp=Z,7.8nm,1.0s
MOL   Molde            47.92 323 eP       P      07 43 57.1 +1.1
SKAR  Skarslia         48.00 320 eP       P      07 43 58.2 +1.5
CLL   Collm            48.05 307 i P      P      07 43 58.3 +1.1
      comp=Z,19nm,0.7s
CLL                              epP      sP     07 44 05.0 +2.7
CLL   Collm            48.05 307 i P      P      07 43 58.3 +1.1
CLL                              e               07 44 05.0
CLL                                pmax   pmax
      comp=Z,19nm,0.7s
AKN   Aaknes           48.26 322 eP       P      07 43 58.6 -0.1
SOKA  Soboth           48.37 300 eP       P      07 44 01.7 +1.9
      comp=Z,9.1nm,1.2s
KHC   Kasperske Hory   48.42 304ceP       P      07 44 00.1 -0.1
KHC                                pmax   pmax
      comp=Z,18nm,2.5s
KHC   Kasperske Hory   48.42 304 eP       P      07 44 00.8 +0.6
GERES GERESS Array B   48.44 304   P      P      07 44 01.7 +1.3
      comp=Z,2.5nm,0.8s,baz=68,slow=8.8,SNR=14
GERES GERESS Array B   48.44 304   P      P      07 44 00.5 +0.1
GERES GERESS Array B   48.44 304   P      P      07 44 00.5 +0.1
PETK  Petropavlovsk-   48.47  50   P      P      07 44 01.6 +1.1
      comp=Z,1.5nm,0.6s,baz=308,slow=4.9,SNR=9.9
HOMB  Homborsund       48.51 317 eP       P      07 44 00.1 -0.5
BILL  Bilibino         48.74  30⇓eP       P      07 44 01.3 -1.0
BILL                             e               07 45 27.2
BILL                             e               07 46 00.3
BILL                               pmax   pmax
      comp=Z,13nm,2.5s
BILL                               MLR    MLR
      comp=Z,129nm,18.0s
ODD1  Odda             49.00 319 eP       P      07 44 05.8 +1.3
SNART Snartemo         49.14 317 eP       P      07 44 06.6 +1.1
SNART Snartemo         49.14 317 i P      P      07 44 06.9 +1.3
BLS5  Blasjo           49.22 319 eP       P      07 44 07.0 +0.9
BER   Bergen           49.49 320 eP       P      07 44 09.5 +1.4
GRF   Grafenberg Arr   49.67 305 eP       P      07 44 11.5 +1.8
      comp=Z,20nm,0.9s,baz=69,slow=6.5
KMY   Karmoy           49.87 319 eP       P      07 44 12.0 +1.0
WATA  Walderalm        50.32 302 eP       P      07 44 16.4 +1.6
      comp=Z,19nm,1.2s
SQTA  Sankt Quirin     50.60 302 eP       P      07 44 17.5 +0.6
      comp=Z,5.8nm,0.4s
MOTA  Moosalm          50.61 303 eP       P      07 44 18.0 +0.9
      comp=Z,17nm,1.1s
FETA  Feichten         50.98 302 i P      P      07 44 20.4 +0.6
      comp=Z,11nm,1.3s
DAG   Danmarks Havn    52.30 344 i P      P      07 44 29.3 +0.2
DAG                                pmax   pmax
      comp=Z,11nm,0.5s
DAG   Danmarks Havn    52.30 344 i P      P      07 44 29.3 +0.2
      comp=Z,11nm,0.5s
DAG   Danmarks Havn    52.30 344 i P      P      07 44 29.4 +0.2
DAG                                IAmb   IAmb   07 44 30.2
      comp=Z,11nm,0.5s
DBG   Daneborg         53.72 341 i P      P      07 44 40.2 +0.6
DBG                                IAmb   IAmb   07 44 41.4
      comp=Z,5.1nm,0.8s
BNI   Bardonecchia     54.36 302   P      P      07 44 45.1 +0.2
BNI                                pmax   pmax
      comp=Z,19nm,1.2s
BNI   Bardonecchia     54.36 302   P      P      07 44 45.1 +0.2
BNI                                IAmb   IAmb   07 44 47.4
      comp=Z,19nm,1.2s
COCO  West Island      55.24 165 i P      P      07 44 49.8 -1.4
KEST  Kesra            57.07 290   P      P      07 45 05.1 +0.7
      comp=Z,3.8nm,0.8s,baz=224,slow=5.8,SNR=3.7
SUMG  Summit           58.97 343   P      P      07 45 18.2 +0.7
SUMG                               pmax   pmax
      comp=Z,4.0nm,1.2s
SUMG  Summit           58.97 343   P      P      07 45 18.1 +0.7
SUMG  Summit           58.97 343 i P      P      07 45 18.0 +0.5
SUMG  Summit           58.97 343 i P      P      07 45 18.1 +0.5
ICESG Greenland Ices   61.71 340 i P      P      07 45 37.1 +0.9
IMAR  Indian Mountai   63.27  23   P      P      07 45 46.5 +0.2
COLD  Coldfoot         63.35  21   P      P      07 45 47.3 +0.5
COLD                               IAmb   IAmb   07 45 48.4
      comp=Z,7.8nm,1.0s
ESDC  Sonseca Array    63.87 301   P      P      07 45 51.7 +0.9
      comp=Z,1.7nm,0.6s,baz=43,slow=7.1,SNR=8.9
BMAR  Burnt Mountain   64.62  19   P      P      07 45 53.8 -1.4
BPAW  Bear Paw Mtn.    65.45  23   P      P      07 46 01.7 +1.0
BPAW                               IAmb   IAmb   07 46 02.1
      comp=Z,9.6nm,1.2s
MDM   Murphy Dome      65.59  22   P      P      07 46 01.1 -0.4
MDM                                IAmb   IAmb   07 46 03.0
      comp=Z,5.4nm,1.0s
COLA  College          65.76  22 i P      P      07 46 02.5  0.0
COLA                               pmax   pmax
      comp=Z,5.0nm,0.9s
KTH   Kantishna Hill   65.87  24   P      P      07 46 04.2 +0.7
ILAR  Eielson Array    66.10  21   P      P      07 46 04.6 -0.2
      comp=Z,2.8nm,0.8s,baz=316,slow=5.2,SNR=31
INK   Inuvik           66.25  14   P      P      07 46 06.1 +0.5
      comp=Z,1.9nm,0.6s,baz=346,slow=6.8,SNR=7.4
C36M  Paulatuk         66.84  11   P      P      07 46 09.4  0.0
DHY   Denali Highway   67.28  23   P      P      07 46 12.8 +0.3
DHY                                IAmb   IAmb   07 46 47.7
      comp=Z,30nm,2.0s
PAX   Paxson           67.91  22   P      P      07 46 15.4 -1.0
PAX                                pmax   pmax
      comp=Z,9.0nm,1.3s
PAX   Paxson           67.91  22   P      P      07 46 15.3 -1.0
PAX                                IAmb   IAmb   07 46 17.9
      comp=Z,9.2nm,1.3s
K27K  Chicken          67.97  20   P      P      07 46 16.7  0.0
K27K                               IAmb   IAmb   07 46 18.5
      comp=Z,5.0nm,0.9s
SCM   Sheep Creek Mo   68.26  24   P      P      07 46 18.8 +0.2
SCM                                pmax   pmax
      comp=Z,34nm,1.4s
SCM   Sheep Creek Mo   68.26  24   P      P      07 46 18.8 +0.2
BCAR  Beaver Creek A   68.83  21   P      P      07 46 23.1 +0.9
KDAK  Kodiak Island    69.63  29   P      P      07 46 27.3 +0.2
      comp=Z,3.6nm,0.5s,baz=7.2,slow=6.3,SNR=24
KDAK  Kodiak Island    69.63  29   P      P      07 46 26.8 -0.3
KDAK                               pmax   pmax
      comp=Z,55nm,1.4s
KDAK  Kodiak Island    69.63  29   P      P      07 46 26.8 -0.3
YKA   Yellowknife Ar   74.59   9   P      P      07 46 56.5 -0.2
      comp=Z,1.8nm,0.7s,baz=346,slow=5.6,SNR=29
TOA0  Torodi Ar. Sit   76.01 275   P      P      07 47 06.0 +0.3
TOA0                               IAmb   IAmb   07 47 06.1
      comp=Z,5.5nm,0.7s
TORD  Torodi Ar. Bea   76.01 275   P      P      07 47 05.3 -0.4
      comp=Z,5.4nm,0.5s,baz=41,slow=5.0,SNR=31
TORD  Torodi Ar. Bea   76.01 275   P      P      07 47 04.9 -0.8
WB0   Warramunga Arr   76.90 132   P      P      07 47 10.8 +0.3
WB0                                IAmb   IAmb   07 47 11.3
      comp=Z,7.1nm,0.9s
WRAB  Tennant Creek    77.01 132ceP       P      07 47 10.8 -0.3
WRAB                               pmax   pmax
      comp=Z,17nm,2.5s
WRA   Warramunga Arr   77.02 132   P      P      07 47 11.1  0.0
      comp=Z,4.6nm,0.8s,baz=332,slow=5.8,SNR=30
WRA   Warramunga Arr   77.02 132   P      P      07 47 11.3 +0.2
WRA   Warramunga Arr   77.02 132   P      P      07 47 11.3 +0.2
WB2   Warramunga Arr   77.02 132   P      P      07 47 11.1 -0.1
WB2                                IAmb   IAmb   07 47 12.1
      comp=Z,11nm,1.1s
WR0   Warramunga Arr   77.14 132   P      P      07 47 11.5 -0.3
WR0                                IAmb   IAmb   07 47 12.6
      comp=Z,8.1nm,1.1s
KOWA  Kowa             79.35 280   P      P      07 47 24.2 -0.1
KOWA                               IAmb   IAmb   07 47 25.3
      comp=Z,6.9nm,0.7s
AS31  Alice Springs    79.81 135   P      P      07 47 26.9 +0.4
ASAR  Alice Springs    79.81 135   P      P      07 47 26.8 +0.3
      comp=Z,3.9nm,0.8s,baz=331,slow=5.7,SNR=31
ASAR  Alice Springs    79.81 135   P      P      07 47 26.4 -0.1
DBIC  Dimbokro         85.11 275   P      P      07 47 54.1 -0.4
      comp=Z,3.3nm,0.5s,baz=20,slow=5.6,SNR=5.2
ULM   Lac du Bonnet    87.99   0   P      P      07 48 06.6 -1.4
      comp=Z,3.4nm,0.7s,baz=2.0,slow=4.8,SNR=9.2
JTMT  Jette            88.96  13   P      P      07 48 12.8 -0.1
EGMT  Eagleton         89.33  10   P      P      07 48 15.0 +0.4
EGMT                               IAmb   IAmb   07 48 15.4
      comp=Z,11nm,1.1s
DGMT  Dagmar           89.44   6   P      P      07 48 11.9 -3.1
HRY   Holter Researc   90.35  11   P      P      07 48 19.1 -0.2
STKA  Stephens Creek   90.43 134   P      P      07 48 19.0 -0.5
      comp=Z,4.0nm,0.6s,baz=322,slow=6.6,SNR=11
STKA  Stephens Creek   90.43 134   P      P      07 48 18.8 -0.7
STKA                               pmax   pmax
      comp=Z,6.0nm,1.8s
STKA  Stephens Creek   90.43 134   P      P      07 48 18.8 -0.7
STKA                               IAmb   IAmb   07 48 20.4
      comp=Z,6.4nm,1.8s
BMO   Blue Mountains   91.22  15   P      P      07 48 22.9 -0.5
BMO                                pmax   pmax
      comp=Z,14nm,1.8s
BMO   Blue Mountains   91.22  15   P      P      07 48 22.9 -0.5
BMO                                IAmb   IAmb   07 48 24.4
      comp=Z,14nm,1.8s
BOZ   Bozeman (W)      91.47  11   P      P      07 48 23.9 -0.7
BOZ                                pmax   pmax
      comp=Z,7.0nm,1.2s
BOZ   Bozeman (W)      91.47  11   P      P      07 48 23.9 -0.7
BOZ                                IAmb   IAmb   07 48 25.9
      comp=Z,6.5nm,1.2s
DLMT  Dillon           91.55  12   P      P      07 48 25.4 +0.4
DLMT                               IAmb   IAmb   07 48 26.6
      comp=Z,7.6nm,1.2s
RLMT  Red Lodge        92.25  10   P      P      07 48 27.9 -0.4
ECSD  EROS Data Cent   94.50   1   P      P      07 48 37.5 -0.9
PDAR  Pinedale Array   94.53  10   P      P      07 48 38.9  0.0
      comp=Z,0.5nm,0.6s,baz=46,slow=2.3,SNR=6.9
PDAR  Pinedale Array   94.53  10   P      P      07 48 38.1 -0.8
HWUT  Hardware Ranch   95.38  12   P      P      07 48 44.1 +1.4
HWUT                               IAmb   IAmb   07 48 44.5
      comp=Z,4.3nm,0.7s
NVAR  Mina Array Bea   97.16  18   P      Pdif   07 48 52.2 +1.2
      comp=Z,0.4nm,0.6s,baz=310,slow=4.2,SNR=5.0
CPUP  Villa Florida   145.06 285   PKPbc  PKPbc  07 54 54.4 -0.6
      comp=Z,4.1nm,0.7s,baz=42,slow=4.0,SNR=7.2
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IDC 20 07:55:45.9±2.3**, 5°.60S**×**130°.76E, h0**km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.4**/27**, mbtmp3.4**/4**, ML3.4**/3**, Error ellipse: s-maj=78.4km s-min=30.6km az=77.0, Banda Sea**

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
FITZ  Fitzroy Crossi   13.39 202   Pn     Pn     07 58 56.7 -0.6
      0.2nm,0.3s,baz=24,slow=12,SNR=7.7
FITZ                               Sn     Sn     08 01 12.7  -14
      0.2nm,0.3s,baz=199,slow=6.4,SNR=2.1
WRA   Warramunga Arr   14.67 167   Pn     Pn     07 59 16.7 +1.8
      0.2nm,0.3s,baz=347,slow=11,SNR=6.7
WRA                                Sn     Sn     08 01 46.6  -12
      0.2nm,0.3s,baz=331,slow=24,SNR=6.1
ASAR  Alice Springs    18.21 171   P      Pn     07 59 59.5 -0.9
      0.1nm,0.3s,baz=348,slow=10,SNR=8.4
MKAR  Makanchi Array   67.48 326   P      P      08 06 43.9 +0.1
      0.2nm,0.5s,baz=122,slow=5.4,SNR=2.4
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*BGR **20** 08:14:28.6±0.0, 17°.22S×174°.20W, h33km*

*IDC **20** 08:14:46.7±1.8, 17°.19S×174°.73W, h175km±16km, mb4.2/18, mb1 4.4/21, mb1mx4.4/25, mbtmp4.7/21, MS3.0/1, Ms1 3.0/1, ms1mx2.7/30, Error ellipse: s-maj=14.7km s-min=9.8km az=126.0*

*NEIC **20** 08:14:46.1±1.4, 17°.1S±0°.1×174°.8W±0°.1, h173km±6km, mb4.6/161, Error ellipse: s-maj=22.1km s-min=14.1km az=128.0*

*NOU **20** 08:14:49.3, 17°.00S×174°.38W, h237km, mb4.7, Tonga Islands*

ISC 20 08:14:45.7±0.3**, 17°.20S**±0°.05×**174°.73W**±0°.07**, h172**km**, n473, σ1s.17**/488**, mb4.6**/103**, 14C-27D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.34	41	P	Pn	08 15 51.6	+0.5
	69nm,0.3s,baz=207,slow=2.6,SNR=109						
AFI				S	Sn	08 16 38.2	-3.9
	173nm,0.3s,baz=30,slow=22,SNR=22						
AFI				LR	LR	08 17 11.9	
	comp=Z,161nm,19.6s,baz=312,slow=34						
NIUE	Niue	4.94	113	P	Pn	08 16 01.4	+2.7
MSVF	Nonsavu	6.91	265	P	Pn	08 16 33.2	+8.5
	4.7nm,0.3s,baz=94,slow=10,SNR=95						
MSVF	Nonsavu	6.91	265	P	Pn	08 16 33.2	+8.5
GLKZ	Green Lake	12.36	193	P	Pn	08 17 36.6	+0.7
GLKZ				S	Sn	08 19 45.8	-7.3
RAR	Rarotonga	14.68	108	P	P	08 18 07.5	+0.5
	4.2nm,0.3s,baz=45,slow=1.4,SNR=3.6						
DZM	Mont Dzumac	18.38	252	P	Pn	08 18 49.7	-0.2
	0.6nm,0.3s,baz=102,slow=20,SNR=2.9						
OUZ	Omahuta	20.75	208	P	Pn	08 19 16.4	-1.6
OUZ				IAmb	IAmb	08 19 18.6	
	comp=Z,37nm,1.4s						
MXZ	Matakaoa Point	21.19	195	P	P	08 19 18.8	+1.0
MXZ				S	S	08 23 04.9	+1.8
KUZ	Kuaotunu	21.22	202	P	P	08 19 19.6	+1.6
WMGZ	Waiomatatini S	21.41	195	P	P	08 19 23.1	+3.1
HAZ	Te Kaha	21.51	196	P	P	08 19 22.3	+1.1
PKGZ	Pakihiroa	21.56	196	P	P	08 19 24.9	+3.2
PUZ	Puketiti	21.69	195	P	P	08 19 24.0	+1.0
PUZ				S	S	08 23 08.4	-3.2
RUGZ	Raukumara Rang	21.74	196	P	P	08 19 25.8	+2.1
RUGZ				S	S	08 23 06.7	-5.9
MKAZ	Moumakai	21.74	202	P	P	08 19 24.9	+1.3
MWZ	Matawai	22.12	196	P	P	08 19 28.4	+1.0
MWZ				S	S	08 23 16.3	-2.4
URZ	Urewera	22.17	197	P	P	08 19 27.6	-0.2
	comp=Z,13nm,0.5s,baz=348,slow=3.2,SNR=21						
URZ				S	S	08 23 14.0	-5.3
	comp=Z,6.5nm,1.1s,baz=336,slow=6.2,SNR=1.8						
URZ	Urewera	22.17	197	P	P	08 19 27.5	-0.2
URZ				IAmb	IAmb	08 19 30.7	
	comp=Z,16nm,0.6s						
BKZ	Black Stump Fm	23.19	198	P	P	08 19 38.6	+1.4
DVHZ	Dannevirke	24.33	197	P	P	08 19 50.4	+2.8
BFZ	Birch Farm	24.67	197	P	P	08 19 51.3	+0.7
BFZ				IAmb	IAmb	08 19 57.9	
	comp=Z,18nm,0.7s						
MRZ	Mangatainoka R	24.84	198	P	P	08 19 51.1	-1.1
OGWZ	Otaki Gorge	25.10	198	P	P	08 19 54.7	+0.2
CAW	Cannon Point	25.40	198	P	P	08 19 56.4	-0.8
BHW	Baring Head	25.73	198	P	P	08 20 00.3	+0.2
QRZ	Quartz Range	25.99	202	P	P	08 20 02.7	+0.2
QRZ	Quartz Range	25.99	202	P	P	08 20 03.3	+0.8
NNZ	Nelson	26.03	201	P	P	08 20 03.7	+0.8
TUWZ	Tuamarina	26.04	200	P	P	08 20 02.7	-0.3
THZ	Tophouse	26.68	201	P	P	08 20 08.9	+0.1
THZ	Tophouse	26.68	201	P	P	08 20 09.3	+0.5
DSZ	Denniston Nort	27.05	203	P	P	08 20 12.2	+0.1
KHZ	Kahutara	27.06	199	P	P	08 20 11.8	-0.3
LTZ	Lake Taylor	27.80	201	P	P	08 20 18.4	-0.4
LTZ				IAmb	IAmb	08 20 22.7	
	comp=Z,18nm,0.8s						
OXZ	Oxford	28.36	201	P	P	08 20 23.0	-0.7
RPZ	Rata Peaks	29.04	202	P	P	08 20 29.8	0.0
	comp=Z,7.7nm,0.6s,baz=350,slow=6.0,SNR=7.0						
RPZ	Rata Peaks	29.04	202	P	P	08 20 29.5	-0.2
WHZ	Wether Hill Ro	32.05	203	P	P	08 20 56.9	+0.8
STKA	Stephens Creek	42.04	241	P	P	08 22 21.6	+1.1
	comp=Z,28nm,0.8s,baz=88,slow=9.3,SNR=41						
STKA	Stephens Creek	42.04	241	P	P	08 22 21.7	+1.1
WR0	Warramunga Arr	48.02	258	P	P	08 23 07.7	-0.1
WB0	Warramunga Arr	48.17	259	P	P	08 23 08.1	-1.0
WB0				IAmb	IAmb	08 23 09.3	
	comp=Z,15nm,0.9s						
WB2	Warramunga Arr	48.20	258	P	P	08 23 08.8	-0.4
WB2				IAmb	IAmb	08 23 09.6	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	48.20	258	P	P	08 23 08.6	-0.7
WRAB				IAmb	IAmb	08 23 09.5	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	48.21	258	P	P	08 23 08.8	-0.5
	comp=Z,7.3nm,0.7s,baz=95,slow=7.1,SNR=86						
WRA				PcP	PcP	08 24 33.9	0.0
	comp=Z,2.4nm,0.6s,baz=94,slow=3.5,SNR=5.6						
WRA	Warramunga Arr	48.21	258	P	P	08 23 08.1	-1.2
AS31	Alice Springs	48.35	253	P	P	08 23 11.0	+0.6
AS31				IAmb	IAmb	08 23 11.6	
	comp=Z,18nm,0.8s						
ASAR	Alice Springs	48.35	253	P	P	08 23 10.3	-0.1
	comp=Z,58nm,0.7s,baz=87,slow=8.6,SNR=514						
ASAR				PcP	PcP	08 24 34.4	0.0
	comp=Z,5.5nm,0.7s,baz=105,slow=3.9,SNR=13						
ASAR				ScP	ScP	08 28 12.4	-0.5
	comp=Z,0.3nm,0.7s,baz=94,slow=4.7,SNR=2.5						
ASAR	Alice Springs	48.35	253	P	P	08 23 09.8	-0.6
SWI	Sorong	55.52	281	P	P	08 24 04.9	+1.4
	comp=Z,75nm,0.9s						
SOEI	Soe	59.58	269	P	P	08 24 43.3	+11
SANI	Sanana	60.10	278	P	P	08 24 36.3	+0.9
VNDA	Vanda	61.47	186	P	P	08 24 45.9	+2.3
	comp=Z,7.4nm,0.8s,baz=6.8,slow=6.3,SNR=16						
VNDA				PcP	pwP	08 25 25.1	+1.9
	comp=Z,2.0nm,0.8s,baz=342,slow=5.1,SNR=2.0						
VNDA	Vanda	61.47	186	P	P	08 24 45.2	+1.6
VNDA				IAmb	IAmb	08 24 46.5	
	comp=Z,8.3nm,0.8s						
EDFI	Ende, Flores	62.30	269	P	P	08 24 48.1	-2.2
	comp=Z,348nmcomp=Z,8.8nm,0.8s						
TOLI2	Tolitoli	66.05	279	P	P	08 25 14.6	0.0
TOLI2				IAmb	IAmb	08 25 16.2	
	comp=Z,17nm,1.0s						
MPSI	Mapaga	66.63	278	P	P	08 25 17.5	-0.8
	comp=Z,854nmcomp=Z,25nm,0.9s						
TWSI	Taliwang, Sumb	66.89	268	P	P	08 25 20.9	+0.9
	comp=Z,32nm,0.9s						
MJAR	Matsushiro Arr	69.50	321	P	P	08 25 36.3	+0.5
	comp=Z,4.3nm,0.9s,baz=154,slow=5.7,SNR=7.5						
PWJI	Pagerwojo	71.93	267	P	P	08 25 55.2	+4.3
	comp=Z,36nm,0.6s						
NGJI	Ngawi	72.43	268	P	P	08 26 07.7	+14
WOJI	Wonogiri, Jawa	72.82	267	P	P	08 25 57.2	+1.0
	comp=Z,65nm,0.8s						
QSPA	South Pole Qui	72.85	180	P	P	08 25 56.8	+1.2
QSPA				IAmb	IAmb	08 25 57.7	
	comp=Z,20nm,0.9s						
SCZ2	Santa Cruz Isl	73.09	45	P	P	08 25 57.9	+0.6
	baz=235						
UGM	Wanagama	73.18	267	P	P	08 25 58.9	+0.5
SCI2	San Clemente I	73.27	47	P	P	08 25 59.1	+0.7
	baz=236						
PEA0B	Petropavlovsk-	73.96	343	P	P	08 26 02.6	+0.7
PETK	Petropavlovsk-	73.96	343	P	P	08 26 02.7	+0.8
	comp=Z,8.2nm,0.7s,baz=110,slow=9.0,SNR=27						
PETK	Petropavlovsk-	73.96	343	P	P	08 26 02.5	+0.5
DECC	Green Verdugo	74.13	46	P	P	08 26 03.9	+0.5
	baz=236						
109C	Camp Elliot, M	74.23	48	P	P	08 26 04.4	+0.5
	baz=237						
KMRM	Mail Ridge	74.26	38	P	P	08 26 05.5	+1.4
ARVC	Arvin	74.28	45	P	P	08 26 04.8	+0.6
	baz=235						
VES	Vestal, Richgr	74.52	44	P	P	08 26 06.0	+0.4
	baz=235,SNR=6.0						
MURC	Murrieta	74.56	47	P	P	08 26 06.4	+0.5
	baz=237,SNR=5.2						
BFSC	Mount Baldy Ra	74.58	46	P	P	08 26 06.6	+0.4
	baz=236						
EDW2	Edwards Air Fo	74.71	45	P	P	08 26 07.6	+0.8
	baz=236,SNR=16						
MONP2	Monument Peak	74.72	48	P	P	08 26 07.7	+0.6
	baz=238						
O02D	Mt. Diablo Mer	74.78	39	P	P	08 26 08.2	+1.2
	baz=231						
RMX	La Rumorosa	74.81	48	P	P	08 26 07.7	+0.2
RMX				IAmb	IAmb	08 26 09.3	
	comp=Z,7.8nm,0.9s						
IKP	In-Ko-Pah, Jac	74.81	48	P	P	08 26 08.1	+0.6
	baz=238						
ISA	Isabella, Lake	74.83	45	P	P	08 26 08.3	+0.9
	baz=235,SNR=10						
ISA	Isabella, Lake	74.83	45	P	P	08 26 08.3	+0.9
ISA				IAmb	IAmb	08 26 10.1	
	comp=Z,22nm,1.3s						
KPJI	Karang Pucung	74.86	267	P	P	08 26 09.0	+1.0
	comp=Z,56μmcomp=Z,48nm,0.7s						
CMB	Columbia Colle	74.95	42	P	P	08 26 07.6	-0.5
PFO	Pinyon Flats O	75.08	47	P	P	08 26 09.6	+0.5
	baz=237						
PFO	Pinyon Flats O	75.08	47	P	P	08 26 08.2	-0.8
TPFO	Pinon Flats	75.08	47	P	P	08 26 09.7	+0.7
	baz=237						
BBRC	Big Bear Solar	75.11	46	P	P	08 26 10.1	+0.8
	baz=237						
AFDM	Forest Hills D	75.13	41	P	P	08 26 09.1	0.0
ORV	Oroville	75.17	40	P	P	08 26 08.8	-0.4
SWSC	Sam W. Stewart	75.19	48	P	P	08 26 10.1	+0.6
	baz=238						
LRMC	Laurel Mtn Rad	75.26	45	P	P	08 26 10.7	+0.7
	baz=236,SNR=11						
N02D	Trinity Center	75.33	38	P	P	08 26 11.3	+1.1
	baz=231						
O03E	Paynes Creek	75.44	39	P	P	08 26 11.2	+0.4
	baz=232						
M02C	Callahan	75.50	38	P	P	08 26 12.3	+1.1
	baz=231						
CWC	Cottonwood Cre	75.53	44	P	P	08 26 12.3	+0.7
	baz=236						
MDPB	Devils Postpil	75.56	43	P	P	08 26 10.9	-0.9
OMMB	Old Mammoth Mi	75.59	43	P	P	08 26 12.5	+0.3
BELC	Belle Mtn. Jos	75.61	47	P	P	08 26 12.9	+0.9
	baz=238						
MPMC	Manual Prospec	75.71	45	P	P	08 26 13.4	+0.8
	baz=236,SNR=15						
MLAC	Mammoth, Mammo	75.71	43	P	P	08 26 13.4	+0.8
	baz=235						
GSC	Goldstone, Bar	75.75	46	P	P	08 26 13.4	+0.6
	baz=237,SNR=10.0						
GSC	Goldstone, Bar	75.75	46	P	P	08 26 12.9	+0.1
GSC				IAmb	IAmb	08 26 14.5	
	comp=Z,13nm,1.1s						
TIN	Tinemaha, Big	75.78	43	P	P	08 26 13.6	+0.7
	baz=235						
BC3	Big Chuckawall	75.81	48	P	P	08 26 13.8	+0.7
	baz=238						
HEC	Hector,Ludlow	75.82	46	P	P	08 26 13.7	+0.5
	baz=237,SNR=15						
CISI	Cisompet, Garu	75.86	266	P	P	08 26 16.3	+2.5
	comp=Z,91nm,0.7s						
K02D	Willamette Mer	75.86	36	P	P	08 26 14.2	+1.0
	baz=230						
GLA	Glamis	75.94	49	P	P	08 26 14.9	+1.1
	baz=238						
BEKR	Beckworth	76.06	40	P	P	08 26 14.8	+0.3
PNTR	Pine Nut	76.07	41	P	P	08 26 15.4	+0.7
PNTR				IAmb	IAmb	08 26 16.5	
	comp=Z,11nm,0.8s						
VCNR	Virginia City	76.16	41	P	P	08 26 15.2	0.0
PIX	Pinacate	76.17	50	P	P	08 26 15.2	+0.2
HUMO	Hull Mountain	76.21	37	P	P	08 26 16.4	+1.3
HUMO				IAmb	IAmb	08 26 17.1	
	comp=Z,8.4nm,0.9s						
GMRC	Granite Mounta	76.27	47	P	P	08 26 16.3	+0.6
	baz=238,SNR=8.9						
IRM	Iron Mountain	76.29	47	P	P	08 26 16.8	+1.0
	baz=238,SNR=9.7						
GRAC	Grapevine Rang	76.32	44	P	P	08 26 16.8	+1.0
	baz=236,SNR=5.2						
L04D	Klamath Falls	76.34	37	P	P	08 26 16.8	+0.8
	baz=231						
M04C	Macdoel	76.34	38	P	P	08 26 16.8	+0.8
	baz=232						
FURC	Furnace Creek,	76.36	45	P	P	08 26 16.9	+0.9
	baz=236						
SHOC	Shoshone, Teco	76.44	45	P	P	08 26 17.1	+0.6
	baz=237,SNR=5.3						
RYN	Ryan	76.49	42	P	P	08 26 17.0	+0.1
NVAR	Mina Array Bea	76.52	42	P	P	08 26 17.7	+0.5
	comp=Z,4.2nm,0.7s,baz=225,slow=8.6,SNR=39						
NVAR	Mina Array Bea	76.52	42	P	P	08 26 17.9	+0.7
113A	Mohawk Valley,	76.56	49	P	P	08 26 17.9	+0.6
113A				IAmb	IAmb	08 26 19.0	
	comp=Z,9.9nm,0.8s						
KSRS	Korea Array	76.56	316	P	P	08 26 18.8	+1.7
	comp=Z,5.6nm,0.9s,baz=129,slow=6.1,SNR=19						
PAHR	Pah Rah Range	76.57	41	P	P	08 26 18.1	+0.7
KSAR	Wonju Array Be	76.57	316	P	P	08 26 17.9	+0.7
NV11	Mina Array Sit	76.61	42	P	P	08 26 18.2	+0.5
NV11				IAmb	IAmb	08 26 19.5	
	comp=Z,20nm,1.4s						
214A	Organ Pipe Nat	76.84	50	P	P	08 26 19.8	+0.9
	baz=240						
214A	Organ Pipe Nat	76.84	50	P	P	08 26 19.0	+0.1
214A				IAmb	IAmb	08 26 20.9	
	comp=Z,8.6nm,0.9s						
TPH	Tonopah	77.01	43	P	P	08 26 20.4	+0.4
TPNV	Topopah Spring	77.03	44	P	P	08 26 20.8	+0.8
	baz=237,SNR=10						
TPNV	Topopah Spring	77.03	44	P	P	08 26 20.3	+0.3
TPNV				IAmb	IAmb	08 26 21.9	
	comp=Z,10.0nm,1.0s						
PDMCI	Parker Dam,Lak	77.08	48	P	P	08 26 21.1	+1.0
	baz=239						
CBJI	Citeko	77.09	267	P	P	08 26 21.4	+0.7
	comp=Z,126nm,1.0s						
J04D	Umpqua Nationa	77.09	37	P	P	08 26 21.2	+0.9
	baz=231						
DBJI	Dramaga	77.15	267	P	P	08 26 22.0	+1.0
	comp=Z,123nm,0.8s						
I04A	Tendick Farm,	77.27	36	P	P	08 26 21.6	+0.5
	baz=231						
MOD	Modoc Plateau	77.32	38	P	P	08 26 22.4	+0.8
K05A	Summer Lake	77.47	38	P	P	08 26 23.5	+1.1
K05A				IAmb	IAmb	08 26 23.8	
	comp=Z,9.4nm,0.8s						
SHPR	Sheep Range	77.53	45	P	P	08 26 23.3	+0.5
SHPR				IAmb	IAmb	08 26 24.9	
	comp=Z,12nm,1.1s						
H04D	Lebanon	77.55	35	P	P	08 26 23.3	+0.8
	baz=230						
J05D	Fort Rock, OR	77.62	37	P	P	08 26 24.2	+1.1
	baz=232						
W13A	Hualapai Mount	77.67	47	P	P	08 26 24.3	+0.6
W13A				IAmb	IAmb	08 26 25.7	
	comp=Z,10nm,1.1s						
USRK	Ussuriysk Ar.	78.06	324	P	P	08 26 27.1	+1.8
	comp=Z,0.8nm,0.7s,baz=71,slow=6.3,SNR=4.2						
PRN	Pahroc Range	78.09	45	P	P	08 26 26.6	+0.7
PRN				IAmb	IAmb	08 26 28.1	
	comp=Z,14nm,1.1s						
PINE	Pine Mountain	78.10	37	P	P	08 26 26.6	+0.8
PINE				IAmb	IAmb	08 26 27.8	
	comp=Z,13nm,0.9s						
CGJI	Cibinong	78.14	267	P	P	08 26 26.6	+0.1
	comp=Z,120nm,0.6s						
I05D	Terrebonne, OR	78.21	36	P	P	08 26 27.1	+0.9
	baz=232						
R11A	Troy Canyon, C	78.24	44	P	P	08 26 27.0	+0.3
	baz=237,SNR=6.7						
R11A	Troy Canyon, C	78.24	44	P	P	08 26 27.4	+0.7
TUC	Tucson	78.51	51	P	P	08 26 29.6	+1.4
	baz=241						
TUC	Tucson	78.51	51	P	P	08 26 28.2	0.0
TUC				IAmb	IAmb	08 26 30.5	
	comp=Z,15nm,0.8s						
WVOR	Wild Horse Val	78.63	39	P	P	08 26 28.8	+0.1
X16A	Lo Mia Camp, P	79.06	49	P	P	08 26 31.9	+0.6
X16A				IAmb	IAmb	08 26 33.6	
	comp=Z,12nm,0.8s						
I07A	Izee	79.10	37	P	P	08 26 31.4	+0.2
F05D	White Salmon	79.11	35	P	P	08 26 31.6	+0.5
	baz=231						
319A	Douglas	79.20	52	P	P	08 26 32.9	+0.9
D03D	Eldon	79.29	33	P	P	08 26 32.6	+0.6
	baz=230						
CCUT	Cedar City	79.30	45	P	P	08 26 33.5	+0.9
KNB	Kanab	79.39	46	P	P	08 26 33.7	+0.7
U15A	North Rim	79.46	47	P	P	08 26 34.3	+0.8
U15A				IAmb	IAmb	08 26 35.9	
	comp=Z,14nm,1.0s						
KASI	Kota Agung	79.59	267	P	P	08 26 35.0	+0.6
WUAZ	Wupatki	79.65	48	P	P	08 26 35.6	+1.2
	baz=240						
WUAZ	Wupatki	79.65	48	P	P	08 26 33.0	-1.5
WUAZ				IAmb	IAmb	08 26 36.7	
	comp=Z,9.0nm,1.0s						
ELK	Elko	79.77	42	P	P	08 26 34.2	-0.9
ELK				IAmb	IAmb	08 26 36.5	
	comp=Z,13nm,1.4s						
PKCU	Pink Cliffs	79.96	46	P	P	08 26 36.7	+0.4
G08A	Pilot Rock	80.13	36	P	P	08 26 36.9	+0.1
G08A				IAmb	IAmb	08 26 38.2	
	comp=Z,8.1nm,1.0s						
X18A	Snowflake	80.19	49	P	P	08 26 37.4	0.0
X18A				IAmb	IAmb	08 26 39.5	
	comp=Z,9.9nm,1.0s						
NJ2	Nanjing	80.24	308	*e*P	P	08 26 38.3	+0.9
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
A04D	Lummi Island	80.25	32	P	P	08 26 37.6	+0.5
	baz=230						
B05A	Bryant	80.27	33	P	P	08 26 37.5	+0.3
	baz=230						
MTPU	Mount Pierson	80.35	45	P	P	08 26 38.8	+0.3
RC01	Rabbit Creek A	80.55	12	P	P	08 26 38.3	-0.1
	baz=204						
MSU	Marysvale	80.60	45	P	P	08 26 40.5	+1.0
SUA	Susitna One	80.70	11	P	P	08 26 39.2	-0.2
BMO	Blue Mountains	80.83	37	P	P	08 26 40.3	-0.1
121A	Cookes Peak, D	80.86	52	P	P	08 26 42.3	+1.3
	baz=243						
121A	Cookes Peak, D	80.86	52	P	P	08 26 42.0	+1.0
121A				IAmb	IAmb	08 26 43.4	
	comp=Z,16nm,0.9s						
MFID	Camas Ranch	80.88	39	P	P	08 26 40.4	-0.4
ZAIG	Zacatecas	80.96	63	P	P	08 26 42.9	+1.0
ZAIG				IAmb	IAmb	08 26 44.5	
	comp=Z,6.4nm,0.8s						
SKT	Skwentna	81.03	11	P	P	08 26 40.1	-0.9
DUG	Dugway, Tooele	81.04	43	P	P	08 26 41.9	+0.1
	baz=239						
KNK	Knik Glacier	81.11	12	P	P	08 26 41.6	+0.1
KNK				IAmb	IAmb	08 26 42.3	
	comp=Z,9.9nm,0.6s						
PMR	Palmer	81.13	12	P	P	08 26 40.9	-0.6
PMR				IAmb	IAmb	08 26 42.6	
	comp=Z,8.0nm,0.6s						
TTA	Tatalina	81.21	9	P	P	08 26 42.5	+0.5
TTA				IAmb	IAmb	08 26 44.2	
	comp=Z,12nm,1.2s						
GHO	Glory Hole Cre	81.34	12	P	P	08 26 42.6	-0.1
F10A	Beach Ranch, E	81.52	36	P	P	08 26 43.2	-0.8
F10A				IAmb	IAmb	08 26 44.9	
	comp=Z,9.8nm,0.9s						
TMUT	Trail Mountain	81.65	45	P	P	08 26 46.5	+1.3
SCM	Sheep Creek Mo	81.72	13	P	P	08 26 44.7	0.0
B08A	Colville Reser	81.78	34	P	P	08 26 44.8	-0.5
HLID	Hailey	81.82	40	P	P	08 26 46.6	+0.8
	baz=237,SNR=13						
HLID	Hailey	81.82	40	P	P	08 26 46.0	+0.2
SPUT	South Promonto	81.86	42	P	P	08 26 46.7	+0.7
HVU	Hansel Valley	81.89	42	P	P	08 26 46.4	+0.2
CTU	Camp Tracy	81.99	43	P	P	08 26 47.1	+0.3
C09A	Chrisman Ranch	82.01	35	P	P	08 26 47.2	+0.8
SRU	San Rafael Swe	82.02	45	P	P	08 26 46.8	-0.1
P17A	Butcher Ranch,	82.05	45	P	P	08 26 48.0	+0.9
N25K	Chitina, Valde	82.12	14	P	P	08 26 47.2	+0.3
	baz=209						
N25K	Chitina, Valde	82.12	14	P	P	08 26 46.4	-0.5
GLB	Gilahina Butte	82.17	14	P	P	08 26 43.9	-3.1
GLB				IAmb	IAmb	08 26 48.0	
	comp=Z,14nm,0.8s						
BALM	Baldy	82.17	15	P	P	08 26 46.1	-1.0
BALM				IAmb	IAmb	08 26 47.8	
	comp=Z,11nm,0.6s						
LENM	Lemitar	82.20	51	P	P	08 26 46.8	-1.2
M24K	Tolsona, Glenn	82.21	13	P	P	08 26 48.1	+0.8
	baz=208						
M24K	Tolsona, Glenn	82.21	13	P	P	08 26 47.3	0.0
MNTX	Cornudas Mount	82.32	54	P	P	08 26 49.4	+0.9
	baz=244						
MNTX	Cornudas Mount	82.32	54	P	P	08 26 49.1	+0.6
MNTX				IAmb	IAmb	08 26 50.0	
	comp=Z,5.9nm,0.7s						
BARN	Barnard Glacie	82.37	16	P	P	08 26 49.1	+0.8
BARN				IAmb	IAmb	08 26 49.6	
	comp=Z,13nm,0.7s						
CTGM	Chitina Glacie	82.37	16	P	P	08 26 48.6	+0.4
CTGM				IAmb	IAmb	08 26 49.5	
	comp=Z,14nm,0.7s						
TCUT	Toone Canyon	82.43	43	P	P	08 26 50.0	+0.8
BNM	Barren Site	82.45	51	P	P	08 26 49.8	+0.4
MVCO	Mesa Verde	82.50	47	P	P	08 26 50.2	+0.6
	baz=242						
HWUT	Hardware Ranch	82.58	42	P	P	08 26 50.0	+0.1
KTH	Kantishna Hill	82.60	11	P	P	08 26 48.8	-0.4
KTH				IAmb	IAmb	08 26 50.4	
	comp=Z,11nm,0.9s						
TRF	Thorofare Moun	82.62	11	P	P	08 26 48.9	-0.6
TX31	Lajitas Ar. Si	82.67	56	P	P	08 26 51.5	+1.0
TX31				IAmb	IAmb	08 26 52.2	
	comp=Z,19nm,1.1s						
TX32	Lajitas Array	82.67	56	P	P	08 26 51.2	+0.7
TXAR	Lajitas Array	82.67	56	P	P	08 26 51.6	+1.2
	comp=Z,2.7nm,0.8s,baz=222,slow=9.2,SNR=33						
TXAR	Lajitas Array	82.67	56	P	P	08 26 52.1	+1.7
PV10	Paradox Valley	82.67	46	P	P	08 26 50.7	+0.2
PV19	Morning Glory	82.68	46	P	P	08 26 50.5	0.0
PV19				IAmb	IAmb	08 26 52.0	
	comp=Z,18nm,1.1s						
PV17	East Wray Mesa	82.68	46	P	P	08 26 50.2	-0.2
PV17				IAmb	IAmb	08 26 51.4	
	comp=Z,8.4nm,0.8s						
DHY	Denali Highway	82.83	12	P	P	08 26 50.6	+0.1
BCYI	Bear Canyon	82.84	39	P	P	08 26 51.4	+0.2
RND	Reindeer	82.84	11	P	P	08 26 50.4	-0.1
PV01	Paradox Valley	82.88	47	P	P	08 26 51.9	+0.3
PV01				IAmb	IAmb	08 26 53.0	
	comp=Z,11nm,0.9s						
NEW	Newport	82.91	35	P	P	08 26 50.6	-0.5
	baz=234						
PV22	Blue Mesa, Par	82.92	46	P	P	08 26 51.6	-0.1
PV22				IAmb	IAmb	08 26 53.3	
	comp=Z,10nm,1.0s						
ANMO	Albuquerque	82.93	50	P	P	08 26 52.7	+0.9
	baz=244						
ANMO	Albuquerque	82.93	50	P	P	08 26 51.7	-0.1
ANMO				IAmb	IAmb	08 26 53.7	
	comp=Z,13nm,1.1s						
MCK	McKinley	83.12	11	P	P	08 26 51.8	0.0
	baz=205,SNR=15						
GDL2	Guadalupe Moun	83.32	54	P	P	08 26 55.0	+1.3
RDMU	Red Mountain	83.37	44	P	P	08 26 53.6	-0.4
MCMT	McKenzie Canyo	83.45	39	P	P	08 26 54.5	+0.2
AHID	Auburn Hatcher	83.47	42	P	P	08 26 54.6	+0.3
AHID				IAmb	IAmb	08 26 55.9	
	comp=Z,21nm,1.5s						
MENT	Mentasta	83.49	14	P	P	08 26 53.0	-0.8
MENT				IAmb	IAmb	08 26 54.8	
	comp=Z,8.7nm,0.6s						
DLBC	Dease Lake	83.84	22	P	P	08 26 56.3	+0.6
DLBC				IAmb	IAmb	08 26 56.9	
	comp=Z,8.5nm,0.9s						
MSO	Missoula	83.88	37	P	P	08 26 55.9	-0.3
	baz=237						
NEA2	Nenana	83.88	11	P	P	08 26 55.6	-0.1
	baz=205,SNR=9.0						
DLMT	Dillon	83.89	39	P	P	08 26 56.4	+0.1
DLMT				IAmb	IAmb	08 26 57.9	
	comp=Z,7.2nm,0.9s						
S22A	4UR Ranch, Cre	83.92	48	P	P	08 26 57.7	+0.8
	baz=243						
S22A	4UR Ranch, Cre	83.92	48	P	P	08 26 57.4	+0.5
S22A				IAmb	IAmb	08 26 58.9	
	comp=Z,12nm,0.9s						
REDW	Red Top Meadow	83.93	41	P	P	08 26 56.7	-0.1
REDW				IAmb	IAmb	08 26 58.2	
	comp=Z,18nm,1.2s						
WRH	Wood River Hil	83.95	11	P	P	08 26 55.6	-0.4
MLY	Manley	84.00	10	P	P	08 26 55.9	-0.5
	baz=203,SNR=11						
SNOW	Snow King Moun	84.04	41	P	P	08 26 57.5	+0.1
SNOW				IAmb	IAmb	08 26 58.8	
	comp=Z,12nm,0.8s						
BCAR	Beaver Creek A	84.05	14	P	P	08 26 56.7	+0.1
O20A	White River Ci	84.05	45	P	P	08 26 57.5	+0.1
	baz=242						
O20A	White River Ci	84.05	45	P	P	08 26 57.1	-0.3
O20A				IAmb	IAmb	08 26 58.7	
	comp=Z,8.7nm,0.8s						
HDA	Harding Lake	84.11	12	P	P	08 26 56.7	-0.2
	baz=207,SNR=20						
HDA	Harding Lake	84.11	12	P	P	08 26 56.2	-0.7
CCB	Clear Creek Bu	84.17	11	P	P	08 26 56.5	-0.5
MOOW	Moose Ponds	84.19	41	P	P	08 26 57.7	-0.3
QLMT	Earthquake Lak	84.31	40	P	P	08 26 59.1	+0.5
I23K	Minto, Yukon-K	84.34	10	P	P	08 26 57.7	-0.3
	baz=204,SNR=6.5						

I23K	**Minto, Yukon-K**	**84.34**	**10**	P	**P**	**08 26 57.2**	**-0.7**
I23K				IAmb	IAmb	08 26 59.3	
	comp=Z,12nm,1.1s						
SCRK	**Sand Creek**	**84.34**	**13**	P	**P**	**08 26 58.2**	**0.0**
	baz=210,SNR=10.0						
TCOL	**CIGO, UAF Yank**	**84.36**	**11**	P	**P**	**08 26 57.8**	**-0.2**
	baz=206,SNR=13						
TCOL	**CIGO, UAF Yank**	**84.36**	**11**	P	**P**	**08 26 57.4**	**-0.6**
COLA	**College**	**84.36**	**11**	P	**P**	**08 26 57.7**	**-0.4**
MDM	**Murphy Dome**	**84.37**	**11**	P	**P**	**08 26 57.5**	**-0.7**
FLWY	**Flagg Ranch**	**84.39**	**41**	P	**P**	**08 26 59.4**	**+0.4**
FLWY				IAmb	IAmb	08 27 00.9	
	comp=Z,8.9nm,0.8s						
YHB	**Horse Butte**	**84.42**	**40**	P	**P**	**08 26 59.4**	**+0.2**
IMAR	**Indian Mountai**	**84.43**	**8**	P	**P**	**08 26 58.1**	**-0.3**
IL31		**84.45**	**12**	P	**P**	**08 26 57.7**	**-0.8**
IL31				IAmb	IAmb	08 26 59.4	
	comp=Z,24nm,1.3s						
ILAR	**Eielson Array**	**84.45**	**12**	P	**P**	**08 26 58.2**	**-0.3**
	comp=Z,5.3nm,0.6s,baz=228,slow=6.0,SNR=94						
ILAR				PP	**PP**	**08 30 09.8**	**-6.7**
	comp=Z,0.8nm,1.0s,baz=218,slow=8.6,SNR=4.3						
ILAR	**Eielson Array**	**84.45**	**12**	P	**P**	**08 26 57.8**	**-0.8**
BW06	**Boulder Array**	**84.45**	**42**	P	**P**	**08 26 59.2**	**-0.2**
	baz=241						
BW06	**Boulder Array**	**84.45**	**42**	P	**P**	**08 26 59.1**	**-0.3**
BW06				IAmb	IAmb	08 27 00.1	
	comp=Z,5.7nm,0.8s						
PD31	**Pinedale Array**	**84.45**	**42**	P	**P**	**08 26 59.1**	**-0.3**
PDAR	**Pinedale Array**	**84.45**	**42**	P	**P**	**08 26 59.0**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=213,slow=3.2,SNR=42						
PDAR	**Pinedale Array**	**84.45**	**42**	P	**P**	**08 26 58.6**	**-0.8**
SMCO	**Snowmass**	**84.47**	**46**	P	**P**	**08 27 00.5**	**+0.7**
YHL	**Hebgen Lake**	**84.48**	**40**	P	**P**	**08 27 00.4**	**+0.9**
YMR	**Madison River**	**84.52**	**40**	P	**P**	**08 27 00.6**	**+1.0**
BOZ	**Bozeman (W)**	**84.59**	**39**	P	**P**	**08 27 00.2**	**+0.3**
	baz=239,SNR=7.1						
BOZ	**Bozeman (W)**	**84.59**	**39**	P	**P**	**08 26 59.8**	**-0.1**
H17A	**Grant Village**	**84.62**	**40**	P	**P**	**08 27 01.9**	**+1.7**
	baz=240,SNR=5.3						
H17A	**Grant Village**	**84.62**	**40**	P	**P**	**08 27 00.7**	**+0.4**
POKR	**Poker Plat Res**	**84.66**	**11**	P	**P**	**08 26 59.3**	**-0.3**
	baz=206,SNR=13						
POKR	**Poker Plat Res**	**84.66**	**11**	P	**P**	**08 26 58.9**	**-0.8**
K27K	**Chicken**	**84.81**	**14**	P	**P**	**08 27 01.2**	**+0.8**
	baz=211						
K27K	**Chicken**	**84.81**	**14**	P	**P**	**08 27 00.9**	**+0.5**
K27K				IAmb	IAmb	08 27 02.4	
	comp=Z,12nm,1.1s						
SDCO	**Great Sand Dun**	**84.86**	**48**	P	**P**	**08 27 01.9**	**+0.3**
	baz=244						
SDCO	**Great Sand Dun**	**84.86**	**48**	P	**P**	**08 27 01.4**	**-0.3**
HRY	**Holter Researc**	**85.05**	**38**	P	**P**	**08 27 02.0**	**-0.1**
MSTX	**Muleshoe**	**85.27**	**52**	P	**P**	**08 27 03.9**	**+0.4**
	baz=246						
MSTX	**Muleshoe**	**85.27**	**52**	P	**P**	**08 27 03.6**	**+0.1**
MSTX				IAmb	IAmb	08 27 05.0	
	comp=Z,15nm,0.9s						
YNE	**Yellowstone No**	**85.28**	**40**	P	**P**	**08 27 02.6**	**-0.9**
PRP	**Porcupine Dome**	**85.38**	**12**	P	**P**	**08 27 03.4**	**+0.1**
T25A	**Trinidad**	**85.38**	**49**	P	**P**	**08 27 04.8**	**+0.7**
Q24A	**Divide**	**85.65**	**47**	P	**P**	**08 27 05.6**	**+0.1**
	baz=244						
EGAK	**Eagle**	**85.66**	**14**	P	**P**	**08 27 03.9**	**-0.7**
EGAK				IAmb	IAmb	08 27 06.0	
	comp=Z,13nm,0.8s						
MAW	**Mawson**	**85.69**	**199**	P	**P**	**08 27 04.7**	**-0.1**
	comp=Z,9.2nm,0.7s,baz=138,slow=7.5,SNR=10						
ISCO	**Idaho Springs**	**85.69**	**46**	P	**P**	**08 27 06.0**	**+0.2**
	baz=244						
833A	**Chaparral WMA,**	**85.72**	**59**	P	**P**	**08 27 06.6**	**+0.9**
	baz=248						
RLMT	**Red Lodge**	**85.79**	**40**	P	**P**	**08 27 06.3**	**+0.4**
	baz=241						
N23A	**Red Feather La**	**85.96**	**45**	P	**P**	**08 27 07.2**	**+0.3**
	baz=243						
N23A	**Red Feather La**	**85.96**	**45**	P	**P**	**08 27 06.7**	**-0.3**
COLD	**Coldfoot**	**86.11**	**9**	P	**P**	**08 27 07.8**	**+1.1**
	baz=204						
COLD	**Coldfoot**	**86.11**	**9**	P	**P**	**08 27 06.6**	**-0.2**
COLD				IAmb	IAmb	08 27 08.6	
	comp=Z,8.2nm,0.9s						
JCT	**Junction City**	**86.20**	**57**	P	**P**	**08 27 08.3**	**+0.2**
	baz=248						
K22A	**Casper**	**86.37**	**43**	P	**P**	**08 27 09.1**	**+0.3**
	baz=243						
AMTX	**Amarillo**	**86.46**	**52**	P	**P**	**08 27 09.8**	**+0.5**
	baz=246						
ABTX	**Abilene, Hawle**	**87.14**	**55**	P	**P**	**08 27 13.2**	**+0.6**
	baz=248						
ABTX	**Abilene, Hawle**	**87.14**	**55**	P	**P**	**08 27 12.2**	**-0.4**
BMAR	**Burnt Mountain**	**87.25**	**11**	P	**P**	**08 27 11.9**	**-0.4**
KSCO	**Kaye Shedlock'**	**87.45**	**48**	P	**P**	**08 27 14.0**	**-0.1**
	baz=246						
GYA	**Guiyang**	**87.76**	**298**	*e*P	**P**	**08 27 15.8**	**0.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
EPYK	**Eagle Plains**	**88.02**	**14**	P	**P**	**08 27 16.2**	**+0.3**
	baz=216						
LAO	**LASA Array**	**88.40**	**40**	P	**P**	**08 27 19.6**	**+1.4**
	baz=243						
WMOK	**Wichita Mounta**	**88.60**	**53**	P	**P**	**08 27 20.0**	**+0.5**
	baz=248						
RSSD	**Black Hills**	**88.64**	**43**	P	**P**	**08 27 19.7**	**+0.1**
	baz=244						
RSSD	**Black Hills**	**88.64**	**43**	P	**P**	**08 27 18.8**	**-0.9**
RSSD				IAmb	IAmb	08 27 20.3	
	comp=Z,7.8nm,1.2s						
XAN	**Xi'an**	**88.64**	**306**	P	**P**	**08 27 21.4**	**+1.7**
XAN				sP	pP	08 27 56.5	-5.5
XAN				pmax	pmax		
	comp=Z,12nm,1.5s						
U32A	**Winter Ranch,**	**89.05**	**51**	P	**P**	**08 27 22.3**	**+0.8**
U32A				IAmb	IAmb	08 27 24.7	
	comp=Z,9.5nm,0.9s						
HKT	**Hockley**	**89.21**	**58**	P	**P**	**08 27 23.7**	**+1.4**
HKT				IAmb	IAmb	08 27 26.1	
	comp=Z,8.6nm,1.2s						
HHC	**Hu-ho-hao-te**	**89.31**	**313**	*e*P	**P**	**08 27 24.0**	**+1.3**
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
FNO	**Franklin**	**89.85**	**53**	P	**P**	**08 27 25.8**	**+0.5**
237A	**Washetta, Mont**	**89.94**	**56**	P	**P**	**08 27 26.5**	**+0.8**
R32A	**Long Quarter,**	**90.03**	**50**	P	**P**	**08 27 26.4**	**+0.4**
INK	**Inuvik**	**90.31**	**14**	P	**P**	**08 27 26.4**	**-0.1**
INK				IAmb	IAmb	08 27 27.5	
	comp=Z,7.0nm,1.0s						
DGMT	**Dagmar**	**90.42**	**39**	P	**P**	**08 27 28.6**	**+1.0**
	baz=244						
NATX	**Nacogdoches**	**90.78**	**57**	P	**P**	**08 27 30.4**	**+0.8**
	baz=250						
SNAA	**Sanae**	**91.18**	**177**	P	**P**	**08 27 30.7**	**-0.2**
VNA3	**Neumayer Olymp**	**91.19**	**175**	P	**P**	**08 27 30.8**	**-0.1**
TUL1	**Leonard**	**91.31**	**53**	P	**P**	**08 27 32.4**	**+0.4**
	baz=250						
K31A	**O'Neill**	**91.57**	**46**	P	**P**	**08 27 33.2**	**+0.1**
VNA2	**Neumayer--Watz**	**91.67**	**176**	P	**P**	**08 27 33.6**	**+0.5**
	baz=170,slow=4.0						
ROC1	**El Roble**	**91.80**	**125**	P	**P**	**08 27 36.8**	**+2.0**
VNA1	**Neumayer--Stat**	**91.87**	**176**	P	**P**	**08 27 33.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**91.97**	**289**	P	**P**	**08 27 37.5**	**+2.0**
	comp=Z,5.9nm,0.8s,baz=96,slow=2.5,SNR=24						
CMAR	**Chiang Mai Arr**	**91.97**	**289**	P	**P**	**08 27 37.0**	**+1.6**
CHTO	**Chiang Mai**	**92.07**	**289**	P	**P**	**08 27 37.4**	**+1.4**
YKA	**Yellowknife Ar**	**92.25**	**24**	P	**P**	**08 27 35.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=234,slow=4.0,SNR=24						
YKA				PKKP	**PKKPdf**	**08 44 47.5**	**-2.9**
	comp=Z,0.1nm,0.6s,baz=63,slow=2.8,SNR=6.2						
MIAR	**Mount Ida**	**92.56**	**55**	P	**P**	**08 27 38.4**	**+0.6**
	baz=251						
MIAR	**Mount Ida**	**92.56**	**55**	P	**P**	**08 27 38.3**	**+0.6**
MIAR				IAmb	IAmb	08 27 38.9	
	comp=Z,6.8nm,1.1s						
W39A	**Magazine**	**92.61**	**54**	P	**P**	**08 27 38.4**	**+0.4**
	baz=251						
Z41A	**Richland Creek**	**92.75**	**56**	P	**P**	**08 27 39.2**	**+0.5**
	baz=251						
MDND	**Maddock**	**92.98**	**41**	P	**P**	**08 27 39.9**	**+0.4**
	baz=248						
GO04	**Tololo Observa**	**93.00**	**123**	P	**P**	**08 27 41.4**	**+1.0**
X40A	**Basin Creek Fa**	**93.12**	**55**	P	**P**	**08 27 41.2**	**+0.8**
	baz=251						
LZH	**Lanzhou**	**93.26**	**307**	*e*P	**P**	**08 27 42.3**	**+1.1**
LZH				pP	pP	08 28 09.5	-14
LZH				sP	pwP	08 28 20.3	-6.4
LZH				PP	**PP**	**08 31 30.3**	**+2.7**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,91nm,5.2s						
C36M	**Paulatuk**	**93.43**	**16**	P	**P**	**08 27 40.5**	**-0.4**
	baz=228						
ECSD	**EROS Data Cent**	**93.43**	**45**	P	**P**	**08 27 41.3**	**-0.4**
	baz=250						
U40A	**Yellville**	**93.70**	**53**	P	**P**	**08 27 43.2**	**+0.1**
	baz=252						
U40A	**Yellville**	**93.70**	**53**	P	**P**	**08 27 42.6**	**-0.4**
S39A	**Bolivar**	**93.77**	**52**	P	**P**	**08 27 42.5**	**-0.8**
W41B	**Gary Mavity, V**	**93.79**	**54**	P	**P**	**08 27 44.1**	**+0.6**
	baz=252						
W41B	**Gary Mavity, V**	**93.79**	**54**	P	**P**	**08 27 42.8**	**-0.7**
MGMO	**Mountain Grove**	**94.39**	**53**	P	**P**	**08 27 45.3**	**-0.9**
SONM	**Songino Array**	**95.33**	**318**	P	**P**	**08 27 50.5**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=130,slow=2.7,SNR=3.6						
CCM	**Cathedral Cave**	**95.44**	**52**	P	**P**	**08 27 50.2**	**-0.8**
	baz=253						
AGMN	**Agassiz Nation**	**95.48**	**41**	P	**P**	**08 27 50.3**	**-0.6**
	baz=250						
SPMN	**Marine on St.**	**96.49**	**45**	P	**P**	**08 27 55.5**	**-0.1**
	baz=252						
GTA	**Gaotai**	**97.30**	**309**	*e*P	Pdif	08 27 59.8	+0.2
GTA				pP	PcP	08 28 07.5	+7.9
GTA				sP	P	08 28 10.5	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LRAL	**Lakeview Retre**	**97.34**	**58**	P	**P**	**08 27 58.7**	**-0.9**
	baz=254						
ZALV	**Zalesovo Beam**	**109.85**	**322**	PKiKP	**PKiKP**	**08 32 55.2**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=96,slow=30,SNR=2.6						
MKAR	**Makanchi Array**	**111.16**	**314**	Pdiff	**Pdif**	**08 29 05.7**	**+4.8**
	comp=Z,0.1nm,0.4s,baz=121,slow=5.6,SNR=3.3						
MKAR				PKiKP	**PKiKP**	**08 32 58.2**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=82,slow=0.6,SNR=19						
ARCES	**ARCESS Array B**	**126.19**	**351**	PKP	**PKPdf**	**08 33 26.8**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=98,slow=0.7,SNR=12						
ARCES	**ARCESS Array B**	**126.19**	**351**		**PKiKP**	**08 33 27.5**	**-0.1**
FINES	**FINESS Array B**	**133.40**	**346**	PKP	**PKPdf**	**08 33 40.5**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=72,slow=6.2,SNR=4.5						
MNK	**Minsk**	**138.88**	**340**	*i* PKP	**PKPdf**	**08 33 46.8**	**-4.6**
	comp=E,3.0nm,0.8s						
MNK				*i* PKP	**PKPdf**	**08 33 46.8**	**-4.6**
	comp=N,25nm,0.9s						
MNK				*i* PKP	**PKPdf**	**08 33 46.8**	**-4.6**
	comp=Z,6.0nm,0.6s						
MNK				*i* pPKP	**pPKPdf**	**08 34 31.4**	**-4.5**
MNK				*i* PP	**PP**	**08 36 41.7**	**-2.9**
MNK				*i* PPP	PPP	08 39 44.4	
MNK				*i* SKS	**SKSdf**	**08 40 40.9**	**-4.6**
MNK				*i* SS	**SS**	**08 54 44.3**	**-1.4**
MNK				*i* SSS	SSS	08 59 56.7	
MNK				*i* LRM	MLR	09 34 54.7	
	comp=Z,179nm,12.2s						
MNK				*i* LRM	MLR	09 35 01.8	
	comp=E,19nm,11.6s						
MNK				*i* LRM	MLR	09 35 08.9	
	comp=N,174nm,14.8s						
AKASG	**Malin Array Be**	**141.47**	**336**	PKhKP	PKPpre	08 33 50.2	
	comp=N,0.6nm,0.4s,baz=43,slow=4.6,SNR=4.3						
AKASG				PKP	**PKPdf**	**08 33 55.0**	**-1.1**
	comp=N,0.8nm,0.5s,baz=37,slow=2.3,SNR=7.1						
AKASG	**Malin Array Be**	**141.47**	**336**		**PKPdf**	**08 33 55.5**	**-0.6**
KMBO	**Kilima Mbogo**	**143.59**	**243**	PKP	PKPbc	08 34 00.3	+1.0
	comp=N,4.3nm,0.5s,baz=64,slow=7.4,SNR=13						
SORM	**Soroca**	**143.82**	**334**	⇑P	PKPab	08 33 57.8	0.0
FLTG	**Flechtingen**	**144.63**	**354**	*e*PKPbc	**PKPab**	**08 34 00.5**	**-0.2**
	baz=9.6,slow=2.9						
KWP	**Kalwaria Pacla**	**144.71**	**340**	*e*PKP	PKPbc	08 34 01.5	+0.3
IBBN	**Ibbenburen**	**144.91**	**357**	*e*PKPbc	**PKPdf**	**08 34 02.1**	**-0.1**
	baz=9.6,slow=2.9						
OJC	**Ojcow**	**145.04**	**344**	*e*PKP	**PKPdf**	**08 34 02.5**	**+0.1**
CLZ	**Clausthal**	**145.20**	**354**	*e*PKPbc	**PKPab**	**08 34 03.2**	**+0.2**
	baz=9.6,slow=2.9						
VASR	**Vaslui**	**145.22**	**332**	⇑P	**PKPab**	**08 34 03.5**	**+0.4**
KSP	**Ksiaz**	**145.29**	**348**	*e*PKP	**PKPab**	**08 34 03.7**	**+0.4**
CLL	**Collm**	**145.41**	**351**	⇓*i*PKPbc	**PKPbc**	**08 34 03.5**	**+0.1**
	comp=Z,51nm,0.9s						
CLL				*e*(SKPdf)		08 37 25.0	
CLL	**Collm**	**145.41**	**351**	*e*PKPbc	**PKPbc**	**08 34 03.4**	**+0.1**
	baz=9.6,slow=2.9						
KOLS	**Kolonicke sedl**	**145.46**	**340**	*e*PKP	**PKPab**	**08 34 04.0**	**0.0**
BURAR	**Bucovina Array**	**145.52**	**336**	⇑P	**PKPab**	**08 34 04.8**	**+0.4**
GTTG	**Gottingen**	**145.53**	**355**	*e*PKPbc	**PKPab**	**08 34 04.2**	**0.0**
	baz=9.6,slow=2.9						
OSTC	**Ostas**	**145.58**	**348**	*e*PKP	**PKPbc**	**08 34 03.9**	**0.0**
CHVC	**Chvalec**	**145.58**	**348**	*e*PKP	**PKPdf**	**08 34 03.5**	**+0.1**
NIE	**Niedzica**	**145.63**	**343**	*e*PKP	**PKPab**	**08 34 05.2**	**+0.5**
UPC	**Upice**	**145.67**	**348**	*e*PKP	**PKPab**	**08 34 04.9**	**+0.2**
NEUB	**Neuenburg**	**145.67**	**353**	*e*PKPbc	**PKPab**	**08 34 04.5**	**-0.2**
	baz=9.6,slow=2.9						
BRG	**Berggiesshubel**	**145.69**	**350**	*i* PKP	**PKPbc**	**08 34 04.3**	**+0.1**
BRG				Amp		08 34 05.8	
	comp=Z,27nm,1.1s						
BRG	**Berggiesshubel**	**145.69**	**350**	*i* PKP	**PKPbc**	**08 34 04.3**	**+0.1**
BRG				Amp		08 34 05.8	
	comp=Z,27nm,1.1s						
BRG	**Berggiesshubel**	**145.69**	**350**	*e*PKPbc	**PKPab**	**08 34 04.6**	**-0.2**
	baz=9.6,slow=2.9						
BIZ	**Bicaz**	**145.71**	**334**	⇑P	**PKPab**	**08 34 05.6**	**+0.6**
FBE	**Freiberg**	**145.74**	**351**	*e*PKPbc	**PKPab**	**08 34 05.1**	**+0.1**
	baz=9.6,slow=2.9						
CRVS	**Cervenica-Dubn**	**145.74**	**341**	*e*PKP	**PKPab**	**08 34 05.0**	**-0.1**
DPC	**Dobruska-Polom**	**145.75**	**347**	*e*PKP	**PKPab**	**08 34 04.9**	**-0.2**
TESR	**Tescani**	**145.81**	**333**	⇓P	**PKPab**	**08 34 05.2**	**-0.2**
TLCR		**145.84**	**330**	⇑P	**PKPbc**	**08 34 04.6**	**-0.2**
KRLC	**Kraliky**	**145.91**	**347**	*e*PKP	**PKPbc**	**08 34 04.8**	**-0.2**
PVCC	**Panska Ves**	**145.92**	**349**	*e*PKP	**PKPab**	**08 34 05.5**	**-0.2**
KASTN	**Kahler Asten**	**145.98**	**356**	*e*PKPbc	**PKPbc**	**08 34 05.2**	**+0.1**
	baz=9.6,slow=2.9						
MORC	**Moravsky Berou**	**146.02**	**346**	⇑P	**PKPab**	**08 34 06.2**	**0.0**
MORC	**Moravsky Berou**	**146.02**	**346**	*e*PKP	**PKPab**	**08 34 06.0**	**-0.2**
TUDR		**146.07**	**331**	⇓P	**PKPab**	**08 34 06.8**	**+0.4**
LANS	**Liptovska Anna**	**146.11**	**343**	*e*PKP	**PKPab**	**08 34 06.9**	**+0.4**
CFR	**Carcaliu**	**146.17**	**330**	⇑P	**PKPab**	**08 34 06.6**	**-0.2**
TPGR	**Topolog**	**146.27**	**330**	⇓P	**PKPbc**	**08 34 05.8**	**-0.4**
VRI	**Vrincioaia**	**146.28**	**333**	⇓P	**PKPab**	**08 34 06.8**	**-0.5**
ARCR	**ARCALIA**	**146.29**	**336**	⇓P	**PKPbc**	**08 34 06.6**	**+0.4**
PLOR	**Plostina**	**146.33**	**333**	⇑P	**PKPab**	**08 34 07.0**	**-0.5**
PLN	**Plauen**	**146.34**	**352**	*e*PKPbc	**PKPbc**	**08 34 06.6**	**+0.4**
	baz=9.6,slow=2.9						
TANN	**Tannenbergstha**	**146.36**	**352**	*e*PKPbc	**PKPbc**	**08 34 06.8**	**+0.4**
	baz=9.6,slow=2.9						
KECS	**Kecovo**	**146.41**	**342**	*e*PKP	**PKPab**	**08 34 07.5**	**-0.1**
GUNZ	**Gunzen**	**146.43**	**352**	*e*PKPbc	**PKPbc**	**08 34 07.0**	**+0.5**
	baz=9.6,slow=2.9						
PRU	**Pruhonice**	**146.45**	**349**	*e*PKP	**PKPbc**	**08 34 06.4**	**-0.1**
OZUR		**146.51**	**334**	⇓P	**PKPab**	**08 34 07.8**	**-0.4**
NKC	**Novy Kostel**	**146.54**	**352**	*e*PKP	**PKPbc**	**08 34 07.1**	**+0.3**
TIRR	**Tirgusor**	**146.56**	**329**	⇓P	**PKPdf**	**08 34 05.6**	**+0.4**
HARR	**Harsova**	**146.63**	**330**	⇓P	**PKPbc**	**08 34 07.8**	**+0.7**
MEM	**Membach**	**146.66**	**359**	*d*PKP	**PKPbc**	**08 34 07.6**	**+0.6**
MEM				*d*PKiKP	**PKiKP**	**08 34 09.7**	**+0.1**
VRAC	**Vranov**	**146.68**	**346**	⇑P	**PKPbc**	**08 34 07.8**	**+0.6**
VRAC	**Vranov**	**146.68**	**346**	*e*PKP	**PKPbc**	**08 34 07.9**	**+0.7**
BTNL	**Ternell**	**146.69**	**359**	*d*PKP	**PKPbc**	**08 34 06.9**	**-0.3**
BRTR	**Keskin Array B**	**146.69**	**318**	PKPbc	**PKPbc**	**08 34 08.1**	**+0.3**
	comp=Z,13nm,0.8s,baz=143,slow=2.5,SNR=32						
BSTI	**Sart Tilman**	**146.69**	**360**	*d*PKP	**PKPab**	**08 34 08.0**	**-0.7**
SNF	**Seneffe**	**146.76**	**1**	*d*PKP	**PKPbc**	**08 34 07.7**	**+0.4**
DOPR	**Dopca**	**146.78**	**334**	⇓P	**PKPab**	**08 34 09.0**	**-0.2**
JAVC	**Velka Javorina**	**146.84**	**345**	*e*PKP	**PKPab**	**08 34 09.2**	**-0.2**
BCLA	**Clavier**	**146.86**	**360**	*d*PKiKP	**PKiKP**	**08 34 09.9**	**-0.2**
VYHS	**Vyhne**	**146.88**	**343**	*e*PKP	**PKPbc**	**08 34 08.6**	**+0.8**
BGES	**Gesves**	**146.90**	**0**	*d*PKP	**PKPab**	**08 34 09.2**	**-0.3**
MLR	**Muntele Rosu**	**146.92**	**333**	⇓P	**PKPab**	**08 34 09.3**	**-0.7**
ISR	**Istrita**	**146.95**	**332**	⇑P	**PKPbc**	**08 34 09.0**	**+0.8**
KRUC	**Moravsky**	**146.96**	**347**	*e*PKP	**PKPbc**	**08 34 08.2**	**+0.2**
TNS	**Taunus Mts**	**146.96**	**356**	*e*PKPbc	**PKPbc**	**08 34 08.2**	**+0.1**
	baz=9.6,slow=2.9						
BMRD	**Maredsous**	**146.97**	**1**	*d*PKP	**PKPbc**	**08 34 08.3**	**+0.3**
ROTZ	**Rotzenmuhle**	**147.03**	**352**	*e*PKPbc	**PKPbc**	**08 34 08.7**	**+0.5**
	baz=9.6,slow=2.9						
DRGR		**147.15**	**338**	⇑P	**PKPbc**	**08 34 09.4**	**+0.7**
DOU	**Dourbes**	**147.18**	**1**	*d*PKP	**PKPbc**	**08 34 08.2**	**-0.3**
DOU				*d*PKiKP	**PKiKP**	**08 34 10.7**	**0.0**
SMOL	**Smolenice**	**147.22**	**345**	*e*PKP	**PKPab**	**08 34 09.8**	**-1.0**
VOIR		**147.35**	**334**	⇓P	**PKPbc**	**08 34 09.6**	**+0.3**
MODS	**Modra-Piesok**	**147.39**	**345**	*e*PKP	**PKPbc**	**08 34 09.6**	**+0.4**
KHC	**Kasperske Hory**	**147.44**	**350**	*e*PKP	**PKPdf**	**08 34 07.0**	**+0.4**
KHC				*e*x	x	08 34 12.1	
ARR	**Arges**	**147.58**	**334**	⇓P	**PKiKP**	**08 34 11.5**	**-0.4**
WLF	**Walferdange**	**147.61**	**359**	*d*PKP	**PKPbc**	**08 34 10.6**	**+1.0**
WLF	**Walferdange**	**147.61**	**359**	*e*PKPbc	**PKPbc**	**08 34 10.7**	**+1.0**
	baz=9.6,slow=2.9						
GEC2	**GERESS Array S**	**147.70**	**350**	*e*PKPbc	**PKPbc**	**08 34 10.5**	**+0.3**
	baz=9.6,slow=2.9						
GERES	**GERESS Array B**	**147.70**	**350**	PKPbc	**PKPbc**	**08 34 10.7**	**+0.6**
	comp=Z,6.3nm,0.7s,baz=29,slow=3.0,SNR=41						
SIRR	**Siria**	**147.97**	**338**	⇓P	**PKPbc**	**08 34 11.5**	**+0.7**
CONA	**Conrad Observa**	**148.14**	**346**	*e*P	**PKPbc**	**08 34 12.1**	**+0.7**
	comp=Z,20nm,0.8s,SNR=8.7						
GZR	**Gura Zlata**	**148.30**	**336**	⇓P	**PKPbc**	**08 34 11.8**	**0.0**
BZS	**Buzias**	**148.55**	**338**	⇑P	**PKPbc**	**08 34 12.2**	**-0.1**
MOA	**Molln**	**148.55**	**348**	*e*P	**PKiKP**	**08 34 13.4**	**-0.3**
	comp=Z,10nm,0.9s						
BFO	**Black Forest**	**148.85**	**356**	*e*PKPbc	**PKPbc**	**08 34 13.5**	**+0.4**
	baz=9.6,slow=2.9						
ARSA	**Arzberg**	**148.86**	**346**	*e*P	**PKPbc**	**08 34 12.9**	**-0.2**
	comp=Z,9.5nm,0.9s						
HERR	**Herculane**	**148.87**	**336**	⇑P	**PKPbc**	**08 34 13.3**	**+0.1**
RJOB	**Jochberg**	**148.92**	**350**	*e*PKPbc	**PKPbc**	**08 34 13.5**	**+0.2**
	baz=9.6,slow=2.9						
UBR	**Ueberruh**	**149.34**	**354**	*e*PKPbc	**PKPbc**	**08 34 14.6**	**+0.2**
	baz=9.6,slow=2.9						
RETA	**Reutte**	**149.46**	**353**	*i* P	**PKPbc**	**08 34 14.9**	**+0.2**
	comp=Z,13nm,0.8s						
KBA	**Koelnbreinsper**	**149.46**	**349**	*i* P	**PKPbc**	**08 34 14.4**	**-0.4**
	comp=Z,8.5nm,0.8s						
WATA	**Walderalm**	**149.50**	**352**	*i* P	**PKPbc**	**08 34 15.0**	**+0.2**
	comp=Z,9.9nm,0.6s						
SOKA	**Soboth**	**149.51**	**347**	*i* P	**PKPbc**	**08 34 14.7**	**-0.1**
	comp=Z,18nm,1.1s,SNR=6.5						
MOTA	**Moosalm**	**149.55**	**352**	*e*P	**PKPbc**	**08 34 15.1**	**+0.1**
	comp=Z,24nm,1.0s,SNR=5.6						
LEF	**Lefka**	**149.60**	**311**	⇑P	**PKPab**	**08 34 19.1**	**-1.8**
SQTA	**Sankt Quirin**	**149.66**	**352**	*e*P	**PKPbc**	**08 34 15.4**	**+0.2**
	comp=Z,26nm,1.5s,SNR=5.2						
DAVA	**Damuels**	**149.75**	**354**	*e*P	**PKPbc**	**08 34 15.7**	**+0.2**
	comp=Z,18nm,0.7s,SNR=7.0						
OBKA	**Obir**	**149.77**	**347**	*e*P	**PKPbc**	**08 34 14.9**	**-0.6**
	comp=Z,7.1nm,0.9s						
MYKA	**Terra Mystica**	**149.84**	**348**	*e*P	**PKPbc**	**08 34 15.2**	**-0.4**
	comp=Z,14nm,0.8s,SNR=6.5						
FETA	**Feichten**	**149.92**	**353**	*i* P	**PKiKP**	**08 34 16.4**	**-0.4**
	comp=Z,26nm,0.9s,SNR=9.3						
ABTA	**Abfaltersbach**	**149.93**	**350**	*i* P	**PKPbc**	**08 34 15.6**	**-0.2**
	comp=Z,26nm,0.8s,SNR=11						
VTS	**Vitosha**	**150.39**	**333**	⇓P	**PKPdf**	**08 34 14.5**	**+2.7**
ESDC	**Sonseca Array**	**156.21**	**18**	PKPab	**PKPab**	**08 34 49.3**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=325,slow=3.5,SNR=14						
TORD	**Torodi Ar. Bea**	**174.70**	**139**	PKP	**PKPdf**	**08 34 34.6**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=304,slow=1.4,SNR=5.7						
TORD				PKPab	**PKPab**	**08 36 10.9**	**+0.4**
	comp=Z,2.6nm,1.0s,baz=242,slow=3.2,SNR=4.8						
TORD	**Torodi Ar. Bea**	**174.70**	**139**		**PKPdf**	**08 34 31.8**	**-4.0**

IDC 20 08:29:22.8±5.0,**45°.20N**×**79°.46E,h0**^{km}**,mb1 1.7**/1,
mb1mx1.7/43,**mbtmp1.7**/1,**ML1.8**/1,**Error ellipse:**
s-maj=64.8km s-min=41.3km az=141.0,Eastern
Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**2.54**	**50**	Pn	Pn	08 30 06.4	+1.2
	0.2nm,0.3s,baz=231,slow=13,SNR=6.6						
MKAR				Lg	Lg	08 30 43.6	
	0.1nm,0.3s,baz=232,slow=26,SNR=2.3						
I46RU	**ZALESOVO INFRA**	**9.42**	**20**	*i*		09 25 00.0	
	baz=204,slow=324,SNR=1.4						
I34MN	**SONGINO INFRAS**	**18.70**	**72**	*i*		10 25 10.0	
	baz=269,slow=325,SNR=0.5						

SOME ***20*** *08:46:55.1,42°.43N×84°.32E,h0*^{km}
NNC ***20*** *08:46:57.0±2.0,42°.50N×84°.28E,h0*^{km}*,mb3.6,mpv3.3,*
Error ellipse: s-maj=14.5km s-min=9.3km az=143.0
ISC 20 08:47:02.9±2.6,**42°.6N**±0°.1×**83°.9E**±0°.1,**h10**^{km}**,n17,**
σ**1**^{s}**.70**/25,**2C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.77**	**290**	*e*P	**Pb**	**08 47 51.2**	**-1.4**
	8.6nm,0.2s						
KTMS				*e*S	**Sg**	**08 48 31.6**	**-0.3**
	16nm,0.7s						
KTMS	**Ketmen**	**2.77**	**290**	Pg	**Pb**	**08 47 51.2**	**-1.4**
	8.6nm,0.2s						
KTMS				Lg	Lg	08 48 32.4	
	16nm,0.7s						
SHLS	**Shalkode**	**3.34**	**282**	*e*P	**Pn**	**08 47 57.7**	**+2.4**
	5.4nm,0.3s						
SHLS				*e*S	**Sb**	**08 48 43.0**	**0.0**
	29nm,1.0s						
SHLS	**Shalkode**	**3.34**	**282**	Pg	**Pn**	**08 47 57.7**	**+2.4**
	5.4nm,0.3s						
SHLS				Lg	Lg	08 48 43.0	
	29nm,1.0s						
DJR	**Jarkent**	**3.50**	**302**	*e*P	**Pb**	**08 48 05.5**	**+0.5**
	1.9nm,0.5s						
DJR				*e*S	**Sg**	**08 48 56.7**	**+1.4**
	6.5nm,0.5s						
DJR	**Jarkent**	**3.50**	**302**	Pg	**Pb**	**08 48 05.5**	**+0.5**
	1.9nm,0.5s						
DJR				Lg	Lg	08 48 56.7	
	6.5nm,0.5s						
UZB	**Uzynbulak**	**3.66**	**281**	*e*P	**Pb**	**08 48 07.7**	**0.0**
	0.6nm,0.4s						
UZB				*e*S	**Sg**	**08 49 00.1**	**-0.1**
	7.2nm,0.4s						
UZB	**Uzynbulak**	**3.66**	**281**	Pg	**Pb**	**08 48 07.7**	**0.0**
	1.3nm,0.2s						
UZB				Lg	Lg	08 49 00.1	
	7.2nm,0.4s						
KPKS	**Kokpek**	**3.95**	**285**	*e*P	**Pb**	**08 48 13.8**	**+1.1**
	4.0nm,0.1s						
KPKS				*e*S	**Sg**	**08 49 10.3**	**+0.5**
	17nm,0.6s						
SATY	**Saty**	**4.09**	**279**	*e*P	**Pg**	**08 48 18.3**	**-3.0**
	1.5nm,0.2s						
SATY				*e*S	**Sg**	**08 49 18.2**	**+3.9**
	9.6nm,0.4s						
SATY	**Saty**	**4.09**	**279**	Pg	**Pg**	**08 48 18.3**	**-3.0**
	1.5nm,0.2s						
SATY				Lg	Lg	08 49 18.2	
	9.6nm,0.4s						
KAPS	**Kapalarasan**	**4.29**	**311**	*e*P	**Pb**	**08 48 19.6**	**+1.3**
	1.5nm,0.4s						
KAPS				*e*S	**Sg**	**08 49 21.1**	**+0.6**
	4.5nm,0.6s						
KAPS	**Kapalarasan**	**4.29**	**311**	Pg	**Pb**	**08 48 19.6**	**+1.3**
	1.5nm,0.4s						
KAPS				Lg	Lg	08 49 21.1	
	4.5nm,0.6s						
MNBS	**Baschi**	**4.31**	**293**	*e*P	**Pb**	**08 48 18.7**	**-0.2**
	2.5nm,0.3s						
MNBS				*e*S	**Sg**	**08 49 19.1**	**-2.2**
	8.8nm,0.6s						
MNBS	**Baschi**	**4.31**	**293**	Pg	**Pb**	**08 48 18.7**	**-0.2**
	2.5nm,0.3s						
MNBS				Lg	Lg	08 49 19.1	
	8.8nm,0.6s						
MK31	**Makanchi Array**	**4.40**	**345**	⇑Pg	**Pb**	**08 48 18.8**	**-1.5**
	1.1nm,0.6s,baz=152,slow=16,SNR=13						
MK31				⇓Lg	Lg	08 49 20.3	
	6.6nm,0.7s,baz=154,slow=29,SNR=15						
MAKZ	**Makanchi**	**4.48**	**343**	⇑Pg	**Pb**	**08 48 22.3**	**+0.7**
	1.2nm,0.6s						
MAKZ				⇓Lg	Lg	08 49 23.7	
	4.0nm,0.9s						

IDC ***20*** *09:04:19.2±0.6,22°.17S×68°.43W,h91*^{km}*±8*^{km}*,mb3.6/9,*
mb1 3.8/12,mb1mx3.7/28,mbtmp3.9/12,MS2.9/2,
Ms1 2.9/2,ms1mx2.7/25,Error ellipse: s-maj=21.8km
s-min=17.9km az=8.0
VAO ***20*** *09:04:19.7±0.5,22°.14S×68°.69W,h109*^{km}*±5*^{km}*,mb4.2*
NEIC ***20*** *09:04:19.3±2.2,22°.39S±0°.02×68°.8W±0°.1,h141*^{km}*±9*^{km}*,*
mb4.3/4,ML4.3(GUC),Error ellipse: s-maj=17.7km
s-min=2.9km az=96.0
GUC ***20*** *09:04:20.8±0.8,22°.38S×68°.61W,h107*^{km}*±4*^{km}*,ML4.3*
ISC 20 09:04:19.6±0.6,**22°.35S**±0°.04×**68°.62W**±0°.06,**h113**^{km}±6^{km},
n85,σ**1**^{s}**.53**/94,**mb3.8**/8,**5C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.37**	**227**	P	**Pn**	**09 04 37.5**	**+1.1**
	2µm,0.3s,baz=41,slow=7.6,SNR=3239						
LVC				S	**Sn**	**09 04 49.0**	**-0.1**
	3µm,0.3s,baz=207,slow=18,SNR=34						
LVC	**Limon Verde**	**0.37**	**227**	*e*P	**Pn**	**09 04 37.2**	**+0.7**
LVC				*i* S	**Sn**	**09 04 49.4**	**+0.2**
LVC	**Limon Verde**	**0.37**	**227**	Pn	**Pn**	**09 04 37.3**	**+0.7**
LVC	**Limon Verde**	**0.37**	**227**	*e*P	**Pn**	**09 04 37.4**	**+0.9**
PB09	**IPOC Station P**	**0.80**	**314**	*e*P	**Pn**	**09 04 40.4**	**+1.1**
PB09				*i* S	**Sn**	**09 04 54.9**	**+0.7**
PB09				IAML		09 04 56.8	
	comp=E,10µm,0.5s						
PB09	**IPOC Station P**	**0.80**	**314**	Pn	**Pn**	**09 04 40.5**	**+1.1**
PB03	**IPOC Station P**	**1.10**	**286**	*e*P	**Pn**	**09 04 43.1**	**+0.9**
PB03				*i* S	**Sn**	**09 04 59.6**	**+0.3**
PB03				IAML		09 05 01.4	
	comp=N,12µm,0.5s						
PB07	**IPOC Station P**	**1.33**	**298**	⇑*e*P	**Pn**	**09 04 45.5**	**+0.6**
PB07				*i* S	**Sn**	**09 05 04.2**	**+0.3**
PB07				IAML		09 05 04.9	
	comp=N,10µm,0.2s						
PB07	**IPOC Station P**	**1.33**	**298**	Pn	**Pn**	**09 04 45.5**	**+0.6**
PB04	**IPOC Station P**	**1.42**	**271**	⇑*i*P	**Pn**	**09 04 46.5**	**+0.8**
PB04				*i* S	**Sn**	**09 05 05.8**	**+0.1**
PB04				IAML		09 05 08.8	
	comp=N,5µm,0.4s						
PB04	**IPOC Station P**	**1.42**	**271**	Pn	**Pn**	**09 04 46.6**	**+0.8**
PB05	**IPOC Station P**	**1.55**	**251**	⇑*e*P	**Pn**	**09 04 47.1**	**-0.2**
PB05				*i* S	**Sn**	**09 05 08.2**	**-0.1**
PB05				IAML		09 05 11.3	
	comp=N,2µm,0.2s						
PATCX	**Punta Patache**	**2.09**	**317**	*e*P	**Pn**	**09 04 54.2**	**+0.3**
PATCX				*i* S	**Sn**	**09 05 20.4**	**+0.2**
PATCX				IAML		09 05 28.6	
	comp=E,3µm,0.3s						
PATCX	**Punta Patache**	**2.09**	**317**	Pn	**Pn**	**09 04 54.3**	**+0.3**
PB10	**IPOC Station P**	**2.13**	**237**	*e*P	**Pn**	**09 04 54.8**	**+0.5**
PB10				*e*S	**Sn**	**09 05 21.1**	**+0.2**
PB10				IAML		09 05 39.5	
	comp=N,3µm,0.9s						
PB10	**IPOC Station P**	**2.13**	**237**	Pn	**Pn**	**09 04 55.2**	**+0.9**
PB08	**IPOC Station P**	**2.26**	**347**	⇑*i*P	**Pn**	**09 04 58.0**	**+1.6**
PB08				*i* S	**Sn**	**09 05 25.9**	**+1.4**
PB08	**IPOC Station P**	**2.26**	**347**	Pn	**Pn**	**09 04 57.7**	**+1.3**
TA01	**Diego Aracena**	**2.30**	**320**	⇑*i*P	**Pn**	**09 04 57.3**	**+0.7**
TA01				*i* S	**Sn**	**09 05 24.6**	**-0.2**
TA01				IAML		09 05 31.8	
	comp=E,2µm,0.4s						
TA01	**Diego Aracena**	**2.30**	**320**	Pn	**Pn**	**09 04 56.9**	**+0.4**
HMBC	**Humberstone**	**2.38**	**330**	*e*P	**Pn**	**09 04 57.8**	**0.0**
HMBC				*e*S	**Sn**	**09 05 26.4**	**-0.6**
HMBC				IAML		09 05 31.7	
	comp=N,1µm,0.6s						
PB14	**IPOC Station P**	**2.79**	**216**	*e*P	**Pn**	**09 05 03.5**	**+0.2**
PB14				⇓*e*S	**Sn**	**09 05 33.6**	**-3.2**
PB14				IAML		09 06 04.9	
	comp=E,652nm,0.6s						
PB14	**IPOC Station P**	**2.79**	**216**		**Pn**	**09 05 03.7**	**+0.4**
GO02	**Mina Guanaco**	**2.94**	**198**	*e*P	**Pn**	**09 05 05.8**	**+0.7**
GO02				*e*S	**Sn**	**09 05 37.1**	**-3.1**
GO02				IAML		09 06 12.2	
	comp=E,1µm,0.4s						
GO02	**Mina Guanaco**	**2.94**	**198**		**Pn**	**09 05 06.3**	**+1.2**
PSGC	**Pisagua**	**3.08**	**333**	*e*P	**Pn**	**09 05 06.0**	**-0.9**
PSGC				*e*S	**Sn**	**09 05 36.8**	**-6.6**
PSGC				IAML		09 06 05.8	
	comp=E,866nm,0.3s						
PSGCX	**Pisagua**	**3.08**	**333**	Pn	**Pn**	**09 05 05.9**	**-1.0**
MNMC	**Minye Minye**	**3.33**	**344**	Pn	**Pn**	**09 05 10.2**	**-0.2**
PB16	**IPOC Station P**	**4.08**	**348**	Pn	**Pn**	**09 05 21.4**	**+0.7**
AC01	**Pan de Azucar**	**4.19**	**205**		**Pn**	**09 05 21.0**	**-0.6**
AC02	**Maricunga**	**4.49**	**186**		**Pn**	**09 05 27.4**	**+1.4**
GO03	**Copiap**	**5.42**	**195**		**Pn**	**09 05 37.5**	**-0.7**
AC04	**Llanos de Chal**	**6.24**	**200**		Pn	09 05 46.4	-2.8
AC05	**El Transito**	**6.63**	**193**		**Pn**	**09 05 53.2**	**-1.4**
LCO	**Las Campanas**	**6.89**	**195**	Pn	Pn	09 05 55.8	-2.5
CO01	**Juntas del Tor**	**7.71**	**190**		**Pn**	**09 06 08.7**	**-0.6**
GO04	**Tololo Observa**	**8.03**	**194**		Pn	09 06 10.7	-3.0
CO03	**El Pedregal**	**8.65**	**192**	Pn	Pn	09 06 19.3	-2.7
CO02	**Combarbal**	**9.07**	**193**		Pn	09 06 23.8	-3.8
SIV	**San Ignacio**	**9.53**	**50**	P	**Pn**	**09 06 30.9**	**-3.0**
	comp=E,9.6nm,0.3s,baz=261,slow=7.6,SNR=196						
SIV				S	Sn	09 08 07.2	-12
	comp=E,0.4nm,0.3s,baz=139,slow=20,SNR=1.9						
VA03	**San Esteban**	**10.51**	**189**	Pn	**Pn**	**09 06 47.1**	**-0.1**
ROC1	**El Roble**	**10.79**	**191**	Pn	**Pn**	**09 06 49.0**	**-2.1**
CPUP	**Villa Florida**	**11.02**	**113**	P	**Pn**	**09 06 52.8**	**-1.2**
	comp=E,0.1nm,0.3s,baz=296,slow=12,SNR=3.4						
AQDB	**Aquidauana**	**12.18**	**84**	*e*P	**Pn**	**09 07 10.9**	**+1.6**
VILB	**Vilhena**	**12.31**	**42**	*e*P	**Pn**	**09 07 10.5**	**-0.7**
BO02	**Sierra Bellavi**	**12.54**	**188**	Pn	**Pn**	**09 07 15.4**	**+1.3**
ETMB	**Extrema**	**12.68**	**11**	*e*P	**Pn**	**09 07 13.0**	**-3.0**
NNA	**Nana**	**12.96**	**321**	LR	LR	09 11 52.3	
	comp=E,27nm,20.9s,baz=305,slow=35						
BI02	**San Fabin de**	**14.45**	**189**		**Pn**	**09 07 39.2**	**+0.4**
TRCB	**Terra Rica**	**14.77**	**95**	*e*P	**P**	**09 07 45.1**	**-1.0**
PTGB	**Pitanga**	**15.36**	**102**	*e*P	**P**	**09 07 54.3**	**+1.7**
CPSB	**Cacapava Do Su**	**15.78**	**124**	*e*P	**P**	**09 07 57.9**	**+0.8**
PCMB	**Pacaembu**	**16.12**	**91**	*e*P	**Pn**	**09 08 00.4**	**+0.6**
ARAG	**Araguaiana, MT**	**17.20**	**70**	*e*P	**P**	**09 08 12.5**	**-0.4**
ITRB	**Iturama**	**17.25**	**85**	*e*P	**Pn**	**09 08 14.8**	**+1.2**
FRTB	**Fartura**	**17.59**	**97**	*e*P	**Pn**	**09 08 18.2**	**+0.5**
PLCA	**Paso Flores**	**18.40**	**185**	P	**P**	**09 08 28.5**	**+2.5**
	comp=E,0.1nm,0.3s,baz=10,slow=9.4,SNR=3.7						
PLCA				LR	LR	09 16 43.3	
	comp=E,66nm,19.1s,baz=12,slow=40						
PLCA	**Paso Flores**	**18.40**	**185**	P	**P**	**09 08 21.5**	**-4.4**
PLCA				IAmb	IAmb	09 09 16.6	
	comp=Z,30nm,1.9s						
PLCA	**Paso Flores**	**18.40**	**185**	*e*P	**P**	**09 08 28.4**	**+2.5**
BB19B	**Bebedouro**	**18.71**	**90**	*e*P	**P**	**09 08 28.9**	**-0.6**
SNDB	**Serra Nova Dou**	**19.48**	**61**	*e*P	**P**	**09 08 36.8**	**-1.1**
IPMB	**Ipameri, GO**	**19.64**	**81**	*e*P	**P**	**09 08 39.2**	**-0.4**
PET01	**Itanhaem-SP**	**19.69**	**100**	*e*P	**Pn**	**09 08 42.3**	**-0.3**
NPGB	**Novo Progresso**	**19.88**	**42**	*e*P	**P**	**09 08 40.2**	**-1.9**
VAO	**Valinhos**	**19.99**	**96**	*e*P	**P**	**09 08 43.8**	**+0.4**
BDFB	**Brasilia**	**20.58**	**75**	P	**P**	**09 08 49.2**	**-0.7**
	comp=Z,2.5nm,0.5s,baz=146,slow=15,SNR=3.8						
BDFB	**Brasilia**	**20.58**	**75**	P	**P**	**09 08 48.7**	**-1.1**
BDFB				IAmb	IAmb	09 09 23.1	
	comp=Z,20nm,1.7s						
ITTB	**Itaituba**	**21.80**	**37**	*e*P	**P**	**09 09 01.0**	**-1.8**
PTGA	**Pitinga**	**23.08**	**23**	P	**P**	**09 09 13.0**	**-2.7**
	comp=Z,1.9nm,0.4s,baz=223,slow=15,SNR=6.0						
PTGA	**Pitinga**	**23.08**	**23**	P	**P**	**09 09 13.9**	**-1.8**
SMTB	**Santa Maria do**	**24.25**	**60**	*e*P	**P**	**09 09 26.2**	**-0.1**
SDBA	**SAO DESIDERIO**	**24.66**	**70**	*e*P	**P**	**09 09 30.3**	**+0.2**
MALB	**Monte Alegre**	**24.70**	**36**	*e*P	**P**	**09 09 30.1**	**-0.2**
SDV	**Santo Domingo**	**31.11**	**356**	*e*P	**P**	**09 10 26.9**	**-0.9**
TXAR	**Lajitas Array**	**61.48**	**325**	P	**P**	**09 14 26.6**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=147,slow=9.6,SNR=6.0						
ANMO	**Albuquerque**	**67.36**	**327**	P	**P**	**09 14 59.2**	**-3.8**
PDAR	**Pinedale Array**	**74.98**	**330**	P	**P**	**09 15 50.8**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=143,slow=7.7,SNR=2.7						
ULM	**Lac du Bonnet**	**76.21**	**342**	P	**P**	**09 15 56.2**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=143,slow=5.4,SNR=4.0						
NVAR	**Mina Array Bea**	**76.33**	**322**	P	**P**	**09 15 58.1**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=152,slow=6.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**09 16 03.3**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=254,slow=5.2,SNR=12						
BOSA	**Boshof**	**82.81**	**118**	P	**P**	**09 16 33.4**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=177,slow=7.6,SNR=4.2						
YKA	**Yellowknife Ar**	**92.08**	**340**	P	**P**	**09 17 17.3**	**+1.8**
	comp=Z,1.2nm,0.6s,baz=128,slow=5.3,SNR=41						
ZALV	**Zalesovo Beam**	**142.60**	**26**	PKP	**PKiKP**	**09 23 41.5**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=272,slow=3.5,SNR=5.5						
MKAR	**Makanchi Array**	**146.16**	**37**	PKPbc	**PKPab**	**09 23 47.8**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=317,slow=2.8,SNR=27						
PALK	**Pallekele**	**146.87**	**112**	PKPbc	**PKPbc**	**09 23 50.9**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=225,slow=5.7,SNR=2.9						

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*IDC **20** 09:06:14.7±9.1, 11°.97S×167°.87E, h0^{km}, mb4.0/5, mb1 4.1/5, mb1mx3.7/34, mbtmp4.0/5, Error ellipse: s-maj=279.8km s-min=46.8km az=129.0*

*NEIC **20** 09:06:42.8±0.7, 11°.42S±0°.08×166°.5E±0°.2, h176^{km}±12^{km}, mb4.3/5, Error ellipse: s-maj=28.3km s-min=10.7km az=84.0*

ISC 20 09:06:40.3±1.2**, 11°.3S**±0°.1×**166°.4E**±0°.2**, h150**^{km}**, n12,** σ**0^{s}.72**/13**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.21**	**170**		**Pn**	**09 07 44.7**	**+1.4**
SANVU				Sn	**Sn**	**09 08 31.6**	**-0.8**
CTA	**Charters Tower**	**21.28**	**243**	P	**P**	**09 11 14.8**	**-0.3**
	2.7nm,0.7s,baz=95,slow=11,SNR=2.9						
BKZ	**Black Stump Fm**	**29.18**	**164**	P	**P**	**09 12 26.7**	**-0.9**
WR0	**Warramunga Arr**	**31.84**	**250**	P	**P**	**09 12 51.4**	**+0.1**
WR0				IAmb	IAmb	09 13 11.8	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	**31.94**	**251**	P	**P**	**09 12 52.3**	**+0.1**
WB2	**Warramunga Arr**	**32.02**	**250**	P	**P**	**09 12 53.7**	**+0.9**
WB2				IAmb	IAmb	09 13 00.1	
	comp=Z,7.1nm,1.4s						
WRA	**Warramunga Arr**	**32.03**	**250**	P	**P**	**09 12 53.0**	**0.0**
	comp=Z,0.8nm,0.6s,baz=85,slow=9.1,SNR=7.5						
WRA	**Warramunga Arr**	**32.03**	**250**	P	**P**	**09 12 52.7**	**-0.2**
ASAR	**Alice Springs**	**33.28**	**244**	P	**P**	**09 13 03.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=68,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	**39.96**	**255**	P	**P**	**09 13 59.9**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=59,slow=5.9,SNR=4.5						
IMAR	**Indian Mountai**	**82.48**	**15**	P	**P**	**09 18 45.5**	**-0.1**
MKAR	**Makanchi Array**	**94.15**	**317**	P	**P**	**09 19 42.3**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=92,slow=6.4,SNR=10						

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*NOU **20** 09:16:37.0, 4°.32S×139°.28E, h6^{km}, mb5.2, Irian Jaya, Indonesia*

*NEIC **20** 09:16:41.1±2.4, 4°.63S±0°.07×139°.33E±0°.07, h30^{km}±5^{km}, mb4.7/15, Error ellipse: s-maj=10.4km s-min=10.0km az=99.0*

*IDC **20** 09:16:43.0±0.7, 4°.58S×139°.30E, h42^{km}±6^{km}, mb3.9/12, mb1 4.2/19, mb1mx4.0/46, mbtmp4.4/19, ML4.7/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/35, Error ellipse: s-maj=19.6km s-min=12.5km az=81.0*

*DJA **20** 09:16:48.9±0.5, 4°S±5°×13°9E±°, h29^{km}±5^{km}, M4.8/6, mb5.1/3, mB4.9/1, MLv4.6/6, Mw(mB)4.2/1*

ISC 20 09:16:41.6±0.5**, 4°.70S**±0°.05×**139°.31E**±0°.06**, h35**^{km}**, n56,** σ**1^{s}.80**/57**, mb4.4**/17**, MS3.5**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**2.26**	**22**	P	**Pn**	**09 17 17.3**	**+0.9**
JAY	**Jayapura**	**2.58**	**33**	P	**Pn**	**09 17 20.6**	**-0.3**
	99nm,0.3s,baz=216,slow=12,SNR=222						
JAY				S	**Sn**	**09 17 46.1**	**-4.9**
	63nm,0.3s,baz=36,slow=11,SNR=5.8						
JAY				LR	LR	09 18 49.9	
	comp=Z,668nm,18.7s,baz=169,slow=51						
JAY	**Jayapura**	**2.58**	**33**	P	**Pn**	**09 17 20.7**	**-0.2**
SMPI	**Sarmi**	**2.75**	**347**	P	**Pn**	**09 17 24.4**	**+1.2**
MMPI	**Merauke**	**3.90**	**164**	P	Pn	09 17 59.0	+20
FAKI	**Fak Fak**	**7.26**	**284**	Pn	**Pn**	**09 18 26.4**	**+1.2**
FAKI	**Fak Fak**	**7.26**	**284**	P	**Pn**	**09 18 27.2**	**+2.0**
	0.3nm815nm98nm,0.8s						
SIJI	**Sorong**	**8.88**	**295**	P	**Pn**	**09 18 48.3**	**+0.7**
	12nm,0.3s,baz=103,slow=10,SNR=27						
SIJI				LR	LR	09 23 00.4	
	comp=Z,370nm,19.7s,baz=124,slow=43						
SWI	**Sorong**	**8.89**	**295**	P	**Pn**	**09 18 47.6**	**0.0**
PMG	**Port Moresby**	**9.09**	**121**	P	**Pn**	**09 18 53.2**	**+2.9**
	2.5nm,0.3s,baz=4.0,slow=7.9,SNR=4.1						
PMG				S	**Sn**	**09 20 29.9**	**-1.6**
	1.5nm,0.3s,baz=267,slow=17,SNR=1.7						
PMG				LR	LR	09 23 56.8	
	comp=Z,250nm,19.1s,baz=298,slow=47						
PMG	**Port Moresby**	**9.09**	**121**		**Pn**	**09 18 50.3**	**0.0**
WB0	**Warramunga Arr**	**15.73**	**197**	Pn	**Pn**	**09 20 19.9**	**-0.7**
SOEI	**Soe**	**15.74**	**251**	P	P	09 20 36.3	+12
WR0	**Warramunga Arr**	**15.87**	**197**	Pn	**Pn**	**09 20 22.0**	**-0.4**
WRAB	**Tennant Creek**	**15.90**	**197**	Pn	**Pn**	**09 20 21.7**	**-1.0**
WB2	**Warramunga Arr**	**15.90**	**197**	Pn	**Pn**	**09 20 21.7**	**-1.2**
WRA	**Warramunga Arr**	**15.91**	**197**	P	**Pn**	**09 20 22.1**	**-0.9**
	2.4nm,0.3s,baz=16,slow=13,SNR=48						
WRA				S	**Sn**	**09 23 15.1**	**-3.2**
	1.4nm,0.3s,baz=8.7,slow=23,SNR=3.6						
WRA				LR	LR	09 26 58.8	
	comp=Z,163nm,18.9s,baz=5.0,slow=38						
WRA	**Warramunga Arr**	**15.91**	**197**		**Pn**	**09 20 21.2**	**-1.7**
BATI	**Baumata**	**16.44**	**250**	P	**Pn**	**09 20 31.1**	**+1.3**
	2.7nm,0.3s,baz=180,slow=5.1,SNR=1.5						
BATI				S	**Sn**	**09 23 27.8**	**-3.6**
	5.2nm,0.3s,baz=131,slow=19,SNR=2.4						
BATI	**Baumata**	**16.44**	**250**	P	P	09 20 46.6	+14
CTA	**Charters Tower**	**16.73**	**157**	P	**P**	**09 20 36.4**	**+1.0**
	1.1nm,0.3s,baz=328,slow=13,SNR=12						
EDFI	**Ende, Flores**	**17.95**	**256**	P	P	09 21 01.8	+13
FITZ	**Fitzroy Crossi**	**18.87**	**224**	P	**Pn**	**09 20 59.9**	**+0.2**
	1.2nm,0.3s,baz=51,slow=10,SNR=34						
FITZ				S	Sn	09 24 17.2	-13
	2.3nm,0.3s,baz=167,slow=11,SNR=6.3						
FITZ				LR	LR	09 28 49.6	
	comp=Z,136nm,19.7s,baz=46,slow=38						
KAPI	**Kappang**	**19.49**	**268**	LR	LR	09 30 42.1	
	comp=Z,94nm,19.8s,baz=88,slow=43						
AS31	**Alice Springs**	**19.57**	**195**		**Pn**	**09 21 10.2**	**+2.1**
AS31				IAmb	IAmb	09 21 24.1	
	comp=Z,22nm,0.5s						
ASAR	**Alice Springs**	**19.57**	**195**	P	**Pn**	**09 21 10.2**	**+2.2**
	comp=Z,8.8nm,0.3s,baz=24,slow=9.1,SNR=548						
ASAR				S	**S**	**09 24 38.5**	**-7.3**
	comp=Z,0.3nm,0.3s,baz=12,slow=29,SNR=2.5						
ASAR				LR	LR	09 29 14.6	
	comp=Z,141nm,19.4s,baz=358,slow=38						
ASAR	**Alice Springs**	**19.57**	**195**		**Pn**	**09 21 09.8**	**+1.7**
MTKI	**Muara Teweh, K**	**24.66**	**278**	P	**P**	**09 22 01.9**	**+2.6**
KKM	**Kota Kinabalu**	**25.41**	**295**	P	**P**	**09 22 05.9**	**-0.3**
KKM				IAmb	IAmb	09 22 32.2	
	comp=Z,32nm,1.1s						
TGY	**Tagaytay City**	**26.09**	**316**	LR	LR	09 32 16.5	
	comp=Z,56nm,21.9s,baz=334,slow=36						
STKA	**Stephens Creek**	**27.12**	**176**	P	**P**	**09 22 22.1**	**+0.7**
	comp=Z,1.9nm,0.5s,baz=342,slow=10.0,SNR=7.2						
STKA				LR	LR	09 34 15.3	
	comp=Z,183nm,18.9s,baz=6.2,slow=39						
STKA	**Stephens Creek**	**27.12**	**176**	P	**P**	**09 22 21.9**	**+0.5**
NWAO	**Narrogin (SRO)**	**34.84**	**214**	P	**P**	**09 23 29.8**	**+0.5**
	comp=Z,7.6nm,0.7s,baz=42,slow=7.9,SNR=9.8						
NWAO	**Narrogin (SRO)**	**34.84**	**214**	P	**P**	**09 23 30.2**	**+0.9**
NWAO				IAmb	IAmb	09 23 42.3	
	comp=Z,20nm,1.4s						
KSRS	**Korea Array**	**43.25**	**347**	P	**P**	**09 24 39.4**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=156,slow=8.1,SNR=6.3						
KSRS				LR	LR	09 42 29.9	
	comp=Z,39nm,19.9s,baz=290,slow=36						
CMAR	**Chiang Mai Arr**	**45.95**	**301**	P	**P**	**09 25 02.0**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=124,slow=6.2,SNR=10						
CMAR	**Chiang Mai Arr**	**45.95**	**301**	P	**P**	**09 25 01.8**	**+0.3**
RPZ	**Rata Peaks**	**47.89**	**149**	P	**P**	**09 25 18.2**	**+1.9**
	comp=Z,7.7nm,0.8s,baz=113,slow=11,SNR=3.8						
TUWZ	**Tuamarina**	**47.91**	**145**	P	**P**	**09 25 18.4**	**+1.9**
BKZ	**Black Stump Fm**	**48.05**	**141**	P	**P**	**09 25 20.2**	**+2.5**
BKZ				IAmb	IAmb	09 25 42.5	
	comp=Z,6.5nm,1.0s						
KLR	**Kul'dur**	**54.11**	**354**	P	**P**	**09 26 03.2**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=180,slow=6.0,SNR=12						
SONM	**Songino Array**	**59.76**	**335**	P	**P**	**09 26 43.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=137,slow=5.7,SNR=2.6						
RAR	**Rarotonga**	**61.23**	**112**	LR	LR	09 48 21.5	
	comp=Z,72nm,20.7s,baz=68,slow=31						
MK31	**Makanchi Array**	**71.72**	**323**	P	**P**	**09 28 00.4**	**+0.2**
MKAR	**Makanchi Array**	**71.72**	**323**	P	**P**	**09 28 00.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=115,slow=7.4,SNR=22						
MKAR				pP	**sP**	**09 28 13.8**	**-1.5**
	comp=Z,2.6nm,0.7s,baz=106,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**71.72**	**323**	P	**P**	**09 28 00.1**	**-0.1**
MAKZ	**Makanchi**	**71.91**	**323**	P	**P**	**09 28 01.2**	**-0.1**
MAKZ				IAmb	IAmb	09 28 16.3	
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**73.94**	**330**	P	**P**	**09 28 12.8**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=76,slow=8.2,SNR=1.5						
KURK	**Kurchatov**	**75.67**	**325**	P	**P**	**09 28 22.8**	**-0.5**
KURBB	**Kurchatov Arra**	**75.68**	**325**	P	**P**	**09 28 22.4**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=111,slow=4.2,SNR=8.5						
KURBB				pP	**PcP**	**09 28 35.7**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=117,slow=5.6,SNR=11						
KKAR	**Karatay Array**	**77.96**	**316**	P	**P**	**09 28 34.1**	**-2.2**
KKAR				IAmb	IAmb	09 28 50.4	
	comp=Z,4.4nm,0.7s						
BVAR	**Borovoye Array**	**81.27**	**325**	P	**P**	**09 28 54.2**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=48,slow=14,SNR=17						
BRVK	**Borovoye**	**81.34**	**325**	P	**P**	**09 28 53.6**	**-0.9**
BRVK				IAmb	IAmb	09 29 09.6	
	comp=Z,5.6nm,0.8s						
ILAR	**Eielson Array**	**87.38**	**24**	P	**P**	**09 29 24.1**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=231,slow=5.7,SNR=2.9						
ILAR				pP	**pP**	**09 29 36.7**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=266,slow=4.6,SNR=5.6						
CPUP	**Villa Florida**	**145.20**	**153**	PKPbc	**PKPdf**	**09 36 17.1**	**+0.8**
	comp=Z,4.4nm,0.7s,baz=240,slow=3.7,SNR=9.2						
CPUP	**Villa Florida**	**145.20**	**153**		**PKPdf**	**09 36 17.0**	**+0.6**

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*BJI **20** 09:30:53.8±0.0, 49°.14N×79°.01E, h13^{km}, mB5.0/35, mb4.6/43, ML5.3/7, Ms4.7/35, Ms7 4.3/35*

*IDC **20** 09:30:53.8±0.4, 49°.02N×78°.96E, h0^{km}, mb4.5/37, mb1 4.6/44, mb1mx4.5/56, mbtmp4.5/44, ML4.1/6, MS3.8/17, Ms1 3.9/17, ms1mx3.6/47, Error ellipse: s-maj=8.7km s-min=6.1km az=37.0*

*BGR **20** 09:30:55.1±0.0, 47°.74N×79°.87E, h33^{km}, mb4.5*

*MOS **20** 09:30:55.0±1.1, 48°.97N×78°.92E, h22^{km}, mb5.0/46, MS4.0/6, Error ellipse: s-maj=6.2km s-min=5.0km az=99.3*

*NEIC **20** 09:30:55.2±1.5, 49°.02N±0°.05×78°.82E±0°.09, h10^{km}±1^{km}, mb4.9/150, Error ellipse: s-maj=10.5km s-min=7.9km az=256.0*

*SOME **20** 09:30:55.8, 48°.98N×78°.65E, h15^{km}, MS4.9*

*NNC **20** 09:30:56.5±0.8, 48°.98N×78°.76E, h14^{km}±6^{km}, mb5.6, mpv5.3, Error ellipse: s-maj=5.8km s-min=3.2km az=93.0*

*ASRS **20** 09:31:01.2±0.3, 49°N±1°×7°9E±°, h10^{km}, MLh6.0/13, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 20 09:30:54.5±0.6**, 49°.01N**±0°.02×**78°.88E**±0°.02**, h7**^{km}±3^{km}**, n531,** σ**2^{s}.07**/657**, mb4.8**/176**, MS4.1**/22**, 49C-35D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.63**	**352**	Pn	**Pn**	**09 31 24.0**	**+0.5**
	250nm,0.3s,baz=152,slow=18,SNR=3005						
KURBB				Pg	**Pb**	**09 31 25.1**	**+0.3**
	250nm,0.3s,baz=179,slow=16,SNR=4706						
KURBB				Lg	Lg	09 31 46.3	
	664nm,0.3s,baz=171,slow=30,SNR=32						
KURBB	**Kurchatov Arra**	**1.63**	**352**	⇓P	**Pg**	**09 31 25.3**	**-0.4**
	2µm,0.5s,baz=172,slow=16						
KURBB				⇓S	**Sg**	**09 31 47.3**	**+0.4**
	16µm,0.7s,baz=172,slow=29						
SEM	**Semipalatinsk**	**1.66**	**32**	*e*P	**Pg**	**09 31 27.0**	**+0.7**
	2µm,0.2s						
SEM				*e*S	**Sg**	**09 31 47.8**	**0.0**
	8µm,0.3s						
SEM	**Semipalatinsk**	**1.66**	**32**	P	**Pg**	**09 31 26.0**	**-0.4**
	3µm,0.2s						
SEM				S	**Sg**	**09 31 48.3**	**+0.5**
	8µm,0.3s						
SEM	**Semipalatinsk**	**1.66**	**32**	*e*PN	**Pg**	**09 31 27.0**	**+0.7**
SEM				*e*S	**Sg**	**09 31 47.8**	**0.0**
KURK	**Kurchatov**	**1.71**	**355**	Pg	**Pb**	**09 31 26.3**	**0.0**
KURK				Sg	**Sg**	**09 31 50.5**	**+0.9**
KURK	**Kurchatov**	**1.71**	**355**	⇓P	**Pb**	**09 31 26.2**	**-0.1**
	4µm,0.9s						
KURK				⇑S	**Sb**	**09 31 48.2**	**+0.1**
	4µm,0.5s						
KURK	**Kurchatov**	**1.71**	**355**	*ce*PN	**Pb**	**09 31 25.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,4µm,0.8s						
KURK	**Kurchatov**	**1.71**	**355**	Pn	**Pb**	**09 31 26.2**	**-0.1**
KURK				Sn	**Sb**	**09 31 47.5**	**-0.6**
MAKZ	**Makanchi**	**3.03**	**135**	Pg	**Pn**	**09 31 45.1**	**+2.2**
MAKZ				Sg	**Sb**	**09 32 26.3**	**+0.3**
MAKZ	**Makanchi**	**3.03**	**135**	⇑Pn	**Pb**	**09 31 46.4**	**-2.4**
	comp=Z,2µm,0.5s						
MAKZ				⇑Lg	Lg	09 32 25.8	
	comp=Z,3µm,0.4s						
MAKZ	**Makanchi**	**3.03**	**135**	PN	**Pb**	**09 31 45.8**	**-3.0**
MAKZ	**Makanchi**	**3.03**	**135**		**Pb**	**09 31 45.8**	**-3.0**
MK31	**Makanchi Array**	**3.19**	**133**	⇑Pn	**Pb**	**09 31 49.9**	**-1.6**
	comp=Z,371nm,0.3s,baz=309,slow=11						
MK31				⇑Lg	Lg	09 32 30.6	
	comp=Z,836nm,0.3s,baz=316,slow=26,SNR=7.5						
MK31	**Makanchi Array**	**3.19**	**133**	*ce*PN	**Pn**	**09 31 47.5**	**+2.4**
MK31	**Makanchi Array**	**3.19**	**133**		**Pb**	**09 31 48.3**	**-3.2**
MKAR	**Makanchi Array**	**3.19**	**133**	Pn	**Pn**	**09 31 47.4**	**+2.3**
	comp=Z,467nm,0.3s,baz=307,slow=10,SNR=728						
MKAR				Lg	Lg	09 32 29.9	
	comp=Z,892nm,0.3s,baz=317,slow=25,SNR=15						
MKAR				LR	LR	09 33 08.9	
	comp=Z,2µm,18.7s,baz=244,slow=43						
MKAR	**Makanchi Array**	**3.19**	**133**	Pg	**Pb**	**09 31 49.7**	**-1.8**
MKAR				Sg	**Sb**	**09 32 31.8**	**+1.2**
MKAR	**Makanchi Array**	**3.19**	**133**	PN	**Pb**	**09 31 48.2**	**-3.3**
MKAR	**Makanchi Array**	**3.19**	**133**		**Pb**	**09 31 48.2**	**-3.3**
KAPS	**Kapalarasan**	**3.74**	**175**	*e*P	**Pb**	**09 32 03.3**	**+2.4**
	comp=Z,280nm,0.6s						
KAPS				*e*S	**Sb**	**09 32 50.1**	**+3.7**
	comp=Z,4µm,0.5s						
KAPS	**Kapalarasan**	**3.74**	**175**	Pg	**Pg**	**09 32 04.7**	**-1.5**
	comp=Z,274nm,0.5s						
KAPS				Lg	Lg	09 32 53.2	
	comp=Z,4µm,0.5s						
KAPS	**Kapalarasan**	**3.74**	**175**	*e*PN	**Pb**	**09 32 03.3**	**+2.4**
KAPS				*e*S	**Sb**	**09 32 50.1**	**+3.7**
TDK	**Taldyqorghan**	**4.02**	**185**	*e*P	**Pg**	**09 32 09.8**	**-1.8**
	comp=Z,495nm,0.6s						
TDK				*e*S	**Sg**	**09 33 00.6**	**-3.0**
	comp=Z,8µm,1.0s						
TDK	**Taldyqorghan**	**4.02**	**185**	Pg	**Pg**	**09 32 11.7**	**+0.1**
	comp=Z,842nm,0.5s						
TDK				Lg	Lg	09 33 05.0	
	comp=Z,12µm,1.1s						
BRZS	**Berezniki**	**4.16**	**286**	*e*P	**Pb**	**09 32 10.0**	**+2.1**
	comp=Z,400nm,0.4s						
BRZS				*e*S	**Sb**	**09 33 01.8**	**+3.6**
	comp=Z,4µm,0.5s						
BRZS	**Berezniki**	**4.16**	**286**	Pg	**Pb**	**09 32 09.7**	**+1.8**
	comp=Z,551nm,0.5s						
BRZS				Lg	Lg	09 33 03.3	
	comp=Z,4µm,0.5s						
UKR	**Ust'-Kan**	**4.27**	**61**	Pn	**Pn**	**09 32 02.5**	**+2.6**
UKR				Pg	**Pg**	**09 32 15.7**	**-0.5**
UKR				Sg	**Sg**	**09 33 06.4**	**-5.0**
ZSN	**Zaisan**	**4.30**	**109**	*e*P	**Pb**	**09 32 12.7**	**+2.3**
	comp=Z,434nm,0.4s						
ZSN				*e*S	**Sb**	**09 33 05.9**	**+3.6**
	comp=Z,3µm,0.6s						
ZSN	**Zaisan**	**4.30**	**109**	Pg	**Pb**	**09 32 12.8**	**+2.5**
	comp=Z,571nm,0.5s						
ZSN				Lg	Lg	09 33 08.7	
	comp=Z,3µm,0.6s						
DJR	**Jarkent**	**4.72**	**172**	*e*P	**Pg**	**09 32 22.3**	**-2.6**
	comp=Z,211nm,0.2s						
DJR				*e*S	**Sg**	**09 33 21.6**	**-4.4**
	comp=Z,3µm,0.8s						
DJR	**Jarkent**	**4.72**	**172**	Pg	**Pg**	**09 32 22.4**	**-2.5**
	comp=Z,239nm,0.5s						
DJR				Lg	Lg	09 33 23.6	
	comp=Z,3µm,0.8s						
ARXS	**Arharly**	**4.85**	**189**	*e*P	**Pb**	**09 32 23.8**	**+4.0**
	comp=Z,134nm,0.6s						
ARXS				*e*S	**Sg**	**09 33 25.2**	**-5.1**
	comp=Z,4µm,0.6s						
ARXS	**Arharly**	**4.85**	**189**	Pg	**Pg**	**09 32 26.1**	**-1.3**
	comp=Z,564nm,0.5s						
ARXS				Lg	Lg	09 33 27.2	
	comp=Z,4µm,0.6s						
MNBS	**Baschi**	**4.94**	**184**	*e*P	**Pg**	**09 32 25.9**	**-3.2**
	comp=Z,714nm,0.8s						
MNBS				*e*S	**Sg**	**09 33 29.4**	**-3.8**
	comp=Z,10µm,0.5s						
MNBS	**Baschi**	**4.94**	**184**	Pg	**Pg**	**09 32 26.0**	**-3.2**
	comp=Z,714nm,0.8s						
MNBS				Lg	Lg	09 33 29.3	
	comp=Z,10µm,0.5s						
TUNR	**Tungur**	**4.98**	**74**	Pn	**Pn**	**09 32 13.0**	**+3.3**
TUNR				S	**Sn**	**09 33 10.2**	**+2.7**
TUNR				Sg	**Sg**	**09 33 29.3**	**-5.1**
CHKK	**Chushkaly**	**5.32**	**195**	*e*P	**Pg**	**09 32 33.2**	**-3.1**
	comp=Z,105nm,0.6s						
CHKK				*e*S	**Sg**	**09 33 41.4**	**-3.8**
	comp=Z,3µm,1.1s						
CHKK	**Chushkaly**	**5.32**	**195**	Pg	**Pg**	**09 32 33.2**	**-3.1**
	comp=Z,105nm,0.6s						
CHKK				Lg	Lg	09 33 41.4	
	comp=Z,3µm,1.1s						
GALT	**Gorno-Altaysk,**	**5.39**	**54**	Pn	**Pn**	**09 32 18.7**	**+3.5**
GALT				Sg	**Sg**	**09 33 45.3**	**-2.2**
KUU	**Kurty**	**5.41**	**200**	*e*P	**Pg**	**09 32 35.2**	**-2.9**
	comp=Z,174nm,0.4s						

KUU				eS	Sg	09 33 43.7	-4.4
	comp=Z,5µm,0.9s						
KUU	Kurty	5.41	200	Pg	Pg	09 32 35.2	-2.9
	comp=Z,174nm,0.4s						
KUU				Lg	Lg	09 33 43.7	
	comp=Z,5µm,0.9s						
KTBS	Karatobe	5.51	197	eP	Pg	09 32 37.9	-2.2
	comp=Z,170nm,0.7s						
KTBS				eS	Sg	09 33 49.2	-2.2
	comp=Z,4µm,1.1s						
KTBS	Karatobe	5.51	197	Pg	Pg	09 32 37.9	-2.2
	comp=Z,170nm,0.7s						
KTBS				Lg	Lg	09 33 49.2	
	comp=Z,4µm,1.1s						
KURS	Kuram	5.54	185	eP	Pg	09 32 38.4	-2.3
	comp=Z,140nm,0.7s						
KURS				eS	Sg	09 33 49.7	-2.8
	comp=Z,2µm,0.9s						
KPKS	Kokpek	5.55	181	eP	Pg	09 32 37.6	-3.1
	comp=Z,368nm,0.5s						
KPKS				eS	Sg	09 33 48.3	-4.3
	comp=Z,4µm,0.7s						
DGZ	Jazzator, Alta	5.63	80	Pn	Pn	09 32 20.9	+2.2
DGZ				Pg	Pg	09 32 39.0	-3.4
DGZ				S	Sn	09 33 23.9	+0.2
DGZ				Sg	Sg	09 33 51.4	-3.8
DGZ	Jazzator, Alta	5.63	80c	iPN	Pn	09 32 21.1	+2.4
KTMS	Ketmen	5.66	169	eP	Pg	09 32 39.3	-3.6
	comp=Z,157nm,0.3s						
KTMS				eS	Sg	09 33 52.1	-4.1
	comp=Z,895nm,0.7s						
KTMS	Ketmen	5.66	169	Pg	Pg	09 32 39.3	-3.6
	comp=Z,157nm,0.3s						
KTMS				Lg	Lg	09 33 52.1	
	comp=Z,895nm,0.7s						
PDGK	Podgornoye	5.70	175	⇑Pn	Pn	09 32 21.9	+2.3
	comp=Z,115nm,0.8s						
PDGK				⇓Pg	Pb	09 32 37.0	+2.7
	comp=Z,153nm,0.8s						
PDGK				⇓Sn	Sn	09 33 26.0	+0.7
	comp=Z,315nm,0.7s						
PDGK				⇑Lg	Lg	09 33 52.3	
	comp=Z,2µm,0.6s						
CHBI	Chibit, Altay	5.75	74	Pn	Pn	09 32 23.4	+3.1
CHBI				Pg	Pg	09 32 44.1	-0.5
CHBI				S	Sn	09 33 28.5	+1.9
KRBS	Karabastau	5.76	204	eP	Pg	09 32 41.3	-3.5
	comp=Z,116nm,0.4s						
KRBS				eS	Sg	09 33 54.7	-4.6
	comp=Z,2µm,0.7s						
ZHN	Zhinishke	5.85	183	eP	Pg	09 32 43.3	-3.2
	comp=Z,86nm,0.3s						
ZHN				eS	Sg	09 33 58.3	-4.0
	comp=Z,298nm,0.7s						
UZB	Uzynbulak	5.87	179	eP	Pg	09 32 42.4	-4.4
	comp=Z,72nm,0.7s						
UZB				eS	Sg	09 33 56.7	-6.1
	comp=Z,1µm,0.9s						
SHLS	Shalkode	5.87	176	eP	Pg	09 32 45.6	-1.2
	comp=Z,371nm,0.6s						
SHLS				eS	Sg	09 34 03.5	+0.6
	comp=Z,2µm,0.9s						
SHLS	Shalkode	5.87	176	Pg	Pg	09 32 45.6	-1.2
	comp=Z,371nm,0.6s						
SHLS				Lg	Lg	09 34 03.5	
	comp=Z,2µm,0.9s						
KNDC	Almaty	5.95	194	⇑Pn	Pn	09 32 25.2	+2.3
	comp=Z,703nm,1.1s						
KNDC				⇓Sn	Sn	09 33 31.9	+0.6
	comp=Z,4µm,0.9s						
KNDC				⇑Lg	Lg	09 34 00.9	
	comp=Z,3µm,0.8s						
SATY	Saty	5.96	183	eP	Pg	09 32 44.6	-4.0
	comp=Z,64nm,0.4s						
SATY				eS	Sg	09 34 01.1	-4.7
	comp=Z,2µm,1.2s						
MDOK	Medeo	5.99	193	eP	Pg	09 32 45.6	-3.5
	comp=Z,165nm,0.5s						
MDOK				eS	Sg	09 34 03.0	-3.6
	comp=Z,1µm,1.2s						
MDOK	Medeo	5.99	193	⇑Pn	Pn	09 32 24.8	+1.2
	comp=Z,84nm,0.4s						
MDOK				⇓Sn	Sn	09 33 33.0	+0.6
	comp=Z,612nm,0.8s						
MDOK				⇑Lg	Lg	09 34 01.0	
	comp=Z,2µm,0.9s						
MDOK	Medeo	5.99	193	Pg	Pg	09 32 45.6	-3.5
	comp=Z,165nm,0.5s						
MDOK				Lg	Lg	09 34 03.0	
	comp=Z,1µm,1.2s						
BSTK	Bystrovka, Nov	6.04	21	Pn	Pn	09 32 26.2	+2.1
BSTK				Pg	Pg	09 32 49.4	-0.7
BSTK				Sg	Sg	09 34 11.2	+3.0
ARTR	Artybash	6.05	59	Pn	Pn	09 32 26.4	+2.1
ARTR				Pg	Pb	09 32 44.9	+4.7
ARTR				S	Sn	09 33 35.3	+1.4
ARTR				Sg	Sg	09 34 08.4	-0.4
ULGR	Ulagan, Altay	6.10	71	Pn	Pn	09 32 27.6	+2.5
ULGR				S	Sn	09 33 35.3	+0.3
ULGR				Sg	Sg	09 34 07.5	-2.6
MTBS	Maitube	6.12	197	eP	Pg	09 32 47.1	-4.7
	comp=Z,45nm,0.5s						
MTBS				eS	Sg	09 34 04.6	-6.4
	comp=Z,1µm,0.9s						
TNSS	Tian-Shan	6.12	193	eP	Pg	09 32 48.0	-3.7
	comp=Z,150nm,0.5s						
TNSS				eS	Sg	09 34 07.2	-3.8
	comp=Z,663nm,0.7s						
TNSS	Tian-Shan	6.12	193	Pg	Pg	09 32 48.1	-3.7
	comp=Z,150nm,0.5s						
TNSS				Lg	Lg	09 34 07.2	
	comp=Z,663nm,0.7s						
ZAA0	Zalesovo Array	6.18	35	⇓Pn	Pn	09 32 28.0	+1.9
	comp=Z,44nm,0.3s						
ZAA0				⇑Sn	Sn	09 33 37.4	+0.4
	comp=Z,22nm,0.2s						
ZAA0				⇓Lg	Lg	09 34 11.5	
	comp=Z,112nm,0.7s						
ZAA0	Zalesovo Array	6.18	35	Pn	Pn	09 32 28.2	+2.1
ZALV	Zalesovo Beam	6.18	35	Pn	Pn	09 32 28.1	+2.1
	comp=Z,275nm,0.3s,baz=225,slow=14,SNR=1663						
ZALV				Sn	Sn	09 33 36.8	-0.2
	comp=Z,91nm,0.3s,baz=220,slow=23,SNR=7.5						
ZALV				Lg	Lg	09 34 10.0	
	comp=Z,75nm,0.3s,baz=234,slow=25,SNR=6.3						
ZALV	Zalesovo Beam	6.18	35	i PN	Pn	09 32 28.2	+2.1
ZALV				pmax	pmax		
	comp=Z,772nm,0.3s						
CUR	Chagan-Uzun	6.26	76	Pn	Pn	09 32 30.0	+2.7
CUR				S	Sn	09 33 41.6	+2.5
CUR				Sg	Sg	09 34 12.6	-2.8
ELT	Eltsovka	6.29	45	Pn	Pn	09 32 29.8	+2.3
ELT				S	Sn	09 33 40.1	+0.5
ELT				Sg	Sg	09 34 11.9	-4.4
KST	Kastek	6.30	200	eP	Pg	09 32 53.1	-2.1
	comp=Z,215nm,1.0s						
KST				eS	Sg	09 34 15.5	-1.3
	comp=Z,2µm,1.0s						
KST	Kastek	6.30	200	Pg	Pg	09 32 53.1	-2.1
	comp=Z,215nm,1.0s						
KST				Lg	Lg	09 34 15.5	
	comp=Z,2µm,1.0s						
KHAR	Kharino, NSO,	6.33	26	Pn	Pn	09 32 30.6	+2.6
KHAR				S	Sn	09 33 42.2	+1.8
KHAR				Sg	Sg	09 34 16.0	-1.4
ALXA	Alekseevka, NS	6.35	20	Pn	Pn	09 32 30.0	+1.6
ALXA				S	Sn	09 33 46.9	+5.8
ALXA				Sg	Sg	09 34 18.7	+0.4
NHES	Novosibirsk, N	6.39	22	Pn	Pn	09 32 30.8	+2.0
NHES				Pg	Pg	09 32 53.9	-2.8
NHES				S	Sn	09 33 43.0	+1.0
NHES				Sg	Sg	09 34 20.5	+1.2
NVS	Novosibirsk	6.43	23	Pn	Pn	09 32 32.3	+2.9
NVS				Pg	Pg	09 32 56.1	-1.4
NVS				S	Sn	09 33 43.7	+0.7
NVS				Sg	Sg	09 34 20.5	-0.3
NVSII	Novosibirsk	6.43	23	Pn	Pn	09 32 32.4	+2.9
NVSII				Pg	Pg	09 32 56.4	-1.2
NVSII				S	Sn	09 33 43.8	+0.7
NVSII				Sg	Sg	09 34 19.6	-1.2
USP	Ospenovka	6.50	210	P	Pn	09 32 31.8	+1.2
	SNR=43						
TKM2	Tokmak 2	6.50	202	P	Pn	09 32 32.7	+2.0
	SNR=23						
TKM2	Tokmak 2	6.50	202	⇑Pn	Pn	09 32 32.0	+1.2
	comp=Z,48nm,0.8s						
TKM2				⇑Pg	Pg	09 32 56.7	-2.4
	comp=Z,252nm,0.9s						
TKM2				⇓Lg	Lg	09 34 17.1	
	comp=Z,1µm,0.8s						
CHMS	Chumysh	6.66	207	P	Pn	09 32 35.2	+2.4
	SNR=14						
BVAR	Borovoye Array	6.69	310	Pn	Pn	09 32 31.6	-1.5
	comp=Z,6.8nm,0.3s,baz=196,slow=36,SNR=85						
BVAR				Sn	Sn	09 33 49.7	+0.1
	comp=Z,123nm,0.3s,baz=99,slow=27,SNR=12						
BVAR				Lg	Lg	09 34 25.0	
	comp=Z,139nm,0.3s,baz=80,slow=29,SNR=7.1						
BRVK	Borovoye	6.77	310	⇑Pn	Pn	09 32 36.0	+1.9
	comp=Z,67nm,0.7s						
BRVK				⇑Sn	Sn	09 33 50.9	-0.4
	comp=Z,1µm,0.8s						
BRVK				⇓Lg	Lg	09 34 27.7	
	comp=Z,2µm,1.0s						
BRVK	Borovoye	6.77	310c	ePN	Pn	09 32 34.4	+0.3
BRVK				pmax	pmax		
	comp=Z,126nm,1.3s						
BRVK	Borovoye	6.77	310	Pn	Pn	09 32 35.8	+1.7
TASR	Tashtagol	6.82	53	Pn	Pn	09 32 37.9	+3.0
TASR				S	Sn	09 33 55.3	+2.6
TASR				Sg	Sg	09 34 30.3	-3.0
BJR1	Bachatsky 1, K	6.87	38	Pn	Pn	09 32 37.8	+2.2
BJR1				S	Sn	09 33 53.3	-0.7
BJR1				Sg	Sg	09 34 32.9	-2.1
SALR	Pechorkino, Sa	6.88	35	Pn	Pn	09 32 31.4	-4.2
SALR				S	Sn	09 33 49.9	-4.1
SALR				Sg	Sb	09 34 25.3	+8.9
BJR3	Bachatsky-3 (S	6.91	38	Pn	Pn	09 32 38.3	+2.2
BJR3				S	Sn	09 33 55.7	+0.8
BJR3				Sg	Sg	09 34 28.9	-7.3
KBK	Karagaybulak	6.92	205	P	Pn	09 32 37.8	+1.3
	SNR=46						
BJR2	Bachatsky-2, K	6.94	38	Pn	Pn	09 32 39.4	+2.9
ULHL	Ulahol	7.01	196	P	Pn	09 32 39.6	+1.8
	SNR=82						
BJR4	Bachatsky-4, K	7.01	38	Pn	Pn	09 32 39.4	+1.9
AAK	Ala-Archa	7.07	207	P	Pn	09 32 39.4	+0.8
	SNR=19						
AAK	Ala-Archa	7.07	207	⇓Pn	Pn	09 32 38.3	-0.1
	comp=Z,24nm,0.6s						
AAK				⇓Lg	Lg	09 34 36.7	
	comp=Z,2µm,0.9s						
AAK	Ala-Archa	7.07	207	i PN	Pn	09 32 39.0	+0.5
AAK	Ala-Archa	7.07	207	Pn	Pn	09 32 39.3	+0.8
POMOR	Pomortsevo, Ku	7.19	38	Pn	Pn	09 32 42.9	+3.0
POMOR				S	Sn	09 34 01.2	-0.6
POMOR				Sg	Sg	09 34 48.5	+3.3
EKS2	Erkin-Say	7.28	211	P	Pn	09 32 42.1	+0.8
	SNR=25						
UCH	Uchtor	7.44	206	P	Pn	09 32 45.2	+1.4
	SNR=28						
TEL	Teeli	7.57	70	Pn	Pn	09 32 47.4	+2.2
TEL				S	Sn	09 34 12.5	+1.3
TEL				Sg	Sg	09 34 53.8	-3.5
KEM	Kemerovo	7.73	32	Pn	Pn	09 32 51.2	+3.9
KEM				S	Sn	09 34 18.5	+3.4
KEM				Sg	Sg	09 35 00.8	-1.7
AML	Almayashu	7.78	210	P	Pn	09 32 49.4	+1.0
	SNR=35						
LUZB	Luzhba, Kemero	7.81	50	Pn	Pn	09 32 50.0	+1.5
LUZB				S	Sn	09 34 15.0	-2.1
LUZB				Sg	Sg	09 35 00.8	-4.3
BALAH	Balakhonka, Ku	7.92	31	Pn	Pn	09 32 53.4	+3.4
BALAH				S	Sn	09 34 22.3	+2.5
BALAH				Sg	Sg	09 35 09.9	+1.3
WMQ	Urumqi	8.00	127	eP	Pn	09 32 53.3	+2.1
WMQ				S	Sn	09 34 22.1	+0.2
WMQ				smax	smax		
	comp=Z,750nm,1.1s						
WMQ				smax	smax		
	comp=Z,750nm,1.1s						
WMQ				LR	LR		
	comp=Z,4µm,8.9s						
WMQ				LR	LR		
	comp=Z,5µm,8.7s						
WMQ				LR	LR		
	comp=Z,3µm,8.3s						
WMQ	Urumqi	8.00	127	P	Pn	09 32 52.9	+1.7
WMQ	Urumqi	8.00	127	Pn	Pn	09 32 52.9	+1.7
KK31	Karatay Array	8.29	228	⇑Pn	Pn	09 32 54.5	-0.5
	comp=Z,66nm,0.5s,baz=40,slow=13,SNR=990						
KK31				⇓Sn	Sn	09 34 27.7	-1.2
	comp=Z,26nm,0.3s,baz=36,slow=24,SNR=4.4						
KK31				⇑Lg	Lg	09 35 08.6	
	comp=Z,368nm,0.6s,baz=48,slow=30,SNR=5.5						
KK31	Karatay Array	8.29	228	P	Pn	09 32 54.5	-0.5
KK31	Karatay Array	8.29	228	Pn	Pn	09 32 54.5	-0.5
KKAR	Karatay Array	8.29	228	P	Pn	09 32 54.4	-0.6
KKAR	Karatay Array	8.29	228		Pn	09 32 54.4	-0.6
KKAR	Karatay Array	8.29	228	Pn	Pn	09 32 54.3	-0.8
ASR1	Anjero-Sudjens	8.29	29	S	Sn	09 34 31.4	+2.7
ASR1				Sg	Sg	09 35 19.3	-1.0
VEH	Verkhnyaya Baz	8.35	55	Pn	Pn	09 32 57.4	+1.4
VEH				S	Sn	09 34 25.5	-5.0
VEH				Sg	Sg	09 35 18.0	-4.4
TBTR	Tabat	8.44	58	Pn	Pn	09 32 59.0	+1.9
TBTR				S	Sn	09 34 29.8	-2.7
TBTR				Sg	Sg	09 35 20.1	-5.1
DJO	Djoy, Khakassi	8.66	60	Pn	Pn	09 33 03.4	+3.2
DJO				S	Sn	09 34 36.4	-1.6
DJO				Sg	Sg	09 35 29.5	-2.9
DJOS	Djoyskaya Sosn	8.77	60	Pn	Pn	09 33 07.3	+5.6
DJOS				S	Sn	09 34 38.0	-2.7
DJOS				Sg	Sg	09 35 31.5	-4.3
BRCR	Berchikul'	8.80	37	Pn	Pn	09 33 02.5	+0.5
BRCR				S	Sn	09 34 40.9	-0.4
BRCR				Sg	Sg	09 35 32.4	-4.2
CERR	Cheremushki	8.80	59	Pn	Pn	09 33 06.6	+4.6
CERR				S	Sn	09 34 42.0	+0.6
CERR				Sg	Sg	09 35 32.0	-4.7
SHRR	Shira	8.89	48	Pn	Pn	09 33 05.3	+2.1
SHRR				S	Sn	09 34 40.3	-3.2
SHRR				Sg	Sg	09 35 42.1	+2.5
ABNR	Abakan	9.16	54	S	Sn	09 34 52.6	+2.4
ABNR				Sg		09 35 44.2	
BLRR	Bol'shaya Rech	9.44	60	Pn	Pn	09 33 12.2	+1.4
BLRR				S	Sn	09 35 00.7	+3.6
BLRR				Sg		09 35 57.6	
ARDR	Aradan	9.88	63	Pn	Pn	09 33 19.8	+2.9
ARDR				Sg		09 36 07.8	
TAS	Tashkent	10.23	225	P	Pn	09 33 21.8	+0.1
TAS	Tashkent	10.23	225	Pn	Pn	09 33 21.8	+0.1
KZLR	Kyzyl	10.31	69	Sg		09 36 18.1	
KTRR	Kuturchin	11.16	52	Pn	Pn	09 33 37.9	+3.7
KTRR				S	Sn	09 35 43.8	+4.8
TDJR	Todzha	11.43	66	S	Sn	09 35 47.3	+1.2
ORY	Orie	11.65	53	Pn	Pn	09 33 43.7	+2.7
AB31	Akbulak array	12.41	278	Pn	Pn	09 33 50.0	-1.3
	comp=Z,11nm,0.6s,baz=90,slow=7.5,SNR=309						
AB31				⇑Lg	Lg	09 37 22.2	
	comp=Z,66nm,0.6s,baz=95,slow=30,SNR=4.2						
ABKAR	Akbulak array	12.41	278	Pn	Pn	09 33 49.7	-1.7
ABKAR	Akbulak array	12.41	278	Pn	Pn	09 33 49.7	-1.7
SVE	Sverdlovsk	13.47	312	eP	Pn	09 34 05.4	-0.4
AKTO	Aktyubinsk	13.57	284	Pn	Pn	09 34 05.9	-1.3
	comp=Z,5.5nm,0.3s,baz=88,slow=11,SNR=81						
AKTO				Sn	Sn	09 36 29.6	-8.5
	comp=Z,3.6nm,0.3s,baz=30,slow=20,SNR=3.3						
AKTO				Lg	Lg	09 38 02.2	
	comp=Z,2.2nm,0.3s,baz=350,slow=20,SNR=3.9						
AKTO				LR	LR	09 39 29.4	
	comp=Z,564nm,19.2s,baz=90,slow=38						
AKTO	Aktyubinsk	13.57	284	⇑Pn	Pn	09 34 05.3	-1.9
	comp=Z,13nm,0.5s						
AKTO				⇓Sn	Sn	09 36 32.7	-5.5
	comp=Z,38nm,1.1s						
AKTO				⇑Lg	Lg	09 38 05.8	
	comp=Z,167nm,1.1s						
ARU	Arti	14.34	309	Pn	Pn	09 34 16.1	-1.6
	comp=Z,0.0nm,0.3s,baz=134,slow=10,SNR=17						
ARU				Sn	Sn	09 36 48.0	-8.8
	comp=Z,0.0nm,0.3s,baz=138,slow=20,SNR=6.0						
ARU				Lg	Lg	09 38 26.4	
	comp=Z,0.0nm,0.3s,baz=7.1,slow=21,SNR=3.7						
ARU				LR	LR	09 40 00.5	
	comp=Z,491nm,18.0s,baz=88,slow=38						
ARU	Arti	14.34	309	P	Pn	09 34 15.8	-1.9
ARU				S	Sn	09 36 53.6	-3.2
ARU	Arti	14.34	309	Pn	Pn	09 34 15.9	-1.8
MOY	Mondy	14.36	71	eP	P	09 34 24.3	-1.0
MOY				pmax	pmax		
	comp=Z,39nm,2.1s						
ZAK	Zakamensk	15.84	76	eP	Pn	09 34 38.5	+0.7
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
NIL	Nilore	15.91	197	P	Pn	09 34 38.6	-0.2
NIL				pmax	pmax		
	comp=Z,49nm,1.1s						
NIL	Nilore	15.91	197	Pn	Pn	09 34 38.6	-0.2
TLY	Talaya	16.01	71	Lg	Lg	09 39 10.4	
	comp=Z,0.0nm,0.3s,baz=31,slow=3.9,SNR=3.6						
TLY				LR	LR	09 40 51.8	
	comp=Z,314nm,20.9s,baz=278,slow=38						
TLY	Talaya	16.01	71c	iP	P	09 34 45.5	+2.0
TLY				pmax	pmax		
	comp=Z,11nm,0.6s						
TLY				MLR	MLR		
	comp=Z,1µm,12.0s						
TLY	Talaya	16.01	71	Pn	Pn	09 34 41.4	+1.4
CEP	Cherat	16.04	201	⇑P	Pn	09 34 42.2	+1.7
CEP				S	S	09 37 49.0	-3.5
KBL	Kabul	16.19	210	P	Pn	09 34 41.8	-0.8
KBL				pmax	pmax		
	comp=Z,50nm,1.5s						
KBL	Kabul	16.19	210	Pn	Pn	09 34 41.8	-0.8
THW	Thamme Wali	17.06	201	P	Pn	09 34 53.5	+0.1
GTA	Gaotai	17.76	115	P	P	09 35 04.3	+1.2
GTA				pP	sP	09 35 09.0	+2.6
GTA				sP	pP	09 35 11.9	+6.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,84nm,6.2s						
GTA				LR	LR		
	comp=Z,490nm,14.9s						
GTA				LR	LR		
	comp=Z,380nm,13.5s						
GTA				LR	LR		
	comp=Z,690nm,13.4s						
SONM	Songino Array	18.27	83	P	Pn	09 35 07.0	-1.4
	comp=Z,1.1nm,0.3s,baz=284,slow=7.3,SNR=15						
SONM				Lg	Lg	09 40 19.7	
	comp=Z,0.1nm,0.3s,baz=286,slow=26,SNR=3.6						
SONM				LR	LR	09 42 53.2	
	comp=Z,218nm,20.0s,baz=271,slow=40						
SONM	Songino Array	18.27	83	P	Pn	09 35 07.7	-0.7
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	18.27	83		Pn	09 35 07.7	-0.7
GEYT	Alibeck	18.64	241	P	P	09 35 12.4	-0.2
	comp=Z,0.7nm,0.3s,baz=38,slow=9.8,SNR=4.3						
GEYT				LR	LR	09 43 59.6	
	comp=Z,113nm,21.2s,baz=20,slow=42						
GEYT	Alibeck	18.64	241	P	P	09 35 10.6	-2.0
GYA0B	ALIBECK ARRAY	18.64	241	P	P	09 35 11.1	-1.5
ULN	Ulaanbaatar	18.69	83c	eP	P	09 35 12.5	-0.8
ULN				pmax	pmax		
	comp=Z,16nm,2.5s						
ULN	Ulaanbaatar	18.69	83	P	Pn	09 35 13.7	+0.1
HRA	Herat	19.11	226	P	P	09 35 16.3	-1.8
KIRV	Kirov	19.71	310	P	P	09 35 24.4	+0.3
	comp=Z,3.7nm,0.3s,baz=120,slow=2.0,SNR=8.8						
KIRV	Kirov	19.71	310c	eP	P	09 35 23.9	-0.2
BELG	Belogornoye	20.00	292	LR	LR	09 43 21.2	
	comp=Z,213nm,19.0s,baz=11,slow=37						
BELG	Belogornoye	20.00	292	i P	P	09 35 26.9	-0.4
BELG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NDI	New Delhi	20.34	184	eP	P	09 35 25.0	-6.2
DANN	Dangsing	20.97	168	eP	P	09 35 38.6	+0.2
	comp=Z,52nm,0.5s						
PYUN	Piuthan	21.12	170	eP	P	09 35 40.2	+0.3
	comp=Z,87nm,0.4s						
GKN	Gorkha	21.44	166	eP	P	09 35 43.8	+0.5
	comp=Z,53nm,0.4s						
KOLN	Koldanda	21.52	169	eP	P	09 35 44.6	+0.4
	comp=Z,40nm,0.5s						
GUN	Gumba	21.75	163	eP	P	09 35 47.2	+0.4
	comp=Z,52nm,0.5s						
KKN	Kakani	21.76	165	eP	P	09 35 47.2	+0.4
	comp=Z,26nm,0.7s						
DMN	Daman	21.90	165	eP	P	09 35 49.1	+0.7
	comp=Z,19nm,0.5s						
PKIN	Phulchoki	21.99	164	eP	P	09 35 50.1	+0.8
	comp=Z,38nm,0.4s						
PKI	Pulchoki	21.99	164	eP	P	09 35 50.1	+0.7
	comp=Z,41nm,0.4s						
LZH	Lanzhou	22.35	116	eP	P	09 35 53.8	+0.7
LZH				pP	sP	09 35 56.9	+0.5
LZH				sP	pP	09 35 58.6	+3.2
LZH				pmax	pmax		
	comp=Z,49nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.1s						
LZH				LR	LR		
	comp=Z,910nm,10.8s						
LZH				LR	LR		
	comp=Z,930nm,12.5s						
LZH				LR	LR		
	comp=Z,970nm,15.2s						
BOD	Bodaibo	22.48	54	eP	P	09 35 52.5	-1.6
BOD				pmax	pmax		
	comp=Z,22nm,1.5s						
TAPN	Taplejung	22.68	159	eP	P	09 35 57.3	+0.5
	comp=Z,71nm,0.9s						
RAMN	Ramite	22.83	162	eP	P	09 35 57.8	-0.4
	comp=Z,93nm,0.8s						
ODAN	Odare	23.08	160	eP	P	09 36 01.9	+1.0
	comp=Z,94nm,0.6s						
BTO	Baotou	23.51	99	eP	P	09 36 04.8	-0.2
GROC	Groznyy	23.54	268	eP	P	09 36 00.4	-4.7
GROC				pmax	pmax		
	comp=Z,26nm,0.8s						
GROC				MLR	MLR		
	comp=Z,267nm,8.0s						
VRH	Novokhopyorsk	23.77	289	eP	P	09 36 13.2	+5.9
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC	Hu-ho-hao-te	24.39	97	eP	P	09 36 13.9	+0.6
HHC				PP	PnPn	09 36 49.4	+6.1
HHC				S	S	09 40 30.3	-2.8
HHC				SS	SnSn	09 41 24.3	+8.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,7.4s						
HHC				LR	LR		
	comp=Z,1µm,15.8s						
HHC				LR	LR		
	comp=Z,1µm,8.4s						
HHC				LR	LR		
	comp=Z,350nm,12.6s						
GOF	Gofitskoye	24.59	274	⇑eP	P	09 36 16.0	+1.0
GOF				pmax	pmax		
	comp=Z,13nm,0.8s						
ZEI	Tsey	24.96	269	eP	P	09 36 18.0	-0.6
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLMR	Klimovskoe	25.11	313	eP	P	09 36 18.9	-0.6
KLMR				pmax	pmax		
	comp=Z,56nm,1.2s						
KLMR	Klimovskoe	25.11	313	eP	P	09 36 18.9	-0.6
KLMR				AMP		09 36 29.3	
	comp=Z,56nm,1.2s						
KLMR				LQ	LQ	09 44 01.7	
KLMR				LQ	LQ	09 44 01.7	
KLMR				LR	LR	09 45 45.3	
KBZ	Khabaz	25.22	272	P	P	09 36 22.5	+1.9
	comp=Z,5.1nm,0.6s,baz=92,slow=5.7,SNR=16						
KBZ				LR	LR	09 48 05.2	
	comp=Z,409nm,20.0s,baz=252,slow=41						
KBZ	Khabaz	25.22	272c	eP	P	09 36 21.3	+0.7
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	25.26	272	eP	P	09 36 21.7	+0.5
KIV				eS	S	09 40 48.3	+1.2
KIV				pmax	pmax		
	comp=Z,34nm,1.0s						
KIV				MLR	MLR		
	comp=Z,414nm,15.0s						
KIV	Kislovodsk	25.26	272	P	P	09 36 19.6	-1.6
KIV				IAmb	IAmb	09 36 39.1	
	comp=Z,16nm,0.7s						
LPSR	Galich'ya Gora	25.27	293	eP	P	09 36 21.8	+0.8
LPSR				pmax	pmax		

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       comp=Z,20nm,0.9s
VORD   Divnogorie       25.32 290  eP    P      09 36 21.9 +0.4
VORD                               pmax  pmax
       comp=Z,30nm,1.3s
VSR    Storozhevoye     25.35 290  eP    P      09 36 22.1 +0.3
VSR                                pmax  pmax
       comp=Z,30nm,1.2s
GNI    Garni            25.70 263  P     P      09 36 28.8 +3.6
       comp=Z,12nm,0.7s,baz=154,slow=15,SNR=5.8
GNI    Garni            25.70 263ceP     P      09 36 26.6 +1.4
GNI                                pmax  pmax
       comp=Z,40nm,1.7s
MOS    Moscow           25.75 301  eP    P      09 36 24.6 -0.8
MOS                                eS    S      09 40 58.4 +4.0
CD2    Chengdu          26.09 125  P     P      09 36 30.0 +1.3
CD2                                S     S      09 41 01.3 +1.1
CD2                                LR    LR
       comp=Z,730nm,10.8s
CD2                                LR    LR
       comp=Z,450nm,8.4s
CD2                                LR    LR
       comp=Z,810nm,10.4s
OBN    Obninsk          26.39 300⇑ eP    P      09 36 31.9 +0.8
OBN                                e            09 37 16.3
OBN                                pmax  pmax
       comp=Z,9.0nm,0.5s
OBN                                MLR   MLR
       comp=Z,222nm,12.0s
TMCR   Tamitsa          26.52 320  eP    P      09 36 35.0 +2.8
TMCR                               pmax  pmax
       comp=Z,29nm,0.6s
XAN    Xi'an            26.79 113  P     P      09 36 36.1 +1.1
XAN                                sP    sP     09 36 42.8 +4.3
XAN                                PP    PnPn   09 37 21.1 +4.9
XAN                                S     S      09 41 11.0 -0.3
XAN                                SS    SnSn   09 42 23.9 +9.1
XAN                                pmax  pmax
       comp=Z,9.0nm,0.5s
XAN                                pmax  pmax
       comp=Z,160nm,5.3s
XAN                                LR    LR
       comp=Z,1µm,14.1s
XAN                                LR    LR
       comp=Z,1µm,16.3s
XAN                                LR    LR
       comp=Z,470nm,11.4s
LVZ    Lovozero         28.93 327  P     P      09 36 54.4 +0.6
LVZ                                pmax  pmax
       comp=Z,88nm,1.5s
LVZ    Lovozero         28.93 327  P     P      09 36 54.4 +0.6
APA    Apatity          29.28 326⇓ iP    P      09 36 59.7 +2.8
APA                                pmax  pmax
       comp=Z,9.0nm,1.0s
APA                                MLR   MLR
       comp=Z,700nm,17.0s
UOSS   Minazif          29.86 225  P     P      09 37 03.1 +0.7
UOSS                               IAmb  IAmb   09 37 29.9
       comp=Z,44nm,1.4s
KMI    Kunming          30.27 133⇓ eP    P      09 37 11.3 +5.0
KMI                                pP    sP     09 37 19.5  +10
KMI                                pmax  pmax
       comp=Z,9.0nm,0.5s
KMI                                pmax  pmax
       comp=Z,140nm,5.2s
KMI                                LR    LR
       comp=Z,270nm,7.6s
KMI                                LR    LR
       comp=Z,300nm,9.8s
KMI                                LR    LR
       comp=Z,250nm,9.8s
WSAR   Wadi Sarin       30.29 219  LR    LR     09 51 27.8
       comp=Z,88nm,19.5s,baz=36,slow=41
UMR    Umm Al-Rimmam    30.66 242⇓ eP           09 37 10.5
MIB    Mutribah         30.69 243  eP           09 37 10.7
YAK    Yakutsk          30.69  46  P     P      09 37 08.4 -1.0
       comp=Z,5.2nm,0.4s,baz=151,slow=1.9,SNR=4.0
YAK    Yakutsk          30.69  46ceP     P      09 37 08.6 -0.8
YAK                                pmax  pmax
       comp=Z,49nm,1.7s
YAK    Yakutsk          30.69  46  P     P      09 37 08.9 -0.5
RST    Umm Al-Ruwaisa   31.11 243  eP           09 37 14.1
GYA    Guiyang          31.16 126 ⇓P     P      09 37 14.9 +0.9
GYA                                pmax  pmax
       comp=Z,20nm,0.7s
GYA                                pmax  pmax
       comp=Z,170nm,4.5s
GYA                                LR    LR
       comp=Z,400nm,17.4s
RDF    Al-Radifah       31.22 242  eP           09 37 15.5
MNK    Minsk            31.45 300  i P   P      09 37 12.9 -3.3
       comp=E,2.0nm,0.7s
MNK                                i P   P      09 37 12.9 -3.3
       comp=N,35nm,1.1s
MNK                                i P   P      09 37 12.9 -3.3
       comp=Z,8.0nm,0.6s
MNK                                i PP  PnPn   09 38 15.7 -3.0
MNK                                i PPP PPP    09 38 24.8
MNK                                i PcP PcP    09 40 05.8 -3.3
MNK                                i S   S      09 42 20.3 -3.7
MNK                                i SS  SnSn   09 44 07.1 -0.7
MNK                                i SSS SSS    09 44 22.2
MNK                                i LQ  LQ     09 47 10.5
MNK                                i LR  LR     09 48 56.4
MNK                                i LRM MLR    09 51 15.3
       comp=N,464nm,23.6s
MNK                                i LRM MLR    09 51 24.6
       comp=E,9.0nm,11.8s
MNK                                i LRM MLR    09 51 25.9
       comp=Z,55nm,9.8s
HYB    Hyderabad        31.51 181  i P   P      09 37 17.0 -0.1
AKASG  Malin Array Be   31.58 292  P     P      09 37 17.7 +0.4
       comp=Z,3.4nm,0.6s,baz=64,slow=9.1,SNR=9.7
AKASG                              LR    LR     09 50 24.0
       comp=Z,302nm,18.7s,baz=75,slow=37
AKBB   Malin Array Si   31.58 292ceP     P      09 37 16.3 -1.0
AKBB   Malin Array Si   31.58 292  P     P      09 37 18.0 +0.6
FIA1   FINESS Array S   31.64 313  P     P      09 37 17.0 -0.8
FIA1                               IAmb  IAmb   09 37 25.3
       comp=Z,21nm,1.4s
FINES  FINESS Array B   31.64 313  P     P      09 37 18.3 +0.5
       comp=Z,1.9nm,0.6s,baz=88,slow=9.7,SNR=8.5
FINES  FINESS Array B   31.64 313  i P   P      09 37 18.6 +0.8
FINES                              pmax  pmax
       comp=Z,2.0nm,0.6s
FINES  FINESS Array B   31.64 313  P     P      09 37 16.6 -1.1
NACGM  Naroch           32.00 301  i P   P      09 37 21.9 +0.9
NACGM                              i P   P      09 37 21.9 +0.9
NACGM                              i P   P      09 37 21.9 +0.9
NACGM                              i Pb  pP     09 37 23.6 +0.2
       comp=Z,14nm,1.0s
NACGM                              i PP  PP     09 38 36.0 +2.9
NACGM                              i PPP PPP    09 38 53.9
NACGM                              i S   S      09 42 46.1  +14
NACGM                              i SS  SS     09 44 39.6  -10
NACGM                              i SSS SSS    09 45 11.8
NACGM                              i LQ  LQ     09 48 35.6
NACGM                              i LR  LR     09 50 32.9
TIXI   Tiksi            32.01  27ceP     P      09 37 20.1 -0.8
TIXI                               pmax  pmax
       comp=Z,22nm,0.5s
TIXI   Tiksi            32.01  27  P     P      09 37 20.9  0.0
TIXI                               IAmb  IAmb   09 37 22.6
       comp=Z,9.2nm,0.5s
CN2    Changchun        32.13  81  eP    P      09 37 23.6 +1.3
CN2                                pmax  pmax
       comp=Z,10.0nm,0.6s
WHN    Wuhan            32.52 111  P     P      09 37 25.1 -0.7
ARCES  ARCESS Array B   32.57 328  P     P      09 37 26.5 +0.6
       comp=Z,10nm,1.0s,baz=98,slow=8.9,SNR=5.3
ARCES  ARCESS Array B   32.57 328  P     P      09 37 26.0 +0.1
ARCES                              pmax  pmax
       comp=Z,28nm,1.3s
ARCES  ARCESS Array B   32.57 328  P     P      09 37 26.0 +0.1
SORM   Soroca           32.94 288 ⇑P     P      09 37 29.8 +0.5
SORM   Soroca           32.94 288 ⇑P     P      09 37 29.8 +0.5
BR131  Keskin Array S   33.21 271  P     P      09 37 32.7 +0.8
BR131                              pmax  pmax
       comp=Z,11nm,0.9s
BR131  Keskin Array S   33.21 271  P     P      09 37 32.7 +0.8
BR131                              IAmb  IAmb   09 37 34.8
       comp=Z,11nm,0.8s
BRTR   Keskin Array B   33.21 271  P     P      09 37 33.8 +1.8
       comp=Z,6.2nm,0.8s,baz=80,slow=7.4,SNR=20
BRTR   Keskin Array B   33.21 271  P     P      09 37 32.3 +0.3
KLR    Kul'dur          34.02  69  P     P      09 37 38.5 -0.2
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       comp=Z,4.5nm,0.7s,baz=303,slow=8.3,SNR=12
KLR                                PcP   PcP    09 40 16.0 -0.4
       comp=Z,1.3nm,0.4s,baz=271,slow=5.0,SNR=4.6
KLR    Kul'dur          34.02  69ceP     P      09 37 37.6 -1.1
KLR                                pmax  pmax
       comp=Z,4.0nm,0.9s
TPGR   Topolog          34.19 283 ⇑P     P      09 37 41.7 +1.4
CM33   Chiang Mai Arr   34.20 145  P     P      09 37 41.0 +0.5
CHTO   Chiang Mai       34.20 145  P     P      09 37 41.2 +0.6
CHTO                               pmax  pmax
       comp=Z,15nm,1.3s
CHTO   Chiang Mai       34.20 145  P     P      09 37 41.2 +0.6
CHTO                               IAmb  IAmb   09 37 47.7
       comp=Z,15nm,1.3s
CMMT   Chiang Mai       34.20 145  P     P      09 37 45.0 +4.4
       comp=Z,4.9nm,1.0s
CFR    Carcaliu         34.23 283 ⇑P     P      09 37 42.1 +1.5
CFR    Carcaliu         34.23 283 ⇑P     P      09 37 42.1 +1.5
NJ2    Nanjing          34.32 105  eP    P      09 37 41.8 +0.4
NJ2                                pmax  pmax
       comp=Z,6.0nm,0.5s
CM35   Chiang Mai Arr   34.40 144  P     P      09 37 43.0 +0.7
MDJ    Mudanjiang       34.46  78  P     P      09 37 42.6  0.0
MDJ                                pP    sP     09 37 45.6 -0.4
MDJ                                S     S      09 43 10.5 -0.4
MDJ                                sS    sS     09 43 16.3 +1.4
MDJ                                pmax  pmax
       comp=Z,10.0nm,1.2s
MDJ                                pmax  pmax
       comp=Z,220nm,6.4s
MDJ                                LR    LR
       comp=Z,2µm,14.2s
MDJ                                LR    LR
       comp=Z,970nm,15.1s
MDJ                                LR    LR
       comp=Z,530nm,21.4s
CM31   Chiang Mai Arr   34.52 145  P     P      09 37 43.4  0.0
CM31                               IAmb  IAmb   09 37 44.7
       comp=Z,8.8nm,0.7s
CMAR   Chiang Mai Arr   34.52 145  P     P      09 37 44.2 +0.9
       comp=Z,6.4nm,0.6s,baz=321,slow=9.1,SNR=33
CMAR                               PcP   PcP    09 40 18.4 +0.2
       comp=Z,1.0nm,0.5s,baz=345,slow=3.1,SNR=4.4
CMAR   Chiang Mai Arr   34.52 145  P     P      09 37 43.9 +0.6
CM36   Chiang Mai Arr   34.53 145  P     P      09 37 44.0 +0.6
CM13   Chiang Mai Arr   34.54 145  P     P      09 37 44.0 +0.5
       comp=Z,11nm,0.8s
CM02   Chiang Mai Arr   34.55 145  P     P      09 37 44.0 +0.5
       comp=Z,134nmcomp=Z,14nm,0.8s
CM09   Chiang Mai Arr   34.55 145  P     P      09 37 44.0 +0.4
       comp=Z,11nm,1.0s
CM01   Chiang Mai Arr   34.56 145  P     P      09 37 44.8 +1.1
       comp=Z,110nmcomp=Z,12nm,0.8s
CM05   Chiang Mai Arr   34.58 145  P     P      09 37 44.0 +0.2
       comp=Z,8.3nm,0.9s
CM04   Chiang Mai Arr   34.59 145  P     P      09 37 44.9 +1.0
       comp=Z,7.6nm,0.7s
TESR   Tescani          34.63 286 ⇓P     P      09 37 45.9 +1.8
VRI    Vrincioaia       34.84 285 ⇓P     P      09 37 48.1 +2.2
VRI    Vrincioaia       34.84 285 ⇓P     P      09 37 48.1 +2.2
PLOR   Plostina         34.90 285 ⇓P     P      09 37 48.9 +2.5
PLOR   Plostina         34.90 285 ⇓P     P      09 37 48.9 +2.5
BUR08  Bucovina Ar. S   35.09 289  P     P      09 37 48.7 +0.5
BURAR  Bucovina Array   35.09 289 ⇓P     P      09 37 50.0 +1.8
BURAR  Bucovina Array   35.09 289 ⇓P     P      09 37 50.0 +1.8
BURAR  Bucovina Array   35.09 289  P     P      09 37 49.0 +0.8
NEHR   Nehoiu           35.30 285 ⇓P     P      09 37 53.2 +3.3
MLR    Muntele Rosu     35.50 285  P     P      09 37 53.3 +1.6
       comp=Z,3.8nm,0.8s,baz=73,slow=6.4,SNR=6.6
MLR    Muntele Rosu     35.50 285 ⇓P     P      09 37 53.9 +2.2
MLR    Muntele Rosu     35.50 285 ⇓P     P      09 37 53.9 +2.2
MLR    Muntele Rosu     35.50 285  P     P      09 37 53.4 +1.6
MLR                                IAmb  IAmb   09 38 00.7
       comp=Z,19nm,1.5s
DOPR   Dopca            35.65 286 ⇑P     P      09 37 55.4 +2.5
UTTA   Uttaradit        35.80 143  P     P      09 38 02.8 +8.5
ARCR   ARCALIA          35.84 288 ⇓P     P      09 37 57.5 +3.0
KWP    Kalwaria Pacla   35.89 293  P     P      09 37 55.8 +0.9
KWP                                pmax  pmax
       comp=Z,29nm,0.9s
KWP    Kalwaria Pacla   35.89 293  P     P      09 37 55.8 +0.9
MMAI   Mount Meron Ar   35.94 260  P     P      09 37 57.3 +1.7
       comp=Z,0.9nm,0.4s,baz=29,slow=8.7,SNR=4.2
VOIR                    36.09 285 ⇓P     P      09 37 58.5 +1.8
VOIR                    36.09 285 ⇓P     P      09 37 58.5 +1.8
USA0B  Ussuriysk Arra   36.18  77  P     P      09 37 56.8 -0.6
USA0B                              pmax  pmax
       comp=Z,15nm,0.8s
USA0B  Ussuriysk Arra   36.18  77  P     P      09 37 56.8 -0.6
USA0B                              IAmb  IAmb   09 38 02.8
       comp=Z,15nm,0.8s
USRK   Ussuriysk Ar.    36.18  77  P     P      09 37 57.6 +0.2
       comp=Z,15nm,0.7s,baz=284,slow=8.0,SNR=38
USRK                               LR    LR     09 53 28.8
       comp=Z,207nm,20.9s,baz=296,slow=38
USRK   Ussuriysk Ar.    36.18  77  P     P      09 37 57.0 -0.4
ARR    Arges            36.38 285 ⇑P     P      09 38 01.5 +2.2
KOLS   Kolonicke sedl   36.41 292  eP    P      09 38 07.0 +7.7
RAYN   Ar Rayn          36.55 238  P     P      09 38 01.5 +0.7
RAYN                               pmax  pmax
       comp=Z,29nm,0.9s
RAYN   Ar Rayn          36.55 238  P     P      09 38 01.5 +0.7
KSAR   Wonju Array Be   36.93  89  P     P      09 38 03.8  0.0
KSAR   Wonju Array Be   36.93  89  P     P      09 38 03.8  0.0
KSRS   Korea Array      36.95  89  P     P      09 38 04.2 +0.3
       comp=Z,1.8nm,0.8s,baz=314,slow=7.2,SNR=8.2
KSRS                               LR    LR     09 54 29.9
       comp=Z,110nm,21.3s,baz=312,slow=38
SPITS  Spitsbergen Ar   36.95 342  P     P      09 38 04.8 +1.1
       comp=Z,4.0nm,0.6s,baz=98,slow=10,SNR=12
ELL    Elmali           37.29 270  P     P      09 38 08.1 +1.0
ELL                                pmax  pmax
       comp=Z,65nm,0.8s
ELL    Elmali           37.29 270  P     P      09 38 08.1 +1.0
UTHA   Uthaitani        37.37 146  P     P      09 38 09.0 +1.3
       comp=Z,18nm,0.8s
OJC    Ojcow            37.42 295  eP    P      09 38 08.3 +0.3
OJC    Ojcow            37.42 295  P     P      09 38 08.2 +0.3
OJC                                pmax  pmax
       comp=Z,24nm,0.9s
OJC    Ojcow            37.42 295  P     P      09 38 08.2 +0.3
OJC                                IAmb  IAmb   09 38 16.6
       comp=Z,24nm,0.9s
GZR    Gura Zlata       37.55 286 ⇓P     P      09 38 11.0 +1.9
HFS    Hagfors          37.82 312  P     P      09 38 11.6 +0.5
       comp=Z,7.3nm,0.5s,baz=83,slow=12,SNR=26
LANS   Liptovska Anna   38.03 293  eP    P      09 38 16.4 +3.3
LANS                               e            09 38 22.2
LANS   Liptovska Anna   38.03 293  eP    P      09 38 16.4 +3.3
LANS                               e            09 38 22.2
BZS    Buzias           38.18 287 ⇑P     P      09 38 14.5 +0.1
BZS    Buzias           38.18 287 ⇑P     P      09 38 14.5 +0.1
EIL    Elat             38.43 256  P     P      09 38 18.6 +1.9
       comp=Z,9.0nm,0.6s,baz=1.8,slow=6.1,SNR=7.3
NC405  NORSAR Array S   38.55 314  P     P      09 38 18.1 +0.8
VYHS   Vyhne            38.68 293  eP    P      09 38 20.4 +1.9
VYHS                               e            09 38 26.8
VYHS   Vyhne            38.68 293  eP    P      09 38 20.4 +1.9
VYHS                               e            09 38 26.8
NC602  NORSAR Array S   38.72 314  P     P      09 38 19.1 +0.4
NB2    NORSAR Subarra   38.80 314  P     P      09 38 19.6 +0.1
       comp=Z,4.0nm,0.5s,baz=77,slow=8.6
NOA    NORSAR Array B   38.80 314  P     P      09 38 19.7 +0.2
       comp=Z,4.7nm,0.6s,baz=76,slow=8.3,SNR=21
NOA                                LR    LR     09 54 43.4
       comp=Z,106nm,21.8s,baz=265,slow=37
MORC   Moravsky Berou   38.94 295  eP    P      09 38 22.7 +1.9
MORC                               e            09 38 28.5
NAO01  NORSAR Array S   39.01 314  P     P      09 38 21.0 -0.2
NAO01                              IAmb  IAmb   09 38 25.3
       comp=Z,39nm,1.1s
JAVC   Velka Javorina   39.23 294  eP    P      09 38 25.4 +2.2
JAVC                               e            09 38 32.3
DPC    Dobruska-Polom   39.44 296  eP    P      09 38 26.7 +1.8
DPC                                e            09 38 32.8
DPC    Dobruska-Polom   39.44 296  eP    P      09 38 26.7 +1.8
DPC                                ex    x      09 38 32.8
VRAC   Vranov           39.69 295  LR    LR     09 55 38.9
       comp=Z,369nm,20.4s,baz=280,slow=37
VRAC   Vranov           39.69 295  eP    P      09 38 28.6 +1.6
MORH   Mrgy, Hungar     39.77 290  eP    P      09 38 29.4 +1.7
DIVS   Divibare         39.91 286  P     P      09 38 29.9 +0.9
KRUC   Moravsky         39.91 295  eP    P      09 38 29.6 +0.8
KRUC                               e            09 38 36.4
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BRG    Berggiesshubel   40.62 298  eP    P      09 38 35.9 +1.2
BRG                                Amp          09 38 43.0
       comp=Z,2.9nm,0.7s
BRG    Berggiesshubel   40.62 298  eP    P      09 38 35.8 +1.2
BRG                                pmax  pmax
       comp=Z,3.0nm,0.7s
BRG    Berggiesshubel   40.62 298  eP    P      09 38 35.9 +1.2
BRG                                Amp          09 38 43.0
       comp=Z,2.9nm,0.7s
PRU    Pruhonice        40.63 297  eP    P      09 38 42.7 +7.9
CONA   Conrad Observa   40.72 293  P     P      09 38 38.3 +2.7
       comp=Z,9.2nm,1.1s
CLL    Collm            40.99 299⇓ iP    P      09 38 39.1 +1.4
       comp=Z,7.0nm,1.0s
CLL                                ePP   PP     09 40 11.0 -0.9
CLL    Collm            40.99 299⇓ iP    P      09 38 39.1 +1.4
CLL                                pmax  pmax
       comp=Z,7.0nm,1.0s
SEY    Seymchan         40.99  42  P     P      09 38 37.4 -0.2
       comp=Z,1.4nm,0.5s,baz=266,slow=14,SNR=5.8
SEY    Seymchan         40.99  42  i P   P      09 38 37.2 -0.4
AGG    Agios Georgios   41.00 278  P     P      09 38 38.9 +0.9
AGG                                pmax  pmax
       comp=Z,12nm,0.9s
AGG    Agios Georgios   41.00 278  P     P      09 38 38.9 +0.9
ARSA   Arzberg          41.22 292  eP    P      09 38 41.3 +1.5
       comp=Z,2.6nm,0.6s
MA2    Magadan          41.23  47  P     P      09 38 39.5 -0.1
       comp=Z,6.7nm,0.6s,baz=312,slow=8.7,SNR=7.4
MA2    Magadan          41.23  47ceP     P      09 38 39.1 -0.5
MA2                                pmax  pmax
       comp=Z,8.0nm,0.7s
MA2    Magadan          41.23  47  P     P      09 38 39.3 -0.3
JNU    Nakatsue         41.45  93  P     P      09 38 41.8  0.0
       comp=Z,3.1nm,0.7s,baz=18,slow=19,SNR=2.7
KHC    Kasperske Hory   41.56 296ceP     P      09 38 42.4 -0.1
KHC                                pmax  pmax
       comp=Z,16nm,1.7s
KHC    Kasperske Hory   41.56 296  eP    P      09 38 43.5 +1.0
KHC                                epP   sP     09 38 48.0 +2.1
GERES  GERESS Array B   41.61 295  P     P      09 38 44.7 +1.7
       comp=Z,0.6nm,0.5s,baz=69,slow=7.3,SNR=6.7
GERES  GERESS Array B   41.61 295  P     P      09 38 41.2 -1.7
MOA    Molln            41.72 294  eP    P      09 38 46.5 +2.7
       comp=Z,9.0nm,1.2s
SOKA   Soboth           41.78 292  i P   P      09 38 45.4 +1.0
       comp=Z,8.6nm,1.1s
KBA    Koelnbreinsper   42.62 293  P     P      09 38 52.8 +1.5
       comp=Z,3.9nm,0.6s
GRF    Grafenberg Arr   42.70 298  eP    P      09 38 57.6 +5.9
       comp=Z,10nm,0.9s,baz=66,slow=6.9
WATA   Walderalm        43.57 294  eP    P      09 39 01.3 +2.3
       comp=Z,11nm,1.1s
SQTA   Sankt Quirin     43.84 294  P     P      09 39 02.9 +1.8
       comp=Z,8.7nm,0.7s
MOTA   Moosalm          43.85 295  eP    P      09 39 02.9 +1.6
       comp=Z,3.5nm,0.6s
MJAR   Matsushiro Arr   44.22  83  LR    LR     09 57 38.5
       comp=Z,108nm,19.1s,baz=350,slow=36
FETA   Feichten         44.23 294  eP    P      09 39 06.5 +2.3
       comp=Z,11nm,1.2s
DAG    Danmarks Havn    44.56 341  i P   P      09 39 06.7 +0.4
DAG                                pmax  pmax
       comp=Z,6.0nm,0.5s
DAG    Danmarks Havn    44.56 341  i P   P      09 39 06.7 +0.4
       comp=Z,6.2nm,0.5s
DAG    Danmarks Havn    44.56 341  i P   P      09 39 06.7 +0.4
DAG                                IAmb  IAmb   09 39 07.3
       comp=Z,6.2nm,0.5s
DAVA   Damuels          44.61 295  i P   P      09 39 08.7 +1.5
       comp=Z,11nm,1.2s
DAVOX  Davos/Dischmat   44.85 295  P     P      09 39 10.1 +0.8
       comp=Z,4.6nm,0.7s,baz=99,slow=14,SNR=6.6
BILL   Bilibino         44.88  32⇑ eP    P      09 39 09.4 +0.4
BILL                               e            09 40 51.6
BILL                               eS    S      09 45 38.7 -7.8
BILL                               pmax  pmax
       comp=Z,22nm,1.7s
BILL                               MLR   MLR
       comp=Z,115nm,15.0s
BILL   Bilibino         44.88  32  P     P      09 39 09.7 +0.7
BILL                               IAmb  IAmb   09 39 14.9
       comp=Z,17nm,1.2s
PETK   Petropavlovsk-   47.36  54  P     P      09 39 27.7 -1.0
       comp=Z,3.9nm,1.0s,baz=349,slow=4.4,SNR=8.7
PETK   Petropavlovsk-   47.36  54  P     P      09 39 27.9 -0.8
EKA    Eskdalemuir Ar   47.95 310  P     P      09 39 33.5 +0.3
       comp=Z,1.7nm,0.6s,baz=64,slow=9.9,SNR=6.3
EUNU   Eureka           50.92 357  P     P      09 39 56.5 +0.9
BORG   Borgarnes        50.96 327  P     P      09 39 55.7 -0.4
       comp=Z,38nm,1.1s,baz=85,slow=12,SNR=2.6
BORG                               LR    LR     09 59 59.8
       comp=Z,2µm,21.3s,baz=75,slow=34
MNSI   Mandailing Nat   51.23 153  P     P      09 40 02.0 +3.4
RDOG   Red Dog Mine     54.52  24  P     P      09 40 21.9 -0.4
STKI   Sintang          56.25 140  P     P      09 40 34.4 -1.1
ANM    Nome             56.27  28  P     P      09 40 35.9 +0.9
ANM                                pmax  pmax
       comp=Z,11nm,0.8s
ANM    Nome             56.27  28  P     P      09 40 35.9 +0.9
ANM                                IAmb  IAmb   09 40 37.0
       comp=Z,11nm,0.8s
RES    Resolute Bay     56.52 358  P     P      09 40 36.9 +0.2
RES                                pmax  pmax
       comp=Z,9.0nm,1.5s
RES    Resolute Bay     56.52 358  P     P      09 40 36.9 +0.2
ESDC   Sonseca Array    57.19 294  P     P      09 40 42.7 +0.7
       comp=Z,2.2nm,1.0s,baz=44,slow=7.2,SNR=8.4
ESDC                               LR    LR     10 05 23.9
       comp=Z,224nm,19.6s,baz=335,slow=36
DAV    Davao City (W)   57.30 121  LR    LR     10 05 43.7
       comp=Z,86nm,18.6s,baz=359,slow=36
COLD   Coldfoot         58.31  20  P     P      09 40 49.6 +0.2
COLD                               IAmb  IAmb   09 40 50.9
       comp=Z,17nm,1.2s
FYU    Fort Yukon       59.95  19  P     P      09 41 01.7 +0.9
FYU                                IAmb  IAmb   09 41 07.6
       comp=Z,17nm,1.3s
I23K   Minto, Yukon-K   60.21  21  P     P      09 41 02.8 +0.3
INK    Inuvik           60.53  13  P     P      09 41 05.2 +0.5
       comp=Z,15nm,0.9s,baz=348,slow=9.1,SNR=41
INK    Inuvik           60.53  13  P     P      09 41 05.1 +0.5
INK                                pmax  pmax
       comp=Z,19nm,1.0s
INK    Inuvik           60.53  13  P     P      09 41 05.1 +0.5
MDM    Murphy Dome      60.64  21  P     P      09 41 05.4 -0.1
MDM                                IAmb  IAmb   09 41 06.8
       comp=Z,14nm,1.4s
BPAW   Bear Paw Mtn.    60.67  23  P     P      09 41 05.4 -0.4
BPAW                               IAmb  IAmb   09 41 07.3
       comp=Z,16nm,1.3s
POKR   Poker Plat Res   60.69  21  P     P      09 41 05.5 -0.4
C36M   Paulatuk         60.75   9  P     P      09 41 05.6 -0.5
PRP    Porcupine Dome   60.78  20  P     P      09 41 07.1 +0.4
PRP                                IAmb  IAmb   09 41 13.0
       comp=Z,15nm,1.4s
TCOL   CIGO, UAF Yank   60.80  21  P     P      09 41 07.0 +0.4
TCOL                               IAmb  IAmb   09 41 07.8
       comp=Z,8.3nm,0.8s
COLA   College          60.80  21  i P   P      09 41 07.0 +0.5
COLA                               pmax  pmax
       comp=Z,6.0nm,1.1s
COLA   College          60.80  21  P     P      09 41 07.0 +0.5
COLA                               IAmb  IAmb   09 41 07.4
       comp=Z,9.6nm,0.9s
BWN    Browne           61.00  22  P     P      09 41 08.3 +0.3
CCB    Clear Creek Bu   61.00  21  P     P      09 41 07.9  0.0
CCB                                IAmb  IAmb   09 41 13.9
       comp=Z,13nm,1.3s
WRH    Wood River Hil   61.08  21  P     P      09 41 08.2 -0.3
WRH                                IAmb  IAmb   09 41 09.1
       comp=Z,15nm,1.5s
IL31                    61.11  21  P     P      09 41 08.6  0.0
IL31                               IAmb  IAmb   09 41 09.0
       comp=Z,6.8nm,0.6s
ILAR   Eielson Array    61.11  21  P     P      09 41 08.4 -0.2
       comp=Z,5.6nm,0.6s,baz=325,slow=5.6,SNR=110
ILAR   Eielson Array    61.11  21  P     P      09 41 08.1 -0.6
KTH    Kantishna Hill   61.14  23  P     P      09 41 08.7 -0.3
KTH                                IAmb  IAmb   09 41 15.2
       comp=Z,15nm,1.0s
KMBO   Kilima Mbogo     61.48 229  P     P      09 41 12.3 +0.2
       comp=Z,1.4nm,0.3s,baz=35,slow=12,SNR=6.9
KMBO   Kilima Mbogo     61.48 229  i P   P      09 41 12.8 +0.7
KMBO                               pmax  pmax
       comp=Z,1.0nm,0.3s
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EPYK	Eagle Plains	61.77	15	P	P	09 41 13.1	-0.1
EPYK				IAmb	IAmb	09 41 18.6	
	comp=Z,7.7nm,0.9s						
RND	Reindeer	61.78	22	P	P	09 41 12.9	-0.5
RND				pmax	pmax		
	comp=Z,5.0nm,0.4s						
RND	Reindeer	61.78	22	P	P	09 41 12.9	-0.5
RND				IAmb	IAmb	09 41 13.4	
	comp=Z,5.2nm,0.4s						
SKT	Skwentna	62.27	24	P	P	09 41 16.6	0.0
DHY	Denali Highway	62.43	22	P	P	09 41 17.4	-0.4
DHY				IAmb	IAmb	09 41 17.8	
	comp=Z,5.6nm,0.7s						
RIDG	Independent Ri	62.46	20	P	P	09 41 17.2	-0.7
DOT	Dot Lake	62.72	20	P	P	09 41 19.6	0.0
DOT				IAmb	IAmb	09 41 19.6	
	comp=Z,3.5nm,0.6s						
K27K	Chicken	62.82	19	P	P	09 41 20.8	+0.6
K27K				IAmb	IAmb	09 41 25.6	
	comp=Z,7.0nm,1.1s						
SUA	Susitna One	62.91	24	P	P	09 41 20.7	-0.3
PAX	Paxson	62.98	21	P	P	09 41 21.2	-0.2
PAX				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PAX	Paxson	62.98	21	P	P	09 41 21.1	-0.2
PAX				IAmb	IAmb	09 41 21.3	
	comp=Z,6.1nm,0.5s						
GHO	Glory Hole Cre	63.14	23	P	P	09 41 22.5	+0.1
GHO				IAmb	IAmb	09 41 23.3	
	comp=Z,17nm,1.3s						
RSO	Redoubt South	63.18	26	P	P	09 41 23.6	+0.7
PMR	Palmer	63.23	23	P	P	09 41 23.0	+0.1
PMR				pmax	pmax		
	comp=Z,15nm,1.3s						
PMR	Palmer	63.23	23	P	P	09 41 23.0	+0.1
PMR				IAmb	IAmb	09 41 30.5	
	comp=Z,15nm,1.3s						
SML	Sawmill	63.26	23	P	P	09 41 23.3	+0.1
SML				IAmb	IAmb	09 41 23.6	
	comp=Z,16nm,1.3s						
DAWY	Dawson	63.34	18	P	P	09 41 24.1	+0.3
SCM	Sheep Creek Mo	63.49	23	P	P	09 41 24.9	+0.1
SCM				pmax	pmax		
	comp=Z,19nm,0.5s						
SCM	Sheep Creek Mo	63.49	23	P	P	09 41 24.9	+0.1
M24K	Tolsona, Glenn	63.55	22	P	P	09 41 25.8	+0.6
KNK	Knik Glacier	63.56	23	P	P	09 41 25.5	+0.3
BCAR	Beaver Creek A	63.73	19	P	P	09 41 26.8	+0.5
KLU	Klutina	64.14	22	P	P	09 41 29.5	+0.5
KLU				IAmb	IAmb	09 41 57.9	
	comp=Z,16nm,1.5s						
BRLK	Bradley Lake	64.28	25	P	P	09 41 29.5	-0.5
N25K	Chitina, Valde	64.36	21	P	P	09 41 31.0	+0.5
N25K				IAmb	IAmb	09 41 50.2	
	comp=Z,18nm,1.4s						
CNPM	China Poot	64.38	26	P	P	09 41 30.7	+0.1
SEW	Seward	64.40	25	P	P	09 41 30.6	0.0
FID	Port Fidalgo	64.64	23	P	P	09 41 32.7	+0.4
GLB	Gilahina Butte	64.69	21	P	P	09 41 34.0	+1.3
GLB				IAmb	IAmb	09 41 35.0	
	comp=Z,9.3nm,1.2s						
MCARA	McCarthy VSAT	64.93	21	P	P	09 41 34.8	+0.7
MCARA				IAmb	IAmb	09 41 54.9	
	comp=Z,18nm,1.4s						
VRDI	Verde Repeater	64.96	21	P	P	09 41 35.3	+0.7
BALM	Baldy	65.39	21	P	P	09 41 38.1	+0.8
BALM				IAmb	IAmb	09 41 43.4	
	comp=Z,7.9nm,1.1s						
RAGM	Ragged Mountai	65.40	22	P	P	09 41 38.5	+1.2
KDAK	Kodiak Island	65.43	27	P	P	09 41 37.5	+0.1
KDAK				pmax	pmax		
	comp=Z,58nm,1.5s						
KDAK	Kodiak Island	65.43	27	P	P	09 41 37.5	+0.1
TGL	Tana Glacier	65.53	21	P	P	09 41 38.7	+0.6
BARN	Barnard Glacie	65.53	20	P	P	09 41 39.9	+1.6
BARN				IAmb	IAmb	09 42 01.1	
	comp=Z,15nm,1.4s						
HMT	Hamilton	65.55	22	P	P	09 41 39.2	+1.0
CTGM	Chitina Glacie	65.69	20	P	P	09 41 39.9	+0.6
CTGM				IAmb	IAmb	09 41 42.8	
	comp=Z,5.3nm,0.8s						
YAH	Yahtse	66.13	21	P	P	09 41 42.9	+0.7
HYT	Haines Junctio	66.65	18	P	P	09 41 46.1	+0.8
HYT				IAmb	IAmb	09 41 46.9	
	comp=Z,8.1nm,0.9s						
WHY	Whitehorse	67.33	17	P	P	09 41 49.5	-0.2
YKA	Yellowknife Ar	68.33	7	P	P	09 41 55.7	-0.1
	comp=Z,9.2nm,0.7s,baz=0.4,slow=6.3,SNR=233						
DLBC	Dease Lake	70.31	16	P	P	09 42 09.6	+1.3
DLBC				IAmb	IAmb	09 42 09.7	
	comp=Z,10nm,1.2s						
TOA0	Torodi Ar. Sit	71.80	269	P	P	09 42 17.9	+0.1
TOA0				IAmb	IAmb	09 42 18.5	
	comp=Z,7.7nm,0.6s						
TORD	Torodi Ar. Bea	71.80	269	P	P	09 42 17.6	-0.1
	comp=Z,7.5nm,0.6s,baz=33,slow=5.3,SNR=18						
TORD	Torodi Ar. Bea	71.80	269	P	P	09 42 17.7	-0.1
FCC	Fort Churchill	72.43	356	P	P	09 42 21.1	+0.2
FCC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FCC	Fort Churchill	72.43	356	P	P	09 42 21.1	+0.2
KOWA	Kowa	74.57	274	P	P	09 42 34.6	+0.4
KOWA				IAmb	IAmb	09 42 35.3	
	comp=Z,7.2nm,0.7s						
FFC	Flin Flon	76.63	1	P	P	09 42 45.7	+0.3
FFC				pmax	pmax		
	comp=Z,19nm,1.3s						
FFC	Flin Flon	76.63	1	P	P	09 42 45.7	+0.3
FFC				IAmb	IAmb	09 42 46.5	
	comp=Z,19nm,1.3s						
LSZ	Lusaka	78.14	230	P	P	09 42 55.1	+0.7
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LSZ	Lusaka	78.14	230	P	P	09 42 55.1	+0.7
DBIC	Dimbokro	80.90	270	P	P	09 43 08.8	-0.6
	comp=Z,5.3nm,0.5s,baz=29,slow=6.9,SNR=7.8						
DBIC	Dimbokro	80.90	270	P	P	09 43 09.6	+0.2
DBIC				pmax	pmax		
	comp=Z,11nm,1.0s						
DBIC	Dimbokro	80.90	270	P	P	09 43 09.6	+0.2
DBIC				IAmb	IAmb	09 43 10.3	
	comp=Z,11nm,1.0s						
ULM	Lac du Bonnet	81.02	357	P	P	09 43 08.4	-1.1
	comp=Z,3.0nm,0.7s,baz=341,slow=3.9,SNR=8.6						
ULM	Lac du Bonnet	81.02	357	P	P	09 43 09.2	-0.4
ULM				pmax	pmax		
	comp=Z,6.0nm,1.5s						
ULM	Lac du Bonnet	81.02	357	P	P	09 43 09.2	-0.4
TIC	Toumodi	81.02	270	*e*P	P	09 43 10.0	-0.2
KIC	Kosan Boka	81.05	269	*e*P	P	09 43 10.1	-0.2
	comp=Z,11nm,0.6s						
VLDQ	Val d'Or	81.11	344	P	P	09 43 11.3	+1.2
VLDQ				IAmb	IAmb	09 43 11.9	
	comp=Z,24nm,1.4s						
LIC	Lamto	81.34	270	*e*P	P	09 43 11.6	-0.2
	comp=Z,3.5nm,0.4s						
WALA	Waterton Lakes	81.69	8	P	P	09 43 13.2	-0.1
WALA				IAmb	IAmb	09 43 18.6	
	comp=Z,14nm,1.3s						
B08A	Colville Reser	81.74	12	P	P	09 43 13.6	+0.1
B08A				IAmb	IAmb	09 43 19.3	
	comp=Z,12nm,1.2s						
C09A	Chrisman Ranch	82.43	12	P	P	09 43 17.8	+0.7
C09A				IAmb	IAmb	09 43 22.9	
	comp=Z,11nm,1.1s						
LTY	Liberty	82.62	13	P	P	09 43 18.5	+0.3
B35A	Bob, Littlefor	82.80	355	P	P	09 43 18.8	-0.3
LON	Longmire	82.94	14	P	P	09 43 20.2	+0.4
LON				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LON	Longmire	82.94	14	P	P	09 43 20.2	+0.4
JTMT	Jette	82.95	9	P	P	09 43 20.4	+0.4
AGMN	Agassiz Nation	82.97	356	P	P	09 43 19.6	-0.3
EGMT	Eagleton	83.06	6	P	P	09 43 20.6	+0.1
EGMT				IAmb	IAmb	09 43 21.2	
	comp=Z,8.6nm,0.8s						
EYMN	Ely	83.07	353	P	P	09 43 20.4	0.0
EYMN				IAmb	IAmb	09 43 20.9	
	comp=Z,10.0nm,0.8s						
E07A	Sunnyside	83.43	13	P	P	09 43 22.9	+0.6
E07A				IAmb	IAmb	09 43 23.6	
	comp=Z,11nm,1.4s						
D41A	Chassel	83.69	351	P	P	09 43 24.1	+0.5
D41A				IAmb	IAmb	09 43 28.7	
	comp=Z,5.3nm,0.8s						
MSO	Missoula	83.89	9	P	P	09 43 24.4	-0.4
F10A	Beach Ranch, E	84.36	11	P	P	09 43 27.6	+0.4
WB0	Warramunga Arr	84.37	129	P	P	09 43 26.3	-1.1
WB0				IAmb	IAmb	09 43 27.7	
	comp=Z,9.8nm,1.1s						
WRAB	Tennant Creek	84.49	129	*i* P	P	09 43 26.2	-1.7
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRAB	Tennant Creek	84.49	129	P	P	09 43 27.9	0.0
WRAB				IAmb	IAmb	09 43 28.4	
	comp=Z,7.1nm,0.9s						
WRA	Warramunga Arr	84.49	129	P	P	09 43 27.5	-0.4
	comp=Z,4.7nm,0.9s,baz=336,slow=5.1,SNR=22						
WRA	Warramunga Arr	84.49	129	P	P	09 43 27.5	-0.4
WB2	Warramunga Arr	84.50	129	P	P	09 43 27.6	-0.3
WB2				IAmb	IAmb	09 43 28.5	
	comp=Z,12nm,1.2s						
WR0	Warramunga Arr	84.61	129	P	P	09 43 28.2	-0.3
WR0				IAmb	IAmb	09 43 29.0	
	comp=Z,9.1nm,1.2s						
E28A	Huff	84.80	360	P	P	09 43 30.0	+0.7
E28A				IAmb	IAmb	09 43 31.4	
	comp=Z,8.1nm,0.8s						
F36A	Milaca	85.28	355	P	P	09 43 31.9	+0.2
F36A				IAmb	IAmb	09 43 32.7	
	comp=Z,9.4nm,1.2s						
GCMT	Greycliff	85.29	6	P	P	09 43 32.5	+0.6
BOZ	Bozeman (W)	85.33	7	P	P	09 43 32.6	+0.4
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	85.33	7	P	P	09 43 32.6	+0.4
F33A	5 Mile Ranch,	85.44	357	P	P	09 43 32.0	-0.4
F33A				IAmb	IAmb	09 43 33.5	
	comp=Z,8.4nm,0.9s						
DLMT	Dillon	85.48	8	P	P	09 43 33.1	+0.2
DLMT				IAmb	IAmb	09 43 38.7	
	comp=Z,12nm,1.4s						
G40A	Rib Lake	85.62	352	P	P	09 43 33.9	+0.4
G40A				IAmb	IAmb	09 43 34.0	
	comp=Z,5.8nm,0.7s						
RLMT	Red Lodge	85.98	6	P	P	09 43 36.0	+0.5
YNE	Yellowstone No	86.04	6	P	P	09 43 35.9	+0.1
FLWY	Flagg Ranch	86.91	7	P	P	09 43 40.6	+0.5
I40A	Norwalk	87.02	352	P	P	09 43 40.6	+0.3
RSSD	Black Hills	87.22	2	P	P	09 43 42.4	+0.9
RSSD				pmax	pmax		
	comp=Z,15nm,1.0s						
RSSD	Black Hills	87.22	2	P	P	09 43 42.4	+0.9
MOOW	Moose Ponds	87.24	7	P	P	09 43 42.2	+0.5
MOOW				IAmb	IAmb	09 43 48.3	
	comp=Z,7.9nm,1.5s						
AS31	Alice Springs	87.39	131	P	P	09 43 41.9	-0.3
ASAR	Alice Springs	87.39	131	P	P	09 43 41.8	-0.5
	comp=Z,6.2nm,0.8s,baz=330,slow=4.7,SNR=67						
ASAR	Alice Springs	87.39	131	P	P	09 43 42.0	-0.2
ASAR	Alice Springs	87.39	131	P	P	09 43 42.0	-0.2
ECSD	EROS Data Cent	87.55	357	P	P	09 43 43.3	+0.3
MOD	Modoc Plateau	87.91	14	P	P	09 43 45.1	+0.3
MOD				IAmb	IAmb	09 43 46.7	
	comp=Z,7.5nm,0.9s						
PD31	Pinedale Array	88.31	6	P	P	09 43 46.6	-0.2
PDAR	Pinedale Array	88.31	6	P	P	09 43 46.7	-0.1
	comp=Z,0.7nm,0.5s,baz=62,slow=3.2,SNR=18						
PDAR	Pinedale Array	88.31	6	P	P	09 43 46.6	-0.2
K31A	O'Neill	88.72	358	P	P	09 43 47.6	-1.0
HVU	Hansel Valley	89.01	9	P	P	09 43 50.0	-0.1
HVU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HVU	Hansel Valley	89.01	9	P	P	09 43 50.0	-0.1
HWUT	Hardware Ranch	89.30	8	P	P	09 43 51.8	+0.3
SPUT	South Promonto	89.51	9	P	P	09 43 53.2	+0.8
ELK	Elko	89.76	11	P	P	09 43 54.7	+1.0
ELK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ELK	Elko	89.76	11	P	P	09 43 54.6	+1.0
TCUT	Toone Canyon	89.80	8	P	P	09 43 54.6	+0.7
BEKR	Beckworth	89.88	15	P	P	09 43 54.0	-0.2
JLU	Jordanelle	90.30	8	P	P	09 43 57.3	+1.1
RDMU	Red Mountain	90.49	6	P	P	09 43 57.9	+0.8
DUG	Dugway, Tooele	90.58	9	P	P	09 43 57.9	+0.5
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	90.58	9	P	P	09 43 57.9	+0.5
DUG				IAmb	IAmb	09 43 59.5	
	comp=Z,7.8nm,0.9s						
BOSA	Boshof	90.87	225	P	P	09 43 57.9	-0.8
	comp=Z,1.5nm,0.7s,baz=90,slow=2.0,SNR=4.2						
NLU	North Lily Min	90.89	8	P	P	09 43 59.9	+0.9
O20A	White River Ci	91.01	5	P	P	09 44 00.5	+1.0
RYN	Ryan	91.39	14	P	P	09 44 01.9	+0.7
NVAR	Mina Array Bea	91.61	13	P	P	09 44 03.4	+1.1
	comp=Z,2.7nm,0.8s,baz=343,slow=3.3,SNR=22						
TPH	Tonopah	92.12	13	P	P	09 44 04.4	-0.3
TPH				pmax	pmax		
	comp=Z,15nm,1.0s						
TPH	Tonopah	92.12	13	P	P	09 44 04.4	-0.3
PV01	Paradox Valley	92.98	6	P	P	09 44 09.3	+0.6
PV01				IAmb	IAmb	09 44 10.2	
	comp=Z,3.1nm,0.7s						
S39A	Bolivar	93.40	354	P	P	09 44 09.8	-0.5
S39A				IAmb	IAmb	09 44 10.7	
	comp=Z,4.7nm,0.9s						
S22A	4UR Ranch, Cre	93.47	5	P	P	09 44 11.1	+0.1
TXAR	Lajitas Array	101.98	2	P	Pdif	09 44 49.9	+0.6
	comp=Z,0.2nm,0.6s,baz=33,slow=4.8,SNR=5.7						

PRU 20 09:36:16.9±0.0**, 50°.30N×19°.13E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.44	100	*e*Pg	Pb	09 36 27.2	-0.2
OJC				*e*Sg	Sb	09 36 33.5	-1.1
MORC	Moravsky Berou	1.15	244	*e*PG	Pg	09 36 38.5	-0.4
MORC				*e*SG	Sg	09 36 52.4	-1.4
NIE	Niedzica	1.16	139	*e*Pg	Pn	09 36 40.7	+0.2
NIE				*e*Sg	Sb	09 36 56.0	+0.5
LANS	Liptovska Anna	1.17	169	*e*PG	Pg	09 36 39.0	-0.3
LANS				*e*SG	Sg	09 36 53.9	-0.6
LANS				*e*LG	Lg	09 36 55.6	
KRLC	Kraliky	1.53	262	*e*PG	Pn	09 36 43.6	-1.9
KRLC				*e*SG	Sg	09 37 05.3	-0.6
	comp=Z,4.8nm,0.5s						
DPC	Dobruska-Polom	1.80	273	*e*PG	Pn	09 36 49.0	-0.2
DPC				*e*SG	Sg	09 37 14.4	-0.3
	comp=Z,4.6nm,0.5s						
VYHS	Vyhne	1.82	186	*e*PN	Pn	09 36 48.8	-0.6
VYHS				*e*SN	Sn	09 37 12.5	-0.7
OSTC	Ostas	1.88	279	*e*SG	Sg	09 37 18.5	+1.2
CHVC	Chvalec	1.99	280	*e*SG	Sg	09 37 21.9	+1.2

JMA ***20*** *09:39:55.8±0.1, 23°.76N×122°.84E, h50^{km}, M1.6*

TAP ***20*** *09:39:56.1, 23°.82N×122°.88E, h57^{km}±1^{km}, ML2.5, D*

ISC 20 09:39:52.4±1.2**, 23°.76N**±0°.04×**122°.83E**±0°.03**, h7**^{km}±10^{km}**,**
n35, σ0^{s}.74/65**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.69	9	P	Pn	09 40 09.5	+0.9
JYNG				S	Sn	09 40 19.6	0.0
YOJ	Yonaguni jima	0.71	13	P	Pn	09 40 09.9	+1.0
YOJ				*e*S	Sn	09 40 20.1	0.0
YOJ	Yonaguni jima	0.71	13	*i* P	Pn	09 40 09.9	+1.0
	baz=10.0						
YOJ				S	Sn	09 40 20.1	0.0
	baz=10.0						
IRIF	Iriomote-Funau	1.00	55	P	Pn	09 40 13.7	+0.9
IRIF				*e*S	Sn	09 40 28.1	+1.0
JKRS	Kuro-shima	1.18	66	*e*S	Sn	09 40 32.4	+0.9
NACB	Ninganchiao	1.20	290	*e*P	Pg	09 40 16.6	+1.0
	baz=278						
NACB				*e*S	Sg	09 40 31.5	+0.3
	baz=278						
TWC	Suao	1.23	313	*e*P	Pg	09 40 16.7	+0.6
	baz=310						
TWC				*e*S	Sb	09 40 30.5	-1.6
	baz=310						
ESL	Shilin	1.28	273	*e*P	Pg	09 40 17.3	+0.3
	baz=262						
ESL				*e*S	Sb	09 40 32.3	-1.3
	baz=262						
ETLH	Xiulin Townshi	1.31	290	*e*P	Pg	09 40 18.2	+0.6
	baz=279						
ETLH				*e*S	Sn	09 40 34.7	-0.3
	baz=279						
HGSD	Ruisui	1.32	258	*i* P	Pg	09 40 18.2	+0.4
	baz=257						
HGSD				*e*S	Sb	09 40 33.8	-0.9
	baz=257						
JIJ	Ishigaki jima	1.34	63	P	Pg	09 40 18.6	+0.5
JIJ				*e*S	Sg	09 40 34.8	-0.7
EYUL	Yuli	1.45	254	P	Pg	09 40 20.4	+0.2
	baz=245						
EYUL				*e*S	Sn	09 40 38.1	-0.2
	baz=245						
YULB	Yu-li	1.46	256	*i* P	Pg	09 40 20.8	+0.4
	baz=247						
YULB				*i* S	Sn	09 40 38.2	-0.3
	baz=247						
TWF1	Yuli	1.47	254	P	Pg	09 40 20.7	+0.1
	baz=246						
TWF1				*e*S	Sn	09 40 38.8	0.0
	baz=246						
NNSB	Datong	1.48	297	*e*P	Pg	09 40 21.4	+0.6
	baz=286						
NNSB				*e*S	Sb	09 40 39.3	-0.1
	baz=286						
NNSH	Datong	1.48	297	*e*P	Pn	09 40 18.8	-0.8
	baz=287						
NNSH				*e*S	Sb	09 40 39.1	-0.3
	baz=287						
WHF	Hehuan Shan	1.48	285	*e*P	Pg	09 40 21.1	+0.2
	baz=282						
WHF				*e*S	Sn	09 40 39.5	-0.3
	baz=282						
TIPB	Shuangxi	1.51	323	*e*P	Pg	09 40 21.8	+0.3
	baz=326						
FULB	Fuli	1.52	249	*i* P	Pb	09 40 20.9	0.0
	baz=239						
FULB				S	Sn	09 40 39.3	-0.8
	baz=239						
FUSS	Fushou	1.53	289	*e*P	Pg	09 40 21.9	0.0
	baz=286						
FUSS				*e*S	Sn	09 40 40.0	-0.6
	baz=286						
CHGB	Renai	1.55	281	*e*P	Pg	09 40 22.2	+0.1
	baz=273						
CHGB				*e*S	Sn	09 40 40.0	-1.0
	baz=273						
NWLT	Wulai	1.58	310	*e*S	Sb	09 40 42.1	0.0
	baz=307						
JISG	Ishigakijimahi	1.58	58	P	Pg	09 40 21.5	-1.3
JISG				*e*S	Sg	09 40 41.9	-1.4
YHNB	Yeheng	1.61	304	*e*P	Pg	09 40 23.5	+0.2
	baz=291						
YHNB				*e*S	Sb	09 40 42.2	-0.8
	baz=291						
WFSB	Wu-fen Shan	1.62	324	*e*S	Sn	09 40 40.6	-1.8
	baz=321						
SSLB	Suanglung	1.72	271	*e*P	Pb	09 40 24.8	+0.4
	baz=269						
SSLB				*e*S	Sn	09 40 45.2	+0.1
	baz=269						
WHP	Taichung City	1.80	287	*e*P	Pg	09 40 27.6	+0.6
	baz=284						
WHP				*e*S	Sb	09 40 48.0	-0.6
	baz=284						
TYC	Yuchr	1.81	275	*e*P	Pg	09 40 27.4	+0.1
	baz=273						
TYC				*e*S	Sb	09 40 49.2	+0.3
	baz=273						
ALS	Alishan	1.88	263	*i* P	Pg	09 40 28.1	-0.4
	baz=261						
CHN5	Tsauling	1.98	266	*e*P	Pb	09 40 29.6	+0.7
	baz=264						
CHN5				*e*S	Sb	09 40 53.4	-0.4
	baz=264						
TPUB	Ta-pu	2.07	258	*e*P	Pb	09 40 31.5	+1.0
	baz=252						
TPUB				*e*S	Sb	09 40 56.8	+0.4
	baz=252						
CHN4	Tsaushan	2.10	259	*e*P	Pb	09 40 31.8	+1.0
	baz=251						
CHN4				*e*S	Sb	09 40 58.5	+1.4
	baz=251						
WTP	Ta-pu	2.10	256	*e*P	Pb	09 40 31.7	+0.8
	baz=255						
WTP				*e*S	Sb	09 40 57.2	0.0
	baz=255						
CHN1	Nanshi	2.19	255	*e*P	Pb	09 40 32.0	-0.4
	baz=254						
CHN1				*e*S	Sb	09 41 00.6	+0.8
	baz=254						
MASBT	Mashibuluo	2.33	241	*e*P	Pb	09 40 33.4	-1.3
	baz=238						
MASBT				*e*S	Sn	09 40 59.9	0.0
	baz=238						

SOME ***20*** *09:40:00.7, 42°.08N×84°.55E, h10^{km}*

NNC ***20*** *09:40:00.1±3.3, 41°.93N×84°.48E, h0^{km}, mb4.1, mpv3.7,*
Error ellipse: s-maj=23.8km s-min=14.1km az=145.0

ISC 20 09:39:53.1±3.4**, 42°.2N**±0°.1×**84°.9E**±0°.1**, h10**^{km}**, n17,**
σ0^{s}.94/27**, 5C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.56	291	*e*P	Pg	09 41 01.7	+0.3
	3.7nm,0.3s						
KTMS				*e*S	Sg	09 41 46.8	-0.7
	54nm,0.4s						
KTMS	Ketmen	3.56	291	Pg	Pg	09 40 59.4	-1.9
	6.3nm,0.3s						
KTMS				Lg	Lg	09 41 47.6	
	71nm,0.6s						
SHLS	Shalkode	4.12	285	*e*P	Pb	09 41 07.4	+1.6
	32nm,0.8s						
SHLS				*e*S	Sb	09 41 55.7	+0.1
	102nm,0.7s						
SHLS	Shalkode	4.12	285	Pg	Pb	09 41 04.7	-1.1
	34nm,1.1s						
SHLS				Lg	Lg	09 41 55.3	
	102nm,0.7s						
DJR	Jarkent	4.28	301	*e*P	Pg	09 41 15.7	+0.5
	14nm,0.8s						
DJR				*e*S	Sg	09 42 10.2	-0.4
	24nm,0.5s						
DJR	Jarkent	4.28	301	Pg	Pg	09 41 14.0	-1.2
	17nm,1.1s						
DJR				Lg	Lg	09 42 11.6	
	24nm,0.5s						
UZB	Uzynbulak	4.43	284	*e*P	Pg	09 41 19.0	+1.0
	15nm,0.8s						
UZB				*e*S	Sg	09 42 15.0	-0.4
	45nm,0.6s						
UZB	Uzynbulak	4.43	284	Pg	Pg	09 41 17.5	-0.6
	17nm,1.4s						
UZB				Lg	Lg	09 42 18.2	
	45nm,0.6s						
KPKS	Kokpek	4.74	287	*e*P	Pg	09 41 24.3	+0.5
	15nm,0.5s						
KPKS				*e*S	Sg	09 42 25.3	+0.1
	86nm,0.6s						
SATY	Saty	4.87	282	*e*P	Pg	09 41 27.1	+0.8
	22nm,1.2s						
SATY				*e*S	Sg	09 42 29.9	+0.5
	53nm,0.7s						
SATY	Saty	4.87	282	Pg	Pg	09 41 25.7	-0.6
	22nm,1.2s						
SATY				Lg	Lg	09 42 30.7	
	53nm,0.7s						
MK31	Makanchi Array	4.92	339	⇓Pn	Pb	09 41 18.9	-0.5
	6.0nm,0.7s,baz=150,slow=8.6,SNR=7.7						
MK31				⇓Pg	Pg	09 41 35.3	+7.9
	1.4nm,0.3s,baz=155,slow=15,SNR=9.7						
MK31				⇑Sn	Sb	09 42 19.2	+0.5
	4.4nm,0.5s						
MK31				⇑Lg	Lg	09 42 39.2	
	21nm,0.6s,baz=157,slow=25,SNR=4.5						
MAKZ	Makanchi	5.03	336	⇓Pn	Pb	09 41 21.6	+0.4
	7.8nm,0.9s						
MAKZ				⇑Pg	Pg	09 41 36.6	+7.3
	19nm,1.0s						
MAKZ				⇑Sn	Sb	09 42 21.2	-0.4
	12nm,0.9s						
MAKZ				⇑Lg	Lg	09 42 44.1	
	4.8nm,0.4s						
KAPS	Kapalarasan	5.04	309	*e*P	Pg	09 41 30.8	+1.1
	15nm,0.9s						
KAPS				*e*S	Sg	09 42 36.3	+1.3

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	21nm,0.8s						
KAPS	**Kapalarasan** 15nm,0.9s	**5.04**	**309**	Pg	**Pg**	**09 41 29.1**	**-0.6**
KAPS	21nm,0.8s			Lg	Lg	09 42 36.3	
MNBS	**Baschi** 11nm,0.6s	**5.11**	**293**	*e*P	**Pg**	**09 41 31.2**	**+0.3**
MNBS	28nm,0.5s			*e*S	**Sg**	**09 42 36.9**	**0.0**
MNBS	**Baschi** 8.3nm,0.7s	**5.11**	**293**	Pg	**Pg**	**09 41 28.8**	**-2.0**
MNBS	28nm,0.5s			Lg	Lg	09 42 36.9	

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*REY **20** 09:45:55.9, 64°.66N×17°.37W, h5^{km}*

*IDC **20** 09:45:56.9±0.8, 64°.54N×17°.59W, h0^{km}, mb3.7/11, mb1 4.0/13, mb1mx3.7/47, mbtmp3.7/13, ML3.4/2, MS3.7/3, Ms1 3.7/3, ms1mx3.1/45, Error ellipse: s-maj=25.3km s-min=12.9km az=20.0*

*NEIC **20** 09:45:58.2±1.9, 64°.43N±0°.09×17°.5W±0°.1, h7^{km}±5^{km}, mb4.3/13, Error ellipse: s-maj=15.9km s-min=4.0km az=212.0*

ISC 20 09:45:57.4±0.5**, 64°.66N**±0°.02×**17°.45W**±0°.03**, h10**^{km}**, n82, σ2^{s}.51**/78**, mb3.8**/15**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals** baz=1.4	**0.14**	**15**	P	**Pg**	**09 45 59.0**	**-1.6**
IDYN	baz=1.4			S	**Sg**	**09 46 01.5**	**-1.4**
ISKR	**Skrokkalda** baz=258	**0.42**	**257**	P	**Pb**	**09 46 04.2**	**-2.7**
THOR	**Thorvaldshraun** baz=46	**0.43**	**50**	P	**Pg**	**09 46 03.8**	**-2.0**
THOR	baz=46			S	**Sg**	**09 46 10.3**	**-1.1**
IJOK	**Jokulheimar** baz=228	**0.48**	**225**	P	**Pb**	**09 46 05.1**	**-2.9**
IASK	**Askja** baz=38	**0.52**	**41**	P	**Pg**	**09 46 05.2**	**-2.3**
IMKO	**Mokollar** baz=53	**0.57**	**56**	P	**Pg**	**09 46 06.2**	**-2.3**
IMKO	baz=53			S	**Sg**	**09 46 14.3**	**-1.7**
IIEY	**Innrieyrar** baz=210	**0.64**	**208**	P	**Pg**	**09 46 07.7**	**-2.0**
IKSK	**Karasker** baz=141	**0.66**	**139**	P	**Pg**	**09 46 07.0**	**-3.1**
IKSK	baz=141			S	**Sg**	**09 46 15.6**	**-3.0**
ISVA	**Svartarkot** baz=4.2	**0.69**	**7**	P	**Pg**	**09 46 08.1**	**-2.5**
IKAL	**Kalfafell** baz=191	**0.72**	**188**	P	**Pg**	**09 46 09.1**	**-2.2**
IVSH	**V-Sauoahnukur** baz=77	**0.75**	**78**	P	**Pg**	**09 46 08.9**	**-3.0**
IFAG	**Fagurholsmyri** baz=158	**0.86**	**156**	P	**Pg**	**09 46 11.1**	**-2.8**
IHVE	**Hveravellir** baz=284	**0.93**	**284**	P	**Pb**	**09 46 12.6**	**-3.0**
IMEL	**Melhnausar** baz=18	**0.97**	**20**	P	**Pg**	**09 46 12.9**	**-3.2**
IREN	**Reynihlio** baz=11	**1.02**	**13**	P	**Pg**	**09 46 13.6**	**-3.3**
ISNB	**Snabyli** baz=211	**1.06**	**210**	P	**Pg**	**09 46 15.3**	**-2.5**
IGRS	**Grimsstaoir** baz=28	**1.13**	**29**	P	**Pb**	**09 46 15.6**	**-3.4**
IFED	**Fedgar** baz=239	**1.17**	**238**	P	**Pn**	**09 46 17.4**	**-2.3**
IRJU	**Rjupnafell** baz=209	**1.18**	**208**	P	**Pb**	**09 46 17.4**	**-2.4**
IMJO	**Mjoaskard** baz=235	**1.21**	**234**	P	**Pg**	**09 46 18.1**	**-2.5**
ISKI	**Skildingahlsh** baz=6.7	**1.23**	**8**	P	**Pn**	**09 46 17.1**	**-3.4**
IGHA	**Grjothals** baz=14	**1.23**	**15**	P	**Pn**	**09 46 17.0**	**-3.7**
IGYG	**Gygjarholskot** baz=254	**1.26**	**254**	P	**Pb**	**09 46 18.4**	**-2.8**
IHVO	**Lagu-Hvolar** baz=210	**1.29**	**209**	P	**Pn**	**09 46 19.1**	**-2.4**
IHAU	**Haukadalur** baz=240	**1.30**	**239**	P	**Pb**	**09 46 19.2**	**-2.6**
IDIM	**Dimmadalss** baz=7.8	**1.32**	**9**	P	**Pn**	**09 46 18.6**	**-3.3**
IHLA	**Hella** baz=342	**1.35**	**343**	P	**Pn**	**09 46 19.3**	**-2.9**
IALF	**Alftagrof** baz=215	**1.40**	**214**	P	**Pb**	**09 46 21.3**	**-2.3**
IHED	**Heoinshofoi** baz=1.0	**1.43**	**2**	P	**Pn**	**09 46 20.3**	**-3.0**
IESK	**Eystri-Skogar** baz=220	**1.44**	**219**	P	**Pb**	**09 46 21.7**	**-2.6**
ISAU	**Saurbar** baz=245	**1.46**	**244**	P	**Pn**	**09 46 21.3**	**-2.4**
IMID	**Miomork** baz=229	**1.47**	**228**	P	**Pb**	**09 46 22.2**	**-2.5**
IBRE	**Brettingsstaoi** baz=352	**1.48**	**353**	P	**Pn**	**09 46 21.2**	**-2.8**
ISIG	**Siglufjorour** baz=337	**1.60**	**338**	P	**Pn**	**09 46 23.2**	**-2.5**
IASM	**Asmuli** baz=241	**1.61**	**240**	P	**Pb**	**09 46 24.3**	**-2.9**
BORG	**Borgarnes** 13nm,0.3s,baz=90,slow=8.1,SNR=27	**1.67**	**275**	Pn	**Pb**	**09 46 24.5**	**-3.6**
BORG	17nm,0.3s,baz=46,slow=22,SNR=6.9			Sn	**Sg**	**09 46 48.0**	**-3.0**
BORG	**Borgarnes**	**1.67**	**275**		**Pb**	**09 46 25.6**	**-2.6**
BORG				Sn	**Sg**	**09 46 49.2**	**-1.7**
ISOL	**Solvholt** baz=246	**1.69**	**246**	P	**Pb**	**09 46 25.5**	**-3.0**
IKRO	**Krokur** baz=253	**1.69**	**252**	P	**Pn**	**09 46 24.8**	**-2.1**
IHEI	**Heioarbar** baz=256	**1.71**	**256**	P	**Pb**	**09 46 25.4**	**-3.4**
ILEI	**Leirhofn** baz=11	**1.80**	**12**	P	**Pn**	**09 46 26.1**	**-2.3**
IHRN	**Hraun** baz=323	**1.84**	**324**	P	**Pb**	**09 46 27.3**	**-3.7**
SCO	**Scoresbysund**	**6.10**	**346**		Pn	09 47 30.7	+3.3
SCO	**Scoresbysund** baz=162,slow=11	**6.10**	**346**	*e*	**Pn**	**09 47 26.5**	**-0.9**
SCO				*i* P	Pn	09 47 30.0	+2.6
SCO				*i* S	**Sn**	**09 48 41.1**	**+4.0**
SCO	comp=Z,1.6nm,0.5s			IAML		09 48 52.6	
EKA	**Eskdalemuir Ar** baz=323,slow=13,SNR=7.1	**11.74**	**136**	Pn	**Pn**	**09 48 44.5**	**-0.1**
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.3	**13.51**	**92**	Pn	**Pn**	**09 49 07.2**	**-1.6**
ARCES	**ARCESS Array B** comp=Z,198nm,18.3s,baz=280,slow=34	**17.10**	**55**	LR	LR	09 55 34.3	
CLL	**Collm** comp=Z,70nm,2.4s	**20.68**	**116**	*i* P	Pn	09 50 37.6	-1.9
CLL	**Collm**	**20.68**	**116**	P	Pn	09 50 38.0	-1.5
CLL	comp=Z,17nm,1.4s			IAmb	IAmb	09 50 39.3	
BRG	**Berggiesshubel**	**21.39**	**115**	*e*P	**P**	**09 50 46.1**	**+1.3**
BRG	comp=Z,26nm,1.5s			Amp		09 50 47.5	
BRG	**Berggiesshubel**	**21.39**	**115**	*e*P	**P**	**09 50 46.1**	**+1.3**
BRG	comp=Z,26nm,1.5s			Amp		09 50 47.5	
GEC2	**GERESS Array S**	**22.93**	**119**	P	**P**	**09 51 02.6**	**+1.2**
GEC2B	**GERESS ARRAY S**	**22.93**	**119**	P	**P**	**09 51 00.8**	**-0.5**
GERES	**GERESS Array B** comp=Z,0.4nm,0.4s,baz=356,slow=8.0,SNR=5.2	**22.93**	**119**	P	**P**	**09 51 02.4**	**+1.0**
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**09 51 00.2**	**-1.2**
DAVOX	**Davos/Dischmat** comp=Z,0.7nm,0.3s,baz=302,slow=11,SNR=3.5	**23.30**	**127**	P	**P**	**09 51 05.5**	**+0.2**
MORC	**Moravsky Berou**	**23.67**	**112**	P	**P**	**09 51 08.7**	**-0.1**
EUNU	**Eureka**	**23.68**	**336**	P	**P**	**09 51 12.6**	**+3.9**
ESDC	**Sonseca Array** comp=Z,0.8nm,0.6s,baz=352,slow=7.4,SNR=4.7	**26.24**	**156**	P	**P**	**09 51 33.0**	**+0.6**
KIRV	**Kirov** comp=Z,165nm,20.3s,baz=305,slow=36	**30.96**	**69**	LR	LR	10 04 21.5	
KBZ	**Khabaz** comp=Z,2.1nm,0.8s,baz=302,slow=9.0,SNR=5.0	**39.09**	**92**	P	**P**	**09 53 26.9**	**+2.7**
YKA	**Yellowknife Ar** comp=Z,1.2nm,1.1s,baz=42,slow=8.5,SNR=8.8	**39.23**	**313**	P	**P**	**09 53 27.0**	**+1.7**
E46A	**Sault Ste Mari**	**39.80**	**276**	P	**P**	**09 53 31.2**	**+1.0**
E46A	comp=Z,15nm,1.5s			IAmb	IAmb	09 53 41.5	
AKTO	**Aktyubinsk** comp=Z,1.0nm,0.6s,baz=309,slow=6.5,SNR=2.3	**40.27**	**73**	P	**P**	**09 53 36.2**	**+2.2**
GNI	**Garni** comp=Z,112nm,20.2s,baz=343,slow=36	**42.81**	**94**	LR	LR	10 11 29.7	
ILAR	**Eielson Array** comp=Z,2.1nm,1.2s,baz=24,slow=6.9,SNR=6.3	**45.70**	**332**	P	**P**	**09 54 19.6**	**+1.8**
ILAR	comp=Z,0.7nm,0.9s,baz=346,slow=2.5,SNR=4.7			PcP	**PP**	**09 55 58.5**	**-5.8**
ILAR	**Eielson Array**	**45.70**	**332**	P	P	09 54 21.5	+3.7
MDM	**Murphy Dome**	**45.80**	**333**	P	P	09 54 21.4	+2.8
MDM	comp=Z,3.5nm,1.2s			IAmb	IAmb	09 54 39.0	
IMAR	**Indian Mountai**	**45.87**	**337**	P	P	09 54 21.6	+2.5
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**09 54 38.2**	**+1.5**
KURK	comp=Z,2.6nm,0.9s			IAmb	IAmb	09 54 42.1	
KURBB	**Kurchatov Arra** comp=Z,1.3nm,0.7s,baz=324,slow=7.3,SNR=7.6	**48.14**	**58**	P	**P**	**09 54 37.8**	**+0.8**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.9s,baz=324,slow=6.0,SNR=5.8	**52.71**	**58**	P	**P**	**09 55 12.7**	**+1.0**
MKAR	**Makanchi Array**	**52.71**	**58**	P	P	09 55 15.0	+3.3
RWWY	**Rawlins**	**53.17**	**291**	P	**P**	**09 55 17.5**	**+2.1**
BW06	**Boulder Array**	**53.20**	**293**	P	**P**	**09 55 17.4**	**+1.8**
BW06	comp=Z,3.5nm,1.1s			IAmb	IAmb	09 55 19.6	
PD31	**Pinedale Array**	**53.20**	**293**	P	**P**	**09 55 17.3**	**+1.6**
PD31	comp=Z,2.8nm,1.0s			IAmb	IAmb	09 55 19.6	
PDAR	**Pinedale Array** comp=Z,1.4nm,0.9s,baz=49,slow=6.6,SNR=9.4	**53.20**	**293**	P	**P**	**09 55 17.2**	**+1.6**
HWUT	**Hardware Ranch**	**54.97**	**294**	P	**P**	**09 55 30.7**	**+2.2**
PV13	**Radium Mtn., P**	**56.82**	**290**	P	P	09 55 44.4	+2.6
MSU	**Marysvale**	**57.87**	**293**	P	**P**	**09 55 50.5**	**+1.4**
TCRU	**Three Creeks R**	**57.89**	**293**	P	P	09 55 52.6	+3.3
SONM	**Songino Array** comp=Z,0.4nm,0.8s,baz=319,slow=4.2,SNR=3.2	**59.63**	**40**	P	**P**	**09 56 03.1**	**+1.9**

IDC 20 09:48:25.6±2.3**, 2°.44N**×**128°.08E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/44**, mbtmp3.3**/3**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx2.9**/18**, Error ellipse: s-maj=169.7km s-min=25.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=344,slow=10,SNR=4.3	**23.08**	**165**	P	P	09 53 32.7	-0.3
ASAR	**Alice Springs** 0.2nm,0.5s,baz=350,slow=7.9,SNR=6.8	**26.56**	**168**	P	P	09 54 05.3	-0.2
MSVF	**Nonsavu** comp=Z,188nm,18.0s,baz=334,slow=36	**53.16**	**114**	LR	LR	10 20 24.5	
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=126,slow=7.6,SNR=2.7	**59.38**	**325**	P	P	09 58 30.1	+0.3

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*IDC **20** 09:51:42.7±3.3, 16°.41S×173°.87W, h55^{km}±32^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.6/34, mbtmp3.8/8, ML4.5/1, Error ellipse: s-maj=46.1km s-min=17.9km az=137.0*

*NEIC **20** 09:51:43.8±0.9, 16°.3S±0°.2×173°.8W±0°.2, h69^{km}±10^{km}, mb4.3/7, Error ellipse: s-maj=36.4km s-min=11.8km az=128.0*

ISC 20 09:51:40.7±0.7**, 16°.4S**±0°.2×**173°.9W**±0°.2**, h35**^{km}**, n19, σ1^{s}.08**/21**, mb4.0**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu** 58nm,0.3s,baz=228,slow=3.9,SNR=226	**3.19**	**40**	P	**Pn**	**09 52 30.6**	**+2.2**
AFI	44nm,0.3s,baz=212,slow=18,SNR=8.5			S	**Sn**	**09 53 03.4**	**-2.0**
AFI	**Afiamalu**	**3.19**	**40**	Pn	**Pn**	**09 52 30.6**	**+2.2**
AFI				Sn	**Sn**	**09 53 03.9**	**-1.4**
URZ	**Urewera** 11nm,0.6s,baz=39,slow=4.1,SNR=18	**23.19**	**198**	P	**P**	**09 56 44.4**	**+0.1**
URZ	**Urewera**	**23.19**	**198**	P	**P**	**09 56 44.5**	**+0.1**
URZ	comp=Z,13nm,0.6s			IAmb	IAmb	09 56 45.5	
BKZ	**Black Stump Fm**	**24.21**	**198**	P	**P**	**09 56 54.8**	**+0.6**
BKZ	comp=Z,13nm,1.1s			IAmb	IAmb	09 57 16.2	
TUWZ	**Tuamarina**	**27.08**	**200**	P	**P**	**09 57 21.1**	**+1.0**
WB0	**Warramunga Arr**	**49.14**	**258**	P	**P**	**10 00 25.5**	**0.0**
WB0	comp=Z,6.2nm,1.5s			IAmb	IAmb	10 00 34.7	
WRA	**Warramunga Arr** comp=Z,0.2nm,0.4s,baz=95,slow=6.7,SNR=3.1	**49.17**	**258**	P	**P**	**10 00 25.1**	**-0.6**
AS31	**Alice Springs**	**49.37**	**253**	P	**P**	**10 00 27.6**	**+0.4**
AS31	comp=Z,1.1nm,0.5s			IAmb	IAmb	10 00 28.0	
ASAR	**Alice Springs** comp=Z,2.6nm,0.5s,baz=89,slow=8.2,SNR=69	**49.37**	**253**	P	**P**	**10 00 27.4**	**+0.2**
ASAR	**Alice Springs**	**49.37**	**253**	P	**P**	**10 00 26.6**	**-0.6**
VNDA	**Vanda**	**62.36**	**186**	P	**P**	**10 01 59.1**	**-0.2**
QSPA	**South Pole Qui**	**73.67**	**180**	P	**P**	**10 03 10.1**	**-0.6**
QSPA	comp=Z,1.7nm,1.1s			IAmb	IAmb	10 03 14.6	
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.6s,baz=238,slow=8.4,SNR=1.9	**75.36**	**42**	P	**P**	**10 03 21.3**	**+0.3**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.6s,baz=225,slow=6.2,SNR=2.5	**81.54**	**56**	P	**P**	**10 03 55.2**	**0.0**
PD31	**Pinedale Array**	**83.30**	**42**	P	**P**	**10 04 02.9**	**-1.4**
PDAR	**Pinedale Array** comp=Z,0.6nm,0.7s,baz=198,slow=4.2,SNR=7.1	**83.30**	**42**	P	**P**	**10 04 03.5**	**-0.8**
PDAR	**Pinedale Array**	**83.30**	**42**	P	**P**	**10 04 03.6**	**-0.6**
ILAR	**Eielson Array** comp=Z,0.6nm,0.9s,baz=219,slow=6.9,SNR=3.1	**83.49**	**11**	P	**P**	**10 04 04.3**	**-0.1**

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*HEL **20** 10:00:30.6±0.1, 64°.65N×30°.66E, h0^{km}, ML2.1, Explosion*

*KOLA **20** 10:00:30.6, 64°.67N×30°.49E, h0^{km}, ML2.5, Kostomuksha, Karelia*

*IDC **20** 10:00:31.7±2.1, 64°.61N×30°.86E, h0^{km}, mb1 3.2/4, mb1mx3.0/47, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=28.4km s-min=8.3km az=104.0*

ISC 20 10:00:30.7±0.9**, 64°.74N**±0°.03×**30°.38E**±0°.05**, h0**^{km}**, n26, σ1^{s}.37**/46**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSF	**Maaselka** baz=147	**1.30**	**335**	PG	**Pn**	**10 00 56.3**	**+0.1**
MSF				SG	**Sn**	**10 01 14.8**	**+0.6**
KU6	**Riekki** baz=166	**1.30**	**351**	PG	**Pb**	**10 00 56.0**	**-0.1**
KU6	comp=Z,9.0nm,0.2s			MSG		10 01 13.4	
KU6				SG	**Sn**	**10 01 15.0**	**+0.7**
OLKF	**Oulanka, Finla** baz=164	**1.64**	**346**	PG	**Pg**	**10 01 02.1**	**0.0**
OLKF				SG	**Sg**	**10 01 25.0**	**+1.7**
JOF	**Joensuu**	**1.88**	**167**	PG	**Pn**	**10 01 02.0**	**-2.0**
JOF				SG	**Sn**	**10 01 25.4**	**-3.0**
OUL	**Oulu**	**1.94**	**282**	PG	**Pg**	**10 01 07.8**	**0.0**
OUL				SG	**Sg**	**10 01 34.6**	**+1.6**
OUF	**Merijarvi** baz=81	**2.47**	**264**	PB	**Pb**	**10 01 14.5**	**-1.4**
OUF	comp=Z,25nm,0.2s			MSG		10 01 46.5	
OUF				SG	**Sg**	**10 01 49.5**	**-0.4**
RNF	**Rovaniemi**	**2.60**	**318**	PG	**Pg**	**10 01 20.5**	**-0.1**
RNF				SB	**Sg**	**10 01 53.5**	**-0.8**
OBF0	**Syolatti, Pyha**	**2.66**	**267**	PB	**Pb**	**10 01 17.6**	**-1.5**
OBF0				SG	**Sg**	**10 01 55.7**	**-0.2**
SUF	**Sumiainen**	**2.77**	**225**	PN	**Pn**	**10 01 15.5**	**-0.7**
SUF	comp=Z,7.2nm,0.2s			MSG		10 01 52.7	
TOF	**Tornio**	**2.87**	**301**	PG	**Pg**	**10 01 25.7**	**+0.1**
TOF	comp=Z,7.2nm,0.2s			MSG		10 01 59.2	
TOF				SG	**Sg**	**10 02 00.8**	**-1.8**
VRF	**Varrio**	**3.04**	**354**	PB	**Pn**	**10 01 22.5**	**+2.5**
VRF	comp=Z,3.3nm,0.2s			MSG		10 02 02.8	
VRF				SG	**Sg**	**10 02 07.5**	**-0.6**
APA0	**Apatity Array**	**3.07**	**19**	P	**Pn**	**10 01 20.4**	**0.0**
APA0				S	**Sn**	**10 01 57.7**	**0.0**
APA	**Apatity**	**3.10**	**22**	P	**Pn**	**10 01 20.8**	**+0.1**
APA				S	**Sn**	**10 01 58.2**	**-0.1**
SGF	**Sodankyl**	**3.13**	**332**	PG	**Pg**	**10 01 30.0**	**-0.7**
SGF				SB	**Sb**	**10 02 06.5**	**+0.6**
KAF	**Kangasniemi** baz=33	**3.21**	**217**	PB	**Pn**	**10 01 25.1**	**+2.8**
KEF	**Keuruu**	**3.58**	**226**	PN	**Pn**	**10 01 29.3**	**+1.9**
KLF	**Kolari**	**3.62**	**317**	SG	**Sg**	**10 02 26.1**	**-0.8**
PAJU	**Pajala**	**3.76**	**311**	SG	**Sg**	**10 02 30.0**	**-1.3**
VAF	**Ylistaro**	**3.81**	**247**	PG	**Pb**	**10 01 40.6**	**+1.9**
VAF				SG	**Sg**	**10 02 31.9**	**-1.0**
FIA0	**FINESS Array S** baz=33	**3.84**	**212**	PN	**Pn**	**10 01 31.3**	**+0.3**
FIA0				SN	**Sn**	**10 02 17.2**	**+0.4**
FINES	**FINESS Array B** comp=Z,0.3nm,0.3s,baz=35,slow=14,SNR=13	**3.84**	**212**	Pn	**Pn**	**10 01 31.4**	**+0.3**
FINES	comp=Z,0.9nm,0.3s,baz=32,slow=16,SNR=15			Pg	**Pb**	**10 01 38.9**	**-0.5**
FINES	comp=Z,0.9nm,0.3s,baz=43,slow=25,SNR=6.9			Sn	**Sn**	**10 02 17.3**	**+0.5**
FINES	comp=Z,2.4nm,0.3s,baz=44,slow=27,SNR=13			Lg	Lg	10 02 30.6	
BURU	**Burvik** baz=87	**3.87**	**272**	PN	**Pn**	**10 01 32.7**	**+1.3**
BURU				SG	**Sg**	**10 02 35.4**	**+0.4**
VJF	**Virojoki**	**4.42**	**198**	SG	**Sb**	**10 02 45.6**	**+2.9**
ARCES	**ARCESS Array B** baz=156,slow=13,SNR=15	**5.17**	**341**	Pn	**Pn**	**10 01 50.5**	**+1.2**
ARCES	baz=159,slow=24,SNR=1.7			Sn	**Sn**	**10 02 48.8**	**-0.8**
ARCES	baz=153,slow=26,SNR=6.8			Lg	Lg	10 03 11.2	
HFS	**Hagfors** comp=Z,0.4nm,0.3s,baz=51,slow=12,SNR=9.6	**8.99**	**247**	Pn	**Pn**	**10 02 42.4**	**+0.7**
HFS	comp=Z,0.3nm,0.3s,baz=62,slow=25,SNR=2.3			Sn	**Sn**	**10 04 20.3**	**-3.2**
HFS	comp=Z,0.5nm,0.3s,baz=58,slow=28,SNR=4.7			Lg	Lg	10 05 12.7	
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=64,slow=14,SNR=7.0	**9.48**	**256**	Pn	**Pn**	**10 02 47.1**	**-1.4**
NOA	comp=Z,0.0nm,0.3s,baz=305,slow=19,SNR=3.7			Lg	Lg	10 05 25.9	

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*IDC **20** 10:02:07.6±1.6, 2°.47S×128°.72E, h0^{km}, mb3.8/2, mb1 4.1/4, mb1mx3.6/43, mbtmp3.8/4, ML3.9/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/36, Error ellipse: s-maj=33.7km s-min=25.2km az=97.0*

*DJA **20** 10:02:10.1±0.3, 2°S±2°×12°9E±°, h10^{km}, M3.9/7, mb4.6/2, mB4.7/1, MLv3.6/7, Mw(mB)4.0/1*

ISC 20 10:02:09.7±0.9**, 2°.43S**±0°.06×**128°.63E**±0°.05**, h10**^{km}**, n12, σ2^{s}.10**/14**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.95**	**162**	P	**Pn**	**10 02 30.0**	**+0.8**
MSAI				S	**Sn**	**10 02 46.5**	**+3.7**
NLAI	**Namlea**	**1.73**	**242**	P	**Pb**	**10 02 41.8**	**+0.3**
SANI	**Sanana**	**2.67**	**278**	P	**Pn**	**10 02 53.0**	**+0.2**
SANI				S	**Sn**	**10 03 22.9**	**-2.3**
SWI	**Sorong**	**3.06**	**59**	P	**Pn**	**10 02 57.4**	**-0.7**
SWI				S	**Sn**	**10 03 35.2**	**+0.5**
SIJI	**Sorong** 10.0nm,0.3s,baz=107,slow=7.4,SNR=27	**3.06**	**60**	Pn	**Pn**	**10 02 58.4**	**+0.3**
SIJI	6.4nm,0.3s,baz=58,slow=16,SNR=9.2			Sn	**Sn**	**10 03 35.2**	**+0.4**
GTOI	**Gorontalo** 0.0nm13nm,0.5s	**6.39**	**298**	P	**Pn**	**10 03 47.6**	**+3.6**
APSI	**Ampana**	**7.14**	**282**	P	**Pn**	**10 03 56.2**	**+1.9**
JAY	**Jayapura** comp=Z,91nm,20.2s,baz=141,slow=39	**12.06**	**91**	LR	LR	10 09 49.2	
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=347,slow=12,SNR=14	**18.27**	**163**	P	**Pn**	**10 06 20.4**	**-3.2**
ASAR	**Alice Springs** 7.0nm,0.8s,baz=350,slow=11,SNR=57	**21.72**	**167**	P	**P**	**10 07 00.1**	**-1.2**
JCJ	**Chichijima** comp=Z,81nm,18.3s,baz=56,slow=33	**32.14**	**23**	LR	LR	10 19 34.5	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=108,slow=8.0,SNR=3.6	**63.69**	**326**	P	**P**	**10 12 41.2**	**-0.2**

IDC 20 10:06:45.1±1.8**, 4°.25S**×**145°.59E, h0**^{km}**, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.5**/36**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=71.7km s-min=26.5km az=127.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=41,slow=9.9,SNR=3.9	**19.07**	**214**	P	Pn	10 11 09.8	-0.2
ASAR	**Alice Springs** 0.3nm,0.5s,baz=43,slow=7.5,SNR=6.9	**22.36**	**209**	P	P	10 11 44.0	-1.0
BATI	**Baumata** 18nm,0.5s,baz=76,slow=12,SNR=4.0	**22.54**	**254**	P	P	10 11 45.9	-1.1
FITZ	**Fitzroy Crossi** 1.6nm,0.5s,baz=49,slow=12,SNR=7.3	**23.89**	**233**	P	P	10 12 01.8	+1.2
ILAR	**Eielson Array** 0.5nm,0.6s,baz=265,slow=5.2,SNR=7.2	**84.44**	**23**	P	P	10 19 19.4	+0.1

IDC 20 10:23:18.6±5.7**, 19°.28S**×**176°.95W, h351**^{km}±44^{km}**, mb3.2**/5**, mb1 3.5**/6**, mb1mx3.2**/31**, mbtmp3.9**/6**, Error ellipse: s-maj=118.2km s-min=21.0km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 1.7nm,0.3s,baz=121,slow=16,SNR=23	**4.99**	**287**	P	Pn	10 24 38.2	-0.1
WRA	**Warramunga Arr** 1.6nm,0.7s,baz=98,slow=8.6,SNR=13	**45.76**	**261**	P	P	10 31 06.3	-0.3
ASAR	**Alice Springs** 3.8nm,0.5s,baz=92,slow=8.3,SNR=105	**45.77**	**255**	P	P	10 31 06.8	+0.1
NVAR	**Mina Array Bea** 0.5nm,0.7s,baz=217,slow=10,SNR=4.5	**79.46**	**43**	P	P	10 34 47.2	0.0
TXAR	**Lajitas Array** 0.3nm,0.9s,baz=242,slow=7.0,SNR=3.9	**85.57**	**57**	P	P	10 35 18.9	+0.4
ILAR	**Eielson Array** 0.5nm,1.0s,baz=227,slow=7.3,SNR=1.6	**86.91**	**12**	P	P	10 35 23.1	-0.9

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*REY **20** 10:32:23.5, 64°.61N×17°.43W, h3^{km}*

*IDC **20** 10:32:24.3±0.5, 64°.49N×17°.65W, h0^{km}, mb4.2/22, mb1 4.4/25, mb1mx4.2/43, mbtmp4.2/25, ML2.8/2, MS4.0/34, Ms1 4.0/34, ms1mx4.0/46, Error ellipse: s-maj=17.5km s-min=9.0km az=22.0*

*MOS **20** 10:32:24.7±1.1, 64°.56N×17°.47W, h10^{km}, mb4.7/75, Error ellipse: s-maj=8.4km s-min=5.5km az=111.5*

*NEIC **20** 10:32:27.1±2.1, 64°.50N±0°.08×17°.4W±0°.1, h13^{km}±3^{km}, mb4.7/173, Error ellipse: s-maj=12.5km s-min=8.2km az=192.0*

*GCMT **20** 10:32:27.1±0.3, 64°.52N±0°.03×17°.82W±0°.08, h12^{km}, MW4.8/109, Moment Tensor Solution. s4,c4; s109,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.43±.05; $M_{\theta\theta}$0.86±.06; $M_{\phi\phi}$0.57±.05; $M_{r\theta}$0.10±.23; $M_{\theta\phi}$0.41±.04; $M_{\phi r}$1.31±.25; Best double couple: $M_0$1.78500×10^{16} NP1:ϕ_s62.00000°,δ28.00000°,λ-55.00000°. NP2: ϕ_s203.00000°,δ68.00000°,λ-107.00000°. Principal axes: T 1.4880, Plg21.0000°, Azm306.0000°; N 0.5970, Plg16.0000°, Azm210.0000°; P -2.0810, Plg63.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 10:32:25.7±0.5**, 64°.58N**±0°.02×**17°.49W**±0°.02**, h5**^{km}±3^{km}**, h5**^{km}**:pP-P, n586, σ1^{s}.47**/580**, mb4.7**/170**, MS4.0**/34**, 34C-20D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals** baz=8.5	**0.22**	**14**	P	**Pg**	**10 32 27.4**	**-2.7**
IDYN	baz=8.5			S	**Sg**	**10 32 30.6**	**-2.3**
ISKR	**Skrokkalda** baz=264	**0.39**	**267**	P	**Pg**	**10 32 31.2**	**-2.0**
ISKR	baz=264			S	**Sg**	**10 32 37.7**	**-0.6**
IJOK	**Jokulheimar** baz=230	**0.42**	**230**	P	**Pg**	**10 32 32.0**	**-1.8**
IJOK	baz=230			S	**Sg**	**10 32 38.9**	**-0.3**
THOR	**Thorvaldshraun** baz=44	**0.50**	**44**	P	**Pg**	**10 32 32.2**	**-3.1**
THOR	baz=44			S	**Sg**	**10 32 39.5**	**-2.2**
IIEY	**Innrieyrar** baz=211	**0.56**	**210**	P	**Pg**	**10 32 34.5**	**-2.0**
IIEY	baz=211			S	**Sg**	**10 32 43.4**	**-0.4**
IASK	**Askja** baz=37	**0.59**	**37**	P	**Pg**	**10 32 33.7**	**-3.4**

IKSK	Karasker	0.61	133	P	Pg	10 32 34.2	-3.2
	baz=137						
IKSK				S	Sg	10 32 43.1	-2.3
	baz=137						
IMKO	Mokollar	0.63	51	P	Pg	10 32 34.7	-3.2
	baz=51						
IKAL	Kalfafell	0.64	188	P	Pg	10 32 35.8	-2.2
	baz=190						
IKAL				S	Sg	10 32 45.6	-0.7
	baz=190						
ISVA	Svartarkot	0.77	7	P	Pg	10 32 36.5	-3.9
	baz=5.7						
ISVA				S	Sg	10 32 47.4	-3.0
	baz=5.7						
IVSH	V-Sauoahnukur	0.79	72	P	Pg	10 32 37.2	-3.7
	baz=74						
IFAG	Fagurholsmyri	0.80	152	P	Pg	10 32 38.1	-2.9
	baz=155						
IFAG				S	Sg	10 32 49.2	-2.1
	baz=155						
IHVE	Hveravellir	0.94	289	P	Pg	10 32 40.1	-3.6
	baz=287						
ISNB	Snabyli	0.98	211	P	Pg	10 32 41.6	-2.9
	baz=212						
IMEL	Melhnausar	1.05	19	P	Pg	10 32 41.3	-4.7
	baz=18						
IRJU	Rjupnafell	1.10	209	P	Pg	10 32 43.6	-3.1
	baz=209						
IREN	Reynihlio	1.10	13	P	Pg	10 32 42.2	-4.6
	baz=12						
IFED	Fedgar	1.11	241	P	Pg	10 32 43.7	-3.3
	baz=240						
IMJO	Mjoaskard	1.15	237	P	Pg	10 32 44.7	-3.2
	baz=236						
IKVO	Krokottuvotn	1.17	12	P	Pb	10 32 43.3	-5.1
	baz=12						
IGRS	Grimsstaoir	1.21	28	P	Pn	10 32 43.9	-5.4
	baz=28						
IHVO	Lagu-Hvolar	1.22	210	P	Pb	10 32 45.4	-3.8
	baz=210						
IGYG	Gygjarholskot	1.22	257	P	Pb	10 32 45.1	-4.1
	baz=256						
IHAU	Haukadalur	1.24	241	P	Pb	10 32 45.9	-3.7
	baz=241						
ISKI	Skildingahlsh	1.31	8	P	Pn	10 32 45.5	-5.2
	baz=7.4						
IGHA	Grjothals	1.31	15	P	Pn	10 32 45.3	-5.4
	baz=14						
IESK	Eystri-Skogar	1.37	220	P	Pn	10 32 47.8	-3.5
	baz=220						
IDIM	Dimmadalss	1.41	9	P	Pn	10 32 46.9	-5.0
	baz=8.5						
IDIM				S	Sn	10 33 05.4	-5.4
	baz=8.5						
ISAU	Saurbar	1.41	246	P	Pn	10 32 48.0	-4.0
	baz=246						
ISAU				S	Sb	10 33 07.1	-3.5
	baz=246						
IHLA	Hella	1.42	345	P	Pn	10 32 47.5	-4.6
	baz=344						
IHED	Heoinshofoi	1.51	3	P	Pn	10 32 48.5	-4.8
	baz=1.9						
IBRE	Brettingsstaoi	1.56	354	P	Pn	10 32 49.4	-4.6
	baz=353						
IASM	Asmuli	1.56	243	P	Pn	10 32 50.8	-3.2
	baz=242						
IGIL	Gilhagi	1.58	17	P	Pn	10 32 49.4	-4.9
	baz=17						
ISOL	Solvholt	1.64	248	P	Pn	10 32 52.1	-3.0
	baz=248						
IKRO	Krokur	1.65	255	P	Pn	10 32 51.6	-3.8
	baz=254						
BORG	Borgarnes	1.66	278	Pn	Pn	10 32 52.2	-3.2
	38nm,0.3s,baz=95,slow=7.6,SNR=90						
BORG				Sn	Sn	10 33 16.5	-0.6
	38nm,0.3s,baz=61,slow=23,SNR=8.4						
ISIG	Siglufjorour	1.67	340	P	Pn	10 32 51.3	-4.3
	baz=338						
IHEI	Heioarbar	1.67	258	P	Pn	10 32 52.2	-3.3
	baz=258						
IBJA	Bjarnastaoir	1.78	251	P	Pn	10 32 54.2	-2.9
	baz=250						
ISAN	Sandskeio	1.85	255	P	Pn	10 32 54.9	-3.2
	baz=255						
ILEI	Leirhofn	1.88	12	P	Pn	10 32 54.1	-4.3
	baz=12						
IHRN	Hraun	1.89	325	P	Pn	10 32 54.8	-3.8
	baz=324						
IGRI	Grimsey	1.98	354	P	Pn	10 32 55.6	-4.2
	baz=353						
SCO	Scoresbysund	6.17	346	e	Pn	10 33 50.9	-6.4
	baz=156,slow=7.9						
SCO				i P	Pn	10 33 56.0	-1.3
SCO				eS	Sn	10 35 15.5	+7.4
SCO				IAML		10 35 20.5	
	comp=Z,3.0nm,0.6s						
DBG	Daneborg	9.82	356	eP	Pn	10 34 53.9	+6.6
SUMG	Summit	11.02	326	i P	Pn	10 35 06.1	+2.1
SUMG	Summit	11.02	326	i P	Pn	10 35 06.1	+2.1
SUMG	Summit	11.02	326	i P	Pn	10 35 06.1	+2.1
EKA	Eskdalemuir Ar	11.70	136	Pn	Pn	10 35 12.1	-0.9
	baz=322,slow=13,SNR=27						
ESK	Eskdalemuir	11.70	136	P	Pn	10 35 08.9	-4.1
ESK	Eskdalemuir	11.70	136		Pn	10 35 08.9	-4.1
DAG	Danmarks Havn	12.26	359	i P	Pn	10 35 21.5	+0.9
DAG	Danmarks Havn	12.26	359	i P	Pn	10 35 21.5	+0.9
DAG	Danmarks Havn	12.26	359	i P	Pn	10 35 21.6	+0.9
NC204	NORSAR Array S	13.22	91		Pn	10 35 33.8	-0.1
NOA	NORSAR Array B	13.53	92	Pn	Pn	10 35 37.4	-0.6
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=5.7						
NOA				LR	LR	10 40 13.1	
	comp=Z,470nm,19.4s,baz=280,slow=34						
KONO	Kongsberg	13.54	99	P	Pn	10 35 40.5	+2.4
SFJD	Kangerlussuaq	13.71	295	LR	LR	10 40 36.4	
	comp=Z,2µm,20.8s,baz=87,slow=36						
HFS	Hagfors	15.04	93	Pn	Pn	10 36 00.2	+1.7
	comp=Z,0.2nm,0.3s,baz=320,slow=13,SNR=4.5						
KBS	Kingsbay	16.72	19	eP	Pn	10 36 19.9	-0.3
SPITS	Spitsbergen Ar	16.95	23	LR	LR	10 41 15.8	
	comp=Z,318nm,19.9s,baz=220,slow=31						
ARCES	ARCESS Array B	17.16	54	LR	LR	10 41 47.0	
	comp=Z,377nm,20.5s,baz=285,slow=33						
BMRD	Maredsous	18.50	130	dPn	Pn	10 36 42.7	+0.2
BMRD				dsPn	pP	10 36 44.9	+0.6
BMRD				dP	sP	10 36 50.9	+5.7
DOU	Dourbes	18.62	131	dPn	P	10 36 43.0	-0.8
MEM	Membach	18.66	127	dpPn	Pn	10 36 44.8	+0.4
MEM				dsPn	pP	10 36 45.9	-0.2
MEM				dP	sP	10 36 50.5	+3.6
BTNL	Ternell	18.72	127	dpPn	Pn	10 36 45.7	+0.6
BTNL				dP	sP	10 36 51.7	+4.0
FINES	FINESS Array B	19.72	79	P	P	10 36 56.1	+0.4
	comp=Z,0.1nm,0.3s,baz=321,slow=11,SNR=8.0						
FINES				LR	LR	10 44 04.7	
	comp=Z,417nm,18.4s,baz=274,slow=35						
FINES	FINESS Array B	19.72	79	P	P	10 36 55.8	+0.2
FINES	FINESS Array B	19.72	79	P	P	10 36 55.8	+0.2
FIA1	FINESS Array S	19.72	79	P	P	10 36 54.1	-1.5
TULEG	Thule	19.93	328	P	Pn	10 36 59.8	+0.4
NEUB	Neuenburg	20.27	117	eP	P	10 37 02.0	+0.3
	comp=Z,81nm,1.3s,baz=325,slow=10						
APA	Apatity	20.37	59	⇓iP	Pn	10 37 07.2	+2.5
APA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MOX	Moxa	20.66	119	eP	P	10 37 06.2	+0.3
	comp=Z,26nm,1.1s,baz=325,slow=10						
MOX				eL	L	10 45 17.1	
	comp=Z,687nm,19.2s						
CLL	Collm	20.66	116	i P	P	10 37 05.4	-0.6
	comp=Z,51nm,1.5s						
CLL				i		10 37 14.4	
CLL	Collm	20.66	116	P	P	10 37 05.9	-0.1
CLL				pmax	pmax		
	comp=Z,29nm,1.2s						
CLL	Collm	20.66	116	P	P	10 37 05.9	-0.1
CLL	Collm	20.66	116	eP	P	10 37 05.9	-0.1
	comp=Z,50nm,1.5s,baz=325,slow=10						
PLN	Plauen	20.99	118	eP	P	10 37 09.5	-0.1
	comp=Z,35nm,1.1s,baz=325,slow=10						
WERD	Werda	21.08	118	eP	P	10 37 10.3	-0.2
	comp=Z,27nm,1.4s,baz=325,slow=10						
ECH	Echery	21.10	129	P	P	10 37 10.3	-0.5
ECH				pmax	pmax		
	comp=Z,14nm,0.9s						
ECH	Echery	21.10	129	P	P	10 37 10.2	-0.5
GUNZ	Gunzen	21.16	118	eP	P	10 37 11.1	-0.3
	comp=Z,81nm,1.6s,baz=325,slow=10						
TANN	Tannenbergstha	21.16	118	eP	P	10 37 11.3	-0.2
	comp=Z,44nm,1.5s,baz=325,slow=10						
WERN	Wernitzgruen	21.23	118	eP	P	10 37 12.1	-0.1
	comp=Z,79nm,1.4s,baz=325,slow=10						
GRA1	Grafenberg Arr	21.29	121	P	P	10 37 10.6	-2.1
GRA1				IAmb	IAmb	10 37 28.0	
	comp=Z,34nm,1.0s						
GRF	Grafenberg Arr	21.29	121	P	P	10 37 10.6	-2.1
GRF				pmax	pmax		
	comp=Z,34nm,1.0s						
GRF	Grafenberg Arr	21.29	121	eP	P	10 37 12.8	+0.1
	comp=Z,26nm,1.1s,baz=325,slow=10						
GRF				eL	L	10 47 17.8	
	comp=Z,419nm,18.3s						
NKC	Novy Kostel	21.31	118	eP	P	10 37 13.2	+0.2
NKC	Novy Kostel	21.31	118	eP	P	10 37 13.2	+0.2
STU	Stuttgart	21.32	125	P	P	10 37 10.7	-2.4
STU				pmax	pmax		
	comp=Z,28nm,0.8s						
STU	Stuttgart	21.32	125	P	P	10 37 10.7	-2.4
STU				IAmb	IAmb	10 37 15.7	
	comp=Z,28nm,0.8s						
BRG	Berggiesshubel	21.37	115	i P	P	10 37 13.3	-0.3
BRG				Amp		10 37 15.5	
	comp=Z,44nm,1.4s						
BRG	Berggiesshubel	21.37	115	i P	P	10 37 13.3	-0.3
BRG				pmax	pmax		
	comp=Z,44nm,1.4s						
BRG	Berggiesshubel	21.37	115	i P	P	10 37 13.3	-0.3
BRG				Amp		10 37 15.5	
	comp=Z,44nm,1.4s						
BRG	Berggiesshubel	21.37	115	eP	P	10 37 13.3	-0.3
	comp=Z,28nm,1.1s,baz=325,slow=10						
BFO	Black Forest	21.39	127	P	P	10 37 13.9	-0.1
BFO				pmax	pmax		
	comp=Z,40nm,1.3s						
BFO	Black Forest	21.39	127	P	P	10 37 13.9	-0.1
BFO				IAmb	IAmb	10 37 18.8	
	comp=Z,40nm,1.3s						
BFO	Black Forest	21.39	127	eP	P	10 37 14.5	+0.6
	comp=Z,42nm,1.3s,baz=325,slow=10						
VSU	Vasula	21.57	86	eP	P	10 37 15.8	+0.2
VSU	Vasula	21.57	86	c iP	P	10 37 15.7	0.0
VSU				pmax	pmax		
	comp=Z,44nm,0.9s						
ROTZ	Rotzenmuhle	21.59	119	eP	P	10 37 15.9	-0.1
	comp=Z,165nm,2.5s,baz=325,slow=10						
FRB	Frobisher Bay	21.78	291	P	P	10 37 16.6	-1.3
	comp=Z,4.1nm,0.9s,baz=67,slow=6.1,SNR=7.2						
FRB				LR	LR	10 45 27.3	
	comp=Z,447nm,21.3s,baz=56,slow=36						
PABE	Paberze	22.20	95	eP	P	10 37 22.6	+0.2
PRU	Pruhonice	22.31	116	eP	P	10 37 24.0	+0.3
PRU	Pruhonice	22.31	116	eP	P	10 37 24.0	+0.3
PUL	Pulkovo	22.37	80	i P	P	10 37 25.4	+1.1
PUL				pmax	pmax		
	comp=Z,26nm,0.6s						
CHVC	Chvalec	22.43	113	eP	P	10 37 25.8	+0.8
UPC	Upice	22.48	113	eP	P	10 37 26.3	+0.8
UPC	Upice	22.48	113	eP	P	10 37 26.3	+0.8
OSTC	Ostas	22.52	112	eP	P	10 37 26.0	0.0
KHC	Kasperske Hory	22.63	118	ceP	P	10 37 27.1	-0.1
KHC				pmax	pmax		
	comp=Z,29nm,1.0s						
KHC	Kasperske Hory	22.63	118	eP	P	10 37 26.7	-0.5
KHC	Kasperske Hory	22.63	118	P	P	10 37 24.9	-2.3
KHC				IAmb	IAmb	10 37 39.0	
	comp=Z,30nm,1.3s						
DPC	Dobruska-Polom	22.72	113	eP	P	10 37 27.9	-0.3
DPC	Dobruska-Polom	22.72	113	eP	P	10 37 27.9	-0.3
SENIN	Lac Senin/Sane	22.77	131	P	P	10 37 29.1	+0.3
DAVA	Damuels	22.83	126	eP	P	10 37 30.4	+1.0
	comp=Z,34nm,1.4s						
SSB	Saint Sauveur	22.89	137	P	P	10 37 30.3	+0.4
SSB				pmax	pmax		
	comp=Z,20nm,1.1s						
SSB	Saint Sauveur	22.89	137		P	10 37 30.3	+0.4
SSB				IAmb	IAmb	10 37 43.4	
	comp=Z,20nm,1.1s						
GEC2	GERESS Array S	22.91	118	P	P	10 37 28.4	-1.8
GEC2				IAmb	IAmb	10 37 39.1	
	comp=Z,38nm,1.5s						
GERES	GERESS Array B	22.91	118	P	P	10 37 30.5	+0.3
	comp=Z,3.8nm,0.9s,baz=328,slow=9.4,SNR=20						
GERES				LR	LR	10 46 22.8	
	comp=Z,651nm,20.5s,baz=318,slow=37						
GERES	GERESS Array B	22.91	118	P	P	10 37 29.6	-0.6
GERES	GERESS Array B	22.91	118	P	P	10 37 29.6	-0.6
RETA	Reutte	22.97	125	eP	P	10 37 30.8	0.0
	comp=Z,16nm,1.5s						
KRLC	Kraliky	23.12	112	eP	P	10 37 31.6	-0.7
KRLC	Kraliky	23.12	112	eP	P	10 37 31.6	-0.7
MOTA	Moosalm	23.21	124	eP	P	10 37 34.5	+1.1
	comp=Z,12nm,0.9s						
TREC	Trest	23.23	115	eP	P	10 37 33.2	-0.2
TREC	Trest	23.23	115	eP	P	10 37 33.2	-0.2
DAVOX	Davos/Dischmat	23.26	127	P	P	10 37 33.6	-0.4
	comp=Z,4.7nm,0.7s,baz=317,slow=17,SNR=4.9						
DAVOX				LR	LR	10 46 20.8	
	comp=Z,378nm,19.3s,baz=324,slow=36						
IIGN	Ignalina	23.27	93	eP	P	10 37 34.0	+0.2
SQTA	Sankt Quirin	23.35	124	eP	P	10 37 35.4	+0.6
	comp=Z,11nm,0.8s						
FETA	Feichten	23.35	125	eP	P	10 37 37.3	+2.5
	comp=Z,24nm,1.4s						
TMCR	Tamitsa	23.38	66	eP	P	10 37 33.9	-0.8
TMCR				pmax	pmax		
	comp=Z,39nm,1.5s						
WATA	Walderalm	23.39	124	eP	P	10 37 35.2	+0.1
	comp=Z,13nm,0.8s						
IDID	Didziasalis	23.52	92	eP	P	10 37 36.3	+0.1
VRAC	Vranov	23.66	114	P	P	10 37 37.5	-0.2
	comp=Z,4.8nm,0.7s,baz=323,slow=10,SNR=8.4						
VRAC				LR	LR	10 47 32.6	
	comp=Z,369nm,18.9s,baz=332,slow=38						
VRAC	Vranov	23.66	114	eP	P	10 37 37.9	+0.2
MORC	Moravsky Berou	23.66	112	eP	P	10 37 38.6	+0.9
MORC	Moravsky Berou	23.66	112	P	P	10 37 37.1	-0.7
MORC				pmax	pmax		
	comp=Z,15nm,1.2s						
MORC	Moravsky Berou	23.66	112	P	P	10 37 37.1	-0.7
EUNU	Eureka	23.75	336	P	P	10 37 38.5	+0.1
EUNU				IAmb	IAmb	10 37 43.3	
	comp=Z,20nm,0.9s						
KRUC	Moravsky	23.78	115	eP	P	10 37 38.8	0.0
NACGM	Naroch	23.81	93	i P	P	10 37 39.3	+0.3
NACGM				i P	P	10 37 39.3	+0.3
NACGM				i P	P	10 37 39.3	+0.3
NACGM				i Pb	pP	10 37 40.6	-0.5
	comp=Z,32nm,1.0s						
NACGM				i PP	PnPn	10 38 10.3	+3.9
NACGM				i S	S	10 42 01.9	+7.0
NACGM				i SS	SnSn	10 42 49.9	+17
NACGM				i SSS	SSS	10 43 00.9	
NACGM				i LQ	LQ	10 45 23.1	
NACGM				i LR	LR	10 46 40.8	
MOA	Molln	23.95	119	eP	P	10 37 40.3	-0.2
	comp=Z,22nm,1.4s						
ABTA	Abfaltersbach	24.22	123	eP	P	10 37 43.6	+0.5
	comp=Z,18nm,1.2s						
OJC	Ojcow	24.23	109	eP	P	10 37 43.2	+0.1
OJC	Ojcow	24.23	109	P	P	10 37 41.6	-1.5
OJC				pmax	pmax		
	comp=Z,16nm,1.3s						
OJC	Ojcow	24.23	109	P	P	10 37 41.6	-1.5
JAVC	Velka Javorina	24.44	113	eP	P	10 37 46.2	+1.1
CONA	Conrad Observa	24.49	117	eP	P	10 37 46.3	+0.8
	comp=Z,11nm,0.9s						
CTI	Castel Tesino	24.51	125	P	P	10 37 47.0	+1.2
CTI				pmax	pmax		
	comp=Z,43nm,1.3s						
CTI	Castel Tesino	24.51	125	P	P	10 37 47.0	+1.2
ZOU	Zoufplan	24.55	123	P	P	10 37 46.3	+0.1
ZOU				IAmb	IAmb	10 37 58.1	
	comp=Z,27nm,1.3s						
MNK	Minsk	24.55	93	i P	P	10 37 44.3	-1.7
	comp=E,3.0nm,0.8s						
MNK				i P	P	10 37 44.3	-1.7
	comp=N,26nm,0.8s						
MNK				i P	P	10 37 44.3	-1.7
	comp=Z,26nm,0.7s						
MNK				i PP	PnPn	10 38 15.6	-1.0
MNK				i PPP	PPP	10 38 23.6	
MNK				i PcP	PcP	10 41 21.5	-2.0
MNK				i S	S	10 42 05.8	-1.0
MNK				i SS	SnSn	10 42 53.0	+2.2
MNK				i SSS	SSS	10 43 06.7	
MNK				i LR	LR	10 46 06.5	
MNK				i LRM	MLR	10 48 10.3	
	comp=E,12nm,12.3s						
MNK				i LRM	MLR	10 48 10.3	
	comp=N,363nm,13.8s						
MNK				i LRM	MLR	10 48 10.3	
	comp=Z,223nm,13.8s						
SMOL	Smolenice	24.62	114	eP	P	10 37 47.9	+1.2
SMOL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SMOL	Smolenice	24.62	114	eP	P	10 37 47.9	+1.2
MODS	Modra-Piesok	24.68	114	eP	P	10 37 47.0	-0.2
MODS				pmax	pmax		
	comp=Z,20nm,1.4s						
MODS	Modra-Piesok	24.68	114	eP	P	10 37 47.0	-0.2
MYKA	Terra Mystica	24.73	122	eP	P	10 37 48.3	+0.5
	comp=Z,14nm,1.2s						
ZST	Bratislava	24.75	115	eP	P	10 37 50.4	+2.6
ZST	Bratislava	24.75	115	eP	P	10 37 50.4	+2.6
ARSA	Arzberg	24.92	118	eP	P	10 37 49.6	+0.3
	comp=Z,5.6nm,0.9s						
LANS	Liptovska Anna	24.93	111	eP	P	10 37 51.1	+1.6
LANS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LANS	Liptovska Anna	24.93	111	eP	P	10 37 51.1	+1.6
VYHS	Vyhne	25.20	112	eP	P	10 37 52.5	+0.6
VYHS				pmax	pmax		
	comp=Z,24nm,1.4s						
VYHS	Vyhne	25.20	112	eP	P	10 37 52.5	+0.6
KLMR	Klimovskoe	25.63	72	eP	P	10 37 53.4	-2.1
KLMR				pmax	pmax		
	comp=Z,28nm,1.3s						
KLMR	Klimovskoe	25.63	72	eP	P	10 37 53.5	-2.1
KLMR				AMP		10 37 59.8	
	comp=Z,28nm,1.3s						
KWP	Kalwaria Pacla	25.88	106	P	P	10 37 58.0	-0.1
KWP				pmax	pmax		
	comp=Z,41nm,1.0s						
KWP	Kalwaria Pacla	25.88	106	P	P	10 37 58.0	-0.1
CSKK	Cskako	25.88	115	eP	P	10 38 00.7	+2.6
CRVS	Cervenica-Dubn	25.94	108	eP	P	10 37 59.2	+0.6
CRVS				pmax	pmax		
	comp=Z,85nm,2.0s						
CRVS	Cervenica-Dubn	25.94	108	eP	P	10 37 59.2	+0.6
BEHE	Becsehely	26.05	118	eP	P	10 38 02.8	+3.3
PSZ	Piszkesteto	26.08	112	eP	P	10 37 59.0	-1.0
PSZ	Piszkesteto	26.08	112	P	P	10 37 57.9	-2.1
PSZ				pmax	pmax		
	comp=Z,28nm,1.3s						
PSZ	Piszkesteto	26.08	112	P	P	10 37 57.9	-2.1
PSZ				IAmb	IAmb	10 38 12.2	
	comp=Z,28nm,1.3s						
ESDC	Sonseca Array	26.17	156	P	P	10 37 59.0	-1.8
	comp=Z,4.0nm,0.8s,baz=347,slow=8.9,SNR=12						
ESDC				LR	LR	10 48 00.8	
	comp=Z,478nm,18.7s,baz=330,slow=36						
ESDC	Sonseca Array	26.17	156	P	P	10 37 59.9	-0.9
KOLS	Kolonicke sedl	26.25	107	eP	P	10 38 02.3	+0.9
KOLS				pmax	pmax		
	comp=Z,26nm,1.3s						
KOLS	Kolonicke sedl	26.25	107	eP	P	10 38 02.3	+0.9
LVV	L'vov	26.29	104	eP	P	10 38 01.9	+0.2
UZH	Uzhgorod	26.49	108	eP	P	10 38 01.5	-2.0
UZH				i		10 38 03.5	
UZH				i		10 38 08.0	
RES	Resolute Bay	26.54	325	P	P	10 38 03.5	-0.3
	comp=Z,3.0nm,0.9s,baz=115,slow=9.0,SNR=6.9						
RES				LR	LR	10 47 53.4	
	comp=Z,326nm,20.4s,baz=53,slow=35						
RES	Resolute Bay	26.54	325	P	P	10 38 04.1	+0.4
RES				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RES	Resolute Bay	26.54	325	P	P	10 38 04.1	+0.4
MORH	Mrgy, Hungar	26.98	116	eP	P	10 38 07.7	-0.3
AKASG	Malin Array Be	27.83	97	P	P	10 38 14.1	-1.4
	comp=Z,4.2nm,0.8s,baz=321,slow=9.3,SNR=9.6						
AKASG				LR	LR	10 49 09.9	
	comp=Z,400nm,20.3s,baz=310,slow=36						
AKASG	Malin Array Be	27.83	97	P	P	10 38 13.7	-1.8
AKBB	Malin Array Si	27.83	97	⇓iP	P	10 38 13.7	-1.8
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	27.89	84	LR	LR	10 48 24.6	
	comp=Z,61nm,21.3s,baz=317,slow=34						
OBN	Obninsk	27.89	84	ceP	P	10 38 16.2	+0.2
OBN				pmax	pmax		
	comp=Z,15nm,0.6s						
OBN				MLR	MLR		
	comp=Z,295nm,24.0s						
MOS	Moscow	27.93	82	eP	P	10 38 23.7	+7.4
SIRR	Siria	28.13	112	⇓P	P	10 38 17.4	-0.8
BURAR	Bucovina Array	28.50	106	⇑P	P	10 38 21.3	-0.4
BURAR	Bucovina Array	28.50	106	⇑P	P	10 38 21.3	-0.4
BURAR	Bucovina Array	28.50	106	P	P	10 38 22.0	+0.3
BZS	Buzias	28.64	113	⇑P	P	10 38 22.9	0.0
BZS	Buzias	28.64	113	⇑P	P	10 38 22.9	0.0
GZR	Gura Zlata	29.29	111	⇑P	P	10 38 28.7	0.0
GZR	Gura Zlata	29.29	111	⇑P	P	10 38 28.7	0.0
MDVR	Moldovita	29.37	113	⇑P	P	10 38 29.0	-0.4
SORM	Soroca	29.40	102	⇑P	P	10 38 28.9	-0.6
SORM	Soroca	29.40	102	⇑P	P	10 38 28.9	-0.6
HERR	Herculane	29.57	112	⇑P	P	10 38 31.2	+0.2
ARR	Arges	30.06	109	⇑P	P	10 38 34.8	-0.7
VOIR		30.18	109	⇑P	P	10 38 36.8	+0.3
VOIR		30.18	109	⇑P	P	10 38 36.8	+0.3
PLOR	Plostina	30.50	106	⇓P	P	10 38 39.6	+0.3
PLOR	Plostina	30.50	106	⇓P	P	10 38 39.6	+0.3
MLR	Muntele Rosu	30.50	108	⇓P	P	10 38 38.3	-1.2
MLR	Muntele Rosu	30.50	108	⇓P	P	10 38 38.3	-1.2
MLR	Muntele Rosu	30.50	108	P	P	10 38 39.8	+0.4
VRI	Vrincioaia	30.52	106	⇑P	P	10 38 38.4	-1.1
VRI	Vrincioaia	30.52	106	⇑P	P	10 38 38.4	-1.1
NEHR	Nehoiu	30.70	107	⇑P	P	10 38 40.2	-0.8
KIRV	Kirov	31.01	69	⇑eP	P	10 38 44.0	+0.4
CFR	Carcaliu	31.66	106	⇑P	P	10 38 48.5	-1.0
CFR	Carcaliu	31.66	106	⇑P	P	10 38 48.5	-1.0
KEST	Kesra	33.09	138	LR	LR	10 51 53.1	
	comp=Z,299nm,21.1s,baz=302,slow=35						
G64A	Maxfield	33.98	260	P	P	10 39 11.2	+1.5
	baz=37						
PKME	Peaks-Kenny Pk	34.19	261	P	P	10 39 11.6	-0.1
	baz=37						
E60A	Ste Agathe de	34.24	264	P	P	10 39 12.4	+0.3
	baz=38						
MATQ	Matagami	34.31	274	P	P	10 39 12.6	0.0
	baz=42						
BELG	Belogornoye	34.50	79	d iP	P	10 39 13.7	-0.5
BELG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AGG	Agios Georgios	34.53	118	P	P	10 39 13.5	-1.1
AGG				pmax	pmax		
	comp=Z,21nm,1.0s						
AGG	Agios Georgios	34.53	118	P	P	10 39 13.5	-1.1
LSQQ	Lebel-sur-Quev	34.56	272	P	P	10 39 15.8	+1.1
	baz=41						
FCC	Fort Churchill	34.71	297	P	P	10 39 17.4	+1.4
FCC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
FCC	Fort Churchill	34.71	297		P	10 39 17.4	+1.4
E56A	St. Veronique	35.65	268	P	P	10 39 25.6	+1.4
	baz=39						
ARU	Arti	36.11	66	d iP	P	10 39 28.2	+0.1
ARU						10 40 46.6	
ARU				PPP	PPP	10 41 03.8	
ARU				S	S	10 45 07.4	-0.2
ARU				SS	SnSn	10 47 28.8	-3.1
ARU				pmax	pmax		
	comp=Z,13nm,2.6s						
C36M	Paulatuk	36.90	326	P	P	10 39 35.6	+1.1
	baz=44,SNR=7.3						
C36M	Paulatuk	36.90	326		P	10 39 36.5	+1.9
C36M				IAmb	IAmb	10 39 37.7	
	comp=Z,12nm,1.2s						
ALGO	Algonquin Park	37.41	270	P	P	10 39 39.9	+0.7
	baz=38						
GOF	Gofitskoye	38.11	91	⇑eP	P	10 39 45.4	+0.3
GOF				pmax	pmax		
	comp=Z,28nm,0.8s						
BR131	Keskin Array S	38.45	105	c iP	P	10 39 48.8	+0.5
BR131	Keskin Array S	38.45	105	P	P	10 39 47.7	-0.6
BR131				IAmb	IAmb	10 39 50.9	
	comp=Z,11nm,0.8s						

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BRTR  Keskin Array B   38.45 105   P       P        10 39 49.0 +0.7
       comp=Z,5.4nm,0.8s,baz=331,slow=5.6,SNR=30
BRTR                               LR      LR       10 56 26.5
       comp=Z,44nm,18.1s,baz=314,slow=38
BRTR  Keskin Array B   38.45 105   P       P        10 39 48.3  0.0
BRTR  Keskin Array B   38.45 105   P       P        10 39 48.3  0.0
KIV   Kislovodsk       38.84  92  eP       P        10 39 52.5 +1.1
KIV                                pmax    pmax
       comp=Z,19nm,0.9s
KIV                                MLR     MLR
       comp=Z,539nm,16.0s
KBZ   Khabaz           39.11  92   P       P        10 39 54.1 +0.6
       comp=Z,5.7nm,0.8s,baz=327,slow=10,SNR=15
KBZ                                LR      LR       10 55 59.0
       comp=Z,308nm,21.6s,baz=321,slow=36
KBZ   Khabaz           39.11  92ceP        P        10 39 54.0 +0.6
KBZ                                pmax    pmax
       comp=Z,11nm,1.0s
YKA   Yellowknife Ar   39.27 313   P       P        10 39 53.8 -0.9
       comp=Z,2.7nm,0.8s,baz=47,slow=8.7,SNR=31
YKA                                PcP     PcP      10 42 01.8 -1.4
       comp=Z,1.0nm,0.9s,baz=46,slow=3.3,SNR=9.1
YKA                                LR      LR       10 55 56.5
       comp=Z,215nm,18.8s,baz=0.0,slow=36
YKA   Yellowknife Ar   39.27 313 i P       P        10 39 53.5 -1.2
YKA                                pmax    pmax
       comp=Z,3.0nm,0.8s
ELL   Elmali           39.46 112   P       P        10 39 57.8 +1.0
ELL                                pmax    pmax
       comp=Z,46nm,1.2s
ELL   Elmali           39.46 112   P       P        10 39 57.8 +1.0
PAL   Palisades        39.62 261   P       P        10 39 58.8 +1.0
       baz=34
E46A  Sault Ste Mari   39.78 276           P        10 39 59.3 +0.1
E46A                               IAmb    IAmb     10 40 02.4
       comp=Z,14nm,0.9s
INK   Inuvik           39.92 329   P       P        10 40 01.3 +1.3
INK                                pmax    pmax
       comp=Z,7.0nm,1.0s
INK   Inuvik           39.92 329           P        10 40 01.3 +1.3
ZEI   Tsey             40.30  92  eP       P        10 40 03.8 +0.1
ZEI                                pmax    pmax
       comp=Z,5.0nm,1.1s
FFC   Flin Flon        40.64 298   P       P        10 40 07.9 +1.7
FFC                                pmax    pmax
       comp=Z,15nm,1.4s
FFC   Flin Flon        40.64 298           P        10 40 07.8 +1.7
N57A  Milroy           41.39 265   P       P        10 40 12.5 +0.1
       baz=34
ULM   Lac du Bonnet    41.63 289   P       P        10 40 13.7 -0.6
       comp=Z,0.8nm,0.5s,baz=34,slow=7.3,SNR=3.3
ULM                                LR      LR       10 57 14.1
       comp=Z,204nm,19.3s,baz=56,slow=36
ULM   Lac du Bonnet    41.63 289⇑eP        P        10 40 13.9 -0.4
M54A  Oil Creek Stat   41.68 267   P       P        10 40 15.6 +0.8
       baz=35
ABKAR Akbulak array    42.01  73   P       P        10 40 17.9 +0.4
ABKAR Akbulak array    42.01  73   P       P        10 40 17.5 +0.1
TIXI  Tiksi            42.11  15⇑eP        P        10 40 18.7 +0.7
TIXI                               pmax    pmax
       comp=Z,78nm,1.1s
TIXI  Tiksi            42.11  15   P       P        10 40 19.1 +1.1
TIXI                               IAmb    IAmb     10 40 21.4
       comp=Z,15nm,1.0s
M53A  WI Miller and    42.17 268   P       P        10 40 19.7 +0.8
       baz=35
B35A  Bob, Littlefor   42.21 285           P        10 40 20.9 +1.8
EPYK  Eagle Plains     42.22 328   P       P        10 40 19.6 +0.5
       baz=34
N54A  Moraine State    42.27 267   P       P        10 40 19.9 +0.2
       baz=35
N54A  Moraine State    42.27 267   P       P        10 40 21.2 +1.5
N54A                               IAmb    IAmb     10 40 25.6
       comp=Z,13nm,1.0s
M52A  Chesterland      42.38 269   P       P        10 40 22.2 +1.7
M52A                               IAmb    IAmb     10 40 24.1
       comp=Z,18nm,0.9s
P57A  Homestead Farm   42.64 264   P       P        10 40 23.3 +0.6
       baz=34
GNI   Garni            42.82  94  eP       P        10 40 23.5 -0.9
GNI                                pmax    pmax
       comp=Z,15nm,1.0s
M51A  Elyria           42.91 269   P       P        10 40 25.5 +0.6
       baz=35
BMAR  Burnt Mountain   42.97 333   P       P        10 40 25.4 +0.3
AGMN  Agassiz Nation   43.15 287   P       P        10 40 26.8 +0.1
       baz=38,SNR=5.1
AGMN  Agassiz Nation   43.15 287   P       P        10 40 29.3 +2.5
AGMN                               IAmb    IAmb     10 40 30.4
       comp=Z,20nm,1.4s
BRVK  Borovoye         43.17  62c iP       P        10 40 27.9 +1.1
BRVK                               pmax    pmax
       comp=Z,17nm,2.2s
BRVK  Borovoye         43.17  62   P       P        10 40 27.6 +0.8
G40A  Rib Lake         43.17 280   P       P        10 40 26.8 -0.2
M50A  Fremont          43.22 270   P       P        10 40 28.2 +0.8
M50A                               IAmb    IAmb     10 40 30.9
       comp=Z,16nm,0.8s
N51A  Ashland          43.33 269           P        10 40 28.4 +0.1
N51A                               IAmb    IAmb     10 40 31.7
       comp=Z,17nm,0.9s
L48A  N Adams          43.38 272   P       P        10 40 29.0 +0.3
L48A                               IAmb    IAmb     10 40 32.4
       comp=Z,12nm,0.8s
O53A  New Philadelph   43.38 268   P       P        10 40 29.3 +0.6
       baz=34
R58A  Rapidan          43.62 263   P       P        10 40 30.5 -0.2
       baz=33
O52A  Adamsville       43.76 268   P       P        10 40 32.1 +0.4
O52A                               IAmb    IAmb     10 40 36.9
       comp=Z,11nm,0.8s
FYU   Fort Yukon       43.85 333   P       P        10 40 33.5 +1.3
P53A  Whipple          44.09 267   P       P        10 40 36.2 +1.9
N49A  Columbus Grove   44.11 271   P       P        10 40 35.1 +0.6
R56A  Bull Pasture M   44.13 265   P       P        10 40 35.1 +0.3
       baz=33
ACSO  Alum Creek Sta   44.16 269   P       P        10 40 34.9 -0.1
       baz=34
ACSO  Alum Creek Sta   44.16 269   P       P        10 40 36.8 +1.9
ACSO                               IAmb    IAmb     10 40 38.3
       comp=Z,15nm,0.9s
COLD  Coldfoot         44.20 336   P       P        10 40 36.1 +1.2
       baz=27
COLD  Coldfoot         44.20 336           P        10 40 37.1 +2.2
SPMN  Marine on St.    44.31 282   P       P        10 40 37.5 +1.3
SPMN                               IAmb    IAmb     10 40 41.0
       comp=Z,9.4nm,1.0s
S57A  Dark Hollow, R   44.48 264   P       P        10 40 37.2 -0.3
       baz=33
EGAK  Eagle            44.56 329   P       P        10 40 39.1 +1.3
EGAK                               IAmb    IAmb     10 40 41.1
       comp=Z,18nm,1.4s
Q53A  Leroy            44.67 267   P       P        10 40 39.8 +0.8
       baz=34
O49A  Covington        44.78 270   P       P        10 40 40.3 +0.4
P51A  Williamsport     44.81 269   P       P        10 40 40.2  0.0
P51A                               IAmb    IAmb     10 40 43.8
       comp=Z,12nm,0.8s
PRP   Porcupine Dome   44.83 332           P        10 40 41.2 +1.0
PRP                                IAmb    IAmb     10 40 45.0
       comp=Z,16nm,1.3s
T58A  Grand View Acr   44.99 263   P       P        10 40 42.0 +0.4
       baz=32
MDND  Maddock          45.04 289   P       P        10 40 42.0 +0.1
       baz=37
MDND  Maddock          45.04 289   P       P        10 40 43.1 +1.2
T57A  Hurt             45.25 263   P       P        10 40 43.8 +0.1
       baz=32
F33A  5 Mile Ranch,    45.28 285           P        10 40 45.8 +2.0
F33A                               IAmb    IAmb     10 40 47.9
       comp=Z,13nm,1.2s
Q51A  Peebles          45.31 269   P       P        10 40 44.7 +0.5
Q51A                               IAmb    IAmb     10 40 49.5
       comp=Z,15nm,1.1s
K27K  Chicken          45.41 329   P       P        10 40 45.0 +0.4
       baz=30
K27K  Chicken          45.41 329   P       P        10 40 47.4 +2.8
K27K                               IAmb    IAmb     10 40 48.8
       comp=Z,13nm,1.3s
S54A  Dingess, Beckl   45.46 266   P       P        10 40 46.3 +0.9
       baz=33
P49A  Miami Univ. Ec   45.48 270   P       P        10 40 46.1 +0.6
       baz=34
P49A  Miami Univ. Ec   45.48 270   P       P        10 40 47.1 +1.6
P49A                               IAmb    IAmb     10 40 48.9
       comp=Z,9.5nm,0.8s
IL31                   45.76 332   P       P        10 40 49.4 +2.0
IL31                               IAmb    IAmb     10 40 51.5
       comp=Z,12nm,1.4s
ILAR  Eielson Array    45.76 332   P       P        10 40 48.0 +0.6
       comp=Z,3.1nm,0.9s,baz=26,slow=7.1,SNR=24
ILAR                               PcP     PcP      10 42 24.5 -0.3
       comp=Z,2.6nm,0.9s,baz=354,slow=2.6,SNR=13
ILAR                               LR      LR       11 02 23.1
       comp=Z,200nm,19.0s,baz=38,slow=39
ILAR  Eielson Array    45.76 332   P       P        10 40 47.7 +0.3
ILAR                               PcP     PcP      10 42 24.8 -0.1
SFIN  Lafayette        45.81 273   P       P        10 40 48.5 +0.5
       baz=34
SFIN  Lafayette        45.81 273   P       P        10 40 49.2 +1.1
SFIN                               IAmb    IAmb     10 40 50.9
       comp=Z,8.8nm,0.8s
P48A  Milroy           45.85 271           P        10 40 49.8 +1.4
P48A                               IAmb    IAmb     10 40 51.1
       comp=Z,12nm,0.9s
MDM   Murphy Dome      45.86 333   P       P        10 40 49.3 +1.1
COLA  College          45.86 333c iP       P        10 40 48.7 +0.6
COLA                               pmax    pmax
       comp=Z,14nm,1.0s
COLA  College          45.86 333   P       P        10 40 49.0 +0.9
TCOL  CIGO, UAF Yank   45.86 333   P       P        10 40 49.1 +0.9
       baz=27,SNR=5.3
TCOL  CIGO, UAF Yank   45.86 333   P       P        10 40 48.9 +0.7
SCRK  Sand Creek       45.87 330   P       P        10 40 49.5 +1.1
       baz=29
I23K  Minto, Yukon-K   45.91 334   P       P        10 40 49.0 +0.5
       baz=27
IMAR  Indian Mountai   45.94 337   P       P        10 40 48.4 -0.3
BCAR  Beaver Creek A   46.18 329   P       P        10 40 51.7 +0.9
RIDG  Independent Ri   46.26 331           P        10 40 52.6 +1.2
MLY   Manley           46.27 335   P       P        10 40 52.0 +0.5
       baz=26,SNR=11
NEA2  Nenana           46.35 334   P       P        10 40 52.8 +0.8
       baz=27,SNR=6.2
DGMT  Dagmar           46.38 293   P       P        10 40 53.1 +0.6
       baz=37
DGMT  Dagmar           46.38 293           P        10 40 55.0 +2.4
BRZS  Berezniki        46.52  63  eP       P        10 40 52.9 -0.7
       comp=Z,2.2nm,1.0s,baz=63
BRZS  Berezniki        46.52  63  eP       P        10 40 52.9 -0.7
BRZS                               pmax    pmax
       comp=Z,2.0nm,1.0s
S51A  Beattyville      46.58 268   P       P        10 40 53.7 -0.5
HDIL  Hopedale         46.61 275   P       P        10 40 54.8 +0.4
       baz=34
V56A  Mocksville       46.79 264   P       P        10 40 55.9 +0.1
       baz=32
MCK   McKinley         47.10 333   P       P        10 40 59.0 +1.0
       baz=26
WCI   Wyandotte Cave   47.25 271   P       P        10 40 59.8 +0.4
WCI                                pmax    pmax
       comp=Z,20nm,0.9s
WCI   Wyandotte Cave   47.25 271   P       P        10 41 00.4 +1.0
       baz=33
WCI   Wyandotte Cave   47.25 271           P        10 40 59.8 +0.4
T50A  Nancy            47.63 269   IAmb    IAmb     10 41 05.2
       comp=Z,8.8nm,1.2s
BILL  Bilibino         47.64 358⇑eP        P        10 41 02.9 +0.9
BILL                              e                 10 42 28.8
BILL                              e                 10 42 56.1
BILL                              eSS      SS       10 51 21.3 -3.4
BILL                               pmax    pmax
       comp=Z,6.0nm,1.1s
BILL                               MLR     MLR
       comp=Z,100nm,17.0s
ZAA0  Zalesovo Array   47.68  51   P       P        10 41 02.7 +0.2
ZAA0                               IAmb    IAmb     10 41 04.0
       comp=Z,6.9nm,1.3s
ZALV  Zalesovo Beam    47.68  51   P       P        10 41 01.8 -0.8
       comp=Z,1.8nm,0.8s,baz=335,slow=6.6,SNR=8.7
ZALV                               PcP     PcP      10 42 32.6 +0.8
       comp=Z,0.8nm,0.8s,baz=270,slow=1.5,SNR=3.8
ZALV                               LR      LR       11 03 23.6
       comp=Z,122nm,18.2s,baz=300,slow=39
ZALV  Zalesovo Beam    47.68  51 i P       P        10 41 03.2 +0.6
ZALV                               pmax    pmax
       comp=Z,2.0nm,0.9s
N25K  Chitina, Valde   48.10 329   P       P        10 41 07.3 +1.5
       baz=28
KURK  Kurchatov        48.16  58d iP       P        10 41 06.2  0.0
KURK                               pmax    pmax
       comp=Z,11nm,1.0s
KURK  Kurchatov        48.16  58   P       P        10 41 06.5 +0.2
KURK                               IAmb    IAmb     10 41 07.8
       comp=Z,8.4nm,0.8s
U49A  Red Boiling Sp   48.47 269   P       P        10 41 10.6 +1.7
U49A                               IAmb    IAmb     10 41 11.9
       comp=Z,8.9nm,1.1s
LAO   LASA Array       48.63 294   P       P        10 41 12.0 +1.9
       baz=35
EGMT  Eagleton         48.92 297   P       P        10 41 12.9 +0.6
       baz=35,SNR=10
EGMT  Eagleton         48.92 297   P       P        10 41 14.5 +2.2
SEM   Semipalatinsk    49.00  57  eP       P        10 41 12.2 -0.9
       comp=Z,2.8nm,0.9s,baz=57
SEM                               eS       S        10 48 17.5 -0.1
       baz=57
SEM   Semipalatinsk    49.00  57  eP       P        10 41 12.1 -0.9
SEM                               eS       S        10 48 17.5 -0.1
SEM                                pmax    pmax
       comp=Z,3.0nm,0.9s
TTA   Tatalina         49.14 336   P       P        10 41 15.2 +1.4
TTA                                pmax    pmax
       comp=Z,8.0nm,1.1s
TTA   Tatalina         49.14 336   P       P        10 41 15.2 +1.4
TTA                                IAmb    IAmb     10 41 18.9
       comp=Z,8.2nm,1.1s
CCM   Cathedral Cave   49.53 275   P       P        10 41 17.3 +0.3
       baz=33
RC01  Rabbit Creek A   49.65 332   P       P        10 41 18.3 +0.7
       baz=25
WVT   Waverly          49.68 271   P       P        10 41 18.8 +0.7
       baz=32
RSSD  Black Hills      49.87 290   P       P        10 41 20.1 +0.3
RSSD                               pmax    pmax
       comp=Z,5.0nm,0.9s
RSSD  Black Hills      49.87 290   P       P        10 41 19.2 -0.6
       baz=34
RSSD  Black Hills      49.87 290           P        10 41 20.1 +0.3
GOGA  Godfrey          50.11 265   P       P        10 41 21.4  0.0
       baz=31
GEYT  Alibeck          50.43  84   P       P        10 41 24.6 +0.7
       comp=Z,3.0nm,0.6s,baz=284,slow=13,SNR=5.3
GEYT                               LR      LR       11 04 56.7
       comp=Z,129nm,19.3s,baz=200,slow=39
GEYT  Alibeck          50.43  84   IAmb    IAmb     10 41 25.5
       comp=Z,2.9nm,0.8s
GCMT  Greycliff        50.73 295   P       P        10 41 25.6 -0.6
S39A  Bolivar          50.73 276   IAmb    IAmb     10 41 28.3
       comp=Z,8.2nm,0.9s
X48A  Hartselle        50.76 269   P       P        10 41 27.8 +1.4
X48A                               IAmb    IAmb     10 41 28.6
       comp=Z,8.9nm,0.9s
HRY   Holter Researc   50.80 298   P       P        10 41 27.4 +0.7
KSU1  Kansas State U   50.95 280   P       P        10 41 27.7  0.0
       baz=33
KSU1  Kansas State U   50.95 280   IAmb    IAmb     10 41 30.0
       comp=Z,8.9nm,0.9s
RLMT  Red Lodge        51.13 295   P       P        10 41 28.8 -0.4
       baz=34,SNR=10
RLMT  Red Lodge        51.13 295   P       P        10 41 31.1 +1.8
KK31  Karatay Array    51.30  70   P       P        10 41 31.1 +0.7
KK31                               pmax    pmax
       comp=Z,9.0nm,1.2s
KK31  Karatay Array    51.30  70   P       P        10 41 31.1 +0.7
KK31                               IAmb    IAmb     10 41 32.6
       comp=Z,9.5nm,1.1s
KKAR  Karatay Array    51.30  70   P       P        10 41 31.4 +1.0
KKAR                               pmax    pmax
       comp=Z,9.0nm,1.2s
KKAR  Karatay Array    51.30  70   P       P        10 41 31.4 +1.0
KKAR                               IAmb    IAmb     10 41 32.6
       comp=Z,9.5nm,1.1s
NEW   Newport          51.47 303   P       P        10 41 31.5 -0.1
       baz=33
MSO   Missoula         51.50 299   P       P        10 41 31.3 -0.6
       baz=33
YNE   Yellowstone No   51.51 295   P       P        10 41 32.5 +0.3
BOZ   Bozeman (W)      51.65 297   P       P        10 41 32.9 -0.2
BOZ                                pmax    pmax
       comp=Z,16nm,1.0s
BOZ   Bozeman (W)      51.65 297   P       P        10 41 32.2 -0.9
       baz=33,SNR=15
BOZ   Bozeman (W)      51.65 297   P       P        10 41 32.9 -0.2
U40A  Yellville        51.65 275   P       P        10 41 32.4 -0.7
       baz=32
U40A  Yellville        51.65 275           P        10 41 32.3 -0.7
DZA   Taraz            51.81  69  eP       P        10 41 34.6 +0.4
       baz=69
DZA   Taraz            51.81  69  eP       P        10 41 34.6 +0.4
IUG   Iuzhnay          51.91  71  eP       P        10 41 35.3 +0.3
       comp=Z,2.8nm,0.8s,baz=71
IUG   Iuzhnay          51.91  71  eP       P        10 41 35.3 +0.3
IUG                                pmax    pmax
       comp=Z,3.0nm,0.8s
LRAL  Lakeview Retre   51.95 268   P       P        10 41 34.7 -0.5
       baz=31
K22A  Casper           52.10 291   P       P        10 41 36.4 -0.1
       baz=33
K22A  Casper           52.10 291   IAmb    IAmb     10 41 39.3
       comp=Z,11nm,1.1s
DGZ   Jazzator, Alta   52.13  53⇓iP        P        10 41 37.5 +0.9
DGZ                                pmax    pmax
       comp=Z,7.0nm,1.1s
YHB   Horse Butte      52.19 296   P       P        10 41 39.3 +2.1
H17A  Grant Village    52.25 295   P       P        10 41 37.4 -0.3
       baz=33,SNR=7.9
H17A  Grant Village    52.25 295   IAmb    IAmb     10 41 42.8
       comp=Z,11nm,1.0s
W41B  Gary Mavity, V   52.39 274   P       P        10 41 38.5  0.0
       baz=32
CBKS  Cedar Bluff      52.51 283   P       P        10 41 39.9 +0.4
       baz=33
CBKS  Cedar Bluff      52.51 283   IAmb    IAmb     10 41 42.4
       comp=Z,14nm,1.1s
FLWY  Flagg Ranch      52.56 295   IAmb    IAmb     10 41 44.2
       comp=Z,8.8nm,0.9s
SEY   Seymchan         52.57   6  eP       P        10 41 39.8 +0.3
MAKZ  Makanchi         52.64  58   P       P        10 41 39.6 -0.7
MAKZ                               pmax    pmax
       comp=Z,10.0nm,1.5s
MAKZ  Makanchi         52.64  58   P       P        10 41 39.6 -0.7
SGDS  Sogindy          52.66  66  eP       P        10 41 40.5 -0.1
       comp=Z,3.1nm,1.3s,baz=66
SGDS  Sogindy          52.66  66  eP       P        10 41 40.4 -0.1
SGDS                               pmax    pmax
       comp=Z,3.0nm,1.3s
MK31  Makanchi Array   52.77  58   P       P        10 41 41.0 -0.2
MK31                               pmax    pmax
       comp=Z,5.0nm,1.2s
MK31  Makanchi Array   52.77  58   P       P        10 41 41.0 -0.2
MKAR  Makanchi Array   52.77  58   P       P        10 41 40.9 -0.3
       comp=Z,3.1nm,0.9s,baz=325,slow=5.9,SNR=15
MKAR                               LR      LR       11 05 36.1
       comp=Z,98nm,18.9s,baz=314,slow=38
MKAR  Makanchi Array   52.77  58 i P       P        10 41 41.5 +0.3
MKAR                               pmax    pmax
       comp=Z,3.0nm,1.0s
MKAR  Makanchi Array   52.77  58   P       P        10 41 40.5 -0.8
PHWY  Pilot Hill       52.80 289   IAmb    IAmb     10 41 44.6
       comp=Z,8.4nm,0.9s
TDK   Taldyqorghan     52.82  62  eP       P        10 41 42.3 +0.7
       baz=62
TDK   Taldyqorghan     52.82  62  eP       P        10 41 42.3 +0.7
KUU   Kurty            52.96  65  eP       P        10 41 43.0 +0.3
       comp=Z,6.5nm,1.1s,baz=65
KUU   Kurty            52.96  65  eP       P        10 41 42.9 +0.3
KUU                                pmax    pmax
       comp=Z,7.0nm,1.1s
EKS2  Erkin-Say        52.98  67   P       P        10 41 45.7 +2.7
       SNR=7.9
TOA0  Torodi Ar. Sit   53.06 156   P       P        10 41 42.2 -1.4
TOA0                               IAmb    IAmb     10 41 49.0
       comp=Z,8.7nm,1.1s
TORD  Torodi Ar. Bea   53.06 156   P       P        10 41 42.1 -1.5
       comp=Z,5.1nm,1.1s,baz=342,slow=8.8,SNR=7.5
TORD                               LR      LR       11 06 01.5
       comp=Z,102nm,18.9s,baz=345,slow=38
TORD  Torodi Ar. Bea   53.06 156   P       P        10 41 42.3 -1.4
ZSN   Zaisan           53.14  56  eP       P        10 41 44.2 +0.2
       comp=Z,2.6nm,0.9s,baz=56
ZSN   Zaisan           53.14  56  eP       P        10 41 44.2 +0.2
ZSN                                pmax    pmax
       comp=Z,3.0nm,0.9s
PD31  Pinedale Array   53.21 293   P       P        10 41 44.0 -0.8
PD31                               IAmb    IAmb     10 41 47.1
       comp=Z,11nm,0.9s
PDAR  Pinedale Array   53.21 293   P       P        10 41 44.0 -0.8
       comp=Z,8.3nm,0.8s,baz=58,slow=6.8,SNR=46
PDAR                               LR      LR       11 03 42.1
       comp=Z,258nm,18.2s,baz=29,slow=35
PDAR  Pinedale Array   53.21 293           P        10 41 43.2 -1.6
BW06  Boulder Array    53.21 293   P       P        10 41 44.5 -0.3
       baz=33,SNR=16
BW06  Boulder Array    53.21 293   P       P        10 41 43.8 -1.1
BW06                               IAmb    IAmb     10 41 47.1
       comp=Z,11nm,0.9s
REDW  Red Top Meadow   53.22 295   P       P        10 41 47.0 +2.1
REDW                               IAmb    IAmb     10 41 48.8
       comp=Z,12nm,1.3s
X40A  Basin Creek Fa   53.23 274   P       P        10 41 44.9 +0.2
       baz=31
CHKK  Chushkaly        53.24  64  eP       P        10 41 44.6 -0.2
       baz=64
CHKK  Chushkaly        53.24  64  eP       P        10 41 44.5 -0.2
AAK   Ala-Archa        53.29  67   P       P        10 41 47.2 +1.9
       SNR=6.6
AAK   Ala-Archa        53.29  67ceP        P        10 41 46.6 +1.3
AAK                                pmax    pmax
       comp=Z,24nm,1.1s
AAK   Ala-Archa        53.29  67   P       P        10 41 45.1 -0.1
AAK                                IAmb    IAmb     10 41 47.9
       comp=Z,9.0nm,1.1s
N23A  Red Feather La   53.34 289   P       P        10 41 45.9 +0.1
       baz=33,SNR=6.4
N23A  Red Feather La   53.34 289   IAmb    IAmb     10 41 53.2
       comp=Z,16nm,1.1s
AML   Almayashu        53.40  68   P       P        10 41 48.5 +2.1
       SNR=9.4
TKM2  Tokmak 2         53.49  66   P       P        10 41 48.6 +1.8
       SNR=6.1
MIAR  Mount Ida        53.50 275   P       P        10 41 47.1 +0.4
       baz=31
KSCO  Kaye Shedlock’   53.56 285   P       P        10 41 47.8 +0.5
       baz=32
KSCO  Kaye Shedlock’   53.56 285   IAmb    IAmb     10 41 50.4
       comp=Z,13nm,1.1s
UCH   Uchtor           53.64  67   P       P        10 41 50.6 +2.4
       SNR=5.8
AAA   Alma-Ata         53.76  65  eP       P        10 41 49.5 +0.9
       baz=65
AAA   Alma-Ata         53.76  65  eP       P        10 41 49.5 +0.9
AHID  Auburn Hatcher   53.82 294   IAmb    IAmb     10 41 55.0
       comp=Z,6.4nm,1.1s
MDOK  Medeo            53.85  65  eP       P        10 41 50.0 +0.5
       baz=65
MDOK  Medeo            53.85  65  eP       P        10 41 49.9 +0.5
ISCO  Idaho Springs    54.12 288   P       P        10 41 53.3 +1.7
ISCO                               pmax    pmax
       comp=Z,4.0nm,1.3s
ISCO  Idaho Springs    54.12 288   P       P        10 41 51.9 +0.3
       baz=32
ISCO  Idaho Springs    54.12 288   P       P        10 41 53.3 +1.7
KPKS  Kokpek           54.23  63  eP       P        10 41 52.6 +0.5
       comp=Z,5.9nm,1.1s,baz=63
KPKS  Kokpek           54.23  63  eP       P        10 41 52.5 +0.5
KPKS                               pmax    pmax
       comp=Z,6.0nm,1.1s
HLID  Hailey           54.43 297   P       P        10 41 53.6  0.0
       baz=32
SATY  Saty             54.47  64  eP       P        10 41 53.6 -0.2
       comp=Z,3.1nm,1.2s,baz=64
SATY  Saty             54.47  64  eP       P        10 41 53.6 -0.2
SATY                               pmax    pmax
       comp=Z,3.0nm,1.2s
MOY   Mondy            54.72  42  eP       P        10 41 57.6 +2.1
MOY                                pmax    pmax
       comp=Z,26nm,1.2s
SHLS  Shalkode         54.79  63  eP       P        10 41 57.9 +1.6
       comp=Z,5.6nm,1.1s,baz=62
SHLS  Shalkode         54.79  63  eP       P        10 41 57.8 +1.6
SHLS                               pmax    pmax
       comp=Z,6.0nm,1.1s
O20A  White River Ci   54.91 290   P       P        10 41 58.0 +0.8
       baz=32
HWUT  Hardware Ranch   54.99 294   P       P        10 41 58.1 +0.3
WMOK  Wichita Mounta   55.56 279   P       P        10 42 02.4 +0.7
       baz=31,SNR=5.4
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SDCO	Great Sand Dun	55.82	287	P	P	10 42 04.3	+0.4
	baz=31						
S22A	4UR Ranch, Cre	56.37	288	P	P	10 42 08.5	+0.7
	baz=31						
PV22	Blue Mesa, Par	56.49	290	P	P	10 42 08.8	+0.2
PV22				IAmb	IAmb	10 42 11.2	
	comp=Z,5.9nm,0.9s						
ZAK	Zakamensk	56.52	41	*e*P	P	10 42 08.7	+0.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH	Kashi	56.53	68	P	P	10 42 13.1	+4.4
KSH				PcP	PcP	10 43 09.3	+4.0
KSH				pmax	pmax		
	comp=Z,28nm,1.2s						
KSH				pmax	pmax		
	comp=Z,610nm,5.7s						
PV04	Paradox Valley	56.66	290	IAmb	IAmb	10 42 12.6	
	comp=Z,8.2nm,0.9s						
DUG	Dugway, Tooele	56.69	294	P	P	10 42 09.0	-0.8
DUG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DUG	Dugway, Tooele	56.69	294	P	P	10 42 10.2	+0.3
	baz=31						
DUG	Dugway, Tooele	56.69	294	P	P	10 42 09.0	-0.8
DUG				IAmb	IAmb	10 42 13.5	
	comp=Z,6.9nm,1.1s						
PV12	Saucer Basin,	56.69	290	IAmb	IAmb	10 42 12.8	
	comp=Z,8.5nm,1.1s						
SRU	San Rafael Swe	56.70	292	P	P	10 42 09.8	-0.3
SRU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SRU	San Rafael Swe	56.70	292	P	P	10 42 09.8	-0.3
PV03	Paradox Valley	56.76	290	IAmb	IAmb	10 42 13.4	
	comp=Z,9.3nm,0.9s						
PV17	East Wray Mesa	56.78	290	IAmb	IAmb	10 42 13.5	
	comp=Z,11nm,1.0s						
TMUT	Trail Mountain	56.82	292	P	P	10 42 10.9	-0.1
ELK	Elko	57.16	296	P	P	10 42 15.5	+2.2
ELK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ELK	Elko	57.16	296	P	P	10 42 15.5	+2.2
J05D	Fort Rock, OR	57.22	302	P	P	10 42 14.7	+1.1
	baz=30						
WMQ	Urumqi	57.28	56	*e*P	P	10 42 16.8	+2.9
WMQ				pP	sP	10 42 21.4	+4.4
WMQ				sP	pP	10 42 24.8	+8.7
WMQ				pmax	pmax		
	comp=Z,32nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,380nm,7.7s						
MVCO	Mesa Verde	57.51	289	P	P	10 42 16.3	+0.4
	baz=31						
ABTX	Abilene, Hawle	57.74	279	P	P	10 42 18.2	+0.9
	baz=30						
ABTX	Abilene, Hawle	57.74	279		P	10 42 18.1	+0.9
ABTX				IAmb	IAmb	10 42 22.6	
	comp=Z,12nm,1.4s						
MSU	Marysvale	57.88	293	P	P	10 42 17.7	-0.7
MSU	Marysvale	57.88	293		P	10 42 17.7	-0.7
MVU	Marysvale	57.90	293	P	P	10 42 19.3	+0.8
MTPU	Mount Pierson	58.29	292		P	10 42 22.1	+0.7
HKT	Hockley	58.41	274	*e*P	P	10 42 22.2	+0.3
HKT				pmax	pmax		
	comp=Z,22nm,4.6s						
DBIC	Dimbokro	58.51	165	P	P	10 42 21.1	-1.6
	comp=Z,6.5nm,0.8s,baz=317,slow=4.8,SNR=7.0						
DBIC				LR	LR	11 08 07.3	
	comp=Z,143nm,19.2s,baz=3.5,slow=37						
DBIC	Dimbokro	58.51	165	P	P	10 42 22.6	-0.1
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DBIC	Dimbokro	58.51	165	P	P	10 42 22.6	-0.1
DBIC				IAmb	IAmb	10 42 23.9	
	comp=Z,7.4nm,0.8s						
TIC	Toumodi	58.51	165	*e*P	P	10 42 22.7	-0.1
ANMO	Albuquerque	58.62	286	*ce*P	P	10 42 24.9	+1.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ANMO	Albuquerque	58.62	286	P	P	10 42 24.1	+0.5
	baz=30						
ANMO	Albuquerque	58.62	286		P	10 42 25.2	+1.7
KIC	Kosan Boka	58.82	165	*e*P	P	10 42 23.6	-1.3
	comp=Z,19nm,0.9s						
PKCU	Pink Cliffs	58.85	292	P	P	10 42 26.5	+1.2
LIC	Lamto	58.93	165	*e*P	P	10 42 25.0	-0.6
	comp=Z,34nm,0.9s						
CCUT	Cedar City	59.18	293		P	10 42 29.1	+1.6
R11A	Troy Canyon, C	59.36	295	P	P	10 42 29.0	+0.3
	baz=30,SNR=6.6						
PAHR	Pah Rah Range	59.64	299	IAmb	IAmb	10 42 34.6	
	comp=Z,8.4nm,1.2s						
JCT	Junction City	59.66	278	P	P	10 42 30.8	+0.1
	baz=30,SNR=6.5						
SONM	Songino Array	59.70	40	P	P	10 42 30.2	-0.7
	comp=Z,2.1nm,0.8s,baz=326,slow=7.7,SNR=14						
SONM				LR	LR	11 10 28.2	
	comp=Z,169nm,20.1s,baz=339,slow=38						
SONM	Songino Array	59.70	40	P	P	10 42 31.5	+0.6
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	59.70	40	P	P	10 42 31.5	+0.6
U15A	North Rim	59.72	291	P	P	10 42 30.6	-0.7
U15A				IAmb	IAmb	10 42 34.2	
	comp=Z,7.8nm,0.9s						
ULN	Ulaanbaatar	59.86	40	⇑*i*P	P	10 42 33.0	+1.1
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PRN	Pahroc Range	59.97	294	IAmb	IAmb	10 42 41.2	
	comp=Z,5.4nm,1.1s						
WUAZ	Wupatki	60.14	290	P	P	10 42 33.7	-0.4
	baz=30,SNR=6.7						
WUAZ	Wupatki	60.14	290	P	P	10 42 33.7	-0.4
TPH	Tonopah	60.24	296	P	P	10 42 36.4	+1.7
TPH				pmax	pmax		
	comp=Z,14nm,0.9s						
TPH	Tonopah	60.24	296	P	P	10 42 36.4	+1.7
NVAR	Mina Array Bea	60.34	297	P	P	10 42 34.5	-1.0
	comp=Z,1.5nm,0.9s,baz=42,slow=2.9,SNR=10						
NVAR				LR	LR	11 08 46.3	
	comp=Z,539nm,18.5s,baz=24,slow=36						
X18A	Snowflake	60.42	288	P	P	10 42 36.0	+0.1
NIL	Nilore	60.47	73	P	P	10 42 35.1	-1.1
NIL				pmax	pmax		
	comp=Z,16nm,1.1s						
NIL	Nilore	60.47	73	P	P	10 42 35.1	-1.1
SHPR	Sheep Range	60.80	294		P	10 42 39.5	+1.0
SHPR				IAmb	IAmb	10 42 42.8	
	comp=Z,8.3nm,1.2s						
TPNV	Topopah Spring	60.84	295	P	P	10 42 38.6	-0.2
	baz=29						
MNTX	Cornudas Mount	60.97	283	P	P	10 42 39.7	+0.1
	baz=30						
MNTX	Cornudas Mount	60.97	283		P	10 42 41.1	+1.5
X16A	Lo Mia Camp, P	61.12	290		P	10 42 41.0	+0.2
X16A				IAmb	IAmb	10 42 44.9	
	comp=Z,7.8nm,1.0s						
121A	Cookes Peak, D	61.25	286	P	P	10 42 41.7	0.0
	baz=30						
121A	Cookes Peak, D	61.25	286		P	10 42 42.5	+0.9
121A				IAmb	IAmb	10 42 45.3	
	comp=Z,5.6nm,0.8s						
FURC	Furnace Creek,	61.50	295	P	P	10 42 43.1	0.0
	baz=29						
SHOC	Shoshone, Teco	61.76	294	P	P	10 42 44.9	0.0
	baz=29						
CWC	Cottonwood Cre	62.00	296	P	P	10 42 46.6	0.0
	baz=29						
MPMC	Manual Prospec	62.10	295	P	P	10 42 47.5	+0.1
	baz=29						
TX31	Lajitas Ar. Si	62.30	280	P	P	10 42 49.5	+0.8
TX32	Lajitas Array	62.30	280	P	P	10 42 49.3	+0.6
TXAR	Lajitas Array	62.30	280	P	P	10 42 48.8	+0.1
	comp=Z,2.2nm,0.9s,baz=48,slow=4.5,SNR=20						
TXAR				LR	LR	11 09 09.7	
	comp=Z,306nm,19.8s,baz=0.0,slow=35						
TXAR	Lajitas Array	62.30	280	P	P	10 42 48.5	-0.2
PDMCI	Parker Dam,Lak	62.31	292	P	P	10 42 48.7	+0.1
	baz=29						
GSC	Goldstone, Bar	62.49	294	P	P	10 42 49.9	0.0
	baz=29						
GMRC	Granite Mounta	62.50	293	P	P	10 42 49.9	-0.1
	baz=29,SNR=5.8						
PETK	Petropavlovsk-	62.59	3	LR	LR	11 10 24.6	
	comp=Z,88nm,19.4s,baz=69,slow=36						
LRMC	Laurel Mtn Rad	62.68	295	P	P	10 42 51.5	+0.3
	baz=29						
TUC	Tucson	62.69	288	P	P	10 42 53.1	+1.9
TUC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUC	Tucson	62.69	288	P	P	10 42 52.0	+0.8
	baz=29						
TUC	Tucson	62.69	288		P	10 42 53.1	+1.9
TUC				IAmb	IAmb	10 42 54.9	
	comp=Z,4.6nm,1.1s						
HEC	Hector,Ludlow	62.72	294	P	P	10 42 52.0	+0.6
	baz=29						
ISA	Isabella, Lake	62.83	296	P	P	10 42 53.3	+1.2
ISA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ISA	Isabella, Lake	62.83	296	P	P	10 42 52.5	+0.4
	baz=28						
ISA	Isabella, Lake	62.83	296		P	10 42 53.3	+1.2
ISA				IAmb	IAmb	10 42 55.6	
	comp=Z,6.9nm,1.0s						
IRM	Iron Mountain	62.84	293	P	P	10 42 52.7	+0.6
	baz=29						
BELC	Belle Mtn. Jos	63.32	293	P	P	10 42 55.7	+0.3
	baz=28						
EDW2	Edwards Air Fo	63.33	295	P	P	10 42 56.2	+0.8
	baz=28						
BC3	Big Chuckawall	63.40	293	P	P	10 42 57.0	+1.0
	baz=29						
113A	Mohawk Valley,	63.50	291	P	P	10 42 57.0	+0.5
113A				IAmb	IAmb	10 42 59.6	
	comp=Z,5.3nm,1.1s						
BFSC	Mount Baldy Ra	63.76	295	P	P	10 42 58.9	+0.5
	baz=28						
214A	Organ Pipe Nat	63.83	289	P	P	10 42 59.7	+1.0
	baz=29						
SBC	Santa Barbara	64.38	296	P	P	10 43 03.0	+0.7
	baz=28						
IKP	In-Ko-Pah, Jac	64.55	293	P	P	10 43 04.2	+0.8
	baz=28						
GTA	Gaotai	65.35	49	⇑P	P	10 43 09.3	+0.6
GTA				pP	sP	10 43 17.9	+6.1
GTA				sP	pP	10 43 22.0	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,5.8s						
GTA				LR	LR		
	comp=N,190nm,16.0s						
GTA				LR	LR		
	comp=E,180nm,17.8s						
GTA				LR	LR		
	comp=Z,240nm,17.5s						
SPX	San Pedro Mart	65.71	291	P	P	10 43 12.5	+1.2
SDV	Santo Domingo	66.78	239		P	10 43 17.3	-0.9
SDV				IAmb	IAmb	10 43 24.1	
	comp=Z,7.2nm,0.8s						
SDV	Santo Domingo	66.78	239	*e*P	P	10 43 16.3	-1.9
HHC	Hu-ho-hao-te	67.58	40	*e*P	P	10 43 27.3	+4.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,7.3s						
ZAIG	Zacatecas	67.58	276	P	P	10 43 23.6	+0.3
ZAIG				IAmb	IAmb	10 43 27.4	
	comp=Z,8.0nm,1.1s						
SMLC	San Martn de	68.16	243	*e*P	P	10 43 25.1	-1.6
USRK	Ussuriysk Ar.	68.94	23	LR	LR	11 15 57.1	
	comp=Z,75nm,18.0s,baz=339,slow=38						
ZARC	Zaragoza, Cauc	69.66	243	*e*P	P	10 43 35.7	-0.3
LZH	Lanzhou	69.68	48	*e*P	P	10 43 35.5	-0.7
LZH				pP	pP	10 43 37.6	-0.8
LZH				sP	sP	10 43 38.8	-0.5
LZH				*e*PP	PP	10 46 11.8	+2.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,83nm,5.2s						
LZH				LR	LR		
	comp=N,240nm,16.5s						
LZH				LR	LR		
	comp=E,250nm,16.7s						
LZH				LR	LR		
	comp=Z,370nm,19.0s						
PTBC	PUERTO BERRIO,	70.38	242	*e*P	P	10 43 39.1	-1.3
NORC	Norcasia	71.43	242	*e*P	P	10 43 46.0	-0.9
CHIC	Chingaza	71.86	241	*e*P	P	10 43 48.4	-1.4
GUY2C	Guyana, Caldas	71.93	243	*e*P	P	10 43 50.2	-0.2
RREF	El Recreo	72.22	242	*e*P	P	10 43 50.8	-1.5
TOLC	Tolima	72.50	242	*e*P	P	10 43 56.2	+2.6
PLMC	San Jos del P	72.58	243	*e*P	P	10 43 51.3	-2.4
ORTC	Ortega, Tolima	73.09	242	*e*P	P	10 43 54.7	-2.1
YOTC	Yotoco, Valle	73.44	243	*e*P	P	10 43 57.0	-2.0
KSRS	Korea Array	74.72	28	LR	LR	11 19 57.2	
	comp=Z,87nm,18.6s,baz=358,slow=38						
NJ2	Nanjing	77.80	37	*e*P	P	10 44 24.6	+1.0
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	Chiang Mai Arr	84.17	59	P	P	10 44 56.9	-0.9
	comp=Z,2.2nm,0.9s,baz=318,slow=6.3,SNR=11						
CMAR	Chiang Mai Arr	84.17	59	*i* P	P	10 44 58.2	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	84.17	59	P	P	10 44 58.3	+0.4
PALK	Pallekele	87.00	80	LR	LR	11 27 10.8	
	comp=Z,62nm,19.7s,baz=84,slow=38						
PB04	IPOC Station P	95.65	228	P	P	10 45 52.5	+0.4
PSI	Prapat	98.51	65	LR	LR	11 35 06.7	
	comp=Z,55nm,20.4s,baz=270,slow=38						
BOSA	Boshof	98.69	143	LR	LR	11 32 16.3	
	comp=Z,137nm,18.9s,baz=342,slow=36						
ASAR	Alice Springs	135.03	38	PKP	PKPdf	10 51 45.2	-0.3
	comp=Z,0.9nm,0.9s,baz=344,slow=2.7,SNR=5.2						
ASAR	Alice Springs	135.03	38	PKIKP	PKPdf	10 51 46.0	+0.5
ASAR	Alice Springs	135.03	38		PKPdf	10 51 46.0	+0.5
STKA	Stephens Creek	144.79	32	PKP	PKPab	10 52 01.8	-0.1
	comp=Z,3.7nm,0.9s,baz=26,slow=1.9,SNR=3.8						
STKA	Stephens Creek	144.79	32		PKPab	10 52 01.5	-0.3

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*TIF **20** 10:54:31.0, 41°.46N×42°.82E, h29^{km}±1^{km}*
*ISK **20** 10:54:31.5, 41°.48N×42°.80E, h10^{km}, ML2.5/6*
*NORS **20** 10:54:32.2±0.0, 41°.69N×42°.72E, h3^{km}, MPVA3.5*
ISC 20 10:54:31.7±1.2**, 41°.46N**±0°.03×**42°.83E**±0°.02**, h6**^{km}±12^{km}**,**
n19, σ0^s.95/35**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKRG	Bakuriani	0.60	59	P	Pg	10 54 43.4	+0.1
BKRG				S	Sb	10 54 53.8	+0.2
KARS	Kars	0.85	167	PG	Pb	10 54 49.1	+0.2
BATM	Batumi	0.87	280	P	Pg	10 54 47.8	-0.5
BATM				S	Sb	10 54 59.6	-1.3
BATM	Batumi	0.87	280	PG	Pb	10 54 48.0	-1.1
BATM				SG	Sb	10 54 59.9	-1.0
TKB	Tkibuli	0.90	8	P	Pg	10 54 48.7	-0.3
TKB				S	Sb	10 55 01.0	-1.1
SENK	Senkaya-Erzuru	0.96	202	PG	Pb	10 54 50.9	0.0
SENK				SG	Sb	10 55 04.5	+0.6
DMNI	Dmanisi	1.03	97	P	Pg	10 54 51.0	-0.5
DMNI				S	Sg	10 55 04.8	0.0
KZRT	Kazreti	1.18	93	P	Pb	10 54 53.4	-1.1
KZRT				S	Sb	10 55 09.1	-0.9
CHVG	Ch'k'valeri	1.38	337	P	Pg	10 54 57.5	-0.6
CHVG				S	Sg	10 55 17.2	+1.2
DIGR	Digorskoe uzhe	1.55	21	*e*Pg	Pb	10 55 00.4	-0.4
DIGR				*e*Sg	Sg	10 55 21.5	+0.1
ZEI	Tsey	1.55	31	*e*Pg	Pb	10 55 00.7	-0.2
ZEI				*e*Sg	Sg	10 55 22.1	+0.5
TASB	TASBURUN-IGDIR	1.82	143	PN	Pb	10 55 04.8	-0.6
TASB				SN	Sb	10 55 28.1	-0.3
KORR	Kora	1.87	29	*e*Pg	Pg	10 55 07.6	+0.1
KORR				*e*Sg	Sg	10 55 33.4	+1.6
AGRB	Hanur-Agry	1.88	176	PN	Pn	10 55 05.3	+0.8
GNI	Garni	1.95	131	PN	Pn	10 55 05.7	+0.3
GNI				SN	Sn	10 55 31.1	+0.8
LSNR	Lesken	1.96	22	*e*Pg	Pg	10 55 09.0	-0.3
LSNR				*e*Sg	Sg	10 55 35.5	+0.7
STDR	Stavd-Durt	2.12	25	*e*Pg	Pg	10 55 13.0	+0.7
STDR				*e*Sg	Sg	10 55 42.6	+2.8
BAYT	Aydıntepe-Bayb	2.30	243	PN	Pn	10 55 10.7	+0.5
LGD	Lagodekhi	2.59	80	P	Pb	10 55 17.3	-1.1
LGD				S	Sg	10 55 53.1	-1.6

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*DJA **20** 11:10:40.2±1.4, 2°N±5°×12°9E±°, h26^{km}±13^{km}, M4.7/12,*
mb5.0/6, mB4.9/3, MLv4.6/12, Mw(mB)4.1/3
*NEIC **20** 11:10:41.0±1.2, 2°.06N±0°.09×128°.46E±0°.08, h73^{km}±7^{km},*
mb4.6/43, Error ellipse: s-maj=13.3km s-min=10.8km
az=204.0
*IDC **20** 11:10:41.1±2.1, 2°.08N×128°.63E, h75^{km}±21^{km}, mb4.0/16,*
mb1 4.2/18, mb1mx3.9/42, mbtmp4.3/18, MS2.9/3,
Ms1 2.9/3, ms1mx2.6/44, Error ellipse: s-maj=19.2km
s-min=11.8km az=75.0
ISC 20 11:10:41.0±0.7**, 2°.01N**±0°.06×**128°.46E**±0°.06**, h76**^{km}±6^{km}**,**
n125, σ1^s.90/133**, mb4.6**/61**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.65	222	Pn	Pn	11 11 07.8	-0.4
TNTI	Ternate	1.65	222	P	Pn	11 11 08.1	-0.1
SGSI	Sangihe	3.37	300	P	Pn	11 11 32.3	+0.9
SWI	Sorong	4.00	136	P	Pn	11 11 40.1	+0.2
SIJI	Sorong	4.00	136	P	Pn	11 11 40.2	+0.2
	20nm,0.3s,baz=115,slow=22,SNR=58						
SIJI				S	Sn	11 12 23.6	-2.2
	22nm,0.3s,baz=193,slow=22,SNR=35						
SIJI				LR	LR	11 13 25.4	
	comp=Z,200nm,21.3s,baz=344,slow=42						
KMSI	Cibinong	4.70	252	P	Pn	11 11 51.1	+1.5
SANI	Sanana	4.73	212	P	Pn	11 11 48.9	-1.1
GTOI	Gorontalo	5.62	256	P	Pn	11 12 04.2	+2.1
	0.2nm714nm46nm,0.6s						
DAV	Davao City (W)	5.79	330	LR	LR	11 13 30.3	
	comp=Z,34nm,21.7s,baz=152,slow=29						
FAKI	Fak Fak	6.19	142	Pn	Pn	11 12 10.2	+0.3
LUWI	Luwuk	6.45	242	Pn	Pn	11 12 13.1	-0.3
LUWI	Luwuk	6.45	242	P	Pn	11 12 16.2	+2.8
	0.4nm97nm,0.7s						
MRSI	Marisa	6.70	257	P	Pn	11 12 18.0	+1.2
	0.3nm888nm76nm,0.5s						
APSI	Ampana	7.41	247	P	Pn	11 12 28.7	+2.2
	0.2nm820nm43nm,0.5s						
TOLI2	Tolitoli	7.73	263		Pn	11 12 31.6	+0.6
MPSI	Mapaga	8.72	259	P	Pn	11 12 53.2	+8.7
TTSI	Tana Toraja	10.00	240	P	Pn	11 13 00.7	-1.2
	68nm,0.8s						
MYLDM	Lahad Datu	10.43	288	Pn	Pn	11 13 07.8	0.0
BNSI	Bone	10.50	233	P	Pn	11 13 09.6	+0.8
	34nm,0.8s						
SPSI	Sidrap Palu	10.52	236	P	Pn	11 13 09.2	+0.1
	42nm,0.6s						
BKSI	Bulukumba	11.07	229	P	Pn	11 13 19.4	+2.9
KAPI	Kappang	11.16	231	P	Pn	11 13 20.0	+2.3
	3.0nm,0.3s,baz=121,slow=1.9,SNR=6.9						
KAPI				S	Sn	11 15 16.6	-4.2
	1.1nm,0.3s,baz=229,slow=19,SNR=1.7						
KAPI	Kappang	11.16	231	Pn	Pn	11 13 17.8	+0.1
JAY	Jayapura	13.04	110	LR	LR	11 17 56.9	
	comp=Z,144nm,19.0s,baz=334,slow=34						
KSM	Kuching	18.16	269	P	Pn	11 14 48.5	+0.2
FITZ	Fitzroy Crossi	20.18	188	P	P	11 15 10.4	+0.8
	1.1nm,0.5s,baz=11,slow=10,SNR=1.9						
KPJI	Karang Pucung	21.59	244	P	P	11 15 34.1	+9.3
WB0	Warramunga Arr	22.41	165	P	P	11 15 32.7	-0.9
WB0				IAmb	IAmb	11 15 37.2	
	comp=Z,9.1nm,0.5s						
WRAB	Tennant Creek	22.56	165	P	P	11 15 37.8	+2.5
WRAB				IAmb	IAmb	11 15 38.7	
	comp=Z,13nm,0.5s						
WRA	Warramunga Arr	22.57	165	P	P	11 15 36.5	+1.2
	comp=Z,7.1nm,0.5s,baz=343,slow=11,SNR=67						
WRA	Warramunga Arr	22.57	165	P	P	11 15 36.3	+1.0
WB2	Warramunga Arr	22.57	165	P	P	11 15 37.7	+2.4
WB2				IAmb	IAmb	11 15 38.7	
	comp=Z,9.0nm,0.6s						
WR0	Warramunga Arr	22.64	165	P	P	11 15 38.5	+2.5
AS31	Alice Springs	26.07	169	P	P	11 16 08.9	+1.2
ASAR	Alice Springs	26.07	169	P	P	11 16 08.4	+0.8
	comp=Z,0.9nm,0.3s,baz=342,slow=7.6,SNR=39						
ASAR				PcP	PcP	11 19 34.0	0.0
	comp=Z,0.7nm,0.6s,baz=356,slow=2.0,SNR=6.5						
ASAR	Alice Springs	26.07	169	P	P	11 16 08.8	+1.1
ASAR					PcP	11 19 33.6	-0.3
GSI	Gunungsitoli	30.88	269	P	P	11 16 51.2	+0.5
NJ2	Nanjing	31.22	344	*e*P	P	11 16 54.6	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	33.23	301	P	P	11 17 13.5	+2.3
	comp=Z,1.0nm,0.4s,baz=115,slow=6.6,SNR=11						
KMI	Kunming	33.81	315	⇓*e*P	P	11 17 18.5	+2.1
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,260nm,4.9s						
KSRS	Korea Array	35.27	359	P	P	11 17 28.2	-0.3
	comp=Z,2.6nm,0.5s,baz=174,slow=9.8,SNR=20						
MJAR	Matsushiro Arr	35.52	14	P	P	11 17 29.1	-1.7
	comp=Z,7.0nm,0.7s,baz=185,slow=9.7,SNR=18						
MJAR	Matsushiro Arr	35.52	14	P	P	11 17 28.7	-2.1
MAJO	Matsushiro	35.52	14	P	P	11 17 27.6	-3.1
MAJO				IAmb	IAmb	11 17 30.9	
	comp=Z,11nm,0.8s						
MAT	Matsushiro	35.52	14	P	P	11 17 29.1	-1.7
STKA	Stephens Creek	35.93	161	P	P	11 17 35.6	+1.2
	comp=Z,4.0nm,0.5s,baz=335,slow=9.4,SNR=17						
STKA	Stephens Creek	35.93	161	P	P	11 17 35.3	+1.0
CD2	Chengdu	37.05	323	*e*P	P	11 17 45.0	+1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JMM	Marumori	37.44	16	P	P	11 17 46.5	-0.5
JTM	Tenmabayashi	40.25	15	P	P	11 18 10.4	0.0
LZH	Lanzhou	40.85	329	*e*P	P	11 18 17.9	+2.1
LZH				pP	pP	11 18 35.6	+1.4
LZH				sP	sP	11 18 42.1	-0.8
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.6s						
H11S3	WAKE ISLAND Hy	40.88	64	T	T	12 01 46.3	
	baz=250,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	40.90	64	T	T	12 01 43.9	
	baz=250,slow=75,SNR=5.3						
H11S1	WAKE ISLAND Hy	40.90	64	T	T	12 01 47.6	
	baz=250,slow=75,SNR=4.8						
HHC	Hu-ho-hao-te	41.57	341	*e*P	P	11 18 22.1	+0.6
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
USRK	Ussuriysk Ar.	42.12	4	P	P	11 18 26.2	+0.4
	comp=Z,2.4nm,0.7s,baz=154,slow=5.3,SNR=5.1						
SHL	Shillong	42.28	307	P	P	11 18 28.5	+0.8
ASAJ	Asahikawa	43.76	15	P	P	11 18 39.4	+0.3
	comp=Z,3.4nm,0.4s,baz=232,slow=10,SNR=6.5						
LSA	Lhasa	44.87	312	P	P	11 18 49.7	+1.0
LSA				IAmb	IAmb	11 18 51.6	
	comp=Z,11nm,1.1s						
GTA	Gaotai	45.45	329	P	P	11 18 53.8	+1.0
GTA				pP	pP	11 19 11.9	+0.5
GTA				sP	sP	11 19 21.4	+1.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,92nm,6.5s						
GTA				LR	LR		
	comp=Z,240nm,17.4s						
GTA				LR	LR		
	comp=Z,190nm,17.4s						
GTA				LR	LR		
	comp=Z,170nm,18.5s						
TAPN	Taplejung	46.42	307	*e*P	P	11 19 02.0	+1.2
	comp=Z,14nm,0.4s						
ODAN	Odare	46.47	306	*e*P	P	11 19 01.8	+0.7
	comp=Z,48nm,0.7s						
RAMN	Ramite	47.15	306	*e*P	P	11 19 07.8	+1.4
	comp=Z,65nm,0.7s						
GUN	Gumba	48.13	306	*e*P	P	11 19 15.2	+1.0
	comp=Z,48nm,0.5s						
PKI	Pulchoki	48.37	306	*e*P	P	11 19 16.4	+0.4
	comp=Z,11nm,0.4s						
PKIN	Phulchoki	48.38	306	*e*P	P	11 19 16.5	+0.5
	comp=Z,9.8nm,0.3s						
KKN	Kakani	48.56	306	*e*P	P	11 19 18.1	+0.8
	comp=Z,17nm,0.5s						
DMN	Daman	48.63	306	*e*P	P	11 19 18.7	+0.8
	comp=Z,20nm,0.7s						
GKN	Gorkha	49.17	306	*e*P	P	11 19 22.6	+0.7
	comp=Z,14nm,0.7s						
SONM	Songino Array	49.48	341	P	P	11 19 23.7	-0.1
	comp=Z,1.2nm,0.5s,baz=152,slow=9.0,SNR=8.2						

SONM				PcP	**PcP**	**11 20 44.6**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=141,slow=3.2,SNR=2.5						
SONM	**Songino Array**	**49.48**	**341**	P	**P**	**11 19 23.6**	**-0.3**
KOLN	**Koldanda**	**49.92**	**305**	*e*P	**P**	**11 19 28.9**	**+1.2**
	comp=Z,44nm,0.7s						
DANN	**Dangsing**	**50.02**	**306**	*e*P	**P**	**11 19 29.2**	**+0.7**
	comp=Z,51nm,0.6s						
PYUN	**Piuthan**	**50.55**	**305**	*e*P	**P**	**11 19 33.7**	**+1.3**
	comp=Z,33nm,0.5s						
WMQ	**Urumqi**	**55.12**	**325**	*e*P	**P**	**11 20 07.8**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,260nm,5.7s						
PETK	**Petropavlovsk-**	**56.39**	**21**	P	**P**	**11 20 15.1**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=182,slow=4.5,SNR=5.0						
PETK	**Petropavlovsk-**	**56.39**	**21**	P	**P**	**11 20 14.6**	**+0.2**
SHLS	**Shalkode**	**59.77**	**320**	*e*P	**P**	**11 20 36.5**	**-1.9**
	comp=Z,2.0nm,0.9s,baz=320						
SHLS				*e*S	**S**	**11 28 37.5**	**-6.5**
	baz=320						
MK31	**Makanchi Array**	**59.95**	**325**	P	**P**	**11 20 39.2**	**-0.3**
MKAR	**Makanchi Array**	**59.95**	**325**	P	**P**	**11 20 39.5**	**0.0**
	comp=Z,2.3nm,0.4s,baz=113,slow=8.1,SNR=45						
MKAR	**Makanchi Array**	**59.95**	**325**	P	**P**	**11 20 39.2**	**-0.3**
BKZ	**Black Stump Fm**	**60.16**	**138**	P	**P**	**11 20 41.5**	**+0.5**
SATY	**Saty**	**60.40**	**320**	*e*P	**P**	**11 20 42.8**	**0.0**
	comp=Z,3.9nm,0.9s,baz=319						
KPKS	**Kokpek**	**60.41**	**320**	*e*P	**P**	**11 20 42.4**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=320						
KSH	**Kashi**	**60.48**	**315**	P	**P**	**11 20 45.1**	**+1.7**
KSH				PcP	**PcP**	**11 21 31.9**	**+4.5**
KSH				S	**S**	**11 28 56.6**	**+3.3**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,410nm,4.7s						
KSH				LR	LR		
	comp=Z,540nm,8.6s						
MDOK	**Medeo**	**61.33**	**319**	*e*P	**P**	**11 20 49.1**	**0.0**
	baz=319						
TNSS	**Tian-Shan**	**61.34**	**319**	*e*P	**P**	**11 20 49.7**	**+0.2**
	baz=319						
MTBS	**Maitube**	**61.72**	**319**	*e*P	**P**	**11 20 50.9**	**-0.7**
	baz=319						
KUU	**Kurty**	**62.12**	**320**	*e*P	**P**	**11 20 53.7**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=319						
ZALV	**Zalesovo Beam**	**62.90**	**333**	P	**P**	**11 20 56.6**	**-2.5**
	comp=Z,0.7nm,0.4s,baz=116,slow=5.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**62.90**	**333**	P	**P**	**11 20 58.1**	**-1.0**
KBL	**Kabul**	**63.94**	**308**	P	**P**	**11 21 06.0**	**-0.7**
KBL				IAmb	IAmb	11 21 07.4	
	comp=Z,6.8nm,1.1s						
KURK	**Kurchatov**	**64.11**	**327**	P	**P**	**11 21 06.8**	**-0.4**
KURK				IAmb	IAmb	11 21 13.6	
	comp=Z,4.2nm,0.8s						
IUG	**Iuzhnay**	**65.65**	**316**	*e*P	**P**	**11 21 17.4**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=316						
KK31	**Karatay Array**	**65.66**	**317**	P	**P**	**11 21 17.7**	**+0.2**
KK31				IAmb	IAmb	11 21 18.2	
	comp=Z,3.7nm,0.8s						
KKAR	**Karatay Array**	**65.66**	**317**	P	**P**	**11 21 17.6**	**+0.1**
BRZS	**Berezniki**	**67.08**	**325**	*e*P	**P**	**11 21 25.7**	**-0.8**
	baz=324						
TIXI	**Tiksi**	**69.54**	**0**	P	**P**	**11 21 40.5**	**-0.8**
BRVK	**Borovoye**	**69.77**	**327**	P	**P**	**11 21 42.6**	**-0.5**
BRVK				IAmb	IAmb	11 21 43.6	
	comp=Z,7.7nm,1.1s						
GEYT	**Alibeck**	**73.31**	**309**	P	**P**	**11 22 03.6**	**-1.2**
	comp=Z,2.5nm,0.6s,baz=168,slow=7.4,SNR=3.2						
ABKAR	**Akbulak array**	**74.57**	**321**	P	**P**	**11 22 11.3**	**-0.5**
ABKAR				IAmb	IAmb	11 22 12.1	
	comp=Z,3.5nm,0.8s						
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**11 22 50.2**	**+0.5**
TTA	**Tatalina**	**81.64**	**27**	P	**P**	**11 22 52.0**	**+1.2**
OHAK	**Old Harbor**	**81.95**	**33**	P	**P**	**11 22 53.6**	**+1.2**
KDAK	**Kodiak Island**	**82.41**	**32**	P	**P**	**11 22 55.8**	**+1.0**
PPLA	**Purkeypile**	**83.36**	**27**	P	**P**	**11 23 00.7**	**+0.9**
PPLA				IAmb	IAmb	11 23 02.3	
	comp=Z,11nm,1.1s						
SKT	**Skwentna**	**83.53**	**28**	P	**P**	**11 23 00.3**	**-0.3**
SKT				IAmb	IAmb	11 23 01.5	
	comp=Z,8.5nm,1.2s						
BRLK	**Bradley Lake**	**83.56**	**30**	P	**P**	**11 23 00.5**	**-0.2**
SUA	**Susitna One**	**83.83**	**28**	P	**P**	**11 23 02.7**	**+0.4**
BPAW	**Bear Paw Mtn.**	**84.06**	**26**	P	**P**	**11 23 04.1**	**+0.9**
TRF	**Thorofare Moun**	**84.29**	**27**	P	**P**	**11 23 05.0**	**+0.4**
TRF				IAmb	IAmb	11 23 22.2	
	comp=Z,10nm,1.4s						
PMR	**Palmer**	**84.62**	**28**	P	**P**	**11 23 06.2**	**+0.2**
PMR				IAmb	IAmb	11 23 29.2	
	comp=Z,17nm,1.4s						
GHO	**Glory Hole Cre**	**84.73**	**28**	P	**P**	**11 23 06.8**	**+0.1**
COLD	**Coldfoot**	**84.79**	**23**	P	**P**	**11 23 07.2**	**+0.3**
COLD				IAmb	IAmb	11 23 08.6	
	comp=Z,2.1nm,0.5s						
KNK	**Knik Glacier**	**84.92**	**29**	P	**P**	**11 23 07.8**	**+0.2**
KNK				IAmb	IAmb	11 23 09.1	
	comp=Z,11nm,0.8s						
RND	**Reindeer**	**84.93**	**27**	P	**P**	**11 23 07.5**	**-0.2**
RND				IAmb	IAmb	11 23 10.2	
	comp=Z,8.3nm,1.3s						
SML	**Sawmill**	**85.02**	**28**	P	**P**	**11 23 08.2**	**0.0**
SML				IAmb	IAmb	11 23 09.7	
	comp=Z,13nm,1.1s						
KBZ	**Khabaz**	**85.41**	**314**	P	**P**	**11 23 10.3**	**0.0**
	comp=Z,1.8nm,0.9s,baz=21,slow=8.6,SNR=4.5						
ILAR	**Eielson Array**	**85.90**	**25**	P	**P**	**11 23 11.1**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=248,slow=4.9,SNR=9.6						
MENT	**Mentasta**	**87.22**	**27**	P	**P**	**11 23 16.9**	**-2.0**
MENT				IAmb	IAmb	11 23 25.2	
	comp=Z,7.4nm,0.7s						
ARCES	**ARCESS Array B**	**92.65**	**340**	P	**P**	**11 23 42.7**	**-1.5**
	comp=Z,6.1nm,0.9s,baz=76,slow=5.1,SNR=3.5						
MNK	**Minsk**	**94.51**	**325**	*i* P	**P**	**11 23 50.3**	**-2.7**
	comp=E,4.0nm,0.8s						
MNK				*i* P	**P**	**11 23 50.3**	**-2.7**
	comp=N,20nm,0.7s						
MNK				*i* P	**P**	**11 23 50.3**	**-2.7**
	comp=Z,16nm,0.7s						
MNK				*i* pP	**sP**	**11 24 21.3**	**-0.8**
MNK				*i* PP	**PP**	**11 27 39.1**	**-2.3**
MNK				*i* PPP	PPP	11 29 41.0	
MNK				*i* S	**SKSac**	**11 34 13.8**	**-7.8**
MNK				*i* sS	**ScS**	**11 35 10.3**	**+10**
MNK				*i* SS	**SS**	**11 41 18.5**	**-4.6**
MNK				*i* SSS	SSS	11 45 01.2	
MNK				*i* LRM	MLR	12 07 17.7	
	comp=E,23nm,17.4s						
MNK				*i* LRM	MLR	12 07 18.4	
	comp=Z,116nm,12.3s						
MNK				*i* LRM	MLR	12 07 27.3	
	comp=N,190nm,19.6s						
YKA	**Yellowknife Ar**	**100.33**	**25**	P	**Pdif**	**11 24 18.3**	**-0.7**
	comp=N,0.2nm,0.5s,baz=307,slow=3.3,SNR=6.3						
TXAR	**Lajitas Array**	**121.24**	**54**	PKP	**PKPdf**	**11 29 26.1**	**-0.1**
	comp=N,0.1nm,0.5s,baz=263,slow=1.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**125.09**	**288**	PKP	**PKPdf**	**11 29 32.7**	**-1.1**
	comp=N,0.3nm,0.3s,baz=24,slow=2.2,SNR=2.1						

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*REY **20** 11:22:54.2, 64°.60N×17°.37W, h3^{km}*

*IDC **20** 11:22:55.8±0.7, 64°.45N×17°.74W, h0^{km}, mb3.8/17, mb1 4.0/19, mb1mx3.8/55, mbtmp3.8/19, ML3.6/2, MS3.7/7, Ms1 3.8/7, ms1mx3.3/45, Error ellipse: s-maj=25.2km s-min=11.3km az=16.0*

*NEIC **20** 11:22:58.2±2.7, 64°.4N±0°.1×17°.9W±0°.1, h10^{km}±1^{km}, mb4.3/24, Error ellipse: s-maj=17.9km s-min=9.7km az=196.0*

ISC 20 11:22:58.1±0.4**, 64°.52N**±0°.04×**17°.67W**±0°.03**, h10**^{km}**, n96, σ2^{s}.03**/85**, mb4.2**/32**, MS4.0**/6**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.30**	**25**	P	Pg	11 22 58.3	-5.9
	baz=0.7						
IDYN				S	**Sg**	**11 23 03.0**	**-5.3**
	baz=0.7						
ISKR	**Skrokkalda**	**0.31**	**278**	P	**Pg**	**11 23 02.5**	**-1.9**
	baz=265						
ISKR				S	**Sb**	**11 23 08.9**	**-2.1**
	baz=265						
IJOK	**Jokulheimar**	**0.32**	**230**	P	**Pg**	**11 23 02.8**	**-1.7**
	baz=233						
IJOK				S	**Sg**	**11 23 10.2**	**+1.5**
	baz=233						
IIEY	**Innrieyrar**	**0.47**	**205**	P	**Pg**	**11 23 05.2**	**-2.0**
	baz=213						
IKAL	**Kalfafell**	**0.57**	**181**	P	**Pg**	**11 23 06.6**	**-2.6**
	baz=192						
THOR	**Thorvaldshraun**	**0.59**	**45**	P	Pg	11 23 02.6	-7.0
	baz=41						
THOR				S	Sg	11 23 09.6	-7.9
	baz=41						
IKSK	**Karasker**	**0.63**	**124**	P	Pg	11 23 04.7	-5.6
	baz=138						
IASK	**Askja**	**0.69**	**39**	P	Pg	11 23 04.2	-7.3
	baz=34						
IMKO	**Mokollar**	**0.73**	**50**	P	Pg	11 23 04.8	-7.4
	baz=49						
IFAG	**Fagurholsmyri**	**0.78**	**145**	P	**Pg**	**11 23 08.6**	**-4.6**
	baz=156						
ISVA	**Svartarkot**	**0.84**	**12**	P	Pg	11 23 07.1	-7.2
	baz=3.8						
IVSH	**V-Sauoahnukur**	**0.88**	**70**	P	Pg	11 23 07.6	-7.5
	baz=73						
IHVE	**Hveravellir**	**0.89**	**294**	P	**Pg**	**11 23 11.3**	**-3.9**
	baz=287						
ISNB	**Snabyli**	**0.89**	**209**	P	**Pg**	**11 23 12.5**	**-2.8**
	baz=213						
IMEL	**Melhnausar**	**1.14**	**22**	P	Pn	11 23 12.2	-7.9
	baz=17						
IMEL				S	Sb	11 23 26.2	-8.5
	baz=17						
IREN	**Reynihlio**	**1.18**	**15**	P	Pn	11 23 13.2	-7.5
	baz=10						
IKVO	**Krokottuvotn**	**1.25**	**15**	P	Pn	11 23 14.1	-7.5
	baz=10						
IGRS	**Grimsstaoir**	**1.30**	**29**	P	Pn	11 23 14.7	-7.7
	baz=26						
IHLA	**Hella**	**1.46**	**348**	P	Pn	11 23 18.6	-6.0
	baz=343						
BORG	**Borgarnes**	**1.59**	**280**	Pn	**Pn**	**11 23 23.2**	**-3.1**
	37nm,0.3s,baz=98,slow=7.3,SNR=56						
BORG				Sn	**Sg**	**11 23 50.2**	**+0.9**
	32nm,0.3s,baz=224,slow=23,SNR=13						
BORG	**Borgarnes**	**1.59**	**280**		**Pn**	**11 23 23.5**	**-2.9**
BORG				Sn	**Sb**	**11 23 45.6**	**-2.2**
SCO	**Scoresbysund**	**6.21**	**347**	Pn	**Pn**	**11 24 28.4**	**-1.3**
SCO	**Scoresbysund**	**6.21**	**347**	*e*	Pn	11 24 23.6	-6.1
	baz=168,slow=6.5						
SCO				*i* P	**Pn**	**11 24 28.0**	**-1.7**
SCO				*i* S	**Sn**	**11 25 41.6**	**+1.0**
SCO				IAML		11 25 47.3	
	comp=Z,1.3nm,0.7s						
EKA	**Eskdalemuir Ar**	**11.70**	**135**	Pn	**Pn**	**11 25 43.0**	**-2.0**
	baz=326,slow=13,SNR=6.4						
DAG	**Danmarks Havn**	**12.32**	**359**	*i* P	**Pn**	**11 25 53.3**	**+0.1**
DAG	**Danmarks Havn**	**12.32**	**359**	*i* P	**Pn**	**11 25 53.4**	**+0.1**
SFJD	**Kangerlussuaq**	**13.66**	**295**	LR	LR	11 31 27.9	
	comp=Z,152nm,20.3s,baz=96,slow=38						
ARCES	**ARCESS Array B**	**17.26**	**54**	LR	LR	11 32 16.7	
	comp=Z,163nm,19.3s,baz=245,slow=32						
FINES	**FINESS Array B**	**19.80**	**79**	P	**P**	**11 27 26.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=242,slow=14,SNR=2.4						
CLL	**Collm**	**20.71**	**115**	*e*P	Pn	11 27 41.0	+0.5
	comp=Z,40nm,1.7s						
CLL	**Collm**	**20.71**	**115**	P	Pn	11 27 40.1	-0.4
CLL				IAmb	IAmb	11 27 42.6	
	comp=Z,18nm,1.3s						
ECH	**Echery**	**21.11**	**129**	P	**P**	**11 27 41.8**	**-0.8**
GRF	**Grafenberg Arr**	**21.32**	**120**	*e*P	**P**	**11 27 47.5**	**+2.7**
	comp=Z,15nm,1.3s,baz=325,slow=9.6						
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**11 27 44.4**	**-1.4**
BRG				Amp		11 27 50.1	
	comp=Z,24nm,1.5s						
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**11 27 44.4**	**-1.4**
BRG				Amp		11 27 50.1	
	comp=Z,24nm,1.5s						
FRB	**Frobisher Bay**	**21.73**	**291**	P	**P**	**11 27 48.0**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=55,slow=12,SNR=3.5						
CHVC	**Chvalec**	**22.48**	**112**	*e*P	**P**	**11 27 57.4**	**+0.2**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**11 27 59.8**	**+0.5**
DPC	**Dobruska-Polom**	**22.77**	**112**	*e*P	**P**	**11 27 59.6**	**-0.8**
GEC2	**GERESS Array S**	**22.95**	**118**	P	**P**	**11 28 01.6**	**-0.7**
GERES	**GERESS Array B**	**22.95**	**118**	P	**P**	**11 28 01.6**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=3.4,slow=6.7,SNR=5.7						
GERES	**GERESS Array B**	**22.95**	**118**	P	**P**	**11 28 01.1**	**-1.2**
VRAC	**Vranov**	**23.70**	**114**	*e*P	**P**	**11 28 12.9**	**+3.1**
MORC	**Moravsky Berou**	**23.71**	**112**	*e*P	**P**	**11 28 12.9**	**+3.0**
MORC	**Moravsky Berou**	**23.71**	**112**	P	**P**	**11 28 10.6**	**+0.7**
EUNU	**Eureka**	**23.78**	**336**	P	**P**	**11 28 10.2**	**-0.1**
EUNU				IAmb	IAmb	11 28 33.0	
	comp=Z,14nm,1.5s						
KRUC	**Moravsky**	**23.82**	**114**	*e*P	**P**	**11 28 13.3**	**+2.4**
LANS	**Liptovska Anna**	**24.98**	**110**	*e*P	**P**	**11 28 21.3**	**-0.3**
PSZ	**Piszkesteto**	**26.13**	**111**	P	**P**	**11 28 33.3**	**+1.3**
KOLS	**Kolonicke sedl**	**26.30**	**107**	*e*P	**P**	**11 28 33.9**	**+0.4**
AKASG	**Malin Array Be**	**27.89**	**97**	P	**P**	**11 28 48.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=315,slow=9.1,SNR=1.9						
BUR08	**Bucovina Ar. S**	**28.52**	**106**	P	**P**	**11 28 53.7**	**+0.1**
C36M	**Paulatuk**	**36.91**	**325**	P	**P**	**11 30 07.4**	**+1.1**
C36M				IAmb	IAmb	11 30 12.5	
	comp=Z,6.4nm,1.3s						
BRTR	**Keskin Array B**	**38.51**	**105**	P	**P**	**11 30 19.9**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=332,slow=7.7,SNR=4.9						
BRTR	**Keskin Array B**	**38.51**	**105**	P	**P**	**11 30 21.4**	**+1.0**
KBZ	**Khabaz**	**39.18**	**92**	P	**P**	**11 30 25.1**	**-0.6**
	comp=Z,3.3nm,1.1s,baz=306,slow=14,SNR=4.4						
YKA	**Yellowknife Ar**	**39.26**	**313**	P	**P**	**11 30 25.6**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=43,slow=8.9,SNR=10						
YKA				PcP	**PcP**	**11 32 34.4**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=50,slow=3.0,SNR=5.5						
INK	**Inuvik**	**39.93**	**329**	P	**P**	**11 30 31.1**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=45,slow=7.1,SNR=3.0						
INK	**Inuvik**	**39.93**	**329**	IAmb	IAmb	11 30 36.1	
	comp=Z,6.1nm,1.4s						
AKTO	**Aktyubinsk**	**40.40**	**73**	P	**P**	**11 30 34.7**	**-1.1**
	comp=Z,3.8nm,1.1s,baz=323,slow=9.0,SNR=4.7						
FFC	**Flin Flon**	**40.60**	**298**	P	**P**	**11 30 38.5**	**+1.0**
ABKAR	**Akbulak array**	**42.10**	**73**	P	**P**	**11 30 52.4**	**+2.5**
ABKAR				IAmb	IAmb	11 30 53.6	
	comp=Z,6.9nm,1.4s						
TIXI	**Tiksi**	**42.19**	**15**	P	**P**	**11 30 50.7**	**+0.4**
TIXI				IAmb	IAmb	11 30 55.7	
	comp=Z,5.9nm,1.1s						
ILAR	**Eielson Array**	**45.78**	**332**	P	**P**	**11 31 19.6**	**+0.4**
	comp=Z,1.9nm,1.2s,baz=22,slow=5.3,SNR=7.9						
ILAR				PcP	**PcP**	**11 32 55.0**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=2.3,slow=2.3,SNR=7.4						
ILAR	**Eielson Array**	**45.78**	**332**	P	**P**	**11 31 20.7**	**+1.5**
IMAR	**Indian Mountai**	**45.97**	**337**	P	**P**	**11 31 21.3**	**+0.6**
ZALV	**Zalesovo Beam**	**47.78**	**51**	P	**P**	**11 31 35.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=332,slow=8.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**47.78**	**51**	P	**P**	**11 31 36.8**	**+1.8**
KURK	**Kurchatov**	**48.25**	**58**	P	**P**	**11 31 38.4**	**-0.3**
KURK				IAmb	IAmb	11 31 42.4	
	comp=Z,4.9nm,1.1s						
KURBB	**Kurchatov Arra**	**48.30**	**58**	P	**P**	**11 31 37.6**	**-1.4**
	comp=Z,3.1nm,1.0s,baz=322,slow=7.4,SNR=13						
EGMT	**Eagleton**	**48.88**	**297**	P	**P**	**11 31 44.6**	**+1.0**
KKAR	**Karatay Array**	**51.40**	**70**	P	**P**	**11 32 05.6**	**+3.0**
YAK	**Yakutsk**	**51.44**	**19**	LR	LR	11 55 18.8	
	comp=Z,58nm,18.4s,baz=36,slow=38						
BOZ	**Bozeman (W)**	**51.61**	**297**	P	**P**	**11 32 04.8**	**+0.3**
BOZ				IAmb	IAmb	11 32 07.2	
	comp=Z,7.1nm,1.2s						
MK31	**Makanchi Array**	**52.86**	**58**	P	**P**	**11 32 15.6**	**+2.1**
MKAR	**Makanchi Array**	**52.86**	**58**	P	**P**	**11 32 12.2**	**-1.4**
	comp=Z,0.8nm,0.9s,baz=332,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**52.86**	**58**	P	**P**	**11 32 15.9**	**+2.3**
TORD	**Torodi Ar. Bea**	**53.03**	**156**	P	**P**	**11 32 13.5**	**-1.5**
	comp=Z,2.1nm,1.1s,baz=340,slow=8.1,SNR=4.5						
BW06	**Boulder Array**	**53.17**	**293**	P	**P**	**11 32 15.6**	**-0.6**
BW06				IAmb	IAmb	11 32 18.0	
	comp=Z,3.9nm,0.9s						
PD31	**Pinedale Array**	**53.17**	**293**	P	**P**	**11 32 14.9**	**-1.2**
PD31				IAmb	IAmb	11 32 17.9	
	comp=Z,3.5nm,0.9s						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**11 32 14.9**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=55,slow=6.8,SNR=13						
PDAR				LR	LR	11 55 44.5	
	comp=Z,115nm,18.0s,baz=11,slow=37						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**11 32 15.2**	**-0.9**
REDW	**Red Top Meadow**	**53.18**	**295**	P	**P**	**11 32 17.1**	**+1.0**
REDW				IAmb	IAmb	11 32 19.0	
	comp=Z,4.0nm,1.1s						
N23A	**Red Feather La**	**53.28**	**289**	P	**P**	**11 32 18.4**	**+1.4**
AAK	**Ala-Archa**	**53.38**	**67**	P	**P**	**11 32 20.4**	**+2.8**
AAK				IAmb	IAmb	11 32 22.4	
	comp=Z,4.4nm,0.9s						
HWUT	**Hardware Ranch**	**54.95**	**294**	P	**P**	**11 32 28.7**	**-0.3**
TLY	**Talaya**	**55.56**	**40**	LR	LR	11 58 57.7	
	comp=Z,64nm,19.5s,baz=325,slow=39						
KSH	**Kashi**	**56.62**	**68**	P	P	11 32 45.9	+4.9
KSH				PP	**PP**	**11 34 53.8**	**+7.3**
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH				pmax	pmax		
	comp=Z,600nm,6.3s						
PV01	**Paradox Valley**	**56.70**	**289**	P	**P**	**11 32 40.6**	**-1.2**
PV01				IAmb	IAmb	11 32 48.6	
	comp=Z,6.3nm,1.3s						
WMQ	**Urumqi**	**57.37**	**56**	*e*P	**P**	**11 32 50.8**	**+4.6**
NVAR	**Mina Array Bea**	**60.31**	**297**	P	**P**	**11 33 06.5**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=58,slow=8.6,SNR=3.7						
NVAR				LR	LR	12 00 58.5	
	comp=Z,133nm,19.9s,baz=12,slow=38						
TXAR	**Lajitas Array**	**62.24**	**280**	P	**P**	**11 33 19.6**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=45,slow=5.5,SNR=5.6						
TXAR				LR	LR	12 00 01.2	
	comp=Z,112nm,18.6s,baz=0.0,slow=36						
GTA	**Gaotai**	**65.45**	**49**	P	**P**	**11 33 43.8**	**+2.8**
GTA				pP	sP	11 33 50.3	+4.2
GTA				sP	pP	11 33 53.3	+8.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,150nm,14.5s						
GTA				LR	LR		
	comp=E,200nm,17.8s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
HHC	**Hu-ho-hao-te**	**67.67**	**39**	*e*P	**P**	**11 33 58.5**	**+3.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,7.8s						
LZH	**Lanzhou**	**69.78**	**47**	*e*P	**P**	**11 34 09.0**	**+0.6**
LZH				pP	pP	11 34 12.3	+0.2
LZH				sP	sP	11 34 13.8	+0.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,52nm,8.1s						
CMAR	**Chiang Mai Arr**	**84.27**	**59**	P	**P**	**11 35 31.1**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=318,slow=3.8,SNR=7.2						

IDC 20 11:24:00.8±11.0**, 6°.14N×92°.31E, h0**^{km}**, mb3.7**/4**, mb1 3.7**/4**, mb1mx3.3**/64**, mbtmp3.7**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.7**/51**, Error ellipse: s-maj=589.5km s-min=26.6km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**36.61**	**301**	LR	LR	11 44 33.3	
	comp=Z,70nm,20.4s,baz=314,slow=34						
MKAR	**Makanchi Array**	**41.42**	**350**	P	P	11 31 48.2	-0.9
	1.4nm,0.8s,baz=164,slow=8.5,SNR=14						
KURBB	**Kurchatov Arra**	**45.81**	**348**	P	P	11 32 24.4	+0.1
	1.2nm,0.7s,baz=162,slow=7.0,SNR=9.2						
ZALV	**Zalesovo Beam**	**48.06**	**354**	P	P	11 32 42.5	+0.7
	1.0nm,0.6s,baz=167,slow=7.2,SNR=4.7						
ASAR	**Alice Springs**	**50.25**	**128**	P	P	11 32 59.1	-0.1
	0.3nm,0.9s,baz=306,slow=7.9,SNR=3.1						

IDC 20 11:29:40.2±3.5**, 23°.33S×179°.90E, h501**^{km}±34^{km}**, mb2.8**/3**, mb1 3.2**/4**, mb1mx2.8**/36**, mbtmp3.8**/4**, Error ellipse: s-maj=53.0km s-min=30.7km az=176.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.07**	**188**	P	P	11 32 49.9	-1.1
	0.6nm,0.3s,baz=4.8,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**42.04**	**260**	P	P	11 36 47.6	+0.1
	0.4nm,0.5s,baz=96,slow=7.1,SNR=12						
ASAR				ScP	ScP	11 41 32.5	-1.2
	0.2nm,0.7s,baz=110,slow=4.2,SNR=4.7						
WRA	**Warramunga Arr**	**42.36**	**266**	P	P	11 36 50.0	-0.1
	0.8nm,0.4s,baz=92,slow=8.5,SNR=22						
TXAR	**Lajitas Array**	**90.21**	**58**	P	P	11 41 47.5	+0.3
	0.2nm,0.6s,baz=224,slow=5.0,SNR=2.7						

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*IDC **20** 11:39:50.6±6.7, 0°.34S×20°.02W, h0^{km}, mb4.2/1, mb1 4.3/2, mb1mx3.5/29, mbtmp4.3/2, ML4.4/1, Error ellipse: s-maj=296.4km s-min=49.6km az=131.0*

*NEIC **20** 11:39:52.0±0.5, 0°.50S±0°.10×20°.0W±0°.2, h10^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=30.9km s-min=15.6km az=261.0*

ISC 20 11:39:52.4±1.9**, 0°.5S**±0°.1×**19°.9W**±0°.3**, h10**^{km}**, n15, σ0^{s}.23**/10**, mb4.2**/3**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.06**	**143**	T	T	11 51 06.0	
	baz=322,slow=73,SNR=41						
H10N3	**ASCENSION HYDR**	**9.07**	**144**	T	T	11 51 08.6	
	baz=322,slow=73,SNR=54						
H10N1	**ASCENSION HYDR**	**9.08**	**144**	T	T	11 51 08.9	
	baz=322,slow=73,SNR=27						
ASCN	**Ascension**	**9.22**	**143**	Pn	**Pn**	**11 42 05.6**	**0.0**
H10S3	**ASCENSION HYDR**	**9.89**	**148**	T	T	11 52 10.1	
	baz=250,slow=74,SNR=7.9						
H10S2	**ASCENSION HYDR**	**9.90**	**148**	T	T	11 52 07.8	
	baz=330,slow=74,SNR=7.1						
DBIC	**Dimbokro**	**16.63**	**64**	Pn	**Pn**	**11 43 46.0**	**+0.1**
	1.5nm,0.3s,baz=238,slow=15,SNR=22						
DBIC				Sn	Sn	11 46 35.9	-15
	0.4nm,0.3s,baz=142,slow=18,SNR=4.2						
DBIC	**Dimbokro**	**16.63**	**64**	Pn	**Pn**	**11 43 45.8**	**0.0**
DBIC				IAmb	IAmb	11 43 55.0	
	comp=Z,26nm,1.5s						
KOWA	**Kowa**	**21.67**	**46**	P	**P**	**11 44 43.1**	**-0.4**
KOWA				IAmb	IAmb	11 44 44.2	
	comp=Z,10nm,0.9s						
TOA0	**Torodi Ar. Sit**	**25.36**	**57**	P	**P**	**11 45 19.9**	**0.0**
TOA0				IAmb	IAmb	11 45 21.6	
	comp=Z,4.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**25.36**	**57**	P	**P**	**11 45 19.6**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=241,slow=10,SNR=11						
TORD	**Torodi Ar. Bea**	**25.36**	**57**	P	**P**	**11 45 20.1**	**+0.1**
ARCES	**ARCESS Array B**	**76.19**	**15**	P	**P**	**11 51 40.5**	**0.0**
ABKAR	**Akbulak array**	**83.76**	**40**	P	**P**	**11 52 22.1**	**+0.3**
ASAR	**Alice Springs**	**145.01**	**135**	PKPbc	**PKPab**	**11 59 30.0**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=222,slow=2.3,SNR=7.5						

IDC 20 11:42:27.4±10.0**, 7°.14S×129°.21E, h124**^{km}±109^{km}**, mb3.5**/2**, mb1 3.6**/4**, mb1mx3.1**/30**, mbtmp3.9**/4**, ML4.0**/2**, Error ellipse: s-maj=109.4km s-min=40.4km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.67**	**159**	P	Pn	11 45 34.7	-1.5
	0.6nm,0.3s,baz=337,slow=12,SNR=19						
WRA				S	Sn	11 47 58.2	-8.9
	1.0nm,0.3s,baz=332,slow=22,SNR=7.9						
ASAR	**Alice Springs**	**17.04**	**165**	P	Pn	11 46 19.9	+1.6
	0.8nm,0.3s,baz=348,slow=11,SNR=81						
ASAR				S	Sn	11 49 18.3	-10
	0.1nm,0.3s,baz=340,slow=22,SNR=3.1						
STKA	**Stephens Creek**	**27.19**	**156**	P	P	11 47 59.1	-0.3
	2.2nm,0.8s,baz=343,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**67.91**	**327**	P	P	11 53 12.7	0.0
	0.2nm,0.4s,baz=122,slow=7.7,SNR=7.9						

DJA 20 11:54:55.0±1.2**, 0°S**±14°×**13°3E**±°**, h10**^{km}**, M3.2**/4**, MLv3.2**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.56**	**250**	P	Pn	11 55 22.7	-0.1
SWI				S	Sb	11 55 43.9	0.0
FAKI	**Fak Fak**	**2.62**	**191**	P	Pn	11 55 37.0	-0.4
PCI	**Palu**	**12.90**	**267**	P	Pn	11 57 48.8	-10
TNG	**Tangerang**	**26.67**	**257**	P	P	12 00 27.2	-7.2
TNG				P	P	12 00 27.1	-7.3

REY ***20*** *11:57:54.1, 64°.61N×17°.39W, h1^{km}*

IDC ***20*** *11:57:55.5±1.0, 64°.46N×17°.65W, h0^{km}, mb3.6/6, mb1 4.0/7, mb1mx3.5/51, mbtmp3.6/7, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/39, Error ellipse: s-maj=40.9km s-min=17.0km az=19.0*

NEIC ***20*** *11:57:57.1±1.3, 64°.4N±0°.1×17°.8W±0°.2, h8^{km}±4^{km}, mb4.3/5, Error ellipse: s-maj=18.2km s-min=11.4km az=194.0*

ISC 20 11:57:55.0±0.6**, 64°.60N**±0°.02×**17°.37W**±0°.03**, h10**^{km}**, n53, σ2^{s}.42**/64**, mb3.8**/8**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.19	0	P	Pg	11 57 58.2	-0.9
	baz=2.6						
IDYN				S	Sg	11 58 01.2	-0.6
	baz=2.6						
ISKR	Skrokkalda	0.44	265	P	Pb	11 58 02.5	-2.4
	baz=264						
ISKR				S	Sg	11 58 08.9	-0.6
	baz=264						
THOR	Thorvaldshraun	0.45	42	P	Pb	11 58 02.8	-2.1
	baz=43						
THOR				S	Sb	11 58 09.9	-1.8
	baz=43						
IJOK	Jokulheimar	0.47	232	S	Sb	11 58 10.0	-2.4
	baz=231						
IJOK				P	Pb	11 58 02.9	-2.5
	baz=231						
IASK	Askja	0.55	34	P	Pb	11 58 04.4	-2.3
	baz=35						
IASK				S	Sb	11 58 11.8	-2.8
	baz=35						
IMKO	Mokollar	0.58	49	P	Pb	11 58 05.1	-2.2
	baz=50						
IMKO				S	Sb	11 58 13.6	-2.0
	baz=50						
IKSK	Karasker	0.59	138	P	Pb	11 58 05.1	-2.3
	baz=138						
IKSK				S	Sb	11 58 13.1	-2.7
	baz=138						
IIEY	Innrieyrar	0.61	213	P	Pb	11 58 05.5	-2.2
	baz=212						
IIEY				S	Sb	11 58 14.4	-1.9
	baz=212						
IKAL	Kalfafell	0.67	192	P	Pb	11 58 06.8	-2.0
	baz=191						
IKAL				S	Sb	11 58 16.7	-1.4
	baz=191						
IVSH	V-Sauoahnukur	0.73	73	P	Pb	11 58 07.6	-2.3
	baz=74						
ISVA	Svartarkot	0.74	4	P	Pg	11 58 07.3	-1.9
	baz=4.3						
IHVE	Hveravellir	0.98	287	P	Pg	11 58 11.5	-2.4
	baz=287						
IMEL	Melhnausar	1.02	17	P	Pg	11 58 12.1	-2.5
	baz=17						
ISNB	Snabyli	1.03	213	S	Sb	11 58 26.8	-1.7
	baz=212						
ISNB				P	Pg	11 58 12.6	-2.2
	baz=212						
IREN	Reynihlio	1.07	10	P	Pg	11 58 13.0	-2.5
	baz=11						
IKVO	Krokottuvotn	1.13	10	P	Pb	11 58 14.0	-2.7
	baz=11						
IGRS	Grimsstaoir	1.17	26	P	Pb	11 58 14.7	-2.5
	baz=27						
IFED	Fedgar	1.17	241	P	Pb	11 58 14.8	-2.4
	baz=241						
IMJO	Mjoaskard	1.21	237	P	Pn	11 58 15.4	-2.6
	baz=237						
IHVO	Lagu-Hvolar	1.26	212	P	Pn	11 58 16.6	-2.1
	baz=211						
IGYG	Gygjarholskot	1.28	257	P	Pn	11 58 16.3	-2.5
	baz=256						
IGYG				S	Sb	11 58 33.7	-1.8
	baz=256						
IGHA	Grjothals	1.28	13	P	Pn	11 58 16.3	-2.7
	baz=14						
ISKI	Skildingahlsh	1.28	6	P	Pn	11 58 16.3	-2.6
	baz=6.6						
ISKI				S	Sb	11 58 32.9	-2.7
	baz=6.6						
IDIM	Dimmadalss	1.38	7	P	Pn	11 58 17.7	-2.5
	baz=7.8						
IHLA	Hella	1.41	343	P	Pn	11 58 18.3	-2.4
	baz=343						
IESK	Eystri-Skogar	1.42	221	P	Pn	11 58 18.7	-2.1
	baz=221						
IHED	Heoinshofoi	1.48	1	P	Pn	11 58 19.3	-2.4
	baz=1.2						
IBRE	Brettingsstaoi	1.54	352	P	Pn	11 58 20.2	-2.3
	baz=352						
IASM	Asmuli	1.62	243	P	Pn	11 58 21.4	-2.1
	baz=243						
ISIG	Siglufjorour	1.67	338	P	Pn	11 58 22.3	-1.9
	baz=338						
ISIG				S	Sn	11 58 44.1	-1.5
	baz=338						
ISOL	Solvholt	1.70	248	P	Pn	11 58 23.1	-1.6
	baz=248						
BORG	Borgarnes	1.71	277	Pn	Pn	11 58 23.4	-1.3
	28nm,0.3s,baz=101,slow=8.4,SNR=63						
BORG				Sn	Sg	11 58 48.5	-1.4
	11nm,0.3s,baz=38,slow=21,SNR=8.8						
BORG	Borgarnes	1.71	277		Pb	11 58 24.5	-1.9
BORG				Sn	Sb	11 58 46.8	-1.1
IKRO	Krokur	1.71	254	P	Pn	11 58 23.3	-1.5
	baz=254						
SCO	Scoresbysund	6.16	346		Pn	11 59 29.7	+3.8
SCO	Scoresbysund	6.16	346	*e*	Pn	11 59 19.4	-6.5
	baz=164,slow=6.9						
SCO				*i* P	Pn	11 59 27.0	+1.1
SCO				*i* S	Sn	12 00 42.0	+5.8
SCO				IAML		12 00 47.0	
	comp=Z,1.0nm,0.5s						
JMIC	Jan Mayen	7.23	24	LR	LR	12 01 42.9	
	comp=Z,266nm,18.5s,baz=190,slow=31						
EKA	Eskdalemuir Ar	11.67	136	Pn	Pn	12 00 43.3	+1.9
	baz=327,slow=13,SNR=6.2						
CLL	Collm	20.63	116	*e*P	Pn	12 02 37.0	+0.6
GERES	GERESS Array B	22.88	119	P	P	12 03 00.3	+1.9
	comp=Z,1.0nm,0.8s,baz=337,slow=6.4,SNR=5.9						
EUNU	Eureka	23.75	336	P	P	12 03 10.7	+3.8
EUNU				IAmb	IAmb	12 03 12.7	
	comp=Z,11nm,1.1s						
YKA	Yellowknife Ar	39.30	313	P	P	12 05 25.7	+2.3
	comp=Z,0.8nm,1.0s,baz=46,slow=8.3,SNR=9.0						
YKA				PcP	PcP	12 07 34.3	+2.5
	comp=Z,0.3nm,0.9s,baz=55,slow=5.2,SNR=4.0						
ILAR	Eielson Array	45.77	333	P	P	12 06 18.4	+2.4
	comp=Z,1.5nm,1.1s,baz=20,slow=6.1,SNR=8.0						
ILAR				PcP	PP	12 07 56.0	-6.7
	comp=Z,0.7nm,1.0s,baz=15,slow=3.7,SNR=4.5						
ILAR	Eielson Array	45.77	333	P	P	12 06 19.8	+3.9
MDM	Murphy Dome	45.86	333	P	P	12 06 20.2	+3.4
IMAR	Indian Mountai	45.94	337	P	P	12 06 21.2	+4.0
MKAR	Makanchi Array	52.71	58	P	P	12 07 11.9	+2.6
	comp=Z,0.4nm,0.9s,baz=303,slow=6.0,SNR=2.2						
BW06	Boulder Array	53.25	293	P	P	12 07 15.5	+1.8
BW06				IAmb	IAmb	12 07 18.0	
	comp=Z,5.9nm,1.3s						
PD31	Pinedale Array	53.25	293	P	P	12 07 14.2	+0.6
PD31				IAmb	IAmb	12 07 18.0	
	comp=Z,4.5nm,1.2s						
PDAR	Pinedale Array	53.25	293	P	P	12 07 14.9	+1.4
	comp=Z,1.2nm,0.8s,baz=60,slow=8.8,SNR=9.8						
PDAR	Pinedale Array	53.25	293	P	P	12 07 15.1	+1.4
PV13	Radium Mtn., P	56.87	290	P	P	12 07 42.1	+2.3
TXAR	Lajitas Array	62.35	280	P	P	12 08 19.4	+1.8
	comp=Z,0.5nm,1.0s,baz=69,slow=4.2,SNR=4.1						

BJI ***20*** *12:07:15.9±0.0, 5°.67S×154°.91E, h41^{km}, mB5.2/39, mb5.0/60, Ms4.8/19, Ms7 4.5/21*

GCMT ***20*** *12:07:16.8±0.2, 6°.40S±0°.02×154°.29E±0°.02, h37^{km}, MW5.1/77, Moment Tensor Solution. s77,c101; s77,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.48±.21; M$_{θθ}$-2.86±.14; M$_{φφ}$-3.62±.13; M$_{rθ}$1.12±.17; M$_{θφ}$2.36±.09; M$_{φr}$-1.40±.13; Best double couple: M$_{0}$6.31500×10^{16} NP1:φ$_{s}$319.00000°, δ37.00000°, λ89.00000°. NP2:φ$_{s}$140.00000°, δ53.00000°, λ90.00000°. Principal axes: T 6.7400, Plg82.0000°, Azm52.0000°; N -0.8500, Plg0.0000°, Azm320.0000°; P -5.8900, Plg8.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***20*** *12:07:17.8±1.6, 6°.12S×154°.42E, h44^{km}±15^{km}, mb4.3/29, mb1 4.5/33, mb1mx4.4/47, mbtmp4.6/33, ML4.0/5, MS4.2/10, Ms1 4.2/10, ms1mx3.9/28 Error ellipse: s-maj=13.0km s-min=9.5km az=75.0*

NEIC ***20*** *12:07:18.8±1.5, 6°.18S±0°.09×154°.43E±0°.07, h57^{km}±5^{km}, mb5.1/83, Error ellipse: s-maj=12.5km s-min=9.5km az=180.0*

DJA ***20*** *12:07:18.1±0.5, 6°S±4°×15°5E±°, h41^{km}±6^{km}, M5.1/19, mB5.0/4, mb4.8/19, MLv5.5/2, Mw(mB)4.3/4*

NOU ***20*** *12:07:22.7, 6°.08S×154°.43E, h78^{km}, mb5.1, Solomon Islands*

ISC 20 12:07:19.5±0.7**, 6°.20S**±0°.05×**154°.44E**±0°.05**, h62**^{km}±6^{km}**, n289, σ1^{s}.10**/289**, mb5.0**/96**, 1C-4D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.02	311	P	Pn	12 08 08.5	+3.6
HNR	Honiara	6.33	121	P	Pn	12 08 50.7	+0.3
	29nm,0.3s,baz=280,slow=1.4,SNR=15						
HNR				S	Sn	12 10 05.9	+4.6
	5.2nm,0.3s,baz=327,slow=21,SNR=1.3						
HNR				LR	LR	12 11 14.9	
	comp=Z,2μm,21.2s,baz=270,slow=37						
HNR	Honiara	6.33	121	Pn	Pn	12 08 50.1	-0.2
HNR	Honiara	6.33	121	P	Pn	12 08 55.6	+5.3
PMG	Port Moresby	7.88	246	P	Pn	12 09 11.1	-0.5
	22nm,0.3s,baz=52,slow=8.1,SNR=132						
PMG				S	Sn	12 10 39.9	+0.6
	13nm,0.3s,baz=14,slow=21,SNR=13						
PMG				LR	LR	12 12 18.2	
	comp=Z,3μm,19.6s,baz=48,slow=38						
PMG	Port Moresby	7.88	246		Pn	12 09 09.8	-1.8
PMG	Port Moresby	7.88	246	Pn	Sn	12 10 40.0	+0.6
PATS	Pohnpei	13.51	17	Pn	Pn	12 10 27.5	-1.0
JAY	Jayapura	14.17	284	P	Pn	12 10 36.0	-1.3
	0.4nm,0.3s,baz=74,slow=4.0,SNR=7.9						
JAY				LR	LR	12 16 21.9	
	comp=Z,1μm,19.5s,baz=88,slow=38						
JAY	Jayapura	14.17	284	P	Pn	12 10 38.2	+0.9
	24nm,1.2s						
MTSU	Mount Surprise	15.44	219	P	Pn	12 10 54.6	+0.9
	baz=15,SNR=4.5						
SANVU	Saraoutou	15.54	127	P	P	12 10 58.1	+0.1
SANVU	Saraoutou	15.54	127	P	P	12 10 58.4	+0.3
CTA	Charters Tower	15.93	209	P	Pn	12 10 60.0	0.0
	0.6nm,0.3s,baz=26,slow=14,SNR=3.9						
CTA				LR	LR	12 16 19.9	
	comp=Z,658nm,19.0s,baz=39,slow=34						
CTAO	Charters Tower	15.93	209	P	P	12 11 03.6	+1.1
SMPI	Sarmi	16.23	284	P	P	12 11 22.4	+17
EIDS	Eidsvold	19.33	189	P	Pn	12 11 41.3	-0.2
	baz=19,SNR=3.3						
DZM	Mont Dzumac	19.59	145	P	P	12 11 43.5	+0.7
	1.0nm,0.3s,baz=321,slow=22,SNR=6.5						
DZM				LR	LR	12 18 08.8	
	comp=Z,869nm,22.0s,baz=320,slow=33						
DZM	Mont Dzumac	19.59	145	*e*P	P	12 11 43.0	+0.2
	120nm,1.2s						
DZM				*e*S	S	12 15 16.4	-4.4
	556nm,26.1s						
DZM				*e*LR	LR	12 16 22.3	
	comp=Z,2μm,26.0s						
DZM	Mont Dzumac	19.59	145	P	P	12 11 41.3	-1.5
QIS	Mount Isa	20.27	224	P	P	12 11 50.9	+0.7
	baz=20,SNR=11						
RMQ	Roma	20.89	194	P	P	12 11 57.7	+0.9
	baz=21,SNR=10						
QLP	Quilpie	22.49	205	P	P	12 12 13.6	-0.3
	baz=22,SNR=4.5						
KDU	Kakadu	22.60	252	P	P	12 12 15.0	-0.2
	baz=23,SNR=7.8						
WR0	Warramunga Arr	23.68	233	P	P	12 12 25.5	-0.3
WR0				IAmb	IAmb	12 12 41.9	
	comp=Z,49nm,0.9s						
WB0	Warramunga Arr	23.70	233	P	P	12 12 24.3	-1.7
WB0				IAmb	IAmb	12 12 44.5	
	comp=Z,50nm,1.1s						
SIJI	Sorong	23.72	282	P	P	12 12 25.5	-0.7
	comp=Z,22nm,0.8s,baz=59,slow=12,SNR=7.6						
WRAB	Tennant Creek	23.82	233	P	P	12 12 26.5	-0.5
WRAB				IAmb	IAmb	12 12 45.6	
	comp=Z,69nm,1.2s						
WB2	Warramunga Arr	23.82	233	P	P	12 12 25.8	-1.2
WB2				IAmb	IAmb	12 12 45.7	
	comp=Z,103nm,1.3s						
WRA	Warramunga Arr	23.83	233	P	P	12 12 26.6	-0.6
	comp=Z,4.3nm,0.6s,baz=57,slow=9.1,SNR=37						
WRA				PcP	PcP	12 16 09.4	+0.3
	comp=Z,8.9nm,0.7s,baz=59,slow=2.2,SNR=10						
WRA				ScP	ScP	12 19 45.1	+2.7
	comp=Z,1.1nm,0.8s,baz=47,slow=2.2,SNR=4.4						
WRA				LR	LR	12 21 55.8	
	comp=Z,805nm,19.8s,baz=65,slow=37						
WRA	Warramunga Arr	23.83	233	P	P	12 12 27.0	-0.2
MTN	Manton Dam	23.90	252	P	P	12 12 29.2	+1.4
	baz=24,SNR=3.1						
ARMA	Armidale	24.24	186	P	P	12 12 32.2	+1.4
	baz=24,SNR=5.8						
MSVF	Nonsavu	25.75	119	P	P	12 12 44.4	-0.3
	comp=Z,2.8nm,0.7s,baz=277,slow=14,SNR=4.9						
MSVF				LR	LR	12 22 08.0	
	comp=Z,825nm,19.4s,baz=292,slow=34						
MSVF	Nonsavu	25.75	119	P	P	12 12 44.2	-0.4
AS31	Alice Springs	26.30	227	P	P	12 12 49.2	-0.4
ASAR	Alice Springs	26.30	227	P	P	12 12 49.7	+0.1
	comp=Z,4.0nm,0.6s,baz=58,slow=8.6,SNR=54						
ASAR				PcP	PcP	12 16 15.6	+0.9
	comp=Z,8.0nm,0.7s,baz=59,slow=2.2,SNR=14						
ASAR				ScP	ScP	12 19 52.1	+2.8
	comp=Z,0.8nm,0.7s,baz=48,slow=3.9,SNR=5.0						
ASAR	Alice Springs	26.30	227	P	P	12 12 49.4	-0.2
ASAR					PcP	12 16 14.4	-0.2
STKA	Stephens Creek	28.23	204	P	P	12 13 06.4	-0.3
	baz=28,SNR=4.4						
STKA	Stephens Creek	28.23	204	P	P	12 13 06.2	-0.5
	comp=Z,2.7nm,0.6s,baz=30,slow=12,SNR=7.3						
STKA				PcP	PcP	12 16 19.8	+0.8
	comp=Z,8.5nm,0.8s,baz=98,slow=4.0,SNR=5.5						
STKA	Stephens Creek	28.23	204	P	P	12 13 06.4	-0.3
SANI	Sanana	28.67	277	P	P	12 13 11.7	+0.9
	comp=Z,32nm,1.1s						
SOEI	Soe	30.08	261	P	P	12 13 26.2	+2.7
	comp=Z,38nm,0.9s						
FITZ	Fitzroy Crossi	30.48	245	P	P	12 13 26.2	-0.6
	comp=Z,3.3nm,0.6s,baz=69,slow=6.4,SNR=13						
FITZ				PcP	PcP	12 16 26.1	+1.1
	comp=Z,11nm,0.9s,baz=230,slow=1.7,SNR=3.7						
SGSI	Sangihe	30.49	288	P	P	12 13 45.9	+19
BATI	Baumata	30.71	260	P	P	12 13 27.7	-1.3
	comp=Z,7.4nm,0.3s,baz=204,slow=13,SNR=2.1						
BATI	Baumata	30.71	260	P	P	12 13 47.0	+18
DAV	Davao City (W)	31.67	294	LR	LR	12 26 44.4	
	comp=Z,220nm,18.8s,baz=114,slow=37						
LUWI	Luwuk	32.01	278	P	P	12 13 40.7	+0.4
LUWI	Luwuk	32.01	278	P	P	12 13 42.0	+1.7
EDFI	Ende, Flores	32.56	263	P	P	12 13 44.7	-0.6
APSI	Ampana	33.13	278	P	P	12 13 51.7	+1.5
MPSI	Mapaga	35.08	279	P	P	12 14 07.1	0.0
JCJ	Chichijima	35.16	341	P	P	12 14 07.7	+0.2
	comp=Z,98nm,0.9s,baz=286,slow=14,SNR=2.4						
URZ	Urewera	37.97	150	P	P	12 14 33.2	+1.9
	comp=Z,13nm,0.7s,baz=335,slow=2.0,SNR=12						
BKZ	Black Stump Fm	38.39	152	P	P	12 14 35.1	+0.1
BKZ				IAmb	IAmb	12 16 01.5	
	comp=Z,58nm,1.4s						
TGY	Tagaytay City	38.88	301	P	P	12 14 39.9	+0.5
	comp=Z,167nm,0.3s,baz=328,slow=2.5,SNR=3.5						
THZ	Tophouse	39.04	158	P	P	12 14 40.1	-0.2
THZ				IAmb	IAmb	12 15 31.3	
	comp=Z,44nm,1.3s						
TUWZ	Tuamarina	39.16	157	P	P	12 14 41.3	+0.1
BFZ	Birch Farm	39.50	154	P	P	12 14 42.4	-1.7
MSWZ	Moikau Station	39.67	155	P	P	12 14 45.0	-0.6
LTZ	Lake Taylor	39.70	159	P	P	12 14 45.8	-0.1
LTZ				IAmb	IAmb	12 14 47.6	
	comp=Z,23nm,0.8s						
MEEK	Meekatharra	39.70	235	P	P	12 14 46.6	+0.5
	baz=40,SNR=6.8						
MTKI	Muara Teweh, K	39.79	276	P	P	12 14 52.5	+5.5
KHZ	Kahutara	39.84	158	P	P	12 14 46.2	-0.7
RPZ	Rata Peaks	40.12	161	P	P	12 14 50.0	+0.7
	comp=Z,12nm,0.8s,baz=266,slow=2.8,SNR=5.8						
RPZ	Rata Peaks	40.12	161	P	P	12 14 49.6	+0.3
RPZ				IAmb	IAmb	12 15 48.8	
	comp=Z,59nm,1.5s						
JOW	Kunigami	41.48	323	P	P	12 14 59.2	-1.5
	comp=Z,22nm,0.6s,baz=146,slow=11,SNR=7.1						
MORW	Morawa	42.78	233	P	P	12 15 11.7	+0.4
	baz=43						
YOJ	Yonaguni jima	43.20	316	P	P	12 15 12.9	-1.7
STKI	Sintang	43.33	277	P	P	12 15 16.9	+1.0
YULB	Yu-li	43.73	313	P	P	12 15 19.6	+0.6
NACB	Ninganchiao	44.01	315	P	P	12 15 22.0	+0.9
TPUB	Ta-pu	44.16	313	P	P	12 15 22.3	-0.1
SSLB	Suanglung	44.23	314	P	P	12 15 23.8	+0.8
YHNB	Yeheng	44.48	315	P	P	12 15 25.2	+0.2
KSM	Kuching	44.71	278	P	P	12 15 27.7	+0.7
KSM				IAmb	IAmb	12 15 45.9	
	comp=Z,20nm,0.7s						
KSM	Kuching	44.71	278	P	P	12 15 28.0	+1.0
JWT	Wachi	44.99	338	P	P	12 15 28.1	-0.7
JNU	Nakatsue	45.05	332	P	P	12 15 27.5	-1.9
	comp=Z,27nm,0.8s,baz=88,slow=4.8,SNR=11						
JNU	Nakatsue	45.05	332	P	P	12 15 27.9	-1.5
JNU				IAmb	IAmb	12 15 30.1	
	comp=Z,32nm,0.8s						
MJAR	Matsushiro Arr	45.15	341	P	P	12 15 28.5	-1.7
	comp=Z,1.7nm,0.6s,baz=174,slow=8.5,SNR=7.0						
MJAR	Matsushiro Arr	45.15	341	P	P	12 15 28.8	-1.3
MAJO	Matsushiro	45.16	341	P	P	12 15 28.9	-1.2
MAJO				IAmb	IAmb	12 16 03.9	
	comp=Z,32nm,1.8s						
MAT	Matsushiro	45.16	341	P	P	12 15 28.4	-1.8
KPJI	Karang Pucung	45.19	266	P	P	12 15 43.2	+12
JHS	Saijyo	45.64	335	P	P	12 15 31.9	-2.1
CISI	Cisompet, Garu	46.29	265	P	P	12 15 39.2	-0.4
QZH	Quanzhou	46.64	313	⇓*i*P	P	12 15 43.5	+1.5
QZH				pmax	pmax		
	comp=Z,97nm,0.9s						
DLV	T Lat	49.12	292	P	P	12 16 01.8	+0.2
KSRS	Korea Array	49.98	332	P	P	12 16 07.0	-0.6
	comp=Z,8.4nm,0.8s,baz=149,slow=8.5,SNR=36						
KSAR	Wonju Array Be	49.99	332	P	P	12 16 06.3	-1.2
KS19	Wonju Array Si	50.05	332	P	P	12 16 07.0	-1.0
KS19				IAmb	IAmb	12 16 08.0	
	comp=Z,14nm,0.9s						
INCN	Inchon	50.61	331	P	P	12 16 12.0	-0.3
NJ2	Nanjing	50.95	320	*e*P	P	12 16 15.8	+0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
MYKOM	Kota Tinggi	51.13	277	P	P	12 16 18.0	+1.4
ASAJ	Asahikawa	51.21	349	P	P	12 16 16.7	0.0
	comp=Z,9.6nm,0.8s,baz=184,slow=12,SNR=5.0						
WHN	Wuhan	52.99	316	P	P	12 16 31.6	+1.5
WHN				pP	pP	12 16 42.9	-2.9
WHN				S	S	12 23 51.6	-3.8
WHN				LR	LR		
	comp=Z,880nm,21.2s						
SDSI	Sungai Dareh	53.14	273	P	P	12 16 32.2	+0.6
USRK	Ussuriysk Ar.	54.10	340	P	P	12 16 38.0	0.0
	comp=Z,3.2nm,0.6s,baz=133,slow=8.6,SNR=12						
USRK	Ussuriysk Ar.	54.10	340	P	P	12 16 37.6	-0.4
IPM	Ipoh	54.37	280	P	P	12 16 40.2	-0.5
IPM				IAmb	IAmb	12 16 42.2	
	comp=Z,16nm,0.8s						
IPM	Ipoh	54.37	280	P	P	12 16 41.0	+0.4
TIA	Tai'an	54.80	323	P	P	12 16 43.3	0.0
TIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KULM	Kulim	54.90	281	P	P	12 16 44.2	-0.2
KULM				IAmb	IAmb	12 16 45.2	
	comp=Z,22nm,1.0s						
KULM	Kulim	54.90	281	P	P	12 16 45.0	+0.6
MNSI	Mandailing Nat	55.20	275	P	P	12 16 46.1	-0.5
MDJ	Mudanjiang	55.30	339	P	P	12 16 46.3	-0.4
MDJ				pP	pP	12 17 02.1	-0.3
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.2s						
PPT	Papeete	55.76	107	LR	LR	12 37 47.3	
	comp=Z,61nm,19.5s,baz=278,slow=33						
PPT2	Papeete2	55.76	107	*e*S	S	12 24 36.3	+3.0
	comp=Z,130nm,26.5s						
PPT2				*e*LR	LR	12 33 11.7	
	comp=Z,224nm,24.2s						
CN2	Changchun	56.24	335	*e*P	P	12 16 58.4	+4.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ENH	Enshi	56.30	313	P	P	12 16 54.8	+0.6
TBI	Tubuai	56.50	114	*e*LR	LR	12 33 31.1	
	comp=Z,508nm,28.0s						
GYA	Guiyang	56.53	307	⇓P	P	12 16 57.6	+1.6
GYA				pmax	pmax		
	comp=Z,16nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,6.2s						
GYA				LR	LR		
	comp=Z,430nm,24.7s						
SLVN	Son La	56.61	300	P	P	12 16 58.3	+1.7
BJI	Beijing	57.95	326	P	P	12 17 05.4	-0.2
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLR	Kul'dur	58.65	343	P	P	12 17 10.3	+0.1
	comp=Z,10nm,0.8s,baz=158,slow=4.9,SNR=37						
XAN	Xi'an	58.75	316	P	P	12 17 11.6	+0.2
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
KMI	Kunming	59.12	304	⇓*i*P	P	12 17 16.4	+2.1
KMI				pP	pP	12 17 24.0	-5.9
KMI				sP	pwP	12 17 32.5	-0.9
KMI				pmax	pmax		
	comp=Z,53nm,0.8s						
KMI				pmax	pmax		
	comp=Z,120nm,4.4s						
KMI				LR	LR		
	comp=Z,180nm,9.6s						
KMI				LR	LR		
	comp=Z,260nm,14.3s						
KMI				LR	LR		
	comp=Z,310nm,19.6s						
PEA0B	Petropavlovsk-	59.14	2	P	P	12 17 14.1	+0.5
PETK	Petropavlovsk-	59.14	2	P	P	12 17 13.9	+0.3
	comp=Z,1.3nm,0.5s,baz=140,slow=5.9,SNR=15						
PETK	Petropavlovsk-	59.14	2	P	P	12 17 14.1	+0.4
CMAR	Chiang Mai Arr	59.94	295	P	P	12 17 20.7	+0.8
	comp=Z,4.8nm,0.8s,baz=123,slow=5.4,SNR=30						
CMAR	Chiang Mai Arr	59.94	295	P	P	12 17 19.1	-0.7
CD2	Chengdu	60.88	310	P	P	12 17 26.9	+0.8
CD2				S	S	12 25 41.1	+1.5
CD2				pmax	pmax		
	comp=Z,90nm,0.8s						
CD2				LR	LR		
	comp=Z,350nm,18.1s						
CD2				LR	LR		
	comp=Z,400nm,20.1s						
HHC	Hu-ho-hao-te	61.13	324	*e*P	P	12 17 28.5	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,7.2s						
LZH	Lanzhou	63.36	316	⇓P	P	12 17 44.3	+1.5
LZH				pP	pP	12 17 59.9	+1.3
LZH				PP	PP	12 20 07.0	+4.1
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,6.0s						
TAOE	Nuku Hiva Isla	64.84	97	*e*LR	LR	12 37 15.2	
	comp=Z,512nm,26.0s						
GTA	Gaotai	67.78	317	⇑P	P	12 18 11.6	+0.4
GTA				pP	pP	12 18 26.1	-1.1
GTA				sP	sP	12 18 33.9	+0.1
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,8.0s						
GTA				LR	LR		
	comp=Z,180nm,19.3s						
GTA				LR	LR		
	comp=Z,160nm,18.9s						
GTA				LR	LR		
	comp=Z,240nm,18.5s						
ULN	Ulaanbaatar	68.04	328	P	P	12 18 11.6	-1.0

SONM	Songino Array	68.37	327	P	P	12 18 15.2	+0.5
	comp=Z,3.5nm,0.6s,baz=128,slow=6.0,SNR=22						
SONM	Songino Array	68.37	327	P	P	12 18 14.6	-0.1
SEY	Seymchan	68.95	359	P	P	12 18 17.6	-0.2
	comp=Z,0.5nm,0.3s,baz=160,slow=6.5,SNR=3.9						
RKT	Rikitea	69.75	112	eLR	LR	12 39 39.9	
	comp=Z,409nm,30.0s						
LSA	Lhasa	70.37	304	P	P	12 18 28.8	+1.0
YAK	Yakutsk	70.67	348	P	P	12 18 27.4	-0.9
YAK				IAmb	IAmb	12 18 29.4	
	comp=Z,16nm,1.0s						
VNDA	Vanda	71.39	178	P	P	12 18 33.2	+0.7
	comp=Z,2.9nm,0.8s,baz=328,slow=3.2,SNR=6.1						
VNDA	Vanda	71.39	178	P	P	12 18 32.9	+0.4
TAPN	Taplejung	72.52	301	eP	P	12 18 41.9	+1.3
	comp=Z,98nm,0.8s						
ODAN	Odare	72.65	300	eP	P	12 18 41.8	+0.4
	comp=Z,211nm,0.8s						
RAMN	Ramite	73.36	300	eP	P	12 18 46.2	+0.7
	comp=Z,52nm,0.7s						
GUN	Gumba	74.23	301	eP	P	12 18 51.2	+0.4
	comp=Z,166nm,0.8s						
PKI	Pulchoki	74.54	301	eP	P	12 18 53.2	+0.6
	comp=Z,140nm,1.1s						
PKIN	Phulchoki	74.56	301	eP	P	12 18 52.8	+0.2
	comp=Z,111nm,1.0s						
KKN	Kakani	74.71	301	eP	P	12 18 53.9	+0.5
	comp=Z,35nm,0.8s						
DMN	Daman	74.81	301	eP	P	12 18 54.4	+0.4
	comp=Z,242nm,0.9s						
DANN	Dangsing	76.16	301	eP	P	12 19 01.4	-0.4
	comp=Z,107nm,0.7s						
ANM	Nome	76.63	17	IAmb	IAmb	12 19 55.2	
	comp=Z,39nm,1.8s						
WMQ	Urumqi	77.87	317	eP	P	12 19 12.6	+1.8
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.3s						
TTA	Tatalina	78.48	21	P	P	12 19 13.6	-0.1
HYB	Hyderabad	78.49	289	i P	P	12 19 13.0	-1.7
CAPN	Captain Cook N	79.01	24	P	P	12 19 16.2	-0.3
	baz=235						
RC01	Rabbit Creek A	79.77	24	P	P	12 19 20.5	-0.2
	baz=237						
ZSN	Zaisan	80.98	320	eP	P	12 19 27.0	-0.5
	baz=320						
IMAR	Indian Mountai	81.16	19	P	P	12 19 27.9	-0.2
RND	Reindeer	81.38	22	P	P	12 19 28.5	-0.9
MCK	McKinley	81.53	22	P	P	12 19 29.6	-0.5
	baz=237						
MLY	Manley	81.60	21	P	P	12 19 30.0	-0.5
	baz=235						
M24K	Tolsona, Glenn	81.75	24	P	P	12 19 31.3	-0.1
	baz=240						
I23K	Minto, Yukon-K	82.15	21	P	P	12 19 32.9	-0.4
	baz=236						
N25K	Chitina, Valde	82.16	25	P	P	12 19 33.5	-0.1
	baz=241						
MK31	Makanchi Array	82.44	319	P	P	12 19 35.2	-0.1
MKAR	Makanchi Array	82.44	319	P	P	12 19 35.1	-0.1
	comp=Z,3.0nm,0.8s,baz=105,slow=5.1,SNR=28						
MKAR	Makanchi Array	82.44	319	P	P	12 19 34.6	-0.7
TCOL	CIGO, UAF Yank	82.54	21	P	P	12 19 34.2	-1.1
	baz=238						
TCOL	CIGO, UAF Yank	82.54	21	P	P	12 19 34.1	-1.2
COLA	College	82.54	21	P	P	12 19 34.1	-1.2
COLA				IAmb	IAmb	12 21 07.9	
	comp=Z,12nm,0.3s						
HDA	Harding Lake	82.63	22	P	P	12 19 34.8	-1.0
	baz=239						
IL31		82.84	22	P	P	12 19 35.5	-1.4
IL31				IAmb	IAmb	12 20 05.6	
	comp=Z,18nm,1.4s						
ILAR	Eielson Array	82.84	22	P	P	12 19 35.6	-1.3
	comp=Z,2.4nm,0.8s,baz=251,slow=5.4,SNR=18						
ILAR	Eielson Array	82.84	22	P	P	12 19 35.4	-1.5
COLD	Coldfoot	83.04	19	P	P	12 19 37.2	-0.6
	baz=236						
COLD	Coldfoot	83.04	19	P	P	12 19 38.0	+0.2
POO	Poona	83.09	289	eP	P	12 19 38.0	-1.2
ZALV	Zalesovo Beam	83.21	326	P	P	12 19 37.7	-1.3
	comp=Z,2.1nm,0.6s,baz=119,slow=5.3,SNR=9.3						
ZALV	Zalesovo Beam	83.21	326	P	P	12 19 37.4	-1.6
DOT	Dot Lake	83.35	23	P	P	12 19 39.3	-0.3
DOT				IAmb	IAmb	12 20 09.5	
	comp=Z,20nm,1.2s						
SHLS	Shalkode	83.37	315	eP	P	12 19 38.3	-2.0
	baz=315						
SCRK	Sand Creek	83.54	23	P	P	12 19 39.7	-1.0
	baz=242						
QSPA	South Pole Qui	83.77	180	P	P	12 19 42.3	+0.4
QSPA				IAmb	IAmb	12 19 43.3	
	comp=Z,17nm,0.8s						
KPKS	Kokpek	84.00	315	eP	P	12 19 42.6	-0.8
	baz=315						
BCAR	Beaver Creek A	84.00	24	P	P	12 19 42.8	-0.2
SATY	Saty	84.09	314	eP	P	12 19 43.6	-0.4
	baz=314						
K27K	Chicken	84.31	23	P	P	12 19 44.0	-0.4
	baz=243						
TDK	Taldyqorghan	84.57	316	eP	P	12 19 45.4	-0.8
	baz=316						
MAW	Mawson	84.92	203	P	P	12 19 48.2	+0.7
	comp=Z,8.4nm,0.8s,baz=99,slow=9.9,SNR=6.6						
BMAR	Burnt Mountain	84.99	20	P	P	12 19 47.7	-0.2
EGAK	Eagle	85.00	23	P	P	12 19 48.3	+0.4
EGAK				IAmb	IAmb	12 20 07.0	
	comp=Z,12nm,1.1s						
KSH	Kashi	85.08	310	P	P	12 19 52.3	+3.3
KSH				pmax	pmax		
	comp=Z,22nm,1.1s						
KSH				pmax	pmax		
	comp=Z,420nm,8.3s						
MDOK	Medeo	85.08	314	eP	P	12 19 48.4	-0.6
	baz=314						
KUU	Kurty	85.75	315	eP	P	12 19 51.4	-0.8
	comp=Z,6.9nm,0.8s,baz=315						
KURK	Kurchatov	85.87	322	P	P	12 19 51.3	-1.2
NIL	Nilore	86.11	304	P	P	12 19 54.1	-0.1
NIL				IAmb	IAmb	12 20 06.3	
	comp=Z,10nm,0.8s						
EPYK	Eagle Plains	87.33	22	P	P	12 19 58.7	-0.7
	baz=248						
EPYK	Eagle Plains	87.33	22	P	P	12 19 59.5	0.0
EPYK				IAmb	IAmb	12 20 16.0	
	comp=Z,13nm,0.9s						
L04D	Klamath Falls	89.14	48	P	P	12 20 07.5	-1.2
	baz=261						
INK	Inuvik	89.17	21	P	P	12 20 07.4	-0.6
	comp=Z,1.4nm,0.8s,baz=232,slow=8.0,SNR=5.6						
H04D	Lebanon	89.20	45	P	P	12 20 07.4	-1.3
	baz=261						
O03E	Paynes Creek	89.22	50	P	P	12 20 07.6	-1.4
	baz=261						
M04C	Macdoel	89.42	48	P	P	12 20 08.9	-1.1
	baz=261						
J04D	Umpqua Nationa	89.45	47	P	P	12 20 08.7	-1.5
	baz=261						
D03D	Eldon	89.46	42	P	P	12 20 09.1	-0.8
	baz=260						
D04E	Lakebay	89.62	43	P	P	12 20 10.0	-0.5
	baz=260						
KKAR	Karatay Array	89.77	313	P	P	12 20 10.2	-1.2
IUG	Iuzhnay	89.98	312	eP	P	12 20 12.7	+0.1
	comp=Z,1.0nm,0.7s,baz=312						
SNCC	San Nicolas Is	90.05	57	P	P	12 20 12.6	-0.4
	baz=263						
J05D	Fort Rock, OR	90.09	47	P	P	12 20 12.1	-1.0
	baz=262						
I05D	Terrebonne, OR	90.16	46	P	P	12 20 12.9	-0.4
	baz=262						
G05D	Wamic, OR	90.31	45	P	P	12 20 13.8	-0.1
	baz=262						
PNTR	Pine Nut	90.74	51	P	P	12 20 17.1	+0.8
PNTR				IAmb	IAmb	12 20 18.5	
	comp=Z,8.2nm,0.9s						
VES	Vestal, Richgr	90.74	54	P	P	12 20 15.5	-0.6
	baz=263						
MDPB	Devils Postpil	90.96	52	P	P	12 20 17.7	+0.3
MDPB				IAmb	IAmb	12 20 18.8	
	comp=Z,5.0nm,0.9s						
PAHR	Pah Rah Range	90.98	50	P	P	12 20 17.1	-0.2
PAHR				IAmb	IAmb	12 20 18.6	
	comp=Z,5.2nm,1.0s						
ISA	Isabella, Lake	91.21	54	P	P	12 20 18.4	0.0
	baz=263						
MWC	Mount Wilson	91.38	56	P	P	12 20 19.0	-0.4
LHV	Little Huntoon	91.49	52	P	P	12 20 19.8	+0.3
LHV				IAmb	IAmb	12 20 22.4	
	comp=Z,11nm,1.0s						
EDW2	Edwards Air Fo	91.51	55	P	P	12 20 19.9	+0.1
	baz=264,SNR=5.8						
RYN	Ryan	91.52	51	P	P	12 20 20.0	+0.2
RYN				IAmb	IAmb	12 20 21.9	
	comp=Z,8.8nm,1.0s						
CWC	Cottonwood Cre	91.61	54	P	P	12 20 19.7	-0.7
	baz=264						
NVAR	Mina Array Bea	91.66	52	P	P	12 20 20.3	-0.3
	comp=Z,7.2nm,0.9s,baz=258,slow=6.5,SNR=44						
BFSC	Mount Baldy Ra	91.72	56	P	P	12 20 20.9	+0.1
	baz=264,SNR=5.2						
NV11	Mina Array Sit	91.78	52	P	P	12 20 21.2	+0.2
NV11				IAmb	IAmb	12 20 23.1	
	comp=Z,9.9nm,0.9s						
LRMC	Laurel Mtn Rad	91.83	55	P	P	12 20 21.7	+0.3
	baz=264,SNR=5.9						
MURC	Murrieta	92.03	57	P	P	12 20 21.8	-0.4
	baz=264						
109C	Camp Elliot, M	92.03	57	P	P	12 20 22.4	+0.2
	baz=264						
MPMC	Manual Prospec	92.05	54	P	P	12 20 22.0	-0.4
	baz=264						
BBRC	Big Bear Solar	92.33	56	P	P	12 20 23.2	-0.6
	baz=264						
BAR	Barrett	92.37	58	IAmb	IAmb	12 20 26.4	
	comp=Z,6.6nm,1.0s						
TPH	Tonopah	92.47	52	P	P	12 20 25.1	+0.8
GSC	Goldstone, Bar	92.52	55	P	P	12 20 24.4	-0.1
	baz=264						
FURC	Furnace Creek,	92.59	54	P	P	12 20 24.9	+0.2
	baz=264,SNR=9.0						
MONP2	Monument Peak	92.60	57	P	P	12 20 24.4	-0.6
	baz=264						
PFO	Pinyon Flats O	92.64	57	LR	LR	12 51 59.9	
	comp=Z,428nm,21.1s,baz=100,slow=29						
PFO	Pinyon Flats O	92.64	57	P	P	12 20 25.0	-0.2
	baz=264,SNR=8.3						
PFO	Pinyon Flats O	92.64	57	P	P	12 20 24.9	-0.2
PFO				IAmb	IAmb	12 20 27.0	
	comp=Z,8.1nm,0.8s						
TPFO	Pinon Flats	92.64	57	P	P	12 20 25.0	-0.2
	baz=264,SNR=6.8						
C36M	Paulatuk	92.76	21	P	P	12 20 24.1	-0.5
	baz=260						
IKP	In-Ko-Pah, Jac	92.84	58	P	P	12 20 24.8	-1.2
	baz=264						
HEC	Hector,Ludlow	92.86	55	P	P	12 20 26.2	+0.1
	baz=264						
SHOC	Shoshone, Teco	93.01	54	P	P	12 20 26.7	0.0
	baz=265,SNR=7.1						
BELC	Belle Mtn. Jos	93.06	56	P	P	12 20 27.2	+0.2
	baz=265,SNR=15						
SWSC	Sam W. Stewart	93.13	57	P	P	12 20 27.1	-0.1
	baz=265						
TPNV	Topopah Spring	93.13	53	P	P	12 20 27.4	+0.1
	baz=265,SNR=6.6						
TPNV	Topopah Spring	93.13	53	IAmb	IAmb	12 20 29.0	
	comp=Z,6.8nm,1.1s						
F10A	Beach Ranch, E	93.25	44	IAmb	IAmb	12 20 33.7	
	comp=Z,9.2nm,1.6s						
GMRC	Granite Mounta	93.41	56	P	P	12 20 28.5	-0.2
	baz=265,SNR=6.6						
BC3	Big Chuckawall	93.48	57	P	P	12 20 28.3	-0.6
	baz=265,SNR=9.8						
NEW	Newport	93.54	42	P	P	12 20 28.2	-0.6
	baz=265						
NEW	Newport	93.54	42	IAmb	IAmb	12 22 32.6	
	comp=Z,22nm,1.9s						
IRM	Iron Mountain	93.78	56	P	P	12 20 30.5	+0.3
	baz=265,SNR=10						
R11A	Troy Canyon, C	93.78	52	P	P	12 20 30.0	-0.4
	baz=265						
R11A	Troy Canyon, C	93.78	52	IAmb	IAmb	12 20 32.5	
	comp=Z,5.5nm,1.1s						
GLA	Glamis	93.95	57	P	P	12 20 31.0	-0.1
	baz=265						
SHPR	Sheep Range	93.96	54	P	P	12 20 30.8	-0.4
SHPR				IAmb	IAmb	12 20 33.3	
	comp=Z,4.7nm,0.9s						
PRN	Pahroc Range	94.12	53	P	P	12 20 31.4	-0.5
PRN				IAmb	IAmb	12 20 34.4	
	comp=Z,7.9nm,1.1s						
ELK	Elko	94.24	50	P	P	12 20 31.6	-0.9
ELK				IAmb	IAmb	12 23 29.7	
	comp=Z,9.6nm,1.8s						
NEE2	Needles Airpor	94.26	56	P	P	12 20 31.6	-0.8
	baz=265						
PDMCI	Parker Dam,Lak	94.62	56	P	P	12 20 34.0	0.0
	baz=266,SNR=6.8						
W13A	Hualapai Mount	94.89	55	P	P	12 20 34.8	-0.8
HLID	Hailey	95.06	47	P	P	12 20 36.0	-0.1
	baz=266						
PSUT	Pine Spring	95.15	52	P	P	12 20 37.8	+1.1
LCMT	Little Creek M	95.54	53	P	P	12 20 38.0	-0.3
YKA	Yellowknife Ar	95.89	28	P	P	12 20 39.0	-0.2
	comp=Z,1.2nm,0.9s,baz=265,slow=4.2,SNR=15						
YKA				PKKPbc	PKKPbc	12 37 27.6	-2.9
	comp=Z,0.7nm,0.7s,baz=93,slow=3.4,SNR=14						
U15A	North Rim	96.27	54	P	P	12 20 41.6	-0.3
U15A				IAmb	IAmb	12 20 44.1	
	comp=Z,3.8nm,1.0s						
BOZ	Bozeman (W)	97.14	45	P	P	12 20 44.9	-0.5
	baz=268						
W18A	Petrified Fore	98.29	56	P	P	12 20 49.1	-1.8
	baz=268						
EGMT	Eagleton	98.45	42	P	P	12 20 50.1	-1.2
	baz=270						
BW06	Boulder Array	98.58	48	P	P	12 20 50.9	-1.1
	baz=270						
PDAR	Pinedale Array	98.58	48	P	P	12 20 51.0	-1.1
	comp=Z,1.0nm,0.7s,baz=228,slow=2.5,SNR=10						
TXAR	Lajitas Array	103.37	61	Pdiff	Pdif	12 21 13.7	+0.2
	comp=Z,0.3nm,1.0s,baz=224,slow=2.5,SNR=1.9						
TXAR				PKKPbc	PKKPbc	12 37 09.6	+1.4
	comp=Z,0.2nm,0.7s,baz=106,slow=2.7,SNR=3.6						
WMOK	Wichita Mounta	107.29	56	P	PKiKP	12 25 37.8	-1.7
	baz=274						
BOSA	Boshof	120.08	232	PKP	PKiKP	12 26 04.3	+0.1
	comp=Z,3.5nm,0.6s,baz=65,slow=2.0,SNR=8.1						
SSPA	Standing Stone	122.14	45	P	PKPdf	12 26 06.3	-1.3
	baz=292						
LSZ	Lusaka	122.64	248	PKPdf	PKiKP	12 26 09.8	+0.2
G58A	Ormstown	122.82	39	P	PKPdf	12 26 07.6	-1.2
	baz=298						
J58A	Remsen	122.83	41	P	PKPdf	12 26 07.3	-1.6
	baz=296						
GERES	GERESS Array B	126.09	329	PKP	PKPdf	12 26 14.8	-0.2
	comp=Z,0.4nm,0.6s,baz=29,slow=3.0,SNR=3.9						
GERES	GERESS Array B	126.09	329		PKPdf	12 26 15.1	0.0
CPUP	Villa Florida	135.34	138	PKP	PKPdf	12 26 33.4	+0.3
	comp=Z,3.3nm,1.2s,baz=107,slow=19,SNR=2.2						
BDFB	Brasilia	148.93	135	PKP	PKPdf	12 26 58.2	+0.6
	comp=Z,4.2nm,0.7s,baz=269,slow=2.5,SNR=5.8						
BDFB				PKPbc	PKPbc	12 27 01.0	-0.6
	comp=Z,3.5nm,0.6s,baz=236,slow=3.6,SNR=4.1						
BDFB	Brasilia	148.93	135		PKPdf	12 26 56.0	-1.5
TOA0	Torodi Ar. Sit	152.28	286		PKPbc	12 27 08.7	-0.7
TOA0				PKPab	PKPab	12 27 18.2	-1.3
TORD	Torodi Ar. Bea	152.28	286	PKPbc	PKPbc	12 27 08.3	-1.1
	comp=Z,7.7nm,0.7s,baz=61,slow=2.6,SNR=28						
TORD	Torodi Ar. Bea	152.28	286		PKPbc	12 27 08.3	-1.1
TORD				PKPab	PKPab	12 27 18.0	-1.5
KOWA	Kowa	157.28	293		PKPab	12 27 40.8	0.0
KIC	Kosan Boka	159.30	272	eP	PKPab	12 27 49.0	-0.7
	comp=Z,38nm,1.3s						
DBIC	Dimbokro	159.42	272	PKPab	PKPab	12 27 50.2	+0.1
	comp=Z,6.1nm,1.0s,baz=69,slow=5.7,SNR=4.4						
TIC	Toumodi	159.58	272	eP	PKPab	12 27 51.2	+0.3
LIC	Lamto	159.59	271	eP	PKPab	12 27 50.7	-0.2
	comp=Z,77nm,1.6s						

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*NEIC **20** 12:08:49.8±1.9, 6°.22S±0°.07×154°.3E±0°.1, h35^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=18.5km s-min=11.0km az=73.0*

*IDC **20** 12:08:53.4±5.8, 6°.05S×154°.55E, h63^{km}±53^{km}, mb4.0/16, mb1 4.2/17, mb1mx4.0/44, mbtmp4.3/17, ML4.1/1, Error ellipse: s-maj=25.2km s-min=18.2km az=61.0*

ISC 20 12:08:52.9±0.5**, 6°.16S**±0°.08×**154°.36E**±0°.09**, h61**^{km}**, n40, σ1**^{s}**.47**/41**, mb4.3**/18**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.42	121	S	Sn	12 11 41.7	+4.8
	19nm,0.3s,baz=187,slow=21,SNR=3.5						
PATS	Pohnpei	13.50	17	Pn	Pn	12 12 00.3	-1.4
SANVU	Saraoutou	15.62	127		Pn	12 12 28.3	-1.2
SANVU				IAmb	IAmb	12 12 33.6	
	comp=Z,29nm,0.7s						
CTA	Charters Tower	15.93	209	P	P	12 12 35.8	-0.1
	comp=Z,0.5nm,0.3s,baz=31,slow=12,SNR=6.5						
CTAO	Charters Tower	15.93	209	Pn	Pn	12 12 29.6	-3.7
WRA	Warramunga Arr	23.79	233	P	P	12 14 03.6	+3.3
	comp=Z,3.4nm,0.6s,baz=55,slow=9.8,SNR=1.8						
WRA				PcP	PcP	12 17 42.9	+0.3
	comp=Z,5.4nm,0.7s,baz=55,slow=2.3,SNR=11						
MSVF	Nonsavu	25.84	119	P	P	12 14 17.4	-1.6
	comp=Z,2.9nm,0.6s,baz=274,slow=13,SNR=1.9						
ASAR	Alice Springs	26.27	226	PcP	PcP	12 17 48.4	+0.3
	comp=Z,4.1nm,0.7s,baz=63,slow=2.7,SNR=8.0						
STKA	Stephens Creek	28.23	203	PcP	PcP	12 17 51.8	-0.8
	comp=Z,4.0nm,0.8s,baz=30,slow=1.7,SNR=3.6						
URZ	Urewera	38.04	150	P	P	12 16 06.2	+0.8
	comp=Z,3.1nm,0.3s,baz=329,slow=5.9,SNR=1.4						
BKZ	Black Stump Fm	38.46	152	P	P	12 16 08.8	-0.2
BKZ				IAmb	IAmb	12 16 12.1	
	comp=Z,15nm,1.1s						
TUWZ	Tuamarina	39.22	157	P	P	12 16 14.4	-0.9
BFZ	Birch Farm	39.57	154	P	P	12 16 17.3	-0.9
BFZ				IAmb	IAmb	12 16 19.8	
	comp=Z,21nm,1.1s						
BHW	Baring Head	39.58	156	P	P	12 16 16.9	-1.3
YULB	Yu-li	43.65	313	P	P	12 16 53.0	+1.1
TPUB	Ta-pu	44.08	313	P	P	12 16 56.1	+0.8
SSLB	Suanglung	44.14	314	P	P	12 16 57.1	+1.3
JNU	Nakatsue	44.98	332	P	P	12 17 01.6	-0.8
	comp=Z,12nm,0.7s,baz=139,slow=5.1,SNR=3.5						
JNU	Nakatsue	44.98	332	P	P	12 17 02.4	+0.1
MJAR	Matsushiro Arr	45.09	342	P	P	12 17 01.9	-1.2
	comp=Z,1.4nm,0.8s,baz=187,slow=8.1,SNR=1.9						
KSRS	Korea Array	49.91	332	P	P	12 17 40.2	-0.2
	comp=Z,4.2nm,0.9s,baz=147,slow=9.2,SNR=4.1						
KLR	Kul'dur	58.59	343	P	P	12 18 43.1	-0.3
	comp=Z,3.2nm,0.7s,baz=117,slow=4.5,SNR=2.7						
PETK	Petropavlovsk-	59.11	2	P	P	12 18 47.2	+0.2
	comp=Z,2.2nm,0.6s,baz=167,slow=13,SNR=1.3						
CMAR	Chiang Mai Arr	59.85	295	P	P	12 18 54.4	+1.6
	comp=Z,2.2nm,0.7s,baz=122,slow=5.2,SNR=2.2						
SONM	Songino Array	68.30	327	P	P	12 19 49.1	+1.4
	comp=Z,1.7nm,0.5s,baz=140,slow=5.1,SNR=5.2						
SONM	Songino Array	68.30	327	P	P	12 19 48.3	+0.6
SONM				IAmb	IAmb	12 19 50.8	
	comp=Z,2.6nm,0.9s						
SHL	Shillong	68.33	300	P	P	12 19 48.9	+0.5
LSA	Lhasa	70.28	304	P	P	12 20 02.2	+1.5
MKAR	Makanchi Array	82.36	319	P	P	12 21 09.3	+0.9
	comp=Z,1.5nm,0.8s,baz=97,slow=5.4,SNR=1.7						
MKAR	Makanchi Array	82.36	319	P	P	12 21 07.4	-1.0
ILAR	Eielson Array	82.84	22	P	P	12 21 11.6	+1.2
	comp=Z,0.6nm,0.6s,baz=246,slow=5.4,SNR=1.4						
ZALV	Zalesovo Beam	83.14	326	P	P	12 21 12.5	+0.3
	comp=Z,1.4nm,0.6s,baz=57,slow=5.3,SNR=1.9						
QSPA	South Pole Qui	83.81	180	P	P	12 21 15.2	-0.4
NVAR	Mina Array Bea	91.71	52	P	P	12 21 54.4	+0.1
	comp=Z,3.6nm,0.8s,baz=257,slow=6.5,SNR=9.0						
NVAR	Mina Array Bea	91.71	52	P	P	12 21 54.2	-0.1
YKA	Yellowknife Ar	95.90	28	P	P	12 22 11.7	-1.1
	comp=Z,0.6nm,0.8s,baz=266,slow=4.4,SNR=2.3						
PDAR	Pinedale Array	98.61	48	P	P	12 22 23.9	-1.9
	comp=Z,0.5nm,0.7s,baz=225,slow=1.9,SNR=4.5						
BOSA	Boshof	120.04	232	PKP	PKPdf	12 27 37.5	-0.2
	comp=Z,2.3nm,0.6s,baz=120,slow=1.5,SNR=5.1						
BOSA	Boshof	120.04	232		PKPdf	12 27 37.0	-0.7
TORD	Torodi Ar. Bea	152.19	286	PKPbc	PKPbc	12 28 41.6	-1.2
	comp=Z,3.8nm,0.6s,baz=46,slow=2.9,SNR=2.8						

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*IDC **20** 12:15:10.6±5.9, 6°.59S×154°.83E, h49^{km}±50^{km}, mb3.3/6, mb1 3.6/6, mb1mx3.3/30, mbtmp3.5/6, ML2.8/1, Error ellipse: s-maj=52.7km s-min=29.5km az=120.0*

ISC 20 12:15:11.2±1.2**, 6°.6S**±0°.3×**154°.8E**±0°.2**, h56**^{km}**, n8, σ1**^{s}**.23**/11**, mb3.3**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.09	249	P	Pn	12 17 05.2	-0.9
	7.3nm,0.3s,baz=42,slow=8.1,SNR=6.3						
PMG				S	Sn	12 18 37.4	+1.2
	4.3nm,0.3s,baz=253,slow=16,SNR=3.2						
WRA	Warramunga Arr	23.91	234	P	P	12 20 19.7	-0.4
	0.5nm,0.5s,baz=58,slow=9.6,SNR=4.9						
WRA				PcP	PcP	12 24 02.5	+0.9
	0.6nm,0.6s,baz=61,slow=2.2,SNR=5.8						
ASAR	Alice Springs	26.31	228	P	P	12 20 42.4	+0.5
	0.4nm,0.6s,baz=55,slow=10,SNR=2.2						
ASAR				PcP	PcP	12 24 07.8	+0.8
	0.7nm,0.7s,baz=60,slow=2.0,SNR=6.2						
SONM	Songino Array	68.92	327	P	P	12 26 11.8	+1.4
	0.4nm,0.4s,baz=118,slow=4.3,SNR=6.7						
MKAR	Makanchi Array	83.01	319	P	P	12 27 29.4	-1.1
	0.2nm,0.7s,baz=100,slow=7.5,SNR=2.2						
ILAR	Eielson Array	83.07	22	P	P	12 27 30.0	-0.4
	0.3nm,0.7s,baz=234,slow=6.0,SNR=4.2						
NVAR	Mina Array Bea	91.61	52	P	P	12 28 13.5	+0.8
	0.3nm,0.8s,baz=245,slow=7.2,SNR=3.8						
TORD	Torodi Ar. Bea	152.77	286	PKPbc	PKPbc	12 35 00.9	-2.0
	0.5nm,0.5s,baz=46,slow=1.7,SNR=2.3						

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*SLM **20** 12:27:33.6±0.7, 37°.080N±0°.009×89°.20W±0°.01, h7^{km}±6^{km}, Md2.6/13, mb_Lg2.4/12(NEIC), Error ellipse: s-maj=1.9km s-min=1.1km az=56.0*

NEIC 20 12:27:33.3±0.8**, 37°.074N**±0°.004×**89°.20W**±0°.02**, h5**^{km}±8^{km}**, Error ellipse: s-maj=2.0km s-min=0.4km az=104.0, Cape Girardeau region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRM	Charleston	0.26	211		Pg	12 27 38.5	+0.2
DWDM	Dogwood	0.36	220		Pg	12 27 40.3	-0.1
DWDM					Sg	12 27 45.5	+0.4
EPRM	East Prairie	0.38	200		Pg	12 27 40.6	0.0
EPRM					Sg	12 27 45.9	+0.3
HENM	Henderson Moun	0.42	212		Sg	12 27 46.9	0.0
CGM3	Cape Girardeau	0.43	301		Pg	12 27 41.4	-0.2
CGM3					Sg	12 27 47.0	-0.2
MATM	Matthews	0.44	228		Pg	12 27 41.7	-0.1
T45A	Paducah	0.45	97		Sg	12 27 47.5	-0.3
T45B	Paducah	0.45	97	P		12 27 41.6	
	baz=278						
T45B				S		12 27 48.2	
	baz=278						
KEWM	Kewanee	0.49	220		Pg	12 27 42.7	0.0
SJMO	Saint John's B	0.50	207		Pg	12 27 42.8	0.0
SJMO					Sg	12 27 49.6	+0.3
HICK	Hickman	0.53	183		Pg	12 27 43.4	-0.1
HICK	Hickman	0.53	183		Sg	12 27 51.4	+0.9
GUAMO	Guam	0.55	250		Pg	12 27 43.5	-0.2
COKM	Charter Oak	0.56	230		Pg	12 27 43.7	-0.3
NMMO	New Madrid	0.56	210		Pg	12 27 43.8	-0.3
CATM	Catron	0.58	218		Pg	12 27 44.3	-0.3
CATM					Sg	12 27 52.6	+0.5
WALK	Watson Lake	0.60	207		Pg	12 27 45.0	+0.2
PARMO	Parma	0.60	227		Pg	12 27 44.5	-0.4
S44A	Carbondale	0.62	356		Sg	12 27 54.4	+1.1
S44A	Carbondale	0.62	356	P		12 27 44.9	
	baz=176						
SIUC	Southern Illin	0.64	359		Pg	12 27 45.7	+0.1
FLPT	Flippin	0.67	188		Pg	12 27 46.0	-0.2
PENMO	Penman	0.71	209		Sg	12 27 56.3	+0.1
GLAT	Glass	0.81	185	Pg	Pg	12 27 48.6	-0.1
LNXT	Lenox	1.00	194	Pg	Pg	12 27 52.3	-0.1
LNXT	Lenox	1.00	194	P		12 27 52.1	
	baz=13						
PBMO	Poplar Bluff	1.03	254		Pg	12 27 52.0	-1.1
PBMO				IAmb_Lg		12 28 08.6	
	comp=Z,17nm,0.8s						
PBMO	Poplar Bluff	1.03	254	P		12 27 52.0	
	baz=73						
PEBM	Pemiscott Bayo	1.10	209	Pg	Pg	12 27 54.2	-0.1
GNAR	Gosnell	1.29	211	Pn	Pn	12 27 57.2	-0.6
WVT	Waverly	1.45	130	Pn	Pn	12 27 59.6	-0.5
WVT	Waverly	1.45	130	P		12 27 59.5	
	baz=311						
USIN	University of	1.51	53	Pn	Pn	12 28 01.3	+0.4

T42A	**Van Buren**	1.52	269	P		12 28 00.3	
	baz=88						
Q44A	**Meyer Farm, Va**	1.83	4	Pn	Pb	12 28 06.3	-0.9
Q44A	**Meyer Farm, Va**	1.83	4	P		12 28 06.2	
	baz=185						
Q44A				S		12 28 30.6	
	baz=185						
CCM	**Cathedral Cave**	1.90	302	Pn	Pb	12 28 07.4	-1.0
CCM				IAmb_Lg		12 28 35.5	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	1.90	302	P		12 28 07.0	
	baz=120						
PLAL	**Pickwick Lake**	2.28	156	Pn	Pn	12 28 11.0	-0.5
V48A	**Smith Brothers**	2.33	124	Pn	Pn	12 28 13.2	+0.9
V48A	**Smith Brothers**	2.33	124	P		12 28 13.3	
	baz=306						
MGMO	**Mountain Grove**	2.46	273	Pn	Pn	12 28 14.8	+0.9
CLTN	**Cedars of Leba**	2.51	112	Pn	Pn	12 28 16.0	+1.3
OXF	**Oxford**	2.56	184	Pn	Pn	12 28 16.4	+1.0
FCAR	**Ozark Folk Cen**	2.64	244	Pn	Pn	12 28 17.3	+0.8
U40A	**Yellville**	3.02	257	Pn	Pn	12 28 23.2	+1.5
W41B	**Gary Mavity, V**	3.11	233	P		12 28 23.4	
	baz=51						
X48A	**Hartselle**	3.15	146	Pn	Pn	12 28 22.4	-1.0
W50A	**Signal Mountai**	3.66	120	IAmb_Lg		12 29 31.8	
	comp=Z,8.1nm,0.8s						
X51A	**Calhoun**	4.33	124	IAmb_Lg		12 29 47.9	
	comp=Z,12nm,0.9s						
U54A	**Nelsons Funny**	5.95	93	IAmb_Lg		12 30 59.6	
	comp=Z,9.4nm,1.0s						
U56A	**King**	7.12	93	IAmb_Lg		12 31 22.0	
	comp=Z,8.5nm,1.3s						

SKHL ***20*** *12:46:36.8±0.1, 47.°98N×155.°34E, h50^{km}±5^{km}, mb5.6/4, Ms4.3/7, msh5.5/3*
KRSC ***20*** *12:46:37.0±1.8, 48.°14N×156.°45E, h17^{km}±32^{km}, ML5.2*
BJI ***20*** *12:46:36.6±0.0, 48.°27N×155.°22E, h49^{km}, mB5.0/35, mb4.6/50, Ms4.3/14, Ms7 4.1/15*
MOS ***20*** *12:46:37.4±1.2, 48.°23N×154.°86E, h41^{km}, mb4.8/48, MS3.5/9, Error ellipse: s-maj=6.6km s-min=3.4km az=76.3*
IDC ***20*** *12:46:41.3±2.5, 48.°29N×154.°77E, h55^{km}±22^{km}, mb4.1/26, mb1 4.3/31, mb1mx4.2/47, mbtmp4.4/31, ML4.3/4, MS3.9/21, Ms1 3.9/21, ms1mx3.7/51, Error ellipse: s-maj=15.4km s-min=9.9km az=153.0*
NEIC ***20*** *12:46:41.0±1.2, 48.°28N±0.°09×154.°8E±0.°1, h51^{km}±6^{km}, mb4.7/123, Error ellipse: s-maj=15.0km s-min=9.4km az=137.0*
ISC 20 12:46:40.2±0.7**, 48.°19N**±0.°05×**154.°92E**±0.°04**, h51**^{km}±5^{km}**, n489,** σ1^{s}**32**/510**, mb4.7**/160**, MS4.0**/20**, 22C-21D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	2.61	17	*e*P	Pn	12 47 18.3	-1.5
SKR				AMB	AMB	12 47 23.7	
	330nm,0.4s						
SKR				*e*S	Sn	12 47 49.4	-0.8
SKR				A	A	12 47 57.0	
	1µm,0.4s						
SKR				A	A	12 47 57.0	
	990nm,0.4s						
SKR				AMS	AMS	12 48 30.0	
	2µm,10.0s						
SKR				AMS	AMS	12 48 30.0	
	2µm,10.0s						
SKR				AMS	AMS	12 48 30.0	
	2µm,10.0s						
SKR	**Severo-Kuril's**	2.61	17	*e*PN	Pn	12 47 18.4	-1.4
SKR				*e*S	Sn	12 47 49.2	-1.1
SKR				pmax	pmax		
	comp=Z,231nm,0.9s						
SKR				smax	smax		
	comp=E,1µm,0.4s						
SKR				smax	smax		
	comp=N,1µm,0.5s						
SKR				MLR	MLR		
	comp=Z,2µm,14.0s						
SKR				MLR	MLR		
	comp=N,2µm,10.0s						
SKR				MLR	MLR		
	comp=E,2µm,10.0s						
SKR				MLR	MLR		
	comp=Z,900nm,12.0s						
SKR	**Severo-Kuril's**	2.61	17	*e*P	Pn	12 47 18.3	-1.5
SKR				*e*S	Sn	12 47 49.5	-0.8
PAU	**Pauzhetka**	3.50	20	*e*P	Pn	12 47 31.4	-0.6
PAU				AMB	AMB	12 47 34.0	
	comp=Z,340nm,0.5s						
PAU				AMB	AMB	12 47 35.5	
	comp=Z,940nm,3.0s						
PAU				*e*S	Sn	12 48 12.4	+0.3
PAU				A	A	12 48 14.7	
	comp=Z,950nm,0.4s						
PAU				A	A	12 48 14.7	
	comp=Z,1µm,0.4s						
PAU				AMS	AMS	12 49 07.8	
	comp=Z,2µm,15.0s						
PAU				AMS	AMS	12 49 07.8	
	comp=Z,2µm,15.0s						
PAU				AMS	AMS	12 49 07.8	
	comp=Z,2µm,15.0s						
PAU	**Pauzhetka**	3.50	20	PN	Pn	12 47 30.9	-1.1
PAU				S	Sn	12 48 11.5	-0.6
PAU	**Pauzhetka**	3.50	20	*e*P	Pn	12 47 30.9	-1.1
PAU				*e*S	Sn	12 48 11.5	-0.6
MTVR	**Mutnovka**	4.78	25	PN	Pn	12 47 48.7	-0.9
MTVR				S	Sn	12 48 42.2	-1.5
MTVR	**Mutnovka**	4.78	25	*e*P	Pn	12 47 48.7	-0.9
MTVR				*e*S	Sn	12 48 42.2	-1.5
GRL	**Gorelyy**	4.81	24	PN	Pn	12 47 49.8	-0.3
GRL	**Gorelyy**	4.81	24	*e*P	Pn	12 47 49.8	-0.3
RUS	**Russkaya**	4.83	27	PN	Pn	12 47 48.1	-2.1
RUS	**Russkaya**	4.83	27	*e*P	Pn	12 47 48.1	-2.1
RUS				*e*S	Sn	12 48 41.2	-3.5
APC	**Apacha**	4.95	16	PN	Pn	12 47 53.2	+1.4
APC	**Apacha**	4.95	16	*e*P	Pn	12 47 53.2	+1.4
PEA0B	**Petropavlovsk-**	5.23	19	*ce*PN	Pn	12 47 55.6	-0.1
PEA0B	**Petropavlovsk-**	5.23	19	Pn	Pn	12 47 56.1	+0.3
PETK	**Petropavlovsk-**	5.23	19	P	Pn	12 47 56.0	+0.2
	comp=Z,11nm,0.3s,baz=173,slow=13,SNR=275						
PETK				LR	LR	12 50 17.8	
	comp=Z,1µm,18.5s,baz=188,slow=42						
PETK	**Petropavlovsk-**	5.23	19	Pn	Pn	12 47 55.9	+0.2
PET	**Petropavlovsk**	5.39	25	*e*P	Pn	12 47 56.9	-1.0
PET				AMB	AMB	12 47 59.9	
	comp=Z,180nm,0.4s						
PET				*e*S	Sn	12 48 56.3	-2.2
PET				A	A	12 49 17.0	
	comp=Z,520nm,0.6s						
PET				A	A	12 49 17.0	
	comp=Z,650nm,0.6s						
PET				AMS	AMS	12 50 21.5	
	comp=Z,650nm,19.0s						
PET	**Petropavlovsk**	5.39	25	*e*PN	Pn	12 47 56.5	-1.4
PET				pmax	pmax		
	comp=Z,98nm,0.6s						
PET				MLR	MLR		
	comp=Z,700nm,19.0s						
PET	**Petropavlovsk**	5.39	25	*e*P	Pn	12 47 56.8	-1.1
PET				*e*S	Sn	12 48 56.7	-1.8
PET	**Petropavlovsk**	5.39	25	Pn	Pn	12 47 56.5	-1.4
DALK	**Dalny**	5.42	25	PN	Pn	12 47 57.0	-1.3
DALK	**Dalny**	5.42	25	*e*P	Pn	12 47 57.0	-1.3
DALK				*e*S	Sn	12 48 57.2	-2.2
UGLR	**Uglovaya**	5.60	25	PN	Pn	12 48 00.5	-0.4
UGLR	**Uglovaya**	5.60	25	*e*P	Pn	12 48 00.5	-0.4
KOK	**Koryaka**	5.62	23	PN	Pn	12 48 01.1	-0.1
KOK	**Koryaka**	5.62	23	*e*P	Pn	12 48 01.1	-0.1
AVH	**Avacha**	5.63	24	PN	Pn	12 48 01.2	0.0
AVH	**Avacha**	5.63	24	*e*P	Pn	12 48 01.2	0.0
SMAR	**Somma**	5.64	24	PN	Pn	12 48 01.1	-0.5
SMAR	**Somma**	5.64	24	*e*P	Pn	12 48 01.1	-0.5
KRER	**Koryakskii**	5.66	24	PN	Pn	12 48 01.6	-0.3
KRER	**Koryakskii**	5.66	24	*e*P	Pn	12 48 01.6	-0.3
SDLR	**Sedlovina**	5.68	25	PN	Pn	12 48 01.1	-0.9
SDLR	**Sedlovina**	5.68	25	*e*P	Pn	12 48 01.1	-0.9
KUR	**Kuril'sk**	5.68	241	*i* P	Pn	12 48 02.2	+0.3
KUR				AMB	AMB	12 48 06.0	
	comp=Z,310nm,0.5s						
KUR				*i* S	Sn	12 49 05.8	0.0
KUR				A	A	12 49 14.6	
	comp=Z,2µm,2.0s						
KUR				A	A	12 49 14.6	
	comp=Z,2µm,2.0s						
KUR				A	A	12 49 25.0	
	comp=Z,820nm,0.7s						
KUR				A	A	12 49 25.0	
	comp=Z,640nm,0.7s						
KUR				AMS	AMS	12 50 04.0	
	comp=Z,2µm,14.0s						
KUR				AMS	AMS	12 50 04.0	
	comp=Z,2µm,14.0s						
KUR				AMS	AMS	12 50 04.0	
	comp=Z,1µm,14.0s						
KUR	**Kuril'sk**	5.68	241	*d i*PN	Pn	12 48 03.9	+2.0
KUR				*i* S	Sn	12 49 07.7	+1.9
KUR				pmax	pmax		
	comp=N,89nm,0.5s						
KUR				pmax	pmax		
	comp=Z,308nm,0.5s						
KUR				pmax	pmax		
	comp=E,41nm,0.2s						
KUR				pmax	pmax		
	comp=Z,674nm,1.1s						
KUR				smax	smax		
	comp=E,1µm,1.9s						
KUR				smax	smax		
	comp=N,521nm,1.3s						
KUR				MLR	MLR		
	comp=Z,682nm,15.0s						
KRX	**Arik**	5.69	23	PN	Pn	12 48 01.9	-0.2
KRX	**Arik**	5.69	23	*e*P	Pn	12 48 01.9	-0.2
NLC	**Nalytchevo**	5.72	28	PN	Pn	12 48 00.3	-2.1
NLC	**Nalytchevo**	5.72	28	*e*P	Pn	12 48 00.3	-2.1
NLC				*e*S	Sn	12 49 01.2	-5.5
GNL	**Ganaly**	5.83	18	PN	Pn	12 48 04.2	+0.1
GNL	**Ganaly**	5.83	18	*e*P	Pn	12 48 04.2	+0.1
SPN	**Mys Shipunski**	5.88	32	PN	Pn	12 48 02.8	-1.9
SPN	**Mys Shipunski**	5.88	32	*e*P	Pn	12 48 02.8	-1.9
SPN				*e*S	Sn	12 49 06.4	-4.3
KII	**Karymskiy**	6.51	24	PN	Pn	12 48 14.1	+0.8
KII	**Karymskiy**	6.51	24	*e*P	Pn	12 48 14.1	+0.8
YUK	**Yuzh-Kuril'sk**	7.54	240	*e*P	Pn	12 48 26.8	-0.6
YUK				AMB	AMB	12 48 30.5	
	comp=Z,1µm,2.0s						
YUK				AMB	AMB	12 48 31.0	
	comp=Z,137nm,0.7s						
YUK				*e*S	Sn	12 49 51.0	-0.5
YUK				A	A	12 49 56.3	
	comp=Z,3µm,3.0s						
YUK				A	A	12 49 56.3	
	comp=Z,2µm,3.0s						
YUK	**Yuzh-Kuril'sk**	7.54	240	*e*PN	Pn	12 48 27.9	+0.5
YUK				pmax	pmax		
	comp=Z,137nm,0.7s						
YUK				pmax	pmax		
	comp=E,66nm,0.1s						
YUK				pmax	pmax		
	comp=N,128nm,0.7s						
YUK				MLR	MLR		
	comp=Z,506nm,14.0s						
GRPR	**Tuman**	7.62	240	*e*P	Pn	12 48 28.0	-0.5
GRPR				AMB	AMB	12 48 44.0	
	comp=Z,112nm,0.5s						
GRPR				*e*S	Sn	12 49 52.0	-1.4
KZV	**Kizimen**	7.69	24	PN	Pn	12 48 28.4	-1.2
KZV	**Kizimen**	7.69	24	*e*P	Pn	12 48 28.4	-1.2
TUMD	**Tumrok D**	7.80	24	*e*P	Pn	12 48 29.5	-1.4
TUMR	**Tumrok**	7.80	23	PN	Pn	12 48 30.8	-0.3
TUMR	**Tumrok**	7.80	23	*e*P	Pn	12 48 30.8	-0.3
NMR	**Nemuro--Hokkai**	8.03	236	*i* P	Pn	12 48 31.0	-3.1
NMR	**Nemuro--Hokkai**	8.03	236	*i* PN	Pn	12 48 31.6	-2.5
YSS	**Yuzh-Sakhalins**	8.32	266	*e*P	Pn	12 48 40.0	+1.9
YSS				AMB	AMB	12 48 41.0	
	comp=Z,410nm,3.0s						
YSS				AMB	AMB	12 48 43.6	
	comp=Z,80nm,0.9s						
YSS				*e*S	Sn	12 50 12.6	+2.0
YSS				AMS	AMS	12 53 19.3	
	comp=Z,750nm,12.0s						
YSS				AMS	AMS	12 53 19.3	
	comp=Z,720nm,12.0s						
YSS	**Yuzh-Sakhalins**	8.32	266	⇓*e*PN	Pn	12 48 40.0	+1.9
YSS				pmax	pmax		
	comp=Z,80nm,1.1s						
YSS				MLR	MLR		
	comp=Z,700nm,12.0s						
YSS	**Yuzh-Sakhalins**	8.32	266	Pn	Pn	12 48 40.0	+1.9
TYV	**Tymovskoe**	8.41	293	*e*P	Pn	12 48 41.8	+2.5
TYV				AMB	AMB	12 48 46.0	
	comp=Z,300nm,5.0s						
TYV				*e*S	Sn	12 50 13.0	+0.2
TYV				A	A	12 50 22.0	
	comp=Z,500nm,6.0s						
TYV				AMS	AMS	12 52 16.5	
	comp=Z,2µm,14.0s						
TYV				AMS	AMS	12 52 16.5	
	comp=Z,2µm,14.0s						
TYV				AMS	AMS	12 52 16.5	
	comp=Z,1µm,14.0s						
TYV	**Tymovskoe**	8.41	293	*e*PN	Pn	12 48 44.1	+4.8
TYV				*e*S	Sn	12 50 18.5	+5.7
TYV				pmax	pmax		
	comp=Z,61nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,4.7s						
TYV				smax	smax		
	comp=E,11nm,1.6s						
TYV				smax	smax		
	comp=E,500nm,6.4s						
TYV				MLR	MLR		
	comp=Z,1µm,15.0s						
UGL	**Uglegorsk**	8.56	281	*i* P	Pn	12 48 44.0	+2.6
UGL				AMB	AMB	12 48 45.0	
	comp=Z,91nm,0.9s						
UGL				*e*S	Sn	12 50 19.8	+3.4
UGL				AMS	AMS	12 52 13.0	
	comp=Z,790nm,15.0s						
UGL				AMS	AMS	12 52 13.0	
	comp=Z,1µm,15.0s						
UGL				AMS	AMS	12 52 13.0	
	comp=Z,1µm,15.0s						
UGL	**Uglegorsk**	8.56	281	⇑*i*PN	Pn	12 48 44.3	+2.9
UGL				pmax	pmax		
	comp=Z,91nm,0.9s						
UGL				MLR	MLR		
	comp=Z,1µm,15.0s						
UGL				MLR	MLR		
	comp=N,600nm,12.0s						
UGL				MLR	MLR		
	comp=E,900nm,6.0s						
OKH	**Okha**	9.28	310	*e*P	Pn	12 48 54.7	+3.6
OKH				*e*S	Sn	12 50 36.5	+2.6
OKH				AMS	AMS	12 52 59.3	
	comp=E,960nm,14.0s						
OKH				AMS	AMS	12 52 59.3	
	comp=E,1µm,14.0s						
OKH				AMS	AMS	12 52 59.3	
	comp=E,670nm,14.0s						
SRKR	**Sorokina**	9.29	22	PN	Pn	12 48 50.3	-1.1
SRKR	**Sorokina**	9.29	22	*e*P	Pn	12 48 50.3	-1.1
KBTR	**Krutoberegovo**	9.37	28	PN	Pn	12 48 49.8	-2.6
KBTR	**Krutoberegovo**	9.37	28	*e*P	Pn	12 48 49.8	-2.6
JKA	**Kamikawa-asahi**	9.47	249	*e*P	Pn	12 48 54.6	+0.8
JKA	**Kamikawa-asahi**	9.47	249	Pn	Pn	12 48 54.9	+1.0
ASAJ	**Asahikawa**	9.47	249	P	Pn	12 48 54.6	+0.8
	comp=E,1.9nm,0.3s,baz=69,slow=16,SNR=18						
ASAJ				LR	LR	12 52 19.8	
	comp=E,493nm,19.1s,baz=58,slow=36						
BKI	**Bering**	9.81	40	*e*S	Sn	12 50 34.1	-13
NKL	**Nikolayevsk**	10.30	304	*e*P	Pn	12 49 05.4	+0.2
NKL				AMB	AMB	12 49 09.5	
	comp=E,135nm,0.9s						
ERM	**Erimo**	10.35	238	*i* PN	Pn	12 49 04.7	-1.2
ERM	**Erimo**	10.35	238	Pn	Pn	12 49 05.7	-0.2
JEW	**Eniwo**	10.86	245	Pn	Pn	12 49 12.3	-0.5
MA2	**Magadan**	11.66	349	*e*P	Pn	12 49 24.0	+0.3
MA2	**Magadan**	11.66	349	PN	Pn	12 49 24.0	+0.3
MA2	**Magadan**	11.66	349	Pn	Pn	12 49 24.0	+0.3
TEY	**Ternei**	12.98	263	*e*P	Pn	12 49 41.2	-0.5
TEY				AMB	AMB	12 49 56.5	
	comp=E,9.0nm,0.8s						
SMY	**Shemya**	13.03	62	PN	Pn	12 49 41.3	-1.0
SMY	**Shemya**	13.03	62	Pn	Pn	12 49 41.3	-1.0
EKMR	**Ekimchan**	14.75	298	*e*P	Pn	12 50 04.5	-1.0
EKMR				AMB	AMB	12 50 16.0	
	comp=E,16nm,0.9s						
SEY	**Seymchan**	14.84	355	P	Pn	12 50 05.8	-0.8
	comp=E,0.6nm,0.3s,baz=155,slow=11,SNR=15						
SEY	**Seymchan**	14.84	355	*e*P	Pn	12 50 05.0	-1.6
KLR	**Kul'dur**	15.32	283	P	P	12 50 15.8	-1.0
	comp=E,0.7nm,0.3s,baz=75,slow=10.0,SNR=27						
KLR				LR	LR	12 56 32.3	
	comp=E,417nm,18.1s,baz=78,slow=39						
KLR	**Kul'dur**	15.32	283	*e*P	Pn	12 50 12.8	-0.1
USA0B	**Ussuriysk Arra**	16.35	264	P	Pn	12 50 26.2	+0.1
USA0B				pmax	pmax		
	comp=Z,22nm,1.5s						
USA0B	**Ussuriysk Arra**	16.35	264	Pn	Pn	12 50 26.2	+0.1
USRK	**Ussuriysk Ar.**	16.35	264	P	Pn	12 50 25.4	-0.7
	baz=70,slow=13,SNR=11						
USRK				LR	LR	12 57 02.3	
	comp=Z,202nm,18.0s,baz=65,slow=38						
USRK	**Ussuriysk Ar.**	16.35	264	P	Pn	12 50 26.5	+0.4
USRK	**Ussuriysk Ar.**	16.35	264	Pn	Pn	12 50 26.5	+0.4
MAJO	**Matsushiro**	16.93	233	P	Pn	12 50 30.9	-2.5
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MAJO	**Matsushiro**	16.93	233	Pn	Pn	12 50 30.9	-2.5
MAT	**Matsushiro**	16.93	233	P	Pn	12 50 29.8	-3.6
MAT				*e*S	Sn	12 53 39.0	-1.6
MJAR	**Matsushiro Arr**	16.93	233	P	Pn	12 50 30.4	-3.0
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=8.8						
MJAR				LR	LR	12 56 45.7	
	comp=Z,117nm,21.2s,baz=40,slow=36						
MJAR	**Matsushiro Arr**	16.93	233	P	Pn	12 50 31.6	-1.8
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	**Matsushiro Arr**	16.93	233	Pn	Pn	12 50 31.6	-1.8
MJB9	**Matsu-Tunnel**	16.93	233		P	12 50 34.9	+0.2
BMKR	**Bomnak**	17.45	302	*e*P	Pn	12 50 38.5	-1.1
BMKR				AMB	AMB	12 50 46.2	
	comp=Z,6.0nm,0.5s						
MDJ	**Mudanjiang**	17.80	268	P	Pn	12 50 43.1	-1.0
MDJ				pP	pP	12 50 53.8	-1.7
MDJ				S	Sn	12 54 00.6	-0.9
MDJ				pmax	pmax		
	comp=Z,12nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.7s						
MDJ				LR	LR		
	comp=Z,420nm,16.4s						
MDJ	**Mudanjiang**	17.80	268		Pn	12 50 43.5	-0.6
JGF	**Kuroka**	18.09	232	P	Pn	12 50 47.9	+0.2
ZEA	**Zeya**	18.22	298	*e*P	Pn	12 50 51.6	+2.5
ZEA				AMB	AMB	12 50 54.0	
	comp=Z,10.0nm,0.7s						
ZEA				AMS	AMS	12 58 40.0	
	comp=Z,300nm,16.0s						
ZEA				AMS	AMS	12 58 40.0	
	comp=Z,400nm,16.0s						
ZEA	**Zeya**	18.22	298	*e*P	Pn	12 50 51.6	+2.5
ZEA				*e*S	Sn	12 54 04.6	-6.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				smax	smax		
	comp=N,200nm,5.3s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
INU	**Inuyama**	18.46	233	P	Pn	12 50 52.3	+0.2
KROS	**Kirovskiy**	18.47	300	*e*P	P	12 50 52.1	+0.5
KROS				AMB	AMB	12 50 55.2	
	comp=Z,6.0nm,0.4s						
YAK	**Yakutsk**	19.82	324	P	P	12 51 06.8	+0.5
	comp=Z,0.1nm,0.3s,baz=158,slow=1.9,SNR=8.0						
YAK				LR	LR	12 58 22.4	
	comp=Z,193nm,20.5s,baz=83,slow=36						
YAK	**Yakutsk**	19.82	324	*e*P	P	12 51 08.0	+1.8
YAK	**Yakutsk**	19.82	324	*e*P	P	12 51 08.0	+1.8
YAK				*e*S	Sn	12 54 50.9	+1.0
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,80nm,1.4s						
YAK				pmax	pmax		
	comp=N,45nm,1.3s						
YAK				pmax	pmax		
	comp=E,38nm,1.1s						
YAK				smax	smax		
	comp=N,16nm,1.7s						
YAK				smax	smax		
	comp=E,13nm,1.2s						
YAK				MLR	MLR		
	comp=Z,343nm,14.0s						
YAK				MLR	MLR		
	comp=N,134nm,13.0s						
YAK				MLR	MLR		
	comp=E,130nm,11.0s						
YAK	**Yakutsk**	19.82	324	P	P	12 51 05.4	-0.8
YAK				IAmb	IAmb	12 51 22.4	
	comp=Z,33nm,0.9s						
BILL	**Bilibino**	20.71	12	⇑*e*P	P	12 51 13.5	-2.4
BILL				*e*		12 51 33.5	
BILL				*e*S	S	12 55 02.7	-1.3
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
BILL				MLR	MLR		
	comp=Z,248nm,17.0s						
BILL	**Bilibino**	20.71	12	P	P	12 51 13.0	-2.8
JMN	**Monobe**	21.38	235	P	P	12 51 22.4	-0.9
JMN				IAmb	IAmb	12 51 33.7	
	comp=Z,28nm,1.0s						
KSRS	**Korea Array**	22.41	251	P	P	12 51 34.6	+0.4
	comp=Z,7.9nm,0.6s,baz=50,slow=9.8,SNR=35						
KSRS				LR	LR	12 59 59.8	
	comp=Z,225nm,18.9s,baz=46,slow=36						
KS19	**Wonju Array Si**	22.42	252	P	P	12 51 34.5	+0.1
KS19				IAmb	IAmb	12 51 38.0	
	comp=Z,44nm,1.4s						
KSAR	**Wonju Array Be**	22.44	251	P	P	12 51 33.9	-0.7
KSAR	**Wonju Array Be**	22.44	251	P	P	12 51 33.9	-0.7
INCN	**Inchon**	23.21	253	P	P	12 51 43.5	+0.9
INCN				pmax	pmax		
	comp=Z,20nm,0.8s						
INCN	**Inchon**	23.21	253	P	P	12 51 43.5	+0.9
INCN				IAmb	IAmb	12 51 44.5	
	comp=Z,20nm,0.8s						
TJN	**Taejon**	23.43	250	*ce*P	P	12 51 44.5	-0.1
TIXI	**Tiksi**	26.45	342	*ce*P	P	12 52 09.9	-1.9
TIXI	**Tiksi**	26.45	342	P	P	12 52 12.2	+0.3
ANM	**Nome**	26.80	38	P	P	12 52 16.1	+1.1
ANM				pmax	pmax		
	comp=Z,14nm,1.2s						
ANM	**Nome**	26.80	38	P	P	12 52 16.1	+1.1
JOW	**Kunigami**	29.77	234	LR	LR	13 05 17.8	
	comp=Z,54nm,21.6s,baz=169,slow=38						
H11N2	**WAKE ISLAND Hy**	30.01	157	T	T	13 24 26.0	
	baz=345,slow=77,SNR=81						
H11N1	**WAKE ISLAND Hy**	30.02	157	T	T	13 24 25.6	
	baz=345,slow=77,SNR=116						
H11N3	**WAKE ISLAND Hy**	30.02	157	T	T	13 24 24.0	
	baz=345,slow=77,SNR=36						
H11S1	**WAKE ISLAND Hy**	31.13	158	T	T	13 25 52.5	
	baz=345,slow=76,SNR=749						
H11S3	**WAKE ISLAND Hy**	31.14	158	T	T	13 25 57.5	
	baz=345,slow=76,SNR=1353						
H11S2	**WAKE ISLAND Hy**	31.14	158	T	T	13 25 47.1	
	baz=345,slow=76,SNR=642						
HHC	**Hu-ho-hao-te**	31.43	273	*e*P	P	12 52 57.0	+0.5
HHC				PP	PnPn	12 54 02.0	+1.3
HHC				S	S	12 57 58.4	-2.2
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,250nm,7.3s						
HHC				LR	LR		
	comp=Z,300nm,9.5s						
HHC				LR	LR		
	comp=Z,310nm,10.1s						
HHC				LR	LR		
	comp=Z,300nm,15.8s						
NJ2	**Nanjing**	31.59	253	*e*P	P	12 52 57.6	-0.3
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ULN	**Ulaanbaatar**	31.60	288	*ce*P	P	12 52 56.0	-2.0
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						

IMAR	Indian Mountai	31.88	37	P	P	12 53 00.4	+0.4
SONM	Songino Array	32.03	288	P	P	12 53 01.2	-0.6
	comp=Z,1.8nm,0.8s,baz=64,slow=9.2,SNR=11						
SONM				PcP	PcP	12 55 50.8	+0.5
	comp=Z,1.2nm,0.8s,baz=88,slow=2.1,SNR=7.0						
SONM				LR	LR	13 07 06.3	
	comp=Z,303nm,19.3s,baz=66,slow=38						
SONM	Songino Array	32.03	288	P	P	12 53 00.6	-1.2
TLY	Talaya	32.63	296	i P	P	12 53 05.6	-1.2
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY	Talaya	32.63	296	P	P	12 53 06.9	0.0
TLY				IAmb	IAmb	12 53 07.8	
	comp=Z,9.3nm,0.9s						
ZAK	Zakamensk	33.20	294	eP	P	12 53 09.3	-2.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
COLD	Coldfoot	33.45	35	P	P	12 53 14.8	+1.0
COLD				IAmb	IAmb	12 53 15.6	
	comp=Z,6.8nm,0.8s						
SML	Sawmill	34.08	45	P	P	12 53 20.3	+0.9
MDM	Murphy Dome	34.08	39	P	P	12 53 20.2	+0.9
MDM				IAmb	IAmb	12 53 31.6	
	comp=Z,7.2nm,1.0s						
TCOL	CIGO, UAF Yank	34.24	40	P	P	12 53 21.5	+0.9
TCOL				IAmb	IAmb	12 53 32.5	
	comp=Z,13nm,0.8s						
COLA	College	34.24	40	i P	P	12 53 19.3	-1.3
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
COLA	College	34.24	40	P	P	12 53 21.5	+0.8
COLA				IAmb	IAmb	12 53 32.4	
	comp=Z,12nm,0.8s						
CCB	Clear Creek Bu	34.26	40	P	P	12 53 21.2	+0.5
CCB				IAmb	IAmb	12 53 32.3	
	comp=Z,9.8nm,1.3s						
POKR	Poker Plat Res	34.42	39	P	P	12 53 23.5	+1.2
POKR				IAmb	IAmb	12 53 24.6	
	comp=Z,11nm,0.8s						
IL31		34.65	40	P	P	12 53 24.1	-0.1
ILAR	Eielson Array	34.65	40	P	P	12 53 24.6	+0.4
	comp=Z,1.2nm,0.7s,baz=251,slow=8.2,SNR=15						
ILAR				PcP	PcP	12 55 56.5	-0.6
	comp=Z,0.6nm,0.7s,baz=287,slow=3.7,SNR=4.1						
ILAR	Eielson Array	34.65	40	P	P	12 53 24.1	-0.1
ILAR	Eielson Array	34.65	40	P	P	12 53 24.1	-0.1
PRP	Porcupine Dome	35.23	39	P	P	12 53 30.7	+1.3
PRP				IAmb	IAmb	12 53 41.1	
	comp=Z,7.4nm,0.8s						
FYU	Fort Yukon	35.36	37	P	P	12 53 32.0	+1.8
BMAR	Burnt Mountain	35.63	35	P	P	12 53 31.6	-1.0
K27K	Chicken	36.77	41	P	P	12 53 43.5	+1.1
K27K				IAmb	IAmb	12 53 54.5	
	comp=Z,9.7nm,1.0s						
BCAR	Beaver Creek A	37.01	43	P	P	12 53 45.6	+1.2
EGAK	Eagle	37.10	40	P	P	12 53 45.1	-0.1
EGAK				IAmb	IAmb	12 53 56.7	
	comp=Z,5.8nm,0.8s						
EPYK	Eagle Plains	38.78	37	P	P	12 54 01.0	+1.7
EPYK				IAmb	IAmb	12 54 02.0	
	comp=Z,14nm,1.1s						
ENH	Enshi	38.83	259	P	P	12 53 59.7	-0.5
ENH				IAmb	IAmb	12 54 00.7	
	comp=Z,9.4nm,0.9s						
LZH	Lanzhou	39.07	271	eP	P	12 54 01.9	-0.4
LZH				pP	pP	12 54 15.3	-0.4
LZH				sP	sP	12 54 22.0	+0.4
LZH				PP	PnPn	12 55 40.3	+5.0
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=Z,300nm,14.3s						
LZH				LR	LR		
	comp=Z,280nm,13.6s						
LZH				LR	LR		
	comp=Z,300nm,16.5s						
HYT	Haines Junctio	39.38	46	P	P	12 54 05.8	+1.3
INK	Inuvik	39.77	33	P	P	12 54 07.9	+0.5
	comp=Z,5.2nm,0.8s,baz=298,slow=6.7,SNR=17						
INK	Inuvik	39.77	33	P	P	12 54 08.8	+1.4
GTA	Gaotai	39.96	278	⇓P	P	12 54 08.8	-0.8
GTA				PcP	PcP	12 56 14.8	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,200nm,6.5s						
GTA				LR	LR		
	comp=Z,210nm,17.8s						
GTA				LR	LR		
	comp=Z,210nm,16.7s						
GTA				LR	LR		
	comp=Z,310nm,17.1s						
ZALV	Zalesovo Beam	42.77	305	P	P	12 54 31.4	-0.9
	comp=Z,2.0nm,0.4s,baz=66,slow=7.0,SNR=8.6						
ZALV				PcP	PcP	12 56 22.8	0.0
	comp=Z,3.3nm,0.7s,baz=80,slow=3.6,SNR=11						
ZALV				LR	LR	13 12 51.3	
	comp=Z,134nm,20.2s,baz=52,slow=37						
ZALV	Zalesovo Beam	42.77	305	P	P	12 54 30.8	-1.4
C36M	Paulatuk	42.95	31	P	P	12 54 34.8	+1.3
C36M				IAmb	IAmb	12 54 35.8	
	comp=Z,14nm,1.0s						
DGZ	Jazzator, Alta	42.98	298	i P	P	12 54 34.1	-0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GYA	Guiyang	43.22	258	⇑P	P	12 54 37.4	+1.0
GYA				pmax	pmax		
	comp=Z,12nm,1.2s						
GYA				pmax	pmax		
	comp=Z,290nm,4.7s						
ZSN	Zaisan	45.52	297	eP	P	12 54 53.5	-0.9
	baz=297						
ZSN	Zaisan	45.52	297	eP	P	12 54 53.4	-0.9
WMQ	Urumqi	45.55	291	eP	P	12 54 55.9	+1.2
WMQ				pmax	pmax		
	comp=Z,11nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.5s						
KMI	Kunming	46.71	260	⇑eP	P	12 55 05.6	+1.4
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,85nm,4.5s						
SEM	Semipalatinsk	46.82	302	eP	P	12 55 03.0	-1.8
	comp=Z,3.5nm,0.8s,baz=302						
SEM	Semipalatinsk	46.82	302	eP	P	12 55 02.9	-1.8
SEM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	47.37	297	i P	P	12 55 07.7	-1.2
MK31				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MK31	Makanchi Array	47.37	297	P	P	12 55 07.5	-1.4
MK31				IAmb	IAmb	12 55 08.7	
	comp=Z,8.1nm,0.7s						
MKAR	Makanchi Array	47.37	297	P	P	12 55 07.9	-1.0
	comp=Z,9.3nm,0.7s,baz=65,slow=8.0,SNR=91						
MKAR				PcP	PcP	12 56 38.9	0.0
	comp=Z,1.2nm,0.8s,baz=32,slow=3.3,SNR=3.2						
MKAR				LR	LR	13 16 18.2	
	comp=Z,172nm,19.9s,baz=344,slow=38						
MKAR	Makanchi Array	47.37	297	P	P	12 55 07.2	-1.7
EUNU	Eureka	47.46	12	P	P	12 55 10.2	+1.0
KURK	Kurchatov	47.59	303	eP	P	12 55 09.5	-1.0
KURK	Kurchatov	47.59	303	ceP	P	12 55 09.5	-1.0
KURK				pmax	pmax		
	comp=Z,34nm,1.3s						
KURK	Kurchatov	47.59	303	P	P	12 55 09.4	-1.1
KURBB	Kurchatov Arra	47.69	303	P	P	12 55 10.2	-1.0
	comp=Z,17nm,0.6s,baz=67,slow=8.4,SNR=104						
KURBB				PcP	PcP	12 56 40.5	+0.6
	comp=Z,2.5nm,0.8s,baz=60,slow=4.1,SNR=5.9						
SLVN	Son La	48.60	255	P	P	12 55 19.8	+1.1
SLVN				IAmb	IAmb	12 55 20.8	
	comp=Z,6.0nm,1.0s						
YKA	Yellowknife Ar	49.03	38	P	P	12 55 22.2	+0.8
	comp=Z,5.2nm,0.8s,baz=298,slow=6.9,SNR=12						
YKA				PcP	PcP	12 56 43.4	-1.1
	comp=Z,0.7nm,0.9s,baz=300,slow=3.8,SNR=3.6						
RES	Resolute Bay	49.07	19	P	P	12 55 23.0	+1.5
	comp=Z,7.9nm,0.9s,baz=314,slow=8.1,SNR=24						
RES	Resolute Bay	49.07	19	P	P	12 55 23.1	+1.5
RES				pmax	pmax		
	comp=Z,13nm,1.1s						
RES	Resolute Bay	49.07	19	P	P	12 55 23.1	+1.5
BRVK	Borovoye	50.93	309	eP	P	12 55 34.9	-1.0
BRVK	Borovoye	50.93	309	P	P	12 55 34.9	-1.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	Borovoye	50.93	309	P	P	12 55 34.9	-1.0
BRVK				IAmb	IAmb	12 55 36.1	
	comp=Z,4.9nm,0.8s						
SHLS	Shalkode	50.99	294	eP	P	12 55 33.5	-3.2
	baz=294						
SHLS				eS	S	13 02 45.3	-4.7
	baz=294						
BRZS	Berezniki	51.25	305	eP	P	12 55 37.1	-1.3
	comp=Z,2.7nm,0.8s,baz=305						
BRZS	Berezniki	51.25	305	eP	P	12 55 37.1	-1.3
BRZS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KPKS	Kokpek	51.29	295	eP	P	12 55 37.7	-1.2
	comp=Z,2.8nm,0.8s,baz=295						
KPKS	Kokpek	51.29	295	eP	P	12 55 37.7	-1.2
KPKS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	51.42	273	P	P	12 55 41.7	+1.2
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	Lhasa	51.42	273	P	P	12 55 41.7	+1.2
LSA				IAmb	IAmb	12 55 43.5	
	comp=Z,6.2nm,0.6s						
NONG	Nongkai	51.47	253	P	P	12 55 43.9	+3.5
	comp=Z,15nm,1.1s						
SATY	Saty	51.69	295	eP	P	12 55 41.1	-0.8
	baz=295						
SATY	Saty	51.69	295	eP	P	12 55 41.1	-0.8
CHKK	Chushkaly	52.10	296	eP	P	12 55 43.5	-1.4
	baz=296						
CHKK	Chushkaly	52.10	296	eP	P	12 55 43.4	-1.4
MDOK	Medeo	52.45	296	eP	P	12 55 46.8	-0.8
	baz=296						
MDOK	Medeo	52.45	296	eP	P	12 55 46.8	-0.8
KUU	Kurty	52.47	297	eP	P	12 55 45.9	-1.7
	comp=Z,4.3nm,0.7s,baz=297						
KUU	Kurty	52.47	297	eP	P	12 55 45.9	-1.7
KUU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAA	Alma-Ata	52.51	296	eP	P	12 55 46.9	-1.0
AAA	Alma-Ata	52.51	296	eP	P	12 55 46.1	-1.8
	baz=296						
AAA	Alma-Ata	52.51	296	eP	P	12 55 46.9	-1.0
PAYA	Payao	52.64	257	P	P	12 55 51.5	+2.3
	comp=Z,6µmcomp=Z,117nm,0.8s						
MTBS	Maitube	52.84	296	eP	P	12 55 49.5	-1.0
	baz=296						
MTBS	Maitube	52.84	296	eP	P	12 55 49.4	-1.0
LAMP	Lampang	53.40	256	P	P	12 55 58.2	+3.4
	comp=Z,16nm,0.9s						
CM34	Chiang Mai Arr	53.48	257	P	P	12 55 56.0	+0.7
CM35	Chiang Mai Arr	53.60	257	P	P	12 55 57.0	+0.8
SHL	Shillong	53.63	269	P	P	12 55 57.1	+0.5
SHL				pmax	pmax		
	comp=Z,33nm,0.6s						
SHL	Shillong	53.63	269	P	P	12 55 57.1	+0.5
CM33	Chiang Mai Arr	53.63	257	P	P	12 55 57.0	+0.6
CMMT	Chiang Mai	53.64	257	P	P	12 55 57.8	+1.3
	comp=Z,6.9nm,1.0s						
CHTO	Chiang Mai	53.64	257	P	P	12 55 57.5	+1.0
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	Chiang Mai	53.64	257	P	P	12 55 57.5	+1.0
CHTO				IAmb	IAmb	12 55 58.5	
	comp=Z,9.9nm,0.8s						
SGDS	Sogindy	53.74	297	eP	P	12 55 56.3	-0.8
	comp=Z,2.3nm,0.9s,baz=297						
SGDS	Sogindy	53.74	297	eP	P	12 55 56.2	-0.8
SGDS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CM36	Chiang Mai Arr	53.75	257	P	P	12 55 59.0	+1.7
CHAI	Chaiyaphum	53.81	252	P	P	12 55 59.0	+1.3
	comp=Z,14nm,0.8s						
CM32	Chiang Mai Arr	53.82	257	P	P	12 55 59.0	+1.2
CM09	Chiang Mai Arr	53.88	257	P	P	12 56 00.1	+1.9
	comp=Z,76nmcomp=Z,8.6nm,0.8s						
CM31	Chiang Mai Arr	53.90	257	P	P	12 56 00.6	+2.2
CM31	Chiang Mai Arr	53.90	257	P	P	12 55 59.8	+1.5
CM31				IAmb	IAmb	12 56 00.7	
	comp=Z,7.6nm,0.8s						
CMAR	Chiang Mai Arr	53.90	257	P	P	12 55 59.9	+1.5
	comp=Z,5.2nm,0.8s,baz=33,slow=7.4,SNR=38						
CMAR				LR	LR	13 20 00.6	
	comp=Z,74nm,18.8s,baz=42,slow=37						
CM02	Chiang Mai Arr	53.91	257	P	P	12 56 00.3	+1.8
	comp=Z,72nmcomp=Z,9.2nm,0.9s						
CM15	Chiang Mai Arr	53.91	257	P	P	12 56 00.3	+1.8
	comp=Z,8.0nm,0.8s						
CM01	Chiang Mai Arr	53.91	257	P	P	12 56 00.5	+2.0
	comp=Z,67nmcomp=Z,8.3nm,0.9s						
CM04	Chiang Mai Arr	53.92	257	P	P	12 56 00.0	+1.5
	comp=Z,69nmcomp=Z,8.8nm,0.9s						
CM05	Chiang Mai Arr	53.94	257	P	P	12 56 00.5	+1.9
	comp=Z,58nmcomp=Z,7.2nm,0.9s						
CM13	Chiang Mai Arr	53.95	257	P	P	12 56 00.3	+1.6
AAK	Ala-Archa	54.29	296	P	P	12 56 00.6	-0.6
	comp=Z,5.6nm,0.7s,baz=116,slow=5.6,SNR=22						
AAK	Ala-Archa	54.29	296	ceP	P	12 56 00.5	-0.6
AAK				pmax	pmax		
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	54.29	296	P	P	12 56 00.5	-0.6
AAK				IAmb	IAmb	12 56 01.5	
	comp=Z,6.0nm,0.8s						
ARU	Arti	54.77	317	LR	LR	13 19 58.3	
	comp=Z,179nm,18.9s,baz=349,slow=36						
ARU	Arti	54.77	317	c iP	P	12 56 02.4	-1.8
ARU				*PP	pP	12 56 17.3	-0.9
ARU						12 57 02.6	
ARU				S	S	13 03 40.1	-0.7
ARU				SS	SS	13 07 27.9	+4.2
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH	Kashi	55.23	292	P	P	12 56 11.6	+3.6
KSH				pmax	pmax		
	comp=Z,19nm,1.4s						
KSH				pmax	pmax		
	comp=Z,630nm,7.1s						
TAPN	Taplejung	55.24	273	eP	P	12 56 09.5	+1.1
	comp=Z,13nm,0.6s						
ODAN	Odare	55.77	273	eP	P	12 56 13.0	+0.9
	comp=Z,7.0nm,0.5s						
GUN	Gumba	56.09	275	eP	P	12 56 14.8	+0.3
	comp=Z,15nm,0.5s						
RAMN	Ramite	56.24	274	eP	P	12 56 15.9	+0.4
	comp=Z,36nm,0.7s						
KKAR	Karatay Array	56.38	299	P	P	12 56 15.2	-0.7
KKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	Karatay Array	56.38	299	P	P	12 56 15.2	-0.7
KKN	Kakani	56.57	276	eP	P	12 56 19.0	+1.2
	comp=Z,19nm,0.5s						
PKI	Pulchoki	56.63	275	eP	P	12 56 18.4	+0.1
	comp=Z,14nm,0.5s						
PKIN	Phulchoki	56.63	275	eP	P	12 56 18.4	+0.1
	comp=Z,13nm,0.5s						
DMN	Daman	56.80	276	eP	P	12 56 20.0	+0.5
	comp=Z,22nm,0.5s						
ARCES	ARCESS Array B	56.89	341	LR	LR	13 25 52.6	
	comp=Z,182nm,18.6s,baz=55,slow=41						
DANN	Dangsing	57.21	277	eP	P	12 56 23.2	+0.8
	comp=Z,53nm,0.6s						
IUG	Iuzhnay	57.23	298	eP	P	12 56 21.4	-0.8
	comp=Z,3.7nm,0.9s,baz=298						
IUG	Iuzhnay	57.23	298	eP	P	12 56 21.4	-0.8
IUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ABKAR	Akbulak array	58.44	310	P	P	12 56 29.3	-1.0
ABKAR				IAmb	IAmb	12 56 30.3	
	comp=Z,3.3nm,0.7s						
AKTO	Aktyubinsk	58.67	312	LR	LR	13 23 47.4	
	comp=Z,157nm,18.6s,baz=329,slow=38						
FFC	Flin Flon	58.84	41	P	P	12 56 34.3	+1.2
FFC				IAmb	IAmb	12 56 35.4	
	comp=Z,6.9nm,0.8s						
HRY	Holter Researc	59.13	53	P	P	12 56 36.5	+1.2
SUMG	Summit	59.17	5	P	P	12 56 36.1	+0.6
SUMG				pmax	pmax		
	comp=Z,17nm,1.2s						
SUMG	Summit	59.17	5	P	P	12 56 36.1	+0.6
FCC	Fort Churchill	59.38	34	P	P	12 56 37.4	+0.7
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FCC	Fort Churchill	59.38	34	P	P	12 56 37.4	+0.7
FCC				IAmb	IAmb	12 56 38.0	
	comp=Z,4.9nm,0.7s						
EGMT	Eagleton	59.39	51	P	P	12 56 37.9	+0.8
EGMT				IAmb	IAmb	12 56 38.9	
	comp=Z,6.6nm,0.8s						
BOZ	Bozeman (W)	59.94	54	P	P	12 56 41.6	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	59.94	54	P	P	12 56 41.5	+0.6
BOZ				IAmb	IAmb	12 56 43.1	
	comp=Z,3.9nm,0.8s						
QLMT	Earthquake Lak	60.54	55	P	P	12 56 47.2	+2.1
NIL	Nilore	60.61	289	P	P	12 56 45.8	+0.2
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
NIL	Nilore	60.61	289	P	P	12 56 45.8	+0.2
YHL	Hebgen Lake	60.66	54	P	P	12 56 47.8	+1.7
NVAR	Mina Array Bea	60.69	64	P	P	12 56 47.7	+1.4
	comp=Z,1.2nm,0.8s,baz=297,slow=7.2,SNR=9.3						
NVAR	Mina Array Bea	60.69	64	P	P	12 56 47.5	+1.2
YHB	Horse Butte	60.72	55	P	P	12 56 47.4	+1.0
YMR	Madison River	60.90	55	P	P	12 56 49.3	+1.7
H17A	Grant Village	61.28	55	P	P	12 56 53.0	+2.7
H17A				IAmb	IAmb	12 57 05.3	
	comp=Z,9.0nm,1.2s						
MOOW	Moose Ponds	61.61	55	P	P	12 56 54.7	+2.2
LOHW	Long Hollow	61.78	55	P	P	12 56 55.6	+2.0
LOHW				IAmb	IAmb	12 56 56.9	
	comp=Z,9.7nm,1.4s						
REDW	Red Top Meadow	61.80	56	P	P	12 56 56.1	+2.4
REDW				IAmb	IAmb	12 56 59.8	
	comp=Z,7.3nm,1.2s						
DGMT	Dagmar	61.92	48	P	P	12 56 55.5	+1.2
BELG	Belogornoye	62.27	319	P	P	12 56 55.1	-1.2
	comp=Z,8.2nm,0.7s,baz=9.8,slow=9.0,SNR=3.3						
KBL	Kabul	62.67	292	P	P	12 56 57.9	-1.7
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	Kabul	62.67	292	P	P	12 56 57.9	-1.7
DUG	Dugway, Tooele	62.77	59	P	P	12 57 01.8	+1.6
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DUG	Dugway, Tooele	62.77	59	P	P	12 57 01.8	+1.6
BW06	Boulder Array	62.91	55	P	P	12 57 01.9	+0.7
PD31	Pinedale Array	62.91	55	P	P	12 57 02.2	+1.0
PDAR	Pinedale Array	62.91	55	P	P	12 57 01.8	+0.6
	comp=Z,2.1nm,0.8s,baz=287,slow=2.2,SNR=20						
PDAR	Pinedale Array	62.91	55	P	P	12 57 02.2	+1.0
FINES	FINESS Array B	63.25	335	P	P	12 57 02.2	-0.6
	comp=Z,3.4nm,0.7s,baz=37,slow=8.3,SNR=10						
FINES	FINESS Array B	63.25	335	i P	P	12 57 03.0	+0.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	63.25	335	P	P	12 57 02.7	-0.1
NLU	North Lily Min	63.36	59	P	P	12 57 05.2	+1.0
TMUT	Trail Mountain	64.30	59	P	P	12 57 11.8	+1.3
MTPU	Mount Pierson	64.57	61	P	P	12 57 13.9	+1.5
ULM	Lac du Bonnet	64.63	42	P	P	12 57 12.3	+0.3
	comp=Z,3.4nm,0.7s,baz=305,slow=6.9,SNR=8.7						
LCMT	Little Creek M	64.64	62	P	P	12 57 13.7	+1.1
SRU	San Rafael Swe	64.81	59	P	P	12 57 13.8	+0.1
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SRU	San Rafael Swe	64.81	59	P	P	12 57 13.8	+0.1
RSSD	Black Hills	64.96	51	P	P	12 57 15.8	+1.2
RSSD				pmax	pmax		
	comp=Z,12nm,0.8s						
RSSD	Black Hills	64.96	51	P	P	12 57 15.8	+1.2
PSI	Prapat	65.81	245	P	P	12 57 20.5	+0.2
	comp=Z,4.7nm,0.6s,baz=179,slow=0.5,SNR=4.2						
RPSI	Rantau Prapat	65.89	245	P	P	12 57 20.5	-0.1
AGMN	Agassiz Nation	66.04	44	P	P	12 57 22.1	+0.9
AGMN				IAmb	IAmb	12 57 22.9	
	comp=Z,7.3nm,1.1s						
N23A	Red Feather La	66.16	55	P	P	12 57 24.1	+1.6
N23A				IAmb	IAmb	12 57 25.2	
	comp=Z,12nm,1.4s						
PV14	Lion Creek, Pa	66.17	59	P	P	12 57 23.6	+1.1
PV22	Blue Mesa, Par	66.20	58	P	P	12 57 23.9	+1.3
PV22				IAmb	IAmb	12 57 24.9	
	comp=Z,6.9nm,1.0s						
D32A	Dogwood Acres,	66.34	45	P	P	12 57 24.3	+1.2
SMCO	Snowmass	66.78	57	P	P	12 57 27.5	+0.9
GEYT	Alibeck	66.91	301	P	P	12 57 26.1	-0.8
	comp=Z,2.3nm,0.6s,baz=90,slow=1.5,SNR=3.7						
GEYT				LR	LR	13 29 07.2	
	comp=Z,74nm,20.5s,baz=225,slow=38						
GEYT	Alibeck	66.91	301	P	P	12 57 27.2	+0.3
ISCO	Idaho Springs	67.11	56	P	P	12 57 30.5	+1.9
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ISCO	Idaho Springs	67.11	56	P	P	12 57 30.5	+1.9
NOA	NORSAR Array B	67.25	342	P	P	12 57 28.3	-0.5
	comp=Z,0.8nm,0.5s,baz=28,slow=6.0,SNR=7.5						
F33A	5 Mile Ranch,	67.62	46	P	P	12 57 32.2	+0.9
F33A				IAmb	IAmb	12 57 33.0	
	comp=Z,10nm,1.0s						
S22A	4UR Ranch, Cre	67.86	58	P	P	12 57 35.1	+1.8
OGNE	Ogallala	68.24	53	P	P	12 57 36.2	+0.8
MSVF	Nonsavu	68.81	156	LR	LR	13 26 23.6	
	comp=Z,76nm,18.1s,baz=326,slow=35						
ECSD	EROS Data Cent	69.00	47	P	P	12 57 40.6	+0.6
ECSD				IAmb	IAmb	12 57 41.5	
	comp=Z,9.5nm,0.8s						
ANMO	Albuquerque	70.04	60	i P	P	12 57 45.0	-1.8
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	70.04	60	P	P	12 57 48.0	+1.2
WB0	Warramunga Arr	70.11	201	P	P	12 57 47.3	+0.4
WRAB	Tennant Creek	70.28	201	ceP	P	12 57 46.4	-1.5
WRAB				pmax	pmax		
	comp=Z,14nm,2.5s						
WRAB	Tennant Creek	70.28	201	P	P	12 57 48.7	+0.8
WB2	Warramunga Arr	70.28	201	P	P	12 57 48.4	+0.4
WB2				IAmb	IAmb	12 57 49.4	
	comp=Z,7.1nm,0.9s						
WRA	Warramunga Arr	70.29	201	P	P	12 57 48.5	+0.4
	comp=Z,3.8nm,0.9s,baz=17,slow=6.4,SNR=13						
WRA	Warramunga Arr	70.29	201	P	P	12 57 48.4	+0.4
LENM	Lemitar	70.29	61	P	P	12 57 50.8	+2.5
I37A	Lemond, Waseca	70.35	45	P	P	12 57 49.4	+1.1
KIV	Kislovodsk	70.66	315	eP	P	12 57 47.3	-3.0
KIV				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV				MLR	MLR		
	comp=Z,340nm,18.0s						
KBZ	Khabaz	70.73	315	P	P	12 57 50.8	+0.2
	comp=Z,2.1nm,0.7s,baz=89,slow=2.9,SNR=6.5						
KBZ				LR	LR	13 31 54.1	
	comp=Z,144nm,20.4s,baz=343,slow=38						
KBZ	Khabaz	70.73	315	eP	P	12 57 50.1	-0.4
KBZ	Khabaz	70.73	315	i P	P	12 57 50.1	-0.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
319A	Douglas	70.90	64	P	P	12 57 53.5	+1.5
319A				IAmb	IAmb	12 57 54.9	
	comp=Z,9.7nm,0.8s						
AKASG	Malin Array Be	71.02	327	P	P	12 57 52.8	+0.6
	comp=Z,0.9nm,0.4s,baz=36,slow=6.3,SNR=6.2						
N35A	Tabor	71.61	49	P	P	12 57 56.8	+0.8
SCIA	State Center	72.03	47	P	P	12 57 59.3	+0.8
GNI	Garni	72.52	311	LR	LR	13 33 40.8	
	comp=Z,127nm,21.3s,baz=39,slow=39						
AMTX	Amarillo	72.80	57	P	P	12 58 03.9	+0.5
AMTX				IAmb	IAmb	12 58 05.5	
	comp=Z,5.6nm,0.7s						
MSTX	Muleshoe	72.86	58	P	P	12 58 04.7	+1.0
MSTX				IAmb	IAmb	12 58 05.0	
	comp=Z,8.3nm,1.1s						
N38A	Joes South For	72.86	48	P	P	12 58 03.7	+0.3
MNTX	Cornudas Mount	72.99	61	P	P	12 58 05.2	+0.9
P38A	Dawn	73.60	48	P	P	12 58 08.4	+0.6
P38A				IAmb	IAmb	12 58 09.1	
	comp=Z,9.1nm,0.8s						
AS31	Alice Springs	73.97	200	P	P	12 58 11.7	+1.6
ASAR	Alice Springs	73.98	200	P	P	12 58 11.4	+1.4
	comp=Z,2.0nm,0.6s,baz=15,slow=5.2,SNR=41						
ASAR	Alice Springs	73.98	200	P	P	12 58 11.2	+1.2
N41A	Harden Midland	74.09	46	P	P	12 58 11.3	+0.7
KWP	Kalwaria Pacla	74.20	330	P	P	12 58 11.6	+0.5
KWP	Kalwaria Pacla	74.20	330	P	P	12 58 11.6	+0.5
P40A	Paris	74.42	48	P	P	12 58 13.2	+0.7
P40A				IAmb	IAmb	12 58 14.1	

	comp=Z,9.8nm,0.9s						
OJC	Ojcow	74.63	332	P	P	12 58 13.9	+0.2
OJC				pmax	pmax		
	comp=Z,17nm,1.1s						
OJC	Ojcow	74.63	332	P	P	12 58 13.9	+0.2
KOLS	Kolonicke sedl	74.94	330	eP	P	12 58 16.2	+0.7
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KOLS	Kolonicke sedl	74.94	330	eP	P	12 58 16.2	+0.7
BUR08	Bucovina Ar. S	75.03	327	P	P	12 58 16.1	0.0
BUR08				IAmb	IAmb	12 58 17.1	
	comp=Z,5.5nm,0.8s						
BURAR	Bucovina Array	75.04	327	⇑P	P	12 58 16.6	+0.4
BURAR	Bucovina Array	75.04	327	P	P	12 58 16.0	-0.2
FLTG	Flechtingen	75.17	338	eP	P	12 58 16.8	+0.1
	comp=Z,7.0nm,0.8s,baz=24,slow=5.8						
CRVS	Cervenica-Dubn	75.24	330	eP	P	12 58 17.6	+0.4
CRVS				pmax	pmax		
	comp=Z,14nm,1.0s						
CRVS	Cervenica-Dubn	75.24	330	eP	P	12 58 17.6	+0.4
R40A	Maddies Statio	75.26	49	P	P	12 58 17.6	+0.1
R40A				IAmb	IAmb	12 58 18.5	
	comp=Z,5.1nm,0.7s						
CHVC	Chvalec	75.44	334	eP	P	12 58 18.4	+0.1
TESR	Tescani	75.45	326	⇓P	P	12 58 18.6	+0.2
UPC	Upice	75.52	334	eP	P	12 58 19.5	+0.7
UPC	Upice	75.52	334	eP	P	12 58 19.5	+0.7
DPC	Dobruska-Polom	75.57	334	eP	P	12 58 19.9	+0.8
DPC	Dobruska-Polom	75.57	334	eP	P	12 58 19.9	+0.8
CLL	Collm	75.64	336	iP	P	12 58 19.5	0.0
	comp=Z,16nm,0.9s						
CLL				epP	pP	12 58 35.0	+1.0
CLL	Collm	75.64	336	P	P	12 58 20.0	+0.6
CLL				pmax	pmax		
	comp=Z,15nm,0.9s						
CLL	Collm	75.64	336	P	P	12 58 20.0	+0.6
CLL	Collm	75.64	336	eP	P	12 58 19.4	0.0
	comp=Z,16nm,0.9s,baz=24,slow=5.8						
LANS	Liptovska Anna	75.67	332	eP	P	12 58 21.3	+1.6
LANS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LANS	Liptovska Anna	75.67	332	eP	P	12 58 21.3	+1.6
KRLC	Kraliky	75.68	334	eP	P	12 58 19.9	+0.2
KRLC	Kraliky	75.68	334	eP	P	12 58 19.9	+0.2
MORC	Moravsky Berou	75.72	333	⇓P	P	12 58 20.7	+0.7
MORC	Moravsky Berou	75.72	333	eP	P	12 58 20.6	+0.7
MORC	Moravsky Berou	75.72	333	P	P	12 58 20.4	+0.5
MORC				pmax	pmax		
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	75.72	333	P	P	12 58 20.4	+0.5
TXAR	Lajitas Array	75.72	62	P	P	12 58 21.7	+1.3
	comp=Z,4.0nm,0.7s,baz=301,slow=4.3,SNR=40						
TXAR	Lajitas Array	75.72	62	P	P	12 58 21.4	+1.0
BRG	Berggiesshubel	75.78	336	iP	P	12 58 20.5	+0.2
BRG				Amp		12 58 22.2	
	comp=Z,6.0nm,0.7s						
BRG	Berggiesshubel	75.78	336	iP	P	12 58 20.4	+0.2
BRG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRG	Berggiesshubel	75.78	336	iP	P	12 58 20.5	+0.2
BRG				Amp		12 58 22.2	
	comp=Z,6.0nm,0.7s						
FBE	Freiberg	75.90	336	eP	P	12 58 21.6	+0.7
	comp=Z,14nm,0.8s,baz=24,slow=5.8						
PVCC	Panska Ves	75.92	335	eP	P	12 58 21.6	+0.6
PVCC	Panska Ves	75.92	335	eP	P	12 58 21.6	+0.6
HHAR	Hobbs	75.94	51	P	P	12 58 21.4	-0.1
HHAR				IAmb	IAmb	12 58 22.5	
	comp=Z,5.9nm,0.7s						
CFR	Carcaliu	76.00	324	⇓P	P	12 58 21.7	+0.1
TPGR	Topolog	76.15	324	⇑P	P	12 58 22.9	+0.4
HPIG		76.28	65	P	P	12 58 24.5	+0.8
DOPR	Dopca	76.38	326	⇑P	P	12 58 24.9	+1.1
PRU	Pruhonice	76.41	335	eP	P	12 58 24.3	+0.5
PRU	Pruhonice	76.41	335	eP	P	12 58 24.3	+0.5
VRAC	Vranov	76.42	333	⇑P	P	12 58 24.8	+0.9
VRAC	Vranov	76.42	333	eP	P	12 58 24.5	+0.6
U40A	Yellville	76.45	50	P	P	12 58 24.1	-0.2
VYHS	Vyhne	76.45	332	eP	P	12 58 24.7	+0.6
VYHS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VYHS	Vyhne	76.45	332	eP	P	12 58 24.7	+0.6
HARR	Harsova	76.48	324	⇑P	P	12 58 24.9	+0.6
TIRR	Tirgusor	76.49	324	⇑P	P	12 58 24.2	-0.1
JAVC	Velka Javorina	76.49	333	eP	P	12 58 25.9	+1.5
MLR	Muntele Rosu	76.57	326	⇓P	P	12 58 25.8	+0.9
MLR	Muntele Rosu	76.57	326	P	P	12 58 25.9	+0.9
MLR				pmax	pmax		
	comp=Z,13nm,0.8s						
MLR	Muntele Rosu	76.57	326	P	P	12 58 25.9	+0.9
MOX	Moxa	76.61	337	eP	P	12 58 25.2	+0.2
	comp=Z,8.8nm,1.1s,baz=24,slow=5.8						
PSZ	Piszkesteto	76.61	331	⇓eP	P	12 58 26.2	+1.1
PSZ	Piszkesteto	76.61	331	P	P	12 58 25.0	-0.1
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PSZ	Piszkesteto	76.61	331	P	P	12 58 24.9	-0.1
PSZ				IAmb	IAmb	12 58 26.8	
	comp=Z,8.7nm,0.8s						
PLN	Plauen	76.62	337	eP	P	12 58 25.4	+0.4
	comp=Z,4.5nm,0.7s,baz=24,slow=5.8						
ISR	Istrita	76.66	325	⇑P	P	12 58 26.3	+0.9
GUNZ	Gunzen	76.68	336	eP	P	12 58 26.0	+0.6
	comp=Z,8.6nm,0.9s,baz=24,slow=5.8						
KRUC	Moravsky	76.70	333	eP	P	12 58 26.0	+0.5
WERN	Wernitzgruen	76.74	336	eP	P	12 58 26.3	+0.6
	comp=Z,9.9nm,0.8s,baz=24,slow=5.8						
NKC	Novy Kostel	76.77	336	eP	P	12 58 26.5	+0.6
NKC	Novy Kostel	76.77	336	eP	P	12 58 26.5	+0.6
VOIR		76.95	326	⇓P	P	12 58 28.0	+1.0
ARR	Arges	77.17	327	⇑P	P	12 58 28.9	+0.7
FCAR	Ozark Folk Cen	77.18	50	P	P	12 58 28.6	+0.2
FCAR				IAmb	IAmb	12 58 29.3	
	comp=Z,6.1nm,0.7s						
BUD	Budapest	77.28	331	eP	P	12 58 30.1	+1.4
WHTX	Lake Whitney,	77.31	56	P	P	12 58 30.3	+1.1
WHTX				IAmb	IAmb	12 58 31.1	
	comp=Z,5.8nm,0.8s						
KHC	Kasperske Hory	77.46	335	eP	P	12 58 30.2	+0.4
KHC	Kasperske Hory	77.46	335	eP	P	12 58 30.2	+0.4
KHC	Kasperske Hory	77.46	335	P	P	12 58 30.0	+0.2
SIRR	Siria	77.46	329	⇑P	P	12 58 30.5	+0.7
GRF	Grafenberg Arr	77.59	337	eP	P	12 58 31.4	+0.9
	comp=Z,13nm,0.9s,baz=24,slow=5.8						
CSKK	Cskako	77.63	331	⇓eP	P	12 58 31.7	+1.0
WET	Wettzell	77.64	336	eP	P	12 58 31.5	+0.7
	comp=Z,17nm,1.1s,baz=24,slow=5.8						
W41B	Gary Mavity, V	77.67	51	P	P	12 58 32.3	+1.2
W41B				IAmb	IAmb	12 58 32.7	
	comp=Z,5.3nm,0.8s						
GEC2	GERESS Array S	77.68	335	P	P	12 58 31.2	+0.2
GEC2				IAmb	IAmb	12 58 32.3	
	comp=Z,7.6nm,0.7s						
GEC2	GERESS Array S	77.68	335	eP	P	12 58 31.5	+0.4
	comp=Z,9.0nm,0.9s,baz=24,slow=5.8						
GERES	GERESS Array B	77.68	335	P	P	12 58 31.7	+0.6
	comp=Z,4.6nm,0.6s,baz=34,slow=5.8,SNR=35						
GERES	GERESS Array B	77.68	335	P	P	12 58 31.3	+0.2
TNS	Taunus Mts	77.80	339	eP	P	12 58 32.3	+0.6
	comp=Z,13nm,0.8s,baz=24,slow=5.8						
GZR	Gura Zlata	77.82	328	⇓P	P	12 58 32.1	+0.2
AHRW	Bad Neuenahr-A	77.83	340	eP	P	12 58 32.6	+0.8
	comp=Z,21nm,0.9s,baz=24,slow=5.8						
CONA	Conrad Observa	77.87	333	iP	P	12 58 33.2	+1.0
	comp=Z,8.7nm,0.7s						
COPA	Copaceanca	78.00	326	⇓P	P	12 58 32.6	-0.2
BTNL	Ternell	78.00	340	dP	P	12 58 33.3	+0.6
MEM	Membach	78.01	340	dP	P	12 58 33.3	+0.5
MPLH	Magyarpolny	78.03	332	⇓eP	P	12 58 34.2	+1.3
BZS	Buzias	78.03	329	⇑P	P	12 58 33.1	+0.1
BR131	Keskin Array S	78.16	318	P	P	12 58 34.1	+0.1
BR131				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BR131	Keskin Array S	78.16	318	P	P	12 58 34.1	+0.1
BR131				IAmb	IAmb	12 58 35.9	
	comp=Z,9.9nm,0.8s						
BRTR	Keskin Array B	78.16	318	P	P	12 58 34.5	+0.5
	comp=Z,5.6nm,0.8s,baz=56,slow=4.6,SNR=22						
BRTR				LR	LR	13 36 17.7	
	comp=Z,94nm,18.3s,baz=315,slow=38						
BRTR	Keskin Array B	78.16	318	P	P	12 58 33.9	-0.1
BCLA	Clavier	78.35	341	dP	P	12 58 34.0	-0.6
BCLA				dpP	pP	12 58 50.7	+1.4
MOA	Molln	78.42	334	iP	P	12 58 36.1	+1.0
	comp=Z,6.8nm,0.8s						
BGES	Gesves	78.43	341	dP	P	12 58 35.4	+0.3
BGES				dPcP	PcP	12 58 43.4	-0.8
MORH	Mrgy, Hungar	78.52	331	⇓eP	P	12 58 35.5	-0.1
BMRD	Maredsous	78.57	341	dP	P	12 58 36.6	+0.7
ARSA	Arzberg	78.58	333	iP	P	12 58 36.0	-0.1
	comp=Z,3.0nm,0.5s						
SOKA	Soboth	79.24	333	iP	P	12 58 40.3	+0.6
	comp=Z,9.8nm,0.7s						
PERS	Pernice	79.26	333	iP	P	12 58 40.3	+0.6
GROS	Grobnik	79.30	333	iP	P	12 58 40.1	+0.1
KBA	Koelnbreinsper	79.38	334	eP	P	12 58 41.8	+1.2
	comp=Z,32nm,1.0s,SNR=12						
OBKA	Obir	79.54	333	iP	P	12 58 42.2	+0.9
	comp=Z,3.5nm,0.6s						
BFO	Black Forest	79.58	338	P	P	12 58 41.0	-0.5
BFO				pmax	pmax		
	comp=Z,14nm,1.1s						
BFO	Black Forest	79.58	338	P	P	12 58 41.0	-0.5
BFO				IAmb	IAmb	12 58 42.9	
	comp=Z,14nm,1.1s						
BFO	Black Forest	79.58	338	eP	P	12 58 42.1	+0.6
	comp=Z,21nm,1.2s,baz=24,slow=5.8						
WATA	Walderalm	79.65	336	iP	P	12 58 42.9	+0.9
	comp=Z,18nm,0.9s						
WTTA	Wattenberg	79.70	336	iP	P	12 58 43.4	+1.1
	comp=Z,31nm,1.0s,SNR=7.4						
MYKA	Terra Mystica	79.70	334	iP	P	12 58 43.2	+1.0
	comp=Z,4.4nm,0.7s						
RETA	Reutte	79.73	336	iP	P	12 58 43.1	+0.7
	comp=Z,8.1nm,0.8s						
MOTA	Moosalm	79.77	336	eP	P	12 58 43.6	+0.9
	comp=Z,15nm,0.7s,SNR=7.1						
SQTA	Sankt Quirin	79.85	336	eP	P	12 58 44.1	+1.0
	comp=Z,15nm,0.8s,SNR=5.8						
ABTA	Abfaltersbach	79.92	335	iP	P	12 58 44.0	+0.6
	comp=Z,12nm,1.9s						
DIVS	Divibare	79.92	329	P	P	12 58 43.4	-0.1
DIVS				IAmb	IAmb	12 58 44.3	
	comp=Z,14nm,1.1s						
DAVA	Damuels	80.15	337	iP	P	12 58 45.4	+0.7
	comp=Z,12nm,0.9s						
FETA	Feichten	80.17	336	iP	P	12 58 45.6	+0.8
	comp=Z,9.2nm,0.9s						
STKA	Stephens Creek	80.60	191	LR	LR	13 32 16.4	
	comp=Z,48nm,21.7s,baz=24,slow=34						
NRCA	Norcia	83.30	333	P	P	12 59 02.2	+0.9
RAYN	Ar Rayn	84.79	300	P	P	12 59 09.2	0.0
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
RAYN	Ar Rayn	84.79	300	P	P	12 59 09.2	0.0
RAYN				IAmb	IAmb	12 59 11.7	
	comp=Z,11nm,1.1s						
H03N2	Juan Fernandez	137.53	90	T	T	15 39 12.1	
	baz=309,slow=77,SNR=28						
H03N1	Juan Fernandez	137.54	90	T	T	15 39 00.6	
	baz=309,slow=77,SNR=28						
H03N3	Juan Fernandez	137.55	90	T	T	15 39 06.3	
	baz=309,slow=77,SNR=36						
CPUP	Villa Florida	146.69	61	PKPbc	PKPbc	13 06 15.7	-0.4
	comp=Z,3.4nm,0.7s,baz=334,slow=5.0,SNR=8.1						
CPUP	Villa Florida	146.69	61	PKP2	PKPab	13 06 17.1	-0.2
CPUP	Villa Florida	146.69	61		PKPab	13 06 17.1	-0.2
PLCA	Paso Flores	147.10	94	PKPbc	PKPbc	13 06 17.1	+0.1
	comp=Z,3.4nm,0.9s,baz=267,slow=2.6,SNR=8.0						
PLCA	Paso Flores	147.10	94	PKP2	PKPab	13 06 18.0	-0.7
PLCA	Paso Flores	147.10	94		PKPab	13 06 18.0	-0.7

NEIC ***20*** *13:08:11.3±3.0, 20°.50S±0°.04×69°.95W±0°.06, h79^{km}±2^{km}, Error ellipse: s-maj=8.0km s-min=4.9km az=102.0*

GUC ***20*** *13:08:13.1±0.6, 20°.47S×69°.89W, h75^{km}±2^{km}, ML3.8*

IDC ***20*** *13:08:13.5±3.6, 20°.43S×69°.64W, h86^{km}±33^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.3/40, mbtmp3.9/6, Error ellipse: s-maj=52.3km s-min=18.9km az=104.0*

ISC 20 13:08:11.4±0.8**, 20°.50S**±0°.03×**70°.01W**±0°.06**, h82**^{km}±5^{km}**, n56,** σ1^{s}**07**/66**, mb4.0**/3**, 10C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	Diego Aracena	0.17	249	⇓iP	Pn	13 08 24.1	+0.8
TA01				iS	Sn	13 08 32.5	+0.4
TA01				IAML		13 08 33.5	
	comp=E,12μm,0.4s						
TA01	Diego Aracena	0.17	249		Pn	13 08 23.9	+0.5
TA01				Sn	Sn	13 08 31.7	-0.4
HMBC	Humberstone	0.25	27	⇓iP	Pn	13 08 23.9	+0.1
HMBC				iS	Sn	13 08 32.2	-0.7
HMBC				IAML		13 08 33.0	
	comp=N,7μm,0.2s						
TA02	Huaiquique	0.26	334	⇓iP	Pn	13 08 24.4	+0.7
TA02				iS	Sn	13 08 33.0	+0.3
PATCX	Punta Patache	0.34	203	⇑iP	Pn	13 08 25.3	+1.0
PATCX				iS	Sn	13 08 34.6	+0.8
PATCX				IAML		13 08 38.8	
	comp=E,8μm,0.5s						
PATCX	Punta Patache	0.34	203		Pn	13 08 25.1	+0.8
PATCX				Sn	Sn	13 08 34.1	+0.3
PB02	IPOC Station P	0.82	173	⇑iP	Pn	13 08 29.6	+0.9
PB02				iS	Sn	13 08 42.3	+0.8
PB08	IPOC Station P	0.88	66	⇓iP	Pn	13 08 29.7	+0.1
PB08				iS	Sn	13 08 42.2	-0.9
PB08				IAML		13 08 43.7	
	comp=E,7μm,0.2s						
PB08	IPOC Station P	0.88	66		Pn	13 08 29.6	0.0
PB08				Sn	Sn	13 08 41.3	-1.8
PSGC	Pisagua	0.91	353	⇓iP	Pn	13 08 30.1	+0.5
PSGC				iS	Sn	13 08 42.9	-0.3
PSGC				IAML		13 08 44.0	
	comp=E,3μm,0.2s						
PSGCX	Pisagua	0.91	353		Pn	13 08 29.8	+0.2
PSGCX				Sn	Sn	13 08 42.5	-0.7
PB07	IPOC Station P	1.22	175	⇑iP	Pn	13 08 34.4	+0.9
PB07				iS	Sn	13 08 50.2	+0.2
PB07				IAML		13 08 54.2	
	comp=E,3μm,0.3s						
PB07	IPOC Station P	1.22	175		Pn	13 08 34.3	+0.7
MNMC	Minye Minye	1.42	16	⇑iP	Pn	13 08 36.8	+0.6
MNMC				iS	Sn	13 08 54.8	+0.2
MNMC				IAML		13 08 56.4	
	comp=E,4μm,0.4s						
MNMC	Minye Minye	1.42	16		Pn	13 08 36.7	+0.6
PB09	IPOC Station P	1.47	151	⇑iP	Pn	13 08 37.7	+1.1
PB09				iS	Sn	13 08 57.0	+1.3
PB09				IAML		13 09 02.2	
	comp=E,1μm,0.4s						
PB09	IPOC Station P	1.47	151		Pn	13 08 37.6	+0.9
PB03	IPOC Station P	1.56	171	⇑iP	Pn	13 08 38.6	+0.8
PB03				iS	Sn	13 08 56.8	-0.8
PB03				IAML		13 08 59.2	
	comp=N,1μm,0.4s						
PB04	IPOC Station P	1.83	184	⇑iP	Pn	13 08 41.8	+0.4
PB04				iS	Sn	13 09 02.5	-1.4
PB04				IAML		13 09 05.8	
	comp=N,1μm,0.1s						
PB04	IPOC Station P	1.83	184		Pn	13 08 41.7	+0.4
AP01	Chacalluta	2.14	352	eP	Pn	13 08 46.5	+1.2
AP01				eS	Sn	13 09 11.9	+0.7
AP01				IAML		13 09 23.1	
	comp=E,1μm,0.3s						
AP01	Chacalluta	2.14	352		Pn	13 08 46.3	+1.0
PB16	IPOC Station P	2.21	12	⇑iP	Pn	13 08 48.1	+1.4
PB16				iS	Sn	13 09 14.7	+1.1
PB16				IAML		13 09 17.6	
	comp=N,376nm,0.3s						
PB16	IPOC Station P	2.21	12		Pn	13 08 48.0	+1.4
LVC	Limon Verde	2.33	154	P	Pn	13 08 49.8	+1.6
	comp=N,12nm,0.3s,baz=3.2,slow=8.2,SNR=370						
LVC				S	Sn	13 09 17.7	+1.5
	comp=N,62nm,0.3s,baz=88,slow=2.0,SNR=17						
LVC	Limon Verde	2.33	154	eP	Pn	13 08 49.7	+1.6
LVC				eS	Sn	13 09 17.5	+1.3
LVC	Limon Verde	2.33	154		Pn	13 08 49.6	+1.4
PB10	IPOC Station P	3.04	189	⇑iP	Pn	13 08 56.9	-0.5
PB10	IPOC Station P	3.04	189		Pn	13 08 56.6	-0.7
PB14	IPOC Station P	4.12	185		Pn	13 09 11.0	-1.4
GO02	Mina Guanaco	4.65	175	⇑iP	Pn	13 09 19.2	-0.4
GO02				eS	Sn	13 10 11.6	-0.9
GO02	Mina Guanaco	4.65	175		Pn	13 09 19.1	-0.5
AC01	Pan de Azucar	5.64	185		Pn	13 09 30.6	-2.2
AC02	Maricunga	6.36	173		Pn	13 09 42.8	-0.2
GO03	Copiap	7.06	182	Pn	Pn	13 09 50.6	-1.6
AC04	Llanos de Chal	7.73	187	Pn	Pn	13 09 57.1	-4.2
AC05	El Transito	8.30	182	Pn	Pn	13 10 06.5	-2.7
LCO	Las Campanas	8.49	184	Pn	Pn	13 10 08.6	-3.4
CO01	Juntas del Tor	9.43	180	Pn	Pn	13 10 22.8	-2.0
SIV	San Ignacio	9.60	64	P	Pn	13 10 24.6	-2.3
	comp=N,0.8nm,0.3s,baz=264,slow=9.8,SNR=16						
H03N1	Juan Fernandez	15.12	210	T	T	13 26 57.8	
	baz=34,slow=72,SNR=8.3						
H03N2	Juan Fernandez	15.13	210	T	T	13 26 53.9	
	baz=34,slow=72,SNR=7.7						
H03N3	Juan Fernandez	15.14	210	T	T	13 26 53.0	
	baz=34,slow=72,SNR=7.7						
PLCA	Paso Flores	20.17	181	P	P	13 12 41.5	+2.2
	comp=N,1.3nm,0.8s,baz=354,slow=9.6,SNR=4.1						
PLCA	Paso Flores	20.17	181	P	P	13 12 39.8	+0.4
PLCA				IAmb	IAmb	13 12 44.1	
	comp=Z,7.5nm,1.4s						
PTGA	Pitinga	21.97	28	P	P	13 12 57.8	-0.9
	comp=Z,2.7nm,0.3s,baz=204,slow=23,SNR=7.1						
PTGA	Pitinga	21.97	28	P	P	13 12 58.3	-0.5
PTGA				IAmb	IAmb	13 13 05.2	
	comp=Z,4.6nm,0.8s						
DBIC	Dimbokro	69.44	74	P	P	13 19 10.7	-0.7
	comp=Z,2.7nm,0.8s,baz=168,slow=19,SNR=1.7						
YKA	Yellowknife Ar	89.91	341	P	P	13 21 02.2	+1.3
	comp=Z,0.2nm,0.7s,baz=124,slow=5.3,SNR=5.0						
YKA				pP	pP	13 21 21.8	-1.3
	comp=Z,0.5nm,0.7s,baz=133,slow=4.9,SNR=9.5						
H11S2	WAKE ISLAND Hy	126.73	278	T	T	15 46 45.2	
	baz=102,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	126.74	278	T	T	15 46 45.4	
	baz=102,slow=75,SNR=15						
H11S3	WAKE ISLAND Hy	126.75	278	T	T	15 46 46.5	
	baz=102,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	126.78	280	T	T	15 46 49.4	
	baz=102,slow=74,SNR=10						
H11N2	WAKE ISLAND Hy	126.80	280	T	T	15 46 50.8	
	baz=102,slow=74,SNR=9.5						
H11N1	WAKE ISLAND Hy	126.80	280	T	T	15 46 49.9	
	baz=102,slow=74,SNR=5.2						
MKAR	Makanchi Array	145.41	34	PKPbc	PKPbc	13 27 41.1	+1.0
	comp=Z,0.2nm,0.6s,baz=312,slow=3.9,SNR=2.6						

IDC ***20*** *13:10:11.5±4.8, 36°.99S×96°.36W, h0^{km}, mb4.2/7, mb1 4.5/7, mb1mx4.1/40, mbtmp4.2/7, MS3.8/8, Ms1 3.8/8, ms1mx3.5/27, Error ellipse: s-maj=196.0km s-min=32.7km az=41.0*

NEIC ***20*** *13:10:12.5±1.2, 37°.0S±0°.1×96°.2W±0°.2, h10^{km}±1^{km}, mb4.5/72, Error ellipse: s-maj=31.2km s-min=20.4km az=266.0*

ISC 20 13:10:12.6±0.8**, 37°.0S**±0°.1×**96°.2W**±0°.2**, h10**^{km}**, n98,** σ0^{s}**73**/82**, mb4.5**/37**, MS3.7**/7**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	14.43	83	T	T	13 28 29.7	
	baz=251,slow=74,SNR=58						
H03S1	Juan Fernandez	14.45	83	T	T	13 28 26.4	
	baz=251,slow=74,SNR=56						
H03S3	Juan Fernandez	14.45	83	T	T	13 28 25.8	
	baz=251,slow=74,SNR=62						
H03N2	Juan Fernandez	14.55	81	T	T	13 28 25.1	
	baz=258,slow=73,SNR=16						
H03N3	Juan Fernandez	14.55	81	T	T	13 28 28.5	
	baz=258,slow=73,SNR=13						
H03N1	Juan Fernandez	14.57	81	T	T	13 28 36.1	
	baz=258,slow=73,SNR=13						
RPN	Rapa Nui	14.83	308	LR	LR	13 17 37.3	
	comp=Z,198nm,20.8s,baz=131,slow=30						
BI02	San Fabin de	19.95	97	P	P	13 14 46.2	+1.3
PLCA	Paso Flores	20.30	109	P	Pn	13 14 50.8	+0.1
	5.8nm,1.1s,baz=279,slow=14,SNR=4.3						
PLCA				LR	LR	13 20 38.7	
	comp=Z,183nm,20.0s,baz=285,slow=31						
PLCA	Paso Flores	20.30	109	P	Pn	13 14 50.6	-0.1
MT05	Renca	21.10	88	P	P	13 14 58.5	+1.2
PEL	Peldehue	21.21	87	P	P	13 14 59.2	+0.7
PEL				IAmb	IAmb	13 15 05.8	
	comp=Z,30nm,1.2s						
VA03	San Esteban	21.44	86	P	P	13 15 02.0	+1.0
CO02	Combarbal	21.62	82	P	P	13 15 03.7	+0.6
CO02				IAmb	IAmb	13 15 11.0	
	comp=Z,18nm,1.1s						
CO03	El Pedregal	22.01	81	P	P	13 15 08.2	+1.0
GO09	Cerro Castillo	22.18	138	P	P	13 15 09.3	+0.6
GO04	Tololo Observa	22.19	80	P	P	13 15 10.2	+0.9
GO04				IAmb	IAmb	13 15 12.2	
	comp=Z,16nm,1.1s						
LCO	Las Campanas	22.77	77	P	P	13 15 16.1	+0.6
LCO				IAmb	IAmb	13 15 18.4	
	comp=Z,18nm,1.3s						
CO01	Juntas del Tor	22.82	80	P	P	13 15 16.3	+0.3
CO01				IAmb	IAmb	13 15 24.7	
	comp=Z,11nm,1.0s						
AC04	Llanos de Chal	22.86	75	P	P	13 15 16.6	+0.5
AC05	El Transito	23.18	77	P	P	13 15 19.6	-0.1
ZON	Zonda	23.34	85	P	P	13 15 20.6	-0.6
ZON				IAmb	IAmb	13 15 24.6	
	comp=Z,17nm,1.3s						
AC01	Pan de Azucar	24.27	71	P	P	13 15 28.7	-1.3
AC01				IAmb	IAmb	13 15 36.1	
	comp=Z,8.3nm,0.9s						
AC02	Maricunga	25.03	74	P	P	13 15 35.8	-1.7
AC02				IAmb	IAmb	13 15 42.1	
	comp=Z,13nm,1.1s						
PB14	IPOC Station P	25.26	68	P	P	13 15 37.2	-2.2
GO02	Mina Guanaco	25.57	70	P	P	13 15 41.0	-1.2
GO02				IAmb	IAmb	13 16 09.2	
	comp=Z,12nm,1.1s						
PB10	IPOC Station P	25.80	66	P	P	13 15 43.4	-0.6
LVC	Limon Verde	27.55	66	LR	LR	13 24 07.3	
	comp=Z,202nm,19.3s,baz=214,slow=30						
LVC	Limon Verde	27.55	66	P	P	13 16 00.8	+0.6
PB09	IPOC Station P	27.81	65	P	P	13 16 02.2	-0.1
PB09				IAmb	IAmb	13 16 18.0	
	comp=Z,16nm,1.4s						
TA01	Diego Aracena	27.93	61	P	P	13 16 03.2	0.0
TA01				IAmb	IAmb	13 16 10.1	
	comp=Z,12nm,1.2s						
NNA	Nana	30.36	40	LR	LR	13 25 39.6	
	comp=Z,158nm,18.1s,baz=219,slow=30						
NNA	Nana	30.36	40	P	P	13 16 23.9	-0.9
ATAH	Atahualpa	33.84	33	LR	LR	13 27 17.9	
	comp=Z,149nm,21.3s,baz=242,slow=30						
CPUP	Villa Florida	34.54	83	LR	LR	13 28 34.1	
	comp=Z,146nm,20.9s,baz=230,slow=32						
OTAV	Otavalo	40.51	28	P	P	13 17 52.7	+0.3
BDFB	Brasilia	47.56	77	LR	LR	13 37 44.2	
	comp=Z,231nm,19.1s,baz=196,slow=35						
JTS	Las Juntas de	48.19	15	LR	LR	13 34 00.4	
	comp=Z,87nm,19.2s,baz=26,slow=30						
QSPA	South Pole Qui	53.25	180	P	P	13 19 31.3	+0.2
VNA3	Neumayer Olymp	54.38	157	P	P	13 19 38.8	-0.4
VNA1	Neumayer--Stat	54.95	156	P	P	13 19 43.5	+0.2
VNA2	Neumayer--Watz	55.18	156	P	P	13 19 44.8	-0.2
	baz=257,slow=7.3						
SNAA	Sanae	56.41	158	P	P	13 19 53.1	-0.8
SNAA	Sanae	56.41	158	P	P	13 19 52.9	-1.0
TXAR	Lajitas Array	66.33	353	P	P	13 21 02.2	+0.8
	comp=Z,2.2nm,0.9s,baz=166,slow=7.6,SNR=13						
TXAR	Lajitas Array	66.33	353	P	P	13 21 01.6	+0.1
JCT	Junction City	67.19	357	P	P	13 21 06.5	-0.2
MNTX	Cornudas Mount	68.85	352	P	P	13 21 16.0	-1.2
319A	Douglas	69.09	348	P	P	13 21 18.0	-0.8
ABTX	Abilene, Hawle	69.31	357	P	P	13 21 19.3	-0.7
TUC	Tucson	70.26	347	P	P	13 21 26.3	+0.3
TUC				IAmb	IAmb	13 21 29.5	
	comp=Z,3.7nm,1.0s						
214A	Organ Pipe Nat	70.31	345	P	P	13 21 27.1	+0.9
MSTX	Muleshoe	70.85	354	P	P	13 21 29.2	-0.3
AMTX	Amarillo	71.67	355	P	P	13 21 34.5	0.0
ANMO	Albuquerque	72.19	351	P	P	13 21 37.7	0.0
	comp=Z,1.9nm,0.9s,baz=157,slow=8.4,SNR=6.0						
ANMO	Albuquerque	72.19	351	P	P	13 21 38.1	+0.3
ANMO				IAmb	IAmb	13 21 41.0	
	comp=Z,4.1nm,1.1s						
X18A	Snowflake	72.28	348	P	P	13 21 38.2	-0.1
X18A				IAmb	IAmb	13 21 42.7	
	comp=Z,6.8nm,1.1s						
X16A	Lo Mia Camp, P	72.43	347	P	P	13 21 38.9	-0.3
X16A				IAmb	IAmb	13 21 43.6	
	comp=Z,5.7nm,1.1s						
V53A	Saluda	73.34	11	P	P	13 21 45.3	+0.9
V53A				IAmb	IAmb	13 21 46.5	

	comp=Z,4.9nm,0.9s						
T25A	Trinidad	74.13	353	P	P	13 21 49.1	-0.1
T25A				IAmb	IAmb	13 21 53.5	
	comp=Z,11nm,1.4s						
S39A	Bolivar	74.34	2	P	P	13 21 50.4	+0.3
S39A				IAmb	IAmb	13 22 02.7	
	comp=Z,3.1nm,0.9s						
U15A	North Rim	74.54	347	P	P	13 21 52.0	+0.3
MVCO	Mesa Verde	74.69	350	P	P	13 21 52.6	+0.2
MVCO				IAmb	IAmb	13 21 56.3	
	comp=Z,6.9nm,1.0s						
CCM	Cathedral Cave	74.80	4	P	P	13 21 52.9	+0.1
CCM				IAmb	IAmb	13 21 55.1	
	comp=Z,5.6nm,0.8s						
SDCO	Great Sand Dun	74.84	352	P	P	13 21 53.2	-0.2
SDCO				IAmb	IAmb	13 21 56.7	
	comp=Z,6.3nm,1.3s						
R40A	Maddies Statio	74.98	3	P	P	13 21 54.7	+0.9
S22A	4UR Ranch, Cre	75.00	351	P	P	13 21 54.9	+0.6
S22A				IAmb	IAmb	13 21 58.0	
	comp=Z,4.4nm,1.1s						
PV01	Paradox Valley	75.61	350	P	P	13 21 56.8	-0.9
PV02	Paradox Valley	75.70	350	P	P	13 21 58.1	-0.2
PV03	Paradox Valley	75.76	350	P	P	13 21 59.0	+0.4
PV03				IAmb	IAmb	13 22 01.8	
	comp=Z,4.1nm,1.1s						
PV17	East Wray Mesa	75.80	350	P	P	13 21 57.2	-1.7
PV17				IAmb	IAmb	13 22 01.9	
	comp=Z,5.3nm,0.9s						
PV12	Saucer Basin,	75.82	350	P	P	13 21 58.9	0.0
PV12				IAmb	IAmb	13 22 02.3	
	comp=Z,7.4nm,1.0s						
SZCU	Shurtz Canyon	75.83	346	P	P	13 21 58.9	-0.1
PV16	Nyswonger Mesa	75.83	350	P	P	13 21 59.2	+0.2
PV16				IAmb	IAmb	13 22 02.1	
	comp=Z,9.1nm,1.3s						
CCUT	Cedar City	75.83	346	P	P	13 21 59.8	+0.7
PV14	Lion Creek, Pa	75.90	350	P	P	13 21 59.2	-0.2
PV14				IAmb	IAmb	13 22 02.6	
	comp=Z,7.2nm,1.0s						
PV04	Paradox Valley	75.91	350	P	P	13 21 59.3	0.0
MTPU	Mount Pierson	76.09	347	P	P	13 22 00.2	-0.4
PSUT	Pine Spring	76.88	346	P	P	13 22 06.0	+1.1
R11A	Troy Canyon, C	77.06	344	P	P	13 22 06.0	+0.1
R11A				IAmb	IAmb	13 22 09.9	
	comp=Z,3.9nm,1.1s						
TMUT	Trail Mountain	77.14	348	P	P	13 22 06.8	+0.3
P17A	Butcher Ranch,	77.24	349	P	P	13 22 06.0	-0.9
NVAR	Mina Array Bea	77.76	342	P	P	13 22 11.3	+1.5
	comp=Z,5.5nm,1.0s,baz=172,slow=5.8,SNR=23						
DUG	Dugway, Tooele	78.30	347	P	P	13 22 11.6	-1.2
DUG				IAmb	IAmb	13 22 29.0	
	comp=Z,7.3nm,1.3s						
N49A	Columbus Grove	78.30	9	P	P	13 22 12.6	+0.1
ELK	Elko	79.29	345	P	P	13 22 18.2	-0.1
	comp=Z,2.3nm,0.9s,baz=184,slow=5.7,SNR=7.9						
ELK	Elko	79.29	345	P	P	13 22 17.5	-0.8
BW06	Boulder Array	80.29	350	P	P	13 22 23.9	+0.2
PD31	Pinedale Array	80.29	350	P	P	13 22 23.9	+0.3
PDAR	Pinedale Array	80.29	350	P	P	13 22 24.0	+0.3
	comp=Z,1.5nm,0.6s,baz=161,slow=5.9,SNR=18						
REDW	Red Top Meadow	81.06	349	P	P	13 22 27.5	-0.3
REDW				IAmb	IAmb	13 22 31.1	
	comp=Z,7.1nm,1.2s						
LOHW	Long Hollow	81.27	349	P	P	13 22 28.8	-0.1
FLWY	Flagg Ranch	81.75	349	P	P	13 22 30.6	-0.7
FLWY				IAmb	IAmb	13 22 35.4	
	comp=Z,4.3nm,0.9s						
HLID	Hailey	81.85	347	P	P	13 22 31.6	-0.4
HLID				IAmb	IAmb	13 22 35.6	
	comp=Z,3.9nm,0.8s						
ULM	Lac du Bonnet	86.85	0	P	P	13 22 57.1	+0.3
	comp=Z,1.6nm,0.7s,baz=180,slow=8.5,SNR=3.3						
ULM	Lac du Bonnet	86.85	0	IAmb	IAmb	13 23 22.9	
	comp=Z,6.9nm,1.4s						
RAYN	Ar Rayn	144.54	101		PKPab	13 29 47.4	-0.7
KBZ	Khabaz	148.35	65	PKPbc	PKPbc	13 29 58.9	0.0
	comp=Z,2.1nm,1.0s,baz=1.2,slow=3.6,SNR=4.1						

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*IDC **20** 13:21:35.6±0.5, 36°.29N×120°.94W, h0^{km}, mb4.4/23, mb1 4.6/31, mb1mx4.5/44, mbtmp4.4/31, ML4.1/8, MS3.7/10, Ms1 3.7/10, ms1mx3.4/46, Error ellipse: s-maj=11.1km s-min=9.1km az=45.0*

*NEIC **20** 13:21:35.6±1.5, 36°.35N±0°.04×121°.03W±0°.05, h7^{km}±3^{km}, Error ellipse: s-maj=7.7km s-min=3.8km az=46.0*

*NCEDC **20** 13:21:37.0±1.5, 36°.43N±0°.04×120°.97W±0°.05, h10^{km}±3^{km}, Mwr4.4/6, mb4.7/107(NEIC), ML4.6/85(NEIC), Error ellipse: s-maj=7.3km s-min=2.4km az=48.0*

*NEIC **20** 13:21:37, 36°.43N×120°.97W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$4.90; M$_{\theta\theta}$-4.22; M$_{\phi\phi}$-0.68; M$_{r\theta}$0.72; M$_{\theta\phi}$3.04; M$_{\phi r}$0.07; Fault plane solution: M$_0$5.56000×10^{15} NP1:φ$_s$306.17000°, δ42.25000°, λ99.14000°. NP2:φ$_s$113.91000°, δ48.41000°, λ81.79000°. Principal axes: T 4.9730, Plg83.0000°, Azm326.0000°; N 1.0290, Plg6.0000°, Azm119.0000°; P -6.0020, Plg3.0000°, Azm210.0000°;*

*ANF **20** 13:21:40.6±0.7, 36°.24N×120°.90W, h30^{km}±5^{km}, ML4.8/44 Error ellipse: s-maj=4.0km s-min=1.7km az=36.0*

ISC 20 13:21:36.5±0.8, **36°.34N**±0°.03×**120°.99W**±0°.03, **h8**^{km}±5^{km}, **n473**, σ**1**^{s}.**18**/484, **mb4.7**/76, **MS3.8**/6, **Central California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRV	Little Rabbit	0.09	342		Pg	13 21 39.3	+0.7
PMPB	Monarch Peak	0.20	130		Pb	13 21 42.6	+2.2
BSMM	Soledad Missio	0.36	277		Pg	13 21 44.3	+0.7
BJCM	Johnson Can.	0.39	302		Pg	13 21 43.8	-0.2
SCZ	Santa Cruz	0.42	307		Pg	13 21 44.3	-0.4
SCZ					Sg	13 21 49.7	-0.5
HAST	Hastings Reser	0.46	276		Pg	13 21 45.9	+0.5
HAST					Sg	13 21 52.2	+0.8
PAPM	Alder Peak	0.53	216		Pb	13 21 48.8	+0.7
PKD	Bear Valley Ra	0.54	138		Pb	13 21 48.5	+0.4
SAO	San Andreas Ge	0.56	319		Pg	13 21 46.4	-0.9
SAO	San Andreas Ge	0.56	319		Sg	13 21 53.7	-0.9
PACP	Pacheco Peak	0.71	340		Pg	13 21 49.5	-0.6
HFEM	San Felipe	0.72	333		Pg	13 21 49.7	-0.7
TCHL	Shandon	0.81	144		Pn	13 21 53.9	-0.3
GHS	Gilroy Hot Spr	0.84	334		Pg	13 21 51.8	-0.8
PAGB	Antelope Grade	0.85	135		Pb	13 21 54.3	+0.7
PAGB				IAML		13 22 10.2	
	comp=N,34μm,0.8s						
THIS	South End of C	0.87	135		Pn	13 21 55.0	-0.1
TRAM	Private Proper	0.88	139		Pn	13 21 55.0	-0.2
TSCN	Private Proper	0.95	147		Pn	13 21 56.2	0.0
MOBB	Monterey Bay O	1.01	290		Pg	13 21 56.0	+0.2
MHC	Mount Hamilton	1.13	332		Pb	13 21 56.3	-2.0
SCCB	Santa Clara Co	1.18	323		Pb	13 21 57.6	-1.5
VOG	Valley Oaks Go	1.29	90	P	Pn	13 21 59.8	-1.1
	baz=276,SNR=132						
VOG				S	Sb	13 22 16.9	-0.9
	baz=276						
SMMC	Simmler	1.30	142	P	Pn	13 22 00.8	-0.3
	baz=325,SNR=725						
WENL	Wente Vineyard	1.42	334		Pn	13 22 00.7	-2.0
JRSC	Jasper Ridge	1.46	317		Pn	13 22 01.1	-2.1
C055	Cottonwood Ave	1.59	326		Pn	13 22 02.9	-2.1
HELL	Mitchell Peak,	1.62	77		Pn	13 22 03.9	-1.5
VES	Vestal, Richgr	1.62	107	P	Pn	13 22 04.6	-0.8
	baz=292,SNR=815						
VES				S	Sn	13 22 26.4	0.0
	baz=292						
CMCM	Mills College	1.72	327		Pn	13 22 05.0	-1.8
PKM	Mcpherson Peak	1.74	146	P	Pn	13 22 07.2	0.0
	baz=329,SNR=394						
BDM	Black Diamond	1.75	337		Pn	13 22 05.5	-1.7
CMB	Columbia Colle	1.75	16		Pn	13 22 05.5	-1.8
CMB				IAML		13 22 31.4	
	comp=E,5μm,1.1s						
CMB				IAML		13 22 32.7	
	comp=N,4μm,0.9s						
BKS	Berkeley--Byer	1.83	327		Pn	13 22 06.3	-1.9
BL67	Building 67, L	1.83	327		Pn	13 22 06.5	-1.9
VAK	Adit at Lawren	1.83	327		Pn	13 22 06.4	-1.9
BL88	Building 88, L	1.84	327		Pn	13 22 06.7	-1.7
BRK	Berkeley--Havi	1.84	327		Pn	13 22 06.4	-1.9
MRDM	Red Cones	1.99	50		Pn	13 22 10.5	-0.2
MDPB	Devils Postpil	2.00	49		Pn	13 22 10.3	-0.5
MDPB				IAML		13 22 37.3	
	comp=E,7μm,0.5s						
OMMB	Old Mammoth Mi	2.03	51		Pn	13 22 11.0	-0.3
OMMB				IAML		13 22 43.8	
	comp=E,8μm,0.9s						
MDCM	Deadman Creek	2.07	48		Pn	13 22 11.8	0.0
FARB	Farallon Islan	2.10	311		Pn	13 22 09.7	-2.3
ARVC	Arvin	2.13	124	P	Pn	13 22 12.0	-0.4
	baz=308,SNR=463						
ISA	Isabella, Lake	2.15	108	P	Pn	13 22 12.5	-0.1
	baz=292,SNR=1000						
ISA				S	Sn	13 22 40.3	+0.8
	baz=292						
ISA	Isabella, Lake	2.15	108		Pn	13 22 12.7	0.0
ISA				IAML		13 22 44.5	
	comp=N,7μm,0.7s						
ISA				IAML		13 22 45.0	
	comp=E,6μm,0.8s						
MLAC	Mammoth, Mammo	2.15	53	P	Pn	13 22 13.2	+0.3
	baz=236,SNR=834						
MLAC				S	Sb	13 22 41.2	-1.5
	baz=236						
MDRNC	Doe Ridge	2.15	52		Pn	13 22 13.4	+0.5
SBC	Santa Barbara	2.16	151	P	Pn	13 22 13.1	+0.3
	baz=333,SNR=72						
MTUM	Tungsten Hills	2.19	62		Pn	13 22 13.6	+0.2
CVS	Carmenet Viney	2.32	330		Pn	13 22 13.3	-1.7
TIN	Tinemaha, Big	2.33	71	P	Pn	13 22 15.7	+0.5
	baz=255,SNR=357						
TIN				S	Sn	13 22 45.5	+1.4
	baz=255						
CWC	Cottonwood Cre	2.35	87	P	Pn	13 22 16.0	+0.5
	baz=271						
CWC				S	Sn	13 22 45.2	+0.6
	baz=271						
MCCM	Marconi Confer	2.35	321		Pn	13 22 12.8	-2.6
MCCM				IAML		13 22 55.6	
	comp=E,3μm,1.0s						
MCCM				IAML		13 23 04.8	
	comp=N,3μm,0.9s						
WAKR	Walker	2.48	29		Pn	13 22 17.8	+0.3
OSI	Osito Audit: C	2.53	132	P	Pn	13 22 17.8	0.0
	baz=316,SNR=156						
OSI	Osito Audit: C	2.53	132		Pn	13 22 18.1	+0.2
OSI				IAML		13 23 14.1	
	comp=E,4μm,1.0s						
OSI				IAML		13 23 15.6	
	comp=N,3μm,0.8s						
SCZ2	Santa Cruz Isl	2.59	154	P	Pn	13 22 18.2	-0.5
	baz=336,SNR=45						
AFDM	Forest Hills D	2.60	0		Pn	13 22 17.7	-1.2
AFDM				IAML		13 23 03.0	
	comp=N,2μm,0.8s						
AFDM				IAML		13 23 16.2	
	comp=E,2μm,1.1s						
LHV	Little Huntoon	2.75	45	Pn	Pn	13 22 20.6	-0.2
RUBR	Rubicon Trail	2.78	13		Pn	13 22 20.7	-0.9
LRMC	Laurel Mtn Rad	2.82	107	P	Pn	13 22 22.2	+0.2
	baz=291,SNR=310						
EDW2	Edwards Air Fo	2.84	120	P	Pn	13 22 22.6	+0.4
	baz=304,SNR=275						
MPMC	Manual Prospec	2.84	95	P	Pn	13 22 22.6	+0.2
	baz=279,SNR=372						
GDXM	Geysers	2.85	330		Pn	13 22 19.6	-2.7
PNTR	Pine Nut	2.95	21		Pn	13 22 23.4	-0.5
GRAC	Grapevine Rang	2.98	76	P	Pn	13 22 24.6	+0.4
	baz=260,SNR=50						
NVAR	Mina Array Bea	2.98	45	Pn	Pn	13 22 26.4	+2.1
	comp=E,98nm,0.3s,baz=235,slow=17,SNR=105						
NVAR				Lg	Lg	13 23 08.0	
	comp=E,116nm,0.3s,baz=236,slow=21,SNR=6.6						
NVAR	Mina Array Bea	2.98	45	Pn	Pn	13 22 24.6	+0.3
RYN	Ryan	3.01	40		Pn	13 22 24.8	+0.2
RYN				IAML		13 23 18.6	
	comp=E,2μm,0.9s						
RYN				IAML		13 23 29.3	
	comp=N,2μm,0.9s						
DECC	Green Verdugo	3.01	133	P	Pn	13 22 24.5	0.0
	baz=316,SNR=17						
NV11	Mina Array Sit	3.07	46		Pn	13 22 25.8	+0.3
NV11				IAML		13 23 16.4	
	comp=E,1μm,1.1s						
NV11				IAML		13 23 16.6	
	comp=N,1μm,1.4s						
HOPS	Hopland Field	3.12	329		Pn	13 22 23.8	-2.3
VCNR	Virginia City	3.13	19	Pn	Pn	13 22 26.0	-0.4
VCNR				IAML		13 23 18.7	
	comp=E,3μm,1.3s						
PASC	Pasadena Art C	3.15	133	Pn	Pn	13 22 26.0	-0.5
PASC				IAML		13 23 14.1	
	comp=E,1μm,1.0s						
PASC				IAML		13 23 23.8	
	comp=N,970nm,1.0s						
MWC	Mount Wilson	3.19	131		Pn	13 22 27.1	-0.1
MWC				IAML		13 23 14.2	
	comp=N,1μm,1.2s						
MWC				IAML		13 23 29.1	
	comp=E,1μm,0.9s						
ORV	Oroville	3.23	353		Pn	13 22 26.1	-1.4
ORV				IAML		13 23 22.3	
	comp=E,856nm,0.9s						
SNCC	San Nicolas Is	3.31	158	P	Pn	13 22 28.1	-0.6
	baz=340,SNR=12						
SNCC	San Nicolas Is	3.31	158		Pn	13 22 27.7	-1.0
FURC	Furnace Creek,	3.33	87	P	Pn	13 22 29.3	+0.5
	baz=271,SNR=69						
FMP	Fort Macarthur	3.43	139	P	Pn	13 22 29.5	-0.8
	baz=322,SNR=7.8						
BFSC	Mount Baldy Ra	3.44	127	P	Pn	13 22 30.3	-0.2
	baz=310,SNR=396						
BFSC				S	Sn	13 23 10.6	-0.9
	baz=310						
TPH	Tonopah	3.47	59		Pn	13 22 30.7	-0.2
TPH	Tonopah	3.47	59	IAML		13 23 29.8	
	comp=E,2μm,1.2s						
TPH				IAML		13 23 30.7	
	comp=N,2μm,1.0s						
GSC	Goldstone, Bar	3.55	106	P	Pn	13 22 32.1	+0.1
	baz=290,SNR=411						
GSC				S	Sn	13 23 14.2	-0.1
	baz=290						
GSC	Goldstone, Bar	3.55	106	Pn	Pn	13 22 32.4	+0.4
GSC				IAML		13 23 31.9	
	comp=N,1μm,0.7s						
BEKR	Beckworth	3.55	8	Pn	Pn	13 22 32.7	+0.5
BEKR				IAML		13 23 28.9	
	comp=E,2μm,0.7s						
BEKR				IAML		13 23 32.3	
	comp=N,972nm,1.0s						
RRX	Edison Barstow	3.56	113	P	Pn	13 22 32.2	0.0
	baz=297,SNR=61						
RRX				S	Sn	13 23 14.9	+0.4
	baz=297						
PAHR	Pah Rah Range	3.59	20	Pn	Pn	13 22 32.3	-0.3
PAHR				IAML		13 23 29.5	
	comp=N,1μm,1.3s						
PAHR				IAML		13 23 29.7	
	comp=E,2μm,1.2s						
SHOC	Shoshone, Teco	3.84	95	P	Pn	13 22 35.9	0.0
	baz=279,SNR=69						
TPNV	Topopah Spring	3.86	80	P	Pn	13 22 36.8	+0.5
	baz=264,SNR=134						
TPNV	Topopah Spring	3.86	80	Pn	Pn	13 22 36.8	+0.5
TPNV				IAML		13 23 43.8	
	comp=E,2μm,1.3s						
SCI2	San Clemente I	3.91	148	P	Pn	13 22 36.5	-0.4
	baz=331,SNR=74						
KCPM	Cahto Peak	3.92	329		Pn	13 22 35.7	-1.4
KCPM				IAML		13 24 05.8	
	comp=E,424nm,1.8s						
BBRC	Big Bear Solar	3.92	121	P	Pn	13 22 37.1	-0.1
	baz=304,SNR=63						
O03E	Paynes Creek	4.00	351	P	Pn	13 22 37.0	-1.1
	baz=170,SNR=44						
HEC	Hector,Ludlow	4.08	110	P	Pn	13 22 39.2	0.0
	baz=294,SNR=279						
O02D	Mt. Diablo Mer	4.08	340	P	Pn	13 22 38.0	-1.3
	baz=159,SNR=11						
MURC	Murrieta	4.14	130	P	Pn	13 22 40.0	-0.1
	baz=314,SNR=75						
WDC	Whiskeytown Da	4.40	344	Pn	Pn	13 22 41.3	-2.4
KMRM	Mail Ridge	4.43	332	Pn	Pn	13 22 43.5	-0.5
KMRM				IAML		13 24 51.1	
	comp=E,281nm,1.9s						
PFO	Pinyon Flats O	4.61	125	Pn	Pn	13 22 46.8	+0.3
	comp=E,23nm,0.3s,baz=296,slow=12,SNR=200						
PFO				Sn	Sn	13 23 40.3	0.0
	comp=E,22nm,0.3s,baz=354,slow=6.4,SNR=11						
PFO				LR	LR	13 24 39.6	
	comp=E,298nm,21.7s,baz=327,slow=40						
PFO	Pinyon Flats O	4.61	125	P	Pn	13 22 46.4	-0.2
	baz=309,SNR=166						
PFO	Pinyon Flats O	4.61	125		Pn	13 22 46.7	+0.2
PFO	Pinyon Flats O	4.61	125	IAML		13 23 44.1	
	comp=E,251nm,1.3s						
PFO				IAML		13 24 22.4	
	comp=E,218nm,1.8s						
GMRC	Granite Mounta	4.61	108	P	Pn	13 22 46.3	-0.4
	baz=292,SNR=242						
SHPR	Sheep Range	4.70	86		Pn	13 22 49.0	+1.1
SHPR				IAML		13 24 12.2	
	comp=E,240nm,0.9s						
109C	Camp Elliot, M	4.70	136	P	Pn	13 22 47.3	-0.4
	baz=319,SNR=11						
109C	Camp Elliot, M	4.70	136		Pn	13 22 47.5	-0.3
BELC	Belle Mtn. Jos	4.71	118	P	Pn	13 22 48.0	0.0
	baz=302,SNR=130						
R11A	Troy Canyon, C	4.75	63	P	Pn	13 22 49.0	+0.4
	baz=248,SNR=12						
R11A	Troy Canyon, C	4.75	63		Pn	13 22 49.4	+0.9
N02D	Trinity Center	4.82	344	P	Pn	13 22 51.5	+2.1
	baz=163						
PRN	Pahroc Range	4.88	76		Pn	13 22 50.5	+0.2
PRN				IAML		13 24 20.4	
	comp=N,713nm,0.9s						
KHMM	Horse Mountain	5.01	335		Pn	13 22 51.8	-0.3
KHMM				IAML		13 24 49.2	
	comp=N,193nm,1.4s						
KHMM				IAML		13 24 53.0	
	comp=E,187nm,2.7s						
TJX	Tijuana	5.02	139	Pn	Pn	13 22 52.2	+0.2
TJX				IAML		13 24 23.9	
	comp=E,511nm,1.2s						
TJX				IAML		13 24 26.2	
	comp=N,499nm,1.0s						
JCC	Jacoby Creek,	5.06	333	Pn	Pn	13 22 52.5	-0.2
MONP2	Monument Peak	5.10	131	P	Pn	13 22 53.1	-0.3
	baz=315,SNR=68						
BAR	Barrett	5.10	134	Pn	Pn	13 22 52.8	-0.4
TKX	Tecate	5.22	135		Pn	13 22 54.2	-0.7
TKX				IAML		13 26 10.0	
	comp=N,144nm,0.1s						
M02C	Callahan	5.25	344	P	Pn	13 22 56.9	+1.6
	baz=163,SNR=14						
IRM	Iron Mountain	5.25	113	P	Pn	13 22 55.2	-0.2
	baz=297,SNR=60						
BC3	Big Chuckawall	5.27	119	P	Pn	13 22 55.3	-0.4
	baz=303,SNR=66						
CBX	Cerro Bola	5.38	137		Pn	13 22 56.8	-0.4
NEE2	Needles Airpor	5.42	105	P	Pn	13 22 57.5	-0.2
	baz=290,SNR=5.8						
SWSC	Sam W. Stewart	5.45	127	P	Pn	13 22 57.4	-0.7
	baz=311,SNR=10						
IKP	In-Ko-Pah, Jac	5.46	131	P	Pn	13 22 58.1	-0.2
	baz=315,SNR=23						
M04C	Macdoel	5.47	353	P	Pn	13 23 00.4	+2.0
	baz=172,SNR=9.3						
RMX	La Rumorosa	5.51	131		Pn	13 23 00.2	+1.2
YBH	Yreka Blue Hor	5.55	347	Pn	Pn	13 23 01.6	+2.1
	comp=N,1.2nm,0.3s,baz=153,slow=7.3,SNR=42						
YBH				Sn	Sn	13 24 09.4	+6.0
	comp=N,1.8nm,0.3s,baz=68,slow=10,SNR=3.7						
YBH				Lg	Lg	13 24 28.9	
	comp=N,1.1nm,0.3s,baz=42,slow=13,SNR=4.2						
YBH	Yreka Blue Hor	5.55	347	Pn	Pn	13 22 57.9	-1.5
KRMB	Red Mountain	5.65	337	Pn	Pn	13 22 59.2	-1.7
W13A	Hualapai Mount	5.91	100	Pn	Pn	13 23 03.1	-1.5
PDMCI	Parker Dam,Lak	5.95	108	P	Pn	13 23 05.3	+0.4
	baz=293,SNR=73						
L04D	Klamath Falls	5.96	351	P	Pn	13 23 07.3	+2.2
	baz=170						
ESJX	Sierra Juarez	6.01	135		Pn	13 23 05.8	-0.1
GLA	Glamis	6.04	121	P	Pn	13 23 06.0	-0.2
	baz=306,SNR=22						
GLA	Glamis	6.04	121		Pn	13 23 05.7	-0.5
L02E	Cave Junction	6.15	342	P	Pn	13 23 09.9	+2.2
	baz=160,SNR=6.7						
CCUT	Cedar City	6.22	77	Pn	Pn	13 23 08.4	-0.4
LCMT	Little Creek M	6.26	82		Pn	13 23 08.4	-0.9
ELK	Elko	6.29	44	Pn	Pn	13 23 10.5	+0.7
	comp=N,0.8nm,0.3s,baz=241,slow=15,SNR=18						
ELK				Lg	Lg	13 24 51.0	
	comp=N,13nm,0.3s,baz=343,slow=12,SNR=8.4						
ELK				LR	LR	13 26 13.7	
	comp=N,251nm,19.8s,baz=242,slow=44						
ELK	Elko	6.29	44		Pn	13 23 08.7	-1.1
WVOR	Wild Horse Val	6.35	16	Pn	Pn	13 23 09.2	-1.3
KBO	Bosley Butte	6.38	338	Pn	Pn	13 23 09.7	-1.2
SZCU	Shurtz Canyon	6.45	76	Pn	Pn	13 23 10.3	-1.6
K02D	Willamette Mer	6.67	343	P	Pn	13 23 17.2	+2.3
	baz=161,SNR=9.5						
J05D	Fort Rock, OR	6.94	358	P	Pn	13 23 20.5	+1.9
	baz=178,SNR=19						
J04D	Umpqua Nationa	6.94	353	P	Pn	13 23 20.9	+2.2
	baz=172,SNR=11						
KEBM	Edson Butte	7.01	339	Pn	Pn	13 23 17.8	-1.8
J01E	Myrtle Point	7.18	342	P	Pn	13 23 23.6	+1.9
	baz=160,SNR=10						
MTPU	Mount Pierson	7.23	74	Pn	Pn	13 23 22.1	-0.7
DUG	Dugway, Tooele	7.49	57	P	Pn	13 23 28.1	+1.9
	baz=242,SNR=19						
I04A	Tendick Farm,	7.52	352	P	Pn	13 23 28.3	+1.8
	baz=171						
I03D	Drain, OR	7.57	347	P	Pn	13 23 28.8	+1.8
	baz=165,SNR=9.3						
WUAZ	Wupatki	7.84	93	P	Pn	13 23 31.3	+0.3
	baz=280,SNR=33						
PIX	Pinacate	7.86	125	Pn	Pn	13 23 31.3	+0.2
I05D	Terrebonne, OR	7.99	358	P	Pn	13 23 36.7	+3.8
	baz=178,SNR=7.5						
X16A	Lo Mia Camp, P	8.03	101	Pn	Pn	13 23 33.5	-0.1
I02D	Swisshome	8.06	345	P	Pn	13 23 37.3	+3.5
	baz=163						
214A	Organ Pipe Nat	8.06	121	P	Pn	13 23 33.8	-0.2
	baz=306						
214A	Organ Pipe Nat	8.06	121	Pn	Pn	13 23 33.8	-0.2
MFID	Camas Ranch	8.10	28	Pn	Pn	13 23 32.9	-1.6
H04D	Lebanon	8.28	351	P	Pn	13 23 40.0	+3.2
	baz=170						
HVU	Hansel Valley	8.38	47	Pn	Pn	13 23 37.7	-0.7
COR	Corvallis	8.42	349	Pn	Pn	13 23 38.1	-0.7
P17A	Butcher Ranch,	8.68	66	Pn	Pn	13 23 41.5	-1.1
SRU	San Rafael Swe	8.74	68	Pn	Pn	13 23 42.1	-1.3
HLID	Hailey	8.80	33	P	Pn	13 23 46.7	+2.5
	baz=217,SNR=7.9						
G05D	Wamic, OR	8.89	358	P	Pn	13 23 49.1	+3.8
	baz=178						
G08A	Pilot Rock	9.07	9	Pn	Pn	13 23 46.3	-1.5
X18A	Snowflake	9.19	98	Pn	Pn	13 23 48.8	-0.7
TUC	Tucson	9.35	113	P	Pn	13 23 51.4	-0.2
	baz=299						
TUC	Tucson	9.35	113		Pn	13 23 50.8	-0.8
F05D	White Salmon	9.54	358	P	Pn	13 23 56.9	+2.8
	baz=178						
PV10	Paradox Valley	9.72	74	Pn	Pn	13 23 56.8	-0.1
MVCO	Mesa Verde	10.06	81	P	Pn	13 24 03.2	+1.7
	baz=269						
PV01	Paradox Valley	10.06	76	Pn	Pn	13 23 59.9	-1.6
E04D	Cinebar	10.27	354	P	Pn	13 24 07.2	+3.1
	baz=173						
O20A	White River Ci	10.71	65	P	Pn	13 24 13.4	+3.0
	baz=254,SNR=11						
BW06	Boulder Array	10.90	50	P	Pn	13 24 15.4	+2.3
	baz=238						
PDAR	Pinedale Array	10.90	50	Pn	Pn	13 24 15.8	+2.7
	comp=N,0.1nm,0.3s,baz=240,slow=12,SNR=15						
D04E	Lakebay	10.91	354	P	Pn	13 24 17.0	+4.1
	baz=172						
319A	Douglas	10.92	114	Pn	Pn	13 24 12.9	-0.3
NLWA	Neilton Lookou	11.25	350	Pn	Pn	13 24 15.1	-2.4
D03D	Eldon	11.29	353	P	Pn	13 24 21.4	+3.3
	baz=171						
S22A	4UR Ranch, Cre	11.40	79	P	Pn	13 24 21.0	+1.1
	baz=268						
S22A	4UR Ranch, Cre	11.40	79	Pn	Pn	13 24 18.2	-1.7
121A	Cookes Peak, D	11.54	105	P	Pn	13 24 23.1	+1.3
	baz=293,SNR=18						
BOZ	Bozeman (W)	11.63	34	P	Pn	13 24 25.0	+2.1
	baz=221						
MSO	Missoula	11.72	24	P	Pn	13 24 28.1	+4.0
	baz=209,SNR=11						
ANMO	Albuquerque	11.90	92	Pn	Pn	13 24 28.4	+1.7
	comp=N,0.2nm,0.3s,baz=281,slow=13,SNR=14						
ANMO				Lg	Lg	13 27 53.6	
	comp=N,0.1nm,0.3s,baz=193,slow=20,SNR=3.4						

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ANMO                                LR     LR     13 28 37.5
      comp=N,81nm,21.7s,baz=278,slow=36
ANMO  Albuquerque        11.90  92  P      Pn     13 24 27.4 +0.7
      baz=281
ANMO  Albuquerque        11.90  92  Pn     Pn     13 24 26.3 -0.4
B05A  Bryant             11.94 356  P      Pn     13 24 30.2 +3.2
      baz=176
B08A  Colville Reser     12.07   5  Pn     Pn     13 24 27.0 -1.8
NEW   Newport            12.25  12  Pn     Pn     13 24 36.1 +4.9
      comp=N,0.9nm,0.3s,baz=189,slow=12,SNR=24
NEW                                 LR     LR     13 29 26.2
      comp=N,393nm,19.1s,baz=196,slow=38
NEW   Newport            12.25  12  P      Pn     13 24 35.5 +4.2
      baz=195,SNR=35
PGC   Sidney             12.43 352  Pn     Pn     13 24 32.0 -1.7
SDCO  Great Sand Dun     12.45  79  P      Pn     13 24 36.8 +2.5
      baz=269
ISCO  Idaho Springs      12.60  69  P      Pn     13 24 36.6 +0.3
      baz=259
N23A  Red Feather La     12.61  64  P      Pn     13 24 38.1 +1.7
      baz=254
N23A  Red Feather La     12.61  64  Pn     Pn     13 24 34.9 -1.5
K22A  Casper             12.82  56  P      Pn     13 24 41.4 +2.3
      baz=246,SNR=8.9
T25A  Trinidad           13.32  82  P      Pn     13 24 47.5 +1.4
      baz=272
WALA  Waterton Lakes     13.72  20  Pn     Pn     13 24 50.6 -0.8
MNTX  Cornudas Mount     13.74 105  P      Pn     13 24 52.6 +0.9
      baz=294,SNR=20
EGMT  Eagleton           14.32  32  P      Pn     13 25 01.9 +2.4
      baz=220,SNR=7.3
KSCO  Kaye Shedlock'     14.78  74  P      Pn     13 25 07.8 +1.9
      baz=266
RSSD  Black Hills        15.08  54  P      Pn     13 25 12.3 +2.3
      baz=245
RSSD  Black Hills        15.08  54         Pn     13 25 07.5 -2.5
MSTX  Muleshoe           15.09  94  P      Pn     13 25 11.4 +1.3
      baz=285,SNR=9.4
LAO   LASA Array         15.11  42  P      Pn     13 25 11.4 +1.1
      baz=232,SNR=6.1
LPIG  La Paz             15.28 140  LR     LR     13 31 19.4
      comp=N,693nm,18.0s,baz=330,slow=38
SLBS  Sierra La Lagu     15.81 140  Pn     Pn     13 25 20.5 +0.9
TX31  Lajitas Ar. Si     16.13 111         Pn     13 25 22.9 -0.8
TX31                                IAmb   IAmb   13 25 29.9
      comp=Z,66nm,1.3s
TX32  Lajitas Array      16.14 111         Pn     13 25 23.0 -0.7
TXAR  Lajitas Array      16.14 111  Pn     P      13 25 26.4 -0.7
      comp=Z,0.4nm,0.3s,baz=287,slow=10,SNR=35
TXAR                                PcP    PcP    13 30 19.6 +0.2
      comp=Z,0.1nm,0.3s,baz=302,slow=2.0,SNR=3.4
TXAR  Lajitas Array      16.14 111  P      P      13 25 26.8 -0.3
DGMT  Dagmar             17.29  40  P      P      13 25 40.0 +0.3
      baz=232
ABTX  Abilene, Hawle     17.98  96  P      P      13 25 47.2 -0.1
      baz=288
ABTX  Abilene, Hawle     17.98  96  P      Pn     13 25 46.3 -0.5
WMOK  Wichita Mounta     18.14  89  P      P      13 25 49.4 +0.3
      baz=282
WMOK  Wichita Mounta     18.14  89  P      Pn     13 25 48.3 -0.5
E28A  Huff               18.28  50  P      Pn     13 25 49.5 -0.9
E28A                                IAmb   IAmb   13 25 56.5
      comp=Z,70nm,1.2s
JCT   Junction City      18.61 102  P      Pn     13 25 55.1 +0.5
      baz=294
JCT   Junction City      18.61 102  P      P      13 25 53.2 -1.2
KAN01 Argonia South      18.63  81  P      P      13 25 53.9 -0.6
KAN01                               IAmb   IAmb   13 26 01.2
      comp=Z,36nm,1.0s
KAN13 South Haven SW     18.86  81  P      P      13 25 56.3 -0.8
OK029 Liberty Lake       19.02  85  P      P      13 25 58.6 -0.3
KSU1  Kansas State U     19.46  75  P      Pn     13 26 04.8 -0.1
      baz=270
KSU1  Kansas State U     19.46  75  P      P      13 26 02.7 -1.0
OK031 S. Brethren Rd     19.50  84  P      P      13 26 03.4 -0.6
OK031                               IAmb   IAmb   13 26 12.2
      comp=Z,26nm,0.7s
MDND  Maddock            19.52  47  P      Pn     13 26 05.9 +0.4
      baz=242
OK030 Cody Creek RV      19.55  84  P      P      13 26 04.3 -0.2
OK030                               IAmb   IAmb   13 26 12.8
      comp=Z,32nm,0.7s
W35A  Tecumseh           19.60  86  P      P      13 26 04.5 -0.7
T35A  Sooner Cattle      19.64  81  P      P      13 26 04.9 -0.7
833A  Chaparral WMA,     19.89 108  P      P      13 26 08.8 +0.4
      baz=300
833A  Chaparral WMA,     19.89 108  P      P      13 26 08.4  0.0
WHTX  Lake Whitney,      19.93  96  P      P      13 26 09.5 +0.7
      baz=289,SNR=6.0
WHTX  Lake Whitney,      19.93  96  P      P      13 26 08.3 -0.5
ECSD  EROS Data Cent     20.02  61  P      P      13 26 10.5 +0.7
      baz=257,SNR=14
ECSD  EROS Data Cent     20.02  61  P      P      13 26 09.3 -0.4
TUL1  Leonard            20.34  84  P      P      13 26 13.7 +0.4
      baz=279,SNR=8.9
TUL1  Leonard            20.34  84  P      P      13 26 13.0 -0.3
TUL1                                IAmb   IAmb   13 26 19.7
      comp=Z,37nm,0.8s
F33A  5 Mile Ranch,      20.82  55  P      P      13 26 17.8 -0.5
X37A  Clayton            20.92  87  P      P      13 26 19.5 -0.1
X37A                                IAmb   IAmb   13 26 29.6
      comp=Z,42nm,0.9s
237A  Washetta, Mont     21.25  94  P      P      13 26 23.2 +0.1
237A                                IAmb   IAmb   13 26 30.0
      comp=Z,18nm,0.7s
U38A  Gravette           21.39  82  P      P      13 26 24.5 -0.1
U38A                                IAmb   IAmb   13 26 33.2
      comp=Z,22nm,0.8s
Z38A  Mt. Pleasant       21.55  91  P      P      13 26 26.1 -0.2
HHAR  Hobbs              21.77  82  P      P      13 26 28.3 -0.4
AGMN  Agassiz Nation     21.98  49  P      P      13 26 31.5 +0.8
      baz=246
AGMN  Agassiz Nation     21.98  49  P      P      13 26 29.7 -1.1
AGMN                                IAmb   IAmb   13 26 35.0
      comp=Z,17nm,0.8s
W39A  Magazine           22.08  85  P      P      13 26 31.8 -0.1
      baz=281,SNR=11
NATX  Nacogdoches        22.26  94  P      P      13 26 33.9  0.0
NATX                                IAmb   IAmb   13 26 35.8
      comp=Z,21nm,0.8s
MIAR  Mount Ida          22.38  86  P      P      13 26 35.2  0.0
      baz=283,SNR=20
MIAR  Mount Ida          22.38  86  P      P      13 26 35.0 -0.2
MIAR                                IAmb   IAmb   13 26 41.1
      comp=Z,40nm,0.8s
K38A  Parkersburg        22.60  65  P      P      13 26 36.0 -1.5
K38A                                IAmb   IAmb   13 27 05.0
      comp=Z,25nm,0.9s
U40A  Yellville          22.63  82  P      P      13 26 37.9  0.0
      baz=279
U40A  Yellville          22.63  82  P      P      13 26 36.9 -1.0
F36A  Milaca             22.68  57  P      P      13 26 37.0 -1.3
ULM   Lac du Bonnet      22.82  45  P      P      13 26 40.9 +1.1
      comp=Z,14nm,0.8s,baz=245,slow=10,SNR=20
ULM                                 PcP    PcP    13 30 30.9 +0.1
      comp=Z,0.9nm,0.5s,baz=265,slow=4.1,SNR=3.3
ULM                                 LR     LR     13 35 55.2
      comp=Z,235nm,22.0s,baz=272,slow=38
ULM   Lac du Bonnet      22.82  45  P      P      13 26 38.2 -1.5
ULM                                 IAmb   IAmb   13 26 43.2
      comp=Z,20nm,0.9s
R40A  Maddies Statio     22.89  76  P      P      13 26 39.5 -1.1
DLBC  Dease Lake         22.90 348  P      P      13 26 41.5 +0.9
      comp=Z,4.7nm,1.0s,baz=221,slow=10,SNR=3.7
DLBC                                LR     LR     13 35 41.3
      comp=Z,205nm,20.5s,baz=136,slow=37
DLBC  Dease Lake         22.90 348  IAmb   IAmb   13 26 58.0
      comp=Z,22nm,1.2s
P40A  Paris              23.00  73  P      P      13 26 41.1 -0.6
P40A                                IAmb   IAmb   13 26 48.8
      comp=Z,14nm,0.7s
WHAR  Wooly Hollow       23.26  84  P      P      13 26 43.5 -0.9
FCAR  Ozark Folk Cen     23.29  82  P      P      13 26 43.8 -0.9
W41B  Gary Mavity, V     23.32  84  P      P      13 26 44.9 -0.1
      baz=282
B35A  Bob, Littlefor     23.32  51  P      P      13 26 43.8 -1.1
L40A  Anamosa            23.69  67  P      P      13 26 47.9 -0.7
L40A                                IAmb   IAmb   13 27 02.1
      comp=Z,26nm,0.9s
CCM   Cathedral Cave     23.71  77  P      P      13 26 49.5 +0.7
      baz=275
N41A  Harden Midland     23.91  70  P      P      13 26 50.4 -0.4
T42A  Van Buren          23.94  79  P      P      13 26 50.2 -0.9
T42A                                IAmb   IAmb   13 26 56.7
      comp=Z,18nm,0.8s
E38A  The Farm, Brul     24.19  56  P      P      13 26 52.9 -0.4
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E38A                                IAmb   IAmb   13 27 01.9
      comp=Z,17nm,0.8s
I40A  Norwalk            24.32  63  P      P      13 26 54.2 -0.4
JFWS  Jewell Farm        24.48  65  P      P      13 26 56.1 +0.1
      baz=265
JFWS  Jewell Farm        24.48  65  P      P      13 26 55.3 -0.7
JFWS                                IAmb   IAmb   13 27 05.1
      comp=Z,21nm,0.9s
PBMO  Poplar Bluff       24.50  80  P      P      13 26 55.2 -1.1
EYMN  Ely                24.60  53  P      P      13 26 57.7 +0.7
      baz=253
EYMN  Ely                24.60  53  P      P      13 26 55.6 -1.5
EYMN                                IAmb   IAmb   13 27 01.7
      comp=Z,32nm,1.4s
G40A  Rib Lake           24.83  59  P      P      13 26 59.2  0.0
G40A                                IAmb   IAmb   13 27 10.7
      comp=Z,21nm,1.2s
L42A  Oliver, Polo       24.84  67  P      P      13 26 58.0 -1.3
P43A  Skaggs, Pawnee     24.95  73  P      P      13 26 58.6 -1.7
Q44A  Meyer Farm, Va     25.38  75  P      P      13 27 03.4 -0.8
HALT  Halls              25.51  81  P      P      13 27 05.6 +0.2
OXF   Oxford             25.74  85  P      P      13 27 07.8 +0.3
      baz=284
OXF   Oxford             25.74  85  P      P      13 27 07.1 -0.4
YKA   Yellowknife Ar     26.48   7  P      P      13 27 14.0 +0.1
      comp=Z,0.9nm,0.8s,baz=185,slow=9.4,SNR=25
YKA                                 PcP    PcP    13 30 39.1 +0.5
      comp=Z,1.2nm,0.5s,baz=143,slow=2.3,SNR=20
YKA                                 LR     LR     13 38 55.3
      comp=Z,236nm,18.8s,baz=0.0,slow=39
WVT   Waverly            26.67  81  P      P      13 27 16.1 +0.1
      baz=281
PLAL  Pickwick Lake      26.70  83  P      P      13 27 14.8 -1.4
PLAL                                IAmb   IAmb   13 27 25.5
      comp=Z,11nm,0.9s
SFIN  Lafayette          26.78  71  P      P      13 27 16.6 -0.3
      baz=272
E43A  Lone Tree Farm     27.22  58  P      P      13 27 20.7 -0.1
E43A                                IAmb   IAmb   13 27 29.2
      comp=Z,9.0nm,0.8s
X48A  Hartselle          27.65  84  P      P      13 27 24.8  0.0
X48A                                IAmb   IAmb   13 27 29.4
      comp=Z,13nm,1.1s
N47A  Urbana             27.83  70  P      P      13 27 25.5 -0.8
N47A                                IAmb   IAmb   13 27 31.6
      comp=Z,12nm,0.8s
CLTN  Cedars of Leba     27.87  80  P      P      13 27 26.3 -0.4
CLTN                                IAmb   IAmb   13 27 32.3
      comp=Z,14nm,1.1s
TGL   Tana Glacier       28.12 337  P      P      13 27 28.3 -0.5
TGL                                 IAmb   IAmb   13 27 35.1
      comp=Z,17nm,0.9s
CRQM  Cirque             28.21 337  P      P      13 27 27.6 -2.1
FCC   Fort Churchill     28.50  30  P      P      13 27 31.4 -0.7
FCC                                 IAmb   IAmb   13 27 39.2
      comp=Z,14nm,1.1s
VRDI  Verde Repeater     28.68 337  P      P      13 27 32.7 -1.2
VRDI                                IAmb   IAmb   13 27 57.7
      comp=Z,23nm,1.5s
FPAL  Fort Paine         28.78  83  P      P      13 27 34.3 -0.6
W50A  Signal Mountai     28.87  82  P      P      13 27 35.5 -0.1
W50A                                IAmb   IAmb   13 27 41.2
      comp=Z,25nm,1.4s
O49A  Covington          28.90  71  P      P      13 27 35.1 -0.7
O49A                                IAmb   IAmb   13 27 40.4
      comp=Z,13nm,0.6s
N49A  Columbus Grove     28.97  70  P      P      13 27 36.3 -0.2
E46A  Sault Ste Mari     29.07  58  P      P      13 27 37.1 -0.1
E46A                                IAmb   IAmb   13 27 49.3
      comp=Z,18nm,1.2s
Z51A  Franklin           29.45  85  P      P      13 27 40.7  0.0
Z51A                                IAmb   IAmb   13 27 46.6
      comp=Z,14nm,0.8s
V51A  Loudon             29.50  80  P      P      13 27 40.8 -0.4
V51A                                IAmb   IAmb   13 27 46.9
      comp=Z,12nm,0.8s
S51A  Beattyville        29.77  76  P      P      13 27 42.9 -0.7
ACSO  Alum Creek Sta     29.93  71  P      P      13 27 45.5 +0.6
      baz=275
ACSO  Alum Creek Sta     29.93  71  P      P      13 27 44.2 -0.7
KDAK  Kodiak Island      29.93 326  LR     LR     13 37 29.0
      comp=Z,206nm,18.5s,baz=127,slow=32
TKL   Tuckaleechee C     30.00  80  P      P      13 27 45.3 -0.3
      comp=Z,12nm,0.8s,baz=247,slow=6.2,SNR=10.0
TKL   Tuckaleechee C     30.00  80  P      P      13 27 45.2 -0.4
TKL                                 IAmb   IAmb   13 27 50.6
      comp=Z,14nm,0.8s
CMIG  Matias Romero      30.03 123  P      P      13 27 45.6 -0.4
      comp=Z,2.5nm,0.7s,baz=338,slow=5.8,SNR=3.8
CMIG                                LR     LR     13 40 48.4
      comp=Z,333nm,18.9s,baz=278,slow=38
HOM   Homer              30.58 329  P      P      13 27 53.1 +2.6
      baz=126
V53A  Saluda             30.76  80  P      P      13 27 52.2 -0.2
V53A                                IAmb   IAmb   13 27 57.1
      comp=Z,16nm,1.2s
GOGA  Godfrey            30.79  84  P      P      13 27 52.7  0.0
GOGA                                IAmb   IAmb   13 27 58.2
      comp=Z,6.3nm,0.8s
O52A  Adamsville         30.81  71  P      P      13 27 52.3 -0.5
SCRK  Sand Creek         30.98 340  P      P      13 27 56.1 +2.0
      baz=142
Q53A  Leroy              31.20  73  P      P      13 27 56.0 -0.2
      baz=278
P53A  Whipple            31.22  72  P      P      13 27 56.2 -0.2
P53A                                IAmb   IAmb   13 27 57.6
      comp=Z,14nm,0.9s
O53A  New Philadelph     31.27  71  P      P      13 27 56.4 -0.5
      baz=276
U54A  Nelsons Funny      31.36  78  P      P      13 27 56.7 -1.0
      baz=282
EPYK  Eagle Plains       31.44 348  P      P      13 27 59.3 +1.2
      baz=155
S54A  Dingess, Beckl     31.53  75  P      P      13 27 59.2 +0.1
      baz=280
M53A  WI Miller and      31.58  68  P      P      13 27 58.9 -0.7
      baz=274
R54A  Victor             31.72  74  P      P      13 28 00.8  0.0
      baz=279
CUT   Chulitna           31.78 334  P      P      13 28 02.9 +1.9
      baz=131
KMSC  Kings Mountain     32.05  80  P      P      13 28 03.7 -0.1
      baz=284
KMSC  Kings Mountain     32.05  80  P      P      13 28 03.6 -0.2
KMSC                                IAmb   IAmb   13 28 08.9
      comp=Z,13nm,0.8s
N54A  Moraine State      32.13  69  P      P      13 28 04.0 -0.4
      baz=275
HDA   Harding Lake       32.14 339  P      P      13 28 05.8 +1.6
      baz=138
MCK   McKinley           32.25 337  P      P      13 28 07.2 +2.0
      baz=135
BLA   Blacksburg         32.33  76  P      P      13 28 06.5 +0.2
      baz=281
M54A  Oil Creek Stat     32.33  68  P      P      13 28 06.6 +0.4
      baz=275
R55A  Marlinton          32.38  74  P      P      13 28 06.4 -0.2
      baz=280
R55A  Marlinton          32.38  74  P      P      13 28 06.2 -0.5
ILAR  Eielson Array      32.40 340  P      P      13 28 08.2 +1.8
      comp=Z,3.4nm,0.9s,baz=156,slow=7.7,SNR=32
ILAR                                PcP    PcP    13 30 54.5 +0.8
      comp=Z,1.6nm,0.8s,baz=175,slow=2.6,SNR=13
Z56A  Williston          32.50  83  P      P      13 28 07.1 -0.6
      baz=287
U56A  King               32.53  78  P      P      13 28 08.1 +0.1
      baz=282
U56A  King               32.53  78  P      P      13 28 08.0  0.0
V56A  Mocksville         32.56  79  P      P      13 28 08.6 +0.4
      baz=283
CCB   Clear Creek Bu     32.57 339  P      P      13 28 08.1 +0.2
SADO  Sadowa             32.59  62  P      P      13 28 08.4 +0.1
      comp=Z,4.5nm,0.8s,baz=301,slow=4.6,SNR=3.0
SADO                                PcP    PcP    13 30 55.0 +0.5
      comp=Z,4.0nm,0.6s,baz=54,slow=4.6,SNR=4.0
T56A  Rocky Mt           32.67  76  P      P      13 28 08.9 -0.3
      baz=282
INK   Inuvik             32.78 351  P      P      13 28 10.4 +0.7
      comp=Z,7.8nm,1.0s,baz=158,slow=10.0,SNR=20
INK                                 PcP    PcP    13 30 55.1 +0.6
      comp=Z,1.5nm,0.8s,baz=36,slow=2.8,SNR=5.4
POKR  Poker Plat Res     32.81 340  P      P      13 28 11.6 +1.6
      baz=138
NEA2  Nenana             32.90 338  P      P      13 28 12.6 +1.7
      baz=136
Q56A  Snyder Ridge,      32.98  72  P      P      13 28 12.0 +0.2
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      baz=279
H53A  Bobcaygeon         32.99  62  P      P      13 28 11.5 -0.3
      baz=271
C36M  Paulatuk           33.10 358  P      P      13 28 13.6 +1.1
      baz=175
V57A  Coltrane Farms     33.12  78  P      P      13 28 12.8 -0.2
      baz=283
BPAW  Bear Paw Mtn.      33.16 336  P      P      13 28 14.0 +0.9
BPAW                                IAmb   IAmb   13 28 15.5
      comp=Z,13nm,1.0s
P56A  Dayton Farm, R     33.18  72  P      P      13 28 13.8 +0.2
      baz=278
O56A  Blue Knob Stat     33.28  70  P      P      13 28 13.6 -0.9
      baz=277
G54A  Lake Saint Pet     33.34  61  P      P      13 28 15.0 +0.1
      baz=270
U57A  Blanch             33.34  77  P      P      13 28 13.9 -1.1
      baz=283
S57A  Dark Hollow, R     33.37  75  P      P      13 28 15.4 +0.1
      baz=281
I23K  Minto, Yukon-K     33.39 339  P      P      13 28 16.4 +1.3
      baz=136,SNR=5.1
I23K  Minto, Yukon-K     33.39 339  P      P      13 28 16.7 +1.6
I23K                                IAmb   IAmb   13 28 18.1
      comp=Z,5.9nm,0.9s
M56A  Emporium           33.44  68  P      P      13 28 15.2 -0.6
      baz=276
R57A  Stanardsville      33.61  74  P      P      13 28 17.0 -0.4
      baz=280
V58A  Windy Hill, Pi     33.66  78  P      P      13 28 16.8 -1.0
      baz=284
MLY   Manley             33.72 338  P      P      13 28 19.9 +1.8
      baz=134
W58A  Raeford            33.75  80  P      P      13 28 17.2 -1.4
      baz=285
P57A  Homestead Farm     33.81  71  P      P      13 28 18.8 -0.3
      baz=279
P57A  Homestead Farm     33.81  71  P      P      13 28 18.3 -0.8
P57A                                IAmb   IAmb   13 28 25.1
      comp=Z,14nm,1.1s
L56A  Greenwood          33.85  67  P      P      13 28 19.2 -0.2
      baz=275
L56A  Greenwood          33.85  67  P      P      13 28 19.0 -0.4
T58A  Grand View Acr     33.86  76  P      P      13 28 19.0 -0.5
      baz=282
U58A  Oxford             33.97  77  P      P      13 28 20.0 -0.4
      baz=283
N57A  Milroy             33.99  69  P      P      13 28 20.6 -0.1
      baz=277
O57A  Amberson           34.00  70  P      P      13 28 21.4 +0.7
      baz=278
R58A  Rapidan            34.01  74  P      P      13 28 21.5 +0.6
      baz=280
S58A  Poland Farm, P     34.10  75  P      P      13 28 21.5 -0.2
      baz=281
Q58A  Fox Den Farm,      34.15  72  P      P      13 28 22.6 +0.5
      baz=280
R58B  Mineral            34.17  74  P      P      13 28 21.9 -0.3
      baz=281
TTA   Tatalina           34.19 332  P      P      13 28 21.8 -0.4
TTA                                 IAmb   IAmb   13 28 24.9
      comp=Z,13nm,1.2s
LSQQ  Lebel-sur-Quev     34.27  54  P      P      13 28 23.2 +0.3
      baz=265
P58A  Pank, Wackersv     34.36  71  P      P      13 28 23.6 -0.2
      baz=279
V59A  Middlesex          34.36  78  P      P      13 28 23.6 -0.2
      baz=284
K57A  Scipio Center      34.57  65  P      P      13 28 25.2 -0.4
      baz=275
N58A  Sunbury            34.61  69  P      P      13 28 26.0  0.0
      baz=277
M58A  Price's Panora     34.74  68  P      P      13 28 27.7 +0.6
      baz=277
L58A  Harry Jones Me     35.12  67  P      P      13 28 30.1 -0.3
      baz=276
COLD  Coldfoot           35.13 341  P      P      13 28 32.4 +2.2
      baz=137
K58A  Earlville          35.20  65  P      P      13 28 30.3 -0.9
      baz=275
E56A  St. Veronique      35.47  59  P      P      13 28 33.4  0.0
      baz=270
W61A  Ground Anchor      35.49  79  P      P      13 28 33.0 -0.6
      baz=285
WUPA  West Chester U     35.58  70  P      P      13 28 34.2 -0.2
WUPA                                IAmb   IAmb   13 28 40.9
      comp=Z,9.7nm,0.8s
I58A  Old Forge          35.62  64  P      P      13 28 34.0 -0.7
      baz=274
D56A  ZEC Mazanza, M     35.66  58  P      P      13 28 35.0  0.0
      baz=270
L59A  Walton             35.70  66  P      P      13 28 35.2 -0.2
      baz=276
M60A  Port Jervis        36.12  68  P      P      13 28 38.6 -0.3
      baz=278
H58A  Gabriels           36.14  62  P      P      13 28 38.9 -0.3
      baz=274
D58A  Chemin du LacG     36.95  58  P      P      13 28 45.8 -0.1
      baz=271
M62A  Hamden             37.39  67  P      P      13 28 49.5 -0.3
      baz=278
E61A  Lac Etchemin       38.61  59  P      P      13 29 00.9 +0.8
      baz=274
G62A  West of Eustis     38.67  61  P      P      13 29 00.3 -0.3
      baz=275
D61A  St Aubert, Com     38.78  58  P      P      13 29 01.7 +0.3
      baz=273
G63A  Kingsbury          39.33  61  P      P      13 29 06.6 +0.5
      baz=276
RDOG  Red Dog Mine       39.41 337  P      P      13 29 06.4 -0.1
RDOG                                IAmb   IAmb   13 29 09.2
      comp=Z,14nm,0.8s
RES   Resolute Bay       40.40  10  P      P      13 29 14.0 -0.6
RES                                 IAmb   IAmb   13 29 20.6
      comp=Z,14nm,1.1s
E64A  Bridgewater        40.45  59  P      P      13 29 14.8 -0.6
      baz=275
EUNU  Eureka             45.84   8  P      P      13 30 00.1 +1.5
EUNU                                IAmb   IAmb   13 30 05.9
      comp=Z,11nm,0.8s
BCIP  Isla Barro Col     46.08 116  P      P      13 29 59.8 -1.3
MTP   Monte Pirata       51.84  95  P      P      13 30 45.5 +0.1
ICESG Greenland Ices     53.53  26 i P      P      13 30 58.6 +1.0
ICESG                               IAmb   IAmb   13 31 03.6
      comp=Z,13nm,0.9s
SUMG  Summit             53.54  22  P      P      13 30 58.0 +0.2
SUMG  Summit             53.54  22 i P      P      13 30 57.0 -0.7
      comp=Z,24nm,0.9s
SUMG  Summit             53.54  22 i P      P      13 30 57.0 -0.7
SUMG                                IAmb   IAmb   13 31 03.9
      comp=Z,24nm,0.9s
PEA0B Petropavlovsk-     57.03 315  P      P      13 31 22.0 -0.6
PETK  Petropavlovsk-     57.03 315  P      P      13 31 23.9 +1.2
      comp=Z,7.3nm,0.8s,baz=84,slow=12,SNR=18
PETK                                PcP    PcP    13 32 18.2 +0.5
      comp=Z,3.1nm,0.8s,baz=108,slow=9.5,SNR=3.7
PETK  Petropavlovsk-     57.03 315  P      P      13 31 22.2 -0.5
DAG   Danmarks Havn      57.69  15 i P      P      13 31 24.7 -2.3
DAG   Danmarks Havn      57.69  15 i P      P      13 31 24.8 -2.3
GRGR  Grenville          58.27  99  P      P      13 31 31.1 -0.8
MA2   Magadan            58.64 323  P      P      13 31 34.9 +1.1
TIXI  Tiksi              61.86 340  P      P      13 31 55.6 -0.1
H11N3 WAKE ISLAND Hy     64.43 276  T      T      14 41 46.2
      baz=58,slow=75,SNR=229
H11N2 WAKE ISLAND Hy     64.43 276  T      T      14 41 46.2
      baz=58,slow=75,SNR=225
H11N1 WAKE ISLAND Hy     64.45 276  T      T      14 41 45.4
      baz=58,slow=75,SNR=309
H11S1 WAKE ISLAND Hy     65.23 275  T      T      14 42 46.6
      baz=58,slow=75,SNR=56
H11S2 WAKE ISLAND Hy     65.24 275  T      T      14 42 46.9
      baz=58,slow=75,SNR=55
H11S3 WAKE ISLAND Hy     65.25 275  T      T      14 42 47.1
      baz=58,slow=75,SNR=26
YAK   Yakutsk            66.78 331  P      P      13 32 27.3 -0.8
SAML  Samuel             70.50 118  P      P      13 32 50.6 -1.4
SAML                                IAmb   IAmb   13 32 52.0
      comp=Z,3.9nm,0.8s
ARCES ARCESS Array B     71.61  12  P      P      13 32 58.0 +0.1
      comp=Z,4.4nm,0.8s,baz=359,slow=4.9,SNR=5.4
PSGCX Pisagua            73.52 130  P      P      13 33 10.7 +0.6
PSGCX                               IAmb   IAmb   13 33 12.2
      comp=Z,8.0nm,0.9s
PATCX Punta Patache      74.42 131  P      P      13 33 14.8 -0.6
LVZ   Lovozero           74.47   9  P      P      13 33 14.5 -0.4
PB08  IPOC Station P     74.52 130  P      P      13 33 16.4 +0.1
PB08                                IAmb   IAmb   13 33 19.0
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	comp=Z,10nm,0.9s						
NOA	NORSAR Array B	75.44	22	P	P	13 33 20.8	+0.2
	comp=Z,2.5nm,1.0s,baz=322,slow=5.7,SNR=4.0						
USRK	Ussuriysk Ar.	76.12	315	P	P	13 33 25.5	+0.7
	comp=Z,7.8nm,0.8s,baz=55,slow=4.8,SNR=19						
USRK	Ussuriysk Ar.	76.12	315	P	P	13 33 24.5	-0.3
LVC	Limon Verde	76.53	131	P	P	13 33 27.0	-0.7
LVC				IAmb	IAmb	13 33 30.5	
	comp=Z,6.6nm,0.8s						
MJAR	Matsushiro Arr	76.83	306	P	P	13 33 28.7	-0.4
	comp=Z,1.5nm,0.6s,baz=47,slow=4.2,SNR=4.5						
GO02	Mina Guanaco	78.05	134	P	P	13 33 35.3	-0.9
GO02				IAmb	IAmb	13 33 38.8	
	comp=Z,7.9nm,0.9s						
AC01	Pan de Azucar	78.22	135	P	P	13 33 36.3	-0.5
FINES	FINESS Array B	78.94	15	P	P	13 33 40.3	0.0
	comp=Z,2.1nm,0.6s,baz=343,slow=3.7,SNR=9.5						
FINES	FINESS Array B	78.94	15	P	P	13 33 40.5	+0.2
KLMR	Klimovskoe	81.84	10	eP	P	13 33 55.4	-0.5
KLMR				AMP		13 33 57.6	
	comp=Z,44nm,1.5s						
KSRS	Korea Array	82.76	312	P	P	13 34 01.1	+0.1
	comp=Z,1.9nm,0.8s,baz=56,slow=4.8,SNR=8.0						
CLL	Collm	83.84	27	eP	P	13 34 08.0	+1.6
	comp=Z,10.0nm,1.3s						
BRG	Berggiesshubel	84.54	27	i P	P	13 34 11.6	+1.6
BRG				Amp		13 34 16.8	
	comp=Z,8.6nm,0.8s						
BRG	Berggiesshubel	84.54	27	i P	P	13 34 11.6	+1.6
BRG				Amp		13 34 16.8	
	comp=Z,8.6nm,0.8s						
ESDC	Sonseca Array	84.72	44	P	P	13 34 10.8	-0.4
	comp=Z,2.5nm,0.8s,baz=299,slow=4.3,SNR=7.2						
ESDC	Sonseca Array	84.72	44	P	P	13 34 10.9	-0.4
MNK	Minsk	85.63	18	i P	P	13 34 15.9	+0.5
	comp=E,3.0nm,0.8s						
MNK				i P	P	13 34 15.9	+0.5
	comp=N,17nm,0.8s						
MNK				i P	P	13 34 15.9	+0.5
	comp=Z,20nm,0.9s						
MNK				i PP	PP	13 37 34.4	+1.1
MNK				i PPP	PPP	13 39 27.7	
MNK				i S	SKSac	13 44 40.2	-0.8
MNK				i SS	SS	13 50 25.5	+3.5
MNK				i SSS	SSS	13 53 56.8	
MNK				i LR	LR	14 11 03.4	
MNK				i LRM	MLR	14 13 51.3	
	comp=E,14nm,11.6s						
MNK				i LRM	MLR	14 13 55.1	
	comp=N,81nm,22.4s						
MNK				i LRM	MLR	14 13 57.8	
	comp=Z,92nm,12.3s						
GERES	GERESS Array B	86.11	28	P	P	13 34 18.6	+0.5
	comp=Z,1.3nm,0.8s,baz=348,slow=3.1,SNR=3.6						
SONM	Songino Array	86.12	330	P	P	13 34 19.5	+1.3
	comp=Z,7.8nm,0.7s,baz=33,slow=3.2,SNR=56						
CPUP	Villa Florida	86.49	126	P	P	13 34 20.8	+0.9
	comp=Z,3.8nm,0.8s,baz=339,slow=4.9,SNR=8.3						
CPUP	Villa Florida	86.49	126	IAmb	IAmb	13 34 21.5	
	comp=Z,5.3nm,0.9s						
ZALV	Zalesovo Beam	87.35	345	P	P	13 34 24.3	+0.5
	comp=Z,6.3nm,0.6s,baz=13,slow=4.9,SNR=29						
HHC	Hu-ho-hao-te	89.31	323	eP	P	13 34 33.0	-0.6
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,82nm,7.1s						
AKASG	Malin Array Be	89.44	18	P	P	13 34 33.8	0.0
	comp=Z,1.5nm,0.6s,baz=336,slow=3.7,SNR=5.7						
AKASG	Malin Array Be	89.44	18	IAmb	IAmb	13 34 34.5	
	comp=Z,1.7nm,0.9s						
PLCA	Paso Flores	89.58	144	P	P	13 34 34.2	-0.3
	comp=Z,3.7nm,0.9s,baz=344,slow=6.0,SNR=5.1						
SEM	Semipalatinsk	91.61	347	eP	P	13 34 43.7	-0.5
	comp=Z,1.3nm,0.6s,baz=347						
ZSN	Zaisan	93.43	343	eP	P	13 34 52.6	+0.2
	comp=Z,2.0nm,1.0s,baz=343						
MKAR	Makanchi Array	94.64	344	P	P	13 34 58.2	+0.2
	comp=Z,2.1nm,0.7s,baz=5.1,slow=4.5,SNR=24						
WMQ	Urumqi	96.06	340	eP	P	13 35 05.6	+1.0
LZH	Lanzhou	96.77	325	eP	P	13 35 05.9	-2.2
LZH				pP	PcP	13 35 09.3	+1.1
LZH				sP	pP	13 35 10.8	-0.1
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,52nm,6.2s						
KPKS	Kokpek	98.57	346	eP	P	13 35 15.2	-0.8
	comp=Z,1.1nm,0.8s,baz=346						
KUU	Kurty	98.60	347	eP	P	13 35 15.2	-0.9
	baz=348						
SHLS	Shalkode	98.71	345	eP	P	13 35 16.3	-0.4
	comp=Z,1.2nm,0.8s,baz=345						
MDOK	Medeo	99.18	347	eP	Pdif	13 35 19.3	+0.5
	baz=347						
ASAR	Alice Springs	115.37	258	PKP	PKiKP	13 40 19.1	-0.1
	comp=Z,0.8nm,0.7s,baz=80,slow=1.9,SNR=12						
FITZ	Fitzroy Crossi	119.13	268	PKP	PKPdf	13 40 26.3	-0.1
	comp=Z,1.3nm,0.6s,baz=261,slow=6.2,SNR=2.8						
MATP	Matopo	148.99	68	PKPbc	PKiKP	13 41 26.7	-0.3
	comp=Z,11nm,0.7s,baz=313,slow=2.3,SNR=26						
LBTB	Lobatse	149.26	78	PKPbc	PKiKP	13 41 27.4	-0.1
	comp=Z,11nm,0.8s,baz=297,slow=4.0,SNR=9.5						
BOSA	Boshof	150.61	85	PKPbc	PKiKP	13 41 30.1	0.0
	comp=Z,5.8nm,0.8s,baz=332,slow=3.6,SNR=6.0						
BOSA	Boshof	150.61	85		PKPbc	13 41 29.1	-0.3

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*DDA **20** 13:27:02.2, 38°.44N×33°.90E, h8^{km}±1^{km}, MW3.5*
*ISK **20** 13:27:02.1, 38°.49N×33°.90E, h1^{km}, ML2.9/20*
ISC 20 13:27:02.7±1.1**, 38°.46N**±0°.02×**33°.90E**±0°.02**, h4**^{km}±9^{km}**,**
n46, σ1^{s}23/76**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSY	AKSARAY - Alti	0.22	330	i P	Pg	13 27 07.2	+0.4
AKSY				i S	Sg	13 27 10.5	+0.8
AKSY				IAML		13 27 18.0	
	comp=E,358nm,0.6s						
GULA	Gulagac	0.29	114	PG	Pg	13 27 08.4	+0.1
GULA				SG	Sg	13 27 12.7	+0.6
SULT	Sultanhani-AKS	0.40	229	PG	Pb	13 27 11.4	-1.0
SULT				SG	Sb	13 27 18.2	-0.7
YAYX	Yaylak	0.48	352	PG	Pg	13 27 12.1	+0.2
YAYX				SG	Sg	13 27 18.9	+0.7
SERE	Sereflikochisa	0.55	332	PG	Pg	13 27 13.4	+0.2
SERE				SG	Sb	13 27 21.7	-1.5
KIRS	Kırehir-Merke	0.67	1	i P	Pg	13 27 15.5	-0.1
KIRS				i S	Sb	13 27 24.9	-1.7
KIRS				IAML		13 27 27.0	
	comp=E,388nm,0.6s						
YESY	Yesilyurt	0.69	190	PG	Pb	13 27 16.9	-0.4
YESY				SG	Sb	13 27 27.7	+0.4
CHBY	Cihanbeyli	0.80	279	PG	Pg	13 27 17.9	-0.1
CHBY				SG	Sb	13 27 30.3	-0.1
AVNS	Nevsehir-Avano	0.82	65	i P	Pg	13 27 17.9	-0.5
AVNS				i S	Sb	13 27 29.9	-1.1
AVNS				IAML		13 27 35.0	
	comp=N,470nm,0.3s						
ALIN	Konya, Altinte	0.82	259	i P	Pg	13 27 18.0	-0.4
ALIN				i S	Sg	13 27 29.2	+0.2
ALIN				IAML		13 27 31.0	
	comp=N,72nm,0.7s						
NIDE	Nigde/Merkez-G	0.83	124	i P	Pg	13 27 18.1	-0.6
NIDE				i S	Sg	13 27 29.6	+0.3
NIDE				IAML		13 27 30.0	
	comp=E,766nm,0.2s						
KKUL	Konya-Kulu	1.04	313	i P	Pb	13 27 23.0	-0.4
KKUL				i S	Sn	13 27 40.0	+0.7
KKUL				IAML		13 27 46.0	
	comp=N,121nm,0.5s						
KERG	Konya-Eregli	1.06	170	i P	Pg	13 27 22.6	-0.4
KERG				i S	Sb	13 27 37.4	-0.5
KERG				IAML		13 27 46.0	
	comp=E,56nm,0.7s						
CMRD	Camardi-Nigde	1.18	133	PN	Pn	13 27 25.7	-0.3
AFSR	Afar-Bala (An	1.18	327	PN	Pn	13 27 25.9	-0.1
YAHY	KAYSERI_Yahyal	1.21	107	i P	Pg	13 27 25.3	-0.5
YAHY				i S	Sb	13 27 42.1	-0.1
YAHY				IAML		13 27 52.0	
	comp=N,78nm,0.5s						
CDAG	Cicekdag	1.22	17	i P	Pn	13 27 26.2	-0.3
CDAG				i S	Sn	13 27 43.3	-0.3
CDAG				IAML		13 27 47.0	
	comp=E,361nm,0.4s						
LADK	Ladik-KONYA	1.23	258	PN	Pn	13 27 26.4	-0.4
BBAL	Bala	1.24	331	i P	Pn	13 27 27.1	+0.3
BBAL				i S	Sn	13 27 45.4	+1.3
BBAL				IAML		13 27 53.0	
	comp=E,135nm,0.8s						
BRTR	Keskin Array B	1.28	351	PN	Pn	13 27 27.2	-0.2
BRTR				SN	Sn	13 27 45.6	+0.5
SIRC	Yozgat	1.31	48	i P	Pb	13 27 27.7	-0.2
SIRC				i S	Sn	13 27 45.8	0.0
SIRC				IAML		13 27 46.0	
	comp=N,213nm,0.7s						
KONT	Konya--Tatoy	1.32	247	PN	Pg	13 27 28.7	+0.8
KONT				SN	Sn	13 27 47.6	+1.7
KONT	Konya--Tatoy	1.32	247	i P	Pg	13 27 27.4	-0.5
KONT				i S	Sn	13 27 47.0	+1.1
KONT				IAML		13 27 50.0	
	comp=E,116nm,1.2s						
GULE	Gulek	1.37	149	i P	Pn	13 27 27.8	-0.9
GULE				i S	Sn	13 27 52.7	+5.4
GULE				IAML		13 28 14.0	
	comp=E,98nm,0.6s						
KMER	Konya-Meram	1.39	241	i P	Pn	13 27 26.8	-2.2
KMER				i S	Sn	13 27 48.8	+0.9
KMER				IAML		13 27 54.0	
	comp=E,81nm,0.6s						
KDHN	Kadinhani	1.40	273	i P	Pn	13 27 28.3	-0.8
KDHN				i S	Sb	13 27 47.1	-0.6
KDHN				IAML		13 27 50.0	
	comp=N,108nm,0.6s						
GUNE	Kayseri	1.42	71	i P	Pg	13 27 29.7	-0.2
GUNE				i S	Sn	13 27 50.4	+1.8
GUNE				IAML		13 27 57.0	
	comp=E,445nm,0.5s						
KKBE	Karaman, Kazim	1.46	212	i P	Pn	13 27 29.4	-0.4
KKBE				i S	Sg	13 27 53.3	+3.9
KKBE				IAML		13 28 03.0	
	comp=E,35nm,0.9s						
KARA	Karaisali	1.51	142	PN	Pg	13 27 31.9	+0.3
DELI	KIRIKKALE	1.53	1	i P	Pb	13 27 31.2	-0.5
DELI				i S	Sg	13 27 53.2	+1.3
DELI				IAML		13 27 57.0	
	comp=E,122nm,0.5s						
BNN	Bunyan	1.57	75	PN	Pg	13 27 32.5	-0.3
SAIM	ADANA	1.79	105	i P	Pg	13 27 36.0	-0.9
SAIM				i S	Sg	13 28 02.4	+2.3
SAIM				IAML		13 28 03.0	
	comp=N,92nm,0.3s						
DOGA	KONYA_Doganhis	1.79	259	i P	Pg	13 27 38.0	+1.0
DOGA				i S	Sn	13 27 57.3	-0.5
DOGA				IAML		13 28 11.0	
	comp=N,42nm,0.7s						
CORM	Corum	1.80	18	PN	Pb	13 27 35.8	-0.6
KOZT	Kozan	1.81	122	PN	Pg	13 27 36.6	-0.8
SARI	SarD1z-Kayseri	1.98	91	PN	Pb	13 27 38.4	-0.9
KEBE	Keben-Mersin	2.02	184	PN	Pb	13 27 39.1	-0.8
TEVE	Tevekalti-Mers	2.06	190	PN	Pb	13 27 38.8	-1.8
CEYT	Ceyhan	2.06	134	PN	Pb	13 27 39.3	-1.3
CUSAR	Sarkisla-SIVAS	2.06	62	i P	Pb	13 27 39.3	-1.4
CUSAR				i S	Sg	13 28 09.4	+0.5
YVAC	Isparta, Yalva	2.10	266	i P	Pb	13 27 41.6	+0.2
YVAC				i S	Sg	13 28 09.4	-0.8
YVAC				IAML		13 28 21.0	
	comp=N,15nm,0.8s						
BERE	Bereket-Mersin	2.18	195	PN	Pb	13 27 41.1	-1.6
IKL	Isikli	2.23	184	PN	Pb	13 27 41.7	-1.8
AKKU	Akkuyu-Mersin	2.32	187	PN	Pb	13 27 43.7	-1.3
TEKE	Tekeli-Mersin	2.40	195	PN	Pb	13 27 44.5	-1.9
TOKT	Tokat	2.76	47	PN	Pn	13 27 49.5	+1.7

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*NOU **20** 13:44:01.4, 36°.82S×177°.90E, h245^{km}, MLv4.3, Off E. Coast of N. Island, N.Z.*
WEL 20 13:44:18.0, 37°S±2°×**17°7E**±°**, h134**^{km}±3^{km}**, M2.9**/43**,**
MLv2.9/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=174.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHRZ	Whale Island	0.43	192	P	Pn	13 44 36.5	-0.7
OPRZ	Ohinepanea	0.59	226	P	Pn	13 44 38.0	0.0
HAZ	Te Kaha	0.64	120	P	Pn	13 44 38.0	-0.3
HAZ				S	Sn	13 44 53.6	-0.1
MARZ	Manawahe	0.64	211	P	Pn	13 44 38.6	+0.2
MYRZ	Mayor Island	0.69	283	P	Pn	13 44 39.0	+0.3
RUGZ	Raukumara Rang	0.70	139	P	Pn	13 44 38.1	-0.8
RUGZ				S	Sn	13 44 53.9	-1.0
TGRZ	Tauranga	0.72	246	P	Pn	13 44 39.1	+0.2
LIRZ	Lichensteins R	0.80	224	P	Pn	13 44 39.9	+0.4
URZ	Urewera	0.82	179	P	Pn	13 44 39.5	-0.2
URZ				S	Sn	13 44 56.0	-0.2
MKRZ	Makatiti	0.86	215	P	Pn	13 44 41.0	+0.9
OMRZ	Omania	0.88	220	P	Pn	13 44 40.5	+0.3
KARZ	Kaharoa	0.89	229	P	Pn	13 44 40.6	+0.3
PKGZ	Pakihiroa	0.90	120	P	Pn	13 44 40.8	+0.4
TARZ	Mount Tarawera	0.92	210	P	Pn	13 44 41.3	+0.6
MWZ	Matawai	0.96	159	P	Pn	13 44 40.5	-0.4
MWZ				S	Sn	13 44 59.3	+0.8
MXZ	Matakaoa Point	0.98	98	P	Pn	13 44 41.2	+0.2
NGRZ	Ngongotaha	0.98	227	P	Pn	13 44 41.7	+0.6
HLRZ	Highlands Stat	1.00	215	P	Pn	13 44 41.8	+0.5
RRRZ	Republican Roa	1.01	207	P	Pn	13 44 41.7	+0.3
TWGZ	Tauwhareparae	1.02	137	P	Pn	13 44 42.7	+1.2
UTU	Utuhina	1.02	224	P	Pn	13 44 42.3	+0.8
MUGZ	Murupara	1.07	194	P	Pn	13 44 42.0	+0.1
RAGZ	Rawiri	1.09	166	P	Pn	13 44 42.8	+0.6
HSRZ	Hossack Road	1.10	217	P	Pn	13 44 43.0	+0.7
WMGZ	Waiomatatini S	1.12	110	P	Pn	13 44 42.6	+0.2
WMGZ				S	Sn	13 45 01.0	+0.2
PUZ	Puketiti	1.12	125	P	Pn	13 44 42.2	-0.3
PUZ				S	Sn	13 44 59.9	-1.1
HRRZ	Handcock Road	1.15	214	P	Pn	13 44 43.3	+0.6
TKGZ	Te Karaka	1.17	149	P	Pn	13 44 43.3	+0.4
RTZ	Ruatahuna	1.18	184	P	Pn	13 44 42.7	-0.4
PRRZ	Plateau Road	1.20	207	P	Pn	13 44 43.5	+0.3
GRRZ	Galatos Road	1.20	220	P	Pn	13 44 43.8	+0.6
ALRZ	Allen Road	1.27	207	P	Pn	13 44 44.4	+0.5
KUZ	Kuaotunu	1.29	302	P	Pn	13 44 43.9	-0.3
TOZ	Tahuroa Road	1.29	256	P	Pn	13 44 44.8	+0.7
WPRZ	Whakapapatarin	1.31	214	P	Pn	13 44 44.9	+0.5
SNGZ	Shannon Statio	1.36	172	P	Pn	13 44 45.3	+0.4
SNGZ				S	Sn	13 45 05.6	+0.2
CNGZ	Carnagh Statio	1.37	140	P	Pn	13 44 45.9	+0.9
RIGZ	Rimuhau	1.38	157	P	Pn	13 44 45.1	0.0
MTHZ	Maungataniwha	1.43	188	P	Pn	13 44 45.9	+0.3
RAHZ	Arahi	1.48	180	P	Pn	13 44 46.5	+0.4
MRHZ	Matea Rd	1.49	201	P	Pn	13 44 46.5	+0.2
TLZ	Tolley Road	1.52	234	P	Pn	13 44 47.2	+0.6
MKAZ	Moumakai	1.57	282	P	Pn	13 44 47.7	+0.5
PRGZ	Paritu Road	1.61	157	P	Pn	13 44 48.4	+0.8
WHHZ	Waihua	1.64	176	P	Pn	13 44 48.4	+0.4
KNZ	Kokohu	1.65	164	P	Pn	13 44 47.5	-0.5
HATZ	Hinemaiaia	1.65	208	P	Pn	13 44 48.3	+0.2
WATZ	Wairara	1.66	220	P	Pn	13 44 48.8	+0.6
NMHZ	Naumai	1.67	188	P	Pn	13 44 49.0	+0.6
WIAZ	Waiheke Island	1.69	292	P	Pn	13 44 48.9	+0.4
GRZ	Great Barrier	1.77	312	P	Pn	13 44 49.3	-0.1
RATZ	Rangitukua	1.77	216	P	Pn	13 44 50.2	+0.7
BKZ	Black Stump Fm	1.79	195	P	Pn	13 44 49.0	-0.7
ETAZ	East Tamaki Re	1.79	285	P	Pn	13 44 50.4	+0.7
RITZ	Rihia Road	1.82	212	P	Pn	13 44 50.8	+0.7
ARHZ	Aropaoanui	1.83	182	P	Pn	13 44 50.2	+0.1
MHGZ	Mahia Peninsul	1.83	160	P	Pn	13 44 50.2	+0.1
MBAZ	Motutapu North	1.87	290	P	Pn	13 44 51.3	+0.6
KATZ	Kakaramea	1.89	215	P	Pn	13 44 51.3	+0.3
AWAZ	Awhitu Peninsu	1.99	280	P	Pn	13 44 52.2	+0.2
ABAZ	Army Bay	1.99	294	P	Pn	13 44 52.8	+0.7
TMVZ	Te Maari	2.00	213	P	Pn	13 44 52.5	+0.2
KRVZ	Karewarewa	2.01	214	P	Pn	13 44 52.7	+0.3
ETVZ	East Tongariro	2.02	212	P	Pn	13 44 52.7	+0.2
MCHZ	McNeill Hill	2.03	189	P	Pn	13 44 52.3	-0.3
WTVZ	West Tongariro	2.05	215	P	Pn	13 44 53.1	+0.2
KWHZ	Kaweka Forest	2.05	195	P	Pn	13 44 52.0	-0.9
OTVZ	Oturere	2.06	213	P	Pn	13 44 53.3	+0.2
HIZ	Hauiti	2.07	238	P	Pn	13 44 54.0	+1.0
TWVZ	Taurewa	2.09	218	P	Pn	13 44 53.7	+0.4
NGZ	Ngauruhoe	2.10	214	P	Pn	13 44 53.8	+0.4
RVAZ	Riverhead Bore	2.11	288	P	Pn	13 44 54.0	+0.4
TUVZ	Tukino	2.15	211	P	Pn	13 44 54.1	0.0
FWVZ	Far West T-bar	2.18	213	P	Pn	13 44 54.6	0.0
WHVZ	Whangaehu Hut	2.19	212	P	Pn	13 44 54.6	-0.1
BHHZ	Black Hill Sta	2.20	201	P	Pn	13 44 53.8	-0.9
CKHZ	Cape Kidnapper	2.22	180	P	Pn	13 44 54.3	-0.5
WNVZ	Wahianoa	2.22	211	P	Pn	13 44 54.8	-0.3
MOVZ	Moawhango	2.23	208	P	Pn	13 44 54.2	-0.9
KRHZ	Kereru	2.27	194	P	Pn	13 44 54.3	-1.3
PKVZ	Pokaka	2.30	216	P	Pn	13 44 56.0	0.0
MTVZ	Mangateitei	2.33	213	P	Pn	13 44 56.1	-0.1
KAHZ	Kahuranaki	2.36	184	P	Pn	13 44 56.1	-0.6
VRZ	Vera Road	2.49	227	P	Pn	13 44 59.1	+0.8
PNHZ	Pukenui	2.57	195	P	Pn	13 44 58.1	-1.2
PXZ	Pawanui	2.60	184	P	Pn	13 44 58.1	-1.4
WCZ	Waipu Caves	2.66	303	P	Pn	13 45 00.6	+0.2
WPHZ	Waipukurau	2.67	191	P	Pn	13 44 59.1	-1.4
TSZ	Takapari Road	2.76	198	P	Pn	13 44 60.0	-1.8
WAZ	Wanganui	2.84	215	P	Pn	13 45 02.3	-0.4
PRHZ	Porangahau	2.85	187	P	Pn	13 45 01.2	-1.6
DREZ	Durham Road	2.87	232	P	Pn	13 45 04.2	+1.2
DVHZ	Dannevirke	2.95	194	P	Pn	13 45 01.9	-2.2
NEZ	North Egmont	2.98	231	P	Pn	13 45 05.9	+1.3
PKE	Pukeiti	3.01	233	P	Pn	13 45 06.9	+2.0
KHEZ	Kahui Hut	3.05	232	P	Pn	13 45 06.8	+1.3
ANWZ	Angora Road	3.06	189	P	Pn	13 45 03.7	-1.8
POWZ	Post Office Ro	3.13	199	P	Pn	13 45 04.4	-2.0
PRWZ	Pori Road	3.23	195	P	Pn	13 45 05.8	-2.0
BFZ	Birch Farm	3.31	191	P	Pn	13 45 06.3	-2.4
MRZ	Mangatainoka R	3.43	200	P	Pn	13 45 07.4	-2.9
TIWZ	Tintock	3.46	195	P	Pn	13 45 08.3	-2.5
CPWZ	Castlepoint	3.54	191	P	Pn	13 45 09.7	-2.1
OUZ	Omahuta	3.58	307	P	Pn	13 45 12.8	+0.4
HOWZ	Holdsworth Sta	3.67	199	P	Pn	13 45 10.4	-3.0
OGWZ	Otaki Gorge	3.69	203	P	Pn	13 45 11.0	-2.7
TMWZ	Te Maipa	3.78	194	P	Pn	13 45 11.9	-3.0
KIW	Kapiti Island	3.82	206	P	Pn	13 45 12.4	-3.1
MTW	Mount Morrison	3.92	198	P	Pn	13 45 13.2	-3.5
CAW	Cannon Point	3.99	203	P	Pn	13 45 14.1	-3.6
TRWZ	Traveller	4.10	195	P	Pn	13 45 15.8	-3.4
PAWZ	Paruwai Farm	4.15	198	P	Pn	13 45 16.0	-3.8
DUWZ	D’Urville Isla	4.17	215	P	Pn	13 45 16.9	-3.1
MSWZ	Moikau Station	4.22	199	P	Pn	13 45 16.9	-3.9
WEL	Wellington	4.24	204	P	Pn	13 45 17.5	-3.5
BHW	Baring Head	4.32	203	P	Pn	13 45 18.2	-3.8
TCW	Tory Channel	4.36	209	P	Pn	13 45 18.7	-3.8
PLWZ	Palliser	4.37	198	P	Pn	13 45 18.7	-4.0
TUWZ	Tuamarina	4.67	210	P	Pn	13 45 22.8	-4.0
NNZ	Nelson	4.75	216	P	Pn	13 45 23.9	-3.8
QRZ	Quartz Range	4.90	225	P	Pn	13 45 26.1	-3.7
BSWZ	Blackbirch Sta	4.94	209	P	Pn	13 45 26.5	-3.8
THZ	Tophouse	5.39	215	P	Pn	13 45 32.2	-4.2
KHZ	Kahutara	5.67	208	P	Pn	13 45 35.3	-4.8
DSZ	Denniston Nort	5.93	222	P	Pn	13 45 39.0	-4.7
GVZ	Greta Valley S	6.34	208	P	Pn	13 45 43.7	-5.4
LTZ	Lake Taylor	6.49	213	P	Pn	13 45 45.9	-5.2
INZ	Inchbonnie	6.83	218	P	Pn	13 45 50.1	-5.6
OKCZ	Okains Bay	6.99	205	P	Pn	13 45 52.6	-5.2
OXZ	Oxford	7.03	212	P	Pn	13 45 52.2	-6.2
MQZ	McQueen’s Vall	7.11	207	P	Pn	13 45 52.9	-6.5
AKCZ	Akaroa Harbour	7.17	205	P	Pn	13 45 54.8	-5.4
RACZ	Rakaia	7.33	209	P	Pn	13 45 56.1	-6.1
WACZ	Wakanui South	7.62	210	P	Pn	13 46 00.6	-5.7
RPZ	Rata Peaks	7.77	214	P	Pn	13 46 02.9	-5.4
ARCZ	Arundel	7.90	213	P	Pn	13 46 04.8	-5.3
TMZ	Timaru	8.33	212	P	Pn	13 46 09.9	-5.8
ODZ	Otahua Downs	9.02	211	P	Pn	13 46 19.1	-5.9

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*MOS **20** 13:46:57.3±1.4, 43°.15N×144°.24E, h117^{km}, mb4.1/1, Error ellipse: s-maj=14.9km s-min=12.0km az=70.3*
*IDC **20** 13:46:58.9±1.2, 45°.57N×143°.57E, h0^{km}, mb3.7/10, mb1 3.8/10, mb1mx3.5/62, mbtmp3.7/10, Error ellipse: s-maj=27.9km s-min=17.0km az=131.0*
*NEIC **20** 13:46:58.3±1.9, 43°.04N±0°.08×144°.4E±0°.2, h123^{km}±9^{km}, mb4.1/12, Error ellipse: s-maj=17.5km s-min=12.2km az=84.0*
*SKHL **20** 13:46:58.6±0.2, 43°.09N×144°.46E, h123^{km}±6^{km}, mb4.7/3, msh5.3/3*
*JMA **20** 13:46:58.5±0.1, 43°.08N×144°.37E, h120^{km}±1^{km}, M3.4*
ISC 20 13:46:58.2±0.7**, 43°.03N**±0°.05×**144°.41E**±0°.04**, h122**^{km}±5^{km}**,**
n83, σ0^{s}97/96**, mb3.9**/16**, 1C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	Akkeshi	0.21	98	P	Pn	13 47 15.4	+0.4
JAK				eS	Sn	13 47 27.8	+0.1
JOB	Onbets	0.44	254	P	Pn	13 47 16.6	+0.7
JOB				eS	Sn	13 47 29.9	+0.6
JAR	Ashorobuto	0.54	300	P	Pn	13 47 16.6	+0.1
JAR				eS	Sn	13 47 29.9	-0.5
JKHN	Kushirohamanak	0.55	84	P	Pn	13 47 17.1	+0.5
JKHN				eS	Sn	13 47 30.7	+0.2
JNK	Nakash	0.60	22	P	Pn	13 47 16.7	-0.3
JNK				eS	Sn	13 47 30.5	-0.7
JCH	Churui	0.87	242	P	Pn	13 47 19.4	+0.3
JCH				eS	Sn	13 47 34.6	-0.4
JTKR	Abashiri--Toko	1.01	339	P	Pn	13 47 20.3	-0.1
NMR	Nemuro--Hokkai	1.02	70	i P	Pn	13 47 20.0	-0.5
NMR				i S	Sn	13 47 36.0	-1.4
NMR	Nemuro--Hokkai	1.02	70⇑	iPN	Pn	13 47 20.5	0.0
NMR				i S	Sn	13 47 36.0	-1.4
NEM2	Nemuro 2	1.03	70	P	Pn	13 47 20.5	-0.1
NEM2				eS	Sn	13 47 36.2	-1.4
JRA	Rausu	1.05	29	P	Pn	13 47 20.7	-0.1
JMP	Maruseppu	1.24	322	P	Pn	13 47 22.5	-0.3
JMP				eS	Sn	13 47 40.6	-1.0
JFR	Furan	1.34	277	P	Pn	13 47 23.5	-0.3
JEM	Erimo	1.37	223	P	Pn	13 47 24.5	+0.3
JEM	Erimo	1.37	223	Pn	Pn	13 47 25.6	+1.4
ERM	Erimo	1.37	223	PN	Pn	13 47 24.6	+0.4
ERM	Erimo	1.37	223	Pn	Pn	13 47 24.6	+0.4
GRPR	Tuman	1.38	45	eP	Pn	13 47 24.0	-0.3
GRPR				AMB	AMB	13 47 25.0	
	88nm,0.2s						
GRPR				eS	Sn	13 47 43.0	-1.3
GRPR				A	A	13 47 45.0	
	1µm,0.4s						
GRPR				A	A	13 47 45.0	
	728nm,0.4s						
GRPR	Tuman	1.38	45	ePN	Pn	13 47 24.9	+0.6
GRPR				eS	Sn	13 47 43.8	-0.5
GRPR				pmax	pmax		
	comp=Z,88nm,0.2s						
GRPR				pmax	pmax		
	comp=E,28nm,0.1s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
GRPR				smax	smax		
	comp=E,728nm,0.3s						
JNBK	Urakawa-nobuka	1.43	239	P	Pn	13 47 24.9	0.0
JNBK				eS	Sn	13 47 44.0	-1.2
YUK	Yuzh-Kuril'sk	1.46	46	i P	Pn	13 47 25.0	-0.2
YUK				AMB	AMB	13 47 26.0	
	comp=E,160nm,0.3s						
YUK				i S	Sn	13 47 45.0	-0.8
YUK				A	A	13 47 46.7	
	comp=E,450nm,0.3s						
YUK				A	A	13 47 46.7	
	comp=E,450nm,0.3s						
YUK	Yuzh-Kuril'sk	1.46	46d	iPN	Pn	13 47 25.9	+0.7
YUK				i S	Sn	13 47 45.6	-0.2
YUK				pmax	pmax		
	comp=Z,294nm,0.2s						
YUK				pmax	pmax		
	comp=E,97nm,0.1s						
JKK2	Kamakawa 2	1.48	306	P	Pn	13 47 25.3	-0.1
JKA	Kamikawa-asahi	1.71	310	eP	Pn	13 47 28.5	+0.4
JKA	Kamikawa-asahi	1.71	310	Pn	Pn	13 47 28.4	+0.4
ASAJ	Asahikawa	1.71	310	Pn	Pn	13 47 28.4	+0.3
	comp=E,18nm,0.3s,baz=156,slow=11,SNR=450						
ASAJ				Sn	Sn	13 47 51.0	0.0
	comp=E,4.2nm,0.3s,baz=240,slow=32,SNR=6.1						
ASAJ	Asahikawa	1.71	310	PN	Pn	13 47 28.5	+0.3
ASAJ						13 47 51.1	
JEW	Eniwo	2.18	266	Pn	Pn	13 47 34.8	+0.9
KUR	Kuril'sk	3.33	47	eP	Pn	13 47 49.0	+0.3
KUR				AMB	AMB	13 47 56.6	
	comp=E,94nm,0.8s						
KUR				eS	Sn	13 48 25.5	-2.3
KUR				A	A	13 48 31.3	
	comp=E,74nm,0.9s						
KUR				A	A	13 48 31.3	
	comp=E,54nm,0.9s						
KUR	Kuril'sk	3.33	47	ePN	Pn	13 47 50.4	+1.7

KUR				*e*S	Sn	13 48 29.3	+1.5
KUR				smax	smax		
	comp=E,41nm,0.4s						
KUR				smax	smax		
	comp=N,33nm,0.2s						
JTM	Tenmabayashi	3.35	229	Pn	Pn	13 47 47.5	-1.5
YSS	Yuzh-Sakhalins	4.10	344	*e*rx	rx	13 48 44.1	
JMM	Marumori	5.84	209	Pn	Pn	13 48 21.6	-0.9
SONM	Songino Array	26.92	294	P	P	13 52 28.6	+0.7
	comp=N,0.7nm,0.5s,baz=87,slow=8.7,SNR=4.8						
SONM	Songino Array	26.92	294	P	P	13 52 28.6	+0.7
SONM	Songino Array	26.92	294	P	P	13 52 28.6	+0.7
SONM	Songino Array	26.92	294	IAmb	IAmb	13 52 30.4	
	comp=Z,0.8nm,0.8s						
ZAA0	Zalesovo Array	39.84	307	P	P	13 54 16.7	-2.6
ZALV	Zalesovo Beam	39.84	307	P	P	13 54 17.2	-2.2
	comp=Z,0.5nm,0.5s,baz=89,slow=8.8,SNR=1.7						
ZALV	Zalesovo Beam	39.84	307	P	P	13 54 19.2	-0.2
ZALV	Zalesovo Beam	39.84	307	P	P	13 54 19.2	-0.2
IMAR	Indian Mountai	40.36	34	P	P	13 54 23.8	+0.3
MKAR	Makanchi Array	43.15	297	P	P	13 54 46.4	0.0
	comp=Z,0.2nm,0.4s,baz=79,slow=7.9,SNR=4.6						
MKAR	Makanchi Array	43.15	297	*e*P	P	13 54 46.4	0.0
MKAR	Makanchi Array	43.15	297	P	P	13 54 46.4	0.0
MKAR	Makanchi Array	43.15	297	P	P	13 54 46.4	0.0
ILAR	Eielson Array	43.25	36	P	P	13 54 46.4	-0.6
	comp=Z,0.5nm,0.9s,baz=256,slow=5.8,SNR=5.0						
ILAR	Eielson Array	43.25	36	P	P	13 54 46.4	-0.6
PRP	Porcupine Dome	43.76	34	P	P	13 54 51.8	+0.5
PRP				IAmb	IAmb	13 54 56.9	
	comp=Z,3.2nm,1.2s						
KURK	Kurchatov	44.28	304	*e*P	P	13 54 55.2	-0.1
KURK	Kurchatov	44.28	304	P	P	13 54 55.2	-0.1
KURK	Kurchatov	44.28	304	P	P	13 54 55.2	-0.1
KURK	Kurchatov	44.28	304	IAmb	IAmb	13 54 55.6	
	comp=Z,1.5nm,0.9s						
KURBB	Kurchatov Arra	44.36	304	P	P	13 54 55.2	-0.8
	comp=Z,0.7nm,0.5s,baz=72,slow=8.9,SNR=6.9						
HMT	Hamilton	45.04	42	P	P	13 55 02.3	+1.0
SUCK	Suckling Hills	45.33	42	P	P	13 55 04.9	+1.3
INK	Inuvik	48.03	30	P	P	13 55 24.4	0.0
	comp=Z,1.0nm,1.0s,baz=256,slow=8.9,SNR=4.2						
INK	Inuvik	48.03	30	P	P	13 55 24.4	0.0
INK	Inuvik	48.03	30	P	P	13 55 24.4	0.0
INK	Inuvik	48.03	30	IAmb	IAmb	13 55 52.2	
	comp=Z,4.6nm,1.5s						
BVAR	Borovoye Array	48.41	309	P	P	13 55 26.9	-0.7
	comp=Z,0.3nm,0.3s,baz=83,slow=12,SNR=5.7						
BVAR	Borovoye Array	48.41	309	P	P	13 55 26.9	-0.7
BRVK	Borovoye	48.46	309	*e*P	P	13 55 27.7	-0.3
BRVK	Borovoye	48.46	309	P	P	13 55 27.7	-0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BRVK	Borovoye	48.46	309	P	P	13 55 27.7	-0.3
BRVK				IAmb	IAmb	13 55 41.3	
	comp=Z,3.6nm,1.5s						
C36M	Paulatuk	51.04	27	P	P	13 55 46.6	-0.6
KKAR	Karatay Array	52.28	297	P	P	13 55 56.8	-0.1
KKAR	Karatay Array	52.28	297	P	P	13 55 56.8	-0.1
EUNU	Eureka	53.91	10	P	P	13 56 07.5	-0.9
EUNU				IAmb	IAmb	13 56 19.5	
	comp=Z,1.5nm,0.9s						
ABKAR	Akbulak array	55.95	308	P	P	13 56 23.3	-0.1
ABKAR				IAmb	IAmb	13 56 23.7	
	comp=Z,2.6nm,1.2s						
RES	Resolute Bay	56.22	16	P	P	13 56 23.8	-1.1
	comp=Z,0.5nm,0.3s,baz=287,slow=17,SNR=16						
RES	Resolute Bay	56.22	16	P	P	13 56 23.8	-1.1
RES	Resolute Bay	56.22	16	P	P	13 56 23.8	-1.1
RES	Resolute Bay	56.22	16	IAmb	IAmb	13 56 26.2	
	comp=Z,3.8nm,1.4s						
YKA	Yellowknife Ar	57.50	33	P	P	13 56 37.7	+3.6
	comp=Z,0.1nm,0.7s,baz=332,slow=6.9,SNR=0.9						
YKA	Yellowknife Ar	57.50	33	P	P	13 56 37.7	+3.6
FIA1	FINESS Array S	64.59	332	P	P	13 57 21.1	-0.9
FIA1				IAmb	IAmb	13 57 34.3	
	comp=Z,20nm,1.4s						
FINES	FINESS Array B	64.59	332	P	P	13 57 21.1	-0.9
	comp=Z,1.4nm,0.5s,baz=46,slow=8.2,SNR=7.5						
FINES	FINESS Array B	64.59	332	P	P	13 57 21.1	-0.9
FINES	FINESS Array B	64.59	332	P	P	13 57 21.1	-0.9
HFS	Hagfors	69.56	336	P	P	13 57 52.7	-0.7
	comp=Z,1.2nm,0.5s,baz=61,slow=12,SNR=2.1						
HFS	Hagfors	69.56	336	P	P	13 57 52.7	-0.7
HFS	Hagfors	69.56	336	P	P	13 57 52.7	-0.7

NEIC ***20*** *13:53:20.7±1.1, 36°.88N±0°.04×105°.01W±0°.07, h0^{km}±2^{km}, ML3.3/70, Error ellipse: s-maj=10.0km s-min=7.0km az=102.0*

IDC ***20*** *13:53:20.0±1.4, 36°.82N×105°.22W, h0^{km}, mb3.2/1, mb1 3.2/4, mb1mx3.1/52, mbtmp2.8/4, ML3.3/3, Error ellipse: s-maj=28.2km s-min=10.4km az=80.0*

ISC 20 13:53:19.3±1.0**, 36°.80N**±0°.04×**105°.01W**±0°.05**, h0^{km}, n42, σ1^{s}31**/42**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T25A	Trinidad	0.58	55	Pg	Pg	13 53 29.9	-0.6
SDCO	Great Sand Dun	1.02	337	Pg	Pg	13 53 37.2	-1.6
S22A	4UR Ranch, Cre	1.73	303	Pn	Pn	13 53 50.7	-0.3
S22A				IAML		13 54 19.9	
	comp=E,158nm,0.8s						
Q24A	Divide	2.16	357	Pn	Pn	13 53 56.7	-0.1
ANMO	Albuquerque	2.20	213	Pn	Pn	13 53 58.0	+0.8
	comp=E,2.2nm,0.3s,baz=32,slow=14,SNR=37						
ANMO				Lg	Lg	13 54 26.8	
	comp=E,11nm,0.3s,baz=276,slow=20,SNR=28						
ANMO	Albuquerque	2.20	213	Pn	Pn	13 53 58.0	+0.8
MVCO	Mesa Verde	2.82	279		Pn	13 54 06.7	+0.8
MVCO				IAML		13 54 49.5	
	comp=E,174nm,0.5s						
MVCO				IAML		13 54 50.2	
	comp=E,147nm,0.7s						
SMCO	Snowmass	2.83	327	Pn	Pn	13 54 06.8	+0.5
SMCO				IAML		13 54 49.1	
	comp=E,122nm,0.5s						
SMCO				IAML		13 54 51.0	
	comp=E,95nm,0.6s						
KSCO	Kaye Shedlock’	2.90	40	Pn	Pn	13 54 07.2	+0.4
BNM	Barren Site	2.96	207	Pn	Pn	13 54 09.7	+1.9
ISCO	Idaho Springs	3.03	351	Pn	Pn	13 54 08.7	-0.1
PV01	Paradox Valley	3.13	296	Pn	Pn	13 54 11.2	+1.1
Y22D	IRIS PASSCAL I	3.14	210	Pn	Pn	13 54 12.5	+2.3
Y22D				IAML		13 55 14.3	
	comp=N,106nm,1.6s						
PV15	Paradox Valley	3.16	300	Pn	Pn	13 54 11.2	+0.6
PV15				IAML		13 55 01.8	
	comp=E,93nm,0.7s						
PV15				IAML		13 55 01.9	
	comp=N,78nm,0.8s						
PV02	Paradox Valley	3.28	296		Pn	13 54 13.4	+1.2
PV02				IAML		13 55 10.6	
	comp=N,90nm,0.7s						
PV02				IAML		13 55 16.5	
	comp=E,46nm,0.7s						
AMTX	Amarillo	3.31	124	Pn	Pn	13 54 14.8	+2.3
PV07	Paradox Valley	3.32	301	Pn	Pn	13 54 13.1	+0.4
PV07				IAML		13 55 09.6	
	comp=N,47nm,0.8s						
PV12	Saucer Basin,	3.37	298	Pn	Pn	13 54 14.7	+1.3
PV03	Paradox Valley	3.38	297	Pn	Pn	13 54 14.7	+1.2
PV03				IAML		13 55 14.6	
	comp=N,74nm,1.0s						
PV03				IAML		13 55 15.2	
	comp=E,36nm,1.0s						
PV11	David Mesa, Pa	3.42	297	Pn	Pn	13 54 15.3	+1.3
PV11				IAML		13 55 18.2	
	comp=E,101nm,0.6s						
PV18	Skein Mesa, Pa	3.42	296	Pn	Pn	13 54 15.1	+1.0
PV16	Nyswonger Mesa	3.45	297	Pn	Pn	13 54 15.2	+0.6
PV16				IAML		13 55 18.7	
	comp=E,60nm,1.2s						
PV22	Blue Mesa, Par	3.46	301	Pn	Pn	13 54 16.0	+1.3
PV22				IAML		13 55 11.9	
	comp=N,48nm,0.9s						
PV22				IAML		13 55 12.5	
	comp=E,42nm,0.6s						
PV17	East Wray Mesa	3.47	296	Pn	Pn	13 54 16.0	+1.3
PV17				IAML		13 55 21.1	
	comp=N,44nm,1.2s						
PV17				IAML		13 55 26.8	
	comp=E,33nm,1.0s						
PV04	Paradox Valley	3.48	298	Pn	Pn	13 54 15.6	+0.7
PV04				IAML		13 55 21.3	
	comp=N,72nm,1.4s						
PV04				IAML		13 55 22.5	
	comp=E,66nm,1.0s						
PV19	Morning Glory	3.50	297	Pn	Pn	13 54 16.1	+0.9
PV19				IAML		13 55 28.1	
	comp=N,41nm,1.1s						
PV20	West Nyswonger	3.50	297	Pn	Pn	13 54 16.3	+1.1
PV20				IAML		13 55 23.1	
	comp=E,78nm,0.8s						
PV20				IAML		13 55 28.9	
	comp=N,76nm,1.1s						
PV14	Lion Creek, Pa	3.55	297	Pn	Pn	13 54 16.9	+1.0
PV14				IAML		13 55 17.4	
	comp=N,69nm,1.4s						
PV14				IAML		13 55 30.1	
	comp=E,67nm,1.1s						
N23A	Red Feather La	4.15	350	Pn	Pn	13 54 24.4	+0.3
N23A				IAML		13 55 32.3	
	comp=E,23nm,0.9s						
N23A				IAML		13 55 33.9	
	comp=N,24nm,1.4s						
O20A	White River Ci	4.18	324	Pn	Pn	13 54 25.4	+0.8
O20A				IAML		13 55 14.2	
	comp=N,23nm,4.5s						
O20A				IAML		13 55 49.3	
	comp=E,21nm,2.8s						
X18A	Snowflake	4.62	242	Pn	Pn	13 54 31.6	+1.1
X18A				IAML		13 55 46.7	
	comp=E,29nm,0.6s						
X18A				IAML		13 55 50.4	
	comp=N,36nm,0.8s						
CBKS	Cedar Bluff	4.63	63		Pn	13 54 30.3	-0.3
OGNE	Ogallala	4.74	28	Pn	Pn	13 54 32.3	+0.2
121A	Cookes Peak, D	4.84	209	Pn	Pn	13 54 34.0	+0.5
121A				IAML		13 56 02.2	
	comp=E,11nm,0.7s						
121A				IAML		13 56 20.1	
	comp=N,14nm,3.8s						
U32A	Winter Ranch,	4.85	93	Pn	Pn	13 54 34.8	+1.2
SRU	San Rafael Swe	4.93	300		Pn	13 54 35.9	+1.0
SRU				IAML		13 55 59.1	
	comp=N,28nm,1.2s						
SRU				IAML		13 56 07.5	
	comp=E,35nm,1.1s						
WUAZ	Wupatki	5.31	258		Pn	13 54 41.1	+1.1
U15A	North Rim	5.87	269		Pn	13 54 49.0	+1.1
PDAR	Pinedale Array	6.91	331	Pn	Pn	13 55 02.8	+0.8
	comp=E,0.1nm,0.3s,baz=138,slow=14,SNR=3.1						
PDAR				Pg	Pb	13 55 25.7	+5.4
	comp=E,0.2nm,0.3s,baz=131,slow=18,SNR=6.6						
PDAR				Lg	Lg	13 56 57.5	
	comp=E,0.2nm,0.3s,baz=130,slow=25,SNR=6.3						
TXAR	Lajitas Array	7.53	171	Pn	Pn	13 55 13.1	+2.6
	comp=E,0.2nm,0.3s,baz=359,slow=12,SNR=9.3						
TXAR				Pg	Pg	13 55 39.7	-3.9
	comp=E,0.4nm,0.3s,baz=349,slow=14,SNR=12						
TXAR				Lg	Lg	13 57 17.7	
	comp=E,0.8nm,0.3s,baz=351,slow=24,SNR=6.3						
NVAR	Mina Array Bea	10.67	283	Pg	Pn	13 56 38.6	+45
	comp=E,0.1nm,0.3s,baz=101,slow=12,SNR=2.6						
ILAR	Eielson Array	37.34	332	P	P	14 00 34.1	+1.0
	comp=E,0.3nm,0.8s,baz=134,slow=7.7,SNR=2.7						

IDC 20 14:09:48.2±2.6**, 17°.65N**×**148°.05E, h0^{km}, mb3.5**/5**, mb1 3.6**/5**, mb1mx3.4**/31**, mbtmp3.5**/5**, Error ellipse: s-maj=63.4km s-min=28.8km az=159.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	45.36	321	P	P	14 18 08.6	+0.2
	0.6nm,0.7s,baz=136,slow=8.7,SNR=4.5						
CMAR	Chiang Mai Arr	46.58	279	P	P	14 18 18.3	-0.1
	0.4nm,0.5s,baz=66,slow=8.3,SNR=5.0						
ZALV	Zalesovo Beam	60.20	323	P	P	14 19 57.5	-0.4
	0.7nm,0.6s,baz=94,slow=10,SNR=2.4						
MKAR	Makanchi Array	60.80	314	P	P	14 20 01.9	-0.4
	0.3nm,0.7s,baz=89,slow=7.7,SNR=3.0						
YKA	Yellowknife Ar	77.86	28	P	P	14 21 47.6	+0.1
	0.1nm,0.5s,baz=288,slow=4.6,SNR=2.3						

BJI ***20*** *14:34:51.5±0.0, 5°.30S×102°.50E, h38^{km}, mB5.1/41, mb5.0/66, Ms4.6/29, Ms7 4.4/30*

NEIC ***20*** *14:34:51.3±1.2, 5°.38S±0°.06×102°.46E±0°.07, h37^{km}±5^{km}, mb5.0/80, Error ellipse: s-maj=9.6km s-min=8.4km az=91.0*

DJA ***20*** *14:34:51.5±0.4, 5°S±3°×10°2E±°, h37^{km}±3^{km}, M4.8/27, mb4.9/27, mB5.3/23, MLv5.1/21, Mw(mB)4.7/23, MwMwp5.3/1, Mwp5.5/1*

KLM ***20*** *14:34:51, 5°.54S×102°.54E, h50^{km}, mb4.6*

IDC ***20*** *14:34:53.5±0.8, 5°.21S×102°.64E, h43^{km}±5^{km}, mb4.6/30, mb1 4.6/32, mb1mx4.4/49, mbtmp4.8/32, ML4.3/2, MS4.0/17, Ms1 4.0/17, ms1mx3.7/49, Error ellipse: s-maj=17.5km s-min=9.4km az=44.0*

NOU ***20*** *14:34:56.5, 5°.25S×102°.43E, h79^{km}, mb5.0, Southern Sumatra, Indonesia*

ISC 20 14:34:52.5±0.5**, 5°.39S**±0°.05×**102°.51E**±0°.05**, h43^{km}**±4^{km}**, h43^{km}:pP-P, n400, σ1^{s}35**/407**, mb5.0**/106**, MS4.2**/24**, 7C-13D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	1.11	24		Pn	14 35 11.0	-0.7
MNAI	Manna	1.11	24	P	Pn	14 35 11.4	-0.3
MNAI				S	Sn	14 35 26.6	+0.8
LWLI	Liwa	1.59	77	P	Pn	14 35 17.3	-1.0
KSI	Kapahiang	1.73	3	P	Pn	14 35 19.6	-0.5
LHSI	Lahat	1.85	33	P	Pn	14 35 21.9	+0.1
KASI	Kota Agung	1.99	94	P	Pn	14 35 23.9	+0.3
KLSI		2.32	73	P	Pn	14 35 28.5	+0.3
BLSI	Bandar Lampung	2.73	90	P	Pn	14 35 34.9	+1.1
PMBI	Palembang	3.33	43		Pn	14 35 41.4	-0.6
PMBI	Palembang	3.33	43	P	Pn	14 35 42.3	+0.2
CGJI	Cibinong	3.40	111	P	Pn	14 35 43.0	0.0
JMBI	JAMBI	3.90	17	P	Pn	14 35 50.1	+0.2
DBJI	Dramaga	4.38	106	P	Pn	14 35 57.4	+0.9
SDSI	Sungai Dareh	4.55	346	P	Pn	14 35 58.3	-0.6
PPBI	Pangkal Pinang	4.83	49	P	Pn	14 36 03.8	+1.0
PDSI	Padang	4.89	335	P	Pn	14 36 03.4	-0.2
LEM	Lembang	5.28	106	P	Pn	14 36 10.7	+1.6
	31nm,0.3s,baz=202,slow=14,SNR=16						
LEM				S	Sn	14 37 11.1	+2.3
	9.8nm,0.3s,baz=110,slow=22,SNR=1.2						
LEM				LR	LR	14 38 37.5	
	comp=Z,1µm,20.0s,baz=259,slow=43						
LEM	Lembang	5.28	106	P	Pn	14 36 09.8	+0.8
	0.8nm2µm211nm,0.9s						
CISI	Cisompet, Garu	5.70	113	Pn	Pn	14 36 14.0	-0.7
CISI	Cisompet, Garu	5.70	113	P	Pn	14 36 14.6	-0.1
	2.9nm6µm414nm,0.5s						
BKNI	Bangkinang	5.86	345		Pn	14 36 16.8	-0.1
BKNI	Bangkinang	5.86	345	P	Pn	14 36 14.3	-2.6
	2.6nm2µm194nm,1.1s						
CMJI	Cimerak	6.37	112	P	Pn	14 36 23.6	-0.2
	0.7nm2µm143nm,0.7s						
KPJI	Karang Pucung	6.67	107	P	Pn	14 36 28.2	+0.2
	0.5nm2µm123nm,0.6s						
MNSI	Mandailing Nat	6.80	334	P	Pn	14 36 28.7	-1.1
	0.5nm2µm85nm,0.7s						
MYKOM	Kota Tinggi	7.25	11		Pn	14 36 36.0	0.0
MYKOM	Kota Tinggi	7.25	11	P	Pn	14 36 39.0	+3.0
GSI	Gunungsitoli	8.27	323	Pn	Pn	14 36 48.1	-1.8
GSI	Gunungsitoli	8.27	323	P	Pn	14 37 02.1	+12
UGM	Wanagama	8.35	108	Pn	Pn	14 36 51.3	+0.2
UGM	Wanagama	8.35	108	P	Pn	14 36 51.2	+0.1
	203nm,0.6s						
COCO	West Island	8.78	219	Pn	Pn	14 36 54.9	-2.0
RPSI	Rantau Prapat	8.79	336		Pn	14 36 55.0	-2.0
PSI	Prapat	8.88	336	P	Pn	14 36 55.0	-3.5
	1.3nm,0.3s,baz=180,slow=8.7,SNR=8.3						
PSI				LR	LR	14 40 53.3	
	comp=Z,925nm,19.0s,baz=90,slow=41						
NGJI	Ngawi	9.12	103	P	Pn	14 37 12.7	+11
PWJI	Pagerwojo	9.60	106	P	Pn	14 37 09.0	+0.8
	72nm,0.9s						
IPM	Ipoh	9.91	351	Pn	Pn	14 37 11.4	-1.1
IPM	Ipoh	9.91	351	P	Pn	14 37 17.0	+4.5
KSM	Kuching	10.35	49	Pn	Pn	14 37 17.9	-0.6
KSM	Kuching	10.35	49	P	Pn	14 37 21.0	+2.5
KULM	Kulim	10.77	350		Pn	14 37 23.1	-1.1
KULM	Kulim	10.77	350	P	Pn	14 37 23.0	-1.1
KMMI	Kalianget	11.51	99	P	Pn	14 37 33.4	-1.0
	88nm,0.8s						
ABJI	Asem Bagus	11.89	102	P	Pn	14 37 40.6	+1.0
	223nm,0.9s						
JAGI	Jajag, Banyuwa	11.96	105	Pn	Pn	14 37 39.5	-1.0
JAGI	Jajag, Banyuwa	11.96	105	P	Pn	14 37 40.4	-0.1
	2µm89nm,0.7s						
SRBI	Singaraja	12.90	103	P	Pn	14 37 52.9	-0.4
	2µm135nm,0.8s						
MTKI	Muara Teweh, K	13.13	71	P	Pn	14 37 57.7	+1.2
	3µm34nm,1.0s						
KBKI	Kotabaru	13.78	82	P	P	14 38 15.3	+2.4
TWSI	Taliwang, Sumb	14.65	104	P	Pn	14 38 13.1	-4.0
BKB	Balikpapan	14.94	75	P	P	14 38 26.3	+0.5
PLAI	Plampang	15.53	104	P	Pn	14 38 25.1	-3.6
SPMM	Sapulut	17.17	55	P	P	14 38 51.0	+0.4
KAPI	Kappang	17.18	90	LR	LR	14 46 02.5	
	comp=Z,380nm,19.2s,baz=268,slow=39						
KAPI	Kappang	17.18	90	Pn	Pn	14 38 48.6	-0.9
WBSI	Waikabubak, Su	17.26	105	P	Pn	14 38 45.7	-4.9
SPSI	Sidrap Palu	17.26	86	P	Pn	14 38 50.2	-0.4
	51nm,1.0s						
TTSI	Tana Toraja	17.42	83	P	P	14 38 54.0	+0.7
	104nm,1.0s						
BKSI	Bulukumba	17.54	91	P	Pn	14 38 53.3	-0.7
	522nm54nm,1.0s						
BNSI	Bone	17.56	88	P	P	14 38 54.9	0.0
	1µm130nm,1.1s						
KKM	Kota Kinabalu	17.78	51	P	Pn	14 38 56.8	-0.3
WSI	Waingapu	18.14	105	P	Pn	14 39 08.3	+6.9
DLV	T Lat	18.21	19	P	P	14 39 01.4	-0.9
PATY	Pattaya	18.26	355	P	Pn	14 39 03.2	+0.4
	63nm,0.7s						
MPSI	Mapaga	18.27	72	P	Pn	14 39 03.8	+0.8
	654nm60nm,0.8s						
PHET	Kaeng Krachan	18.40	351	P	Pn	14 39 05.0	+0.5
	395nm28nm,0.7s						
MYLDM	Lahad Datu	19.11	57	P	P	14 39 11.8	-0.1
MYLDM				IAmb	IAmb	14 39 31.8	
	comp=Z,63nm,0.8s						
SRAK	Srakaew	19.28	359	P	P	14 39 14.2	+0.5
	comp=Z,13µmcomp=Z,1µm,0.6s						
EDFI	Ende, Flores	19.33	101	P	P	14 39 12.4	-2.0
	comp=Z,336nmcomp=Z,14nm,0.5s						
TOLI2	Tolitoli	19.36	71	P	P	14 39 14.4	-0.3
TOLI2				IAmb	IAmb	14 39 16.9	
	comp=Z,60nm,0.5s						
APSI	Ampana	19.62	78	P	Pn	14 39 18.4	-0.8
	comp=Z,1µmcomp=Z,105nm,1.0s						
MMRI	Maumere	19.85	100	P	P	14 39 18.9	-1.1
MMRI				IAmb	IAmb	14 39 23.5	
	comp=Z,60nm,0.6s						
MMRI	Maumere	19.85	100	P	P	14 39 19.5	-0.5
	comp=Z,89nm,0.6s						
MRSI	Marisa	20.26	74	P	P	14 39 24.3	-0.2
	comp=Z,1µmcomp=Z,116nm,0.9s						
LUWI	Luwuk	20.68	79	P	P	14 39 28.7	-0.4
LUWI	Luwuk	20.68	79	P	P	14 39 29.2	+0.1
	comp=Z,2µmcomp=Z,141nm,1.0s						
UBPT	Khong Chiam	20.74	8	P	P	14 39 28.8	-0.9
	comp=Z,21nm,0.9s						
UBPT	Khong Chiam	20.74	8	P	P	14 39 28.3	-1.3
UTHA	Uthaitani	21.03	352	P	P	14 39 32.2	-0.6
	comp=Z,416nmcomp=Z,52nm,0.8s						
CHAI	Chaiyaphum	21.16	359	P	P	14 39 33.9	-0.2
	comp=Z,666nmcomp=Z,62nm,0.8s						
GTOI	Gorontalo	21.33	74	P	P	14 39 34.1	-2.0
	comp=Z,26nm,0.6s						
BATI	Baumata	21.50	104	P	P	14 39 37.2	-0.7
	comp=Z,115nm,0.4s,baz=332,slow=1.0,SNR=17						
BATI				S	S	14 43 28.8	-5.3
	comp=Z,51nm,0.7s,baz=127,slow=12,SNR=4.1						
BATI	Baumata	21.50	104	P	P	14 39 37.4	-0.5
	comp=Z,1µmcomp=Z,95nm,0.6s						
SOEI	Soe	22.00	103	P	P	14 39 41.7	-1.7
SOEI	Soe	22.00	103	P	P	14 39 42.6	-0.8
	comp=Z,1µmcomp=Z,117nm,0.9s						
SUKH	Sukhothai	22.90	353	P	P	14 39 52.5	-0.2
	comp=Z,86nm,0.7s						
UTTA	Uttaradit	23.06	355	P	P	14 39 53.0	-1.4
	comp=Z,416nmcomp=Z,64nm,0.8s						
NONG	Nongkai	23.31	2	P	P	14 39 55.0	-1.8
ENPP	El Nido	23.56	46	*e*P	P	14 39 58.3	-1.0
SANI	Sanana	23.66	83	P	P	14 39 58.8	-1.5
	comp=Z,33nm,0.9s						
CM04	Chiang Mai Arr	23.89	352	P	P	14 40 01.5	-0.8
	comp=Z,335nmcomp=Z,47nm,1.0s						
CM05	Chiang Mai Arr	23.90	352	P	P	14 40 01.8	-0.6
	comp=Z,236nmcomp=Z,30nm,1.0s						
CM13	Chiang Mai Arr	23.92	352	P	P	14 40 01.7	-0.9
	comp=Z,249nmcomp=Z,34nm,0.9s						
CM02	Chiang Mai Arr	23.93	352	P	P	14 40 02.0	-0.6
	comp=Z,284nmcomp=Z,40nm,0.9s						
CM09	Chiang Mai Arr	23.93	352	P	P	14 40 02.1	-0.6
	comp=Z,427nmcomp=Z,57nm,0.9s						
CM15	Chiang Mai Arr	23.95	352	P	P	14 40 02.0	-0.9
	comp=Z,289nmcomp=Z,40nm,0.8s						
CM31	Chiang Mai Arr	23.95	352	P	P	14 40 02.6	-0.3
	comp=Z,9µmcomp=Z,1µm,1.0s						
CM31	Chiang Mai Arr	23.95	352	P	P	14 40 01.4	-1.5
CM31				IAmb	IAmb	14 40 15.5	
	comp=Z,41nm,0.9s						
CMAR	Chiang Mai Arr	23.95	352	P	P	14 40 01.9	-1.1
	comp=Z,10nm,0.6s,baz=183,slow=8.9,SNR=92						
CMAR				pP	pP	14 40 14.1	+0.1
	comp=Z,30nm,0.9s,baz=181,slow=9.1,SNR=19						
CMAR				PcP	PcP	14 43 46.9	+2.3
	comp=Z,1.5nm,0.6s,baz=210,slow=3.2,SNR=6.6						
CMAR				LR	LR	14 49 44.1	
	comp=Z,237nm,19.9s,baz=222,slow=37						
CMAR	Chiang Mai Arr	23.95	352	P	P	14 40 01.4	-1.5
CM36	Chiang Mai Arr	23.99	352	P	P	14 40 03.0	-0.3
CM35	Chiang Mai Arr	24.14	352	*e*P	P	14 40 03.0	-1.6
CM32	Chiang Mai Arr	24.16	351	P	P	14 40 04.0	-0.8
CHTO	Chiang Mai	24.30	352	P	P	14 40 04.4	-1.7
PAGZ	Pagadian	24.63	58	*e*P	P	14 40 09.9	+0.8
SKMP	Bagumbayan, Su	24.97	62	*e*P	P	14 40 13.2	+0.9
PALK	Pallekele	25.13	300	LR	LR	14 49 47.1	
	comp=Z,263nm,18.8s,baz=231,slow=36						
QIZ	Qiongzhong	25.32	16	P	P	14 40 16.6	+1.3
QIZ				S	S	14 44 43.6	+5.0
QIZ				pmax	pmax		
	comp=Z,19nm,1.3s						
QIZ				LR	LR		
	comp=Z,400nm,4.4s						
QIZ				LR	LR		
	comp=Z,340nm,11.8s						
QIZ				LR	LR		
	comp=Z,380nm,17.5s						
SJMP	San Jose	25.63	46	*e*P	P	14 40 20.6	+2.4
KCP	Kidapawan	25.68	62⇓	*e*P	P	14 40 19.4	+0.6
DDMP	Don Marcelino,	25.82	64	*e*P	P	14 40 17.6	-2.4
FITZ	Fitzroy Crossi	25.89	121	P	P	14 40 21.4	+0.8
	baz=26,SNR=9.9						
FITZ	Fitzroy Crossi	25.89	121	P	P	14 40 21.4	+0.8
	comp=Z,7.2nm,0.8s,baz=317,slow=6.9,SNR=15						
FITZ				LR	LR	14 51 43.0	
	comp=Z,248nm,19.6s,baz=316,slow=39						
DAV	Davao City (W)	26.14	62	LR	LR	14 51 34.3	
	comp=Z,205nm,19.1s,baz=282,slow=39						
SLVN	Son La	26.59	3	P	P	14 40 26.3	-0.6
TGY	Tagaytay City	26.63	43	P	P	14 40 25.8	-1.6
	comp=Z,91nm,0.3s,baz=156,slow=8.1,SNR=3.6						
MATI	Mati	26.68	63	*e*P	P	14 40 25.3	-2.5
LQP	Lukban	27.05	44⇓	*e*P	P	14 40 30.2	-1.1
MSLP	Maasin	27.08	55	*e*P	P	14 40 32.2	+0.8
MTN	Manton Dam	29.20	107	P	P	14 40 49.5	-0.8
	baz=29,SNR=41						
FAKI	Fak Fak	29.76	86	P	P	14 40 53.4	-1.9
FAKI				IAmb	IAmb	14 41 08.7	
	comp=Z,15nm,0.7s						
H08S2	Diego Garcia H	29.90	264	T	T	15 11 57.0	
	baz=87,slow=76,SNR=140						
H08S3	Diego Garcia H	29.91	264	T	T	15 11 57.7	
	baz=87,slow=76,SNR=122						
H08S1	Diego Carcia H	29.92	264	T	T	15 11 58.5	
	baz=87,slow=76,SNR=118						
KMI	Kunming	30.33	0⇓	*e*P	P	14 41 01.3	+0.9
KMI				pP	pP	14 41 07.8	-3.7
KMI				sP	pwP	14 41 13.8	+0.2
KMI				S	S	14 45 48.3	-10
KMI				sS	sS	14 46 10.3	-6.7
KMI				pmax	pmax		
	comp=Z,12nm,0.7s						
KMI				pmax	pmax		

	comp=Z,140nm,4.5s						
KMI				LR	LR		
	comp=Z,710nm,15.0s						
KMI				LR	LR		
	comp=Z,230nm,9.5s						
KMI				LR	LR		
	comp=Z,680nm,14.7s						
KDU	**Kakadu**	**30.45**	**106**	P	**P**	**14 41 00.3**	**-1.0**
	baz=31,SNR=7.5						
NWAO	**Narrogin (SRO)**	**30.65**	**155**	LR	LR	14 51 46.5	
	comp=Z,363nm,21.8s,baz=309,slow=33						
H01W3	**Cape Leeuwin H**	**31.26**	**161**	T	T	15 13 57.7	
	baz=338,slow=76,SNR=28						
H01W2	**Cape Leeuwin H**	**31.27**	**161**	T	T	15 13 54.0	
	baz=338,slow=76,SNR=30						
H01W1	**Cape Leeuwin H**	**31.27**	**161**	T	T	15 13 52.8	
	baz=338,slow=76,SNR=25						
GYA	**Guiyang**	**31.91**	**7**	⇓P	**P**	**14 41 14.1**	**-0.1**
GYA				pP	pwP	14 41 27.5	0.0
GYA				sP	sP	14 41 35.3	+4.9
GYA				S	**S**	**14 46 19.1**	**-3.4**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GYA				LR	LR		
	comp=Z,360nm,15.6s						
HYB	**Hyderabad**	**32.76**	**314**	*i* P	**P**	**14 41 23.0**	**+1.3**
YULB	**Yu-li**	**33.98**	**32**	P	**P**	**14 41 32.5**	**+0.3**
YULB				IAmb	IAmb	14 41 46.0	
	comp=Z,22nm,1.1s						
WB0	**Warramunga Arr**	**34.15**	**118**	P	**P**	**14 41 34.0**	**+0.2**
WB0				IAmb	IAmb	14 41 46.1	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**34.17**	**118**	P	**P**	**14 41 34.2**	**+0.3**
	comp=Z,6.9nm,0.7s,baz=293,slow=9.8,SNR=35						
WRA				S	**S**	**14 46 59.3**	**+1.7**
	comp=Z,2.2nm,0.9s,baz=294,slow=16,SNR=5.8						
WRA	**Warramunga Arr**	**34.17**	**118**	P	**P**	**14 41 33.9**	**-0.1**
WRAB	**Tennant Creek**	**34.17**	**118**	P	**P**	**14 41 33.9**	**-0.1**
WRAB				IAmb	IAmb	14 41 46.0	
	comp=Z,20nm,0.8s						
WB2	**Warramunga Arr**	**34.18**	**118**	P	**P**	**14 41 33.9**	**-0.1**
WB2				IAmb	IAmb	14 41 45.9	
	comp=Z,18nm,0.9s						
WR0	**Warramunga Arr**	**34.35**	**118**	P	**P**	**14 41 35.8**	**+0.3**
WR0				IAmb	IAmb	14 41 47.6	
	comp=Z,22nm,0.9s						
YHNB	**Yeheng**	**35.07**	**31**	P	**P**	**14 41 41.4**	**-0.3**
ODAN	**Odare**	**35.24**	**336**	*e*P	**P**	**14 41 44.0**	**+0.7**
	comp=Z,107nm,0.7s						
ASPA	**Alice Springs**	**35.27**	**124**	P	**P**	**14 41 44.0**	**+0.5**
	baz=35						
ASAR	**Alice Springs**	**35.27**	**124**	P	**P**	**14 41 44.5**	**+1.0**
	comp=Z,6.5nm,0.6s,baz=295,slow=8.0,SNR=156						
ASAR				S	**S**	**14 47 17.4**	**+2.9**
	comp=Z,1.5nm,1.0s,baz=297,slow=16,SNR=5.1						
ASAR				LR	LR	14 56 45.2	
	comp=Z,199nm,21.2s,baz=314,slow=37						
ASAR	**Alice Springs**	**35.27**	**124**	P	**P**	**14 41 43.3**	**-0.2**
AS31	**Alice Springs**	**35.27**	**124**	P	**P**	**14 41 43.5**	**0.0**
TAPN	**Taplejung**	**35.55**	**337**	*e*P	**P**	**14 41 47.1**	**+1.1**
	comp=Z,180nm,0.8s						
RAMN	**Ramite**	**35.64**	**335**	*e*P	**P**	**14 41 47.9**	**+1.1**
	comp=Z,43nm,0.6s						
ENH	**Enshi**	**36.08**	**10**	P	**P**	**14 41 48.8**	**-1.4**
ENH				IAmb	IAmb	14 41 51.8	
	comp=Z,13nm,0.7s						
CD2	**Chengdu**	**36.11**	**2**	*e*P	**P**	**14 41 51.3**	**+0.8**
CD2				S	**S**	**14 47 30.4**	**+3.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				LR	LR		
	comp=Z,610nm,14.1s						
CD2				LR	LR		
	comp=Z,340nm,11.6s						
CD2				LR	LR		
	comp=Z,910nm,15.1s						
LSA	**Lhasa**	**36.55**	**343**	P	**P**	**14 41 55.3**	**+0.6**
LSA				pmax	pmax		
	comp=Z,140nm,1.1s						
LSA	**Lhasa**	**36.55**	**343**	P	**P**	**14 41 54.5**	**-0.3**
PKI	**Pulchoki**	**36.69**	**334**	*e*P	**P**	**14 41 56.4**	**+0.6**
	comp=Z,20nm,0.6s						
PKIN	**Phulchoki**	**36.70**	**334**	*e*P	**P**	**14 41 56.4**	**+0.5**
	comp=Z,18nm,0.6s						
GUN	**Gumba**	**36.79**	**335**	*e*P	**P**	**14 41 57.8**	**+1.1**
	comp=Z,65nm,0.6s						
DMN	**Daman**	**36.86**	**334**	*e*P	**P**	**14 41 57.8**	**+0.6**
	comp=Z,58nm,1.0s						
KKN	**Kakani**	**36.94**	**334**	*e*P	**P**	**14 41 58.7**	**+0.9**
	comp=Z,47nm,0.7s						
DANN	**Dangsing**	**38.10**	**333**	*e*P	**P**	**14 42 08.7**	**+1.0**
	comp=Z,46nm,0.4s						
JAY	**Jayapura**	**38.21**	**87**	P	**P**	**14 42 07.6**	**-1.0**
	comp=Z,7.5nm,0.7s,baz=303,slow=17,SNR=2.0						
QIS	**Mount Isa**	**39.04**	**116**	P	**P**	**14 42 16.3**	**+0.9**
	baz=39,SNR=5.8						
XAN	**Xi'an**	**39.68**	**8**	P	**P**	**14 42 19.3**	**-1.3**
XAN				sP	pP	14 42 31.6	-0.3
XAN				PP	**PP**	**14 43 53.3**	**+0.9**
XAN				S	**S**	**14 48 19.4**	**-1.7**
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN				pmax	pmax		
	comp=Z,180nm,5.7s						
XAN				LR	LR		
	comp=Z,440nm,17.5s						
XAN				LR	LR		
	comp=Z,180nm,10.6s						
XAN				LR	LR		
	comp=Z,640nm,19.1s						
NJ2	**Nanjing**	**40.36**	**22**	*e*P	**P**	**14 42 27.6**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LZH	**Lanzhou**	**41.27**	**2**	*e*P	**P**	**14 42 34.1**	**+0.2**
LZH				pP	pP	14 42 45.9	+0.5
LZH				sP	sP	14 42 50.8	+0.4
LZH				SS	SS	14 51 46.8	-3.1
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.2s						
LZH				LR	LR		
	comp=Z,370nm,13.6s						
LZH				LR	LR		
	comp=Z,340nm,14.6s						
LZH				LR	LR		
	comp=Z,310nm,16.3s						
BBOO	**Buckleboo**	**41.49**	**135**	P	**P**	**14 42 36.8**	**+1.2**
	baz=42,SNR=8.7						
NDI	**New Delhi**	**41.72**	**326**	*e*P	**P**	**14 42 39.0**	**+1.6**
MTSU	**Mount Surprise**	**42.73**	**111**	P	**P**	**14 42 47.0**	**+1.1**
	baz=43,SNR=23						
HTT	**Hallett**	**43.85**	**134**	P	**P**	**14 42 56.7**	**+2.0**
	baz=44,SNR=7.4						
PMG	**Port Moresby**	**44.44**	**98**	P	**P**	**14 42 59.5**	**-0.2**
	comp=Z,42nm,1.1s,baz=261,slow=0.9,SNR=6.4						
GTA	**Gaotai**	**44.64**	**357**	⇓P	**P**	**14 43 01.9**	**+0.9**
GTA				pP	pP	14 43 08.0	-4.8
GTA				sP	sP	14 43 11.8	-6.0
GTA				pmax	pmax		
	comp=Z,16nm,0.7s						
GTA				pmax	pmax		
	comp=Z,290nm,5.8s						
GTA				LR	LR		
	comp=Z,360nm,16.7s						
GTA				LR	LR		
	comp=Z,300nm,17.8s						
GTA				LR	LR		
	comp=Z,540nm,18.9s						
CTA	**Charters Tower**	**44.94**	**113**	P	**P**	**14 43 04.1**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=293,slow=13,SNR=10						
CTAO	**Charters Tower**	**44.94**	**113**	P	**P**	**14 43 03.7**	**0.0**
CTAO				IAmb	IAmb	14 43 24.2	
	comp=Z,27nm,0.9s						
QLP	**Quilpie**	**45.02**	**123**	P	**P**	**14 43 06.2**	**+2.0**
	baz=45,SNR=5.0						
STKA	**Stephens Creek**	**45.05**	**131**	P	**P**	**14 43 06.2**	**+1.8**
	baz=45,SNR=47						
STKA	**Stephens Creek**	**45.05**	**131**	P	**P**	**14 43 06.3**	**+1.9**
	comp=Z,18nm,0.6s,baz=308,slow=7.4,SNR=70						
STKA				LR	LR	15 03 27.0	
	comp=Z,186nm,19.6s,baz=328,slow=38						
STKA	**Stephens Creek**	**45.05**	**131**	P	**P**	**14 43 05.6**	**+1.2**
JSU	**Suzuyama**	**45.35**	**34**	P	**P**	**14 43 05.8**	**-0.9**
JSU				IAmb	IAmb	14 43 07.2	
	comp=Z,11nm,0.6s						
HHC	**Hu-ho-hao-te**	**46.76**	**9**	*e*P	**P**	**14 43 19.3**	**+1.6**
HHC				PP	**PP**	**14 45 09.0**	**+0.8**
HHC				S	**S**	**14 50 06.4**	**+1.7**
HHC				pmax	pmax		
	comp=Z,16nm,1.7s						
HHC				pmax	pmax		
	comp=Z,190nm,7.0s						
HHC				LR	LR		
	comp=Z,260nm,11.6s						
HHC				LR	LR		
	comp=Z,290nm,15.9s						
HHC				LR	LR		
	comp=Z,380nm,19.2s						
JNU	**Nakatsue**	**46.81**	**33**	P	**P**	**14 43 18.0**	**-0.2**
	comp=Z,12nm,0.8s,baz=159,slow=5.5,SNR=7.1						
JNU	**Nakatsue**	**46.81**	**33**	P	**P**	**14 43 17.5**	**-0.7**
BJT	**Baijiatuau**	**46.90**	**14**	P	**P**	**14 43 18.2**	**-0.5**
BJT				IAmb	IAmb	14 43 19.7	
	comp=Z,15nm,0.6s						
BJI	**Beijing**	**46.92**	**14**	P	**P**	**14 43 19.3**	**+0.5**
BJI				pmax	pmax		
	comp=Z,20nm,0.6s						
BJI				LR	LR		
	comp=Z,380nm,16.9s						
BJI				LR	LR		
	comp=Z,120nm,9.4s						
JTU	**Tsushima**	**47.11**	**31**	P	**P**	**14 43 19.2**	**-1.3**
NIL	**Nilore**	**47.69**	**327**	P	**P**	**14 43 24.6**	**-0.4**
CMSA	**Cobar Meteorol**	**48.05**	**128**	P	**P**	**14 43 30.2**	**+2.3**
	baz=48,SNR=17						
KSAR	**Wonju Array Be**	**48.73**	**27**	P	**P**	**14 43 32.8**	**-0.1**
KSRS	**Korea Array**	**48.76**	**27**	P	**P**	**14 43 33.0**	**-0.2**
	comp=Z,9.6nm,0.5s,baz=228,slow=7.1,SNR=72						
KS19	**Wonju Array Si**	**48.78**	**27**	P	**P**	**14 43 32.6**	**-0.7**
KS19				IAmb	IAmb	14 43 34.4	
	comp=Z,11nm,0.7s						
RMQ	**Roma**	**48.82**	**121**	P	**P**	**14 43 34.0**	**+0.1**
	baz=49,SNR=4.8						
JMN	**Monobe**	**48.94**	**35**	P	**P**	**14 43 34.3**	**-0.3**
JMN				IAmb	IAmb	14 44 01.9	
	comp=Z,26nm,1.2s						
JHS	**Saijyo**	**49.44**	**33**	P	**P**	**14 43 38.1**	**-0.3**
KBL	**Kabul**	**50.73**	**324**	P	**P**	**14 43 48.4**	**0.0**
WMQ	**Urumqi**	**50.77**	**346**	P	**P**	**14 43 49.8**	**+1.4**
WMQ				pP	pP	14 43 58.3	-2.0
WMQ				sP	sP	14 44 02.5	-2.8
WMQ				pmax	pmax		
	comp=Z,100nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,370nm,6.7s						
WMQ	**Urumqi**	**50.77**	**346**	P	**P**	**14 43 48.9**	**+0.5**
JWT	**Wachi**	**50.92**	**35**	P	**P**	**14 43 48.4**	**-1.2**
JWT				IAmb	IAmb	14 43 49.6	
	comp=Z,22nm,0.8s						
KSH	**Kashi**	**50.95**	**334**	P	**P**	**14 43 49.6**	**-0.3**
KSH				pP	pP	14 44 01.4	-0.4
KSH				pmax	pmax		
	comp=Z,32nm,0.8s						
KSH				pmax	pmax		
	comp=Z,420nm,7.8s						
YNG	**Young**	**51.24**	**130**	P	**P**	**14 43 52.8**	**+0.7**
	baz=51,SNR=6.9						
JGF	**Kuroka**	**52.28**	**36**	P	**P**	**14 43 59.0**	**-0.8**
SHLS	**Shalkode**	**52.63**	**339**	*e*P	**P**	**14 44 00.8**	**-1.6**
	comp=Z,16nm,1.2s,baz=339						
SATY	**Saty**	**52.94**	**338**	*e*P	**P**	**14 44 04.4**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=338						
SONM	**Songino Array**	**53.10**	**3**	P	**P**	**14 44 06.4**	**+0.6**
	comp=Z,28nm,0.7s,baz=182,slow=9.2,SNR=190						
SONM				PcP	**PcP**	**14 45 14.2**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=182,slow=4.1,SNR=5.1						
SONM				LR	LR	15 09 57.7	
	comp=Z,175nm,19.9s,baz=103,slow=40						
SONM	**Songino Array**	**53.10**	**3**	P	**P**	**14 44 05.6**	**-0.2**
CN2	**Changchun**	**53.16**	**21**	*e*P	**P**	**14 44 09.3**	**+3.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULN	**Ulaanbaatar**	**53.17**	**4**	P	**P**	**14 44 06.0**	**-0.3**
ULN				IAmb	IAmb	14 44 08.1	
	comp=Z,27nm,1.1s						
MAJO	**Matsushiro**	**53.43**	**36**	P	**P**	**14 44 06.0**	**-2.3**
MAT	**Matsushiro**	**53.43**	**36**	P	**P**	**14 44 06.0**	**-2.2**
MJAR	**Matsushiro Arr**	**53.43**	**36**	P	**P**	**14 44 06.3**	**-2.0**
	comp=Z,6.8nm,0.7s,baz=220,slow=7.2,SNR=11						
MJAR	**Matsushiro Arr**	**53.43**	**36**	P	**P**	**14 44 05.9**	**-2.4**
TKM2	**Tokmak 2**	**53.92**	**336**	P	**P**	**14 44 13.0**	**+1.0**
	SNR=10.0						
KBK	**Karagaybulak**	**53.97**	**335**	P	**P**	**14 44 13.9**	**+1.6**
	SNR=6.1						
AML	**Almayashu**	**54.08**	**334**	P	**P**	**14 44 13.8**	**+0.4**
	SNR=13						
CHKK	**Chushkaly**	**54.15**	**337**	*e*P	**P**	**14 44 12.9**	**-0.5**
	baz=337						
CHMS	**Chumysh**	**54.34**	**335**	P	**P**	**14 44 15.4**	**+0.6**
	SNR=5.5						
KUU	**Kurty**	**54.44**	**337**	*e*P	**P**	**14 44 14.9**	**-0.5**
	comp=Z,18nm,0.7s,baz=337						
TDK	**Taldyqorghan**	**54.62**	**339**	*e*P	**P**	**14 44 16.4**	**-0.4**
	comp=Z,9.1nm,0.7s,baz=339						
USP	**Ospenovka**	**54.66**	**335**	P	**P**	**14 44 17.5**	**+0.4**
	SNR=15						
ZSN	**Zaisan**	**54.87**	**345**	*e*P	**P**	**14 44 17.6**	**-0.9**
	comp=Z,16nm,0.8s,baz=345						
MK31	**Makanchi Array**	**54.96**	**343**	P	**P**	**14 44 18.9**	**-0.3**
MK31				IAmb	IAmb	14 44 20.8	
	comp=Z,13nm,0.8s						
MKAR	**Makanchi Array**	**54.96**	**343**	P	**P**	**14 44 19.4**	**+0.2**
	comp=Z,13nm,0.5s,baz=150,slow=8.9,SNR=243						
MKAR	**Makanchi Array**	**54.96**	**343**	P	**P**	**14 44 18.9**	**-0.4**
DZA	**Taraz**	**55.75**	**333**	*e*P	**P**	**14 44 24.6**	**-0.4**
	baz=332						
IUG	**Iuzhnay**	**55.78**	**331**	*e*P	**P**	**14 44 25.2**	**-0.1**
	comp=Z,3.9nm,0.8s,baz=331						
JMM	**Marumori**	**55.84**	**36**	P	**P**	**14 44 24.8**	**-0.9**
JMM				IAmb	IAmb	14 44 32.3	
	comp=Z,18nm,0.8s						
USA0B	**Ussuriysk Arra**	**56.04**	**25**	P	**P**	**14 44 26.4**	**-0.6**
USA0B				IAmb	IAmb	14 44 27.4	
	comp=Z,13nm,0.6s						
USRK	**Ussuriysk Ar.**	**56.04**	**25**	P	**P**	**14 44 26.5**	**-0.5**
	comp=Z,8.6nm,0.5s,baz=206,slow=5.5,SNR=56						
USRK				pP	**pP**	**14 44 38.5**	**-0.4**
	comp=Z,8.4nm,0.6s,baz=221,slow=6.6,SNR=12						
USRK	**Ussuriysk Ar.**	**56.04**	**25**	P	**P**	**14 44 26.0**	**-1.0**
KK31	**Karatay Array**	**56.29**	**332**	P	**P**	**14 44 28.3**	**-0.5**
KKAR	**Karatay Array**	**56.29**	**332**	P	**P**	**14 44 28.1**	**-0.8**
HIA	**Hailar**	**56.46**	**13**	P	**P**	**14 44 29.1**	**-0.9**
HIA				IAmb	IAmb	14 44 30.1	
	comp=Z,10nm,0.8s						
TLY	**Talaya**	**56.85**	**1**	P	**P**	**14 44 32.6**	**-0.1**
TLY				IAmb	IAmb	14 44 34.8	
	comp=Z,17nm,0.8s						
HNR	**Honiara**	**57.05**	**98**	P	**P**	**14 44 34.4**	**-0.4**
	comp=Z,66nm,0.6s,baz=238,slow=2.1,SNR=11						
HNR	**Honiara**	**57.05**	**98**	P	**P**	**14 44 33.7**	**-1.1**
JTM	**Tenmabayashi**	**57.96**	**34**	P	**P**	**14 44 38.9**	**-1.8**
SEM	**Semipalatinsk**	**58.80**	**344**	*e*P	**P**	**14 44 45.8**	**-0.9**
	comp=Z,5.7nm,0.6s,baz=343						
KURK	**Kurchatov**	**59.55**	**343**	P	**P**	**14 44 51.3**	**-0.2**
KURK				IAmb	IAmb	14 44 53.2	
	comp=Z,13nm,0.8s						
JEW	**Eniwo**	**59.58**	**32**	P	**P**	**14 44 51.6**	**-0.2**
GEYT	**Alibeck**	**59.63**	**320**	P	**P**	**14 44 53.4**	**+1.0**
	comp=Z,8.1nm,0.7s,baz=162,slow=6.8,SNR=12						
GEYT	**Alibeck**	**59.63**	**320**	P	**P**	**14 44 52.0**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**59.63**	**320**	P	**P**	**14 44 52.5**	**+0.1**
GYA0B				IAmb	IAmb	14 44 54.3	
	comp=Z,11nm,0.8s						
ERM	**Erimo**	**59.95**	**34**	P	**P**	**14 44 53.9**	**-0.5**
KLR	**Kul'dur**	**60.06**	**22**	P	**P**	**14 44 54.6**	**-0.4**
	comp=Z,11nm,0.7s,baz=228,slow=4.8,SNR=44						
BRZS	**Berezniki**	**60.90**	**338**	*e*P	**P**	**14 44 59.5**	**-1.3**
	baz=338						
ZAA0	**Zalesovo Array**	**60.95**	**348**	P	**P**	**14 45 00.4**	**-0.6**
ZALV	**Zalesovo Beam**	**60.95**	**348**	P	**P**	**14 45 00.8**	**-0.2**
	comp=Z,27nm,0.6s,baz=170,slow=5.5,SNR=90						
ZALV				pP	**pP**	**14 45 14.4**	**+1.3**
	comp=Z,17nm,0.4s,baz=160,slow=5.7,SNR=11						
ZALV				LR	LR	15 14 05.8	
	comp=Z,229nm,18.9s,baz=205,slow=39						
ZALV	**Zalesovo Beam**	**60.95**	**348**	P	**P**	**14 45 00.4**	**-0.6**
ASAJ	**Asahikawa**	**61.06**	**32**	P	**P**	**14 45 01.9**	**-0.1**
	comp=Z,10nm,0.7s,baz=234,slow=8.4,SNR=8.6						
JKA	**Kamikawa-asahi**	**61.06**	**32**	P	**P**	**14 45 01.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**63.09**	**30**	P	**P**	**14 45 14.4**	**-1.1**
SANVU	**Saraoutou**	**64.21**	**104**	P	**P**	**14 45 21.9**	**-1.7**
BRVK	**Borovoye**	**64.28**	**339**	P	**P**	**14 45 22.3**	**-0.9**
BRVK				IAmb	IAmb	14 45 23.9	
	comp=Z,12nm,0.7s						
ABKAR	**Akbulak array**	**65.79**	**331**	P	**P**	**14 45 32.9**	**-0.3**
MAW	**Mawson**	**67.67**	**195**	LR	LR	15 09 17.7	
	comp=Z,202nm,21.4s,baz=58,slow=30						
YAK	**Yakutsk**	**70.41**	**13**	P	**P**	**14 46 00.8**	**-0.9**
	comp=Z,21nm,0.6s,baz=87,slow=0.1,SNR=24						
YAK	**Yakutsk**	**70.41**	**13**	P	**P**	**14 46 00.2**	**-1.6**
ARU	**Arti**	**71.29**	**336**	P	**P**	**14 46 07.3**	**-0.1**
ARU				IAmb	IAmb	14 46 08.7	
	comp=Z,19nm,0.9s						
QRZ	**Quartz Range**	**71.41**	**131**	P	**P**	**14 46 08.4**	**0.0**
OXZ	**Oxford**	**71.47**	**134**	P	**P**	**14 46 09.0**	**+0.3**
LTZ	**Lake Taylor**	**71.54**	**133**	P	**P**	**14 46 09.1**	**-0.2**
LTZ				IAmb	IAmb	14 46 31.0	
	comp=Z,18nm,1.4s						
THZ	**Tophouse**	**71.83**	**132**	P	**P**	**14 46 12.0**	**+0.9**
THZ				IAmb	IAmb	14 46 27.4	
	comp=Z,22nm,1.3s						
KHZ	**Kahutara**	**72.40**	**133**	P	**P**	**14 46 14.8**	**+0.4**
KHZ				IAmb	IAmb	14 46 16.5	
	comp=Z,19nm,1.2s						
KBZ	**Khabaz**	**72.49**	**319**	P	**P**	**14 46 15.9**	**+1.2**
	comp=Z,8.0nm,0.9s,baz=129,slow=6.0,SNR=18						
BKZ	**Black Stump Fm**	**74.21**	**129**	P	**P**	**14 46 25.9**	**+0.7**
BKZ				IAmb	IAmb	14 46 27.5	
	comp=Z,17nm,0.7s						
PEA0B	**Petropavlovsk-**	**74.44**	**31**	P	**P**	**14 46 25.2**	**-0.9**
PETK	**Petropavlovsk-**	**74.44**	**31**	P	**P**	**14 46 24.9**	**-1.2**
	comp=Z,5.7nm,0.8s,baz=222,slow=2.0,SNR=7.1						
PETK	**Petropavlovsk-**	**74.44**	**31**	P	**P**	**14 46 24.8**	**-1.3**
PET	**Petropavlovsk**	**74.89**	**31**	P	**P**	**14 46 28.4**	**-0.3**
MA2	**Magadan**	**75.10**	**23**	P	**P**	**14 46 29.3**	**-0.5**
MA2				IAmb	IAmb	14 46 30.6	
	comp=Z,13nm,0.7s						
SYO	**Syowa Base**	**75.50**	**199**	⇑*e*sP	sP	14 46 48.4	-1.2
BOSA	**Boshof**	**76.25**	**242**	P	**P**	**14 46 38.2**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=160,slow=7.0,SNR=3.6						
BOSA				LR	LR	15 16 42.5	
	comp=Z,110nm,19.4s,baz=42,slow=33						
CSS	**Mathiatis**	**76.26**	**308**	P	**P**	**14 46 37.7**	**+0.7**
CSS				IAmb	IAmb	14 46 39.5	
	comp=Z,11nm,0.7s						
BR131	**Keskin Array S**	**77.44**	**313**	P	**P**	**14 46 43.4**	**-0.2**
BR131				IAmb	IAmb	14 46 45.0	
	comp=Z,9.1nm,0.8s						
BRTR	**Keskin Array B**	**77.44**	**313**	P	**P**	**14 46 43.6**	**0.0**
	comp=Z,5.6nm,0.8s,baz=138,slow=7.3,SNR=19						
SEY	**Seymchan**	**77.84**	**21**	P	**P**	**14 46 45.1**	**-0.1**
	comp=Z,8.3nm,0.6s,baz=231,slow=4.8,SNR=63						
VNDA	**Vanda**	**78.38**	**169**	LR	LR	15 16 29.2	
	comp=Z,103nm,21.8s,baz=302,slow=32						
TIXI	**Tiksi**	**78.81**	**8**	P	**P**	**14 46 49.0**	**-1.3**
TIXI				IAmb	IAmb	14 46 50.1	
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**81.95**	**334**	*e*P	**P**	**14 47 05.6**	**-1.8**
KLMR				AMP		14 47 09.3	
	comp=Z,29nm,1.4s						
TIRR	**Tirgusor**	**82.51**	**316**	⇓P	**P**	**14 47 12.3**	**+1.6**
SORM	**Soroca**	**83.52**	**320**	⇓P	**P**	**14 47 17.2**	**+1.4**
AKASG	**Malin Array Be**	**83.67**	**322**	P	**P**	**14 47 17.1**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=84,slow=4.7,SNR=16						
VRI	**Vrincioaia**	**84.02**	**317**	⇓P	**P**	**14 47 20.9**	**+2.4**
PLOR	**Plostina**	**84.07**	**317**	⇑P	**P**	**14 47 21.2**	**+2.3**
TESR	**Tescani**	**84.23**	**318**	⇓P	**P**	**14 47 21.3**	**+1.7**
MLR	**Muntele Rosu**	**84.46**	**317**	⇑P	**P**	**14 47 23.5**	**+2.5**
AFI	**Afiamalu**	**84.58**	**103**	LR	LR	15 25 59.7	
	comp=Z,34nm,18.5s,baz=261,slow=36						
PRAR	**RASCA**	**84.71**	**318**	⇓P	**P**	**14 47 24.5**	**+2.4**
DOPR	**Dopca**	**84.95**	**317**	⇓P	**P**	**14 47 25.0**	**+1.7**
VOIR		**85.06**	**316**	⇑P	**P**	**14 47 24.6**	**+0.6**
BURAR	**Bucovina Array**	**85.44**	**319**	⇓P	**P**	**14 47 28.6**	**+2.9**
BURAR	**Bucovina Array**	**85.44**	**319**	P	**P**	**14 47 27.6**	**+1.8**
BUR08	**Bucovina Ar. S**	**85.45**	**319**	P	**P**	**14 47 27.7**	**+1.8**
BUR08				IAmb	IAmb	14 47 29.0	
	comp=Z,6.2nm,0.7s						
BILL	**Bilibino**	**85.46**	**20**	P	**P**	**14 47 24.8**	**-0.5**
MNK	**Minsk**	**85.51**	**326**	*i* P	**P**	**14 47 24.8**	**-1.0**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**14 47 24.8**	**-1.0**
	comp=N,8.0nm,0.8s						
MNK				*i* P	**P**	**14 47 24.8**	**-1.0**
	comp=Z,11nm,0.8s						
MNK				*i* PP	**PP**	**14 50 43.0**	**-1.7**
MNK				*i* PPP	PPP	14 52 36.5	
MNK				*i* S	**SKSac**	**14 57 46.6**	**-0.9**
MNK				*i* SS	**SS**	**15 03 30.6**	**+0.2**
MNK				*i* SSS	SSS	15 07 02.2	
MNK				*i* LQ	LQ	15 20 05.2	
MNK				*i* LR	LR	15 25 10.1	
MNK				*i* LRM	MLR	15 27 03.5	
	comp=E,25nm,12.3s						
MNK				*i* LRM	MLR	15 27 03.5	
	comp=N,130nm,11.6s						
MNK				*i* LRM	MLR	15 27 03.5	
	comp=Z,88nm,9.4s						
NACGM	**Naroch**	**86.23**	**326**	*i* P	**P**	**14 47 30.6**	**+1.2**
NACGM				*i* P	**P**	**14 47 30.6**	**+1.2**
NACGM				*i* P	**P**	**14 47 30.6**	**+1.2**
NACGM				*i* pP	**pP**	**14 47 42.6**	**+0.4**
NACGM				*i* PP	**PP**	**14 50 57.5**	**+6.9**
NACGM				*i* PPP	PPP	14 53 00.6	
NACGM				*i* S	**SKSac**	**14 57 50.9**	**-1.1**
NACGM				*i* sS	**sS**	**14 58 23.2**	**+1.0**
NACGM				*i* PS	**PnS**	**14 58 56.9**	**-6.8**
NACGM				*i* PS		14 59 04.2	
NACGM				*i* SS	SS	15 03 56.7	+16
NACGM				*i* SSS	SSS	15 07 35.2	
NACGM				*i* LQ	LQ	15 21 24.3	
NACGM				*i* LR	LR	15 28 06.0	
HERR	**Herculane**	**86.78**	**315**	⇓P	**P**	**14 47 34.1**	**+1.8**
BZS	**Buzias**	**87.47**	**316**	⇑P	**P**	**14 47 37.4**	**+1.8**
SIRR	**Siria**	**87.55**	**317**	⇑P	**P**	**14 47 37.8**	**+1.7**
KOLS	**Kolonicke sedl**	**87.63**	**319**	*e*P	**P**	**14 47 38.7**	**+2.3**
CRVS	**Cervenica-Dubn**	**88.16**	**319**	*e*P	**P**	**14 47 42.1**	**+3.2**
FINES	**FINESS Array B**	**88.25**	**332**	P	**P**	**14 47 40.2**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=107,slow=5.6,SNR=12						
VYHS	**Vyhne**	**89.81**	**319**	*e*P	**P**	**14 47 48.2**	**+1.6**
ARCES	**ARCESS Array B**	**90.49**	**340**	P	**P**	**14 47 49.9**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=104,slow=5.1,SNR=6.8						
ARCES				LR	LR	15 32 16.9	
	comp=Z,141nm,19.6s,baz=250,slow=38						
MODS	**Modra-Piesok**	**90.82**	**318**	*e*P	**P**	**14 47 53.9**	**+2.5**
MORC	**Moravsky Berou**	**90.82**	**320**	⇑P	**P**	**14 47 53.6**	**+2.2**
GERES	**GERESS Array B**	**93.23**	**319**	P	**P**	**14 48 03.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=92,slow=4.4,SNR=6.9						
YKA	**Yellowknife Ar**	**116.82**	**18**	PKP	**PKPdf**	**14 53 31.9**	**0.0**
	comp=Z,0.5nm,0.8s,baz=322,slow=1.7,SNR=6.0						
ULM	**Lac du Bonnet**	**132.69**	**16**	PKP	**PKPdf**	**14 54 03.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=307,slow=7.3,SNR=3.3						
PDAR	**Pinedale Array**	**133.19**	**32**	PKP	**PKiKP**	**14 54 05.0**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=141,slow=2.3,SNR=4.8						
MNTX	**Cornudas Mount**	**143.02**	**42**		**PKPdf**	**14 54 20.9**	**-1.5**
T35A	**Sooner Cattle**	**144.11**	**26**	PKPdf	PKPbc	14 54 21.9	-0.2
OK029	**Liberty Lake**	**144.60**	**29**		PKPbc	14 54 23.8	+0.1
R40A	**Maddies Statio**	**144.60**	**20**	PKPdf	**PKPab**	**14 54 23.0**	**-0.4**
BCOK	**Bluff Creek, N**	**144.63**	**29**		PKPbc	14 54 23.9	+0.2
QUOK	**Quay**	**144.64**	**27**		**PKPab**	**14 54 23.4**	**-0.2**
N58A	**Sunbury**	**144.69**	**359**	P	PKPbc	14 54 23.9	+0.1
	baz=1.4						
S39A	**Bolivar**	**144.75**	**22**	PKPdf	**PKPab**	**14 54 23.4**	**-0.5**
WMOK	**Wichita Mounta**	**144.78**	**31**	P	PKPbc	14 54 24.3	0.0
	baz=321						
OK030	**Cody Creek RV**	**144.81**	**28**		**PKPab**	**14 54 24.1**	**-0.1**
O49A	**Covington**	**144.81**	**9**		**PKPab**	**14 54 23.7**	**-0.4**
P46A	**Rosedale**	**144.81**	**13**		PKPbc	14 54 24.1	-0.1
ACSO	**Alum Creek Sta**	**144.96**	**7**	P	PKPbc	14 54 24.8	+0.2
	baz=351						
Q44A	**Meyer Farm, Va**	**145.04**	**16**		**PKPbc**	**14 54 24.7**	**-0.3**
O53A	**New Philadelph**	**145.13**	**5**	P	**PKPab**	**14 54 25.2**	**0.0**
	baz=354						
O53A	**New Philadelph**	**145.13**	**5**		**PKPbc**	**14 54 24.9**	**-0.3**
CCM	**Cathedral Cave**	**145.15**	**19**	P	**PKPbc**	**14 54 25.2**	**-0.1**
	baz=336						
CCM	**Cathedral Cave**	**145.15**	**19**		**PKPbc**	**14 54 24.9**	**-0.5**
O52A	**Adamsville**	**145.20**	**6**		**PKPbc**	**14 54 25.1**	**-0.4**
O56A	**Blue Knob Stat**	**145.26**	**1**	P	**PKPab**	**14 54 25.8**	**0.0**
	baz=358						
O56A	**Blue Knob Stat**	**145.26**	**1**		**PKPbc**	**14 54 25.6**	**-0.1**
O54A	**Avella**	**145.26**	**4**		**PKPbc**	**14 54 25.6**	**0.0**
TUL1	**Leonard**	**145.27**	**27**	P	**PKPab**	**14 54 25.9**	**0.0**
	baz=327						
TUL1	**Leonard**	**145.27**	**27**		**PKPbc**	**14 54 25.7**	**-0.1**

O57A	Amberson	145.33	0	P	PKPbc	14 54 25.8	-0.1
	baz=360						
P48A	Milroy	145.33	11		PKPbc	14 54 25.3	-0.5
P49A	Miami Univ. Ec	145.38	10	P	PKPbc	14 54 25.5	-0.5
	baz=347						
P49A	Miami Univ. Ec	145.38	10		PKPbc	14 54 25.3	-0.8
BLO	Bloomington	145.39	12		PKPbc	14 54 25.9	-0.1
W35A	Tecumseh	145.39	29		PKPbc	14 54 25.9	-0.3
O58A	Lewisberry	145.41	359	P	PKPbc	14 54 26.1	0.0
	baz=1.1						
U38A	Gravette	145.42	24		PKPbc	14 54 25.8	-0.5
PSUB	Penn St. - Bra	145.56	357		PKPdf	14 54 25.7	-0.7
MGMO	Mountain Grove	145.61	21		PKPdf	14 54 26.3	-0.4
P52A	Corning	145.65	6	P	PKPdf	14 54 26.5	-0.1
	baz=352						
P52A	Corning	145.65	6		PKPdf	14 54 26.3	-0.3
TX31	Lajitas Ar. Si	145.66	43	PKPbc	PKPab	14 54 28.4	+0.7
TX32	Lajitas Array	145.66	43	PKPbc	PKPab	14 54 28.4	+0.7
TXAR	Lajitas Array	145.66	43	PKPbc	PKPab	14 54 28.6	+0.9
	comp=Z,24nm,0.6s,baz=283,slow=1.0,SNR=228						
TXAR				pPKPbc	pPKPdf	14 54 40.0	-0.4
	comp=Z,18nm,0.8s,baz=292,slow=1.9,SNR=13						
TXAR	Lajitas Array	145.66	43		PKPab	14 54 27.9	+0.2
P60A	Greenville	145.69	357	P	PKPbc	14 54 27.0	0.0
	baz=3.4						
P60A	Greenville	145.69	357	PKPdf	PKPdf	14 54 25.8	-0.9
HHAR	Hobbs	145.74	24		PKPdf	14 54 26.1	-0.8
MCWV	Mont Chateau	145.81	3	P	PKPab	14 54 27.6	-0.2
	baz=356						
P53A	Whipple	145.87	5	PKPdf	PKPdf	14 54 26.2	-0.8
ABTX	Abilene, Hawle	145.92	35	P	PKPab	14 54 28.6	+0.1
	baz=318						
P59A	Jarrettsville	145.92	359	P	PKPbc	14 54 27.8	+0.1
	baz=2.0						
P56A	Dayton Farm, R	146.01	2	P	PKPab	14 54 28.5	0.0
	baz=358						
P58A	Pank, Wackersv	146.05	360	P	PKPbc	14 54 28.3	+0.2
	baz=0.4						
P57A	Homestead Farm	146.05	1	P	PKPab	14 54 28.5	-0.2
	baz=359						
SIUC	Southern Illin	146.09	17	PKPbc	PKPbc	14 54 28.1	-0.2
U40A	Yellville	146.10	23	P	PKPbc	14 54 28.3	-0.1
	baz=332						
U40A	Yellville	146.10	23	PKPbc	PKPdf	14 54 27.9	+0.4
Q52A	Bidwell	146.30	7	PKPdf	PKPdf	14 54 27.2	-0.5
WCI	Wyandotte Cave	146.34	13	P	PKPbc	14 54 29.3	+0.2
	baz=344						
WCI	Wyandotte Cave	146.34	13		PKPdf	14 54 28.2	+0.4
Q54A	Coxs Mills	146.42	5	PKPdf	PKPdf	14 54 27.7	-0.2
Q57A	Strasburg	146.49	1	P	PKPbc	14 54 29.4	-0.1
	baz=358						
X37A	Clayton	146.56	27		PKPbc	14 54 29.3	-0.5
PBMO	Poplar Bluff	146.58	19		PKPbc	14 54 29.3	-0.5
FCAR	Ozark Folk Cen	146.79	22	PKPdf	PKPdf	14 54 28.0	-0.6
R53A	Hurricane	146.96	6		PKPdf	14 54 29.8	+0.9
R55A	Marlinton	147.17	4		PKPbc	14 54 30.9	-0.6
R57A	Stanardsville	147.23	1	P	PKPbc	14 54 31.4	-0.2
	baz=358						
R58A	Rapidan	147.24	1	P	PKPbc	14 54 31.9	+0.3
	baz=359						
WHAR	Wooly Hollow	147.26	23		PKPbc	14 54 30.8	-0.9
JCT	Junction City	147.38	37	P	PKPbc	14 54 33.0	+0.7
	baz=316						
JCT	Junction City	147.38	37		PKPbc	14 54 32.9	+0.6
MIAR	Mount Ida	147.39	25	P	PKPbc	14 54 32.7	+0.6
	baz=329						
MIAR	Mount Ida	147.39	25	PKPdf	PKPdf	14 54 28.8	-0.9
S57A	Dark Hollow, R	147.75	2	P	PKPbc	14 54 33.8	+0.8
	baz=357						
S58A	Poland Farm, P	147.92	1	P	PKPbc	14 54 34.0	+0.6
	baz=359						
WVT	Waverly	147.96	16	P	PKPbc	14 54 33.9	+0.3
	baz=340						
WVT	Waverly	147.96	16		PKPbc	14 54 33.0	-0.6
U49A	Red Boiling Sp	148.10	13	PKPbc	PKPbc	14 54 33.4	-0.7
CLTN	Cedars of Leba	148.38	14		PKPbc	14 54 34.3	-0.5
W45A	Hickory Valley	148.47	19	PKPab	PKPab	14 54 37.8	-0.5
TZTN	Tazewell	148.50	9	P	PKPbc	14 54 35.3	+0.2
	baz=348						
T59A	Double "B" Far	148.56	0	P	PKPbc	14 54 35.9	+0.7
	baz=360						
T58A	Grand View Acr	148.57	2	P	PKiKP	14 54 36.2	-0.6
	baz=358						
V48A	Smith Brothers	148.59	15		PKPbc	14 54 35.3	-0.1
PLAL	Pickwick Lake	148.97	17	PKPab	PKPab	14 54 39.6	-0.7
U57A	Blanch	149.06	3	P	PKPbc	14 54 37.0	+0.6
	baz=356						
U58A	Oxford	149.12	2	P	PKiKP	14 54 37.7	-0.2
	baz=358						
SWET	Sewanee	149.31	14		PKPbc	14 54 36.7	-0.6
W50A	Signal Mountai	149.47	13		PKPdf	14 54 31.7	-1.5
V57A	Coltrane Farms	149.57	4	P	PKPbc	14 54 38.2	+0.5
	baz=356						
X48A	Hartselle	149.75	16		PKPbc	14 54 37.3	-1.0
V59A	Middlesex	149.76	1	P	PKiKP	14 54 39.1	-0.1
	baz=359						
BG3	Lake Jocassee	150.11	9		PKPab	14 54 44.9	-0.1
KMSC	Kings Mountain	150.18	6	P	PKiKP	14 54 40.1	-0.1
	baz=352						
W56A	Indian Trail	150.26	5	P	PKiKP	14 54 39.9	-0.3
	baz=354						
Y49A	Blount Mountai	150.48	15		PKPbc	14 54 39.9	-0.2
Y52A	Lilburn	151.01	11	PKPab	PKPab	14 54 48.7	0.0
GOGA	Godfrey	151.57	11	PKPab	PKPab	14 54 50.7	-0.3

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*IDC **20** 14:35:04.3±1.0, 36°.37N×141°.65E, h0^{km}, mb3.7/13, mb1 3.8/18, mb1mx3.7/61, mbtmp3.7/18, ML3.2/3, MS3.0/5, Ms1 3.0/5, ms1mx2.8/49, Error ellipse: s-maj=21.0km s-min=16.0km az=138.0*

*NEIC **20** 14:35:05.8±1.9, 36°.46N±0°.04×141°.67E±0°.08, h10^{km}±1^{km}, mb4.4/3, Error ellipse: s-maj=10.8km s-min=6.9km az=82.0*

*NIED **20** 14:35:06.1, 36°.47N×141°.62E, h46^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.42; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.69; $M_{r\theta}$0.10; $M_{\theta\phi}$-1.12; $M_{\phi r}$0.41; Fault plane solution: $M_0$1.31000×10^{15} NP1: ϕ_s188.00000°, δ80.00000°, λ-24.00000°. NP2: ϕ_s283.00000°, δ66.00000°, λ-169.00000°.*

*JMA **20** 14:35:06.1±0.1, 36°.47N×141°.62E, h46^{km}±3^{km}, M3.9*

JMA Felt I J1.

ISC 20 14:35:04.7±1.6, **36°.46N**±0°.03×**141°.65E**±0°.06, **h2**^{km}±10^{km}, **n59**, σ**1**^{s}**21**/65, **mb3.9**/16, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.87	262	P	Pg	14 35 22.0	+0.7
JHYU				*e*S	Sg	14 35 32.9	+0.4
JHO	Hitachi	0.89	280	P	Pg	14 35 21.8	+0.2
JHO				*e*S	Sg	14 35 33.8	+0.7
ONAJ	Iwakimizuishiy	0.94	313	P	Pg	14 35 22.5	-0.1
ONAJ				*e*S	Sg	14 35 34.7	-0.1
CHOJ	Chosi	0.99	221	P	Pg	14 35 23.7	+0.1
CHOJ				*e*S	Sg	14 35 36.4	-0.1
JFK	Kawauchi	1.10	326	P	Pb	14 35 25.2	-1.2
JFK				*e*S	Sg	14 35 39.1	-0.9
JYT	Yasato	1.20	259		Pb	14 35 26.7	-1.4
JFT	Otama	1.49	316	P	Pn	14 35 31.5	-1.0
JFT				*e*S	Sn	14 35 49.1	-3.5
JMM	Marumori	1.56	334	P	Pn	14 35 31.9	-1.6
JMM				*e*S	Sn	14 35 51.2	-3.1
JMM	Marumori	1.56	334	Pn	Pn	14 35 31.9	-1.6
JAG	Ashikaga	1.77	270	P	Pn	14 35 34.8	-1.6
JFY	Yanaizu	1.82	302	P	Pn	14 35 36.5	-0.6
BSO1	Boso 1	1.88	197	P	Pn	14 35 36.2	-1.2
BSO1				*e*S	Sn	14 35 58.7	-2.8
BSO3	Boso 3	1.90	210	P	Pn	14 35 37.9	+0.1
JKT	Katashina	1.96	280	P	Pn	14 35 37.9	-1.1
MJAR	Matsushiro Arr	2.77	273	Pn	Pn	14 35 49.9	-0.3
	1.1nm,0.3s,baz=109,slow=8.8,SNR=35						
MJAR				Sn	Sn	14 36 24.8	+0.5
	1.9nm,0.3s,baz=130,slow=17,SNR=7.7						
MJAR	Matsushiro Arr	2.77	273		Pn	14 35 49.3	-0.9
MAJO	Matsushiro	2.78	273		Pn	14 35 49.9	-0.3
MAT	Matsushiro	2.78	273	P	Pn	14 35 49.4	-0.8
MAT				*e*S	Sn	14 36 24.6	+0.3
MJB9	Matsu-Tunnel	2.78	273	Pn	Pn	14 35 50.7	+0.5
JSD	Sado	3.13	301	Pn	Pn	14 35 56.0	+1.0
JSG	Sagara	3.34	239	Pn	Pn	14 35 59.3	+1.3
JGF	Kuroka	3.58	257	Pn	Pn	14 36 02.0	+0.7
JHJ2	Mitsune	3.67	205	Pn	Pn	14 36 02.0	-0.4
JHJ	Hachijo jima 2	3.67	205	Pn	Pn	14 36 01.6	-0.9
	51nm,0.3s,baz=90,slow=21,SNR=18						
JHJ				Sn	Sn	14 36 43.6	-2.7
	26nm,0.3s,baz=70,slow=23,SNR=6.8						
JHJ				LR	LR	14 36 48.6	
	comp=Z,57nm,19.5s,baz=21,slow=29						
INU	Inuyama	3.92	255		Pn	14 36 07.4	+1.4
JTM	Tenmabayashi	4.34	354	Pn	Pn	14 36 13.0	+1.2
JWT	Wachi	5.21	259	Pn	Pn	14 36 24.1	+0.5
ERM	Erimo	5.67	11	Pn	Pn	14 36 27.9	-2.0
JHS	Saijyo	7.09	261	Pn	Pn	14 36 48.8	-0.7
ASAJ	Asahikawa	7.68	5	Pn	Pn	14 36 57.8	+0.2
	0.8nm,0.3s,baz=200,slow=16,SNR=11						
JKA	Kamikawa-asahi	7.68	5		Pn	14 36 57.8	+0.2
JCJ	Chichijima	9.35	177	LR	LR	14 41 31.6	
	comp=Z,134nm,18.6s,baz=92,slow=42						
USRK	Ussuriysk Ar.	10.68	319	Pn	Pn	14 37 40.2	+1.6
	baz=98,slow=10,SNR=1.7						
USRK				LR	LR	14 41 20.4	
	comp=Z,80nm,18.5s,baz=115,slow=35						
KSRS	Korea Array	11.03	279	Pn	Pn	14 37 43.0	-0.5
	0.1nm,0.3s,baz=88,slow=14,SNR=1.2						
KLR	Kul'dur	14.67	334	LR	LR	14 43 59.2	
	comp=Z,71nm,19.4s,baz=139,slow=36						
PETK	Petropavlovsk-	20.09	29	P	P	14 39 38.6	-0.8
	5.0nm,1.0s,baz=284,slow=7.5,SNR=4.0						
PETK				LR	LR	14 46 43.5	
	comp=Z,93nm,22.0s,baz=162,slow=35						
HHC	Hu-ho-hao-te	23.84	290	*e*P	P	14 40 18.3	-1.0
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,8.0s						
YAK	Yakutsk	26.67	347	P	P	14 40 46.8	+2.1
	comp=Z,20nm,0.8s,baz=153,slow=1.5,SNR=21						
YAK	Yakutsk	26.67	347	P	P	14 40 44.9	+0.2
SEY	Seymchan	27.32	11	P	P	14 40 52.6	+2.1
	comp=Z,1.4nm,0.7s,baz=198,slow=8.4,SNR=26						
H11N2	WAKE ISLAND Hy	27.69	120	T	T	15 09 42.9	
	baz=313,slow=75,SNR=37						
H11N1	WAKE ISLAND Hy	27.70	120	T	T	15 09 43.6	
	baz=313,slow=75,SNR=24						
H11N3	WAKE ISLAND Hy	27.71	120	T	T	15 09 46.2	
	baz=313,slow=75,SNR=17						
SONM	Songino Array	28.27	305	P	P	14 40 59.7	+0.3
	comp=Z,0.8nm,0.7s,baz=114,slow=9.4,SNR=5.7						
SONM	Songino Array	28.27	305	P	P	14 40 59.0	-0.4
LZH	Lanzhou	30.36	281	*e*P	P	14 41 18.0	-0.1
LZH				pP	sP	14 41 21.3	+3.3
LZH				sP	pwP	14 41 22.8	+2.4
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,5.0s						
WMQ	Urumqi	41.27	297	*e*P	P	14 42 52.3	+0.9
ZALV	Zalesovo Beam	42.44	313	P	P	14 43 00.9	+0.2
	comp=Z,0.5nm,0.5s,baz=59,slow=6.9,SNR=2.6						
MKAR	Makanchi Array	44.59	303	P	P	14 43 17.7	-0.5
	comp=Z,1.1nm,0.7s,baz=88,slow=8.5,SNR=6.7						
MKAR	Makanchi Array	44.59	303	P	P	14 43 17.6	-0.6
KURK	Kurchatov	46.44	309	P	P	14 43 32.0	-0.7
KURK				IAmb	IAmb	14 43 40.2	
	comp=Z,3.3nm,0.8s						
KURBB	Kurchatov Arra	46.51	308	P	P	14 43 32.4	-0.9
	comp=Z,0.7nm,0.6s,baz=85,slow=7.7,SNR=7.4						
ILAR	Eielson Array	49.88	32	P	P	14 44 00.2	+1.1
	comp=Z,0.4nm,0.9s,baz=277,slow=7.2,SNR=2.8						
WRA	Warramunga Arr	56.52	188	P	P	14 44 48.7	+0.2
	comp=Z,0.7nm,0.7s,baz=3.3,slow=7.7,SNR=1.6						
YKA	Yellowknife Ar	64.21	30	P	P	14 45 40.5	-0.2
	comp=Z,0.4nm,0.7s,baz=302,slow=6.1,SNR=8.2						
ARCES	ARCESS Array B	64.60	340	P	P	14 45 44.0	+0.9
	comp=Z,3.0nm,0.9s,baz=58,slow=11,SNR=1.2						
NOA	NORSAR Array B	74.79	337	P	P	14 46 46.4	+0.3
	comp=Z,0.8nm,0.8s,baz=34,slow=10,SNR=2.2						
AKASG	Malin Array Be	74.87	322	P	P	14 46 47.5	+0.8
	comp=Z,0.5nm,0.4s,baz=46,slow=5.9,SNR=2.7						
NVAR	Mina Array Bea	75.18	53	P	P	14 46 48.1	-1.0
	comp=Z,0.4nm,0.7s,baz=294,slow=5.6,SNR=3.0						

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*SOME **20** 14:43:34.1, 42°.13N×77°.25E, h15^{km}*

*KRNET **20** 14:43:34.7±0.1, 42°.13N×77°.27E, h21^{km}, mb3.3*

*NNC **20** 14:43:35.0±0.5, 42°.17N×77°.26E, h0^{km}, mb3.5, mpv3.5, Error ellipse: s-maj=3.1km s-min=1.8km az=177.0*

ISC 20 14:43:34.6±0.9, **42°.11N**±0°.04×**77°.23E**±0°.02, **h12**^{km}±6^{km}, **n83**, σ**0**^{s}**93**/152, **27C-6D**, **Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	Kajisay	0.04	300	⇑*i*P	Pg	14 43 37.2	+0.1
	baz=63						
KDJ				⇑*i*S	Sg	14 43 39.1	+0.1
	baz=63						
ANVS	Anan'yevo	0.75	25	⇓*i*P	Pg	14 43 48.5	-0.6
	baz=24						
ANVS				⇓*i*S	Sg	14 43 59.1	+0.1
	baz=24						
ULHL	Ulahol	0.75	281	⇑*i*P	Pg	14 43 48.6	-0.6
	baz=79						
ULHL				⇑*i*S	Sg	14 43 59.7	+0.7
	baz=79						
PRZ	Przheval'sk	0.94	66	⇑*i*P	Pg	14 43 52.3	-0.6
	baz=66						
PRZ				⇑*i*S	Sb	14 44 05.2	-0.4
	baz=66						
TNSS	Tian-Shan	0.95	347	*e*P	Pg	14 43 52.2	-0.9
	baz=45						
TNSS				*e*S	Sg	14 44 05.4	-0.1
	baz=45						
TNSS	Tian-Shan	0.95	347	*e*P	Pg	14 43 52.2	-0.9
	31nm,0.1s						
TNSS				*e*S	Sg	14 44 05.4	-0.1
	36nm,0.2s						
TNSS	Tian-Shan	0.95	347	P	Pg	14 43 52.2	-0.9
	31nm,0.1s						
TNSS				S	Sg	14 44 05.4	-0.1
	36nm,0.2s						
BOOM	Boomskoye usch	1.03	292	⇓*i*P	Pb	14 43 54.7	+0.2
	baz=90						
BOOM				⇓*i*S	Sg	14 44 08.9	+0.9
	baz=90						
IZV	Izvestkoviy	1.03	334	*e*P	Pb	14 43 53.9	-0.7
	baz=32						
IZV				*e*S	Sb	14 44 08.5	+0.3
	baz=32						
IZV	Izvestkoviy	1.03	334	*e*P	Pb	14 43 53.9	-0.7
	28nm,0.3s						
IZV				*e*S	Sb	14 44 08.5	+0.3
	82nm,0.2s						
IZV	Izvestkoviy	1.03	334	P	Pb	14 43 53.9	-0.7
	28nm,0.3s						
IZV				S	Sb	14 44 08.5	+0.3
	82nm,0.2s						
MDOK	Medeo	1.06	353	*e*P	Pb	14 43 54.1	-1.0
	baz=51						
MDOK				*e*S	Sb	14 44 08.5	-0.5
	baz=51						
MDOK	Medeo	1.06	353	*e*P	Pb	14 43 54.1	-1.0
	28nm,0.2s						
MDOK				*e*S	Sb	14 44 08.4	-0.5
	51nm,0.4s						
MDOK	Medeo	1.06	353	*e*P	Sb	14 44 08.0	-1.1
	baz=337						
MDOK	Medeo	1.06	353	⇑P	Pb	14 43 54.1	-1.0
	4.7nm,0.2s						
MDOK				S	Sb	14 44 08.2	-0.8
	29nm,0.5s						
MDOK	Medeo	1.06	353	Pg	Pb	14 43 54.1	-1.0
	28nm,0.2s						
MDOK				Lg	Lg	14 44 08.4	
	51nm,0.4s						
KOTS	Kotyrbulak	1.13	356	*e*P	Pb	14 43 55.4	-0.8
	baz=54						
KOTS				*e*S	Sb	14 44 10.8	-0.1
	baz=54						
KOTS	Kotyrbulak	1.13	356	*e*P	Pb	14 43 55.4	-0.8
	96nm,0.2s						
KOTS				*e*S	Sb	14 44 10.8	-0.1
	81nm,0.2s						
KOTS	Kotyrbulak	1.13	356	P	Pb	14 43 55.4	-0.8
	96nm,0.2s						
KOTS				S	Sb	14 44 10.8	-0.1
	81nm,0.2s						
MTBS	Maitube	1.18	330	*e*P	Pn	14 43 56.3	-0.8
	baz=28						
MTBS				*e*S	Sb	14 44 12.1	-0.3
	baz=28						
MTBS	Maitube	1.18	330	*e*P	Pn	14 43 56.3	-0.8
	25nm,0.2s						
MTBS				*e*S	Sb	14 44 12.0	-0.3
	43nm,0.2s						
MTBS	Maitube	1.18	330	P	Pn	14 43 56.3	-0.8
	25nm,0.2s						
MTBS				S	Sb	14 44 12.0	-0.3
	43nm,0.2s						
SATY	Saty	1.29	42	*e*P	Pn	14 43 57.6	-1.0
	baz=42						
SATY				*e*S	Sb	14 44 15.0	-0.4
	baz=42						
SATY	Saty	1.29	42	*e*P	Pn	14 43 57.5	-1.0
	24nm,0.3s						
SATY				*e*S	Sb	14 44 15.0	-0.4
	71nm,0.3s						
SATY	Saty	1.29	42	P	Pn	14 43 57.5	-1.0
	24nm,0.3s						
SATY				S	Sb	14 44 15.0	-0.4
	71nm,0.3s						
KST	Kastek	1.32	315	*e*P	Pn	14 43 59.2	+0.1
	baz=14						
KST				*e*S	Sn	14 44 17.2	+0.5
	baz=14						
KST	Kastek	1.32	315	*e*P	Pn	14 43 59.2	+0.1
	5.4nm,0.2s						
KST				*e*S	Sn	14 44 17.2	+0.5
	49nm,0.3s						
KST	Kastek	1.32	315	P	Pn	14 43 59.2	+0.1
	5.4nm,0.2s						
KST				S	Sn	14 44 17.2	+0.5
	49nm,0.3s						
ZHN	Zhinishke	1.38	40	*e*P	Pn	14 43 59.3	-0.6
	baz=39						
ZHN				*e*S	Sn	14 44 17.6	-0.6
	baz=39						
ZHN	Zhinishke	1.38	40	*e*P	Pn	14 43 59.3	-0.6
	11nm,0.2s						
ZHN				*e*S	Sn	14 44 17.5	-0.6
	29nm,0.2s						
ZHN	Zhinishke	1.38	40	P	Pn	14 43 59.3	-0.6
	11nm,0.2s						
ZHN				S	Sn	14 44 17.5	-0.6
	29nm,0.2s						
TKM2	Tokmak 2	1.46	304	⇑*i*P	Pb	14 44 01.5	-0.3
	baz=3.0						
TKM2				⇑*i*S	Sb	14 44 21.3	+1.0
	baz=3.0						
TKM2	Tokmak 2	1.46	304	⇑P	Pn	14 44 01.1	+0.1
	1.0nm,0.2s						
TKM2				⇑S	Sb	14 44 21.4	+1.0
	7.6nm,0.2s						
KURS	Kuram	1.54	26	*e*P	Pn	14 44 02.2	+0.2
	baz=26						
KURS				*e*S	Sb	14 44 22.2	-0.5
	baz=26						
KURS	Kuram	1.54	26	*e*P	Pn	14 44 02.2	+0.2
	8.6nm,0.5s						
KURS				*e*S	Sb	14 44 22.2	-0.5
	11nm,0.4s						
KURS	Kuram	1.54	26	P	Pn	14 44 02.2	+0.2
	8.6nm,0.5s						
KURS				S	Sb	14 44 22.2	-0.5
	11nm,0.4s						
DGS	Degeres	1.56	317	*e*P	Pb	14 44 03.3	-0.2
	baz=16						
DGS				*e*S	Sb	14 44 24.4	+1.0
	baz=16						
DGS	Degeres	1.56	317	*e*P	Pb	14 44 03.3	-0.2
	4.3nm,0.2s						
DGS				*e*S	Sb	14 44 24.4	+1.0
	28nm,0.3s						
DGS	Degeres	1.56	317	P	Pb	14 44 03.3	-0.2
	4.3nm,0.2s						
DGS				S	Sb	14 44 24.4	+1.0
	28nm,0.3s						
KTBS	Karatobe	1.65	346	*e*P	Pb	14 44 04.8	-0.3
	baz=45						
KTBS				*e*S	Sb	14 44 26.8	+0.9
	baz=45						
KTBS	Karatobe	1.65	346	*e*P	Pb	14 44 04.8	-0.3
	14nm,0.3s						
KTBS				*e*S	Sb	14 44 26.7	+0.9
	154nm,0.4s						
KTBS	Karatobe	1.65	346	P	Pb	14 44 04.8	-0.3
	14nm,0.3s						
KTBS				S	Sb	14 44 26.7	+0.9
	154nm,0.4s						
UZB	Uzynbulak	1.68	51	*e*P	Pb	14 44 04.3	-1.3
	baz=51						
UZB				*e*S	Sb	14 44 26.5	-0.2
	baz=51						
UZB	Uzynbulak	1.68	51	*e*P	Pb	14 44 04.3	-1.3
	25nm,0.3s						
UZB				*e*S	Sb	14 44 26.6	-0.2
	72nm,0.4s						
UZB	Uzynbulak	1.68	51	P	Pb	14 44 04.3	-1.3
	25nm,0.3s						
UZB				S	Sb	14 44 26.5	-0.2
	72nm,0.4s						
KPKS	Kokpek	1.73	38	*e*P	Pb	14 44 05.5	-0.8
	baz=38						
KPKS				*e*S	Sb	14 44 28.2	+0.1
	baz=38						
KPKS	Kokpek	1.73	38	*e*P	Pb	14 44 05.5	-0.8
	42nm,0.2s						
KPKS				*e*S	Sb	14 44 28.2	+0.1
	88nm,0.4s						
CHKK	Chushkaly	1.75	354	*e*P	Pb	14 44 06.5	-0.3
	baz=53						
CHKK				*e*S	Sb	14 44 29.9	+1.1
	baz=53						
CHKK	Chushkaly	1.75	354	*e*P	Pb	14 44 06.5	-0.3
	16nm,0.3s						
CHKK				*e*S	Sb	14 44 29.9	+1.1
	112nm,0.3s						
CHKK	Chushkaly	1.75	354	P	Pb	14 44 06.5	-0.3
	16nm,0.3s						
CHKK				S	Sb	14 44 29.9	+1.1
	112nm,0.3s						
KBK	Karagaybulak	1.78	289	⇑*i*P	Pb	14 44 07.2	-0.1
	baz=88						
KBK				⇑*i*S	Sb	14 44 31.0	+1.4
	baz=88						
KUU	Kurty	1.90	340	*e*P	Pb	14 44 08.8	-0.4
	baz=39						
KUU				*e*S	Sb	14 44 34.1	+1.1
	baz=39						
KUU	Kurty	1.90	340	*e*P	Pb	14 44 08.8	-0.4
	7.4nm,0.3s						
KUU				*e*S	Sb	14 44 34.1	+1.1
	25nm,0.2s						
KUU	Kurty	1.90	340	Pg	Pb	14 44 08.8	-0.4
	7.4nm,0.3s						
KUU				Lg	Lg	14 44 34.1	
	25nm,0.2s						
SHLS	Shalkode	1.95	57	*e*P	Pg	14 44 13.7	+1.7
	18nm,0.5s						
SHLS				*e*S	Sg	14 44 42.0	+4.7
	60nm,0.5s						
SHLS	Shalkode	1.95	57	Pg	Pg	14 44 13.7	+1.7
	18nm,0.5s						
SHLS				Lg	Lg	14 44 42.0	
	60nm,0.5s						
KRBS	Karabastau	1.96	325	*e*P	Pb	14 44 09.8	-0.4
	baz=24						
KRBS				*e*S	Sb	14 44 35.4	+0.8
	baz=24						
KRBS	Karabastau	1.96	325	*e*P	Pb	14 44 09.8	-0.4
	20nm,0.3s						
KRBS				*e*S	Sb	14 44 35.5	+0.8
	18nm,0.3s						
KRBS	Karabastau	1.96	325	Pg	Pb	14 44 09.8	-0.4
	20nm,0.3s						
KRBS				Lg	Lg	14 44 35.5	
	18nm,0.3s						
UCH	Uchtor	2.02	274	⇑*i*P	Pb	14 44 11.5	-0.1
	baz=74						
UCH				⇑*i*S	Sb	14 44 38.3	+1.4
	baz=74						
UCH	Uchtor	2.02	274	P	Pb	14 44 11.9	+0.3
	SNR=6.1						
CHMS	Chumysh	2.04	297	⇑*i*P	Pb	14 44 11.5	-0.1
	baz=96						
CHMS				⇑*i*S	Sb	14 44 38.3	+1.4
	baz=96						
PDGK	Podgornoye	2.06	53	⇑Pn	Pb	14 44 10.4	-1.6
	7.0nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PDGK				⇑Sn	Sb	14 44 38.0	+0.2
	35nm,0.5s						
AAK	Ala-Archa	2.10	286	⇑iP	Pb	14 44 12.3	-0.4
	baz=85						
AAK				⇑iS	Sb	14 44 39.8	+1.1
	baz=85						
AAK	Ala-Archa	2.10	286	⇓Pn	Pb	14 44 12.7	+0.1
	5.4nm,0.8s						
AAK				⇓Sn	Sb	14 44 40.6	+1.9
	8.1nm,0.5s						
AAK	Ala-Archa	2.10	286	P	Pb	14 44 12.1	-0.6
ARXS	Arharly	2.15	11	eP	Pb	14 44 12.6	-0.9
	28nm,0.6s						
ARXS				eS	Sb	14 44 40.9	+0.7
	48nm,0.3s						
ARXS	Arharly	2.15	11	Pg	Pb	14 44 12.6	-0.9
	28nm,0.6s						
ARXS				Lg	Lg	14 44 40.8	
	48nm,0.3s						
MNBS	Baschi	2.15	23	eP	Pb	14 44 13.7	+0.2
	10nm,0.3s						
MNBS				eS	Sb	14 44 41.9	+1.8
	53nm,0.2s						
MNBS	Baschi	2.15	23	Pg	Pb	14 44 13.7	+0.2
	10nm,0.3s						
MNBS				Lg	Lg	14 44 41.9	
	53nm,0.2s						
USP	Ospenovka	2.32	301	⇑iP	Pb	14 44 15.2	-1.3
	baz=0.0						
USP				⇑iS	Sb	14 44 45.0	-0.1
	baz=0.0						
EKS2	Erkin-Say	2.62	283	⇑iP	Pb	14 44 19.6	-1.9
	baz=83						
EKS2				⇑iS	Sb	14 44 52.1	-1.6
	baz=83						
EKS2	Erkin-Say	2.62	283	P	Pn	14 44 16.9	0.0
	SNR=20						
AML	Almayashu	2.63	272	⇑iP	Pb	14 44 20.1	-1.8
	baz=71						
AML				⇑iS	Sb	14 44 52.8	-1.6
	baz=71						
KTMS	Ketmen	2.66	59	eP	Pb	14 44 21.5	-0.7
	5.0nm,0.3s						
KTMS				eS	Sb	14 44 55.2	+0.4
	21nm,0.3s						
KTMS	Ketmen	2.66	59	Pg	Pb	14 44 21.5	-0.7
	5.0nm,0.3s						
KTMS				Lg	Lg	14 44 55.3	
	21nm,0.3s						
DJR	Jarkent	2.91	39	eP	Pb	14 44 25.8	-0.6
	6.8nm,0.6s						
DJR				eS	Sb	14 45 02.9	+1.0
	12nm,0.4s						
DJR	Jarkent	2.91	39	Pg	Pb	14 44 25.8	-0.6
	6.8nm,0.6s						
DJR				Lg	Lg	14 45 02.9	
	12nm,0.4s						
TDK	Taldyqorghan	3.02	16	eP	Pb	14 44 28.2	-0.1
	15nm,0.2s						
TDK				eS	Sb	14 45 06.8	+1.8
	41nm,0.4s						
MRKS	Merke	3.03	283	eP	Pb	14 44 29.4	+0.8
	5.6nm,0.6s						
MRKS				eS	Sg	14 45 09.7	-2.3
	8.6nm,0.3s						
MRKS	Merke	3.03	283	Pg	Pb	14 44 29.4	+0.8
	5.6nm,0.6s						
MRKS				Lg	Lg	14 45 09.7	
	8.6nm,0.3s						
KAPS	Kapalarasan	3.53	25	eP	Pb	14 44 37.3	+0.3
	2.4nm,0.4s						
KAPS				eS	Sb	14 45 22.6	+2.8
	12nm,0.5s						
KAPS	Kapalarasan	3.53	25	Pg	Pb	14 44 37.3	+0.3
	2.4nm,0.4s						
KAPS				Lg	Lg	14 45 22.6	
	12nm,0.5s						

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*NEIC **20** 14:48:42.8±1.1, 6°.12S±0°.09×154°.46E±0°.08, h44^{km}±7^{km}, mb4.6/24, Error ellipse: s-maj=12.5km s-min=11.5km az=198.0*

*IDC **20** 14:48:46.0±2.9, 6°.13S×154°.39E, h67^{km}±27^{km}, mb3.7/11, mb1 4.0/15, mb1mx3.9/32, mbtmp4.2/15, ML3.6/4, MS3.7/7, Ms1 3.7/7, ms1mx3.4/36, Error ellipse: s-maj=20.7km s-min=18.2km az=148.0*

ISC 20 14:48:45.1±0.4, **6°.07S**±0°.06×**154°.39E**±0°.06, **h61**^{km}, **n64**, σ**1^{s}40**/66, **mb4.5**/32, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.44	122	P	Pn	14 50 17.6	+0.3
	12nm,0.3s,baz=237,slow=5.9,SNR=6.8						
HNR				S	Sn	14 51 36.7	+7.2
	5.2nm,0.3s,baz=244,slow=21,SNR=10						
HNR				LR	LR	14 52 58.0	
	comp=Z,405nm,18.4s,baz=292,slow=39						
HNR	Honiara	6.44	122	Pn	Pn	14 50 14.7	-2.7
PMG	Port Moresby	7.90	245	P	Pn	14 50 38.0	+0.6
	5.5nm,0.3s,baz=55,slow=7.4,SNR=21						
PMG				S	Sn	14 52 07.5	+2.1
	4.4nm,0.3s,baz=270,slow=24,SNR=8.3						
PMG				LR	LR	14 53 33.7	
	comp=Z,388nm,20.8s,baz=86,slow=36						
PMG	Port Moresby	7.90	245	Pn	Pn	14 50 35.9	-1.5
PATS	Pohnpei	13.40	17	Pn	Pn	14 51 50.2	-2.4
CTA	Charters Tower	16.02	209	P	Pn	14 52 27.1	+0.3
	0.2nm,0.3s,baz=33,slow=13,SNR=6.9						
CTAO	Charters Tower	16.02	209	Pn	Pn	14 52 24.9	-1.8
DZM	Mont Dzumac	19.72	145	P	Pn	14 53 10.9	-0.9
	0.7nm,0.3s,baz=340,slow=12,SNR=5.8						
DZM	Mont Dzumac	19.72	145	P	P	14 53 08.0	-1.9
DZM				IAmb	IAmb	14 53 35.9	
	comp=Z,30nm,1.2s						
WR0	Warramunga Arr	23.72	233	P	P	14 53 51.5	-0.3
WR0				IAmb	IAmb	14 54 07.7	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	23.74	233	P	P	14 53 51.9	-0.1
WB2	Warramunga Arr	23.86	233	P	P	14 53 52.5	-0.6
WB2				IAmb	IAmb	14 54 11.1	
	comp=Z,16nm,1.1s						
WRA	Warramunga Arr	23.87	233	P	P	14 53 52.6	-0.6
	comp=Z,1.7nm,0.9s,baz=57,slow=9.5,SNR=7.0						
WRA				PcP	PcP	14 57 35.0	0.0
	comp=Z,2.0nm,0.6s,baz=60,slow=2.3,SNR=12						
WRA	Warramunga Arr	23.87	233		PcP	14 57 34.3	-0.7
MSVF	Nonsavu	25.85	119	P	P	14 54 10.0	-1.3
AS31	Alice Springs	26.35	226	P	P	14 54 14.5	-1.3
ASAR	Alice Springs	26.36	226	P	P	14 54 14.9	-0.8
	comp=Z,0.7nm,0.6s,baz=58,slow=8.5,SNR=11						
ASAR				PcP	PcP	14 57 40.5	0.0
	comp=Z,2.2nm,0.7s,baz=56,slow=2.8,SNR=16						
ASAR	Alice Springs	26.36	226		PcP	14 57 40.1	-0.3
WAKE	Wake Island	27.94	25	P	P	14 54 30.0	+0.1
JCJ	Chichijima	35.02	341	P	P	14 55 32.4	+0.4
BKZ	Black Stump Fm	38.52	152	P	P	14 56 01.8	+0.1
BKZ				IAmb	IAmb	14 56 08.1	
	comp=Z,24nm,1.5s						
TUWZ	Tuamarina	39.29	157	P	P	14 56 06.5	-1.5
BSWZ	Blackbirch Sta	39.51	157	P	P	14 56 08.1	-1.8
LTZ	Lake Taylor	39.84	159	P	P	14 56 11.4	-1.2
LTZ				IAmb	IAmb	14 56 15.0	
	comp=Z,25nm,1.4s						
OXZ	Oxford	40.24	160	P	P	14 56 16.1	+0.2
OXZ				IAmb	IAmb	14 56 18.3	
	comp=Z,5.4nm,0.9s						
YULB	Yu-li	43.62	313	P	P	14 56 44.4	+0.7
YULB				IAmb	IAmb	14 56 47.2	
	comp=Z,28nm,1.2s						
TPUB	Ta-pu	44.04	313	P	P	14 56 47.3	+0.1
TPUB				IAmb	IAmb	14 56 48.5	
	comp=Z,23nm,0.7s						
JWT	Wachi	44.85	338	P	P	14 56 52.8	-0.6
JNU	Nakatsue	44.92	332	P	P	14 56 53.8	-0.3
JHS	Saijyo	45.51	335	P	P	14 56 58.2	-0.4
KSRS	Korea Array	49.85	332	P	P	14 57 32.0	-0.1
	comp=Z,2.1nm,0.7s,baz=146,slow=7.7,SNR=8.5						
KSRS				LR	LR	15 15 36.5	
	comp=Z,32nm,20.4s,baz=190,slow=32						
USA0B	Ussuriysk Arra	53.96	340	P	P	14 58 05.4	+2.7
USA0B				IAmb	IAmb	14 58 08.5	
	comp=Z,5.5nm,0.9s						
USRK	Ussuriysk Ar.	53.96	340	P	P	14 58 05.4	+2.7
MDJ	Mudanjiang	55.16	339	P	P	14 58 12.3	+0.8
MDJ				IAmb	IAmb	14 58 14.8	
	comp=Z,5.7nm,1.2s						
PETK	Petropavlovsk-	59.02	2	P	P	14 58 39.1	+0.6
	comp=Z,2.6nm,1.0s,baz=154,slow=7.9,SNR=6.8						
CMAR	Chiang Mai Arr	59.85	295	P	P	14 58 46.8	+1.8
	comp=Z,0.7nm,0.5s,baz=122,slow=5.5,SNR=10						
CMAR				LR	LR	15 25 14.4	
	comp=Z,21nm,19.3s,baz=0.0,slow=37						
CMAR	Chiang Mai Arr	59.85	295	P	P	14 58 45.2	+0.3
SONM	Songino Array	68.24	327	P	P	14 59 40.3	+0.8
	comp=Z,1.6nm,0.6s,baz=137,slow=5.5,SNR=9.1						
SONM	Songino Array	68.24	327	P	P	14 59 39.7	+0.1
LSA	Lhasa	70.26	304	P	P	14 59 54.3	+1.5
LSA				IAmb	IAmb	14 59 55.3	
	comp=Z,7.9nm,0.8s						
VNDA	Vanda	71.52	178	P	P	14 59 59.7	+0.6
VNDA				IAmb	IAmb	15 00 04.0	
	comp=Z,4.7nm,1.3s						
TAPN	Taplejung	72.41	301	eP	P	15 00 06.5	+0.8
	comp=Z,34nm,1.0s						
ODAN	Odare	72.55	300	eP	P	15 00 07.2	+0.8
	comp=Z,51nm,0.8s						
RAMN	Ramite	73.25	300	eP	P	15 00 11.2	+0.6
	comp=Z,9.3nm,0.5s						
GUN	Gumba	74.13	301	eP	P	15 00 16.6	+0.7
	comp=Z,39nm,0.8s						
PKI	Pulchoki	74.44	301	eP	P	15 00 18.0	+0.3
	comp=Z,26nm,1.0s						
PKIN	Phulchoki	74.45	301	eP	P	15 00 18.0	+0.3
	comp=Z,22nm,1.0s						
KKN	Kakani	74.61	301	eP	P	15 00 19.2	+0.7
	comp=Z,21nm,0.8s						
DMN	Daman	74.71	301	eP	P	15 00 20.0	+0.9
	comp=Z,58nm,0.9s						
DANN	Dangsing	76.05	301	eP	P	15 00 26.8	-0.1
	comp=Z,23nm,0.7s						
IMAR	Indian Mountai	81.05	19	P	P	15 00 53.2	0.0
MK31	Makanchi Array	82.32	319	P	P	15 01 00.4	+0.1
MKAR	Makanchi Array	82.32	319	P	P	15 01 00.8	+0.4
	comp=Z,0.9nm,0.7s,baz=101,slow=5.5,SNR=7.6						
MKAR	Makanchi Array	82.32	319	P	P	15 01 00.4	+0.1
ILAR	Eielson Array	82.74	22	P	P	15 01 02.8	+0.7
	comp=Z,1.0nm,0.7s,baz=244,slow=5.2,SNR=10						
QSPA	South Pole Qui	83.90	180	P	P	15 01 07.4	-0.9
QSPA				IAmb	IAmb	15 01 08.5	
	comp=Z,3.7nm,0.8s						
YBH	Yreka Blue Hor	88.72	48	LR	LR	15 37 08.5	
	comp=Z,83nm,18.2s,baz=331,slow=33						
NVAR	Mina Array Bea	91.62	52	P	P	15 01 46.9	+0.8
	comp=Z,2.2nm,1.0s,baz=251,slow=5.6,SNR=9.0						
NVAR	Mina Array Bea	91.62	52	P	P	15 01 45.9	-0.2
NEW	Newport	93.47	42	LR	LR	15 39 49.9	
	comp=Z,116nm,18.9s,baz=309,slow=33						
YKA	Yellowknife Ar	95.80	28	P	P	15 02 04.3	-0.2
	comp=Z,0.5nm,0.9s,baz=265,slow=4.3,SNR=4.3						
PDAR	Pinedale Array	98.52	48	P	P	15 02 16.7	-0.9
	comp=Z,0.4nm,0.8s,baz=222,slow=1.2,SNR=3.6						
PDAR				LR	LR	15 43 24.3	
	comp=Z,64nm,18.2s,baz=30,slow=33						
TORD	Torodi Ar. Bea	152.20	287	PKPbc	PKPbc	15 08 34.3	-0.7
	comp=Z,2.5nm,0.7s,baz=56,slow=1.9,SNR=7.9						
TORD	Torodi Ar. Bea	152.20	287		PKPbc	15 08 34.2	-0.8

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*JMA **20** 15:11:10.3±0.1, 24°.26N×122°.14E, h60^{km}±1^{km}, M2.3*

*TAP **20** 15:11:10.6, 24°.34N×122°.13E, h60^{km}, ML3.1, C*

ISC 20 15:11:11.4±1.2, **24°.30N**±0°.02×**122°.19E**±0°.02, **h47**^{km}±10^{km}, **n107**, σ**1^{s}08**/203, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao	0.37	294	i P	Pn	15 11 20.9	-0.1
	baz=290						
ENAH				i S	Sn	15 11 28.8	+1.0
	baz=290						
TWC	Suao	0.43	315	i P	Pn	15 11 21.8	+0.1
	baz=317						
TWC				i S	Sn	15 11 29.4	+0.4
	baz=317						
NACB	Ninganchiao	0.56	257	P	Pn	15 11 22.4	-0.7
	baz=246						
NACB				S	Sn	15 11 31.3	-0.3
	baz=246						
TWD	Chiawan	0.58	248	i P	Pn	15 11 23.0	-0.5
	baz=235						
TWD				i S	Sn	15 11 32.2	0.0
	baz=235						
ILA	Ilan	0.61	319	i P	Pn	15 11 24.3	+0.4
	baz=326						
ILA				i S	Sn	15 11 34.3	+1.5
	baz=326						
HWA	Hwalien	0.62	239	S	Sn	15 11 34.2	+1.2
	baz=226						
TWE	Neicheng	0.63	312	i P	Pn	15 11 24.1	-0.1
	baz=310						
TWE				i S	Sn	15 11 33.6	+0.3
	baz=310						
NTC	Toucheng	0.64	330	i P	Pn	15 11 24.0	-0.2
	baz=339						
NTC				i S	Sn	15 11 33.4	-0.1
	baz=339						
ETLH	Xiulin Townshi	0.65	262	P	Pn	15 11 23.8	-0.7
	baz=251						
ETLH				S	Sn	15 11 33.6	-0.3
	baz=251						
ENTT	Nioudou	0.66	301	i P	Pn	15 11 24.3	-0.2
	baz=295						
ENTT				i S	Sn	15 11 34.2	+0.2
	baz=295						
NDT	Datong Townshi	0.68	296	i P	Pn	15 11 24.6	-0.3
	baz=292						
NDT				i S	Sn	15 11 34.4	-0.1
	baz=292						
JYNG	Yonagunijimaku	0.71	78	P	Pn	15 11 25.5	+0.4
JYNG				S	Sn	15 11 36.3	+1.3
TWB1	Santiao Chiao	0.73	346	i P	Pn	15 11 24.5	-0.9
	baz=350						
TWB1				i S	Sn	15 11 34.4	-1.1
	baz=350						
NNSB	Datong	0.74	280	P	Pn	15 11 25.1	-0.7
	baz=277						
NNSB				S	Sn	15 11 35.5	-0.6
	baz=277						
TIPB	Shuangxi	0.75	334	i P	Pn	15 11 25.1	-0.6
	baz=347						
TIPB				i S	Sn	15 11 35.5	-0.5
	baz=347						
NNS	Nan Shan	0.76	281	i P	Pn	15 11 25.2	-0.7
	baz=278						
NNS				i S	Sn	15 11 35.8	-0.5
	baz=278						
YOJ	Yonaguni jima	0.77	78	P	Pn	15 11 26.2	+0.3
YOJ				S	Sn	15 11 37.4	+0.9
YOJ	Yonaguni jima	0.77	78	P	Pn	15 11 26.4	+0.5
	baz=81						
YOJ				S	Sn	15 11 37.4	+0.9
	baz=81						
NWLT	Wulai	0.78	307	i P	Pn	15 11 25.9	-0.2
	baz=300						
NWLT				i S	Sn	15 11 36.8	-0.1
	baz=300						
YHNB	Yeheng	0.83	297	P	Pn	15 11 26.3	-0.5
	baz=288						
YHNB				S	Sn	15 11 38.1	+0.1
	baz=288						
ESL	Shilin	0.84	235	i P	Pn	15 11 26.1	-0.8
	baz=240						
ESL				i S	Sn	15 11 37.5	-0.8
	baz=240						
NSK	Sanguang	0.84	297	i P	Pn	15 11 26.5	-0.5
	baz=288						
NSK				i S	Sn	15 11 38.4	0.0
	baz=288						
NWF	Wu-fen Shan	0.85	334	i P	Pn	15 11 26.5	-0.7
	baz=346						
NWF				i S	Sn	15 11 37.8	-0.9
	baz=346						
WFSB	Wu-fen Shan	0.85	334	P	Pn	15 11 26.4	-0.7
	baz=346						
WFSB				S	Sn	15 11 37.5	-0.9
	baz=346						
WHF	Hehuan Shan	0.85	260	i P	Pn	15 11 26.8	-0.7
	baz=256						
WHF				i S	Sn	15 11 38.9	-0.3
	baz=256						
FUSS	Fushou	0.86	267	P	Pn	15 11 27.0	-0.5
	baz=263						
FUSS				S	Sn	15 11 38.7	-0.4
	baz=263						
TWA	Mucha	0.87	321	i P	Pn	15 11 27.2	-0.2
	baz=332						
TWA				i S	Sn	15 11 39.2	+0.2
	baz=332						
NHDH	Xindian Distri	0.89	318	i P	Pn	15 11 27.5	-0.1
	baz=327						
NHDH				i S	Sn	15 11 39.2	-0.3
	baz=327						
TWT	Tachien	0.92	267	i P	Pn	15 11 28.3	+0.1
	baz=257						
TWT				S	Sn	15 11 40.2	-0.3
	baz=257						
TATO	Taipei	0.93	317	P	Pn	15 11 27.6	-0.4
	baz=318						
TATO				S	Sn	15 11 40.5	+0.2
	baz=318						
TNOU	National Taiwa	0.93	336	P	Pn	15 11 26.8	-1.3
	baz=346						
TNOU				S	Sn	15 11 38.9	-1.4
	baz=346						
EGFH	Guangfu	0.94	228	eP	Pn	15 11 27.6	-0.6
	baz=216						
EGFH				i S	Sn	15 11 40.3	-0.2
	baz=216						
TDCB	Techi	0.94	267	P	Pn	15 11 28.2	-0.1
	baz=258						
TDCB				S	Sn	15 11 40.2	-0.6
	baz=258						
CHGB	Renai	0.95	256	P	Pn	15 11 28.2	-0.4
	baz=245						
CHGB				S	Sn	15 11 40.6	-0.7
	baz=245						
YM01	YM01	1.01	326	P	Pn	15 11 28.3	-0.9
	baz=339						
YM01				S	Sn	15 11 41.2	-1.3
	baz=339						
YM10	YM10	1.02	326	P	Pn	15 11 28.5	-0.9
	baz=338						
YM10				S	Sn	15 11 41.7	-1.1
	baz=338						
YM11	YM11	1.03	327	P	Pn	15 11 28.0	-1.5
	baz=339						
YM11				S	Sn	15 11 41.7	-1.1
	baz=339						
YM05	YM05	1.03	327	P	Pn	15 11 28.3	-1.2
	baz=339						
YM05				S	Sn	15 11 41.5	-1.3
	baz=339						
YM04	YM04	1.04	325	P	Pn	15 11 28.7	-0.9
	baz=337						
YM04				S	Sn	15 11 41.7	-1.3
	baz=337						
YM08	YM08	1.04	329	P	Pn	15 11 29.9	+0.3
	baz=340						
YM08				S	Sn	15 11 41.1	-1.9
	baz=340						
YM03	YM03	1.05	326	P	Pn	15 11 30.4	+0.5
	baz=338						
YM03				S	Sn	15 11 44.0	+0.5
	baz=338						
TWS1	Kuangyinshan	1.06	319	i P	Pn	15 11 29.6	-0.3
	baz=330						
TWS1				i S	Sn	15 11 43.7	+0.2
	baz=330						
HGSD	Ruisui	1.06	221	P	Pn	15 11 30.3	+0.4
	baz=217						
HGSD				S	Sn	15 11 44.6	+1.0
	baz=217						
ANP	Anpu	1.07	326	P	Pn	15 11 29.9	-0.3
	baz=338						
ANP				eS	Sn	15 11 42.9	-1.0
	baz=338						
NTST	Danshui	1.09	322	P	Pn	15 11 29.8	-0.5
	baz=334						
NTST				i S	Sn	15 11 44.2	-0.1
	baz=334						
TWY	Chenhua	1.11	331	P	Pn	15 11 30.1	-0.5
	baz=344						
TWY				S	Sn	15 11 44.4	-0.3
	baz=344						
EHY	Hungye	1.12	225	i P	Pn	15 11 29.4	-1.3
	baz=221						
EHY				S	Sn	15 11 43.8	-1.1
	baz=221						
LIOB	Emei	1.12	288	i P	Pn	15 11 30.7	0.0
	baz=286						
LIOB				S	Sn	15 11 45.6	+0.5
	baz=286						
NCUH	Zhongli	1.13	306	eP	Pn	15 11 28.8	-2.0
	baz=306						
NSTT	Nanjuang	1.13	287	i P	Pn	15 11 30.9	0.0
	baz=285						
NSTT				i S	Sn	15 11 45.5	+0.3
	baz=285						
WHP	Taichung City	1.13	269	i P	Pn	15 11 31.2	+0.3
	baz=262						
WHP				i S	Sn	15 11 45.7	+0.3
	baz=262						
WPL	Puli Township	1.16	256	P	Pn	15 11 31.1	-0.1
	baz=248						
WPL				eS	Sn	15 11 45.9	0.0
	baz=248						
DPDB	Guoxing	1.18	257	P	Pn	15 11 31.7	+0.1
	baz=250						
DPDB				S	Sn	15 11 46.8	+0.2
	baz=250						
YULB	Yu-li	1.22	222	P	Pn	15 11 30.7	-1.3
	baz=219						
YULB				S	Sn	15 11 45.5	-1.8
	baz=219						
EYUL	Yuli	1.24	220	P	Pn	15 11 31.2	-1.1
	baz=226						
EYUL				S	Sn	15 11 48.0	+0.1
	baz=226						
SSLB	Suanglung	1.24	246	P	Pn	15 11 32.0	-0.3
	baz=238						
SSLB				S	Sn	15 11 47.3	-0.6
	baz=238						
TWF1	Yuli	1.25	221	i P	Pn	15 11 31.3	-1.1
	baz=226						
TWF1				S	Sn	15 11 45.5	-2.5
	baz=226						
SMLT	Sun Moon Lake	1.25	251	i P	Pn	15 11 33.2	+0.7
	baz=242						
SMLT				i S	Sn	15 11 49.7	+1.5
	baz=242						
TYC	Yuchr	1.28	252	i P	Pn	15 11 33.6	+0.8
	baz=243						
TYC				i S	Sn	15 11 50.4	+1.6
	baz=243						
NMLH	Miaoli	1.29	281	eP	Pn	15 11 33.2	+0.1
	baz=278						
NMLH				S	Sn	15 11 49.0	-0.2
	baz=278						
PCYT	Pengchaiyu	1.33	356	eP	Pn	15 11 32.8	-0.7
	baz=351						
WHYT	Xinyi Township	1.36	244	i P	Pn	15 11 34.8	+0.8
	baz=236						
WHYT				i S	Sn	15 11 52.4	+1.5
	baz=236						
FULB	Fuli	1.37	217	i P	Pn	15 11 33.0	-1.1
	baz=224						
FULB				i S	Sn	15 11 50.5	-0.6
	baz=224						
WWF	Wufeng	1.38	260	eS	Sn	15 11 52.8	+1.4
	baz=268						
TCU	Taichung	1.39	264	S	Sn	15 11 52.6	+1.1
	baz=272						
IRIF	Iriomote-Funau	1.41	88	P	Pn	15 11 34.5	-0.1
IRIF				S	Sn	15 11 52.2	+0.2
WDJ	Dajia District	1.41	272	eP	Pn	15 11 34.5	-0.1
	baz=269						
WDJ				S	Sn	15 11 53.0	+1.0
	baz=269						
CHKT	Chengkung	1.41	212	S	Sn	15 11 49.4	-2.7
	baz=201						
WJS	Zhushan	1.42	251	i P	Pn	15 11 35.6	+0.9
	baz=239						
WJS				i S	Sn	15 11 54.0	+1.8
	baz=239						
WNT1	Nantou City	1.43	254	P	Pn	15 11 35.8	+0.9
	baz=251						
WNT1				S	Sn	15 11 54.9	+2.3
	baz=251						
WNT	Mingjian	1.44	253	i P	Pn	15 11 36.1	+1.1
	baz=250						
WNT				i S	Sn	15 11 54.1	+1.5
	baz=250						

ALS	Alishan	1.49	238	*i* P	Pn	15 11 36.3	+0.3
	baz=227						
ALS				*i* S	Sn	15 11 55.6	+1.2
	baz=227						
HATJ	Hateruma jima	1.50	99	*e*S	Sn	15 11 55.2	+1.0
WCHH	Zhanghua	1.50	262	S	Sn	15 11 54.7	+0.3
	baz=268						
ELDTW	Lidau	1.54	224	*i* P	Pn	15 11 35.5	-1.0
	baz=216						
ELDTW				S	Sn	15 11 53.7	-1.7
	baz=216						
CHN5	Tsauling	1.55	243	*i* P	Pn	15 11 36.7	+0.1
	baz=232						
CHN5				*i* S	Sn	15 11 57.2	+1.6
	baz=232						
EDH	Donghe	1.55	212	P	Pn	15 11 35.2	-1.3
	baz=202						
EDH				S	Sn	15 11 53.0	-2.5
	baz=202						
WGK	Gukeng	1.61	248	S	Sn	15 11 58.9	+2.0
	baz=244						
WDLH	Douliu	1.63	248	*i* P	Pn	15 11 38.5	+0.9
	baz=245						
WDLH				S	Sn	15 11 58.6	+1.3
	baz=245						
JKRS	Kuro-shima	1.66	92	P	Pn	15 11 38.6	+0.5
JKRS				S	Sn	15 11 59.4	+1.1
LONT	Longtian	1.69	215	P	Pn	15 11 36.1	-2.4
	baz=213						
LONT				S	Sn	15 11 58.3	-0.7
	baz=213						
RLNB	Erlin	1.72	257	P	Pn	15 11 37.9	-1.0
	baz=253						
RLNB				S	Sn	15 12 00.5	+0.9
	baz=253						
STYT	Tauyuan	1.73	229	*i* P	Pn	15 11 39.6	+0.5
	baz=220						
STYT				*i* S	Sn	15 12 01.0	+1.0
	baz=220						
CHN4	Tsaushan	1.74	237	*i* P	Pn	15 11 39.8	+0.6
	baz=226						
CHN4				*i* S	Sn	15 12 02.0	+1.8
	baz=226						
TPUB	Ta-pu	1.74	235	P	Pn	15 11 39.7	+0.5
	baz=224						
TPUB				S	Sn	15 12 01.9	+1.8
	baz=224						
CHN2	Minshiung	1.74	244	*e*S	Sn	15 12 03.1	+2.9
	baz=233						
LDUT	Ludao	1.75	202	P	Pn	15 11 37.1	-2.2
	baz=200						
LDUT				S	Sn	15 11 57.5	-2.9
	baz=200						
WTK	Tuku	1.75	250	P	Pn	15 11 39.2	-0.2
	baz=247						
WTK				S	Sn	15 12 01.4	+0.9
	baz=247						
WTP	Ta-pu	1.78	234	*i* P	Pn	15 11 40.4	+0.6
	baz=223						
WTP				S	Sn	15 12 03.2	+2.0
	baz=223						
JIJ	Ishigaki jima	1.79	88	P	Pn	15 11 39.8	0.0
JIJ				S	Sn	15 12 01.0	-0.3
TWGBT	Beinan	1.79	215	P	Pn	15 11 38.5	-1.3
	baz=213						
TWGBT				S	Sn	15 11 58.9	-2.5
	baz=213						
TWG	Pinlang	1.79	215	*i* P	Pn	15 11 38.8	-1.1
	baz=213						
TWG				S	Sn	15 11 59.2	-2.2
	baz=213						
CHY	Chiayi	1.80	244	*e*P	Pn	15 11 40.5	+0.5
	baz=232						
CHY				S	Sn	15 12 03.4	+1.8
	baz=232						
TTN	Taitung	1.81	212	*e*P	Pn	15 11 40.7	+0.5
	baz=218						
TWK	Hsinying	1.86	237	*i* P	Pn	15 11 41.6	+0.7
	baz=233						
TWK				*i* S	Sn	15 12 05.0	+1.7
	baz=233						
CHN1	Nanshi	1.88	234	*i* P	Pn	15 11 42.3	+1.2
	baz=231						
CHN1				*i* S	Sn	15 12 05.1	+1.4
	baz=231						
SNST	Tainan City	1.88	236	P	Pn	15 11 42.8	+1.6
	baz=232						
SNST				*i* S	Sn	15 12 05.5	+1.8
	baz=232						
SGST	Jiashian	1.91	231	*i* P	Pn	15 11 41.3	-0.2
	baz=221						
SGST				*i* S	Sn	15 12 05.0	+0.8
	baz=221						
SLGT	Liugui	1.92	228	*i* P	Pn	15 11 42.9	+1.2
	baz=225						
SLGT				*i* S	Sn	15 12 06.1	+1.5
	baz=225						
JISG	Ishigakijimahi	1.96	81	P	Pn	15 11 41.9	-0.2
JISG				S	Sn	15 12 04.9	-0.6
ICHU	Yijhu	1.98	242	*e*P	Pn	15 11 43.0	+0.6
	baz=229						
ICHU				S	Sn	15 12 07.8	+1.7
	baz=229						
ECL	Taimali	2.04	214	P	Pn	15 11 42.2	-1.0
	baz=212						
ECL				*i* S	Sn	15 12 05.0	-2.5
	baz=212						
CHN8	Yiju	2.04	243	*e*P	Pn	15 11 43.3	0.0
	baz=230						
CHN8				S	Sn	15 12 09.4	+1.8
	baz=230						
SCST	Cishan	2.10	228	*e*P	Pn	15 11 45.5	+1.5
	baz=225						
SCST				*e*S	Sn	15 12 10.4	+1.5
	baz=225						
SSD	Sandimen	2.10	223	*i* P	Pn	15 11 45.2	+1.1
	baz=221						
SSD				*i* S	Sn	15 12 10.0	+0.9
	baz=221						
TSMG	Majia	2.13	222	P	Pn	15 11 45.4	+0.9
	baz=211						
TSMG				S	Sn	15 12 11.0	+1.3
	baz=211						
JTJ	Tarama	2.32	81	P	Pn	15 11 47.5	+0.4
JTJ				S	Sn	15 12 14.6	+0.3

*IDC **20** 15:17:22.6±1.6, 28°.97N×69°.52E, h0^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.5/55, mbtmp3.6/13, ML3.9/1, Error ellipse: s-maj=34.2km s-min=26.4km az=44.0*

ISC 20 15:17:24.8±1.3**, 29°.1N**±0°.2×**69°.6E**±0°.2**, h12^{km}, n13, σ1^{s}04**/13**, mb3.6**/11**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	14.13	15	Pn	Pn	15 20 43.8	-1.0
	0.5nm,0.3s,baz=119,slow=4.1,SNR=8.4						
MKAR	Makanchi Array	20.31	26	P	P	15 22 01.4	+0.8
	0.5nm,0.6s,baz=253,slow=7.5,SNR=3.7						
KURBB	Kurchatov Arra	22.58	15	P	P	15 22 25.4	+0.5
	1.6nm,0.2s,baz=209,slow=8.9,SNR=8.5						
BVAR	Borovoye Array	23.95	1	P	P	15 22 40.0	+1.3
	0.4nm,0.6s,baz=57,slow=5.5,SNR=5.1						
ZALV	Zalesovo Beam	27.25	20	P	P	15 23 09.2	+0.5
	0.3nm,0.3s,baz=224,slow=8.1,SNR=2.7						
SONM	Songino Array	33.99	46	P	P	15 24 09.8	+1.4
	0.2nm,0.5s,baz=249,slow=7.3,SNR=2.1						
AKASG	Malin Array Be	37.12	317	P	P	15 24 35.9	+0.9
	0.4nm,0.4s,baz=103,slow=7.9,SNR=2.0						
ARCES	ARCESS Array B	47.65	341	P	P	15 26 00.4	-0.1
	2.3nm,0.7s,baz=128,slow=6.9,SNR=1.4						
KSRS	Korea Array	48.86	64	P	P	15 26 09.0	-1.3
	1.0nm,0.7s,baz=260,slow=8.4,SNR=5.7						
NOA	NORSAR Array B	49.77	327	P	P	15 26 15.5	-1.5
	0.4nm,0.6s,baz=98,slow=15,SNR=1.7						
ASAR	Alice Springs	81.11	123	P	P	15 29 40.2	-0.1
	0.2nm,0.7s,baz=315,slow=5.5,SNR=4.7						
ILAR	Eielson Array	82.26	15	P	P	15 29 45.8	0.0
	0.2nm,0.6s,baz=326,slow=6.5,SNR=1.9						
YKA	Yellowknife Ar	88.71	2	P	P	15 30 18.3	+0.4
	0.2nm,0.5s,baz=357,slow=4.8,SNR=2.7						

*NEIC **20** 15:27:03.4, 36°.92N×97°.62W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.05; $M_{\theta\theta}$1.72; $M_{\phi\phi}$-0.67; $M_{r\theta}$-0.38; $M_{\theta\phi}$-1.03; $M_{\phi r}$1.44; Fault plane solution: $M_0$2.35000×10^{14} NP1:ϕ_s255.05000°, δ45.13000°, λ-153.58000°. NP2:ϕ_s145.74000°, δ71.62000°, λ-48.02000°. Principal axes: T 2.3537, Plg16.0000°, Azm206.0000°; N -0.0025, Plg39.0000°, Azm310.0000°; P -2.3511, Plg46.0000°, Azm99.0000°;*

*TUL **20** 15:27:03.3±1.1, 36°.94N±0°.03×97°.62W±0°.04, h2^{km}±1^{km}, ML3.5, mb_Lg3.6/139(NEIC), Mwr3.5/29(NEIC) Error ellipse: s-maj=6.3km s-min=1.7km az=46.0*

*NEIC **20** 15:27:03.3±0.8, 36°.92N±0°.03×97°.62W±0°.04, h3^{km}±2^{km}, Error ellipse: s-maj=6.3km s-min=1.7km az=48.0*

*ANF **20** 15:27:05.3±0.8, 36°.94N×97°.67W, h20^{km}±7^{km}, ML4.5/17, Error ellipse: s-maj=2.2km s-min=2.0km az=58.0*

*IDC **20** 15:27:05.3±1.8, 37°.09N×98°.01W, h0^{km}, mb3.3/2, mb1 3.7/5, mb1mx3.5/38, mbtmp3.4/5, ML3.8/2, Error ellipse: s-maj=28.6km s-min=13.4km az=107.0*

ISC 20 15:27:03.3±1.0**, 36°.92N**±0°.02×**97°.60W**±0°.02**, h4^{km}**±8^{km}**, n155, σ0^{s}95**/141**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.14	46		Pg	15 27 06.3	+0.3
KAN13				Sg	Sg	15 27 08.4	+0.6
KAN01	Argonia South	0.27	332		Pg	15 27 08.4	0.0
KAN01				Sg	Sg	15 27 11.9	-0.1
KAN14	Manchester OK	0.29	278		Pg	15 27 08.9	-0.1
KAN14				Sg	Sg	15 27 12.5	-0.3
KS21	Milan North St	0.37	352		Pg	15 27 10.2	-0.3
KS21				Sg	Sg	15 27 14.8	-0.5
KAN08	Anthony NE Sta	0.43	316		Pg	15 27 11.3	-0.2
KAN08				Sg	Sg	15 27 17.0	-0.1
KAN10	Anthony SW Sta	0.45	298		Pg	15 27 11.7	-0.2
KAN12	Harper NE Stat	0.49	320		Pg	15 27 12.6	-0.2
KAN12				Sg	Sg	15 27 18.9	-0.4
CROK	Carrier	0.51	217	Pg	Pg	15 27 13.4	+0.3
T35A	Sooner Cattle	0.87	90	Pg	Pg	15 27 20.1	+0.1
T35A				Sg	Sg	15 27 31.6	+0.3
T35B	Sooner Cattle	0.87	90	P		15 27 20.0	
	baz=272						
T35B				S		15 27 31.9	
	baz=272						
QUOK	Quay	1.03	136		Pg	15 27 23.5	+0.4
QUOK				Sg	Sg	15 27 37.2	+0.8
OK029	Liberty Lake	1.12	174		Pg	15 27 24.9	+0.1
OK031	S. Brethren Rd	1.14	147		Pg	15 27 25.3	+0.2
OK030	Cody Creek RV	1.19	146		Pg	15 27 26.1	+0.1
U32A	Winter Ranch,	1.25	245		Pg	15 27 26.6	-0.6
U32A	Winter Ranch,	1.25	245	P		15 27 26.6	
	baz=63						
U32A				S		15 27 43.6	
	baz=63						
BCOK	Bluff Creek, N	1.26	180		Pg	15 27 27.3	0.0
OK025	Westminster Rd	1.35	171		Pn	15 27 29.0	+0.1
OKCFA	Oklahoma City	1.50	175		Pn	15 27 31.3	+0.3
OKCSW	OKLAHOMA CITY	1.51	175		Pn	15 27 31.5	+0.3
FNO	Franklin	1.66	174		Pn	15 27 33.8	+0.6
R32A	Long Quarter,	1.74	330	Pn	Pn	15 27 34.5	+0.1
R32A	Long Quarter,	1.74	330	P		15 27 34.4	
	baz=149,SNR=29						
R32A				S		15 27 57.4	
	baz=149						
TUL1	Leonard	1.77	124	P	Pb	15 27 36.0	-0.4
	baz=306,SNR=49						
TUL1				S	Sb	15 27 59.6	+0.7
	baz=306						
TUL1	Leonard	1.77	124		Pb	15 27 35.9	-0.4
TUL1				IAmb_Lg		15 28 00.8	
	comp=Z,326nm,0.8s						
TUL1	Leonard	1.77	124	P		15 27 35.9	
	baz=306,SNR=37						
TUL1				S		15 27 59.8	
	baz=306						
W35A	Tecumseh	1.86	161	Pn	Pn	15 27 36.4	+0.6
KSU1	Kansas State U	2.32	19	P	Pn	15 27 42.9	+0.7
	baz=200						
KSU1				S	Sn	15 28 11.9	+0.7
	baz=200						
KSU1	Kansas State U	2.32	19	Pn	Pn	15 27 43.1	+0.9
KSU1				IAmb_Lg		15 28 16.8	
	comp=Z,288nm,1.1s						
KSU1	Kansas State U	2.32	19	P		15 27 42.6	
	baz=200,SNR=20						
KSU1				S		15 28 13.9	
	baz=200						
X34A	Smith Ranch, M	2.32	185	IAmb_Lg		15 28 21.2	
	comp=Z,158nm,0.7s						
WMOK	Wichita Mounta	2.38	204	P	Pn	15 27 43.6	+0.5
	baz=23,SNR=54						
WMOK				S	Sn	15 28 13.7	+1.1
	baz=23						
WMOK	Wichita Mounta	2.38	204	Pn	Pn	15 27 43.3	+0.3
WMOK				IAmb_Lg		15 28 23.5	
	comp=Z,134nm,1.0s						
WMOK	Wichita Mounta	2.38	204	P		15 27 43.7	
	baz=23,SNR=67						
WMOK				S		15 28 14.0	
	baz=23						
CBKS	Cedar Bluff	2.54	319	P	Pn	15 27 45.1	-0.2
	baz=138						
CBKS				Sb	Sb	15 28 21.2	+0.1
	baz=138						
CBKS	Cedar Bluff	2.54	319	Pn	Pn	15 27 45.6	+0.3
CBKS	Cedar Bluff	2.54	319	P		15 27 46.1	
	baz=138,SNR=42						
CBKS				S		15 28 17.3	
	baz=138						
U38A	Gravette	2.63	99		Pn	15 27 47.6	+1.2
U38A	Gravette	2.63	99	P		15 27 48.7	
	baz=282,SNR=30						
X37A	Clayton	2.95	141	Pn	Pn	15 27 51.8	+0.9
X37A				IAmb_Lg		15 28 43.5	
	comp=Z,204nm,0.7s						
X37A	Clayton	2.95	141	P		15 27 51.9	
	baz=323						
HHAR	Hobbs	3.01	101		Pn	15 27 52.9	+1.1
HHAR				IAmb_Lg		15 28 47.4	
	comp=Z,101nm,0.8s						
S39A	Bolivar	3.50	76		Pn	15 27 59.7	+1.3
S39A				IAmb_Lg		15 28 58.6	
	comp=Z,132nm,0.7s						
S39A	Bolivar	3.50	76	P		15 27 59.1	
	baz=259,SNR=20						
W39A	Magazine	3.54	118	P	Pn	15 27 59.7	+0.7
	baz=300,SNR=9.4						
W39A				Sb	Sg	15 28 54.3	-2.5
	baz=300						
W39A	Magazine	3.54	118		Pn	15 27 59.6	+0.7
W39A				IAmb_Lg		15 29 01.3	
	comp=Z,152nm,0.9s						
Z35A	Perchaven, San	3.59	175	Pn	Pn	15 28 00.5	+0.8
N33B	J Bar K, Exete	3.82	2	P		15 28 02.9	
	baz=182,SNR=8.0						
N33B				S		15 28 48.8	
	baz=182						
N33A	J Bar K, Exete	3.82	2	Pn	Pn	15 28 02.6	-0.2
N33A				IAmb_Lg		15 29 13.5	
	comp=Z,127nm,0.9s						
U40A	Yellville	3.86	97	P	Pn	15 28 04.3	+0.9
	baz=280,SNR=26						
U40A				S	Sn	15 28 50.2	+1.0
	baz=280						
U40A	Yellville	3.86	97		Pn	15 28 04.1	+0.7
U40A				IAmb_Lg		15 29 10.1	
	comp=Z,89nm,1.0s						
U40A	Yellville	3.86	97	P		15 28 05.0	
	baz=280,SNR=14						
U40A				P		15 28 05.0	
	baz=280,SNR=14						
AMTX	Amarillo	3.88	240	P		15 28 05.5	
	baz=57,SNR=12						
MIAR	Mount Ida	4.04	125	P	Pn	15 28 07.0	+1.1
	baz=307,SNR=6.9						
MIAR				Sb	Sg	15 29 09.9	-3.1
	baz=307						
MIAR	Mount Ida	4.04	125	Pn	Pn	15 28 06.5	+0.6
MIAR				IAmb_Lg		15 29 16.2	
	comp=Z,145nm,1.0s						
P38A	Dawn	4.19	49	Pn	Pn	15 28 06.8	-1.1
P38A				IAmb_Lg		15 29 19.8	
	comp=Z,160nm,0.8s						
N35A	Tabor	4.22	21		Pn	15 28 07.4	-1.0
Z38A	Mt. Pleasant	4.23	149	Pn	Pn	15 28 08.2	-0.4
MGMO	Mountain Grove	4.27	85		Pn	15 28 09.1	0.0
MGMO				IAmb_Lg		15 29 20.2	
	comp=Z,116nm,1.0s						
R40A	Maddies Statio	4.45	70	Pn	Pn	15 28 11.8	+0.3
R40A				IAmb_Lg		15 29 29.8	
	comp=Z,99nm,0.8s						
R40A	Maddies Statio	4.45	70	P		15 28 12.4	
	baz=254,SNR=12						
KSCO	Kaye Shedlock’	4.49	299	P	Pn	15 28 11.9	-0.3
	baz=116,SNR=12						
KSCO				S	Sn	15 29 03.4	-1.5
	baz=116						
KSCO	Kaye Shedlock’	4.49	299	Pn	Pn	15 28 12.0	-0.2
KSCO				IAmb_Lg		15 29 23.8	
	comp=Z,79nm,0.9s						
KSCO	Kaye Shedlock’	4.49	299	P		15 28 12.6	
	baz=116,SNR=6.6						
BGNE	Belgrade	4.51	355	P	Pn	15 28 12.6	+0.2
	baz=175,SNR=6.7						
BGNE				S	Sn	15 29 04.5	-0.7
	baz=175						
BGNE	Belgrade	4.51	355	Pn	Pn	15 28 12.4	+0.1
BGNE	Belgrade	4.51	355	P		15 28 13.0	
	baz=175,SNR=13						
FCAR	Ozark Folk Cen	4.54	101		Pn	15 28 13.5	+0.8
FCAR				IAmb_Lg		15 29 26.9	
	comp=Z,125nm,1.0s						
X40A	Basin Creek Fa	4.57	121	P	Pn	15 28 14.5	+1.2
	baz=304						
X40A				S	Sn	15 29 08.3	+1.5
	baz=304						
X40A	Basin Creek Fa	4.57	121		Pn	15 28 14.1	+0.9
X40A				IAmb_Lg		15 29 39.8	
	comp=Z,99nm,1.1s						
WHAR	Wooly Hollow	4.60	109	Pn	Pn	15 28 14.5	+1.0
ABTX	Abilene, Hawle	4.60	202	P	Pn	15 28 14.0	+0.4
	baz=20						
ABTX				S	Sn	15 29 06.8	-0.8
	baz=20						
ABTX	Abilene, Hawle	4.60	202	Pn	Pn	15 28 14.2	+0.6
ABTX	Abilene, Hawle	4.60	202	P		15 28 14.4	
	baz=20,SNR=7.8						
W41B	Gary Mavity, V	4.67	110	P	Pn	15 28 15.4	+0.8
	baz=294						
W41B				S	Sn	15 29 10.6	+1.4
	baz=294						
W41B	Gary Mavity, V	4.67	110		Pn	15 28 15.1	+0.5
W41B				IAmb_Lg		15 29 34.6	
	comp=Z,108nm,0.9s						
UALR	University of	4.78	115	Pn	Pn	15 28 16.9	+0.9
WLAR	White Oak Lake	4.88	130	IAmb_Lg		15 29 48.9	
	comp=Z,86nm,1.1s						
WHTX	Lake Whitney,	4.92	179	P	Pn	15 28 18.5	+0.5
	baz=358						
WHTX				S	Sn	15 29 14.7	-0.6
	baz=358						
WHTX	Lake Whitney,	4.92	179		Pn	15 28 18.4	+0.5
WHTX				IAmb_Lg		15 29 53.8	
	comp=Z,68nm,0.8s						
WHTX	Lake Whitney,	4.92	179	P		15 28 18.6	
	baz=358,SNR=17						
P40A	Paris	5.09	57	Pn	Pn	15 28 20.5	+0.2
P40A				IAmb_Lg		15 29 51.5	
	comp=Z,148nm,1.0s						
237A	Washetta, Mont	5.12	163	Pn	Pn	15 28 20.9	+0.1
237A				IAmb_Lg		15 30 00.9	
	comp=Z,69nm,0.9s						
L34A	Svendsen Farm,	5.13	10	Pn	Pn	15 28 20.5	-0.4
MSTX	Muleshoe	5.14	237	P	Pn	15 28 21.3	+0.1
	baz=53						
MSTX	Muleshoe	5.14	237	Pn	Pn	15 28 21.0	-0.2
MSTX				IAmb_Lg		15 30 00.7	
	comp=Z,104nm,1.0s						
N38A	Joes South For	5.16	40	Pn	Pn	15 28 21.4	+0.2
CCM	Cathedral Cave	5.18	75	P	Pn	15 28 22.5	+0.9
	baz=260						
CCM				S	Sn	15 29 23.3	+1.5
	baz=260						
CCM	Cathedral Cave	5.18	75	Pn	Pn	15 28 21.4	-0.1
CCM				IAmb_Lg		15 29 55.7	
	comp=Z,104nm,0.9s						
OGNE	Ogallala	5.30	321	P	Pn	15 28 23.4	0.0
	baz=138,SNR=5.7						
OGNE	Ogallala	5.30	321	IAmb_Lg		15 30 03.4	
	comp=Z,107nm,0.7s						
Z41A	Richland Creek	5.37	131	P	Pn	15 28 24.8	+0.7
	baz=314						
Z41A	Richland Creek	5.37	131	IAmb_Lg		15 30 05.2	
	comp=Z,71nm,0.8s						
T25A	Trinidad	5.45	274	P	Pn	15 28 25.1	-0.4
	baz=90,SNR=7.4						
T25A	Trinidad	5.45	274	Pn	Pn	15 28 25.1	-0.4
T25A				IAmb_Lg		15 30 04.7	
	comp=Z,116nm,0.9s						
CCAR	Cane Creek	5.62	120	Pn	Pn	15 28 29.0	+1.4
CCAR				IAmb_Lg		15 30 10.8	
	comp=Z,74nm,1.0s						
NATX	Nacogdoches	5.69	154	P	Pn	15 28 29.5	+0.9
	baz=336						
NATX	Nacogdoches	5.69	154	IAmb_Lg		15 30 12.1	
	comp=Z,63nm,0.8s						
PBMO	Poplar Bluff	5.75	89	IAmb_Lg		15 30 10.1	
	comp=Z,140nm,1.1s						
K31A	O'Neill	5.77	351		Pn	15 28 29.7	0.0
K31A	O'Neill	5.77	351	P		15 28 30.6	
	baz=171,SNR=5.3						
HBAR	Harrisburg	5.77	102	IAmb_Lg		15 30 19.2	
	comp=Z,100nm,0.9s						
X43A	Marvell	5.97	112	IAmb_Lg		15 30 15.2	
	comp=Z,90nm,0.9s						
SCIA	State Center	6.03	33	P	Pn	15 28 34.1	+0.9
	baz=216						
SCIA	State Center	6.03	33	Pn	Pn	15 28 33.6	+0.4
LPAR	Lepanto	6.04	100	IAmb_Lg		15 30 27.2	
	comp=Z,99nm,0.8s						
SLM	Saint Louis	6.08	71	IAmb_Lg		15 30 16.7	
	comp=Z,81nm,0.9s						
435B	Jarrell	6.12	180	Pn	Pn	15 28 34.3	-0.1
435B				IAmb_Lg		15 30 32.8	
	comp=Z,117nm,0.8s						
GNAR	Gosnell	6.19	97	IAmb_Lg		15 30 27.0	
	comp=Z,100nm,0.8s						
PEBM	Pemiscott Bayo	6.28	95	IAmb_Lg		15 30 35.6	
	comp=Z,114nm,0.8s						
Q24A	Divide	6.31	291	P	Pn	15 28 35.6	-1.7
	baz=106						
Q24A	Divide	6.31	291		Pn	15 28 36.2	-1.1
Q24A				IAmb_Lg		15 30 30.3	
	comp=Z,64nm,0.9s						
SDCO	Great Sand Dun	6.35	280	P	Pn	15 28 38.0	+0.1
	baz=95,SNR=7.9						
SDCO	Great Sand Dun	6.35	280	Pn	Pn	15 28 37.7	-0.2
SDCO	Great Sand Dun	6.35	280	P		15 28 39.0	
	baz=95						
N41A	Harden Midland	6.49	52	Pn	Pn	15 28 39.9	+0.5
JCT	Junction City	6.68	197	P	Pn	15 28 41.7	-0.4
	baz=15						
JCT	Junction City	6.68	197	Pn	Pn	15 28 41.6	-0.5
JCT	Junction City	6.68	197	P		15 28 41.7	
	baz=15,SNR=8.6						
K38A	Parkersburg	6.82	32	Pn	Pn	15 28 42.2	-2.0
K38A	Parkersburg	6.82	32	P		15 28 43.1	
	baz=215						
ECSD	EROS Data Cent	6.85	6	P	Pn	15 28 44.0	-0.6
	baz=187						
ECSD	EROS Data Cent	6.85	6	Pn	Pn	15 28 43.4	-1.1
ECSD	EROS Data Cent	6.85	6	P		15 28 44.0	
	baz=187,SNR=12						
ISCO	Idaho Springs	6.92	297	P	Pn	15 28 44.4	-1.4
	baz=112,SNR=6.3						
ISCO	Idaho Springs	6.92	297	Pn	Pn	15 28 44.8	-1.0
ISCO				IAmb_Lg		15 30 48.4	
	comp=Z,57nm,0.8s						
342A	Flagon Creek P	7.05	140	IAmb_Lg		15 31 01.5	
	comp=Z,40nm,1.1s						
OXF	Oxford	7.08	107	P	Pn	15 28 48.4	+0.7
	baz=292						
OXF	Oxford	7.08	107	Pn	Pn	15 28 48.1	+0.4
OXF				IAmb_Lg		15 30 59.4	
	comp=Z,57nm,0.9s						
L40A	Anamosa	7.12	42	Pn	Pn	15 28 48.5	+0.3
HDIL	Hopedale	7.44	58	Pn	Pn	15 28 53.3	+0.7
ANMO	Albuquerque	7.45	257	Pg	Pb	15 29 16.5	+3.4
	comp=Z,0.3nm,0.3s,baz=61,slow=13,SNR=4.4						
ANMO				Lg	Lg	15 30 54.2	
	comp=Z,3.6nm,0.3s,baz=342,slow=15,SNR=15						
ANMO	Albuquerque	7.45	257	IAmb_Lg		15 31 03.9	
	comp=Z,39nm,0.8s						
VBMS	Vicksburg	7.49	127	IAmb_Lg		15 31 14.3	
	comp=Z,48nm,1.2s						
PHWY	Pilot Hill	7.51	308	Pn	Pn	15 28 53.9	0.0

PHWY				IAmb_Lg		15 31 14.8	
	comp=Z,59nm,0.8s						
SUSD	**Miller**	**7.59**	**353**	IAmb_Lg		15 31 05.6	
	comp=Z,66nm,0.9s						
N23A	**Red Feather La**	**7.62**	**304**	P	**Pn**	**15 28 55.4**	**0.0**
	baz=119,SNR=5.1						
N23A	**Red Feather La**	**7.62**	**304**	Pn	**Pn**	**15 28 55.1**	**-0.2**
N23A				IAmb_Lg		15 31 04.4	
	comp=Z,94nm,0.7s						
I37A	**Lemond, Waseca**	**7.78**	**23**	IAmb_Lg		15 31 24.7	
	comp=Z,55nm,1.1s						
O44A	**Mansfield**	**7.85**	**63**	IAmb_Lg		15 31 15.2	
	comp=Z,67nm,0.9s						
WVT	**Waverly**	**7.91**	**93**	Pn	**Pn**	**15 28 59.5**	**+0.5**
WVT				IAmb_Lg		15 31 17.8	
	comp=Z,37nm,1.2s						
L42A	**Oliver, Polo**	**7.96**	**48**	Pn	**Pn**	**15 29 00.2**	**+0.5**
L42A				IAmb_Lg		15 31 20.4	
	comp=Z,69nm,0.9s						
JFWS	**Jewell Farm**	**8.23**	**41**	P	**Pn**	**15 29 03.5**	**+0.1**
	baz=226						
JFWS	**Jewell Farm**	**8.23**	**41**	Pn	**Pn**	**15 29 03.6**	**+0.2**
JFWS				IAmb_Lg		15 31 27.4	
	comp=Z,74nm,1.0s						
MNTX	**Cornudas Mount**	**8.28**	**233**	P	**Pn**	**15 29 04.5**	**+0.4**
	baz=49,SNR=7.1						
MNTX	**Cornudas Mount**	**8.28**	**233**	Pn	**Pn**	**15 29 04.4**	**+0.4**
MNTX				IAmb_Lg		15 31 45.4	
	comp=Z,34nm,0.9s						
MNTX	**Cornudas Mount**	**8.28**	**233**	P		15 29 04.5	
	baz=49,SNR=7.7						
M44A	**Midewin, Midew**	**8.66**	**56**	IAmb_Lg		15 31 39.0	
	comp=Z,84nm,1.0s						
833A	**Chaparral WMA,**	**8.70**	**191**	IAmb_Lg		15 31 55.2	
	comp=Z,39nm,1.0s						
RSSD	**Black Hills**	**8.70**	**328**	P	**Pn**	**15 29 11.0**	**+0.9**
	baz=144						
RSSD	**Black Hills**	**8.70**	**328**		**Pn**	**15 29 10.2**	**+0.1**
RSSD				IAmb_Lg		15 31 54.0	
	comp=Z,59nm,1.1s						
I40A	**Norwalk**	**8.77**	**35**	IAmb_Lg		15 31 52.9	
	comp=Z,47nm,1.0s						
V48A	**Smith Brothers**	**8.78**	**94**	IAmb_Lg		15 31 45.5	
	comp=Z,32nm,0.9s						
RWWY	**Rawlins**	**8.84**	**306**	IAmb_Lg		15 32 03.1	
	comp=Z,58nm,1.0s						
SFIN	**Lafayette**	**8.91**	**64**	IAmb_Lg		15 31 53.9	
	comp=Z,45nm,0.8s						
K22A	**Casper**	**8.94**	**313**	Pn	**Pn**	**15 29 13.3**	**0.0**
F33A	**5 Mile Ranch,**	**8.97**	**6**		**Pn**	**15 29 12.6**	**-0.9**
F33A				IAmb_Lg		15 31 59.6	
	comp=Z,31nm,1.1s						
BLO	**Bloomington**	**9.03**	**72**	IAmb_Lg		15 32 02.3	
	comp=Z,55nm,0.8s						
WCI	**Wyandotte Cave**	**9.07**	**78**	IAmb_Lg		15 31 53.0	
	comp=Z,47nm,0.8s						
TXAR	**Lajitas Array**	**9.11**	**216**	Pn	**Pn**	**15 29 15.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=32,slow=10,SNR=6.4						
TXAR				Pg		15 29 50.8	
	comp=Z,0.9nm,0.3s,baz=38,slow=16,SNR=8.7						
TXAR				Lg	Lg	15 31 47.8	
	comp=Z,1.1nm,0.3s,baz=24,slow=29,SNR=6.7						
CLTN	**Cedars of Leba**	**9.11**	**92**	IAmb_Lg		15 32 06.3	
	comp=Z,33nm,1.0s						
PV17	**East Wray Mesa**	**9.12**	**282**	IAmb_Lg		15 32 05.0	
	comp=Z,28nm,1.3s						
K43A	**Burlington**	**9.18**	**48**	IAmb_Lg		15 32 05.8	
	comp=Z,76nm,0.9s						
121A	**Cookes Peak, D**	**9.45**	**245**	IAmb_Lg		15 32 10.3	
	comp=Z,26nm,0.8s						
U49A	**Red Boiling Sp**	**9.50**	**89**	IAmb_Lg		15 32 05.4	
	comp=Z,44nm,1.2s						
I42A	**Draeger Farm,**	**9.61**	**41**	IAmb_Lg		15 32 12.4	
	comp=Z,37nm,0.9s						
E28A	**Huff**	**9.92**	**348**	IAmb_Lg		15 32 29.8	
	comp=Z,58nm,0.8s						
R49A	**Shelbyville**	**9.96**	**78**	IAmb_Lg		15 32 20.7	
	comp=Z,38nm,1.0s						
BW06	**Boulder Array**	**10.89**	**306**		**Pn**	**15 29 39.1**	**-1.0**
PD31	**Pinedale Array**	**10.89**	**306**		**Pn**	**15 29 38.5**	**-1.5**
PDAR	**Pinedale Array**	**10.89**	**306**	Pn	**Pn**	**15 29 38.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=119,slow=15,SNR=13						
PDAR				Pg		15 30 22.6	
	comp=Z,0.3nm,0.3s,baz=120,slow=18,SNR=8.7						
PDAR				Lg	Lg	15 32 41.0	
	comp=Z,0.8nm,0.3s,baz=153,slow=13,SNR=3.1						
PDAR	**Pinedale Array**	**10.89**	**306**	Pn	**Pn**	**15 29 38.1**	**-2.0**
S51A	**Beattyville**	**11.19**	**82**	Pn	**Pn**	**15 29 45.7**	**+1.7**
TKL	**Tuckaleechee C**	**11.23**	**92**	Lg	Lg	15 32 54.6	
	comp=Z,0.4nm,0.3s,baz=4.0,slow=22,SNR=9.9						
DGMT	**Dagmar**	**12.52**	**339**	Pn	**Pn**	**15 29 59.9**	**-2.3**
ULM	**Lac du Bonnet**	**13.39**	**5**	Pn	**Pn**	**15 30 09.6**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=182,slow=16,SNR=2.2						
ULM				Lg	Lg	15 33 59.2	
	comp=Z,0.2nm,0.3s,baz=113,slow=18,SNR=4.7						
SADO	**Sadowa**	**16.00**	**55**	Lg	Lg	15 35 22.5	
	comp=Z,0.3nm,0.3s,baz=170,slow=15,SNR=4.6						
YKA	**Yellowknife Ar**	**27.68**	**343**	P	**P**	**15 32 52.2**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=141,slow=9.7,SNR=4.0						
ILAR	**Eielson Array**	**40.15**	**330**	P	**P**	**15 34 40.5**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=104,slow=8.0,SNR=6.7						

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*REY **20** 15:44:43.0, 64°.62N × 17°.42W, h1^{km}*
*IDC **20** 15:44:44.7±0.7, 64°.32N × 17°.97W, h0^{km}, mb3.8/16, mb1 4.0/19, mb1mx3.8/52, mbtmp3.8/19, ML2.6/2, MS3.7/3, Ms1 3.7/3, ms1mx3.0/60, Error ellipse: s-maj=22.6km s-min=11.8km az=21.0*
*NEIC **20** 15:44:46.2±2.6, 64°.43N±0°.09 × 17°.9W±0°.1, h8^{km}±4^{km}, mb4.3/22, Error ellipse: s-maj=13.1km s-min=6.7km az=179.0*
ISC 20 15:44:46.6±0.4**, 64°.45N**±0°.03×**17°.71W**±0°.03**, h10**^{km}**, n116,** σ**1^{s}78**/111**, mb4.0**/28**, MS3.7**/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IJOK	**Jokulheimar**	**0.26**	**239**	P	**Pg**	**15 44 52.0**	**+0.1**
	baz=230						
IJOK				S	**Sg**	**15 44 59.1**	**+3.7**
	baz=230						
ISKR	**Skrokkalda**	**0.31**	**291**	P	**Pg**	**15 44 51.3**	**-1.5**
	baz=263						
ISKR				S	**Sb**	**15 44 58.0**	**-1.4**
	baz=263						
IIEY	**Innrieyrar**	**0.40**	**207**	P	**Pb**	**15 44 54.5**	**-1.2**
	baz=211						
IIEY				S	**Sb**	**15 45 03.2**	**+1.3**
	baz=211						
IKAL	**Kalfafell**	**0.51**	**179**	S	**Sb**	**15 45 05.8**	**+1.0**
	baz=190						
IKAL				P	**Pb**	**15 44 55.9**	**-1.6**
	baz=190						
IKSK	**Karasker**	**0.61**	**118**	P	**Pg**	**15 44 54.3**	**-4.1**
	baz=138						
IKSK				S	**Sg**	**15 45 03.4**	**-3.1**
	baz=138						
IFAG	**Fagurholsmyri**	**0.74**	**141**	P	**Pg**	**15 44 58.1**	**-2.7**
	baz=156						
IFAG				S	**Sg**	**15 45 09.8**	**-0.6**
	baz=156						
IASK	**Askja**	**0.76**	**37**	P	Pg	15 44 53.6	-7.6
	baz=37						
ISNB	**Snabyli**	**0.82**	**210**	P	**Pn**	**15 45 01.7**	**-2.5**
	baz=212						
ISNB				S	**Sn**	**15 45 15.8**	**-0.6**
	baz=212						
IHVE	**Hveravellir**	**0.90**	**299**	P	**Pg**	**15 44 60.0**	**-4.0**
	baz=286						
ISVA	**Svartarkot**	**0.91**	**12**	P	Pg	15 44 56.5	-7.6
	baz=5.4						
ISVA				S	Sg	15 45 07.4	-8.5
	baz=5.4						
IVSH	**V-Sauoahnukur**	**0.93**	**66**	P	Pg	15 44 56.9	-7.5
	baz=74						
IVSH				S	Sg	15 45 07.6	-8.9
	baz=74						
IRJU	**Rjupnafell**	**0.94**	**207**	P	**Pn**	**15 45 03.7**	**-2.0**
	baz=209						
IFED	**Fedgar**	**0.96**	**245**	P	**Pb**	**15 45 03.6**	**-1.7**
	baz=240						
IHVO	**Lagu-Hvolar**	**1.05**	**209**	P	**Pn**	**15 45 05.5**	**-1.9**
	baz=210						
IHVO				S	**Sn**	**15 45 22.7**	**+0.6**
	baz=210						
IHAU	**Haukadalur**	**1.10**	**245**	P	**Pn**	**15 45 05.9**	**-2.0**
	baz=241						
IGYG	**Gygjarholskot**	**1.10**	**262**	P	**Pg**	**15 45 05.2**	**-2.5**
	baz=256						
IALF	**Alftagrof**	**1.16**	**215**	P	**Pn**	**15 45 07.4**	**-1.4**
	baz=215						
IESK	**Eystri-Skogar**	**1.20**	**220**	P	**Pn**	**15 45 07.9**	**-1.5**
	baz=220						
IMEL	**Melhnausar**	**1.21**	**21**	P	Pn	15 45 01.1	-8.4
	baz=18						
IMEL				S	Sb	15 45 15.5	-10
	baz=18						
IMID	**Miomork**	**1.24**	**231**	P	**Pn**	**15 45 08.6**	**-1.3**
	baz=230						
IREN	**Reynihlio**	**1.25**	**16**	P	Pn	15 45 01.9	-8.1
	baz=12						
IREN				S	Sb	15 45 16.7	-10
	baz=12						
ISAU	**Saurbar**	**1.27**	**250**	P	**Pb**	**15 45 08.1**	**-2.4**
	baz=246						
ISAU				S	**Sn**	**15 45 28.6**	**+1.3**
	baz=246						
IKVO	**Krokottuvotn**	**1.32**	**15**	P	Pn	15 45 03.0	-8.1
	baz=11						
IGRS	**Grimsstaoir**	**1.37**	**29**	P	Pn	15 45 03.9	-7.9
	baz=28						
IGRS				S	Sn	15 45 20.4	-10
	baz=28						
IASM	**Asmuli**	**1.42**	**245**	P	**Pb**	**15 45 10.9**	**-2.1**
	baz=242						
ISKI	**Skildingahlsh**	**1.46**	**11**	P	Pn	15 45 05.4	-7.5
	baz=7.3						
ISKI				S	Sn	15 45 23.3	-8.7
	baz=7.3						
IGHA	**Grjothals**	**1.47**	**17**	P	Pn	15 45 05.3	-7.8
	baz=14						
ISOL	**Solvholt**	**1.51**	**251**	P	**Pb**	**15 45 12.2**	**-2.3**
	baz=247						
IHLA	**Hella**	**1.53**	**350**	P	Pn	15 45 07.5	-6.3
	baz=343						
IKRO	**Krokur**	**1.53**	**258**	P	**Pn**	**15 45 11.7**	**-2.1**
	baz=254						
IDIM	**Dimmadalss**	**1.55**	**12**	P	Pn	15 45 06.8	-7.4
	baz=8.4						
IHEI	**Heioarbar**	**1.56**	**262**	P	**Pn**	**15 45 12.1**	**-2.1**
	baz=258						
BORG	**Borgarnes**	**1.59**	**282**	Pg	**Pn**	**15 45 12.4**	**-2.2**
	37nm,0.3s,baz=105,slow=7.1,SNR=58						
BORG				Lg	Lg	15 45 37.7	
	21nm,0.3s,baz=229,slow=22,SNR=12						
BORG	**Borgarnes**	**1.59**	**282**	Pn	**Pn**	**15 45 11.8**	**-2.9**
IHED	**Heoinshofoi**	**1.65**	**6**	P	Pn	15 45 08.4	-7.0
	baz=1.7						
IBJA	**Bjarnastaoir**	**1.65**	**254**	P	**Pn**	**15 45 14.3**	**-1.3**
	baz=250						
IBRE	**Brettingsstaoi**	**1.68**	**357**	P	Pn	15 45 09.2	-6.8
	baz=352						
ISAN	**Sandskeio**	**1.73**	**258**	P	**Pn**	**15 45 15.3**	**-1.4**
	baz=255						
IGIL	**Gilhagi**	**1.73**	**19**	P	Pn	15 45 09.3	-7.3
	baz=16						
ISIG	**Siglufjorour**	**1.76**	**344**	P	Pn	15 45 11.3	-5.8
	baz=338						
IVOS	**Vogsosar**	**1.85**	**253**	P	**Pb**	**15 45 17.4**	**-2.9**
	baz=250						
IHRN	**Hraun**	**1.95**	**330**	P	Pn	15 45 14.6	-5.1
	baz=324						
ILEI	**Leirhofn**	**2.03**	**14**	P	Pn	15 45 14.1	-6.6
	baz=12						
IGRI	**Grimsey**	**2.10**	**357**	P	Pn	15 45 15.0	-6.7
	baz=353						
SCO	**Scoresbysund**	**6.27**	**347**	Pn	**Pn**	**15 46 16.3**	**-2.7**
SCO	**Scoresbysund**	**6.27**	**347**	*i* P	**Pn**	**15 46 16.0**	**-3.0**
SCO				*i* S	**Sn**	**15 47 31.1**	**+0.6**
SCO	**Scoresbysund**	**6.27**	**347**	*e*	Pn	15 46 14.2	-4.8
	baz=159,slow=8.6						
SCO				*i* P	**Pn**	**15 46 16.0**	**-3.0**
SCO				*i* S	**Sn**	**15 47 31.2**	**+0.6**
SCO				IAML		15 47 46.1	
	comp=Z,1.2nm,0.5s						
SUMG	**Summit**	**11.07**	**326**	Pn	**Pn**	**15 47 25.9**	**+0.9**
ESK	**Eskdalemuir**	**11.67**	**135**	Pn	**Pn**	**15 47 32.9**	**0.0**
EKA	**Eskdalemuir Ar**	**11.67**	**135**	Pn	**Pn**	**15 47 30.9**	**-2.0**
	baz=328,slow=14,SNR=12						
DAG	**Danmarks Havn**	**12.39**	**359**	*i* P	**Pn**	**15 47 46.3**	**+3.7**
DAG	**Danmarks Havn**	**12.39**	**359**	*i* P	**Pn**	**15 47 46.4**	**+3.7**
HFS	**Hagfors**	**15.13**	**92**	Pn	**Pn**	**15 48 19.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=325,slow=12,SNR=1.8						
FINES	**FINESS Array B**	**19.84**	**78**	P	**P**	**15 49 17.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=325,slow=12,SNR=1.3						
FINES	**FINESS Array B**	**19.84**	**78**	P	**P**	**15 49 17.1**	**+0.1**
CLL	**Collm**	**20.70**	**115**	*e*P	**P**	**15 49 27.0**	**+0.5**
	comp=Z,5.0nm,1.0s						
CLL				*i*		15 49 29.5	
	comp=Z,27nm,1.7s						
ECH	**Echery**	**21.09**	**129**	P	**P**	**15 49 32.8**	**+2.0**
GRA1	**Grafenberg Arr**	**21.30**	**120**	P	**P**	**15 49 35.3**	**+2.2**
GRA1				IAmb	IAmb	15 49 54.3	
	comp=Z,14nm,1.0s						
GRFO	**Grafenberg**	**21.30**	**120**	P	**P**	**15 49 35.4**	**+2.3**
BRG	**Berggiesshubel**	**21.41**	**114**	*e*P	**P**	**15 49 33.6**	**-0.6**
BRG				Amp		15 49 34.1	
	comp=Z,11nm,1.1s						
BRG	**Berggiesshubel**	**21.41**	**114**	*e*P	**P**	**15 49 33.6**	**-0.6**
BRG				Amp		15 49 34.1	
	comp=Z,11nm,1.1s						
UPC	**Upice**	**22.52**	**112**	*e*P	**P**	**15 49 50.8**	**+4.7**
KHC	**Kasperske Hory**	**22.66**	**118**	*e*P	**P**	**15 49 46.5**	**-1.1**
DPC	**Dobruska-Polom**	**22.76**	**112**	*e*P	**P**	**15 49 48.4**	**-0.3**
GERES	**GERESS Array B**	**22.93**	**118**	P	**P**	**15 49 49.4**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=325,slow=9.0,SNR=5.9						
GERES	**GERESS Array B**	**22.93**	**118**	P	**P**	**15 49 50.3**	**-0.3**
KRLC	**Kraliky**	**23.16**	**112**	*e*P	**P**	**15 49 51.8**	**-1.1**
EUNU	**Eureka**	**23.83**	**336**	P	**P**	**15 49 57.4**	**-1.9**
EUNU				IAmb	IAmb	15 50 02.6	
	comp=Z,6.2nm,1.1s						
MNK	**Minsk**	**24.64**	**92**	*i* P	**P**	**15 50 07.4**	**+0.5**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**15 50 07.4**	**+0.5**
	comp=N,12nm,0.7s						
MNK				*i* P	**P**	**15 50 07.4**	**+0.5**
	comp=Z,10.0nm,0.8s						
MNK				*i* PP	**PnPn**	**15 50 39.0**	**+0.9**
MNK				*i* PPP	PPP	15 50 47.0	
MNK				*i* PcP	**PcP**	**15 53 44.3**	**+0.5**
MNK				*i* S	**S**	**15 54 28.8**	**+1.0**
MNK				*i* SS	**SnSn**	**15 55 17.1**	**+4.1**
MNK				*i* SSS	SSS	15 55 30.8	
MNK				*i* LR	LR	15 59 42.8	
MNK				*i* LRM	MLR	16 00 32.2	
	comp=E,11nm,12.7s						
MNK				*i* LRM	MLR	16 00 39.4	
	comp=Z,154nm,19.9s						
MNK				*i* LRM	MLR	16 00 47.5	
	comp=N,303nm,18.1s						
MODS	**Modra-Piesok**	**24.71**	**114**	*e*P	**P**	**15 50 06.4**	**-1.2**
LANS	**Liptovska Anna**	**24.98**	**110**	*e*P	**P**	**15 50 10.2**	**+0.2**
VYHS	**Vyhne**	**25.24**	**112**	*e*P	**P**	**15 50 10.3**	**-2.0**
KLMR	**Klimovskoe**	**25.76**	**71**	*e*P	**P**	**15 50 16.8**	**-0.1**
KLMR				AMP		15 50 24.2	
	comp=Z,18nm,1.5s						
ESDC	**Sonseca Array**	**26.09**	**155**	P	**P**	**15 50 19.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=338,slow=10.0,SNR=2.9						
KOLS	**Kolonicke sedl**	**26.30**	**107**	*e*P	**P**	**15 50 23.0**	**+1.1**
AKASG	**Malin Array Be**	**27.91**	**97**	P	**P**	**15 50 38.0**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=322,slow=9.7,SNR=4.9						
C36M	**Paulatuk**	**36.95**	**326**	P	**P**	**15 51 54.0**	**-1.1**
C36M				IAmb	IAmb	15 52 00.1	
	comp=Z,5.6nm,1.2s						
BRTR	**Keskin Array B**	**38.51**	**105**	P	**P**	**15 52 09.2**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=296,slow=4.6,SNR=4.3						
KBZ	**Khabaz**	**39.20**	**92**	P	**P**	**15 52 16.3**	**+1.9**
	comp=Z,2.1nm,0.8s,baz=306,slow=11,SNR=5.8						
YKA	**Yellowknife Ar**	**39.29**	**313**	P	**P**	**15 52 13.7**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=48,slow=8.4,SNR=8.2						
INK	**Inuvik**	**39.98**	**329**	P	**P**	**15 52 21.0**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=43,slow=10,SNR=3.8						
INK	**Inuvik**	**39.98**	**329**	IAmb	IAmb	15 52 24.5	
	comp=Z,7.6nm,1.4s						
AKTO	**Aktyubinsk**	**40.44**	**73**	P	**P**	**15 52 25.5**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=302,slow=7.7,SNR=5.5						
ABKAR	**Akbulak array**	**42.14**	**73**	P	**P**	**15 52 40.5**	**+1.9**
TIXI	**Tiksi**	**42.27**	**15**	P	**P**	**15 52 41.5**	**+2.2**
TIXI				IAmb	IAmb	15 52 44.1	
	comp=Z,5.4nm,1.1s						
FYU	**Fort Yukon**	**43.92**	**333**	P	**P**	**15 52 53.9**	**+1.1**
FYU				IAmb	IAmb	15 52 58.6	
	comp=Z,12nm,1.2s						
IL31		**45.83**	**332**	P	**P**	**15 53 08.3**	**+0.4**
IL31				IAmb	IAmb	15 53 12.3	
	comp=Z,6.0nm,1.3s						
ILAR	**Eielson Array**	**45.83**	**332**	P	**P**	**15 53 07.9**	**-0.1**
	comp=Z,1.2nm,1.0s,baz=24,slow=6.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**47.84**	**51**	P	**P**	**15 53 24.5**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=330,slow=8.6,SNR=4.7						
KURK	**Kurchatov**	**48.31**	**58**	P	**P**	**15 53 27.8**	**+0.3**
KURK				IAmb	IAmb	15 53 29.5	
	comp=Z,2.9nm,1.1s						
EGMT	**Eagleton**	**48.89**	**297**	P	**P**	**15 53 31.3**	**-0.9**
KKAR	**Karatay Array**	**51.44**	**69**	P	**P**	**15 53 50.2**	**-1.2**
MK31	**Makanchi Array**	**52.92**	**58**	P	**P**	**15 54 02.5**	**+0.1**
MKAR	**Makanchi Array**	**52.92**	**58**	P	**P**	**15 54 03.0**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=317,slow=5.0,SNR=7.1						
MKAR	**Makanchi Array**	**52.92**	**58**	P	**P**	**15 54 02.3**	**-0.1**
PD31	**Pinedale Array**	**53.18**	**293**	P	**P**	**15 54 04.0**	**-0.6**
PD31				IAmb	IAmb	15 54 11.7	
	comp=Z,2.4nm,0.9s						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**15 54 04.2**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=50,slow=5.6,SNR=9.4						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**15 54 03.5**	**-1.1**
BW06	**Boulder Array**	**53.18**	**293**	P	**P**	**15 54 03.1**	**-1.5**
BW06				IAmb	IAmb	15 54 11.7	
	comp=Z,2.8nm,0.9s						
WMOK	**Wichita Mounta**	**55.49**	**279**	P	**P**	**15 54 21.5**	**+0.2**
TLY	**Talaya**	**55.62**	**40**	LR	LR	16 19 07.9	
	comp=Z,49nm,19.4s,baz=330,slow=37						
PV23	**Carpenter Ridg**	**56.61**	**290**	P	**P**	**15 54 29.8**	**+0.2**
PV05	**Paradox Valley**	**56.97**	**290**	P	**P**	**15 54 31.2**	**-0.9**
PV05				IAmb	IAmb	15 54 34.2	
	comp=Z,3.7nm,0.8s						
ELK	**Elko**	**57.13**	**296**	P	**P**	**15 54 34.5**	**+1.3**
WMQ	**Urumqi**	**57.43**	**56**	*e*P	**P**	**15 54 38.1**	**+3.1**
MSU	**Marysvale**	**57.84**	**292**	P	**P**	**15 54 38.6**	**+0.4**
DBIC	**Dimbokro**	**58.40**	**165**	P	**P**	**15 54 40.4**	**-1.7**
	comp=Z,3.5nm,0.8s,baz=16,slow=5.5,SNR=3.9						
SONM	**Songino Array**	**59.87**	**40**	P	**P**	**15 54 52.8**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=338,slow=6.2,SNR=3.8						
NIL	**Nilore**	**60.60**	**73**	P	**P**	**15 54 59.5**	**+2.4**
X16A	**Lo Mia Camp, P**	**61.07**	**290**	P	**P**	**15 55 00.2**	**-0.3**
TXAR	**Lajitas Array**	**62.23**	**280**	P	**P**	**15 55 08.2**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=46,slow=7.3,SNR=3.4						
SDV	**Santo Domingo**	**66.63**	**239**	LR	LR	16 21 26.3	
	comp=Z,46nm,20.6s,baz=68,slow=33						
HHC	**Hu-ho-hao-te**	**67.74**	**39**	*e*P	**P**	**15 55 45.5**	**+1.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,7.4s						
LZH	**Lanzhou**	**69.84**	**47**	*e*P	**P**	**15 55 58.0**	**+0.8**
LZH				pP	pP	15 56 00.5	-0.4
LZH				sP	sP	15 56 01.9	-0.4
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,7.8s						
KSRS	**Korea Array**	**74.88**	**28**	LR	LR	16 32 35.1	
	comp=Z,69nm,18.2s,baz=180,slow=38						
CMAR	**Chiang Mai Arr**	**84.33**	**58**	P	**P**	**15 57 18.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=317,slow=7.4,SNR=6.3						

IDC 20 15:54:53.5±4.2**, 15°.77N**×**148°.31E, h0**^{km}**, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.5**/51**, mbtmp3.5**/6**, Error ellipse: s-maj=129.7km s-min=24.3km az=80.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**28.14**	**324**	P	P	16 00 46.1	-1.3
	0.5nm,0.6s,baz=145,slow=9.7,SNR=2.7						
WRA	**Warramunga Arr**	**38.06**	**202**	P	P	16 02 13.5	-0.5
	0.9nm,0.8s,baz=25,slow=9.1,SNR=3.4						
ASAR	**Alice Springs**	**41.65**	**200**	P	P	16 02 44.0	+0.1
	0.2nm,0.5s,baz=24,slow=6.9,SNR=8.1						
SONM	**Songino Array**	**46.97**	**322**	P	P	16 03 27.7	+1.2
	0.2nm,0.6s,baz=133,slow=8.1,SNR=3.6						
CMAR	**Chiang Mai Arr**	**47.15**	**281**	P	P	16 03 28.1	0.0
	0.4nm,0.4s,baz=64,slow=7.1,SNR=2.3						
MKAR	**Makanchi Array**	**62.28**	**315**	P	P	16 05 17.4	-0.2
	0.2nm,0.5s,baz=101,slow=7.5,SNR=1.9						

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*NEIC **20** 16:05:56.9±1.9, 34°.19N±0°.09 × 23°.61E±0°.07, h10^{km}±1^{km}, mb4.4/7, ML4.0(THE), Error ellipse: s-maj=16.1km s-min=7.3km az=202.0*
*IDC **20** 16:05:59.6±2.1, 34°.60N × 23°.90E, h0^{km}, mb3.7/9, mb1 3.8/14, mb1mx3.6/58, mbtmp3.6/14, ML3.5/4, Error ellipse: s-maj=43.1km s-min=20.6km az=18.0*
*THE **20** 16:05:59.0, 34°.63N × 23°.65E, h12^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=2.4km s-min=1.4km az=20.0*
*ATH **20** 16:06:00.5, 35°.06N × 23°.94E, h36^{km}±5^{km}, ML3.4/5, Error ellipse: s-maj=6.1km s-min=1.6km az=208.0*
ISC 20 16:06:00.6±1.2**, 34°.67N**±0°.07×**23°.72E**±0°.04**, h14**^{km}±6^{km}**, n61,** σ**1^{s}82**/65**, mb3.8**/13**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.34**	**61**	P	**Pg**	**16 06 07.5**	**-0.2**
GVD				S	**Sg**	**16 06 13.4**	**+0.9**
GVD				AML	AML	16 06 13.5	
	comp=E,70967µm,0.4s						
GVD				AML	AML	16 06 14.1	
	comp=N,89224µm,0.3s						
GVD	**Gavdhos**	**0.34**	**61**	P	**Pg**	**16 06 07.4**	**-0.3**
GVD				S	**Sg**	**16 06 13.3**	**+0.9**
	comp=N,40µm,0.4s						
GVDS	**Gavdos**	**0.35**	**61**	P	**Pg**	**16 06 07.3**	**-0.4**
GVDS				S	**Sg**	**16 06 12.6**	**0.0**
	comp=N,35µm,0.4s						
IMMV	**Iera Moni Meta**	**0.81**	**15**	P	Pb	16 06 09.4	-7.2
IMMV				AML	AML	16 06 29.2	
	comp=E,12012µm,0.3s						
IMMV				AML	AML	16 06 30.1	
	comp=N,9212µm,0.4s						
IMMV	**Iera Moni Meta**	**0.81**	**15**	P	**Pb**	**16 06 15.9**	**-0.7**
IMMV				S	**Sg**	**16 06 28.5**	**+1.3**
	comp=N,5µm,0.3s						
VAM	**Vamos**	**0.83**	**28**	P	Pb	16 06 09.6	-7.2
VAM				AML	AML	16 06 29.2	
	comp=E,20600µm,0.4s						
VAM				AML	AML	16 06 31.0	
	comp=N,10314µm,0.5s						
VAM	**Vamos**	**0.83**	**28**	P	**Pb**	**16 06 16.1**	**-0.8**
VAM				S	**Sg**	**16 06 28.9**	**+1.2**
	comp=N,8µm,0.5s						
PRNS	**Prines Rethymn**	**0.94**	**43**	P	**Pb**	**16 06 17.0**	**-1.7**
PRNS				S	**Sb**	**16 06 30.7**	**-0.4**
SIVA	**Sivas**	**0.96**	**69**	P	Pb	16 06 14.2	-4.8
SIVA	**Sivas**	**0.96**	**69**	P	**Pb**	**16 06 19.0**	**0.0**
SIVA				S	**Sn**	**16 06 32.9**	**-0.2**
	comp=N,7µm,0.6s						
IDI	**Anoyia**	**1.14**	**57**	P	Pn	16 06 16.3	-6.0
IDI	**Anoyia**	**1.14**	**57**	P	**Pn**	**16 06 21.9**	**-0.3**
IDI				S	**Sn**	**16 06 37.2**	**-0.5**
	comp=N,842nm,0.5s						
IDI	**Anoyia**	**1.14**	**57**	Pn	**Pb**	**16 06 22.3**	**+0.2**
ANKY	**Antikythira Is**	**1.24**	**344**	P	Pn	16 06 18.5	-5.0
ANKY				AML	AML	16 06 46.2	
	comp=N,2048µm,0.5s						
ANKY				AML	AML	16 06 48.9	
	comp=E,1170µm,0.4s						
ANKY	**Antikythira Is**	**1.24**	**344**	P	**Pn**	**16 06 19.8**	**-3.7**
ANKY				S	**Sb**	**16 06 39.1**	**-0.6**
	comp=E,975nm,0.7s						
LAST	**Lasithi**	**1.52**	**71**	P	**Pn**	**16 06 23.3**	**-4.2**
LAST	**Lasithi**	**1.52**	**71**	P	**Pn**	**16 06 25.1**	**-2.4**
LAST				S	**Sn**	**16 06 47.0**	**-0.2**
KTHA	**Kythira Island**	**1.67**	**341**	P	**Pn**	**16 06 25.5**	**-3.9**
KTHA				AML	AML	16 07 03.8	
	comp=N,703µm,0.4s						
KTHA				AML	AML	16 07 05.2	
	comp=E,1334µm,0.6s						
SANT	**Santorini**	**2.21**	**39**	Pn	**Pb**	**16 06 38.7**	**-1.6**
ITM	**Ithomi**	**2.90**	**330**	Pn	**Pb**	**16 06 49.8**	**-2.2**
KARP	**Karpathos**	**2.95**	**72**	Pn	**Pn**	**16 06 49.3**	**+2.2**
AGG	**Agios Georgios**	**4.48**	**346**	Pn	**Pn**	**16 07 11.4**	**+3.3**
AKAS	**Kas**	**5.05**	**70**	Pn	**Pn**	**16 07 17.4**	**+1.3**
ELL	**Elmali**	**5.44**	**66**		**Pn**	**16 07 22.4**	**+1.0**
MANT	**Manisa**	**5.45**	**44**	Pn	**Pn**	**16 07 23.5**	**+1.9**
LIT	**Litokhoron**	**5.51**	**350**	Pn	**Pn**	**16 07 23.6**	**+1.4**
FNA	**Florina**	**6.38**	**344**	Pn	**Pn**	**16 07 36.4**	**+2.2**
TIP	**Timpagrande**	**7.16**	**311**	Pn	**Pn**	**16 07 46.0**	**+1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSS	Mathiatis	7.91	85	Pn	Pn	16 07 53.0	-2.2
RAFF	Raffo Rosso	8.01	291	Pn	Pn	16 07 56.0	-0.5
BRTR	Keskin Array B	9.38	55	Pn	Pn	16 08 18.9	+3.4
	comp=E,0.1nm,0.3s,baz=236,slow=13,SNR=3.6						
BRTR	Keskin Array B	9.38	55		Pn	16 08 16.8	+1.4
SGRT	San Giovanni R	9.45	321	Pn	Pn	16 08 17.0	+0.6
MMAI	Mount Meron Ar	9.86	96	Pn	Pn	16 08 21.2	-0.8
	baz=294,slow=14,SNR=1.9						
NRCA	Norcia	11.61	318	Pn	Pn	16 08 48.1	+2.2
PSZ	Piszkesteto	13.54	349	Pn	Pn	16 09 15.2	+3.0
GERES	GERESS Array B	15.99	335	Pn	P	16 09 49.9	+1.2
	comp=E,0.1nm,0.3s,baz=153,slow=12,SNR=9.0						
KRLC	Kraliky	16.21	344	*e*P	P	16 09 53.7	+2.7
KHC	Kasperske Hory	16.28	336	*e*P	P	16 09 50.4	-1.3
KHC				*e*pP	pP	16 09 55.1	-0.1
KHC				*e*x	x	16 10 01.5	
AKASG	Malin Array Be	16.51	12	Pn	P	16 09 53.5	-0.8
	comp=E,0.5nm,0.3s,baz=208,slow=10,SNR=3.4						
AKASG	Malin Array Be	16.51	12	P	P	16 09 54.8	+0.5
DPC	Dobruska-Polom	16.57	343	*e*P	Pn	16 09 47.0	-5.5
KBZ	Khabaz	17.37	53	P	P	16 10 04.3	+0.6
	comp=E,0.1nm,0.3s,baz=288,slow=7.2,SNR=4.7						
ESDC	Sonseca Array	22.57	291	P	P	16 11 04.6	+4.0
	comp=E,0.7nm,0.7s,baz=78,slow=9.8,SNR=2.6						
HFS	Hagfors	26.30	349	P	P	16 11 36.9	+1.4
	comp=E,2.8nm,0.7s,baz=165,slow=12,SNR=10.0						
NOA	NORSAR Array B	27.59	347	P	P	16 11 48.3	+1.2
	comp=E,0.4nm,0.6s,baz=153,slow=11,SNR=2.0						
AKTO	Aktyubinsk	29.45	47	P	P	16 12 03.5	-0.2
	comp=E,0.8nm,0.6s,baz=248,slow=8.6,SNR=3.5						
UOSS	Minazif	29.70	100	P	P	16 12 00.9	-5.4
UOSS				IAmb	IAmb	16 12 21.6	
	comp=Z,20nm,1.2s						
ABKAR	Akbulak array	30.29	50	P	P	16 12 11.9	+0.6
KKAR	Karatay Array	36.98	63	P	P	16 13 08.7	-0.8
KURBB	Kurchatov Arra	42.34	51	P	P	16 13 54.5	+0.5
	comp=Z,0.8nm,0.4s,baz=274,slow=8.7,SNR=15						
KURK	Kurchatov	42.40	50	P	P	16 13 54.5	0.0
MK31	Makanchi Array	45.03	56	P	P	16 14 15.8	+0.1
MK31				IAmb	IAmb	16 14 17.3	
	comp=Z,2.6nm,1.1s						
MKAR	Makanchi Array	45.03	56	P	P	16 14 16.5	+0.8
	comp=Z,1.2nm,0.4s,baz=268,slow=7.7,SNR=39						
MKAR	Makanchi Array	45.03	56	P	P	16 14 15.9	+0.2
ZALV	Zalesovo Beam	46.19	46	P	P	16 14 24.6	-0.2
	comp=Z,0.6nm,0.5s,baz=262,slow=7.6,SNR=2.6						
TULEG	Thule	57.18	344	P	P	16 15 46.9	+0.3
TULEG				IAmb	IAmb	16 16 12.0	
	comp=Z,4.7nm,0.7s						
LBTB	Lobatse	59.39	178	P	P	16 15 54.7	-7.9
SONM	Songino Array	60.71	50	P	P	16 16 11.5	-0.1
	comp=Z,0.2nm,0.5s,baz=291,slow=8.6,SNR=2.4						
RES	Resolute Bay	63.83	345	P	P	16 16 30.2	-1.8
RES				IAmb	IAmb	16 16 58.9	
	comp=Z,1.9nm,1.1s						
CMAR	Chiang Mai Arr	67.80	82	P	P	16 16 59.2	+0.7
	comp=Z,0.2nm,0.5s,baz=299,slow=9.2,SNR=2.2						

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*NEIC **20** 16:09:50.2±1.3, 15.°69N±0.°05×93.°49W±0.°02, h80^{km}±7^{km}, mb4.3/13, Md4.2/24(MEX), Error ellipse: s-maj=7.9km s-min=2.0km az=201.0*

*MEX **20** 16:09:50.8±0.7, 15.°66N×93.°51W, h88^{km}±5^{km}, MD4.2*

*IDC **20** 16:09:55.1±4.9, 16.°43N×93.°27W, h84^{km}±9^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.3/34, mbtmp3.5/5, Error ellipse: s-maj=106.6km s-min=12.8km az=8.0*

ISC 20 16:09:50.3±0.7**, 15.°68N**±0.°04×**93.°49W**±0.°03**, h84**^{km}±5^{km}**, n40, σ0.s95**/58**, mb3.8**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.26	85	*e*P	Pn	16 10 02.2	-0.6
PCIG				*e*S	Sn	16 10 12.0	-0.1
PCIG		0.26	85		Pn	16 10 02.2	-0.6
PCIG					Sn	16 10 12.0	-0.1
TGIG		1.15	18	*e*P	Pn	16 10 11.3	-0.1
TGIG				*e*S	Sn	16 10 26.4	-0.8
TGIG		1.15	18		Pn	16 10 11.3	-0.1
TGIG					Sn	16 10 26.4	-0.8
TGBT	Tuxtla Gutierr	1.15	20	*e*P	Pn	16 10 11.1	-0.3
TGBT				*i* S	Sn	16 10 27.0	-0.3
TGBT	Tuxtla Gutierr	1.15	20		Pn	16 10 11.1	-0.3
TGBT					Sn	16 10 27.0	-0.3
THIG		1.41	123	*e*P	Pn	16 10 13.8	-0.8
THIG				*i* S	Sn	16 10 33.0	-0.1
THIG		1.41	123		Pn	16 10 13.8	-0.8
THIG					Sn	16 10 33.0	-0.1
CCIG	Comitan	1.43	65	*e*P	Pn	16 10 15.3	+0.2
CCIG				*e*S	Sn	16 10 32.9	-0.8
CCIG	Comitan	1.43	65		Pn	16 10 15.3	+0.2
CCIG					Sn	16 10 32.9	-0.8
CMIG	Matias Romero	1.94	317	P	Pn	16 10 21.4	-0.1
	31nm,0.3s,baz=143,slow=12,SNR=151						
CMIG				S	Sn	16 10 44.1	-1.1
	84nm,0.3s,baz=140,slow=9.5,SNR=25						
CMIG	Matias Romero	1.94	317	*e*P	Pn	16 10 21.4	-0.1
CMIG				*e*S	Sn	16 10 44.5	-0.7
CMIG	Matias Romero	1.94	317		Pn	16 10 21.4	-0.1
CMIG					Sn	16 10 44.5	-0.7
HUEH	Huehuetenango	1.95	100		Pn	16 10 21.9	+0.1
RTAL	Retalhuleu	2.08	123		Pn	16 10 23.0	-0.4
HUIG	Huatulco	2.52	272	*i* P	Pn	16 10 28.0	-1.3
HUIG				*i* S	Sn	16 10 58.9	-0.3
HUIG	Huatulco	2.52	272		Pn	16 10 28.0	-1.3
HUIG					Sn	16 10 58.9	-0.3
PETF	Flores	3.69	70		Pn	16 10 44.5	-0.6
MTO3	Montecristo	4.19	107		Pn	16 10 50.9	-1.2
TEIG	Tepich	6.71	47		Pn	16 11 24.2	-2.0
344A	Westbrook Farm	15.90	9	Pn	Pn	16 13 28.5	-0.5
344A				IAmb	IAmb	16 13 29.1	
	comp=Z,37nm,0.5s						
TXAR	Lajitas Array	16.51	327	P	Pn	16 13 36.4	-0.4
	comp=Z,0.1nm,0.3s,baz=150,slow=16,SNR=10.0						
TXAR	Lajitas Array	16.51	327	Pn	Pn	16 13 35.9	-0.9
TX31	Lajitas Ar. Si	16.51	327	Pn	Pn	16 13 35.8	-0.9
TX31				IAmb	IAmb	16 13 42.4	
	comp=Z,8.8nm,1.1s						
SLBS	Sierra La Lagu	17.41	300	Pn	Pn	16 13 46.3	-1.6
MIAR	Mount Ida	18.78	360	P	P	16 14 03.4	+0.5
MIAR				IAmb	IAmb	16 14 22.6	
	comp=Z,5.8nm,0.7s						
MNTX	Cornudas Mount	19.28	328	Pn	Pn	16 14 10.5	+0.3
X48A	Hartselle	19.57	16	P	P	16 14 11.7	+0.2
X48A				IAmb	IAmb	16 14 15.1	
	comp=Z,8.8nm,0.8s						
U40A	Yellville	20.60	1	P	P	16 14 23.4	+0.8
U40A				IAmb	IAmb	16 14 42.9	
	comp=Z,8.2nm,0.9s						
NVAR	Mina Array Bea	31.46	321	P	P	16 16 07.0	+2.8
	comp=Z,0.5nm,0.6s,baz=142,slow=8.6,SNR=4.9						
NVAR				pP	pP	16 16 26.4	+2.8
	comp=Z,0.8nm,0.8s,baz=125,slow=10.0,SNR=4.0						
PQI	Presque Isle	37.48	29	P	P	16 16 55.4	-0.3
HAWA	Hanford	37.54	330	P	P	16 16 55.8	-0.4
HAWA				IAmb	IAmb	16 17 04.0	
	comp=Z,8.3nm,1.4s						
BATG	Bathurst New B	38.84	30	P	P	16 17 07.6	+0.5
FCC	Fort Churchill	43.01	360	P	P	16 17 41.1	0.0
YKA	Yellowknife Ar	49.07	347	P	P	16 18 27.3	-1.4
	comp=Z,0.3nm,0.6s,baz=146,slow=7.9,SNR=7.8						
YKA				pP	pP	16 18 48.4	-1.1
	comp=Z,0.3nm,0.5s,baz=146,slow=7.9,SNR=4.0						
INK	Inuvik	58.43	344	P	P	16 19 36.1	-0.7
	comp=Z,0.9nm,0.7s,baz=136,slow=8.1,SNR=2.1						
IL31		60.73	337	P	P	16 19 54.0	+1.3
IL31				IAmb	IAmb	16 19 54.0	
	comp=Z,7.4nm,1.4s						
ILAR	Eielson Array	60.73	337	P	P	16 19 54.3	+1.5
	comp=Z,0.1nm,0.4s,baz=131,slow=2.5,SNR=2.3						
ILAR				pP	pP	16 20 14.5	+0.1
	comp=Z,0.2nm,0.7s,baz=126,slow=4.6,SNR=2.8						
ILAR	Eielson Array	60.73	337	P	P	16 19 54.1	+1.3
LL01	San Ignacio de	60.95	162	P	P	16 19 55.0	+0.5

IDC 20 16:30:03.8±3.5**, 25.°97S**×**28.°93E, h0**^{km}**, mb1 2.8**/2**, mb1mx2.8**/35**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=31.1km s-min=16.8km az=112.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.16	287	Pg	Pg	16 31 02.8	-1.6
	3.1nm,0.3s,baz=102,slow=16,SNR=35						
LBTB				Lg	Lg	16 31 45.3	
	2.6nm,0.3s,baz=18,slow=22,SNR=13						
BOSA	Boshof	4.20	230	Pn	Pn	16 31 09.7	+0.4
	0.1nm,0.3s,baz=46,slow=14,SNR=1.9						
BOSA				Pg	Pb	16 31 21.2	+2.5
	0.3nm,0.3s,baz=48,slow=12,SNR=4.7						
BOSA				Sn	Sn	16 31 57.7	-1.4
	0.4nm,0.3s,baz=351,slow=21,SNR=1.3						
BOSA				Lg	Lg	16 32 14.5	
	3.0nm,0.3s,baz=145,slow=18,SNR=14						
I47ZA	BOSHOF INFRASO	4.22	230	*i*		16 55 50.0	
	baz=51,slow=313,SNR=1.1						
MATP	Matopo	5.53	356	Pn	Pn	16 31 28.7	+1.2
	0.2nm,0.3s,baz=171,slow=12,SNR=1.6						
MATP				Sn	Sn	16 32 31.8	-0.1
	0.5nm,0.3s,baz=44,slow=22,SNR=2.8						
MATP				Lg	Lg	16 32 55.7	
	0.5nm,0.3s,baz=247,slow=23,SNR=6.3						
I35NA	TSUMEB INFRASO	12.46	300	*i*		17 44 10.0	
	baz=130,slow=300,SNR=2.7						

IDC 20 16:32:46.4±6.7**, 32.°35N**×**95.°26E, h0**^{km}**, mb3.7**/3**, mb1 3.7**/5**, mb1mx3.4**/46**, mbtmp3.6**/5**, ML3.1**/2**, Error ellipse: s-maj=114.5km s-min=66.4km az=153.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.52	329	P	Pn	16 36 51.1	-0.9
	0.0nm,0.3s,baz=133,slow=15,SNR=3.4						
SONM	Songino Array	17.63	25	P	Pn	16 36 53.4	-0.1
	0.1nm,0.3s,baz=216,slow=13,SNR=16						
ZALV	Zalesovo Beam	22.85	344	P	P	16 37 51.9	+0.8
	0.3nm,0.4s,baz=146,slow=14,SNR=2.2						
ARCES	ARCESS Array B	53.03	336	P	P	16 42 04.6	-0.1
	6.6nm,1.1s,baz=82,slow=6.5,SNR=1.3						
NOA	NORSAR Array B	59.48	326	P	P	16 42 50.8	-0.2
	0.3nm,0.4s,baz=82,slow=6.3,SNR=1.6						

IDC 20 16:36:37.0±38.0**, 17.°65S**×**178.°67E, h523**^{km}±285^{km}**, mb3.1**/3**, mb1 3.3**/3**, mb1mx2.8**/46**, mbtmp4.1**/3**, Error ellipse: s-maj=987.9km s-min=77.5km az=81.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	0.60	262	P	P	16 37 39.8	0.0
	1.4nm,0.3s,baz=76,slow=4.5,SNR=14						
STKA	Stephens Creek	36.33	240	P	P	16 42 56.3	-0.2
	2.4nm,0.7s,baz=90,slow=12,SNR=4.2						
WRA	Warramunga Arr	41.94	260	P	P	16 43 41.8	-0.3
	0.4nm,0.6s,baz=94,slow=7.7,SNR=10.0						
ASAR	Alice Springs	42.18	254	P	P	16 43 43.9	-0.1
	4.5nm,0.5s,baz=89,slow=7.8,SNR=191						

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*IDC **20** 16:44:50.6±1.2, 28.°03N×101.°71E, h0^{km}, mb3.2/6, mb1 3.4/6, mb1mx3.2/57, mbtmp3.2/6, Error ellipse: s-maj=34.5km s-min=20.1km az=77.0*

ISC 20 16:44:52.2±1.4**, 28.°1N**±0.°2×**101.°8E**±0.°3**, h10**^{km}**, n7, σ0.s64**/6**, mb3.4**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.93	196	Pg	Pn	16 47 52.1	+37
	0.1nm,0.3s,baz=3.0,slow=16,SNR=8.7						
CMAR				Lg	Lg	16 50 00.9	
	0.0nm,0.3s,baz=342,slow=28,SNR=1.7						
SONM	Songino Array	20.04	9	P	P	16 49 24.8	-0.7
	0.1nm,0.3s,baz=195,slow=9.0,SNR=1.6						
KSRS	Korea Array	23.83	60	P	P	16 50 06.0	+0.6
	0.4nm,0.6s,baz=246,slow=11,SNR=1.8						
MKAR	Makanchi Array	24.14	326	P	P	16 50 08.7	+0.4
	0.5nm,0.6s,baz=134,slow=10,SNR=7.1						
KURBB	Kurchatov Arra	28.58	328	P	P	16 50 48.5	+0.2
	0.2nm,0.2s,baz=143,slow=9.3,SNR=2.2						
WRA	Warramunga Arr	57.20	143	P	P	16 54 39.2	-0.4
	0.3nm,0.6s,baz=331,slow=8.1,SNR=2.0						
ASAR	Alice Springs	60.06	146	P	P	16 54 59.7	+0.1
	0.2nm,0.6s,baz=319,slow=5.5,SNR=2.0						

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*JMA **20** 16:49:04.8±0.1, 33.°85N×136.°75E, h405^{km}, M2.5*

*IDC **20** 16:49:08.6±2.0, 33.°28N×136.°71E, h302^{km}±24^{km}, mb2.9/4, mb1 2.9/6, mb1mx2.5/58, mbtmp3.4/6, Error ellipse: s-maj=31.8km s-min=22.3km az=88.0*

ISC 20 16:49:11.7±1.1**, 33.°6N**±0.°1×**136.°9E**±0.°1**, h350**^{km}**, n11, σ2.s44**/11**, mb3.0**/4**, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.79	350	P	Pn	16 49 55.5	-1.1
JKN2	Miekihoku	0.80	322	P	Pn	16 49 55.4	-1.3
TK02	Tokai 2	0.81	65	P	Pn	16 49 56.2	-0.2
JAO	Obara	1.68	11	P	Pn	16 49 59.1	-1.8
JOD2	Odawara 2	2.46	47	P	Pn	16 50 04.2	-2.3
MJAR	Matsushiro Arr	3.12	20	P	Pn	16 50 08.9	-3.2
	0.1nm,0.3s,baz=193,slow=10.0,SNR=5.8						
KSRS	Korea Array	8.24	300	P	Pn	16 51 06.6	-2.0
	0.1nm,0.3s,baz=112,slow=13,SNR=5.1						
PETK	Petropavlovsk-	24.52	31	P	P	16 54 04.5	+4.0
	2.0nm,0.9s,baz=251,slow=8.8,SNR=1.6						
ZALV	Zalesovo Beam	41.61	315	P	P	16 56 28.0	+1.6
	0.3nm,0.3s,baz=81,slow=8.9,SNR=1.6						
WRA	Warramunga Arr	53.31	183	P	P	16 57 54.2	-1.7
	0.2nm,0.3s,baz=360,slow=7.6,SNR=8.2						
ASAR	Alice Springs	57.03	183	P	P	16 58 22.0	-0.2
	0.3nm,0.8s,baz=21,slow=12,SNR=1.5						

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*NEIC **20** 17:05:30.0±2.1, 0.°22N±0.°07×122.°56E±0.°07, h160^{km}±7^{km}, mb4.7/26, Error ellipse: s-maj=12.8km s-min=7.7km az=48.0*

*DJA **20** 17:05:31.2±0.3, 0˚N±3˚×12˚3E±˚, h140^{km}±4^{km}, M4.1/17, mb4.2/7, mB4.8/2, MLv4.1/17, Mw(mB)4.1/2*

*IDC **20** 17:05:31.5±2.9, 0.°17N×122.°64E, h176^{km}±26^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.4/38, mbtmp4.1/9, MS3.4/1, Ms1 3.4/1, ms1mx2.5/34, Error ellipse: s-maj=50.0km s-min=12.4km az=61.0*

*NOU **20** 17:05:35.0, 0.°11S×122.°42E, h197^{km}, mb4.2, Minahassa Peninsula, Sulawesi*

ISC 20 17:05:30.1±0.6**, 0.°19N**±0.°05×**122.°53E**±0.°05**, h160**^{km}±5^{km}**, n66, σ1.s45**/75**, mb4.3**/21**, 1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	0.65	296	P	Pn	17 05 52.1	-1.3
MRSI				S	Sn	17 06 09.3	-1.8
GTOI	Gorontalo	0.66	47	P	Pn	17 05 53.8	+0.4
GTOI				S	Sn	17 06 11.3	+0.1
LUWI	Luwuk	1.24	169		Pn	17 05 58.3	+0.3
LUWI				Sn	Sn	17 06 19.0	-0.4
LUWI	Luwuk	1.24	169	P	Pn	17 05 58.1	+0.1
LUWI				S	Sn	17 06 18.4	-1.0
APSI	Ampana	1.40	219	P	Pn	17 05 59.9	+0.5
KMSI	Cibinong	1.50	75	P	Pn	17 06 02.3	+1.9
TOLI2	Tolitoli	1.97	298		Pn	17 06 05.1	-0.4
TOLI2				Sn	Sn	17 06 30.0	-2.8
MPSI	Mapaga	2.63	273	P	Pn	17 06 12.9	-0.4
SANI	Sanana	4.11	123	P	Pn	17 06 30.4	-1.7
TTSI	Tana Toraja	4.20	220	P	Pn	17 06 33.3	+0.1
TNTI	Ternate	4.88	83	Pn	Pn	17 06 42.3	+0.2
TNTI	Ternate	4.88	83	P	Pn	17 06 42.8	+0.7
SPSI	Sidrap Palu	4.96	214	P	Pn	17 06 43.3	+0.1
BNSI	Bone	5.16	208	P	Pn	17 06 46.6	+0.8
	0.2nm36nm,1.1s						
NLAI	Namlea	5.70	127	P	Pn	17 06 53.7	+0.8
	0.4nm936nm20nm,0.8s						
KAPI	Kappang	5.86	208	P	Pn	17 06 56.2	+1.1
	3.5nm,0.3s,baz=34,slow=8.5,SNR=9.8						
KAPI	Kappang	5.86	208		Pn	17 06 56.1	+1.0
BKSI	Bulukumba	5.97	204	P	Pn	17 06 57.4	+0.8
	0.1nm26nm,1.1s						
MYLDM	Lahad Datu	6.38	321		Pn	17 07 05.2	+3.1
KKM	Kota Kinabalu	8.58	313	Pn	Pn	17 07 34.8	+3.5
SOEI	Soe	10.03	170	Pn	Pn	17 07 53.9	+3.4
FAKI	Fak Fak	10.20	108	Pn	Pn	17 07 53.0	+0.3
BATI	Baumata	10.39	174	P	Pn	17 07 57.2	+2.0
	0.6nm,0.3s,baz=78,slow=7.5,SNR=3.7						
DLV	T Lat	18.18	310		Pn	17 09 33.2	+0.4
DLV				IAmb	IAmb	17 10 18.2	
	comp=Z,49nm,1.4s						
FITZ	Fitzroy Crossi	18.43	171	P	P	17 09 33.5	+0.1
	comp=Z,1.6nm,0.3s,baz=6.2,slow=8.1,SNR=46						
UBPT	Khong Chiam	22.56	312	P	P	17 10 17.0	0.0
UBPT				IAmb	IAmb	17 10 48.2	
	comp=Z,29nm,1.7s						
WB0	Warramunga Arr	22.99	150	P	P	17 10 19.5	-1.6
WB0				IAmb	IAmb	17 10 21.9	
	comp=Z,13nm,1.1s						
TPUB	Ta-pu	23.05	356	P	P	17 10 22.5	+0.9
WRAB	Tennant Creek	23.11	151	P	P	17 10 21.6	-0.5
WRA	Warramunga Arr	23.11	151	P	P	17 10 21.6	-0.6
	comp=Z,5.6nm,0.9s,baz=327,slow=11,SNR=44						
WRA				pP	pP	17 10 51.0	-1.2
	comp=Z,2.6nm,0.7s,baz=325,slow=11,SNR=6.5						
WRA	Warramunga Arr	23.11	151	P	P	17 10 20.9	-1.2
WRA					pP	17 10 46.6	-5.6
WB2	Warramunga Arr	23.12	151	P	P	17 10 21.4	-0.8
WR0	Warramunga Arr	23.23	150	P	P	17 10 22.2	-0.9
WR0				IAmb	IAmb	17 10 23.8	
	comp=Z,11nm,0.9s						
SSLB	Suanglung	23.51	356	P	P	17 10 25.8	+0.1
SSLB				IAmb	IAmb	17 11 03.2	
	comp=Z,43nm,1.4s						
YOJ	Yonaguni jima	24.14	1	P	P	17 10 31.5	+0.1
YHNB	Yeheng	24.36	357	P	P	17 10 33.8	+0.2
AS31	Alice Springs	26.16	156	P	P	17 10 48.7	-1.0
ASAR	Alice Springs	26.16	156	P	P	17 10 49.1	-0.6
	comp=Z,1.3nm,0.5s,baz=345,slow=15,SNR=40						
ASAR				pP	pP	17 11 23.4	+0.7
	comp=Z,0.8nm,0.5s,baz=343,slow=14,SNR=6.3						
ASAR				PcP	PcP	17 14 11.8	-1.0
	comp=Z,0.4nm,0.3s,baz=349,slow=2.1,SNR=12						
ASAR				ScP	ScP	17 17 35.0	-2.8
	comp=Z,0.2nm,0.5s,baz=334,slow=2.7,SNR=6.1						
ASAR	Alice Springs	26.16	156	P	P	17 10 49.0	-0.8
JOW	Kunigami	27.06	11	LR	LR	17 22 23.8	
	comp=Z,75nm,18.1s,baz=35,slow=37						
CMAR	Chiang Mai Arr	29.43	309	P	P	17 11 20.5	+1.6
	comp=Z,0.7nm,0.7s,baz=135,slow=7.3,SNR=5.7						
RABL	Rabaul	29.93	99	P	P	17 11 25.1	+1.7
CTAO	Charters Tower	30.76	132	P	P	17 11 30.0	-0.6
CTAO				IAmb	IAmb	17 12 27.5	
	comp=Z,29nm,1.6s						
STKA	Stephens Creek	36.64	152	P	P	17 12 20.6	-0.7
	comp=Z,6.2nm,0.8s,baz=318,slow=7.3,SNR=7.5						
JMM	Marumori	41.10	22	P	P	17 12 57.8	-0.5
JMM				IAmb	IAmb	17 13 03.1	
	comp=Z,71nm,1.5s						
LSA	Lhasa	41.89	317	P	P	17 13 04.8	-0.6
TAPN	Taplejung	42.97	312	*e*P	P	17 13 14.5	+0.5
CAN	Canberra	43.10	148	P	P	17 13 15.8	+1.2
CAN				IAmb	IAmb	17 14 37.3	
	comp=Z,55nm,1.6s						
RAMN	Ramite	43.59	311	*e*P	P	17 13 18.4	-0.5
	comp=Z,4.2nm,0.4s						
GUN	Gumba	44.64	311	*e*P	P	17 13 28.0	+0.6
	comp=Z,7.6nm,0.4s						
PKI	Pulchoki	44.82	311	*e*P	P	17 13 28.8	0.0
PKIN	Phulchoki	44.83	311	*e*P	P	17 13 28.3	-0.5
	comp=Z,6.2nm,0.5s						
DANN	Dangsing	46.47	310	*e*P	P	17 13 41.6	-0.1
	comp=Z,9.3nm,0.6s						
SANVU	Saraoutou	46.77	111	P	P	17 13 43.6	-0.2
SANVU				IAmb	IAmb	17 13 49.7	
	comp=Z,30nm,1.2s						
WAKE	Wake Island	47.23	64	P	P	17 13 45.5	-1.8
SONM	Songino Array	49.49	346	P	P	17 14 04.4	+0.1
	comp=Z,0.7nm,0.7s,baz=165,slow=6.2,SNR=4.5						
SONM	Songino Array	49.49	346	P	P	17 14 04.4	+0.1
MK31	Makanchi Array	58.21	329	P	P	17 15 07.5	0.0
MKAR	Makanchi Array	58.21	329	P	P	17 15 07.5	0.0
	comp=Z,0.9nm,0.6s,baz=125,slow=8.6,SNR=15						
MKAR	Makanchi Array	58.21	329	P	P	17 15 07.2	-0.3
MKAR				PcP	PcP	17 15 52.8	-4.3
QRZ	Quartz Range	60.94	138	P	P	17 15 25.9	-0.4
LBZ	Lake Benmore	61.27	143	P	P	17 15 27.4	-1.1
LBZ				IAmb	IAmb	17 15 44.8	
	comp=Z,84nm,1.9s						
RPZ	Rata Peaks	61.45	142	P	P	17 15 29.9	+0.2
RPZ				IAmb	IAmb	17 16 50.0	
	comp=Z,38nm,1.5s						
KURK	Kurchatov	62.58	330	P	P	17 15 37.1	+0.1
KURK				IAmb	IAmb	17 16 22.2	
	comp=Z,4.6nm,1.3s						
KNTN	Kanton	65.79	93	P	P	17 16 00.0	+1.3
SYO	Syowa Base	87.63	201⇓	*e*pP	pP	17 18 40.8	+0.7

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*NEIC **20** 17:10:05.1±1.7, 37.°78S±0.°09×179.°8W±0.°2, h44^{km}±18^{km}, mb4.3/5, Error ellipse: s-maj=20.8km s-min=11.9km az=112.0*

*WEL **20** 17:10:06.0±0.8, 37˚S±6˚×18˚0W±˚, h33^{km}, M3.8/46, ML4.0/46, MLv3.8/46, Error ellipse: s-maj=0.0km s-min=0.0km az=38.3*

*IDC **20** 17:10:11.7±3.1, 36.°71S×178.°50E, h0^{km}, mb3.6/2, mb1 3.9/2, mb1mx3.6/31, mbtmp3.6/2, Error ellipse: s-maj=67.4km s-min=30.1km az=109.0*

ISC 20 17:10:01.1±2.4**, 37.°44S**±0.°07×**179.°86W**±0.°08**, h6**^{km}±13^{km}**, n90, σ1.s50**/95**, mb3.9**/4**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.43	254	P	Pg	17 10 28.9	+0.5
MXZ	Matakaoa Point	1.47	265	P	Pn	17 10 27.9	-0.2
PUZ	Puketiti	1.62	246	P	Pb	17 10 32.1	+0.7
PUZ				S	Sn	17 10 51.9	+0.4
PKGZ	Pakihiroa	1.70	254	P	Pb	17 10 32.8	0.0
PKGZ				S	Sn	17 10 52.6	-0.9
CNGZ	Carnagh Statio	1.85	235	P	Pb	17 10 36.4	+1.1
TWGZ	Tauwhareparae	1.87	246	P	Pb	17 10 35.6	0.0
TWGZ				S	Sn	17 10 57.7	+0.2
HAZ	Te Kaha	1.90	260	P	Pb	17 10 35.4	-0.7
HAZ				S	Sn	17 10 58.4	+0.1
RUGZ	Raukumara Rang	2.03	254	P	Pn	17 10 37.0	+1.1
TKGZ	Te Karaka	2.07	240	P	Pb	17 10 38.4	-0.7
MWZ	Matawai	2.25	246	P	Pn	17 10 40.4	+1.4
MWZ				S	Sn	17 11 06.3	-0.8
RIGZ	Rimuhau	2.27	235	P	Pn	17 10 41.2	+2.1
RIGZ				S	Sn	17 11 09.1	+1.7
PRGZ	Paritu Road	2.32	230	P	Pb	17 10 42.3	-1.0
MHGZ	Mahia Peninsul	2.46	225	P	Pb	17 10 44.4	-1.2
KNZ	Kokohu	2.51	230	P	Pn	17 10 44.2	+1.8
URZ	Urewera	2.54	250	Pn	Pn	17 10 44.3	+1.5
	9.1nm,0.3s,baz=62,slow=3.6,SNR=53						
URZ				Sn	Sn	17 11 12.6	-1.3
	20nm,0.3s,baz=260,slow=19,SNR=11						
URZ	Urewera	2.54	250	P	Pn	17 10 44.3	+1.5
WHRZ	Whale Island	2.55	260	P	Pb	17 10 45.6	-1.6
SNGZ	Shannon Statio	2.59	238	P	Pn	17 10 45.5	+2.0
RTZ	Ruatahuna	2.76	244	P	Pn	17 10 47.9	+1.9
EDRZ	Edgecumbe	2.78	255	P	Pb	17 10 49.1	-2.1
WHHZ	Waihua	2.81	234	P	Pn	17 10 49.0	+2.4
RAHZ	Arahi	2.83	238	P	Pn	17 10 48.7	+2.0
MUGZ	Murupara	2.86	248	P	Pn	17 10 48.9	+1.6
OPRZ	Ohinepanea	2.88	261	P	Pn	17 10 48.0	+0.5
MTHZ	Maungataniwha	2.96	241	P	Pn	17 10 50.4	+1.7
ARHZ	Aropaoanui	3.07	233	P	Pn	17 10 52.3	+2.2
NMHZ	Naumai	3.11	237	P	Pn	17 10 53.0	+2.4
BKZ	Black Stump Fm	3.35	238		Pn	17 10 55.3	+1.3
BKZ	Black Stump Fm	3.35	238	P	Pn	17 10 55.6	+1.5
MCHZ	McNeill Hill	3.37	232	P	Pn	17 10 56.1	+1.9
KAHZ	Kahuranaki	3.48	226	P	Pn	17 10 57.3	+1.6
KWHZ	Kaweka Forest	3.53	235	P	Pn	17 10 58.0	+1.5
KUZ	Kuaotunu	3.60	280	P	Pn	17 10 57.0	-0.4
PXZ	Pawanui	3.65	224	P	Pn	17 10 59.3	+1.3
KRHZ	Kereru	3.69	232	P	Pn	17 10 59.8	+1.2
BHHZ	Black Hill Sta	3.80	236	P	Pn	17 11 01.9	+1.6
TMVZ	Te Maari	3.88	243	P	Pn	17 11 02.4	+1.1
ETVZ	East Tongariro	3.88	243	P	Pn	17 11 02.7	+1.3
KRVZ	Karewarewa	3.91	244	P	Pn	17 11 03.6	+1.8
OTVZ	Oturere	3.92	243	P	Pn	17 11 03.5	+1.5
PRHZ	Porangahau	3.94	223	P	Pn	17 11 03.7	+1.7
GRZ	Great Barrier	3.94	286	P	Pn	17 11 02.2	+0.1
PNHZ	Pukenui	3.96	230	P	Pn	17 11 03.1	+0.8
MOVZ	Moawhango	3.97	239	P	Pn	17 11 05.5	+3.0
NGZ	Ngauruhoe	3.97	243	P	Pn	17 11 04.6	+1.9
MKAZ	Moumakai	3.99	273	P	Pn	17 11 03.3	+0.5
WNVZ	Wahianoa	4.04	241	P	Pn	17 11 06.4	+2.8
WIAZ	Waiheke Island	4.06	278	P	Pn	17 11 04.0	+0.3
ANWZ	Angora Road	4.16	222	P	Pn	17 11 06.0	+1.0
TSZ	Takapari Road	4.19	230	P	Pn	17 11 06.2	+0.7
ETAZ	East Tamaki Re	4.19	275	P	Pn	17 11 06.2	+0.7

DVHZ	Dannevirke	4.22	226	P	Pn	17 11 07.0	+1.0
HIZ	Hauiti	4.31	254	Pn	Pn	17 11 09.2	+1.9
HIZ	Hauiti	4.31	254	P	Pn	17 11 09.3	+2.1
AWAZ	Awhitu Peninsu	4.41	273	P	Pn	17 11 09.9	+1.4
BFZ	Birch Farm	4.44	222		Pn	17 11 09.8	+0.9
BFZ	Birch Farm	4.44	222	P	Pn	17 11 09.8	+0.9
PRWZ	Pori Road	4.50	225	P	Pn	17 11 11.2	+1.4
POWZ	Post Office Ro	4.51	228	P	Pn	17 11 11.7	+1.8
TIWZ	Tintock	4.70	223	P	Pn	17 11 13.3	+0.8
MRZ	Mangatainoka R	4.79	226	P	Pn	17 11 14.1	+0.2
WCZ	Waipu Caves	4.89	286	P	Pn	17 11 16.3	+1.1
TMWZ	Te Maipa	4.93	221	P	Pn	17 11 16.0	+0.3
PAWZ	Paruwai Farm	5.37	221	P	Pn	17 11 21.7	-0.1
MSWZ	Moikau Station	5.49	222	Pn	Pn	17 11 21.6	-1.8
PLWZ	Palliser	5.60	221	Pn	Pn	17 11 22.2	-2.7
BHW	Baring Head	5.69	224	Pn	Pn	17 11 22.8	-3.3
SNZO	South Karori	5.72	226	Pn	Pn	17 11 26.5	0.0
OUZ	Omahuta	5.73	291		Pn	17 11 27.2	+0.6
OUZ	Omahuta	5.73	291	P	Pn	17 11 27.7	+1.1
BSWZ	Blackbirch Sta	6.46	227	Pn	Pn	17 11 33.2	-3.4
NNZ	Nelson	6.46	232		Pn	17 11 34.5	-2.2
CTZ	Chatham Island	6.76	160	P	Pn	17 11 48.1	+7.3
CTZ				S	Sn	17 12 58.8	+0.8
QRZ	Quartz Range	6.82	238	Pn	Pn	17 11 40.3	-1.3
THZ	Tophouse	7.06	230	Pn	Pn	17 11 43.3	-1.7
KHZ	Kahutara	7.10	224	Pn	Pn	17 11 44.0	-1.5
LTZ	Lake Taylor	8.05	226	Pn	Pn	17 11 56.4	-2.2
LTZ	Lake Taylor	8.05	226	P	Pn	17 11 59.6	+1.0
RAO	Raoul Island	8.32	12	Pn	Pn	17 12 09.5	+7.2
MQZ	McQueen's Vall	8.46	220	Pn	Pn	17 12 01.9	-2.2
OXZ	Oxford	8.53	224	Pn	Pn	17 12 03.9	-1.3
AS31	Alice Springs	41.72	276	P	P	17 17 50.2	-0.7
ASAR	Alice Springs	41.72	276	P	P	17 17 51.2	+0.2
	0.6nm,0.5s,baz=118,slow=7.5,SNR=22						
ASAR	Alice Springs	41.72	276	P	P	17 17 49.8	-1.2
WR0	Warramunga Arr	43.18	281	P	P	17 18 02.8	0.0
WB2	Warramunga Arr	43.33	281	P	P	17 18 04.3	+0.2
WB2				IAmb	IAmb	17 18 12.0	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	43.34	281	P	P	17 18 03.9	-0.3
	comp=Z,0.4nm,0.5s,baz=120,slow=7.7,SNR=5.7						
WRA	Warramunga Arr	43.34	281	IAmb	IAmb	17 18 04.6	
	comp=Z,0.1nm,1.1s						
WB0	Warramunga Arr	43.40	281	P	P	17 18 04.5	-0.2
WB0				IAmb	IAmb	17 18 32.7	
	comp=Z,7.5nm,1.4s						
FINES	FINESS Array B	151.02	334	PKPbc	PKPab	17 30 02.6	+1.1
	comp=Z,4.0nm,1.1s,baz=36,slow=2.6,SNR=3.5						

NOU 20 17:15:21.6, 35°.41S×179°.66E, h319^{km}, MLv4.5, Off E. Coast of N. Island, N.Z., Off east coast of North Island

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NEIC 20 17:18:40.9±1.2, 7°.49S±0°.08×127°.97E±0°.06, h155^{km}±8^{km}, mb4.7/4, Error ellipse: s-maj=12.2km s-min=9.0km az=186.0

IDC 20 17:18:40.4±1.9, 7°.67S×127°.97E, h158^{km}±26^{km}, mb2.8/1, mb1 3.6/6, mb1mx3.2/38, mbtmp4.0/6, Error ellipse: s-maj=25.0km s-min=19.1km az=126.0

ISC 20 17:18:39.5±0.7, 7°.75S±0°.06×128°.08E±0°.05, h150^{km}, n20, σ2^{s}.30/27, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.20	94	Pn	Pn	17 19 33.0	+3.5
SAUI				Sn	Sn	17 20 09.8	+1.7
SOEI	Soe	4.26	242		Pn	17 19 45.4	+2.0
BATI	Baumata	5.00	240	P	Pn	17 19 54.6	+1.6
	7.1nm,0.3s,baz=124,slow=4.3,SNR=12						
BATI				S	Sn	17 20 50.5	+0.3
	11nm,0.3s,baz=114,slow=24,SNR=14						
MMRI	Maumere	5.85	261	Pn	Pn	17 20 05.3	+1.1
MMRI				Sn	Sn	17 21 09.7	-0.7
FAKI	Fak Fak	6.34	41	Pn	Pn	17 20 10.9	0.0
FAKI				Sn	Sn	17 21 19.2	-3.3
SIJI	Sorong	7.54	25	P	Pn	17 20 27.2	+0.4
	1.0nm,0.3s,baz=26,slow=22,SNR=18						
FITZ	Fitzroy Crossi	10.56	193	P	Pn	17 21 07.6	+0.6
	1.0nm,0.3s,baz=20,slow=11,SNR=24						
FITZ				S	Sn	17 23 01.6	-2.3
	1.2nm,0.3s,baz=325,slow=21,SNR=6.3						
WB0	Warramunga Arr	13.43	153		Pn	17 21 45.4	+1.1
WRAB	Tennant Creek	13.55	154		P	17 21 47.9	-1.9
WRA	Warramunga Arr	13.56	154	P	Pn	17 21 46.9	+1.0
	0.7nm,0.3s,baz=329,slow=15,SNR=26						
WRA				S	Sn	17 24 11.9	-4.3
	1.6nm,0.3s,baz=331,slow=22,SNR=12						
WRA	Warramunga Arr	13.56	154		P	17 21 47.3	-2.5
WB2	Warramunga Arr	13.56	154		Pn	17 21 46.7	+0.7
WR0	Warramunga Arr	13.66	153		P	17 21 49.0	-2.0
AS31	Alice Springs	16.79	161	P	Pn	17 22 30.2	+4.3
ASAR	Alice Springs	16.79	161	P	Pn	17 22 28.8	+2.8
	0.9nm,0.3s,baz=342,slow=11,SNR=126						
ASAR				S	S	17 25 31.5	-1.2
	0.4nm,0.3s,baz=320,slow=22,SNR=7.3						
ASAR	Alice Springs	16.79	161	P	Pn	17 22 29.3	+3.3
KKM	Kota Kinabalu	18.10	319	P	P	17 22 37.9	-2.3
KKM				IAmb	IAmb	17 22 57.5	
	comp=Z,51nm,1.5s						
MYKOM	Kota Tinggi	25.95	290	P	P	17 23 59.6	+1.3
MYKOM				IAmb	IAmb	17 24 18.4	
	comp=Z,24nm,1.2s						
SANVU	Saraoutou	39.03	105	P	P	17 25 54.3	+2.4
MKAR	Makanchi Array	67.82	328	P	P	17 29 20.6	-0.8
	comp=Z,0.2nm,0.5s,baz=119,slow=6.3,SNR=2.0						

SOF 20 17:21:47.1, 42°.65N×26°.31E, h9^{km}, MD2.6

ISK 20 17:21:47.4, 42°.60N×26°.33E, h8^{km}, ML2.6/13

ISC 20 17:21:46.7±1.0, 42°.60N±0°.02×26°.34E±0°.02, h14^{km}±9^{km}, n47, σ1^{s}.14/54, 10C-13D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMB	Yambol	0.22	126	PG	Pb	17 21 52.3	-0.4
JMB				SG	Sg	17 21 55.7	+0.7
JMB	Yambol	0.22	126	*i* Pg	Pb	17 21 52.2	-0.4
SZH	Strazhica	0.73	336	*i* Pg	Pb	17 22 00.7	-0.6
EDRB	Edirne	0.81	158	PG	Pn	17 22 03.7	0.0
EDRB				SG	Sn	17 22 15.1	-0.4
DIM	Dimitrovgrad	0.81	228	*i* Pg	Pn	17 22 03.1	-0.6
PVL	Pavlikeni	0.96	310	*i* P	Pn	17 22 07.4	+1.6
PRD	Provadia	0.98	52	*i* P	Pn	17 22 06.4	+0.3
PLD	Plovdiv	1.31	248	PN	Pg	17 22 12.2	+0.3
PLD				SN	Sg	17 22 29.3	+0.4
PLD	Plovdiv	1.31	248	P	Pg	17 22 11.6	-0.3
PHSR	Pinarhisar	1.31	137	PN	Pg	17 22 12.5	+0.6
RZN	Rozhen	1.51	233	*i* P	Pg	17 22 15.5	-0.3
RDO	Rodhopi	1.57	203	PN	Pb	17 22 16.0	+0.4
PGB	Panagyurishte	1.60	269	*i* P	Pg	17 22 17.1	-0.5
ALN	Alexandroupoli	1.71	187	PN	Pb	17 22 18.4	+0.4
PSN	Preselentsi	1.73	51	P	Pb	17 22 17.0	-1.3
COPA	Copaceanca	1.74	332	⇑P	Pg	17 22 22.4	+2.3
CTYL	Yalikoy Yolu	1.84	127	PN	Pb	17 22 20.6	+0.5
ICOR	Ion Corvin	1.85	35	⇑P	Pg	17 22 21.6	-0.7
ENEZ	Enez	1.87	184	PN	Pb	17 22 20.5	-0.1
LEHL	Lehliu	1.91	10	⇑P	Pg	17 22 24.0	+0.7
ERIK	Erikli-Kesan	1.93	176	PN	Pb	17 22 21.9	+0.2
MAR4	Marsite Statio	1.95	158	PN	Pb	17 22 21.3	-0.8
SLVT	Silivri	1.96	134	PN	Pb	17 22 22.2	+0.1
VLAD	Vladila	1.99	315	⇑P	Pg	17 22 24.8	-0.1
VLAD				⇓S	Sg	17 22 51.7	+1.1
GZKV	Gazikoy-Tekird	1.99	158	PN	Pb	17 22 22.4	-0.3
SULR		2.08	358	⇑P	Pg	17 22 26.1	-0.5
CTKS	Kestanelik-??a	2.12	129	PN	Pb	17 22 24.3	-0.5
AMRR	Amara	2.14	19	⇑P	Pg	17 22 26.2	-1.5
HUMR	Humele	2.17	333	⇓P	Pg	17 22 27.5	-0.7
HUMR				⇓S	Sg	17 22 57.0	+0.7
MRMT	Marmara Adasi	2.21	154	PN	Pb	17 22 25.4	-1.0
LPK	Lapseki	2.25	172	PN	Pb	17 22 26.2	-0.9
VTS	Vitosha	2.29	272	⇓P	Pb	17 22 27.0	-1.0
VTS				⇓S	Sg	17 22 57.7	-2.7
TLBR	Topalu	2.31	32	⇓S	Sg	17 22 58.3	-2.6
KRBG	Karabiga-Canak	2.32	162	PN	Pb	17 22 27.2	-1.1
TIRR	Tirgusor	2.39	38	⇑P	Pb	17 22 28.6	-1.0
TIRR				⇑S	Sb	17 23 00.4	+1.5
KLYT	Kilyos	2.42	123	PN	Pn	17 22 27.8	+1.9
ISR	Istrita	2.52	3	⇓P	Pg	17 22 33.1	-2.0
ISK	Istanbul-Kandi	2.55	126	PN	Pb	17 22 30.2	-2.0
TPGR	Topolog	2.71	33	⇑P	Pb	17 22 34.8	-0.3
CFR	Carcaliu	2.89	26	⇓P	Pb	17 22 37.5	-0.5
MLR	Muntele Rosu	2.91	355	⇓P	Pb	17 22 39.4	+1.0
BISRR	Bisoca	2.96	5	⇓P	Pb	17 22 39.2	-0.1
VOIR		2.98	342	⇓P	Pb	17 22 39.9	+0.1
TLCR		3.15	34	⇑P	Pn	17 22 38.3	+2.4
STIP	Stip	3.22	255	*i* Pn	Pn	17 22 36.6	-0.2
PLOR	Plostina	3.26	4	⇓P	Pb	17 22 42.3	-2.0
VRI	Vrincioaia	3.28	5	⇓P	Pb	17 22 43.7	-1.0

IDC 20 17:29:04.7±1.0, 67°.13N×20°.87E, h0^{km}, mb1 3.0/4, mb1mx2.9/45, mbtmp3.0/4, ML2.3/4, Error ellipse: s-maj=15.3km s-min=7.9km az=112.0

NAO 20 17:29:04.3±0.8, 67°.16N×20°.94E, ML2.6

HEL 20 17:29:04.7±0.1, 67°.18N×20°.64E, h1^{km}, ML2.0, ML2.5(UPP), Confirmed Induced event

BER 20 17:29:06.1±3.6, 67°.13N×20°.88E, h0^{km}, ML2.1, ML2.6(NAO), Confirmed Induced event

KOLA 20 17:29:06.3, 67°.11N×21°.13E, h0^{km}, ML2.4, Kiruna Area, Sweden

ISC 20 17:29:03.1±0.7, 67°.15N±0°.03×20°.57E±0°.02, h0^{km}, n41, σ1^{s}.39/70, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.63	60	*i* P	Pg	17 29 15.4	+0.2
MASU				*i* S	Sg	17 29 23.5	0.0
RATU	Laukkuluspa	0.78	331	*i* P	Pg	17 29 18.2	+0.2
RATU				*i* S	Sg	17 29 28.3	+0.3
KUA	Kurravaara	0.81	354	*i* P	Pg	17 29 18.4	-0.3
KUA				*i* S	Sg	17 29 29.3	0.0
SALU	Saltoluokta	0.84	287	*i* P	Pb	17 29 20.1	-0.4
SALU				*i* S	Sb	17 29 31.6	-0.7
ERTU	Ertsjaerv	0.87	132	*i* P	Pg	17 29 20.2	+0.4
NIKU	Nikkaluokta	0.93	321	*e*P	Pb	17 29 21.2	-1.0
HARU	Harads	1.00	171	*e*P	Pg	17 29 22.9	+0.6
PAJU	Pajala	1.00	96	*e*P	Pg	17 29 22.1	-0.2
PAJU				*e*S	Sg	17 29 35.5	+0.2
LANU	Lannavaara	1.05	30	*e*P	Pg	17 29 22.6	-0.7
LANU				*e*S	Sg	17 29 36.1	-0.9
TOF	Tornio	1.84	124	*e*P	Pb	17 29 37.3	-0.4
TOF				*e*S	Sb	17 30 01.7	+0.6
TOF				MSG		17 30 03.6	
	comp=Z,9.0nm,0.1s						
KIF	Kilpisjarvi	1.87	3	Pn	Pb	17 29 37.5	-0.6
KIF				Sn	Sg	17 30 03.0	-0.1
KIF	Kilpisjarvi	1.87	3	*e*P	Pb	17 29 37.5	-0.6
KIF				*e*S	Sg	17 30 02.0	-1.0
KIF	Kilpisjarvi	1.87	3	*e*P	Pb	17 29 37.5	-0.6
KIF				*e*S	Sg	17 30 02.1	-1.0
FAUS	Fauske	2.07	279	*e*P	Pb	17 29 41.6	+0.1
FAUS				*e*S	Sg	17 30 08.7	-0.8
FAUS				IAML		17 30 11.4	
	comp=Z,45nm,0.3s						
KTK1	Kautokeino	2.12	27	Pn	Pb	17 29 41.1	-1.3
KTK1				Sn	Sn	17 30 07.1	+0.2
KTK1	Kautokeino	2.12	27	*e*P	Pb	17 29 41.5	-1.0
KTK1				*e*S	Sn	17 30 06.3	-0.6
KTK1				IAML		17 30 10.6	
	comp=Z,38nm,0.4s						
STEI	Steigen	2.19	293	*e*P	Pb	17 29 43.1	-0.5
STEI				IAML		17 30 19.2	
	comp=Z,14nm,0.5s						
STEI	Steigen	2.19	293	*e*P	Pb	17 29 42.1	-1.5
STEI				*e*S	Sb	17 30 10.9	-0.3
JETT	Jettan, Norway	2.42	359	Pn	Pn	17 29 44.8	+0.8
JETT				Pg	Pb	17 29 46.9	-0.6
BURU	Burvik	2.60	172	*e*P	Pn	17 29 48.4	+2.1
BURU				*e*S	Sn	17 30 20.7	+2.2
ARA0	ARCESS Array S	3.02	35	Pn	Pn	17 29 52.7	+0.6
	baz=209,slow=16						
ARA0				Sn	Sn	17 30 28.7	-0.2
	baz=210,slow=28						
ARA0	ARCESS Array S	3.02	35	Pn	Pn	17 29 52.7	+0.6
	baz=209,slow=16						
ARA0				Sn	Sn	17 30 28.7	-0.2
	baz=210,slow=28						
ARA0				IAML		17 30 39.9	
	comp=Z,6.2nm,0.5s						
ARCES	ARCESS Array B	3.02	35	Pn	Pn	17 29 53.0	+0.9
	baz=215,slow=13,SNR=62						
ARCES				Sn	Sn	17 30 30.1	+1.2
	baz=213,slow=23,SNR=8.1						
HAMF	Hammerfest	3.69	16	*e*P	Pn	17 30 03.6	+2.3
KU6	Riekki	3.89	103	MSG		17 31 05.8	
	comp=Z,3.1nm,0.2s						
VAF	Ylistaro	4.22	167	MSG		17 31 19.4	
	comp=Z,2.2nm,0.2s						
HEMU	Hemsoen	4.62	195	*e*S	Sn	17 31 08.5	+0.2
APA0	Apatity Array	4.82	79	Pn	Pn	17 30 16.1	-0.7
	baz=275,slow=10						
APA0				Sn	Sn	17 31 10.1	-3.2
	baz=270,slow=22						
APA0				Lg	Lg	17 31 30.0	
	baz=293,slow=37						
APA0	Apatity Array	4.82	79	Pn	Pn	17 30 16.1	-0.7
	baz=275,slow=10						
APA0				Sn	Sn	17 31 10.1	-3.2
	baz=270,slow=22						
APA0				Sg	Sb	17 31 30.0	+3.3
	baz=293,slow=37						
APA0	Apatity Array	4.82	79	P	Pn	17 30 16.1	-0.7
APA0				S	Sn	17 31 08.6	-4.7
FIA0	FINESS Array S	6.21	155	Pn	Pn	17 30 37.6	+1.8
	baz=341,slow=12						
FIA0				Sn	Sn	17 31 47.4	0.0
	baz=346,slow=28						
FIA0				Lg	Lg	17 32 16.4	
	baz=346,slow=37						
FIA0	FINESS Array S	6.21	155	Pn	Pn	17 30 37.6	+1.8
	baz=341,slow=12						
FINES	FINESS Array B	6.21	155	Pn	Pn	17 30 37.6	+1.8
	comp=Z,0.3nm,0.3s,baz=344,slow=13,SNR=12						
FINES				Sn	Sn	17 31 46.7	-0.7
	comp=Z,0.5nm,0.3s,baz=345,slow=22,SNR=6.4						
FINES				Lg	Lg	17 32 17.1	
	comp=Z,1.0nm,0.3s,baz=346,slow=29,SNR=8.2						
NB2	NORSAR Subarra	7.37	218	Pn	Pn	17 30 53.5	+1.6
	baz=26,slow=14						
NB2	NORSAR Subarra	7.37	218	Pn	Pn	17 30 53.5	+1.6
	baz=26,slow=14						
NOA	NORSAR Array B	7.37	218	Pn	Pn	17 30 52.7	+0.8
	comp=Z,0.0nm,0.3s,baz=32,slow=11,SNR=1.5						
NOA				Sn	Sn	17 32 13.9	-2.2
	comp=Z,0.0nm,0.3s,baz=33,slow=19,SNR=2.1						
NRA0	NORESS Array S	7.56	216	Pn	Pn	17 30 56.1	+1.7
	baz=30,slow=14						
NRA0				Sn	Sn	17 32 18.6	-2.0
	baz=39,slow=28						
NRA0	NORESS Array S	7.56	216	Pn	Pn	17 30 56.1	+1.7
	baz=30,slow=14						
NRA0				Sn	Sn	17 32 18.6	-2.0
	baz=39,slow=28						
HFS	Hagfors	7.67	207	Pn	Pn	17 30 55.8	-0.2
	comp=Z,0.1nm,0.3s,baz=18,slow=12,SNR=5.6						
HFS				Sn	Sn	17 32 22.1	-1.4
	comp=Z,0.3nm,0.3s,baz=33,slow=24,SNR=1.7						
HFS	Hagfors	7.67	207	Pn	Pn	17 30 55.9	-0.1
	baz=30,slow=12						
HFS				Sn	Sn	17 32 21.7	-1.8
	baz=15,slow=28						
HFS	Hagfors	7.67	207	Pn	Pn	17 30 55.9	-0.1
	baz=30,slow=12						
HFS				Sn	Sn	17 32 21.7	-1.8
	baz=15,slow=28						

SJA 20 17:34:21.0±0.5, 22°.37S×71°.96W, h10^{km}, MW4.6

IDC 20 17:34:39.2±0.4, 23°.35S×70°.52W, h0^{km}, mb4.8/25, mb1 4.9/30, mb1mx4.8/43, mbtmp4.8/30, ML4.4/5, MS4.4/16, Ms1 4.4/16, ms1mx4.1/29, Error ellipse: s-maj=15.7km s-min=12.1km az=57.0

NEIC 20 17:34:40.6, 23°.35S×70°.91W, h31^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.61; $M_{\theta\theta}$0.30; $M_{\phi\phi}$-2.91; $M_{r\theta}$-0.12; $M_{\theta\phi}$-1.49; $M_{\phi r}$0.52; Fault plane solution: $M_0$3.19000×10^{16} NP1:ϕ_s211.13000°, δ41.76000°, λ104.23000°. NP2:ϕ_s12.35000°, δ49.79000°, λ77.62000°. Principal axes: T 2.6920, Plg80.0000°, Azm224.0000°; N 0.8341, Plg9.0000°, Azm20.0000°; P -3.5261, Plg4.0000°, Azm111.0000°;

MOS 20 17:34:41.9±1.8, 23°.37S×70°.72W, h33^{km}, mb5.4/7 Error ellipse: s-maj=11.5km s-min=7.0km az=97.9

NEIC 20 17:34:41.2±2.8, 23°.35S±0°.04×70°.88W±0°.06, h21^{km}±3^{km}, mb5.3/168, Mwr4.9/40, Mww5.2, ML5.2(GUC), Error ellipse: s-maj=8.5km s-min=5.1km az=99.0

NEIC 20 17:34:43, 23°.33S×71°.01W, h36^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}5.23; $M_{\theta\theta}$2.04; $M_{\phi\phi}$-7.27; $M_{r\theta}$-0.94; $M_{\theta\phi}$-3.96; $M_{\phi r}$-2.00; Fault plane solution: $M_0$7.92000×10^{16} NP1:ϕ_s14.00000°, δ36.00000°, λ81.00000°. NP2:ϕ_s205.00000°, δ54.00000°, λ96.00000°. Principal axes: T 5.5819, Plg80.0000°, Azm141.0000°; N 3.4859, Plg5.0000°, Azm21.0000°; P -9.0679, Plg9.0000°, Azm290.0000°;

GUC 20 17:34:43.5±0.9, 23°.41S×70°.46W, h47^{km}±5^{km}, ML5.2

BJI 20 17:34:44.0±0.0, 23°.40S×70°.70W, h30^{km}, mB5.3/7, Ms5.4/10, Ms7 5.1/10

GCMT 20 17:34:50.2±0.2, 23°.22S±0°.01×71°.01W±0°.01, h34^{km}, MW5.1/102, Moment Tensor Solution. s52,c66; s102,c140; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.44±.22; $M_{\theta\theta}$2.44±.16; $M_{\phi\phi}$-6.88±.17; $M_{r\theta}$-0.24±.17; $M_{\theta\phi}$-2.30±.12; $M_{\phi r}$-2.14±.19; Best double couple: $M_0$6.31900×10^{16} NP1:ϕ_s22.00000°, δ36.00000°, λ103.00000°. NP2:ϕ_s187.00000°, δ55.00000°, λ81.00000°. Principal axes: T 4.8460, Plg78.0000°, Azm66.0000°; N 2.9450, Plg7.0000°, Azm192.0000°; P -7.7910, Plg10.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

VAO 20 17:34:50.1±0.8, 23°.01S×70°.30W, h64^{km}±5^{km}, mb5.1

ISC 20 17:34:43.0±0.8, 23°.39S±0°.03×70°.79W±0°.05, h32^{km}±5^{km}, n709, σ1^{s}.51/672, mb5.3/115, MS4.5/19, 20C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	IPOC Station P	0.25	119	⇓*i*P	Pb	17 34 50.5	+0.5
PB10				*i* S	Sb	17 34 55.1	+0.4
PB10	IPOC Station P	0.25	119		Pb	17 34 50.4	+0.4
PB10				Sg	Sn	17 34 55.5	+0.2
PB04	IPOC Station P	1.21	29	⇑*i*P	Pn	17 35 03.5	-0.4
PB04				*i* S	Sn	17 35 17.7	-1.6
PB04	IPOC Station P	1.21	29		Pn	17 35 03.2	-0.7
PB14	IPOC Station P	1.28	164	⇑*i*P	Pn	17 35 05.3	+0.3
PB14				*i* S	Sn	17 35 21.4	+0.2
PB14	IPOC Station P	1.28	164	Pn	Pn	17 35 05.1	+0.1
PB14				Sn	Sn	17 35 20.6	-0.6
PB03	IPOC Station P	1.65	36	*e*P	Pn	17 35 09.7	-0.2
PB03				*i* S	Sn	17 35 28.5	-1.6
PB07	IPOC Station P	1.86	27	*i* P	Pn	17 35 12.8	-0.1
PB07				*i* S	Sn	17 35 34.4	-0.9
PB07				IAML		17 35 50.3	
	comp=N,21μm,0.6s						
PB07	IPOC Station P	1.86	27	Pn	Pn	17 35 12.7	-0.1
LVC	Limon Verde	1.90	66	Pn	Pn	17 35 14.2	+0.6
	comp=N,425nm,0.3s,baz=250,slow=12,SNR=850						
LVC				Lg	Lg	17 35 35.8	
	comp=N,1μm,0.3s,baz=247,slow=3.3,SNR=24						
LVC				LR	LR	17 35 56.4	
	comp=N,14μm,19.0s,baz=250,slow=47						
LVC	Limon Verde	1.90	66	*e*P	Pn	17 35 14.0	+0.5
LVC				*e*S	Sn	17 35 36.4	-0.2
LVC	Limon Verde	1.90	66	*e*P	Pn	17 35 14.1	+0.5
GO02	Mina Guanaco	2.07	148	⇑*i*P	Pn	17 35 17.7	+1.8
GO02				*i* S	Sn	17 35 42.4	+1.6
GO02				IAML		17 35 44.6	
	comp=N,38μm,0.4s						
GO02	Mina Guanaco	2.07	148	Pn	Pn	17 35 17.7	+1.8
PB09	IPOC Station P	2.14	42	IAML		17 35 55.0	
	comp=E,15μm,0.6s						
PB09	IPOC Station P	2.14	42	Pn	Pn	17 35 17.2	+0.5
PB02	IPOC Station P	2.22	22	⇑*i*P	Pn	17 35 17.8	0.0
PATCX	Punta Patache	2.63	13	⇑*i*P	Pn	17 35 22.9	-0.5
PATCX	Punta Patache	2.63	13	Pn	Pn	17 35 22.6	-0.7
AC01	Pan de Azucar	2.75	176	⇑*i*P	Pn	17 35 24.4	-0.6
AC01				*e*S	Sn	17 35 56.1	-1.0
AC01	Pan de Azucar	2.75	176	Pn	Pn	17 35 24.5	-0.4
TA01	Diego Aracena	2.87	11	⇑*i*P	Pn	17 35 25.8	-0.8
TA01				IAML		17 36 24.3	
	comp=E,6μm,0.6s						
TA01	Diego Aracena	2.87	11	Pn	Pn	17 35 25.6	-1.0
TA02	Huaiquique	3.17	11	*e*P	Pn	17 35 30.0	-0.7
HMBC	Humberstone	3.21	15	*e*P	Pn	17 35 32.1	+0.7
HMBC				*e*S	Sn	17 36 09.6	+0.9
HMBC				IAML		17 36 30.5	
	comp=N,5μm,0.7s						
PB08	IPOC Station P	3.58	25	*i* P	Pn	17 35 37.3	+0.6
PB08				*e*S	Sn	17 36 16.1	-1.9
PB08				IAML		17 36 42.2	
	comp=N,3μm,0.7s						
PB08	IPOC Station P	3.58	25	Pn	Pn	17 35 37.1	+0.4
AC02	Maricunga	3.74	157	⇑*e*P	Pn	17 35 39.5	+0.5
AC02				*e*S	Sn	17 36 22.0	-0.3
AC02	Maricunga	3.74	157		Pn	17 35 41.2	+2.2
PSGC	Pisagua	3.83	9	⇑*i*P	Pn	17 35 39.2	-0.7
PSGCX	Pisagua	3.83	9	Pn	Pn	17 35 39.1	-0.8
GO03	Copiap	4.21	173	Pn	Pn	17 35 44.6	-0.5
MNMC	Minye Minye	4.38	15	*e*P	Pn	17 35 48.1	+0.4
MNMC				*e*S	Sn	17 36 38.8	+0.9
MNMC	Minye Minye	4.38	15	Pn	Pn	17 35 47.1	-0.6
AC04	Llanos de Chal	4.80	183	Pn	Pn	17 35 51.2	-1.9
AP01	Chacalluta	5.01	5	*e*P	Pn	17 35 55.8	-0.3
AP01	Chacalluta	5.01	5		Pn	17 35 55.3	-0.8
PB16	IPOC Station P	5.17	14	Pn	Pn	17 35 58.8	-0.1
AC05	El Transito	5.44	175		Pn	17 36 01.7	-0.4
LCO	Las Campanas	5.59	179	P	Pn	17 36 02.5	-1.8
LCO	Las Campanas	5.59	179	Pn	Pn	17 36 02.5	-1.8
AGUA	GUANDACOL	6.41	162	*i* P	Pn	17 36 17.4	+2.0
AGUA				*e*S	Sb	17 37 42.6	-7.4
CO01	Juntas del Tor	6.59	175		Pn	17 36 17.3	-0.6
GO04	Tololo Observa	6.75	180		Pn	17 36 18.5	-1.7
AROD	Rodeo	6.85	170	*i* P	Pn	17 36 22.7	+1.2
AROD				*e*S	Sn	17 37 51.6	+13
ACCO	Cerro Coronel	7.33	168	*i* P	Pn	17 36 29.4	+1.2
ACCO				*e*S	Sn	17 38 04.8	+14
CO03	El Pedregal	7.42	179	Pn	Pn	17 36 27.5	-1.7
CO03					Sn	17 37 50.1	-2.2
CO02	Combarbal	7.78	181		Pn	17 36 32.1	-2.2
RTLL	Cerro Villicun	8.17	166	*i* P	Pn	17 36 39.3	-0.1
ZON	Zonda	8.33	167	P	Pn	17 36 41.9	+0.1
ZON	Zonda	8.33	167	Pn	Pn	17 36 41.9	+0.1
RTLS	Leoncito	8.48	171	*i* P	Pn	17 36 43.8	-0.1
RTCV	Cerro Valdivia	8.67	167	*i* P	Pn	17 36 46.1	-0.2
AUSP	Uspallata	8.88	172	*i* P	Pn	17 36 49.2	-0.3
ASAL	Salagasta	9.32	170	*i* P	Pn	17 36 54.4	-1.0
VA03	San Esteban	9.34	179		Pn	17 36 53.9	-1.7
ROC1	El Roble	9.55	181		Pn	17 36 56.2	-2.4
ARCO	CERRO ARCO	9.55	171	*i* P	Pn	17 36 57.2	-1.3
TCA	Tanti	9.64	147	*i* P	Pn	17 36 58.2	-1.4
PEL	Peldehue	9.71	179	P	Pn	17 36 58.1	-2.6
PEL	Peldehue	9.71	179	Pn	Pn	17 36 58.1	-2.6
AAGR	Agrelo	9.81	170	*i* P	Pn	17 36 59.5	-2.5
MT02	Curacav	9.83	182		Pn	17 36 59.0	-3.3
MT05	Renca	9.96	180	Pn	Pn	17 37 03.9	-0.1
MRA	San Martin	10.04	155	*i* P	Pn	17 37 04.3	-0.9
BO02	Sierra Bellavi	11.36	180	Pn	Pn	17 37 19.7	-3.5
RFA	San Rafael	11.52	170	*i* P	Pn	17 37 23.6	-1.7
SIV	San Ignacio	11.74	53	Pn	Pn	17 37 26.0	-2.5
	comp=N,3.4nm,0.3s,baz=256,slow=12,SNR=64						
H03N1	Juan Fernandez	12.29	214	T	T	17 49 57.7	
	baz=40,slow=72,SNR=265						
H03N2	Juan Fernandez	12.30	214	T	T	17 50 17.2	
	baz=40,slow=72,SNR=1533						
H03N3	Juan Fernandez	12.31	214	T	T	17 50 15.7	
	baz=40,slow=72,SNR=1655						
VA04	Juan Fernndez	12.41	213	Pn	Pn	17 37 34.8	-2.7
CPUP	Villa Florida	12.56	106	Pn	Pn	17 37 38.3	-1.3
	comp=N,0.2nm,0.3s,baz=296,slow=11,SNR=6.5						
CPUP				LR	LR	17 43 09.7	
	comp=N,5μm,18.1s,baz=284,slow=41						
CPUP	Villa Florida	12.56	106	P	Pn	17 37 39.0	-0.6
CPUP	Villa Florida	12.56	106	Pn	Pn	17 37 39.0	-0.6
CPUP	Villa Florida	12.56	106	*e*P	Pn	17 37 41.5	+1.8
H03S3	Juan Fernandez	12.60	213	T	T	17 50 36.3	
	baz=40,slow=74,SNR=37						
H03S1	Juan Fernandez	12.61	213	T	T	17 50 33.5	
	baz=40,slow=74,SNR=39						
H03S2	Juan Fernandez	12.62	213	T	T	17 50 31.1	
	baz=40,slow=74,SNR=48						
NNA	Nana	12.72	332	Pn	Pn	17 37 43.5	+1.6
	comp=N,5.9nm,0.3s,baz=123,slow=13,SNR=4.3						

NNA				Sn	Sn	17 39 59.7	-2.9
	comp=N,11nm,0.3s,baz=196,slow=18,SNR=6.5						
NNA				LR	LR	17 42 00.6	
	comp=N,1µm,21.6s,baz=166,slow=34						
NNA	Nana	12.72	332	ceP	Pn	17 37 43.6	+1.7
NNA				pmax	pmax		
	comp=Z,30nm,0.7s						
NNA	Nana	12.72	332	Pn	Pn	17 37 40.3	-1.6
BI02	San Fabin de	13.23	182	Pn	Pn	17 37 46.0	-2.7
PTLB	Pontes e Lacer	13.53	56	eP	Pn	17 37 51.3	-1.6
BI03	Tigo	13.54	188	Pn	Pn	17 37 51.1	-1.8
ITQB	Itaqui	14.13	119	eP	P	17 38 06.3	-1.8
ETMB	Extrema	14.19	19	eP	Pn	17 37 59.2	-2.7
VILB	Vilhena	14.45	46	eP	Pn	17 38 03.7	-1.8
LC01	Cunco	15.48	183		Pn	17 38 17.8	-1.4
CZSB	Cruzeiro do Su	15.68	353	eP	Pn	17 38 22.9	+1.1
PP1B	Ponte de Pedra	15.97	72	eP	Pn	17 38 22.3	-3.2
LPA	La Plata	16.04	139	eP	Pn	17 38 28.0	+1.8
LPA				PP	sP	17 39 19.8	+39
LPA				S	Sn	17 41 20.8	-2.2
LPA				SS	SnSn	17 41 43.0	+6.8
LPA				SSS	SSS	17 42 50.6	
LPA				PCP	PcP	17 43 24.6	+2.8
LPA				SCS	ScS	17 50 29.3	-3.5
LPA				PKIKP	PKiKP	17 51 16.4	+0.6
LPA				SKIKP		17 54 41.3	
LPA				SKIKS		17 58 21.8	
SAML	Samuel	16.11	28	P	Pn	17 38 24.8	-2.4
SAML				pmax	pmax		
	comp=Z,24nm,0.8s						
SAML	Samuel	16.11	28		Pn	17 38 24.8	-2.4
SAML	Samuel	16.11	28	eP	Pn	17 38 25.1	-2.1
TRCB	Terra Rica	16.72	92	eP	Pn	17 38 35.1	+0.1
CPSB	Cacapava Do Su	16.97	118	eP	Pn	17 38 39.0	+1.0
PTGB	Pitanga	17.15	98	eP	P	17 38 42.0	0.0
PLCA	Paso Flores	17.29	179	P	Pn	17 38 42.1	0.0
	comp=Z,0.8nm,0.3s,baz=351,slow=11,SNR=19						
PLCA				LR	LR	17 45 38.4	
	comp=Z,671nm,19.8s,baz=4.5,slow=38						
PLCA	Paso Flores	17.29	179	P	Pn	17 38 41.4	-0.7
PLCA				pmax	pmax		
	comp=Z,143nm,1.5s						
PLCA	Paso Flores	17.29	179		Pn	17 38 41.4	-0.7
ITAB	Concordia	17.30	107	eP	P	17 38 44.7	+1.4
ATAH	Atahualpa	17.74	334	P	P	17 38 50.6	+1.8
	comp=Z,0.3nm,0.3s,baz=174,slow=7.9,SNR=12						
ATAH				S	S	17 42 13.2	+1.5
	comp=Z,0.6nm,0.3s,baz=360,slow=3.6,SNR=5.5						
CNLB	Canela	18.80	113	eP	Pn	17 39 02.0	+1.3
LL01	San Ignacio de	18.98	184		P	17 38 60.0	-1.8
ITRB	Iturama	19.35	83	eP	P	17 39 05.0	-1.1
ARAG	Araguaiana, MT	19.44	70	eP	P	17 39 06.7	-0.3
FRTB	Fartura	19.49	94	eP	P	17 39 08.2	+0.6
GO07	Milladeo Hill,	19.81	186	P	P	17 39 11.6	+0.7
GO07				IAmb	IAmb	17 39 21.7	
	comp=Z,93nm,0.6s						
BB19B	Bebedouro	20.73	88	eP	P	17 39 19.6	-1.6
SPB	Sao Paulo	21.42	95	P	P	17 39 26.3	-2.2
SPB	Sao Paulo	21.42	95	eP	P	17 39 27.2	-1.2
PET01	Itanhaem-SP	21.52	97	eP	P	17 39 28.7	-0.9
SNDB	Serra Nova Dou	21.74	62	eP	P	17 39 29.9	-2.1
IPMB	Ipameri, GO	21.79	80	eP	P	17 39 30.7	-1.8
VAO	Valinhos	21.90	94	eP	P	17 39 32.5	-1.2
NPGB	Novo Progresso	22.00	45	eP	P	17 39 33.4	-1.4
MACA	Manacapuru-AM	22.36	27	eP	P	17 39 38.6	0.0
BDFB	Brasilia	22.79	74	P	P	17 39 40.9	-2.4
	comp=Z,14nm,0.7s,baz=238,slow=10,SNR=15						
BDFB				LR	LR	17 49 56.6	
	comp=Z,698nm,18.5s,baz=254,slow=41						
BDFB	Brasilia	22.79	74	P	P	17 39 40.6	-2.7
BDFB				pmax	pmax		
	comp=Z,67nm,1.0s						
BDFB	Brasilia	22.79	74	P	P	17 39 40.6	-2.7
PARB	Paraibuna	23.10	95	eP	P	17 39 47.1	+0.7
ITTB	Itaituba	23.86	40	eP	P	17 39 52.1	-1.6
PEXB	Peixe	24.14	66	eP	P	17 39 54.8	-1.7
BSCB	Bom Sucesso	24.20	89	eP	P	17 39 56.8	-0.2
ESAR	Angra dos Reis	24.21	94	eP	P	17 39 58.0	+1.0
PTGA	Pitinga	24.86	27	P	P	17 40 02.3	-0.5
	comp=Z,13nm,0.6s,baz=205,slow=11,SNR=24						
PTGA	Pitinga	24.86	27	P	P	17 40 02.6	-0.2
VAS01	Vassouras-RJ	25.21	93	eP	P	17 40 05.9	-0.3
GCUF	Volcan Galeras	25.29	344	eP	P	17 40 10.5	+3.1
MACC	Macarena, Meta	25.56	353	eP	P	17 40 07.3	-1.9
GARC	Garzon, Huila	25.84	349	eP	P	17 40 14.0	+2.0
PCON	Cinco Dias	26.14	347	eP	P	17 40 20.0	+4.9
DUB01	Friburgo-RJ	26.22	93	eP	P	17 40 13.8	-1.5
JANB	Januaria	26.30	76	eP	P	17 40 14.4	-1.7
BETC	Betania	26.31	349	eP	P	17 40 19.1	+3.0
PRPB	Parauapebas	26.47	53	eP	P	17 40 16.7	-0.8
SMTB	Santa Maria do	26.50	61	eP	P	17 40 17.0	-0.8
MARP	Paez Belalcaza	26.56	348	eP	P	17 40 20.9	+2.3
MALB	Monte Alegre	26.74	39	eP	P	17 40 18.6	-1.4
SDBA	SAO DESIDERIO	26.90	71	eP	P	17 40 20.6	-0.8
ORTC	Ortega, Tolima	27.48	350	eP	P	17 40 28.9	+2.3
VILC	Villavicencio,	27.48	354	eP	P	17 40 28.7	+2.0
YOTC	Yotoco, Valle	27.75	348	eP	P	17 40 30.2	+1.1
CHIC	Chingaza	28.00	354	eP	P	17 40 32.9	+1.2
ANIL	Santa Ana	28.08	350	eP	P	17 40 34.5	+2.2
TOLC	Tolima	28.16	350	eP	P	17 40 34.4	+1.4
ROSC	El Rosal	28.27	353	P	P	17 40 35.8	+1.7
	comp=Z,11nm,0.5s,baz=163,slow=8.2,SNR=5.6						
ROSC				LR	LR	17 52 48.2	
	comp=Z,725nm,21.1s,baz=196,slow=38						
ROSC	El Rosal	28.27	353	P	P	17 40 31.3	-2.8
ROSC				pmax	pmax		
	comp=Z,18nm,0.7s						
ROSC	El Rosal	28.27	353	P	P	17 40 31.3	-2.8
RREF	El Recreo	28.47	350	eP	P	17 40 39.1	+2.9
PLMC	San Jos del P	28.63	349	eP	P	17 40 38.4	+1.5
GUY2C	Guyana, Caldas	28.79	351	eP	P	17 40 41.0	+2.2
NORC	Norcasia	29.05	352	eP	P	17 40 41.5	+0.8
RUSC	La Rusia	29.19	355	eP	P	17 40 43.6	+1.2
MCPB	Macapa, AP	29.24	41	eP	P	17 40 42.4	+0.1
CBOC	Ciudad Bolivar	29.52	349	eP	P	17 40 47.7	+2.8
HELC	Santa Helena	29.77	350	eP	P	17 40 48.2	+0.9
EFI	East Falkland	29.89	164	P	P	17 40 46.2	-1.4
EFI				pmax	pmax		
	comp=Z,107nm,1.5s						
EFI	East Falkland	29.89	164	P	P	17 40 46.2	-1.4
EFI				IAmb	IAmb	17 40 51.6	
	comp=Z,107nm,1.4s						
BARC	Barichara	29.89	355	eP	P	17 40 48.6	+0.3
PTBC	PUERTO BERRIO,	29.96	353	eP	P	17 40 47.9	-0.8
SOLC	Bahia Solano	30.14	347	eP	P	17 41 00.1	+10
TMAB	Tom-Au,PA,Br	30.33	50	eP	P	17 40 52.0	0.0
BRRC	Barranca, Sant	30.45	354	eP	P	17 40 52.4	-0.5
PAMC	Pamplona, Colo	30.60	356	eP	P	17 41 00.0	+5.2
DBBC	Dabeiba	30.69	349	eP	P	17 40 57.2	+2.1
ZARC	Zaragoza, Cauc	30.95	352	eP	P	17 40 57.5	+0.1
GDU01	Guandu, BA	31.05	78	eP	P	17 40 57.4	-1.0
UREC	San Jos de Ur	31.30	351	eP	P	17 41 00.8	+0.3
SDV	Santo Domingo	32.08	0	P	P	17 41 06.2	-1.3
SDV	Santo Domingo	32.08	0	eP	P	17 41 07.6	+0.1
SMLC	San Martn de	32.16	354	eP	P	17 41 06.8	-1.2
MOTC	Monteria, Cord	32.33	351	eP	P	17 41 10.0	+0.5
SJCC	San Jacinto, C	33.36	352	eP	P	17 41 19.2	+0.6
RPN	Rapa Nui	34.97	256	P	P	17 41 35.7	+3.3
	comp=Z,20nm,0.7s,baz=148,slow=3.3,SNR=3.6						
NBMO	Morrinhos-CE	35.81	61	eP	P	17 41 39.0	-0.8
NBPA	Parau_RN	36.86	67	eP	P	17 41 48.5	-0.3
SVB	Belmont	37.62	15	P	P	17 41 54.7	-0.4
RCBR	Riachuelo	37.85	68	P	P	17 41 56.7	-0.5
RCBR				pmax	pmax		
	comp=Z,114nm,1.0s						
RCBR	Riachuelo	37.85	68	P	P	17 41 56.7	-0.5
RCBR	Riachuelo	37.85	68	eP	P	17 41 56.6	-0.6
NBPV	Pedro Velho	38.07	69	eP	P	17 41 57.9	-1.2
FDF	Fort de France	39.05	15	P	P	17 42 04.9	-2.2
FDF				pmax	pmax		
	comp=Z,44nm,0.7s						
FDF	Fort de France	39.05	15	P	P	17 42 04.9	-2.2
FDF				IAmb	IAmb	17 42 08.0	
	comp=Z,44nm,0.7s						
HOPE	Hope Point	40.11	149	P	P	17 42 16.3	+0.8
HOPE				pmax	pmax		
	comp=Z,62nm,1.1s						
HOPE	Hope Point	40.11	149	P	P	17 42 16.3	+0.8
HOPE				IAmb	IAmb	17 42 18.6	
	comp=Z,62nm,1.1s						
ICMP	Isla Caja de M	41.24	6	P	P	17 42 23.4	-1.8
CRPR	Cabo Rojo, PR	41.30	5	P	P	17 42 23.1	-2.7
CRPR				PP	PP	17 44 00.2	-1.4
OBIP	Obispado Ponce	41.38	6	P	P	17 42 24.8	-1.7
OBIP				IAmb	IAmb	17 42 28.0	
	comp=Z,55nm,0.8s						
PDPR	Patillas Dam,	41.42	7	P	P	17 42 25.0	-1.7
SJG	San Juan	41.50	7	P	P	17 42 26.2	-1.2
	comp=Z,65nm,0.8s,baz=228,slow=2.5						
SJG	San Juan	41.50	7	P	P	17 42 25.3	-2.0
SJG				pmax	pmax		
	comp=Z,62nm,0.9s						
SJG	San Juan	41.50	7	P	P	17 42 25.3	-2.0
SJG				IAmb	IAmb	17 42 27.0	
	comp=Z,62nm,0.8s						
MPR	Mayaguez	41.50	5	P	P	17 42 26.1	-1.2
MPR				IAmb	IAmb	17 42 27.4	
	comp=Z,63nm,1.0s						
MTP	Monte Pirata	41.55	8	P	P	17 42 25.7	-2.1
HUMP	Col San Antoni	41.56	7	P	P	17 42 25.8	-2.1
CBYP	Canovanas	41.69	7	P	P	17 42 27.5	-1.5
CBYP				IAmb	IAmb	17 42 28.5	
	comp=Z,82nm,0.9s						
CUPR	Culebra, Puert	41.79	8	P	P	17 42 27.9	-1.8
MTDJ	Mount Denham	41.89	350	P	P	17 42 30.3	-0.4
MTDJ				IAmb	IAmb	17 42 33.7	
	comp=Z,51nm,0.8s						
CMIG	Matias Romero	46.62	328	P	P	17 43 10.2	+1.7
	comp=Z,0.9nm,0.3s,baz=137,slow=5.3,SNR=6.7						
TIGA	Tifton	55.88	347	P	P	17 44 18.1	+0.4
	baz=166						
352A	Blakely	56.22	345	P	P	17 44 19.3	-0.8
158A	Hollywood	56.53	350	P	P	17 44 23.4	+1.0
	baz=170						
NHSC	New Hope	56.89	351	P	P	17 44 26.0	+1.2
	baz=170						
Z59A	Georgetown, SC	56.90	352	P	P	17 44 25.9	+1.0
	baz=171						
250A	Grady	57.02	344	P	P	17 44 24.3	-1.5
250A				IAmb	IAmb	17 44 27.1	
	comp=Z,35nm,0.9s						
BELA	Belgrano 2	57.13	171	P	P	17 44 26.8	+0.6
Y60A	Bolivia	57.52	353	P	P	17 44 30.2	+1.0
	baz=172						
Y58A	Scranton	57.60	351	P	P	17 44 30.8	+0.9
	baz=170						
GOGA	Godfrey	57.77	347	P	P	17 44 31.3	+0.3
	baz=166						
Z51A	Franklin	58.04	346	P	P	17 44 31.8	-1.2
X60A	Albert Glenn T	58.05	353	P	P	17 44 34.2	+1.2
	baz=172						
X59A	McDuffie Farm,	58.12	352	P	P	17 44 34.5	+1.0
	baz=172						
LRAL	Lakeview Retre	58.20	344	P	P	17 44 34.3	+0.2
	baz=163,SNR=6.9						
LRAL	Lakeview Retre	58.20	344	P	P	17 44 33.8	-0.4
HKT	Hockley	58.24	334	i P	P	17 44 34.8	+0.4
HKT				pmax	pmax		
	comp=Z,12nm,1.1s						
Y52A	Lilburn	58.33	347	IAmb	IAmb	17 44 36.2	
	comp=Z,18nm,0.8s						
833A	Chaparral WMA,	58.35	330	P	P	17 44 35.2	0.0
	baz=149,SNR=5.0						
VBMS	Vicksburg	58.43	340	P	P	17 44 36.4	+0.7
	baz=159						
BIRD	Birdtown, Kers	58.45	351	IAmb	IAmb	17 44 37.7	
	comp=Z,31nm,0.8s						
W60A	Pink Hill	58.50	353	P	P	17 44 37.3	+1.2
	baz=173						
RKT	Rikitea	58.50	256	eS	S	17 52 33.8	-4.5
	comp=Z,543nm,28.8s						
RKT				eLQ	LQ	17 59 09.0	
	comp=Z,532nm,32.2s						
RKT				eLR	LR	18 01 39.9	
	comp=Z,855nm,25.2s						
W61A	Ground Anchor	58.55	354	P	P	17 44 37.4	+1.0
	baz=173						
Z47A	Carrollton	58.64	343	P	P	17 44 36.4	-0.8
Z47A				IAmb	IAmb	17 44 38.4	
	comp=Z,25nm,0.7s						
W58A	Raeford	58.64	352	P	P	17 44 38.1	+1.0
	baz=171,SNR=5.3						
W59A	Clinton	58.69	353	P	P	17 44 38.2	+0.8
	baz=172						
V62A	Hyde County Ai	58.84	355	P	P	17 44 39.1	+0.6
	baz=175						
VNA3	Neumayer Olymp	58.86	161	P	P	17 44 39.1	+0.8
W57A	Gilead	58.88	351	P	P	17 44 39.4	+0.6
	baz=170						
W56A	Indian Trail	58.95	351	P	P	17 44 39.8	+0.6
	baz=170,SNR=6.7						
KMSC	Kings Mountain	59.07	350	P	P	17 44 40.8	+0.6
	baz=169,SNR=5.3						
KMSC	Kings Mountain	59.07	350	P	P	17 44 39.9	-0.3
KMSC				IAmb	IAmb	17 44 41.9	
	comp=Z,29nm,1.1s						
VNA1	Neumayer--Stat	59.10	160	P	P	17 44 41.1	+1.1
V60A	Jim Taylor Roa	59.16	354	P	P	17 44 41.9	+1.2
	baz=173						
V59A	Middlesex	59.26	353	P	P	17 44 42.5	+1.1
	baz=172,SNR=7.0						
FPAL	Fort Paine	59.31	346	IAmb	IAmb	17 44 43.0	
	comp=Z,32nm,1.1s						
V58A	Windy Hill, Pi	59.39	352	P	P	17 44 42.8	+0.4
	baz=171,SNR=5.1						
VNA2	Neumayer--Watz	59.46	160	P	P	17 44 43.5	+1.0
	baz=282,slow=9.3						
W52A	Murphy	59.49	348	P	P	17 44 43.3	+0.2
W52A				IAmb	IAmb	17 44 44.7	
	comp=Z,31nm,0.9s						
V57A	Coltrane Farms	59.57	352	P	P	17 44 44.1	+0.5
	baz=171,SNR=6.1						
V56A	Mocksville	59.59	351	P	P	17 44 44.5	+0.8
	baz=170,SNR=11						
U61A	Possum Corner	59.64	355	P	P	17 44 45.0	+1.0
	baz=174						
435B	Jarrell	59.69	333	P	P	17 44 44.8	+0.3
	baz=152						
U59A	Littleton	59.79	353	P	P	17 44 46.2	+1.1
	baz=173,SNR=6.6						
U59A	Littleton	59.79	353	P	P	17 44 44.8	-0.2
U59A				IAmb	IAmb	17 44 47.3	
	comp=Z,32nm,0.9s						
V53A	Saluda	59.84	349	P	P	17 44 44.5	-1.0
U60A	Pendleton	59.84	354	P	P	17 44 46.2	+0.8
	baz=173						
W50A	Signal Mountai	59.88	346	P	P	17 44 45.6	-0.2
U58A	Oxford	59.91	353	P	P	17 44 46.7	+0.8
	baz=172						
TKL	Tuckaleechee C	60.00	348	P	P	17 44 47.2	+0.6
	comp=Z,28nm,0.8s,baz=162,slow=8.4,SNR=21						
TKL	Tuckaleechee C	60.00	348	IAmb	IAmb	17 44 47.8	
	comp=Z,32nm,0.8s						
U57A	Blanch	60.05	352	P	P	17 44 47.7	+0.8
	baz=171,SNR=7.0						
U56A	King	60.10	351	P	P	17 44 48.1	+0.8
	baz=170						
U56A	King	60.10	351	IAmb	IAmb	17 44 49.5	
	comp=Z,28nm,0.8s						
OXF	Oxford	60.24	342	P	P	17 44 47.2	-1.0
OXF				pmax	pmax		
	comp=Z,55nm,0.9s						
OXF	Oxford	60.24	342	P	P	17 44 47.6	-0.6
	baz=160,SNR=9.6						
OXF	Oxford	60.24	342	P	P	17 44 47.2	-1.0
V51A	Loudon	60.26	347	IAmb	IAmb	17 44 49.6	
	comp=Z,24nm,0.8s						
PLAL	Pickwick Lake	60.33	344	IAmb	IAmb	17 44 49.6	
	comp=Z,26nm,0.9s						
JCT	Junction City	60.37	331	P	P	17 44 50.0	+0.7
	baz=149						
T59A	Double "B" Far	60.38	354	P	P	17 44 50.0	+1.0
	baz=173,SNR=10.0						
T58A	Grand View Acr	60.46	353	P	P	17 44 50.8	+1.1
	baz=172,SNR=15						
T60A	Surry	60.47	355	P	P	17 44 50.7	+1.0
	baz=174						
U54A	Nelsons Funny	60.49	350	P	P	17 44 50.3	+0.2
	baz=168,SNR=7.8						
T57A	Hurt	60.59	352	P	P	17 44 51.6	+1.1
	baz=171,SNR=5.3						
T57A	Hurt	60.59	352	P	P	17 44 50.5	-0.1
T57A				IAmb	IAmb	17 44 52.6	
	comp=Z,21nm,1.0s						
X43A	Marvell	60.67	341	P	P	17 44 51.9	+0.7
	baz=159						
WHTX	Lake Whitney,	60.69	334	P	P	17 44 51.9	+0.6
	baz=152						
T56A	Rocky Mt	60.73	352	P	P	17 44 52.7	+1.2
	baz=170,SNR=5.9						
TZTN	Tazewell	60.82	348	P	P	17 44 52.1	-0.1
	baz=167						
TZTN	Tazewell	60.82	348	IAmb	IAmb	17 44 53.5	
	comp=Z,23nm,1.1s						
BLA	Blacksburg	60.96	351	P	P	17 44 53.8	+0.6
	baz=170						
CLTN	Cedars of Leba	60.96	346	IAmb	IAmb	17 44 54.4	
	comp=Z,32nm,0.9s						
S58A	Poland Farm, P	61.06	353	P	P	17 44 54.5	+0.8
	baz=172,SNR=7.2						
S58A	Poland Farm, P	61.06	353	P	P	17 44 54.5	+0.8
S58A				IAmb	IAmb	17 44 56.0	
	comp=Z,26nm,0.8s						
SNAA	Sanae	61.08	160	P	P	17 44 54.0	+0.4
SNAA	Sanae	61.08	160	ceP	P	17 44 53.5	-0.1
SNAA				pmax	pmax		
	comp=Z,56nm,1.7s						
SNAA	Sanae	61.08	160	P	P	17 44 54.2	+0.6
S59A	Mechanicsville	61.14	354	P	P	17 44 55.2	+1.0
	baz=173						
TXAR	Lajitas Array	61.23	327	P	P	17 44 56.3	+1.1
	comp=Z,4.5nm,0.7s,baz=153,slow=8.1,SNR=36						
TXAR				LR	LR	18 07 57.5	
	comp=Z,180nm,20.4s,baz=0.0,slow=33						
TXAR	Lajitas Array	61.23	327	P	P	17 44 55.3	+0.1
TXAR	Lajitas Array	61.23	327	P	P	17 44 55.3	+0.1
U49A	Red Boiling Sp	61.24	346	P	P	17 44 55.0	0.0
U49A				IAmb	IAmb	17 44 56.1	
	comp=Z,19nm,0.8s						
X40A	Basin Creek Fa	61.26	339	P	P	17 44 55.5	+0.4
	baz=157						
S56A	Natural Bridge	61.30	352	P	P	17 44 55.9	+0.5
	baz=171						
S57A	Dark Hollow, R	61.31	353	P	P	17 44 56.4	+0.9
	baz=172,SNR=8.5						
WVT	Waverly	61.35	344	P	P	17 44 55.3	-0.4
WVT				pmax	pmax		
	comp=Z,37nm,0.8s						
WVT	Waverly	61.35	344	P	P	17 44 55.6	-0.2
	baz=162						
WVT	Waverly	61.35	344	P	P	17 44 55.3	-0.4
R58B	Mineral	61.39	354	P	P	17 44 57.2	+1.2
	baz=173,SNR=11						
T50A	Nancy	61.53	347	P	P	17 44 56.1	-0.8
T50A				IAmb	IAmb	17 44 58.1	
	comp=Z,17nm,0.8s						
MIAR	Mount Ida	61.55	339	P	P	17 44 57.9	+0.7
	baz=156,SNR=12						
MIAR	Mount Ida	61.55	339	IAmb	IAmb	17 44 59.2	
	comp=Z,26nm,0.9s						
R59A	King George, V	61.55	354	P	P	17 44 58.0	+1.0
	baz=174						
R60A	Leonardtown, M	61.58	355	P	P	17 44 58.4	+1.2
	baz=174						
S54A	Dingess, Beckl	61.67	351	P	P	17 44 58.4	+0.6
	baz=169,SNR=5.2						
S54A	Dingess, Beckl	61.67	351	IAmb	IAmb	17 44 59.4	
	comp=Z,29nm,0.8s						
W41B	Gary Mavity, V	61.70	340	P	P	17 44 58.8	+0.7
	baz=158,SNR=8.8						
W41B	Gary Mavity, V	61.70	340	IAmb	IAmb	17 44 59.9	
	comp=Z,20nm,0.9s						
R58A	Rapidan	61.74	354	P	P	17 44 59.6	+1.3
	baz=173						
R57A	Stanardsville	61.79	353	P	P	17 45 00.2	+1.6
	baz=172,SNR=9.9						
WHAR	Wooly Hollow	61.82	340	IAmb	IAmb	17 45 00.7	
	comp=Z,21nm,0.8s						
R55A	Marlinton	61.97	352	P	P	17 45 01.3	+1.4
	baz=170						
R55A	Marlinton	61.97	352	IAmb	IAmb	17 45 02.4	
	comp=Z,18nm,0.9s						
R54A	Victor	61.99	351	P	P	17 45 00.8	+0.7
	baz=170						
R56A	Bull Pasture M	62.00	352	P	P	17 45 01.2	+1.0
	baz=171						
ABTX	Abilene, Hawle	62.15	333	P	P	17 45 02.3	+1.1
	baz=150,SNR=6.8						
ABTX	Abilene, Hawle	62.15	333	P	P	17 45 02.2	+1.0
ABTX				IAmb	IAmb	17 45 03.7	
	comp=Z,32nm,0.9s						
X37A	Clayton	62.21	337	IAmb	IAmb	17 45 04.0	
	comp=Z,30nm,1.0s						
W39A	Magazine	62.22	339	P	P	17 45 02.9	+1.4
	baz=156,SNR=12						
W39A	Magazine	62.22	339	IAmb	IAmb	17 45 04.1	
	comp=Z,19nm,0.9s						
Q60A	Greensboro	62.25	356	P	P	17 45 02.7	+1.0
	baz=175						
Q58A	Fox Den Farm,	62.34	354	P	P	17 45 03.4	+1.1
	baz=173						
Q57A	Strasburg	62.51	353	P	P	17 45 05.1	+1.7
	baz=172,SNR=10						
Q56A	Snyder Ridge,	62.60	353	P	P	17 45 05.6	+1.5
	baz=171,SNR=6.2						
Q56A	Snyder Ridge,	62.60	353	P	P	17 45 05.4	+1.3
Q56A				IAmb	IAmb	17 45 06.8	
	comp=Z,35nm,1.0s						
PBMO	Poplar Bluff	62.65	342	IAmb	IAmb	17 45 05.8	
	comp=Z,27nm,0.8s						
Q53A	Leroy	62.74	351	P	P	17 45 05.5	+0.5
	baz=169						
P58A	Pank, Wackersv	62.85	354	P	P	17 45 06.5	+0.8
	baz=173						
P59A	Jarrettsville	62.90	355	P	P	17 45 07.1	+1.1
	baz=174						
P57A	Homestead Farm	62.91	354	P	P	17 45 07.7	+1.5
	baz=173,SNR=6.3						
P57A	Homestead Farm	62.91	354	P	P	17 45 07.4	+1.3
P57A				IAmb	IAmb	17 45 09.0	
	comp=Z,29nm,0.9s						
U40A	Yellville	62.98	340	P	P	17 45 07.2	+0.5
	baz=157,SNR=17						
U40A	Yellville	62.98	340	IAmb	IAmb	17 45 08.3	
	comp=Z,28nm,0.8s						
WCI	Wyandotte Cave	63.00	346	P	P	17 45 05.5	-1.3
WCI				pmax	pmax		
	comp=Z,31nm,0.8s						
WCI	Wyandotte Cave	63.00	346	P	P	17 45 06.5	-0.2
	baz=164						
WCI	Wyandotte Cave	63.00	346	P	P	17 45 05.5	-1.3
P56A	Dayton Farm, R	63.02	353	P	P	17 45 08.2	+1.4
	baz=172,SNR=6.8						
P60A	Greenville	63.04	356	P	P	17 45 07.9	+0.9
	baz=175						
Q51A	Peebles	63.20	349	IAmb	IAmb	17 45 09.7	
	comp=Z,16nm,0.8s						
HHAR	Hobbs	63.26	339	P	P	17 45 08.7	+0.2
MCWV	Mont Chateau	63.29	352	P	P	17 45 09.3	+0.6
	baz=171						
P53A	Whipple	63.33	351	IAmb	IAmb	17 45 10.0	
	comp=Z,47nm,1.4s						
O58A	Lewisberry	63.45	355	P	P	17 45 10.6	+0.9
	baz=174						
O60A	Telford	63.53	356	P	P	17 45 11.1	+0.9
	baz=175						
MGMO	Mountain Grove	63.53	341	IAmb	IAmb	17 45 12.1	
	comp=Z,19nm,0.8s						
TUL1	Leonard	63.55	337	P	P	17 45 11.0	+0.5
	baz=154						
TUL1	Leonard	63.55	337	IAmb	IAmb	17 45 12.3	
	comp=Z,27nm,0.9s						
P52A	Corning	63.59	350	P	P	17 45 10.7	0.0
	baz=168						
P52A	Corning	63.59	350	P	P	17 45 10.2	-0.4
P52A				IAmb	IAmb	17 45 11.7	
	comp=Z,27nm,1.1s						
P51A	Williamsport	63.59	349	IAmb	IAmb	17 45 11.6	
	comp=Z,24nm,1.1s						
O57A	Amberson	63.60	354	P	P	17 45 11.5	+0.8
	baz=173						
WMOK	Wichita Mounta	63.63	334	P	P	17 45 11.0	0.0
	baz=151						
O56A	Blue Knob Stat	63.75	353	P	P	17 45 12.9	+1.1
	baz=172,SNR=6.6						
O56A	Blue Knob Stat	63.75	353	IAmb	IAmb	17 45 14.2	
	comp=Z,36nm,1.1s						
P49A	Miami Univ. Ec	63.94	348	P	P	17 45 12.7	-0.3
	baz=166,SNR=5.4						
P49A	Miami Univ. Ec	63.94	348	IAmb	IAmb	17 45 13.6	
	comp=Z,28nm,0.9s						
MNTX	Cornudas Mount	64.01	327	P	P	17 45 14.5	+0.9
	baz=145,SNR=16						
MNTX	Cornudas Mount	64.01	327	P	P	17 45 14.4	+0.9
SSPA	Standing Stone	64.04	354	P	P	17 45 14.2	+0.6
	baz=173						

SSPA	Standing Stone	64.04	354	P	P	17 45 14.3	+0.7
O53A	New Philadelph	64.06	351	P	P	17 45 13.9	+0.3
	baz=170						
CCM	Cathedral Cave	64.08	342	P	P	17 45 14.3	+0.4
CCM				pmax	pmax		
	comp=Z,25nm,0.9s						
CCM	Cathedral Cave	64.08	342	P	P	17 45 14.2	+0.3
	baz=159						
CCM	Cathedral Cave	64.08	342	P	P	17 45 14.3	+0.4
CCM				IAmb	IAmb	17 45 15.3	
	comp=Z,25nm,0.9s						
N57A	Milroy	64.13	354	P	P	17 45 14.8	+0.7
	baz=173						
N58A	Sunbury	64.14	355	P	P	17 45 15.1	+0.9
	baz=174						
N58A	Sunbury	64.14	355	IAmb	IAmb	17 45 16.6	
	comp=Z,29nm,1.2s						
N59A	State Game Lan	64.15	356	P	P	17 45 15.6	+1.2
	baz=175						
Q44A	Meyer Farm, Va	64.28	344	IAmb	IAmb	17 45 15.9	
	comp=Z,23nm,0.8s						
ACSO	Alum Creek Sta	64.31	350	P	P	17 45 15.3	-0.1
	baz=168,SNR=5.9						
ACSO	Alum Creek Sta	64.31	350	IAmb	IAmb	17 45 16.5	
	comp=Z,32nm,0.9s						
N56A	West Decatur	64.36	354	P	P	17 45 16.8	+1.1
	baz=172						
M61A	Granite Spring	64.43	358	P	P	17 45 17.1	+1.0
	baz=177						
M63A	Gales Ferry	64.48	359	P	P	17 45 16.8	+0.5
	baz=179						
M60A	Port Jervis	64.49	357	P	P	17 45 16.8	+0.3
	baz=176						
O49A	Covington	64.50	349	P	P	17 45 16.6	0.0
O49A				IAmb	IAmb	17 45 17.6	
	comp=Z,27nm,1.0s						
P46A	Rosedale	64.53	346	IAmb	IAmb	17 45 17.4	
	comp=Z,26nm,0.8s						
M62A	Hamden	64.53	358	P	P	17 45 17.2	+0.4
	baz=178						
N54A	Moraine State	64.59	352	P	P	17 45 17.6	+0.4
	baz=171						
N54A	Moraine State	64.59	352	IAmb	IAmb	17 45 19.2	
	comp=Z,40nm,1.3s						
M58A	Price's Panora	64.65	355	P	P	17 45 18.5	+0.9
	baz=174						
MSTX	Muleshoe	64.66	331	P	P	17 45 18.7	+0.8
	baz=148,SNR=6.0						
MSTX	Muleshoe	64.66	331	IAmb	IAmb	17 45 20.2	
	comp=Z,26nm,0.9s						
M57A	Sunshine Farm,	64.67	355	P	P	17 45 18.6	+0.9
	baz=174						
T35A	Sooner Cattle	64.71	337	IAmb	IAmb	17 45 20.1	
	comp=Z,29nm,1.1s						
M59A	Waymart	64.75	356	P	P	17 45 20.2	+2.0
	baz=175,SNR=6.6						
M56A	Emporium	64.91	354	P	P	17 45 20.4	+1.1
	baz=173,SNR=5.3						
M56A	Emporium	64.91	354	P	P	17 45 20.1	+0.9
M56A				IAmb	IAmb	17 45 21.2	
	comp=Z,25nm,0.9s						
M54A	Oil Creek Stat	65.09	353	P	P	17 45 20.7	+0.2
	baz=171						
M54A	Oil Creek Stat	65.09	353	IAmb	IAmb	17 45 22.1	
	comp=Z,43nm,1.2s						
M53A	WI Miller and	65.15	352	P	P	17 45 21.1	+0.3
	baz=170						
SFIN	Lafayette	65.24	346	P	P	17 45 20.9	-0.5
	baz=164						
L58A	Harry Jones Me	65.28	356	P	P	17 45 23.0	+1.4
	baz=175						
L57A	Andrews Acres	65.30	355	P	P	17 45 22.2	+0.4
	baz=174						
L61A	Hillsdale 1, H	65.31	358	P	P	17 45 23.0	+1.2
	baz=177						
L59A	Walton	65.37	357	P	P	17 45 23.6	+1.3
	baz=176,SNR=6.5						
L59A	Walton	65.37	357	IAmb	IAmb	17 45 24.3	
	comp=Z,35nm,1.0s						
N47A	Urbana	65.43	348	IAmb	IAmb	17 45 35.8	
	comp=Z,26nm,1.1s						
BINY	Binghamton	65.44	356	P	P	17 45 23.9	+1.2
	baz=175						
L56A	Greenwood	65.50	354	P	P	17 45 24.2	+1.1
	baz=173						
L56A	Greenwood	65.50	354	IAmb	IAmb	17 45 24.7	
	comp=Z,17nm,0.8s						
HRV	Adam Dziewonsk	65.57	359	P	P	17 45 24.5	+1.0
	baz=179						
L53A	Girard	65.61	352	P	P	17 45 24.3	+0.6
	baz=171						
P40A	Paris	65.67	342	IAmb	IAmb	17 45 25.9	
	comp=Z,30nm,1.0s						
NVL	N'lazarevskaya	65.69	159	*e*P	P	17 45 23.2	-0.8
NVL				*e*S	S	17 54 15.0	+7.4
NVL				pmax	pmax		
	comp=Z,55nm,1.3s						
ERPA	Erie	65.73	353	P	P	17 45 24.9	+0.3
	baz=171						
ERPA	Erie	65.73	353	P	P	17 45 23.3	-1.2
ERPA				IAmb	IAmb	17 45 26.2	
	comp=Z,23nm,0.8s						
K61A	Williamstown	65.77	358	P	P	17 45 25.5	+0.7
	baz=178						
121A	Cookes Peak, D	65.89	326	P	P	17 45 28.7	+2.7
	baz=143						
HDIL	Hopedale	65.91	345	P	P	17 45 25.7	0.0
	baz=162						
K59A	Cooperstown	65.94	357	P	P	17 45 27.1	+1.2
	baz=176						
K58A	Earlville	65.98	356	P	P	17 45 27.2	+1.1
	baz=175						
K58A	Earlville	65.98	356	IAmb	IAmb	17 45 28.3	
	comp=Z,17nm,0.8s						
K57A	Scipio Center	66.00	355	P	P	17 45 27.2	+0.8
	baz=174						
K56A	Middlesex	66.04	355	P	P	17 45 27.4	+0.9
	baz=174						
J61A	Chester	66.43	359	P	P	17 45 30.3	+1.3
	baz=178						
N41A	Harden Midland	66.45	343	P	P	17 45 29.0	-0.2
J56A	Wolcott	66.57	355	P	P	17 45 30.9	+1.0
	baz=174						
J59A	Piesco	66.61	357	P	P	17 45 31.2	+0.9
	baz=176						
J57A	Williamstown	66.64	356	P	P	17 45 31.2	+0.9
	baz=175						
KSU1	Kansas State U	66.70	338	P	P	17 45 31.1	+0.2
	baz=154						
QSPA	South Pole Qui	66.81	180	P	P	17 45 33.0	+1.6
QSPA				IAmb	IAmb	17 45 43.6	
	comp=Z,41nm,1.1s						
R32A	Long Quarter,	66.84	336	IAmb	IAmb	17 45 34.7	
	comp=Z,42nm,1.2s						
I58A	Old Forge	66.86	357	P	P	17 45 32.7	+0.9
	baz=176						
I59A	Olmsteadville	66.92	358	P	P	17 45 33.6	+1.4
	baz=177						
I60A	Shoreham	66.94	358	P	P	17 45 33.6	+1.4
	baz=178						
I61A	Oroboro, Fairl	67.01	359	P	P	17 45 34.6	+1.9
	baz=179						
I57A	Carthage	67.15	356	P	P	17 45 34.6	+1.0
	baz=175						
ANMO	Albuquerque	67.17	329	P	P	17 45 36.5	+2.3
	comp=Z,5.6nm,0.8s,baz=146,slow=8.3,SNR=15						
ANMO	Albuquerque	67.17	329	*ce*P	P	17 45 35.1	+0.9
ANMO				pmax	pmax		
	comp=Z,37nm,2.5s						
ANMO	Albuquerque	67.17	329	P	P	17 45 36.0	+1.8
	baz=145						
ANMO	Albuquerque	67.17	329	P	P	17 45 33.6	-0.6
TUC	Tucson	67.29	324	P	P	17 45 37.1	+2.2
	baz=140						
LBNH	Lisbon	67.31	359	P	P	17 45 35.9	+1.3
	baz=179						
I51A	Listowel	67.52	352	P	P	17 45 36.2	+0.3
	baz=170						
H58A	Gabriels	67.55	357	P	P	17 45 37.3	+1.1
	baz=177						
CBKS	Cedar Bluff	67.56	336	P	P	17 45 37.4	+1.0
CBKS				pmax	pmax		
	comp=Z,42nm,1.0s						
CBKS	Cedar Bluff	67.56	336	P	P	17 45 37.7	+1.3
	baz=151,SNR=7.8						
CBKS	Cedar Bluff	67.56	336	P	P	17 45 37.4	+1.0
H61A	Lyndonville	67.60	359	P	P	17 45 37.9	+1.5
	baz=179						
H62A	Milan	67.64	360	P	P	17 45 38.2	+1.5
	baz=180						
TAOE	Nuku Hiva Isla	67.64	270	*e*LR	LR	18 05 52.0	
	comp=Z,480nm,25.3s						
TAOE	Nuku Hiva Isla	67.64	270	*e*T	T	18 59 30.3	
	comp=Z,47nm,0.2s						
H60A	Morristown	67.64	359	P	P	17 45 38.2	+1.5
	baz=178						
H64A	Troy	67.72	1	P	P	17 45 37.7	+0.6
	baz=182						
H59A	Cadyville	67.76	358	P	P	17 45 38.7	+1.3
	baz=177						
LONY	Lake Ozonia	67.77	357	P	P	17 45 38.7	+1.2
	baz=176						
H65A	Eastbrook	67.80	2	P	P	17 45 39.1	+1.5
	baz=183						
H66A	Whiting	67.92	3	P	P	17 45 40.0	+1.6
	baz=184						
FRNY	Flat Rock	67.94	358	P	P	17 45 38.9	+0.3
FRNY				IAmb	IAmb	17 45 40.9	
	comp=Z,22nm,0.9s						
H53A	Bobcaygeon	68.01	354	P	P	17 45 39.3	+0.3
	baz=172,SNR=6.9						
T25A	Trinidad	68.03	332	P	P	17 45 41.7	+2.1
	baz=147,SNR=7.3						
214A	Organ Pipe Nat	68.15	322	P	P	17 45 42.9	+2.7
	baz=139,SNR=13						
G60A	Masonville	68.17	359	P	P	17 45 41.9	+1.8
	baz=179						
G59A	Clarenceville	68.18	358	P	P	17 45 41.2	+1.2
	baz=178						
G63A	Kingsbury	68.18	1	P	P	17 45 41.4	+1.3
	baz=181						
SCIA	State Center	68.21	342	P	P	17 45 41.2	+0.9
	baz=158						
SADO	Sadowa	68.26	354	P	P	17 45 40.8	+0.3
	comp=Z,17nm,0.6s,baz=193,slow=5.8,SNR=16						
SADO	Sadowa	68.26	354	IAmb	IAmb	17 45 41.9	
	comp=Z,22nm,0.8s						
G57A	Newington	68.27	357	P	P	17 45 41.9	+1.3
	baz=176						
G58A	Ormstown	68.28	358	P	P	17 45 41.5	+0.9
	baz=177						
G62A	West of Eustis	68.28	0	P	P	17 45 42.6	+1.9
	baz=180						
G62A	West of Eustis	68.28	0	P	P	17 45 42.0	+1.3
G62A				IAmb	IAmb	17 45 55.4	
	comp=Z,32nm,0.9s						
G65A	Princeton	68.33	2	P	P	17 45 42.2	+1.3
	baz=183						
G64A	Maxfield	68.34	2	P	P	17 45 42.6	+1.5
	baz=182						
PKME	Peaks-Kenny Pk	68.34	1	P	P	17 45 42.3	+1.3
	baz=182						
G61A	St-Isidore-de-	68.35	359	P	P	17 45 42.5	+1.4
	baz=179						
JFWS	Jewell Farm	68.37	345	P	P	17 45 41.8	+0.5
	baz=161						
JFWS	Jewell Farm	68.37	345	IAmb	IAmb	17 45 42.8	
	comp=Z,21nm,0.8s						
K38A	Parkersburg	68.77	343	IAmb	IAmb	17 45 45.2	
	comp=Z,34nm,1.1s						
F63A	Nahmakanta, Br	68.78	1	P	P	17 45 45.9	+2.1
	baz=182						
G54A	Lake Saint Pet	68.78	354	P	P	17 45 45.0	+1.1
	baz=173						
KSCO	Kaye Shedlock'	68.86	334	P	P	17 45 46.3	+1.6
	baz=149						
W18A	Petrified Fore	68.92	326	P	P	17 45 47.8	+2.7
	baz=142,SNR=8.0						
F64A	Sherman	68.96	2	P	P	17 45 46.4	+1.5
	baz=182						
I42A	Draeger Farm,	68.99	346	IAmb	IAmb	17 45 46.6	
	comp=Z,22nm,0.8s						
SDCO	Great Sand Dun	69.02	331	P	P	17 45 48.1	+2.3
	baz=146,SNR=35						
F61A	St Evariste	69.04	360	P	P	17 45 46.7	+1.3
	baz=180						
F60A	Warwick	69.04	359	P	P	17 45 46.8	+1.4
	baz=179						
GLMI	Grayling	69.05	350	P	P	17 45 46.5	+0.9
	baz=166						
L34A	Svendsen Farm,	69.21	340	P	P	17 45 47.2	+0.6
BGNE	Belgrade	69.29	338	P	P	17 45 48.0	+0.9
	baz=153						
ALGO	Algonquin Park	69.33	355	P	P	17 45 48.2	+1.0
	baz=173						
E58A	La Victoria	69.47	358	P	P	17 45 48.6	+0.6
	baz=178,SNR=5.8						
E63A	Oxbow	69.52	2	P	P	17 45 49.7	+1.4
	baz=182						
E64A	Bridgewater	69.53	2	P	P	17 45 49.7	+1.3
	baz=183						
S22A	4UR Ranch, Cre	69.62	330	P	P	17 45 51.8	+2.2
	baz=145,SNR=8.4						
E56A	St. Veronique	69.71	357	P	P	17 45 50.2	+0.6
	baz=176						
Q24A	Divide	69.88	332	P	P	17 45 53.4	+2.2
	baz=147,SNR=7.8						
MVCO	Mesa Verde	69.97	329	P	P	17 45 53.6	+2.0
	baz=143						
D60A	Saint Jean D'O	69.97	360	P	P	17 45 52.4	+1.3
	baz=180						
WUAZ	Wupatki	70.07	326	P	P	17 45 55.1	+2.9
	baz=141,SNR=18						
GLA	Glamis	70.10	322	P	P	17 45 54.6	+2.3
	baz=137						
D63A	Stockholm	70.14	2	P	P	17 45 53.2	+1.1
	baz=183						
D58A	Chemin du LacG	70.18	358	P	P	17 45 53.3	+0.9
	baz=178,SNR=6.0						
D56A	ZEC Mazanza, M	70.20	357	P	P	17 45 53.4	+0.8
	baz=176						
I37A	Lemond, Waseca	70.21	343	IAmb	IAmb	17 45 54.3	
	comp=Z,22nm,0.8s						
OGNE	Ogallala	70.29	335	P	P	17 45 54.8	+1.5
	baz=150						
LATQ	La Tuque	70.47	359	P	P	17 45 55.4	+1.2
	baz=178						
E46A	Sault Ste Mari	70.50	350	IAmb	IAmb	17 45 55.5	
	comp=Z,22nm,0.9s						
IKP	In-Ko-Pah, Jac	70.55	320	P	P	17 45 56.9	+1.8
	baz=136						
LIC	Lamto	70.58	74	*e*P	P	17 45 54.9	-0.7
	comp=Z,48nm,0.8s						
SWSC	Sam W. Stewart	70.58	321	P	P	17 45 57.5	+2.3
	baz=137						
PDMCI	Parker Dam,Lak	70.64	323	P	P	17 45 57.5	+2.0
	baz=138						
ISCO	Idaho Springs	70.77	332	P	P	17 45 58.6	+2.0
	baz=146,SNR=6.5						
TIC	Toumodi	70.78	74	*e*P	P	17 45 56.3	-0.6
ECSD	EROS Data Cent	70.88	340	P	P	17 45 57.5	+0.7
	baz=155,SNR=10						
KIC	Kosan Boka	70.89	74	*e*P	P	17 45 57.1	-0.5
	comp=Z,46nm,0.8s						
BC3	Big Chuckawall	70.90	322	P	P	17 46 00.0	+2.8
	baz=137,SNR=11						
MONP2	Monument Peak	70.91	320	P	P	17 45 58.2	+0.7
	baz=136						
DBIC	Dimbokro	70.94	74	P	P	17 45 57.5	-0.3
	comp=Z,20nm,0.7s,baz=220,slow=6.1,SNR=27						
DBIC				LR	LR	18 17 29.9	
	comp=Z,436nm,18.1s,baz=220,slow=36						
DBIC	Dimbokro	70.94	74	P	P	17 45 57.2	-0.6
DBIC				pmax	pmax		
	comp=Z,28nm,0.9s						
DBIC	Dimbokro	70.94	74	P	P	17 45 57.2	-0.6
DBIC				IAmb	IAmb	17 45 58.6	
	comp=Z,28nm,0.9s						
IRM	Iron Mountain	71.09	322	P	P	17 46 01.2	+2.9
	baz=137,SNR=13						
SPMN	Marine on St.	71.18	344	IAmb	IAmb	17 45 59.8	
	comp=Z,22nm,0.9s						
TBI	Tubuai	71.25	252	*e*LR	LR	18 07 34.5	
	comp=Z,325nm,23.8s						
VLDQ	Val d'Or	71.43	355	IAmb	IAmb	17 46 01.9	
	comp=Z,20nm,0.8s						
TPFO	Pinon Flats	71.44	321	P	P	17 46 02.7	+2.1
	baz=136						
PFO	Pinyon Flats O	71.44	321	P	P	17 46 02.4	+1.8
	comp=Z,6.2nm,1.0s,baz=127,slow=5.5,SNR=4.9						
PFO	Pinyon Flats O	71.44	321	*i* P	P	17 46 00.7	+0.1
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	71.44	321	P	P	17 46 02.5	+1.8
	baz=136						
PFO	Pinyon Flats O	71.44	321	P	P	17 46 03.9	+3.3
BELC	Belle Mtn. Jos	71.46	322	P	P	17 46 02.8	+2.1
	baz=137						
N23A	Red Feather La	71.82	333	P	P	17 46 05.2	+2.3
	baz=146,SNR=8.7						
GMRC	Granite Mounta	71.84	322	P	P	17 46 05.9	+3.0
	baz=137,SNR=12						
MURC	Murrieta	71.86	320	P	P	17 46 05.3	+2.3
	baz=136						
F36A	Milaca	71.96	343	IAmb	IAmb	17 46 04.6	
	comp=Z,22nm,0.9s						
O20A	White River Ci	72.20	331	P	P	17 46 07.6	+2.5
	baz=144,SNR=9.8						
HEC	Hector,Ludlow	72.25	322	P	P	17 46 08.3	+2.9
	baz=137,SNR=8.4						
LSQQ	Lebel-sur-Quev	72.33	356	P	P	17 46 06.0	+0.6
	baz=174						
BFSC	Mount Baldy Ra	72.59	321	P	P	17 46 09.7	+2.2
	baz=136						
SHPR	Sheep Range	72.83	324	P	P	17 46 09.0	+0.2
GSC	Goldstone, Bar	72.86	322	P	P	17 46 11.1	+2.2
	baz=136						
MATQ	Matagami	73.08	355	P	P	17 46 10.2	+0.4
	baz=174						
PPT2	Papeete2	73.20	258	*e*S	S	17 55 33.0	-4.9
	comp=Z,258nm,26.2s						
PPT2	Papeete2	73.20	258	*e*LR	LR	18 08 27.0	
	comp=Z,532nm,26.2s						
EDW2	Edwards Air Fo	73.24	321	P	P	17 46 13.4	+2.2
	baz=135						
EYMN	Ely	73.41	346	P	P	17 46 11.9	+0.1
	baz=160,SNR=5.4						
LRMC	Laurel Mtn Rad	73.48	322	P	P	17 46 14.9	+2.2
	baz=136						
K22A	Casper	73.52	333	P	P	17 46 14.7	+1.9
	baz=146						
FURC	Furnace Creek,	73.73	323	P	P	17 46 16.3	+2.4
	baz=137						
TPNV	Topopah Spring	73.74	324	P	P	17 46 17.3	+3.0
	baz=137,SNR=10						
RSSD	Black Hills	73.77	336	P	P	17 46 14.7	+0.4
RSSD				pmax	pmax		
	comp=Z,13nm,0.9s						
RSSD	Black Hills	73.77	336	P	P	17 46 16.0	+1.6
	baz=148						
RSSD	Black Hills	73.77	336	P	P	17 46 14.7	+0.4
MPMC	Manual Prospec	73.79	322	P	P	17 46 16.4	+1.9
	baz=136						
ISA	Isabella, Lake	74.07	321	P	P	17 46 18.7	+2.7
	baz=135,SNR=6.7						
PKM	Mcpherson Peak	74.31	320	P	P	17 46 20.1	+2.4
	baz=134						
GRAC	Grapevine Rang	74.39	323	P	P	17 46 19.4	+1.5
	baz=136						
CWC	Cottonwood Cre	74.39	322	P	P	17 46 19.8	+1.7
	baz=136						
DUG	Dugway, Tooele	74.40	328	P	P	17 46 19.5	+1.5
	baz=140						
R11A	Troy Canyon, C	74.42	325	P	P	17 46 21.1	+3.0
	baz=138,SNR=13						
VNDA	Vanda	74.69	190	P	P	17 46 20.6	+1.5
	comp=Z,4.1nm,0.8s,baz=318,slow=23,SNR=7.3						
AGMN	Agassiz Nation	74.82	343	P	P	17 46 20.8	+0.7
	baz=156,SNR=9.7						
AGMN	Agassiz Nation	74.82	343	P	P	17 46 19.6	-0.5
BW06	Boulder Array	74.91	331	P	P	17 46 22.1	+1.1
	baz=144						
PDAR	Pinedale Array	74.91	331	P	P	17 46 22.6	+1.6
	comp=Z,2.4nm,0.9s,baz=142,slow=7.5,SNR=12						
PDAR				LR	LR	18 21 15.2	
	comp=Z,79nm,19.3s,baz=84,slow=37						
PDAR	Pinedale Array	74.91	331	P	P	17 46 21.3	+0.3
SYO	Syowa Base	75.34	160⇑	*e*P	P	17 46 20.4	-2.5
KOWA	Kowa	75.36	67	P	P	17 46 23.6	-0.3
KOWA				IAmb	IAmb	17 46 38.8	
	comp=Z,29nm,0.7s						
MDND	Maddock	75.50	340	P	P	17 46 25.3	+1.3
	baz=153						
NVAR	Mina Array Bea	75.94	323	P	P	17 46 29.3	+2.3
	comp=Z,2.9nm,0.8s,baz=156,slow=6.6,SNR=19						
NVAR				LR	LR	18 14 46.1	
	comp=Z,126nm,20.7s,baz=68,slow=32						
NVAR	Mina Array Bea	75.94	323	P	P	17 46 27.9	+0.9
ELK	Elko	76.02	327	P	P	17 46 29.3	+1.8
	comp=Z,3.5nm,0.8s,baz=130,slow=3.5,SNR=18						
ELK				LR	LR	18 16 54.0	
	comp=Z,106nm,20.6s,baz=150,slow=33						
ULM	Lac du Bonnet	76.61	344	P	P	17 46 31.0	+0.8
	comp=Z,5.9nm,0.7s,baz=162,slow=6.7,SNR=11						
ULM	Lac du Bonnet	76.61	344	*i* P	P	17 46 29.7	-0.5
ULM	Lac du Bonnet	76.61	344	IAmb	IAmb	17 46 31.9	
	comp=Z,44nm,1.4s						
H17A	Grant Village	76.65	332	P	P	17 46 32.3	+1.4
	baz=143						
RLMT	Red Lodge	76.68	333	P	P	17 46 32.9	+1.9
	baz=144,SNR=14						
LAO	LASA Array	76.76	336	P	P	17 46 33.1	+1.8
	baz=147,SNR=5.1						
DGMT	Dagmar	77.54	338	P	P	17 46 37.5	+1.9
	baz=149						
HLID	Hailey	77.74	329	P	P	17 46 39.4	+2.5
	baz=140,SNR=20						
BOZ	Bozeman (W)	78.06	332	P	P	17 46 40.6	+1.9
	baz=142,SNR=8.6						
O03E	Paynes Creek	79.18	323	P	P	17 46 45.9	+1.0
	baz=134						
EGMT	Eagleton	79.23	335	P	P	17 46 46.3	+1.4
	baz=144,SNR=7.3						
TORD	Torodi Ar. Bea	79.62	71	P	P	17 46 47.5	-0.2
	comp=Z,36nm,0.7s,baz=253,slow=5.0,SNR=108						
TORD				LR	LR	18 22 17.0	
	comp=Z,188nm,18.1s,baz=215,slow=36						
TORD	Torodi Ar. Bea	79.62	71	P	P	17 46 47.1	-0.6
O02D	Mt. Diablo Mer	79.65	322	P	P	17 46 48.7	+1.3
	baz=133						
MSO	Missoula	80.03	332	P	P	17 46 51.3	+2.0
	baz=140						
N02D	Trinity Center	80.14	323	P	P	17 46 51.3	+1.2
	baz=133						
M04C	Macdoel	80.22	324	P	P	17 46 51.7	+1.1
	baz=134						
M02C	Callahan	80.51	323	P	P	17 46 53.6	+1.5
	baz=133						
YBH	Yreka Blue Hor	80.66	323	P	P	17 46 53.7	+0.9
	comp=Z,3.1nm,0.8s,baz=57,slow=10,SNR=7.0						
L04D	Klamath Falls	80.77	324	P	P	17 46 54.7	+1.2
	baz=133						
J05D	Fort Rock, OR	80.94	325	P	P	17 46 56.5	+2.1
	baz=134,SNR=5.9						
TSUM	Tsumeb	81.16	107	P	P	17 46 56.3	+0.1
TSUM				IAmb	IAmb	17 47 08.0	
	comp=Z,29nm,1.1s						
J04D	Umpqua Nationa	81.37	325	P	P	17 46 57.6	+0.9
	baz=134						
L02E	Cave Junction	81.44	323	P	P	17 46 59.2	+2.3
	baz=132						
I05D	Terrebonne, OR	81.72	326	P	P	17 47 00.6	+2.2
	baz=134,SNR=5.5						
K02D	Willamette Mer	81.83	324	P	P	17 47 01.1	+2.0
	baz=132						
I04A	Tendick Farm,	81.91	325	P	P	17 46 59.9	+0.5
	baz=134						
NEW	Newport	82.52	331	P	P	17 47 03.9	+1.4
	comp=Z,5.5nm,1.0s,baz=69,slow=5.9,SNR=4.1						
NEW	Newport	82.52	331	P	P	17 47 02.9	+0.4
	baz=138						
MAW	Mawson	83.02	164	P	P	17 47 05.6	+0.8
	comp=Z,17nm,0.9s,baz=222,slow=8.6,SNR=17						
MAW				LR	LR	18 24 14.9	
	comp=Z,245nm,18.4s,baz=238,slow=36						
MAW	Mawson	83.02	164	P	P	17 47 06.1	+1.3
MAW				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAW	Mawson	83.02	164	P	P	17 47 06.1	+1.3
BOSA	Boshof	84.09	118	P	P	17 47 10.7	-0.6
	comp=Z,8.0nm,0.7s,baz=253,slow=3.4,SNR=17						
BOSA				LR	LR	18 22 54.4	
	comp=Z,350nm,18.0s,baz=241,slow=34						
BOSA	Boshof	84.09	118	P	P	17 47 11.2	-0.1
BOSA				pmax	pmax		
	comp=Z,15nm,0.9s						
BOSA	Boshof	84.09	118	P	P	17 47 11.2	-0.1
BOSA				IAmb	IAmb	17 47 27.6	
	comp=Z,15nm,0.8s						
D04E	Lakebay	84.41	327	P	P	17 47 12.9	+0.8
	baz=134						
MESJ	Messejana	84.61	45	*e*P	P	17 47 15.2	+1.8
MESJ				*e*LQ	LQ	17 47 25.7	

D03D	Eldon	84.82	327	P	P	17 47 15.0	+0.8
	baz=133						
PBEJ	Beja	84.95	45	*e*P	P	17 47 17.1	+2.0
PBEJ				*e*LQ	LQ	17 47 27.4	
EVO	Evora	85.14	44	*e*P	P	17 47 17.5	+1.5
EVO				*e*LQ	LQ	17 47 25.4	
PSBE	So Bento	85.21	43	*e*P	P	17 47 15.9	-0.5
PSBE				*e*LQ	LQ	17 47 28.7	
PMTG	Montargil	85.31	44	*e*P	P	17 47 18.6	+1.7
	comp=Z,77nm,1.5s						
PMTG				*e*LQ	LQ	17 47 28.9	
PBAR	Barrancos	85.57	45	*e*P	P	17 47 16.8	-1.4
	comp=Z,43nm,1.6s						
PBAR				*e*LQ	LQ	17 47 30.2	
LBTB	Lobatse	85.80	115	P	P	17 47 19.7	-0.2
LBTB				pmax	pmax		
	comp=Z,16nm,1.2s						
LBTB	Lobatse	85.80	115	P	P	17 47 19.7	-0.2
NRS	Narsarsuaq	86.72	12	P	P	17 47 20.7	-2.6
NRS				pmax	pmax		
	comp=Z,105nm,0.7s						
NRS	Narsarsuaq	86.72	12	P	P	17 47 20.7	-2.6
FRB	Frobisher Bay	86.86	1	P	P	17 47 24.2	+0.3
	comp=Z,7.2nm,1.0s,baz=181,slow=6.1,SNR=11						
TAM	Tamanrasset	87.22	64	P	P	17 47 26.9	0.0
TAM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TAM	Tamanrasset	87.22	64	P	P	17 47 26.9	0.0
ESDC	Sonseca Array	88.39	45	P	P	17 47 32.5	+0.5
	comp=Z,1.7nm,1.0s,baz=236,slow=4.8,SNR=5.8						
ESDC				LR	LR	18 27 02.9	
	comp=Z,180nm,18.0s,baz=330,slow=36						
YKA	Yellowknife Ar	92.40	341	P	P	17 47 50.9	+0.9
	comp=Z,6.7nm,0.7s,baz=133,slow=4.9,SNR=132						
YKA				PP	PP	17 51 33.6	+2.1
	comp=Z,0.5nm,0.7s,baz=132,slow=9.5,SNR=5.1						
YKA				LR	LR	18 32 09.0	
	comp=Z,192nm,20.4s,baz=0.0,slow=37						
KEST	Kesra	95.82	54	LR	LR	18 32 29.7	
	comp=Z,387nm,19.9s,baz=237,slow=36						
INK	Inuvik	102.12	340	P	Pdif	17 48 34.8	+1.0
	comp=Z,2.4nm,1.1s,baz=113,slow=1.9,SNR=4.2						
ILAR	Eielson Array	105.19	334	PP	PP	17 53 08.9	-0.3
	comp=Z,0.9nm,1.1s,baz=142,slow=3.5,SNR=4.1						
VYHS	Vyhne	106.90	44	*e*P	Pdif	17 49 00.0	+4.4
VYHS	Vyhne	106.90	44	*e*PDIFF	Pdif	17 49 00.0	+4.4
BRTR	Keskin Array B	115.33	56	PKP	PKiKP	17 53 22.4	+0.7
	comp=Z,0.6nm,0.5s,baz=186,slow=1.2,SNR=4.3						
LVZ	Lovozero	117.26	24*c*	*i*PKIKP	PKPdf	17 53 20.5	-4.0
LVZ				pmax	pmax		
	comp=Z,73nm,1.3s						
OBN	Obninsk	118.72	39	⇑*i*PKIKP	PKPdf	17 53 25.5	-2.0
OBN				pmax	pmax		
	comp=Z,33nm,1.7s						
OBN				MLR	MLR		
	comp=Z,119nm,12.0s						
KIV	Kislovodsk	122.51	52	*e*PKIKP	PKiKP	17 53 35.9	+0.4
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KBZ	Khabaz	122.65	52	PKP	PKiKP	17 53 36.6	+1.0
	comp=Z,3.4nm,0.9s,baz=265,slow=4.7,SNR=7.9						
KBZ	Khabaz	122.65	52	*i* PKIKP	PKPdf	17 53 32.1	-3.4
GNI	Garni	123.85	56	*i* PKIKP	PKPdf	17 53 34.6	-3.6
KIRV	Kirov	125.34	34	*i* PKIKP	PKPdf	17 53 38.2	-1.9
BELG	Belogornoye	125.44	41	*i* PKIKP	PKPdf	17 53 37.6	-2.9
H11S2	WAKE ISLAND Hy	126.37	276	T	T	20 13 00.8	
	baz=106,slow=75,SNR=416						
H11S1	WAKE ISLAND Hy	126.38	276	T	T	20 13 01.5	
	baz=106,slow=75,SNR=541						
H11S3	WAKE ISLAND Hy	126.39	276	T	T	20 13 01.5	
	baz=106,slow=75,SNR=420						
H11N3	WAKE ISLAND Hy	126.51	278	T	T	20 13 12.6	
	baz=106,slow=75,SNR=201						
H11N2	WAKE ISLAND Hy	126.52	278	T	T	20 13 15.8	
	baz=106,slow=75,SNR=168						
H11N1	WAKE ISLAND Hy	126.53	278	T	T	20 13 14.0	
	baz=106,slow=75,SNR=224						
ASAR	Alice Springs	127.43	209	PKP	PKiKP	17 53 46.1	+0.1
	comp=Z,2.2nm,0.5s,baz=129,slow=1.6,SNR=49						
ASAR	Alice Springs	127.43	209	PKIKP	PKPdf	17 53 43.9	-1.5
ASAR	Alice Springs	127.43	209	PKPdf	PKPdf	17 53 43.9	-1.5
TIXI	Tiksi	130.43	352	*i* PKIKP	PKPdf	17 53 47.4	-2.1
WRA	Warramunga Arr	130.44	212	PKP	PKiKP	17 53 52.2	+0.2
	comp=Z,1.3nm,0.4s,baz=155,slow=1.8,SNR=47						
ARU	Arti	130.69	35	*i* PKIKP	PKPdf	17 53 48.2	-2.2
SEY	Seymchan	131.12	335	*i* PKIKP	PKiKP	17 53 52.2	+0.2
PETK	Petropavlovsk-	133.01	322	PKP	PKiKP	17 53 56.9	+0.7
	comp=Z,7.8nm,1.2s,baz=238,slow=1.4,SNR=4.4						
FITZ	Fitzroy Crossi	135.75	203	PKP	PKiKP	17 54 03.6	+0.9
	comp=Z,1.6nm,0.6s,baz=213,slow=4.8,SNR=6.7						
BRVK	Borovoye	138.26	35	*i* PKIKP	PKPdf	17 54 03.1	-1.6
YAK	Yakutsk	138.94	345	*i* PKIKP	PKPdf	17 54 06.4	+0.7
DZA	Taraz	143.19	49	*e*PKP	PKPdf	17 54 14.1	0.0
	baz=49						
DZA	Taraz	143.19	49	*e*PKIKP	PKPdf	17 54 14.0	0.0
KURK	Kurchatov	143.86	33*c*	*i*PKIKP	PKPdf	17 54 14.2	-0.7
KURK				pmax	pmax		
	comp=Z,11nm,1.7s						
YSS	Yuzh-Sakhalins	144.31	320	*e*PKHKP	PKPab	17 54 11.6	-2.2
ZALV	Zalesovo Beam	144.40	25	PKP	PKPdf	17 54 15.3	-0.4
	comp=Z,10nm,0.6s,baz=302,slow=3.3,SNR=37						
SEM	Semipalatinsk	144.86	33	*e*PKP	PKPab	17 54 16.1	+0.1
	baz=33						
SEM	Semipalatinsk	144.86	33	*e*PKIKP	PKPab	17 54 16.1	+0.1
EKS2	Erkin-Say	144.96	48	P	PKPdf	17 54 18.1	+0.8
	SNR=25						
AML	Almayashu	145.10	49	P	PKPdf	17 54 18.9	+1.0
	SNR=44						
USP	Ospenovka	145.22	47	P	PKPdf	17 54 18.7	+1.1
	SNR=20						
SGDS	Sogindy	145.23	46	*e*PKP	PKPbc	17 54 17.5	+0.2
	baz=47						
SGDS	Sogindy	145.23	46	*e*PKIKP	PKPbc	17 54 17.5	+0.2
BOD	Bodaibo	145.43	355	⇑*i*PKIKP	PKPbc	17 54 17.2	-0.2
BOD				pmax	pmax		
	comp=Z,70nm,1.5s						
AAK	Ala-Archa	145.46	48	P	PKPab	17 54 19.9	+1.5
	SNR=62						
AAK	Ala-Archa	145.46	48	*i* PKP2	PKPdf	17 54 15.1	-3.1
GRNR	Gornyy	145.47	329	⇑*i*PKIKP	PKPab	17 54 19.8	+1.8
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
CHMS	Chumysh	145.49	47	P	PKPab	17 54 19.7	+1.3
	SNR=22						
UCH	Uchtor	145.63	48	P	PKPab	17 54 21.1	+1.6
	SNR=51						
KBK	Karagaybulak	145.76	48	P	PKiKP	17 54 21.5	-1.3
	SNR=13						
TKM2	Tokmak 2	146.09	47	P	PKPab	17 54 20.9	+0.1
	SNR=19						
KUU	Kurty	146.16	45	*e*PKP	PKPdf	17 54 19.7	+0.5
	baz=45						
KUU	Kurty	146.16	45	*e*PKP2	PKPdf	17 54 19.6	+0.5
CHKK	Chushkaly	146.60	44	*e*PKP	PKPdf	17 54 20.6	+0.7
	baz=45						
CHKK	Chushkaly	146.60	44	*e*PKP2	PKPdf	17 54 20.5	+0.7
POO	Poona	146.68	92	*e*P	PKPab	17 54 24.0	+0.4
ZEA	Zeya	146.78	340	*e*PKP2	PKPab	17 54 22.8	0.0
ZEA				pmax	pmax		
	comp=Z,20nm,1.7s						
AAA	Alma-Ata	146.84	46	*e*PKP	PKPdf	17 54 21.1	+0.8
	baz=46						
AAA	Alma-Ata	146.84	46	*e*PKP2	PKPdf	17 54 21.1	+0.8
TDK	Taldyqorghan	146.94	42	*e*PKP	PKPdf	17 54 20.9	+0.5
	baz=42						
TDK	Taldyqorghan	146.94	42	*e*PKP2	PKPdf	17 54 20.9	+0.5
MDOK	Medeo	146.95	46	*e*PKP	PKPdf	17 54 20.7	+0.1
	baz=46						
MDOK	Medeo	146.95	46	*e*PKP2	PKPdf	17 54 20.7	+0.1
KSH	Kashi	147.63	52	PKPbc	PKPbc	17 54 24.1	-0.5
SIJI	Sorong	147.72	225	PKPbc	PKiKP	17 54 26.8	-0.7
	comp=Z,11nm,0.8s,baz=133,slow=18,SNR=6.5						
SATY	Saty	147.88	45	*e*PKP	PKPdf	17 54 22.2	0.0
	baz=45						
SATY	Saty	147.88	45	*e*PKIKP	PKPdf	17 54 22.2	0.0
MK31	Makanchi Array	148.18	36*c*	*i*PKIKP	PKPdf	17 54 23.6	+1.2
MKAR	Makanchi Array	148.18	36	PKP	PKPdf	17 54 23.8	+1.4
	comp=Z,15nm,0.7s,baz=321,slow=1.4,SNR=75						
MKAR				PKPbc	PKiKP	17 54 26.9	-0.5
	comp=Z,15nm,0.7s,baz=324,slow=3.1,SNR=95						
SHLS	Shalkode	148.52	44	*e*PKP	PKPdf	17 54 23.9	+0.7
	baz=44						
SHLS	Shalkode	148.52	44	*e*PKIKP	PKPdf	17 54 23.9	+0.7
DGZ	Jazzator, Alta	148.68	28	*i* PKIKP	PKPdf	17 54 24.5	+1.2
KLR	Kul'dur	148.70	331*c*	*i*PKP2	PKPbc	17 54 25.4	-1.5
KAPI	Kappang	149.95	201	PKPbc	PKiKP	17 54 32.9	+0.9
	comp=Z,4.4nm,0.4s,baz=26,slow=19,SNR=3.5						
KAPI	Kappang	149.95	201	PKP2	PKiKP	17 54 32.5	+0.4
KAPI	Kappang	149.95	201		PKiKP	17 54 32.5	+0.4
HYB	Hyderabad	150.69	96	*i* PKP	PKPbc	17 54 33.0	+0.2
HYB				*e*		17 54 40.0	
HYB				*e*		17 54 44.0	
IRK	Irkutsk	150.95	6	*e*PKIKP	PKPdf	17 54 24.8	-1.8
IRK				*e*		17 54 41.0	
IRK				pmax	pmax		
	comp=Z,62nm,2.0s						
MOY	Mondy	151.07	11	*e*PKIKP	PKiKP	17 54 34.4	+1.1
MOY				pmax	pmax		
	comp=Z,46nm,2.2s						
TLY	Talaya	151.44	7	*e*PKIKP	PKPdf	17 54 30.4	+3.0
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MJAR	Matsushiro Arr	151.79	304	PKPbc	PKiKP	17 54 35.8	+0.6
	comp=Z,5.7nm,0.8s,baz=96,slow=1.2,SNR=14						
MJAR	Matsushiro Arr	151.79	304	PKIKP	PKiKP	17 54 35.4	+0.2
MJAR	Matsushiro Arr	151.79	304		PKiKP	17 54 35.4	+0.2
MAT	Matsushiro	151.79	304	PKP	PKiKP	17 54 35.4	+0.2
USRK	Ussuriysk Ar.	152.08	324	PKPbc	PKiKP	17 54 36.6	+1.2
	comp=Z,6.7nm,0.7s,baz=6.0,slow=0.9,SNR=16						
USRK				PKPab	pPKPbc	17 54 46.3	+1.4
	comp=Z,5.0nm,0.7s,baz=38,slow=3.9,SNR=7.6						
ZAK	Zakamensk	152.66	8	*e*PKIKP	PKPdf	17 54 29.6	+0.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WMQ	Urumqi	153.01	36	*e*PKPbc	PKPdf	17 54 29.5	-0.6
WMQ				LR	LR		
	comp=Z,310nm,25.9s						
WMQ				LR	LR		
	comp=Z,200nm,23.1s						
SONM	Songino Array	155.51	5	PKP	PKPdf	17 54 34.8	+1.2
	comp=Z,1.6nm,0.9s,baz=276,slow=1.4,SNR=13						
SONM				PKPbc	PKPbc	17 54 43.7	
	comp=Z,1.9nm,1.0s,baz=116,slow=3.4,SNR=7.7						
SONM				PKPab	PKPab	17 55 00.6	+1.3
	comp=Z,2.5nm,0.7s,baz=325,slow=3.3,SNR=9.2						
SONM	Songino Array	155.51	5	PKIKP	PKPdf	17 54 34.9	+1.4
SONM	Songino Array	155.51	5	PKPdf	PKPdf	17 54 34.9	+1.4
CN2	Changchun	155.65	331	*e*PKP	PKPdf	17 54 33.3	-0.3
KSRS	Korea Array	158.68	315	PKP	PKPdf	17 54 39.4	+1.7
	comp=Z,1.7nm,0.9s,baz=93,slow=1.9,SNR=7.3						
KSRS				PKPab	PKPab	17 55 15.2	+2.1
	comp=Z,0.3nm,0.4s,baz=61,slow=4.3,SNR=4.8						
GTA	Gaotai	162.15	24	PKP	PKPdf	17 54 39.8	-1.8
GTA				PKPab	PKPab	17 55 28.8	+0.5
GTA				LR	LR		
	comp=Z,200nm,18.5s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
GTA				LR	LR		
	comp=Z,180nm,17.4s						
HHC	Hu-ho-hao-te	162.48	354	*e*PKP	PKPdf	17 54 43.3	+1.4
LZH	Lanzhou	166.52	19	*e*PKP	PKPdf	17 54 44.8	-0.9
LZH				LR	LR		
	comp=Z,320nm,18.0s						
LZH				LR	LR		
	comp=Z,280nm,18.4s						
LZH				LR	LR		
	comp=Z,330nm,20.1s						
NJ2	Nanjing	167.87	317	*e*PKP	PKPdf	17 54 45.9	-0.6
CMAR	Chiang Mai Arr	169.22	115	PKP	PKPdf	17 54 49.1	+1.3
	comp=Z,0.6nm,0.9s,baz=246,slow=2.3,SNR=6.1						
CMAR				PKPab	PKPab	17 56 00.1	+0.1
	comp=Z,1.3nm,1.0s,baz=256,slow=4.4,SNR=8.4						
CMAR				PP	PP	17 59 51.8	+2.2
	comp=Z,0.8nm,0.9s,baz=257,slow=6.0,SNR=5.9						
CMAR	Chiang Mai Arr	169.22	115		PP	17 59 48.6	-1.1
XAN	Xi'an	169.39	1	PKP	PKPdf	17 54 49.3	+1.7
XAN				pPKP	sPKPdf	17 54 59.0	-1.6
CD2	Chengdu	171.08	32	PKP	PKPdf	17 54 47.3	-1.3
GYA	Guiyang	176.17	37	*e*PKP	PKPdf	17 54 52.0	+1.3

IDC 20 17:56:12.4±7.3**, 6°.22S**×**152°.17E, h161**^{km}±49^{km}**, mb3.2**/5**, mb1 3.3**/6**, mb1mx3.1**/27**, mbtmp3.7**/6**, Error ellipse: s-maj=94.8km s-min=30.6km az=107.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.89	237	P	Pn	17 57 38.1	+0.4
	1.0nm,0.3s,baz=45,slow=13,SNR=2.6						
WRA	Warramunga Arr	22.05	230	P	P	18 00 54.3	-0.1
	2.2nm,1.0s,baz=52,slow=9.0,SNR=11						
ASAR	Alice Springs	24.69	223	P	P	18 01 17.6	-1.1
	0.4nm,0.6s,baz=56,slow=9.1,SNR=15						
FITZ	Fitzroy Crossi	28.45	243	P	P	18 01 54.1	+1.7
	1.7nm,0.8s,baz=68,slow=12,SNR=2.5						
MKAR	Makanchi Array	80.98	319	P	P	18 08 09.5	+0.4
	0.3nm,0.5s,baz=97,slow=6.5,SNR=8.8						
ZALV	Zalesovo Beam	81.98	327	P	P	18 08 13.4	-0.8
	0.3nm,0.4s,baz=125,slow=9.3,SNR=1.7						
TORD	Torodi Ar. Bea	150.12	286	PKPbc	PKPbc	18 15 45.2	0.0
	0.2nm,0.4s,baz=70,slow=1.7,SNR=1.4						

IDC 20 17:58:57.2±4.1**, 6°.32S**×**153°.40E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/32**, mbtmp3.4**/3**, Error ellipse: s-maj=144.2km s-min=39.3km az=115.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.93	232	P	P	18 04 03.5	+0.3
	1.8nm,1.0s,baz=57,slow=10,SNR=7.1						
ASAR	Alice Springs	25.47	225	P	P	18 04 26.9	-0.4
	0.4nm,0.7s,baz=54,slow=9.0,SNR=3.3						
MKAR	Makanchi Array	81.86	319	P	P	18 11 19.0	+0.5
	0.2nm,0.8s,baz=114,slow=5.1,SNR=1.7						
TORD	Torodi Ar. Bea	151.32	286	PKPbc	PKPbc	18 18 53.4	-0.6
	0.7nm,0.6s,baz=98,slow=2.9,SNR=2.4						

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*IDC **20** 18:35:01.1±6.6, 7°.27S×154°.91E, h56^{km}±56^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.6/48, mbtmp4.1/9, ML1.7/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/25, Error ellipse: s-maj=37.8km s-min=26.7km az=93.0*

ISC 20 18:34:59.3±1.0**, 7°.2S**±0°.2×**155°.0E**±0°.1**, h41**^{km}**, n11, σ1**^{s}**.25**/11**, mb4.0**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.36	114	LR	LR	18 38 46.7	
	comp=Z,394nm,18.5s,baz=258,slow=42						
PMG	Port Moresby	8.05	254	P	Pn	18 36 52.9	-0.8
	0.6nm,0.3s,baz=80,slow=6.1,SNR=1.9						
PMG				S	Sn	18 38 25.3	+1.8
	1.8nm,0.3s,baz=111,slow=16,SNR=5.1						
PMG				LR	LR	18 40 18.5	
	comp=Z,67nm,18.6s,baz=81,slow=40						
WRA	Warramunga Arr	23.68	236	P	P	18 40 06.2	-1.2
	3.8nm,0.9s,baz=62,slow=9.7,SNR=11						
ASAR	Alice Springs	26.01	229	P	P	18 40 27.8	-0.9
	1.2nm,0.7s,baz=59,slow=10,SNR=15						
STKA	Stephens Creek	27.52	205	P	P	18 40 42.9	+0.8
	5.5nm,0.8s,baz=26,slow=14,SNR=7.3						
STKA				LR	LR	18 51 34.3	
	comp=Z,111nm,18.6s,baz=31,slow=36						
CMAR	Chiang Mai Arr	60.89	296	P	P	18 45 08.9	+0.6
	1.0nm,0.6s,baz=126,slow=5.4,SNR=11						
SONM	Songino Array	69.54	327	P	P	18 46 04.0	-0.1
	0.9nm,0.8s,baz=131,slow=6.4,SNR=8.2						
MKAR	Makanchi Array	83.59	319	P	P	18 47 22.6	-0.8
	1.3nm,0.9s,baz=100,slow=6.4,SNR=5.5						
NVAR	Mina Array Bea	91.87	52	P	P	18 48 05.5	+1.7
	0.6nm,0.8s,baz=258,slow=5.9,SNR=3.7						
YKA	Yellowknife Ar	96.55	28	P	P	18 48 24.0	-0.3
	1.0nm,0.9s,baz=264,slow=4.4,SNR=8.4						
TORD	Torodi Ar. Bea	153.09	285	PKPbc	PKiKP	18 54 52.4	-1.3
	1.6nm,0.9s,baz=83,slow=2.3,SNR=3.6						

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*BJI **20** 18:43:53.9±0.0, 36°.78N×70°.86E, h176^{km}, mB4.7/4, mb4.1/6*

*IDC **20** 18:43:53.0±2.3, 36°.44N×70°.99E, h182^{km}±21^{km}, mb3.6/20, mb1 3.7/27, mb1mx3.4/57, mbtmp4.1/27, MS4.0/1, Ms1 4.0/1, ms1mx2.9/44, Error ellipse: s-maj=13.3km s-min=11.2km az=18.0*

*MOS **20** 18:43:53.2±1.0, 36°.57N×70°.90E, h194^{km}, mb4.1/7, Error ellipse: s-maj=9.2km s-min=5.0km az=85.8*

*NEIC **20** 18:43:54.3±2.9, 36°.56N±0°.05×70°.89E±0°.09, h194^{km}±5^{km}, mb4.3/31, Error ellipse: s-maj=10.0km s-min=7.7km az=76.0*

*NNC **20** 18:43:58.9±2.4, 36°.99N×70°.92E, h207^{km}±21^{km}, mb3.3, mpv4.4, Error ellipse: s-maj=20.9km s-min=13.7km az=4.0*

ISC 20 18:43:54.6±0.3**, 36°.55N**±0°.04×**70°.97E**±0°.04**, h200**^{km}**, n159, σ1**^{s}**.89**/175**, mb4.1**/31**, 15C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.55	219	PN	Pn	18 44 37.7	-1.6
KBL						18 45 09.8	
KBL	Kabul	2.55	219		Pn	18 44 37.7	-1.6
KBL				Sn	Sn	18 45 09.8	-4.3
CEP	Cherat	2.83	164	P	Pn	18 44 41.9	-0.5
CEP				S	Sn	18 45 17.0	-2.7
NIL	Nilore	3.44	146	PN	Pn	18 44 49.6	0.0
NIL						18 45 30.9	
NIL	Nilore	3.44	146		Pn	18 44 49.6	0.0
NIL				Sn	Sn	18 45 30.9	-1.7
THW	Thamme Wali	3.80	170	P	Pn	18 44 53.2	-0.8
SARP	Sargodha	4.83	163	P	Pn	18 45 05.5	-1.3
KSH	Kashi	4.93	52	P	Pn	18 45 03.8	-4.4
KSH				S	Sn	18 45 54.6	-12
KSH				smax	smax		
	comp=N,180nm,0.4s						
KSH				smax	smax		
	comp=E,150nm,0.3s						
TAS	Tashkent	4.94	345	Pn	Pn	18 45 08.2	0.0
TAS				Sn	Sn	18 46 02.5	-3.8
IUG	Iuzhnay	5.63	353	*e*P	Pn	18 45 16.4	-0.7
	baz=354						
IUG	Iuzhnay	5.63	353	*e*PN	Pn	18 45 16.4	-0.7
AML	Almayashu	5.96	20	P	Pn	18 45 21.1	-0.4
	SNR=172						
DHRM	DHARAMSHALA	6.15	133	*e*P	Pn	18 45 23.2	-0.8
DHRM				*e*S	Sn	18 46 27.9	-6.8
DHRM				IAML		18 46 33.6	
	comp=N,424nm,0.2s						
DHRM				IAML		18 46 33.7	
	comp=E,430nm,0.3s						
UCH	Uchtor	6.30	25	P	Pn	18 45 25.9	-0.1
	SNR=41						
DZA	Taraz	6.34	2	*e*P	Pn	18 45 25.6	-0.5
	baz=3.1						
DZA	Taraz	6.34	2	*e*PN	Pn	18 45 25.6	-0.5
EKS2	Erkin-Say	6.47	19	P	Pn	18 45 27.7	-0.3
	SNR=89						
BRLS	Borolday	6.53	353	*e*P	Pn	18 45 24.6	-4.1
	comp=E,10nm,0.6s,baz=352						
BRLS	Borolday	6.53	353	*e*PN	Pn	18 45 24.5	-4.1
BRLS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KK31	Karatay Array	6.55	357	⇑P	Pn	18 45 28.0	-0.9
	comp=Z,7.4nm,0.3s,baz=182,slow=12,SNR=477						
KK31				⇑S	Sn	18 46 38.1	-5.6
	comp=Z,53nm,0.5s,baz=186,slow=23,SNR=25						
KK31	Karatay Array	6.55	357	PN	Pn	18 45 28.3	-0.6
KK31	Karatay Array	6.55	357		Pn	18 45 28.2	-0.6
KK31				Sn	Sn	18 46 37.9	-5.9
KKAR	Karatay Array	6.55	357	PN	Pn	18 45 28.1	-0.8
KKAR	Karatay Array	6.55	357		Pn	18 45 28.1	-0.8
KKAR	Karatay Array	6.55	357		Pn	18 45 27.8	-1.1
AAK	Ala-Archa	6.66	23	P	Pn	18 45 30.4	+0.1
	comp=Z,12nm,0.3s,baz=158,slow=2.8,SNR=148						
AAK				S	Sn	18 46 43.9	-2.5
	comp=Z,4.1nm,0.3s,baz=325,slow=22,SNR=23						
AAK	Ala-Archa	6.66	23	P	Pn	18 45 30.5	+0.1
	SNR=44						
AAK	Ala-Archa	6.66	23	⇓P	Pn	18 45 30.2	-0.2
	comp=Z,8.7nm,0.3s						
AAK				⇓S	Sn	18 46 43.9	-2.5
	comp=Z,65nm,0.8s						
AAK	Ala-Archa	6.66	23*c*	*e*PN	Pn	18 45 30.3	-0.1
AAK				pmax	pmax		
	comp=Z,54nm,0.8s						
AAK	Ala-Archa	6.66	23		Pn	18 45 30.2	-0.2
KBK	Karagaybulak	6.83	25	P	Pn	18 45 32.9	+0.3
	SNR=18						
ULHL	Ulahol	7.00	34	P	Pn	18 45 34.7	-0.2
	SNR=8.0						
CHMS	Chumysh	7.07	23	P	Pn	18 45 35.4	-0.2
	SNR=10						
USP	Ospenovka	7.23	21	P	Pn	18 45 37.4	-0.4
	SNR=15						
TKM2	Tokmak 2	7.29	28	P	Pn	18 45 38.7	0.0
	SNR=38						
TKM2	Tokmak 2	7.29	28	⇓P	Pn	18 45 38.7	0.0
	comp=Z,34nm,0.6s						
TKM2				⇓S	Sn	18 46 57.9	-3.5
	comp=Z,15nm,0.7s						
HRA	Herat	7.44	256		Pn	18 45 39.8	-0.9
SMLA	Simla	7.47	135	*e*P	Pn	18 45 39.5	-1.4
SMLA				*e*S	Sn	18 46 59.0	-6.4
SMLA				IAML		18 47 01.4	
	comp=N,150nm,0.4s						
SMLA				IAML		18 47 02.2	
	comp=E,215nm,0.3s						
MTBS	Maitube	7.79	31	*e*P	Pn	18 45 44.9	-0.3
	baz=31						
MTBS	Maitube	7.79	31	*e*PN	Pn	18 45 44.8	-0.3
AAA	Alma-Ata	8.06	33	*e*P	Pn	18 45 48.9	+0.2
	baz=33						
AAA	Alma-Ata	8.06	33	*e*PN	Pn	18 45 48.8	+0.2
MDOK	Medeo	8.09	33	*e*P	Pn	18 45 48.7	-0.3
	baz=33						
MDOK	Medeo	8.09	33	⇑P	Pn	18 45 48.9	-0.1
	comp=E,6.9nm,0.4s						
MDOK				⇓S	Sn	18 47 16.1	-4.0
	comp=E,6.1nm,0.6s						
MDOK	Medeo	8.09	33	*e*PN	Pn	18 45 48.6	-0.4
DDI	Dehra Dun	8.58	134	*e*S	Sn	18 47 25.5	-6.3
DDI				IAML		18 47 26.9	
	comp=N,184nm,0.4s						
DDI				IAML		18 47 28.0	
	comp=E,118nm,0.3s						
SATY	Saty	8.65	39	*e*P	Pn	18 45 56.1	-0.3
	baz=39						
SATY	Saty	8.65	39	*e*PN	Pn	18 45 56.0	-0.3
PDGK	Podgornoye	9.41	41	⇓P	Pn	18 46 05.9	-0.3
	comp=E,1.6nm,0.8s						
NDI	New Delhi	9.45	144	*e*P	Pn	18 46 05.0	-1.7
NDI				*e*S	Sn	18 47 41.0	-11
GEYT	Alibeck	10.34	281	P	Pn	18 46 15.6	-2.6
	comp=E,0.6nm,0.3s,baz=104,slow=7.9,SNR=7.3						
GEYT				S	Sn	18 48 09.2	-4.5
	comp=E,2.0nm,0.3s,baz=106,slow=16,SNR=2.4						
GYA0B	ALIBECK ARRAY	10.34	281	Pn	Pn	18 46 15.4	-2.8
MK31	Makanchi Array	13.26	36	P	Pn	18 46 55.0	-0.2
	comp=E,1.3nm,0.6s,baz=220,slow=6.5,SNR=24						
MK31	Makanchi Array	13.26	36*c*	*e*P	Pn	18 46 55.3	+0.1
MK31	Makanchi Array	13.26	36	Pn	Pn	18 46 54.7	-0.5
MKAR	Makanchi Array	13.26	36	P	Pn	18 46 53.5	-1.7
	comp=E,0.2nm,0.3s,baz=215,slow=10,SNR=26						
MKAR	Makanchi Array	13.26	36*c*	*e*P	Pn	18 46 55.5	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	13.26	36	Pn	Pn	18 46 54.8	-0.4
DANN	Dangsing	13.54	124	*e*P	Pn	18 46 57.6	-1.4
	comp=Z,21nm,0.2s						
BHPL	Bhopal	14.39	155	*e*P	P	18 47 12.5	+1.7
BHPL				*e*S	S	18 49 40.3	-9.2
DMN	Daman	14.92	123	*e*P	Pn	18 47 15.8	-0.3
	comp=Z,23nm,0.3s						
KKN	Kakani	14.92	122	*e*P	Pn	18 47 15.9	-0.2
	comp=Z,44nm,0.6s						
AB31	Akbulak array	15.03	331	⇑P	Pn	18 47 15.4	-1.5
	comp=Z,8.0nm,0.5s,baz=145,slow=12,SNR=142						
ABKAR	Akbulak array	15.03	331		Pn	18 47 15.3	-1.6
ABKAR	Akbulak array	15.03	331		Pn	18 47 15.4	-1.6
KURBB	Kurchatov Arra	15.08	19	P	Pn	18 47 16.1	-1.4
	comp=Z,0.2nm,0.3s,baz=212,slow=8.7,SNR=32						
KURBB	Kurchatov Arra	15.08	19	⇑P	Pn	18 47 14.1	-3.4
	comp=Z,3.7nm,0.5s						
PKIN	Phulchoki	15.14	122	*e*P	Pn	18 47 18.4	-0.4
	comp=Z,54nm,0.4s						
PKI	Pulchoki	15.15	122	*e*P	Pn	18 47 18.7	-0.3
	comp=Z,65nm,0.5s						
KURK	Kurchatov	15.19	19	⇑P	Pn	18 47 17.2	-1.6
	comp=Z,4.9nm,1.1s						
KURK	Kurchatov	15.19	19*c*	*e*P	Pn	18 47 17.2	-1.6
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	15.19	19	P	Pn	18 47 18.3	-0.5
GUN	Gumba	15.26	120	*e*P	Pn	18 47 19.6	-0.7

	comp=Z,25nm,0.4s						
SEM	Semipalatinsk	15.38	23	eP	P	18 47 22.1	+0.4
	baz=23						
SEM	Semipalatinsk	15.38	23	eP	P	18 47 22.1	+0.4
RAMN	Ramite	16.36	121	eP	Pn	18 47 33.9	+0.4
	comp=Z,22nm,0.3s						
BVAR	Borovoye Array	16.48	359	P	P	18 47 33.8	+0.3
	comp=Z,1.6nm,0.3s,baz=132,slow=8.0,SNR=38						
BRVK	Borovoye	16.51	359	⇑P	Pn	18 47 34.3	-0.5
	comp=Z,6.7nm,0.6s						
BRVK	Borovoye	16.51	359	ceP	Pn	18 47 34.3	-0.5
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
BRVK	Borovoye	16.51	359	P	P	18 47 33.7	-0.1
BRVK				IAmb	IAmb	18 47 35.8	
	comp=Z,8.2nm,0.7s						
AKTO	Aktyubinsk	16.73	330	P	Pn	18 47 37.5	+0.1
	comp=Z,3.4nm,0.3s,baz=141,slow=11,SNR=73						
AKTO				S	Sn	18 50 43.0	-2.4
	comp=Z,0.6nm,0.3s,baz=287,slow=15,SNR=5.2						
AKTO	Aktyubinsk	16.73	330	⇓P	Pn	18 47 37.0	-0.3
	comp=Z,28nm,0.9s						
TAPN	Taplejung	16.89	118	eP	Pn	18 47 40.9	+1.0
	comp=Z,30nm,0.4s						
ODAN	Odare	16.96	120	eP	Pn	18 47 41.4	+0.7
	comp=Z,29nm,0.7s						
DGZ	Jazzator, Alta	17.75	37	i P	P	18 47 48.5	+0.8
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LSA	Lhasa	18.21	106	P	Pn	18 47 56.0	+0.4
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	Lhasa	18.21	106	P	Pn	18 47 56.0	+0.4
LSA				IAmb	IAmb	18 47 57.9	
	comp=Z,6.1nm,0.7s						
ZAA0	Zalesovo Array	19.88	25	⇑P	P	18 48 10.7	+0.4
	comp=Z,0.8nm,0.6s						
ZAA0	Zalesovo Array	19.88	25	P	P	18 48 11.3	+1.0
ZAA0				IAmb	IAmb	18 48 12.0	
	comp=Z,4.9nm,0.7s						
ZALV	Zalesovo Beam	19.88	25	P	P	18 48 11.4	+1.1
	comp=Z,1.6nm,0.3s,baz=215,slow=10,SNR=33						
ZALV	Zalesovo Beam	19.88	25	P	P	18 48 11.2	+0.8
SHL	Shillong	20.95	116	P	P	18 48 24.2	+2.0
SHL				pmax	pmax		
	comp=Z,16nm,1.1s						
SHL	Shillong	20.95	116	P	P	18 48 24.2	+2.0
SHL				IAmb	IAmb	18 48 25.8	
	comp=Z,16nm,1.1s						
ARU	Arti	21.58	341	P	P	18 48 28.6	+0.4
	comp=Z,0.6nm,0.3s,baz=178,slow=9.9,SNR=4.9						
ARU	Arti	21.58	341	d iP	P	18 48 28.7	+0.5
ARU				*PP	pP	18 48 57.4	-5.3
ARU				S	S	18 52 19.0	+5.3
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU	Arti	21.58	341	P	P	18 48 29.2	+1.0
ARU				IAmb	IAmb	18 48 31.2	
	comp=Z,9.6nm,1.2s						
BELG	Belogornoye	22.84	321	P	P	18 48 41.3	+1.2
	comp=Z,16nm,0.9s,baz=180,slow=20,SNR=4.8						
BELG	Belogornoye	22.84	321	i P	P	18 48 39.2	-0.9
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RAYN	Ar Rayn	25.50	246	P	P	18 49 04.7	+0.1
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
RAYN	Ar Rayn	25.50	246	P	P	18 49 04.7	+0.1
SONM	Songino Array	28.32	55	P	P	18 49 31.1	+1.4
	comp=Z,0.4nm,0.5s,baz=254,slow=10,SNR=3.2						
BR131	Keskin Array S	29.40	288	P	P	18 49 41.1	+1.8
BR131				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BR131	Keskin Array S	29.40	288	P	P	18 49 41.1	+1.8
BR131				IAmb	IAmb	18 50 02.5	
	comp=Z,4.9nm,1.4s						
BRTR	Keskin Array B	29.40	288	P	P	18 49 40.4	+1.1
	comp=Z,0.4nm,0.7s,baz=116,slow=10,SNR=3.8						
BRTR	Keskin Array B	29.40	288	P	P	18 49 40.7	+1.4
BRTR	Keskin Array B	29.40	288	P	P	18 49 40.6	+1.4
OBN	Obninsk	29.88	319	i P	P	18 49 42.7	-0.5
OBN				e*PP	pP	18 50 24.1	0.0
OBN				e		18 50 46.1	
OBN				eS	S	18 54 31.2	+6.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	30.26	118	P	P	18 49 48.5	+1.6
CHTO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CHTO	Chiang Mai	30.26	118		P	18 49 48.5	+1.6
PALK	Pallekele	30.47	161	P	P	18 49 49.6	+0.8
PALK				pmax	pmax		
	comp=Z,31nm,1.4s						
PALK	Pallekele	30.47	161	P	P	18 49 49.6	+0.8
CMAR	Chiang Mai Arr	30.50	119	P	P	18 49 49.9	+0.9
	comp=Z,1.1nm,0.5s,baz=296,slow=7.8,SNR=11						
CMAR	Chiang Mai Arr	30.50	119	i P	P	18 49 50.5	+1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ELL	Elmali	32.77	283	P	P	18 50 10.4	+1.6
ELL				pmax	pmax		
	comp=Z,41nm,1.3s						
ELL	Elmali	32.77	283	P	P	18 50 10.3	+1.6
AKASG	Malin Array Be	32.90	309	P	P	18 50 10.2	+0.5
	comp=Z,0.4nm,0.5s,baz=82,slow=6.5,SNR=6.3						
AKASG	Malin Array Be	32.90	309	ceP	P	18 50 10.1	+0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	32.90	309	P	P	18 50 10.4	+0.8
AKBB				pmax	pmax		
	comp=Z,12nm,1.7s						
AKBB	Malin Array Si	32.90	309	P	P	18 50 10.4	+0.8
AKBB				IAmb	IAmb	18 50 13.5	
	comp=Z,12nm,1.6s						
MLR	Muntele Rosu	34.74	299	P	P	18 50 27.9	+2.2
	comp=Z,2.0nm,0.8s,baz=141,slow=7.4,SNR=4.2						
MLR	Muntele Rosu	34.74	299	P	P	18 50 26.4	+0.7
MLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MLR	Muntele Rosu	34.74	299	P	P	18 50 26.4	+0.7
BURAR	Bucovina Array	35.24	303	P	P	18 50 31.2	+1.3
BUR08	Bucovina Ar. S	35.25	303	P	P	18 50 31.5	+1.5
FIA1	FINESS Array S	37.43	326	P	P	18 50 49.5	+1.4
FINES	FINESS Array B	37.43	326	P	P	18 50 49.3	+1.2
	comp=Z,1.1nm,0.4s,baz=133,slow=11,SNR=7.7						
ARCES	ARCESS Array B	41.09	338	P	P	18 51 19.4	+1.2
	comp=Z,4.2nm,0.9s,baz=111,slow=7.5,SNR=8.1						
GSI	Gunungsitoli	42.84	139	P	P	18 51 34.8	+1.7
GSI				IAmb	IAmb	18 51 38.9	
	comp=Z,20nm,1.0s						
YAK	Yakutsk	43.94	35	P	P	18 51 41.5	+0.3
	comp=Z,3.4nm,0.4s,baz=292,slow=2.2,SNR=4.9						
YAK	Yakutsk	43.94	35	ceP	P	18 51 40.8	-0.4
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YAK	Yakutsk	43.94	35	P	P	18 51 41.0	-0.2
YAK				IAmb	IAmb	18 51 42.6	
	comp=Z,8.9nm,0.5s						
NC405	NORSAR Array S	44.09	323	P	P	18 51 42.5	0.0
NC303	NORSAR Array S	44.27	323	P	P	18 51 44.8	+0.9
NB201	NORSAR Array S	44.29	323	P	P	18 51 44.0	-0.2
NOA	NORSAR Array B	44.33	323	P	P	18 51 44.9	+0.4
	comp=Z,1.0nm,0.8s,baz=97,slow=7.9,SNR=3.7						
NAO01	NORSAR Array S	44.47	323	P	P	18 51 45.0	-0.5
NC204	NORSAR Array S	44.57	323	P	P	18 51 47.3	+0.9
NC204				IAmb	IAmb	18 52 09.3	
	comp=Z,23nm,1.3s						
TIXI	Tiksi	45.73	22	P	P	18 51 56.2	+0.9
SPITS	Spitsbergen Ar	47.44	347	P	P	18 52 10.3	+1.8
	comp=Z,8.4nm,0.9s,baz=123,slow=9.2,SNR=6.5						
KMBO	Kilima Mbogo	48.85	227	P	P	18 52 21.4	+1.1
	comp=Z,1.4nm,0.5s,baz=25,slow=8.7,SNR=5.4						
JOW	Kunigami	49.09	84	LR	LR	19 16 21.0	
	comp=Z,155nm,21.2s,baz=202,slow=40						
LSZ	Lusaka	65.47	226	P	P	18 54 17.2	+0.7
LSZ				pmax	pmax		
	comp=Z,11nm,1.7s						
LSZ	Lusaka	65.47	226	P	P	18 54 17.1	+0.7
LSZ				IAmb	IAmb	18 54 17.4	
	comp=Z,11nm,1.6s						
TOA0	Torodi Ar. Sit	65.70	269	P	P	18 54 16.6	-1.3
TOA0				IAmb	IAmb	18 54 18.9	
	comp=Z,5.6nm,1.4s						
TORD	Torodi Ar. Bea	65.70	269	P	P	18 54 16.4	-1.5
	comp=Z,0.9nm,0.5s,baz=46,slow=6.0,SNR=6.0						
TORD	Torodi Ar. Bea	65.70	269	P	P	18 54 16.6	-1.3
KOWA	Kowa	69.54	273	P	P	18 54 40.5	-1.5
KOWA				IAmb	IAmb	18 54 59.3	
	comp=Z,11nm,1.6s						
COLD	Coldfoot	71.93	16	P	P	18 54 57.1	+1.6
IMAR	Indian Mountai	72.13	18	P	P	18 54 57.6	+0.8
INK	Inuvik	73.86	9	P	P	18 55 08.0	+1.2
	comp=Z,1.2nm,0.6s,baz=333,slow=7.2,SNR=5.1						
INK	Inuvik	73.86	9	P	P	18 55 08.6	+1.8
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	Inuvik	73.86	9	P	P	18 55 08.6	+1.8
INK				IAmb	IAmb	18 55 25.8	
	comp=Z,4.7nm,1.3s						
ILAR	Eielson Array	74.73	16	P	P	18 55 12.4	+0.4
	comp=Z,0.2nm,0.5s,baz=322,slow=6.2,SNR=4.1						
BOSA	Boshof	77.77	220	P	P	18 55 29.4	-0.2
	comp=Z,1.5nm,0.6s,baz=26,slow=6.1,SNR=5.3						
BOSA	Boshof	77.77	220	IAmb	IAmb	18 55 29.8	
	comp=Z,15nm,1.6s						
YKA	Yellowknife Ar	81.19	3	P	P	18 55 48.5	+1.0
	comp=Z,1.1nm,0.3s,baz=3.0,slow=5.3,SNR=34						
YKA				pP	pP	18 56 36.2	-0.7
	comp=Z,0.6nm,0.7s,baz=356,slow=5.4,SNR=9.1						
WRA	Warramunga Arr	82.04	122	P	P	18 55 51.9	-0.6
	comp=Z,2.5nm,0.5s,baz=324,slow=4.9,SNR=48						
WRA	Warramunga Arr	82.04	122	IAmb	IAmb	18 55 52.4	
	comp=Z,0.1nm,0.5s						
ASAR	Alice Springs	84.30	125	P	P	18 56 03.5	-0.6
	comp=Z,3.1nm,0.6s,baz=311,slow=5.0,SNR=63						

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*IDC **20** 19:13:47.9±9.8, 25°.90N×127°.09E, h272^{km}±169^{km}, mb3.0/4, mb1 3.0/4, mb1mx2.6/48, mbtmp3.6/4, Error ellipse: s-maj=433.0km s-min=136.3km az=115.0*

*JMA **20** 19:13:53.5±0.2, 27°.58N×126°.50E, h180^{km}, M3.6*

ISC 20 19:13:52.5±0.9**, 27°.47N**±0°.07×**126°.55E**±0°.06**, h195**^{km}±10^{km}**, n32, σ1^{s}54**/55**, mb3.4**/4**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGN	Aguni-jima	1.08	145	P	Pn	19 14 23.2	+0.8
JAGN				S	Sn	19 14 45.2	-0.2
JKE	Kume jima 2	1.16	169	P	Pn	19 14 23.7	+0.7
JKE				S	Sn	19 14 47.2	+0.6
JIH	Iheya	1.34	109	P	Pn	19 14 25.3	+0.9
JIH				S	Sn	19 14 47.8	-1.2
JNTH	Nagotoyohara	1.63	125	P	Pn	19 14 28.2	+1.2
JNTH				S	Sn	19 14 52.3	-1.3
JOW	Kunigami	1.67	112	P	Pn	19 14 27.6	+0.2
	11nm,0.3s,baz=131,slow=16,SNR=122						
JOW				S	Sn	19 14 52.2	-2.2
	47nm,0.3s,baz=127,slow=19,SNR=26						
JOW	Kunigami	1.67	112	P	Pn	19 14 28.2	+0.8
JOW				S	Sn	19 14 52.5	-1.9
JJT3	Tamagusuku3	1.73	140	P	Pn	19 14 29.9	+1.9
JJT3				S	Sn	19 14 55.9	+0.5
JYRO	Yoronjima	1.75	104	P	Pn	19 14 28.9	+0.7
JYRO				S	Sn	19 14 54.1	-1.7
JOKE	Okinoerabujima	1.81	93	P	Pn	19 14 29.0	+0.3
JOKE				S	Sn	19 14 54.5	-2.3
JTK	Tokunoshima	2.16	81	P	Pn	19 14 32.3	0.0
JTK				S	Sn	19 15 01.0	-2.3
JAMN	Amaminishikomi	2.45	71	P	Pn	19 14 35.3	-0.2
JAMN				S	Sn	19 15 06.9	-2.2
JIKM	Ikemajima	2.79	205	S	Sn	19 15 15.8	-0.4
JAM	Amami Oshima	2.86	70	P	Pn	19 14 40.4	+0.1
JAM				eS	Sn	19 15 15.0	-2.6
JTAJ	Takarajima	2.88	54	P	Pn	19 14 41.0	+0.5
JOGS	Gusukube	2.89	201	P	Pn	19 14 41.5	+0.8
JOGS				S	Sn	19 15 18.3	+0.1
JIRB	Irabujima	2.91	205	P	Pn	19 14 41.1	+0.2
JIRB				S	Sn	19 15 17.2	-1.4
JMJ2	Miyako jima3	2.93	202	P	Pn	19 14 42.6	+1.4
JMJ2				S	Sn	19 15 18.8	-0.3
JZK	Kikaishima	3.15	74	P	Pn	19 14 44.3	+0.7
JZK				eS	Sn	19 15 22.2	-1.4
JTJ	Tarama	3.27	211	P	Pn	19 14 45.2	0.0
JTJ				S	Sn	19 15 24.5	-1.9
JISG	Ishigakijimahi	3.51	215	P	Pn	19 14 47.8	-0.3
JISG				S	Sn	19 15 29.1	-2.4
JNN	Nakanoshima	3.76	50	P	Pn	19 14 52.0	+0.9
JIJ	Ishigaki jima	3.78	215	P	Pn	19 14 50.6	-0.8
JIJ				S	Sn	19 15 34.2	-3.3
JKRS	Kuro-shima	3.95	216	P	Pn	19 14 52.8	-0.7
JKRS				S	Sn	19 15 39.3	-2.1
IRIF	Iriomote-Funau	4.02	220	P	Pn	19 14 53.8	-0.7
IRIF				S	Sn	19 15 40.6	-2.5
HATJ	Hateruma jima	4.20	217	eS	Sn	19 15 45.1	-2.0
YOJ	Yonaguni jima	4.37	227	P	Pn	19 14 59.1	+0.3
JMZ	Minamidaito 2	4.50	110	P	Pn	19 15 00.7	+0.3
JMZ				S	Sn	19 15 50.5	-3.2
JKDJ	Kitadaitoujima	4.51	109	P	Pn	19 15 02.3	+1.7
JKDJ				S	Sn	19 15 51.4	-2.7
SONM	Songino Array	25.70	328	P	P	19 19 07.8	+3.1
	0.9nm,0.5s,baz=144,slow=11,SNR=10						
MKAR	Makanchi Array	39.59	311	P	P	19 21 04.5	-0.4
	0.4nm,0.5s,baz=97,slow=10,SNR=8.4						
ZALV	Zalesovo Beam	40.35	323	P	P	19 21 11.2	+0.3
	0.5nm,0.3s,baz=128,slow=7.3,SNR=4.3						
KURBB	Kurchatov Arra	42.92	316	P	P	19 21 32.0	+0.2
	0.1nm,0.4s,baz=106,slow=9.2,SNR=1.8						

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*KRNET **20** 19:14:27.8±0.1, 39°.31N×71°.64E, h15^{km}, mb3.1*

*NNC **20** 19:14:30.9±3.9, 39°.40N×71°.74E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=28.5km s-min=18.2km az=10.0*

ISC 20 19:14:30.0±2.1**, 39°.4N**±0°.1×**71°.62E**±0°.04**, h10**^{km}**, n26, σ2^{s}07**/43**, 24C-12D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.17	54	⇑iP	Pg	19 14 31.9	-2.0
	baz=35						
DRK				⇑iS	Sg	19 14 35.7	-0.9
	baz=35						
BTK	Batken	0.92	318	⇓iP	Pg	19 14 46.6	-1.1
	baz=20						
BTK				⇓iS	Sg	19 15 00.1	+0.4
	baz=20						
OHH	Osh	1.45	38	⇑iP	Pn	19 14 55.5	-0.9
	baz=35						
OHH				⇑iS	Sg	19 15 15.7	-1.0
	baz=35						
SFK	Sufi-Kurgan	1.58	66	⇑iP	Pn	19 14 57.2	-1.1
	baz=63						
SFK				⇑iS	Sb	19 15 18.9	-0.8
	baz=63						
TRKS	Terek-Say	2.18	350	⇑iP	Pn	19 15 06.7	+0.2
	baz=51						
TRKS				⇑iS	Sn	19 15 34.9	+1.3
	baz=51						
ARSB	Arslanbob	2.20	28	⇑iP	Pn	19 15 07.9	+1.1
	baz=26						
ARSB				⇑iS	Sb	19 15 36.7	-0.7
	baz=26						
IUG	Iuzhnay	3.02	337	Pg	Pb	19 15 22.2	-1.7
	32nm,0.2s						
IUG				Lg	Lg	19 16 05.0	
	102nm,0.6s						
AML	Almayashu	3.17	29	⇓iP	Pn	19 15 21.0	+0.7
	baz=28						
AML				⇓iS	Sn	19 15 59.6	+1.3
	baz=28						
AML	Almayashu	3.17	29	P	Pn	19 15 23.0	+2.7
	SNR=12						
MNAS	Manas	3.17	12	⇑iP	Pn	19 15 21.3	+1.1
	baz=11						
MNAS				⇑iS	Sn	19 16 00.5	+2.4
	baz=11						
ARLS	Aral	3.22	39	⇓iP	Pn	19 15 21.5	+0.7
	baz=38						
ARLS				⇓iS	Sn	19 16 01.1	+1.8
	baz=38						
MRKS	Merke	3.57	19	Pg	Pb	19 15 32.5	-0.8
	8.5nm,0.5s						
MRKS				Lg	Lg	19 16 21.6	
	8.8nm,0.3s						
UCH	Uchtor	3.59	37	⇑iP	Pn	19 15 27.4	+1.2
	baz=36						
UCH				⇑iS	Sn	19 16 10.9	+2.0
	baz=36						
UCH	Uchtor	3.59	37	P	Pn	19 15 28.4	+2.2
	SNR=7.8						
EKS2	Erkin-Say	3.66	26	⇑iP	Pn	19 15 28.1	+1.3
	baz=25						
EKS2				⇑iS	Sn	19 16 12.7	+2.6
	baz=25						
EKS2	Erkin-Say	3.66	26	P	Pn	19 15 29.6	+2.8
	SNR=6.9						
KK31	Karatay Array	3.81	348	⇑Pn	Pn	19 15 32.1	+3.3
	1.3nm,0.2s,baz=170,slow=12,SNR=9.4						
KK31				⇑Sn	Sb	19 16 20.2	-3.4
	3.9nm,0.3s,baz=168,slow=22,SNR=4.2						
KK31				⇑Lg	Lg	19 16 30.2	
	11nm,0.6s,baz=160,slow=29,SNR=7.1						
AAK	Ala-Archa	3.91	33	⇑iP	Pn	19 15 32.1	+1.8
	baz=32						
AAK				⇑iS	Sn	19 16 18.5	+2.1
	baz=32						
AAK	Ala-Archa	3.91	33	P	Pn	19 15 33.9	+3.6
	SNR=9.8						
AAK	Ala-Archa	3.91	33	⇓Pn	Pn	19 15 33.5	+3.2
	2.1nm,0.4s						
AAK				⇓Pg	Pb	19 15 40.1	+0.9
	4.0nm,0.5s						
AAK				⇓Sn	Sb	19 16 21.3	-5.3
	4.4nm,0.6s						
AAK				⇓Lg	Lg	19 16 30.3	
	11nm,0.5s						
CHMS	Chumysh	4.32	32	⇑iP	Pn	19 15 37.6	+1.8
	baz=31						
CHMS				⇑iS	Sn	19 16 28.8	+2.6
	baz=31						
CHMS	Chumysh	4.32	32	P	Pn	19 15 38.7	+2.9
	SNR=7.6						
TKM2	Tokmak 2	4.64	39	⇑Pn	Pn	19 15 42.1	+1.8
	1.0nm,0.4s						
TKM2				⇓Pg	Pb	19 15 53.2	+1.6
	6.6nm,0.8s						
TKM2				⇓Lg	Lg	19 16 52.1	
	4.9nm,0.6s						
SGDS	Sogindy	4.65	28	Pg	Pb	19 15 52.4	+0.6
	3.9nm,0.6s						
SGDS				Lg	Lg	19 16 55.8	
	6.7nm,0.4s						
DGS	Degeres	4.96	38	Pg	Pb	19 15 57.5	+0.5
	5.5nm,0.7s						
DGS				Lg	Lg	19 17 04.7	
	5.8nm,0.5s						
TNSS	Tian-Shan	5.43	46	Pg	Pb	19 16 05.9	+0.8
	3.4nm,0.4s						
TNSS				Lg	Lg	19 17 19.4	
	3.8nm,0.6s						

IDC 20 19:15:43.6±2.1**, 2°.24S**×**134°.29E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/4**, mb1mx3.3**/34**, mbtmp3.4**/4**, ML3.1**/2**, Error ellipse: s-maj=57.6km s-min=24.3km az=62.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.31	294	Pn	Pn	19 16 36.7	-0.1
	1.9nm,0.3s,baz=281,slow=23,SNR=10						
SIJI				Sn	Sn	19 17 16.9	0.0
	2.7nm,0.3s,baz=315,slow=23,SNR=5.9						
WRA	Warramunga Arr	17.59	180	P	Pn	19 19 50.5	+0.1
	0.1nm,0.3s,baz=360,slow=12,SNR=7.3						
ASAR	Alice Springs	21.30	181	P	P	19 20 32.0	-0.1
	1.5nm,0.9s,baz=7.7,slow=13,SNR=11						
MKAR	Makanchi Array	66.77	324	P	P	19 26 37.1	+0.1
	0.2nm,0.4s,baz=106,slow=6.1,SNR=6.9						

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*IDC **20** 19:19:19.9±1.9, 4°.01S×141°.95E, h104^{km}±17^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.3/30, mbtmp3.9/6, Error ellipse: s-maj=29.0km s-min=15.2km az=74.0*

*NEIC **20** 19:19:20.1±1.5, 4°.0S±0°.1×141°.9E±0°.1, h108^{km}±12^{km}, mb4.0/9, Error ellipse: s-maj=25.6km s-min=8.4km az=51.0*

ISC 20 19:19:20.0±0.9**, 4°.00S**±0°.09×**142°.0E**±0°.1**, h109**^{km}**, n18, σ1^{s}13**/20**, mb3.7**/6**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.95	319	P	Pn	19 19 52.4	0.0
	17nm,0.3s,baz=158,slow=10.0,SNR=82						
JAY				S	Sn	19 20 16.4	-0.7
	20nm,0.3s,baz=0.5,slow=13,SNR=7.5						
PMG	Port Moresby	7.44	136	P	Pn	19 21 06.3	+0.4
	1.1nm,0.3s,baz=293,slow=14,SNR=4.3						
SAUI	Saumlaki	11.32	249	Pn	Pn	19 21 57.9	-0.8
WB0	Warramunga Arr	17.32	205	P	P	19 23 13.0	-2.0
WR0	Warramunga Arr	17.44	204	P	P	19 23 14.4	-1.8
WR0				IAmb	IAmb	19 23 19.1	
	comp=Z,6.4nm,0.8s						
WB2	Warramunga Arr	17.50	205	P	P	19 23 15.6	-1.3
WRA	Warramunga Arr	17.50	205	P	P	19 23 15.6	-1.3
	comp=Z,1.3nm,0.3s,baz=27,slow=12,SNR=34						
WRA	Warramunga Arr	17.50	205	P	P	19 23 15.9	-1.1
SOEI	Soe	18.48	251		Pn	19 23 29.6	+0.4
SOEI				IAmb	IAmb	19 24 13.8	
	comp=Z,8.9nm,0.9s						
AS31	Alice Springs	21.04	201	P	P	19 23 54.9	-0.5
ASAR	Alice Springs	21.05	201	P	P	19 23 55.0	-0.5
	comp=Z,3.0nm,0.6s,baz=25,slow=11,SNR=47						
ASAR				pP	pP	19 24 16.4	0.0
	comp=Z,6.1nm,0.7s,baz=31,slow=10,SNR=14						
ASAR	Alice Springs	21.05	201	P	P	19 23 54.5	-0.9
FITZ	Fitzroy Crossi	21.26	228	P	P	19 23 58.9	+1.2
	comp=Z,2.0nm,0.6s,baz=25,slow=9.6,SNR=12						
MYLDM	Lahad Datu	25.16	291	P	P	19 24 36.7	+1.3
MYLDM				IAmb	IAmb	19 24 41.8	
	comp=Z,15nm,1.3s						
KHZ	Kahutara	47.47	148	P	P	19 27 44.5	+0.6
MK31	Makanchi Array	72.81	322	P	P	19 30 36.6	-0.2
MK31				IAmb	IAmb	19 31 12.8	
	comp=Z,2.3nm,1.4s						
MKAR	Makanchi Array	72.81	322	P	P	19 30 38.2	+1.4
	comp=Z,0.4nm,0.6s,baz=105,slow=7.5,SNR=5.2						
ILAR	Eielson Array	85.67	24	P	P	19 31 45.0	-1.3
	comp=Z,0.3nm,0.6s,baz=248,slow=4.8,SNR=2.9						

WEL 20 19:20:29.0±1.0**, 35°S**±15°×**17°9W**±1°8**, h205**^{km}±18^{km}**, M4.0**/18**, mB4.2**/1**, MLv4.0**/18**, Mw(mB)3.3**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.3, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.34	213	P	Pn	19 21 21.1	-1.7
MXZ				S	S	19 22 02.9	-1.6
WMGZ	Waiomatatini S	3.51	209	P	Pn	19 21 25.7	+0.8
PKGZ	Pakihiroa	3.71	212	P	Pn	19 21 26.7	-0.7
PKGZ				S	S	19 22 13.4	+0.7
HAZ	Te Kaha	3.74	216	P	Pn	19 21 27.5	-0.1
HAZ				S	S	19 22 14.5	+1.2
RUGZ	Raukumara Rang	3.95	215	P	Pn	19 21 29.7	-0.8
RUGZ				S	S	19 22 18.9	+0.6
TWGZ	Tauwhareparae	3.99	211	P	Pn	19 21 31.7	+0.9
TWGZ				S	S	19 22 21.4	+2.4
CNGZ	Carnagh Statio	4.17	207	P	Pn	19 21 32.8	-0.2
TKGZ	Te Karaka	4.27	210	P	Pn	19 21 35.2	+1.0
MWZ	Matawai	4.32	214	P	Pn	19 21 35.1	+0.1
MWZ				S	S	19 22 26.8	+0.4
URZ	Urewera	4.46	218	P	Pn	19 21 36.1	-0.5
URZ				S	S	19 22 30.6	+1.1
RIGZ	Rimuhau	4.53	209	P	Pn	19 21 38.8	+1.2
PRGZ	Paritu Road	4.67	207	P	Pn	19 21 40.6	+1.3
SNGZ	Shannon Statio	4.77	212	P	Pn	19 21 41.4	+0.8
SNGZ				S	S	19 22 40.2	+3.5
MUGZ	Murupara	4.80	219	P	Pn	19 21 41.0	+0.1
RTZ	Ruatahuna	4.80	216	P	Pn	19 21 40.8	-0.2
KNZ	Kokohu	4.84	208	P	Pn	19 21 40.2	-1.2
MKAZ	Moumakai	4.97	241	P	Pn	19 21 43.4	+0.3
OTVZ	Oturere	5.89	220	P	Pn	19 21 54.8	-0.2
KRHZ	Kereru	5.91	213	P	Pn	19 21 54.1	-1.0
KRHZ				S	S	19 23 04.0	+0.9
HIZ	Hauiti	5.92	229	P	Pn	19 21 56.4	+1.1
BHHZ	Black Hill Sta	5.93	216	P	Pn	19 21 55.1	-0.4
BHHZ				S	S	19 23 03.6	0.0
PXZ	Pawanui	6.03	208	P	Pn	19 21 56.3	-0.3
PNHZ	Pukenui	6.21	213	P	Pn	19 21 57.7	-1.2
PNHZ				S	S	19 23 08.8	-1.2
PRHZ	Porangahau	6.32	209	P	Pn	19 22 00.2	-0.1

*IDC **20** 19:27:26.4±1.7, 3°.57S×138°.70E, h75^{km}±29^{km}, mb3.8/1, mb1 4.1/7, mb1mx3.6/31, mbtmp4.3/7, MS3.3/2, Ms1 3.3/2, ms1mx2.7/23, Error ellipse: s-maj=24.7km s-min=16.4km az=139.0*

*NEIC **20** 19:27:28.4±2.3, 3°.7S±0°.1×138°.58E±0°.06, h87^{km}±11^{km}, mb4.1/10, Error ellipse: s-maj=17.9km s-min=7.1km az=197.0*

ISC 20 19:27:26.2±0.7**, 3°.74S**±0°.07×**138°.62E**±0°.07**, h71**^{km}**, n25,** σ**2**^{s}.**19**/27**, mb4.2**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.41	60	P	Pn	19 28 01.6	-1.8
	11nm,0.3s,baz=251,slow=15,SNR=58						
JAY				S	Sn	19 28 29.3	-2.7
	32nm,0.3s,baz=78,slow=20,SNR=10						
FAKI	Fak Fak	6.41	277	Pn	Pn	19 28 59.8	+1.7
SIJI	Sorong	7.88	291	P	Pn	19 29 18.9	+0.8
	5.0nm,0.3s,baz=280,slow=22,SNR=23						
PMG	Port Moresby	10.18	124	P	Pn	19 29 51.9	+2.4
	1.0nm,0.3s,baz=284,slow=9.8,SNR=3.9						
PMG	Port Moresby	10.18	124	Pn	Pn	19 29 52.7	+3.2
SOEI	Soe	15.45	247		Pn	19 31 01.5	+1.3
SOEI				IAmb	IAmb	19 31 21.8	
	comp=Z,14nm,0.8s						
SOEI					S	19 34 01.6	-1.0
BATI	Baumata	16.17	246	P	P	19 31 11.3	+0.1
	comp=Z,1.3nm,0.3s,baz=80,slow=7.3,SNR=7.4						
WB0	Warramunga Arr	16.46	194	Pn	Pn	19 31 12.5	-0.2
WB0				IAmb	IAmb	19 31 22.8	
	comp=Z,7.8nm,0.8s						
WR0	Warramunga Arr	16.61	194	Pn	Pn	19 31 14.5	-0.1
WR0				IAmb	IAmb	19 31 23.9	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	16.63	194		Pn	19 31 15.3	+0.5
WRAB				IAmb	IAmb	19 31 37.4	
	comp=Z,8.9nm,0.7s						
WB2	Warramunga Arr	16.64	194	Pn	Pn	19 31 14.7	-0.3
WRA	Warramunga Arr	16.64	194	P	Pn	19 31 15.5	+0.5
	comp=Z,1.2nm,0.3s,baz=15,slow=12,SNR=30						
WRA				S	Sn	19 34 17.1	-2.1
	comp=Z,0.3nm,0.3s,baz=10,slow=23,SNR=4.7						
WC3	Warramunga Arr	16.65	194	Pn	Pn	19 31 14.8	-0.3
TOLI2	Tolitoli	18.47	285		Pn	19 31 37.5	+0.2
FITZ	Fitzroy Crossi	19.11	221	P	Pn	19 31 45.9	+0.9
	comp=Z,0.5nm,0.3s,baz=39,slow=9.1,SNR=11						
FITZ				S	S	19 35 08.5	-8.1
	comp=Z,0.7nm,0.3s,baz=189,slow=12,SNR=6.7						
AS31	Alice Springs	20.33	193	P	Pn	19 31 59.5	+0.1
ASAR	Alice Springs	20.33	193	P	P	19 31 58.2	+1.4
	comp=Z,4.8nm,0.5s,baz=17,slow=9.6,SNR=68						
ASAR				S	S	19 35 41.6	+0.7
	comp=Z,2.3nm,0.9s,baz=13,slow=22,SNR=9.5						
JOW	Kunigami	31.99	342	LR	LR	19 46 53.3	
	comp=Z,56nm,19.6s,baz=158,slow=37						
KSAR	Wonju Array Be	42.17	347	P	P	19 35 11.9	0.0
KSRS	Korea Array	42.17	347	LR	LR	19 52 39.2	
	comp=Z,35nm,19.3s,baz=345,slow=36						
MKAR	Makanchi Array	70.55	323	P	P	19 38 33.2	-0.5
	comp=Z,0.2nm,0.7s,baz=121,slow=8.0,SNR=2.8						
MKAR	Makanchi Array	70.55	323	P	P	19 38 31.2	-2.5
KK31	Karatay Array	76.80	316	P	P	19 39 11.0	+0.6
KK31				IAmb	IAmb	19 39 13.1	
	comp=Z,2.4nm,0.8s						
KKAR	Karatay Array	76.80	316	P	P	19 39 11.1	+0.8
KKAR	Karatay Array	76.80	316	P	P	19 39 10.9	+0.5
KKAR				IAmb	IAmb	19 39 13.2	
	comp=Z,2.4nm,0.8s						

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*MOS **20** 19:38:49.4±0.8, 47°.90N×154°.94E, h45^{km}, mb4.2/1, Error ellipse: s-maj=15.7km s-min=5.1km az=70.6*

*SKHL **20** 19:38:50.5±0.3, 47°.94N×154°.91E, h61^{km}±4^{km}, mb4.4/5*

*KRSC **20** 19:38:53.3±1.8, 48°.16N×156°.14E, h30^{km}±24^{km}, ML4.3*

*IDC **20** 19:38:56.0±3.2, 48°.28N×154°.46E, h83^{km}±27^{km}, mb3.2/7, mb1 3.5/11, mb1mx3.3/43, mbtmp3.6/11, Error ellipse: s-maj=49.5km s-min=16.5km az=153.0*

ISC 20 19:38:49.4±0.9**, 47°.9N**±0°.1×**154°.9E**±0°.1**, h35**^{km}**, n67,** σ**2**^{s}.**31**/75**, mb3.5**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.88	15	eP	Pn	19 39 32.8	0.0
SKR				AMB	AMB	19 39 36.8	
	30nm,0.7s						
SKR				eS	Sn	19 40 04.8	-1.3
SKR				A	A	19 40 09.0	
	140nm,0.2s						
SKR				A	A	19 40 09.0	
	170nm,0.2s						
SKR	Severo-Kuril's	2.88	15	ePN	Pn	19 39 33.6	+0.8
SKR				eS	Sn	19 40 04.2	-1.9
SKR				smax	smax		
	comp=E,139nm,0.3s						
SKR				smax	smax		
	comp=N,154nm,0.4s						
SKR	Severo-Kuril's	2.88	15	eP	Pn	19 39 33.7	+0.9
SKR				eS	Sn	19 40 03.5	-2.6
PAU	Pauzhetka	3.76	18	eP	Pn	19 39 46.5	+1.6
PAU				AMB	AMB	19 39 50.2	
	comp=N,36nm,0.3s						
PAU				eS	Sn	19 40 28.3	+0.4
PAU				A	A	19 40 29.4	
	comp=N,202nm,0.3s						
PAU				A	A	19 40 29.4	
	comp=N,205nm,0.3s						
PAU	Pauzhetka	3.76	18	PN	Pn	19 39 47.9	+3.0
PAU				S	Sn	19 40 28.5	+0.6
PAU	Pauzhetka	3.76	18	eP	Pn	19 39 47.9	+3.0
PAU				eS	Sn	19 40 28.5	+0.6
KDTR	Khodutka, Kamc	4.40	26	PN	Pn	19 39 54.7	+1.1
KDTR	Khodutka, Kamc	4.40	26	eP	Pn	19 39 54.7	+1.1
KDTR				eS	Sn	19 40 41.0	-2.6
MTVR	Mutnovka	5.03	23	PN	Pn	19 40 04.1	+1.6
MTVR	Mutnovka	5.03	23	eP	Pn	19 40 04.1	+1.6
MTVR				eS	Sn	19 40 57.1	-2.3
GRL	Gorelyy	5.06	22	PN	Pn	19 40 04.8	+1.9
GRL	Gorelyy	5.06	22	eP	Pn	19 40 04.8	+1.9
GRL				eS	Sn	19 40 58.1	-2.1
RUS	Russkaya	5.08	26	PN	Pn	19 40 03.3	+0.4
RUS	Russkaya	5.08	26	eP	Pn	19 40 03.3	+0.4
RUS				eS	Sn	19 40 56.0	-4.3
APC	Apacha	5.22	15	PN	Pn	19 40 08.1	+3.3
APC	Apacha	5.22	15	eP	Pn	19 40 08.1	+3.3
PETK	Petropavlovsk-	5.49	18	P	Pn	19 40 11.1	+2.4
	comp=N,1.6nm,0.3s,baz=176,slow=11,SNR=22						
KUR	Kuril'sk	5.55	244	eP	Pn	19 40 13.5	+4.0
KUR				AMB	AMB	19 40 19.0	
	comp=N,80nm,0.6s						
KUR				eS	Sn	19 41 11.7	-0.4
KUR				A	A	19 41 20.6	
	comp=N,72nm,0.6s						
KUR				A	A	19 41 20.6	
	comp=N,40nm,0.6s						
KUR	Kuril'sk	5.55	244	ePN	Pn	19 40 13.3	+3.8
KUR				eS	Sn	19 41 15.7	+3.6
KUR				pmax	pmax		
	comp=Z,65nm,0.5s						
KUR				smax	smax		
	comp=N,62nm,0.5s						
KUR				smax	smax		
	comp=E,38nm,0.3s						
PET	Petropavlovsk	5.64	24	eP	Pn	19 40 14.0	+3.3
PET				eS	Sn	19 41 13.6	-0.6
UGLR	Uglovaya	5.85	24	PN	Pn	19 40 15.9	+2.2
UGLR	Uglovaya	5.85	24	eP	Pn	19 40 15.9	+2.2
KOK	Koryaka	5.88	22	PN	Pn	19 40 16.7	+2.6
KOK	Koryaka	5.88	22	eP	Pn	19 40 16.7	+2.6
AVH	Avacha	5.88	23	eP	Pn	19 40 17.0	+2.9
AVH	Avacha	5.88	23	PN	Pn	19 40 17.0	+2.9
AVH	Avacha	5.88	23	eP	Pn	19 40 17.0	+2.9
SMAR	Somma	5.90	23	PN	Pn	19 40 16.8	+2.4
SMAR	Somma	5.90	23	eP	Pn	19 40 16.8	+2.4
KRER	Koryakskii	5.92	23	PN	Pn	19 40 17.5	+2.8
KRER	Koryakskii	5.92	23	eP	Pn	19 40 17.5	+2.8
KRX	Arik	5.94	22	PN	Pn	19 40 17.1	+2.1
KRX	Arik	5.94	22	eP	Pn	19 40 17.1	+2.1
GNL	Ganaly	6.10	17	PN	Pn	19 40 19.5	+2.5
GNL	Ganaly	6.10	17	eP	Pn	19 40 19.5	+2.5
SPN	Mys Shipunski	6.12	30	eP	Pn	19 40 18.8	+1.5
SPN	Mys Shipunski	6.12	30	PN	Pn	19 40 18.8	+1.5
SPN	Mys Shipunski	6.12	30	eP	Pn	19 40 18.8	+1.5
NMR	Nemuro--Hokkai	7.88	238	eP	Pn	19 40 42.5	+1.0
NMR				eS	Sn	19 42 06.0	-3.4
NMR	Nemuro--Hokkai	7.88	238	ePN	Pn	19 40 41.5	0.0
TUMD	Tumrok D	8.05	23	eP	Pn	19 40 47.3	+3.5
TUMR	Tumrok	8.06	22	PN	Pn	19 40 47.3	+3.3
YSS	Yuzh-Sakhalins	8.31	268	eP	Pn	19 40 49.0	+1.7
YSS				AMB	AMB	19 40 50.3	
	comp=E,21nm,0.5s						
YSS	Yuzh-Sakhalins	8.31	268	ePN	Pn	19 40 49.2	+1.9
TYV	Tymovskoe	8.53	295	eP	Pn	19 40 50.9	+0.6
TYV				AMB	AMB	19 41 11.0	
	comp=E,5.0nm,0.6s						
JKA	Kamikawa-asahi	9.38	251	eP	Pn	19 41 06.5	+4.6
ASAJ	Asahikawa	9.38	251	P	Pn	19 41 06.5	+4.5
	comp=E,1.6nm,0.3s,baz=81,slow=15,SNR=16						
KBTR	Krutoberegovo	9.62	27	PN	Pn	19 41 06.2	+1.0
KBTR	Krutoberegovo	9.62	27	eP	Pn	19 41 06.2	+1.0
KLR	Kul'dur	15.38	284	P	Pn	19 42 25.1	+1.4
	comp=E,0.1nm,0.3s,baz=103,slow=18,SNR=2.1						
KLR	Kul'dur	15.38	284	eP	Pn	19 42 23.1	-0.6
USRK	Ussuriysk Ar.	16.33	265	P	Pn	19 42 37.3	+1.5
	baz=85,slow=15,SNR=7.0						
KSRS	Korea Array	22.32	252	P	P	19 43 44.6	+0.7
	comp=E,1.0nm,0.6s,baz=49,slow=10,SNR=6.8						
H11S1	WAKE ISLAND Hy	30.87	158	T	T	20 17 59.1	
	baz=345,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	30.88	158	T	T	20 17 59.2	
	baz=345,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	30.89	158	T	T	20 18 01.3	
	baz=345,slow=76,SNR=7.6						
SONM	Songino Array	32.12	288	P	P	19 45 11.0	-2.4
	comp=E,0.4nm,0.9s,baz=94,slow=6.5,SNR=2.3						
SONM	Songino Array	32.12	288	P	P	19 45 11.0	-2.4
ILAR	Eielson Array	34.87	40	P	P	19 45 38.4	+1.4
	comp=E,0.4nm,0.7s,baz=246,slow=7.7,SNR=4.3						
MKAR	Makanchi Array	47.50	297	P	P	19 47 18.8	-2.0
	comp=E,0.2nm,0.7s,baz=74,slow=5.1,SNR=2.5						
YKA	Yellowknife Ar	49.25	38	P	P	19 47 34.9	+0.8
	comp=E,1.0nm,0.9s,baz=294,slow=7.2,SNR=6.5						
TXAR	Lajitas Array	75.85	62	P	P	19 50 33.7	+1.5
	comp=E,0.4nm,0.5s,baz=273,slow=2.6,SNR=4.5						
BRTR	Keskin Array B	78.37	318	P	P	19 50 45.0	-1.3
	comp=E,0.6nm,0.8s,baz=67,slow=3.2,SNR=3.7						
BRTR	Keskin Array B	78.37	318	P	P	19 50 45.0	-1.3
H03N2	Juan Fernandez	137.53	90	T	T	22 31 22.6	
	baz=309,slow=77,SNR=18						
H03N1	Juan Fernandez	137.54	90	T	T	22 31 22.8	
	baz=309,slow=77,SNR=22						
H03N3	Juan Fernandez	137.54	90	T	T	22 31 25.3	
	baz=309,slow=77,SNR=22						

IDC 20 19:45:52.8±64.0**, 20°.97S**×**178°.12W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/24**, mbtmp3.9**/3**, Error ellipse: s-maj=1169.0km s-min=166.6km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.48	245	P	P	19 53 07.5	-0.9
	1.1nm,0.4s,baz=80,slow=6.1,SNR=3.7						
ASAR	Alice Springs	44.30	257	P	P	19 54 04.7	-0.1
	1.1nm,0.7s,baz=89,slow=7.2,SNR=14						
WRA	Warramunga Arr	44.43	263	P	P	19 54 06.0	+0.3
	0.4nm,0.2s,baz=96,slow=8.4,SNR=23						

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*ANF **20** 20:25:49.2±0.5, 32°.81N×96°.88W, h1^{km}±3^{km}, ML3.6/10, Error ellipse: s-maj=2.2km s-min=2.0km az=48.0*

*NEIC **20** 20:25:49.4±1.3, 32°.82N±0°.04×96°.91W±0°.04, h9^{km}±6^{km}, mb_Lg3.0/69, Error ellipse: s-maj=6.6km s-min=5.2km az=187.0*

ISC 20 20:25:48.4±0.9**, 32°.82N**±0°.03×**96°.92W**±0°.03**, h10**^{km}**, n71,** σ**1**^{s}.**02**/53**, Central Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z35A	Perchaven, San	0.58	332	Pg	Pg	20 25 59.6	-0.2
Z35A				Sg	Sg	20 26 07.2	-0.2
Z35A	Perchaven, San	0.58	332	P		20 25 59.7	
	baz=150						
Z35A				S		20 26 07.3	
	baz=150						
WHTX	Lake Whitney,	0.94	209	P	Pn	20 26 07.9	+0.3
	baz=29						
WHTX				S	Sn	20 26 20.8	-0.4
	baz=29						
WHTX	Lake Whitney,	0.94	209		Pn	20 26 07.0	-0.6
WHTX	Lake Whitney,	0.94	209	P		20 26 07.9	
	baz=29						
WHTX				S		20 26 20.8	
	baz=29						
237A	Washetta, Mont	1.24	131		Pg	20 26 13.0	+0.7
237A	Washetta, Mont	1.24	131	P		20 26 13.2	
	baz=312						
Z38A	Mt. Pleasant	1.69	74		Pn	20 26 17.6	-0.4
435B	Jarrell	2.10	196	Sb	Sg	20 26 57.2	+1.1
	baz=16						
435B	Jarrell	2.10	196	Pn	Pn	20 26 24.1	+0.4
435B	Jarrell	2.10	196	S		20 26 57.0	
	baz=16						
NATX	Nacogdoches	2.19	118	S	Sb	20 26 54.4	-0.8
	baz=300						
NATX	Nacogdoches	2.19	118		Pn	20 26 24.8	-0.1
NATX	Nacogdoches	2.19	118	S		20 26 54.3	
	baz=300						
X37A	Clayton	2.19	36		Pn	20 26 25.2	+0.4
X37A	Clayton	2.19	36	P		20 26 26.4	
	baz=216						
ABTX	Abilene, Hawle	2.30	266	Pb	Pg	20 26 31.7	-0.8
	baz=84						
ABTX				S	Sg	20 27 01.3	-1.1
	baz=84						
ABTX	Abilene, Hawle	2.30	266	Pn	Pn	20 26 28.0	+1.5
ABTX	Abilene, Hawle	2.30	266	P		20 26 27.6	
	baz=84						
ABTX				S		20 26 57.1	
	baz=84						
W35A	Tecumseh	2.33	1	Pn	Pn	20 26 27.1	+0.3
WMOK	Wichita Mounta	2.46	322	P	Pb	20 26 31.8	-1.0
	baz=140						
WMOK				S	Sb	20 27 03.5	+0.2
	baz=140						
WMOK	Wichita Mounta	2.46	322		Pn	20 26 29.1	+0.4
WMOK				IAmb_Lg		20 27 12.7	
	comp=Z,79nm,0.8s						
WMOK	Wichita Mounta	2.46	322	P		20 26 31.1	
	baz=140						
WMOK				S		20 27 03.4	
	baz=140						
FNO	Franklin	2.47	351		Pn	20 26 29.9	+1.2
OKCSW	OKLAHOMA CITY	2.62	351	Pn	Pn	20 26 30.7	0.0
OKCFA	Oklahoma City	2.63	351	Pn	Pn	20 26 31.4	+0.5
OKCFA				IAmb_Lg		20 27 17.3	
	comp=Z,70nm,0.7s						
OK025	Westminster Rd	2.78	353		Pn	20 26 34.2	+1.2
OK025				IAmb_Lg		20 27 22.2	
	comp=Z,58nm,0.9s						
BCOK	Bluff Creek, N	2.89	349		Pn	20 26 35.3	+0.8
OK029	Liberty Lake	3.00	352		Pn	20 26 37.7	+1.6
OK030	Cody Creek RV	3.10	2	IAmb_Lg		20 27 32.2	
	comp=Z,54nm,0.8s						
OK031	S. Brethren Rd	3.13	1	Pn	Pn	20 26 39.0	+1.2
TUL1	Leonard	3.22	17	Pn	Pn	20 26 39.3	+0.2
TUL1				IAmb_Lg		20 27 39.7	
	comp=Z,31nm,0.8s						
MIAR	Mount Ida	3.28	57		Pn	20 26 40.0	+0.2
MIAR	Mount Ida	3.28	57	P		20 26 40.6	
	baz=239						
WLAR	White Oak Lake	3.31	74	Pn	Pn	20 26 41.1	+0.9
QUOK	Quay	3.35	3	Pn	Pn	20 26 41.1	+0.3
JCT	Junction City	3.39	227	P	Pn	20 26 43.7	+2.4
	baz=46						
JCT	Junction City	3.39	227		Pn	20 26 41.6	+0.2
JCT				IAmb_Lg		20 27 39.0	
	comp=Z,55nm,0.9s						
Z41A	Richland Creek	3.49	82	P	Pn	20 26 43.9	+1.2
	baz=264						
Z41A	Richland Creek	3.49	82	Pn	Pn	20 26 43.1	+0.4
Z41A	Richland Creek	3.49	82	S		20 27 24.0	
	baz=264						
Z41A				S		20 27 24.0	
	baz=264						
W39A	Magazine	3.52	47	P	Pn	20 26 45.2	+2.0
	baz=228						
W39A	Magazine	3.52	47		Pn	20 26 44.8	+1.6
W39A				IAmb_Lg		20 27 48.1	
	comp=Z,43nm,1.1s						
W39A	Magazine	3.52	47	P		20 26 45.0	
	baz=228						
W39A				S		20 27 26.6	
	baz=228						
CROK	Carrier	3.78	347	Pn	Pn	20 26 47.2	+0.4
X40A	Basin Creek Fa	3.79	63	Pn	Pn	20 26 48.1	+1.2
U32A	Winter Ranch,	3.95	335	Pn	Pn	20 26 50.9	+1.8
U32A				IAmb_Lg		20 28 05.6	
	comp=Z,42nm,0.8s						
U32A	Winter Ranch,	3.95	335	P		20 26 50.6	
	baz=154						
T35A	Sooner Cattle	4.10	5	Pn	Pn	20 26 52.0	+0.8
T35A				IAmb_Lg		20 27 59.1	
	comp=Z,63nm,1.1s						
T35B	Sooner Cattle	4.10	5	P		20 26 52.0	
	baz=185						
U38A	Gravette	4.17	29	IAmb_Lg		20 28 04.0	
	comp=Z,24nm,0.7s						
KAN13	South Haven SW	4.21	354	Pn	Pn	20 26 52.2	-0.5
KAN13				IAmb_Lg		20 28 07.2	
	comp=Z,44nm,1.0s						
KAN14	Manchester OK	4.22	349	Pn	Pn	20 26 53.1	+0.3
KAN14				IAmb_Lg		20 28 04.5	
	comp=Z,30nm,1.0s						
UALR	University of	4.28	62	Pn	Pn	20 26 54.9	+1.3
KAN01	Argonia South	4.38	351	Pn	Pn	20 26 55.3	+0.3
KAN01				IAmb_Lg		20 28 09.4	
	comp=Z,28nm,0.8s						
KAN10	Anthony SW Sta	4.40	348	Pn	Pn	20 26 55.4	+0.1
AMTX	Amarillo	4.46	299	P	Pn	20 26 58.3	+2.0
	baz=116						
AMTX	Amarillo	4.46	299	Pn	Pn	20 26 58.2	+1.9
AMTX	Amarillo	4.46	299	P		20 26 58.3	
	baz=116						
KS21	Milan North St	4.50	352	IAmb_Lg		20 28 12.8	
	comp=Z,54nm,1.0s						
W41B	Gary Mavity, V	4.54	58	P	Pn	20 26 58.5	+1.3
	baz=240						
W41B	Gary Mavity, V	4.54	58	Pn	Pn	20 26 57.4	+0.3
KAN12	Harper NE Stat	4.56	349	IAmb_Lg		20 28 20.5	
	comp=Z,40nm,1.2s						
833A	Chaparral WMA,	4.96	206	IAmb_Lg		20 28 33.7	
	comp=Z,22nm,0.8s						
FCAR	Ozark Folk Cen	5.01	51	Pn	Pn	20 27 04.3	+0.6
S39A	Bolivar	5.68	30	IAmb_Lg		20 28 51.7	
	comp=Z,17nm,0.9s						
MGMO	Mountain Grove	5.77	40	IAmb_Lg		20 28 52.1	
	comp=Z,19nm,0.8s						
R32A	Long Quarter,	5.78	346	IAmb_Lg		20 29 09.9	
	comp=Z,20nm,0.8s						
KSU1	Kansas State U	6.28	2	IAmb_Lg		20 29 11.5	
	comp=Z,27nm,1.0s						
T42A	Van Buren	6.37	47		Pn	20 27 23.0	+0.7
T42A	Van Buren	6.37	47	P		20 27 23.2	
	baz=230						
CBKS	Cedar Bluff	6.41	340	IAmb_Lg		20 29 28.8	
	comp=Z,17nm,0.7s						
R40A	Maddies Statio	6.65	33	IAmb_Lg		20 29 21.2	
	comp=Z,14nm,0.8s						
TX32	Lajitas Array	6.75	241		Pn	20 27 27.7	+0.1
MNTX	Cornudas Mount	7.25	263	P	Pn	20 27 36.1	+1.6
	baz=79						
MNTX	Cornudas Mount	7.25	263	IAmb_Lg		20 29 51.4	
	comp=Z,24nm,0.8s						
P38A	Dawn	7.33	21	IAmb_Lg		20 29 49.8	
	comp=Z,16nm,0.8s						
KSCO	Kaye Shedlock'	7.72	325	IAmb_Lg		20 30 14.9	
	comp=Z,23nm,0.9s						
P40A	Paris	7.77	29	IAmb_Lg		20 30 02.1	
	comp=Z,28nm,1.1s						
T45A	Paducah	7.99	56	IAmb_Lg		20 30 03.0	
	comp=Z,17nm,0.8s						
ANMO	Albuquerque	8.21	288	IAmb_Lg		20 30 19.0	
	comp=Z,14nm,0.9s						
N38A	Joes South For	8.49	19	IAmb_Lg		20 30 21.2	
	comp=Z,22nm,0.7s						
SDCO	Great Sand Dun	8.56	307	IAmb_Lg		20 30 26.3	
	comp=Z,8.9nm,0.9s						
Q24A	Divide	9.06	315	IAmb_Lg		20 30 39.6	
	comp=Z,16nm,0.9s						
121A	Cookes Peak, D	9.16	271	IAmb_Lg		20 30 49.7	
	comp=Z,15nm,0.9s						
HDIL	Hopedale	9.85	36	IAmb_Lg		20 31 13.5	
	comp=Z,18nm,0.8s						

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*MAN **20** 20:33:07.8, 6°.24N×123°.89E, h623^{km}, MS5.2*

*NOU **20** 20:33:11.3, 6°.30N×123°.73E, h600^{km}, mb4.9, Mindanao, Philippines*

*IDC **20** 20:33:11.2±0.5, 6°.26N×123°.74E, h606^{km}±5^{km}, mb3.8/31, mb1 3.9/34, mb1mx3.8/41, mbtmp4.8/34, Error ellipse: s-maj=10.0km s-min=5.5km az=79.0*

*KLM **20** 20:33:11, 6°.22N×123°.79E, h618^{km}, mb5.0*

*DJA **20** 20:33:11.6±0.5, 6°N±6°×12°4E±°, h592^{km}±3^{km}, M4.6/53, mB5.1/30, mb4.8/53, MLv5.4/12, Mw(mB)4.4/30*

*NEIC **20** 20:33:11.3±1.7, 6°.32N±0°.07×123°.71E±0°.09, h606^{km}±5^{km}, mb4.7/142, Error ellipse: s-maj=13.6km s-min=10.3km az=68.0*

ISC 20 20:33:10.7±0.4**, 6°.31N**±0°.04×**123°.73E**±0°.05**, h602**^{km}±4^{km}**, n358,** σ**1**^{s}.**18**/406**, mb4.7**/122**, 3C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	0.84	75	eP	P	20 34 20.7	-1.1
SKMP				eS	S	20 35 16.1	-3.4
KCP	Kidapawan	1.52	63	⇓iP	P	20 34 24.1	+0.5
PAGZ	Pagadian	1.57	347	eP	P	20 34 22.8	-0.8
PAGZ				eS	S	20 35 24.4	+1.4
DDMP	Don Marcelino,	1.98	96	eP	P	20 34 23.0	-2.2
DDMP				eS	S	20 35 23.5	-2.2
DAV	Davao City (W)	1.99	67	P	P	20 34 25.7	+0.6
	76nm,0.3s,baz=172,slow=2.0,SNR=9.6						
DAV				S	S	20 35 27.2	+1.5
	32nm,0.3s,baz=168,slow=20,SNR=1.2						
BUKP	Musuan	2.05	40	eP	P	20 34 25.1	-0.4
CGP	Cagayan de Oro	2.34	24	⇓iP	P	20 34 26.6	-0.1
MATI	Mati	2.59	76	eP	P	20 34 25.5	-2.4
MATI				eS	S	20 35 26.8	-3.9
BUTP	Butuan	3.24	35	eP	P	20 34 31.1	-0.3
CNOP	Candoni, Negro	3.66	343	eP	P	20 34 31.2	-2.8
MSLP	Maasin	3.96	16	eP	P	20 34 35.5	-0.6
MSLP				eS	S	20 35 45.4	-0.3
LLP	Lapu-Lapu	3.99	3	⇓iP	P	20 34 36.2	-0.1
LLP				eS	S	20 35 45.0	-1.1
GLSP	General Luna,	4.19	34	eP	P	20 34 35.9	-1.8
GLSP				eS	S	20 35 43.9	-4.7
GUIM	Jordan	4.44	345	eP	P	20 34 36.5	-2.9
GUIM				eS	S	20 35 46.6	-5.2
OCLP	Ormoc	4.79	10	eP	P	20 34 41.7	-0.4
OCLP				eS	S	20 35 59.4	+2.6
MYLDM	Lahad Datu	5.32	258	P	P	20 34 48.2	+1.9
GTOI	Gorontalo	5.68	187	P	P	20 34 48.4	-0.9
	0.6nm2µm184nm,0.8s						
KMSI	Cibinong	5.70	177	P	P	20 34 48.6	-0.9
	1.4nm4µm352nm,0.8s						
TOLI2	Tolitoli	5.94	210	P	P	20 34 51.7	+0.2
MRSI	Marisa	6.06	197	P	P	20 34 52.7	+0.2
	1.9nm6µm693nm,0.8s						
CNP	Catarman	6.24	8	eP	P	20 34 53.2	-0.7
CNP				eS	S	20 36 15.9	-2.5
TNTI	Ternate	6.59	146	P	P	20 34 56.8	-0.4
TNTI	Ternate	6.59	146	P	P	20 34 57.3	+0.1
	1.3nm927nm51nm,0.5s						
MPSI	Mapaga	7.05	213	P	P	20 35 01.4	0.0
	1.1nm4µm202nm,0.7s						
LUWI	Luwuk	7.36	187	P	P	20 35 02.9	-1.3
LUWI	Luwuk	7.36	187	P	P	20 35 04.1	-0.1
	3.3nm9µm515nm,0.5s						
SPMM	Sapulut	7.40	258	P	P	20 35 05.0	+0.4
APSI	Ampana	7.46	196	P	P	20 35 05.2	+0.1
	1.1nm3µm349nm,0.7s						
KKM	Kota Kinabalu	7.47	268	P	P	20 35 05.5	+0.1
PGP	Puerto Galera	7.66	339	⇓eP	P	20 35 07.2	+0.3
JCNP	Jose Panganiba	8.00	353	eP	P	20 35 08.2	-1.9
LQP	Lukban	8.05	345	⇑eP	P	20 35 09.8	-1.0
TGY	Tagaytay City	8.22	341	P	P	20 35 12.2	-0.1
	72nm,0.3s,baz=176,slow=2.7,SNR=18						
TGY				S	S	20 36 52.7	+0.9
	baz=171,slow=22,SNR=3.3						
SANI	Sanana	8.60	165	P	P	20 35 14.6	-1.3
	3µm232nm,0.7s						

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NLAI  Namlea           10.06 160  P      P      20 35 30.3 +0.1
      2µm71nm,0.7s
TTSI  Tana Toraja      10.07 203  P      P      20 35 30.6 +0.3
      2µm225nm,0.9s
BKB   Balikpapan       10.15 222  P      P      20 35 31.9 +0.8
BKB   Balikpapan       10.15 222  P      P      20 35 30.3 -0.8
      5µm510nm,0.9s
SWI   Sorong           10.36 133  P      P      20 35 34.5 +1.4
      797nm71nm,0.7s
SIJI  Sorong           10.36 133  P      P      20 35 34.5 +1.2
      14nm,0.3s,baz=321,slow=14,SNR=52
MSAI  Masohi           10.90 151  P      P      20 35 38.7 +0.1
      523nm42nm,1.0s
SPSI  Sidrap Palu      10.94 201  P      P      20 35 38.8 -0.1
      1µm71nm,0.8s
BNSI  Bone             11.23 199  P      P      20 35 42.2 +0.3
      808nm109nm,0.8s
MTKI  Muara Teweh, K   11.38 231  P      P      20 35 43.9 +0.5
      4µm424nm,0.7s
KAPI  Kappang          11.92 200  P      P      20 35 48.4 -0.4
      2.6nm,0.3s,baz=349,slow=2.8,SNR=14
KAPI                              S      S      20 37 56.0 -2.6
      0.8nm,0.3s,baz=223,slow=19,SNR=1.1
KAPI  Kappang          11.92 200  P      P      20 35 47.6 -1.2
BKSI  Bulukumba        12.10 197  P      P      20 35 50.9 +0.4
      42nm,0.7s
KBKI  Kotabaru         12.17 219  P      P      20 35 51.4 +0.2
      742nm78nm,0.8s
FAKI  Fak Fak          12.50 137  P      P      20 35 55.5 +0.9
FAKI  Fak Fak          12.50 137  P      P      20 35 55.1 +0.5
      2µm152nm,0.7s
BBKI  Banjar Baru      13.15 223  P      P      20 36 00.8 -0.3
      24nm,0.9s
STKI  Sintang          13.71 244  P      P      20 36 07.5 +0.7
      13µm25nm,0.6s
KSM   Kuching          14.22 251  P      P      20 36 12.1 +0.3
MMRI  Maumere          14.92 186  P      P      20 36 19.3 +1.2
MMRI  Maumere          14.92 186  P      P      20 36 19.0 +0.8
      2µm154nm,0.7s
EDFI  Ende, Flores     15.09 188  P      P      20 36 20.6 +0.7
      458nm43nm,0.7s
SOEI  Soe              15.96 178  P      P      20 36 27.9  0.0
SOEI                              IAmb   IAmb   20 36 39.4
      comp=Z,47nm,0.7s
SOEI  Soe              15.96 178  P      P      20 36 28.2 +0.3
      comp=Z,73nm,0.7s
SAUI  Saumlaki         16.08 152  P      P      20 36 28.9 +0.1
PLAI  Plampang         16.16 202  P      P      20 36 30.5 +0.9
      comp=Z,51nm,0.7s
BATI  Baumata          16.40 180  P      P      20 36 32.4 +0.6
      comp=Z,40nm,0.3s,baz=348,slow=0.5,SNR=162
BATI                              S      S      20 39 14.8 -0.8
      comp=Z,1.4nm,0.3s,baz=108,slow=20,SNR=2.0
BATI  Baumata          16.40 180  P      P      20 36 31.7 -0.1
      comp=Z,2µmcomp=Z,224nm,0.7s
TWSI  Taliwang, Sumb   16.43 205  P      P      20 36 32.9 +0.9
      comp=Z,839nmcomp=Z,32nm,0.7s
TWG   Pinlang          16.62 351  P      P      20 36 33.5 -0.2
TWG                               IAmb   IAmb   20 36 34.3
      comp=Z,42nm,0.6s
YULB  Yu-li            17.15 352  P      P      20 36 37.1 -1.4
YULB                              IAmb   IAmb   20 36 52.9
      comp=Z,31nm,0.9s
TPUB  Ta-pu            17.16 350  P      P      20 36 38.1 -0.5
JAGI  Jajag, Banyuwa   17.51 213  P      P      20 36 42.4 +0.5
JAGI  Jajag, Banyuwa   17.51 213  P      P      20 36 43.1 +1.2
      comp=Z,86nm,0.9s
SSLB  Suanglung        17.59 352  P      P      20 36 42.5 -0.1
NACB  Ninganchiao      17.89 354  P      P      20 36 44.8 -0.4
NACB                              IAmb   IAmb   20 37 02.3
      comp=Z,19nm,0.9s
YOJ   Yonaguni jima    18.07 358  P      P      20 36 46.9  0.0
YHNB  Yeheng           18.40 353  P      P      20 36 49.6 -0.3
YHNB                              IAmb   IAmb   20 36 51.9
      comp=Z,30nm,1.0s
QIZ   Qiongzhong       18.51 314  P      P      20 36 51.6 +0.6
QIZ                               IAmb   IAmb   20 37 05.4
      comp=Z,40nm,1.4s
JAY   Jayapura         19.08 117  P      P      20 36 56.1 -0.2
      comp=Z,1.1nm,0.3s,baz=249,slow=8.6,SNR=2.2
UGM   Wanagama         19.31 223  P      P      20 36 59.6 +1.3
UBPT  Khong Chiam      20.01 298  P      P      20 37 06.2 +1.6
      comp=Z,585nmcomp=Z,12nm,2.3s
UBPT  Khong Chiam      20.01 298  P      P      20 37 05.3 +0.7
MTN   Manton Dam       20.40 159  P      P      20 37 08.0 -0.1
      baz=20,SNR=51
MTN   Manton Dam       20.40 159  P      P      20 37 07.8 -0.2
MTN                               IAmb   IAmb   20 37 08.7
      comp=Z,19nm,0.8s
KDU   Kakadu           20.77 155  P      P      20 37 11.2 -0.2
      baz=21,SNR=7.4
JOW   Kunigami         20.87  11  P      P      20 37 12.5 +0.4
      comp=Z,14nm,0.5s,baz=174,slow=5.7,SNR=5.6
CISI  Cisompet, Garu   21.01 229  P      P      20 37 13.7  0.0
CISI                              IAmb   IAmb   20 37 20.7
      comp=Z,19nm,0.7s
KLSI                   21.89 241  P      P      20 37 23.0 +1.5
      comp=Z,184nmcomp=Z,13nm,1.0s
LWLI  Liwa             22.63 241  P      P      20 37 28.9 +0.7
      comp=Z,103nm,1.2s
SRAK  Srakaew          22.66 291  P      P      20 37 24.0 -4.3
      comp=Z,130nm,0.6s
IPM   Ipoh             22.67 267  P      P      20 37 29.4 +0.9
IPM                               IAmb   IAmb   20 37 40.0
      comp=Z,18nm,1.4s
IPM   Ipoh             22.67 267  P      P      20 37 29.0 +0.5
KULM  Kulim            22.98 269  P      P      20 37 32.1 +0.8
KULM                              IAmb   IAmb   20 37 56.5
      comp=Z,23nm,1.4s
KULM  Kulim            22.98 269  P      P      20 37 32.0 +0.8
NONG  Nongkai          23.23 302  P      P      20 37 34.2 +0.8
      comp=Z,24nm,1.0s
MNAI  Manna            23.29 243  P      P      20 37 35.2 +1.3
CHAI  Chaiyaphum       23.34 296  P      P      20 37 35.0 +0.6
      comp=Z,624nmcomp=Z,53nm,0.6s
SDSI  Sungai Dareh     23.39 253  P      P      20 37 35.7 +0.9
      comp=Z,9.7nm,1.1s
SLVN  Son La           24.32 310  P      P      20 37 44.7 +1.7
FITZ  Fitzroy Crossi   24.32 176  P      P      20 37 43.2 +0.3
      baz=24,SNR=29
FITZ  Fitzroy Crossi   24.32 176  P      P      20 37 43.2 +0.3
      comp=Z,12nm,0.3s,baz=7.2,slow=8.8,SNR=114
FITZ                              ScP    ScP    20 43 43.2 -0.5
      comp=Z,4.7nm,0.8s,baz=73,slow=3.8,SNR=4.9
FITZ  Fitzroy Crossi   24.32 176  P      P      20 37 43.4 +0.4
FITZ                              IAmb   IAmb   20 37 44.7
      comp=Z,26nm,1.1s
PHET  Kaeng Krachan    24.64 287  P      P      20 37 47.6 +1.8
      comp=Z,354nmcomp=Z,48nm,0.8s
PSI   Prapat           24.97 263  P      P      20 37 47.5 -1.4
      comp=Z,4.0nm,0.4s,baz=181,slow=5.0,SNR=1.4
PSI                               ScP    ScP    20 43 44.6 -1.3
      comp=Z,8.1nm,0.8s,baz=179,slow=3.3,SNR=5.3
RPSI  Rantau Prapat    24.98 263         ScP    20 43 44.6 -1.2
PHIT  Phitsanulok      25.22 297  P      P      20 37 53.3 +2.4
      comp=Z,102nm,0.8s
UTTA  Uttaradit        25.32 299  P      P      20 37 53.1 +1.3
      comp=Z,208nmcomp=Z,23nm,0.9s
WHN   Wuhan            25.67 341  P      P      20 37 59.3 +4.6
GYA   Guiyang          25.81 323 ⇓P      P      20 37 57.6 +1.4
GYA                               pmax   pmax
      comp=Z,5.0nm,0.6s
SUKH  Sukhothai        26.03 297  P      P      20 38 01.0 +3.0
      comp=Z,17nm,0.6s
LAMP  Lampang          26.43 300  P      P      20 38 03.0 +1.4
      comp=Z,25nm,0.7s
GSI   Gunungsitoli     26.55 260  P      P      20 38 02.0 -0.8
GSI                               IAmb   IAmb   20 38 03.4
      comp=Z,38nm,1.0s
GSI   Gunungsitoli     26.55 260  P      P      20 38 03.7 +1.0
      comp=Z,49nm,0.9s
PAYA  Payao            26.59 301  P      P      20 38 04.0 +1.1
      comp=Z,4µmcomp=Z,369nm,0.6s
CM36  Chiang Mai Arr   26.90 299  P      P      20 38 07.0 +1.3
CM35  Chiang Mai Arr   26.91 299  P      P      20 38 06.0 +0.2
CM04  Chiang Mai Arr   26.95 299  P      P      20 38 07.7 +1.5
      comp=Z,116nmcomp=Z,13nm,0.9s
CM09  Chiang Mai Arr   26.96 299  P      P      20 38 07.0 +0.8
      comp=Z,145nmcomp=Z,19nm,0.7s
CM01  Chiang Mai Arr   26.98 299  P      P      20 38 08.0 +1.6
      comp=Z,138nmcomp=Z,14nm,0.8s
CM05  Chiang Mai Arr   26.98 299  P      P      20 38 07.0 +0.6
      comp=Z,77nmcomp=Z,8.4nm,0.7s
CM34  Chiang Mai Arr   26.99 300  P      P      20 38 07.0 +0.6
CM02  Chiang Mai Arr   27.00 299  P      P      20 38 08.1 +1.5
      comp=Z,101nmcomp=Z,14nm,0.8s
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CM31  Chiang Mai Arr   27.01 299  P      P      20 38 08.0 +1.4
      comp=Z,5µmcomp=Z,445nm,0.7s
CM31  Chiang Mai Arr   27.01 299  P      P      20 38 07.9 +1.2
CM31                              IAmb   IAmb   20 38 08.9
      comp=Z,12nm,0.7s
CMAR  Chiang Mai Arr   27.01 299  P      P      20 38 08.1 +1.4
      comp=Z,8.2nm,0.7s,baz=115,slow=7.1,SNR=75
CMAR                              PcP    PcP    20 41 08.6 +1.0
      comp=Z,1.6nm,0.8s,baz=172,slow=1.2,SNR=6.8
CMAR                              ScP    ScP    20 43 52.4 +0.6
      comp=Z,4.6nm,1.0s,baz=131,slow=1.2,SNR=24
CMAR  Chiang Mai Arr   27.01 299  P      P      20 38 07.3 +0.7
CMAR                                     ScP    20 43 51.4 -0.3
CM15  Chiang Mai Arr   27.02 299  P      P      20 38 08.0 +1.2
      comp=Z,163nmcomp=Z,18nm,0.7s
CM13  Chiang Mai Arr   27.02 299  P      P      20 38 08.2 +1.5
      comp=Z,105nmcomp=Z,12nm,0.8s
JCJ   Chichijima       27.13  38  P      P      20 38 07.0 -0.5
      comp=Z,177nm,0.4s,baz=241,slow=6.4,SNR=30
JCJ   Chichijima       27.13  38  P      P      20 38 06.8 -0.7
CMMT  Chiang Mai       27.14 300  P      P      20 38 08.8 +1.0
      comp=Z,16nm,0.8s
CHTO  Chiang Mai       27.15 300  P      P      20 38 08.6 +0.8
CHTO                              IAmb   IAmb   20 38 09.8
      comp=Z,18nm,0.7s
CM33  Chiang Mai Arr   27.15 300  P      P      20 38 08.0 +0.1
CM32  Chiang Mai Arr   27.17 299  P      P      20 38 09.0 +1.0
ENH   Enshi            27.35 332  P      P      20 38 11.0 +1.5
ENH                               IAmb   IAmb   20 38 11.3
      comp=Z,9.7nm,0.8s
JNU   Nakatsue         27.50  13  P      P      20 38 10.1 -0.6
      comp=Z,14nm,0.9s,baz=343,slow=5.4,SNR=4.5
JNU   Nakatsue         27.50  13  P      P      20 38 09.4 -1.4
JNU                               IAmb   IAmb   20 38 11.8
      comp=Z,28nm,1.2s
COEN  Coen             27.89 136  P      P      20 38 13.8 -0.6
COEN                              IAmb   IAmb   20 38 14.5
      comp=Z,8.1nm,0.6s
WB0   Warramunga Arr   27.95 158  P      P      20 38 14.5 -0.3
PSA00 Pilbara Seismi   27.96 188  P      P      20 38 14.5 -0.4
PSA00                             IAmb   IAmb   20 38 15.6
      comp=Z,34nm,0.8s
PSA00 Pilbara Seismi   27.96 188  P      P      20 38 14.3 -0.6
PSA00                             IAmb   IAmb   20 38 15.9
      comp=Z,13nm,0.8s
WRAB  Tennant Creek    28.09 158  P      P      20 38 16.3 +0.3
WRA   Warramunga Arr   28.09 158  P      P      20 38 16.0  0.0
      comp=Z,54nm,0.4s,baz=340,slow=9.2,SNR=578
WRA                               PcP    PcP    20 41 10.7 +0.4
      comp=Z,4.1nm,0.6s,baz=345,slow=2.8,SNR=8.7
WRA                               S      S      20 42 16.6 -3.7
      comp=Z,5.2nm,0.6s,baz=334,slow=15,SNR=9.9
WRA                               ScP    ScP    20 43 54.1 -1.0
      comp=Z,6.5nm,0.8s,baz=341,slow=3.6,SNR=13
WRA   Warramunga Arr   28.09 158  P      P      20 38 15.0 -1.1
WB2   Warramunga Arr   28.10 158  P      P      20 38 15.9 -0.1
WR0   Warramunga Arr   28.18 158  P      P      20 38 16.9 +0.1
JTU   Tsushima         28.57  10  P      P      20 38 20.1 +0.2
JTU                               IAmb   IAmb   20 38 26.1
      comp=Z,39nm,1.3s
JMN   Monobe           28.87  18  P      P      20 38 23.5 +0.9
JHS   Saijyo           29.84  16  P      P      20 38 31.8 +0.9
JHS                               IAmb   IAmb   20 38 34.2
      comp=Z,42nm,1.2s
GIRL  Giralia          30.23 198  P      P      20 38 36.0 +1.6
      baz=30,SNR=10
GIRL  Giralia          30.23 198  P      P      20 38 36.0 +1.6
RABL  Rabaul           30.25 109  P      P      20 38 36.5 +1.7
JHJ2  Mitsune          30.58  27  P      P      20 38 38.0 +0.7
JWT   Wachi            30.78  19  P      P      20 38 39.0 +0.1
JWT                               IAmb   IAmb   20 38 40.3
      comp=Z,29nm,0.7s
QIS   Mount Isa        30.92 150  P      P      20 38 40.9 +0.6
      baz=31,SNR=36
KSAR  Wonju Array Be   31.22   6  P      P      20 38 42.3 -0.4
KSRS  Korea Array      31.24   6  P      P      20 38 43.9 +1.1
      comp=Z,6.8nm,0.9s,baz=186,slow=10.0,SNR=30
KSRS                              ScP    ScP    20 44 04.7 -0.4
      comp=Z,2.2nm,0.8s,baz=180,slow=2.3,SNR=11
KS19  Wonju Array Si   31.28   6  P      P      20 38 44.1 +1.0
KS19                              IAmb   IAmb   20 39 01.8
      comp=Z,28nm,1.4s
INU   Inuyama          31.39  21  P      P      20 38 44.2 +0.1
AS31  Alice Springs    31.40 162  P      P      20 38 45.5 +1.1
AS31                                     S      20 43 10.7 -0.4
ASAR  Alice Springs    31.40 162  P      P      20 38 45.2 +0.8
      comp=Z,62nm,0.3s,baz=338,slow=7.6,SNR=1572
ASAR                              PcP    PcP    20 41 19.1 +0.1
      comp=Z,5.3nm,0.5s,baz=343,slow=1.9,SNR=9.4
ASAR                              S      S      20 43 09.3 -1.8
      comp=Z,13nm,0.7s,baz=352,slow=24,SNR=24
ASAR                              ScP    ScP    20 44 05.2 -0.6
      comp=Z,2.9nm,0.5s,baz=351,slow=3.5,SNR=9.5
ASAR  Alice Springs    31.40 162         S      20 43 10.8 -0.3
ASAR                              ScP    ScP    20 44 05.1 -0.8
ASAR  Alice Springs    31.40 162  P      P      20 38 45.3 +0.9
MTSU  Mount Surprise   31.66 140  P      P      20 38 47.0 +0.2
      baz=32,SNR=4.2
JGF   Kuroka           31.73  21  P      P      20 38 46.7 -0.4
JGF                               IAmb   IAmb   20 38 47.6
      comp=Z,24nm,0.8s
MAT   Matsushiro       32.88  22  P      P      20 38 55.9 -0.9
MJAR  Matsushiro Arr   32.88  22  P      P      20 38 56.0 -0.7
      comp=Z,43nm,0.8s,baz=194,slow=9.2,SNR=88
MJAR  Matsushiro Arr   32.88  22  P      P      20 38 55.6 -1.2
MAJO  Matsushiro       32.88  22  P      P      20 38 55.8 -1.0
MJB9  Matsu-Tunnel     32.89  22  P      P      20 38 56.5 -0.3
MEEK  Meekatharra      33.12 188  P      P      20 38 59.1 +0.2
      baz=33,SNR=34
JYT   Yasato           33.39  25  P      P      20 38 59.0 -2.0
JYT                               IAmb   IAmb   20 39 27.1
      comp=Z,65nm,1.5s
JSD   Sado             34.23  21  P      P      20 39 07.4 -0.6
CTAO  Charters Tower   34.33 140  P      P      20 39 10.5 +1.4
CTAO                              IAmb   IAmb   20 39 11.3
      comp=Z,14nm,0.9s
JMM   Marumori         35.04  24  P      P      20 39 15.2 +0.5
MORW  Morawa           35.94 192  P      P      20 39 22.4 +0.2
      baz=36,SNR=34
MORW  Morawa           35.94 192  P      P      20 39 22.8 +0.5
SHL   Shillong         35.95 306  P      P      20 39 23.5 +0.8
FORT  Forrest          37.11 174  P      P      20 39 32.5 +0.8
      baz=37,SNR=103
FORT  Forrest          37.11 174  P      P      20 39 32.5 +0.8
BLDU  Ballidu          37.32 190  P      P      20 39 33.6 +0.1
      baz=38,SNR=16
KMBL  Kambalda         37.50 183  P      P      20 39 35.5 +0.5
      baz=38,SNR=88
JTM   Tenmabayashi     37.68  22  P      P      20 39 36.4 +0.1
KLBR  Kellerberrin     38.11 188  P      P      20 39 40.1 +0.2
      baz=38,SNR=63
QLP   Quilpie          38.26 150  P      P      20 39 41.9 +0.7
      baz=38,SNR=4.4
USA0B Ussuriysk Arra   38.43  10  P      P      20 39 42.9 +0.6
USA0B                             IAmb   IAmb   20 39 44.0
      comp=Z,24nm,1.1s
USRK  Ussuriysk Ar.    38.43  10  P      P      20 39 42.6 +0.3
      comp=Z,13nm,0.8s,baz=202,slow=7.9,SNR=22
USRK  Ussuriysk Ar.    38.43  10  P      P      20 39 42.5 +0.2
LSA   Lhasa            38.50 311  P      P      20 39 45.8 +2.1
LSA                               IAmb   IAmb   20 39 46.5
      comp=Z,14nm,0.7s
MDJ   Mudanjiang       38.50   7  P      P      20 39 43.8 +0.9
MDJ                               IAmb   IAmb   20 39 44.5
      comp=Z,12nm,0.6s
MUN   Mundaring        38.74 190  P      P      20 39 45.2 +0.3
      baz=39,SNR=11
GTA   Gaotai           39.38 330 ⇑P      P      20 39 51.6 +1.4
GTA                               PcP    PcP    20 41 43.6 +0.7
GTA                               pmax   pmax
      comp=Z,7.0nm,0.6s
NWAO  Narrogin (SRO)   39.50 189  P      P      20 39 51.6 +0.6
      baz=40,SNR=60
NWAO  Narrogin (SRO)   39.50 189  P      P      20 39 51.7 +0.6
NWAO                              IAmb   IAmb   20 39 52.5
      comp=Z,50nm,0.9s
NWAO  Narrogin (SRO)   39.50 189  P      P      20 39 51.8 +0.7
NWAO                              IAmb   IAmb   20 39 52.5
      comp=Z,37nm,0.9s
ERM   Erimo            39.53  23  P      P      20 39 52.0 +0.9
ERM                               IAmb   IAmb   20 39 53.6
      comp=Z,36nm,0.8s
JEW   Eniwo            39.61  21  P      P      20 39 53.0 +1.1
TAPN  Taplejung        40.09 306  eP     P      20 39 57.3 +1.0
      comp=Z,55nm,0.6s
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ODAN  Odare            40.15 305  eP     P      20 39 57.6 +0.9
      comp=Z,89nm,0.7s
BBOO  Buckleboo        40.63 164  P      P      20 40 00.8 +0.7
      baz=41,SNR=96
BBOO  Buckleboo        40.63 164  P      P      20 40 00.7 +0.7
RAMN  Ramite           40.83 305  eP     P      20 40 03.1 +1.0
      comp=Z,76nm,0.6s
ASAJ  Asahikawa        41.13  21  P      P      20 40 05.2 +1.3
      comp=Z,26nm,0.4s,baz=224,slow=8.8,SNR=45
JKA   Kamikawa-asahi   41.13  21  P      P      20 40 04.8 +1.0
JKA                               IAmb   IAmb   20 40 05.6
      comp=Z,43nm,0.7s
EIDS  Eidsvold         41.22 141  P      P      20 40 05.3 +0.5
      baz=41,SNR=8.0
EIDS  Eidsvold         41.22 141  P      P      20 40 05.3 +0.5
EIDS                              IAmb   IAmb   20 40 06.1
      comp=Z,20nm,0.9s
STKA  Stephens Creek   41.62 157  P      P      20 40 08.9 +1.1
      baz=42,SNR=53
STKA  Stephens Creek   41.62 157  P      P      20 40 08.8 +1.0
      comp=Z,39nm,0.6s,baz=334,slow=8.1,SNR=114
STKA                              ScP    ScP    20 44 42.9 -1.0
      comp=Z,4.1nm,0.7s,baz=318,slow=8.3,SNR=4.9
STKA  Stephens Creek   41.62 157  P      P      20 40 09.1 +1.2
GUN   Gumba            41.80 305  eP     P      20 40 10.7 +0.9
      comp=Z,92nm,0.4s
PKI   Pulchoki         42.05 305  eP     P      20 40 12.0 +0.2
      comp=Z,34nm,0.5s
PKIN  Phulchoki        42.06 305  eP     P      20 40 11.9 +0.1
      comp=Z,38nm,0.6s
HTT   Hallett          42.07 161  P      P      20 40 12.6 +1.2
      baz=42,SNR=15
KKN   Kakani           42.24 305  eP     P      20 40 13.3 +0.2
      comp=Z,47nm,0.4s
DMN   Daman            42.31 305  eP     P      20 40 14.3 +0.6
      comp=Z,67nm,0.8s
PALK  Pallekele        42.72 274  P      P      20 40 17.8 +1.0
      comp=Z,5.1nm,0.5s,baz=184,slow=6.4,SNR=7.5
PALK  Pallekele        42.72 274  P      P      20 40 17.6 +0.7
PALK                              IAmb   IAmb   20 40 45.8
      comp=Z,27nm,1.4s
HIA   Hailar           42.95 356  P      P      20 40 19.0 +1.0
HIA                               IAmb   IAmb   20 40 19.6
      comp=Z,11nm,0.8s
CMSA  Cobar Meteorol   43.08 152  P      P      20 40 21.1 +1.8
      baz=43,SNR=18
KLR   Kul'dur          43.31   8  P      P      20 40 20.9 +0.2
      comp=Z,10nm,0.5s,baz=194,slow=6.7,SNR=36
KLR                               ScP    ScP    20 44 50.8 +0.3
      comp=Z,0.8nm,0.7s,baz=222,slow=3.2,SNR=4.2
YSS   Yuzh-Sakhalins   43.68  19  P      P      20 40 23.8 +0.2
YSS                               IAmb   IAmb   20 40 25.4
      comp=Z,16nm,0.7s
DANN  Dangsing         43.70 305  eP     P      20 40 25.2 +0.7
      comp=Z,220nm,0.5s
ULN   Ulaanbaatar      43.79 344  P      P      20 40 24.9 +0.1
SONM  Songino Array    43.95 343  P      P      20 40 26.5 +0.6
      comp=Z,1.7nm,0.8s,baz=161,slow=8.4,SNR=12
SONM                              PcP    PcP    20 41 57.2 -0.9
      comp=Z,0.7nm,0.5s,baz=154,slow=4.3,SNR=3.7
SONM                              ScP    ScP    20 44 52.5 -0.9
      comp=Z,2.0nm,0.9s,baz=164,slow=4.0,SNR=6.5
SONM  Songino Array    43.95 343  P      P      20 40 26.4 +0.4
SONM                              PcP    PcP    20 41 58.1  0.0
ARMA  Armidale         45.26 145  P      P      20 40 37.0 +0.8
      baz=45,SNR=7.3
ARMA  Armidale         45.26 145  P      P      20 40 36.9 +0.8
ARMA                              IAmb   IAmb   20 40 39.3
      comp=Z,19nm,0.9s
ARPS  Mount Arapiles   46.08 160  P      P      20 40 43.0 +0.9
      baz=46,SNR=21
CAN   Canberra         47.76 152  P      P      20 40 55.8 +1.0
CAN                               PcP    PcP    20 42 13.2 +1.4
CNB   Canberra Magne   47.92 152  P      P      20 40 57.8 +1.7
      baz=48,SNR=11
TOO   Toolangi         48.14 157  P      P      20 40 59.3 +1.7
      baz=48,SNR=7.5
TOO   Toolangi         48.14 157  P      P      20 40 58.5 +0.9
TOO                               IAmb   IAmb   20 41 00.1
      comp=Z,17nm,0.8s
DZM   Mont Dzumac      50.45 125  P      P      20 41 15.6 +0.7
DZM                               IAmb   IAmb   20 41 25.2
      comp=Z,45nm,1.5s
DZM   Mont Dzumac      50.45 125  P      P      20 41 15.2 +0.3
ZSN   Zaisan           52.74 328  eP     P      20 41 30.8  0.0
      baz=328
TAU   Tasmania Unive   53.47 159  P      P      20 41 36.8 +0.8
TAU                               IAmb   IAmb   20 41 45.4
      comp=Z,24nm,1.1s
SHLS  Shalkode         53.47 321  eP     P      20 41 35.0 -1.2
      comp=Z,5.6nm,0.9s,baz=321
MK31  Makanchi Array   53.75 326  P      P      20 41 38.9 +0.9
MK31                              PcP    PcP    20 42 33.8 -0.3
MK31                                     S      20 48 28.1  0.0
MKAR  Makanchi Array   53.75 326  P      P      20 41 38.8 +0.8
      comp=Z,7.8nm,0.4s,baz=119,slow=7.8,SNR=256
MKAR                              PcP    PcP    20 42 34.1  0.0
      comp=Z,3.8nm,0.6s,baz=116,slow=4.2,SNR=9.5
MKAR                              ScP    ScP    20 45 34.0 -1.2
      comp=Z,1.6nm,0.5s,baz=115,slow=5.5,SNR=12
MKAR                              S      S      20 48 28.2  0.0
      comp=Z,0.9nm,0.9s,baz=119,slow=14,SNR=6.5
MKAR  Makanchi Array   53.75 326  P      P      20 41 38.6 +0.6
MKAR                              PcP    PcP    20 42 33.3 -0.9
NIL   Nilore           53.99 307  P      P      20 41 40.4 +0.4
NIL                               IAmb   IAmb   20 41 42.2
      comp=Z,34nm,1.4s
SATY  Saty             54.09 320  eP     P      20 41 41.2 +0.6
      comp=Z,4.2nm,0.6s,baz=320
KPKS  Kokpek           54.12 321  eP     P      20 41 41.0 +0.3
      comp=Z,5.8nm,0.7s,baz=320
PEA0B Petropavlovsk-   54.27  25  P      P      20 41 42.4 +1.0
PEA0B                             IAmb   IAmb   20 41 44.5
      comp=Z,100nm,1.4s
PETK  Petropavlovsk-   54.27  25  P      P      20 41 42.4 +1.0
      comp=Z,15nm,0.6s,baz=190,slow=3.2,SNR=52
PETK  Petropavlovsk-   54.27  25  P      P      20 41 41.7 +0.3
PET   Petropavlovsk    54.60  25  P      P      20 41 44.6 +0.9
PET                               IAmb   IAmb   20 41 54.3
      comp=Z,72nm,1.4s
MDOK  Medeo            55.02 319  eP     P      20 41 47.7 +0.7
      baz=320
TNSS  Tian-Shan        55.02 319  eP     P      20 41 48.2 +0.8
      baz=319
TDK   Taldyqorghan     55.06 322  eP     P      20 41 47.6 +0.5
      comp=Z,8.2nm,0.7s,baz=322
AAA   Alma-Ata         55.12 319  eP     P      20 41 48.5 +0.9
      baz=320
CHKK  Chushkaly        55.38 320  eP     P      20 41 49.2 -0.2
      baz=320
YAK   Yakutsk          55.78   3  P      P      20 41 52.0 +0.3
      comp=Z,18nm,0.6s,baz=177,slow=1.2,SNR=25
YAK   Yakutsk          55.78   3  P      P      20 41 51.9 +0.1
YAK                               IAmb   IAmb   20 41 53.3
      comp=Z,46nm,0.6s
KUU   Kurty            55.81 320  eP     P      20 41 52.7 +0.4
      comp=Z,15nm,0.7s,baz=320
TKM2  Tokmak 2         55.85 319  P      P      20 41 54.0 +1.1
      SNR=5.8
UCH   Uchtor           56.27 317  P      P      20 41 57.9 +1.8
      SNR=10
AAK   Ala-Archa        56.45 318  P      P      20 41 57.4 +0.4
USP   Ospenovka        56.72 319  P      P      20 41 59.5 +0.9
      SNR=5.0
AML   Almayashu        56.78 317  P      P      20 42 00.8 +1.3
      SNR=11
EKS2  Erkin-Say        56.94 318  P      P      20 42 01.9 +1.6
      SNR=11
ZAA0  Zalesovo Array   56.96 334  P      P      20 41 59.5 -0.5
ZALV  Zalesovo Beam    56.96 334  P      P      20 41 59.8 -0.2
      comp=Z,1.4nm,0.5s,baz=115,slow=7.0,SNR=6.6
ZALV  Zalesovo Beam    56.96 334  P      P      20 41 59.4 -0.6
MA2   Magadan          57.01  16  P      P      20 42 01.1 +1.0
MA2                               IAmb   IAmb   20 42 02.3
      comp=Z,39nm,0.7s
KBL   Kabul            57.59 307  P      P      20 42 05.0  0.0
BTLS  Baital           57.80 320  eP     P      20 42 05.6 -0.2
      baz=320
KURK  Kurchatov        57.98 328  P      P      20 42 07.4 +0.5
KURK                              IAmb   IAmb   20 42 08.1
      comp=Z,20nm,0.7s
DZA   Taraz            58.69 317  eP     P      20 42 12.1 +0.2
      baz=317
IUG   Iuzhnay          59.30 316  eP     P      20 42 16.6 +0.5
      baz=316
KK31  Karatay Array    59.32 317  P      P      20 42 16.7 +0.5
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KKAR	**Karatay Array**	59.32	317	P	**P**	**20 42 16.5**	**+0.4**
KKAR	**Karatay Array**	59.32	317	P	**P**	**20 42 16.5**	**+0.4**
SEY	**Seymchan**	60.26	15	P	**P**	**20 42 23.4**	**+1.5**
	comp=Z,5.6nm,0.8s,baz=163,slow=4.0,SNR=14						
SEY				ScP	**ScP**	**20 46 03.5**	**0.0**
	comp=Z,1.8nm,0.8s,baz=180,slow=4.2,SNR=5.4						
BRZS	**Berezniki**	60.88	325	*e*P	**P**	**20 42 26.1**	**-0.1**
	baz=325						
OUZ	**Omahuta**	62.49	135	PcP	**PcP**	**20 43 07.0**	**-2.2**
HRA	**Herat**	63.01	305	P	**P**	**20 42 40.5**	**-0.1**
BRVK	**Borovoye**	63.62	327	P	**P**	**20 42 44.0**	**+0.2**
DCZ	**Deep Cove**	64.50	148	P	**P**	**20 42 50.5**	**+1.1**
DCZ				IAmb	IAmb	20 42 51.0	
	comp=Z,15nm,0.8s						
QRZ	**Quartz Range**	64.80	141	P	**P**	**20 42 52.8**	**+1.3**
QRZ				IAmb	IAmb	20 43 20.4	
	comp=Z,66nm,1.4s						
WKZ	**Wanaka**	65.10	146	P	**P**	**20 42 54.3**	**+1.0**
TIXI	**Tiksi**	65.35	2	P	**P**	**20 42 53.9**	**-0.4**
LBZ	**Lake Benmore**	65.48	145	P	**P**	**20 42 56.6**	**+0.9**
LBZ				IAmb	IAmb	20 42 57.4	
	comp=Z,26nm,0.8s						
NNZ	**Nelson**	65.55	141	P	**P**	**20 42 56.9**	**+0.8**
NNZ				IAmb	IAmb	20 43 24.6	
	comp=Z,84nm,1.5s						
THZ	**Tophouse**	65.56	142	P	**P**	**20 42 57.0**	**+0.7**
RPZ	**Rata Peaks**	65.58	144	P	**P**	**20 42 57.2**	**+0.9**
RPZ				IAmb	IAmb	20 42 59.0	
	comp=Z,15nm,0.8s						
LTZ	**Lake Taylor**	65.75	143	P	**P**	**20 42 57.6**	**+0.2**
LTZ				IAmb	IAmb	20 42 58.9	
	comp=Z,18nm,1.0s						
TUWZ	**Tuamarina**	66.02	141	P	**P**	**20 42 58.9**	**-0.1**
ODZ	**Otahua Downs**	66.14	146	P	**P**	**20 43 00.5**	**+0.8**
KHZ	**Kahutara**	66.32	142	P	**P**	**20 43 01.0**	**+0.2**
KHZ				IAmb	IAmb	20 43 18.9	
	comp=Z,24nm,1.4s						
SNZO	**South Karori**	66.44	140	P	**P**	**20 43 01.4**	**-0.2**
SNZO				IAmb	IAmb	20 43 21.7	
	comp=Z,75nm,1.1s						
BKZ	**Black Stump Fm**	66.49	138	P	**P**	**20 43 03.2**	**+1.1**
BKZ				IAmb	IAmb	20 43 03.6	
	comp=Z,33nm,0.6s						
MQZ	**McQueen's Vall**	66.51	143	P	**P**	**20 43 02.8**	**+0.7**
MQZ				IAmb	IAmb	20 43 04.4	
	comp=Z,32nm,1.4s						
BHW	**Baring Head**	66.59	140	P	**P**	**20 43 02.2**	**-0.4**
MSWZ	**Moikau Station**	66.84	140	P	**P**	**20 43 04.4**	**+0.3**
GEYT	**Alibeck**	66.96	308	P	**P**	**20 43 06.0**	**+0.9**
	comp=Z,5.7nm,0.7s,baz=130,slow=4.4,SNR=10						
GEYT	**Alibeck**	66.96	308	P	**P**	**20 43 05.9**	**+0.9**
UOSS	**Minazif**	67.00	294	P	**P**	**20 43 05.0**	**-0.5**
BFZ	**Birch Farm**	67.10	139	P	**P**	**20 43 06.5**	**+0.7**
BFZ				IAmb	IAmb	20 43 21.4	
	comp=Z,56nm,1.4s						
BILL	**Bilibino**	67.88	16	P	**P**	**20 43 10.0**	**0.0**
BILL				IAmb	IAmb	20 43 15.9	
	comp=Z,11nm,0.7s						
ATKA	**Atka Island**	68.13	36	P	**P**	**20 43 11.9**	**+0.1**
ABKAR	**Akbulak array**	68.28	321	P	**P**	**20 43 12.7**	**0.0**
ABKAR	**Akbulak array**	68.28	321	P	**P**	**20 43 12.8**	**0.0**
SOCY	**Socotra**	68.94	281	P	**P**	**20 43 16.3**	**-1.1**
SOCY				IAmb	IAmb	20 43 21.3	
	comp=Z,32nm,0.9s						
ARU	**Arti**	71.18	328	P	**P**	**20 43 29.4**	**-0.4**
ARU				IAmb	IAmb	20 43 30.1	
	comp=Z,9.7nm,0.6s						
NIKH	**Nikolski High**	71.47	36	P	**P**	**20 43 31.6**	**0.0**
CASY	**Casey**	73.04	186	P	**P**	**20 43 40.4**	**+0.1**
CASY				IAmb	IAmb	20 43 41.0	
	comp=Z,19nm,0.7s						
AKUT	**Akutan**	73.53	35	P	**P**	**20 43 43.7**	**+0.4**
FALS	**False Pass**	75.02	35	P	**P**	**20 43 52.2**	**+0.5**
FALS				IAmb	IAmb	20 43 52.4	
	comp=Z,38nm,0.6s						
ANM	**Nome**	76.18	25	P	**P**	**20 43 59.0**	**+1.0**
RAYN	**Ar Rayn**	76.73	293	P	**P**	**20 44 01.9**	**0.0**
RAYN				IAmb	IAmb	20 44 02.6	
	comp=Z,14nm,0.8s						
SDPT	**Sand Point**	76.77	35	P	**P**	**20 44 01.3**	**0.0**
RDOG	**Red Dog Mine**	77.99	22	P	**P**	**20 44 08.2**	**+0.5**
GEVA	**Gevas**	78.81	308	P	**P**	**20 44 13.8**	**+0.9**
KBZ	**Khabaz**	79.05	313	P	**P**	**20 44 13.9**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=169,slow=4.1,SNR=4.6						
ABPO	**Ambohimpanom**	79.39	249	P	**P**	**20 44 15.4**	**-0.8**
TTA	**Tatalina**	79.98	27	P	**P**	**20 44 19.5**	**+1.1**
MARD	**Mardin**	80.61	307	P	**P**	**20 44 22.7**	**+0.4**
A21K	**Barrow**	80.75	19	P	**P**	**20 44 23.5**	**+1.5**
A21K				IAmb	IAmb	20 44 40.5	
	comp=Z,41nm,0.9s						
KOPT	**Kop Dagi**	80.80	309	P	**P**	**20 44 24.6**	**+1.2**
IMAR	**Indian Mountai**	81.23	24	P	**P**	**20 44 25.9**	**+1.2**
KDAK	**Kodiak Island**	81.33	33	P	**P**	**20 44 26.4**	**+1.1**
	comp=Z,24nm,0.6s,baz=290,slow=5.2,SNR=16						
KDAK	**Kodiak Island**	81.33	33	P	**P**	**20 44 26.3**	**+1.0**
KLMR	**Klimovskoe**	81.71	331	*e*P	**P**	**20 44 23.4**	**-3.8**
KLMR				AMP		20 44 27.3	
	comp=Z,7.0nm,0.6s						
BPAW	**Bear Paw Mtn.**	82.31	26	P	**P**	**20 44 31.2**	**+1.0**
BPAW				IAmb	IAmb	20 44 32.0	
	comp=Z,13nm,0.7s						
KTH	**Kantishna Hill**	82.32	27	P	**P**	**20 44 31.5**	**+1.2**
TRF	**Thorofare Moun**	82.60	27	P	**P**	**20 44 31.8**	**0.0**
I23K	**Minto, Yukon-K**	83.02	25	P	**P**	**20 44 34.8**	**+1.1**
DHY	**Denali Highway**	83.92	27	P	**P**	**20 44 38.4**	**0.0**
DHY				IAmb	IAmb	20 44 47.9	
	comp=Z,18nm,1.4s						
HDA	**Harding Lake**	84.07	26	P	**P**	**20 44 38.1**	**-0.8**
IL31		84.08	26	P	**P**	**20 44 37.8**	**-1.1**
ILAR	**Eielson Array**	84.08	26	P	**P**	**20 44 38.1**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=241,slow=5.3,SNR=28						
ILAR				PKKPbc	**PKKPbc**	**21 02 47.8**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=124,slow=2.1,SNR=4.1						
BR131	**Keskin Array S**	86.09	309	P	**P**	**20 44 48.3**	**-1.1**
BRTR	**Keskin Array B**	86.09	309	P	**P**	**20 44 48.4**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=123,slow=4.6,SNR=21						
K27K	**Chicken**	86.22	26	P	**P**	**20 44 49.9**	**+0.7**
VNDA	**Vanda**	86.35	172	P	**P**	**20 44 50.0**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=312,slow=6.7,SNR=17						
VNDA	**Vanda**	86.35	172	P	**P**	**20 44 50.0**	**+0.4**
VNDA				IAmb	IAmb	20 44 50.6	
	comp=Z,12nm,1.1s						
KMBO	**Kilima Mbogo**	86.62	269	P	**P**	**20 44 53.3**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=38,slow=3.8,SNR=4.7						
ARCES	**ARCESS Array B**	87.01	340	P	**P**	**20 44 52.8**	**-0.1**
	comp=Z,9.7nm,1.1s,baz=82,slow=6.5,SNR=2.2						
AKASG	**Malin Array Be**	88.02	321	P	**P**	**20 44 56.7**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=63,slow=4.7,SNR=7.3						
FINES	**FINESS Array B**	88.16	332	P	**P**	**20 44 57.2**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=52,slow=4.8,SNR=13						
MNK	**Minsk**	88.31	325	*i* P	**P**	**20 44 57.0**	**-2.2**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**20 44 57.0**	**-2.2**
	comp=N,11nm,0.8s						
MNK				*i* P	**P**	**20 44 57.0**	**-2.2**
	comp=Z,6.0nm,0.9s						
MNK				*i* pP	**pP**	**20 47 06.1**	**-1.7**
MNK				*i* PP	**PP**	**20 48 35.5**	**-2.4**
MNK				*i* PPP	PPP	20 50 37.5	
MNK				*i* S	**SKSac**	**20 54 28.4**	**-2.8**
MNK				*i* sS	sS	20 58 33.9	-9.1
MNK				*i* SS	**SS**	**21 01 01.9**	**-0.5**
MNK				*i* SSS	SSS	21 04 51.8	
MNK				*i* LRM	MLR	21 26 39.1	
	comp=Z,80nm,12.3s						
MNK				*i* LRM	MLR	21 26 45.6	
	comp=N,103nm,13.8s						
MNK				*i* LRM	MLR	21 26 46.4	
	comp=E,15nm,12.3s						
BURAR	**Bucovina Array**	91.10	318	P	**P**	**20 45 11.6**	**-0.9**
BUR08	**Bucovina Ar. S**	91.11	318	P	**P**	**20 45 11.9**	**-0.6**
BUR08				IAmb	IAmb	20 45 29.7	
	comp=Z,8.6nm,1.4s						
SYO	**Syowa Base**	93.74	201	⇑*e*PcP	**PcP**	**20 45 26.4**	**+2.4**
GERES	**GERESS Array B**	98.22	321	P	Pdif	20 45 44.5	-0.1
	comp=Z,0.2nm,0.3s,baz=47,slow=5.8,SNR=3.6						
YKA	**Yellowknife Ar**	98.38	24	P	Pdif	20 45 44.5	-0.3
	comp=Z,0.1nm,0.3s,baz=304,slow=3.9,SNR=4.3						
YKA				PKKPbc	**PKKPbc**	**21 02 11.1**	**-4.4**
	comp=Z,0.4nm,0.5s,baz=117,slow=3.0,SNR=8.0						
NVAR	**Mina Array Bea**	107.37	47	PKKPbc	PKKPbc	21 01 48.0	-0.8
	comp=Z,0.1nm,0.5s,baz=127,slow=5.8,SNR=4.6						
NVAR				PKKPab	**PKKPab**	**21 02 03.5**	**-2.3**
	comp=Z,0.7nm,0.8s,baz=165,slow=3.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	119.27	289	PKP	**PKPdf**	**20 50 53.2**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=46,slow=2.1,SNR=8.6						
TORD	**Torodi Ar. Bea**	119.27	289		**PKPdf**	**20 50 52.7**	**-0.9**
DBIC	**Dimbokro**	127.10	283	PKP	**PKPdf**	**20 51 08.9**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=66,slow=6.5,SNR=4.1						
PLCA	**Paso Flores**	143.41	162	PKP	**PKPdf**	**20 51 37.9**	**-0.3**
	comp=Z,9.9nm,0.7s,baz=220,slow=3.8,SNR=27						
PLCA				SKPbc	**SKPbc**	**20 54 18.4**	**-2.3**
	comp=Z,4.6nm,0.9s,baz=200,slow=6.4,SNR=5.5						
PLCA	**Paso Flores**	143.41	162	PKPdf	**PKPdf**	**20 51 37.6**	**-0.6**
LC01	**Cunco**	144.62	159	PKPdf	PKPbc	20 51 40.7	+0.2
BI02	**San Fabin de**	146.81	158		**PKPbc**	**20 51 47.5**	**+0.6**
BO02	**Sierra Bellavi**	148.65	157		**PKPbc**	**20 51 52.1**	**+0.5**
MT02	**Curacav**	149.83	155		**PKPbc**	**20 51 54.6**	**+0.1**
PEL	**Peldehue**	150.12	155		**PKPbc**	**20 51 55.3**	**+0.1**
ROC1	**El Roble**	150.13	155		**PKPbc**	**20 51 55.7**	**+0.2**
VA03	**San Esteban**	150.51	155		**PKiKP**	**20 51 56.6**	**-0.1**
GO02	**Mina Guanaco**	157.32	147		**PKPab**	**20 52 36.2**	**+1.0**
CPUP	**Villa Florida**	160.06	177	PKPab	**PKPab**	**20 52 45.3**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=185,slow=4.2,SNR=3.2						
BDFB	**Brasilia**	167.68	220	PKPab	**PKPab**	**20 53 20.3**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=166,slow=4.2,SNR=3.6						

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*NEIC **20** 20:44:17.9±2.2,24°.05N±0°.05×122°.32E±0°.03,h22^{km}±3^{km}, mb4.5/30,Mwr4.4/26,ML4.5(TAP),Error ellipse: s-maj=6.7km s-min=4.1km az=173.0*

*NEIC **20** 20:44:18.9,24°.06N×122°.32E,h21^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.97; M$_{\theta\theta}$2.33; M$_{\phi\phi}$1.64; M$_{r\theta}$0.19; M$_{\theta\phi}$2.13; M$_{\phi r}$-1.30; Fault plane solution: M$_{0}$4.27000×10^{15} NP1:ϕ_s244.06000°, δ41.98000°,λ-67.55000°. NP2:ϕ_s34.99000°,δ51.82000°, λ-108.96000°. Principal axes: T 4.2083, Plg5.0000°, Azm138.0000°; N 0.1166, Plg15.0000°, Azm47.0000°; P -4.3249, Plg74.0000°, Azm247.0000°;*

*NIED **20** 20:44:19.2,24°.02N×122°.28E,h29^{km},MW4.4,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.50; M$_{\theta\theta}$0.22; M$_{\phi\phi}$3.28; M$_{r\theta}$0.64; M$_{\theta\phi}$1.71; M$_{\phi r}$-1.65; Fault plane solution: M$_{0}$4.19000×10^{15} NP1:ϕ_s6.00000°, δ57.00000°,λ-112.00000°. NP2:ϕ_s223.00000°, δ39.00000°,λ-60.00000°.*

*TAP **20** 20:44:19.2,24°.11N×122°.27E,h20^{km},ML4.5,D*

*JMA **20** 20:44:19.2,24°.02N×122°.28E,h29^{km}±2^{km},M4.8*

*BJI **20** 20:44:20.1±0.0,24°.18N×122°.17E,h16^{km},mB4.5/14, mb4.1/18,ML4.4/5,Ms4.3/20,Ms7 4.2/19*

*IDC **20** 20:44:21.3±1.9,24°.18N×122°.34E,h45^{km}±18^{km},mb3.9/21, mb1 4.0/22,mb1mx3.8/47,mbtmp4.1/22,ML4.0/1,MS3.8/17, Ms1 3.8/17,ms1mx3.6/44,Error ellipse: s-maj=16.6km s-min=11.4km az=69.0*

ISC 20 20:44:19.5±0.9**,24°.06N**±0°.02×**122°.27E**±0°.02**,h31**^{km}±6^{km}**, n254,**σ1^{s}.**11**/348**,mb4.3**/37**,MS3.8**/13**,9C-3D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	0.57	313	P	**Pb**	**20 44 30.0**	**-1.2**
	baz=318						
ENAH				S	**Sb**	**20 44 38.1**	**-1.1**
	baz=318						
ENA	**Nanau**	0.61	307	P	**Pb**	**20 44 30.4**	**-1.3**
	baz=314						
ENA				*e*S	**Sb**	**20 44 39.7**	**-0.4**
	baz=314						
HWA	**Hwalien**	0.61	263	*e*P	**Pn**	**20 44 32.0**	**0.0**
	baz=242						
HWA				*e*S	**Sn**	**20 44 42.7**	**+1.9**
	baz=242						
TWD	**Chiawan**	0.62	272	P	**Pb**	**20 44 31.7**	**-0.1**
	baz=251						
TWD				*e*S	**Sn**	**20 44 40.8**	**-0.1**
	baz=251						
NACB	**Ninganchiao**	0.63	281	⇓*i*P	**Pb**	**20 44 31.8**	**-0.3**
	baz=259						
NACB				S	**Sb**	**20 44 40.3**	**-0.4**
	baz=259						
NACB	**Ninganchiao**	0.63	281		**Pb**	**20 44 31.6**	**-0.5**
TWC	**Suao**	0.67	325	⇑*i*P	**Pb**	**20 44 31.1**	**-1.6**
	baz=323						
TWC				*e*S	**Sb**	**20 44 39.0**	**-2.8**
	baz=323						
JYNG	**Yonagunijimaku**	0.73	57	P	**Pn**	**20 44 33.1**	**-0.5**
JYNG				S	**Sb**	**20 44 42.8**	**-0.6**
ETLH	**Xiulin Townshi**	0.74	282	P	**Pn**	**20 44 33.4**	**-0.4**
	baz=264						
ETLH				*e*S	**Sn**	**20 44 44.0**	**+0.1**
	baz=264						
YOJ	**Yonaguni jima**	0.79	59	P	**Pn**	**20 44 34.2**	**-0.2**
YOJ				S	**Sb**	**20 44 44.6**	**-0.4**
YOJ	**Yonaguni jima**	0.79	59	P	**Pn**	**20 44 33.9**	**-0.5**
	baz=61						
YOJ				*e*S	**Sb**	**20 44 43.2**	**-1.8**
	baz=61						
YOJ	**Yonaguni jima**	0.79	59		**Pn**	**20 44 34.0**	**-0.3**
YOJ					**Sb**	**20 44 44.5**	**-0.5**
ESL	**Shilin**	0.81	253	⇓*i*P	**Pn**	**20 44 33.9**	**-0.8**
	baz=237						
ESL				*e*S	**Sb**	**20 44 44.9**	**-0.7**
	baz=237						
ILA	**Ilan**	0.85	326	⇑*i*P	**Pn**	**20 44 34.8**	**-0.4**
	baz=324						
ILA				S	**Sn**	**20 44 45.9**	**-0.8**
	baz=324						
TWE	**Neicheng**	0.86	320	⇑*i*P	**Pn**	**20 44 34.9**	**-0.5**
	baz=324						
TWE				*e*S	**Sn**	**20 44 46.1**	**-0.8**
	baz=324						
EGFH	**Guangfu**	0.86	244	*e*P	**Pn**	**20 44 34.9**	**-0.5**
	baz=229						
EGFH				*e*S	**Sb**	**20 44 47.5**	**+0.2**
	baz=229						
ENTT	**Nioudou**	0.86	312	*i* P	**Pn**	**20 44 35.2**	**-0.3**
	baz=317						
ENTT				*e*S	**Sn**	**20 44 44.7**	**-2.4**
	baz=317						
NDT	**Datong Townshi**	0.88	308	P	**Pb**	**20 44 36.0**	**-0.2**
	baz=313						
NDT				*e*S	**Sn**	**20 44 46.8**	**-0.6**
	baz=313						
NTC	**Toucheng**	0.89	333	⇑*e*P	**Pn**	**20 44 35.8**	**0.0**
	baz=331						
NTC				*e*S	**Sn**	**20 44 46.6**	**-1.0**
	baz=331						
NNSB	**Datong**	0.89	295	⇓*i*P	**Pn**	**20 44 36.1**	**+0.2**
	baz=292						
NNSB				*e*S	**Sb**	**20 44 48.6**	**+0.4**
	baz=292						
NNSH	**Datong**	0.89	295	*e*P	**Pn**	**20 44 36.1**	**+0.2**
	baz=292						
NNSH				*e*S	**Sn**	**20 44 47.7**	**-0.1**
	baz=292						
NNS	**Nan Shan**	0.90	295	*i* P	**Pn**	**20 44 36.2**	**0.0**
	baz=292						
NNS				*e*S	**Sb**	**20 44 48.5**	**0.0**
	baz=292						
WHF	**Hehuan Shan**	0.92	276	P	**Pn**	**20 44 36.5**	**-0.2**
	baz=259						
WHF				*e*S	**Sn**	**20 44 48.0**	**-1.1**
	baz=259						
FUSS	**Fushou**	0.96	282	P	**Pn**	**20 44 37.3**	**+0.4**
	baz=279						
FUSS				*e*S	**Sn**	**20 44 48.8**	**-0.9**
	baz=279						
HGSD	**Ruisui**	0.96	234	*e*P	**Pn**	**20 44 36.6**	**-0.1**
	baz=233						
HGSD				*e*S	**Sn**	**20 44 48.5**	**-0.9**
	baz=233						
TWB1	**Santiao Chiao**	0.98	345	*i* P	**Pn**	**20 44 36.9**	**-0.1**
	baz=330						
TWB1				*e*S	**Sn**	**20 44 49.5**	**-0.4**
	baz=330						
TIPB	**Shuangxi**	1.00	336	⇑*i*P	**Pn**	**20 44 37.4**	**+0.1**
	baz=334						
TIPB				S	**Sn**	**20 44 49.6**	**-0.7**
	baz=334						
NWLT	**Wulai**	1.00	316	P	**Pb**	**20 44 38.0**	**-0.3**
	baz=313						
TWT	**Tachien**	1.02	281	P	**Pb**	**20 44 38.6**	**-0.1**
	baz=264						
YHNB	**Yeheng**	1.02	307	P	**Pn**	**20 44 37.9**	**+0.2**
	baz=305						
YHNB				*e*S	**Sn**	**20 44 50.5**	**-0.5**
	baz=305						
YHNB	**Yeheng**	1.02	307		**Pn**	**20 44 37.9**	**+0.2**
EHY	**Hungye**	1.03	238	P	**Pn**	**20 44 37.4**	**-0.4**
	baz=225						
EHY				*e*S	**Sn**	**20 44 50.1**	**-0.9**
	baz=225						
NSK	**Sanguang**	1.03	307	*e*P	**Pn**	**20 44 38.4**	**+0.5**
	baz=304						
NSK				*e*S	**Sb**	**20 44 52.0**	**-0.2**
	baz=304						
TDCB	**Techi**	1.03	281	P	**Pb**	**20 44 38.5**	**-0.4**
	baz=265						
TDCB				*e*S	**Sb**	**20 44 52.3**	**0.0**
	baz=265						
NWF	**Wu-fen Shan**	1.10	336	P	**Pn**	**20 44 39.1**	**+0.3**
	baz=334						
NWF				*e*S	**Sn**	**20 44 53.4**	**+0.4**
	baz=334						
WFSB	**Wu-fen Shan**	1.10	336	⇑*i*P	**Pn**	**20 44 39.0**	**+0.3**
	baz=334						
WFSB				S	**Sb**	**20 44 53.6**	**-0.4**
	baz=334						
TWA	**Mucha**	1.11	326	P	**Pb**	**20 44 39.8**	**-0.3**
	baz=324						
TWA				S	**Sb**	**20 44 54.8**	**+0.5**
	baz=324						
YULB	**Yu-li**	1.11	234	*e*P	**Pn**	**20 44 38.3**	**-0.6**
	baz=250						
YULB				*e*S	**Sn**	**20 44 52.9**	**-0.3**
	baz=250						
YULB	**Yu-li**	1.11	234		**Pn**	**20 44 38.6**	**-0.3**
EYUL	**Yuli**	1.12	231	*e*P	**Pn**	**20 44 39.2**	**+0.1**
	baz=248						
EYUL				*e*S	**Sb**	**20 44 55.2**	**+0.6**
	baz=248						
NHDH	**Xindian Distri**	1.13	323	⇑P	**Pb**	**20 44 39.9**	**-0.5**
	baz=321						
NHDH				*e*S	**Sb**	**20 44 54.2**	**-0.5**
	baz=321						
TWF1	**Yuli**	1.14	232	P	**Pn**	**20 44 39.0**	**-0.2**
	baz=248						
TWF1				*e*S	**Sn**	**20 44 54.2**	**+0.4**
	baz=248						
TATO	**Taipei**	1.16	322	⇑*i*P	**Pb**	**20 44 40.7**	**-0.2**
	baz=320						
TATO				*e*S	**Sb**	**20 44 55.5**	**-0.1**
	baz=320						
TATO	**Taipei**	1.16	322		**Pb**	**20 44 40.5**	**-0.5**
TATO					**Sn**	**20 44 54.6**	**+0.3**
TNOU	**National Taiwa**	1.18	337	*e*P	**Pn**	**20 44 39.7**	**0.0**
	baz=350						
TNOU				*e*S	**Sn**	**20 44 55.0**	**+0.3**
	baz=350						
TAP	**Taipei**	1.20	325	*e*P	**Pb**	**20 44 41.3**	**-0.3**
	baz=323						
TAP				*e*S	**Sb**	**20 44 56.8**	**0.0**
	baz=323						
BACT	**New Taipei Cit**	1.20	321	*e*P	**Pb**	**20 44 41.9**	**+0.3**
	baz=319						
BACT				*e*S	**Sb**	**20 44 57.5**	**+0.7**
	baz=319						
WPL	**Puli Township**	1.20	268	*e*P	**Pn**	**20 44 41.0**	**+0.8**
	baz=257						
WPL				*e*S	**Sb**	**20 44 56.4**	**-0.5**
	baz=257						
DPDB	**Guoxing**	1.23	269	P	**Pn**	**20 44 41.3**	**+0.8**
	baz=258						
DPDB				*e*S	**Sn**	**20 44 56.7**	**+0.5**
	baz=258						
WHP	**Taichung City**	1.23	280	P	**Pb**	**20 44 41.7**	**-0.5**
	baz=266						
WHP				*e*S	**Sb**	**20 44 58.6**	**+0.9**
	baz=266						
SSLB	**Suanglung**	1.23	258	P	**Pn**	**20 44 40.8**	**+0.2**
	baz=243						
SSLB	**Suanglung**	1.23	258		**Pn**	**20 44 40.8**	**+0.2**
FULB	**Fuli**	1.24	227	*e*P	**Pn**	**20 44 40.3**	**-0.3**
	baz=212						
FULB				*e*S	**Sn**	**20 44 56.2**	**-0.1**
	baz=212						
YM01	**YM01**	1.26	330	*e*P	**Pn**	**20 44 41.6**	**+0.7**
	baz=345						
YM01				*e*S	**Sn**	**20 44 57.2**	**+0.4**
	baz=345						
CHKT	**Chengkung**	1.27	221	*e*P	**Pn**	**20 44 40.4**	**-0.6**
	baz=208						
CHKT				*e*S	**Sn**	**20 44 55.3**	**-1.6**
	baz=208						
SMLT	**Sun Moon Lake**	1.27	262	P	**Pn**	**20 44 41.7**	**+0.6**
	baz=260						
YM10	**YM10**	1.27	330	*e*P	**Pn**	**20 44 41.4**	**+0.3**
	baz=344						
YM10				*e*S	**Sb**	**20 44 58.8**	**0.0**
	baz=344						
YM11	**YM11**	1.27	330	*e*P	**Pb**	**20 44 42.2**	**-0.7**
	baz=344						
YM04	**YM04**	1.28	329	P	**Pn**	**20 44 41.3**	**+0.1**
	baz=344						
YM08	**YM08**	1.28	331	*e*P	**Pn**	**20 44 41.2**	**-0.1**
	baz=345						
LIOB	**Emei**	1.29	297	P	**Pb**	**20 44 42.8**	**-0.3**
	baz=296						
LIOB				*e*S	**Sb**	**20 44 59.9**	**+0.6**
	baz=296						
NTY	**Taoyuan**	1.29	317	*e*P	**Pb**	**20 44 42.2**	**-0.9**
	baz=329						
NTY				*e*S	**Sb**	**20 44 59.8**	**+0.4**
	baz=329						
NSTT	**Nanjuang**	1.29	296	P	**Pb**	**20 44 43.0**	**-0.2**
	baz=294						
TWS1	**Kuangyinshan**	1.30	323	P	**Pb**	**20 44 42.6**	**-0.6**
	baz=334						
TWS1				S	**Sb**	**20 45 00.4**	**+0.8**
	baz=334						
YM03	**YM03**	1.30	329	*e*P	**Pn**	**20 44 42.3**	**+0.8**
	baz=327						
TYC	**Yuchr**	1.30	264	*e*P	**Pb**	**20 44 42.5**	**-0.8**
	baz=262						
TYC				*e*S	**Sb**	**20 45 00.1**	**+0.3**
	baz=262						
ANP	**Anpu**	1.31	329	P	**Pn**	**20 44 42.7**	**+0.9**
	baz=327						
NTST	**Danshui**	1.33	326	P	**Pb**	**20 44 43.0**	**-0.8**
	baz=336						
NTST				*e*S	**Sb**	**20 45 01.2**	**+0.7**
	baz=336						
NCU	**National Centr**	1.34	313	P	**Pb**	**20 44 43.1**	**-0.9**
	baz=311						
NCU				*e*S	**Sb**	**20 45 02.8**	**+1.9**
	baz=311						
NCUH	**Zhongli**	1.34	313	*e*P	**Pn**	**20 44 42.7**	**+0.6**
	baz=310						
WHYT	**Xinyi Township**	1.35	255	P	**Pb**	**20 44 43.5**	**-0.7**
	baz=242						
WHYT				*e*S	**Sb**	**20 45 01.1**	**+0.1**
	baz=242						
HSN1	**Hsinchu**	1.35	302	*e*P	**Pb**	**20 44 43.9**	**-0.3**
	baz=301						
HSN1				*e*S	**Sb**	**20 45 01.2**	**+0.2**
	baz=301						
TWY	**Chenhua**	1.36	333	P	**Pb**	**20 44 43.7**	**-0.5**
	baz=332						
TWY				*e*S	**Sn**	**20 44 59.7**	**+0.5**
	baz=332						
IRIF	**Iriomote-Funau**	1.36	78	P	**Pn**	**20 44 43.1**	**+0.8**
IRIF				S	**Sb**	**20 45 01.6**	**+0.2**
SBCB	**Hsinchu**	1.38	302	P	**Pb**	**20 44 44.2**	**-0.5**
	baz=300						
SBCB				*e*S	**Sb**	**20 45 03.5**	**+1.5**
	baz=300						
TWQ1	**Liyutan**	1.40	282	*e*P	**Pb**	**20 44 45.0**	**0.0**
	baz=280						
EDH	**Donghe**	1.40	220	P	**Pn**	**20 44 42.8**	**0.0**
	baz=208						
EDH				*e*S	**Sn**	**20 45 00.3**	**+0.1**
	baz=208						
HSN	**Hsinchu**	1.40	302	*e*P	**Pn**	**20 44 43.9**	**+1.1**
	baz=302						
HATJ	**Hateruma jima**	1.40	90	P	**Pb**	**20 44 45.2**	**+0.2**
HATJ				S	**Sb**	**20 45 04.3**	**+1.7**
NSY	**Sanyi**	1.42	285	*e*P	**Pb**	**20 44 45.6**	**+0.1**
	baz=283						
NMLH	**Miaoli**	1.43	290	*e*P	**Pb**	**20 44 45.2**	**-0.4**
	baz=288						
WJS	**Zhushan**	1.43	261	*e*P	**Pb**	**20 44 45.6**	**0.0**
	baz=260						
WJS				*e*S	**Sb**	**20 45 05.3**	**+1.9**
	baz=260						
WWF	**Wufeng**	1.44	270	*e*P	**Pb**	**20 44 45.9**	**+0.2**
	baz=269						

WWF				eS	Sb	20 45 04.5	+0.9
	baz=269						
ELDTW	Lidau	1.44	233	eP	Pn	20 44 43.4	-0.1
	baz=219						
ELDTW				eS	Sn	20 45 01.4	0.0
	baz=219						
ALS	Alishan	1.45	248	P	Pn	20 44 44.9	+1.2
	baz=248						
ALS				eS	Sb	20 45 03.9	-0.3
	baz=248						
TCU	Taichung	1.46	274	P	Pb	20 44 45.8	-0.2
	baz=273						
TCU				eS	Sb	20 45 05.3	+1.1
	baz=273						
WNT	Mingjian	1.46	263	P	Pb	20 44 46.0	-0.1
	baz=262						
WNT				eS	Sb	20 45 04.9	+0.6
	baz=262						
WNT1	Nantou City	1.46	264	P	Pb	20 44 46.4	+0.3
	baz=250						
WNT1				eS	Sb	20 45 04.3	0.0
	baz=250						
WDJ	Dajia District	1.52	281	P	Pb	20 44 46.1	-0.8
	baz=280						
CHN5	Tsauling	1.53	253	eP	Pb	20 44 46.7	-0.6
	baz=241						
CHN5				eS	Sb	20 45 07.0	+0.7
	baz=241						
LONT	Longtian	1.55	223	P	Pn	20 44 45.1	+0.2
	baz=223						
LDUT	Ludao	1.56	208	P	Pn	20 44 44.7	-0.4
	baz=209						
LDUT				eS	Sn	20 45 03.1	-1.2
	baz=209						
WCHH	Zhanghua	1.57	271	eP	Pb	20 44 47.9	0.0
	baz=270						
WCHH				eS	Sb	20 45 09.3	+2.1
	baz=270						
PCYT	Pengchaiyu	1.57	353	P	Pn	20 44 45.4	+0.1
	baz=351						
JKRS	Kuro-shima	1.60	83	P	Pb	20 44 47.0	-1.3
JKRS				eS	Sb	20 45 07.2	-0.9
WGK	Gukeng	1.61	257	eP	Pb	20 44 48.2	-0.3
	baz=256						
WDLH	Douliu	1.63	257	eP	Pb	20 44 47.7	-1.1
	baz=244						
WDLH				eS	Sb	20 45 09.4	+0.4
	baz=244						
STYT	Tauyuan	1.65	238	P	Pn	20 44 47.3	+1.0
	baz=238						
STYT				eS	Sb	20 45 08.9	-0.8
	baz=238						
TWGBT	Beinan	1.65	222	eP	Pn	20 44 45.9	-0.4
	baz=223						
TWGBT				eS	Sn	20 45 06.4	0.0
	baz=223						
TWG	Pinlang	1.65	222	eP	Pn	20 44 45.9	-0.4
	baz=222						
TWG	Pinlang	1.65	222		Pn	20 44 45.9	-0.4
TTN	Taitung	1.66	219	eP	Pn	20 44 47.4	+1.0
	baz=206						
TPUB	Ta-pu	1.68	244	P	Pb	20 44 48.8	-1.1
	baz=244						
TPUB				eS	Sn	20 45 08.3	+1.0
	baz=244						
TPUB	Ta-pu	1.68	244		Pn	20 44 48.4	+1.7
CHN4	Tsaushan	1.69	246	eP	Pb	20 44 49.0	-0.9
	baz=235						
CHN4				eS	Sb	20 45 10.7	-0.2
	baz=235						
WTP	Ta-pu	1.72	242	P	Pn	20 44 49.0	+1.7
	baz=243						
WTP				eS	Sb	20 45 11.0	-0.8
	baz=243						
CHN2	Minshiung	1.73	253	eP	Pb	20 44 49.8	-0.8
	baz=252						
JIJ	Ishigaki jima	1.74	80	P	Pn	20 44 48.2	+0.8
JIJ				S	Sn	20 45 09.5	+1.0
RLNB	Erlin	1.76	265	eP	Pn	20 44 49.2	+1.5
	baz=264						
RLNB				eS	Sb	20 45 12.8	+0.1
	baz=264						
WTK	Tuku	1.76	258	eP	Pb	20 44 50.3	-0.9
	baz=246						
WTK				eS	Sb	20 45 13.2	+0.3
	baz=246						
CHY	Chiayi	1.78	252	eP	Pb	20 44 50.1	-1.3
	baz=252						
CHY				eS	Sb	20 45 15.1	+1.7
	baz=252						
TWK	Hsinying	1.81	245	eP	Pn	20 44 50.3	+1.7
	baz=245						
TWK				eS	Sb	20 45 13.9	-0.5
	baz=245						
CHN1	Nanshi	1.82	242	eP	Pb	20 44 51.1	-1.0
	baz=242						
CHN1				eS	Sb	20 45 12.8	-1.7
	baz=242						
SNST	Tainan City	1.83	243	eP	Pb	20 44 51.2	-1.0
	baz=243						
SGST	Jiashian	1.83	238	eP	Pn	20 44 49.9	+1.2
	baz=239						
SGST				eS	Sb	20 45 13.8	-1.0
	baz=239						
SLGT	Liugui	1.83	235	eP	Pb	20 44 50.9	-1.5
	baz=224						
SLGT				eS	Sb	20 45 14.4	-0.4
	baz=224						
ECL	Taimali	1.89	220	eP	Pn	20 44 49.0	-0.6
	baz=220						
WLGB	Puzi	1.90	253	eP	Pb	20 44 53.2	-0.3
	baz=252						
WSF	Szhu	1.92	258	eP	Pn	20 44 52.0	+1.9
	baz=257						
WSF				eS	Sb	20 45 16.9	-0.5
	baz=257						
JISG	Ishigakijimahi	1.93	74	P	Pn	20 44 50.7	+0.5
JISG				S	Sn	20 45 14.1	+0.7
ICHU	Yijhu	1.95	250	eP	Pn	20 44 52.3	+1.9
	baz=249						
SSD	Sandimen	1.99	229	eP	Pn	20 44 53.0	+2.0
	baz=220						
CHN3	Shinhua	2.00	241	eP	Pb	20 44 54.5	-0.8
	baz=241						
SCST	Cishan	2.01	235	eP	Pb	20 44 54.6	-0.6
	baz=224						
TSMG	Majia	2.01	228	eP	Pb	20 44 54.0	-1.4
	baz=219						
CHN8	Yiju	2.02	250	eP	Pn	20 44 53.3	+2.0
	baz=250						
CHN8				eS	Sb	20 45 18.4	-1.7
	baz=250						
MASBT	Mashibuluo	2.08	227	eP	Pn	20 44 53.5	+1.3
	baz=219						
MASBT				eS	Sb	20 45 21.6	-0.5
	baz=219						
TWM1	Shoushan	2.10	234	eP	Pb	20 44 56.3	-0.6
	baz=233						
SGLT	Jiouru	2.11	231	eP	Pb	20 44 56.9	-0.1
	baz=231						
TAW	Tawu	2.11	217	eP	Pn	20 44 53.3	+0.7
	baz=217						
LAY	Lan-yu	2.12	198	eP	Pn	20 44 52.1	-0.6
	baz=199						
EAST	Anshuo	2.12	218	eP	Pn	20 44 52.5	-0.3
	baz=219						
TSPT	Pingtung City	2.13	230	eP	Pb	20 44 55.7	-1.8
	baz=231						
SSPT	Xinbi	2.22	225	eP	Pn	20 44 56.4	+2.4
	baz=218						
SCZT	Fangliau	2.26	222	eP	Pb	20 44 57.4	-2.3
	baz=216						
SLIU	Shizi	2.28	217	eP	Pn	20 44 55.9	+1.0
	baz=218						
JTJ	Tarama	2.29	75	P	Pn	20 44 56.1	+1.0
JTJ				S	Sn	20 45 23.9	+1.7
WLCH	Liuqiu	2.43	226	eP	Pb	20 45 01.7	-0.8
	baz=227						
TWP	Hsiaoliuchiu	2.45	226	eP	Pb	20 45 00.8	-2.0
	baz=227						
HEN	Hengchun	2.48	215	eP	Pn	20 44 59.3	+1.6
	baz=216						
TSEB	Hengchuen, Pin	2.49	211	eP	Pn	20 44 59.2	+1.3
	baz=213						
TWKBT	Hengchun	2.50	213	eP	Pn	20 44 58.6	+0.6
	baz=214						
TWK1	Hengchun	2.50	213	eP	Pn	20 44 58.8	+0.8
	baz=214						
WDGT	Dungji	2.52	252	eP	Pn	20 44 59.8	+1.5
	baz=251						
PHUB	P'eng-hu	2.53	258	eP	Pn	20 44 59.4	+1.0
	baz=258						
PNG	Penghu	2.54	259	eP	Pn	20 44 59.7	+1.2
	baz=259						
PTTC	Pingtan	2.69	303	eP	Pn	20 45 00.3	-0.3
	baz=301						
VWUC	VWUC	2.73	290	eP	Pn	20 45 01.0	-0.2
	baz=289						
VCHM	Qimei	2.74	253	eP	Pn	20 45 02.3	+1.1
	baz=252						
JIRB	Irabujima	2.75	73	P	Pn	20 45 02.5	+1.1
JIRB				S	Sn	20 45 35.0	+1.4
JIKM	Ikemajima	2.84	72	P	Pn	20 45 04.4	+1.7
JIKM				S	Sn	20 45 37.8	+1.9
JMJ	Miyako jima 2	2.86	74	eP	Pn	20 45 04.1	+1.3
	baz=74						
JMJ2	Miyako jima3	2.87	76	P	Pn	20 45 05.9	+2.9
JMJ2				S	Sn	20 45 38.4	+1.9
JOGS	Gusukube	2.94	76	P	Pn	20 45 06.5	+2.5
JOGS				S	Sn	20 45 40.0	+1.7
MATB	Ma-tsu	2.96	315	eP	Pn	20 45 04.0	-0.3
	baz=314						
MSUT	Lienchiang	2.99	315	eP	Pn	20 45 04.0	-0.7
	baz=314						
PTMZ	Houxiangcun	3.03	289	eP	Pn	20 45 05.3	+0.1
	baz=288						
LYJJ	Jianjiangzhen	3.37	318	eP	Pn	20 45 09.9	+0.1
	baz=317						
XPSS	Dashiqiu	3.42	327	eP	Pn	20 45 10.5	-0.1
	baz=336						
QZH	Quanzhou	3.46	285	⇑iPn	Pn	20 45 11.6	+0.4
QZH				Sn	Sn	20 45 49.1	-2.1
QZH				LR	LR		
	comp=E,2µm,12.6s						
QZH				LR	LR		
	comp=Z,2µm,10.9s						
KNM	Kinmen	3.52	277	eP	Pn	20 45 13.8	+1.8
	baz=275						
KNMB	Chin-men Tao	3.57	277	eP	Pn	20 45 12.7	+0.1
	baz=276						
KNMB	Chin-men Tao	3.57	277		Pn	20 45 12.9	+0.3
MHZQ	Yeshan	3.57	305	eP	Pn	20 45 12.3	-0.4
	baz=304						
AXDP	Jialang	4.01	283	eP	Pn	20 45 20.1	+1.4
	baz=281						
JOW	Kunigami	6.09	62	P	Pn	20 45 46.4	-1.0
	8.2nm,0.3s,baz=163,slow=27,SNR=34						
JOW				S	Sn	20 46 55.7	-0.2
	1.9nm,0.3s,baz=108,slow=20,SNR=2.0						
SSE	Sheshan	7.08	352	Pn	Pn	20 46 00.5	-0.3
NJ2	Nanjing	8.52	340	eP	Pn	20 46 20.3	-0.3
NJ2				S	Sn	20 47 55.5	-0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				smax	smax		
	comp=N,82nm,0.9s						
NJ2				smax	smax		
	comp=E,81nm,1.1s						
NJ2				LR	LR		
	comp=N,2µm,10.9s						
NJ2				LR	LR		
	comp=E,960nm,8.5s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s						
JNU	Nakatsue	11.77	38	LR	LR	20 52 36.9	
	comp=Z,336nm,18.4s,baz=155,slow=43						
JMN	Monobe	14.00	44	P	Pn	20 47 31.4	-4.2
KSAR	Wonju Array Be	14.18	19		Pn	20 47 37.8	-0.3
KSRS	Korea Array	14.20	19	P	Pn	20 47 41.5	+3.1
	0.2nm,0.3s,baz=203,slow=13,SNR=3.5						
KSRS				LR	LR	20 53 41.8	
	comp=Z,280nm,18.3s,baz=180,slow=40						
KS19	Wonju Array Si	14.23	18		Pn	20 47 41.0	+2.2
GYA	Guiyang	14.32	283	eP	P	20 47 46.5	-0.5
GYA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GYA				LR	LR		
	comp=N,320nm,14.0s						
GYA				LR	LR		
	comp=E,800nm,13.6s						
GYA				LR	LR		
	comp=Z,1µm,13.8s						
JHS	Saijyo	14.41	38	P	P	20 47 46.2	-1.6
SLVN	Son La	17.16	265	P	P	20 48 20.9	+2.4
DAV	Davao City (W)	17.19	169	LR	LR	20 54 43.3	
	comp=Z,216nm,19.9s,baz=14,slow=36						
CD2	Chengdu	17.78	297	P	P	20 48 27.0	+1.8
CD2				S	Sn	20 51 41.3	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=N,520nm,7.8s						
CD2				LR	LR		
	comp=E,970nm,11.4s						
CD2				LR	LR		
	comp=Z,1µm,14.1s						
JHJ	Hachijo jima 2	17.81	56	LR	LR	20 55 15.9	
	comp=Z,126nm,20.1s,baz=294,slow=37						
MJAR	Matsushiro Arr	18.52	44	LR	LR	20 56 12.0	
	comp=Z,299nm,20.6s,baz=220,slow=39						
LZH	Lanzhou	19.91	311	eP	Pn	20 48 51.0	+0.5
LZH				PP	PnPn	20 49 10.0	+5.1
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,86nm,5.4s						
LZH				LR	LR		
	comp=N,460nm,13.6s						
LZH				LR	LR		
	comp=E,640nm,15.2s						
LZH				LR	LR		
	comp=Z,610nm,16.8s						
USRK	Ussuriysk Ar.	21.61	19	P	P	20 49 05.6	-1.2
	1.7nm,0.7s,baz=212,slow=12,SNR=4.7						
USRK				LR	LR	20 58 31.9	
	comp=Z,302nm,18.1s,baz=170,slow=40						
USRK	Ussuriysk Ar.	21.61	19	P	P	20 49 05.2	-1.6
CHTO	Chiang Mai	22.32	261	P	P	20 49 16.5	+1.8
CM31	Chiang Mai Arr	22.43	260	P	P	20 49 17.0	+1.1
CMAR	Chiang Mai Arr	22.43	260	P	P	20 49 18.1	+2.3
	0.6nm,0.8s,baz=57,slow=8.6,SNR=8.3						
CMAR				LR	LR	20 57 30.9	
	comp=Z,59nm,19.2s,baz=163,slow=35						
CMAR	Chiang Mai Arr	22.43	260	P	P	20 49 18.3	+2.4
TOLI2	Tolitoli	22.86	184	P	P	20 49 17.1	-3.2
TOLI2				IAmb	IAmb	20 49 29.0	
	comp=Z,13nm,1.2s						
JTM	Tenmabayashi	22.94	39	P	P	20 49 17.0	-4.0
GTOI	Gorontalo	23.30	178	P	P	20 49 32.2	+7.5
TNTI	Ternate	23.67	167	P	P	20 49 26.7	-1.7
TNTI				IAmb	IAmb	20 49 49.0	
	comp=Z,26nm,1.0s						
TNTI	Ternate	23.67	167	P	P	20 49 36.1	+7.7
GTA	Gaotai	24.38	314	P	P	20 49 36.8	+1.8
GTA				pP	pP	20 49 40.4	-2.8
GTA				sP	sP	20 49 42.9	-3.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,87nm,4.9s						
GTA				LR	LR		
	comp=Z,200nm,10.5s						
GTA				LR	LR		
	comp=Z,300nm,14.9s						
GTA				LR	LR		
	comp=Z,580nm,15.1s						
LUWI	Luwuk	24.95	179	P	P	20 49 40.8	+0.6
LUWI				IAmb	IAmb	20 50 15.4	
	comp=Z,27nm,1.2s						
ASAJ	Asahikawa	26.02	35	LR	LR	21 00 07.8	
	comp=Z,204nm,19.2s,baz=212,slow=37						
KLR	Kul'dur	26.21	14	LR	LR	21 01 27.8	
	comp=Z,289nm,18.7s,baz=198,slow=39						
ULN	Ulaanbaatar	26.66	337	P	P	20 49 54.8	-0.8
ULN				IAmb	IAmb	20 49 57.3	
	comp=Z,18nm,1.6s						
SONM	Songino Array	26.88	336	P	P	20 49 57.2	-0.3
	comp=Z,5.5nm,0.7s,baz=150,slow=9.0,SNR=40						
SONM				ScP	ScP	20 56 54.9	-2.4
	comp=Z,0.7nm,1.0s,baz=119,slow=5.2,SNR=3.5						
SONM				LR	LR	21 01 30.2	
	comp=Z,300nm,21.4s,baz=168,slow=38						
SONM	Songino Array	26.88	336	P	P	20 49 57.3	-0.3
SONM					ScP	20 56 57.0	-0.3
SHL	Shillong	27.60	280	P	P	20 50 03.8	-0.5
SHL				IAmb	IAmb	20 50 35.0	
	comp=Z,14nm,1.4s						
LSA	Lhasa	28.27	288	P	P	20 50 13.1	+2.5
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LSA	Lhasa	28.27	288		P	20 50 11.5	+0.9
KAPI	Kappang	29.00	185	LR	LR	21 01 43.0	
	comp=Z,80nm,20.7s,baz=23,slow=36						
TLY	Talaya	31.07	337	P	P	20 50 34.5	-0.1
	comp=Z,1.9nm,0.5s,baz=216,slow=8.0,SNR=4.0						
TLY				LR	LR	21 03 00.5	
	comp=Z,94nm,20.4s,baz=138,slow=36						
TLY	Talaya	31.07	337	P	P	20 50 32.6	-2.0
TLY				IAmb	IAmb	20 50 46.8	
	comp=Z,2.9nm,0.7s						
BATI	Baumata	34.08	178	P	P	20 51 02.2	+1.0
	comp=Z,7.2nm,0.5s,baz=337,slow=13,SNR=3.6						
BATI				LR	LR	21 04 45.8	
	comp=Z,104nm,19.6s,baz=2.0,slow=36						
WMQ	Urumqi	34.46	313	eP	P	20 51 08.5	+4.1
MK31	Makanchi Array	39.12	316	P	P	20 51 43.5	-0.5
MKAR	Makanchi Array	39.12	316	P	P	20 51 44.1	+0.1
	comp=Z,2.6nm,0.7s,baz=98,slow=9.8,SNR=24						
MKAR				PcP	PcP	20 53 53.0	-0.2
	comp=Z,0.4nm,0.8s,baz=96,slow=4.3,SNR=2.1						
MKAR				ScP	ScP	20 57 37.9	-1.6
	comp=Z,0.8nm,0.9s,baz=93,slow=6.1,SNR=5.4						
MKAR				LR	LR	21 09 27.6	
	comp=Z,241nm,19.1s,baz=320,slow=39						
MKAR	Makanchi Array	39.12	316	P	P	20 51 43.8	-0.2
PETK	Petropavlovsk-	39.42	33	LR	LR	21 09 06.1	
	comp=Z,156nm,20.2s,baz=187,slow=38						
ZAA0	Zalesovo Array	40.89	327	P	P	20 51 57.4	-1.1
ZALV	Zalesovo Beam	40.89	327	P	P	20 51 57.5	-1.0
	comp=Z,2.4nm,0.5s,baz=115,slow=8.4,SNR=16						
ZALV				LR	LR	21 10 17.8	
	comp=Z,260nm,20.1s,baz=274,slow=38						
ZALV	Zalesovo Beam	40.89	327	P	P	20 51 57.3	-1.2
WAKE	Wake Island	41.39	88	P	P	20 52 00.7	-2.4
FITZ	Fitzroy Crossi	42.03	175	P	P	20 52 08.0	-0.2
	comp=Z,4.0nm,1.1s,baz=16,slow=15,SNR=2.9						
KURK	Kurchatov	42.83	320	P	P	20 52 14.8	+0.4
KURK				IAmb	IAmb	20 52 26.0	
	comp=Z,12nm,1.5s						
KURBB	Kurchatov Arra	42.84	320	P	P	20 52 14.6	+0.1
	comp=Z,0.7nm,0.6s,baz=112,slow=9.7,SNR=9.2						
COEN	Coen	42.95	149	P	P	20 52 17.3	+1.5
COEN				IAmb	IAmb	20 52 18.4	
	comp=Z,16nm,0.9s						
WB0	Warramunga Arr	45.13	164	P	P	20 52 33.7	+0.5
WRA	Warramunga Arr	45.29	164	P	P	20 52 35.4	+1.0
	comp=Z,3.7nm,0.9s,baz=346,slow=8.5,SNR=13						
WB2	Warramunga Arr	45.29	164	P	P	20 52 34.6	+0.2
WB2				IAmb	IAmb	20 52 35.8	
	comp=Z,8.6nm,1.0s						
PSAD1	Pilbara Seismi	45.30	183	P	P	20 52 34.5	0.0
WC3	Warramunga Arr	45.31	164	P	P	20 52 35.0	+0.3
WC3				IAmb	IAmb	20 52 36.0	
	comp=Z,14nm,1.2s						
WR0	Warramunga Arr	45.36	164	P	P	20 52 35.7	+0.8
WR0				IAmb	IAmb	20 52 36.4	
	comp=Z,9.9nm,1.1s						
PSAB1	Pilbara Seismi	45.42	183	P	P	20 52 34.5	-0.9
KK06	Karatay Array	46.33	307	P	P	20 52 42.7	+0.2
KK05	Karatay Array	46.33	307	P	P	20 52 42.7	+0.2
KBL	Kabul	47.11	296	P	P	20 52 49.8	+0.8
KBL				IAmb	IAmb	20 53 02.4	
	comp=Z,11nm,1.4s						
TIXI	Tiksi	47.77	3	P	P	20 52 51.5	-1.7
TIXI				IAmb	IAmb	20 53 19.4	
	comp=Z,2.1nm,0.8s						
BVAR	Borovoye Array	48.40	321	P	P	20 52 58.3	-0.2
	comp=Z,1.0nm,0.5s,baz=106,slow=11,SNR=16						
BRVK	Borovoye	48.47	321	P	P	20 52 58.5	-0.5
BRVK				IAmb	IAmb	20 53 12.3	
	comp=Z,3.1nm,0.7s						
AS31	Alice Springs	48.77	166	P	P	20 53 01.5	-0.1
ASAR	Alice Springs	48.77	166	P	P	20 53 03.1	+1.6
	comp=Z,5.1nm,0.9s,baz=345,slow=6.5,SNR=24						
ASAR	Alice Springs	48.77	166	P	P	20 53 01.5	-0.1
AB06	Akbulak array	54.22	314	P	P	20 53 41.4	-0.7
ABKAR	Akbulak array	54.24	314	P	P	20 53 42.0	-0.3
ABKAR				IAmb	IAmb	20 53 46.6	
	comp=Z,3.6nm,0.7s						
ABKAR	Akbulak array	54.24	314	P	P	20 53 42.1	-0.2
AB05	Akbulak array	54.24	314	P	P	20 53 42.1	-0.2
GEYT	Alibeck	55.72	301	P	P	20 53 55.2	+2.0
STKA	Stephens Creek	58.61	161	P	P	20 54 14.8	+1.4
	comp=Z,4.1nm,0.8s,baz=334,slow=7.7,SNR=6.4						
KBZ	Khabaz	66.33	309	P	P	20 55 05.6	+0.5
	comp=Z,1.0nm,0.8s,baz=136,slow=7.2,SNR=3.6						
BMAR	Burnt Mountain	69.23	24	P	P	20 55 23.9	+0.8
SPB1	Spitsbergen Ar	69.81	348	P	P	20 55 25.4	-1.0
SPA1	Spitsbergen Ar	69.81	348	P	P	20 55 25.4	-1.0
ARCES	ARCESS Array B	70.03	338	P	P	20 55 27.4	-0.4
	comp=Z,11nm,1.1s,baz=62,slow=3.4,SNR=3.9						
FINES	FINESS Array B	72.05	330	P	P	20 55 40.2	0.0
	comp=Z,1.7nm,0.8s,baz=49,slow=6.3,SNR=4.0						
AKASG	Malin Array Be	73.62	319	P	P	20 55 49.0	-0.7
	comp=Z,0.4nm,0.4s,baz=53,slow=4.8,SNR=1.7						
BRTR	Keskin Array B	74.05	307	P	P	20 55 51.9	-0.8
	comp=Z,1.6nm,0.9s,baz=107,slow=6.6,SNR=9.0						
BRTR	Keskin Array B	74.05	307	P	P	20 55 51.2	-1.5
NOA	NORSAR Array B	78.80	332	LR	LR	21 34 53.6	
	comp=Z,178nm,18.7s,baz=305,slow=38						
YKA	Yellowknife Ar	82.70	23	P	P	20 56 39.2	-0.5
	comp=Z,1.0nm,0.8s,baz=317,slow=4.2,SNR=13						
GERES	GERESS Array B	83.57	321	P	P	20 56 44.2	-0.4
	comp=Z,0.6nm,0.8s,baz=2.9,slow=3.9,SNR=4.4						
KMBO	Kilima Mbogo	85.90	267	P	P	20 56 57.4	+0.1
	comp=Z,2.3nm,0.9s,baz=345,slow=1.6,SNR=6.3						

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*IDC **20** 20:49:22.5±0.9, 2°.45S×139°.00E, h0^{km}, mb3.7/6, mb1 4.1/8, mb1mx3.8/29, mbtmp4.0/8, ML4.2/2, Error ellipse: s-maj=22.1km s-min=19.4km az=173.0*

*NEIC **20** 20:49:25.7±1.5, 2°.50S±0°.10×138°.95E±0°.06, h24^{km}±6^{km}, mb4.5/21, Error ellipse: s-maj=14.1km s-min=9.4km az=178.0*

ISC 20 20:49:27.6±0.5**, 2°.52S**±0°.07×**138°.92E**±0°.05**, h37^{km}, n41, σ1^{s}66**/44**, mb4.2**/14**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	1.25	93	P	Pn	20 49 47.5	-1.0
JAY	Jayapura	1.78	90	Pn	Pn	20 49 54.8	-1.1
	18nm,0.3s,baz=245,slow=12,SNR=60						
JAY				Sn	Sn	20 50 15.9	-1.4
	25nm,0.3s,baz=113,slow=17,SNR=10.0						
JAY	Jayapura	1.78	90	P	Pn	20 49 56.0	+0.1
FAKI	Fak Fak	6.68	266	Pn	Pn	20 51 03.8	+0.6
MTN	Manton Dam	12.83	217	Pn	Pn	20 52 26.3	-1.2
SOEI	Soe	16.24	243	P	P	20 53 15.7	-0.3
SOEI				IAmb	IAmb	20 53 29.8	
	comp=Z,22nm,0.9s						
BATI	Baumata	16.97	243	P	P	20 53 24.1	+0.2
	comp=Z,2.0nm,0.3s,baz=176,slow=1.1,SNR=10						
WB0	Warramunga Arr	17.70	194	P	P	20 53 32.1	+0.1
WR0	Warramunga Arr	17.85	194	P	P	20 53 33.3	-0.3
WB2	Warramunga Arr	17.88	194		Pn	20 53 33.0	-0.6
WRA	Warramunga Arr	17.89	194	P	P	20 53 34.0	0.0
	comp=Z,0.5nm,0.3s,baz=15,slow=13,SNR=12						
WRA				S	Sn	20 56 40.8	-11
	comp=Z,0.1nm,0.3s,baz=9.0,slow=23,SNR=3.4						
WRA	Warramunga Arr	17.89	194	P	Pn	20 53 32.4	-1.3
FITZ	Fitzroy Crossi	20.23	219	P	P	20 53 59.8	+0.1
	comp=Z,1.9nm,0.8s,baz=50,slow=16,SNR=2.0						
FITZ				S	S	20 57 36.7	-8.1
	comp=Z,1.9nm,0.7s,baz=5.1,slow=5.7,SNR=3.2						
FITZ	Fitzroy Crossi	20.23	219	P	P	20 53 59.1	-0.6
FITZ				IAmb	IAmb	20 54 24.3	
	comp=Z,13nm,1.6s						
PATS	Pohnpei	21.47	64	P	P	20 54 14.0	+0.8
AS31	Alice Springs	21.57	193	P	P	20 54 14.1	-0.1
ASAR	Alice Springs	21.57	193	P	P	20 54 14.7	+0.5
	comp=Z,1.4nm,0.6s,baz=25,slow=9.9,SNR=8.6						
ASAR				S	S	20 58 12.8	+1.3
	comp=Z,0.9nm,0.8s,baz=6.3,slow=28,SNR=3.3						
ASAR	Alice Springs	21.57	193	P	P	20 54 13.7	-0.5
EIDS	Eidsvold	25.56	154	P	P	20 54 54.1	+1.0
EIDS				IAmb	IAmb	20 54 57.6	
	comp=Z,9.0nm,0.9s						
PSA00	Pilbara Seismi	26.52	223	P	P	20 55 03.4	+1.5
PSA00				IAmb	IAmb	20 55 17.9	

	comp=Z,35nm,1.5s						
JMZ	Minamidaito 2	29.14	346	P	P	20 55 26.1	+0.9
DLV	T Lat	33.49	296	P	P	20 56 03.3	-0.7
DLV				IAmb	IAmb	20 56 13.6	
	comp=Z,40nm,1.4s						
CAN	Canberra	33.95	165	P	P	20 56 10.6	+3.1
NWAO	Narrogin (SRO)	36.45	212	P	P	20 56 28.9	-0.1
NWAO				IAmb	IAmb	20 56 55.7	
	comp=Z,23nm,1.2s						
JTM	Tenmabayashi	43.15	2	P	P	20 57 21.7	-2.8
CMAR	Chiang Mai Arr	44.53	300	P	P	20 57 37.2	+1.1
	comp=Z,0.6nm,0.9s,baz=117,slow=6.4,SNR=4.2						
CMAR	Chiang Mai Arr	44.53	300	P	P	20 57 35.6	-0.5
TUWZ	Tuamarina	49.91	146	P	P	20 58 17.0	-0.6
RPZ	Rata Peaks	49.94	150	P	P	20 58 19.5	+1.6
RPZ				IAmb	IAmb	20 58 24.6	
	comp=Z,18nm,1.1s						
MK31	Makanchi Array	69.77	322	P	P	21 00 34.3	+0.2
MKAR	Makanchi Array	69.77	322	P	P	21 00 35.0	+0.9
	comp=Z,1.2nm,0.7s,baz=110,slow=8.3,SNR=16						
MKAR	Makanchi Array	69.77	322	P	P	21 00 34.3	+0.2
ZAA0	Zalesovo Array	71.88	330	P	P	21 00 45.8	-0.9
ZAA0				IAmb	IAmb	21 00 48.8	
	comp=Z,1.5nm,0.9s						
ZALV	Zalesovo Beam	71.88	330	P	P	21 00 46.4	-0.3
	comp=Z,0.4nm,0.4s,baz=105,slow=5.2,SNR=3.7						
ZALV	Zalesovo Beam	71.88	330	P	P	21 00 45.4	-1.3
KURK	Kurchatov	73.69	325	P	P	21 00 57.3	-0.2
KURK				IAmb	IAmb	21 01 25.5	
	comp=Z,2.5nm,1.2s						
TIXI	Tiksi	74.33	357	P	P	21 01 02.5	+1.7
VNDA	Vanda	75.95	175	P	P	21 01 11.6	+1.5
VNDA				IAmb	IAmb	21 01 14.3	
	comp=Z,13nm,1.5s						
BRVK	Borovoye	79.35	325	P	P	21 01 29.8	+0.2
BRVK				IAmb	IAmb	21 01 30.9	
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	85.57	24	P	P	21 02 01.2	-0.5
	comp=Z,1.0nm,0.7s,baz=265,slow=4.9,SNR=9.0						
BMAR	Burnt Mountain	87.15	22	P	P	21 02 09.0	-0.5

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*ANF **20** 21:42:31.8±0.7, 41°.84N×119°.60W, h4^{km}±5^{km}, ML3.4/15, Error ellipse: s-maj=3.8km s-min=2.5km az=84.0*

*NEIC **20** 21:42:33.9±2.8, 41°.88N±0°.03×119°.65W±0°.02, h1^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=1.7km az=167.0*

*REN **20** 21:42:33.1±2.9, 41°.90N±0°.02×119°.63W±0°.03, h10^{km}±5^{km}, ML3.5/5, ML3.3/44(SEA), ML3.1/52(NEIC), Mwr3.6/6(SLM), Error ellipse: s-maj=3.2km s-min=1.9km az=124.0*

*NEIC **20** 21:42:33.1, 41°.90N×119°.63W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.42; $M_{\theta\theta}$-1.22; $M_{\phi\phi}$1.64; $M_{r\theta}$-1.14; $M_{\theta\phi}$-0.92; $M_{\phi r}$-2.10; Fault plane solution: $M_0$2.95000×10^{14} NP1:ϕ_s122.00000°, δ35.00000°, λ-171.00000°. NP2:ϕ_s25.00000°, δ85.00000°, λ-55.00000°. Principal axes: T 2.9577, Plg31.0000°, Azm87.0000°; N -0.0032, Plg35.0000°, Azm202.0000°; P -2.9546, Plg40.0000°, Azm327.0000°;*

*SEA **20** 21:42:33.4±3.1, 41°.84N±0°.04×119°.61W±0°.03, h0^{km}±6^{km} Error ellipse: s-maj=5.6km s-min=3.4km az=188.0*

ISC 20 21:42:33.5±1.2**, 41°.89N**±0°.03×**119°.66W**±0°.02**, h2**^{km}±11^{km}**, n62, σ1^{s}22**/74**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.48	272		Pg	21 42 43.2	+0.5
MOD					Sg	21 42 50.4	+1.5
MOD	Modoc Plateau	0.48	272	IAML		21 42 51.2	
	comp=E,4µm,0.7s						
MOD				IAML		21 42 53.1	
	comp=N,2µm,0.3s						
LKVW	Lakeview	0.62	303		Pg	21 42 45.5	+0.1
LKVW					Sg	21 42 54.6	+1.2
WVOR	Wild Horse Val	0.94	54		Pg	21 42 50.5	-1.0
WVOR					Sg	21 43 03.3	-0.4
WVOR	Wild Horse Val	0.94	54	IAML		21 43 07.8	
	comp=N,502nm,1.0s						
K05A	Summer Lake	1.24	313		Pn	21 42 57.0	-1.1
K05A					Sn	21 43 14.6	-0.9
LASM	Arnica Sink	1.46	259		Pn	21 42 59.9	-1.3
LASM					Sg	21 43 20.9	+0.5
LTIM	Timbered Crate	1.54	243		Pn	21 43 01.1	-1.1
HOG	Hogback Mounta	1.56	284		Pn	21 43 01.5	-1.1
M04C	Macdoel	1.63	267	P	Pn	21 43 02.1	-1.3
	baz=85,SNR=122						
M04C				S	Sn	21 43 24.6	-0.5
	baz=85						
M04C	Macdoel	1.63	267		Pn	21 43 02.2	-1.3
LBCM	Butte Creek Ri	1.65	231		Pn	21 43 02.5	-1.2
K04D	Chiloquin, OR	1.72	296	Pb	Pn	21 43 04.9	+0.3
	baz=114						
K04D				S	Sb	21 43 28.0	-0.1
	baz=114						
K04D	Chiloquin, OR	1.72	296		Pb	21 43 05.2	-0.7
J05D	Fort Rock, OR	1.81	321	P	Pn	21 43 04.6	-1.4
	baz=139,SNR=215						
J05D				Sb	Sg	21 43 32.3	+0.4
	baz=139						
J05D	Fort Rock, OR	1.81	321		Pb	21 43 06.8	-0.8
L04D	Klamath Falls	1.99	280	P	Pn	21 43 06.8	-1.6
	baz=98,SNR=49						
L04D				Sb	Sg	21 43 37.2	-0.4
	baz=98						
L04D	Klamath Falls	1.99	280		Pn	21 43 07.3	-1.2
TMBU	Tom Butte, New	2.03	328		Pb	21 43 10.2	-1.1
BEKR	Beckworth	2.09	195		Pb	21 43 10.9	-1.4
BEKR				IAML		21 43 41.4	
	comp=E,159nm,0.7s						
BEKR				IAML		21 43 42.1	
	comp=N,104nm,0.6s						
SVIC	Surveyors Ice	2.11	327		Pb	21 43 12.1	-0.5
NCOR	Newberry Crate	2.11	330		Pb	21 43 12.8	+0.1
PINE	Pine Mountain	2.12	334	Pn	Pn	21 43 10.7	+0.4
PINE				IAML		21 43 44.6	
	comp=N,103nm,1.0s						
PINE				IAML		21 43 49.4	
	comp=E,131nm,1.2s						
PAHR	Pah Rah Range	2.19	174	Pn	Pb	21 43 12.7	-1.3
I07A	Izee	2.20	3		Pn	21 43 12.1	+0.8
I07A				IAML		21 43 53.2	
	comp=E,80nm,2.0s						
J04D	Umpqua Nationa	2.26	308	Sb	Sg	21 43 45.9	-0.2
	baz=126						
O03E	Paynes Creek	2.27	226	P	Pn	21 43 10.1	-2.1
	baz=45						
O03E				Sb	Sb	21 43 44.6	+0.7
	baz=45						
YBH	Yreka Blue Hor	2.28	267	Pn	Pn	21 43 10.9	-1.5
ASBU	Astronaut Butt	2.30	328		Pb	21 43 14.6	-1.3
M02C	Callahan	2.44	259	P	Pn	21 43 12.6	-2.0
	baz=77,SNR=12						
N02D	Trinity Center	2.46	249	P	Pn	21 43 12.9	-1.9
	baz=67,SNR=9.4						
N02D				Sb	Sb	21 43 50.7	+1.3
	baz=67						
WDC	Whiskeytown Da	2.53	240	Pn	Pn	21 43 15.0	-0.7
WDC				IAML		21 43 57.0	
	comp=E,59nm,0.9s						
WDC				IAML		21 43 59.1	
	comp=N,64nm,0.8s						
HUMO	Hull Mountain	2.55	287		Pn	21 43 14.1	-1.8
HUMO				IAML		21 44 00.6	
	comp=E,82nm,1.1s						
HUMO				IAML		21 44 03.3	
	comp=N,85nm,1.3s						
ORV	Oroville	2.72	212	Pn	Pn	21 43 19.2	+1.0
I05D	Terrebonne, OR	2.74	334	Sb	Sb	21 43 58.9	+1.5
	baz=152						
I04A	Tendick Farm,	2.78	314	Sb	Sg	21 44 01.3	-1.5
	baz=132						
PNTR	Pine Nut	2.80	179		Pn	21 43 21.0	+1.4
RUBR	Rubicon Trail	2.86	188		Pn	21 43 22.2	+1.8
RUBR				IAML		21 44 05.4	
	comp=E,62nm,0.7s						
RUBR				IAML		21 44 27.3	
	comp=N,75nm,1.3s						
O02D	Mt. Diablo Mer	2.92	235	Pb	Pb	21 43 24.8	-1.5
	baz=53						
O02D				Sb	Sb	21 44 03.7	+1.2
	baz=53						
L02E	Cave Junction	2.95	277	P	Pn	21 43 20.7	-0.8
	baz=94,SNR=17						
L02E				Sb	Sb	21 44 04.9	+1.6
	baz=94						
K02D	Willamette Mer	3.08	287	P	Pn	21 43 22.6	-0.7
	baz=104,SNR=105						
K02D				Sb	Sb	21 44 09.2	+2.1
	baz=104						
K02D	Willamette Mer	3.08	287		Pn	21 43 24.4	+1.1
AFDM	Forest Hills D	3.10	199		Pn	21 43 24.9	+1.4
AFDM				IAML		21 44 19.7	
	comp=E,32nm,0.9s						
KRMB	Red Mountain	3.20	265		Pn	21 43 24.6	-0.4
KRMB				IAML		21 44 26.7	
	comp=E,48nm,2.1s						
KRMB				IAML		21 44 37.1	
	comp=N,47nm,3.0s						
MFID	Camas Ranch	3.21	60	Pn	Pn	21 43 23.7	-1.5
MFID				IAML		21 44 21.1	
	comp=N,71nm,0.5s						
MFID				IAML		21 44 27.8	
	comp=N,66nm,0.4s						
KHMM	Horse Mountain	3.22	253		Pn	21 43 25.9	+0.6
KHMM				IAML		21 44 30.8	
	comp=E,64nm,1.8s						
KHMM				IAML		21 44 36.8	
	comp=N,52nm,1.1s						
I03D	Drain, OR	3.26	305	Sb	Sb	21 44 14.9	+2.7
	baz=122						
WAKR	Walker	3.38	177		Pn	21 43 28.3	+0.7
WAKR				IAML		21 44 33.3	
	comp=N,28nm,1.3s						
KBO	Bosley Butte	3.41	277	Pn	Pn	21 43 27.2	-0.7
G08A	Pilot Rock	3.44	8		Pn	21 43 29.7	+1.4
ELK	Elko	3.52	107	Pn	Pn	21 43 28.7	-0.9
ELK				IAML		21 44 26.2	
	comp=N,37nm,0.3s						
KEBM	Edson Butte	3.60	287	Pn	Pn	21 43 30.3	-0.1
NV11	Mina Array Sit	3.64	161		Pn	21 43 32.0	+0.9
NV11				IAML		21 44 36.3	
	comp=E,21nm,1.8s						
LHV	Little Huntoon	3.74	166		Pn	21 43 32.6	+0.3
LHV				IAML		21 44 41.0	
	comp=N,50nm,1.4s						
HLID	Hailey	4.21	65	Sb	Sb	21 44 41.2	+1.3
	baz=248						
HLID	Hailey	4.21	65	Pn	Pn	21 43 38.3	-0.7
HLID				IAML		21 44 51.3	
	comp=N,27nm,0.9s						
HLID				IAML		21 44 55.1	
	comp=N,18nm,1.3s						
STD	Studebaker Rid	4.72	338		Pb	21 43 58.8	+1.7
HVU	Hansel Valley	5.15	89		Pn	21 43 52.2	+0.4
FMW	Mount Fremont	5.24	345		Pn	21 43 50.8	-2.3
SPUT	South Promonto	5.44	94	Pn	Pn	21 43 55.6	-0.2
DUG	Dugway, Tooele	5.45	106		Pn	21 43 55.5	-0.5
PSUT	Pine Spring	5.57	125		Pn	21 43 58.7	+1.0

IDC 20 21:49:36.4±3.4**, 23°.23N**×**143°.72E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.3**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=146.8km s-min=30.5km az=79.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.87	193	P	P	21 57 44.5	-0.2
	0.8nm,0.3s,baz=7.0,slow=8.0,SNR=20						
MKAR	Makanchi Array	54.04	312	P	P	21 59 02.9	+0.2
	0.4nm,0.9s,baz=91,slow=9.2,SNR=3.6						
FINES	FINESS Array B	82.02	335	P	P	22 01 57.9	-0.3
	0.5nm,0.4s,baz=66,slow=6.8,SNR=4.0						

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*NEIC **20** 21:52:05.8±0.9, 18°.49N±0°.08×69°.07W±0°.06, h118^{km}±2^{km}, mb4.4/18, Error ellipse: s-maj=11.2km s-min=7.4km az=197.0*

*IDC **20** 21:52:05.5±0.6, 18°.43N×69°.10W, h113^{km}±5^{km}, mb3.6/11, mb1 3.8/15, mb1mx3.6/35, mbtmp4.1/15, Error ellipse: s-maj=15.9km s-min=12.7km az=65.0*

*OSPL **20** 21:52:06.4±4.0, 18°.53N×69°.00W, h129^{km}±35^{km}, ML4.4, Fault plane solution: NP1:ϕ_s183.10000°, δ30.70000°, λ-19.10000°.*

ISC 20 21:52:05.4±0.5**, 18°.46N**±0°.05×**69°.09W**±0°.04**, h115**^{km}±4^{km}**, n113, σ1^{s}61**/131**, mb4.1**/16**, 1C-3D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.43	320		Pn	21 52 22.1	-0.4
SDD	Santo Domingo	0.78	270	Pn	Pn	21 52 25.2	+0.2
SDD	Santo Domingo	0.78	270	⇑*i*P	Pn	21 52 25.4	+0.4
SDD				*e*S	Sn	21 52 40.3	+0.6
SDD				IAML		21 52 44.4	
	comp=Z,906nm,0.5s						
LOSC1	San Cristbal	0.96	267	*i* P	Pn	21 52 28.4	+1.7
BANI	BANI	1.20	267		Pn	21 52 30.2	+0.9
BON1	Bonao	1.32	292	*i* P	Pn	21 52 31.7	+1.2
BON1				*e*S	Sn	21 52 50.7	+1.1
BON1				IAML		21 52 53.8	
	comp=Z,4µm,0.3s						
SC01	Santiago de lo	1.82	302		Pn	21 52 36.9	+0.4
SC01	Santiago de lo	1.82	302	⇓*i*P	Pn	21 52 37.4	+0.9
SC01				*e*S	Sn	21 53 02.6	+2.4
SC01				IAML		21 53 08.3	
	comp=Z,3µm,0.4s						
MPR	Mayaguez	1.87	97		Pn	21 52 37.5	+0.5
AGPR	Aguadilla, PR	1.88	89		Pn	21 52 38.0	+0.8
AGPR	Aguadilla, PR	1.88	89	*i* P	Pn	21 52 38.5	+1.3
AGPR				IAML		21 53 10.4	
	comp=Z,2µm,0.3s						
CRPR	Cabo Rojo, PR	1.94	103	Pn	Pn	21 52 38.3	+0.4
MLPR	Magueyes Islan	2.01	104	Pn	Pn	21 52 38.0	-0.8
SDDR	Presa de Saban	2.14	284	*e*P	Pn	21 52 42.7	+2.1
SDDR				*e*S	Sn	21 53 09.9	+2.4
SDDR	Presa de Saban	2.14	284	Pn	Pn	21 52 42.4	+1.8
SDDR	Presa de Saban	2.14	284	⇓*i*P	Pn	21 52 42.2	+1.7
SDDR				*e*S	Sn	21 53 10.3	+2.9
SDDR				IAML		21 53 14.3	
	comp=Z,2µm,0.7s						
AOPR	Arecibo Observ	2.22	93	*e*P	Pn	21 52 42.5	+1.0
AOPR				*e*S	Sn	21 53 11.7	+2.5
OBIP	Obispado Ponce	2.40	100	Pn	Pn	21 52 44.2	+0.5
EMPR	Esperanza - Ma	2.43	89		Pn	21 52 44.4	+0.2
ICMP	Isla Caja de M	2.51	103		Pn	21 52 45.3	+0.2
SJG	San Juan	2.82	97	P	Pn	21 52 49.6	+0.4
	comp=Z,62nm,0.3s,baz=299,slow=6.9,SNR=52						
SJG	San Juan	2.82	97		Pn	21 52 49.7	+0.5
SJG	San Juan	2.82	97	*e*P	Pn	21 52 49.6	+0.4
SJG				*e*S	Sn	21 53 22.1	-0.8
SJG				*i*		21 53 29.6	
	comp=Z,3µm,0.2s						
GCPR	Guaynabo City	2.86	93	Pn	Pn	21 52 50.3	+0.5
PDPR	Patillas Dam,	2.95	98		Pn	21 52 51.4	+0.4
CBYP	Canovanas	3.08	93		Pn	21 52 52.6	-0.1
HUMP	Col San Antoni	3.10	95	Pn	Pn	21 52 52.9	+0.1
JAKH	Jacmel	3.26	267		Pn	21 52 56.2	+1.2
LGNH	Logne	3.33	271	Pn	Pn	21 52 57.2	+1.2
MTP	Monte Pirata	3.38	96		Pn	21 52 57.3	+0.7
GRTK	Grand Turk	3.59	328		Pn	21 52 57.2	-2.2
GRTK	Grand Turk	3.59	328	*i* P	Pn	21 52 57.2	-2.2
GRTK				*e*S	Sn	21 53 36.0	-5.2
GRTK				IAML		21 53 37.6	
	comp=Z,921nm,0.3s						
CDVI	St. Croix	4.17	99	Pn	Pn	21 53 07.0	-0.2
GTBY	Guantanamo Bay	5.87	285	Pn	Pn	21 53 27.5	-2.6
GTBY	Guantanamo Bay	5.87	285	⇓*i*P	Pn	21 53 27.7	-2.4
SKI	Saint Kitts	6.15	99	*e*P	Pn	21 53 36.0	+2.1
SKI	Saint Kitts	6.15	99	*e*S	Sn	21 54 45.6	+2.6
MLYT	Lee's Yard	6.81	104	*e*P	Pn	21 53 44.3	+1.5
MLYT	Lee's Yard	6.81	104	*e*S	Sn	21 55 00.1	+1.2
ANBD	Bethesda, Anti	7.12	100	*e*P	Pn	21 53 46.8	-0.3
ANBD	Bethesda, Anti	7.12	100	*e*S	Sn	21 55 06.5	-0.1
ABD	La Joyeuse, An	7.52	104	*e*P	Pn	21 53 52.5	0.0
ABD	La Joyeuse, An	7.52	104	*e*S	Sn	21 55 13.3	-2.9
CBE	Ff, Capester	7.54	107	*e*S	Sn	21 55 22.2	+5.6
TBG	Guadaloupe-3	7.58	109	*e*P	Pn	21 53 53.6	+0.3
TBG	Guadaloupe-3	7.58	109	*e*S	Sn	21 55 16.5	-1.0
TDBA	Terre de Bas,	7.59	109	*e*P	Pn	21 53 53.8	+0.4
TDBA	Terre de Bas,	7.59	109	*e*S	Sn	21 55 18.8	+1.0
DSLB	Salisbury	7.93	111	*e*P	Pn	21 53 59.6	+1.5
DSLB	Salisbury	7.93	111	*e*S	Sn	21 55 23.3	-2.9
FDF	Fort de France	8.47	115	*e*P	Pn	21 54 07.3	+1.9
BIM	Bigot	8.63	116	*e*P	Pn	21 54 08.0	+0.4
MPOM	Morne Pois Mar	8.85	116	*e*P	Pn	21 54 10.0	-0.5
SLBI	Saint Lucia, B	8.96	118	*e*P	Pn	21 54 11.9	0.0
SLB	Belfond	9.00	120	*e*P	Pn	21 54 14.0	+1.4
SVB	Belmont	9.14	123	*e*P	Pn	21 54 14.8	+0.4
SVB	Belmont	9.14	123	Pn	Pn	21 54 14.5	+0.1
SVV	Soufriere Volc	9.14	123	*e*P	Pn	21 54 15.5	+1.1
PCRV	Puerto La Cruz	9.30	152	P	Pn	21 54 17.7	+1.1
	comp=Z,3.9nm,0.3s,baz=338,slow=3.2,SNR=17						
PLCV	Puerto La Cruz	9.33	152		Pn	21 54 17.7	+0.7
GCMP	Grenada, Carri	9.48	128	*e*P	Pn	21 54 18.0	-1.0
GRGR	Grenville	9.54	130	Pn	Pn	21 54 19.9	0.0
SDV	Santo Domingo	9.63	189	P	Pn	21 54 22.6	+1.4
	comp=Z,15nm,0.3s,baz=30,slow=6.3,SNR=82						
SDV	Santo Domingo	9.63	189	Pn	Pn	21 54 23.9	+2.6
SDV	Santo Domingo	9.63	189	*e*P	Pn	21 54 24.3	+3.1
SDV				*e*S	Sn	21 56 01.7	-6.1
BBGH	Gun Hill	10.59	119	*e*P	Pn	21 54 39.9	+5.9
MOTC	Monteria, Cord	11.55	214	*e*P	Pn	21 54 49.1	+2.3
MOTC				*e*S	Sn	21 56 42.6	-11
PAMC	Pamplona, Colo	11.60	198	*e*P	Pn	21 54 49.5	+1.5
PAMC				*e*S	Sn	21 56 51.3	-4.6
ZARC	Zaragoza, Cauc	12.26	208	*e*P	Pn	21 54 57.2	+1.0
ZARC				*e*S	Sn	21 57 09.5	-1.8
RUSC	La Rusia	13.08	198	*e*P	Pn	21 55 10.0	+2.6
RUSC				*e*S	Sn	21 57 18.8	-13
HELC	Santa Helena	13.71	208	*e*P	Pn	21 55 17.9	+2.3
NORC	Norcasia	14.00	204	*e*P	P	21 55 22.8	-0.4
BBSR	BB Station	14.41	15	Pn	Pn	21 55 24.0	0.0
ROSC	El Rosal	14.47	201	P	Pn	21 55 26.9	+1.7
	comp=Z,2.2nm,0.3s,baz=307,slow=20,SNR=3.3						
GUY2C	Guyana, Caldas	14.51	206	*e*P	P	21 55 29.9	+0.7
JTS	Las Juntas de	17.37	244	P	Pn	21 56 01.3	+0.5
	comp=Z,0.3nm,0.3s,baz=15,slow=19,SNR=1.6						
U61A	Possum Corner	18.95	341	P	P	21 56 15.6	-1.9
BIRD	Birdtown, Kers	19.04	330		P	21 56 16.4	-2.0
BIRD				IAmb	IAmb	21 56 19.7	
	comp=Z,10nm,0.7s						
KMSC	Kings Mountain	19.86	329	P	P	21 56 27.1	-0.3
T59A	Double "B" Far	19.89	340	P	P	21 56 26.8	-0.9
T59A				IAmb	IAmb	21 57 19.2	
	comp=Z,36nm,1.7s						
152A	Waverly Hall	19.94	318	P	P	21 56 28.7	+0.4
R58B	Mineral	20.90	340	P	P	21 56 39.4	+0.9
R58B				IAmb	IAmb	21 56 44.1	
	comp=Z,29nm,1.5s						
V53A	Saluda	21.01	327	P	P	21 56 40.3	+0.5
V53A				IAmb	IAmb	21 56 41.7	
	comp=Z,12nm,0.9s						
PTGA	Pitinga	21.07	154	P	P	21 56 41.5	+0.9
	comp=Z,3.5nm,0.8s,baz=328,slow=16,SNR=3.9						
PTGA	Pitinga	21.07	154	P	P	21 56 40.8	+0.1
W52A	Murphy	21.17	324	P	P	21 56 42.7	+1.2
W52A				IAmb	IAmb	21 56 47.1	
	comp=Z,11nm,0.4s						
W50A	Signal Mountai	22.03	322	P	P	21 56 50.5	-0.1
SWET	Sewanee	22.40	322	P	P	21 56 56.3	+1.8
SWET				IAmb	IAmb	21 57 03.9	
	comp=Z,28nm,1.7s						
R53A	Hurricane	22.76	333	P	P	21 57 00.1	+2.1
TXAR	Lajitas Array	33.30	296	P	P	21 58 33.2	+0.9
	comp=Z,0.3nm,0.5s,baz=124,slow=6.7,SNR=5.5						
TXAR	Lajitas Array	33.30	296	P	P	21 58 32.9	+0.5
OGNE	Ogallala	36.01	316	P	P	21 58 55.7	+0.2
PDAR	Pinedale Array	41.87	314	PcP	PcP	22 01 37.9	-0.4
	comp=Z,0.7nm,0.5s,baz=111,slow=4.9,SNR=6.2						
CPUP	Villa Florida	45.97	165	P	P	22 00 15.8	-1.2
	comp=Z,1.8nm,0.6s,baz=341,slow=9.4,SNR=5.6						
CPUP	Villa Florida	45.97	165	P	P	22 00 15.3	-1.8
CPUP				IAmb	IAmb	22 00 50.3	
	comp=Z,15nm,1.6s						
YKA	Yellowknife Ar	54.02	336	P	P	22 01 17.1	-0.4
	comp=Z,1.6nm,0.6s,baz=112,slow=7.8,SNR=20						
YKA				pP	pP	22 01 44.5	-0.4
	comp=Z,2.0nm,0.9s,baz=117,slow=7.7,SNR=7.1						
YKA				sP	sP	22 01 56.3	-1.4
	comp=Z,1.5nm,0.9s,baz=116,slow=7.3,SNR=4.3						
PLCA	Paso Flores	58.90	181	P	P	22 01 51.1	-1.3
	comp=Z,0.5nm,0.5s,baz=340,slow=12,SNR=3.6						
ESDC	Sonseca Array	59.46	54	P	P	22 01 57.6	+1.2
	comp=Z,0.8nm,0.9s,baz=269,slow=7.0,SNR=2.4						
ESDC				pP	pP	22 02 24.1	-0.2
	comp=Z,0.5nm,0.6s,baz=268,slow=7.3,SNR=2.1						
DBIC	Dimbokro	63.51	92	P	P	22 02 24.9	+0.9
	comp=Z,1.4nm,0.6s,baz=283,slow=14,SNR=1.8						
TOA0	Torodi Ar. Sit	67.95	83	P	P	22 02 52.4	-0.1
TOA0				IAmb	IAmb	22 04 53.8	
	comp=Z,16nm,1.9s						
TORD	Torodi Ar. Bea	67.95	83	P	P	22 02 51.9	-0.6
	comp=Z,1.4nm,0.8s,baz=305,slow=8.1,SNR=3.8						
TORD	Torodi Ar. Bea	67.95	83	P	P	22 02 52.1	-0.4
IL31		68.26	333	P	P	22 02 53.4	-0.1
IL31				IAmb	IAmb	22 02 59.1	
	comp=Z,15nm,1.6s						
ILAR	Eielson Array	68.26	333	P	P	22 02 53.7	+0.1
	comp=Z,0.3nm,0.5s,baz=96,slow=4.1,SNR=6.4						
ILAR				pP	pP	22 03 24.0	+1.8
	comp=Z,0.9nm,0.9s,baz=144,slow=4.7,SNR=4.7						
CCB	Clear Creek Bu	68.65	333	P	P	22 02 55.8	-0.1
ARCES	ARCESS Array B	74.46	21	P	P	22 03 32.8	+2.0
	comp=Z,5.1nm,0.9s,baz=322,slow=5.7,SNR=2.6						
ARCES				pP	pP	22 03 59.5	-0.4
	comp=Z,3.9nm,0.7s,baz=316,slow=3.3,SNR=2.4						
FINES	FINESS Array B	76.42	29	P	P	22 03 43.1	+1.1
	comp=Z,1.4nm,0.7s,baz=243,slow=8.4,SNR=4.4						
FINES				pP	pP	22 04 09.8	-1.5
	comp=Z,1.1nm,0.7s,baz=124,slow=3.4,SNR=1.3						
FINES	FINESS Array B	76.42	29	P	P	22 03 42.1	+0.1
LZH	Lanzhou	125.34	7	*e*PKP	PKiKP	22 10 53.8	0.0
LZH				pPKP	pPKPdf	22 11 17.5	-7.2
LZH				sPKP		22 11 47.3	
STKA	Stephens Creek	149.30	238	PKPbc	PKPbc	22 11 40.3	-0.9
	comp=Z,5.6nm,0.7s,baz=93,slow=3.7,SNR=10						
STKA	Stephens Creek	149.30	238		PKPbc	22 11 41.0	-0.2
WRA	Warramunga Arr	157.82	262	PKP	PKPdf	22 11 48.6	-0.6
	comp=Z,0.6nm,0.7s,baz=85,slow=0.9,SNR=3.9						
WRA				PKPab	PKPab	22 12 22.8	+0.2
	comp=Z,0.8nm,0.7s,baz=87,slow=4.0,SNR=6.6						
ASAR	Alice Springs	157.93	252	PKP	PKPdf	22 11 49.3	0.0
	comp=Z,0.2nm,0.4s,baz=76,slow=1.7,SNR=4.7						
ASAR				PKPab	PKPab	22 12 22.6	-0.3
	comp=Z,1.8nm,0.6s,baz=106,slow=4.6,SNR=16						

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*NEIC **20** 22:09:57.5±1.4, 59°.78N±0°.05×158°.3W±0°.1, h1^{km}±7^{km}, Error ellipse: s-maj=11.7km s-min=5.3km az=63.0*

AEIC 20 22:09:57.7±1.7**, 59°.80N**±0°.04×**158°.2W**±0°.1**, h0**^{km}±7^{km}**, ML3.3**/44**, ML3.5**/22(NEIC)**, Error ellipse: s-maj=10.1km s-min=5.1km az=71.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLK5	Peulik 5	1.93	158		Pn	22 10 31.4	-0.3
PLK5					Sn	22 10 57.3	+0.7
KAHC	Katmai Hardscr	2.01	123		Pn	22 10 32.5	-0.5
KAHC					Sb	22 11 00.1	-0.7
KVTA	Katmai Vly 10	2.07	132		Pn	22 10 33.2	-0.5
KVTA					Sb	22 11 01.8	-0.5
ANCK	Angle Creek	2.13	137		Pn	22 10 34.2	-0.4
ANCK					Sb	22 11 03.5	-0.7
KABU	Katmai Buttres	2.16	134		Pn	22 10 34.7	-0.2
KABU					Sb	22 11 04.2	-0.6
PLK1	Peulik 1	2.17	157		Pn	22 10 35.3	+0.4
KBM	Katmai Bkd Mtn	2.18	133		Pn	22 10 35.5	+0.3
KBM					Sb	22 11 05.2	-0.3
ACHA	Angle Creek He	2.18	135		Pn	22 10 35.3	+0.1
ACHA					Sb	22 11 05.1	-0.5
KCG	Knife Ck. Glac	2.19	132		Pn	22 10 35.0	-0.3
KCG					Sb	22 11 05.2	-0.6
KCE	Katmai Mt Cerb	2.21	133		Pn	22 10 35.4	-0.2
PLK2	Peulik 2	2.26	153		Pn	22 10 36.7	+0.5
PLK2					Sb	22 11 07.0	-0.8
KABR	Katmai Barrier	2.37	133		Pn	22 10 37.5	-0.2
AUP	Augustine Pinn	2.48	98		Pn	22 10 39.3	-0.1
AUP					Sn	22 11 11.9	+1.6
OPT	Oil Point	2.53	91		Pn	22 10 40.4	+0.4
ILS	Iliamna Low So	2.60	84		Pn	22 10 41.1	+0.1
IVE	Iliamna Volcan	2.63	83		Pn	22 10 41.7	+0.3
NCT	North Crescent	2.75	72		Pn	22 10 43.2	+0.1
RED	Redoubt Volcan	2.80	75		Pn	22 10 43.7	0.0
RED					Sn	22 11 20.2	+2.0
RSO	Redoubt South	2.82	74		Pn	22 10 44.7	+0.7
SPCR	Spurr Chakacha	3.29	62		Pn	22 10 51.1	+0.6
TT01	Tatalina	3.30	18		Pn	22 10 49.5	-1.0
TTA	Tatalina	3.32	18		Pn	22 10 50.5	-0.3
TTA					Sn	22 11 31.5	+0.5

TTA	Tatalina	3.32	18	IAML		22 11 55.7	
	comp=N,72nm,0.8s						
CRP	Crater Peak	3.34	61		Pn	22 10 52.2	+1.0
SPCP	Crater Peak Br	3.34	61		Pn	22 10 52.1	+0.8
SPCG	Spurr Capps Gl	3.41	61		Pn	22 10 52.1	0.0
KDAK	Kodiak Island	3.56	122		Pn	22 10 54.9	+0.8
KDAK	Kodiak Island	3.56	122	IAML		22 11 18.7	
	comp=N,61nm,2.9s						
KDAK				IAML		22 12 02.8	
	comp=N,71nm,3.8s						
STLK	Strandline Lak	3.58	59		Pn	22 10 55.2	+0.8
OHAK	Old Harbor	3.65	133		Pn	22 10 55.8	+0.4
OHAK					Sn	22 11 40.7	+1.6
BRLK	Bradley Lake	3.71	87		Pn	22 10 56.0	-0.1
SII	Sitkinak Islan	3.89	145		Pn	22 10 59.7	+1.2
SII				IAML		22 12 42.9	
	comp=N,81nm,3.2s						
SKT	Skwentna	3.94	53		Pn	22 11 00.6	+1.3
SKT				IAML		22 12 14.2	
	comp=E,51nm,1.0s						
SKT				IAML		22 12 15.2	
	comp=N,60nm,0.6s						
SUA	Susitna One	4.04	62		Pn	22 11 01.6	+0.8
SUA	Susitna One	4.04	62	IAML		22 12 13.8	
	comp=E,65nm,1.6s						
SUA				IAML		22 12 20.1	
	comp=N,45nm,4.0s						
PPLA	Purkeypile	4.26	40		Pn	22 11 04.9	+1.2
SEW	Seward	4.42	82	Pn	Pn	22 11 07.5	+1.6
GHO	Glory Hole Cre	4.97	62		Pn	22 11 14.0	+0.6
GHO	Glory Hole Cre	4.97	62	IAML		22 12 35.0	
	comp=E,35nm,1.5s						
GHO				IAML		22 12 52.4	
	comp=N,34nm,2.2s						
KNK	Knik Glacier	5.08	67		Pn	22 11 16.1	+1.1
KNK	Knik Glacier	5.08	67	IAML		22 12 10.3	
	comp=N,26nm,4.5s						
KNK				IAML		22 13 09.9	
	comp=E,35nm,3.9s						
KTH	Kantishna Hill	5.13	40		Pn	22 11 16.0	+0.4
TRF	Thorofare Moun	5.27	42		Pn	22 11 16.7	-1.0
BPAW	Bear Paw Mtn.	5.50	35	Pn	Pn	22 11 20.2	-0.5
SCM	Sheep Creek Mo	5.71	64	Pn	Pn	22 11 25.6	+2.0
RND	Reindeer	5.75	47	Pn	Pn	22 11 22.5	-1.8
ANM	Nome	5.84	328	Pn	Pn	22 11 27.4	+2.1
KLU	Klutina	6.28	69		Pn	22 11 31.6	+0.1
IMAR	Indian Mountai	6.54	16		Pn	22 11 35.4	+0.5
N25K	Chitina, Valde	6.93	69	Pn	Pn	22 11 40.5	+0.1

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*SOF **20** 22:29:26.2, 46°.13N×26°.61E, h7^{km}, MD3.4*

*IDC **20** 22:29:27.6±0.8, 45°.72N×26°.83E, h0^{km}, mb3.5/5, mb1 3.6/9, mb1mx3.4/40, mbtmp3.5/9, ML2.9/4, Error ellipse: s-maj=15.1km s-min=7.3km az=151.0*

*IASPEI **20** 22:29:30.6±0.8, 45°.85N±0°.02×26°.61E±0°.02, h10^{km}±4^{km}, mb3.8/5, Error ellipse: s-maj=2.8km s-min=2.6km az=171.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SIGU **20** 22:29:30.8, 45°.83N×26°.60E, h5^{km}, mb3.4*

*BUC **20** 22:29:31.3±0.1, 45°.84N×26°.59E, h8^{km}±1^{km}, ml3.2/58, Error ellipse: s-maj=1.1km s-min=1.0km az=2.0*

ISC 20 22:29:29.9±0.7, 45°.89N±0°.01×26°.63E±0°.01, h13^{km}±4^{km}, n170, σ1^{s}.28/269, mb3.8/5, 107C-116D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	Plostina	0.04	162	⇑P	Pg	22 29 32.4	0.0
PLOR				⇓S	Sg	22 29 34.2	0.0
PLOR	Plostina	0.04	162	⇑P	Pg	22 29 32.4	0.0
PLOR				⇓S	Sg	22 29 34.2	0.0
VRI	Vrincioaia	0.07	109	⇑P	Pg	22 29 33.1	+0.5
VRI				⇑S	Sg	22 29 35.5	+1.0
VRI	Vrincioaia	0.07	109	⇑P	Pg	22 29 33.1	+0.5
VRI				⇑S	Sg	22 29 35.5	+1.0
ODBI	Odobesti	0.32	113	⇑P	Pb	22 29 38.8	+1.3
ODBI	Odobesti	0.32	113	⇑P	Pb	22 29 38.8	+1.3
BISRR	Bisoca	0.35	171	⇑P	Pg	22 29 37.0	+0.1
BISRR				⇓S	Sg	22 29 42.1	+0.4
BISRR	Bisoca	0.35	171	⇑P	Pg	22 29 37.0	+0.1
BISRR				⇓S	Sg	22 29 42.1	+0.4
PETR	Petresti	0.45	111	⇑P	Pn	22 29 41.8	-0.2
PETR				⇓S	Sg	22 29 45.2	+0.3
PETR	Petresti	0.45	111	⇑P	Pn	22 29 41.8	-0.2
PETR				⇓S	Sg	22 29 45.2	+0.3
NEHR	Nehoiu	0.52	207	⇑P	Pg	22 29 39.9	-0.2
NEHR				⇑S	Sg	22 29 47.1	+0.1
NEHR	Nehoiu	0.52	207	⇑P	Pg	22 29 39.9	-0.2
NEHR				⇑S	Sg	22 29 47.1	+0.1
GRER		0.56	155	⇑P	Pb	22 29 42.6	+1.0
GRER				⇓S	Sb	22 29 49.7	+0.2
GRER		0.56	155	⇑P	Pb	22 29 42.6	+1.0
GRER				⇓S	Sb	22 29 49.7	+0.2
GHRR		0.57	72	⇑P	Pn	22 29 43.6	0.0
GHRR				⇓S	Sn	22 29 51.9	-1.0
GHRR		0.57	72	⇑P	Pn	22 29 43.6	0.0
GHRR				⇓S	Sn	22 29 51.9	-1.0
TESR	Tescani	0.62	1	⇑P	Pn	22 29 44.7	+0.3
TESR				⇑S	Sb	22 29 52.2	+0.9
TESR	Tescani	0.62	1	⇑P	Pn	22 29 44.7	+0.3
TESR				⇑S	Sb	22 29 52.2	+0.9
OZUR		0.62	290	⇑P	Pn	22 29 43.9	-0.6
OZUR				⇑S	Sb	22 29 51.8	+0.4
OZUR		0.62	290	⇑P	Pn	22 29 43.9	-0.6
OZUR				⇑S	Sb	22 29 51.8	+0.4
MLR	Muntele Rosu	0.62	231	⇑P	Pg	22 29 42.3	+0.1
MLR				⇑S	Sg	22 29 51.0	+0.6
MLR	Muntele Rosu	0.62	231	Pg	Pg	22 29 42.2	+0.1
	97nm,0.3s,baz=49,slow=2.7,SNR=2843						
MLR				Lg	Lg	22 29 49.5	
	267nm,0.3s,baz=172,slow=20,SNR=42						
MLR	Muntele Rosu	0.62	231	⇑P	Pg	22 29 42.3	+0.1
MLR				⇑S	Sg	22 29 51.0	+0.6
ISR	Istrita	0.77	185	⇑P	Pb	22 29 46.1	+0.8
ISR	Istrita	0.77	185	⇑P	Pb	22 29 46.1	+0.8
TUDR		0.78	112	⇑P	Pn	22 29 46.6	0.0
TUDR				⇓S	Sn	22 29 58.7	+0.5
TUDR		0.78	112	⇑P	Pn	22 29 46.6	0.0
TUDR				⇓S	Sn	22 29 58.7	+0.5
BIR	Birlad	0.79	61	⇓P	Pn	22 29 47.4	+0.7
BIR				⇓S	Sn	22 29 59.3	+0.9
BIR	Birlad	0.79	61	⇓P	Pn	22 29 47.4	+0.7
BIR				⇓S	Sn	22 29 59.3	+0.9
VARL	Varlezi	0.85	89	⇑P	Pn	22 29 47.7	+0.2
VARL				⇑S	Sn	22 30 00.5	+0.7
VARL	Varlezi	0.85	89	⇑P	Pn	22 29 47.7	+0.2
VARL				⇑S	Sn	22 30 00.5	+0.7
DOPR	Dopca	0.87	276	⇓P	Pn	22 29 48.2	+0.3
DOPR				⇓S	Sn	22 30 00.9	+0.5
DOPR	Dopca	0.87	276	⇓P	Pn	22 29 48.2	+0.3
DOPR				⇓S	Sn	22 30 00.9	+0.5
SCHL	Schela	0.93	114	⇓P	Pn	22 29 49.8	+1.2
SCHL				⇓S	Sn	22 30 02.8	+1.1
SCHL	Schela	0.93	114	⇓P	Pn	22 29 49.8	+1.2
SCHL				⇓S	Sn	22 30 02.8	+1.1
PGOR	Pogoanele	1.01	166	⇑P	Pb	22 29 49.5	+0.3
PGOR				⇓S	Sb	22 30 02.2	-0.2
PGOR	Pogoanele	1.01	166	⇑P	Pb	22 29 49.5	+0.3
PGOR				⇓S	Sb	22 30 02.2	-0.2
GIRR	Girov	1.07	355	⇑P	Pn	22 29 52.8	+2.2
GIRR	Girov	1.07	355	⇑P	Pn	22 29 52.8	+2.2
GISR	Galati	1.09	114	⇓P	Pn	22 29 52.6	+1.8
GISR	Galati	1.09	114	⇓P	Pn	22 29 52.6	+1.8
VASR	Vaslui	1.10	47	⇓P	Pn	22 29 52.7	+1.7
VASR				⇑S	Sn	22 30 08.8	+2.7
VASR	Vaslui	1.10	47	⇓P	Pn	22 29 52.7	+1.7
VASR				⇑S	Sn	22 30 08.8	+2.7
BIZ	Bicaz	1.11	341	⇓P	Pn	22 29 53.6	+2.4
BIZ	Bicaz	1.11	341	⇓P	Pn	22 29 53.6	+2.4
JOSR	Joseni	1.12	317	⇓P	Pg	22 29 53.6	+2.0
JOSR	Joseni	1.12	317	⇓P	Pg	22 29 53.6	+2.0
GIUM	Giurgiulesti	1.18	110	⇑P	Pg	22 29 53.4	+0.9
GIUM				⇓S	Sn	22 30 10.5	+2.6
GIUM	Giurgiulesti	1.18	110	⇑P	Pg	22 29 53.4	+0.9
GIUM				⇓S	Sn	22 30 10.5	+2.6
GIUM	Giurgiulesti	1.18	110	P	Pg	22 29 53.4	+0.9
GIUM				S	Sn	22 30 10.4	+2.6
SULR		1.24	193	⇑P	Pg	22 29 54.8	+1.0
SULR				⇓S	Sb	22 30 09.8	+0.8
SULR		1.24	193	⇑P	Pg	22 29 54.8	+1.0
SULR				⇓S	Sb	22 30 09.8	+0.8
CFR	Carcaliu	1.27	123	⇓S	Sg	22 30 11.7	+0.8
CFR	Carcaliu	1.27	123	⇓S	Sg	22 30 11.7	+0.8
MTUR	Matau	1.29	240	⇑P	Pg	22 29 54.7	+0.1
MTUR	Matau	1.29	240	⇑P	Pg	22 29 54.7	+0.1
AMRR	Amara	1.37	159	⇓P	Pb	22 29 55.9	+0.5
AMRR				⇑S	Sg	22 30 15.4	+1.3
AMRR	Amara	1.37	159	⇓P	Pb	22 29 55.9	+0.5
AMRR				⇑S	Sg	22 30 15.4	+1.3
LEHL	Lehliu	1.42	175	⇓P	Pb	22 29 56.9	+0.7
LEHL				⇓S	Sg	22 30 16.4	+0.8
LEHL	Lehliu	1.42	175	⇓P	Pb	22 29 56.9	+0.7
LEHL				⇓S	Sg	22 30 16.4	+0.8
IAS	Iasi	1.45	26	⇑P	Pg	22 29 57.8	0.0
IAS				⇓S	Sg	22 30 18.8	+2.1
IAS	Iasi	1.45	26	⇑P	Pg	22 29 57.8	0.0
IAS				⇓S	Sg	22 30 18.8	+2.1
INCR	INCERC-Sediu C	1.49	193	⇓P	Pb	22 29 57.9	+0.6
INCR				⇓S	Sb	22 30 17.2	+1.1
INCR	INCERC-Sediu C	1.49	193	⇓P	Pb	22 29 57.9	+0.6
INCR				⇓S	Sb	22 30 17.2	+1.1
ARR	Arges	1.50	250	⇓P	Pb	22 29 57.5	0.0
ARR				⇑S	Sg	22 30 18.5	+0.4
ARR	Arges	1.50	250	⇓P	Pb	22 29 57.5	0.0
ARR				⇑S	Sg	22 30 18.5	+0.4
PRAR	RASCA	1.50	349	⇑P	Pg	22 29 59.5	+0.8
PRAR	RASCA	1.50	349	⇑P	Pg	22 29 59.5	+0.8
HARR	Harsova	1.51	142	⇑P	Pn	22 29 57.0	+0.4
HARR	Harsova	1.51	142	⇑P	Pn	22 29 57.0	+0.4
STFAR	Stefanesti-Arg	1.56	230	⇑P	Pg	22 30 00.5	+0.6
STFAR				⇑S	Sb	22 30 19.0	+0.7
STFAR	Stefanesti-Arg	1.56	230	⇑P	Pg	22 30 00.5	+0.6
STFAR				⇑S	Sb	22 30 19.0	+0.7
MDB	Medias	1.59	280	⇓P	Pn	22 29 58.1	+0.4
MDB				⇓S	Sg	22 30 21.5	+0.5
MDB	Medias	1.59	280	⇓P	Pn	22 29 58.1	+0.4
MDB				⇓S	Sg	22 30 21.5	+0.5
TPGR	Topolog	1.63	129	⇓P	Pb	22 29 59.8	0.0
TPGR	Topolog	1.63	129	⇓P	Pb	22 29 59.8	0.0
TLBR	Topalu	1.68	143	⇓P	Pn	22 29 59.9	+1.0
TLBR	Topalu	1.68	143	⇓P	Pn	22 29 59.9	+1.0
TLCR		1.69	114	⇓P	Pg	22 30 02.2	0.0
TLCR				⇑S	Sg	22 30 24.1	-0.1
TLCR		1.69	114	⇓P	Pg	22 30 02.2	0.0
TLCR				⇑S	Sg	22 30 24.1	-0.1
RASA	Rasa	1.71	167	⇓P	Pb	22 30 01.4	+0.2
RASA				⇓S	Sg	22 30 24.9	-0.1
RASA	Rasa	1.71	167	⇓P	Pb	22 30 01.4	+0.2
RASA				⇓S	Sg	22 30 24.9	-0.1
SGRR	Singureni	1.73	196	⇑P	Pb	22 30 01.5	0.0
SGRR				⇑S	Sb	22 30 23.4	+0.3
SGRR	Singureni	1.73	196	⇑P	Pb	22 30 01.5	0.0
SGRR				⇑S	Sb	22 30 23.4	+0.3
HUMR	Humele	1.79	221	⇓P	Pb	22 30 02.0	-0.6
HUMR				⇓S	Sb	22 30 26.0	+1.1
HUMR	Humele	1.79	221	⇓P	Pb	22 30 02.0	-0.6
HUMR				⇓S	Sb	22 30 26.0	+1.1
MILM	Milestii Mici	1.83	55	⇓P	Pb	22 30 03.0	-0.1
MILM				⇑S	Sg	22 30 29.2	+0.5
MILM	Milestii Mici	1.83	55	⇓P	Pb	22 30 03.0	-0.1
MILM				⇑S	Sg	22 30 29.2	+0.5
MILM	Milestii Mici	1.83	55	P	Pb	22 30 03.9	+0.8
CVDA	Cernavoda	1.85	147	⇑P	Pn	22 30 02.6	+1.4
CVDA				⇑S	Sb	22 30 27.1	+0.6
CVDA	Cernavoda	1.85	147	⇑P	Pn	22 30 02.6	+1.4
CVDA				⇑S	Sb	22 30 27.1	+0.6
KIS	Kishinev	1.88	53	*e*P	Pb	22 30 05.0	+1.0
	20nm,0.2s						
KIS				*e*S	Sg	22 30 31.0	+0.8
	230nm,0.4s						
KIS	Kishinev	1.88	53	⇓P	Pg	22 30 05.2	-0.7
KIS				⇓S	Sg	22 30 30.8	+0.6
KIS	Kishinev	1.88	53	⇓P	Pg	22 30 05.2	-0.7
KIS				⇓S	Sg	22 30 30.8	+0.6
KIS	Kishinev	1.88	53	*e*P	Pb	22 30 05.0	+1.0
KIS				Pm		22 30 06.5	
KIS				*e*S	Sg	22 30 31.0	+0.8
KIS				Sm		22 30 37.0	
TIRR	Tirgusor	1.91	138	⇓P	Pn	22 30 02.6	+0.5
TIRR				⇑S	Sb	22 30 29.3	+1.1
TIRR	Tirgusor	1.91	138	⇓P	Pn	22 30 02.6	+0.5
TIRR				⇑S	Sb	22 30 29.3	+1.1
ICOR	Ion Corvin	1.96	155	⇑P	Pn	22 30 04.4	+1.6
ICOR				⇓S	Sb	22 30 29.7	0.0
ICOR	Ion Corvin	1.96	155	⇑P	Pn	22 30 04.4	+1.6
ICOR				⇓S	Sb	22 30 29.7	0.0
ARCR	ARCALIA	1.98	308	⇑P	Pb	22 30 05.5	-0.2
ARCR				⇓S	Sb	22 30 31.8	+1.5
ARCR	ARCALIA	1.98	308	⇑P	Pb	22 30 05.5	-0.2
ARCR				⇓S	Sb	22 30 31.8	+1.5
BURAR	Bucovina Array	1.98	331	⇑P	Pb	22 30 06.1	+0.2
BURAR	Bucovina Array	1.98	331	⇑P	Pb	22 30 06.1	+0.2
COPA	Copaceanca	2.02	210	⇑P	Pn	22 30 05.0	+1.4
COPA				⇓S	Sb	22 30 31.1	-0.4
COPA	Copaceanca	2.02	210	⇑P	Pn	22 30 05.0	+1.4
COPA				⇓S	Sb	22 30 31.1	-0.4
LOT	Lotru	2.06	259	⇑P	Pn	22 30 05.1	+0.9
LOT				⇓S	Sb	22 30 32.2	-0.4
LOT	Lotru	2.06	259	⇑P	Pn	22 30 05.1	+0.9
LOT				⇓S	Sb	22 30 32.2	-0.4
MFTR	Murfatlar	2.13	143	⇓P	Pn	22 30 06.3	+1.2
MFTR				⇓S	Sb	22 30 33.8	-0.9
MFTR	Murfatlar	2.13	143	⇓P	Pn	22 30 06.3	+1.2
MFTR				⇓S	Sb	22 30 33.8	-0.9
TSCT	Constanta Port	2.25	140	⇓P	Pn	22 30 07.9	+1.2
TSCT	Constanta Port	2.25	140	⇓P	Pn	22 30 07.9	+1.2
CJR	Cluj-Napoca	2.26	292	⇓P	Pn	22 30 08.3	+1.3
CJR	Cluj-Napoca	2.26	292	⇓P	Pn	22 30 08.3	+1.3
EFOR	EFORIE	2.30	141	⇓P	Pb	22 30 10.2	-1.0
EFOR	EFORIE	2.30	141	⇓P	Pb	22 30 10.2	-1.0
CHRU	Chernivtsi	2.46	349	*e*S	Sb	22 30 45.3	+1.2
PSN	Preselentsi	2.47	153	*i* P	Pn	22 30 12.1	+2.3
MANR	Mangalia	2.50	145	⇑P	Pn	22 30 11.7	+1.6
MANR				⇓S	Sb	22 30 44.4	-0.7
MANR	Mangalia	2.50	145	⇑P	Pn	22 30 11.7	+1.6
MANR				⇓S	Sb	22 30 44.4	-0.7
SORM	Soroca	2.54	27	⇑P	Pn	22 30 12.2	+1.5
SORM				⇓S	Sb	22 30 47.0	+0.7
SORM	Soroca	2.54	27	⇑P	Pn	22 30 12.2	+1.5
SORM				⇓S	Sb	22 30 47.0	+0.7
KSV	Kosov	2.65	337	*e*P	Pb	22 30 15.8	-1.4
SZH	Strazhica	2.67	191	*i* P	Pn	22 30 14.3	+1.7
KMPD	K-Podol'skiy	2.68	358	*e*P	Pb	22 30 17.1	-0.5
KMPD				*e*S	Sb	22 30 50.8	+0.4
SRE	Strehaia	2.71	244	⇑S	Sn	22 30 46.9	+1.1
SRE	Strehaia	2.71	244	⇑S	Sn	22 30 46.9	+1.1
RAKU	Rahkiv	2.72	323	*e*P	Pb	22 30 17.8	-0.6
PRD	Provadia	2.75	168	*i* P	Pn	22 30 16.3	+2.7
NSLU	Nyzhne Selyshc	2.75	328	*e*P	Pg	22 30 23.1	+0.6
GZR	Gura Zlata	2.75	261	⇓P	Pn	22 30 14.8	+1.1
GZR	Gura Zlata	2.75	261	⇓P	Pn	22 30 14.8	+1.1
NDNU	Novodnistrovsk	2.75	10	*e*P	Pb	22 30 16.9	-2.0
NDNU				Pm		22 30 32.2	
NDNU				*e*S	Sb	22 30 53.6	+1.1
NDNU				Sm		22 31 04.9	
BMR	Baia Mare	2.80	311	⇓P	Pb	22 30 17.3	-2.4
BMR	Baia Mare	2.80	311	⇓P	Pb	22 30 17.3	-2.4
DRGR		2.86	290	⇑P	Pn	22 30 17.1	+1.9
DRGR				⇑S	Sn	22 30 53.0	+3.4
DRGR		2.86	290	⇑P	Pn	22 30 17.1	+1.9
DRGR				⇑S	Sn	22 30 53.0	+3.4
BAIL	Bailesti	2.99	232	⇑P	Pn	22 30 18.2	+1.2
BAIL				⇓S	Sn	22 30 54.3	+1.7
BAIL	Bailesti	2.99	232	⇑P	Pn	22 30 18.2	+1.2
BAIL				⇓S	Sn	22 30 54.3	+1.7
PUNG	Punghina	3.08	240	⇓P	Pn	22 30 20.0	+1.9
PUNG				⇑S	Sn	22 30 55.5	+0.8
PUNG	Punghina	3.08	240	⇓P	Pn	22 30 20.0	+1.9
PUNG				⇑S	Sn	22 30 55.5	+0.8
HERR	Herculane	3.14	253	⇑P	Pn	22 30 20.0	+1.0
HERR	Herculane	3.14	253	⇑P	Pn	22 30 20.0	+1.0
STNU	Starunia	3.17	334	*e*P	Pb	22 30 24.8	-1.3
HORU	Horodok	3.33	358	*e*P	Pn	22 30 22.5	+0.9
HORU				Pm		22 30 41.2	
HORU				*e*S	Sb	22 31 07.4	-1.7
HORU				Sm		22 31 22.8	
TRSU	Trosnyk	3.34	313	*e*P	Pn	22 30 25.0	+3.2
BZS	Buzias	3.52	267	⇓P	Pn	22 30 24.5	+0.2
BZS				⇓S	Sn	22 31 08.3	+2.6
BZS	Buzias	3.52	267	⇓P	Pn	22 30 24.5	+0.2
BZS				⇓S	Sn	22 31 08.3	+2.6
BERU	Beregovo	3.59	312	*e*P	Pn	22 30 25.2	0.0
MORS	Morshin	3.74	331	*e*P	Pn	22 30 31.0	+3.8
VTS	Vitosha	4.08	218	⇓P	Pn	22 30 33.8	+1.7
VTS	Vitosha	4.08	218	⇓P	Pn	22 30 33.8	+1.7
KOLS	Kolonicke sedl	4.25	317	*e*PN	Pn	22 30 36.0	+1.8
KOLS				*e*PG	Pg	22 30 57.5	+6.3
RZN	Rozhen	4.42	199	*i* P	Pn	22 30 38.3	+1.5
CRVS	Cervenica-Dubn	4.63	313	*e*PN	Pn	22 30 41.2	+1.7
AKASG	Malin Array Be	5.12	19	Pn	Pn	22 30 46.8	+0.6
	2.1nm,0.3s,baz=231,slow=33,SNR=10.0						
AKASG				Sn	Sn	22 31 42.8	-2.2
	3.1nm,0.3s,baz=201,slow=22,SNR=4.5						
AKASG				Lg	Lg	22 32 06.7	
	9.0nm,0.3s,baz=203,slow=29,SNR=14						
SEV	Sevastopol'	5.15	103	*e*P	Pn	22 30 49.2	+2.6
SEV				Pm		22 30 51.7	
SEV				*e*S	Sn	22 31 48.1	+2.3
SEV				Sm		22 31 49.6	
STIP	Stip	5.29	219	*i* Pn	Pn	22 30 47.3	-1.2
VAY	Valandovo	5.43	214	*i* Pn	Pn	22 30 51.4	+0.8
ALU	Alushta	5.62	100	⇑*e*P	Pn	22 30 54.0	+1.0
ALU				Pm		22 30 55.4	
ALU				*e*S	Sn	22 31 59.5	+2.2
ALU				Sm		22 31 59.7	
LANS	Liptovska Anna	5.85	306	*e*PN	Pn	22 31 01.3	+5.1
VYHS	Vyhne	5.92	299	*e*PN	Pn	22 31 01.6	+4.4
SUDU	Sudak	5.98	97	*e*P	Pn	22 30 59.9	+1.9
SUDU				Pm		22 31 01.7	
SUDU				*e*S	Sn	22 32 07.2	+0.9
SUDU				Sm		22 32 09.4	
BRTR	Keskin Array B	8.03	138	Pn	Pn	22 31 24.3	-2.0
	0.1nm,0.3s,baz=328,slow=12,SNR=2.5						
FINES	FINESS Array B	15.59	359	Pn	Pn	22 33 04.5	-4.5
	0.1nm,0.3s,baz=184,slow=11,SNR=1.8						
HFS	Hagfors	16.20	336	Pn	Pn	22 33 13.3	-3.7
	0.1nm,0.3s,baz=138,slow=15,SNR=1.4						
ARU	Arti	22.43	50	P	P	22 34 27.0	-1.1
	0.3nm,0.5s,baz=231,slow=13,SNR=3.7						
ARCES	ARCESS Array B	23.72	359	P	P	22 34 41.5	+0.3
	2.7nm,1.0s,baz=170,slow=12,SNR=1.3						
MKAR	Makanchi Array	37.75	68	P	P	22 36 46.1	+0.8
	0.1nm,0.5s,baz=268,slow=7.0,SNR=2.5						
TORD	Torodi Ar. Bea	38.86	221	P	P	22 36 53.9	-1.0
	1.9nm,1.0s,baz=21,slow=9.3,SNR=1.9						
CMAR	Chiang Mai Arr	64.75	89	P	P	22 40 06.0	-2.1
	0.5nm,0.4s,baz=316,slow=6.3,SNR=0.9						

ZUR 20 22:42:09.2, 47°.44N×7°.85E, h9^{km}±3^{km}, MLh0.5/3, 2C-5D, Error ellipse: s-maj=6.0km s-min=1.4km az=92.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROTHE	Rothenfluh	0.06	53	⇓Pg	Pg	22 42 11.5	+0.3
	0.1nm,SNR=16						
ROTHE				⇓Pg	Pg	22 42 11.5	+0.3
SFRA	Frenkendorf	0.11	306	Sg	Sg	22 42 14.1	+0.4
SFRA				Sg	Sg	22 42 14.1	+0.4
	0.2nm,SNR=5.3						
EMMET	Emmethof	0.11	90	⇓Pg	Pg	22 42 12.2	+0.3
	SNR=4.6						
EMMET				⇓Pg	Pg	22 42 12.2	+0.3
SAUR	Augst-Roemermu	0.13	319	Sg	Sg	22 42 14.3	+0.2
	0.1nm,SNR=1.5						
SAUR				Sg	Sg	22 42 14.3	+0.2
BALST	Balsthal	0.14	225	⇑Pg	Pg	22 42 12.6	+0.2
BALST				⇑Pg	Pg	22 42 12.6	+0.2
	SNR=9.3						
BALST				Sg	Sg	22 42 15.0	+0.4
SRER	Reinach, Raine	0.18	294	⇓Pg	Pg	22 42 13.4	+0.4

ROM 20 22:43:23.8±0.1, 40°.783N±0°.006×16°.312E±0°.008, h6^{km}±1^{km}, ML2.7/24, 2C-8D, Error ellipse: s-maj=0.6km s-min=0.6km az=38.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIGL	Miglionico	0.20	151	⇓P	Pg	22 43 29.2	+1.4
MIGL				S	Sg	22 43 32.4	+1.8
MIGL				AML	AML		
	comp=N,11250μm,0.2s						
MIGL				AML	AML		
	comp=E,14750μm,0.2s						
AMUR	Altamura	0.25	61	⇓P	Pb	22 43 29.8	-1.0
AMUR				S	Sb	22 43 33.8	-1.6
AMUR				AML	AML		
	comp=E,2025μm,0.2s						
AMUR				AML	AML		
	comp=E,2020μm,0.2s						
AMUR				AML	AML		
	comp=N,2300μm,1.0s						
ACER	Acerenza	0.28	271	⇓P	Pg	22 43 30.1	+0.9
ACER				S	Sb	22 43 34.7	-1.4
ACER				AML	AML		
	comp=E,2385μm,1.0s						
ACER				AML	AML		
	comp=N,2195μm,0.2s						
ACER				AML	AML		
	comp=N,2300μm,0.2s						
ACER				AML	AML		
	comp=E,2525μm,1.0s						
MRVN	Minervino Murg	0.29	342	⇓P	Pg	22 43 30.0	+0.5
MRVN				S	Sg	22 43 34.7	+1.3
MRVN				AML	AML		
	comp=E,3075μm,0.2s						
MRVN				AML	AML		
	comp=N,2170μm,0.3s						
PALZ	Palazzo San Ge	0.31	301	⇑P	Pg	22 43 30.5	+0.7
PALZ				S	Sb	22 43 35.7	-1.3
PALZ				AML	AML		
	comp=N,1117μm,0.7s						
PALZ				AML	AML		
	comp=N,1118μm,0.7s						
PALZ				AML	AML		
	comp=E,1550μm,1.4s						
MATE	Matera	0.33	114	⇑P	Pg	22 43 30.9	+0.8
MATE				S	Sb	22 43 36.0	-1.4
MATE				AML	AML		
	comp=N,1400μm,0.1s						
MATE				AML	AML		
	comp=E,1640μm,1.2s						
CRAC	Craco	0.43	167	⇓P	Pb	22 43 32.9	-0.8
CRAC				AML	AML		
	comp=E,2365μm,1.4s						
CRAC				AML	AML		
	comp=N,1960μm,0.5s						
AG11	Viggiano (PZ)	0.53	211	P	Pg	22 43 34.4	+0.5
AG11				AML	AML		
	comp=N,1440μm,0.4s						
AG11				AML	AML		
	comp=E,930μm,0.2s						
AG11				AML	AML		
	comp=N,1435μm,0.4s						
AG11				AML	AML		
	comp=E,930μm,0.2s						
VULT	Monte Vulture	0.56	288	P	Pb	22 43 36.0	+0.1
VULT				AML	AML		
	comp=N,792μm,0.4s						
VULT				AML	AML		
	comp=E,622μm,0.3s						
VULT				AML	AML		
	comp=N,768μm,0.4s						
VULT				AML	AML		
	comp=E,602μm,0.3s						
VULT				AML	AML		
	comp=N,767μm,0.4s						
VULT				AML	AML		
	comp=E,602μm,0.3s						
NOCI	Noci	0.57	89	P	Pg	22 43 35.2	+0.5
NOCI				AML	AML		
	comp=N,2915μm,1.1s						
NOCI				AML	AML		
	comp=E,2240μm,0.3s						
MCEL	Monticello	0.60	221	⇓P	Pg	22 43 35.5	+0.2
MCEL				S	Sb	22 43 45.8	+0.4
MCEL				AML	AML		
	comp=N,942μm,0.6s						
MCEL				AML	AML		
	comp=E,708μm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MCEL				AML	AML		
	comp=N,978µm,0.6s						
MCEL				AML	AML		
	comp=E,708µm,0.2s						
MCEL				AML	AML		
	comp=E,684µm,0.2s						
MCEL				AML	AML		
	comp=N,942µm,0.6s						
AG51	**Grumento Nova**	**0.60**	**216**	P	Pg	22 43 35.6	+0.3
SCHR	**S. Chirico Rap**	**0.61**	**197**	P	Pg	22 43 36.0	+0.5
SCHR				AML	AML		
	comp=E,576µm,1.4s						
SCHR				AML	AML		
	comp=N,450µm,0.2s						
SCHR				AML	AML		
	comp=E,577µm,1.4s						
MRLC	**Muro Lucano**	**0.63**	**268**	P	Pb	22 43 37.4	+0.3
MRLC				AML	AML		
	comp=E,408µm,1.3s						
MRLC				AML	AML		
	comp=N,549µm,0.8s						
MRLC				AML	AML		
	comp=E,460µm,0.2s						
MRLC				AML	AML		
	comp=N,603µm,0.8s						
SLCN	**Sala Consilina**	**0.65**	**233**	P	Pg	22 43 36.5	+0.3
SLCN				AML	AML		
	comp=E,1215µm,0.4s						
SLCN				AML	AML		
	comp=N,760µm,1.5s						
MTSN	**Montesano sull**	**0.67**	**220**	P	Pg	22 43 36.6	-0.1
MTSN				AML	AML		
	comp=E,458µm,0.7s						
MTSN				AML	AML		
	comp=E,458µm,0.7s						
MTSN				AML	AML		
	comp=N,699µm,0.4s						
SIRI	**Monte Sirino -**	**0.69**	**210**	P	Pg	22 43 37.0	-0.1
SIRI				AML	AML		
	comp=E,966µm,1.6s						
SIRI				AML	AML		
	comp=E,941µm,1.6s						
SIRI				AML	AML		
	comp=N,1330µm,0.2s						
SIRI				AML	AML		
	comp=E,938µm,1.6s						
SIRI				AML	AML		
	comp=N,1295µm,0.2s						
ORI	**Oriolo Calabro**	**0.73**	**172**	AML	AML		
	comp=N,1235µm,0.3s						
ORI				AML	AML		
	comp=E,1117µm,1.4s						
SGTA	**Sant Agata di**	**0.80**	**296**	AML	AML		
	comp=E,641µm,0.5s						
SGTA				AML	AML		
	comp=N,405µm,0.4s						
SGTA				AML	AML		
	comp=E,605µm,0.5s						
SGTA				AML	AML		
	comp=N,404µm,0.4s						
SGTA				AML	AML		
	comp=N,472µm,0.7s						
CDRU	**Civita di Ruta**	**0.82**	**249**	⇓P	Pg	22 43 39.6	+0.1
CDRU				AML	AML		
	comp=N,298µm,0.8s						
CDRU				AML	AML		
	comp=E,475µm,0.5s						
CAFE	**Carife**	**0.85**	**287**	P	Pb	22 43 40.9	-0.1
CAFE				AML	AML		
	comp=E,322µm,1.0s						
CAFE				AML	AML		
	comp=N,241µm,0.5s						
CAFE				AML	AML		
	comp=E,322µm,1.0s						
CAFE				AML	AML		
	comp=N,240µm,0.5s						
CAFE				AML	AML		
	comp=E,316µm,0.6s						
CAFE				AML	AML		
	comp=N,306µm,0.8s						
MGR	**Morigerati**	**0.87**	**222**	P	Pg	22 43 40.1	-0.3
MGR				AML	AML		
	comp=N,554µm,0.3s						
MGR				AML	AML		
	comp=E,397µm,0.6s						
MCRV	**Calabrutti - M**	**0.87**	**270**	P	Pb	22 43 41.1	-0.1
MCRV				AML	AML		
	comp=N,724µm,1.1s						
MCRV				AML	AML		
	comp=E,632µm,1.0s						
SALB	**San Lorenzo Be**	**0.91**	**178**	P	Pg	22 43 41.0	-0.1
SALB				AML	AML		
	comp=E,764µm,0.3s						
SALB				AML	AML		
	comp=E,732µm,0.3s						
SALB				AML	AML		
	comp=N,474µm,0.6s						
SALB				AML	AML		
	comp=E,732µm,0.3s						
SALB				AML	AML		
	comp=N,528µm,0.6s						
MMN	**Mormanno**	**0.93**	**196**	P	Pb	22 43 42.1	0.0
MMN				AML	AML		
	comp=E,142µm,1.1s						
MMN				AML	AML		
	comp=N,252µm,0.5s						
MSAG	**Monte S. Angel**	**0.98**	**342**	P	Pg	22 43 42.5	0.0
MSAG				AML	AML		
	comp=E,788µm,0.4s						
MSAG				AML	AML		
	comp=N,2245µm,0.2s						
MSAG				AML	AML		
	comp=N,2165µm,0.2s						
MSAG				AML	AML		
	comp=E,844µm,0.4s						
MSAG				AML	AML		
	comp=E,844µm,0.4s						
SGRT	**San Giovanni R**	**1.06**	**336**	AML	AML		
	comp=E,1146µm,0.2s						
SGRT				AML	AML		
	comp=N,938µm,0.2s						
CET2	**Cetraro**	**1.28**	**192**	AML	AML		
	comp=E,494µm,0.8s						
CET2				AML	AML		
	comp=N,606µm,0.5s						
MELA	**Melanico ??? S**	**1.28**	**316**	⇓P	Pg	22 43 48.4	0.0
MELA				AML	AML		
	comp=E,708µm,0.4s						
MELA				AML	AML		
	comp=N,689µm,0.4s						
MELA				AML	AML		
	comp=N,690µm,0.4s						
MELA				AML	AML		
	comp=E,709µm,0.4s						
MELA				AML	AML		
	comp=N,690µm,0.4s						
MELA				AML	AML		
	comp=E,782µm,0.4s						
DBRK	**Dubrovnik**	**2.33**	**35**	*e*Pn	Pn	22 44 03.5	+0.9
MAKA	**Makarska**	**2.56**	**12**	*e*Pn	Pn	22 44 05.7	0.0
RICI	**Ricice**	**2.78**	**12**	*e*Pn	Pn	22 44 08.7	0.0
ZIRJ	**Zirje**	**2.91**	**350**	*e*Pn	Pn	22 44 10.3	-0.2
MORI	**Morici**	**3.11**	**352**	*e*Pn	Pn	22 44 12.9	-0.4
KIJV	**Kijevo**	**3.22**	**1**	*e*Pn	Pn	22 44 15.0	+0.2
DUGI	**Dugi Otok**	**3.34**	**344**	*e*Pn	Pn	22 44 16.2	-0.2
UDBI	**Udbina**	**3.77**	**354**	*e*Pn	Pn	22 44 22.9	+0.6
NVLJ	**Novalja**	**3.92**	**345**	*e*Pn	Pn	22 44 24.2	-0.2
OBKA	**Obir**	**5.87**	**348**	*e*Pn	Pn	22 44 49.3	-1.9
	comp=E,2.2nm,0.2s						
OBKA				*e*Sn	Sn	22 45 56.4	-2.3
	comp=E,1.2nm,0.3s						
ABTA	**Abfaltersbach**	**6.57**	**337**	*e*Pn	Pb	22 45 10.0	-8.3
	comp=E,0.7nm,0.4s						
ABTA				*e*Sn	Sn	22 46 13.2	-2.7
	comp=E,0.7nm,0.4s						
WTTA	**Wattenberg**	**7.30**	**334**	*e*Pn	Pn	22 45 12.8	+1.8
	comp=E,0.4nm,0.2s						
WTTA				*e*Sn	Sn	22 46 33.6	-0.7
	comp=E,1.7nm,0.4s						
WATA	**Walderalm**	**7.38**	**334**	*e*Pn	Pn	22 45 14.7	+2.6
	comp=E,0.5nm,0.2s						
WATA				*e*Sn	Sn	22 46 36.1	-0.1
	comp=E,1.3nm,0.2s						
SQTA	**Sankt Quirin**	**7.41**	**332**	*e*Pn	Pn	22 45 16.4	+3.9
	comp=E,0.8nm,0.3s						
SQTA				*e*Sn	Sn	22 46 34.9	-2.0
	comp=E,1.1nm,0.3s						
FETA	**Feichten**	**7.42**	**329**	*e*Pn	Pn	22 45 13.4	+0.7
	comp=E,0.1nm,0.1s						
FETA				*e*Sn	Sn	22 46 37.1	-0.1
	comp=E,0.2nm,0.2s						
MOTA	**Moosalm**	**7.55**	**332**	*e*Pn	Pn	22 45 18.7	+4.2
	comp=E,0.2nm,0.3s						
MOTA				*e*Sn	Sn	22 46 38.0	-2.4
	comp=E,0.1nm,0.1s						

IDC 20 22:49:50.5±10.0**, 13°.57S**×**166°.61E, h154**km±112km**,**
mb3.5/4**, mb1 3.6**/5**, mb1mx3.3**/39**, mbtmp3.9**/5**, Error ellipse: s-maj=106.8km s-min=57.0km az=141.0,**
Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.46**	**181**	P	Pn	22 51 50.1	0.0
	0.1nm,0.3s,baz=58,slow=18,SNR=1.2						
STKA	**Stephens Creek**	**29.28**	**227**	P	P	22 55 38.2	-0.1
	1.8nm,0.8s,baz=35,slow=8.6,SNR=4.6						
WRA	**Warramunga Arr**	**31.51**	**254**	P	P	22 55 58.1	0.0
	0.4nm,0.7s,baz=85,slow=8.9,SNR=2.9						
ASAR	**Alice Springs**	**32.51**	**247**	P	P	22 56 06.8	0.0
	1.1nm,0.5s,baz=74,slow=9.4,SNR=14						
MKAR	**Makanchi Array**	**95.92**	**317**	P	P	23 02 59.7	-0.2
	0.4nm,0.7s,baz=84,slow=5.7,SNR=3.2						

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*IDC **20** 22:51:44.4±1.6, 33°.26S×178°.71W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/29, mbtmp4.0/4, ML4.0/1, Error ellipse: s-maj=42.2km s-min=37.2km az=152.0*
*WEL **20** 22:51:52.8±0.9, 34°S±19°×17°8W±2°3, h206km±24km, M3.9/18, mB4.4/9, ML4.6/10, MLv4.4/18, Mw(mB)3.5/9, Error ellipse: s-maj=0.0km s-min=0.0km az=128.7*
ISC 20 22:51:50.3±1.4**, 33°.3S**±0°.1×**178°.7W**±0°.2**, h41**km**, n36,**
σ**1ˢ.57**/47**, mb3.8**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.89**	**209**	P	**Pn**	**22 53 01.4**	**+0.1**
MXZ				S	**Sn**	**22 53 56.6**	**0.0**
WMGZ	**Waiomatatini S**	**5.08**	**206**	P	**Pn**	**22 53 04.2**	**+0.4**
WMGZ				S	**Sn**	**22 54 04.3**	**+3.2**
PKGZ	**Pakihiroa**	**5.27**	**209**	P	**Pn**	**22 53 06.9**	**+0.4**
PKGZ				S	**Sn**	**22 54 07.0**	**+1.0**
HAZ	**Te Kaha**	**5.28**	**212**	P	**Pn**	**22 53 07.3**	**+0.7**
HAZ				S	**Sn**	**22 54 09.5**	**+3.4**
PUZ	**Puketiti**	**5.36**	**206**	P	**Pn**	**22 53 10.2**	**+2.5**
RUGZ	**Raukumara Rang**	**5.50**	**211**	P	**Pn**	**22 53 09.6**	**-0.2**
RUGZ				S	**Sn**	**22 54 13.1**	**+1.4**
TWGZ	**Tauwhareparae**	**5.55**	**208**	P	**Pn**	**22 53 09.7**	**-0.7**
TWGZ				S	**Sn**	**22 54 14.8**	**+1.8**
CNGZ	**Carnagh Statio**	**5.74**	**205**	P	**Pn**	**22 53 12.1**	**-0.8**
TKGZ	**Te Karaka**	**5.83**	**207**	P	**Pn**	**22 53 16.0**	**+1.8**
MWZ	**Matawai**	**5.87**	**210**	P	**Pn**	**22 53 11.7**	**-3.1**
MWZ				S	**Sn**	**22 54 21.2**	**+0.3**
URZ	**Urewera**	**5.99**	**213**	Pn	**Pn**	**22 53 15.2**	**-1.2**
	3.5nm,0.3s,baz=5.2,slow=16,SNR=20						
URZ				Sn	**Sn**	**22 54 22.2**	**-1.5**
	1.6nm,0.3s,baz=12,slow=14,SNR=1.2						
RIGZ	**Rimuhau**	**6.10**	**207**	P	**Pn**	**22 53 17.1**	**-0.8**
RIGZ				S	**Sn**	**22 54 26.6**	**+0.2**
SNGZ	**Shannon Statio**	**6.33**	**209**	P	**Pn**	**22 53 22.7**	**+1.7**
SNGZ				S	**Sn**	**22 54 33.1**	**+1.0**
RTZ	**Ruatahuna**	**6.34**	**212**	P	**Pn**	**22 53 20.9**	**-0.4**
RTZ				S	**Sn**	**22 54 30.8**	**-1.7**
RAHZ	**Arahi**	**6.55**	**210**	P	**Pn**	**22 53 25.0**	**+0.9**
RAHZ				S	**Sn**	**22 54 37.7**	**+0.2**
MTHZ	**Maungataniwha**	**6.60**	**212**	P	**Pn**	**22 53 25.4**	**+0.6**
MTHZ				S	**Sn**	**22 54 39.0**	**+0.2**
ARHZ	**Aropaoanui**	**6.88**	**209**	P	**Pn**	**22 53 30.2**	**+1.6**
BKZ	**Black Stump Fm**	**7.01**	**212**	P	**Pn**	**22 53 30.4**	**0.0**
KWHZ	**Kaweka Forest**	**7.26**	**211**	P	**Pn**	**22 53 33.1**	**-0.7**
KWHZ				S	**Sn**	**22 54 52.3**	**-2.6**
HIZ	**Hauiti**	**7.36**	**223**	P	**Pn**	**22 53 37.7**	**+2.5**
KAHZ	**Kahuranaki**	**7.38**	**207**	P	**Pn**	**22 53 36.0**	**+0.4**
OTVZ	**Oturere**	**7.40**	**216**	P	**Pn**	**22 53 35.9**	**0.0**
OTVZ				S	**Sn**	**22 54 58.2**	**-0.3**
KRHZ	**Kereru**	**7.46**	**211**	P	**Pn**	**22 53 35.2**	**-1.4**
KRHZ				S	**Sn**	**22 54 55.4**	**-4.5**
BHHZ	**Black Hill Sta**	**7.47**	**213**	P	**Pn**	**22 53 36.8**	**0.0**
BHHZ				S	**Sn**	**22 54 57.6**	**-2.5**
CTA	**Charters Tower**	**33.77**	**284**	P	**P**	**22 58 28.9**	**+0.6**
	0.9nm,0.3s,baz=102,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**42.42**	**270**	P	**P**	**22 59 41.3**	**+0.1**
	0.5nm,0.4s,baz=107,slow=8.1,SNR=4.9						
WRA	**Warramunga Arr**	**43.67**	**276**	P	**P**	**22 59 50.3**	**-1.0**
	0.8nm,0.4s,baz=115,slow=8.2,SNR=11						
H03S2	**Juan Fernandez**	**79.39**	**123**	T	T	00 32 13.1	
	baz=236						
H03S1	**Juan Fernandez**	**79.40**	**123**	T	T	00 32 14.7	
	baz=236						
H03S3	**Juan Fernandez**	**79.41**	**123**	T	T	00 32 11.7	
	baz=236						
H03N3	**Juan Fernandez**	**79.60**	**123**	T	T	00 32 21.9	
	baz=240,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**79.60**	**123**	T	T	00 32 20.6	
	baz=240,slow=72,SNR=9.8						
H03N1	**Juan Fernandez**	**79.61**	**123**	T	T	00 32 21.0	
	baz=240,slow=72,SNR=15						
FINES	**FINESS Array B**	**147.62**	**338**	PKPbc	**PKPbc**	**23 11 29.4**	**0.0**
	2.1nm,0.5s,baz=24,slow=3.5,SNR=14						
NOA	**NORSAR Array B**	**151.50**	**350**	PKPbc	**PKiKP**	**23 11 39.9**	**+0.4**
	0.7nm,0.8s,baz=14,slow=4.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**159.94**	**181**	PKPab	**PKPab**	**23 12 23.8**	**-0.9**
	0.5nm,0.6s,baz=165,slow=2.9,SNR=1.8						

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*IDC **20** 23:05:41.4±1.8, 24°.17N×122°.27E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/26, mbtmp3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.6/28, Error ellipse: s-maj=168.6km s-min=23.9km az=64.0*
*JMA **20** 23:05:45.6±0.1, 24°.02N×122°.28E, h24km±3km, M3.3*
*TAP **20** 23:05:45.8, 24°.12N×122°.29E, h26km, ML3.6, D*
ISC 20 23:05:45.6±1.0**, 24°.08N**±0°.02×**122°.29E**±0°.02**, h26**km±9km**,**
n141, σ**0ˢ.87**/260**, mb3.4**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.57**	**310**	*e*P	**Pb**	**23 05 56.3**	**-0.7**
	baz=306						
ENAH				*e*S	**Sn**	**23 06 05.1**	**-1.4**
	baz=306						
ENA	**Nanau**	**0.61**	**305**	P	**Pb**	**23 05 57.5**	**-0.1**
	baz=309						
ENA				S	**Sb**	**23 06 05.9**	**+0.2**
	baz=309						
TWD	**Chiawan**	**0.63**	**270**	P	**Pb**	**23 05 58.1**	**+0.1**
	baz=253						
TWD				S	**Sn**	**23 06 07.3**	**-0.8**
	baz=253						
HWA	**Hwalien**	**0.63**	**261**	*e*P	**Pb**	**23 05 58.5**	**+0.5**
	baz=257						
HWA				*e*S	**Sn**	**23 06 07.7**	**-0.4**
	baz=257						
NACB	**Ninganchiao**	**0.64**	**278**	*e*P	**Pb**	**23 05 57.8**	**-0.3**
	baz=261						
NACB				*e*S	**Sn**	**23 06 07.5**	**-0.9**
	baz=261						
TWC	**Suao**	**0.66**	**323**	*i* P	**Pb**	**23 05 57.5**	**-1.0**
	baz=321						
TWC				S	**Sb**	**23 06 05.8**	**-1.4**
	baz=321						
JYNG	**Yonagunijimaku**	**0.70**	**58**	P	**Pn**	**23 05 59.6**	**-0.3**
JYNG				S	**Sb**	**23 06 09.0**	**+0.5**
ETLH	**Xiulin Townshi**	**0.75**	**280**	*e*P	**Pb**	**23 05 59.9**	**-0.1**
	baz=277						
ETLH				*e*S	**Sn**	**23 06 11.5**	**+0.4**
	baz=277						
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pn**	**23 06 00.5**	**-0.2**
YOJ				S	**Sb**	**23 06 10.4**	**+0.3**
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pn**	**23 06 00.5**	**-0.2**
	baz=61						
YOJ				S	**Sn**	**23 06 10.9**	**-0.5**
	baz=61						
EGS		**0.82**	**337**	P	**Pn**	**23 06 01.6**	**0.0**
	baz=328						
EGS				S	**Sn**	**23 06 12.1**	**-0.8**
	baz=328						
ESL	**Shilin**	**0.83**	**251**	P	**Pb**	**23 06 00.3**	**-1.0**
	baz=240						
ESL				S	**Sb**	**23 06 12.5**	**+0.4**
	baz=240						
ILA	**Ilan**	**0.84**	**324**	*e*P	**Pn**	**23 06 01.9**	**+0.1**
	baz=322						
ILA				S	**Sn**	**23 06 12.8**	**-0.5**
	baz=322						
TWE	**Neicheng**	**0.85**	**318**	P	**Pn**	**23 06 01.7**	**-0.2**
	baz=323						
TWE				*e*S	**Sn**	**23 06 12.6**	**-0.9**
	baz=323						
ENTT	**Nioudou**	**0.86**	**310**	P	**Pn**	**23 06 02.0**	**-0.1**
	baz=308						
ENTT				S	**Sn**	**23 06 13.3**	**-0.6**
	baz=308						
NTC	**Toucheng**	**0.87**	**332**	*e*P	**Pn**	**23 06 01.9**	**-0.4**
	baz=329						
NTC				S	**Sn**	**23 06 14.2**	**0.0**
	baz=329						
NDT	**Datong Townshi**	**0.88**	**306**	*e*P	**Pn**	**23 06 02.4**	**+0.1**
	baz=313						
NDT				*e*S	**Sn**	**23 06 13.9**	**-0.3**
	baz=313						
EGFH	**Guangfu**	**0.89**	**243**	*e*S	**Sb**	**23 06 13.3**	**-0.5**
	baz=230						
NNSB	**Datong**	**0.89**	**293**	*e*P	**Pb**	**23 06 02.2**	**-0.3**
	baz=290						
NNSB				*e*S	**Sn**	**23 06 15.0**	**+0.2**
	baz=290						
NNSH	**Datong**	**0.89**	**293**	*e*P	**Pb**	**23 06 02.1**	**-0.4**
	baz=290						
NNSH				*e*S	**Sn**	**23 06 14.4**	**-0.4**
	baz=290						
NNS	**Nan Shan**	**0.91**	**293**	*i* P	**Pn**	**23 06 02.7**	**-0.1**
	baz=291						
NNS				S	**Sn**	**23 06 14.6**	**-0.5**
	baz=291						
WHF	**Hehuan Shan**	**0.94**	**274**	P	**Pb**	**23 06 02.7**	**-0.7**
	baz=260						
WHF				S	**Sb**	**23 06 15.5**	**-0.1**
	baz=260						
TWB1	**Santiao Chiao**	**0.96**	**344**	P	**Pn**	**23 06 03.5**	**+0.1**
	baz=341						
TWB1				S	**Sn**	**23 06 15.8**	**-0.4**
	baz=341						
FUSS	**Fushou**	**0.97**	**280**	P	**Pb**	**23 06 03.5**	**-0.3**
	baz=278						
FUSS				*e*S	**Sn**	**23 06 16.9**	**+0.1**
	baz=278						
TIPB	**Shuangxi**	**0.98**	**335**	P	**Pn**	**23 06 04.0**	**+0.2**
	baz=332						
TIPB				S	**Sn**	**23 06 15.9**	**-0.9**
	baz=332						
HGSD	**Ruisui**	**0.99**	**234**	*e*P	**Pn**	**23 06 03.2**	**-0.5**
	baz=233						
HGSD				*e*S	**Sb**	**23 06 16.9**	**+0.4**
	baz=233						
NWLT	**Wulai**	**0.99**	**314**	P	**Pn**	**23 06 04.6**	**+0.6**
	baz=312						
NWLT				S	**Sn**	**23 06 17.0**	**-0.2**
	baz=312						
YHNB	**Yeheng**	**1.02**	**305**	*e*P	**Pb**	**23 06 04.3**	**-0.2**
	baz=291						
YHNB				*e*S	**Sn**	**23 06 18.4**	**+0.6**
	baz=291						
TWT	**Tachien**	**1.03**	**280**	P	**Pb**	**23 06 05.1**	**+0.2**
	baz=277						
TWT				S	**Sn**	**23 06 18.6**	**+0.4**
	baz=277						
NSK	**Sanguang**	**1.03**	**305**	P	**Pb**	**23 06 04.4**	**-0.5**
	baz=291						
NSK				S	**Sn**	**23 06 18.6**	**+0.5**
	baz=291						
TDCB	**Techi**	**1.04**	**280**	*e*P	**Pb**	**23 06 05.1**	**0.0**
	baz=278						
TDCB				*e*S	**Sn**	**23 06 18.9**	**+0.3**
	baz=278						
NWF	**Wu-fen Shan**	**1.09**	**335**	*e*P	**Pb**	**23 06 05.5**	**-0.3**
	baz=332						
NWF				*e*S	**Sn**	**23 06 20.0**	**+0.5**
	baz=332						
WFSB	**Wu-fen Shan**	**1.09**	**335**	*e*P	**Pb**	**23 06 05.6**	**-0.1**
	baz=332						
WFSB				*e*S	**Sn**	**23 06 19.7**	**+0.3**
	baz=332						
TWA	**Mucha**	**1.10**	**324**	P	**Pb**	**23 06 06.7**	**+0.7**
	baz=322						
TWA				S	**Sn**	**23 06 20.3**	**+0.6**
	baz=322						
NHDH	**Xindian Distri**	**1.12**	**322**	*e*P	**Pb**	**23 06 06.0**	**-0.2**
	baz=332						
NHDH				*e*S	**Sn**	**23 06 21.4**	**+1.3**
	baz=332						
YULB	**Yu-li**	**1.14**	**233**	P	**Pn**	**23 06 05.3**	**-0.6**
	baz=248						
YULB				*e*S	**Sn**	**23 06 20.3**	**-0.3**
	baz=248						
TATO	**Taipei**	**1.15**	**321**	*e*P	**Pb**	**23 06 07.2**	**+0.5**
	baz=318						
TATO				*e*S	**Sn**	**23 06 21.3**	**+0.4**
	baz=318						
EYUL	**Yuli**	**1.15**	**231**	*e*P	**Pn**	**23 06 04.9**	**-1.1**
	baz=218						
EYUL				*e*S	**Sn**	**23 06 21.6**	**+0.7**
	baz=218						
TNOU	**National Taiwa**	**1.16**	**336**	*e*P	**Pb**	**23 06 06.7**	**-0.3**
	baz=334						
TNOU				*e*S	**Sb**	**23 06 22.0**	**+0.4**
	baz=334						
TWF1	**Yuli**	**1.16**	**231**	P	**Pn**	**23 06 05.2**	**-1.0**
	baz=247						
TWF1				S	**Sb**	**23 06 22.2**	**+0.6**
	baz=247						
TAP1	**Taipei**	**1.18**	**324**	*e*P	**Pb**	**23 06 07.2**	**-0.1**
	baz=321						
TAP1				S	**Sb**	**23 06 22.7**	**+0.5**
	baz=321						
TAP	**Taipei**	**1.19**	**323**	*e*P	**Pb**	**23 06 07.4**	**0.0**
	baz=321						
TAP				S	**Sb**	**23 06 23.4**	**+1.0**
	baz=321						
WPL	**Puli Township**	**1.22**	**267**	*e*P	**Pn**	**23 06 07.0**	**+0.1**
	baz=257						
WPL				*e*S	**Sn**	**23 06 22.7**	**+0.1**
	baz=257						
WHP	**Taichung City**	**1.24**	**279**	*e*P	**Pb**	**23 06 09.1**	**+0.7**
	baz=266						
WHP				*e*S	**Sb**	**23 06 24.0**	**0.0**
	baz=266						
YM01	**YM01**	**1.24**	**328**	P	**Pb**	**23 06 09.6**	**+1.1**
	baz=341						
YM01				*e*S	**Sb**	**23 06 24.9**	**+0.8**
	baz=341						
DPDB	**Guoxing**	**1.25**	**268**	*e*P	**Pn**	**23 06 07.2**	**-0.2**
	baz=258						
DPDB				*e*S	**Sb**	**23 06 24.2**	**+0.1**
	baz=258						
SSLB	**Suanglung**	**1.25**	**257**	*e*P	**Pn**	**23 06 06.9**	**-0.6**
	baz=256						
SSLB				*e*S	**Sn**	**23 06 23.9**	**+0.3**
	baz=256						
YM10	**YM10**	**1.26**	**328**	*e*P	**Pn**	**23 06 07.4**	**-0.1**
	baz=341						
YM10				S	**Sb**	**23 06 24.8**	**+0.3**
	baz=341						
YM11	**YM11**	**1.26**	**329**	*e*P	**Pb**	**23 06 09.9**	**+1.3**
	baz=342						
YM11				*e*S	**Sb**	**23 06 24.5**	**0.0**
	baz=342						
YM05	**YM05**	**1.26**	**329**	*e*P	**Pn**	**23 06 07.7**	**+0.1**
	baz=341						
YM05				S	**Sb**	**23 06 24.5**	**-0.1**
	baz=341						
FULB	**Fuli**	**1.27**	**226**	*e*P	**Pn**	**23 06 06.0**	**-1.6**
	baz=213						
FULB				*e*S	**Sn**	**23 06 24.8**	**+0.9**
	baz=213						
YM04	**YM04**	**1.27**	**327**	*e*P	**Pb**	**23 06 08.0**	**-0.8**
	baz=340						
YM04				*e*S	**Sb**	**23 06 23.9**	**-0.8**
	baz=340						
YM08	**YM08**	**1.27**	**330**	*e*P	**Pb**	**23 06 08.0**	**-0.9**
	baz=328						
YM08				*e*S	**Sb**	**23 06 23.9**	**-0.9**
	baz=328						
NTY	**Taoyuan**	**1.28**	**316**	*e*P	**Pb**	**23 06 09.1**	**+0.1**
	baz=313						
NTY				*e*S	**Sb**	**23 06 25.9**	**+0.8**
	baz=313						
SMLT	**Sun Moon Lake**	**1.28**	**261**	*e*P	**Pn**	**23 06 08.0**	**0.0**
	baz=251						

SMLT	baz=251			S	**Sb**	**23 06 25.9**	**+0.6**
TWS1	**Kuangyinshan** baz=331	**1.29**	**322**	P	**Pb**	**23 06 08.7**	**-0.4**
TWS1	baz=331			S	**Sb**	**23 06 26.2**	**+0.9**
YM03	**YM03** baz=340	**1.29**	**328**	*e*P	**Pb**	**23 06 08.8**	**-0.3**
YM03	baz=340			*e*S	**Sb**	**23 06 24.5**	**-0.8**
LIOB	**Emei** baz=294	**1.29**	**296**	*e*P	**Pb**	**23 06 09.4**	**+0.3**
LIOB	baz=294			*e*S	**Sb**	**23 06 25.3**	**0.0**
CHKT	**Chengkung** baz=210	**1.29**	**221**	*e*P	**Pn**	**23 06 07.3**	**-0.6**
CHKT	baz=210			*e*S	**Sn**	**23 06 23.1**	**-1.4**
NSTT	**Nanjuang** baz=293	**1.29**	**295**	*e*P	**Pb**	**23 06 09.7**	**+0.4**
NSTT	baz=293			S	**Sb**	**23 06 25.3**	**-0.1**
ANP	**Anpu** baz=340	**1.30**	**328**	*e*P	**Pn**	**23 06 08.3**	**+0.1**
ANP	baz=340			*e*S	**Sb**	**23 06 25.1**	**-0.7**
NTST	**Danshui** baz=338	**1.32**	**325**	*e*P	**Pn**	**23 06 08.3**	**-0.1**
NTST	baz=338			*e*S	**Sb**	**23 06 26.4**	**+0.3**
NCU	**National Centr** baz=309	**1.34**	**312**	*e*S	**Sb**	**23 06 25.9**	**-0.8**
NCUH	**Zhongli** baz=309	**1.34**	**311**	*e*P	**Pb**	**23 06 09.7**	**-0.3**
NCUH	baz=309			*e*S	**Sb**	**23 06 27.6**	**+0.9**
IRIF	**Iriomote-Funau**	**1.34**	**79**	P	**Pb**	**23 06 09.8**	**-0.2**
IRIF				S	**Sb**	**23 06 28.4**	**+1.6**
TWY	**Chenhua** baz=330	**1.34**	**332**	*e*P	**Pb**	**23 06 09.7**	**-0.4**
TWY	baz=330			*e*S	**Sb**	**23 06 25.9**	**-0.9**
YUS	**Yu-Shan** baz=244	**1.36**	**244**	*e*P	**Pn**	**23 06 09.9**	**+0.6**
YUS	baz=244			*e*S	**Sn**	**23 06 26.5**	**-0.3**
SBCB	**Hsinchu** baz=299	**1.38**	**301**	*e*P	**Pb**	**23 06 10.2**	**-0.5**
SBCB	baz=299			*e*S	**Sb**	**23 06 28.7**	**+0.7**
HATJ	**Hateruma jima**	**1.39**	**91**	P	**Pb**	**23 06 11.9**	**+1.1**
HATJ				S	**Sb**	**23 06 29.7**	**+1.6**
HSN	**Hsinchu** baz=301	**1.40**	**301**	*e*P	**Pn**	**23 06 09.9**	**+0.5**
HSN	baz=301			*e*S	**Sb**	**23 06 28.1**	**-0.3**
TWQ1	**Liyutan** baz=280	**1.41**	**281**	*e*P	**Pb**	**23 06 11.1**	**-0.1**
TWQ1	baz=280			*e*S	**Sb**	**23 06 29.5**	**+0.8**
EDH	**Donghe** baz=211	**1.43**	**219**	*e*P	**Pn**	**23 06 09.1**	**-0.7**
EDH	baz=211			S	**Sn**	**23 06 26.4**	**-1.3**
NSY	**Sanyi** baz=282	**1.43**	**284**	*e*P	**Pb**	**23 06 12.2**	**+0.6**
NSY	baz=282			*e*S	**Sb**	**23 06 31.5**	**+2.0**
WJS	**Zhushan** baz=259	**1.45**	**260**	*e*P	**Pn**	**23 06 11.1**	**+0.9**
WJS	baz=259			*e*S	**Sb**	**23 06 30.9**	**+1.0**
WWF	**Wufeng** baz=268	**1.45**	**269**	*e*P	**Pb**	**23 06 11.6**	**-0.3**
WWF	baz=268			*e*S	**Sb**	**23 06 32.3**	**+2.3**
ELDTW	**Lidau** baz=220	**1.47**	**233**	*e*P	**Pn**	**23 06 10.2**	**-0.2**
ELDTW	baz=220			S	**Sn**	**23 06 28.7**	**-0.2**
ALS	**Alishan** baz=247	**1.47**	**248**	P	**Pn**	**23 06 11.4**	**+0.6**
ALS	baz=247			*i* S	**Sn**	**23 06 29.7**	**+0.3**
TCU	**Taichung** baz=272	**1.47**	**273**	*e*P	**Pn**	**23 06 11.3**	**+0.9**
TCU	baz=272			*e*S	**Sb**	**23 06 32.0**	**+1.4**
WNT	**Mingjian** baz=262	**1.48**	**262**	*e*P	**Pb**	**23 06 12.5**	**+0.1**
WNT	baz=262			S	**Sb**	**23 06 31.5**	**+0.7**
WNT1	**Nantou City** baz=249	**1.48**	**264**	*e*P	**Pb**	**23 06 12.8**	**+0.3**
WNT1	baz=249			*e*S	**Sb**	**23 06 32.6**	**+1.8**
WDJ	**Dajia District** baz=279	**1.53**	**280**	*e*P	**Pb**	**23 06 12.5**	**-0.7**
WDJ	baz=279			*e*S	**Sb**	**23 06 31.8**	**-0.4**
CHN5	**Tsauling** baz=252	**1.55**	**252**	P	**Pb**	**23 06 12.9**	**-0.8**
CHN5	baz=252			S	**Sb**	**23 06 33.5**	**+0.6**
PCYT	**Pengchaiyu** baz=336	**1.55**	**353**	*e*P	**Pn**	**23 06 11.9**	**+0.3**
PCYT	baz=336			S	**Sb**	**23 06 31.5**	**-1.4**
JKRS	**Kuro-shima**	**1.58**	**84**	P	**Pb**	**23 06 14.0**	**-0.1**
JKRS				S	**Sb**	**23 06 34.1**	**+0.4**
WCHH	**Zhanghua** baz=269	**1.58**	**270**	*e*P	**Pb**	**23 06 13.3**	**-0.8**
WCHH	baz=269			*e*S	**Sb**	**23 06 34.8**	**+1.2**
LONT	**Longtian** baz=223	**1.58**	**222**	*e*P	**Pn**	**23 06 11.1**	**-0.9**
LONT	baz=223			*e*S	**Sn**	**23 06 31.3**	**-0.3**
LDUT	**Ludao** baz=209	**1.59**	**208**	*e*P	**Pn**	**23 06 10.5**	**-1.6**
LDUT	baz=209			*e*S	**Sn**	**23 06 29.2**	**-2.6**
WGK	**Gukeng** baz=256	**1.63**	**256**	*e*S	**Sb**	**23 06 36.0**	**+0.9**
WDLH	**Douliu** baz=244	**1.65**	**257**	*e*P	**Pb**	**23 06 15.0**	**-0.3**
WDLH	baz=244			*e*S	**Sb**	**23 06 36.8**	**+1.2**
STYT	**Tauyuan** baz=237	**1.68**	**237**	*e*P	**Pn**	**23 06 13.3**	**0.0**
STYT	baz=237			S	**Sn**	**23 06 34.5**	**+0.5**
TWGBT	**Beinan** baz=234	**1.68**	**222**	*e*P	**Pn**	**23 06 11.3**	**-1.9**
TWGBT	baz=234			*e*S	**Sn**	**23 06 33.7**	**-0.3**
TWG	**Pinlang** baz=234	**1.68**	**222**	P	**Pn**	**23 06 12.5**	**-0.9**
TWG	baz=234			S	**Sn**	**23 06 32.6**	**-1.5**
TPUB	**Ta-pu** baz=243	**1.71**	**243**	*e*P	**Pb**	**23 06 15.5**	**-0.8**
TPUB	baz=243			*e*S	**Sb**	**23 06 37.9**	**+0.5**
CHN4	**Tsaushan** baz=236	**1.71**	**245**	P	**Pb**	**23 06 16.1**	**-0.3**
CHN4	baz=236			S	**Sb**	**23 06 37.9**	**+0.3**
JIJ	**Ishigaki jima**	**1.72**	**80**	P	**Pn**	**23 06 14.5**	**+0.7**
JIJ				S	**Sn**	**23 06 35.5**	**+0.6**
WTP	**Ta-pu** baz=242	**1.75**	**242**	P	**Pb**	**23 06 16.0**	**-1.0**
WTP	baz=242			*e*S	**Sn**	**23 06 37.4**	**+1.6**
CHN2	**Minshiung** baz=252	**1.75**	**252**	*e*S	**Sb**	**23 06 38.2**	**-0.3**
RLNB	**Erlin** baz=264	**1.77**	**264**	*e*S	**Sb**	**23 06 39.9**	**+0.6**
WTK	**Tuku** baz=245	**1.78**	**258**	*e*P	**Pb**	**23 06 16.9**	**-0.6**
WTK	baz=245			*e*S	**Sb**	**23 06 39.0**	**-0.4**
CHY	**Chiayi** baz=251	**1.80**	**252**	*e*P	**Pn**	**23 06 15.5**	**+0.5**
CHY	baz=251			*e*S	**Sb**	**23 06 40.4**	**+0.3**
TWK	**Hsinying** baz=244	**1.84**	**244**	*e*P	**Pn**	**23 06 17.2**	**+1.7**
TWK	baz=244			S	**Sb**	**23 06 41.0**	**-0.2**
CHN1	**Nanshi** baz=242	**1.84**	**241**	*e*P	**Pb**	**23 06 18.3**	**-0.3**
CHN1	baz=242			S	**Sb**	**23 06 41.0**	**-0.3**
SGST	**Jiashian** baz=238	**1.85**	**238**	P	**Pn**	**23 06 17.5**	**+1.8**
SGST	baz=238			S	**Sb**	**23 06 41.0**	**-0.6**
SLGT	**Liugui** baz=225	**1.86**	**235**	*e*P	**Pb**	**23 06 17.8**	**-1.0**
SLGT	baz=225			S	**Sb**	**23 06 41.3**	**-0.4**
JISG	**Ishigakijimahi**	**1.91**	**74**	P	**Pn**	**23 06 17.3**	**+0.8**
JISG				*e*S	**Sn**	**23 06 38.9**	**-0.9**
WSF	**Szhu** baz=257	**1.94**	**257**	*e*P	**Pn**	**23 06 18.6**	**+1.7**
WSF	baz=257			*e*S	**Sb**	**23 06 43.5**	**-0.6**
ICHU	**Yijhu** baz=249	**1.98**	**249**	*e*P	**Pn**	**23 06 18.9**	**+1.5**
ICHU	baz=249			*e*S	**Sn**	**23 06 43.5**	**+2.2**
SSD	**Sandimen** baz=223	**2.02**	**229**	*e*P	**Pn**	**23 06 18.3**	**+0.3**
SSD	baz=223			*e*S	**Sn**	**23 06 42.9**	**+0.5**
SCST	**Cishan** baz=223	**2.03**	**234**	*e*P	**Pn**	**23 06 20.3**	**+2.1**
SCST	baz=223			*e*S	**Sb**	**23 06 45.7**	**-0.9**
CHN8	**Yiju** baz=250	**2.04**	**249**	*e*S	**Sb**	**23 06 45.5**	**-1.4**
TSMG	**Majia** baz=223	**2.04**	**228**	*e*P	**Pn**	**23 06 20.0**	**+1.8**
TSMG	baz=223			*e*S	**Sn**	**23 06 44.6**	**+1.7**
MASBT	**Mashibuluo** baz=222	**2.11**	**226**	*e*P	**Pn**	**23 06 20.9**	**+1.6**
MASBT	baz=222			*e*S	**Sn**	**23 06 45.5**	**+0.8**
LAY	**Lan-yu** baz=209	**2.15**	**199**	*e*P	**Pn**	**23 06 19.2**	**-0.6**
LAY	baz=209			*e*S	**Sn**	**23 06 45.2**	**-0.4**
EAST	**Anshuo** baz=219	**2.15**	**218**	*e*P	**Pn**	**23 06 20.0**	**+0.2**
SSPT	**Xinbi** baz=220	**2.24**	**225**	*e*P	**Pn**	**23 06 22.0**	**+0.9**
SSPT	baz=220			*e*S	**Sn**	**23 06 49.1**	**+1.2**
JTJ	**Tarama**	**2.27**	**75**	P	**Pn**	**23 06 23.4**	**+2.0**
JTJ				S	**Sb**	**23 06 51.5**	**-2.0**
SCZT	**Fangliau** baz=218	**2.29**	**222**	*e*P	**Pn**	**23 06 22.0**	**+0.2**
SCZT	baz=218			*e*S	**Sn**	**23 06 49.4**	**+0.2**
SLIU	**Shizi** baz=218	**2.31**	**217**	*e*S	**Sn**	**23 06 49.1**	**-0.5**
HEN	**Hengchun** baz=217	**2.51**	**215**	*e*S	**Sn**	**23 06 56.1**	**+1.5**
TSEB	**Hengchuen, Pin** baz=214	**2.52**	**211**	*e*S	**Sn**	**23 06 57.5**	**+2.7**
TWKBT	**Hengchun** baz=215	**2.53**	**213**	*e*P	**Pn**	**23 06 25.6**	**+0.6**
TWKBT	baz=215			*e*S	**Sn**	**23 06 54.7**	**-0.3**
TWK1	**Hengchun** baz=215	**2.53**	**213**	*e*S	**Sn**	**23 06 56.4**	**+1.4**
WDGT	**Dungji** baz=240	**2.54**	**252**	*e*P	**Pn**	**23 06 26.2**	**+1.0**
WDGT	baz=240			S	**Sn**	**23 06 55.0**	**-0.4**
PHUB	**P'eng-hu** baz=258	**2.55**	**258**	*e*P	**Pn**	**23 06 26.7**	**+1.4**
PHUB	baz=258			*e*S	**Sn**	**23 06 56.1**	**+0.6**
PNG	**Penghu** baz=259	**2.55**	**259**	P	**Pn**	**23 06 26.7**	**+1.4**
PNG	baz=259			S	**Sn**	**23 06 56.6**	**+1.0**
PTTC	**Pingtan** baz=300	**2.69**	**302**	*e*S	**Sn**	**23 06 58.6**	**-0.3**
VWUC	**VWUC** baz=289	**2.74**	**290**	*e*P	**Pn**	**23 06 28.0**	**+0.1**
VWUC	baz=289			*e*S	**Sn**	**23 07 00.8**	**+0.7**
VCHM	**Qimei** baz=241	**2.76**	**252**	*e*S	**Sn**	**23 07 01.1**	**+0.4**
MATB	**Ma-tsu** baz=312	**2.96**	**315**	*e*P	**Pn**	**23 06 31.8**	**+0.9**
PTMZ	**Houxiangcun** baz=288	**3.04**	**289**	*e*P	**Pn**	**23 06 32.9**	**+0.9**
PTMZ	baz=288			*e*S	**Sn**	**23 07 08.1**	**+0.6**
LYJJ	**Jianjiangzhen** baz=314	**3.36**	**318**	*e*P	**Pn**	**23 06 38.5**	**+2.1**
LYJJ	baz=314			*e*S	**Sn**	**23 07 15.4**	**0.0**
XPSS	**Dashiqiu** baz=334	**3.41**	**327**	*e*P	**Pn**	**23 06 37.2**	**+0.1**
KNM	**Kinmen** baz=275	**3.53**	**276**	*e*P	**Pn**	**23 06 40.7**	**+1.9**
KNM	baz=275			*e*S	**Sn**	**23 07 22.6**	**+2.9**
MHZQ	**Yeshan** baz=303	**3.57**	**305**	*e*S	**Sn**	**23 07 21.0**	**+0.3**
KNMB	**Chin-men Tao** baz=276	**3.58**	**277**	*e*P	**Pn**	**23 06 39.0**	**-0.4**
KNMB	baz=276			*e*S	**Sn**	**23 07 20.7**	**-0.2**
AXDP	**Jialang** baz=270	**4.02**	**283**	*e*P	**Pn**	**23 06 45.2**	**-0.3**
AXDP	baz=270			*e*S	**Sn**	**23 07 31.9**	**+0.2**
KSRS	**Korea Array** comp=Z,35nm,18.5s,baz=0.0,slow=39	**14.18**	**19**	LR	LR	23 14 55.5	
SONM	**Songino Array** 0.6nm,0.6s,baz=150,slow=10.0,SNR=7.7	**26.86**	**336**	P	**P**	**23 11 23.0**	**-1.3**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=109,slow=7.8,SNR=4.0	**39.11**	**316**	P	**P**	**23 13 09.9**	**-0.9**
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=345,slow=8.9,SNR=1.9	**45.31**	**164**	P	**P**	**23 14 01.7**	**+0.2**
STKA	**Stephens Creek** 0.9nm,0.4s,baz=348,slow=9.3,SNR=2.9	**58.63**	**161**	P	**P**	**23 15 41.1**	**+0.6**

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*DRS **20** 23:16:47.8±0.0, 42°.57N×45°.57E, h13^{km}*
*NORS **20** 23:16:47.0±0.0, 42°.52N×45°.65E, h9^{km}, MPVA3.4*
*TIF **20** 23:16:48.6, 42°.48N×45°.74E, h20^{km}±1^{km}*
ISC 20 23:16:48.7±1.0, **42°.54N**±0°.02×**45°.61E**±0°.02, **h16**^{km}±9^{km},
n25, σ**1^{s}.22**/50, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh** 56nm,0.1s	**0.47**	**74**	*i* Pg	**Pg**	**23 16 57.4**	**-0.7**
BTLR	125nm,0.3s			*e*Sg	**Sg**	**23 17 04.3**	**-0.2**
DVE	**Vedeno**	**0.57**	**42**	*e*Pg	**Pg**	**23 16 59.1**	**-0.8**
DVE				*e*Sg	**Sb**	**23 17 07.2**	**-1.1**
GROC	**Groznyy**	**0.68**	**12**	*e*Pg	**Pn**	**23 17 02.4**	**-1.3**
GROC				*e*Sg	**Sn**	**23 17 12.8**	**-1.2**
KMGR	**Komgaron**	**0.75**	**314**	*e*Pg	**Pn**	**23 17 03.9**	**-0.9**
KMGR				*e*Sg	**Sn**	**23 17 16.1**	**+0.1**
XNZR	**Khunzakh**	**0.81**	**89**	*e*Pg	**Pg**	**23 17 04.2**	**-0.3**
XNZR				*e*Sg	**Sb**	**23 17 15.7**	**+0.3**
LGD	**Lagodekhi**	**0.84**	**146**	P	**Pb**	**23 17 05.5**	**+0.4**
LGD				S	**Sg**	**23 17 16.2**	**0.0**
DLMR	**Dylym** 27nm,0.3s	**0.92**	**54**	*e*Pg	**Pb**	**23 17 06.1**	**-0.2**
DLMR	176nm,0.2s			*e*Sg	**Sb**	**23 17 18.7**	**+0.3**
KRNR	**Karanay** 18nm,0.4s	**1.00**	**73**	*i* Pg	**Pb**	**23 17 07.3**	**-0.4**
KRNR	24nm,0.4s			*e*Sg	**Sb**	**23 17 20.6**	**-0.1**
GNBR	**Gunib** 41nm,0.2s	**1.01**	**98**	*i* Pg	**Pg**	**23 17 08.0**	**-0.3**
GNBR	71nm,0.6s			*e*Sg	**Sg**	**23 17 21.8**	**+0.2**
DBC	**Dubki** 16nm,0.3s	**1.02**	**61**	*i* Pg	**Pb**	**23 17 07.5**	**-0.5**
DBC	25nm,0.4s			*e*Sg	**Sn**	**23 17 22.9**	**+0.4**
ARKR	**Arakani** 22nm,0.4s	**1.03**	**86**	*i* Pg	**Pb**	**23 17 08.0**	**-0.1**
ARKR	38nm,0.5s			*e*Sg	**Sn**	**23 17 22.8**	**+0.2**
BUJR	**Buynaksk** 13nm,0.2s	**1.14**	**75**	*i* Pg	**Pg**	**23 17 11.0**	**+0.2**
BUJR	63nm,0.2s			*e*Sg	**Sn**	**23 17 27.4**	**+1.9**
DDFL	**Dedoflistskaro**	**1.16**	**161**	P	**Pg**	**23 17 13.9**	**+3.0**
DDFL				S	**Sn**	**23 17 26.9**	**+1.1**
ARNR	**Ardon**	**1.17**	**304**	*e*Pg	**Pg**	**23 17 11.6**	**+0.4**
ARNR				*e*Sg	**Sn**	**23 17 29.2**	**+3.1**
KORR	**Kora**	**1.26**	**296**	*e*Pg	**Pg**	**23 17 13.4**	**+0.4**
KORR				*e*Sg	**Sg**	**23 17 31.5**	**+2.0**
ZEI	**Tsey**	**1.28**	**282**	*e*Pg	**Pg**	**23 17 11.7**	**-1.8**
ZEI				*e*Sg	**Sg**	**23 17 31.3**	**+1.0**
TRKR	**Terskaya**	**1.35**	**332**	*e*Pg	**Pg**	**23 17 15.1**	**+0.4**
TRKR				*e*Sg	**Sg**	**23 17 34.3**	**+2.1**
STDR	**Stavd-Durt**	**1.41**	**307**	*e*Pg	**Pg**	**23 17 16.0**	**+0.2**
STDR				*e*Sg	**Sg**	**23 17 37.1**	**+3.0**
KZRT	**Kazreti**	**1.46**	**219**	P	**Pg**	**23 17 16.2**	**-0.6**
KZRT				S	**Sg**	**23 17 35.9**	**+0.1**
LSNR	**Lesken**	**1.50**	**300**	*e*Pg	**Pg**	**23 17 17.7**	**0.0**
LSNR				*e*Sg	**Sg**	**23 17 39.2**	**+1.9**
DIGR	**Digorskoe uzhe**	**1.54**	**284**	*e*Pg	**Pg**	**23 17 16.8**	**-1.5**
DIGR				*e*Sg	**Sg**	**23 17 37.9**	**-0.4**
PRTR	**Priterechnaya**	**1.55**	**322**	*e*Pg	**Pg**	**23 17 17.8**	**-0.8**
PRTR				*e*Sg	**Sg**	**23 17 40.7**	**+1.9**
DMNI	**Dmanisi**	**1.60**	**222**	P	**Pg**	**23 17 18.4**	**-1.2**
DMNI				S	**Sg**	**23 17 40.2**	**-0.2**
BKRG	**Bakuriani**	**1.73**	**244**	P	**Pg**	**23 17 21.1**	**-0.9**
BKRG				S	**Sg**	**23 17 44.9**	**+0.3**
TKB	**Tkibuli**	**1.94**	**265**	P	**Pg**	**23 17 24.5**	**-1.5**
TKB				S	**Sg**	**23 17 50.7**	**-0.6**

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*MOS **20** 23:27:15.9±0.0, 42°.53N×45°.67E, h16^{km}, MPVA3.7*
*NORS **20** 23:27:15.7±0.0, 42°.51N×45°.65E, h9^{km}, MPVA3.7*
*DRS **20** 23:27:17.0±0.0, 42°.57N×45°.59E, h14^{km}, ML2.6/7*
*TIF **20** 23:27:17.3, 42°.50N×45°.72E, h20^{km}±1^{km}*
ISC 20 23:27:18.1±1.0, **42°.56N**±0°.02×**45°.66E**±0°.02, **h16**^{km}±8^{km},
n34, σ**0^{s}.89**/68, **9C-5D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh** 108nm,0.1s	**0.43**	**75**	⇑*i*Pg	**Pg**	**23 27 26.0**	**-0.8**
BTLR	273nm,0.3s			⇓*e*Sg	**Sg**	**23 27 32.6**	**-0.1**
DVE	**Vedeno**	**0.53**	**41**	*e*Pg	**Pg**	**23 27 27.7**	**-0.9**
DVE				*e*Sg	**Sg**	**23 27 35.5**	**-0.2**
GROC	**Groznyy**	**0.65**	**9**	*e*Pg	**Pg**	**23 27 30.9**	**0.0**
GROC				*e*Sg	**Sb**	**23 27 41.3**	**+1.4**
KMGR	**Komgaron**	**0.77**	**311**	*e*Pg	**Pg**	**23 27 32.2**	**-0.9**
KMGR				*e*Sg	**Sb**	**23 27 44.8**	**+1.4**
XNZR	**Khunzakh**	**0.77**	**91**	*e*Pg	**Pg**	**23 27 32.8**	**-0.4**
XNZR				*e*Sg	**Sb**	**23 27 43.6**	**0.0**
LGD	**Lagodekhi**	**0.84**	**149**	P	**Pb**	**23 27 33.8**	**-0.6**
LGD				S	**Sb**	**23 27 44.8**	**-0.6**
LGD	**Lagodekhi**	**0.84**	**149**	*e*Pg	**Pb**	**23 27 33.9**	**-0.4**
LGD				*e*Sg	**Sb**	**23 27 44.7**	**-0.6**
VLKR	**Vladikavkaz**	**0.87**	**304**	*e*Pg	**Pb**	**23 27 34.2**	**-0.7**
VLKR				*e*Sg	**Sg**	**23 27 47.6**	**+1.1**
DLMR	**Dylym** 49nm,0.2s	**0.88**	**54**	⇑*e*Pg	**Pb**	**23 27 34.5**	**-0.5**
DLMR	400nm,0.5s			⇑*e*Sg	**Sg**	**23 27 47.3**	**+0.5**
KRNR	**Karanay** 31nm,0.4s	**0.96**	**73**	⇑*i*Pg	**Pb**	**23 27 35.9**	**-0.5**
KRNR	56nm,0.2s			⇓*e*Sg	**Sb**	**23 27 49.0**	**+0.1**
DBC	**Dubki** 29nm,0.3s	**0.98**	**61**	⇑*e*Pg	**Pb**	**23 27 36.3**	**-0.4**
DBC	56nm,0.4s			⇓*e*Sg	**Sn**	**23 27 50.6**	**-0.2**
GNBR	**Gunib** 84nm,0.2s	**0.98**	**99**	⇑*i*Pg	**Pb**	**23 27 36.6**	**-0.1**
GNBR	117nm,0.2s			⇓*e*Sg	**Sn**	**23 27 50.9**	**+0.1**
ARKR	**Arakani** 43nm,0.5s	**0.99**	**87**	⇑*i*Pg	**Pb**	**23 27 36.6**	**-0.2**
ARKR	78nm,0.6s			⇑*e*Sg	**Sg**	**23 27 50.0**	**-0.1**
BUJR	**Buynaksk** 23nm,0.2s	**1.10**	**75**	⇓*e*Pg	**Pn**	**23 27 39.0**	**+0.1**
BUJR	138nm,0.2s			⇑*e*Sg	**Sg**	**23 27 55.4**	**+1.6**
BTKR	**Batakoyurt**	**1.16**	**315**	*e*Pg	**Pg**	**23 27 40.4**	**0.0**
BTKR				*e*Sg	**Sg**	**23 27 57.9**	**+2.4**
DDFL	**Dedoflistskaro**	**1.16**	**163**	P	**Pg**	**23 27 42.6**	**+2.0**
DDFL				S	**Sn**	**23 27 54.8**	**-0.5**
ARNR	**Ardon**	**1.19**	**302**	*e*Pg	**Pn**	**23 27 40.2**	**+0.2**
ARNR				*e*Sg	**Sg**	**23 27 57.8**	**+1.3**
KORR	**Kora**	**1.28**	**295**	*e*Pg	**Pn**	**23 27 41.7**	**+0.3**
KORR				*e*Sg	**Sg**	**23 28 00.7**	**+1.1**
ZEI	**Tsey**	**1.32**	**281**	*e*Pg	**Pn**	**23 27 40.3**	**-1.7**
ZEI				*e*Sg	**Sg**	**23 28 00.3**	**-0.4**
TRKR	**Terskaya**	**1.35**	**330**	*e*Pg	**Pb**	**23 27 43.2**	**+0.3**
TRKR				*e*Sg	**Sg**	**23 28 02.6**	**+1.0**
STDR	**Stavd-Durt**	**1.43**	**305**	*e*Pg	**Pb**	**23 27 44.4**	**+0.1**
STDR				*e*Sg	**Sg**	**23 28 05.7**	**+1.6**
KANR	**Karaman**	**1.49**	**64**	*e*Pg	**Pn**	**23 27 44.8**	**+0.6**
KANR				*e*Sg	**Sg**	**23 28 08.0**	**+1.9**
KZRT	**Kazreti**	**1.50**	**219**	P	**Pn**	**23 27 44.7**	**+0.3**
KZRT				S	**Sb**	**23 28 04.6**	**+0.2**
URKR	**Urkarakh**	**1.52**	**104**	*e*Pg	**Pb**	**23 27 46.5**	**+0.6**
URKR				*e*Sg	**Sg**	**23 28 06.7**	**-0.2**
LSNR	**Lesken**	**1.53**	**299**	*e*Pg	**Pb**	**23 27 45.7**	**-0.3**
LSNR				*e*Sg	**Sg**	**23 28 07.7**	**+0.4**
PRTR	**Priterechnaya**	**1.56**	**320**	*e*Pg	**Pb**	**23 27 46.3**	**-0.3**
PRTR				*e*Sg	**Sg**	**23 28 08.6**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.57**	**283**	*e*Pg	**Pn**	**23 27 44.7**	**-0.8**
DIGR				*e*Sg	**Sn**	**23 28 05.8**	**+0.2**
DMNI	**Dmanisi**	**1.65**	**222**	P	**Pn**	**23 27 46.9**	**+0.5**
DMNI				S	**Sb**	**23 28 08.7**	**+0.1**
BKRG	**Bakuriani**	**1.78**	**244**	P	**Pb**	**23 27 49.6**	**-0.7**
BKRG				S	**Sb**	**23 28 13.3**	**+0.8**
AKT	**Akhty**	**1.88**	**124**	*e*Pg	**Pb**	**23 27 51.1**	**-1.0**
AKT				*e*Sg	**Sb**	**23 28 14.2**	**-1.2**
TKB	**Tkibuli**	**1.98**	**265**	P	**Pb**	**23 27 52.9**	**-0.9**
TKB				S	**Sb**	**23 28 18.9**	**+0.6**
KBTC	**Kuba-Taba**	**2.07**	**308**	*e*Pg	**Pb**	**23 27 54.9**	**-0.4**
KBTC				*e*Sg	**Sb**	**23 28 20.0**	**-0.8**
NEY	**Neytrino**	**2.27**	**289**	*e*Pn	**Pb**	**23 27 57.0**	**-1.7**
NEY				*e*Sn	**Sb**	**23 28 26.0**	**-0.6**
KBZ	**Khabaz**	**2.34**	**301**	*e*Pn	**Pb**	**23 27 58.1**	**-1.7**
KBZ				*e*Sn	**Sb**	**23 28 27.8**	**-0.6**

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*IDC **20** 23:54:28.8±5.2, 5°.71S×153°.53E, h86^{km}±41^{km}, mb3.7/11,*
mb1 3.9/12, mb1mx3.6/43, mbtmp4.1/12, MS3.3/2,
Ms1 3.3/2, ms1mx2.9/30, Error ellipse: s-maj=45.1km
s-min=18.7km az=113.0
ISC 20 23:54:22.4±1.2, **5°.7S**±0°.2×**153°.9E**±0°.2, **h35**^{km}, **n16**,
σ**1^{s}.25**/16, **mb4.0**/11, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby** 4.5nm,0.3s,baz=74,slow=6.1,SNR=6.1	**7.59**	**241**	P	**Pn**	**23 56 12.4**	**+1.7**
PMG	2.6nm,0.3s,baz=146,slow=23,SNR=1.6			S	**Sn**	**23 57 36.3**	**+0.7**
PMG	comp=Z,209nm,22.0s,baz=22,slow=37			LR	LR	23 59 01.4	
WRA	**Warramunga Arr** 2.2nm,0.8s,baz=55,slow=9.5,SNR=9.0	**23.67**	**232**	P	**P**	**23 59 30.5**	**-0.5**
WRA	0.6nm,0.5s,baz=57,slow=2.4,SNR=8.3			PcP	**PcP**	**00 03 14.7**	**-0.3**
ASAR	**Alice Springs** 3.0nm,0.9s,baz=57,slow=9.0,SNR=22	**26.22**	**225**	P	**P**	**23 59 54.1**	**-0.2**
ASAR	0.5nm,0.5s,baz=61,slow=2.9,SNR=4.8			PcP	**PcP**	**00 03 19.6**	**-1.1**
H11S3	**WAKE ISLAND Hy** baz=208,slow=76,SNR=6.1	**27.19**	**27**	T	T	00 28 19.6	
H11S2	**WAKE ISLAND Hy** baz=208,slow=76,SNR=6.4	**27.19**	**27**	T	T	00 28 19.5	
H11S1	**WAKE ISLAND Hy** baz=208,slow=76,SNR=6.9	**27.21**	**27**	T	T	00 28 19.1	
FITZ	**Fitzroy Crossi** 3.3nm,0.7s,baz=63,slow=7.4,SNR=11	**30.18**	**244**	P	**P**	**00 00 27.8**	**-1.9**
FITZ	comp=Z,71nm,18.1s,baz=352,slow=37			LR	LR	00 13 00.6	
KSRS	**Korea Array** 0.5nm,0.4s,baz=148,slow=7.2,SNR=1.7	**49.32**	**333**	P	**P**	**00 03 06.8**	**-1.4**

USRK	Ussuriysk Ar.	53.48	341	P	P	00 03 38.3	-1.0
	1.0nm,0.7s,baz=133,slow=5.0,SNR=2.1						
PETK	Petropavlovsk-	58.71	3	P	P	00 04 18.6	+2.1
	1.2nm,0.5s,baz=184,slow=5.8,SNR=2.0						
SONM	Songino Array	67.69	328	P	P	00 05 16.5	+0.2
	1.3nm,0.5s,baz=147,slow=5.8,SNR=4.8						
MKAR	Makanchi Array	81.73	319	P	P	00 06 37.4	-0.2
	0.6nm,0.4s,baz=89,slow=9.2,SNR=15						
ZALV	Zalesovo Beam	82.52	326	P	P	00 06 40.4	-1.1
	1.5nm,0.5s,baz=115,slow=5.5,SNR=3.8						
ILAR	Eielson Array	82.62	22	P	P	00 06 43.0	+1.1
	0.8nm,0.6s,baz=247,slow=5.0,SNR=19						
YKA	Yellowknife Ar	95.75	28	P	P	00 07 45.0	+0.4
	0.3nm,0.8s,baz=266,slow=4.6,SNR=4.3						
TORD	Torodi Ar. Bea	151.61	287	PKPbc	PKPbc	00 14 12.9	-1.2
	0.5nm,0.3s,baz=99,slow=2.2,SNR=6.8						

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*IDC **21** 00:02:49.6±0.6, 2.°82S×122.°44E, h0^{km}, mb4.1/16, mb1 4.3/20, mb1mx4.2/35, mbtmp4.2/20, ML4.3/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/38, Error ellipse: s-maj=20.6km s-min=13.3km az=69.0*

*DJA **21** 00:02:53.2±0.2, 3°S±2°×12°2E±°, h10^{km}, M4.6/26, mb4.7/16, mB5.0/6, MLv4.6/26, Mw(mB)4.4/6*

*NEIC **21** 00:02:55.2±2.5, 2.°88S±0.°06×122.°46E±0.°07, h39^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=9.5km s-min=8.4km az=103.0*

ISC 21 00:02:55.3±0.4**, 2.°87S**±0.°05×**122.°50E**±0.°05**, h35^{km}, n119, σ1.^{s}55**/117**, mb4.5**/38**, MS3.8**/6**, 2C, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.83	8	Pn	Pn	00 03 24.5	+0.2
LUWI	Luwuk	1.83	8	P	Pn	00 03 24.6	+0.2
APSI	Ampana	2.12	336	P	Pn	00 03 29.0	+0.7
TTSI	Tana Toraja	2.68	266	P	Pn	00 03 35.0	-1.0
BNSI	Bone	2.83	237	P	Pn	00 03 37.6	-0.5
SPSI	Sidrap Palu	2.94	248	P	Pn	00 03 39.4	-0.1
MRSI	Marisa	3.37	350	P	Pn	00 03 45.1	-0.4
BKSI	Bulukumba	3.40	224	P	Pn	00 03 45.6	-0.3
KAPI	Kappang	3.47	232	Pn	Pn	00 03 46.6	-0.3
	18nm,0.3s,baz=80,slow=3.7,SNR=22						
KAPI				Sn	Sn	00 04 25.6	-1.2
	28nm,0.3s,baz=152,slow=23,SNR=7.8						
KAPI				LR	LR	00 04 50.4	
	comp=Z,275nm,19.0s,baz=38,slow=35						
KAPI	Kappang	3.47	232	Pn	Pn	00 03 46.4	-0.5
GTOI	Gorontalo	3.52	8	P	Pn	00 03 49.8	+2.3
KMSI	Cibinong	3.73	23	P	Pn	00 03 51.4	+1.0
BSSI	Bau Bau, Buton	3.82	212	P	Pn	00 03 51.8	+0.1
MPSI	Mapaga	4.11	321	P	Pn	00 03 55.7	0.0
TOLI2	Tolitoli	4.31	336	Pn	Pn	00 03 59.2	+0.8
NLAI	Namlea	4.61	95	P	Pn	00 04 03.8	+1.3
MMRI	Maumere	5.74	183	Pn	Pn	00 04 16.9	-1.1
MMRI	Maumere	5.74	183	P	Pn	00 04 17.6	-0.4
	0.7nm125nm,0.8s						
BKB	Balikpapan	5.82	286	Pn	Pn	00 04 20.7	+1.5
EDFI	Ende, Flores	5.90	188	P	Pn	00 04 19.0	-1.4
	0.2nm1μm42nm,0.6s						
TNTI	Ternate	6.06	53	Pn	Pn	00 04 22.3	-0.2
TNTI	Ternate	6.06	53	P	Pn	00 04 22.6	+0.1
	0.6nm83nm,0.5s						
KBKI	Kotabaru	6.34	266	P	Pn	00 04 26.1	-0.2
	0.2nm2μm68nm,0.9s						
MSAI	Masohi	6.44	94	P	Pn	00 04 29.4	+1.7
	0.1nm1μm18nm,0.6s						
SOEI	Soe	7.06	166	Pn	Pn	00 04 38.3	+1.9
SOEI	Soe	7.06	166	P	Pn	00 04 38.1	+1.7
	0.3nm989nm105nm,1.0s						
WSI	Waingapu	7.10	198	P	Pn	00 04 48.5	+12
BATI	Baumata	7.38	171	Pn	Pn	00 04 41.1	+0.5
	3.4nm,0.3s,baz=340,slow=3.0,SNR=5.6						
BATI				LR	LR	00 07 48.7	
	comp=Z,464nm,18.2s,baz=29,slow=40						
BATI	Baumata	7.38	171	P	Pn	00 04 42.5	+1.8
	0.1nm23nm,1.1s						
WBSI	Waikabubak, Su	7.40	205	P	Pn	00 04 42.4	+1.4
	0.2nm53nm,0.8s						
BASI	Baing, Sumba	7.55	195	P	Pn	00 04 43.8	+0.9
	0.3nm1μm56nm,0.9s						
PLAI	Plampang	7.56	218	P	Pn	00 04 56.0	+13
TWSI	Taliwang, Sumb	8.08	224	P	Pn	00 04 49.6	-0.6
	9.7nm,1.0s						
MYLDM	Lahad Datu	8.94	333	Pn	Pn	00 05 01.6	-0.4
SWI	Sorong	8.98	77	P	Pn	00 05 03.8	+1.2
	40nm,0.6s						
SIJI	Sorong	8.98	77	Pn	Pn	00 05 03.0	+0.3
	8.9nm,0.3s,baz=259,slow=14,SNR=12						
SIJI				Sn	Sn	00 06 43.6	+0.9
	1.5nm,0.3s,baz=48,slow=19,SNR=4.2						
FAKI	Fak Fak	9.74	91		Pn	00 05 15.4	+2.5
DAV	Davao City (W)	10.34	17	LR	LR	00 09 33.6	
	comp=Z,201nm,19.2s,baz=276,slow=39						
LEM	Lembang	15.34	255	LR	LR	00 14 02.3	
	comp=Z,168nm,19.3s,baz=62,slow=44						
FITZ	Fitzroy Crossi	15.45	169	Pn	Pn	00 06 31.7	+1.0
	0.6nm,0.3s,baz=2.6,slow=7.1,SNR=22						
FITZ	Fitzroy Crossi	15.45	169		P	00 06 33.6	-1.2
KLSI		17.82	264	P	P	00 07 05.9	+4.7
LHSI	Lahat	18.97	267	P	Pn	00 07 21.3	+6.6
WB0	Warramunga Arr	20.42	146	P	P	00 07 28.1	-1.5
WRA	Warramunga Arr	20.53	147	P	P	00 07 28.7	-2.1
	1.5nm,0.7s,baz=321,slow=11,SNR=10						
WRA	Warramunga Arr	20.53	147	P	P	00 07 29.5	-1.4
WB2	Warramunga Arr	20.54	147	P	P	00 07 29.0	-2.0
WR0	Warramunga Arr	20.66	146	P	P	00 07 30.5	-1.7
WR0				IAmb	IAmb	00 07 35.5	
	comp=Z,9.8nm,0.9s						
SDSI	Sungai Dareh	21.15	275	P	P	00 07 42.4	+4.8
COEN	Coen	23.20	120	P	P	00 07 59.1	-0.3
ASAR	Alice Springs	23.43	153	P	P	00 08 00.5	-1.1
	comp=Z,3.4nm,0.9s,baz=350,slow=18,SNR=19						
ASAR				PcP	PcP	00 11 47.4	0.0
	comp=Z,0.7nm,0.6s,baz=352,slow=1.6,SNR=5.6						
ASAR				LR	LR	00 17 47.6	
	comp=Z,136nm,19.5s,baz=339,slow=38						
ASAR	Alice Springs	23.43	153	P	P	00 08 01.2	-0.4
RPSI	Rantau Prapat	24.21	283	P	P	00 08 07.1	-1.8
PSI	Prapat	24.23	283	P	P	00 08 07.1	-2.2
	comp=Z,3.0nm,0.5s,baz=180,slow=14,SNR=2.4						
PSI				LR	LR	00 19 46.7	
	comp=Z,126nm,19.2s,baz=94,slow=42						
CHAI	Chaiyaphum	27.56	313	P	P	00 08 40.0	+0.8
NONG	Nongkai	28.22	318	P	P	00 08 49.0	+3.9
CM04	Chiang Mai Arr	31.36	313	P	P	00 09 14.2	+1.3
CM09	Chiang Mai Arr	31.38	313	P	P	00 09 21.2	+8.1
CM05	Chiang Mai Arr	31.38	313	P	P	00 09 14.0	+0.8
CM01	Chiang Mai Arr	31.39	313	P	P	00 09 15.0	+1.8
CM02	Chiang Mai Arr	31.40	313	P	P	00 09 14.5	+1.2
CM35	Chiang Mai Arr	31.41	314	P	P	00 09 14.0	+0.6
CMAR	Chiang Mai Arr	31.42	313	P	P	00 09 13.1	-0.4
	comp=Z,3.2nm,0.7s,baz=137,slow=7.0,SNR=22						
CMAR				LR	LR	00 24 57.4	
	comp=Z,29nm,19.5s,baz=305,slow=42						
CM13	Chiang Mai Arr	31.42	313	P	P	00 09 15.0	+1.5
CM34	Chiang Mai Arr	31.52	314	P	P	00 09 15.0	+0.6
CHTO	Chiang Mai	31.65	314	P	P	00 09 15.4	-0.1
CHTO				IAmb	IAmb	00 09 16.9	
	comp=Z,18nm,1.4s						
CM33	Chiang Mai Arr	31.65	314	P	P	00 09 16.0	+0.5
KMI	Kunming	33.79	327	⇑P	P	00 09 35.3	+0.9
KMI				pmax	pmax		
	comp=Z,3.0nm,1.4s						
STKA	Stephens Creek	33.99	150	P	P	00 09 35.8	-0.1
	comp=Z,5.0nm,0.8s,baz=324,slow=8.4,SNR=7.0						
STKA	Stephens Creek	33.99	150	P	P	00 09 36.0	+0.1
NJ2	Nanjing	34.90	355	*e*P	P	00 09 44.3	+0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
JMN	Monobe	37.95	16	P	P	00 10 10.3	+0.6
JWT	Wachi	39.83	17	P	P	00 10 26.6	+1.2
JWT				IAmb	IAmb	00 10 36.5	
	comp=Z,40nm,1.4s						
JGF	Kuroka	40.72	19	P	P	00 10 34.2	+1.4
JGF				IAmb	IAmb	00 10 36.6	
	comp=Z,20nm,1.5s						
MJAR	Matsushiro Arr	41.86	19	P	P	00 10 41.8	-0.4
	comp=Z,4.5nm,0.8s,baz=191,slow=8.7,SNR=10						
MAT	Matsushiro	41.86	19	P	P	00 10 41.8	-0.3
MJB9	Matsu-Tunnel	41.86	19	P	P	00 10 44.4	+2.3
LZH	Lanzhou	42.49	337	⇑P	P	00 10 49.3	+1.8
LZH				pP	sP	00 11 01.0	0.0
LZH				sP	pwP	00 11 07.9	+7.8
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,88nm,6.5s						
LZH				LR	LR		
	comp=N,280nm,13.6s						
LZH				LR	LR		
	comp=E,330nm,13.0s						
LZH				LR	LR		
	comp=Z,150nm,17.4s						
ODAN	Odare	44.97	313	*e*P	P	00 11 07.6	0.0
	comp=Z,12nm,0.8s						
TAPN	Taplejung	45.02	314	*e*P	P	00 11 07.7	-0.5
	comp=Z,17nm,1.0s						
RAMN	Ramite	45.59	313	*e*P	P	00 11 12.5	-0.1
	comp=Z,22nm,0.9s						
GUN	Gumba	46.67	313	*e*P	P	00 11 20.5	-0.7
	comp=Z,26nm,0.9s						
PKI	Pulchoki	46.82	313	*e*P	P	00 11 21.5	-0.9
PKIN	Phulchoki	46.83	313	*e*P	P	00 11 21.6	-0.8
	comp=Z,10nm,0.7s						
GTA	Gaotai	46.97	336	*e*P	P	00 11 22.5	-0.6
GTA				pP	pwP	00 11 34.9	-1.0
GTA				sP	sP	00 11 40.8	+4.2
GTA				PcP	PcP	00 12 55.8	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,71nm,6.3s						
GTA				LR	LR		
	comp=N,160nm,18.2s						
GTA				LR	LR		
	comp=E,210nm,19.6s						
GTA				LR	LR		
	comp=Z,190nm,16.7s						
USRK	Ussuriysk Ar.	47.62	9	P	P	00 11 27.8	-0.1
	comp=Z,4.2nm,0.6s,baz=193,slow=6.5,SNR=6.6						
USRK	Ussuriysk Ar.	47.62	9	P	P	00 11 29.6	+1.6
DANN	Dangsing	48.46	313	*e*P	P	00 11 34.2	-0.9
	comp=Z,33nm,0.7s						
JKA	Kamikawa-asahi	50.13	19	P	P	00 11 48.5	+1.3
ULN	Ulaanbaatar	52.30	347	P	P	00 12 03.2	-0.5
ULN				IAmb	IAmb	00 12 06.7	
	comp=Z,2.2nm,0.8s						
SONM	Songino Array	52.43	346	P	P	00 12 03.1	-1.4
	comp=Z,1.3nm,0.7s,baz=170,slow=7.4,SNR=13						
SONM	Songino Array	52.43	346	P	P	00 12 03.7	-0.8
WMQ	Urumqi	55.99	330	*e*P	P	00 12 32.3	+1.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,47nm,5.9s						
KSH	Kashi	60.00	320	P	P	00 12 58.8	+0.1
KSH				pP	sP	00 13 13.3	0.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,440nm,5.6s						
MK31	Makanchi Array	60.80	329	P	P	00 13 03.1	-0.8
MK31				IAmb	IAmb	00 13 04.8	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	60.80	329	P	P	00 13 03.0	-0.9
	comp=Z,3.9nm,0.9s,baz=129,slow=7.5,SNR=28						
KBL	Kabul	62.43	312	P	P	00 13 14.4	-1.0
KBL				IAmb	IAmb	00 13 21.7	
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	62.64	322	P	P	00 13 16.2	-0.4
AAK				IAmb	IAmb	00 13 23.9	
	comp=Z,2.5nm,1.0s						
PEA0B	Petropavlovsk-	63.10	23	P	P	00 13 21.5	+2.3
PETK	Petropavlovsk-	63.10	23	P	P	00 13 20.1	+0.8
	comp=Z,1.8nm,0.6s,baz=199,slow=3.5,SNR=5.0						
PETK	Petropavlovsk-	63.10	23	P	P	00 13 20.9	+1.6
ZALV	Zalesovo Beam	64.72	336	P	P	00 13 27.8	-2.1
	comp=Z,1.0nm,0.7s,baz=134,slow=6.4,SNR=5.6						
ZALV	Zalesovo Beam	64.72	336	P	P	00 13 27.0	-2.8
YAK	Yakutsk	64.95	4	P	P	00 13 31.1	-0.1
KURK	Kurchatov	65.21	331	P	P	00 13 30.7	-2.4
KURK				IAmb	IAmb	00 13 33.8	
	comp=Z,6.4nm,0.9s						
BRVK	Borovoye	70.75	330	P	P	00 14 06.2	-1.7
BRVK				IAmb	IAmb	00 14 08.8	
	comp=Z,6.9nm,1.1s						
TIXI	Tiksi	74.50	2	P	P	00 14 29.1	-0.7
TIXI				IAmb	IAmb	00 14 30.8	
	comp=Z,22nm,1.2s						
ABKAR	Akbulak array	74.69	323	P	P	00 14 30.6	-0.8
ABKAR				IAmb	IAmb	00 14 30.9	
	comp=Z,3.4nm,1.1s						
AKTO	Aktyubinsk	76.30	324	LR	LR	00 51 50.5	
	comp=Z,214nm,18.7s,baz=344,slow=39						
VNDA	Vanda	77.49	172	P	P	00 14 46.6	-0.2
KBZ	Khabaz	84.47	314	P	P	00 15 24.0	-0.6
	comp=Z,1.3nm,0.9s,baz=92,slow=11,SNR=3.7						
KMBO	Kilima Mbogo	85.20	269	P	P	00 15 29.4	+0.1
	comp=Z,1.4nm,0.9s,baz=98,slow=4.6,SNR=3.7						
KLMR	Klimovskoe	89.06	331	*e*P	P	00 15 42.7	-3.9
KLMR				AMP		00 15 50.9	
	comp=Z,26nm,1.5s						
BRTR	Keskin Array B	90.94	310	P	P	00 15 54.5	-1.7
	comp=Z,0.6nm,0.7s,baz=135,slow=7.1,SNR=5.7						
ILAR	Eielson Array	92.84	25	P	P	00 16 02.3	-1.8
	comp=Z,0.4nm,0.9s,baz=221,slow=6.9,SNR=2.1						
AKASG	Malin Array Be	94.28	320	P	P	00 16 09.4	-1.6
	comp=Z,0.3nm,0.4s,baz=69,slow=3.7,SNR=5.0						
AKASG	Malin Array Be	94.28	320	P	P	00 16 09.2	-1.8
TORD	Torodi Ar. Bea	120.63	284	PKP	PKiKP	00 21 44.6	0.0
	comp=Z,0.8nm,0.8s,baz=79,slow=2.8,SNR=3.3						
CPUP	Villa Florida	150.97	180	PKPbc	PKPbc	00 22 45.5	+0.2
	comp=Z,3.1nm,0.8s,baz=82,slow=2.1,SNR=6.2						

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*BUT **21** 00:05:33±2.5, 44.°77N±0.°04×114.°78W±0.°03, h11^{km}±6^{km}, Md2.8, ML2.8/46(NEIC), Error ellipse: s-maj=6.0km s-min=3.0km az=187.0*

*NEIC **21** 00:05:34.3±2.7, 44.°71N±0.°03×114.°75W±0.°05, h16^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=4.6km az=105.0*

*IDC **21** 00:05:38.0±0.9, 44.°83N×115.°23W, h0^{km}, mb1 3.0/3, mb1mx2.9/37, mbtmp2.7/3, ML2.9/3, Error ellipse: s-maj=19.3km s-min=8.2km az=73.0*

ISC 21 00:05:33.5±0.9**, 44.°76N**±0.°04×**114.°80W**±0.°04**, h10^{km}, n32, σ1.^{s}35**/33**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCYI	Bear Canyon	1.09	114		Pg	00 05 53.4	-1.1
HLID	Hailey	1.23	167		Pn	00 05 56.1	-0.8
HLID				Sn	Sb	00 06 12.2	-0.6
MCMT	McKenzie Canyo	1.39	86		Pn	00 05 59.0	-0.2
MFID	Camas Ranch	1.53	209		Pn	00 06 01.3	+0.3
DLMT	Dillon	1.68	68		Pn	00 06 03.8	+0.7
DLMT				IAML		00 06 26.2	
	78nm,0.6s						
DLMT				IAML		00 06 27.4	
	110nm,0.6s						
BMO	Blue Mountains	1.79	274		Pn	00 06 04.3	-0.2
BMO				IAML		00 06 31.5	
	85nm,0.5s						
BMO				IAML		00 06 33.6	
	75nm,0.3s						
LRM	Limekiln Ridge	1.97	56	Pn	Pb	00 06 09.5	-0.1
F10A	Beach Ranch, E	2.10	306	Pn	Pn	00 06 09.0	+0.2
MSO	Missoula	2.16	16	Pn	Pn	00 06 08.9	-0.7
MSO				IAML		00 06 42.2	
	70nm,0.6s						
MSO				IAML		00 06 43.0	
	54nm,0.6s						
BOZ	Bozeman (W)	2.40	68	Pn	Pn	00 06 12.7	-0.3
BOZ				IAML		00 06 49.5	
	57nm,0.5s						
QLMT	Earthquake Lak	2.40	87	Pn	Pb	00 06 16.3	-0.6
YHB	Horse Butte	2.57	89	Pn	Pb	00 06 18.6	-1.1
YHB				IAML		00 06 56.9	
	comp=E,39nm,0.7s						
YHB				IAML		00 06 57.0	
	comp=N,38nm,0.7s						
YHL	Hebgen Lake	2.58	87	Pn	Pn	00 06 16.3	+0.7
YHL				IAML		00 06 54.5	
	comp=E,43nm,0.5s						
YMR	Madison River	2.74	91	Pn	Pb	00 06 21.2	-1.5
YMR				IAML		00 07 06.2	
	comp=E,42nm,0.7s						
HRY	Holter Researc	2.85	46	Pn	Pn	00 06 18.3	-0.9
YPP	Pitchstone Pla	2.90	98	Pn	Pn	00 06 19.5	-0.4
G08A	Pilot Rock	3.00	282	Pn	Pn	00 06 21.9	+0.7
JTMT	Jette	3.01	7	Pn	Pn	00 06 21.3	-0.1
JTMT				IAML		00 06 57.7	
	comp=N,19nm,0.5s						
JTMT				IAML		00 06 58.9	
	comp=E,29nm,0.4s						
FLWY	Flagg Ranch	3.02	101	Pn	Pn	00 06 20.0	-1.5
FLWY				IAML		00 07 13.6	
	comp=E,23nm,3.6s						
MOOW	Moose Ponds	3.08	108	Pn	Pn	00 06 25.6	+3.2
REDW	Red Top Meadow	3.17	115	Pn	Pn	00 06 23.9	+0.3
REDW				IAML		00 07 39.1	
	comp=E,14nm,4.2s						
YNE	Yellowstone No	3.42	84	Pn	Pn	00 06 27.9	+0.9
YNE				IAML		00 07 24.6	
	comp=E,23nm,0.7s						
I07A	Izee	3.44	260	Pn	Pn	00 06 28.3	+1.1
I07A				IAML		00 07 26.5	
	comp=N,11nm,3.5s						
NEW	Newport	3.86	336	Pg	Pb	00 06 43.1	+1.5
	comp=N,0.7nm,0.3s,baz=158,slow=16,SNR=7.8						
NEW				Lg	Lg	00 07 33.5	
	comp=N,5.5nm,0.3s,baz=69,slow=22,SNR=26						
RLMT	Red Lodge	3.95	83	Pn	Pn	00 06 36.0	+1.7
RLMT				IAML		00 07 40.8	
	comp=N,18nm,0.8s						
RLMT				IAML		00 07 41.0	
	comp=N,15nm,0.3s						
ELK	Elko	4.02	185	Pn	Pb	00 06 42.2	-2.3
	comp=N,0.3nm,0.3s,baz=354,slow=17,SNR=6.8						
ELK				Lg	Lg	00 07 37.1	
	comp=N,0.8nm,0.3s,baz=172,slow=12,SNR=8.5						
ELK	Elko	4.02	185	Pn	Pn	00 06 34.5	-0.8
PDAR	Pinedale Array	4.29	116	Pn	Pb	00 06 52.0	+2.9
	comp=N,0.1nm,0.3s,baz=300,slow=13,SNR=8.8						
PINE	Pine Mountain	4.51	260	Pn	Pn	00 06 44.2	+2.2
PINE				IAML		00 08 07.7	
	comp=N,9.8nm,4.6s						
B08A	Colville Reser	4.77	321	Pn	Pn	00 06 45.2	-0.2
B08A				IAML		00 08 05.2	
	comp=E,7.7nm,0.5s						
B08A				IAML		00 08 11.5	
	comp=N,8.7nm,0.5s						
NVAR	Mina Array Bea	6.84	204	Pg	Pb	00 07 35.1	+2.4
	comp=N,0.1nm,0.3s,baz=28,slow=16,SNR=2.3						
NVAR				Lg	Lg	00 09 15.1	
	comp=N,0.1nm,0.3s,baz=22,slow=36,SNR=2.5						
YKA	Yellowknife Ar	17.77	0	Pn	Pn	00 09 41.5	+0.8
	comp=N,0.1nm,0.3s,baz=177,slow=13,SNR=3.0						

IDC 21 00:21:05.2±2.0**, 7.°48S**×**127.°01E, h0^{km}, mb3.4**/1**, mb1 4.3**/3**, mb1mx3.7**/20**, mbtmp4.0**/3**, ML4.0**/2**, Error ellipse: s-maj=216.0km s-min=31.0km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	151	Pn	Pn	00 24 27.6	-1.4
	0.6nm,0.3s,baz=323,slow=14,SNR=34						
WRA				Sn	Sn	00 26 51.1	-17
	1.1nm,0.3s,baz=325,slow=24,SNR=13						
ASAR	Alice Springs	17.40	158	P	P	00 25 10.7	-0.4
	0.5nm,0.3s,baz=342,slow=12,SNR=58						
ASAR				S	Sn	00 28 12.7	-11
	0.4nm,0.3s,baz=317,slow=19,SNR=6.9						
MKAR	Makanchi Array	67.03	328	P	P	00 32 00.2	0.0
	0.2nm,0.4s,baz=117,slow=7.5,SNR=7.6						

HEL 21 00:34:13.8±0.0**, 67.°18N**×**20.°66E, h0^{km}, ML1.7, ML2.1**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	213	*i* P	Pg	00 34 15.0	0.0
DUNU				*i* S	Sg	00 34 15.7	-0.1
MASU	Masugnsbyn	0.59	61	*i* P	Pg	00 34 24.4	-0.7
MASU				*i* S	Sg	00 34 32.5	-0.2
RATU	Laukkuluspa	0.77	328	*i* P	Pg	00 34 27.5	-1.0
RATU				*i* S	Sg	00 34 37.7	-0.8
KUA	Kurravaara	0.79	351	*i* P	Pg	00 34 27.9	-1.0
SALU	Saltoluokta	0.86	285	*i* P	Pg	00 34 29.3	-0.9
ERTU	Ertsjaerv	0.87	135	*i* P	Pg	00 34 29.3	-1.1
PAJU	Pajala	0.97	98	*e*P	Pg	00 34 31.2	-1.2
PAJU				*e*SB	Sg	00 34 44.3	-0.6
LANU	Lannavaara	1.01	29	*e*P	Pg	00 34 31.7	-1.5
	baz=213						
LANU				*e*SB	Sg	00 34 45.7	-0.6
HARU	Harads	1.02	173	*e*P	Pg	00 34 32.2	-1.2
TOF	Tornio	1.83	125	*e*PN	Pn	00 34 46.3	-0.2
TOF				MSG		00 35 07.9	
	comp=Z,4.3nm,0.2s						
TOF				*e*SN	Sb	00 35 10.9	-0.6
KIF	Kilpisjarvi	1.84	2	*e*PG	Pb	00 34 47.5	-0.7
KIF				MSG		00 35 09.7	
	comp=Z,3.7nm,0.2s						
KIF				*e*SG	Sg	00 35 12.6	-0.2
RNF	Rovaniemi	2.19	103	*e*PB	Pn	00 34 52.1	+0.7
RNF				*e*SG	Sb	00 35 21.3	-0.5
SGF	Sodankyl	2.29	81	*e*PB	Pn	00 34 53.7	+0.9
	baz=261						
SGF				*e*SG	Sb	00 35 24.3	-0.4
BURU	Burvik	2.62	173	*e*P	Pn	00 34 57.8	+0.5
MSF	Maaselka	3.58	107	*e*SG	Sb	00 36 04.0	+2.1
KU6	Riekki	3.86	103	*e*SG	Sg	00 36 15.3	-2.3

UPP 21 00:35:09.5±0.0**, 67.°83N**×**20.°19E, h0^{km}, ML2.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	23	P	Pg	00 35 12.3	+0.2
KUA				S	Sg	00 35 14.3	+0.4
RATU	Laukkuluspa	0.23	269	P	Pg	00 35 14.1	+0.2
RATU				S	Sg	00 35 17.3	+0.5
KOVU	Salmi	0.40	358	P	Pg	00 35 17.1	0.0
NIKU	Nikkaluokta	0.44	276	P	Pg	00 35 18.0	0.0
LANU	Lannavaara	0.71	71	P	Pg	00 35 22.9	-0.3
DUNU	Dundret	0.72	168	P	Pg	00 35 23.0	-0.3
MASU	Masugnsbyn	0.79	118	P	Pg	00 35 24.4	-0.1
SALU	Saltoluokta	0.79	236	P	Pg	00 35 24.3	-0.3
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 35 32.4	-0.1
PAJU	Pajala	1.39	124	P	Pg	00 35 34.8	-1.2
ERTU	Ertsjaerv	1.50	148	P	Pn	00 35 37.1	-0.5

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*IDC **21** 00:38:56.1±1.2, 67.°84N×20.°65E, h0^{km}, mb1 3.1/4, mb1mx2.8/38, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=21.6km s-min=7.7km az=120.0*

*HEL **21** 00:38:56.2, 67.°85N×20.°34E, h0^{km}, ML1.9, Explosion*

ISC 21 00:38:55.6±0.8**, 67.°81N**±0.°03×**20.°22E**±0.°03**, h0^{km}, n30, σ1.^{s}11**/40**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.24	273	*i* P	Pg	00 38 59.8	-0.4
RATU				*i* S	Sg	00 39 02.9	-0.4
KOVU	Salmi	0.41	357	*i* P	Pg	00 39 02.9	-0.7
NIKU	Nikkaluokta	0.45	278	*i* P	Pg	00 39 03.6	-0.7
DUNU	Dundret	0.70	169	*i* P	Pg	00 39 08.9	-0.2
LANU	Lannavaara	0.71	69	*e*P	Pg	00 39 08.4	-0.9
LANU				*e*S	Sg	00 39 17.9	-0.5
MASU	Masugnsbyn	0.77	117	*i* P	Pg	00 39 10.1	-0.3
SALU	Saltoluokta	0.79	237	*i* P	Pg	00 39 10.1	-0.5
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	00 39 19.4	+0.4
KIF	Kilpisjarvi	1.22	10	*e*PB	Pg	00 39 18.1	-0.9
KIF				MSG		00 39 33.0	
	comp=Z,13nm,0.2s						
KIF				*e*SB	Sg	00 39 34.0	-0.7
PAJU	Pajala	1.37	124	*e*P	Pg	00 39 20.5	-1.3
	baz=307						
PAJU				*e*SB	Sg	00 39 39.4	-0.1
ERTU	Ertsjaerv	1.48	148	*e*P	Pn	00 39 23.0	-0.4
HARU	Harads	1.68	169	*e*P	Pn	00 39 26.3	+0.1
TOF	Tornio	2.37	135	*e*PB	Pn	00 39 37.3	+1.5
	baz=325						
TOF				MSG		00 40 06.4	
	comp=Z,5.3nm,0.2s						
TOF				*e*SG	Sb	00 40 09.2	+0.3
SGF	Sodankyl	2.44	96	*e*P	Pn	00 39 37.6	+0.9
	baz=282						
SGF				*e*SG	Sb	00 40 11.9	+1.0
RNF	Rovaniemi	2.56	115	*e*PB	Pn	00 39 39.9	+1.6
RNF				*e*SB	Sb	00 40 13.9	-0.4

ARA0	ARCESS Array S	2.60	46	eP	Pn	00 39 39.8	+1.0
ARA0	ARCESS Array S	2.60	46	eP	Pn	00 39 39.0	+0.2
	baz=227						
ARA0				eSG	Sb	00 40 14.9	-0.5
ARCES	ARCESS Array B	2.60	46	Pn	Pn	00 39 38.2	-0.6
	baz=224,slow=15,SNR=15						
ARCES				Lg	Lg	00 40 12.9	
	baz=224,slow=25,SNR=13						
BURU	Burvik	3.27	171	eP	Pn	00 39 49.9	+1.8
OUL	Oulu	3.56	138	ePG	Pb	00 39 59.7	+0.3
VRF	Varrio	3.57	87	ePB	Pn	00 39 54.9	+2.8
OLKF	Oulanka, Finla	3.89	108	eP	Pn	00 39 57.4	+0.8
OUF	Merijarvi	3.92	150	ePG	Pb	00 40 06.3	+0.9
	baz=338						
OUF				eSG	Sg	00 40 59.0	-2.2
UMAU	Umeaa	3.95	177	eP	Pn	00 39 58.9	+1.6
	baz=355						
MSF	Maaselka	3.97	115	eP	Pn	00 39 58.8	+1.1
KU6	Riekki	4.21	111	ePG	Pb	00 40 10.9	+0.5
	baz=298						
HUSU	Husum	4.51	186	ePG	Pb	00 40 16.6	+1.1
	baz=7.0						
FINES	FINESS Array B	6.87	156	Pn	Pn	00 40 39.0	+1.6
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=4.8						
FINES				Pg	Pb	00 40 53.6	-2.0
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=4.9						
FINES				Lg	Lg	00 42 28.9	
	comp=Z,0.2nm,0.3s,baz=346,slow=29,SNR=2.7						
NOA	NORSAR Array B	7.82	214	Pn	Pn	00 40 50.6	0.0
	comp=Z,0.0nm,0.3s,baz=12,slow=14,SNR=2.2						
HFS	Hagfors	8.22	203	Pn	Pn	00 40 54.7	-1.3
	comp=Z,0.1nm,0.3s,baz=18,slow=14,SNR=2.3						

IDC 21 01:03:10.8±1.7**,7°.17N×92°.71E,h0**^{km}**,mb3.5**/4**,mb1 3.7**/5**, mb1mx3.4**/39**,mbtmp3.6**/5**,ML3.9**/1**,Error ellipse: s-maj=48.2km s-min=28.8km az=52.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.91	271	Pn	Pn	01 06 02.3	+0.2
	0.8nm,0.3s,baz=166,slow=14,SNR=1.6						
PALK				Sn	Sn	01 08 01.0	-15
	2.1nm,0.3s,baz=289,slow=8.8,SNR=6.6						
H08S3	Diego Garcia H	24.95	234	T	T	01 34 41.5	
	baz=54,slow=76,SNR=16						
H08S2	Diego Garcia H	24.96	234	T	T	01 34 36.6	
	baz=54,slow=76,SNR=8.9						
H08S1	Diego Carcia H	24.97	234	T	T	01 34 37.6	
	baz=54,slow=76,SNR=6.9						
MKAR	Makanchi Array	40.48	349	P	P	01 10 50.8	-0.5
	0.5nm,0.4s,baz=166,slow=8.6,SNR=14						
SONM	Songino Array	42.17	14	P	P	01 11 05.6	+0.2
	0.3nm,0.5s,baz=199,slow=8.9,SNR=3.8						
KURBB	Kurchatov Arra	44.90	347	P	P	01 11 27.1	0.0
	0.6nm,0.7s,baz=172,slow=6.9,SNR=8.2						
WRA	Warramunga Arr	49.03	124	P	P	01 11 59.8	-0.2
	0.5nm,0.9s,baz=308,slow=9.2,SNR=4.8						

PRU 21 01:29:24.8±0.0**,50°.06N×18°.39E,h0**^{km}**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.27	215	ePG	Pg	01 29 30.8	+0.8
OKC				eSG	Sg	01 29 34.1	+0.6
MORC	Moravsky Berou	0.62	243	ePG	Pg	01 29 36.2	-0.4
MORC				eSG	Sg	01 29 44.4	-0.2
KRLC	Kraliky	1.04	271	ePG	Pg	01 29 43.7	-0.9
KRLC				eSG	Sg	01 29 57.5	-0.6
DPC	Dobruska-Polom	1.36	283	ePG	Pg	01 29 49.0	-1.9
DPC				eSG	Sg	01 30 08.6	+0.1

*MOS **21** 01:30:06.5±0.8, 42°.76N×20°.35E, h13^{km}, mb4.6/17, Error ellipse: s-maj=4.9km s-min=3.0km az=92.4*

*SKO **21** 01:30:07.0, 42°.83N×20°.30E, h11^{km}*

*IDC **21** 01:30:06.5±0.6, 42°.79N×20°.30E, h0^{km}, mb4.0/17, mb1 4.0/31, mb1mx3.9/61, mbtmp4.0/31, ML3.6/14, MS3.5/2, Ms1 3.5/2, ms1mx2.7/42, Error ellipse: s-maj=10.8km s-min=9.5km az=15.0*

*PDG **21** 01:30:06.3±0.1, 42°.72N×20°.35E, h5^{km}, MD4.0/13, ML4.1/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*

*TIR **21** 01:30:06.3, 42°.69N×20°.42E, h6^{km}±2^{km}, Ml4.3*

*BEO **21** 01:30:07.9±0.2, 42°.77N×20°.33E, h10^{km}±2^{km}, ML4.0/23*

*PRU **21** 01:30:07.7±0.0, 42°.71N×20°.47E, h0^{km}, M4.4*

*RHSSO **21** 01:30:07.3±0.5, 42°.73N×20°.34E, h3^{km}±1^{km}, ML4.2/16*

*LDG **21** 01:30:07.0±0.1, 42°.76N×20°.36E, h10^{km}, Ml4.1/18, Error ellipse: s-maj=2.6km s-min=1.9km az=2.0*

*NEIC **21** 01:30:08.7±1.5, 42°.74N±0°.04×20°.37E±0°.05, h11^{km}±2^{km}, mb4.4/24, Md4.0(TIR), ML4.3(VIE), ML4.2(PDG), ML4.2/3(BUC), Error ellipse: s-maj=6.0km s-min=4.4km az=150.0*

*MED_RC **21** 01:30:08.0±0.4, 42°.74N×20°.35E, h17^{km}±1^{km}, MW4.2/18, Moment Tensor Solution.Mantle waves: s18,c20; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.66±.34; $M_{\theta\theta}$0.91±.23; $M_{\phi\phi}$0.75±.19; $M_{r\theta}$-1.23±.33; $M_{\theta\phi}$1.37±.14; $M_{\phi r}$-0.52±.28; Best double couple: $M_0$2.37000×10^{15} NP1:ϕ_s209.00000°,δ31.00000°, λ-118.00000°. NP2:ϕ_s61.00000°,δ63.00000°, λ-74.00000°. Principal axes: T 2.5800, Plg17.0000°, Azm139.0000°; N -0.4300, Plg14.0000°, Azm234.0000°; P -2.1500, Plg68.0000°, Azm2.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*BGR **21** 01:30:09.9±0.0, 42°.68N×20°.31E, h5^{km}*

*THE **21** 01:30:10.1, 42°.60N×20°.58E, h0^{km}±2^{km}, ML3.9/2, Error ellipse: s-maj=4.0km s-min=1.1km az=340.0*

ISC 21 01:30:07.1±1.0**,42°.74N**±0°.01×**20°.36E**±0°.01**,h5**^{km}±6^{km}**, n562,**σ1^{s}**54**/703**,mb4.3**/37**,61C-48D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVY	Plav	0.33	243	ePg	Pg	01 30 12.2	-1.3
PVY				i Sg	Sg	01 30 17.2	-0.6
BEY	Berane	0.36	291	⇑iPg	Pg	01 30 14.2	0.0
IVA	Berane	0.36	291	⇓iPg	Pg	01 30 13.2	-1.0
IVA				i Sg	Sg	01 30 19.1	+0.1
BCI	Bajram Curri	0.43	210	P	Pg	01 30 14.9	-0.5
	baz=220						
BCI				S	Sg	01 30 20.9	-0.1
	baz=220						
BCI				AMP			
	comp=N,113nm,0.3s,baz=220						
SJES	Sjenica	0.59	332	⇑iPg	Pg	01 30 18.5	0.0
SJES				eSg	Sg	01 30 25.8	-0.4
SJES	Sjenica	0.59	332	⇑iPg	Pg	01 30 18.5	0.0
SJES				eSg	Sg	01 30 26.5	+0.3
KOME	Kolasin	0.63	280	⇑iPg	Pg	01 30 18.0	-1.2
KOME				i Sg	Sg	01 30 27.8	+0.4
PUK	Puka	0.78	206	P	Pg	01 30 21.2	-0.8
	baz=212						
PUK				S	Sg	01 30 33.0	+0.9
	baz=212						
PUK				AMP			
	comp=E,70nm,0.3s,baz=212						
GJIK	Gjilan	0.84	109	⇑iPg	Pg	01 30 23.1	-0.3
GJIK				i Sg	Sb	01 30 35.9	-0.1
IVAS	Ivanjica	0.85	350	⇓iPg	Pg	01 30 22.9	-0.5
IVAS				eSg	Sg	01 30 33.3	-1.1
PDG	Podgorica	0.87	249	⇑P	Pg	01 30 22.5	-1.3
PDG				⇓S	Sg	01 30 34.5	-0.7
PDG	Podgorica	0.87	249	ePg	Pg	01 30 22.1	-1.7
PDG				eSg	Sg	01 30 35.8	+0.7
PDG	Podgorica	0.87	249	⇓iPg	Pg	01 30 22.2	-1.6
PDG				eSg	Sg	01 30 34.0	-1.1
PDG	Podgorica	0.87	249	Pg	Pg	01 30 22.2	-1.6
PDG				Sg	Sg	01 30 34.4	-0.7
PDG	Podgorica	0.87	249	⇓iPg	Pg	01 30 22.2	-1.6
PDG				i Sg	Sg	01 30 34.0	-1.1
TTG	Podgorica	0.87	249	⇓iPg	Pg	01 30 22.2	-1.6
TTG				i Sg	Sg	01 30 35.7	+0.7
PLE	Pljevlja	0.92	310	P	Pg	01 30 24.2	-0.6
PLE				S	Sg	01 30 35.0	-1.7
PLE	Pljevlja	0.92	310	⇓iPg	Pg	01 30 23.5	-1.3
PLE				i Sg	Sb	01 30 38.0	-0.3
NKY	Niksic	1.01	274	P	Pg	01 30 25.6	-0.8
NKY				S	Sg	01 30 40.0	+0.6
NKY	Niksic	1.01	274	⇓iPg	Pg	01 30 24.9	-1.5
NKY				i Sg	Sb	01 30 40.5	-0.2
DRME	Dracevica, Mon	1.03	238	⇓iPg	Pg	01 30 24.9	-1.9
DRME				eSg	Sg	01 30 39.4	-0.8
DRME	Dracevica, Mon	1.03	238	⇑iPg	Pg	01 30 25.1	-1.7
DRME				i Sg	Sb	01 30 41.0	-0.2
NKME	Niksic	1.03	272	⇑iPg	Pg	01 30 25.4	-1.5
NKME				i Sg	Sb	01 30 41.5	+0.1
PHP	Peshkopia	1.06	177	P	Pg	01 30 25.6	-1.8
PHP	Peshkopia	1.06	177	P	Pg	01 30 25.7	-1.7
PHP				S	Sg	01 30 41.1	0.0
PHP	Peshkopia	1.06	177	P	Pg	01 30 25.7	-1.7
	baz=179						
PHP				S	Sg	01 30 41.1	0.0
	baz=179						
PHP				AMP			
	comp=N,21nm,0.5s,baz=179						
CEME	Cevo	1.08	260	⇓iPg	Pg	01 30 26.1	-1.7
CEME				i Sg	Sb	01 30 42.7	0.0
SKO	Skopje	1.11	133	ePg	Pg	01 30 27.9	-0.5
SKO				eSg	Sn	01 30 44.7	-0.4
SKO	Skopje	1.11	133	P	Pg	01 30 27.4	-1.0
SKO	Skopje	1.11	133	i Pg	Pg	01 30 27.2	-1.2
SKO				i Sg	Sn	01 30 46.0	+0.9
SKO				eLg	Lg	01 30 50.0	
	comp=E,107nm,0.5s						
ULC	Ulcinj	1.13	227	P	Pg	01 30 27.9	-0.9
ULC				S	Sb	01 30 44.0	-0.3
ULC	Ulcinj	1.13	227	i Pg	Pg	01 30 27.9	-0.9
ULC	Ulcinj	1.13	227	ePg	Pg	01 30 26.9	-1.9
ULC				i Sg	Sb	01 30 44.4	+0.1
RUDO	Rudo	1.13	321	⇓iPg	Pg	01 30 27.0	-1.9
RUDO				eSg	Sg	01 30 43.0	-0.6
UPM	Unac-Piva	1.16	294	⇑iPg	Pg	01 30 28.5	-0.9
UPM				eSg	Sg	01 30 44.0	-0.4
UPM	Unac-Piva	1.16	294	⇑iPg	Pg	01 30 27.8	-1.6
UPM				i Sg	Sn	01 30 46.0	-0.6
BUM	Brajici-Budva	1.17	248	⇓iPg	Pg	01 30 27.7	-1.8
BUM				eSg	Sb	01 30 45.8	+0.5
GRUS	Gruza	1.18	13	ePg	Pg	01 30 29.5	-0.2
GRUS				eSg	Sn	01 30 46.1	-0.6
BBLS	Lazići	1.32	329	ePg	Pn	01 30 31.6	-0.7
BBLS	Lazići	1.32	329	⇑iPg	Pn	01 30 31.3	-1.0
BBLS				eSg	Sg	01 30 49.5	-0.1
BOVS	Bovan	1.33	47	ePg	Pn	01 30 31.6	-0.8
BOVS				eSg	Sg	01 30 49.6	-0.3
BRY	Bratogost	1.35	277	eP	Pn	01 30 30.0	-2.7
BRY				S	Sn	01 30 52.0	+0.9
BRY	Bratogost	1.35	277	⇑iPg	Pn	01 30 30.8	-1.9
BRY				eSg	Sg	01 30 49.8	-0.6
BRY	Bratogost	1.35	277	⇓iPg	Pn	01 30 31.2	-1.5
BRY				i Sg	Sn	01 30 52.2	+1.1
DIVS	Divibare	1.38	349	ePg	Pn	01 30 32.9	-0.3
DIVS				eSg	Sb	01 30 51.3	-0.2
DIVS	Divibare	1.38	349	⇑iPg	Pn	01 30 32.7	-0.5
DIVS				eSg	Sb	01 30 51.0	-0.5
DIVS	Divibare	1.38	349		Pn	01 30 32.5	-0.6
HCY	Herceg Novi	1.41	259	⇑iPg	Pn	01 30 32.5	-0.9
HCY				eSg	Sb	01 30 51.9	-0.2
HCY	Herceg Novi	1.41	259	⇓iPg	Pn	01 30 32.1	-1.3
HCY				i Sg	Sn	01 30 54.0	+1.6
TIR	Tirane	1.44	195	P	Pb	01 30 34.3	-0.2
TIR				S	Sg	01 30 55.9	+2.5
	comp=E,4µm,0.6s						
TIR	Tirane	1.44	195	⇓P	Pb	01 30 34.3	-0.2
TIR	Tirane	1.44	195	ePg	Pb	01 30 34.2	-0.2
TIR				eSg	Sg	01 30 54.4	+1.0
TIR	Tirane	1.44	195	P	Pb	01 30 34.3	-0.2
TIR				S	Sg	01 30 53.7	+0.3
TIR	Tirane	1.44	195		Pn	01 30 33.8	-0.1
TIR	Tirane	1.44	195	P	Pn	01 30 34.1	+0.2
	baz=198						
TIR				S	Sg	01 30 53.7	+0.3
	baz=198						
TIR				AMP			
	comp=N,15nm,0.7s,baz=198						
TIR	Tirane	1.44	195	i Pn	Pb	01 30 34.2	-0.2
TREB	Trebinje	1.48	270	ePg	Pn	01 30 34.2	-0.2
TREB				eSg	Sg	01 30 55.1	+0.5
TREB	Trebinje	1.48	270	⇑iPg	Pn	01 30 33.9	-0.5
TREB				eSg	Sg	01 30 54.6	0.0
TRUS	Trudelj	1.48	1	ePg	Pn	01 30 34.5	0.0
TRUS				eSg	Sn	01 30 53.9	-0.3
BOSS	Bosilegrad	1.59	98	ePg	Pn	01 30 35.9	0.0
BOSS				eSg	Sg	01 30 59.2	+1.1
DBRK	Dubrovnik	1.63	268	ePn	Pn	01 30 35.9	-0.6
DBRK				Sn	Sg	01 31 01.8	+2.3
SVIS	Svilajnac	1.65	22	ePg	Pb	01 30 37.7	-0.2
SVIS				eSg	Sb	01 30 58.8	-0.2
OHR	Ohrid	1.66	168	i Pn	Pn	01 30 36.7	-0.3
OHR				i Sn	Sg	01 31 00.4	-0.2
OHR				eLg	Lg	01 31 05.5	
	comp=E,4µm,0.6s						
HAPS	Han Pijesak,BI	1.69	323	ePn	Pn	01 30 36.9	-0.5
HAPS	Han Pijesak,BI	1.69	323	⇑iPn	Pn	01 30 36.5	-0.9
HAPS				eSn	Sn	01 30 59.9	+0.4
STIP	Stip	1.72	127	i Pn	Pn	01 30 38.2	+0.5
STIP				eLg	Lg	01 31 10.4	
	comp=E,184nm,0.6s						
ZAGS	Zajecar	1.74	51	ePn	Pn	01 30 37.8	-0.2
ZAGS				eSg	Sg	01 31 02.5	-0.5
ZAPS	Zavoj	1.75	72	ePg	Pb	01 30 39.2	-0.6
ZAPS				eSg	Sg	01 31 04.3	+0.9
TEKS	Tekeris	1.90	342	ePn	Pn	01 30 39.4	-0.9
TEKS				eSg	Sb	01 31 06.5	0.0
TEKS	Tekeris	1.90	342	eSn	Sn	01 31 05.5	+0.8
KUBS	Kucevo	1.93	29	ePn	Pn	01 30 39.0	-1.6
KUBS				eSg	Sg	01 31 08.5	-0.5
STON	Ston	1.96	275	ePn	Pn	01 30 41.6	+0.6
STON	Ston	1.96	275	ePn	Pb	01 30 42.2	-1.1
STON				Sn	Sg	01 31 09.3	-0.7
STON	Ston	1.96	275	⇓iPn	Pn	01 30 41.2	+0.2
STON				eSn	Sn	01 31 06.1	+0.2
FNA	Florina	2.10	158	P	Pn	01 30 43.4	+0.4
FNA				S	Sn	01 31 09.1	-0.5
	comp=E,3µm,0.7s						
FNA	Florina	2.10	158	P	Pn	01 30 43.7	+0.7
FNA	Florina	2.10	158	Pn	Pn	01 30 43.7	+0.7
FNA	Florina	2.10	158	i Pn	Pn	01 30 43.7	+0.7
VTS	Vitosha	2.13	92	⇓P	Pn	01 30 44.0	+0.5
VTS				⇑S	Sn	01 31 10.9	+0.5
VTS	Vitosha	2.13	92	P	Pn	01 30 44.0	+0.5
VTS						01 31 10.9	
VTS	Vitosha	2.13	92		Pn	01 30 44.0	+0.5
VTS					Sn	01 31 10.9	+0.5
VTS	Vitosha	2.13	92	i Pn	Pn	01 30 43.5	0.0
KBN	Korca	2.14	171	P	Pn	01 30 44.0	+0.4
KBN	Korca	2.14	171	P	Pn	01 30 44.2	+0.6
	baz=172						
KBN				S	Sb	01 31 14.3	+1.0
	baz=172						
KBN				AMP			
	comp=E,5.6nm,1.1s,baz=172						
VAY	Valandovo	2.18	130	ePn	Pn	01 30 43.9	-0.1
VAY	Valandovo	2.18	130	i Pn	Pn	01 30 43.9	-0.1
VAY				i Sn	Sg	01 31 20.4	+3.3
VAY				eLg	Lg	01 31 28.8	
	comp=N,516nm,0.8s						
MDVR	Moldovita	2.26	25	⇓P	Pn	01 30 44.9	-0.4
MDVR	Moldovita	2.26	25		Pn	01 30 44.9	-0.4
GRG	Griva	2.35	139	P	Pn	01 30 46.9	+0.5
VLO	Vlora	2.36	196	P	Pb	01 30 49.1	-1.0
VLO	Vlora	2.36	196	P	Pb	01 30 48.8	-1.3
	baz=198						
VLO				S	Sb	01 31 21.1	+1.6
	baz=198						
VLO				AMP			
	comp=E,11nm,0.5s,baz=198						
NEST	Nestorio	2.38	167	P	Pn	01 30 47.9	+1.0
PUNG	Punghina	2.42	50	⇓P	Pn	01 30 47.7	+0.3
PUNG	Punghina	2.42	50		Pn	01 30 47.7	+0.3
FRGS	Fruska Gora	2.45	351	ePn	Pn	01 30 47.2	-0.6
FRGS				eSg	Sg	01 31 24.4	-1.3
FRGS	Fruska Gora	2.45	351	eSn	Sn	01 31 18.9	+0.8
KNT	Kendrikon	2.47	129	P	Pn	01 30 48.2	+0.2
RICI	Ricice	2.48	289	ePn	Pb	01 30 50.2	-1.9
RICI				Sn	Sb	01 31 22.5	-0.5
DJES	Djerdap	2.48	38	ePn	Pn	01 30 48.4	+0.2
DJES				eSg	Sg	01 31 26.7	-0.1
MAKA	Makarska	2.51	284	ePn	Pb	01 30 50.7	-1.9
MAKA				Sn	Sb	01 31 23.3	-0.4
BAIL	Bailesti	2.53	59	⇑P	Pn	01 30 49.4	+0.6
BAIL	Bailesti	2.53	59		Pn	01 30 49.4	+0.6
LSK	Leskovik	2.60	176	P	Pn	01 30 51.8	+1.9
LSK	Leskovik	2.60	176	P	Pn	01 30 51.8	+1.9
	baz=176						
LSK				S	Sb	01 31 28.0	+1.6
	baz=176						
LSK				AMP			
	comp=E,5.6nm,0.6s,baz=176						
HERR	Herculane	2.61	34	⇑P	Pn	01 30 50.0	+0.1
HERR	Herculane	2.61	34		Pn	01 30 50.0	+0.1
PENT	Pentalofos	2.61	167	P	Pn	01 30 51.1	+1.0
KZN	Kozani	2.66	156	P	Pn	01 30 51.5	+0.8
BANR	Banloc	2.70	12	⇑P	Pn	01 30 51.7	+0.5
BANR	Banloc	2.70	12		Pn	01 30 51.7	+0.5
SRE	Strehaia	2.82	46	⇓P	Pn	01 30 53.6	+0.7
SRE	Strehaia	2.82	46	P	Pn	01 30 53.6	+0.7
SRE	Strehaia	2.82	46		Pn	01 30 53.6	+0.7
SRN	Sarande	2.87	185	P	Pn	01 30 55.7	+2.2
SRN	Sarande	2.87	185	P	Pn	01 30 55.4	+1.8
	baz=187						
SRN				S	Sb	01 31 34.0	-0.2
	baz=187						
SRN				AMP			
	comp=N,1.9nm,0.7s,baz=187						
KPRO	Kipourio	2.89	164	P	Pn	01 30 54.4	+0.6
HVAR	Hvar	2.90	280	ePn	Pn	01 30 55.1	+1.1
HVAR				Sn	Sn	01 31 31.0	+1.8
SRS	Serrai	2.91	123	P	Pn	01 30 54.3	+0.2
SOH	Sokhos	2.95	130	P	Pn	01 30 54.9	+0.2
NVR	Nevrokopi	2.96	117	P	Pn	01 30 55.2	+0.4
HORT	Hortiatis	2.97	135	P	Pn	01 30 55.2	+0.2
BZS	Buzias	3.01	17	⇑P	Pn	01 30 55.0	-0.5
BZS	Buzias	3.01	17	ePn	Pn	01 30 54.4	-1.1
BZS	Buzias	3.01	17	P	Pn	01 30 55.0	-0.5
BZS	Buzias	3.01	17		Pn	01 30 55.0	-0.5
BLY	Banja Luka	3.05	312	ePn	Pn	01 30 56.6	+0.6
BLY	Banja Luka	3.05	312	⇓iPn	Pn	01 30 56.2	+0.2
BLY				eSn	Sn	01 31 33.2	+0.3
KEK	Kerkira	3.06	188	P	Pn	01 30 57.2	+1.1
TIM	Timisoara	3.06	11	⇑P	Pn	01 30 56.6	+0.5
TIM	Timisoara	3.06	11	P	Pn	01 30 56.6	+0.5
TIM	Timisoara	3.06	11		Pn	01 30 56.6	+0.5
LIT	Litokhoron	3.09	148	P	Pn	01 30 57.0	+0.4
JAN	Janina	3.10	173	P	Pn	01 30 58.9	+2.1
KIJV	Kijevo	3.15	295	Sn	Sn	01 31 37.1	+1.8
KIJV	Kijevo	3.15	295	ePn	Pn	01 30 59.2	+1.9
KIJV	Kijevo	3.15	295	Pg	Pg	01 31 07.7	+0.4
GZR	Gura Zlata	3.17	33	⇑P	Pn	01 30 57.4	-0.4
GZR	Gura Zlata	3.17	33	P	Pn	01 30 57.4	-0.4
GZR	Gura Zlata	3.17	33		Pn	01 30 57.4	-0.4
IGT	Igoumenitsa	3.21	180	P	Pn	01 30 59.5	+1.3
VLAD	Vladila	3.21	66	⇑P	Pn	01 30 59.3	+1.1
VLAD	Vladila	3.21	66		Pn	01 30 59.3	+1.1
PLG	Polygyros	3.31	135	P	Pn	01 31 00.3	+0.6
THL	Klokotos Trika	3.41	158	P	Pn	01 31 01.5	+0.5
MATE	Matera	3.44	234	⇓P	Pn	01 31 02.4	+1.0
MATE	Matera	3.44	234		Pn	01 31 02.4	+1.0
PRIJ	Prijedor	3.45	312	ePn	Pn	01 31 01.5	0.0
KAVA	Kavala	3.56	118	P	Pn	01 31 03.5	+0.5
SGRT	San Giovanni R	3.56	255	Pn	Pn	01 31 03.6	+0.4
ZIRJ	Zirje	3.56	286	Sn	Sn	01 31 47.9	+2.4
ZIRJ	Zirje	3.56	286	ePn	Pn	01 31 04.1	+1.0
ZIRJ	Zirje	3.56	286	Pg	Pg	01 31 13.9	-1.5
MORI	Morici	3.57	290	ePn	Pn	01 31 04.6	+1.4
MORI				Sn	Sn	01 31 47.3	+1.5
AMBH	Ambrzfalva	3.62	4	⇑ePN	Pn	01 31 04.3	+0.5
AMBH				eSN	Sn	01 31 50.0	+3.1
OUR	Ouranopolis	3.63	130	P	Pn	01 31 04.5	+0.5
DEV	Deva	3.63	29	⇑P	Pn	01 31 04.0	0.0
DEV	Deva	3.63	29	P	Pn	01 31 04.0	0.0
DEV	Deva	3.63	29		Pn	01 31 04.0	0.0
SIRR	Siria	3.65	14	⇓P	Pn	01 31 04.7	+0.4
SIRR	Siria	3.65	14		Pn	01 31 04.7	+0.4
LOT	Lotru	3.66	41	⇓P	Pn	01 31 04.7	+0.2
LOT	Lotru	3.66	41		Pn	01 31 04.7	+0.2
MORH	Mrgy, Hungar	3.68	341	⇓ePN	Pn	01 31 04.5	-0.3
MORH	Mrgy, Hungar	3.68	341	⇓iPn	Pn	01 31 04.4	-0.3
MORH				eSn	Sn	01 31 48.3	-0.2
PAIG	Paliouri	3.77	137	P	Pn	01 31 05.9	+0.1
UDBI	Udbina	3.78	300	ePn	Pn	01 31 07.7	+1.6
UDBI				Pg	Pg	01 31 18.4	-1.2
HUMR	Humele	3.80	60	⇑P	Pn	01 31 07.2	+0.8
HUMR	Humele	3.80	60		Pn	01 31 07.2	+0.8
THAS	Thassos island	3.90	122	P	Pn	01 31 07.7	0.0
TSLK	Tsoukalades, L	3.92	177	P	Pn	01 31 09.6	+1.6
LKD2	Lefkada island	3.96	177	P	Pn	01 31 09.4	+0.9
MAKR	Makrakomi, Fth	3.96	160	P	Pn	01 31 09.4	+0.8
EVR	Evrytania	3.98	163	P	Pn	01 31 10.4	+1.5
XOR	Xorichti	4.00	147	P	Pn	01 31 09.2	+0.1
AGG	Agios Georgios	4.01	157	P	Pn	01 31 09.9	+0.7
AGG	Agios Georgios	4.01	157	P	Pn	01 31 09.9	+0.7
AGG	Agios Georgios	4.01	157	Pn	Pn	01 31 09.9	+0.7
NYDR	Nydri-Lefkada	4.03	176	P	Pn	01 31 10.2	+0.7
ARR	Arges	4.05	48	⇑P	Pn	01 31 10.5	+0.7
ARR	Arges	4.05	48		Pn	01 31 10.5	+0.7
DUGI	Dugi Otok	4.06	290	ePn	Pn	01 31 10.6	+0.7
DUGI				Sn	Sn	01 32 01.4	+3.6
NEO	Neokhori	4.06	147	P	Pn	01 31 10.1	+0.2
RDO	Rodhopi	4.18	111	P	Pn	01 31 12.0	+0.5
PDO	Prodromos	4.19	171	P	Pn	01 31 12.7	+1.1
MTUR	Matau	4.21	52	⇑P	Pn	01 31 12.9	+1.0
MTUR	Matau	4.21	52	P	Pn	01 31 13.0	+1.0
MTUR	Matau	4.21	52		Pn	01 31 12.9	+1.0
ANX	Ano Chora	4.31	163	P	Pn	01 31 15.1	+1.6
VOIR		4.32	50	⇑P	Pn	01 31 14.6	+1.0
VOIR		4.32	50	P	Pn	01 31 14.6	+1.0
VOIR		4.32	50		Pn	01 31 14.6	+1.0
AXAR	Agios Charalam	4.34	155	P	Pn	01 31 14.6	+0.8
SGRR	Singureni	4.35	68	⇑P	Pn	01 31 14.8	+1.0
SGRR	Singureni	4.35	68		Pn	01 31 14.8	+1.0
NVLJ	Novalja	4.38	296	ePn	Pn	01 31 14.6	+0.4
NVLJ				Sn	Sn	01 32 07.5	+2.0
DRGR		4.38	22	⇑P	Pn	01 31 14.0	-0.4
DRGR		4.38	22	P	Pn	01 31 14.0	-0.4
DRGR		4.38	22		Pn	01 31 14.0	-0.4
KALN	Kalnik	4.39	322	i Pn	Pn	01 31 14.3	-0.2
ZAG	Zagreb	4.40	316	ePn	Pn	01 31 15.9	+1.4
ZAG				Sn	Sn	01 32 08.2	+2.0
ZAG	Zagreb	4.40	316	ePn	Pn	01 31 14.7	+0.2
SMIA	Simia	4.42	150	P	Pn	01 31 15.2	+0.3
MDB	Medias	4.46	39	⇑P	Pn	01 31 16.4	+1.1
MDB	Medias	4.46	39	P	Pn	01 31 16.4	+1.1
MDB	Medias	4.46	39		Pn	01 31 16.4	+1.1
PTJ	Puntijarka	4.46	317	ePn	Pn	01 31 15.3	-0.2
PTJ				Sn	Sn	01 32 10.3	+2.4
EFP	Efpalio	4.47	164	P	Pn	01 31 17.4	+1.9
TIP	Timpagrande	4.48	219	⇑P	Pn	01 31 16.2	+0.5
TIP	Timpagrande	4.48	219	Pn	Pn	01 31 16.3	+0.5
TIH	Tihany	4.51	338	⇓ePN	Pn	01 31 16.0	-0.1
TIH				eSN	Sn	01 32 08.3	-0.6
SERG	Sergoula	4.51	163	P	Pn	01 31 17.8	+1.6
BEHE	Becsehely	4.52	327	⇓ePN	Pn	01 31 19.4	+3.1
BEHE				eSN	Sn	01 32 10.4	+1.3
BEHE	Becsehely	4.52	327	ePn	Pn	01 31 16.6	+0.4
BEHE				eSn	Sn	01 32 07.3	-1.8
ATAL	Atalanti	4.52	153	P	Pn	01 31 16.8	+0.5
OZLJ	Ozalj	4.54	311	ePn	Pn	01 31 17.1	+0.6
KALE	Kalithea	4.55	162	P	Pn	01 31 17.8	+1.0
LKR	Lokris	4.55	153	P	Pn	01 31 17.2	+0.5
BSZH	Besenyszg	4.56	359	ePN	Pn	01 31 17.3	+0.6
LIA	Limnos Island	4.61	126	P	Pn	01 31 17.8	+0.3
ALN	Alexandroupoli	4.63	112	P	Pn	01 31 18.4	+0.6
ALN	Alexandroupoli	4.63	112	P	Pn	01 31 18.7	+0.9
ALN	Alexandroupoli	4.63	112	Pn	Pn	01 31 18.7	+0.9
PAOL	Paolisi	4.65	250	Pn	Pn	01 31 19.4	+1.4
CRES	Cresnjev	4.68	313	⇑iPn	Pn	01 31 18.6	+0.2
RLS	Riolos of Patr	4.75	169	P	Pn	01 31 20.9	+1.5
LTVH	Ltavrtes, Hu	4.77	13	⇑ePN	Pn	01 31 20.6	+0.9
LTVH				eSN	Sn	01 32 13.7	-1.6
BUD	Budapest	4.83	349	⇓ePN	Pn	01 31 20.0	-0.6
BUD				eSN	Sn	01 32 17.8	+1.0
INTR	Introdacqua	4.83	263	Pn	Pn	01 31 22.2	+1.6
DOPR	Dopca	4.84	46	⇑P	Pn	01 31 21.5	+0.9
DOPR	Dopca	4.84	46		Pn	01 31 21.5	+0.9
CSKK	Cskako	4.85	343	⇑ePN	Pn	01 31 21.2	+0.4
CSKK				eSN	Sn	01 32 19.2	+1.8
MPLH	Magyarpolny	4.86	337	⇓ePN	Pn	01 31 21.0	+0.1
MPLH				eSN	Sn	01 32 16.0	-1.5
MLR	Muntele Rosu	4.87	54	Pn	Pn	01 31 22.2	+1.1

	comp=N,6.6nm,0.3s,baz=231,slow=3.5,SNR=85						
MLR				Lg	Lg	01 32 46.7	
	comp=N,2.0nm,0.3s,baz=275,slow=16,SNR=3.2						
MLR	**Muntele Rosu**	**4.87**	**54**	⇑P	**Pn**	**01 31 22.4**	**+1.2**
MLR	**Muntele Rosu**	**4.87**	**54**	P	**Pn**	**01 31 22.7**	**+1.5**
MLR	**Muntele Rosu**	**4.87**	**54**	Pn	**Pn**	**01 31 22.7**	**+1.5**
KLV	**Kalavryta, Ach**	**4.89**	**163**	P	**Pn**	**01 31 22.4**	**+1.0**
DRO	**Drossia**	**4.89**	**167**	P	**Pn**	**01 31 22.2**	**+0.8**
RIY	**Rijeka**	**4.96**	**303**	*e*Pn	**Pn**	**01 31 24.2**	**+2.0**
RIY	**Rijeka**	**4.96**	**303**	*e*Pn	**Pn**	**01 31 22.7**	**+0.5**
RIY				*e*Sn	**Sn**	**01 32 18.2**	**-1.7**
LEHL	**Lehliu**	**5.00**	**68**	⇑P	**Pn**	**01 31 24.0**	**+1.1**
LEHL	**Lehliu**	**5.00**	**68**		**Pn**	**01 31 24.0**	**+1.1**
THAL	**Thalero**	**5.02**	**159**	P	**Pn**	**01 31 24.4**	**+1.3**
VILL	**Villia**	**5.10**	**153**	P	**Pn**	**01 31 24.9**	**+0.7**
EREA	**Eretria**	**5.10**	**147**	P	**Pn**	**01 31 24.9**	**+0.6**
OZUR		**5.13**	**47**	⇓P	**Pn**	**01 31 25.5**	**+0.8**
OZUR		**5.13**	**47**		**Pn**	**01 31 25.5**	**+0.8**
EGYH	**Egyhazaskeszo**	**5.14**	**336**	⇓*e*PN	**Pn**	**01 31 20.9**	**-3.8**
EGYH				*e*SN	**Sn**	**01 32 21.2**	**-3.2**
AQU	**L'Aquila**	**5.15**	**268**	P	**Pn**	**01 31 26.3**	**+1.3**
AQU	**L'Aquila**	**5.15**	**268**	*e*Pn	**Pn**	**01 31 24.8**	**-0.2**
AQU				*e*Sn	**Sn**	**01 32 22.6**	**-2.2**
AQU	**L'Aquila**	**5.15**	**268**	Pn	**Pn**	**01 31 26.3**	**+1.3**
LOUT	**Loutraki**	**5.15**	**156**	P	**Pn**	**01 31 25.8**	**+0.9**
PSZ	**Piszkesteto**	**5.19**	**357**	⇑P	**Pn**	**01 31 25.1**	**-0.3**
PSZ	**Piszkesteto**	**5.19**	**357**	⇓*e*PN	**Pn**	**01 31 24.8**	**-0.6**
PSZ				*e*SN	**Sn**	**01 32 22.4**	**-3.3**
PSZ	**Piszkesteto**	**5.19**	**357**	P	**Pn**	**01 31 25.1**	**-0.3**
PSZ	**Piszkesteto**	**5.19**	**357**		**Pn**	**01 31 25.1**	**-0.3**
PSZ	**Piszkesteto**	**5.19**	**357**	Pn	**Pn**	**01 31 25.1**	**-0.3**
ARCR	**ARCALIA**	**5.19**	**32**	⇓P	**Pn**	**01 31 26.0**	**+0.6**
ARCR	**ARCALIA**	**5.19**	**32**		**Pn**	**01 31 26.0**	**+0.6**
CEY	**Cerknica**	**5.21**	**307**	⇑*i*Pn	**Pn**	**01 31 26.0**	**+0.3**
CEY				*e*Sn	**Sn**	**01 32 23.8**	**-2.3**
SRO2	**Moca**	**5.21**	**345**	*e*P	**Pn**	**01 31 24.7**	**-0.9**
SRO2				*e*		01 32 26.2	
SRO2	**Moca**	**5.21**	**345**	*e*PN	**Pn**	**01 31 24.7**	**-0.9**
SRO2				*e*SN	**Sn**	**01 32 26.2**	**+0.1**
AMT	**Artemida-Makis**	**5.31**	**168**	P	**Pn**	**01 31 27.4**	**+0.3**
LJU	**Ljubljana**	**5.32**	**310**	⇑*i*Pn	**Pn**	**01 31 27.6**	**+0.4**
LJU				*e*Sn	**Sn**	**01 32 27.0**	**-1.9**
NRCA	**Norcia**	**5.33**	**273**	Pn	**Pn**	**01 31 28.6**	**+1.2**
BISRR	**Bisoca**	**5.36**	**56**	⇓P	**Pn**	**01 31 29.4**	**+1.5**
BISRR	**Bisoca**	**5.36**	**56**		**Pn**	**01 31 29.4**	**+1.5**
TRIP	**Tripoli**	**5.41**	**164**	P	**Pn**	**01 31 29.9**	**+1.4**
ATH	**Athens Observa**	**5.41**	**151**	P	**Pn**	**01 31 29.5**	**+1.0**
ATH	**Athens Observa**	**5.41**	**151**	P	**Pn**	**01 31 29.5**	**+1.0**
ATHU	**Athens Univers**	**5.44**	**150**	P	**Pn**	**01 31 30.3**	**+1.4**
GRER		**5.45**	**59**	⇑P	**Pn**	**01 31 28.2**	**-0.8**
GRER		**5.45**	**59**		**Pn**	**01 31 28.2**	**-0.8**
SOKA	**Soboth**	**5.46**	**318**	*i* Pn	**Pn**	**01 31 29.5**	**+0.2**
	comp=N,27nm,0.3s,SNR=21						
SOKA				*e*Sn	**Sg**	**01 33 08.1**	**+5.5**
	comp=N,16nm,0.6s						
SOKA	**Soboth**	**5.46**	**318**		**Pn**	**01 31 29.5**	**+0.2**
SOKA					Lg	01 33 08.1	
PLOR	**Plostina**	**5.48**	**53**	⇑P	**Pn**	**01 31 30.5**	**+1.0**
PLOR	**Plostina**	**5.48**	**53**	P	**Pn**	**01 31 30.5**	**+1.0**
PLOR	**Plostina**	**5.48**	**53**		**Pn**	**01 31 30.5**	**+1.0**
VRI	**Vrincioaia**	**5.54**	**53**	⇑P	**Pn**	**01 31 31.1**	**+0.9**
VRI	**Vrincioaia**	**5.54**	**53**	P	**Pn**	**01 31 31.1**	**+0.9**
VRI	**Vrincioaia**	**5.54**	**53**		**Pn**	**01 31 31.1**	**+0.9**
EPID	**Epidavros**	**5.54**	**157**	P	**Pn**	**01 31 31.2**	**+0.9**
TRI	**Trieste**	**5.59**	**304**	P	**Pn**	**01 31 32.3**	**+1.4**
TRI	**Trieste**	**5.59**	**304**	Pn	**Pn**	**01 31 32.3**	**+1.4**
OBKA	**Obir**	**5.60**	**314**	*i* Pn	**Pn**	**01 31 31.7**	**+0.5**
	comp=N,11nm,0.4s,SNR=10						
OBKA				*e*Sn	**Sg**	**01 33 14.6**	**+7.7**
	comp=N,52nm,0.7s						
OBKA	**Obir**	**5.60**	**314**		**Pn**	**01 31 31.7**	**+0.5**
OBKA					Lg	01 33 14.6	
SOP	**Sopron**	**5.62**	**333**	*e*PN	**Pn**	**01 31 32.0**	**+0.6**
SOP				*e*SN	**Sn**	**01 32 33.0**	**-3.2**
ARSA	**Arzberg**	**5.66**	**324**	*i* Pn	**Pn**	**01 31 32.4**	**+0.5**
	comp=N,30nm,0.2s,SNR=26						
ARSA	**Arzberg**	**5.66**	**324**		**Pn**	**01 31 32.4**	**+0.5**
ITM	**Ithomi**	**5.69**	**167**	Pn	**Pn**	**01 31 33.1**	**+0.8**
MURB	**Monte Urbino**	**5.77**	**278**	Pn	**Pn**	**01 31 34.8**	**+1.4**
VYHS	**Vyhne**	**5.85**	**350**	*e*P	**Pn**	**01 31 34.1**	**-0.4**
VYHS				*e*		01 32 39.8	
VYHS	**Vyhne**	**5.85**	**350**	*e*PN	**Pn**	**01 31 34.1**	**-0.4**
VYHS				*e*SN	**Sn**	**01 32 39.8**	**-2.1**
BIZ	**Bicaz**	**5.86**	**42**	⇑P	**Pn**	**01 31 35.7**	**+1.1**
BIZ	**Bicaz**	**5.86**	**42**		**Pn**	**01 31 35.7**	**+1.1**
TESR	**Tescani**	**5.86**	**48**	⇓P	**Pn**	**01 31 35.2**	**+0.5**
TESR	**Tescani**	**5.86**	**48**		**Pn**	**01 31 35.1**	**+0.5**
TLBR	**Topalu**	**5.86**	**69**	⇑P	**Pn**	**01 31 35.6**	**+0.9**
TLBR	**Topalu**	**5.86**	**69**		**Pn**	**01 31 35.6**	**+0.9**
ZST	**Bratislava**	**5.91**	**338**	*e*P	**Pn**	**01 31 36.3**	**+1.0**
ZST				*e*		01 32 40.2	
ZST	**Bratislava**	**5.91**	**338**	*e*PN	**Pn**	**01 31 36.3**	**+1.0**
ZST				*e*SN	**Sn**	**01 32 40.1**	**-3.4**
BURAR	**Bucovina Array**	**5.96**	**34**	⇑P	**Pn**	**01 31 38.2**	**+2.1**
BURAR	**Bucovina Array**	**5.96**	**34**		**Pn**	**01 31 38.2**	**+2.1**
BURAR	**Bucovina Array**	**5.96**	**34**	Pn	**Pn**	**01 31 38.4**	**+2.3**
BUR08	**Bucovina Ar. S**	**5.98**	**33**	Pn	**Pn**	**01 31 37.6**	**+1.3**
MODS	**Modra-Piesok**	**6.03**	**340**	*e*P	**Pn**	**01 31 36.7**	**-0.3**
MODS				*e*		01 32 43.5	
MODS	**Modra-Piesok**	**6.03**	**340**	*e*PN	**Pn**	**01 31 36.7**	**-0.3**
MODS				*e*SN	**Sn**	**01 32 43.5**	**-2.9**
MODS				*e*SG	**Sg**	**01 33 25.8**	**+5.1**
UZH	**Uzhgorod**	**6.04**	**12**	*e*P	**Pn**	**01 31 37.0**	**-0.1**
UZH				*e*S	**Sn**	**01 32 47.2**	**+0.6**
UZH				MLR	MLR		
	comp=N,10.0nm,1.0s						
UZH				MLR	MLR		
	comp=E,10.0nm,1.0s						
UZH				MLR	MLR		
	comp=Z,6.0nm,1.0s						
CONA	**Conrad Observa**	**6.08**	**330**	*e*Pn	**Pn**	**01 31 37.7**	**0.0**
	comp=Z,4.5nm,0.3s						
CONA				*e*Sn	**Sn**	**01 32 44.2**	**-3.4**
	comp=Z,11nm,0.5s						
CONA	**Conrad Observa**	**6.08**	**330**		**Pn**	**01 31 37.7**	**0.0**
CONA					**Sn**	**01 32 44.2**	**-3.4**
TIRR	**Tirgusor**	**6.10**	**71**	P	**Pn**	**01 31 37.9**	**0.0**
TIRR	**Tirgusor**	**6.10**	**71**	Pn	**Pn**	**01 31 37.9**	**0.0**
CFR	**Carcaliu**	**6.12**	**64**	⇓P	**Pn**	**01 31 38.3**	**+0.1**
CFR	**Carcaliu**	**6.12**	**64**	P	**Pn**	**01 31 38.3**	**+0.1**
CFR	**Carcaliu**	**6.12**	**64**		**Pn**	**01 31 38.3**	**+0.1**
SMOL	**Smolenice**	**6.13**	**341**	*e*P	**Pn**	**01 31 39.1**	**+0.8**
SMOL				*e*		01 32 47.6	
SMOL	**Smolenice**	**6.13**	**341**	*e*PN	**Pn**	**01 31 39.1**	**+0.8**
SMOL				*e*SN	**Sn**	**01 32 47.6**	**-1.1**
MYKA	**Terra Mystica**	**6.16**	**311**	*i* Pn	**Pn**	**01 31 40.3**	**+1.5**
	comp=Z,14nm,0.4s,SNR=13						
MYKA				*e*Sn	**Sg**	**01 33 32.7**	**+7.7**
	comp=Z,18nm,0.5s						
MYKA	**Terra Mystica**	**6.16**	**311**		**Pn**	**01 31 40.3**	**+1.5**
MYKA					Lg	01 33 32.7	
LATE	**Laterza**	**6.30**	**272**	Pn	**Pn**	**01 31 41.6**	**+0.8**
KOLS	**Kolonicke sedl**	**6.33**	**12**	*e*P	**Pn**	**01 31 42.2**	**+1.1**
KOLS				MLR	MLR		
	comp=Z,100nm,1.1s						
KOLS	**Kolonicke sedl**	**6.33**	**12**	*e*PN	**Pn**	**01 31 42.2**	**+1.1**
KOLS				*e*SG	**Sg**	**01 33 35.9**	**+5.5**
KOLS				*e*LG	Lg	01 33 59.1	
JAVC	**Velka Javorina**	**6.40**	**344**	*e*PN	**Pn**	**01 31 42.7**	**+0.6**
LANS	**Liptovska Anna**	**6.44**	**355**	*e*P	**Pn**	**01 31 45.0**	**+2.4**
LANS	**Liptovska Anna**	**6.44**	**355**	*e*PN	**Pn**	**01 31 45.0**	**+2.4**
STAL	**STALIGIAL**	**6.50**	**305**	Pn	**Pn**	**01 31 44.1**	**+0.6**
ZOU	**Zoufplan**	**6.50**	**308**	Pn	**Pn**	**01 31 45.0**	**+1.4**
TLCR		**6.58**	**65**	⇑P	**Pn**	**01 31 45.4**	**+1.0**
TLCR		**6.58**	**65**	P	**Pn**	**01 31 45.4**	**+1.0**
TLCR		**6.58**	**65**		**Pn**	**01 31 45.4**	**+1.0**
KBA	**Koelnbreinsper**	**6.60**	**313**	*e*Pn	**Pn**	**01 31 46.1**	**+1.2**
	comp=Z,6.0nm,0.4s						
KBA				*e*Sn	**Sn**	**01 32 58.4**	**-2.2**
	comp=Z,13nm,0.4s						
KBA	**Koelnbreinsper**	**6.60**	**313**	P	**Pn**	**01 31 46.1**	**+1.2**
KBA						01 32 58.4	
KBA	**Koelnbreinsper**	**6.60**	**313**		**Pn**	**01 31 46.1**	**+1.2**
KBA					**Sn**	**01 32 58.4**	**-2.2**
MOA	**Molln**	**6.67**	**322**	*i* Pn	**Pn**	**01 31 46.9**	**+1.1**
	comp=Z,3.0nm,0.2s,SNR=9.7						
MOA				*e*Sn	**Sn**	**01 33 03.1**	**+0.9**
	comp=Z,5.9nm,0.2s						
MOA	**Molln**	**6.67**	**322**		**Pn**	**01 31 46.9**	**+1.1**
MOA					**Sn**	**01 33 03.1**	**+0.9**
OSSC	**Osservatorio P**	**6.71**	**280**	Pn	**Pn**	**01 31 48.5**	**+2.2**
TEOL	**Teolo**	**6.78**	**296**	Pn	**Pn**	**01 31 46.8**	**-0.5**
ABTA	**Abfaltersbach**	**6.87**	**308**	*i* Pn	**Pn**	**01 31 49.8**	**+1.2**
	comp=Z,15nm,0.5s,SNR=7.2						
ABTA				*e*Sn	**Sg**	**01 33 56.1**	**+8.5**
	comp=Z,27nm,0.7s						
ABTA	**Abfaltersbach**	**6.87**	**308**		**Pn**	**01 31 49.8**	**+1.2**
ABTA					Lg	01 33 56.1	
KRUC	**Moravsky**	**6.90**	**338**	*e*PN	**Pn**	**01 31 48.2**	**-0.6**
KRUC				*e*SN	**Sn**	**01 33 07.0**	**-0.7**
APE	**Apeiranthos**	**6.92**	**143**	*i* P	**Pn**	**01 31 49.4**	**+0.1**
VAE	**Valguarnera**	**6.96**	**223**	Sn	Sn	01 33 19.1	+10
	comp=Z,1.5nm,0.3s,baz=176,slow=5.6,SNR=4.2						
CASP	**Castiglione de**	**6.99**	**274**	Pn	**Pn**	**01 31 51.5**	**+1.4**
ZCCA	**Zocca**	**7.00**	**286**	Pn	**Pn**	**01 31 52.7**	**+2.3**
CTI	**Castel Tesino**	**7.06**	**301**	P	**Pn**	**01 31 51.4**	**+0.2**
CTI	**Castel Tesino**	**7.06**	**301**	Pn	**Pn**	**01 31 51.4**	**+0.2**
VRAC	**Vranov**	**7.07**	**340**	Pn	**Pn**	**01 31 51.1**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=142,slow=12,SNR=6.9						
VRAC				Sn	**Sn**	**01 33 11.0**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=270,slow=23,SNR=4.8						
VRAC	**Vranov**	**7.07**	**340**	*e*PN	**Pn**	**01 31 50.7**	**-0.5**
VRAC				*e*SN	**Sn**	**01 33 10.8**	**-1.1**
KWP	**Kalwaria Pacla**	**7.08**	**13**	P	**Pn**	**01 31 53.2**	**+1.8**
KWP	**Kalwaria Pacla**	**7.08**	**13**	Pn	**Pn**	**01 31 53.2**	**+1.8**
RAFF	**Raffo Rosso**	**7.18**	**222**	Pn	**Pn**	**01 31 53.1**	**+0.4**
CORL	**Corleone**	**7.24**	**230**	Pn	**Pn**	**01 31 54.8**	**+1.1**
MORC	**Moravsky Berou**	**7.30**	**346**	⇑P	**Pn**	**01 31 55.0**	**+0.6**
MORC	**Moravsky Berou**	**7.30**	**346**	*e*PN	**Pn**	**01 31 54.4**	**0.0**
MORC	**Moravsky Berou**	**7.30**	**346**	P	**Pn**	**01 31 55.0**	**+0.6**
MORC	**Moravsky Berou**	**7.30**	**346**		**Pn**	**01 31 55.0**	**+0.6**
MORC	**Moravsky Berou**	**7.30**	**346**	Pn	**Pn**	**01 31 55.4**	**+0.9**
RJOB	**Jochberg**	**7.31**	**316**	*e*Pn	**Pn**	**01 31 56.5**	**+2.0**
RJOB				*e*Sn	**Sn**	**01 33 16.7**	**-1.2**
VLC	**Villacollemand**	**7.39**	**284**	Pn	**Pn**	**01 31 57.1**	**+1.4**
OJC	**Ojcow**	**7.49**	**357**	P	**Pn**	**01 31 59.8**	**+2.8**
OJC	**Ojcow**	**7.49**	**357**	Pn	**Pn**	**01 31 59.8**	**+2.8**
MANT	**Manisa**	**7.55**	**122**	Pn	**Pn**	**01 31 59.8**	**+1.8**
SALO	**Salr**	**7.63**	**295**	Pn	**Pn**	**01 32 00.6**	**+1.6**
WTTA	**Wattenberg**	**7.66**	**309**	*i* Pn	**Pn**	**01 32 01.4**	**+2.0**
	comp=Z,5.1nm,0.3s,SNR=9.9						
WTTA				*e*Sn	**Sn**	**01 33 26.4**	**-0.2**
	comp=Z,12nm,0.4s						
WTTA	**Wattenberg**	**7.66**	**309**		**Pn**	**01 32 01.4**	**+2.0**
WTTA					**Sn**	**01 33 26.4**	**-0.2**
GEC2	**GERESS Array S**	**7.67**	**325**	Pn	**Pn**	**01 32 00.8**	**+1.3**
GEC2	**GERESS Array S**	**7.67**	**325**	*e*Pn	**Pn**	**01 32 00.7**	**+1.2**
GERES	**GERESS Array B**	**7.67**	**325**	Pn	**Pn**	**01 32 00.7**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=149,slow=13,SNR=41						
WATA	**Walderalm**	**7.73**	**309**	*i* Pn	**Pn**	**01 32 02.5**	**+2.1**
	comp=Z,5.2nm,0.3s,SNR=8.4						
WATA				*e*Sn	**Sn**	**01 33 29.7**	**+1.3**
	comp=Z,22nm,0.6s						
WATA	**Walderalm**	**7.73**	**309**		**Pn**	**01 32 02.5**	**+2.1**
WATA					**Sn**	**01 33 29.7**	**+1.3**
KRLC	**Kraliky**	**7.74**	**343**	*e*P	**Pn**	**01 32 00.3**	**-0.1**
KRLC	**Kraliky**	**7.74**	**343**	*e*PN	**Pn**	**01 32 00.3**	**-0.1**
SQTA	**Sankt Quirin**	**7.88**	**308**	*i* Pn	**Pn**	**01 32 04.6**	**+2.2**
	comp=Z,13nm,0.4s,SNR=9.0						
SQTA				*e*Sn	**Sn**	**01 33 31.8**	**-0.2**
	comp=Z,11nm,0.6s						
SQTA	**Sankt Quirin**	**7.88**	**308**		**Pn**	**01 32 04.6**	**+2.2**
SQTA					**Sn**	**01 33 31.8**	**-0.2**
KHC	**Kasperske Hory**	**7.94**	**326**	*e*P	**Pn**	**01 32 04.6**	**+1.4**
KHC				*e*		01 33 30.0	
KHC	**Kasperske Hory**	**7.94**	**326**	*e*PN	**Pn**	**01 32 04.6**	**+1.4**
KHC				*e*SN	**Sn**	**01 33 30.0**	**-3.5**
KHC	**Kasperske Hory**	**7.94**	**326**	Pn	**Pn**	**01 32 04.7**	**+1.5**
MOTA	**Moosalm**	**8.00**	**308**	*i* Pn	**Pn**	**01 32 05.7**	**+1.5**
	comp=Z,7.8nm,0.4s,SNR=8.5						
MOTA				*e*Sn	**Sn**	**01 33 36.9**	**+1.7**
	comp=Z,16nm,0.7s						
MOTA	**Moosalm**	**8.00**	**308**		**Pn**	**01 32 05.7**	**+1.5**
MOTA					**Sn**	**01 33 36.9**	**+1.7**
MSSA	**Maissana**	**8.03**	**285**	Pn	**Pn**	**01 32 05.2**	**+0.7**
FETA	**Feichten**	**8.06**	**305**	*e*Pn	**Pn**	**01 32 06.9**	**+1.9**
	comp=Z,2.6nm,0.4s						
FETA				*e*Sn	**Sn**	**01 33 38.5**	**+1.9**
	comp=Z,11nm,0.8s						
FETA	**Feichten**	**8.06**	**305**		**Pn**	**01 32 06.9**	**+1.9**
FETA					**Sn**	**01 33 38.5**	**+1.9**
DPC	**Dobruska-Polom**	**8.10**	**341**	*e*P	**Pn**	**01 32 06.7**	**+1.3**
DPC	**Dobruska-Polom**	**8.10**	**341**	*e*PN	**Pn**	**01 32 06.7**	**+1.3**
IDI	**Anoyia**	**8.24**	**153**	Pn	**Pn**	**01 32 05.8**	**-1.5**
RETA	**Reutte**	**8.28**	**308**	*e*Pn	**Pn**	**01 32 08.9**	**+1.0**
	comp=Z,4.1nm,0.6s						
RETA				*e*Sn	**Sn**	**01 33 44.1**	**+2.3**
	comp=Z,4.8nm,0.4s						
RETA	**Reutte**	**8.28**	**308**		**Pn**	**01 32 08.9**	**+1.0**
RETA					**Sn**	**01 33 44.1**	**+2.3**
PRU	**Pruhonice**	**8.29**	**333**	*e*P	**Pn**	**01 32 09.5**	**+1.6**
PRU	**Pruhonice**	**8.29**	**333**	*e*PN	**Pn**	**01 32 09.5**	**+1.6**
OSTC	**Ostas**	**8.32**	**341**	*e*PN	**Pn**	**01 32 09.5**	**+1.1**
UPC	**Upice**	**8.32**	**340**	*e*P	**Pn**	**01 32 10.1**	**+1.7**
UPC	**Upice**	**8.32**	**340**	*e*PN	**Pn**	**01 32 10.1**	**+1.7**
FUR	**Furstenfeldbru**	**8.37**	**313**	*e*Pn	**Pn**	**01 32 08.9**	**-0.2**
PGF	**Pioggiola**	**8.38**	**273**	*e*P	**Pn**	**01 32 11.4**	**+2.2**
CHVC	**Chvalec**	**8.38**	**341**	*e*PN	**Pn**	**01 32 10.4**	**+1.1**
DAVOX	**Davos/Dischmat**	**8.48**	**302**	Pn	**Pn**	**01 32 11.2**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=115,slow=5.2,SNR=24						
DAVA	**Damuels**	**8.70**	**305**	*e*Pn	**Pn**	**01 32 16.5**	**+2.8**
	comp=Z,2.9nm,0.5s						
DAVA				*e*Sn	**Sn**	**01 33 50.9**	**-1.3**
	comp=Z,14nm,0.6s						
DAVA	**Damuels**	**8.70**	**305**		**Pn**	**01 32 16.5**	**+2.8**
DAVA					**Sn**	**01 33 50.9**	**-1.3**
UBR	**Ueberruh**	**8.76**	**308**	*e*Pn	**Pn**	**01 32 15.0**	**+0.6**
VSL	**Villasalto**	**8.90**	**252**	Pn	**Pn**	**01 32 17.6**	**+1.2**
BRG	**Berggiesshubel**	**9.24**	**334**	*e*P	**Pn**	**01 32 24.3**	**+3.3**
BRG				Amp		01 32 28.4	
	comp=Z,3.5nm,0.9s						
BRG				*e*x	x	01 33 08.5	
BRG				*e*x	x	01 34 30.6	
BRG				Amp		01 35 19.4	
	comp=Z,11nm,1.1s						
BRG	**Berggiesshubel**	**9.24**	**334**	*e*P	**Pn**	**01 32 24.3**	**+3.3**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG	**Berggiesshubel**	**9.24**	**334**	*e*P	**Pn**	**01 32 24.3**	**+3.3**
BRG				Amp		01 32 28.4	
	comp=Z,3.5nm,0.9s						
BRG				*e*x	x	01 33 08.5	
BRG				*e*x	x	01 34 30.6	
BRG				Amp		01 35 19.4	
	comp=Z,11nm,1.1s						
GRA1	**Grafenberg Arr**	**9.40**	**321**	Pn	**Pn**	**01 32 23.8**	**+0.7**
GRF	**Grafenberg Arr**	**9.40**	**321**	P	**Pn**	**01 32 23.8**	**+0.7**
GUNZ	**Gunzen**	**9.41**	**327**	*e*Pn	**Pn**	**01 32 25.4**	**+2.0**
WERD	**Werda**	**9.49**	**327**	*e*Pn	**Pn**	**01 32 26.9**	**+2.5**
SBF	**Sospel**	**9.49**	**281**	*e*Pn	**Pn**	**01 32 22.2**	**-2.3**
SBF	**Sospel**	**9.49**	**281**	*e*P	**Pn**	**01 32 28.3**	**+3.8**
SBF				*e*Sn	Sn	01 34 02.2	-9.3
	comp=Z,9.7nm,0.5s						
MOX	**Moxa**	**9.92**	**326**	P	**Pn**	**01 32 32.6**	**+2.3**
CLL	**Collm**	**9.93**	**332**	*e*Pn	**Pn**	**01 32 33.0**	**+2.7**
CLL				*e*Pg		01 33 14.0	
CLL				*e*Sn	**Sn**	**01 34 14.0**	**-8.1**
CLL				*e*		01 34 45.0	
CLL				*e*Sg		01 35 31.0	
CLL	**Collm**	**9.93**	**332**	*e*P	**Pn**	**01 32 33.0**	**+2.7**
SENIN	**Lac Senin/Sane**	**10.00**	**296**	Pn	**Pn**	**01 32 33.1**	**+1.6**
AKASG	**Malin Array Be**	**10.02**	**34**	Pn	**Pn**	**01 32 31.9**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=220,slow=12,SNR=6.7						
AKBB	**Malin Array Si**	**10.02**	**34**	*i* P	**Pn**	**01 32 33.0**	**+1.4**
MBDF	**Montbardon**	**10.03**	**286**	*e*Pn	**Pn**	**01 32 29.1**	**-2.9**
MBDF				*e*Sn	Sn	01 34 15.2	-10
	comp=Z,16nm,0.6s						
FRF	**La Foret Royal**	**10.05**	**279**	*e*Pn	**Pn**	**01 32 29.4**	**-2.8**
FRF	**La Foret Royal**	**10.05**	**279**	*e*P	**Pn**	**01 32 35.2**	**+3.0**
FRF				*e*Sn	Sn	01 34 15.8	-10
	comp=Z,4.4nm,0.5s						
BFO	**Black Forest**	**10.12**	**308**	P	**Pn**	**01 32 33.7**	**+0.7**
BFO	**Black Forest**	**10.12**	**308**	Pn	**Pn**	**01 32 33.7**	**+0.7**
BFO	**Black Forest**	**10.12**	**308**	*e*Pn	**Pn**	**01 32 33.7**	**+0.7**
BNI	**Bardonecchia**	**10.14**	**288**	P	**Pn**	**01 32 33.9**	**+0.5**
BNI	**Bardonecchia**	**10.14**	**288**	Pn	**Pn**	**01 32 33.9**	**+0.5**
LMR	**La Mourre**	**10.16**	**278**	*e*P	**Pn**	**01 32 36.5**	**+2.9**
LMR				*e*Sn	Sn	01 34 18.0	-10
	comp=Z,263nm,2.1s						
LPG	**La Plagne**	**10.16**	**290**	*e*Pn	**Pn**	**01 32 31.2**	**-2.7**
LPG	**La Plagne**	**10.16**	**290**	*e*P	**Pn**	**01 32 36.9**	**+3.0**
LPG				*e*Sn	Sn	01 34 18.6	-10
	comp=Z,25nm,0.6s						
LPL	**La Plagne**	**10.18**	**290**	*e*Pn	**Pn**	**01 32 31.0**	**-3.1**
LPL	**La Plagne**	**10.18**	**290**	*e*P	**Pn**	**01 32 37.1**	**+3.0**
LPL				*e*Sn	Sn	01 34 18.8	-10
	comp=Z,37nm,0.8s						
BR131	**Keskin Array S**	**10.45**	**102**	*i* P	**Pn**	**01 32 36.6**	**-1.1**
BRTR	**Keskin Array B**	**10.45**	**102**	Pn	**Pn**	**01 32 39.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=257,slow=12,SNR=2.8						
BRTR				LR	LR	01 37 20.3	
	comp=Z,68nm,18.3s,baz=328,slow=41						
ORIF	**Oris-en-Rattie**	**10.68**	**287**	*e*Pn	**Pn**	**01 32 38.1**	**-2.8**
ORIF	**Oris-en-Rattie**	**10.68**	**287**	*e*P	**Pn**	**01 32 43.6**	**+2.7**
ORIF				*e*Sn	Sn	01 34 30.8	-10
	comp=Z,17nm,0.7s						
ECH	**Echery**	**10.76**	**305**	P	**Pn**	**01 32 43.0**	**+1.2**
ECH	**Echery**	**10.76**	**305**	Pn	**Pn**	**01 32 43.0**	**+1.2**
CDF	**Champ du Feu**	**10.77**	**306**	*e*P	**Pn**	**01 32 45.2**	**+3.1**
HINF	**Hinteralfeld**	**10.78**	**303**	*e*P	**Pn**	**01 32 45.0**	**+2.9**
HINF				*e*Sn	Sn	01 34 32.8	-10
	comp=Z,11nm,0.7s						
SMRF	**Simiane la Rot**	**10.84**	**282**	*e*P	**Pn**	**01 32 45.6**	**+2.7**
SMRF				*e*Sn	Sn	01 34 34.5	-10
CABF	**La Chapelle**	**10.87**	**296**	*e*P	**Pn**	**01 32 45.6**	**+2.2**
CABF				*e*Sn	Sn	01 34 35.9	-10
	comp=Z,4.7nm,0.7s						
KEST	**Kesra**	**11.03**	**234**	Pn	**Pn**	**01 32 46.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=344,slow=16,SNR=1.5						
TNS	**Taunus Mts**	**11.10**	**316**	*e*Pn	**Pn**	**01 32 46.8**	**+0.4**
HAU	**Haudompre**	**11.16**	**303**	*e*P	**Pn**	**01 32 50.2**	**+2.8**
VIVF	**Saint-Julien-l**	**11.53**	**286**	*e*P	**Pn**	**01 32 54.4**	**+2.0**
WLF	**Walferdange**	**12.02**	**310**	*d*Pn	**Pn**	**01 32 58.5**	**-0.5**
WLF				*d*PnPn	**PnPn**	**01 33 05.5**	**-1.2**
WLF	**Walferdange**	**12.02**	**310**	P	**Pn**	**01 33 02.5**	**+3.5**
WLF	**Walferdange**	**12.02**	**310**	Pn	**Pn**	**01 33 02.5**	**+3.5**
SFTF	**Sexfontaines**	**12.05**	**302**	*e*P	**Pn**	**01 33 02.5**	**+3.0**
	baz=122						
SFTF				*e*Sn	Sn	01 35 03.4	-11
	comp=Z,5.7nm,0.4s						
LASF	**Ste Croix**	**12.08**	**282**	*e*P	**Pn**	**01 33 02.3**	**+2.5**
MEZF	**Maizieres J'vi**	**12.16**	**304**	*e*P	**Pn**	**01 33 03.7**	**+2.8**
	baz=124						
SMF	**Signal de Mont**	**12.38**	**294**	*e*Pn	**Pn**	**01 33 01.1**	**-2.9**
SMF	**Signal de Mont**	**12.38**	**294**	*e*P	**Pn**	**01 33 06.7**	**+2.7**
SMF				*e*Sn	Sn	01 35 11.1	-11
	comp=Z,8.1nm,0.6s						
BTNL	**Ternell**	**12.52**	**314**	*d*x	**Pn**	**01 33 07.9**	**+2.1**
LOR	**Lormes**	**12.52**	**297**	*e*Pn	**Pn**	**01 33 02.9**	**-2.9**
LOR	**Lormes**	**12.52**	**297**	*e*P	**Pn**	**01 33 08.6**	**+2.8**
	baz=116						
LOR				*e*Sn	Sn	01 35 14.4	-11
	comp=Z,7.2nm,0.5s						
MEM	**Membach**	**12.59**	**314**	*d*x	**Pn**	**01 33 09.2**	**+2.3**
MEM				*d*PnPn	**PnPn**	**01 33 13.5**	**-1.0**
SSF	**Saint Saulge**	**12.70**	**296**	*e*P	**Pn**	**01 33 10.8**	**+2.5**
SSF				*e*Sn	Sn	01 35 18.8	-11
	comp=Z,5.4nm,0.5s						
AVF	**Avril sur Loir**	**12.74**	**294**	*e*P	**Pn**	**01 33 11.3**	**+2.4**
AVF				*e*Sn	Sn	01 35 19.7	-11
	comp=Z,9.5nm,0.9s						
BCLA	**Clavier**	**12.88**	**312**	*d*x	**Pn**	**01 33 13.1**	**+2.4**
NACGM	**Naroch**	**12.88**	**17**	*i* P	**Pn**	**01 33 10.5**	**-0.2**
NACGM				*i* P	**Pn**	**01 33 10.5**	**-0.2**
NACGM				*i* P	**Pn**	**01 33 10.5**	**-0.2**
NACGM				*i* S	**Sn**	**01 35 26.1**	**-8.2**
NACGM				*i* LQ	LQ	01 36 41.6	
NACGM				*i* LR	LR	01 37 36.5	
BGF	**Bois d'Agland**	**13.04**	**293**	*e*Pn	**Pn**	**01 33 09.6**	**-3.3**
BGF	**Bois d'Agland**	**13.04**	**293**	*e*P	**Pn**	**01 33 15.1**	**+2.2**
BGF				*e*Sn	Sn	01 35 26.8	-11
	comp=Z,7.0nm,0.6s						
BMRD	**Maredsous**	**13.11**	**311**	*d*Pn	**Pn**	**01 33 12.8**	**-1.2**
BMRD				*d*PnPn	**PnPn**	**01 33 20.6**	**-1.1**
BMRD				*d*PbPb	**PbPb**	**01 33 54.0**	**-2.5**
MTLF	**Montolieu**	**13.29**	**279**	*e*P	**Pn**	**01 33 19.3**	**+3.0**
HYF	**Humbligny**	**13.32**	**296**	*e*Sn	Sn	01 35 33.6	-12
CAF	**Calviac**	**13.39**	**286**	*e*P	**Pn**	**01 33 19.8**	**+2.1**
TCF	**Toulx Ste Croi**	**13.42**	**292**	*e*P	**Pn**	**01 33 19.8**	**+1.6**
TCF				*e*Sn	Sn	01 35 37.6	-10
	comp=Z,1.4nm,0.6s						
SOC	**Sochi**	**14.16**	**80**	*e*P	**Pn**	**01 33 27.6**	**-0.7**
SOC				*e*		01 36 06.9	
SOC				pmax	pmax		
	comp=Z,14nm,1.1s						
SOC				MLR	MLR		
	comp=Z,137nm,18.0s						
VORD	**Divnogorie**	**15.31**	**51**	*e*P	**P**	**01 33 48.2**	**-0.5**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MMAI	**Mount Meron Ar**	**15.32**	**124**	Pn	**Pn**	**01 33 45.9**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=316,slow=10,SNR=3.3						
VSR	**Storozhevoye**	**15.35**	**50**	*e*P	**P**	**01 33 48.2**	**-0.9**
VSR				pmax	pmax		
	comp=Z,20nm,1.9s						
LDF	**La Druitiere**	**15.45**	**299**	*e*P	**Pn**	**01 33 47.3**	**+1.7**
LPSR	**Galich'ya Gora**	**15.88**	**45**	*e*P	**Pn**	**01 33 51.6**	**+0.4**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
VSU	**Vasula**	**16.24**	**12**	*i* P	**Pn**	**01 33 55.7**	**0.0**
OBN	**Obninsk**	**16.28**	**35**	⇑*e*P	**Pn**	**01 33 54.8**	**-1.5**
OBN				*e*S	**Sn**	**01 36 58.2**	**+1.1**
OBN				pmax	pmax		
	comp=Z,30nm,1.1s						
OBN				MLR	MLR		
	comp=Z,254nm,14.0s						
OBN	**Obninsk**	**16.28**	**35**	P	**P**	**01 33 58.7**	**-0.7**
KIV	**Kislovodsk**	**16.29**	**78**	*e*P	**Pn**	**01 33 58.1**	**+1.5**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV	**Kislovodsk**	**16.29**	**78**	P	**P**	**01 33 59.6**	**0.0**
KBZ	**Khabaz**	**16.45**	**79**	Pn	**P**	**01 34 02.6**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=7.3,SNR=6.9						
KBZ	**Khabaz**	**16.45**	**79**	*ce*P	**Pn**	**01 33 58.5**	**-0.1**
GOF	**Gofitskoye**	**16.51**	**74**	⇑*e*P	**P**	**01 34 01.2**	**-0.8**
SGMF	**Saint Gilles**	**16.96**	**297**	*e*P	**P**	**01 34 07.1**	**+0.1**
MOS	**Moscow**	**17.15**	**35**	*e*P	**Pn**	**01 34 05.5**	**-1.8**
MOS				pmax	pmax		
	comp=Z,45nm,1.3s						
HFS	**Hagfors**	**17.89**	**349**	P	**Pn**	**01 34 16.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=9.1						
GNI	**Garni**	**18.45**	**90**	P	**Pn**	**01 34 24.9**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=259,slow=4.2,SNR=6.4						
GNI	**Garni**	**18.45**	**90**	*ce*P	**Pn**	**01 34 24.4**	**+0.7**
GNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GNI	**Garni**	**18.45**	**90**	P	**Pn**	**01 34 26.9**	**+3.1**
ESDC	**Sonseca Array**	**18.54**	**269**	P	**P**	**01 34 24.1**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=71,slow=11,SNR=2.9						
NC602	**NORSAR Array S**	**18.80**	**346**	P	**Pn**	**01 34 28.1**	**+0.5**
NC602				IAmb	IAmb	01 34 30.7	
	comp=Z,62nm,1.4s						
FINES	**FINESS Array B**	**19.04**	**8**	P	**P**	**01 34 29.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=171,slow=9.4,SNR=9.6						
FINES	**FINESS Array B**	**19.04**	**8**	*i* P	**Pn**	**01 34 31.2**	**+0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**19.04**	**8**	P	**P**	**01 34 30.1**	**+0.3**
NB2	**NORSAR Subarra**	**19.14**	**346**	P	**P**	**01 34 29.8**	**-1.2**
	comp=Z,10nm,1.2s,baz=159,slow=11						
NOA	**NORSAR Array B**	**19.14**	**346**	P	**P**	**01 34 30.8**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=164,slow=11,SNR=7.0						
EKA	**Eskdalemuir Ar**	**19.79**	**318**	P	**P**	**01 34 38.1**	**+0.1**
	baz=115,slow=9.5,SNR=4.9						
BELG	**Belogornoye**	**20.66**	**53**	*i* P	**P**	**01 34 47.5**	**-0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOF	**Joensuu**	**21.21**	**14**	P	**P**	**01 34 50.1**	**-3.3**
JOF				pmax	pmax		
	comp=Z,23nm,0.9s						
KLMR	**Klimovskoe**	**21.52**	**26**	*e*P	**P**	**01 34 54.5**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,59nm,1.3s						
KLMR	**Klimovskoe**	**21.52**	**26**	*e*P	**P**	**01 34 54.6**	**-2.1**
KLMR				AMP		01 34 57.4	
	comp=Z,59nm,1.3s						
TMCR	**Tamitsa**	**23.74**	**19**	*e*P	**P**	**01 35 18.0**	**-1.8**
TMCR				pmax	pmax		
	comp=Z,20nm,1.4s						
KIRV	**Kirov**	**24.03**	**39**	*ce*P	**P**	**01 35 20.9**	**-1.8**
ARCES	**ARCESS Array B**	**26.99**	**4**	P	**P**	**01 35 48.0**	**-1.5**
	comp=Z,3.2nm,0.8s,baz=187,slow=9.5,SNR=11						
ARCES	**ARCESS Array B**	**26.99**	**4**	P	**P**	**01 35 48.7**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,28nm,1.4s						
ARCES	**ARCESS Array B**	**26.99**	**4**	P	**P**	**01 35 48.7**	**-0.8**
ARU	**Arti**	**27.89**	**47**	P	**P**	**01 35 56.7**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=256,slow=5.5,SNR=12						

ARU	Arti	27.89	47	*d i*P	P	01 35 56.7	-0.9
ARU				S	S	01 40 41.2	-0.2
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARU	Arti	27.89	47	P	P	01 35 57.4	-0.2
ARU				IAmb	IAmb	01 36 03.5	
	comp=Z,6.0nm,0.9s						
ABKAR	Akbulak array	28.01	63	P	P	01 35 58.8	-0.1
GEYT	Alibeck	29.02	87	P	P	01 36 07.8	-0.2
	comp=Z,1.8nm,0.6s,baz=261,slow=9.6,SNR=3.5						
GEYT	Alibeck	29.02	87	P	P	01 36 09.6	+1.6
GYA0B	ALIBECK ARRAY	29.02	87	P	P	01 36 10.0	+2.1
GYA0B				IAmb	IAmb	01 36 13.0	
	comp=Z,3.9nm,0.7s						
JMIC	Jan Mayen	31.75	343	P	P	01 36 30.2	-1.5
	comp=Z,53nm,0.6s,baz=109,slow=6.5,SNR=3.0						
HRA	Herat	33.52	90	P	P	01 36 48.2	+0.4
TOA0	Torodi Ar. Sit	33.62	214	P	P	01 36 48.9	+0.3
TOA0				IAmb	IAmb	01 36 54.1	
	comp=Z,5.1nm,1.1s						
TORD	Torodi Ar. Bea	33.62	214	P	P	01 36 48.4	-0.2
	comp=Z,3.3nm,0.8s,baz=32,slow=9.3,SNR=4.2						
TORD	Torodi Ar. Bea	33.62	214	P	P	01 36 49.1	+0.6
BRVK	Borovoye	34.37	55	P	P	01 36 55.7	+0.9
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BRVK	Borovoye	34.37	55	P	P	01 36 55.7	+0.9
KOWA	Kowa	35.10	224	P	P	01 37 01.1	-0.3
	comp=Z,1.2nm,0.6s,baz=37,slow=15,SNR=2.6						
SPA0	Spitsbergen Ar	35.59	359	P	P	01 37 06.2	+1.2
AAK	Ala-Archa	39.21	71	*ce*P	P	01 37 36.7	+0.4
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
KSH	Kashi	41.38	75	P	P	01 37 54.3	0.0
KSH				sP	sP	01 38 02.1	+5.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,640nm,6.2s						
DBIC	Dimbokro	42.26	219	P	P	01 38 01.1	-0.4
	comp=Z,3.3nm,0.8s,baz=4.7,slow=9.3,SNR=6.0						
DBIC	Dimbokro	42.26	219	P	P	01 38 01.2	-0.4
DBIC				pmax	pmax		
	comp=Z,14nm,1.5s						
DBIC	Dimbokro	42.26	219	P	P	01 38 01.2	-0.3
DBIC				IAmb	IAmb	01 38 02.0	
	comp=Z,14nm,1.5s						
ZAA0	Zalesovo Array	42.85	52	P	P	01 38 05.9	0.0
ZALV	Zalesovo Beam	42.85	52	P	P	01 38 06.0	+0.1
	comp=Z,4.6nm,0.7s,baz=282,slow=8.2,SNR=20						
ZALV	Zalesovo Beam	42.85	52	P	P	01 38 05.8	-0.1
MKAR	Makanchi Array	43.16	62	P	P	01 38 08.8	+0.3
	comp=Z,0.6nm,0.5s,baz=278,slow=8.0,SNR=12						
MKAR	Makanchi Array	43.16	62	P	P	01 38 08.6	0.0
DGZ	Jazzator, Alta	45.52	57	*i* P	P	01 38 26.9	-0.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	Urumqi	47.78	64	*e*P	P	01 38 47.9	+2.6
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.5s						
RES	Resolute Bay	55.36	343	P	P	01 39 41.5	+0.1
	comp=Z,1.8nm,0.9s,baz=42,slow=10,SNR=4.3						
RES	Resolute Bay	55.36	343	P	P	01 39 41.3	-0.2
RES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RES	Resolute Bay	55.36	343	P	P	01 39 41.3	-0.2
RES				IAmb	IAmb	01 39 42.3	
	comp=Z,3.8nm,1.1s						
TIXI	Tiksi	55.44	21	*ce*P	P	01 39 40.1	-1.9
TIXI				pmax	pmax		
	comp=Z,24nm,2.5s						
SONM	Songino Array	57.72	53	P	P	01 39 59.2	+0.3
	comp=Z,0.6nm,0.8s,baz=291,slow=7.8,SNR=4.3						
GTA	Gaotai	57.86	64	*e*P	P	01 40 00.5	+0.6
GTA				pP	sP	01 40 08.3	+6.0
GTA				sP	pP	01 40 12.0	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LZH	Lanzhou	62.34	65	⇓P	P	01 40 30.4	-0.4
LZH				pP	sP	01 40 35.1	+2.0
LZH				sP	pP	01 40 38.5	+6.0
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
C36M	Paulatuk	65.19	347	P	P	01 40 48.7	0.0
C36M				IAmb	IAmb	01 40 49.5	
	comp=Z,2.2nm,1.0s						
FCC	Fort Churchill	65.27	329	P	P	01 40 48.9	-0.6
FCC				pmax	pmax		
	comp=Z,5.0nm,1.4s						
FCC	Fort Churchill	65.27	329	P	P	01 40 48.9	-0.6
FCC				IAmb	IAmb	01 40 49.8	
	comp=Z,4.9nm,1.4s						
BILL	Bilibino	66.60	13	⇑*e*P	P	01 40 57.3	-0.6
BILL				*e*		01 41 31.5	
BILL				*e*		01 43 25.8	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,93nm,17.0s						
INK	Inuvik	67.55	350	P	P	01 41 03.1	-0.8
	comp=Z,2.0nm,1.1s,baz=270,slow=1.5,SNR=3.4						
INK	Inuvik	67.55	350	P	P	01 41 03.1	-0.8
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
INK	Inuvik	67.55	350	IAmb	IAmb	01 41 04.0	
	comp=Z,7.2nm,1.5s						
YKA	Yellowknife Ar	69.07	339	P	P	01 41 12.2	-1.3
	comp=Z,0.6nm,0.5s,baz=42,slow=5.9,SNR=12						
YKA	Yellowknife Ar	69.07	339	*ce*P	P	01 41 13.1	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	69.44	84	P	P	01 41 15.8	-0.7
	comp=Z,1.0nm,0.6s,baz=296,slow=7.3,SNR=7.7						
KLR	Kul'dur	70.46	40	P	P	01 41 22.8	+0.4
	comp=Z,0.4nm,0.6s,baz=292,slow=6.2,SNR=3.6						
KLR	Kul'dur	70.46	40	*ce*P	P	01 41 21.6	-0.7
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BOSA	Boshof	71.15	175	P	P	01 41 28.2	+1.5
	comp=Z,1.0nm,0.4s,baz=353,slow=6.8,SNR=8.6						
BOSA	Boshof	71.15	175	P	P	01 41 27.2	+0.5
BOSA				pmax	pmax		
	comp=Z,13nm,1.5s						
BOSA	Boshof	71.15	175	P	P	01 41 27.2	+0.5
ULM	Lac du Bonnet	71.97	323	P	P	01 41 30.3	-1.2
	comp=Z,1.6nm,0.8s,baz=78,slow=5.8,SNR=2.4						
ULM				LR	LR	02 14 50.4	
	comp=Z,89nm,19.6s,baz=70,slow=37						
MDM	Murphy Dome	72.27	355	P	P	01 41 33.5	+0.5
MDM				IAmb	IAmb	01 41 47.7	
	comp=Z,6.3nm,1.4s						
DAWY	Dawson	72.33	351	P	P	01 41 33.7	+0.2
DAWY				IAmb	IAmb	01 41 38.4	
	comp=Z,6.5nm,1.3s						
ILAR	Eielson Array	72.36	354	P	P	01 41 33.1	-0.4
	comp=Z,0.5nm,0.6s,baz=356,slow=5.2,SNR=11						
ILAR	Eielson Array	72.36	354	P	P	01 41 33.9	+0.4
ILAR	Eielson Array	72.36	354	P	P	01 41 33.9	+0.4
DHY	Denali Highway	74.07	354	P	P	01 41 44.0	+0.1
DHY				IAmb	IAmb	01 41 46.4	
	comp=Z,3.8nm,0.8s						
PPLA	Purkeypile	74.54	356	P	P	01 41 46.6	0.0
ASAR	Alice Springs	122.67	93	PKP	PKiKP	01 49 06.2	+1.9
	comp=Z,0.4nm,0.6s,baz=349,slow=10,SNR=22						
ASAR	Alice Springs	122.67	93		PKiKP	01 49 05.5	+1.2

*IDC **21** 01:35:08.2±0.6, 7°.11N×34°.13W, h0^{km}, mb4.0/20, mb1 4.2/21, mb1mx4.0/50, mbtmp4.1/21, ML4.3/1, MS4.0/18, Ms1 4.0/18, ms1mx3.8/35, Error ellipse: s-maj=20.0km s-min=14.2km az=148.0*

*NEIC **21** 01:35:10.9±1.6, 7°.3N±0°.1×34°.1W±0°.1, h10^{km}±1^{km}, mb4.5/23, Error ellipse: s-maj=20.7km s-min=15.1km az=325.0*

*GCMT **21** 01:35:12.9±0.4, 7°.27N±0°.03×34°.11W±0°.02, h24^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s17,c17; s76,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.34±.14; M$_{\theta\theta}$-0.62±.12; M$_{\phi\phi}$0.96±.10; M$_{r\theta}$0.28±.15; M$_{\theta\phi}$-2.13±.10; M$_{\phi r}$0.08±.12; Best double couple: M$_0$2.29500×10^{16} NP1:ϕ_s190.00000°, δ83.00000°, λ-5.00000°. NP2: ϕ_s281.00000°, δ85.00000°, λ-173.00000°. Principal axes: T 2.4460, Plg2.0000°, Azm55.0000°; N -0.3020, Plg81.0000°, Azm312.0000°; P -2.1440, Plg9.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 01:35:10.1±0.4, **7°.13N**±0°.08×**34°.10W**±0°.09, **h10**^{km}**, n104,** σ**1^{s}00**/82, **mb4.4**/36, **MS4.0**/17, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBMO	Morrinhos-CE	11.94	210	*e*P	Pn	01 37 59.9	-0.8
SACV	Santiago Islan	12.91	52		Pn	01 38 08.9	-5.0
RCBR	Riachuelo	12.99	188	Pn	Pn	01 38 13.8	-1.2
	1.6nm,0.3s,baz=359,slow=15,SNR=13						
RCBR				LR	LR	01 42 03.3	
	comp=Z,429nm,20.4s,baz=7.0,slow=32						
RCBR	Riachuelo	12.99	188		Pn	01 38 14.9	-0.2
RCBR	Riachuelo	12.99	188	*e*P	Pn	01 38 15.0	-0.1
NBPA	Parau_RN	13.14	193	*e*P	Pn	01 38 16.7	-0.3
TMAB	Tom-Au,PA,Br	16.85	236	*e*P	Pn	01 39 06.1	-0.3
MCPB	Macapa, AP	19.39	248	*e*P	P	01 39 37.2	+0.7
PRPB	Parauapebas	20.50	230	*e*P	P	01 39 48.3	-0.3
SMTB	Santa Maria do	20.81	220	*e*P	P	01 39 51.8	-0.1
GDU01	Guandu, BA	21.41	195	*e*P	P	01 39 58.3	-0.2
MALB	Monte Alegre	22.01	247	*e*P	P	01 40 04.0	-0.8
SDBA	SAO DESIDERIO	22.18	209	*e*P	P	01 40 06.3	-0.5
JANB	Januaria	24.25	205	*e*P	P	01 40 28.4	+0.7
ITTB	Itaituba	24.42	243	*e*P	P	01 40 28.6	-0.7
H10N3	ASCENSION HYDR	24.56	127	T	T	02 06 10.1	
	baz=306,slow=75,SNR=250						
H10N2	ASCENSION HYDR	24.56	127	T	T	02 06 10.3	
	baz=306,slow=75,SNR=253						
H10N1	ASCENSION HYDR	24.58	127	T	T	02 06 11.5	
	baz=306,slow=75,SNR=335						
H10S3	ASCENSION HYDR	25.11	129	T	T	02 06 44.2	
	baz=307,slow=74,SNR=218						
H10S2	ASCENSION HYDR	25.13	129	T	T	02 06 45.6	
	baz=273,slow=74,SNR=72						
NAN01	Guarapari, ES	25.52	193	*e*P	P	01 40 39.5	+0.5
SNDB	Serra Nova Dou	25.54	222	*e*P	P	01 40 39.7	+0.3
BDFB	Brasilia	26.49	211	P	P	01 40 47.6	-0.4
	6.8nm,0.9s,baz=53,slow=8.7,SNR=9.0						
BDFB				LR	LR	01 50 30.9	
	comp=Z,486nm,18.7s,baz=9.8,slow=35						
BDFB	Brasilia	26.49	211	P	P	01 40 50.6	+2.5
BDFB				IAmb	IAmb	01 40 51.2	
	comp=Z,9.4nm,0.9s						
SJMB	Sao Joao De Ma	26.60	195	*e*P	P	01 40 49.1	+0.3
BSFB	Barra de Sao F	26.64	194	*e*P	P	01 40 49.9	+0.7
PTGA	Pitinga	26.96	254	P	P	01 40 53.0	+0.8
	comp=Z,5.5nm,0.9s,baz=79,slow=11,SNR=7.8						
RIB01	Linhares ES	27.00	193	*e*P	P	01 40 54.5	+2.1
H05S1	Guadeloupe/Mar	27.22	288	T	T	02 09 17.4	
	SNR=16						
MACA	Manacapuru-AM	28.43	250	*e*P	P	01 41 06.0	+0.7
ARAG	Araguaiana, MT	28.68	218	*e*P	P	01 41 07.9	+0.4
DBIC	Dimbokro	29.04	89	P	P	01 41 11.0	+0.2
	comp=Z,3.2nm,0.7s,baz=255,slow=12,SNR=5.0						
DBIC	Dimbokro	29.04	89	P	P	01 41 10.9	+0.1
DBIC				IAmb	IAmb	01 41 12.4	
	comp=Z,4.8nm,0.8s						
PMOZ	Porto Moniz, M	30.01	29	*e*T	T	02 12 19.9	
FUL	Funchal	30.01	30	*e*T	T	02 12 17.7	
PMAR	Madeira	30.06	30	*e*T	T	02 12 19.3	
KOWA	Kowa	30.42	74	P	P	01 41 23.0	-0.1
	comp=Z,2.5nm,0.8s,baz=262,slow=13,SNR=6.7						
KOWA	Kowa	30.42	74	P	P	01 41 23.2	+0.1
KOWA				IAmb	IAmb	01 41 30.6	
	comp=Z,4.2nm,0.9s						
PMPS	Porto Santo	30.62	30	*e*T	T	02 11 29.5	
PMPST	Porto Santo, M	30.64	30	*e*T	T	02 11 26.3	
ITRB	Iturama	31.10	211	*e*P	P	01 41 29.4	+0.4
PCMB	Pacaembu	33.15	210	*e*P	P	01 41 47.9	+1.0
TOA0	Torodi Ar. Sit	35.72	77	P	P	01 42 09.7	+0.3
TOA0				IAmb	IAmb	01 42 20.2	
	comp=Z,8.9nm,1.1s						
TORD	Torodi Ar. Bea	35.72	77	P	P	01 42 09.6	+0.3
	comp=Z,3.4nm,0.7s,baz=275,slow=9.6,SNR=9.7						
TORD				LR	LR	01 54 49.9	
	comp=Z,157nm,20.9s,baz=5.0,slow=33						
TORD	Torodi Ar. Bea	35.72	77	P	P	01 42 10.0	+0.7
ETMB	Extrema	36.14	243	*e*P	P	01 42 13.6	+0.7
ROSC	El Rosal	40.05	269	LR	LR	01 59 48.8	
	comp=Z,159nm,18.7s,baz=40,slow=37						
CPUP	Villa Florida	40.18	213	P	P	01 42 45.0	-1.8
	comp=Z,1.6nm,0.9s,baz=37,slow=3.7,SNR=3.1						
CPUP				LR	LR	01 59 05.0	
	comp=Z,207nm,18.3s,baz=51,slow=36						
CZSB	Cruzeiro do Su	41.23	250	*e*P	P	01 42 56.4	+0.7
ESDC	Sonseca Array	42.20	35	P	P	01 43 03.1	-0.3
	comp=Z,1.1nm,1.1s,baz=230,slow=8.6,SNR=1.2						
LVC	Limon Verde	45.10	228	LR	LR	02 02 52.7	
	comp=Z,199nm,18.8s,baz=66,slow=37						
ATAH	Atahualpa	46.39	253	LR	LR	02 03 41.0	
	comp=Z,147nm,18.6s,baz=72,slow=37						
NNA	Nana	46.55	246	LR	LR	02 02 55.7	
	comp=Z,189nm,19.2s,baz=40,slow=36						
AC02	Maricunga	47.87	224	P	P	01 43 49.4	+0.2
H09W1	TRISTAN DA CUN	48.48	157	T	T	02 36 06.7	
	SNR=5.2						
KEST	Kesra	48.87	48	LR	LR	02 03 29.6	
	comp=Z,200nm,20.4s,baz=244,slow=35						
CO01	Juntas del Tor	50.55	221	P	P	01 44 10.0	+0.6
CO01				IAmb	IAmb	01 44 14.8	
	comp=Z,10nm,1.4s						
TKL	Tuckaleechee C	53.52	309	LR	LR	02 04 18.9	
	comp=Z,99nm,20.6s,baz=40,slow=33						
EKA	Eskdalemuir Ar	54.02	21	P	P	01 44 34.4	-0.1
	comp=Z,0.3nm,0.4s,baz=213,slow=7.6,SNR=1.3						
SADO	Sadowa	54.12	322	LR	LR	02 01 51.3	
	comp=Z,78nm,21.8s,baz=66,slow=30						
BO02	Sierra Bellavi	54.20	217	P	P	01 44 38.0	+1.8
BO02				IAmb	IAmb	01 44 39.1	
	comp=Z,7.2nm,1.1s						
DAVA	Damuels	54.80	35	*e*P	P	01 44 41.8	+1.3
	comp=Z,20nm,2.1s						
FETA	Feichten	55.15	36	*e*P	P	01 44 43.7	+0.6
	comp=Z,5.6nm,1.2s						
SQTA	Sankt Quirin	55.53	36	*e*P	P	01 44 46.9	+1.1
	comp=Z,7.4nm,1.3s						
MOTA	Moosalm	55.54	36	*e*P	P	01 44 47.3	+1.4
	comp=Z,7.8nm,1.3s						
WTTA	Wattenberg	55.81	36	*e*P	P	01 44 48.6	+0.8
	comp=Z,2.4nm,0.8s						
ABTA	Abfaltersbach	56.07	37	*e*P	P	01 44 51.2	+1.6
	comp=Z,4.8nm,1.3s						
MYKA	Terra Mystica	56.69	38	*e*P	P	01 44 55.3	+1.3
	comp=Z,0.1nm,0.3s						
KBA	Koelnbreinsper	56.73	37	*e*P	P	01 44 55.2	+0.8
	comp=Z,8.9nm,1.6s						
OBKA	Obir	57.18	38	*e*P	P	01 44 58.7	+1.2
	comp=Z,12nm,1.6s						
SOKA	Soboth	57.56	38	*e*P	P	01 45 01.7	+1.6
	comp=Z,8.9nm,1.9s						
GERES	GERESS Array B	57.80	35	P	P	01 45 01.4	-0.4
	comp=Z,0.3nm,0.5s,baz=243,slow=5.8,SNR=4.1						
GERES				LR	LR	02 06 41.8	
	comp=Z,279nm,19.5s,baz=336,slow=33						
PLCA	Paso Flores	58.23	212	LR	LR	02 10 26.7	
	comp=Z,523nm,18.7s,baz=51,slow=36						
NOA	NORSAR Array B	63.43	23	P	P	01 45 40.0	+0.1
	comp=Z,1.6nm,1.0s,baz=230,slow=6.9,SNR=2.6						
NOA				LR	LR	02 08 50.4	
	comp=Z,87nm,21.4s,baz=275,slow=32						
HFS	Hagfors	63.87	24	P	P	01 45 42.5	-0.3
	comp=Z,1.7nm,0.6s,baz=190,slow=7.5,SNR=5.4						
MLR	Muntele Rosu	64.14	43	P	P	01 45 45.1	+0.1
BOSA	Boshof	67.30	125	P	P	01 46 05.0	-0.7
	comp=Z,2.4nm,0.7s,baz=319,slow=6.4,SNR=4.9						
BOSA				LR	LR	02 10 09.1	
	comp=Z,30nm,19.8s,baz=342,slow=31						
BOSA	Boshof	67.30	125	P	P	01 46 06.0	+0.3
BOSA				IAmb	IAmb	01 46 08.5	
	comp=Z,4.3nm,0.9s						
AKASG	Malin Array Be	67.76	38	P	P	01 46 08.0	-0.1
	comp=Z,0.6nm,0.6s,baz=261,slow=5.0,SNR=4.1						
AKASG	Malin Array Be	67.76	38	P	P	01 46 07.3	-0.8
BR131	Keskin Array S	68.39	50	P	P	01 46 13.3	+0.9
BRTR	Keskin Array B	68.39	50	P	P	01 46 12.7	+0.2
	comp=Z,1.4nm,0.8s,baz=229,slow=5.5,SNR=8.3						
BRTR				LR	LR	02 14 55.9	
	comp=Z,93nm,21.1s,baz=318,slow=35						
BRTR	Keskin Array B	68.39	50	P	P	01 46 12.4	0.0
FCC	Fort Churchill	68.66	331	P	P	01 46 13.1	-0.4
FCC				IAmb	IAmb	01 46 17.0	
	comp=Z,3.4nm,0.9s						
TXAR	Lajitas Array	68.74	299	P	P	01 46 14.3	-0.5
	comp=Z,0.2nm,0.5s,baz=110,slow=5.2,SNR=4.1						
TXAR	Lajitas Array	68.74	299	P	P	01 46 14.2	-0.6
FINES	FINESS Array B	69.80	26	P	P	01 46 21.1	+0.5
	comp=Z,4.0nm,0.9s,baz=243,slow=12,SNR=2.9						
ISCO	Idaho Springs	71.27	310	P	P	01 46 31.9	+1.5
O20A	White River Ci	73.31	310	P	P	01 46 43.4	+0.9
RLMT	Red Lodge	74.52	315	P	P	01 46 49.8	+0.3
PDAR	Pinedale Array	74.52	312	P	P	01 46 49.1	-0.4
	comp=Z,0.7nm,0.7s,baz=107,slow=7.2,SNR=6.8						
PDAR				LR	LR	02 15 05.3	
	comp=Z,68nm,21.7s,baz=21,slow=32						
PDAR	Pinedale Array	74.52	312	P	P	01 46 49.8	+0.3
FLWY	Flagg Ranch	75.45	314	P	P	01 46 56.3	+1.4
FLWY				IAmb	IAmb	01 47 09.9	
	comp=Z,4.2nm,0.9s						
WUAZ	Wupatki	75.54	305	P	P	01 46 58.0	+2.5
WUAZ				IAmb	IAmb	01 47 04.6	
	comp=Z,3.8nm,1.0s						
X16A	Lo Mia Camp, P	75.57	304	P	P	01 46 56.6	+0.8
YMR	Madison River	75.68	314	P	P	01 46 56.7	+0.5
KBZ	Khabaz	75.72	47	P	P	01 46 56.0	0.0
	comp=Z,1.4nm,0.9s,baz=260,slow=18,SNR=3.3						
CCUT	Cedar City	77.18	307	P	P	01 47 06.3	+1.4
ELK	Elko	78.68	310	P	P	01 47 13.1	0.0
	comp=Z,0.8nm,0.8s,baz=193,slow=1.9,SNR=4.5						
ELK	Elko	78.68	310	P	P	01 47 13.6	+0.4
YKA	Yellowknife Ar	79.33	332	P	P	01 47 14.7	-1.2
	comp=Z,0.4nm,0.7s,baz=97,slow=5.8,SNR=5.9						
TPH	Tonopah	80.24	307	P	P	01 47 22.6	+1.0
ILAR	Eielson Array	93.06	337	LR	LR	02 29 07.6	
	comp=Z,60nm,18.5s,baz=250,slow=35						
LZH	Lanzhou	121.64	40	*e*PKP	PKPdf	01 54 01.0	-4.0
LZH				sPKP		01 54 15.5	

*IDC **21** 02:16:57.0±4.9, 2°.32S×101°.07E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/32, mbtmp3.6/4, Error ellipse: s-maj=272.8km s-min=26.0km az=54.0*

*DJA **21** 02:17:06.5±0.4, 2°S±3°×10°1E±°, h43^{km}±7^{km}, M3.5/7, MLv3.5/7*

ISC 21 02:17:04.3±1.0, **2°.44S**±0°.07×**100°.89E**±0°.07, **h50**^{km}**, n10,** σ**2^{s}00**/13, **mb3.7**/4, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.67	59	P	Pn	02 17 19.3	+1.6
KRJI				S	Sn	02 17 29.7	+2.3
PDSI	Padang	1.58	344	P	Pn	02 17 31.3	+1.4
PDSI				S	Sn	02 17 50.6	+1.4
SDSI	Sungai Dareh	1.59	20	P	Pn	02 17 31.4	+1.3
SDSI				S	Sn	02 17 49.6	+0.1
SISI	Saibi	2.11	302	P	Pn	02 17 39.8	+2.6
MNAI	Manna	2.81	133	P	Pn	02 17 49.3	+2.5
KLSI		4.43	120	P	Pn	02 18 11.4	+2.3
WRA	Warramunga Arr	37.00	121	P	P	02 24 08.3	-1.1
	0.4nm,0.8s,baz=303,slow=9.2,SNR=2.2						
ASAR	Alice Springs	38.27	126	P	P	02 24 19.2	-0.9
	0.6nm,0.7s,baz=297,slow=8.3,SNR=5.0						
STKA	Stephens Creek	48.19	132	P	P	02 25 37.8	-2.3
	2.6nm,0.9s,baz=293,slow=7.7,SNR=3.2						
MKAR	Makanchi Array	51.69	344	P	P	02 26 05.3	-1.0
	0.3nm,0.4s,baz=161,slow=8.8,SNR=11						

*MOS **21** 02:27:15.2±0.0, 41°.94N×46°.45E, h22^{km}, MPVA3.0*

*DRS **21** 02:27:15.1±0.0, 41°.92N×46°.39E, h12^{km}, ML1.9/6*

*NORS **21** 02:27:16.4±0.0, 41°.91N×46°.46E, h15^{km}, MPVA2.9*

ISC 21 02:27:16.3±1.0, **41°.92N**±0°.03×**46°.39E**±0°.03, **h26**^{km}±7^{km}, **n14,** σ**1^{s}18**/27, **5C-7D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.13	233	P	Pb	02 27 21.1	-0.3
LGD				S	Sb	02 27 25.3	+0.4
DDFL	Dedoflistskaro	0.51	203	P	Pn	02 27 28.2	+0.2
DDFL				S	Sn	02 27 37.4	+1.5
GNBR	Gunib	0.64	42	⇓*e*Pg	Pn	02 27 28.3	-1.4
	31nm,0.2s						
GNBR				⇓*e*Sg	Sn	02 27 38.0	-1.1
	69nm,0.5s						
BTLR	Botlikh	0.76	351	⇓*e*Pg	Pn	02 27 30.4	-1.0
	7.9nm,0.5s						
BTLR				⇓*e*Sg	Sn	02 27 41.1	-0.9
	36nm,0.3s						
ARKR	Arakani	0.82	33	⇑*e*Pg	Pn	02 27 31.7	-0.6
	11nm,0.4s						
ARKR				⇑*e*Sg	Sn	02 27 42.7	-0.9
	30nm,0.4s						
KRNR	Karanay	0.99	23	⇑*e*Pg	Pn	02 27 34.4	-0.2
	4.9nm,0.3s						
KRNR				⇓*e*Sg	Sn	02 27 48.0	+0.2
	8.4nm,0.6s						
DVE	Vedeno	1.06	350	*e*Pg	Pb	02 27 36.1	+0.1
DVE				*e*Sg	Sn	02 27 50.8	+1.4
AKT	Akhty	1.10	113	⇑*e*Pg	Pb	02 27 35.8	-0.9
	13nm,0.4s						
AKT				⇑*e*Sg	Sn	02 27 51.8	+1.4
	44nm,0.5s						
DBC	Dubki	1.15	16	⇓*e*Pg	Pb	02 27 38.2	+0.6
	6.5nm,0.4s						
DBC				⇓*e*Sg	Sn	02 27 53.9	+2.1
	14nm,0.4s						
SEAG	Tbilisi Sea	1.19	263	P	Pn	02 27 36.8	-0.5
SEAG				S	Sn	02 27 50.9	-1.7
GROC	Groznyy	1.36	342	*e*Pg	Pb	02 27 42.6	+1.5
DMNI	Dmanisi	1.75	251	P	Pn	02 27 44.9	-0.2
DMNI				S	Sn	02 28 07.0	+0.5
ZEI	Tsey	2.04	296	*e*Pg	Pb	02 27 51.4	-1.4
ZEI				*e*Sg	Sb	02 28 19.8	+2.0
KORR	Kora	2.08	305	*e*Pg	Pb	02 27 51.9	-1.4
KORR				*e*Sg	Sb	02 28 19.2	+0.5

*IDC **21** 02:40:40.3±1.5, 20°.95S×179°.35W, h604^{km}±18^{km}, mb2.9/7, mb1 3.2/8, mb1mx2.9/41, mbtmp3.8/8, Error ellipse: s-maj=35.9km s-min=19.3km az=158.0*

ISC 21 02:40:40.0±0.8, **20°.9S**±0°.2×**179°.3W**±0°.2, **h600**^{km}**, n12,** σ**0^{s}88**/12, **mb3.5**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.01	322	P	P	02 42 06.2	+0.5
	3.4nm,0.3s,baz=148,slow=12,SNR=14						
RAO	Raoul Island	8.40	171	P	P	02 42 43.3	+0.3
	96nm,0.3s,baz=271,slow=23,SNR=4.9						
CTA	Charters Tower	32.20	265	P	P	02 46 21.3	+0.6
	3.8nm,1.0s,baz=242,slow=13,SNR=1.8						
ASAR	Alice Springs	43.20	257	P	P	02 47 49.5	-0.4
	0.3nm,0.5s,baz=91,slow=8.3,SNR=5.1						
WRA	Warramunga Arr	43.30	263	P	P	02 47 50.2	-0.4
	0.6nm,0.8s,baz=96,slow=11,SNR=3.0						
NVAR	Mina Array Bea	82.19	44	P	P	02 51 59.6	0.0
	0.9nm,0.7s,baz=223,slow=8.3,SNR=5.9						
TXAR	Lajitas Array	88.33	58	P	P	02 52 29.7	+0.4
	0.7nm,0.8s,baz=211,slow=4.4,SNR=8.1						
ILAR	Eielson Array	89.00	13	P	P	02 52 31.8	+0.4
	0.3nm,0.5s,baz=218,slow=5.1,SNR=6.2						
PDAR	Pinedale Array	90.12	44	P	P	02 52 37.2	-0.2
	0.4nm,0.7s,baz=204,slow=3.3,SNR=4.8						
AKASG	Malin Array Be	142.75	330	PKP	PKPdf	02 59 03.4	-2.4
	0.1nm,0.3s,baz=41,slow=4.6,SNR=4.5						
BRTR	Keskin Array B	146.18	311	PKPbc	PKPbc	02 59 14.7	+0.2
	0.3nm,0.6s,baz=157,slow=1.8,SNR=2.0						
GERES	GERESS Array B	150.24	343	PKPbc	PKPbc	02 59 24.1	-0.2
	0.1nm,0.5s,baz=5.2,slow=1.5,SNR=5.1						

*IDC **21** 02:48:15.5±5.1, 5°.23S×146°.54E, h140^{km}±44^{km}, mb3.6/7, mb1 3.9/9, mb1mx3.6/40, mbtmp4.1/9, Error ellipse: s-maj=43.5km s-min=17.3km az=92.0*

ISC 21 02:48:11.0±1.1, **5°.18S**±0°.10×**146°.8E**±0°.2, **h100**^{km}**, n10,** σ**1^{s}24**/10, **mb3.9**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.21	176	S	Sn	02 50 02.6	+1.4
	11nm,0.3s,baz=180,slow=21,SNR=15						
JAY	Jayapura	6.67	293	P	Pn	02 49 47.9	+1.5
	4.4nm,0.3s,baz=129,slow=4.7,SNR=9.1						
WRA	Warramunga Arr	19.06	219	P	P	02 52 24.5	-1.1
	3.0nm,0.3s,baz=34,slow=12,SNR=147						

ASAR	**Alice Springs**	**22.21**	**213**	P	**P**	**02 52 59.0**	**-0.5**
	3.5nm,0.5s,baz=48,slow=7.9,SNR=54						
FITZ	**Fitzroy Crossi**	**24.37**	**236**	P	**P**	**02 53 17.9**	**-2.1**
	19nm,0.7s,baz=46,slow=10,SNR=43						
STKA	**Stephens Creek**	**27.01**	**190**	P	**P**	**02 53 43.5**	**-0.3**
	1.8nm,0.6s,baz=353,slow=7.1,SNR=3.5						
SONM	**Songino Array**	**63.61**	**331**	P	**P**	**02 58 31.5**	**+0.1**
	0.7nm,1.0s,baz=141,slow=5.0,SNR=3.6						
VNDA	**Vanda**	**72.74**	**177**	P	**P**	**02 59 28.1**	**+0.3**
	3.8nm,1.3s,baz=322,slow=8.5,SNR=5.2						
MKAR	**Makanchi Array**	**76.76**	**320**	P	**P**	**02 59 50.8**	**-0.9**
	0.3nm,0.5s,baz=101,slow=7.7,SNR=4.9						
ILAR	**Eielson Array**	**84.79**	**23**	P	**P**	**03 00 34.2**	**+0.3**
	0.9nm,0.6s,baz=248,slow=5.0,SNR=16						

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*NEIC **21** 03:07:40.1±1.0, 0°.42S±0°.06×20°.1W±0°.1, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=19.8km s-min=6.5km az=243.0*

*IDC **21** 03:07:40.3±1.1, 0°.40S×19°.98W, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx3.9/37, mbtmp4.1/11, ML4.3/2, MS3.6/5, Ms1 3.5/5, ms1mx3.3/32, Error ellipse: s-maj=49.1km s-min=19.3km az=150.0*

ISC 21 03:07:41.0±0.6, **0°.5S**±0°.1×**20°.02W**±0°.10, **h10**^{km}, **n30**, σ**0^{s}.93**/28, **mb4.0**/11, **MS3.6**/3, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.17**	**143**	Pn	**Pn**	**03 09 53.5**	**+0.3**
	baz=323,slow=13,SNR=6.5						
H10N2				T	T	03 19 01.6	
	baz=321,slow=74,SNR=178						
H10N3	**ASCENSION HYDR**	**9.17**	**143**	Pn	**Pn**	**03 09 53.2**	**0.0**
	baz=323,slow=13,SNR=6.1						
H10N3				T	T	03 19 01.4	
	baz=321,slow=74,SNR=227						
H10N1	**ASCENSION HYDR**	**9.19**	**143**	Pn	**Pn**	**03 09 53.4**	**0.0**
	baz=323,slow=13,SNR=5.3						
H10N1				T	T	03 19 03.4	
	baz=321,slow=74,SNR=358						
ASCN	**Ascension**	**9.33**	**143**	Pn	**Pn**	**03 09 54.2**	**-1.4**
H10S3	**ASCENSION HYDR**	**9.98**	**148**	Pn	**Pn**	**03 10 05.7**	**+1.3**
H10S3				T	T	03 20 02.7	
	SNR=87						
H10S2	**ASCENSION HYDR**	**10.00**	**148**	Pn	**Pn**	**03 10 05.9**	**+1.3**
H10S2				T	T	03 20 05.0	
	SNR=58						
DBIC	**Dimbokro**	**16.70**	**65**	Pn	**Pn**	**03 11 34.9**	**-0.4**
	0.5nm,0.3s,baz=229,slow=14,SNR=9.3						
DBIC				LR	LR	03 16 49.1	
	comp=Z,129nm,18.6s,baz=19,slow=33						
DBIC	**Dimbokro**	**16.70**	**65**	P	**Pn**	**03 11 35.3**	**+0.1**
RCBR	**Riachuelo**	**16.73**	**251**	Pn	**Pn**	**03 11 34.9**	**-0.8**
	3.1nm,0.3s,baz=71,slow=11,SNR=42						
RCBR				LR	LR	03 16 49.7	
	comp=Z,121nm,20.8s,baz=139,slow=33						
RCBR	**Riachuelo**	**16.73**	**251**		**Pn**	**03 11 34.6**	**-1.1**
RCBR				IAmb	IAmb	03 11 37.6	
	comp=Z,11nm,0.8s						
KOWA	**Kowa**	**21.71**	**46**	P	**P**	**03 12 32.5**	**+0.1**
	comp=Z,16nm,0.9s,baz=219,slow=7.1,SNR=33						
KOWA	**Kowa**	**21.71**	**46**	P	**P**	**03 12 31.9**	**-0.6**
KOWA				IAmb	IAmb	03 12 34.0	
	comp=Z,23nm,1.0s						
TOA0	**Torodi Ar. Sit**	**25.42**	**57**	P	**P**	**03 13 08.9**	**-0.2**
TOA0				IAmb	IAmb	03 13 11.5	
	comp=Z,7.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**25.42**	**57**	P	**P**	**03 13 09.9**	**+0.9**
	comp=Z,6.3nm,0.7s,baz=237,slow=10,SNR=18						
TORD	**Torodi Ar. Bea**	**25.42**	**57**	P	**P**	**03 13 08.7**	**-0.3**
BDFB	**Brasilia**	**31.49**	**240**	P	**P**	**03 14 04.9**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=163,slow=17,SNR=1.8						
BDFB				LR	LR	03 25 41.1	
	comp=Z,114nm,19.2s,baz=326,slow=34						
BDFB	**Brasilia**	**31.49**	**240**	P	**P**	**03 14 02.1**	**-1.3**
TAM	**Tamanrasset**	**33.94**	**45**	P	**P**	**03 14 24.1**	**-0.8**
TAM				IAmb	IAmb	03 14 27.6	
	comp=Z,4.3nm,0.9s						
CPUP	**Villa Florida**	**44.18**	**231**	LR	LR	03 35 34.8	
	comp=Z,34nm,18.1s,baz=50,slow=38						
KEST	**Kesra**	**45.21**	**34**	LR	LR	03 35 58.0	
	comp=Z,203nm,18.1s,baz=263,slow=38						
GERES	**GERESS Array B**	**57.07**	**26**	P	**P**	**03 17 28.2**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=178,slow=8.9,SNR=5.4						
BRTR	**Keskin Array B**	**63.12**	**44**	P	**P**	**03 18 09.2**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=243,slow=7.9,SNR=5.2						
AKASG	**Malin Array Be**	**65.85**	**32**	P	**P**	**03 18 26.6**	**-0.1**
	comp=Z,0.1nm,0.2s,baz=238,slow=5.5,SNR=4.1						
AKASG	**Malin Array Be**	**65.85**	**32**	P	**P**	**03 18 26.5**	**-0.1**
KBZ	**Khabaz**	**71.06**	**43**	P	**P**	**03 18 59.5**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=234,slow=6.2,SNR=6.8						
TXAR	**Lajitas Array**	**84.68**	**299**	P	**P**	**03 20 17.4**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=121,slow=6.6,SNR=5.7						
TXAR	**Lajitas Array**	**84.68**	**299**	P	**P**	**03 20 14.3**	**-1.4**
YKA	**Yellowknife Ar**	**92.53**	**332**	P	**P**	**03 20 53.6**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=92,slow=7.7,SNR=2.8						
ASAR	**Alice Springs**	**145.12**	**135**	PKPbc	**PKPdf**	**03 27 19.8**	**0.0**
	comp=Z,1.6nm,0.8s,baz=222,slow=2.5,SNR=12						
ASAR	**Alice Springs**	**145.12**	**135**		**PKPbc**	**03 27 18.2**	**-1.0**

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*JMA **21** 03:14:47.6±0.1, 34°.91N×138°.47E, h211^{km}±1^{km}, M3.2*

*IDC **21** 03:14:48.4±0.6, 34°.99N×138°.58E, h212^{km}±7^{km}, mb3.4/7, mb1 3.4/11, mb1mx3.1/40, mbtmp3.9/11, Error ellipse: s-maj=36.0km s-min=7.8km az=70.0*

ISC 21 03:14:48.1±0.8, **34°.95N**±0°.05×**138°.44E**±0°.07, **h209**^{km}±6^{km}, **n28**, σ**0^{s}.56**/39, **mb3.5**/7, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHZ3	**Shizuoka 3**	**0.23**	**303**	P	**Pn**	**03 15 15.7**	**+0.1**
SHZ3				S	**S**	**03 15 36.8**	**-0.3**
JSG	**Sagara**	**0.34**	**218**	P	**Pn**	**03 15 15.6**	**-0.2**
JSG				*e*S	**S**	**03 15 37.2**	**-0.1**
JKKG	**Kakegawa**	**0.42**	**248**	P	**Pn**	**03 15 15.5**	**-0.4**
JYN	**Shimob**	**0.56**	**9**	P	**Pn**	**03 15 16.7**	**+0.1**
JYN				S	**S**	**03 15 39.0**	**+0.1**
JOD2	**Odawara 2**	**0.62**	**59**	P	**Pn**	**03 15 16.7**	**0.0**
JOD2				S	**S**	**03 15 39.1**	**+0.1**
JRY	**Ryogami san**	**1.13**	**19**	P	**Pn**	**03 15 20.2**	**+0.5**
JRY				S	**S**	**03 15 44.8**	**+0.5**
TK02	**Tokai 2**	**1.15**	**210**	P	**Pn**	**03 15 19.8**	**+0.2**
TK02				*e*S	**S**	**03 15 43.9**	**+0.1**
JIE	**Ise**	**1.53**	**249**	P	**Pn**	**03 15 22.6**	**-0.3**
JIE				S	**S**	**03 15 49.0**	**-0.6**
JYTA	**Yamagatataniai**	**1.54**	**295**	P	**Pn**	**03 15 22.9**	**0.0**
MJAR	**Matsushiro Arr**	**1.60**	**353**	P	**Pn**	**03 15 23.4**	**-0.2**
	3.0nm,0.3s,baz=179,slow=11,SNR=157						
MJAR				S	**S**	**03 15 51.4**	**+0.4**
	0.2nm,0.3s,baz=177,slow=20,SNR=5.9						
MAT	**Matsushiro**	**1.61**	**353**	P	**Pn**	**03 15 23.6**	**+0.1**
MAT				S	**S**	**03 15 51.3**	**+0.3**
MAT	**Matsushiro**	**1.61**	**353**	P	**Pn**	**03 15 23.6**	**+0.1**
MAT				S	**S**	**03 15 51.3**	**+0.3**
JAG	**Ashikaga**	**1.69**	**29**	P	**Pn**	**03 15 23.9**	**-0.4**
TTO1	**TONANKAI O.B.S**	**1.90**	**227**	P	**Pn**	**03 15 26.2**	**+0.2**
JHJ	**Hachijo jima 2**	**2.13**	**148**	P	**Pn**	**03 15 28.3**	**-0.5**
	20nm,0.3s,baz=72,slow=21,SNR=7.5						
JHJ				S	**S**	**03 16 01.7**	**+1.8**
	24nm,0.3s,baz=115,slow=23,SNR=9.4						
JHJ2	**Mitsune**	**2.16**	**148**	P	**Pn**	**03 15 28.4**	**-0.5**
JKG	**Kaga**	**2.17**	**308**	P	**Pn**	**03 15 29.2**	**+0.2**
JWY	**Kouya**	**2.46**	**254**	P	**Pn**	**03 15 32.0**	**-0.2**
ASAJ	**Asahikawa**	**9.70**	**18**	P	**Pn**	**03 17 02.2**	**-1.1**
	0.7nm,0.3s,baz=319,slow=20,SNR=6.0						
USRK	**Ussuriysk Ar.**	**10.49**	**334**	P	**Pn**	**03 17 13.9**	**+0.5**
	baz=144,slow=13,SNR=6.1						
KLR	**Kul'dur**	**15.10**	**343**	P	**Pn**	**03 18 09.5**	**-1.5**
	0.3nm,0.3s,baz=147,slow=9.6,SNR=19						
SONM	**Songino Array**	**27.06**	**308**	P	**P**	**03 20 11.9**	**+0.6**
	0.2nm,0.4s,baz=127,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**43.22**	**304**	P	**P**	**03 22 29.2**	**+0.6**
	0.6nm,0.5s,baz=84,slow=10,SNR=12						
KURBB	**Kurchatov Arra**	**45.42**	**309**	P	**P**	**03 22 46.1**	**+0.2**
	1.1nm,0.6s,baz=91,slow=7.0,SNR=16						
WRA	**Warramunga Arr**	**54.72**	**185**	P	**P**	**03 23 55.3**	**-0.7**
	0.3nm,0.7s,baz=0.1,slow=7.2,SNR=2.4						
ARCES	**ARCESS Array B**	**65.09**	**339**	P	**P**	**03 25 05.9**	**0.0**
	17nm,1.4s,baz=60,slow=6.3,SNR=6.2						
FINES	**FINESS Array B**	**69.52**	**332**	P	**P**	**03 25 34.1**	**+0.4**
	2.7nm,0.9s,baz=66,slow=6.7,SNR=7.7						
NOA	**NORSAR Array B**	**75.15**	**336**	P	**P**	**03 26 07.5**	**+0.4**
	0.9nm,0.6s,baz=43,slow=5.6,SNR=3.2						

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*IDC **21** 04:07:11.4±0.9, 22°.20N×81°.37W, h0^{km}, mb3.7/8, mb1 4.2/10, mb1mx3.9/44, mbtmp3.9/10, ML4.2/2, MS3.7/7, Ms1 3.7/7, ms1mx3.4/32, Error ellipse: s-maj=33.4km s-min=17.6km az=65.0*

*NEIC **21** 04:07:13.8±1.8, 22°.22N±0°.06×81°.4W±0°.1, h16^{km}±4^{km}, mb4.1/44, Error ellipse: s-maj=13.9km s-min=7.9km az=73.0*

*SSNC **21** 04:07:15.0±1.6, 22°.26N×81°.42W, h15^{km}±20^{km}, MD4.4, ML4.1, MW4.2*

ISC 21 04:07:14.8±2.6, **22°.22N**±0°.05×**81°.43W**±0°.04, **h23**^{km}±21^{km}, **n125**, σ**1^{s}.80**/124, **mb4.0**/13, **MS3.8**/3, **1C-2D**, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**1.35**	**94**	⇓*i*P	**Pn**	**04 07 36.5**	**-1.8**
MGV				*e*S	**Sn**	**04 07 53.6**	**-1.9**
MGV				IAML		04 07 55.3	
	comp=N,4μm,0.3s						
MGV				IAML		04 07 55.3	
	comp=E,3μm,0.2s						
SOR	**Soroa**	**1.56**	**292**	⇓*i*P	**Pn**	**04 07 39.1**	**-2.2**
SOR				*e*S	**Sn**	**04 07 58.5**	**-2.3**
SOR				IAML		04 08 06.7	
	comp=E,1μm,0.4s						
SOR				IAML		04 08 08.2	
	comp=N,995nm,0.3s						
LCCY	**Blossom Villag**	**2.84**	**153**		**Pn**	**04 07 58.9**	**+0.1**
LCCY				Sn	**Sn**	**04 08 31.7**	**-0.6**
FSCY	**Frank Sound, G**	**2.91**	**175**	⇑*i*P	**Pn**	**04 07 59.6**	**-0.1**
FSCY				*e*S	**Sn**	**04 08 32.1**	**-1.8**
FSCY				IAML		04 08 41.9	
	comp=Z,876nm,0.2s						
FSCY	**Frank Sound, G**	**2.91**	**175**	Pn	**Pn**	**04 07 59.9**	**+0.2**
FSCY				Sn	**Sn**	**04 08 33.7**	**-0.2**
CBCY	**The Bluff, Cay**	**2.93**	**147**	Pn	**Pn**	**04 07 59.9**	**-0.1**
CBCY				Sn	**Sn**	**04 08 33.6**	**-0.8**
CCCC	**Cccc**	**3.56**	**106**	*e*P	**Pn**	**04 08 12.3**	**+3.6**
061Z	**Ochoppi**	**3.66**	**7**		**Pn**	**04 08 08.9**	**-1.2**
LMGC	**Las Mercedes**	**4.66**	**117**	*e*P	**Pn**	**04 08 22.8**	**-1.0**
LMGC				*e*S	**Sn**	**04 09 12.5**	**-4.7**
060A	**Indiantown**	**4.89**	**11**	Pn	**Pn**	**04 08 28.2**	**+1.2**
MTDJ	**Mount Denham**	**5.40**	**137**	*e*P	**Pn**	**04 08 32.9**	**-1.2**
MTDJ				*e*S	**Sn**	**04 09 29.9**	**-5.9**
MTDJ	**Mount Denham**	**5.40**	**137**	Pn	**Pn**	**04 08 33.7**	**-0.5**
BBJ	**Bamboo Saint A**	**5.46**	**134**	*i* P	**Pn**	**04 08 35.8**	**+0.8**
MCJ	**Malvern**	**5.54**	**140**	*i* P	**Pn**	**04 08 40.4**	**+4.4**
RCC	**Rio Carpintero**	**5.80**	**111**	*e*P	**Pn**	**04 08 38.8**	**-0.7**
DWPF	**Disney Wildern**	**5.86**	**360**		**Pn**	**04 08 41.9**	**+1.5**
STH	**Stony Hill**	**5.99**	**133**	*i* P	**Pn**	**04 08 43.4**	**+1.2**
HOJ	**Hope**	**6.08**	**133**	*i* P	Pn	04 08 53.6	+10
GTBY	**Guantanamo Bay**	**6.33**	**110**	*e*P	**Pn**	**04 08 47.1**	**+0.3**
GTBY	**Guantanamo Bay**	**6.33**	**110**	Pn	**Pn**	**04 08 46.1**	**-0.7**
TEIG	**Tepich**	**6.69**	**254**	Pn	**Pn**	**04 08 52.4**	**+0.7**
MASC	**Masc**	**7.02**	**106**	*e*P	**Pn**	**04 08 54.4**	**-1.9**
656A	**Willston**	**7.18**	**352**		**Pn**	**04 08 57.5**	**-1.0**
553A	**Crawfordville**	**8.38**	**342**	Pn	**Pn**	**04 09 12.8**	**-2.1**
456A	**Hilliard**	**8.48**	**357**	Pn	**Pn**	**04 09 15.9**	**-0.4**
TIGA	**Tifton**	**9.38**	**349**		**Pn**	**04 09 28.1**	**-0.5**
PETF	**Flores**	**9.54**	**238**		**Pn**	**04 09 32.7**	**+1.8**
352A	**Blakely**	**9.73**	**342**		**Pn**	**04 09 32.5**	**-1.0**
TGUH	**Tegucigalpa,Un**	**9.84**	**215**	Pn	**Pn**	**04 09 35.1**	**0.0**
ESPN	**Las Esperanzas**	**10.34**	**196**		**Pn**	**04 09 41.6**	**-0.3**
250A	**Grady**	**10.63**	**337**		**Pn**	**04 09 45.3**	**-0.4**
152A	**Waverly Hall**	**10.81**	**345**		**Pn**	**04 09 46.5**	**-1.7**
ACON	**Acoyapa**	**10.81**	**200**		**Pn**	**04 09 48.3**	**0.0**
MTO3	**Montecristo**	**10.82**	**225**		**Pn**	**04 09 48.9**	**+0.1**
BANI	**BANI**	**11.07**	**108**		**Pn**	**04 09 50.9**	**-1.1**
GOGA	**Godfrey**	**11.29**	**351**		**Pn**	**04 09 53.2**	**-1.5**
Z51A	**Franklin**	**11.54**	**344**		**Pn**	**04 09 57.5**	**-0.7**
CCIG	**Comitan**	**11.71**	**242**	Pn	**Pn**	**04 10 01.8**	**+1.1**
LRAL	**Lakeview Retre**	**11.84**	**337**	Pn	**Pn**	**04 10 03.7**	**+1.4**
JSC	**Jenkinsville**	**12.02**	**1**		**Pn**	**04 10 05.5**	**+0.8**
JTS	**Las Juntas de**	**12.34**	**196**	LR	LR	04 14 49.3	
	comp=Z,225nm,19.1s,baz=54,slow=37						
Y49A	**Blount Mountai**	**12.39**	**340**	Pn	**Pn**	**04 10 10.8**	**+0.8**
Z47A	**Carrollton**	**12.41**	**333**		**Pn**	**04 10 09.8**	**-0.3**
X51A	**Calhoun**	**12.66**	**347**		**Pn**	**04 10 13.5**	**0.0**
BG3	**Lake Jocassee**	**12.79**	**354**		**Pn**	**04 10 15.5**	**+0.2**
W52A	**Murphy**	**13.01**	**351**		**Pn**	**04 10 18.5**	**+0.2**
W50A	**Signal Mountai**	**13.37**	**346**		**Pn**	**04 10 23.6**	**+0.4**
CPCT	**Cooper Cave**	**13.45**	**349**	Pn	**Pn**	**04 10 24.9**	**+0.5**
V53A	**Saluda**	**13.45**	**355**		**Pn**	**04 10 24.3**	**-0.1**
TKL	**Tuckaleechee C**	**13.54**	**352**	Pn	**Pn**	**04 10 22.7**	**-2.9**
	comp=Z,2.1nm,0.3s,baz=173,slow=13,SNR=20						
TKL				LR	LR	04 15 53.2	
	comp=Z,187nm,21.4s,baz=192,slow=38						
TKL	**Tuckaleechee C**	**13.54**	**352**		**Pn**	**04 10 26.1**	**+0.5**
SJCC	**San Jacinto, C**	**13.64**	**153**	*e*P	**Pn**	**04 10 30.2**	**+3.0**
CMIG	**Matias Romero**	**13.66**	**250**	Pn	**Pn**	**04 10 25.1**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=58,slow=16,SNR=10						
CMIG				Sn	**Sn**	**04 12 52.1**	**-6.3**
	comp=Z,0.7nm,0.3s,baz=304,slow=15,SNR=8.0						
CMIG				LR	LR	04 16 34.2	
	comp=Z,135nm,18.1s,baz=82,slow=41						
V52A	**Sevierville**	**13.70**	**353**		**Pn**	**04 10 28.4**	**+0.6**
V51A	**Loudon**	**13.77**	**350**		**Pn**	**04 10 30.1**	**+1.4**
OXF	**Oxford**	**14.11**	**332**	Pn	**Pn**	**04 10 33.8**	**+0.5**
U56A	**King**	**14.11**	**3**		**Pn**	**04 10 34.4**	**+1.1**
V48A	**Smith Brothers**	**14.27**	**342**		**Pn**	**04 10 35.8**	**+0.3**
T50A	**Nancy**	**15.04**	**349**	Pn	**Pn**	**04 10 44.5**	**-1.4**
T50A				IAmb	IAmb	04 11 01.0	
	comp=Z,10nm,1.1s						
HKT	**Hockley**	**15.04**	**304**	Pn	**Pn**	**04 10 42.6**	**-3.3**
HKT				IAmb	IAmb	04 10 54.1	
	comp=Z,6.8nm,1.1s						
SMLC	**San Martn de**	**15.11**	**151**	*e*P	**Pn**	**04 10 47.0**	**+0.1**
UREC	**San Jos de Ur**	**15.47**	**158**	*e*P	**Pn**	**04 10 51.4**	**-0.3**
R58B	**Mineral**	**15.98**	**10**	Pn	**Pn**	**04 10 55.2**	**-3.0**
R58B				IAmb	IAmb	04 11 03.0	
	comp=Z,11nm,0.9s						
W41B	**Gary Mavity, V**	**16.00**	**326**	Pn	**Pn**	**04 10 57.9**	**-0.5**
W41B				IAmb	IAmb	04 11 10.3	
	comp=Z,10nm,0.9s						
WHAR	**Wooly Hollow**	**16.11**	**326**	Pn	**Pn**	**04 10 58.5**	**-1.4**
LCAR	**Lake Charles**	**16.19**	**331**	Pn	**Pn**	**04 11 01.9**	**+1.1**
MIAR	**Mount Ida**	**16.26**	**322**	Pn	**Pn**	**04 11 01.8**	**0.0**
MIAR				IAmb	IAmb	04 11 10.8	
	comp=Z,10nm,1.1s						
PBMO	**Poplar Bluff**	**16.47**	**334**	P	**Pn**	**04 11 05.9**	**+1.5**
FCAR	**Ozark Folk Cen**	**16.50**	**328**	P	**Pn**	**04 11 05.7**	**+0.8**
TLIG	**Tlapa**	**16.77**	**257**		**Pn**	**04 11 09.8**	**+1.4**
TLIG				IAmb	IAmb	04 11 26.4	
	comp=Z,9.8nm,1.0s						
Q51A	**Peebles**	**16.83**	**355**	P	**Pn**	**04 11 09.5**	**+0.5**
Q51A				IAmb	IAmb	04 11 21.5	
	comp=Z,8.9nm,0.8s						
SDV	**Santo Domingo**	**16.84**	**140**	Pn	**P**	**04 11 13.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=302,slow=2.6,SNR=5.8						
SDV				LR	LR	04 18 24.0	
	comp=Z,76nm,18.1s,baz=277,slow=40						
SDV	**Santo Domingo**	**16.84**	**140**	Pn	**Pn**	**04 11 08.3**	**-1.1**
SDV				IAmb	IAmb	04 11 27.2	
	comp=Z,16nm,0.8s						
SDV	**Santo Domingo**	**16.84**	**140**	*e*P	**P**	**04 11 14.2**	**+2.7**
T42A	**Van Buren**	**16.96**	**333**		**Pn**	**04 11 11.1**	**+0.4**
T42A				IAmb	IAmb	04 11 19.1	
	comp=Z,11nm,0.9s						
CBOC	**Ciudad Bolivar**	**17.09**	**161**	*e*P	**P**	**04 11 17.9**	**+3.8**
P53A	**Whipple**	**17.21**	**0**	P	**Pn**	**04 11 14.0**	**+0.3**
P53A				IAmb	IAmb	04 11 22.7	
	comp=Z,26nm,1.1s						
WHTX	**Lake Whitney,**	**17.25**	**308**	Pn	**Pn**	**04 11 13.0**	**-1.3**
WHTX				IAmb	IAmb	04 11 25.6	
	comp=Z,10nm,0.7s						
833A	**Chaparral WMA,**	**17.34**	**294**	P	**Pn**	**04 11 15.7**	**+0.3**
833A				IAmb	IAmb	04 11 24.2	
	comp=Z,7.9nm,0.6s						
OLIL	**Olney**	**17.42**	**342**	IAmb	IAmb	04 11 24.4	
	comp=Z,17nm,0.9s						
P49A	**Miami Univ. Ec**	**17.48**	**352**	IAmb	IAmb	04 11 21.8	
	comp=Z,20nm,1.1s						
GUY2C	**Guyana, Caldas**	**17.89**	**160**	*e*P	**P**	**04 11 26.6**	**+3.2**
CCM	**Cathedral Cave**	**17.90**	**334**	P	**Pn**	**04 11 23.3**	**+1.0**
RREF	**El Recreo**	**18.20**	**160**	*e*P	**Pn**	**04 11 22.0**	**-4.8**
TOLC	**Tolima**	**18.51**	**160**	*e*P	**P**	**04 11 29.8**	**-0.2**
N54A	**Moraine State**	**18.72**	**3**		**P**	**04 11 32.5**	**+0.7**
CHIC	**Chingaza**	**19.01**	**156**	*e*P	**P**	**04 11 36.6**	**+0.9**
ORTC	**Ortega, Tolima**	**19.17**	**161**	*e*P	**P**	**04 11 38.1**	**+1.2**
P40A	**Paris**	**19.48**	**335**	IAmb	IAmb	04 11 47.8	
	comp=Z,12nm,1.1s						
ZAIG	**Zacatecas**	**19.54**	**276**	P	**P**	**04 11 42.7**	**+1.5**
ZAIG				IAmb	IAmb	04 11 50.8	
	comp=Z,7.6nm,1.1s						
WMOK	**Wichita Mounta**	**19.66**	**313**	P	**P**	**04 11 42.4**	**+0.2**
MARP	**Paez Belalcaza**	**19.98**	**164**	*e*P	**P**	**04 11 49.0**	**+2.9**
P38A	**Dawn**	**20.18**	**332**	P	**P**	**04 11 48.0**	**+0.2**
P38A				IAmb	IAmb	04 12 04.4	
	comp=Z,7.7nm,1.1s						
PCON	**Cinco Dias**	**20.37**	**165**	*e*P	Pn	04 11 55.0	+2.2
TXAR	**Lajitas Array**	**21.22**	**294**	P	**P**	**04 12 00.8**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=118,slow=10,SNR=20						
TXAR				LR	LR	04 22 43.9	
	comp=Z,165nm,18.3s,baz=0.0,slow=44						
TXAR	**Lajitas Array**	**21.22**	**294**	P	**P**	**04 11 59.2**	**-0.1**
TX31	**Lajitas Ar. Si**	**21.22**	**294**	P	**P**	**04 11 59.9**	**+0.6**
TX31				IAmb	IAmb	04 12 13.8	
	comp=Z,12nm,1.0s						
GCUF	**Volcan Galeras**	**21.25**	**169**	*e*P	**P**	**04 12 06.0**	**+6.0**
MACC	**Macarena, Meta**	**21.28**	**159**	*e*P	**P**	**04 12 01.5**	**+1.7**
R32A	**Long Quarter,**	**21.92**	**321**	IAmb	IAmb	04 12 19.2	
	comp=Z,9.3nm,0.8s						
OTAV	**Otavalo**	**22.05**	**172**	P	**P**	**04 12 07.8**	**-0.8**
OTAV	**Otavalo**	**22.05**	**172**	*e*P	**P**	**04 12 10.6**	**+2.0**
MSTX	**Muleshoe**	**22.12**	**307**	P	**P**	**04 12 09.5**	**+0.6**
MSTX				IAmb	IAmb	04 12 22.7	
	comp=Z,9.7nm,1.0s						
SADO	**Sadowa**	**22.57**	**4**	LR	LR	04 21 39.5	
	comp=Z,320nm,18.3s,baz=101,slow=38						
MNTX	**Cornudas Mount**	**23.30**	**299**	P	**P**	**04 12 21.6**	**+0.5**
MNTX				IAmb	IAmb	04 12 33.0	
	comp=Z,3.7nm,1.0s						
T25A	**Trinidad**	**24.80**	**312**	IAmb	IAmb	04 12 48.2	
	comp=Z,5.2nm,0.9s						
ECSD	**EROS Data Cent**	**24.87**	**333**	P	**P**	**04 12 36.6**	**+0.8**
K31A	**O'Neill**	**24.96**	**329**	P	**P**	**04 12 37.0**	**+0.4**
PDAR	**Pinedale Array**	**31.11**	**318**	P	**P**	**04 13 32.8**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=148,slow=8.6,SNR=1.9						
PDAR	**Pinedale Array**	**31.11**	**318**	P	**P**	**04 13 31.6**	**-0.3**
NVAR	**Mina Array Bea**	**35.42**	**306**	P	**P**	**04 14 10.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=114,slow=10.0,SNR=2.5						
NVAR	**Mina Array Bea**	**35.42**	**306**	P	**P**	**04 14 09.2**	**-0.2**
SIV	**San Ignacio**	**42.90**	**151**	P	**P**	**04 15 12.1**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=324,slow=7.5,SNR=12						
YKA	**Yellowknife Ar**	**46.12**	**339**	P	**P**	**04 15 36.7**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=130,slow=9.0,SNR=7.3						
ILAR	**Eielson Array**	**59.69**	**333**	P	**P**	**04 17 16.4**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=114,slow=4.0,SNR=6.5						
PLCA	**Paso Flores**	**63.45**	**171**	P	**P**	**04 17 42.1**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=294,slow=3.2,SNR=5.4						
PLCA	**Paso Flores**	**63.45**	**171**	P	**P**	**04 17 41.5**	**-1.3**
NOA	**NORSAR Array B**	**72.08**	**31**	LR	LR	04 47 58.8	
	comp=Z,238nm,18.8s,baz=265,slow=34						
ARCES	**ARCESS Array B**	**75.10**	**20**	P	**P**	**04 18 54.9**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=275,slow=4.4,SNR=3.0						
ARCES	**ARCESS Array B**	**75.10**	**20**	P	**P**	**04 18 55.3**	**+0.6**
KOLS	**Kolonicke sedl**	**82.07**	**40**	*e*P	**P**	**04 19 36.2**	**+2.7**
WRA	**Warramunga Arr**	**146.59**	**267**	PKPbc	**PKPdf**	**04 26 55.7**	**+2.0**
	comp=Z,2.2nm,0.8s,baz=82,slow=3.5,SNR=12						
WRA	**Warramunga Arr**	**146.59**	**267**		**PKPdf**	**04 26 55.4**	**+1.7**
ASAR	**Alice Springs**	**147.48**	**261**	PKPbc	**PKPbc**	**04 26 58.1**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=96,slow=3.6,SNR=10						
ASAR	**Alice Springs**	**147.48**	**261**		**PKPbc**	**04 26 57.9**	**+0.2**

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*IDC **21** 04:24:50.1±1.8, 11°.40S×163°.28E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.8/37, mbtmp3.9/6, ML4.5/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/29, Error ellipse: s-maj=43.2km s-min=32.1km az=139.0*

*NEIC **21** 04:24:56.5±1.6, 11°.1S±0°.1×163°.24E±0°.09, h52^{km}±5^{km}, mb4.5/10, Error ellipse: s-maj=18.6km s-min=8.4km az=214.0*

ISC 21 04:24:55.4±0.7, **11°.17S**±0°.10×**163°.32E**±0°.09, **h35**^{km}, **n31**, σ**1^{s}.64**/26, **mb4.2**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.74**	**297**	Pn	**Pn**	**04 25 50.3**	**-0.4**
	37nm,0.3s,baz=62,slow=1.8,SNR=11						
HNR				Sn	**Sn**	**04 26 36.5**	**+2.9**
	46nm,0.3s,baz=154,slow=6.8,SNR=3.7						
HNR				LR	LR	04 27 14.8	
	comp=Z,302nm,19.5s,baz=110,slow=38						
HNR	**Honiara**	**3.74**	**297**	Pn	**Pn**	**04 25 49.9**	**-0.8**
HNR				Sn	**Sn**	**04 26 37.2**	**+3.6**
SANVU	**Saraoutou**	**5.69**	**139**		Pn	04 26 20.7	+3.3
SANVU				Sn	**Sn**	**04 27 22.2**	**+0.7**
DZM	**Mont Dzumac**	**11.24**	**165**	Pn	**Pn**	**04 27 35.4**	**+1.7**
PMG	**Port Moresby**	**16.00**	**275**	LR	LR	04 33 47.3	
	comp=Z,66nm,19.0s,baz=18,slow=34						
CTA	**Charters Tower**	**18.66**	**240**	P	**Pn**	**04 29 12.8**	**+1.7**
	0.2nm,0.3s,baz=104,slow=9.6,SNR=3.8						
RAO	**Raoul Island**	**25.10**	**139**	P	**P**	**04 30 17.6**	**+0.6**
WB0	**Warramunga Arr**	**29.12**	**249**	P	**P**	**04 30 52.1**	**-1.1**
WB0				IAmb	IAmb	04 31 05.2	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**29.20**	**249**	P	**P**	**04 30 51.7**	**-2.2**
WRA	**Warramunga Arr**	**29.21**	**249**	P	**P**	**04 30 52.8**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=79,slow=9.0,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**29.66**	**6**	T	T	05 02 00.9	
	baz=188,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.66**	**6**	T	T	05 01 59.2	
	baz=188,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**29.68**	**6**	T	T	05 02 00.8	
	baz=188,slow=76,SNR=9.4						
ASAR	**Alice Springs**	**30.62**	**242**	P	**P**	**04 31 05.0**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=72,slow=9.6,SNR=5.9						
ASAR				LR	LR	04 42 14.4	
	comp=Z,92nm,20.0s,baz=68,slow=34						
ASAR	**Alice Springs**	**30.62**	**242**	P	**P**	**04 31 04.7**	**-1.8**
H11N1	**WAKE ISLAND Hy**	**30.89**	**7**	T	T	05 03 28.8	
	baz=187,slow=76,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**30.90**	**7**	T	T	05 03 33.9	
	baz=187,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**30.91**	**7**	T	T	05 03 29.8	
	baz=187,slow=76,SNR=7.9						
FITZ	**Fitzroy Crossi**	**37.05**	**255**	P	**P**	**04 32 01.1**	**-1.3**
FITZ				IAmb	IAmb	04 32 03.4	
	comp=Z,1.9nm,0.9s						
SOEI	**Soe**	**38.41**	**268**	P	**P**	**04 32 12.4**	**-1.6**
SOEI				IAmb	IAmb	04 32 30.9	
	comp=Z,8.8nm,0.6s						
KAPI	**Kappang**	**43.53**	**274**	P	**P**	**04 32 55.3**	**-0.8**
KAPI				IAmb	IAmb	04 33 13.8	
	comp=Z,9.2nm,0.5s						
NWAO	**Narrogin (SRO)**	**47.43**	**235**	P	**P**	**04 33 25.7**	**-1.0**
NWAO				IAmb	IAmb	04 33 42.7	
	comp=Z,11nm,1.1s						
HATHI	**Halemaʻumaʻu T**	**50.88**	**54**	P	**P**	**04 33 53.2**	**-0.2**
SONM	**Songino Array**	**77.38**	**325**	P	**P**	**04 36 48.3**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=142,slow=4.3,SNR=4.7						
SONM	**Songino Array**	**77.38**	**325**	P	**P**	**04 36 45.3**	**-1.6**
ILAR	**Eielson Array**	**84.40**	**19**	P	**P**	**04 37 25.2**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=243,slow=4.0,SNR=2.0						
ILAR	**Eielson Array**	**84.40**	**19**	P	**P**	**04 37 23.9**	**+0.1**
BMAR	**Burnt Mountain**	**86.84**	**18**	P	**P**	**04 37 36.8**	**+0.9**
MK31	**Makanchi Array**	**91.99**	**317**	P	**P**	**04 37 59.2**	**-1.5**
MK31				IAmb	IAmb	04 38 03.5	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**91.99**	**317**	P	**P**	**04 38 01.4**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=100,slow=6.4,SNR=8.8						
MKAR	**Makanchi Array**	**91.99**	**317**	P	**P**	**04 37 58.8**	**-1.8**

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*JMA **21** 04:47:28.6±0.1, 23°.18N×121°.51E, h42^{km}±2^{km}, M3.5*

*TAP **21** 04:47:29.1, 23°.20N×121°.53E, h37^{km}, ML3.9, C*

ISC 21 04:47:29.1±1.4, **23°.18N**±0°.02×**121°.59E**±0°.02, **h30**^{km}±7^{km}, **n127**, σ**1^{s}.38**/226, **6C-9D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.22**	**249**	*i* P	**Pn**	**04 47 35.8**	**-0.5**
	baz=232						
CHKT				*e*S	**Sn**	**04 47 40.0**	**-0.8**
	baz=232						
FULB	**Fuli**	**0.27**	**275**	⇑*i*P	**Pn**	**04 47 36.2**	**-0.8**
	baz=269						
FULB				*e*S	**Sn**	**04 47 42.0**	**-0.1**
	baz=269						
EYUL	**Yuli**	**0.30**	**305**	P	**Pn**	**04 47 37.1**	**-0.4**
	baz=309						
EYUL				*e*S	**Sn**	**04 47 43.4**	**+0.6**
	baz=309						
TWF1	**Yuli**	**0.32**	**304**	⇑*i*P	**Pn**	**04 47 36.8**	**-0.9**
	baz=307						
TWF1				*e*S	**Sn**	**04 47 42.6**	**-0.8**

								baz=307
EDH	**Donghe**	0.33	232	P	Pn	04 47 37.3	-0.6	baz=216
EDH				S	Sn	04 47 43.0	-0.6	baz=216
YULB	**Yu-li**	0.34	309	⇑*i*P	Pn	04 47 36.9	-1.1	baz=300
YULB				S	Sn	04 47 42.5	-1.4	baz=300
HGSD	**Ruisui**	0.35	335	⇑*i*P	Pn	04 47 37.1	-1.1	baz=345
HGSD				S	Sn	04 47 45.5	+1.4	baz=345
EHY	**Hungye**	0.41	324	⇑*i*P	Pn	04 47 37.7	-1.3	baz=318
EHY				*e*S	Sn	04 47 43.6	-2.0	baz=318
LONT	**Longtian**	0.50	237	⇓*i*P	Pn	04 47 39.1	-1.1	baz=239
LONT				*e*S	Sn	04 47 47.7	0.0	baz=239
EGFH	**Guangfu**	0.51	344	P	Pn	04 47 39.4	-1.0	baz=337
EGFH				*e*S	Sn	04 47 46.7	-1.4	baz=337
LDUT	**Ludao**	0.51	192	⇓*i*P	Pn	04 47 39.3	-1.1	baz=184
LDUT				S	Sn	04 47 47.6	-0.5	baz=184
ELDTW	**Lidau**	0.52	272	⇓*i*P	Pn	04 47 38.9	-1.7	baz=267
ELDTW				S	Sn	04 47 45.7	-2.9	baz=267
TTN	**Taitung**	0.58	224	*e*P	Pn	04 47 41.0	-0.3	baz=211
TTN				*e*S	Sn	04 47 49.9	+0.1	baz=211
TWGBT	**Beinan**	0.59	233	⇓*i*P	Pn	04 47 39.9	-1.5	baz=237
TWGBT				*e*S	Sn	04 47 47.5	-2.5	baz=237
TWG	**Pinlang**	0.59	233	P	Pn	04 47 39.8	-1.6	baz=237
TWG				*e*S	Sn	04 47 47.7	-2.3	baz=237
ESL	**Shilin**	0.65	348	P	Pn	04 47 40.7	-1.6	baz=346
ESL				S	Sn	04 47 48.9	-2.6	baz=346
STYT	**Tauyuan**	0.76	269	⇓*i*P	Pn	04 47 42.9	-1.0	baz=266
STYT				*e*S	Sn	04 47 52.6	-1.8	baz=266
ALS	**Alishan**	0.79	295	*i* P	Pn	04 47 44.0	-0.5	baz=295
ALS				S	Sn	04 47 54.2	-1.2	baz=295
HWA	**Hwalien**	0.80	1	*e*P	Pn	04 47 43.7	-0.6	baz=17
HWA				*e*S	Sn	04 47 55.4	+0.3	baz=17
ECL	**Taimali**	0.82	225	*e*P	Pn	04 47 42.5	-2.1	baz=220
ECL				*e*S	Sn	04 47 53.0	-2.6	baz=220
SSLB	**Suanglung**	0.84	317	⇑*i*P	Pn	04 47 44.0	-0.9	baz=323
SSLB				S	Sn	04 47 54.0	-2.3	baz=323
WHYT	**Xinyi Township**	0.85	308	*e*P	Pn	04 47 44.8	-0.2	baz=313
WHYT				*e*S	Sn	04 47 55.7	-0.8	baz=313
SLGT	**Liugui**	0.88	258	P	Pn	04 47 45.2	-0.3	baz=255
SLGT				*e*S	Sn	04 47 56.6	-0.7	baz=255
TPUB	**Ta-pu**	0.89	278	⇓*i*P	Pn	04 47 45.4	-0.2	baz=276
TPUB				S	Sn	04 47 57.0	-0.4	baz=276
TWD	**Chiawan**	0.90	1	*e*P	Pn	04 47 45.0	-0.8	baz=354
TWD				*e*S	Sn	04 47 56.1	-1.6	baz=354
SGST	**Jiashian**	0.93	264	⇓*i*P	Pn	04 47 45.3	-0.8	baz=261
SGST				S	Sn	04 47 57.7	-0.7	baz=261
CHN4	**Tsaushan**	0.93	281	⇓*i*P	Pn	04 47 46.0	-0.1	baz=279
CHN4				*e*S	Sn	04 47 58.8	+0.4	baz=279
CHN5	**Tsauling**	0.93	297	*i* P	Pn	04 47 46.3	+0.1	baz=297
CHN5				S	Sn	04 47 59.4	+0.8	baz=297
SMLT	**Sun Moon Lake**	0.94	318	*i* P	Pn	04 47 46.2	-0.2	baz=325
SMLT				S	Sn	04 47 57.7	-1.3	baz=325
CHN1	**Nanshi**	0.97	271	⇓*i*P	Pn	04 47 47.0	+0.3	baz=268
CHN1				*e*S	Sn	04 48 00.1	+0.6	baz=268
SSD	**Sandimen**	0.98	244	P	Pn	04 47 45.9	-0.8	baz=240
SSD				*e*S	Sn	04 47 59.2	-0.4	baz=240
TSMG	**Majia**	0.98	242	P	Pn	04 47 45.9	-1.0	baz=237
TSMG				*e*S	Sn	04 47 59.0	-0.8	baz=237
TYC	**Yuchr**	0.98	317	*i* P	Pn	04 47 46.7	-0.2	baz=329
TYC				S	Sn	04 47 59.4	-0.4	baz=329
NACB	**Ninganchiao**	0.99	1	*e*P	Pn	04 47 45.6	-1.4	baz=355
NACB				*e*S	Sn	04 47 57.0	-3.1	baz=355
SNST	**Tainan City**	1.00	273	P	Pn	04 47 47.6	+0.5	baz=270
SNST				*e*S	Sn	04 48 00.8	+0.6	baz=270
WHF	**Hehuan Shan**	1.01	343	P	Pn	04 47 46.4	-1.2	baz=349
WHF				*e*S	Sn	04 47 59.2	-1.8	baz=349
WPL	**Puli Township**	1.01	325	*e*P	Pn	04 47 46.9	-0.3	baz=336
TWK	**Hsinying**	1.01	275	P	Pn	04 47 47.4	+0.1	baz=273
TWK				*e*S	Sn	04 48 01.9	+1.4	baz=273
WJS	**Zhushan**	1.02	309	P	Pn	04 47 47.5	+0.2	baz=310
WJS				S	Sn	04 48 01.1	+0.5	baz=310
ETLH	**Xiulin Townshi**	1.03	355	P	Pn	04 47 46.7	-0.9	baz=1.0
ETLH				*e*S	Sn	04 47 58.5	-2.5	baz=1.0
TAW	**Tawu**	1.03	218	*e*P	Pn	04 47 46.3	-1.2	baz=213
TAW				*e*S	Sn	04 47 59.0	-1.9	baz=213
EAST	**Anshuo**	1.04	221	P	Pn	04 47 46.2	-1.5	baz=216
EAST				*e*S	Sn	04 48 00.4	-0.9	baz=216
MASBT	**Mashibuluo**	1.04	238	P	Pn	04 47 46.9	-0.8	baz=229
MASBT				*e*S	Sn	04 47 59.9	-1.3	baz=229
DPDB	**Guoxing**	1.04	325	*i* P	Pn	04 47 47.8	0.0	baz=336
DPDB				S	Sn	04 48 00.3	-1.1	baz=336
SCST	**Cishan**	1.05	254	P	Pn	04 47 47.9	+0.2	baz=250
SCST				*e*S	Sn	04 48 03.7	+2.4	baz=250
WGK	**Gukeng**	1.07	299	P	Pn	04 47 48.6	+0.6	baz=310
WGK				S	Sn	04 48 03.4	+1.6	baz=310
CHN2	**Minshiung**	1.08	289	P	Pn	04 47 48.5	+0.3	baz=273
CHN2				*e*S	Sn	04 48 03.5	+1.4	baz=273
WNT	**Mingjian**	1.08	310	P	Pn	04 47 48.7	+0.5	baz=311
WNT				*e*S	Sn	04 48 02.7	+0.5	baz=311
WDLH	**Douliu**	1.09	298	P	Pn	04 47 49.0	+0.7	baz=309
WDLH				*e*S	Sn	04 48 03.3	+0.9	baz=309
SGLT	**Jiouru**	1.10	246	*e*P	Pn	04 47 49.1	+0.6	baz=243
WNT1	**Nantou City**	1.10	311	P	Pn	04 47 49.4	+0.9	baz=312
WNT1				*e*S	Sn	04 48 02.8	+0.1	baz=312
FUSS	**Fushou**	1.11	344	P	Pn	04 47 48.7	-0.2	baz=358
FUSS				*e*S	Sn	04 48 01.6	-1.7	baz=358
CHY	**Chiayi**	1.11	287	P	Pn	04 47 48.5	-0.1	baz=285
CHY				*e*S	Sn	04 48 03.7	+0.7	baz=285
TSPT	**Pingtung City**	1.12	244	*e*P	Pn	04 47 51.4	+2.6	baz=241
CHN3	**Shinhua**	1.13	265	P	Pn	04 47 50.5	+1.7	baz=262
CHN3				*e*S	Sn	04 48 06.3	+3.1	baz=262
TWM1	**Shoushan**	1.13	252	P	Pn	04 47 50.6	+1.8	baz=248
TWM1				*e*S	Sn	04 48 07.6	+4.3	baz=248
LAY	**Lan-yu**	1.13	182	P	Pn	04 47 47.8	-1.1	baz=170
LAY				*e*S	Sn	04 48 02.5	-1.0	baz=170
TWT	**Tachien**	1.14	341	*i* P	Pn	04 47 48.8	-0.3	baz=345
TWT				S	Sn	04 48 01.8	-2.0	baz=345
TDCB	**Techi**	1.14	340	P	Pn	04 47 48.7	-0.5	baz=345
TDCB				*e*S	Sn	04 48 02.0	-1.9	baz=345
SSPT	**Xinbi**	1.16	234	P	Pn	04 47 49.7	+0.4	baz=222
SSPT				*e*S	Sn	04 48 05.4	+1.2	baz=222
WWF	**Wufeng**	1.19	317	*e*P	Pn	04 47 49.8	+0.2	baz=305
WWF				*e*S	Sn	04 48 06.1	+1.3	baz=305
SCZT	**Fangliau**	1.20	228	P	Pn	04 47 49.5	-0.3	baz=222
SCZT				*e*S	Sn	04 48 06.8	+1.8	baz=222
SLIU	**Shizi**	1.20	217	*e*P	Pn	04 47 48.6	-1.3	baz=213
SLIU				*e*S	Sn	04 48 03.6	-1.5	baz=213
WTK	**Tuku**	1.21	295	P	Pn	04 47 49.8	-0.2	baz=294
WTK				S	Sn	04 48 05.7	+0.3	baz=294
ICHU	**Yijhu**	1.21	279	P	Pn	04 47 49.9	-0.2	baz=276
ICHU				S	Sn	04 48 07.2	+1.8	baz=276
WLGB	**Puzi**	1.22	285	*e*P	Pn	04 47 48.4	-1.7	baz=282
WLGB				*e*S	Sn	04 48 05.8	+0.2	baz=282
SNJT	**Kaohsiung City**	1.23	250	P	Pn	04 47 51.8	+1.6	baz=246
SNJT				*e*S	Sn	04 48 09.8	+4.1	baz=246
WHP	**Taichung City**	1.24	332	P	Pn	04 47 51.6	+1.1	baz=336
WHP				*e*S	Sn	04 48 07.2	+0.9	baz=336
ENA	**Nanau**	1.25	7	*e*P	Pn	04 47 50.0	-0.6	baz=23
ENA				*e*S	Sn	04 48 05.8	-0.6	baz=23
NNSB	**Datong**	1.26	352	P	Pn	04 47 50.5	-0.3	baz=7.0
NNSB				*e*S	Sn	04 48 04.8	-2.0	baz=7.0
NNSH	**Datong**	1.26	352	*e*P	Pn	04 47 50.5	-0.3	baz=6.0
NNSH				*e*S	Sn	04 48 05.1	-1.7	baz=6.0
NNS	**Nan Shan**	1.27	351	*e*P	Pn	04 47 51.3	+0.3	baz=7.0
NNS				*e*S	Sn	04 48 05.5	-1.6	baz=7.0
CHN8	**Yiju**	1.27	278	*e*P	Pn	04 47 50.8	0.0	baz=275
CHN8				*e*S	Sn	04 48 08.2	+1.3	baz=275
TCU	**Taichung**	1.28	319	*e*P	Pn	04 47 52.6	+1.8	baz=308
TCU				*e*S	Sn	04 48 08.5	+1.5	baz=308
ENAH	**Nanao**	1.28	9	*e*P	Pn	04 47 51.0	+0.1	baz=14
WCHH	**Zhanghua**	1.30	314	*e*P	Pn	04 47 52.2	+1.0	baz=315
WCHH				*e*S	Sn	04 48 09.1	+1.4	baz=315
WSF	**Szhu**	1.33	290	*e*P	Pn	04 47 53.7	+2.0	baz=289
WSF				*e*S	Sn	04 48 09.2	+0.8	baz=289
WLCH	**Liuqiu**	1.38	234	*e*P	Pn	04 47 55.4	+3.0	baz=230
WLCH				*e*S	Sn	04 48 15.0	+5.4	baz=230
TWP	**Hsiaoliuchiu**	1.40	234	*e*P	Pn	04 47 56.8	+4.2	baz=230
TWP				*e*S	Sn	04 48 14.0	+4.0	baz=230
TSEB	**Hengchuen, Pin**	1.42	207	*e*P	Pn	04 47 52.4	-0.4	baz=196
TSEB				*e*S	Sn	04 48 10.6	+0.1	baz=196
NDT	**Datong Townshi**	1.42	357	*e*P	Pn	04 47 53.1	+0.2	baz=3.0
NDT				*e*S	Sn	04 48 09.6	-1.0	baz=3.0
TWKBT	**Hengchun**	1.42	210	*e*P	Pn	04 47 52.3	-0.6	baz=197
TWKBT				*e*S	Sn	04 48 09.5	-1.1	baz=197
TWK1	**Hengchun**	1.42	211	*e*P	Pn	04 47 52.4	-0.5	baz=197
TWK1				*e*S	Sn	04 48 09.6	-1.0	baz=197
NSY	**Sanyi**	1.45	329	*e*P	Pn	04 47 54.5	+1.2	baz=333
NSY				*e*S	Sn	04 48 13.1	+1.9	baz=333
TWC	**Suao**	1.45	10	*e*P	Pn	04 47 54.6	+1.4	baz=16
TWC				*e*S	Sn	04 48 10.9	-0.3	baz=16
WDJ	**Dajia District**	1.45	324	*e*P	Pn	04 47 53.8	+0.5	baz=327
WDJ				*e*S	Sn	04 48 14.2	+2.8	baz=327
YHNB	**Yeheng**	1.50	353	P	Pn	04 47 54.2	+0.2	baz=359
YHNB				*e*S	Sn	04 48 11.7	-0.9	baz=359
NSK	**Sanguang**	1.51	352	P	Pn	04 47 54.4	+0.2	baz=358
NSK				*e*S	Sn	04 48 12.0	-0.8	baz=358
NMLH	**Miaoli**	1.54	332	*e*P	Pn	04 47 55.0	+0.5	baz=336
NMLH				*e*S	Sn	04 48 14.3	+0.8	baz=336
TWE	**Neicheng**	1.54	3	*e*P	Pn	04 47 55.0	+0.5	baz=8.0
NSTT	**Nanjuang**	1.54	340	*e*P	Pn	04 47 56.8	+2.2	baz=346
NSTT				*e*S	Sn	04 48 14.7	+1.1	baz=346
LIOB	**Emei**	1.55	341	P	Pn	04 47 55.9	+1.1	baz=346
LIOB				*e*S	Sn	04 48 15.6	+1.7	baz=346
NWLT	**Wulai**	1.60	357	*e*P	Pn	04 47 55.6	+0.3	baz=4.0
NWLT				*e*S	Sn	04 48 14.9	0.0	baz=4.0
NTC	**Toucheng**	1.69	8	*e*P	Pn	04 47 57.9	+1.3	baz=1.0
EGS		1.69	11	*e*P	Pn	04 47 58.5	+1.9	baz=16
WDGT	**Dungji**	1.77	273	P	Pn	04 47 57.2	-0.5	baz=270
WDGT				*e*S	Sn	04 48 17.1	-2.2	baz=270
JYNG	**Yonagunijimaku**	1.78	44	*e*S	Sn	04 48 19.9	+0.5	
TWA	**Mucha**	1.80	360	*e*P	Pn	04 48 00.4	+2.3	baz=7.0
TWA				*e*S	Sn	04 48 21.6	+1.8	baz=7.0
TIPB	**Shuangxi**	1.80	7	*e*P	Pn	04 47 59.5	+1.4	baz=4.0
TIPB				*e*S	Sn	04 48 20.6	+0.6	baz=4.0
YOJ	**Yonaguni jima**	1.83	45	P	Pn	04 47 59.2	+0.7	
YOJ				S	Sn	04 48 21.2	+0.6	
YOJ	**Yonaguni jima**	1.83	45	*e*P	Pn	04 47 58.1	-0.4	baz=48
TWB1	**Santiao Chiao**	1.86	11	*e*P	Pn	04 47 59.1	+0.1	baz=17
PHUB	**P'eng-hu**	1.88	281	*e*P	Pn	04 47 58.4	-0.7	baz=279
NWF	**Wu-fen Shan**	1.90	5	*e*P	Pn	04 48 00.9	+1.4	baz=11
WFSB	**Wu-fen Shan**	1.90	5	*e*P	Pn	04 47 58.8	-0.6	baz=11
PNG	**Penghu**	1.91	282	*e*P	Pn	04 47 59.0	-0.5	baz=266
PNG				*e*S	Sn	04 48 21.4	-1.1	baz=266
YM01	**YM01**	1.96	360	*e*P	Pn	04 48 01.8	+1.5	baz=5.0
YM04	**YM04**	1.97	359	*e*P	Pn	04 47 59.0	-1.4	baz=4.0
YM05	**YM05**	1.98	359	*e*P	Pn	04 48 01.6	+1.0	baz=5.0
VCHM	**Qimei**	1.98	271	*e*P	Pn	04 47 59.7	-0.9	baz=269
YM08	**YM08**	2.00	0	*e*P	Pn	04 48 02.2	+1.3	baz=5.0
HATJ	**Hateruma jima**	2.22	66	P	Pn	04 48 04.2	+0.4	
HATJ				S	Sn	04 48 30.5	+0.3	
IRIF	**Iriomote-Funau**	2.28	59	P	Pn	04 48 05.3	+0.6	
IRIF				S	Sn	04 48 33.6	+1.9	
JKRS	**Kuro-shima**	2.46	64	P	Pn	04 48 07.9	+0.7	
JKRS				*e*S	Sn	04 48 37.4	+1.2	
JIJ	**Ishigaki jima**	2.62	63	P	Pn	04 48 09.5	+0.1	
JIJ				S	Sn	04 48 39.6	-0.7	
VWUC	**VWUC**	2.66	313	*e*P	Pn	04 48 08.7	-1.2	baz=312
PTTC	**Pingtan**	2.84	325	*e*P	Pn	04 48 11.8	-0.6	baz=325
JISG	**Ishigakijimahi**	2.86	60	P	Pn	04 48 12.5	-0.2	
JISG				S	Sn	04 48 45.1	-1.1	
PTMZ	**Houxiangcun**	2.92	310	*e*P	Pn	04 48 12.3	-1.1	baz=298
KNM	**Kinmen**	3.14	294	*e*P	Pn	04 48 17.1	+0.6	baz=290
KNMB	**Chin-men Tao**	3.19	294	*e*P	Pn	04 48 15.8	-1.5	baz=292
JTJ	**Tarama**	3.20	62	P	Pn	04 48 18.3	+0.9	
JTJ				S	Sn	04 48 55.9	+1.3	
MATB	**Ma-tsu**	3.32	334	*e*P	Pn	04 48 18.0	-0.9	baz=333
AXDP	**Jialang**	3.72	298	*e*P	Pn	04 48 23.5	-1.0	baz=296
MHZQ	**Yeshan**	3.73	322	*e*P	Pn	04 48 23.5	-1.0	baz=322
LYJJ	**Jianjiangzhen**	3.75	334	*e*P	Pn	04 48 24.4	-0.5	baz=334
JMJ	**Miyako jima 2**	3.76	64	*e*P	Pn	04 48 25.7	+0.6	baz=65

ROM 21 04:47:54.8±0.2, 38°.38N±0°.01×15°.39E±0°.01, h119km±1km, ML2.5/9, Error ellipse: s-maj=1.2km s-min=1.1km az=156.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res	
				Op	ISC	h m s	ISC	
MILZ	**Milazzo**	0.17	230	P	Pn	04 48 11.0	-0.2	
MILZ				S	Sn	04 48 23.4	-0.1	
MPNC	**Port Mandanici**	0.24	188	P	Pn	04 48 11.2	-0.3	
MPNC				S	Sn	04 48 23.9	-0.1	
MCSR	**Castroreale**	0.34	200	P	Pn	04 48 12.4	+0.5	
MCSR				S	Sn	04 48 24.6	-0.2	
MCSR				AML	AML			comp=E,451µm,1.1s
MCSR				AML	AML			comp=N,662µm,0.3s
GMB	**Gambarie**	0.40	122	P	Pn	04 48 12.7	+0.4	
GMB				S	Sn	04 48 25.4	0.0	
GMB				AML	AML			comp=E,924µm,0.6s
GMB				AML	AML			comp=N,812µm,0.2s
GMB				AML	AML			comp=E,928µm,0.6s
GMB				AML	AML			comp=N,813µm,0.2s
NOV	**Novara**	0.41	210	P	Pn	04 48 12.6	+0.4	
NOV				S	Sn	04 48 25.5	+0.2	
NOV				AML	AML			comp=E,193µm,0.3s
NOV				AML	AML			comp=N,182µm,0.8s
CEL	**Celeste**	0.41	107	P	Pn	04 48 12.9	+0.7	
CEL				S	Sn	04 48 25.0	-0.3	
MTTG	**Motta San Giov**	0.45	148	P	Pn	04 48 12.6	+0.2	
MTTG				S	Sn	04 48 26.3	+0.7	
MTTG				AML	AML			comp=E,139µm,1.6s
MTTG				AML	AML			comp=N,172µm,0.4s
JOPP	**Joppolo**	0.45	59	P	Pn	04 48 12.3	-0.1	
JOPP				S	Sn	04 48 25.2	-0.4	
JOPP				AML	AML			comp=E,120µm,0.6s
JOPP				AML	AML			comp=N,112µm,1.2s
MUCR	**Ucria**	0.53	231	P	Pn	04 48 12.9	0.0	
MUCR				S	Sn	04 48 26.6	-0.1	
MUCR				AML	AML			comp=N,100µm,1.4s
MUCR				AML	AML			comp=E,80µm,0.4s
SOI	**Samo**	0.60	120	P	Pn	04 48 13.4	0.0	
SOI				S	Sn	04 48 27.1	-0.2	
MPAZ	**Palizzi**	0.64	131	P	Pn	04 48 13.8	+0.1	
MPAZ				S	Sn	04 48 27.5	-0.4	
MPAZ				AML	AML			comp=N,140µm,0.6s
MPAZ				AML	AML			comp=E,131µm,0.3s
IFIL	**Filicudi I Eol**	0.68	286	P	Pn	04 48 14.1	+0.3	
PLAC	**Placanica**	0.82	85	P	Pn	04 48 15.4	+0.3	
PLAC				S	Sn	04 48 30.5	0.0	
CAR1	**CAROLEI**	1.08	36	P	Pn	04 48 17.6	0.0	
CAR1				S	Sn	04 48 35.5	+0.6	
CAR1				AML	AML			comp=E,99µm,1.1s
CAR1				AML	AML			comp=N,90µm,0.9s
CET2	**Cetraro**	1.23	21	P	Pn	04 48 19.6	+0.5	
CET2				S	Sn	04 48 37.4	-0.3	
CET2				AML	AML			comp=N,174µm,0.3s
CET2				AML	AML			comp=E,131µm,0.9s
CELI	**Celico**	1.34	40	P	Pn	04 48 21.0	+0.5	
CUC	**Castrocucco**	1.64	11	P	Pn	04 48 24.0	+0.1	
CUC				S	Sn	04 48 46.5	+0.4	
ORI	**Oriolo Calabro**	1.87	26	S	Sn	04 48 52.0	+1.1	

SFS ***21*** *04:50:26.0, 43°.00N×1°.70W, h3km, ML2.6, BEINTZA-LABAIEN (NAVARRA)*
INMG ***21*** *04:50:26.7±1.0, 43°.05N×1°.74W, h3km±3km, ML2.4, Error ellipse: s-maj=1.8km s-min=1.6km az=160.0*
MDD ***21*** *04:50:26.8±0.4, 43°.05N×1°.74W, h3km±3km, mbLg2.6/24, Error ellipse: s-maj=3.3km s-min=2.8km az=136.0, PRXIMO*
STR ***21*** *04:50:27.6±0.6, 43°N±2°×°±°, h10km, MLv2.6/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*
LDG ***21*** *04:50:27.0±0.1, 43°.09N×1°.70W, h5km, Md2.9/1, Ml2.9/36, Error ellipse: s-maj=1.4km s-min=1.2km az=108.0*
ISC 21 04:50:26.4±0.9**, 43°.06N**±0°.02×**1°.75W**±0°.02**, h15**km±6km**,**
n88, σ2s.42/169**, 1C-1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALK	**Alkurruntz**	0.24	48	P	Pg	04 50 31.2	-0.6
EALK				Pg	Pg	04 50 32.1	+0.4
EALK				Sg	Sg	04 50 34.8	-0.7
EALK	**Alkurruntz**	0.24	48	Pg	Pg	04 50 31.0	-0.8
	0.1nm,0.1s,SNR=7.9						
EALK				Lg	Lg	04 50 34.5	
	297nm,0.1s						
EARA	**Aranguren**	0.32	156	Pg	Pg	04 50 32.4	-0.6
EARA				Sg	Sg	04 50 37.0	-0.5
EARA	**Aranguren**	0.32	156	⇑Pg	Pg	04 50 32.2	-0.8
	90nm,0.2s,SNR=18						
EARA				Lg	Lg	04 50 37.0	
	209nm,0.1s						
EORO	**Oroz-Betelu**	0.37	117	⇓Pg	Pg	04 50 33.0	-0.9
	29nm,0.2s,SNR=18						
EORO				Lg	Lg	04 50 38.0	
	792nm,0.3s,SNR=44						
SJPF	**Ste Jean**	0.39	82	*e*Pg	Pg	04 50 33.5	-0.8
SJPF				*e*Sg	Sg	04 50 38.3	-1.4
	544nm,0.3s						
ATE	**Arette**	0.77	88	Pg	Pg	04 50 40.8	-0.7
ATE				Sg	Sg	04 50 51.5	-0.1
ATE	**Arette**	0.77	88	Pg	Pg	04 50 40.6	-0.8
	9.4nm,0.2s,SNR=7.9						
ATE				Lg	Lg	04 50 51.1	
	185nm,0.3s,SNR=7.9						
TERF	**Tercis-les-Bai**	0.77	37	Pg	Pg	04 50 41.8	+0.3
TERF				Sg	Sg	04 50 52.8	+1.1
ETSF	**Etsaut**	0.89	100	*e*Pg	Pg	04 50 42.3	-1.4
ETSF				*e*Sg	Sg	04 50 54.5	-0.9
	114nm,0.2s						
ELAN	**Lanestosa**	1.24	278	Pg	Pg	04 50 49.7	-0.7
	5.6nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	04 51 07.8	
	32nm,0.3s,SNR=7.9						
PYLO	**Lourdes**	1.25	88	Pg	Pg	04 50 49.9	-0.5
PYLO				Sg	Sg	04 51 06.6	-0.2
ECHI	**Chisagues Biel**	1.48	105	Pg	Pn	04 50 54.0	+1.3
ECHI				Sg	Sg	04 51 13.9	-0.5
ECHI	**Chisagues Biel**	1.48	105	Pg	Pn	04 50 53.6	+0.9
	35nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	04 51 14.0	
	69nm,0.3s,SNR=7.9						
EPF	**Esparros**	1.53	90	*e*Pg	Pn	04 50 54.9	+1.6
EPF				*e*Sg	Sn	04 51 14.2	+1.2
	90nm,0.3s						
MLS	**Moulis**	2.09	92	Pn	Pn	04 51 02.3	+1.4
MLS				Sn	Sn	04 51 28.3	+1.6
LRVF	**chteau la Riv**	2.15	28	Pn	Pn	04 51 04.0	+2.3
LRVF				Sn	Sn	04 51 30.4	+2.3
CSOR	**Sort**	2.23	107	Pn	Pn	04 51 04.2	+1.2
	0.2nm,0.2s,SNR=37						
CSOR				Pg	Pb	04 51 07.3	+0.8
	8.7nm,0.3s,SNR=7.9						
CSOR				Lg	Lg	04 51 37.2	
	48nm,0.3s,SNR=8.0						
ETOR	**Torete**	2.25	186	Pn	Pn	04 51 03.5	+0.3
	0.9nm,0.2s,SNR=7.9						
ETOR				Pg	Pb	04 51 08.7	+1.8
	32nm,0.2s,SNR=32						
ETOR				Sn	Sn	04 51 31.2	+0.5
	7.5nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	04 51 37.9	
	70nm,0.5s,SNR=7.0						
MONQ	**Montcuq**	2.50	58	Pn	Pn	04 51 08.3	+1.7
MONQ				Sn	Sn	04 51 38.7	+1.9
EARI	**Arriondas**	2.54	277	Pn	Pn	04 51 08.8	+1.7
	2.4nm,0.3s,SNR=4.0						
EARI				Sn	Sn	04 51 38.1	+0.3
	118nm,1.3s,SNR=7.9						
LFF	**La Frestale**	2.60	43	*e*Pn	Pn	04 51 07.2	-0.7
LFF	**La Frestale**	2.60	43	*e*Pg	Pb	04 51 14.2	+1.5
LFF				*e*Sn	Sn	04 51 37.0	-2.2
	9.5nm,0.3s						
LFF				*e*Sg	Sb	04 51 46.7	+2.3
	36nm,0.5s						
ERTA	**Horta de San J**	2.62	143	Pn	Pn	04 51 08.2	+0.1
	0.8nm,0.2s,SNR=7.9						
ERTA				Pg	Pb	04 51 14.6	+1.7
	3.2nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	04 51 39.6	0.0
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	04 51 48.6	
	12nm,0.4s,SNR=7.9						
EMIR	**Miracle**	2.68	114	Pn	Pn	04 51 09.9	+0.8
	1.8nm,0.2s,SNR=7.9						
EMIR				Pg	Pb	04 51 15.4	+1.3
	3.1nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	04 51 51.7	
	25nm,0.3s,SNR=7.9						
EPOB	**Poblet**	2.71	128	Pn	Pn	04 51 09.2	-0.2
	0.8nm,0.2s,SNR=7.9						
EPOB				Pg	Pb	04 51 16.7	+2.1
	1.6nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	04 51 40.6	-1.4
	1.0nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	04 51 51.0	
	8.0nm,0.2s,SNR=7.9						
CLLI	**Llivia**	2.80	101	Pn	Pn	04 51 12.8	+2.0
	0.0nm,0.3s,SNR=14						
CLLI				Pg	Pb	04 51 17.8	+1.5
	SNR=19						
CLLI				Lg	Lg	04 51 55.1	
	20nm,0.4s,SNR=5.0						
EMOS	**Mosqueruela**	2.86	160	Pn	Pn	04 51 12.2	+0.6
	0.6nm,0.2s,SNR=7.9						
EMOS				Pg	Pb	04 51 19.5	+2.2
	5.6nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	04 51 45.5	-0.3
	0.1nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	04 51 57.7	
	9.2nm,0.4s,SNR=7.9						
MTLF	**Montolieu**	2.92	83	Pn	Pn	04 51 13.6	+1.4
MTLF				Sn	Sn	04 51 47.2	+0.2
MTLF	**Montolieu**	2.92	83	*e*Pn	Pn	04 51 12.3	+0.1
MTLF	**Montolieu**	2.92	83	*e*P	Pn	04 51 14.3	+2.1
MTLF				*e*Sn	Sn	04 51 45.1	-1.9
	21nm,0.3s						
UCM	**Universidad Co**	2.97	203	Pn	Pn	04 51 12.8	-0.3
UCM				Sn	Sn	04 51 47.6	-0.8
UCM	**Universidad Co**	2.97	203	*e*P	Pn	04 51 12.8	-0.3
UCM				*e*S	Sn	04 51 47.6	-0.8
GUD	**Guadarrama**	3.01	217	Pn	Pn	04 51 14.4	+0.7
	0.6nm,0.2s,SNR=7.9						
GUD				Pg	Pb	04 51 22.5	+2.7
	4.0nm,0.5s,SNR=7.9						
GUD				Sn	Sn	04 51 49.3	-0.2
	2.2nm,0.3s,SNR=7.9						
GUD				Lg	Lg	04 52 00.9	
	5.6nm,0.3s,SNR=7.9						
RJF	**Les Rejaudoux**	3.25	45	*e*Pn	Pn	04 51 15.9	-0.9
RJF				*e*Sn	Sn	04 51 52.8	-2.4
	9.5nm,0.4s						
RJF				*e*Sg	Sb	04 52 07.0	+3.9
	12nm,0.3s						
CAF	**Calviac**	3.33	55	*e*Pn	Pn	04 51 17.2	-0.7
CAF				*e*Sn	Sn	04 51 54.7	-2.4
	17nm,0.3s						
CFON	**Fontmartina**	3.36	111	Pn	Pn	04 51 19.0	+0.5
	2.9nm,0.1s,SNR=10						
CFON				Pg	Pb	04 51 28.0	+2.3
	5.8nm,0.2s,SNR=12						
CFON				Sn	Sn	04 51 58.5	+0.4
	11nm,0.3s,SNR=7.9						
CFON				Lg	Lg	04 52 13.5	
	45nm,0.2s						
SJAF	**Saint Jean de**	3.46	98	Pn	Pn	04 51 20.8	+1.1
	1.5nm,0.2s,SNR=7.9						
SJAF				Pg	Pb	04 51 29.5	+2.1
	0.3nm,0.2s,SNR=7.9						
SJAF				Sn	Sn	04 51 58.5	-1.9
	5.0nm,0.3s,SNR=7.9						
SJAF				Lg	Lg	04 52 16.0	
	9.3nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	3.47	99	Pn	Pn	04 51 21.9	+1.9
	0.1nm,0.1s,SNR=7.9						
EJON				Lg	Lg	04 52 15.9	
	8.9nm,0.3s,SNR=7.9						
ECHE	**Chera**	3.52	170	Pg	Pg	04 51 32.1	-1.7
	6.6nm,0.5s,SNR=7.9						
ECHE				Lg	Lg	04 52 18.0	
	5.1nm,0.3s,SNR=7.9						
MFF	**Saint Martin d**	3.72	17	*e*Pn	Pn	04 51 22.7	-0.6
MFF	**Saint Martin d**	3.72	17	*e*Pg	Pb	04 51 34.7	+2.9
MFF				*e*Sn	Sn	04 52 03.4	-3.4
	5.7nm,0.3s						
MFF				*e*Sg	Sb	04 52 21.8	+5.2
	4.1nm,0.3s						
ESDC	**Sonseca Array**	3.77	207	Sn	Sn	04 52 06.7	-1.5
	1.6nm,0.3s,baz=30,slow=24,SNR=5.5						
ESDC				Lg	Lg	04 52 24.3	
	baz=26,slow=30,SNR=7.9						
ECAL	**Calabor**	3.85	255	Pn	Pn	04 51 26.0	+0.8
	2.2nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	04 52 08.9	-1.3
	0.6nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	04 52 27.9	
	7.6nm,0.3s,SNR=7.9						
PBRG	**Braganca**	3.90	253	Pn	Pn	04 51 27.0	+1.2
PBRG				Sn	Sn	04 52 11.0	-0.4
	2.0nm,0.6s						
PBRG	**Braganca**	3.90	253	*e*Pn	Pn	04 51 27.0	+1.2
PBRG				*e*Sn	Sn	04 52 11.0	-0.4
PBRG				A	A	04 52 38.0	
	4.0nm,0.6s						
PAB	**San Pablo**	4.02	210	Pn	Pn	04 51 26.6	-0.9
	0.3nm,0.4s,SNR=7.9						
PAB				Sn	Sn	04 52 12.8	-1.5
	1.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	04 52 34.0	
	4.8nm,0.4s,SNR=7.9						
LASF	**Ste Croix**	4.20	74	*e*Pn	Pn	04 51 29.3	-0.6
LASF	**Ste Croix**	4.20	74	*e*P	Pn	04 51 32.5	+2.6
LASF				*e*Sn	Sn	04 52 15.7	-3.0
	28nm,0.6s						
TCF	**Toulx Ste Croi**	4.29	40	*e*Pn	Pn	04 51 30.7	-0.4
TCF	**Toulx Ste Croi**	4.29	40	*e*Pg	Pb	04 51 45.6	+4.1
TCF				*e*Sn	Sn	04 52 17.3	-3.6
	6.1nm,0.4s						
TCF				*e*Sg	Sg	04 52 40.0	-4.0
	5.0nm,0.4s						
MVO	**Moncorvo**	4.36	246	Pn	Pn	04 51 32.5	+0.3
	0.2nm,0.1s,SNR=12						
MVO				Sn	Sn	04 52 21.5	-1.2
	1.6nm,0.2s,SNR=7.9						
MVO				Lg	Lg	04 52 42.6	
	10nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	4.36	246	*e*Pn	Pn	04 51 32.6	+0.4
MVO				*e*Sn	Sn	04 52 21.1	-1.6
MVO				A	A	04 52 43.3	
	8.6nm,0.6s						
PVRL	**Vila Real**	4.78	250	Pn	Pn	04 51 38.6	+0.7
PVRL				Lg	Lg	04 52 56.5	
	2.3nm,0.5s						
PVRL	**Vila Real**	4.78	250	*e*Pn	Pn	04 51 38.6	+0.7
PVRL				*e*Sg	Sg	04 52 56.5	-3.3
PVRL				A	A	04 52 58.9	
	4.6nm,0.5s						
BGF	**Bois d'Agland**	4.79	42	*e*Pn	Pn	04 51 36.7	-1.3
BGF				*e*Sn	Sn	04 52 28.4	-4.7
	12nm,0.4s						
BGF				*e*Sg	Sg	04 52 55.0	-5.0
	16nm,0.4s						
POLO	**Lamas de Olo**	4.79	251	Pn	Pn	04 51 39.3	+1.2
POLO				Sn	Sn	04 52 32.0	-1.4
	2.3nm,0.6s						
POLO	**Lamas de Olo**	4.79	251	*e*Pn	Pn	04 51 39.3	+1.2
POLO				*e*Sn	Sn	04 52 32.0	-1.4
POLO				A	A	04 53 08.4	
	2.3nm,0.6s						
QUIF	**Quistinic**	4.96	349	*e*Pn	Pn	04 51 39.7	-0.5
QUIF				*e*Sn	Sn	04 52 34.0	-3.2
	4.1nm,0.4s						
VIVF	**Saint-Julien-l**	4.97	67	*e*Pn	Pn	04 51 40.1	-0.4
VIVF				*e*Sn	Sn	04 52 34.1	-3.6
	5.0nm,0.3s						
SESP	**Santiago Espad**	4.97	187	Pn	Pn	04 51 41.3	+0.6
	0.3nm,0.1s,SNR=7.9						
SESP				Sn	Sn	04 52 35.1	-2.8
	4.1nm,0.4s,SNR=7.9						
SESP				Lg	Lg	04 53 03.7	
	1.6nm,0.4s,SNR=7.9						
AVF	**Avril sur Loir**	5.20	42	*e*Pn	Pn	04 51 42.9	-0.7
AVF				*e*Sn	Sn	04 52 39.4	-3.8
AVF				*e*Sg	Sg	04 53 07.7	-5.5
	11nm,0.7s						
SGMF	**Saint Gilles**	5.22	354	*e*Pn	Pn	04 51 43.7	-0.2
SGMF	**Saint Gilles**	5.22	354	*e*Pg	Pg	04 52 03.1	-3.3
SGMF				*e*Sn	Sn	04 52 40.2	-3.6
	1.0nm,0.3s						
SGMF				*e*Sg	Sg	04 53 09.7	-4.3
	1.2nm,0.4s						
HYF	**Humbligny**	5.23	35	*e*Pn	Pn	04 51 42.8	-1.2
HYF				*e*Sn	Sn	04 52 39.4	-4.6
HYF				*e*Sg	Sb	04 53 08.3	+8.3
EADA	**Adamuz**	5.34	205	Pn	Pn	04 51 45.9	+0.3
	0.8nm,0.2s,SNR=7.9						
EADA				Sn	Sn	04 52 43.0	-3.8
	0.2nm,0.2s,SNR=7.9						
EADA				Lg	Lg	04 53 13.4	
	1.1nm,0.3s,SNR=7.9						
EQES	**Quesada**	5.35	191	Pn	Pn	04 51 46.8	+1.0
	0.1nm,0.1s,SNR=7.9						
EQES				Pg	Pg	04 52 06.4	-2.4
	SNR=7.9						
EQES				Sn	Sn	04 52 44.5	-2.7
	0.1nm,0.1s,SNR=7.9						
EQES				Lg	Lg	04 53 16.0	
	1.5nm,0.4s,SNR=7.9						
SMF	**Signal de Mont**	5.35	46	*e*Pn	Pn	04 51 44.9	-0.8
SMF	**Signal de Mont**	5.35	46	*e*P	Pn	04 51 49.8	+4.1
SMF				*e*Sn	Sn	04 52 43.0	-4.0
	1.6nm,0.3s						
GRR	**Gorron**	5.36	6	*e*Pn	Pn	04 51 45.2	-0.6
GRR				*e*Sn	Sn	04 52 42.1	-5.2
	1.5nm,0.2s						
ROSF	**Rostrenen**	5.38	349	*e*Pn	Pn	04 51 45.4	-0.7
ROSF				*e*Sn	Sn	04 52 43.8	-3.9
	4.3nm,0.3s						
SMRF	**Simiane la Rot**	5.41	78	*e*Pn	Pn	04 51 46.0	-0.5
SMRF				*e*Sn	Sn	04 52 44.2	-4.2
	1.4nm,0.4s						
SSF	**Saint Saulge**	5.46	41	*e*Pn	Pn	04 51 46.2	-1.0
SSF				*e*Sn	Sn	04 52 46.2	-3.6
	1.9nm,0.3s						
SSF				*e*Sg	Sg	04 53 16.2	-5.5
	1.1nm,0.3s						
PMRV	**Marv??o**	5.59	231	Pn	Pn	04 51 49.5	+0.5
PMRV				Sn	Sn	04 52 49.5	-3.4
	3.1nm,0.9s						
PMRV	**Marv??o**	5.59	231	*e*Pn	Pn	04 51 49.5	+0.5
PMRV				*e*Sn	Sn	04 52 49.5	-3.4
PMRV				A	A	04 52 58.0	
	3.1nm,0.9s						
LDF	**La Druitiere**	5.65	11	*e*Pn	Pn	04 51 49.5	-0.3
LDF				*e*Sn	Sn	04 52 48.3	-6.0
	3.8nm,0.5s						
ECAB	**El Cabril**	5.71	210	Pn	Pn	04 51 50.7	0.0
	0.4nm,0.2s,SNR=7.9						
ECAB				Sn	Sn	04 52 51.8	-4.2
	0.2nm,0.3s,SNR=7.9						
FLN	**La Foliniere**	5.77	8	*e*Sn	Sn	04 52 51.8	-5.5
	2.0nm,0.4s						
ORIF	**Oris-en-Rattie**	5.81	69	*e*Pn	Pn	04 51 51.5	-0.6
ORIF	**Oris-en-Rattie**	5.81	69	*e*P	Pn	04 51 55.0	+2.9
ORIF				*e*Sn	Sn	04 52 54.5	-4.0
	1.6nm,0.3s						
LMR	**La Mourre**	6.04	85	*e*P	Pn	04 51 59.6	+4.4
LMR				*e*Sn	Sn	04 53 00.2	-3.9
	1.3nm,0.4s						
FRF	**La Foret Royal**	6.15	82	*e*Pn	Pn	04 51 56.2	-0.4
FRF	**La Foret Royal**	6.15	82	*e*P	Pn	04 51 59.4	+2.8
FRF				*e*Sn	Sn	04 53 03.1	-3.5
	0.8nm,0.3s						
MBDF	**Montbardon**	6.38	72	*e*Pn	Pn	04 51 59.3	-0.7
MBDF	**Montbardon**	6.38	72	*e*Pg	Pg	04 52 24.1	-4.4
MBDF				*e*Sn	Sn	04 53 07.9	-4.7
	2.6nm,0.4s						
LPL	**La Plagne**	6.56	65	*e*Pn	Pn	04 52 02.1	-0.5
LPG	**La Plagne**	6.57	65	*e*P	Pn	04 52 06.2	+3.5
PGF	**Pioggiola**	7.92	90	*e*Pn	Pn	04 52 19.8	-1.3

JMA ***21*** *04:52:28.4, 23°.17N×121°.55E, h41km±2km*
TAP ***21*** *04:52:29.8, 23°.20N×121°.52E, h34km, ML3.1, C*
ISC 21 04:52:28.9±0.9**, 23°.19N**±0°.02×**121°.57E**±0°.02**, h31**km±8km**,**
n85, σ0s.84/161**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	**Chengkung**	0.21	245	P	Pn	04 52 36.0	+0.1
	baz=231						
CHKT				S	Sn	04 52 41.0	+0.7
	baz=231						
FULB	**Fuli**	0.26	273	P	Pn	04 52 36.5	-0.1
	baz=269						
FULB				S	Sn	04 52 41.9	+0.4
	baz=269						
EYUL	**Yuli**	0.28	305	*e*P	Pn	04 52 37.3	+0.4
	baz=310						
EYUL				*e*S	Sn	04 52 43.1	+1.0
	baz=310						
TWF1	**Yuli**	0.30	303	*i* P	Pn	04 52 37.4	+0.2
	baz=309						
TWF1				S	Sn	04 52 43.0	+0.4
	baz=309						
YULB	**Yu-li**	0.32	309	P	Pn	04 52 37.4	-0.1
	baz=301						
YULB				S	Sn	04 52 42.8	-0.4
	baz=301						
EDH	**Donghe**	0.33	229	*i* P	Pb	04 52 37.4	+0.6
	baz=214						
EDH				S	Sb	04 52 43.1	+0.9
	baz=214						
HGSD	**Ruisui**	0.33	336	P	Pn	04 52 37.4	-0.2
	baz=350						
HGSD				*e*S	Sn	04 52 46.3	+2.9
	baz=350						
EHY	**Hungye**	0.39	324	P	Pn	04 52 38.3	-0.2
	baz=320						
EHY				S	Sb	04 52 44.0	+0.1
	baz=320						
LONT	**Longtian**	0.49	236	*e*P	Pb	04 52 39.2	-0.1
	baz=237						
LONT				*e*S	Sb	04 52 47.3	+0.8
	baz=237						
EGFH	**Guangfu**	0.50	345	*e*P	Pn	04 52 39.9	0.0
	baz=341						
EGFH				*e*S	Sn	04 52 47.1	-0.4
	baz=341						
ELDTW	**Lidau**	0.51	270	P	Pb	04 52 39.1	-0.6
	baz=267						
ELDTW				S	Sb	04 52 45.9	-1.2
	baz=267						
LDUT	**Ludao**	0.52	190	*e*P	Pb	04 52 39.4	-0.4
	baz=183						
LDUT				*e*S	Sb	04 52 47.4	+0.2
	baz=183						
TWGBT	**Beinan**	0.58	231	*e*P	Pb	04 52 40.1	-0.7
	baz=236						
TWGBT				*e*S	Sb	04 52 47.7	-1.1
	baz=236						
TWG	**Pinlang**	0.59	232	*e*P	Pb	04 52 40.1	-0.7
	baz=236						
TWG				*e*S	Sb	04 52 48.0	-1.0
	baz=236						
ESL	**Shilin**	0.64	349	*e*P	Pn	04 52 41.8	0.0
	baz=345						
ESL				*e*S	Sb	04 52 49.3	-1.1
	baz=345						
YUS	**Yu-Shan**	0.64	298	*e*P	Pb	04 52 42.0	-0.1
	baz=299						
YUS				*e*S	Sb	04 52 50.6	-0.5
	baz=299						
STYT	**Tauyuan**	0.75	268	*e*P	Pn	04 52 43.1	-0.3
	baz=266						
STYT				*e*S	Sb	04 52 52.7	-0.9
	baz=266						
ALS	**Alishan**	0.77	295	*e*P	Pb	04 52 44.2	+0.1
	baz=295						
ALS				*e*S	Sn	04 52 54.6	-0.1
	baz=295						
HWA	**Hwalien**	0.79	2	*e*P	Pn	04 52 43.2	-0.6
	baz=20						
HWA				*e*S	Sn	04 52 55.7	+1.1
	baz=20						
ECL	**Taimali**	0.82	224	*e*P	Pn	04 52 43.0	-1.3
	baz=219						
ECL				*e*S	Sn	04 52 53.2	-2.1
	baz=219						
SSLB	**Suanglung**	0.82	317	*e*P	Pn	04 52 44.4	0.0
	baz=325						
SSLB				*e*S	Sn	04 52 54.4	-1.2
	baz=325						
SLGT	**Liugui**	0.87	257	*e*P	Pb	04 52 45.8	+0.2
	baz=256						
SLGT				*e*S	Sb	04 52 57.1	+0.1
	baz=256						
TPUB	**Ta-pu**	0.87	278	*e*P	Pb	04 52 45.7	+0.1
	baz=276						
TPUB				*e*S	Sb	04 52 57.6	+0.6
	baz=276						
WTP	**Ta-pu**	0.88	274	*e*P	Pb	04 52 45.9	0.0
	baz=272						
WTP				*e*S	Sb	04 52 58.0	+0.7
	baz=272						
TWD	**Chiawan**	0.89	2	*e*P	Pn	04 52 45.2	-0.1
	baz=355						
TWD				*e*S	Sn	04 52 56.5	-0.6
	baz=355						
CHN4	**Tsaushan**	0.91	280	*e*P	Pb	04 52 46.6	+0.3
	baz=279						
CHN4				*e*S	Sb	04 52 59.9	+1.7
	baz=279						
SGST	**Jiashian**	0.92	264	*e*P	Pn	04 52 45.5	-0.2
	baz=261						
SGST				*e*S	Sb	04 52 58.4	+0.2
	baz=261						
CHN5	**Tsauling**	0.92	297	*e*P	Pb	04 52 46.6	+0.2
	baz=297						
CHN5				*e*S	Sb	04 52 59.4	+1.1
	baz=297						
SMLT	**Sun Moon Lake**	0.93	319	*e*P	Pb	04 52 46.4	-0.2
	baz=325						
SMLT				*e*S	Sn	04 52 58.0	-0.2
	baz=325						
CHN1	**Nanshi**	0.96	270	*e*P	Pb	04 52 47.4	+0.3
	baz=268						
CHN1				*e*S	Sb	04 53 00.3	+0.8
	baz=268						
TYC	**Yuchr**	0.97	318	*e*P	Pb	04 52 47.2	0.0
	baz=329						
TYC				*e*S	Sb	04 53 00.1	+0.4
	baz=329						
SSD	**Sandimen**	0.97	243	*e*P	Pn	04 52 46.9	+0.5
	baz=239						
SSD				*e*S	Sn	04 52 58.4	-0.7
	baz=239						
TSMG	**Majia**	0.98	241	*e*P	Pb	04 52 47.3	-0.1
	baz=237						
TSMG				*e*S	Sb	04 53 00.9	+1.0
	baz=237						
NACB	**Ninganchiao**	0.98	1	*e*P	Pn	04 52 46.3	-0.3
	baz=355						
NACB				*e*S	Sn	04 52 58.5	-1.0
	baz=355						
SNST	**Tainan City**	0.99	272	*e*P	Pb	04 52 48.0	+0.5
	baz=270						
SNST				*e*S	Sb	04 53 00.9	+0.7
	baz=270						
WHF	**Hehuan Shan**	0.99	344	*e*P	Pn	04 52 46.8	-0.3
	baz=349						
WHF				*e*S	Sn	04 52 59.5	-0.8
	baz=349						
TWK	**Hsinying**	1.00	275	*e*P	Pb	04 52 48.5	+0.7
	baz=273						
TWK				*e*S	Sb	04 53 01.0	+0.4
	baz=273						
WJS	**Zhushan**	1.00	309	*e*P	Pb	04 52 48.2	+0.5
	baz=310						
WJS				*e*S	Sb	04 53 01.2	+0.6

	baz=310						
ETLH	**Xiulin Townshi**	1.02	355	*e*P	**Pn**	**04 52 46.6**	**-0.6**
	baz=2.0						
ETLH				*e*S	**Sn**	**04 52 59.1**	**-1.4**
	baz=2.0						
DPDB	**Guoxing**	1.03	325	*e*P	**Pb**	**04 52 48.3**	**0.0**
	baz=336						
DPDB				*e*S	**Sb**	**04 53 01.4**	**-0.1**
	baz=336						
MASBT	**Mashibuluo**	1.04	237	*e*P	**Pn**	**04 52 47.2**	**-0.1**
	baz=232						
MASBT				*e*S	**Sn**	**04 53 00.6**	**-0.2**
	baz=232						
EAST	**Anshuo**	1.04	220	*e*P	**Pn**	**04 52 46.8**	**-0.6**
	baz=208						
EAST				*e*S	**Sn**	**04 52 59.7**	**-1.2**
	baz=208						
WGK	**Gukeng**	1.05	298	*e*P	**Pb**	**04 52 48.9**	**+0.3**
	baz=311						
WGK				*e*S	**Sb**	**04 53 03.7**	**+1.7**
	baz=311						
WNT	**Mingjian**	1.06	310	*e*P	**Pb**	**04 52 49.1**	**+0.2**
	baz=311						
WNT				*e*S	**Sb**	**04 53 03.0**	**+0.5**
	baz=311						
WDLH	**Douliu**	1.07	298	*e*P	**Pb**	**04 52 49.2**	**+0.3**
	baz=308						
WDLH				*e*S	**Sb**	**04 53 03.8**	**+1.1**
	baz=308						
WNT1	**Nantou City**	1.09	311	*e*S	**Sb**	**04 53 04.0**	**+0.9**
	baz=312						
FUSS	**Fushou**	1.10	344	*e*P	**Pb**	**04 52 48.9**	**-0.7**
	baz=359						
FUSS				*e*S	**Sn**	**04 53 01.7**	**-0.9**
	baz=359						
CHY	**Chiayi**	1.10	287	*e*P	**Pb**	**04 52 50.2**	**+0.8**
	baz=285						
CHY				*e*S	**Sb**	**04 53 04.0**	**+0.6**
	baz=285						
TWT	**Tachien**	1.12	341	*e*P	**Pb**	**04 52 49.7**	**-0.2**
	baz=345						
TWT				*e*S	**Sn**	**04 53 02.6**	**-0.5**
	baz=345						
TDCB	**Techi**	1.13	340	*e*P	**Pb**	**04 52 49.4**	**-0.6**
	baz=345						
TDCB				*e*S	**Sn**	**04 53 02.2**	**-1.0**
	baz=345						
LAY	**Lan-yu**	1.14	181	*e*P	**Pn**	**04 52 47.9**	**-0.9**
	baz=170						
LAY				*e*S	**Sn**	**04 53 02.7**	**-0.7**
	baz=170						
SSPT	**Xinbi**	1.16	233	*e*P	**Pb**	**04 52 50.8**	**+0.4**
	baz=227						
SSPT				*e*S	**Sb**	**04 53 06.7**	**+1.6**
	baz=227						
WWF	**Wufeng**	1.17	317	*e*P	**Pn**	**04 52 49.7**	**+0.6**
	baz=305						
WWF				*e*S	**Sb**	**04 53 06.6**	**+1.2**
	baz=305						
SCZT	**Fangliau**	1.20	227	*e*P	**Pb**	**04 52 50.8**	**-0.2**
	baz=221						
SCZT				*e*S	**Sb**	**04 53 06.9**	**+0.7**
	baz=221						
ICHU	**Yijhu**	1.20	279	*e*P	**Pn**	**04 52 50.4**	**+0.8**
	baz=276						
ICHU				*e*S	**Sb**	**04 53 07.2**	**+0.9**
	baz=276						
SLIU	**Shizi**	1.20	217	*e*P	**Pb**	**04 52 51.2**	**0.0**
	baz=212						
SLIU				*e*S	**Sn**	**04 53 05.8**	**+1.0**
	baz=212						
WHP	**Taichung City**	1.23	332	*e*P	**Pb**	**04 52 52.3**	**+0.7**
	baz=336						
WHP				*e*S	**Sb**	**04 53 07.8**	**+0.6**
	baz=336						
NNSB	**Datong**	1.25	352	*e*P	**Pn**	**04 52 50.6**	**+0.3**
	baz=9.0						
NNSB				*e*S	**Sn**	**04 53 05.0**	**-1.1**
	baz=9.0						
NNSH	**Datong**	1.25	352	*e*S	**Sn**	**04 53 05.2**	**-0.9**
	baz=9.0						
CHN8	**Yiju**	1.26	277	*e*S	**Sb**	**04 53 08.5**	**+0.5**
	baz=275						
WCHH	**Zhanghua**	1.28	314	*e*S	**Sb**	**04 53 09.5**	**+0.8**
	baz=314						
HEN	**Hengchun**	1.41	213	*e*P	**Pb**	**04 52 54.1**	**-0.4**
	baz=198						
HEN				*e*S	**Sn**	**04 53 10.9**	**+1.1**
	baz=198						
NDT	**Datong Townshi**	1.41	358	*e*P	**Pn**	**04 52 53.4**	**+0.9**
	baz=5.0						
NDT				*e*S	**Sb**	**04 53 10.8**	**-1.6**
	baz=5.0						
TSEB	**Hengchuen, Pin**	1.42	206	*e*S	**Sn**	**04 53 10.1**	**-0.2**
	baz=195						
TWKBT	**Hengchun**	1.43	210	*e*P	**Pn**	**04 52 52.8**	**+0.2**
	baz=195						
TWKBT				*e*S	**Sn**	**04 53 10.4**	**+0.1**
	baz=195						
TWK1	**Hengchun**	1.43	210	*e*P	**Pn**	**04 52 53.0**	**+0.3**
	baz=195						
TWK1				*e*S	**Sn**	**04 53 10.0**	**-0.3**
	baz=195						
WDJ	**Dajia District**	1.44	324	*e*S	**Sb**	**04 53 14.9**	**+1.8**
	baz=326						
TWC	**Suao**	1.44	10	*e*P	**Pn**	**04 52 53.5**	**+0.7**
	baz=30						
TWC				*e*S	**Sb**	**04 53 13.1**	**0.0**
	baz=30						
YHNB	**Yeheng**	1.49	353	*e*P	**Pb**	**04 52 54.7**	**-1.3**
	baz=10.0						
YHNB				*e*S	**Sn**	**04 53 12.1**	**+0.1**
	baz=10.0						
NSK	**Sanguang**	1.50	353	*e*P	**Pb**	**04 52 55.2**	**-1.0**
	baz=10.0						
NSK				*e*S	**Sn**	**04 53 12.1**	**-0.1**
	baz=10.0						
LIOB	**Emei**	1.54	341	*e*P	**Pb**	**04 52 57.0**	**+0.1**
	baz=347						
LIOB				*e*S	**Sb**	**04 53 15.9**	**-0.1**
	baz=347						
NWLT	**Wulai**	1.58	358	*e*P	**Pb**	**04 52 56.9**	**-0.8**
	baz=5.0						
NWLT				*e*S	**Sn**	**04 53 15.1**	**+0.8**
	baz=5.0						
TIPB	**Shuangxi**	1.79	7	*e*P	**Pb**	**04 52 59.9**	**-1.3**
	baz=5.0						
TIPB				*e*S	**Sn**	**04 53 20.6**	**+1.1**
	baz=5.0						
YOJ	**Yonaguni jima**	1.83	46	P	**Pn**	**04 52 58.6**	**+0.4**
YOJ				S	**Sn**	**04 53 20.9**	**+0.6**
PHUB	**P'eng-hu**	1.86	280	*e*P	**Pn**	**04 52 58.8**	**+0.1**
	baz=277						
PHUB				*e*S	**Sn**	**04 53 20.6**	**-0.6**
	baz=277						
HATJ	**Hateruma jima**	2.23	67	S	**Sn**	**04 53 30.7**	**+0.6**
IRIF	**Iriomote-Funau**	2.29	60	P	**Pn**	**04 53 05.4**	**+0.9**
IRIF				S	**Sn**	**04 53 32.8**	**+1.2**
JKRS	**Kuro-shima**	2.47	64	P	**Pn**	**04 53 08.1**	**+1.1**
JKRS				*e*S	**Sn**	**04 53 37.3**	**+1.2**
JIJ	**Ishigaki jima**	2.63	63	P	**Pn**	**04 53 09.8**	**+0.6**
JIJ				*e*S	**Sn**	**04 53 40.4**	**+0.3**
VWUC	**VWUC**	2.64	313	*e*P	**Pn**	**04 53 09.5**	**+0.1**
	baz=309						
VWUC				*e*S	**Sn**	**04 53 38.4**	**-2.0**
	baz=309						
JISG	**Ishigakijimahi**	2.87	60	P	**Pn**	**04 53 12.8**	**+0.3**
JISG				S	**Sn**	**04 53 45.2**	**-0.8**
PTMZ	**Houxiangcun**	2.90	310	*e*P	**Pn**	**04 53 13.0**	**+0.1**
	baz=294						
PTMZ				*e*S	**Sn**	**04 53 44.8**	**-2.0**
	baz=294						
KNMB	**Chin-men Tao**	3.18	294	*e*S	**Sn**	**04 53 50.9**	**-2.7**
	baz=290						
MATB	**Ma-tsu**	3.30	334	*e*P	**Pn**	**04 53 18.6**	**+0.2**
	baz=335						
MATB				*e*S	**Sn**	**04 53 54.9**	**-1.7**
	baz=335						
MSUT	**Lienchiang**	3.33	334	*e*S	**Sn**	**04 53 56.9**	**-0.3**
	baz=335						

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*MAN **21** 05:20:22.8, 5°.59N×125°.47E, h44^{km}, MS5.2*

MAN INTENSITY IV - GENERAL SANTOS CITY; DON MARCELINO.

*BJI **21** 05:20:24.3±0.0, 5°.55N×125°.67E, h84^{km}, mB5.2/58, mb4.8/68, Ms4.9/66, Ms7 4.6/63*

*MOS **21** 05:20:24.9±1.3, 5°.86N×125°.37E, h72^{km}, mb5.1/44, MS4.4/8, Error ellipse: s-maj=9.3km s-min=4.9km az=108.0*

*NOU **21** 05:20:24.0, 5°.76N×125°.71E, h20^{km}, mb5.3, Mindanao, Philippines*

*GCMT **21** 05:20:26.6±0.1, 5°.85N±0°.01×125°.25E±0°.01, h67^{km}±1^{km}, MW5.5/122, Moment Tensor Solution. s115,c183; s122,c199; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.52±.02; $M_{\theta\theta}$0.67±.03; $M_{\phi\phi}$-1.18±.03; $M_{r\theta}$0.43±.03; $M_{\theta\phi}$1.83±.03; $M_{\phi r}$0.24±.03; Best double couple: $M_0$2.13500×10^{17} NP1:ϕ_s12.00000°, δ76.00000°, λ167.00000°. NP2:ϕ_s105.00000°, δ77.00000°, λ14.00000°. Principal axes: T 1.9630, Plg19.0000°, Azm328.0000°; N 0.3470, Plg71.0000°, Azm147.0000°; P -2.3060, Plg0.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 05:20:27.6±2.0, 5°.75N±0°.05×125°.38E±0°.08, h78^{km}±1^{km}, mb5.2/123 Error ellipse: s-maj=11.6km s-min=7.8km az=90.0*

*IDC **21** 05:20:27.5±1.2, 5°.79N×125°.40E, h79^{km}±11^{km}, mb4.4/36, mb1 4.5/39, mb1mx4.4/48, mbtmp4.7/39, MS4.4/25, Ms1 4.4/25, ms1mx4.3/40, Error ellipse: s-maj=13.3km s-min=8.2km az=86.0*

*KLM **21** 05:20:27, 5°.83N×125°.60E, h48^{km}, mb5.2*

*DJA **21** 05:20:28.5±0.4, 6°N±3°×12°5E±°, h56^{km}±3^{km}, M5.2/78, mb5.3/78, mB5.6/59, MLv5.8/12, Mw(mB)5.1/59, MwMwp5.1/21, Mwp5.4/21*

ISC 21 05:20:27.1±0.3, **5°.81N**±0°.03×**125°.42E**±0°.04, **h71**^{km}±2^{km}, **h72**^{km}**:pP-P, n522,** σ**1^{s}95**/534, **mb5.0**/184, **20C-20D, Fault plane solution: NP1:**ϕ_s96.70271°, δ68.67136°, λ-19.92478°. **NP2:**ϕ_s194.21336°, δ71.49149°, λ-157.44589°. **Principal axes:** T Plg1.8750°, Azm325.0099°; N Plg61.1339°, Azm231.6055°; P Plg28.7935°, Azm56.0409°; **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	0.42	45	*e*P	**Pn**	**05 20 36.1**	**-3.1**
SKMP	**Bagumbayan, Su**	1.12	309	*e*P	**Pn**	**05 20 43.4**	**-3.7**
SKMP				*e*S	**Sn**	**05 21 00.9**	**-1.3**
KCP	**Kidapawan**	1.24	345	⇓*e*P	**Pn**	**05 20 49.5**	**+0.8**
KCP				*i* S	**Sn**	**05 21 05.7**	**+0.8**
DAV	**Davao City (W)**	1.26	7	P	**Pn**	**05 20 49.5**	**+0.5**
	670nm,0.3s,baz=162,slow=0.6,SNR=113						
DAV				S	**Sn**	**05 21 12.0**	**+6.5**
	4µm,0.3s,baz=118,slow=23,SNR=8.8						
MATI	**Mati**	1.41	36	*e*P	**Pn**	**05 20 47.7**	**-3.1**
MATI				*e*S	**Sn**	**05 21 08.6**	**-0.1**
BUKP	**Musuan**	2.09	350	*e*P	**Pn**	**05 20 59.8**	**-0.2**
BUKP				*e*S	**Sn**	**05 21 31.5**	**+6.5**
SGSI	**Sangihe**	2.11	177	P	**Pn**	**05 20 59.2**	**-1.1**
CGP	**Cagayan de Oro**	2.73	345	⇓*e*P	**Pn**	**05 21 12.7**	**+4.1**
PAGZ	**Pagadian**	2.86	315	*e*P	**Pn**	**05 21 08.3**	**-2.1**
PAGZ				*e*S	Sn	05 21 30.6	-13
BUTP	**Butuan**	3.15	4	*e*P	**Pn**	**05 21 15.2**	**+0.9**
ZCP	**Zamboanga City**	3.50	289	⇑*i*P	**Pn**	**05 21 18.8**	**-0.3**
ZCP				*i* S	**Sn**	**05 22 01.3**	**+1.8**
GLSP	**General Luna,**	4.01	10	*e*P	**Pn**	**05 21 25.1**	**-1.0**
GLSP				*e*S	**Sn**	**05 22 11.9**	**-0.1**
MSLP	**Maasin**	4.33	353	*e*P	**Pn**	**05 21 30.9**	**+0.4**
MSLP				*e*S	**Sn**	**05 22 12.2**	**-7.6**
LLP	**Lapu-Lapu**	4.70	342	⇑*e*P	**Pn**	**05 21 35.8**	**+0.2**
LLP				*e*S	**Sn**	**05 22 33.8**	**+4.9**
CNOP	**Candoni, Negro**	4.85	326	*e*P	**Pn**	**05 21 37.4**	**-0.2**
CNOP				*e*S	**Sn**	**05 22 30.5**	**-1.9**
OCLP	**Ormoc**	5.27	351	*e*P	**Pn**	**05 21 44.6**	**+1.3**
OCLP				*e*S	**Sn**	**05 22 35.3**	**-7.5**
TNTI	**Ternate**	5.37	159		**Pn**	**05 21 43.7**	**-1.0**
TNTI	**Ternate**	5.37	159	P	**Pn**	**05 21 44.3**	**-0.4**
	3.4nm7µm10µm740nm,0.9s						
KMSI	**Cibinong**	5.39	195	P	**Pn**	**05 21 43.3**	**-1.7**
	9.7nm419nm14µm1µm,0.9s						
GUIM	**Jordan**	5.54	330	*e*P	**Pn**	**05 21 47.3**	**+0.3**
GTOI	**Gorontalo**	5.67	205	P	**Pn**	**05 21 47.2**	**-1.6**
	6.4nm19µm2µm,0.7s						
JAP	**San Jose, Anti**	5.99	325	⇑*e*P	**Pn**	**05 21 56.0**	**+2.8**
JAP				*e*S	Sn	05 22 40.8	-20
MRSI	**Marisa**	6.33	213	P	**Pn**	**05 21 56.2**	**-1.6**
	9.4nm16µm17µm2µm,1.1s						
TOLI2	**Tolitoli**	6.57	225		**Pn**	**05 21 57.4**	**-3.7**
MYLDM	**Lahad Datu**	6.91	265	Pn	**Pn**	**05 22 06.2**	**+0.4**
LUWI	**Luwuk**	7.30	201		**Pn**	**05 22 11.8**	**+0.8**
LUWI	**Luwuk**	7.30	201	P	**Pn**	**05 22 11.7**	**+0.6**
	7.6nm7µm17µm2µm,0.8s						
APSI	**Ampana**	7.66	210	P	**Pn**	**05 22 16.2**	**+0.2**
	2.4nm8µm7µm387nm,0.6s						
MPSI	**Mapaga**	7.74	226	P	**Pn**	**05 22 13.5**	**-3.6**
	0.7nm11µm3µm58nm,0.9s						
SANI	**Sanana**	7.83	176	P	**Pn**	**05 22 14.5**	**-3.8**
	2.3nm6µm8µm756nm,0.9s						
PGP	**Puerto Galera**	8.82	330	⇑*e*P	**Pn**	**05 22 36.7**	**+4.8**
SWI	**Sorong**	8.83	138	P	**Pn**	**05 22 31.8**	**-0.2**
	6µm2µm241nm,0.7s						
SIJI	**Sorong**	8.84	138	P	**Pn**	**05 22 31.9**	**-0.2**
	21nm,0.3s,baz=332,slow=12,SNR=41						
SIJI				LR	LR	05 26 12.3	
	comp=Z,2µm,19.8s,baz=318,slow=39						
SPMM	**Sapulut**	8.98	263	P	Pn	05 22 39.0	+4.9
LQP	**Lukban**	9.09	335	⇓*e*P	**Pn**	**05 22 32.1**	**-3.6**
NLAI	**Namlea**	9.14	169	P	**Pn**	**05 22 33.9**	**-2.4**
	7µm320nm,0.7s						
KKM	**Kota Kinabalu**	9.16	272		**Pn**	**05 22 37.7**	**+1.1**
TGY	**Tagaytay City**	9.35	332	LR	LR	05 26 42.8	
	comp=Z,6µm,18.8s,baz=170,slow=40						
MSAI	**Masohi**	9.75	159	P	**Pn**	**05 22 44.9**	**+0.4**
	58nm,0.6s						
TTSI	**Tana Toraja**	10.42	213	P	**Pn**	**05 22 54.0**	**+0.3**
	6µm3µm198nm,1.2s						
BKB	**Balikpapan**	11.03	231		**Pn**	**05 23 00.2**	**-1.9**
BKB	**Balikpapan**	11.03	231	P	**Pn**	**05 23 02.2**	**+0.1**
	8µm4µm180nm,0.7s						
FAKI	**Fak Fak**	11.03	142		**Pn**	**05 23 02.6**	**+0.5**
FAKI	**Fak Fak**	11.03	142	P	**Pn**	**05 23 01.0**	**-1.1**
	4µm3µm252nm,1.0s						
SPSI	**Sidrap Palu**	11.23	210	P	**Pn**	**05 23 05.6**	**+0.9**
	6µm2µm93nm,0.8s						
BNSI	**Bone**	11.44	208	P	**Pn**	**05 23 09.2**	**+1.5**
	3µm162nm,1.2s						
KAPI	**Kappang**	12.15	208	P	**Pn**	**05 23 17.8**	**+0.5**
	4.2nm,0.3s,baz=17,slow=8.4,SNR=19						
KAPI	**Kappang**	12.15	208	P	**Pn**	**05 23 18.5**	**+1.2**
KAPI	**Kappang**	12.15	208	Pn	**Pn**	**05 23 18.5**	**+1.2**
BKSI	**Bulukumba**	12.26	206	P	**Pn**	**05 23 19.8**	**+1.0**
	2µm50nm,1.3s						
BSSI	**Bau Bau, Buton**	12.85	203	P	**Pn**	**05 23 25.3**	**-1.6**
	3µm1µm86nm,0.8s						
KBKI	**Kotabaru**	12.93	226	P	**Pn**	**05 23 27.2**	**-0.8**
	2µm77nm,1.1s						
BBKI	**Banjar Baru**	14.01	229	P	**Pn**	**05 23 44.9**	**+2.5**
	4µm185nm,1.9s						
MMRI	**Maumere**	14.69	192	Pn	**Pn**	**05 23 51.4**	**+0.2**
EDFI	**Ende, Flores**	14.93	194	P	**Pn**	**05 23 53.7**	**-0.7**
	519nm42nm,1.4s						
SMPI	**Sarmi**	15.37	120	P	**P**	**05 24 02.7**	**-0.4**
	4µm79nm,0.4s						
SOEI	**Soe**	15.50	184	P	**Pn**	**05 24 02.8**	**+1.0**
SOEI	**Soe**	15.50	184	P	**Pn**	**05 24 02.5**	**+0.8**
	3µm308nm,0.8s						
KSM	**Kuching**	15.68	255	Pn	**Pn**	**05 24 03.3**	**-0.5**
KSM	**Kuching**	15.68	255	P	**P**	**05 24 09.0**	**+2.5**
BATI	**Baumata**	16.00	186	P	**Pn**	**05 24 07.8**	**-0.1**
	4.2nm,0.3s,baz=270,slow=0.9,SNR=14						
BATI				LR	LR	05 31 10.7	
	comp=Z,1µm,18.6s,baz=1.5,slow=40						
BATI	**Baumata**	16.00	186	P	**Pn**	**05 24 08.3**	**+0.3**
	2µm201nm,1.0s						
PBKI	**Pangkalan Bun**	16.12	239	P	**P**	**05 24 13.7**	**+2.2**
	179nm,1.1s						
PLAI	**Plampang**	16.41	208	P	**P**	**05 24 14.6**	**-0.1**
	3µm2µm140nm,0.9s						
WBSI	**Waikabubak, Su**	16.48	201	P	**P**	**05 24 15.3**	**-0.2**
	2µm126nm,0.8s						
TWSI	**Taliwang, Sumb**	16.77	211	P	**P**	**05 24 19.3**	**+0.7**
	1µm78nm,0.8s						
KMMI	**Kalianget**	17.14	222	P	**P**	**05 24 24.9**	**+2.2**
	5µm3µm102nm,1.5s						
SRBI	**Singaraja**	17.15	217	P	**P**	**05 24 24.8**	**+2.0**
	2µm119nm,1.2s						
JAY	**Jayapura**	17.36	118	LR	LR	05 30 10.3	
	comp=Z,2µm,21.9s,baz=323,slow=34						
JAY	**Jayapura**	17.36	118	P	**P**	**05 24 28.4**	**+3.1**
	762nm23nm,0.9s						
TWG	**Pinlang**	17.43	347	P	**P**	**05 24 25.7**	**-0.1**
DNP	**Denpasar**	17.62	215	P	**P**	**05 24 30.6**	**+2.5**
	58µm377nm,0.5s						
DLV	**T Lat**	17.80	291	P	**Pn**	**05 24 32.4**	**+2.1**
DLV				IAmb	IAmb	05 24 58.9	
	comp=Z,116nm,1.1s						
YULB	**Yu-li**	17.93	348	P	**Pn**	**05 24 32.0**	**+0.3**
TPUB	**Ta-pu**	17.99	346	P	**Pn**	**05 24 32.8**	**+0.4**
SSLB	**Suanglung**	18.39	347	P	**Pn**	**05 24 37.2**	**0.0**
GMJI	**Gumukmas**	18.39	221	P	**Pn**	**05 24 40.4**	**+3.1**
	comp=Z,65nm,1.0s						
YHNB	**Yeheng**	19.15	349	P	**Pn**	**05 24 46.8**	**+0.4**
MTN	**Manton Dam**	19.38	163	P	**P**	**05 24 47.2**	**-0.1**
	baz=19,SNR=56						
MTN	**Manton Dam**	19.38	163	P	**P**	**05 24 46.7**	**-0.6**
MTN				IAmb	IAmb	05 25 24.3	
	comp=Z,97nm,0.7s						
KDU	**Kakadu**	19.67	159	P	**P**	**05 24 50.0**	**-0.4**
	baz=20,SNR=18						
TPI	**Tanjungpandan**	19.68	245	P	**Pn**	**05 24 52.9**	**+0.3**
	comp=Z,1µmcomp=Z,58nm,0.9s						
KNMB	**Chin-men Tao**	19.74	341	P	**Pn**	**05 24 52.5**	**-0.7**
QIZ	**Qiongzhong**	20.07	312	P	**P**	**05 24 55.8**	**+0.9**
QIZ				S	**S**	**05 28 38.1**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,18nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,570nm,7.4s						
QIZ				LR	LR		
	comp=Z,1µm,12.8s						
QIZ				LR	LR		
	comp=Z,1µm,16.3s						
QIZ				LR	LR		
	comp=Z,2µm,19.6s						
QIZ	**Qiongzhong**	20.07	312	P	Pn	05 24 58.3	+1.0
QZH	**Quanzhou**	20.12	342	P	**P**	**05 24 56.4**	**+1.1**
QZH				sP	**sP**	**05 25 21.3**	**+2.1**
QZH				S	**S**	**05 28 38.8**	**+1.3**
QZH				pmax	pmax		
	comp=Z,870nm,6.8s						
QZH				LR	LR		
	comp=Z,1µm,21.3s						
QZH				LR	LR		
	comp=Z,2µm,22.7s						
QZH				LR	LR		
	comp=Z,3µm,22.3s						
PPBI	**Pangkal Pinang**	20.82	248	P	Pn	05 25 08.2	+2.1
	comp=Z,5µmcomp=Z,19µmcomp=Z,84nm,1.5s						
KPJI	**Karang Pucung**	21.00	232	P	**P**	**05 25 08.2**	**+3.3**
	comp=Z,2µmcomp=Z,88nm,1.0s						
JOW	**Kunigami**	21.09	7	P	**P**	**05 25 07.0**	**+1.3**
	comp=Z,130nm,0.9s,baz=198,slow=8.2,SNR=23						
KNRA	**Kununurra**	21.60	171	P	**P**	**05 25 10.5**	**-0.8**
KNRA				IAmb	IAmb	05 25 54.6	
	comp=Z,136nm,0.8s						
CMJI	**Cimerak**	21.65	232	P	**P**	**05 25 14.4**	**+2.6**
	comp=Z,986nmcomp=Z,55nm,1.5s						
DSRI	**Dabo**	21.72	254	P	**P**	**05 25 16.5**	**+3.9**
	comp=Z,49nm,1.1s						
LEM	**Lembang**	21.75	235	P	**P**	**05 25 14.5**	**+1.5**
	comp=Z,32nm,0.6s,baz=355,slow=6.1,SNR=5.6						
MYKOM	**Kota Tinggi**	21.88	260	P	**P**	**05 25 19.0**	**+4.7**
CISI	**Cisompet, Garu**	22.01	233	P	**P**	**05 25 16.5**	**+0.7**
	comp=Z,73nm,1.0s						
CBJI	**Citeko**	22.16	237	P	**P**	**05 25 21.6**	**+4.3**
	comp=Z,14µmcomp=Z,320nm,1.5s						
DBJI	**Dramaga**	22.31	237	P	**P**	**05 25 21.6**	**+2.6**
	comp=Z,8µmcomp=Z,202nm,1.4s						
BLSI	**Bandar Lampung**	23.00	242	P	**P**	**05 25 29.6**	**+3.4**
	comp=Z,6µmcomp=Z,192nm,0.5s						
KLSI		23.14	244	P	**P**	**05 25 30.2**	**+2.7**
	comp=Z,588nmcomp=Z,40nm,1.7s						
CGJI	**Cibinong**	23.23	238	P	**P**	**05 25 30.0**	**+1.6**
	comp=Z,2µmcomp=Z,106nm,0.6s						
KASI	**Kota Agung**	23.73	242	P	**P**	**05 25 36.0**	**+3.1**
	comp=Z,1µmcomp=Z,69nm,0.7s						
FITZ	**Fitzroy Crossi**	23.75	179	P	**P**	**05 25 32.0**	**-1.0**
	baz=24,SNR=76						
FITZ	**Fitzroy Crossi**	23.75	179	P	**P**	**05 25 32.2**	**-0.9**
	comp=Z,18nm,0.8s,baz=13,slow=9.6,SNR=35						
FITZ	**Fitzroy Crossi**	23.75	179	IAmb	IAmb	05 26 03.8	
	comp=Z,110nm,1.1s						
LHSI	**Lahat**	23.87	247	P	**P**	**05 25 36.1**	**+1.9**
	comp=Z,3µmcomp=Z,114nm,1.2s						
LWLI	**Liwa**	23.88	244	P	**P**	**05 25 37.0**	**+2.5**
	comp=Z,204nm,1.0s						
IPM	**Ipoh**	24.33	268	P	**P**	**05 25 40.0**	**+1.6**
SRAK	**Srakaew**	24.41	291	P	**P**	**05 25 36.6**	**-2.5**
	comp=Z,5µmcomp=Z,432nm,0.9s						
KSI	**Kapahiang**	24.66	248	P	**P**	**05 25 43.4**	**+2.0**
	comp=Z,159nm,0.9s						
KULM	**Kulim**	24.66	270	P	**P**	**05 25 41.8**	**+0.4**
KULM	**Kulim**	24.66	270	P	**P**	**05 25 44.0**	**+2.6**
SDSI	**Sungai Dareh**	24.87	255	P	**P**	**05 25 44.7**	**+1.4**
	comp=Z,2µmcomp=Z,55nm,1.2s						
BKNI	**Bangkinang**	24.93	258	P	**P**	**05 25 45.7**	**+1.8**
	comp=Z,3µmcomp=Z,3µmcomp=Z,111nm,0.8s						
CHAI	**Chaiyaphum**	25.07	295	P	**P**	**05 25 46.8**	**+1.7**
	comp=Z,998nmcomp=Z,115nm,1.0s						
SSE	**Sheshan**	25.47	352	P	**P**	**05 25 48.3**	**-0.2**
SSE				S	**S**	**05 30 13.8**	**+3.2**
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,170nm,7.4s						
SSE				LR	LR		
	comp=Z,260nm,23.7s						
SSE				LR	LR		
	comp=Z,710nm,22.7s						
PDSI	**Padang**	25.80	256	P	**P**	**05 25 52.2**	**+0.4**
	comp=Z,54nm,0.8s						
MNSI	**Mandailing Nat**	26.26	260	P	**P**	**05 26 00.8**	**+4.9**
	comp=Z,18µmcomp=Z,28nm,1.0s						
COEN	**Coen**	26.39	138	P	**P**	**05 25 57.6**	**+0.6**
PMG	**Port Moresby**	26.42	125	P	**P**	**05 25 57.0**	**-0.3**
	comp=Z,30nm,0.8s,baz=6.4,slow=12,SNR=3.9						
PMG				LR	LR	05 37 06.3	
	comp=Z,821nm,19.8s,baz=290,slow=38						
PMG	**Port Moresby**	26.42	125	P	**P**	**05 25 57.6**	**+0.3**
PMG				pmax	pmax		
	comp=Z,48nm,0.9s						
PMG	**Port Moresby**	26.42	125	P	**P**	**05 25 57.6**	**+0.3**
PMG				IAmb	IAmb	05 26 06.7	
	comp=Z,48nm,0.8s						
JCJ	**Chichijima**	26.52	35	P	**P**	**05 25 58.0**	**-0.1**
	comp=Z,98nm,0.7s,baz=266,slow=8.9,SNR=7.7						
JCJ				LR	LR	05 34 39.6	
	comp=Z,449nm,21.7s,baz=240,slow=32						
JCJ	**Chichijima**	26.52	35	P	**P**	**05 25 57.8**	**-0.3**
PSI	**Prapat**	26.58	265	P	**P**	**05 25 59.7**	**+0.7**
	comp=Z,4.8nm,0.6s,baz=360,slow=23,SNR=7.0						
PSI				LR	LR	05 38 43.2	
	comp=Z,750nm,19.8s,baz=90,slow=41						
WHN	**Wuhan**	26.72	338	⇓P	**P**	**05 26 00.8**	**+1.0**
WHN				pmax	pmax		
	comp=Z,50nm,1.0s						
WHN				LR	LR		
	comp=Z,8µm,27.0s						
WHN				LR	LR		
	comp=Z,1µm,10.0s						
WHN				LR	LR		
	comp=Z,5µm,25.3s						
NJ2	**Nanjing**	26.82	348	*e*P	**P**	**05 26 03.3**	**+2.6**
NJ2				pP	**pP**	**05 26 19.0**	**+1.4**
NJ2				sP	**sP**	**05 26 29.0**	**+2.9**
NJ2				S	**S**	**05 30 27.9**	**-4.0**
NJ2				sS	**sS**	**05 31 03.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,950nm,15.6s						
NJ2				LR	LR		
	comp=Z,790nm,18.0s						
NJ2				LR	LR		
	comp=Z,1µm,21.8s						
WB0	**Warramunga Arr**	26.91	161	P	**P**	**05 26 00.5**	**-1.2**
PHIT	**Phitsanulok**	26.94	297	P	**P**	**05 26 04.0**	**+2.0**
	comp=Z,8µmcomp=Z,197nm,1.0s						
UTTA	**Uttaradit**	27.03	298	P	**P**	**05 26 04.6**	**+1.8**
	comp=Z,333nmcomp=Z,37nm,1.0s						
WRAB	**Tennant Creek**	27.05	161	*ce*P	**P**	**05 26 01.6**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,35nm,1.3s						
WRAB	**Tennant Creek**	27.05	161	P	**P**	**05 26 02.3**	**-0.6**

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WRA   Warramunga Arr   27.05 161   P     P      05 26 01.7  -1.3
      comp=Z,6.5nm,0.3s,baz=340,slow=10,SNR=47
WRA   Warramunga Arr   27.05 161   P     P      05 26 01.8  -1.2
WB2   Warramunga Arr   27.06 161   IAmb  IAmb   05 26 36.4
      comp=Z,120nm,0.9s
WR0   Warramunga Arr   27.13 161   IAmb  IAmb   05 26 44.6
      comp=Z,129nm,1.2s
SISI  Saibi            27.23 256   P     P      05 26 05.9  +1.3
      comp=Z,1µmcomp=Z,93nm,0.7s
GYA   Guiyang          27.24 321 ⇓P     P      05 26 06.5  +1.8
GYA                                pP    sP     05 26 26.8  -3.3
GYA                                S     S      05 30 43.8  +4.8
GYA                                sS    sS     05 31 11.1  +2.9
GYA                                pmax  pmax
      comp=Z,14nm,1.1s
GYA                                pmax  pmax
      comp=Z,370nm,7.3s
GYA                                LR    LR
      comp=Z,1µm,22.8s
GYA                                LR    LR
      comp=Z,970nm,25.4s
GYA                                LR    LR
      comp=Z,2µm,24.2s
UTHA  Uthaitani        27.27 293   P     P      05 26 07.5  +2.6
      comp=Z,416nmcomp=Z,29nm,0.9s
JNU   Nakatsue         27.65  10   P     P      05 26 07.7  -0.5
      comp=Z,20nm,0.9s,baz=153,slow=5.2,SNR=6.1
SUKH  Sukhothai        27.75 297   P     P      05 26 13.1  +3.9
      comp=Z,29nm,1.0s
PSA00 Pilbara Seismi   27.75 191   P     P      05 26 08.5  -0.7
PSA00 Pilbara Seismi   27.75 191   IAmb  IAmb   05 26 25.5
      comp=Z,89nm,0.9s
GSI   Gunungsitoli     28.14 262   P     P      05 26 12.7  -0.1
GSI                                IAmb  IAmb   05 26 59.2
      comp=Z,83nm,0.8s
GSI   Gunungsitoli     28.14 262   P     P      05 26 13.1  +0.3
      comp=Z,3µmcomp=Z,134nm,1.0s
LAMP  Lampang          28.14 299   P     P      05 26 15.7  +2.9
      comp=Z,32nm,0.9s
PAYA  Payao            28.28 301   P     P      05 26 16.3  +2.3
      comp=Z,2µmcomp=Z,279nm,1.1s
ENH   Enshi            28.59 330   P     P      05 26 17.4  +0.8
ENH                                IAmb  IAmb   05 26 51.9
      comp=Z,37nm,0.8s
CM36  Chiang Mai Arr   28.61 299   P     P      05 26 18.0  +1.1
CM35  Chiang Mai Arr   28.62 299   P     P      05 26 18.0  +1.0
CM04  Chiang Mai Arr   28.66 298   P     P      05 26 19.0  +1.6
      comp=Z,18nm,1.0s
CM09  Chiang Mai Arr   28.67 298   P     P      05 26 19.0  +1.5
      comp=Z,13nm,1.1s
CM01  Chiang Mai Arr   28.69 298   P     P      05 26 19.6  +2.0
      comp=Z,156nmcomp=Z,18nm,1.2s
CM34  Chiang Mai Arr   28.69 299   P     P      05 26 19.0  +1.4
CM05  Chiang Mai Arr   28.70 298   P     P      05 26 19.0  +1.3
      comp=Z,94nmcomp=Z,12nm,1.0s
CM02  Chiang Mai Arr   28.71 298   P     P      05 26 19.7  +1.9
      comp=Z,139nmcomp=Z,17nm,0.9s
CM31  Chiang Mai Arr   28.72 298   P     P      05 26 21.6  +3.7
      comp=Z,341nm,0.5s
CM31  Chiang Mai Arr   28.72 298   P     P      05 26 19.1  +1.2
CMAR  Chiang Mai Arr   28.72 298   P     P      05 26 18.0  +0.1
      comp=Z,4.5nm,0.7s,baz=123,slow=7.6,SNR=36
CMAR                               ScP   ScP    05 33 01.7  -0.5
      comp=Z,0.9nm,0.4s,baz=106,slow=1.4,SNR=4.8
CMAR                               LR    LR     05 39 50.6
      comp=Z,486nm,18.5s,baz=150,slow=40
CMAR  Chiang Mai Arr   28.72 298   P     P      05 26 18.8  +0.9
CM15  Chiang Mai Arr   28.73 298   P     P      05 26 20.0  +2.0
      comp=Z,203nmcomp=Z,16nm,0.9s
CM13  Chiang Mai Arr   28.74 298   P     P      05 26 19.0  +1.0
      comp=Z,127nmcomp=Z,12nm,0.9s
CMMT  Chiang Mai       28.85 299   P     P      05 26 20.5  +1.4
      comp=Z,244nmcomp=Z,9.0nm,0.8s
CM33  Chiang Mai Arr   28.86 299   P     P      05 26 20.0  +0.9
CHTO  Chiang Mai       28.86 299   P     P      05 26 20.4  +1.3
CHTO                               pmax  pmax
      comp=Z,16nm,1.1s
CHTO  Chiang Mai       28.86 299   P     P      05 26 20.4  +1.3
JMN   Monobe           28.87  15   P     P      05 26 20.0  +0.9
JMN                                IAmb  IAmb   05 26 26.8
      comp=Z,42nm,0.8s
CM32  Chiang Mai Arr   28.88 299   P     P      05 26 21.0  +1.7
KMI   Kunming          29.00 314 ⇑P     P      05 26 22.0  +1.4
KMI                                pP    pP     05 26 39.8  +2.3
KMI                                sP    sP     05 26 51.3  +5.4
KMI                                S     S      05 31 10.0  +3.1
KMI                                sS    sS     05 31 38.0  +1.8
KMI                                pmax  pmax
      comp=Z,9.0nm,1.3s
KMI                                pmax  pmax
      comp=Z,290nm,6.0s
KMI                                LR    LR
      comp=Z,2µm,25.7s
KMI                                LR    LR
      comp=Z,1µm,25.5s
KMI                                LR    LR
      comp=Z,2µm,24.5s
KMI   Kunming          29.00 314   P     P      05 26 20.5  -0.1
KMI                                pmax  pmax
      comp=Z,49nm,1.1s
KMI   Kunming          29.00 314   P     P      05 26 20.5  -0.1
KMI                                IAmb  IAmb   05 26 43.5
      comp=Z,49nm,1.1s
QIS   Mount Isa        29.68 152   P     P      05 26 27.8  +1.5
      baz=30,SNR=6.2
MTSU  Mount Surprise   30.23 142   P     P      05 26 32.2  +0.9
      baz=30,SNR=7.2
AS31  Alice Springs    30.44 165   P     P      05 26 32.4  -0.7
ASAR  Alice Springs    30.44 165   P     P      05 26 32.5  -0.7
      comp=Z,6.7nm,0.5s,baz=345,slow=7.7,SNR=69
ASAR                               LR    LR     05 40 56.7
      comp=Z,432nm,19.4s,baz=2.5,slow=40
ASAR  Alice Springs    30.44 165   P     P      05 26 32.1  -1.0
ASAR  Alice Springs    30.44 165   P     P      05 26 32.1  -1.0
TJN   Taejon           30.48   3 i P     P      05 26 32.3  -0.9
JWT   Wachi            30.74  16   P     P      05 26 35.7  +0.1
JWT                                IAmb  IAmb   05 26 44.3
      comp=Z,42nm,1.1s
INU   Inuyama          31.28  18   IAmb  IAmb   05 26 41.9
      comp=Z,34nm,0.9s
KSAR  Wonju Array Be   31.57   4   P     P      05 26 43.2  +0.4
KSAR  Wonju Array Be   31.57   4   P     P      05 26 43.2  +0.4
KSAR                                     PcP    05 29 34.4  +0.5
KSRS  Korea Array      31.58   4   P     P      05 26 43.2  +0.4
      comp=Z,7.1nm,0.7s,baz=185,slow=9.9,SNR=24
KSRS                               PcP   PcP    05 29 34.1  +0.2
      comp=Z,3.3nm,0.9s,baz=174,slow=4.8,SNR=3.3
KSRS                               ScP   ScP    05 33 10.4  -0.7
      comp=Z,2.6nm,0.8s,baz=190,slow=3.1,SNR=5.9
KSRS                               LR    LR     05 40 19.8
      comp=Z,333nm,20.6s,baz=195,slow=38
JGF   Kuroka           31.62  19   P     P      05 26 43.4  +0.1
KS19  Wonju Array Si   31.63   4   P     P      05 26 43.0  -0.3
XAN   Xi'an            31.98 334   P     P      05 26 46.3  -0.3
XAN                                pP    pP     05 27 03.8  +0.1
XAN                                PP    PP     05 28 02.3  +2.2
XAN                                SS    SS     05 33 59.0   -14
XAN                                pmax  pmax
      comp=Z,37nm,1.1s
XAN                                pmax  pmax
      comp=Z,280nm,5.9s
XAN                                LR    LR
      comp=Z,1µm,20.6s
XAN                                LR    LR
      comp=Z,1µm,18.4s
XAN                                LR    LR
      comp=Z,2µm,19.5s
CD2   Chengdu          32.20 323   P     P      05 26 49.4  +0.8
CD2                                pP    pP     05 27 08.8  +3.1
CD2                                S     S      05 31 51.8  -4.9
CD2                                sS    sS     05 32 28.3  +2.2
CD2                                pmax  pmax
      comp=Z,60nm,0.9s
CD2                                pmax  pmax
      comp=Z,290nm,5.7s
CD2                                LR    LR
      comp=Z,3µm,22.1s
CD2                                LR    LR
      comp=Z,4µm,21.6s
CD2                                LR    LR
      comp=Z,3µm,20.6s
MAJO  Matsushiro       32.76  19 i P     P      05 26 52.2  -1.1
MAJO                               pmax  pmax
      comp=Z,15nm,1.0s
MAJO  Matsushiro       32.76  19   P     P      05 26 51.7  -1.6
MAJO                               IAmb  IAmb   05 26 59.0
      comp=Z,32nm,1.1s
MAT   Matsushiro       32.76  19   P     P      05 26 52.4  -0.9
MAT                               eS     S      05 32 05.0  -0.1
MJAR  Matsushiro Arr   32.76  19   P     P      05 26 52.4  -0.9
      comp=Z,14nm,1.0s,baz=193,slow=9.2,SNR=19
MJAR  Matsushiro Arr   32.76  19   P     P      05 26 51.2  -2.1
MJAR                               pmax  pmax
      comp=Z,4.0nm,1.0s
MJAR  Matsushiro Arr   32.76  19   P     P      05 26 51.2  -2.1
MEEK  Meekatharra      32.92 191   P     P      05 26 55.2  +0.3
      baz=33,SNR=13
TIY   Taiyuan          33.89 341  eP     P      05 27 06.1  +2.9
TIY                                pmax  pmax
      comp=Z,200nm,4.5s
TIY                                LR    LR
      comp=Z,420nm,9.8s
TIY                                LR    LR
      comp=Z,600nm,16.7s
TIY                                LR    LR
      comp=Z,2µm,26.3s
JSD   Sado             34.14  18   IAmb  IAmb   05 27 11.6
      comp=Z,30nm,1.0s
BJT   Baijiatuau       35.06 348   P     P      05 27 13.3  +0.1
BJT                                pmax  pmax
      comp=Z,116nm,1.5s
BJT   Baijiatuau       35.06 348   P     P      05 27 13.2  +0.1
BJI   Beijing          35.08 348   P     P      05 27 12.6  -0.7
BJI                                pmax  pmax
      comp=Z,15nm,1.1s
BJI                                LR    LR
      comp=Z,340nm,19.1s
BJI                                LR    LR
      comp=Z,480nm,19.9s
BJI                                LR    LR
      comp=Z,670nm,20.0s
MORW  Morawa           35.83 194   P     P      05 27 20.7  +0.8
      baz=36,SNR=6.2
SNY   Shenyang         35.91 358 ⇓P     P      05 27 20.4   0.0
SNY                                S     S      05 32 58.9  +5.6
SNY                                pmax  pmax
      comp=Z,17nm,1.1s
SNY                                pmax  pmax
      comp=Z,120nm,4.6s
SNY                                LR    LR
      comp=Z,340nm,10.9s
SNY                                LR    LR
      comp=Z,1µm,22.3s
SNY                                LR    LR
      comp=Z,720nm,18.9s
LZH   Lanzhou          36.06 330  eP     P      05 27 23.3  +1.3
LZH                                pP    pP     05 27 41.8  +2.5
LZH                                sP    sP     05 27 49.3  +1.7
LZH                                S     S      05 32 54.1  -2.2
LZH                                pmax  pmax
      comp=Z,20nm,1.0s
LZH                                pmax  pmax
      comp=Z,270nm,8.7s
LZH                                LR    LR
      comp=Z,1µm,16.8s
LZH                                LR    LR
      comp=Z,1µm,16.3s
LZH                                LR    LR
      comp=Z,750nm,17.0s
FORT  Forrest          36.47 176   P     P      05 27 24.7  -0.6
      baz=37,SNR=13
FORT  Forrest          36.47 176   P     P      05 27 24.7  -0.6
MSHR  Mys Shultsa      36.97   7 i P     P      05 27 27.9  -1.5
MSHR                               pmax  pmax
      comp=Z,15nm,0.9s
HHC   Hu-ho-hao-te     37.03 342  eP     P      05 27 30.3  +0.2
HHC                                PP    PnPn   05 29 00.8  +3.9
HHC                                S     S      05 33 12.5  +1.7
HHC                                sS    sS     05 33 48.3  +7.7
HHC                                SS    SnSn   05 35 46.4  -4.6
HHC                                pmax  pmax
      comp=Z,14nm,1.0s
HHC                                pmax  pmax
      comp=Z,190nm,5.6s
HHC                                LR    LR
      comp=Z,940nm,21.3s
HHC                                LR    LR
      comp=Z,550nm,16.2s
HHC                                LR    LR
      comp=Z,1µm,23.8s
KMBL  Kambalda         37.12 185   P     P      05 27 30.3  -0.6
      baz=37,SNR=6.6
BLDU  Ballidu          37.16 192   P     P      05 27 32.0  +0.8
      baz=37,SNR=5.1
KLBR  Kellerberrin     37.90 191   P     P      05 27 37.3  -0.2
      baz=38,SNR=4.1
USA0B Ussuriysk Arra   38.67   8 i P     P      05 27 41.2  -2.6
USA0B Ussuriysk Arra   38.67   8   IAmb  IAmb   05 28 03.5
      comp=Z,21nm,0.7s
USRK  Ussuriysk Ar.    38.67   8   P     P      05 27 43.2  -0.5
      comp=Z,8.7nm,0.7s,baz=201,slow=7.1,SNR=15
USRK  Ussuriysk Ar.    38.67   8   P     P      05 27 43.5  -0.2
USRK  Ussuriysk Ar.    38.67   8   P     P      05 27 43.5  -0.2
MDJ   Mudanjiang       38.83   5   P     P      05 27 45.5  +0.4
MDJ                                pP    pP     05 28 05.3  +2.6
MDJ                                sP    sP     05 28 15.0  +3.9
MDJ                                S     S      05 33 40.5  +2.8
MDJ                                sS    sS     05 34 13.8  +6.3
MDJ                                ScS   ScS    05 37 45.6  -2.4
MDJ                                pmax  pmax
      comp=Z,15nm,0.9s
MDJ                                pmax  pmax
      comp=Z,140nm,4.7s
MDJ                                LR    LR
      comp=Z,440nm,19.9s
MDJ                                LR    LR
      comp=Z,1µm,27.1s
MDJ                                LR    LR
      comp=Z,1µm,21.4s
RMQ   Roma             39.27 146   P     P      05 27 55.7  +6.6
      baz=39,SNR=4.5
NWAO  Narrogin (SRO)   39.30 191   P     P      05 27 50.6  +1.5
      baz=39,SNR=4.3
NWAO  Narrogin (SRO)   39.30 191   P     P      05 27 48.4  -0.8
NWAO                               pmax  pmax
      comp=Z,37nm,0.8s
NWAO  Narrogin (SRO)   39.30 191   P     P      05 27 48.4  -0.8
NWAO  Narrogin (SRO)   39.30 191   P     P      05 27 48.4  -0.8
NWAO                               IAmb  IAmb   05 28 22.7
      comp=Z,37nm,0.8s
ERM   Erimo            39.36  21 i P     P      05 27 49.0  -0.5
ERM                                pmax  pmax
      comp=Z,43nm,1.1s
BBOO  Buckleboo        39.72 166   P     P      05 27 52.8  +0.2
      baz=40,SNR=25
EIDS  Eidsvold         39.78 142   P     P      05 27 53.0  -0.3
      baz=40,SNR=4.8
EIDS  Eidsvold         39.78 142   P     P      05 27 53.4   0.0
EIDS                               IAmb  IAmb   05 28 16.1
      comp=Z,52nm,1.1s
LSA   Lhasa            40.10 310   P     P      05 27 58.0  +1.5
LSA                                pmax  pmax
      comp=Z,40nm,1.4s
TEY   Ternei           40.28  12⇑eP     P      05 27 57.8  +0.7
TEY                                pmax  pmax
      comp=Z,40nm,0.9s
TEY                                pmax  pmax
      comp=N,20nm,0.8s
STKA  Stephens Creek   40.53 159   P     P      05 27 59.7  +0.4
      baz=41,SNR=14
STKA  Stephens Creek   40.53 159   P     P      05 27 59.6  +0.2
      comp=N,15nm,0.8s,baz=330,slow=8.5,SNR=22
STKA                               LR    LR     05 46 53.2
      comp=N,494nm,18.9s,baz=340,slow=39
STKA  Stephens Creek   40.53 159   P     P      05 27 59.5  +0.2
STKA                               pmax  pmax
      comp=Z,11nm,0.9s
STKA  Stephens Creek   40.53 159   P     P      05 27 59.5  +0.2
GTA   Gaotai           40.65 329   P     P      05 28 01.3  +0.8
GTA                                pP    pP     05 28 19.3  +1.3
GTA                                sP    sP     05 28 29.6  +3.4
GTA                                S     S      05 34 07.9  +2.5
GTA                                pmax  pmax
      comp=Z,9.0nm,1.2s
GTA                                pmax  pmax
      comp=Z,210nm,7.2s
GTA                                LR    LR
      comp=Z,710nm,19.1s
GTA                                LR    LR
      comp=Z,830nm,20.0s
GTA                                LR    LR
      comp=Z,840nm,18.2s
ASAJ  Asahikawa        41.03  19   P     P      05 28 03.5  +0.2
      comp=Z,21nm,0.9s,baz=244,slow=17,SNR=10
ASAJ  Asahikawa        41.03  19   P     P      05 28 04.8  +1.5
ASAJ                               pmax  pmax
      comp=Z,100nm,1.4s
JKA   Kamikawa-asahi   41.03  19   P     P      05 28 04.8  +1.5
HTT   Hallett          41.07 163   P     P      05 28 04.4  +0.5
      baz=41,SNR=5.0
TAPN  Taplejung        41.75 305  eP     P      05 28 10.1  +0.2
ODAN  Odare            41.81 304  eP     P      05 28 11.2  +0.9
CMSA  Cobar Meteorol   41.88 154   P     P      05 28 11.1  +0.7
      baz=42,SNR=7.9
YUK   Yuzh-Kuril'sk    42.10  22  eP     P      05 28 18.1  +6.1
YUK                               e             05 29 55.7
H11S3 WAKE ISLAND Hy   42.15  69   T     T      06 13 24.7
      baz=240,slow=78,SNR=44
H11S1 WAKE ISLAND Hy   42.17  69   T     T      06 13 25.8
      baz=240,slow=78,SNR=14
H11S2 WAKE ISLAND Hy   42.17  69   T     T      06 13 25.8
      baz=240,slow=78,SNR=16
RAMN  Ramite           42.50 304  eP     P      05 28 17.0  +1.1
H11N1 WAKE ISLAND Hy   42.61  67   T     T      06 14 30.9
      baz=255,slow=75,SNR=20
H11N2 WAKE ISLAND Hy   42.62  67   T     T      06 14 02.4
      baz=255,slow=75,SNR=17
H11N3 WAKE ISLAND Hy   42.63  67   T     T      06 14 04.9
      baz=255,slow=75,SNR=18
GUN   Gumba            43.46 305  eP     P      05 28 24.7  +0.9
KLR   Kul'dur          43.60   6   P     P      05 28 24.1  -0.1
      comp=Z,4.3nm,0.8s,baz=209,slow=4.6,SNR=18
KLR   Kul'dur          43.60   6ceP     P      05 28 22.7  -1.5
KLR                                pmax  pmax
      comp=Z,21nm,2.3s
YSS   Yuzh-Sakhalins   43.63  17⇓eP     P      05 28 24.7  +0.3
YSS                               e*PP   pP     05 28 45.0  +2.7
YSS                               e             05 30 45.4
YSS                               eS     S      05 34 48.4  -0.3
YSS                               eSS    SS     05 38 01.1  -5.2
YSS                                pmax  pmax
      comp=Z,300nm,4.4s
YSS                                pmax  pmax
      comp=Z,40nm,0.9s
YSS                                MLR   MLR
      comp=Z,300nm,17.0s
YSS                                MLR   MLR
      comp=E,300nm,15.0s
PKI   Pulchoki         43.72 304  eP     P      05 28 26.4  +0.6
PKIN  Phulchoki        43.73 304  eP     P      05 28 27.1  +1.2
KKN   Kakani           43.90 305  eP     P      05 28 27.9  +0.7
ARMA  Armidale         43.91 147   P     P      05 28 28.6  +1.6
      baz=44,SNR=5.0
ARMA  Armidale         43.91 147   P     P      05 28 27.2  +0.1
ARMA                               IAmb  IAmb   05 28 54.4
      comp=Z,34nm,0.8s
DMN   Daman            43.98 304  eP     P      05 28 28.9  +1.0
      comp=Z,49nm,1.0s
PALK  Pallekele        44.43 274 i P     P      05 28 27.0  -4.4
GKN   Gorkha           44.51 305  eP     P      05 28 32.4  +0.4
ULN   Ulaanbaatar      44.75 342   P     P      05 28 33.4  -0.2
ULN                                pmax  pmax
      comp=Z,29nm,1.2s
ULN   Ulaanbaatar      44.75 342   P     P      05 28 33.4  -0.2
SONM  Songino Array    44.93 342   P     P      05 28 34.2  -0.7
      comp=Z,2.2nm,0.7s,baz=162,slow=8.3,SNR=18
SONM                               LR    LR     05 49 43.4
      comp=Z,484nm,19.4s,baz=154,slow=39
SONM  Songino Array    44.93 342   P     P      05 28 34.1  -0.8
SONM                               pmax  pmax
      comp=Z,16nm,1.1s
SONM  Songino Array    44.93 342   P     P      05 28 34.1  -0.8
ARPS  Mount Arapiles   45.06 161   P     P      05 28 36.8  +0.9
      baz=45,SNR=6.4
KOLN  Koldanda         45.28 304  eP     P      05 28 38.8  +0.6
DANN  Dangsing         45.36 305  eP     P      05 28 39.3  +0.4
      comp=Z,112nm,0.8s
GRNR  Gornyy           45.75  10⇑iP     P      05 28 41.9  +0.7
GRNR                               pmax  pmax
      comp=Z,5.0nm,0.8s
GRNR                               MLR   MLR
      comp=E,120nm,17.0s
GRNR                               MLR   MLR
      comp=N,90nm,12.0s
GRNR                               MLR   MLR
      comp=Z,240nm,17.0s
PYUN  Piuthan          45.90 304  eP     P      05 28 44.1  +1.0
      comp=Z,46nm,0.5s
SANVU Saraoutou        46.47 118   P     P      05 28 47.0  -0.4
CAN   Canberra         46.54 153   P     P      05 28 47.9  +0.2
CAN                                pmax  pmax
      comp=Z,44nm,1.0s
CAN   Canberra         46.54 153   P     P      05 28 47.9  +0.2
CAN                                IAmb  IAmb   05 29 24.2
      comp=Z,44nm,1.0s
TOO   Toolangi         47.04 158   P     P      05 28 52.4  +0.8
TOO                                pmax  pmax
      comp=Z,137nm,1.8s
TOO   Toolangi         47.04 158   P     P      05 28 52.4  +0.8
TYV   Tymovskoe        47.16  15  eP     P      05 28 59.4  +7.2
TYV                                pmax  pmax
      comp=Z,100nm,3.0s
TYV                                pmax  pmax
      comp=Z,11nm,1.1s
HYB   Hyderabad        47.20 288 i P     P      05 28 53.0  -0.2
ZEA   Zeya             47.81   1  eP     P      05 28 56.7  -0.5
ZEA                                pmax  pmax
      comp=N,20nm,0.7s
ZEA                                pmax  pmax
      comp=E,10.0nm,0.7s
ZEA                                pmax  pmax
      comp=Z,20nm,1.3s
ZEA                                MLR   MLR
      comp=N,200nm,19.0s
ZEA                                MLR   MLR
      comp=Z,300nm,19.0s
ZAK   Zakamensk        48.15 341  eP     P      05 29 13.5   +13
ZAK                                pmax  pmax
      comp=Z,8.0nm,1.3s
DZM   Mont Dzumac      48.80 126  eP     P      05 29 07.5  +2.0
      comp=Z,94nm,1.0s
DZM   Mont Dzumac      48.80 126  eLR    LR     05 43 10.0
      comp=Z,1µm,28.2s
DZM   Mont Dzumac      48.80 126   P     P      05 29 06.0  +0.5
      comp=Z,8.7nm,0.6s,baz=250,slow=14,SNR=5.5
DZM   Mont Dzumac      48.80 126   P     P      05 29 06.0  +0.5
TLY   Talaya           49.16 342 i P     P      05 29 07.0  -0.7
TLY                                pmax  pmax
      comp=Z,3.0nm,1.0s
MOY   Mondy            50.00 340  eP     P      05 29 20.2  +6.0
MOY                                pmax  pmax
      comp=Z,51nm,2.5s
WMQ   Urumqi           50.28 325  eP     P      05 29 17.5  +1.1
WMQ                                pP    sP     05 29 40.5  -2.1
WMQ                                sP    pP     05 29 48.3   +14
WMQ                                pmax  pmax
      comp=Z,25nm,1.1s
WMQ                                pmax  pmax
      comp=Z,260nm,5.7s
WMQ                                LR    LR
      comp=Z,2µm,14.9s
WMQ                                LR    LR
      comp=Z,1µm,23.7s
WMQ                                LR    LR
      comp=Z,1µm,24.1s
WMQ   Urumqi           50.28 325   P     P      05 29 16.3  -0.2
WMQ                                pmax  pmax
      comp=Z,16nm,0.9s
WMQ   Urumqi           50.28 325   P     P      05 29 16.2  -0.2
WMQ                                IAmb  IAmb   05 30 21.1
      comp=Z,16nm,0.9s
POO   Poona            51.79 289  eP     P      05 29 27.0  -1.1
BOD   Bodaibo          52.64 352  eP     P      05 29 38.3  +4.6
BOD                                pmax  pmax
      comp=Z,48nm,1.6s
PEA0B Petropavlovsk-   54.03  23ceP     P      05 29 43.8  -0.2
PETK  Petropavlovsk-   54.03  23   P     P      05 29 45.2  +1.2
      comp=Z,13nm,0.9s,baz=191,slow=4.5,SNR=12
DGZ   Jazzator, Alta   54.15 330 i P     P      05 29 43.4  -1.7
DGZ                                pmax  pmax
      comp=Z,6.0nm,1.4s
PET   Petropavlovsk    54.35  24  eP     P      05 29 46.5  +0.2
PET                               eS     S      05 37 20.8  +1.8
PET                               e*SS   sS     05 37 48.5  -1.2
PET                                pmax  pmax
      comp=Z,47nm,1.2s
PET                                MLR   MLR
      comp=Z,400nm,22.0s
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PET	**Petropavlovsk**	**54.35**	**24**	P	**P**	**05 29 46.6**	**+0.4**
SHLS	**Shalkode**	**54.92**	**320**	*e*P	**P**	**05 29 48.5**	**-2.3**
	comp=Z,7.1nm,0.9s,baz=320						
SHLS	**Shalkode**	**54.92**	**320**	*e*P	**P**	**05 29 48.5**	**-2.3**
SHLS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	**55.11**	**325**	*i* P	**P**	**05 29 51.4**	**-0.6**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**55.11**	**325**	P	**P**	**05 29 51.5**	**-0.6**
MKAR	**Makanchi Array**	**55.11**	**325**	P	**P**	**05 29 51.4**	**-0.6**
	comp=Z,3.2nm,0.5s,baz=123,slow=8.6,SNR=22						
MKAR				LR	LR	05 56 09.4	
	comp=Z,573nm,18.8s,baz=133,slow=39						
MAKZ	**Makanchi**	**55.30**	**325**	P	**P**	**05 29 52.6**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,19nm,1.1s						
MAKZ	**Makanchi**	**55.30**	**325**	P	**P**	**05 29 52.6**	**-0.8**
MAKZ				IAmb	IAmb	05 31 10.1	
	comp=Z,19nm,1.1s						
SATY	**Saty**	**55.55**	**319**	*e*P	**P**	**05 29 54.9**	**-0.6**
	comp=Z,10nm,1.2s,baz=320						
SATY	**Saty**	**55.55**	**319**	*e*P	**P**	**05 29 54.8**	**-0.6**
SATY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KPKS	**Kokpek**	**55.57**	**320**	*e*P	**P**	**05 29 54.1**	**-1.4**
	comp=Z,6.8nm,0.9s,baz=320						
KPKS	**Kokpek**	**55.57**	**320**	*e*P	**P**	**05 29 54.0**	**-1.4**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	**Nilore**	**55.63**	**307**	P	**P**	**05 29 56.0**	**0.0**
NIL				pmax	pmax		
	comp=Z,52nm,1.0s						
NIL	**Nilore**	**55.63**	**307**	P	**P**	**05 29 56.0**	**0.0**
KSH	**Kashi**	**55.66**	**315**	P	**P**	**05 29 58.3**	**+2.1**
KSH				pP	pP	05 30 18.3	+3.9
KSH				S	**S**	**05 37 39.1**	**+1.8**
KSH				sS	sS	05 38 12.5	+3.9
KSH				pmax	pmax		
	comp=Z,33nm,1.1s						
KSH				pmax	pmax		
	comp=Z,740nm,6.4s						
KSH				LR	LR		
	comp=Z,670nm,11.3s						
KSH				LR	LR		
	comp=Z,790nm,9.6s						
KSH				LR	LR		
	comp=Z,1µm,14.0s						
YAK	**Yakutsk**	**56.19**	**2**	P	**P**	**05 29 59.1**	**-0.3**
	comp=Z,12nm,0.4s,baz=344,slow=2.0,SNR=11						
YAK	**Yakutsk**	**56.19**	**2**	*e*P	**P**	**05 29 59.0**	**-0.3**
YAK				e*PP	**pP**	**05 30 19.8**	**+1.9**
YAK				*e*		05 30 54.9	
YAK				*e*		05 32 09.2	
YAK				*e*S	**S**	**05 37 42.4**	**-0.8**
YAK				e*SS	**sS**	**05 38 09.7**	**-5.0**
YAK				pmax	pmax		
	comp=Z,55nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,53nm,3.2s						
YAK				smax	smax		
	comp=E,84nm,4.0s						
YAK	**Yakutsk**	**56.19**	**2**	P	**P**	**05 29 59.4**	**+0.1**
CHKK	**Chushkaly**	**56.84**	**320**	*e*P	**P**	**05 30 02.6**	**-1.8**
	baz=320						
CHKK	**Chushkaly**	**56.84**	**320**	*e*P	**P**	**05 30 02.5**	**-1.8**
MSVF	**Nonsavu**	**56.97**	**115**	LR	LR	05 53 09.9	
	comp=E,499nm,19.7s,baz=321,slow=34						
MSVF	**Nonsavu**	**56.97**	**115**	*i* P	**P**	**05 30 06.3**	**+0.5**
MSVF				pmax	pmax		
	comp=Z,35nm,1.1s						
MSVF	**Nonsavu**	**56.97**	**115**	P	**P**	**05 30 03.5**	**-2.2**
MA2	**Magadan**	**57.03**	**15**	*ce*P	**P**	**05 30 04.5**	**-0.9**
MA2				pmax	pmax		
	comp=Z,12nm,1.3s						
MA2	**Magadan**	**57.03**	**15**	P	**P**	**05 30 06.5**	**+1.0**
MA2				IAmb	IAmb	05 30 23.3	
	comp=Z,25nm,0.9s						
KUU	**Kurty**	**57.27**	**320**	*e*P	**P**	**05 30 06.4**	**-1.1**
	comp=Z,16nm,1.0s,baz=320						
KUU	**Kurty**	**57.27**	**320**	*e*P	**P**	**05 30 06.3**	**-1.1**
KUU				pmax	pmax		
	comp=Z,16nm,1.0s						
TKM2	**Tokmak 2**	**57.33**	**318**	*i* P	**P**	**05 30 07.2**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK	**Ala-Archa**	**57.95**	**317**	P	**P**	**05 30 13.9**	**+1.5**
AAK				pmax	pmax		
	comp=Z,12nm,1.2s						
AAK	**Ala-Archa**	**57.95**	**317**	P	**P**	**05 30 13.9**	**+1.5**
ZAA0	**Zalesovo Array**	**58.15**	**333**	P	**P**	**05 30 11.6**	**-1.7**
ZAA0				IAmb	IAmb	05 30 52.8	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**58.15**	**333**	P	**P**	**05 30 12.4**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=128,slow=5.1,SNR=4.9						
ZALV				LR	LR	05 57 02.4	
	comp=Z,473nm,20.5s,baz=141,slow=38						
ZALV	**Zalesovo Beam**	**58.15**	**333**	*i* P	**P**	**05 30 12.3**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**58.15**	**333**	P	**P**	**05 30 12.0**	**-1.3**
KBL	**Kabul**	**59.23**	**307**	P	**P**	**05 30 21.6**	**+0.1**
KBL				pmax	pmax		
	comp=Z,16nm,0.8s						
KBL	**Kabul**	**59.23**	**307**	P	**P**	**05 30 21.6**	**+0.1**
KBL				IAmb	IAmb	05 31 27.6	
	comp=Z,16nm,0.8s						
BTLS	**Baital**	**59.25**	**320**	*e*P	**P**	**05 30 19.1**	**-2.1**
	baz=320						
BTLS	**Baital**	**59.25**	**320**	*e*P	**P**	**05 30 19.1**	**-2.1**
KURK	**Kurchatov**	**59.30**	**327**	*i* P	**P**	**05 30 20.1**	**-1.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.2s						
KURK	**Kurchatov**	**59.30**	**327**	P	**P**	**05 30 20.7**	**-0.6**
DZA	**Taraz**	**60.19**	**317**	*e*P	**P**	**05 30 26.9**	**-0.8**
	baz=317						
DZA	**Taraz**	**60.19**	**317**	*e*P	**P**	**05 30 26.9**	**-0.8**
SEY	**Seymchan**	**60.33**	**14**	P	**P**	**05 30 29.1**	**+0.9**
	comp=Z,14nm,1.1s,baz=218,slow=5.5,SNR=19						
SEY	**Seymchan**	**60.33**	**14**	*i* P	**P**	**05 30 28.4**	**+0.2**
IUG	**Iuzhnay**	**60.82**	**315**	*e*P	**P**	**05 30 31.1**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=316						
IUG	**Iuzhnay**	**60.82**	**315**	*e*P	**P**	**05 30 31.1**	**-1.1**
IUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	**Karatay Array**	**60.83**	**317**	P	**P**	**05 30 32.0**	**-0.1**
KK31				pmax	pmax		
	comp=Z,14nm,0.9s						
KK31	**Karatay Array**	**60.83**	**317**	P	**P**	**05 30 32.0**	**-0.1**
KK31				IAmb	IAmb	05 31 14.7	
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**60.83**	**317**	P	**P**	**05 30 31.9**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**60.83**	**317**	P	**P**	**05 30 31.3**	**-0.8**
KKAR	**Karatay Array**	**60.83**	**317**	P	**P**	**05 30 31.9**	**-0.2**
KKAR				IAmb	IAmb	05 31 14.8	
	comp=Z,14nm,0.9s						
BRZS	**Berezniki**	**62.25**	**325**	*e*P	**P**	**05 30 39.6**	**-1.9**
	baz=325						
BRZS	**Berezniki**	**62.25**	**325**	*e*P	**P**	**05 30 39.5**	**-1.9**
LBZ	**Lake Benmore**	**64.13**	**146**	P	**P**	**05 30 54.3**	**+0.4**
THZ	**Tophouse**	**64.13**	**142**	P	**P**	**05 30 54.4**	**+0.3**
RPZ	**Rata Peaks**	**64.20**	**145**	P	**P**	**05 30 53.1**	**-1.4**
RPZ				IAmb	IAmb	05 31 24.9	
	comp=Z,37nm,0.8s						
OXZ	**Oxford**	**64.54**	**144**	P	**P**	**05 30 57.1**	**+0.5**
OXZ				IAmb	IAmb	05 31 27.1	
	comp=Z,24nm,0.7s						
HRA	**Herat**	**64.67**	**305**	P	**P**	**05 30 56.5**	**-1.5**
BRVK	**Borovoye**	**64.95**	**327**	P	**P**	**05 30 58.3**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,31nm,0.9s						
BRVK	**Borovoye**	**64.95**	**327**	P	**P**	**05 30 58.3**	**-0.8**
BRVK				IAmb	IAmb	05 31 54.3	
	comp=Z,31nm,0.9s						
BKZ	**Black Stump Fm**	**64.99**	**138**	P	**P**	**05 31 01.0**	**+1.3**
BKZ				IAmb	IAmb	05 31 30.7	
	comp=Z,41nm,0.9s						
TIXI	**Tiksi**	**65.80**	**1**	*i* P	**P**	**05 31 02.3**	**-2.0**
TIXI	**Tiksi**	**65.80**	**1**	P	**P**	**05 31 02.8**	**-1.5**
TIXI				IAmb	IAmb	05 31 35.8	
	comp=Z,39nm,1.1s						
BILL	**Bilibino**	**67.90**	**15**	*de*P	**P**	**05 31 16.1**	**-1.6**
BILL				*i*		05 31 32.8	
BILL				*e*		05 31 44.5	
BILL				*e*		05 33 43.5	
BILL				*e*SS	SS	05 44 26.5	-7.0
BILL				pmax	pmax		
	comp=Z,13nm,1.7s						
BILL				MLR	MLR		
	comp=Z,168nm,19.0s						
BILL	**Bilibino**	**67.90**	**15**	P	**P**	**05 31 17.8**	**0.0**
GEYT	**Alibeck**	**68.58**	**308**	P	**P**	**05 31 23.3**	**+0.6**
	comp=Z,12nm,1.1s,baz=159,slow=4.6,SNR=12						
GEYT				LR	LR	06 06 32.0	
	comp=Z,176nm,18.5s,baz=240,slow=40						
GEYT	**Alibeck**	**68.58**	**308**	P	**P**	**05 31 22.6**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**68.58**	**308**	P	**P**	**05 31 21.1**	**-1.6**
ABKAR	**Akbulak array**	**69.72**	**321**	P	**P**	**05 31 28.1**	**-1.3**
ARU	**Arti**	**72.49**	**328**	*c i*P	**P**	**05 31 44.1**	**-1.9**
ARU				S	**S**	**05 41 05.9**	**+1.3**
ARU				SS	**SS**	**05 45 39.9**	**-4.6**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARU	**Arti**	**72.49**	**328**	P	**P**	**05 31 46.1**	**0.0**
RDOG	**Red Dog Mine**	**77.83**	**21**	P	**P**	**05 32 17.2**	**+0.6**
RDOG				IAmb	IAmb	05 32 39.3	
	comp=Z,27nm,1.1s						
BELG	**Belogornoye**	**77.97**	**322**	*i* P	**P**	**05 32 14.7**	**-2.8**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RAYN	**Ar Rayn**	**78.47**	**293**	P	**P**	**05 32 20.6**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,15nm,1.0s						
RAYN	**Ar Rayn**	**78.47**	**293**	P	**P**	**05 32 20.6**	**-0.4**
GROC	**Groznyy**	**78.48**	**313**	*e*P	**P**	**05 32 17.3**	**-3.3**
GROC				*e*		05 32 26.1	
GROC				e*PP	**PcP**	**05 32 32.8**	**+3.3**
GROC				e*SP	**pP**	**05 32 40.9**	**+1.1**
GROC				*e*		05 35 12.6	
GROC				pmax	pmax		
	comp=Z,42nm,1.1s						
GNI	**Garni**	**79.16**	**310**	*i* P	**P**	**05 32 22.1**	**-2.5**
GNI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TTA	**Tatalina**	**79.66**	**27**	P	**P**	**05 32 27.9**	**+1.2**
TTA				pmax	pmax		
	comp=Z,51nm,1.8s						
TTA	**Tatalina**	**79.66**	**27**	P	**P**	**05 32 27.9**	**+1.2**
TTA				IAmb	IAmb	05 32 51.2	
	comp=Z,51nm,1.8s						
ZEI	**Tsey**	**79.86**	**312**	*e*P	**P**	**05 32 26.2**	**-2.2**
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s						
OHAK	**Old Harbor**	**80.43**	**33**	IAmb	IAmb	05 32 39.4	
	comp=Z,36nm,0.8s						
GOF	**Gofitskoye**	**80.53**	**315**	⇑*e*P	**P**	**05 32 32.7**	**+1.0**
KBZ	**Khabaz**	**80.61**	**313**	P	**P**	**05 32 31.4**	**-0.7**
	comp=Z,5.8nm,1.0s,baz=202,slow=2.4,SNR=9.0						
KBZ				LR	LR	06 13 27.8	
	comp=Z,262nm,20.1s,baz=82,slow=40						
KBZ	**Khabaz**	**80.61**	**313**	*i* P	**P**	**05 32 30.1**	**-2.0**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
A21K	**Barrow**	**80.68**	**19**	P	**P**	**05 32 32.5**	**+0.6**
	baz=260						
A21K	**Barrow**	**80.68**	**19**	P	**P**	**05 32 32.3**	**+0.4**
A21K				IAmb	IAmb	05 33 01.3	
	comp=Z,30nm,0.8s						
KIV	**Kislovodsk**	**80.77**	**313**	*e*P	**P**	**05 32 30.2**	**-2.9**
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV				MLR	MLR		
	comp=Z,293nm,19.0s						
KDAK	**Kodiak Island**	**80.85**	**33**	P	**P**	**05 32 33.1**	**+0.1**
	comp=Z,18nm,1.0s,baz=313,slow=11,SNR=10.0						
RSO	**Redoubt South**	**80.94**	**30**	P	**P**	**05 32 33.6**	**-0.2**
IMAR	**Indian Mountai**	**80.99**	**24**	P	**P**	**05 32 34.5**	**+0.8**
PPLA	**Purkeypile**	**81.39**	**27**	P	**P**	**05 32 37.8**	**+1.7**
VRH	**Novokhopyorsk**	**81.55**	**321**	*e*P	**P**	**05 32 33.7**	**-3.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SKT	**Skwentna**	**81.64**	**28**	IAmb	IAmb	05 33 03.1	
	comp=Z,34nm,1.0s						
CNPM	**China Poot**	**81.65**	**31**	IAmb	IAmb	05 33 02.2	
	comp=Z,51nm,1.0s						
KTH	**Kantishna Hill**	**82.01**	**27**	P	**P**	**05 32 39.5**	**+0.3**
KTH				IAmb	IAmb	05 33 02.7	
	comp=Z,35nm,1.0s						
MLY	**Manley**	**82.17**	**25**	P	**P**	**05 32 40.4**	**+0.4**
	baz=267,SNR=14						
TRF	**Thorofare Moun**	**82.28**	**27**	IAmb	IAmb	05 33 20.0	
	comp=Z,42nm,0.9s						
RC01	**Rabbit Creek A**	**82.46**	**29**	P	**P**	**05 32 41.0**	**-0.6**
	baz=268						
COLD	**Coldfoot**	**82.50**	**23**	P	**P**	**05 32 41.3**	**-0.3**
	baz=267						
COLD	**Coldfoot**	**82.50**	**23**	IAmb	IAmb	05 33 06.9	
	comp=Z,28nm,0.9s						
I23K	**Minto, Yukon-K**	**82.75**	**25**	P	**P**	**05 32 43.2**	**+0.2**
	baz=268,SNR=18						
I23K	**Minto, Yukon-K**	**82.75**	**25**	IAmb	IAmb	05 33 20.6	
	comp=Z,26nm,0.8s						
NEA2	**Nenana**	**82.86**	**26**	P	**P**	**05 32 42.7**	**-0.9**
	baz=268,SNR=8.7						
MCK	**McKinley**	**82.90**	**27**	P	**P**	**05 32 43.3**	**-0.6**
	baz=269,SNR=9.9						
RND	**Reindeer**	**82.93**	**27**	IAmb	IAmb	05 33 10.3	
	comp=Z,51nm,1.1s						
KLMR	**Klimovskoe**	**82.96**	**331**	*e*P	**P**	**05 32 41.4**	**-2.7**
KLMR				pmax	pmax		
	comp=Z,18nm,0.9s						
KLMR	**Klimovskoe**	**82.96**	**331**	*e*P	**P**	**05 32 41.4**	**-2.7**
KLMR				AMP		05 32 49.8	
	comp=Z,18nm,0.9s						
KNK	**Knik Glacier**	**83.08**	**29**	P	**P**	**05 32 46.3**	**+1.5**
VORD	**Divnogorie**	**83.08**	**321**	*e*P	**P**	**05 32 43.4**	**-1.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR	**Storozhevoye**	**83.16**	**321**	*e*P	**P**	**05 32 43.7**	**-1.7**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MDM	**Murphy Dome**	**83.23**	**25**	IAmb	IAmb	05 33 20.6	
	comp=Z,20nm,0.8s						
WRH	**Wood River Hil**	**83.28**	**26**	IAmb	IAmb	05 33 08.2	
	comp=Z,35nm,1.0s						
LPSR	**Galich'ya Gora**	**83.29**	**322**	*e*P	**P**	**05 32 44.8**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TCOL	**CIGO, UAF Yank**	**83.39**	**25**	P	**P**	**05 32 45.8**	**-0.5**
	baz=270						
COLA	**College**	**83.39**	**25**	*i* P	**P**	**05 32 46.2**	**0.0**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
CCB	**Clear Creek Bu**	**83.41**	**26**	IAmb	IAmb	05 33 08.6	
	comp=Z,28nm,1.0s						
POKR	**Poker Plat Res**	**83.57**	**25**	P	**P**	**05 32 47.2**	**-0.1**
	baz=270						
POKR	**Poker Plat Res**	**83.57**	**25**	P	**P**	**05 32 46.9**	**-0.3**
POKR				IAmb	IAmb	05 33 17.2	
	comp=Z,17nm,0.9s						
DHY	**Denali Highway**	**83.59**	**27**	IAmb	IAmb	05 33 25.5	
	comp=Z,19nm,0.9s						
SCM	**Sheep Creek Mo**	**83.62**	**28**	P	**P**	**05 32 48.5**	**+0.8**
SCM				pmax	pmax		
	comp=Z,54nm,0.9s						
SCM	**Sheep Creek Mo**	**83.62**	**28**	P	**P**	**05 32 48.5**	**+0.8**
TMCR	**Tamitsa**	**83.67**	**334**	*e*P	**P**	**05 32 44.5**	**-3.2**
TMCR				pmax	pmax		
	comp=Z,16nm,0.7s						
HDA	**Harding Lake**	**83.78**	**26**	P	**P**	**05 32 47.7**	**-0.6**
	baz=270						
IL31		**83.80**	**26**	IAmb	IAmb	05 33 10.2	
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**83.80**	**26**	P	**P**	**05 32 47.2**	**-1.2**
	comp=Z,4.6nm,0.9s,baz=253,slow=4.9,SNR=21						
MOS	**Moscow**	**84.00**	**325**	*e*P	**P**	**05 32 45.6**	**-3.9**
MOS				*e*		05 33 17.0	
M24K	**Tolsona, Glenn**	**84.16**	**28**	P	**P**	**05 32 49.1**	**-1.3**
	baz=271						
PAX	**Paxson**	**84.47**	**27**	IAmb	IAmb	05 33 28.0	
	comp=Z,53nm,1.4s						
OBN	**Obninsk**	**84.62**	**325**	⇓*e*P	**P**	**05 32 51.3**	**-1.4**
OBN				*e*		05 36 02.9	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,354nm,13.0s						
BMAR	**Burnt Mountain**	**84.68**	**23**	P	**P**	**05 32 51.7**	**-1.2**
N25K	**Chitina, Valde**	**84.93**	**29**	P	**P**	**05 32 52.2**	**-2.0**
	baz=273						
N25K	**Chitina, Valde**	**84.93**	**29**	IAmb	IAmb	05 33 41.8	
	comp=Z,30nm,1.1s						
DOT	**Dot Lake**	**85.07**	**27**	P	**P**	**05 32 55.6**	**+0.7**
DOT				IAmb	IAmb	05 33 28.7	
	comp=Z,22nm,0.9s						
SCRK	**Sand Creek**	**85.09**	**26**	P	**P**	**05 32 55.0**	**-0.1**
	baz=273						
MAW	**Mawson**	**85.24**	**200**	LR	LR	06 08 01.0	
	comp=Z,86nm,18.2s,baz=58,slow=34						
VNDA	**Vanda**	**85.64**	**173**	P	**P**	**05 32 56.5**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=328,slow=2.0,SNR=5.5						
VNDA				LR	LR	06 11 09.7	
	comp=Z,224nm,20.3s,baz=332,slow=36						
VNDA	**Vanda**	**85.64**	**173**	P	**P**	**05 32 56.5**	**-0.9**
VNDA				pmax	pmax		
	comp=Z,14nm,1.1s						
K27K	**Chicken**	**85.92**	**26**	P	**P**	**05 32 59.0**	**-0.1**
	baz=275						
K27K	**Chicken**	**85.92**	**26**	P	**P**	**05 33 00.9**	**+1.9**
K27K				IAmb	IAmb	05 33 40.9	
	comp=Z,34nm,0.9s						
BCAR	**Beaver Creek A**	**86.14**	**27**	P	**P**	**05 33 02.1**	**+1.9**
PPT	**Papeete**	**86.99**	**108**	LR	LR	06 09 28.4	
	comp=Z,81nm,18.2s,baz=270,slow=34						
PPT2	**Papeete2**	**87.00**	**108**	*e*LR	LR	06 00 43.1	
	comp=Z,597nm,27.8s						
BR131	**Keskin Array S**	**87.70**	**310**	P	**P**	**05 33 08.8**	**+0.4**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR131	**Keskin Array S**	**87.70**	**310**	P	**P**	**05 33 08.8**	**+0.4**
BRTR	**Keskin Array B**	**87.70**	**310**	P	**P**	**05 33 06.8**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=112,slow=5.5,SNR=5.8						
TBI	**Tubuai**	**87.81**	**114**	*e*LQ	LQ	05 57 28.3	
	comp=Z,519nm,33.2s						
TBI				*e*LR	LR	06 01 05.7	
	comp=Z,546nm,30.8s						
ARCES	**ARCESS Array B**	**88.06**	**340**	P	**P**	**05 33 07.3**	**-2.0**
	comp=Z,3.5nm,0.9s,baz=83,slow=6.0,SNR=9.5						
ARCES				LR	LR	06 15 43.4	
	comp=Z,304nm,20.6s,baz=240,slow=38						
ARCES	**ARCESS Array B**	**88.06**	**340**	P	**P**	**05 33 07.3**	**-2.0**
ARCES				pmax	pmax		
	comp=Z,31nm,1.5s						
INK	**Inuvik**	**88.72**	**21**	P	**P**	**05 33 11.9**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=283,slow=9.6,SNR=5.4						
INK	**Inuvik**	**88.72**	**21**	IAmb	IAmb	05 33 49.0	
	comp=Z,15nm,0.9s						
FINES	**FINESS Array B**	**89.39**	**332**	P	**P**	**05 33 14.2**	**-1.5**
	comp=Z,2.8nm,0.7s,baz=52,slow=3.2,SNR=14						
FINES				LR	LR	06 15 45.0	
	comp=Z,458nm,19.0s,baz=53,slow=37						
AKASG	**Malin Array Be**	**89.47**	**321**	P	**P**	**05 33 14.2**	**-2.1**
	comp=Z,1.9nm,0.8s,baz=73,slow=4.4,SNR=4.2						
AKASG				LR	LR	06 18 10.7	
	comp=Z,179nm,18.1s,baz=60,slow=39						
MNK	**Minsk**	**89.68**	**325**	*i* P	**P**	**05 33 15.8**	**-1.4**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**05 33 15.8**	**-1.4**
	comp=N,16nm,0.9s						
MNK				*i* P	**P**	**05 33 15.8**	**-1.4**
	comp=Z,14nm,0.9s						
MNK				*i* pP	**pP**	**05 33 32.7**	**-4.1**
MNK				*i* sP	**sP**	**05 33 39.6**	**-5.0**
MNK				*i* PP	**PP**	**05 36 48.6**	**-1.2**
MNK				*i* PPP	PPP	05 38 45.6	
MNK				*i* S	**SKSac**	**05 43 40.4**	**-1.1**
MNK				*i* sS	**ScS**	**05 44 10.9**	**+3.7**
MNK				*i* PS	PnS	05 44 54.1	-23
MNK				*i* SP	**SP**	**05 45 09.1**	**+1.2**
MNK				*i* SS	**SS**	**05 50 02.7**	**+2.3**
MNK				*i* SSS	SSS	05 53 39.0	
MNK				*i* SKKS	**SKKSdf**	**05 57 46.8**	**-5.1**
MNK				*i* LQ	LQ	06 07 57.7	
MNK				*i* LR	LR	06 09 52.0	
MNK				*i* LRM	MLR	06 14 41.0	
	comp=Z,222nm,18.5s						
MNK				*i* LRM	MLR	06 14 42.7	
	comp=N,391nm,18.5s						
MNK				*i* LRM	MLR	06 14 47.0	
	comp=E,45nm,18.5s						
C36M	**Paulatuk**	**91.70**	**19**	P	**P**	**05 33 25.4**	**-0.9**
	baz=291						
BURAR	**Bucovina Array**	**92.59**	**318**	P	**P**	**05 33 29.8**	**-1.2**
EUNU	**Eureka**	**92.75**	**5**	IAmb	IAmb	05 33 42.8	
	comp=Z,23nm,1.4s						
SYO	**Syowa Base**	**93.88**	**201**	⇓*e*P	**P**	**05 33 36.0**	**-0.3**
KOLS	**Kolonicke sedl**	**94.22**	**320**	*e*P	**P**	**05 33 38.7**	**+0.3**
KOLS	**Kolonicke sedl**	**94.22**	**320**	*e*P	**P**	**05 33 38.7**	**+0.3**
UZH	**Uzhgorod**	**94.28**	**320**	*e*P	**P**	**05 33 38.5**	**-0.1**
UZH				*e*		05 34 01.5	
DAG	**Danmarks Havn**	**95.03**	**352**	*i* P	**P**	**05 33 39.4**	**-2.1**
DAG	**Danmarks Havn**	**95.03**	**352**	*i* P	**P**	**05 33 39.4**	**-2.1**
DAG	**Danmarks Havn**	**95.03**	**352**	*i* P	**P**	**05 33 39.5**	**-2.1**
TAOE	**Nuku Hiva Isla**	**95.25**	**98**	*e*LR	LR	06 04 26.9	
	comp=Z,767nm,25.9s						
TAOE	**Nuku Hiva Isla**	**95.25**	**98**	*e*T	T	07 18 08.9	
	comp=Z,55nm,0.2s						
RES	**Resolute Bay**	**96.01**	**10**	P	**P**	**05 33 45.0**	**-1.0**
	comp=Z,5.1nm,0.9s,baz=316,slow=5.6,SNR=12						
NB2	**NORSAR Subarra**	**96.36**	**333**	P	**P**	**05 33 44.4**	**-3.5**
	comp=Z,19nm,1.7s,baz=65,slow=4.6						
NB2	**NORSAR Subarra**	**96.36**	**333**	P	**P**	**05 33 44.4**	**-3.5**
	baz=65,slow=4.6						
NOA	**NORSAR Array B**	**96.36**	**333**	P	**P**	**05 33 45.7**	**-2.2**
	comp=Z,0.1nm,0.5s,baz=192,slow=20,SNR=3.7						
NOA				LR	LR	06 20 26.2	
	comp=Z,419nm,21.4s,baz=65,slow=37						
DBG	**Daneborg**	**97.28**	**351**	*i* P	Pdif	05 33 56.3	+4.5
DBG				IAmb	IAmb	05 33 57.9	
	comp=Z,7.5nm,1.0s						
YKA	**Yellowknife Ar**	**98.15**	**24**	P	**P**	**05 33 55.4**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=296,slow=4.2,SNR=9.4						
YKA				PP	**PP**	**05 37 53.5**	**-2.0**
	comp=Z,0.4nm,0.8s,baz=297,slow=6.2,SNR=3.8						
YKA				PKKPbc	PKKPdf	05 50 42.0	+10
	comp=Z,0.2nm,0.5s,baz=114,slow=3.3,SNR=5.0						
CLL	**Collm**	**99.20**	**324**	*e*Pdif	**Pdif**	**05 34 03.0**	**+2.2**
	comp=Z,5.0nm,0.6s						
CLL				LmV		06 21 00.0	
	comp=Z,700nm,20.2s						
CLL	**Collm**	**99.20**	**324**	*e*P	**Pdif**	**05 33 58.0**	**-2.8**
GERES	**GERESS Array B**	**99.66**	**321**	P	**Pdif**	**05 34 02.3**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=48,slow=1.5,SNR=2.5						
GERES				LR	LR	06 22 19.3	
	comp=Z,356nm,19.7s,baz=56,slow=37						
NEW	**Newport**	**103.40**	**38**	P	**Pdif**	**05 34 18.5**	**-1.2**
	baz=295						
MSO	**Missoula**	**105.97**	**38**	P	**PKiKP**	**05 38 42.9**	**-0.3**
	baz=297						
NVAR	**Mina Array Bea**	**106.48**	**47**	Pdiff	**Pdif**	**05 34 40.4**	**+6.5**
	comp=Z,0.5nm,0.8s,baz=258,slow=7.6,SNR=3.8						
NVAR				PP	**PP**	**05 39 03.9**	**+4.8**
	comp=Z,0.7nm,0.9s,baz=269,slow=5.9,SNR=3.8						
VNA2	**Neumayer--Watz**	**108.50**	**195**	PKiKP	**PKiKP**	**05 38 49.3**	**+2.2**
GSC	**Goldstone, Bar**	**108.75**	**50**	P	**PKiKP**	**05 38 46.7**	**-2.0**
	baz=292						
PDAR	**Pinedale Array**	**110.64**	**40**	PP	PP	05 39 42.0	+13
	comp=Z,0.4nm,0.6s,baz=48,slow=2.2,SNR=3.5						
PDAR				PKKP	**PKKPdf**	**05 50 13.1**	**+3.5**
	comp=Z,0.6nm,0.7s,baz=128,slow=5.3,SNR=5.1						
ECSD	**EROS Data Cent**	**117.80**	**33**	P	**PKPdf**	**05 39 04.8**	**-0.9**
	baz=311						
TORD	**Torodi Ar. Bea**	**121.02**	**289**	PKP	**PKPdf**	**05 39 10.0**	**-2.5**
	comp=Z,1.0nm,0.3s,baz=63,slow=1.8,SNR=11						
TORD	**Torodi Ar. Bea**	**121.02**	**289**		**PKPdf**	**05 39 11.0**	**-1.6**
TXAR	**Lajitas Array**	**121.33**	**51**	PKP	**PKPdf**	**05 39 12.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=0.0,slow=2.5,SNR=3.6						
U38A	**Gravette**	**123.84**	**38**		**PKPdf**	**05 39 16.7**	**-0.8**
R40A	**Maddies Statio**	**123.89**	**35**		**PKiKP**	**05 39 17.6**	**-0.1**
CCM	**Cathedral Cave**	**124.63**	**35**	P	**PKPdf**	**05 39 18.5**	**-0.4**
	baz=314						
LATQ	**La Tuque**	**124.65**	**15**	P	**PKPdf**	**05 39 18.3**	**-0.3**
	baz=338						
U40A	**Yellville**	**124.83**	**38**	P	**PKPdf**	**05 39 18.1**	**-1.3**
	baz=311						
U40A	**Yellville**	**124.83**	**38**	PKPdf	**PKPdf**	**05 39 19.0**	**-0.4**
D58A	**Chemin du LacG**	**124.89**	**15**	P	**PKPdf**	**05 39 18.0**	**-1.2**
	baz=338						
D60A	**Saint Jean D’O**	**125.54**	**14**	P	**PKPdf**	**05 39 19.7**	**-0.7**
	baz=340						
MIAR	**Mount Ida**	**125.56**	**40**	P	**PKPdf**	**05 39 20.4**	**-0.4**

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       baz=310
E61A   Lac Etchemin      126.10  14  P        PKPdf   05 39 21.6 +0.1
       baz=340
G57A   Newington         126.12  18  P        PKiKP   05 39 22.0  0.0
       baz=335
J58A   Remsen            127.59  19  P        PKiKP   05 39 24.9 -0.1
       baz=334
WVT    Waverly           127.92  34  PKIKP    PKiKP   05 39 25.6 -0.2
WVT    Waverly           127.92  34  P        PKPdf   05 39 24.2 -1.1
       baz=316
WVT    Waverly           127.92  34  PKPdf    PKiKP   05 39 25.6 -0.2
M56A   Emporium          128.22  23  P        PKPdf   05 39 25.5 -0.2
       baz=330
M57A   Sunshine Farm,    128.74  22  P        PKPdf   05 39 26.5 -0.2
       baz=331
TZTN   Tazewell          129.90  31  P        PKPdf   05 39 29.3 +0.3
       baz=321
M61A   Granite Spring    129.93  19  P        PKPdf   05 39 28.2 -0.7
       baz=335
N61A   South Mountain    130.25  20  P        PKPdf   05 39 27.9 -1.6
       baz=334
RTAL   Retalhuleu        138.02  61           PKPdf   05 39 43.9 -0.8
PLCA   Paso Flores       142.40 160  PKP      PKPdf   05 39 53.0 +0.9
       comp=Z,3.4nm,0.8s,baz=175,slow=2.1,SNR=8.0
ACON   Acoyapa           144.82  60           PKPdf   05 39 57.4 +0.4
BI02   San Fabin de      145.70 156  PKPdf    PKPab   05 39 59.3 +0.5
BO02   Sierra Bellavi    147.50 155           PKPab   05 40 05.2 -0.6
SDDR   Presa de Saban    150.37  33           PKiKP   05 40 12.3 +0.2
BCIP   Isla Barro Col    150.76  60  eP       PKiKP   05 40 15.2 +2.1
DR12   Loma Pena Alta    151.54  31  PKPbc    PKPbc   05 40 13.9 -0.2
LCO    Las Campanas      152.34 148  PKIKP    PKiKP   05 40 16.7 +0.5
LCO    Las Campanas      152.34 148           PKiKP   05 40 16.7 +0.5
MTP    Monte Pirata      153.90  24  PKPbc    PKiKP   05 40 20.1 +0.8
OTAV   Otavalo           155.43  77  eP       PKPab   05 40 47.5 +7.6
CBOC   Ciudad Bolivar    155.67  62  eP       PKPab   05 40 35.8 -4.7
ZARC   Zaragoza, Cauc    155.84  57⇓eP        PKPdf   05 40 11.9 -2.2
YOTC   Yotoco, Valle     156.19  66  eP       PKPdf   05 40 19.0 +4.2
GUY2C  Guyana, Caldas    156.53  63  eP       PKPab   05 40 35.6 -9.0
RREF   El Recreo         156.70  63  eP       PKPdf   05 40 23.6 +7.6
NORC   Norcasia          156.81  61  eP       PKPab   05 40 46.7 +1.4
TOLC   Tolima            156.86  64  eP       PKPdf   05 40 16.4 +0.5
ORTC   Ortega, Tolima    157.22  65  eP       PKPdf   05 40 20.1 +4.1
SPBC   San Pablo de B    157.46  60  eP       PKPdf   05 40 15.0 -1.3
BARC   Barichara         157.72  57  eP       PKPab   05 40 45.4 -4.0
RUSC   La Rusia          158.18  58  eP       PKPdf   05 40 22.0 +4.3
CHIC   Chingaza          158.25  62  eP       PKPdf   05 40 14.3 -3.4
SDV    Santo Domingo     158.34  48  eP       PKPdf   05 40 23.6 +6.1
MACC   Macarena, Meta    159.20  68  eP       PKPdf   05 40 20.5 +2.1
SIV    San Ignacio       168.04 148  PKP      PKPdf   05 40 26.2 -0.2
       comp=Z,2.2nm,0.9s,baz=264,slow=4.7,SNR=3.5
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*AEIC **21** 05:25:35.2±1.2, 67°.78N±0°.04×161°.9W±0°.1, h1^{km}±5^{km}, ML3.5/43, ML3.5/6(NEIC) Error ellipse: s-maj=6.9km s-min=5.3km az=137.0*

*NEIC **21** 05:25:35.9±1.2, 67°.76N±0°.04×162°.04W±0°.09, h5^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=5.1km az=175.0*

*IDC **21** 05:25:36.7±1.7, 67°.98N×162°.06W, h0^{km}, mb3.7/6, mb1 4.2/8, mb1mx3.8/40, mbtmp3.9/8, ML4.1/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/45, Error ellipse: s-maj=58.6km s-min=17.9km az=30.0*

*ANF **21** 05:25:37.2±1.1, 67°.68N×162°.10W, h15^{km}, ML4.0/3, Error ellipse: s-maj=13.9km s-min=5.2km az=69.0*

ISC 21 05:25:37.0±0.8**, 67°.74N**±0°.06×**162°.03W**±0°.06**, h10**^{km}**, n66,** σ**1**^{s}**07**/76**, mb3.9**/5**, Northern Alaska**

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Code   Station Name         Δ°  AZ°    Phase ID          Time     Res
                                       Op       ISC      h  m  s  ISC
RDOG   Red Dog Mine        0.46 314             Pg      05 25 44.5 -1.4
RDOG                                            Sb      05 25 53.0 -0.9
RDOG   Red Dog Mine        0.46 314    IAML             05 25 55.3
       comp=E,4μm,0.9s
ANM    Nome                3.47 205             Pn      05 26 30.2 -0.7
ANM    Nome                3.47 205    IAML             05 27 31.6
       comp=N,72nm,0.9s
ANM                                    IAML             05 27 41.0
       comp=E,71nm,1.4s
IM03                       3.72 115             Pn      05 26 33.5 -0.8
A21K   Barrow              4.07  25    P        Pn      05 26 39.3 +0.2
       baz=210,SNR=46
A21K                                   S        Sn      05 27 28.5 +1.8
       baz=210
A21K   Barrow              4.07  25             Pn      05 26 38.8 -0.3
A21K                                            Sn      05 27 26.7  0.0
A21K   Barrow              4.07  25    IAML             05 28 06.7
       comp=E,225nm,1.5s
PS05   TAPS Pump Stn5      4.51  97             Pn      05 26 44.7 -0.5
COLD   Coldfoot            4.58  91    P        Pn      05 26 46.2  0.0
       baz=282,SNR=10
COLD   Coldfoot            4.58  91             Pn      05 26 45.7 -0.4
MLY    Manley              5.29 116    P        Pn      05 26 55.3 -0.7
       baz=307,SNR=9.1
MLY    Manley              5.29 116             Pn      05 26 55.1 -0.8
MLY                                             Sn      05 27 58.5 +1.6
PS01   TAPS Pump Stn       5.44  56             Sn      05 28 00.4 -0.1
TTA    Tatalina            5.45 150             Pn      05 26 57.7 -0.5
TT01   Tatalina            5.47 150             Pn      05 26 57.9 -0.5
CHUM   Lake Minchumin      5.56 130             Sn      05 28 04.8 +1.3
I23K   Minto, Yukon-K      5.71 111    P        Pn      05 27 01.3 -0.3
       baz=303,SNR=9.1
I23K                                   S        Sn      05 28 08.1 +1.0
       baz=303
I23K   Minto, Yukon-K      5.71 111             Pn      05 27 01.4 -0.2
BPAW   Bear Paw Mtn.       5.81 124             Pn      05 27 02.4 -0.7
NEA2   Nenana              6.13 115    P        Pn      05 27 07.2 -0.2
       baz=307,SNR=28
NEA2                                   S        Sn      05 28 16.2 -1.2
       baz=307
NEA2   Nenana              6.13 115             Pn      05 27 07.5 +0.1
MDM    Murphy Dome         6.21 110             Pn      05 27 08.1 -0.5
KTH    Kantishna Hill      6.22 127             Pn      05 27 08.4 -0.4
BWN    Browne              6.26 119             Pn      05 27 09.1 -0.1
PPLA   Purkeypile          6.37 135             Pn      05 27 10.6 -0.2
TCOL   CIGO, UAF Yank      6.39 110    P        Pn      05 27 10.7 -0.3
       baz=304,SNR=11
TCOL                                   S        Sn      05 28 23.3 -0.6
       baz=304
TCOL   CIGO, UAF Yank      6.39 110             Pn      05 27 10.2 -0.8
COLA   College             6.39 110             Pn      05 27 10.4 -0.6
POKR   Poker Plat Res      6.42 107    P        Pn      05 27 11.3 -0.1
       baz=301,SNR=9.4
POKR                                   S        Sn      05 28 25.4 +0.9
       baz=301
POKR   Poker Plat Res      6.42 107             Pn      05 27 11.3 -0.1
POKR                                            Sn      05 28 24.4 -0.2
TRF    Thorofare Moun      6.49 126             Pn      05 27 12.7 +0.1
CCB    Clear Creek Bu      6.54 112             Pn      05 27 12.7 -0.3
WRH    Wood River Hil      6.54 114             Pn      05 27 12.7 -0.4
FYU    Fort Yukon          6.64  92    Pn       Pn      05 27 13.8 -0.6
BM03   Burnt Mountain      6.67  85             Pn      05 27 14.3 -0.6
MCK    McKinley            6.72 121    P        Pn      05 27 14.3 -1.3
       baz=313
MCK    McKinley            6.72 121             Pn      05 27 14.1 -1.6
IL31                       6.80 109             Pn      05 27 15.8 -0.7
ILAR   Eielson Array       6.80 109    Pn       Pn      05 27 16.1 -0.4
       comp=E,6.7nm,0.3s,baz=304,slow=14,SNR=436
ILAR                                   Sn       Sn      05 28 31.9 -2.1
       comp=E,0.6nm,0.3s,baz=301,slow=21,SNR=4.6
ILAR                                   Lg       Lg      05 29 16.4
       baz=305,slow=30,SNR=5.7
PRP    Porcupine Dome      6.93 101             Pn      05 27 17.3 -1.2
PS08   TAPS Pump Stn8      6.95 110             Pn      05 27 18.3 -0.4
RND    Reindeer            6.98 122             Pn      05 27 18.9 -0.2
HDA    Harding Lake        6.98 112    P        Pn      05 27 18.6 -0.5
       baz=306,SNR=14
HDA                                    S        Sn      05 28 35.6 -2.8
       baz=306
HDA                                    S        Sn      05 28 35.6 -2.8
       baz=306
HDA    Harding Lake        6.98 112             Pn      05 27 18.6 -0.5
SKT    Skwentna            7.30 137             Pn      05 27 23.7 +0.1
WAT2   Susitna Watana      7.38 124             Pn      05 27 25.0 +0.3
WAT1   Susitna Watana      7.49 125             Pn      05 27 26.5 +0.4
STLK   Strandline Lak      7.64 140             Pn      05 27 28.0 -0.1
DHY    Denali Highway      7.69 121             Pn      05 27 28.7 -0.3
WAT6   Susitna Watana      7.92 124             Pn      05 27 31.7 -0.5
SCRK   Sand Creek          8.29 109    P        Pn      05 27 36.5 -0.7
       baz=305,SNR=8.5
SCRK                                   S        Sn      05 29 07.4 -3.4
       baz=305
SCRK   Sand Creek          8.29 109             Pn      05 27 36.4 -0.8
PAX    Paxson              8.40 117             Pn      05 27 37.1 -1.5
DOT    Dot Lake            8.46 111             Pn      05 27 38.1 -1.2
KNK    Knik Glacier        8.61 131    Pn       Pn      05 27 43.5 +2.1
K27K   Chicken             8.96 105    P        Pn      05 27 45.5 -0.6
       baz=304
K27K                                   S        Sn      05 29 24.7 -2.3
       baz=304
INK    Inuvik             10.65  74    Pn       Pn      05 28 08.0 -1.2
       comp=E,0.5nm,0.3s,baz=103,slow=5.9,SNR=12
INK    Inuvik             10.65  74             Pn      05 28 08.4 -0.9
YKA    Yellowknife Ar     20.19  82    P        P       05 30 11.4 +0.2
       comp=E,2.8nm,0.9s,baz=307,slow=9.8,SNR=41
RES    Resolute Bay       21.46  42    LR       LR      05 40 27.7
       comp=E,120nm,18.3s,baz=244,slow=42
PDAR   Pinedale Array     37.21 105    P        P       05 32 49.9 +1.5
       comp=E,0.5nm,0.6s,baz=322,slow=6.8,SNR=6.6
NVAR   Mina Array Bea     37.95 118    P        P       05 32 56.5 +1.9
       comp=E,0.7nm,0.7s,baz=315,slow=8.8,SNR=4.9
ZALV   Zalesovo Beam      48.91 314    P        P       05 34 23.0 +0.6
       comp=E,0.9nm,0.5s,baz=45,slow=4.3,SNR=1.7
TXAR   Lajitas Array      51.31 108    P        P       05 34 41.8 +0.8
       comp=E,1.2nm,0.7s,baz=334,slow=7.0,SNR=9.5
AKASG  Malin Array Be     61.58 352    P        P       05 35 53.7  0.0
       comp=E,0.5nm,0.5s,baz=7.1,slow=6.5,SNR=2.5
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*NEIC **21** 05:31:58.6±1.2, 47°.43N±0°.07×70°.22W±0°.06, h13^{km}±7^{km}, Error ellipse: s-maj=10.2km s-min=5.4km az=191.0*

*ANF **21** 05:31:59.4±0.3, 47°.35N×70°.25W, h13^{km}±1^{km}, ML3.7/55, Error ellipse: s-maj=2.4km s-min=1.3km az=2.0*

*OTT **21** 05:31:59.6±0.1, 47°.37N×70°.22W, h15^{km}, MN3.7/32*

OTT 14km west from La Pocatiere, Qc. Felt Charlevoix Seismic Zone, Qc. Felt at La Pocatiere, St-aime-des-lacs, L''Islet, Mont-Carmel, Riviere-Ouelle, Saint-Roch-des-Aulnaies, Baie St-Paul, Lac Beauport, Petite riviere st francois, Qc.

*WES **21** 05:32:00.2, 47°.31N×70°.24W, h13^{km}*

ISC 21 05:31:58.9±0.8**, 47°.38N**±0°.02×**70°.22W**±0°.02**, h17**^{km}±5^{km}**, n155,** σ**0**^{s}**88**/195**, 4C-3D, Southern Quebec**

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Code   Station Name         Δ°  AZ°    Phase ID          Time     Res
                                       Op       ISC      h  m  s  ISC
A11    Saint Roch-des      0.13 172  ⇑PG        Pg      05 32 02.9 +0.1
A11                                    SG       Sg      05 32 05.3 -0.2
A11                                    Trac             05 32 05.3
       comp=Z,7μm,0.1s
A54    Misere              0.15 303  ⇑PG        Pb      05 32 03.5 +0.1
A54                                    SG       Sg      05 32 06.1 +0.1
A54                                    Trac             05 32 06.4
       comp=Z,1μm,0.1s
D61A   St Aubert, Com      0.17 172    PG       Pg      05 32 03.6 +0.2
D61A                                   SG       Sg      05 32 06.4  0.0
D61A   St Aubert, Com      0.17 172    P        Pg      05 32 03.4  0.0
       baz=342,SNR=1000
D61A                                   S        Sg      05 32 06.0 -0.4
       baz=342
A16    Riviere Ouelle      0.18  57  ⇓PG        Pg      05 32 03.5 +0.1
A16                                    Trac     Sg      05 32 06.4 -0.1
       comp=Z,4μm,0.1s
A16                                    SG       Sg      05 32 06.4 -0.1
LMQ    La Malbaie          0.19 338  ⇑PG        Pb      05 32 03.9  0.0
LMQ                                    SG       Sg      05 32 06.9 +0.1
LMQ                                    Trac             05 32 06.9
       comp=Z,3μm,0.2s
A61    Sainte Mathild      0.33  16  ⇓PG        Pg      05 32 06.2 +0.2
A61                                    SG       Sg      05 32 10.9 +0.1
A61                                    Trac             05 32 11.2
       comp=Z,1μm,0.1s
A21    Saint Andre         0.49  48  ⇓PG        Pg      05 32 08.8 +0.1
A21                                    SG       Sg      05 32 15.5 +0.1
A21                                    Trac             05 32 15.6
       comp=Z,2μm,0.2s
A64    Saint Simeon        0.51  26  ⇑PG        Pg      05 32 08.8 -0.3
A64                                    SG       Sg      05 32 15.8 -0.1
A64                                    Trac             05 32 16.1
       comp=Z,720nm,0.1s
D60A   Saint Jean D’O      0.66 226    PG       Pg      05 32 11.4 -0.5
D60A                                   SG       Sg      05 32 20.7 -0.1
D60A                                   Trac             05 32 20.8
       comp=Z,395nm,0.1s
D60A   Saint Jean D’O      0.66 226    P        Pg      05 32 11.2 -0.8
       baz=49,SNR=1000
D60A                                   S        Sg      05 32 20.5 -0.3
       baz=49
D62A   Allapoint, All      0.85 110    P        Pg      05 32 15.7 +0.2
       baz=286
D62A                                   S        Sg      05 32 27.1 +0.3
       baz=286
D62A   Allapoint, All      0.85 110             Pg      05 32 15.6 +0.2
D62A   Allapoint, All      0.85 110    P                05 32 15.3
       baz=290
D62A                                   P                05 32 15.3
       baz=290
D62A                                   S                05 32 27.2
       baz=290
D62A                                   S                05 32 27.2
       baz=290
QCQ    Quebec              0.93 231    PG       Pb      05 32 16.0 -0.6
QCQ                                    SG       Sb      05 32 29.0 +0.4
QCQ                                    Trac             05 32 29.5
       comp=Z,371nm,0.2s
E61A   Lac Etchemin        0.96 191    PG       Pb      05 32 17.0 -0.1
E61A                                   SG       Sb      05 32 29.7 +0.2
E61A                                   Trac             05 32 35.8
       comp=Z,318nm,0.1s
E61A   Lac Etchemin        0.96 191    P        Pb      05 32 16.8 -0.3
       baz=11,SNR=723
E61A                                   S        Sb      05 32 29.6 +0.1
       baz=11
D59A   Saint-Raymond       1.16 252    P        Pn      05 32 19.7 -0.6
       baz=74,SNR=120
D59A                                   S        Sb      05 32 35.2  0.0
       baz=74
E60A   Ste Agathe de       1.31 220    P        Pn      05 32 22.2 -0.1
       baz=41,SNR=399
E60A                                   S        Sb      05 32 40.2 +0.7
       baz=41
D63A   Stockholm           1.48 102    P        Pb      05 32 26.1 +0.1
       baz=281,SNR=20
F61A   St Evariste         1.50 201    P        Pn      05 32 25.6 +0.6
       baz=21,SNR=662
E63A   Oxbow               1.56 127    P        Pb      05 32 26.6 -0.7
       baz=306
E63A                                   S        Sb      05 32 47.3 +0.6
       baz=306
E63A   Oxbow               1.56 127             Pn      05 32 26.4 +0.6
E63A   Oxbow               1.56 127    P                05 32 26.5
       baz=309,SNR=403
E63A                                   P                05 32 26.5
       baz=309,SNR=403
E63A                                   Sb               05 32 47.4
       baz=309
E63A                                   Sb               05 32 47.4
       baz=309
PQI    Presque Isle        1.67 114    Pn       Pb      05 32 28.6 -0.5
LATQ   La Tuque            1.74 271    PN       Pn      05 32 29.4 +1.1
LATQ                                   SN       Sb      05 32 51.1 -0.8
LATQ                                   Trac             05 32 58.7
       comp=Z,475nm,0.1s
LATQ   La Tuque            1.74 271    P        Pn      05 32 29.3 +1.1
       baz=92,SNR=148
LATQ   La Tuque            1.74 271    Pn       Pn      05 32 29.2 +0.9
E59A   St. Maurice         1.81 241    P        Pn      05 32 30.1 +1.0
       baz=61,SNR=22
D58A   Chemin du LacG      1.83 262    P        Pn      05 32 30.4 +0.8
       baz=82,SNR=1000
D58A                                   S        Sb      05 32 53.7 -0.9
       baz=82
F60A   Warwick             1.84 221    P        Pn      05 32 30.4 +0.7
       baz=41,SNR=380
F63A   Nahmakanta, Br      1.84 155    P        Pn      05 32 30.8 +1.1
       baz=334,SNR=94
F63A                                   S        Sb      05 32 54.4 -0.5
       baz=334
F63A   Nahmakanta, Br      1.84 155             Pb      05 32 31.1 -1.0
F63A   Nahmakanta, Br      1.84 155    P                05 32 30.9
       baz=336,SNR=43
F63A                                   P                05 32 30.9
       baz=336,SNR=43
DPQ    Saint Jean          1.88 249    PN       Pn      05 32 31.1 +0.9
DPQ                                    SN       Sn      05 32 54.5 +1.0
DPQ                                    Trac             05 33 01.6
       comp=Z,173nm,0.1s
E64A   Bridgewater         1.90 119    P        Pn      05 32 31.4 +0.9
       baz=299
E64A                                   S        Sb      05 32 56.1 -0.4
       baz=299
F64A   Sherman             1.99 139    P        Pn      05 32 32.6 +0.8
       baz=319,SNR=143
F64A   Sherman             1.99 139             Pn      05 32 32.5 +0.8
F64A   Sherman             1.99 139    P                05 32 32.6
       baz=320,SNR=120
F64A                                   P                05 32 32.6
       baz=320,SNR=120
DMCQ   Dolbeau-Mistas      2.01 323    PN       Pn      05 32 33.1 +1.0
DMCQ                                   SN       Sn      05 32 58.0 +1.2
DMCQ                                   LG       Lg      05 33 02.4
DMCQ                                   Trac             05 33 04.9
       comp=Z,100nm,0.1s
G62A   West of Eustis      2.17 186    P        Pn      05 32 35.0 +0.9
       baz=5.4,SNR=219
G62A   West of Eustis      2.17 186             Pn      05 32 34.0 -0.2
G62A                                   IAmb_Lg          05 33 10.4
       comp=Z,81nm,0.7s
G62A   West of Eustis      2.17 186    P                05 32 35.3
       baz=5.7,SNR=211
G62A                                   P                05 32 35.3
       baz=5.7,SNR=211
PKME   Peaks-Kenny Pk      2.21 163    PN       Pn      05 32 35.5 +0.8
PKME                                   SN       Sn      05 33 01.8 +0.3
PKME                                   LG       Lg      05 33 07.7
PKME                                   Trac             05 33 08.6
       comp=Z,42nm,0.1s
PKME   Peaks-Kenny Pk      2.21 163    P        Pn      05 32 35.5 +0.8
       baz=343,SNR=5.5
PKME   Peaks-Kenny Pk      2.21 163    Pn       Pn      05 32 35.5 +0.8
STUQ   Sainte-Ursule       2.24 242    PN       Pn      05 32 36.5 +1.3
STUQ                                   SN       Sn      05 33 02.4  0.0
STUQ                                   LG       Lg      05 33 09.0
STUQ                                   Trac             05 33 11.4
       comp=Z,97nm,0.1s
G61A   St-Isidore-de-      2.28 204    P        Pn      05 32 37.1 +1.4
       baz=23,SNR=464
G63A   Kingsbury           2.30 169    P        Pn      05 32 37.2 +1.2
       baz=349,SNR=47
G63A                                   S        Sn      05 33 05.0 +1.1
       baz=349
E58A   La Victoria         2.32 246    P        Pn      05 32 36.6 +0.3
       baz=65,SNR=437
F59A   Saint Guilaume      2.33 230    P        Pn      05 32 37.5 +1.1
       baz=49,SNR=34
G64A   Maxfield            2.35 154    P        Pn      05 32 37.8 +1.1
       baz=334,SNR=28
CNQ    Baie Comeau         2.40  36    PN       Pn      05 32 38.0 +0.5
CNQ                                    SN       Sn      05 33 06.9 +0.5
CNQ                                    Trac             05 33 15.2
       comp=Z,102nm,0.1s
MOQ    Mont Orford         2.50 215    PN       Pn      05 32 40.0 +1.2
MOQ                                    SN       Sn      05 33 09.0 +0.2
MOQ                                    Trac             05 33 17.7
       comp=Z,50nm,0.1s
MOQ    Mont Orford         2.50 215             Pn      05 32 39.8 +1.0
G60A   Masonville          2.71 214    P        Pn      05 32 42.8 +1.2
       baz=32,SNR=290
HANN   Hanwell             2.81 121    PN       Pn      05 32 43.7 +0.7
HANN                                   SN       Sn      05 33 16.3 -0.1
HANN                                   LG       Lg      05 33 28.4
HANN                                   Trac             05 33 31.8
       comp=Z,72nm,0.2s
H64A   Troy                2.82 165    P        Pn      05 32 44.1 +1.0
       baz=346,SNR=40
BATG   Bathurst New B      2.83  90    PN       Pn      05 32 43.7 +0.4
BATG                                   SN       Sn      05 33 16.6 -0.5
BATG                                   Trac             05 33 25.8
       comp=Z,36nm,0.1s
BATG                                   LG       Lg      05 33 27.5
BATG   Bathurst New B      2.83  90             Pn      05 32 43.3  0.0
BATG                                   IAmb_Lg          05 33 31.4
       comp=Z,64nm,1.0s
WVL    Waterville          2.84 172    Pn       Pn      05 32 44.0 +0.7
WVL                                    IAmb_Lg          05 33 32.7
       comp=Z,68nm,0.8s
G65A   Princeton           2.85 139    P        Pn      05 32 43.8 +0.3
       baz=320
G65A   Princeton           2.85 139    Pn       Pn      05 32 43.4 -0.2
G65A                                   IAmb_Lg          05 33 33.9
       comp=Z,62nm,1.1s
G65A   Princeton           2.85 139    P                05 32 43.8
       baz=321,SNR=27
G65A                                   P                05 32 43.8
       baz=321,SNR=27
H62A   Milan               2.88 193    P        Pn      05 32 44.8 +0.9
       baz=13,SNR=54
H62A   Milan               2.88 193             Pn      05 32 45.0 +1.0
H62A                                   IAmb_Lg          05 33 31.1
       comp=Z,57nm,0.7s
H62A   Milan               2.88 193    P                05 32 45.1
       baz=13,SNR=18
H62A                                   P                05 32 45.1
       baz=13,SNR=18
ICQ    Pointe Anglais      2.91  41    PN       Pn      05 32 44.9 +0.6
ICQ                                    SN       Sn      05 33 19.0 +0.1
ICQ                                    LG       Lg      05 33 29.3
ICQ                                    Trac             05 33 30.8
       comp=Z,72nm,0.1s
MNTQ   Montreal, Queb      3.01 233    PN       Pn      05 32 46.3 +0.6
MNTQ                                   SN       Sn      05 33 21.4 +0.1
MNTQ                                   Trac             05 33 31.7
       comp=Z,113nm,0.2s
MNTQ                                   LG       Lg      05 33 33.5
H65A   Eastbrook           3.01 152    P        Pn      05 32 46.3 +0.6
       baz=333,SNR=19
G59A   Clarenceville       3.08 223    P        Pn      05 32 47.5 +0.8
       baz=41,SNR=29
H61A   Lyndonville         3.08 203    P        Pn      05 32 47.7 +1.0
       baz=22,SNR=41
D56A   ZEC Mazanza, M      3.11 266    P        Pn      05 32 46.5 -0.6
       baz=84,SNR=34
TRQ    Mont Tremblant      3.19 250    PN       Pn      05 32 48.7 +0.4
TRQ                                    SN       Sn      05 33 25.9  0.0
TRQ                                    LG       Lg      05 33 38.3
TRQ                                    Trac             05 33 45.5
       comp=Z,50nm,0.2s
TRQ    Mont Tremblant      3.19 250             Pn      05 32 48.5 +0.2
GGN    Saint George        3.25 133    PN       Pn      05 32 49.3 +0.2
GGN                                    SN       Sn      05 33 26.6 -0.7
GGN                                    Trac             05 33 29.4
       comp=Z,56nm,0.1s
GGN    Saint George        3.25 133    Pn       Pn      05 32 49.7 +0.6
GGN                                    IAmb_Lg          05 33 49.1
       comp=Z,45nm,0.8s
EMMW   East Machias        3.29 143    Pn       Pn      05 32 49.9 +0.3
H66A   Whiting             3.29 141    P        Pn      05 32 49.8 +0.2
       baz=322
H60A   Morristown          3.30 212    P        Pn      05 32 50.8 +1.1
       baz=31,SNR=45
MNQ    Manicouagan         3.30  16    PN       Pn      05 32 50.6 +0.8
MNQ                                    SN       Sn      05 33 28.3 -0.3
MNQ                                    Trac             05 33 45.8
       comp=Z,86nm,0.2s
I63A   Otisfield           3.33 184    P        Pn      05 32 51.3 +1.1
       baz=4.1,SNR=33
I63A   Otisfield           3.33 184    Pn       Pn      05 32 52.3 +2.1
LBNH   Lisbon              3.35 201    PN       Pn      05 32 51.3 +0.8
LBNH                                   SN       Sn      05 33 29.6 -0.3
LBNH                                   LG       Lg      05 33 43.5
LBNH                                   Trac             05 33 45.2
       comp=Z,52nm,0.2s
LBNH   Lisbon              3.35 201    P        Pn      05 32 51.4 +0.8
       baz=20,SNR=21
LBNH   Lisbon              3.35 201    Pn       Pn      05 32 51.3 +0.8
LBNH                                   IAmb_Lg          05 33 51.0
       comp=Z,48nm,0.8s
E56A   St. Veronique       3.40 258    P        Pn      05 32 50.7 -0.4
       baz=75
FRNY   Flat Rock           3.45 224    PN       Pn      05 32 52.4 +0.6
FRNY                                   SN       Sn      05 33 32.6 +0.3
FRNY                                   Trac             05 33 45.5
       comp=Z,29nm,0.1s
FRNY   Flat Rock           3.45 224             Pn      05 32 52.5 +0.7
FRNY   Flat Rock           3.45 224    P                05 32 52.3
       baz=42,SNR=41
F57A   Harrington          3.46 245    P        Pn      05 32 52.7 +0.9
       baz=62,SNR=90
G58A   Ormstown            3.47 231    P        Pn      05 32 52.2 +0.2
       baz=49,SNR=64
I64A   Boothbay            3.48 173    P        Pn      05 32 53.0 +0.8
       baz=353,SNR=30
VT1    Waterbury           3.52 211             Pn      05 32 55.0 +2.3
VT1                                    IAmb_Lg          05 33 59.0
       comp=Z,44nm,0.7s
I62A   Tamworth            3.59 193    P        Pn      05 32 54.5 +0.8
       baz=12,SNR=21
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I62A	Tamworth	3.59	193	Pn	Pn	05 32 55.0	+1.3
I62A				IAmb_Lg		05 33 58.5	
	comp=Z,56nm,0.8s						
I62A	Tamworth	3.59	193	P		05 32 54.6	
	baz=12,SNR=22						
I62A				P		05 32 54.6	
	baz=12,SNR=22						
HKNB	Havelock Quarr	3.62	111	PN	Pn	05 32 54.4	+0.3
HKNB				SN	Sn	05 33 35.3	-1.0
HKNB				Trac		05 33 37.8	
	comp=Z,55nm,0.2s						
HKNB				LG	Lg	05 33 54.4	
H59A	Cadyville	3.65	223	P	Pn	05 32 55.5	+1.0
	baz=41,SNR=52						
ALFO	Alfred	3.66	243	PN	Pn	05 32 55.3	+0.6
ALFO				SN	Sn	05 33 37.4	0.0
ALFO				LG	Lg	05 33 53.4	
ALFO				Trac		05 33 53.7	
	comp=Z,18nm,0.1s						
SMQ	Clarke City	3.68	38	PN	Pn	05 32 55.4	+0.5
SMQ				SN	Sn	05 33 37.2	-0.7
SMQ				Trac		05 33 57.3	
	comp=Z,34nm,0.1s						
WCNB	Wards Creek	3.69	116	PN	Pn	05 32 55.3	+0.2
WCNB				SN	Sn	05 33 37.4	-0.6
WCNB				Trac		05 33 41.1	
	comp=Z,5.6nm,0.1s						
WCNB				LG	Lg	05 33 55.3	
I61A	Oroboro, Fairl	3.71	203	P	Pn	05 32 56.5	+1.0
	baz=22,SNR=43						
ELNB	Elgin, New Bru	3.81	112	PN	Pn	05 32 57.3	+0.5
ELNB				SN	Sn	05 33 40.4	-0.7
ELNB				Trac		05 33 43.2	
	comp=Z,5.8nm,0.1s						
SVNB	Stilesville Qu	3.87	106	PN	Pn	05 32 57.9	+0.4
SVNB				Trac		05 34 11.3	
	comp=Z,52nm,0.2s						
BMNY	Brushton-Moira	3.91	231	P		05 32 58.5	
	baz=48,SNR=30						
GRQ	Grand Remous	3.93	261	PN	Pn	05 32 58.1	-0.3
GRQ				SN	Sn	05 33 43.1	-1.0
GRQ				Trac		05 34 03.2	
	comp=Z,83nm,0.3s						
MCVT	Middlebury Col	3.93	211	P		05 32 59.7	
	baz=29,SNR=25						
HNH	Hanover	3.94	202	Pn	Pn	05 32 59.6	+1.0
HNH				IAmb_Lg		05 34 04.0	
	comp=Z,40nm,0.8s						
VABQ	Val Des Bois	3.99	250	PN	Pn	05 32 59.1	-0.1
VABQ				SN	Sn	05 33 45.2	-0.3
VABQ				LG	Lg	05 34 04.8	
VABQ				Trac		05 34 06.5	
	comp=Z,48nm,0.2s						
GAC	Glen Almond	3.99	247	PN	Pn	05 32 59.5	+0.3
GAC				PN	Pb	05 33 00.1	-8.7
GAC				SN	Sn	05 33 44.7	-0.9
GAC				SN	Sb	05 33 44.8	-12
GAC				LG	Lg	05 34 02.5	
GAC				Trac		05 34 03.0	
	comp=Z,26nm,0.2s						
GAC				Trac		05 34 03.1	
	comp=Z,68nm,0.2s						
G57A	Newington	4.01	237	P	Pn	05 33 00.7	+1.2
	baz=54						
FFD	Franklin Falls	4.03	195		Pn	05 33 00.8	+1.0
LMN	Caledonia Moun	4.03	110	PN	Pn	05 32 59.8	0.0
LMN				SN	Sn	05 33 44.8	-1.8
LMN				Trac		05 33 47.5	
	comp=Z,11nm,0.1s						
LMN	Caledonia Moun	4.03	110	Pn	Pn	05 33 00.3	+0.5
H58A	Gabriels	4.05	224	P	Pn	05 33 00.6	+0.6
	baz=42,SNR=30						
LONY	Lake Ozonia	4.10	229	P	Pn	05 33 01.2	+0.4
	baz=47,SNR=21						
LONY	Lake Ozonia	4.10	229		Pn	05 33 00.9	+0.2
LONY				IAmb_Lg		05 34 09.6	
	comp=Z,50nm,1.1s						
ORIO	Orleans, Innes	4.13	244	PN	Pn	05 33 05.4	+4.3
ORIO				Trac		05 34 10.4	
	comp=Z,80nm,0.3s						
I60A	Shoreham	4.13	212	P	Pn	05 33 01.8	+0.6
	baz=31,SNR=15						
J63A	Strafford	4.14	189	P	Pn	05 33 02.5	+1.3
	baz=8.0,SNR=25						
J62A	Henniker	4.30	196	P	Pn	05 33 04.6	+1.1
	baz=15,SNR=17						
J61A	Chester	4.35	203	P	Pn	05 33 05.2	+1.0
	baz=22,SNR=9.4						
J61A	Chester	4.35	203	P		05 33 05.1	
	baz=21,SNR=10						
J61A				P		05 33 05.1	
	baz=21,SNR=10						
NCB	Newcomb	4.41	221		Pn	05 33 05.1	+0.1
NCB	Newcomb	4.41	221	P		05 33 05.3	
	baz=38,SNR=29						
KB1O	Rock site, Kin	4.57	247	PN	Pn	05 33 08.1	+0.9
KB1O				Trac		05 34 27.3	
	comp=Z,33nm,0.2s						
ACCN	Adirondack Com	4.67	213	Pn	Pn	05 33 08.9	+0.3
K63A	Dunstable	4.78	192	Pn	Pn	05 33 10.2	+0.2
LSQQ	Lebel-sur-Quev	4.82	293	PN	Pn	05 33 09.7	-1.0
LSQQ				Trac		05 34 19.7	
	comp=Z,2.5nm,0.0s						
K62A	Royalston	4.92	198	P	Pn	05 33 12.7	+0.7
	baz=16						
K62A	Royalston	4.92	198	Pn	Pn	05 33 12.9	+0.8
K62A				IAmb_Lg		05 34 40.2	
	comp=Z,31nm,0.8s						
VLDQ	Val d'Or	4.93	281	PN	Pn	05 33 14.0	+1.9
VLDQ				Trac		05 34 43.6	
	comp=Z,15nm,0.2s						
VLDQ	Val d'Or	4.93	281	IAmb_Lg		05 34 42.8	
	comp=Z,35nm,0.8s						
J59A	Piesco	4.94	219	P	Pn	05 33 12.5	+0.2
	baz=36,SNR=11						
J59A	Piesco	4.94	219	Pn	Pn	05 33 12.4	+0.1
J59A	Piesco	4.94	219	P		05 33 13.1	
	baz=36,SNR=9.3						
J59A				P		05 33 13.1	
	baz=36,SNR=9.3						
I58A	Old Forge	4.97	224	P	Pn	05 33 13.4	+0.7
	baz=41,SNR=23						
CRLO	Chalk River	5.10	257	PN	Pn	05 33 12.5	-2.0
CRLO				SN	Sn	05 34 10.3	-2.6
CRLO				Trac		05 34 39.1	
	comp=Z,42nm,0.2s						
I57A	Carthage	5.13	230	P	Pn	05 33 15.5	+0.6
	baz=46						
K61A	Williamstown	5.18	206	P	Pn	05 33 16.5	+1.0
	baz=24,SNR=6.3						
L61B	Northampton	5.22	200	P	Pn	05 33 16.6	+0.4
	baz=19						
TRY	Troy	5.25	209	Pn	Pn	05 33 17.4	+1.0
TRY				IAmb_Lg		05 34 50.2	
	comp=Z,30nm,0.8s						
PLVO	Plevna	5.30	246	Pn	Pn	05 33 17.6	+0.4
PLVO				IAmb_Lg		05 34 44.3	
	comp=Z,38nm,0.8s						
QUA2	Belchertown	5.32	197	IAmb_Lg		05 34 53.9	
	comp=Z,35nm,0.9s						
J58A	Remsen	5.37	223	P	Pn	05 33 19.0	+0.8
	baz=40,SNR=9.0						
J58A	Remsen	5.37	223		Pn	05 33 18.4	+0.2
J58A	Remsen	5.37	223	P		05 33 18.7	
	baz=40,SNR=8.9						
J58A				P		05 33 18.7	
	baz=40,SNR=8.9						
K59A	Cooperstown	5.65	217	P	Pn	05 33 22.4	+0.4
	baz=34,SNR=5.7						
J57A	Williamstown	5.68	228	Pn	Pn	05 33 24.2	+1.8
DELO	Deloro Mine	5.89	244	Pn	Pn	05 33 26.4	+1.0
DELO				IAmb_Lg		05 35 07.8	
	comp=Z,31nm,0.9s						
K58A	Earlville	6.00	222	P	Pn	05 33 27.8	+1.0
	baz=38						
K58A	Earlville	6.00	222	Pn	Pn	05 33 26.7	-0.1
K58A				IAmb_Lg		05 35 08.3	
	comp=Z,33nm,0.9s						
L59A	Walton	6.21	215	IAmb_Lg		05 35 16.7	
	comp=Z,24nm,0.9s						
J56A	Wolcott	6.22	231	Pn	Pn	05 33 31.1	+1.3
J56A				IAmb_Lg		05 35 23.8	
	comp=Z,33nm,0.9s						
WSPT	Westport, CT	6.59	201	IAmb_Lg		05 35 40.4	
	comp=Z,28nm,0.9s						
BINY	Binghamton	6.60	220	Pn	Pn	05 33 36.1	+1.0
SADO	Sadowa	6.73	250	Pn	Pn	05 33 36.3	-0.5
J55A	Hilton	6.75	235	Pn	Pn	05 33 39.4	+2.3
ODNJ	Ogdensburg	7.03	208	IAmb_Lg		05 35 45.0	
	comp=Z,18nm,1.0s						
M58A	Price's Panora	7.48	219	P	Pn	05 33 48.2	+1.0
	baz=35,SNR=5.1						
M57A	Sunshine Farm,	7.80	222	P	Pn	05 33 52.1	+0.5
	baz=37,SNR=7.5						
M57A	Sunshine Farm,	7.80	222		Sb	05 35 49.1	+2.9
N57A	Milroy	8.46	221	P	Pn	05 34 00.8	+0.2
	baz=36,SNR=6.1						
MVL	Millersville	8.60	213	IAmb_Lg		05 36 26.3	
	comp=Z,17nm,1.2s						
N56A	West Decatur	8.68	225	P	Pn	05 34 04.2	+0.6
	baz=39						
DRLN	Deer Lake	8.69	73	Pn	Pn	05 34 03.5	-0.1
ERPA	Erie	8.71	236	IAmb_Lg		05 36 40.0	
	comp=Z,20nm,0.8s						
M54A	Oil Creek Stat	8.94	232	IAmb_Lg		05 36 39.2	
	comp=Z,20nm,0.8s						
N54A	Moraine State	9.50	231	IAmb_Lg		05 37 01.1	
	comp=Z,15nm,0.8s						

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*IDC **21** 05:48:09.8±3.7, 5°.19S×146°.79E, h94^{km}±32^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.7/30, mbtmp4.1/9, Error ellipse: s-maj=32.0km s-min=14.1km az=112.0*

*NEIC **21** 05:48:12.6±1.5, 5°.36S±0°.10×146°.6E±0°.2, h117^{km}±9^{km}, mb4.3/13, Error ellipse: s-maj=22.6km s-min=13.0km az=75.0*

ISC 21 05:48:10.3±0.8, **5°.21S**±0°.07×**146°.7E**±0°.1, **h100^{km}, n29, σ1^{s}.47**/30, **mb4.1**/10, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.20	174	S	Sn	05 50 01.9	+1.8
	5.8nm,0.3s,baz=345,slow=7.1,SNR=4.8						
PMG	Port Moresby	4.20	174	Pn	Pn	05 49 12.3	+0.1
JAY	Jayapura	6.53	294	P	Pn	05 49 46.5	+2.6
	4.7nm,0.3s,baz=125,slow=5.8,SNR=11						
COEN	Coen	9.35	201	Pn	Pn	05 50 22.6	+0.4
WB0	Warramunga Arr	18.77	219	P	P	05 52 22.4	+0.6
WR0	Warramunga Arr	18.83	218	P	Pn	05 52 23.1	-0.9
WR0				IAmb	IAmb	05 52 23.9	
	comp=Z,12nm,0.8s						
WB2	Warramunga Arr	18.93	218	P	Pn	05 52 24.3	-1.0
WRA	Warramunga Arr	18.94	218	P	Pn	05 52 24.4	-0.9
	comp=Z,2.0nm,0.3s,baz=39,slow=11,SNR=94						
WRA				S	Sn	05 55 57.6	-0.1
	comp=Z,0.0nm,0.3s,baz=37,slow=18,SNR=5.9						
WRA	Warramunga Arr	18.94	218	P	P	05 52 23.5	-0.1
AS31	Alice Springs	22.09	213	P	P	05 52 57.7	+0.1
ASAR	Alice Springs	22.10	213	P	P	05 52 58.3	+0.7
	comp=Z,4.5nm,0.5s,baz=48,slow=8.0,SNR=90						
ASAR	Alice Springs	22.10	213	P	P	05 52 55.6	-1.9
FITZ	Fitzroy Crossi	24.22	236	P	P	05 53 17.4	-0.5
	comp=Z,7.1nm,0.5s,baz=46,slow=8.1,SNR=23						
FITZ	Fitzroy Crossi	24.22	236	P	P	05 53 16.7	-1.2
FITZ				IAmb	IAmb	05 53 19.6	
	comp=Z,6.9nm,0.7s						
ARMA	Armidale	25.50	170	P	P	05 53 30.2	+0.6
ARMA				IAmb	IAmb	05 53 53.1	
	comp=Z,9.9nm,1.2s						
STKA	Stephens Creek	26.95	190	P	P	05 53 41.8	-0.7
	comp=Z,1.1nm,0.6s,baz=0.0,slow=11,SNR=1.9						
STKA	Stephens Creek	26.95	190	IAmb	IAmb	05 53 43.4	
	comp=Z,2.7nm,1.5s						
BBOO	Buckleboo	29.19	199	P	P	05 54 01.8	-0.7
PSA00	Pilbara Seismi	30.67	235	P	P	05 54 15.3	-0.2
PSA00				IAmb	IAmb	05 54 22.2	
	comp=Z,9.3nm,1.1s						
FORT	Forrest	30.88	212	P	P	05 54 17.2	-0.2
VNDA	Vanda	72.71	177	P	P	05 59 27.8	+0.8
	comp=Z,1.3nm,1.1s,baz=328,slow=5.9,SNR=5.7						
VNDA	Vanda	72.71	177	P	P	05 59 26.0	-0.9
VNDA				IAmb	IAmb	05 59 28.7	
	comp=Z,10nm,1.5s						
MKAR	Makanchi Array	76.69	320	P	P	05 59 50.6	+0.1
	comp=Z,0.2nm,0.5s,baz=99,slow=8.0,SNR=4.8						
MKAR				pP	pP	06 00 10.3	-5.3
	comp=Z,0.3nm,0.5s,baz=92,slow=7.8,SNR=6.4						
MKAR	Makanchi Array	76.69	320	P	P	05 59 50.8	+0.3
ZALV	Zalesovo Beam	78.18	328	P	P	05 59 58.1	-0.5
	comp=Z,0.6nm,0.5s,baz=118,slow=9.2,SNR=3.6						
IMAR	Indian Mountai	82.87	21	P	P	06 00 25.9	+2.5
CCB	Clear Creek Bu	84.47	23	P	P	06 00 32.5	+0.9
QSPA	South Pole Qui	84.75	180	P	P	06 00 32.8	-0.4
QSPA				IAmb	IAmb	06 00 40.5	
	comp=Z,5.4nm,1.3s						
ILAR	Eielson Array	84.89	23	P	P	06 00 34.6	+0.9
	comp=Z,1.5nm,0.6s,baz=252,slow=5.0,SNR=30						

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*OSPL **21** 05:49:57.5±1.9, 18°.42N×67°.50W, h142^{km}±18^{km}, ML3.3*

*RSPR **21** 05:49:57.3, 18°.42N×67°.72W, h123^{km}±1^{km}, MD3.7/11*

*NEIC **21** 05:49:58.1±1.4, 18°.5N±0°.1×67°.69W±0°.06, h116^{km}±7^{km}, Error ellipse: s-maj=18.5km s-min=8.0km az=193.0*

ISC 21 05:49:59.3±1.2, **18°.56N**±0°.08×**67°.69W**±0°.04, **h100^{km}, n52, σ1^{s}.07**/61, **13C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.56	100	⇑eP	Pn	05 50 16.1	+0.7
AGPR	Aguadilla, PR	0.56	100		Pn	05 50 16.1	+0.7
AGPR					Sn	05 50 30.4	+2.8
AGPR	Aguadilla, PR	0.56	100	IAML		05 50 31.1	
	comp=N,1μm,0.5s						
AGPR				IAML		05 50 31.2	
	comp=E,2μm,0.3s						
AGPR	Aguadilla, PR	0.56	100	i P	Pn	05 50 16.2	+0.7
AGPR				eS	Sn	05 50 30.5	+2.8
AGPR				IAML		05 50 31.1	
	comp=Z,673nm,0.2s						
MPR	Mayaguez	0.63	124		Pn	05 50 16.2	+0.1
LSP	Las Mesas	0.69	124	⇑eP	Pn	05 50 16.6	0.0
LSP	Las Mesas	0.69	124		Pn	05 50 16.6	0.0
CRPR	Cabo Rojo, PR	0.78	135	⇑eP	Pn	05 50 16.3	-1.2
CRPR	Cabo Rojo, PR	0.78	135	eS	Sn	05 50 31.6	+0.5
CRPR	Cabo Rojo, PR	0.78	135		Pn	05 50 16.3	-1.2
CRPR					Sn	05 50 31.6	+0.5
MLPR	Magueyes Islan	0.85	134		Pn	05 50 15.7	-2.4
MLPR				IAML		05 50 31.1	
	comp=N,310nm,0.5s						
AOPR	Arecibo Observ	0.91	103	⇑eP	Pn	05 50 18.6	-0.2
AOPR	Arecibo Observ	0.91	103	eS	Sn	05 50 34.7	+1.2
AOPR	Arecibo Observ	0.91	103		Pn	05 50 18.6	-0.2
AOPR					Sn	05 50 34.7	+1.2
AOPR	Arecibo Observ	0.91	103	IAML		05 50 37.9	
	comp=N,988nm,0.3s						
EMPR	Esperanza - Ma	1.10	94	⇑eP	Pn	05 50 20.9	+0.1
EMPR	Esperanza - Ma	1.10	94	eS	Sn	05 50 38.6	+1.5
EMPR	Esperanza - Ma	1.10	94		Pn	05 50 20.9	+0.1
EMPR					Sn	05 50 38.6	+1.5
EMPR	Esperanza - Ma	1.10	94	IAML		05 50 40.1	
	comp=N,288nm,0.3s						
EMPR				IAML		05 50 41.9	
	comp=E,308nm,0.3s						
OBIP	Obispado Ponce	1.15	116	⇑eP	Pn	05 50 20.3	-1.1
OBIP	Obispado Ponce	1.15	116	eS	Sn	05 50 39.0	+0.9
OBIP	Obispado Ponce	1.15	116		Pn	05 50 20.3	-1.1
OBIP					Sn	05 50 39.0	+0.9
OBIP	Obispado Ponce	1.15	116	IAML		05 50 40.6	
	comp=N,223nm,0.2s						
CELP	Cerrillos	1.16	114	⇑eP	Pn	05 50 20.6	-0.9
CELP	Cerrillos	1.16	114	eS	Sn	05 50 39.1	+0.8
CELP	Cerrillos	1.16	114		Pn	05 50 20.6	-0.9
CELP					Sn	05 50 39.1	+0.8
ICMP	Isla Caja de M	1.29	121	⇑eP	Pn	05 50 21.6	-1.4
ICMP	Isla Caja de M	1.29	121		Pn	05 50 21.6	-1.4
GCPR	Guaynabo City	1.54	99	⇑eP	Pn	05 50 24.9	-1.1
GCPR	Guaynabo City	1.54	99		Pn	05 50 24.9	-1.1
IGPR	InterUniversit	1.62	111	⇑eP	Pn	05 50 26.1	-0.9
IGPR	InterUniversit	1.62	111	eS	Sn	05 50 48.5	+0.5
IGPR	InterUniversit	1.62	111		Pn	05 50 26.6	-0.4
IGPR				IAML		05 50 52.7	
	comp=E,264nm,0.3s						
DR12	Loma Pena Alta	1.62	278		Pn	05 50 26.7	-0.4
PDPR	Patillas Dam,	1.67	109		Pn	05 50 26.5	-1.2
PDPR				IAML		05 50 51.2	
	comp=E,158nm,0.6s						
CBYP	Canovanas	1.76	99	⇑eP	Pn	05 50 27.8	-1.1
CBYP	Canovanas	1.76	99	eS	Sn	05 50 51.5	0.0
CBYP	Canovanas	1.76	99		Pn	05 50 27.8	-1.1
CBYP					Sn	05 50 51.5	0.0
HUMP	Col San Antoni	1.80	103	⇑eP	Pn	05 50 28.3	-0.9
HUMP	Col San Antoni	1.80	103	eS	Sn	05 50 52.2	+0.1
HUMP	Col San Antoni	1.80	103		Pn	05 50 28.3	-0.9
HUMP					Sn	05 50 52.2	+0.1
MTP	Monte Pirata	2.08	102	⇑eP	Pn	05 50 32.1	-0.8
MTP	Monte Pirata	2.08	102	eS	Sn	05 50 59.0	+0.4
MTP	Monte Pirata	2.08	102		Pn	05 50 32.1	-0.8
MTP					Sn	05 50 59.0	+0.4
MTP	Monte Pirata	2.08	102	IAML		05 51 02.5	
	comp=E,133nm,0.4s						
MTP				IAML		05 51 04.0	
	comp=N,108nm,0.2s						
SDD	Santo Domingo	2.11	268	i P	Pn	05 50 33.8	+0.5
SDD				eS	Sn	05 50 59.7	+0.3
SC01	Santiago de lo	3.00	287		Pn	05 50 44.9	-0.2
SC01	Santiago de lo	3.00	287	i P	Pn	05 50 45.3	+0.3
SC01				eS	Sn	05 51 21.3	+0.9
SC01				IAML		05 51 36.6	
	comp=Z,63nm,0.8s						
SDDR	Presa de Saban	3.44	278		Pn	05 50 50.7	-0.2
SDDR				IAML		05 51 43.8	
	comp=Z,61nm,0.5s						
SDDR				IAML		05 51 44.1	
	comp=Z,50nm,0.5s						
SDDR	Presa de Saban	3.44	278	i P	Pn	05 50 51.5	+0.6
SDDR				eS	Sn	05 51 31.4	+0.6
SDDR				IAML		05 51 44.1	
	comp=Z,22nm,0.3s						
GRTK	Grand Turk	4.37	313	Pn	Pn	05 51 02.0	-1.5
GRTK				IAML		05 51 52.2	
	comp=Z,68nm,0.3s						
GRTK				IAML		05 52 08.1	
	comp=Z,72nm,2.8s						
GRTK	Grand Turk	4.37	313	i P	Pn	05 51 02.3	-1.1
GRTK				eS	Sn	05 51 51.3	-2.0
GRTK				IAML		05 51 54.8	
	comp=Z,22nm,0.7s						

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*IDC **21** 05:52:20.8±2.0, 3°.43S×140°.81E, h0^{km}, mb3.7/3, mb1 4.2/4, mb1mx3.8/23, mbtmp4.0/4, ML4.4/1, MS3.9/2, Ms1 3.9/2, ms1mx3.0/42, Error ellipse: s-maj=49.9km s-min=11.0km az=93.0*

*NEIC **21** 05:52:28.9±0.8, 3°.80S±0°.10×140°.77E±0°.08, h46^{km}±24^{km}, mb4.1/8, Error ellipse: s-maj=14.5km s-min=10.1km az=155.0*

ISC 21 05:52:21.6±0.9, **3°.41S**±0°.08×**140°.9E**±0°.1, **h10^{km}, n19, σ1^{s}.11**/17, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.92	347	Pg	Pg	05 52 38.5	-0.7
	25nm,0.3s,baz=178,slow=11,SNR=27						
JAY				Lg	Lg	05 52 50.7	
	94nm,0.3s,baz=84,slow=19,SNR=13						
PMG	Port Moresby	8.61	134	Pn	Pn	05 54 26.9	+0.7
COEN	Coen	10.71	168	Pn	Pn	05 54 56.6	+1.4
MTN	Manton Dam	13.46	225		Pn	05 55 33.2	+0.4
WB0	Warramunga Arr	17.45	201	Pn	Pn	05 56 23.8	-1.5
WB0				IAmb	IAmb	05 56 42.1	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	17.58	200		Pn	05 56 25.9	-0.9
WR0				IAmb	IAmb	05 56 33.3	
	comp=Z,14nm,1.1s						
WB2	Warramunga Arr	17.63	201		Pn	05 56 26.5	-1.0
WB2				IAmb	IAmb	05 56 31.8	
	comp=Z,23nm,1.2s						
WRA	Warramunga Arr	17.63	201	P	Pn	05 56 26.8	-0.7
	comp=Z,1.3nm,0.3s,baz=23,slow=12,SNR=22						
WRA	Warramunga Arr	17.63	201	P	P	05 56 27.3	-1.2
WC3	Warramunga Arr	17.64	201		P	05 56 27.5	-1.0
WC3				IAmb	IAmb	05 56 31.8	
	comp=Z,21nm,1.2s						
FITZ	Fitzroy Crossi	20.89	225	P	P	05 57 05.0	+0.7
	comp=Z,2.9nm,0.6s,baz=48,slow=16,SNR=3.3						
FITZ	Fitzroy Crossi	20.89	225	P	P	05 57 03.8	-0.5
FITZ				IAmb	IAmb	05 57 08.3	
	comp=Z,6.4nm,1.0s						
AS31	Alice Springs	21.24	198	P	P	05 57 06.9	-1.1
ASAR	Alice Springs	21.24	198	P	P	05 57 07.3	-0.6
	comp=Z,2.7nm,0.7s,baz=28,slow=11,SNR=16						
ASAR	Alice Springs	21.24	198	P	P	05 57 06.1	-1.8
EIDS	Eidsvold	23.92	157	P	P	05 57 35.8	-0.1
JNU	Nakatsue	37.56	346	LR	LR	06 13 07.4	
	comp=Z,149nm,18.4s,baz=39,slow=33						
SONM	Songino Array	59.30	334	LR	LR	06 30 48.5	
	comp=Z,105nm,18.0s,baz=82,slow=39						
MKAR	Makanchi Array	71.69	322	P	P	06 03 45.0	+1.3
	comp=Z,0.4nm,0.5s,baz=110,slow=6.6,SNR=2.3						

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*IDC **21** 05:54:13.2±1.2, 24°.19N×124°.86E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/32, mbtmp3.6/7, MS3.6/1, Ms1 3.6/1, ms1mx2.8/40, Error ellipse: s-maj=68.0km s-min=22.1km az=67.0*

*JMA **21** 05:54:17.2±0.2, 24°.24N×125°.26E, h29^{km}, M3.4*

ISC 21 05:54:18.6±1.0, **24°.35N**±0°.08×**125°.24E**±0°.06, **h39^{km}**±3^{km}, **n20, σ1^{s}.03**/29, **mb3.6**/9, **1C-1D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ2	Miyako jima3	0.40	12	P	Pn	05 54 27.3	-0.6
JMJ2				S	Sn	05 54 34.6	0.0
JOGS	Gusukube	0.44	20	P	Pn	05 54 28.0	-0.4
JOGS				S	Sn	05 54 36.4	+1.0
JIRB	Irabujima	0.48	353	P	Pn	05 54 28.4	-0.7
JIRB				eS	Sn	05 54 36.9	+0.5
JTJ	Tarama	0.57	301	P	Pn	05 54 29.4	-0.9
JTJ				S	Sn	05 54 38.6	+0.1
JIKM	Ikemajima	0.57	1	P	Pn	05 54 29.9	-0.5
JIKM				eS	Sn	05 54 39.6	+0.9
JISG	Ishigakijimahi	0.88	286	P	Pn	05 54 34.0	-0.5
JISG				S	Sn	05 54 46.3	+0.2
JIJ	Ishigaki jima	1.00	271	P	Pn	05 54 35.9	-0.2
JIJ				S	Sn	05 54 49.4	+0.4
JKRS	Kuro-shima	1.13	265	P	Pn	05 54 37.9	0.0
JKRS				eS	Sn	05 54 53.4	+1.3
HATJ	Hateruma jima	1.34	258	P	Pn	05 54 40.0	-0.8
HATJ				eS	Sn	05 54 56.9	-0.5
IRIF	Iriomote-Funau	1.38	270	P	Pn	05 54 41.1	-0.2
IRIF				S	Sn	05 55 00.4	+2.1
SONM	Songino Array	27.81	332	P	P	06 00 02.4	-1.8
	0.2nm,0.5s,baz=148,slow=8.5,SNR=1.8						
PMG	Port Moresby	39.79	145	LR	LR	06 15 39.9	
	comp=Z,83nm,20.4s,baz=64,slow=32						
MK31	Makanchi Array	40.84	314	⇓Pn	P	06 01 56.1	-0.4
	0.6nm,0.5s,baz=128,slow=13,SNR=8.9						
MKAR	Makanchi Array	40.84	314	P	P	06 01 56.4	-0.1
	0.8nm,0.5s,baz=101,slow=10.0,SNR=12						
MAKZ	Makanchi	41.05	314	⇑Pn	P	06 01 58.3	+0.1
	2.4nm,1.4s						
ZALV	Zalesovo Beam	42.17	325	P	P	06 02 05.6	-1.6
	0.4nm,0.4s,baz=116,slow=10,SNR=2.5						
WRA	Warramunga Arr	44.91	168	P	P	06 02 28.5	-1.1
	0.7nm,0.9s,baz=348,slow=8.7,SNR=2.6						
ASAR	Alice Springs	48.46	169	P	P	06 02 57.0	-0.4
	0.2nm,0.3s,baz=356,slow=13,SNR=1.5						
FINES	FINESS Array B	73.16	330	P	P	06 05 45.5	+0.6
	3.3nm,1.0s,baz=67,slow=7.7,SNR=3.5						
YKA	Yellowknife Ar	81.35	24	P	P	06 06 33.5	+2.6
	0.2nm,0.7s,baz=299,slow=6.3,SNR=2.2						

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*IDC **21** 06:07:03.7±0.6, 30°.46N×142°.11E, h0^{km}, mb4.0/20, mb1 4.1/26, mb1mx4.1/52, mbtmp4.0/26, ML3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/41, Error ellipse: s-maj=19.1km s-min=13.3km az=82.0*

*NIED **21** 06:07:06.2, 30°.53N×142°.06E, h48^{km}, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.50; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-0.45; $M_{r\theta}$-0.26; $M_{\theta\phi}$0.37; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.04000×10^{15} NP1: ϕ_s112.00000°, δ65.00000°, λ-38.00000°. NP2: ϕ_s220.00000°, δ56.00000°, λ-150.00000°.*

*JMA **21** 06:07:06.2±0.2, 30°.53N×142°.06E, h48^{km}, M4.4*

*NEIC **21** 06:07:08.3±1.9, 30°.50N±0°.06×142°.0E±0°.1, h31^{km}±5^{km}, mb4.5/39, Error ellipse: s-maj=16.1km s-min=8.6km az=75.0*

ISC 21 06:07:07.3±0.5, **30°.51N**±0°.05×**142°.05E**±0°.09, **h23^{km}, n97,**

$\sigma 1^{s}24$/104, mb4.4/37, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	3.19	324	P	Pn	06 07 55.1	-1.0
JHCJ				*e*S	Sn	06 08 29.9	-3.5
JHJ2	**Mitsune**	3.21	324	P	Pn	06 07 55.4	-1.0
JHJ2				*e*S	Sn	06 08 30.3	-3.7
JHJ2	**Mitsune**	3.21	324	Pn	Pn	06 07 56.6	+0.2
JHJ	**Hachijo jima 2**	3.24	324	Pn	Pn	06 07 56.3	-0.4
	7.5nm,0.3s,baz=267,slow=19,SNR=1.4						
JHJ				Sn	Sn	06 08 31.8	-2.7
	67nm,0.3s,baz=245,slow=22,SNR=4.8						
CBIJ	**Chichi jima**	3.41	178	P	Pn	06 07 58.5	-0.5
CBIJ				*e*S	Sn	06 08 35.3	-3.4
JCJ	**Chichijima**	3.41	178	Pn	Pn	06 07 58.4	-0.6
	23nm,0.3s,baz=284,slow=23,SNR=13						
JCJ				Sn	Sn	06 08 35.0	-3.7
	47nm,0.3s,baz=62,slow=23,SNR=7.1						
JCJ	**Chichijima**	3.41	178	Pn	Pn	06 07 58.5	-0.5
JMKN	**Mikurajimanish**	3.96	329	*e*S	Sn	06 08 50.2	-2.2
BSO1	**Boso 1**	4.23	348	P	Pn	06 08 08.9	-0.9
JKO	**Kozu shima**	4.42	327	*e*S	Sn	06 09 03.5	-0.1
BSO3	**Boso 3**	4.47	343	P	Pn	06 08 12.7	-0.7
BSO4	**Boso 4**	4.69	343	P	Pn	06 08 17.4	+0.8
JOD2	**Odawara 2**	5.35	333	P	Pn	06 08 26.2	+0.4
JYT	**Yasato**	5.91	345	Pn	Pn	06 08 32.3	-1.1
JRY	**Ryogami san**	6.09	335	P	Pn	06 08 36.2	+0.3
JRY				*e*S	Sn	06 09 44.9	0.0
JAG	**Ashikaga**	6.28	340	P	Pn	06 08 38.8	+0.2
JAG				*e*S	Sn	06 09 45.9	-3.7
JGF	**Kuroka**	6.42	323		Pn	06 08 40.1	-0.4
MJAR	**Matsushiro Arr**	6.81	333	Pn	Pn	06 08 46.3	+0.4
	0.6nm,0.3s,baz=158,slow=11,SNR=19						
MJAR				Sn	Sn	06 10 01.0	-1.8
	0.4nm,0.3s,baz=160,slow=18,SNR=6.8						
MJAR	**Matsushiro Arr**	6.81	333		Pn	06 08 45.4	-0.4
MAJO	**Matsushiro**	6.82	333		Pn	06 08 46.6	+0.7
MAT	**Matsushiro**	6.82	333	P	Pn	06 08 46.6	+0.7
MAT				S	Sn	06 10 00.5	-2.3
JFK	**Kawauchi**	6.91	352	*e*S	Sn	06 09 56.9	-8.1
JWT	**Wachi**	7.34	312	Pn	Pn	06 08 54.0	+1.0
JMM	**Marumori**	7.41	352		Pn	06 08 51.6	-2.4
JSD	**Sado**	8.13	338	Pn	Pn	06 09 03.1	-0.8
JTM	**Tenmabayashi**	10.28	356	Pn	Pn	06 09 31.8	-1.6
ERM	**Erimo**	11.51	4	Pn	Pn	06 09 47.2	-3.0
JOW	**Kunigami**	12.64	257	LR	LR	06 14 52.2	
	comp=Z,138nm,18.7s,baz=34,slow=37						
ASAJ	**Asahikawa**	13.59	2	Pn	Pn	06 10 18.2	-0.3
	1.0nm,0.3s,baz=177,slow=20,SNR=2.2						
KSRS	**Korea Array**	13.61	304	Pn	Pn	06 10 20.5	+1.7
	baz=108,slow=12,SNR=1.5						
USRK	**Ussuriysk Ar.**	15.81	333	Pn	Pn	06 10 49.3	+0.9
	baz=165,slow=12,SNR=1.9						
KLR	**Kul'dur**	20.26	340	P	P	06 11 42.5	+1.5
	1.0nm,0.5s,baz=150,slow=13,SNR=2.3						
SONM	**Songino Array**	32.25	313	P	P	06 13 34.6	+0.5
	0.7nm,0.4s,baz=119,slow=9.7,SNR=2.9						
SEY	**Seymchan**	33.11	9	P	P	06 13 41.4	+0.1
	0.7nm,0.5s,baz=226,slow=6.2,SNR=5.1						
MTN	**Manton Dam**	44.37	195	P	P	06 15 15.2	-0.8
ZALV	**Zalesovo Beam**	46.88	317	P	P	06 15 36.8	+1.3
	0.7nm,0.5s,baz=110,slow=7.3,SNR=2.5						
ZALV				PcP	PcP	06 17 08.2	+0.2
	1.7nm,0.5s,baz=103,slow=3.5,SNR=6.3						
ANM	**Nome**	46.99	28	P	P	06 15 37.3	+1.0
ANM				IAmb	IAmb	06 15 48.6	
	comp=Z,9.6nm,1.4s						
MK31	**Makanchi Array**	48.27	307	P	P	06 15 46.3	-0.2
MKAR	**Makanchi Array**	48.27	307	P	P	06 15 46.8	+0.3
	comp=Z,0.5nm,0.3s,baz=88,slow=8.7,SNR=13						
MKAR	**Makanchi Array**	48.27	307	P	P	06 15 46.0	-0.4
MAKZ	**Makanchi**	48.48	307	P	P	06 15 48.1	0.0
MAKZ				IAmb	IAmb	06 16 00.6	
	comp=Z,2.3nm,0.6s						
WB0	**Warramunga Arr**	50.53	189	P	P	06 16 03.3	-0.6
KURK	**Kurchatov**	50.55	313	P	P	06 16 03.9	+0.1
KURK				IAmb	IAmb	06 16 17.7	
	comp=Z,9.8nm,1.4s						
WR0	**Warramunga Arr**	50.70	189	P	P	06 16 04.6	-0.6
WRAB	**Tennant Creek**	50.70	189	P	P	06 16 01.8	-3.3
WB2	**Warramunga Arr**	50.71	189	P	P	06 16 04.4	-0.9
WB2				IAmb	IAmb	06 16 05.3	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	50.71	189	P	P	06 16 04.6	-0.6
	comp=Z,7.2nm,0.6s,baz=6.1,slow=7.5,SNR=68						
WRA	**Warramunga Arr**	50.71	189	P	P	06 16 04.0	-1.3
FITZ	**Fitzroy Crossi**	50.85	200	P	P	06 16 06.0	-0.3
SKT	**Skwentna**	52.53	33	P	P	06 16 19.4	+0.9
SKT				IAmb	IAmb	06 16 38.8	
	comp=Z,11nm,1.2s						
CCB	**Clear Creek Bu**	54.40	30	P	P	06 16 31.9	-0.2
AS31	**Alice Springs**	54.43	189	P	P	06 16 32.5	-0.3
ASAR	**Alice Springs**	54.43	189	P	P	06 16 32.1	-0.7
	comp=Z,1.5nm,0.5s,baz=355,slow=5.1,SNR=33						
ASAR	**Alice Springs**	54.43	189	P	P	06 16 32.2	-0.6
IL31		54.80	30	P	P	06 16 37.0	+2.0
IL31				IAmb	IAmb	06 17 03.2	
	comp=Z,5.5nm,1.5s						
ILAR	**Eielson Array**	54.80	30	P	P	06 16 34.4	-0.6
	comp=Z,0.9nm,0.8s,baz=252,slow=6.7,SNR=6.7						
DOT	**Dot Lake**	56.01	31	P	P	06 16 44.0	+0.1
DOT				IAmb	IAmb	06 17 12.1	
	comp=Z,5.5nm,1.3s						
KK31	**Karatay Array**	57.04	304	P	P	06 16 52.0	+0.6
KK31				IAmb	IAmb	06 17 04.4	
	comp=Z,2.6nm,0.6s						
KKAR	**Karatay Array**	57.04	304	P	P	06 16 52.1	+0.6
KKAR				IAmb	IAmb	06 17 04.4	
	comp=Z,2.6nm,0.6s						
KKAR	**Karatay Array**	57.04	304	P	P	06 16 51.7	+0.3
INK	**Inuvik**	59.99	25	P	P	06 17 11.8	+0.3
	comp=Z,1.3nm,0.9s,baz=274,slow=6.7,SNR=4.2						
INK	**Inuvik**	59.99	25	P	P	06 17 12.3	+0.8
INK				IAmb	IAmb	06 17 24.9	
	comp=Z,5.6nm,1.4s						
STKA	**Stephens Creek**	62.05	180	P	P	06 17 25.4	-0.5
	comp=Z,2.1nm,0.7s,baz=351,slow=13,SNR=2.1						
FORT	**Forrest**	62.39	194	P	P	06 17 27.7	-0.5
ABKAR	**Akbulak array**	62.66	313	P	P	06 17 30.0	+0.1
YKA	**Yellowknife Ar**	69.21	29	P	P	06 18 11.9	+0.1
	comp=Z,0.7nm,0.7s,baz=293,slow=5.9,SNR=13						
YKA				PcP	PcP	06 18 35.9	+0.4
	comp=Z,0.2nm,0.6s,baz=294,slow=4.7,SNR=4.6						
PINE	**Pine Mountain**	74.21	48	P	P	06 18 43.7	+1.2
PINE				IAmb	IAmb	06 18 44.0	
	comp=Z,7.2nm,1.3s						
K05A	**Summer Lake**	74.73	49	P	P	06 18 45.4	-0.2
FINES	**FINESS Array B**	74.84	333	P	P	06 18 45.6	0.0
	comp=Z,0.9nm,0.5s,baz=58,slow=4.7,SNR=8.7						
KBZ	**Khabaz**	75.61	312	P	P	06 18 50.9	+0.5
	comp=Z,1.2nm,0.6s,baz=106,slow=8.4,SNR=4.1						
WALA	**Waterton Lakes**	75.95	41	P	P	06 18 53.2	+0.8
WALA				IAmb	IAmb	06 18 54.1	
	comp=Z,3.1nm,0.6s						
JTMT	**Jette**	76.40	42	P	P	06 18 55.9	+1.0
JTMT				IAmb	IAmb	06 18 56.7	
	comp=Z,4.0nm,0.7s						
BEKR	**Beckworth**	76.42	52	P	P	06 18 55.8	+0.5
PNTR	**Pine Nut**	77.31	52	P	P	06 19 01.3	+0.9
PNTR				IAmb	IAmb	06 19 22.7	
	comp=Z,4.3nm,0.9s						
RYN	**Ryan**	78.27	52	P	P	06 19 06.0	+0.4
NVAR	**Mina Array Bea**	78.51	52	P	P	06 19 07.8	+0.7
	comp=Z,2.2nm,0.5s,baz=291,slow=5.9,SNR=25						
AKASG	**Malin Array Be**	79.81	323	P	P	06 19 14.8	+1.2
	comp=Z,0.3nm,0.4s,baz=50,slow=5.5,SNR=1.4						
NB2	**NORSAR Subarra**	80.41	338	P	P	06 19 15.4	-1.3
	comp=Z,2.6nm,0.8s,baz=42,slow=5.3						
NOA	**NORSAR Array B**	80.41	338	P	P	06 19 15.7	-1.0
	comp=Z,0.7nm,0.8s,baz=40,slow=5.8,SNR=2.5						
MOOW	**Moose Ponds**	80.61	45	P	P	06 19 19.6	+1.2
TPNV	**Topopah Spring**	80.67	53	P	P	06 19 19.4	+0.6
TPNV				IAmb	IAmb	06 19 20.0	
	comp=Z,2.6nm,0.6s						
RLMT	**Red Lodge**	80.73	43	P	P	06 19 20.0	+1.0
DUG	**Dugway, Tooele**	81.25	48	P	P	06 19 22.6	+0.9
PDAR	**Pinedale Array**	81.88	45	P	P	06 19 25.2	0.0
	comp=Z,1.1nm,0.6s,baz=270,slow=2.0,SNR=13						
PDAR	**Pinedale Array**	81.88	45	P	P	06 19 24.5	-0.6
BRTR	**Keskin Array B**	83.61	313	P	P	06 19 34.3	+0.2
	comp=Z,0.9nm,0.8s,baz=140,slow=4.0,SNR=5.3						
ULM	**Lac du Bonnet**	84.66	33	P	P	06 19 38.4	-0.6
	comp=Z,0.6nm,0.6s,baz=307,slow=5.1,SNR=1.7						
PV14	**Lion Creek, Pa**	84.70	48	P	P	06 19 37.8	-2.0
PV17	**East Wray Mesa**	84.80	48	P	P	06 19 40.3	0.0
PV16	**Nyswonger Mesa**	84.81	48	P	P	06 19 40.1	-0.3
PV16				IAmb	IAmb	06 19 41.8	
	comp=Z,3.0nm,0.7s						
PV13	**Radium Mtn., P**	84.96	48	P	P	06 19 41.6	+0.5
PV13				IAmb	IAmb	06 19 42.5	
	comp=Z,3.1nm,0.7s						
PV01	**Paradox Valley**	85.13	48	IAmb	IAmb	06 19 43.2	
	comp=Z,3.1nm,0.7s						
TX31	**Lajitas Ar. Si**	93.65	53	P	P	06 20 21.5	-0.8
TX32	**Lajitas Array**	93.65	53	P	P	06 20 22.6	+0.3
TX32				IAmb	IAmb	06 20 29.8	
	comp=Z,2.7nm,1.4s						
TXAR	**Lajitas Array**	93.65	53	P	P	06 20 23.2	+0.8
	comp=Z,1.0nm,0.6s,baz=312,slow=1.8,SNR=10						
TXAR	**Lajitas Array**	93.65	53	P	P	06 20 22.4	+0.1
PLCA	**Paso Flores**	151.75	120	PKPbc	PKPbc	06 27 01.1	+1.0
	comp=Z,0.9nm,0.8s,baz=232,slow=7.0,SNR=3.5						

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*NEIC **21** 06:12:32.5±1.1, 20°4S±0°1×178°3W±0°2, h566^{km}±7^{km}, mb4.3/19, Error ellipse: s-maj=21.5km s-min=20.0km az=127.0*

*IDC **21** 06:12:32.5±1.5, 20°46S×178°31W, h560^{km}±16^{km}, mb3.7/23, mb1 3.8/25, mb1mx3.7/39, mbtmp4.5/25, Error ellipse: s-maj=12.9km s-min=11.3km az=118.0*

ISC 21 06:12:31.3±0.5, **20°4S**±0°1×**178°23W**±0°10, **h550**^{km}, **n81, $\sigma 0^{s}78$**/84, **mb4.2**/31, **16C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.42	307	P	P	06 13 57.0	+0.5
	34nm,0.3s,baz=155,slow=4.0,SNR=134						
MSVF	**Nonsavu**	4.42	307	P	P	06 13 56.9	+0.4
DZM	**Mont Dzumac**	14.38	261	P	P	06 15 36.5	+2.0
	0.5nm,0.3s,baz=73,slow=18,SNR=5.6						
CTA	**Charters Tower**	33.28	264	P	P	06 18 23.9	0.0
	7.5nm,0.5s,baz=100,slow=11,SNR=10						
COEN	**Coen**	37.36	274		pwP	06 20 37.7	+2.4
STKA	**Stephens Creek**	37.63	244	P	P	06 18 59.7	-0.1
	1.3nm,0.7s,baz=78,slow=9.5,SNR=3.4						
STKA	**Stephens Creek**	37.63	244	IAmb	IAmb	06 19 08.4	
	comp=Z,3.0nm,1.4s						
JAY	**Jayapura**	43.81	289	P	P	06 19 49.0	-0.2
	comp=Z,12nm,0.4s,baz=134,slow=5.3,SNR=12						
WR0	**Warramunga Arr**	44.20	262	P	P	06 19 51.4	-0.8
WR0				IAmb	IAmb	06 19 52.8	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	44.32	257	P	P	06 19 52.6	-0.5
ASAR	**Alice Springs**	44.32	257	P	P	06 19 52.6	-0.4
	comp=Z,9.9nm,0.5s,baz=97,slow=7.6,SNR=120						
ASAR				PcP	PcP	06 21 25.1	-0.2
	comp=Z,0.9nm,0.7s,baz=128,slow=3.0,SNR=5.4						
ASAR				S	S	06 25 45.6	-2.0
	comp=Z,1.0nm,0.8s,baz=95,slow=15,SNR=7.7						
ASAR	**Alice Springs**	44.32	257	P	P	06 19 52.1	-0.9
WB0	**Warramunga Arr**	44.37	262	P	P	06 19 52.9	-0.6
WB2	**Warramunga Arr**	44.38	262	P	P	06 19 52.8	-0.8
WB2				IAmb	IAmb	06 19 53.4	
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	44.40	262	P	P	06 19 52.6	-1.0
	comp=Z,4.6nm,0.3s,baz=96,slow=7.5,SNR=107						
WRA	**Warramunga Arr**	44.40	262	P	P	06 19 52.3	-1.4
SIJI	**Sorong**	53.01	285	P	P	06 20 57.9	+0.3
	comp=Z,30nm,0.6s,baz=84,slow=5.1,SNR=14						
VNDA	**Vanda**	57.97	185	P	P	06 21 31.4	+0.4
	comp=Z,1.7nm,0.5s,baz=3.1,slow=7.2,SNR=8.5						
VNDA	**Vanda**	57.97	185	P	P	06 21 31.3	+0.4
QSPA	**South Pole Qui**	69.64	180	P	P	06 22 45.6	0.0
	comp=Z,6.9nm,0.7s,baz=308,slow=1.0,SNR=33						
QSPA	**South Pole Qui**	69.64	180	P	P	06 22 45.5	0.0
QSPA				IAmb	IAmb	06 22 46.6	
	comp=Z,7.5nm,0.8s						
MJAR	**Matsushiro Arr**	70.02	324	P	P	06 22 48.1	+0.1
	comp=Z,1.5nm,0.5s,baz=161,slow=5.7,SNR=4.3						
JKA	**Kamikawa-asahi**	73.55	332	P	P	06 23 08.0	-0.4
JKA				IAmb	IAmb	06 23 11.0	
	comp=Z,10nm,0.8s						
ASAJ	**Asahikawa**	73.56	332	P	P	06 23 09.3	+0.8
	comp=Z,8.1nm,0.5s,baz=156,slow=8.6,SNR=7.0						
PETK	**Petropavlovsk-**	76.14	345	P	P	06 23 22.8	+0.1
	comp=Z,6.6nm,0.6s,baz=122,slow=5.8,SNR=14						
PETK	**Petropavlovsk-**	76.14	345	P	P	06 23 22.6	-0.1
KSRS	**Korea Array**	76.69	319	P	P	06 23 26.8	+0.7
	comp=Z,1.0nm,0.5s,baz=129,slow=6.4,SNR=4.8						
USRK	**Ussuriysk Ar.**	78.78	326	P	P	06 23 38.4	+1.2
	comp=Z,4.0nm,0.7s,baz=120,slow=4.0,SNR=10						
NVAR	**Mina Array Bea**	81.12	43	P	P	06 23 50.7	+0.9
	comp=Z,1.0nm,0.7s,baz=236,slow=8.2,SNR=6.4						
MAW	**Mawson**	81.56	200	P	P	06 23 51.8	+0.4
	comp=Z,0.9nm,0.4s,baz=258,slow=16,SNR=1.7						
KLR	**Kul'dur**	82.35	330	P	P	06 23 56.5	+0.9
	comp=Z,1.2nm,0.4s,baz=100,slow=2.8,SNR=8.0						
PINE	**Pine Mountain**	82.66	38	P	P	06 23 57.6	0.0
PINE				IAmb	IAmb	06 23 59.9	
	comp=Z,7.3nm,0.8s						
G08A	**Pilot Rock**	84.69	38	P	P	06 24 07.8	+0.4
F10A	**Beach Ranch, E**	86.08	38	P	P	06 24 14.2	+0.1
F10A				IAmb	IAmb	06 24 15.3	
	comp=Z,5.3nm,0.8s						
SEY	**Seymchan**	86.25	347	P	P	06 24 14.6	+0.2
	comp=Z,8.5nm,0.6s,baz=150,slow=5.5,SNR=44						
RND	**Reindeer**	86.67	13	P	P	06 24 16.1	-0.4
WRH	**Wood River Hil**	87.77	13	P	P	06 24 20.6	-0.9
WRH				IAmb	IAmb	06 24 21.9	
	comp=Z,10nm,1.1s						
HDA	**Harding Lake**	87.96	13	P	P	06 24 21.4	-1.0
IMAR	**Indian Mountai**	88.12	10	P	P	06 24 22.9	-0.2
IL31		88.29	13	P	P	06 24 22.9	-0.9
IL31				IAmb	IAmb	06 24 43.8	
	comp=Z,7.6nm,1.5s						
ILAR	**Eielson Array**	88.29	13	P	P	06 24 23.2	-0.7
	comp=Z,1.9nm,0.5s,baz=214,slow=5.4,SNR=37						
PDAR	**Pinedale Array**	89.06	43	P	P	06 24 28.5	+0.2
	comp=Z,0.5nm,0.5s,baz=210,slow=2.5,SNR=7.8						
PRP	**Porcupine Dome**	89.22	13	IAmb	IAmb	06 24 30.1	
	comp=Z,4.5nm,1.2s						
PLCA	**Paso Flores**	89.48	134	P	P	06 24 31.4	+1.1
	comp=Z,2.2nm,1.1s,baz=300,slow=6.7,SNR=2.3						
CMAR	**Chiang Mai Arr**	89.88	290	P	P	06 24 33.6	+1.2
	comp=Z,1.5nm,0.6s,baz=132,slow=2.7,SNR=12						
CMAR	**Chiang Mai Arr**	89.88	290	P	P	06 24 32.0	-0.4
INK	**Inuvik**	94.25	15	P	P	06 24 50.9	-0.4
	comp=Z,0.8nm,0.7s,baz=231,slow=6.5,SNR=2.7						
INK	**Inuvik**	94.25	15	IAmb	IAmb	06 25 17.3	
	comp=Z,3.2nm,1.4s						
SONM	**Songino Array**	95.55	319	P	P	06 24 57.9	+0.1
	comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=2.8						
MKAR	**Makanchi Array**	110.99	313	PKiKP	PKiKP	06 30 00.8	-1.5
	comp=Z,0.3nm,0.5s,baz=73,slow=1.2,SNR=6.6						
ARCES	**ARCESS Array B**	128.81	350	PKP	PKPdf	06 30 35.2	-0.6
	comp=Z,4.0nm,0.9s,baz=70,slow=1.7,SNR=7.0						
FINES	**FINESS Array B**	135.64	344	PKP	PKPdf	06 30 48.7	-0.1
	comp=Z,2.2nm,0.8s,baz=58,slow=3.4,SNR=3.8						
AKASG	**Malin Array Be**	142.84	331	PKhKP	PKPdf	06 30 58.8	-3.4
	comp=Z,9.8nm,0.5s,baz=43,slow=4.4,SNR=56						
TOKA	**Tokat**	144.40	312		PKPdf	06 31 04.6	-0.7
SORM	**Soroca**	145.03	328	⇑P	PKPdf	06 31 05.8	-0.3
BR131	**Keskin Array S**	146.63	312		PKPbc	06 31 11.3	-0.5
BRTR	**Keskin Array B**	146.63	312	PKPbc	PKPbc	06 31 11.3	-0.6
	comp=Z,2.9nm,0.8s,baz=135,slow=4.4,SNR=14						
BRTR	**Keskin Array B**	146.63	312		PKPbc	06 31 11.1	-0.8
BURAR	**Bucovina Array**	146.89	330	⇑P	PKPbc	06 31 12.9	+0.7
BURAR	**Bucovina Array**	146.89	330		PKPbc	06 31 12.5	+0.2
BIZ	**Bicaz**	146.95	329	⇑P	PKPbc	06 31 13.2	+0.9
TUDR		147.07	326	⇑P	PKPdf	06 31 09.6	0.0
CFR	**Carcaliu**	147.09	325	⇑P	PKPbc	06 31 11.7	-1.0
TPGR	**Topolog**	147.15	324	⇑P	PKPbc	06 31 13.4	+0.5
VRI	**Vrincioaia**	147.38	327	⇑P	PKPbc	06 31 12.9	-0.6
MANR	**Mangalia**	147.70	322	⇑P	PKPbc	06 31 14.6	+0.3
CLL	**Collm**	147.94	347	*i* PKPbc	PKPbc	06 31 14.7	0.0
	comp=Z,15nm,1.1s						
CLL				*i* PKPab	PKPab	06 31 19.2	-0.1
	comp=Z,9.0nm,0.8s						
DPC	**Dobruska-Polom**	147.99	342	⇑*e*PKP	PKPbc	06 31 15.1	+0.1
DPC				*e*PKPAB	PKPab	06 31 20.4	+0.7
DOPR	**Dopca**	147.99	328	⇑P	PKPbc	06 31 15.4	+0.4
DRGR		148.64	332	⇑P	PKPbc	06 31 16.7	0.0
ARR	**Arges**	148.79	328	⇑P	PKiKP	06 31 18.1	-0.1
PRU	**Pruhonice**	148.80	344	⇑*e*PKP	PKPbc	06 31 17.0	+0.1
PRU				*e*PKPAB	PKPab	06 31 23.5	+0.6
KHC	**Kasperske Hory**	149.84	344	⇑*e*PKP	PKPbc	06 31 19.6	+0.1
KHC				*e*PKPAB	PKPab	06 31 27.8	+0.5
BZS	**Buzias**	150.03	332	⇑P	PKPbc	06 31 19.1	-0.8
GERES	**GERESS Array B**	150.07	344	PKPbc	PKPbc	06 31 19.9	-0.2
	comp=Z,1.1nm,0.5s,baz=25,slow=2.6,SNR=8.6						
GERES				PKPab	PKPab	06 31 28.5	+0.2
	comp=Z,0.8nm,0.6s,baz=20,slow=4.3,SNR=6.9						
HERR	**Herculane**	150.22	330	⇑P	PKPbc	06 31 20.3	-0.1
CONA	**Conrad Observa**	150.29	341	*e*P	PKPbc	06 31 20.3	-0.3
	comp=Z,2.5nm,0.6s						
KBA	**Koelnbreinsper**	151.79	343	*e*P	PKPab	06 31 36.6	+0.9
	comp=Z,3.2nm,0.6s						
MYKA	**Terra Mystica**	152.12	342	*e*P	PKPab	06 31 36.8	-0.3
	comp=Z,3.1nm,0.5s						
ABTA	**Abfaltersbach**	152.31	344	*e*P	PKPbc	06 31 24.3	-1.0
	comp=Z,3.3nm,0.5s						
DBIC	**Dimbokro**	164.90	154	PKPab	PKPab	06 32 32.4	-0.9
	comp=Z,3.8nm,1.0s,baz=180,slow=5.1,SNR=1.7						

SNET 21 06:17:40.6±1.5, **15°27N**×**90°15W**, **h6**^{km}±8^{km}, **ML3.1, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	1.05	132	*e*P	Pg	06 17 59.6	-1.3
ESQI				*e*S	Sg	06 18 14.5	-0.1
MTO3	**Montecristo**	1.16	138	*e*P	Pg	06 18 01.1	-1.7
MTO3				IAML		06 18 19.3	
	comp=Z,312nm,0.3s						
HUEH	**Huehuetenango**	1.30	272	*e*P	Pn	06 18 03.8	-1.8
RTR	**El Retiro**	1.45	160	*e*P	Pn	06 18 06.9	-0.7
SBLS	**San Blas**	1.51	160	*e*P	Pn	06 18 08.6	+0.1
CEVE	**Cerro Verde**	1.52	160	*e*P	Pn	06 18 08.7	+0.1
	comp=Z,236nm,0.3s						
CEVE				IAML		06 18 11.3	
	comp=Z,232nm,0.3s						
LLGN	**La Laguna**	1.60	133	*e*P	Pn	06 18 08.8	-0.8
LLGN				*e*S	Sb	06 18 31.3	0.0
PETF	**Flores**	1.66	9	*e*P	Pn	06 18 09.9	-0.4
BOQS	**Boqueron**	1.74	151	*e*P	Pn	06 18 11.7	0.0
PAVA	**Las Pavas**	1.94	143	*e*P	Pn	06 18 14.4	+0.2
LALI	**Alcalda de L**	1.94	155	*e*P	Pn	06 18 12.9	-1.2
LALI				*e*S	Sn	06 18 39.1	+0.2
LFRS	**El Faro**	1.95	147	*e*P	Pn	06 18 14.3	-0.1
LFRS				*e*S	Sb	06 18 40.4	-0.8
COEG	**Centro de Oper**	2.05	143	IAML		06 18 18.5	
	comp=Z,218nm,0.5s						

IDC 21 06:17:59.8±12.0, **17°74N**×**147°81E**, **h290**^{km}±132^{km}, **mb3.0**/10, **mb1 3.2**/10, **mb1mx3.1**/47, **mbtmp3.7**/10, **Error ellipse: s-maj=32.4km s-min=19.2km az=84.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul'dur**	34.00	341	P	P	06 24 17.8	+1.2
	0.7nm,0.3s,baz=124,slow=7.3,SNR=3.8						
WRA	**Warramunga Arr**	39.71	200	P	P	06 25 04.8	-0.1
	0.6nm,0.8s,baz=22,slow=8.9,SNR=3.2						
ASAR	**Alice Springs**	43.33	199	P	P	06 25 34.1	0.0
	0.3nm,0.6s,baz=17,slow=9.7,SNR=2.2						
SONM	**Songino Array**	45.15	321	P	P	06 25 47.6	-0.6
	0.9nm,0.7s,baz=132,slow=10.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	46.34	279	P	P	06 25 56.9	-0.9
	0.7nm,0.3s,baz=67,slow=7.4,SNR=4.4						
ZALV	**Zalesovo Beam**	60.00	323	P	P	06 27 36.2	+0.1
	0.6nm,0.4s,baz=101,slow=7.9,SNR=4.6						
MKAR	**Makanchi Array**	60.57	314	P	P	06 27 40.7	+0.5
	0.3nm,0.6s,baz=95,slow=9.3,SNR=4.7						
ILAR	**Eielson Array**	63.62	26	P	P	06 27 58.1	-1.9
	0.2nm,0.6s,baz=242,slow=5.9,SNR=4.1						
YKA	**Yellowknife Ar**	77.89	28	P	P	06 29 25.9	+0.4
	0.4nm,0.7s,baz=290,slow=5.7,SNR=5.0						
NVAR	**Mina Array Bea**	82.14	52	P	P	06 29 50.0	+1.0
	0.4nm,0.7s,baz=266,slow=4.5,SNR=3.6						

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*IDC **21** 06:25:15.3±5.6, 20°63S×169°62E, h144^{km}±38^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/29, mbtmp3.8/4, Error ellipse: s-maj=170.2km s-min=45.3km az=150.0*

*NOU **21** 06:25:15.8, 20°18S×169°48E, h55^{km}, MLv4.4, Vanuatu Islands*

ISC 21 06:25:16.8±1.7, **20°4S**±0°1×**169°4E**±0°2, **h150**^{km}, **n18, $\sigma 1^{s}17$**/19, **mb3.5**/3, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	1.67	228	P	Pn	06 25 46.0	-2.2
LIFNC	**LIFOU**	2.03	258	P	Pn	06 25 49.3	-2.9
YATNC	**Mamie plateau,**	2.86	233	P	Pn	06 26 01.0	-1.4
YATNC	**Mamie plateau,**	2.86	233	P	Pn	06 26 00.7	-1.7
PINNC	**Pines Island,**	2.87	218	P	Pn	06 26 01.6	-0.8
PINNC	**Pines Island,**	2.87	218	P	Pn	06 26 01.6	-0.8
OUENC	**Ouen Island, N**	3.12	228	P	Pn	06 26 05.4	-0.2
OUENC	**Ouen Island, N**	3.12	228	P	Pn	06 26 05.3	-0.3
DZM	**Mont Dzumac**	3.21	237	P	Pn	06 26 06.4	-0.5
	14nm,0.3s,baz=106,slow=18,SNR=228						
DZM				S	Sn	06 26 45.9	+0.2
	26nm,0.3s,baz=137,slow=23,SNR=37						
DZM	**Mont Dzumac**	3.21	237	P	Pn	06 26 06.5	-0.4
DZM	**Mont Dzumac**	3.21	237	P	Pn	06 26 06.4	-0.5
NOUC	**Port Laguerre**	3.34	238	P	Pn	06 26 08.6	+0.1
NOUC	**Port Laguerre**	3.34	238	P	Pn	06 26 08.5	+0.1
KOUNC	**Koumac, New Ca**	4.76	267	P	Pn	06 26 27.0	-0.1
WRA	**Warramunga Arr**	32.84	265	P	P	06 31 36.7	+0.2
	0.2nm,0.3s,baz=100,slow=8.3,SNR=2.0						
ASAR	**Alice Springs**	32.99	258	P	P	06 31 38.8	+1.1
	2.2nm,0.6s,baz=86,slow=9.3,SNR=35						
SONM	**Songino Array**	88.18	323	P	P	06 37 51.4	+0.6
	0.2nm,0.4s,baz=134,slow=4.2,SNR=2.1						
GERES	**GERESS Array B**	145.53	331	PKPbc	PKPdf	06 44 37.2	0.0
	1.1nm,0.7s,baz=26,slow=3.4,SNR=6.5						

NNC 21 06:30:37.4±1.7, **54°20N**×**86°44E**, **h0**^{km}, **mb3.6, mpv2.9, 7C-2D, Error ellipse: s-maj=26.9km s-min=8.3km az=173.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	0.99	256	⇑P	Pg	06 30 56.2	-0.2
	0.5nm,0.4s						
ZAA0				⇑S	Sb	06 31 10.2	-0.7
	15nm,1.1s						
KURK	**Kurchatov**	5.92	237	⇑Pn	Pn	06 32 07.7	+1.5
	3.5nm,1.2s						
KURK				⇑Lg	Lg	06 33 44.8	
	12nm,1.5s						
KURBB	**Kurchatov Arra**	6.02	237	⇑Pn	Pn	06 32 08.6	+0.9
	2.6nm,0.5s						
KURBB				⇓Sn	Sn	06 33 16.3	-0.9
	2.5nm,0.7s						
KURBB				⇑Lg	Lg	06 33 47.8	
	14nm,1.3s						
MK31	**Makanchi Array**	7.87	201	⇑Pn	Pn	06 32 34.2	+1.1
	0.5nm,0.5s,baz=27,slow=13,SNR=12						
MK31				⇓Lg	Lg	06 34 48.6	
	3.8nm,0.9s,baz=24,slow=30,SNR=6.5						

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*IDC **21** 06:37:43.1±0.9, 5°18N×127°05E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/40, mbtmp3.8/8, MS3.3/3, Ms1 3.3/3, ms1mx2.9/56, Error ellipse: s-maj=68.6km s-min=16.9km az=74.0*

ISC 21 06:37:44.5±0.9, **5°2N**±0°1×**127°4E**±0°2, **h10**^{km}, **n12, $\sigma 1^{s}27$**/11, **mb3.7**/8, **1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	2.60	315	LR	LR	06 39 37.3	
	comp=Z,973nm,18.2s,baz=124,slow=48						
KCP	**Kidapawan**	2.92	307	⇑*i*P	Pn	06 38 30.9	-0.3
KCP				*i* S	Sb	06 39 13.9	+1.2
SIJI	**Sorong**	7.17	148	LR	LR	06 42 25.4	
	comp=Z,179nm,20.5s,baz=176,slow=38						
KAPI	**Kappang**	12.75	217	LR	LR	06 45 27.8	
	comp=Z,98nm,18.8s,baz=46,slow=37						
FITZ	**Fitzroy Crossi**	23.25	184	P	P	06 42 52.5	+0.3
	3.3nm,0.9s,baz=12,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	25.92	165	P	P	06 43 17.3	+0.1
	9.5nm,1.0s,baz=344,slow=10,SNR=24						
ASAR	**Alice Springs**	29.41	168	P	P	06 43 49.5	+1.2
	0.5nm,0.5s,baz=350,slow=7.4,SNR=8.1						
ASAR				PcP	PcP	06 46 54.3	-0.2
	0.4nm,0.7s,baz=352,slow=3.7,SNR=1.5						
STKA	**Stephens Creek**	39.29	161	P	P	06 45 12.6	-1.1

	1.1nm,0.6s,baz=310,slow=11,SNR=2.4						
SONM	Songino Array	46.12	340	P	P	06 46 08.4	-0.8
	0.7nm,0.9s,baz=157,slow=7.8,SNR=3.2						
MKAR	Makanchi Array	56.74	324	P	P	06 47 27.5	-1.2
	0.4nm,0.5s,baz=124,slow=7.4,SNR=7.5						
ZALV	Zalesovo Beam	59.59	332	P	P	06 47 47.1	-1.3
	0.7nm,0.4s,baz=118,slow=8.3,SNR=1.4						
ILAR	Eielson Array	83.45	25	P	P	06 50 14.3	+2.2
	0.4nm,0.8s,baz=269,slow=8.6,SNR=4.3						

THR ***21*** *06:38:56.2±0.4, 29°.01N×55°.99E, h16^{km}±4^{km}, ML3.1*
DSN ***21*** *06:38:59.5±1.3, 28°.77N×56°.18E, h10^{km}, ML3.5/6, Error ellipse: s-maj=41.4km s-min=8.4km az=81.0*
OMAN ***21*** *06:39:00.5±2.1, 28°.73N×56°.08E, h10^{km}, ml2.8/6, Error ellipse: s-maj=75.3km s-min=21.6km az=50.0*
ISC 21 06:38:56.8±1.7**, 28°.95N**±0°.09×**56°.2E**±0°.3**, h10**^{km}**, n21, σ0^{s}.93**/27**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	1.15	26	*e*Pg	Pg	06 39 18.1	-0.8
KRBR				*e*Sg	Sn	06 39 34.4	-0.8
KRBR				IAML		06 39 37.4	
	comp=N,215nm,0.4s						
BNDS	Bandar-Abbas	1.54	180	*e*Pg	Pb	06 39 26.0	+0.3
BNDS				IAML		06 39 51.8	
	comp=N,319nm,0.2s						
SHME	Shamm	2.89	181	P	Pn	06 39 42.5	-0.4
SHME				S	Sn	06 40 17.1	-0.7
SHME	Shamm	2.89	181	P	Pn	06 39 44.1	+1.2
SHME				S	Sn	06 40 16.6	-1.1
BANOM	Banah	3.02	178	*e*P	Pn	06 39 45.7	+1.0
	SNR=17						
BANOM				S	Sn	06 40 20.4	-0.5
BANOM	Banah	3.02	178	P	Pn	06 39 45.7	+1.0
	SNR=17						
BANOM				S	Sn	06 40 21.6	+0.6
MDH	Madha	3.64	178	P	Pn	06 39 53.7	+0.5
BSRN	Basiran	3.94	40	*e*Pn	Pn	06 39 58.9	+1.4
NAZ	Nazwa, Dubai	3.97	187	*i* P	Pn	06 39 58.8	+1.0
	SNR=8.3						
NAZ	Nazwa, Dubai	3.97	187	P	Pn	06 39 58.8	+1.0
	SNR=8.3						
UOSS	Minazif	3.99	180	*i* P	Pn	06 39 58.1	0.0
	SNR=16						
UOSS	Minazif	3.99	180	P	Pn	06 39 58.5	+0.4
UOSS				S	Sn	06 40 43.1	-1.8
HATD	Hatta, Dubai	4.11	180	*i* P	Pn	06 40 00.6	+0.8
	SNR=6.0						
HATD	Hatta, Dubai	4.11	180	P	Pn	06 40 00.5	+0.8
	SNR=6.1						
FAQ	Al Faqa, Dubai	4.22	187	P	Pn	06 40 01.9	+0.7
FAQ	Al Faqa, Dubai	4.22	187	P	Pn	06 40 01.9	+0.7
	SNR=8.4						
ASHO	Ashiyiah	4.25	181	*i* P	Pn	06 40 02.6	+0.9
	SNR=83						
ASHO	Ashiyiah	4.25	181	P	Pn	06 40 02.7	+1.0
	SNR=12						
ASUD	Al Ashush, Dub	4.37	190	P	Pn	06 40 04.4	+1.0
TABS	Tabas	4.75	10	*e*Pn	Pn	06 40 09.0	+0.4
ARQ	Araqi	5.60	177	P	Pn	06 40 21.1	+0.9
	SNR=7.6						

NNC ***21*** *06:49:37.1±0.2, 43°.23N×78°.69E, h0^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=3.7km s-min=1.1km az=173.0*
SOME ***21*** *06:49:37.1, 43°.23N×78°.67E, h10^{km}*
ISC 21 06:49:37.2±1.1**, 43°.25N**±0°.04×**78°.66E**±0°.03**, h6**^{km}±11^{km}**, n8, σ0^{s}.19**/16**, 3C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	Kokpek	0.22	4	*e*P	Pg	06 49 41.5	-0.1
	6.3nm,0.1s						
KPKS				*e*S	Sg	06 49 44.5	+0.1
	5.8nm,0.1s						
SATY	Saty	0.27	225	*e*P	Pg	06 49 42.2	-0.2
	2.5nm,0.1s						
SATY				*e*S	Sg	06 49 46.1	+0.1
	22nm,0.2s						
SATY	Saty	0.27	225	P	Pg	06 49 42.3	-0.2
	2.5nm,0.1s						
SATY				S	Sg	06 49 46.1	+0.1
	22nm,0.2s						
UZB	Uzynbulak	0.28	111	*e*P	Pg	06 49 42.7	0.0
	0.8nm,0.1s						
UZB				*e*S	Sg	06 49 46.8	+0.2
	4.2nm,0.1s						
UZB	Uzynbulak	0.28	111	P	Pg	06 49 42.7	0.0
	0.6nm,0.0s						
UZB				S	Sg	06 49 46.8	+0.2
	4.2nm,0.1s						
PDGK	Podgornoye	0.61	82	⇓P	Pg	06 49 49.0	0.0
	2.9nm,1.4s						
PDGK				⇓S	Sg	06 49 56.8	-0.2
	1.1nm,0.6s						
MDOK	Medeo	1.18	266	⇑P	Pg	06 49 59.9	0.0
	2.3nm,0.7s						
MDOK				⇑S	Sb	06 50 16.2	+0.4
	8.2nm,1.4s						
KNDC	Almaty	1.24	269	⇓P	Pn	06 50 01.0	-0.2
	14nm,0.3s						
KNDC				⇑S	Sn	06 50 18.2	-0.1
	12nm,0.3s						

MOS ***21*** *06:51:09.9±1.0, 18°.01N×146°.47E, h50^{km}, mb5.3/52, Error ellipse: s-maj=9.4km s-min=4.7km az=109.5*
BJI ***21*** *06:51:13.0±0.0, 18°.00N×146°.60E, h70^{km}, mB5.1/43, mb4.7/56, Ms4.6/37, Ms7 4.3/38*
IDC ***21*** *06:51:14.4±0.5, 17°.98N×146°.50E, h80^{km}±3^{km}, mb4.6/32, mb1 4.7/36, mb1mx4.6/50, mbtmp4.9/36, MS4.1/38, Ms1 4.1/38, ms1mx4.0/55, Error ellipse: s-maj=13.0km s-min=6.8km az=87.0*
NEIC ***21*** *06:51:14.5±2.0, 18°.00N±0°.05×146°.56E±0°.10, h79^{km}±5^{km}, mb5.4/339, ML5.4/6, Error ellipse: s-maj=13.5km s-min=6.8km az=93.0*
NOU ***21*** *06:51:15.6, 17°.97N×146°.63E, h80^{km}, mb5.3, Mariana Islands*
GCMT ***21*** *06:51:15.4±0.2, 17°.95N±0°.01×146°.86E±0°.01, h78^{km}±2^{km}, MW5.1/119, Moment Tensor Solution. s82,c104; s119,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.09±.17; $M_{\theta\theta}$0.56±.14; $M_{\phi\phi}$2.54±.16; $M_{r\theta}$0.64±.11; $M_{\theta\phi}$-1.48±.15; $M_{\phi r}$4.83±.10; Best double couple: $M_0$5.81400×10^{16} NP1:ϕ_s313.00000°, δ22.00000°, λ-135.00000°. NP2:ϕ_s180.00000°, δ75.00000°, λ-74.00000°. Principal axes: T 5.5090, Plg28.0000°, Azm257.0000°; N 0.6130, Plg15.0000°, Azm355.0000°; P -6.1180, Plg57.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 06:51:14.6±0.3**, 17°.96N**±0°.03×**146°.63E**±0°.05**, h82**^{km}±2^{km}**, h82**^{km}**:pP-P, n672, σ1^{s}.57**/617**, mb5.3**/281**, 46C-94D, Fault plane solution: NP1:**ϕ_s198.93553°**,** δ78.67017°, λ-47.85637°. **NP2:**ϕ_s301.18384°**,** δ43.36320°, λ-163.37413°. **Principal axes:** T Plg22.0343°, Azm258.1485°**;** N Plg41.1411°, Azm8.8546°**;** P Plg40.7677°, Azm147.7254°**; Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	1.49	213	P	Pn	06 51 40.8	+0.8
ANA2	Anatahan	1.83	209		Pn	06 51 45.3	+0.9
ANA2				IAML		06 52 14.4	
	comp=N,31µm,0.5s						
ANA2				IAML		06 52 14.9	
	comp=E,28µm,0.5s						
ANA2	Anatahan	1.83	209	P	Pn	06 51 45.7	+1.3
JCJ	Chichijima	9.97	337	P	Pn	06 53 32.8	-2.3
	comp=E,20nm,0.3s,baz=107,slow=20,SNR=11						
JCJ				S	Sn	06 55 20.2	-5.0
	comp=E,20nm,0.3s,baz=281,slow=23,SNR=2.6						
PATS	Pohnpei	15.88	133		Pn	06 54 50.5	-2.9
JHJ	Hachijo jima 2	16.30	339	P	Pn	06 54 57.6	-0.9
	comp=E,16nm,0.3s,baz=254,slow=23,SNR=3.9						
JHJ				LR	LR	07 00 46.1	
	comp=E,504nm,21.8s,baz=139,slow=35						
H11S3	WAKE ISLAND Hy	19.07	85	T	T	07 16 33.6	
	baz=274,slow=74,SNR=6.3						
JYT	Yasato	19.07	344	P	P	06 55 30.0	-0.5
H11S1	WAKE ISLAND Hy	19.08	85	T	T	07 16 34.1	
	baz=274,slow=74,SNR=8.6						
H11S2	WAKE ISLAND Hy	19.08	85	T	T	07 16 37.2	
	baz=274,slow=74,SNR=9.0						
JOW	Kunigami	19.11	301	P	P	06 55 31.0	0.0
	comp=E,7.3nm,0.3s,baz=124,slow=12,SNR=17						
JOW	Kunigami	19.11	301	P	P	06 55 30.6	-0.4
H11N1	WAKE ISLAND Hy	19.26	82	T	T	07 16 46.5	
	baz=267,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	19.27	82	T	T	07 16 47.6	
	baz=267,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	19.28	82	T	T	07 16 48.5	
	baz=267,slow=74,SNR=14						
INU	Inuyama	19.31	336	P	P	06 55 33.6	+0.5
JGF	Kuroka	19.40	337		P	06 55 32.5	-1.7
JGF					Sn	06 59 21.0	+7.4
MANU	Manus Island	19.89	178	P	P	06 55 38.0	-1.6
JWT	Wachi	19.93	332		P	06 55 40.9	+0.9
MJAR	Matsushiro Arr	19.95	340	P	P	06 55 39.1	-1.0
	comp=E,1.9nm,0.3s,baz=169,slow=10,SNR=32						
MJAR				S	S	06 59 17.9	-2.1
	comp=E,0.1nm,0.3s,baz=137,slow=18,SNR=2.0						
MJAR				ScP	ScP	07 03 22.6	-0.1
	comp=E,0.1nm,0.3s,baz=170,slow=2.6,SNR=5.2						
MJAR	Matsushiro Arr	19.95	340		P	06 55 39.8	-0.3
MAJO	Matsushiro	19.95	340	P	P	06 55 38.5	-1.6
MAJO				pmax	pmax		
	comp=Z,73nm,1.1s						
MAJO	Matsushiro	19.95	340		P	06 55 38.5	-1.6
MAT	Matsushiro	19.95	340	P	P	06 55 40.0	-0.1
MAT				S	S	06 59 19.5	-0.6
MJB9	Matsu-Tunnel	19.95	340	P	P	06 55 39.9	-0.3
JMM	Marumori	20.48	347	P	P	06 55 46.3	+0.5
JMM				IAmb	IAmb	06 55 53.0	
	comp=Z,122nm,0.9s						
JNU	Nakatsue	20.69	320	P	P	06 55 48.1	-0.1
	comp=Z,20nm,0.9s,baz=309,slow=19,SNR=4.8						
JNU				LR	LR	07 02 31.5	
	comp=Z,426nm,21.4s,baz=127,slow=33						
JNU	Nakatsue	20.69	320	P	P	06 55 49.2	+1.0
JHS	Saijyo	20.80	327		Pn	06 55 51.2	-1.3
JAY	Jayapura	21.17	197	P	P	06 55 54.6	+1.2
	comp=Z,20nm,0.9s,baz=15,slow=12,SNR=3.1						
JAY				LR	LR	07 03 46.8	
	comp=Z,266nm,18.6s,baz=52,slow=36						
JAY	Jayapura	21.17	197	P	P	06 55 55.0	+1.6
	comp=Z,1µmcomp=Z,91nm,1.4s						
JSD	Sado	21.30	342	P	P	06 55 54.5	-0.1
JSD				IAmb	IAmb	06 55 58.2	
	comp=Z,207nm,0.9s						
SMPI	Sarmi	21.30	202	P	P	06 55 56.1	+1.3
	comp=Z,102nm,1.3s						
GENI	Genyem	21.39	198	P	P	06 55 58.0	+2.2
	comp=Z,4µmcomp=Z,265nm,1.5s						
RABL	Rabaul	22.68	166	P	P	06 56 09.6	+0.1
JTM	Tenmabayashi	23.25	349	P	P	06 56 14.1	-0.8
JTM				IAmb	IAmb	06 56 24.4	
	comp=Z,88nm,0.8s						
SIJI	Sorong	24.05	221	P	P	06 56 23.4	+1.0
	comp=Z,45nm,0.5s,baz=21,slow=9.8,SNR=22						
SIJI				LR	LR	07 04 03.0	
	comp=Z,484nm,20.3s,baz=37,slow=32						
SWI	Sorong	24.05	221	P	P	06 56 22.8	+0.4
	comp=Z,2µmcomp=Z,164nm,0.6s						
ERM	Erimo	24.16	354	P	P	06 56 22.0	-1.0
ERM				pmax	pmax		
	comp=Z,106nm,1.4s						
ERM	Erimo	24.16	354	P	P	06 56 22.0	-1.0
YHNB	Yeheng	24.43	290	P	P	06 56 24.1	-1.7
YHNB				IAmb	IAmb	06 56 50.2	
	comp=Z,134nm,1.3s						
SSLB	Suanglung	24.66	288	P	P	06 56 27.7	-0.2
SSLB				IAmb	IAmb	06 56 52.0	
	comp=Z,145nm,1.4s						
TGY	Tagaytay City	24.98	265	LR	LR	07 04 54.5	
	comp=Z,653nm,18.9s,baz=21,slow=33						
FAKI	Fak Fak	25.13	216	IAmb	IAmb	06 56 46.9	
	comp=Z,144nm,1.4s						
FAKI	Fak Fak	25.13	216	P	P	06 56 33.1	+0.9
	comp=Z,68nm,1.1s						
JEW	Eniwo	25.19	351	P	P	06 56 32.3	-0.1
JEW				IAmb	IAmb	06 57 01.8	
	comp=Z,180nm,1.0s						
KSRS	Korea Array	25.43	324	P	P	06 56 34.1	-0.6
	comp=Z,13nm,0.9s,baz=146,slow=9.0,SNR=41						
KSRS				ScP	ScP	07 03 35.8	-1.2
	comp=Z,2.2nm,0.9s,baz=137,slow=3.6,SNR=6.6						
KSRS				LR	LR	07 05 07.5	
	comp=Z,399nm,21.5s,baz=126,slow=33						
KSAR	Wonju Array Be	25.45	323	P	P	06 56 33.3	-1.5
KSAR	Wonju Array Be	25.45	323	P	P	06 56 33.3	-1.5
KS19	Wonju Array Si	25.50	324	P	P	06 56 33.6	-1.7
ASAJ	Asahikawa	26.30	353	P	P	06 56 43.4	+0.9
	comp=Z,12nm,0.8s,baz=226,slow=13,SNR=7.7						
ASAJ				LR	LR	07 07 30.2	
	comp=Z,161nm,20.3s,baz=166,slow=37						
ASAJ	Asahikawa	26.30	353	P	P	06 56 43.1	+0.7
ASAJ				pmax	pmax		
	comp=Z,48nm,0.9s						
JKA	Kamikawa-asahi	26.30	353	P	P	06 56 43.1	+0.6
PMG	Port Moresby	27.20	179	P	P	06 56 51.4	+0.6
	comp=Z,74nm,0.8s,baz=354,slow=5.9,SNR=9.3						
PMG				LR	LR	07 08 59.7	
	comp=Z,123nm,18.8s,baz=9.0,slow=39						
PMG	Port Moresby	27.20	179	*d i*P	P	06 56 50.6	-0.2
PMG				pmax	pmax		
	comp=Z,81nm,0.8s						
PMG	Port Moresby	27.20	179	P	P	06 56 51.4	+0.6
PMG				IAmb	IAmb	06 56 55.9	
	comp=Z,69nm,0.8s						
PMG	Port Moresby	27.20	179	P	P	06 56 51.9	+1.1
MSHR	Mys Shultsa	27.85	335	⇓*e*P	P	06 56 55.3	-1.1
MSHR				pmax	pmax		
	comp=Z,19nm,1.1s						
SANI	Sanana	28.44	228	P	P	06 57 00.8	-1.1
	comp=Z,21nm,1.1s						
NJ2	Nanjing	28.71	305	*e*P	P	06 57 07.6	+3.4
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
GTOI	Gorontalo	28.90	236	P	P	06 57 07.1	+1.1
	comp=Z,14nm,1.2s						
USA0B	Ussuriysk Arra	28.91	338	P	P	06 57 06.0	+0.1
USA0B				pmax	pmax		
	comp=Z,15nm,0.8s						
USA0B	Ussuriysk Arra	28.91	338	P	P	06 57 06.0	+0.1
USRK	Ussuriysk Ar.	28.91	338	P	P	06 57 05.8	0.0
	comp=Z,7.9nm,0.5s,baz=134,slow=7.7,SNR=28						
USRK				pP	pP	06 57 24.0	+0.3
	comp=Z,7.2nm,0.9s,baz=154,slow=9.7,SNR=3.2						
USRK				ScP	ScP	07 03 48.0	+0.6
	comp=Z,2.1nm,0.9s,baz=146,slow=2.8,SNR=3.1						
USRK				LR	LR	07 07 50.4	
	comp=Z,279nm,20.9s,baz=133,slow=34						
YSS	Yuzh-Sakhalins	29.09	355	⇑*e*P	P	06 57 10.0	+2.7
YSS				*e*		06 58 11.9	
YSS				*e*S	S	07 01 56.1	+3.0
YSS						07 07 36.0	
YSS				pmax	pmax		
	comp=Z,200nm,4.5s						
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
MRSI	Marisa	29.84	237	P	P	06 57 15.1	+0.7
	comp=Z,721nmcomp=Z,31nm,0.6s						
LUWI	Luwuk	30.13	234	P	P	06 57 16.4	-0.5
LUWI				IAmb	IAmb	06 57 18.0	
	comp=Z,88nm,1.0s						
LUWI	Luwuk	30.13	234	P	P	06 57 16.8	-0.1
	comp=Z,3µmcomp=Z,115nm,0.7s						
MDJ	Mudanjiang	30.17	335	P	P	06 57 19.0	+2.0
MDJ				pP	pwP	06 57 38.1	-1.6
MDJ				sP	sP	06 57 48.0	+4.0
MDJ				PP	PnPn	06 58 18.8	+0.9
MDJ				S	S	07 02 10.9	+0.7
MDJ				sS	sS	07 02 44.9	+3.7
MDJ				SS	ScP	07 03 49.8	-1.6
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.2s						
MDJ				LR	LR		
	comp=Z,460nm,21.4s						
MDJ				LR	LR		
	comp=Z,430nm,17.1s						
MDJ				LR	LR		
	comp=Z,710nm,21.4s						
HNR	Honiara	30.23	153	LR	LR	07 09 09.7	
	comp=Z,571nm,20.0s,baz=330,slow=36						
COEN	Coen	31.90	186	IAmb	IAmb	06 57 36.1	
	comp=Z,101nm,1.4s						
TYV	Tymovskoe	32.98	355	*e*P	P	06 57 42.5	+1.0
TYV				*e*S	S	07 02 58.0	+4.2
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV				smax	smax		
	comp=N,12nm,1.7s						
KLR	Kul'dur	33.43	342	*c i*P	P	06 57 45.4	-0.1
KLR				pmax	pmax		
	comp=Z,46nm,0.9s						
TTSI	Tana Toraja	33.67	234	P	P	06 57 49.5	+1.5
	comp=Z,47nm,1.4s						
GRNR	Gornyy	33.73	348	⇑*i*P	P	06 57 49.4	+1.3
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,130nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,220nm,16.0s						
MTN	Manton Dam	34.22	208	P	P	06 57 52.1	-0.5
MTN				IAmb	IAmb	06 58 04.0	
	comp=Z,88nm,1.6s						
BJI	Beijing	34.27	316	P	P	06 57 52.6	-0.3
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				LR	LR		
	comp=Z,360nm,14.9s						
BJI				LR	LR		
	comp=Z,430nm,17.9s						
BJI				LR	LR		
	comp=Z,300nm,23.5s						
SPSI	Sidrap Palu	34.30	233	P	P	06 57 54.1	+0.7
	comp=Z,52nm,1.1s						
BNSI	Bone	34.32	232	P	P	06 57 54.4	+0.8
	comp=Z,827nmcomp=Z,48nm,1.4s						
QIZ	Qiongzhong	34.86	278	P	P	06 57 59.0	+0.7
QIZ				S	S	07 03 26.5	+2.9
QIZ				LR	LR		
	comp=Z,260nm,8.4s						
QIZ				LR	LR		
	comp=Z,400nm,24.1s						
QIZ				LR	LR		
	comp=Z,490nm,25.0s						
BKSI	Bulukumba	34.92	231	P	P	06 57 58.9	+0.2
	comp=Z,33nm,1.0s						
KAPI	Kappang	34.99	232	P	P	06 57 59.7	+0.3
KAPI				pmax	pmax		
	comp=Z,42nm,1.1s						
KAPI	Kappang	34.99	232	P	P	06 57 59.7	+0.3
KAPI				IAmb	IAmb	06 58 20.8	
	comp=Z,42nm,1.1s						
SOEI	Soe	35.30	220	P	P	06 58 01.9	-0.3
SOEI				IAmb	IAmb	06 58 48.5	
	comp=Z,89nm,1.3s						
SOEI	Soe	35.30	220	P	P	06 58 01.8	-0.3
	comp=Z,1µmcomp=Z,42nm,0.7s						
PETK	Petropavlovsk-	36.13	11	P	P	06 58 08.8	+0.1
	comp=Z,13nm,1.1s,baz=189,slow=8.7,SNR=6.6						
PETK				PcP	PcP	07 00 33.5	+0.6
	comp=Z,10nm,1.0s,baz=209,slow=4.8,SNR=5.2						
PETK				ScP	ScP	07 04 11.0	-1.0
	comp=Z,7.0nm,0.9s,baz=181,slow=7.4,SNR=5.3						
PETK				LR	LR	07 10 47.2	
	comp=Z,297nm,21.9s,baz=192,slow=32						
PETK	Petropavlovsk-	36.13	11	P	P	06 58 09.4	+0.8
EDFI	Ende, Flores	36.20	225	P	P	06 58 08.8	-1.1
	comp=Z,14nm,0.8s						
XAN	Xi'an	37.24	303	P	P	06 58 24.6	+6.1
XAN				S	S	07 04 00.6	+0.9
XAN				PcS	PcS	07 04 26.6	+1.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN				LR	LR		
	comp=Z,460nm,16.3s						
XAN				LR	LR		
	comp=Z,410nm,18.4s						
XAN				LR	LR		
	comp=Z,660nm,20.6s						
HHC	Hu-ho-hao-te	37.74	315	*e*P	P	06 58 23.4	+0.7
HHC				PP	PnPn	06 59 51.8	-0.5
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.7s						
HHC				LR	LR		
	comp=Z,190nm,12.8s						
HHC				LR	LR		
	comp=Z,170nm,13.6s						
HHC				LR	LR		
	comp=Z,360nm,13.6s						
GYA	Guiyang	37.83	290	*e*P	P	06 58 24.8	+1.2
GYA				pP	pwP	06 58 45.6	-0.4
GYA				PP	PnPn	06 59 55.0	+1.5
GYA				S	S	07 04 07.5	-1.5
GYA				ScP	ScP	07 04 17.4	-1.7
GYA				sS	sS	07 04 44.0	+3.4
GYA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,200nm,4.8s						
GYA				LR	LR		
	comp=Z,300nm,19.4s						
HIA	Hailar	38.03	331	P	P	06 58 24.6	-0.3
HIA				pmax	pmax		
	comp=Z,28nm,1.0s						
HIA	Hailar	38.03	331	P	P	06 58 24.6	-0.3
WBSI	Waikabubak, Su	38.41	227	P	P	06 58 26.2	-2.3
	comp=Z,813nmcomp=Z,67nm,0.6s						
ZEA	Zeya	38.74	342	*e*P	P	06 58 30.6	-0.1
ZEA				pmax	pmax		
	comp=N,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
SANVU	Saraoutou	38.90	147	P	P	06 58 33.2	+0.7
PLAI	Plampang	38.99	229	P	P	06 58 33.4	+0.1
KSM	Kuching	39.24	249	P	P	06 58 36.0	+0.6
WB0	Warramunga Arr	39.37	198	P	P	06 58 36.1	-0.3
WB0				IAmb	IAmb	06 58 45.8	
	comp=Z,26nm,0.7s						
WR0	Warramunga Arr	39.51	198	P	P	06 58 37.6	+0.1
WRAB	Tennant Creek	39.54	198	*de*P	P	06 58 37.7	-0.1
WRAB				pmax	pmax		
	comp=Z,31nm,1.3s						
WB2	Warramunga Arr	39.55	198	P	P	06 58 37.6	-0.3
WB2				IAmb	IAmb	06 58 47.4	
	comp=Z,31nm,0.8s						
WRA	Warramunga Arr	39.55	198	P	P	06 58 37.9	0.0
	comp=Z,7.7nm,0.5s,baz=28,slow=8.6,SNR=79						
WRA				PcP	PcP	07 00 45.1	+1.2
	comp=Z,2.6nm,0.5s,baz=16,slow=3.8,SNR=2.3						
WRA				ScP	ScP	07 04 25.6	+0.2
	comp=Z,8.6nm,0.9s,baz=13,slow=4.0,SNR=16						
WRA				S	S	07 04 35.4	+0.8
	comp=Z,5.1nm,1.0s,baz=24,slow=16,SNR=5.5						
WRA				LR	LR	07 15 36.5	
	comp=Z,185nm,21.7s,baz=15,slow=37						
WRA	Warramunga Arr	39.55	198	P	P	06 58 37.2	-0.7
TWSI	Taliwang, Sumb	39.58	230	P	P	06 58 38.3	+0.1
	comp=Z,2µmcomp=Z,57nm,1.0s						
KMMI	Kalianget	40.71	235	P	P	06 58 49.8	+2.3
	comp=Z,59nm,1.5s						
CD2	Chengdu	40.86	297	*e*P	P	06 58 49.0	+0.3
CD2				S	S	07 04 55.6	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,690nm,23.0s						
CD2				LR	LR		
	comp=Z,590nm,23.0s						
KMI	Kunming	41.30	288	⇑P	P	06 58 56.3	+3.7
KMI				pP	pP	06 59 11.1	-0.2
KMI				sP	sP	06 59 22.8	+2.4
KMI				S	S	07 05 10.9	+10
KMI				SS	SS	07 08 01.3	-6.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,75nm,4.6s						
KMI				LR	LR		
	comp=Z,220nm,14.8s						
KMI				LR	LR		
	comp=Z,280nm,20.3s						
KMI				LR	LR		
	comp=Z,420nm,33.2s						

FITZ	Fitzroy Crossi	41.35	211	LR	LR	07 17 01.5	
	comp=Z,64nm,19.2s,baz=30,slow=38						
FITZ	Fitzroy Crossi	41.35	211	P	P	06 58 53.4	+0.7
MA2	Magadan	41.67	3	d iP	P	06 58 55.5	+0.7
MA2				pmax	pmax		
	comp=Z,47nm,1.3s						
MA2	Magadan	41.67	3	P	P	06 58 55.8	+0.9
MA2				IAmb	IAmb	06 58 56.9	
	comp=Z,38nm,1.0s						
LZH	Lanzhou	41.79	304	⇓P	P	06 58 55.9	-0.5
LZH				pP	pP	06 59 12.1	-3.0
LZH				sP	sP	06 59 26.0	+1.9
LZH				pmax	pmax		
	comp=Z,15nm,0.8s						
LZH				pmax	pmax		
	comp=Z,160nm,6.5s						
LZH				LR	LR		
	comp=Z,400nm,17.3s						
LZH				LR	LR		
	comp=Z,610nm,16.8s						
LZH				LR	LR		
	comp=Z,410nm,17.9s						
KOUNC	Koumac, New Ca	42.01	155	P	P	06 58 59.2	+1.2
ASAR	Alice Springs	43.20	197	P	P	06 59 07.7	-0.1
	comp=Z,8.5nm,0.6s,baz=17,slow=6.6,SNR=53						
ASAR				ScP	ScP	07 04 40.0	+0.1
	comp=Z,6.3nm,0.9s,baz=18,slow=3.9,SNR=16						
ASAR				S	S	07 05 27.4	-1.2
	comp=Z,2.0nm,0.9s,baz=22,slow=23,SNR=4.2						
ASAR				LR	LR	07 17 50.3	
	comp=Z,299nm,20.5s,baz=10,slow=37						
TPI	Tanjungpandan	43.57	246	P	P	06 59 21.1	+10
ULN	Ulaanbaatar	43.89	322	d iP	P	06 59 13.3	+0.1
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	Ulaanbaatar	43.89	322	P	P	06 59 12.9	-0.4
NOUC	Port Laguerre	44.23	153	P	P	06 59 16.9	+1.0
DZM	Mont Dzumac	44.26	153	eP	P	06 59 16.9	+0.6
	comp=Z,221nm,1.2s						
DZM	Mont Dzumac	44.26	153	eLR	LR	07 11 41.4	
	comp=Z,2µm,26.1s						
DZM	Mont Dzumac	44.26	153	LR	LR	07 15 31.7	
	comp=Z,595nm,21.6s,baz=346,slow=33						
DZM	Mont Dzumac	44.26	153	P	P	06 59 16.1	-0.3
DZM				IAmb	IAmb	06 59 18.6	
	comp=Z,98nm,1.1s						
DZM	Mont Dzumac	44.26	153	P	P	06 59 17.5	+1.2
SONM	Songino Array	44.27	321	P	P	06 59 14.8	-1.4
	comp=Z,4.6nm,0.6s,baz=136,slow=9.3,SNR=36						
SONM				PcP	PcP	07 00 59.6	+0.3
	comp=Z,1.8nm,0.4s,baz=116,slow=3.4,SNR=2.0						
SONM				ScP	ScP	07 04 42.2	-1.9
	comp=Z,3.7nm,1.1s,baz=128,slow=3.3,SNR=6.5						
SONM				LR	LR	07 17 59.7	
	comp=Z,146nm,19.5s,baz=114,slow=36						
SONM	Songino Array	44.27	321	P	P	06 59 15.2	-1.0
SONM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SONM	Songino Array	44.27	321	P	P	06 59 15.2	-1.0
OUENC	Ouen Island, N	44.74	153	P	P	06 59 21.2	+1.2
KPJI	Karang Pucung	44.91	239	P	P	06 59 21.6	+0.1
	comp=Z,69nm,1.1s						
SEY	Seymchan	45.11	4	P	P	06 59 23.6	+1.2
	comp=Z,12nm,0.9s,baz=177,slow=6.5,SNR=30						
SEY	Seymchan	45.11	4	⇓eP	P	06 59 23.4	+1.0
SEY				i *PP	pwP	06 59 44.2	-1.9
CMAR	Chiang Mai Arr	45.19	278	P	P	06 59 24.3	+0.5
	comp=Z,1.8nm,0.3s,baz=98,slow=5.5,SNR=1.1						
CMAR				ScP	ScP	07 04 48.1	-0.2
	comp=Z,0.9nm,0.3s,baz=120,slow=1.8,SNR=4.2						
CMAR				LR	LR	07 17 04.0	
	comp=Z,154nm,21.5s,baz=128,slow=34						
CMAR	Chiang Mai Arr	45.19	278	P	P	06 59 24.8	+1.0
YAK	Yakutsk	45.61	349	LR	LR	07 18 02.2	
	comp=Z,60nm,21.7s,baz=117,slow=35						
YAK	Yakutsk	45.61	349	eP	P	06 59 26.6	+0.2
YAK				e*PP	pP	06 59 45.3	+0.1
YAK				eS	S	07 06 00.6	-2.0
YAK				e		07 09 09.9	
YAK				eSSS	SSS	07 10 21.6	
YAK				pmax	pmax		
	comp=Z,108nm,0.9s						
YAK				pmax	pmax		
	comp=N,33nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax	smax		
	comp=N,89nm,2.0s						
YAK				smax	smax		
	comp=E,106nm,1.9s						
YAK	Yakutsk	45.61	349	P	P	06 59 26.4	+0.1
GTA	Gaotai	45.69	308	eP	P	06 59 26.4	-1.2
GTA				pP	pP	06 59 43.4	-3.2
GTA				sP	pwP	06 59 53.0	+2.3
GTA				ScP	ScP	07 04 49.0	-1.2
GTA				ScS	ScS	07 09 12.9	-3.2
GTA				pmax	pmax		
	comp=E,160nm,6.4s						
GTA				LR	LR		
	comp=E,350nm,18.9s						
GTA				LR	LR		
	comp=E,260nm,17.4s						
GTA				LR	LR		
	comp=E,300nm,18.5s						
BOD	Bodaibo	46.53	337	eP	P	06 59 31.9	-1.8
BOD				pmax	pmax		
	comp=Z,11nm,1.7s						
IPM	Ipoh	46.55	259	P	P	06 59 37.0	+2.5
KULM	Kulim	46.62	260	P	P	06 59 36.0	+0.9
KULM				IAmb	IAmb	06 59 48.0	
	comp=Z,133nm,2.0s						
KULM	Kulim	46.62	260	P	P	06 59 38.0	+2.9
MSVF	Nonsavu	47.05	137	deP	P	06 59 39.0	+0.6
MSVF				pmax	pmax		
	comp=Z,47nm,1.0s						
MSVF	Nonsavu	47.05	137	P	P	06 59 38.8	+0.5
MSVF				IAmb	IAmb	06 59 40.4	
	comp=Z,49nm,0.9s						
MSVF	Nonsavu	47.05	137	P	P	06 59 39.4	+1.0
KLSI		47.05	245	P	P	06 59 38.1	-0.3
	comp=Z,18nm,1.1s						
CGJI	Cibinong	47.21	242	P	P	06 59 37.9	-1.7
	comp=Z,2µmcomp=Z,92nm,0.4s						
ZAK	Zakamensk	47.26	323	eP	P	06 59 39.4	-0.3
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KASI	Kota Agung	47.67	245	P	P	06 59 41.9	-1.3
	comp=Z,63nm,1.1s						
TLY	Talaya	47.67	325	P	P	06 59 42.9	+0.2
	comp=Z,3.2nm,0.4s,baz=138,slow=6.7,SNR=12						
TLY				LR	LR	07 19 55.1	
	comp=Z,190nm,19.6s,baz=113,slow=36						
TLY	Talaya	47.67	325	eP	P	06 59 42.3	-0.4
TLY				pmax	pmax		
	comp=Z,22nm,1.0s						
SDSI	Sungai Dareh	48.26	252	P	P	06 59 48.6	+0.8
	comp=Z,11nm,1.3s						
ARMA	Armidale	48.34	174	P	P	06 59 48.5	+0.4
MOY	Mondy	49.13	324	eP	P	06 59 55.0	+0.9
MOY				pmax	pmax		
	comp=Z,19nm,2.7s						
XMIS	Christmas Isla	49.35	238	P	P	06 59 55.6	-0.5
STKA	Stephens Creek	49.79	186	P	P	06 59 59.4	+0.4
	comp=Z,14nm,0.8s,baz=344,slow=8.8,SNR=23						
STKA				pP	pP	07 00 17.9	-0.3
	comp=Z,10nm,0.4s,baz=22,slow=14,SNR=5.1						
STKA				S	S	07 07 00.0	-2.4
	comp=Z,20nm,1.3s,baz=150,slow=15,SNR=7.3						
STKA				LR	LR	07 23 20.4	
	comp=Z,122nm,18.1s,baz=12,slow=39						
TEZP	TEZPUR	50.24	290	ex	P	07 00 03.6	+0.8
SAIH	SAIHA	50.32	285	ex	P	07 00 04.3	+0.7
SISI	Saibi	50.55	253	P	P	07 00 04.2	-1.0
	comp=Z,708nmcomp=Z,49nm,0.6s						
SHL	Shillong	51.11	289	⇑ex	P	07 00 11.2	+1.7
SHL	Shillong	51.11	289	IAmb	IAmb	07 00 22.1	
	comp=Z,20nm,0.4s						
BBOO	Buckleboo	51.48	191	P	P	07 00 12.9	+1.0
BILL	Bilibino	51.60	9	c iP	P	07 00 12.8	+0.5
BILL				e		07 01 26.6	
BILL				e		07 02 12.6	
BILL				pmax	pmax		
	comp=Z,48nm,1.0s						
BILL				MLR	MLR		
	comp=Z,110nm,17.0s						
FORT	Forrest	51.65	200	P	P	07 00 13.5	+0.4
FORT				IAmb	IAmb	07 00 34.3	
	comp=Z,80nm,1.6s						
KIP	Kipapa	52.02	77	⇑eP	P	07 00 16.9	+0.8
KIP				pmax	pmax		
	comp=Z,88nm,1.3s						
CAN	Canberra	53.03	178	P	P	07 00 24.7	+1.4
CAN				pmax	pmax		
	comp=Z,52nm,1.0s						
CAN	Canberra	53.03	178	P	P	07 00 24.7	+1.4
CAN				IAmb	IAmb	07 00 25.3	
	comp=Z,52nm,1.0s						
GAMB	Gambell	53.81	21	IAmb	IAmb	07 00 51.4	
	comp=Z,53nm,1.4s						
POHA	Pohakuloa	54.54	78	P	P	07 00 35.8	+0.9
TIXI	Tiksi	54.70	353	⇓eP	P	07 00 35.5	+0.5
TIXI				pmax	pmax		
	comp=Z,38nm,1.3s						
TAPN	Taplejung	54.75	291	eP	P	07 00 36.8	+0.4
	comp=Z,12nm,0.5s						
TOO	Toolangi	55.24	181	P	P	07 00 40.1	+0.7
TOO				pmax	pmax		
	comp=Z,30nm,1.1s						
TOO	Toolangi	55.24	181	P	P	07 00 40.1	+0.7
TOO				IAmb	IAmb	07 00 41.9	
	comp=Z,30nm,1.1s						
MORW	Morawa	55.30	213	P	P	07 00 39.9	0.0
MORW				IAmb	IAmb	07 00 51.7	
	comp=Z,27nm,0.7s						
WMQ	Urumqi	55.46	311	eP	P	07 00 42.9	+1.9
WMQ				pP	pP	07 01 00.5	0.0
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,430nm,5.5s						
WMQ	Urumqi	55.46	311	IAmb	IAmb	07 01 17.8	
	comp=Z,51nm,1.5s						
RAMN	Ramite	55.76	291	eP	P	07 00 43.9	+0.2
GUN	Gumba	56.33	292	eP	P	07 00 48.8	+0.9
	comp=Z,23nm,0.8s						
ANM	Nome	56.53	23	P	P	07 00 49.0	+0.8
ANM				pmax	pmax		
	comp=Z,33nm,1.1s						
ANM	Nome	56.53	23	P	P	07 00 49.0	+0.8
ANM				IAmb	IAmb	07 00 50.5	
	comp=Z,33nm,1.1s						
DGZ	Jazzator, Alta	56.66	318	⇑eP	P	07 00 49.7	+0.1
DGZ				i *PP	pP	07 01 04.4	-4.6
DGZ				pmax	pmax		
	comp=Z,27nm,1.2s						
PKI	Pulchoki	56.77	292	eP	P	07 00 51.0	0.0
	comp=Z,6.8nm,0.4s						
PKIN	Phulchoki	56.78	292	eP	P	07 00 51.0	0.0
GKN	Gorkha	57.42	292	eP	P	07 00 55.9	+0.6
	comp=Z,17nm,0.6s						
NWAO	Narrogin (SRO)	57.88	209	LR	LR	07 27 44.0	
	comp=Z,97nm,19.0s,baz=50,slow=38						
ZSN	Zaisan	57.94	315	eP	P	07 00 59.1	+0.5
	baz=315						
ZSN	Zaisan	57.94	315	eP	P	07 00 59.0	+0.5
DANN	Dangsing	58.17	293	eP	P	07 01 00.9	+0.2
	comp=Z,66nm,0.6s						
OHAK	Old Harbor	58.98	33	P	P	07 01 06.3	+0.9
OHAK				IAmb	IAmb	07 01 07.1	
	comp=Z,41nm,1.0s						
ZALV	Zalesovo Beam	59.13	323	P	P	07 01 05.0	-1.6
	comp=Z,9.8nm,0.4s,baz=107,slow=8.4,SNR=33						
ZALV				pP	pP	07 01 26.5	+0.3
	comp=Z,5.7nm,0.6s,baz=102,slow=7.9,SNR=2.5						
ZALV				ScP	ScP	07 05 45.8	-2.0
	comp=Z,1.6nm,0.7s,baz=104,slow=3.0,SNR=2.6						
ZALV				LR	LR	07 25 10.4	
	comp=Z,196nm,21.7s,baz=60,slow=34						
ZALV	Zalesovo Beam	59.13	323	i P	P	07 01 06.0	-0.6
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZALV	Zalesovo Beam	59.13	323	P	P	07 01 05.7	-0.9
RDOG	Red Dog Mine	59.22	20	IAmb	IAmb	07 01 09.0	
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	59.49	33	LR	LR	07 25 56.1	
	comp=Z,80nm,20.1s,baz=248,slow=35						
KDAK	Kodiak Island	59.49	33	deP	P	07 01 09.9	+0.9
KDAK				pmax	pmax		
	comp=Z,114nm,1.3s						
TTA	Tatalina	59.51	27	P	P	07 01 09.1	0.0
TTA				pmax	pmax		
	comp=Z,30nm,1.2s						
TTA	Tatalina	59.51	27	P	P	07 01 09.1	0.0
TTA				IAmb	IAmb	07 01 11.8	
	comp=Z,30nm,1.2s						
MK31	Makanchi Array	59.61	314	P	P	07 01 09.4	-0.7
MK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MK31	Makanchi Array	59.61	314	P	P	07 01 09.4	-0.7
MKAR	Makanchi Array	59.61	314	P	P	07 01 08.8	-1.3
	comp=Z,2.6nm,0.4s,baz=84,slow=7.4,SNR=54						
MKAR				ScP	ScP	07 05 49.2	-0.9
	comp=Z,2.4nm,0.9s,baz=106,slow=4.3,SNR=5.1						
MKAR				LR	LR	07 27 36.0	
	comp=Z,178nm,18.9s,baz=58,slow=37						
MKAR				PKPPKP	P'P'df	07 30 32.6	-7.8
	comp=Z,0.4nm,0.9s,baz=230,slow=3.0,SNR=4.0						
MKAR				PKP2bc		07 30 46.4	
	comp=Z,1.3nm,0.9s,baz=298,slow=2.6,SNR=7.6						
MAKZ	Makanchi	59.82	314	P	P	07 01 11.0	-0.5
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	Makanchi	59.82	314	P	P	07 01 10.9	-0.5
HOM	Homer	60.47	31	P	P	07 01 16.1	+0.5
	baz=254						
CNPM	China Poot	60.63	31	P	P	07 01 17.0	+0.2
BRLK	Bradley Lake	60.87	31	P	P	07 01 17.8	-0.6
CAPN	Captain Cook N	61.00	30	P	P	07 01 19.8	+0.6
	baz=254						
PPLA	Purkeypile	61.15	27	P	P	07 01 21.4	+1.0
SKT	Skwentna	61.16	28	IAmb	IAmb	07 01 21.3	
	comp=Z,24nm,1.1s						
SEM	Semipalatinsk	61.34	318	eP	P	07 01 20.9	-1.1
	comp=Z,3.5nm,0.8s,baz=318						
SEM	Semipalatinsk	61.34	318	eP	P	07 01 20.9	-1.1
SEM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDGK	Podgornoye	61.35	310	i P	P	07 01 21.3	-0.8
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SHLS	Shalkode	61.37	310	eP	P	07 01 19.7	-2.5
	comp=Z,5.1nm,1.1s,baz=310						
SHLS	Shalkode	61.37	310	eP	P	07 01 19.7	-2.5
SHLS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
IMAR	Indian Mountai	61.53	24	P	P	07 01 23.4	+0.6
SEW	Seward	61.65	31	P	P	07 01 24.0	+0.4
SEW				IAmb	IAmb	07 01 24.8	
	comp=Z,58nm,1.1s						
RC01	Rabbit Creek A	61.75	30	P	P	07 01 24.3	0.0
	baz=255						
KPKS	Kokpek	61.94	310	eP	P	07 01 25.4	-0.7
	comp=Z,2.3nm,0.6s,baz=310						
KPKS	Kokpek	61.94	310	eP	P	07 01 25.3	-0.7
KPKS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TRF	Thorofare Moun	62.13	27	IAmb	IAmb	07 01 28.1	
	comp=Z,58nm,1.1s						
SATY	Saty	62.14	310	eP	P	07 01 27.1	-0.3
	baz=310						
SATY	Saty	62.14	310	eP	P	07 01 27.1	-0.3
PMR	Palmer	62.16	29	IAmb	IAmb	07 01 28.0	
	comp=Z,38nm,1.2s						
TDK	Taldyqorghan	62.19	312	eP	P	07 01 27.8	+0.1
	comp=Z,7.1nm,0.6s,baz=312						
TDK	Taldyqorghan	62.19	312	eP	P	07 01 27.7	+0.1
TDK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GHO	Glory Hole Cre	62.30	29	P	P	07 01 28.1	0.0
GHO				IAmb	IAmb	07 01 29.2	
	comp=Z,25nm,1.0s						
MLY	Manley	62.40	25	P	P	07 01 29.6	+0.9
	baz=252,SNR=34						
KURK	Kurchatov	62.41	318	deP	P	07 01 28.0	-0.9
KURK				pmax	pmax		
	comp=Z,16nm,0.8s						
KURK	Kurchatov	62.41	318	P	P	07 01 27.9	-0.9
KNK	Knik Glacier	62.43	29	P	P	07 01 28.7	-0.2
KNK				IAmb	IAmb	07 01 30.3	
	comp=Z,31nm,1.0s						
SML	Sawmill	62.58	29	P	P	07 01 30.4	+0.5
BWN	Browne	62.68	26	P	P	07 01 31.1	+0.6
A21K	Barrow	62.73	18	P	P	07 01 31.5	+0.9
	baz=244						
RND	Reindeer	62.74	27	IAmb	IAmb	07 02 10.5	
	comp=Z,24nm,0.8s						
MCK	McKinley	62.79	27	P	P	07 01 31.0	-0.3
	baz=255,SNR=7.9						
URZ	Urewera	62.82	153	LR	LR	07 25 08.5	
	comp=Z,194nm,21.9s,baz=28,slow=32						
NEA2	Nenana	62.96	26	P	P	07 01 32.3	-0.1
	baz=254,SNR=19						
I23K	Minto, Yukon-K	63.00	25	P	P	07 01 33.4	+0.9
	baz=254,SNR=23						
I23K	Minto, Yukon-K	63.00	25	IAmb	IAmb	07 01 34.7	
	comp=Z,45nm,1.1s						
Q23K	Middleton Isla	63.04	32	P	P	07 01 33.6	+0.8
	baz=259						
MDOK	Medeo	63.13	310	eP	P	07 01 34.3	+0.2
	baz=310						
MDOK	Medeo	63.13	310	eP	P	07 01 34.2	+0.2
CHKK	Chushkaly	63.18	311	eP	P	07 01 34.8	+0.6
	baz=311						
CHKK	Chushkaly	63.18	311	eP	P	07 01 34.7	+0.6
AAA	Alma-Ata	63.23	310	eP	P	07 01 35.1	+0.5
	baz=310						
AAA	Alma-Ata	63.23	310	eP	P	07 01 35.0	+0.5
FID	Port Fidalgo	63.23	30	P	P	07 01 34.7	+0.5
QRZ	Quartz Range	63.24	158	P	P	07 01 36.4	+1.9
COLD	Coldfoot	63.29	23	P	P	07 01 35.6	+1.1
	baz=252						
COLD	Coldfoot	63.29	23	IAmb	IAmb	07 01 36.8	
	comp=Z,30nm,1.0s						
DHY	Denali Highway	63.31	28	IAmb	IAmb	07 01 36.3	
	comp=Z,36nm,1.2s						
BKZ	Black Stump Fm	63.33	154	P	P	07 01 35.0	0.0
WRH	Wood River Hil	63.34	26	P	P	07 01 34.6	-0.2
WRH				IAmb	IAmb	07 01 35.7	
	comp=Z,37nm,1.0s						
MDM	Murphy Dome	63.41	26	P	P	07 01 36.1	+0.8
MDM				IAmb	IAmb	07 01 37.2	
	comp=Z,26nm,0.8s						
CCB	Clear Creek Bu	63.50	26	P	P	07 01 35.5	-0.4
TCOL	CIGO, UAF Yank	63.54	26	P	P	07 01 35.8	-0.3
	baz=255						
COLA	College	63.54	26	deP	P	07 01 35.4	-0.7
COLA				pmax	pmax		
	comp=Z,20nm,0.9s						
COLA	College	63.54	26	P	P	07 01 36.3	+0.2
SMLA	Simla	63.64	296	ex	P	07 01 37.3	-0.1
KLU	Klutina	63.64	30	P	P	07 01 38.1	+1.1
KLU				IAmb	IAmb	07 01 38.9	
	comp=Z,44nm,1.1s						
M24K	Tolsona, Glenn	63.64	29	P	P	07 01 37.9	+1.0
	baz=258						
KUU	Kurty	63.65	311	eP	P	07 01 35.1	-2.2
	comp=Z,4.3nm,0.7s,baz=311						
KUU	Kurty	63.65	311	eP	P	07 01 35.9	-1.4
KUU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
POKR	Poker Plat Res	63.77	26	P	P	07 01 37.3	-0.4
	baz=256,SNR=6.2						
HDA	Harding Lake	63.81	26	P	P	07 01 37.3	-0.6
	baz=256,SNR=13						
IL31		63.92	26	IAmb	IAmb	07 01 39.0	
	comp=Z,43nm,1.1s						
ILAR	Eielson Array	63.92	26	P	P	07 01 37.7	-0.9
	comp=Z,27nm,1.0s,baz=258,slow=5.1,SNR=117						
ILAR				pP	pP	07 01 59.4	+1.0
	comp=Z,8.0nm,0.8s,baz=249,slow=6.2,SNR=4.7						
ILAR				LR	LR	07 28 57.9	
	comp=Z,146nm,19.4s,baz=274,slow=35						
ILAR	Eielson Array	63.92	26	P	P	07 01 37.8	-0.8
KSH	Kashi	64.01	306	P	P	07 01 42.8	+2.9
KSH				pP	pwP	07 02 04.8	+0.6
KSH				S	S	07 10 15.8	+5.7
KSH				sS	sS	07 10 51.1	+6.6
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,820nm,7.4s						
KSH				LR	LR		
	comp=Z,630nm,7.7s						
KSH				LR	LR		
	comp=Z,730nm,9.7s						
KSH				LR	LR		
	comp=Z,900nm,10.3s						
PAX	Paxson	64.14	28	P	P	07 01 40.4	+0.2
PAX				pmax	pmax		
	comp=Z,53nm,1.3s						
PAX	Paxson	64.14	28	P	P	07 01 40.4	+0.2
PAX				IAmb	IAmb	07 01 41.8	
	comp=Z,53nm,1.3s						
N25K	Chitina, Valde	64.28	30	P	P	07 01 42.2	+1.0
	baz=260						
N25K	Chitina, Valde	64.28	30	P	P	07 01 41.9	+0.7
N25K				IAmb	IAmb	07 01 43.3	
	comp=Z,96nm,1.8s						
RIDG	Independent Ri	64.56	27	IAmb	IAmb	07 01 44.4	
	comp=Z,84nm,1.1s						
GLB	Gilahina Butte	64.63	30	P	P	07 01 44.1	+0.7
GLB				IAmb	IAmb	07 01 45.4	
	comp=Z,68nm,1.2s						
VRDI	Verde Repeater	64.77	30	P	P	07 01 45.0	+0.6
CRQM	Cirque	64.85	31	P	P	07 01 45.9	+0.9
CRQM				IAmb	IAmb	07 01 46.9	
	comp=Z,62nm,1.2s						
DOT	Dot Lake	64.89	27	IAmb	IAmb	07 01 46.4	
	comp=Z,35nm,0.8s						
LTZ	Lake Taylor	64.89	159	P	P	07 01 45.3	+0.1
PLWZ	Palliser	64.89	157	P	P	07 01 44.7	-0.6
MENT	Mentasta	64.92	28	P	P	07 01 45.9	+0.7
SCRK	Sand Creek	64.98	27	P	P	07 01 46.0	+0.3
	baz=259,SNR=35						
MCARA	McCarthy VSAT	64.99	30	IAmb	IAmb	07 01 47.6	
	comp=Z,42nm,0.9s						
FYU	Fort Yukon	65.00	24	P	P	07 01 46.8	+1.2
AAK	Ala-Archa	65.02	309	⇑eP	P	07 01 45.9	-0.5
AAK				pmax	pmax		
	comp=Z,12nm,1.2s						
AAK	Ala-Archa	65.02	309	P	P	07 01 46.1	-0.3
BALM	Baldy	65.27	30	P	P	07 01 48.0	+0.4
BTLS	Baital	65.28	312	eP	P	07 01 46.7	-1.2
	baz=312						
BTLS	Baital	65.28	312	eP	P	07 01 46.7	-1.2
OXZ	Oxford	65.30	160	IAmb	IAmb	07 01 48.0	
	comp=Z,32nm,1.0s						
RPZ	Rata Peaks	65.33	161	P	P	07 01 47.8	-0.3
RPZ				IAmb	IAmb	07 01 50.5	
	comp=Z,52nm,1.1s						
BMAR	Burnt Mountain	65.44	23	P	P	07 01 47.2	-1.3
LBZ	Lake Benmore	65.67	162	P	P	07 01 50.7	+0.5
LBZ				IAmb	IAmb	07 01 51.0	
	comp=Z,25nm,0.8s						
CTGM	Chitina Glacie	65.75	31	IAmb	IAmb	07 01 52.9	
	comp=Z,32nm,1.0s						
TABL	Table Mountain	65.78	31	P	P	07 01 52.5	+1.4
TABL				IAmb	IAmb	07 01 52.9	
	comp=Z,53nm,0.8s						
DCZ	Deep Cove	65.82	164	P	P	07 01 51.5	+0.4
K27K	Chicken	65.82	27	P	P	07 01 52.1	+1.0
	baz=261,SNR=19						
K27K	Chicken	65.82	27	P	P	07 01 51.7	+0.7
K27K				IAmb	IAmb	07 01 53.3	
	comp=Z,45nm,1.1s						
BRZS	Berezniki	66.17	317	eP	P	07 01 53.0	-0.5
	baz=317						
BRZS	Berezniki	66.17	317	eP	P	07 01 53.0	-0.5
EGAK	Eagle	66.33	26	IAmb	IAmb	07 01 55.9	
	comp=Z,49nm,1.4s						
NIL	Nilore	66.66	299	P	P	07 01 57.3	+0.3
NIL				pmax	pmax		
	comp=Z,26nm,0.9s						
NIL	Nilore	66.66	299	P	P	07 01 57.3	+0.3
DAWY	Dawson	67.00	27	P	P	07 01 59.4	+0.8
DAWY				IAmb	IAmb	07 02 00.7	
	comp=Z,35nm,0.9s						
HYT	Haines Junctio	67.60	31	P	P	07 02 03.9	+1.4
HYT				IAmb	IAmb	07 02 05.2	
	comp=Z,67nm,0.9s						
BRVK	Borovoye	67.67	321	ceP	P	07 02 01.7	-1.2
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
BRVK	Borovoye	67.67	321	P	P	07 02 02.7	-0.2
KK31	Karatay Array	67.92	310	P	P	07 02 04.0	-0.7
KK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KK31	Karatay Array	67.92	310	P	P	07 02 04.0	-0.7

KKAR	**Karatay Array**	67.92	310	P	P	07 02 04.2	-0.5
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KKAR	**Karatay Array**	67.92	310	P	P	07 02 04.2	-0.5
KKAR	**Karatay Array**	67.92	310	P	P	07 02 03.6	-1.1
WHY	**Whitehorse**	68.88	31	P	P	07 02 11.8	+1.2
JIS	**Juneau Island**	69.13	34	IAmb	IAmb	07 02 14.8	
	comp=Z,42nm,1.1s						
INK	**Inuvik**	69.70	23	P	P	07 02 15.2	-0.1
INK				pmax	pmax		
	comp=Z,38nm,1.0s						
INK	**Inuvik**	69.70	23	P	P	07 02 15.2	-0.1
INK				IAmb	IAmb	07 02 16.7	
	comp=Z,38nm,1.0s						
KBL	**Kabul**	70.00	301	P	P	07 02 17.8	-0.3
KBL				pmax	pmax		
	comp=Z,13nm,1.0s						
KBL	**Kabul**	70.00	301	P	P	07 02 17.8	-0.3
DLBC	**Dease Lake**	71.42	33	P	P	07 02 27.6	+1.6
DLBC				IAmb	IAmb	07 02 28.6	
	comp=Z,44nm,0.9s						
PPT	**Papeete**	72.00	116	LR	LR	07 29 11.1	
	comp=Z,349nm,20.7s,baz=322,slow=32						
PPT2	**Papeete2**	72.01	116	*e*LR	LR	07 24 23.7	
	comp=Z,1µm,30.0s,baz=297						
C36M	**Paulatuk**	73.10	22	P	P	07 02 35.9	+0.1
	baz=276						
C36M	**Paulatuk**	73.10	22		P	07 02 36.1	+0.4
C36M				IAmb	IAmb	07 02 37.1	
	comp=Z,65nm,1.1s						
ARU	**Arti**	74.17	325	*c* *i*P	P	07 02 41.6	-0.7
ARU				S	S	07 12 09.7	+0.7
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	**Arti**	74.17	325	P	P	07 02 41.6	-0.7
ABKAR	**Akbulak array**	74.48	317		P	07 02 43.2	-0.9
ABKAR	**Akbulak array**	74.48	317	P	P	07 02 42.6	-1.5
TBI	**Tubuai**	74.70	121	*e*LR	LR	07 25 25.0	
	comp=Z,269nm,30.5s						
NLWA	**Neilton Lookou**	76.67	44	P	P	07 02 57.9	+1.0
NLWA					P	07 02 58.6	+1.7
NLWA				IAmb	IAmb	07 02 59.6	
	comp=Z,43nm,1.1s						
PGC	**Sidney**	76.69	43	P	P	07 02 57.9	+1.2
PGC					P	07 02 58.1	+1.4
E03A	**Lebam**	77.06	45	IAmb	IAmb	07 03 01.5	
	comp=Z,60nm,0.9s						
A04D	**Lummi Island**	77.16	43	P	P	07 03 00.3	+0.9
	baz=282						
D03D	**Eldon**	77.16	44	P	P	07 03 01.1	+1.6
	baz=282,SNR=13						
I02D	**Swisshome**	77.39	48	P	P	07 03 02.5	+1.7
	baz=283						
D04E	**Lakebay**	77.45	44	P	P	07 03 02.5	+1.4
	baz=283						
F04D	**Rainier, OR**	77.53	45	P	P	07 03 02.7	+1.1
	baz=283						
J01E	**Myrtle Point**	77.54	49	P	P	07 03 03.2	+1.5
	baz=283						
B05A	**Bryant**	77.65	43	P	P	07 03 03.5	+1.3
	baz=283,SNR=16						
E04D	**Cinebar**	77.73	45	P	P	07 03 04.3	+1.6
	baz=283,SNR=8.7						
I03D	**Drain, OR**	77.84	48	P	P	07 03 04.7	+1.4
	baz=283,SNR=6.9						
K02D	**Willamette Mer**	77.84	49	P	P	07 03 04.6	+1.1
	baz=283,SNR=5.7						
D05A	**Enumclaw**	77.97	44	P	P	07 03 05.4	+1.4
D05A					P	07 03 06.1	+2.1
D05A				IAmb	IAmb	07 03 06.8	
	comp=Z,60nm,1.1s						
L02E	**Cave Junction**	78.01	49	P	P	07 03 05.8	+1.5
	baz=283,SNR=10						
GEYT	**Alibeck**	78.04	306	P	P	07 03 04.5	-0.1
	comp=Z,6.1nm,1.1s,baz=273,slow=8.8,SNR=6.0						
GEYT				LR	LR	07 39 41.8	
	comp=Z,160nm,20.0s,baz=5.0,slow=37						
GEYT	**Alibeck**	78.04	306	P	P	07 03 04.8	+0.2
H04D	**Lebanon**	78.08	47	P	P	07 03 06.1	+1.4
	baz=283,SNR=7.0						
KHMM	**Horse Mountain**	78.21	51		P	07 03 08.1	+2.4
KHMM				IAmb	IAmb	07 03 08.6	
	comp=Z,114nm,1.4s						
YKA	**Yellowknife Ar**	78.22	28	P	P	07 03 05.3	+0.3
	comp=Z,37nm,0.9s,baz=288,slow=5.1,SNR=279						
YKA				pP	pP	07 03 26.2	+0.7
	comp=Z,14nm,0.8s,baz=288,slow=5.2,SNR=5.1						
EUNU	**Eureka**	78.33	8	IAmb	IAmb	07 03 07.5	
	comp=Z,41nm,0.9s						
HUMO	**Hull Mountain**	78.37	49		P	07 03 09.0	+2.6
HUMO				IAmb	IAmb	07 03 09.9	
	comp=Z,82nm,1.7s						
H04A	**Detroit Lake**	78.42	47	P	P	07 03 07.2	+0.6
H04A					P	07 03 07.5	+0.9
H04A				IAmb	IAmb	07 03 08.6	
	comp=Z,60nm,1.2s						
I04A	**Tendick Farm,**	78.47	48	P	P	07 03 07.8	+0.8
	baz=284,SNR=14						
C06D	**Leavenworth**	78.52	43	P	P	07 03 07.9	+0.8
	baz=284						
KIRV	**Kirov**	78.55	328	⇑*e*P	P	07 03 07.1	+0.2
F05D	**White Salmon**	78.63	45	P	P	07 03 08.8	+1.1
	baz=284						
M02C	**Callahan**	78.73	50	P	P	07 03 10.0	+1.6
	baz=284,SNR=11						
YBH	**Yreka Blue Hor**	78.75	50	IAmb	IAmb	07 03 11.1	
	comp=Z,32nm,0.9s						
J04D	**Umpqua Nationa**	78.82	48	P	P	07 03 10.2	+1.1
	baz=284,SNR=9.5						
LTY	**Liberty**	78.83	44		P	07 03 10.0	+1.2
LTY				IAmb	IAmb	07 03 10.8	
	comp=Z,51nm,1.4s						
G05D	**Wamic, OR**	78.89	46	P	P	07 03 10.3	+1.1
	baz=284						
L04D	**Klamath Falls**	78.93	49	P	P	07 03 10.6	+1.0
	baz=284,SNR=7.6						
N02D	**Trinity Center**	78.94	50	P	P	07 03 10.9	+1.3
	baz=284,SNR=8.0						
O02D	**Mt. Diablo Mer**	79.08	51	P	P	07 03 12.0	+1.7
	baz=284,SNR=12						
I05D	**Terrebonne, OR**	79.09	47	P	P	07 03 11.2	+0.9
	baz=284,SNR=7.9						
K04D	**Chiloquin, OR**	79.23	49	P	P	07 03 12.3	+1.1
	baz=284,SNR=6.6						
M04C	**Macdoel**	79.38	50	P	P	07 03 13.0	+0.9
	baz=284,SNR=18						
GDXM	**Geysers**	79.41	53	IAmb	IAmb	07 03 14.9	
	comp=Z,46nm,1.1s						
B08A	**Colville Reser**	79.42	43	P	P	07 03 12.7	+0.7
B08A					P	07 03 12.9	+0.9
B08A				IAmb	IAmb	07 03 14.0	
	comp=Z,78nm,1.2s						
J05D	**Fort Rock, OR**	79.43	48	P	P	07 03 13.7	+1.3
	baz=285,SNR=36						
E07A	**Sunnyside**	79.54	44	IAmb	IAmb	07 03 15.0	
	comp=Z,36nm,1.0s						
HOPEN	**Hopen**	79.58	348	*e*P	P	07 03 12.8	+0.5
O03E	**Paynes Creek**	79.78	51	P	P	07 03 14.8	+0.6
	baz=285,SNR=13						
K05A	**Summer Lake**	79.81	48	IAmb	IAmb	07 03 17.0	
	comp=Z,61nm,0.9s						
RES	**Resolute Bay**	79.93	14	IAmb	IAmb	07 03 16.1	
	comp=Z,45nm,0.9s						
D08A	**Wollman Farm,**	80.03	44	IAmb	IAmb	07 03 17.4	
	comp=Z,51nm,1.1s						
SPA0	**Spitsbergen Ar**	80.03	351	P	P	07 03 15.9	+1.1
SPA0					P	07 03 16.5	+1.8
SPA0				IAmb	IAmb	07 03 44.7	
	comp=Z,72nm,1.3s						
SPA0	**Spitsbergen Ar**	80.03	351	*e*P	P	07 03 15.6	+0.8
E08A	**Dider Farm, El**	80.09	44	IAmb	IAmb	07 03 17.9	
	comp=Z,81nm,1.5s						
KBS	**Kingsbay**	80.14	352	*de*P	P	07 03 16.7	+1.4
KBS				pmax	pmax		
	comp=Z,18nm,0.8s						
KBS	**Kingsbay**	80.14	352	P	P	07 03 16.3	+1.1
KBS				IAmb	IAmb	07 03 23.9	
	comp=Z,33nm,0.9s						
KBS	**Kingsbay**	80.14	352	*e*P	P	07 03 16.9	+1.6
ORV	**Oroville**	80.19	52	IAmb	IAmb	07 03 18.1	
	comp=Z,52nm,1.1s						
BRBA	**Barentsburg A**	80.44	351	*e*P	P	07 03 17.6	+0.8
MOD	**Modoc Plateau**	80.45	49	IAmb	IAmb	07 03 19.9	
	comp=Z,55nm,1.3s						
E09A	**Wood Farm, Sta**	80.69	44	IAmb	IAmb	07 03 21.1	
	comp=Z,43nm,1.0s						
AFDM	**Forest Hills D**	80.75	52	IAmb	IAmb	07 03 21.4	
	comp=Z,47nm,1.2s						
NEW	**Newport**	80.86	42	P	P	07 03 20.6	+0.8
	baz=287						
NEW	**Newport**	80.86	42	IAmb	IAmb	07 03 21.9	
	comp=Z,61nm,1.1s						
BEKR	**Beckworth**	80.96	51	P	P	07 03 20.8	+0.2
BEKR				IAmb	IAmb	07 03 22.5	
	comp=Z,40nm,0.9s						
HSPB	**Hornsund (broa**	80.97	350	*e*P	P	07 03 20.7	+1.0
BELG	**Belogornoye**	81.32	322	P	P	07 03 21.6	-0.4
	comp=Z,21nm,0.8s,baz=36,slow=0.6,SNR=14						
BELG				pP	pP	07 03 42.8	+0.2
	comp=Z,13nm,0.5s,baz=216,slow=2.9,SNR=4.0						
CMB	**Columbia Colle**	81.44	53	IAmb	IAmb	07 03 25.0	
	comp=Z,33nm,0.9s						
WVOR	**Wild Horse Val**	81.50	48	IAmb	IAmb	07 03 25.5	
	comp=Z,51nm,1.0s						
PAHR	**Pah Rah Range**	81.72	51	IAmb	IAmb	07 03 26.7	
	comp=Z,48nm,1.2s						
BMO	**Blue Mountains**	81.73	46	IAmb	IAmb	07 03 26.6	
	comp=Z,54nm,1.1s						
PNTR	**Pine Nut**	81.74	52		P	07 03 26.4	+1.5
PNTR				IAmb	IAmb	07 03 27.1	
	comp=Z,45nm,0.8s						
TMCR	**Tamitsa**	81.81	335	*e*P	P	07 03 23.9	-0.4
TMCR				pmax	pmax		
	comp=Z,22nm,0.4s						
APA	**Apatity**	82.01	339	⇓*i*P	P	07 03 25.7	+0.3
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
WAKR	**Walker**	82.02	52	IAmb	IAmb	07 03 28.7	
	comp=Z,128nm,1.9s						
PAGB	**Antelope Grade**	82.18	55	P	P	07 03 28.0	+1.0
PAGB					P	07 03 28.5	+1.5
PAGB				IAmb	IAmb	07 03 29.4	
	comp=Z,43nm,0.9s						
SMMC	**Simmler**	82.50	55	P	P	07 03 29.9	+1.2
	baz=287						
KLMR	**Klimovskoe**	82.52	332	*e*P	P	07 03 25.9	-2.2
KLMR				pmax	pmax		
	comp=Z,21nm,0.9s						
KLMR	**Klimovskoe**	82.52	332	*e*P	P	07 03 25.9	-2.2
KLMR				AMP		07 03 29.2	
	comp=Z,21nm,0.9s						
WALA	**Waterton Lakes**	82.65	41	IAmb	IAmb	07 03 32.0	
	comp=Z,57nm,1.1s						
RYN	**Ryan**	82.67	52	P	P	07 03 30.1	+0.5
RYN				IAmb	IAmb	07 03 31.9	
	comp=Z,38nm,1.0s						
VOG	**Valley Oaks Go**	82.69	54	P	P	07 03 29.7	+0.1
	baz=287						
MLAC	**Mammoth, Mammo**	82.73	53	P	P	07 03 31.0	+1.0
	baz=287						
PKM	**Mcpherson Peak**	82.77	56	P	P	07 03 31.5	+1.2
	baz=287,SNR=9.5						
LHV	**Little Huntoon**	82.80	52	IAmb	IAmb	07 03 32.8	
	comp=Z,62nm,1.3s						
JTMT	**Jette**	82.84	42	IAmb	IAmb	07 03 32.3	
	comp=Z,35nm,1.1s						
NVAR	**Mina Array Bea**	82.90	52	P	P	07 03 32.0	+1.1
	comp=Z,28nm,0.8s,baz=266,slow=5.8,SNR=188						
NVAR				PP	PP	07 06 41.7	-0.4
	comp=Z,1.7nm,0.9s,baz=280,slow=5.1,SNR=2.6						
NVAR				LR	LR	07 32 28.9	
	comp=Z,128nm,21.8s,baz=306,slow=30						
NVAR	**Mina Array Bea**	82.90	52	P	P	07 03 31.9	+0.9
SBC	**Santa Barbara**	82.97	56	P	P	07 03 31.8	+0.7
	baz=287						
UOSS	**Minazif**	82.98	294	P	P	07 03 31.9	+0.6
NV11	**Mina Array Sit**	83.01	52		P	07 03 32.8	+1.5
NV11				IAmb	IAmb	07 03 33.6	
	comp=Z,40nm,1.1s						
VES	**Vestal, Richgr**	83.06	55	P	P	07 03 31.8	+0.3
	baz=287,SNR=14						
MFID	**Camas Ranch**	83.18	47	IAmb	IAmb	07 03 34.3	
	comp=Z,57nm,1.0s						
HAMF	**Hammerfest**	83.32	344	*e*P	P	07 03 32.8	+0.7
TULEG	**Thule**	83.32	8	IAmb	IAmb	07 03 34.2	
	comp=Z,78nm,1.3s						
TULEG	**Thule**	83.32	8	⇓*i*P	P	07 03 33.0	+1.0
TULEG				IAmb	IAmb	07 03 33.9	
	comp=Z,36nm,1.0s						
MSO	**Missoula**	83.36	43	P	P	07 03 33.0	+0.1
	baz=289						
TIN	**Tinemaha, Big**	83.36	53	P	P	07 03 34.1	+0.9
	baz=287						
ARA0	**ARCESS Array S**	83.46	342	*e*P	P	07 03 33.4	+0.5
ARCES	**ARCESS Array B**	83.46	342	P	P	07 03 33.3	+0.4
	comp=Z,4.9nm,0.5s,baz=88,slow=8.8,SNR=61						
ARCES				pP	pP	07 03 53.2	-0.4
	comp=Z,5.9nm,0.4s,baz=69,slow=7.9,SNR=4.7						
ARCES				LR	LR	07 46 01.0	
	comp=Z,280nm,18.8s,baz=225,slow=39						
ARCES	**ARCESS Array B**	83.46	342	P	P	07 03 32.9	0.0
ARCES				pmax	pmax		
	comp=Z,22nm,1.1s						
ARCES	**ARCESS Array B**	83.46	342	P	P	07 03 32.9	0.0
ARVC	**Arvin**	83.47	55	P	P	07 03 34.4	+0.8
	baz=287,SNR=5.9						
SNCC	**San Nicolas Is**	83.47	57	P	P	07 03 34.2	+0.5
	baz=287						
ISA	**Isabella, Lake**	83.59	55	P	P	07 03 34.6	+0.3
	baz=287,SNR=11						
CWC	**Cottonwood Cre**	83.66	54	P	P	07 03 35.5	+0.7
	baz=288						
OSI	**Osito Audit: C**	83.70	56	P	P	07 03 35.8	+0.9
	baz=287						
GRAC	**Grapevine Rang**	84.04	53	P	P	07 03 37.6	+1.0
	baz=288,SNR=8.8						
HLID	**Hailey**	84.11	46	P	P	07 03 37.7	+0.8
	baz=289						
DECC	**Green Verdugo**	84.12	56	P	P	07 03 37.6	+0.6
	baz=288						
EDW2	**Edwards Air Fo**	84.20	55	P	P	07 03 38.4	+1.0
	baz=288,SNR=18						
MPMC	**Manual Prospec**	84.23	54	P	P	07 03 38.6	+0.9
	baz=288,SNR=32						
LRMC	**Laurel Mtn Rad**	84.26	55	P	P	07 03 38.6	+0.8
	baz=288,SNR=8.4						
PASC	**Pasadena Art C**	84.26	56	IAmb	IAmb	07 03 39.3	
	comp=Z,36nm,1.1s						
FMP	**Fort Macarthur**	84.31	57	P	P	07 03 38.4	+0.4
	baz=288						
SCI2	**San Clemente I**	84.33	57	P	P	07 03 38.2	+0.1
	baz=288						
MWC	**Mount Wilson**	84.35	56	IAmb	IAmb	07 03 40.1	
	comp=Z,57nm,1.3s						
KTK1	**Kautokeino**	84.42	342	*e*P	P	07 03 37.9	+0.2
ELK	**Elko**	84.44	49	P	P	07 03 39.2	+0.4
ELK				pmax	pmax		
	comp=Z,46nm,0.9s						
ELK	**Elko**	84.44	49	P	P	07 03 39.2	+0.4
ELK				IAmb	IAmb	07 03 40.9	
	comp=Z,46nm,0.8s						
FURC	**Furnace Creek,**	84.58	54	P	P	07 03 40.1	+0.9
	baz=288,SNR=20						
BFSC	**Mount Baldy Ra**	84.66	56	P	P	07 03 40.0	+0.2
	baz=288						
TPNV	**Topopah Spring**	84.90	53	P	P	07 03 41.8	+0.8
	baz=288,SNR=29						
TPNV	**Topopah Spring**	84.90	53	IAmb	IAmb	07 03 43.0	
	comp=Z,37nm,1.0s						
R11A	**Troy Canyon, C**	84.95	51	P	P	07 03 42.3	+1.0
	baz=289,SNR=37						
R11A	**Troy Canyon, C**	84.95	51	IAmb	IAmb	07 03 43.6	
	comp=Z,37nm,1.1s						
RRX	**Edison Barstow**	84.98	55	P	P	07 03 42.4	+1.1
	baz=288						
GSC	**Goldstone, Bar**	84.99	55	P	P	07 03 42.3	+0.8
	baz=288,SNR=20						
GSC	**Goldstone, Bar**	84.99	55	IAmb	IAmb	07 03 43.4	
	comp=Z,36nm,1.1s						
DAG	**Danmarks Havn**	85.05	357	*i* P	P	07 03 41.2	+0.4
DAG				pmax	pmax		
	comp=Z,35nm,1.1s						
DAG	**Danmarks Havn**	85.05	357	*i* P	P	07 03 41.2	+0.4
	comp=Z,35nm,1.1s						
DAG	**Danmarks Havn**	85.05	357	*i* P	P	07 03 41.3	+0.4
DAG				IAmb	IAmb	07 03 42.6	
	comp=Z,35nm,1.1s						
SHOC	**Shoshone, Teco**	85.22	54	P	P	07 03 43.1	+0.6
	baz=289,SNR=12						
MURC	**Murrieta**	85.22	56	P	P	07 03 43.0	+0.4
	baz=288,SNR=9.2						
TRO	**Tromso**	85.22	344	*e*P	P	07 03 41.4	-0.3
BBRC	**Big Bear Solar**	85.23	56	P	P	07 03 43.2	+0.3
	baz=288,SNR=5.8						
BOZ	**Bozeman (W)**	85.28	44	P	P	07 03 43.5	+0.8
	baz=291,SNR=56						
BOZ	**Bozeman (W)**	85.28	44	IAmb	IAmb	07 03 44.8	
	comp=Z,38nm,0.9s						
HEC	**Hector,Ludlow**	85.51	55	P	P	07 03 44.7	+0.6
	baz=289,SNR=6.0						
109C	**Camp Elliot, M**	85.52	57	P	P	07 03 44.6	+0.7
	baz=288,SNR=5.7						
109C	**Camp Elliot, M**	85.52	57	IAmb	IAmb	07 03 45.7	
	comp=Z,38nm,1.1s						
MOS	**Moscow**	85.56	328	*e*P	P	07 03 45.4	+1.7
MOS				*e*		07 04 05.7	
MOS				*e*		07 14 07.7	
EGMT	**Eagleton**	85.60	41	P	P	07 03 44.8	+0.5
	baz=292,SNR=32						
PRN	**Pahroc Range**	85.66	52	IAmb	IAmb	07 03 47.1	
	comp=Z,42nm,1.1s						
PFO	**Pinyon Flats O**	85.80	56	*de*P	P	07 03 45.8	+0.2
PFO				pmax	pmax		
	comp=Z,45nm,1.0s						
PFO	**Pinyon Flats O**	85.80	56	P	P	07 03 46.1	+0.6
	baz=289,SNR=14						
PFO	**Pinyon Flats O**	85.80	56	P	P	07 03 46.0	+0.5
PFO				IAmb	IAmb	07 03 47.3	
	comp=Z,42nm,1.1s						
TPFO	**Pinon Flats**	85.81	56	P	P	07 03 46.1	+0.5
	baz=289,SNR=13						
HVU	**Hansel Valley**	85.84	47	IAmb	IAmb	07 03 48.1	
	comp=Z,54nm,1.1s						
YHL	**Hebgen Lake**	85.84	44	P	P	07 03 47.0	+1.3
SHPR	**Sheep Range**	85.87	53	IAmb	IAmb	07 03 48.4	
	comp=Z,35nm,1.3s						
VALR	**Valaam**	86.02	334	*e*P	P	07 03 44.8	-1.0
VALR				pmax	pmax		
	comp=Z,13nm,0.7s						
BELC	**Belle Mtn. Jos**	86.04	56	P	P	07 03 46.9	+0.2
	baz=289,SNR=14						
GMRC	**Granite Mounta**	86.05	55	P	P	07 03 47.6	+0.8
	baz=289,SNR=19						
MONP2	**Monument Peak**	86.06	57	P	P	07 03 47.5	+0.6
	baz=289,SNR=15						
PSUT	**Pine Spring**	86.18	51	IAmb	IAmb	07 03 49.5	
	comp=Z,39nm,0.9s						
SPUT	**South Promonto**	86.24	48	IAmb	IAmb	07 03 49.8	
	comp=Z,41nm,1.1s						
YPP	**Pitchstone Pla**	86.31	45	IAmb	IAmb	07 04 12.5	
	comp=Z,47nm,1.7s						
DUG	**Dugway, Tooele**	86.36	49	P	P	07 03 49.2	+0.9
	baz=290						
DUG	**Dugway, Tooele**	86.36	49	IAmb	IAmb	07 03 50.3	
	comp=Z,46nm,1.1s						
OBN	**Obninsk**	86.37	327	⇓*e*P	P	07 03 46.3	-1.4
OBN				*e*		07 07 07.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,438nm,22.0s						
IKP	**In-Ko-Pah, Jac**	86.39	57	P	P	07 03 49.1	+0.7
	baz=289,SNR=7.5						
H17A	**Grant Village**	86.42	44	P	P	07 03 51.3	+2.8
	baz=292,SNR=64						
FLWY	**Flagg Ranch**	86.45	45	P	P	07 03 49.9	+1.2
LKWY	**Lake**	86.47	44	IAmb	IAmb	07 03 52.9	
	comp=Z,45nm,1.1s						
SWSC	**Sam W. Stewart**	86.54	57	P	P	07 03 49.4	+0.4
	baz=289,SNR=6.4						
MOOW	**Moose Ponds**	86.54	45	IAmb	IAmb	07 03 51.5	
	comp=Z,25nm,0.9s						
BC3	**Big Chuckawall**	86.58	56	P	P	07 03 50.1	+0.7
	baz=289,SNR=19						
REDW	**Red Top Meadow**	86.61	45	IAmb	IAmb	07 03 51.9	
	comp=Z,88nm,1.8s						
IRM	**Iron Mountain**	86.66	55	P	P	07 03 50.3	+0.7
	baz=289,SNR=18						
LOHW	**Long Hollow**	86.68	45	IAmb	IAmb	07 03 52.1	
	comp=Z,54nm,1.5s						
ESJX	**Sierra Juarez**	86.72	58	IAmb	IAmb	07 03 51.3	
	comp=Z,25nm,1.2s						
RKT	**Rikitea**	86.76	115	*e*LR	LR	07 31 08.8	
	comp=Z,571nm,32.8s						
NEE2	**Needles Airpor**	86.86	55	P	P	07 03 51.5	+0.9
	baz=290,SNR=7.8						
CCUT	**Cedar City**	86.88	52	IAmb	IAmb	07 03 53.5	
	comp=Z,46nm,1.1s						
CTU	**Camp Tracy**	86.95	48	IAmb	IAmb	07 03 53.0	
	comp=Z,32nm,1.1s						
ZEI	**Tsey**	86.96	314	*e*P	P	07 03 48.5	-2.6
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NLU	**North Lily Min**	86.98	49	IAmb	IAmb	07 03 53.4	
	comp=Z,31nm,1.1s						
RLMT	**Red Lodge**	87.01	43	P	P	07 03 52.9	+1.5
	baz=292,SNR=60						
RLMT	**Red Lodge**	87.01	43	P	P	07 03 52.9	+1.5
TCUT	**Toone Canyon**	87.04	48	IAmb	IAmb	07 03 53.5	
	comp=Z,31nm,0.8s						
SZCU	**Shurtz Canyon**	87.07	51	IAmb	IAmb	07 03 54.1	
	comp=Z,27nm,1.0s						
LCMT	**Little Creek M**	87.15	52	IAmb	IAmb	07 03 54.6	
	comp=Z,33nm,1.0s						
TCRU	**Three Creeks R**	87.19	50	IAmb	IAmb	07 03 54.7	
	comp=Z,18nm,0.9s						
FFC	**Flin Flon**	87.24	33	P	P	07 03 52.6	+0.6
FFC				pmax	pmax		
	comp=Z,71nm,1.0s						
FFC	**Flin Flon**	87.24	33	P	P	07 03 52.6	+0.6
GLA	**Glamis**	87.27	56	P	P	07 03 53.7	+1.0
	baz=290,SNR=9.1						
GLA	**Glamis**	87.27	56	IAmb	IAmb	07 03 54.7	
	comp=Z,31nm,0.9s						
MPU	**Maple Canyon**	87.28	49	IAmb	IAmb	07 03 54.8	
	comp=Z,34nm,1.2s						
KBZ	**Khabaz**	87.29	315	P	P	07 03 52.6	+0.3
	comp=Z,3.6nm,0.9s,baz=70,slow=4.4,SNR=7.9						
KBZ				LR	LR	07 45 01.7	
	comp=Z,150nm,19.8s,baz=15,slow=37						
KBZ	**Khabaz**	87.29	315	⇓*e*P	P	07 03 51.1	-1.3
KBZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
W13A	**Hualapai Mount**	87.32	54	IAmb	IAmb	07 03 55.2	
	comp=Z,27nm,1.2s						
KIV	**Kislovodsk**	87.34	315	*e*P	P	07 03 50.3	-2.5
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
STEI	**Steigen**	87.37	344	*e*P	P	07 03 51.8	-0.5
PDMCI	**Parker Dam,Lak**	87.39	55	P	P	07 03 54.1	+1.0
	baz=290,SNR=19						
SPX	**San Pedro Mart**	87.43	58	P	P	07 03 54.7	+0.8
SPX				IAmb	IAmb	07 03 55.9	
	comp=Z,50nm,1.7s						
DBG	**Daneborg**	87.56	356	*i* P	P	07 03 53.6	+0.5
LOF	**Lofoten**	87.67	344	*e*P	P	07 03 55.2	+1.4
BW06	**Boulder Array**	87.71	46	P	P	07 03 55.2	+0.4
	baz=292,SNR=12						
PDAR	**Pinedale Array**	87.71	46	P	P	07 03 54.5	-0.3
	comp=Z,6.3nm,0.8s,baz=253,slow=2.5,SNR=56						
PDAR				pP	pP	07 04 17.5	+1.9
	comp=Z,1.2nm,0.5s,baz=299,slow=9.2,SNR=2.9						
PDAR				PP	PP	07 07 19.5	-1.4
	comp=Z,1.7nm,1.1s,baz=286,slow=5.5,SNR=3.9						
PDAR				LR	LR	07 35 25.8	
	comp=Z,90nm,21.9s,baz=332,slow=30						
PDAR	**Pinedale Array**	87.71	46	P	P	07 03 54.9	+0.1
FAUS	**Fauske**	87.74	343	*e*P	P	07 03 54.5	+0.5
TMUT	**Trail Mountain**	87.84	49	IAmb	IAmb	07 03 57.7	
	comp=Z,22nm,0.9s						
FINES	**FINESS Array B**	87.92	336	P	P	07 03 53.5	-1.5
	comp=Z,12nm,0.4s,baz=64,slow=4.5,SNR=122						
SFX	**San Felipe**	87.93	58	IAmb	IAmb	07 03 57.7	
	comp=Z,30nm,1.1s						
U15A	**North Rim**	88.07	52	IAmb	IAmb	07 03 59.2	
	comp=Z,42nm,0.9s						
P17A	**Butcher Ranch,**	88.11	49	P	P	07 03 56.7	-0.1
P17A				IAmb	IAmb	07 03 59.0	
	comp=Z,59nm,1.3s						
LAO	**LASA Array**	88.33	41	P	P	07 03 58.5	+1.0
	baz=294,SNR=11						
SRU	**San Rafael Swe**	88.40	49	IAmb	IAmb	07 03 59.9	
	comp=Z,37nm,0.8s						
DGMT	**Dagmar**	88.82	39	P	P	07 03 59.8	+0.2
	baz=296,SNR=8.3						
DGMT	**Dagmar**	88.82	39	IAmb	IAmb	07 04 02.3	
	comp=Z,22nm,0.9s						
MOR8	**Moi Rana**	88.83	342	*e*P	P	07 03 58.2	-1.1
PIX	**Pinacate**	88.87	57	IAmb	IAmb	07 04 02.2	
	comp=Z,26nm,1.4s						

WUAZ	Wupatki	89.09	53	P	P	07 04 02.8	+1.4
	baz=291,SNR=48						
214A	Organ Pipe Nat	89.25	57	P	P	07 04 03.4	+1.3
	baz=291,SNR=55						
SUMG	Summit	89.62	2	*i* P	P	07 04 04.1	+0.7
SUMG				pmax	pmax		
	comp=Z,15nm,0.8s						
SUMG	Summit	89.62	2	IAmb	IAmb	07 04 25.7	
	comp=Z,24nm,1.3s						
SUMG	Summit	89.62	2	*i* P	P	07 04 04.1	+0.7
	comp=Z,14nm,0.8s						
SUMG	Summit	89.62	2	*i* P	P	07 04 04.2	+0.7
SUMG				IAmb	IAmb	07 04 09.3	
	comp=Z,14nm,0.8s						
O20A	White River Ci	89.64	48	P	P	07 04 04.5	+0.6
	baz=293,SNR=29						
O20A	White River Ci	89.64	48	IAmb	IAmb	07 04 05.8	
	comp=Z,47nm,1.1s						
RWWY	Rawlins	89.74	46	IAmb	IAmb	07 04 06.4	
	comp=Z,49nm,1.2s						
PV23	Carpenter Ridg	89.75	50	P	P	07 04 04.3	-0.2
K22A	Casper	89.81	45	P	P	07 04 05.3	+0.7
	baz=294,SNR=17						
K22A	Casper	89.81	45	IAmb	IAmb	07 04 07.6	
	comp=Z,40nm,1.1s						
PV22	Blue Mesa, Par	89.88	49	IAmb	IAmb	07 04 07.1	
	comp=Z,42nm,1.2s						
PV13	Radium Mtn., P	90.00	50	P	P	07 04 05.7	0.0
PV07	Paradox Valley	90.02	49	IAmb	IAmb	07 04 07.7	
	comp=Z,33nm,1.1s						
PV15	Paradox Valley	90.17	49	IAmb	IAmb	07 04 08.4	
	comp=Z,34nm,1.1s						
W18A	Petrified Fore	90.49	53	P	P	07 04 09.2	+1.2
	baz=292,SNR=6.5						
X18A	Snowflake	90.55	53	IAmb	IAmb	07 04 10.8	
	comp=Z,21nm,1.1s						
MVCO	Mesa Verde	90.60	51	P	P	07 04 09.3	+0.7
	baz=293,SNR=24						
TUC	Tucson	90.72	56	P	P	07 04 10.5	+1.5
TUC				pmax	pmax		
	comp=Z,48nm,1.3s						
TUC	Tucson	90.72	56	P	P	07 04 10.4	+1.5
	baz=292						
TUC	Tucson	90.72	56	P	P	07 04 10.5	+1.5
NSS	Namsos	90.74	342	*e*P	P	07 04 08.5	+0.3
RSSD	Black Hills	90.82	43	P	P	07 04 09.7	+0.3
RSSD				pmax	pmax		
	comp=Z,70nm,1.5s						
RSSD	Black Hills	90.82	43	P	P	07 04 09.6	+0.3
	baz=296						
RSSD	Black Hills	90.82	43	P	P	07 04 09.7	+0.3
N23A	Red Feather La	90.93	46	P	P	07 04 11.6	+1.6
	baz=295,SNR=52						
MNK	Minsk	91.03	329	*i* P	P	07 04 10.1	+0.3
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	07 04 10.1	+0.3
	comp=N,34nm,1.0s						
MNK				*i* P	P	07 04 10.1	+0.3
	comp=Z,16nm,1.0s						
MNK				*i* pP	pP	07 04 31.7	+1.0
MNK				*i* sP	sP	07 04 40.6	+1.5
MNK				*i* PP	PP	07 07 47.1	+0.5
MNK				*i* PPP	PPP	07 09 45.4	
MNK				*i* S	SKSac	07 14 33.7	-0.8
MNK				*i* sS	ScS	07 15 13.3	+10
MNK				*i* SP	SP	07 15 50.2	-18
MNK				*i* PS	PnS	07 16 20.0	+0.4
MNK				*i* SS	SS	07 21 07.2	+2.4
MNK				*i* SSS	SSS	07 25 05.0	
MNK				*i* SKKS	SKKSdf	07 28 31.7	-1.1
MNK				*i* LQ	LQ	07 36 19.5	
MNK				*i* LR	LR	07 39 22.8	
MNK				*i* LRM	MLR	07 46 23.8	
	comp=Z,188nm,19.2s						
MNK				*i* LRM	MLR	07 46 24.3	
	comp=N,396nm,19.2s						
MNK				*i* LRM	MLR	07 46 27.6	
	comp=E,53nm,19.2s						
ISAL	Salakas	91.27	331	*e*P	P	07 04 11.2	+0.4
NACGM	Naroch	91.34	330	*i* P	P	07 04 10.2	-0.9
NACGM				*i* P	P	07 04 10.2	-0.9
NACGM				*i* P	P	07 04 10.2	-0.9
NACGM				*i* Pb	PcP	07 04 12.3	+0.3
	comp=Z,22nm,0.7s						
NACGM				*i* PP	PP	07 07 49.0	0.0
NACGM				*i* PPP	PPP	07 09 32.5	
NACGM				*i* SKS		07 13 52.8	
NACGM				*i* PS	PS	07 16 07.4	-15
NACGM				*i* SS	SS	07 20 28.4	-41
NACGM				*i* SSS	SSS	07 24 13.2	
NACGM				*i* LQ	LQ	07 35 11.3	
NACGM				*i* LR	LR	07 40 27.4	
IIGN	Ignalina	91.35	330	*e*P	P	07 04 11.7	+0.4
S22A	4UR Ranch, Cre	91.61	49	P	P	07 04 14.4	+1.2
	baz=294,SNR=27						
ISCO	Idaho Springs	91.62	47	P	P	07 04 14.6	+1.3
	baz=295,SNR=26						
ISCO	Idaho Springs	91.62	47	IAmb	IAmb	07 04 15.7	
	comp=Z,23nm,1.1s						
MDND	Maddock	91.83	38	P	P	07 04 13.8	+0.1
	baz=299						
Q24A	Divide	92.30	48	P	P	07 04 17.5	+1.0
	baz=295						
PABE	Paberze	92.30	331	*e*P	P	07 04 14.9	-0.7
AKASG	Malin Array Be	92.41	326	P	P	07 04 14.2	-2.0
	comp=Z,0.8nm,0.4s,baz=44,slow=4.5,SNR=4.6						
AKASG				LR	LR	07 46 22.9	
	comp=Z,217nm,19.5s,baz=305,slow=36						
AKASG	Malin Array Be	92.41	326	*ce*P	P	07 04 15.3	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SDCO	Great Sand Dun	92.56	49	P	P	07 04 18.6	+0.9
	baz=295,SNR=20						
SDCO	Great Sand Dun	92.56	49	P	P	07 04 17.6	-0.1
SDCO				IAmb	IAmb	07 04 19.8	
	comp=Z,21nm,1.1s						
RAYN	Ar Rayn	92.69	296	P	P	07 04 16.7	-1.5
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RAYN	Ar Rayn	92.69	296	P	P	07 04 16.7	-1.5
ULM	Lac du Bonnet	92.70	35	P	P	07 04 17.8	+0.2
	comp=Z,25nm,0.9s,baz=298,slow=5.0,SNR=42						
ULM				pP	pP	07 04 37.5	-1.0
	comp=Z,6.6nm,0.8s,baz=328,slow=7.2,SNR=3.6						
ULM				LR	LR	07 40 54.7	
	comp=Z,134nm,21.7s,baz=324,slow=32						
ULM	Lac du Bonnet	92.70	35	P	P	07 04 17.2	-0.4
ULM				pmax	pmax		
	comp=Z,36nm,1.0s						
ULM	Lac du Bonnet	92.70	35	P	P	07 04 17.2	-0.4
121A	Cookes Peak, D	92.98	55	P	P	07 04 21.4	+1.8
	baz=293,SNR=11						
ANMO	Albuquerque	93.03	52	*de*P	P	07 04 20.9	+1.2
ANMO				pmax	pmax		
	comp=Z,34nm,1.7s						
ANMO	Albuquerque	93.03	52	P	P	07 04 20.8	+1.1
	baz=294						
ANMO	Albuquerque	93.03	52	P	P	07 04 20.0	+0.3
ANMO				IAmb	IAmb	07 04 22.1	
	comp=Z,24nm,1.2s						
Y22D	IRIS PASSCAL I	93.03	53	P	P	07 04 21.1	+1.4
	baz=294						
ICESG	Greenland Ices	93.07	2	*i* P	P	07 04 20.1	+0.7
ICESG				IAmb	IAmb	07 04 22.1	
	comp=Z,13nm,0.9s						
BNM	Barren Site	93.22	53	P	P	07 04 20.9	+0.2
NB2	NORSAR Subarra	93.56	340	P	P	07 04 20.5	-0.9
	comp=Z,0.5nm,0.4s,baz=63,slow=4.6						
NB2	NORSAR Subarra	93.56	340	P	P	07 04 20.5	-0.9
	baz=63,slow=4.6						
NOA	NORSAR Array B	93.56	340	P	P	07 04 19.6	-1.8
	comp=Z,0.2nm,0.4s,baz=33,slow=13,SNR=6.8						
NOA				pP	pP	07 04 41.3	-1.1
	comp=Z,0.4nm,0.4s,baz=54,slow=6.7,SNR=1.7						
NOA				LR	LR	07 50 46.1	
	comp=Z,151nm,19.2s,baz=45,slow=38						
OGNE	Ogallala	93.57	45	P	P	07 04 22.1	+0.2
	baz=297						
T25A	Trinidad	93.61	49	P	P	07 04 23.3	+0.9
	baz=296,SNR=15						
AGMN	Agassiz Nation	93.75	36	P	P	07 04 22.4	-0.1
	baz=302						
SUSD	Miller	93.90	41	P	P	07 04 23.3	0.0
	baz=300						
KSCO	Kaye Shedlock'	94.05	47	P	P	07 04 25.2	+1.0
	baz=297						
SFJD	Kangerlussuaq	94.33	7	P	P	07 04 25.3	+0.6
SFJD				pmax	pmax		
	comp=Z,81nm,1.9s						
SFJD	Kangerlussuaq	94.33	7	P	P	07 04 25.3	+0.6
SLBS	Sierra La Lagu	94.60	63	P	P	07 04 29.2	+2.2
SLBS				IAmb	IAmb	07 04 30.0	
	comp=Z,19nm,1.1s						
MNTX	Cornudas Mount	95.18	54	P	P	07 04 30.5	+1.1
	baz=295						
MNTX	Cornudas Mount	95.18	54	P	P	07 04 29.5	0.0
MNTX				IAmb	IAmb	07 04 31.8	
	comp=Z,14nm,1.1s						
BRTR	Keskin Array B	95.25	315	P	P	07 04 28.1	-1.7
	comp=Z,1.2nm,0.7s,baz=305,slow=37,SNR=3.8						
BRTR				LR	LR	07 50 25.2	
	comp=Z,44nm,18.6s,baz=330,slow=37						
VNDA	Vanda	95.70	177	P	P	07 04 29.2	-1.4
	comp=Z,2.0nm,1.0s,baz=307,slow=4.8,SNR=4.2						
VNDA				LR	LR	07 43 26.1	
	comp=Z,30nm,21.2s,baz=344,slow=33						
ECSD	EROS Data Cent	95.71	41	P	P	07 04 31.4	-0.2
	baz=301						
CBKS	Cedar Bluff	96.13	46	P	P	07 04 33.8	+0.1
	baz=299						
CBKS	Cedar Bluff	96.13	46	IAmb	IAmb	07 04 35.7	
	comp=Z,19nm,0.9s						
MSTX	Muleshoe	96.19	51	P	P	07 04 34.1	0.0
	baz=296						
MSTX	Muleshoe	96.19	51	P	P	07 04 33.8	-0.3
MSTX				IAmb	IAmb	07 04 35.7	
	comp=Z,21nm,1.6s						
ASF	Jabal al Asfar	96.32	307	P	P	07 04 33.3	-1.4
	comp=Z,0.1nm,0.5s,baz=356,slow=5.1,SNR=1.9						
EYMN	Ely	96.38	35	P	P	07 04 34.7	+0.2
	baz=306						
EYMN	Ely	96.38	35	IAmb	IAmb	07 04 35.4	
	comp=Z,12nm,1.3s						
F36A	Milaca	96.42	38	IAmb	IAmb	07 04 35.7	
	comp=Z,13nm,1.0s						
AMTX	Amarillo	96.59	50	P	P	07 04 36.6	+0.8
	baz=297						
AMTX	Amarillo	96.59	50	IAmb	IAmb	07 04 37.8	
	comp=Z,14nm,0.9s						
R32A	Long Quarter,	97.03	46	IAmb	IAmb	07 04 39.5	
	comp=Z,13nm,0.9s						
E38A	The Farm, Brul	97.12	36	IAmb	IAmb	07 04 38.2	
	comp=Z,7.4nm,0.9s						
SPMN	Marine on St.	97.20	38	P	Pdif	07 04 38.6	+0.3
	baz=304						
SPMN	Marine on St.	97.20	38	IAmb	IAmb	07 04 39.2	
	comp=Z,14nm,1.1s						
TX31	Lajitas Ar. Si	97.52	56	IAmb	IAmb	07 04 42.4	
	comp=Z,23nm,1.2s						
TXAR	Lajitas Array	97.52	56	P	Pdif	07 04 41.1	+0.8
	comp=Z,4.2nm,1.1s,baz=286,slow=4.6,SNR=14						
TXAR				PP	PP	07 08 36.8	-1.3
	comp=Z,0.7nm,0.9s,baz=270,slow=6.3,SNR=4.7						
TXAR				LR	LR	07 40 47.1	
	comp=Z,56nm,21.7s,baz=0.0,slow=30						
TXAR	Lajitas Array	97.52	56	P	P	07 04 39.8	-0.4
KSU1	Kansas State U	98.11	45	P	Pdif	07 04 42.6	+0.1
	baz=301						
KSU1	Kansas State U	98.11	45	IAmb	IAmb	07 04 43.9	
	comp=Z,12nm,0.9s						
G40A	Rib Lake	98.67	37	IAmb	IAmb	07 04 46.0	
	comp=Z,7.3nm,0.8s						
WMOK	Wichita Mounta	98.77	49	P	Pdif	07 04 46.1	+0.5
	baz=299						
WMOK	Wichita Mounta	98.77	49	IAmb	IAmb	07 04 47.3	
	comp=Z,8.5nm,1.0s						
ABTX	Abilene, Hawle	99.14	51	P	Pdif	07 04 47.7	+0.4
	baz=298						
ABTX	Abilene, Hawle	99.14	51	IAmb	IAmb	07 04 49.3	
	comp=Z,19nm,1.2s						
CLL	Collm	100.00	333	*e*P	Pdif	07 04 48.0	-2.6
CLL				*e*		07 08 56.0	
JCT	Junction City	100.02	53	P	Pdif	07 04 51.3	+0.1
	baz=298						
GERES	GERESS Array B	101.43	330	PKKPbc	PKKPbc	07 21 05.2	-1.5
	comp=Z,1.1nm,0.9s,baz=262,slow=3.0,SNR=4.6						
U40A	Yellville	102.08	45	P	Pdif	07 04 59.9	-0.4
	baz=303						
MIAR	Mount Ida	102.56	47	P	Pdif	07 05 02.2	-0.2
	baz=302						
QSPA	South Pole Qui	107.78	180	PKKPab	PKKPab	07 20 54.4	-4.4
	comp=Z,1.2nm,0.7s,baz=194,slow=2.5,SNR=2.3						
SYO	Syowa Base	112.73	202	⇑*e*X	Pdif	07 05 39.8	-6.9
ESDC	Sonseca Array	116.43	335	PP	PP	07 10 55.6	-0.1
	comp=Z,1.6nm,0.8s,baz=22,slow=7.3,SNR=5.1						
ESDC				PKKPab	PKKPab	07 20 24.5	-0.2
	comp=Z,0.4nm,0.4s,baz=224,slow=5.0,SNR=7.9						
LSZ	Lusaka	121.18	263	PKIKP	PKiKP	07 10 00.5	+1.3
LSZ	Lusaka	121.18	263	PKPdf	PKiKP	07 10 00.5	+1.3
SNAA	Sanae	123.38	191	PKPdf	PKiKP	07 10 01.8	-0.1
SNAA	Sanae	123.38	191	⇓*i*PKIKP	PKiKP	07 10 02.5	+0.6
VNA2	Neumayer--Watz	124.80	190	PKPdf	PKiKP	07 10 04.9	+0.2
	baz=119,slow=2.0						
VNA3	Neumayer Olymp	124.89	189	PKPdf	PKiKP	07 10 04.9	0.0
CBOC	Ciudad Bolivar	131.72	65	*e*P	PKPpre	07 10 11.6	
PLMC	San Jos del P	131.96	66	*e*P	PKPdf	07 10 16.3	-3.4
OTAV	Otavalo	132.14	73	*e*P	PKPdf	07 10 17.6	-3.0
YOTC	Yotoco, Valle	132.35	67	*e*P	PKPpre	07 10 10.8	
GUY2C	Guyana, Caldas	132.60	65	*e*P	PKPpre	07 10 07.5	
GCUF	Volcan Galeras	132.72	71	*e*P	PKPdf	07 10 15.4	-6.2
OCAC	Ocana	132.74	60	*e*P	PKPdf	07 10 20.4	-0.9
RREF	El Recreo	132.78	65	*e*P	PKPdf	07 10 16.0	-6.0
BRRC	Barranca, Sant	133.03	61	*e*P	PKPdf	07 10 16.1	-5.5
TORD	Torodi Ar. Bea	133.60	309	PKP	PKPdf	07 10 22.4	-0.3
	comp=Z,1.0nm,0.6s,baz=28,slow=3.4,SNR=2.7						
TORD				pPKP	pPKPdf	07 10 44.9	+0.4
	comp=Z,0.9nm,0.5s,baz=73,slow=0.9,SNR=2.2						
TORD				SKPbc	SKPbc	07 13 42.1	-2.1
	comp=Z,2.9nm,0.9s,baz=48,slow=3.9,SNR=5.4						
PAMC	Pamplona, Colo	133.75	60	*e*P	PKPpre	07 10 14.4	
BARC	Barichara	133.75	62	*e*P	PKPpre	07 10 11.1	
RUSC	La Rusia	134.20	62	*e*P	PKPdf	07 10 20.4	-4.0
CHIC	Chingaza	134.30	64	*e*P	PKPpre	07 10 12.7	
SDV	Santo Domingo	134.56	57	PKPdf	PKPdf	07 10 18.5	-6.2
SDV	Santo Domingo	134.56	57	*e*P	PKPdf	07 10 17.9	-6.8
NNA	Nana	137.66	88	⇑*i*PKIKP	PKPdf	07 10 30.9	+0.6
NNA				pmax	pmax		
	comp=Z,49nm,1.3s						
LL01	San Ignacio de	138.91	135		PKPdf	07 10 31.9	+0.2
PLCA	Paso Flores	140.86	133	PKhKP	PKPpre	07 10 29.4	
	comp=Z,2.5nm,0.8s,baz=221,slow=4.6,SNR=7.5						
PLCA				SKPbc	SKiKP	07 14 07.0	0.0
	comp=Z,6.5nm,1.1s,baz=248,slow=2.8,SNR=5.1						
PLCA	Paso Flores	140.86	133	PKHKP	PKPpre	07 10 30.5	
PLCA	Paso Flores	140.86	133		PKPpre	07 10 30.4	
DBIC	Dimbokro	142.70	309	PKhKP	PKPdf	07 10 35.1	-4.3
	comp=Z,1.9nm,0.4s,baz=49,slow=4.0,SNR=10						
AC05	El Transito	144.58	115	PKPdf	PKPdf	07 10 42.4	-0.1
PB09	IPOC Station P	146.10	102		PKPab	07 10 47.0	0.0
LVC	Limon Verde	146.40	104	PKP2	PKPab	07 10 48.4	0.0
LVC	Limon Verde	146.40	104		PKPab	07 10 48.4	0.0
PTGA	Pitinga	148.76	60		PKPdf	07 10 50.7	+1.0
CPUP	Villa Florida	156.33	115	PKP	PKPdf	07 11 01.7	+1.3
	comp=Z,3.4nm,1.0s,baz=219,slow=7.7,SNR=4.1						
CPUP				PKPab	PKPab	07 11 29.0	-0.1
	comp=Z,6.4nm,0.9s,baz=257,slow=5.4,SNR=7.3						
CPUP	Villa Florida	156.33	115	PKPab	PKPab	07 11 30.7	+1.7
BDFB	Brasilia	165.79	83	PKP	PKPdf	07 11 12.2	+1.3
	comp=Z,4.7nm,0.8s,baz=267,slow=1.8,SNR=6.5						
BDFB				PKPab	PKPab	07 12 11.6	+0.8
	comp=Z,7.1nm,1.1s,baz=343,slow=4.6,SNR=6.5						

IDC 21 07:10:35.8±1.5**, 51°.27S**×**141°.21E, h0**^{km}**, mb4.0**/4**, mb1 4.2**/5**, mb1mx3.8**/27**, mbtmp4.0**/5**, ML3.8**/1**, MS3.4**/2**, Ms1 3.5**/2**, ms1mx3.1**/28 **Error ellipse: s-maj=116.0km s-min=24.0km az=81.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	19.38	1	P	Pn	07 15 04.8	+0.8
	0.2nm,0.3s,baz=162,slow=13,SNR=2.4						
H01W1	Cape Leeuwin H	25.45	300	T	T	07 41 49.4	
	baz=139,slow=75						
H01W2	Cape Leeuwin H	25.46	299	T	T	07 41 50.2	
	baz=139,slow=75						
H01W3	Cape Leeuwin H	25.47	300	T	T	07 41 46.6	
	baz=139,slow=75						
VNDA	Vanda	27.47	170	P	P	07 16 23.3	+0.3
	4.6nm,1.1s,baz=338,slow=6.4,SNR=3.7						
ASAR	Alice Springs	28.13	346	P	P	07 16 29.1	-0.4
	1.0nm,0.6s,baz=170,slow=8.8,SNR=7.0						
WRA	Warramunga Arr	31.73	348	P	P	07 17 00.2	-1.1
	1.8nm,0.8s,baz=174,slow=7.4,SNR=13						
FITZ	Fitzroy Crossi	35.33	334	P	P	07 17 33.8	+1.1
	1.6nm,0.7s,baz=182,slow=8.4,SNR=5.4						
KAPI	Kappang	49.46	331	LR	LR	07 39 57.6	
	comp=Z,41nm,19.6s,baz=198,slow=36						
H08S2	Diego Garcia H	70.80	282	T	T	08 38 04.8	
	baz=142						
H08S1	Diego Carcia H	70.81	282	T	T	08 38 03.0	
	baz=142						
H08S3	Diego Garcia H	70.82	282	T	T	08 38 04.3	
	baz=142						
CMAR	Chiang Mai Arr	78.67	319	LR	LR	07 58 57.2	
	comp=Z,16nm,18.1s,baz=95,slow=37						
ARCES	ARCESS Array B	145.50	326	PKPbc	PKPdf	07 30 12.8	-1.5
	1.6nm,0.5s,baz=81,slow=5.8,SNR=12						
GERES	GERESS Array B	146.80	287	PKPbc	PKPbc	07 30 18.4	-0.6
	0.5nm,0.4s,baz=121,slow=3.7,SNR=4.8						

IDC 21 07:16:46.0±384.0**, 54°.17N**×**59°.66E, h0**^{km}**, Error ellipse: s-maj=168.2km s-min=78.8km az=9.0, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	3.90	196	*i*		07 39 40.0	
	baz=15,slow=338,SNR=0.2						
I46RU	ZALESOVO INFRA	14.75	81	*i*		08 51 40.0	
	baz=284,slow=319,SNR=1.6						
I34MN	SONGINO INFRAS	29.65	83	*i*		10 19 20.0	
	baz=304,slow=327,SNR=0.6						

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*IDC **21** 07:51:33.1±2.0, 6°.77S×129°.57E, h151^{km}±23^{km}, mb3.4/3, mb1 3.8/8, mb1mx3.3/45, mbtmp4.1/8, MS2.7/1, Ms1 2.7/1, ms1mx2.3/30, Error ellipse: s-maj=23.8km s-min=17.2km az=100.0*

*DJA **21** 07:51:34.0±0.5, 7°S±4°×13°0E±°, h192^{km}±13^{km}, M4.4/8, mB4.8/5, mb4.3/7, MLv4.6/8, Mw(mB)4.1/5*

ISC 21 07:51:34.7±0.8**, 6°.94S**±0°.06×**129°.67E**±0°.07**, h200**^{km}**, n15,** σ**3**^{s}**.15**/20**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.92	123	P	Pn	07 52 13.2	+0.8
SAUI				S	Sn	07 52 40.1	-1.6
MSAI	Masohi	3.64	348	P	Pn	07 52 30.3	-1.8
FAKI	Fak Fak	4.74	33	P	Pn	07 52 41.9	-4.0
SOEI	Soe	6.04	242	P	Pn	07 53 03.0	+0.4
	0.5nm36nm,0.4s						
SIJI	Sorong	6.23	15	P	Pn	07 53 00.9	-4.1
	7.3nm,0.3s,baz=248,slow=24,SNR=31						
SIJI				S	Sn	07 54 04.7	-12
	8.7nm,0.3s,baz=97,slow=23,SNR=11						
SWI	Sorong	6.24	15	P	Pn	07 53 01.0	-4.1
	0.4nm2μm43nm,0.8s						
BATI	Baumata	6.77	241	P	Pn	07 53 11.1	-0.9
	18nm,0.3s,baz=133,slow=0.9,SNR=8.1						
BATI				S	Sn	07 54 26.6	-2.6
	20nm,0.3s,baz=18,slow=22,SNR=10						
BATI	Baumata	6.77	241	P	Pn	07 53 12.9	+0.9
	0.2nm691nm42nm,0.6s						
EDFI	Ende, Flores	8.11	257	P	Pn	07 53 30.5	+0.9
FITZ	Fitzroy Crossi	11.77	199	P	Pn	07 54 17.0	+0.3
	2.6nm,0.3s,baz=17,slow=9.7,SNR=52						
FITZ				S	Sn	07 56 22.4	-5.6
	2.0nm,0.3s,baz=86,slow=19,SNR=3.4						
FITZ				LR	LR	07 59 47.9	
	comp=Z,39nm,19.7s,baz=46,slow=42						
WRA	Warramunga Arr	13.70	161	P	P	07 54 42.7	-0.5
	1.2nm,0.3s,baz=335,slow=13,SNR=34						
WRA				S	S	07 57 09.5	-4.2
	3.7nm,0.3s,baz=333,slow=23,SNR=6.5						
ASAR	Alice Springs	17.12	167	P	Pn	07 55 25.6	+3.1
	0.4nm,0.3s,baz=345,slow=9.3,SNR=33						
ASAR				S	S	07 58 31.5	+2.3
	1.2nm,0.3s,baz=352,slow=27,SNR=8.7						
STKA	Stephens Creek	27.20	157	P	P	07 57 04.9	+5.0
	1.3nm,0.8s,baz=327,slow=18,SNR=2.9						
MKAR	Makanchi Array	68.00	327	P	P	08 02 15.4	+3.1
	0.5nm,0.5s,baz=122,slow=7.2,SNR=6.4						
ILAR	Eielson Array	93.43	25	P	P	08 04 28.9	+1.9
	0.3nm,0.8s,baz=256,slow=3.6,SNR=2.2						

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*NNC **21** 08:03:52.7±8.2, 37°.08N×70°.65E, h0^{km}, mb4.3, mpv4.2, Error ellipse: s-maj=65.4km s-min=43.1km az=172.0*

*IDC **21** 08:04:03.2±1.9, 37°.97N×70°.61E, h0^{km}, mb3.5/3, mb1 3.7/9, mb1mx3.4/53, mbtmp3.6/9, ML3.3/6, MS3.8/1, Ms1 3.8/1, ms1mx2.7/44, Error ellipse: s-maj=25.1km s-min=20.4km az=156.0*

ISC 21 08:04:07.7±0.9**, 38°.55N**±0°.06×**70°.34E**±0°.07**, h10**^{km}**, n24,** σ**2**^{s}**.88**/28**, mb3.5**/3**, 3C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.40	35	P	Pn	08 05 18.9	+4.0
	SNR=18						
KK31	Karatay Array	4.55	2	⇑P	Pn	08 05 20.4	+3.7
	5.4nm,0.4s,baz=179,slow=13,SNR=62						
KK31				⇓S	Sg	08 06 34.8	+0.9
	42nm,0.8s,baz=170,slow=25,SNR=4.7						
UCH	Uchtor	4.86	40	P	Pn	08 05 24.3	+3.0
	SNR=5.9						
EKS2	Erkin-Say	4.87	31	P	Pb	08 05 29.8	-3.4
	SNR=10						
AAK	Ala-Archa	5.17	36	Pn	Pn	08 05 28.3	+3.1
	1.5nm,0.3s,baz=208,slow=8.7,SNR=18						
AAK				Sn	Sn	08 06 25.8	+0.9
	baz=252,slow=20,SNR=0.9						
AAK				Lg	Lg	08 06 58.4	
	1.5nm,0.3s,baz=148,slow=22,SNR=4.3						
AAK	Ala-Archa	5.17	36	P	Pn	08 05 29.0	+3.8
	SNR=19						
AAK	Ala-Archa	5.17	36	⇓P	Pn	08 05 28.7	+3.5
	11nm,0.4s						
AAK				S	Sb	08 06 41.0	+0.7
	32nm,0.8s						
KBK	Karagaybulak	5.40	39	P	Pn	08 05 32.4	+3.9
	SNR=9.8						
CHMS	Chumysh	5.56	36	P	Pb	08 05 39.0	-6.0
	SNR=7.0						
USP	Ospenovka	5.67	32	P	Pn	08 05 39.2	+7.1
	SNR=20						
THW	Thamme Wali	5.85	168	P	Pn	08 05 34.1	-0.5
TKM2	Tokmak 2	5.92	41	P	Pb	08 05 44.3	-6.8
	SNR=10						
TKM2	Tokmak 2	5.92	41	⇓P	Pn	08 05 37.9	+2.3
	9.1nm,0.5s						
TKM2				⇓S	Sb	08 06 57.1	-4.9
	9.3nm,0.9s						
MKAR	Makanchi Array	12.04	43	Pn	Pn	08 07 00.8	+1.4
	0.2nm,0.3s,baz=232,slow=14,SNR=54						
MKAR				Lg	Lg	08 10 33.4	
	0.1nm,0.3s,baz=245,slow=27,SNR=2.2						
AB31	Akbulak array	13.06	328	⇑P	Pn	08 07 15.9	+2.8
	1.2nm,0.4s,baz=153,slow=11,SNR=37						
AB31				⇑S	S	08 09 56.9	-6.9
	2.4nm,0.7s,baz=144,slow=21,SNR=4.1						
KURBB	Kurchatov Arra	13.40	23	Pn	Pn	08 07 19.5	+1.7
	0.0nm,0.3s,baz=213,slow=12,SNR=4.7						
KURBB				Sn	Sn	08 09 48.1	+1.4
	0.1nm,0.3s,baz=360,slow=12,SNR=7.2						
KURBB				Lg	Lg	08 11 15.6	
	0.0nm,0.3s,baz=234,slow=42,SNR=3.1						
BVAR	Borovoye Array	14.48	0	Pn	Pn	08 07 34.2	+1.5
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.3						
AKTO	Aktyubinsk	14.76	328	Pn	Pn	08 07 38.4	+2.0
	0.2nm,0.3s,baz=137,slow=13,SNR=3.6						
AKTO				Sn	Sn	08 10 21.0	+1.0
	0.1nm,0.3s,baz=202,slow=19,SNR=2.8						
AKTO	Aktyubinsk	14.76	328	⇓P	P	08 07 40.8	-1.7
	4.8nm,1.1s						
AKTO				⇓S	S	08 10 37.6	-1.1
	6.2nm,1.4s						
ZALV	Zalesovo Beam	18.31	28	P	P	08 08 22.9	+1.2
	0.3nm,0.3s,baz=219,slow=11,SNR=2.1						
SONM	Songino Array	27.66	59	P	P	08 09 55.2	-0.5
	0.2nm,0.4s,baz=262,slow=8.6,SNR=2.4						
MJAR	Matsushiro Arr	52.71	70	LR	LR	08 35 12.1	
	comp=Z,78nm,18.7s,baz=275,slow=35						
ILAR	Eielson Array	72.95	16	P	P	08 15 36.5	-0.4
	0.3nm,0.7s,baz=326,slow=4.7,SNR=2.4						
YKA	Yellowknife Ar	79.23	2	P	P	08 16 12.6	0.0

0.3nm,0.5s,baz=0.9,slow=5.4,SNR=15

*NEIC **21** 08:16:58.9±1.5,17°.6S±0°.2×178°.4W±0°.2,h533^{km}±13^{km}, mb4.2/15,Error ellipse: s-maj=26.3km s-min=20.7km az=149.0*

*IDC **21** 08:16:58.5±1.4,17°.71S×178°.29W,h530^{km}±17^{km},mb3.2/5, mb1 3.4/7,mb1mx3.0/32,mbtmp4.1/7,Error ellipse: s-maj=30.6km s-min=21.3km az=144.0*

ISC 21 08:16:59.4±0.8**,17°.6S**±0°.2×**178°.3W**±0°.1**,h547**^{km}**,n23,** σ1^{s}**43**/23**,mb4.1**/12**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.46**	**267**	P	**P**	**08 18 16.6**	**-0.7**
	2.1nm,0.3s,baz=128,slow=8.3,SNR=20						
AFI	**Afiamalu**	**7.29**	**61**	P	**P**	**08 18 47.8**	**-2.4**
	3.1nm,0.3s,baz=34,slow=2.0,SNR=6.4						
NIUE	**Niue**	**8.11**	**102**	P	**P**	**08 18 58.9**	**+0.9**
OUZ	**Omahuta**	**18.97**	**201**	P	**P**	**08 20 42.2**	**-3.9**
OUZ				IAmb	IAmb	08 20 49.5	
	comp=Z,13nm,1.0s						
URZ	**Urewera**	**20.97**	**190**	P	**P**	**08 21 03.0**	**-1.2**
	comp=Z,11nm,1.0s,baz=266,slow=5.0,SNR=6.3						
URZ	**Urewera**	**20.97**	**190**	P	**P**	**08 21 02.4**	**-1.8**
ARMA	**Armidale**	**30.17**	**239**	P	**P**	**08 22 25.0**	**-0.6**
ARMA				IAmb	IAmb	08 22 30.5	
	comp=Z,26nm,1.4s						
TOO	**Toolangi**	**37.43**	**231**	P	**P**	**08 23 27.3**	**+0.9**
TOO				IAmb	IAmb	08 23 53.7	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**08 23 38.3**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=99,slow=9.4,SNR=9.7						
STKA	**Stephens Creek**	**38.85**	**241**	IAmb	IAmb	08 23 39.4	
	comp=Z,0.9nm,0.8s						
BBOO	**Buckleboo**	**43.63**	**241**	P	**P**	**08 24 16.2**	**+0.4**
WR0	**Warramunga Arr**	**44.58**	**259**	P	**P**	**08 24 22.6**	**-0.8**
WR0				IAmb	IAmb	08 24 29.7	
	comp=Z,8.9nm,1.4s						
WB0	**Warramunga Arr**	**44.74**	**259**	P	**P**	**08 24 24.4**	**-0.2**
WB0				IAmb	IAmb	08 24 25.0	
	comp=Z,5.8nm,1.1s						
WB2	**Warramunga Arr**	**44.76**	**259**	P	**P**	**08 24 24.4**	**-0.4**
WB2				IAmb	IAmb	08 24 30.9	
	comp=Z,7.4nm,1.2s						
WRAB	**Tennant Creek**	**44.76**	**259**	P	**P**	**08 24 26.0**	**+1.2**
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**08 24 23.7**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=92,slow=7.0,SNR=12						
WRA				PcP	**PcP**	**08 25 56.9**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=96,slow=3.7,SNR=2.3						
WRA	**Warramunga Arr**	**44.77**	**259**	IAmb	IAmb	08 24 24.8	
	comp=Z,0.1nm,0.8s						
AS31	**Alice Springs**	**44.96**	**254**	P	**P**	**08 24 26.1**	**-0.1**
AS31				IAmb	IAmb	08 24 26.8	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**08 24 26.2**	**0.0**
	comp=Z,11nm,0.7s,baz=89,slow=8.1,SNR=112						
ASAR				PcP	**PcP**	**08 25 57.5**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=100,slow=3.6,SNR=2.9						
FORT	**Forrest**	**50.22**	**244**	P	**P**	**08 25 05.5**	**+0.1**
FORT				IAmb	IAmb	08 25 12.1	
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.16**	**260**	P	**P**	**08 25 27.9**	**+1.1**
FITZ				IAmb	IAmb	08 25 53.7	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**72.45**	**180**	P	**P**	**08 27 31.0**	**+0.6**
ILAR	**Eielson Array**	**85.57**	**13**	P	**P**	**08 28 41.0**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=212,slow=5.0,SNR=1.1						

IDC 21 08:34:50.1±31.0**,25°.84S**×**175°.17W,h0**^{km}**,mb3.9**/4**, mb1 4.0**/4**,mb1mx3.7**/29**,mbtmp3.9**/4**,Error ellipse: s-maj=570.4km s-min=158.4km az=82.0,South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.89**	**271**	P	P	08 41 53.0	+0.9
	3.6nm,0.9s,baz=89,slow=12,SNR=1.5						
STKA	**Stephens Creek**	**38.15**	**251**	P	P	08 42 11.3	0.0
	1.8nm,0.9s,baz=107,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**46.07**	**261**	P	P	08 43 15.7	-0.4
	0.6nm,0.6s,baz=98,slow=8.2,SNR=8.5						
WRA	**Warramunga Arr**	**46.66**	**266**	P	P	08 43 20.1	-0.7
	0.7nm,0.6s,baz=106,slow=8.2,SNR=5.3						

IDC 21 08:39:39.8±14.0**,54°.25N**×**159°.84E,h0**^{km}**,Error ellipse: s-maj=106.2km s-min=36.6km az=49.0,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I44RU	**PETROPAVLOVSK-**	**1.71**	**229**	*i*		08 48 50.0	
	baz=47,slow=336,SNR=6.2						
PETK	**Petropavlovsk-**	**1.71**	**229**	Pg	Pn	08 40 11.0	+0.1
	0.1nm,0.3s,baz=58,slow=18,SNR=3.2						
I53US	**FAIRBANKS INFR**	**27.70**	**47**	*i*		11 25 50.0	
	baz=277,slow=324,SNR=1.0						

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*IDC **21** 08:46:31.4±1.1,13°.64N×91°.28W,h0^{km},mb3.9/9, mb1 4.2/12,mb1mx4.0/40,mbtmp3.9/12,ML3.9/3,Error ellipse: s-maj=43.4km s-min=14.8km az=42.0*

*NEIC **21** 08:46:34.2±2.9,13°.40N±0°.09×91°.52W±0°.07,h25^{km}±6^{km}, mb4.3/44,Error ellipse: s-maj=13.9km s-min=7.2km az=212.0*

*UCR **21** 08:46:36.7±1.2,13°.70N×91°.37W,h13^{km}±9^{km},ML3.8, mb4.3(NEIC)*

*SNET **21** 08:46:36.5±1.1,13°.68N×91°.37W,h13^{km}±10^{km},ML4.0*

ISC 21 08:46:36.5±0.9**,13°.51N**±0°.08×**91°.54W**±0°.06**,h38**^{km}±2^{km}**, n102,** σ1^{s}**32**/102**,mb4.2**/29**,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**1.02**	**352**	*e*P	**Pn**	**08 46 52.9**	**-1.4**
RTAL	**Retalhuleu**	**1.02**	**352**	Pn	**Pn**	**08 46 53.4**	**-0.9**
THIG		**1.56**	**333**		**Pn**	**08 47 00.3**	**-1.3**
HUEH	**Huehuetenango**	**1.80**	**1**	*e*P	**Pn**	**08 47 05.4**	**+0.1**
HUEH				*e*S	**Sn**	**08 47 27.2**	**+0.2**
HUEH	**Huehuetenango**	**1.80**	**1**		**Pn**	**08 47 05.3**	**+0.1**
RTR	**El Retiro**	**1.89**	**78**	*e*P	**Pn**	**08 47 05.8**	**-0.4**
RTR	**El Retiro**	**1.89**	**78**	*e*P	**Pn**	**08 47 05.8**	**-0.4**
CEVE	**Cerro Verde**	**1.89**	**80**	*e*P	**Pn**	**08 47 05.4**	**-1.0**
CEVE				IAML		08 47 35.5	
	comp=Z,2µm,0.4s						
CEVE	**Cerro Verde**	**1.89**	**80**	*e*P	**Pn**	**08 47 05.4**	**-1.0**
CEVE				IAML		08 47 35.5	
	comp=Z,2µm,0.4s						
SNJE	**San Jose**	**1.92**	**79**	*e*P	**Pn**	**08 47 06.1**	**-0.6**
SNJE	**San Jose**	**1.92**	**79**	*e*P	**Pn**	**08 47 06.1**	**-0.6**
JAYA	**Jayaque - finc**	**2.04**	**86**	*e*P	**Pn**	**08 47 07.1**	**-1.3**
JAYA				*e*S	**Sn**	**08 47 32.3**	**-0.5**
JAYA	**Jayaque - finc**	**2.04**	**86**	*e*P	**Pn**	**08 47 07.1**	**-1.3**
JAYA				*e*S	**Sn**	**08 47 32.3**	**-0.5**
LALI	**Alcalda de L**	**2.16**	**90**	*e*P	**Pn**	**08 47 09.7**	**-0.2**
LALI	**Alcalda de L**	**2.16**	**90**	*e*P	**Pn**	**08 47 09.7**	**-0.2**
BOQS	**Boqueron**	**2.21**	**84**	*e*P	**Pn**	**08 47 11.2**	**+0.4**
BOQS	**Boqueron**	**2.21**	**84**	*e*P	**Pn**	**08 47 11.2**	**+0.4**
UEES	**Universidad Ev**	**2.25**	**84**	IAML		08 47 47.0	
	comp=Z,1µm,0.2s						
UEES	**Universidad Ev**	**2.25**	**84**	IAML		08 47 47.0	
	comp=Z,1µm,0.2s						
SNET	**Serv Nac Est T**	**2.25**	**85**	*e*P	**Pn**	**08 47 11.1**	**-0.2**
SNET				*e*S	**Sn**	**08 47 37.6**	**-0.3**
SNET				IAML		08 47 45.5	
	comp=Z,938nm,0.3s						
SNET	**Serv Nac Est T**	**2.25**	**85**	*e*P	**Pn**	**08 47 11.1**	**-0.2**
SNET				*e*S	**Sn**	**08 47 37.6**	**-0.3**
SNET				IAML		08 47 45.5	
	comp=Z,938nm,0.3s						
SNET	**Serv Nac Est T**	**2.25**	**85**	Pn	**Pn**	**08 47 10.0**	**-1.3**
MTO3	**Montecristo**	**2.30**	**67**	*e*P	**Pn**	**08 47 11.8**	**-0.2**
MTO3				*e*S	**Sn**	**08 47 38.6**	**-0.6**
MTO3	**Montecristo**	**2.30**	**67**	*e*P	**Pn**	**08 47 11.8**	**-0.2**
MTO3				*e*S	**Sn**	**08 47 38.6**	**-0.6**
MTO3	**Montecristo**	**2.30**	**67**	Pn	**Pn**	**08 47 11.8**	**-0.2**
ESQI	**Esquipulas**	**2.38**	**64**	*e*P	**Pn**	**08 47 12.9**	**-0.1**
ESQI				*e*S	**Sn**	**08 47 40.4**	**-0.6**
ESQI	**Esquipulas**	**2.38**	**64**	Pn	**Pn**	**08 47 12.7**	**-0.4**
LFRS	**El Faro**	**2.42**	**87**	*e*P	**Pn**	**08 47 13.7**	**+0.2**
LFRS	**El Faro**	**2.42**	**87**	*e*P	**Pn**	**08 47 13.7**	**+0.2**
PCIG		**2.72**	**324**		**Pn**	**08 47 16.3**	**-1.4**
CCIG	**Comitan**	**2.82**	**348**		**Pn**	**08 47 21.0**	**+1.9**
COEB	**Comit de Eme**	**2.93**	**90**	IAML		08 48 12.7	
	comp=Z,309nm,0.5s						
COEB	**Comit de Eme**	**2.93**	**90**	IAML		08 48 12.7	
	comp=Z,309nm,0.5s						
PETF	**Flores**	**3.76**	**25**	Pn	**Pn**	**08 47 33.2**	**+1.3**
TGUH	**Tegucigalpa,Un**	**4.18**	**82**	Pn	**Pn**	**08 47 37.0**	**-0.9**
CRIN	**San Cristobal**	**4.45**	**100**	Pn	**Pn**	**08 47 41.0**	**-0.5**
CMIG	**Matias Romero**	**4.81**	**318**	Pn	**Pn**	**08 47 45.9**	**-0.4**
	comp=Z,2.7nm,0.3s,baz=156,slow=12,SNR=11						
CMIG				Sn	**Sn**	**08 48 36.9**	**-3.8**
	comp=Z,4.6nm,0.3s,baz=83,slow=7.5,SNR=5.4						
CMIG				Lg	Lg	08 48 57.4	
	comp=Z,16nm,0.3s,baz=48,slow=22,SNR=9.2						
CMIG	**Matias Romero**	**4.81**	**318**		**Pn**	**08 47 46.3**	**0.0**
ACON	**Acoyapa**	**6.40**	**103**	Pn	**Pn**	**08 48 06.3**	**-1.9**
ESPN	**Las Esperanzas**	**7.18**	**100**	Pn	**Pn**	**08 48 16.7**	**-2.2**
JTS	**Las Juntas de**	**7.20**	**116**	Pn	**Pn**	**08 48 17.0**	**-2.2**
	comp=Z,1.2nm,0.3s,baz=57,slow=6.3,SNR=11						
JTS				Sn	Sn	08 49 32.2	-7.6
	comp=Z,0.6nm,0.3s,baz=348,slow=20,SNR=0.8						
JTS				Lg	Lg	08 50 14.9	
	comp=Z,0.8nm,0.3s,baz=176,slow=23,SNR=3.4						
TEIG	**Tepich**	**7.38**	**25**		**Pn**	**08 48 22.3**	**+0.6**
TLIG	**Tlapa**	**7.88**	**302**		**Pn**	**08 48 29.7**	**+1.1**
EDLM	**Las Mercedes**	**8.86**	**117**	*e*P	**Pn**	**08 48 44.6**	**+2.6**
553A	**Crawfordville**	**17.86**	**20**		**Pn**	**08 50 43.9**	**+1.9**
TXAR	**Lajitas Array**	**19.35**	**326**	P	**P**	**08 51 00.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=154,slow=12,SNR=19						
TXAR	**Lajitas Array**	**19.35**	**326**		**P**	**08 51 00.9**	**+2.0**
TX31	**Lajitas Ar. Si**	**19.35**	**326**		**Pn**	**08 51 01.3**	**+1.1**
TX31				IAmb	IAmb	08 51 02.2	
	comp=Z,12nm,0.9s						
TX32	**Lajitas Array**	**19.35**	**326**		**P**	**08 51 00.6**	**+1.7**
152A	**Waverly Hall**	**20.07**	**17**	P	**P**	**08 51 07.1**	**+0.5**
152A				IAmb	IAmb	08 51 12.4	
	comp=Z,12nm,0.8s						
ABTX	**Abilene, Hawle**	**20.42**	**340**	P	**P**	**08 51 11.2**	**+0.8**
Y49A	**Blount Mountai**	**20.79**	**12**	P	**P**	**08 51 14.6**	**+0.1**
SDV	**Santo Domingo**	**21.01**	**100**	P	**P**	**08 51 14.3**	**-2.9**
	comp=Z,2.9nm,0.7s,baz=322,slow=14,SNR=2.2						
GOGA	**Godfrey**	**21.14**	**19**	P	**P**	**08 51 17.4**	**-0.8**
GOGA				IAmb	IAmb	08 51 21.7	
	comp=Z,19nm,1.5s						
UALR	**University of**	**21.19**	**358**		**P**	**08 51 19.6**	**+0.9**
WHAR	**Wooly Hollow**	**21.70**	**358**	P	**P**	**08 51 24.0**	**-0.2**
WHAR				IAmb	IAmb	08 51 25.6	
	comp=Z,7.4nm,0.9s						
MNTX	**Cornudas Mount**	**22.12**	**327**	P	**P**	**08 51 30.1**	**+1.4**
MNTX				IAmb	IAmb	08 51 33.1	
	comp=Z,7.9nm,0.8s						
FCAR	**Ozark Folk Cen**	**22.30**	**359**	P	**P**	**08 51 30.3**	**-0.2**
W50A	**Signal Mountai**	**22.32**	**14**	P	**P**	**08 51 30.1**	**-0.8**
W50A				IAmb	IAmb	08 51 57.2	
	comp=Z,8.4nm,1.0s						
LCAR	**Lake Charles**	**22.47**	**1**	IAmb	IAmb	08 51 32.4	
	comp=Z,6.9nm,0.7s						
CPCT	**Cooper Cave**	**22.75**	**15**	P	**P**	**08 51 34.8**	**-0.6**
TKL	**Tuckaleechee C**	**23.14**	**16**	P	**P**	**08 51 38.4**	**-1.0**
	comp=Z,6.8nm,0.6s,baz=180,slow=12,SNR=21						
TKL	**Tuckaleechee C**	**23.14**	**16**	P	**P**	**08 51 38.6**	**-0.8**
TKL				IAmb	IAmb	08 51 40.2	
	comp=Z,7.9nm,0.8s						
AMTX	**Amarillo**	**23.18**	**338**	P	**P**	**08 51 39.4**	**-0.5**
V53A	**Saluda**	**23.43**	**18**	P	**P**	**08 51 41.9**	**-0.5**
V53A				IAmb	IAmb	08 51 48.6	
	comp=Z,12nm,1.1s						
T42A	**Van Buren**	**23.43**	**1**	P	**P**	**08 51 40.1**	**-2.1**
U49A	**Red Boiling Sp**	**23.49**	**12**	P	**P**	**08 51 41.6**	**-1.2**
U49A				IAmb	IAmb	08 51 42.5	
	comp=Z,5.2nm,0.8s						
TZTN	**Tazewell**	**24.04**	**16**	P	**P**	**08 51 46.7**	**-1.3**
V55A	**Taylorsville**	**24.11**	**21**	P	**P**	**08 51 47.8**	**-0.9**
V55A				IAmb	IAmb	08 51 48.7	
	comp=Z,6.9nm,0.9s						
S39A	**Bolivar**	**24.14**	**357**	IAmb	IAmb	08 51 48.9	
	comp=Z,6.9nm,0.6s						
T50A	**Nancy**	**24.17**	**13**	P	**P**	**08 51 47.2**	**-2.0**
S44A	**Carbondale**	**24.18**	**4**	P	**P**	**08 51 48.4**	**-0.8**
SIUC	**Southern Illin**	**24.20**	**5**	P	**P**	**08 51 48.0**	**-1.4**
SIUC				IAmb	IAmb	08 51 49.3	
	comp=Z,7.3nm,0.7s						
CCM	**Cathedral Cave**	**24.45**	**1**	P	**P**	**08 51 49.9**	**-1.9**
U54A	**Nelsons Funny**	**24.52**	**19**	P	**P**	**08 51 51.5**	**-1.0**
U54A				IAmb	IAmb	08 52 00.8	
	comp=Z,10nm,0.9s						
R40A	**Maddies Statio**	**24.69**	**359**	IAmb	IAmb	08 51 53.4	
	comp=Z,7.3nm,0.8s						
ANMO	**Albuquerque**	**25.25**	**330**	P	**P**	**08 52 00.1**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=160,slow=14,SNR=6.5						
ANMO	**Albuquerque**	**25.25**	**330**	P	**P**	**08 52 00.0**	**+0.8**
P40A	**Paris**	**25.93**	**359**	P	**P**	**08 52 04.0**	**-1.1**
P40A				IAmb	IAmb	08 52 27.9	
	comp=Z,11nm,1.4s						
T25A	**Trinidad**	**26.20**	**336**	P	**P**	**08 52 09.2**	**+1.4**
Q51A	**Peebles**	**26.43**	**14**	IAmb	IAmb	08 52 09.9	
	comp=Z,8.7nm,0.9s						
PV12	**Saucer Basin,**	**29.08**	**331**	IAmb	IAmb	08 52 36.8	
	comp=Z,4.5nm,0.8s						
MTPU	**Mount Pierson**	**30.56**	**327**	P	**P**	**08 52 49.5**	**+2.6**
K58A	**Earlville**	**32.23**	**22**	P	**P**	**08 52 59.1**	**-2.1**
PDAR	**Pinedale Array**	**33.05**	**335**	P	**P**	**08 53 07.0**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=139,slow=6.0,SNR=2.0						
PDAR				PcP	**PcP**	**08 55 53.1**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=190,slow=4.2,SNR=2.5						
REDW	**Red Top Meadow**	**34.08**	**335**	P	**P**	**08 53 18.3**	**+0.7**
REDW				IAmb	IAmb	08 53 19.5	
	comp=Z,3.7nm,0.8s						
SNOW	**Snow King Moun**	**34.12**	**335**	P	**P**	**08 53 18.5**	**+0.5**
LOHW	**Long Hollow**	**34.18**	**335**	IAmb	IAmb	08 53 36.6	
	comp=Z,3.3nm,1.3s						
NV11	**Mina Array Sit**	**34.24**	**321**	P	**P**	**08 53 20.9**	**+1.9**
NV11				IAmb	IAmb	08 53 27.6	
	comp=Z,3.3nm,1.0s						
NVAR	**Mina Array Bea**	**34.33**	**321**	P	**P**	**08 53 21.4**	**+1.6**
	comp=Z,2.8nm,0.8s,baz=130,slow=7.5,SNR=15						
NVAR				PcP	**PcP**	**08 55 57.0**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=159,slow=2.8,SNR=2.9						
NVAR	**Mina Array Bea**	**34.33**	**321**	P	**P**	**08 53 23.1**	**+3.2**
MCMT	**McKenzie Canyo**	**36.11**	**334**	P	**P**	**08 53 36.6**	**+1.5**
ULM	**Lac du Bonnet**	**36.81**	**355**	P	**P**	**08 53 37.4**	**-3.3**
	comp=Z,1.8nm,0.7s,baz=181,slow=8.6,SNR=5.2						
F10A	**Beach Ranch, E**	**38.95**	**331**	IAmb	IAmb	08 54 00.9	
	comp=Z,5.9nm,0.8s						
H04A	**Detroit Lake**	**40.57**	**326**	P	**P**	**08 54 14.3**	**+2.0**
SIV	**San Ignacio**	**42.03**	**133**	P	**P**	**08 54 23.6**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=336,slow=6.6,SNR=5.3						
YKA	**Yellowknife Ar**	**51.61**	**347**	P	**P**	**08 55 37.9**	**-1.0**
	comp=Z,1.7nm,0.7s,baz=142,slow=8.5,SNR=38						
YKA				PcP	**PcP**	**08 56 52.3**	**0.0**
	comp=Z,0.8nm,0.7s,baz=142,slow=4.3,SNR=13						
INK	**Inuvik**	**61.04**	**343**	P	**P**	**08 56 45.4**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=118,slow=7.6,SNR=5.2						
INK	**Inuvik**	**61.04**	**343**	IAmb	IAmb	08 56 46.6	
	comp=Z,2.6nm,1.0s						
ILAR	**Eielson Array**	**63.47**	**337**	P	**P**	**08 57 02.0**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=150,slow=4.3,SNR=20						
RND	**Reindeer**	**63.66**	**335**	P	**P**	**08 57 04.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**146.60**	**342**	PKPbc	**PKPbc**	**09 06 15.6**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=348,slow=4.0,SNR=12						

IDC 21 08:54:33.9±2.7**,3°.08S**×**135°.28E,h0**^{km}**,mb3.1**/2**, mb1 3.4**/4**,mb1mx3.3**/35**,mbtmp3.3**/4**,ML3.1**/1**,Error ellipse: s-maj=70.1km s-min=27.0km az=63.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.57**	**299**	Pn	Pn	08 55 44.8	+0.4
	0.9nm,0.3s,baz=164,slow=19,SNR=7.1						
SIJI				Sn	Sn	08 56 37.1	-1.2
	1.6nm,0.3s,baz=277,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**16.78**	**183**	Pn	Pn	08 58 31.7	+1.1
	baz=3.6,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**20.51**	**184**	P	P	08 59 13.2	-0.6
	0.3nm,0.5s,baz=8.4,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**68.02**	**324**	P	P	09 05 35.4	+0.2
	0.2nm,0.5s,baz=108,slow=8.0,SNR=2.2						

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*NEIC **21** 09:09:12.4±0.5,10°.7S±0°.2×164°.18E±0°.08,h64^{km}±24^{km}, mb4.2/8,Error ellipse: s-maj=34.7km s-min=2.7km az=197.0*

*IDC **21** 09:09:12.6±6.8,10°.80S×164°.15E,h63^{km}±29^{km},mb3.8/4, mb1 3.9/7,mb1mx3.5/52,mbtmp4.1/7,ML4.0/3,MS3.3/2, Ms1 3.3/2,ms1mx2.9/38,Error ellipse: s-maj=104.3km s-min=22.2km az=41.0*

ISC 21 09:09:12.8±2.0**,11°.0S**±0°.2×**164°.0E**±0°.2**,h35**^{km}**,n18,** σ1^{s}**30**/21**,mb4.2**/8**,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.31**	**291**	P	**Pn**	**09 10 15.6**	**-0.3**
	23nm,0.3s,baz=132,slow=8.1,SNR=9.4						
HNR				S	**Sn**	**09 11 06.3**	**+1.2**
	17nm,0.3s,baz=196,slow=19,SNR=3.8						
HNR				LR	LR	09 11 53.8	
	comp=Z,261nm,21.2s,baz=52,slow=37						
HNR	**Honiara**	**4.31**	**291**		**Pn**	**09 10 16.3**	**+0.3**
HNR					**Sn**	**09 11 05.7**	**+0.7**
SANVU	**Saraoutou**	**5.37**	**145**		**Pn**	**09 10 32.2**	**+1.7**
SANVU				Sn	**Sn**	**09 11 29.7**	**-1.5**
DZM	**Mont Dzumac**	**11.22**	**168**	P	**Pn**	**09 11 53.4**	**+2.6**
	0.4nm,0.3s,baz=73,slow=10,SNR=7.9						
DZM				S	**Sn**	**09 13 54.3**	**-0.9**
	0.2nm,0.3s,baz=307,slow=20,SNR=2.9						
PMG	**Port Moresby**	**16.68**	**274**	LR	LR	09 19 07.6	
	comp=Z,176nm,18.5s,baz=76,slow=35						
CTA	**Charters Tower**	**19.33**	**240**	P	**Pn**	**09 13 37.3**	**+0.9**
	0.4nm,0.3s,baz=53,slow=10,SNR=4.7						
CTAO	**Charters Tower**	**19.33**	**240**	P	**P**	**09 13 36.0**	**+0.8**
COEN	**Coen**	**20.56**	**260**	P	**P**	**09 13 48.1**	**-0.6**
STKA	**Stephens Creek**	**29.31**	**222**	P	**P**	**09 15 10.5**	**-1.7**
	1.3nm,0.3s,baz=12,slow=9.3,SNR=2.1						
WR0	**Warramunga Arr**	**29.73**	**249**	P	**P**	**09 15 15.2**	**-0.8**
WR0				IAmb	IAmb	09 15 31.8	
	comp=Z,6.6nm,1.4s						
WB0	**Warramunga Arr**	**29.82**	**249**	P	**P**	**09 15 16.1**	**-0.7**
WB0				IAmb	IAmb	09 15 34.8	
	comp=Z,3.8nm,1.0s						
WRAB	**Tennant Creek**	**29.89**	**249**	P	**P**	**09 15 15.9**	**-1.5**
WRAB				IAmb	IAmb	09 15 19.5	
	comp=Z,6.4nm,1.2s						
WB2	**Warramunga Arr**	**29.89**	**249**	P	**P**	**09 15 16.4**	**-1.1**
WB2				IAmb	IAmb	09 15 19.7	
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr**	**29.91**	**249**	P	**P**	**09 15 16.8**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=81,slow=9.1,SNR=10.0						
WRA	**Warramunga Arr**	**29.91**	**249**	P	**P**	**09 15 16.9**	**-0.7**
ASAR	**Alice Springs**	**31.30**	**242**	P	**P**	**09 15 28.7**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=63,slow=10,SNR=15						
FITZ	**Fitzroy Crossi**	**37.75**	**255**	P	**P**	**09 16 24.2**	**-1.5**
	comp=Z,1.7nm,0.6s,baz=83,slow=8.7,SNR=7.7						
FITZ	**Fitzroy Crossi**	**37.75**	**255**	P	**P**	**09 16 24.5**	**-1.2**
FITZ				IAmb	IAmb	09 16 51.3	
	comp=Z,9.8nm,1.4s						

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*IDC **21** 09:10:21.2±1.3,41°.08N×72°.65E,h0^{km},mb3.9/8, mb1 4.0/13,mb1mx3.7/67,mbtmp3.9/13,ML3.6/5,MS3.9/2, Ms1 3.9/2,ms1mx2.9/45,Error ellipse: s-maj=22.5km s-min=11.6km az=162.0*

*ISU **21** 09:10:22,41°.13N×72°.63E,h5^{km},Hypocentre not reviewed by the ISC*

*BJI **21** 09:10:22.6±0.0,41°.12N×72°.39E,h18^{km},mb3.7/2,ML3.6/2*

*KNET **21** 09:10:23.8±0.4,41°.29N×72°.63E,h0^{km},ml3.8,Error ellipse: s-maj=6.7km s-min=2.7km az=132.0*

*KRNET **21** 09:10:23.6±0.1,41°.21N×72°.64E,h14^{km},mb4.3*

*NNC **21** 09:10:25.6±0.7,41°.32N×72°.70E,h0^{km},mb4.7,mpv4.4, Error ellipse: s-maj=5.8km s-min=3.7km az=177.0*

*MOS **21** 09:10:27.2±3.4,40°.99N×72°.34E,h33^{km},mb4.2/5,Error ellipse: s-maj=7.3km s-min=4.6km az=67.2*

*SOME **21** 09:10:27.7,41°.42N×72°.68E,h15^{km}*

*NEIC **21** 09:10:28.3±1.0,41°.26N±0°.05×72°.59E±0°.09,h43^{km}±8^{km}, mb4.1/7,Error ellipse: s-maj=11.3km s-min=4.8km az=117.0*

ISC 21 09:10:24.8±0.9**,41°.25N**±0°.02×**72°.70E**±0°.02**,h11**^{km}±6^{km}**, n183,** σ1^{s}**95**/258**,mb4.0**/15**,MS3.9**/3**,51C-27D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.23**	**72**	⇑*i*P	**Pg**	**09 10 28.9**	**-0.7**
	baz=67						
ARSB				⇑*i*S	**Sg**	**09 10 33.0**	**+0.1**
	baz=67						
ARSB	**Arslanbob**	**0.23**	**72**	*e*P		09 10 29.0	
ARSB				*e*S		09 10 34.0	
OHH	**Osh**	**0.73**	**175**	⇑*i*P	**Pg**	**09 10 36.9**	**-2.0**
	baz=71						
OHH				⇑*i*S	**Sg**	**09 10 46.5**	**-2.0**
	baz=71						
OHH	**Osh**	**0.73**	**175**	*e*P		09 10 36.0	
OHH				*e*S		09 11 04.0	
NAM	**Namangan**	**0.83**	**252**	*e*P		09 10 38.0	
NAM				*e*S		09 10 50.0	
AML	**Almayashu**	**1.15**	**40**	⇑*i*P	**Pg**	**09 10 46.3**	**-0.7**
	baz=40						
AML				⇑*i*S	**Sn**	**09 11 03.0**	**-0.2**
	baz=40						
AML	**Almayashu**	**1.15**	**40**	P	**Pg**	**09 10 46.2**	**-0.7**
	344nm,0.2s,SNR=743						
AML				⇓S	**Sn**	**09 11 03.4**	**+0.2**
	763nm,0.2s						
TRKS	**Terek-Say**	**1.20**	**284**	⇑*i*P	**Pb**	**09 10 44.7**	**-3.0**
	baz=83						
TRKS				⇑*i*S	**Sb**	**09 11 01.0**	**-2.3**
	baz=83						
MNAS	**Manas**	**1.24**	**353**	⇑*i*P	**Pb**	**09 10 47.2**	**-1.1**
	baz=56						
MNAS				⇑*i*S	**Sn**	**09 11 05.3**	**+0.2**
	baz=56						
ARLS	**Aral**	**1.36**	**63**	⇑*i*P	**Pn**	**09 10 49.6**	**-0.3**
	baz=63						
ARLS				⇑*i*S	**Sg**	**09 11 09.9**	**+1.2**
	baz=63						
SFK	**Sufi-Kurgan**	**1.38**	**153**	⇓*i*P	**Pn**	**09 10 49.3**	**-1.0**
	baz=51						
SFK				⇓*i*S	**Sn**	**09 11 07.8**	**-0.9**
	baz=51						
SFK	**Sufi-Kurgan**	**1.38**	**153**	*e*P		09 10 48.0	
SFK				*e*S		09 11 10.0	
MRKS	**Merke**	**1.54**	**15**	*e*P	**Pg**	**09 10 54.6**	**+0.3**
	425nm,0.3s						
MRKS				*e*S	**Sg**	**09 11 14.4**	**0.0**
	894nm,0.2s						
MRKS	**Merke**	**1.54**	**15**	P	**Pb**	**09 10 53.1**	**-0.3**
	425nm,0.3s						
MRKS				S	**Sg**	**09 11 14.3**	**0.0**
	894nm,0.2s						
MRKS	**Merke**	**1.54**	**15**	*e*PN	**Pg**	**09 10 54.7**	**+0.3**
EKS2	**Erkin-Say**	**1.62**	**29**	⇑*i*P	**Pb**	**09 10 54.6**	**-0.2**
	baz=30						
EKS2				⇑*i*S	**Sg**	**09 11 16.6**	**-0.4**
	baz=30						
EKS2	**Erkin-Say**	**1.62**	**29**	P	**Pb**	**09 10 54.5**	**-0.2**
	202nm,0.3s,SNR=180						
EKS2				⇓S	**Sg**	**09 11 17.9**	**+0.9**
	401nm,0.3s						
UCH	**Uchtor**	**1.67**	**54**	⇑*i*P	**Pb**	**09 10 55.6**	**-0.3**
	baz=54						
UCH				⇑*i*S	**Sg**	**09 11 18.9**	**+0.3**
	baz=54						
UCH	**Uchtor**	**1.67**	**54**	⇑P	**Pn**	**09 10 55.4**	**+1.0**
	552nm,0.2s,SNR=927						
UCH				⇑S	**Sg**	**09 11 20.6**	**+2.0**
	420nm,0.2s						
BTK	**Batken**	**1.86**	**231**	⇑*i*P	**Pn**	**09 10 56.2**	**-0.5**
	baz=31						
BTK				⇑*i*S	**Sn**	**09 11 21.1**	**+0.8**
	baz=31						
BTK	**Batken**	**1.86**	**231**	*e*P		09 10 55.0	
BTK				*e*S		09 11 21.0	
DRK	**Karamyk**	**1.90**	**201**	⇓*i*P	**Pn**	**09 10 57.6**	**+0.2**
	baz=1.0						
DRK				⇓*i*S	**Sn**	**09 11 22.4**	**+0.9**
	baz=1.0						
AAK	**Ala-Archa**	**1.93**	**44**	Pn	**Pb**	**09 11 00.1**	**+0.1**
	199nm,0.3s,baz=211,slow=7.3,SNR=2041						
AAK				Lg	Lg	09 11 26.4	
	100nm,0.3s,baz=342,slow=18,SNR=12						
AAK	**Ala-Archa**	**1.93**	**44**	⇑*i*P	**Pb**	**09 11 00.3**	**+0.3**
	baz=44						
AAK				⇑*i*S	**Sg**	**09 11 26.0**	**-0.7**
	baz=44						
AAK	**Ala-Archa**	**1.93**	**44**	P	**Pb**	**09 11 00.1**	**+0.1**
	704nm,0.4s,SNR=854						
AAK				⇓S	**Sg**	**09 11 28.1**	**+1.3**

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       661nm,0.3s
AAK    Ala-Archa          1.93  44 ⇑Pn     Pb      09 11 00.0 +0.1
       388nm,0.5s
AAK                                ⇑Lg     Lg      09 11 26.5
       276nm,0.6s
AAK    Ala-Archa          1.93  44 i PN    Pb      09 11 00.5 +0.4
AAK                                 pmax   pmax
       comp=Z,389nm,0.4s
AAK    Ala-Archa          1.93  44         Pb      09 11 00.4 +0.4
DZA    Taraz              1.93 329 eP      Pg      09 11 01.8 +0.1
       comp=Z,764nm,0.4s
DZA                                eS      Sg      09 11 26.8 +0.1
       comp=Z,4µm,0.4s
DZA    Taraz              1.93 329 ePN     Pg      09 11 01.8 +0.1
DZA                                eS      Sg      09 11 26.8 +0.1
FRU1   Bishkek            2.12  42⇓iP      Pb      09 11 02.5 -0.8
       baz=42
FRU1                              ⇓iS      Sg      09 11 31.0 -1.9
       baz=42
IUG    Iuzhnay            2.19 295 eP      Pb      09 11 05.2 +0.8
       comp=Z,530nm,0.2s
IUG                                eS      Sb      09 11 32.3 +0.7
       comp=Z,3µm,0.5s
IUG    Iuzhnay            2.19 295 ePN     Pb      09 11 05.2 +0.8
IUG                                eS      Sb      09 11 32.3 +0.7
KBK    Karagaybulak       2.19  49⇓eP      Pb      09 11 04.4 -0.1
       baz=49
KBK                               ⇓iS      Sb      09 11 33.0 +1.3
       baz=49
KBK    Karagaybulak       2.19  49 ⇑P      Pb      09 11 04.9 +0.4
       comp=Z,206nm,0.1s,SNR=386
KBK                                ⇑S      Sg      09 11 37.0 +1.9
       comp=Z,2µm,0.5s
CHMS   Chumysh            2.32  41⇑iP      Pb      09 11 06.2 -0.4
       baz=41
CHMS                              ⇑iS      Sb      09 11 35.6 +0.3
       baz=41
CHMS   Chumysh            2.32  41 ⇑P      Pb      09 11 06.2 -0.4
       comp=Z,282nm,0.4s,SNR=190
CHMS                               ⇓S      Sg      09 11 39.9 +0.6
       comp=Z,341nm,0.3s
CHMS   Chumysh            2.32  41 ePN     Pb      09 11 06.2 -0.4
USP    Ospenovka          2.42  33⇑iP      Pb      09 11 07.4 -0.9
       baz=33
USP                               ⇑iS      Sb      09 11 38.1  0.0
       baz=33
USP    Ospenovka          2.42  33  P      Pb      09 11 07.3 -0.9
       comp=Z,275nm,0.2s,SNR=253
KK31   Karatay Array      2.46 319 ⇓Pn     Pn      09 11 06.0 +1.1
       comp=Z,248nm,0.6s,baz=130,slow=12,SNR=2234
KK31                               ⇓Lg     Lg      09 11 39.8
       comp=Z,103nm,0.3s,baz=135,slow=27,SNR=8.1
KK31   Karatay Array      2.46 319  PN     Pn      09 11 06.8 +1.9
KK31   Karatay Array      2.46 319         Pn      09 11 06.8 +1.9
KKAR   Karatay Array      2.46 319  PN     Pn      09 11 06.8 +1.9
KKAR   Karatay Array      2.46 319         Pn      09 11 06.8 +1.9
KKAR   Karatay Array      2.46 319         Pn      09 11 06.3 +1.4
CHM    Chimkent           2.55 296 eP      Pb      09 11 12.3 +1.8
       comp=Z,173nm,0.2s
CHM                                eS      Sb      09 11 43.9 +2.1
       comp=Z,3µm,0.4s
CHM    Chimkent           2.55 296 ePN     Pb      09 11 12.3 +1.8
CHM                                eS      Sb      09 11 43.9 +2.1
TAS    Tashkent           2.56 273 eP              09 11 09.0
TAS                                eS              09 11 44.0
SGDS   Sogindy            2.62  32  Pg     Pb      09 11 10.8 -1.0
       comp=Z,167nm,0.3s
SGDS                                Lg     Lg      09 11 45.7
       comp=Z,604nm,0.3s
BOOM   Boomskoye usch     2.72  62⇓iP      Pn      09 11 10.9 +2.3
       baz=62
BOOM                              ⇓iS      Sb      09 11 45.0 -2.0
       baz=62
TKM2   Tokmak 2           2.73  51⇑iP      Pn      09 11 11.1 +2.4
       baz=51
TKM2                              ⇑iS      Sb      09 11 44.8 -2.4
       baz=51
TKM2   Tokmak 2           2.73  51 ⇑P      Pb      09 11 12.1 -1.7
       comp=Z,389nm,0.4s,SNR=456
TKM2   Tokmak 2           2.73  51 ⇑Pn     Pb      09 11 12.0 -1.7
       comp=Z,210nm,0.4s
TKM2                               ⇓Lg     Lg      09 11 51.5
       comp=Z,386nm,0.8s
TKM2   Tokmak 2           2.73  51 i PN    Pb      09 11 12.1 -1.7
TKM2                               i               09 11 51.5
TKM2                                pmax   pmax
       comp=Z,210nm,0.4s
TKM2                                pmax   pmax
       comp=Z,304nm,0.6s
BRLS   Borolday           2.77 311 eP      Pb      09 11 14.8 +0.5
       comp=Z,266nm,0.2s
BRLS                               eS      Sb      09 11 48.8 +0.5
       comp=Z,688nm,0.4s
BRLS   Borolday           2.77 311 ePN     Pb      09 11 14.8 +0.5
BRLS                               eS      Sb      09 11 48.8 +0.5
ULHL   Ulahol             2.83  68⇑iP      Pn      09 11 13.1 +2.9
       baz=68
ULHL                              ⇑iS      Sb      09 11 48.5 -1.8
       baz=68
ULHL   Ulahol             2.83  68 ⇓P      Pb      09 11 13.5 -2.0
       comp=Z,47nm,0.2s,SNR=80
KST    Kastek             3.02  53 eP      Pg      09 11 22.4 -0.2
       comp=Z,118nm,0.3s
KST                                eS      Sg      09 12 01.4 -0.2
       comp=Z,282nm,0.6s
KST    Kastek             3.02  53  Pg     Pb      09 11 19.7 +1.1
       comp=Z,245nm,0.3s
KST                                 Lg     Lg      09 12 00.9
       comp=Z,282nm,0.6s
KST    Kastek             3.02  53 ePN     Pg      09 11 22.4 -0.2
KST                                eS      Sg      09 12 01.4 -0.2
DGS    Degeres            3.03  48 eP      Pg      09 11 22.4 -0.4
       comp=Z,127nm,0.3s
DGS                                eS      Sg      09 12 01.7 -0.3
       comp=Z,290nm,0.6s
DGS    Degeres            3.03  48  Pg     Pb      09 11 19.4 +0.7
       comp=Z,93nm,0.6s
DGS                                 Lg     Lg      09 12 00.4
       comp=Z,290nm,0.6s
DGS    Degeres            3.03  48 ePN     Pg      09 11 22.4 -0.4
DGS                                eS      Sg      09 12 01.7 -0.3
KRBS   Karabastau         3.29  41 eP      Pg      09 11 26.4 -1.4
       comp=Z,36nm,0.2s
KRBS                               eS      Sg      09 12 08.6 -1.8
       comp=Z,201nm,0.6s
KRBS   Karabastau         3.29  41  Pg     Pb      09 11 24.3 +1.1
       comp=Z,59nm,0.3s
KRBS                                Lg     Lg      09 12 08.6
       comp=Z,201nm,0.6s
KRBS   Karabastau         3.29  41 ePN     Pg      09 11 26.4 -1.4
KRBS                               eS      Sg      09 12 08.6 -1.8
MTBS   Maitube            3.35  55 eP      Pg      09 11 27.9 -0.9
       comp=Z,32nm,0.3s
MTBS                               eS      Sg      09 12 10.7 -1.6
       comp=Z,161nm,0.4s
MTBS   Maitube            3.35  55  Pg     Pb      09 11 25.7 +1.5
       comp=Z,72nm,0.5s
MTBS                                Lg     Lg      09 12 10.8
       comp=Z,161nm,0.4s
MTBS   Maitube            3.35  55 ePN     Pg      09 11 28.0 -0.9
MTBS                               eS      Sg      09 12 10.7 -1.6
IZV    Izvestkoviy        3.41  57 eP      Pg      09 11 28.9 -1.3
       comp=Z,81nm,0.5s
IZV                                eS      Sg      09 12 13.2 -1.2
       comp=Z,230nm,0.6s
IZV    Izvestkoviy        3.41  57  Pg     Pb      09 11 26.7 +1.3
       comp=Z,63nm,0.5s
IZV                                 Lg     Lg      09 12 13.0
       comp=Z,230nm,0.6s
IZV    Izvestkoviy        3.41  57 ePN     Pg      09 11 28.9 -1.3
IZV                                eS      Sg      09 12 13.2 -1.2
KDJ    Kajisay            3.47  74⇑iP      Pn      09 11 21.3 +2.4
       baz=74
KDJ                               ⇑iS      Sn      09 12 03.2 +3.1
       baz=74
TNSS   Tian-Shan          3.63  59 eP      Pg      09 11 33.0 -1.3
       comp=Z,44nm,0.3s
TNSS                               eS      Sg      09 12 19.5 -1.8
       comp=Z,52nm,0.6s
TNSS   Tian-Shan          3.63  59  Pg     Pb      09 11 30.5 +1.4
       comp=Z,44nm,0.3s
TNSS                                Lg     Lg      09 12 19.2
       comp=Z,52nm,0.6s
TNSS   Tian-Shan          3.63  59 ePN     Pg      09 11 33.0 -1.3
TNSS                               eS      Sg      09 12 19.5 -1.8
AAA    Alma-Ata           3.69  57 eP      Pg      09 11 34.1 -1.4
       comp=Z,53nm,0.1s
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AAA                                eS      Sg      09 12 22.2 -1.1
       comp=Z,110nm,0.4s
AAA    Alma-Ata           3.69  57  Pg     Pb      09 11 32.5 +2.5
       comp=Z,122nm,0.3s
AAA                                 Lg     Lg      09 12 22.6
       comp=Z,110nm,0.4s
AAA    Alma-Ata           3.69  57 ePN     Pg      09 11 34.1 -1.4
AAA                                eS      Sg      09 12 22.2 -1.1
KNDC   Almaty             3.73  57 ⇑Pg     Pb      09 11 32.6 +1.9
       comp=Z,108nm,0.5s
KNDC                               ⇑Lg     Lg      09 12 23.3
       comp=Z,381nm,0.9s
MDOK   Medeo              3.75  58 eP      Pg      09 11 34.7 -2.0
       comp=Z,37nm,0.4s
MDOK                               eS      Sg      09 12 22.9 -2.4
       comp=Z,107nm,0.8s
MDOK   Medeo              3.75  58 ⇑Pn     Pn      09 11 26.2 +3.4
       comp=Z,17nm,0.5s
MDOK                               ⇑Pg     Pb      09 11 32.4 +1.2
       comp=Z,53nm,0.6s
MDOK                               ⇓Lg     Lg      09 12 22.4
       comp=Z,142nm,0.9s
MDOK   Medeo              3.75  58  Pg     Pb      09 11 32.5 +1.4
       comp=Z,66nm,0.4s
MDOK                                Lg     Lg      09 12 22.4
       comp=Z,107nm,0.8s
MDOK   Medeo              3.75  58 ePN     Pg      09 11 34.7 -2.0
MDOK                               eS      Sg      09 12 22.9 -2.4
KUU    Kurty              3.77  44 eP      Pg      09 11 35.0 -1.9
       comp=Z,23nm,0.3s
KUU                                eS      Sg      09 12 23.3 -2.4
       comp=Z,142nm,0.5s
KUU    Kurty              3.77  44  Pg     Pb      09 11 33.1 +1.8
       comp=Z,56nm,0.5s
KUU                                 Lg     Lg      09 12 23.4
       comp=Z,142nm,0.5s
KUU    Kurty              3.77  44 ePN     Pg      09 11 35.1 -1.9
KUU                                eS      Sg      09 12 23.3 -2.4
KTBS   Karatobe           3.84  49 eP      Pg      09 11 36.7 -1.6
       comp=Z,37nm,0.3s
KTBS                               eS      Sg      09 12 26.0 -2.0
       comp=Z,356nm,0.5s
KTBS   Karatobe           3.84  49  Pg     Pb      09 11 34.1 +1.6
       comp=Z,42nm,0.4s
KTBS                                Lg     Lg      09 12 25.3
       comp=Z,356nm,0.5s
KTBS   Karatobe           3.84  49 ePN     Pg      09 11 36.7 -1.6
KTBS                               eS      Sg      09 12 26.0 -2.0
BTLS   Baital             3.91  14 eP      Pg      09 11 36.5 -3.2
       comp=Z,31nm,0.3s
BTLS                               eS      Sg      09 12 26.2 -4.2
       comp=Z,118nm,0.6s
BTLS   Baital             3.91  14  Pg     Pg      09 11 36.6 -3.1
       comp=Z,31nm,0.3s
BTLS                                Lg     Lg      09 12 29.7
       comp=Z,12nm,0.5s
BTLS   Baital             3.91  14 ePN     Pg      09 11 36.5 -3.2
BTLS                               eS      Sg      09 12 26.2 -4.2
ANVS   Anan'yevo          4.01  66⇓iP      Pn      09 11 28.3 +2.0
       baz=66
ANVS                              ⇓iS      Sn      09 12 16.2 +2.9
       baz=66
CHKK   Chushkaly          4.10  49 eP      Pg      09 11 40.9 -2.4
       comp=Z,30nm,0.4s
CHKK                               eS      Sg      09 12 33.3 -3.1
       comp=Z,198nm,0.4s
CHKK   Chushkaly          4.10  49  Pg     Pb      09 11 38.9 +1.9
       comp=Z,30nm,0.4s
CHKK                                Lg     Lg      09 12 33.8
       comp=Z,198nm,0.4s
CHKK   Chushkaly          4.10  49 ePN     Pg      09 11 40.9 -2.4
CHKK                               eS      Sg      09 12 33.3 -3.1
SATY   Saty               4.61  65 eP      Pg      09 11 51.0 -2.1
       comp=Z,86nm,0.9s
SATY                               eS      Sg      09 12 50.7 -2.1
       comp=Z,65nm,0.6s
SATY   Saty               4.61  65  Pg     Pb      09 11 49.3 +3.6
       comp=Z,86nm,0.9s
SATY                                Lg     Lg      09 12 51.5
       comp=Z,65nm,0.6s
SATY   Saty               4.61  65 ePN     Pg      09 11 51.0 -2.1
KURS   Kuram              4.63  59 eP      Pg      09 11 51.0 -2.4
       comp=Z,29nm,0.9s
KURS                               eS      Sg      09 12 50.6 -2.8
       comp=Z,56nm,1.4s
KURS   Kuram              4.63  59  Pg     Pb      09 11 48.9 +2.9
       comp=Z,29nm,0.9s
KURS                                Lg     Lg      09 12 50.5
       comp=Z,56nm,1.4s
KURS   Kuram              4.63  59 ePN     Pg      09 11 51.0 -2.4
KURS                               eS      Sg      09 12 50.6 -2.8
ZHN    Zhinishke          4.67  64 eP      Pg      09 11 51.7 -2.5
       comp=Z,5.6nm,0.2s
ZHN                                eS      Sg      09 12 51.6 -3.1
       comp=Z,10nm,0.2s
ZHN    Zhinishke          4.67  64  Pg     Pb      09 11 49.5 +2.7
       comp=Z,5.6nm,0.2s
ZHN                                 Lg     Lg      09 12 51.6
       comp=Z,10nm,0.2s
ZHN    Zhinishke          4.67  64 ePN     Pg      09 11 51.7 -2.5
ZHN                                eS      Sg      09 12 51.6 -3.1
ARXS   Arharly            4.80  50 eP      Pg      09 11 53.7 -3.0
       comp=Z,67nm,0.4s
ARXS                               eS      Sg      09 12 55.6 -3.2
       comp=Z,99nm,0.5s
ARXS   Arharly            4.80  50  Pg     Pb      09 11 51.0 +2.1
       comp=Z,31nm,0.6s
ARXS                                Lg     Lg      09 12 54.5
       comp=Z,99nm,0.5s
UZB    Uzynbulak          5.07  66 eP      Pg      09 11 58.2 -3.6
       comp=Z,22nm,0.4s
UZB                                eS      Sg      09 13 02.9 -4.5
       comp=Z,52nm,0.6s
UZB    Uzynbulak          5.07  66  Pg     Pb      09 11 56.4 +2.9
       comp=Z,22nm,0.4s
UZB                                 Lg     Lg      09 13 03.0
       comp=Z,52nm,0.6s
MNBS   Baschi             5.07  54 eP      Pg      09 11 59.3 -2.5
       comp=Z,19nm,0.4s
MNBS                               eS      Sg      09 13 05.1 -2.3
       comp=Z,76nm,0.6s
MNBS   Baschi             5.07  54  Pg     Pg      09 11 58.0 -3.7
       comp=Z,22nm,0.4s
MNBS                                Lg     Lg      09 13 05.6
       comp=Z,76nm,0.6s
SHLS   Shalkode           5.37  67 eP      Pg      09 12 09.7 +2.1
       comp=Z,13nm,0.5s
SHLS                               eS      Sg      09 13 23.2 +6.0
       comp=Z,71nm,0.6s
SHLS   Shalkode           5.37  67  Pg     Pg      09 12 08.2 +0.5
       comp=Z,15nm,0.4s
SHLS                                Lg     Lg      09 13 23.7
       comp=Z,71nm,0.6s
PDGK   Podgornoye         5.45  65  Pg     Pb      09 12 02.8 +2.8
       comp=Z,7.7nm,0.7s
PDGK                                Lg     Lg      09 13 14.6
       comp=Z,22nm,0.8s
PDGK   Podgornoye         5.45  65 ⇓Pn     Pn      09 11 48.1 +2.0
       comp=Z,3.8nm,0.8s
PDGK                               ⇑Pg     Pb      09 12 02.5 +2.5
       comp=Z,11nm,0.5s
PDGK                               ⇑Lg     Lg      09 13 19.6
       comp=Z,84nm,0.8s
PDGK   Podgornoye         5.45  65  PN     Pn      09 11 48.9 +2.9
DJR    Jarkent            6.06  57  Pg     Pb      09 12 14.7 +4.3
       comp=Z,12nm,0.4s
DJR                                 Lg     Lg      09 13 35.1
       comp=Z,23nm,1.1s
KTMS   Ketmen             6.08  66  Pg     Pb      09 12 16.1 +5.3
       comp=Z,4.0nm,0.3s
KTMS                                Lg     Lg      09 13 37.4
       comp=Z,32nm,0.5s
KAPS   Kapalarasan        6.31  48  Pg     Pb      09 12 19.7 +5.0
       comp=Z,7.1nm,0.6s
KAPS                                Lg     Lg      09 13 43.5
       comp=Z,29nm,0.5s
KBL    Kabul              7.30 204  PN     Pn      09 12 13.2 +1.7
KBL    Kabul              7.30 204         Pn      09 12 13.2 +1.7
CEP    Cherat             7.44 185  P      Pn      09 12 15.6 +2.1
NIL    Nilore             7.60 176  P      Pn      09 12 16.3 +0.8
NIL    Nilore             7.60 176         Pn      09 12 16.3 +0.8
THW    Thamme Wali        8.48 185  P      Pn      09 12 27.0 -0.6
MAKZ   Makanchi           8.69  47 ⇓Pn     Pn      09 12 33.0 +2.7
       comp=Z,5.2nm,1.1s
MAKZ                               ⇑Lg     Lg      09 15 02.1
       comp=Z,17nm,1.1s
MAKZ   Makanchi           8.69  47  P      Pn      09 12 33.2 +2.8
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MAKZ   Makanchi           8.69  47         Pn      09 12 33.2 +2.8
MK31   Makanchi Array     8.85  48 ⇑Pn     Pn      09 12 34.4 +1.7
       comp=Z,1.4nm,0.4s
MK31                               ⇑Lg     Lg      09 15 07.4
       comp=Z,10nm,0.8s,baz=258,slow=24,SNR=2.7
MK31   Makanchi Array     8.85  48  P      Pn      09 12 35.1 +2.4
MK31   Makanchi Array     8.85  48         Pn      09 12 35.1 +2.4
MKAR   Makanchi Array     8.85  48  Pn     Pn      09 12 34.8 +2.2
       comp=Z,0.6nm,0.3s,baz=234,slow=12,SNR=36
MKAR                                Lg     Lg      09 15 01.8
       comp=Z,0.8nm,0.3s,baz=218,slow=25,SNR=4.2
MKAR   Makanchi Array     8.85  48         Pn      09 12 34.7 +2.0
KURBB  Kurchatov Arra    10.21  21  Pn     Pn      09 12 49.9 -1.3
       comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=17
KURBB                               Lg     Lg      09 15 45.4
       comp=Z,0.2nm,0.3s,baz=207,slow=30,SNR=4.8
KURBB  Kurchatov Arra    10.21  21 ⇑Pn     Pn      09 12 49.6 -1.6
       comp=Z,2.7nm,0.6s
KURBB                              ⇓Lg     Lg      09 15 45.1
       comp=Z,52nm,0.7s
KURK   Kurchatov         10.32  21 ⇓Lg     Lg      09 15 49.5
       comp=Z,28nm,0.7s
KURK   Kurchatov         10.32  21 eP      Pn      09 12 52.7 +0.1
KURK   Kurchatov         10.32  21         Pn      09 12 51.8 -0.9
HRA    Herat             10.73 234  Pn     Pn      09 12 58.4 -0.3
WMQ    Urumqi            11.36  72  P      Pn      09 13 08.4 +1.3
WMQ    Urumqi            11.36  72         Pn      09 13 08.4 +1.3
BVAR   Borovoye Array    11.88 353  Pn     Pn      09 13 17.5 +3.4
       comp=Z,0.3nm,0.3s,baz=76,slow=7.9,SNR=3.4
BVAR                                Lg     Lg      09 16 41.5
       comp=Z,0.7nm,0.3s,baz=132,slow=24,SNR=3.5
BRVK   Borovoye          11.92 353  P      Pn      09 13 16.3 +1.7
BRVK   Borovoye          11.92 353  Pn     Pn      09 13 16.2 +1.7
AB31   Akbulak array     12.02 316 ⇓Pn     Pn      09 13 18.1 +2.2
       comp=Z,2.7nm,0.5s
ABKAR  Akbulak array     12.02 316         Pn      09 13 13.7 -2.3
AKTO   Aktyubinsk        13.73 317  Pn     Pn      09 13 38.1 -1.1
       comp=Z,0.2nm,0.3s,baz=129,slow=14,SNR=5.5
AKTO                                Sn     Sn      09 16 08.3 -3.3
       comp=Z,0.1nm,0.3s,baz=47,slow=19,SNR=2.6
AKTO   Aktyubinsk        13.73 317 ⇓Pn     Pn      09 13 40.0 +0.8
       comp=Z,7.2nm,1.2s
ZAA0   Zalesovo Array    15.07  29  Pn     Pn      09 13 58.7 +1.1
ZALV   Zalesovo Beam     15.07  29  Pn     Pn      09 13 58.3 +0.8
       comp=Z,0.7nm,0.3s,baz=220,slow=14,SNR=8.0
ZALV                                Sn     S       09 16 54.3 -7.5
       baz=225,slow=16,SNR=2.3
ZALV                                Lg     Lg      09 18 25.7
       comp=Z,0.1nm,0.3s,baz=218,slow=26,SNR=4.1
ZALV   Zalesovo Beam     15.07  29 i P     Pn      09 14 00.3 +2.7
ZALV                                pmax   pmax
       comp=Z,3.0nm,0.5s
ZALV   Zalesovo Beam     15.07  29         Pn      09 13 58.7 +1.1
ARU    Arti              17.75 334  P      P       09 14 33.2 +0.7
ARU                                 S      S       09 17 55.1 -1.4
GTA    Gaotai            20.73  86 eP      P       09 15 06.9 +1.5
GTA                                 pP     sP      09 15 15.3 +4.5
GTA                                 sP     pP      09 15 19.3  +10
GTA                                 pmax   pmax
       comp=Z,2.0nm,1.2s
KBZ    Khabaz            22.06 286 eP      P       09 15 19.1 -0.4
KBZ                                 pmax   pmax
       comp=Z,2.0nm,1.4s
KIV    Kislovodsk        22.20 287 eP      P       09 15 20.5 -0.6
KIV                                 pmax   pmax
       comp=Z,13nm,0.9s
ZAK    Zakamensk         23.05  56 eP      P       09 15 30.9 +0.8
ZAK                                 pmax   pmax
       comp=Z,5.0nm,1.2s
SONM   Songino Array     24.76  63  P      P       09 15 47.2 +0.7
       comp=Z,4.0nm,0.9s,baz=274,slow=11,SNR=14
SONM   Songino Array     24.76  63  P      P       09 15 46.6 +0.1
ULN    Ulaanbaatar       25.21  63  P      P       09 15 50.6 +0.1
ULN                                 pmax   pmax
       comp=Z,7.0nm,0.9s
ULN    Ulaanbaatar       25.21  63  P      P       09 15 50.6 +0.1
ULN                                 IAmb   IAmb    09 15 52.0
       comp=Z,7.2nm,0.8s
BR131  Keskin Array S    29.58 280⇑iP      P       09 16 28.3 -1.5
AKBB   Malin Array Si    31.25 303⇑iP      P       09 16 43.5 -0.8
MNK    Minsk             32.27 310 i P     P       09 16 56.3 +3.1
       comp=E,2.0nm,0.8s
MNK                                i P     P       09 16 56.3 +3.1
       comp=N,13nm,0.8s
MNK                                i P     P       09 16 56.3 +3.1
       comp=Z,10.0nm,0.8s
MNK                                i PP    PnPn    09 18 02.0 +2.8
MNK                                i PPP   PPP     09 18 11.6
MNK                                i PcP   PcP     09 19 44.9 +3.8
MNK                                i S     S       09 22 10.5 +4.3
MNK                                i SS    ScP     09 23 40.2  +16
MNK                                i SS    SnSn    09 24 01.4 +4.0
MNK                                i SSS   SSS     09 24 16.6
MNK                                i SSS   SSS     09 24 29.7
MNK                                i LQ    LQ      09 27 29.9
MNK                                i LQ    LQ      09 27 29.9
MNK                                i LR    LR      09 28 46.0
MNK                                i LRM   MLR     09 31 17.2
       comp=E,47nm,18.7s
MNK                                i LRM   MLR     09 31 17.2
       comp=N,460nm,18.7s
MNK                                i LRM   MLR     09 31 17.2
       comp=Z,129nm,18.7s
BURAR  Bucovina Array    34.06 297  P      P       09 17 07.9 -1.1
FINES  FINESS Array B    34.42 322  P      P       09 17 11.0 -0.8
       comp=Z,0.7nm,0.3s,baz=109,slow=10,SNR=7.0
FINES  FINESS Array B    34.42 322  P      P       09 17 10.7 -1.2
ARCES  ARCESS Array B    37.33 335  P      P       09 17 35.5 -1.2
       comp=Z,1.9nm,0.7s,baz=106,slow=8.6,SNR=6.6
TIXI   Tiksi             40.88  24  P      P       09 18 05.8 -0.6
TIXI                                IAmb   IAmb    09 18 06.7
       comp=Z,2.7nm,1.0s
CLL    Collm             41.39 305 epP     pP      09 18 21.0 +6.2
NB2    NORSAR Subarra    41.49 320  P      P       09 18 10.3 -1.3
       comp=Z,3.2nm,0.7s,baz=91,slow=8.6
NOA    NORSAR Array B    41.49 320  P      P       09 18 10.4 -1.2
       comp=Z,0.4nm,0.5s,baz=109,slow=7.8,SNR=1.9
USA0B  Ussuriysk Arra    42.84  65 eP      P       09 18 24.6 +1.9
BFO    Black Forest      45.02 302 i P     P       09 18 42.2 +2.0
TGY    Tagaytay City     49.74 108  LR     LR      09 43 05.6
       comp=Z,92nm,18.1s,baz=29,slow=40
ERM    Erimo             51.25  64  P      P       09 19 28.1 -0.3
ERM    Erimo             51.25  64  P      P       09 19 28.1 -0.3
TORD   Torodi Ar. Bea    67.20 268  P      P       09 21 16.3 -2.9
       comp=Z,0.8nm,0.7s,baz=49,slow=6.1,SNR=1.6
INK    Inuvik            69.00  10  P      P       09 21 28.6 -1.1
       comp=Z,1.0nm,0.5s,baz=319,slow=4.6,SNR=6.5
INK    Inuvik            69.00  10  P      P       09 21 28.6 -1.1
INK                                 pmax   pmax
       comp=Z,2.0nm,0.7s
INK    Inuvik            69.00  10  IAmb   IAmb    09 21 29.4
       comp=Z,1.6nm,0.7s
C36M   Paulatuk          69.02   6  P      P       09 21 28.6 -1.2
C36M                                IAmb   IAmb    09 21 35.0
       comp=Z,1.4nm,0.6s
ILAR   Eielson Array     69.85  17  P      P       09 21 33.8 -1.3
       comp=Z,0.6nm,0.8s,baz=322,slow=4.9,SNR=5.6
ILAR                                LR     LR      09 55 03.6
       comp=Z,82nm,18.0s,baz=322,slow=38
ILAR   Eielson Array     69.85  17  P      P       09 21 33.9 -1.1
ILAR   Eielson Array     69.85  17  P      P       09 21 33.9 -1.1
YKA    Yellowknife Ar    76.44   3  P      P       09 22 12.8 -1.2
       comp=Z,1.0nm,0.6s,baz=359,slow=5.7,SNR=35
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IDC 21 09:16:23.7±1.5, 9°.47S×123°.74E, h132km±13km, mb2.9/1, mb1 3.0/4, mb1mx2.8/39, mbtmp3.3/4, Error ellipse: s-maj=76.3km s-min=17.8km az=61.0, Timor region

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Code   Station Name       Δ°   AZ°   Phase ID           Time       Res
                                     Op     ISC       h  m  s      ISC
BATI   Baumata           0.74 186   P      Pn      09 16 44.6  0.0
       36nm,0.3s,baz=354,slow=5.7,SNR=20
BATI                                S      Sn      09 17 01.6 +1.0
       26nm,0.3s,baz=156,slow=21,SNR=18
FITZ   Fitzroy Crossi    8.77 168   P      Pn      09 18 28.8 +1.2
       0.3nm,0.3s,baz=354,slow=11,SNR=13
FITZ                                S      Sn      09 20 04.1 -0.7
       1.7nm,0.3s,baz=275,slow=23,SNR=14
WRA    Warramunga Arr   14.60 137   P      Pn      09 19 43.9 -0.2
       0.2nm,0.3s,baz=313,slow=15,SNR=8.4
WRA                                 S      Sn      09 22 18.8 -7.0
       0.5nm,0.3s,baz=304,slow=23,SNR=9.4
ASAR   Alice Springs    17.14 147   P      Pn      09 20 16.9 +1.6
       0.1nm,0.3s,baz=339,slow=13,SNR=2.5
```

ASAR				S	Sn	09 23 24.9	-1.9
	0.2nm,0.3s,baz=319,slow=21,SNR=6.3						
MKAR	Makanchi Array	67.09	330	P	P	09 27 02.9	0.0
	0.2nm,0.5s,baz=146,slow=6.3,SNR=3.9						

IDC ***21*** *09:34:18.1±1.3, 11°.11S×161°.78E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/35, mbtmp3.7/7, ML4.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/25, Error ellipse: s-maj=33.2km s-min=27.0km az=157.0*

ISC 21 09:34:23.2±1.2**, 11°.2S**±0°.2×**161°.8E**±0°.2**, h36**^{km}**, n9, σ1^s.63**/8**, mb3.6**/6**, MS3.4**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.50	314	Pn	Pn	09 34 59.1	-2.3
	35nm,0.3s,baz=120,slow=6.0,SNR=12						
HNR				Sn	Sn	09 35 32.9	+2.2
	476nm,0.3s,baz=216,slow=11,SNR=20						
STKA	Stephens Creek	27.76	219	LR	LR	09 50 06.1	
	comp=Z,108nm,19.7s,baz=25,slow=34						
WRA	Warramunga Arr	27.78	248	P	P	09 40 10.3	+1.3
	0.5nm,0.8s,baz=73,slow=9.3,SNR=3.3						
WRA				LR	LR	09 49 43.4	
	comp=Z,89nm,21.2s,baz=65,slow=33						
ASAR	Alice Springs	29.27	241	P	P	09 40 21.9	-0.3
	0.6nm,0.9s,baz=81,slow=10,SNR=5.0						
PPT	Papeete	47.45	104	LR	LR	10 01 18.1	
	comp=Z,48nm,18.1s,baz=204,slow=34						
SONM	Songino Array	76.52	325	P	P	09 46 09.9	+0.2
	0.8nm,0.8s,baz=124,slow=6.0,SNR=5.1						
NVAR	Mina Array Bea	89.12	51	P	P	09 47 16.4	+1.0
	0.3nm,0.7s,baz=224,slow=6.3,SNR=3.2						
MKAR	Makanchi Array	90.97	317	P	P	09 47 23.6	+0.1
	0.3nm,0.6s,baz=95,slow=6.2,SNR=4.6						
YKA	Yellowknife Ar	96.91	28	P	P	09 47 49.8	-0.6
	0.1nm,0.7s,baz=252,slow=3.5,SNR=4.2						

JMA ***21*** *10:27:39.0±0.2, 33°.28N×137°.72E, h374^{km}, M2.8*

IDC ***21*** *10:27:40.7±5.8, 33°.08N×136°.98E, h308^{km}±128^{km}, mb2.7/4, mb1 2.8/5, mb1mx2.7/33, mbtmp3.3/5, Error ellipse: s-maj=235.2km s-min=19.8km az=60.0*

ISC 21 10:27:41.8±1.0**, 33°.46N**±0°.10×**137°.69E**±0°.08**, h352**^{km}**, n24, σ1^s.12**/27**, mb2.9**/4**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.61	296	P	Pn	10 28 27.4	+1.3
JIE	Ise	1.23	319	P	Pn	10 28 29.3	+0.6
JKN2	Miekihoku	1.41	304	P	Pn	10 28 29.8	+0.3
JTNC	Tanabenakahech	1.77	282	P	Pn	10 28 31.5	-0.2
JNY	Yasuok	1.90	4	P	Pn	10 28 33.9	+1.3
JWY	Kouya	1.90	294	P	Pn	10 28 32.8	+0.2
JEG	Eigenji	1.98	328	P	Pn	10 28 34.1	+1.0
JYTA	Yamagatataniai	2.27	340	P	Pn	10 28 36.0	+0.9
JWT	Wachi	2.62	314	P	Pn	10 28 38.0	+0.1
BSO3	Boso 3	2.70	60	*e*S	S	10 29 24.2	+0.4
JAI	Aioi	2.72	278	P	Pn	10 28 38.2	-0.6
JRY	Ryogami san	2.74	21	*e*S	S	10 29 26.3	+1.4
BSO1	Boso 1	2.98	66	P	Pn	10 28 40.5	+0.1
BSO1				*e*S	S	10 29 27.7	0.0
JKG	Kaga	3.02	339	P	Pn	10 28 42.2	+0.9
MAT	Matsushiro	3.10	8	P	Pn	10 28 42.8	+0.7
MJAR	Matsushiro Arr	3.10	8	P	Pn	10 28 42.9	+0.8
	0.2nm,0.3s,baz=193,slow=10,SNR=13						
JMN	Monobe	3.19	276	P	Pn	10 28 42.6	-0.4
JAG	Ashikaga	3.29	26	*e*S	S	10 29 32.4	-1.5
JYT	Yasato	3.44	36	P	Pn	10 28 45.7	+0.4
JYT				*e*S	S	10 29 34.1	-2.4
JHO	Hitachi	3.93	36	P	Pn	10 28 50.0	-0.1
JHO				*e*S	S	10 29 42.5	-2.7
SONM	Songino Array	27.52	311	P	P	10 32 58.9	+1.6
	0.2nm,0.4s,baz=110,slow=6.3,SNR=2.2						
MKAR	Makanchi Array	43.53	305	P	P	10 35 11.2	-0.7
	0.1nm,0.3s,baz=84,slow=8.7,SNR=4.2						
WRA	Warramunga Arr	53.20	184	P	P	10 36 24.4	-0.7
	0.3nm,0.3s,baz=1.0,slow=7.7,SNR=5.4						
ASAR	Alice Springs	56.93	184	P	P	10 36 52.0	+0.6
	0.3nm,0.6s,baz=16,slow=12,SNR=4.7						

SNET ***21*** *10:42:48.6±1.1, 12°.15N×89°.46W, h16^{km}±11^{km}, ML3.8*

INET ***21*** *10:42:52.7, 12°.29N×89°.36W, h15^{km}, MW3.2*

UCR ***21*** *10:42:52.1±1.9, 12°.48N×89°.33W, h0^{km}±7^{km}, ML3.6, mb4.5(NEIC)*

NEIC ***21*** *10:42:55.2±2.0, 12°.60N±0°.03×89°.24W±0°.06, h35^{km}±2^{km}, mb4.5/53, Error ellipse: s-maj=10.5km s-min=5.4km az=278.0*

IDC ***21*** *10:42:57.3±3.3, 12°.94N×88°.94W, h39^{km}±29^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.7/49, mbtmp3.9/10, ML3.4/2, Error ellipse: s-maj=40.9km s-min=25.8km az=42.0*

ISC 21 10:42:50.9±0.7**, 12°.43N**±0°.05×**89°.30W**±0°.04**, h10**^{km}**, n103, σ1^s.43**/102**, mb4.5**/29**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	1.05	359	*e*P	Pn	10 43 12.1	+0.4
LALI	Alcalda de L	1.05	359	*e*P	Pn	10 43 12.1	+0.4
LFRS	El Faro	1.21	11	*e*P	Pn	10 43 14.2	+0.2
LFRS	El Faro	1.21	11	*e*P	Pn	10 43 14.2	+0.2
JAYA	Jayaque - finc	1.22	353	*e*P	Pb	10 43 14.5	+0.3
JAYA				IAML		10 43 38.1	
	comp=Z,2µm,0.4s						
JAYA	Jayaque - finc	1.22	353	*e*P	Pb	10 43 14.5	+0.3
JAYA				IAML		10 43 38.1	
	comp=Z,2µm,0.4s						
COEG	Centro de Oper	1.25	19	*e*P	Pg	10 43 15.6	+0.6
COEG				IAML		10 43 48.1	
	comp=Z,1µm,0.4s						
COEG	Centro de Oper	1.25	19	*e*P	Pg	10 43 15.6	+0.6
COEG				IAML		10 43 48.1	
	comp=Z,1µm,0.4s						
SNET	Serv Nac Est T	1.25	3	*e*P	Pn	10 43 14.9	+0.3
SNET				IAML		10 43 39.6	
	comp=Z,994nm,0.7s						
SNET	Serv Nac Est T	1.25	3	*e*P	Pn	10 43 14.9	+0.3
SNET				IAML		10 43 39.6	
	comp=Z,994nm,0.7s						
SNET	Serv Nac Est T	1.25	3		Pn	10 43 14.8	+0.3
UEES	Universidad Ev	1.28	2	*e*P	Pb	10 43 15.5	+0.4
UEES				IAML		10 43 45.7	
	comp=Z,998nm,0.4s						
UEES	Universidad Ev	1.28	2	*e*P	Pb	10 43 15.5	+0.4
UEES				IAML		10 43 45.7	
	comp=Z,998nm,0.4s						
BOQS	Boqueron	1.29	1	*e*P	Pb	10 43 15.9	+0.4
BOQS	Boqueron	1.29	1	*e*P	Pb	10 43 15.9	+0.4
COEB	Comit de Eme	1.30	35	*e*P	Pb	10 43 15.9	+0.5
COEB				IAML		10 43 43.6	
	comp=Z,676nm,0.6s						
COEB	Comit de Eme	1.30	35	*e*P	Pb	10 43 15.9	+0.5
COEB				IAML		10 43 43.6	
	comp=Z,676nm,0.6s						
TECA	Tecapa	1.31	36	*e*P	Pg	10 43 16.8	+0.7
TECA	Tecapa	1.31	36	*e*P	Pg	10 43 16.8	+0.7
CEVE	Cerro Verde	1.42	347	*e*P	Pb	10 43 18.0	+0.3
CEVE				*e*S	Sg	10 43 40.0	+3.2
CEVE				IAML		10 43 44.0	
	comp=Z,2µm,0.5s						
CEVE	Cerro Verde	1.42	347	*e*P	Pb	10 43 18.0	+0.3
CEVE				*e*S	Sg	10 43 40.0	+3.2
CEVE				IAML		10 43 44.0	
	comp=Z,2µm,0.5s						
SBLS	San Blas	1.43	347	*e*P	Pb	10 43 18.0	+0.1
SBLS	San Blas	1.43	347	*e*P	Pb	10 43 18.0	+0.1
LCND	La Caada	1.62	57	*e*P	Pn	10 43 20.6	+0.9
LCND				IAML		10 43 45.7	
	comp=Z,545nm,0.4s						
LCND	La Caada	1.62	57	*e*P	Pn	10 43 20.6	+0.9
LCND				IAML		10 43 45.7	
	comp=Z,545nm,0.4s						
CNCH	Conchagua	1.65	59	*e*P	Pb	10 43 21.4	-0.2
CNCH				*e*S	Sg	10 43 46.4	+2.2
CNCH	Conchagua	1.65	59	*e*P	Pb	10 43 21.4	-0.2
CNCH				*e*S	Sg	10 43 46.4	+2.2
MTO3	Montecristo	1.96	358	*e*P	Pn	10 43 25.8	+1.4
MTO3				*e*S	Sg	10 43 54.9	+1.0
MTO3	Montecristo	1.96	358	*e*P	Pn	10 43 25.8	+1.4
MTO3				*e*S	Sg	10 43 54.9	+1.0
MTO3	Montecristo	1.96	358		Pn	10 43 25.6	+1.3
ESQI	Esquipulas	2.12	359	*e*P	Pn	10 43 28.1	+1.7
ESQI	Esquipulas	2.12	359		Pn	10 43 28.1	+1.7
CRIN	San Cristobal	2.21	83		Pn	10 43 29.3	+1.6
TGUH	Tegucigalpa,Un	2.55	50	Pn	Pn	10 43 33.1	+0.7
HUEH	Huehuetenango	3.58	323		Pn	10 43 48.4	+1.6
ACON	Acoyapa	4.06	96	Pn	Pn	10 43 56.8	+3.7
CCIG	Comitan	4.71	325		Pn	10 44 05.1	+2.8
JTS	Las Juntas de	4.76	116	Pn	Pn	10 44 05.8	+3.0
	comp=Z,3.8nm,0.3s,baz=6.3,slow=23,SNR=20						
JTS				Sn	Sn	10 44 56.1	-2.0
	comp=Z,4.8nm,0.3s,baz=280,slow=22,SNR=4.8						
JTS	Las Juntas de	4.76	116		Pn	10 44 05.6	+2.8
CMIG	Matias Romero	7.12	311	Pn	Pn	10 44 36.4	+1.2
	comp=Z,0.3nm,0.3s,baz=145,slow=9.7,SNR=7.9						
CMIG				Sn	Sn	10 45 52.5	-3.7
	comp=Z,0.0nm,0.3s,baz=119,slow=5.6,SNR=2.2						
CMIG	Matias Romero	7.12	311		Pn	10 44 36.0	+0.8
TLIG	Tlapa	10.30	301	Pn	Pn	10 45 22.3	+3.3
MTDJ	Mount Denham	12.72	62	Pn	Pn	10 45 50.5	-1.5
GTBY	Guantanamo Bay	15.52	59	Pn	Pn	10 46 30.9	+0.9
OTAV	Otavalo	16.20	138		P	10 46 41.9	-0.6
OTAV				IAmb	IAmb	10 46 47.4	
	comp=Z,39nm,0.8s						
ROSC	El Rosal	16.61	116	Pn	P	10 46 46.6	-0.3
SDV	Santo Domingo	18.67	99	P	Pn	10 47 10.9	+1.0
435B	Jarrell	19.80	339	P	P	10 47 21.9	+0.3
435B				IAmb	IAmb	10 47 22.8	
	comp=Z,21nm,0.9s						
143A	Socs Landing,	20.27	355	P	P	10 47 26.2	-0.5
143A				IAmb	IAmb	10 47 33.4	
	comp=Z,43nm,1.7s						
JCT	Junction City	20.42	333		P	10 47 27.5	-0.9
WHTX	Lake Whitney,	20.86	340		P	10 47 32.9	-0.2
TXAR	Lajitas Array	21.48	324	P	P	10 47 41.9	+1.9
	comp=Z,1.1nm,0.4s,baz=145,slow=9.7,SNR=13						
TXAR	Lajitas Array	21.48	324		P	10 47 41.0	+1.1
TX31	Lajitas Ar. Si	21.48	324		P	10 47 41.2	+1.3
TX32	Lajitas Array	21.48	324	P	P	10 47 41.2	+1.2
H06E1	SOCORRO T-PHAS	21.76	290	T	T	11 10 03.0	
	SNR=10						
OXF	Oxford	21.98	360		P	10 47 44.1	-1.0
OXF				IAmb	IAmb	10 47 46.9	
	comp=Z,25nm,0.9s						
Z35A	Perchaven, San	22.04	342	P	P	10 47 45.1	-0.7
Z35A				IAmb	IAmb	10 47 46.0	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	22.19	352	P	P	10 47 48.4	+1.1
ABTX	Abilene, Hawle	22.23	336	P	P	10 47 47.2	-0.6
MIAR	Mount Ida	22.36	351	P	P	10 47 48.9	-0.3
MIAR				IAmb	IAmb	10 47 52.1	
	comp=Z,12nm,1.0s						
UALR	University of	22.41	353	P	P	10 47 49.4	-0.4
UALR				IAmb	IAmb	10 47 52.5	
	comp=Z,19nm,1.2s						
SJG	San Juan	23.02	73	P	P	10 47 54.3	-2.1
W39A	Magazine	23.02	351	P	P	10 47 55.9	-0.3
W39A				IAmb	IAmb	10 48 03.7	
	comp=Z,24nm,1.4s						
X34A	Smith Ranch, M	23.39	342	P	P	10 47 59.3	-0.6
X34A				IAmb	IAmb	10 48 06.9	
	comp=Z,9.7nm,0.8s						
FCAR	Ozark Folk Cen	23.50	354	P	P	10 48 00.5	-0.5
FCAR				IAmb	IAmb	10 48 02.9	
	comp=Z,13nm,1.0s						
LCAR	Lake Charles	23.59	356	P	P	10 48 02.0	+0.1
TKL	Tuckaleechee C	23.66	11	P	P	10 48 01.7	-0.9
	comp=Z,4.6nm,0.8s,baz=183,slow=11,SNR=6.9						
TKL	Tuckaleechee C	23.66	11	IAmb	IAmb	10 48 05.8	
	comp=Z,50nm,1.9s						
CLTN	Cedars of Leba	23.71	6	P	P	10 48 02.3	-0.8
WMOK	Wichita Mounta	23.82	340	IAmb	IAmb	10 48 03.4	
	comp=Z,12nm,1.2s						
FNO	Franklin	23.88	343	P	P	10 48 03.5	-1.3
U40A	Yellville	24.04	353	P	P	10 48 04.9	-1.3
PARMO	Parma	24.13	359	P	P	10 48 07.2	+0.1
MNTX	Cornudas Mount	24.23	325	P	P	10 48 07.6	-0.4
PBMO	Poplar Bluff	24.26	358	P	P	10 48 07.7	-0.6
PBMO				IAmb	IAmb	10 48 09.4	
	comp=Z,24nm,1.1s						
OK030	Cody Creek RV	24.35	345	P	P	10 48 08.1	-1.0
OK030				IAmb	IAmb	10 48 08.7	
	comp=Z,8.6nm,0.6s						
OK031	S. Brethren Rd	24.39	345	P	P	10 48 08.8	-0.7
T42A	Van Buren	24.55	357	IAmb	IAmb	10 48 11.9	
	comp=Z,12nm,0.7s						
QUOK	Quay	24.56	345	P	P	10 48 09.8	-1.2
QUOK				IAmb	IAmb	10 48 10.6	
	comp=Z,11nm,0.7s						
MSTX	Muleshoe	24.71	332	IAmb	IAmb	10 48 12.5	
	comp=Z,16nm,1.4s						
MGMO	Mountain Grove	24.76	354	P	P	10 48 12.0	-0.8
MGMO				IAmb	IAmb	10 48 14.6	
	comp=Z,16nm,1.1s						
AMTX	Amarillo	25.02	335	P	P	10 48 14.0	-1.2
AMTX				IAmb	IAmb	10 48 21.8	
	comp=Z,23nm,1.4s						
CROK	Carrier	25.21	343	P	P	10 48 15.8	-1.1
CROK				IAmb	IAmb	10 48 16.6	
	comp=Z,12nm,0.8s						
S39A	Bolivar	25.41	353	P	P	10 48 17.7	-1.0
CCM	Cathedral Cave	25.58	356	P	P	10 48 18.3	-1.9
CCM				IAmb	IAmb	10 48 21.9	
	comp=Z,10nm,0.7s						
121A	Cookes Peak, D	26.23	323	P	P	10 48 25.2	-1.1
BNM	Barren Site	26.77	327	P	P	10 48 29.5	-1.7
PV14	Lion Creek, Pa	31.24	329	IAmb	IAmb	10 49 11.8	
	comp=Z,5.1nm,0.9s						
CCX	Cicese	31.73	312	P	P	10 49 16.0	+0.9
G40A	Rib Lake	32.73	359	IAmb	IAmb	10 49 23.3	
	comp=Z,9.2nm,1.1s						
SADO	Sadowa	33.38	13	P	P	10 49 26.9	-2.6
	comp=Z,2.6nm,0.6s,baz=202,slow=11,SNR=3.7						
SADO	Sadowa	33.38	13	IAmb	IAmb	10 49 36.0	
	comp=Z,9.1nm,1.1s						
REDW	Red Top Meadow	36.01	333	IAmb	IAmb	10 49 55.0	
	comp=Z,4.6nm,1.0s						
AGMN	Agassiz Nation	36.17	353	IAmb	IAmb	10 49 56.9	
	comp=Z,6.3nm,0.8s						
NVAR	Mina Array Bea	36.55	320	P	P	10 49 59.4	+2.2
	comp=Z,1.2nm,0.9s,baz=135,slow=8.1,SNR=5.2						
NVAR				PcP	PcP	10 52 22.3	+1.6
	comp=Z,0.3nm,0.6s,baz=145,slow=3.3,SNR=3.8						
NVAR	Mina Array Bea	36.55	320	P	P	10 49 59.5	+2.4
ULM	Lac du Bonnet	38.09	353	P	P	10 50 06.5	-3.3
	comp=Z,1.8nm,0.6s,baz=178,slow=10,SNR=5.2						
YKA	Yellowknife Ar	53.17	346	P	P	10 52 07.6	-1.2
	comp=Z,1.5nm,0.8s,baz=140,slow=8.0,SNR=13						
INK	Inuvik	62.69	343	P	P	10 53 14.3	-1.2
	comp=Z,0.7nm,0.6s,baz=162,slow=9.6,SNR=2.9						
ILAR	Eielson Array	65.31	337	P	P	10 53 33.3	+0.4
	comp=Z,0.4nm,0.9s,baz=180,slow=4.2,SNR=4.4						
WRA	Warramunga Arr	137.53	254	PKP	PKiKP	11 02 19.6	+1.6
	comp=Z,0.8nm,1.1s,baz=83,slow=2.2,SNR=2.7						
CMAR	Chiang Mai Arr	148.25	345	PKPbc	PKPbc	11 02 37.9	-0.3
	comp=Z,1.1nm,0.3s,baz=342,slow=3.3,SNR=5.4						

JMA 21 10:44:18.3, 32°.91N×130°.81E, h10^{km}±1^{km}, M0.9, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	0.22	15	P	Pg	10 44 23.1	+0.2
JNU				*e*S	Sg	10 44 26.4	+0.4
JTA	Tamana	0.24	283	P	Pg	10 44 23.5	+0.3
JTA				S	Sg	10 44 27.0	+0.5
JIU3	Izumi3	0.36	180	P	Pg	10 44 25.4	0.0

JMA 21 10:45:59.7, 36°.81N×137°.90E, h2^{km}±1^{km}, M0.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT	Matsushiro	0.36	137	P	Pg	10 46 06.7	0.0
MAT				S	Sg	10 46 11.7	+0.3
MAT	Matsushiro	0.36	137	P	Pg	10 46 06.7	0.0
MAT				S	Sg	10 46 11.9	+0.5
JNG	Nsakai	0.43	158	*e*S	Sg	10 46 14.2	+0.6

IDC ***21*** *10:51:10.4±0.8, 51°.80N×172°.83W, h0^{km}, mb4.0/19, mb1 4.2/21, mb1mx4.1/49, mbtmp4.0/21, ML3.7/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/36, Error ellipse: s-maj=22.2km s-min=14.9km az=177.0*

NEIC ***21*** *10:51:14.9±1.9, 51°.52N±0°.09×172°.70W±0°.08, h42^{km}±8^{km}, Error ellipse: s-maj=13.5km s-min=6.7km az=184.0*

AEIC ***21*** *10:51:14.4±2.0, 51°.51N±0°.09×172°.71W±0°.07, h36^{km}±6^{km}, ML3.5/20, mb4.1/60(NEIC), Error ellipse: s-maj=12.9km s-min=5.8km az=184.0*

ISC 21 10:51:15.4±0.6**, 51°.71N**±0°.09×**172°.74W**±0°.04**, h35**^{km}**, n123, σ1^s.35**/123**, mb4.1**/30**, MS4.0**/3**, 1C, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.02	305		Pn	10 51 34.5	+1.3
ATKA	Atka Island	1.03	299	Pn	Pn	10 51 33.7	+0.4
ATKA	Atka Island	1.03	299		Sn	10 51 49.9	+3.4
KOKL	Mount Kliuchef	1.10	305		Pn	10 51 35.6	+1.3
KOWE	Korovin West	1.15	306		Pn	10 51 37.2	+2.3
GSMY	Great Sitkin M	2.09	281		Pn	10 51 49.5	+1.6
GSTR	Great Sitkin T	2.10	282	Pn	Pn	10 51 49.5	+1.6
GSTD	Great Sitkin T	2.14	281		Pn	10 51 49.2	+0.6
GSTD					Sn	10 52 15.5	+1.5
ADK	Adak	2.46	276	Pn	Pn	10 51 53.0	+0.1
NIKH	Nikolski High	2.70	60		Pn	10 51 56.5	+0.3
KIMD	Kanaga Island	2.80	273		Pn	10 51 58.2	+0.6
OKSP	Okmok Steeple	3.13	59		Pn	10 52 03.0	+0.8
OKWE	Okmok W'ng Wal	3.26	55		Pn	10 52 05.5	+1.5
MAPS	Pakushin South	4.10	57		Pn	10 52 16.5	+1.0
MNAT	Makushin Natee	4.27	57		Pn	10 52 19.1	+1.3
MNAT					Sn	10 53 09.0	+2.6
UNV	Unalaska Valle	4.35	58	Pn	Pn	10 52 20.4	+1.5
UNV	Unalaska Valle	4.35	58		Sn	10 53 11.0	+2.7
FALS	False Pass	6.42	57	Pn	Pn	10 52 48.5	+1.2
CHGN	Chignik	9.60	56	Pn	Pn	10 53 31.4	+0.5
OHAK	Old Harbor	12.57	56	Pn	Pn	10 54 09.3	-2.1
KDAK	Kodiak Island	13.11	54	Pn	Pn	10 54 17.0	-1.8
	0.4nm,0.3s,baz=213,slow=4.3,SNR=12						
KDAK	Kodiak Island	13.11	54	Pn	Pn	10 54 19.0	+0.2
CNPM	China Poot	14.40	49	Pn	Pn	10 54 36.3	-0.1
BRLK	Bradley Lake	14.66	48	Pn	Pn	10 54 40.6	+0.6
SKT	Skwentna	15.43	40	Pn	Pn	10 54 49.7	-0.3
SKT				IAmb	IAmb	10 54 55.4	
	comp=Z,9.3nm,1.1s						
SEW	Seward	15.46	48	Pn	Pn	10 54 48.8	-1.6
SEW				IAmb	IAmb	10 55 14.2	
	comp=Z,20nm,1.0s						
SUA	Susitna One	15.48	42	Pn	Pn	10 54 52.0	+1.1
SUA				IAmb	IAmb	10 54 59.6	
	comp=Z,18nm,1.4s						
PMR	Palmer	16.23	43	Pn	Pn	10 55 01.3	+1.0
GHO	Glory Hole Cre	16.39	43	Pn	Pn	10 55 03.5	+1.0
KNK	Knik Glacier	16.44	44	Pn	Pn	10 55 01.3	-1.7
KNK				IAmb	IAmb	10 55 23.2	
	comp=Z,18nm,1.3s						
KTH	Kantishna Hill	16.54	36		P	10 55 07.1	+0.4
SML	Sawmill	16.66	43	Pn	Pn	10 55 06.4	+0.5
SML				IAmb	IAmb	10 55 25.6	
	comp=Z,26nm,1.4s						
TRF	Thorofare Moun	16.71	37		P	10 55 08.9	+0.3
TRF				IAmb	IAmb	10 55 23.7	
	comp=Z,15nm,1.5s						
GLI	Glacier Island	16.83	47	Pn	Pn	10 55 08.0	+0.1
GLI				IAmb	IAmb	10 55 29.4	
	comp=Z,30nm,1.1s						
BPAW	Bear Paw Mtn.	16.84	34		P	10 55 10.8	+0.9
HIN	Hinchinbrook I	16.93	49	Pn	Pn	10 55 08.0	-1.3
FID	Port Fidalgo	17.07	48	Pn	Pn	10 55 08.6	-2.4
SCM	Sheep Creek Mo	17.10	44	Pn	Pn	10 55 11.5	0.0
SCM				IAmb	IAmb	10 55 25.7	
	comp=Z,25nm,1.3s						
RND	Reindeer	17.23	38	Pn	Pn	10 55 13.5	+0.4
KLU	Klutina	17.59	46	Pn	Pn	10 55 16.6	-0.8
DHY	Denali Highway	17.64	40		P	10 55 20.1	+1.1
M24K	Tolsona, Glenn	17.71	44	P	P	10 55 20.2	+0.6
M24K				IAmb	IAmb	10 55 21.8	
	comp=Z,23nm,1.1s						
KAIM	Kayak Island	17.79	51	P	Pn	10 55 18.8	-1.1
RAGM	Ragged Mountai	17.80	50	P	P	10 55 20.8	+0.3
RAGM				IAmb	IAmb	10 55 25.1	
	comp=Z,37nm,1.2s						
I23K	Minto, Yukon-K	18.04	33	P	P	10 55 24.0	+1.0
I23K				IAmb	IAmb	10 55 26.2	
	comp=Z,11nm,0.5s						
PETK	Petropavlovsk-	18.04	286	P	Pn	10 55 20.7	-2.3
	comp=Z,0.2nm,0.3s,baz=96,slow=14,SNR=2.9						
WRH	Wood River Hil	18.09	36	P	Pn	10 55 22.6	-0.9
N25K	Chitina, Valde	18.22	46	P	P	10 55 24.5	-0.7
N25K				IAmb	IAmb	10 55 46.4	
	comp=Z,15nm,1.3s						
CCB	Clear Creek Bu	18.29	35	P	P	10 55 24.1	-1.8
MDM	Murphy Dome	18.31	34		P	10 55 25.7	-0.5
PAX	Paxson	18.37	42	P	Pn	10 55 27.6	+0.5
HDA	Harding Lake	18.48	37	P	P	10 55 27.9	0.0
GLB	Gilahina Butte	18.52	47	P	Pn	10 55 29.7	+0.9
GLB				IAmb	IAmb	10 55 49.3	
	comp=Z,16nm,1.3s						
VRDI	Verde Repeater	18.62	48	P	P	10 55 29.1	-0.6
VRDI				IAmb	IAmb	10 55 46.9	
	comp=Z,21nm,1.4s						
IL31		18.69	36	P	P	10 55 28.8	-1.4
IL31				IAmb	IAmb	10 55 33.9	
	comp=Z,5.9nm,0.7s						
ILAR	Eielson Array	18.69	36	P	P	10 55 28.6	-1.7
	comp=Z,1.2nm,0.3s,baz=232,slow=9.2,SNR=75						
ILAR				LR	LR	11 03 46.9	
	comp=Z,56nm,18.3s,baz=254,slow=41						
ILAR	Eielson Array	18.69	36		P	10 55 30.2	-0.1
RIDG	Independent Ri	18.96	40		P	10 55 32.8	-0.5
RIDG				IAmb	IAmb	10 55 41.5	
	comp=Z,8.2nm,0.5s						
COLD	Coldfoot	19.13	27	P	Pn	10 55 37.4	+1.3
COLD				IAmb	IAmb	10 55 38.5	
	comp=Z,14nm,1.1s						
DOT	Dot Lake	19.24	41	P	P	10 55 36.3	0.0
BILL	Bilibino	19.29	336	P	Pn	10 55 38.9	+0.9
BILL				IAmb	IAmb	10 55 48.0	
	comp=Z,7.7nm,0.9s						
CTGM	Chitina Glacie	19.54	49	P	P	10 55 40.0	+0.3
CTGM				IAmb	IAmb	10 55 42.8	
	comp=Z,12nm,0.7s						
PRP	Porcupine Dome	19.57	35	P	P	10 55 40.4	+0.3
PRP				IAmb	IAmb	10 55 44.0	
	comp=Z,3.9nm,0.6s						
PCA	Pinnacle	19.87	52	P	P	10 55 43.9	+0.6
K27K	Chicken	20.20	41	P	P	10 55 47.9	+1.2
K27K				IAmb	IAmb	10 55 52.5	
	comp=Z,4.4nm,0.6s						
FYU	Fort Yukon	20.25	32		P	10 55 48.1	+0.9
FYU				IAmb	IAmb	10 55 49.6	
	comp=Z,12nm,1.0s						
EGAK	Eagle	20.86	39	P	P	10 55 53.7	-0.1
A21K	Barrow	20.99	14	P	P	10 55 54.9	-0.2
A21K				IAmb	IAmb	10 55 59.6	
	comp=Z,3.9nm,0.5s						
DAWY	Dawson	21.31	42	P	P	10 55 58.3	-0.4
DAWY				IAmb	IAmb	10 56 03.1	
	comp=Z,6.0nm,0.6s						
HYT	Haines Junctio	21.34	51	P	P	10 56 00.9	+1.7
HYT				IAmb	IAmb	10 56 01.9	
	comp=Z,7.7nm,0.5s						
SEY	Seymchan	21.63	315	P	P	10 56 01.6	-0.5
	comp=Z,0.8nm,0.4s,baz=44,slow=22,SNR=7.6						
DLBC	Dease Lake	25.00	58	P	P	10 56 38.1	+2.4
	comp=Z,3.8nm,0.5s,baz=259,slow=6.3,SNR=11						
DLBC	Dease Lake	25.00	58	P	P	10 56 38.0	+2.4
INK	Inuvik	25.05	34	P	P	10 56 35.4	-0.4
	comp=Z,17nm,0.5s,baz=248,slow=7.0,SNR=79						
INK	Inuvik	25.05	34	P	P	10 56 35.7	-0.1
YKA	Yellowknife Ar	32.24	48	P	P	10 57 40.1	+0.2
	comp=Z,0.7nm,0.4s,baz=275,slow=7.0,SNR=30						
YKA				PcP	PcP	11 00 27.5	0.0
	comp=Z,0.2nm,0.5s,baz=299,slow=1.2,SNR=5.4						
KLR	Kul'dur	34.70	288	P	P	10 58 00.3	-1.2
	comp=Z,1.0nm,0.5s,baz=64,slow=9.2,SNR=8.0						
H11N2	WAKE ISLAND Hy	35.68	214	T	T	11 36 26.4	
	baz=21,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	35.69	214	T	T	11 36 23.5	
	baz=21,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	35.70	214	T	T	11 36 25.3	
	baz=21,slow=75,SNR=8.8						
H11S1	WAKE ISLAND Hy	36.88	214	T	T	11 37 46.3	
	baz=21,slow=74,SNR=6.6						
H11S2	WAKE ISLAND Hy	36.90	214	T	T	11 37 40.9	
	baz=21,slow=74,SNR=4.8						
H11S3	WAKE ISLAND Hy	36.90	214	T	T	11 37 42.5	
	baz=21						

MJAR	Matsushiro Arr	37.58	266	P	P	10 58 29.2	+2.9
	comp=Z,1.0nm,0.4s,baz=36,slow=6.4,SNR=5.7						
MCMT	McKenzie Canyo	39.45	76	P	P	10 58 42.4	+0.2
NVAR	Mina Array Bea	39.75	88	P	P	10 58 46.0	+1.2
	comp=Z,0.3nm,0.4s,baz=303,slow=9.0,SNR=5.2						
TPH	Tonopah	40.64	87	P	P	10 58 48.4	-3.7
RLMT	Red Lodge	41.44	73	P	P	10 58 58.6	0.0
RLMT				IAmb	IAmb	10 59 00.7	
	comp=Z,2.2nm,0.7s						
JCJ	Chichijima	41.72	252	LR	LR	11 12 48.4	
	comp=Z,216nm,20.3s,baz=120,slow=31						
BW06	Boulder Array	42.58	76	P	P	10 59 07.8	-0.1
BW06				IAmb	IAmb	10 59 26.6	
	comp=Z,4.2nm,1.4s						
PD31	Pinedale Array	42.58	76	P	P	10 59 07.5	-0.4
PDAR	Pinedale Array	42.58	76	P	P	10 59 08.2	+0.2
	comp=Z,2.4nm,0.7s,baz=303,slow=4.3,SNR=18						
PDAR	Pinedale Array	42.58	76	P	P	10 59 07.1	-0.8
FCC	Fort Churchill	42.95	49	P	P	10 59 10.8	+0.4
FCC				IAmb	IAmb	10 59 11.5	
	comp=Z,5.2nm,1.2s						
MDND	Maddock	45.56	65	P	P	10 59 30.1	-1.4
PV04	Paradox Valley	45.59	81	P	P	10 59 31.8	-0.2
PV04				IAmb	IAmb	10 59 35.1	
	comp=Z,3.8nm,0.8s						
PV03	Paradox Valley	45.71	81	P	P	10 59 32.8	-0.3
PV03				IAmb	IAmb	10 59 33.6	
	comp=Z,2.3nm,0.6s						
AGMN	Agassiz Nation	47.38	62	P	P	10 59 43.4	-2.4
SONM	Songino Array	49.84	299	P	P	11 00 04.7	0.0
	comp=Z,0.5nm,0.6s,baz=48,slow=8.4,SNR=4.3						
SONM	Songino Array	49.84	299	IAmb	IAmb	11 00 13.2	
	comp=Z,1.4nm,1.3s						
SPITS	Spitsbergen Ar	50.26	358	P	P	11 00 07.3	-0.2
	comp=Z,1.1nm,0.4s,baz=52,slow=8.1,SNR=10						
HHC	Hu-ho-hao-te	51.20	289	*e*P	P	11 00 15.8	+0.7
P38A	Dawn	54.04	70	P	P	11 00 34.6	-1.4
TXAR	Lajitas Array	54.85	86	P	P	11 00 41.9	-0.3
	comp=Z,0.3nm,0.5s,baz=272,slow=5.6,SNR=4.1						
P40A	Paris	54.96	69	P	P	11 00 41.5	-1.2
ARCES	ARCESS Array B	58.34	353	P	P	11 01 05.8	-0.5
	comp=Z,3.0nm,0.9s,baz=33,slow=5.6,SNR=6.0						
ARCES				PcP	PcP	11 01 57.2	+0.3
	comp=Z,6.5nm,1.0s,baz=25,slow=4.0,SNR=6.7						
LZH	Lanzhou	58.88	290	⇑P	P	11 01 11.8	+1.1
LZH				pP	pwP	11 01 25.0	-0.2
LZH				sP	sP	11 01 31.3	+7.6
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
WMQ	Urumqi	62.27	306	*e*P	P	11 01 35.8	+2.2
MKAR	Makanchi Array	62.72	312	P	P	11 01 36.0	-0.6
	comp=Z,0.4nm,0.3s,baz=44,slow=6.7,SNR=11						
FINES	FINESS Array B	66.20	350	P	P	11 01 58.3	-0.6
	comp=Z,2.8nm,0.8s,baz=18,slow=6.9,SNR=6.8						
NOA	NORSAR Array B	67.56	358	P	P	11 02 07.9	+0.3
	comp=Z,0.9nm,0.5s,baz=0.4,slow=5.8,SNR=4.7						
HFS	Hagfors	68.39	357	P	P	11 02 12.4	-0.4
	comp=Z,2.3nm,0.4s,baz=31,slow=3.8,SNR=15						
ABKAR	Akbulak array	69.87	326	P	P	11 02 21.9	-0.2
KK31	Karatay Array	70.86	316	P	P	11 02 28.5	+0.2
KKAR	Karatay Array	70.86	316	P	P	11 02 28.3	-0.1
MNK	Minsk	72.77	348	*i* P	P	11 02 37.6	-2.0
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	11 02 37.6	-2.0
	comp=N,17nm,0.9s						
MNK				*i* P	P	11 02 37.6	-2.0
	comp=Z,5.0nm,0.9s						
MNK				*i* PcP	pwP	11 02 54.1	+0.4
MNK				*i* PP	PP	11 04 43.1	-38
MNK				*i* PPP	PPP	11 06 41.1	
MNK				*i* S	S	11 11 59.2	-3.2
MNK				*i* S	S	11 11 59.2	-3.2
MNK				*i* ScS	ScS	11 13 06.7	+23
MNK				*i* SS	SS	11 16 37.0	-4.2
MNK				*i* SSS	SSS	11 20 04.6	
MNK				*i* LQ	LQ	11 30 30.1	
MNK				*i* LR	LR	11 34 48.9	
MNK				*i* LRM	MLR	11 40 50.9	
	comp=Z,215nm,19.0s						
MNK				*i* LRM	MLR	11 40 52.6	
	comp=E,41nm,19.0s						
MNK				*i* LRM	MLR	11 40 56.7	
	comp=N,522nm,19.0s						
AKASG	Malin Array Be	76.28	346	P	P	11 02 59.2	-0.8
	comp=N,1.3nm,0.3s,baz=17,slow=5.9,SNR=4.8						
AKASG	Malin Array Be	76.28	346	IAmb	IAmb	11 02 59.7	
	comp=Z,1.5nm,1.3s						
GERES	GERESS Array B	79.68	356	P	P	11 03 19.0	-0.1
	comp=Z,0.6nm,0.6s,baz=21,slow=5.7,SNR=4.4						
KBZ	Khabaz	80.06	335	P	P	11 03 21.4	+0.4
	comp=Z,0.5nm,0.4s,baz=18,slow=3.7,SNR=3.7						
WRA	Warramunga Arr	84.98	229	P	P	11 03 48.5	+1.6
	comp=Z,0.3nm,0.6s,baz=60,slow=7.7,SNR=4.2						
ASAR	Alice Springs	88.39	227	P	P	11 04 03.2	-0.2
	comp=Z,0.7nm,0.7s,baz=30,slow=5.1,SNR=9.1						
STKA	Stephens Creek	92.38	218	LR	LR	11 44 56.7	
	comp=Z,42nm,20.3s,baz=24,slow=35						

*NEIC **21** 11:12:15.4±1.5, 30°.76N±0°.07×139°.8E±0°.2, h171^{km}±5^{km}, mb4.1/17, Error ellipse: s-maj=19.7km s-min=9.3km az=74.0*

*IDC **21** 11:12:15.9±1.3, 30°.82N×139°.86E, h173^{km}±12^{km}, mb3.3/11, mb1 3.5/18, mb1mx3.4/44, mbtmp3.9/18, Error ellipse: s-maj=17.9km s-min=11.2km az=88.0*

*JMA **21** 11:12:20.8±0.6, 31°.28N×139°.99E, h194^{km}±4^{km}, M3.7*

ISC 21 11:12:14.1±0.5, **30°.79N**±0°.04×**139°.96E**±0°.08, **h150**^{km}, **n72**, σ1^{s}**98**/76, **mb3.8**/16, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.28	357	P	Pn	11 12 57.2	+4.7
JHCJ				*e*S	Sn	11 13 23.8	+1.6
JHJ2	Mitsune	2.32	357	P	Pn	11 12 57.5	+4.6
JHJ2				*e*S	Sn	11 13 24.7	+1.7
JHJ2	Mitsune	2.32	357	Pn	Pn	11 12 57.6	+4.6
JHJ	Hachijo jima 2	2.33	356	P	Pn	11 12 57.5	+4.5
	32nm,0.3s,baz=87,slow=21,SNR=10.0						
JHJ				S	Sn	11 13 25.8	+2.6
	52nm,0.3s,baz=253,slow=23,SNR=10						
JKO	Kozu shima	3.46	349	P	Pn	11 13 10.4	+3.2
TTO4	TONANKAI O.B.S	3.81	328	P	Pn	11 13 15.7	+4.2
TTO1	TONANKAI O.B.S	3.90	317	P	Pn	11 13 17.3	+4.6
BSO1	Boso 1	3.95	12	P	Pn	11 13 15.2	+2.2
BSO1				*e*S	Sn	11 13 58.5	-0.6
CBIJ	Chichi jima	4.16	152	P	Pn	11 13 18.2	+1.7
CBIJ				S	Sn	11 14 07.9	+2.9
JCJ	Chichijima	4.16	152	P	Pn	11 13 18.4	+1.9
	32nm,0.3s,baz=103,slow=23,SNR=35						
JCJ				S	Sn	11 14 06.5	+1.5
	42nm,0.3s,baz=259,slow=21,SNR=8.2						
JCJ	Chichijima	4.16	152	Pn	Pn	11 13 18.7	+2.2
BSO4	Boso 4	4.20	4	P	Pn	11 13 19.0	+2.2
HMMJ	Hamamatsu 2	4.47	336	P	Pn	11 13 23.9	+3.5
JIE	Ise	4.52	323	P	Pn	11 13 25.3	+4.2
JOD2	Odawara 2	4.52	351	P	Pn	11 13 23.7	+2.6
JKN2	Miekihoku	4.64	319	P	Pn	11 13 26.4	+3.7
JTNC	Tanabenakahech	4.76	310	P	Pn	11 13 28.2	+3.9
JAO	Obara	5.01	334	P	Pn	11 13 31.4	+3.8
JHU	Hanno	5.08	354	P	Pn	11 13 30.1	+1.6
JHU				*e*S	Sn	11 14 22.5	-4.1
JYT	Yasato	5.43	2		Pn	11 13 33.3	+0.2
JAG	Ashikaga	5.64	356	P	Pn	11 13 35.9	0.0
JAG				*e*S	Sn	11 14 34.5	-5.3
JWT	Wachi	5.89	321	Pn	Pn	11 13 43.7	+4.4
MJAR	Matsushiro Arr	5.92	346	P	Pn	11 13 41.4	+1.7
	0.7nm,0.3s,baz=160,slow=11,SNR=29						
MJAR	Matsushiro Arr	5.92	346	Pn	Pn	11 13 41.0	+1.3
MAJO	Matsushiro	5.92	346	Pn	Pn	11 13 41.9	+2.3
MAT	Matsushiro	5.92	346	P	Pn	11 13 41.2	+1.5
MAT				*e*S	Sn	11 14 43.9	-2.8
JMN	Monobe	5.93	301	Pn	Pn	11 13 44.4	+4.6
JMM	Marumori	7.09	5		Pn	11 13 54.8	-0.5
JSD	Sado	7.37	349	Pn	Pn	11 13 58.6	-0.2
JTM	Tenmabayashi	10.02	5	Pn	Pn	11 14 33.4	-0.8
ERM	Erimo	11.49	12	Pn	Pn	11 14 52.9	-0.7
KSRS	Korea Array	11.98	307	P	Pn	11 14 59.4	-0.6
	0.4nm,0.3s,baz=116,slow=12,SNR=4.0						
KS19	Wonju Array Si	12.04	307	Pn	Pn	11 14 59.3	-1.6
JEW	Eniwo	12.09	5	Pn	Pn	11 15 01.1	-0.2
ASAJ	Asahikawa	13.47	8	P	Pn	11 15 18.0	-1.0
	0.9nm,0.3s,baz=222,slow=8.5,SNR=6.3						
JKA	Kamikawa-asahi	13.47	8	Pn	Pn	11 15 18.3	-0.8
USA0B	Ussuriysk Arra	14.79	337		P	11 15 38.1	+0.3
USRK	Ussuriysk Ar.	14.79	337	P	Pn	11 15 34.8	-1.0
	baz=145,slow=11,SNR=11						
USRK	Ussuriysk Ar.	14.79	337		Pn	11 15 37.8	+2.1
MDJ	Mudanjiang	16.04	332	P	Pn	11 15 51.4	+0.3
MDJ				IAmb	IAmb	11 15 51.7	
	comp=Z,7.5nm,0.7s						
KLR	Kul'dur	19.44	344	P	P	11 16 28.1	-0.6
	comp=Z,0.8nm,0.3s,baz=169,slow=10,SNR=15						
SONM	Songino Array	30.74	313	P	P	11 18 14.3	-0.8
	comp=Z,0.4nm,0.5s,baz=116,slow=6.5,SNR=3.6						
SONM	Songino Array	30.74	313	P	P	11 18 14.7	-0.3
MKAR	Makanchi Array	46.66	307	P	P	11 20 25.9	-1.6
	comp=Z,0.4nm,0.5s,baz=88,slow=8.6,SNR=6.5						
MKAR				PcP	PcP	11 21 58.0	-0.7
	comp=Z,0.2nm,0.4s,baz=82,slow=5.2,SNR=4.6						
MKAR	Makanchi Array	46.66	307	P	P	11 20 26.0	-1.4
KURK	Kurchatov	49.04	312	P	P	11 20 44.1	-1.4
WB0	Warramunga Arr	50.55	187	P	P	11 20 56.2	-1.1
WR0	Warramunga Arr	50.73	187	P	P	11 20 57.5	-1.1
WR0				IAmb	IAmb	11 20 58.7	
	comp=Z,3.5nm,0.7s						
WB2	Warramunga Arr	50.73	187	P	P	11 20 57.5	-1.1
WB2				IAmb	IAmb	11 21 16.5	
	comp=Z,7.9nm,1.3s						
WRA	Warramunga Arr	50.73	187	P	P	11 20 57.6	-1.0
	comp=Z,1.9nm,0.6s,baz=2.8,slow=7.7,SNR=32						
WRA	Warramunga Arr	50.73	187	P	P	11 20 56.6	-2.0
WC3	Warramunga Arr	50.74	187	P	P	11 20 57.5	-1.2
WC3				IAmb	IAmb	11 21 00.5	
	comp=Z,5.7nm,1.1s						
KDAK	Kodiak Island	52.64	38	P	P	11 21 11.7	-0.7
	comp=Z,9.6nm,0.8s,baz=290,slow=2.0,SNR=7.2						
KDAK	Kodiak Island	52.64	38	P	P	11 21 11.0	-1.3
IMAR	Indian Mountai	52.67	28	P	P	11 21 12.7	+0.2
A21K	Barrow	52.68	21	P	P	11 21 13.0	+0.5
A21K				IAmb	IAmb	11 21 33.3	
	comp=Z,3.3nm,1.1s						
SANVU	Saraoutou	52.91	146	P	P	11 21 16.2	+1.3
PPLA	Purkeypile	53.03	32	P	P	11 21 16.3	+1.0
AS31	Alice Springs	54.45	187	P	P	11 21 25.3	-0.7
ASAR	Alice Springs	54.46	187	P	P	11 21 26.1	+0.1
	comp=Z,1.0nm,0.6s,baz=14,slow=13,SNR=23						
ASAR	Alice Springs	54.46	187	P	P	11 21 24.5	-1.5
SCM	Sheep Creek Mo	55.27	33	P	P	11 21 31.3	-0.2
ILAR	Eielson Array	55.45	30	P	P	11 21 31.9	-0.8
	comp=Z,0.2nm,0.6s,baz=268,slow=6.7,SNR=4.4						
ILAR	Eielson Array	55.45	30	P	P	11 21 32.5	-0.2
RIDG	Independent Ri	56.36	31	P	P	11 21 38.9	-0.4
DOT	Dot Lake	56.71	31	P	P	11 21 41.5	-0.2
DOT				IAmb	IAmb	11 21 53.6	
	comp=Z,5.2nm,1.5s						
INK	Inuvik	60.51	25	P	P	11 22 06.0	-1.8
	comp=Z,0.9nm,0.7s,baz=308,slow=3.5,SNR=3.0						
ABKAR	Akbulak array	61.15	313	P	P	11 22 11.4	-1.1
YKA	Yellowknife Ar	69.83	28	P	P	11 23 07.4	-0.5
	comp=Z,0.2nm,0.7s,baz=294,slow=5.8,SNR=3.2						
FINES	FINESS Array B	73.78	333	P	P	11 23 30.3	-1.2
	comp=Z,1.4nm,0.8s,baz=93,slow=7.0,SNR=3.5						
NVAR	Mina Array Bea	79.76	51	P	P	11 24 06.4	+0.6
	comp=Z,0.6nm,0.5s,baz=286,slow=5.9,SNR=8.0						
PDAR	Pinedale Array	82.94	44	P	P	11 24 22.5	-0.1
	comp=Z,0.2nm,0.5s,baz=270,slow=1.8,SNR=3.0						

*NEIC **21** 11:13:13.7±0.8, 18°.3S±0°.1×171°.99W±0°.07, h13^{km}±3^{km}, mb4.4/11, Error ellipse: s-maj=15.3km s-min=8.9km az=194.0*

*IDC **21** 11:13:14.7±1.0, 17°.99S×172°.49W, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.0/27, mbtmp4.0/9, ML3.7/1, MS3.3/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=43.8km s-min=18.8km az=137.0*

*NOU **21** 11:14:08.3, 14°.07S×171°.51W, h50^{km}, MLv2.0, Samoa Islands*

ISC 21 11:13:15.0±0.6, **18°.27S**±0°.08×**172°.02W**±0°.08, **h10**^{km}, **n31**, σ1^{s}**89**/28, **mb4.3**/12, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	2.14	112		Pn	11 13 48.8	-2.0
AFI	Afiamalu	4.34	3	Pn	Pn	11 14 18.6	-2.6
	4.6nm,0.3s,baz=186,slow=8.8,SNR=13						
AFI				Sn	Sn	11 15 02.2	-10
	18nm,0.3s,baz=170,slow=24,SNR=8.7						
AFI				LR	LR	11 15 34.0	
	comp=Z,88nm,18.8s,baz=246,slow=34						
AFI	Afiamalu	4.34	3		Pn	11 14 19.4	-1.8
AFI	Afiamalu	4.34	3	P	Pn	11 14 19.0	-2.2
MSVF	Nonsavu	9.47	272	Pn	Pn	11 15 33.2	+1.6
	0.5nm,0.3s,baz=131,slow=13,SNR=6.2						
MSVF				LR	LR	11 18 43.3	
	comp=Z,310nm,21.1s,baz=137,slow=36						
MSVF	Nonsavu	9.47	272		Pn	11 15 34.3	+2.6
RAR	Rarotonga	11.90	106	LR	LR	11 19 36.5	
	comp=Z,72nm,21.5s,baz=320,slow=31						
RAR	Rarotonga	11.90	106	Pn	Pn	11 16 03.3	-1.5
DZM	Mont Dzumac	20.57	256	P	P	11 17 51.9	-2.4
	5.4nm,0.7s,baz=112,slow=19,SNR=2.9						
DZM				LR	LR	11 24 13.5	
	comp=Z,257nm,20.4s,baz=20,slow=33						
DZM	Mont Dzumac	20.57	256	P	P	11 17 52.7	-1.5
DZM				IAmb	IAmb	11 18 09.7	
	comp=Z,30nm,1.3s						
URZ	Urewera	22.07	203	P	P	11 18 12.0	+1.9
	comp=Z,5.7nm,0.3s,baz=185,slow=2.5,SNR=7.7						
RPZ	Rata Peaks	29.11	206	P	P	11 19 23.7	+7.7
	comp=Z,6.6nm,0.6s,baz=309,slow=0.9,SNR=11						
CTAO	Charters Tower	39.38	260	P	P	11 20 43.3	-1.9
WR0	Warramunga Arr	50.35	259	P	P	11 22 10.9	-1.8
WR0				IAmb	IAmb	11 22 13.5	
	comp=Z,4.1nm,0.9s						
WB0	Warramunga Arr	50.51	259	P	P	11 22 12.2	-1.6
WB0				IAmb	IAmb	11 22 17.0	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	50.53	259	P	P	11 22 12.1	-1.9
WB2				IAmb	IAmb	11 22 12.5	
	comp=Z,3.8nm,0.7s						
WRAB	Tennant Creek	50.53	259	P	P	11 22 11.9	-2.1
WRA	Warramunga Arr	50.54	259	P	P	11 22 11.8	-2.3
	comp=Z,2.4nm,0.6s,baz=96,slow=8.5,SNR=24						
WRA	Warramunga Arr	50.54	259	P	P	11 22 12.2	-1.9
AS31	Alice Springs	50.54	254	P	P	11 22 12.9	-1.2
ASAR	Alice Springs	50.54	254	P	P	11 22 12.5	-1.6
	comp=Z,2.2nm,0.6s,baz=92,slow=7.7,SNR=45						
ASAR	Alice Springs	50.54	254	P	P	11 22 12.2	-1.9
FORT	Forrest	55.35	245	P	P	11 22 49.4	-0.1
QSPA	South Pole Qui	71.79	180	P	P	11 24 38.4	+0.7
QSPA				IAmb	IAmb	11 24 39.6	
	comp=Z,4.0nm,1.1s						
TXAR	Lajitas Array	81.13	55	P	P	11 25 33.7	+2.5
	comp=Z,1.0nm,1.0s,baz=217,slow=6.0,SNR=4.1						
PDAR	Pinedale Array	83.53	41	P	P	11 25 44.6	+1.0
	comp=Z,0.7nm,0.9s,baz=212,slow=3.2,SNR=4.3						
WRH	Wood River Hil	84.52	10	P	P	11 25 49.1	+1.3
ILAR	Eielson Array	85.00	11	P	P	11 25 50.6	+0.4
	comp=Z,0.7nm,0.7s,baz=225,slow=4.5,SNR=9.0						
YKA	Yellowknife Ar	92.20	23	P	P	11 26 26.2	+1.6
	comp=Z,0.1nm,0.5s,baz=217,slow=3.0,SNR=4.3						
CMAR	Chiang Mai Arr	94.76	288	LR	LR	12 08 29.6	
	comp=Z,25nm,18.4s,baz=250,slow=35						
GERES	GERESS Array B	149.15	353	PKPbc	PKPbc	11 33 04.6	+0.7
	comp=Z,0.7nm,0.8s,baz=105,slow=2.1,SNR=3.6						

*NEIC **21** 11:15:42.6±1.0, 20°.6S±0°.1×177°.8W±0°.1, h517^{km}±8^{km}, mb4.3/42, Error ellipse: s-maj=19.6km s-min=15.2km az=142.0*

*IDC **21** 11:15:42.6±1.6, 20°.79S×177°.77W, h524^{km}±17^{km}, mb3.4/14, mb1 3.6/17, mb1mx3.5/25, mbtmp4.2/17, Error ellipse: s-maj=16.5km s-min=11.9km az=130.0*

ISC 21 11:15:40.7±0.4, **20°.81S**±0°.07×**177°.73W**±0°.07, **h500**^{km}, **n105**, σ1^{s}**84**/111, **mb4.2**/33, **1D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.03	307	P	P	11 17 10.0	+1.9
	3.2nm,0.3s,baz=162,slow=7.2,SNR=16						
NIUE	Niue	7.54	78	P	P	11 17 32.0	-0.4
NIUE				S	S	11 19 07.2	+3.2
AFI	Afiamalu	8.91	41	P	P	11 17 42.7	-4.1
	29nm,0.3s,baz=216,slow=13,SNR=13						
DZM	Mont Dzumac	14.79	262	P	P	11 18 49.9	+1.0
	1.2nm,0.3s,baz=99,slow=10,SNR=11						
OUZ	Omahuta	16.26	206	P	P	11 19 08.2	+4.3
OUZ				IAmb	IAmb	11 19 09.3	
	comp=Z,13nm,0.8s						
WCZ	Waipu Caves	16.60	203	P	P	11 19 10.9	+3.4
KUZ	Kuaotunu	16.88	198	P	P	11 19 10.9	+0.6
WIAZ	Waiheke Island	17.10	200	P	P	11 19 12.6	+0.1
WMGZ	Waiomatatini S	17.28	190	P	P	11 19 16.7	+2.5
HAZ	Te Kaha	17.33	192	P	P	11 19 16.4	+1.7
PKGZ	Pakihiroa	17.40	191	P	P	11 19 18.6	+3.1
PUZ	Puketiti	17.55	191	P	P	11 19 18.3	+1.5
RUGZ	Raukumara Rang	17.55	192	P	P	11 19 17.9	+0.9
RUGZ				S	S	11 22 00.9	-13
TWGZ	Tauwhareparae	17.70	191	P	P	11 19 20.9	+2.7
KMRZ	Kaimai	17.84	197	P	P	11 19 21.9	+2.3
TOZ	Tahuroa Road	17.86	198	P	P	11 19 22.7	+3.1
MWZ	Matawai	17.94	192	P	P	11 19 20.6	+0.1
MWZ				S	S	11 22 05.4	-14
URZ	Urewera	17.95	193	P	P	11 19 20.3	-0.1
	comp=Z,1.9nm,0.3s,baz=276,slow=4.5,SNR=16						
URZ				S	S	11 22 10.5	-9.4
	comp=Z,0.2nm,0.3s,baz=46,slow=17,SNR=1.2						
URZ	Urewera	17.95	193	P	P	11 19 20.7	+0.2
TKGZ	Te Karaka	17.98	191	P	P	11 19 22.7	+1.9
RIGZ	Rimuhau	18.26	191	P	P	11 19 25.1	+1.8
RIGZ				S	S	11 22 10.8	-14
RTZ	Ruatahuna	18.32	193	P	P	11 19 26.1	+2.1
TLZ	Tolley Road	18.41	197	P	P	11 19 27.8	+3.1
SNGZ	Shannon Statio	18.41	192	P	P	11 19 25.8	+1.1
RAHZ	Arahi	18.59	193	P	P	11 19 27.0	+0.6
HIZ	Hauiti	18.77	198	P	P	11 19 30.8	+2.9
BKZ	Black Stump Fm	18.96	194	P	P	11 19 28.8	-1.0
BKZ				S	S	11 22 28.3	-8.0
OTVZ	Oturere	19.16	196	P	P	11 19 31.6	-0.1
MCHZ	McNeill Hill	19.18	193	P	P	11 19 32.6	+0.9
KWHZ	Kaweka Forest	19.22	194	P	P	11 19 32.4	+0.2
KWHZ				S	S	11 22 37.1	-3.5
VRZ	Vera Road	19.36	198	P	P	11 19 36.1	+2.7
BHHZ	Black Hill Sta	19.37	195	P	P	11 19 32.5	-1.0
BHHZ				S	S	11 22 31.2	-12
KRHZ	Kereru	19.44	194	P	P	11 19 35.1	+0.9
KRHZ				S	S	11 22 38.1	-6.0
KAHZ	Kahuranaki	19.48	193	P	P	11 19 35.9	+1.4
KAHZ				S	S	11 22 38.9	-5.9
PNHZ	Pukenui	19.74	194	P	P	11 19 37.7	+0.8
PNHZ				S	S	11 22 35.5	-13
TSZ	Takapari Road	19.93	194	P	P	11 19 39.6	+0.9
ANWZ	Angora Road	20.20	193	P	P	11 19 41.5	+0.5
ANWZ				S	S	11 22 54.0	-2.2
RPZ	Rata Peaks	24.68	200	P	P	11 20 21.2	-0.1
	comp=Z,8.5nm,0.9s,baz=67,slow=1.9,SNR=2.0						
EIDS	Eidsvold	29.01	255	P	P	11 21 00.9	+1.3
EIDS				IAmb	IAmb	11 21 21.3	
	comp=Z,6.5nm,1.0s						
ARMA	Armidale	29.16	245	P	P	11 21 03.0	+2.0
CTAO	Charters Tower	33.72	265	P	P	11 21 40.9	+0.8
TOO	Toolangi	35.92	234	P	P	11 21 60.0	+1.6
TOO				IAmb	IAmb	11 22 02.9	
	comp=Z,9.9nm,1.1s						
STKA	Stephens Creek	37.89	245	P	P	11 22 15.6	+1.0
	comp=Z,3.8nm,0.5s,baz=89,slow=11,SNR=13						
STKA	Stephens Creek	37.89	245	P	P	11 22 15.7	+1.2
BBOO	Buckleboo	42.64	244	P	P	11 22 53.2	+0.6
WR0	Warramunga Arr	44.62	262	P	P	11 23 09.0	+0.7
AS31	Alice Springs	44.70	257	P	P	11 23 09.1	+0.2
ASAR	Alice Springs	44.70	257	P	P	11 23 09.1	+0.2
	comp=Z,3.1nm,0.6s,baz=93,slow=7.9,SNR=19						
ASAR				S	S	11 29 06.4	-2.4
	comp=Z,0.5nm,0.8s,baz=90,slow=16,SNR=4.5						
WB0	Warramunga Arr	44.79	263	P	P	11 23 09.8	+0.1
WB0				IAmb	IAmb	11 23 09.9	
	comp=Z,3.6nm,0.6s						
WB2	Warramunga Arr	44.80	262	P	P	11 23 09.7	0.0
WRA	Warramunga Arr	44.81	262	P	P	11 23 09.5	-0.3
	comp=Z,1.8nm,0.5s,baz=98,slow=8.8,SNR=7.1						
WRA	Warramunga Arr	44.81	262	P	P	11 23 09.9	+0.1
FORT	Forrest	49.41	247	P	P	11 23 44.5	+0.2
FORT				IAmb	IAmb	11 24 12.7	
	comp=Z,14nm,0.9s						
FAKI	Fak Fak	51.82	283	P	P	11 24 02.3	+0.1
SOEI	Soe	56.77	272	P	P	11 24 35.9	-1.4
SOEI				IAmb	IAmb	11 24 55.8	
	comp=Z,8.2nm,0.8s						
VNDA	Vanda	57.63	185	P	P	11 24 41.8	-0.1
	comp=Z,0.8nm,0.9s,baz=40,slow=3.9,SNR=3.0						
VNDA	Vanda	57.63	185	P	P	11 24 42.2	+0.3
PSA00	Pilbara Seismi	57.85	257	P	P	11 24 43.9	-0.5
PSA00	Pilbara Seismi	57.85	257	P	P	11 24 44.9	+0.4
PSA00				IAmb	IAmb	11 24 45.1	
	comp=Z,11nm,1.1s						
NWAO	Narrogin (SRO)	58.46	243	P	P	11 24 49.7	+1.3
QSPA	South Pole Qui	69.26	180	P	P	11 25 59.0	+2.0
MJAR	Matsushiro Arr	70.61	324	P	P	11 26 04.4	-0.9
	comp=Z,3.8nm,0.6s,baz=157,slow=6.3,SNR=13						
MJAR	Matsushiro Arr	70.61	324	P	P	11 26 04.4	-0.9
MAJO	Matsushiro	70.61	324	P	P	11 26 04.5	-0.7
MAJO				IAmb	IAmb	11 26 05.1	
	comp=Z,7.2nm,0.7s						
JHS	Saijyo	72.50	319	P	P	11 26 16.5	+0.1
PEA0B	Petropavlovsk-	76.63	345	P	P	11 26 38.4	-0.9
PEA0B				IAmb	IAmb	11 26 55.7	
	comp=Z,27nm,1.4s						
PETK	Petropavlovsk-	76.63	345	P	P	11 26 38.2	-1.0
	comp=Z,1.3nm,0.6s,baz=143,slow=8.1,SNR=3.6						
PETK	Petropavlovsk-	76.63	345	P	P	11 26 38.6	-0.6
KSRS	Korea Array	77.29	318	P	P	11 26 42.6	-0.6
	comp=Z,1.1nm,0.8s,baz=114,slow=5.9,SNR=3.5						
USRK	Ussuriysk Ar.	79.36	326	P	P	11 26 55.6	+1.4
	comp=Z,2.5nm,0.7s,baz=110,slow=5.6,SNR=5.8						
YBH	Yreka Blue Hor	80.37	38	P	P	11 27 00.8	+1.2
WAKR	Walker	80.39	43	P	P	11 27 01.1	+1.1
PNTR	Pine Nut	80.64	42	P	P	11 27 02.8	+1.5
PNTR				IAmb	IAmb	11 27 03.1	
	comp=Z,7.2nm,0.9s						
NVAR	Mina Array Bea	81.07	43	P	P	11 27 04.2	+0.6
	comp=Z,1.8nm,0.9s,baz=229,slow=9.7,SNR=11						
NVAR	Mina Array Bea	81.07	43	P	P	11 27 04.3	+0.8
K05A	Summer Lake	82.05	39	P	P	11 27 09.3	+0.9
K05A				IAmb	IAmb	11 27 12.7	
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	83.20	40	P	P	11 27 14.6	+0.5
U15A	North Rim	83.98	48	P	P	11 27 19.6	+1.2
U15A				IAmb	IAmb	11 27 20.1	
	comp=Z,4.6nm,0.8s						
EYAK	Cordova Ski Ar	85.11	15	P	P	11 27 22.3	-0.6
PMR	Palmer	85.26	13	P	P	11 27 22.5	-1.1
PMR				IAmb	IAmb	11 27 22.6	
	comp=Z,10nm,1.4s						
GHO	Glory Hole Cre	85.47	13	P	P	11 27 23.9	-0.9
GHO				IAmb	IAmb	11 27 24.5	
	comp=Z,7.5nm,0.6s						
SCM	Sheep Creek Mo	85.87	14	P	P	11 27 26.4	-0.3
F10A	Beach Ranch, E	86.09	37	P	P	11 27 28.3	+0.1
F10A				IAmb	IAmb	11 27 28.8	
	comp=Z,5.9nm,0.8s						
N25K	Chitina, Valde	86.31	15	P	P	11 27 28.1	-0.7
N25K				IAmb	IAmb	11 27 51.1	
	comp=Z,11nm,1.2s						
RND	Reindeer	86.94	13	P	P	11 27 31.1	-0.6
RND				IAmb	IAmb	11 27 31.4	
	comp=Z,8.7nm,0.8s						
TXAR	Lajitas Array	87.01	57	P	P	11 27 33.9	+1.0
	comp=Z,0.9nm,0.7s,baz=217,slow=7.3,SNR=6.1						
CCB	Clear Creek Bu	88.26	12	P	P	11 27 36.3	-1.5
IMAR	Indian Mountai	88.42	10	P	P	11 27 37.8	-0.7
IL31		88.56	13	P	P	11 27 38.0	-1.2
IL31				IAmb	IAmb	11 27 41.0	
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	88.56	13	P	P	11 27 37.5	-1.6
	comp=Z,1.2nm,0.5s,baz=217,slow=5.4,SNR=20						
PDAR	Pinedale Array	89.01	43	P	P	11 27 41.7	-0.4
	comp=Z,0.8nm,0.7s,baz=225,slow=3.4,SNR=9.9						
PDAR	Pinedale Array	89.01	43	P	P	11 27 42.3	+0.2
YHL	Hebgen Lake	89.05	41	P	P	11 27 43.5	+1.2
DAWY	Dawson	89.69	16	P	P	11 27 44.0	-0.5
DAWY				IAmb	IAmb	11 27 44.8	
	comp=Z,3.4nm,0.7s						
EGAK	Eagle	89.84	15	P	P	11 27 44.5	-0.7
EGAK				IAmb	IAmb	11 27 45.3	
	comp=Z,3.6nm,0.8s						
YKA	Yellowknife Ar	96.69	25	P	P	11 28 16.0	-0.5
	comp=Z,0.3nm,0.9s,baz=225,slow=4.0,SNR=3.9						
MKAR	Makanchi Array	111.59	313	PKiKP	PKiKP	11 33 16.1	-1.9
	comp=Z,0.3nm,0.4s,baz=65,slow=1.6,SNR=6.2						
ARCES	ARCESS Array B	129.27	350	PKP	PKPdf	11 33 50.4	-0.7

	comp=Z,8.3nm,1.2s,baz=29,slow=2.8,SNR=6.0						
ARCES	**ARCESS Array B**	**129.27**	**350**		**PKPdf**	**11 33 50.7**	**-0.4**
FINES	**FINESS Array B**	**136.14**	**344**	PKP	**PKPdf**	**11 34 03.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=163,slow=1.5,SNR=3.9						
AKASG	**Malin Array Be**	**143.41**	**331**	PKP	PKPab	11 34 14.5	-1.3
	comp=Z,2.0nm,0.6s,baz=44,slow=4.5,SNR=9.2						
BRTR	**Keskin Array B**	**147.24**	**312**	PKPbc	**PKPbc**	**11 34 27.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=151,slow=3.3,SNR=3.5						
CLL	**Collm**	**148.42**	**347**	⇓*i*PKPbc	**PKPbc**	**11 34 29.9**	**-0.4**
	comp=Z,8.0nm,0.7s						
GERES	**GERESS Array B**	**150.57**	**345**	PKPbc	**PKPbc**	**11 34 34.5**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=48,slow=2.0,SNR=5.7						
GERES	**GERESS Array B**	**150.57**	**345**		**PKPbc**	**11 34 34.9**	**-0.8**

NNC 21 11:19:02.6±3.9**, 50°.78N×73°.67E, h0^{km}, mb2.9, mpv2.5, 4C-1D, Error ellipse: s-maj=59.6km s-min=13.8km az=24.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRVK	**Borovoye**	**3.10**	**319**	⇑Pg	Pb	11 19 58.5	0.0
	2.1nm,1.1s						
BRVK				⇑Lg	Lg	11 20 43.5	
	2.7nm,0.6s						
KURBB	**Kurchatov Arra**	**3.10**	**91**	⇓Pg	Pb	11 19 59.6	+1.1
	0.7nm,0.3s,baz=255,slow=16						
KURBB				⇑Lg	Lg	11 20 42.4	
	6.8nm,0.6s,baz=277,slow=29						
KURK	**Kurchatov**	**3.15**	**89**	⇑Pg	Pb	11 19 58.6	-0.8
	2.3nm,1.2s						

NOU ***21*** *12:05:07.8, 36°.22S×178°.80E, h255^{km}, MLv4.3, Off E. Coast of N. Island, N.Z.*

WEL 21 12:04:26.3±0.9**, 33°S**±13°×**18°0W**±2°2**, h292**^{km}±14^{km}**, M4.5**/5**, mB4.7**/5**, MLv4.8**/4**, Mw(mB)3.9**/5**, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.74**	**197**	P	Pn	12 05 41.2	+0.8
MXZ				S	S	12 06 42.9	+3.1
WMGZ	**Waiomatatini S**	**4.96**	**195**	P	Pn	12 05 40.3	-2.6
WMGZ				S	S	12 06 42.1	-2.4
WAZ	**Wanganui**	**7.85**	**210**	P	Pn	12 06 18.4	+0.6
KIW	**Kapiti Island**	**8.83**	**206**	P	Pn	12 06 29.7	-0.3
TRWZ	**Traveller**	**9.05**	**201**	P	Pn	12 06 33.1	+0.6
TRWZ				S	S	12 08 16.3	+1.0
PAWZ	**Paruwai Farm**	**9.11**	**202**	P	Pn	12 06 33.5	+0.1
PAWZ				S	S	12 08 17.6	+0.7
DUWZ	**D'Urville Isla**	**9.17**	**210**	P	Pn	12 06 34.5	+0.3
MSWZ	**Moikau Station**	**9.20**	**203**	P	Pn	12 06 34.5	0.0
MSWZ				S	S	12 08 20.3	+1.5
BHW	**Baring Head**	**9.32**	**205**	P	Pn	12 06 35.8	-0.2
PLWZ	**Palliser**	**9.34**	**203**	P	Pn	12 06 35.6	-0.6
PLWZ				S	S	12 08 23.2	+1.2
TCW	**Tory Channel**	**9.37**	**208**	P	Pn	12 06 36.3	-0.3
TUWZ	**Tuamarina**	**9.69**	**208**	P	Pn	12 06 38.9	-1.6
NNZ	**Nelson**	**9.75**	**211**	P	Pn	12 06 41.1	-0.1
NNZ				S	S	12 08 31.3	+0.1
QRZ	**Quartz Range**	**9.83**	**215**	P	Pn	12 06 42.6	+0.3
QRZ				S	S	12 08 30.1	-2.9
BSWZ	**Blackbirch Sta**	**9.96**	**208**	P	Pn	12 06 44.2	+0.4
THZ	**Tophouse**	**10.40**	**211**	P	Pn	12 06 49.9	+0.6
THZ				S	S	12 08 49.8	+3.7
KHZ	**Kahutara**	**10.69**	**207**	P	Pn	12 06 52.0	-0.8
DSZ	**Denniston Nort**	**10.88**	**215**	P	Pn	12 06 55.6	+0.3
DSZ				S	S	12 08 59.9	+2.8
LTZ	**Lake Taylor**	**11.50**	**210**	P	Pn	12 07 02.7	-0.1
LTZ				S	S	12 09 08.8	-2.3
INZ	**Inchbonnie**	**11.81**	**212**	P	P	12 07 07.6	-0.9
OKCZ	**Okains Bay**	**11.99**	**205**	P	P	12 07 09.8	-0.6
OKCZ				S	S	12 09 23.9	+1.6
OXZ	**Oxford**	**12.05**	**209**	P	Pn	12 07 09.3	-0.1
OXZ				S	S	12 09 21.6	-1.8
MQZ	**McQueen's Vall**	**12.13**	**206**	P	Pn	12 07 10.2	-0.2
MQZ				S	S	12 09 24.2	-1.0
RPZ	**Rata Peaks**	**12.78**	**211**	P	P	12 07 19.2	+0.1

DJA ***21*** *12:39:34.9±0.2, 1°S±2°×12°4E±°, h10^{km}, M4.2/19, mb4.5/7, mB4.7/5, MLv4.3/19, Mw(mB)3.9/5*

IDC ***21*** *12:39:36.5±2.9, 1°.09S×123°.49E, h46^{km}±32^{km}, mb2.9/3, mb1 3.5/5, mb1mx3.2/41, mbtmp3.5/5, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/16, Error ellipse: s-maj=26.8km s-min=21.4km az=162.0*

ISC 21 12:39:36.6±1.0**, 1°.14S**±0°.06×**123°.51E**±0°.05**, h40**^{km}**, n19, σ1^s.34**/21**, mb3.2**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.74**	**277**	P	**Pn**	**12 39 49.5**	**-1.2**
LUWI				S	**Sn**	**12 40 00.5**	**-0.3**
KMSI	**Cibinong**	**1.77**	**15**	P	**Pn**	**12 40 04.7**	**0.0**
KMSI				S	**Sn**	**12 40 28.7**	**+2.7**
GTOI	**Gorontalo**	**1.83**	**344**	P	Pn	12 40 07.6	+2.0
APSI	**Ampana**	**1.88**	**277**	P	**Pn**	**12 40 07.0**	**+0.8**
MRSI	**Marisa**	**2.25**	**316**	P	**Pn**	**12 40 11.8**	**+0.5**
SANI	**Sanana**	**2.64**	**110**	P	**Pn**	**12 40 14.7**	**-2.0**
MPSI	**Mapaga**	**3.90**	**292**	P	**Pn**	**12 40 35.7**	**+1.7**
TTSI	**Tana Toraja**	**4.15**	**243**	P	**Pn**	**12 40 38.4**	**+0.9**
NLAI	**Namlea**	**4.15**	**120**	P	**Pn**	**12 40 38.3**	**+0.8**
SPSI	**Sidrap Palu**	**4.67**	**233**	P	**Pn**	**12 40 46.4**	**+1.7**
BNSI	**Bone**	**4.70**	**226**	P	**Pn**	**12 40 46.2**	**+1.2**
BKSI	**Bulukumba**	**5.36**	**219**	P	**Pn**	**12 40 56.2**	**+2.1**
	0.1nm520nm32nm,0.6s						
KAPI	**Kappang**	**5.38**	**224**	P	**Pn**	**12 40 55.8**	**+1.5**
	3.0nm,0.3s,baz=94,slow=5.1,SNR=10						
KAPI				S	**Sn**	**12 41 55.3**	**+0.3**
	2.2nm,0.3s,baz=161,slow=18,SNR=2.4						
KAPI				LR	LR	12 43 28.7	
	comp=Z,136nm,20.9s,baz=56,slow=43						
BSSI	**Bau Bau, Buton**	**5.81**	**211**	P	**Pn**	**12 41 01.2**	**+0.8**
	0.2nm628nm57nm,0.6s						
SIJI	**Sorong**	**7.76**	**88**	P	**Pn**	**12 41 27.3**	**+0.2**
	2.7nm,0.3s,baz=149,slow=22,SNR=7.6						
EDFI	**Ende, Flores**	**7.78**	**193**	P	**Pn**	**12 41 27.9**	**+0.5**
	0.0nm9.4nm,0.5s						
WRA	**Warramunga Arr**	**21.48**	**151**	P	**P**	**12 44 21.4**	**-0.6**
	0.6nm,0.6s,baz=335,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**24.56**	**157**	P	**P**	**12 44 53.0**	**+0.1**
	0.5nm,0.8s,baz=327,slow=7.2,SNR=13						
MKAR	**Makanchi Array**	**59.84**	**328**	P	**P**	**12 49 36.8**	**-1.4**
	0.3nm,0.8s,baz=118,slow=4.2,SNR=4.2						

IDC 21 12:46:34.6±11.0**, 4°.13S×137°.29E, h0**^{km}**, mb4.1**/1**, mb1 3.5**/3**, mb1mx3.3**/27**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=171.6km s-min=67.4km az=13.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**14.79**	**245**	Pn	Pn	12 50 05.3	0.0
	2.7nm,0.3s,baz=69,slow=8.6,SNR=6.8						
WRA	**Warramunga Arr**	**15.97**	**190**	Pn	Pn	12 50 22.6	+1.7
	0.1nm,0.3s,baz=14,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**19.69**	**189**	P	P	12 51 04.3	-1.3
	0.1nm,0.3s,baz=10,slow=10,SNR=6.6						
STKA	**Stephens Creek**	**27.89**	**172**	P	P	12 52 26.8	+0.4
	2.0nm,0.9s,baz=337,slow=7.7,SNR=2.9						

IDC ***21*** *12:57:55.4±2.4, 19°.83S×68°.94W, h109^{km}±26^{km}, mb3.4/6, mb1 3.7/9, mb1mx3.5/37, mbtmp3.9/9, Error ellipse: s-maj=31.5km s-min=20.1km az=118.0*

NEIC ***21*** *12:57:55.1±1.4, 19°.91S±0°.04×69°.2W±0°.1, h99^{km}±5^{km}, Error ellipse: s-maj=15.3km s-min=6.2km az=83.0*

GUC ***21*** *12:57:55.5±0.7, 19°.89S×69°.15W, h98^{km}±3^{km}, ML4.0*

ISC 21 12:57:54.6±0.7**, 19°.89S**±0°.03×**69°.19W**±0°.06**, h100**^{km}±6^{km}**, n52, σ0^s.94**/55**, mb3.9**/5**, 5C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.25**	**172**	⇓*i*P	**Pn**	**12 58 09.8**	**+0.2**
PB08				*i* S	**Sn**	**12 58 21.0**	**+0.3**
PB08				IAML		12 58 23.7	
	comp=E,6μm,0.2s						
PB08	**IPOC Station P**	**0.25**	**172**		**Pn**	**12 58 09.7**	**+0.1**
PB08				Sn	**Sn**	**12 58 20.9**	**+0.3**
HMBC	**Humberstone**	**0.76**	**239**	⇓*i*P	**Pn**	**12 58 12.9**	**+0.1**
HMBC				*i* S	**Sn**	**12 58 26.7**	**+0.3**
HMBC				IAML		12 58 28.1	
	comp=E,5μm,0.2s						
MNMC	**Minye Minye**	**0.85**	**333**	⇓*i*P	**Pn**	**12 58 14.7**	**+0.8**
MNMC				*i* S	**Sn**	**12 58 29.3**	**+1.1**
MNMC				IAML		12 58 30.4	
	comp=N,11μm,0.6s						
MNMC	**Minye Minye**	**0.85**	**333**		**Pn**	**12 58 14.3**	**+0.5**
MNMC				Sn	**Sn**	**12 58 29.4**	**+1.2**
PSGC	**Pisagua**	**0.93**	**288**	⇑*i*P	**Pn**	**12 58 14.6**	**+0.2**
PSGC				*i* S	**Sn**	**12 58 29.3**	**0.0**
PSGCX	**Pisagua**	**0.93**	**288**		**Pn**	**12 58 14.3**	**-0.1**
PSGCX				Sn	**Sn**	**12 58 29.3**	**+0.1**
TA02	**Huaiquique**	**0.96**	**247**	*e*P	**Pn**	**12 58 15.0**	**+0.4**
TA02				*e*S	**Sn**	**12 58 30.2**	**+0.5**
TA02				IAML		12 58 36.6	
	comp=E,6μm,0.1s						
TA01	**Diego Aracena**	**1.15**	**234**	⇑*i*P	**Pn**	**12 58 16.8**	**+0.1**
TA01				*i* S	**Sn**	**12 58 33.7**	**+0.3**
TA01				IAML		12 58 38.6	
	comp=E,2μm,0.4s						
TA01	**Diego Aracena**	**1.15**	**234**		**Pn**	**12 58 16.9**	**+0.2**
PATCX	**Punta Patache**	**1.29**	**224**	⇑*i*P	**Pn**	**12 58 18.5**	**0.0**
PATCX				*i* S	**Sn**	**12 58 37.0**	**+0.5**
PATCX				IAML		12 58 44.9	
	comp=E,3μm,0.4s						
PATCX	**Punta Patache**	**1.29**	**224**		**Pn**	**12 58 18.7**	**+0.2**
PB02	**IPOC Station P**	**1.57**	**205**	*e*S	**Sn**	**12 58 42.8**	**+0.3**
PB02				IAML		12 58 50.5	
	comp=E,4μm,0.3s						
PB16	**IPOC Station P**	**1.58**	**349**	⇓*i*P	**Pn**	**12 58 23.7**	**+1.3**
PB16				*i* S	**Sn**	**12 58 44.9**	**+1.5**
PB16	**IPOC Station P**	**1.58**	**349**		**Pn**	**12 58 23.5**	**+1.1**
AP01	**Chacalluta**	**1.86**	**324**	*e*P	**Pn**	**12 58 26.0**	**+0.5**
AP01				*e*S	**Sn**	**12 58 49.7**	**+0.8**
AP01				IAML		12 59 00.2	
	comp=E,2μm,0.4s						
AP01	**Chacalluta**	**1.86**	**324**		**Pn**	**12 58 25.9**	**+0.4**
PB09	**IPOC Station P**	**1.90**	**181**	*e*P	**Pn**	**12 58 27.0**	**+0.9**
PB09				*e*S	**Sn**	**12 58 51.9**	**+1.9**
PB09				IAML		12 59 01.9	
	comp=E,1μm,0.8s						
PB09	**IPOC Station P**	**1.90**	**181**		**Pn**	**12 58 27.0**	**+0.9**
PB07	**IPOC Station P**	**1.94**	**199**	⇑*i*P	**Pn**	**12 58 26.8**	**+0.1**
PB07				*e*S	**Sn**	**12 58 51.5**	**+0.5**
PB07				IAML		12 58 58.5	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**1.94**	**199**		**Pn**	**12 58 27.5**	**+0.8**
PB03	**IPOC Station P**	**2.21**	**194**	⇑*i*P	**Pn**	**12 58 30.2**	**0.0**
PB03				IAML		12 59 06.1	
	comp=E,1μm,0.3s						
PB04	**IPOC Station P**	**2.59**	**200**	IAML		12 59 17.8	
	comp=N,1μm,0.6s						
PB04	**IPOC Station P**	**2.59**	**200**		**Pn**	**12 58 36.0**	**+0.9**
LVC	**Limon Verde**	**2.72**	**175**	P	**Pn**	**12 58 38.1**	**+1.1**
	comp=N,8.2nm,0.3s,baz=8.6,slow=9.1,SNR=65						
LVC				S	**Sn**	**12 59 12.4**	**+2.9**
	comp=N,43nm,0.3s,baz=73,slow=19,SNR=15						
PB10	**IPOC Station P**	**3.82**	**199**		**Pn**	**12 58 50.5**	**-1.0**
PB14	**IPOC Station P**	**4.84**	**193**		**Pn**	**12 59 05.3**	**-0.2**
GO02	**Mina Guanaco**	**5.26**	**184**		**Pn**	**12 59 10.5**	**-0.7**
AC02	**Maricunga**	**6.91**	**180**	Pn	**Pn**	**12 59 33.5**	**-0.4**
SIV	**San Ignacio**	**8.64**	**65**	P	**Pn**	**12 59 54.6**	**-2.4**
	comp=N,5.0nm,0.3s,baz=264,slow=10,SNR=114						
CPUP	**Villa Florida**	**12.65**	**123**	P	**Pn**	**13 00 50.3**	**-0.6**
	comp=N,0.2nm,0.3s,baz=312,slow=11,SNR=3.8						
CPUP	**Villa Florida**	**12.65**	**123**		**Pn**	**13 00 50.6**	**-0.3**
MT02	**Curacav**	**13.43**	**187**	Pn	**Pn**	**13 01 01.5**	**+0.3**
H03N1	**Juan Fernandez**	**16.04**	**211**	T	T	13 16 59.7	
	baz=34,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**16.05**	**211**	T	T	13 17 01.0	
	baz=34,slow=72,SNR=11						
H03N3	**Juan Fernandez**	**16.05**	**211**	T	T	13 17 00.1	
	baz=34,slow=72,SNR=7.4						
PLCA	**Paso Flores**	**20.81**	**183**	P	**P**	**13 02 28.5**	**+0.5**
	comp=N,1.2nm,0.8s,baz=357,slow=12,SNR=4.8						
PLCA	**Paso Flores**	**20.81**	**183**	P	**P**	**13 02 28.8**	**+0.8**
PLCA				IAmb	IAmb	13 02 56.2	
	comp=Z,7.0nm,1.4s						
PDAR	**Pinedale Array**	**72.59**	**330**	P	**P**	**13 09 11.2**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=106,slow=6.7,SNR=1.9						
ULM	**Lac du Bonnet**	**73.71**	**343**	P	**P**	**13 09 16.3**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=163,slow=6.5,SNR=4.8						
ULM	**Lac du Bonnet**	**73.71**	**343**	IAmb	IAmb	13 09 41.8	
	comp=Z,4.9nm,1.4s						
NVAR	**Mina Array Bea**	**74.07**	**322**	P	**P**	**13 09 22.0**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=138,slow=8.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**77.07**	**71**	P	**P**	**13 09 35.8**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=254,slow=5.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**77.07**	**71**	IAmb	IAmb	13 09 39.9	
	comp=Z,0.8nm,0.6s						
YKA	**Yellowknife Ar**	**89.59**	**341**	P	**P**	**13 10 40.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=130,slow=5.2,SNR=31						
H11S2	**WAKE ISLAND Hy**	**127.40**	**278**	T	T	15 36 31.0	
	baz=101,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**127.41**	**278**	T	T	15 36 31.5	
	baz=101,slow=75,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**127.42**	**278**	T	T	15 36 31.8	
	baz=101,slow=75,SNR=9.4						
H11N3	**WAKE ISLAND Hy**	**127.44**	**280**	T	T	15 36 32.4	
	baz=101,slow=74,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**127.45**	**280**	T	T	15 36 32.4	
	baz=101,slow=74,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**127.45**	**280**	T	T	15 36 31.7	
	baz=101						
WRA	**Warramunga Arr**	**134.19**	**212**	PKP	**PKPdf**	**13 17 01.4**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=149,slow=1.6,SNR=2.6						

IDC ***21*** *13:07:27.9±7.3, 1°.37S×14°.08W, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.6/53, mbtmp4.0/5, ML3.6/1, MS3.8/9, Ms1 3.8/9, ms1mx3.4/34, Error ellipse: s-maj=352.7km s-min=80.8km az=150.0*

ISC 21 13:07:33.8±2.2**, 0°.1S**±0°.4×**14°.7W**±0°.3**, h10**^{km}**, n18, σ1^s.74**/10**, mb4.2**/3**, MS3.7**/7**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**7.67**	**178**	T	T	13 15 46.4	
	baz=358,slow=74,SNR=45						
H10N3	**ASCENSION HYDR**	**7.69**	**178**	T	T	13 15 42.2	
	baz=358,slow=74,SNR=49						
H10N1	**ASCENSION HYDR**	**7.69**	**178**	T	T	13 15 46.7	
	baz=358,slow=74,SNR=43						
LIC	**Lamto**	**11.54**	**57**	*e*P	Pn	13 10 23.7	+4.9
	32nm,1.1s						
TIC	**Toumodi**	**11.77**	**55**	*e*P	**Pn**	**13 10 24.5**	**+2.5**
KIC	**Kosan Boka**	**11.85**	**57**	*e*P	**Pn**	**13 10 25.6**	**+2.5**
	26nm,1.1s						
DBIC	**Dimbokro**	**11.92**	**55**	Pn	**Pn**	**13 10 22.9**	**-1.2**
	0.4nm,0.3s,baz=222,slow=14,SNR=6.2						
DBIC				Sn	**Sn**	**13 12 36.8**	**-0.4**
	0.8nm,0.3s,baz=305,slow=20,SNR=6.5						
DBIC				LR	LR	13 14 25.2	
	comp=Z,318nm,18.9s,baz=202,slow=34						
KOWA	**Kowa**	**17.96**	**36**	S	**Sn**	**13 15 05.1**	**+0.7**
	baz=96,slow=19,SNR=2.5						
KOWA				LR	LR	13 18 29.1	
	comp=Z,251nm,18.1s,baz=205,slow=35						
TORD	**Torodi Ar. Bea**	**20.93**	**50**	P	**P**	**13 12 16.2**	**-0.7**
	2.7nm,0.6s,baz=235,slow=11,SNR=10						
TORD				S	**S**	**13 16 08.3**	**-2.1**
	1.7nm,0.7s,baz=236,slow=22,SNR=4.2						
TORD				LR	LR	13 20 00.1	
	comp=Z,261nm,18.2s,baz=280,slow=35						
MDT	**Midelt**	**34.10**	**15**	LR	LR	13 27 48.7	
	comp=Z,169nm,19.2s,baz=346,slow=35						
ESDC	**Sonseca Array**	**40.79**	**13**	LR	LR	13 32 10.1	
	comp=Z,206nm,18.1s,baz=340,slow=35						
CPUP	**Villa Florida**	**48.60**	**234**	LR	LR	13 33 07.7	
	comp=Z,55nm,20.9s,baz=60,slow=32						
MLR	**Muntele Rosu**	**57.84**	**33**	P	**P**	**13 17 26.5**	**+0.6**
	1.4nm,0.4s,baz=180,slow=9.1,SNR=3.6						
BRTR	**Keskin Array B**	**59.25**	**42**	P	**P**	**13 17 35.4**	**-0.5**
	0.6nm,0.6s,baz=228,slow=3.7,SNR=4.0						
NOA	**NORSAR Array B**	**64.14**	**14**	LR	LR	13 46 58.1	
	comp=Z,48nm,18.1s,baz=280,slow=36						
PLCA	**Paso Flores**	**64.66**	**224**	LR	LR	13 40 49.6	
	comp=Z,32nm,21.3s,baz=124,slow=31						
KBZ	**Khabaz**	**67.23**	**42**	P	**P**	**13 18 27.4**	**-1.1**
	1.3nm,0.8s,baz=291,slow=8.6,SNR=4.1						
ULM	**Lac du Bonnet**	**84.42**	**320**	LR	LR	13 54 40.6	
	comp=Z,70nm,18.3s,baz=352,slow=33						

IDC ***21*** *13:10:06.9±4.3, 34°.69N×25°.00E, h0^{km}, mb3.5/1, mb1 3.8/3, mb1mx3.3/56, mbtmp3.7/3, ML4.2/2, MS3.8/1, Ms1 3.8/1, ms1mx2.5/46, Error ellipse: s-maj=76.7km s-min=25.7km az=55.0*

ATH ***21*** *13:10:11.5, 34°.86N×24°.63E, h41^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=3.0km s-min=1.4km az=178.0*

THE ***21*** *13:10:11.3, 34°.66N×24°.67E, h19^{km}±2^{km}, ML3.2/7, Error ellipse: s-maj=2.7km s-min=1.0km az=339.0*

ISC 21 13:10:11.5±1.2**, 34°.76N**±0°.06×**24°.65E**±0°.03**, h31**^{km}±8^{km}**, n45, σ1^s.07**/59**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.29**	**27**	P	**Pb**	**13 10 19.1**	**+0.1**
SIVA				S	**Sn**	**13 10 25.0**	**+0.1**
SIVA				AML	AML	13 10 25.4	
	comp=E,30678μm,0.3s						
SIVA				AML	AML	13 10 26.9	
	comp=N,13630μm,0.2s						
SIVA	**Sivas**	**0.29**	**27**	P	**Pb**	**13 10 19.1**	**+0.1**
SIVA				S	**Sn**	**13 10 25.1**	**+0.1**
	comp=N,11μm,0.3s						
TMBK	**Timbaki Herakl**	**0.33**	**17**	P	**Pb**	**13 10 19.7**	**+0.3**
TMBK				S	**Sn**	**13 10 26.8**	**+0.9**
	comp=N,3μm,0.5s						
GVDS	**Gavdos**	**0.47**	**281**	P	**Pb**	**13 10 21.5**	**0.0**
GVDS				S	**Sn**	**13 10 30.3**	**+1.0**
	comp=N,5μm,0.4s						
GVD	**Gavdhos**	**0.47**	**280**	P	**Pb**	**13 10 21.3**	**-0.2**
GVD				S	**Sn**	**13 10 30.2**	**+0.9**
GVD				AML	AML	13 10 33.1	
	comp=N,12122μm,0.4s						
GVD				AML	AML	13 10 34.2	
	comp=E,13238μm,0.3s						
GVD	**Gavdhos**	**0.47**	**280**	P	**Pb**	**13 10 21.3**	**-0.2**
GVD				S	**Sn**	**13 10 30.1**	**+0.7**
	comp=E,6μm,0.3s						
IDI	**Anoyia**	**0.57**	**20**	Pn	**Pb**	**13 10 22.9**	**-0.2**
	comp=E,46nm,0.3s,baz=201,slow=7.1,SNR=164						
IDI				Sn	**Sn**	**13 10 34.1**	**+2.2**
	comp=E,152nm,0.3s,baz=78,slow=20,SNR=38						
IDI	**Anoyia**	**0.57**	**20**	P	**Pb**	**13 10 22.5**	**-0.6**
IDI				S	**Sb**	**13 10 30.3**	**-0.7**
IDI				AML	AML	13 10 36.8	
	comp=E,3829μm,0.3s						
IDI				AML	AML	13 10 37.3	
	comp=N,2507μm,0.5s						
IDI	**Anoyia**	**0.57**	**20**	P	**Pb**	**13 10 22.5**	**-0.6**
IDI				S	**Sn**	**13 10 34.2**	**+2.4**
	comp=N,2μm,0.4s						
PRNS	**Prines Rethymn**	**0.62**	**349**	P	**Pb**	**13 10 23.4**	**-0.5**
PRNS				S	**Sn**	**13 10 35.2**	**+2.2**
KSTL	**Kastelli Herak**	**0.65**	**32**	P	**Pn**	**13 10 26.0**	**+1.5**
KSTL				S	**Sn**	**13 10 37.1**	**+3.4**
IACM	**Heraklion**	**0.65**	**32**	P	**Pn**	**13 10 24.6**	**+0.1**
IACM	**Heraklion**	**0.65**	**32**	P	**Pn**	**13 10 24.6**	**+0.1**
VAM	**Vamos**	**0.75**	**330**	P	**Pb**	**13 10 25.2**	**-0.9**
VAM				AML	AML	13 10 41.9	
	comp=N,2258μm,0.5s						
VAM				AML	AML	13 10 43.1	
	comp=E,2371μm,0.4s						
VAM	**Vamos**	**0.75**	**330**	P	**Pb**	**13 10 25.2**	**-0.9**
LAST	**Lasithi**	**0.79**	**59**	P	**Pn**	**13 10 26.7**	**+0.1**
LAST				S	**Sn**	**13 10 38.1**	**+0.7**
LAST				AML	AML	13 10 42.2	
	comp=N,1588μm,0.5s						
LAST				AML	AML	13 10 43.8	
	comp=E,2009μm,0.4s						
LAST	**Lasithi**	**0.79**	**59**	P	**Pn**	**13 10 26.7**	**+0.1**
LAST				S	**Sn**	**13 10 38.2**	**+0.7**
	comp=E,908nm,0.5s						
IMMV	**Iera Moni Meta**	**0.89**	**322**	P	**Pn**	**13 10 27.9**	**-0.1**
IMMV				S	**Sb**	**13 10 39.3**	**-0.7**
IMMV				AML	AML	13 10 47.9	
	comp=N,3063μm,0.4s						
IMMV				AML	AML	13 10 50.2	
	comp=E,4625μm,0.5s						
IMMV	**Iera Moni Meta**	**0.89**	**322**	P	**Pn**	**13 10 28.4**	**+0.5**
IMMV				S	**Sn**	**13 10 42.7**	**+2.9**
	comp=E,2μm,0.5s						
NPS	**Neapolis**	**0.94**	**57**	P	**Pb**	**13 10 29.7**	**+0.4**
NPS				AML	AML	13 10 48.1	
	comp=E,1686μm,0.5s						
NPS				AML	AML	13 10 48.6	
	comp=N,1389μm,0.7s						
NPS	**Neapolis**	**0.94**	**57**	P	**Pb**	**13 10 29.7**	**+0.4**
ZKR	**Zakros**	**1.34**	**74**	P	**Pb**	**13 10 35.0**	**-1.0**
ZKR	**Zakros**	**1.34**	**74**	P	**Pb**	**13 10 35.0**	**-1.0**
ANKY	**Antikythira Is**	**1.56**	**316**	P	**Pn**	**13 10 37.6**	**+0.4**
ANKY	**Antikythira Is**	**1.56**	**316**	P	**Pn**	**13 10 37.9**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.75**	**20**	P	**Pn**	**13 10 39.7**	**0.0**
SNT5	**Nea Kammeni, S**	**1.75**	**20**	P	**Pn**	**13 10 39.7**	**0.0**
SAP3	**Santorini-Thir**	**1.77**	**18**	P	**Pn**	**13 10 39.5**	**-0.5**
SAP3	**Santorini-Thir**	**1.77**	**18**	P	**Pn**	**13 10 39.5**	**-0.5**
ANAF	**Anafi Island**	**1.84**	**29**	P	**Pn**	**13 10 40.7**	**-0.3**
ANAF	**Anafi Island**	**1.84**	**29**	P	**Pn**	**13 10 40.7**	**-0.3**
MHLO	**Agia Marina, M**	**1.94**	**354**	P	**Pn**	**13 10 41.5**	**-0.9**
MHLO	**Agia Marina, M**	**1.94**	**354**	P	**Pn**	**13 10 42.3**	**0.0**
KTHA	**Kythira Island**	**1.98**	**320**	P	**Pn**	**13 10 43.6**	**+0.7**
KTHA	**Kythira Island**	**1.98**	**320**	P	**Pn**	**13 10 43.6**	**+0.7**
KARP	**Karpathos**	**2.20**	**68**	P	**Pn**	**13 10 47.4**	**+1.4**
KARP	**Karpathos**	**2.20**	**68**	P	**Pn**	**13 10 47.4**	**+1.4**
VLI	**Veliai**	**2.40**	**325**	P	**Pn**	**13 10 48.6**	**-0.1**
VLI	**Veliai**	**2.40**	**325**	P	**Pn**	**13 10 48.6**	**-0.1**
APE	**Apeiranthos**	**2.42**	**17**	P	**Pn**	**13 10 48.5**	**-0.4**
APE	**Apeiranthos**	**2.42**	**17**	P	**Pn**	**13 10 48.5**	**-0.4**
GERES	**GERESS Array B**	**16.25**	**333**	Pn	**Pn**	**13 13 59.1**	**+1.7**
	comp=N,0.3nm,0.3s,baz=140,slow=12,SNR=8.0						
AKASG	**Malin Array Be**	**16.28**	**10**	Pn	**Pn**	**13 13 56.5**	**-1.2**
	comp=N,1.9nm,0.3s,baz=200,slow=10,SNR=5.8						
SPITS	**Spitsbergen Ar**	**43.67**	**358**	LR	LR	13 36 43.9	
	comp=N,109nm,18.2s,baz=215,slow=36						
MKAR	**Makanchi Array**	**44.35**	**56**	P	**P**	**13 18 17.0**	**-1.8**
	comp=N,0.3nm,0.5s,baz=264,slow=7.8,SNR=5.1						

SOME ***21*** *13:10:28.3, 49°.97N×87°.40E, h5^{km}*

ASRS ***21*** *13:10:32.0±0.3, 50°N±2°×8°8E±°, h5^{km}, MLv3.6/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***21*** *13:10:33.8±1.7, 50°.27N×87°.66E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=14.9km s-min=8.4km az=101.0*

ISC 21 13:10:31.0±0.8**, 50°.21N**±0°.03×**88°.00E**±0°.03**, h10**^{km}**, n25, σ2^s.13**/47**, 8C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun**	**0.25**	**117**	P	**Pb**	**13 10 37.3**	**-0.5**
CUR				S	**Sb**	**13 10 41.5**	**-0.8**
CHBI	**Chibit, Altay**	**0.34**	**288**	P	**Pg**	**13 10 37.6**	**-0.2**
CHBI				S	**Sg**	**13 10 41.7**	**-0.5**
ULGR	**Ulagan, Altay**	**0.41**	**356**	Pg	**Pb**	**13 10 40.8**	**+0.3**
ULGR				S	**Sb**	**13 10 47.1**	**+0.2**
DGZ	**Jazzator, Alta**	**0.63**	**216**	P	**Pg**	**13 10 41.1**	**-2.1**
DGZ				S	**Sg**	**13 10 47.4**	**-4.2**
TEL	**Teeli**	**1.62**	**59**	P	**Pg**	**13 11 03.2**	**+1.2**
TEL				S	**Sg**	**13 11 24.5**	**+1.6**
ARTR	**Artybash**	**1.65**	**344**	P	**Pg**	**13 11 01.9**	**-0.8**
ARTR				S	**Sg**	**13 11 23.4**	**-0.7**
UKR	**Ust'-Kan**	**2.18**	**291**	P	**Pb**	**13 11 10.2**	**-0.5**
UKR				S	**Sb**	**13 11 37.1**	**-0.6**
TASR	**Tashtagol**	**2.55**	**358**	P	**Pb**	**13 11 16.4**	**-0.5**
TASR				S	**Sg**	**13 11 50.6**	**-2.3**
TBTR	**Tabat**	**3.21**	**31**	P	**Pb**	**13 11 26.0**	**-2.0**
TBTR				S	**Sb**	**13 12 06.4**	**-0.7**
ELT	**Eltsovka**	**3.24**	**341**	P	**Pb**	**13 11 25.4**	**-3.2**
ELT				S	**Sb**	**13 12 07.7**	**-0.4**
DJO	**Djoy, Khakassi**	**3.26**	**37**	P	**Pb**	**13 11 28.1**	**-0.9**
DJO				S	**Sb**	**13 12 07.9**	**-0.9**
DJOS	**Djoyskaya Sosn**	**3.34**	**38**	P	**Pb**	**13 11 29.4**	**-0.9**
DJOS				S	**Sb**	**13 12 10.5**	**-0.6**
VEH	**Verkhnyaya Baz**	**3.37**	**24**	P	**Pb**	**13 11 31.7**	**+0.8**
VEH				S	**Sb**	**13 12 10.7**	**-1.2**
CERR	**Cheremushki**	**3.40**	**38**	P	**Pb**	**13 11 28.4**	**-2.8**
CERR				S	**Sb**	**13 12 11.4**	**-1.1**
ZSN	**Zaisan**	**3.46**	**218**	*e*P	**Pb**	**13 11 29.8**	**-2.4**
	9.4nm,0.2s						
ZSN				*e*S	**Sb**	**13 12 14.6**	**+0.3**
	70nm,0.4s						
LUZB	**Luzhba, Kemero**	**3.50**	**9**	P	**Pb**	**13 11 30.0**	**-2.9**
LUZB				S	**Sb**	**13 12 12.9**	**-2.6**

BLRR	**Bol'shaya Rech**	**3.95**	**43**	P	Pb	13 11 35.5	-5.2
BLRR				S	**Sb**	**13 12 23.3**	**-5.3**
ABNR	**Abakan**	**4.11**	**30**	P	**Pb**	**13 11 40.5**	**-2.8**
ABNR				S	**Sb**	**13 12 28.4**	**-4.6**
ARDR	**Aradan**	**4.14**	**53**	S	**Sn**	**13 12 26.5**	**+3.6**
ZAA0	**Zalesovo Array** 1.3nm,0.8s	**4.22**	**334**	⇓Pn	**Pn**	**13 11 37.7**	**+2.3**
ZAA0	11nm,1.0s			⇑Lg	Lg	13 12 42.3	
SEM	**Semipalatinsk** 3.6nm,0.2s	**4.97**	**275**	*e*P	**Pb**	**13 11 56.9**	**-1.3**
SEM	39nm,0.4s			*e*S	**Sb**	**13 13 01.5**	**+3.5**
MK31	**Makanchi Array** 5.0nm,0.4s,baz=52,slow=14,SNR=450	**5.11**	**230**	⇑Pn	**Pn**	**13 11 50.0**	**+2.4**
MK31	2.5nm,0.3s			⇓Sn	**Sn**	**13 12 49.3**	**+2.7**
MK31	6.2nm,0.4s,baz=47,slow=29,SNR=3.9			⇓Lg	Lg	13 13 13.8	
MAKZ	**Makanchi** 9.0nm,0.5s	**5.26**	**232**	⇑Pn	**Pn**	**13 11 51.8**	**+2.2**
MAKZ	7.7nm,0.7s			⇑Sn	**Sn**	**13 12 52.5**	**+2.3**
MAKZ	7.6nm,0.5s			⇑Lg	Lg	13 13 17.8	
KURK	**Kurchatov** 3.9nm,0.8s	**6.01**	**278**	⇓Pn	**Pn**	**13 12 00.8**	**+0.8**
KURK				⇓Sn	**Sn**	**13 13 09.2**	**+0.5**
KURK	13nm,0.5s			⇑Lg	Lg	13 13 37.1	
KURBB	**Kurchatov Arra** 6.2nm,0.3s	**6.07**	**278**	⇓Pn	**Pn**	**13 12 01.8**	**+1.1**
KURBB	16nm,0.5s			⇑Sn	**Sn**	**13 13 09.7**	**-0.4**
KURBB	49nm,0.7s			⇑Lg	Lg	13 13 37.6	

KRNET ***21*** *13:15:14.0±0.1, 39°.51N×71°.39E, h22^{km}, mb2.7*
SOME ***21*** *13:15:30.2, 40°.22N×71°.40E, h5^{km}*
NNC ***21*** *13:15:37.3±5.2, 40°.62N×71°.73E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=45.6km s-min=22.7km az=13.0*
ISC 21 13:15:15.0±1.8**, 39°.50N**±0°.08×**71°.37E**±0°.05**, h10^{km}, n19, σ1^{s}.64**/35**, 19C-12D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=94	**0.33**	**93**	⇑*i*P	**Pg**	**13 15 21.3**	**-0.4**
DRK	baz=94			⇑*i*S	**Sg**	**13 15 26.4**	**+0.2**
BTK	**Batken** baz=22	**0.70**	**323**	⇓*i*P	**Pg**	**13 15 27.2**	**-1.4**
BTK	baz=22			⇓*i*S	**Sg**	**13 15 37.6**	**-0.3**
OHH	**Osh** baz=46	**1.49**	**46**	⇓*i*P	**Pn**	**13 15 41.0**	**-1.0**
OHH	baz=46			⇓*i*S	**Sn**	**13 16 00.5**	**-1.1**
SFK	**Sufi-Kurgan** baz=72	**1.72**	**72**	⇑*i*P	**Pn**	**13 15 45.1**	**-0.1**
SFK	baz=72			⇑*e*S	**Sn**	**13 16 06.9**	**-0.5**
ARSB	**Arslanbob** baz=33	**2.20**	**33**	⇑*i*P	**Pn**	**13 15 51.7**	**0.0**
ARSB	baz=33			⇑*i*S	**Sn**	**13 16 18.6**	**-0.5**
IUG	**Iuzhnay** 3.5nm,0.1s	**2.84**	**339**	*e*P	**Pg**	**13 16 12.7**	**+3.3**
IUG	19nm,0.4s			*e*S	**Sb**	**13 16 42.7**	**+2.1**
AML	**Almayashu** baz=33	**3.17**	**33**	⇑*e*P	**Pn**	**13 16 04.8**	**-0.5**
AML	baz=33			⇑*i*S	**Sn**	**13 16 40.1**	**-3.2**
ARLS	**Aral** baz=43	**3.26**	**43**	⇑*i*P	**Pn**	**13 16 06.6**	**+0.3**
ARLS	baz=43			⇑*i*S	**Sn**	**13 16 44.3**	**-0.9**
MRKS	**Merke** 5.1nm,0.4s	**3.54**	**23**	*e*P	**Pg**	**13 16 23.4**	**+0.7**
MRKS	7.0nm,0.2s			*e*S	**Sb**	**13 17 01.2**	**+0.5**
UCH	**Uchtor** baz=40	**3.62**	**40**	⇓*i*P	**Pn**	**13 16 11.6**	**0.0**
UCH	baz=40			⇓*i*S	**Sn**	**13 16 51.6**	**-3.0**
EKS2	**Erkin-Say** baz=29	**3.65**	**29**	⇑*i*P	**Pn**	**13 16 12.2**	**+0.6**
EKS2	baz=29			⇑*i*S	**Sn**	**13 16 53.0**	**-1.8**
KK31	**Karatay Array** 0.5nm,0.3s,baz=154,slow=15,SNR=5.5	**3.66**	**350**	⇓Pg	**Pg**	**13 16 24.0**	**-1.1**
KK31	1.2nm,0.3s,baz=160,slow=29,SNR=7.1			⇓Lg	Lg	13 17 04.0	
AAK	**Ala-Archa** baz=36	**3.93**	**36**	⇑*i*P	**Pn**	**13 16 16.2**	**+0.7**
AAK	baz=36			⇑*i*S	**Sn**	**13 16 59.3**	**-2.4**
AAK	**Ala-Archa** 2.6nm,0.4s	**3.93**	**36**	⇑Pn	**Pb**	**13 16 25.3**	**+0.9**
AAK	8.6nm,0.8s			Lg	Lg	13 17 08.8	
KBK	**Karagaybulak** baz=39	**4.16**	**39**	⇑*i*P	**Pn**	**13 16 18.6**	**0.0**
KBK	baz=39			⇑*i*S	**Sn**	**13 17 04.0**	**-3.4**
USP	**Ospenovka** baz=31	**4.44**	**31**	⇓*i*P	**Pn**	**13 16 23.1**	**+0.7**
USP	baz=31			⇓*i*S	**Sn**	**13 17 12.2**	**-2.0**
ULHL	**Ulahol** baz=52	**4.60**	**52**	⇓*i*P	**Pn**	**13 16 25.5**	**+0.7**
ULHL	baz=52			⇓*i*S	**Sn**	**13 17 16.2**	**-2.2**
TKM2	**Tokmak 2** 3.0nm,0.9s	**4.67**	**42**	⇑Pg	**Pg**	**13 16 45.0**	**+0.5**
TKM2	2.6nm,0.7s			⇑Lg	Lg	13 17 36.1	
IZV	**Izvestkoviy** 0.6nm,0.2s	**5.30**	**46**	*e*P	**Pg**	**13 16 59.7**	**+3.2**
IZV	3.2nm,0.5s			*e*S	**Sg**	**13 18 03.8**	**-1.4**

KRNET ***21*** *13:29:20.4±0.1, 40°.73N×72°.81E, h11^{km}, mb3.4*
SOME ***21*** *13:29:20.6, 40°.78N×72°.75E, h15^{km}*
ISU ***21*** *13:29:21, 40°.74N×72°.77E, h10^{km}, Hypocentre not reviewed by the ISC*
NNC ***21*** *13:29:23.2±1.2, 40°.86N×72°.77E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=10.7km s-min=4.4km az=177.0*
ISC 21 13:29:19.6±0.9**, 40°.74N**±0°.03×**72°.84E**±0°.03**, h17^{km}**±8^{km}**, n54, σ1^{s}.30**/83**, 31C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh** baz=85	**0.21**	**191**	⇑*i*P	**Pg**	**13 29 24.6**	**-0.1**
OHH	baz=85			⇑*i*S	**Sg**	**13 29 27.7**	**-0.5**
OHH	**Osh**	**0.21**	**191**	*e*P		13 29 24.0	
OHH				*e*S		13 29 27.0	
ARSB	**Arslanbob** baz=12	**0.60**	**10**	⇑*i*P	**Pb**	**13 29 32.2**	**+0.5**
ARSB	baz=12			⇑*i*S	**Sb**	**13 29 40.5**	**+0.6**
ARSB	**Arslanbob**	**0.60**	**10**	*e*P		13 29 32.0	
ARSB				*e*S		13 29 40.0	
FRG	**Fergana**	**0.80**	**270**	*e*P		13 29 37.0	
FRG				*e*S		13 29 48.0	
SFK	**Sufi-Kurgan** baz=43	**0.88**	**145**	⇑*i*P	**Pn**	**13 29 37.5**	**+0.1**
SFK	baz=43			⇑*i*S	**Sn**	**13 29 49.7**	**-0.2**
DRK	**Karamyk** baz=12	**1.48**	**213**	⇑*i*P	**Pg**	**13 29 48.2**	**0.0**
DRK	baz=12			⇑*i*S	**Sg**	**13 30 08.5**	**+0.9**
AML	**Almayashu** baz=25	**1.54**	**24**	⇑*i*P	**Pg**	**13 29 49.5**	**+0.3**
AML	baz=25			⇑*i*S	**Sg**	**13 30 10.7**	**+1.4**
AML	**Almayashu** SNR=132	**1.54**	**24**	P	**Pg**	**13 29 49.3**	**+0.1**
ARLS	**Aral** baz=45	**1.59**	**44**	⇑*i*P	**Pg**	**13 29 50.4**	**+0.2**
ARLS	baz=45			⇑*i*S	**Sg**	**13 30 12.4**	**+1.6**
BTK	**Batken** baz=47	**1.68**	**247**	⇓*i*P	**Pg**	**13 29 51.2**	**-0.8**
BTK	baz=47			⇓*i*S	**Sg**	**13 30 14.3**	**+0.4**
BTK	**Batken**	**1.68**	**247**	*e*P		13 29 51.0	
BTK				*e*S		13 30 15.0	
MNAS	**Manas** baz=53	**1.77**	**352**	⇑*i*P	**Pg**	**13 29 53.4**	**-0.2**
MNAS	baz=53			⇑*i*S	**Sg**	**13 30 18.0**	**+1.4**
UCH	**Uchtor** baz=40	**1.95**	**40**	⇑*i*P	**Pg**	**13 29 57.6**	**+0.5**
UCH	baz=40			⇑*i*S	**Sg**	**13 30 23.7**	**+1.2**
UCH	**Uchtor** SNR=189	**1.95**	**40**	P	**Pg**	**13 29 57.8**	**+0.7**
MRKS	**Merke** 80nm,0.5s	**2.03**	**8**	*e*P	**Pg**	**13 29 58.6**	**+0.1**
MRKS	254nm,0.4s			*e*S	**Sg**	**13 30 25.9**	**+1.0**
MRKS	**Merke** 80nm,0.5s	**2.03**	**8**	Pg	**Pg**	**13 29 58.6**	**+0.1**
MRKS	254nm,0.4s			Lg	Lg	13 30 25.9	
EKS2	**Erkin-Say** baz=20	**2.05**	**20**	⇓*i*P	**Pg**	**13 29 58.6**	**-0.4**
EKS2	baz=20			⇓*i*S	**Sg**	**13 30 25.8**	**+0.2**
EKS2	**Erkin-Say** SNR=49	**2.05**	**20**	P	**Pg**	**13 29 58.5**	**-0.5**
AAK	**Ala-Archa** baz=33	**2.27**	**33**	⇑*i*P	**Pg**	**13 30 01.6**	**-1.6**
AAK	baz=33			⇑*i*S	**Sg**	**13 30 31.7**	**-0.9**
AAK	**Ala-Archa** SNR=96	**2.27**	**33**	P	**Pg**	**13 30 02.3**	**-0.9**
AAK	**Ala-Archa** 25nm,0.3s	**2.27**	**33**	⇑Pn	**Pg**	**13 30 02.1**	**-1.0**
AAK	181nm,0.6s			⇓Lg	Lg	13 30 33.8	
DZA	**Taraz** 69nm,0.1s	**2.43**	**333**	*e*P	**Pg**	**13 30 05.0**	**-1.2**
DZA	370nm,0.4s			*e*S	**Sg**	**13 30 36.6**	**-1.2**
DZA	**Taraz** 69nm,0.1s	**2.43**	**333**	Pg	**Pg**	**13 30 05.0**	**-1.2**
DZA	370nm,0.4s			Lg	Lg	13 30 36.6	
FRU1	**Bishkek** baz=32	**2.47**	**32**	⇑*i*P	**Pb**	**13 30 04.3**	**+0.8**
FRU1	baz=32			⇑*i*S	**Sb**	**13 30 35.4**	**+1.7**
KBK	**Karagaybulak** baz=39	**2.49**	**39**	⇑*i*P	**Pb**	**13 30 04.7**	**+0.8**
KBK	baz=39			⇑*i*S	**Sb**	**13 30 36.5**	**+2.2**
KBK	**Karagaybulak** SNR=66	**2.49**	**39**	P	**Pg**	**13 30 06.0**	**-1.3**
IUG	**Iuzhnay** 7.7nm,0.2s	**2.54**	**305**	*e*P	**Pb**	**13 30 06.1**	**+1.4**
IUG	215nm,0.3s			*e*S	**Sg**	**13 30 39.0**	**-2.2**
IUG	**Iuzhnay** 7.7nm,0.2s	**2.54**	**305**	Pg	**Pb**	**13 30 06.1**	**+1.4**
IUG	215nm,0.3s			Lg	Lg	13 30 39.0	
CHMS	**Chumysh** baz=32	**2.68**	**32**	⇑*e*P	**Pb**	**13 30 07.0**	**0.0**
CHMS	baz=32			⇑*i*S	**Sb**	**13 30 41.2**	**+1.6**
CHMS	**Chumysh** SNR=6.6	**2.68**	**32**	P	**Pb**	**13 30 08.2**	**+1.2**
USP	**Ospenovka** baz=26	**2.82**	**26**	⇓*e*P	**Pb**	**13 30 08.9**	**-0.5**
USP	baz=26			⇓*i*S	**Sb**	**13 30 44.8**	**+1.2**
USP	**Ospenovka** SNR=27	**2.82**	**26**	P	**Pb**	**13 30 09.3**	**-0.1**
KK31	**Karatay Array** 1.8nm,0.2s,baz=132,slow=14,SNR=109	**2.94**	**325**	Pn	**Pb**	**13 30 09.2**	**-2.2**
KK31	24nm,0.5s,baz=146,slow=31,SNR=5.7			⇓Lg	Lg	13 30 51.2	
ULHL	**Ulahol** baz=58	**2.97**	**58**	⇑*i*P	**Pb**	**13 30 11.2**	**-0.9**
ULHL	baz=58			⇑*i*S	**Sb**	**13 30 48.9**	**+0.7**
TKM2	**Tokmak 2** baz=43	**3.00**	**42**	⇓*e*P	**Pb**	**13 30 11.7**	**-1.0**
TKM2	baz=43			⇓*i*S	**Sb**	**13 30 49.2**	**0.0**
TKM2	**Tokmak 2** SNR=9.0	**3.00**	**42**	P	**Pb**	**13 30 13.7**	**+1.0**
TKM2	**Tokmak 2** 8.0nm,0.4s	**3.00**	**42**	⇑Pn	**Pb**	**13 30 12.3**	**-0.4**
TKM2	41nm,0.6s			⇓Lg	Lg	13 30 54.8	
KST	**Kastek** 9.3nm,0.4s	**3.28**	**44**	*e*P	**Pg**	**13 30 21.7**	**-0.7**
KST	30nm,0.5s			*e*S	**Sg**	**13 31 05.5**	**+0.5**
KST	**Kastek** 9.3nm,0.4s	**3.28**	**44**	Pg	**Pg**	**13 30 21.7**	**-0.7**
KST	30nm,0.5s			Lg	Lg	13 31 05.5	
DGS	**Degeres** 24nm,0.4s	**3.33**	**40**	*e*P	**Pg**	**13 30 23.0**	**-0.3**
DGS	43nm,0.8s			*e*S	**Sg**	**13 31 07.2**	**+0.8**
DGS	**Degeres** 24nm,0.4s	**3.33**	**40**	Pg	**Pg**	**13 30 23.0**	**-0.3**
DGS	43nm,0.8s			Lg	Lg	13 31 07.2	
MTBS	**Maitube** 4.8nm,0.4s	**3.59**	**47**	*e*P	**Pg**	**13 30 26.9**	**-1.5**
MTBS	20nm,0.3s			*e*S	**Sg**	**13 31 14.1**	**-0.8**
MTBS	**Maitube** 4.8nm,0.4s	**3.59**	**47**	Pg	**Pg**	**13 30 26.9**	**-1.5**
MTBS	20nm,0.3s			Lg	Lg	13 31 14.1	
IZV	**Izvestkoviy** 2.9nm,0.2s	**3.64**	**50**	*e*P	**Pg**	**13 30 26.9**	**-2.4**
IZV	29nm,0.6s			*e*S	**Sg**	**13 31 14.7**	**-1.8**
IZV	**Izvestkoviy** 2.9nm,0.2s	**3.64**	**50**	Pg	**Pg**	**13 30 26.9**	**-2.4**
IZV	29nm,0.6s			Lg	Lg	13 31 14.6	
TNSS	**Tian-Shan** 3.7nm,0.4s	**3.83**	**52**	*e*P	**Pg**	**13 30 31.8**	**-1.2**
TNSS	12nm,0.5s			*e*S	**Sg**	**13 31 22.6**	**-0.2**
TNSS	**Tian-Shan** 3.7nm,0.4s	**3.83**	**52**	Pg	**Pg**	**13 30 31.8**	**-1.2**
TNSS	12nm,0.5s			Lg	Lg	13 31 22.6	
MDOK	**Medeo** 6.0nm,0.5s	**3.97**	**51**	⇑Pg	**Pg**	**13 30 36.1**	**+0.5**
MDOK	29nm,1.1s			⇑Lg	Lg	13 31 26.9	
CHKK	**Chushkaly** 4.2nm,0.4s	**4.38**	**43**	*e*P	**Pg**	**13 30 42.2**	**-1.2**
CHKK	16nm,0.5s			*e*S	**Sg**	**13 31 40.9**	**+0.7**
CHKK	**Chushkaly** 4.2nm,0.4s	**4.38**	**43**	Pg	**Pg**	**13 30 42.3**	**-1.2**
CHKK	16nm,0.5s			Lg	Lg	13 31 40.8	
SATY	**Saty** 2.1nm,0.3s	**4.76**	**59**	*e*P	**Pg**	**13 30 50.7**	**0.0**
SATY	14nm,0.5s			*e*S	**Sg**	**13 31 54.6**	**+2.2**
ARXS	**Arharly** 4.5nm,0.4s	**5.07**	**45**	*e*P	**Pg**	**13 30 54.5**	**-2.1**
ARXS	15nm,0.9s			*e*S	**Sg**	**13 32 01.6**	**-0.6**
ARXS	**Arharly** 4.5nm,0.4s	**5.07**	**45**	Pg	**Pg**	**13 30 54.5**	**-2.1**
ARXS	15nm,0.9s			Lg	Lg	13 32 01.6	
UZB	**Uzynbulak** 1.5nm,0.3s	**5.20**	**60**	*e*P	**Pg**	**13 30 56.0**	**-3.2**
UZB	9.1nm,0.7s			*e*S	**Sg**	**13 32 03.8**	**-2.8**
UZB	**Uzynbulak** 1.5nm,0.3s	**5.20**	**60**	Pg	**Pg**	**13 30 56.0**	**-3.2**
UZB	9.1nm,0.7s			Lg	Lg	13 32 03.8	
PDGK	**Podgornoye** 4.2nm,1.0s	**5.59**	**60**	⇑Pg	**Pg**	**13 31 07.9**	**+1.3**
PDGK	15nm,0.8s			⇓Lg	Lg	13 32 19.2	
TDK	**Taldyqorghan** 20nm,0.4s	**5.91**	**42**	Pg	**Pg**	**13 31 10.3**	**-2.4**
TDK	42nm,0.8s			Lg	Lg	13 32 28.2	

IDC ***21*** *13:53:19.4±1.4, 54°.86N×161°.70E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.3/72, mbtmp3.4/6, ML2.4/1, Error ellipse: s-maj=42.2km s-min=20.7km az=160.0*
KRSC ***21*** *13:53:20.9±0.7, 54°.47N×162°.15E, h46^{km}±18^{km}, ML4.0*
ISC 21 13:53:20.4±2.4**, 54°.52N**±0°.05×**162°.11E**±0°.04**, h14^{km}**±15^{km}**, n41, σ1^{s}.32**/53**, mb3.4**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMD	**Tumrok D**	**1.21**	**305**	*e*P	**Pn**	**13 53 42.9**	**0.0**
TUMD				*e*S	**Sg**	**13 53 59.0**	**-0.3**
KZV	**Kizimen**	**1.21**	**300**	*e*P	**Pb**	**13 53 43.2**	**0.0**
TUMR	**Tumrok**	**1.37**	**305**	*e*P	**Pb**	**13 53 45.8**	**-0.1**
KII	**Karymskiy**	**1.64**	**254**	*e*P	**Pn**	**13 53 49.4**	**+0.6**
KMNR	**Kamenistaya**	**1.64**	**320**	*e*P	**Pb**	**13 53 50.3**	**-0.2**
KBTR	**Krutoberegovo**	**1.74**	**13**	*e*P	**Pb**	**13 53 51.5**	**-0.6**
KBG	**Krutoberegovo**	**1.77**	**11**	*e*P	**Pb**	**13 53 52.6**	**-0.1**
KBG				*e*S	**Sb**	**13 54 15.0**	**+0.2**
SPN	**Mys Shipunski**	**1.89**	**222**	*e*P	**Pn**	**13 53 52.1**	**-0.1**
SPN				*e*S	**Sn**	**13 54 14.2**	**-1.5**
KLY	**Klyuchi**	**1.98**	**336**	*e*P	**Pn**	**13 53 54.5**	**+1.0**
KLY				*e*S	**Sn**	**13 54 18.5**	**+0.4**
KOZ	**Kozyrevsk**	**2.01**	**321**	*e*P	**Pb**	**13 53 55.9**	**-0.7**
SMKR	**Semkarok**	**2.10**	**350**	*e*P	**Pb**	**13 53 57.5**	**-0.8**
BDR	**Baidarnaya**	**2.12**	**346**	*e*P	**Pb**	**13 53 57.4**	**-1.2**
NLC	**Nalytchevo**	**2.12**	**232**	*e*P	**Pn**	**13 53 56.2**	**+0.8**
NLC				*e*S	**Sn**	**13 54 21.4**	**-0.2**
SRKR	**Sorokina**	**2.21**	**346**	*e*P	**Pn**	**13 53 58.4**	**+1.7**
SRDR	**Sredinnyy**	**2.26**	**324**	*e*P	**Pn**	**13 53 58.8**	**+1.4**
SDLR	**Sedlovina**	**2.28**	**238**	*e*P	**Pn**	**13 53 58.5**	**+0.8**
SDLR				*e*S	**Sn**	**13 54 24.9**	**-0.7**
SMAR	**Somma**	**2.33**	**239**	*e*P	**Pn**	**13 53 59.3**	**+0.8**
SMAR				*e*S	**Sn**	**13 54 26.6**	**-0.4**
KRER	**Koryakskii**	**2.33**	**240**	*e*P	**Pn**	**13 53 59.7**	**+1.2**
KRER				*e*S	**Sn**	**13 54 26.8**	**-0.2**
BKI	**Bering**	**2.33**	**71**	*e*P	**Pn**	**13 53 59.2**	**+0.9**
BKI				*e*S	**Sn**	**13 54 26.3**	**-0.5**
UGLR	**Uglovaya**	**2.35**	**237**	*e*P	**Pn**	**13 53 59.5**	**+0.9**
KRX	**Arik**	**2.35**	**242**	*e*P	**Pn**	**13 53 59.6**	**+0.9**
KRX				*e*S	**Sn**	**13 54 27.1**	**-0.4**
AVH	**Avacha**	**2.36**	**239**	*e*P	**Pn**	**13 54 00.0**	**+1.2**
AVH				*e*S	**Sn**	**13 54 28.2**	**+0.7**
KOK	**Koryaka**	**2.40**	**241**	*e*P	**Pn**	**13 54 00.5**	**+1.2**
ESO	**Esso**	**2.41**	**307**	*e*P	**Pn**	**13 54 01.0**	**+1.6**
DALK	**Dalny**	**2.49**	**235**	*e*P	**Pn**	**13 54 01.4**	**+1.0**
DALK				*e*S	**Sn**	**13 54 30.2**	**-0.4**
PET	**Petropavlovsk**	**2.54**	**235**	*e*P	**Pn**	**13 54 02.1**	**+0.9**
PET				*e*S	**Sn**	**13 54 31.2**	**-0.7**
GNL	**Ganaly**	**2.59**	**253**	*e*P	**Pn**	**13 54 03.5**	**+1.5**
KRMR	**Karymshinskiy**	**2.91**	**236**	*e*P	**Pn**	**13 54 09.0**	**+2.8**
KRMR				*e*S	**Sn**	**13 54 43.9**	**+2.9**
PETK	**Petropavlovsk-** 2.6nm,0.3s,baz=78,slow=18,SNR=32	**2.97**	**243**	Pn	**Pn**	**13 54 08.3**	**+1.2**
PETK	2.3nm,0.3s,baz=88,slow=19,SNR=5.1			Sn	**Sn**	**13 54 45.3**	**+2.7**
MTVR	**Mutnovka**	**3.11**	**231**	*e*P	**Pn**	**13 54 11.0**	**+1.9**
GRL	**Gorelyy**	**3.11**	**232**	*e*P	**Pn**	**13 54 11.1**	**+1.9**
APC	**Apacha**	**3.35**	**244**	*e*P	**Pn**	**13 54 14.2**	**+1.9**
OSSR	**Ossora**	**4.77**	**6**	*e*P	**Pn**	**13 54 33.8**	**+2.0**
H11N2	**WAKE ISLAND Hy** baz=355,slow=76,SNR=118	**34.92**	**172**	T	T	14 37 29.2	
H11N3	**WAKE ISLAND Hy** baz=355,slow=76,SNR=101	**34.93**	**172**	T	T	14 37 30.7	
H11N1	**WAKE ISLAND Hy** baz=355,slow=76,SNR=117	**34.94**	**172**	T	T	14 37 30.9	
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=300,slow=7.6,SNR=5.8	**41.30**	**44**	P	**P**	**14 01 06.3**	**+1.4**
KURBB	**Kurchatov Arra** 0.2nm,0.5s,baz=54,slow=6.4,SNR=2.6	**48.10**	**302**	P	**P**	**14 01 57.0**	**-2.3**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=42,slow=7.1,SNR=2.7	**48.62**	**296**	P	**P**	**14 02 00.8**	**-2.6**
FINES	**FINESS Array B** 2.3nm,0.9s,baz=39,slow=9.0,SNR=5.7	**59.28**	**337**	P	**P**	**14 03 19.8**	**-1.1**
TXAR	**Lajitas Array** 0.3nm,0.6s,baz=306,slow=6.3,SNR=1.9	**68.99**	**69**	P	**P**	**14 04 26.4**	**+1.1**

IDC ***21*** *13:57:34.6±1.2, 17°.57N×148°.08E, h0^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.5/53, mbtmp3.6/8, Error ellipse: s-maj=36.2km s-min=24.1km az=100.0*
NEIC ***21*** *13:57:39.7±1.2, 17°.6N±0°.2×148°.1E±0°.2, h35^{km}±4^{km}, mb4.1/6, Error ellipse: s-maj=25.5km s-min=21.8km az=213.0*
ISC 21 13:57:37.7±0.8**, 17°.5N**±0°.1×**148°.0E**±0°.1**, h21^{km}, n16, σ0^{s}.70**/15**, mb3.8**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	**Anatahan**	**2.51**	**242**	Pn	**Pn**	**13 58 16.9**	**-0.5**
PATS	**Pohnpei**	**14.63**	**135**	Pn	**Pn**	**14 01 03.3**	**-0.2**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=22,slow=9.2,SNR=1.7	**39.60**	**200**	P	**P**	**14 05 09.4**	**+1.6**
ASAR	**Alice Springs** 0.5nm,1.0s,baz=20,slow=6.8,SNR=2.6	**43.21**	**199**	P	**P**	**14 05 36.8**	**-0.7**
SONM	**Songino Array** 0.5nm,0.8s,baz=104,slow=6.1,SNR=2.7	**45.43**	**321**	P	**P**	**14 05 55.9**	**+0.8**
SONM	**Songino Array**	**45.43**	**321**	P	**P**	**14 05 54.8**	**-0.3**
CMAR	**Chiang Mai Arr** 0.4nm,0.4s,baz=72,slow=8.6,SNR=1.3	**46.58**	**279**	P	**P**	**14 06 04.9**	**+0.5**
MK31	**Makanchi Array**	**60.86**	**314**	P	**P**	**14 07 48.8**	**+0.1**
MK31	comp=Z,2.2nm,1.3s			IAmb	IAmb	14 08 11.5	
MKAR	**Makanchi Array** comp=Z,0.6nm,0.7s,baz=111,slow=5.1,SNR=4.2	**60.86**	**314**	P	**P**	**14 07 49.0**	**+0.3**
KURK	**Kurchatov**	**63.61**	**318**	P	**P**	**14 08 06.1**	**-0.8**
KURBB	**Kurchatov Arra** comp=Z,2.7nm,0.8s,baz=94,slow=7.7,SNR=10	**63.66**	**318**	P	**P**	**14 08 07.1**	**-0.2**
KKAR	**Karatay Array**	**69.21**	**310**	P	**P**	**14 08 43.0**	**-0.1**
INK	**Inuvik** comp=Z,0.6nm,0.8s,baz=221,slow=5.3,SNR=6.0	**69.57**	**23**	P	**P**	**14 08 45.3**	**+0.6**
INK	**Inuvik** comp=Z,2.1nm,1.3s	**69.57**	**23**	IAmb	IAmb	14 08 50.3	
ABKAR	**Akbulak array**	**75.69**	**317**	P	**P**	**14 09 21.1**	**-0.5**
ABKAR	comp=Z,1.4nm,0.8s			IAmb	IAmb	14 09 21.6	
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.8s,baz=286,slow=4.8,SNR=3.9	**77.97**	**28**	P	**P**	**14 09 33.7**	**-0.4**

MOS ***21*** *13:58:03.3±1.2, 38°.15N×42°.86E, h9^{km}, mb4.6/33, Error ellipse: s-maj=5.6km s-min=4.0km az=86.3*
DSN ***21*** *13:58:03.8±1.2, 38°.02N×42°.88E, h4^{km}, mb4.9/12, Error ellipse: s-maj=20.8km s-min=6.2km az=93.0*
ISK ***21*** *13:58:03.7, 38°.24N×42°.85E, h5^{km}, ML4.5/27*
NSSP ***21*** *13:58:03.5, 38°.28N×42°.78E, h10^{km}, Ms4.2*
TEH ***21*** *13:58:04.0, 38°.29N×42°.87E, h9^{km}, ML4.6*
IDC ***21*** *13:58:04.0±0.6, 38°.29N×42°.83E, h0^{km}, mb4.1/25, mb1 4.2/34, mb1mx4.1/58, mbtmp4.2/34, ML3.8/7, MS3.6/17, Ms1 3.6/17, ms1mx3.3/49, Error ellipse: s-maj=12.2km s-min=8.7km az=162.0*
DDA ***21*** *13:58:04.0, 38°.32N×42°.82E, h14^{km}±1^{km}, MW4.4*
NEIC ***21*** *13:58:07.5±2.6, 38°.19N±0°.07×42°.90E±0°.07, h30^{km}±6^{km}, Error ellipse: s-maj=10.0km s-min=8.1km az=191.0*
ISC 21 13:58:05.1±0.6**, 38°.24N**±0°.02×**42°.86E**±0°.01**, h10^{km}**±4^{km}**, n409, σ1^{s}.84**/448**, mb4.5**/75**, MS3.7**/10**, 46C-17D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.13**	**47**	PG	**Pg**	**13 58 07.8**	**-0.4**
AKDM				SG	**Sg**	**13 58 09.4**	**-1.1**
AKDM	**Akdamar-Van**	**0.13**	**47**	*e*Pg	**Pg**	**13 58 06.8**	**-1.4**
GEVA	**Gevas**	**0.17**	**65**	⇑*i*P	**Pg**	**13 58 08.6**	**-0.3**
GEVA				*i* S	**Sg**	**13 58 11.5**	**0.0**
GEVA	comp=E,114μm,0.3s			IAML		13 58 14.0	
GEVA	comp=N,122μm,0.3s			IAML		13 58 14.0	
PERV	**Siirt/Pervari-**	**0.39**	**221**	⇑*i*P	**Pg**	**13 58 12.5**	**-0.3**

PERV				*i* S	**Sb**	**13 58 20.3**	**+0.1**
TVAN	**Van**	**0.52**	**56**	⇑*i*P	**Pg**	**13 58 14.2**	**-0.9**
TVAN				IAML		13 58 29.0	
	comp=N,36µm,0.5s						
TVAN				IAML		13 58 35.0	
	comp=E,23µm,0.5s						
VANB	**Van**	**0.55**	**49**	PG	**Pg**	**13 58 13.4**	**-2.3**
VANB	**Van**	**0.55**	**49**	*e*Pg	**Pg**	**13 58 13.5**	**-2.3**
BLIS	**Bitlis-Merkez**	**0.61**	**287**	⇑*i*P	**Pg**	**13 58 15.6**	**-1.4**
BLIS				*i* S	**Sg**	**13 58 23.5**	**-1.6**
BLIS				IAML		13 58 27.0	
	comp=E,14µm,0.4s						
BLIS				IAML		13 58 27.0	
	comp=N,18µm,0.8s						
BLIS	**Bitlis-Merkez**	**0.61**	**287**	*e*Pg	**Pg**	**13 58 15.6**	**-1.4**
GURO	**Guroymak-BITLI**	**0.72**	**296**	PG	**Pg**	**13 58 17.4**	**-1.6**
GURO	**Guroymak-BITLI**	**0.72**	**296**	*e*Pg	**Pg**	**13 58 16.7**	**-2.3**
SRTM	**Siirt_Merkez**	**0.78**	**252**	⇑*i*P	**Pg**	**13 58 19.6**	**-0.6**
SRTM				*i* S	**Sb**	**13 58 32.1**	**+0.6**
SRTM				IAML		13 58 35.0	
	comp=N,20µm,0.6s						
SRTM				IAML		13 58 38.0	
	comp=E,21µm,0.6s						
SRTM	**Siirt_Merkez**	**0.78**	**252**	*e*Pg	**Pg**	**13 58 19.5**	**-0.7**
SIRT	**Sirnak**	**0.81**	**204**	PG	**Pg**	**13 58 20.1**	**-0.6**
SIRT	**Sirnak**	**0.81**	**204**	*e*Pg	**Pg**	**13 58 20.1**	**-0.6**
ERCV	**ERCIS-VAN**	**0.86**	**26**	PG	**Pg**	**13 58 20.3**	**-1.4**
ERCV				SG	**Sb**	**13 58 33.3**	**-0.7**
ERCV	**ERCIS-VAN**	**0.86**	**26**	*e*Pg	**Pg**	**13 58 20.0**	**-1.7**
BASK	**Baskale_VAN**	**0.92**	**101**	⇑*i*P	**Pg**	**13 58 21.7**	**-1.1**
BASK				*i* S	**Sb**	**13 58 36.8**	**+1.1**
BASK				IAML		13 58 42.0	
	comp=N,7µm,0.5s						
BASK				IAML		13 58 43.0	
	comp=E,5µm,0.6s						
BASK	**Baskale_VAN**	**0.92**	**101**	*e*Pg	**Pg**	**13 58 21.9**	**-0.9**
MLAZ	**Malazgirt-MUS**	**0.93**	**345**	PG	**Pg**	**13 58 21.8**	**-1.2**
MLAZ				SG	**Sb**	**13 58 35.3**	**-0.6**
MLAZ	**Malazgirt-MUS**	**0.93**	**345**	*e*Pn	**Pg**	**13 58 21.3**	**-1.7**
VMUR	**Van-Muradiye**	**0.93**	**36**	⇑*i*P	**Pg**	**13 58 21.8**	**-1.3**
VMUR				*i* S	**Sb**	**13 58 36.8**	**+0.8**
VMUR				IAML		13 58 39.0	
	comp=N,8µm,0.7s						
VMUR				IAML		13 58 44.0	
	comp=E,15µm,0.8s						
OZAP	**Van, Ozalp-Mer**	**0.98**	**64**	⇑*i*P	**Pg**	**13 58 22.4**	**-1.6**
OZAP				IAML		13 58 47.0	
	comp=E,6µm,0.9s						
OZAP				IAML		13 58 47.0	
	comp=N,4µm,1.2s						
CUKT	**Cukurca**	**1.16**	**149**	PN	**Pb**	**13 58 25.9**	**-1.3**
CUKT	**Cukurca**	**1.16**	**149**	⇓*i*P	**Pb**	**13 58 26.8**	**-0.4**
CUKT				*i* S	**Sn**	**13 58 43.9**	**+0.5**
CUKT				IAML		13 58 52.0	
	comp=E,9µm,0.5s						
CUKT				IAML		13 58 59.0	
	comp=N,10µm,0.8s						
CUKT	**Cukurca**	**1.16**	**149**	*e*Pn	**Pb**	**13 58 25.9**	**-1.3**
MUSM	**Mu-Merkez**	**1.16**	**295**	⇑*i*P	**Pb**	**13 58 25.3**	**-2.1**
MUSM				*i* S	**Sg**	**13 58 40.2**	**-2.4**
MUSM				IAML		13 58 44.0	
	comp=N,5µm,0.5s						
MUSM				IAML		13 58 46.0	
	comp=E,3µm,0.9s						
MUSM	**Mu-Merkez**	**1.16**	**295**	*e*Pg	**Pb**	**13 58 25.3**	**-2.1**
EKAR	**Karacoban**	**1.19**	**329**	*e*P	**Pb**	**13 58 26.5**	**-1.4**
EKAR				IAML		13 58 52.0	
	comp=N,9µm,1.0s						
EKAR				IAML		13 59 05.0	
	comp=E,12µm,0.7s						
CLDR	**Caldiran**	**1.22**	**42**	PN	**Pb**	**13 58 26.6**	**-1.8**
CLDR	**Caldiran**	**1.22**	**42**	⇑*i*P	**Pb**	**13 58 26.4**	**-2.0**
CLDR				*i* S	**Sn**	**13 58 45.9**	**+0.7**
CLDR				IAML		13 58 54.0	
	comp=N,3µm,0.8s						
CLDR				IAML		13 58 56.0	
	comp=E,4µm,0.7s						
CLDR	**Caldiran**	**1.22**	**42**	*e*Pn	**Pb**	**13 58 26.1**	**-2.3**
BTMN	**Batman**	**1.30**	**255**	⇑*i*P	**Pn**	**13 58 29.4**	**0.0**
BTMN				*i* S	**Sn**	**13 58 47.7**	**+0.8**
BTMN				IAML		13 58 48.0	
	comp=N,11µm,0.5s						
BTMN				IAML		13 58 49.0	
	comp=E,17µm,0.6s						
YOVA	**Hakkari_Yksek**	**1.30**	**120**	⇑*i*P	**Pn**	**13 58 29.0**	**-0.6**
YOVA				*i* S	**Sn**	**13 58 50.3**	**+3.2**
YOVA				IAML		13 58 54.0	
	comp=E,4µm,0.9s						
YOVA				IAML		13 58 59.0	
	comp=N,3µm,0.7s						
YOVA	**Hakkari_Yksek**	**1.30**	**120**	*e*Pn	**Pn**	**13 58 29.1**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.31**	**267**	PN	**Pn**	**13 58 29.1**	**-0.4**
SVAN				SN	**Sg**	**13 58 47.5**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.31**	**267**	⇑*i*P	**Pn**	**13 58 29.3**	**-0.2**
SVAN				*i* S	**Sn**	**13 58 47.0**	**-0.1**
SVAN				IAML		13 58 48.0	
	comp=N,5µm,0.6s						
SVAN				IAML		13 58 51.0	
	comp=E,2µm,0.8s						
SVAN	**Silvan-Diyarba**	**1.31**	**267**	*e*Pn	**Pn**	**13 58 29.1**	**-0.4**
AGRB	**Hanur-Agry**	**1.34**	**4**	PN	**Pn**	**13 58 28.6**	**-1.5**
AGRB				SN	**Sn**	**13 58 48.1**	**+0.1**
AGRB	**Hanur-Agry**	**1.34**	**4**	*e*Pn	**Pn**	**13 58 28.5**	**-1.5**
MIDY	**Mardin/Midyat-**	**1.43**	**235**	⇑*i*P	**Pb**	**13 58 31.6**	**-0.2**
MIDY				*i* S	**Sb**	**13 58 50.3**	**+0.2**
MIDY				IAML		13 58 53.0	
	comp=E,13µm,0.4s						
MIDY				IAML		13 58 53.0	
	comp=N,11µm,0.4s						
DYDN	**Diyadin**	**1.45**	**26**	⇑*i*P	**Pn**	**13 58 30.1**	**-1.5**
DYDN				IAML		13 58 58.0	
	comp=E,2µm,0.8s						
DYDN				IAML		13 59 03.0	
	comp=N,2µm,0.8s						
KOTA	**Agri, Merkez-K**	**1.58**	**10**	⇑*i*P	**Pn**	**13 58 32.2**	**-1.1**
KOTA				*i* S	**Sn**	**13 58 53.8**	**-0.2**
KOTA				IAML		13 58 58.0	
	comp=E,1µm,1.4s						
KOTA				IAML		13 59 07.0	
	comp=N,2µm,1.1s						
SLHN	**Bingol, Solhan**	**1.61**	**297**	*e*P	**Pn**	**13 58 34.0**	**+0.3**
SLHN				*i* S	**Sg**	**13 58 58.4**	**+1.6**
SLHN				IAML		13 59 07.0	
	comp=E,5µm,0.8s						
SLHN				IAML		13 59 09.0	
	comp=N,3µm,0.9s						
EATA	**Eleskirt**	**1.64**	**350**	⇑*i*P	**Pn**	**13 58 34.0**	**-0.3**
EATA				*i* S	**Sn**	**13 58 54.2**	**-1.6**
EATA				IAML		13 59 02.0	
	comp=E,5µm,1.1s						
EATA				IAML		13 59 02.0	
	comp=N,4µm,0.7s						
KARO	**Karliova-Bingo**	**1.77**	**308**	PN	**Pn**	**13 58 35.8**	**-0.2**
BNGB	**Bingl**	**1.87**	**294**	PN	**Pn**	**13 58 37.8**	**+0.6**
IGDI	**IGDIR**	**1.88**	**30**	⇑*i*P	**Pn**	**13 58 36.9**	**-0.4**
IGDI				IAML		13 59 14.0	
	comp=E,761nm,0.8s						
MARD	**Mardin**	**1.89**	**241**	⇑*i*P	**Pn**	**13 58 38.0**	**+0.4**
MARD				*i* S	**Sb**	**13 59 02.9**	**-0.6**
MARD				IAML		13 59 12.0	
	comp=E,11µm,0.7s						
MARD				IAML		13 59 14.0	
	comp=N,17µm,0.6s						
HANI	**Diyarbakir_Han**	**1.94**	**276**	⇑*i*P	**Pn**	**13 58 38.3**	**+0.1**
HANI				*i* S	**Sb**	**13 59 04.5**	**-0.5**
HANI				IAML		13 59 09.0	
	comp=N,4µm,0.5s						
HANI				IAML		13 59 10.0	
	comp=E,4µm,0.6s						
HOMI	**Horasan**	**1.95**	**338**	*i* P	**Pn**	**13 58 39.3**	**+0.8**
HOMI				*i* S	**Sg**	**13 59 07.1**	**-0.7**
HOMI				IAML		13 59 23.0	
	comp=N,3µm,0.8s						
HOMI				IAML		13 59 35.0	
	comp=E,2µm,0.8s						
VNNZ	**Vanand**	**2.00**	**22**	*i* P	**Pb**	**13 58 41.0**	**-0.6**
VNNZ				*i* S	**Sg**	**13 59 08.9**	**-0.6**
ECAT	**Cat-ERZURUM**	**2.01**	**313**	⇓*e*P	**Pn**	**13 58 39.9**	**+0.7**
ECAT				*i* S	**Sb**	**13 59 06.6**	**-0.3**
ECAT				IAML		13 59 12.0	
	comp=N,612nm,0.9s						
TASB	**TASBURUN-IGDIR**	**2.04**	**31**	PN	**Pn**	**13 58 39.8**	**+0.2**
METS	**Metsamor**	**2.13**	**26**	*i* P	**Pb**	**13 58 44.5**	**+0.7**
METS				*i* S	**Sg**	**13 59 14.4**	**+0.9**
DYBB	**Diyarbakir**	**2.17**	**263**	PN	**Pn**	**13 58 41.4**	**+0.1**
YEDI	**Yedisu-Bingol**	**2.17**	**304**	PN	**Pn**	**13 58 41.8**	**+0.4**
DIYA	**Diyarbakir**	**2.19**	**262**	⇑*i*P	**Pn**	**13 58 41.7**	**+0.1**
DIYA				*i* S	**Sn**	**13 59 08.0**	**-0.8**
DIYA				IAML		13 59 28.0	
	comp=E,3µm,0.6s						
DIYA				IAML		13 59 33.0	
	comp=N,5µm,1.1s						
AKDA	**Akdag**	**2.19**	**328**	*i* P	**Pn**	**13 58 42.5**	**+0.7**
NRKZ	**NAREK**	**2.25**	**38**	*i* P	**Pb**	**13 58 44.5**	**-1.3**
NRKZ				*i* S	**Sb**	**13 59 15.0**	**+1.3**
IMRD	**Marand**	**2.28**	**77**	*e*Pn	**Pn**	**13 58 44.5**	**+1.5**
IMRD				*e*		13 58 48.8	
	comp=Z,99nm,0.5s						
EMRE	**Erzurum,Aziziy**	**2.31**	**321**	*e*P	**Pb**	**13 58 46.7**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.35**	**350**	PN	**Pn**	**13 58 44.3**	**+0.3**
KARS	**Kars**	**2.39**	**4**	PN	**Pn**	**13 58 44.9**	**+0.5**
KARS	**Kars**	**2.39**	**4**	P	**Pn**	**13 58 44.9**	**+0.5**
GNI	**Garni**	**2.40**	**37**	Pn	**Pn**	**13 58 45.0**	**+0.4**
	comp=Z,16nm,0.3s,baz=242,slow=2.5,SNR=32						
GNI				LR	LR	13 59 14.0	
	comp=Z,636nm,18.0s,baz=143,slow=29						
GNI	**Garni**	**2.40**	**37**	⇑*i*P	**Pn**	**13 58 44.9**	**+0.4**
GNI				⇑*i*S	**Sn**	**13 59 15.9**	**+1.8**
GNI	**Garni**	**2.40**	**37**	P	**Pn**	**13 58 45.9**	**+1.2**
GNI	**Garni**	**2.40**	**37**	PN	**Pn**	**13 58 45.2**	**+0.6**
GNI	**Garni**	**2.40**	**37**	P	**Pn**	**13 58 45.0**	**+0.4**
GNI	**Garni**	**2.40**	**37**	Pn	**Pn**	**13 58 44.6**	**0.0**
KOVA	**Elazig, Kovanc**	**2.44**	**282**	⇓*e*P	**Pn**	**13 58 44.0**	**-1.0**
KOVA				*i* S	**Sb**	**13 59 20.8**	**+1.5**
KAPZ	**Kaputan**	**2.52**	**34**	*i* P	**Pn**	**13 58 46.8**	**+0.6**
KAPZ				*i* S	**Sn**	**13 59 18.2**	**+1.1**
KRIK	**Erzurum-spir**	**2.58**	**325**	*i* P	**Pb**	**13 58 49.3**	**-2.2**
KRIK				*i* S	**Sb**	**13 59 25.0**	**+1.7**
ITBZ	**Tabriz**	**2.59**	**89**	*e*Pn	**Pn**	**13 58 48.2**	**+1.0**
MAHB	**Mahabad**	**2.70**	**122**	*e*Pn	**Pn**	**13 58 51.3**	**+2.6**
TNCL	**Tunceli-Merkez**	**2.74**	**290**	⇑*i*P	**Pn**	**13 58 49.6**	**+0.4**
TNCL				*i* S	**Sb**	**13 59 26.3**	**-1.7**
TNCL				IAML		13 59 39.0	
	comp=E,2µm,1.2s						
TNCL				IAML		13 59 44.0	
	comp=N,1µm,0.8s						
ERZN	**Erzincan**	**2.79**	**300**	PN	**Pn**	**13 58 50.5**	**+0.5**
BAYB	**BAYBURT**	**2.85**	**316**	*i* P	**Pb**	**13 58 53.5**	**-2.7**
BAYB				*i* S	**Sg**	**13 59 38.0**	**+1.3**
BAYT	**Aydıntepe-Bayb**	**3.01**	**316**	PN	**Pn**	**13 58 53.9**	**+0.9**
ELZG	**Elazig**	**3.06**	**276**	⇑*i*P	**Pn**	**13 58 53.9**	**+0.2**
ELZG				*i* S	**Sn**	**13 59 33.3**	**+2.9**
ELZG				IAML		13 59 52.0	
	comp=N,2µm,1.0s						
ELZG				IAML		13 59 53.0	
	comp=E,1µm,0.7s						
DBOC	**Borcka**	**3.23**	**344**	*e*P	**Pn**	**13 58 57.3**	**+1.4**
IHRS	**Heris**	**3.29**	**87**	*e*Pn	**Pn**	**13 58 58.7**	**+1.8**
IHRS				*e*		13 59 11.8	
	comp=Z,99nm,1.3s						
KELT	**Kelkit**	**3.39**	**305**	*i* P	**Pb**	**13 59 03.2**	**-2.1**
BATM	**Batumi**	**3.48**	**345**	⇑P	**Pn**	**13 59 01.1**	**+1.9**
BATM	**Batumi**	**3.48**	**345**	PN	**Pn**	**13 59 00.1**	**+0.9**
BATM	**Batumi**	**3.48**	**345**	P	**Pn**	**13 59 00.1**	**+0.9**
MALT	**Malatya**	**3.49**	**273**	PN	**Pn**	**13 58 59.7**	**+0.2**
MALT	**Malatya**	**3.49**	**273**	P	**Pn**	**13 58 59.4**	**-0.1**
ILIC	**ilic-Erzincan**	**3.56**	**291**	PN	**Pn**	**13 59 01.6**	**+1.0**
IHSH	**Hashtrud**	**3.61**	**104**	*e*Pn	**Pb**	**13 59 04.7**	**-2.0**
KTUT	**Trabzon**	**3.64**	**320**	PN	**Pn**	**13 59 02.7**	**+1.3**
SURC	**SANLIURFA_SURC**	**3.64**	**249**	⇑*i*P	**Pn**	**13 59 01.8**	**+0.2**
ALUC	**Giresun/Alucra**	**3.81**	**305**	*e*P	**Pb**	**13 59 09.9**	**-2.5**
ISRB	**Sarab**	**3.82**	**95**	*e*		13 59 22.7	
	comp=Z,99nm,1.2s						
ISRB				*e*Pn	**Pn**	**13 59 07.0**	**+2.9**
AKCD	**Akcadag**	**3.89**	**272**	⇑*i*P	**Pn**	**13 59 05.2**	**+0.1**
HEKM	**Malatya_Hekimh**	**3.90**	**281**	*i* P	**Pn**	**13 59 06.2**	**+1.0**
SUSE	**Susehri**	**4.12**	**300**	*i* P	**Pn**	**13 59 11.1**	**+2.9**
DARE	**Darende-Malaty**	**4.24**	**276**	PN	**Pn**	**13 59 10.3**	**+0.5**
GZT	**Gaziantep**	**4.29**	**260**	*i* P	**Pn**	**13 59 10.1**	**-0.4**
GZT				IAML		13 59 41.0	
	comp=N,417nm,0.6s						
GZT				IAML		13 59 47.0	
	comp=E,436nm,0.7s						
IDHR	**Dehrash**	**4.53**	**140**	*e*Pn	**Pn**	**13 59 15.7**	**+1.7**
IDHR				*e*		14 00 55.0	
	comp=Z,99nm,0.8s						
GAZ	**Gaziantep**	**4.61**	**258**	PN	**Pn**	**13 59 16.3**	**+1.5**
GAZ	**Gaziantep**	**4.61**	**258**	Pn	**Pn**	**13 59 14.2**	**-0.7**
ZEI	**Tsey**	**4.61**	**10**	*e*P	**Pn**	**13 59 16.8**	**+1.8**
ZEI				pmax	pmax		
	comp=Z,53nm,0.7s						
ILIN	**Lien**	**4.68**	**134**	*e*Pn	**Pn**	**13 59 18.1**	**+2.1**
ILIN				*e*		14 00 56.8	
	comp=Z,99nm,1.3s						
RSDY	**Resadiye-TOKAT**	**4.80**	**298**	PN	**Pn**	**13 59 19.2**	**+1.7**
IGHG	**Ghaleghazi**	**4.92**	**141**	*e*Pn	**Pn**	**13 59 20.4**	**+1.1**
IGHG				*e*		14 00 22.6	
	comp=Z,99nm,0.8s						
AKT	**Akhty**	**4.95**	**48**	*i* P	**Pn**	**13 59 22.8**	**+3.2**
NEY	**Neytrino**	**5.00**	**359**	*i* P	**Pn**	**13 59 22.9**	**+2.5**
KAMA	**Osmaniye**	**5.02**	**260**	*i* P	**Pn**	**13 59 20.3**	**-0.3**
SARI	**SarD1z-Kayseri**	**5.07**	**274**	PN	**Pn**	**13 59 22.1**	**+0.8**
BTLR	**Botlikh**	**5.11**	**29**	⇓*e*P	**Pn**	**13 59 24.2**	**+2.5**
KER	**Kermanshah**	**5.17**	**137**	*e*Pn	**Pn**	**13 59 24.5**	**+1.9**
ANDN	**Andirin**	**5.20**	**265**	*e*P	**Pn**	**13 59 23.1**	**+0.1**
KCHF	**Cheshme Sefid,**	**5.20**	**138**	*e*Pn	**Pn**	**13 59 24.7**	**+1.6**
HSRG	**Sareghieh**	**5.28**	**123**	*e*Pn	**Pn**	**13 59 26.9**	**+2.6**
GROC	**Groznyy**	**5.43**	**23**	*e*P	**Pn**	**13 59 28.3**	**+2.2**
GROC				*e*		14 00 28.9	
GROC				smax	smax		
	comp=E,29nm,0.6s						
GROC				smax	smax		
	comp=E,22nm,1.0s						
GROC				smax	smax		
	comp=N,59nm,1.2s						
GROC				MLR	MLR		
	comp=Z,259nm,8.0s						
IALM	**Almabolaq**	**5.44**	**127**	*e*Pn	**Pn**	**13 59 28.5**	**+2.0**
KBZ	**Khabaz**	**5.48**	**0**	Pn	**Pn**	**13 59 30.2**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=176,slow=12,SNR=10						
KBZ				Lg	Lg	14 00 56.5	
	baz=122,slow=15,SNR=1.2						
KBZ				LR	LR	14 01 51.7	
	comp=Z,636nm,18.5s,baz=196,slow=42						
IBZA	**Bozab**	**5.52**	**132**	*e*Pn	**Pn**	**13 59 29.4**	**+1.9**
KIV	**Kislovodsk**	**5.71**	**359**	*e*P	**Pn**	**13 59 31.3**	**+1.3**
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIV				MLR	MLR		
	comp=Z,259nm,8.0s						
KVAR	**Kislovodsk Arr**	**5.71**	**359**	Pn	Pn	13 59 35.8	+5.8
	baz=90,slow=20,SNR=3.4						
KVAR				LR	LR	14 02 04.6	
	comp=Z,989nm,20.7s,baz=94,slow=42						
RPOR	**Krasnaya Polya**	**5.80**	**341**	⇑*e*P	**Pn**	**13 59 33.6**	**+2.5**
SOC	**Sochi**	**5.84**	**337**	*e*P	**Pn**	**13 59 31.2**	**-0.5**
SOC				*e*		14 00 40.4	
SOC				MLR	MLR		
	comp=Z,299nm,11.0s						
QABG	**Abgarm-Qazvin**	**5.95**	**113**	*e*Pn	**Pn**	**13 59 34.5**	**+1.1**
GUZR	**Guzeripl'**	**6.11**	**341**	*de*P	**Pn**	**13 59 38.3**	**+2.8**
IKFM	**Kafar-mosalman**	**6.21**	**138**	*e*Pn	**Pn**	**13 59 38.4**	**+1.7**
IRAZ	**Razeghan**	**6.34**	**114**	*e*Pn	**Pn**	**13 59 41.2**	**+2.5**
QALM	**Alamut, Qazvin**	**6.46**	**104**	*e*Pn	**Pn**	**13 59 43.2**	**+2.7**
IKMR	**Kamar-syah**	**6.50**	**135**	*e*Pn	**Pn**	**13 59 42.1**	**+1.3**
HWQ	**Hawqa**	**6.84**	**237**	*e*P	**Pn**	**13 59 46.4**	**+0.7**
BR131	**Keskin Array S**	**7.33**	**285**	*de*P	**Pn**	**13 59 54.0**	**+1.6**
BR131	**Keskin Array S**	**7.33**	**285**	Pn	**Pn**	**13 59 52.6**	**+0.2**
BRTR	**Keskin Array B**	**7.33**	**285**	Pn	**Pn**	**13 59 54.5**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=107,slow=14,SNR=28						
BRTR				LR	LR	14 02 24.1	
	comp=Z,41nm,21.5s,baz=114,slow=36						
BRTR	**Keskin Array B**	**7.33**	**285**	Pn	**Pn**	**13 59 52.9**	**+0.6**
RCY	**Rachaya**	**7.41**	**232**	*e*P	**Pn**	**13 59 55.1**	**+1.6**
SHBL	**Chebaa**	**7.57**	**232**	*e*P	**Pn**	**13 59 57.2**	**+1.6**
MMAI	**Mount Meron Ar**	**8.00**	**232**	Pn	**Pn**	**14 00 02.6**	**+1.1**
	comp=Z,4.0nm,0.3s,baz=70,slow=17,SNR=11						
MMAI				Lg	Lg	14 02 16.1	
	comp=Z,2.1nm,0.3s,baz=58,slow=12,SNR=2.3						
MMAI				LR	LR	14 03 31.9	
	comp=Z,913nm,18.4s,baz=40,slow=41						
CSS	**Mathiatis**	**8.33**	**250**	Pn	**Pn**	**14 00 05.7**	**-0.2**
AMIS	**Naft Sefid**	**8.41**	**139**	*e*Pn	**Pn**	**14 00 07.2**	**+0.1**
IPIR	**Pirpir**	**8.58**	**128**	*e*Pn	**Pn**	**14 00 11.8**	**+2.2**
KRSH	**Karshahi**	**8.63**	**117**	*e*Pn	**Pn**	**14 00 14.6**	**+4.4**
ISHM	**Shahmirzad**	**8.69**	**103**	*e*Pn	Pn	14 00 16.3	+5.2
IGLO	**Ghaloghah**	**8.90**	**98**	*e*Pn	**Pn**	**14 00 16.9**	**+2.9**
MIB	**Mutribah**	**9.20**	**155**	*e*P		14 00 17.1	
RST	**Umm Al-Ruwaisa**	**9.37**	**157**	*e*P		14 00 18.8	
KBD	**Kabd**	**9.89**	**155**	*e*P		14 00 26.4	
RDF	**Al-Radifah**	**10.08**	**156**	*e*P		14 00 29.0	
IRAM	**Ramesheh**	**10.10**	**127**	*e*Pn	**Pn**	**14 00 31.5**	**+1.1**
KLNJ	**Kolanjah**	**10.18**	**133**	*e*Pn	**Pn**	**14 00 31.8**	**+0.1**
QRN	**Al-Qurain**	**10.37**	**155**	*e*P		14 00 33.7	
EIL	**Elat**	**10.78**	**220**	Pn	**Pn**	**14 00 41.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=108,slow=16,SNR=2.7						
EIL				Lg	Lg	14 03 43.0	
	comp=Z,0.6nm,0.3s,baz=352,slow=18,SNR=1.6						
EIL				LR	LR	14 05 18.0	
	comp=Z,431nm,20.1s,baz=46,slow=40						
SBZV	**Sabzevar**	**11.89**	**94**	*e*Pn	**Pn**	**14 00 58.0**	**+3.1**
GEYT	**Alibeck**	**12.03**	**87**	Pn	**Pn**	**14 00 57.6**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=260,slow=16,SNR=13						
GEYT				LR	LR	14 06 46.5	
	comp=Z,36nm,21.2s,baz=255,slow=43						
GEYT	**Alibeck**	**12.03**	**87**	Pn	**Pn**	**14 00 55.8**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**12.03**	**87**	Pn	**Pn**	**14 00 56.2**	**-0.4**
ISFR	**Sfrayin**	**12.06**	**91**	*e*Pn	**Pn**	**14 00 59.5**	**+2.2**
TPRV	**Parvadeh(Tabas**	**12.39**	**111**	*e*Pn	**Pn**	**14 01 05.3**	**+3.7**
TKDS	**Koohdasht(Taba**	**12.45**	**107**	*e*Pn	**Pn**	**14 01 05.5**	**+3.1**
IAKL	**Akhelmad**	**12.74**	**92**	*e*Pn	**Pn**	**14 01 08.7**	**+2.1**
IPAY	**Payeh**	**12.96**	**93**	*e*Pn	**Pn**	**14 01 12.8**	**+3.2**
CFR	**Carcaliu**	**12.99**	**307**	⇑P	**Pn**	**14 01 13.4**	**+3.7**
IKRD	**Kardeh**	**13.31**	**91**	*e*Pn	Pn	14 01 16.9	+13
IMYA	**Miami**	**13.86**	**93**	*e*Pn	**Pn**	**14 01 24.7**	**+3.0**
SORM	**Soroca**	**14.46**	**318**	⇓P	**P**	**14 01 34.5**	**-2.1**
MLR	**Muntele Rosu**	**14.52**	**305**	LR	LR	14 07 42.4	
	comp=Z,308nm,19.2s,baz=146,slow=40						
MLR	**Muntele Rosu**	**14.52**	**305**	⇑P	**P**	**14 01 35.4**	**-2.0**
TESR	**Tescani**	**14.54**	**310**	⇓P	**P**	**14 01 35.6**	**-1.8**
BELG	**Belogornoye**	**14.54**	**12**	*ce*P	**Pn**	**14 01 30.7**	**0.0**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
IDI	**Anoyia**	**14.70**	**264**	Pn	**Pn**	**14 01 34.7**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=80,slow=15,SNR=3.2						
IDI				LR	LR	14 07 21.1	
	comp=Z,109nm,21.1s,baz=136,slow=38						
IDI	**Anoyia**	**14.70**	**264**	Pn	**Pn**	**14 01 33.0**	**-0.2**
RAYN	**Ar Rayn**	**14.85**	**170**	P	**Pn**	**14 01 32.3**	**-2.8**
RAYN	**Ar Rayn**	**14.85**	**170**	P	**Pn**	**14 01 31.9**	**-3.2**
RAYN	**Ar Rayn**	**14.85**	**170**	Pn	**Pn**	**14 01 31.9**	**-3.2**
DOPR	**Dopca**	**15.07**	**306**	⇓P	**P**	**14 01 43.5**	**+0.1**
VOIR		**15.08**	**304**	⇑P	**P**	**14 01 42.2**	**-1.3**
VOIR		**15.08**	**304**	P	**P**	**14 01 45.1**	**+1.6**
VTS	**Vitosha**	**15.57**	**292**	⇓P	**P**	**14 01 49.3**	**+0.2**
AKASG	**Malin Array Be**	**15.78**	**327**	Pn	**P**	**14 01 51.8**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=137,slow=11,SNR=8.9						
AKASG				LR	LR	14 08 40.7	
	comp=Z,137nm,19.8s,baz=290,slow=40						
AKASG	**Malin Array Be**	**15.78**	**327**	P	**Pn**	**14 01 45.8**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**15.78**	**327**	Pn	**Pn**	**14 01 45.8**	**-1.4**
AKBB	**Malin Array Si**	**15.78**	**327**	⇓*e*P	**P**	**14 01 50.8**	**-0.3**
AKBB	**Malin Array Si**	**15.78**	**327**	Pn	**Pn**	**14 01 45.9**	**-1.3**
AKBB				IAmb	IAmb	14 01 56.2	
	comp=Z,26nm,1.1s						
BURAR	**Bucovina Array**	**15.93**	**312**	⇑P	**P**	**14 01 54.4**	**+1.4**
BURAR	**Bucovina Array**	**15.93**	**312**		**P**	**14 01 51.7**	**-1.3**
BUR08	**Bucovina Ar. S**	**15.95**	**312**		**P**	**14 01 52.5**	**-0.8**
SLWR	**Sila**	**16.01**	**149**	P	**Pn**	**14 01 47.5**	**-2.9**
SLWR				S	**Sn**	**14 04 42.4**	**-5.5**
HRA	**Herat**	**16.09**	**98**	Pn	**Pn**	**14 01 49.5**	**-2.1**
AKTO	**Aktyubinsk**	**16.27**	**37**	Pn	**Pn**	**14 01 52.2**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=226,slow=11,SNR=17						
AB31	**Akbulak array**	**16.50**	**43**	*i* P	**Pn**	**14 01 54.7**	**-1.8**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABKAR	**Akbulak array**	**16.50**	**43**	Pn	**Pn**	**14 01 54.2**	**-2.3**
SHME	**Shamm**	**16.54**	**133**	P	**Pn**	**14 01 53.9**	**-3.2**
GZR	**Gura Zlata**	**16.57**	**302**	⇑P	**P**	**14 02 01.1**	**+1.1**
ITM	**Ithomi**	**16.60**	**273**	P	**P**	**14 02 00.8**	**+0.3**
ITM				IAmb	IAmb	14 02 23.4	
	comp=Z,25nm,1.2s						
HERR	**Herculane**	**16.66**	**300**	⇑P	**P**	**14 02 03.7**	**+2.8**
BANOM	**Banah**	**16.73**	**133**	P	**Pn**	**14 01 56.7**	**-2.8**
BANOM	**Banah**	**16.73**	**133**	P	**Pn**	**14 01 56.8**	**-2.8**
BANOM				S	**Sn**	**14 04 55.3**	**-10**
MASF	**Masafi**	**17.07**	**135**	P	**Pn**	**14 02 02.2**	**-1.7**
MASF				S	Sn	14 05 01.5	-12
MSFE	**Esma-Masafi**	**17.08**	**135**	*i* P	**Pn**	**14 02 02.0**	**-2.0**
	SNR=8.5						
NAZ	**Nazwa, Dubai**	**17.11**	**137**	*i* P	**Pn**	**14 02 02.8**	**-1.6**
	SNR=7.1						
NAZ	**Nazwa, Dubai**	**17.11**	**137**	P	**Pn**	**14 02 03.0**	**-1.3**
MDVR	**Moldovita**	**17.11**	**299**	⇑P	**P**	**14 02 07.8**	**+1.7**
MDH	**Madha**	**17.21**	**135**	P	**Pn**	**14 02 03.7**	**-1.9**
MDH	**Madha**	**17.21**	**135**	P	**Pn**	**14 02 03.9**	**-1.7**
MDH				S	Sn	14 05 06.7	-10
ASUD	**Al Ashush, Dub**	**17.22**	**138**	*i* P	**Pn**	**14 02 04.5**	**-1.2**
	SNR=7.6						
MZWR	**Madinat Zayed**	**17.23**	**144**	P	**Pn**	**14 02 04.4**	**-1.4**
MZWR				S	**Sn**	**14 05 15.1**	**-2.4**
FAQ	**Al Faqa, Dubai**	**17.26**	**138**	P	**Pn**	**14 02 04.3**	**-2.0**
FAQ	**Al Faqa, Dubai**	**17.26**	**138**	P	**Pn**	**14 02 04.0**	**-2.3**
FAQ				S	Sn	14 05 04.1	-14
OBN	**Obninsk**	**17.41**	**348**	P	**Pn**	**14 02 06.7**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=150,slow=14,SNR=3.3						
OBN	**Obninsk**	**17.41**	**348**	⇑*i*P	**Pn**	**14 02 06.6**	**-1.3**
OBN				*e*S	**Sn**	**14 05 22.9**	**+1.4**
OBN				pmax	pmax		
	comp=Z,37nm,1.6s						
OBN				MLR	MLR		
	comp=Z,211nm,13.0s						
BZS	**Buzias**	**17.41**	**302**	⇓P	**P**	**14 02 09.5**	**+0.2**
UOSS	**Minazif**	**17.43**	**136**	P	**Pn**	**14 02 05.4**	**-3.0**
UOSS	**Minazif**	**17.43**	**136**	Pn	**Pn**	**14 02 06.9**	**-1.6**
UOSS				IAmb	IAmb	14 02 23.4	
	comp=Z,29nm,0.8s						
UOSS	**Minazif**	**17.43**	**136**	P	**Pn**	**14 02 06.8**	**-1.7**
UOSS				S	Sn	14 05 09.1	-13
HATD	**Hatta, Dubai**	**17.49**	**136**	*i* P	**Pn**	**14 02 06.7**	**-2.4**
	SNR=5.9						
HATD	**Hatta, Dubai**	**17.49**	**136**	P	**Pn**	**14 02 07.0**	**-2.1**
HATD				S	Sn	14 05 10.9	-13
ASHO	**Ashiyiah**	**17.56**	**137**	*i* P	**Pn**	**14 02 07.7**	**-2.4**
	SNR=13						
ASHO	**Ashiyiah**	**17.56**	**137**	P	**Pn**	**14 02 07.5**	**-2.5**
ASHO				S	Sn	14 05 12.4	-13
MOS	**Moscow**	**17.86**	**350**	*e*P	**Pn**	**14 02 11.1**	**-2.3**
MOS				pmax	pmax		
	comp=Z,41nm,0.8s						
ALNE	**Al Ain**	**17.91**	**138**	P	**Pn**	**14 02 11.6**	**-2.7**
ALNE	**Al Ain**	**17.91**	**138**	P	**Pn**	**14 02 09.8**	**-4.5**
UZH	**Uzhgorod**	**18.14**	**312**	*e*P	**P**	**14 02 18.2**	**+0.9**
SOHO	**SOHO**	**18.26**	**136**	S	Sn	14 05 31.8	-11
KOLS	**Kolonicke sedl**	**18.29**	**312**	*e*P	**P**	**14 02 20.7**	**+1.7**
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KOLS	**Kolonicke sedl**	**18.29**	**312**	*e*P	**P**	**14 02 20.7**	**+1.7**
KWP	**Kalwaria Pacla**	**18.38**	**315**	P	**Pn**	**14 02 18.6**	**-1.4**
KWP				pmax	pmax		
	comp=Z,43nm,1.3s						
KWP	**Kalwaria Pacla**	**18.38**	**315**		**Pn**	**14 02 18.6**	**-1.4**
KWP				IAmb	IAmb	14 02 23.7	
	comp=Z,43nm,1.3s						
CRVS	**Cervenica-Dubn**	**18.75**	**311**	*e*P	**Pn**	**14 02 30.7**	**+6.2**
CRVS	**Cervenica-Dubn**	**18.75**	**311**	*e*	**Pn**	**14 02 30.7**	**+6.2**
MNK	**Minsk**	**19.20**	**333**	*i* P	**P**	**14 02 25.4**	**-3.5**
	comp=E,1.0nm,0.7s						
MNK				*i* P	**P**	**14 02 25.4**	**-3.5**
	comp=N,13nm,0.7s						
MNK				*i* P	**P**	**14 02 25.4**	**-3.5**
	comp=Z,7.0nm,0.7s						
MNK				*i* PP	**PnPn**	**14 02 39.3**	**-3.3**
MNK				*i* PPP	PPP	14 02 47.1	
MNK				*i* S	**Sn**	**14 06 01.0**	**-3.8**
MNK				*i* SS	**SnSn**	**14 06 18.9**	**0.0**
MNK				*i* SSS	SSS	14 06 31.9	
MNK				*i* PcP	**PcP**	**14 06 47.8**	**-4.2**
MNK				*i* LQ	LQ	14 08 12.8	
MNK				*i* LR	LR	14 09 40.8	
MNK				*i* LRM	MLR	14 11 04.4	
	comp=E,36nm,17.2s						
MNK				*i* LRM	MLR	14 11 04.4	
	comp=N,478nm,17.2s						
MNK				*i* LRM	MLR	14 11 33.7	
	comp=Z,119nm,17.2s						
PSZ	**Piszkesteto**	**19.30**	**307**	*e*PN	**Pn**	**14 02 33.2**	**+2.0**
PSZ	**Piszkesteto**	**19.30**	**307**	P	**P**	**14 02 29.0**	**-1.2**

PSZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PSZ	Piszkesteto	19.30	307	P	P	14 02 29.0	-1.2
MORH	Mrgy, Hungar	19.57	302	ePN	Pn	14 02 35.0	+0.7
NACGM	Naroch	19.92	332	i P	Pn	14 02 41.4	+3.1
NACGM				i P	Pn	14 02 41.4	+3.1
NACGM				i P	Pn	14 02 41.4	+3.1
NACGM				i Pb	sP	14 02 43.8	+1.9
	comp=Z,14nm,0.7s						
NACGM				i PP	PnPn	14 02 58.1	+5.8
NACGM				i PPP	PPP	14 03 18.8	
NACGM				i S	Sn	14 06 29.6	+7.5
NACGM				i SS	SnSn	14 06 38.1	+1.7
NACGM				i SSS	SSS	14 06 55.8	
NACGM				i LQ	LQ	14 08 50.2	
NACGM				i LR	LR	14 10 25.6	
NACGM				i Sb		14 13 07.9	
	comp=Z,201nm,13.3s						
LANS	Liptovska Anna	20.04	310	eP	Pn	14 02 41.0	+1.0
LANS	Liptovska Anna	20.04	310	eP	Pn	14 02 41.0	+1.0
WSAR	Wadi Sarin	20.14	133	P	Pn	14 02 40.5	-0.7
	comp=Z,8.5nm,0.6s,baz=347,slow=11,SNR=7.9						
VYHS	Vyhne	20.17	308	eP	Pn	14 02 41.9	+0.4
VYHS				pmax	pmax		
	comp=Z,30nm,1.4s						
VYHS	Vyhne	20.17	308	eP	Pn	14 02 41.8	+0.3
TIH	Tihany	20.26	303	ePN	Pn	14 02 42.9	+0.4
TIP	Timpagrande	20.37	281	P	P	14 02 42.5	+0.6
IIGN	Ignalina	20.47	332	eP	P	14 02 40.9	-1.8
MPLH	Magyarpolny	20.57	304	ePN	Pn	14 02 45.9	-0.2
ISAL	Salakas	20.67	332	eP	P	14 02 41.6	-3.3
SUW	Suwalki	20.74	326	eP	P	14 02 43.9	-1.7
SUW	Suwalki	20.74	326	P	P	14 02 45.8	+0.1
SUW				pmax	pmax		
	comp=Z,44nm,0.9s						
SUW	Suwalki	20.74	326	P	P	14 02 45.8	+0.1
KIRV	Kirov	20.80	10	P	P	14 02 45.5	-0.7
	comp=Z,9.6nm,0.8s,baz=208,slow=7.2,SNR=6.3						
BRLS	Borolday	20.98	68	eP	P	14 02 47.9	-0.5
	comp=Z,27nm,1.4s,baz=69						
BRLS	Borolday	20.98	68	eP	P	14 02 47.9	-0.5
BRLS				pmax	pmax		
	comp=Z,27nm,1.4s						
ARU	Arti	20.99	25	P	P	14 02 48.2	-0.1
	comp=Z,4.5nm,0.6s,baz=208,slow=9.6,SNR=24						
ARU				LR	LR	14 13 28.5	
	comp=Z,114nm,21.9s,baz=212,slow=44						
ARU	Arti	20.99	25d	iP	P	14 02 48.5	+0.2
ARU				S	S	14 06 44.7	+2.8
ARU				pmax	pmax		
	comp=Z,63nm,1.4s						
ARU	Arti	20.99	25	P	P	14 02 47.4	-1.0
JAVC	Velka Javorina	21.02	308	eP	P	14 02 51.3	+2.4
MODS	Modra-Piesok	21.10	307	eP	P	14 02 54.5	+4.8
MODS				pmax	pmax		
	comp=Z,57nm,1.9s						
MODS	Modra-Piesok	21.10	307	eP	P	14 02 54.5	+4.8
SOP	Sopron	21.35	305	ePN	P	14 02 54.4	+2.1
MORC	Moravsky Berou	21.44	311	eP	P	14 02 53.6	+0.2
MORC	Moravsky Berou	21.44	311	P	P	14 02 53.0	-0.4
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	21.44	311	P	P	14 02 53.0	-0.4
PABE	Paberze	21.44	330	eP	P	14 02 51.5	-1.7
KK31	Karatay Array	21.48	68	P	P	14 02 53.8	0.0
KK31				pmax	pmax		
	comp=Z,59nm,1.0s						
KK31	Karatay Array	21.48	68	P	P	14 02 53.8	0.0
KKAR	Karatay Array	21.48	68	P	P	14 02 53.8	0.0
KKAR				pmax	pmax		
	comp=Z,59nm,1.0s						
KKAR	Karatay Array	21.48	68	P	P	14 02 53.8	0.0
KKAR	Karatay Array	21.48	68	P	P	14 02 53.8	0.0
KKAR				IAmb	IAmb	14 03 00.2	
	comp=Z,59nm,0.9s						
VRAC	Vranov	21.84	309	P	P	14 02 59.5	+1.9
	comp=Z,3.0nm,0.5s,baz=77,slow=9.1,SNR=3.6						
CONA	Conrad Observa	21.87	305	eP	P	14 03 00.7	+2.7
	comp=Z,14nm,1.3s						
ARSA	Arzberg	21.91	303	eP	P	14 03 01.7	+3.3
	comp=Z,4.6nm,0.7s						
SVE	Sverdlovsk	22.01	27	eP	P	14 03 00.3	+1.0
SVE				pmax	pmax		
	comp=Z,61nm,1.5s						
KRLC	Kraliky	22.01	311	eP	P	14 03 01.9	+2.4
KRLC				e		14 03 07.0	
KRLC	Kraliky	22.01	311	eP	P	14 03 01.9	+2.4
KRLC				ex	x	14 03 07.0	
DZA	Taraz	22.07	69	eP	P	14 03 00.5	+0.3
	baz=69						
DZA	Taraz	22.07	69	eP	P	14 03 00.4	+0.3
WHFO	Wadi Hawf	22.38	152	P	P	14 03 03.7	0.0
	SNR=32						
DPC	Dobruska-Polom	22.39	311	eP	P	14 03 10.9	+7.4
DPC	Dobruska-Polom	22.39	311	eP	P	14 03 10.9	+7.4
PBUR	Paburge	22.63	329	eP	P	14 03 02.4	-3.5
CHVC	Chvalec	22.64	312	eP	P	14 03 10.0	+3.8
ABTO	Aybut	22.73	153	P	P	14 03 06.8	-0.6
KLMR	Klimovskoe	22.73	356	eP	P	14 03 04.4	-2.6
KLMR				pmax	pmax		
	comp=Z,28nm,1.0s						
KLMR	Klimovskoe	22.73	356	eP	P	14 03 04.4	-2.6
KLMR				AMP		14 03 13.0	
	comp=Z,28nm,1.0s						
VSU	Vasula	22.78	338	eP	P	14 03 05.7	-1.8
MOA	Molln	22.88	304	eP	P	14 03 10.7	+1.9
	comp=Z,8.3nm,1.2s						
RBK	Rabkut	22.93	151	P	P	14 03 09.7	+0.3
NRCA	Norcia	23.00	291	P	P	14 03 08.8	-1.3
NRCA				IAmb	IAmb	14 03 28.8	
	comp=Z,30nm,1.4s						
DMTO	DMTO	23.02	149	P	P	14 03 09.9	-0.5
SHAO	Shalim	23.03	147	i P	P	14 03 08.3	-2.1
	SNR=12						
KBA	Koelnbreinsper	23.32	302	eP	P	14 03 14.8	+1.4
	comp=Z,15nm,1.7s						
PRU	Pruhonice	23.33	309	eP	P	14 03 15.4	+2.1
PRU	Pruhonice	23.33	309	eP	P	14 03 15.4	+2.1
GERES	GERESS Array B	23.51	306	P	P	14 03 15.6	+0.4
	comp=Z,1.8nm,0.7s,baz=116,slow=9.1,SNR=10						
GERES				LR	LR	14 13 53.6	
	comp=Z,168nm,18.8s,baz=108,slow=40						
KHC	Kasperske Hory	23.66	307	P	P	14 03 16.8	+0.2
KHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KHC	Kasperske Hory	23.66	307	eP	P	14 03 17.0	+0.4
KHC	Kasperske Hory	23.66	307	P	P	14 03 16.8	+0.2
EKS2	Erkin-Say	23.86	70	P	P	14 03 21.4	+2.6
	SNR=6.6						
MTSE	Matsula	23.90	335	eP	P	14 03 19.1	+0.4
BRVK	Borovoye	24.03	43c	eP	P	14 03 21.7	+1.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRVK	Borovoye	24.03	43	P	P	14 03 20.9	+0.8
BRVK				IAmb	IAmb	14 03 36.4	
	comp=Z,12nm,1.0s						
BVAR	Borovoye Array	24.07	43	P	P	14 03 20.5	+0.1
	comp=Z,1.5nm,0.9s,baz=319,slow=8.6,SNR=3.8						
BTLS	Baital	24.17	64	eP	P	14 03 21.6	+0.1
	baz=64						
BTLS	Baital	24.17	64	eP	P	14 03 21.5	+0.1
BRZS	Berezniki	24.25	51	eP	P	14 03 22.0	-0.1
	baz=51						
BRZS	Berezniki	24.25	51	eP	P	14 03 22.0	-0.1
CTI	Castel Tesino	24.30	299	P	P	14 03 23.8	+1.0
CTI				pmax	pmax		
	comp=Z,22nm,1.2s						
CTI	Castel Tesino	24.30	299	P	P	14 03 23.8	+1.0
VALR	Valaam	24.32	346	i P	P	14 03 23.1	+0.5
VALR				pmax	pmax		
	comp=Z,17nm,1.0s						
AAK	Ala-Archa	24.39	70	P	P	14 03 25.6	+1.8
	comp=Z,5.6nm,0.9s,baz=233,slow=4.6,SNR=10						
AAK	Ala-Archa	24.39	70	P	P	14 03 25.9	+2.2
	SNR=6.5						
AAK	Ala-Archa	24.39	70	i P	P	14 03 25.5	+1.8
	SNR=12						
AAK	Ala-Archa	24.39	70	P	P	14 03 24.2	+0.5
AAK				pmax	pmax		
	comp=Z,13nm,0.9s						
AAK	Ala-Archa	24.39	70	P	P	14 03 24.2	+0.5
AAK				IAmb	IAmb	14 03 36.1	
	comp=Z,12nm,0.9s						
SGDS	Sogindy	24.50	68	eP	P	14 03 25.2	+0.6
	baz=68						
SGDS	Sogindy	24.50	68	eP	P	14 03 25.2	+0.6
CHMS	Chumysh	24.58	69	P	P	14 03 27.6	+2.4
	SNR=9.3						
NKC	Novy Kostel	24.69	309	eP	P	14 03 28.1	+2.0
NKC	Novy Kostel	24.69	309	eP	P	14 03 28.1	+2.0
CLL	Collm	24.70	312	eP	P	14 03 26.0	-0.2
CLL	Collm	24.70	312	P	P	14 03 26.6	+0.4
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
CLL	Collm	24.70	312	P	P	14 03 26.6	+0.4
CLL				IAmb	IAmb	14 03 38.0	
	comp=Z,15nm,1.2s						
KBK	Karagaybulak	24.73	70	P	P	14 03 29.6	+2.8
	SNR=9.8						
SQTA	Sankt Quirin	24.78	301	eP	P	14 03 27.8	+0.7
	comp=Z,14nm,0.6s						
MOTA	Moosalm	24.87	302	eP	P	14 03 29.1	+1.1
	comp=Z,13nm,0.8s						
NIL	Nilore	24.97	91	P	P	14 03 26.4	-2.4
NIL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NIL	Nilore	24.97	91	P	P	14 03 26.4	-2.4
NIL				IAmb	IAmb	14 03 40.3	
	comp=Z,9.6nm,1.1s						
FETA	Feichten	25.07	301	eP	P	14 03 30.6	+0.8
	comp=Z,12nm,0.8s						
TKM2	Tokmak 2	25.20	69	P	P	14 03 32.6	+1.6
	SNR=7.8						
TKM2	Tokmak 2	25.20	69	i P	P	14 03 32.1	+1.0
TKM2				pmax	pmax		
	comp=Z,11nm,0.9s						
GRF	Grafenberg Arr	25.30	307	eP	P	14 03 33.0	+1.4
	comp=Z,27nm,0.9s,baz=105,slow=9.8						
FINES	FINESS Array B	25.47	341	P	P	14 03 32.3	-0.7
	comp=Z,3.7nm,0.8s,baz=161,slow=13,SNR=7.8						
FINES				PcP	PcP	14 07 04.3	-0.2
	comp=Z,1.2nm,0.8s,baz=90,slow=2.8,SNR=3.4						
FINES	FINESS Array B	25.47	341	P	P	14 03 32.1	-0.9
DAVOX	Davos/Dischmat	25.61	300	P	P	14 03 34.9	+0.1
	comp=Z,3.6nm,0.5s,baz=124,slow=9.1,SNR=5.6						
DAVA	Damuels	25.68	301	eP	P	14 03 35.9	+0.6
	comp=Z,16nm,1.2s						
ULHL	Ulahol	25.70	70	P	P	14 03 39.1	+3.5
	SNR=7.5						
KSH	Kashi	25.73	77	P	P	14 03 35.8	0.0
KSH				pmax	pmax		
	comp=Z,18nm,0.6s						
KSH				pmax	pmax		
	comp=Z,270nm,6.6s						
KUU	Kurty	25.75	67	eP	P	14 03 37.0	+1.1
	comp=Z,15nm,1.1s,baz=66						
KUU	Kurty	25.75	67	eP	P	14 03 36.9	+1.1
KUU				pmax	pmax		
	comp=Z,15nm,1.1s						
MTBS	Maitube	25.81	68	eP	P	14 03 38.0	+1.5
	baz=68						
MTBS	Maitube	25.81	68	eP	P	14 03 37.9	+1.5
AAA	Alma-Ata	26.17	68	eP	P	14 03 40.9	+1.3
	comp=Z,4.5nm,0.7s,baz=68						
AAA	Alma-Ata	26.17	68	eP	P	14 03 40.9	+1.3
AAA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHKK	Chushkaly	26.22	67	eP	P	14 03 40.9	+0.9
	baz=67						
CHKK	Chushkaly	26.22	67	eP	P	14 03 40.9	+0.9
MDOK	Medeo	26.26	68	eP	P	14 03 41.9	+1.2
	baz=68						
MDOK	Medeo	26.26	68	eP	P	14 03 41.8	+1.2
TDK	Taldyqorghan	27.26	64	eP	P	14 03 51.4	+1.9
	baz=64						
TDK	Taldyqorghan	27.26	64	eP	P	14 03 51.3	+1.9
SATY	Saty	27.26	68	eP	P	14 03 51.1	+1.5
	baz=68						
SATY	Saty	27.26	68	eP	P	14 03 51.0	+1.5
SENIN	Lac Senin/Sane	27.34	299	P	P	14 03 49.4	-0.9
SENIN				IAmb	IAmb	14 04 06.9	
	comp=Z,9.4nm,1.0s						
KPKS	Kokpek	27.45	68	eP	P	14 03 53.2	+2.0
	baz=68						
KPKS	Kokpek	27.45	68	eP	P	14 03 53.2	+2.0
SHLS	Shalkode	28.03	68	eP	P	14 04 00.2	+3.8
	baz=68						
SHLS	Shalkode	28.03	68	eP	P	14 04 00.2	+3.8
KURBB	Kurchatov Arra	28.04	52	P	P	14 03 57.3	+1.1
	comp=Z,2.1nm,0.6s,baz=264,slow=9.1,SNR=14						
KURBB				PcP	PcP	14 07 10.8	0.0
	comp=Z,0.6nm,0.8s,baz=258,slow=3.8,SNR=4.2						
KURK	Kurchatov	28.11	52d	eP	P	14 03 58.7	+1.8
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	28.11	52	P	P	14 03 56.2	-0.7
KURK				IAmb	IAmb	14 04 18.4	
	comp=Z,5.9nm,0.8s						
HFS	Hagfors	28.62	329	P	P	14 04 01.6	+0.2
	comp=Z,8.5nm,0.8s,baz=127,slow=11,SNR=6.5						
MAKZ	Makanchi	29.82	61	P	P	14 04 12.7	+0.5
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	Makanchi	29.82	61	P	P	14 04 12.7	+0.5
MAKZ				IAmb	IAmb	14 04 14.4	
	comp=Z,3.2nm,0.6s						
MK31	Makanchi Array	30.03	61	i P	P	14 04 14.7	+0.6
MK31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MK31	Makanchi Array	30.03	61	P	P	14 04 14.4	+0.4
MKAR	Makanchi Array	30.03	61	P	P	14 04 14.8	+0.7
	comp=Z,3.5nm,0.7s,baz=269,slow=6.6,SNR=48						
MKAR				LR	LR	14 18 23.1	
	comp=Z,78nm,18.7s,baz=286,slow=41						
MKAR	Makanchi Array	30.03	61	P	P	14 04 14.4	+0.3
NOA	NORSAR Array B	30.15	329	P	P	14 04 13.1	-1.9
	comp=Z,0.4nm,0.6s,baz=126,slow=8.8,SNR=3.5						
ZALV	Zalesovo Beam	32.51	47	P	P	14 04 37.1	+1.4
	comp=Z,0.7nm,0.3s,baz=264,slow=11,SNR=2.5						
DGZ	Jazzator, Alta	33.59	55⇓	eP	P	14 04 46.6	+1.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	33.95	66	eP	P	14 04 49.5	+0.9
WMQ				pP	pP	14 04 52.8	+0.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
EKA	Eskdalemuir Ar	35.09	314	P	P	14 04 58.3	+0.2
	comp=Z,3.4nm,0.6s,baz=100,slow=8.7,SNR=13						
DANN	Dangsing	35.34	94	eP	P	14 05 03.3	+2.3
	comp=Z,22nm,0.7s						
ESDC	Sonseca Array	36.12	287	P	P	14 05 06.8	-0.6
	comp=Z,2.5nm,0.7s,baz=69,slow=8.8,SNR=11						
DMN	Daman	36.73	94	eP	P	14 05 15.3	+2.4
KKN	Kakani	36.78	94	eP	P	14 05 15.3	+2.0
	comp=Z,6.7nm,0.6s						
PKIN	Phulchoki	36.98	94	eP	P	14 05 16.6	+1.6
	comp=Z,6.7nm,0.5s						
PKI	Pulchoki	36.99	94	eP	P	14 05 16.7	+1.5
	comp=Z,8.0nm,0.6s						
GUN	Gumba	37.20	93	eP	P	14 05 18.5	+1.5
	comp=Z,20nm,0.9s						
RAMN	Ramite	38.21	94	eP	P	14 05 26.5	+1.0
	comp=Z,17nm,0.7s						
ODAN	Odare	38.88	94	eP	P	14 05 31.5	+0.5
	comp=Z,42nm,1.1s						
TAPN	Taplejung	38.90	93	eP	P	14 05 32.7	+1.4
	comp=Z,13nm,0.8s						
GTA	Gaotai	43.74	70	P	P	14 06 12.0	+1.2
GTA				pP	sP	14 06 15.5	-0.5
GTA				sP	pP	14 06 18.4	+3.9
GTA				PcP	PcP	14 08 08.8	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,190nm,6.2s						
GTA				LR	LR		
	comp=N,140nm,18.2s						
GTA				LR	LR		
	comp=E,160nm,17.1s						
GTA				LR	LR		
	comp=Z,210nm,17.5s						
TORD	Torodi Ar. Bea	44.21	247	P	P	14 06 13.7	-0.9
	comp=Z,1.2nm,0.8s,baz=52,slow=5.4,SNR=2.1						
TORD				LR	LR	14 27 40.5	
	comp=Z,74nm,18.4s,baz=130,slow=40						
PALK	Pallekele	46.02	122	LR	LR	14 26 00.1	
	comp=Z,62nm,18.2s,baz=72,slow=36						
SONM	Songino Array	46.22	57	P	P	14 06 31.1	+0.8
	comp=Z,0.3nm,0.5s,baz=279,slow=8.2,SNR=2.4						
SONM				LR	LR	14 28 18.5	
	comp=Z,133nm,19.6s,baz=302,slow=39						
ULN	Ulaanbaatar	46.64	56⇑	eP	P	14 06 34.3	+0.6
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
LZH	Lanzhou	47.87	73	eP	P	14 06 42.0	-1.4
LZH				pP	pP	14 06 45.9	-1.3
LZH				sP	sP	14 06 50.0	+1.3
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
BOD	Bodaibo	48.94	42	eP	P	14 06 51.2	+0.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	Hu-ho-hao-te	51.79	64	eP	P	14 07 13.6	+0.5
CMAR	Chiang Mai Arr	52.34	96	P	P	14 07 17.8	+0.4
	comp=Z,2.5nm,0.8s,baz=298,slow=8.2,SNR=17						
CMAR				LR	LR	14 33 45.5	
	comp=Z,72nm,18.3s,baz=341,slow=41						
XAN	Xi'an	52.50	73	P	P	14 07 19.4	+1.0
XAN				pP	sP	14 07 24.8	+1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TIXI	Tiksi	52.98	23⇑	eP	P	14 07 21.4	+0.1
TIXI	Tiksi	52.98	23	P	P	14 07 21.8	+0.4
YAK	Yakutsk	55.65	35⇑	eP	P	14 07 40.6	-0.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NJ2	Nanjing	60.83	71	eP	P	14 08 16.3	-1.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
USA0B	Ussuriysk Arra	64.09	53⇑	eP	P	14 08 39.3	0.0
SEY	Seymchan	64.67	28	P	P	14 08 43.8	+1.0
	comp=Z,6.1nm,0.7s,baz=286,slow=7.1,SNR=31						
SEY	Seymchan	64.67	28⇓	eP	P	14 08 43.9	+1.2
KSAR	Wonju Array Be	64.69	61	P	P	14 08 42.3	-1.0
KSAR	Wonju Array Be	64.69	61	P	P	14 08 42.3	-1.0
KSRS	Korea Array	64.71	61	P	P	14 08 44.2	+0.8
	comp=Z,3.7nm,0.7s,baz=285,slow=6.7,SNR=16						
BILL	Bilibino	65.92	20⇓	eP	P	14 08 51.6	+0.9
BILL				pmax	pmax		
	comp=Z,11nm,2.5s						
BILL				MLR	MLR		
	comp=Z,85nm,20.0s						
BILL	Bilibino	65.92	20	P	P	14 08 50.7	0.0
BILL				IAmb	IAmb	14 08 52.3	
	comp=Z,4.0nm,0.9s						
MA2	Magadan	65.96	32⇑	eP	P	14 08 50.5	-0.6
MA2				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BOSA	Boshof	68.52	197	P	P	14 09 08.2	+0.5
	comp=Z,4.7nm,0.8s,baz=0.0,slow=8.1,SNR=3.3						
YSS	Yuzh-Sakhalins	69.12	46⇑	eP	P	14 09 13.1	+1.8
YSS				pmax	pmax		
	comp=Z,7.0nm,1.2s						
A21K	Barrow	69.86	7	P	P	14 09 16.2	+0.8
INK	Inuvik	73.74	359	P	P	14 09 37.9	-0.9
	comp=Z,0.5nm,0.6s,baz=335,slow=8.0,SNR=4.8						
COLD	Coldfoot	74.39	5	P	P	14 09 43.3	+0.7
COLD				IAmb	IAmb	14 09 56.6	
	comp=Z,6.5nm,1.2s						
LEM	Lembang	74.89	112	LR	LR	14 44 38.0	
	comp=Z,54nm,18.3s,baz=168,slow=37						
COLA	College	76.88	5c	eP	P	14 09 57.6	+0.7
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FCC	Fort Churchill	76.93	339	P	P	14 09 57.8	+0.5
FCC				pmax	pmax		
	comp=Z,8.0nm,1.4s						
FCC	Fort Churchill	76.93	339	P	P	14 09 57.8	+0.5
FCC				IAmb	IAmb	14 09 58.7	
	comp=Z,7.9nm,1.4s						
YKA	Yellowknife Ar	77.98	350	P	P	14 10 03.3	+0.1
	comp=Z,1.3nm,0.8s,baz=22,slow=6.1,SNR=18						
ULM	Lac du Bonnet	84.69	335	P	P	14 10 38.9	-0.1
	comp=Z,1.0nm,0.7s,baz=5.7,slow=10,SNR=3.0						

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*NEIC **21** 13:58:37.0±0.6, 19°.0N±0°.1×65°.16W±0°.04, h43^{km}±49^{km},*
Error ellipse: s-maj=17.4km s-min=5.0km az=174.0
RSPR 21 13:58:38.0, 19°.03N×65°.18W, h24^{km}±21^{km}, MD2.7/5,
2C-10D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.81	139⇓	eP	Pb	13 58 51.3	-2.0
TBVI	Tortola	0.81	139	eS	Sb	13 59 02.0	-1.9
TBVI	Tortola	0.81	139⇓	eP	Pb	13 58 51.1	-2.3
TBVI	Tortola	0.81	139	eS	Sb	13 59 02.0	-1.9
TBVI	Tortola	0.81	139		Pb	13 58 51.3	-2.0
TBVI					Sb	13 59 02.0	-1.9
CBYP	Canovanas	0.99	221⇓	eP	Pn	13 58 54.0	-2.5
CBYP	Canovanas	0.99	221	eS	Sb	13 59 06.2	-3.0
CBYP	Canovanas	0.99	221⇓	eP	Pn	13 58 54.0	-2.5
CBYP	Canovanas	0.99	221	eS	Sb	13 59 06.4	-2.8
CBYP	Canovanas	0.99	221		Pn	13 58 54.0	-2.5
CBYP					Sb	13 59 06.2	-3.0
CBYP	Canovanas	0.99	221	IAML		13 59 06.5	
	comp=E,92nm,0.2s						
CBYP				IAML		13 59 06.7	
	comp=N,116nm,0.2s						
MTP	Monte Pirata	0.99	201⇓	eP	Pn	13 58 54.2	-2.3
MTP	Monte Pirata	0.99	201	eS	Sb	13 59 06.5	-2.7
MTP	Monte Pirata	0.99	201⇓	eP	Pn	13 58 54.1	-2.3
MTP	Monte Pirata	0.99	201	eS	Sb	13 59 06.9	-2.3
MTP	Monte Pirata	0.99	201		Pn	13 58 54.2	-2.3
MTP					Sb	13 59 06.5	-2.7
HUMP	Col San Antoni	1.09	216	Pn	Pn	13 58 55.4	-2.3
HUMP				IAML		13 59 08.8	
	comp=N,44nm,0.2s						
PDPR	Patillas Dam,	1.28	219	Pn	Pn	13 58 58.2	-2.3
PDPR				IAML		13 59 22.1	
	comp=E,23nm,1.2s						
IGPR	InterUniversit	1.38	220⇓	eP	Pn	13 58 59.4	-2.4
IGPR	InterUniversit	1.38	220	eS	Sn	13 59 16.1	-3.1
IGPR	InterUniversit	1.38	220⇓	eP	Pn	13 58 59.4	-2.4
IGPR	InterUniversit	1.38	220	eS	Sn	13 59 16.1	-3.1
EMPR	Esperanza - Ma	1.40	247⇑	eP	Pn	13 59 00.1	-1.8
EMPR	Esperanza - Ma	1.40	247	Pn	Pn	13 59 01.0	-1.0
CELP	Cerrillos	1.63	235⇑	eP	Pn	13 59 03.6	-1.6
CELP	Cerrillos	1.63	235	eS	Sn	13 59 22.8	-2.7
CELP	Cerrillos	1.63	235		Sn	13 59 22.8	-2.7
AOPR	Arecibo Observ	1.64	246⇓	eP	Pn	13 59 03.3	-2.1
AOPR	Arecibo Observ	1.64	246	eS	Sn	13 59 23.2	-2.6
AOPR	Arecibo Observ	1.64	246⇓	eP	Pn	13 59 03.1	-2.3
AOPR	Arecibo Observ	1.64	246	eS	Sn	13 59 22.6	-3.2
AOPR	Arecibo Observ	1.64	246		Pn	13 59 03.1	-2.3
AOPR					Sn	13 59 22.6	-3.2
AOPR	Arecibo Observ	1.64	246	IAML		13 59 32.3	
	comp=N,24nm,1.1s						
AOPR				IAML		13 59 35.3	
	comp=E,35nm,0.6s						
SKI	Saint Kitts	2.86	126	Pn	Pn	13 59 22.3	+0.1

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*DDA **21** 13:59:36.9, 38°.31N×42°.79E, h7^{km}±2^{km}, ML3.5*
*ISK **21** 13:59:37.0, 38°.31N×42°.79E, h5^{km}, ML3.6/9*
ISC 21 13:59:36.8±1.0**, 38°.29N**±0°.03×**42°.80E**±0°.03**, h13**^{km}±8^{km}**,**
n15, σ0^s.52/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.14	74	PG	Pg	13 59 40.5	0.0
AKDM				SG	Sg	13 59 43.3	+0.1
GEVA	Gevas	0.20	83	i P	Pg	13 59 41.3	-0.1
GEVA				i S	Sg	13 59 44.7	+0.1
GEVA				IAML		13 59 46.0	
	comp=N,14µm,0.5s						
GEVA				IAML		13 59 47.0	
	comp=E,16µm,0.2s						
PERV	Siirt/Pervari-	0.40	211	i P	Pb	13 59 45.8	0.0
PERV				i S	Sb	13 59 51.7	-0.2
PERV				IAML		13 59 55.0	
	comp=E,14µm,0.5s						
PERV				IAML		13 59 55.0	
	comp=N,7µm,0.4s						
VANB	Van	0.55	56	PG	Pg	13 59 48.0	+0.3
BLIS	Bitlis-Merkez	0.56	283	i P	Pb	13 59 48.3	-0.2
BLIS				i S	Sb	13 59 55.6	-0.9
BLIS				IAML		13 59 59.0	
	comp=E,2µm,0.3s						
BLIS				IAML		13 59 59.0	
	comp=N,2µm,0.3s						
GURO	Guroymak-BITLI	0.66	294	PG	Pb	13 59 50.1	-0.2

GURO				SG	**Sb**	**13 59 59.2**	**-0.3**
SIRT	**Sirnak**	**0.84**	**200**	PG	**Pb**	**13 59 53.8**	**+0.5**
SIRT				SG	**Sn**	**14 00 06.1**	**-0.5**
ERCV	**ERCIS-VAN**	**0.84**	**30**	PG	**Pb**	**13 59 53.8**	**+0.4**
ERCV				SG	**Sb**	**14 00 05.1**	**+0.4**
MLAZ	**Malazgirt-MUS**	**0.88**	**347**	PG	**Pb**	**13 59 54.2**	**+0.2**
VMUR	**Van-Muradiye**	**0.92**	**40**	*i* P	**Pg**	**13 59 54.7**	**0.0**
BASK	**Baskale_VAN**	**0.97**	**104**	*i* P	**Pb**	**13 59 54.6**	**-1.1**
CUKT	**Cukurca**	**1.22**	**148**	PN	**Pg**	**14 00 01.1**	**+0.8**
CLDR	**Caldiran**	**1.22**	**45**	PN	**Pg**	**14 00 01.2**	**+0.9**
SVAN	**Silvan-Diyarba**	**1.27**	**264**	PN	**Pg**	**14 00 01.6**	**+0.3**
AGRB	**Hanur-Agry**	**1.29**	**6**	PN	**Pg**	**14 00 01.9**	**+0.2**

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*NSSP **21** 14:07:46.5, 38°.28N×42°.78E, h10^{km}, Ms3.2*
*DDA **21** 14:07:46.6, 38°.29N×42°.82E, h10^{km}±2^{km}, ML3.4*
*ISK **21** 14:07:46.7, 38°.30N×42°.83E, h4^{km}, ML3.5/20*
*TEH **21** 14:07:47.0, 38°.31N×42°.85E, h6^{km}, ML3.6*
ISC 21 14:07:47.5±0.9, **38°.30N**±0°.02×**42°.83E**±0°.02, **h7**^{km}±7^{km}, **n70**, σ**1^{s}.12**/100, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	**Akdamar-Van**	**0.12**	**74**	PG	**Pg**	**14 07 50.1**	**-0.1**
AKDM				SG	**Sg**	**14 07 52.8**	**+0.7**
AKDM	**Akdamar-Van**	**0.12**	**74**	*e*Pg	**Pg**	**14 07 50.1**	**-0.1**
GEVA	**Gevas**	**0.18**	**85**	*i* P	**Pg**	**14 07 50.9**	**-0.3**
GEVA				*i* S	**Sg**	**14 07 53.9**	**+0.2**
GEVA				IAML		14 07 56.0	
	comp=N,19µm,0.4s						
GEVA	**Gevas**	**0.18**	**85**	*e*Pg	**Pg**	**14 07 50.9**	**-0.3**
PERV	**Siirt/Pervari-**	**0.42**	**213**	*i* P	**Pg**	**14 07 55.1**	**-0.5**
PERV				*i* S	**Sg**	**14 08 01.4**	**+0.3**
PERV				IAML		14 08 04.0	
	comp=N,9µm,0.6s						
PERV				IAML		14 08 05.0	
	comp=E,11µm,0.5s						
VANB	**Van**	**0.53**	**56**	PG	**Pg**	**14 07 56.1**	**-1.7**
VANB				SG	**Sg**	**14 08 04.7**	**0.0**
VANB	**Van**	**0.53**	**56**	*e*Pg	**Pg**	**14 07 56.0**	**-1.7**
BLIS	**Bitlis-Merkez**	**0.57**	**282**	*i* P	**Pg**	**14 07 58.1**	**-0.5**
BLIS				IAML		14 08 06.0	
	comp=N,3µm,0.6s						
BLIS				*i* S	**Sg**	**14 08 06.1**	**0.0**
BLIS				IAML		14 08 08.0	
	comp=E,2µm,0.4s						
BLIS	**Bitlis-Merkez**	**0.57**	**282**	*e*Pg	**Pg**	**14 07 58.0**	**-0.5**
GURO	**Guroymak-BITLI**	**0.68**	**292**	PG	**Pg**	**14 07 59.8**	**-0.8**
GURO	**Guroymak-BITLI**	**0.68**	**292**	*e*Pg	**Pg**	**14 07 59.7**	**-0.8**
SRTM	**Siirt_Merkez**	**0.78**	**247**	*i* P	**Pg**	**14 08 02.5**	**+0.1**
SRTM				*i* S	**Sn**	**14 08 15.5**	**-1.5**
SRTM				IAML		14 08 25.0	
	comp=E,2µm,0.7s						
SRTM				IAML		14 08 25.0	
	comp=N,1µm,0.5s						
SRTM	**Siirt_Merkez**	**0.78**	**247**	*e*Pg	**Pg**	**14 08 02.5**	**+0.1**
SIRT	**Sirnak**	**0.85**	**201**	PG	**Pg**	**14 08 03.7**	**-0.1**
SIRT	**Sirnak**	**0.85**	**201**	*e*Pg	**Pg**	**14 08 03.6**	**-0.2**
MLAZ	**Malazgirt-MUS**	**0.87**	**345**	PG	**Pg**	**14 08 03.9**	**-0.4**
MLAZ				SG	**Sb**	**14 08 16.5**	**-0.5**
MLAZ	**Malazgirt-MUS**	**0.87**	**345**	*e*Pg	**Pg**	**14 08 03.9**	**-0.4**
VMUR	**Van-Muradiye**	**0.90**	**40**	*i* P	**Pg**	**14 08 04.1**	**-0.7**
VMUR				*i* S	**Sb**	**14 08 17.6**	**-0.4**
VMUR				IAML		14 08 25.0	
	comp=N,886nm,0.7s						
VMUR				IAML		14 08 26.0	
	comp=E,1µm,1.7s						
VMUR	**Van-Muradiye**	**0.90**	**40**	*e*Pg	**Pg**	**14 08 04.1**	**-0.7**
BASK	**Baskale_VAN**	**0.96**	**104**	*i* P	**Pg**	**14 08 04.2**	**-1.7**
BASK				*i* S	**Sb**	**14 08 19.1**	**-0.3**
BASK				IAML		14 08 26.0	
	comp=E,630nm,0.9s						
BASK	**Baskale_VAN**	**0.96**	**104**	*e*Pg	**Pg**	**14 08 04.1**	**-1.7**
OZAP	**Van, Ozalp-Mer**	**0.98**	**68**	*i* P	**Pg**	**14 08 04.5**	**-1.8**
OZAP				*i* S	**Sn**	**14 08 25.1**	**+2.9**
MUSM	**Mu-Merkez**	**1.12**	**293**	*i* P	**Pg**	**14 08 07.5**	**-1.4**
MUSM				*i* S	**Sg**	**14 08 22.8**	**-0.7**
MUSM				IAML		14 08 26.0	
	comp=N,616nm,0.6s						
MUSM				IAML		14 08 29.0	
	comp=E,561nm,1.1s						
MUSM	**Mu-Merkez**	**1.12**	**293**	*e*Pg	**Pg**	**14 08 07.5**	**-1.4**
CLDR	**Caldiran**	**1.20**	**45**	PN	**Pb**	**14 08 09.5**	**-1.2**
CLDR	**Caldiran**	**1.20**	**45**	*i* P	**Pb**	**14 08 08.6**	**-2.1**
CLDR				*i* S	**Sn**	**14 08 27.6**	**+0.1**
CLDR	**Caldiran**	**1.20**	**45**	*e*Pn	**Pb**	**14 08 09.5**	**-1.2**
CUKT	**Cukurca**	**1.21**	**149**	PN	**Pb**	**14 08 09.9**	**-0.9**
CUKT				SN	**Sn**	**14 08 27.9**	**+0.1**
CUKT	**Cukurca**	**1.21**	**149**	*e*Pn	**Pb**	**14 08 09.9**	**-0.9**
AGRB	**Hanur-Agry**	**1.28**	**6**	PN	**Pn**	**14 08 11.4**	**-0.6**
AGRB				SN	**Sn**	**14 08 30.2**	**+0.6**
AGRB	**Hanur-Agry**	**1.28**	**6**	*e*Pn	**Pn**	**14 08 11.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.29**	**264**	PN	**Pb**	**14 08 11.8**	**-0.4**
SVAN				SN	**Sg**	**14 08 30.5**	**+1.4**
SVAN	**Silvan-Diyarba**	**1.29**	**264**	*i* P	**Pb**	**14 08 11.6**	**-0.5**
SVAN				*i* S	**Sg**	**14 08 30.0**	**+0.9**
SVAN				IAML		14 08 31.0	
	comp=N,445nm,0.4s						
SVAN				IAML		14 08 32.0	
	comp=E,363nm,0.7s						
SVAN	**Silvan-Diyarba**	**1.29**	**264**	*e*Pn	**Pb**	**14 08 11.6**	**-0.5**
BTMN	**Batman**	**1.30**	**252**	*i* P	**Pn**	**14 08 11.6**	**-0.5**
BTMN				*i* S	**Sg**	**14 08 29.3**	**+0.2**
BTMN				IAML		14 08 33.0	
	comp=E,1µm,0.4s						
BTMN				IAML		14 08 33.0	
	comp=N,1µm,0.6s						
YOVA	**Hakkari_Yksek**	**1.35**	**121**	*i* P	**Pn**	**14 08 12.2**	**-0.8**
YOVA				*i* S	**Sg**	**14 08 32.4**	**+1.4**
YOVA				IAML		14 08 36.0	
	comp=N,363nm,1.0s						
YOVA				IAML		14 08 36.0	
	comp=E,341nm,1.1s						
YOVA	**Hakkari_Yksek**	**1.35**	**121**	*e*Pn	**Pn**	**14 08 12.1**	**-0.8**
MIDY	**Mardin/Midyat-**	**1.44**	**232**	*i* P	**Pn**	**14 08 12.8**	**-1.3**
MIDY				*i* S	**Sg**	**14 08 34.3**	**+0.5**
MIDY				IAML		14 08 35.0	
	comp=E,996nm,0.4s						
MIDY				IAML		14 08 37.0	
	comp=N,913nm,0.5s						
KOTA	**Agri, Merkez-K**	**1.53**	**11**	*i* P	**Pb**	**14 08 15.9**	**-0.4**
KOTA				*i* S	**Sg**	**14 08 37.3**	**+0.6**
EATA	**Eleskirt**	**1.59**	**351**	*i* P	**Pn**	**14 08 16.1**	**-0.2**
EATA				*i* S	**Sg**	**14 08 39.0**	**+0.4**
EATA				IAML		14 08 41.0	
	comp=N,502nm,0.4s						
EATA				IAML		14 08 42.0	
	comp=E,557nm,0.6s						
EATA	**Eleskirt**	**1.59**	**351**	*e*Pn	**Pn**	**14 08 16.1**	**-0.2**
KARO	**Karliova-Bingo**	**1.72**	**307**	PN	**Pb**	**14 08 18.7**	**-0.8**
BNGB	**Bingl**	**1.82**	**293**	PN	**Pb**	**14 08 20.3**	**-0.9**
HOMI	**Horasan**	**1.89**	**338**	*i* P	**Pb**	**14 08 21.7**	**-0.7**
HOMI				*i* S	**Sg**	**14 08 49.1**	**+0.9**
HOMI				IAML		14 08 53.0	
	comp=E,328nm,0.5s						
HOMI				IAML		14 08 55.0	
	comp=N,252nm,0.5s						
HANI	**Diyarbakir_Han**	**1.92**	**274**	*i* P	**Pn**	**14 08 20.6**	**0.0**
HANI				*i* S	**Sg**	**14 08 47.9**	**-1.1**
HANI				IAML		14 08 51.0	
	comp=E,593nm,0.5s						
HANI				IAML		14 08 53.0	
	comp=N,458nm,1.0s						
ECAT	**Cat-ERZURUM**	**1.95**	**313**	*i* P	**Pb**	**14 08 22.9**	**-0.6**
ECAT				*i* S	**Sb**	**14 08 48.6**	**+0.5**
VNNZ	**Vanand**	**1.96**	**23**	*i* P	**Pg**	**14 08 25.0**	**-0.1**
VNNZ				*i* S	**Sg**	**14 08 53.2**	**+2.7**
YEDI	**Yedisu-Bingol**	**2.12**	**303**	PN	**Pn**	**14 08 23.6**	**+0.1**
DYBB	**Diyarbakir**	**2.15**	**262**	PN	**Pn**	**14 08 24.0**	**+0.2**
NRKZ	**NAREK**	**2.22**	**39**	*i* P	**Pb**	**14 08 27.6**	**-0.3**
NRKZ				*i* S	**Sg**	**14 08 57.9**	**-0.9**
EMRE	**Erzurum,Aziziy**	**2.25**	**321**	*i* P	**Pb**	**14 08 29.2**	**+0.6**
EMRE				*i* S	**Sg**	**14 08 58.8**	**-1.1**
EMRE				IAML		14 09 09.0	
	comp=N,159nm,0.8s						
EMRE				IAML		14 09 16.0	
	comp=E,244nm,0.7s						
IMRD	**Marand**	**2.29**	**79**	*e*Pn	**Pn**	**14 08 27.0**	**+1.1**
IMRD				*e*		14 08 30.9	
	comp=Z,99nm,0.5s						
SENK	**Senkaya-Erzuru**	**2.29**	**351**	PN	**Pn**	**14 08 26.7**	**+0.8**
KARS	**Kars**	**2.34**	**5**	PN	**Pn**	**14 08 26.7**	**+0.2**
GNI	**Garni**	**2.37**	**38**	*i* P	**Pb**	**14 08 31.4**	**+0.7**
GNI				*i* S	**Sg**	**14 09 02.5**	**-1.2**
GNI	**Garni**	**2.37**	**38**	PN	**Pn**	**14 08 27.4**	**+0.4**
KOVA	**Elazig, Kovanc**	**2.40**	**281**	*i* P	**Pb**	**14 08 29.2**	**-1.9**
KOVA				*i* S	**Sg**	**14 09 04.4**	**-0.3**
KOVA				IAML		14 09 14.0	
	comp=N,220nm,1.3s						
KOVA				IAML		14 09 16.0	
	comp=E,182nm,1.3s						
KAPZ	**Kaputan**	**2.49**	**35**	*i* P	**Pb**	**14 08 32.5**	**-0.1**
KAPZ				*i* S	**Sg**	**14 09 06.0**	**-1.4**
ITBZ	**Tabriz**	**2.61**	**90**	*e*Pn	**Pn**	**14 08 31.8**	**+1.5**
ERZN	**Erzincan**	**2.75**	**299**	PN	**Pn**	**14 08 32.6**	**+0.5**
MAHB	**Mahabad**	**2.75**	**123**	*e*Pn	**Pn**	**14 08 34.0**	**+1.9**
MAHB				*e*		14 09 16.1	
	comp=Z,99nm,0.8s						
BAYT	**Aydıntepe-Bayb**	**2.96**	**316**	PN	**Pn**	**14 08 35.9**	**+0.9**
IHRS	**Heris**	**3.31**	**88**	*e*Pn	**Pn**	**14 08 41.6**	**+1.6**
MALT	**Malatya**	**3.46**	**272**	PN	**Pn**	**14 08 43.7**	**+1.8**
ILIC	**ilic-Erzincan**	**3.52**	**290**	PN	**Pn**	**14 08 43.9**	**+1.2**
IHSH	**Hashtrud**	**3.65**	**104**	*e*Pn	**Pb**	**14 08 47.5**	**-2.2**
ISRB	**Sarab**	**3.85**	**96**	*e*Pn	**Pn**	**14 08 49.1**	**+1.8**
IDHR	**Dehrash**	**4.59**	**140**	*e*Pn	**Pn**	**14 08 58.4**	**+0.9**
IDHR				*e*		14 10 30.8	
	comp=Z,99nm,0.7s						
HSRG	**Sareghieh**	**5.33**	**123**	*e*Pn	**Pn**	**14 09 09.4**	**+1.7**
IGLO	**Ghaloghah**	**8.94**	**98**	*e*Pn	**Pn**	**14 10 01.1**	**+3.9**

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*IDC **21** 14:17:00.4±1.0, 6°.23S×128°.05E, h368^{km}±12^{km}, mb3.2/5, mb1 3.1/10, mb1mx2.9/43, mbtmp3.9/10, Error ellipse: s-maj=15.8km s-min=9.9km az=92.0*
*NEIC **21** 14:17:01.6±1.2, 6°.22S±0°.09×127°.99E±0°.10, h383^{km}±12^{km}, mb4.1/10, Error ellipse: s-maj=14.3km s-min=13.2km az=124.0*
ISC 21 14:16:59.9±0.6, **6°.16S**±0°.06×**127°.95E**±0°.07, **h350**^{km}, **n31**, σ**1^{s}.72**/34, **mb3.6**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.78**	**119**	Pn	**Pn**	**14 18 09.9**	**+3.1**
SOEI	**Soe**	**5.10**	**225**		**Pn**	**14 18 23.5**	**+2.7**
FAKI	**Fak Fak**	**5.36**	**53**		**Pn**	**14 18 26.3**	**+2.7**
BATI	**Baumata**	**5.84**	**226**	P	**Pn**	**14 18 31.8**	**+2.8**
	22nm,0.3s,baz=84,slow=2.2,SNR=21						
BATI				S	**S**	**14 19 41.3**	**+0.1**
	4.2nm,0.3s,baz=341,slow=13,SNR=4.0						
MMRI	**Maumere**	**6.17**	**246**	Pn	**Pn**	**14 18 36.0**	**+3.2**
SIJI	**Sorong**	**6.21**	**32**	P	**Pn**	**14 18 36.3**	**+3.1**
	1.4nm,0.3s,baz=139,slow=23,SNR=9.2						
SIJI				S	**S**	**14 19 48.7**	**-0.3**
	3.8nm,0.3s,baz=225,slow=23,SNR=16						
MTN	**Manton Dam**	**7.34**	**155**	Pn	**Pn**	**14 18 49.0**	**+2.6**
KAPI	**Kappang**	**8.24**	**278**	P	**P**	**14 18 59.6**	**-0.2**
	1.5nm,0.3s,baz=72,slow=16,SNR=3.2						
TOLI2	**Tolitoli**	**10.17**	**315**	P	**P**	**14 19 22.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**12.07**	**191**	P	**P**	**14 19 42.3**	**-0.1**
	0.4nm,0.3s,baz=9.1,slow=7.0,SNR=12						
FITZ	**Fitzroy Crossi**	**12.07**	**191**	P	**P**	**14 19 42.6**	**+0.3**
WB0	**Warramunga Arr**	**14.90**	**156**	P	**P**	**14 20 13.5**	**0.0**
WRA	**Warramunga Arr**	**15.04**	**156**	P	**P**	**14 20 14.5**	**-0.5**
	0.3nm,0.3s,baz=340,slow=11,SNR=10						
WB2	**Warramunga Arr**	**15.04**	**156**	P	**P**	**14 20 15.5**	**+0.4**
WR0	**Warramunga Arr**	**15.14**	**156**	P	**P**	**14 20 16.0**	**-0.1**
WR0				IAmb	IAmb	14 20 23.1	
	comp=Z,12nm,1.5s						
KKM	**Kota Kinabalu**	**16.86**	**316**	P	**Pn**	**14 20 37.2**	**-1.3**
COEN	**Coen**	**16.86**	**118**	P	**P**	**14 20 35.3**	**+0.4**
COEN				IAmb	IAmb	14 20 51.4	
	comp=Z,19nm,1.4s						
MBWA	**Marble Bar**	**16.90**	**207**	P	**P**	**14 20 35.1**	**-0.1**
PSA00	**Pilbara Seismi**	**17.21**	**206**	P	**P**	**14 20 38.1**	**-0.4**
PSA00				IAmb	IAmb	14 20 54.3	
	comp=Z,21nm,1.3s						
AS31	**Alice Springs**	**18.32**	**162**	P	**P**	**14 20 48.6**	**-1.8**
ASAR	**Alice Springs**	**18.32**	**162**	P	**P**	**14 20 50.0**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=343,slow=12,SNR=20						
ASAR				S	**S**	**14 23 58.1**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=344,slow=18,SNR=6.3						
ASAR	**Alice Springs**	**18.32**	**162**	P	**P**	**14 20 49.3**	**-1.1**
PSI	**Prapat**	**30.32**	**286**	P	**P**	**14 22 40.6**	**0.0**
	comp=Z,3.1nm,0.5s,baz=180,slow=2.1,SNR=5.2						
JWT	**Wachi**	**41.82**	**9**	P	**P**	**14 24 16.4**	**-0.2**
JWT				IAmb	IAmb	14 24 23.1	
	comp=Z,12nm,1.2s						
KSRS	**Korea Array**	**43.39**	**360**	P	**P**	**14 24 28.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=171,slow=9.2,SNR=5.2						
SONM	**Songino Array**	**57.03**	**343**	P	**P**	**14 26 09.7**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=158,slow=7.9,SNR=3.6						
PETK	**Petropavlovsk-**	**64.19**	**19**	P	**P**	**14 26 56.9**	**-1.2**
	comp=Z,2.3nm,0.8s,baz=171,slow=4.1,SNR=6.6						
PET	**Petropavlovsk**	**64.44**	**20**	P	**P**	**14 26 57.2**	**-2.4**
MK31	**Makanchi Array**	**66.42**	**328**	P	**P**	**14 27 11.4**	**-1.0**
MKAR	**Makanchi Array**	**66.42**	**328**	P	**P**	**14 27 11.5**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=115,slow=8.5,SNR=15						
MAKZ	**Makanchi**	**66.60**	**327**	P	**P**	**14 27 12.2**	**-1.4**
MAKZ				IAmb	IAmb	14 27 30.2	
	comp=Z,1.7nm,1.3s						

IDC 21 14:50:58.5±73.0, **16°.67S**×**175°.99W**, **h552**^{km}±111^{km}, **mb2.9**/3, **mb1 3.1**/4, **mb1mx2.8**/33, **mbtmp3.9**/4, **Error ellipse: s-maj=1168.0km s-min=134.9km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.80**	**259**	P	P	14 52 35.4	0.0
	1.5nm,0.3s,baz=19,slow=4.6,SNR=14						
STKA	**Stephens Creek**	**41.25**	**241**	P	P	14 57 55.9	0.0
	1.0nm,0.5s,baz=89,slow=8.9,SNR=6.9						
WRA	**Warramunga Arr**	**47.14**	**258**	P	P	14 58 40.8	-0.8
	0.3nm,0.6s,baz=94,slow=9.8,SNR=1.6						
ASAR	**Alice Springs**	**47.36**	**253**	P	P	14 58 43.2	0.0
	1.8nm,0.5s,baz=90,slow=8.1,SNR=35						

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*IDC **21** 15:00:40.4±3.3, 28°.89N×142°.42E, h65^{km}±31^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.1/36, mbtmp3.6/4, Error ellipse: s-maj=45.7km s-min=23.3km az=95.0*
ISC 21 15:00:36.0±1.2, **28°.99N**±0°.09×**142°.4E**±0°.3, **h27**^{km}, **n6**, σ**1^{s}.22**/7, **mb3.7**/5, **1C**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.90**	**186**	P	**Pb**	**15 01 09.1**	**-0.9**
	9.1nm,0.3s,baz=294,slow=21,SNR=5.3						
JCJ				S	**Sb**	**15 01 35.1**	**+1.8**
	37nm,0.3s,baz=104,slow=23,SNR=12						
WRA	**Warramunga Arr**	**49.27**	**190**	P	**P**	**15 09 22.0**	**-0.5**
	1.4nm,0.5s,baz=12,slow=8.7,SNR=12						
MK31	**Makanchi Array**	**49.44**	**308**	⇑Pn	**P**	**15 09 23.8**	**+0.1**
	1.2nm,1.1s,baz=44,slow=13,SNR=5.1						
MKAR	**Makanchi Array**	**49.44**	**308**	P	**P**	**15 09 24.2**	**+0.5**
	0.3nm,0.4s,baz=97,slow=7.8,SNR=6.3						
ASAR	**Alice Springs**	**52.99**	**190**	P	**P**	**15 09 49.5**	**-0.9**
	0.1nm,0.5s,baz=8.1,slow=6.3,SNR=6.1						
ILAR	**Eielson Array**	**55.97**	**29**	P	**P**	**15 10 12.2**	**+0.6**
	0.4nm,0.6s,baz=266,slow=6.3,SNR=7.2						

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*CRAAG **21** 15:06:11.0, 35°.84N×5°.68E, Ml2.8*
*MDD **21** 15:06:13.1±1.3, 35°.76N×5°.67E, h0^{km}, mb4.2/10, Error ellipse: s-maj=14.4km s-min=5.6km az=6.0, PRXIMO*
*IDC **21** 15:06:21.6±1.6, 33°.70N×10°.63E, h0^{km}, mb3.2/3, mb1 3.2/4, mb1mx3.1/32, mbtmp3.2/4, ML2.6/1, Error ellipse: s-maj=36.2km s-min=24.4km az=97.0*
ISC 21 15:06:11.8±1.0, **35°.74N**±0°.08×**5°.74E**±0°.04, **h10**^{km}, **n28**, σ**1^{s}.30**/31, **mb3.3**/3, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.33**	**327**	P	**Pg**	**15 06 16.6**	**-2.0**
CKHR	**Kef el Ahmar**	**0.33**	**327**	P	**Pg**	**15 06 16.6**	**-2.0**
SET	**Setif**	**0.54**	**330**	P	**Pg**	**15 06 23.0**	**+0.7**
SET	**Setif**	**0.54**	**330**	P	**Pg**	**15 06 23.0**	**+0.7**
CTEI	**Djebel Teioual**	**0.63**	**59**	P	**Pg**	**15 06 23.9**	**-0.3**
CTEI	**Djebel Teioual**	**0.63**	**59**	P	**Pg**	**15 06 23.9**	**-0.3**
CASM	**Ain Smara**	**0.80**	**49**	P	**Pn**	**15 06 29.2**	**-0.1**
CASM	**Ain Smara**	**0.80**	**49**	P	**Pn**	**15 06 29.2**	**-0.1**
DFRA	**Djebel Bou Aff**	**0.81**	**8**	P	**Pb**	**15 06 28.5**	**+0.3**
DFRA	**Djebel Bou Aff**	**0.81**	**8**	P	**Pb**	**15 06 28.5**	**+0.3**
CKFL	**Kef-Lekhel**	**1.04**	**50**	P	**Pn**	**15 06 33.1**	**+0.5**
CKFL	**Kef-Lekhel**	**1.04**	**50**	P	**Pn**	**15 06 33.1**	**+0.5**
CMAH	**Djebel Manchou**	**1.62**	**56**	P	**Pb**	**15 06 42.1**	**+0.1**
CMAH	**Djebel Manchou**	**1.62**	**56**	P	**Pb**	**15 06 42.1**	**+0.1**
KEST	**Kesra**	**2.94**	**89**	Pn	**Pn**	**15 07 00.4**	**+1.8**
	1.5nm,0.3s,baz=227,slow=17,SNR=13						
KEST				Sn	**Sn**	**15 07 32.4**	**-1.6**
	0.7nm,0.3s,baz=319,slow=20,SNR=2.5						
ETOS	**Mallorca**	**4.64**	**331**	P	**Pn**	**15 07 23.4**	**+1.4**
	2.6nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**15 08 15.3**	**-0.7**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.80**	**314**	P	**Pn**	**15 07 25.7**	**+1.6**
	10nm,0.2s,SNR=9.0						
EIBI				S	**Sn**	**15 08 17.8**	**-2.0**
	1.5nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.98**	**293**	P	**Pn**	**15 07 39.8**	**-0.6**
	2.5nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**6.50**	**299**	P	**Pn**	**15 07 48.8**	**+1.2**
	3.3nm,0.4s,SNR=5.9						
EMOS	**Mosqueruela**	**6.73**	**315**	P	**Pn**	**15 07 53.1**	**+2.2**
	1.1nm,0.3s,SNR=4.0						
SESP	**Santiago Espad**	**7.05**	**292**	P	**Pn**	**15 07 56.2**	**+1.0**
	10nm,0.5s,SNR=7.9						
EBER	**Berja**	**7.06**	**282**	P	**Pn**	**15 07 55.5**	**+0.1**
	2.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**7.36**	**289**	P	**Pn**	**15 08 00.5**	**+1.0**
	2.1nm,0.3s,SNR=7.9						
CSOR	**Sort**	**7.53**	**333**	P	**Pn**	**15 08 03.5**	**+1.7**
	2.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**7.54**	**284**	P	**Pn**	**15 08 02.0**	**+0.1**
	2.7nm,0.4s,SNR=4.6						
AKASG	**Malin Array Be**	**22.59**	**41**	P	**P**	**15 11 13.1**	**+0.7**
	0.3nm,0.4s,baz=237,slow=8.5,SNR=1.3						
TORD	**Torodi Ar. Bea**	**22.79**	**190**	P	**P**	**15 11 17.3**	**+2.7**
	0.5nm,0.5s,baz=9.3,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**56.46**	**53**	P	**P**	**15 15 51.8**	**-2.0**
	0.2nm,0.5s,baz=270,slow=7.6,SNR=4.4						

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*NNC **21** 15:26:40.1±3.2, 50°.00N×88°.98E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=25.5km s-min=18.7km az=101.0*
*ASRS **21** 15:26:40.4±0.4, 50°N±3°×8°9E±°, h5^{km}, MLh3.0/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 21 15:26:38.5±1.2, **50°.27N**±0°.04×**88°.92E**±0°.03, **h7**^{km}±10^{km}, **n22**, σ**2^{s}.22**/38, **7C-4D**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.40**	**246**	P	**Pg**	**15 26 46.4**	**+0.1**
CUR				S	**Sg**	**15 26 51.5**	**-0.1**
ULGR	**Ulagan, Altay**	**0.71**	**301**	P	**Pn**	**15 26 54.0**	**-1.0**
ULGR				S	**Sn**	**15 27 03.7**	**-2.6**
CHBI	**Chibit, Altay**	**0.91**	**273**	P	**Pb**	**15 26 55.8**	**-0.8**
CHBI				S	**Sb**	**15 27 08.1**	**-0.9**
TEL	**Teeli**	**1.11**	**47**	P	**Pg**	**15 27 01.8**	**+2.1**
TEL				S	**Sg**	**15 27 17.2**	**+3.0**
DGZ	**Jazzator, Alta**	**1.11**	**240**	P	**Pn**	**15 26 58.8**	**-1.8**
DGZ				S	**Sb**	**15 27 11.7**	**-3.2**
ARTR	**Artybash**	**1.85**	**327**	P	**Pg**	**15 27 15.4**	**+1.6**
ARTR				S	**Sg**	**15 27 40.3**	**+2.4**
TASR	**Tashtagol**	**2.58**	**346**	P	**Pg**	**15 27 28.8**	**+0.9**
TASR				S	**Sg**	**15 28 01.7**	**+0.4**
UKR	**Ust'-Kan**	**2.73**	**286**	P	**Pb**	**15 27 26.7**	**-0.9**
TBTR	**Tabat**	**2.89**	**22**	P	**Pb**	**15 27 27.2**	**-3.2**
TBTR				S	**Sg**	**15 28 09.2**	**-2.2**
DJO	**Djoy, Khakassi**	**2.90**	**29**	S	**Sg**	**15 28 07.5**	**-4.0**
DJOS	**Djoyskaya Sosn**	**2.97**	**31**	P	**Pb**	**15 27 31.7**	**+0.1**
DJOS				S	**Sg**	**15 28 10.6**	**-3.1**
CERR	**Cheremushki**	**3.02**	**30**	P	**Pb**	**15 27 31.2**	**-1.4**
CERR				S	**Sb**	**15 28 10.3**	**+0.6**
VEH	**Verkhnyaya Baz**	**3.11**	**16**	P	**Pb**	**15 27 33.4**	**-0.8**
VEH				S	**Sb**	**15 28 12.6**	**+0.2**
LUZB	**Luzhba, Kemero**	**3.40**	**360**	S	**Sb**	**15 28 14.8**	**-5.7**
ELT	**Eltsovka**	**3.43**	**332**	S	**Sb**	**15 28 19.9**	**-1.4**
BLRR	**Bol’shaya Rech**	**3.53**	**37**	P	**Pb**	**15 27 39.7**	**-1.6**
BLRR				S	**Sb**	**15 28 24.5**	**+0.1**
ARDR	**Aradan**	**3.65**	**49**	P	**Pb**	**15 27 41.4**	**-2.0**
ARDR				S	**Sb**	**15 28 26.2**	**-1.7**
SHRR	**Shira**	**4.30**	**10**	P	**Pn**	**15 27 47.1**	**+2.8**
SHRR				S	**Sn**	**15 28 37.5**	**+2.9**
MK31	**Makanchi Array**	**5.61**	**234**	⇑Pn	**Pn**	**15 28 04.6**	**+2.3**
	0.9nm,0.5s,baz=54,slow=14,SNR=30						
MK31				⇑Sn	**Sn**	**15 29 07.6**	**+0.6**
	0.3nm,0.2s,baz=48,slow=16,SNR=4.0						
MK31				⇑Lg	Lg	15 29 33.9	
	2.1nm,0.5s,baz=47,slow=30,SNR=4.4						
MAKZ	**Makanchi**	**5.76**	**236**	⇓Pn	**Pn**	**15 28 06.3**	**+1.9**
	0.7nm,0.5s						
MAKZ				⇑Sn	**Sn**	**15 29 12.0**	**+1.3**
	1.9nm,0.7s						
MAKZ				⇑Lg	Lg	15 29 37.5	
	4.2nm,0.7s						
KURK	**Kurchatov**	**6.59**	**278**	⇓Pn	**Pn**	**15 28 17.8**	**+2.1**
	1.1nm,0.7s						
KURK				⇓Lg	Lg	15 30 11.9	
	2.2nm,0.6s						
KURBB	**Kurchatov Arra**	**6.65**	**277**	⇑Pn	**Pn**	**15 28 18.1**	**+1.7**
	3.1nm,0.9s						
KURBB				⇓Sn	Sn	15 29 40.6	+8.2
	3.1nm,0.7s						
KURBB				⇑Lg	Lg	15 30 11.2	
	9.0nm,0.6s						

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*IDC **21** 15:38:47.7±2.6, 39°.26N×142°.69E, h0^{km}, mb3.4/2, mb1 3.7/3, mb1mx3.3/45, mbtmp3.4/3, ML2.6/1, Error ellipse: s-maj=50.3km s-min=37.3km az=78.0*
*JMA **21** 15:39:00.4, 38°.87N×141°.67E, h66^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s291.00000°, δ49.00000°, λ0.00000°. NP2: ϕ_s201.00000°, δ90.00000°, λ139.00000°. Principal axes: T Plg28.0000°, Azm148.0000°; N Plg49.0000°, Azm21.0000°; P Plg28.0000°, Azm254.0000°;*
JMA Felt I J1.
ISC 21 15:39:00.1±1.2, **38°.89N**±0°.05×**141°.74E**±0°.08, **h63**^{km}±7^{km}, **n23**, σ**1^{s}.27**/29, **8C-4D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.20**	**344**	⇑P	**Pn**	**15 39 10.6**	**+0.7**
OFUJ				S	**Sn**	**15 39 17.8**	**+0.8**
JKMT	**Kesennumamotoy**	**0.22**	**250**	⇑P	**Pn**	**15 39 10.4**	**+0.4**
JKMT				S	**Sn**	**15 39 17.4**	**+0.2**
JMK	**Ichinoseki**	**0.41**	**279**	⇑P	**Pn**	**15 39 11.4**	**0.0**
JMK				S	**Sn**	**15 39 19.6**	**-0.1**
JIO	**Ouri**	**0.53**	**215**	⇑P	**Pn**	**15 39 12.6**	**0.0**
JIO				S	**Sn**	**15 39 21.2**	**-0.5**
JOM	**Ohasama**	**0.68**	**329**	⇑P	**Pn**	**15 39 14.7**	**+0.4**
JOM				S	**Sn**	**15 39 25.1**	**+0.4**
JOU	**Okura**	**0.99**	**239**	⇓P	**Pn**	**15 39 17.9**	**-0.2**
JOU				S	**Sn**	**15 39 31.3**	**-0.2**
JRG	**Rokugo**	**1.00**	**301**	⇑P	**Pn**	**15 39 18.2**	**0.0**
JRG				S	**Sn**	**15 39 31.9**	**+0.2**
JYK	**Kaneyama**	**1.08**	**272**	⇑P	**Pn**	**15 39 19.1**	**-0.1**
JYK				S	**Sn**	**15 39 33.4**	**-0.1**
JMM	**Marumori**	**1.26**	**216**	⇓P	**Pn**	**15 39 21.0**	**-0.6**
JMM				S	**Sn**	**15 39 36.7**	**-1.1**
JYS	**Shirataka**	**1.47**	**244**	⇓P	**Pn**	**15 39 24.5**	**+0.1**
JYS				S	**Sn**	**15 39 42.6**	**-0.2**
JANG	**Nango**	**1.49**	**353**	P	**Pn**	**15 39 25.0**	**+0.3**
JAH	**Hinai**	**1.55**	**327**	⇑P	**Pn**	**15 39 26.3**	**+0.8**
JYA	**Atsumi**	**1.61**	**260**	⇓P	**Pn**	**15 39 26.2**	**-0.1**
JYA				*e*S	**Sn**	**15 39 45.1**	**-1.0**
MAT	**Matsushiro**	**3.65**	**231**	P	**Pn**	**15 39 55.6**	**+1.5**
MAT				*e*S	**Sn**	**15 40 41.2**	**+5.3**
MJAR	**Matsushiro Arr**	**3.65**	**231**	Pn	**Pn**	**15 39 56.0**	**+1.9**
	0.3nm,0.3s,baz=44,slow=12,SNR=21						
MJAR				Sn	Sn	15 40 51.7	+16
	0.2nm,0.3s,baz=236,slow=32,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**28.92**	**124**	T	T	16 15 24.2	
	baz=318,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**28.93**	**124**	T	T	16 15 24.9	
	baz=318,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**28.94**	**124**	T	T	16 15 24.3	
	baz=318,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**29.70**	**126**	T	T	16 16 17.3	
	baz=319,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.70**	**126**	T	T	16 16 24.1	
	baz=319,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**29.71**	**126**	T	T	16 16 19.6	

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         baz=319,slow=76,SNR=9.6
MKAR Makanchi Array    43.38 301  P        P        15 46 55.3 -0.8
         0.1nm,0.5s,baz=86,slow=9.1,SNR=6.1
WRA  Warramunga Arr    58.93 188  P        P        15 48 52.0 -0.8
         0.4nm,0.4s,baz=5.2,slow=7.6,SNR=5.4
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*IDC **21** 15:44:10.4±1.0, 64°.57N×17°.76W, h0^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.6/41, mbtmp3.6/9, ML1.7/1, Error ellipse: s-maj=30.5km s-min=16.1km az=13.0*

*REY **21** 15:44:10.8, 64°.67N×17°.46W, h7^{km}*

ISC 21 15:44:10.2±1.0**, 64°.68N**±0°.02×**17°.48W**±0°.03**, h6**^{km}±7^{km}**, n46, σ1ˢ.83**/53**, mb3.6**/7**, Iceland**

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Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
IDYN Dyngjuhals         0.12  25  P        Pg       15 44 13.7 +1.0
         baz=18
IDYN                              S        Sg       15 44 16.2 +1.8
         baz=18
IDJK Dyngjujokull       0.21 149  P        Pg       15 44 14.7 +0.4
         baz=150
IDJK                              S        Sg       15 44 18.5 +1.4
         baz=150
IGRF Grimsfjall         0.29 161  P        Pb       15 44 16.1 -1.8
         baz=162
IKVE Kverkfjoll         0.35  91  P        Pb       15 44 17.3 -1.6
         baz=88
IHUS Husbondi           0.40 191  P        Pb       15 44 18.3 -1.4
         baz=193
ISKR Skrokkalda         0.41 253  P        Pb       15 44 18.4 -1.4
         baz=255
IJOK Jokulheimar        0.49 221  P        Pg       15 44 19.4 -0.1
         baz=223
IASK Askja              0.51  44  P        Pb       15 44 20.1 -1.6
         baz=42
IMKO Mokollar           0.57  58  P        Pb       15 44 21.0 -1.6
         baz=57
IMKO                              S        Sb       15 44 29.7 -1.3
         baz=57
IIEY Innrieyrar         0.65 206  P        Pb       15 44 22.2 -1.7
         baz=207
IIEY                              S        Sg       15 44 31.7 +0.6
         baz=207
ISVA Svartarkot         0.66   8  P        Pg       15 44 22.8 -0.1
         baz=7.3
ISVA                              S        Sg       15 44 32.5 +1.0
         baz=7.3
IKSK Karasker           0.68 140  P        Pb       15 44 22.1 -2.4
         baz=140
IKAL Kalfafell          0.74 187  P        Pb       15 44 23.8 -1.7
         baz=188
IVSH V-Sauoahnukur      0.76  80  P        Pg       15 44 24.0 -0.8
         baz=79
IVSH                              S        Sg       15 44 34.4 -0.3
         baz=79
IFAG Fagurholsmyri      0.89 156  P        Pb       15 44 26.1 -1.9
         baz=156
IHVE Hveravellir        0.91 283  P        Pb       15 44 26.6 -1.8
         baz=284
IMEL Melhnausar         0.96  21  P        Pb       15 44 27.6 -1.6
         baz=20
IREN Reynihlio          1.00  14  P        Pn       15 44 28.3 -2.4
         baz=13
IKVO Krokottuvotn       1.06  14  P        Pn       15 44 29.4 -2.3
         baz=13
IGRS Grimsstaoir        1.12  30  P        Pb       15 44 30.2 -1.6
         baz=30
IRJU Rjupnafell         1.19 206  P        Pb       15 44 31.5 -1.6
         baz=207
ISKI Skildingahlsh      1.21   9  P        Pb       15 44 31.7 -1.7
         baz=8.4
ISKI                              S        Sg       15 44 48.3 -0.5
         baz=8.4
IGHA Grjothals          1.22  16  P        Pb       15 44 31.6 -1.9
         baz=16
IGYG Gygjarholskot      1.25 252  P        Pb       15 44 32.4 -1.7
         baz=253
IDIM Dimmadalss         1.30  10  P        Pb       15 44 33.2 -1.9
         baz=9.4
IHVO Lagu-Hvolar        1.31 208  P        Pb       15 44 33.6 -1.5
         baz=209
IHLA Hella              1.32 344  P        Pb       15 44 33.8 -1.5
         baz=344
IALF Alftagrof          1.41 213  P        Pb       15 44 35.1 -1.7
         baz=213
ISAU Saurbar            1.45 243  P        Pn       15 44 35.3 -1.6
         baz=243
IBRE Brettingsstaoi     1.46 353  P        Pb       15 44 35.6 -2.1
         baz=353
IGIL Gilhagi            1.48  18  P        Pb       15 44 35.7 -2.3
         baz=18
ISIG Siglufjorour       1.57 338  P        Pb       15 44 37.4 -2.3
         baz=338
IASM Asmuli             1.61 239  P        Pb       15 44 38.5 -1.8
         baz=240
BORG Borgarnes          1.65 274  Pn       Pb       15 44 38.7 -2.2
         19nm,0.3s,baz=97,slow=9.2,SNR=61
BORG                              Sn       Sg       15 45 02.3 -0.8
         8.8nm,0.3s,baz=59,slow=17,SNR=11
ILEI Leirhofn           1.78  13  P        Pb       15 44 40.6 -2.6
         baz=13
IHRN Hraun              1.81 324  P        Pn       15 44 40.9 -0.9
         baz=324
SCO  Scoresbysund       6.07 346  e        Pn       15 45 36.2 -4.1
         baz=158,slow=6.5
SCO                              iP        Pn       15 45 41.0 +0.7
SCO                              iP        Pn       15 45 41.0 +0.7
SCO                              eS        Sn       15 46 55.0 +5.1
SCO                               IAML              15 46 58.1
         comp=Z,1.4nm,0.4s
EKA  Eskdalemuir Ar    11.77 136  Pn       Pn       15 46 59.6 +1.3
         baz=320,slow=13,SNR=9.8
NOA  NORSAR Array B    13.53  92  Pn       P        15 47 25.3 -6.4
         comp=Z,0.0nm,0.3s,baz=290,slow=13,SNR=1.4
YKA  Yellowknife Ar    39.21 313  P        P        15 51 39.0 +0.6
         comp=Z,0.6nm,1.0s,baz=52,slow=8.3,SNR=5.3
ILAR Eielson Array     45.67 332  P        P        15 52 34.2 +3.2
         comp=Z,2.1nm,1.2s,baz=13,slow=7.0,SNR=8.6
MKAR Makanchi Array    52.71  58  P        P        15 53 27.1 +2.0
         comp=Z,0.5nm,0.9s,baz=351,slow=7.3,SNR=5.2
TORD Torodi Ar. Bea    53.16 156  P        P        15 53 29.6 +0.9
         comp=Z,0.7nm,0.8s,baz=334,slow=9.6,SNR=2.2
PDAR Pinedale Array    53.18 293  P        P        15 53 28.3 -0.6
         comp=Z,0.6nm,0.8s,baz=51,slow=6.6,SNR=5.3
SONM Songino Array     59.62  40  P        P        15 54 15.6 +1.0
         comp=Z,0.3nm,0.7s,baz=339,slow=6.3,SNR=4.4
CMAR Chiang Mai Arr    84.12  59  P        P        15 56 44.1 +2.3
         comp=Z,0.2nm,0.3s,baz=327,slow=6.5,SNR=4.3
```

IDC 21 16:01:39.6±2.9**, 3°.48S**×**135°.40E, h0**^{km}**, mb3.2**/1**, mb1 3.6**/3**, mb1mx3.4**/23**, mbtmp3.4**/3**, ML3.1**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/38**, Error ellipse: s-maj=107.0km s-min=28.0km az=84.0, Irian Jaya region**

```
Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
KAPI Kappang           15.68 264  LR       LR       16 13 24.4
         comp=Z,33nm,18.6s,baz=135,slow=45
WRA  Warramunga Arr    16.40 184  Pn       Pn       16 05 29.2 -2.1
         0.1nm,0.3s,baz=2.5,slow=13,SNR=2.6
WRA                               Sn       Sn       16 08 28.5 -5.6
         0.1nm,0.3s,baz=3.9,slow=23,SNR=3.2
FITZ Fitzroy Crossi    17.39 213  P        Pn       16 05 44.0 +0.2
         0.1nm,0.3s,baz=25,slow=14,SNR=2.2
ASAR Alice Springs     20.12 184  P        P        16 06 16.1 +0.9
         12nm,0.3s,baz=8.3,slow=12,SNR=10
MKAR Makanchi Array    68.42 324  P        P        16 12 43.3  0.0
         0.2nm,0.7s,baz=116,slow=6.6,SNR=2.6
```

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*IDC **21** 16:07:15.0±2.2, 6°.83S×129°.59E, h140^{km}±22^{km}, mb4.0/7, mb1 4.2/11, mb1mx3.8/35, mbtmp4.5/11, Error ellipse: s-maj=25.7km s-min=12.6km az=66.0*

*DJA **21** 16:07:16.8±0.2, 7°S±2°×13°0E±°, h191^{km}±6^{km}, M4.5/12, mB4.9/7, mb4.5/11, MLv4.7/12, Mw(mB)4.2/7*

*NEIC **21** 16:07:17.2±2.2, 6°.69S±0°.06×129°.69E±0°.08, h163^{km}±7^{km}, mb4.5/26, Error ellipse: s-maj=11.3km s-min=8.9km az=71.0*

*NOU **21** 16:07:25.4, 7°.52S×129°.82E, h180^{km}, mb4.5, Banda Sea*

ISC 21 16:07:20.1±0.4**, 7°.13S**±0°.05×**129°.66E**±0°.05**, h200**^{km}**, n90, σ2ˢ.17**/86**, mb4.4**/23**, Banda Sea**

```
Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
SAUI Saumlaki           1.83 118  Pn       Pn       16 07 54.7 -2.2
SAUI                              Sn       Sn       16 08 20.6 -5.0
SAUI Saumlaki           1.83 118  P        Pn       16 07 54.8 -2.2
SAUI                              S        Sn       16 08 20.6 -5.0
BNDI Bandanaira         2.60   5  P        Pn       16 07 58.7 -6.4
MSAI Masohi             3.82 349  P        Pn       16 08 14.1 -5.6
NLAI Namlea             4.63 326  P        Pn       16 08 25.9 -3.9
FAKI Fak Fak            4.91  32  Pn       Pn       16 08 24.8 -8.7
FAKI Fak Fak            4.91  32  P        Pn       16 08 24.7 -8.7
MTN  Manton Dam         5.87 166  Pn       Pn       16 08 45.9 +0.3
SOEI Soe                5.94 244  Pn       Pn       16 08 46.3 -0.3
SOEI Soe                5.94 244  P        Pn       16 08 46.4 -0.3
         0.8nm2μm112nm,0.8s
SANI Sanana             6.23 324  P        Pn       16 08 46.1 -4.3
         0.2nm558nm56nm,0.7s
SIJI Sorong             6.42  15  P        Pn       16 08 44.4 -8.4
         10nm,0.3s,baz=90,slow=12,SNR=76
SIJI                              S        Sn       16 09 48.9  -17
         26nm,0.3s,baz=283,slow=24,SNR=7.1
SWI  Sorong             6.42  14  P        Pn       16 08 44.0 -8.9
         0.9nm3μm47nm,0.4s
BATI Baumata            6.67 242  P        Pn       16 08 56.0 -0.1
         23nm,0.3s,baz=96,slow=1.2,SNR=38
BATI                              S        Sn       16 10 10.0 -2.3
         30nm,0.3s,baz=58,slow=23,SNR=13
BATI Baumata            6.67 242  P        Pn       16 08 55.8 -0.3
         0.4nm1μm54nm,0.6s
MMRI Maumere            7.50 258  Pn       Pn       16 09 05.6 -1.3
EDFI Ende, Flores       8.06 258  P        Pn       16 09 13.8 -0.4
         12nm,0.6s
KNRA Kununurra          8.54 186  Pn       Pn       16 09 21.0 +0.5
LUWI Luwuk              9.15 311  Pn       Pn       16 09 19.9 -8.5
WAMI Wamena             9.57  71  P        Pn       16 09 34.5 +0.7
WSI  Waingapu           9.60 254  P        Pn       16 09 20.2  -14
GTOI Gorontalo         10.17 319  P        Pn       16 09 42.5 +0.9
SPSI Sidrap Palu       10.33 287  P        P        16 09 53.0 +1.8
WBSI Waikabubak, Su    10.46 255  P        Pn       16 09 42.7 -2.7
         50nm,1.1s
MRSI Marisa            10.79 314  P        Pn       16 09 49.2 -0.3
FITZ Fitzroy Crossi    11.59 199  P        Pn       16 09 59.1 -0.6
         2.7nm,0.3s,baz=14,slow=8.4,SNR=41
FITZ                              S        Sn       16 12 01.7 -7.3
         3.9nm,0.3s,baz=90,slow=20,SNR=3.3
FITZ Fitzroy Crossi    11.59 199  Pn       Pn       16 09 59.6 -0.2
PLAI Plampang          11.89 261  P        Pn       16 10 01.4 -2.3
         26nm,0.9s
TWSI Taliwang, Sumb    12.76 262  P        Pn       16 10 12.4 -2.2
WB0  Warramunga Arr    13.38 160  Pn       Pn       16 10 21.3 -1.1
WRAB Tennant Creek     13.52 161           Pn       16 10 23.7 -0.4
WRA  Warramunga Arr    13.53 161  P        Pn       16 10 23.4 -0.8
         2.8nm,0.3s,baz=337,slow=13,SNR=67
WRA                               S        S        16 12 48.6 -6.4
         7.0nm,0.3s,baz=338,slow=21,SNR=9.6
WRA  Warramunga Arr    13.53 161           Pn       16 10 22.0 -2.2
WB2  Warramunga Arr    13.53 161  Pn       Pn       16 10 23.4 -0.9
WR0  Warramunga Arr    13.61 160           Pn       16 10 24.5 -0.7
COEN Coen              14.91 118  Pn       Pn       16 10 40.5 -0.9
COEN                              IAmb     IAmb     16 10 45.3
         comp=Z,9.3nm,0.7s
BBKI Banjar Baru       15.20 283  P        P        16 10 47.2 +1.9
JAGI Jajag, Banyuwa    15.42 264  Pn       Pn       16 10 46.2 -1.4
MTKI Muara Teweh, K    15.95 292  P        Pn       16 10 56.4 +2.4
AS31 Alice Springs     16.94 167  P        Pn       16 11 08.3 +2.5
AS31                              IAmb     IAmb     16 11 10.2
         comp=Z,14nm,0.7s
ASAR Alice Springs     16.95 167  P        Pn       16 11 05.9 +0.1
         comp=Z,5.3nm,0.3s,baz=344,slow=9.3,SNR=516
ASAR                              S        S        16 14 12.7 +1.7
         comp=Z,1.9nm,0.3s,baz=355,slow=26,SNR=6.8
ASAR Alice Springs     16.95 167  P        Pn       16 11 06.6 +0.8
PSA00 Pilbara Seismi   17.21 212           Pn       16 11 11.3 +2.4
PSA00                             IAmb     IAmb     16 11 26.7
         comp=Z,39nm,1.5s
PBKI Pangkalan Bun     18.45 283  P        Pn       16 11 25.4 +1.9
UGM  Wanagama          18.99 266  P        P        16 11 27.0 +0.2
CTA  Charters Tower    20.61 130  P        P        16 11 46.4 +2.2
         comp=Z,5.1nm,0.7s,baz=311,slow=14,SNR=10.0
CTAO Charters Tower    20.61 130  P        Pn       16 11 47.4 -2.3
CTAO                              IAmb     IAmb     16 11 50.5
         comp=Z,9.2nm,1.0s
KSM  Kuching           21.11 293  P        P        16 11 48.1 -1.3
KSM                               IAmb     IAmb     16 11 54.0
         comp=Z,36nm,1.3s
CISI Cisompet, Garu    21.67 267  P        P        16 11 54.9 -0.4
CISI Cisompet, Garu    21.67 267  P        P        16 11 57.7 +2.4
LEM  Lembang           21.88 269  P        P        16 11 57.0 -0.6
         comp=Z,14nm,0.5s,baz=150,slow=20,SNR=2.9
FORT Forrest           23.58 183  P        P        16 12 16.4 +3.7
FORT                              IAmb     IAmb     16 12 28.9
         comp=Z,13nm,0.7s
BBOO Buckleboo         26.24 168  P        P        16 12 40.1 +3.3
BBOO                              IAmb     IAmb     16 12 59.9
         comp=Z,17nm,1.2s
STKA Stephens Creek    27.03 157  P        P        16 12 47.2 +3.4
         comp=Z,4.0nm,0.3s,baz=342,slow=8.4,SNR=22
STKA Stephens Creek    27.03 157  P        P        16 12 47.4 +3.6
ARMA Armidale          31.01 141  P        P        16 13 23.2 +4.0
KULM Kulim             31.47 292  P        P        16 13 22.0 -1.3
KULM                              IAmb     IAmb     16 13 28.0
         comp=Z,13nm,1.4s
GSI  Gunungsitoli      33.09 283  P        P        16 13 35.2 -2.2
CAN  Canberra          33.21 150  P        P        16 13 42.9 +4.7
CMAR Chiang Mai Arr    39.55 310  P        P        16 14 31.2 -0.8
         comp=Z,1.6nm,0.6s,baz=137,slow=7.4,SNR=19
CMAR Chiang Mai Arr    39.55 310  P        P        16 14 31.0 -1.1
CHTO Chiang Mai        39.77 311  P        P        16 14 32.8 -0.9
JWT  Wachi             42.52   7  P        P        16 14 54.1 -1.8
JWT                               IAmb     IAmb     16 15 09.0
         comp=Z,15nm,1.3s
LZH  Lanzhou           49.36 332 eP        P        16 15 50.6 +1.1
LZH                               pP       pP       16 16 30.4 -1.8
LZH                               sP       sP       16 16 49.3 -4.6
LZH                               pmax     pmax
         comp=Z,14nm,1.3s
WHZ  Wether Hill Ro    50.79 146  P        P        16 16 03.6 +3.6
WHZ                               IAmb     IAmb     16 16 07.8
         comp=Z,18nm,1.4s
ODAN Odare             53.08 311 eP        P        16 16 16.3 -1.2
         comp=Z,6.0nm,0.4s
TAPN Taplejung         53.12 312 eP        P        16 16 16.3 -1.5
         comp=Z,7.2nm,0.4s
RAMN Ramite            53.72 311 eP        P        16 16 21.4 -0.7
         comp=Z,13nm,0.5s
GUN  Gumba             54.78 311 eP        P        16 16 28.7 -1.2
         comp=Z,8.8nm,0.4s
PKI  Pulchoki          54.95 311 eP        P        16 16 29.8 -1.3
         comp=Z,4.0nm,0.5s
PKIN Phulchoki         54.96 311 eP        P        16 16 30.4 -0.7
         comp=Z,4.3nm,0.4s
DANN Dangsing          56.60 311 eP        P        16 16 42.0 -0.7
         comp=Z,6.0nm,0.5s
ULN  Ulaanbaatar       58.28 342  P        P        16 16 53.8 -0.1
ULN                               IAmb     IAmb     16 16 54.2
         comp=Z,4.3nm,0.7s
SONM Songino Array     58.45 342  P        P        16 16 54.4 -0.7
         comp=Z,0.8nm,0.4s,baz=160,slow=5.7,SNR=8.7
SONM Songino Array     58.45 342  P        P        16 16 54.4 -0.7
WMQ  Urumqi            63.31 327 eP        P        16 17 29.0 +1.1
MK31 Makanchi Array    68.14 327  P        P        16 17 58.5 -0.1
MKAR Makanchi Array    68.14 327  P        P        16 17 58.2 -0.4
         comp=Z,2.7nm,0.3s,baz=116,slow=8.2,SNR=90
MAKZ Makanchi          68.32 327  P        P        16 17 59.5 -0.2
AAK  Ala-Archa         70.42 320  P        P        16 18 13.3 +0.5
ZALV Zalesovo Beam     71.55 334  P        P        16 18 17.7 -1.4
         comp=Z,2.3nm,0.5s,baz=125,slow=5.8,SNR=9.0
ZALV Zalesovo Beam     71.55 334  P        P        16 18 17.9 -1.2
KURK Kurchatov         72.45 329  P        P        16 18 24.3 -0.3
KURK                              IAmb     IAmb     16 18 24.5
         comp=Z,3.5nm,0.5s
BRVK Borovoye          78.06 328  P        P        16 18 56.0 -0.5
ABKAR Akbulak array    82.40 322  P        P        16 19 19.4 -0.3
QSPA South Pole Qui    82.85 180  P        P        16 19 25.0 +3.1
QSPA                              IAmb     IAmb     16 19 34.5
         comp=Z,12nm,1.4s
PDAR Pinedale Array   117.22  45  PKP      PKiKP    16 25 43.5 +1.4
         comp=Z,0.2nm,0.5s,baz=327,slow=1.5,SNR=2.0
PDAR Pinedale Array   117.22  45           PKiKP    16 25 43.1 +1.0
TORD Torodi Ar. Bea   128.50 281  PKP      PKiKP    16 26 05.7 +0.8
         comp=Z,0.8nm,0.7s,baz=87,slow=1.7,SNR=2.3
CPUP Villa Florida    146.06 169  PKPbc    PKiKP    16 26 40.5 +0.2
         comp=Z,1.3nm,0.6s,baz=207,slow=4.5,SNR=2.6
```

IDC 21 16:14:23.6±16.0**, 15°.84S**×**174°.37W, h0**^{km}**, mb4.3**/5**, mb1 4.4**/5**, mb1mx3.9**/31**, mbtmp4.3**/5**, Error ellipse: s-maj=312.9km s-min=148.1km az=79.0, Tonga Islands**

```
Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
CTA  Charters Tower    37.63 258  P        P        16 21 41.1 +0.4
         5.4nm,1.0s,baz=100,slow=6.1,SNR=2.4
STKA Stephens Creek    43.01 240  P        P        16 22 24.8 -0.2
         1.2nm,0.4s,baz=80,slow=12,SNR=5.1
WRA  Warramunga Arr    48.83 257  P        P        16 23 10.6 -0.6
         1.3nm,0.5s,baz=92,slow=7.2,SNR=25
ASAR Alice Springs     49.08 252  P        P        16 23 12.6 -0.6
         10nm,0.5s,baz=88,slow=8.2,SNR=227
FITZ Fitzroy Crossi    57.20 258  P        P        16 24 13.6 +0.6
         0.5nm,0.3s,baz=108,slow=3.2,SNR=4.6
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*IDC **21** 16:19:36.0±4.7, 3°.70S×145°.70E, h75^{km}±50^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.8/30, mbtmp4.1/12, ML1.6/1, MS3.6/12, Ms1 3.6/12, ms1mx3.5/25, Error ellipse: s-maj=32.4km s-min=22.0km az=127.0*

ISC 21 16:19:32.9±0.8**, 3°.44S**±0°.08×**145°.6E**±0°.2**, h35**^{km}**, n19, σ1ˢ.80**/13**, mb4.0**/10**, MS3.6**/8**, Near north coast of New Guinea**

```
Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
JAY  Jayapura           4.94 281  LR       LR       16 22 19.4
         comp=Z,388nm,20.9s,baz=124,slow=32
PMG  Port Moresby       6.14 165  P        Pn       16 21 00.5 -0.6
         0.9nm,0.3s,baz=219,slow=6.5,SNR=3.4
PMG                               S        Sn       16 22 13.2 +3.0
         0.8nm,0.3s,baz=267,slow=3.5,SNR=3.2
HNR  Honiara           15.47 113  LR       LR       16 28 26.8
         comp=Z,107nm,19.5s,baz=278,slow=35
CTA  Charters Tower    16.56 178  LR       LR       16 29 02.8
         comp=Z,306nm,21.6s,baz=6.0,slow=35
WRA  Warramunga Arr    19.73 213  P        P        16 23 58.3 -1.4
         0.7nm,0.3s,baz=40,slow=12,SNR=18
WRA                               LR       LR       16 32 22.5
         comp=Z,382nm,19.2s,baz=75,slow=39
BATI Baumata           22.75 252  P        P        16 24 32.5 +0.1
         46nm,1.1s,baz=305,slow=19,SNR=4.7
ASAR Alice Springs     23.05 208  P        P        16 24 34.6 -0.8
         8.0nm,1.1s,baz=38,slow=8.2,SNR=19
ASAR                              LR       LR       16 33 02.8
         comp=Z,176nm,18.7s,baz=34,slow=35
FITZ Fitzroy Crossi    24.36 232  P        P        16 24 45.1 -2.7
         5.8nm,0.8s,baz=41,slow=7.5,SNR=6.6
STKA Stephens Creek    28.54 187  LR       LR       16 37 48.7
         comp=Z,158nm,18.8s,baz=20,slow=39
KSRS Korea Array       43.87 340  P        P        16 27 36.1 +0.2
         0.6nm,0.7s,baz=153,slow=8.2,SNR=4.2
KSRS                              LR       LR       16 43 33.1
         comp=Z,54nm,18.5s,baz=92,slow=32
USRK Ussuriysk Ar.     48.97 347  P        P        16 28 16.8 +0.9
         2.3nm,0.7s,baz=182,slow=6.6,SNR=6.7
CMAR Chiang Mai Arr    50.80 297  P        P        16 28 31.8 +1.4
         1.5nm,0.9s,baz=130,slow=6.4,SNR=8.3
CMAR                              LR       LR       16 51 23.0
         comp=Z,14nm,18.7s,baz=95,slow=37
SONM Songino Array     61.49 331  P        P        16 29 48.0 +1.7
         0.7nm,1.0s,baz=156,slow=7.6,SNR=3.1
SONM                              LR       LR       16 55 58.2
         comp=Z,48nm,20.2s,baz=269,slow=35
VNDA Vanda             74.54 176  LR       LR       17 02 03.9
         comp=Z,67nm,18.1s,baz=276,slow=34
MKAR Makanchi Array    74.62 320  P        P        16 31 08.8 +0.1
         1.1nm,1.0s,baz=115,slow=5.8,SNR=5.6
ZALV Zalesovo Beam     76.10 328  LR       LR       17 07 43.2
         comp=Z,73nm,18.0s,baz=96,slow=38
ILAR Eielson Array     83.71  23  P        P        16 31 58.0 +0.1
         3.2nm,0.8s,baz=253,slow=5.1,SNR=24
NVAR Mina Array Bea    96.93  52  LR       LR       17 07 10.6
         comp=Z,37nm,21.9s,baz=316,slow=29
YKA  Yellowknife Ar    97.58  27  P        P        16 33 00.7 -2.7
         0.3nm,0.8s,baz=274,slow=4.9,SNR=3.2
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*JMA **21** 16:30:57.4±0.1, 24°.05N×122°.28E, h27^{km}±3^{km}, M2.7*

*TAP **21** 16:30:57.6, 24°.13N×122°.28E, h26^{km}, ML3.2, D*

ISC 21 16:30:57.4±1.1**, 24°.08N**±0°.02×**122°.28E**±0°.02**, h23**^{km}±12^{km}**, n123, σ0ˢ.80**/237**, Taiwan region**

```
Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                  Op       ISC       h  m  s  ISC
ENAH Nanao              0.56 311  P        Pb       16 31 08.0 -0.6
         baz=306
ENAH                              S        Sb       16 31 16.8 +0.5
         baz=306
ENA  Nanau              0.60 306 iP        Pb       16 31 08.9 -0.3
         baz=309
ENA                               S        Sb       16 31 17.1 -0.2
         baz=309
HWA  Hwalien            0.62 261 eP        Pb       16 31 10.1 +0.5
         baz=256
HWA                              eS        Sn       16 31 19.6 -0.4
         baz=256
TWD  Chiawan            0.62 270 eP        Pb       16 31 09.9 +0.4
         baz=252
TWD                              eS        Sb       16 31 18.5 +0.6
         baz=252
NACB Ninganchiao        0.63 279 eP        Pb       16 31 09.7 -0.1
         baz=259
NACB                             eS        Sn       16 31 19.3 -0.9
         baz=259
TWC  Suao               0.66 324 eP        Pb       16 31 09.3 -0.9
         baz=321
TWC                               S        Sb       16 31 17.6 -1.3
         baz=321
JYNG Yonagunijimaku     0.71  59  P        Pb       16 31 11.0 -0.1
JYNG                             eS        Sb       16 31 20.4 -0.1
ETLH Xiulin Townshi     0.74 280 eP        Pb       16 31 11.4 -0.2
         baz=276
ETLH                              S        Sn       16 31 22.8 -0.2
         baz=276
YOJ  Yonaguni jima      0.77  60  P        Pb       16 31 12.0 -0.1
YOJ                               S        Sb       16 31 22.0 -0.2
YOJ  Yonaguni jima      0.77  60  P        Pb       16 31 12.3 +0.2
         baz=62
YOJ                               S        Sn       16 31 22.9 -0.8
         baz=62
ESL  Shilin             0.82 251 eP        Pb       16 31 12.1 -0.8
         baz=239
ESL                              eS        Sb       16 31 23.9 +0.4
         baz=239
ILA  Ilan               0.84 325 eP        Pb       16 31 12.7 -0.6
         baz=322
ILA                               S        Sn       16 31 25.4 +0.1
         baz=322
TWE  Neicheng           0.85 319 eP        Pb       16 31 13.2 -0.2
         baz=323
TWE                               S        Sb       16 31 24.4  0.0
         baz=323
ENTT Nioudou            0.86 311 iP        Pb       16 31 13.6  0.0
         baz=307
ENTT                             eS        Sn       16 31 25.1 -0.7
         baz=307
NDT  Datong Townshi     0.87 307  P        Pn       16 31 14.1 -0.1
         baz=313
NDT                               S        Sb       16 31 25.1  0.0
         baz=313
NTC  Toucheng           0.87 332 eP        Pb       16 31 13.8 -0.1
         baz=341
NTC                              eS        Sn       16 31 25.4 -0.8
         baz=341
EGFH Guangfu            0.88 242 eP        Pn       16 31 13.3 -1.0
         baz=229
EGFH                             eS        Sb       16 31 25.0 -0.2
         baz=229
NNSB Datong             0.89 293  P        Pb       16 31 14.1 -0.1
         baz=290
NNSB                             eS        Sn       16 31 26.5 -0.2
         baz=290
NNSH Datong             0.89 293 eP        Pb       16 31 13.7 -0.4
         baz=290
NNSH                             eS        Sn       16 31 26.4 -0.4
         baz=290
NNS  Nan Shan           0.90 294  P        Pn       16 31 14.2 -0.5
         baz=290
NNS                              eS        Sn       16 31 26.5 -0.6
         baz=290
WHF  Hehuan Shan        0.93 274 eP        Pn       16 31 14.6 -0.7
         baz=271
WHF                               S        Sb       16 31 27.4 +0.3
         baz=271
FUSS Fushou             0.96 280 eP        Pn       16 31 15.2 -0.4
         baz=277
```

FUSS	baz=277			eS	Sn	16 31 28.2	-0.5
TWB1	**Santiao Chiao** baz=342	**0.96**	**344**	eP	**Pn**	**16 31 14.6**	**-0.8**
TWB1	baz=342			S	**Sb**	**16 31 27.4**	**-0.3**
HGSD	**Ruisui** baz=232	**0.97**	**233**	eP	**Pn**	**16 31 14.8**	**-0.9**
HGSD	baz=232			eS	**Sb**	**16 31 28.3**	**+0.3**
TIPB	**Shuangxi** baz=332	**0.98**	**335**	eP	**Pn**	**16 31 15.2**	**-0.5**
TIPB	baz=332			S	**Sb**	**16 31 27.1**	**-1.1**
NWLT	**Wulai** baz=311	**0.99**	**315**	P	**Pn**	**16 31 15.7**	**-0.2**
NWLT	baz=311			S	**Sn**	**16 31 28.6**	**-0.6**
CHGB	**Renai** baz=254	**1.01**	**269**	eP	**Pn**	**16 31 15.9**	**-0.3**
CHGB	baz=254			eS	**Sb**	**16 31 29.2**	**0.0**
YHNB	**Yeheng** baz=290	**1.01**	**306**	eP	**Pn**	**16 31 15.8**	**-0.3**
YHNB	baz=290			eS	**Sb**	**16 31 28.9**	**-0.2**
TWT	**Tachien** baz=277	**1.02**	**280**	eP	**Pb**	**16 31 17.0**	**+0.6**
TWT	baz=277			eS	**Sn**	**16 31 30.4**	**+0.3**
NSK	**Sanguang** baz=290	**1.03**	**306**	P	**Pn**	**16 31 16.3**	**-0.1**
NSK	baz=290			S	**Sn**	**16 31 29.8**	**-0.3**
TDCB	**Techi** baz=277	**1.04**	**280**	eP	**Pn**	**16 31 16.4**	**-0.2**
TDCB	baz=277			eS	**Sn**	**16 31 29.8**	**-0.6**
EHY	**Hungye** baz=236	**1.04**	**237**	P	**Pn**	**16 31 16.1**	**-0.5**
EHY	baz=236			S	**Sb**	**16 31 30.4**	**+0.4**
NWF	**Wu-fen Shan** baz=333	**1.09**	**336**	P	**Pn**	**16 31 17.0**	**-0.2**
NWF	baz=333			S	**Sn**	**16 31 31.0**	**-0.6**
WFSB	**Wu-fen Shan** baz=333	**1.09**	**336**	P	**Pn**	**16 31 17.0**	**-0.2**
WFSB	baz=333			eS	**Sn**	**16 31 30.9**	**-0.6**
VWDT	**VWDT** baz=240	**1.09**	**253**	eP	**Pn**	**16 31 17.3**	**+0.2**
VWDT	baz=240			eS	**Sb**	**16 31 32.7**	**+1.4**
TWA	**Mucha** baz=322	**1.10**	**325**	eP	**Pb**	**16 31 17.8**	**+0.1**
TWA	baz=322			S	**Sb**	**16 31 31.6**	**0.0**
NHDH	**Xindian Distri** baz=331	**1.11**	**322**	eP	**Pb**	**16 31 18.2**	**+0.3**
NHDH	baz=331			S	**Sn**	**16 31 31.6**	**-0.6**
YULB	**Yu-li** baz=247	**1.13**	**233**	eP	**Pn**	**16 31 17.2**	**-0.6**
YULB	baz=247			S	**Sn**	**16 31 32.2**	**-0.3**
EYUL	**Yuli** baz=218	**1.14**	**231**	eP	**Pn**	**16 31 17.5**	**-0.4**
EYUL	baz=218			eS	**Sb**	**16 31 33.3**	**+0.5**
TATO	**Taipei** baz=318	**1.15**	**321**	eP	**Pb**	**16 31 18.7**	**+0.2**
TATO	baz=318			eS	**Sb**	**16 31 33.1**	**+0.2**
TWF1	**Yuli** baz=245	**1.15**	**231**	eP	**Pn**	**16 31 17.6**	**-0.5**
TWF1	baz=245			eS	**Sn**	**16 31 33.0**	**-0.2**
TNOU	**National Taiwa** baz=334	**1.16**	**337**	eP	**Pn**	**16 31 18.2**	**0.0**
TNOU	baz=334			eS	**Sn**	**16 31 32.2**	**-1.1**
TAP1	**Taipei** baz=321	**1.18**	**324**	eP	**Pb**	**16 31 18.8**	**-0.2**
TAP1	baz=321			eS	**Sb**	**16 31 34.2**	**+0.4**
TAP	**Taipei** baz=321	**1.19**	**324**	eP	**Pn**	**16 31 18.7**	**+0.2**
TAP	baz=321			eS	**Sb**	**16 31 34.2**	**+0.1**
WPL	**Puli Township** baz=257	**1.21**	**267**	eP	**Pn**	**16 31 18.5**	**-0.3**
WPL	baz=257			eS	**Sb**	**16 31 34.9**	**+0.2**
WHP	**Taichung City** baz=267	**1.23**	**280**	eP	**Pb**	**16 31 19.9**	**-0.1**
WHP	baz=267			S	**Sb**	**16 31 37.4**	**+1.8**
DPDB	**Guoxing** baz=258	**1.23**	**268**	eP	**Pb**	**16 31 20.0**	**0.0**
DPDB	baz=258			eS	**Sn**	**16 31 35.2**	**0.0**
YM01	**YM01** baz=340	**1.24**	**329**	eP	**Pb**	**16 31 20.7**	**+0.5**
YM01	baz=340			S	**Sb**	**16 31 36.6**	**+0.8**
SSLB	**Suanglung** baz=255	**1.25**	**257**	eP	**Pn**	**16 31 19.3**	**-0.1**
SSLB	baz=255			eS	**Sn**	**16 31 35.2**	**-0.2**
YM10	**YM10** baz=340	**1.25**	**329**	eP	**Pn**	**16 31 19.6**	**+0.1**
YM10	baz=340			eS	**Sb**	**16 31 36.9**	**+0.7**
FULB	**Fuli** baz=213	**1.26**	**226**	eP	**Pn**	**16 31 17.8**	**-1.8**
FULB	baz=213			S	**Sn**	**16 31 34.5**	**-1.2**
YM11	**YM11** baz=341	**1.26**	**330**	eP	**Pb**	**16 31 20.6**	**+0.2**
YM11	baz=341			eS	**Sb**	**16 31 36.6**	**+0.4**
YM05	**YM05** baz=340	**1.26**	**329**	eP	**Pb**	**16 31 21.1**	**+0.6**
YM05	baz=340			eS	**Sb**	**16 31 37.2**	**+0.9**
YM04	**YM04** baz=341	**1.27**	**328**	eP	**Pb**	**16 31 20.0**	**-0.5**
YM04	baz=341			eS	**Sb**	**16 31 36.9**	**+0.5**
YM08	**YM08** baz=342	**1.27**	**331**	eP	**Pb**	**16 31 20.3**	**-0.3**
YM08	baz=342			eS	**Sb**	**16 31 37.4**	**+0.8**
SMLT	**Sun Moon Lake** baz=260	**1.27**	**261**	P	**Pn**	**16 31 19.6**	**-0.3**
SMLT	baz=260			S	**Sb**	**16 31 37.2**	**+0.4**
NTY	**Taoyuan** baz=313	**1.28**	**316**	eP	**Pb**	**16 31 20.5**	**-0.3**
NTY	baz=313			eS	**Sb**	**16 31 37.2**	**+0.4**
LIOB	**Emei** baz=294	**1.28**	**296**	P	**Pb**	**16 31 21.2**	**+0.4**
LIOB	baz=294			eS	**Sb**	**16 31 37.0**	**+0.2**
TWS1	**Kuangyinshan** baz=330	**1.28**	**323**	P	**Pb**	**16 31 20.9**	**+0.1**
TWS1	baz=330			eS	**Sb**	**16 31 36.8**	**-0.2**
CHKT	**Chengkung** baz=209	**1.28**	**221**	eP	**Pn**	**16 31 19.6**	**-0.3**
CHKT	baz=209			eS	**Sn**	**16 31 33.9**	**-2.5**
YM03	**YM03** baz=340	**1.28**	**329**	eP	**Pn**	**16 31 19.7**	**-0.2**
YM03	baz=340			eS	**Sn**	**16 31 36.1**	**-0.3**
NSTT	**Nanjuang** baz=293	**1.29**	**296**	eP	**Pb**	**16 31 20.9**	**0.0**
NSTT	baz=293			eS	**Sb**	**16 31 37.2**	**+0.2**
ANP	**Anpu** baz=339	**1.30**	**328**	eP	**Pb**	**16 31 21.8**	**+0.7**
ANP	baz=339			eS	**Sb**	**16 31 37.5**	**0.0**
TYC	**Yuchr** baz=261	**1.31**	**263**	eP	**Pn**	**16 31 20.6**	**+0.4**
TYC	baz=261			eS	**Sn**	**16 31 37.2**	**+0.2**
NTST	**Danshui** baz=338	**1.32**	**325**	eP	**Pn**	**16 31 20.5**	**+0.2**
NTST	baz=338			eS	**Sb**	**16 31 38.1**	**+0.2**
NCU	**National Centr** baz=309	**1.33**	**312**	eS	**Sb**	**16 31 40.5**	**+2.2**
NCUH	**Zhongli** baz=309	**1.33**	**312**	eP	**Pb**	**16 31 22.1**	**+0.5**
NCUH	baz=309			eS	**Sb**	**16 31 39.2**	**+0.9**
TWY	**Chenhua** baz=330	**1.34**	**333**	eP	**Pn**	**16 31 20.8**	**+0.1**
TWY	baz=330			S	**Sb**	**16 31 38.2**	**-0.3**
YUS	**Yu-Shan** baz=243	**1.35**	**244**	eP	**Pn**	**16 31 21.4**	**+0.2**
YUS	baz=243			eS	**Sn**	**16 31 39.0**	**+0.4**
IRIF	**Iriomote-Funau**	**1.35**	**79**	P	**Pb**	**16 31 21.6**	**-0.4**
IRIF				S	**Sb**	**16 31 38.9**	**+0.1**
WHYT	**Xinyi Township** baz=241	**1.36**	**254**	eP	**Pb**	**16 31 22.0**	**-0.1**
WHYT	baz=241			eS	**Sn**	**16 31 38.2**	**0.0**
SBCB	**Hsinchu** baz=299	**1.38**	**301**	eS	**Sb**	**16 31 40.8**	**+1.3**
HATJ	**Hateruma jima**	**1.40**	**91**	P	**Pb**	**16 31 23.3**	**+0.5**
HATJ				S	**Sb**	**16 31 40.6**	**+0.4**
TWQ1	**Liyutan** baz=279	**1.40**	**281**	eP	**Pb**	**16 31 22.6**	**-0.2**
TWQ1	baz=279			S	**Sb**	**16 31 41.7**	**+1.5**
EDH	**Donghe** baz=210	**1.42**	**219**	eP	**Pn**	**16 31 20.2**	**-1.5**
EDH	baz=210			S	**Sn**	**16 31 37.5**	**-2.1**
WJS	**Zhushan** baz=259	**1.44**	**260**	eP	**Pb**	**16 31 23.6**	**+0.1**
WJS	baz=259			eS	**Sb**	**16 31 42.6**	**+1.2**
WWF	**Wufeng** baz=267	**1.44**	**269**	eS	**Sb**	**16 31 42.9**	**+1.4**
ELDTW	**Lidau** baz=220	**1.46**	**233**	eP	**Pn**	**16 31 21.2**	**-1.1**
ELDTW	baz=220			S	**Sn**	**16 31 40.1**	**-0.7**
ALS	**Alishan** baz=247	**1.46**	**248**	eP	**Pn**	**16 31 22.9**	**+0.3**
ALS	baz=247			S	**Sn**	**16 31 41.7**	**+0.5**
TCU	**Taichung** baz=271	**1.46**	**273**	eP	**Pb**	**16 31 23.8**	**-0.1**
TCU	baz=271			eS	**Sb**	**16 31 43.7**	**+1.6**
WNT	**Mingjian** baz=261	**1.47**	**263**	eP	**Pb**	**16 31 24.1**	**+0.1**
WNT	baz=261			eS	**Sb**	**16 31 43.1**	**+0.8**
WNT1	**Nantou City** baz=262	**1.47**	**264**	eP	**Pn**	**16 31 22.4**	**0.0**
WNT1	baz=262			S	**Sb**	**16 31 45.8**	**+3.5**
CHN5	**Tsauling** baz=251	**1.54**	**252**	eP	**Pb**	**16 31 24.9**	**-0.4**
CHN5	baz=251			S	**Sb**	**16 31 45.2**	**+0.8**
PCYT	**Pengchaiyu** baz=337	**1.56**	**353**	eP	**Pn**	**16 31 23.4**	**-0.3**
PCYT	baz=337			eS	**Sn**	**16 31 42.5**	**-0.6**
LONT	**Longtian** baz=223	**1.57**	**222**	eP	**Pn**	**16 31 22.1**	**-1.7**
LONT	baz=223			eS	**Sn**	**16 31 43.8**	**+0.3**
LDUT	**Ludao** baz=209	**1.58**	**208**	eP	**Pn**	**16 31 23.6**	**-0.3**
LDUT	baz=209			eS	**Sn**	**16 31 42.3**	**-1.4**
JKRS	**Kuro-shima**	**1.59**	**84**	P	**Pb**	**16 31 25.6**	**-0.5**
JKRS				eS	**Sn**	**16 31 44.5**	**+0.6**
WGK	**Gukeng** baz=255	**1.62**	**256**	eS	**Sb**	**16 31 47.6**	**+1.1**
WDLH	**Douliu** baz=244	**1.64**	**257**	eP	**Pn**	**16 31 25.8**	**+1.0**
WDLH	baz=244			eS	**Sb**	**16 31 48.9**	**+1.8**
STYT	**Tauyuan** baz=237	**1.67**	**237**	eP	**Pb**	**16 31 27.7**	**+0.3**
STYT	baz=237			S	**Sb**	**16 31 47.4**	**-0.5**
TWGBT	**Beinan** baz=233	**1.67**	**221**	eP	**Pn**	**16 31 24.9**	**-0.3**
TWGBT	baz=233			eS	**Sn**	**16 31 45.0**	**-0.8**
TWG	**Pinlang** baz=233	**1.67**	**222**	eP	**Pn**	**16 31 24.6**	**-0.6**
TWG	baz=233			eS	**Sn**	**16 31 45.3**	**-0.6**
TPUB	**Ta-pu** baz=243	**1.70**	**243**	eP	**Pb**	**16 31 27.1**	**-0.8**
TPUB	baz=243			S	**Sb**	**16 31 49.5**	**+0.7**
CHN4	**Tsaushan** baz=235	**1.71**	**245**	eP	**Pb**	**16 31 27.9**	**-0.2**
CHN4	baz=235			S	**Sb**	**16 31 50.3**	**+1.3**
JIJ	**Ishigaki jima**	**1.73**	**80**	P	**Pn**	**16 31 26.2**	**+0.2**
JIJ				S	**Sn**	**16 31 47.6**	**+0.3**
WTP	**Ta-pu** baz=242	**1.73**	**242**	eP	**Pb**	**16 31 28.3**	**-0.3**
WTP	baz=242			S	**Sb**	**16 31 49.7**	**-0.3**
WTK	**Tuku** baz=245	**1.77**	**258**	eP	**Pb**	**16 31 28.0**	**-1.1**
WTK	baz=245			eS	**Sb**	**16 31 49.9**	**-1.1**
CHY	**Chiayi** baz=251	**1.79**	**252**	eP	**Pb**	**16 31 29.5**	**0.0**
CHY	baz=251			eS	**Sb**	**16 31 53.3**	**+1.7**
TWK	**Hsinying** baz=244	**1.83**	**244**	eP	**Pb**	**16 31 30.0**	**-0.2**
TWK	baz=244			S	**Sb**	**16 31 52.9**	**+0.2**
CHN1	**Nanshi** baz=241	**1.83**	**241**	P	**Pb**	**16 31 30.0**	**-0.3**
CHN1	baz=241			S	**Sb**	**16 31 53.0**	**+0.2**
SNST	**Tainan City** baz=243	**1.84**	**243**	eS	**Sb**	**16 31 53.6**	**+0.6**
SGST	**Jiashian** baz=238	**1.84**	**238**	P	**Pb**	**16 31 28.2**	**+0.6**
SGST	baz=238			S	**Sb**	**16 31 52.5**	**-0.5**
SLGT	**Liugui** baz=224	**1.85**	**234**	eP	**Pb**	**16 31 28.3**	**+0.7**
SLGT	baz=224			eS	**Sb**	**16 31 52.5**	**-0.6**
WLGB	**Puzi** baz=252	**1.91**	**252**	eP	**Pb**	**16 31 30.1**	**-1.3**
WLGB	baz=252			eS	**Sb**	**16 31 54.1**	**-0.8**
ECL	**Taimali** baz=221	**1.91**	**220**	eP	**Pn**	**16 31 27.7**	**-0.8**
ECL	baz=221			S	**Sn**	**16 31 50.8**	**-1.1**
JISG	**Ishigakijimahi**	**1.92**	**74**	P	**Pn**	**16 31 29.1**	**+0.4**
JISG				S	**Sn**	**16 31 51.3**	**-0.8**
WSF	**Szhu** baz=272	**1.93**	**257**	eP	**Pb**	**16 31 30.4**	**-1.4**
WSF	baz=272			eS	**Sb**	**16 31 55.4**	**-0.1**
SSD	**Sandimen** baz=223	**2.01**	**229**	eP	**Pn**	**16 31 30.6**	**+0.7**
SSD	baz=223			eS	**Sn**	**16 31 56.2**	**+1.9**
CHN3	**Shinhua** baz=241	**2.02**	**241**	eS	**Sb**	**16 31 56.8**	**-1.3**
SCST	**Cishan** baz=222	**2.02**	**234**	eP	**Pn**	**16 31 31.0**	**+1.0**
SCST	baz=222			eS	**Sn**	**16 31 58.3**	**+0.1**
TSMG	**Majia** baz=223	**2.03**	**228**	eP	**Pn**	**16 31 31.0**	**+0.9**
TSMG	baz=223			eS	**Sn**	**16 31 55.6**	**+0.8**
MASBT	**Mashibuluo** baz=221	**2.10**	**226**	eP	**Pn**	**16 31 32.7**	**+1.6**
MASBT	baz=221			eS	**Sn**	**16 31 58.0**	**+1.4**
LAY	**Lan-yu** baz=208	**2.14**	**198**	eS	**Sn**	**16 31 56.5**	**-1.0**
EAST	**Anshuo** baz=219	**2.14**	**218**	P	**Pn**	**16 31 32.8**	**+1.1**
EAST	baz=219			eS	**Sn**	**16 31 58.0**	**+0.4**
SSPT	**Xinbi** baz=220	**2.23**	**225**	eP	**Pn**	**16 31 33.9**	**+1.0**
SSPT	baz=220			eS	**Sn**	**16 32 02.0**	**+2.2**
JTJ	**Tarama**	**2.28**	**75**	P	**Pn**	**16 31 35.0**	**+1.4**
JTJ				eS	**Sn**	**16 32 02.3**	**+1.3**
SCZT	**Fangliau** baz=218	**2.28**	**222**	eP	**Pn**	**16 31 33.4**	**-0.2**
SCZT	baz=218			eS	**Sn**	**16 32 02.0**	**+1.0**
SLIU	**Shizi** baz=218	**2.30**	**217**	eP	**Pb**	**16 31 36.3**	**-1.9**
SLIU	baz=218			eS	**Sn**	**16 32 03.2**	**+1.8**
PHUB	**P'eng-hu** baz=257	**2.54**	**258**	eP	**Pn**	**16 31 37.5**	**+0.3**
PHUB	baz=257			eS	**Sn**	**16 32 08.1**	**+0.7**
PNG	**Penghu** baz=258	**2.54**	**259**	eS	**Sn**	**16 32 08.4**	**+0.9**
VWUC	**VWUC** baz=288	**2.73**	**290**	eP	**Pn**	**16 31 40.2**	**+0.4**
VWUC	baz=288			eS	**Sn**	**16 32 12.0**	**-0.1**
PTMZ	**Houxiangcun** baz=288	**3.03**	**289**	eP	**Pn**	**16 31 43.1**	**-0.8**
PTMZ	baz=288			eS	**Sn**	**16 32 19.4**	**-0.1**
XPSS	**Dashiqiu** baz=335	**3.41**	**327**	eP	**Pn**	**16 31 48.3**	**-0.7**

IDC 21 16:42:07.0±25.0**,23°.65S**×**174°.14W,h0^{km},mb4.2**/4**, mb1 4.3**/4**,mb1mx3.8**/31**,mbtmp4.2**/4**,Error ellipse: s-maj=468.1km s-min=138.3km az=79.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower** 1.9nm,0.6s,baz=101,slow=10,SNR=4.8	**36.85**	**268**	P	P	16 49 17.4	+0.2
STKA	**Stephens Creek** 1.1nm,0.4s,baz=94,slow=12,SNR=6.1	**39.80**	**248**	P	P	16 49 40.8	-1.2
ASAR	**Alice Springs** 1.4nm,0.4s,baz=92,slow=7.7,SNR=133	**47.36**	**259**	P	P	16 50 43.0	-0.1
WRA	**Warramunga Arr** 1.8nm,0.3s,baz=102,slow=7.6,SNR=33	**47.78**	**264**	P	P	16 50 46.7	+0.4

IDC ***21*** *16:48:34.4±1.8, 16°.31S×120°.35E, h0^{km}, mb3.4/1, mb1 4.0/6, mb1mx3.6/35, mbtmp3.9/6, ML3.6/4, Error ellipse: s-maj=40.4km s-min=27.8km az=51.0*

ISC 21 16:48:36.3±1.3**,16°.35S**±0°.09×**120°.6E**±0°.1**,h10^{km},n6, σ2^{s}97**/10**,Northwest of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.8nm,0.3s,baz=293,slow=8.0,SNR=45	**5.14**	**111**	Pn	**Pn**	**16 49 56.7**	**+3.3**
FITZ	4.0nm,0.3s,baz=154,slow=20,SNR=10.0			Sn	**Sn**	**16 50 55.0**	**+2.2**
BATI	**Baumata** 3.4nm,0.3s,baz=174,slow=2.6,SNR=6.7	**6.80**	**27**	Pn	**Pn**	**16 50 16.8**	**+0.6**
BATI	2.5nm,0.3s,baz=301,slow=19,SNR=1.9			Sn	**Sn**	**16 51 33.4**	**-0.5**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=286,slow=13,SNR=5.4	**13.56**	**107**	Pn	**Pn**	**16 51 49.2**	**+0.4**
WRA	0.8nm,0.3s,baz=64,slow=4.3,SNR=5.2			Sn	**Sn**	**16 54 14.8**	**-4.9**
ASAR	**Alice Springs** 0.4nm,0.3s,baz=304,slow=14,SNR=20	**14.48**	**122**	Pn	**Pn**	**16 52 04.2**	**+2.8**
ASAR	0.4nm,0.3s,baz=300,slow=22,SNR=10.0			Sn	**Sn**	**16 54 38.7**	**-3.5**
NWAO	**Narrogin (SRO)** 0.5nm,0.3s,baz=25,slow=14,SNR=5.0	**16.78**	**190**	Pn	**Pn**	**16 52 30.6**	**-0.9**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=133,slow=6.3,SNR=4.6	**71.67**	**333**	P	**P**	**16 59 57.2**	**-1.0**

IDC ***21*** *17:18:58.0±0.6, 56°.91S×23°.54W, h0^{km}, mb4.3/10, mb1 4.4/10, mb1mx4.3/21, mbtmp4.3/10, Error ellipse: s-maj=21.0km s-min=20.2km az=77.0*

NEIC ***21*** *17:19:00.7±1.9, 57°.00S±0°.07×23°.5W±0°.2, h18^{km}±3^{km}, mb4.6/22, Error ellipse: s-maj=17.0km s-min=5.6km az=59.0*

ISC 21 17:18:59.3±0.4**,56°.98S**±0°.09×**23°.56W**±0°.09**,h10^{km},n62, σ0^{s}83**/57**,mb4.5**/16**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.80**	**285**	Pn	**Pn**	**17 20 53.0**	**+0.3**
VNA1	**Neumayer--Stat**	**15.21**	**160**	P	**Pn**	**17 22 33.6**	**-0.2**
VNA3	**Neumayer Olymp**	**15.48**	**163**	P	**Pn**	**17 22 36.5**	**-0.8**
VNA2	**Neumayer--Watz** baz=331,slow=15	**15.60**	**160**	P	**Pn**	**17 22 37.6**	**-1.3**
BELA	**Belgrano 2**	**21.34**	**186**	P	**P**	**17 23 45.2**	**-0.8**
QSPA	**South Pole Qui** 1.9nm,0.9s,baz=201,slow=3.0,SNR=8.4	**33.27**	**180**	P	**P**	**17 25 37.0**	**+0.5**
QSPA	**South Pole Qui**	**33.27**	**180**	P	**P**	**17 25 36.5**	**0.0**
PLCA	**Paso Flores** 1.6nm,0.8s,baz=182,slow=7.6,SNR=3.8	**34.13**	**278**	P	**P**	**17 25 42.5**	**-1.7**
PLCA	**Paso Flores**	**34.13**	**278**	P	**P**	**17 25 43.1**	**-1.0**
CPUP	**Villa Florida** 5.2nm,0.8s,baz=152,slow=7.3,SNR=9.2	**38.96**	**307**	P	**P**	**17 26 25.3**	**0.0**
CPUP	**Villa Florida**	**38.96**	**307**	P	**P**	**17 26 25.4**	**0.0**
CPUP	comp=Z,12nm,1.1s			IAmb	IAmb	17 26 35.9	
MT02	**Curacav**	**39.98**	**286**	P	**P**	**17 26 34.1**	**+0.3**
MT02	comp=Z,7.8nm,0.9s			IAmb	IAmb	17 26 34.3	
CO01	**Juntas del Tor**	**42.03**	**290**	P	**P**	**17 26 50.3**	**-0.6**
LCO	**Las Campanas**	**43.12**	**290**	P	**P**	**17 26 59.3**	**-0.6**
BOSA	**Boshof** comp=Z,2.3nm,0.7s,baz=209,slow=15,SNR=4.3	**44.30**	**71**	P	**P**	**17 27 08.8**	**-0.5**
BOSA	**Boshof**	**44.30**	**71**	P	**P**	**17 27 08.7**	**-0.5**
BOSA	comp=Z,15nm,1.5s			IAmb	IAmb	17 27 35.5	
BDFB	**Brasilia** comp=Z,1.6nm,0.5s,baz=168,slow=14,SNR=1.8	**45.22**	**326**	P	**P**	**17 27 16.5**	**-0.1**
BDFB	**Brasilia**	**45.22**	**326**	P	**P**	**17 27 16.4**	**-0.2**
BDFB	comp=Z,5.6nm,1.1s			IAmb	IAmb	17 27 19.3	
GO02	**Mina Guanaco**	**45.71**	**294**	P	**P**	**17 27 20.4**	**-0.3**
GO02	comp=Z,10nm,0.8s			IAmb	IAmb	17 27 22.2	
VNDA	**Vanda** comp=Z,1.0nm,0.7s,baz=185,slow=7.0,SNR=4.1	**45.72**	**182**	P	**P**	**17 27 20.9**	**+1.1**
VNDA	**Vanda**	**45.72**	**182**	P	**P**	**17 27 20.7**	**+0.9**
VNDA	comp=Z,5.8nm,1.1s			IAmb	IAmb	17 27 21.8	
LBTB	**Lobatse** comp=Z,3.3nm,0.7s,baz=203,slow=8.6,SNR=6.4	**47.41**	**69**	P	**P**	**17 27 32.7**	**-1.0**
LVC	**Limon Verde**	**47.51**	**297**	P	**P**	**17 27 35.5**	**+0.6**
H10S2	**ASCENSION HYDR** baz=34,slow=74,SNR=3.8	**48.40**	**12**	T	T	18 19 59.6	
H10S3	**ASCENSION HYDR** baz=186,slow=74,SNR=4.6	**48.41**	**12**	T	T	18 19 59.4	
TSUM	**Tsumeb**	**48.45**	**56**	P	**P**	**17 27 42.8**	**+0.9**
TSUM	comp=Z,7.4nm,1.2s			IAmb	IAmb	17 27 43.8	
PB07	**IPOC Station P**	**48.74**	**297**	P	**P**	**17 27 44.5**	**+0.4**
H10N1	**ASCENSION HYDR** baz=193	**49.52**	**12**	T	T	18 21 19.1	
H10N3	**ASCENSION HYDR** baz=193,slow=74	**49.52**	**12**	T	T	18 21 25.7	
H10N2	**ASCENSION HYDR** baz=193,slow=74	**49.54**	**12**	T	T	18 21 25.8	
PB08	**IPOC Station P**	**49.73**	**298**	P	**P**	**17 27 51.7**	**-0.3**
MNMC	**Minye Minye**	**50.80**	**299**	P	**P**	**17 28 00.8**	**+0.8**
PB16	**IPOC Station P**	**51.45**	**299**	P	**P**	**17 28 06.7**	**+1.6**
PB16	comp=Z,5.3nm,1.0s			IAmb	IAmb	17 28 35.7	
SAML	**Samuel**	**56.91**	**311**	P	**P**	**17 28 44.9**	**+0.5**
SAML	comp=Z,5.2nm,0.8s			IAmb	IAmb	17 28 45.5	
DBIC	**Dimbokro**	**65.25**	**21**	P	**P**	**17 29 41.3**	**+0.4**

	comp=Z,3.6nm,0.8s,baz=166,slow=7.3,SNR=4.8						
TOA0	Torodi Ar. Sit	72.95	26	P	P	17 30 29.0	+0.4
TORD	Torodi Ar. Bea	72.95	26	P	P	17 30 29.2	+0.6
	comp=Z,16nm,0.7s,baz=196,slow=6.1,SNR=54						
TORD	Torodi Ar. Bea	72.95	26	P	P	17 30 28.7	+0.1
SDV	Santo Domingo	76.11	312	P	P	17 30 47.7	+0.4
SDV				IAmb	IAmb	17 30 48.8	
	comp=Z,6.1nm,0.8s						
STKA	Stephens Creek	90.60	167	P	P	17 32 04.0	+2.4
	comp=Z,3.0nm,0.9s,baz=198,slow=13,SNR=2.5						
STKA	Stephens Creek	90.60	167	P	P	17 32 02.1	+0.5
PDAR	Pinedale Array	122.55	299	PKP	PKPdf	17 37 54.0	-0.3
	comp=Z,0.4nm,0.6s,baz=133,slow=5.3,SNR=5.1						
PDAR	Pinedale Array	122.55	299		PKPdf	17 37 53.8	-0.5
CMAR	Chiang Mai Arr	122.86	108	PKP	PKPdf	17 37 55.1	-0.2
	comp=Z,1.9nm,0.8s,baz=225,slow=3.9,SNR=20						
CMAR	Chiang Mai Arr	122.86	108	PKPpre	PKPpre	17 37 47.6	
CMAR					PKPdf	17 37 55.4	0.0
NVAR	Mina Array Bea	123.61	290	PKP	PKiKP	17 37 58.0	+1.2
	comp=Z,0.5nm,0.6s,baz=126,slow=4.6,SNR=5.5						
NVAR	Mina Array Bea	123.61	290		PKiKP	17 37 57.8	+1.1
FINES	FINESS Array B	124.30	26	PKP	PKPdf	17 37 56.7	0.0
	comp=Z,4.3nm,0.7s,baz=159,slow=5.9,SNR=7.6						
FINES	FINESS Array B	124.30	26		PKPdf	17 37 56.8	+0.1
ARCES	ARCESS Array B	131.08	21	PKP	PKPdf	17 38 09.1	-0.4
	comp=Z,0.9nm,0.6s,baz=180,slow=2.2,SNR=7.7						
MKAR	Makanchi Array	135.29	70	PKP	PKPdf	17 38 16.8	-1.3
	comp=Z,1.0nm,1.0s,baz=245,slow=6.2,SNR=5.1						
MKAR	Makanchi Array	135.29	70		PKPdf	17 38 16.6	-1.6
YKA	Yellowknife Ar	138.22	316	PKhKP	PKPpre	17 38 13.8	
	comp=Z,0.1nm,0.3s,baz=110,slow=3.1,SNR=5.4						
YKA				PKP	PKPdf	17 38 23.2	+0.3
	comp=Z,4.1nm,1.0s,baz=121,slow=2.7,SNR=21						
YKA				PP	PP	17 41 11.7	-1.5
	comp=Z,0.6nm,0.8s,baz=121,slow=7.5,SNR=5.5						
YKA	Yellowknife Ar	138.22	316		PKPpre	17 38 13.8	
YKA					PP	17 41 11.7	-1.5
RES	Resolute Bay	139.48	337	PKP	PKPdf	17 38 24.2	-0.7
	comp=Z,1.7nm,0.9s,baz=112,slow=5.3						
RES	Resolute Bay	139.48	337	PKPpre	PKPpre	17 38 18.1	
RES					PKPdf	17 38 24.0	-0.9
ZALV	Zalesovo Beam	140.99	63	PKhKP	PKPpre	17 38 20.9	
	comp=Z,0.7nm,0.4s,baz=217,slow=0.7,SNR=1.6						
INK	Inuvik	147.81	319	PKPbc	PKPbc	17 38 42.8	+0.2
	comp=Z,4.1nm,0.6s,baz=78,slow=2.7,SNR=17						
SONM	Songino Array	148.79	85	PKPbc	PKPbc	17 38 45.1	-0.9
	comp=Z,4.2nm,0.9s,baz=217,slow=2.7,SNR=11						
ILAR	Eielson Array	152.25	310	PKPbc	PKiKP	17 38 53.9	0.0
	comp=Z,4.9nm,0.8s,baz=136,slow=3.0,SNR=32						
ILAR	Eielson Array	152.25	310		PKiKP	17 38 53.7	-0.1
KDAK	Kodiak Island	153.03	293	PKPbc	PKiKP	17 38 56.1	+0.5
	comp=Z,7.7nm,0.9s,baz=74,slow=7.4,SNR=1.9						

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*IDC **21** 17:19:36.4±1.2, 57°.05S×23°.47W, h0^{km}, mb4.6/3, mb1 4.7/3, mb1mx4.1/21, mbtmp4.6/3, Error ellipse: s-maj=60.1km s-min=33.2km az=6.0*

*NEIC **21** 17:19:39.4±0.2, 57°.0S±0°.3×23°.1W±0°.2, h15^{km}±8^{km}, mb4.2/3, Error ellipse: s-maj=44.0km s-min=16.5km az=173.0*

ISC 21 17:19:37.9±1.1, **57°.1S**±0°.4×**23°.2W**±0°.1, **h10**^{km}, **n19**, σ**0^{s}68**/19, **mb4.3**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.01	285	Pn	Pn	17 21 35.4	+1.3
CPUP	Villa Florida	39.17	307	P	P	17 27 04.4	-1.2
	4.6nm,0.8s,baz=165,slow=9.3,SNR=5.1						
LBTB	Lobatse	47.26	68	P	P	17 28 12.1	+0.9
	2.4nm,0.7s,baz=200,slow=7.1,SNR=3.0						
LBTB	Lobatse	47.26	68	P	P	17 28 11.6	+0.4
LBTB				IAmb	IAmb	17 28 14.4	
	comp=Z,1.7nm,0.7s						
TOA0	Torodi Ar. Sit	72.95	25		P	17 31 07.3	+0.1
TORD	Torodi Ar. Bea	72.95	25	P	P	17 31 07.9	+0.7
	comp=Z,12nm,0.7s,baz=195,slow=6.2,SNR=6.4						
TORD	Torodi Ar. Bea	72.95	25	P	P	17 31 07.3	+0.1
CMAR	Chiang Mai Arr	122.65	107	PKP	PKiKP	17 38 34.2	+0.4
	comp=Z,1.6nm,0.8s,baz=232,slow=4.1,SNR=3.8						
CMAR	Chiang Mai Arr	122.65	107		PKiKP	17 38 34.2	+0.4
PDAR	Pinedale Array	122.76	299	PKP	PKPdf	17 38 32.5	-0.8
	comp=Z,0.3nm,0.5s,baz=128,slow=6.0,SNR=3.0						
NVAR	Mina Array Bea	123.83	290	PKP	PKiKP	17 38 36.3	+0.5
	comp=Z,0.4nm,0.6s,baz=128,slow=3.8,SNR=2.5						
NVAR	Mina Array Bea	123.83	290		PKiKP	17 38 36.0	+0.3
FINES	FINESS Array B	124.29	26	PKP	PKPdf	17 38 35.2	-0.1
	comp=Z,3.3nm,0.8s,baz=224,slow=10,SNR=2.6						
ARCES	ARCESS Array B	131.10	21	PKP	PKPdf	17 38 47.5	-0.7
	comp=Z,1.1nm,0.6s,baz=231,slow=0.8,SNR=1.6						
YKA	Yellowknife Ar	138.43	316	PKP	PKPdf	17 39 01.6	-0.3
	comp=Z,2.7nm,0.9s,baz=118,slow=2.9,SNR=3.7						
INK	Inuvik	148.01	319	PKPbc	PKPbc	17 39 21.2	-0.6
	comp=Z,2.9nm,0.6s,baz=85,slow=2.4,SNR=5.9						
SONM	Songino Array	148.60	85	PKPbc	PKPbc	17 39 23.9	-0.3
	comp=Z,2.6nm,0.8s,baz=191,slow=3.0,SNR=3.3						
K27K	Chicken	150.25	309		PKiKP	17 39 28.1	-0.2
ILAR	Eielson Array	152.46	310	PKPbc	PKPbc	17 39 32.1	-0.6
	comp=Z,2.3nm,0.6s,baz=140,slow=3.4,SNR=4.1						

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*IDC **21** 17:21:20.6±0.6, 8°.28S×128°.53E, h0^{km}, mb4.3/13, mb1 4.4/16, mb1mx4.3/27, mbtmp4.3/16, ML3.7/3, MS3.8/14, Ms1 3.8/14, ms1mx3.5/38, Error ellipse: s-maj=20.7km s-min=13.4km az=80.0*

*NEIC **21** 17:21:25.3±2.5, 8°.41S±0°.06×128°.75E±0°.06, h44^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=8.9km s-min=8.6km az=175.0*

*NOU **21** 17:21:27.4, 8°.70S×128°.83E, h8^{km}, mb4.8, Timor Sea*

*DJA **21** 17:21:27.8±0.2, 8°S±2°×12°9E±°, h45^{km}±3^{km}, M4.6/49, mb4.8/49, mB5.1/20, MLv4.8/10, Mw(mB)4.5/20, MwMwp4.2/1, Mwp4.7/1*

ISC 21 17:21:25.2±0.4, **8°.51S**±0°.05×**128°.75E**±0°.05, **h35**^{km}, **n133**, σ**2^{s}31**/131, **mb4.6**/39, **MS3.9**/11, **1D**, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.57	79		Pn	17 22 05.6	+1.2
SAUI	Saumlaki	2.57	79	P	Pn	17 22 06.7	+2.3
SOEI	Soe	4.60	254	Pn	Pn	17 22 32.2	-0.2
SOEI	Soe	4.60	254	P	Pn	17 22 33.6	+1.2
MTN	Manton Dam	4.90	152	Pn	Pn	17 22 38.4	+1.9
BATI	Baumata	5.30	251	Pn	Pn	17 22 42.4	+0.4
	12nm,0.3s,baz=84,slow=4.8,SNR=14						
BATI				Sn	Sn	17 23 46.0	+4.1
	9.3nm,0.3s,baz=68,slow=19,SNR=1.2						
BATI	Baumata	5.30	251	P	Pn	17 22 42.8	+0.8
	0.7nm2μm175nm,1.1s						
NLAI	Namlea	5.48	342	P	Pn	17 22 46.1	+1.6
	1μm70nm,0.6s						
MMRI	Maumere	6.45	268	Pn	Pn	17 22 58.0	+0.4
MMRI	Maumere	6.45	268	P	Pn	17 22 59.0	+1.3
	0.7nm2μm197nm,1.2s						
FAKI	Fak Fak	6.55	32		Pn	17 22 57.7	-1.5
SANI	Sanana	6.98	337	P	Pn	17 23 06.2	+1.2
	0.2nm920nm41nm,0.8s						
EDFI	Ende, Flores	6.99	267	P	Pn	17 23 08.1	+2.9
	0.1nm538nm36nm,0.8s						
KNRA	Kununurra	7.13	180	Pn	Pn	17 23 06.5	-0.5
SIJI	Sorong	7.99	18	Pn	Pn	17 23 17.1	-1.9
	2.4nm,0.3s,baz=183,slow=21,SNR=9.5						
SIJI				Sn	Sn	17 24 48.1	0.0
	0.5nm,0.3s,baz=70,slow=18,SNR=1.1						
SWI	Sorong	7.99	18	P	Pn	17 23 20.2	+1.3
	0.2nm705nm46nm,0.6s						
WSI	Waingapu	8.43	261	P	Pn	17 23 28.5	+3.6
	3μm282nm,0.9s						
BSSI	Bau Bau, Buton	8.53	285	P	Pn	17 23 29.0	+2.7
	1μm142nm,1.1s						
BKSI	Bulukumba	9.13	290	P	Pn	17 23 36.0	+1.4
	1μm117nm,1.3s						
WBSI	Waikabubak, Su	9.31	262	P	Pn	17 23 37.4	+0.3
	1μm140nm,0.8s						
TNTI	Ternate	9.32	351	Pn	Pn	17 23 34.6	-2.5
TNTI	Ternate	9.32	351	P	Pn	17 23 40.8	+3.6
	41nm,1.0s						
BNSI	Bone	9.51	295	P	Pn	17 23 42.1	+2.3
	1μm124nm,1.3s						
LUWI	Luwuk	9.51	321	Pn	Pn	17 23 40.3	+0.5
LUWI	Luwuk	9.51	321	P	Pn	17 23 43.9	+4.1
	892nm40nm,1.2s						
KAPI	Kappang	9.59	291	Pn	Pn	17 23 41.3	+0.5
	2.3nm,0.3s,baz=123,slow=6.8,SNR=12						
KAPI				Sn	Sn	17 25 29.3	+1.9
	7.4nm,0.3s,baz=202,slow=17,SNR=4.3						
KAPI				LR	LR	17 27 46.9	
	comp=Z,422nm,18.1s,baz=118,slow=42						
KAPI	Kappang	9.59	291	Pn	Pn	17 23 41.2	+0.4
FITZ	Fitzroy Crossi	10.00	197	Pn	Pn	17 23 46.1	-0.4
	2.8nm,0.3s,baz=34,slow=10,SNR=41						
FITZ				Sn	Sn	17 25 34.3	-3.3
	2.0nm,0.3s,baz=82,slow=18,SNR=3.7						
FITZ				Lg	Lg	17 26 48.5	
	baz=336,slow=20,SNR=1.2						
FITZ				LR	LR	17 27 53.8	
	comp=Z,158nm,21.3s,baz=20,slow=39						
FITZ	Fitzroy Crossi	10.00	197	Pn	Pn	17 23 43.5	-3.0
SPSI	Sidrap Palu	10.00	296	P	Pn	17 23 49.6	+3.1
	1μm81nm,1.5s						
APSI	Ampana	10.34	316	P	Pn	17 23 54.7	+3.5
	920nm64nm,1.5s						
TTSI	Tana Toraja	10.41	301	P	Pn	17 23 56.3	+4.2
	831nm59nm,1.1s						
PLAI	Plampang	10.86	267	P	Pn	17 23 57.8	-0.4
	108nm,0.8s						
WAMI	Wamena	10.91	66	P	Pn	17 24 01.1	+2.1
	87nm,0.7s						
MRSI	Marisa	11.21	322	P	Pn	17 24 03.4	+0.3
	17nm,1.0s						
TWSI	Taliwang, Sumb	11.74	268	P	Pn	17 24 10.0	-0.3
	18nm,0.9s						
TOLI2	Tolitoli	12.43	320	Pn	Pn	17 24 20.7	+1.0
MPSI	Mapaga	12.45	314	P	Pn	17 24 23.3	+3.2
	481nm28nm,1.2s						
SGSI	Sangihe	12.53	345	P	Pn	17 24 24.1	+3.0
	142nm,0.8s						
WRAB	Tennant Creek	12.59	155		Pn	17 24 19.3	-2.6
WRA	Warramunga Arr	12.59	155	Pn	Pn	17 24 19.2	-2.8
	3.7nm,0.3s,baz=334,slow=14,SNR=59						
WRA				Sn	Sn	17 26 33.8	-7.2
	1.5nm,0.3s,baz=333,slow=23,SNR=7.0						
WRA				Lg	Lg	17 28 10.2	
	baz=333,slow=29,SNR=1.5						
WRA				LR	LR	17 29 46.5	
	comp=Z,453nm,19.6s,baz=330,slow=39						
WRA	Warramunga Arr	12.59	155		Pn	17 24 19.7	-2.2
WB2	Warramunga Arr	12.60	155		Pn	17 24 19.9	-2.1
WR0	Warramunga Arr	12.69	154		Pn	17 24 21.3	-2.0
BBKI	Banjar Baru	14.71	289	P	P	17 24 54.0	-2.6
	19nm,1.0s						
COEN	Coen	15.14	112	P	Pn	17 24 54.0	-2.7
COEN				IAmb	IAmb	17 25 04.5	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	15.57	212	P	Pn	17 24 59.2	-3.0
PSA00				IAmb	IAmb	17 25 12.4	
	comp=Z,63nm,1.0s						
MTKI	Muara Teweh, K	15.71	298	P	P	17 25 08.3	+0.6
DAV	Davao City (W)	15.79	348	LR	LR	17 30 57.6	
	comp=Z,197nm,21.5s,baz=182,slow=37						
AS31	Alice Springs	15.86	162	P	Pn	17 25 03.2	-2.8
ASAR	Alice Springs	15.86	162	Pn	Pn	17 25 02.9	-3.1
	comp=Z,1.3nm,0.3s,baz=330,slow=9.3,SNR=76						
ASAR				Sn	Sn	17 27 50.8	-10
	comp=Z,0.3nm,0.3s,baz=334,slow=19,SNR=3.5						
ASAR				Lg	Lg	17 29 51.4	
	baz=337,slow=30,SNR=1.7						
ASAR				LR	LR	17 31 36.9	
	comp=Z,320nm,18.4s,baz=338,slow=38						
ASAR	Alice Springs	15.86	162		Pn	17 25 03.8	-2.2
PWJI	Pagerwojo	16.78	270	P	P	17 25 19.0	-0.6
	comp=Z,42nm,0.9s						
PMG	Port Moresby	18.20	94	P	Pn	17 25 38.3	+3.0
	comp=Z,0.9nm,0.3s,baz=292,slow=7.1,SNR=5.7						
PMG				LR	LR	17 33 55.7	
	comp=Z,311nm,19.4s,baz=256,slow=41						
PMG	Port Moresby	18.20	94	P	P	17 25 33.6	-1.7
PMG				IAmb	IAmb	17 25 42.5	
	comp=Z,36nm,1.1s						
PMG	Port Moresby	18.20	94	P	Pn	17 25 39.7	+4.4
	comp=Z,31nm,1.1s						
KPJI	Karang Pucung	19.67	272	P	P	17 25 51.9	+0.5
	comp=Z,44nm,0.8s						
CMJI	Cimerak	20.11	271	P	P	17 25 55.3	-0.9
	comp=Z,50nm,1.0s						
CTA	Charters Tower	20.47	126	P	Pn	17 26 03.2	+0.8
	comp=Z,26nm,0.9s,baz=316,slow=12,SNR=20						
CTA				LR	LR	17 34 41.6	
	comp=Z,561nm,19.4s,baz=296,slow=38						
CTAO	Charters Tower	20.47	126	P	P	17 25 58.5	-1.6
CTAO				IAmb	IAmb	17 26 05.1	
	comp=Z,31nm,0.9s						
CISI	Cisompet, Garu	20.75	271	P	P	17 26 00.7	-2.6
CISI	Cisompet, Garu	20.75	271	P	P	17 26 02.2	-1.1
	comp=Z,56nm,0.6s						
LEM	Lembang	21.01	273	P	P	17 26 04.7	-1.5
	comp=Z,16nm,0.6s,baz=118,slow=20,SNR=7.9						
LEM				LR	LR	17 34 42.9	
	comp=Z,302nm,21.4s,baz=79,slow=39						
CBJI	Citeko	21.82	274	P	P	17 26 15.3	+0.7
	comp=Z,65nm,0.6s						
FORT	Forrest	22.17	182	P	P	17 26 19.1	+0.8
XMIS	Christmas Isla	22.87	263	P	P	17 26 24.4	-1.5
XMIS	Christmas Isla	22.87	263	P	P	17 26 31.9	+6.0
MORW	Morawa	23.69	209	P	P	17 26 34.2	+0.4
MORW				IAmb	IAmb	17 27 02.6	
	comp=Z,22nm,1.1s						
BBOO	Buckleboo	25.11	165	P	P	17 26 47.1	+0.2
BBOO				IAmb	IAmb	17 26 51.1	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	26.14	155	P	P	17 26 59.5	+3.3
	comp=Z,6.5nm,0.6s,baz=314,slow=8.5,SNR=15						
STKA				LR	LR	17 37 52.3	
	comp=Z,270nm,19.7s,baz=322,slow=38						
STKA	Stephens Creek	26.14	155	P	P	17 26 56.5	+0.3
NWAO	Narrogin (SRO)	26.54	202	P	P	17 27 00.7	+0.9
	comp=Z,9.1nm,0.7s,baz=47,slow=9.2,SNR=5.8						
NWAO				LR	LR	17 38 05.8	
	comp=Z,169nm,18.2s,baz=28,slow=38						
RGRI	Rengat	27.54	286	P	P	17 27 13.7	+4.7
	comp=Z,57μmcomp=Z,359nm,0.4s						
PSI	Prapat	31.79	289	LR	LR	17 40 34.2	
	comp=Z,159nm,20.6s,baz=90,slow=37						
DZM	Mont Dzumac	38.65	115	*e*P	P	17 28 49.5	+3.7
	comp=Z,107nm,1.4s						
DZM	Mont Dzumac	38.65	115	*e*LR	LR	17 39 19.1	
	comp=Z,377nm,24.2s						
CMAR	Chiang Mai Arr	39.79	312	P	P	17 28 53.1	-2.0
	comp=Z,2.3nm,0.9s,baz=144,slow=7.2,SNR=14						
CMAR				PcP	PcP	17 31 02.6	+1.5
	comp=Z,1.0nm,0.9s,baz=159,slow=2.3,SNR=3.6						
CMAR				ScP	ScP	17 34 51.9	+4.3
	comp=Z,0.2nm,0.8s,baz=145,slow=3.3,SNR=2.1						
CMAR				LR	LR	17 47 30.7	
	comp=Z,54nm,18.4s,baz=187,slow=40						
CMAR	Chiang Mai Arr	39.79	312	P	P	17 28 53.5	-1.7
GYA	Guiyang	40.84	329	*e*P	P	17 29 06.8	+2.9
GYA				sP	sP	17 29 25.4	+7.7
GYA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NJ2	Nanjing	41.42	347	*e*P	P	17 29 08.6	+0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI	Kunming	41.95	324	⇓P	P	17 29 16.0	+2.9
KMI				pP	sP	17 29 25.8	-1.2
KMI				sP	pP	17 29 29.9	+6.9
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MAJO	Matsushiro	45.68	11	P	P	17 29 41.5	-1.3
MJAR	Matsushiro Arr	45.68	11	P	P	17 29 41.6	-1.1
	comp=Z,1.4nm,0.3s,baz=191,slow=8.6,SNR=5.4						
KSRS	Korea Array	45.72	359	P	P	17 29 42.0	-0.9
	comp=Z,1.1nm,0.6s,baz=174,slow=14,SNR=3.2						
XAN	Xi'an	46.31	337	P	P	17 29 46.0	-1.7
XAN				pP	pP	17 29 50.8	-6.9
XAN				pmax	pmax		
	comp=Z,3μm,0.6s						
MSVF	Nonsavu	48.76	106	LR	LR	17 49 28.0	
	comp=Z,168nm,18.8s,baz=289,slow=34						
LZH	Lanzhou	50.17	334	*e*P	P	17 30 20.8	+3.1
LZH				pP	sP	17 30 37.1	+5.5
LZH				sP	pP	17 30 42.3	+15
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
RPZ	Rata Peaks	50.83	141	LR	LR	17 51 27.5	
	comp=Z,395nm,20.8s,baz=316,slow=35						
HHC	Hu-ho-hao-te	51.60	343	*e*P	P	17 30 27.3	-1.0
LSA	Lhasa	52.45	318	P	P	17 30 33.3	-2.0
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
LSA	Lhasa	52.45	318	P	P	17 30 33.7	-1.6
LSA				IAmb	IAmb	17 30 38.8	
	comp=Z,4.9nm,0.9s						
ODAN	Odare	53.33	313	*e*P	P	17 30 39.4	-2.2
	comp=Z,11nm,0.7s						
TAPN	Taplejung	53.39	313	*e*P	P	17 30 37.9	-4.1
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	53.86	12	P	P	17 30 43.3	-1.4
	comp=Z,6.4nm,1.1s,baz=164,slow=19,SNR=1.7						
RAMN	Ramite	53.96	312	*e*P	P	17 30 43.9	-2.3
	comp=Z,20nm,0.7s						
GTA	Gaotai	54.71	333	P	P	17 30 50.6	-0.7
GTA				pP	sP	17 31 04.8	-0.5
GTA				sP	pP	17 31 11.8	+10
GTA				ScP	ScP	17 35 58.6	+8.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,170nm,7.3s						
GTA				LR	LR		
	comp=N,140nm,19.6s						
GTA				LR	LR		
	comp=E,190nm,18.2s						
GTA				LR	LR		
	comp=Z,190nm,18.5s						
GUN	Gumba	55.03	313	*e*P	P	17 30 51.3	-2.8
	comp=Z,28nm,0.9s						
PKI	Pulchoki	55.19	312	*e*P	P	17 30 52.2	-3.0
	comp=Z,8.8nm,0.7s						
PKIN	Phulchoki	55.20	312	*e*P	P	17 30 52.1	-3.1
	comp=Z,9.1nm,0.8s						
KKN	Kakani	55.40	312	*e*P	P	17 30 53.8	-2.8
DMN	Daman	55.43	312	*e*P	P	17 30 55.5	-1.3
	comp=Z,12nm,0.7s						
DANN	Dangsing	56.83	312	*e*P	P	17 31 04.1	-2.8
	comp=Z,16nm,0.8s						
ULN	Ulaanbaatar	59.32	343	P	P	17 31 22.8	-1.0
ULN				IAmb	IAmb	17 31 36.3	
	comp=Z,4.7nm,0.9s						
SONM	Songino Array	59.49	343	P	P	17 31 24.5	-0.4
	comp=Z,2.5nm,0.9s,baz=164,slow=8.3,SNR=15						
SONM	Songino Array	59.49	343	P	P	17 31 24.3	-0.5
WMQ	Urumqi	63.99	328	*e*P	P	17 31 55.3	0.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.3s						
PETK	Petropavlovsk-	66.13	19	P	P	17 32 08.4	-0.5
	comp=Z,2.7nm,0.7s,baz=170,slow=4.5,SNR=8.6						
KSH	Kashi	68.30	318	P	P	17 32 24.8	+1.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,470nm,5.8s						
MK31	Makanchi Array	68.82	328	P	P	17 32 24.6	-1.4
MKAR	Makanchi Array	68.82	328	P	P	17 32 24.1	-1.9
	comp=Z,1.3nm,0.6s,baz=119,slow=8.2,SNR=21						
MKAR	Makanchi Array	68.82	328	P	P	17 32 24.0	-2.0
AAK	Ala-Archa	70.90	321	P	P	17 32 38.7	-0.5
VNDA	Vanda	71.11	173	P	P	17 32 42.6	+3.0
	comp=Z,1.1nm,0.7s,baz=320,slow=8.0,SNR=5.5						
VNDA	Vanda	71.11	173	P	P	17 32 40.8	+1.2
VNDA				IAmb	IAmb	17 33 06.4	
	comp=Z,5.3nm,1.1s						
ZAA0	Zalesovo Array	72.39	335	P	P	17 32 44.5	-3.1
ZAA0				IAmb	IAmb	17 33 03.6	
	comp=Z,7.4nm,1.2s						
ZALV	Zalesovo Beam	72.39	335	P	P	17 32 45.3	-2.3
	comp=Z,2.8nm,0.7s,baz=123,slow=5.5,SNR=7.0						
ZALV	Zalesovo Beam	72.39	335	P	P	17 32 44.7	-2.8
MAW	Mawson	73.11	201	P	P	17 32 50.0	-1.6
KURK	Kurchatov	73.16	329	P	P	17 32 50.0	-2.3
KURK				IAmb	IAmb	17 33 03.3	
	comp=Z,7.8nm,0.9s						
KKAR	Karatay Array	73.66	320	P	P	17 32 53.6	-1.9
BRVK	Borovoye	78.75	328	P	P	17 33 20.5	-3.6
BRVK				IAmb	IAmb	17 33 35.2	
	comp=Z,5.5nm,1.0s						
PPT2	Papeete2	79.58	106	*e*LR	LR	17 58 06.2	
	comp=Z,159nm,24.2s						
ABKAR	Akbulak array	82.92	322	P	P	17 33 43.6	-2.8
ABKAR	Akbulak array	82.92	322	P	P	17 33 43.8	-2.6
ABKAR				IAmb	IAmb	17 33 55.4	
	comp=Z,4.0nm,1.2s						
RND	Reindeer	94.14	27	P	P	17 34 38.2	-1.9
DHY	Denali Highway	94.75	27	P	P	17 34 41.6	-1.4
ILAR	Eielson Array	95.23	25	P	P	17 34 42.5	-2.4
	comp=Z,0.4nm,0.8s,baz=263,slow=4.6,SNR=4.4						
YKA	Yellowknife Ar	109.64	26	Pdiff	Pdif	17 35 50.0	+0.6
	comp=Z,0.2nm,0.6s,baz=289,slow=3.8,SNR=1.9						
YKA				PKiKP	PKiKP	17 39 52.2	+0.2
	comp=Z,0.3nm,0.6s,baz=287,slow=0.3,SNR=4.0						
GERES	GERESS Array B	112.77	320	PKiKP	PKiKP	17 39 58.8	+0.3
	comp=Z,0.4nm,0.5s,baz=100,slow=3.2,SNR=4.1						
PDAR	Pinedale Array	118.82	46	PKP	PKPdf	17 40 10.5	0.0
	comp=Z,0.5nm,0.7s,baz=251,slow=2.8,SNR=3.2						
TORD	Torodi Ar. Bea	127.87	280	PKP	PKPdf	17 40 28.4	+0.1
	comp=Z,1.6nm,0.6s,baz=50,slow=2.3,SNR=6.4						
TORD	Torodi Ar. Bea	127.87	280		PKiKP	17 40 28.7	-0.2
CPUP	Villa Florida	144.87	170	PKPbc	PKPdf	17 41 00.5	+1.1
	comp=Z,3.5nm,0.5s,baz=117,slow=1.6,SNR=4.5						

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*NEIC **21** 17:33:38.6±1.2, 29°.81S±0°.05×71°.2W±0°.1, h65^{km}±20^{km}, Error ellipse: s-maj=15.3km s-min=6.7km az=94.0*

*GUC **21** 17:33:38.4±0.5, 29°.81S×71°.25W, h60^{km}±4^{km}, ML4.1*

ISC 21 17:33:38.5±1.3, **29°.81S**±0°.03×**71°.32W**±0°.09, **h53**^{km}±21^{km}, **n38**, σ**0^{s}76**/46, **6C**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.58	129	⇑*i*P	Pn	17 33 50.8	-0.3
GO04				*i* S	Sn	17 34 00.3	+0.1
GO04	Tololo Observa	0.58	129		Pn	17 33 51.2	+0.1
LCO	Las Campanas	0.96	34	*e*S	Sn	17 34 08.9	0.0
LCO	Las Campanas	0.96	34	Pn	Pn	17 33 55.9	-0.2
CO01	Juntas del Tor	1.08	99	⇑*i*P	Pn	17 33 57.3	-0.2
CO01				*i* S	Sn	17 34 11.2	-0.5
CO01				IAML		17 34 12.1	
	comp=N,6μm,0.3s						
CO01	Juntas del Tor	1.08	99		Pn	17 33 57.3	-0.2
CO03	El Pedregal	1.16	152	⇑*i*P	Pn	17 33 58.5	0.0
CO03				*e*S	Sn	17 34 13.8	+0.3
CO03				IAML		17 34 16.1	
	comp=E,7μm,0.2s						
CO03	El Pedregal	1.16	152	Pn	Pn	17 33 58.5	0.0
AC05	El Transito	1.33	44	⇑*i*P	Pn	17 34 01.2	+0.3
AC05				*i* S	Sn	17 34 18.0	+0.4
AC05				IAML		17 34 19.2	
	comp=E,8μm,0.2s						
AC05	El Transito	1.33	44	Pn	Pn	17 34 01.2	+0.3
CO02	Combarbal	1.42	169		Pn	17 34 02.3	+0.3
AC04	Llanos de Chal	1.61	8	*e*P	Pn	17 34 05.1	+0.5
AC04				*e*S	Sn	17 34 24.9	+0.6
AC04				IAML		17 34 29.1	
	comp=E,3μm,0.3s						
AC04	Llanos de Chal	1.61	8	Pn	Pn	17 34 05.3	+0.7
GO03	Copiap	2.41	24	⇑*i*P	Pn	17 34 15.4	0.0
GO03				IAML		17 35 02.3	
	comp=N,1μm,0.4s						
GO03	Copiap	2.41	24		Pn	17 34 15.4	0.0
ZON	Zonda	2.86	128		Pn	17 34 20.7	-1.0
VA03	San Esteban	3.02	168	*e*P	Pn	17 34 24.8	+0.9
VA03				*i* S	Sn	17 35 00.2	+1.3
VA03	San Esteban	3.02	168		Pn	17 34 25.0	+1.1
ROCH	El Roble	3.16	175	⇑*i*P	Pn	17 34 26.5	+0.5
ROCH				IAML		17 35 19.8	
	comp=N,644nm,0.3s						
ROC1	El Roble	3.17	175		Pn	17 34 26.3	+0.2
PEL	Peldehue	3.37	171	*e*P	Pn	17 34 29.4	+0.8
PEL	Peldehue	3.37	171		Pn	17 34 29.3	+0.6
MT02	Curacav	3.44	177	*e*P	Pn	17 34 29.5	-0.1
MT02	Curacav	3.44	177		Pn	17 34 29.6	-0.1
AC02	Maricunga	3.54	34	*e*P	Pn	17 34 32.5	+1.1
AC02	Maricunga	3.54	34		Pn	17 34 31.6	+0.2
MT05	Renca	3.60	172		Pn	17 34 32.6	+0.6
AC01	Pan de Azucar	3.70	10	*e*P	Pn	17 34 31.6	-1.7
AC01	Pan de Azucar	3.70	10	Pn	Pn	17 34 31.8	-1.4
MT03	Universidad Ad	3.74	170	*e*P	Pn	17 34 35.0	+1.2
VA05	Santo Domingo	3.84	184	*e*P	Pn	17 34 35.8	+0.7
VA05				*i* S	Sn	17 35 20.3	+1.3
MT09	Talagante	3.96	176	*e*P	Pn	17 34 37.2	+0.3
MT09				*e*S	Sn	17 35 21.1	-1.2
LMEL	Las Melosas	4.14	167	*e*P	Pn	17 34 40.1	+0.8
BO03	Pichilemu	4.70	186	*e*P	Pn	17 34 45.2	-1.7
BO02	Sierra Bellavi	4.99	175	*e*P	Pn	17 34 51.0	+0.1

BO02	**Sierra Bellavi**	**4.99**	**175**	Pn	**Pn**	**17 34 51.0**	**+0.1**
BI02	**San Fabin de**	**6.83**	**180**		**Pn**	**17 35 15.7**	**-0.5**
LVC	**Limon Verde**	**7.49**	**17**	Pn	**Pn**	**17 35 24.5**	**-1.0**

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*BJI **21** 17:35:27.9±0.0,42°.54N×144°.66E,h46^{km},mB5.0/23,mb4.4/40,Ms3.8/7,Ms7 3.7/7*

*MOS **21** 17:35:29.5±0.9,42°.54N×144°.61E,h55^{km},mb4.4/14,Error ellipse: s-maj=7.2km s-min=5.5km az=85.1*

*SKHL **21** 17:35:30.8±0.1,42°.49N×144°.68E,h62^{km}±6^{km},mb5.8/1,msh5.0/2*

*JMA **21** 17:35:30.6±0.1,42°.65N×144°.53E,h54^{km}±1^{km},M4.5 JMA Felt III J1.*

*NIED **21** 17:35:30.6,42°.65N×144°.53E,h54^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.04; $M_{\theta\theta}$2.63; $M_{\phi\phi}$-2.67; $M_{r\theta}$1.02; $M_{\theta\phi}$-3.69; $M_{\phi r}$0.86; Fault plane solution: $M_0$4.73000×10^{15} NP1: ϕ_s253.00000°,δ85.00000°,λ-165.00000°. NP2: ϕ_s161.00000°,δ75.00000°,λ-5.00000°.*

*NEIC **21** 17:35:31.9±1.1,42°.50N±0°.04×144°.5E±0°.1,h63^{km}±6^{km},mb4.6/60 Error ellipse: s-maj=14.0km s-min=5.7km az=84.0*

*IDC **21** 17:35:32.7±2.0,42°.65N×144°.50E,h63^{km}±16^{km},mb3.8/19,mb1 4.0/25,mb1mx3.9/47,mbtmp4.1/25,MS3.4/5,Ms1 3.4/5,ms1mx3.0/34,Error ellipse: s-maj=14.6km s-min=12.4km az=130.0*

ISC 21 17:35:31.0±0.6,**42°.53N**±0°.05×**144°.66E**±0°.04,**h52**^{km}±5^{km},**n252**,σ**1^s.62**/272,**mb4.4**/74,**MS4.0**/3,**23C-14D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.47**	**3**	⇑P	**Pn**	**17 35 40.7**	**-1.3**
JAK				*e*S	**Sn**	**17 35 48.1**	**-1.8**
JKHN	**Kushirohamanak**	**0.66**	**33**	⇑P	**Pn**	**17 35 43.9**	**-0.5**
JOB	**Onbets**	**0.71**	**302**	⇓P	**Pn**	**17 35 43.1**	**-1.9**
JCH	**Churui**	**0.96**	**275**	⇓P	**Pn**	**17 35 46.7**	**-1.6**
JAR	**Ashorobuto**	**1.01**	**320**	⇓P	**Pn**	**17 35 46.7**	**-2.2**
JAR				*e*S	**Sn**	**17 35 58.2**	**-3.9**
JNK	**Nakash**	**1.05**	**2**	⇑P	**Pn**	**17 35 47.6**	**-1.9**
JNK				*e*S	**Sn**	**17 36 00.0**	**-3.2**
NMR	**Nemuro--Hokkai**	**1.15**	**43**	*i* P	**Pn**	**17 35 49.9**	**-0.8**
NMR				*i* S	**Sn**	**17 36 04.3**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.15**	**43**	⇑*i*PN	**Pn**	**17 35 49.7**	**-1.0**
NMR				*i* S	**Sn**	**17 36 04.1**	**-1.3**
NEM2	**Nemuro 2**	**1.15**	**43**	⇑P	**Pn**	**17 35 49.8**	**-1.0**
NEM2				*e*S	**Sn**	**17 36 03.9**	**-1.6**
ERM	**Erimo**	**1.23**	**246**	*ce*PN	**Pn**	**17 35 51.9**	**0.0**
ERM	**Erimo**	**1.23**	**246**		**Pn**	**17 35 51.1**	**-0.8**
JEM	**Erimo**	**1.23**	**246**	P	**Pn**	**17 35 51.1**	**-0.8**
JNBK	**Urakawa-nobuka**	**1.44**	**261**	⇓P	**Pn**	**17 35 52.8**	**-1.9**
JRA	**Rausu**	**1.45**	**13**	⇑P	**Pn**	**17 35 53.7**	**-1.1**
JRA				*e*S	**Sn**	**17 36 09.3**	**-3.3**
JTKR	**Abashiri--Toko**	**1.54**	**339**	⇓P	**Pn**	**17 35 55.1**	**-1.0**
JTKR				*e*S	**Sn**	**17 36 13.4**	**-1.6**
JFR	**Furan**	**1.65**	**293**	⇓P	**Pn**	**17 35 55.6**	**-2.0**
GRPR	**Tuman**	**1.67**	**29**	*i* P	**Pn**	**17 35 57.0**	**-0.9**
GRPR				AMB	AMB	17 35 58.0	
	4μm,0.4s						
GRPR				*i* S	**Sn**	**17 36 17.0**	**-1.1**
GRPR				A	A	17 36 21.0	
	27μm,0.5s						
GRPR				A	A	17 36 21.0	
	12μm,0.5s						
GRPR	**Tuman**	**1.67**	**29**	⇓*i*PN	**Pn**	**17 35 57.5**	**-0.4**
GRPR				*i* S	**Sn**	**17 36 17.1**	**-1.1**
GRPR				pmax	pmax		
	comp=N,431nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,4μm,0.3s						
GRPR				pmax	pmax		
	comp=E,540nm,0.1s						
GRPR				smax	smax		
	comp=E,12μm,0.3s						
GRPR				smax	smax		
	comp=N,27μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**30**	*i* P	**Pn**	**17 35 58.2**	**-0.6**
YUK				AMB	AMB	17 35 59.0	
	comp=N,4μm,0.4s						
YUK				*i* S	**Sn**	**17 36 19.0**	**-0.8**
YUK				A	A	17 36 20.0	
	comp=N,37μm,0.5s						
YUK				A	A	17 36 20.0	
	comp=N,10μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**30**	*c i*PN	**Pn**	**17 35 58.2**	**-0.6**
YUK				*i* S	**Sn**	**17 36 19.4**	**-0.4**
YUK				pmax	pmax		
	comp=Z,7μm,0.3s						
YUK				pmax	pmax		
	comp=N,380nm,0.2s						
YUK				smax	smax		
	comp=N,37μm,0.4s						
YUK				smax	smax		
	comp=E,10μm,0.4s						
JKA	**Kamikawa-asahi**	**2.19**	**317**	*e*P	**Pn**	**17 36 04.5**	**-0.4**
JKA	**Kamikawa-asahi**	**2.19**	**317**	Pn	**Pn**	**17 36 04.1**	**-0.8**
ASAJ	**Asahikawa**	**2.19**	**317**	P	**Pn**	**17 36 04.5**	**-0.5**
	comp=E,259nm,0.3s,baz=139,slow=13,SNR=776						
ASAJ				S	**Sn**	**17 36 29.3**	**-1.5**
	comp=E,140nm,0.3s,baz=127,slow=27,SNR=15						
JEW	**Eniwo**	**2.39**	**279**		**Pn**	**17 36 06.7**	**-1.0**
JTM	**Tenmabayashi**	**3.21**	**238**		**Pn**	**17 36 18.7**	**-0.2**
KUR	**Kuril'sk**	**3.56**	**40**	*i* P	**Pn**	**17 36 24.3**	**+0.6**
KUR				AMB	AMB	17 36 28.0	
	comp=E,498nm,0.6s						
KUR				AMB	AMB	17 36 32.0	
	comp=E,1μm,2.0s						
KUR				*i* S	**Sn**	**17 37 04.3**	**-0.1**
KUR				A	A	17 37 10.0	
	comp=E,2μm,2.0s						
KUR				A	A	17 37 10.0	
	comp=E,1μm,2.0s						
KUR				A	A	17 37 17.0	
	comp=E,1μm,0.4s						
KUR				A	A	17 37 17.0	
	comp=E,569nm,0.4s						
KUR	**Kuril'sk**	**3.56**	**40**	*c i*PN	**Pn**	**17 36 24.9**	**+1.2**
KUR				*i* S	**Sn**	**17 37 06.5**	**+2.1**
KUR				pmax	pmax		
	comp=Z,1μm,1.6s						
KUR				pmax	pmax		
	comp=N,254nm,0.6s						
KUR				pmax	pmax		
	comp=E,188nm,0.6s						
KUR				pmax	pmax		
	comp=Z,608nm,0.6s						
KUR				smax	smax		
	comp=N,3μm,1.3s						
KUR				smax	smax		
	comp=E,2μm,1.5s						
KUR				smax	smax		
	comp=N,269nm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.63**	**344**	*e*P	**Pn**	**17 36 38.9**	**+0.6**
YSS				AMB	AMB	17 36 39.2	
	comp=E,30nm,0.4s						
YSS				*e*S	**Sn**	**17 37 30.6**	**-0.1**
YSS				A	A	17 37 31.9	
	comp=E,80nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.63**	**344**	⇓*e*PN	**Pn**	**17 36 38.5**	**+0.2**
YSS				*e*S	**Sn**	**17 37 30.6**	**-0.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				smax	smax		
	comp=E,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
YSS	**Yuzh-Sakhalins**	**4.63**	**344**	Pn	**Pn**	**17 36 37.4**	**-0.9**
JMM	**Marumori**	**5.52**	**214**		**Pn**	**17 36 48.9**	**-1.7**
TEY	**Ternei**	**6.35**	**296**	*e*P	**Pn**	**17 37 02.8**	**+0.9**
TEY				AMB	AMB	17 37 05.7	
	comp=Z,30nm,0.8s						
TEY	**Ternei**	**6.35**	**296**	⇑*e*PN	**Pn**	**17 37 01.2**	**-0.7**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.6s						
JSD	**Sado**	**6.64**	**230**		**Pn**	**17 37 05.4**	**-0.6**
UGL	**Uglegorsk**	**6.79**	**345**	*e*P	**Pn**	**17 37 09.6**	**+1.6**
UGL				AMB	AMB	17 37 16.0	
	comp=Z,20nm,0.5s						
UGL				*e*S	**Sn**	**17 38 22.5**	**-1.4**
UGL				A	A	17 38 38.0	
	comp=Z,350nm,3.0s						
UGL				A	A	17 38 38.0	
	comp=Z,390nm,3.0s						
UGL				A	A	17 38 38.0	
	comp=Z,20nm,0.5s						
UGL				A	A	17 38 38.0	
	comp=Z,40nm,0.5s						
UGL	**Uglegorsk**	**6.79**	**345**	*e*PN	Pn	17 37 14.2	+6.2
UGL				*e*S	Sn	17 38 33.2	+9.3
UGL				pmax	pmax		
	comp=Z,30nm,0.9s						
UGL				smax	smax		
	comp=N,40nm,0.8s						
UGL				smax	smax		
	comp=N,280nm,3.0s						
UGL				smax	smax		
	comp=E,350nm,3.0s						
UGL				MLR	MLR		
	comp=N,600nm,15.0s						
UGL				MLR	MLR		
	comp=Z,1μm,15.0s						
JYT	**Yasato**	**7.18**	**210**		**Pn**	**17 37 11.0**	**-2.4**
MAJO	**Matsushiro**	**7.79**	**222**	PN	**Pn**	**17 37 21.2**	**-0.5**
MAJO	**Matsushiro**	**7.79**	**222**		**Pn**	**17 37 21.2**	**-0.5**
MAT	**Matsushiro**	**7.79**	**222**	P	**Pn**	**17 37 21.1**	**-0.6**
MAT				S	**Sn**	**17 38 46.6**	**-1.8**
MJAR	**Matsushiro Arr**	**7.79**	**222**	P	**Pn**	**17 37 21.7**	**0.0**
	comp=Z,1.1nm,0.3s,baz=30,slow=13,SNR=74						
MJAR				LR	LR	17 41 08.4	
	comp=Z,297nm,18.6s,baz=40,slow=43						
MJAR	**Matsushiro Arr**	**7.79**	**222**		**Pn**	**17 37 21.2**	**-0.5**
TYV	**Tymovskoe**	**8.45**	**351**	*e*P	**Pn**	**17 37 31.7**	**+1.0**
TYV				AMB	AMB	17 37 32.4	
	comp=Z,23nm,0.8s						
TYV	**Tymovskoe**	**8.45**	**351**	*e*PN	**Pn**	**17 37 31.7**	**+1.0**
TYV				pmax	pmax		
	comp=Z,23nm,0.8s						
JGF	**Kuroka**	**8.95**	**222**	Pn	**Pn**	**17 37 37.5**	**-0.2**
INU	**Inuyama**	**9.32**	**222**		**Pn**	**17 37 43.0**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.38**	**285**	P	**Pn**	**17 37 45.0**	**+1.6**
	baz=88,slow=14,SNR=25						
USRK	**Ussuriysk Ar.**	**9.38**	**285**	Pn	**Pn**	**17 37 44.8**	**+1.3**
USA0B	**Ussuriysk Arra**	**9.38**	**285**	⇓*e*PN	**Pn**	**17 37 45.3**	**+1.8**
USA0B	**Ussuriysk Arra**	**9.38**	**285**	Pn	**Pn**	**17 37 45.1**	**+1.6**
MSHR	**Mys Shultsa**	**9.97**	**275**	⇑*e*PN	**Pn**	**17 37 53.2**	**+1.7**
JHJ2	**Mitsune**	**10.15**	**204**	Pn	**Pn**	**17 37 52.0**	**-2.0**
JHJ	**Hachijo jima 2**	**10.15**	**204**	P	**Pn**	**17 37 51.9**	**-2.2**
	comp=Z,24nm,0.3s,baz=345,slow=20,SNR=8.8						
JHJ				S	Sn	17 39 35.2	-11
	comp=Z,66nm,0.3s,baz=93,slow=23,SNR=9.9						
JHJ				LR	LR	17 41 38.2	
	comp=Z,111nm,21.2s,baz=321,slow=36						
JWT	**Wachi**	**10.21**	**228**	Pn	**Pn**	**17 37 55.0**	**+0.1**
OKH	**Okha**	**11.09**	**355**	*e*P	**Pn**	**17 38 09.7**	**+3.0**
KLR	**Kul'dur**	**11.21**	**311**	P	**Pn**	**17 38 09.8**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=118,slow=14,SNR=40						
KLR				LR	LR	17 42 58.0	
	comp=Z,213nm,18.1s,baz=134,slow=40						
KLR	**Kul'dur**	**11.21**	**311**	*e*P	**Pn**	**17 38 10.0**	**+1.5**
KLR	**Kul'dur**	**11.21**	**311**	*ce*PN	**Pn**	**17 38 10.0**	**+1.5**
KLR				pmax	pmax		
	comp=Z,22nm,1.0s						
SKR	**Severo-Kuril's**	**11.33**	**40**	*e*P	**Pn**	**17 38 09.7**	**-0.3**
SKR				AMB	AMB	17 38 17.0	
	comp=Z,74nm,1.0s						
SKR				*e*S	**Sn**	**17 40 10.8**	**-4.1**
SKR	**Severo-Kuril's**	**11.33**	**40**	*e*PN	**Pn**	**17 38 11.5**	**+1.5**
SKR				*e*S	**Sn**	**17 40 18.6**	**+3.7**
SKR				pmax	pmax		
	comp=Z,74nm,1.3s						
SKR				MLR	MLR		
	comp=Z,100nm,13.0s						
JHS	**Saijyo**	**11.73**	**234**	Pn	**Pn**	**17 38 14.7**	**-0.9**
PAU	**Pauzhetka**	**12.18**	**39**	*e*P	**Pn**	**17 38 20.8**	**-0.8**
PAU				AMB	AMB	17 38 25.8	
	comp=Z,63nm,0.8s						
PAU				*e*S	**Sn**	**17 40 30.5**	**-5.2**
PAU				A	A	17 40 34.4	
	comp=Z,19nm,0.3s						
PAU				A	A	17 40 34.4	
	comp=Z,17nm,0.3s						
EKMR	**Ekimchan**	**13.14**	**327**	*e*P	**Pn**	**17 38 35.0**	**+0.2**
EKMR				AMB	AMB	17 38 48.0	
	comp=Z,8.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**13.71**	**35**	P	**Pn**	**17 38 41.3**	**-1.2**
PEA0B	**Petropavlovsk-**	**13.71**	**35**	Pn	**Pn**	**17 38 41.3**	**-1.2**
PETK	**Petropavlovsk-**	**13.71**	**35**	P	**Pn**	**17 38 41.6**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=207,slow=8.9,SNR=5.9						
PETK	**Petropavlovsk-**	**13.71**	**35**	Pn	**Pn**	**17 38 40.1**	**-2.5**
KSRS	**Korea Array**	**13.79**	**254**	P	**Pn**	**17 38 44.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=5.5						
KSAR	**Wonju Array Be**	**13.83**	**254**	P	**P**	**17 38 48.4**	**-2.7**
KSAR	**Wonju Array Be**	**13.83**	**254**	P	**P**	**17 38 48.4**	**-2.7**
PET	**Petropavlovsk**	**14.07**	**37**	*e*P	**Pn**	**17 38 44.5**	**-2.8**
PET				*e*S	**Sn**	**17 41 13.0**	**-8.7**
JCJ	**Chichijima**	**15.53**	**188**	LR	LR	17 45 12.0	
	comp=Z,43nm,20.7s,baz=160,slow=37						
JSU	**Suzuyama**	**15.78**	**230**	Pn	**Pn**	**17 39 06.5**	**-3.3**
JSU				IAmb	IAmb	17 39 08.3	
	comp=Z,61nm,1.3s						
BMKR	**Bomnak**	**16.01**	**325**	*e*P	**Pn**	**17 39 11.0**	**-1.6**
BMKR				AMB	AMB	17 39 13.0	
	comp=Z,6.0nm,0.9s						
ZEA	**Zeya**	**16.10**	**320**	*e*P	**Pn**	**17 39 12.3**	**-1.4**
ZEA				AMB	AMB	17 39 34.3	
	comp=Z,10.0nm,0.8s						
ZEA	**Zeya**	**16.10**	**320**	*e*P	**P**	**17 39 19.4**	**+3.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KROS	**Kirovskiy**	**16.66**	**322**	*e*P	**Pn**	**17 39 19.1**	**-1.6**
KROS				AMB	AMB	17 39 22.0	
	comp=Z,3.0nm,0.4s						
MA2	**Magadan**	**17.48**	**10**	*e*P	**P**	**17 39 30.4**	**-1.0**
MA2	**Magadan**	**17.48**	**10**	⇓*e*P	**P**	**17 39 30.4**	**-1.0**
MA2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MA2	**Magadan**	**17.48**	**10**	P	**P**	**17 39 31.0**	**-0.5**
SEY	**Seymchan**	**20.93**	**10**	P	**P**	**17 40 05.6**	**-3.5**
	comp=Z,2.8nm,0.8s,baz=282,slow=1.5,SNR=24						
SEY	**Seymchan**	**20.93**	**10**	*i* P	**P**	**17 40 05.7**	**-3.4**
YAK	**Yakutsk**	**21.47**	**341**	*e*P	**P**	**17 40 19.1**	**+4.3**
YAK				*e*		17 40 40.5	
YAK				*e*		17 43 59.3	
YAK				*e*S	Sn	17 44 15.5	-4.8
YAK				*e**SS	**sS**	**17 44 35.2**	**+6.7**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,91nm,2.8s						
YAK				pmax	pmax		
	comp=N,12nm,2.5s						
NJ2	**Nanjing**	**22.96**	**251**	*e*P	**P**	**17 40 28.6**	**-2.3**
NJ2				pmax	pmax		
	comp=N,14nm,0.5s						
HHC	**Hu-ho-hao-te**	**24.69**	**277**	*e*P	**P**	**17 40 44.3**	**-2.9**
ULN	**Ulaanbaatar**	**26.84**	**294**	*e*P	**P**	**17 41 08.9**	**+2.2**
ULN	**Ulaanbaatar**	**26.84**	**294**	⇑*e*P	**P**	**17 41 08.9**	**+2.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**27.29**	**294**	P	**P**	**17 41 09.8**	**-0.8**
	comp=Z,7.6nm,0.9s,baz=79,slow=8.7,SNR=18						
SONM	**Songino Array**	**27.29**	**294**	P	**P**	**17 41 09.8**	**-0.8**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**27.29**	**294**	P	**P**	**17 41 09.8**	**-0.8**
BILL	**Bilibino**	**28.05**	**17**	*e*P	**P**	**17 41 18.6**	**+1.6**
BILL	**Bilibino**	**28.05**	**17**	⇑*e*P	**P**	**17 41 18.6**	**+1.6**
BILL				*e*		17 42 09.4	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,78nm,17.0s						
TLY	**Talaya**	**29.04**	**303**	*e*P	**P**	**17 41 27.0**	**+1.0**
TLY	**Talaya**	**29.04**	**303**	⇑*e*P	**P**	**17 41 27.0**	**+1.0**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN	**Xi'an**	**29.14**	**265**	P	**P**	**17 41 28.0**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**29.48**	**134**	T	T	18 12 47.4	
	baz=327,slow=76,SNR=1906						
H11N1	**WAKE ISLAND Hy**	**29.49**	**134**	T	T	18 12 46.4	
	baz=327,slow=76,SNR=2087						
H11N3	**WAKE ISLAND Hy**	**29.49**	**134**	T	T	18 12 48.8	
	baz=327,slow=76,SNR=1485						
H11S1	**WAKE ISLAND Hy**	**30.38**	**135**	T	T	18 13 55.9	
	baz=328,slow=76,SNR=2886						
H11S3	**WAKE ISLAND Hy**	**30.39**	**135**	T	T	18 13 55.9	
	baz=328,slow=76,SNR=2295						
H11S2	**WAKE ISLAND Hy**	**30.40**	**135**	T	T	18 13 53.8	
	baz=328,slow=76,SNR=1832						
LZH	**Lanzhou**	**32.00**	**272**	⇑P	**P**	**17 41 52.6**	**+0.1**
LZH				pP	pP	17 42 07.5	+2.0
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
GTA	**Gaotai**	**33.71**	**280**	*e*P	**P**	**17 42 07.9**	**+0.6**
GTA				pP	pP	17 42 23.4	+3.0
GTA				sP	sP	17 42 29.9	+3.5
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,6.0s						
GTA				LR	LR		
	comp=Z,120nm,14.2s						
GTA				LR	LR		
	comp=Z,150nm,14.5s						
GTA				LR	LR		
	comp=Z,190nm,15.3s						
CD2	**Chengdu**	**34.47**	**264**	*e*P	**P**	**17 42 11.0**	**-2.9**
GYA	**Guiyang**	**34.85**	**255**	⇓P	**P**	**17 42 18.8**	**+1.5**
GYA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI	**Kunming**	**38.47**	**257**	⇑P	**P**	**17 42 49.5**	**+1.2**
KMI				pP	pP	17 43 03.1	+1.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
DGZ	**Jazzator, Alta**	**39.47**	**301**	⇑*i*P	**P**	**17 42 55.9**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TTA	**Tatalina**	**39.52**	**38**	P	**P**	**17 42 58.2**	**+1.8**
TTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TTA	**Tatalina**	**39.52**	**38**	P	**P**	**17 42 58.2**	**+1.8**
TTA				IAmb	IAmb	17 43 00.4	
	comp=Z,6.7nm,1.2s						
ZALV	**Zalesovo Beam**	**40.29**	**308**	P	**P**	**17 43 01.5**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=90,slow=8.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**40.29**	**308**	P	**P**	**17 43 01.7**	**-1.1**
ZALV	**Zalesovo Beam**	**40.29**	**308**	P	**P**	**17 43 01.7**	**-1.1**
WMQ	**Urumqi**	**40.85**	**292**	*e*P	**P**	**17 43 08.4**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,7.1s						
KDAK	**Kodiak Island**	**41.41**	**46**	P	**P**	**17 43 12.2**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=332,slow=5.9,SNR=6.8						
ZSN	**Zaisan**	**41.67**	**298**	*e*P	**P**	**17 43 13.7**	**-0.6**
	baz=298						
ZSN	**Zaisan**	**41.67**	**298**	*e*P	**P**	**17 43 13.6**	**-0.6**
BPAW	**Bear Paw Mtn.**	**41.79**	**36**	P	**P**	**17 43 16.3**	**+1.2**
KTH	**Kantishna Hill**	**41.83**	**37**	P	**P**	**17 43 16.3**	**+0.9**
KTH				IAmb	IAmb	17 43 18.9	
	comp=Z,9.3nm,1.0s						
CNPM	**China Poot**	**41.92**	**43**	P	**P**	**17 43 16.0**	**-0.2**
BRLK	**Bradley Lake**	**42.08**	**43**	P	**P**	**17 43 17.0**	**-0.5**
TRF	**Thorofare Moun**	**42.11**	**37**	P	**P**	**17 43 17.7**	**-0.2**
TRF				IAmb	IAmb	17 43 32.8	
	comp=Z,7.3nm,1.0s						
BWN	**Browne**	**42.45**	**36**	P	**P**	**17 43 22.5**	**+2.1**
I23K	**Minto, Yukon-K**	**42.47**	**35**	P	**P**	**17 43 21.6**	**+1.0**
I23K				IAmb	IAmb	17 43 21.7	
	comp=Z,4.4nm,0.7s						
RND	**Reindeer**	**42.76**	**37**	P	**P**	**17 43 23.8**	**+0.8**
RND				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RND	**Reindeer**	**42.76**	**37**	P	**P**	**17 43 23.8**	**+0.8**
GHO	**Glory Hole Cre**	**42.85**	**40**	P	**P**	**17 43 24.0**	**+0.3**
GHO				IAmb	IAmb	17 43 36.6	
	comp=Z,8.8nm,0.8s						
MDM	**Murphy Dome**	**42.96**	**35**	P	**P**	**17 43 24.7**	**+0.2**
MDM				IAmb	IAmb	17 43 44.9	
	comp=Z,13nm,1.3s						
WRH	**Wood River Hil**	**43.04**	**36**	P	**P**	**17 43 26.1**	**+0.9**
WRH				IAmb	IAmb	17 43 43.3	
	comp=Z,11nm,1.4s						
KNK	**Knik Glacier**	**43.10**	**40**	P	**P**	**17 43 26.0**	**+0.2**
COLA	**College**	**43.12**	**35**	⇓*i*P	**P**	**17 43 26.2**	**+0.4**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SML	**Sawmill**	**43.13**	**40**	P	**P**	**17 43 26.4**	**+0.4**
SML				IAmb	IAmb	17 43 40.1	
	comp=Z,11nm,0.8s						
DHY	**Denali Highway**	**43.45**	**38**	P	**P**	**17 43 29.1**	**+0.4**
HDA	**Harding Lake**	**43.54**	**36**	P	**P**	**17 43 29.5**	**+0.3**
HDA				IAmb	IAmb	17 43 42.5	
	comp=Z,9.2nm,1.1s						
IL31		**43.54**	**35**	P	**P**	**17 43 29.7**	**+0.6**
ILAR	**Eielson Array**	**43.54**	**35**	P	**P**	**17 43 29.2**	**0.0**
	comp=Z,3.0nm,0.8s,baz=286,slow=11,SNR=36						
ILAR	**Eielson Array**	**43.54**	**35**	P	**P**	**17 43 28.9**	**-0.3**
MK31	**Makanchi Array**	**43.54**	**298**	*i* P	**P**	**17 43 28.2**	**-1.3**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**43.54**	**298**	P	**P**	**17 43 28.0**	**-1.5**
MKAR	**Makanchi Array**	**43.54**	**298**	P	**P**	**17 43 28.4**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=84,slow=10,SNR=40						
SCM	**Sheep Creek Mo**	**43.60**	**40**	P	**P**	**17 43 29.3**	**-0.5**
SCM				pmax	pmax		
	comp=Z,12nm,1.1s						
SCM	**Sheep Creek Mo**	**43.60**	**40**	P	**P**	**17 43 29.3**	**-0.5**
SCM				IAmb	IAmb	17 43 43.2	
	comp=Z,12nm,1.1s						
MAKZ	**Makanchi**	**43.74**	**298**	P	**P**	**17 43 30.2**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MAKZ	**Makanchi**	**43.74**	**298**	P	**P**	**17 43 30.2**	**-0.9**
SEM	**Semipalatinsk**	**43.79**	**303**	*e*P	**P**	**17 43 30.8**	**-1.0**
	baz=303						
SEM	**Semipalatinsk**	**43.79**	**303**	*e*P	**P**	**17 43 30.7**	**-1.0**
PRP	**Porcupine Dome**	**44.06**	**34**	P	**P**	**17 43 34.2**	**+0.6**
PRP				IAmb	IAmb	17 43 46.9	
	comp=Z,9.1nm,0.7s						
FYU	**Fort Yukon**	**44.12**	**33**	P	**P**	**17 43 34.2**	**+0.5**
FYU				IAmb	IAmb	17 43 36.0	
	comp=Z,18nm,1.3s						
FID	**Port Fidalgo**	**44.14**	**41**	P	**P**	**17 43 34.5**	**+0.4**
KLU	**Klutina**	**44.30**	**40**	P	**P**	**17 43 36.0**	**+0.6**
KLU				IAmb	IAmb	17 43 57.0	
	comp=Z,5.7nm,0.9s						
RIDG	**Independent Ri**	**44.52**	**37**	P	**P**	**17 43 37.5**	**+0.3**
RIDG				IAmb	IAmb	17 44 05.6	
	comp=Z,17nm,1.5s						
KURK	**Kurchatov**	**44.71**	**304**	*e*P	**P**	**17 43 38.5**	**-0.2**
KURK	**Kurchatov**	**44.71**	**304**	⇑*e*P	**P**	**17 43 38.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	**Kurchatov**	**44.71**	**304**	P	**P**	**17 43 37.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**45.43**	**253**	P	**P**	**17 43 45.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=45,slow=7.5,SNR=6.7						
VRDI	**Verde Repeater**	**45.52**	**40**	P	**P**	**17 43 45.8**	**+0.5**
VRDI				IAmb	IAmb	17 43 46.8	
	comp=Z,9.6nm,1.2s						
K27K	**Chicken**	**45.70**	**36**	P	**P**	**17 43 47.1**	**+0.8**
K27K				IAmb	IAmb	17 44 09.9	
	comp=Z,5.3nm,0.8s						
MCARA	**McCarthy VSAT**	**45.70**	**40**	P	**P**	**17 43 47.3**	**+0.9**
CRQM	**Cirque**	**45.76**	**41**	P	**P**	**17 43 48.6**	**+1.5**
TGL	**Tana Glacier**	**45.91**	**41**	P	**P**	**17 43 49.4**	**+1.2**
EGAK	**Eagle**	**45.98**	**35**	P	**P**	**17 43 48.8**	**+0.2**
EGAK				IAmb	IAmb	17 44 02.2	
	comp=Z,8.7nm,1.2s						
BALM	**Baldy**	**46.09**	**40**	P	**P**	**17 43 50.0**	**+0.3**
BALM				IAmb	IAmb	17 43 55.5	
	comp=Z,11nm,1.1s						
ISLE	**Juniper Island**	**46.17**	**41**	P	**P**	**17 43 50.9**	**+0.6**
BARN	**Barnard Glacie**	**46.41**	**40**	P	**P**	**17 43 53.3**	**+1.1**
CTGM	**Chitina Glacie**	**46.58**	**40**	P	**P**	**17 43 54.2**	**+0.6**
TAPN	**Taplejung**	**48.22**	**271**	*e*P	**P**	**17 44 08.4**	**+1.5**
	comp=Z,18nm,0.9s						
MDOK	**Medeo**	**48.31**	**295**	*e*P	**P**	**17 44 06.4**	**-0.9**
	baz=295						
MDOK	**Medeo**	**48.31**	**295**	*e*P	**P**	**17 44 06.4**	**-0.9**
INK	**Inuvik**	**48.37**	**29**	P	**P**	**17 44 07.2**	**+0.2**
	comp=Z,4.3nm,0.5s,baz=299,slow=7.0,SNR=29						
INK	**Inuvik**	**48.37**	**29**	P	**P**	**17 44 07.1**	**0.0**
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**48.37**	**29**	P	**P**	**17 44 07.1**	**0.0**
INK				IAmb	IAmb	17 44 08.5	
	comp=Z,4.9nm,0.6s						

AAA	**Alma-Ata**	**48.38**	**295**	*e*P	**P**	**17 44 06.8**	**-0.9**
AAA	**Alma-Ata**	**48.38**	**295**	*e*P	**P**	**17 44 06.8**	**-0.9**
	baz=295						
AAA	**Alma-Ata**	**48.38**	**295**	*e*P	**P**	**17 44 06.8**	**-0.9**
HYT	**Haines Junctio**	**48.44**	**40**	P	**P**	**17 44 09.7**	**+1.8**
BRZS	**Berezniki**	**48.55**	**305**	*e*P	**P**	**17 44 07.7**	**-1.2**
	baz=305						
BRZS	**Berezniki**	**48.55**	**305**	*e*P	**P**	**17 44 07.6**	**-1.2**
ODAN	**Odare**	**48.73**	**271**	*e*P	**P**	**17 44 11.7**	**+1.0**
BRVK	**Borovoye**	**48.92**	**310**	*e*P	**P**	**17 44 11.6**	**0.0**
BRVK	**Borovoye**	**48.92**	**310**	⇑*e*P	**P**	**17 44 11.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BRVK	**Borovoye**	**48.92**	**310**	P	**P**	**17 44 11.2**	**-0.4**
RAMN	**Ramite**	**49.26**	**271**	*e*P	**P**	**17 44 14.7**	**-0.1**
	comp=Z,10nm,0.5s						
GUN	**Gumba**	**49.26**	**273**	*e*P	**P**	**17 44 15.8**	**+0.9**
	comp=Z,15nm,0.4s						
WHY	**Whitehorse**	**49.72**	**40**	P	**P**	**17 44 19.0**	**+1.3**
WHY				IAmb	IAmb	17 44 25.9	
	comp=Z,9.4nm,1.5s						
KKN	**Kakani**	**49.77**	**273**	*e*P	**P**	**17 44 18.7**	**0.0**
AAK	**Ala-Archa**	**50.24**	**295**	*e*P	**P**	**17 44 20.8**	**-1.2**
AAK	**Ala-Archa**	**50.24**	**295**	P	**P**	**17 44 20.8**	**-1.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AAK	**Ala-Archa**	**50.24**	**295**	P	**P**	**17 44 20.8**	**-1.2**
DANN	**Dangsing**	**50.58**	**274**	*e*P	**P**	**17 44 25.5**	**+0.6**
	comp=Z,33nm,0.5s						
C36M	**Paulatuk**	**51.40**	**27**	P	**P**	**17 44 29.2**	**-0.8**
C36M				IAmb	IAmb	17 44 30.8	
	comp=Z,9.3nm,1.3s						
KK31	**Karatay Array**	**52.67**	**298**	P	**P**	**17 44 38.4**	**-1.6**
KK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KK31	**Karatay Array**	**52.67**	**298**	P	**P**	**17 44 38.4**	**-1.6**
KKAR	**Karatay Array**	**52.67**	**298**	P	**P**	**17 44 38.5**	**-1.5**
KKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	**Karatay Array**	**52.67**	**298**	P	**P**	**17 44 38.8**	**-1.1**
KKAR	**Karatay Array**	**52.67**	**298**	P	**P**	**17 44 38.5**	**-1.5**
KKAR				IAmb	IAmb	17 44 50.1	
	comp=Z,1.9nm,0.9s						
IUG	**Iuzhnay**	**53.42**	**297**	*e*P	**P**	**17 44 45.2**	**-0.4**
	baz=297						
IUG	**Iuzhnay**	**53.42**	**297**	*e*P	**P**	**17 44 45.2**	**-0.4**
ARU	**Arti**	**53.99**	**317**	*e*P	**P**	**17 44 49.8**	**+0.4**
ARU	**Arti**	**53.99**	**317**	*c i*P	**P**	**17 44 48.0**	**-1.4**
ARU						17 45 49.1	
ARU				S	**S**	**17 52 21.9**	**+0.7**
ARU				SS	**SS**	**17 55 57.8**	**-4.6**
ARU				pmax	pmax		
	comp=Z,15nm,2.7s						
ARU	**Arti**	**53.99**	**317**	P	**P**	**17 44 48.5**	**-0.9**
ARU				IAmb	IAmb	17 44 52.2	
	comp=Z,3.9nm,0.9s						
EUNU	**Eureka**	**54.37**	**10**	P	**P**	**17 44 50.9**	**-1.1**
EUNU				IAmb	IAmb	17 45 13.0	
	comp=Z,4.2nm,0.8s						
AB06	**Akbulak array**	**56.38**	**308**	P	**P**	**17 45 05.8**	**-0.9**
AB05	**Akbulak array**	**56.39**	**308**	P	**P**	**17 45 06.1**	**-0.7**
AB02	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.7**
AB07	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.7**
AB01	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.7**
AB31	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.7**
AB31				IAmb	IAmb	17 45 09.9	
	comp=Z,4.6nm,1.0s						
ABKAR	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.6**
ABKAR	**Akbulak array**	**56.40**	**308**	P	**P**	**17 45 06.2**	**-0.6**
ABKAR				IAmb	IAmb	17 45 09.9	
	comp=Z,4.6nm,1.0s						
RES	**Resolute Bay**	**56.65**	**16**	P	**P**	**17 45 07.2**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=312,slow=7.2,SNR=10						
RES	**Resolute Bay**	**56.65**	**16**	P	**P**	**17 45 07.7**	**-0.5**
RES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RES	**Resolute Bay**	**56.65**	**16**	P	**P**	**17 45 07.7**	**-0.5**
RES				IAmb	IAmb	17 45 12.0	
	comp=Z,6.4nm,0.9s						
YKA	**Yellowknife Ar**	**57.82**	**33**	P	**P**	**17 45 16.7**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=302,slow=6.5,SNR=12						
ARCES	**ARCESS Array B**	**59.75**	**339**	P	**P**	**17 45 28.5**	**-1.5**
	comp=Z,3.9nm,1.0s,baz=50,slow=8.4,SNR=1.9						
ARCES	**ARCESS Array B**	**59.75**	**339**	P	**P**	**17 45 29.0**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,12nm,1.2s						
ARCES	**ARCESS Array B**	**59.75**	**339**	P	**P**	**17 45 29.0**	**-1.0**
BELG	**Belogornoye**	**61.53**	**316**	⇑*e*P	**P**	**17 45 41.4**	**-0.9**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WR0	**Warramunga Arr**	**62.87**	**191**	P	**P**	**17 45 49.2**	**-2.4**
WR0				IAmb	IAmb	17 45 57.3	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**62.88**	**191**	P	**P**	**17 45 51.9**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=7.5,slow=6.9,SNR=3.3						
FINES	**FINESS Array B**	**65.12**	**332**	P	**P**	**17 46 04.5**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=42,slow=7.3,SNR=13						
FINES	**FINESS Array B**	**65.12**	**332**	*i* P	**P**	**17 46 07.0**	**+1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OBN	**Obninsk**	**65.21**	**323**	*e*P	**P**	**17 46 06.2**	**-0.3**
OBN	**Obninsk**	**65.21**	**323**	⇓*e*P	**P**	**17 46 06.2**	**-0.3**
OBN				*e*		17 48 30.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**66.61**	**191**	P	**P**	**17 46 17.1**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=9.2,slow=7.7,SNR=7.6						
ASAR	**Alice Springs**	**66.61**	**191**	P	**P**	**17 46 15.3**	**-0.6**
KIV	**Kislovodsk**	**69.20**	**311**	*e*P	**P**	**17 46 34.6**	**+2.4**
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KBZ	**Khabaz**	**69.23**	**311**	P	**P**	**17 46 32.0**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=47,slow=0.9,SNR=7.2						
KBZ	**Khabaz**	**69.23**	**311**	*e*P	**P**	**17 46 32.6**	**+0.4**
KBZ	**Khabaz**	**69.23**	**311**	⇑*e*P	**P**	**17 46 32.6**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,11nm,3.6s						
NACGM	**Naroch**	**69.50**	**327**	*i* P	**P**	**17 46 32.4**	**-1.3**
NACGM				*i* P	**P**	**17 46 32.4**	**-1.3**
NACGM				*i* P	**P**	**17 46 32.4**	**-1.3**
NACGM				*i* Pb	pP	17 46 37.2	-11
	comp=Z,8.0nm,0.9s						
NACGM				*i* PcP	**sP**	**17 46 56.9**	**+2.8**
NACGM				*i* PP	**PP**	**17 49 07.3**	**+0.1**
NACGM				*i* PPP	PPP	17 50 39.5	
NACGM				*i* S	**S**	**17 55 41.3**	**+4.1**
NACGM				*i* PS		17 57 26.4	
NACGM				*i* SS	**SS**	**18 00 10.6**	**+6.2**
NACGM				*i* SSS	SSS	18 03 27.7	
NACGM				*i* LR	LR	18 17 56.2	
NACGM				*i* Sb		18 23 20.6	
	comp=Z,243nm,16.1s						
NVAR	**Mina Array Bea**	**69.77**	**56**	P	**P**	**17 46 37.4**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=290,slow=6.7,SNR=10						
NVAR	**Mina Array Bea**	**69.77**	**56**	P	**P**	**17 46 35.1**	**-0.9**
NB201	**NORSAR Array S**	**70.03**	**338**	P	**P**	**17 46 35.5**	**-1.4**
NB2	**NORSAR Subarra**	**70.06**	**338**	P	**P**	**17 46 36.4**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**70.06**	**338**	P	**P**	**17 46 37.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=35,slow=6.1,SNR=6.6						
NOA	**NORSAR Array B**	**70.06**	**338**	P	**P**	**17 46 37.0**	**-0.2**
AKASG	**Malin Array Be**	**71.47**	**323**	P	**P**	**17 46 45.2**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=43,slow=6.0,SNR=6.6						
AKASG	**Malin Array Be**	**71.47**	**323**	P	**P**	**17 46 44.9**	**-0.8**
AKBB	**Malin Array Si**	**71.47**	**323**	⇓*e*P	**P**	**17 46 47.1**	**+1.3**
BW06	**Boulder Array**	**72.08**	**48**	P	**P**	**17 46 50.4**	**+0.4**
PD31	**Pinedale Array**	**72.08**	**48**	P	**P**	**17 46 50.3**	**+0.3**
PDAR	**Pinedale Array**	**72.08**	**48**	P	**P**	**17 46 50.6**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=316,slow=1.6,SNR=16						
PDAR	**Pinedale Array**	**72.08**	**48**	P	**P**	**17 46 50.5**	**+0.5**
PV17	**East Wray Mesa**	**75.44**	**51**	P	**P**	**17 47 11.3**	**+1.7**
PV17				IAmb	IAmb	17 47 30.8	
	comp=Z,6.4nm,1.2s						
KHC	**Kasperske Hory**	**79.12**	**330**	*e*P	**P**	**17 47 30.5**	**+0.7**
KHC				*e*		17 47 49.0	
KHC	**Kasperske Hory**	**79.12**	**330**	*e*P	**P**	**17 47 30.5**	**+0.7**
KHC				*e*x	x	17 47 49.0	
TXAR	**Lajitas Array**	**84.84**	**55**	P	**P**	**17 48 02.3**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=289,slow=2.8,SNR=2.4						
CCM	**Cathedral Cave**	**85.05**	**41**	P	**P**	**17 48 00.7**	**-0.3**
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	**Cathedral Cave**	**85.05**	**41**	P	**P**	**17 48 00.7**	**-0.3**
MDT	**Midelt**	**99.89**	**334**	LR	LR	18 37 17.1	
	comp=Z,89nm,18.7s,baz=352,slow=37						
H03N2	**Juan Fernandez**	**144.79**	**90**	T	T	20 36 43.4	
	baz=301,slow=76,SNR=19						
H03N3	**Juan Fernandez**	**144.80**	**90**	T	T	20 36 44.4	
	baz=301,slow=76,SNR=18						
H03N1	**Juan Fernandez**	**144.81**	**90**	T	T	20 36 43.7	
	baz=301,slow=76,SNR=17						

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*IDC **21** 17:39:52.6±0.8, 56°.53S×150°.58W, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.2/23, mbtmp4.1/7, MS3.6/1, Ms1 3.6/1, ms1mx3.1/18, Error ellipse: s-maj=33.6km s-min=21.8km az=11.0*

*NEIC **21** 17:39:53.8±0.6, 56°.6S±0°.2×150°.6W±0°.3, h10^{km}±1^{km}, mb4.8/6, Error ellipse: s-maj=37.7km s-min=25.7km az=357.0*

ISC 21 17:39:54.2±0.7**, 56°.6S**±0°.2×**150°.5W**±0°.1**, h10^{km}, n36, σ1^s.06**/21**, mb4.4**/8**, 1C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**26.59**	**201**	P	**P**	**17 45 34.1**	**+2.1**
	3.4nm,1.3s,baz=63,slow=11,SNR=3.6						
VNDA				LR	LR	17 53 24.3	
	comp=Z,111nm,18.0s,baz=32,slow=30						
VNDA	**Vanda**	**26.59**	**201**	P	**P**	**17 45 31.7**	**-0.3**
VNDA				IAmb	IAmb	17 45 38.5	
	comp=Z,20nm,1.9s						
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**17 46 33.3**	**-0.6**
	comp=Z,5.5nm,1.2s,baz=75,slow=3.2,SNR=4.1						
QSPA	**South Pole Qui**	**33.55**	**180**	P	**P**	**17 46 33.4**	**-0.5**
QSPA				IAmb	IAmb	17 46 37.0	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**52.04**	**268**	P	**P**	**17 49 03.7**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=87,slow=8.9,SNR=2.9						
STKA	**Stephens Creek**	**52.04**	**268**	P	**P**	**17 49 03.4**	**-0.4**
PLCA	**Paso Flores**	**52.07**	**108**	P	**P**	**17 49 05.0**	**+1.0**
	comp=Z,3.1nm,1.0s,baz=254,slow=9.3,SNR=4.6						
PLCA	**Paso Flores**	**52.07**	**108**	P	**P**	**17 49 04.0**	**0.0**
PLCA				IAmb	IAmb	17 49 13.3	
	comp=Z,22nm,1.9s						
H03S2	**Juan Fernandez**	**52.62**	**96**	T	T	18 46 09.0	
	baz=219,slow=74,SNR=60						
H03S1	**Juan Fernandez**	**52.63**	**96**	T	T	18 46 11.3	
	baz=219,slow=74,SNR=70						
H03S3	**Juan Fernandez**	**52.64**	**96**	T	T	18 46 09.9	
	baz=219,slow=74,SNR=68						
H03N3	**Juan Fernandez**	**52.91**	**96**	T	T	18 46 26.6	
	baz=222,slow=72,SNR=230						
H03N2	**Juan Fernandez**	**52.92**	**96**	T	T	18 46 25.7	
	baz=222,slow=72,SNR=377						
H03N1	**Juan Fernandez**	**52.93**	**96**	T	T	18 46 26.3	
	baz=222,slow=72,SNR=175						
SYO	**Syowa Base**	**54.48**	**184**	⇑*e*X	P	17 49 16.0	-5.2
ASAR	**Alice Springs**	**62.68**	**268**	P	**P**	**17 50 18.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=137,slow=6.8,SNR=34						
ASAR	**Alice Springs**	**62.68**	**268**	P	**P**	**17 50 18.4**	**-0.7**
H01W1	**Cape Leeuwin H**	**64.39**	**245**	T	T	19 00 31.7	
	baz=140,slow=76,SNR=8.2						
H01W2	**Cape Leeuwin H**	**64.39**	**245**	T	T	19 00 30.8	
	baz=140,slow=76,SNR=8.0						
H01W3	**Cape Leeuwin H**	**64.40**	**245**	T	T	19 00 32.9	
	baz=140,slow=76,SNR=8.6						
WRA	**Warramunga Arr**	**65.42**	**271**	P	**P**	**17 50 36.8**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=147,slow=6.0,SNR=3.4						
MNMC	**Minye Minye**	**69.28**	**93**	P	**P**	**17 51 01.1**	**-0.7**
MNMC				IAmb	IAmb	17 51 03.9	
	comp=Z,9.0nm,0.8s						
CPUP	**Villa Florida**	**70.14**	**108**	P	**P**	**17 51 06.0**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=209,slow=9.3,SNR=5.0						
CPUP	**Villa Florida**	**70.14**	**108**	P	**P**	**17 51 06.5**	**-0.2**
H10S3	**ASCENSION HYDR**	**105.27**	**135**	T	T	19 52 07.5	
	baz=204,slow=74,SNR=7.4						
H10S2	**ASCENSION HYDR**	**105.28**	**135**	T	T	19 52 09.0	
	baz=16,slow=74,SNR=4.4						
H10N3	**ASCENSION HYDR**	**106.35**	**134**	T	T	19 53 31.1	
	baz=203,slow=75,SNR=9.9						
H10N1	**ASCENSION HYDR**	**106.35**	**134**	T	T	19 53 33.5	
	baz=203,slow=75,SNR=14						
H10N2	**ASCENSION HYDR**	**106.37**	**134**	T	T	19 53 32.3	
	baz=203,slow=75,SNR=12						
ILAR	**Eielson Array**	**121.07**	**2**	PKP	**PKPdf**	**17 58 46.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=205,slow=2.8,SNR=10.0						
YKA	**Yellowknife Ar**	**122.00**	**19**	PKP	**PKPdf**	**17 58 47.2**	**0.0**
	comp=Z,0.2nm,0.6s,baz=180,slow=2.3,SNR=2.1						
MKAR	**Makanchi Array**	**146.61**	**276**	PKPbc	**PKPdf**	**17 59 34.6**	**+1.2**
	comp=Z,5.0nm,0.8s,baz=117,slow=4.5,SNR=65						
MKAR	**Makanchi Array**	**146.61**	**276**		**PKPdf**	**17 59 33.6**	**+0.2**
ZALV	**Zalesovo Beam**	**149.08**	**289**	PKPbc	**PKPbc**	**17 59 40.6**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=106,slow=2.4,SNR=7.8						
ZALV	**Zalesovo Beam**	**149.08**	**289**		**PKPdf**	**17 59 40.3**	**+3.1**
ESDC	**Sonseca Array**	**152.38**	**113**	PKPbc	**PKPbc**	**17 59 49.5**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=215,slow=1.6,SNR=1.7						

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*IDC **21** 18:05:12.4±0.7, 24°.31N×125°.26E, h0^{km}, mb4.0/19, mb1 4.1/20, mb1mx4.0/33, mbtmp4.0/20, ML3.2/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/42, Error ellipse: s-maj=19.4km s-min=16.6km az=70.0*

*NIED **21** 18:05:16.7, 24°.27N×125°.28E, h42^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.71; $M_{\theta\theta}$1.18; $M_{\phi\phi}$-0.48; $M_{r\theta}$1.38; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.81; Fault plane solution: $M_0$1.99000×10^{15} NP1: ϕ_s251.00000°, δ78.00000°, λ-121.00000°. NP2: ϕ_s142.00000°, δ33.00000°, λ-22.00000°.*

*JMA **21** 18:05:16.6±0.2, 24°.27N×125°.28E, h42^{km}, M3.7*

*NEIC **21** 18:05:17.6±2.1, 24°.3N±0°.1×125°.29E±0°.10, h41^{km}±8^{km}, mb4.3/17, Error ellipse: s-maj=16.0km s-min=12.8km az=164.0*

ISC 21 18:05:17.4±0.6**, 24°.30N**±0°.07×**125°.29E**±0°.05**, h38^{km}**±2^{km}**, n84, σ1^s.24**/90**, mb4.2**/36**, MS3.5**/5**, 2C, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.44**	**4**	P	**Pn**	**18 05 26.9**	**-0.2**
JMJ2				S	**Sn**	**18 05 34.7**	**+0.7**
JOGS	**Gusukube**	**0.47**	**13**	P	**Pn**	**18 05 27.6**	**+0.1**
JOGS				S	**Sn**	**18 05 35.9**	**+1.2**
JIRB	**Irabujima**	**0.53**	**348**	P	**Pn**	**18 05 27.9**	**-0.7**
JIRB				S	**Sn**	**18 05 37.1**	**+0.7**
JIKM	**Ikemajima**	**0.62**	**356**	P	**Pn**	**18 05 29.5**	**-0.3**
JIKM				S	**Sn**	**18 05 39.0**	**+0.5**
JTJ	**Tarama**	**0.63**	**302**	P	**Pn**	**18 05 29.1**	**-0.8**
JTJ				S	**Sn**	**18 05 38.3**	**-0.5**
JISG	**Ishigakijimahi**	**0.94**	**288**	P	**Pn**	**18 05 33.3**	**-0.7**
JISG				S	**Sn**	**18 05 46.2**	**0.0**
JIJ	**Ishigaki jima**	**1.05**	**274**	P	**Pn**	**18 05 35.4**	**-0.1**
JIJ				S	**Sn**	**18 05 49.8**	**+0.9**
JKRS	**Kuro-shima**	**1.17**	**267**	P	**Pn**	**18 05 37.6**	**+0.4**
JKRS				S	**Sn**	**18 05 51.9**	**0.0**
HATJ	**Hateruma jima**	**1.38**	**260**	P	**Pn**	**18 05 40.0**	**-0.1**
HATJ				*e*S	**Sn**	**18 05 56.3**	**-0.8**
IRIF	**Iriomote-Funau**	**1.43**	**272**	P	**Pn**	**18 05 40.7**	**0.0**
IRIF				S	**Sn**	**18 05 59.6**	**+1.4**
YOJ	**Yonaguni jima**	**2.08**	**275**	Pn	**Pn**	**18 05 50.3**	**+0.5**
NACB	**Ninganchiao**	**3.38**	**269**	Pn	**Pn**	**18 06 06.5**	**-1.0**
TATO	**Taipei**	**3.52**	**282**		**Pn**	**18 06 11.1**	**+1.5**
YHNB	**Yeheng**	**3.59**	**277**		**Pn**	**18 06 11.8**	**+1.3**
JOW	**Kunigami**	**3.69**	**46**	Pn	**Pn**	**18 06 12.7**	**+0.9**
	3.7nm,0.3s,baz=119,slow=21,SNR=6.4						
JOW				Sn	**Sn**	**18 06 53.7**	**-0.4**
	9.4nm,0.3s,baz=217,slow=25,SNR=3.8						
YULB	**Yu-li**	**3.77**	**257**	Pn	**Pn**	**18 06 11.1**	**-1.8**
SSLB	**Suanglung**	**4.00**	**264**	Pn	**Pn**	**18 06 15.2**	**-0.9**
TWG	**Pinlang**	**4.14**	**250**		**Pn**	**18 06 15.7**	**-2.4**
TPUB	**Ta-pu**	**4.38**	**258**		**Pn**	**18 06 21.6**	**+0.1**
KSRS	**Korea Array**	**13.30**	**9**	Pn	**P**	**18 08 28.8**	**-3.8**
	0.1nm,0.3s,baz=192,slow=11,SNR=3.4						
KSRS				LR	LR	18 13 41.3	
	comp=Z,111nm,18.7s,baz=179,slow=38						
ENH	**Enshi**	**15.25**	**296**	P	**P**	**18 08 54.5**	**+0.1**
MAT	**Matsushiro**	**16.50**	**39**	P	**Pn**	**18 09 03.0**	**-2.9**
MJAR	**Matsushiro Arr**	**16.50**	**39**	Pn	**P**	**18 09 10.2**	**+2.0**
	0.1nm,0.3s,baz=225,slow=11,SNR=8.2						
MJAR	**Matsushiro Arr**	**16.50**	**39**	Pn	**Pn**	**18 09 05.1**	**-0.8**
HHC	**Hu-ho-hao-te**	**20.11**	**328**	*e*P	Pn	18 09 49.5	-0.4
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
KMI	**Kunming**	**20.50**	**277**	⇑P	Pn	18 09 56.3	+1.5
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI				pmax	pmax		
	comp=Z,100nm,4.1s						
KMI				LR	LR		
	comp=N,140nm,13.6s						
KMI				LR	LR		
	comp=E,180nm,15.8s						
KMI				LR	LR		
	comp=Z,180nm,25.0s						
LZH	**Lanzhou**	**21.89**	**307**	⇑P	**P**	**18 10 09.3**	**+2.0**
LZH				pP	pP	18 10 18.4	+1.3
LZH				sP	sP	18 10 22.9	+1.1
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
ASAJ	**Asahikawa**	**24.31**	**31**	P	**P**	**18 10 31.4**	**+0.1**
	comp=Z,10nm,1.1s,baz=227,slow=19,SNR=1.9						
JKA	**Kamikawa-asahi**	**24.31**	**31**	P	**P**	**18 10 31.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**25.19**	**262**	P	**P**	**18 10 40.6**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=60,slow=8.7,SNR=7.2						
CMAR				LR	LR	18 19 13.4	
	comp=Z,20nm,21.3s,baz=154,slow=33						
CMAR	**Chiang Mai Arr**	**25.19**	**262**	P	**P**	**18 10 40.0**	**+0.5**
GTA	**Gaotai**	**26.25**	**311**	*e*P	**P**	**18 10 48.8**	**-0.2**
GTA				pP	pP	18 10 58.3	-1.1
GTA				sP	sP	18 11 01.9	-2.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**27.87**	**332**	P	**P**	**18 11 02.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=148,slow=9.5,SNR=4.4						
SONM				LR	LR	18 23 40.5	
	comp=Z,136nm,19.1s,baz=220,slow=40						
SONM	**Songino Array**	**27.87**	**332**	P	**P**	**18 11 02.9**	**-0.6**
ODAN	**Odare**	**34.20**	**282**	*e*P	**P**	**18 12 01.0**	**+1.4**
	comp=Z,5.2nm,0.5s						
RAMN	**Ramite**	**34.90**	**283**	*e*P	**P**	**18 12 06.9**	**+1.2**
GUN	**Gumba**	**35.47**	**284**	*e*P	**P**	**18 12 11.7**	**+1.0**
	comp=Z,10nm,0.8s						
PKI	**Pulchoki**	**35.91**	**284**	*e*P	**P**	**18 12 15.1**	**+0.6**
	comp=Z,11nm,1.0s						
PKIN	**Phulchoki**	**35.92**	**284**	*e*P	**P**	**18 12 14.9**	**+0.4**
	comp=Z,7.0nm,0.8s						
KKN	**Kakani**	**36.01**	**284**	*e*P	**P**	**18 12 16.1**	**+0.9**
	comp=Z,17nm,0.9s						
DMN	**Daman**	**36.17**	**284**	*e*P	**P**	**18 12 17.6**	**+0.9**
WMQ	**Urumqi**	**36.33**	**312**	*e*P	**P**	**18 12 19.3**	**+1.8**
DANN	**Dangsing**	**37.31**	**285**	*e*P	**P**	**18 12 27.4**	**+1.0**
	comp=Z,14nm,0.6s						
PETK	**Petropavlovsk-**	**37.73**	**32**	P	**P**	**18 12 30.4**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=217,slow=1.9,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**38.74**	**88**	T	T	18 53 51.2	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**38.74**	**88**	T	T	18 53 54.1	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**38.75**	**88**	T	T	18 53 52.4	
	baz=283						
MK31	**Makanchi Array**	**40.90**	**314**	P	**P**	**18 12 55.6**	**-0.2**
MK31				IAmb	IAmb	18 12 57.2	
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**40.90**	**314**	P	**P**	**18 12 56.1**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=100,slow=9.9,SNR=97						
MKAR				LR	LR	18 31 43.1	
	comp=Z,94nm,19.0s,baz=310,slow=39						
MKAR	**Makanchi Array**	**40.90**	**314**	P	**P**	**18 12 55.9**	**+0.1**
MAKZ	**Makanchi**	**41.11**	**314**	P	**P**	**18 12 57.5**	**0.0**
MAKZ				IAmb	IAmb	18 12 59.1	
	comp=Z,4.5nm,0.6s						
ZALV	**Zalesovo Beam**	**42.23**	**325**	P	**P**	**18 13 05.8**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=118,slow=8.9,SNR=10						
ZALV				LR	LR	18 30 17.4	
	comp=Z,102nm,19.7s,baz=46,slow=36						
ZALV	**Zalesovo Beam**	**42.23**	**325**	P	**P**	**18 13 05.6**	**-1.0**
KSH	**Kashi**	**43.99**	**302**	P	**P**	**18 13 25.8**	**+4.6**
KSH				pP	sP	18 13 35.4	-1.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,290nm,5.6s						
KURK	**Kurchatov**	**44.44**	**319**	P	**P**	**18 13 24.3**	**-0.1**
KURK				IAmb	IAmb	18 13 34.6	
	comp=Z,7.3nm,1.3s						
KURBB	**Kurchatov Arra**	**44.47**	**319**	P	**P**	**18 13 24.4**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=108,slow=9.0,SNR=20						
WRA	**Warramunga Arr**	**44.85**	**168**	P	**P**	**18 13 27.9**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=348,slow=8.9,SNR=13						
WRA	**Warramunga Arr**	**44.85**	**168**	P	**P**	**18 13 28.1**	**+0.1**
AAK	**Ala-Archa**	**45.43**	**307**	P	**P**	**18 13 33.8**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=114,slow=6.1,SNR=8.9						
AAK	**Ala-Archa**	**45.43**	**307**	P	**P**	**18 13 33.8**	**+1.2**
NIL	**Nilore**	**46.06**	**294**	P	**P**	**18 13 36.8**	**-0.8**
KK31	**Karatay Array**	**48.39**	**307**	P	**P**	**18 13 55.5**	**-0.1**
KKAR	**Karatay Array**	**48.39**	**307**	P	**P**	**18 13 55.8**	**+0.2**
KKAR				IAmb	IAmb	18 14 07.4	
	comp=Z,2.6nm,1.3s						
KKAR	**Karatay Array**	**48.39**	**307**	P	**P**	**18 13 56.4**	**+0.8**
ASAR	**Alice Springs**	**48.41**	**169**	P	**P**	**18 13 56.5**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=355,slow=7.5,SNR=48						
ASAR	**Alice Springs**	**48.41**	**169**	P	**P**	**18 13 56.2**	**+0.4**
KBL	**Kabul**	**49.50**	**295**	P	**P**	**18 14 02.7**	**-1.8**
KBL				IAmb	IAmb	18 14 07.1	
	comp=Z,4.7nm,0.9s						
BRVK	**Borovoye**	**50.05**	**320**	P	**P**	**18 14 07.0**	**-1.1**
BRVK				IAmb	IAmb	18 14 18.2	
	comp=Z,2.0nm,0.7s						
BILL	**Bilibino**	**50.33**	**19**	P	**P**	**18 14 06.0**	**-4.0**
BILL				IAmb	IAmb	18 14 22.8	
	comp=Z,5.2nm,1.3s						
ABKAR	**Akbulak array**	**56.05**	**314**	P	**P**	**18 14 53.0**	**+0.6**
ABKAR	**Akbulak array**	**56.05**	**314**	P	**P**	**18 14 52.9**	**+0.6**
ABKAR				IAmb	IAmb	18 14 53.8	
	comp=Z,8.2nm,0.6s						
ARU	**Arti**	**57.28**	**323**	P	**P**	**18 15 01.0**	**0.0**
ARU				IAmb	IAmb	18 15 02.1	
	comp=Z,3.4nm,0.5s						
GEYT	**Alibeck**	**57.97**	**301**	P	**P**	**18 15 08.5**	**+2.4**
	comp=Z,2.6nm,0.6s,baz=347,slow=6.1,SNR=5.8						
ILAR	**Eielson Array**	**67.38**	**28**	P	**P**	**18 16 09.3**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=270,slow=4.9,SNR=2.3						
KBZ	**Khabaz**	**68.32**	**309**	P	**P**	**18 16 15.3**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=162,slow=4.2,SNR=4.1						
ARCES	**ARCESS Array B**	**70.82**	**338**	P	**P**	**18 16 30.5**	**+0.9**
	comp=Z,4.4nm,1.1s,baz=76,slow=11,SNR=1.6						
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**18 16 45.0**	**+0.9**
	comp=Z,3.3nm,0.6s,baz=61,slow=6.7,SNR=10						
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**18 16 44.8**	**+0.7**
AKASG	**Malin Array Be**	**75.25**	**319**	P	**P**	**18 16 55.7**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=62,slow=6.9,SNR=4.8						
BRTR	**Keskin Array B**	**76.10**	**307**	P	**P**	**18 17 01.6**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=66,slow=4.9,SNR=2.2						
BRTR	**Keskin Array B**	**76.10**	**307**	P	**P**	**18 17 00.3**	**-1.2**
NB2	**NORSAR Subarra**	**79.84**	**333**	P	**P**	**18 17 22.3**	**+0.6**
	comp=Z,3.6nm,1.0s,baz=55,slow=5.6						
NOA	**NORSAR Array B**	**79.84**	**333**	P	**P**	**18 17 22.4**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=53,slow=5.8,SNR=4.0						
YKA	**Yellowknife Ar**	**81.37**	**24**	P	**P**	**18 17 31.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=305,slow=4.1,SNR=7.6						

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*NEIC **21** 18:25:06.9±2.2, 21°.2S±0°.2×175°.7W±0°.1, h162^{km}±9^{km}, mb4.7/3, Error ellipse: s-maj=32.1km s-min=16.7km az=174.0*

*IDC **21** 18:25:10.1±4.1, 21°.25S×176°.11W, h176^{km}±32^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.4/32, mbtmp4.1/7, Error ellipse: s-maj=37.0km s-min=24.1km az=92.0*

ISC 21 18:25:05.8±0.7**, 21°.3S**±0°.2×**175°.66W**±0°.09**, h150^{km}, n22, σ1^s.49**/20**, mb3.9**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.81**	**69**	Pn	**Pn**	**18 26 31.8**	**+1.9**
NIUE					**Sn**	**18 27 34.0**	**-1.7**
MSVF	**Nonsavu**	**6.89**	**300**	P	**Pn**	**18 26 44.6**	**+0.1**
	2.4nm,0.3s,baz=138,slow=14,SNR=12						
DZM	**Mont Dzumac**	**16.66**	**264**	P	**Pn**	**18 28 52.9**	**+2.3**
	0.4nm,0.3s,baz=74,slow=18,SNR=7.0						
DZM	**Mont Dzumac**	**16.66**	**264**	P	**Pn**	**18 28 52.8**	**+2.1**
DZM				IAmb	IAmb	18 28 56.7	
	comp=Z,51nm,1.4s						
URZ	**Urewera**	**18.05**	**199**	P	**P**	**18 29 05.2**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=6.7,slow=23,SNR=1.9						
URZ				S	S	18 32 10.8	-14
	comp=Z,0.3nm,0.3s,baz=57,slow=12,SNR=2.2						
RPZ	**Rata Peaks**	**24.97**	**203**	P	**P**	**18 30 16.3**	**+0.9**
	comp=Z,7.5nm,0.5s,baz=46,slow=3.2,SNR=7.5						
RPZ	**Rata Peaks**	**24.97**	**203**	P	**P**	**18 30 15.8**	**+0.4**

RPZ				IAmb	IAmb	18 30 38.3	
	comp=Z,32nm,1.4s						
ASAR	**Alice Springs**	**46.48**	**257**	P	**P**	**18 33 16.4**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=88,slow=8.5,SNR=63						
ASAR				PcP	**PcP**	**18 34 50.6**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=104,slow=3.9,SNR=2.0						
ASAR	**Alice Springs**	**46.48**	**257**	P	**P**	**18 33 16.0**	**-2.1**
WRA	**Warramunga Arr**	**46.66**	**262**	P	**P**	**18 33 17.5**	**-2.1**
	comp=Z,0.8nm,0.3s,baz=95,slow=7.8,SNR=18						
WRA	**Warramunga Arr**	**46.66**	**262**	P	**P**	**18 33 17.3**	**-2.3**
FITZ	**Fitzroy Crossi**	**55.09**	**262**	P	**P**	**18 34 21.8**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=82,slow=7.1,SNR=1.5						
H03S2	**Juan Fernandez**	**83.75**	**124**	T	T	20 09 43.5	
	baz=248						
H03S1	**Juan Fernandez**	**83.77**	**124**	T	T	20 09 51.8	
	baz=248						
H03S3	**Juan Fernandez**	**83.77**	**124**	T	T	20 09 43.5	
	baz=248						
ILAR	**Eielson Array**	**88.59**	**12**	P	**P**	**18 37 42.1**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=210,slow=5.2,SNR=2.6						
ILAR	**Eielson Array**	**88.59**	**12**	P	**P**	**18 37 39.9**	**-1.2**
AKASG	**Malin Array Be**	**144.72**	**332**	PKP	**PKPab**	**18 44 23.8**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=34,slow=3.3,SNR=15						
AKASG	**Malin Array Be**	**144.72**	**332**		PKPbc	18 44 22.9	-0.8
AKBB	**Malin Array Si**	**144.72**	**332**		**PKPdf**	**18 44 24.1**	**-0.4**
BRTR	**Keskin Array B**	**148.96**	**313**	PKPbc	**PKiKP**	**18 44 36.9**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=143,slow=2.6,SNR=5.1						
BRTR	**Keskin Array B**	**148.96**	**313**		**PKPbc**	**18 44 36.6**	**+0.3**

JMA ***21*** *18:53:35.0±0.1, 24°.03N×122°.27E, h25^{km}±3^{km}, M2.2*
TAP ***21*** *18:53:35.2, 24°.08N×122°.28E, h22^{km}, ML2.6, D*
ISC 21 18:53:34.4±1.2**, 24°.08N**±0°.02×**122°.29E**±0°.02**, h18**^{km}±3^{km},
n73, σ**0^{s}50**/130**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.58**	**310**	P	**Pb**	**18 53 45.6**	**-0.3**
	baz=310						
ENAH				S	**Sb**	**18 53 54.0**	**+0.3**
	baz=310						
ENA	**Nanau**	**0.61**	**305**	*i* P	**Pb**	**18 53 46.1**	**-0.5**
	baz=305						
ENA				*e*S	**Sb**	**18 53 54.2**	**-0.6**
	baz=305						
TWD	**Chiawan**	**0.64**	**270**	*i* P	**Pg**	**18 53 47.4**	**+0.3**
	baz=270						
TWD				S	**Sb**	**18 53 55.6**	**+0.1**
	baz=270						
NACB	**Ninganchiao**	**0.65**	**279**	P	**Pb**	**18 53 47.1**	**+0.1**
	baz=278						
NACB				S	**Sg**	**18 53 56.2**	**+0.3**
	baz=278						
TWC	**Suao**	**0.67**	**323**	*i* P	**Pb**	**18 53 46.9**	**-0.6**
	baz=324						
TWC				*i* S	**Sb**	**18 53 56.2**	**-0.2**
	baz=324						
JYNG	**Yonagunijimaku**	**0.70**	**58**	P	**Pn**	**18 53 49.1**	**-0.3**
JYNG				*e*S	**Sn**	**18 53 58.6**	**-1.2**
ETLH	**Xiulin Townshi**	**0.75**	**280**	P	**Pb**	**18 53 49.2**	**+0.1**
	baz=280						
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pn**	**18 53 49.7**	**-0.5**
YOJ				*e*S	**Sn**	**18 54 00.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pn**	**18 53 50.6**	**+0.3**
	baz=59						
YOJ				S	**Sn**	**18 54 01.0**	**-0.2**
	baz=59						
ESL	**Shilin**	**0.83**	**252**	P	**Pb**	**18 53 49.8**	**-0.5**
	baz=251						
ESL				S	**Sb**	**18 54 01.6**	**+0.5**
	baz=251						
TWE	**Neicheng**	**0.86**	**318**	*i* P	**Pb**	**18 53 50.8**	**0.0**
	baz=319						
TWE				S	**Sb**	**18 54 01.9**	**0.0**
	baz=319						
ENTT	**Nioudou**	**0.87**	**310**	P	**Pg**	**18 53 51.5**	**+0.1**
	baz=310						
ENTT				S	**Sb**	**18 54 02.3**	**0.0**
	baz=310						
NTC	**Toucheng**	**0.88**	**332**	*e*P	**Pb**	**18 53 51.4**	**+0.2**
	baz=332						
NTC				*e*S	**Sb**	**18 54 02.8**	**+0.1**
	baz=332						
NDT	**Datong Townshi**	**0.88**	**307**	*i* P	**Pn**	**18 53 52.0**	**+0.1**
	baz=306						
NDT				*i* S	**Sb**	**18 54 02.9**	**+0.2**
	baz=306						
NNSB	**Datong**	**0.90**	**293**	P	**Pb**	**18 53 51.5**	**-0.1**
	baz=293						
NNSB				S	**Sg**	**18 54 04.1**	**+0.1**
	baz=293						
NNSH	**Datong**	**0.90**	**293**	*e*P	**Pn**	**18 53 52.8**	**+0.5**
	baz=293						
NNSH				S	**Sg**	**18 54 04.1**	**+0.1**
	baz=293						
NNS	**Nan Shan**	**0.91**	**294**	*i* P	**Pb**	**18 53 51.7**	**-0.1**
	baz=293						
NNS				S	**Sg**	**18 54 04.7**	**+0.3**
	baz=293						
WHF	**Hehuan Shan**	**0.94**	**274**	P	**Pb**	**18 53 52.4**	**-0.1**
	baz=274						
WHF				S	**Sb**	**18 54 04.9**	**+0.1**
	baz=274						
TWB1	**Santiao Chiao**	**0.97**	**343**	P	**Pb**	**18 53 52.5**	**-0.2**
	baz=344						
TWB1				S	**Sg**	**18 54 05.8**	**-0.2**
	baz=344						
FUSS	**Fushou**	**0.97**	**280**	*e*P	**Pb**	**18 53 52.5**	**-0.4**
	baz=280						
FUSS				*e*S	**Sg**	**18 54 06.5**	**+0.2**
	baz=280						
TIPB	**Shuangxi**	**0.99**	**335**	*i* P	**Pn**	**18 53 53.3**	**-0.1**
	baz=335						
TIPB				S	**Sb**	**18 54 05.3**	**-0.4**
	baz=335						
NWLT	**Wulai**	**1.00**	**314**	*e*P	**Pb**	**18 53 53.3**	**0.0**
	baz=314						
NWLT				*e*S	**Sb**	**18 54 06.7**	**+0.5**
	baz=314						
CHGB	**Renai**	**1.02**	**269**	P	**Pb**	**18 53 53.3**	**-0.4**
	baz=269						
CHGB				S	**Sb**	**18 54 06.5**	**-0.4**
	baz=269						
YHNB	**Yeheng**	**1.02**	**305**	P	**Pb**	**18 53 53.6**	**0.0**
	baz=305						
YHNB				S	**Sb**	**18 54 07.3**	**+0.5**
	baz=305						
TWT	**Tachien**	**1.03**	**280**	S	**Sb**	**18 54 07.6**	**+0.4**
	baz=279						
NSK	**Sanguang**	**1.04**	**305**	*i* P	**Pb**	**18 53 53.8**	**-0.1**
	baz=305						
NSK				*i* S	**Sb**	**18 54 07.6**	**+0.4**
	baz=305						
TDCB	**Techi**	**1.05**	**280**	*e*P	**Pn**	**18 53 54.5**	**+0.1**
	baz=279						
EHY	**Hungye**	**1.05**	**238**	P	**Pb**	**18 53 53.8**	**-0.3**
	baz=236						
EHY				S	**Sb**	**18 54 07.5**	**-0.1**
	baz=236						
NWF	**Wu-fen Shan**	**1.09**	**335**	P	**Pb**	**18 53 54.6**	**-0.2**
	baz=335						
NWF				S	**Sb**	**18 54 08.8**	**-0.1**
	baz=335						
WFSB	**Wu-fen Shan**	**1.09**	**335**	P	**Pb**	**18 53 54.3**	**-0.5**
	baz=335						
WFSB				S	**Sn**	**18 54 09.1**	**-0.4**
	baz=335						
VWDT	**VWDT**	**1.10**	**253**	P	**Pn**	**18 53 54.1**	**-0.8**
	baz=252						
TWA	**Mucha**	**1.11**	**324**	P	**Pn**	**18 53 55.0**	**-0.1**
	baz=325						
TWA				S	**Sn**	**18 54 09.6**	**-0.3**
	baz=325						
NHDH	**Xindian Distri**	**1.13**	**322**	*e*P	**Pb**	**18 53 55.6**	**+0.2**
	baz=322						
NHDH				*e*S	**Sb**	**18 54 09.8**	**+0.1**
	baz=322						
YULB	**Yu-li**	**1.14**	**233**	P	**Pn**	**18 53 54.8**	**-0.7**
	baz=233						
YULB				*e*S	**Sb**	**18 54 09.4**	**-0.6**
	baz=233						
TATO	**Taipei**	**1.16**	**321**	*e*P	**Pn**	**18 53 55.6**	**-0.1**
	baz=321						
TATO				S	**Sb**	**18 54 10.6**	**0.0**
	baz=321						
TWF1	**Yuli**	**1.16**	**232**	*e*P	**Pn**	**18 53 55.1**	**-0.7**
	baz=231						
TWF1				*e*S	**Sb**	**18 54 10.6**	**-0.2**
	baz=231						
TNOU	**National Taiwa**	**1.17**	**336**	*e*P	**Pn**	**18 53 55.6**	**-0.3**
	baz=336						
TNOU				S	**Sn**	**18 54 11.4**	**+0.1**
	baz=336						
WHP	**Taichung City**	**1.25**	**280**	*e*P	**Pn**	**18 53 57.1**	**+0.1**
	baz=279						
WHP				*e*S	**Sb**	**18 54 13.2**	**0.0**
	baz=279						
DPDB	**Guoxing**	**1.25**	**268**	P	**Pn**	**18 53 56.8**	**-0.3**
	baz=268						
YM01	**YM01**	**1.25**	**328**	*e*P	**Pn**	**18 53 56.9**	**-0.1**
	baz=328						
YM01				*e*S	**Sn**	**18 54 13.7**	**+0.2**
	baz=328						
SSLB	**Suanglung**	**1.26**	**257**	*e*P	**Pn**	**18 53 56.4**	**-0.7**
	baz=256						
SSLB				*e*S	**Sb**	**18 54 13.5**	**0.0**
	baz=256						
YM10	**YM10**	**1.26**	**328**	*e*P	**Pn**	**18 53 57.2**	**0.0**
	baz=328						
YM10				*e*S	**Sn**	**18 54 14.1**	**+0.4**
	baz=328						
FULB	**Fuli**	**1.27**	**227**	P	**Pn**	**18 53 56.2**	**-1.0**
	baz=226						
FULB				*e*S	**Sb**	**18 54 14.0**	**+0.3**
	baz=226						
YM11	**YM11**	**1.27**	**329**	*e*P	**Pn**	**18 53 57.1**	**-0.2**
	baz=329						
YM11				*e*S	**Sg**	**18 54 14.9**	**-0.6**
	baz=329						
YM05	**YM05**	**1.27**	**329**	*e*P	**Pn**	**18 53 57.1**	**-0.2**
	baz=328						
YM05				*e*S	**Sn**	**18 54 14.1**	**+0.2**
	baz=328						
YM04	**YM04**	**1.27**	**327**	*e*P	**Pn**	**18 53 57.6**	**+0.2**
	baz=327						
YM04				*e*S	**Sb**	**18 54 13.5**	**-0.5**
	baz=327						
YM08	**YM08**	**1.28**	**330**	*e*P	**Pb**	**18 53 58.4**	**+0.4**
	baz=330						
SMLT	**Sun Moon Lake**	**1.29**	**262**	*e*P	**Pn**	**18 53 57.1**	**-0.5**
	baz=261						
TWS1	**Kuangyinshan**	**1.29**	**322**	*e*S	**Sn**	**18 54 14.3**	**-0.1**
	baz=322						
YM03	**YM03**	**1.29**	**328**	*e*P	**Pb**	**18 53 58.2**	**-0.1**
	baz=328						
LIOB	**Emei**	**1.29**	**296**	P	**Pb**	**18 53 58.2**	**-0.1**
	baz=296						
LIOB				*e*S	**Sn**	**18 54 14.1**	**-0.3**
	baz=296						
ANP	**Anpu**	**1.31**	**328**	*e*P	**Pn**	**18 53 57.1**	**-0.8**
	baz=328						
TYC	**Yuchr**	**1.32**	**263**	P	**Pn**	**18 53 57.7**	**-0.3**
	baz=262						
TYC				S	**Sn**	**18 54 14.6**	**-0.5**
	baz=262						
IRIF	**Iriomote-Funau**	**1.34**	**79**	P	**Pb**	**18 53 59.3**	**+0.3**
IRIF				*e*S	**Sg**	**18 54 16.8**	**-1.0**
YUS	**Yu-Shan**	**1.36**	**245**	*e*P	**Pn**	**18 53 59.2**	**+0.2**
	baz=244						
YUS				*e*S	**Sn**	**18 54 15.4**	**-1.3**
	baz=244						
HATJ	**Hateruma jima**	**1.38**	**91**	*e*S	**Sg**	**18 54 18.2**	**-1.0**
ELDTW	**Lidau**	**1.47**	**233**	P	**Pn**	**18 53 59.8**	**-0.2**
	baz=232						
ELDTW				S	**Sn**	**18 54 19.2**	**+0.3**
	baz=232						
ALS	**Alishan**	**1.48**	**248**	*e*P	**Pn**	**18 54 00.2**	**-0.2**
	baz=247						
WNT	**Mingjian**	**1.48**	**263**	*e*S	**Sb**	**18 54 20.3**	**+0.3**
	baz=262						
CHN5	**Tsauling**	**1.55**	**252**	*e*P	**Pn**	**18 54 01.5**	**+0.2**
	baz=252						
CHN5				*e*S	**Sn**	**18 54 20.8**	**-0.2**
	baz=252						
JKRS	**Kuro-shima**	**1.58**	**84**	P	**Pb**	**18 54 03.3**	**+0.3**
JKRS				*e*S	**Sb**	**18 54 23.4**	**+0.8**
STYT	**Tauyuan**	**1.68**	**237**	*e*P	**Pn**	**18 54 03.4**	**+0.5**
	baz=236						
STYT				*e*S	**Sn**	**18 54 23.6**	**-0.4**
	baz=236						
TPUB	**Ta-pu**	**1.71**	**243**	*e*P	**Pn**	**18 54 04.1**	**+0.7**
	baz=243						
TPUB				*e*S	**Sn**	**18 54 25.0**	**+0.3**
	baz=243						
JIJ	**Ishigaki jima**	**1.71**	**80**	P	**Pb**	**18 54 04.5**	**-0.9**
JIJ				*e*S	**Sb**	**18 54 25.4**	**-1.2**
CHN4	**Tsaushan**	**1.72**	**245**	*e*P	**Pn**	**18 54 03.9**	**+0.5**
	baz=245						
CHN4				*e*S	**Sn**	**18 54 24.7**	**-0.2**
	baz=245						
WTP	**Ta-pu**	**1.75**	**242**	*e*P	**Pn**	**18 54 04.9**	**+1.0**
	baz=241						
WTP				*e*S	**Sn**	**18 54 25.5**	**-0.2**
	baz=241						
TWK	**Hsinying**	**1.84**	**244**	*e*P	**Pn**	**18 54 04.9**	**-0.3**
	baz=243						
TWK				*e*S	**Sn**	**18 54 28.3**	**+0.3**
	baz=243						
CHN1	**Nanshi**	**1.85**	**242**	*e*S	**Sn**	**18 54 28.4**	**+0.4**
	baz=241						
SGST	**Jiashian**	**1.85**	**238**	*e*P	**Pn**	**18 54 05.2**	**-0.1**
	baz=237						
SGST				*e*S	**Sn**	**18 54 28.3**	**0.0**
	baz=237						
JISG	**Ishigakijimahi**	**1.91**	**74**	P	**Pn**	**18 54 06.8**	**+0.8**
JISG				*e*S	**Sn**	**18 54 30.1**	**+0.5**
SSD	**Sandimen**	**2.02**	**229**	*e*P	**Pn**	**18 54 08.1**	**+0.6**
	baz=228						
TSMG	**Majia**	**2.04**	**228**	*e*P	**Pn**	**18 54 09.3**	**+1.4**
	baz=227						
JTJ	**Tarama**	**2.27**	**75**	P	**Pn**	**18 54 12.6**	**+1.6**
JTJ				*e*S	**Sn**	**18 54 40.0**	**+1.5**

IDC ***21*** *19:00:09.9±12.0, 38°.73N×20°.69E, h0^{km}, mb3.4/2,*
mb1 3.4/3, mb1mx3.2/39, mbtmp3.3/3, ML3.4/1, Error
ellipse: s-maj=230.2km s-min=38.2km az=34.0
ATH ***21*** *19:00:10.3, 38°.31N×20°.49E, h12^{km}±1^{km}, ML3.0/26, Error*
ellipse: s-maj=1.5km s-min=0.6km az=259.0
THE ***21*** *19:00:10.7, 38°.31N×20°.52E, h0^{km}±1^{km}, ML2.9/6, Error*
ellipse: s-maj=1.8km s-min=0.5km az=216.0
ISC 21 19:00:09.2±0.8**, 38°.30N**±0°.02×**20°.46E**±0°.03**, h18**^{km}±3^{km},
n123, σ**1^{s}05**/165**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.03**	**156**	P	**Pg**	**19 00 12.4**	**0.0**
KEF5				S	**Sg**	**19 00 13.9**	**-0.7**
KEF5	**Kardakata, Kep**	**0.03**	**156**	P	**Pg**	**19 00 12.4**	**0.0**
KEF5				S	**Sg**	**19 00 13.9**	**-0.7**
KEF4	**Livadi, Kephal**	**0.05**	**209**	P	**Pg**	**19 00 12.8**	**+0.3**
KEF4				S	**Sg**	**19 00 14.9**	**+0.2**
KEF4	**Livadi, Kephal**	**0.05**	**209**	P	**Pg**	**19 00 12.8**	**+0.3**
KEF4				S	**Sg**	**19 00 14.9**	**+0.2**
DMLN	**Damoulianata-K**	**0.09**	**225**	P	**Pg**	**19 00 13.3**	**+0.5**
DMLN				S	**Sg**	**19 00 15.6**	**+0.4**
DMLN	**Damoulianata-K**	**0.09**	**225**	P	**Pg**	**19 00 13.3**	**+0.5**
DMLN				S	**Sg**	**19 00 15.6**	**+0.4**
LXRA	**Lixouri, Kepha**	**0.10**	**188**	P	**Pg**	**19 00 13.5**	**+0.6**
LXRA				S	**Sg**	**19 00 15.9**	**+0.5**
ARG2	**Argostoli**	**0.13**	**168**	P	**Pg**	**19 00 13.5**	**+0.3**
ARG2				S	**Sg**	**19 00 16.1**	**+0.3**
ARGA	**Argostoli. Kep**	**0.13**	**171**	P	**Pg**	**19 00 13.4**	**+0.3**
ARGA				S	**Sg**	**19 00 16.2**	**+0.4**
ARGA				AML	AML	19 00 16.4	
	comp=E,64626μm,0.4s						
ARGA				AML	AML	19 00 16.4	
KEF3	**Kipouria, Keph**	**0.13**	**220**	P	**Pg**	**19 00 13.4**	**+0.2**
KEF3				S	**Sg**	**19 00 15.7**	**-0.2**
KEF3	**Kipouria, Keph**	**0.13**	**220**	P	**Pg**	**19 00 13.4**	**+0.2**
KEF3				S	**Sg**	**19 00 15.8**	**-0.1**
VLS	**Valsamata**	**0.16**	**139**	P	**Pg**	**19 00 13.7**	**0.0**
VLS				S	**Sg**	**19 00 16.4**	**-0.3**
VLS				AML	AML	19 00 16.8	
	comp=E,76945μm,0.3s						
VLS				AML	AML	19 00 16.8	
	comp=N,48982μm,0.2s						
VLS	**Valsamata**	**0.16**	**139**	P	**Pg**	**19 00 13.8**	**+0.1**
VLS				S	**Sg**	**19 00 16.4**	**-0.3**
FSK	**Fiskardo**	**0.18**	**28**	P	**Pg**	**19 00 14.0**	**+0.1**
FSK				S	**Sg**	**19 00 16.9**	**-0.1**
FSK				AML	AML	19 00 17.3	
	comp=N,34432μm,0.2s						
FSK				AML	AML	19 00 17.4	
	comp=E,60183μm,0.2s						
FSK	**Fiskardo**	**0.18**	**28**	P	**Pg**	**19 00 14.0**	**+0.1**
FSK				S	**Sg**	**19 00 16.9**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.21**	**151**	P	**Pg**	**19 00 14.7**	**+0.3**
PSDA				S	**Sg**	**19 00 18.0**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.21**	**151**	P	**Pg**	**19 00 14.7**	**+0.3**
PSDA				S	**Sg**	**19 00 18.0**	**+0.2**
EVGI	**Lefkada island**	**0.36**	**26**	P	**Pg**	**19 00 17.0**	**+0.2**
EVGI				S	**Sg**	**19 00 22.4**	**+0.6**
EVGI	**Lefkada island**	**0.36**	**26**	P	**Pg**	**19 00 17.0**	**+0.2**
EVGI				S	**Sg**	**19 00 22.4**	**+0.6**
DRAG	**Dragano-Lefkad**	**0.39**	**14**	P	**Pg**	**19 00 17.4**	**0.0**
DRAG				S	**Sg**	**19 00 23.2**	**+0.3**
DRAG	**Dragano-Lefkad**	**0.39**	**14**	P	**Pg**	**19 00 17.4**	**0.0**
DRAG				S	**Sg**	**19 00 23.2**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.45**	**25**	P	**Pg**	**19 00 18.5**	**0.0**
NYDR				S	**Sg**	**19 00 25.3**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.45**	**25**	P	**Pg**	**19 00 18.5**	**0.0**
NYDR				S	**Sg**	**19 00 25.3**	**+0.6**
	comp=E,2μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.46**	**159**	P	**Pg**	**19 00 18.7**	**+0.2**
VLMS				S	**Sg**	**19 00 25.5**	**+0.8**
VLMS				AML	AML	19 00 27.2	
	comp=E,8910μm,0.3s						
VLMS				AML	AML	19 00 32.6	
	comp=N,11586μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.46**	**159**	P	**Pg**	**19 00 18.7**	**+0.2**
VLMS				S	**Sb**	**19 00 26.0**	**+0.8**
LKD2	**Lefkada island**	**0.51**	**18**	P	**Pg**	**19 00 19.6**	**0.0**
LKD2	**Lefkada island**	**0.51**	**18**	P	**Pg**	**19 00 19.6**	**0.0**
TSLK	**Tsoukalades, L**	**0.55**	**17**	P	**Pg**	**19 00 20.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.55**	**17**	P	**Pg**	**19 00 20.2**	**0.0**
AST1	**Astakos**	**0.55**	**64**	P	**Pg**	**19 00 20.4**	**+0.1**
AST1				S	**Sb**	**19 00 28.6**	**+0.7**
	comp=N,3μm,0.3s						
PDO	**Prodromos**	**0.64**	**62**	P	**Pg**	**19 00 22.1**	**+0.1**
PDO				S	**Sg**	**19 00 30.9**	**+0.3**
PDO				AML	AML	19 00 35.3	
	comp=E,3955μm,0.4s						
PDO				AML	AML	19 00 36.5	
	comp=N,4598μm,0.4s						
PDO	**Prodromos**	**0.64**	**62**	P	**Pg**	**19 00 22.1**	**+0.1**
PDO				S	**Sb**	**19 00 31.5**	**+0.9**
	comp=N,3μm,0.4s						
AXS	**Araxos**	**0.73**	**98**	P	**Pg**	**19 00 23.5**	**-0.1**
AXS	**Araxos**	**0.73**	**98**	P	**Pg**	**19 00 23.5**	**-0.1**
RLS	**Riolos of Patr**	**0.83**	**107**	P	**Pg**	**19 00 25.2**	**-0.3**
RLS				AML	AML	19 00 46.0	
	comp=E,923μm,0.7s						
RLS				AML	AML	19 00 46.7	
	comp=N,847μm,0.6s						
RLS	**Riolos of Patr**	**0.83**	**107**	P	**Pg**	**19 00 25.2**	**-0.3**
DRO	**Drossia**	**1.05**	**109**	P	**Pb**	**19 00 29.9**	**+1.0**
DRO				AML	AML	19 00 57.2	
	comp=E,741μm,0.3s						
DRO				AML	AML	19 00 57.8	
	comp=N,2237μm,0.4s						
DRO	**Drossia**	**1.05**	**109**	P	**Pb**	**19 00 29.9**	**+1.0**
EFP	**Efpalio**	**1.15**	**83**	P	**Pb**	**19 00 30.3**	**-0.2**
EFP				AML	AML	19 00 54.7	
	comp=E,1768μm,0.5s						
EFP				AML	AML	19 00 54.9	
	comp=N,1254μm,0.6s						
EFP	**Efpalio**	**1.15**	**83**	P	**Pb**	**19 00 30.4**	**-0.2**
ANX	**Ano Chora**	**1.19**	**75**	P	**Pb**	**19 00 31.5**	**+0.2**
ANX				AML	AML	19 00 56.4	
	comp=E,1992μm,1.0s						
ANX				AML	AML	19 00 56.5	
	comp=N,1578μm,0.4s						
ANX	**Ano Chora**	**1.19**	**75**	P	**Pb**	**19 00 31.5**	**+0.2**
EVR	**Evrytania**	**1.23**	**60**	P	**Pn**	**19 00 32.0**	**+0.4**
EVR				AML	AML	19 00 59.1	
	comp=N,626μm,0.8s						
EVR				AML	AML	19 00 59.1	
	comp=E,716μm,0.8s						
EVR	**Evrytania**	**1.23**	**60**	P	**Pn**	**19 00 32.0**	**+0.4**
IGT	**Igoumenitsa**	**1.23**	**356**	P	**Pn**	**19 00 33.4**	**+1.8**
IGT				AML	AML	19 01 00.5	
	comp=E,939μm,0.5s						
IGT				AML	AML	19 01 00.8	
	comp=N,708μm,0.5s						
IGT	**Igoumenitsa**	**1.23**	**356**	P	**Pn**	**19 00 33.4**	**+1.8**
IGT				S	**Sg**	**19 00 51.6**	**+2.4**
	comp=N,355nm,0.4s						
AMT	**Artemida-Makis**	**1.25**	**127**	P	**Pb**	**19 00 33.6**	**+1.2**
AMT				AML	AML	19 01 02.7	
	comp=E,1194μm,0.7s						
AMT				AML	AML	19 01 05.6	
	comp=N,1246μm,0.4s						
AMT	**Artemida-Makis**	**1.25**	**127**	P	**Pg**	**19 00 34.7**	**+1.2**
SERG	**Sergoula**	**1.26**	**84**	P	**Pn**	**19 00 32.3**	**+0.3**
SERG				AML	AML	19 00 57.6	
	comp=N,825μm,0.3s						
SERG				AML	AML	19 01 03.7	
	comp=E,665μm,0.4s						
SERG	**Sergoula**	**1.26**	**84**	P	**Pn**	**19 00 32.3**	**+0.3**
TRIZ	**Trizonia**	**1.27**	**87**	P	**Pn**	**19 00 32.5**	**+0.3**
TRIZ	**Trizonia**	**1.27**	**87**	P	**Pn**	**19 00 32.5**	**+0.3**
ALIK	**Aliki, Aigiali**	**1.30**	**91**	P	**Pn**	**19 00 33.2**	**+0.7**
KALE	**Kalithea**	**1.33**	**86**	P	**Pn**	**19 00 33.2**	**+0.2**
KALE				AML	AML	19 01 03.9	
	comp=E,461μm,0.5s						
KALE				AML	AML	19 01 05.3	
	comp=N,845μm,0.7s						
KALE	**Kalithea**	**1.33**	**86**	P	**Pn**	**19 00 33.2**	**+0.2**
KLV	**Kalavryta, Ach**	**1.36**	**100**	P	**Pn**	**19 00 34.2**	**+0.8**
KLV				AML	AML	19 01 03.3	
	comp=E,533μm,0.5s						
KLV				AML	AML	19 01 03.9	
	comp=N,372μm,0.9s						
KLV	**Kalavryta, Ach**	**1.36**	**100**	P	**Pn**	**19 00 34.2**	**+0.8**
JAN	**Janina**	**1.39**	**13**	P	**Pb**	**19 00 36.2**	**+1.5**
JAN				AML	AML	19 00 57.9	
	comp=N,711μm,0.3s						
JAN				AML	AML	19 01 05.7	
	comp=E,776μm,0.3s						
JAN	**Janina**	**1.39**	**13**	P	**Pb**	**19 00 36.2**	**+1.5**
JAN				S	**Sg**	**19 00 56.9**	**+2.7**
	comp=E,375nm,0.5s						
MAKR	**Makrakomi, Fth**	**1.49**	**61**	P	**Pb**	**19 00 37.3**	**+0.8**
MAKR				AML	AML	19 01 03.2	
	comp=N,1619μm,0.8s						
MAKR				AML	AML	19 01 10.2	
	comp=E,1228μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.49**	**61**	P	**Pb**	**19 00 37.3**	**+0.8**
KEK	**Kerkira**	**1.50**	**340**	P	**Pn**	**19 00 36.8**	**+1.5**
KEK	**Kerkira**	**1.50**	**340**	P	**Pn**	**19 00 36.8**	**+1.5**
ITM	**Ithomi**	**1.62**	**133**	P	**Pb**	**19 00 39.6**	**+1.0**
ITM	**Ithomi**	**1.62**	**133**	P	**Pb**	**19 00 39.6**	**+1.0**
TRIP	**Tripoli**	**1.63**	**118**	P	**Pb**	**19 00 39.6**	**+0.7**
TRIP				AML	AML	19 01 10.5	
	comp=E,351μm,1.0s						
TRIP				AML	AML	19 01 19.1	
	comp=N,383μm,0.5s						
TRIP	**Tripoli**	**1.63**	**118**	P	**Pb**	**19 00 39.6**	**+0.7**
AGG	**Agios Georgios**	**1.64**	**63**	P	**Pb**	**19 00 40.1**	**+1.2**
AGG				AML	AML	19 01 08.1	
	comp=N,506μm,0.5s						
AGG				AML	AML	19 01 10.6	
	comp=E,690μm,0.8s						
AGG	**Agios Georgios**	**1.64**	**63**	P	**Pb**	**19 00 40.1**	**+1.2**
AGG				S	**Sg**	**19 01 02.7**	**+0.7**
PYL	**PYLOS**	**1.74**	**144**	P	**Pb**	**19 00 41.5**	**+0.9**
PYL	**PYLOS**	**1.74**	**144**	P	**Pb**	**19 00 41.5**	**+0.9**
THL	**Klokotos Trika**	**1.75**	**43**	P	**Pb**	**19 00 41.6**	**+0.8**
THL				AML	AML	19 01 11.0	
	comp=E,622μm,0.6s						
THL				AML	AML	19 01 11.1	
	comp=N,601μm,0.7s						
THL	**Klokotos Trika**	**1.75**	**43**	P	**Pb**	**19 00 41.6**	**+0.8**
THAL	**Thalero**	**1.76**	**98**	P	**Pb**	**19 00 41.4**	**+0.4**
THAL				AML	AML	19 01 17.9	
	comp=N,823μm,0.5s						
THAL				AML	AML	19 01 20.7	
	comp=E,1264μm,0.7s						
THAL	**Thalero**	**1.76**	**98**	P	**Pb**	**19 00 41.4**	**+0.4**
VLX	**Vlachokerasia**	**1.79**	**121**	P	**Pb**	**19 00 42.5**	**+1.0**
VLX				AML	AML	19 01 19.7	
	comp=N,492μm,0.9s						
VLX				AML	AML	19 01 20.0	
	comp=E,482μm,0.8s						
VLX	**Vlachokerasia**	**1.79**	**121**	P	**Pb**	**19 00 42.5**	**+1.0**
AXAR	**Agios Charalam**	**1.79**	**74**	P	**Pb**	**19 00 42.3**	**+0.8**

AXAR				AML	AML	19 01 18.7	
	comp=N,1177µm,0.6s						
AXAR				AML	AML	19 01 20.7	
	comp=E,961µm,0.7s						
AXAR	Agios Charalam	1.79	74	P	Pb	19 00 42.3	+0.8
KPRO	Kipourio	1.80	23	P	Pb	19 00 42.9	+1.2
KPRO				AML	AML	19 01 16.2	
	comp=E,550µm,0.9s						
KPRO				AML	AML	19 01 18.1	
	comp=N,677µm,0.6s						
KPRO	Kipourio	1.80	23	P	Pb	19 00 42.9	+1.2
LKR	Lokris	2.03	79	P	Pn	19 00 45.2	+2.7
LKR	Lokris	2.03	79	P	Pn	19 00 45.2	+2.7
ATAL	Atalanti	2.05	78	P	Pb	19 00 46.0	0.0
ATAL				AML	AML	19 01 28.4	
	comp=E,179µm,1.0s						
ATAL				AML	AML	19 01 36.5	
	comp=N,200µm,0.8s						
ATAL	Atalanti	2.05	78	P	Pb	19 00 46.0	0.0
NEST	Nestorio	2.16	12	P	Pb	19 00 48.3	+0.4
NEST	Nestorio	2.16	12	P	Pb	19 00 48.3	+0.4
VIL2	Platees	2.22	91	P	Pb	19 00 48.8	0.0
VIL2				AML	AML	19 01 31.3	
	comp=N,191µm,1.1s						
VIL2				AML	AML	19 01 36.0	
	comp=E,411µm,0.6s						
VILL	Villia	2.25	93	P	Pb	19 00 48.8	-0.7
KRND	KRANIDI	2.32	112	P	Pb	19 00 50.4	-0.2
KRND	KRANIDI	2.32	112	P	Pb	19 00 50.4	-0.2
XOR	Xorichti	2.39	63	P	Pb	19 00 52.9	+1.2
XOR	Xorichti	2.39	63	P	Pb	19 00 52.1	+0.4
OHR	Ohrid	2.82	5	*i* Pn	Pn	19 00 56.6	+3.1
VAY	Valandovo	3.43	28	*i* Pn	Pg	19 01 13.5	-1.4
DRME	Dracevica, Mon	4.00	346	*e*Pn	Pn	19 01 10.9	+1.3
PDG	Podgorica	4.22	348	*e*Pn	Pn	19 01 10.4	-2.3
TREB	Trebinje	4.69	341	*e*Pn	Pn	19 01 19.0	-0.2
DBRK	Dubrovnik	4.70	339	Sn	Sn	19 02 12.5	-0.9
DBRK	Dubrovnik	4.70	339	*e*Pn	Pn	19 01 20.0	+0.7
BRY	Bratogost	4.82	343	*e*Pn	Pn	19 01 20.7	-0.3
SJES	Sjenica	4.97	356	*e*Pn	Pn	19 01 24.0	+1.0
STON	Ston	5.02	336	*e*Pn	Pn	19 01 23.8	+0.2
STON				Sn	Sn	19 02 19.1	-2.1
STON	Ston	5.02	336	*e*Pn	Pn	19 01 23.1	-0.6
BBLS	Lazići	5.62	352	*e*Pn	Pn	19 01 32.7	+0.8
MAKA	Makarska	5.62	333	*e*Pn	Pn	19 01 32.5	+0.6
MAKA				Sn	Sn	19 02 33.2	-2.7
HVAR	Hvar	5.74	329	*e*Pn	Pn	19 01 33.7	+0.2
HVAR				Sn	Sn	19 02 36.2	-2.8
RICI	Ricice	5.76	335	*e*Pn	Pn	19 01 34.1	+0.3
RICI				Sn	Sn	19 02 37.6	-1.9
DIVS	Divibare	5.80	357	*e*Pn	Pn	19 01 34.0	-0.5
HAPS	Han Pijesak,BI	5.89	349	*e*Pn	Pn	19 01 35.5	-0.2
KIJV	Kijevo	6.46	333	*e*Pn	Pn	19 01 44.5	+1.0
KIJV				Sn	Sn	19 02 54.9	-1.9
ZIRJ	Zirje	6.47	327	*e*Pn	Pn	19 01 43.6	+0.1
ZIRJ				Sn	Sn	19 02 53.9	-2.9
MORI	Morici	6.61	329	*e*Pn	Pn	19 01 46.0	+0.4
MORI				Sn	Sn	19 02 57.5	-3.0
UDBI	Udbina	7.15	332	*e*Pn	Pn	19 01 53.3	+0.4
UDBI				Sn	Sn	19 03 11.4	-2.3
NVLJ	Novalja	7.53	328	*e*Pn	Pn	19 01 58.6	+0.5
NVLJ				Sn	Sn	19 03 19.2	-3.7
CRES	Cresnjev	8.38	335	*e*Pn	Pn	19 02 10.0	+0.2
CEY	Cerknica	8.68	331	*e*Pn	Pn	19 02 14.7	+0.8
SOKA	Soboth	9.28	336	*i* Pn	Pn	19 02 22.4	+0.3
	comp=E,1.1nm,0.3s						
SOKA				*i* Sn	Sn	19 04 05.3	-0.7
	comp=E,0.2nm,0.1s						
OBKA	Obir	9.29	334	*e*Pn	Pn	19 02 24.4	+2.1
	comp=E,0.5nm,0.2s						
OBKA				*e*Sn	Sn	19 04 05.7	-0.6
	comp=E,3.3nm,0.5s						
MOA	Molln	10.56	337	*e*Pn	Pn	19 02 41.2	+1.6
	comp=E,0.9nm,0.3s						
GERES	GERESS Array B	11.62	337	Pn	Pn	19 02 54.0	-0.1
	comp=E,0.1nm,0.3s,baz=164,slow=14,SNR=1.7						
FINES	FINESS Array B	23.43	7	P	P	19 05 15.3	-1.8
	comp=E,2.3nm,0.9s,baz=203,slow=10,SNR=3.9						
MKAR	Makanchi Array	45.28	58	P	P	19 08 26.1	+0.4
	comp=E,0.1nm,0.3s,baz=271,slow=7.4,SNR=1.9						

VIE 21 19:00:12.3±0.4**,46°.52N×15°.06E,h3**^{km}±6^{km}**,ml0.2**/2**,**
Error ellipse: s-maj=1.4km s-min=1.2km az=121.0 15 km SSE of Lavamnd,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOKA	Soboth	0.16	355	*i* Pg	Pg	19 00 15.8	+0.3
	0.1nm,0.1s						
SOKA				*i* Sg	Sg	19 00 17.8	+0.1
	0.5nm,0.0s						
OBKA	Obir	0.35	269	*e*Sg	Sg	19 00 24.0	+0.4
	0.5nm,0.1s						

KRSC ***21*** *19:17:45.2±0.5, 55°.79N×162°.21E, h56*^{km}*±12*^{km}*, ML4.9*
MOS ***21*** *19:17:47.0±0.8, 55°.87N×162°.05E, h52*^{km}*, mb4.6/19,*
MS3.2/5, Error ellipse: s-maj=6.3km s-min=3.5km az=75.0
BJI ***21*** *19:17:49.0±0.0, 55°.80N×161°.90E, h76*^{km}*, mB4.8/12,*
mb4.4/19
IDC ***21*** *19:17:50.9±1.7, 55°.90N×161°.91E, h74*^{km}*±17*^{km}*, mb4.1/34,*
mb1 4.2/39, mb1mx4.1/50, mbtmp4.4/39, MS3.6/12,
Ms1 3.6/12, ms1mx3.4/59, Error ellipse: s-maj=12.9km
s-min=8.6km az=149.0
NEIC ***21*** *19:17:51.0±2.1, 55°.76N±0°.09×161°.9E±0°.2, h79*^{km}*±7*^{km}*,*
mb4.7/218, Error ellipse: s-maj=14.2km s-min=10.6km
az=135.0

ISC 21 19:17:48.3±0.7**,55°.84N**±0°.03×**162°.16E**±0°.03**,h49**^{km}±7^{km}**,**
n673,σ1^{s}.**16**/709**,mb4.7**/171**,MS3.6**/10**,21C-10D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.52	36	PN	Pn	19 17 58.2	-1.5
KBG				S	Sn	19 18 06.0	-1.9
KBG	Krutoberegovo	0.52	36	*e*P	Pn	19 17 58.2	-1.5
KBG				*e*S	Sn	19 18 06.0	-1.9
KBTR	Krutoberegovo	0.53	45	PN	Pn	19 17 58.4	-1.4
KBTR	Krutoberegovo	0.53	45	*e*P	Pn	19 17 58.4	-1.4
ZLN	Zelenaya	0.78	284	PN	Pn	19 18 02.2	-1.0
ZLN	Zelenaya	0.78	284	*e*P	Pn	19 18 02.2	-1.0
BZGR	Bezymyannyi-Gr	0.83	278	PN	Pn	19 18 02.6	-1.2
BZGR				S	Sn	19 18 14.0	-1.1
BZGR	Bezymyannyi-Gr	0.83	278	*e*P	Pn	19 18 02.6	-1.2
BZGR				*e*S	Sn	19 18 14.0	-1.1
CIRR	Tsirk	0.84	290	PN	Pn	19 18 02.9	-1.1
CIRR	Tsirk	0.84	290	*e*P	Pn	19 18 02.9	-1.1
SMKR	Semkarok	0.84	333	PN	Pn	19 18 03.0	-0.9
SMKR	Semkarok	0.84	333	*e*P	Pn	19 18 03.0	-0.9
LGNR	Loginova	0.86	287	PN	Pn	19 18 03.4	-1.0
LGNR	Loginova	0.86	287	*e*P	Pn	19 18 03.4	-1.0
BDR	Baidarnaya	0.90	325	PN	Pn	19 18 04.1	-0.7
BDR	Baidarnaya	0.90	325	*e*P	Pn	19 18 04.1	-0.7
BZMR	Bezymyannaya	0.94	277	*e*P	Pn	19 18 04.1	-1.3
BZWR	Bezymyannyi-We	0.94	278	PN	Pn	19 18 04.5	-0.9
BZWR	Bezymyannyi-We	0.94	278	*e*P	Pn	19 18 04.5	-0.9
KLY	Klyuchi	0.97	300	PN	Pn	19 18 03.0	-2.5
KLY				S	Sn	19 18 14.7	-3.5
KLY	Klyuchi	0.97	300	*e*P	Pn	19 18 03.0	-2.5
KLY				*e*S	Sn	19 18 14.7	-3.5
KRSR	Krestovskiy	0.97	294	PN	Pn	19 18 04.2	-1.5
KRSR				S	Sn	19 18 16.5	-2.0
KRSR	Krestovskiy	0.97	294	*e*P	Pn	19 18 04.2	-1.5
KRSR				*e*S	Sn	19 18 16.5	-2.0
SRKR	Sorokina	0.99	326	PN	Pn	19 18 05.2	-0.7
SRKR	Sorokina	0.99	326	*e*P	Pn	19 18 05.2	-0.7
KIRR	Kirishev	1.03	277	PN	Pn	19 18 05.7	-0.8
KIRR				S	Sn	19 18 18.9	-1.0
KIRR	Kirishev	1.03	277	*e*P	Pn	19 18 05.7	-0.8
KIRR				*e*S	Sn	19 18 18.9	-1.0
KMNR	Kamenistaya	1.09	267	PN	Pn	19 18 06.7	-0.5
KMNR	Kamenistaya	1.09	267	*i* P	Pn	19 18 06.7	-0.5
TUMD	Tumrok D	1.18	238	*e*P	Pn	19 18 07.4	-1.1
TUMD				*e*S	Sn	19 18 22.8	-0.7
TUMR	Tumrok	1.27	245	PN	Pn	19 18 09.3	-0.4
TUMR				S	Sn	19 18 24.4	-1.3
TUMR	Tumrok	1.27	245	*e*P	Pn	19 18 09.3	-0.4
TUMR				*e*S	Sn	19 18 24.4	-1.3
KZV	Kizimen	1.28	236	PN	Pn	19 18 08.9	-1.1
KZV	Kizimen	1.28	236	*i* P	Pn	19 18 08.9	-1.1
KOZ	Kozyrevsk	1.30	281	PN	Pn	19 18 10.1	0.0
KOZ				S	Sn	19 18 27.9	+1.5
KOZ	Kozyrevsk	1.30	281	*e*P	Pn	19 18 10.1	0.0
KOZ				*e*S	Sn	19 18 27.9	+1.5
SRDR	Sredinnyy	1.45	290	PN	Pn	19 18 11.7	-0.4
SRDR	Sredinnyy	1.45	290	*e*P	Pn	19 18 11.7	-0.4
ESO	Esso	1.95	274	PN	Pn	19 18 18.5	-0.4
ESO	Esso	1.95	274	*e*P	Pn	19 18 18.5	-0.4
BKI	Bering	2.26	105	PN	Pn	19 18 22.2	-0.9
BKI				S	Sn	19 18 48.5	-1.2
BKI	Bering	2.26	105	*e*P	Pn	19 18 22.2	-0.9
BKI				*e*S	Sn	19 18 48.5	-1.2
SPN	Mys Shipunski	3.01	205	PN	Pn	19 18 31.8	-1.7
SPN				S	Sn	19 19 05.2	-3.1
SPN	Mys Shipunski	3.01	205	*e*P	Pn	19 18 31.8	-1.7
SPN				*e*S	Sn	19 19 05.2	-3.1
NLC	Nalytchevo	3.13	213	PN	Pn	19 18 34.6	-0.5
NLC				S	Sn	19 19 10.1	-1.1
NLC	Nalytchevo	3.13	213	*e*P	Pn	19 18 34.6	-0.5
NLC				*e*S	Sn	19 19 10.1	-1.1
SDLR	Sedlovina	3.19	218	PN	Pn	19 18 35.9	-0.2
SDLR				S	Sn	19 19 12.8	-0.1
SDLR	Sedlovina	3.19	218	*e*P	Pn	19 18 35.9	-0.2
SDLR				*e*S	Sn	19 19 12.8	-0.1
KRX	Arik	3.21	221	PN	Pn	19 18 36.4	+0.1
KRX	Arik	3.21	221	*e*P	Pn	19 18 36.4	+0.1
KRER	Koryakskii	3.22	219	PN	Pn	19 18 36.9	+0.4
KRER	Koryakskii	3.22	219	*e*P	Pn	19 18 36.9	+0.4
SMAR	Somma	3.24	219	PN	Pn	19 18 36.8	+0.1
SMAR				S	Sn	19 19 14.4	+0.3
SMAR	Somma	3.24	219	*e*P	Pn	19 18 36.8	+0.1
SMAR				*e*S	Sn	19 19 14.4	+0.3
GNL	Ganaly	3.25	230	PN	Pn	19 18 36.7	-0.1
GNL	Ganaly	3.25	230	*e*P	Pn	19 18 36.7	-0.1
AVH	Avacha	3.26	219	PN	Pn	19 18 37.2	+0.3
AVH	Avacha	3.26	219	*e*P	Pn	19 18 37.2	+0.3
KOK	Koryaka	3.27	220	PN	Pn	19 18 37.5	+0.4
KOK	Koryaka	3.27	220	*e*P	Pn	19 18 37.5	+0.4
UGLR	Uglovaya	3.27	218	PN	Pn	19 18 37.1	0.0
UGLR	Uglovaya	3.27	218	*e*P	Pn	19 18 37.1	0.0
DALK	Dalny	3.44	217	PN	Pn	19 18 39.0	-0.3
DALK				S	Sn	19 19 17.4	-1.4
DALK	Dalny	3.44	217	*e*P	Pn	19 18 39.0	-0.3
DALK				*e*S	Sn	19 19 17.4	-1.4
OSSR	Ossora	3.46	8	PN	Pn	19 18 39.8	+0.3
OSSR	Ossora	3.46	8	*e*P	Pn	19 18 39.8	+0.3
PALN	Palana	3.47	341	PN	Pn	19 18 40.6	+0.9
PALN	Palana	3.47	341	*e*P	Pn	19 18 40.6	+0.9
PET	Petropavlovsk	3.48	217	PN	Pn	19 18 39.7	-0.2
PET				S	Sn	19 19 19.7	-0.1
PET	Petropavlovsk	3.48	217	*i* P	Pn	19 18 39.7	-0.2
PET				*e*S	Sn	19 19 19.7	-0.1
PET	Petropavlovsk	3.48	217		Pn	19 18 39.6	-0.3
PEA0B	Petropavlovsk-	3.77	225	PN	Pn	19 18 43.9	0.0
PEA0B	Petropavlovsk-	3.77	225	Pn	Pn	19 18 43.9	0.0
PETK	Petropavlovsk-	3.77	225	P	Pn	19 18 44.2	+0.3
	9.4nm,0.3s,baz=71,slow=16,SNR=348						
PETK				S	Sn	19 19 29.1	+2.1
	9.4nm,0.3s,baz=31,slow=26,SNR=4.6						
PETK				LR	LR	19 20 29.7	
	comp=Z,822nm,20.8s,baz=51,slow=43						
PETK	Petropavlovsk-	3.77	225	Pn	Pn	19 18 44.0	+0.1
KRMR	Karymshinskiy	3.83	220	PN	Pn	19 18 45.9	+1.3
KRMR				S	Sn	19 19 28.0	-0.2
KRMR	Karymshinskiy	3.83	220	*e*P	Pn	19 18 45.9	+1.3
KRMR				*e*S	Sn	19 19 28.0	-0.2
RUS	Russkaya	4.03	214	PN	Pn	19 18 46.8	-0.5
RUS				S	Sn	19 19 31.8	-1.4
RUS	Russkaya	4.03	214	*e*P	Pn	19 18 46.8	-0.5
RUS				*e*S	Sn	19 19 31.8	-1.4
GRL	Gorelyy	4.07	218	PN	Pn	19 18 48.7	+0.6
GRL				S	Sn	19 19 35.5	+1.0
GRL	Gorelyy	4.07	218	*i* P	Pn	19 18 48.7	+0.6
GRL				*e*S	Sn	19 19 35.5	+1.0
MTVR	Mutnovka	4.09	216	PN	Pn	19 18 48.8	+0.4
MTVR				S	Sn	19 19 35.4	+0.4
MTVR	Mutnovka	4.09	216	*e*P	Pn	19 18 48.8	+0.4
MTVR				*e*S	Sn	19 19 35.4	+0.4
APC	Apacha	4.13	227	PN	Pn	19 18 49.3	+0.6
APC	Apacha	4.13	227	*e*P	Pn	19 18 49.3	+0.6
KDTR	Khodutka, Kamc	4.70	213	PN	Pn	19 18 56.7	+0.1
KDTR	Khodutka, Kamc	4.70	213	*e*P	Pn	19 18 56.7	+0.1
KDTR				*e*S	Sn	19 19 48.1	-1.7
TILK	Tilichiki	5.08	23	PN	Pn	19 19 03.2	+1.5
TILK				S	Sn	19 19 59.4	+0.4
TILK	Tilichiki	5.08	23	*e*P	Pn	19 19 03.2	+1.5
TILK				*e*S	Sn	19 19 59.4	+0.4
PAU	Pauzhetka	5.41	218	PN	Pn	19 19 08.1	+1.8
PAU	Pauzhetka	5.41	218	*e*P	Pn	19 19 08.1	+1.8
SKR	Severo-Kuril's	6.31	218	*e*PN	Pn	19 19 20.1	+1.5
SKR				*e*S	Sn	19 20 35.0	+5.8
SKR				pmax	pmax		
	comp=Z,64nm,0.8s						
SKR				smax	smax		
	comp=E,73nm,0.7s						
SKR				smax	smax		
	comp=N,121nm,0.9s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
SKR	Severo-Kuril's	6.31	218	*e*P	Pn	19 19 19.9	+1.3
KMSK	Kamenskaya	6.97	16	PN	Pn	19 19 29.3	+1.7
KMSK	Kamenskaya	6.97	16	*e*P	Pn	19 19 29.3	+1.7
MA2	Magadan	7.16	306	P	Pn	19 19 32.1	+1.9
	comp=Z,0.9nm,0.3s,baz=113,slow=11,SNR=14						
MA2				LR	LR	19 22 36.1	
	comp=Z,327nm,20.0s,baz=126,slow=41						
MA2	Magadan	7.16	306	⇓*i*PN	Pn	19 19 32.6	+2.4
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MA2	Magadan	7.16	306	Pn	Pn	19 19 31.7	+1.5
SEY	Seymchan	8.68	329	P	Pn	19 19 54.4	+3.4
	comp=Z,0.4nm,0.3s,baz=138,slow=14,SNR=5.5						
SEY	Seymchan	8.68	329	⇑*e*PN	Pn	19 19 54.8	+3.8
BILL	Bilibino	12.39	7	⇑*e*PN	Pn	19 20 46.9	+5.2
BILL				*e*S	Sn	19 23 03.5	+5.4
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL				MLR	MLR		
	comp=Z,277nm,17.0s						
BILL	Bilibino	12.39	7		Pn	19 20 45.4	+3.7
UGL	Uglegorsk	13.96	249	*e*P	Pn	19 20 58.2	-5.0
YSS	Yuzh-Sakhalins	14.98	242	⇑*e*P	P	19 21 22.9	+1.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,10.0s						
GAMB	Gambell	15.27	48	Pn	P	19 21 23.9	-0.4
GRNR	Gornyy	16.15	262	⇑*i*P	P	19 21 34.3	+0.1
GRNR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,240nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,160nm,16.0s						
GRNR				MLR	MLR		
	comp=N,110nm,15.0s						
JKA	Kamikawa-asahi	17.13	235		Pn	19 21 42.6	-1.3
ASAJ	Asahikawa	17.13	235	P	P	19 21 46.0	+1.0
	comp=N,4.1nm,0.3s,baz=72,slow=9.3,SNR=34						
YAK	Yakutsk	17.72	304	P	P	19 21 51.6	+0.2
	comp=N,0.0nm,0.3s,baz=237,slow=1.2,SNR=8.7						
YAK	Yakutsk	17.72	304	*e*P	P	19 21 52.0	+0.6
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK	Yakutsk	17.72	304		Pn	19 21 50.5	-0.7
YAK				IAmb	IAmb	19 22 04.2	
	comp=Z,28nm,0.7s						
UNV	Unalaska Valle	18.08	83	P	Pn	19 21 57.3	+1.7
ANM	Nome	18.15	48	P	Pn	19 21 57.8	+1.5
ANM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ANM	Nome	18.15	48	P	Pn	19 21 57.8	+1.5
ERM	Erimo	18.54	230	P	P	19 22 00.6	0.0
ERM				pmax	pmax		
	comp=Z,34nm,0.5s						
ERM	Erimo	18.54	230	P	P	19 22 00.6	0.0
ERM				IAmb	IAmb	19 22 06.6	
	comp=Z,34nm,0.5s						
KLR	Kul'dur	19.53	263	P	P	19 22 11.4	0.0
	comp=Z,0.2nm,0.3s,baz=55,slow=12,SNR=7.5						
KLR	Kul'dur	19.53	263	⇑*e*P	Pn	19 22 12.2	-0.8
ZEA	Zeya	20.11	279	*e*P	P	19 22 17.7	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RDOG	Red Dog Mine	20.12	39	P	Pn	19 22 19.3	-0.5
JTM	Tenmabayashi	20.45	231	P	P	19 22 22.1	+0.7
JTM				IAmb	IAmb	19 22 38.3	
	comp=Z,73nm,1.5s						
TIXI	Tiksi	21.17	331	P	P	19 22 28.7	-0.1
TTA	Tatalina	22.10	54	P	P	19 22 40.3	+1.2
TTA				pmax	pmax		
	comp=Z,13nm,0.9s						
TTA	Tatalina	22.10	54	P	P	19 22 40.3	+1.2
USRK	Ussuriysk Ar.	22.42	251	P	P	19 22 43.0	+0.5
	comp=Z,1.1nm,0.6s,baz=42,slow=15,SNR=3.3						
USRK				LR	LR	19 32 31.7	
	comp=Z,87nm,20.3s,baz=41,slow=40						
USRK	Ussuriysk Ar.	22.42	251	P	P	19 22 43.0	+0.5
IMAR	Indian Mountai	23.19	46	P	P	19 22 50.6	+0.3
A21K	Barrow	23.31	32	P	P	19 22 50.8	-0.6
	baz=250,SNR=6.8						
A21K	Barrow	23.31	32	P	P	19 22 51.2	-0.2
PPLA	Purkeypile	23.85	54	P	P	19 22 57.7	+0.9
PPLA				IAmb	IAmb	19 22 59.6	
	comp=Z,40nm,0.9s						
RSO	Redoubt South	23.86	60	P	P	19 22 58.7	+1.8
SKT	Skwentna	24.24	56	P	P	19 23 00.9	+0.8
SKT				IAmb	IAmb	19 23 03.2	
	comp=Z,28nm,0.9s						
OHAK	Old Harbor	24.29	68	P	P	19 23 00.9	+0.4
OHAK				IAmb	IAmb	19 23 01.8	
	comp=Z,48nm,1.0s						
BPAW	Bear Paw Mtn.	24.33	51	P	P	19 23 01.6	+0.7
BPAW				IAmb	IAmb	19 23 04.4	
	comp=Z,76nm,1.4s						
KTH	Kantishna Hill	24.38	52	P	P	19 23 02.3	+0.8
KTH				IAmb	IAmb	19 23 04.4	
	comp=Z,32nm,1.2s						
MLY	Manley	24.41	49	P	P	19 23 02.3	+0.6
	baz=270,SNR=24						
KDAK	Kodiak Island	24.50	67	P	P	19 23 01.8	-0.7
	comp=Z,32nm,0.7s,baz=281,slow=5.4,SNR=27						
KDAK	Kodiak Island	24.50	67	P	P	19 23 01.9	-0.7
KDAK				pmax	pmax		
	comp=Z,30nm,0.8s						
KDAK	Kodiak Island	24.50	67	P	P	19 23 01.9	-0.7
KDAK				IAmb	IAmb	19 23 03.5	
	comp=Z,30nm,0.8s						
TRF	Thorofare Moun	24.67	53	P	P	19 23 05.0	+0.8
TRF				IAmb	IAmb	19 23 07.4	
	comp=Z,29nm,0.9s						
SUA	Susitna One	24.68	57	P	P	19 23 04.7	+0.4
COLD	Coldfoot	24.70	44	P	P	19 23 04.4	+0.2
	baz=266,SNR=16						
COLD	Coldfoot	24.70	44	P	P	19 23 04.8	+0.5
COLD				IAmb	IAmb	19 23 07.6	
	comp=Z,18nm,0.7s						
CUT	Chulitna	24.78	55	P	P	19 23 05.1	+0.1
	baz=277,SNR=6.5						
CNPM	China Poot	24.78	62	P	P	19 23 04.8	-0.3
CNPM				IAmb	IAmb	19 23 07.2	
	comp=Z,25nm,0.6s						
BWN	Browne	24.99	51	P	P	19 23 08.4	+1.5
I23K	Minto, Yukon-K	24.99	48	P	P	19 23 07.0	+0.1
	baz=271,SNR=25						
I23K	Minto, Yukon-K	24.99	48	P	P	19 23 07.6	+0.7
I23K				IAmb	IAmb	19 23 10.2	
	comp=Z,30nm,0.7s						
NEA2	Nenana	25.14	50	P	P	19 23 08.5	+0.2
	baz=273,SNR=15						
MAJO	Matsushiro	25.22	230	P	P	19 23 08.8	-0.5
MAJO				pmax	pmax		
	comp=Z,21nm,1.3s						
MAJO	Matsushiro	25.22	230	P	P	19 23 08.8	-0.5
MAT	Matsushiro	25.22	230	P	P	19 23 08.3	-0.9
MJAR	Matsushiro Arr	25.22	230	P	P	19 23 08.4	-0.8
	comp=Z,4.4nm,0.7s,baz=39,slow=7.2,SNR=12						
MJAR	Matsushiro Arr	25.22	230	P	P	19 23 09.0	-0.3
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	25.22	230	P	P	19 23 08.9	-0.3
RC01	Rabbit Creek A	25.22	58	P	P	19 23 09.1	+0.1
	baz=280						
MCK	McKinley	25.25	52	P	P	19 23 09.3	-0.1
	baz=275,SNR=11						
RND	Reindeer	25.32	53	P	P	19 23 10.0	0.0
RND				pmax	pmax		
	comp=Z,12nm,0.7s						
RND	Reindeer	25.32	53	P	P	19 23 10.0	0.0
MDM	Murphy Dome	25.48	49	P	P	19 23 12.0	+0.6
GHO	Glory Hole Cre	25.49	56	P	P	19 23 12.2	+0.6
GHO				IAmb	IAmb	19 23 17.6	
	comp=Z,22nm,1.0s						
WRH	Wood River Hil	25.57	50	P	P	19 23 12.4	+0.3
WRH				IAmb	IAmb	19 23 14.1	
	comp=Z,40nm,0.9s						
TCOL	CIGO, UAF Yank	25.64	49	P	P	19 23 13.1	+0.3
	baz=273						
TCOL	CIGO, UAF Yank	25.64	49	P	P	19 23 13.3	+0.5
TCOL				IAmb	IAmb	19 23 16.3	
	comp=Z,21nm,0.9s						
COLA	College	25.64	49	P	P	19 23 13.3	+0.5
COLA				pmax	pmax		
	comp=Z,21nm,1.0s						
COLA	College	25.64	49	P	P	19 23 13.3	+0.5
COLA				IAmb	IAmb	19 23 16.3	
	comp=Z,21nm,0.9s						
CCB	Clear Creek Bu	25.68	50	P	P	19 23 13.4	+0.3
CCB				IAmb	IAmb	19 23 16.5	
	comp=Z,19nm,0.6s						
SML	Sawmill	25.77	56	P	P	19 23 14.3	+0.2
SML				IAmb	IAmb	19 23 17.7	
	comp=Z,23nm,0.8s						
KNK	Knik Glacier	25.77	57	P	P	19 23 14.2	+0.1
KNK				IAmb	IAmb	19 23 15.8	
	comp=Z,20nm,0.7s						
POKR	Poker Plat Res	25.81	48	P	P	19 23 14.2	-0.1
	baz=273						
POKR	Poker Plat Res	25.81	48	P	P	19 23 15.1	+0.7
BOD	Bodaibo	25.98	295	*e*P	P	19 23 16.3	+0.3
BOD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DHY	Denali Highway	26.02	53	P	P	19 23 16.5	0.0
IL31		26.06	49	P	P	19 23 16.8	+0.2
ILAR	Eielson Array	26.06	49	P	P	19 23 16.6	-0.1
	comp=Z,9.7nm,0.8s,baz=268,slow=8.0,SNR=89						
ILAR				LR	LR	19 34 12.3	
	comp=Z,147nm,18.6s,baz=286,slow=38						
HDA	Harding Lake	26.07	50	P	P	19 23 16.4	-0.3
	baz=275,SNR=14						
HDA	Harding Lake	26.07	50	P	P	19 23 16.7	0.0
HDA				IAmb	IAmb	19 23 17.6	
	comp=Z,14nm,0.7s						
SCM	Sheep Creek Mo	26.23	56	P	P	19 23 18.8	+0.5
SCM				pmax	pmax		
	comp=Z,32nm,0.7s						
SCM	Sheep Creek Mo	26.23	56	P	P	19 23 18.8	+0.5
PRP	Porcupine Dome	26.59	47	P	P	19 23 22.4	+0.8
PRP				IAmb	IAmb	19 23 23.1	
	comp=Z,24nm,0.9s						
FYU	Fort Yukon	26.65	45	P	P	19 23 23.0	+1.1
FYU				IAmb	IAmb	19 23 23.7	
	comp=Z,22nm,0.8s						
M24K	Tolsona, Glenn	26.72	55	P	P	19 23 23.0	+0.4
	baz=280						
M24K	Tolsona, Glenn	26.72	55	P	P	19 23 23.5	+0.9
M24K				IAmb	IAmb	19 23 30.9	
	comp=Z,40nm,1.1s						
PAX	Paxson	26.90	53	P	P	19 23 24.5	+0.2
PAX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PAX	Paxson	26.90	53	P	P	19 23 24.5	+0.2
KLU	Klutina	26.95	56	P	P	19 23 25.3	+0.5
KLU				IAmb	IAmb	19 23 31.6	
	comp=Z,14nm,0.6s						
RIDG	Independent Ri	27.06	51	P	P	19 23 25.1	-0.6
RIDG				IAmb	IAmb	19 23 25.9	
	comp=Z,16nm,1.0s						
SCRK	Sand Creek	27.41	51	P	P	19 23 27.9	-0.9
	baz=278,SNR=27						
DOT	Dot Lake	27.42	51	P	P	19 23 28.3	-0.6

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N25K  Chitina, Valde    27.55  56   P     P      19 23 30.3 +0.1
      baz=282
N25K  Chitina, Valde    27.55  56   P     P      19 23 31.0 +0.9
GLB   Gilahina Butte    27.95  56   P     P      19 23 34.5 +0.8
VRDI  Verde Repeater    28.17  56   P     P      19 23 36.6 +0.8
K27K  Chicken           28.23  50   P     P      19 23 36.3 +0.3
K27K                                IAmb  IAmb   19 23 37.2
      comp=Z,11nm,0.8s
CRQM  Cirque            28.44  57   P     P      19 23 39.2 +1.1
CRQM                                IAmb  IAmb   19 23 40.0
      comp=Z,15nm,0.7s
EGAK  Eagle             28.50  49   P     P      19 23 37.7 -0.8
EGAK                                IAmb  IAmb   19 23 38.8
      comp=Z,15nm,0.8s
BCAR  Beaver Creek A    28.53  52   P     P      19 23 39.7 +0.9
BARN  Barnard Glacie    29.06  56   P     P      19 23 45.0 +1.3
BARN                                IAmb  IAmb   19 23 51.1
      comp=Z,12nm,0.7s
MESA  MESA              29.16  58   P     P      19 23 46.0 +1.4
MESA                                IAmb  IAmb   19 23 47.0
      comp=Z,24nm,0.8s
CTGM  Chitina Glacie    29.23  56   P     P      19 23 46.3 +1.1
CTGM                                IAmb  IAmb   19 23 47.1
      comp=Z,12nm,0.8s
KSRS  Korea Array       29.41 246   P     P      19 23 45.7 -1.0
      comp=Z,0.8nm,0.6s,baz=29,slow=9.8,SNR=2.3
TABL  Table Mountain    29.47  57   P     P      19 23 47.5 +0.2
TABL                                IAmb  IAmb   19 23 49.8
      comp=Z,20nm,0.8s
PCA   Pinnacle          30.00  58   P     P      19 23 52.9 +1.1
EPYK  Eagle Plains      30.07  45   P     P      19 23 53.2 +0.9
INK   Inuvik            30.98  41   P     P      19 24 01.0 +0.7
      comp=Z,3.7nm,0.5s,baz=294,slow=7.0,SNR=34
INK   Inuvik            30.98  41   P     P      19 24 00.9 +0.7
INK                                 pmax  pmax
      comp=Z,6.0nm,0.6s
INK   Inuvik            30.98  41   P     P      19 24 00.9 +0.7
HYT   Haines Junctio    31.07  56   P     P      19 24 02.8 +1.4
HYT                                 IAmb  IAmb   19 24 03.6
      comp=Z,10nm,0.8s
WHY   Whitehorse        32.34  55   P     P      19 24 14.1 +1.6
WHY                                 IAmb  IAmb   19 24 15.1
      comp=Z,11nm,0.8s
C36M  Paulatuk          34.12  37   P     P      19 24 27.3 -0.4
      baz=285,SNR=9.7
C36M  Paulatuk          34.12  37   P     P      19 24 28.2 +0.5
SONM  Songino Array     34.51 281   P     P      19 24 31.4 -0.1
      comp=Z,0.9nm,0.6s,baz=60,slow=7.5,SNR=5.5
SONM                                LR    LR     19 39 43.7
      comp=Z,94nm,18.1s,baz=17,slow=38
SONM  Songino Array     34.51 281   P     P      19 24 30.9 -0.7
DLBC  Dease Lake        35.48  57   P     P      19 24 40.7 +0.9
      comp=Z,10nm,0.9s,baz=272,slow=8.1,SNR=10.0
DLBC  Dease Lake        35.48  57   P     P      19 24 42.1 +2.4
DLBC                                IAmb  IAmb   19 24 43.7
      comp=Z,17nm,1.1s
H11N2 WAKE ISLAND Hy    36.23 172   T     T      20 03 58.2
      baz=357,slow=76,SNR=205
H11N3 WAKE ISLAND Hy    36.24 172   T     T      20 03 59.4
      baz=357,slow=76,SNR=20
H11N1 WAKE ISLAND Hy    36.24 172   T     T      20 03 59.6
      baz=357,slow=76,SNR=14
EUNU  Eureka            38.99  15   P     P      19 25 10.1 +0.9
RES   Resolute Bay      40.32  24   P     P      19 25 20.6 +0.4
      comp=Z,3.3nm,0.6s,baz=304,slow=7.5,SNR=9.2
RES   Resolute Bay      40.32  24   P     P      19 25 20.4 +0.2
RES                                 pmax  pmax
      comp=Z,3.0nm,0.7s
RES   Resolute Bay      40.32  24   P     P      19 25 20.4 +0.2
YKA   Yellowknife Ar    40.35  45   P     P      19 25 21.2 +0.7
      comp=Z,6.8nm,0.7s,baz=302,slow=7.3,SNR=72
YKA                                 PcP   PcP    19 27 22.8 -0.1
      comp=Z,1.2nm,0.5s,baz=324,slow=2.7,SNR=12
YKA   Yellowknife Ar    40.35  45 i P     P      19 25 21.2 +0.7
YKA                                 pmax  pmax
      comp=Z,8.0nm,0.7s
ZALV  Zalesovo Beam     42.35 301   LR    LR     19 44 14.0
      comp=Z,123nm,19.3s,baz=16,slow=38
GTA   Gaotai            43.53 275  eP     P      19 25 48.4 +1.4
GTA                                 pmax  pmax
      comp=Z,4.0nm,0.9s
DGZ   Jazzator, Alta    43.58 295⇑eP     P      19 25 45.8 -1.4
DGZ                                 pmax  pmax
      comp=Z,4.0nm,0.7s
SPA0  Spitsbergen Ar    44.62 350   P     P      19 25 55.0  0.0
SPITS Spitsbergen Ar    44.62 350   P     P      19 25 54.6 -0.5
      comp=Z,18nm,0.8s,baz=57,slow=8.1,SNR=21
ZSN   Zaisan            46.32 294  eP     P      19 26 08.6 -0.3
      baz=294
ZSN   Zaisan            46.32 294  eP     P      19 26 08.6 -0.3
B08A  Colville Reser    46.36  65   P     P      19 26 10.7 +1.6
KURK  Kurchatov         47.33 301⇓eP     P      19 26 15.2 -1.5
KURK                                pmax  pmax
      comp=Z,4.0nm,0.8s
KURK  Kurchatov         47.33 301   P     P      19 26 14.7 -2.0
I04A  Tendick Farm,     47.77  71   P     P      19 26 21.3 +1.1
      baz=313
MK31  Makanchi Array    48.08 295   P     P      19 26 20.0 -2.6
MK31                                pmax  pmax
      comp=Z,1.0nm,0.8s
MK31  Makanchi Array    48.08 295   P     P      19 26 20.0 -2.6
MKAR  Makanchi Array    48.08 295   P     P      19 26 19.9 -2.7
      comp=Z,0.9nm,0.5s,baz=35,slow=3.5,SNR=9.6
MKAR                                LR    LR     19 47 46.4
      comp=Z,113nm,20.8s,baz=345,slow=38
MKAR  Makanchi Array    48.08 295   P     P      19 26 21.0 -1.6
MKAR  Makanchi Array    48.08 295   P     P      19 26 21.0 -1.6
E09A  Wood Farm, Sta    48.18  66   P     P      19 26 24.3 +1.0
MAKZ  Makanchi          48.23 295   P     P      19 26 23.1 -0.6
MAKZ                                pmax  pmax
      comp=Z,3.0nm,1.1s
MAKZ  Makanchi          48.23 295   P     P      19 26 23.1 -0.6
J04D  Umpqua Nationa    48.30  72   P     P      19 26 25.3 +0.7
      baz=313
WALA  Waterton Lakes    48.61  61   P     P      19 26 27.4 +0.6
WALA                                IAmb  IAmb   19 26 35.4
      comp=Z,8.2nm,0.8s
J05D  Fort Rock, OR     48.74  71   P     P      19 26 29.4 +1.5
      baz=313
L04D  Klamath Falls     48.90  73   P     P      19 26 30.4 +1.3
      baz=314
F10A  Beach Ranch, E    49.01  66   P     P      19 26 30.8 +0.9
YBH   Yreka Blue Hor    49.01  73   LR    LR     19 43 29.6
      comp=Z,15nm,20.8s,baz=316,slow=31
JTMT  Jette             49.31  62   P     P      19 26 33.4 +1.3
JTMT                                IAmb  IAmb   19 26 34.0
      comp=Z,6.8nm,0.8s
N02D  Trinity Center    49.54  74   P     P      19 26 35.6 +1.7
      baz=314
BRVK  Borovoye          49.67 308⇑eP     P      19 26 35.2 +0.6
BRVK                                pmax  pmax
      comp=Z,1.0nm,0.7s
BMO   Blue Mountains    49.73  67   P     P      19 26 36.1 +0.8
BMO                                 pmax  pmax
      comp=Z,7.0nm,1.5s
BMO   Blue Mountains    49.73  67   P     P      19 26 36.1 +0.8
O02D  Mt. Diablo Mer    50.05  75   P     P      19 26 38.9 +1.1
      baz=315
MSO   Missoula          50.10  63   P     P      19 26 38.9 +0.8
      baz=313
MSO   Missoula          50.10  63   P     P      19 26 39.0 +0.9
O03E  Paynes Creek      50.51  74   P     P      19 26 42.9 +1.6
      baz=315
FCC   Fort Churchill    50.60  41   P     P      19 26 41.5  0.0
FCC                                 pmax  pmax
      comp=Z,8.0nm,0.7s
FCC   Fort Churchill    50.60  41   P     P      19 26 41.5  0.0
FCC                                 IAmb  IAmb   19 26 42.1
      comp=Z,7.6nm,0.7s
ARCES ARCESS Array B    51.05 342   P     P      19 26 43.4 -1.4
      comp=Z,1.9nm,0.4s,baz=34,slow=9.6,SNR=22
ARCES ARCESS Array B    51.05 342   P     P      19 26 43.4 -1.4
ARCES                               pmax  pmax
      comp=Z,18nm,1.4s
ARCES ARCESS Array B    51.05 342   P     P      19 26 43.4 -1.4
SUMG  Summit            51.08   8   P     P      19 26 45.8 +0.3
SUMG                                pmax  pmax
      comp=Z,17nm,1.2s
SUMG  Summit            51.08   8   P     P      19 26 45.8 +0.3
HRY   Holter Researc    51.24  62   P     P      19 26 47.2 +0.5
TDK   Taldyqorghan      51.28 295  eP     P      19 26 47.4 +0.5
      comp=Z,3.5nm,1.1s,baz=295
TDK   Taldyqorghan      51.28 295  eP     P      19 26 47.4 +0.5
TDK                                 pmax  pmax
      comp=Z,3.0nm,1.1s
EGMT  Eagleton          51.35  59   P     P      19 26 48.2 +0.8
      baz=314
SHLS  Shalkode          52.03 293  eP     P      19 26 51.2 -1.5
      comp=Z,4.8nm,0.7s,baz=293
SHLS  Shalkode          52.03 293  eP     P      19 26 51.2 -1.5
SHLS                                pmax  pmax
      comp=Z,5.0nm,0.7s
MCMT  McKenzie Canyo    52.04  64   P     P      19 26 52.9  0.0
BOZ   Bozeman (W)       52.11  63   P     P      19 26 54.2 +0.9
      baz=315
BCYI  Bear Canyon       52.12  65   P     P      19 26 53.8 +0.3
HLID  Hailey            52.13  66   P     P      19 26 54.2 +0.7
      baz=315
ARU   Arti              52.20 317c iP     P      19 26 53.2 -0.4
ARU                                              19 28 47.2
ARU                                 S     S      19 34 15.2 +0.9
ARU                                 pmax  pmax
      comp=Z,5.0nm,1.3s
KPKS  Kokpek            52.22 294  eP     P      19 26 53.9 -0.1
      comp=Z,2.3nm,1.0s,baz=294
KPKS  Kokpek            52.22 294  eP     P      19 26 53.9 -0.1
KPKS                                pmax  pmax
      comp=Z,2.0nm,1.0s
SATY  Saty              52.65 294  eP     P      19 26 57.4 +0.1
      baz=294
SATY  Saty              52.65 294  eP     P      19 26 57.3  0.0
QLMT  Earthquake Lak    52.75  63   P     P      19 26 59.4 +1.2
YHL   Hebgen Lake       52.86  63   P     P      19 27 00.4 +1.4
YHB   Horse Butte       52.93  63   P     P      19 27 00.9 +1.5
WAKR  Walker            53.07  74   P     P      19 27 02.6 +2.1
WAKR                                IAmb  IAmb   19 27 03.4
      comp=Z,8.7nm,0.8s
YMR   Madison River     53.10  63   P     P      19 27 02.2 +1.5
MDOK  Medeo             53.27 295  eP     P      19 27 01.0 -0.9
      baz=295
MDOK  Medeo             53.27 295  eP     P      19 27 01.0 -0.9
JMIC  Jan Mayen         53.30 356   P     P      19 27 01.2 -0.2
      comp=Z,95nm,0.9s,baz=143,slow=5.1,SNR=2.0
YNE   Yellowstone No    53.34  62   P     P      19 27 03.8 +1.4
YMP   Mirror Lake Pl    53.46  62   P     P      19 27 04.9 +1.5
LKWY  Lake              53.46  63   P     P      19 27 05.9 +2.5
LKWY                                pmax  pmax
      comp=Z,7.0nm,1.0s
LKWY  Lake              53.46  63   P     P      19 27 05.9 +2.5
LKWY                                IAmb  IAmb   19 27 07.2
      comp=Z,7.5nm,1.0s
RYN   Ryan              53.47  73   P     P      19 27 05.4 +2.0
RYN                                 IAmb  IAmb   19 27 06.1
      comp=Z,6.9nm,0.7s
H17A  Grant Village     53.49  63   P     P      19 27 05.4 +1.8
      baz=316,SNR=8.0
H17A  Grant Village     53.49  63   P     P      19 27 06.4 +2.8
H17A                                IAmb  IAmb   19 27 07.2
      comp=Z,13nm,1.2s
RLMT  Red Lodge         53.63  62   P     P      19 27 05.4 +0.8
      baz=316,SNR=13
RLMT  Red Lodge         53.63  62   P     P      19 27 06.2 +1.7
FLWY  Flagg Ranch       53.65  63   P     P      19 27 06.9 +2.2
FLWY                                IAmb  IAmb   19 27 07.2
      comp=Z,5.8nm,0.8s
DGMT  Dagmar            53.67  56   P     P      19 27 04.9 +0.3
      baz=316
ELK   Elko              53.70  69   LR    LR     19 50 21.9
      comp=Z,44nm,18.4s,baz=9.0,slow=36
ELK   Elko              53.70  69   P     P      19 27 06.7 +1.6
ELK                                 pmax  pmax
      comp=Z,3.0nm,1.0s
ELK   Elko              53.70  69   P     P      19 27 06.7 +1.6
NVAR  Mina Array Bea    53.73  73   P     P      19 27 07.5 +2.1
      comp=Z,7.5nm,0.7s,baz=300,slow=7.4,SNR=41
NVAR  Mina Array Bea    53.73  73   P     P      19 27 07.4 +1.9
LHV   Little Huntoon    53.76  74   P     P      19 27 07.9 +2.6
LHV                                 IAmb  IAmb   19 27 08.6
      comp=Z,12nm,0.9s
NV11  Mina Array Sit    53.81  73   P     P      19 27 07.9 +2.0
NV11                                IAmb  IAmb   19 27 08.6
      comp=Z,7.9nm,0.8s
MOOW  Moose Ponds       53.87  64   P     P      19 27 07.8 +1.5
MDPB  Devils Postpil    53.89  75   P     P      19 27 08.8 +2.2
MDPB                                IAmb  IAmb   19 27 09.6
      comp=Z,11nm,1.0s
OMMB  Old Mammoth Mi    53.95  75   P     P      19 27 09.2 +2.1
OMMB                                IAmb  IAmb   19 27 10.1
      comp=Z,7.0nm,1.2s
LAO   LASA Array        53.99  58   P     P      19 27 07.7 +0.7
      baz=316,SNR=5.2
LAO   LASA Array        53.99  58   P     P      19 27 08.5 +1.5
LOHW  Long Hollow       54.04  64   P     P      19 27 09.3 +1.7
LOHW                                IAmb  IAmb   19 27 10.1
      comp=Z,5.3nm,0.9s
HVU   Hansel Valley     54.24  67   P     P      19 27 10.7 +1.7
HVU                                 pmax  pmax
      comp=Z,4.0nm,1.0s
HVU   Hansel Valley     54.24  67   P     P      19 27 10.7 +1.7
FRB   Frobisher Bay     54.51  25   P     P      19 27 09.3 -1.0
      comp=Z,5.4nm,0.7s,baz=332,slow=9.8,SNR=6.8
TPH   Tonopah           54.58  73   P     P      19 27 13.5 +2.0
TPH   Tonopah           54.58  73   P     P      19 27 13.5 +2.0
AAK   Ala-Archa         54.95 296   P     P      19 27 12.7 -1.4
AAK                                 pmax  pmax
      comp=Z,3.0nm,0.9s
AAK   Ala-Archa         54.95 296   P     P      19 27 12.7 -1.4
SFJD  Kangerlussuaq     55.05  15   LR    LR     19 54 03.4
      comp=Z,72nm,18.3s,baz=9.0,slow=40
SMMC  Simmler           55.09  77   P     P      19 27 17.1 +2.0
      baz=318
BW06  Boulder Array     55.18  64   P     P      19 27 16.9 +1.1
      baz=317,SNR=9.6
BW06  Boulder Array     55.18  64   P     P      19 27 17.3 +1.4
BW06                                IAmb  IAmb   19 27 17.9
      comp=Z,7.2nm,0.9s
PD31  Pinedale Array    55.18  64   P     P      19 27 17.3 +1.5
PD31                                IAmb  IAmb   19 27 17.9
      comp=Z,6.6nm,0.9s
PDAR  Pinedale Array    55.18  64   P     P      19 27 17.0 +1.1
      comp=Z,4.6nm,0.7s,baz=333,slow=2.6,SNR=46
PDAR  Pinedale Array    55.18  64   P     P      19 27 16.9 +1.1
VES   Vestal, Richgr    55.20  76   P     P      19 27 17.3 +1.5
      baz=318
R11A  Troy Canyon, C    55.26  71   P     P      19 27 17.3 +0.9
      baz=317,SNR=7.5
R11A  Troy Canyon, C    55.26  71   P     P      19 27 18.0 +1.6
GRAC  Grapevine Rang    55.29  74   P     P      19 27 18.3 +1.8
      baz=318
CWC   Cottonwood Cre    55.31  75   P     P      19 27 18.6 +1.8
      baz=318
DUG   Dugway, Tooele    55.37  68   P     P      19 27 19.1 +1.9
DUG                                 pmax  pmax
      comp=Z,10.0nm,1.0s
DUG   Dugway, Tooele    55.37  68   P     P      19 27 18.5 +1.3
      baz=317
DUG   Dugway, Tooele    55.37  68   P     P      19 27 19.1 +1.9
DUG                                 IAmb  IAmb   19 27 19.9
      comp=Z,9.9nm,1.0s
LSA   Lhasa             55.48 273   P     P      19 27 17.9 -0.5
LSA                                 pmax  pmax
      comp=Z,4.0nm,0.6s
LSA   Lhasa             55.48 273   P     P      19 27 17.9 -0.5
LSA                                 IAmb  IAmb   19 27 21.8
      comp=Z,4.2nm,0.6s
PKM   Mcpherson Peak    55.51  77   P     P      19 27 19.7 +1.5
      baz=318
CTU   Camp Tracy        55.56  67   P     P      19 27 20.3 +1.7
ISA   Isabella, Lake    55.67  76   P     P      19 27 20.3 +1.0
ISA                                 pmax  pmax
      comp=Z,7.0nm,1.0s
ISA   Isabella, Lake    55.67  76   P     P      19 27 20.9 +1.6
      baz=318,SNR=5.3
ISA   Isabella, Lake    55.67  76   P     P      19 27 20.3 +1.0
ISA                                 IAmb  IAmb   19 27 21.6
      comp=Z,7.2nm,1.0s
JLU   Jordanelle        55.79  67   P     P      19 27 22.0 +1.7
MPMC  Manual Prospec    55.91  75   P     P      19 27 22.7 +1.5
      baz=318,SNR=7.0
TPNV  Topopah Spring    55.93  73   P     P      19 27 22.8 +1.6
TPNV                                pmax  pmax
      comp=Z,15nm,1.1s
TPNV  Topopah Spring    55.93  73   P     P      19 27 22.5 +1.3
      baz=318,SNR=9.1
TPNV  Topopah Spring    55.93  73   P     P      19 27 22.8 +1.6
NLU   North Lily Min    55.93  68   P     P      19 27 23.2 +1.9
FURC  Furnace Creek,    55.95  74   P     P      19 27 23.0 +1.8
      baz=318,SNR=5.9
PSUT  Pine Spring       56.04  70   P     P      19 27 23.6 +1.5
ULM   Lac du Bonnet     56.09  49   P     P      19 27 22.4 +0.5
      comp=Z,5.9nm,0.5s,baz=318,slow=6.4,SNR=18
ULM   Lac du Bonnet     56.09  49   P     P      19 27 22.4 +0.5
ULM                                 pmax  pmax
      comp=Z,9.0nm,0.6s
ULM   Lac du Bonnet     56.09  49   P     P      19 27 22.4 +0.5
MPU   Maple Canyon      56.12  67   P     P      19 27 24.0 +1.4
MDND  Maddock           56.23  53   P     P      19 27 24.3 +1.2
      baz=318
MDND  Maddock           56.23  53   P     P      19 27 24.1 +1.1
PRN   Pahroc Range      56.23  72   P     P      19 27 25.2 +1.9
LRMC  Laurel Mtn Rad    56.24  75   P     P      19 27 24.5 +1.1
      baz=318
EDW2  Edwards Air Fo    56.51  76   P     P      19 27 26.6 +1.4
      baz=318,SNR=7.9
KK31  Karatay Array     56.61 299   P     P      19 27 23.7 -2.1
KK31                                pmax  pmax
      comp=Z,3.0nm,1.0s
KK31  Karatay Array     56.61 299   P     P      19 27 23.7 -2.1
KKAR  Karatay Array     56.61 299   P     P      19 27 23.8 -2.0
KKAR                                pmax  pmax
      comp=Z,3.0nm,1.0s
KKAR  Karatay Array     56.61 299   P     P      19 27 23.8 -2.0
RDMU  Red Mountain      56.78  66   P     P      19 27 29.0 +1.7
K22A  Casper            56.78  62   P     P      19 27 27.9 +0.7
      baz=318
K22A  Casper            56.78  62   P     P      19 27 28.5 +1.3
K22A                                IAmb  IAmb   19 27 29.2
      comp=Z,9.8nm,1.1s
GSC   Goldstone, Bar    56.85  75   P     P      19 27 29.2 +1.5
GSC                                 pmax  pmax
      comp=Z,11nm,0.9s
GSC   Goldstone, Bar    56.85  75   P     P      19 27 29.1 +1.4
      baz=318
GSC   Goldstone, Bar    56.85  75   P     P      19 27 29.2 +1.5
TMUT  Trail Mountain    56.87  68   P     P      19 27 29.7 +1.6
RSSD  Black Hills       56.92  59   P     P      19 27 29.3 +1.1
RSSD                                pmax  pmax
      comp=Z,15nm,1.1s
RSSD  Black Hills       56.92  59   P     P      19 27 28.8 +0.6
      baz=318
RSSD  Black Hills       56.92  59   P     P      19 27 29.3 +1.1
MVU   Marysvale         56.93  69   P     P      19 27 30.4 +1.9
ABKAR Akbulak array     56.94 310   P     P      19 27 26.8 -1.2
ABKAR Akbulak array     56.94 310   P     P      19 27 26.3 -1.7
ABKAR                               IAmb  IAmb   19 27 39.5
      comp=Z,1.4nm,0.8s
MSU   Marysvale         56.94  69   P     P      19 27 30.4 +1.9
MSU   Marysvale         56.94  69   P     P      19 27 30.4 +1.9
MWC   Mount Wilson      56.97  77   P     P      19 27 29.7 +1.0
MWC                                 pmax  pmax
      comp=Z,8.0nm,0.8s
MWC   Mount Wilson      56.97  77   P     P      19 27 29.7 +1.0
MWC                                 IAmb  IAmb   19 27 31.6
      comp=Z,8.2nm,0.8s
P17A  Butcher Ranch,    56.98  67   P     P      19 27 30.3 +1.6
VALR  Valaam            57.03 334  eP     P      19 27 27.6 -0.8
VALR                                pmax  pmax
      comp=Z,31nm,1.2s
CCUT  Cedar City        57.03  71   P     P      19 27 30.9 +1.7
SZCU  Shurtz Canyon     57.14  70   P     P      19 27 31.2 +1.3
RWWY  Rawlins           57.15  63   P     P      19 27 30.8 +0.8
RWWY                                IAmb  IAmb   19 27 31.7
      comp=Z,7.1nm,0.8s
Q16A  Castle Valley     57.17  68   P     P      19 27 32.1 +2.0
BFSC  Mount Baldy Ra    57.17  76   P     P      19 27 31.6 +1.6
      baz=319
MTPU  Mount Pierson     57.29  69   P     P      19 27 33.5 +2.4
SRU   San Rafael Swe    57.37  67   P     P      19 27 33.0 +1.6
SRU                                 pmax  pmax
      comp=Z,20nm,0.8s
SRU   San Rafael Swe    57.37  67   P     P      19 27 33.0 +1.6
HEC   Hector,Ludlow     57.45  75   P     P      19 27 33.5 +1.5
      baz=319,SNR=8.1
LCMT  Little Creek M    57.49  71   P     P      19 27 34.0 +1.7
AGMN  Agassiz Nation    57.56  51   P     P      19 27 32.4  0.0
      baz=319,SNR=5.5
AGMN  Agassiz Nation    57.56  51   P     P      19 27 32.6 +0.2
AGMN                                IAmb  IAmb   19 27 33.7
      comp=Z,7.6nm,0.8s
KNB   Kanab             57.71  71   P     P      19 27 36.1 +2.2
KNB                                 pmax  pmax
      comp=Z,6.0nm,0.9s
KNB   Kanab             57.71  71   P     P      19 27 36.1 +2.2
O20A  White River Ci    57.78  65   P     P      19 27 35.7 +1.4
      baz=318,SNR=14
O20A  White River Ci    57.78  65   P     P      19 27 35.5 +1.2
GMRC  Granite Mounta    57.85  74   P     P      19 27 36.4 +1.5
      baz=319,SNR=8.5
MURC  Murrieta          57.91  76   P     P      19 27 36.5 +1.4
      baz=319
FIA1  FINESS Array S    58.07 337   P     P      19 27 35.1 -0.7
FINES FINESS Array B    58.07 337   P     P      19 27 35.0 -0.8
      comp=Z,11nm,0.5s,baz=37,slow=8.0,SNR=107
FINES FINESS Array B    58.07 337   P     P      19 27 35.0 -0.8
FINES FINESS Array B    58.07 337   P     P      19 27 34.6 -1.1
BELC  Belle Mtn. Jos    58.26  75   P     P      19 27 39.2 +1.5
      baz=319
PFO   Pinyon Flats O    58.30  76⇑eP     P      19 27 37.9 -0.1
PFO                                 pmax  pmax
      comp=Z,7.0nm,0.9s
PFO   Pinyon Flats O    58.30  76   P     P      19 27 39.0 +1.0
      baz=319
TPFO  Pinon Flats       58.31  76   P     P      19 27 38.9 +0.9
      baz=319
N23A  Red Feather La    58.38  63   P     P      19 27 39.6 +1.0
      baz=319,SNR=13
N23A  Red Feather La    58.38  63   P     P      19 27 39.8 +1.2
B35A  Bob, Littlefor    58.44  49   P     P      19 27 39.0 +0.4
U15A  North Rim         58.44  71   P     P      19 27 40.7 +1.6
U15A                                IAmb  IAmb   19 27 41.9
      comp=Z,6.3nm,0.9s
IRM   Iron Mountain     58.61  74   P     P      19 27 41.6 +1.6
      baz=319,SNR=8.5
PV23  Carpenter Ridg    58.64  67   P     P      19 27 41.6 +1.2
PV14  Lion Creek, Pa    58.70  67   P     P      19 27 42.1 +1.3
PV22  Blue Mesa, Par    58.70  67   P     P      19 27 42.0 +1.3
PV04  Paradox Valley    58.74  67   P     P      19 27 42.3 +1.2
PV19  Morning Glory     58.76  67   P     P      19 27 42.6 +1.3
PV16  Nyswonger Mesa    58.80  67   P     P      19 27 42.8 +1.3
PV17  East Wray Mesa    58.80  67   P     P      19 27 43.2 +1.7
BC3   Big Chuckawall    58.82  75   P     P      19 27 42.8 +1.2
      baz=319
PV11  David Mesa, Pa    58.83  67   P     P      19 27 43.1 +1.4
PV07  Paradox Valley    58.84  67   P     P      19 27 43.3 +1.5
PV18  Skein Mesa, Pa    58.85  67   P     P      19 27 43.3 +1.5
PV12  Saucer Basin,     58.85  67   P     P      19 27 43.0 +1.1
MONP2 Monument Peak     58.86  76   P     P      19 27 43.4 +1.4
      baz=319
PV03  Paradox Valley    58.88  67   P     P      19 27 43.3 +1.2
PV05  Paradox Valley    58.88  67   P     P      19 27 43.6 +1.5
PV13  Radium Mtn., P    58.96  67   P     P      19 27 43.9 +1.3
PV02  Paradox Valley    58.97  67   P     P      19 27 43.7 +1.0
PV15  Paradox Valley    59.00  67   P     P      19 27 44.3 +1.3
PDMCI Parker Dam,Lak    59.04  74   P     P      19 27 44.2 +1.3
      baz=319
SMCO  Snowmass          59.15  65   P     P      19 27 45.4 +1.2
CBX   Cerro Bola        59.17  77   P     P      19 27 45.2 +1.2
IKP   In-Ko-Pah, Jac    59.22  76   P     P      19 27 45.7 +1.4
      baz=320
F33A  5 Mile Ranch,     59.24  53   P     P      19 27 44.6 +0.4
ISCO  Idaho Springs     59.37  63   P     P      19 27 47.0 +1.5
ISCO                                pmax  pmax
      comp=Z,9.0nm,1.0s
ISCO  Idaho Springs     59.37  63   P     P      19 27 46.9 +1.3
      baz=319,SNR=11
ISCO  Idaho Springs     59.37  63   P     P      19 27 47.0 +1.5
ISCO                                IAmb  IAmb   19 27 48.5
      comp=Z,9.2nm,0.9s
BELG  Belogornoye       59.41 320⇑eP     P      19 27 45.2 +0.1
BELG                                pmax  pmax
      comp=Z,1.0nm,0.9s
BELG                                MLR   MLR
      comp=Z,24nm,11.0s
WUAZ  Wupatki           59.61  71   P     P      19 27 48.3 +1.3
      baz=319,SNR=7.5
WUAZ  Wupatki           59.61  71   P     P      19 27 48.8 +1.7
GLA   Glamis            59.62  75   P     P      19 27 48.6 +1.6
GLA                                 pmax  pmax
      comp=Z,12nm,0.9s
GLA   Glamis            59.62  75   P     P      19 27 48.2 +1.2
      baz=320
GLA   Glamis            59.62  75   P     P      19 27 48.6 +1.6
EYMN  Ely               59.70  48   P     P      19 27 46.7 -0.6
      baz=321,SNR=7.0
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EYMN	Ely	59.70	48	P	P	19 27 47.2	-0.1
ESJX	Sierra Juarez	59.80	77	P	P	19 27 49.1	+0.7
ESJX				IAmb	IAmb	19 27 49.7	
	comp=Z,7.8nm,1.0s						
MVCO	Mesa Verde	59.84	67	P	P	19 27 50.0	+1.2
	baz=319						
MVCO	Mesa Verde	59.84	67	P	P	19 27 50.2	+1.4
MVCO				IAmb	IAmb	19 27 51.0	
	comp=Z,4.5nm,0.7s						
CMAR	Chiang Mai Arr	59.92	258	P	P	19 27 48.9	-0.3
	comp=Z,0.6nm,0.6s,baz=24,slow=7.4,SNR=6.1						
CMAR				PcP	PcP	19 28 34.1	-1.0
	comp=Z,1.3nm,0.6s,baz=8.9,slow=4.0,SNR=8.8						
CMAR				LR	LR	19 55 12.3	
	comp=Z,64nm,18.8s,baz=101,slow=38						
Q24A	Divide	60.24	64	P	P	19 27 52.3	+0.8
	baz=320						
OGNE	Ogallala	60.28	60	P	P	19 27 52.2	+0.7
	baz=320						
S22A	4UR Ranch, Cre	60.30	66	P	P	19 27 53.2	+1.2
	baz=320,SNR=12						
S22A	4UR Ranch, Cre	60.30	66	P	P	19 27 53.5	+1.5
S22A				IAmb	IAmb	19 27 54.9	
	comp=Z,9.7nm,0.9s						
113A	Mohawk Valley,	60.41	75	P	P	19 27 53.6	+1.3
113A				IAmb	IAmb	19 27 54.5	
	comp=Z,7.5nm,1.0s						
X16A	Lo Mia Camp, P	60.41	72	P	P	19 27 54.5	+1.9
X16A				IAmb	IAmb	19 27 55.5	
	comp=Z,6.8nm,0.9s						
ECSD	EROS Data Cent	60.71	55	P	P	19 27 54.7	+0.3
	baz=321,SNR=5.6						
ECSD	EROS Data Cent	60.71	55	P	P	19 27 54.8	+0.5
ECSD				IAmb	IAmb	19 27 55.3	
	comp=Z,5.9nm,0.8s						
E38A	The Farm, Brul	60.73	49	P	P	19 27 54.4	+0.1
OBN	Obninsk	60.84	328	⇓eP	P	19 27 56.0	+1.1
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SDCO	Great Sand Dun	60.98	65	P	P	19 27 58.0	+1.4
	baz=320,SNR=5.8						
SDCO	Great Sand Dun	60.98	65	P	P	19 27 58.1	+1.5
SDCO				IAmb	IAmb	19 27 59.0	
	comp=Z,6.9nm,0.9s						
X18A	Snowflake	61.12	70	P	P	19 27 59.0	+1.5
NB2	NORSAR Subarra	61.23	344	P	P	19 27 56.6	-1.0
	comp=Z,1.4nm,0.7s,baz=18,slow=6.9						
NOA	NORSAR Array B	61.23	344	P	P	19 27 56.6	-1.0
	comp=Z,2.3nm,0.7s,baz=18,slow=6.8,SNR=9.0						
KSCO	Kaye Shedlock'	61.47	62	P	P	19 28 00.6	+1.0
	baz=320						
214A	Organ Pipe Nat	61.55	74	P	P	19 28 01.6	+1.4
	baz=320,SNR=5.5						
214A	Organ Pipe Nat	61.55	74	P	P	19 28 01.5	+1.4
214A				IAmb	IAmb	19 28 02.6	
	comp=Z,10.0nm,1.0s						
HFS	Hagfors	61.69	343	P	P	19 27 59.3	-1.3
	comp=Z,2.5nm,0.5s,baz=49,slow=4.5,SNR=14						
BGNE	Belgrade	61.80	57	P	P	19 28 02.0	+0.3
	baz=321						
I37A	Lemond, Waseca	61.95	52	P	P	19 28 03.4	+0.7
T25A	Trinidad	62.01	65	P	P	19 28 04.6	+1.2
	baz=320						
T25A	Trinidad	62.01	65	P	P	19 28 04.6	+1.2
T25A				IAmb	IAmb	19 28 05.5	
	comp=Z,9.1nm,1.2s						
TUC	Tucson	62.37	73	P	P	19 28 07.2	+1.5
	baz=321						
ANMO	Albuquerque	62.64	68	⇓eP	P	19 28 08.7	+1.1
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ANMO	Albuquerque	62.64	68	P	P	19 28 08.7	+1.1
	baz=321						
ANMO	Albuquerque	62.64	68	P	P	19 28 08.8	+1.1
ANMO				IAmb	IAmb	19 28 09.9	
	comp=Z,5.4nm,0.8s						
LENM	Lemitar	62.97	69	P	P	19 28 12.0	+2.2
CBKS	Cedar Bluff	63.05	60	P	P	19 28 10.8	+0.7
	baz=321						
BNM	Barren Site	63.16	68	P	P	19 28 12.8	+1.6
121A	Cookes Peak, D	63.80	70	P	P	19 28 16.7	+1.4
	baz=321						
319A	Douglas	63.90	72	P	P	19 28 17.7	+1.8
319A				IAmb	IAmb	19 28 18.5	
	comp=Z,12nm,0.9s						
VLDQ	Val d'Or	65.06	40	P	P	19 28 21.3	-1.8
VLDQ				IAmb	IAmb	19 28 21.9	
	comp=Z,8.0nm,0.6s						
AMTX	Amarillo	65.15	64	P	P	19 28 24.8	+0.8
	baz=322						
MSTX	Muleshoe	65.31	66	P	P	19 28 25.8	+0.8
	baz=322						
MNTX	Cornudas Mount	65.73	69	P	P	19 28 28.9	+1.3
	baz=322,SNR=12						
MNTX	Cornudas Mount	65.73	69	P	P	19 28 28.7	+1.0
MNTX				IAmb	IAmb	19 28 30.0	
	comp=Z,12nm,1.0s						
P40A	Paris	66.13	54	P	P	19 28 30.3	+0.1
P40A				IAmb	IAmb	19 28 30.9	
	comp=Z,12nm,1.2s						
GEYT	Alibeck	66.60	303	P	P	19 28 32.7	-0.5
	comp=Z,0.6nm,0.4s,baz=98,slow=8.9,SNR=1.8						
ALGO	Algonquin Park	66.67	41	P	P	19 28 33.8	+0.4
	baz=328						
WMOK	Wichita Mounta	66.72	62	P	P	19 28 34.1	+0.1
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMOK	Wichita Mounta	66.72	62	P	P	19 28 34.4	+0.4
	baz=323,SNR=10						
WMOK	Wichita Mounta	66.72	62	P	P	19 28 34.1	+0.1
WMOK				IAmb	IAmb	19 28 35.4	
	comp=Z,9.1nm,0.9s						
AKASG	Malin Array Be	66.87	330	P	P	19 28 33.1	-1.5
	comp=Z,2.2nm,0.3s,baz=29,slow=6.8,SNR=16						
AKBB	Malin Array Si	66.87	330	P	P	19 28 33.3	-1.3
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKBB	Malin Array Si	66.87	330	P	P	19 28 33.3	-1.3
D56A	ZEC Mazanza, M	66.93	39	P	P	19 28 33.9	-1.2
	baz=329						
S39A	Bolivar	67.02	57	P	P	19 28 35.0	-0.8
R40A	Maddies Statio	67.03	55	P	P	19 28 35.2	-0.6
R40A				IAmb	IAmb	19 28 36.4	
	comp=Z,10nm,1.1s						
G54A	Lake Saint Pet	67.13	42	P	P	19 28 36.0	-0.4
	baz=328						
GOF	Gofitskoye	67.17	318	⇑eP	P	19 28 38.2	+1.5
E56A	St. Veronique	67.27	39	P	P	19 28 36.6	-0.6
	baz=329						
I51A	Listowel	67.34	44	P	P	19 28 37.1	-0.6
	baz=327						
D58A	Chemin du LacG	67.54	37	P	P	19 28 38.4	-0.6
	baz=330						
CCM	Cathedral Cave	67.69	55	P	P	19 28 40.0	-0.1
	baz=324						
TRQ	Mont Tremblant	67.71	39	P	P	19 28 39.4	-0.8
HHAR	Hobbs	67.86	58	P	P	19 28 40.5	-0.6
HHAR				IAmb	IAmb	19 28 41.5	
	comp=Z,14nm,1.1s						
MGMO	Mountain Grove	67.94	56	P	P	19 28 41.0	-0.7
MGMO				IAmb	IAmb	19 28 41.9	
	comp=Z,5.1nm,0.7s						
ABTX	Abilene, Hawle	67.97	64	P	P	19 28 42.0	+0.1
	baz=323						
ABTX	Abilene, Hawle	67.97	64	P	P	19 28 41.9	+0.1
ABTX				IAmb	IAmb	19 28 43.0	
	comp=Z,10nm,1.1s						
E58A	La Victoria	68.03	38	P	P	19 28 41.6	-0.4
	baz=330						
FVM	French Village	68.12	54	P	P	19 28 42.6	-0.2
FVM				pmax	pmax		
	comp=Z,13nm,1.3s						
FVM	French Village	68.12	54	P	P	19 28 42.5	-0.2
FVM				IAmb	IAmb	19 28 43.4	
	comp=Z,13nm,1.2s						
KIV	Kislovodsk	68.24	317	eP	P	19 28 43.3	-0.3
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
U40A	Yellville	68.31	57	P	P	19 28 43.4	-0.6
	baz=324						
U40A	Yellville	68.31	57	P	P	19 28 43.7	-0.3
U40A				IAmb	IAmb	19 28 44.4	
	comp=Z,9.6nm,1.1s						
D61A	St Aubert, Com	68.35	36	P	P	19 28 43.3	-0.7
	baz=331						
D60A	Saint Jean D'O	68.36	36	P	P	19 28 43.7	-0.3
	baz=331						
TX31	Lajitas Ar. Si	68.50	69	P	P	19 28 46.2	+0.9
TX32	Lajitas Array	68.50	69	P	P	19 28 46.4	+1.1
TX32				IAmb	IAmb	19 28 47.3	
	comp=Z,8.4nm,0.8s						
TXAR	Lajitas Array	68.50	69	P	P	19 28 46.4	+1.1
	comp=Z,7.3nm,0.7s,baz=296,slow=4.5,SNR=55						
TXAR	Lajitas Array	68.50	69	P	P	19 28 46.2	+0.9
G57A	Newington	68.52	40	P	P	19 28 43.9	-1.2
	baz=330						
EKA	Eskdalemuir Ar	68.54	351	P	P	19 28 43.5	-1.5
	comp=Z,2.3nm,0.7s,baz=19,slow=5.2,SNR=8.5						
F59A	Saint Guilaume	68.65	38	P	P	19 28 45.2	-0.7
	baz=330						
E60A	Ste Agathe de	68.66	37	P	P	19 28 45.4	-0.6
	baz=331						
W39A	Magazine	68.81	58	P	P	19 28 47.0	0.0
	baz=324						
F60A	Warwick	68.84	37	P	P	19 28 47.7	+0.7
	baz=331						
FCAR	Ozark Folk Cen	69.03	57	P	P	19 28 48.1	-0.4
F61A	St Evariste	69.16	37	P	P	19 28 49.5	+0.4
	baz=331						
L53A	Girard	69.20	45	P	P	19 28 48.8	-0.6
	baz=328						
H58A	Gabriels	69.40	40	P	P	19 28 49.7	-1.0
	baz=330						
SORM	Soroca	69.42	329	⇑P	P	19 28 49.4	-1.2
MIAR	Mount Ida	69.43	59	P	P	19 28 51.5	+0.5
MIAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MIAR	Mount Ida	69.43	59	P	P	19 28 51.0	+0.1
	baz=324						
MIAR	Mount Ida	69.43	59	P	P	19 28 51.5	+0.5
WHAR	Wooly Hollow	69.44	57	P	P	19 28 51.1	+0.1
WHAR				IAmb	IAmb	19 28 51.7	
	comp=Z,5.8nm,0.8s						
M53A	WI Miller and	69.47	46	P	P	19 28 50.4	-0.7
	baz=328						
M53A	WI Miller and	69.47	46	P	P	19 28 50.7	-0.4
M53A				IAmb	IAmb	19 28 50.8	
	comp=Z,8.3nm,0.7s						
ACSO	Alum Creek Sta	69.53	48	P	P	19 28 51.4	-0.1
	baz=327						
W41B	Gary Mavity, V	69.56	57	P	P	19 28 51.5	-0.2
	baz=325						
W41B	Gary Mavity, V	69.56	57	P	P	19 28 51.9	+0.1
W41B				IAmb	IAmb	19 28 52.7	
	comp=Z,12nm,1.1s						
JCT	Junction City	69.60	66	P	P	19 28 52.5	+0.4
JCT				pmax	pmax		
	comp=Z,11nm,0.9s						
JCT	Junction City	69.60	66	P	P	19 28 52.2	+0.1
	baz=324,SNR=5.4						
JCT	Junction City	69.60	66	P	P	19 28 52.5	+0.4
JCT				IAmb	IAmb	19 28 53.7	
	comp=Z,11nm,0.8s						
KWP	Kalwaria Pacla	69.60	333	P	P	19 28 51.7	-0.1
KWP				pmax	pmax		
	comp=Z,14nm,1.0s						
KWP	Kalwaria Pacla	69.60	333	P	P	19 28 51.7	-0.1
KWP				IAmb	IAmb	19 28 52.5	
	comp=Z,14nm,1.0s						
K56A	Middlesex	69.72	43	P	P	19 28 52.0	-0.6
	baz=329						
I58A	Old Forge	69.74	40	P	P	19 28 52.3	-0.5
	baz=330						
OJC	Ojcow	69.77	335	P	P	19 28 52.7	-0.1
OJC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
OJC	Ojcow	69.77	335	P	P	19 28 52.7	-0.1
OJC				IAmb	IAmb	19 28 52.9	
	comp=Z,6.2nm,0.6s						
M54A	Oil Creek Stat	69.81	45	P	P	19 28 52.2	-1.1
	baz=328						
X40A	Basin Creek Fa	69.84	58	P	P	19 28 53.0	-0.5
	baz=325						
J58A	Remsen	69.91	41	P	P	19 28 52.8	-1.1
	baz=330						
K57A	Scipio Center	69.99	42	P	P	19 28 53.7	-0.6
	baz=329						
H61A	Lyndonville	70.10	38	P	P	19 28 54.0	-0.9
	baz=331						
L56A	Greenwood	70.11	43	P	P	19 28 54.2	-0.9
	baz=329						
L56A	Greenwood	70.11	43	P	P	19 28 54.3	-0.7
L56A				IAmb	IAmb	19 28 54.4	
	comp=Z,5.8nm,0.6s						
CLL	Collm	70.20	340	eP	P	19 28 55.0	-0.4
CLL	Collm	70.20	340	eP	P	19 28 55.0	-0.4
I60A	Shoreham	70.22	39	P	P	19 28 55.7	+0.1
	baz=331						
OSTC	Ostas	70.26	338	eP	P	19 28 55.6	-0.2
CHVC	Chvalec	70.26	338	eP	P	19 28 55.7	-0.1
KOLS	Kolonicke sedl	70.35	333	eP	P	19 28 56.0	-0.4
KOLS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KOLS	Kolonicke sedl	70.35	333	eP	P	19 28 56.0	-0.4
G63A	Kingsbury	70.37	36	P	P	19 28 56.8	+0.2
	baz=332						
P52A	Corning	70.39	48	P	P	19 28 56.5	-0.3
	baz=328						
M56A	Emporium	70.42	44	P	P	19 28 56.4	-0.6
	baz=329						
DPC	Dobruska-Polom	70.43	338	eP	P	19 28 56.3	-0.6
DPC	Dobruska-Polom	70.43	338	eP	P	19 28 56.3	-0.6
L57A	Andrews Acres	70.49	43	P	P	19 28 57.2	-0.2
	baz=329						
G64A	Maxfield	70.54	36	P	P	19 28 58.0	+0.5
	baz=332						
CRVS	Cervenica-Dubn	70.59	334	eP	P	19 28 57.5	-0.3
CRVS	Cervenica-Dubn	70.59	334	eP	P	19 28 57.5	-0.3
KRLC	Kraliky	70.59	337	eP	P	19 28 57.5	-0.4
KRLC	Kraliky	70.59	337	eP	P	19 28 57.5	-0.4
MORC	Moravsky Berou	70.70	337	⇑P	P	19 28 58.0	-0.6
MORC	Moravsky Berou	70.70	337	P	P	19 28 58.1	-0.4
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MORC	Moravsky Berou	70.70	337	P	P	19 28 58.1	-0.4
BUR08	Bucovina Ar. S	70.76	331	P	P	19 28 58.5	-0.6
BURAR	Bucovina Array	70.78	331	⇓P	P	19 28 58.1	-1.0
BURAR	Bucovina Array	70.78	331	P	P	19 28 58.4	-0.7
WVT	Waverly	70.83	54	P	P	19 28 59.9	+0.4
WVT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WVT	Waverly	70.83	54	P	P	19 28 59.7	+0.2
	baz=326						
WVT	Waverly	70.83	54	P	P	19 28 59.9	+0.4
LANS	Liptovska Anna	70.84	335	eP	P	19 29 00.0	+0.6
LANS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LANS	Liptovska Anna	70.84	335	eP	P	19 29 00.0	+0.6
J61A	Chester	70.91	39	P	P	19 29 01.0	+1.1
	baz=331						
I63A	Otisfield	70.98	37	P	P	19 28 59.3	-1.0
	baz=332						
L59A	Walton	71.01	41	P	P	19 28 59.3	-1.3
	baz=330						
GIRR	Girov	71.02	330	⇑P	P	19 28 59.5	-1.0
PRU	Pruhonice	71.15	339	eP	P	19 29 01.0	-0.2
PRU	Pruhonice	71.15	339	eP	P	19 29 01.0	-0.2
M58A	Price's Panora	71.18	43	P	P	19 29 00.5	-1.1
	baz=330						
J62A	Henniker	71.28	39	P	P	19 28 59.8	-2.3
	baz=331						
N57A	Milroy	71.29	44	P	P	19 29 00.8	-1.4
	baz=329						
Q53A	Leroy	71.30	48	P	P	19 29 01.7	-0.6
	baz=328						
O56A	Blue Knob Stat	71.31	45	P	P	19 29 01.3	-1.1
	baz=329						
VRAC	Vranov	71.35	337	P	P	19 29 02.6	+0.1
	comp=Z,3.5nm,0.4s,baz=33,slow=13,SNR=7.5						
TESR	Tescani	71.39	329	⇑P	P	19 29 01.8	-0.9
M59A	Waymart	71.43	42	P	P	19 29 02.2	-0.9
	baz=330						
OXF	Oxford	71.44	56	P	P	19 29 02.8	-0.3
	baz=326						
CLTN	Cedars of Leba	71.54	53	P	P	19 29 04.0	+0.2
VYHS	Vyhne	71.61	335	eP	P	19 29 04.0	0.0
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VYHS	Vyhne	71.61	335	eP	P	19 29 04.0	0.0
PLAL	Pickwick Lake	71.67	54	P	P	19 29 03.6	-0.9
PLAL				IAmb	IAmb	19 29 05.2	
	comp=Z,6.5nm,0.8s						
O57A	Amberson	71.72	44	P	P	19 29 04.3	-0.6
	baz=329						
P56A	Dayton Farm, R	71.85	45	P	P	19 29 05.6	0.0
	baz=329						
R54A	Victor	72.09	48	P	P	19 29 07.0	-0.2
	baz=328						
N60A	Cedar Hill Far	72.13	42	P	P	19 29 06.8	-0.4
	baz=330						
KHC	Kasperske Hory	72.16	339	⇑eP	P	19 29 07.2	-0.1
KHC				pmax	pmax		
	comp=Z,13nm,2.5s						
KHC	Kasperske Hory	72.16	339	eP	P	19 29 07.3	-0.1
DRGR		72.22	332	⇑P	P	19 29 07.3	-0.5
DRGR		72.22	332	P	P	19 29 07.3	-0.5
DOPR	Dopca	72.24	330	⇑P	P	19 29 08.0	+0.1
M61A	Granite Spring	72.25	41	P	P	19 29 06.9	-1.1
	baz=331						
ZST	Bratislava	72.29	336	eP	P	19 29 08.8	+0.7
ZST	Bratislava	72.29	336	eP	P	19 29 08.8	+0.7
TPGR	Topolog	72.36	327	⇓P	P	19 29 08.2	-0.4
TZTN	Tazewell	72.39	50	P	P	19 29 08.5	-0.4
	baz=328						
GERES	GERESS Array B	72.41	339	P	P	19 29 08.4	-0.5
	comp=Z,1.2nm,0.5s,baz=28,slow=6.0,SNR=9.8						
GERES	GERESS Array B	72.41	339	P	P	19 29 08.6	-0.3
GERES	GERESS Array B	72.41	339	P	P	19 29 08.6	-0.3
SWET	Sewanee	72.44	53	P	P	19 29 08.9	-0.3
SWET				IAmb	IAmb	19 29 09.3	
	comp=Z,6.6nm,0.6s						
P58A	Pank, Wackersv	72.47	44	P	P	19 29 08.8	-0.5
	baz=330						
MLR	Muntele Rosu	72.52	329	⇑P	P	19 29 09.8	+0.1
MLR	Muntele Rosu	72.52	329	P	P	19 29 10.1	+0.4
MLR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MLR	Muntele Rosu	72.52	329	P	P	19 29 10.1	+0.4
MLR				IAmb	IAmb	19 29 11.9	
	comp=Z,7.4nm,1.1s						
R56A	Bull Pasture M	72.56	46	P	P	19 29 09.4	-0.5
	baz=329						
V51A	Loudon	72.66	51	P	P	19 29 10.3	-0.2
V51A				IAmb	IAmb	19 29 10.9	
	comp=Z,10nm,1.0s						
Q58A	Fox Den Farm,	72.79	45	P	P	19 29 10.9	-0.4
	baz=329						
VOIR		72.82	330	⇑P	P	19 29 11.1	-0.3
ARR	Arges	73.00	330	⇓P	P	19 29 12.5	0.0
TKL	Tuckaleechee C	73.03	51	P	P	19 29 12.4	-0.3
	comp=Z,0.8nm,0.3s,baz=288,slow=3.2,SNR=1.7						
U54A	Nelsons Funny	73.15	49	P	P	19 29 13.5	0.0
	baz=328						
FPAL	Fort Paine	73.15	53	P	P	19 29 13.2	-0.3
FPAL				IAmb	IAmb	19 29 14.0	
	comp=Z,7.7nm,1.0s						
R58A	Rapidan	73.22	45	P	P	19 29 14.0	+0.2
	baz=329						
S57A	Dark Hollow, R	73.29	46	P	P	19 29 13.8	-0.4
	baz=329						
GZR	Gura Zlata	73.49	331	⇓P	P	19 29 14.4	-0.9
BZS	Buzias	73.59	332	⇓P	P	19 29 14.7	-1.2
LRAL	Lakeview Retre	73.78	55	P	P	19 29 16.8	-0.3
	baz=327						
LRAL	Lakeview Retre	73.78	55	P	P	19 29 16.6	-0.5
LRAL				IAmb	IAmb	19 29 17.1	
	comp=Z,5.6nm,0.6s						
HERR	Herculane	74.06	331	⇓P	P	19 29 17.5	-1.1
T58A	Grand View Acr	74.16	47	P	P	19 29 18.9	-0.4
	baz=329						
SOKA	Soboth	74.18	337	eP	P	19 29 19.3	0.0
	comp=Z,1.5nm,0.4s						
U57A	Blanch	74.27	47	P	P	19 29 19.8	-0.1
	baz=329						
V56A	Mocksville	74.32	49	P	P	19 29 20.0	-0.2
	baz=329						
OBKA	Obir	74.45	337	eP	P	19 29 21.0	0.0
	comp=Z,2.0nm,0.4s						
SQTA	Sankt Quirin	74.45	340	i P	P	19 29 21.2	+0.1
	comp=Z,1.1nm,0.3s						
KMSC	Kings Mountain	74.53	50	P	P	19 29 21.0	-0.4
	baz=329						
ABTA	Abfaltersbach	74.65	339	eP	P	19 29 21.9	-0.2
	comp=Z,1.6nm,0.5s						
FETA	Feichten	74.74	340	eP	P	19 29 22.7	0.0
	comp=Z,3.2nm,0.8s						
W56A	Indian Trail	74.86	49	P	P	19 29 23.0	-0.4
	baz=329						
V58A	Windy Hill, Pi	74.91	48	P	P	19 29 23.4	-0.3
	baz=329						
W57A	Gilead	75.09	49	P	P	19 29 24.3	-0.4
	baz=329						
W57A	Gilead	75.09	49	P	P	19 29 24.5	-0.1
W57A				IAmb	IAmb	19 29 25.0	
	comp=Z,17nm,1.4s						
DAVOX	Davos/Dischmat	75.13	341	P	P	19 29 23.8	-1.2
	comp=Z,3.0nm,0.8s,baz=7.1,slow=5.3,SNR=4.5						
BRTR	Keskin Array B	75.25	321	P	P	19 29 24.8	-1.0
	comp=Z,0.9nm,0.7s,baz=85,slow=3.2,SNR=3.0						
V59A	Middlesex	75.30	47	P	P	19 29 25.9	+0.1
	baz=330						
VTS	Vitosha	75.93	330	⇑P	P	19 29 28.3	-1.3
W60A	Pink Hill	76.13	47	P	P	19 29 30.8	+0.1
	baz=330						
Z59A	Georgetown, SC	77.03	49	P	P	19 29 36.1	+0.3
	baz=330						
NRCA	Norcia	78.26	337	P	P	19 29 42.2	-0.4
WRA	Warramunga Arr	79.08	207	P	P	19 29 46.4	-0.7
	comp=Z,2.5nm,1.0s,baz=16,slow=6.0,SNR=8.3						
WRA	Warramunga Arr	79.08	207	i P	P	19 29 47.5	+0.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	79.08	207	P	P	19 29 45.3	-1.8
AS31	Alice Springs	82.76	206	P	P	19 30 04.8	-1.8
ASAR	Alice Springs	82.76	206	P	P	19 30 06.3	-0.3
	comp=Z,3.3nm,0.9s,baz=12,slow=4.4,SNR=18						
ESDC	Sonseca Array	84.12	349	P	P	19 30 12.3	-1.4
	comp=Z,1.6nm,0.8s,baz=360,slow=4.5,SNR=7.2						
RAYN	Ar Rayn	84.53	305	P	P	19 30 14.1	-1.9
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RAYN	Ar Rayn	84.53	305	P	P	19 30 14.1	-1.9
KEST	Kesra	85.88	338	P	P	19 30 21.9	-0.8
	comp=Z,2.0nm,0.5s,baz=2.3,slow=0.9,SNR=12						
KEST	Kesra	85.88	338	P	P	19 30 21.9	-0.8
KEST				IAmb	IAmb	19 30 25.3	
	comp=Z,8.4nm,1.1s						

REY ***21*** *19:21:14.9, 64.°66N×17.°37W, h11km*

IDC ***21*** *19:21:15.7±0.6, 64.°55N×17.°55W, h0km, mb3.8/17, mb1 4.0/21, mb1mx3.9/43, mbtmp3.8/21, ML2.6/3, MS3.6/2, Ms1 3.6/2, ms1mx2.9/53, Error ellipse: s-maj=21.0km s-min=8.9km az=15.0*

NEIC ***21*** *19:21:16.6±2.5, 64.°50N±0.°06×17.°7W±0.°2, h8km±5km, mb4.5/33, Error ellipse: s-maj=13.4km s-min=3.4km az=49.0*

ISC 21 19:21:16.7±0.4, **64.°62N**±0.°02×**17.°44W**±0.°03, **h10**km, **n110,** σ**2.s28**/120, **mb4.0**/28, **1C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDJK	Dyngjujokull	0.15	144	P	Pg	19 21 18.5	-1.7
	baz=159						
IDJK				S	Sg	19 21 22.0	-0.6
	baz=159						
IDYN	Dyngjuhals	0.17	11	P	Pg	19 21 17.6	-2.8
	baz=1.7						
IDYN				S	Sg	19 21 20.3	-2.8
	baz=1.7						
IGRF	Grimsfjall	0.23	161	P	Pg	19 21 19.9	-1.7
	baz=170						
IURH	Urdarhals	0.23	33	P	Pg	19 21 18.8	-2.8
	baz=31						
IURH				S	Sg	19 21 22.6	-2.2
	baz=31						
IKVE	Kverkfjoll	0.33	80	P	Pg	19 21 21.0	-2.4
	baz=86						
IHUS	Husbondi	0.34	196	P	Pg	19 21 22.1	-1.5
	baz=199						
ISKR	Skrokkalda	0.41	261	P	Pg	19 21 23.4	-1.4
	baz=258						
ISKR				S	Sb	19 21 30.9	-1.5
	baz=258						
THOR	Thorvaldshraun	0.45	46	P	Pg	19 21 22.5	-3.1
	baz=47						
THOR				S	Sg	19 21 29.7	-1.8

	baz=47						
IJOK	Jokulheimar	0.46	228	P	Pg	19 21 23.8	-1.9
	baz=227						
IKRE	Kreppuhraun	0.48	70	P	Pg	19 21 22.9	-3.2
	baz=73						
IKRE				S	Sg	19 21 29.6	-2.9
	baz=73						
IASK	Askja	0.55	38	P	Pg	19 21 24.3	-3.1
	baz=38						
IASK				S	Sg	19 21 29.3	-5.2
	baz=38						
IMKO	Mokollar	0.59	53	P	Pg	19 21 24.9	-3.3
	baz=54						
IMKO				S	Sg	19 21 33.5	-2.4
	baz=54						
IIEY	Innrieyrar	0.61	210	P	Pg	19 21 26.6	-1.8
	baz=210						
IIEY				S	Sb	19 21 35.1	-2.9
	baz=210						
IKSK	Karasker	0.63	137	P	Pg	19 21 25.7	-3.1
	baz=142						
IKSK				S	Sg	19 21 35.0	-2.1
	baz=142						
IKAL	Kalfafell	0.69	189	P	Pg	19 21 27.7	-2.3
	baz=191						
IKAL				S	Sb	19 21 37.8	-2.5
	baz=191						
ISVA	Svartarkot	0.72	6	P	Pg	19 21 27.0	-3.5
	baz=4.3						
ISVA				S	Sg	19 21 36.6	-3.4
	baz=4.3						
IVSH	V-Sauoahnukur	0.76	75	P	Pg	19 21 27.4	-3.9
	baz=77						
IVSH				S	Sg	19 21 37.8	-3.4
	baz=77						
IFAG	Fagurholsmyri	0.83	155	P	Pg	19 21 29.9	-2.7
	baz=158						
IFAG				S	Sg	19 21 41.7	-1.7
	baz=158						
IHVE	Hveravellir	0.94	286	P	Pg	19 21 31.5	-3.4
	baz=284						
IMEL	Melhnausar	1.01	19	P	Pb	19 21 31.7	-4.5
	baz=18						
IMEL				S	Sg	19 21 46.8	-2.3
	baz=18						
IREN	Reynihlio	1.05	12	P	Pb	19 21 32.4	-4.5
	baz=11						
IREN				S	Sb	19 21 47.0	-3.8
	baz=11						
IKVO	Krokottuvotn	1.12	12	P	Pb	19 21 33.6	-4.5
	baz=11						
IKVO				S	Sb	19 21 49.5	-3.3
	baz=11						
IRJU	Rjupnafell	1.15	209	P	Pg	19 21 35.6	-3.0
	baz=209						
IRJU				S	Sn	19 21 51.8	-2.6
	baz=209						
IFED	Fedgar	1.15	239	P	Pg	19 21 35.8	-2.9
	baz=239						
IGRS	Grimsstaoir	1.16	28	P	Pn	19 21 34.1	-4.8
	baz=28						
IGRS				S	Sb	19 21 50.4	-3.5
	baz=28						
IMJO	Mjoaskard	1.20	236	P	Pb	19 21 36.8	-2.6
	baz=235						
IGYG	Gygjarholskot	1.25	255	P	Pb	19 21 36.9	-3.4
	baz=254						
ISKI	Skildingahlsh	1.26	8	P	Pn	19 21 35.8	-4.6
	baz=6.7						
ISKI				S	Sb	19 21 52.4	-4.5
	baz=6.7						
IHVO	Lagu-Hvolar	1.26	210	P	Pb	19 21 37.8	-2.7
	baz=210						
IGHA	Grjothals	1.27	15	P	Pn	19 21 35.8	-4.7
	baz=14						
IHAU	Haukadalur	1.28	240	P	Pb	19 21 38.1	-2.7
	baz=240						
IDIM	Dimmadalss	1.36	9	P	Pn	19 21 37.4	-4.3
	baz=7.9						
IALF	Alftagrof	1.37	215	P	Pn	19 21 39.1	-2.8
	baz=215						
IHLA	Hella	1.38	344	P	Pn	19 21 38.2	-3.8
	baz=342						
BORG	Borgarnes	1.68	276	Pg	Pn	19 21 43.8	-2.2
	16nm,0.3s,baz=99,slow=7.2,SNR=60						
BORG				Lg	Lg	19 22 08.2	
	11nm,0.3s,baz=236,slow=22,SNR=12						
BORG	Borgarnes	1.68	276	Pn	Pn	19 21 44.0	-2.0
SCO	Scoresbysund	6.13	346	Pn	Pn	19 22 48.4	+1.3
SCO	Scoresbysund	6.13	346	e	Pn	19 22 41.4	-5.7
	baz=157,slow=8.6						
SCO				i P	Pn	19 22 47.0	-0.2
SCO				i S	Sn	19 24 06.1	+8.9
SCO				IAML		19 24 15.4	
	comp=Z,0.9nm,0.5s						
EKA	Eskdalemuir Ar	11.71	136	Pn	Pn	19 24 03.4	-0.2
	baz=321,slow=13,SNR=10						
DAG	Danmarks Havn	12.22	359	i P	Pn	19 24 14.3	+3.9
DAG	Danmarks Havn	12.22	359	eP	Pn	19 24 14.3	+3.9
NOA	NORSAR Array B	13.51	92	Pn	Pn	19 24 26.1	-2.0
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.6						
SFJD	Kangerlussuaq	13.71	295	LR	LR	19 29 30.3	
	comp=Z,165nm,21.9s,baz=96,slow=36						
HFS	Hagfors	15.02	93	Pn	Pn	19 24 48.3	-0.3
	comp=Z,0.1nm,0.3s,baz=334,slow=9.6,SNR=2.2						
FINES	FINESS Array B	19.69	79	P	P	19 25 46.5	+0.9
	comp=Z,0.1nm,0.3s,baz=302,slow=7.9,SNR=2.6						
CLL	Collm	20.66	116	eP	Pn	19 25 58.0	-0.6
CLL	Collm	20.66	116	P	P	19 25 57.6	+1.3
BRG	Berggiesshubel	21.37	115	eP	P	19 26 04.6	+0.7
BRG				Amp		19 26 07.3	
	comp=Z,12nm,1.2s						
BRG	Berggiesshubel	21.37	115	eP	P	19 26 04.6	+0.7
BRG				Amp		19 26 07.3	
	comp=Z,12nm,1.2s						
CHVC	Chvalec	22.43	113	eP	P	19 26 17.9	+2.6
KHC	Kasperske Hory	22.63	118	eP	P	19 26 20.9	+3.4
KHC	Kasperske Hory	22.63	118	P	P	19 26 19.4	+1.9
KHC				IAmb	IAmb	19 26 31.0	
	comp=Z,29nm,2.0s						
DPC	Dobruska-Polom	22.72	113	eP	P	19 26 21.3	+2.9
GEC2	GERESS Array S	22.91	119	P	P	19 26 21.9	+1.4
GEC2				IAmb	IAmb	19 26 41.5	
	comp=Z,23nm,1.7s						
GERES	GERESS Array B	22.91	119	P	P	19 26 22.1	+1.5
	comp=Z,1.0nm,0.8s,baz=311,slow=6.9,SNR=7.1						
GERES	GERESS Array B	22.91	119	P	P	19 26 21.5	+1.0
KRLC	Kraliky	23.12	113	eP	P	19 26 29.2	+6.6
VRAC	Vranov	23.65	114	P	P	19 26 26.7	-1.2
	comp=Z,2.1nm,0.7s,baz=300,slow=10,SNR=3.8						
KWP	Kalwaria Pacla	25.87	106	P	P	19 26 50.2	+2.0
PSZ	Piszkesteto	26.08	112	P	P	19 26 52.1	+1.9
PSZ				IAmb	IAmb	19 26 54.1	
	comp=Z,12nm,1.1s						
ESDC	Sonseca Array	26.20	156	P	P	19 26 53.1	+1.8
	comp=Z,1.4nm,1.1s,baz=350,slow=11,SNR=4.3						
AKASG	Malin Array Be	27.81	98	P	P	19 27 05.9	+0.3
	comp=Z,0.4nm,0.5s,baz=324,slow=9.9,SNR=2.6						
BRTR	Keskin Array B	38.45	105	P	P	19 28 39.9	+1.5
	comp=Z,1.5nm,1.0s,baz=313,slow=5.1,SNR=4.5						
KBZ	Khabaz	39.09	92	P	P	19 28 44.4	+0.9
	comp=Z,2.5nm,0.8s,baz=325,slow=7.7,SNR=12						
KBZ	Khabaz	39.09	92⇑	eP	P	19 28 44.7	+1.2
KBZ	Khabaz	39.09	92	pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	39.26	313	P	P	19 28 45.0	+0.2
	comp=Z,1.8nm,1.0s,baz=46,slow=8.5,SNR=11						
YKA				PcP	PcP	19 30 54.5	+1.2
	comp=Z,0.2nm,0.7s,baz=61,slow=5.7,SNR=4.5						
INK	Inuvik	39.89	329	P	P	19 28 52.1	+2.1
	comp=Z,3.2nm,1.1s,baz=50,slow=9.2,SNR=4.7						
INK	Inuvik	39.89	329	P	P	19 28 51.9	+1.9
TIXI	Tiksi	42.07	15	P	P	19 29 09.6	+1.8
ILAR	Eielson Array	45.73	332	P	P	19 29 39.6	+2.2
	comp=Z,2.7nm,1.1s,baz=23,slow=5.6,SNR=14						
ILAR				PcP	PcP	19 31 16.0	+1.1
	comp=Z,1.1nm,1.0s,baz=345,slow=2.8,SNR=5.1						
ILAR	Eielson Array	45.73	332	P	P	19 29 39.0	+1.6
ILAR				PcP	PcP	19 31 15.5	+0.7
COLA	College	45.83	333	P	P	19 29 39.6	+1.4
IMAR	Indian Mountai	45.91	337	P	P	19 29 40.7	+2.0
DOT	Dot Lake	46.14	330	P	P	19 29 40.8	+0.1
BCAR	Beaver Creek A	46.16	329	P	P	19 29 40.5	-0.3
ZALV	Zalesovo Beam	47.64	51	P	P	19 29 52.4	0.0
	comp=Z,0.4nm,0.4s,baz=321,slow=13,SNR=3.9						
ZALV				PcP	PcP	19 31 23.0	+1.3
	comp=Z,0.4nm,0.3s,baz=132,slow=2.2,SNR=3.6						
ZALV	Zalesovo Beam	47.64	51	P	P	19 29 53.3	+0.9
ZALV					PcP	19 31 22.8	+1.1
KURK	Kurchatov	48.11	58	P	P	19 29 56.3	+0.2
KURK				IAmb	IAmb	19 29 58.5	
	comp=Z,5.7nm,0.9s						
EGMT	Eagleton	48.92	297	P	P	19 30 02.3	-0.1
SUA	Susitna One	49.49	333	P	P	19 30 06.1	-0.5
GEYT	Alibeck	50.41	84	P	P	19 30 16.5	+2.7
	comp=Z,0.8nm,0.4s,baz=357,slow=15,SNR=2.3						
GEYT	Alibeck	50.41	84	P	P	19 30 14.2	+0.3
RLMT	Red Lodge	51.13	295	P	P	19 30 19.3	-0.2
RLMT				IAmb	IAmb	19 30 23.9	
	comp=Z,7.9nm,1.4s						
KK07	Karatay Array	51.27	70	P	P	19 30 20.1	-0.2
YNE	Yellowstone No	51.51	295	P	P	19 30 23.8	+1.4
BOZ	Bozeman (W)	51.65	297	P	P	19 30 24.6	+1.3
BOZ				IAmb	IAmb	19 30 28.1	
	comp=Z,8.7nm,1.3s						
YMP	Mirror Lake Pl	51.79	295	P	P	19 30 22.6	-2.0
H17A	Grant Village	52.25	295	P	P	19 30 27.2	-0.7
MAKZ	Makanchi	52.60	59	P	P	19 30 30.6	+0.4
MK31	Makanchi Array	52.73	58	P	P	19 30 31.2	+0.1
MKAR	Makanchi Array	52.73	58	P	P	19 30 31.4	+0.3
	comp=Z,1.4nm,0.9s,baz=337,slow=5.3,SNR=8.9						
TORD	Torodi Ar. Bea	53.09	156	P	P	19 30 33.3	-0.8
	comp=Z,0.8nm,0.9s,baz=330,slow=8.3,SNR=2.6						
BW06	Boulder Array	53.22	293	P	P	19 30 35.9	+0.9
BW06				IAmb	IAmb	19 30 38.8	
	comp=Z,10.0nm,1.6s						
PD31	Pinedale Array	53.22	293	P	P	19 30 35.8	+0.8
PD31				IAmb	IAmb	19 30 38.8	
	comp=Z,9.6nm,1.6s						
PDAR	Pinedale Array	53.22	293	P	P	19 30 33.7	-1.3
	comp=Z,1.8nm,0.9s,baz=54,slow=7.7,SNR=8.1						
PDAR	Pinedale Array	53.22	293	P	P	19 30 35.8	+0.8
AAK	Ala-Archa	53.25	67	P	P	19 30 36.6	+1.4
N23A	Red Feather La	53.34	289	P	P	19 30 36.2	+0.2
N23A				IAmb	IAmb	19 30 40.1	
	comp=Z,8.9nm,1.2s						
HRA	Herat	55.17	82	P	P	19 30 50.3	+0.9
NLU	North Lily Min	56.60	293	P	P	19 30 58.0	-1.6
PV17	East Wray Mesa	56.79	290	P	P	19 30 59.0	-1.9
PV13	Radium Mtn., P	56.84	290	P	P	19 31 01.8	+0.6
PV13				IAmb	IAmb	19 31 05.0	
	comp=Z,6.9nm,1.0s						
PV05	Paradox Valley	57.02	290	P	P	19 31 01.6	-0.9
PV05				IAmb	IAmb	19 31 05.5	
	comp=Z,6.1nm,1.0s						
SONM	Songino Array	59.66	40	P	P	19 31 21.8	+1.1
	comp=Z,0.6nm,0.7s,baz=328,slow=5.3,SNR=3.6						
SONM	Songino Array	59.66	40	P	P	19 31 21.7	+1.0
ULN	Ulaanbaatar	59.81	40	P	P	19 31 22.1	+0.3
ULN				IAmb	IAmb	19 31 25.0	
	comp=Z,4.7nm,1.1s						
WUAZ	Wupatki	60.15	290	P	P	19 31 23.9	-0.4
WUAZ				IAmb	IAmb	19 31 28.4	
	comp=Z,6.4nm,1.2s						
TXAR	Lajitas Array	62.32	280	P	P	19 31 39.4	+0.4
	comp=Z,0.6nm,0.8s,baz=54,slow=4.6,SNR=4.6						
TXAR				LR	LR	19 58 17.1	
	comp=Z,69nm,18.6s,baz=0.0,slow=36						
CMAR	Chiang Mai Arr	84.13	59	P	P	19 33 47.8	+0.1
	comp=Z,0.9nm,1.0s,baz=322,slow=7.1,SNR=6.4						

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*THE **21** 19:26:38.4, 38°.04N×23°.76E, h8^{km}±1^{km}, ML1.8/12, Error ellipse: s-maj=1.3km s-min=0.4km az=134.0*

ATH 21 19:26:38.3, 38°.04N×23°.76E, h12^{km}±1^{km}**, ML2.0**/8**, Error ellipse: s-maj=1.9km s-min=0.7km az=125.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATH	Athens Observa	0.07	208	P	Pg	19 26 40.5	-0.2
ATH				S	Sg	19 26 42.3	-0.2
ATH				AML	AML	19 26 42.5	
	comp=N,6625µm,0.3s						
ATH				AML	AML	19 26 42.7	
	comp=E,10522µm,0.2s						
ATH	Athens Observa	0.07	208	P	Pg	19 26 40.7	0.0
ATH				S	Sg	19 26 42.3	-0.2
	comp=E,4µm,0.3s						
ATHU	Athens Univers	0.07	163	P	Pg	19 26 40.7	-0.1
ATHU				S	Sg	19 26 42.2	-0.4
ATHU				AML	AML	19 26 42.3	
	comp=E,2041µm,0.2s						
ATHU				AML	AML	19 26 42.4	
	comp=N,2206µm,0.1s						
ATHU	Athens Univers	0.07	163	P	Pg	19 26 40.7	-0.1
ATHU				S	Sg	19 26 42.1	-0.5
	comp=N,1µm,0.1s						
PTL	Penteli	0.09	80	P	Pg	19 26 40.9	0.0
PTL				S	Sg	19 26 42.5	-0.4
PTL				AML	AML	19 26 42.9	
	comp=N,1864µm,0.2s						
PTL				AML	AML	19 26 43.0	
	comp=E,1487µm,0.2s						
PTL	Penteli	0.09	80	P	Pg	19 26 40.9	-0.1
PTL				S	Sg	19 26 42.5	-0.4
	comp=E,745nm,0.2s						
DION	Dionisos Attik	0.14	73	P	Pg	19 26 41.9	+0.1
DION				S	Sg	19 26 44.0	-0.3
DION				AML	AML	19 26 44.6	
	comp=N,3114µm,0.4s						
DION				AML	AML	19 26 44.6	
	comp=E,3903µm,0.3s						
DION	Dionisos Attik	0.14	73	P	Pg	19 26 41.9	+0.1
DION				S	Sg	19 26 44.0	-0.2
VLY	Voula,Athens	0.18	171	P	Pg	19 26 42.3	-0.1
VLY				S	Sg	19 26 44.9	-0.3
VLY				AML	AML	19 26 45.2	
	comp=N,1151µm,0.1s						
VLY				AML	AML	19 26 45.3	
	comp=E,1605µm,0.2s						
VLY	Voula,Athens	0.18	171	P	Pg	19 26 42.3	-0.1
VLY				S	Sg	19 26 44.9	-0.3
VILL	Villia	0.38	290	P	Pg	19 26 45.8	0.0
VILL				S	Sg	19 26 50.8	0.0
	comp=E,118nm,0.3s						
EREA	Eretria	0.41	20	P	Pg	19 26 46.6	+0.2
EREA				S	Sg	19 26 52.2	+0.4
EREA				AML	AML	19 26 52.9	
	comp=E,359µm,0.2s						
EREA				AML	AML	19 26 53.2	
	comp=N,471µm,0.4s						
EREA	Eretria	0.41	20	P	Pg	19 26 46.6	+0.2
EREA				S	Sg	19 26 52.2	+0.3
	comp=N,200nm,0.2s						
VIL2	Platees	0.42	295	P	Pg	19 26 45.8	-0.9
VIL2				S	Sg	19 26 50.8	-1.6
VIL2				AML	AML	19 26 52.3	
	comp=E,260µm,0.3s						
VIL2				AML	AML	19 26 53.8	
	comp=N,175µm,0.3s						
KARY	Karystos	0.54	90	P	Pg	19 26 48.4	-0.4
KARY				S	Sg	19 26 55.7	-0.2
KARY	Karystos	0.54	90	P	Pg	19 26 48.4	-0.4
KARY				S	Sg	19 26 55.7	-0.2
	comp=N,40nm,0.1s						
LOUT	Loutraki	0.62	266	P	Pg	19 26 49.9	-0.5
LOUT	Loutraki	0.62	266	P	Pg	19 26 49.9	-0.5
LOUT				S	Sg	19 26 58.7	+0.1
	comp=N,105nm,0.2s						
KYMI	Kymi, Euboea I	0.66	24	P	Pg	19 26 50.8	-0.2
KYMI	Kymi, Euboea I	0.66	24	P	Pg	19 26 50.8	-0.3
KYMI				S	Sg	19 27 00.1	+0.4
	comp=N,80nm,0.4s						
EPID	Epidavros	0.66	231	P	Pg	19 26 50.9	-0.2
EPID	Epidavros	0.66	231	P	Pg	19 26 50.9	-0.2
EPID				S	Sb	19 27 01.4	+0.5
YDRA	Hydra	0.72	199	P	Pg	19 26 52.1	-0.2
KRND	KRANIDI	0.81	217	P	Pg	19 26 53.8	-0.1
KRND				S	Sb	19 27 05.3	0.0
KRND	KRANIDI	0.81	217	P	Pg	19 26 53.9	-0.1
KRND				S	Sb	19 27 05.3	0.0
	comp=N,80nm,0.2s						
LKR	Lokris	0.86	316	P	Pg	19 26 54.0	-0.8
LKR				S	Sb	19 27 06.5	-0.1
LKR				AML	AML	19 27 09.8	
	comp=E,232µm,0.2s						
LKR				AML	AML	19 27 09.8	
	comp=N,231µm,0.2s						
LKR	Lokris	0.86	316	P	Pg	19 26 54.0	-0.9
LKR				S	Sb	19 27 06.5	-0.2
	comp=N,102nm,0.1s						
ATAL	Atalanti	0.88	319	P	Pg	19 26 54.3	-0.9
ATAL				S	Sb	19 27 07.2	0.0
ATAL	Atalanti	0.88	319	P	Pg	19 26 54.3	-0.9
ATAL				S	Sb	19 27 07.2	0.0
	comp=N,38nm,0.2s						
SMIA	Simia	0.95	333	P	Pg	19 26 56.3	-0.3
SMIA				S	Sb	19 27 09.7	+0.4
SMIA	Simia	0.95	333	P	Pg	19 26 56.3	-0.3
SMIA				S	Sb	19 27 09.7	+0.4
	comp=N,108nm,0.3s						
AXAR	Agios Charalam	1.13	311	P	Pb	19 26 58.9	-1.0
AXAR				S	Sb	19 27 14.1	-0.5
AXAR	Agios Charalam	1.13	311	P	Pb	19 26 58.9	-1.0
AXAR				S	Sn	19 27 16.1	+0.5
KALE	Kalithea	1.32	286	P	Pb	19 27 03.0	-0.1
KALE	Kalithea	1.32	286	P	Pb	19 27 03.0	-0.2

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*BJI **21** 19:52:53.2±0.0, 5°.84S×146°.98E, h76^{km}, mB5.2/34, mb4.9/59, Ms5.1/14, Ms7 4.8/14*

*NEIC **21** 19:52:56.8±1.8, 5°.66S±0°.06×146°.33E±0°.07, h63^{km}±5^{km}, mb5.1/126, Error ellipse: s-maj=10.9km s-min=8.7km az=77.0*

*MOS **21** 19:52:56.8±0.9, 5°.67S×146°.27E, h74^{km}, mb5.1/18, Error ellipse: s-maj=8.6km s-min=5.2km az=109.2*

*DJA **21** 19:52:57.6±0.4, 6°S±3°×14°6E±°, h47^{km}±12^{km}, M5.0/12, mB5.4/10, mb5.1/12, MLv5.4/5, Mw(mB)4.8/10*

*IDC **21** 19:52:57.6±1.7, 5°.71S×146°.29E, h65^{km}±15^{km}, mb4.7/30, mb1 4.7/35, mb1mx4.7/41, mbtmp5.0/35, MS4.2/9, Ms1 4.2/9, ms1mx3.7/41, Error ellipse: s-maj=10.7km s-min=8.4km az=80.0*

*GCMT **21** 19:52:58.8±0.3, 5°.73S±0°.02×146°.33E±0°.02, h71^{km}±5^{km}, MW5.0/69, Moment Tensor Solution. s37,c49; s69,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.39±.24; $M_{\theta\theta}$-1.24±.19; $M_{\phi\phi}$-0.15±.23; $M_{r\theta}$-3.15±.13; $M_{\theta\phi}$-0.11±.19; $M_{\phi r}$2.56±.16; Best double couple: $M_0$4.23300×10^{16} NP1:ϕ_s80.00000°, δ11.00000°, λ44.00000°. NP2: ϕ_s306.00000°, δ83.00000°, λ98.00000°. Principal axes: T 4.5580, Plg52.0000°, Azm225.0000°; N -0.6540, Plg8.0000°, Azm125.0000°; P -3.9070, Plg37.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **21** 19:52:58.6, 5°.69S×146°.36E, h70^{km}, mb5.1, Eastern New Guinea Reg., P.N.G.*

ISC 21 19:52:53.8±0.2**, 5°.63S**±0°.04×**146°.38E**±0°.04**, h35**^{km}**, n443,** σ1^{s}.**43**/456**, mb5.0**/130**, MS4.4**/5**, 17C-7D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.70	16	Pn	Pn	19 53 49.6	+1.2
PMG	Port Moresby	3.83	168	P	Pn	19 53 53.1	+2.8
	91nm,0.3s,baz=14,slow=5.7,SNR=223						
PMG				S	Sn	19 54 37.7	+3.5
	76nm,0.3s,baz=140,slow=23,SNR=8.2						
PMG				LR	LR	19 55 50.9	
	comp=Z,5µm,21.5s,baz=1.0,slow=46						
PMG	Port Moresby	3.83	168	Pn	Pn	19 53 52.2	+1.9
PMG	Port Moresby	3.83	168	P	Pn	19 53 53.2	+2.9
RABL	Rabaul	5.94	76	Pn	Pn	19 54 22.0	+2.7
RABL	Rabaul	5.94	76	P	Pn	19 54 22.4	+3.1
JAY	Jayapura	6.45	298	P	Pn	19 54 33.3	+7.0
	5.0nm,0.3s,baz=198,slow=5.7,SNR=17						
JAY				S	Sn	19 55 47.3	+8.5
	2.5nm,0.3s,baz=335,slow=17,SNR=1.1						
JAY				LR	LR	19 57 49.3	
	comp=Z,470nm,18.9s,baz=182,slow=46						
JAY	Jayapura	6.45	298	P	Pn	19 54 31.7	+5.3
	0.3nm51nm,1.0s						
COEN	Coen	8.86	201	P	Pn	19 55 02.2	+2.9
	baz=8.8						
COEN				S	Sn	19 56 37.0	-1.0
	baz=8.8						
COEN	Coen	8.86	201		Pn	19 55 01.4	+2.0
MTSU	Mount Surprise	12.59	189	P	Pn	19 55 54.2	+3.6
	baz=13,SNR=17						
HNR	Honiara	13.97	106	P	Pn	19 56 13.2	+3.8
	3.8nm,0.3s,baz=138,slow=11,SNR=5.7						
HNR				LR	LR	20 01 13.6	
	comp=Z,206nm,20.2s,baz=288,slow=35						
HNR	Honiara	13.97	106		Pn	19 56 11.3	+1.9
HNR	Honiara	13.97	106	P	P	19 56 15.0	-1.9
	268nm,1.1s						
FAKI	Fak Fak	14.34	280		Pn	19 56 16.4	+1.9
CTA	Charters Tower	14.37	180	P	P	19 56 18.6	-2.8
	7.7nm,0.3s,baz=360,slow=14,SNR=71						
CTA				LR	LR	20 01 50.6	
	comp=Z,2µm,21.3s,baz=358,slow=37						
CTAO	Charters Tower	14.37	180	P	P	19 56 19.0	-2.4
CTAO	Charters Tower	14.37	180		P	19 56 19.0	-2.4
KDU	Kakadu	15.41	242	P	Pn	19 56 30.5	+1.8
	baz=16,SNR=41						
SIJI	Sorong	15.81	287	P	Pn	19 56 35.7	+1.8
	1.3nm,0.3s,baz=80,slow=9.3,SNR=12						
SIJI				LR	LR	20 03 57.9	
	comp=Z,606nm,20.2s,baz=99,slow=42						
SWI	Sorong	15.81	287	P	P	19 56 36.1	-1.3
	2µm304nm,0.7s						
QIS	Mount Isa	16.23	203	P	P	19 56 41.6	-0.4
	baz=16,SNR=15						
MTN	Manton Dam	16.66	243	P	P	19 56 48.0	+1.3
	baz=17,SNR=4.6						
MTN	Manton Dam	16.66	243	Pn	Pn	19 56 44.4	-0.3
MSAI	Masohi	17.54	277	P	P	19 57 00.8	+4.2
	641nm32nm,0.7s						
WB0	Warramunga Arr	18.26	219	P	P	19 57 02.5	-2.0
WB0				IAmb	IAmb	19 57 26.1	
	comp=Z,157nm,1.4s						
WR0	Warramunga Arr	18.31	218	P	P	19 57 03.5	-1.6
WRAB	Tennant Creek	18.41	218⇑	eP	Pn	19 57 06.5	+0.1
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WRAB	Tennant Creek	18.41	218	P	P	19 57 04.3	-1.8
WC3	Warramunga Arr	18.42	218	P	Pn	19 57 06.9	+0.5
	baz=18						
WB2	Warramunga Arr	18.42	218	P	P	19 57 04.7	-1.6
WRA	Warramunga Arr	18.42	218	P	P	19 57 06.2	0.0
	comp=Z,2.8nm,0.3s,baz=56,slow=11,SNR=63						
WRA				S	Sn	20 00 30.4	-1.1
	comp=Z,0.5nm,0.3s,baz=55,slow=16,SNR=4.9						
WRA				PcP	PcP	20 01 36.2	-0.1
	comp=Z,0.4nm,0.3s,baz=23,slow=1.7,SNR=9.3						
WRA				LR	LR	20 04 50.4	
	comp=Z,1µm,19.3s,baz=45,slow=39						
WRA				ScP	ScP	20 05 08.1	-1.3
	comp=Z,0.2nm,0.3s,baz=35,slow=2.2,SNR=6.5						
WRA	Warramunga Arr	18.42	218	P	P	19 57 05.3	-1.0
NLAI	Namlea	19.36	276	P	Pn	19 57 20.0	+2.1
TNTI	Ternate	20.02	288	P	P	19 57 24.1	+0.2
EIDS	Eidsvold	20.14	168	P	P	19 57 24.7	-0.3
	baz=20,SNR=9.3						
EIDS	Eidsvold	20.14	168	P	P	19 57 25.4	+0.4
EIDS				IAmb	IAmb	19 57 31.5	
	comp=Z,89nm,1.4s						
RMQ	Roma	20.86	174	P	P	19 57 34.2	+1.3
	baz=21,SNR=35						
QLP	Quilpie	20.93	185	P	P	19 57 34.5	+0.9
	baz=21,SNR=4.4						
AS31	Alice Springs	21.58	213	P	P	19 57 40.4	-0.2
ASAR	Alice Springs	21.58	213	P	P	19 57 41.5	+0.8
	comp=Z,17nm,0.7s,baz=44,slow=7.0,SNR=71						
ASAR				PcP	PcP	20 01 42.5	+0.4
	comp=Z,2.8nm,0.6s,baz=51,slow=1.9,SNR=5.9						
ASAR				LR	LR	20 07 00.7	
	comp=Z,2µm,19.7s,baz=346,slow=39						
ASAR	Alice Springs	21.58	213	P	P	19 57 40.0	-0.7
SOEI	Soe	22.29	258	P	P	19 57 49.7	+1.3
SANVU	Saraoutou	22.66	117	P	P	19 57 53.0	+0.8
SANVU				IAmb	IAmb	19 58 00.5	
	comp=Z,32nm,0.7s						
KOUNC	Koumac, New Ca	22.86	132	P	P	19 57 54.1	-0.1
BATI	Baumata	22.95	257	P	P	19 57 56.7	+1.4
	comp=Z,144nm,0.8s,baz=174,slow=1.1,SNR=30						
FITZ	Fitzroy Crossi	23.74	237	P	P	19 58 03.0	0.0
	baz=24,SNR=79						
FITZ	Fitzroy Crossi	23.74	237	P	P	19 58 02.8	-0.2
	comp=Z,78nm,0.9s,baz=42,slow=7.2,SNR=96						
FITZ				LR	LR	20 08 13.2	
	comp=Z,1µm,21.1s,baz=97,slow=39						
FITZ	Fitzroy Crossi	23.74	237	P	P	19 58 02.4	-0.6

FITZ				IAmb	IAmb	19 58 04.9	
	comp=Z,66nm,0.9s						
LUWI	**Luwuk**	**24.00**	**280**	P	**P**	**19 58 06.8**	**+1.4**
MMRI	**Maumere**	**24.14**	**261**	P	**P**	**19 58 06.7**	**-0.1**
ARMA	**Armidale**	**25.15**	**169**	P	**P**	**19 58 16.0**	**+0.1**
	baz=25,SNR=5.6						
DZM	**Mont Dzumac**	**25.37**	**132**	P	**P**	**19 58 19.0**	**+1.0**
	comp=Z,42nm,1.2s,baz=55,slow=10,SNR=5.5						
DZM	**Mont Dzumac**	**25.37**	**132**	P	**P**	**19 58 17.9**	**-0.1**
DZM				IAmb	IAmb	19 58 21.0	
	comp=Z,66nm,1.3s						
DZM	**Mont Dzumac**	**25.37**	**132**	P	**P**	**19 58 19.4**	**+1.4**
CMSA	**Cobar Meteorol**	**25.78**	**181**	P	**P**	**19 58 22.2**	**+0.7**
	baz=26,SNR=10						
TOLI2	**Tolitoli**	**26.42**	**284**	P	**P**	**19 58 25.4**	**-2.1**
TOLI2				IAmb	IAmb	19 58 41.3	
	comp=Z,25nm,0.6s						
STKA	**Stephens Creek**	**26.49**	**189**	P	**P**	**19 58 28.1**	**+0.2**
	baz=26,SNR=18						
STKA	**Stephens Creek**	**26.49**	**189**	P	**P**	**19 58 27.6**	**-0.3**
	comp=Z,6.0nm,0.5s,baz=17,slow=7.7,SNR=20						
STKA				LR	LR	20 10 25.0	
	comp=Z,912nm,18.3s,baz=305,slow=40						
STKA	**Stephens Creek**	**26.49**	**189**	P	**P**	**19 58 26.4**	**-1.6**
STKA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
STKA	**Stephens Creek**	**26.49**	**189**	P	**P**	**19 58 26.4**	**-1.6**
KAPI	**Kappang**	**26.52**	**270**	P	**P**	**19 58 28.8**	**+0.5**
	comp=Z,21nm,0.6s,baz=148,slow=4.4,SNR=11						
KAPI	**Kappang**	**26.52**	**270**	P	**P**	**19 58 27.6**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,28nm,1.0s						
KAPI	**Kappang**	**26.52**	**270**	P	**P**	**19 58 27.6**	**-0.8**
HTT	**Hallett**	**28.52**	**193**	P	**P**	**19 58 46.6**	**+0.5**
	baz=29,SNR=3.6						
YNG	**Young**	**28.59**	**177**	P	**P**	**19 58 45.6**	**-1.1**
	baz=29,SNR=14						
BBOO	**Buckleboo**	**28.70**	**198**	P	**P**	**19 58 47.5**	**-0.3**
	baz=29,SNR=9.9						
PSA00	**Pilbara Seismi**	**30.18**	**236**	P	**P**	**19 59 01.6**	**+0.6**
PSA00				IAmb	IAmb	19 59 09.4	
	comp=Z,58nm,1.2s						
PSA00	**Pilbara Seismi**	**30.18**	**236**	P	**P**	**19 58 57.9**	**-3.1**
PSA00				IAmb	IAmb	19 59 02.7	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	**30.37**	**212**	P	**P**	**19 59 02.7**	**+0.2**
	baz=30,SNR=6.8						
JAGI	**Jajag, Banyuwa**	**32.10**	**263**	P	**P**	**19 59 15.6**	**-2.4**
JAGI				IAmb	IAmb	19 59 26.7	
	comp=Z,67nm,1.5s						
MSVF	**Nonsavu**	**33.20**	**114**	P	**P**	**19 59 29.2**	**+1.6**
	comp=Z,7.0nm,0.7s,baz=251,slow=22,SNR=6.4						
MSVF	**Nonsavu**	**33.20**	**114**	P	**P**	**19 59 26.0**	**-1.7**
MSVF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MSVF	**Nonsavu**	**33.20**	**114**	P	**P**	**19 59 25.9**	**-1.7**
MEEK	**Meekatharra**	**33.73**	**229**	P	**P**	**19 59 32.5**	**+0.4**
	baz=34,SNR=40						
KMBL	**Kambalda**	**34.39**	**219**	P	**P**	**19 59 38.0**	**+0.2**
	baz=34,SNR=26						
GIRL	**Giralia**	**35.33**	**238**	P	**P**	**19 59 46.4**	**+0.4**
	baz=35,SNR=4.4						
UGM	**Wanagama**	**35.67**	**264**	P	**P**	**19 59 47.0**	**-2.0**
KSM	**Kuching**	**36.71**	**280**	P	**P**	**20 00 00.0**	**+2.1**
MORW	**Morawa**	**36.96**	**227**	P	**P**	**19 59 59.5**	**-0.3**
	baz=37,SNR=8.3						
KLBR	**Kellerberrin**	**37.22**	**223**	P	**P**	**20 00 01.8**	**-0.2**
	baz=37,SNR=12						
BLDU	**Ballidu**	**37.35**	**225**	P	**P**	**20 00 03.0**	**-0.2**
	baz=37,SNR=8.7						
NACB	**Ninganchiao**	**38.23**	**322**	P	**P**	**20 00 09.8**	**-0.8**
CISI	**Cisompet, Garu**	**38.35**	**265**	P	**P**	**20 00 10.7**	**-1.1**
NWAO	**Narrogin (SRO)**	**38.39**	**221**	P	**P**	**20 00 12.0**	**+0.1**
	baz=38,SNR=3.9						
NWAO	**Narrogin (SRO)**	**38.39**	**221**	P	**P**	**20 00 12.2**	**+0.3**
	comp=Z,6.0nm,0.7s,baz=62,slow=12,SNR=1.9						
MUN	**Mundaring**	**38.50**	**223**	P	**P**	**20 00 14.2**	**+1.3**
	baz=39,SNR=5.4						
LEM	**Lembang**	**38.54**	**266**	P	**P**	**20 00 14.4**	**+0.8**
	comp=Z,31nm,0.6s,baz=338,slow=23,SNR=7.9						
YHNB	**Yeheng**	**38.73**	**322**	P	**P**	**20 00 14.8**	**0.0**
TATO	**Taipei**	**38.88**	**323**	P	**P**	**20 00 15.4**	**-0.7**
XMI	**Christmas Isla**	**40.55**	**261**	P	**P**	**20 00 31.4**	**+1.2**
	comp=Z,259nm,1.1s						
XMIS	**Christmas Isla**	**40.59**	**261**	P	**P**	**20 00 30.0**	**-0.5**
XMIS	**Christmas Isla**	**40.59**	**261**	P	**P**	**20 00 31.5**	**+1.0**
	comp=Z,193nm,1.0s						
QZH	**Quanzhou**	**40.67**	**320**	*e*P	**P**	**20 00 33.5**	**+2.5**
JMN	**Monobe**	**40.90**	**344**	P	**P**	**20 00 33.5**	**+0.8**
RAO	**Raoul Island**	**41.09**	**129**	P	**P**	**20 00 33.0**	**-1.5**
JNU	**Nakatsue**	**41.25**	**340**	P	**P**	**20 00 36.6**	**+0.9**
	comp=Z,44nm,1.1s,baz=126,slow=3.6,SNR=7.6						
JNU	**Nakatsue**	**41.25**	**340**	P	**P**	**20 00 36.2**	**+0.6**
PMBI	**Palembang**	**41.57**	**272**	P	**P**	**20 00 38.6**	**0.0**
HIZ	**Hauiti**	**41.69**	**146**	P	**P**	**20 00 42.5**	**+3.3**
JGF	**Kuroka**	**41.88**	**349**	P	**P**	**20 00 41.4**	**+0.6**
JGF				IAmb	IAmb	20 00 42.4	
	comp=Z,31nm,1.1s						
JWT	**Wachi**	**41.99**	**347**	P	**P**	**20 00 42.4**	**+0.8**
JWT				IAmb	IAmb	20 00 43.7	
	comp=Z,58nm,1.2s						
AFI	**Afiamalu**	**41.99**	**104**	P	**P**	**20 00 43.2**	**+1.1**
	comp=Z,16nm,0.6s,baz=163,slow=22,SNR=4.5						
AFI	**Afiamalu**	**41.99**	**104**	P	**P**	**20 00 43.2**	**+1.1**
AFI				pmax	pmax		
	comp=Z,56nm,1.1s						
AFI	**Afiamalu**	**41.99**	**104**	IAmb	IAmb	20 00 45.1	
	comp=Z,56nm,1.1s						
JHS	**Saijyo**	**42.30**	**344**	P	**P**	**20 00 44.5**	**+0.3**
JHS				IAmb	IAmb	20 00 46.6	
	comp=Z,44nm,1.2s						
OTVZ	**Oturere**	**42.60**	**146**	P	**P**	**20 00 49.5**	**+2.7**
MJAR	**Matsushiro Arr**	**42.64**	**350**	P	**P**	**20 00 47.5**	**+0.6**
	comp=Z,21nm,1.1s,baz=173,slow=7.3,SNR=24						
MJAR	**Matsushiro Arr**	**42.64**	**350**	P	**P**	**20 00 46.7**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,16nm,1.2s						
MJAR	**Matsushiro Arr**	**42.64**	**350**	P	**P**	**20 00 46.7**	**-0.3**
MAJO	**Matsushiro**	**42.65**	**350**	*c i*P	**P**	**20 00 47.7**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,36nm,1.3s						
MAJO	**Matsushiro**	**42.65**	**350**	P	**P**	**20 00 47.0**	**0.0**
MAJO				IAmb	IAmb	20 00 49.3	
	comp=Z,47nm,1.2s						
MAT	**Matsushiro**	**42.65**	**350**	P	**P**	**20 00 47.6**	**+0.6**
MAT				S	**S**	**20 07 04.2**	**-3.6**
URZ	**Urewera**	**42.81**	**144**	P	**P**	**20 00 48.4**	**0.0**
	comp=Z,10nm,0.5s,baz=208,slow=2.9,SNR=3.7						
THZ	**Tophouse**	**43.04**	**151**	P	**P**	**20 00 48.0**	**-2.3**
THZ				IAmb	IAmb	20 00 53.0	
	comp=Z,68nm,1.3s						
BHHZ	**Black Hill Sta**	**43.05**	**146**	P	**P**	**20 00 51.7**	**+1.4**
MTHZ	**Maungataniwha**	**43.05**	**145**	P	**P**	**20 00 52.4**	**+2.0**
BKZ	**Black Stump Fm**	**43.07**	**145**	P	**P**	**20 00 52.2**	**+1.8**
MYKOM	**Kota Tinggi**	**43.11**	**279**	P	**P**	**20 00 53.0**	**+1.9**
KWHZ	**Kaweka Forest**	**43.20**	**145**	P	**P**	**20 00 53.7**	**+2.2**
TUWZ	**Tuamarina**	**43.31**	**150**	P	**P**	**20 00 51.7**	**-0.6**
TSZ	**Takapari Road**	**43.38**	**147**	P	**P**	**20 00 55.4**	**+2.4**
KIW	**Kapiti Island**	**43.39**	**148**	P	**P**	**20 00 56.0**	**+3.0**
PNHZ	**Pukenui**	**43.42**	**146**	P	**P**	**20 00 55.4**	**+2.1**
BSWZ	**Blackbirch Sta**	**43.49**	**150**	P	**P**	**20 00 52.2**	**-1.6**
OGWZ	**Otaki Gorge**	**43.49**	**148**	P	**P**	**20 00 56.1**	**+2.2**
MRZ	**Mangatainoka R**	**43.60**	**147**	P	**P**	**20 00 55.9**	**+1.2**
DCZ	**Deep Cove**	**43.61**	**159**	P	**P**	**20 00 55.8**	**+1.2**
DCZ				IAmb	IAmb	20 00 57.1	
	comp=Z,22nm,0.9s						
RPZ	**Rata Peaks**	**43.71**	**154**	P	**P**	**20 00 56.6**	**+1.1**
	comp=Z,48nm,0.7s,baz=281,slow=2.6,SNR=37						
RPZ	**Rata Peaks**	**43.71**	**154**	P	**P**	**20 00 55.9**	**+0.4**
OXZ	**Oxford**	**43.84**	**153**	P	**P**	**20 00 57.0**	**+0.4**
OXZ				IAmb	IAmb	20 01 00.1	
	comp=Z,19nm,0.8s						
TIWZ	**Tintock**	**43.85**	**147**	P	**P**	**20 00 58.1**	**+1.3**
MLZ	**Mavora Lakes**	**43.88**	**158**	P	**P**	**20 00 57.8**	**+1.0**
MLZ				IAmb	IAmb	20 00 59.3	
	comp=Z,36nm,1.1s						
LBZ	**Lake Benmore**	**43.88**	**155**	P	**P**	**20 00 57.0**	**+0.1**
LBZ				IAmb	IAmb	20 00 58.6	
	comp=Z,32nm,0.7s						
BFZ	**Birch Farm**	**43.98**	**147**	P	**P**	**20 00 58.9**	**+1.2**
JSD	**Sado**	**44.10**	**351**	P	**P**	**20 00 58.5**	**-0.2**
WHZ	**Wether Hill Ro**	**44.26**	**158**	P	**P**	**20 01 00.1**	**+0.2**
WHZ				IAmb	IAmb	20 01 01.2	
	comp=Z,22nm,1.0s						
TJN	**Taejon**	**45.43**	**338**	⇑*e*P	**P**	**20 01 09.6**	**+0.3**
NJ2	**Nanjing**	**45.73**	**327**	⇑P	**P**	**20 01 13.9**	**+2.1**
NJ2				S	**S**	**20 07 52.6**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,26nm,0.9s						
KSRS	**Korea Array**	**46.19**	**340**	P	**P**	**20 01 16.9**	**+1.7**
	comp=Z,22nm,1.0s,baz=160,slow=9.0,SNR=39						
KSRS	**Korea Array**	**46.19**	**340**	P	**P**	**20 01 17.0**	**+1.7**
KSAR	**Wonju Array Be**	**46.19**	**340**	P	**P**	**20 01 16.1**	**+0.8**
KSAR	**Wonju Array Be**	**46.19**	**340**	P	**P**	**20 01 16.1**	**+0.8**
KS19	**Wonju Array Si**	**46.25**	**340**	P	**P**	**20 01 15.2**	**-0.6**
IPM	**Ipoh**	**46.39**	**282**	P	**P**	**20 01 17.5**	**+0.1**
IPM				IAmb	IAmb	20 01 19.4	
	comp=Z,17nm,0.8s						
IPM	**Ipoh**	**46.39**	**282**	P	**P**	**20 01 19.0**	**+1.7**
JTM	**Tenmabayashi**	**46.45**	**354**	P	**P**	**20 01 16.7**	**-0.5**
INCN	**Inchon**	**46.68**	**338**	P	**P**	**20 01 20.0**	**+0.8**
INCN				pmax	pmax		
	comp=Z,38nm,0.9s						
INCN	**Inchon**	**46.68**	**338**	P	**P**	**20 01 20.0**	**+0.8**
KULM	**Kulim**	**46.93**	**283**	P	**P**	**20 01 21.1**	**-0.4**
KULM				IAmb	IAmb	20 01 30.0	
	comp=Z,15nm,0.8s						
KULM	**Kulim**	**46.93**	**283**	P	**P**	**20 01 23.0**	**+1.5**
WHN	**Wuhan**	**47.26**	**321**	⇑P	**P**	**20 01 26.3**	**+2.5**
JEW	**Eniwo**	**48.45**	**355**	P	**P**	**20 01 34.5**	**+1.7**
YUK	**Yuzh-Kuril'sk**	**49.44**	**360**	*e*P	**P**	**20 01 41.3**	**+1.0**
SLVN	**Son La**	**49.52**	**304**	P	**P**	**20 01 43.1**	**+1.6**
JKA	**Kamikawa-asahi**	**49.63**	**356**	P	**P**	**20 01 42.1**	**+0.3**
ASAJ	**Asahikawa**	**49.63**	**356**	P	**P**	**20 01 44.5**	**+2.7**
	comp=Z,28nm,1.1s,baz=233,slow=13,SNR=7.6						
ASAJ	**Asahikawa**	**49.63**	**356**	P	**P**	**20 01 42.1**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,43nm,1.1s						
GYA	**Guiyang**	**49.98**	**312**	⇑P	**P**	**20 01 47.1**	**+2.2**
GYA				sP	sP	20 02 10.0	+11
GYA				S	**S**	**20 08 54.5**	**+1.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ENH	**Enshi**	**50.23**	**317**	P	**P**	**20 01 47.7**	**+1.0**
ENH				IAmb	IAmb	20 01 49.6	
	comp=Z,25nm,1.2s						
KUR	**Kuril'sk**	**50.65**	**1**	⇑*e*P	**P**	**20 01 51.5**	**+2.0**
USA0B	**Ussuriysk Arra**	**51.27**	**347**	P	**P**	**20 01 55.6**	**+1.4**
USA0B				pmax	pmax		
	comp=Z,19nm,0.9s						
USA0B	**Ussuriysk Arra**	**51.27**	**347**	P	**P**	**20 01 55.6**	**+1.4**
USA0B				IAmb	IAmb	20 01 57.3	
	comp=Z,19nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.27**	**347**	P	**P**	**20 01 55.7**	**+1.5**
	comp=Z,8.2nm,0.6s,baz=163,slow=6.8,SNR=29						
MDJ	**Mudanjiang**	**52.25**	**345**	P	**P**	**20 02 02.5**	**+1.0**
MDJ				IAmb	IAmb	20 02 03.9	
	comp=Z,28nm,1.3s						
KMI	**Kunming**	**52.28**	**308**	⇓P	**P**	**20 02 04.8**	**+2.3**
KMI				pP	sP	20 02 22.3	+5.4
KMI				sP	pP	20 02 31.3	+19
KMI				S	**S**	**20 09 25.6**	**-0.1**
KMI				sS	sS	20 09 56.6	+14
KMI				SS	**SS**	**20 13 01.3**	**-2.6**
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
KMI				pmax	pmax		
	comp=Z,100nm,4.1s						
KMI				LR	LR		
	comp=Z,140nm,13.6s						
KMI				LR	LR		
	comp=Z,180nm,15.8s						
KMI				LR	LR		
	comp=Z,180nm,25.0s						
KMI	**Kunming**	**52.28**	**308**	P	**P**	**20 02 04.7**	**+2.3**
KMI				pmax	pmax		
	comp=Z,24nm,1.4s						
KMI	**Kunming**	**52.28**	**308**	P	**P**	**20 02 04.7**	**+2.3**
KMI				IAmb	IAmb	20 02 06.2	
	comp=Z,24nm,1.4s						
YSS	**Yuzh-Sakhalins**	**52.45**	**357**	⇑*e*P	**P**	**20 02 04.4**	**+1.5**
YSS				*e**SP	sP	20 02 25.6	+8.6
YSS				*e*S	**S**	**20 09 26.8**	**0.0**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,5.6s						
YSS	**Yuzh-Sakhalins**	**52.45**	**357**	P	**P**	**20 02 03.2**	**+0.2**
CM31	**Chiang Mai Arr**	**52.53**	**298**	P	**P**	**20 02 04.1**	**0.0**
CM31				IAmb	IAmb	20 02 07.1	
	comp=Z,13nm,0.7s						
CMAR	**Chiang Mai Arr**	**52.53**	**298**	P	**P**	**20 02 05.5**	**+1.5**
	comp=Z,7.5nm,0.5s,baz=118,slow=5.9,SNR=72						
CMAR	**Chiang Mai Arr**	**52.53**	**298**	P	**P**	**20 02 05.2**	**+1.1**
CHTO	**Chiang Mai**	**52.67**	**299**	P	**P**	**20 02 05.0**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,21nm,1.4s						
CHTO	**Chiang Mai**	**52.67**	**299**	P	**P**	**20 02 05.0**	**-0.1**
CHTO				IAmb	IAmb	20 02 08.2	
	comp=Z,21nm,1.4s						
XAN	**Xi'an**	**53.01**	**321**	P	**P**	**20 02 07.9**	**+0.5**
XAN				pP	sP	20 02 26.8	+4.8
XAN				pmax	pmax		
	comp=Z,35nm,1.4s						
BJT	**Baijiatuau**	**53.27**	**331**	P	**P**	**20 02 10.3**	**+1.2**
BJT				pmax	pmax		
	comp=Z,21nm,1.2s						
BJT	**Baijiatuau**	**53.27**	**331**	P	**P**	**20 02 10.3**	**+1.2**
BJT				IAmb	IAmb	20 02 11.3	
	comp=Z,22nm,1.2s						
BJI	**Beijing**	**53.28**	**331**	P	**P**	**20 02 10.0**	**+0.8**
BJI				pmax	pmax		
	comp=Z,13nm,1.2s						
CD2	**Chengdu**	**54.58**	**314**	⇓P	**P**	**20 02 19.9**	**+1.0**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
UGL	**Uglegorsk**	**54.61**	**357**	*e*P	**P**	**20 02 20.3**	**+1.6**
UGL				pmax	pmax		
	comp=Z,60nm,1.0s						
KLR	**Kul'dur**	**56.10**	**348**	*d i*P	**P**	**20 02 30.4**	**+0.9**
KLR				pmax	pmax		
	comp=Z,38nm,1.5s						
HHC	**Hu-ho-hao-te**	**56.20**	**329**	*e*P	**P**	**20 02 31.8**	**+1.3**
HHC				S	**S**	**20 10 15.4**	**-2.4**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
TYV	**Tymovskoe**	**56.36**	**357**	*e*P	**P**	**20 02 33.0**	**+1.7**
TYV				pmax	pmax		
	comp=Z,23nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,4.8s						
LZH	**Lanzhou**	**57.53**	**320**	⇑P	**P**	**20 02 41.1**	**+1.0**
LZH				pP	sP	20 03 00.9	+6.2
LZH				sP	pP	20 03 09.8	+19
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
PEA0B	**Petropavlovsk-**	**59.30**	**8**	⇑*e*P	**P**	**20 02 53.6**	**+1.7**
PETK	**Petropavlovsk-**	**59.30**	**8**	P	**P**	**20 02 53.7**	**+1.8**
	comp=Z,20nm,1.0s,baz=162,slow=5.8,SNR=10						
PETK	**Petropavlovsk-**	**59.30**	**8**	P	**P**	**20 02 53.0**	**+1.1**
HIA	**Hailar**	**59.40**	**340**	P	**P**	**20 02 53.2**	**+0.5**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
HIA	**Hailar**	**59.40**	**340**	P	**P**	**20 02 53.2**	**+0.5**
SHL	**Shillong**	**61.30**	**303**	P	**P**	**20 03 06.8**	**+0.4**
SHL				pmax	pmax		
	comp=Z,27nm,0.5s						
SHL	**Shillong**	**61.30**	**303**	P	**P**	**20 03 06.8**	**+0.4**
ZEA	**Zeya**	**61.30**	**347**	*e*P	**P**	**20 03 06.8**	**+1.2**
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
GTA	**Gaotai**	**62.06**	**320**	*e*P	**P**	**20 03 12.3**	**+1.1**
GTA				pP	sP	20 03 28.0	+2.1
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	**Ulaanbaatar**	**63.49**	**332**	*d i*P	**P**	**20 03 21.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,30nm,1.7s						
ULN	**Ulaanbaatar**	**63.49**	**332**	P	**P**	**20 03 21.0**	**+0.5**
ULN				IAmb	IAmb	20 03 25.5	
	comp=Z,31nm,1.4s						
LSA	**Lhasa**	**63.52**	**307**	P	**P**	**20 03 21.0**	**-0.5**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
LSA	**Lhasa**	**63.52**	**307**	P	**P**	**20 03 21.0**	**-0.5**
LSA				IAmb	IAmb	20 03 24.8	
	comp=Z,10nm,0.7s						
SONM	**Songino Array**	**63.78**	**331**	P	**P**	**20 03 23.4**	**+0.9**
	comp=Z,12nm,1.2s,baz=149,slow=5.3,SNR=29						
SONM	**Songino Array**	**63.78**	**331**	P	**P**	**20 03 23.6**	**+1.2**
SONM				pmax	pmax		
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**63.78**	**331**	P	**P**	**20 03 23.6**	**+1.2**
CIT	**Chita**	**63.89**	**338**	*e*P	**P**	**20 03 24.3**	**+1.4**
MA2	**Magadan**	**65.09**	**2**	*d i*P	**P**	**20 03 31.6**	**+1.0**
MA2				pmax	pmax		
	comp=Z,23nm,1.3s						
MA2	**Magadan**	**65.09**	**2**	P	**P**	**20 03 30.2**	**-0.4**
MA2				IAmb	IAmb	20 03 33.6	
	comp=Z,20nm,1.1s						
TAPN	**Taplejung**	**65.43**	**303**	*e*P	**P**	**20 03 34.5**	**+0.6**
	comp=Z,40nm,1.0s						
ODAN	**Odare**	**65.53**	**303**	*e*P	**P**	**20 03 35.0**	**+0.6**
	comp=Z,22nm,0.7s						
RAMN	**Ramite**	**66.22**	**303**	*e*P	**P**	**20 03 39.3**	**+0.4**
	comp=Z,14nm,0.5s						
ZAK	**Zakamensk**	**67.02**	**332**	*e*P	**P**	**20 03 43.8**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,16nm,1.3s						
GUN	**Gumba**	**67.15**	**303**	*e*P	**P**	**20 03 45.6**	**+0.7**
	comp=Z,42nm,0.7s						
PKI	**Pulchoki**	**67.43**	**303**	*e*P	**P**	**20 03 47.5**	**+0.8**
	comp=Z,53nm,1.5s						
PKIN	**Phulchoki**	**67.44**	**303**	*e*P	**P**	**20 03 47.4**	**+0.7**
	comp=Z,33nm,1.2s						
KKN	**Kakani**	**67.61**	**303**	*e*P	**P**	**20 03 48.1**	**+0.4**
	comp=Z,46nm,1.1s						
DMN	**Daman**	**67.69**	**303**	*e*P	**P**	**20 03 48.8**	**+0.5**
TLY	**Talaya**	**67.74**	**333**	*ce*P	**P**	**20 03 49.0**	**+1.3**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY	**Talaya**	**67.74**	**333**	P	**P**	**20 03 46.5**	**-1.3**
BOD	**Bodaibo**	**68.44**	**342**	*e*P	**P**	**20 03 52.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,20nm,1.5s						
SEY	**Seymchan**	**68.52**	**3**	⇑*i*P	**P**	**20 03 53.7**	**+1.3**
YAK	**Yakutsk**	**68.69**	**352**	*ce*P	**P**	**20 03 54.4**	**+1.0**
YAK				pmax	pmax		
	comp=Z,43nm,1.7s						
YAK	**Yakutsk**	**68.69**	**352**	P	**P**	**20 03 53.8**	**+0.4**
YAK				IAmb	IAmb	20 03 55.9	
	comp=Z,17nm,0.8s						
MOY	**Mondy**	**68.96**	**332**	*e*P	**P**	**20 03 56.8**	**+1.3**
MOY				pmax	pmax		
	comp=Z,26nm,1.7s						
DANN	**Dangsing**	**69.06**	**303**	*e*P	**P**	**20 03 56.8**	**0.0**
	comp=Z,15nm,0.8s						
HYB	**Hyderabad**	**70.75**	**291**	*i* P	**P**	**20 04 07.0**	**-0.1**
WMQ	**Urumqi**	**72.11**	**319**	*e*P	**P**	**20 04 15.9**	**+1.1**
WMQ				pP	PcP	20 04 36.1	+3.0
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,470nm,7.7s						
WMQ	**Urumqi**	**72.11**	**319**	P	**P**	**20 04 14.1**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ	**Urumqi**	**72.11**	**319**	P	**P**	**20 04 14.1**	**-0.7**
VNDA	**Vanda**	**72.31**	**177**	P	**P**	**20 04 15.9**	**+0.5**
	comp=Z,8.4nm,0.8s,baz=326,slow=6.2,SNR=25						
VNDA	**Vanda**	**72.31**	**177**	P	**P**	**20 04 13.7**	**-1.7**
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**72.31**	**177**	P	**P**	**20 04 13.7**	**-1.7**
BILL	**Bilibino**	**74.83**	**8**	⇑*i*P	**P**	**20 04 30.1**	**-0.1**
BILL				*i*		20 04 38.1	
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
BILL				MLR	MLR		
	comp=Z,480nm,23.0s						
BILL	**Bilibino**	**74.83**	**8**	P	**P**	**20 04 30.5**	**+0.3**
BILL				IAmb	IAmb	20 04 33.2	
	comp=Z,23nm,1.3s						
DGZ	**Jazzator, Alta**	**74.98**	**325**	⇓*e*P	**P**	**20 04 31.7**	**0.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ZSN	**Zaisan**	**75.49**	**322**	*e*P	**P**	**20 04 34.4**	**-0.2**
	baz=322						
ZSN	**Zaisan**	**75.49**	**322**	*e*P	**P**	**20 04 34.3**	**-0.2**
MK31	**Makanchi Array**	**76.82**	**321**	P	**P**	**20 04 41.9**	**-0.2**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MK31	**Makanchi Array**	**76.82**	**321**	P	**P**	**20 04 41.9**	**-0.2**
MKAR	**Makanchi Array**	**76.82**	**321**	P	**P**	**20 04 42.2**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=100,slow=7.9,SNR=43						
MKAR	**Makanchi Array**	**76.82**	**321**	P	**P**	**20 04 41.6**	**-0.5**
MAKZ	**Makanchi**	**77.02**	**321**	P	**P**	**20 04 42.7**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MAKZ	**Makanchi**	**77.02**	**321**	P	**P**	**20 04 42.7**	**-0.6**
SHLS	**Shalkode**	**77.34**	**316**	*e*P	**P**	**20 04 43.4**	**-1.9**
	comp=Z,2.8nm,0.8s,baz=316						
SHLS				*e*S	**S**	**20 14 27.0**	**-6.3**
	baz=316						
SHLS	**Shalkode**	**77.34**	**316**	*e*P	**P**	**20 04 43.3**	**-1.9**
SHLS				*e*S	**S**	**20 14 27.0**	**-6.3**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KPKS	**Kokpek**	**77.98**	**316**	*e*P	**P**	**20 04 48.5**	**-0.3**
	baz=316						
KPKS	**Kokpek**	**77.98**	**316**	*e*P	**P**	**20 04 48.4**	**-0.3**
TIXI	**Tiksi**	**77.98**	**354**	P	**P**	**20 04 47.2**	**-0.9**
SATY	**Saty**	**78.04**	**316**	*e*P	**P**	**20 04 49.0**	**-0.1**
	baz=316						
SATY	**Saty**	**78.04**	**316**	*e*P	**P**	**20 04 49.0**	**-0.1**
ZAA0	**Zalesovo Array**	**78.37**	**328**	P	**P**	**20 04 49.3**	**-1.2**
ZALV	**Zalesovo Beam**	**78.37**	**328**	P	**P**	**20 04 49.5**	**-1.0**
	comp=Z,4.8nm,0.5s,baz=113,slow=6.4,SNR=21						
ZALV	**Zalesovo Beam**	**78.37**	**328**	P	**P**	**20 04 49.3**	**-1.2**
ANM	**Nome**	**78.56**	**19**	P	**P**	**20 04 52.8**	**+1.4**
ANM				pmax	pmax		
	comp=Z,16nm,1.2s						
ANM	**Nome**	**78.56**	**19**	P	**P**	**20 04 52.8**	**+1.4**
ANM				IAmb	IAmb	20 05 12.3	
	comp=Z,16nm,1.2s						
KSH	**Kashi**	**78.67**	**312**	P	**P**	**20 04 54.1**	**+1.4**
KSH				pP	sP	20 05 14.1	+6.6
KSH				S	**S**	**20 14 46.4**	**-1.4**
KSH				sS	ScS	20 15 20.8	+9.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,340nm,5.7s						
KSH				LR	LR		
	comp=Z,570nm,7.3s						
KSH				LR	LR		
	comp=Z,720nm,8.1s						
KSH				LR	LR		
	comp=Z,820nm,7.4s						
TDK	**Taldyqorghan**	**78.69**	**318**	*e*P	**P**	**20 04 52.4**	**-0.2**
	baz=318						
TDK	**Taldyqorghan**	**78.69**	**318**	*e*P	**P**	**20 04 52.3**	**-0.2**
MDOK	**Medeo**	**79.01**	**316**	*e*P	**P**	**20 04 54.4**	**-0.1**
	baz=316						
MDOK	**Medeo**	**79.01**	**316**	*e*P	**P**	**20 04 54.4**	**-0.1**
TNSS	**Tian-Shan**	**79.04**	**316**	*e*P	**P**	**20 04 55.2**	**+0.2**
	baz=316						
TNSS	**Tian-Shan**	**79.04**	**316**	*e*P	**P**	**20 04 55.2**	**+0.2**
AAA	**Alma-Ata**	**79.12**	**316**	*e*P	**P**	**20 04 54.5**	**-0.6**
	baz=316						
AAA	**Alma-Ata**	**79.12**	**316**	*e*P	**P**	**20 04 54.4**	**-0.6**
NIL	**Nilore**	**79.21**	**306**	P	**P**	**20 04 55.4**	**-0.3**
NIL				pmax	pmax		
	comp=Z,20nm,1.0s						
NIL	**Nilore**	**79.21**	**306**	P	**P**	**20 04 55.4**	**-0.3**
NIL				IAmb	IAmb	20 05 17.4	
	comp=Z,20nm,0.9s						
KUU	**Kurty**	**79.73**	**316**	*e*P	**P**	**20 04 57.7**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=316						
KUU	**Kurty**	**79.73**	**316**	*e*P	**P**	**20 04 57.7**	**-0.6**
KUU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**80.55**	**323**	P	**P**	**20 05 01.7**	**-0.8**
KURK				pmax	pmax		
	comp=Z,17nm,1.5s						
KURK	**Kurchatov**	**80.55**	**323**	P	**P**	**20 05 01.7**	**-0.8**
AAK	**Ala-Archa**	**80.64**	**315**	*c i*P	**P**	**20 05 04.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,17nm,1.3s						
AAK	**Ala-Archa**	**80.64**	**315**	P	**P**	**20 05 03.9**	**+0.5**

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TTA   Tatalina           80.95  23  P        P        20 05 05.7 +1.2
TTA                                 pmax     pmax
      comp=Z,16nm,1.4s
TTA   Tatalina           80.95  23  P        P        20 05 05.7 +1.2
RDOG  Red Dog Mine       81.57  17  P        P        20 05 09.1 +1.5
RDOG                                IAmb     IAmb     20 05 11.2
      comp=Z,27nm,0.9s
BTLS  Baital             81.64 317 eP        P        20 05 07.9 -0.5
      comp=Z,1.4nm,0.6s,baz=317
BTLS  Baital             81.64 317 eP        P        20 05 07.8 -0.6
BTLS                                pmax     pmax
      comp=Z,1.0nm,0.6s
MAW   Mawson             82.35 203  P        P        20 05 11.7  0.0
      baz=82,SNR=5.2
MAW   Mawson             82.35 203  P        P        20 05 11.6 -0.1
      comp=Z,18nm,1.0s,baz=76,slow=5.4,SNR=7.8
MAW   Mawson             82.35 203  P        P        20 05 12.0 +0.3
MAW                                 pmax     pmax
      comp=Z,11nm,1.5s
MAW   Mawson             82.35 203  P        P        20 05 12.0 +0.3
RC01  Rabbit Creek A     82.66  26  P        P        20 05 13.3 -0.2
      baz=244
KBL   Kabul              82.81 306  P        P        20 05 12.8 -2.3
KBL                                 pmax     pmax
      comp=Z,4.0nm,0.7s
KBL   Kabul              82.81 306  P        P        20 05 12.8 -2.3
DZA   Taraz              82.96 314 eP        P        20 05 15.1 -0.3
      baz=314
DZA   Taraz              82.96 314 eP        P        20 05 15.1 -0.3
CUT   Chulitna           83.02  25  P        P        20 05 15.0 -0.2
      baz=244
KTH   Kantishna Hill     83.27  24  P        P        20 05 16.4 -0.2
KTH                                 IAmb     IAmb     20 05 18.4
      comp=Z,19nm,1.2s
IMAR  Indian Mountai     83.37  21  P        P        20 05 17.1 +0.1
BPAW  Bear Paw Mtn.      83.49  23  P        P        20 05 17.9 +0.2
BPAW                                IAmb     IAmb     20 05 19.2
      comp=Z,19nm,1.3s
SML   Sawmill            83.58  26  P        P        20 05 18.5 +0.2
SML                                 IAmb     IAmb     20 05 20.7
      comp=Z,19nm,0.8s
KK31  Karatay Array      83.59 314  P        P        20 05 17.8 -0.9
KK31                                pmax     pmax
      comp=Z,5.0nm,1.1s
KK31  Karatay Array      83.59 314  P        P        20 05 17.8 -0.9
KKAR  Karatay Array      83.59 314  P        P        20 05 18.0 -0.7
KKAR                                pmax     pmax
      comp=Z,5.0nm,1.1s
KKAR  Karatay Array      83.59 314  P        P        20 05 17.8 -0.8
KKAR  Karatay Array      83.59 314  P        P        20 05 18.0 -0.7
IUG   Iuzhnay            83.71 313 eP        P        20 05 19.1 -0.4
      comp=Z,2.0nm,0.9s,baz=313
IUG   Iuzhnay            83.71 313 eP        P        20 05 19.0 -0.4
IUG                                 pmax     pmax
      comp=Z,2.0nm,0.9s
BRZS  Berezniki          83.92 321 eP        P        20 05 19.6 -0.6
      comp=Z,4.4nm,1.1s,baz=321
BRZS  Berezniki          83.92 321 eP        P        20 05 19.6 -0.6
BRZS                                pmax     pmax
      comp=Z,4.0nm,1.1s
MLY   Manley             84.01  22  P        P        20 05 20.7 +0.3
      baz=243,SNR=20
RND   Reindeer           84.04  24  P        P        20 05 20.3 -0.3
RND   Reindeer           84.04  24  P        P        20 05 20.2 -0.3
RND                                 IAmb     IAmb     20 05 22.3
      comp=Z,17nm,0.9s
BWN   Browne             84.12  23  P        P        20 05 21.3 +0.4
MCK   McKinley           84.14  24  P        P        20 05 20.5 -0.5
      baz=245,SNR=13
QSPA  South Pole Qui     84.33 180  P        P        20 05 21.9 -0.3
      comp=Z,9.8nm,0.7s,baz=340,slow=1.2,SNR=28
QSPA  South Pole Qui     84.33 180  P        P        20 05 21.8 -0.3
QSPA                                IAmb     IAmb     20 05 22.9
      comp=Z,14nm,0.8s
NEA2  Nenana             84.46  23  P        P        20 05 22.2 -0.4
      baz=244,SNR=10.0
DHY   Denali Highway     84.51  25  P        P        20 05 23.3 +0.2
DHY                                 IAmb     IAmb     20 05 31.1
      comp=Z,15nm,1.0s
KLU   Klutina            84.51  26  P        P        20 05 23.5 +0.4
KLU                                 IAmb     IAmb     20 05 31.9
      comp=Z,16nm,1.0s
I23K  Minto, Yukon-K     84.59  22  P        P        20 05 23.2  0.0
      baz=244
I23K  Minto, Yukon-K     84.59  22  P        P        20 05 23.3 +0.1
M24K  Tolsona, Glenn     84.64  26  P        P        20 05 24.1 +0.5
      baz=247
M24K  Tolsona, Glenn     84.64  26  P        P        20 05 22.7 -0.9
WRH   Wood River Hil     84.79  23  P        P        20 05 23.8 -0.5
WRH                                 IAmb     IAmb     20 05 25.3
      comp=Z,25nm,1.2s
MDM   Murphy Dome        84.94  23  P        P        20 05 24.1 -0.9
MDM                                 IAmb     IAmb     20 05 25.4
      comp=Z,16nm,1.4s
CCB   Clear Creek Bu     84.98  23  P        P        20 05 24.4 -0.7
COLA  College            85.05  23ceP        P        20 05 24.8 -0.7
COLA                                pmax     pmax
      comp=Z,14nm,1.0s
N25K  Chitina, Valde     85.14  27  P        P        20 05 26.4 +0.2
      baz=249
COLD  Coldfoot           85.21  20  P        P        20 05 27.1 +0.8
      baz=243,SNR=8.8
COLD  Coldfoot           85.21  20  P        P        20 05 27.1 +0.8
HDA   Harding Lake       85.22  24  P        P        20 05 25.7 -0.7
      baz=246,SNR=5.5
HDA   Harding Lake       85.22  24  P        P        20 05 25.8 -0.7
A21K  Barrow             85.28  16  P        P        20 05 27.2 +0.7
      baz=237
A21K  Barrow             85.28  16  P        P        20 05 26.2 -0.3
POKR  Poker Plat Res     85.31  23  P        P        20 05 26.8 -0.1
      baz=246
IL31                     85.39  23  P        P        20 05 26.1 -1.1
IL31                                IAmb     IAmb     20 05 27.1
      comp=Z,14nm,0.8s
ILAR  Eielson Array      85.39  23  P        P        20 05 26.4 -0.8
      comp=Z,9.2nm,0.6s,baz=253,slow=4.9,SNR=59
ILAR  Eielson Array      85.39  23  P        P        20 05 26.1 -1.2
GLB   Gilahina Butte     85.44  27  P        P        20 05 27.5 -0.1
GLB                                 IAmb     IAmb     20 05 38.1
      comp=Z,17nm,1.3s
TGL   Tana Glacier       85.65  28  P        P        20 05 29.3 +0.5
RIDG  Independent Ri     85.81  25  P        P        20 05 30.0 +0.5
RIDG                                IAmb     IAmb     20 05 31.3
      comp=Z,18nm,1.1s
DOT   Dot Lake           86.11  25  P        P        20 05 31.4 +0.5
DOT                                 IAmb     IAmb     20 05 32.8
      comp=Z,26nm,1.3s
BRVK  Borovoye           86.18 324⇓eP        P        20 05 31.4  0.0
BRVK                                pmax     pmax
      comp=Z,5.0nm,1.0s
BRVK  Borovoye           86.18 324  P        P        20 05 31.2 -0.2
SCRK  Sand Creek         86.26  24  P        P        20 05 31.5 -0.2
      baz=249
BARN  Barnard Glacie     86.29  28  P        P        20 05 33.0 +0.9
BARN                                IAmb     IAmb     20 05 35.8
      comp=Z,15nm,0.7s
CTGM  Chitina Glacie     86.41  28  P        P        20 05 33.6 +1.0
CTGM                                IAmb     IAmb     20 05 36.3
      comp=Z,14nm,0.8s
FYU   Fort Yukon         86.72  22  P        P        20 05 33.7 -0.1
BCAR  Beaver Creek A     86.88  26  P        P        20 05 35.3 +0.6
K27K  Chicken            87.07  25  P        P        20 05 36.8 +1.2
BMAR  Burnt Mountain     87.28  21  P        P        20 05 35.2 -1.4
EGAK  Eagle              87.68  24  P        P        20 05 38.6 +0.2
HYT   Haines Junctio     88.17  28  P        P        20 05 40.8 -0.2
HYT                                 IAmb     IAmb     20 06 01.6
      comp=Z,26nm,1.3s
HRA   Herat              88.32 305  P        P        20 05 40.4 -2.1
HRA                                 IAmb     IAmb     20 06 03.7
      comp=Z,11nm,1.2s
EPYK  Eagle Plains       89.90  23  P        P        20 05 49.4 +0.4
EPYK                                IAmb     IAmb     20 05 50.3
      comp=Z,16nm,1.1s
SYO   Syowa Base         90.72 200⇑eP        P        20 05 52.8 +0.1
INK   Inuvik             91.54  21  P        P        20 05 56.6 +0.2
      comp=Z,6.1nm,1.1s,baz=274,slow=5.0,SNR=7.5
INK   Inuvik             91.54  21  P        P        20 05 55.5 -1.0
INK                                 pmax     pmax
      comp=Z,9.0nm,1.2s
INK   Inuvik             91.54  21  P        P        20 05 55.5 -1.0
INK                                 IAmb     IAmb     20 05 57.9
      comp=Z,9.3nm,1.2s
ABKAR Akbulak array      91.89 319  P        P        20 05 56.3 -2.2
GEYT  Alibeck            92.05 308  P        P        20 05 59.0 -0.6
      comp=Z,1.1nm,0.6s,baz=201,slow=7.8,SNR=3.6
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GEYT  Alibeck            92.05 308  P        P        20 05 58.7 -0.9
O02D  Mt. Diablo Mer     94.23  50  P        P        20 06 10.5 +0.8
      baz=266
M02C  Callahan           94.26  49  P        P        20 06 10.5 +0.7
      baz=266
N02D  Trinity Center     94.34  49  P        P        20 06 11.0 +0.8
      baz=266
YBH   Yreka Blue Hor     94.39  49  P        P        20 06 11.4 +1.1
YBH                                 pmax     pmax
      comp=Z,12nm,1.4s
YBH   Yreka Blue Hor     94.39  49  P        P        20 06 11.4 +1.1
YBH                                 IAmb     IAmb     20 06 13.6
      comp=Z,12nm,1.4s
WDC   Whiskeytown Da     94.44  50  P        P        20 06 11.8 +1.3
WDC                                 pmax     pmax
      comp=Z,12nm,1.2s
WDC   Whiskeytown Da     94.44  50  P        P        20 06 11.8 +1.3
WDC                                 IAmb     IAmb     20 06 13.7
      comp=Z,12nm,1.2s
I04A  Tendick Farm,      94.73  47  P        P        20 06 12.3 +0.5
      baz=267
O03E  Paynes Creek       94.99  50  P        P        20 06 13.6 +0.5
      baz=267
C36M  Paulatuk           95.07  21  P        P        20 06 12.5 -0.2
      baz=268
ORV   Oroville           95.18  51  P        P        20 06 14.4 +0.4
ORV                                 pmax     pmax
      comp=Z,10.0nm,1.2s
ORV   Oroville           95.18  51  P        P        20 06 14.4 +0.4
ORV                                 IAmb     IAmb     20 06 15.8
      comp=Z,9.5nm,1.1s
J05D  Fort Rock, OR      95.56  47  P        P        20 06 16.9 +1.1
      baz=268
AFDM  Forest Hills D     95.56  52  P        P        20 06 16.5 +0.8
AFDM                                IAmb     IAmb     20 06 18.5
      comp=Z,9.9nm,1.1s
G05D  Wamic, OR          95.58  45  P        P        20 06 16.5 +0.9
      baz=268
BELA  Belgrano 2         96.61 180  P        P        20 06 18.5 -1.1
NVAR  Mina Array Bea     97.63  52  P        Pdif     20 06 26.3 +0.9
      comp=Z,1.6nm,0.8s,baz=265,slow=6.3,SNR=7.3
NVAR                                PP       PP       20 10 31.0 +7.7
      comp=Z,0.1nm,0.3s,baz=251,slow=9.2,SNR=4.2
NVAR  Mina Array Bea     97.63  52  P        P        20 06 25.2 -0.2
CWC   Cottonwood Cre     97.77  54  P        P        20 06 26.2 +0.2
      baz=269
EDW2  Edwards Air Fo     97.80  56  P        P        20 06 26.5 +0.5
      baz=269
E09A  Wood Farm, Sta     97.82  44  P        Pdif     20 06 27.0 +1.3
E09A                                IAmb     IAmb     20 06 28.7
      comp=Z,8.5nm,1.1s
LRMC  Laurel Mtn Rad     98.07  55  P        P        20 06 28.0 +0.7
      baz=269
MPMC  Manual Prospec     98.24  54  P        P        20 06 28.8 +0.7
      baz=269
BMO   Blue Mountains     98.42  46  P        P        20 06 29.2 +0.6
BMO                                 pmax     pmax
      comp=Z,5.0nm,1.4s
BMO   Blue Mountains     98.42  46  P        P        20 06 29.2 +0.6
F10A  Beach Ranch, E     98.46  44  P        P        20 06 29.2 +0.5
F10A                                IAmb     IAmb     20 06 31.2
      comp=Z,3.5nm,0.9s
NEW   Newport            98.50  42  P        P        20 06 29.4 +0.6
      baz=271
PFO   Pinyon Flats O     99.05  57  P        Pdif     20 06 29.8 -1.9
      baz=269
YKA   Yellowknife Ar     99.14  28  P        Pdif     20 06 31.1 -0.2
      comp=Z,2.1nm,1.0s,baz=273,slow=4.4,SNR=12
YKA                                 PP       PP       20 10 27.6 -6.2
      comp=Z,0.7nm,0.9s,baz=278,slow=4.3,SNR=3.3
R11A  Troy Canyon, C     99.77  52  P        Pdif     20 06 34.5 -0.4
      baz=270
HLID  Hailey            100.53  47  P        Pdif     20 06 38.5 +0.4
      baz=272
VNA2  Neumayer--Watz    101.62 189  Pdiff    Pdif     20 06 42.9 +0.6
      baz=180,slow=2.1
VNA3  Neumayer Olymp    101.65 188  Pdiff    Pdif     20 06 41.0 -1.4
214A  Organ Pipe Nat    102.12  59  P        Pdif     20 06 44.1 -1.2
      baz=271
BOZ   Bozeman (W)       102.39  45  P        Pdif     20 06 45.6 -0.7
      baz=275
PDAR  Pinedale Array    104.13  47  Pdiff    Pdif     20 06 55.0 +0.7
      comp=Z,0.9nm,0.8s,baz=222,slow=1.8,SNR=6.3
TXAR  Lajitas Array     110.13  61  PKKPbc   PKKPbc   20 22 25.5 +0.7
      comp=Z,0.3nm,0.6s,baz=122,slow=3.3,SNR=3.4
U40A  Yellville         117.94  52  P        PKPdf    20 11 35.8 -1.5
      baz=285
CLL   Collm             120.33 328 ePKiKP    PKPdf    20 11 40.0 -1.4
CLL                                ePP       PP       20 13 06.0 -1.2
CLL   Collm             120.33 328 ePKIKP    PKPdf    20 11 40.0 -1.4
CLL                                e                  20 13 06.0
GERES GERESS Array B    121.25 325  PKP      PKPdf    20 11 41.9 -1.5
      comp=Z,0.4nm,0.7s,baz=22,slow=1.4,SNR=3.5
PLCA  Paso Flores       122.77 147  PKP      PKPdf    20 11 47.1 +0.6
      comp=Z,3.1nm,0.7s,baz=222,slow=3.5,SNR=11
LRAL  Lakeview Retre    123.48  54  P        PKPdf    20 11 46.3 -1.6
      baz=287
I51A  Listowel          123.71  40  P        PKPdf    20 11 46.7 -1.4
      baz=298
T50A  Nancy             123.88  49  PKPdf    PKPdf    20 11 47.1 -1.6
ALGO  Algonquin Park    124.45  36  P        PKPdf    20 11 48.0 -1.4
      baz=302
G54A  Lake Saint Pet    124.72  37  P        PKPdf    20 11 48.7 -1.4
      baz=302
BI02  San Fabin de      125.14 143  PKPdf    PKPdf    20 11 51.1 -0.2
E56A  St. Veronique     125.85  34  P        PKPdf    20 11 50.8 -1.4
      baz=306
U54A  Nelsons Funny     126.31  48           PKPdf    20 11 51.7 -1.7
M56A  Emporium          126.66  41  P        PKPdf    20 11 53.0 -0.9
      baz=300
BO02  Sierra Bellavi    126.69 142  PKPdf    PKPdf    20 11 51.9 -2.4
G57A  Newington         126.71  36  P        PKPdf    20 11 52.4 -1.4
      baz=305
J57A  Williamstown      127.05  38  P        PKPdf    20 11 53.3 -1.2
      baz=303
J58A  Remsen            127.52  38  P        PKPdf    20 11 54.9 -0.6
      baz=304
H58A  Gabriels          127.58  36  P        PKPdf    20 11 54.9 -0.7
      baz=305
K58A  Earlville         127.62  38  P        PKPdf    20 11 55.4 -0.3
      baz=303
O57A  Amberson          127.65  42  P        PKPdf    20 11 55.2 -0.6
      baz=299
Q57A  Strasburg         127.68  44  P        PKPdf    20 11 55.5 -0.4
      baz=298
H59A  Cadyville         127.73  36  P        PKPdf    20 11 54.8 -1.0
      baz=306
M58A  Price’s Panora    127.84  40  P        PKPdf    20 11 55.0 -1.1
      baz=301
D60A  Saint Jean D’O    127.86  32  P        PKPdf    20 11 54.7 -1.2
      baz=310
L59A  Walton            128.31  39  P        PKPdf    20 11 55.8 -1.3
      baz=303
H60A  Morristown        128.35  35  P        PKPdf    20 11 55.6 -1.4
      baz=307
M59A  Waymart           128.41  40  P        PKPdf    20 11 55.8 -1.5
      baz=302
R58B  Mineral           128.54  45  P        PKPdf    20 11 56.0 -1.5
      baz=298
O59A  Robesonia         128.56  41  P        PKPdf    20 11 55.9 -1.6
      baz=301
J60A  Lant Hill Farm    128.70  37  P        PKPdf    20 11 55.5 -2.2
      baz=305
H61A  Lyndonville       128.81  35  P        PKPdf    20 11 56.0 -1.9
      baz=308
PB08  IPOC Station P    136.69 127           PKPdf    20 12 09.7 -4.2
CPUP  Villa Florida     140.79 145  PKP      PKPdf    20 12 19.2 -1.5
      comp=Z,4.4nm,0.8s,baz=200,slow=6.5,SNR=5.9
CPUP  Villa Florida     140.79 145           PKPdf    20 12 18.9 -1.9
SDV   Santo Domingo     143.16  83           PKPab    20 12 22.3 +1.2
TOA0  Torodi Ar. Sit    144.40 285  PKPdf    PKPab    20 12 24.7 -0.9
TORD  Torodi Ar. Bea    144.40 285  PKP      PKPab    20 12 25.6  0.0
      comp=Z,6.7nm,0.8s,baz=73,slow=3.6,SNR=17
TORD  Torodi Ar. Bea    144.40 285           PKPab    20 12 24.4 -1.2
CRPR  Cabo Rojo, PR     145.07  66           PKPbc    20 12 26.4 -1.5
OBIP  Obispado Ponce    145.52  66           PKPdf    20 12 27.9 -1.3
SJG   San Juan          145.91  66  PKP2     PKPdf    20 12 29.3 -0.6
SJG   San Juan          145.91  66           PKPdf    20 12 29.3 -0.6
PDPR  Patillas Dam,     146.06  66           PKPdf    20 12 29.7 -0.5
HUMP  Col San Antoni    146.18  66           PKPdf    20 12 30.0 -0.4
MTP   Monte Pirata      146.46  66           PKPdf    20 12 29.9 -0.9
SAML  Samuel            147.16 116  PKIKP    PKPdf    20 12 31.5 -0.7
SAML  Samuel            147.16 116  PKPdf    PKPdf    20 12 31.5 -0.7
KOWA  Kowa              149.58 289           PKPbc    20 12 39.1 -1.5
KIC   Kosan Boka        151.27 273 eP        PKPbc    20 12 44.4 -0.4
      comp=Z,8.2nm,0.5s
```

```
DBIC  Dimbokro          151.38 274  PKPbc    PKPbc    20 12 44.5 -0.5
      comp=Z,6.0nm,0.5s,baz=61,slow=2.5,SNR=14
DBIC  Dimbokro          151.38 274  PKIKP    PKPbc    20 12 44.7 -0.3
DBIC  Dimbokro          151.38 274           PKPbc    20 12 44.6 -0.3
TIC   Toumodi           151.54 274 eP        PKiKP    20 12 46.4 +0.5
LIC   Lamto             151.55 273 eP        PKPbc    20 12 45.5 +0.1
      comp=Z,26nm,0.4s
PTGA  Pitinga           152.95 103           PKPbc    20 12 48.6 +0.1
BDFB  Brasilia          154.51 146  PKPbc    PKPbc    20 12 52.0  0.0
      comp=Z,9.2nm,0.8s,baz=235,slow=2.3,SNR=10
```

DDA ***21*** *19:55:11.6, 37°.62N×30°.11E, h6km±1km, MW3.7*
IDC ***21*** *19:55:11.1±1.4, 37°.64N×30°.12E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/35, mbtmp3.7/6, ML3.3/2, MS3.1/1, Ms1 3.2/1, ms1mx2.4/49, Error ellipse: s-maj=52.9km s-min=16.6km az=147.0*
ISK ***21*** *19:55:11.3, 37°.63N×30°.07E, h6km, ML3.6/27*
IASPEI ***21*** *19:55:12.2±0.9, 37°.64N±0°.02×30°.10E±0°.03, h7km±7km, mb3.6/4, Error ellipse: s-maj=3.8km s-min=3.3km az=119.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
THE ***21*** *19:55:14.3, 37°.69N×30°.03E, h0km±5km, ML3.2/2, Error ellipse: s-maj=15.2km s-min=1.9km az=46.0*
NIC ***21*** *19:55:17.0±0.0, 37°.49N×30°.20E, h15km±1km, Ml3.7/3*
ISC 21 19:55:12.5±0.9**, 37°.64N**±0°.02×**30°.10E**±0°.02**, h6**km±6km**, n113, σ1**s**.15**/135**, mb3.6**/4**, 13C-5D, Turkey**

```
Code  Station Name       Δ°   AZ°   Phase ID           Time     Res
                                    Op       ISC      h  m  s   ISC
BRDR  BURDUR-Merkez      0.06 328 i P        Pg       19 55 13.8 -0.3
BRDR                                IAML              19 55 15.0
      comp=N,36µm,0.4s
BRDR                              i S        Sg       19 55 15.4  0.0
BRDR                                IAML              19 55 16.0
      comp=E,44µm,0.3s
ISP   Isparta            0.38  62   PG       Pg       19 55 19.7 -0.1
ISP                                 SG       Sb       19 55 26.4 -1.4
BCK   Bucak              0.43 115   PG       Pg       19 55 19.9 -0.9
BCK                                 SG       Sb       19 55 27.4 -1.8
BUCA  Burdur, Bucak-     0.48 131 i P        Pg       19 55 20.5 -1.2
BUCA                              i S        Sg       19 55 28.2 +0.2
BUCA                                IAML              19 55 30.0
      comp=N,2µm,0.2s
BUCA                                IAML              19 55 30.0
      comp=E,2µm,0.3s
GOLH  Golhisar           0.59 227 i P        Pg       19 55 22.5 -1.3
GOLH                              i S        Sg       19 55 32.3 +0.7
GOLH                                IAML              19 55 34.0
      comp=N,3µm,0.3s
GOLH                                IAML              19 55 37.0
      comp=E,3µm,0.3s
KZIL  AFYON_Kizioren     0.61   3 i P        Pg       19 55 24.2 -0.1
BAGO  Egridir - ISPA     0.64  57 i P        Pg       19 55 24.0 -0.9
KORT  Korkueli           0.67 163 i P        Pb       19 55 26.3 -0.3
KORT                              i S        Sg       19 55 34.1  0.0
CAEL  Denizli, Camel     0.81 230 i P        Pg       19 55 27.8 -0.3
KHL   Karahalli          0.82 326   PG       Pg       19 55 27.6 -0.6
ANTB  Antalya            0.86 149   PG       Pg       19 55 28.1 -0.9
KHAL  Karahalli          0.87 327 i P        Pg       19 55 28.5 -0.7
KHAL                              i S        Sn       19 55 44.0 -0.4
KHAL                                IAML              19 55 49.0
      comp=N,925nm,0.4s
KHAL                                IAML              19 55 49.0
      comp=E,2µm,0.5s
ELL   Elmali             0.91 190   PG       Pg       19 55 28.8 -1.1
ELL   Elmali             0.91 190   S        Sb       19 55 43.6 +0.5
TAVA  DENIZLI_Tavas      0.96 260 i P        Pg       19 55 29.0 -1.9
SHUT  Suhut-Afyon        0.97  21   PG       Pg       19 55 30.1 -1.1
YVAC  Isparta, Yalva     1.09  55 i P        Pg       19 55 32.5 -1.0
KEMT  Kemer-ANTALYA      1.10 161   PN       Pg       19 55 32.9 -0.7
AFYO  Afyonkarahisar     1.15   8 i P        Pg       19 55 34.2 -0.4
AFYO                              i S        Sn       19 55 50.9 -0.5
AFYO                                IAML              19 56 01.0
      comp=E,1µm,0.7s
AFYO                                IAML              19 56 10.0
      comp=N,1µm,1.0s
FETY  Fethiye            1.29 219   P        Pn       19 55 36.3 -0.8
FETY                                S        Sn       19 55 56.0 +1.3
FETY  Fethiye            1.29 219   PN       Pn       19 55 36.1 -1.0
DOGA  KONYA_Doganhis     1.32  69 i P        Pg       19 55 37.7 -0.1
DOGA                              i S        Sn       19 55 56.6 +1.0
DOGA                                IAML              19 56 01.0
      comp=E,586nm,0.8s
DOGA                                IAML              19 56 02.0
      comp=N,701nm,0.8s
SEDI  Konya, Seydise     1.33  98 i P        Pg       19 55 37.5 -0.4
USAK  Uak-Merkez         1.37 322 i P        Pn       19 55 37.4 -0.8
USAK                              i S        Sg       19 55 56.9 +0.4
USAK                                IAML              19 56 03.0
      comp=E,420nm,0.4s
KEPZ  Antalya-Kepez      1.41 121 i P        Pg       19 55 38.8 -0.7
DEMR  Demre-Antalya      1.41 186   PN       Pn       19 55 37.6 -1.1
DALY  Dalyan (Mula)      1.42 235   PN       Pn       19 55 37.9 -0.9
DALY  Dalyan (Mula)      1.42 235 i P        Pn       19 55 38.2 -0.6
DALY                              i S        Sg       19 55 58.8 +0.7
DALY                                IAML              19 56 02.0
      comp=E,952nm,1.0s
KULA  Kula-Manisa        1.43 308   PN       Pn       19 55 37.9 -1.2
AKAS  Kas                1.46 196   PN       Pn       19 55 39.1 -0.4
AKAS  Kas                1.46 196 i P        Pg       19 55 40.5  0.0
AKAS                              i S        Sg       19 56 05.1 +5.6
AKAS                                IAML              19 56 11.0
      comp=E,290nm,0.6s
AKAS                                IAML              19 56 13.0
      comp=N,470nm,0.6s
MULA  Mugla, Merkez-     1.47 255 i P        Pg       19 55 40.6  0.0
MANT  Manisa             1.48 305 i P        Pn       19 55 39.0 -0.8
MANT                              i S        Sg       19 56 02.2 +2.0
MANT                                IAML              19 56 05.0
      comp=N,934nm,0.3s
MANT                                IAML              19 56 07.0
      comp=E,688nm,0.4s
GEDZ  Gediz              1.50 339   PN       Pn       19 55 39.7 -0.3
GDZ   Gediz              1.52 341 i P        Pn       19 55 39.7 -0.7
GDZ                               i S        Sg       19 56 06.1 +4.7
GDZ                                 IAML              19 56 10.0
      comp=N,126nm,0.8s
GDZ                                 IAML              19 56 10.0
      comp=E,164nm,0.7s
YER   Yerkesik           1.54 251   P        Pn       19 55 40.4 -0.1
YER                                 S        Sg       19 56 02.1 +0.3
YER   Yerkesik           1.54 251   PN       Pn       19 55 39.5 -1.0
SHAP  Saphane-Kutahy     1.54 334   PN       Pn       19 55 40.0 -0.6
KSL   Kastellorizon      1.55 196   P        Pg       19 55 42.9 +0.8
KSL                                 S        Sg       19 56 04.3 +2.1
      comp=E,748nm,0.8s
KSL   Kastellorizon      1.55 196   P        Pg       19 55 42.8 +0.6
KSL                                 S        Sg       19 56 01.9 -0.3
AUKIR Kırka- Seyitga     1.67  12 i P        Pb       19 55 42.9 -0.7
SIMA  Simav-Kutahya      1.69 329   PN       Pn       19 55 41.9 -0.7
TURN  Turunc             1.72 240 i P        Pg       19 55 46.2 +0.8
DEMI  Demirci            1.77 322 i P        Pn       19 55 43.3 -0.4
DEMI                              i S        Sg       19 56 11.1 +1.7
DEMI                                IAML              19 56 22.0
      comp=N,247nm,0.5s
MRSB  Marmaris-Mugla     1.78 239   PN       Pn       19 55 42.7 -1.1
KONT  Konya--Tatoy       1.81  80   PN       Pn       19 55 44.3  0.0
KONT  Konya--Tatoy       1.81  80 i P        Pb       19 55 45.4 -0.7
KDHN  Kadinhani          1.81  61 i P        Pn       19 55 44.6 +0.3
ANDZ  Kutahya, Merke     1.87 355 i P        Pn       19 55 44.2 -0.9
TVSB  Tavsanli           1.87 345   PN       Pn       19 55 44.4 -0.7
CIFT  Cifteler, Eski     1.87  23   PN       Pn       19 55 45.1  0.0
CIFT  Cifteler, Eski     1.87  23 i P        Pn       19 55 45.2  0.0
LADK  Ladik-KONYA        1.87  72   PN       Pn       19 55 45.2  0.0
SGAZ  Eskisehir, Sey     1.97  17 i P        Pn       19 55 46.2 -0.3
SVRH  Sivrihisar-ESK     2.12  31   PN       Pn       19 55 48.6 +0.1
ARG   Arkhangelos        2.13 229   P        Pn       19 55 49.8 +1.2
ARG                                 S        Sb       19 56 17.7 -0.4
      comp=N,355nm,0.5s
ARG   Arkhangelos        2.13 229   PN       Pn       19 55 48.0 -0.6
ARG   Arkhangelos        2.13 229   P        Pb       19 55 51.5  0.0
DATC  Datca-Mugla        2.14 246   PN       Pn       19 55 48.1 -0.6
BORA  Eskisehir          2.25   7   PN       Pn       19 55 50.5 +0.2
AUBOZ BOZOYUK            2.26 359 i P        Pn       19 55 50.3 -0.2
ALIN  Konya, Altinte     2.29  73 i P        Pg       19 55 56.4 +0.1
BODT  Bodrum             2.30 256   P        Pn       19 55 50.8 -0.1
BODT  Bodrum             2.30 256   PN       Pn       19 55 50.5 -0.4
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DURS	**Dursunbey**	**2.33**	**327**	*i* P	**Pn**	**19 55 51.0**	**-0.5**
CHBY	**Cihanbeyli**	**2.39**	**66**	PN	**Pn**	**19 55 52.4**	**+0.1**
SRCK	**Saricakaya, Es**	**2.43**	**10**	PN	**Pn**	**19 55 52.9**	**+0.2**
BILE	**Bilecik/Merkez**	**2.52**	**356**	*i* P	**Pn**	**19 55 53.8**	**-0.2**
STEP	**BALIKESIR_Sava**	**2.55**	**314**	*i* P	**Pn**	**19 55 54.0**	**-0.3**
ULDT	**Uludag**	**2.61**	**343**	*i* P	**Pn**	**19 55 53.6**	**-1.7**
ZEDA	**zmir-Bergama**	**2.72**	**300**	*i* P	**Pn**	**19 55 56.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**2.88**	**341**	PN	**Pn**	**19 55 58.8**	**-0.1**
KCTX	**Karacabey (Bur**	**2.95**	**333**	PN	**Pn**	**19 55 59.7**	**-0.2**
BUHA	**Balikesir, Bur**	**3.01**	**309**	*i* P	**Pn**	**19 56 00.8**	**+0.1**
KIBS	**BOLU**	**3.09**	**26**	*i* P	**Pb**	**19 56 08.6**	**+0.7**
KARP	**Karpathos**	**3.16**	**229**	P	**Pn**	**19 56 03.6**	**+0.8**
AKMS	**Akamas**	**3.18**	**145**	P	**Pn**	**19 56 04.6**	**+1.5**
AKMS				AML	AML	19 56 52.9	
	comp=N,0.6nm,0.7s						
AKMS				AML	AML	19 56 56.9	
	comp=N,0.5nm,0.4s						
ALFC	**Alefka**	**3.20**	**140**	P	**Pn**	**19 56 04.9**	**+1.6**
ALFC				AML	AML	19 56 48.7	
	comp=N,0.5nm,0.6s						
ALFC				AML	AML	19 56 58.4	
	comp=N,0.5nm,0.7s						
LEF	**Lefka**	**3.38**	**137**	⇑P	**Pn**	**19 56 03.4**	**-2.3**
CMDR	**Camlidere-ANKA**	**3.39**	**32**	*i* P	**Pn**	**19 56 07.2**	**+1.1**
PRK	**Paraskevi**	**3.41**	**299**	P	**Pn**	**19 56 07.2**	**+1.1**
BRTR	**Keskin Array B**	**3.46**	**52**	Pn	**Pn**	**19 56 07.5**	**+0.4**
	comp=N,4.8nm,0.3s,baz=218,slow=11,SNR=140						
BRTR				Sn	**Sn**	**19 56 50.5**	**+2.1**
	comp=N,1.8nm,0.3s,baz=220,slow=24,SNR=9.5						
BAYC	**CANAKKALE_Bayr**	**3.48**	**308**	*i* P	**Pn**	**19 56 07.3**	**+0.1**
NATA	**Nata**	**3.49**	**144**	P	**Pn**	**19 56 08.8**	**+1.6**
BCAM	**Yenicaga**	**3.52**	**25**	*i* P	**Pn**	**19 56 06.2**	**-1.5**
SZAC	**Souni**	**3.66**	**141**	P	**Pn**	**19 56 10.9**	**+1.3**
SZAC				AML	AML	19 57 05.0	
	comp=N,0.4nm,1.1s						
SZAC				AML	AML	19 57 11.3	
	comp=N,0.5nm,0.6s						
DEVR	**Zonguldak/Devr**	**3.78**	**22**	*i* P	**Pn**	**19 56 12.1**	**+0.8**
ASGA	**Asgata**	**3.82**	**137**	P	**Pn**	**19 56 14.2**	**+2.4**
CDAG	**Cicekdag**	**3.88**	**58**	*i* P	**Pn**	**19 56 10.9**	**-1.9**
OSC1	**CSNet OBS 1**	**4.24**	**167**	P	**Pn**	**19 56 19.0**	**+1.3**
IDI	**Anoyia**	**4.81**	**242**	Pn	**Pn**	**19 56 26.4**	**+0.9**
	comp=N,0.9nm,0.3s,baz=62,slow=16,SNR=13						
IDI				Sn	**Sn**	**19 57 22.3**	**+0.6**
	comp=N,1.3nm,0.3s,baz=130,slow=12,SNR=3.6						
IDI	**Anoyia**	**4.81**	**242**	⇑P	**Pn**	**19 56 26.3**	**+0.7**
IDI				⇑S	**Sn**	**19 57 20.7**	**-1.0**
OSC2	**CSNet OBS 4**	**4.89**	**158**	P	**Pn**	**19 56 27.8**	**+1.3**
TIRR	**Tirgusor**	**6.93**	**350**	⇑P	**Pn**	**19 56 54.6**	**+0.2**
JURR	**Jurilovca**	**7.17**	**353**	⇑P	**Pn**	**19 56 58.2**	**+0.3**
HARR	**Harsova**	**7.23**	**348**	⇑P	**Pn**	**19 56 59.3**	**+0.7**
TPGR	**Topolog**	**7.32**	**351**	⇓P	**Pn**	**19 56 59.7**	**-0.1**
CFR	**Carcaliu**	**7.67**	**350**	⇑P	**Pn**	**19 57 04.1**	**-0.6**
VARL	**Varlezi**	**8.42**	**349**	⇓P	**Pn**	**19 57 16.9**	**+2.0**
MLR	**Muntele Rosu**	**8.44**	**340**	⇑P	**Pn**	**19 57 14.2**	**-1.1**
VRI	**Vrincioaia**	**8.59**	**344**	⇓P	**Pn**	**19 57 18.3**	**+1.0**
PLOR	**Plostina**	**8.60**	**344**	⇓P	**Pn**	**19 57 19.3**	**+1.9**
VOIR		**8.66**	**336**	⇑P	**Pn**	**19 57 19.2**	**+0.9**
DOPR	**Dopca**	**9.03**	**339**	⇑P	**Pn**	**19 57 24.1**	**+0.7**
TESR	**Tescani**	**9.22**	**345**	⇓P	**Pn**	**19 57 26.1**	**+0.1**
HERR	**Herculane**	**9.26**	**324**	⇑P	**Pn**	**19 57 25.5**	**-0.9**
SORM	**Soroca**	**10.56**	**354**	⇑P	**Pn**	**19 57 43.9**	**-0.4**
BURAR	**Bucovina Array**	**10.59**	**342**	⇑P	**Pn**	**19 57 47.8**	**+3.0**
HFS	**Hagfors**	**24.82**	**340**	P	**P**	**20 00 34.6**	**-0.5**
	comp=N,3.0nm,0.9s,baz=133,slow=14,SNR=2.4						
NOA	**NORSAR Array B**	**26.26**	**339**	LR	LR	20 12 51.2	
	comp=N,39nm,19.8s,baz=295,slow=40						
TORD	**Torodi Ar. Bea**	**35.15**	**234**	P	**P**	**20 02 06.0**	**-1.1**
	comp=N,0.5nm,0.4s,baz=21,slow=8.9,SNR=2.1						
MKAR	**Makanchi Array**	**39.08**	**59**	P	**P**	**20 02 40.0**	**-0.3**
	comp=N,0.6nm,0.6s,baz=278,slow=7.4,SNR=9.6						
ZALV	**Zalesovo Beam**	**40.40**	**48**	P	**P**	**20 02 50.8**	**-0.2**
	comp=N,0.7nm,0.6s,baz=271,slow=7.9,SNR=2.1						

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*NEIC **21** 20:04:46.5±1.3,25°.47S±0°.07×177°.2W±0°.2,h109^{km}±9^{km}, mb4.3/3,Error ellipse: s-maj=30.9km s-min=5.2km az=108.0*

*IDC **21** 20:04:50.4±2.7,25°.70S×177°.36W,h128^{km}±23^{km}, mb3.9/11,mb1 4.1/13,mb1mx3.8/46,mbtmp4.3/13,Error ellipse: s-maj=20.4km s-min=20.0km az=2.0*

ISC 21 20:04:47.0±0.5,**25°.53S**±0°.07×**177°.3W**±0°.1,**h100**^{km}**,n43,** σ1^{s}06/43,**mb4.1**/10,**3C-3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.75**	**189**	P	**Pn**	**20 05 44.4**	**+1.6**
	110nm,0.3s,baz=91,slow=6.0,SNR=6.6						
RAO				S	**Sn**	**20 06 26.8**	**+0.7**
	326nm,0.3s,baz=100,slow=22,SNR=9.9						
RAO	**Raoul Island**	**3.75**	**189**	Pn	**Pn**	**20 05 44.3**	**+1.5**
MSVF	**Nonsavu**	**8.90**	**330**	P	Pn	20 07 01.3	+8.4
	1.1nm,0.3s,baz=126,slow=10.0,SNR=15						
MSVF	**Nonsavu**	**8.90**	**330**		**Pn**	**20 06 53.1**	**+0.3**
AFI	**Afiamalu**	**12.65**	**25**	P	**Pn**	**20 07 42.5**	**-0.9**
	11nm,0.3s,baz=252,slow=9.6,SNR=7.4						
AFI				S	Sn	20 09 54.7	-8.0
	4.3nm,0.3s,baz=45,slow=19,SNR=4.1						
AFI	**Afiamalu**	**12.65**	**25**		Pn	20 07 36.0	-7.4
AFI					Sn	20 09 52.5	-10
URZ	**Urewera**	**13.56**	**199**	P	**Pn**	**20 07 55.2**	**+0.1**
	0.5nm,0.3s,baz=32,slow=15,SNR=1.5						
URZ				S	Sn	20 10 09.0	-15
	3.5nm,0.3s,baz=0.0,slow=20,SNR=12						
URZ	**Urewera**	**13.56**	**199**	Pn	**Pn**	**20 07 54.9**	**-0.2**
RPZ	**Rata Peaks**	**20.50**	**205**	P	**P**	**20 09 15.3**	**-1.7**
	3.1nm,0.6s,baz=166,slow=12,SNR=2.1						
RPZ				S	S	20 12 41.8	-19
	3.5nm,0.5s,baz=278,slow=23,SNR=1.7						
CTA	**Charters Tower**	**34.00**	**272**	P	**P**	**20 11 21.1**	**-0.3**
	3.0nm,0.4s,baz=103,slow=12,SNR=8.0						
STKA	**Stephens Creek**	**36.48**	**250**	P	**P**	**20 11 42.4**	**-0.2**
	1.3nm,0.4s,baz=92,slow=12,SNR=9.4						
QIS	**Mount Isa**	**39.88**	**268**	P	**P**	**20 12 12.3**	**+1.1**
	baz=16,SNR=12						
AS31	**Alice Springs**	**44.25**	**262**	P	**P**	**20 12 46.1**	**-0.7**
ASAR	**Alice Springs**	**44.25**	**262**	P	**P**	**20 12 45.9**	**-0.9**
	6.3nm,0.4s,baz=92,slow=7.6,SNR=111						
ASAR	**Alice Springs**	**44.25**	**262**	P	**P**	**20 12 45.6**	**-1.2**
QSPA	**South Pole Qui**	**64.56**	**180**	P	**P**	**20 15 12.7**	**-0.6**
	6.0nm,0.7s,baz=79,slow=1.4,SNR=15						
QSPA	**South Pole Qui**	**64.56**	**180**	P	**P**	**20 15 12.2**	**-1.1**
QSPA				IAmb	IAmb	20 15 13.9	
	comp=Z,7.1nm,0.7s						
MAW	**Mawson**	**77.09**	**200**	P	**P**	**20 16 28.5**	**-0.4**
	comp=Z,5.7nm,0.5s,baz=152,slow=4.3,SNR=13						
MAW	**Mawson**	**77.09**	**200**	P	**P**	**20 16 28.4**	**-0.4**
MAW				IAmb	IAmb	20 16 29.2	
	comp=Z,1.6nm,0.7s						
PETK	**Petropavlovsk-**	**81.29**	**345**	P	**P**	**20 16 53.4**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=129,slow=4.0,SNR=2.3						
MDPB	**Devils Postpil**	**83.24**	**43**		pP	20 17 28.8	+0.3
NVAR	**Mina Array Bea**	**84.22**	**43**	P	**P**	**20 17 09.2**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=234,slow=6.8,SNR=3.9						
NVAR	**Mina Array Bea**	**84.22**	**43**	P	**P**	**20 17 05.6**	**-2.0**
TXAR	**Lajitas Array**	**89.20**	**57**	P	**P**	**20 17 32.6**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=316,slow=5.1,SNR=2.1						
PDAR	**Pinedale Array**	**92.15**	**43**	P	**P**	**20 17 46.5**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=226,slow=3.9,SNR=4.2						
ILAR	**Eielson Array**	**93.05**	**13**	P	**P**	**20 17 49.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=218,slow=4.5,SNR=2.7						
KURBB	**Kurchatov Arra**	**118.15**	**316**	PKP	**PKPdf**	**20 23 20.4**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=108,slow=4.5,SNR=1.5						
ARCES	**ARCESS Array B**	**133.97**	**349**	PKP	**PKPdf**	**20 23 52.3**	**+0.6**
	comp=Z,6.0nm,1.1s,baz=29,slow=2.1,SNR=2.0						
NB2	**NORSAR Subarra**	**144.03**	**353**	PKP	**PKPab**	**20 24 08.5**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=12,slow=3.3						
NOA	**NORSAR Array B**	**144.03**	**353**	PKP	**PKPab**	**20 24 08.2**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=18,slow=2.8,SNR=12						
HFS	**Hagfors**	**144.59**	**351**	PKP	**PKPab**	**20 24 10.0**	**0.0**
	comp=Z,5.6nm,0.5s,baz=66,slow=5.0,SNR=39						
AKASG	**Malin Array Be**	**147.68**	**328**	PKPbc	**PKPbc**	**20 24 18.9**	**-0.7**
	comp=Z,2.1nm,0.4s,baz=42,slow=3.9,SNR=8.5						
SORM	**Soroca**	**149.77**	**325**	⇑P	**PKPbc**	**20 24 24.7**	**-0.3**
BRTR	**Keskin Array B**	**150.55**	**306**	PKPbc	**PKPbc**	**20 24 26.6**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=155,slow=3.7,SNR=4.5						
BRTR				PKPab	**PKPab**	**20 24 34.6**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=133,slow=3.1,SNR=3.2						
BRTR	**Keskin Array B**	**150.55**	**306**		**PKPdf**	**20 24 24.1**	**+2.1**
EIL	**Elat**	**151.22**	**286**	PKPbc	**PKiKP**	**20 24 29.6**	**0.0**
	comp=Z,2.0nm,0.4s,baz=162,slow=3.2,SNR=3.9						
CFR	**Carcaliu**	**151.68**	**320**	⇓P	**PKPbc**	**20 24 27.7**	**-1.9**
BURAR	**Bucovina Array**	**151.70**	**327**	⇓P	**PKiKP**	**20 24 30.5**	**+0.3**
BIZ	**Bicaz**	**151.71**	**325**	⇓P	**PKiKP**	**20 24 30.3**	**+0.3**
VRI	**Vrincioaia**	**152.06**	**323**	⇑P	**PKPbc**	**20 24 30.0**	**-0.6**
DOPR	**Dopca**	**152.72**	**324**	⇑P	**PKPbc**	**20 24 32.3**	**+0.3**
CLL	**Collm**	**153.09**	**346**	*e*PKPbc	**PKiKP**	**20 24 33.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**167.64**	**175**	PKP	**PKPdf**	**20 24 40.2**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=121,slow=0.7,SNR=2.1						
TORD				PKPab	**PKPab**	**20 25 47.2**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=174,slow=3.7,SNR=2.6						

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*BJI **21** 20:08:30.0±0.0,5°.83S×146°.86E,h60^{km},mB5.4/61, mb5.6/83,Ms5.3/88,Ms7 5.1/84*

*NEIC **21** 20:08:33.7,5°.64S×146°.32E,h54^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.27; $M_{\theta\theta}$-3.31; $M_{\phi\phi}$0.04; $M_{r\theta}$-3.74; $M_{\theta\phi}$0.61; $M_{\phi r}$1.35; Fault plane solution: $M_0$5.20000×10^{17} NP1:ϕ_s92.11000°, δ20.61000°,λ75.50000°. NP2:ϕ_s287.56000°,δ70.08000°, λ95.38000°. Principal axes: T 5.1524, Plg65.0000°, Azm206.0000°; N 0.0892, Plg5.0000°, Azm106.0000°; P -5.2415, Plg25.0000°, Azm13.0000°;*

*MOS **21** 20:08:33.1±1.0,5°.64S×146°.21E,h56^{km},mb5.8/37, MS5.2/56 Error ellipse: s-maj=6.8km s-min=4.6km az=104.9*

*NEIC **21** 20:08:33.6±2.1,5°.66S±0°.06×146°.33E±0°.06,h49^{km}±1^{km}, mb5.7/276,Ms_20 5.5/619,Mwb5.7/64,Mww5.7, Mwc5.7(GCMT),Error ellipse: s-maj=9.7km s-min=9.2km az=184.0*

*IDC **21** 20:08:33.8±1.1,5°.71S×146°.29E,h50^{km}±9^{km},mb5.3/38, mb1 5.3/42,mb1mx5.3/47,mbtmp5.5/42,MS5.2/31, Ms1 5.2/31,ms1mx5.1/36,Error ellipse: s-maj=8.0km s-min=6.1km az=97.0*

*NEIC **21** 20:08:35,5°.65S×146°.32E,h60^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.44; $M_{\theta\theta}$-1.83; $M_{\phi\phi}$0.39; $M_{r\theta}$-4.56; $M_{\theta\phi}$0.01; $M_{\phi r}$2.00; Fault plane solution: $M_0$5.25000×10^{17} NP1:ϕ_s66.00000°, δ12.00000°,λ44.00000°. NP2:ϕ_s292.00000°,δ82.00000°, λ99.00000°. Principal axes: T 5.2126, Plg53.0000°, Azm213.0000°; N 0.0755, Plg9.0000°, Azm111.0000°; P -5.2881, Plg36.0000°, Azm15.0000°;*

*NOU **21** 20:08:36.8,5°.75S×146°.27E,h66^{km},ML5.8,Eastern New Guinea Reg., P.N.G.*

*DJA **21** 20:08:36.1±0.3,6°S±2°×14°6E±°,h69^{km}±3^{km},M5.8/135, mb6.0/135,mB6.2/120,MLv6.3/7,Mw(mB)5.9/120, MwMwp5.4/37,Mwp5.6/37*

*GCMT **21** 20:08:37.6±0.1,5°.71S±0°.01×146°.31E±0°.01,h64^{km}±1^{km}, MW5.7/146,Moment Tensor Solution. s144,c278; s146,c309; Duration: 1^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}1.76±.05; $M_{\theta\theta}$-2.17±.04; $M_{\phi\phi}$0.40±.04; $M_{r\theta}$-3.92±.04; $M_{\theta\phi}$0.39±.04; $M_{\phi r}$2.05±.04; Best double couple: $M_0$4.86500×10^{17} NP1:ϕ_s77.00000°,δ15.00000°, λ51.00000°. NP2:ϕ_s296.00000°,δ79.00000°,λ99.00000°. Principal axes: T 4.7520, Plg55.0000°, Azm218.0000°; N 0.2240, Plg9.0000°, Azm114.0000°; P -4.9790, Plg33.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 20:08:37,5°.70S×146°.31E,h67^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.69; $M_{\theta\theta}$-2.22; $M_{\phi\phi}$0.53; $M_{r\theta}$-4.08; $M_{\theta\phi}$0.02; $M_{\phi r}$2.18; Fault plane solution: $M_0$5.04000×10^{17} NP1:ϕ_s65.00000°, δ16.00000°,λ40.00000°. NP2:ϕ_s296.00000°,δ80.00000°, λ102.00000°. Principal axes: T 5.0317, Plg54.0000°, Azm221.0000°; N 0.0219, Plg12.0000°, Azm114.0000°; P -5.0537, Plg34.0000°, Azm15.0000°;*

ISC 21 20:08:35.4±0.3,**5°.70S**±0°.03×**146°.37E**±0°.03,**h68**^{km}±2^{km}, **h69**^{km}**:pP-P,n1418,**σ**1^{s}55**/1346,**mb5.8**/352,**37C-36D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.76**	**168**	P	**Pn**	**20 09 30.9**	**-0.1**
	204nm,0.3s,baz=33,slow=5.1,SNR=177						
PMG				S	**Sn**	**20 10 14.0**	**-0.1**
	478nm,0.3s,baz=122,slow=22,SNR=7.2						
PMG				LR	LR	20 11 18.4	
	comp=Z,85μm,20.9s,baz=358,slow=44						
PMG	**Port Moresby**	**3.76**	**168**		**Pn**	**20 09 30.5**	**-0.5**
PMG	**Port Moresby**	**3.76**	**168**	P	**Pn**	**20 09 31.1**	**+0.1**
MANU	**Manus Island**	**3.77**	**15**		**Pn**	**20 09 29.4**	**-1.8**
RABL	**Rabaul**	**5.96**	**76**		**Pn**	**20 09 59.8**	**-1.3**
RABL	**Rabaul**	**5.96**	**76**	P	**Pn**	**20 10 01.8**	**+0.6**
JAY	**Jayapura**	**6.48**	**299**	P	**Pn**	**20 10 08.1**	**-0.2**
	31nm,0.3s,baz=152,slow=7.9,SNR=58						
JAY				S	**Sn**	**20 11 23.1**	**+2.3**
	baz=144,slow=16,SNR=2.1						
JAY				LR	LR	20 12 55.6	
	comp=Z,15μm,19.9s,baz=184,slow=41						
JAY	**Jayapura**	**6.48**	**299**	P	**Pn**	**20 10 09.6**	**+1.4**
	3.9nm6μm645nm,0.9s						
MMPI	**Merauke**	**6.54**	**245**	P	**Pn**	**20 10 09.5**	**+0.4**
	27nm44μm27μm932nm,0.7s						
GENI	**Genyem**	**6.91**	**296**	P	**Pn**	**20 10 17.5**	**+3.4**
	30nm11μm24μm2μm,0.9s						
COEN	**Coen**	**8.79**	**201**	P	**Pn**	**20 10 40.6**	**+0.8**
	baz=8.8						
COEN				S	**Sn**	**20 12 15.9**	**-1.4**
	baz=8.8						
COEN	**Coen**	**8.79**	**201**		**Pn**	**20 10 39.5**	**-0.3**
BAKI	**Biak**	**11.18**	**293**	P	**Pn**	**20 11 13.7**	**+1.2**
	6μm732nm,0.8s						
MTSU	**Mount Surprise**	**12.52**	**189**	P	**Pn**	**20 11 31.7**	**+0.9**
	baz=13,SNR=76						
HNR	**Honiara**	**13.96**	**106**	P	**Pn**	**20 11 51.4**	**+1.3**
	2.9nm,0.3s,baz=190,slow=12,SNR=47						
HNR				LR	LR	20 16 42.8	
	comp=Z,4μm,20.8s,baz=280,slow=35						
HNR	**Honiara**	**13.96**	**106**		**Pn**	**20 11 50.5**	**+0.4**
HNR	**Honiara**	**13.96**	**106**	P	**P**	**20 11 53.8**	**-2.2**
CTA	**Charters Tower**	**14.30**	**180**	P	**Pn**	**20 11 55.7**	**+1.1**
	14nm,0.3s,baz=0.8,slow=14,SNR=70						
CTA				LR	LR	20 17 47.8	
	comp=Z,24μm,19.0s,baz=2.0,slow=39						
CTAO	**Charters Tower**	**14.30**	**180**	P	**Pn**	**20 11 55.0**	**+0.4**
CTAO	**Charters Tower**	**14.30**	**180**	Pn	**Pn**	**20 11 55.0**	**+0.4**
FAKI	**Fak Fak**	**14.35**	**281**		**Pn**	**20 11 53.6**	**-1.7**
FAKI	**Fak Fak**	**14.35**	**281**	P	**Pn**	**20 11 56.1**	**+0.9**
	7μm10μm612nm,0.8s						
SAUI	**Saumlaki**	**15.13**	**261**	P	**Pn**	**20 12 06.0**	**+0.6**
SAUI	**Saumlaki**	**15.13**	**261**	P	**Pn**	**20 12 05.5**	**+0.1**
	13μm15μm1μm,1.1s						
KDU	**Kakadu**	**15.37**	**242**	P	**Pn**	**20 12 07.9**	**-0.4**
	baz=15,SNR=159						
SIJI	**Sorong**	**15.82**	**287**	P	**Pn**	**20 12 12.6**	**-1.5**
	17nm,0.3s,baz=86,slow=9.4,SNR=96						
SIJI				LR	LR	20 19 36.2	
	comp=Z,8μm,19.9s,baz=104,slow=42						
SWI	**Sorong**	**15.83**	**287**	P	**Pn**	**20 12 12.8**	**-1.4**
	4μm25μm3μm,1.0s						
BNDI	**Bandanaira**	**16.44**	**273**	P	**P**	**20 12 23.3**	**-0.3**
	8μm35μm3μm,1.6s						
MTN	**Manton Dam**	**16.62**	**244**	P	**Pn**	**20 12 23.8**	**-0.3**
	baz=17,SNR=199						
MTN	**Manton Dam**	**16.62**	**244**		**Pn**	**20 12 23.5**	**-0.7**
MTN				IAmb	IAmb	20 12 27.9	
	comp=Z,1μm,1.4s						
PATS	**Pohnpei**	**17.24**	**44**	P	**P**	**20 12 33.8**	**+1.4**
	baz=17,SNR=8.1						
PATS	**Pohnpei**	**17.24**	**44**		**Pn**	**20 12 31.2**	**-0.6**
MSAI	**Masohi**	**17.54**	**277**	P	**Pn**	**20 12 35.2**	**-0.4**
	comp=Z,4μmcomp=Z,314nm,0.8s						
WB0	**Warramunga Arr**	**18.20**	**219**	P	**P**	**20 12 42.4**	**-0.6**
WB0				IAmb	IAmb	20 13 07.4	
	comp=Z,712nm,1.5s						
WR0	**Warramunga Arr**	**18.25**	**218**	P	**P**	**20 12 42.6**	**-1.0**
WR0				IAmb	IAmb	20 13 08.0	
	comp=Z,470nm,1.1s						
WRAB	**Tennant Creek**	**18.35**	**218**	P	**P**	**20 12 44.0**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,148nm,0.8s						
WRAB	**Tennant Creek**	**18.35**	**218**	P	**P**	**20 12 44.0**	**-0.7**
WC3	**Warramunga Arr**	**18.36**	**218**	P	**P**	**20 12 44.3**	**-0.4**
	baz=18						
WB2	**Warramunga Arr**	**18.36**	**218**	P	**P**	**20 12 43.9**	**-0.8**
WRA	**Warramunga Arr**	**18.36**	**218**	P	**P**	**20 12 44.1**	**-0.7**
	comp=Z,6.9nm,0.3s,baz=35,slow=10,SNR=103						
WRA				S	**Sn**	**20 16 07.5**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=32,slow=23,SNR=4.1						
WRA				PcP	**PcP**	**20 17 16.2**	**+2.4**
	comp=Z,1.8nm,0.3s,baz=20,slow=1.8,SNR=3.3						
WRA				LR	LR	20 20 28.4	
	comp=Z,16μm,19.4s,baz=45,slow=39						
WRA				ScP	**ScP**	**20 20 47.2**	**+3.7**
	comp=Z,0.4nm,0.3s,baz=38,slow=1.9,SNR=2.6						
WRA	**Warramunga Arr**	**18.36**	**218**	P	**P**	**20 12 43.8**	**-1.0**
NLAI	**Namlea**	**19.36**	**276**	P	**Pn**	**20 12 57.6**	**+0.1**
	comp=Z,22μmcomp=Z,2μm,0.9s						
KNRA	**Kununurra**	**19.92**	**239**	P	**P**	**20 13 00.8**	**-1.1**
TNTI	**Ternate**	**20.04**	**288**		**P**	**20 13 02.8**	**-0.3**
TNTI				IAmb	IAmb	20 13 17.0	
	comp=Z,271nm,0.8s						
TNTI	**Ternate**	**20.04**	**288**	P	**P**	**20 13 04.0**	**+0.9**
	comp=Z,4μmcomp=Z,6μmcomp=Z,394nm,0.9s						
EIDS	**Eidsvold**	**20.07**	**167**	P	**P**	**20 13 04.3**	**+1.0**
	baz=20,SNR=39						
EIDS	**Eidsvold**	**20.07**	**167**		**P**	**20 13 04.1**	**+0.7**
EIDS				IAmb	IAmb	20 13 10.1	
	comp=Z,298nm,1.2s						
SANI	**Sanana**	**20.65**	**279**	P	**P**	**20 13 09.6**	**-0.2**
	comp=Z,7μmcomp=Z,12μmcomp=Z,920nm,0.7s						
RMQ	**Roma**	**20.79**	**174**	P	**P**	**20 13 12.5**	**+1.3**
	baz=21,SNR=88						
QLP	**Quilpie**	**20.86**	**185**	P	**P**	**20 13 12.7**	**+0.8**
	baz=21,SNR=66						
AS31	**Alice Springs**	**21.52**	**213**	P	**P**	**20 13 18.9**	**-0.1**
ASAR	**Alice Springs**	**21.52**	**213**	P	**P**	**20 13 18.9**	**-0.1**
	comp=Z,90nm,0.8s,baz=42,slow=9.0,SNR=90						
ASAR				S	**S**	**20 17 16.5**	**+2.4**
	comp=Z,3.7nm,0.6s,baz=31,slow=25,SNR=2.5						
ASAR				LR	LR	20 22 38.6	
	comp=Z,26μm,19.3s,baz=32,slow=39						
ASAR	**Alice Springs**	**21.52**	**213**	P	**P**	**20 13 18.7**	**-0.4**
SOEI	**Soe**	**22.26**	**258**	P	**P**	**20 13 26.8**	**-0.4**
SOEI	**Soe**	**22.26**	**258**	P	**P**	**20 13 26.8**	**-0.4**
	comp=Z,13μmcomp=Z,19μmcomp=Z,2μm,1.3s						
SANVU	**Saraoutou**	**22.63**	**117**	P	**P**	**20 13 30.5**	**-0.5**
SANVU	**Saraoutou**	**22.63**	**117**	P	**P**	**20 13 31.7**	**+0.7**
SGSI	**Sangihe**	**22.81**	**294**	P	**P**	**20 13 33.5**	**+0.6**
	comp=Z,4μmcomp=Z,325nm,0.6s						
BATI	**Baumata**	**22.92**	**257**	P	**P**	**20 13 32.8**	**-1.3**
	comp=Z,1μm,0.9s,baz=150,slow=0.2,SNR=85						
BATI				S	**S**	**20 17 39.1**	**+0.1**
	comp=Z,42nm,1.0s,baz=127,slow=16,SNR=1.6						
BATI				LR	LR	20 24 57.4	
	comp=Z,9μm,20.2s,baz=110,slow=43						
BATI	**Baumata**	**22.92**	**257**	P	**P**	**20 13 34.5**	**+0.4**
	comp=Z,7μmcomp=Z,12μmcomp=Z,883nm,0.8s						
KMSI	**Cibinong**	**23.21**	**285**	P	**P**	**20 13 37.1**	**+0.3**
	comp=Z,16μmcomp=Z,1μm,0.8s						
MATI	**Mati**	**23.68**	**302**	*e*P	**P**	**20 13 39.2**	**-2.0**
FITZ	**Fitzroy Crossi**	**23.70**	**237**	P	**P**	**20 13 40.0**	**-1.2**
	baz=24,SNR=291						
FITZ	**Fitzroy Crossi**	**23.70**	**237**	P	**P**	**20 13 39.5**	**-1.7**
	comp=Z,469nm,0.9s,baz=52,slow=10,SNR=225						
FITZ				S	**S**	**20 17 52.2**	**+0.8**
	comp=Z,16nm,0.8s,baz=290,slow=12,SNR=0.9						
FITZ				LR	LR	20 23 59.6	
	comp=Z,17μm,18.1s,baz=60,slow=39						
FITZ	**Fitzroy Crossi**	**23.70**	**237**	P	**P**	**20 13 39.3**	**-1.9**
DDMP	**Don Marcelino,**	**23.72**	**299**	*e*P	**P**	**20 13 38.0**	**-3.5**
LUWI	**Luwuk**	**24.00**	**280**	P	**P**	**20 13 45.0**	**+0.9**
LUWI	**Luwuk**	**24.00**	**280**	P	**P**	**20 13 45.4**	**+1.3**
	comp=Z,8μmcomp=Z,57μmcomp=Z,5μm,1.3s						
MMRI	**Maumere**	**24.12**	**262**	P	**P**	**20 13 43.9**	**-1.2**
MMRI	**Maumere**	**24.12**	**262**	P	**P**	**20 13 44.8**	**-0.3**
	comp=Z,8μmcomp=Z,21μmcomp=Z,1μm,0.9s						
GTOI	**Gorontalo**	**24.16**	**284**	P	**P**	**20 13 48.3**	**+2.8**
	comp=Z,20μmcomp=Z,1μm,1.2s						
DAV	**Davao City (W)**	**24.32**	**301**	P	**P**	**20 13 48.9**	**+1.9**
	comp=Z,94nm,0.4s,baz=53,slow=3.4,SNR=7.1						
DAV				S	**S**	**20 18 04.9**	**+3.3**
	comp=Z,78nm,0.4s,baz=63,slow=12,SNR=1.2						
EDFI	**Ende, Flores**	**24.67**	**261**	P	**P**	**20 13 49.7**	**-0.5**
	comp=Z,4μmcomp=Z,4μmcomp=Z,418nm,0.8s						
SKMP	**Bagumbayan, Su**	**24.94**	**299**	*e*P	**P**	**20 13 53.1**	**+0.5**
ARMA	**Armidale**	**25.08**	**169**	P	**P**	**20 13 54.5**	**+0.7**
	baz=25,SNR=18						
ARMA	**Armidale**	**25.08**	**169**	P	**P**	**20 13 53.8**	**-0.1**
ARMA				IAMs_20	IAMs_20	20 23 29.6	
	comp=Z,12μm,22.0s						
APSI	**Ampana**	**25.13**	**280**	P	**P**	**20 13 55.6**	**+1.3**
	comp=Z,3μmcomp=Z,20μmcomp=Z,2μm,1.4s						
MRSI	**Marisa**	**25.15**	**283**	P	**P**	**20 13 54.9**	**+0.4**
	comp=Z,4μmcomp=Z,6μmcomp=Z,736nm,1.2s						
BUKP	**Musuan**	**25.18**	**302**	*e*P	**P**	**20 13 56.0**	**+1.2**
BUTP	**Butuan**	**25.30**	**305**	*e*P	**P**	**20 13 56.6**	**+0.7**
DZM	**Mont Dzumac**	**25.33**	**132**	*e*P	**P**	**20 13 55.3**	**-0.9**
	comp=Z,351nm,1.4s						
DZM				*e*S	**S**	**20 18 16.8**	**-1.0**
	comp=Z,2μm,27.1s						
DZM				*e*LR	LR	20 20 21.6	
	comp=Z,7μm,31.4s						
DZM	**Mont Dzumac**	**25.33**	**132**	P	**P**	**20 13 56.0**	**-0.2**
	comp=Z,65nm,0.9s,baz=295,slow=12,SNR=17						
DZM				LR	LR	20 23 27.3	
	comp=Z,4μm,19.5s,baz=324,slow=35						
DZM	**Mont Dzumac**	**25.33**	**132**	P	**P**	**20 13 55.9**	**-0.2**
DZM	**Mont Dzumac**	**25.33**	**132**	P	**P**	**20 13 57.1**	**+0.9**
GLSP	**General Luna,**	**25.37**	**307**	*e*P	**P**	**20 13 56.0**	**-0.4**
KWAJ	**Kwajalein Atol**	**25.62**	**56**	P	**P**	**20 13 58.0**	**-0.7**
KWAJ				pmax	pmax		
	comp=Z,799nm,1.5s						
KWAJ	**Kwajalein Atol**	**25.62**	**56**	P	**P**	**20 13 58.0**	**-0.7**
YATNC	**Mamie plateau,**	**25.66**	**131**	P	**P**	**20 14 00.6**	**+1.6**
CMSA	**Cobar Meteorol**	**25.71**	**181**	P	**P**	**20 14 01.0**	**+1.6**
	baz=26,SNR=18						
BSSI	**Bau Bau, Buton**	**25.74**	**268**	P	**P**	**20 13 59.5**	**-0.4**
	comp=Z,4μmcomp=Z,6μmcomp=Z,311nm,1.0s						
CGP	**Cagayan de Oro**	**25.79**	**303**	⇓*e*P	**P**	**20 14 01.7**	**+1.5**
OUENC	**Ouen Island, N**	**25.83**	**132**	P	**P**	**20 14 01.9**	**+1.3**
BASI	**Baing, Sumba**	**25.93**	**258**	P	**P**	**20 14 02.4**	**+0.8**
	comp=Z,6μmcomp=Z,23μmcomp=Z,2μm,1.6s						
BKSI	**Bulukumba**	**26.13**	**270**	P	**P**	**20 14 03.8**	**+0.4**
	comp=Z,5μmcomp=Z,4μmcomp=Z,411nm,1.1s						
WSI	**Waingapu**	**26.13**	**260**	P	**P**	**20 14 03.6**	**+0.2**
	comp=Z,57μmcomp=Z,4μm,0.8s						
BNSI	**Bone**	**26.19**	**272**	P	**P**	**20 14 05.6**	**+1.6**
	comp=Z,8μmcomp=Z,716nm,1.4s						
STKA	**Stephens Creek**	**26.42**	**189**	P	**P**	**20 14 05.0**	**-0.8**
	baz=26,SNR=37						
STKA	**Stephens Creek**	**26.42**	**189**	P	**P**	**20 14 04.7**	**-1.2**
	comp=Z,30nm,0.9s,baz=349,slow=7.9,SNR=27						
STKA				S	**S**	**20 18 35.6**	**+1.0**
	comp=Z,12nm,1.1s,baz=272,slow=19,SNR=1.4						
STKA				LR	LR	20 26 12.6	
	comp=Z,15μm,18.5s,baz=7.2,slow=40						
STKA				PKP2bc		20 49 12.1	
	comp=Z,1.8nm,0.8s,baz=283,slow=5.8,SNR=3.5						
STKA	**Stephens Creek**	**26.42**	**189**	P	**P**	**20 14 05.4**	**-0.4**
TOLI2	**Tolitoli**	**26.43**	**284**	P	**P**	**20 14 05.3**	**-0.8**
KAPI	**Kappang**	**26.51**	**270**	P	**P**	**20 14 06.3**	**-0.5**
	comp=Z,114nm,0.9s,baz=94,slow=5.7,SNR=60						
KAPI				S	**S**	**20 18 37.3**	**+0.9**
	comp=Z,21nm,1.1s,baz=271,slow=23,SNR=7.3						
KAPI				LR	LR	20 26 17.7	
	comp=Z,2μm,19.6s,baz=84,slow=40						
KAPI	**Kappang**	**26.51**	**270**	P	**P**	**20 14 06.7**	**-0.2**
KAPI				IAmb	IAmb	20 14 13.6	
	comp=Z,238nm,0.7s						
SPSI	**Sidrap Palu**	**26.56**	**273**	P	**P**	**20 14 07.4**	**+0.1**
	comp=Z,4μmcomp=Z,5μmcomp=Z,444nm,1.2s						
MSLP	**Maasin**	**26.58**	**306**	*e*P	**P**	**20 14 06.4**	**-1.1**
PAGZ	**Pagadian**	**26.59**	**300**	*e*P	**P**	**20 14 07.8**	**+0.3**
TTSI	**Tana Toraja**	**26.60**	**275**	P	**P**	**20 14 08.8**	**+1.1**
	comp=Z,7μmcomp=Z,652nm,1.5s						
WBSI	**Waikabubak, Su**	**27.02**	**260**	P	**P**	**20 14 10.7**	**-0.7**
	comp=Z,14μmcomp=Z,1μm,0.9s						
MPSI	**Mapaga**	**27.10**	**282**	P	**P**	**20 14 11.3**	**-0.9**
	comp=Z,3μmcomp=Z,4μmcomp=Z,166nm,1.0s						
OCLP	**Ormoc**	**27.32**	**308**	*e*P	**P**	**20 14 13.3**	**-0.7**
MGCD	**Mangrove Creek**	**27.72**	**171**	P	**P**	**20 14 18.5**	**+1.1**
	baz=28,SNR=5.1						
CNP	**Catarman**	**28.16**	**310**	*e*P	**P**	**20 14 18.1**	**-3.5**
CNOP	**Candoni, Negro**	**28.23**	**303**	*e*P	**P**	**20 14 21.8**	**-0.4**
HTT	**Hallett**	**28.45**	**193**	P	**P**	**20 14 24.6**	**+0.6**
	baz=28,SNR=37						
YNG	**Young**	**28.52**	**176**	P	**P**	**20 14 25.2**	**+0.7**
	baz=29,SNR=37						
PLAI	**Plampang**	**28.53**	**262**	P	**P**	**20 14 23.1**	**-1.8**
	comp=Z,3μmcomp=Z,264nm,0.9s						
BBOO	**Buckleboo**	**28.63**	**198**	P	**P**	**20 14 25.4**	**-0.2**
	baz=29,SNR=25						
BBOO	**Buckleboo**	**28.63**	**198**	P	**P**	**20 14 24.5**	**-1.1**
BBOO				IAmb	IAmb	20 14 27.9	
	comp=Z,172nm,1.4s						
GUIM	**Jordan**	**28.70**	**304**	*e*P	**P**	**20 14 26.6**	**+0.2**

PVCP	**Virac**	**29.23**	**311**	*e*P	**P**	**20 14 30.2**	**-0.8**
TWSI	**Taliwang, Sumb**	**29.40**	**262**	P	**P**	**20 14 30.4**	**-2.3**
	comp=Z,1µmcomp=Z,122nm,0.6s						
CAN	**Canberra**	**29.57**	**176**	P	**P**	**20 14 32.6**	**-1.4**
CAN				pmax	pmax		
	comp=Z,30nm,0.7s						
CAN				MLR	MLR		
	comp=Z,9µm,20.0s						
CAN	**Canberra**	**29.57**	**176**	P	**P**	**20 14 32.6**	**-1.4**
CAN				IAMs_20	IAMs_20	20 26 30.5	
	comp=Z,9µm,20.0s						
CNB	**Canberra Magne**	**29.60**	**175**	P	**P**	**20 14 35.8**	**+1.6**
	baz=30,SNR=5.4						
BKB	**Balikpapan**	**29.74**	**277**	P	**P**	**20 14 36.3**	**+0.6**
BKB	**Balikpapan**	**29.74**	**277**	P	**P**	**20 14 38.4**	**+2.7**
	comp=Z,7µmcomp=Z,589nm,1.4s						
MYLDM	**Lahad Datu**	**29.85**	**291**	P	**P**	**20 14 37.9**	**+1.2**
MYLDM				IAmb	IAmb	20 14 48.3	
	comp=Z,307nm,1.3s						
MBWA	**Marble Bar**	**30.04**	**237**	IAMs_20	IAMs_20	20 27 43.2	
	comp=Z,11µm,19.0s						
CUYO	**Cuyo Island**	**30.12**	**303**	*e*P	**P**	**20 14 38.2**	**-0.8**
OTRP	**Odiongan**	**30.13**	**307**	*e*P	**P**	**20 14 38.3**	**-0.8**
PSA00	**Pilbara Seismi**	**30.14**	**236**	P	**P**	**20 14 38.1**	**-0.9**
PSA00	**Pilbara Seismi**	**30.14**	**236**	P	**P**	**20 14 39.2**	**+0.2**
PSA00				IAmb	IAmb	20 14 48.4	
	comp=Z,194nm,0.9s						
PSA00				IAMs_20	IAMs_20	20 27 46.7	
	comp=Z,15µm,20.0s						
KBKI	**Kotabaru**	**30.20**	**273**	P	**P**	**20 14 40.6**	**+0.9**
	comp=Z,883nmcomp=Z,88nm,1.1s						
FORT	**Forrest**	**30.31**	**212**	P	**P**	**20 14 40.4**	**0.0**
	baz=30,SNR=20						
FORT	**Forrest**	**30.31**	**212**	P	**P**	**20 14 39.8**	**-0.6**
FORT				IAmb	IAmb	20 15 09.6	
	comp=Z,98nm,0.7s						
JCNP	**Jose Panganiba**	**30.76**	**310**	*e*P	**P**	**20 14 42.3**	**-2.2**
BOAC	**Boac**	**30.91**	**308**	*e*P	**P**	**20 14 45.7**	**-0.2**
SRBI	**Singaraja**	**31.02**	**264**	P	**P**	**20 14 45.2**	**-1.7**
	comp=Z,2µmcomp=Z,80nm,0.8s						
DNP	**Denpasar**	**31.05**	**263**	P	**P**	**20 14 46.9**	**-0.3**
ARPS	**Mount Arapiles**	**31.20**	**187**	P	**P**	**20 14 49.8**	**+1.6**
	baz=31,SNR=19						
BUSP	**Coron**	**31.41**	**304**	*e*P	**P**	**20 14 49.9**	**-0.5**
BBKI	**Banjar Baru**	**31.50**	**273**	P	**P**	**20 14 51.1**	**-0.1**
	comp=Z,2µmcomp=Z,155nm,1.4s						
LQP	**Lukban**	**31.54**	**309**	*e*P	**P**	**20 14 50.5**	**-1.1**
SPMM	**Sapulut**	**31.60**	**289**	P	**P**	**20 14 54.0**	**+1.9**
POLP	**Polilio Island**	**31.60**	**310**	*e*P	**P**	**20 14 50.9**	**-1.2**
ENPP	**El Nido**	**31.64**	**302**	*e*P	**P**	**20 14 51.1**	**-1.3**
TOO	**Toolangi**	**31.73**	**181**	P	**P**	**20 14 53.7**	**+0.7**
	baz=32,SNR=5.9						
TOO	**Toolangi**	**31.73**	**181**	P	**P**	**20 14 53.4**	**+0.4**
TOO				pmax	pmax		
	comp=Z,50nm,1.1s						
TOO				MLR	MLR		
	comp=Z,9µm,21.0s						
TOO	**Toolangi**	**31.73**	**181**	P	**P**	**20 14 53.4**	**+0.4**
TOO				IAMs_20	IAMs_20	20 27 46.5	
	comp=Z,9µm,21.0s						
MTKI	**Muara Teweh, K**	**31.77**	**277**	P	**P**	**20 14 52.7**	**-0.8**
	comp=Z,2µmcomp=Z,147nm,1.4s						
BATP	**Bataraza**	**31.92**	**297**	*e*P	P	20 14 49.0	-5.8
JAGI	**Jajag, Banyuwa**	**32.08**	**263**	P	**P**	**20 14 54.6**	**-1.8**
JAGI	**Jajag, Banyuwa**	**32.08**	**263**	P	**P**	**20 14 54.5**	**-1.8**
	comp=Z,3µmcomp=Z,264nm,0.8s						
KMMI	**Kalianget**	**32.23**	**266**	P	**P**	**20 14 58.5**	**+0.9**
	comp=Z,3µmcomp=Z,102nm,0.8s						
KKM	**Kota Kinabalu**	**32.28**	**291**	P	**P**	**20 14 58.6**	**+0.4**
LUBP	**Lubang**	**32.33**	**307**	*e*P	**P**	**20 14 58.1**	**-0.3**
BALP	**Baler**	**32.51**	**311**	*e*P	**P**	**20 14 58.6**	**-1.3**
FUNA	**Funafuti**	**32.69**	**97**	P	**P**	**20 15 01.8**	**+0.2**
JCJ	**Chichijima**	**32.85**	**353**	LR	LR	20 28 33.0	
	comp=Z,586nm,18.2s,baz=172,slow=36						
CAUP	**Cauayan**	**33.09**	**313**	*e*P	**P**	**20 15 06.6**	**+1.5**
MSVF	**Nonsavu**	**33.18**	**114**	P	**P**	**20 15 07.1**	**+1.2**
	comp=Z,15nm,0.9s,baz=300,slow=0.5,SNR=7.4						
MSVF	**Nonsavu**	**33.18**	**114**	P	**P**	**20 15 07.0**	**+1.1**
MSVF				IAmb	IAmb	20 15 16.4	
	comp=Z,106nm,1.5s						
MSVF	**Nonsavu**	**33.18**	**114**	P	**P**	**20 15 08.8**	**+2.9**
BWJI	**Bawean**	**33.54**	**268**	P	**P**	**20 15 09.9**	**+0.9**
	comp=Z,9µmcomp=Z,814nm,1.1s						
MEEK	**Meekatharra**	**33.67**	**229**	P	**P**	**20 15 10.3**	**+0.2**
	baz=34,SNR=106						
GRJI	**Gresik**	**33.70**	**266**	P	**P**	**20 15 10.1**	**-0.4**
	comp=Z,1µmcomp=Z,144nm,1.0s						
TBJI	**Tambak Boyo**	**34.33**	**266**	P	**P**	**20 15 15.7**	**-0.2**
	comp=Z,114nm,0.9s						
KMBL	**Kambalda**	**34.33**	**219**	P	**P**	**20 15 15.6**	**-0.1**
	baz=34,SNR=50						
PWJI	**Pagerwojo**	**34.39**	**264**	P	**P**	**20 15 14.8**	**-1.6**
	comp=Z,2µmcomp=Z,189nm,0.7s						
PBKI	**Pangkalan Bun**	**34.73**	**273**	P	**P**	**20 15 20.9**	**+1.5**
	comp=Z,16µmcomp=Z,2µm,1.2s						
GIRL	**Giralia**	**35.29**	**238**	P	**P**	**20 15 25.8**	**+1.7**
	baz=35,SNR=24						
GIRL	**Giralia**	**35.29**	**238**	P	**P**	**20 15 25.7**	**+1.7**
GIRL				IAMs_20	IAMs_20	20 30 28.1	
	comp=Z,9µm,22.0s						
STKI	**Sintang**	**35.30**	**278**	P	**P**	**20 15 23.5**	**-0.8**
	comp=Z,24µmcomp=Z,53nm,0.6s						
UGM	**Wanagama**	**35.65**	**264**	P	**P**	**20 15 26.3**	**-1.1**
UGM	**Wanagama**	**35.65**	**264**	P	**P**	**20 15 27.1**	**-0.2**
	comp=Z,7µmcomp=Z,470nm,0.8s						
SMRI	**Semarang**	**35.73**	**266**	P	**P**	**20 15 27.8**	**-0.1**
SMRI	**Semarang**	**35.73**	**266**	P	**P**	**20 15 28.3**	**+0.3**
	comp=Z,6µmcomp=Z,450nm,1.6s						
KSM	**Kuching**	**36.71**	**280**	P	**P**	**20 15 36.7**	**+0.3**
KSM	**Kuching**	**36.71**	**280**	P	**P**	**20 15 37.0**	**+0.7**
MORW	**Morawa**	**36.91**	**227**	P	**P**	**20 15 38.1**	**+0.3**
	baz=37,SNR=18						
MORW	**Morawa**	**36.91**	**227**	P	**P**	**20 15 37.4**	**-0.5**
MORW				IAmb	IAmb	20 15 47.5	
	comp=Z,217nm,1.2s						
TAU	**Tasmania Unive**	**37.06**	**179**	P	**P**	**20 15 39.5**	**+0.6**
TAU				pmax	pmax		
	comp=Z,128nm,1.4s						
TAU				MLR	MLR		
	comp=Z,6µm,18.0s						
TAU	**Tasmania Unive**	**37.06**	**179**	P	**P**	**20 15 39.5**	**+0.6**
TAU				IAmb	IAmb	20 15 41.9	
	comp=Z,128nm,1.4s						
TAU				IAMs_20	IAMs_20	20 33 20.7	
	comp=Z,6µm,18.0s						
KLBR	**Kellerberrin**	**37.16**	**223**	P	**P**	**20 15 39.6**	**-0.4**
	baz=37,SNR=42						
KPJI	**Karang Pucung**	**37.23**	**265**	P	**P**	**20 15 41.5**	**+0.8**
	comp=Z,4µmcomp=Z,334nm,0.6s						
BLDU	**Ballidu**	**37.30**	**225**	P	**P**	**20 15 41.2**	**+0.1**
	baz=37,SNR=39						
TWG	**Pinlang**	**37.62**	**320**	P	**P**	**20 15 42.2**	**-1.7**
TWG				IAmb	IAmb	20 15 45.6	
	comp=Z,95nm,0.6s						
YOJ	**Yonaguni jima**	**37.64**	**324**	P	**P**	**20 15 43.7**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,474nm,1.1s						
YOJ				MLR	MLR		
	comp=Z,2µm,20.0s						
YOJ	**Yonaguni jima**	**37.64**	**324**	P	**P**	**20 15 43.7**	**-0.3**
CMJI	**Cimerak**	**37.71**	**265**	P	**P**	**20 15 44.3**	**-0.5**
	comp=Z,5µmcomp=Z,456nm,1.0s						
JCJI	**Jatiwangi**	**37.89**	**267**	P	**P**	**20 15 47.8**	**+1.5**
	comp=Z,15µmcomp=Z,431nm,0.4s						
YULB	**Yu-li**	**37.89**	**321**	P	**P**	**20 15 43.0**	**-3.2**
YULB				IAmb	IAmb	20 15 49.0	
	comp=Z,86nm,0.8s						
TPUB	**Ta-pu**	**38.25**	**320**	P	**P**	**20 15 48.6**	**-0.6**
NACB	**Ninganchiao**	**38.28**	**322**	P	**P**	**20 15 49.9**	**+0.5**
CISI	**Cisompet, Garu**	**38.33**	**265**	P	**P**	**20 15 48.6**	**-1.5**
CISI	**Cisompet, Garu**	**38.33**	**265**	P	**P**	**20 15 49.8**	**-0.3**
	comp=Z,11µmcomp=Z,668nm,0.7s						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	P	**P**	**20 15 50.3**	**+0.5**
	baz=38,SNR=18						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	LR	LR	20 32 27.2	
	comp=Z,5µm,20.3s,baz=57,slow=38						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	P	**P**	**20 15 49.6**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,109nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,9µm,19.0s						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	P	**P**	**20 15 49.5**	**-0.3**
NWAO				IAmb	IAmb	20 15 58.6	
	comp=Z,87nm,1.1s						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	P	**P**	**20 15 49.6**	**-0.2**
NWAO				IAmb	IAmb	20 15 58.7	
	comp=Z,109nm,1.1s						
NWAO	**Narrogin (SRO)**	**38.33**	**221**	IAMs_20	IAMs_20	20 33 11.1	
	comp=Z,9µm,19.0s						
SSLB	**Suanglung**	**38.39**	**321**	P	**P**	**20 15 49.8**	**-0.6**
SSLB				IAmb	IAmb	20 15 56.4	
	comp=Z,217nm,1.2s						
MUN	**Mundaring**	**38.44**	**223**	P	**P**	**20 15 51.2**	**+0.5**
	baz=38,SNR=20						
LEM	**Lembang**	**38.53**	**266**	P	**P**	**20 15 52.8**	**+0.9**
	comp=Z,3µmcomp=Z,274nm,1.2s						
OUZ	**Omahuta**	**38.63**	**143**	P	**P**	**20 15 54.8**	**+2.5**
TPI	**Tanjungpandan**	**38.72**	**273**	P	**P**	**20 15 54.5**	**+1.2**
	comp=Z,10µmcomp=Z,808nm,1.4s						
YHNB	**Yeheng**	**38.78**	**322**	P	**P**	**20 15 54.1**	**+0.4**
TATO	**Taipei**	**38.94**	**323**	P	**P**	**20 15 55.1**	**+0.2**
JHJ	**Hachijo jima 2**	**39.11**	**351**	LR	LR	20 31 20.8	
	comp=Z,2µm,18.3s,baz=165,slow=35						
CBJI	**Citeko**	**39.30**	**267**	P	**P**	**20 15 57.1**	**-1.0**
	comp=Z,5µmcomp=Z,346nm,0.6s						
DBJI	**Dramaga**	**39.40**	**267**	P	**P**	**20 15 58.5**	**-0.5**
	comp=Z,65µmcomp=Z,301nm,1.2s						
JSU	**Suzuyama**	**40.00**	**339**	P	**P**	**20 16 03.8**	**+0.1**
PPBI	**Pangkal Pinang**	**40.28**	**273**	P	**P**	**20 16 07.6**	**+1.3**
	comp=Z,7µmcomp=Z,604nm,1.4s						
CGJI	**Cibinong**	**40.45**	**267**	P	**P**	**20 16 06.6**	**-1.0**
	comp=Z,7µmcomp=Z,643nm,0.8s						
KNMB	**Chin-men Tao**	**40.52**	**319**	P	**P**	**20 16 08.2**	**+0.1**
KNMB				IAmb	IAmb	20 16 10.4	
	comp=Z,181nm,1.0s						
XMI	**Christmas Isla**	**40.53**	**261**	P	**P**	**20 16 09.5**	**+1.1**
	comp=Z,2µm,1.1s						
XMIS	**Christmas Isla**	**40.57**	**261**	P	**P**	**20 16 09.1**	**+0.5**
XMIS	**Christmas Isla**	**40.57**	**261**	P	**P**	**20 16 09.7**	**+1.0**
	comp=Z,2µm,1.1s						
QZH	**Quanzhou**	**40.72**	**320**	⇓*i*P	**P**	**20 16 10.6**	**+0.9**
QZH				sP	**pP**	**20 16 30.0**	**+3.8**
QZH				S	**S**	**20 22 17.1**	**+1.7**
QZH				SS	**SS**	**20 25 19.6**	**+1.0**
QZH				pmax	pmax		
	comp=Z,130nm,1.1s						
QZH				LR	LR		
	comp=Z,880nm,19.4s						
QZH				LR	LR		
	comp=Z,960nm,24.6s						
QZH				LR	LR		
	comp=Z,890nm,18.5s						
JSG	**Sagara**	**40.90**	**350**	P	**P**	**20 16 12.1**	**+1.1**
BLSI	**Bandar Lampung**	**40.93**	**268**	P	**P**	**20 16 11.7**	**0.0**
	comp=Z,3µmcomp=Z,274nm,1.4s						
JMN	**Monobe**	**40.96**	**344**	P	**P**	**20 16 12.3**	**+0.7**
JNU	**Nakatsue**	**41.32**	**340**	P	**P**	**20 16 14.9**	**+0.4**
	comp=Z,470nm,1.2s,baz=136,slow=3.7						
JNU				LR	LR	20 30 48.0	
	comp=Z,3µm,21.4s,baz=169,slow=32						
JNU	**Nakatsue**	**41.32**	**340**	P	**P**	**20 16 15.1**	**+0.6**
JNU				IAMs_20	IAMs_20	20 30 03.7	
	comp=Z,5µm,22.0s						
KLSI		**41.48**	**269**	P	**P**	**20 16 16.0**	**-0.1**
	comp=Z,1µmcomp=Z,78nm,1.5s						
DLV	**T Lat**	**41.55**	**295**	P	**P**	**20 16 17.0**	**0.0**
PMBI	**Palembang**	**41.56**	**272**	P	**P**	**20 16 18.8**	**+2.0**
PMBI	**Palembang**	**41.56**	**272**	P	**P**	**20 16 18.6**	**+1.7**
	comp=Z,14µmcomp=Z,1µm,1.4s						
HIZ	**Hauiti**	**41.64**	**146**	P	**P**	**20 16 19.4**	**+2.3**
HIZ				IAmb	IAmb	20 16 27.7	
	comp=Z,192nm,1.4s						
KASI	**Kota Agung**	**41.67**	**268**	P	**P**	**20 16 16.5**	**-1.2**
	comp=Z,6µmcomp=Z,706nm,1.0s						
INU	**Inuyama**	**41.77**	**348**	P	**P**	**20 16 18.3**	**+0.1**
INU				IAmb	IAmb	20 16 20.3	
	comp=Z,323nm,1.5s						
KNTN	**Kanton**	**41.89**	**88**	P	**P**	**20 16 20.9**	**+1.4**
KNTN				IAmb	IAmb	20 16 27.9	
	comp=Z,151nm,1.1s						
JGF	**Kuroka**	**41.95**	**349**	P	**P**	**20 16 19.2**	**-0.4**
JGF				IAmb	IAmb	20 16 21.4	
	comp=Z,185nm,1.0s						
AFI	**Afiamalu**	**41.98**	**104**	P	**P**	**20 16 20.3**	**0.0**
	comp=Z,115nm,1.0s,baz=269,slow=2.5,SNR=15						
AFI	**Afiamalu**	**41.98**	**104**	P	**P**	**20 16 21.4**	**+1.0**
AFI				IAmb	IAmb	20 16 24.4	
	comp=Z,162nm,1.1s						
JWT	**Wachi**	**42.05**	**347**	P	**P**	**20 16 19.9**	**-0.5**
JWT				IAmb	IAmb	20 16 22.6	
	comp=Z,193nm,0.9s						
QRZ	**Quartz Range**	**42.09**	**150**	P	**P**	**20 16 22.9**	**+2.2**
QRZ				IAmb	IAmb	20 16 25.0	
	comp=Z,107nm,0.8s						
QRZ				IAMs_20	IAMs_20	20 34 42.3	
	comp=Z,5µm,19.0s						
JYT	**Yasato**	**42.11**	**353**	P	**P**	**20 16 21.1**	**+0.2**
JYT				IAmb	IAmb	20 16 42.4	
	comp=Z,167nm,1.2s						
LWLI	**Liwa**	**42.12**	**269**	P	**P**	**20 16 20.6**	**-1.0**
	comp=Z,379nm,1.2s						
WATZ	**Wairara**	**42.27**	**145**	P	**P**	**20 16 25.8**	**+3.5**
JHS	**Saijyo**	**42.37**	**344**	P	**P**	**20 16 23.6**	**+0.5**
JHS				IAmb	IAmb	20 16 25.0	
	comp=Z,308nm,1.2s						
PKVZ	**Pokaka**	**42.45**	**146**	P	**P**	**20 16 26.9**	**+3.1**
WTVZ	**West Tongariro**	**42.47**	**146**	P	**P**	**20 16 26.7**	**+2.7**
KRVZ	**Karewarewa**	**42.48**	**146**	P	**P**	**20 16 28.0**	**+3.9**
NGZ	**Ngauruhoe**	**42.52**	**146**	P	**P**	**20 16 27.7**	**+3.2**
OTVZ	**Oturere**	**42.54**	**146**	P	**P**	**20 16 28.0**	**+3.3**
FWVZ	**Far West T-bar**	**42.54**	**146**	P	**P**	**20 16 27.0**	**+2.3**
TUVZ	**Tukino**	**42.61**	**146**	P	**P**	**20 16 27.9**	**+2.8**
WNVZ	**Wahianoa**	**42.62**	**146**	P	**P**	**20 16 28.9**	**+3.6**
MJAR	**Matsushiro Arr**	**42.71**	**350**	P	**P**	**20 16 25.0**	**-0.9**
	comp=Z,135nm,1.1s,baz=173,slow=7.7,SNR=102						
MJAR				LR	LR	20 32 34.1	
	comp=Z,2µm,20.8s,baz=185,slow=34						
MJAR	**Matsushiro Arr**	**42.71**	**350**	P	**P**	**20 16 24.1**	**-1.8**
MAJO	**Matsushiro**	**42.71**	**350**	P	**P**	**20 16 24.8**	**-1.0**
MAT	**Matsushiro**	**42.71**	**350**	P	**P**	**20 16 24.8**	**-1.0**
MAT				S	**S**	**20 22 45.4**	**+0.8**
LHSI	**Lahat**	**42.73**	**271**	P	**P**	**20 16 26.7**	**+0.3**
	comp=Z,5µmcomp=Z,301nm,1.4s						
MOVZ	**Moawhango**	**42.76**	**146**	P	**P**	**20 16 29.1**	**+2.8**
DUWZ	**D’Urville Isla**	**42.78**	**149**	P	**P**	**20 16 29.5**	**+3.1**
NNZ	**Nelson**	**42.81**	**150**	P	**P**	**20 16 27.2**	**+0.7**
NNZ				IAMs_20	IAMs_20	20 34 56.3	
	comp=Z,4µm,19.0s						
JMBI	**JAMBI**	**42.82**	**274**	P	**P**	**20 16 29.7**	**+2.6**
	comp=Z,9µmcomp=Z,699nm,1.3s						
FOZ	**Fox Glacier**	**42.97**	**155**	P	**P**	**20 16 30.3**	**+2.5**
FOZ				IAmb	IAmb	20 16 31.5	
	comp=Z,186nm,1.5s						
THZ	**Tophouse**	**42.98**	**151**	P	**P**	**20 16 29.3**	**+1.3**
THZ				IAmb	IAmb	20 16 30.8	
	comp=Z,193nm,1.3s						
BKZ	**Black Stump Fm**	**43.01**	**145**	P	**P**	**20 16 30.4**	**+2.1**
BKZ				IAmb	IAmb	20 16 31.4	
	comp=Z,129nm,1.3s						
JTU	**Tsushima**	**43.10**	**339**	P	**P**	**20 16 29.1**	**+0.1**
JTU				IAMs_20	IAMs_20	20 30 58.9	
	comp=Z,5µm,22.0s						
MYKOM	**Kota Tinggi**	**43.11**	**279**	P	**P**	**20 16 30.1**	**+0.7**
MYKOM	**Kota Tinggi**	**43.11**	**279**	P	**P**	**20 16 31.0**	**+1.6**
GZH	**Guangzhou**	**43.13**	**313**	P	**P**	**20 16 32.5**	**+3.1**
GZH				sP	**sP**	**20 16 55.0**	**+1.0**
GZH				S	**S**	**20 22 56.3**	**+5.3**
GZH				sS	**sS**	**20 23 22.4**	**+2.2**
GZH				SS	**SS**	**20 26 06.8**	**+0.7**
GZH				LR	LR		
	comp=Z,760nm,19.3s						
GZH				LR	LR		
	comp=Z,940nm,18.3s						
TUWZ	**Tuamarina**	**43.25**	**149**	P	**P**	**20 16 30.5**	**+0.4**
TCW	**Tory Channel**	**43.26**	**149**	P	**P**	**20 16 31.9**	**+1.7**
MNAI	**Manna**	**43.26**	**270**	P	**P**	**20 16 27.5**	**-3.1**
MNAI	**Manna**	**43.26**	**270**	P	**P**	**20 16 29.0**	**-1.7**
	comp=Z,6µmcomp=Z,308nm,1.4s						
TSZ	**Takapari Road**	**43.33**	**146**	P	**P**	**20 16 32.4**	**+1.5**
KIW	**Kapiti Island**	**43.33**	**148**	P	**P**	**20 16 33.0**	**+2.2**
PNHZ	**Pukenui**	**43.36**	**146**	P	**P**	**20 16 33.1**	**+2.0**
BSWZ	**Blackbirch Sta**	**43.43**	**150**	P	**P**	**20 16 32.0**	**+0.4**
OGWZ	**Otaki Gorge**	**43.44**	**148**	P	**P**	**20 16 33.3**	**+1.6**
LTZ	**Lake Taylor**	**43.46**	**152**	P	**P**	**20 16 33.2**	**+1.3**
LTZ				IAmb	IAmb	20 16 36.3	
	comp=Z,97nm,0.8s						
LTZ				IAMs_20	IAMs_20	20 34 06.6	
	comp=Z,4µm,19.0s						
DCZ	**Deep Cove**	**43.54**	**159**	P	**P**	**20 16 33.8**	**+1.4**
DCZ				IAmb	IAmb	20 16 35.8	
	comp=Z,137nm,1.0s						
MRZ	**Mangatainoka R**	**43.55**	**147**	P	**P**	**20 16 33.6**	**+1.0**
SNZO	**South Karori**	**43.55**	**149**	P	**P**	**20 16 33.8**	**+1.2**
SNZO				IAmb	IAmb	20 16 35.0	
	comp=Z,171nm,1.0s						
QIZ	**Qiongzhong**	**43.57**	**305**	P	**P**	**20 16 31.5**	**-1.6**
QIZ				PP	**PP**	**20 18 14.9**	**-0.7**
QIZ				PcP	**PcP**	**20 18 18.8**	**-1.0**
QIZ				S	**S**	**20 22 58.3**	**+0.7**
QIZ				pmax	pmax		
	comp=Z,52nm,1.4s						
QIZ				LR	LR		
	comp=Z,630nm,21.4s						
QIZ				LR	LR		
	comp=Z,850nm,15.3s						
QIZ				LR	LR		
	comp=Z,840nm,18.6s						
QIZ	**Qiongzhong**	**43.57**	**305**	P	**P**	**20 16 33.8**	**+0.7**
CAW	**Cannon Point**	**43.59**	**148**	P	**P**	**20 16 34.8**	**+1.9**
DVHZ	**Dannevirke**	**43.61**	**147**	P	**P**	**20 16 34.9**	**+1.8**
RPZ	**Rata Peaks**	**43.65**	**154**	P	**P**	**20 16 34.0**	**+0.7**
RPZ				IAmb	IAmb	20 16 36.0	
	comp=Z,128nm,0.7s						
JMM	**Marumori**	**43.66**	**354**	P	**P**	**20 16 33.6**	**+0.3**
JMM				IAmb	IAmb	20 16 35.2	
	comp=Z,403nm,1.4s						
KAHZ	**Kahuranaki**	**43.66**	**145**	P	**P**	**20 16 36.5**	**+3.0**
KSI	**Kapahiang**	**43.67**	**271**	P	**P**	**20 16 33.2**	**-0.8**
	comp=Z,4µmcomp=Z,230nm,1.5s						
HOWZ	**Holdsworth Sta**	**43.68**	**148**	P	**P**	**20 16 34.8**	**+1.2**
HOWZ				S	**pP**	**20 16 52.4**	**+1.1**
PRWZ	**Pori Road**	**43.68**	**147**	P	**P**	**20 16 35.6**	**+2.0**
WKZ	**Wanaka**	**43.71**	**157**	P	**P**	**20 16 35.7**	**+1.9**
WKZ				IAmb	IAmb	20 16 36.9	
	comp=Z,175nm,1.3s						
BHW	**Baring Head**	**43.71**	**149**	P	**P**	**20 16 34.2**	**+0.4**
BHW	**Baring Head**	**43.71**	**149**	P	**P**	**20 16 35.0**	**+1.2**
OXZ	**Oxford**	**43.78**	**153**	P	**P**	**20 16 34.4**	**0.0**
OXZ				IAmb	IAmb	20 16 38.8	
	comp=Z,64nm,0.6s						
KHZ	**Kahutara**	**43.79**	**151**	P	**P**	**20 16 35.1**	**+0.7**
KHZ				IAmb	IAmb	20 16 37.5	
	comp=Z,138nm,1.1s						
KHZ				IAMs_20	IAMs_20	20 33 44.2	
	comp=Z,5µm,20.0s						
TIWZ	**Tintock**	**43.79**	**147**	P	**P**	**20 16 35.9**	**+1.4**
SSE	**Sheshan**	**43.80**	**328**	P	**P**	**20 16 35.3**	**+0.7**
SSE				S	**S**	**20 23 00.9**	**+0.4**
SSE				pmax	pmax		
	comp=Z,77nm,1.1s						
SSE				pmax	pmax		
	comp=Z,260nm,4.5s						
SSE				LR	LR		
	comp=Z,770nm,19.8s						
SSE				LR	LR		
	comp=Z,690nm,19.8s						
SSE	**Sheshan**	**43.80**	**328**	P	**P**	**20 16 36.1**	**+1.5**
SSE				IAmb	IAmb	20 16 36.7	
	comp=Z,109nm,0.9s						
PXZ	**Pawanui**	**43.81**	**146**	P	**P**	**20 16 38.3**	**+3.7**
MLZ	**Mavora Lakes**	**43.81**	**158**	P	**P**	**20 16 35.9**	**+1.2**
MLZ				IAmb	IAmb	20 16 38.6	
	comp=Z,222nm,1.1s						
LBZ	**Lake Benmore**	**43.82**	**155**	P	**P**	**20 16 34.9**	**+0.3**
LBZ				IAmb	IAmb	20 16 37.2	
	comp=Z,166nm,0.9s						
PRHZ	**Porangahau**	**43.85**	**146**	P	**P**	**20 16 36.8**	**+1.9**
MTW	**Mount Morrison**	**43.86**	**148**	P	**P**	**20 16 36.1**	**+1.0**
MTW				S	**pP**	**20 16 52.6**	**-0.2**
ANWZ	**Angora Road**	**43.89**	**146**	P	**P**	**20 16 37.1**	**+1.8**
MSWZ	**Moikau Station**	**43.91**	**148**	P	**P**	**20 16 34.9**	**-0.6**
MSWZ	**Moikau Station**	**43.91**	**148**	P	**P**	**20 16 36.6**	**+1.1**
BFZ	**Birch Farm**	**43.92**	**147**	P	**P**	**20 16 36.9**	**+1.3**
BFZ				IAmb	IAmb	20 16 40.7	
	comp=Z,185nm,1.2s						
BFZ				IAMs_20	IAMs_20	20 34 20.8	
	comp=Z,4µm,20.0s						
BFZ	**Birch Farm**	**43.92**	**147**	P	**P**	**20 16 36.6**	**+1.1**
PAWZ	**Paruwai Farm**	**43.98**	**148**	P	**P**	**20 16 37.5**	**+1.5**
PYZ	**Puysegur Point**	**43.98**	**160**	P	**P**	**20 16 38.0**	**+2.1**
PYZ				IAmb	IAmb	20 16 39.5	
	comp=Z,255nm,1.2s						
PLWZ	**Palliser**	**44.02**	**149**	P	**P**	**20 16 36.8**	**+0.3**
PLWZ	**Palliser**	**44.02**	**149**	P	**P**	**20 16 37.2**	**+0.8**
TMWZ	**Te Maipa**	**44.03**	**148**	P	**P**	**20 16 37.6**	**+1.1**
CPWZ	**Castlepoint**	**44.06**	**147**	P	**P**	**20 16 39.0**	**+2.3**
TRWZ	**Traveller**	**44.13**	**148**	P	**P**	**20 16 39.2**	**+2.0**
JSD	**Sado**	**44.16**	**351**	P	**P**	**20 16 38.0**	**+0.5**
JSD				IAmb	IAmb	20 16 39.2	
	comp=Z,195nm,1.2s						
WHZ	**Wether Hill Ro**	**44.20**	**158**	P	**P**	**20 16 38.5**	**+0.8**
WHZ				IAmb	IAmb	20 16 40.3	
	comp=Z,153nm,1.2s						
RGRI	**Rengat**	**44.28**	**275**	P	**P**	**20 16 40.4**	**+1.6**
	comp=Z,55µmcomp=Z,572nm,0.9s						
MQZ	**McQueen’s Vall**	**44.36**	**153**	P	**P**	**20 16 40.8**	**+1.8**
MQZ				IAmb	IAmb	20 16 41.7	
	comp=Z,317nm,1.3s						
ODZ	**Otahua Downs**	**44.54**	**155**	P	**P**	**20 16 42.0**	**+1.5**
NIUE	**Niue**	**44.57**	**111**	P	**P**	**20 16 41.4**	**+0.4**
SDSI	**Sungai Dareh**	**45.10**	**274**	P	**P**	**20 16 45.9**	**+0.5**
	comp=Z,6µmcomp=Z,459nm,1.5s						
TJN	**Taejon**	**45.49**	**338**	⇑*e*P	**P**	**20 16 48.2**	**+0.2**
UBPT	**Khong Chiam**	**45.57**	**298**	P	**P**	**20 16 47.5**	**-1.4**
BKNI	**Bangkinang**	**45.65**	**276**	P	**P**	**20 16 50.5**	**+0.8**
BKNI	**Bangkinang**	**45.65**	**276**	P	**P**	**20 16 50.7**	**+1.0**
	comp=Z,9µmcomp=Z,772nm,1.2s						
NJ2	**Nanjing**	**45.79**	**327**	⇓P	**P**	**20 16 51.8**	**+1.3**
NJ2				pP	**pP**	**20 17 05.0**	**-2.1**
NJ2				sP	**sP**	**20 17 13.5**	**-1.2**
NJ2				S	**S**	**20 23 33.4**	**+4.1**
NJ2				sS	**sS**	**20 23 58.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,120nm,1.3s						
NJ2				pmax	pmax		
	comp=Z,560nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,19.8s						
NJ2				LR	LR		
	comp=Z,940nm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,24.6s						
PDSI	**Padang**	**46.06**	**274**	P	**P**	**20 16 52.0**	**-1.0**
	comp=Z,50nm,0.7s						
KSRS	**Korea Array**	**46.25**	**340**	P	**P**	**20 16 53.8**	**-0.2**
	comp=Z,314nm,1.2s,baz=158,slow=8.8,SNR=191						
KSRS				S	**S**	**20 23 38.6**	**+2.8**
	comp=Z,1.7nm,0.8s,baz=162,slow=17,SNR=4.8						
KSRS				LR	LR	20 33 17.1	
	comp=Z,4µm,21.9s,baz=165,slow=32						
KSAR	**Wonju Array Be**	**46.26**	**340**	P	**P**	**20 16 54.8**	**+0.7**
KSAR	**Wonju Array Be**	**46.26**	**340**	P	**P**	**20 16 54.8**	**+0.7**
KS19	**Wonju Array Si**	**46.32**	**340**	P	**P**	**20 16 54.7**	**+0.1**
IPM	**Ipoh**	**46.40**	**282**	P	**P**	**20 16 55.8**	**+0.2**
IPM	**Ipoh**	**46.40**	**282**	P	**P**	**20 16 57.0**	**+1.4**
JTM	**Tenmabayashi**	**46.52**	**354**	P	**P**	**20 16 56.2**	**+0.2**
INCN	**Inchon**	**46.74**	**338**	P	**P**	**20 16 58.0**	**+0.1**
INCN				pmax	pmax		
	comp=Z,550nm,1.3s						
INCN				MLR	MLR		
	comp=Z,3µm,22.0s						
INCN	**Inchon**	**46.74**	**338**	P	**P**	**20 16 58.0**	**+0.1**
KULM	**Kulim**	**46.94**	**283**	P	**P**	**20 16 59.2**	**-0.6**
KULM	**Kulim**	**46.94**	**283**	P	**P**	**20 17 01.0**	**+1.2**
MNSI	**Mandailing Nat**	**47.16**	**276**	P	**P**	**20 17 01.1**	**-0.5**
	comp=Z,3µmcomp=Z,222nm,1.3s						
WHN	**Wuhan**	**47.31**	**322**	⇑P	**P**	**20 17 04.5**	**+2.1**
WHN				pP	**pP**	**20 17 21.8**	**+2.2**
WHN				S	**S**	**20 23 53.8**	**+2.6**
WHN				sS	**sS**	**20 24 24.9**	**+4.1**
WHN				LR	LR		
	comp=Z,2µm,11.9s						
WHN				LR	LR		
	comp=Z,2µm,16.4s						
WHN				LR	LR		
	comp=Z,6µm,41.3s						
ERM	**Erimo**	**47.58**	**357**	⇑*e*P	**P**	**20 17 05.7**	**+1.4**
ERM				pmax	pmax		
	comp=Z,192nm,1.7s						
ERM	**Erimo**	**47.58**	**357**	P	**P**	**20 17 05.3**	**+1.1**
ERM				IAmb	IAmb	20 17 10.9	
	comp=Z,82nm,1.0s						
PSI	**Prapat**	**48.13**	**279**	S	**S**	**20 24 04.3**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=360,slow=17,SNR=18						
SRAK	**Srakaew**	**48.15**	**294**	P	**P**	**20 17 06.3**	**-2.9**

	comp=Z,4μmcomp=Z,451nm,0.7s						
TRTT	Trang	48.47	286	P	P	20 17 12.8	+1.2
	comp=Z,2μmcomp=Z,187nm,1.3s						
JEW	Eniwo	48.52	355	P	P	20 17 12.2	+0.7
TSI	Tuntungan	48.61	280	P	P	20 17 13.1	+0.3
	comp=Z,5μmcomp=Z,419nm,1.3s						
NONG	Nongkai	48.74	300	P	P	20 17 14.3	+0.6
	comp=Z,141nm,0.8s						
PATY	Pattaya	48.85	293	P	P	20 17 16.2	+1.7
	comp=Z,87nm,0.7s						
CHAI	Chaiyaphum	48.90	297	P	P	20 17 15.3	+0.4
	comp=Z,1μmcomp=Z,140nm,0.6s						
GSI	Gunungsitoli	49.22	277	P	P	20 17 16.5	-1.0
GSI	Gunungsitoli	49.22	277	P	P	20 17 17.0	-0.5
	comp=Z,4μmcomp=Z,341nm,1.5s						
COCO	West Island	49.30	259	P	P	20 17 17.2	-0.8
COCO				pmax	pmax		
	comp=Z,570nm,1.1s						
COCO				MLR	MLR		
	comp=Z,2μm,20.0s						
COCO	West Island	49.30	259	P	P	20 17 17.2	-0.8
YUK	Yuzh-Kuril'sk	49.51	360	*d i*P	P	20 17 19.9	+0.8
YUK				*i* S	S	20 24 24.5	+2.8
YUK				*e*SS	SS	20 27 44.9	-10
YUK				pmax	pmax		
	comp=Z,472nm,1.2s						
YUK				pmax	pmax		
	comp=N,188nm,0.9s						
YUK				pmax	pmax		
	comp=E,299nm,1.1s						
SLVN	Son La	49.56	304	P	P	20 17 20.9	+1.0
SURT	Suratani	49.61	287	P	P	20 17 23.1	+2.7
	comp=E,4.0nm,1.1s						
JKA	Kamikawa-asahi	49.70	356	P	P	20 17 21.7	+1.1
ASAJ	Asahikawa	49.71	356	P	P	20 17 21.6	+1.1
	comp=E,128nm,1.0s,baz=223,slow=13,SNR=32						
ASAJ				S	S	20 24 23.2	-1.3
	comp=E,5.2nm,1.1s,baz=103,slow=14,SNR=1.2						
ASAJ	Asahikawa	49.71	356	P	P	20 17 21.7	+1.1
ASAJ				pmax	pmax		
	comp=Z,209nm,1.1s						
ASAJ				MLR	MLR		
	comp=Z,2μm,22.0s						
PKDT	Phuket	49.78	285	P	P	20 17 22.8	+1.1
	comp=Z,3μmcomp=Z,349nm,1.0s						
TIA	Tai'an	49.90	329	P	P	20 17 22.4	+0.2
TIA				S	S	20 24 27.8	+0.3
TIA				pmax	pmax		
	comp=Z,69nm,1.7s						
TIA				LR	LR		
	comp=Z,1μm,28.4s						
TIA				LR	LR		
	comp=Z,2μm,23.0s						
TIA				LR	LR		
	comp=Z,2μm,24.0s						
TPTI		49.93	279	P	P	20 17 22.2	-0.6
	comp=Z,1μmcomp=Z,153nm,1.2s						
DL2	Dalian	49.95	335	P	P	20 17 23.8	+1.3
DL2				pP	pP	20 17 40.1	+0.7
DL2				S	S	20 24 29.3	+1.2
DL2				sS	sS	20 24 51.4	-6.5
DL2				pmax	pmax		
	comp=Z,180nm,1.4s						
DL2				pmax	pmax		
	comp=Z,270nm,5.3s						
DL2				LR	LR		
	comp=Z,2μm,24.7s						
DL2				LR	LR		
	comp=Z,1μm,21.1s						
DL2				LR	LR		
	comp=Z,3μm,21.2s						
PHET	Kaeng Krachan	49.98	292	P	P	20 17 25.1	+1.9
	comp=Z,1μmcomp=Z,168nm,0.8s						
MSHR	Mys Shultsa	50.01	345	⇑*e*P	P	20 17 24.2	+1.3
MSHR				pmax	pmax		
	comp=Z,45nm,1.0s						
GYA	Guiyang	50.02	312	⇑P	P	20 17 23.9	+0.5
GYA				sP	sP	20 17 45.8	-2.4
GYA				S	S	20 24 30.8	+1.1
GYA				sS	sS	20 24 54.3	-5.2
GYA				SS	SS	20 28 02.4	-1.3
GYA				pmax	pmax		
	comp=Z,43nm,1.3s						
GYA				LR	LR		
	comp=Z,350nm,17.1s						
GYA				LR	LR		
	comp=Z,470nm,19.4s						
GYA				LR	LR		
	comp=Z,630nm,16.8s						
ENH	Enshi	50.28	318	P	P	20 17 25.3	+0.1
LHMI	Lhok Sumawe	50.53	282	P	P	20 17 27.2	-0.1
LHMI	Lhok Sumawe	50.53	282	P	P	20 17 27.9	+0.5
	comp=Z,5μmcomp=Z,397nm,1.3s						
KUR	Kuril'sk	50.72	1	*d i*P	P	20 17 29.4	+1.2
KUR						20 18 44.8	
KUR				*e*		20 19 28.3	
KUR				*e*PPP	PPP	20 20 28.6	
KUR				*i* S	S	20 24 43.1	+4.6
KUR				pmax	pmax		
	comp=E,136nm,1.3s						
KUR				pmax	pmax		
	comp=Z,970nm,1.3s						
KUR				pmax	pmax		
	comp=N,313nm,1.5s						
PHIT	Phitsanulok	50.78	298	P	P	20 17 30.8	+1.7
	comp=N,2μmcomp=N,285nm,0.8s						
UTTA	Uttaradit	50.87	298	P	P	20 17 31.0	+1.2
	comp=N,1μmcomp=N,155nm,0.8s						
UTHA	Uthaitani	51.04	295	P	P	20 17 32.0	+0.8
	comp=N,936nmcomp=N,129nm,0.8s						
NANT	Nan	51.16	300	P	P	20 17 34.1	+2.1
	comp=N,17μmcomp=N,2μm,0.9s						
TEY	Ternei	51.26	351	⇓*i*P	P	20 17 31.6	-0.7
TEY				*e*		20 17 44.4	
TEY				pmax	pmax		
	comp=E,20nm,1.2s						
TEY				pmax	pmax		
	comp=N,30nm,1.1s						
TEY				pmax	pmax		
	comp=Z,60nm,1.3s						
USA0B	Ussuriysk Arra	51.34	347	P	P	20 17 33.1	+0.2
USA0B				MLR	MLR		
	comp=Z,2μm,19.0s						
USA0B	Ussuriysk Arra	51.34	347	P	P	20 17 33.1	+0.2
USRK	Ussuriysk Ar.	51.34	347	P	P	20 17 33.5	+0.7
	comp=Z,45nm,0.6s,baz=171,slow=7.4,SNR=82						
USRK				LR	LR	20 38 21.0	
	comp=Z,1μm,18.8s,baz=150,slow=35						
USRK	Ussuriysk Ar.	51.34	347	P	P	20 17 33.0	+0.1
SUKH	Sukhothai	51.58	297	P	P	20 17 37.2	+2.0
	comp=Z,58nm,1.2s						
SNY	Shenyang	51.68	338	⇓P	P	20 17 36.0	+0.6
SNY				S	S	20 24 53.0	+1.2
SNY				pmax	pmax		
	comp=Z,97nm,1.5s						
SNY				pmax	pmax		
	comp=Z,490nm,2.7s						
SNY				LR	LR		
	comp=Z,2μm,20.4s						
SNY				LR	LR		
	comp=Z,2μm,19.9s						
SNY				LR	LR		
	comp=Z,5μm,28.4s						
LAMP	Lampang	51.98	299	P	P	20 17 40.2	+2.0
	comp=Z,1μmcomp=Z,173nm,0.8s						
PAYA	Payao	52.11	300	P	P	20 17 40.3	+1.2
	comp=Z,15μmcomp=Z,2μm,0.8s						
MDJ	Mudanjiang	52.31	345	P	P	20 17 40.6	+0.5
MDJ				pP	pP	20 17 55.0	-2.1
MDJ				sP	sP	20 18 01.5	-3.1
MDJ				PP	PP	20 19 39.9	+0.4
MDJ				S	S	20 25 01.9	+1.4
MDJ				sS	sS	20 25 27.3	-2.8
MDJ				SS	SS	20 28 41.8	+2.6
MDJ				pmax	pmax		
	comp=Z,130nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,650nm,3.8s						
MDJ				LR	LR		
	comp=Z,1μm,24.2s						
MDJ				LR	LR		
	comp=Z,880nm,24.2s						
MDJ				LR	LR		
	comp=Z,3μm,31.3s						
MDJ	Mudanjiang	52.31	345	P	P	20 17 40.2	+0.1
MDJ				IAmb	IAmb	20 17 42.2	
	comp=Z,176nm,1.3s						
KMI	Kunming	52.32	308	⇑P	P	20 17 42.3	+1.5
KMI				pP	pP	20 17 55.1	-2.9
KMI				sP	sP	20 18 02.3	-3.3
KMI				PcP	PcP	20 18 52.0	+0.7
KMI				PP	PP	20 19 42.5	+2.4
KMI				S	S	20 25 02.4	+0.7
KMI				sS	sS	20 25 27.6	-3.7
KMI				SS	SS	20 28 38.8	-1.6
KMI				pmax	pmax		
	comp=Z,66nm,1.2s						
KMI				pmax	pmax		
	comp=Z,270nm,3.5s						
KMI				LR	LR		
	comp=Z,380nm,25.1s						
KMI				LR	LR		
	comp=Z,870nm,24.7s						
KMI				LR	LR		
	comp=Z,1μm,25.7s						
KMI	Kunming	52.32	308	P	P	20 17 42.8	+2.0
KMI				pmax	pmax		
	comp=Z,117nm,1.3s						
KMI				MLR	MLR		
	comp=Z,1μm,22.0s						
KMI	Kunming	52.32	308	P	P	20 17 42.8	+2.0
KMI				IAmb	IAmb	20 17 45.4	
	comp=Z,117nm,1.3s						
CM36	Chiang Mai Arr	52.45	298	P	P	20 17 42.0	+0.4
CM35	Chiang Mai Arr	52.46	299	P	P	20 17 42.0	+0.3
CM04	Chiang Mai Arr	52.50	298	P	P	20 17 43.0	+0.9
	comp=Z,905nmcomp=Z,119nm,0.8s						
CM09	Chiang Mai Arr	52.51	298	P	P	20 17 43.6	+1.5
	comp=Z,906nmcomp=Z,120nm,0.9s						
YSS	Yuzh-Sakhalins	52.52	357	⇑*e*P	P	20 17 42.6	+1.0
YSS				*e*		20 19 35.7	
YSS				*e*S	S	20 25 02.1	-1.1
YSS				pmax	pmax		
	comp=Z,170nm,1.0s						
YSS				smax	smax		
	comp=N,500nm,5.3s						
YSS				MLR	MLR		
	comp=Z,900nm,18.0s						
YSS				MLR	MLR		
	comp=N,500nm,15.0s						
YSS	Yuzh-Sakhalins	52.52	357	P	P	20 17 40.6	-1.1
CM34	Chiang Mai Arr	52.53	299	P	P	20 17 43.0	+0.8
CM01	Chiang Mai Arr	52.53	298	P	P	20 17 43.8	+1.6
	comp=N,906nmcomp=N,114nm,1.1s						
CM05	Chiang Mai Arr	52.53	298	P	P	20 17 43.7	+1.4
	comp=N,712nmcomp=N,90nm,0.7s						
CM02	Chiang Mai Arr	52.55	298	P	P	20 17 43.9	+1.5
	comp=N,833nmcomp=N,106nm,0.8s						
CM31	Chiang Mai Arr	52.56	298	P	P	20 17 44.0	+1.5
	comp=N,24μmcomp=N,3μm,0.7s						
CM31	Chiang Mai Arr	52.56	298	P	P	20 17 43.1	+0.7
CMAR	Chiang Mai Arr	52.56	298	P	P	20 17 43.7	+1.3
	comp=N,68nm,0.8s,baz=122,slow=6.0,SNR=324						
CMAR				S	S	20 25 07.7	+3.0
	comp=N,0.2nm,0.4s,baz=120,slow=13,SNR=2.9						
CMAR				LR	LR	20 42 26.5	
	comp=N,551nm,18.7s,baz=167,slow=39						
CMAR	Chiang Mai Arr	52.56	298	P	P	20 17 45.3	+2.9
CM15	Chiang Mai Arr	52.57	298	P	P	20 17 43.9	+1.3
	comp=N,932nmcomp=N,128nm,0.8s						
CM13	Chiang Mai Arr	52.58	298	P	P	20 17 43.0	+0.4
	comp=N,811nmcomp=N,103nm,1.0s						
CMMT	Chiang Mai	52.69	299	P	P	20 17 44.0	+0.6
	comp=N,418nmcomp=N,41nm,1.1s						
CM33	Chiang Mai Arr	52.69	299	P	P	20 17 44.0	+0.5
CHTO	Chiang Mai	52.69	299	P	P	20 17 43.3	-0.2
CHTO				pmax	pmax		
	comp=Z,121nm,1.4s						
CHTO	Chiang Mai	52.69	299	P	P	20 17 43.3	-0.2
CHTO				IAmb	IAmb	20 17 46.5	
	comp=Z,121nm,1.4s						
CM32	Chiang Mai Arr	52.72	298	P	P	20 17 45.0	+1.4
XAN	Xi'an	53.06	321	P	P	20 17 46.0	+0.1
XAN				pP	pP	20 18 00.4	-2.9
XAN				S	S	20 25 09.9	-1.2
XAN				pmax	pmax		
	comp=Z,290nm,1.4s						
XAN				LR	LR		
	comp=Z,570nm,17.3s						
XAN				LR	LR		
	comp=Z,1μm,21.7s						
XAN				LR	LR		
	comp=Z,1μm,18.4s						
BJT	Baijiatuau	53.33	331	P	P	20 17 48.1	+0.4
BJT				pmax	pmax		
	comp=Z,141nm,1.0s						
BJT				MLR	MLR		
	comp=Z,2μm,22.0s						
BJT	Baijiatuau	53.33	331	P	P	20 17 48.1	+0.4
BJT				IAmb	IAmb	20 17 50.4	
	comp=Z,140nm,1.0s						
BJI	Beijing	53.34	331	P	P	20 17 48.0	+0.2
BJI				S	S	20 25 15.1	+0.5
BJI				LR	LR		
	comp=Z,1μm,20.6s						
BJI				LR	LR		
	comp=Z,890nm,16.2s						
BJI				LR	LR		
	comp=Z,2μm,27.5s						
TIY	Taiyuan	53.51	327	*e*P	P	20 17 50.1	+0.9
TIY				pP	pP	20 18 09.6	+3.1
TIY				S	S	20 25 21.6	+4.4
TIY				pmax	pmax		
	comp=Z,49nm,0.9s						
TIY				pmax	pmax		
	comp=Z,460nm,7.1s						
TIY				LR	LR		
	comp=Z,1μm,20.7s						
TIY				LR	LR		
	comp=Z,430nm,14.5s						
TIY				LR	LR		
	comp=Z,3μm,27.5s						
CD2	Chengdu	54.62	314	P	P	20 17 57.9	+0.5
CD2				pP	pP	20 18 13.5	-1.2
CD2				S	S	20 25 34.3	+1.9
CD2				sS	sS	20 25 59.3	-2.8
CD2				SS	SS	20 29 14.5	-1.7
CD2				pmax	pmax		
	comp=Z,210nm,0.7s						
CD2				pmax	pmax		
	comp=Z,410nm,8.0s						
CD2				LR	LR		
	comp=Z,1μm,21.2s						
CD2				LR	LR		
	comp=Z,1μm,18.8s						
CD2				LR	LR		
	comp=Z,2μm,19.0s						
UGL	Uglegorsk	54.68	357	*d i*P	P	20 17 58.2	+0.8
UGL				*e*S	S	20 25 35.9	+3.5
UGL				pmax	pmax		
	comp=Z,1μm,1.6s						
UGL				pmax	pmax		
	comp=E,180nm,1.1s						
UGL				pmax	pmax		
	comp=N,70nm,1.2s						
UGL				pmax	pmax		
	comp=Z,350nm,1.2s						
UGL				smax	smax		
	comp=N,2μm,19.0s						
UGL				smax	smax		
	comp=E,1μm,19.0s						
KLR	Kul'dur	56.17	349	P	P	20 18 08.9	+0.8
	comp=E,127nm,1.2s,baz=161,slow=6.4,SNR=86						
KLR				S	S	20 25 46.5	-5.9
	comp=E,0.2nm,0.3s,baz=116,slow=19,SNR=1.2						
KLR	Kul'dur	56.17	349	*d i*P	P	20 18 08.6	+0.5
KLR				pmax	pmax		
	comp=Z,275nm,1.5s						
HHC	Hu-ho-hao-te	56.25	329	*e*P	P	20 18 09.8	+0.8
HHC				S	S	20 25 52.5	-1.4
HHC				ScS	ScS	20 27 53.3	+1.0
HHC				SS	SS	20 29 40.4	-1.4
HHC				pmax	pmax		
	comp=Z,91nm,1.2s						
HHC				pmax	pmax		
	comp=Z,310nm,5.0s						
HHC				LR	LR		
	comp=Z,1μm,23.8s						
HHC				LR	LR		
	comp=Z,1μm,18.7s						
HHC				LR	LR		
	comp=Z,2μm,19.6s						
TYV	Tymovskoe	56.43	357	*e*P	P	20 18 11.6	+1.7
TYV				*e*S	S	20 26 00.2	+4.6
TYV				pmax	pmax		
	comp=Z,154nm,1.2s						
TYV				smax	smax		
	comp=N,600nm,2.6s						
TYV				smax	smax		
	comp=E,10.0nm,2.0s						
TYV				MLR	MLR		
	comp=Z,1μm,19.0s						
SKR	Severo-Kuril's	56.79	7	*e*P	P	20 18 11.8	-0.6
SKR				*e**PP	pP	20 18 25.7	-3.9
SKR				*e*		20 20 16.6	
SKR				*e*S	S	20 26 03.1	+2.8
SKR				pmax	pmax		
	comp=Z,300nm,3.0s						
SKR				pmax	pmax		
	comp=Z,180nm,1.3s						
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
BTO	Baotou	56.89	327	*e*P	P	20 18 15.0	+1.5
GRNR	Gornyy	56.90	352	⇑*i*P	P	20 18 15.0	+1.7
GRNR				*e*S	S	20 26 07.5	+5.6
GRNR				pmax	pmax		
	comp=E,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,50nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,80nm,1.2s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
LZH	Lanzhou	57.58	320	*e*P	P	20 18 19.4	+0.8
LZH				pP	pP	20 18 36.5	+0.4
LZH				sP	sP	20 18 41.5	-2.2
LZH				S	S	20 26 11.1	-0.6
LZH				sS	sS	20 26 40.3	-1.4
LZH				SS	SS	20 30 03.0	+0.1
LZH				pmax	pmax		
	comp=N,210nm,1.2s						
LZH				pmax	pmax		
	comp=N,390nm,6.2s						
LZH				LR	LR		
	comp=N,1μm,19.5s						
LZH				LR	LR		
	comp=N,740nm,19.5s						
LZH				LR	LR		
	comp=N,750nm,20.1s						
LKP	Lekhapani	58.82	307	*e*P	P	20 18 26.9	-0.2
LKP				IAmb	IAmb	20 18 28.9	
	comp=Z,95nm,0.7s						
NKL	Nikolayevsk	58.83	356	*e*P	P	20 18 25.9	-0.8
NKL				*e*S	S	20 26 23.8	-3.1
NKL				pmax	pmax		
	comp=E,101nm,1.5s						
NKL				pmax	pmax		
	comp=N,7.0nm,1.0s						
NKL				pmax	pmax		
	comp=Z,286nm,1.3s						
NKL				smax	smax		
	comp=E,132nm,3.1s						
NKL				smax	smax		
	comp=N,22nm,5.7s						
SAIH	SAIHA	59.24	300	*e*P	P	20 18 31.1	+0.8
SAIH				IAmb	IAmb	20 18 35.8	
	comp=Z,184nm,0.9s						
PEA0B	Petropavlovsk-	59.37	8	P	P	20 18 30.2	-0.3
PEA0B				pmax	pmax		
	comp=Z,500nm,1.4s						
PEA0B				MLR	MLR		
	comp=Z,5μm,22.0s						
PEA0B	Petropavlovsk-	59.37	8	P	P	20 18 30.2	-0.3
PETK	Petropavlovsk-	59.37	8	P	P	20 18 30.9	+0.4
	comp=Z,99nm,1.0s,baz=174,slow=6.0,SNR=65						
PETK				LR	LR	20 40 04.3	
	comp=Z,4μm,21.4s,baz=192,slow=32						
PETK				PKP2bc		20 48 10.2	
	comp=Z,12nm,1.1s,baz=39,slow=0.9,SNR=8.4						
PETK	Petropavlovsk-	59.37	8	P	P	20 18 29.6	-0.9
PET	Petropavlovsk	59.42	9	⇑*i*P	P	20 18 32.0	+1.2
PET				*e**PP	pP	20 18 48.7	+0.6
PET				*e*		20 20 44.9	
PET				*e*S	S	20 26 36.6	+2.0
PET				*e*SS	SS	20 30 30.2	-0.7
PET				*e*SSS	SSS	20 33 08.4	
PET				pmax	pmax		
	comp=Z,115nm,1.4s						
PET	Petropavlovsk	59.42	9	P	P	20 18 29.5	-1.3
HIA	Hailar	59.46	340	P	P	20 18 32.1	+0.9
HIA				pmax	pmax		
	comp=Z,337nm,1.3s						
HIA				MLR	MLR		
	comp=Z,1μm,19.0s						
HIA	Hailar	59.46	340	P	P	20 18 32.1	+0.9
MOKO	MOKOCHONG	59.46	305	*e*P	P	20 18 32.2	+0.4
MOKO				IAmb	IAmb	20 18 33.7	
	comp=Z,91nm,0.9s						
KOHI	KOHIMA	59.55	304	*e*P	P	20 18 32.4	-0.1
ZIRO	ZIRO	60.50	306	*e*P	P	20 18 39.4	+0.4
ZIRO				IAmb	IAmb	20 18 46.3	
	comp=Z,34nm,0.7s						
KIP	Kipapa	60.81	62	⇑*e*P	P	20 18 42.4	+1.5
KIP				pmax	pmax		
	comp=Z,89nm,1.2s						
BELO	BELONIA	60.84	300	*e*P	P	20 18 43.6	+2.6
TEZP	TEZPUR	60.99	305	*e*P	P	20 18 42.2	+0.1
TEZP				IAmb	IAmb	20 18 45.4	
	comp=Z,90nm,1.0s						
SHL	Shillong	61.33	303	P	P	20 18 44.8	+0.2
SHL				pmax	pmax		
	comp=Z,142nm,0.8s						
SHL				MLR	MLR		
	comp=Z,800nm,22.0s						
SHL	Shillong	61.33	303	*e*P	P	20 18 45.3	+0.7
SHL				IAmb	IAmb	20 18 48.0	
	comp=Z,105nm,0.7s						
SHL	Shillong	61.33	303	P	P	20 18 44.8	+0.2
ZEA	Zeya	61.37	347	*e*P	P	20 18 45.1	+1.0
ZEA				*e*S	S	20 27 00.6	+1.0
ZEA				*e*SS	SS	20 31 05.5	+4.0
ZEA				pmax	pmax		
	comp=N,100nm,1.1s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,300nm,9.1s						
ZEA				smax	smax		
	comp=N,400nm,11.5s						
ZEA				smax	smax		
	comp=E,600nm,10.1s						
GUWA	GUWAHATI	61.73	304	*e*P	P	20 18 48.4	+1.3
GUWA				IAmb	IAmb	20 18 50.3	
	comp=Z,143nm,1.0s						
GTA	Gaotai	62.11	320	⇑P	P	20 18 50.4	+0.8
GTA				pP	pP	20 19 06.8	-0.3
GTA				sP	sP	20 19 14.1	-0.5
GTA				S	S	20 27 12.3	+2.5
GTA				sS	sS	20 27 41.8	+1.6
GTA				SS	SS	20 31 15.8	+1.9
GTA				pmax	pmax		
	comp=Z,76nm,1.2s						
GTA				pmax	pmax		
	comp=Z,220nm,5.4s						
GTA				LR	LR		
	comp=Z,350nm,19.6s						
GTA				LR	LR		
	comp=Z,520nm,16.7s						
GTA				LR	LR		
	comp=Z,710nm,18.9s						
SMY	Shemya	62.78	19	P	P	20 18 54.4	+0.9
SMY				pmax	pmax		
	comp=Z,600nm,1.2s						
SMY	Shemya	62.78	19	P	P	20 18 54.4	+0.9
AMKA	Amchitka	63.48	22	P	P	20 18 59.7	+1.5
ULN	Ulaanbaatar	63.55	332	*ce*P	P	20 19 00.0	+1.0
ULN				pmax	pmax		
	comp=Z,248nm,1.7s						
ULN				MLR	MLR		
	comp=Z,1μm,22.0s						
ULN	Ulaanbaatar	63.55	332	P	P	20 18 59.0	0.0
LSA	Lhasa	63.56	307	P	P	20 19 01.3	+1.5
LSA				S	S	20 27 27.6	-1.4
LSA				pmax	pmax		
	comp=Z,390nm,1.1s						

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LSA                                  pmax      pmax
      comp=Z,2µm,12.1s
LSA                                  LR        LR
      comp=Z,2µm,23.5s
LSA                                  LR        LR
      comp=Z,3µm,32.0s
LSA                                  LR        LR
      comp=Z,3µm,27.8s
LSA   Lhasa             63.56 307    P         P         20 19 00.1 +0.3
LSA                                  pmax      pmax
      comp=Z,71nm,0.8s
LSA   Lhasa             63.56 307    P         P         20 19 00.1 +0.3
LSA                                  IAmb      IAmb      20 19 02.7
      comp=Z,71nm,0.8s
PPT   Papeete           63.58 107    LR        LR        20 43 49.5
      comp=Z,310nm,20.5s,baz=272,slow=33
PPT2  Papeete2          63.58 107   eS         S         20 27 28.7 -0.1
      comp=Z,1µm,24.1s
PPT2                                eLQ        LQ        20 35 15.0
      comp=Z,3µm,30.2s
PPT2                                eLR        LR        20 37 58.6
      comp=Z,2µm,24.5s
SONM  Songino Array     63.84 331    P         P         20 19 01.6 +0.7
      comp=Z,60nm,1.1s,baz=146,slow=5.8,SNR=140
SONM                                 S         S         20 27 31.1  0.0
      comp=Z,0.2nm,0.4s,baz=168,slow=7.4,SNR=1.8
SONM                                 PKPPKP              20 47 52.0
      comp=Z,1.1nm,0.9s,baz=96,slow=1.4,SNR=4.4
SONM                                 LR        LR        20 47 52.6
      comp=Z,1µm,19.8s,baz=139,slow=37
SONM                                 PKP2bc              20 48 01.3
      comp=Z,4.5nm,1.0s,baz=292,slow=1.4,SNR=6.0
SONM  Songino Array     63.84 331    P         P         20 19 01.2 +0.3
CIT   Chita             63.95 338   eP         P         20 19 02.7 +1.3
CIT                                 e                    20 19 16.8
CIT                                 e                    20 19 39.4
CIT                                 e                    20 21 21.0
CIT                                 eS         S         20 27 31.5 -0.6
CIT                                 e                    20 28 08.0
CIT                                  pmax      pmax
      comp=Z,583nm,1.6s
GTK   Tadong            64.71 304   eP         P         20 19 07.7 +0.7
GTK                                  IAmb      IAmb      20 19 16.1
      comp=Z,125nm,0.9s
MA2   Magadan           65.17   2    S         S         20 27 48.5 +1.9
      baz=75,slow=12
MA2   Magadan           65.17   2deP           P         20 19 09.6 +0.5
MA2                                  pmax      pmax
      comp=Z,195nm,1.3s
MA2   Magadan           65.17   2    P         P         20 19 09.9 +0.9
MA2                                  IAMs_20   IAMs_20   20 42 41.6
      comp=Z,3µm,22.0s
CASY  Casey             65.38 195    P         P         20 19 09.9 -0.5
CASY  Casey             65.38 195    IAMs_20   IAMs_20   20 46 59.1
      comp=Z,3µm,19.0s
TAPN  Taplejung         65.46 303   eP         P         20 19 12.5 +0.4
      comp=Z,276nm,1.0s
ODAN  Odare             65.56 303   eP         P         20 19 13.0 +0.4
      comp=Z,328nm,0.9s
BOK   Bokaro            65.83 299   eP         P         20 19 16.1 +2.0
BOK                                  IAmb      IAmb      20 19 17.2
      comp=Z,71nm,0.8s
RAMN  Ramite            66.25 303   eP         P         20 19 17.2 +0.1
      comp=Z,108nm,0.6s
PALK  Pallekele         66.78 280c iP          P         20 19 20.9 +0.5
PALK                                 pmax      pmax
      comp=Z,97nm,1.0s
PALK                                 MLR       MLR
      comp=Z,2µm,24.0s
PALK  Pallekele         66.78 280    P         P         20 19 19.4 -1.0
PALK                                 IAmb      IAmb      20 19 22.9
      comp=Z,116nm,1.1s
ZAK   Zakamensk         67.08 332   eP         P         20 19 22.0 +0.3
ZAK                                 e                    20 28 12.9
ZAK                                  pmax      pmax
      comp=Z,123nm,1.4s
GUN   Gumba             67.18 303   eP         P         20 19 23.5 +0.4
      comp=Z,330nm,0.8s
PKI   Pulchoki          67.46 303   eP         P         20 19 24.9 +0.1
      comp=Z,386nm,1.4s
PKIN  Phulchoki         67.47 303   eP         P         20 19 24.9 +0.1
      comp=Z,393nm,1.4s
KKN   Kakani            67.64 303   eP         P         20 19 26.0 +0.2
      comp=Z,207nm,0.9s
DMN   Daman             67.72 303   eP         P         20 19 26.8 +0.4
      comp=Z,385nm,1.0s
TLY   Talaya            67.80 333    P         P         20 19 27.1 +1.0
      comp=Z,16nm,0.8s,baz=153,slow=6.9,SNR=33
TLY   Talaya            67.80 333d iP          P         20 19 26.9 +0.8
TLY                                 e                    20 19 45.2
TLY                                 eS         S         20 28 21.9 +3.0
TLY                                 e                    20 28 51.6
TLY                                  pmax      pmax
      comp=Z,186nm,1.5s
TLY                                  MLR       MLR
      comp=Z,2µm,17.0s
TLY   Talaya            67.80 333    P         P         20 19 26.9 +0.8
TLY                                  IAMs_20   IAMs_20   20 46 32.5
      comp=Z,2µm,22.0s
IRK   Irkutsk           67.90 334   eP         P         20 19 26.6 -0.1
IRK                                  pmax      pmax
      comp=Z,105nm,1.8s
BOD   Bodaibo           68.50 342⇑iP           P         20 19 30.3  0.0
BOD                                  pmax      pmax
      comp=Z,153nm,1.3s
SEY   Seymchan          68.59   3    P         P         20 19 31.2 +0.4
      comp=Z,62nm,1.0s,baz=181,slow=5.4,SNR=116
SEY   Seymchan          68.59   3⇑eP           P         20 19 32.1 +1.3
YAK   Yakutsk           68.76 352d iP          P         20 19 32.0 +0.2
YAK                                 e*PP       pP        20 19 43.0 -6.7
YAK                                 eS         S         20 28 31.3 +1.5
YAK                                 e*SS       sS        20 29 00.4 +0.7
YAK                                 e                    20 29 21.0
YAK                                 eSS        SS        20 32 52.6 -3.4
YAK                                  pmax      pmax
      comp=Z,166nm,1.3s
YAK                                  pmax      pmax
      comp=N,83nm,1.3s
YAK                                  pmax      pmax
      comp=E,22nm,1.4s
YAK                                  smax      smax
      comp=E,392nm,2.0s
YAK                                  smax      smax
      comp=N,362nm,2.5s
YAK   Yakutsk           68.76 352    P         P         20 19 32.1 +0.4
YAK                                  IAmb      IAmb      20 19 33.6
      comp=Z,130nm,1.1s
MOY   Mondy             69.02 332   eP         P         20 19 34.7 +0.9
MOY                                  pmax      pmax
      comp=Z,185nm,1.7s
DANN  Dangsing          69.09 303   eP         P         20 19 34.8 -0.2
      comp=Z,112nm,0.8s
TRD   Trivandrum        70.63 281   eP         P         20 19 45.9 +1.6
HYB   Hyderabad         70.77 291   i P        P         20 19 44.0 -1.2
HYB   Hyderabad         70.77 291   eP         P         20 19 46.1 +1.0
HYB                                  IAmb      IAmb      20 19 53.1
      comp=Z,75nm,0.9s
NGP   Nagpur            71.17 294   eP         P         20 19 48.3 +0.8
WMQ   Urumqi            72.16 319    P         P         20 19 54.5 +1.4
WMQ                                  pP        PcP       20 20 10.8 -0.2
WMQ                                  sP        sP        20 20 20.9 +2.0
WMQ                                  S         S         20 29 11.3 +0.9
WMQ                                  SKS       SKSac     20 29 46.9 -4.7
WMQ                                  pmax      pmax
      comp=Z,75nm,1.3s
WMQ                                  pmax      pmax
      comp=Z,580nm,5.3s
WMQ                                  LR        LR
      comp=Z,910nm,20.1s
WMQ                                  LR        LR
      comp=Z,780nm,20.1s
WMQ                                  LR        LR
      comp=Z,2µm,20.1s
WMQ   Urumqi            72.16 319    P         P         20 19 54.0 +0.9
WMQ                                  pmax      pmax
      comp=Z,91nm,1.2s
WMQ   Urumqi            72.16 319    P         P         20 19 54.0 +0.9
WMQ                                  IAmb      IAmb      20 19 55.9
      comp=Z,91nm,1.2s
VNDA  Vanda             72.24 177    P         P         20 19 53.5 +0.6
      comp=Z,53nm,0.9s,baz=331,slow=6.6,SNR=86
VNDA                                 S         S         20 29 13.0 +2.8
      comp=Z,0.8nm,0.9s,baz=294,slow=10.0,SNR=1.3
VNDA                                 LR        LR        20 50 25.5
      comp=Z,2µm,19.2s,baz=348,slow=35
VNDA  Vanda             72.24 177    P         P         20 19 53.2 +0.3
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VNDA                                 IAmb      IAmb      20 19 55.6
      comp=Z,111nm,1.1s
TAOE  Nuku Hiva Isla    72.86  97   eLR        LR        20 42 15.0
      comp=Z,1µm,21.3s
SBA   Scott Base        72.90 176    P         P         20 19 58.8 +2.0
SBA                                  pmax      pmax
      comp=Z,102nm,1.3s
SBA                                  MLR       MLR
      comp=Z,2µm,20.0s
SBA   Scott Base        72.90 176    P         P         20 19 58.8 +2.0
SBA                                  IAmb      IAmb      20 20 06.4
      comp=Z,102nm,1.2s
SBA   Scott Base        72.90 176    IAMs_20   IAMs_20   20 46 36.2
      comp=Z,2µm,20.0s
BHPL  Bhopal            73.14 296   eP         P         20 20 00.1 +0.8
BHPL                                 IAmb      IAmb      20 20 00.8
      comp=Z,85nm,1.1s
DGAR  Diego Garcia      73.38 264ceP           P         20 20 02.3 +1.5
DGAR                                 pmax      pmax
      comp=Z,697nm,1.5s
DGAR  Diego Garcia      73.38 264    P         P         20 20 01.6 +0.9
DDI   Dehra Dun         74.43 303   eP         P         20 20 07.7 +1.0
DDI                                  IAmb      IAmb      20 20 09.2
      comp=Z,61nm,0.9s
NDI   New Delhi         74.69 302   eP         P         20 20 07.0 -1.2
GOA   Goa               74.84 288   eP         P         20 20 11.0 +1.8
GOA                                  IAmb      IAmb      20 20 12.9
      comp=Z,135nm,1.2s
BILL  Bilibino          74.90   8ceP           P         20 20 09.2 +0.7
BILL                                i                    20 20 16.6
BILL                                e                    20 22 56.8
BILL                                eS         S         20 29 44.3 +4.1
BILL                                 pmax      pmax
      comp=Z,122nm,1.3s
BILL                                 MLR       MLR
      comp=Z,478nm,18.0s
BILL  Bilibino          74.90   8    P         P         20 20 09.7 +1.1
BILL                                 IAmb      IAmb      20 20 11.7
      comp=Z,95nm,1.1s
DGZ   Jazzator, Alta    75.03 325d iP          P         20 20 10.1 +0.2
DGZ                                  pmax      pmax
      comp=Z,36nm,1.1s
DGZ                                  MLR       MLR
      comp=Z,1µm,20.0s
POO   Poona             75.38 291⇓iP           P         20 20 13.0 +0.6
      comp=Z,170nm,1.0s
POO                                 eP         P         20 20 13.5 +1.1
POO                                  IAmb      IAmb      20 20 14.0
      comp=Z,103nm,1.0s
SMLA  Simla             75.39 304   eP         P         20 20 12.4 +0.3
SMLA                                 IAmb      IAmb      20 20 14.1
      comp=Z,100nm,1.2s
ZSN   Zaisan            75.54 322   eP         P         20 20 11.2 -1.5
      comp=Z,5.6nm,0.9s,baz=322
ZSN   Zaisan            75.54 322   eP         P         20 20 11.2 -1.5
ZSN                                  pmax      pmax
      comp=Z,6.0nm,0.9s
GAMB  Gambell           76.08  18    P         P         20 20 16.6 +1.2
GAMB                                 IAMs_20   IAMs_20   20 51 02.8
      comp=Z,2µm,20.0s
DHRM  DHARAMSHALA       76.41 305   eP         P         20 20 18.5 +0.3
DHRM                                 IAmb      IAmb      20 20 19.8
      comp=Z,66nm,0.7s
CHGN  Chignik           76.44  28    P         P         20 20 19.0 +1.5
CHGN                                 IAmb      IAmb      20 20 20.0
      comp=Z,119nm,1.0s
MK31  Makanchi Array    76.87 321   i P        P         20 20 20.3  0.0
MK31                                 pmax      pmax
      comp=Z,31nm,0.9s
MK31  Makanchi Array    76.87 321    P         P         20 20 19.7 -0.6
MKAR  Makanchi Array    76.87 321    P         P         20 20 20.1 -0.2
      comp=Z,13nm,0.7s,baz=101,slow=6.9,SNR=142
MKAR                                 S         S         20 30 04.4 +1.6
      comp=Z,0.2nm,0.4s,baz=192,slow=13,SNR=5.1
MKAR                                 PKKPbc    PKKPbc    20 39 31.2 -0.1
      comp=Z,0.3nm,0.6s,baz=288,slow=2.5,SNR=4.6
MKAR                                 PKPPKP    P'P'df    20 47 31.0 -0.4
      comp=Z,1.5nm,1.1s,baz=354,slow=1.2,SNR=7.0
MKAR  Makanchi Array    76.87 321    P         P         20 20 19.5 -0.8
MAKZ  Makanchi          77.07 321    P         P         20 20 20.5 -0.9
MAKZ                                 pmax      pmax
      comp=Z,40nm,1.0s
MAKZ  Makanchi          77.07 321    P         P         20 20 20.5 -0.9
SHLS  Shalkode          77.39 316   eP         P         20 20 20.4 -3.1
      comp=Z,12nm,0.8s,baz=316
SHLS                                eS         S         20 30 04.5 -4.4
      baz=316
SHLS  Shalkode          77.39 316   eP         P         20 20 20.3 -3.1
SHLS                                eS         S         20 30 04.4 -4.4
SHLS                                 pmax      pmax
      comp=Z,12nm,0.8s
PDGK  Podgornoye        77.43 317   i P        P         20 20 22.5 -1.1
PDGK                                 pmax      pmax
      comp=Z,30nm,0.7s
KPKS  Kokpek            78.03 316   eP         P         20 20 25.3 -1.6
      comp=Z,22nm,1.4s,baz=316
KPKS                                i S        S         20 30 14.4 -1.3
      baz=316
KPKS  Kokpek            78.03 316   eP         P         20 20 25.3 -1.6
KPKS                                i S        S         20 30 14.3 -1.3
KPKS                                 pmax      pmax
      comp=Z,22nm,1.4s
TIXI  Tiksi             78.05 354    P         P         20 20 25.3 -1.0
SATY  Saty              78.08 316   eP         P         20 20 26.0 -1.2
      baz=316
SATY                                eS         S         20 30 15.3 -1.1
      baz=316
SATY  Saty              78.08 316   eP         P         20 20 26.0 -1.2
SATY                                eS         S         20 30 15.2 -1.1
ZAA0  Zalesovo Array    78.43 328    P         P         20 20 27.4 -1.3
ZAA0                                 IAMs_20   IAMs_20   20 53 46.8
      comp=Z,2µm,22.0s
ZALV  Zalesovo Beam     78.43 328    P         P         20 20 27.8 -0.9
      comp=Z,20nm,0.6s,baz=112,slow=6.1,SNR=82
ZALV                                 PKKPbc    PKKPbc    20 39 26.8 -1.3
      comp=Z,1.4nm,0.6s,baz=307,slow=1.5,SNR=8.3
ZALV                                 PKPPKP              20 47 30.7
      comp=Z,3.1nm,1.0s,baz=267,slow=2.6,SNR=3.2
ZALV                                 LR        LR        20 54 20.3
      comp=Z,2µm,21.7s,baz=117,slow=35
ZALV  Zalesovo Beam     78.43 328    P         P         20 20 27.0 -1.7
ANM   Nome              78.63  19    P         P         20 20 31.1 +1.4
ANM                                  pmax      pmax
      comp=Z,72nm,1.3s
ANM                                  MLR       MLR
      comp=Z,2µm,21.0s
ANM   Nome              78.63  19    P         P         20 20 31.1 +1.4
ANM                                  IAmb      IAmb      20 20 39.2
      comp=Z,72nm,1.3s
ANM                                  IAMs_20   IAMs_20   20 51 48.3
      comp=Z,2µm,21.0s
KSH   Kashi             78.71 312    P         P         20 20 32.4 +1.6
KSH                                  sP        sP        20 20 54.6 -2.1
KSH                                  PP        PP        20 23 32.4 +2.5
KSH                                  S         S         20 30 25.3 +2.1
KSH                                  ScS       ScS       20 30 46.5 -0.3
KSH                                  pmax      pmax
      comp=Z,39nm,0.8s
KSH                                  pmax      pmax
      comp=Z,980nm,5.6s
KSH                                  LR        LR
      comp=Z,390nm,9.3s
KSH                                  LR        LR
      comp=Z,380nm,11.1s
KSH                                  LR        LR
      comp=Z,1µm,19.5s
TDK   Taldyqorghan      78.74 318   eP         P         20 20 29.7 -1.0
      comp=Z,24nm,0.8s,baz=318
TDK                                 i S        S         20 30 22.3 -0.8
      baz=318
TDK   Taldyqorghan      78.74 318   eP         P         20 20 29.7 -1.0
TDK                                 i S        S         20 30 22.2 -0.8
TDK                                  pmax      pmax
      comp=Z,24nm,0.8s
MDOK  Medeo             79.06 316   eP         P         20 20 31.8 -0.9
      baz=316
MDOK                                eS         S         20 30 26.1 -0.7
      baz=316
MDOK  Medeo             79.06 316   eP         P         20 20 31.7 -0.9
MDOK                                eS         S         20 30 26.0 -0.7
TNSS  Tian-Shan         79.09 316   eP         P         20 20 33.4 +0.2
      baz=316
TNSS  Tian-Shan         79.09 316   eP         P         20 20 33.3 +0.2
AAA   Alma-Ata          79.16 316   eP         P         20 20 32.8 -0.4
      comp=Z,16nm,0.9s,baz=316
AAA                                 eS         S         20 30 27.5 -0.2
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      baz=316
AAA   Alma-Ata          79.16 316   eP         P         20 20 32.7 -0.4
AAA                                 eS         S         20 30 27.5 -0.2
AAA                                  pmax      pmax
      comp=Z,16nm,0.9s
NIL   Nilore            79.25 306    P         P         20 20 33.6 -0.1
NIL                                  pmax      pmax
      comp=Z,68nm,0.7s
NIL   Nilore            79.25 306    P         P         20 20 33.6 -0.1
NIL                                  IAmb      IAmb      20 20 35.5
      comp=Z,68nm,0.7s
CHKK  Chushkaly         79.32 316   eP         P         20 20 33.1 -0.8
      baz=316
CHKK  Chushkaly         79.32 316   eP         P         20 20 33.0 -0.8
OHAK  Old Harbor        79.34  29    P         P         20 20 34.5 +0.8
OHAK                                 IAmb      IAmb      20 20 42.8
      comp=Z,145nm,1.4s
SEM   Semipalatinsk     79.52 323   eP         P         20 20 32.9 -2.2
      baz=323
SEM                                 eS         S         20 30 29.6 -2.0
      baz=323
SEM   Semipalatinsk     79.52 323   eP         P         20 20 32.8 -2.2
SEM                                 eS         S         20 30 29.5 -2.0
KUU   Kurty             79.78 316   eP         P         20 20 34.9 -1.5
      comp=Z,31nm,0.9s,baz=316
KUU                                 eS         S         20 30 32.8 -1.3
      baz=316
KUU   Kurty             79.78 316   eP         P         20 20 34.8 -1.5
KUU                                 eS         S         20 30 32.7 -1.3
KUU                                  pmax      pmax
      comp=Z,31nm,0.9s
KDAK  Kodiak Island     79.94  28    P         P         20 20 37.3 +0.5
      comp=Z,40nm,0.9s,baz=246,slow=4.7,SNR=10.0
KDAK  Kodiak Island     79.94  28⇑eP           P         20 20 38.0 +1.1
KDAK                                 pmax      pmax
      comp=Z,163nm,1.2s
KDAK  Kodiak Island     79.94  28    P         P         20 20 37.7 +0.8
KDAK                                 IAmb      IAmb      20 20 39.9
      comp=Z,72nm,1.1s
KDAK  Kodiak Island     79.94  28    IAMs_20   IAMs_20   20 53 49.4
      comp=Z,2µm,20.0s
TKM2  Tokmak 2          79.99 315    P         P         20 20 37.6 -0.2
      SNR=26
TKM2  Tokmak 2          79.99 315   i P        P         20 20 37.1 -0.7
TKM2                                 pmax      pmax
      comp=Z,13nm,0.7s
BHUJ  Bhuj              80.12 295   eP         P         20 20 40.2 +1.6
BHUJ                                 IAmb      IAmb      20 20 41.4
      comp=Z,89nm,0.9s
KBK   Karagaybulak      80.37 315    P         P         20 20 41.0 +1.2
      SNR=17
UCH   Uchtor            80.56 314    P         P         20 20 42.1 +0.9
      SNR=36
KURK  Kurchatov         80.60 323ceP           P         20 20 39.6 -1.0
KURK                                 pmax      pmax
      comp=Z,30nm,0.9s
KURK                                 MLR       MLR
      comp=Z,2µm,20.0s
KURK  Kurchatov         80.60 323    P         P         20 20 39.5 -1.1
KURK  Kurchatov         80.60 323    IAMs_20   IAMs_20   20 58 05.5
      comp=Z,2µm,19.0s
CHMS  Chumysh           80.61 315    P         P         20 20 41.9 +1.0
      SNR=19
KURBB Kurchatov Arra    80.62 323    P         P         20 20 40.0 -0.7
      comp=Z,15nm,1.0s,baz=116,slow=4.2,SNR=96
KURBB                                PP        PP        20 23 43.9 -1.3
      comp=Z,9.5nm,1.1s,baz=115,slow=7.1,SNR=5.6
AAK   Ala-Archa         80.69 315    P         P         20 20 41.6 +0.2
      comp=Z,12nm,0.6s,baz=130,slow=5.4,SNR=65
AAK   Ala-Archa         80.69 315    P         P         20 20 42.8 +1.3
      SNR=26
AAK   Ala-Archa         80.69 315    P         P         20 20 41.0 -0.5
AAK                                  pmax      pmax
      comp=Z,23nm,1.1s
AAK                                  MLR       MLR
      comp=Z,800nm,18.0s
AAK   Ala-Archa         80.69 315    P         P         20 20 41.0 -0.5
USP   Ospenovka         80.86 315    P         P         20 20 42.6 +0.4
      SNR=33
TTA   Tatalina          81.02  23    P         P         20 20 43.8 +1.1
TTA                                  pmax      pmax
      comp=Z,44nm,1.1s
TTA                                  MLR       MLR
      comp=Z,2µm,20.0s
TTA   Tatalina          81.02  23    P         P         20 20 43.8 +1.1
TTA                                  IAMs_20   IAMs_20   20 52 24.7
      comp=Z,2µm,20.0s
AML   Almayashu         81.11 314    P         P         20 20 44.9 +0.8
      SNR=61
EKS2  Erkin-Say         81.20 315    P         P         20 20 44.6 +0.4
      SNR=42
HOM   Homer             81.24  27    P         P         20 20 43.0 -0.8
      baz=243
CNPM  China Poot        81.37  27    P         P         20 20 44.6 +0.1
CNPM                                 IAmb      IAmb      20 20 47.2
      comp=Z,128nm,1.0s
BRLK  Bradley Lake      81.63  27    P         P         20 20 47.4 +1.4
BRLK                                 IAmb      IAmb      20 21 02.3
      comp=Z,88nm,1.3s
BRLK                                 IAMs_20   IAMs_20   20 51 00.7
      comp=Z,1µm,19.0s
RDOG  Red Dog Mine      81.64  17    P         P         20 20 47.0 +1.2
RDOG                                 IAMs_20   IAMs_20   20 53 38.7
      comp=Z,2µm,21.0s
BTLS  Baital            81.69 317   eP         P         20 20 44.6 -2.0
      comp=Z,8.5nm,0.8s,baz=317
BTLS                                eS         S         20 30 52.3 -1.6
      baz=317
BTLS  Baital            81.69 317   eP         P         20 20 44.5 -2.0
BTLS                                eS         S         20 30 52.3 -1.6
BTLS                                 pmax      pmax
      comp=Z,8.0nm,0.8s
MAW   Mawson            82.28 203    P         P         20 20 50.2 +1.0
      baz=82,SNR=28
MAW   Mawson            82.28 203    P         P         20 20 49.7 +0.6
      comp=Z,100nm,1.0s,baz=79,slow=6.6,SNR=40
MAW                                  LR        LR        20 56 43.3
      comp=Z,1µm,19.4s,baz=78,slow=35
MAW   Mawson            82.28 203    P         P         20 20 49.8 +0.6
MAW                                  pmax      pmax
      comp=Z,44nm,1.2s
MAW                                  MLR       MLR
      comp=Z,500nm,21.0s
MAW   Mawson            82.28 203    P         P         20 20 49.8 +0.6
SKT   Skwentna          82.36  25    P         P         20 20 49.0 -0.7
SKT                                  IAMs_20   IAMs_20   20 52 22.2
      comp=Z,2µm,22.0s
SEW   Seward            82.43  27    P         P         20 20 50.7 +0.6
SEW                                  IAmb      IAmb      20 20 52.4
      comp=Z,130nm,1.2s
SEW                                  IAMs_20   IAMs_20   20 51 12.2
      comp=Z,2µm,22.0s
SUA   Susitna One       82.46  26    P         P         20 20 50.1 -0.2
SUA                                  IAmb      IAmb      20 20 53.6
      comp=Z,87nm,1.5s
SUA                                  IAMs_20   IAMs_20   20 50 32.8
      comp=Z,2µm,22.0s
PPLA  Purkeypile        82.52  24    P         P         20 20 50.7  0.0
PPLA                                 IAmb      IAmb      20 21 11.3
      comp=Z,75nm,1.4s
PPLA                                 IAMs_20   IAMs_20   20 53 24.4
      comp=Z,2µm,22.0s
RC01  Rabbit Creek A    82.73  26    P         P         20 20 51.5 -0.1
      baz=244
KBL   Kabul             82.85 306    P         P         20 20 51.4 -1.7
KBL                                  pmax      pmax
      comp=Z,17nm,0.8s
KBL                                  MLR       MLR
      comp=Z,400nm,21.0s
KBL   Kabul             82.85 306    P         P         20 20 51.4 -1.7
DZA   Taraz             83.00 314   eP         P         20 20 52.6 -0.9
      comp=Z,16nm,0.9s,baz=314
DZA                                 eS         S         20 31 06.9 -0.6
      baz=314
DZA   Taraz             83.00 314   eP         P         20 20 52.5 -0.9
DZA                                 eS         S         20 31 06.9 -0.6
DZA                                  pmax      pmax
      comp=Z,16nm,0.9s
CUT   Chulitna          83.08  25    P         P         20 20 52.7 -0.7
      baz=244
PMR   Palmer            83.21  26    P         P         20 20 53.9 -0.2
PMR                                  pmax      pmax
      comp=Z,64nm,1.1s
PMR                                  MLR       MLR
      comp=Z,2µm,20.0s
PMR   Palmer            83.21  26    P         P         20 20 53.9 -0.2
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PMR                                   IAmb     IAmb     20 20 56.0
       comp=Z,64nm,1.1s
PMR                                   IAMs_20  IAMs_20  20 53 37.8
       comp=Z,2µm,20.0s
KTH    Kantishna Hill    83.34  24    P        P        20 20 54.5 -0.3
KTH                                   IAmb     IAmb     20 20 56.4
       comp=Z,106nm,1.2s
GHO    Glory Hole Cre    83.38  26    P        P        20 20 55.0  0.0
GHO                                   IAmb     IAmb     20 20 57.1
       comp=Z,45nm,1.0s
KNK    Knik Glacier      83.43  26    P        P        20 20 55.7 +0.4
KNK                                   IAmb     IAmb     20 20 57.7
       comp=Z,77nm,1.0s
IMAR   Indian Mountai    83.44  21    P        P        20 20 55.3 +0.1
TRF    Thorofare Moun    83.54  24    P        P        20 20 55.6 -0.4
TRF                                   IAMs_20  IAMs_20  20 52 29.3
       comp=Z,2µm,22.0s
BPAW   Bear Paw Mtn.     83.56  23    P        P        20 20 55.1 -0.8
BPAW                                  IAmb     IAmb     20 20 57.8
       comp=Z,69nm,1.2s
BPAW                                  IAMs_20  IAMs_20  20 54 35.8
       comp=Z,2µm,20.0s
KK31   Karatay Array     83.64 314    P        P        20 20 56.2 -0.5
KK31                                  pmax     pmax
       comp=Z,23nm,1.0s
KK31   Karatay Array     83.64 314    P        P        20 20 56.2 -0.5
KKAR   Karatay Array     83.64 314    P        P        20 20 56.2 -0.5
KKAR                                  pmax     pmax
       comp=Z,23nm,1.0s
KKAR   Karatay Array     83.64 314    P        P        20 20 56.2 -0.5
KKAR   Karatay Array     83.64 314    P        P        20 20 55.6 -1.1
SML    Sawmill           83.65  26    P        P        20 20 56.8 +0.4
SML                                   IAmb     IAmb     20 20 58.7
       comp=Z,136nm,1.0s
SML                                   IAMs_20  IAMs_20  20 50 35.3
       comp=Z,2µm,22.0s
IUG    Iuzhnay           83.75 313   eP        P        20 20 56.4 -1.1
       comp=Z,6.8nm,0.8s,baz=313
IUG                                  eS        SKSac    20 31 12.8 -2.0
       baz=313
IUG    Iuzhnay           83.75 313   eP        P        20 20 56.3 -1.1
IUG                                  eS        SKSac    20 31 12.7 -2.0
IUG                                   pmax     pmax
       comp=Z,7.0nm,0.8s
GLI    Glacier Island    83.81  27    P        P        20 20 57.4 +0.2
GLI                                   IAmb     IAmb     20 20 59.5
       comp=Z,76nm,0.8s
GLI                                   IAMs_20  IAMs_20  20 51 40.8
       comp=Z,2µm,21.0s
HIN    Hinchinbrook I    83.89  27    P        P        20 20 57.7  0.0
HIN                                   IAmb     IAmb     20 21 06.7
       comp=Z,93nm,1.1s
BRZS   Berezniki         83.97 321   eP        P        20 20 56.6 -1.7
       comp=Z,22nm,1.1s,baz=321
BRZS                                 eS        SKSac    20 31 13.3 -2.2
       baz=321
BRZS   Berezniki         83.97 321   eP        P        20 20 56.5 -1.7
BRZS                                 eS        SKSac    20 31 13.3 -2.2
BRZS                                  pmax     pmax
       comp=Z,22nm,1.1s
FID    Port Fidalgo      84.04  27    P        P        20 20 58.8 +0.4
FID                                   IAmb     IAmb     20 21 00.5
       comp=Z,87nm,1.0s
FID                                   IAMs_20  IAMs_20  20 51 34.1
       comp=Z,1µm,21.0s
MLY    Manley            84.08  22    P        P        20 20 58.5  0.0
       baz=243,SNR=69
SCM    Sheep Creek Mo    84.09  26    P        P        20 20 59.1 +0.4
SCM                                   pmax     pmax
       comp=Z,136nm,1.1s
SCM                                   MLR      MLR
       comp=Z,2µm,22.0s
SCM    Sheep Creek Mo    84.09  26    P        P        20 20 59.1 +0.4
SCM                                   IAmb     IAmb     20 21 01.2
       comp=Z,136nm,1.1s
SCM                                   IAMs_20  IAMs_20  20 52 34.1
       comp=Z,2µm,22.0s
RND    Reindeer          84.11  24    P        P        20 20 58.4 -0.3
RND                                   pmax     pmax
       comp=Z,113nm,1.0s
RND                                   MLR      MLR
       comp=Z,3µm,21.0s
RND    Reindeer          84.11  24    P        P        20 20 58.4 -0.3
RND                                   IAmb     IAmb     20 21 00.3
       comp=Z,113nm,1.0s
BWN    Browne            84.19  23    P        P        20 20 59.2 +0.2
BWN                                   IAMs_20  IAMs_20  20 55 39.2
       comp=Z,2µm,20.0s
MCK    McKinley          84.21  24    P        P        20 20 58.5 -0.7
       baz=245,SNR=65
QSPA   South Pole Qui    84.26 180    P        P        20 20 59.7 +0.1
       comp=Z,98nm,0.9s,baz=333,slow=1.4,SNR=129
QSPA                                  S        SKSac    20 31 10.4 -6.7
       comp=Z,0.6nm,0.3s,baz=346,slow=6.4,SNR=1.0
QSPA   South Pole Qui    84.26 180    P        P        20 20 59.9 +0.2
EYAK   Cordova Ski Ar    84.30  27    IAMs_20  IAMs_20  20 50 14.6
       comp=Z,1µm,21.0s
NEA2   Nenana            84.53  23    P        P        20 21 00.4 -0.3
       baz=245,SNR=45
DHY    Denali Highway    84.58  25    P        P        20 21 01.6 +0.4
DHY                                   IAmb     IAmb     20 21 03.5
       comp=Z,89nm,1.0s
DHY                                   IAMs_20  IAMs_20  20 53 41.7
       comp=Z,2µm,22.0s
KLU    Klutina           84.58  26    P        P        20 21 01.8 +0.6
KLU                                   IAmb     IAmb     20 21 03.9
       comp=Z,90nm,1.1s
KLU                                   IAMs_20  IAMs_20  20 51 32.9
       comp=Z,2µm,22.0s
I23K   Minto, Yukon-K    84.66  22    P        P        20 21 01.5 +0.2
       baz=244,SNR=16
I23K   Minto, Yukon-K    84.66  22    P        P        20 21 01.5 +0.2
I23K                                  IAMs_20  IAMs_20  20 53 14.7
       comp=Z,2µm,22.0s
M24K   Tolsona, Glenn    84.70  26    P        P        20 21 01.4 -0.3
       baz=247
M24K   Tolsona, Glenn    84.70  26    P        P        20 21 02.2 +0.4
M24K                                  IAmb     IAmb     20 21 04.6
       comp=Z,93nm,0.9s
M24K                                  IAMs_20  IAMs_20  20 52 17.2
       comp=Z,2µm,22.0s
RAGM   Ragged Mountai    84.73  28    P        P        20 21 02.3 +0.4
RAGM                                  IAMs_20  IAMs_20  20 55 03.1
       comp=Z,2µm,21.0s
WRH    Wood River Hil    84.86  23    P        P        20 21 02.0 -0.4
WRH                                   IAmb     IAmb     20 21 10.5
       comp=Z,108nm,1.0s
WRH                                   IAMs_20  IAMs_20  20 55 37.1
       comp=Z,1µm,20.0s
HMT    Hamilton          84.91  28    P        P        20 21 03.6 +0.8
HMT                                   IAmb     IAmb     20 21 31.4
       comp=Z,102nm,1.4s
MDM    Murphy Dome       85.01  23    P        P        20 21 02.3 -0.9
MDM                                   IAmb     IAmb     20 21 04.6
       comp=Z,80nm,1.4s
MDM                                   IAMs_20  IAMs_20  20 56 29.1
       comp=Z,2µm,20.0s
CCB    Clear Creek Bu    85.05  23    P        P        20 21 02.2 -1.1
CCB                                   IAmb     IAmb     20 21 04.6
       comp=Z,113nm,1.0s
CCB                                   IAMs_20  IAMs_20  20 56 53.0
       comp=Z,1µm,20.0s
TCOL   CIGO, UAF Yank    85.12  23    P        P        20 21 02.8 -0.8
       baz=246,SNR=18
TCOL   CIGO, UAF Yank    85.12  23    P        P        20 21 03.0 -0.7
TCOL                                  IAmb     IAmb     20 21 05.0
       comp=Z,86nm,0.8s
TCOL                                  IAMs_20  IAMs_20  20 55 51.9
       comp=Z,2µm,20.0s
COLA   College           85.12  23⇑ eP        P        20 21 03.2 -0.5
COLA                                  pmax     pmax
       comp=Z,97nm,0.9s
COLA   College           85.12  23    P        P        20 21 03.1 -0.5
COLA                                  IAmb     IAmb     20 21 05.0
       comp=Z,79nm,0.8s
COLA   College           85.12  23    IAMs_20  IAMs_20  20 55 40.9
       comp=Z,2µm,20.0s
N25K   Chitina, Valde    85.21  27    P        P        20 21 05.0 +0.6
       baz=249
N25K   Chitina, Valde    85.21  27    P        P        20 21 05.2 +0.9
COLD   Coldfoot          85.28  20    P        P        20 21 05.6 +1.1
       baz=243
COLD   Coldfoot          85.28  20    P        P        20 21 05.7 +1.2
COLD                                  IAmb     IAmb     20 21 07.6
       comp=Z,58nm,1.0s
COLD                                  IAMs_20  IAMs_20  20 54 05.9
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       comp=Z,2µm,22.0s
HDA    Harding Lake      85.29  24    P        P        20 21 04.2 -0.3
       baz=246,SNR=22
HDA    Harding Lake      85.29  24    P        P        20 21 03.3 -1.3
HDA                                   IAMs_20  IAMs_20  20 55 41.4
       comp=Z,2µm,20.0s
PAX    Paxson            85.33  25    P        P        20 21 04.9  0.0
PAX                                   pmax     pmax
       comp=Z,37nm,1.1s
PAX                                   MLR      MLR
       comp=Z,1µm,19.0s
PAX    Paxson            85.33  25    P        P        20 21 04.9  0.0
A21K   Barrow            85.35  16    P        P        20 21 04.8 +0.2
       baz=237
A21K   Barrow            85.35  16    P        P        20 21 05.3 +0.7
A21K                                  IAMs_20  IAMs_20  20 59 18.5
       comp=Z,2µm,20.0s
POKR   Poker Plat Res    85.38  23    P        P        20 21 04.2 -0.8
       baz=246,SNR=9.8
POKR   Poker Plat Res    85.38  23    P        P        20 21 04.3 -0.8
POKR                                  IAmb     IAmb     20 21 06.2
       comp=Z,26nm,0.8s
POKR                                  IAMs_20  IAMs_20  20 55 58.9
       comp=Z,2µm,20.0s
IL31                     85.46  23    P        P        20 21 04.1 -1.2
IL31                                  IAmb     IAmb     20 21 06.3
       comp=Z,73nm,0.8s
ILAR   Eielson Array     85.46  23    P        P        20 21 03.8 -1.6
       comp=Z,60nm,0.7s,baz=253,slow=4.6,SNR=275
ILAR                                  PKKP     PKKPdf   20 39 07.3 +2.7
       comp=Z,1.1nm,0.9s,baz=17,slow=1.8,SNR=6.1
ILAR                                  PKPPKP   P'P'df   20 47 14.2 -0.5
       comp=Z,1.1nm,1.0s,baz=0.9,slow=2.3,SNR=5.7
ILAR                                  LR       LR       20 56 05.5
       comp=Z,1µm,20.5s,baz=263,slow=33
ILAR   Eielson Array     85.46  23    P        P        20 21 03.6 -1.8
ILAR   Eielson Array     85.46  23    P        P        20 21 03.6 -1.8
GLB    Gilahina Butte    85.50  27    P        P        20 21 06.2 +0.4
GLB                                   IAmb     IAmb     20 21 08.3
       comp=Z,53nm,0.9s
CRQM   Cirque            85.57  28    P        P        20 21 06.8 +0.5
CRQM                                  IAmb     IAmb     20 21 09.0
       comp=Z,91nm,1.0s
VRDI   Verde Repeater    85.59  27    P        P        20 21 06.6 +0.2
TGL    Tana Glacier      85.72  28    P        P        20 21 07.8 +0.9
TGL                                   IAmb     IAmb     20 21 09.7
       comp=Z,114nm,1.2s
MCARA  McCarthy VSAT     85.84  27    P        P        20 21 08.5 +1.2
MCARA                                 IAmb     IAmb     20 21 16.2
       comp=Z,87nm,1.4s
RIDG   Independent Ri    85.88  25    P        P        20 21 07.8 +0.2
RIDG                                  IAMs_20  IAMs_20  20 53 06.3
       comp=Z,2µm,22.0s
ISLE   Juniper Island    85.89  28    P        P        20 21 08.2 +0.4
ISLE                                  IAmb     IAmb     20 21 16.5
       comp=Z,91nm,1.3s
BALM   Baldy             86.03  28    P        P        20 21 09.5 +1.0
BALM                                  IAmb     IAmb     20 21 11.9
       comp=Z,58nm,0.9s
BALM                                  IAMs_20  IAMs_20  20 56 27.4
       comp=Z,1µm,21.0s
MENT   Mentasta          86.07  26    P        P        20 21 09.0 +0.5
MENT                                  IAmb     IAmb     20 21 11.1
       comp=Z,28nm,0.8s
MENT                                  IAMs_20  IAMs_20  20 54 18.3
       comp=Z,2µm,22.0s
YAH    Yahtse            86.09  28    P        P        20 21 10.1 +1.1
YAH                                   IAmb     IAmb     20 21 17.9
       comp=Z,94nm,1.4s
BVAR   Borovoye Array    86.16 324    P        P        20 21 09.0 -0.1
       comp=Z,11nm,0.6s,baz=45,slow=15,SNR=22
DOT    Dot Lake          86.18  25    P        P        20 21 08.9 -0.1
BRVK   Borovoye          86.23 324ceP          P        20 21 08.4 -1.1
BRVK                                  pmax     pmax
       comp=Z,22nm,0.9s
BRVK                                  MLR      MLR
       comp=Z,745nm,19.0s
BRVK   Borovoye          86.23 324    P        P        20 21 07.8 -1.6
PRP    Porcupine Dome    86.28  23    P        P        20 21 08.9 -0.7
PRP                                   IAMs_20  IAMs_20  20 53 39.6
       comp=Z,2µm,22.0s
SCRK   Sand Creek        86.32  24    P        P        20 21 09.9  0.0
       baz=249,SNR=27
BARN   Barnard Glacie    86.36  28    P        P        20 21 11.2 +1.0
BARN                                  IAmb     IAmb     20 21 13.2
       comp=Z,71nm,0.8s
BARN                                  IAMs_20  IAMs_20  20 56 36.0
       comp=Z,1µm,20.0s
TABL   Table Mountain    86.40  28    P        P        20 21 11.3 +0.9
CTGM   Chitina Glacie    86.48  28    P        P        20 21 11.7 +1.0
CTGM                                  IAMs_20  IAMs_20  20 56 28.1
       comp=Z,1µm,22.0s
PCA    Pinnacle          86.72  29    P        P        20 21 13.6 +1.8
PCA                                   IAmb     IAmb     20 21 15.2
       comp=Z,40nm,0.8s
FYU    Fort Yukon        86.79  22    P        P        20 21 13.0 +1.1
FYU                                   IAMs_20  IAMs_20  20 54 48.9
       comp=Z,2µm,21.0s
BCAR   Beaver Creek A    86.94  26    P        P        20 21 13.4 +0.6
BCPM   Bancas Point      86.97  29    IAMs_20  IAMs_20  20 58 07.2
       comp=Z,1µm,20.0s
K27K   Chicken           87.13  25    P        P        20 21 14.6 +0.9
K27K                                  IAMs_20  IAMs_20  20 53 58.3
       comp=Z,2µm,22.0s
BMAR   Burnt Mountain    87.35  21    P        P        20 21 13.5 -1.1
EGAK   Eagle             87.75  24    P        P        20 21 16.9 +0.3
EGAK                                  IAmb     IAmb     20 21 19.2
       comp=Z,96nm,1.1s
HYT    Haines Junctio    88.23  28    P        P        20 21 20.3 +1.2
HRA    Herat             88.35 305    P        P        20 21 19.4 -1.0
SKAG   Skagway           88.96  30    P        P        20 21 24.4 +2.1
SKAG                                  IAmb     IAmb     20 21 25.7
       comp=Z,45nm,1.1s
BESE   Bessie Mountai    89.00  31    P        P        20 21 24.0 +1.3
JIS    Juneau Island     89.18  31    P        P        20 21 25.4 +2.0
JIS                                   IAmb     IAmb     20 21 26.6
       comp=Z,66nm,1.4s
JIS                                   IAMs_20  IAMs_20  20 52 32.0
       comp=Z,2µm,22.0s
WHY    Whitehorse        89.44  29    P        P        20 21 26.3 +1.5
WHY                                   IAmb     IAmb     20 21 28.8
       comp=Z,34nm,1.2s
EPYK   Eagle Plains      89.97  23    P        P        20 21 27.6 +0.5
WSAR   Wadi Sarin        90.15 293    P        P        20 21 28.8 -0.1
       comp=Z,11nm,0.9s,baz=127,slow=7.3,SNR=3.1
SYO    Syowa Base        90.66 200⇑ iP        P        20 21 30.0 -0.2
SYO    Syowa Base        90.66 200⇑ iPcP      PcP      20 21 32.4 +1.2
DLBC   Dease Lake        91.47  32    P        P        20 21 34.6 +0.3
       comp=Z,13nm,1.1s,baz=331,slow=7.9,SNR=5.6
DLBC                                  PKKPbc   PKKPbc   20 38 56.4 -0.9
       comp=Z,3.4nm,0.9s,baz=205,slow=6.3,SNR=3.4
DLBC   Dease Lake        91.47  32    P        P        20 21 35.8 +1.6
DLBC                                  IAmb     IAmb     20 21 37.2
       comp=Z,27nm,1.2s
DLBC                                  IAMs_20  IAMs_20  20 53 27.5
       comp=Z,2µm,22.0s
INK    Inuvik            91.61  21    P        P        20 21 34.2 -0.3
       comp=Z,26nm,1.0s,baz=257,slow=5.0,SNR=31
INK                                   PKKP     PKKPdf   20 38 54.1 +0.3
       comp=Z,1.6nm,0.6s,baz=76,slow=5.6,SNR=7.4
INK    Inuvik            91.61  21    P        P        20 21 34.4 -0.1
INK                                   pmax     pmax
       comp=Z,72nm,1.3s
INK                                   MLR      MLR
       comp=Z,3µm,22.0s
INK    Inuvik            91.61  21    P        P        20 21 34.4 -0.1
INK                                   IAmb     IAmb     20 21 36.3
       comp=Z,72nm,1.3s
AB06   Akbulak array     91.93 319    P        P        20 21 34.1 -2.4
AB07   Akbulak array     91.93 319    P        P        20 21 33.7 -2.8
AB31   Akbulak array     91.94 319    P        P        20 21 33.7 -2.8
ABKAR  Akbulak array     91.94 319    P        P        20 21 33.9 -2.6
ABKAR  Akbulak array     91.94 319    P        P        20 21 33.7 -2.8
GYB1   ALIBECK ARRAY     92.08 308    P        P        20 21 36.7 -0.8
GYA2   ALIBECK ARRAY     92.08 308    P        P        20 21 37.4 -0.1
GEYT   Alibeck           92.09 308    P        P        20 21 37.1 -0.5
       comp=Z,7.7nm,0.8s,baz=129,slow=2.1,SNR=17
GEYT                                  LR       LR       21 07 06.1
       comp=Z,406nm,20.3s,baz=55,slow=38
GEYT   Alibeck           92.09 308    P        P        20 21 36.5 -1.1
GYA0   ALIBECK ARRAY     92.09 308    P        P        20 21 36.6 -0.9
GYA0                                  pmax     pmax
       comp=Z,15nm,1.0s
GYA0   ALIBECK ARRAY     92.09 308    P        P        20 21 36.6 -0.9
GYA0B  ALIBECK ARRAY     92.09 308    P        P        20 21 36.2 -1.3
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GYA1   ALIBECK ARRAY     92.09 308    P        P        20 21 36.9 -0.7
GYB4   ALIBECK ARRAY     92.10 308    P        P        20 21 36.2 -1.4
SVE    Sverdlovsk        92.39 327   eP        P        20 21 37.6 -0.8
SVE                                   pmax     pmax
       comp=Z,13nm,1.0s
SVE                                   MLR      MLR
       comp=Z,2µm,25.0s
UOSS   Minazif           92.52 295    P        P        20 21 39.8 +0.1
KBO    Bosley Butte      93.35  48    IAMs_20  IAMs_20  20 53 58.9
       comp=Z,2µm,21.0s
ARU    Arti              93.49 326d iP        P        20 21 41.6 -1.9
ARU                                                     20 25 25.0
ARU                                   S        SKSac    20 32 09.5 -2.4
ARU                                   pmax     pmax
       comp=Z,12nm,0.9s
ARU                                   MLR      MLR
       comp=Z,1µm,22.0s
ARU    Arti              93.49 326    P        P        20 21 42.1 -1.4
KRMB   Red Mountain      93.53  49    IAMs_20  IAMs_20  20 54 27.8
       comp=Z,2µm,21.0s
KHMM   Horse Mountain    93.61  49    P        P        20 21 47.4 +2.7
KHMM                                  IAmb     IAmb     20 21 48.7
       comp=Z,61nm,1.2s
KCPM   Cahto Peak        93.64  51    P        P        20 21 46.9 +2.2
J01E   Myrtle Point      93.64  47    P        P        20 21 44.3 -0.2
       baz=266
I02D   Swisshome         93.77  46    P        P        20 21 44.9 -0.2
       baz=266
K02D   Willamette Mer    93.80  48    P        P        20 21 45.7 +0.3
       baz=266,SNR=6.1
L02E   Cave Junction     93.81  48    P        P        20 21 46.1 +0.8
       baz=266,SNR=7.2
MCCM   Marconi Confer    94.07  52    IAMs_20  IAMs_20  20 55 25.5
       comp=Z,2µm,20.0s
E03A   Lebam             94.14  44    P        P        20 21 49.2 +2.5
E03A                                  IAmb     IAmb     20 21 50.4
       comp=Z,50nm,1.2s
E03A                                  IAMs_20  IAMs_20  20 58 57.5
       comp=Z,1µm,19.0s
GDXM   Geysers           94.18  52    P        P        20 21 49.7 +2.5
GDXM                                  IAmb     IAmb     20 21 51.0
       comp=Z,37nm,1.2s
G03D   McMinnville, O    94.26  45    P        P        20 21 47.0 -0.3
       baz=266
O02D   Mt. Diablo Mer    94.28  50    P        P        20 21 48.3 +0.7
       baz=266,SNR=18
M02C   Callahan          94.31  49    P        P        20 21 48.3 +0.6
       baz=266,SNR=19
HUMO   Hull Mountain     94.31  48    P        P        20 21 49.6 +1.9
HUMO                                  IAMs_20  IAMs_20  20 55 45.4
       comp=Z,2µm,22.0s
N02D   Trinity Center    94.40  49    P        P        20 21 48.9 +0.7
       baz=266,SNR=17
YBH    Yreka Blue Hor    94.44  49    P        P        20 21 49.7 +1.4
       comp=Z,25nm,1.2s,baz=182,slow=2.2,SNR=22
YBH    Yreka Blue Hor    94.44  49    P        P        20 21 50.6 +2.2
YBH                                   MLR      MLR
       comp=Z,2µm,22.0s
YBH    Yreka Blue Hor    94.44  49    P        P        20 21 50.6 +2.2
WDC    Whiskeytown Da    94.50  50    P        P        20 21 50.9 +2.4
WDC                                   pmax     pmax
       comp=Z,61nm,1.4s
WDC                                   MLR      MLR
       comp=Z,2µm,22.0s
WDC    Whiskeytown Da    94.50  50    P        P        20 21 50.9 +2.4
WDC                                   IAmb     IAmb     20 21 52.2
       comp=Z,61nm,1.4s
WDC                                   IAMs_20  IAMs_20  20 56 31.4
       comp=Z,2µm,22.0s
D03D   Eldon             94.53  43    P        P        20 21 49.7 +1.2
       baz=267
D04E   Lakebay           94.72  43    P        P        20 21 50.8 +1.4
       baz=267
L04D   Klamath Falls     94.77  48    P        P        20 21 50.6 +0.6
       baz=267,SNR=7.1
I04A   Tendick Farm,     94.78  47    P        P        20 21 51.3 +1.5
       baz=267
E04D   Cinebar           94.83  44    P        P        20 21 51.1 +1.3
       baz=267
A04D   Lummi Island      94.85  42    P        P        20 21 51.0 +1.1
       baz=267
J04D   Umpqua Nationa    94.97  47    P        P        20 21 51.1 +0.2
       baz=267
H04A   Detroit Lake      95.00  46    P        P        20 21 51.6 +0.9
H04A                                  IAMs_20  IAMs_20  20 56 06.2
       comp=Z,2µm,22.0s
O03E   Paynes Creek      95.04  50    P        P        20 21 52.2 +1.1
       baz=267,SNR=15
M04C   Macdoel           95.09  49    P        P        20 21 52.6 +1.2
       baz=267,SNR=9.7
SAO    San Andreas Ge    95.12  54    IAMs_20  IAMs_20  20 57 33.4
       comp=Z,2µm,20.0s
C36M   Paulatuk          95.14  21    P        P        20 21 51.3 +0.5
       baz=268
C36M   Paulatuk          95.14  21    P        P        20 21 50.5 -0.3
C36M                                  IAmb     IAmb     20 21 52.2
       comp=Z,21nm,1.0s
C36M                                  IAMs_20  IAMs_20  21 02 14.6
       comp=Z,1µm,20.0s
ORV    Oroville          95.23  51    P        P        20 21 52.2 +0.3
ORV                                   MLR      MLR
       comp=Z,2µm,22.0s
ORV    Oroville          95.23  51    P        P        20 21 52.2 +0.3
ORV                                   IAMs_20  IAMs_20  20 55 11.1
       comp=Z,2µm,22.0s
B05A   Bryant            95.23  42    P        P        20 21 52.1 +0.4
       baz=267
D05A   Enumclaw          95.26  43    P        P        20 21 53.4 +1.5
D05A                                  IAmb     IAmb     20 21 56.0
       comp=Z,44nm,1.2s
LON    Longmire          95.36  44    P        P        20 21 53.8 +1.4
LON                                   pmax     pmax
       comp=Z,13nm,1.5s
LON                                   MLR      MLR
       comp=Z,1µm,21.0s
LON    Longmire          95.36  44    P        P        20 21 53.8 +1.4
LON                                   IAMs_20  IAMs_20  20 59 38.7
       comp=Z,1µm,21.0s
F05D   White Salmon      95.56  45    P        P        20 21 54.5 +1.2
       baz=268
I05D   Terrebonne, OR    95.58  46    P        P        20 21 53.8 +0.3
       baz=268
PMPB   Monarch Peak      95.61  54    IAMs_20  IAMs_20  20 57 34.5
       comp=Z,2µm,21.0s
AFDM   Forest Hills D    95.61  52    P        P        20 21 55.2 +1.5
AFDM                                  IAmb     IAmb     20 21 57.0
       comp=Z,56nm,1.3s
J05D   Fort Rock, OR     95.61  47    P        P        20 21 54.0 +0.3
       baz=268,SNR=12
G05D   Wamic, OR         95.64  45    P        P        20 21 53.8 +0.1
       baz=268
K05A   Summer Lake       95.84  48    P        P        20 21 56.5 +1.6
K05A                                  IAmb     IAmb     20 21 58.6
       comp=Z,39nm,1.4s
K05A                                  IAMs_20  IAMs_20  20 57 55.8
       comp=Z,1µm,20.0s
PINE   Pine Mountain     95.85  47    P        P        20 21 56.6 +1.7
PINE                                  IAmb     IAmb     20 21 57.9
       comp=Z,39nm,1.5s
C06D   Leavenworth       96.03  42    P        P        20 21 55.6 +0.3
       baz=268
CMB    Columbia Colle    96.03  52    P        P        20 21 56.1 +0.5
CMB                                   MLR      MLR
       comp=Z,1µm,21.0s
CMB    Columbia Colle    96.03  52    P        P        20 21 56.1 +0.5
CMB                                   IAMs_20  IAMs_20  20 56 45.3
       comp=Z,1µm,21.0s
PAGB   Antelope Grade    96.03  55    P        P        20 21 57.7 +2.0
PAGB                                  IAmb     IAmb     20 22 15.4
       comp=Z,24nm,1.3s
PAGB                                  IAMs_20  IAMs_20  20 58 08.7
       comp=Z,2µm,21.0s
BEKR   Beckworth         96.13  51    P        P        20 21 57.2 +1.0
BEKR                                  IAmb     IAmb     20 21 58.7
       comp=Z,44nm,1.5s
BEKR                                  IAMs_20  IAMs_20  20 57 07.7
       comp=Z,2µm,21.0s
LTY    Liberty           96.16  43    P        P        20 21 56.6 +0.6
LTY                                   IAMs_20  IAMs_20  21 00 05.8
       comp=Z,1µm,20.0s
SMMC   Simmler           96.22  55    P        P        20 21 57.2 +0.7
       baz=268
MOD    Modoc Plateau     96.25  49    P        P        20 21 57.1 +0.4
MOD                                   IAMs_20  IAMs_20  20 57 12.6
       comp=Z,2µm,22.0s
RUBR   Rubicon Trail     96.25  51    IAMs_20  IAMs_20  20 56 57.1
       comp=Z,2µm,21.0s
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PKM	**Mcpherson Peak**	**96.35**	**56**	P	**P**	**20 21 58.3**	**+0.9**
	baz=268						
SNCC	**San Nicolas Is**	**96.52**	**57**	P	**P**	**20 21 57.9**	**0.0**
	baz=268						
BELA	**Belgrano 2**	**96.54**	**180**	P	**P**	**20 21 57.2**	**+0.1**
F07A	**Phinny Hill Vi**	**96.63**	**45**	P	**P**	**20 21 58.4**	**+0.3**
F07A				IAMs_20	IAMs_20	21 02 12.5	
	comp=Z,1µm,19.0s						
VCNR	**Virginia City**	**96.65**	**51**	P	**P**	**20 21 58.9**	**+0.3**
VCNR				IAMs_20	IAMs_20	20 57 09.7	
	comp=Z,2µm,21.0s						
PNTR	**Pine Nut**	**96.69**	**51**	P	**P**	**20 21 59.2**	**+0.4**
PNTR				IAmb	IAmb	20 22 02.4	
	comp=Z,15nm,0.9s						
PNTR				IAMs_20	IAMs_20	20 57 21.6	
	comp=Z,2µm,21.0s						
E07A	**Sunnyside**	**96.70**	**44**	P	**P**	**20 21 58.5**	**+0.1**
E07A				IAmb	IAmb	20 22 01.4	
	comp=Z,24nm,1.1s						
ABPO	**Ambohimpanom**	**96.75**	**250**	P	**P**	**20 21 57.7**	**-1.8**
ABPO				pmax	pmax		
	comp=Z,34nm,1.0s						
ABPO	**Ambohimpanom**	**96.75**	**250**	P	**P**	**20 21 57.7**	**-1.8**
ABPO				IAmb	IAmb	20 22 01.2	
	comp=Z,34nm,1.0s						
WAKR	**Walker**	**96.79**	**52**	P	**P**	**20 21 59.0**	**-0.3**
WAKR				IAMs_20	IAMs_20	20 57 34.5	
	comp=Z,2µm,21.0s						
OPO	**Ambohidratompo**	**96.86**	**251**	P	**P**	**20 22 00.1**	**+0.2**
	comp=Z,44nm,0.9s,baz=107,slow=4.2,SNR=21						
PAHR	**Pah Rah Range**	**96.87**	**51**	P	**P**	**20 21 59.9**	**+0.4**
PAHR				IAMs_20	IAMs_20	20 57 41.4	
	comp=Z,2µm,21.0s						
I07A	**Izee**	**96.89**	**46**	P	**P**	**20 21 60.0**	**+0.5**
PNT	**Penticton**	**96.90**	**41**	P	**P**	**20 21 59.2**	**-0.1**
PNT				pmax	pmax		
	comp=Z,15nm,0.9s						
PNT				MLR	MLR		
	comp=Z,2µm,21.0s						
HAWA	**Hanford**	**96.92**	**44**	P	**P**	**20 22 00.1**	**+0.7**
HAWA				IAmb	IAmb	20 22 02.4	
	comp=Z,19nm,1.1s						
HAWA				IAMs_20	IAMs_20	20 58 08.0	
	comp=Z,1µm,21.0s						
MDPB	**Devils Postpil**	**97.05**	**53**	P	**P**	**20 22 00.6**	**0.0**
MDPB				IAmb	IAmb	20 22 03.1	
	comp=Z,29nm,1.4s						
MDPB				IAMs_20	IAMs_20	21 02 31.3	
	comp=Z,1µm,19.0s						
B08A	**Colville Reser**	**97.08**	**42**	P	**P**	**20 21 59.9**	**-0.3**
B08A				IAmb	IAmb	20 22 03.5	
	comp=Z,32nm,1.5s						
OMMB	**Old Mammoth Mi**	**97.11**	**53**	P	**P**	**20 22 00.6**	**-0.3**
OMMB				IAMs_20	IAMs_20	21 02 41.0	
	comp=Z,1µm,18.0s						
E08A	**Dider Farm, El**	**97.25**	**44**	P	Pdif	20 22 01.7	+0.8
E08A				IAmb	IAmb	20 22 03.8	
	comp=Z,19nm,1.1s						
E08A				IAMs_20	IAMs_20	20 56 54.6	
	comp=Z,1µm,20.0s						
G08A	**Pilot Rock**	**97.30**	**45**	P	**P**	**20 22 01.3**	**0.0**
G08A				IAmb	IAmb	20 22 04.8	
	comp=Z,25nm,1.4s						
G08A				IAMs_20	IAMs_20	20 56 57.3	
	comp=Z,1µm,20.0s						
SCI2	**San Clemente I**	**97.33**	**58**	P	Pdif	20 22 01.8	+0.1
	baz=268						
D08A	**Wollman Farm,**	**97.35**	**43**	P	**P**	**20 22 01.3**	**0.0**
D08A				IAmb	IAmb	20 22 04.3	
	comp=Z,21nm,1.2s						
D08A				IAMs_20	IAMs_20	21 00 50.2	
	comp=Z,1µm,20.0s						
ISA	**Isabella, Lake**	**97.48**	**55**	P	Pdif	20 22 03.0	+0.6
ISA				pmax	pmax		
	comp=Z,13nm,1.2s						
ISA				MLR	MLR		
	comp=Z,1µm,21.0s						
ISA	**Isabella, Lake**	**97.48**	**55**	P	**P**	**20 22 02.3**	**0.0**
	baz=268,SNR=6.3						
ISA	**Isabella, Lake**	**97.48**	**55**	P	Pdif	20 22 03.0	+0.6
ISA				IAMs_20	IAMs_20	20 55 54.9	
	comp=Z,1µm,21.0s						
WVOR	**Wild Horse Val**	**97.50**	**48**	P	Pdif	20 22 02.7	+0.3
WVOR				pmax	pmax		
	comp=Z,23nm,1.4s						
WVOR				MLR	MLR		
	comp=Z,2µm,22.0s						
WVOR	**Wild Horse Val**	**97.50**	**48**	P	Pdif	20 22 02.7	+0.4
WVOR				IAmb	IAmb	20 22 05.0	
	comp=Z,23nm,1.4s						
WVOR				IAMs_20	IAMs_20	20 57 40.7	
	comp=Z,2µm,22.0s						
RYN	**Ryan**	**97.51**	**52**	P	Pdif	20 22 02.8	+0.3
RYN				IAmb	IAmb	20 22 05.2	
	comp=Z,27nm,1.5s						
RYN				IAMs_20	IAMs_20	20 57 45.6	
	comp=Z,2µm,21.0s						
LHV	**Little Huntoon**	**97.52**	**52**	P	Pdif	20 22 04.2	+1.9
LHV				IAmb	IAmb	20 22 05.4	
	comp=Z,21nm,1.3s						
LHV				IAMs_20	IAMs_20	21 00 12.7	
	comp=Z,1µm,19.0s						
PASC	**Pasadena Art C**	**97.67**	**56**	P	**P**	**20 22 01.9**	**-1.2**
PASC				IAmb	IAmb	20 22 06.4	
	comp=Z,13nm,0.7s						
PASC	**Pasadena Art C**	**97.67**	**56**	IAMs_20	IAMs_20	20 54 42.2	
	comp=Z,1µm,21.0s						
NVAR	**Mina Array Bea**	**97.68**	**52**	P	Pdif	20 22 04.5	+1.1
	comp=Z,2.9nm,0.7s,baz=260,slow=6.1,SNR=25						
NVAR				LR	LR	20 58 17.2	
	comp=Z,1µm,21.2s,baz=274,slow=30						
NVAR	**Mina Array Bea**	**97.68**	**52**	P	**P**	**20 22 02.2**	**-1.2**
MWC	**Mount Wilson**	**97.78**	**56**	P	Pdif	20 22 04.9	+1.0
MWC				pmax	pmax		
	comp=Z,54nm,1.3s						
MWC				MLR	MLR		
	comp=Z,1µm,21.0s						
MWC	**Mount Wilson**	**97.78**	**56**	P	Pdif	20 22 04.9	+1.0
MWC				IAmb	IAmb	20 22 07.2	
	comp=Z,54nm,1.3s						
MWC				IAMs_20	IAMs_20	20 58 46.0	
	comp=Z,1µm,21.0s						
C09A	**Chrisman Ranch**	**97.79**	**43**	P	**P**	**20 22 02.8**	**-0.6**
NV11	**Mina Array Sit**	**97.80**	**52**	P	**P**	**20 22 03.6**	**-0.2**
NV11				IAMs_20	IAMs_20	20 58 16.1	
	comp=Z,1µm,20.0s						
CWC	**Cottonwood Cre**	**97.81**	**54**	P	Pdif	20 22 04.9	+1.0
	baz=269						
EDW2	**Edwards Air Fo**	**97.85**	**56**	P	Pdif	20 22 05.0	+0.9
	baz=269,SNR=7.5						
E09A	**Wood Farm, Sta**	**97.88**	**44**	P	**P**	**20 22 03.5**	**-0.3**
E09A				IAmb	IAmb	20 22 07.3	
	comp=Z,45nm,1.3s						
NVL	**N'lazarevskaya**	**97.94**	**194**	*e*P	**P**	**20 22 03.2**	**-0.3**
NVL				*e*S	**SKSac**	**20 32 35.5**	**+0.6**
NVL				pmax	pmax		
	comp=Z,16nm,1.0s						
BFSC	**Mount Baldy Ra**	**98.11**	**56**	P	Pdif	20 22 06.2	+1.0
	baz=269						
LRMC	**Laurel Mtn Rad**	**98.12**	**55**	P	Pdif	20 22 06.3	+1.0
	baz=269,SNR=8.3						
MPMC	**Manual Prospec**	**98.28**	**55**	P	Pdif	20 22 06.9	+0.8
	baz=269						
GRAC	**Grapevine Rang**	**98.40**	**54**	P	Pdif	20 22 07.3	+0.9
	baz=269						
BMO	**Blue Mountains**	**98.47**	**46**	P	Pdif	20 22 06.6	0.0
BMO				pmax	pmax		
	comp=Z,12nm,1.0s						
BMO				MLR	MLR		
	comp=Z,1µm,21.0s						
BMO	**Blue Mountains**	**98.47**	**46**	P	**P**	**20 22 06.5**	**0.0**
F10A	**Beach Ranch, E**	**98.52**	**44**	P	Pdif	20 22 07.0	+0.2
F10A				IAmb	IAmb	20 22 09.3	
	comp=Z,19nm,1.0s						
TPH	**Tonopah**	**98.53**	**52**	P	**P**	**20 22 06.2**	**-0.9**
TPH				pmax	pmax		
	comp=Z,45nm,1.4s						
TPH	**Tonopah**	**98.53**	**52**	P	**P**	**20 22 06.2**	**-0.9**
109C	**Camp Elliot, M**	**98.54**	**58**	P	Pdif	20 22 08.7	+1.7
109C				IAmb	IAmb	20 22 10.8	
	comp=Z,19nm,1.0s						
NEW	**Newport**	**98.56**	**42**	P	Pdif	20 22 07.5	+0.7
	comp=Z,5.9nm,0.8s,baz=314,slow=1.5,SNR=7.8						
NEW				PP	**PP**	**20 26 05.8**	**-2.3**
	comp=Z,1.4nm,0.5s,baz=295,slow=3.5,SNR=4.4						
NEW	**Newport**	**98.56**	**42**	P	**P**	**20 22 05.8**	**-1.0**
NEW				pmax	pmax		
	comp=Z,14nm,1.1s						
NEW	**Newport**	**98.56**	**42**	P	Pdif	20 22 08.3	+1.4
	baz=271,SNR=5.0						
NEW	**Newport**	**98.56**	**42**	P	**P**	**20 22 05.8**	**-1.0**
FURC	**Furnace Creek,**	**98.80**	**54**	P	Pdif	20 22 08.9	+0.9
	baz=270						
GSC	**Goldstone, Bar**	**98.83**	**55**	P	**P**	**20 22 08.1**	**-0.3**
GSC				pmax	pmax		
	comp=Z,19nm,1.5s						
GSC				MLR	MLR		
	comp=Z,900nm,20.0s						
GSC	**Goldstone, Bar**	**98.83**	**55**	P	Pdif	20 22 09.4	+1.0
	baz=269						
GSC	**Goldstone, Bar**	**98.83**	**55**		**P**	**20 22 08.1**	**-0.3**
BAR	**Barrett**	**98.90**	**58**	IAMs_20	IAMs_20	20 56 24.9	
	comp=Z,2µm,22.0s						
PFO	**Pinyon Flats O**	**99.09**	**57**	P	**Pdif**	**20 22 11.4**	**+1.7**
	comp=Z,4.2nm,0.9s,baz=278,slow=2.8,SNR=4.6						
PFO	**Pinyon Flats O**	**99.09**	**57**	⇓*e*P	**Pdif**	**20 22 11.3**	**+1.7**
PFO				pmax	pmax		
	comp=Z,24nm,1.6s						
PFO	**Pinyon Flats O**	**99.09**	**57**	P	**Pdif**	**20 22 10.4**	**+0.7**
	baz=269						
PFO	**Pinyon Flats O**	**99.09**	**57**	P	**Pdif**	**20 22 11.1**	**+1.4**
PFO	**Pinyon Flats O**	**99.09**	**57**	IAMs_20	IAMs_20	20 58 58.0	
	comp=Z,1µm,20.0s						
XPFO	**Pion Flat**	**99.10**	**57**	P	**Pdif**	**20 22 11.1**	**+1.4**
XPFO				IAMs_20	IAMs_20	20 59 13.0	
	comp=Z,2µm,21.0s						
TPFO	**Pinon Flats**	**99.10**	**57**	P	**Pdif**	**20 22 10.5**	**+0.8**
	baz=269						
MONP2	**Monument Peak**	**99.11**	**58**	P	**Pdif**	**20 22 10.9**	**+1.1**
	baz=269						
YKA	**Yellowknife Ar**	**99.20**	**28**	P	**Pdif**	**20 22 08.6**	**-0.6**
	comp=Z,14nm,1.1s,baz=275,slow=4.2,SNR=58						
YKA				PP	**PP**	**20 26 11.7**	**-0.8**
	comp=Z,6.4nm,1.1s,baz=270,slow=7.1,SNR=9.8						
YKA				PKKPbc	**PKKPbc**	**20 38 33.0**	**-3.5**
	comp=Z,3.9nm,0.9s,baz=96,slow=3.2,SNR=20						
YKA				PKKP	**PKKPdf**	**20 38 40.9**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=99,slow=3.4,SNR=4.2						
YKA				PKPPKP	**P'P'df**	**20 46 49.5**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=82,slow=5.3,SNR=3.5						
YKA				LR	LR	21 04 06.6	
	comp=Z,711nm,21.2s,baz=0.0,slow=34						
HEC	**Hector,Ludlow**	**99.21**	**56**	P	**Pdif**	**20 22 11.1**	**+1.0**
	baz=270,SNR=5.7						
TPNV	**Topopah Spring**	**99.29**	**54**	P	**Pdif**	**20 22 10.6**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,11nm,1.1s						
TPNV				MLR	MLR		
	comp=Z,1µm,22.0s						
TPNV	**Topopah Spring**	**99.29**	**54**	P	**Pdif**	**20 22 10.6**	**+0.1**
	baz=270						
TPNV	**Topopah Spring**	**99.29**	**54**	P	**Pdif**	**20 22 10.6**	**+0.1**
TPNV				IAMs_20	IAMs_20	20 58 27.9	
	comp=Z,1µm,22.0s						
IKP	**In-Ko-Pah, Jac**	**99.37**	**58**	P	**Pdif**	**20 22 11.7**	**+0.9**
	baz=269						
BELC	**Belle Mtn. Jos**	**99.48**	**57**	P	**Pdif**	**20 22 12.9**	**+1.5**
	baz=270						
ESJX	**Sierra Juarez**	**99.50**	**59**	IAMs_20	IAMs_20	20 57 39.9	
	comp=Z,2µm,22.0s						
MFID	**Camas Ranch**	**99.56**	**47**	Pdif	**Pdif**	**20 22 12.8**	**+1.3**
MFID				IAMs_20	IAMs_20	21 00 15.1	
	comp=Z,1µm,21.0s						
GMRC	**Granite Mounta**	**99.77**	**56**	P	**Pdif**	**20 22 13.5**	**+0.8**
	baz=270,SNR=6.4						
R11A	**Troy Canyon, C**	**99.82**	**52**	P	**Pdif**	**20 22 13.4**	**+0.6**
	baz=271						
R11A	**Troy Canyon, C**	**99.82**	**52**	Pdif	**Pdif**	**20 22 13.4**	**+0.6**
R11A				IAMs_20	IAMs_20	21 01 28.5	
	comp=Z,1µm,20.0s						
BELG	**Belogornoye**	**99.83**	**322**	LR	LR	21 08 17.1	
	comp=Z,852nm,22.0s,baz=89,slow=36						
BELG	**Belogornoye**	**99.83**	**322**	⇓*e*P	**Pdif**	**20 22 11.1**	**-1.2**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BELG				MLR	MLR		
	comp=Z,208nm,21.0s						
SPX	**San Pedro Mart**	**99.90**	**60**	IAMs_20	IAMs_20	21 00 32.8	
	comp=Z,2µm,21.0s						
UABX	**UABC, Campus M**	**99.94**	**58**	IAMs_20	IAMs_20	20 58 25.3	
	comp=Z,1µm,20.0s						
ELK	**Elko**	**100.05**	**50**	P	**Pdif**	**20 22 14.4**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=241,slow=4.2,SNR=9.0						
ELK	**Elko**	**100.05**	**50**	P	**Pdif**	**20 22 15.7**	**+1.8**
ELK				MLR	MLR		
	comp=Z,1µm,20.0s						
ELK	**Elko**	**100.05**	**50**	Pdif	**Pdif**	**20 22 15.7**	**+1.8**
ELK				IAMs_20	IAMs_20	21 01 37.5	
	comp=Z,1µm,20.0s						
CPBX	**Cerro Prieto**	**100.05**	**58**	IAMs_20	IAMs_20	21 01 18.4	
	comp=Z,1µm,18.0s						
SHPR	**Sheep Range**	**100.17**	**54**	IAMs_20	IAMs_20	21 00 51.2	
	comp=Z,2µm,20.0s						
IRM	**Iron Mountain**	**100.19**	**56**	P	**Pdif**	**20 22 15.2**	**+0.8**
	baz=270,SNR=10.0						
PRN	**Pahroc Range**	**100.25**	**53**	IAMs_20	IAMs_20	21 00 48.1	
	comp=Z,1µm,21.0s						
SFX	**San Felipe**	**100.43**	**60**	IAMs_20	IAMs_20	20 58 11.6	
	comp=Z,1µm,20.0s						
GLA	**Glamis**	**100.46**	**58**	IAMs_20	IAMs_20	21 00 02.1	
	comp=Z,1µm,21.0s						
JTMT	**Jette**	**100.48**	**43**	IAMs_20	IAMs_20	20 58 10.1	
	comp=Z,1µm,20.0s						
HLID	**Hailey**	**100.58**	**47**	P	**Pdif**	**20 22 17.0**	**+0.9**
	baz=272						
HLID	**Hailey**	**100.58**	**47**	IAMs_20	IAMs_20	21 00 46.2	
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**100.76**	**44**	IAMs_20	IAMs_20	21 03 05.6	
	comp=Z,1µm,20.0s						
113A	**Mohawk Valley,**	**101.35**	**58**	IAMs_20	IAMs_20	20 58 34.8	
	comp=Z,1µm,21.0s						
VNA2	**Neumayer--Watz**	**101.55**	**189**	PP	**PP**	**20 26 31.3**	**+1.6**
VNA2	**Neumayer--Watz**	**101.55**	**189**	Pdiff	**Pdif**	**20 22 20.6**	**+0.9**
	baz=126,slow=3.9						
VNA3	**Neumayer Olymp**	**101.58**	**188**	PP	**PP**	**20 26 29.2**	**-0.8**
VNA3	**Neumayer Olymp**	**101.58**	**188**	Pdiff	**Pdif**	**20 22 20.3**	**+0.5**
DUG	**Dugway, Tooele**	**101.92**	**50**	P	**Pdif**	**20 22 23.3**	**+1.2**
	baz=273						
DUG	**Dugway, Tooele**	**101.92**	**50**	IAMs_20	IAMs_20	21 00 42.0	
	comp=Z,1µm,22.0s						
VNA1	**Neumayer--Stat**	**101.93**	**188**	PP	**PP**	**20 26 32.9**	**+0.4**
VNA1	**Neumayer--Stat**	**101.93**	**188**	Pdiff	**Pdif**	**20 22 21.4**	**+0.1**
214A	**Organ Pipe Nat**	**102.17**	**59**	IAMs_20	IAMs_20	20 59 19.5	
	comp=Z,1µm,22.0s						
ALE	**Alert**	**102.27**	**4**	IAMs_20	IAMs_20	21 09 18.9	
	comp=Z,914nm,19.0s						
BOZ	**Bozeman (W)**	**102.45**	**45**	P	**Pdif**	**20 22 25.7**	**+1.4**
	baz=275						
U15A	**North Rim**	**102.48**	**54**	IAMs_20	IAMs_20	21 00 07.4	
	comp=Z,1µm,22.0s						
SRIG	**Santa Rosalia**	**102.70**	**63**	IAMs_20	IAMs_20	21 00 38.2	
	comp=Z,1µm,21.0s						
RES	**Resolute Bay**	**102.84**	**14**	PP	**PP**	**20 26 37.2**	**-2.4**
	comp=Z,2.0nm,1.0s,baz=239,slow=3.4,SNR=4.6						
RES				PKKPbc	**PKKPbc**	**20 38 24.3**	**-1.9**
	comp=Z,2.6nm,0.8s,baz=50,slow=1.2,SNR=9.1						
RES	**Resolute Bay**	**102.84**	**14**	IAMs_20	IAMs_20	21 09 57.6	
	comp=Z,1µm,20.0s						
ZEI	**Tsey**	**103.00**	**312**	*e*P	**Pdif**	**20 22 24.8**	**-2.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TMCR	**Tamitsa**	**103.06**	**335**	*e*P	**Pdif**	**20 22 21.6**	**-4.7**
KLMR	**Klimovskoe**	**103.14**	**331**	*e*P	**Pdif**	**20 22 24.7**	**-2.1**
KLMR				*e*		20 26 38.4	
KLMR				pmax	pmax		
	comp=Z,27nm,1.3s						
KLMR	**Klimovskoe**	**103.14**	**331**	*e*Pdif	**Pdif**	**20 22 24.7**	**-2.1**
KLMR				AMP		20 22 26.8	
	comp=Z,27nm,1.3s						
KLMR				*e*PP	**PP**	**20 26 38.5**	**-3.7**
KLMR				*e*PKKPbc	**PKKPbc**	**20 38 21.8**	**-3.2**
KLMR				LQ	LQ	20 59 28.3	
KLMR				LQ	LQ	20 59 28.3	
KLMR				LR	LR	21 07 37.6	
REDW	**Red Top Meadow**	**103.18**	**47**	IAMs_20	IAMs_20	21 02 13.0	
	comp=Z,1µm,21.0s						
MOOW	**Moose Ponds**	**103.23**	**47**	IAMs_20	IAMs_20	21 00 50.2	
	comp=Z,2µm,22.0s						
FLWY	**Flagg Ranch**	**103.23**	**46**	IAMs_20	IAMs_20	21 01 02.3	
	comp=Z,2µm,22.0s						
SNOW	**Snow King Moun**	**103.25**	**47**	IAMs_20	IAMs_20	21 02 24.7	
	comp=Z,1µm,22.0s						
WUAZ	**Wupatki**	**103.26**	**55**	IAMs_20	IAMs_20	21 02 16.1	
	comp=Z,1µm,21.0s						
LOHW	**Long Hollow**	**103.34**	**47**	IAMs_20	IAMs_20	21 02 39.2	
	comp=Z,1µm,21.0s						
KBZ	**Khabaz**	**103.65**	**313**	PP	**PKiKP**	**20 26 48.1**	**+0.5**
	comp=Z,8.2nm,1.2s,baz=80,slow=6.5,SNR=7.7						
KIV	**Kislovodsk**	**103.78**	**314**	⇑P	**PKiKP**	**20 26 48.7**	**+0.7**
TUC	**Tucson**	**103.88**	**58**	IAMs_20	IAMs_20	21 01 24.7	
	comp=Z,2µm,21.0s						
APA	**Apatity**	**103.89**	**339**	⇓*i*P	**Pdif**	**20 22 41.2**	**+11**
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BW06	**Boulder Array**	**104.18**	**47**	P	**Pdif**	**20 22 33.3**	**+1.1**
	baz=276						
PDAR	**Pinedale Array**	**104.18**	**47**	Pdiff	**Pdif**	**20 22 32.8**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=224,slow=1.8,SNR=13						
PDAR				PKiKP	**PKiKP**	**20 26 47.9**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=222,slow=2.0,SNR=2.5						
PDAR				PKKPbc	**PKKPbc**	**20 38 21.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=102,slow=5.1,SNR=9.6						
PDAR				PKPPKP		20 46 45.6	
	comp=Z,1.4nm,1.1s,baz=76,slow=6.3,SNR=6.1						
PDAR	**Pinedale Array**	**104.18**	**47**	Pdif	**Pdif**	**20 22 32.0**	**-0.2**
W18A	**Petrified Fore**	**104.62**	**55**	IAMs_20	IAMs_20	21 00 27.1	
	comp=Z,945nm,21.0s						
PV17	**East Wray Mesa**	**105.03**	**52**	IAMs_20	IAMs_20	21 11 37.4	
	comp=Z,2µm,21.0s						
PV16	**Nyswonger Mesa**	**105.06**	**52**	IAMs_20	IAMs_20	21 00 34.2	
	comp=Z,1µm,20.0s						
PV03	**Paradox Valley**	**105.11**	**52**	IAMs_20	IAMs_20	21 04 01.8	
	comp=Z,1µm,22.0s						
319A	**Douglas**	**105.19**	**59**	IAMs_20	IAMs_20	21 04 01.7	
	comp=Z,1µm,20.0s						
PV15	**Paradox Valley**	**105.39**	**52**	IAMs_20	IAMs_20	21 04 14.2	
	comp=Z,1µm,20.0s						
O20A	**White River Ci**	**105.42**	**50**	P	**PKiKP**	**20 26 52.1**	**+0.8**
	baz=276						
O20A	**White River Ci**	**105.42**	**50**	IAMs_20	IAMs_20	21 04 48.5	
	comp=Z,1µm,21.0s						
MVCO	**Mesa Verde**	**105.47**	**53**	IAMs_20	IAMs_20	21 00 57.5	
	comp=Z,974nm,20.0s						
ARCES	**ARCESS Array B**	**105.78**	**342**	Pdiff	**Pdif**	**20 22 36.5**	**-2.0**
	comp=Z,2.8nm,0.7s,baz=256,slow=3.0,SNR=11						
ARCES				PKKPbc	**PKKPbc**	**20 38 14.4**	**-3.0**
	comp=Z,1.9nm,0.3s,baz=240,slow=3.4,SNR=48						
ARCES				PKKP	**PKKPdf**	**20 38 28.5**	**+0.5**
	comp=Z,18nm,1.3s,baz=270,slow=1.1,SNR=4.7						
LAO	**LASA Array**	**106.05**	**43**	IAMs_20	IAMs_20	21 07 01.5	
	comp=Z,1µm,20.0s						
121A	**Cookes Peak, D**	**106.40**	**58**	IAMs_20	IAMs_20	21 03 25.5	
	comp=Z,1µm,21.0s						
SMCO	**Snowmass**	**106.49**	**51**	IAMs_20	IAMs_20	21 04 42.0	
	comp=Z,1µm,22.0s						
TULEG	**Thule**	**106.65**	**8**	IAMs_20	IAMs_20	21 07 16.8	
	comp=Z,1µm,21.0s						
S22A	**4UR Ranch, Cre**	**106.75**	**52**	IAMs_20	IAMs_20	21 02 03.1	
	comp=Z,1µm,22.0s						
Y22D	**IRIS PASSCAL I**	**107.01**	**56**	IAMs_20	IAMs_20	21 04 05.4	
	comp=Z,1µm,22.0s						
FFC	**Flin Flon**	**107.06**	**34**	IAMs_20	IAMs_20	21 02 05.1	
	comp=Z,1µm,22.0s						
ANMO	**Albuquerque**	**107.32**	**55**	Pdiff	**Pdif**	**20 22 47.2**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=103,slow=13,SNR=3.8						
ANMO				PKKP	**PKKPab**	**20 38 26.0**	**+0.4**
	comp=Z,8.2nm,1.0s,baz=131,slow=4.5,SNR=12						
ANMO	**Albuquerque**	**107.32**	**55**	P	**Pdif**	**20 22 46.3**	**0.0**
ANMO				MLR	MLR		
	comp=Z,700nm,20.0s						
ANMO	**Albuquerque**	**107.32**	**55**		**Pdif**	**20 22 46.2**	**0.0**
PHWY	**Pilot Hill**	**107.38**	**49**	IAMs_20	IAMs_20	21 03 29.4	
	comp=Z,1µm,22.0s						
ANN	**Anapa**	**107.41**	**315**	*e*P	**Pdif**	**20 22 37.8**	**-8.4**
ANN				pmax	pmax		
	comp=Z,28nm,1.1s						
ANN				MLR	MLR		
	comp=Z,526nm,10.0s						
ANN				MLR	MLR		
	comp=N,678nm,18.0s						
ISCO	**Idaho Springs**	**107.46**	**50**	IAMs_20	IAMs_20	21 04 35.6	
	comp=Z,2µm,21.0s						
SDCO	**Great Sand Dun**	**107.80**	**52**	IAMs_20	IAMs_20	21 03 00.8	
	comp=Z,1µm,22.0s						
Q24A	**Divide**	**107.92**	**51**	IAMs_20	IAMs_20	21 04 19.0	
	comp=Z,1µm,21.0s						
RSSD	**Black Hills**	**107.99**	**46**	IAMs_20	IAMs_20	21 03 55.0	
	comp=Z,1µm,22.0s						
MNTX	**Cornudas Mount**	**108.50**	**59**	P	**PKiKP**	**20 26 57.8**	**+0.8**
	baz=275						
MNTX	**Cornudas Mount**	**108.50**	**59**	IAMs_20	IAMs_20	21 06 10.1	
	comp=Z,1µm,21.0s						
HPIG		**108.57**	**64**	IAMs_20	IAMs_20	21 03 48.6	
	comp=Z,1µm,21.0s						
T25A	**Trinidad**	**108.73**	**53**	IAMs_20	IAMs_20	21 05 32.6	
	comp=Z,1µm,22.0s						
KMBO	**Kilima Mbogo**	**108.90**	**267**	Pdiff	**Pdif**	**20 22 51.6**	**-2.3**
	comp=Z,0.9nm,0.2s,baz=60,slow=19,SNR=2.8						
FINES	**FINESS Array B**	**109.13**	**334**	Pdiff	**Pdif**	**20 22 52.3**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=101,slow=3.9,SNR=5.0						
FINES				PKiKP	**PKiKP**	**20 26 56.4**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=114,slow=4.8,SNR=3.4						
E28A	**Huff**	**109.81**	**42**	IAMs_20	IAMs_20	21 11 14.0	
	comp=Z,1µm,22.0s						
KSCO	**Kaye Shedlock'**	**109.86**	**51**	IAMs_20	IAMs_20	21 07 14.3	
	comp=Z,1µm,20.0s						
TXAR	**Lajitas Array**	**110.17**	**61**	PKiKP	**PKiKP**	**20 27 00.2**	**0.0**
	comp=Z,1.0nm,0.9s,baz=241,slow=1.3,SNR=5.8						
TXAR				PP	**PP**	**20 27 37.1**	**+2.1**
	comp=Z,0.3nm,0.6s,baz=132,slow=1.9,SNR=2.4						
TXAR				PKKPbc	**PKKPbc**	**20 38 01.4**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=108,slow=4.1,SNR=7.2						
TXAR				PKKPab	**PKKPab**	**20 38 14.6**	**+1.7**
	comp=Z,8.5nm,1.0s,baz=114,slow=6.0,SNR=22						
MSTX	**Muleshoe**	**110.45**	**56**	IAMs_20	IAMs_20	21 06 04.4	
	comp=Z,1µm,20.0s						
MNK	**Minsk**	**110.92**	**327**	*i* PP	**PP**	**20 27 34.4**	**-4.9**
MNK				*i* PP	**PP**	**20 27 34.4**	**-4.9**
MNK				*i* PP	**PP**	**20 27 34.4**	**-4.9**
MNK				*i* PPP	PPP	20 29 54.7	
MNK				*i* SKP		20 30 26.3	
MNK				*i* PKS		20 30 33.0	
MNK				*i* SKS	**SKSdf**	**20 34 03.1**	**-3.8**
MNK				*i* SP	**SP**	**20 36 58.6**	**-3.8**
MNK				*i* PS	**PS**	**20 37 06.0**	**-5.2**
MNK				*i* SS	**SS**	**20 43 01.2**	**-3.8**
MNK				*i* SKKS	**SKKSdf**	**20 45 17.3**	**-7.5**
MNK				*i* SSS	SSS	20 47 10.2	
MNK				*i* LQ	LQ	21 05 41.3	
MNK				*i* LR	LR	21 10 02.6	
MNK				*i* LRM	MLR	21 17 35.2	
	comp=N,197nm,17.9s						
MNK				*i* LRM	MLR	21 17 40.3	
	comp=E,55nm,17.9s						
MNK				*i* LRM	MLR	21 17 43.5	
	comp=Z,375nm,17.9s						
BRTR	**Keskin Array B**	**111.06**	**310**	PKiKP	**PKiKP**	**20 27 01.5**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=23,slow=17,SNR=1.9						
BRTR				PP	**PP**	**20 27 39.5**	**-1.6**
	comp=Z,1.7nm,1.0s,baz=94,slow=7.4,SNR=5.1						
BRTR				PKKPbc	**PKKPbc**	**20 38 00.4**	**+0.6**
	comp=Z,3.3nm,1.1s,baz=194,slow=3.7,SNR=8.6						
AMTX	**Amarillo**	**111.22**	**55**	IAMs_20	IAMs_20	21 05 04.8	
	comp=Z,1µm,22.0s						
AKASG	**Malin Array Be**	**111.40**	**323**	PKiKP	**PKiKP**	**20 27 02.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=60,slow=2.4,SNR=2.3						
AKASG				PP	**PP**	**20 27 43.0**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=61,slow=7.0,SNR=15						
AKASG				PKKPbc	**PKKPbc**	**20 37 57.8**	**-1.1**
	comp=Z,2.7nm,0.7s,baz=263,slow=3.5,SNR=12						
AKASG	**Malin Array Be**	**111.40**	**323**		PKKPbc	20 37 57.0	-1.8
SUSD	**Miller**	**111.50**	**44**	IAMs_20	IAMs_20	21 06 48.7	
	comp=Z,2µm,21.0s						
ULM	**Lac du Bonnet**	**111.91**	**38**	PKiKP	**PKiKP**	**20 27 01.4**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=314,slow=6.3,SNR=4.5						
ULM				PP	**PP**	**20 27 43.6**	**-3.0**
	comp=Z,2.3nm,0.9s,baz=269,slow=9.1,SNR=5.0						
ULM				PKKPbc	**PKKPbc**	**20 37 55.3**	**-1.9**
	comp=Z,3.0nm,0.7s,baz=64,slow=2.0,SNR=5.3						
ULM				PKKPab	**PKKPab**	**20 38 04.9**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=105,slow=5.4,SNR=6.1						
K31A	**O'Neill**	**112.06**	**46**	IAMs_20	IAMs_20	21 12 08.8	
	comp=Z,1µm,20.0s						
CBKS	**Cedar Bluff**	**112.12**	**50**	IAMs_20	IAMs_20	21 09 14.9	
	comp=Z,1µm,19.0s						
AGMN	**Agassiz Nation**	**112.52**	**40**	IAMs_20	IAMs_20	21 05 49.3	
	comp=Z,1µm,22.0s						
SORM	**Soroca**	**112.73**	**320**	⇓P	**PKiKP**	**20 27 04.0**	**-0.4**
SORM	**Soroca**	**112.73**	**320**	⇑P	**PKKPbc**	**20 37 53.8**	**-0.5**
SORM	**Soroca**	**112.73**	**320**	⇓PKIKP	**PKiKP**	**20 27 04.0**	**-0.4**

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F33A   5 Mile Ranch,     112.96  42    IAMs_20  IAMs_20  21 08 22.1
       comp=Z,1µm,21.0s
R32A   Long Quarter,     112.98  51    IAMs_20  IAMs_20  21 07 18.8
       comp=Z,2µm,22.0s
U32A   Winter Ranch,     113.14  53    IAMs_20  IAMs_20  21 10 04.3
       comp=Z,1µm,19.0s
ABTX   Abilene, Hawle    113.22  57    IAMs_20  IAMs_20  21 09 22.1
       comp=Z,947nm,20.0s
JCT    Junction City     113.38  59    P        PKiKP    20 27 06.0 -0.3
       baz=278
JCT    Junction City     113.38  59    IAMs_20  IAMs_20  21 05 14.6
       comp=Z,1µm,22.0s
WMOK   Wichita Mounta    113.60  55    P        PKiKP    20 27 06.9 +0.3
       baz=280
WMOK   Wichita Mounta    113.60  55    IAMs_20  IAMs_20  21 06 29.8
       comp=Z,1µm,20.0s
MATP   Matopo            113.71 245    Pdiff    Pdif     20 23 14.9  0.0
       comp=Z,1.9nm,0.8s,baz=122,slow=6.6,SNR=2.9
MATP                                   PKiKP    PKiKP    20 27 08.1 +0.8
       comp=Z,2.9nm,0.6s,baz=139,slow=1.0,SNR=14
MATP                                   PP       PP       20 27 58.9 -1.5
       comp=Z,4.9nm,1.0s,baz=90,slow=3.9,SNR=5.1
CFR    Carcaliu          113.75 317   ⇑P        PKKPbc   20 37 46.5 -4.3
L34A   Svendsen Farm,    113.93  46    IAMs_20  IAMs_20  21 10 00.4
       comp=Z,1µm,21.0s
KS21   Milan North St    114.02  52    IAMs_20  IAMs_20  21 06 09.5
       comp=Z,1µm,20.0s
KSU1   Kansas State U    114.44  50    IAMs_20  IAMs_20  21 16 29.4
       comp=Z,1µm,21.0s
OK029  Liberty Lake      114.48  53    IAMs_20  IAMs_20  21 06 12.8
       comp=Z,2µm,22.0s
VRI    Vrincioaia        114.49 318   ⇓P        PKiKP    20 27 08.5 +0.6
VRI    Vrincioaia        114.49 318   ⇑P        PKKPbc   20 37 49.6 +1.2
VRI    Vrincioaia        114.49 318   ⇓PKIKP    PKiKP    20 27 08.5 +0.6
PLOR   Plostina          114.55 318   ⇓P        PKiKP    20 27 08.3 +0.3
PLOR   Plostina          114.55 318   ⇓P        PKKPbc   20 37 49.0 +0.8
PLOR   Plostina          114.55 318   ⇓PKIKP    PKiKP    20 27 08.3 +0.3
OKCFA  Oklahoma City     114.55  54    IAMs_20  IAMs_20  21 07 26.9
       comp=Z,1µm,22.0s
BIZ    Bicaz             114.56 319   ⇓P        PKPdf    20 27 06.9 -1.1
BIZ    Bicaz             114.56 319   ⇓P        PKKPbc   20 37 49.6 +1.4
OK025  Westminster Rd    114.61  53    IAMs_20  IAMs_20  21 07 05.4
       comp=Z,1µm,22.0s
F36A   Milaca            114.80  42    IAMs_20  IAMs_20  21 15 10.7
       comp=Z,1µm,20.0s
LBTB   Lobatse           114.86 239    PKP      PKPdf    20 27 09.1 -0.3
       comp=Z,3.0nm,0.8s,baz=154,slow=0.6,SNR=3.0
BURAR  Bucovina Array    114.90 320   ⇓P        PKKPbc   20 37 46.8 -0.4
OK031  S. Brethren Rd    114.94  53    IAMs_20  IAMs_20  21 06 20.9
       comp=Z,1µm,19.0s
OK030  Cody Creek RV     114.99  53    IAMs_20  IAMs_20  21 05 56.2
       comp=Z,1µm,20.0s
T35A   Sooner Cattle     115.00  52    IAMs_20  IAMs_20  21 07 30.4
       comp=Z,1µm,22.0s
Z35A   Perchaven, San    115.09  56    IAMs_20  IAMs_20  21 08 38.5
       comp=Z,1µm,20.0s
MLR    Muntele Rosu      115.13 318   ⇓P        PKiKP    20 27 09.2 -0.1
MLR    Muntele Rosu      115.13 318   ⇑P        PKKPbc   20 37 44.9 -1.4
MLR    Muntele Rosu      115.13 318   ⇓PKIKP    PKiKP    20 27 09.2 -0.1
WHTX   Lake Whitney,     115.15  57    IAMs_20  IAMs_20  21 11 56.2
       comp=Z,846nm,20.0s
435B   Jarrell           115.23  59    IAMs_20  IAMs_20  21 11 48.5
       comp=Z,1µm,19.0s
LSZ    Lusaka            115.32 250   i PKIKP   PKPdf    20 27 07.2 -3.3
LSZ                                    MLR      MLR
       comp=Z,2µm,22.0s
LSZ    Lusaka            115.32 250             PKPdf    20 27 07.2 -3.3
LSZ    Lusaka            115.32 250    IAMs_20  IAMs_20  21 10 51.3
       comp=Z,2µm,22.0s
EYMN   Ely               115.40  39    IAMs_20  IAMs_20  21 07 13.3
       comp=Z,2µm,22.0s
KVTX   Kingsville        115.41  62    IAMs_20  IAMs_20  21 12 35.6
       comp=Z,835nm,20.0s
MBAR   Mbarara           115.43 267    IAMs_20  IAMs_20  21 14 09.9
       comp=Z,968nm,20.0s
NB2    NORSAR Subarra    115.44 338    PKKP     PKKPbc   20 37 44.2 -1.4
       comp=Z,5.4nm,1.4s,baz=231,slow=4.4
NOA    NORSAR Array B    115.44 338    PKKPbc   PKKPbc   20 37 45.1 -0.5
       comp=Z,1.8nm,0.9s,baz=48,slow=3.2,SNR=5.2
SPMN   Marine on St.     115.48  42    IAMs_20  IAMs_20  21 12 45.9
       comp=Z,935nm,20.0s
VOIR                     115.74 318   ⇑P        PKiKP    20 27 10.1 -0.3
VOIR                     115.74 318   ⇑P        PKKPbc   20 37 45.6 +1.5
VOIR                     115.74 318   ⇑PKIKP    PKiKP    20 27 10.1 -0.3
TUL1   Leonard           115.78  53    IAMs_20  IAMs_20  21 07 44.2
       comp=Z,1µm,22.0s
SUR    Sutherland        115.92 230    PKP      PKiKP    20 27 12.2 +0.9
       comp=Z,17nm,1.1s,baz=160,slow=7.3,SNR=2.6
ARR    Arges             116.04 318   ⇑P        PKiKP    20 27 12.5 +1.5
ARR    Arges             116.04 318   ⇑P        PKKPbc   20 37 42.9 -0.2
COPA   Copaceanca        116.05 317   ⇑P        PKKPbc   20 37 43.2 +0.4
KOLS   Kolonicke sedl    116.24 322   ePKIKP    PKiKP    20 27 13.5 +2.3
KOLS                                  e                  20 28 18.8
KOLS   Kolonicke sedl    116.24 322   ePKP      PKiKP    20 27 13.5 +2.3
KOLS                                  ePP       PP       20 28 18.8 +1.6
K38A   Parkersburg       116.31  45    IAMs_20  IAMs_20  21 11 57.2
       comp=Z,1µm,20.0s
UZH    Uzhgorod          116.34 322   eP        Pdif     20 23 32.0 +6.2
X37A   Clayton           116.39  54    IAMs_20  IAMs_20  21 08 21.6
       comp=Z,1µm,20.0s
P38A   Dawn              116.62  48    PKPdf    PKPdf    20 27 10.6 -1.6
CRVS   Cervenica-Dubn    116.74 323   ePKIKP    PKiKP    20 27 14.0 +1.8
CRVS   Cervenica-Dubn    116.74 323   ePKP      PKiKP    20 27 14.0 +1.8
U38A   Gravette          116.77  52             PKPdf    20 27 10.9 -1.7
DRGR                     116.79 320   ⇓P        PKKPbc   20 37 38.9 -1.7
GZR    Gura Zlata        117.26 319   ⇑P        PKPdf    20 27 09.3 -4.0
GZR    Gura Zlata        117.26 319   ⇓P        PKKPbc   20 37 38.7  0.0
GZR    Gura Zlata        117.26 319   ⇑PKIKP    PKPdf    20 27 09.3 -4.0
S39A   Bolivar           117.29  50             PKPdf    20 27 12.4 -1.1
W39A   Magazine          117.53  53    P        PKPdf    20 27 13.3 -0.7
       baz=283
HERR   Herculane         117.68 318   ⇓P        PKPdf    20 27 13.3 -0.8
LANS   Liptovska Anna    117.83 324   ePKIKP    PKiKP    20 27 16.3 +2.0
LANS   Liptovska Anna    117.83 324   ePKP      PKiKP    20 27 16.3 +2.0
MIAR   Mount Ida         117.85  54    P        PKPdf    20 27 14.5 -0.2
       baz=283
MIAR   Mount Ida         117.85  54    IAMs_20  IAMs_20  21 08 21.1
       comp=Z,1µm,21.0s
BZS    Buzias            117.93 319   ⇓P        PKPdf    20 27 12.2 -2.3
BZS    Buzias            117.93 319   ⇑P        PKKPbc   20 37 36.9 +0.7
BZS    Buzias            117.93 319   ⇓PKIKP    PKPdf    20 27 12.2 -2.3
R40A   Maddies Statio    117.93  50    IAMs_20  IAMs_20  21 08 18.8
       comp=Z,1µm,19.0s
JFWS   Jewell Farm       117.98  44    P        PKPdf    20 27 14.3 -0.4
       baz=290
JFWS   Jewell Farm       117.98  44    IAMs_20  IAMs_20  21 10 36.3
       comp=Z,1µm,22.0s
U40A   Yellville         117.99  52    P        PKPdf    20 27 14.3 -0.6
       baz=285
U40A   Yellville         117.99  52    PKPdf    PKPdf    20 27 13.7 -1.3
U40A                                   IAMs_20  IAMs_20  21 10 49.6
       comp=Z,1µm,21.0s
PSZ    Piszkesteto       118.10 322    IAMs_20  IAMs_20  21 23 07.4
       comp=Z,1µm,19.0s
MGMO   Mountain Grove    118.24  51    IAMs_20  IAMs_20  21 12 40.0
       comp=Z,1µm,21.0s
N41A   Harden Midland    118.27  47    IAMs_20  IAMs_20  21 12 44.3
       comp=Z,1µm,21.0s
WLAR   White Oak Lake    118.41  55    IAMs_20  IAMs_20  21 13 15.2
       comp=Z,1µm,21.0s
X40A   Basin Creek Fa    118.46  54    IAMs_20  IAMs_20  21 08 38.2
       comp=Z,2µm,22.0s
VYHS   Vyhne             118.49 323   ePKIKP    PKiKP    20 27 19.8 +4.2
VYHS   Vyhne             118.49 323   ePKP      PKiKP    20 27 19.8 +4.2
VYHS                                  e         PKKPbc   20 37 34.4  0.0
I42A   Draeger Farm,     118.55  43    IAMs_20  IAMs_20  21 20 29.1
       comp=Z,1µm,20.0s
WHAR   Wooly Hollow      118.70  53    PKPdf    PKPdf    20 27 15.6 -0.7
WHAR                                   IAMs_20  IAMs_20  21 09 45.5
       comp=Z,1µm,22.0s
W41B   Gary Mavity, V    118.76  53    P        PKPdf    20 27 16.0 -0.4
       baz=284
Z41A   Richland Creek    118.76  55    IAMs_20  IAMs_20  21 11 47.5
       comp=Z,974nm,19.0s
CCM    Cathedral Cave    118.77  50    P        PKPdf    20 27 15.2 -1.1
       baz=287
CCM    Cathedral Cave    118.77  50    IAMs_20  IAMs_20  21 21 39.0
       comp=Z,867nm,21.0s
KRLC   Kraliky           118.95 325   ePKIKP    PKPdf    20 27 16.1 -0.3
KRLC                                  e                  20 27 37.8
KRLC   Kraliky           118.95 325   ePKPDF    PKPdf    20 27 16.1 -0.3
KRLC                                  ex        x        20 27 37.8
KRLC                                  ePKKP     PKKPbc   20 37 32.6 -0.2
DPC    Dobruska-Polom    119.08 326   ePKKP     PKKPbc   20 37 32.6 +0.2
H43A   Windswept, Lux    119.10  42    IAMs_20  IAMs_20  21 16 27.4
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       comp=Z,1µm,21.0s
CMIG   Matias Romero     119.11  74    PKKPab   PKKPab   20 37 32.7 -0.9
       comp=Z,8.5nm,1.1s,baz=70,slow=4.5,SNR=9.9
T42A   Van Buren         119.18  51             PKPdf    20 27 16.5 -0.7
K43A   Burlington        119.38  44    IAMs_20  IAMs_20  21 11 39.2
       comp=Z,1µm,22.0s
LCAR   Lake Charles      119.39  52    PKPdf    PKPdf    20 27 16.8 -0.8
LCAR                                   IAMs_20  IAMs_20  21 11 55.6
       comp=Z,1µm,22.0s
FVM    French Village    119.41  49    IAMs_20  IAMs_20  21 10 12.9
       comp=Z,1µm,22.0s
DIVS   Divibare          119.58 318    PKPdf    PKPdf    20 27 17.5 -0.4
ZST    Bratislava        119.65 323   ePP       PP       20 28 44.0 +3.2
X43A   Marvell           120.01  53    IAMs_20  IAMs_20  21 11 11.3
       comp=Z,1µm,22.0s
143A   Socs Landing,     120.03  55    IAMs_20  IAMs_20  21 11 46.2
       comp=Z,1µm,22.0s
BRG    Berggiesshubel    120.11 327   ePKP      PKPdf    20 27 18.5 -0.1
BRG                                    Amp               20 27 22.4
       comp=Z,17nm,1.4s
BRG                                   ex        x        20 28 13.1
BRG                                    Amp               20 28 15.4
       comp=Z,11nm,1.3s
BRG                                   ex        x        20 28 50.2
BRG                                    Amp               20 28 51.6
       comp=Z,17nm,1.4s
BRG    Berggiesshubel    120.11 327   ePKIKP    PKPdf    20 27 18.4 -0.1
BRG                                   e                  20 28 50.2
BRG                                    pmax     pmax
       comp=Z,17nm,1.4s
BRG                                    pmax     pmax
       comp=Z,17nm,1.5s
BRG    Berggiesshubel    120.11 327   ePKP      PKPdf    20 27 18.5 -0.1
BRG                                    Amp               20 27 22.4
       comp=Z,17nm,1.4s
BRG                                   ex        x        20 28 13.1
BRG                                    Amp               20 28 15.4
       comp=Z,11nm,1.3s
BRG                                   ex        x        20 28 50.2
BRG                                    Amp               20 28 51.6
       comp=Z,17nm,1.4s
G45A   Suttons Bay       120.25  40    IAMs_20  IAMs_20  21 11 20.7
       comp=Z,1µm,20.0s
PRU    Pruhonice         120.25 326    AMS      AMS      21 21 40.0
       comp=Z,2µm,24.4s
PARMO  Parma             120.31  51    IAMs_20  IAMs_20  21 13 45.9
       comp=Z,1µm,19.0s
CLL    Collm             120.38 328   i PKiKP   PKiKP    20 27 19.4 +0.3
CLL                                   e                  20 28 35.0
CLL                                   ePP       PP       20 28 44.0 -1.6
CLL                                   ePKKPbc   PKKPbc   20 37 29.0 +1.5
CLL                                   e                  20 37 39.0
CLL                                   ePS       PS       20 38 36.0 -1.4
CLL                                   e                  20 39 36.0
CLL                                   ePPS      PPS      20 39 54.0
CLL                                   eSS       SS       20 45 12.0 +3.3
CLL                                   eSSS      SSS      20 49 36.0
CLL                                   e(SSSS)            20 53 54.0
CLL                                    Lm       MLR      21 19 00.0
       comp=N,1µm,21.0s
CLL                                    Lm       MLR      21 19 00.0
       comp=E,1µm,21.3s
CLL    Collm             120.38 328   i PKIKP   PKiKP    20 27 19.4 +0.3
CLL                                   e                  20 28 44.0
S44A   Carbondale        120.38  49    IAMs_20  IAMs_20  21 10 07.6
       comp=Z,1µm,20.0s
SIUC   Southern Illin    120.41  49    IAMs_20  IAMs_20  21 22 30.8
       comp=Z,1µm,21.0s
PENMO  Penman            120.47  51    IAMs_20  IAMs_20  21 17 25.1
       comp=Z,1µm,20.0s
HENM   Henderson Moun    120.51  51    IAMs_20  IAMs_20  21 13 49.2
       comp=Z,1µm,20.0s
CONA   Conrad Observa    120.52 324   eP        PKPdf    20 27 18.7 -0.8
       comp=Z,1.2nm,0.5s
E46A   Sault Ste Mari    120.52  38    PKPdf    PKPdf    20 27 18.1 -1.4
PDG    Podgorica         120.72 317    IAMs_20  IAMs_20  21 23 01.5
       comp=Z,1µm,20.0s
HICK   Hickman           120.75  51    IAMs_20  IAMs_20  21 13 54.5
       comp=Z,1µm,22.0s
HALT   Halls             120.85  51    IAMs_20  IAMs_20  21 14 45.2
       comp=Z,956nm,21.0s
344A   Westbrook Farm    120.88  57    PKPdf    PKPdf    20 27 18.9 -1.6
T45A   Paducah           121.05  50    IAMs_20  IAMs_20  21 15 52.4
       comp=Z,1µm,20.0s
OXF    Oxford            121.19  53    P        PKPdf    20 27 20.7 -0.4
       baz=286
KHC    Kasperske Hory    121.23 326 ⇓ iPKIKP    PKiKP    20 27 23.9 +3.0
KHC                                    pmax     pmax
       comp=Z,22nm,2.5s
KHC    Kasperske Hory    121.23 326   ePKPDF    PKPdf    20 27 20.6 -0.2
Y45A   Yeager Farm, C    121.25  54    IAMs_20  IAMs_20  21 11 14.2
       comp=Z,1µm,21.0s
GEC2   GERESS Array S    121.31 325             PKPdf    20 27 20.2 -0.8
GERES  GERESS Array B    121.31 325    PKhKP    PKPdf    20 27 18.4 -2.6
       comp=Z,1.7nm,0.6s,baz=72,slow=1.6,SNR=12
GERES                                  PKP      PKiKP    20 27 21.6 +0.4
       comp=Z,1.7nm,0.6s,baz=60,slow=1.6,SNR=10
GERES                                  SKS      SKSdf    20 34 20.7 -6.6
       comp=Z,0.1nm,0.4s,baz=66,slow=6.4,SNR=4.1
GERES                                  PKKPbc   PKKPab   20 37 22.9 -0.5
       comp=Z,1.5nm,0.8s,baz=226,slow=3.8,SNR=8.6
GERES  GERESS Array B    121.31 325    PKPdf    PKPdf    20 27 19.7 -1.4
USIN   University of     121.49  49    IAMs_20  IAMs_20  21 14 11.8
       comp=Z,1µm,20.0s
SOKA   Soboth            121.61 323   eP        PKPdf    20 27 21.5 -0.2
CCIG   Comitan           121.79  74    IAMs_20  IAMs_20  21 10 26.8
       comp=Z,833nm,21.0s
N47A   Urbana            121.89  45    IAMs_20  IAMs_20  21 22 01.7
       comp=Z,1µm,20.0s
146A   Union             121.97  55    IAMs_20  IAMs_20  21 14 48.3
       comp=Z,1µm,20.0s
OBKA   Obir              121.98 323   eP        PKKPbc   20 37 22.2 +0.8
RTAL   Retalhuleu        122.30  76    IAMs_20  IAMs_20  21 11 45.6
       comp=Z,1µm,21.0s
Z47A   Carrollton        122.62  54    IAMs_20  IAMs_20  21 17 36.4
       comp=Z,994nm,20.0s
MATQ   Matagami          122.64  32    P        PKPdf    20 27 23.3 -0.1
       baz=305
PLCA   Paso Flores       122.71 147    PKP      PKiKP    20 27 25.5 +1.3
       comp=Z,11nm,0.7s,baz=238,slow=2.3,SNR=51
PLCA   Paso Flores       122.71 147   eP        PKiKP    20 27 25.9 +1.7
N49A   Columbus Grove    122.92  44             PKPdf    20 27 23.7 -0.6
X48A   Hartselle         123.07  52    IAMs_20  IAMs_20  21 14 04.2
       comp=Z,1µm,21.0s
O49A   Covington         123.11  45    IAMs_20  IAMs_20  21 13 52.1
       comp=Z,1µm,20.0s
STAL   STALIGIAL         123.21 323             PKPdf    20 27 24.2 -0.5
LC01   Cunco             123.24 145    PKPdf    PKiKP    20 27 26.2 +1.0
WTTA   Wattenberg        123.32 325   eP        PKiKP    20 27 25.5 +0.2
       comp=Z,4.6nm,0.6s
LSQQ   Lebel-sur-Quev    123.39  33    P        PKPdf    20 27 24.3 -0.6
       baz=305
U49A   Red Boiling Sp    123.39  50    IAMs_20  IAMs_20  21 16 36.4
       comp=Z,1µm,22.0s
LRAL   Lakeview Retre    123.53  54    P        PKPdf    20 27 24.8 -0.9
       baz=287
LRAL   Lakeview Retre    123.53  54    IAMs_20  IAMs_20  21 18 15.5
       comp=Z,1µm,21.0s
MOTA   Moosalm           123.58 325   eP        PKPdf    20 27 25.1 -0.5
       comp=Z,5.2nm,0.6s
SWET   Sewanee           123.70  51    IAMs_20  IAMs_20  21 19 59.8
       comp=Z,894nm,20.0s
I51A   Listowel          123.77  40    P        PKPdf    20 27 25.4 -0.4
       baz=298
TSUM   Tsumeb            123.84 242    PKP      PKiKP    20 27 28.3 +1.3
       comp=Z,21nm,1.2s,baz=183,slow=1.7,SNR=10
TSUM                                   PP       PP       20 29 11.4 +1.0
       comp=Z,2.8nm,0.8s,baz=92,slow=10.0,SNR=3.7
PETF   Flores            123.92  74    IAMs_20  IAMs_20  21 13 12.1
       comp=Z,1µm,20.0s
T50A   Nancy             123.93  49    IAMs_20  IAMs_20  21 19 41.3
       comp=Z,951nm,20.0s
FETA   Feichten          123.97 325   eP        PKiKP    20 27 26.9 +0.4
       comp=Z,2.6nm,0.6s
FPAL   Fort Paine        124.17  52             PKPpre   20 27 14.7
W50A   Signal Mountai    124.19  51    IAMs_20  IAMs_20  21 18 12.6
       comp=Z,1µm,22.0s
Q51A   Peebles           124.27  46             PKPdf    20 27 25.7 -1.2
250A   Grady             124.42  55    IAMs_20  IAMs_20  21 16 13.2
       comp=Z,1µm,22.0s
INTR   Introdacqua       124.51 318    IAMs_20  IAMs_20  21 30 12.5
       comp=Z,736nm,21.0s
ALGO   Algonquin Park    124.51  36    P        PKPdf    20 27 26.6 -0.5
       baz=302
MTO3   Montecristo       124.57  77    IAMs_20  IAMs_20  21 14 03.6
       comp=Z,898nm,20.0s
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ESQI   Esquipulas        124.58  76    IAMs_20  IAMs_20  21 14 06.8
       comp=Z,1µm,20.0s
NRCA   Norcia            124.64 319    IAMs_20  IAMs_20  21 29 37.0
       comp=Z,1µm,20.0s
CPCT   Cooper Cave       124.72  50             PKPdf    20 27 27.1 -0.8
CPCT                                   IAMs_20  IAMs_20  21 16 19.4
       comp=Z,1µm,19.0s
V51A   Loudon            124.72  50    IAMs_20  IAMs_20  21 18 26.6
       comp=Z,1µm,19.0s
SNET   Serv Nac Est T    124.72  77    IAMs_20  IAMs_20  21 14 29.9
       comp=Z,1µm,20.0s
G54A   Lake Saint Pet    124.78  37    P        PKPdf    20 27 26.8 -0.9
       baz=302
MURB   Monte Urbino      124.82 320    IAMs_20  IAMs_20  21 06 41.5
       comp=Z,808nm,19.0s
P52A   Corning           124.88  45    P        PKPdf    20 27 27.8 -0.3
       baz=295
Z51A   Franklin          124.90  53             PKPdf    20 27 27.1 -1.2
H53A   Bobcaygeon        124.91  38    P        PKPdf    20 27 27.3 -0.7
       baz=301
TZTN   Tazewell          125.06  49    P        PKPdf    20 27 27.0 -1.5
       baz=292
TZTN   Tazewell          125.06  49    IAMs_20  IAMs_20  21 13 04.5
       comp=Z,1µm,22.0s
TEIG   Tepich            125.08  69    IAMs_20  IAMs_20  21 15 45.8
       comp=Z,1µm,20.0s
BI02   San Fabin de      125.09 143    PKPdf    PKiKP    20 27 29.1  0.0
M53A   WI Miller and     125.09  42    P        PKPdf    20 27 28.0 -0.4
       baz=297
M53A   WI Miller and     125.09  42    IAMs_20  IAMs_20  21 18 57.2
       comp=Z,1µm,20.0s
TKL    Tuckaleechee C    125.21  50    PKIKP    PKPpre   20 27 17.8
TKL                                    MLR      MLR
       comp=Z,1µm,20.0s
TKL    Tuckaleechee C    125.21  50             PKPpre   20 27 17.8
ERPA   Erie              125.23  41    P        PKPdf    20 27 28.6  0.0
       baz=298
O53A   New Philadelph    125.26  44    P        PKPdf    20 27 28.5 -0.3
       baz=296
V52A   Sevierville       125.28  50             PKPpre   20 27 17.5
V52A                                   IAMs_20  IAMs_20  21 19 47.4
       comp=Z,1µm,20.0s
W52A   Murphy            125.29  51             PKPdf    20 27 24.4 -4.7
W52A                                   IAMs_20  IAMs_20  21 21 00.8
       comp=Z,825nm,20.0s
152A   Waverly Hall      125.47  54             PKPdf    20 27 28.4 -1.0
152A                                   IAMs_20  IAMs_20  21 18 07.8
       comp=Z,1µm,20.0s
Y52A   Lilburn           125.61  52    PKPdf    PKPdf    20 27 29.4 -0.3
Y52A                                   IAMs_20  IAMs_20  21 13 35.2
       comp=Z,1µm,22.0s
Q53A   Leroy             125.63  45    P        PKPdf    20 27 29.1 -0.5
       baz=295
352A   Blakely           125.66  55    IAMs_20  IAMs_20  21 14 18.0
       comp=Z,1µm,21.0s
M54A   Oil Creek Stat    125.73  42    P        PKPdf    20 27 29.2 -0.4
       baz=298
M54A   Oil Creek Stat    125.73  42             PKPdf    20 27 29.4 -0.2
M54A                                   IAMs_20  IAMs_20  21 19 53.1
       comp=Z,1µm,20.0s
N54A   Moraine State     125.77  42    P        PKPdf    20 27 29.3 -0.4
       baz=298
D56A   ZEC Mazanza, M    125.78  34    P        PKPdf    20 27 29.0 -0.5
       baz=306
O54A   Avella            125.86  44             PKiKP    20 27 30.8 +0.5
E56A   St. Veronique     125.92  34    P        PKPdf    20 27 29.5 -0.3
       baz=306
V53A   Saluda            125.94  50    IAMs_20  IAMs_20  21 20 22.7
       comp=Z,1µm,21.0s
GOGA   Godfrey           126.22  52    P        PKPdf    20 27 30.7 -0.1
       baz=290
S54A   Dingess, Beckl    126.22  47    P        PKPdf    20 27 30.4 -0.3
       baz=294
R54A   Victor            126.30  46    P        PKPdf    20 27 30.7 -0.2
       baz=295
BO02   Sierra Bellavi    126.64 142    PKPdf    PKiKP    20 27 32.0 -0.2
J56A   Wolcott           126.65  39    P        PKPdf    20 27 31.5 +0.2
       baz=302
K56A   Middlesex         126.66  39    P        PKPdf    20 27 31.2 -0.2
       baz=301
M56A   Emporium          126.72  41    P        PKPdf    20 27 31.8 +0.2
       baz=300
TIGA   Tifton            126.76  55    P        PKPdf    20 27 31.6 -0.3
       baz=288
TIGA   Tifton            126.76  55    IAMs_20  IAMs_20  21 28 01.1
       comp=Z,1µm,21.0s
D58A   Chemin du LacG    126.77  33    P        PKPdf    20 27 31.4 -0.1
       baz=308
154A   Montrose          126.77  53    IAMs_20  IAMs_20  21 19 45.3
       comp=Z,1µm,20.0s
G57A   Newington         126.78  36    P        PKPdf    20 27 31.1 -0.4
       baz=305
L56A   Greenwood         126.80  40    P        PKPdf    20 27 31.5 -0.3
       baz=301
R55A   Marlinton         126.88  46    P        PKPdf    20 27 32.0  0.0
       baz=296
R55A   Marlinton         126.88  46             PKPdf    20 27 32.0  0.0
R55A                                   IAMs_20  IAMs_20  21 24 01.9
       comp=Z,1µm,19.0s
HODGE  Hodges            126.88  51             PKiKP    20 27 32.4 -0.2
HODGE                                  IAMs_20  IAMs_20  21 20 27.0
       comp=Z,889nm,20.0s
N56A   West Decatur      126.92  42    P        PKPdf    20 27 31.6 -0.4
       baz=299
E58A   La Victoria       127.00  34    P        PKPdf    20 27 31.6 -0.3
       baz=308
PAULI  Pauline           127.01  50    IAMs_20  IAMs_20  21 21 19.2
       comp=Z,1µm,20.0s
I57A   Carthage          127.03  37    P        PKPdf    20 27 31.7 -0.4
       baz=304
O56A   Blue Knob Stat    127.05  43    P        PKPdf    20 27 32.2 -0.1
       baz=298
O56A   Blue Knob Stat    127.05  43    IAMs_20  IAMs_20  21 24 08.2
       comp=Z,1µm,19.0s
BLA    Blacksburg        127.11  47    P        PKPdf    20 27 32.1 -0.4
       baz=295
J57A   Williamstown      127.11  38    P        PKPdf    20 27 32.0 -0.1
       baz=303
K57A   Scipio Center     127.15  39    P        PKPdf    20 27 32.4  0.0
       baz=302
Q56A   Snyder Ridge,     127.20  44    IAMs_20  IAMs_20  21 24 45.2
       comp=Z,1µm,21.0s
P56A   Dayton Farm, R    127.22  44    P        PKPdf    20 27 32.1 -0.5
       baz=298
KMSC   Kings Mountain    127.26  50    P        PKPdf    20 27 32.3 -0.4
       baz=292
KMSC   Kings Mountain    127.26  50             PKiKP    20 27 33.5 +0.2
KMSC                                   IAMs_20  IAMs_20  21 20 26.6
       comp=Z,1µm,21.0s
LONY   Lake Ozonia       127.29  36    P        PKPdf    20 27 32.4 -0.2
       baz=305
G58A   Ormstown          127.29  35    P        PKPdf    20 27 32.2 -0.2
       baz=306
L57A   Andrews Acres     127.33  40    P        PKPdf    20 27 32.8 +0.1
       baz=301
R56A   Bull Pasture M    127.33  45    P        PKPdf    20 27 32.3 -0.6
       baz=296
SSPA   Standing Stone    127.33  42    IAMs_20  IAMs_20  21 21 40.4
       comp=Z,1µm,20.0s
MT02   Curacav           127.41 140             PKiKP    20 27 34.9 +1.2
T56A   Rocky Mt          127.47  47    P        PKPdf    20 27 32.6 -0.6
       baz=295
M57A   Sunshine Farm,    127.48  41    P        PKPdf    20 27 32.7 -0.3
       baz=300
N57A   Milroy            127.50  42    P        PKPdf    20 27 32.8 -0.2
       baz=300
255A   Hazlehurst        127.50  54    IAMs_20  IAMs_20  21 18 28.7
       comp=Z,1µm,20.0s
S56A   Natural Bridge    127.53  46    P        PKPdf    20 27 32.9 -0.3
       baz=296
J58A   Remsen            127.58  38    P        PKPdf    20 27 33.0 -0.1
       baz=304
J58A   Remsen            127.58  38             PKiKP    20 27 33.6  0.0
I58A   Old Forge         127.58  37    P        PKPdf    20 27 33.0 -0.1
       baz=304
F59A   Saint Guilaume    127.58  34    P        PKPdf    20 27 33.0  0.0
       baz=308
H58A   Gabriels          127.64  36    P        PKPdf    20 27 33.0 -0.2
       baz=305
ROC1   El Roble          127.67 140   i P       PKPdf    20 27 33.8 -0.2
K58A   Earlville         127.68  39    P        PKPdf    20 27 33.0 -0.3
       baz=303
O57A   Amberson          127.71  42    P        PKPdf    20 27 33.2 -0.3
       baz=299
Q57A   Strasburg         127.74  44    P        PKPdf    20 27 33.5 -0.1
       baz=298
BINY   Binghamton        127.77  39    P        PKPdf    20 27 33.1 -0.5
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	baz=302						
PEL	Peldehue	127.78	140	PKIKP	PKiKP	20 27 35.6	+1.1
PEL	Peldehue	127.78	140	PKPdf	PKiKP	20 27 35.6	+1.1
PEL	Peldehue	127.78	140	*i* P	PKPdf	20 27 33.9	0.0
G59A	Clarenceville	127.83	35	P	PKPdf	20 27 33.3	-0.2
	baz=307						
W56A	Indian Trail	127.83	49	P	PKPdf	20 27 33.5	-0.3
	baz=293						
NCB	Newcomb	127.87	37	PKPdf	PKPdf	20 27 32.5	-1.1
M58A	Price's Panora	127.90	40	P	PKPdf	20 27 33.1	-0.7
	baz=301						
D60A	Saint Jean D'O	127.92	32	P	PKPdf	20 27 33.4	-0.2
	baz=310						
S57A	Dark Hollow, R	127.93	46	P	PKPdf	20 27 33.5	-0.4
	baz=296						
S57A	Dark Hollow, R	127.93	46	IAMs_20	IAMs_20	21 19 03.9	
	comp=Z,1µm,20.0s						
L58A	Harry Jones Me	127.94	39	P	PKPdf	20 27 33.5	-0.4
	baz=302						
F60A	Warwick	127.97	33	P	PKPdf	20 27 33.6	-0.1
	baz=309						
J59A	Piesco	127.99	37	P	PKPdf	20 27 33.7	-0.2
	baz=304						
J59A	Piesco	127.99	37		PKPdf	20 27 34.0	+0.1
J59A				IAMs_20	IAMs_20	21 18 22.2	
	comp=Z,1µm,20.0s						
E60A	Ste Agathe de	127.99	33	P	PKPdf	20 27 33.1	-0.7
	baz=309						
R57A	Stanardsville	128.00	45	P	PKPdf	20 27 34.0	-0.1
	baz=297						
N58A	Sunbury	128.00	41	P	PKPdf	20 27 34.2	+0.2
	baz=301						
BIRD	Birdtown, Kers	128.11	50	IAMs_20	IAMs_20	21 25 04.2	
	comp=Z,892nm,20.0s						
D61A	St Aubert, Com	128.12	31	P	PKPdf	20 27 33.8	-0.2
	baz=311						
V57A	Coltrane Farms	128.13	48	P	PKPdf	20 27 34.4	0.0
	baz=294						
O58A	Lewisberry	128.22	42	P	PKPdf	20 27 34.4	0.0
	baz=300						
U57A	Blanch	128.23	47	P	PKiKP	20 27 34.9	-0.3
	baz=295						
656A	Willston	128.25	57	IAMs_20	IAMs_20	21 28 07.0	
	comp=Z,866nm,20.0s						
456A	Hilliard	128.26	55	IAMs_20	IAMs_20	21 17 03.9	
	comp=Z,1µm,22.0s						
W57A	Gilead	128.26	49	P	PKPdf	20 27 34.5	-0.1
	baz=294						
W57A	Gilead	128.26	49	IAMs_20	IAMs_20	21 21 37.2	
	comp=Z,1µm,20.0s						
P58A	Pank, Wackersv	128.28	43	P	PKPdf	20 27 34.0	-0.6
	baz=299						
Q58A	Fox Den Farm,	128.28	44	P	PKPdf	20 27 34.1	-0.5
	baz=298						
PAGS	Pennsylvania G	128.31	42	IAMs_20	IAMs_20	21 26 44.2	
	comp=Z,1µm,19.0s						
R58A	Rapidan	128.36	45	P	PKPdf	20 27 34.1	-0.6
	baz=298						
L59A	Walton	128.37	39	P	PKPdf	20 27 34.0	-0.7
	baz=303						
E61A	Lac Etchemin	128.46	32	P	PKPdf	20 27 34.2	-0.5
	baz=310						
M59A	Waymart	128.47	40	P	PKPdf	20 27 33.9	-1.0
	baz=302						
F61A	St Evariste	128.49	33	P	PKPdf	20 27 34.4	-0.4
	baz=310						
I60A	Shoreham	128.49	36	P	PKPdf	20 27 34.6	-0.2
	baz=306						
N59A	State Game Lan	128.58	41	P	PKPdf	20 27 34.3	-0.9
	baz=302						
T58A	Grand View Acr	128.59	46	P	PKPdf	20 27 35.0	-0.2
	baz=296						
O59A	Robesonia	128.62	41	P	PKPdf	20 27 34.9	-0.3
	baz=301						
G61A	St-Isidore-de-	128.63	34	P	PKPdf	20 27 34.7	-0.4
	baz=309						
S58A	Poland Farm, P	128.64	45	P	PKPdf	20 27 34.9	-0.4
	baz=297						
V58A	Windy Hill, Pi	128.66	48	P	PKPdf	20 27 34.8	-0.6
	baz=295						
CO02	Combarbal	128.81	138		PKiKP	20 27 37.5	+0.8
U58A	Oxford	128.82	47	P	PKPdf	20 27 34.8	-0.9
	baz=296						
CBN	Corbin Frederi	128.84	44	IAMs_20	IAMs_20	21 18 16.8	
	comp=Z,1µm,21.0s						
H61A	Lyndonville	128.87	35	P	PKPdf	20 27 35.1	-0.4
	baz=308						
AAGR	Agrelo	128.98	142	*i* P	PKPdf	20 27 36.4	+0.1
L60A	Shokan	128.99	39	P	PKPdf	20 27 35.4	-0.5
	baz=304						
X58A	Rowland	129.00	49	P	PKPdf	20 27 36.0	0.0
	baz=294						
X58A	Rowland	129.00	49	IAMs_20	IAMs_20	21 23 04.6	
	comp=Z,1µm,21.0s						
Y58A	Scranton	129.00	50	IAMs_20	IAMs_20	21 22 36.9	
	comp=Z,895nm,19.0s						
JTS	Las Juntas de	129.02	81	PKIKP	PKiKP	20 27 38.1	+0.8
JTS				MLR	MLR		
	comp=Z,1µm,21.0s						
JTS	Las Juntas de	129.02	81	PKPdf	PKiKP	20 27 38.1	+0.8
JTS	Las Juntas de	129.02	81	IAMs_20	IAMs_20	21 12 53.9	
	comp=Z,1µm,21.0s						
I61A	Oroboro, Fairl	129.07	35	P	PKPdf	20 27 35.7	-0.2
	baz=307						
O60A	Telford	129.13	41	P	PKPdf	20 27 35.9	-0.2
	baz=302						
K61A	Williamstown	129.19	37	P	PKPdf	20 27 35.8	-0.4
	baz=305						
WUPA	West Chester U	129.19	42	IAMs_20	IAMs_20	21 19 49.7	
	comp=Z,813nm,20.0s						
AUSP	Uspallata	129.20	140	*i* P	PKPdf	20 27 36.5	-0.4
P60A	Greenville	129.24	42	P	PKPdf	20 27 36.3	0.0
	baz=301						
CO03	El Pedregal	129.25	138	PKPdf	PKiKP	20 27 37.3	-0.3
D63A	Stockholm	129.28	30	P	PKPdf	20 27 36.1	-0.1
	baz=314						
Q60A	Greensboro	129.51	43	IAMs_20	IAMs_20	21 23 08.1	
	comp=Z,1µm,20.0s						
DWPF	Disney Wildern	129.55	58	IAMs_20	IAMs_20	21 16 48.5	
	comp=Z,874nm,22.0s						
Y59A	Loris	129.57	50	IAMs_20	IAMs_20	21 23 25.0	
	comp=Z,955nm,21.0s						
GO04	Tololo Observa	129.59	137		PKiKP	20 27 38.7	+0.3
GO04	Tololo Observa	129.59	137	*i* P	PKPdf	20 27 36.4	-1.3
M61A	Granite Spring	129.65	39	P	PKPdf	20 27 36.9	-0.1
	baz=304						
L61B	Northampton	129.67	37	P	PKPdf	20 27 36.6	-0.5
	baz=306						
PAL	Palisades	129.72	40	P	PKPdf	20 27 37.1	-0.1
	baz=303						
CNNC	Cliffs of the	129.80	48	IAMs_20	IAMs_20	21 17 08.6	
	comp=Z,1µm,21.0s						
K62A	Royalston	129.81	37	P	PKPdf	20 27 36.7	-0.7
	baz=306						
E64A	Bridgewater	129.84	30	P	PKPdf	20 27 36.9	-0.4
	baz=313						
PKME	Peaks-Kenny Pk	129.86	32	P	PKPdf	20 27 36.7	-0.6
	baz=311						
F64A	Sherman	129.95	31	P	PKiKP	20 27 38.2	-0.2
	baz=312						
RTCV	Cerro Valdivia	129.98	141	*i* P	PKPdf	20 27 37.5	-0.6
ZON	Zonda	130.10	140	PKIKP	PKiKP	20 27 39.6	+0.4
ZON	Zonda	130.10	140	PKPdf	PKiKP	20 27 39.6	+0.4
ZON	Zonda	130.10	140	*i* P	PKPdf	20 27 38.4	0.0
S61A	Accomac	130.27	44	P	PKPdf	20 27 37.9	-0.4
	baz=299						
H64A	Troy	130.30	33	P	PKPdf	20 27 38.4	+0.1
	baz=311						
RTLL	Cerro Villicun	130.38	140	*i* P	PKPdf	20 27 38.6	-0.3
ACCO	Cerro Coronel	130.48	139	*i* P	PKPdf	20 27 39.7	+0.2
AROD	Rodeo	130.48	138	*i* P	PKPdf	20 27 39.2	-0.3
061Z	Ochoppi	130.62	61	IAMs_20	IAMs_20	21 31 28.4	
	comp=Z,740nm,19.0s						
060A	Indiantown	130.77	59	IAMs_20	IAMs_20	21 33 49.0	
	comp=Z,755nm,20.0s						
AVFE	Valle Fertil	131.47	140	*i* P	PKPdf	20 27 40.6	-0.4
ACHE	Chepes	131.63	141	*i* P	PKPdf	20 27 41.1	-0.4
VCA	Vinchina	132.25	138	*i* P	PKPdf	20 27 41.6	-1.0
TCA	Tanti	132.77	143	*i* P	PKPdf	20 27 42.9	-0.6
AC02	Maricunga	132.81	135	IAMs_20	IAMs_20	21 17 49.5	
	comp=Z,623nm,20.0s						
PB14	IPOC Station P	133.20	132	PKPdf	PKPdf	20 27 43.8	-1.0
ATAH	Atahualpa	133.55	105	SKPbc	SKPab	20 31 11.1	+0.2
	comp=Z,16nm,1.0s,baz=235,slow=4.0,SNR=5.7						
BCIP	Isla Barro Col	134.08	83	IAMs_20	IAMs_20	21 16 34.1	
	comp=Z,735nm,20.0s						
OTAV	Otavalo	134.93	95	*e*P	PKiKP	20 27 50.6	+0.7
LVC	Limon Verde	135.47	130	PKhKP	PKPpre	20 27 38.5	
	comp=Z,2.8nm,0.6s,baz=188,slow=3.5,SNR=5.0						
LVC				PKP	PKiKP	20 27 50.3	-0.4
	comp=Z,10nm,0.8s,baz=222,slow=3.1,SNR=8.8						
LVC				SKPbc	SKPbc	20 31 16.4	+1.8
	comp=Z,1.6nm,0.4s,baz=244,slow=6.5,SNR=2.0						
LVC	Limon Verde	135.47	130	PKHKP	PKPpre	20 27 34.6	
LVC				MLR	MLR		
	comp=Z,400nm,20.0s						
LVC	Limon Verde	135.47	130		PKPpre	20 27 34.6	
MNMC	Minye Minye	136.83	126		PKPpre	20 27 38.6	
GTBY	Guantanamo Bay	137.30	67	IAMs_20	IAMs_20	21 30 48.9	
	comp=Z,635nm,21.0s						
PB16	IPOC Station P	137.31	125		PKPpre	20 27 41.7	
RREF	El Recreo	138.46	89	*e*P	PKiKP	20 27 57.2	-0.1
TOLC	Tolima	138.47	90	*e*P	PKPdf	20 27 54.8	-0.1
ITQB	Itaqui	138.47	149	*e*P	PKiKP	20 27 56.8	+0.6
CZSB	Cruzeiro do Su	138.80	108	*e*P	PKPpre	20 27 46.6	
NORC	Norcasia	138.97	88	*e*P	PKPdf	20 27 49.3	-6.1
ROSC	El Rosal	139.48	89	PKP	PKPdf	20 27 56.5	-0.3
	comp=Z,18nm,0.6s,baz=38,slow=16,SNR=5.7						
ROSC	El Rosal	139.48	89	*e*P	PKPdf	20 27 56.8	+0.1
MACC	Macarena, Meta	139.73	93	*e*P	PKPdf	20 27 51.1	-5.7
CPUP	Villa Florida	140.73	145	PKhKP	PKPpre	20 27 50.4	
	comp=Z,8.4nm,1.0s,baz=236,slow=3.6,SNR=5.6						
CPUP				PKP	PKPdf	20 27 59.4	+1.1
	comp=Z,11nm,0.7s,baz=234,slow=2.2,SNR=13						
SDDR	Presa de Saban	141.02	67	IAMs_20	IAMs_20	21 26 25.7	
	comp=Z,614nm,20.0s						
PAMC	Pamplona, Colo	141.16	85	*e*P	PKPdf	20 27 54.2	-5.6
SC01	Santiago de lo	141.42	66	IAMs_20	IAMs_20	21 37 15.0	
	comp=Z,988nm,20.0s						
CNLB	Canela	141.45	155	*e*P	PKPdf	20 27 45.9	-14
ITAB	Concordia	142.69	152	*e*P	PKiKP	20 28 04.5	-0.3
SDV	Santo Domingo	143.17	83	PKhKP	PKPdf	20 28 00.6	-2.5
	comp=Z,13nm,0.5s,baz=248,slow=3.4,SNR=17						
SDV	Santo Domingo	143.17	83	*e*P	PKPdf	20 28 02.9	-0.2
ETMB	Extrema	144.06	115	*e*P	PKPbc	20 28 03.2	+0.7
TOC2	Torodi Ar. Sit	144.38	285	IAMs_20	IAMs_20	21 36 06.7	
	comp=Z,717nm,20.0s						
TOC3	Torodi Ar. Sit	144.39	285	IAMs_20	IAMs_20	21 41 03.7	
	comp=Z,726nm,21.0s						
TOC1	Torodi Ar. Sit	144.40	285	IAMs_20	IAMs_20	21 36 08.1	
	comp=Z,852nm,20.0s						
TOB3	Torodi Ar. Sit	144.40	285	IAMs_20	IAMs_20	21 36 07.1	
	comp=Z,854nm,22.0s						
TOA2	Torodi Ar. Sit	144.40	285	IAMs_20	IAMs_20	21 36 06.2	
	comp=Z,816nm,20.0s						
TOB1	Torodi Ar. Sit	144.41	285	IAMs_20	IAMs_20	21 36 08.3	
	comp=Z,765nm,20.0s						
TOC4	Torodi Ar. Sit	144.41	285	IAMs_20	IAMs_20	21 41 03.3	
	comp=Z,654nm,20.0s						
TOA0	Torodi Ar. Sit	144.41	285	PKPdf	PKPbc	20 28 03.9	+0.4
TOA0				IAMs_20	IAMs_20	21 36 06.3	
	comp=Z,811nm,20.0s						
TORD	Torodi Ar. Bea	144.41	285	PKP	PKPab	20 28 03.3	0.0
	comp=Z,75nm,1.0s,baz=61,slow=2.8,SNR=103						
TORD	Torodi Ar. Bea	144.41	285		PKPab	20 28 03.1	-0.2
TOB4	Torodi Ar. Sit	144.42	285	IAMs_20	IAMs_20	21 36 06.7	
	comp=Z,835nm,20.0s						
TOB5	Torodi Ar. Sit	144.42	285	IAMs_20	IAMs_20	21 36 07.7	
	comp=Z,869nm,20.0s						
TOC5	Torodi Ar. Sit	144.43	285	IAMs_20	IAMs_20	21 36 06.9	
	comp=Z,974nm,19.0s						
PTGB	Pitanga	144.84	150	*e*P	PKPdf	20 28 07.0	+1.3
MPR	Mayaguez	145.02	66		PKPbc	20 28 04.4	-1.0
CRPR	Cabo Rojo, PR	145.10	67		PKPbc	20 28 04.7	-1.0
MLPR	Magueyes Islan	145.17	67		PKPbc	20 28 04.0	-1.9
SIV	San Ignacio	145.32	129	PKPbc	PKPab	20 28 06.9	+0.3
	comp=Z,275nm,0.8s,baz=244,slow=3.8,SNR=227						
AOPR	Arecibo Observ	145.33	66		PKPbc	20 28 05.1	-1.3
OBIP	Obispado Ponce	145.55	66	PKPdf	PKPdf	20 28 06.1	-0.8
ICMP	Isla Caja de M	145.67	67	PKPdf	PKPdf	20 28 06.6	-0.5
SJG	San Juan	145.95	66	PKPbc	PKPdf	20 28 07.0	-0.5
	comp=Z,44nm,0.7s,baz=291,slow=4.2,SNR=32						
SJG	San Juan	145.95	66	PKP2	PKPdf	20 28 07.6	+0.1
SJG				MLR	MLR		
	comp=Z,600nm,21.0s						
SJG	San Juan	145.95	66		PKPdf	20 28 07.6	+0.1
SJG	San Juan	145.95	66	IAMs_20	IAMs_20	21 33 30.1	
	comp=Z,588nm,21.0s						
GCPR	Guaynabo City	145.95	66		PKPdf	20 28 07.7	+0.2
PDPR	Patillas Dam,	146.09	66		PKPdf	20 28 08.0	+0.2
TRCB	Terra Rica	146.12	147	*e*P	PKPab	20 28 10.5	+1.0
AQDB	Aquidauana	146.13	141	*e*P	PKPab	20 28 09.5	0.0
CBYP	Canovanas	146.17	66		PKPdf	20 28 08.1	+0.1
HUMP	Col San Antoni	146.21	66		PKPbc	20 28 08.6	-0.5
MTP	Monte Pirata	146.49	66	PKPdf	PKPdf	20 28 08.5	+0.1
PTLB	Pontes e Lacer	147.14	130	*e*P	PKPbc	20 28 12.0	+0.2
SAML	Samuel	147.14	116	PKIKP	PKPdf	20 28 10.6	+0.9
SAML				MLR	MLR		
	comp=Z,500nm,20.0s						
SAML	Samuel	147.14	116	PKPdf	PKPdf	20 28 10.6	+0.9
SAML	Samuel	147.14	116	IAMs_20	IAMs_20	21 28 41.4	
	comp=Z,545nm,20.0s						
SAML	Samuel	147.14	116	*e*P	PKPbc	20 28 12.1	+0.2
CDVI	St. Croix	147.31	66	PKPdf	PKPdf	20 28 09.8	0.0
PET01	Itanhaem-SP	147.36	156	*e*P	PKPab	20 28 13.7	-0.4
VILB	Vilhena	147.75	125	*e*P	PKPbc	20 28 13.5	-0.1
VILB	Vilhena	147.75	125	*e*P	PKPbc	20 28 12.7	-0.9
PCMB	Pacaembu	147.82	148	*e*P	PKPbc	20 28 12.3	-1.3
SPB	Sao Paulo	147.92	156		PKPbc	20 28 14.2	+0.5
SPB	Sao Paulo	147.92	156	*e*P	PKPbc	20 28 13.5	-0.2
SPB	Sao Paulo	147.92	156	*e*P	PKPbc	20 28 13.9	+0.1
VAO	Valinhos	148.63	156	*e*P	PKPbc	20 28 14.2	-1.6
PP1B	Ponte de Pedra	148.75	138	*e*P	PKPbc	20 28 14.9	-1.2
PARB	Paraibuna	148.85	158	*e*P	PKPbc	20 28 14.9	-1.4
PCRV	Puerto La Cruz	148.98	80	PKPbc	PKPbc	20 28 15.8	-1.1
	comp=Z,19nm,0.6s,baz=283,slow=5.4,SNR=4.1						
SEUS	St. Eustatius	149.01	65	IAMs_20	IAMs_20	21 25 27.1	
	comp=Z,828nm,21.0s						
SKI	Saint Kitts	149.28	65	IAMs_20	IAMs_20	21 23 28.3	
	comp=Z,781nm,20.0s						
KOWA	Kowa	149.60	289	PKPbc	PKPbc	20 28 17.7	-0.6
	comp=Z,20nm,0.7s,baz=66,slow=2.0,SNR=4.7						
KOWA	Kowa	149.60	289		PKPbc	20 28 18.8	+0.5
BB19B	Bebedouro	149.64	152	*e*P	PKPdf	20 28 15.9	+2.2
ITRB	Iturama	149.86	147	*e*P	PKPbc	20 28 16.5	-2.4
MAN01	Angra dos Reis	149.86	161	*e*P	PKPdf	20 28 15.8	+1.8
ANWB	Willy Bob	150.03	64	IAMs_20	IAMs_20	21 29 56.4	
	comp=Z,732nm,21.0s						
VAS01	Vassouras-RJ	150.58	161	*e*P	PKPdf	20 28 17.5	+2.4
DUB01	Friburgo-RJ	151.09	163	*e*P	PKPdf	20 28 18.4	+2.5
KIC	Kosan Boka	151.26	273	*e*PKIKP	PKiKP	20 28 22.7	-0.1
	comp=Z,34nm,0.6s						
BSCB	Bom Sucesso	151.30	158	*e*P	PKPdf	20 28 19.1	+2.8
DBIC	Dimbokro	151.38	273	PKPbc	PKPbc	20 28 21.8	-0.8
	comp=Z,30nm,0.5s,baz=80,slow=2.2,SNR=57						
FDF	Fort de France	151.50	70	PKIKP	PKPdf	20 28 15.5	-1.2
FDF				MLR	MLR		
	comp=Z,900nm,22.0s						
FDF	Fort de France	151.50	70	PKPdf	PKPdf	20 28 15.5	-1.2
FDF				IAMs_20	IAMs_20	21 31 02.8	
	comp=Z,925nm,22.0s						
CAM01	Campos-RJ	151.53	164	*e*P	PKPdf	20 28 19.1	+2.6
TIC	Toumodi	151.54	273	*e*PKIKP	PKPbc	20 28 23.2	+0.2
LIC	Lamto	151.55	273	*e*PKIKP	PKPbc	20 28 23.1	+0.1
	comp=Z,133nm,0.7s						
SVB	Belmont	151.76	73	IAMs_20	IAMs_20	21 49 51.8	
	comp=Z,754nm,21.0s						
ARAG	Araguaiana, MT	152.13	140	*e*P	PKPdf	20 28 20.6	+3.0
IPMB	Ipameri, GO	152.41	149	*e*P	PKPdf	20 28 20.8	+2.7
TOSP	Speyside	152.83	76	IAMs_20	IAMs_20	21 26 01.6	
	comp=Z,777nm,21.0s						
ALF01	Guarapari-ES	152.93	165	*e*P	PKPdf	20 28 20.0	+1.4
PTGA	Pitinga	152.94	103	PKP	PKPdf	20 28 18.3	-0.6
	comp=Z,1.1nm,0.3s,baz=278,slow=8.7,SNR=4.3						
PTGA				PKPbc	PKiKP	20 28 26.3	-0.1
	comp=Z,18nm,0.8s,baz=250,slow=2.8,SNR=24						
PTGA				PKPab	pPKPdf	20 28 38.6	0.0
	comp=Z,13nm,0.8s,baz=241,slow=3.6,SNR=9.4						
PTGA	Pitinga	152.94	103		PKPdf	20 28 18.9	0.0
PTGA	Pitinga	152.94	103	IAMs_20	IAMs_20	21 45 26.1	
	comp=Z,480nm,20.0s						
RIB01	Linhares ES	154.26	165	*e*P	PKPdf	20 28 23.1	+2.5
BDFB	Brasilia	154.45	146	PKP	PKPdf	20 28 21.8	+0.8
	comp=Z,5.4nm,0.8s,baz=166,slow=3.6,SNR=6.1						
BDFB				PKPbc	PKiKP	20 28 30.2	+0.7
	comp=Z,40nm,0.9s,baz=188,slow=1.5,SNR=23						
BDFB				PKPab	PKPab	20 28 44.1	+0.3
	comp=Z,12nm,0.6s,baz=167,slow=10.0,SNR=4.8						
BDFB	Brasilia	154.45	146	PKPdf	PKPdf	20 28 23.3	+2.2
BSFB	Barra de Sao F	154.60	164	*e*P	PKPdf	20 28 24.0	+2.9
SJMB	Sao Joao De Ma	154.63	163	*e*P	PKPdf	20 28 23.4	+2.3
NPGB	Novo Progresso	154.89	120	*e*P	PKPdf	20 28 24.7	+3.1
SNDB	Serra Nova Dou	155.16	135	*e*P	PKPdf	20 28 25.6	+3.6
ITTB	Itaituba	155.76	114	*e*P	PKPdf	20 28 25.4	+2.6
JANB	Januaria	156.81	153	*e*P	PKPdf	20 28 27.2	+3.0
PEXB	Peixe	157.07	141	*e*P	PKPdf	20 28 26.0	+1.6
MALB	Monte Alegre	158.07	109	*e*P	PKPdf	20 28 28.8	+3.1
SDBA	SAO DESIDERIO	158.80	148	*e*P	PKPdf	20 28 29.4	+2.7
GDU01	Guandu, BA	159.82	163	*e*P	PKPdf	20 28 30.4	+2.7
SMTB	Santa Maria do	159.93	136	*e*P	PKPdf	20 28 30.1	+2.2
PRPB	Parauapebas	160.00	126	*e*P	PKPdf	20 28 30.0	+2.0
MCPB	Macapa, AP	160.64	108	*e*P	PKPdf	20 28 30.3	+1.5
RCBR	Riachuelo	168.32	169	PKPab	PKPab	20 29 44.6	+0.5
	comp=Z,46nm,1.0s,baz=130,slow=4.1,SNR=9.4						
RCBR	Riachuelo	168.32	169	PKPab	PKPab	20 29 45.1	+1.0

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*JMA **21** 20:46:27.6, 23°.99N×121°.68E, h38km±1km, M3.1*
*TAP **21** 20:46:28.2, 24°.02N×121°.69E, h40km, ML3.7, C*
ISC 21 20:46:28.0±0.9**, 24°.01N**±0°.02×**121°.73E**±0°.02**, h32**km±5km,
n143, σ**1**^{s}**08**/259**, 10C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.12	254	⇑*i*P	Pn	20 46 35.1	+1.4
	baz=239						
HWA				*e*S	Sb	20 46 40.9	+3.3
	baz=239						
TWD	Chiawan	0.14	299	*i* P	Pn	20 46 34.8	+0.8
	baz=306						
TWD				S	Sb	20 46 39.9	+2.1
	baz=306						
NACB	Ninganchiao	0.20	322	⇑*i*P	Pb	20 46 35.2	+0.8
	baz=319						
NACB				*i* S	Sn	20 46 40.4	+1.2
	baz=319						
ETLH	Xiulin Townshi	0.30	311	⇑*i*P	Pb	20 46 36.1	+0.4
	baz=305						
ETLH				*i* S	Sb	20 46 41.4	+0.5
	baz=305						
ESL	Shilin	0.34	234	⇑*i*P	Pb	20 46 36.4	+0.3
	baz=236						
ESL				*e*S	Sb	20 46 42.1	+0.5
	baz=236						
ENA	Nanau	0.41	1	*i* P	Pb	20 46 37.5	+0.3
	baz=14						
ENA				*e*S	Sb	20 46 44.9	+1.4
	baz=14						
EGFH	Guangfu	0.44	219	P	Pb	20 46 38.1	+0.6
	baz=224						
EGFH				*e*S	Sb	20 46 44.9	+0.8
	baz=224						
ENAH	Nanao	0.44	9	P	Pb	20 46 38.1	+0.5
	baz=13						
ENAH				*e*S	Sb	20 46 44.5	+0.4
	baz=13						
WHF	Hehuan Shan	0.45	287	⇑*i*P	Pb	20 46 38.0	0.0
	baz=281						
WHF				*e*S	Sb	20 46 44.8	-0.1
	baz=281						
FUSS	Fushou	0.50	298	⇑*i*P	Pb	20 46 39.0	+0.3
	baz=299						
FUSS				S	Sb	20 46 46.4	+0.3
	baz=299						
CHGB	Renai	0.51	276	⇑*i*P	Pb	20 46 39.0	+0.2
	baz=272						
CHGB				S	Sb	20 46 46.2	-0.1
	baz=272						
NNSB	Datong	0.52	323	⇑*i*P	Pb	20 46 39.0	+0.1
	baz=325						
NNSB				*i* S	Sb	20 46 46.4	-0.1
	baz=325						
NNSH	Datong	0.52	323	*i* P	Pb	20 46 39.0	+0.1
	baz=324						
NNSH				S	Sb	20 46 46.5	0.0
	baz=324						
NNS	Nan Shan	0.54	323	⇑*i*P	Pb	20 46 39.2	0.0
	baz=325						
NNS				S	Sb	20 46 46.8	-0.1
	baz=325						
TWT	Tachien	0.56	296	P	Pb	20 46 40.0	+0.4
	baz=292						
TWT				*i* S	Sb	20 46 47.8	+0.2
	baz=292						
TDCB	Techi	0.58	295	⇑*i*P	Pb	20 46 40.0	+0.2
	baz=292						
TDCB				S	Sb	20 46 47.6	-0.3
	baz=292						
HGSD	Ruisui	0.59	209	P	Pb	20 46 40.5	+0.6
	baz=218						
HGSD				*e*S	Sn	20 46 50.2	+1.6
	baz=218						
VWDT	VWDT	0.60	245	*i* P	Pb	20 46 40.5	+0.4
	baz=235						
TWC	Suao	0.60	10	*e*P	Pb	20 46 40.9	+0.7
	baz=21						
TWC				S	Sb	20 46 49.7	+1.2
	baz=21						
NDT	Datong Townshi	0.62	341	P	Pb	20 46 40.5	0.0
	baz=344						
NDT				S	Sb	20 46 48.8	-0.3
	baz=344						
EHY	Hungye	0.63	217	P	Pb	20 46 39.7	-0.9
	baz=213						
EHY				*e*S	Sb	20 46 48.2	-1.0
	baz=213						
ENTT	Nioudou	0.64	346	*i* P	Pb	20 46 40.8	-0.1
	baz=350						
ENTT				*e*S	Sb	20 46 49.8	+0.1
	baz=350						
WPL	Puli Township	0.71	270	⇓*i*P	Pn	20 46 41.7	-0.1
	baz=267						
WPL				*e*S	Sb	20 46 51.6	+0.2
	baz=267						
TWE	Neicheng	0.71	355	*e*P	Pn	20 46 41.8	0.0
	baz=349						
TWE				*e*S	Sb	20 46 51.7	+0.3
	baz=349						
YHNB	Yeheng	0.73	334	⇓*i*P	Pn	20 46 42.2	0.0
	baz=336						
YHNB				*i* S	Sb	20 46 51.4	-0.8
	baz=336						
YULB	Yu-li	0.73	213	P	Pn	20 46 41.1	-1.0
	baz=211						
YULB				*e*S	Sb	20 46 50.8	-1.3
	baz=211						
DPDB	Guoxing	0.74	272	*i* P	Pn	20 46 42.3	+0.1
	baz=269						
DPDB				*e*S	Sb	20 46 52.7	+0.5
	baz=269						
NSK	Sanguang	0.74	333	⇓*i*P	Pn	20 46 42.3	-0.1
	baz=335						
NSK				S	Sb	20 46 51.9	-0.6
	baz=335						
SSLB	Suanglung	0.75	253	⇓*i*P	Pn	20 46 42.1	-0.3
	baz=256						
SSLB				*e*S	Sb	20 46 51.3	-1.1
	baz=256						
ILA	Ilan	0.75	1	*e*P	Pn	20 46 43.2	+0.8
	baz=355						
ILA				*e*S	Sb	20 46 53.0	+0.5
	baz=355						
EYUL	Yuli	0.76	210	*e*P	Pn	20 46 42.4	-0.1
	baz=218						
EYUL				*e*S	Sn	20 46 52.6	-0.4
	baz=218						
WHP	Taichung City	0.77	290	P	Pn	20 46 43.0	+0.3
	baz=291						
WHP				*e*S	Sb	20 46 52.8	-0.3
	baz=291						
TWF1	Yuli	0.77	211	*i* P	Pn	20 46 41.6	-1.0
	baz=219						
TWF1				*e*S	Sn	20 46 51.8	-1.3
	baz=219						
SMLT	Sun Moon Lake	0.77	261	⇓*i*P	Pn	20 46 42.6	-0.1
	baz=255						
SMLT				S	Sb	20 46 52.9	-0.4
	baz=255						
NWLT	Wulai	0.79	345	*e*P	Pn	20 46 43.0	0.0
	baz=340						
NWLT				*e*S	Sn	20 46 52.6	-1.2
	baz=340						
TYC	Yuchr	0.81	263	*i* P	Pn	20 46 43.1	0.0
	baz=256						
TYC				S	Sn	20 46 53.3	-0.8
	baz=256						
NTC	Toucheng	0.84	6	*e*P	Pn	20 46 44.5	+0.9
	baz=356						
NTC				*e*S	Sb	20 46 57.3	+2.0

	baz=356						
WHYT	Xinyi Township	0.86	249	P	Pn	20 46 44.6	+0.6
	baz=248						
WHYT				S	Sn	20 46 55.8	+0.3
	baz=248						
YUS	Yu-Shan	0.88	234	⇓*i*P	Pn	20 46 44.8	+0.1
	baz=224						
YUS				*e*S	Sn	20 46 55.8	-0.8
	baz=224						
FULB	Fuli	0.90	206	*e*P	Pn	20 46 44.6	+0.1
	baz=213						
NSTT	Nanjuang	0.91	313	P	Pn	20 46 45.5	+0.9
	baz=314						
NSTT				*e*S	Sn	20 46 56.8	+0.2
	baz=314						
LIOB	Emei	0.91	314	⇓*i*P	Pn	20 46 45.6	+1.0
	baz=315						
LIOB				*e*S	Sn	20 46 57.3	+0.6
	baz=315						
TWQ1	Liyutan	0.94	291	⇓*i*P	Pn	20 46 45.9	+0.9
	baz=291						
TWQ1				S	Sn	20 46 58.2	+0.8
	baz=291						
WJS	Zhushan	0.94	259	P	Pn	20 46 46.1	+1.1
	baz=258						
WJS				S	Sn	20 46 58.5	+1.2
	baz=258						
WWF	Wufeng	0.94	272	*e*P	Pn	20 46 46.5	+1.4
	baz=272						
WWF				*e*S	Sb	20 46 59.8	+1.7
	baz=272						
TIPB	Shuangxi	0.96	5	*e*P	Pn	20 46 46.3	+0.9
	baz=358						
TIPB				*e*S	Sb	20 47 00.2	+1.6
	baz=358						
NHDH	Xindian Distri	0.97	349	*e*P	Pn	20 46 45.8	+0.4
	baz=343						
NHDH				*e*S	Sn	20 46 57.8	-0.2
	baz=343						
CHKT	Chengkung	0.97	200	*e*P	Pn	20 46 45.7	+0.3
	baz=188						
CHKT				*e*S	Sn	20 46 59.3	+1.3
	baz=188						
WNT	Mingjian	0.97	262	P	Pn	20 46 46.5	+1.1
	baz=262						
WNT				*e*S	Sn	20 46 59.4	+1.3
	baz=262						
WNT1	Nantou City	0.97	264	P	Pn	20 46 46.9	+1.5
	baz=253						
WNT1				S	Sb	20 46 59.8	+1.1
	baz=253						
NSY	Sanyi	0.97	295	⇓*i*P	Pn	20 46 46.5	+1.0
	baz=295						
NSY				*e*S	Sb	20 47 00.1	+1.2
	baz=295						
TCU	Taichung	0.97	278	P	Pn	20 46 46.6	+1.1
	baz=278						
TCU				*e*S	Sb	20 47 00.7	+1.8
	baz=278						
TWA	Mucha	0.97	352	*e*P	Pn	20 46 46.0	+0.5
	baz=348						
TWA				*e*S	Sn	20 46 58.3	0.0
	baz=348						
ALS	Alishan	0.98	240	P	Pn	20 46 46.5	+0.6
	baz=231						
ALS				*e*S	Sn	20 46 59.2	+0.3
	baz=231						
TATO	Taipei	0.98	347	P	Pn	20 46 45.9	+0.3
	baz=349						
TATO				*e*S	Sn	20 46 58.5	0.0
	baz=349						
HSN1	Hsinchu	1.00	320	P	Pn	20 46 46.8	+1.0
	baz=321						
HSN1				*e*S	Sb	20 47 01.2	+1.5
	baz=321						
NMLH	Miaoli	1.01	302	*e*P	Pn	20 46 46.9	+1.0
	baz=302						
NMLH				S	Sb	20 47 00.9	+1.1
	baz=302						
BACT	New Taipei Cit	1.02	345	*e*P	Pn	20 46 47.2	+1.1
	baz=354						
BACT				*e*S	Sn	20 47 00.3	+1.0
	baz=354						
TWB1	Santiao Chiao	1.02	13	*e*P	Pn	20 46 47.3	+1.2
	baz=26						
TWB1				*e*S	Sb	20 47 01.2	+1.0
	baz=26						
SBCB	Hsinchu	1.03	319	*e*P	Pn	20 46 46.9	+0.6
	baz=320						
SBCB				*e*S	Sb	20 47 02.3	+1.7
	baz=320						
TAP	Taipei	1.04	349	*e*P	Pn	20 46 46.9	+0.5
	baz=351						
TAP				*e*S	Sn	20 47 00.8	+0.9
	baz=351						
CHN5	Tsauling	1.05	247	P	Pn	20 46 47.6	+1.0
	baz=237						
CHN5				*e*S	Sn	20 47 01.7	+1.5
	baz=237						
ELDTW	Lidau	1.05	219	*i* P	Pn	20 46 45.9	-0.7
	baz=210						
ELDTW				*e*S	Sn	20 47 01.4	+1.1
	baz=210						
HSN	Hsinchu	1.05	319	*e*P	Pn	20 46 47.7	+1.2
	baz=322						
HSN				*e*S	Sb	20 47 01.9	+0.8
	baz=322						
WDJ	Dajia District	1.05	289	P	Pn	20 46 47.3	+0.7
	baz=289						
WDJ				*e*S	Sb	20 47 02.6	+1.5
	baz=289						
NWF	Wu-fen Shan	1.06	2	*e*P	Pn	20 46 47.3	+0.6
	baz=353						
NWF				*e*S	Sn	20 47 01.3	+1.0
	baz=353						
WFSB	Wu-fen Shan	1.06	2	*e*P	Pn	20 46 47.3	+0.7
	baz=353						
WFSB				*e*S	Sn	20 47 00.8	+0.5
	baz=353						
NTY	Taoyuan	1.06	338	*e*P	Pn	20 46 47.3	+0.6
	baz=346						
NTY				*e*S	Sn	20 47 01.8	+1.5
	baz=346						
NCUH	Zhongli	1.07	333	P	Pn	20 46 47.5	+0.7
	baz=334						
NCUH				*e*S	Sb	20 47 02.8	+1.0
	baz=334						
WCHH	Zhanghua	1.07	274	P	Pn	20 46 47.7	+0.9
	baz=273						
WCHH				*e*S	Sb	20 47 02.7	+1.0
	baz=273						
NCU	National Centr	1.08	333	P	Pn	20 46 47.8	+0.9
	baz=334						
NCU				*e*S	Sn	20 47 02.4	+1.6
	baz=334						
EDH	Donghe	1.11	201	*e*P	Pn	20 46 46.5	-0.8
	baz=190						
WGK	Gukeng	1.12	253	*i* P	Pn	20 46 48.7	+1.3
	baz=252						
TWS1	Kuangyinshan	1.12	345	P	Pn	20 46 48.0	+0.5
	baz=347						
TWS1				*e*S	Sn	20 47 03.2	+1.4
	baz=347						
TNOU	National Taiwa	1.13	2	P	Pn	20 46 48.1	+0.4
	baz=348						
TNOU				*e*S	Sn	20 47 03.3	+1.1
	baz=348						
WDLH	Douliu	1.14	254	*i* P	Pn	20 46 49.0	+1.3
	baz=253						
WDLH				S	Sb	20 47 05.1	+1.5
	baz=253						
YM01	YM01	1.14	353	P	Pn	20 46 47.7	-0.1
	baz=354						
YM01				*e*S	Sn	20 47 02.2	-0.2
	baz=354						
YM10	YM10	1.15	352	P	Pn	20 46 48.0	+0.1
	baz=354						
YM10				*e*S	Sn	20 47 02.8	+0.1
	baz=354						
YM04	YM04	1.15	351	P	Pn	20 46 47.2	-0.8
	baz=353						
YM04				*e*S	Sn	20 47 03.7	+1.0
	baz=353						
YM11	YM11	1.16	353	P	Pn	20 46 48.2	+0.1
	baz=355						
YM03	YM03	1.18	351	P	Pn	20 46 48.5	+0.2
	baz=354						
NTST	Danshui	1.18	347	P	Pn	20 46 48.5	+0.2
	baz=349						
NTST				*e*S	Sn	20 47 03.8	+0.6
	baz=349						
YM08	YM08	1.18	354	P	Pn	20 46 48.0	-0.3
	baz=343						
YM08				*e*S	Sn	20 47 02.2	-1.1
	baz=343						
ANP	Anpu	1.19	351	P	Pn	20 46 48.3	-0.2
	baz=353						
JYNG	Yonagunijimaku	1.19	68	P	Pn	20 46 49.2	+0.8
JYNG				*e*S	Sn	20 47 04.5	+0.9
STYT	Tauyuan	1.23	227	*i* P	Pn	20 46 49.8	+0.8
	baz=226						
STYT				*e*S	Sn	20 47 06.8	+2.1
	baz=226						
LONT	Longtian	1.23	207	P	Pn	20 46 47.9	-1.1
	baz=207						
LONT				*e*S	Sn	20 47 03.4	-1.1
	baz=207						
CHN4	Tsaushan	1.23	238	P	Pn	20 46 50.4	+1.4
	baz=227						
CHN4				*e*S	Sb	20 47 07.1	+0.8
	baz=227						
TPUB	Ta-pu	1.23	235	P	Pn	20 46 50.1	+1.0
	baz=228						
TPUB				*e*S	Sn	20 47 06.8	+2.1
	baz=228						
CHN2	Minshiung	1.25	248	*e*P	Pb	20 46 51.5	+0.6
	baz=247						
CHN2				*e*S	Sb	20 47 08.3	+1.7
	baz=247						
YOJ	Yonaguni jima	1.25	69	P	Pn	20 46 50.0	+0.7
YOJ				*e*S	Sn	20 47 06.0	+1.0
YOJ	Yonaguni jima	1.25	69	*i* P	Pn	20 46 49.8	+0.5
	baz=68						
YOJ				S	Sn	20 47 05.3	+0.2
	baz=68						
RLNB	Erlin	1.26	265	P	Pn	20 46 50.6	+1.2
	baz=264						
TWY	Chenhua	1.27	355	*e*P	Pn	20 46 50.5	+1.1
	baz=343						
TWY				*e*S	Sn	20 47 05.5	+0.1
	baz=343						
WTK	Tuku	1.27	256	P	Pn	20 46 50.8	+1.2
	baz=255						
WTK				*e*S	Sb	20 47 08.1	+0.7
	baz=255						
WTP	Ta-pu	1.28	234	P	Pn	20 46 50.9	+1.2
	baz=233						
WTP				*e*S	Sn	20 47 07.5	+1.8
	baz=233						
CHY	Chiayi	1.30	247	P	Pn	20 46 51.5	+1.6
	baz=246						
CHY				*e*S	Sn	20 47 08.6	+2.3
	baz=246						
TWGBT	Beinan	1.33	207	P	Pn	20 46 49.1	-1.3
	baz=196						
TWGBT				*e*S	Sn	20 47 06.5	-0.5
	baz=196						
TWG	Pinlang	1.33	207	*e*P	Pn	20 46 49.0	-1.4
	baz=196						
TWG				*e*S	Sn	20 47 05.8	-1.3
	baz=196						
LDUT	Ludao	1.35	190	*e*P	Pn	20 46 51.2	+0.5
	baz=181						
LDUT				*e*S	Sn	20 47 06.2	-1.4
	baz=181						
CHN1	Nanshi	1.38	234	P	Pn	20 46 52.3	+1.3
	baz=233						
CHN1				*e*S	Sn	20 47 09.0	+0.8
	baz=233						
SNST	Tainan City	1.38	235	P	Pn	20 46 52.1	+1.0
	baz=235						
SNST				*e*S	Sb	20 47 10.8	+0.3
	baz=235						
SGST	Jiashian	1.40	229	*i* P	Pn	20 46 52.0	+0.6
	baz=219						
SGST				*e*S	Sn	20 47 10.4	+1.6
	baz=219						
WLGB	Puzi	1.42	248	P	Pn	20 46 52.0	+0.4
	baz=236						
WLGB				*e*S	Sb	20 47 11.6	+0.2
	baz=236						
SLGT	Liugui	1.42	225	P	Pn	20 46 53.0	+1.4
	baz=225						
SLGT				*e*S	Sn	20 47 11.8	+2.5
	baz=225						
WSF	Szhu	1.43	255	P	Pn	20 46 52.8	+1.0
	baz=243						
WSF				*e*S	Sb	20 47 12.4	+0.5
	baz=243						
ICHU	Yijhu	1.48	244	P	Pn	20 46 53.6	+1.2
	baz=244						
ICHU				*e*S	Sn	20 47 12.8	+2.1
	baz=244						
CHN8	Yiju	1.54	245	*e*P	Pn	20 46 54.3	+1.0
	baz=245						
CHN8				*e*S	Sb	20 47 15.2	+0.1
	baz=245						
CHN3	Shinhua	1.56	234	*e*P	Pn	20 46 55.6	+2.1
	baz=233						
ECL	Taimali	1.58	207	P	Pn	20 46 54.4	+0.6
	baz=197						
SCST	Cishan	1.60	226	*e*P	Pn	20 46 56.2	+2.1
	baz=227						
SCST				*e*S	Sb	20 47 18.0	+1.4
	baz=227						
SSD	Sandimen	1.61	219	*e*P	Pn	20 46 55.7	+1.4
	baz=218						
SCLT	Jiali	1.64	240	*e*P	Pn	20 46 55.8	+1.2
	baz=240						
SCLT				*e*S	Sn	20 47 17.2	+2.6
	baz=240						
TSMG	Majia	1.64	218	P	Pn	20 46 56.5	+1.9
	baz=219						
TSMG				*e*S	Sn	20 47 17.4	+2.8
	baz=219						
PCYT	Pengchaiyu	1.64	11	*e*P	Pn	20 46 56.2	+1.6
	baz=13						
TWM1	Shoushan	1.69	226	*e*P	Pb	20 46 58.8	+0.4
	baz=235						
SGLT	Jiouru	1.71	222	*e*P	Pn	20 46 57.6	+1.9
	baz=221						
MASBT	Mashibuluo	1.72	216	*e*P	Pn	20 46 56.2	+0.4
	baz=218						
MASBT				*e*S	Sn	20 47 18.9	+2.3
	baz=218						
EAST	Anshuo	1.81	207	*e*P	Pn	20 46 57.4	+0.3
	baz=199						
IRIF	Iriomote-Funau	1.85	80	P	Pn	20 46 58.4	+0.8
IRIF				S	Sn	20 47 21.4	+1.5
SSPT	Xinbi	1.86	215	*e*P	Pn	20 47 00.4	+2.7
	baz=203						
HATJ	Hateruma jima	1.90	88	P	Pn	20 46 59.4	+1.3
HATJ				S	Sn	20 47 22.5	+1.5
SCZT	Fangliau	1.93	212	*e*P	Pn	20 47 00.3	+1.7
	baz=224						
SCZT				*e*S	Sn	20 47 24.0	+2.3
	baz=224						
SLIU	Shizi	1.98	206	*e*P	Pn	20 47 00.1	+0.7
	baz=201						
PHUB	P'eng-hu	2.04	256	P	Pn	20 46 59.9	-0.2
	baz=256						
PHUB				*e*S	Sn	20 47 23.4	-1.1
	baz=256						
PNG	Penghu	2.04	258	*e*P	Pn	20 47 00.2	+0.1
	baz=257						
PNG				*e*S	Sn	20 47 25.1	+0.5
	baz=257						
WDGT	Dungji	2.04	249	*e*P	Pn	20 47 00.9	+0.7
	baz=249						
WDGT				*e*S	Sn	20 47 23.9	-0.7
	baz=249						
JKRS	Kuro-shima	2.09	83	P	Pn	20 47 02.4	+1.6
JKRS				*e*S	Sn	20 47 27.2	+1.4
TWKBT	Hengchun	2.23	203	*e*P	Pn	20 47 04.4	+1.7
	baz=193						
JIJ	Ishigaki jima	2.23	80	P	Pn	20 47 03.5	+0.8
JIJ				S	Sn	20 47 29.0	-0.2
VCHM	Qimei	2.26	250	*e*P	Pn	20 47 03.4	+0.3
	baz=237						
VWUC	VWUC	2.30	296	*e*P	Pn	20 47 02.5	-1.1
	baz=295						
PTTC	Pingtan	2.32	310	*e*P	Pn	20 47 02.8	-1.2
	baz=309						
JISG	Ishigakijimahi	2.42	76	P	Pn	20 47 05.8	+0.4
JISG				S	Sn	20 47 33.7	-0.2
PTMZ	Houxiangcun	2.59	294	*e*P	Pn	20 47 06.7	-1.0
	baz=293						
MATB	Ma-tsu	2.68	323	*e*P	Pn	20 47 07.9	-1.0
	baz=322						
JTJ	Tarama	2.78	76	P	Pn	20 47 11.7	+1.4
JTJ				S	Sn	20 47 44.1	+1.3
KNM	Kinmen	3.04	278	*e*P	Pn	20 47 15.0	+1.1
	baz=277						
KNMB	Chin-men Tao	3.08	279	*e*P	Pn	20 47 13.5	-1.0
	baz=279						
MHZQ	Yeshan	3.21	311	*e*P	Pn	20 47 15.0	-1.3
	baz=309						
JIRB	Irabujima	3.24	75	P	Pn	20 47 18.0	+1.4
JIRB				*e*S	Sn	20 47 55.0	+0.8
JMJ2	Miyako jima3	3.36	77	P	Pn	20 47 19.8	+1.5
JMJ2				S	Sn	20 47 58.3	+1.2
AXDP	Jialang	3.54	285	*e*P	Pn	20 47 20.3	-0.4
	baz=284						

RSNC 21 21:09:24.4±1.2, 4°.39N×75°.87W, h160km±4km, ML3.5, Mw3.8, 5D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ANIL	Santa Ana	0.48	78	⇓*i*P	Pn	21 09 47.2	0.0
ANIL				*e*S	Sn	21 10 04.1	-0.5
ANIL				*i*		21 10 06.8	
	comp=Z,215nm,0.2s						
TOLC	Tolima	0.58	71	*e*P	Pn	21 09 47.9	+0.1
TOLC				*e*S	Sn	21 10 05.4	-0.1
TOLC				*i*		21 10 08.1	
	comp=Z,1μm,0.6s						
YOTC	Yotoco, Valle	0.62	229	*e*P	Pn	21 09 46.9	-0.9
YOTC				*e*S	Sn	21 10 05.2	-0.4
YOTC				*i*		21 10 09.0	
	comp=Z,252nm,0.2s						
PLMC	San Jos del P	0.66	321	*e*P	Pn	21 09 47.7	-0.1
PLMC				*e*S	Sn	21 10 05.5	-0.3
RREF	El Recreo	0.73	46	*e*P	Pn	21 09 49.3	+0.3
RREF				*e*S	Sn	21 10 10.9	+3.2
RREF				*i*		21 10 12.6	
	comp=Z,465nm,0.3s						
CBOC	Ciudad Bolivar	1.47	354	⇓*i*P	Pn	21 09 54.7	0.0
CBOC				*e*S	Sn	21 10 16.7	-1.3
MALC	Bahia Malaga	1.51	256	*e*P	Pn	21 09 55.9	+1.1
MALC				*e*S	Sn	21 10 19.2	+1.0
MALC				*i*		21 10 29.1	
	comp=Z,372nm,0.5s						
NORC	Norcasia	1.53	41	⇓*i*P	Pn	21 09 54.9	-0.3
NORC				*e*S	Sn	21 10 17.9	-0.9
NORC				*i*		21 10 19.1	
	comp=Z,94nm,0.8s						
MARP	Paez Belalcaza	1.54	183	*e*P	Pn	21 09 55.6	+0.1
MARP				*e*S	Sn	21 10 19.0	-0.5
ROSC	El Rosal	1.61	74	⇓*i*P	Pn	21 09 57.2	+0.9
ROSC				*e*S	Sn	21 10 21.6	+0.9
BETC	Betania	1.75	166	*e*P	Pn	21 09 56.5	-1.0
BETC				*e*S	Sn	21 10 21.6	-1.4
HELC	Santa Helena	1.82	11	⇓*i*P	Pn	21 09 58.5	-0.1
HELC				*e*S	Sn	21 10 23.8	-1.1
HELC				*i*		21 10 27.9	
	comp=Z,243nm,0.5s						
PCON	Cinco Dias	2.12	194	*e*P	Pn	21 10 02.5	+0.4
PCON				*e*S	Sn	21 10 30.1	-1.1
PCON				*i*		21 10 41.6	
	comp=Z,144nm,0.4s						
VILC	Villavicencio,	2.19	97	*e*P	Pn	21 10 02.8	+0.3
VILC				*e*S	Sn	21 10 31.8	-0.1
VILC				*i*		21 10 35.8	
	comp=Z,241nm,0.5s						
SOTA	Rioblanco	2.36	198	*e*S	Sn	21 10 35.4	-0.8
SOLC	Bahia Solano	2.38	320	*e*P	Pn	21 10 04.8	+0.2
SOLC				*e*S	Sn	21 10 35.5	-0.3
SOLC				*i*		21 10 39.5	
	comp=Z,161nm,0.4s						
PTBC	PUERTO BERRIO,	2.56	33	*e*P	Pn	21 10 05.6	-1.2
PTBC				*e*S	Sn	21 10 37.3	-2.2
PTBC				*i*		21 10 39.0	
	comp=Z,69nm,0.2s						
DBBC	Dabeiba	2.63	353	*e*P	Pn	21 10 07.8	+0.1
DBBC				*e*S	Sn	21 10 40.4	-0.9
ZARC	Zaragoza, Cauc	3.24	18	*e*P	Pn	21 10 15.1	-0.2
ZARC				*e*S	Sn	21 10 53.2	-1.6
ZARC				*i*		21 10 55.3	
	comp=Z,212nm,0.4s						
UREC	San Jos de Ur	3.35	6	*e*P	Pn	21 10 16.6	-0.1
UREC				*e*S	Sn	21 10 54.4	-3.0
UREC				*i*		21 10 57.7	
	comp=Z,95nm,0.2s						
BRRC	Barranca, Sant	3.45	38	*e*P	Pn	21 10 17.0	-0.9
BRRC				*e*S	Sn	21 10 57.2	-2.2
BRRC				*i*		21 10 58.8	
	comp=Z,88nm,0.2s						
BARC	Barichara	3.46	51	*e*P	Pn	21 10 17.6	-0.6
BARC				*e*S	Sn	21 10 58.9	-1.0
BARC				*i*		21 11 01.1	
	comp=Z,135nm,0.1s						
CCUFI	Cufio, Nario	3.47	205	*e*P	Pn	21 10 18.2	-0.5
CCUFI				*e*S	Sn	21 10 58.2	-2.5
GCUF	Volcan Galeras	3.47	205	*e*P	Pn	21 10 17.9	-0.8
GCUF				*e*S	Sn	21 10 58.7	-2.1
GCUF				*i*		21 11 04.7	
	comp=Z,101nm,0.3s						
CPAS1	Pasto	3.50	205	*e*P	Pn	21 10 18.8	-0.1
CPAS1				*e*S	Sn	21 10 59.9	-1.3
PAMC	Pamplona, Colo	4.30	47	*e*P	Pn	21 10 28.3	-1.1
PAMC				*e*S	Sn	21 11 17.7	-2.2
PAMC				*i*		21 11 24.8	
	comp=Z,58nm,0.5s						
OCAC	Ocana	4.59	33	*e*P	Pn	21 10 32.4	-0.4
OCAC				*e*S	Sn	21 11 23.4	-2.7
OCAC				*i*		21 11 28.9	
	comp=Z,58nm,0.5s						
SMLC	San Martn de	4.73	22	*e*P	Pn	21 10 33.4	-1.1
SMLC				*e*S	Sn	21 11 25.6	-3.7
SMLC				*i*		21 11 26.9	
	comp=Z,74nm,0.3s						
SDV	Santo Domingo	6.85	49	*e*P	Pn	21 11 01.6	-1.2
SDV				*e*S	Sn	21 12 14.2	-5.8
SDV				*i*		21 12 17.2	
	comp=Z,39nm,0.5s						

IDC 21 21:27:21.9±491.0, 37°.51N×118°.30W, h0km, Error ellipse: s-maj=174.6km s-min=112.0km az=162.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	0.92	360	*i*		21 26 57.0	
	3.7nm,0.3s,baz=225,slow=43,SNR=40						
I57US	PINON FLAT INF	4.17	158	*i*		21 55 00.0	
	baz=338,slow=311,SNR=1.1						
I56US	NEWPORT INFRAS	10.78	4	*i*		22 31 40.0	
	baz=185,slow=326,SNR=1.7						
I10CA	LAC DU BONNET	20.37	44	*i*		23 42 00.0	
	baz=234,slow=337,SNR=1.5						

DJA 21 21:27:28.4±0.4, 2°S±3°×12°9E±°, h10km, M3.9/6, mb4.3/4, mB4.9/1, MLv3.6/6, Mw(mB)4.2/1, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSAI	Masohi	0.94	173	P	Pg	21 27 46.2	-0.3
SANI	Sanana	2.84	277	P	Pn	21 28 14.1	+0.2
SWI	Sorong	2.89	58	P	Pn	21 28 14.4	-0.1
GTOI	Gorontalo	6.54	297	P	Pn	21 29 07.3	+2.6
	0.1nm9.9nm,0.8s						
APSI	Ampana	7.31	282	P	Pn	21 29 16.3	+1.0
	0.3nm697nm73nm,0.6s						
MPSI	Mapaga	9.32	287	P	Pn	21 29 42.8	-0.1

IDC 21 21:50:08.2±3.3, 1°.82N×128°.13E, h136km±37km, mb3.5/7, mb1 3.5/9, mb1mx3.2/50, mbtmp3.8/9, MS3.7/2, Ms1 3.7/2, ms1mx2.9/28, Error ellipse: s-maj=69.6km s-min=13.8km az=71.0

ISC 21 21:50:07.9±0.8, 1°.8N±0°.2×128°.1E±0°.3, h134km, n11, σ0ˢ.60/10, mb3.9/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	Sorong	4.15	130	P	Pn	21 51 09.9	+0.2
	1.6nm,0.3s,baz=323,slow=20,SNR=4.1						

TGY	Tagaytay City	14.10	330	P	Pn	21 53 22.2	+0.3
	36nm,0.3s,baz=127,slow=10,SNR=3.6						
FITZ	Fitzroy Crossi	19.94	187	P	P	21 54 29.3	-0.2
	0.1nm,0.3s,baz=60,slow=11,SNR=1.9						
FITZ				LR	LR	22 03 07.1	
	comp=Z,127nm,19.3s,baz=328,slow=39						
WRA	Warramunga Arr	22.48	164	P	P	21 54 56.3	0.0
	1.4nm,0.3s,baz=336,slow=11,SNR=6.0						
ASAR	Alice Springs	25.96	168	P	P	21 55 27.7	-0.4
	0.5nm,0.4s,baz=345,slow=9.6,SNR=8.4						
CTA	Charters Tower	28.13	142	LR	LR	22 09 06.5	
	comp=Z,236nm,20.6s,baz=146,slow=40						
STKA	Stephens Creek	35.88	160	P	P	21 56 55.2	+0.2
	3.7nm,0.4s,baz=341,slow=8.7,SNR=14						
SONM	Songino Array	49.53	341	P	P	21 58 44.4	-0.7
	0.2nm,0.3s,baz=146,slow=8.0,SNR=2.7						
MKAR	Makanchi Array	59.89	325	P	P	22 00 00.6	+0.9
	0.5nm,0.3s,baz=110,slow=8.2,SNR=13						
ZALV	Zalesovo Beam	62.90	333	P	P	22 00 18.9	-0.8
	0.7nm,0.4s,baz=132,slow=8.7,SNR=2.7						
KURBB	Kurchatov Arra	64.07	327	P	P	22 00 27.9	+0.5
	1.1nm,0.6s,baz=127,slow=5.9,SNR=17						

KLM ***21*** *21:55:44,8.°19S×119.°59E,h171km,mb4.9*

NEIC ***21*** *21:55:46.2±2.1,8.°21S±0.°07×119.°67E±0.°06,h194km±5km,mb4.8/69,Error ellipse: s-maj=10.5km s-min=8.3km az=205.0*

DJA ***21*** *21:55:46.6±0.2,8°S±2°×12°0E±°,h185km±3km,M4.6/29,mB5.1/16,mb4.7/29,MLv5.0/23,Mw(mB)4.5/16*

IDC ***21*** *21:55:47.5±0.8,8.°06S×119.°71E,h202km±7km,mb4.3/33,mb1 4.4/38,mb1mx4.3/50,mbtmp4.8/38,Error ellipse: s-maj=11.2km s-min=6.2km az=64.0*

NOU ***21*** *21:55:47.0,8.°30S×119.°72E,h181km,mb4.8,Flores Region, Indonesia*

ISC 21 21:55:46.3±0.6,**8.°23S**±0.°04×**119.°71E**±0.°04,**h198**km±5km,**n458,**σ**1.s15**/484,**mb4.7**/80,**24C-27D,Fault plane solution: NP1:**φs144.03932°,δ74.30538°,λ-86.13797°. **NP2:**φs310.02701°,δ16.15120°,λ-103.47983°. **Principal axes:** T Plg29.2039°, Azm230.9116°; N Plg3.7178°, Azm322.9931°; P Plg60.5142°, Azm59.5920°; **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.43	192	P	Pn	21 56 17.6	-1.8
WBSI				S	Sn	21 56 41.4	-3.8
WSI	Waingapu	1.54	158	P	Pn	21 56 19.0	-1.3
PLAI	Plampang	2.00	253	P	Pn	21 56 23.9	-0.8
EDFI	Ende, Flores	2.03	105	P	Pn	21 56 24.2	-1.0
BASI	Baing, Sumba	2.15	157	P	Pn	21 56 25.4	-1.0
MMRI	Maumere	2.54	99	Pn	Pn	21 56 30.4	-0.2
MMRI	Maumere	2.54	99	P	Pn	21 56 30.3	-0.2
TWSI	Taliwang, Sumb	2.84	260	P	Pn	21 56 33.2	-0.8
BKSI	Bulukumba	2.92	8	P	Pn	21 56 34.9	-0.1
KAPI	Kappang	3.20	1	P	Pn	21 56 38.8	+0.5
	191nm,0.3s,baz=175,slow=7.8,SNR=331						
KAPI				S	Sn	21 57 17.8	-1.2
	baz=136,slow=22,SNR=6.0						
KAPI	Kappang	3.20	1		Pn	21 56 38.6	+0.3
BNSI	Bone	3.83	6	P	Pn	21 56 46.9	+0.9
SPSI	Sidrap Palu	4.24	1	P	Pn	21 56 51.8	+0.7
BATI	Baumata	4.37	117	P	Pn	21 56 53.3	+0.5
	49nm,0.3s,baz=300,slow=8.1,SNR=26						
BATI				S	Sn	21 57 42.1	-2.9
	85nm,0.3s,baz=233,slow=5.1,SNR=5.5						
BATI	Baumata	4.37	117	P	Pn	21 56 53.4	+0.6
SRBI	Singaraja	4.45	272	P	Pn	21 56 53.8	+0.1
SOEI	Soe	4.75	109	Pn	Pn	21 56 57.2	-0.5
SOEI	Soe	4.75	109	P	Pn	21 56 57.9	+0.2
TTSI	Tana Toraja	5.15	1	P	Pn	21 57 04.8	+2.1
	0.9nm2μm228nm,1.3s						
JAGI	Jajag, Banyuwa	5.50	267	Pn	Pn	21 57 05.5	-1.6
JAGI	Jajag, Banyuwa	5.50	267	P	Pn	21 57 05.6	-1.6
	3.6nm6μm165nm,0.6s						
KMMI	Kalianget	5.81	281	P	Pn	21 57 13.3	+2.2
	0.4nm1μm86nm,0.9s						
KBKI	Kotabaru	6.03	324	P	Pn	21 57 15.1	+1.0
	0.2nm686nm57nm,1.1s						
BBKI	Banjar Baru	6.77	314	P	Pn	21 57 26.5	+2.8
	0.3nm5μm38nm,1.0s						
APSI	Ampana	7.53	15	P	Pn	21 57 35.2	+1.7
	0.5nm1μm128nm,1.4s						
LUWI	Luwuk	7.77	23	Pn	Pn	21 57 37.6	+1.0
LUWI	Luwuk	7.77	23	P	Pn	21 57 37.8	+1.2
	0.3nm3μm88nm,0.8s						
PWJI	Pagerwojo	7.83	271	P	Pn	21 57 37.5	+0.1
	1.1nm6μm125nm,0.5s						
MRSI	Marisa	8.93	15	P	Pn	21 57 52.5	+0.7
	864nm83nm,0.8s						
UGM	Wanagama	9.10	271	Pn	Pn	21 57 53.2	-0.8
UGM	Wanagama	9.10	271	P	Pn	21 57 53.4	-0.6
	4μm234nm,0.6s						
SMRI	Semarang	9.26	277		Pn	21 57 57.7	+1.6
TOLI2	Tolitoli	9.34	7	Pn	Pn	21 57 58.2	+1.0
GTOI	Gorontalo	9.40	21	P	Pn	21 57 58.1	+0.1
	308nm14nm,0.9s						
KPJI	Karang Pucung	10.71	274	P	Pn	21 58 14.5	-0.4
	56nm,0.7s						
FITZ	Fitzroy Crossi	11.38	150	P	Pn	21 58 23.4	0.0
	3.2nm,0.3s,baz=348,slow=11,SNR=81						
FITZ				S	Sn	22 00 22.8	-7.6
	5.1nm,0.3s,baz=191,slow=18,SNR=6.5						
FITZ	Fitzroy Crossi	11.38	150		Pn	21 58 23.6	+0.1
TNTI	Ternate	11.76	41	Pn	Pn	21 58 30.1	+1.8
TNTI	Ternate	11.76	41	P	Pn	21 58 29.8	+1.5
	1μm66nm,1.3s						
CISI	Cisompet, Garu	11.80	272	Pn	Pn	21 58 26.6	-2.3
CISI	Cisompet, Garu	11.80	272	P	Pn	21 58 26.3	-2.6
	3μm80nm,0.9s						
LEM	Lembang	12.07	276	P	Pn	21 58 31.3	-1.0
	4.9nm,0.3s,baz=84,slow=19,SNR=7.3						
MTN	Manton Dam	12.13	113		Pn	21 58 32.8	-0.3
CBJI	Citeko	12.88	277	P	Pn	21 58 41.1	-1.4
	7μm86nm,0.5s						
PSA00	Pilbara Seismi	13.27	179		Pn	21 58 47.4	+0.1
PSA00	Pilbara Seismi	13.27	179		Pn	21 58 45.8	-1.5
MYLDM	Lahad Datu	13.38	355	P	P	21 58 51.4	0.0
KSM	Kuching	13.44	315		P	21 58 52.7	+0.5
FAKI	Fak Fak	13.55	68	Pn	Pn	21 58 49.6	-1.3
SWI	Sorong	13.64	58	P	Pn	21 58 51.7	-0.3
	2μm196nm,1.0s						
SIJI	Sorong	13.64	58	P	Pn	21 58 51.1	-1.0
	4.8nm,0.3s,baz=232,slow=12,SNR=13						
SIJI				S	S	22 01 26.9	+2.4
	0.7nm,0.3s,baz=67,slow=23,SNR=2.4						
XMI	Christmas Isla	14.01	260	P	P	21 58 58.0	-0.5
XMIS	Christmas Isla	14.05	260		Pn	21 58 56.0	-1.1
XMIS	Christmas Isla	14.05	260	P	P	21 58 59.0	+0.1
KKM	Kota Kinabalu	14.60	346		P	21 59 04.9	-0.3
GIRL	Giralia	15.26	200		P	21 59 13.0	+0.7
KLSI		15.29	282	P	P	21 59 14.2	+1.5
	8.6nm,0.8s						
KASI	Kota Agung	15.34	279	P	P	21 59 13.6	+0.4
	48nm,0.6s						
LWLI	Liwa	15.87	281	P	Pn	21 59 23.0	+3.6
	3μm28nm,0.4s						
LHSI	Lahat	16.67	284	P	Pn	21 59 30.0	+1.0
	16nm,0.8s						
MNAI	Manna	17.09	282		P	21 59 33.1	+0.6
WB0	Warramunga Arr	18.27	130	P	P	21 59 46.0	+0.6
WB0				IAmb	IAmb	21 59 49.0	
	comp=Z,25nm,0.8s						
WRA	Warramunga Arr	18.34	131	P	P	21 59 46.8	+0.7
	comp=Z,6.2nm,0.3s,baz=305,slow=12,SNR=41						
WRA				S	S	22 03 03.5	-1.8
	comp=Z,2.2nm,0.3s,baz=307,slow=21,SNR=12						
WRA				ScP	ScP	22 07 24.7	-0.8
	comp=Z,0.0nm,0.3s,baz=309,slow=1.7,SNR=3.8						
WRA	Warramunga Arr	18.34	131	P	P	21 59 46.6	+0.5
WRAB	Tennant Creek	18.34	131	P	P	21 59 47.0	+0.9
WRAB				IAmb	IAmb	21 59 49.8	
	comp=Z,23nm,0.6s						
WB2	Warramunga Arr	18.35	131	P	P	21 59 46.7	+0.6
WB2				IAmb	IAmb	21 59 50.8	
	comp=Z,23nm,0.6s						
WR0	Warramunga Arr	18.50	131	P	P	21 59 48.9	+1.0
BKNI	Bangkinang	20.45	294	P	P	22 00 11.0	+2.1
AS31	Alice Springs	20.51	140	P	P	22 00 10.8	+1.3
AS31				IAmb	IAmb	22 00 14.2	
	comp=Z,12nm,0.4s						
ASAR	Alice Springs	20.51	140	P	P	22 00 11.3	+1.9
	comp=Z,11nm,0.3s,baz=316,slow=9.0,SNR=47						
ASAR				S	S	22 03 45.9	-2.1
	comp=Z,30nm,0.9s,baz=314,slow=19,SNR=30						
ASAR				ScP	ScP	22 07 29.8	-0.7
	comp=Z,5.8nm,0.6s,baz=331,slow=1.8,SNR=14						
MORW	Morawa	21.01	189	P	P	22 00 15.5	+0.9
MORW				IAmb	IAmb	22 00 18.2	
	comp=Z,46nm,1.2s						
MNSI	Mandailing Nat	21.98	293	P	P	22 00 24.2	-0.4
TGY	Tagaytay City	22.22	3	P	P	22 00 27.3	+0.3
	comp=Z,179nm,0.4s,baz=152,slow=6.9,SNR=7.9						
TGY				S	S	22 04 09.0	-7.9
	comp=Z,130nm,0.3s,baz=188,slow=9.3,SNR=3.6						
IPM	Ipoh	22.51	303	P	P	22 00 30.9	+1.2
IPM	Ipoh	22.51	303	P	P	22 00 32.0	+2.4
DLV	T Lat	22.94	331	P	P	22 00 34.7	+1.0
KULM	Kulim	23.27	305	P	P	22 00 36.7	+0.2
KULM				IAmb	IAmb	22 00 39.4	
	comp=Z,20nm,0.7s						
KULM	Kulim	23.27	305	P	P	22 00 37.0	+0.5
RPSI	Rantau Prapat	23.40	297	P	P	22 00 38.4	+0.7
PSI	Prapat	23.45	297	P	P	22 00 38.4	+0.1
	comp=Z,9.9nm,0.3s,baz=180,slow=5.9,SNR=11						
COEN	Coen	23.71	106	P	P	22 00 41.1	+0.6
FORT	Forrest	23.75	162	P	P	22 00 42.3	+1.6
NWAO	Narrogin (SRO)	24.68	185	P	P	22 00 50.7	+1.6
	comp=Z,35nm,0.7s,baz=15,slow=9.9,SNR=17						
NWAO	Narrogin (SRO)	24.68	185	P	P	22 00 50.3	+1.2
NWAO	Narrogin (SRO)	24.68	185	P	P	22 00 50.6	+1.5
NWAO				IAmb	IAmb	22 00 53.8	
	comp=Z,35nm,0.8s						
UBPT	Khong Chiam	27.29	329	P	P	22 01 13.4	+0.7
UBPT				IAmb	IAmb	22 01 15.2	
	comp=Z,24nm,1.1s						
CTA	Charters Tower	28.26	117	P	P	22 01 23.3	+2.0
	comp=Z,4.4nm,0.7s,baz=290,slow=15,SNR=4.0						
CTAO	Charters Tower	28.26	117	P	P	22 01 21.6	+0.3
CTAO				IAmb	IAmb	22 01 26.6	
	comp=Z,31nm,1.3s						
BBOO	Buckleboo	28.77	150	P	P	22 01 27.2	+1.5
QIZ	Qiongzhong	28.78	340	P	P	22 01 27.0	+1.2
QIZ				IAmb	IAmb	22 01 28.7	
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	31.11	142	P	P	22 01 48.5	+2.2
	comp=Z,9.5nm,0.4s,baz=320,slow=8.8,SNR=36						
STKA				ScP	ScP	22 08 01.0	0.0
	comp=Z,7.2nm,0.7s,baz=308,slow=3.4,SNR=11						
STKA	Stephens Creek	31.11	142	P	P	22 01 47.9	+1.6
SLVN	Son La	33.23	332	P	P	22 02 06.7	+1.8
SLVN				IAmb	IAmb	22 02 07.9	
	comp=Z,24nm,0.8s						
CM31	Chiang Mai Arr	33.51	322	P	P	22 02 08.6	+1.3
CM31				IAmb	IAmb	22 02 10.1	
	comp=Z,22nm,1.4s						
CMAR	Chiang Mai Arr	33.51	322	P	P	22 02 08.7	+1.3
	comp=Z,7.4nm,1.1s,baz=143,slow=6.5,SNR=28						
CMAR				PcP	PcP	22 04 45.0	+1.4
	comp=Z,4.8nm,0.9s,baz=176,slow=3.1,SNR=17						
CMAR	Chiang Mai Arr	33.51	322	P	P	22 02 08.4	+1.0
CHTO	Chiang Mai	33.79	323	P	P	22 02 10.9	+1.2
CHTO				IAmb	IAmb	22 02 12.2	
	comp=Z,21nm,1.3s						
GYA	Guiyang	36.73	340	⇑P	P	22 02 36.1	+1.2
GYA				pP	pP	22 03 18.3	+2.0
GYA				PcP	PcP	22 04 53.9	+0.8
GYA				pmax	pmax		
	comp=Z,18nm,1.3s						
KMI	Kunming	37.05	334	⇑P	P	22 02 40.6	+2.9
KMI				pP	pP	22 03 25.8	+6.8
KMI				pmax	pmax		
	comp=Z,54nm,1.1s						
KMI	Kunming	37.05	334	P	P	22 02 40.2	+2.6
WHN	Wuhan	38.89	353	⇑P	P	22 02 53.8	+1.1
WHN				pmax	pmax		
	comp=Z,58nm,1.0s						
ENH	Enshi	39.52	346	P	P	22 02 58.4	+0.4
ENH				IAmb	IAmb	22 02 59.4	
	comp=Z,22nm,0.9s						
NJ2	Nanjing	40.06	359	⇑P	P	22 03 03.8	+1.4
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
CD2	Chengdu	41.81	339	*e*P	P	22 03 18.0	+1.2
SHL	Shillong	43.15	322	P	P	22 03 27.7	-0.1
KSAR	Wonju Array Be	46.08	9	P	P	22 03 50.4	0.0
KSRS	Korea Array	46.09	9	P	P	22 03 49.6	-0.9
	comp=Z,4.0nm,0.9s,baz=187,slow=9.6,SNR=8.3						
KSRS				PcP	PcP	22 05 24.1	+0.7
	comp=Z,10nm,0.7s,baz=192,slow=3.2,SNR=21						
LZH	Lanzhou	46.54	342	⇑P	P	22 03 55.9	+1.6
LZH				pP	pwP	22 04 38.9	-0.5
LZH				sP	sP	22 04 58.6	-0.5
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LSA	Lhasa	46.66	325	P	P	22 03 56.5	+0.8
LSA				pmax	pmax		
	comp=Z,110nm,1.3s						
LSA	Lhasa	46.66	325	P	P	22 03 56.3	+0.6
LSA				IAmb	IAmb	22 03 58.1	
	comp=Z,66nm,1.5s						
ODAN	Odare	46.89	319	*e*P	P	22 03 56.6	-0.7
	comp=Z,44nm,0.9s						
DZM	Mont Dzumac	46.97	112	P	P	22 03 59.9	+2.0
	comp=Z,22nm,0.9s,baz=262,slow=12,SNR=10.0						
DZM	Mont Dzumac	46.97	112	P	P	22 03 59.6	+1.8
DZM				IAmb	IAmb	22 04 16.9	
	comp=Z,54nm,1.4s						
TAPN	Taplejung	47.02	320	*e*P	P	22 03 58.5	+0.1
	comp=Z,44nm,0.8s						
RAMN	Ramite	47.47	319	*e*P	P	22 04 01.9	+0.1
	comp=Z,52nm,0.8s						
MJAR	Matsushiro Arr	47.81	20	P	P	22 04 02.3	-1.7
	comp=Z,1.9nm,0.3s,baz=179,slow=7.9,SNR=4.2						
MJAR				PcP	PcP	22 05 29.6	0.0
	comp=Z,5.6nm,0.9s,baz=196,slow=3.6,SNR=5.3						
BJT	Baijiatuau	48.12	356	P	P	22 04 06.2	0.0
BJT					PcP	22 05 31.1	+0.5
GUN	Gumba	48.59	319	*e*P	P	22 04 10.3	-0.2
	comp=Z,62nm,0.7s						
PKI	Pulchoki	48.67	318	*e*P	P	22 04 10.5	-0.6
	comp=Z,32nm,0.6s						
PKIN	Phulchoki	48.68	318	*e*P	P	22 04 10.4	-0.7
	comp=Z,34nm,0.5s						
DMN	Daman	48.89	318	*e*P	P	22 04 12.2	-0.5
	comp=Z,74nm,0.9s						
KKN	Kakani	48.90	318	*e*P	P	22 04 12.2	-0.5
	comp=Z,32nm,0.9s						
HHC	Hu-ho-hao-te	49.41	352	*e*P	P	22 04 16.3	+0.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
DANN	Dangsing	50.27	318	*e*P	P	22 04 22.6	-0.6
	comp=Z,103nm,0.5s						
GTA	Gaotai	50.87	340	P	P	22 04 28.3	+1.1
GTA				pP	pwP	22 05 14.6	+1.0
GTA				sP	PcP	22 05 37.3	-3.6
GTA				pmax	pmax		
	comp=Z,58nm,1.0s						
GTA				pmax	pmax		
	comp=Z,160nm,4.5s						
GTA				LR	LR		
	comp=N,98nm,19.3s						
GTA				LR	LR		
	comp=E,180nm,20.0s						
GTA				LR	LR		
	comp=Z,140nm,18.9s						
MDJ	Mudanjiang	53.35	9	P	P	22 04 45.2	0.0
MDJ				IAmb	IAmb	22 04 45.6	
	comp=Z,16nm,1.1s						
USA0B	Ussuriysk Arra	53.36	11	P	P	22 04 45.3	+0.1
USRK	Ussuriysk Ar.	53.36	11	P	P	22 04 43.9	-1.4
	comp=Z,4.9nm,0.5s,baz=184,slow=6.5,SNR=23						
USRK	Ussuriysk Ar.	53.36	11	P	P	22 04 44.9	-0.4
MLZ	Mavora Lakes	55.66	140	P	P	22 05 03.0	+1.0
MLZ				IAmb	IAmb	22 05 08.1	
	comp=Z,29nm,1.5s						
RPZ	Rata Peaks	56.89	137	P	P	22 05 12.2	+1.5
	comp=Z,24nm,0.8s,baz=238,slow=3.2,SNR=15						
RPZ	Rata Peaks	56.89	137	P	P	22 05 12.5	+1.8
ULN	Ulaanbaatar	56.96	350	P	P	22 05 11.9	+0.7
ULN				IAmb	IAmb	22 05 13.6	
	comp=Z,44nm,1.4s						
SONM	Songino Array	57.05	349	P	P	22 05 11.9	+0.1
	comp=Z,19nm,0.6s,baz=166,slow=8.5,SNR=76						
SONM	Songino Array	57.05	349	P	P	22 05 12.1	+0.3
KLR	Kul'dur	58.19	9	P	P	22 05 18.8	-0.7
	comp=Z,1.3nm,0.4s,baz=174,slow=6.6,SNR=9.3						
WMQ	Urumqi	59.38	334	P	P	22 05 28.9	+1.0
WMQ				sP	sP	22 06 31.8	-1.9
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,450nm,6.1s						
WMQ	Urumqi	59.38	334	P	P	22 05 28.4	+0.5
WMQ				IAmb	IAmb	22 05 29.4	
	comp=Z,20nm,0.8s						
NIL	Nilore	60.63	316	P	P	22 05 35.6	-1.0
NIL				IAmb	IAmb	22 05 36.6	
	comp=Z,9.1nm,0.6s						
TLY	Talaya	61.26	349	P	P	22 05 41.6	+1.2
	comp=Z,9.6nm,0.4s,baz=189,slow=6.8,SNR=15						
TLY	Talaya	61.26	349	P	P	22 05 41.2	+0.8
TLY				IAmb	IAmb	22 05 42.2	
	comp=Z,24nm,0.9s						
KSH	Kashi	62.41	323	P	P	22 05 48.3	-0.2
KSH				pP	pwP	22 06 36.9	-0.9
KSH				pmax	pmax		
	comp=Z,46nm,0.6s						
KSH				pmax	pmax		
	comp=Z,370nm,7.4s						
SHLS	Shalkode	62.87	328	*e*P	P	22 05 49.8	-1.6
	comp=Z,13nm,0.8s,baz=328						
SHLS				*i* S	S	22 14 00.2	-5.0
	baz=328						
SATY	Saty	63.37	327	*e*P	P	22 05 54.4	-0.3
	comp=Z,7.1nm,0.7s,baz=327						
SATY				*i* S	S	22 14 11.4	0.0
	baz=327						
SATY				*e*S	S	22 14 11.4	0.0
	baz=327						
ZSN	Zaisan	63.45	334	*e*P	P	22 05 54.5	-0.5
	comp=Z,9.9nm,1.1s,baz=334						
ZSN				*i* S	S	22 14 09.1	-3.0
	baz=334						
KPKS	Kokpek	63.50	328	*e*P	P	22 05 54.5	-1.0
	comp=Z,13nm,0.8s,baz=328						
KPKS				*i* S	S	22 14 12.2	-0.7
	baz=328						
KBL	Kabul	64.05	315	P	P	22 05 58.0	-1.4
KBL				IAmb	IAmb	22 05 59.8	
	comp=Z,8.3nm,0.8s						
MK31	Makanchi Array	64.10	332	P	P	22 05 59.1	-0.2
MKAR	Makanchi Array	64.10	332	P	P	22 05 59.2	-0.1
	comp=Z,25nm,0.7s,baz=140,slow=7.8,SNR=339						
TNSS	Tian-Shan	64.14	326	*e*P	P	22 05 59.5	-0.6
	baz=326						
TNSS				*i* S	S	22 14 18.7	-2.8
	baz=326						
MDOK	Medeo	64.17	327	*e*P	P	22 05 59.4	-0.6
	baz=326						
MDOK				*i* S	S	22 14 19.1	-2.3
	baz=326						
MAKZ	Makanchi	64.25	332	P	P	22 06 00.1	-0.2
MAKZ				IAmb	IAmb	22 06 01.0	
	comp=Z,15nm,0.9s						
AAA	Alma-Ata	64.28	327	*e*P	P	22 06 00.1	-0.5
	baz=326						
AAA				*i* S	S	22 14 20.4	-2.1
	baz=326						
MTBS	Maitube	64.49	326	*e*P	P	22 06 01.6	-0.4
	baz=326						
MTBS				*i* S	S	22 14 23.0	-2.1
	baz=326						
CHKK	Chushkaly	64.67	327	*e*P	P	22 06 01.1	-1.9
	baz=327						
CHKK				*i* S	S	22 14 25.1	-2.0
	baz=327						
TDK	Taldyqorghan	64.70	329	*e*P	P	22 06 02.7	-0.5
	comp=Z,27nm,0.8s,baz=329						
TDK				*i* S	S	22 14 25.5	-2.0
	baz=329						
TKM2	Tokmak 2	64.81	326	P	P	22 06 03.6	-0.6
	SNR=5.6						
KBK	Karagaybulak	65.01	325	P	P	22 06 05.6	+0.1
	SNR=8.7						
KUU	Kurty	65.04	327	*e*P	P	22 06 04.5	-0.9
	comp=Z,16nm,0.8s,baz=327						
KUU				*i* S	S	22 14 29.7	-2.0
	baz=327						
AAK	Ala-Archa	65.25	325	P	P	22 06 05.6	-1.4
	comp=Z,6.4nm,0.7s,baz=135,slow=5.4,SNR=38						
AAK	Ala-Archa	65.25	325	P	P	22 06 07.1	+0.1
	SNR=9.5						
AAK	Ala-Archa	65.25	325	P	P	22 06 07.0	-0.1
AAK				IAmb	IAmb	22 06 08.0	
	comp=Z,7.6nm,0.8s						
AML	Almayashu	65.40	324	P	P	22 06 08.3	0.0
	SNR=18						
USP	Ospenovka	65.65	325	P	P	22 06 08.8	-0.7
	SNR=12						
EKS2	Erkin-Say	65.68	324	P	P	22 06 09.8	0.0
	SNR=8.7						
SGDS	Sogindy	65.70	326	*e*P	P	22 06 08.4	-1.3
	baz=326						
SGDS				*i* S	S	22 14 37.8	-2.0
	baz=326						
BTLS	Baital	67.03	327	*e*P	P	22 06 16.6	-1.5
	baz=326						
BTLS				*i* S	S	22 14 53.9	-1.8
	baz=326						
DZA	Taraz	67.25	323	*e*P	P	22 06 18.0	-1.5
	baz=323						
DZA				*i* S	S	22 14 56.5	-1.8
	baz=323						
IUG	Iuzhnay	67.59	322	*e*P	P	22 06 21.0	-0.8
	comp=Z,4.7nm,0.9s,baz=322						
IUG				*i* S	S	22 15 00.7	-2.0
	baz=322						
SEM	Semipalatinsk	67.68	334	*e*P	P	22 06 20.8	-1.6
	comp=Z,11nm,0.8s,baz=334						
SEM				*i* S	S	22 15 01.3	-2.4
	baz=334						
KK31	Karatay Array	67.86	323	P	P	22 06 22.6	-0.8
KKAR	Karatay Array	67.86	323	P	P	22 06 22.6	-0.8
SOCY	Socotra	68.40	287	P	P	22 06 26.7	-0.6
ZAA0	Zalesovo Array	68.58	339	P	P	22 06 26.8	-0.7
ZALV	Zalesovo Beam	68.58	339	P	P	22 06 26.6	-0.9
	comp=Z,16nm,0.3s,baz=141,slow=5.0,SNR=116						
ZALV	Zalesovo Beam	68.58	339	P	P	22 06 26.7	-0.8
KURBB	Kurchatov Arra	68.60	333	P	P	22 06 27.1	-0.5
	comp=Z,6.5nm,0.6s,baz=138,slow=5.4,SNR=93						
KURK	Kurchatov	68.62	333	P	P	22 06 27.5	-0.3
KURK				IAmb	IAmb	22 06 29.0	
	comp=Z,21nm,0.9s						
PEA0B	Petropavlovsk-	69.10	23	P	P	22 06 31.6	+0.9
PEA0B				IAmb	IAmb	22 06 40.3	
	comp=Z,24nm,1.4s						
PETK	Petropavlovsk-	69.10	23	P	P	22 06 30.6	-0.1
	comp=Z,7.2nm,0.7s,baz=179,slow=0.9,SNR=16						
PETK	Petropavlovsk-	69.10	23	P	P	22 06 30.9	+0.1
YAK	Yakutsk	70.48	5	P	P	22 06 38.4	-0.5
	comp=Z,8.3nm,0.5s,baz=140,slow=1.0,SNR=5.9						
YAK	Yakutsk	70.48	5	P	P	22 06 38.1	-0.9
YAK				IAmb	IAmb	22 06 39.2	
	comp=Z,16nm,0.6s						
OPO	Ambohidratompo	70.91	253	P	P	22 06 44.4	+1.7
	comp=Z,2.0nm,0.4s,baz=112,slow=7.6,SNR=4.2						
BRZS	Berezniki	70.92	330	*e*P	P	22 06 41.1	-0.8
	comp=Z,5.9nm,0.8s,baz=330						
BRZS				*i* S	S	22 15 39.3	-1.8
	baz=330						
MA2	Magadan	72.00	16	P	P	22 06 48.5	+0.4
MA2				IAmb	IAmb	22 06 50.5	
	comp=Z,16nm,0.8s						
VNDA	Vanda	72.63	171	P	P	22 06 54.7	+3.0
	comp=Z,2.5nm,0.5s,baz=316,slow=6.1,SNR=20						
VNDA	Vanda	72.63	171	P	P	22 06 54.3	+2.6
GEYT	Alibeck	73.42	313	P	P	22 06 56.6	-0.5
	comp=Z,5.2nm,0.8s,baz=163,slow=5.7,SNR=11						
GEYT	Alibeck	73.42	313	P	P	22 06 56.8	-0.3
GYA0B	ALIBECK ARRAY	73.42	313	P	P	22 06 56.8	-0.2
BVAR	Borovoye Array	73.95	332	P	P	22 06 59.4	-0.4
	comp=Z,3.1nm,0.6s,baz=34,slow=16,SNR=34						
BRVK	Borovoye	74.03	332	P	P	22 06 59.4	-0.8
JOHN	Johnston Islan	74.23	70	P	P	22 06 59.7	-2.4
ABKAR	Akbulak array	77.34	325	P	P	22 07 18.1	-1.0
ABKAR	Akbulak array	77.34	325	P	P	22 07 18.5	-0.6
QRN	Al-Qurain	78.25	302	*e*P		22 07 22.1	
RDF	Al-Radifah	78.61	302	⇓*e*P		22 07 24.8	
RAYN	Ar Rayn	79.00	296	P	P	22 07 28.1	-0.7
AKTO	Aktyubinsk	79.00	325	P	P	22 07 27.1	-1.0
	comp=Z,10nm,0.6s,baz=112,slow=7.2,SNR=44						
MIB	Mutribah	79.03	302	*e*P		22 07 27.2	

RST	Umm Al-Ruwaisa	79.23	302	*e*P		22 07 27.6	
TIXI	Tiksi	79.94	3	P	P	22 07 31.6	-1.2
TIXI				IAmb	IAmb	22 07 33.2	
	comp=Z,11nm,0.7s						
ARU	Arti	81.54	331	P	P	22 07 40.0	-1.5
KMBO	Kilima Mbogo	82.37	270	P	P	22 07 48.2	+1.0
	comp=Z,6.1nm,0.9s,baz=50,slow=8.2,SNR=13						
BILL	Bilibino	82.87	16	P	P	22 07 49.2	+1.0
GNI	Garni	83.95	312	P	P	22 07 54.8	+0.2
BELG	Belogornoye	85.74	324	P	P	22 08 02.1	-0.8
	comp=Z,19nm,0.8s,baz=27,slow=6.8,SNR=16						
KBZ	Khabaz	86.23	315	P	P	22 08 05.6	+0.1
	comp=Z,8.5nm,0.8s,baz=113,slow=4.8,SNR=37						
MARD	Mardin	86.23	308	P	P	22 08 05.9	0.0
MARD				IAmb	IAmb	22 08 06.9	
	comp=Z,7.8nm,0.8s						
KIV	Kislovodsk	86.43	315	P	P	22 08 06.6	-0.1
LSZ	Lusaka	89.31	255	P	P	22 08 22.2	+1.1
LSZ				IAmb	IAmb	22 08 23.2	
	comp=Z,6.6nm,0.9s						
BOSA	Boshof	89.99	241	P	P	22 08 25.3	+1.4
	comp=Z,3.1nm,0.6s,baz=100,slow=3.9,SNR=14						
BOSA	Boshof	89.99	241	P	P	22 08 24.9	+0.9
SNAA	Sanae	91.92	195	P	P	22 08 34.4	+2.5
BRTR	Keskin Array B	92.19	310	P	P	22 08 32.6	-1.2
	comp=Z,1.7nm,0.8s,baz=97,slow=6.3,SNR=8.0						
BRTR	Keskin Array B	92.19	310	P	P	22 08 32.4	-1.5
BELA	Belgrano 2	92.84	185	P	P	22 08 36.8	+0.8
VNA2	Neumayer--Watz	93.55	195	P	P	22 08 41.9	+2.5
	baz=116,slow=3.8						
VNA3	Neumayer Olymp	93.93	195	P	P	22 08 34.1	-7.1
VNA1	Neumayer--Stat	93.95	195	P	P	22 08 46.1	+5.0
A21K	Barrow	95.71	19	P	P	22 08 49.8	+0.7
	baz=261						
AKASG	Malin Array Be	96.61	320	P	P	22 08 51.8	-1.9
	comp=Z,0.8nm,0.5s,baz=80,slow=5.2,SNR=5.7						
MLY	Manley	97.21	25	P	Pdif	22 08 56.5	+0.4
	baz=266						
COLD	Coldfoot	97.56	23	P	Pdif	22 08 58.5	+0.8
	baz=267						
ODBI	Odobesti	97.68	315	⇑P	P	22 08 55.9	-2.7
VRI	Vrincioaia	97.91	315	⇑P	P	22 08 58.9	-0.8
PLOR	Plostina	97.97	315	⇑P	P	22 08 58.4	-1.6
TESR	Tescani	98.01	316	⇑P	P	22 08 58.9	-1.2
MLR	Muntele Rosu	98.44	315	⇑P	P	22 09 01.1	-1.0
ILAR	Eielson Array	98.84	26	P	P	22 09 02.0	-1.4
	comp=Z,0.5nm,0.9s,baz=238,slow=5.2,SNR=5.0						
BURAR	Bucovina Array	99.04	317	⇑P	Pdif	22 09 03.7	-1.0
ARCES	ARCESS Array B	99.13	339	P	Pdif	22 09 04.5	-0.1
	comp=Z,1.7nm,0.9s,baz=69,slow=4.0,SNR=4.3						
M24K	Tolsona, Glenn	99.15	28	P	Pdif	22 09 05.4	+0.6
	baz=270						
ARR	Arges	99.36	315	⇑P	Pdif	22 09 05.3	-0.9
N25K	Chitina, Valde	99.90	29	P	Pdif	22 09 08.7	+0.5
	baz=271						
SCRK	Sand Creek	100.11	26	P	Pdif	22 09 09.8	+0.6
	baz=272						
INK	Inuvik	103.78	22	Pdiff	Pdif	22 09 24.8	-0.4
	comp=Z,1.6nm,1.0s,baz=219,slow=4.2,SNR=3.5						
YKA	Yellowknife Ar	113.21	24	PKiKP	PKiKP	22 13 59.3	-0.6
	comp=Z,1.2nm,0.7s,baz=321,slow=1.3,SNR=20						
H04D	Lebanon	115.27	45	P	PKPdf	22 14 04.8	+0.4
	baz=284						
I04A	Tendick Farm,	115.68	45	P	PKiKP	22 14 05.4	+0.1
	baz=284						
J04D	Umpqua Nationa	116.02	46	P	PKiKP	22 14 06.4	+0.2
	baz=284						
G05D	Wamic, OR	116.07	43	P	PKiKP	22 14 06.3	+0.3
	baz=286						
N02D	Trinity Center	116.11	48	P	PKPdf	22 14 06.3	0.0
	baz=282						
L04D	Klamath Falls	116.12	47	P	PKiKP	22 14 06.4	+0.1
	baz=283						
J05D	Fort Rock, OR	116.63	46	P	PKiKP	22 14 07.8	+0.6
	baz=285						
NEW	Newport	117.89	39	P	PKiKP	22 14 10.2	+0.8
	baz=290						
TORD	Torodi Ar. Bea	119.01	280	PKP	PKPdf	22 14 11.3	-1.1
	comp=Z,3.3nm,0.6s,baz=59,slow=1.9,SNR=12						
TORD	Torodi Ar. Bea	119.01	280		PKPdf	22 14 11.9	-0.5
SBC	Santa Barbara	119.75	55	P	PKiKP	22 14 14.0	+0.6
	baz=281						
SCZ2	Santa Cruz Isl	119.90	56	P	PKiKP	22 14 14.3	+0.6
	baz=281						
NVAR	Mina Array Bea	119.99	50	PKP	PKiKP	22 14 14.8	+0.7
	comp=Z,1.1nm,0.6s,baz=267,slow=2.1,SNR=9.0						
NVAR	Mina Array Bea	119.99	50		PKiKP	22 14 14.2	+0.1
SNCC	San Nicolas Is	120.13	56	P	PKiKP	22 14 14.4	+0.1
	baz=281						
MSO	Missoula	120.42	40	P	PKiKP	22 14 14.8	+0.3
	baz=292						
CWC	Cottonwood Cre	120.64	52	P	PKPdf	22 14 15.1	-0.1
	baz=283						
ESDC	Sonseca Array	120.93	312	PKP	PKiKP	22 14 15.9	+0.2
	comp=Z,1.6nm,1.0s,baz=7.0,slow=3.2,SNR=4.3						
EDW2	Edwards Air Fo	121.05	54	P	PKiKP	22 14 16.6	+0.5
	baz=282						
GRAC	Grapevine Rang	121.06	52	P	PKiKP	22 14 16.3	+0.3
	baz=284						
MPMC	Manual Prospec	121.19	53	P	PKiKP	22 14 16.8	+0.4
	baz=284						
HLID	Hailey	121.29	44	P	PKiKP	22 14 16.9	+0.5
	baz=290						
BFSC	Mount Baldy Ra	121.46	55	P	PKiKP	22 14 17.0	+0.1
	baz=282						
FURC	Furnace Creek,	121.58	52	P	PKiKP	22 14 17.5	+0.6
	baz=284						
ELK	Elko	121.63	47	PKP	PKiKP	22 14 17.5	+0.2
	comp=Z,2.6nm,0.7s,baz=323,slow=4.3,SNR=12						
GSC	Goldstone, Bar	121.91	53	P	PKiKP	22 14 18.3	+0.5
	baz=284						
TPNV	Topopah Spring	121.94	51	P	PKPdf	22 14 17.6	-0.1
	baz=285						
BBRC	Big Bear Solar	122.05	55	P	PKiKP	22 14 18.3	0.0
	baz=283						
BOZ	Bozeman (W)	122.38	40	P	PKiKP	22 14 18.7	+0.2
	baz=294						
HEC	Hector,Ludlow	122.39	54	P	PKiKP	22 14 18.7	0.0
	baz=284						
EGMT	Eagleton	122.50	37	P	PKiKP	22 14 19.0	+0.5
	baz=297						
TPFO	Pinon Flats	122.57	55	P	PKiKP	22 14 19.2	0.0
	baz=283						
MONP2	Monument Peak	122.75	56	P	PKiKP	22 14 19.6	0.0
	baz=282						
BELC	Belle Mtn. Jos	122.86	55	P	PKiKP	22 14 20.1	+0.3
	baz=283						
GMRC	Granite Mounta	122.94	54	P	PKiKP	22 14 20.2	+0.3
	baz=284						
SWSC	Sam W. Stewart	123.25	56	P	PKiKP	22 14 20.8	+0.4
	baz=283						
IRM	Iron Mountain	123.51	54	P	PKiKP	22 14 21.6	+0.8
	baz=284						
DUG	Dugway, Tooele	123.56	47	P	PKiKP	22 14 21.4	+0.4
	baz=290						
RLMT	Red Lodge	124.09	40	P	PKiKP	22 14 22.2	+0.2
	baz=296						
PDMCI	Parker Dam,Lak	124.28	54	P	PKiKP	22 14 22.8	+0.5
	baz=285						
BW06	Boulder Array	124.88	43	P	PKiKP	22 14 23.8	+0.1
	baz=294						
PDAR	Pinedale Array	124.88	43	PKP	PKPdf	22 14 21.9	-1.3
	comp=Z,0.7nm,0.5s,baz=127,slow=1.3,SNR=13						
PDAR	Pinedale Array	124.88	43	PKPdf	PKPdf	22 14 23.1	-0.1
KIC	Kosan Boka	124.90	272	*e*PKIKP	PKPdf	22 14 23.7	-0.1
	comp=Z,9.3nm,0.7s						
DBIC	Dimbokro	125.04	272	PKP	PKPdf	22 14 23.2	-0.9
	comp=Z,4.2nm,0.7s,baz=101,slow=3.5,SNR=8.7						
DBIC	Dimbokro	125.04	272		PKPdf	22 14 24.2	+0.2
LIC	Lamto	125.17	272	*e*PKIKP	PKPdf	22 14 24.2	-0.1
	comp=Z,22nm,0.7s						
TIC	Toumodi	125.20	272	*e*PKIKP	PKPdf	22 14 24.3	-0.1
LAO	LASA Array	125.25	37	P	PKiKP	22 14 24.6	+0.6
	baz=300						
214A	Organ Pipe Nat	125.94	56	P	PKiKP	22 14 26.1	+0.3
	baz=284						
WUAZ	Wupatki	126.13	52	P	PKiKP	22 14 26.6	+0.4
	baz=288						
O20A	White River Ci	126.84	45	P	PKiKP	22 14 27.7	+0.1
	baz=293						
K22A	Casper	126.95	42	P	PKiKP	22 14 27.8	+0.1
	baz=297						
TUC	Tucson	127.51	55	P	PKiKP	22 14 29.4	+0.4
	baz=286						
W18A	Petrified Fore	127.52	52	P	PKiKP	22 14 29.0	-0.1
	baz=289						
RSSD	Black Hills	127.86	39	P	PKiKP	22 14 29.4	-0.1
	baz=300						
N23A	Red Feather La	128.12	44	P	PKiKP	22 14 30.2	0.0
	baz=296						
MDND	Maddock	128.39	33	P	PKiKP	22 14 30.7	+0.6
	baz=307						
ULM	Lac du Bonnet	128.75	29	PKP	PKPdf	22 14 29.7	-0.4
	comp=Z,1.9nm,0.7s,baz=243,slow=1.1,SNR=3.6						
S22A	4UR Ranch, Cre	128.79	48	P	PKiKP	22 14 31.5	-0.2
	baz=293						
ISCO	Idaho Springs	128.82	45	P	PKiKP	22 14 31.5	-0.1
	baz=296						
ANMO	Albuquerque	130.11	51	P	PKiKP	22 14 34.0	-0.3
	baz=291						
PLCA	Paso Flores	130.37	170	PKP	PKiKP	22 14 34.6	+0.1
	comp=Z,1.6nm,0.6s,baz=225,slow=2.9,SNR=7.5						
PLCA				SKPbc	SKPab	22 17 39.8	+1.3
	comp=Z,6.6nm,0.9s,baz=196,slow=5.9,SNR=12						
T25A	Trinidad	130.80	47	P	PKiKP	22 14 35.6	-0.1
	baz=295						
MNTX	Cornudas Mount	132.07	54	P	PKiKP	22 14 38.4	+0.3
	baz=289						
BGNE	Belgrade	132.97	39	P	PKiKP	22 14 39.2	-0.4
	baz=304						
TXAR	Lajitas Array	134.23	57	PKhKP	PKPpre	22 14 31.2	
	comp=Z,0.3nm,0.5s,baz=232,slow=1.0,SNR=5.3						
TXAR				PKP	PKiKP	22 14 42.6	0.0
	comp=Z,0.7nm,0.5s,baz=318,slow=1.7,SNR=6.2						
TXAR				SKPbc	SKPbc	22 17 52.0	-0.3
	comp=Z,0.3nm,0.5s,baz=46,slow=3.6,SNR=3.5						
TXAR	Lajitas Array	134.23	57	PKPdf	PKiKP	22 14 42.2	-0.5
KSU1	Kansas State U	135.23	41	P	PKiKP	22 14 44.3	+0.1
	baz=304						
LSQQ	Lebel-sur-Quev	136.96	16	P	PKiKP	22 14 47.6	+0.2
	baz=336						
JCT	Junction City	136.98	54	P	PKiKP	22 14 48.0	-0.1
	baz=293						
GLMI	Grayling	137.88	26	P	PKiKP	22 14 49.8	+0.4
	baz=323						
833A	Chaparral WMA,	138.10	56	P	PKiKP	22 14 50.4	0.0
	baz=291						
435B	Jarrell	138.60	52	P	PKiKP	22 14 51.0	-0.3
	baz=295						
HDIL	Hopedale	138.74	34	P	PKiKP	22 14 51.4	+0.1
	baz=314						
U40A	Yellville	139.24	42	P	PKiKP	22 14 52.3	-0.2
	baz=306						
W39A	Magazine	139.26	44	P	PKiKP	22 14 52.6	+0.1
	baz=303						
D56A	ZEC Mazanza, M	139.40	15	P	PKiKP	22 14 52.7	+0.2
	baz=338						
PLTB	Pedras Altas	139.72	189	*e*P	PKPdf	22 14 48.9	-2.3
E56A	St. Veronique	139.79	16	P	PKiKP	22 14 53.5	+0.3
	baz=337						
G54A	Lake Saint Pet	139.91	20	P	PKiKP	22 14 53.8	+0.2
	baz=332						
SFIN	Lafayette	140.06	32	P	PKiKP	22 14 54.7	+0.7
	baz=316						
D59A	Saint-Raymond	140.12	12	P	PKiKP	22 14 54.6	+0.6
	baz=342						
I51A	Listowel	140.21	24	P	PKiKP	22 14 55.0	+0.7
	baz=327						
D61A	St Aubert, Com	140.26	11	P	PKiKP	22 14 54.9	+0.7
	baz=345						
E61A	Lac Etchemin	140.94	11	P	PKiKP	22 14 56.4	+0.7
	baz=344						
F60A	Warwick	141.08	13	P	PKiKP	22 14 56.5	+0.6
	baz=342						
G57A	Newington	141.12	17	P	PKiKP	22 14 56.4	+0.4
	baz=337						
G58A	Ormstown	141.34	16	P	PKiKP	22 14 56.9	+0.4
	baz=338						
G60A	Masonville	141.82	14	P	PKiKP	22 14 58.0	+0.5
	baz=341						
F63A	Nahmakanta, Br	141.90	10	P	PKiKP	22 14 58.2	+0.6
	baz=346						
H59A	Cadyville	141.90	16	P	PKiKP	22 14 58.2	+0.5
	baz=338						
P49A	Miami Univ. Ec	141.92	31	P	PKiKP	22 14 58.3	+0.4
	baz=319						
H58A	Gabriels	141.98	16	P	PKiKP	22 14 58.1	+0.2
	baz=337						
I57A	Carthage	141.99	18	P	PKiKP	22 14 58.1	+0.2
	baz=335						
J57A	Williamstown	142.36	19	P	PKiKP	22 14 58.9	+0.3
	baz=334						
OXF	Oxford	142.59	41	P	PKiKP	22 14 59.6	+0.2
	baz=308						
M54A	Oil Creek Stat	142.68	24	P	PKiKP	22 14 59.6	+0.2
	baz=327						
J59A	Piesco	142.76	17	P	PKiKP	22 15 00.2	+0.7
	baz=336						
I61A	Oroboro, Fairl	142.95	14	P	PKiKP	22 15 00.0	+0.2
	baz=340						
BINY	Binghamton	143.44	20	P	PKiKP	22 15 01.2	+0.3
	baz=333						
I64A	Boothbay	143.53	11	P	PKiKP	22 15 00.5	-0.4
	baz=344						
ITAB	Concordia	143.87	192	*e*P	PKPdf	22 14 58.1	-0.7
K63A	Dunstable	144.28	14	P	PKPab	22 14 57.6	+0.2
	baz=341,SNR=16						
N58A	Sunbury	144.39	22	P	PKPab	22 14 57.5	-0.4
	baz=331,SNR=14						
HRV	Adam Dziewonsk	144.45	14	P	PKPab	22 14 57.8	-0.2
	baz=341						
O57A	Amberson	144.59	23	P	PKPab	22 14 58.2	-0.5
	baz=330,SNR=13						
L62A	Suffield	144.61	16	P	PKPab	22 14 58.3	-0.3
	baz=339						
N59A	State Game Lan	144.66	20	P	PKPab	22 14 58.6	-0.3
	baz=333,SNR=56						
M60A	Port Jervis	144.67	19	P	PKPab	22 14 58.6	-0.3
	baz=335,SNR=18						
P56A	Dayton Farm, R	144.70	25	P	PKPab	22 14 58.6	-0.5
	baz=327,SNR=36						
TZTN	Tazewell	144.75	33	P	PKPab	22 14 59.1	-0.3
	baz=318,SNR=45						
R54A	Victor	144.81	29	P	PKPbc	22 14 58.8	-0.8
	baz=323,SNR=18						
N60A	Cedar Hill Far	144.93	20	P	PKPbc	22 14 59.4	-0.3
	baz=334,SNR=28						
Q56A	Snyder Ridge,	144.94	26	P	PKPbc	22 14 59.3	-0.6
	baz=326,SNR=25						
O58A	Lewisberry	144.94	22	P	PKPbc	22 14 59.1	-0.7
	baz=331,SNR=18						
M61A	Granite Spring	144.96	18	P	PKPbc	22 14 59.5	-0.3
	baz=336,SNR=23						
S54A	Dingess, Beckl	144.96	30	P	PKPbc	22 14 59.4	-0.6
	baz=322,SNR=36						
L63A	North Scituate	145.04	15	P	PKPbc	22 14 59.7	-0.4
	baz=340,SNR=8.7						
O59A	Robesonia	145.05	21	P	PKPbc	22 14 59.6	-0.6
	baz=332,SNR=15						
P57A	Homestead Farm	145.06	24	P	PKPbc	22 14 59.5	-0.7
	baz=328,SNR=17						
LRAL	Lakeview Retre	145.08	41	P	PKPbc	22 15 00.1	-0.5
	baz=309,SNR=49						
M62A	Hamden	145.09	17	P	PKPbc	22 14 59.3	-0.9
	baz=338						
DUB01	Friburgo-RJ	145.12	210	*e*P	PKPbc	22 14 59.1	-1.9
R55A	Marlinton	145.14	28	P	PKPbc	22 15 00.0	-0.6
	baz=324,SNR=30						
PAL	Palisades	145.19	18	P	PKPdf	22 15 00.4	-0.2
	baz=336,SNR=41						
Q57A	Strasburg	145.28	25	P	PKPdf	22 15 00.3	-0.5
	baz=328,SNR=10.0						
N61A	South Mountain	145.30	19	P	PKPdf	22 15 00.7	-0.1
	baz=335,SNR=12						
O60A	Telford	145.32	21	P	PKPdf	22 15 00.5	-0.3
	baz=333,SNR=15						
P58A	Pank, Wackersv	145.34	23	P	PKPdf	22 15 00.6	-0.3
	baz=330,SNR=22						
M63A	Gales Ferry	145.36	16	P	PKPdf	22 15 00.6	-0.3
	baz=339,SNR=6.9						
R56A	Bull Pasture M	145.37	27	P	PKPdf	22 15 00.6	-0.5
	baz=325,SNR=10						
M64A	Tiverton	145.44	15	P	PKPdf	22 15 00.9	0.0
	baz=341,SNR=6.7						
VAS01	Vassouras-RJ	145.47	208	*e*P	PKPdf	22 15 01.4	-0.3
ALF01	Guarapari-ES	145.47	214	*e*P	PKPdf	22 15 00.7	-1.0
CPUP	Villa Florida	145.52	185	PKPbc	PKPab	22 15 03.2	+0.7
	comp=Z,8.4nm,0.7s,baz=156,slow=1.9,SNR=17						
CPUP	Villa Florida	145.52	185		PKPab	22 15 03.1	+0.6
CPUP	Villa Florida	145.52	185	*e*P	PKPdf	22 15 00.7	-0.9
M65A	Busby, Falmout	145.56	14	P	PKPdf	22 15 01.0	-0.1
	baz=342						
P59A	Jarrettsville	145.57	22	P	PKPdf	22 15 01.3	0.0
	baz=331,SNR=13						
N63A	Mattituck	145.62	16	P	PKPdf	22 15 01.2	0.0
	baz=338						
Q58A	Fox Den Farm,	145.66	24	P	PKPdf	22 15 01.3	-0.1
	baz=329,SNR=13						
P60A	Greenville	145.69	21	P	PKPdf	22 15 01.7	+0.2
	baz=332,SNR=13						
U54A	Nelsons Funny	145.69	32	P	PKPdf	22 15 01.7	0.0
	baz=320,SNR=19						
R57A	Stanardsville	145.85	26	P	PKPdf	22 15 02.2	+0.4
	baz=327,SNR=9.0						
BLA	Blacksburg	145.86	29	P	PKPdf	22 15 02.1	+0.2
	baz=323						
S56A	Natural Bridge	145.89	28	P	PKPdf	22 15 02.1	+0.2
	baz=325,SNR=5.7						
R58A	Rapidan	146.07	25	P	PKPdf	22 15 02.7	+0.6
	baz=328,SNR=7.9						
S57A	Dark Hollow, R	146.10	27	P	PKPdf	22 15 02.8	+0.6
	baz=326,SNR=6.3						
Q59A	Harwood	146.13	23	P	PKPdf	22 15 02.7	+0.4
	baz=330						
BRAL	Brewton	146.19	44	P	PKPdf	22 15 03.0	+0.5
	baz=307						
T56A	Rocky Mt	146.19	29	P	PKPdf	22 15 02.9	+0.5
	baz=323,SNR=10.0						
Q60A	Greensboro	146.32	22	P	PKPbc	22 15 03.4	-0.6
	baz=332						
R58B	Mineral	146.40	26	P	PKPdf	22 15 03.6	+0.8
	baz=328,SNR=5.3						
CBN	Corbin Frederi	146.41	25	P	PKPbc	22 15 03.6	-0.7
	baz=328						
R59A	King George, V	146.52	24	P	PKPdf	22 15 03.8	+0.9
	baz=329						
U56A	King	146.56	30	P	PKPdf	22 15 03.8	+0.7
	baz=322						
T57A	Hurt	146.58	28	P	PKPbc	22 15 04.3	-0.6
	baz=324,SNR=8.8						
S58A	Poland Farm, P	146.62	26	P	PKPdf	22 15 04.0	+0.9
	baz=327,SNR=5.6						
R60A	Leonardtown, M	146.68	24	P	PKPbc	22 15 04.4	-0.7
	baz=330						
S59A	Mechanicsville	146.82	25	P	PKPbc	22 15 05.3	-0.2
	baz=328						
V56A	Mocksville	146.92	31	P	PKPbc	22 15 05.2	-0.7
	baz=321,SNR=11						
T58A	Grand View Acr	146.96	27	P	PKPbc	22 15 05.5	-0.5
	baz=326,SNR=9.2						
BSFB	Barra de Sao F	146.97	215	*e*P	PKPdf	22 15 03.7	-0.5
KMSC	Kings Mountain	147.00	33	P	PKPbc	22 15 05.6	-0.5
	baz=320,SNR=22						
U57A	Blanch	147.00	29	P	PKPbc	22 15 05.5	-0.6
	baz=324,SNR=11						
GOGA	Godfrey	147.04	37	P	PKPbc	22 15 05.7	-0.6
	baz=314,SNR=28						
S60A	Water View	147.13	24	P	PKPbc	22 15 06.1	-0.2
	baz=329						
BSCB	Bom Sucesso	147.19	207	*e*P	PKPdf	22 15 04.4	-0.2
V57A	Coltrane Farms	147.22	30	P	PKPbc	22 15 05.9	-0.8
	baz=323,SNR=17						
SJMB	Sao Joao De Ma	147.26	215	*e*P	PKPdf	22 15 04.2	-0.6
T59A	Double "B" Far	147.37	26	P	PKPbc	22 15 06.5	-0.5
	baz=327,SNR=16						
W56A	Indian Trail	147.40	32	P	PKPbc	22 15 06.5	-0.7
	baz=321,SNR=18						
U58A	Oxford	147.40	28	P	PKPbc	22 15 06.4	-0.8
	baz=325,SNR=18						
S61A	Accomac	147.54	23	P	PKPbc	22 15 07.2	-0.3
	baz=331						
T60A	Surry	147.58	25	P	PKPbc	22 15 07.4	-0.2
	baz=329,SNR=7.4						
V58A	Windy Hill, Pi	147.62	29	P	PKPbc	22 15 07.1	-0.7
	baz=324,SNR=9.1						
W57A	Gilead	147.69	31	P	PKPbc	22 15 07.6	-0.4
	baz=322,SNR=12						
U59A	Littleton	147.78	27	P	PKPbc	22 15 07.7	-0.5
	baz=326						
U60A	Pendleton	147.97	26	P	PKPbc	22 15 08.2	-0.5
	baz=327,SNR=5.9						
V59A	Middlesex	148.06	28	P	PKPbc	22 15 08.5	-0.4
	baz=325,SNR=6.7						
X57A	Johnson Farm,	148.17	32	P	PKPbc	22 15 08.8	-0.4
	baz=321						
W58A	Raeford	148.18	30	P	PKPbc	22 15 08.9	-0.4
	baz=323,SNR=8.2						
LVC	Limon Verde	148.21	165	*e*P	PKPdf	22 15 05.5	-1.2
TRCB	Terra Rica	148.26	194	*e*P	PKPdf	22 15 05.5	-0.9
TIGA	Tifton	148.31	40	P	PKPbc	22 15 09.5	-0.2
	baz=312						
U61A	Possum Corner	148.39	25	P	PKPbc	22 15 09.6	-0.2
	baz=328						
W59A	Clinton	148.45	29	P	PKPbc	22 15 09.6	-0.3
	baz=324						
X58A	Rowland	148.49	31	P	PKPbc	22 15 09.7	-0.4
	baz=322						
V60A	Jim Taylor Roa	148.51	27	P	PKPbc	22 15 09.6	-0.4
	baz=327						
BB19B	Bebedouro	148.67	201	*e*P	PKPdf	22 15 06.3	-0.7
V61A	Roper	148.79	26	P	PKPbc	22 15 10.5	-0.3
	baz=328						
Y58A	Scranton	148.83	32	P	PKPbc	22 15 10.6	-0.4
	baz=321						
X59A	McDuffie Farm,	148.85	30	P	PKPbc	22 15 10.6	-0.3
	baz=323						
W60A	Pink Hill	148.89	28	P	PKPbc	22 15 10.6	-0.4
	baz=325						
PCMB	Pacaembu	149.05	197	*e*P	PKPdf	22 15 07.0	-0.6
W61A	Ground Anchor	149.12	27	P	PKPbc	22 15 11.2	-0.5
	baz=327						
X60A	Albert Glenn T	149.15	29	P	PKPbc	22 15 11.2	-0.6
	baz=324,SNR=6.1						
NHSC	New Hope	149.16	34	P	PKPbc	22 15 11.7	-0.1
	baz=319						
Y59A	Loris	149.17	31	P	PKPbc	22 15 11.8	0.0
	baz=322						
V62A	Hyde County Ai	149.25	26	P	PKPbc	22 15 12.0	0.0
	baz=329						
158A	Hollywood	149.43	34	P	PKPbc	22 15 12.4	0.0
	baz=319						
Y60A	Bolivia	149.49	30	P	PKPbc	22 15 11.9	-0.7
	baz=323						
Z59A	Georgetown, SC	149.54	33	P	PKPbc	22 15 12.5	-0.3
	baz=321						
GDU01	Guandu, BA	150.02	223	*e*P	PKPdf	22 15 08.8	-0.5
AQDB	Aquidauana	151.12	189	*e*P	PKPdf	22 15 09.8	-1.0
IPMB	Ipameri, GO	151.35	205	*e*P	PKPdf	22 15 10.4	-1.0
DWPF	Disney Wildern	151.91	43	P	PKPbc	22 15 17.8	-0.7
	baz=311						
RCBR	Riachuelo	151.95	241	*e*P	PKPdf	22 15 11.0	-1.4
JANB	Januaria	151.96	214	*e*P	PKPdf	22 15 11.6	-0.8
NBPA	Parau_RN	153.03	240	*e*P	PKPdf	22 15 13.3	-0.6
BDFB	Brasilia	153.34	207	PKP	PKPdf	22 15 15.5	+1.1
	comp=Z,0.9nm,0.4s,baz=192,slow=3.7,SNR=6.0						
BDFB				PKPbc	PKiKP	22 15 22.7	+0.5
	comp=Z,4.9nm,0.7s,baz=90,slow=1.0,SNR=6.0						
BDFB	Brasilia	153.34	207		PKPdf	22 15 15.3	+0.9
PP1B	Ponte de Pedra	153.78	192	*e*P	PKPdf	22 15 14.5	-0.4
ARAG	Araguaiana, MT	154.78	199	*e*P	PKPdf	22 15 16.2	-0.1
NBMO	Morrinhos-CE	156.77	241	*e*P	PKPdf	22 15 19.2	+0.2
SNDB	Serra Nova Dou	158.02	204	*e*P	PKPdf	22 15 20.2	-0.3
SMTB	Santa Maria do	158.82	217	*e*P	PKPdf	22 15 21.0	-0.5
CZSB	Cruzeiro do Su	159.89	142	*e*P	PKPdf	22 15 21.9	-0.9
OTAV	Otavalo	160.24	113	*e*P	PKPdf	22 15 20.5	-3.3
ROSB	Rosrio	160.45	236	*e*P	PKPdf	22 15 21.7	-1.7
ETMB	Extrema	161.13	162	*e*P	PKPdf	22 15 23.2	-0.9
NPGB	Novo Progresso	164.05	198	*e*P	PKPdf	22 15 26.6	-0.3

MOS ***21*** *21:59:53.6±0.0, 42°.90N×45°.61E, h7^{km}, MPVA3.0*

NORS 21 21:59:54.2±0.0, 42°.92N×45°.69E, h24^{km}, MPVA3.0,

Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GROC	Groznyy	0.30	15	*e*Pg	Pb	22 00 01.6	+0.5
DVE	Vedeno	0.32	82	*e*Pg	Pn	22 00 02.8	-0.7
BTLR	Botlikh	0.47	122	*e*Pg	Pn	22 00 06.2	+0.8
BTLR				*e*Sg	Sn	22 00 14.7	+1.7
KMGR	Komgaron	0.62	284	*e*Pg	Pn	22 00 07.7	+0.1
KMGR				*e*Sg	Sn	22 00 17.8	+1.0
DBC	Dubki	0.84	82	*e*Pg	Pn	22 00 13.4	+2.7
DBC				*e*Sg	Sn	22 00 30.4	+8.1
KRNR	Karanay	0.90	95	*e*Pg	Pn	22 00 15.0	+3.6
KRNR				*e*Sg	Sn	22 00 28.0	+4.2
ARKR	Arakani	1.01	108	*e*Pg	Pb	22 00 16.3	+3.3
ARKR				*e*Sg	Sn	22 00 32.2	+5.8
LACR	Lac	1.03	266	*e*Pg	Pb	22 00 13.7	+0.4
LACR				*e*Sg	Sn	22 00 28.8	+1.9
TRKR	Terskaya	1.07	320	*e*Pg	Pb	22 00 15.9	+1.9

TRKR				*e*Sg	Sn	22 00 32.3	+4.6
GNBR	**Gunib**	1.08	119	*e*Pg	Pb	22 00 18.4	+4.2
GNBR				*e*Sg	Sn	22 00 32.9	+4.8
STDR	**Stavd-Durt**	1.27	291	*e*Pg	Pb	22 00 19.3	+1.8
STDR				*e*Sg	Sb	22 00 38.2	+4.7
ZEI	**Tsey**	1.32	265	*e*Pg	Pb	22 00 18.9	+0.4
ZEI				*e*Sg	Sb	22 00 36.7	+1.7
LSNR	**Lesken**	1.41	286	*e*Pg	Pb	22 00 21.0	+1.1
LSNR				*e*Sg	Sb	22 00 40.7	+3.3
DIGR	**Digorskoe uzhe**	1.55	270	*e*Pg	Pb	22 00 22.5	+0.2
DIGR				*e*Sg	Sb	22 00 43.2	+1.7

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*DRS **21** 21:59:59.8±0.0, 42°.97N×45°.80E, h16^{km}, ML2.4/5*
*MOS **21** 22:00:00.3±0.0, 42°.95N×45°.62E, h13^{km}, MPVA3.4*
*NORS **21** 22:00:01.5±0.0, 42°.91N×45°.65E, h18^{km}, MPVA3.5*
ISC 21 22:00:02.1±1.0**, 42°.96N**±0°.03×**45°.61E**±0°.02**, h10**^{km}±9^{km}**, n30,** σ**0^{s}.84**/55**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.28**	**30**	*e*Pg	**Pg**	**22 00 07.7**	**0.0**
GROC				*e*Sg	**Sg**	**22 00 12.7**	**+1.2**
GROC	**Groznyy**	**0.28**	**30**	*e*Sg	**Pg**	**22 00 07.2**	**-0.5**
DVE	**Vedeno**	**0.38**	**91**	*e*Pg	**Pg**	**22 00 09.8**	**+0.2**
DVE				*e*Sg	**Sg**	**22 00 15.1**	**+0.4**
BTLR	**Botlikh**	**0.54**	**123**	*e*Pg	**Pg**	**22 00 12.2**	**-0.5**
BTLR				*e*Sg	**Sg**	**22 00 20.0**	**+0.1**
KMGR	**Komgaron**	**0.55**	**280**	*e*Pg	**Pg**	**22 00 13.2**	**+0.3**
KMGR				*e*Sg	**Sb**	**22 00 23.2**	**+1.3**
VLKR	**Vladikavkaz**	**0.69**	**277**	*e*Pg	**Pg**	**22 00 15.8**	**+0.3**
VLKR				*e*Sg	**Sb**	**22 00 27.2**	**+1.3**
PNSH	**Pansheti**	**0.80**	**246**	P	**Pg**	**22 00 16.5**	**-1.1**
DBC	**Dubki**	**0.90**	**86**	*e*Pg	**Pg**	**22 00 19.1**	**-0.4**
DBC				*e*Sg	**Sg**	**22 00 31.4**	**+0.2**
KRNR	**Karanay**	**0.96**	**98**	*e*Pg	**Pg**	**22 00 20.7**	**-0.1**
KRNR				*e*Sg	**Sn**	**22 00 34.8**	**-0.9**
LACR	**Lac**	**0.97**	**262**	*e*Pg	**Pg**	**22 00 19.4**	**-1.4**
LACR				*e*Sg	**Sg**	**22 00 33.1**	**-0.4**
TRKR	**Terskaya**	**0.99**	**320**	*e*Pg	**Pg**	**22 00 21.4**	**+0.2**
TRKR				*e*Sg	**Sn**	**22 00 37.8**	**+1.5**
ARNR	**Ardon**	**0.99**	**283**	*e*Pg	**Pg**	**22 00 20.9**	**-0.3**
ARNR				*e*Sg	**Sn**	**22 00 36.8**	**+0.5**
ARKR	**Arakani**	**1.08**	**109**	*e*Pg	**Pg**	**22 00 23.1**	**+0.2**
ARKR				*e*Sg	**Sn**	**22 00 39.0**	**+0.4**
KORR	**Kora**	**1.14**	**277**	*e*Pg	**Pb**	**22 00 23.3**	**-0.6**
KORR				*e*Sg	**Sn**	**22 00 39.9**	**0.0**
GNBR	**Gunib**	**1.15**	**119**	*i* Pg	**Pb**	**22 00 24.0**	**-0.2**
GNBR				*e*Sg	**Sn**	**22 00 40.4**	**+0.1**
STDR	**Stavd-Durt**	**1.20**	**290**	*e*Pg	**Pn**	**22 00 24.6**	**-0.4**
STDR				*e*Sg	**Sn**	**22 00 43.2**	**+1.8**
LGD	**Lagodekhi**	**1.22**	**157**	P	**Pn**	**22 00 24.3**	**-1.0**
LGD				S	**Sb**	**22 00 40.0**	**-1.1**
PRTR	**Priterechnaya**	**1.25**	**310**	*e*Pg	**Pn**	**22 00 25.2**	**-0.4**
PRTR				*e*Sg	**Sn**	**22 00 43.7**	**+1.2**
ZEI	**Tsey**	**1.27**	**263**	*e*Pg	**Pn**	**22 00 24.5**	**-1.6**
ZEI				*e*Sg	**Sb**	**22 00 42.0**	**-0.6**
LSNR	**Lesken**	**1.34**	**284**	*e*Pg	**Pn**	**22 00 26.8**	**-0.2**
LSNR				*e*Sg	**Sg**	**22 00 46.0**	**+0.7**
BTNK	**Botanikuri**	**1.41**	**205**	P	**Pg**	**22 00 29.2**	**0.0**
DIGR	**Digorskoe uzhe**	**1.49**	**268**	*e*Pg	**Pn**	**22 00 28.1**	**-1.1**
DIGR				*e*Sg	**Sn**	**22 00 47.6**	**-1.2**
DDFL	**Dedoflistskaro**	**1.56**	**166**	P	**Pg**	**22 00 33.5**	**+1.4**
KZRT	**Kazreti**	**1.81**	**210**	P	**Pn**	**22 00 33.7**	**+0.2**
KZRT				S	**Sb**	**22 00 58.3**	**+0.1**
KBTC	**Kuba-Taba**	**1.82**	**299**	*e*Pg	**Pn**	**22 00 32.3**	**-1.2**
KBTC				*e*Sg	**Sn**	**22 00 56.3**	**-0.4**
BRNG	**Burnasheti**	**1.88**	**225**	P	**Pn**	**22 00 35.4**	**+0.8**
BRNG				S	**Sb**	**22 01 01.4**	**+1.1**
DMNI	**Dmanisi**	**1.94**	**213**	P	**Pn**	**22 00 35.9**	**+0.5**
DMNI				S	**Sb**	**22 01 02.3**	**+0.3**
BKRG	**Bakuriani**	**1.96**	**233**	P	**Pn**	**22 00 36.5**	**+0.9**
NEY	**Neytrino**	**2.13**	**279**	*e*Pg	**Pn**	**22 00 37.6**	**-0.4**
NEY				*e*Sg	**Sb**	**22 01 06.5**	**-1.1**
ABS	**Abastumani**	**2.40**	**241**	P	**Pn**	**22 00 42.0**	**+0.4**
ABS				S	**Sb**	**22 01 16.0**	**+0.8**

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*IDC **21** 22:18:32.2±4.5, 52°.13N×173°.09W, h0^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.6/55, mbtmp3.7/9, ML3.3/2, MS4.2/1, Ms1 4.2/1, ms1mx2.9/59, Error ellipse: s-maj=108.6km s-min=25.3km az=172.0*
*AEIC **21** 22:18:33.5±1.5, 51°.55N±0°.03×172°.62W±0°.10, h40^{km}±7^{km}, ML3.2/15, mb3.6/28(NEIC), Error ellipse: s-maj=8.8km s-min=4.6km az=87.0*
*NEIC **21** 22:18:33.3±1.2, 51°.52N±0°.07×172°.60W±0°.08, h30^{km}±6^{km}, Error ellipse: s-maj=11.7km s-min=4.3km az=210.0*
ISC 21 22:18:32.7±1.2**, 51°.5N**±0°.1×**172°.62W**±0°.04**, h27**^{km}**, n62,** σ**0^{s}.91**/58**, mb3.9**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.19**	**310**		**Pb**	**22 18 54.2**	**-0.5**
KOFP					**Sb**	**22 19 10.6**	**+0.8**
ATKA	**Atka Island**	**1.20**	**306**		**Sb**	**22 19 09.5**	**-0.3**
ATKA	**Atka Island**	**1.20**	**306**		**Pn**	**22 18 53.8**	**+0.1**
KOKL	**Mount Kliuchef**	**1.27**	**310**		**Pb**	**22 18 55.4**	**-0.6**
KOKL					**Sb**	**22 19 12.7**	**+0.6**
GSMY	**Great Sitkin M**	**2.20**	**285**		**Pn**	**22 19 08.3**	**+0.8**
GSTD	**Great Sitkin T**	**2.26**	**285**		**Pn**	**22 19 09.3**	**+1.0**
GSTD					**Sn**	**22 19 35.5**	**+0.2**
ADK	**Adak**	**2.56**	**280**		**Pn**	**22 19 12.9**	**+0.6**
NIKH	**Nikolski High**	**2.74**	**56**		**Pn**	**22 19 15.8**	**+1.0**
KIMD	**Kanaga Island**	**2.89**	**277**		**Pn**	**22 19 18.1**	**+1.2**
OKSO	**Okmok South**	**3.30**	**54**		**Pn**	**22 19 22.4**	**-0.2**
MAPS	**Pakushin South**	**4.15**	**54**		**Pn**	**22 19 34.0**	**-0.3**
UNV	**Unalaska Valle**	**4.39**	**55**	Pn	**Pn**	**22 19 39.6**	**+2.1**
RSO	**Redoubt South**	**14.23**	**43**	Pn	**Pn**	**22 21 51.7**	**-0.7**
BRLK	**Bradley Lake**	**14.73**	**47**		**P**	**22 22 02.3**	**-2.6**
SEW	**Seward**	**15.53**	**47**	Pn	**Pn**	**22 22 09.9**	**+0.3**
PPLA	**Purkeypile**	**15.80**	**36**		**Pn**	**22 22 14.4**	**+1.2**
PPLA				IAmb	IAmb	22 22 20.7	
	comp=Z,4.4nm,1.2s						
GHO	**Glory Hole Cre**	**16.49**	**42**		**Pn**	**22 22 23.0**	**+1.1**
GHO				IAmb	IAmb	22 22 33.8	
	comp=Z,6.1nm,1.0s						
KNK	**Knik Glacier**	**16.52**	**44**		**Pn**	**22 22 22.6**	**+0.2**
KNK				IAmb	IAmb	22 22 35.3	
	comp=Z,3.1nm,0.9s						
KTH	**Kantishna Hill**	**16.66**	**35**		**P**	**22 22 26.2**	**0.0**
TRF	**Thorofare Moun**	**16.83**	**36**		**P**	**22 22 28.2**	**0.0**
BPAW	**Bear Paw Mtn.**	**16.96**	**34**		**P**	**22 22 30.1**	**+0.6**
BPAW				IAmb	IAmb	22 22 31.4	
	comp=Z,2.9nm,0.8s						
SCM	**Sheep Creek Mo**	**17.19**	**43**		**Pn**	**22 22 31.3**	**+0.5**
RND	**Reindeer**	**17.34**	**37**		**Pn**	**22 22 32.7**	**+0.1**
RND				IAmb	IAmb	22 22 48.8	
	comp=Z,3.3nm,1.1s						
IMAR	**Indian Mountai**	**17.38**	**26**	Pn	**P**	**22 22 35.5**	**+1.4**
I23K	**Minto, Yukon-K**	**18.16**	**32**	P	**P**	**22 22 43.6**	**+0.9**
I23K				IAmb	IAmb	22 22 46.1	
	comp=Z,5.2nm,1.1s						
PETK	**Petropavlovsk-**	**18.16**	**287**	P	**Pn**	**22 22 41.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=80,slow=17,SNR=1.4						
WRH	**Wood River Hil**	**18.21**	**35**		**Pn**	**22 22 42.5**	**-0.7**
CCB	**Clear Creek Bu**	**18.41**	**35**	P	**P**	**22 22 44.5**	**-1.0**
MDM	**Murphy Dome**	**18.43**	**34**	P	**P**	**22 22 45.0**	**-0.8**
HDA	**Harding Lake**	**18.59**	**36**	P	**P**	**22 22 47.4**	**-0.1**
IL31		**18.80**	**35**	P	**P**	**22 22 49.7**	**-0.1**
ILAR	**Eielson Array**	**18.80**	**35**	P	**P**	**22 22 49.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=232,slow=9.4,SNR=27						
TGL	**Tana Glacier**	**18.84**	**49**	P	**Pn**	**22 22 51.0**	**-0.1**
TGL				IAmb	IAmb	22 23 08.2	
	comp=Z,11nm,1.2s						
RIDG	**Independent Ri**	**19.06**	**39**	P	**P**	**22 22 52.8**	**+0.1**
RIDG				IAmb	IAmb	22 22 56.8	
	comp=Z,2.6nm,0.8s						
DOT	**Dot Lake**	**19.34**	**40**	P	**P**	**22 22 55.6**	**-0.1**
DOT				IAmb	IAmb	22 23 03.6	
	comp=Z,2.4nm,0.8s						
BARN	**Barnard Glacie**	**19.48**	**49**	P	**Pn**	**22 22 58.4**	**-0.4**
BARN				IAmb	IAmb	22 23 05.1	
	comp=Z,3.1nm,0.6s						
CTGM	**Chitina Glacie**	**19.61**	**49**	P	**P**	**22 22 59.1**	**+0.3**
CTGM				IAmb	IAmb	22 23 13.0	
	comp=Z,7.2nm,1.1s						
K27K	**Chicken**	**20.30**	**40**	P	Pn	22 23 07.1	-1.1
K27K				IAmb	IAmb	22 23 13.9	
	comp=Z,1.9nm,1.0s						
BMAR	**Burnt Mountain**	**21.08**	**30**	P	**P**	**22 23 13.7**	**-0.9**
HYT	**Haines Junctio**	**21.41**	**51**	P	**P**	**22 23 18.3**	**+0.1**
HYT				IAmb	IAmb	22 23 21.8	
	comp=Z,7.0nm,1.2s						
DLBC	**Dease Lake**	**25.05**	**57**	P	**P**	**22 23 58.0**	**+3.6**
	comp=Z,1.2nm,0.4s,baz=290,slow=12,SNR=4.4						
DLBC				LR	LR	22 33 01.5	
	comp=Z,568nm,21.5s,baz=94,slow=35						
INK	**Inuvik**	**25.17**	**33**	P	**P**	**22 23 55.5**	**+0.2**
	comp=Z,4.7nm,0.5s,baz=242,slow=8.5,SNR=21						
INK	**Inuvik**	**25.17**	**33**	P	**P**	**22 23 55.5**	**+0.2**
YKA	**Yellowknife Ar**	**32.31**	**47**	P	**P**	**22 24 59.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=274,slow=6.9,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**35.56**	**215**	T	T	23 03 38.0	
	baz=21,slow=76,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**35.57**	**214**	T	T	23 03 38.4	
	baz=21,slow=76,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**35.58**	**215**	T	T	23 03 43.7	
	baz=21,slow=76,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**36.76**	**214**	T	T	23 05 00.2	
	baz=18,slow=76						
H11S2	**WAKE ISLAND Hy**	**36.78**	**214**	T	T	23 04 59.7	
	baz=18,slow=76						
H11S3	**WAKE ISLAND Hy**	**36.78**	**214**	T	T	23 05 07.3	
	baz=18						
ARCES	**ARCESS Array B**	**58.54**	**353**	P	**P**	**22 28 25.5**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=15,slow=7.5,SNR=1.8						
KURK	**Kurchatov**	**61.65**	**317**	P	**P**	**22 28 47.0**	**-0.7**
MK31	**Makanchi Array**	**62.91**	**312**	P	**P**	**22 28 57.2**	**+1.0**
MKAR	**Makanchi Array**	**62.91**	**312**	P	**P**	**22 28 55.1**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=33,slow=7.0,SNR=5.5						
MKAR	**Makanchi Array**	**62.91**	**312**	P	**P**	**22 28 55.5**	**-0.7**
ARU	**Arti**	**64.44**	**331**	P	**P**	**22 29 05.8**	**-0.3**
FINES	**FINESS Array B**	**66.41**	**350**	P	**P**	**22 29 18.2**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=24,slow=7.6,SNR=1.5						
NOA	**NORSAR Array B**	**67.76**	**358**	P	**P**	**22 29 27.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=0.8,slow=5.9,SNR=2.9						
AAK	**Ala-Archa**	**69.66**	**314**	P	**P**	**22 29 40.0**	**+0.2**
ABKAR	**Akbulak array**	**70.07**	**326**	P	**P**	**22 29 42.1**	**+0.2**
ABKAR				IAmb	IAmb	22 29 43.8	
	comp=Z,0.6nm,0.7s						
ABKAR	**Akbulak array**	**70.07**	**326**	P	**P**	**22 29 42.0**	**+0.1**
KKAR	**Karatay Array**	**71.05**	**316**	P	**P**	**22 29 47.9**	**-0.1**

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*SKO **21** 22:36:58.8, 40°.69N×21°.24E, h17^{km}*
*TIR **21** 22:36:59.6, 40°.74N×21°.21E, h6^{km}±3^{km}, Ml2.4*
*ATH **21** 22:37:00.5, 40°.73N×21°.27E, h12^{km}±1^{km}, ML2.3/5, Error ellipse: s-maj=2.6km s-min=1.0km az=307.0*
THE 21 22:37:00.1, 40°.77N×21°.22E, h5^{km}±1^{km}**, ML2.0**/9**, 2C-4D, Error ellipse: s-maj=1.7km s-min=0.8km az=262.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.12**	**83**	P	Pg	22 37 03.0	+0.4
FNA				S	Sg	22 37 05.3	+1.1
FNA				AML	AML	22 37 05.6	
	comp=E,32995µm,0.2s						
FNA				AML	AML	22 37 05.9	
	comp=N,24871µm,0.2s						
FNA	**Florina**	**0.12**	**83**	P	Pg	22 37 03.0	+0.4
FNA				S	Sg	22 37 05.3	+1.1
	comp=N,15µm,0.2s						
FNA	**Florina**	**0.12**	**83**	P	Pg	22 37 03.1	+0.5
	baz=71						
FNA				S	Sg	22 37 05.4	+1.2
	baz=71						
FNA	**Florina**	**0.12**	**83**	⇑*i*Pg	Pg	22 37 03.1	+0.5
FNA				*i* Sg	Sg	22 37 05.4	+1.1
KBN	**Korca**	**0.36**	**246**	P	Pg	22 37 07.0	-0.1
KBN				S	Sg	22 37 12.1	+0.3
	comp=N,482nm,0.3s						
KBN	**Korca**	**0.36**	**246**	P	Pg	22 37 06.9	-0.1
	baz=251						
KBN				S	Sg	22 37 11.8	0.0
	baz=251						
KBN				AMP			
	comp=N,2.0nm,0.4s,baz=251						
NEST	**Nestorio**	**0.38**	**200**	P	Pg	22 37 06.9	-0.5
NEST				S	Sg	22 37 12.6	+0.2
NEST				AML	AML	22 37 13.5	
	comp=N,1277µm,0.2s						
NEST				AML	AML	22 37 13.9	
	comp=E,1698µm,0.2s						
NEST	**Nestorio**	**0.38**	**200**	P	Pg	22 37 06.9	-0.5
NEST				S	Sg	22 37 12.6	+0.2
	comp=E,540nm,0.2s						
OHR	**Ohrid**	**0.47**	**317**	⇓*i*Pg	Pg	22 37 09.5	+0.4
OHR				*i* Sg	Sb	22 37 17.3	-0.9
OHR				*e*Lg	Lg	22 37 18.2	
	comp=N,70nm,0.3s						
PENT	**Pentalofos**	**0.58**	**186**	P	Pg	22 37 10.7	-0.5
PENT				S	Sg	22 37 18.8	+0.1
PENT				AML	AML	22 37 23.9	
	comp=E,306µm,0.4s						
PENT				AML	AML	22 37 25.8	
	comp=N,266µm,0.4s						
PENT	**Pentalofos**	**0.58**	**186**	P	Pg	22 37 10.7	-0.5
PENT				S	Sg	22 37 19.9	+1.2
	comp=N,148nm,0.4s						
KZN	**Kozani**	**0.62**	**138**	P	Pg	22 37 11.4	-0.7
KZN				S	Sg	22 37 18.9	-1.3
KZN				AML	AML	22 37 21.2	
	comp=E,376µm,0.3s						
KZN				AML	AML	22 37 24.6	
	comp=N,350µm,0.4s						
KZN	**Kozani**	**0.62**	**138**	P	Pg	22 37 11.4	-0.7
KZN				S	Sg	22 37 20.3	+0.1
	comp=N,180nm,0.2s						
LSK	**Leskovik**	**0.78**	**218**	P	Pg	22 37 14.2	-0.9
	baz=219						
LSK				S	Sg	22 37 25.7	+0.6
	baz=219						
LSK				AMP			
	comp=N,0.7nm,0.5s,baz=219						
KPRO	**Kipourio**	**0.82**	**172**	P	Pg	22 37 15.5	-0.3
KPRO				S	Sg	22 37 25.9	-0.6
KPRO				AML	AML	22 37 31.4	
	comp=E,561µm,0.4s						
KPRO				AML	AML	22 37 33.0	
	comp=N,340µm,0.6s						
KPRO	**Kipourio**	**0.82**	**172**	P	Pg	22 37 15.5	-0.3
KPRO				S	Sb	22 37 28.2	-0.1
	comp=N,225nm,0.3s						
GRG	**Griva**	**0.92**	**78**	P	Pg	22 37 17.1	-0.6
GRG	**Griva**	**0.92**	**78**	⇓*i*Pg	Pg	22 37 17.3	-0.4
PHP	**Peshkopia**	**1.09**	**328**	P	Pg	22 37 19.8	-1.1
PHP				S	Sn	22 37 36.8	-0.8
	comp=N,50nm,0.5s						
PHP	**Peshkopia**	**1.09**	**328**	P	Pb	22 37 21.6	+0.1
	baz=329						
PHP				S	Sn	22 37 37.7	+0.1
	baz=329						
PHP				AMP			
	comp=N,0.3nm,0.7s,baz=329						
VAY	**Valandovo**	**1.16**	**61**	⇓*i*Pg	Pg	22 37 21.8	-0.6
VAY				*i* Sg	Sb	22 37 37.8	-0.2
VAY				*e*Lg	Lg	22 37 39.2	
	comp=N,23nm,0.6s						
TIR	**Tirane**	**1.18**	**300**	*i* Pg	Pb	22 37 23.0	0.0
STIP	**Stip**	**1.18**	**38**	*i* Pn	Pn	22 37 25.4	+2.1
LIT	**Litokhoron**	**1.18**	**124**	P	Pg	22 37 21.6	-1.1
LIT	**Litokhoron**	**1.18**	**124**	P	Pg	22 37 21.7	-1.0
LIT	**Litokhoron**	**1.18**	**124**	*i* Pg	Pg	22 37 20.7	-1.9
SKO	**Skopje**	**1.21**	**8**	*i* Sg	Sb	22 37 39.8	+0.2
SKO				*e*Lg	Lg	22 37 40.6	
	comp=E,1.0nm,0.4s						
SRN	**Sarande**	**1.29**	**227**	P	Pn	22 37 24.0	-0.7
	baz=228						
SRN				S	Sn	22 37 42.5	+0.1
	baz=228						
SRN				AMP			
	comp=N,0.2nm,0.6s,baz=228						
KNT	**Kendrikon**	**1.33**	**72**	P	Pn	22 37 24.8	-0.5
KNT	**Kendrikon**	**1.33**	**72**	P	Pn	22 37 23.7	-1.7
KNT				S	Sn	22 37 43.3	-0.2
	comp=N,42nm,0.4s						
KNT	**Kendrikon**	**1.33**	**72**	⇑*i*Pg	Pn	22 37 23.7	-1.7
THE	**Thessaloniki**	**1.33**	**95**	⇓*i*Pg	Pn	22 37 25.2	-0.2
THL	**Klokotos Trika**	**1.35**	**153**	P	Pn	22 37 23.9	-1.7
THL	**Klokotos Trika**	**1.35**	**153**	P	Pn	22 37 23.9	-1.7
THL				S	Sn	22 37 44.0	+0.1
	comp=N,35nm,0.5s						
IGT	**Igoumenitsa**	**1.41**	**209**	P	Pb	22 37 26.8	-0.1
	baz=210						
IGT				S	Sn	22 37 46.7	+1.3
	baz=210						
SOH	**Sokhos**	**1.62**	**87**	*i* Pn	Pn	22 37 28.1	-1.3
GJIK	**Gjilan**	**1.70**	**5**	*i* Pn	Pg	22 37 32.3	-0.4
PLG	**Polygyros**	**1.74**	**102**	P	Pn	22 37 30.8	-0.2
PLG	**Polygyros**	**1.74**	**102**	P	Pn	22 37 31.1	0.0
BCI	**Bajram Curri**	**1.81**	**332**	P	Pg	22 37 35.0	+0.2
	baz=333						
BCI				S	Sg	22 38 00.8	+2.4
	baz=333						
SRS	**Serrai**	**1.83**	**78**	*i* Pn	Pn	22 37 32.6	+0.4
MAKR	**Makrakomi, Fth**	**1.89**	**158**	P	Pn	22 37 32.9	-0.1
MAKR	**Makrakomi, Fth**	**1.89**	**158**	P	Pn	22 37 33.0	-0.1
EVR	**Evrytania**	**1.91**	**166**	P	Pn	22 37 34.0	+0.6
EVR	**Evrytania**	**1.91**	**166**	P	Pn	22 37 33.8	+0.4
AGG	**Agios Georgios**	**1.94**	**154**	P	Pn	22 37 33.4	-0.4
AGG	**Agios Georgios**	**1.94**	**154**	P	Pn	22 37 33.4	-0.4
ANX	**Ano Chora**	**2.24**	**166**	P	Pn	22 37 38.9	+0.9
ANX	**Ano Chora**	**2.24**	**166**	P	Pn	22 37 38.9	+0.9

DDA 21 22:38:47.2, 38°.43N×27°.22E, h4^{km}±1^{km}**, ML1.3, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	**zmir**	**0.47**	**215**	*i* P	Pg	22 38 57.0	+0.8
DGB				IAML		22 39 02.0	
	comp=E,25nm,1.0s						
DGB				*i* S	Sb	22 39 04.1	-1.1
DGB				IAML		22 39 05.0	
	comp=N,15nm,0.6s						
ZEDA	**zmir-Bergama**	**0.55**	**348**	*i* P	Pb	22 38 58.8	-0.5
ZEDA				*i* S	Sg	22 39 05.6	+0.8
ZEYE	**Izmir, Urla-Ze**	**0.60**	**251**	*i* P	Pg	22 38 58.8	+0.1
ZEYE				*i* S	Sb	22 39 08.3	-0.7
ZEYE				IAML		22 39 13.0	
	comp=E,15nm,0.5s						
AKHS	**Akhisar**	**0.64**	**46**	*i* P	Pg	22 38 44.2	-15
STEP	**BALIKESIR_Sava**	**1.02**	**22**	*i* P	Pg	22 39 06.8	0.0
STEP				IAML		22 39 21.0	
	comp=N,17nm,1.4s						
STEP				*i* S	Sb	22 39 21.8	+0.6
STEP				IAML		22 39 23.0	
	comp=E,6.5nm,0.2s						
MANT	**Manisa**	**1.05**	**86**	*i* P	Pg	22 39 07.2	-0.2
MANT				IAML		22 39 16.0	
	comp=E,5.5nm,1.0s						
MANT				*i* S	Sg	22 39 19.7	-1.2
MANT				IAML		22 39 23.0	
	comp=N,7.3nm,0.2s						
BUHA	**Balikesir, Bur**	**1.07**	**354**	*i* P	Pn	22 39 09.0	-0.1
BUHA				*i* S	Sn	22 39 23.7	-0.8
BUHA				IAML		22 39 52.0	
	comp=N,9.2nm,1.5s						

IDC 21 22:38:50.5±1.7**, 3°.38S×130°.79E, h0**^{km}**, mb3.7**/2**, mb1 4.1**/4**, mb1mx3.6**/45**, mbtmp3.8**/4**, ML3.5**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/45**, Error ellipse: s-maj=85.4km s-min=24.6km az=84.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.53**	**11**	Pn	Pn	22 39 33.0	0.0
	9.2nm,0.3s,baz=221,slow=23,SNR=29						
SIJI				Sn	Sn	22 40 01.0	-3.6
	5.7nm,0.3s,baz=264,slow=23,SNR=2.1						
DAV	**Davao City (W)**	**11.61**	**333**	LR	LR	22 46 10.6	
	comp=Z,77nm,20.7s,baz=156,slow=38						
WRA	**Warramunga Arr**	**16.83**	**168**	Pn	Pn	22 42 46.6	-1.1
	0.2nm,0.3s,baz=349,slow=12,SNR=6.2						
WRA				Sn	Sn	22 45 40.3	-15
	0.1nm,0.3s,baz=345,slow=24,SNR=2.5						
ASAR	**Alice Springs**	**20.40**	**172**	P	P	22 43 29.6	+0.5
	6.1nm,0.5s,baz=350,slow=10,SNR=61						
MKAR	**Makanchi Array**	**65.67**	**326**	P	P	22 49 36.8	0.0
	0.1nm,0.4s,baz=132,slow=7.3,SNR=1.7						

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*NEIC **21** 22:46:40.4±1.3, 41°.22N±0°.05×117°.21W±0°.03, h0^{km}±1^{km}, ML2.5/38, Error ellipse: s-maj=8.6km s-min=4.8km az=5.0*
*IDC **21** 22:46:40.2±1.1, 41°.33N×117°.22W, h0^{km}, mb1 2.8/3, mb1mx2.7/39, mbtmp2.5/3, ML2.8/3, Error ellipse: s-maj=11.0km s-min=5.9km az=175.0*
ISC 21 22:46:40.3±1.1**, 41°.22N**±0°.04×**117°.21W**±0°.04**, h0**^{km}**, n25,** σ**0^{s}.97**/26**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELK	**Elko**	**1.57**	**107**	Pg	**Pn**	**22 47 09.2**	**-0.4**
	2.9nm,0.3s,baz=288,slow=12,SNR=50						
ELK				Lg	Lg	22 47 30.9	
	5.2nm,0.3s,baz=324,slow=21,SNR=13						
ELK	**Elko**	**1.57**	**107**	Pn	**Pn**	**22 47 08.9**	**-0.7**
WVOR	**Wild Horse Val**	**1.61**	**319**		**Pn**	**22 47 09.8**	**-0.3**
PAHR	**Pah Rah Range**	**2.24**	**228**	Pn	**Pn**	**22 47 19.0**	**+0.1**
PAHR				IAML		22 47 59.0	
	comp=E,24nm,1.2s						
MOD	**Modoc Plateau**	**2.42**	**287**	Pn	**Pn**	**22 47 21.6**	**+0.3**
MOD				IAML		22 48 14.3	
	comp=N,26nm,0.9s						
MFID	**Camas Ranch**	**2.42**	**25**	Pn	**Pn**	**22 47 21.4**	**+0.2**
MFID				IAML		22 48 03.4	
	comp=N,28nm,0.8s						
BEKR	**Beckworth**	**2.75**	**242**		**Pn**	**22 47 24.8**	**-1.1**
BEKR				IAML		22 48 12.2	
	comp=E,18nm,0.7s						
BEKR				IAML		22 48 14.4	
	comp=N,16nm,1.9s						
RYN	**Ryan**	**2.78**	**202**		**Pn**	**22 47 26.0**	**-0.2**
RYN				IAML		22 48 12.4	
	comp=E,23nm,1.1s						
PNTR	**Pine Nut**	**2.81**	**221**	Pn	**Pn**	**22 47 26.7**	**0.0**
NV11	**Mina Array Sit**	**2.88**	**195**		**Pn**	**22 47 27.6**	**+0.1**
NV11				IAML		22 48 17.5	
	comp=E,15nm,0.8s						
NV11				IAML		22 48 18.8	
	comp=N,14nm,0.8s						
NVAR	**Mina Array Bea**	**2.91**	**197**	Pn	**Pn**	**22 47 28.9**	**+0.8**
	comp=N,0.4nm,0.3s,baz=14,slow=13,SNR=14						
NVAR				Pg	**Pg**	**22 47 35.7**	**-0.4**
	comp=N,2.0nm,0.3s,baz=14,slow=15,SNR=14						
NVAR				Lg	Lg	22 48 15.1	
	comp=N,2.7nm,0.3s,baz=6.2,slow=34,SNR=2.1						
NVAR	**Mina Array Bea**	**2.91**	**197**		**Pn**	**22 47 27.1**	**-1.0**
HLID	**Hailey**	**3.13**	**41**	Pn	**Pn**	**22 47 30.5**	**-0.4**
HLID				IAML		22 48 32.0	
	comp=N,11nm,1.0s						
LHV	**Little Huntoon**	**3.13**	**199**		**Pn**	**22 47 30.6**	**-0.2**
K05A	**Summer Lake**	**3.13**	**300**	Pn	**Pn**	**22 47 31.9**	**+0.9**
K05A				IAML		22 48 35.4	
	comp=E,17nm,4.3s						
R11A	**Troy Canyon, C**	**3.13**	**156**		**Pn**	**22 47 32.3**	**+1.2**
BGU	**Big Grassy Mou**	**3.17**	**94**		**Pn**	**22 47 30.5**	**-1.2**
WAKR	**Walker**	**3.21**	**213**	Pn	**Pn**	**22 47 32.1**	**0.0**
WAKR				IAML		22 48 31.8	
	comp=N,9.9nm,0.7s						
WAKR				IAML		22 48 37.2	
	comp=E,13nm,3.6s						
I07A	**Izee**	**3.32**	**330**	Pn	**Pn**	**22 47 34.1**	**+0.5**
I07A				IAML		22 48 44.7	
	comp=N,13nm,4.3s						
I07A				IAML		22 48 47.6	
	comp=E,15nm,4.3s						
HVU	**Hansel Valley**	**3.38**	**79**	Pn	**Pn**	**22 47 34.6**	**+0.1**
AFDM	**Forest Hills D**	**3.67**	**233**	Pn	**Pn**	**22 47 39.5**	**+1.2**
AFDM				IAML		22 48 39.0	
	comp=N,7.1nm,2.4s						
AFDM				IAML		22 49 12.1	
	comp=E,6.9nm,4.4s						
PSUT	**Pine Spring**	**3.72**	**135**		**Pn**	**22 47 40.9**	**+1.7**
YBH	**Yreka Blue Hor**	**4.16**	**279**	Pn	**Pn**	**22 47 45.8**	**+0.6**
	comp=E,0.2nm,0.3s,baz=90,slow=11,SNR=3.0						
YBH				Lg	Lg	22 48 51.2	
	comp=E,0.1nm,0.3s,baz=166,slow=15,SNR=2.0						
PDAR	**Pinedale Array**	**5.91**	**72**	Pn	**Pn**	**22 48 12.3**	**+3.0**
	comp=E,0.1nm,0.3s,baz=259,slow=14,SNR=1.7						
PDAR				Pg	**Pb**	**22 48 24.1**	**-0.2**
	comp=E,0.1nm,0.3s,baz=269,slow=17,SNR=2.8						
I56US	**NEWPORT INFRAS**	**7.04**	**0**	*i*		23 32 50.0	
	baz=175,slow=330,SNR=2.1						

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*JMA **21** 23:05:27.9±0.1, 37°.06N×141°.14E, h51^{km}±1^{km}, M4.0*
JMA Felt II J1.

*NEIC **21** 23:05:27.8±1.1, 37°.03N±0°.04×141°.17E±0°.09, h50^{km}±5^{km}, mb4.2/15, Error ellipse: s-maj=11.1km s-min=4.9km az=98.0*

*NIED **21** 23:05:27.9, 37°.06N×141°.14E, h51^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}7.55; $M_{\theta\theta}$-1.63; $M_{\phi\phi}$-5.91; $M_{r\theta}$1.29; $M_{\theta\phi}$-1.47; $M_{\phi r}$6.49; Fault plane solution: $M_0$9.60000×10^{14} NP1:ϕ_s13.00000°, δ67.00000°, λ87.00000°. NP2:ϕ_s200.00000°, δ23.00000°, λ96.00000°.*

*IDC **21** 23:05:28.0±1.8, 37°.02N×141°.29E, h55^{km}±15^{km}, mb3.6/15, mb1 3.8/20, mb1mx3.7/45, mbtmp3.9/20, ML3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.6/53 Error ellipse: s-maj=14.9km s-min=10.5km az=99.0*

ISC 21 23:05:26.5±1.1, **37°.01N**±0°.04×**141°.32E**±0°.07, **h42**^{km}±9^{km}, **n92**, σ**1^{s}02**/98, **mb4.1**/27, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.42	283	P	Pn	23 05 36.8	+0.4
ONAJ				*i* S	Sn	23 05 43.0	-0.4
JFK	Kawauchi	0.50	316	P	Pn	23 05 37.6	+0.2
JFK				S	Sn	23 05 44.4	-0.7
JFFD	Fukushimafurud	0.61	278	P	Pn	23 05 38.7	-0.1
JFFD				S	Sn	23 05 46.2	-1.3
JHO	Hitachi	0.72	237	P	Pn	23 05 40.5	+0.3
JHO				S	Sn	23 05 49.3	-0.8
JFT	Otama	0.93	303	P	Pn	23 05 43.6	+0.4
JFT				S	Sn	23 05 54.7	-0.7
JMM	Marumori	0.95	334	P	Pn	23 05 43.5	+0.1
JMM				S	Sn	23 05 54.8	-1.0
JMM	Marumori	0.95	334		Pn	23 05 43.5	+0.1
JMM				Sn	Sn	23 05 54.9	-0.9
JYT	Yasato	1.19	230		Pn	23 05 46.8	+0.1
JYT				Sn	Sn	23 06 00.2	-1.5
JFY	Yanaizu	1.35	288	P	Pn	23 05 48.7	-0.1
JIO	Ouri	1.44	1	P	Pn	23 05 50.7	+0.6
JOU	Okura	1.45	339	P	Pn	23 05 50.6	+0.3
JYS	Shirataka	1.56	321	P	Pn	23 05 52.2	+0.4
JYS				S	Sn	23 06 10.9	0.0
JAG	Ashikaga	1.61	249	P	Pn	23 05 52.5	+0.1
JAG				S	Sn	23 06 10.7	-1.2
JKT	Katashina	1.68	262	P	Pn	23 05 54.0	+0.6
MJAR	Matsushiro Arr	2.54	260	P	Pn	23 06 06.0	+0.8
	3.2nm,0.3s,baz=85,slow=15,SNR=74						
MJAR				S	Sn	23 06 36.6	+1.7
	3.9nm,0.3s,baz=64,slow=20,SNR=7.7						
MJAR				LR	LR	23 07 23.5	
	comp=Z,159nm,21.8s,baz=210,slow=46						
MJAR	Matsushiro Arr	2.54	260		Pn	23 06 05.3	+0.2
MAJO	Matsushiro	2.54	260		Pn	23 06 06.3	+1.1
MAT	Matsushiro	2.54	260	P	Pn	23 06 06.3	+1.1
MAT				*e*S	Sn	23 06 37.5	+2.6
JSD	Sado	2.64	294		Pn	23 06 05.7	-0.9
JGF	Kuroka	3.49	247		Pn	23 06 20.2	+1.8
JTM	Tenmabayashi	3.78	357	Pn	Pn	23 06 23.8	+1.6
INU	Inuyama	3.85	246		Pn	23 06 25.1	+1.9
JHJ2	Mitsune	4.08	198	Pn	Pn	23 06 28.0	+1.7
JHJ	Hachijo jima 2	4.08	198	P	Pn	23 06 28.1	+1.7
	29nm,0.3s,baz=330,slow=23,SNR=11						
JHJ				S	Sn	23 07 14.1	+1.3
	85nm,0.3s,baz=86,slow=22,SNR=7.6						
JWT	Wachi	5.09	252		Pn	23 06 42.2	+2.0
ERM	Erimo	5.20	15	Pn	Pn	23 06 42.8	+1.1
JEW	Eniwo	5.83	1	Pn	Pn	23 06 51.5	+1.2
ASAJ	Asahikawa	7.17	7	P	Pn	23 07 09.1	+0.4
	1.9nm,0.3s,baz=198,slow=12,SNR=6.8						
ASAJ				S	Sn	23 08 29.2	+0.5
	1.0nm,0.3s,baz=33,slow=28,SNR=1.6						
JKA	Kamikawa-asahi	7.17	7		Pn	23 07 09.1	+0.4
JCJ	Chichijima	9.91	175	P	Pn	23 07 44.6	-1.8
	4.7nm,0.3s,baz=265,slow=18,SNR=1.2						
USRK	Ussuriysk Ar.	10.09	318	P	Pn	23 07 51.7	+3.0
	baz=121,slow=13,SNR=11						
USRK				S	Sn	23 09 31.3	-9.2
	baz=144,slow=25,SNR=1.6						
USRK	Ussuriysk Ar.	10.09	318	Pn	Pn	23 07 51.1	+2.3
USA0B	Ussuriysk Arra	10.09	318	Pn	Pn	23 07 51.1	+2.4
KSRS	Korea Array	10.69	276	P	Pn	23 07 59.7	+2.8
	0.2nm,0.3s,baz=99,slow=14,SNR=5.3						
KLR	Kul'dur	14.05	333	LR	LR	23 13 26.9	
	comp=Z,72nm,18.9s,baz=96,slow=34						
SEY	Seymchan	26.83	11	P	P	23 11 03.2	+0.6
	0.9nm,0.6s,baz=227,slow=7.7,SNR=4.6						
SONM	Songino Array	27.73	304	P	P	23 11 10.3	-0.7
	1.0nm,0.5s,baz=103,slow=9.2,SNR=5.4						
SONM	Songino Array	27.73	304	P	P	23 11 10.4	-0.7
H11N2	WAKE ISLAND Hy	28.20	121	T	T	23 41 22.7	
	baz=313,slow=75,SNR=100						
H11N1	WAKE ISLAND Hy	28.21	121	T	T	23 41 23.3	
	baz=313,slow=75,SNR=132						
H11N3	WAKE ISLAND Hy	28.22	121	T	T	23 41 24.0	
	baz=313,slow=75,SNR=81						
H11S1	WAKE ISLAND Hy	28.91	123	T	T	23 42 16.1	
	baz=314,slow=75,SNR=72						
H11S3	WAKE ISLAND Hy	28.91	123	T	T	23 42 13.9	
	baz=314,slow=75,SNR=61						
H11S2	WAKE ISLAND Hy	28.93	123	T	T	23 42 14.6	
	baz=314,slow=75,SNR=59						
CMAR	Chiang Mai Arr	41.41	255	P	P	23 13 08.6	-0.4
	0.4nm,0.3s,baz=51,slow=8.6,SNR=1.3						
ZAA0	Zalesovo Array	41.87	312	P	P	23 13 12.1	-0.3
ZAA0				IAmb	IAmb	23 13 12.9	
	comp=Z,3.5nm,0.6s						
ZALV	Zalesovo Beam	41.87	312	P	P	23 13 12.4	0.0
	comp=Z,3.1nm,0.4s,baz=94,slow=7.1,SNR=13						
ZALV				PcP	PcP	23 15 06.8	-0.7
	comp=Z,0.9nm,0.4s,baz=64,slow=3.4,SNR=6.1						
ZALV	Zalesovo Beam	41.87	312	P	P	23 13 11.9	-0.5
MK31	Makanchi Array	44.07	302	P	P	23 13 30.1	-0.2
MKAR	Makanchi Array	44.07	302	P	P	23 13 30.2	-0.1
	comp=Z,1.1nm,0.6s,baz=83,slow=10,SNR=16						
MKAR				PcP	PcP	23 15 14.4	-0.7
	comp=Z,0.2nm,0.4s,baz=64,slow=3.8,SNR=3.3						
MKAR	Makanchi Array	44.07	302	P	P	23 13 29.9	-0.3
MAKZ	Makanchi	44.28	302	P	P	23 13 31.8	-0.1
TAPN	Taplejung	45.86	274	*e*P	P	23 13 43.4	-1.7
	comp=Z,3.4nm,0.4s						
KURK	Kurchatov	45.89	308	P	P	23 13 44.2	-0.4
KURK				IAmb	IAmb	23 13 46.5	
	comp=Z,3.5nm,0.6s						
ODAN	Odare	46.34	274	*e*P	P	23 13 48.1	-0.7
RAMN	Ramite	46.93	274	*e*P	P	23 13 53.0	-0.4
	comp=Z,8.7nm,0.7s						
GUN	Gumba	47.08	276	*e*P	P	23 13 54.9	+0.2
	comp=Z,8.7nm,0.5s						
PKI	Pulchoki	47.60	275	*e*P	P	23 13 59.5	+0.7
KKN	Kakani	47.61	276	*e*P	P	23 13 59.4	+0.7
GKN	Gorkha	48.03	276	*e*P	P	23 14 01.9	0.0
DANN	Dangsing	48.58	277	*e*P	P	23 14 06.1	-0.1
	comp=Z,13nm,0.5s						
ILAR	Eielson Array	49.56	32	P	P	23 14 14.4	+1.5
	comp=Z,0.3nm,0.7s,baz=262,slow=6.3,SNR=2.7						
AAK	Ala-Archa	50.43	298	P	P	23 14 19.8	-0.3
AAK				IAmb	IAmb	23 14 37.9	
	comp=Z,2.7nm,1.4s						
KK31	Karatay Array	53.07	300	P	P	23 14 39.3	-0.2
KK31				IAmb	IAmb	23 14 40.8	
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	53.07	300	P	P	23 14 38.7	-0.8
ARU	Arti	56.33	319	P	P	23 15 02.2	-0.7
WR0	Warramunga Arr	57.02	188	P	P	23 15 08.4	+0.2
WRA	Warramunga Arr	57.02	188	P	P	23 15 08.4	+0.2
	comp=Z,0.8nm,0.7s,baz=4.4,slow=7.3,SNR=5.4						
ABKAR	Akbulak array	57.90	310	P	P	23 15 13.3	-0.7
ABKAR	Akbulak array	57.90	310	P	P	23 15 13.4	-0.7
ABKAR				IAmb	IAmb	23 15 13.9	
	comp=Z,1.8nm,0.6s						
ASAR	Alice Springs	60.75	188	P	P	23 15 35.0	+1.0
	comp=Z,0.3nm,0.7s,baz=5.9,slow=6.7,SNR=1.6						
ARCES	ARCESS Array B	63.99	339	P	P	23 15 55.0	-0.2
	comp=Z,0.4nm,0.5s,baz=61,slow=9.4,SNR=4.2						
FIA1	FINESS Array S	68.80	332	P	P	23 16 25.4	-0.5
FINES	FINESS Array B	68.80	332	P	P	23 16 25.6	-0.4
	comp=Z,1.9nm,0.6s,baz=44,slow=8.5,SNR=6.6						
FINES	FINESS Array B	68.80	332	P	P	23 16 25.4	-0.6
KBZ	Khabaz	70.86	311	P	P	23 16 39.0	0.0
	comp=Z,1.6nm,0.8s,baz=32,slow=4.2,SNR=5.1						
NB2	NORSAR Subarra	74.18	337	P	P	23 16 58.4	-0.1
	comp=Z,0.7nm,0.7s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.18	337	P	P	23 16 58.4	-0.1
	comp=Z,1.1nm,0.7s,baz=38,slow=5.9,SNR=5.7						
AKASG	Malin Array Be	74.27	322	P	P	23 16 58.5	-0.6
	comp=Z,1.0nm,0.3s,baz=47,slow=6.1,SNR=8.0						
PDAR	Pinedale Array	77.74	45	P	P	23 17 18.9	-0.4
	comp=Z,0.2nm,0.6s,baz=298,slow=4.0,SNR=2.0						
PDAR	Pinedale Array	77.74	45	P	P	23 17 20.4	+1.0
BUR08	Bucovina Ar. S	78.27	322	P	P	23 17 21.8	-0.3
BURAR	Bucovina Array	78.28	322	P	P	23 17 21.9	-0.2
MLR	Muntele Rosu	79.35	320	P	P	23 17 28.2	+0.2
MLR				IAmb	IAmb	23 17 39.3	
	comp=Z,3.8nm,1.3s						
RAYN	Ar Rayn	80.59	292	P	P	23 17 34.0	-1.0
RAYN				IAmb	IAmb	23 17 35.0	
	comp=Z,1.2nm,0.6s						
CSS	Mathiatis	82.02	308	P	P	23 17 43.1	+0.8
CSS				IAmb	IAmb	23 17 48.0	
	comp=Z,4.1nm,1.2s						
GERES	GERESS Array B	82.69	328	P	P	23 17 45.5	-0.2
	comp=Z,0.5nm,0.5s,baz=40,slow=5.8,SNR=6.2						
GERES	GERESS Array B	82.69	328	P	P	23 17 45.1	-0.7
H03N2	Juan Fernandez	147.10	96	T	T	02 10 03.4	
	baz=291,slow=76,SNR=17						
H03N3	Juan Fernandez	147.11	96	T	T	02 10 04.7	
	baz=291,slow=76,SNR=23						
H03N1	Juan Fernandez	147.12	96	T	T	02 10 05.4	
	baz=291,slow=76,SNR=22						
SIV	San Ignacio	151.16	49	PKPbc	PKiKP	23 25 16.5	+0.2
	comp=Z,1.3nm,0.8s,baz=269,slow=2.2,SNR=5.6						

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*IDC **21** 23:15:19.8±0.8, 6°.71N×72°.94W, h166^{km}±8^{km}, mb3.0/2, mb1 3.5/4, mb1mx3.1/40, mbtmp3.8/4, Error ellipse: s-maj=40.2km s-min=8.9km az=132.0*

*RSNC **21** 23:15:20.8±1.1, 6°.80N×73°.14W, h152^{km}±5^{km}, ML3.6, Mw3.8, Fault plane solution: NP1:ϕ_s160.00000°, δ49.00000°, λ118.00000°.*

ISC 21 23:15:19.1±0.8, **6°.83N**±0°.03×**73°.12W**±0°.04, **h162**^{km}±5^{km}, **n37**, σ**1^{s}27**/68, **3C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	195	*i* P	Pn	23 15 41.4	+0.1
BARC				*e*S	Sn	23 15 57.1	-1.1
BARC				*i*		23 16 03.2	
	comp=Z,424nm,0.2s						
BRRC	Barranca, Sant	0.65	295	⇑*i*P	Pn	23 15 43.3	+0.8
BRRC				*e*S	Sn	23 16 00.8	+0.3
BRRC				*i*		23 16 03.6	
	comp=Z,611nm,0.8s						
PAMC	Pamplona, Colo	0.65	40	⇑*i*P	Pn	23 15 44.2	+1.0
PAMC				*e*S	Sn	23 16 01.3	-0.3
PAMC				*i*		23 16 02.3	
	comp=Z,686nm,0.2s						
RUSC	La Rusia	0.94	178	⇑*e*P	Pn	23 15 45.2	+0.1
RUSC				*e*S	Sn	23 16 04.1	-0.9
RUSC				*i*		23 16 05.9	
	comp=Z,458nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	258	*e*P	Pn	23 15 47.9	-0.3
PTBC				*e*S	Sn	23 16 09.5	-1.0
PTBC				*i*		23 16 14.8	
	comp=Z,1μm,0.4s						
TAMC	Tame, Arauca	1.38	107	⇓*e*P	Pn	23 15 49.5	+1.1
TAMC				*i*		23 16 10.3	
	comp=Z,284nm,0.3s						
TAMC				*e*S	Sn	23 16 10.4	-0.5
OCAC	Ocana	1.41	352	*e*P	Pn	23 15 49.5	+0.6
OCAC				*e*S	Sn	23 16 11.3	-0.5
OCAC				*i*		23 16 17.7	
	comp=Z,549nm,0.4s						
SPBC	San Pablo de B	1.51	219	⇓*e*P	Pn	23 15 50.3	+0.5
SPBC				*e*S	Sn	23 16 12.2	-1.2
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	23 15 54.0	+0.8
ZARC				*e*S	Sn	23 16 20.0	+0.5
ZARC				*i*		23 16 26.3	
	comp=Z,708nm,0.4s						
NORC	Norcasia	2.15	234	*e*P	Pn	23 15 57.3	+0.5
NORC				*e*S	Sn	23 16 24.7	-1.1
NORC				*i*		23 16 30.2	
	comp=Z,451nm,0.2s						
SMLC	San Martn de	2.17	334	*e*P	Pn	23 15 57.7	+0.8
SMLC				*e*S	Sn	23 16 26.2	0.0
SMLC				*i*		23 16 28.6	
	comp=Z,365nm,0.5s						
CHIC	Chingaza	2.27	196	⇓*e*P	Pn	23 15 59.0	+0.5
CHIC				*e*S	Sn	23 16 28.6	-0.4
CHIC				*i*		23 16 34.1	
	comp=Z,198nm,0.4s						
ROSC	El Rosal	2.31	211	P	Pn	23 16 01.1	+2.0
	comp=Z,66nm,0.3s,baz=214,slow=14,SNR=61						
ROSC				S	Sn	23 16 31.0	+1.2
	comp=Z,87nm,0.3s,baz=56,slow=20,SNR=14						
HELC	Santa Helena	2.48	255	*e*P	Pn	23 16 01.3	+0.4
HELC				*e*S	Sn	23 16 32.6	-0.6
HELC				*i*		23 16 39.5	
	comp=Z,376nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	23 16 02.0	+0.5
UREC				*e*S	Sn	23 16 32.3	-2.1
UREC				*i*		23 16 40.8	
	comp=Z,256nm,0.2s						
GUY2C	Guyana, Caldas	2.75	235	*e*P	Pn	23 16 05.1	+0.8
GUY2C				*e*S	Sn	23 16 40.6	+1.3
GUY2C				*i*		23 16 47.5	
	comp=Z,322nm,0.4s						
VILC	Villavicencio,	2.76	192	*e*P	Pn	23 16 04.5	+0.3
VILC				*e*S	Sn	23 16 38.4	-0.7
PTGC	Puerto Gaitan,	2.79	159	*e*P	Pn	23 16 04.2	-0.2
PTGC				*e*S	Sn	23 16 37.2	-2.4
PTGC				*i*		23 16 47.7	
	comp=Z,76nm,0.2s						
RREF	El Recreo	2.93	229	*e*P	Pn	23 16 08.3	+1.6
RREF				*e*S	Sn	23 16 46.5	+2.9
RREF				*i*		23 16 52.2	
	comp=Z,344nm,0.3s						
CBOC	Ciudad Bolivar	3.03	252	*e*P	Pn	23 16 08.9	+1.4
CBOC				*e*S	Sn	23 16 44.1	-0.9
CBOC				*i*		23 16 55.9	
	comp=Z,108nm,0.5s						
DBBC	Dabeiba	3.07	274	*e*P	Pn	23 16 08.8	+0.8
DBBC				*e*S	Sn	23 16 44.6	-1.2
TOLC	Tolima	3.13	225	*e*P	Pn	23 16 09.5	+0.6
TOLC				*e*S	Sn	23 16 48.3	+0.8
TOLC				*i*		23 16 55.3	
	comp=Z,373nm,0.7s						
MOTC	Monteria, Cord	3.18	308	*e*P	Pn	23 16 08.5	-0.7
MOTC				*e*S	Sn	23 16 46.8	-1.2
SDV	Santo Domingo	3.20	50	P	Pn	23 16 10.9	+1.3
	baz=239,slow=15						
SDV				S	Sn	23 16 48.6	-0.2
	comp=Z,24nm,0.3s,baz=241,slow=22,SNR=3.3						
ANIL	Santa Ana	3.25	224	*e*P	Pn	23 16 12.3	+1.9
ANIL				*e*S	Sn	23 16 51.3	+1.0
ANIL				*i*		23 16 55.0	
	comp=Z,48nm,0.3s						
ORTC	Ortega, Tolima	3.59	216	*e*P	Pn	23 16 15.2	+0.6
ORTC				*e*S	Sn	23 16 59.0	+1.3
ORTC				*i*		23 17 13.7	
	comp=Z,51nm,0.6s						
PLMC	San Jos del P	3.68	239	*e*P	Pn	23 16 16.7	+1.0
PLMC				*e*S	Sn	23 16 59.2	-0.6
PLMC				*i*		23 17 05.5	
	comp=Z,84nm,0.3s						
SMRC	Santa Marta, M	4.44	346	*e*P	Pn	23 16 25.8	+0.3
SMRC				*e*S	Sn	23 17 14.5	-2.7
SMRC				*i*		23 17 16.8	
	comp=Z,72nm,0.4s						
PTAC	Punta Ardita,	4.67	274	*e*P	Pn	23 16 28.4	0.0
PTAC				*e*S	Sn	23 17 20.2	-2.2
MARP	Paez Belalcaza	4.87	216	*e*P	Pn	23 16 31.8	+0.5
MARP				*e*S	Sn	23 17 24.7	-3.0
GARC	Garzon, Huila	5.19	207	*e*P	Pn	23 16 34.9	-0.6
GARC				*e*S	Sn	23 17 31.0	-4.1
GARC				*i*		23 17 35.0	
	comp=Z,45nm,0.2s						
PCON	Cinco Dias	5.54	216	*e*P	Pn	23 16 41.4	+1.0
YKA	Yellowknife Ar	63.25	340	P	P	23 25 31.2	+1.1
	comp=Z,0.4nm,0.6s,baz=128,slow=7.0,SNR=7.8						
TORD	Torodi Ar. Bea	73.73	78	P	P	23 26 34.9	-1.1
	comp=Z,0.3nm,0.4s,baz=284,slow=5.9,SNR=1.3						
MKAR	Makanchi Array	122.31	20	PKP	PKPdf	23 33 55.5	+0.3
	comp=Z,0.1nm,0.4s,baz=332,slow=1.9,SNR=5.2						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	23 34 49.3	+0.1
	comp=Z,0.7nm,0.5s,baz=113,slow=3.6,SNR=8.0						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPbc	23 34 52.5	+0.2
	comp=Z,0.7nm,0.4s,baz=108,slow=2.6,SNR=12						

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*CRAAG **21** 23:18:48.9, 36°.84N×3°.74E, Ml2.8*

*MDD **21** 23:18:50.5±1.4, 36°.92N×3°.67E, h8^{km}±12^{km}, mb3.9/9, Error ellipse: s-maj=15.2km s-min=10.7km az=72.0, PRXIMO*

ISC 21 23:18:49.0±1.2, **37°.04N**±0°.06×**3°.63E**±0°.08, **h10**^{km}, **n21**, σ**2^{s}07**/31, **Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.31	203	P	Pg	23 18 54.5	-0.7
ABMS	Boumerdes	0.31	203	P	Pg	23 18 54.5	-0.7
ABA	Alger-Bouzarea	0.53	244	P	Pb	23 19 00.7	+0.2
ABA	Alger-Bouzarea	0.53	244	P	Pb	23 19 00.7	+0.2
ADJB	Djebel Djouab	0.89	190	P	Pg	23 19 05.4	-0.8
ADJB	Djebel Djouab	0.89	190	P	Pg	23 19 05.4	-0.8
EIBI	Ibiza	2.68	318	P	Pn	23 19 34.3	+2.0
	3.1nm,0.1s,SNR=4.0						
ETOS	Mallorca	2.80	347	P	Pn	23 19 35.4	+1.5
	1.1nm,0.1s,SNR=11						
ETOS				S	Sn	23 20 06.2	-1.5
	4.4nm,0.2s,SNR=6.0						
EBEN2	Beniarda presa	3.44	300	P	Pn	23 19 44.6	+2.0
	3.2nm,0.2s,SNR=4.0						
EBEN2				S	Sn	23 20 21.2	-2.3
	1.1nm,0.1s,SNR=4.0						
ETOB	Tobarra	4.40	293	P	Pn	23 19 58.1	+2.1
	1.3nm,0.1s,SNR=12						
ETOB				S	Sn	23 20 45.1	-2.2
	0.7nm,0.3s,SNR=4.0						
ECHE	Chera	4.42	307	P	Pn	23 19 59.0	+2.7
	3.6nm,0.2s,SNR=7.9						
ECHE				S	Sn	23 20 46.9	-1.0
	0.3nm,0.2s,SNR=4.0						
EMOS	Mosqueruela	4.62	317	P	Pn	23 20 01.3	+2.2
	0.6nm,0.1s,SNR=7.9						
EMOS				S	Sn	23 20 51.7	-1.1
	0.6nm,0.2s,SNR=7.9						
EPOB	Poblet	4.74	336	S	Sn	23 20 53.4	-2.4
	0.9nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.81	349	P	Pn	23 20 03.2	+1.6
	1.2nm,0.1s,SNR=8.8						
CFON				S	Sn	23 20 54.4	-3.0
	2.2nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.43	354	P	Pn	23 20 12.2	+2.1
	1.7nm,0.2s,SNR=7.9						
EJON				S	Sn	23 21 09.7	-3.0
	0.8nm,0.2s,SNR=7.9						
SJAF	Saint Jean de	5.47	354	P	Pn	23 20 12.7	+2.1
	2.2nm,0.3s,SNR=7.9						
SJAF				S	Sn	23 21 11.8	-1.8
	0.8nm,0.3s,SNR=7.9						
CLLI	Llivia	5.58	347	P	Pn	23 20 15.6	+3.3
	0.3nm,0.1s,SNR=7.9						
CLLI				S	Sn	23 21 13.8	-2.7
	0.2nm,0.2s,SNR=4.0						
CSOR	Sort	5.67	341	P	Pn	23 20 16.5	+3.1
	0.2nm,0.1s,SNR=7.9						
CSOR				S	Sn	23 21 17.9	-0.8
	1.2nm,0.3s,SNR=7.9						
ETOR	Torete	5.82	312	P	Pn	23 20 17.6	+2.1
	1.8nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	6.52	296	P	Pn	23 20 26.5	+1.4
	0.4nm,0.1s,baz=112,slow=14,SNR=5.3						
PAB	San Pablo	6.76	294	P	Pn	23 20 29.8	+1.5
	0.2nm,0.1s,SNR=7.9						

IDC 21 23:21:46.3±14.0, **2°.17N**×**128°.10E**, **h650**^{km}±234^{km}, **mb2.5**/5, **mb1 2.6**/5, **mb1mx2.4**/38, **mbtmp3.5**/5, **Error ellipse: s-maj=120.8km s-min=46.8km az=45.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.28	187	P	P	23 25 41.1	+0.6
	1.3nm,0.8s,baz=348,slow=9.3,SNR=0.8						
WRA	Warramunga Arr	22.81	165	P	P	23 26 02.9	-0.1
	0.5nm,0.3s,baz=344,slow=10,SNR=9.8						
ASAR	Alice Springs	26.29	168	P	P	23 26 34.4	+0.7
	0.5nm,0.5s,baz=352,slow=7.6,SNR=5.2						
STKA	Stephens Creek	36.20	160	P	P	23 27 57.1	-0.2
	0.7nm,0.3s,baz=1.9,slow=8.6,SNR=3.2						
MKAR	Makanchi Array	59.61	325	P	P	23 30 50.1	+0.1
	0.1nm,0.3s,baz=111,slow=7.8,SNR=5.5						

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*IDC **21** 23:22:21.0±2.0, 43°.60N×105°.40W, h0^{km}, mb3.6/1, mb1 3.6/4, mb1mx3.4/44, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=49.6km s-min=9.3km az=151.0*

*NEIC **21** 23:22:23.0±1.5, 43°.74N±0°.04×105°.27W±0°.07, h0^{km}±2^{km}, ML3.1/36, Error ellipse: s-maj=9.2km s-min=6.4km az=124.0*

ISC 21 23:22:22.1±0.9, **43°.74N**±0°.05×**105°.32W**±0°.06, **h0**^{km}, **n30**, σ**1^{s}12**/29, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	67	Pg	Pg	23 22 41.0	-0.3
K22A	Casper	1.40	219	Pn	Pg	23 22 47.8	-1.0
K22A				IAML		23 23 11.1	
	comp=N,294nm,0.6s						
K22A				IAML		23 23 14.0	
	comp=E,226nm,0.6s						
PHWY	Pilot Hill	2.44	182	Pn	Pn	23 23 04.4	+1.0
PHWY				IAML		23 23 41.4	
	comp=E,60nm,0.4s						
PHWY				IAML		23 23 43.0	
	comp=E,77nm,0.5s						
RWWY	Rawlins	2.48	215	Pn	Pn	23 23 05.0	+1.2
RWWY				IAML		23 23 40.6	
	comp=E,122nm,0.7s						
RWWY				IAML		23 23 41.1	
	comp=E,124nm,0.7s						
LAO	LASA Array	3.02	348	Pn	Pn	23 23 12.8	+1.7
PD31	Pinedale Array	3.24	254	Pn	Pn	23 23 15.1	+0.7
PDAR	Pinedale Array	3.24	254	Pn	Pn	23 23 15.1	+0.7
	comp=E,3.4nm,0.3s,baz=76,slow=16,SNR=24						
PDAR				Lg	Lg	23 23 59.9	
	comp=E,9.0nm,0.3s,baz=76,slow=31,SNR=2.7						
PDAR	Pinedale Array	3.24	254		Pn	23 23 14.5	+0.1
YNE	Yellowstone No	3.59	292	Pn	Pn	23 23 19.5	+0.3
LKWY	Lake	3.75	285	Pn	Pn	23 23 23.2	+1.9
LKWY				IAML		23 23 51.1	
	comp=E,26nm,2.4s						
LKWY				IAML		23 23 53.8	
	comp=E,37nm,0.6s						
H17A	Grant Village	3.84	282	Pn	Pn	23 23 24.5	+1.8
H17A				IAML		23 24 25.9	
	comp=N,24nm,0.7s						
H17A				IAML		23 24 35.8	
	comp=E,15nm,1.6s						
FLWY	Flagg Ranch	3.90	277	Pn	Pn	23 23 24.1	+0.7
FLWY				IAML		23 24 37.6	
	comp=E,29nm,2.0s						
FLWY				IAML		23 24 59.9	
	comp=E,30nm,4.0s						
MOOW	Moose Ponds	3.93	272		Pn	23 23 25.4	+1.6
ISCO	Idaho Springs	3.94	183	Pn	Pn	23 23 25.5	+1.4
YPP	Pitchstone Pla	3.99	280		Pn	23 23 25.6	+0.9
O20A	White River Ci	4.21	212	Pn	Pn	23 23 28.6	+0.9
O20A				IAML		23 24 43.7	
	comp=E,31nm,0.9s						
Q24A	Divide	4.77	178	Pn	Pn	23 23 36.4	+0.9
Q24A				IAML		23 24 58.8	
	comp=N,12nm,1.4s						
DGMT	Dagmar	4.80	9	Pn	Pn	23 23 37.1	+1.5
HWUT	Hardware Ranch	5.07	247		Pn	23 23 40.0	+0.6
KSCO	Kaye Shedlock'	5.14	156	Pn	Pn	23 23 40.6	+0.2
P17A	Butcher Ranch,	5.88	225		Pn	23 23 51.1	+0.5
PV04	Paradox Valley	5.99	208	Pn	Pn	23 23 53.2	+1.2
PV03	Paradox Valley	6.09	207		Pn	23 23 54.7	+1.2
S22A	4UR Ranch, Cre	6.09	191	Pn	Pn	23 23 54.9	+1.2
TMUT	Trail Mountain	6.26	227	Pn	Pn	23 23 57.3	+1.4
ECSD	EROS Data Cent	6.31	87	Pn	Pn	23 23 56.6	+0.3
I10CA	LAC DU BONNET	9.06	41	*i*		00 22 40.0	
	baz=222,slow=335,SNR=7.8						
ULM	Lac du Bonnet	9.17	41	Pn	Pn	23 24 34.5	-1.0
	comp=N,1.0nm,0.3s,baz=230,slow=11,SNR=13						
ULM				Pg		23 25 02.3	
	comp=N,0.4nm,0.3s,baz=229,slow=17,SNR=1.9						
ULM				Lg	Lg	23 27 05.6	
	comp=N,0.1nm,0.3s,baz=132,slow=18,SNR=3.4						
YKA	Yellowknife Ar	19.56	347	P	P	23 26 50.5	-0.6
	comp=N,0.1nm,0.3s,baz=157,slow=13,SNR=3.7						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**89.60**	**355**	P	**P**	**23 35 20.9**	**-0.5**
	comp=N,0.1nm,0.6s,baz=6.9,slow=4.2,SNR=4.0						

IDC 21 23:40:24.3±1.7,**3°.41S**×**130°.98E**,**h0**^{km},**mb3.6**/2, **mb1 3.9**/5,**mb1mx3.5**/33,**mbtmp3.7**/5,**ML3.4**/3,**MS3.1**/2, **Ms1 3.1**/2,**ms1mx2.7**/31,**Error ellipse: s-maj=83.9km s-min=23.0km az=86.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.54**	**7**	Pn	Pn	23 41 06.3	-0.5
	5.2nm,0.3s,baz=33,slow=3.0,SNR=31						
SIJI				Sn	Sn	23 41 36.7	-1.7
	7.1nm,0.3s,baz=208,slow=22,SNR=11						
SIJI				LR	LR	23 42 22.6	
	comp=Z,304nm,19.3s,baz=230,slow=47						
DAV	**Davao City (W)**	**11.72**	**333**	LR	LR	23 47 56.2	
	comp=Z,112nm,19.7s,baz=148,slow=39						
FITZ	**Fitzroy Crossi**	**15.51**	**199**	Pn	Pn	23 44 02.8	-1.7
	0.2nm,0.3s,baz=20,slow=15,SNR=1.5						
FITZ				Sn	Sn	23 46 49.0	-8.2
	0.1nm,0.3s,baz=212,slow=5.3,SNR=2.2						
WRA	**Warramunga Arr**	**16.76**	**169**	Pn	Pn	23 44 18.6	-2.0
	0.2nm,0.3s,baz=350,slow=11,SNR=7.3						
WRA				Sn	Sn	23 47 16.1	-12
	0.2nm,0.3s,baz=354,slow=24,SNR=4.0						
ASAR	**Alice Springs**	**20.34**	**172**	P	Pn	23 45 03.6	-0.8
	3.9nm,0.5s,baz=351,slow=11,SNR=37						
MKAR	**Makanchi Array**	**65.80**	**326**	P	P	23 51 11.7	+0.2
	0.2nm,0.5s,baz=106,slow=6.0,SNR=2.3						

IDC ***22*** *00:03:37.3±0.6,64°.59N×17°.63W,h0^{km},mb3.7/15, mb1 4.0/19,mb1mx3.8/51,mbtmp3.8/19,ML2.7/3,Error ellipse: s-maj=20.8km s-min=9.4km az=13.0*
REY ***22*** *00:03:37.3,64°.66N×17°.52W,h3^{km}*
NEIC ***22*** *00:03:39.1±1.2,64°.54N±0°.09×17°.6W±0°.1,h7^{km}±4^{km}, mb4.4/33,Error ellipse: s-maj=13.6km s-min=8.3km az=192.0*
ISC 22 00:03:39.2±0.4,**64°.73N**±0°.03×**17°.48W**±0°.03,**h10**^{km},**n119**, σ**1^{s}81**/120,**mb4.3**/30,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.08**	**40**	P	**Pg**	**00 03 40.3**	**-1.3**
	baz=26						
IDYN				S	**Sg**	**00 03 43.4**	**0.0**
	baz=26						
IURH	**Urdarhals**	**0.17**	**58**	P	**Pg**	**00 03 41.9**	**-1.0**
	baz=45						
IURH				S	**Sg**	**00 03 46.1**	**+0.7**
	baz=45						
IDJK	**Dyngjujokull**	**0.25**	**155**	P	Pg	00 03 41.6	-2.8
	baz=143						
IKVE	**Kverkfjoll**	**0.35**	**99**	P	**Pg**	**00 03 44.3**	**-1.9**
	baz=87						
IKVE				S	**Sg**	**00 03 49.5**	**-1.4**
	baz=87						
THOR	**Thorvaldshraun**	**0.40**	**59**	P	**Pg**	**00 03 45.9**	**-1.1**
	baz=52						
THOR				S	**Sb**	**00 03 52.0**	**-2.6**
	baz=52						
ISKR	**Skrokkalda**	**0.43**	**246**	P	Pg	00 03 44.7	-2.9
	baz=255						
ISKR				S	**Sg**	**00 03 50.1**	**-3.1**
	baz=255						
IHUS	**Husbondi**	**0.45**	**190**	P	Pg	00 03 44.5	-3.5
	baz=190						
IKRE	**Kreppuhraun**	**0.47**	**83**	P	**Pg**	**00 03 46.1**	**-2.4**
	baz=76						
IKRE				S	**Sg**	**00 03 53.4**	**-1.3**
	baz=76						
IASK	**Askja**	**0.48**	**48**	P	**Pg**	**00 03 47.0**	**-1.5**
	baz=43						
IASK				S	**Sb**	**00 03 54.5**	**-2.4**
	baz=43						
IJOK	**Jokulheimar**	**0.53**	**218**	P	Pg	00 03 45.8	-3.7
	baz=222						
IMKO	**Mokollar**	**0.55**	**63**	P	**Pg**	**00 03 48.0**	**-1.8**
	baz=57						
IMKO				S	**Sb**	**00 03 56.9**	**-1.9**
	baz=57						
ISVA	**Svartarkot**	**0.61**	**9**	P	**Pg**	**00 03 49.6**	**-1.4**
	baz=9.2						
IIEY	**Innrieyrar**	**0.70**	**204**	P	Pg	00 03 48.4	-4.3
	baz=205						
IKSK	**Karasker**	**0.72**	**142**	P	Pg	00 03 49.1	-4.1
	baz=138						
IVSH	**V-Sauoahnukur**	**0.76**	**84**	P	**Pg**	**00 03 51.0**	**-2.8**
	baz=78						
IVSH				S	**Sg**	**00 04 01.9**	**-1.7**
	baz=78						
IKAL	**Kalfafell**	**0.79**	**187**	P	Pg	00 03 50.1	-4.3
	baz=186						
IHVE	**Hveravellir**	**0.90**	**280**	P	Pg	00 03 53.0	-3.6
	baz=284						
IMEL	**Melhnausar**	**0.91**	**22**	P	**Pg**	**00 03 54.1**	**-2.5**
	baz=21						
IFAG	**Fagurholsmyri**	**0.93**	**157**	P	Pg	00 03 52.6	-4.5
	baz=154						
IREN	**Reynihlio**	**0.95**	**15**	P	**Pg**	**00 03 55.2**	**-2.2**
	baz=14						
IKVO	**Krokottuvotn**	**1.02**	**14**	P	**Pg**	**00 03 56.2**	**-2.5**
	baz=14						
IKVO				S	**Sn**	**00 04 11.1**	**-2.8**
	baz=14						
IGRS	**Grimsstaoir**	**1.07**	**32**	P	**Pg**	**00 03 57.2**	**-2.6**
	baz=30						
ISKI	**Skildingahlsh**	**1.16**	**9**	P	**Pg**	**00 03 58.6**	**-2.8**
	baz=9.4						
IGHA	**Grjothals**	**1.17**	**17**	P	**Pg**	**00 03 58.5**	**-3.0**
	baz=16						
IGHA				S	**Sb**	**00 04 14.2**	**-2.4**
	baz=16						
IRJU	**Rjupnafell**	**1.24**	**206**	P	Pn	00 03 57.9	-4.6
	baz=206						
IMJO	**Mjoaskard**	**1.25**	**231**	P	Pn	00 03 58.3	-4.4
	baz=233						
IDIM	**Dimmadalss**	**1.25**	**10**	P	**Pb**	**00 04 00.0**	**-2.9**
	baz=10						
IGYG	**Gygjarholskot**	**1.27**	**250**	P	Pn	00 03 58.6	-4.3
	baz=253						
IHED	**Heoinshofoi**	**1.35**	**3**	P	**Pn**	**00 04 01.6**	**-2.6**
	baz=3.4						
IHED				S	**Sn**	**00 04 20.4**	**-1.7**
	baz=3.4						
IBRE	**Brettingsstaoi**	**1.41**	**353**	P	**Pn**	**00 04 02.4**	**-2.4**
	baz=354						
IGIL	**Gilhagi**	**1.43**	**19**	P	**Pn**	**00 04 02.6**	**-2.6**
	baz=18						
ISAU	**Saurbar**	**1.48**	**241**	P	Pn	00 04 01.7	-4.1
	baz=243						
ISIG	**Siglufjorour**	**1.53**	**338**	P	**Pn**	**00 04 04.1**	**-2.4**
	baz=339						
BORG	**Borgarnes**	**1.65**	**272**	Pg	**Pn**	**00 04 05.0**	**-3.2**
	45nm,0.3s,baz=103,slow=9.1,SNR=73						
BORG				Lg	Lg	00 04 29.6	
	21nm,0.3s,baz=276,slow=23,SNR=9.7						
BORG	**Borgarnes**	**1.65**	**272**	Pn	**Pn**	**00 04 05.3**	**-2.9**
BORG				Sn	**Sn**	**00 04 30.0**	**+0.6**
ILEI	**Leirhofn**	**1.73**	**13**	P	**Pn**	**00 04 07.4**	**-1.9**
	baz=13						
IHRN	**Hraun**	**1.77**	**323**	P	**Pn**	**00 04 07.5**	**-2.3**
	baz=324						
IHRN				S	**Sn**	**00 04 31.1**	**-1.3**
	baz=324						
IGRI	**Grimsey**	**1.83**	**353**	P	**Pn**	**00 04 08.4**	**-2.2**
	baz=354						
SCO	**Scoresbysund**	**6.02**	**346**	Pn	**Pn**	**00 05 08.3**	**+0.1**
SCO	**Scoresbysund**	**6.02**	**346**	*e*	Pn	00 05 00.8	-7.4
	baz=152,slow=7.4						
SCO				*i* P	**Pn**	**00 05 07.5**	**-0.7**
SCO				*i* S	**Sn**	**00 06 21.5**	**+4.4**
SCO				IAML		00 06 31.5	
	comp=Z,1.7nm,0.4s						
EKA	**Eskdalemuir Ar**	**11.80**	**136**	Pn	**Pn**	**00 06 25.9**	**-1.5**
	baz=323,slow=13,SNR=11						
ESK	**Eskdalemuir**	**11.80**	**136**	Pn	**Pn**	**00 06 25.4**	**-1.9**
DAG	**Danmarks Havn**	**12.11**	**359**	*i* P	Pn	00 06 36.9	+5.5
DAG	**Danmarks Havn**	**12.11**	**359**	*i* P	Pn	00 06 36.9	+5.5
DSB	**Dublin**	**12.84**	**149**	Pn	**Pn**	**00 06 40.0**	**-1.5**
HFS	**Hagfors**	**15.04**	**93**	Pn	**Pn**	**00 07 11.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=276,slow=13,SNR=2.3						
ARCES	**ARCESS Array B**	**17.07**	**55**	P	**Pn**	**00 07 37.5**	**-0.1**
	baz=282,slow=10.0,SNR=2.0						
FINES	**FINESS Array B**	**19.68**	**79**	P	**P**	**00 08 08.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=250,slow=12,SNR=3.9						
FINES	**FINESS Array B**	**19.68**	**79**	P	**P**	**00 08 08.4**	**+0.4**
TULEG	**Thule**	**19.80**	**327**	P	**Pn**	**00 08 11.0**	**+0.2**
CLL	**Collm**	**20.73**	**116**	*i* P	**P**	**00 08 19.9**	**+0.4**
	comp=Z,43nm,2.1s						
CLL				*e*(PP)		00 08 34.0	
CLL	**Collm**	**20.73**	**116**	P	**P**	**00 08 18.1**	**-1.4**
NKC	**Novy Kostel**	**21.38**	**118**	*e*P	**P**	**00 08 30.0**	**+3.5**
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**00 08 29.4**	**+2.3**
BRG				Amp		00 08 35.0	
	comp=Z,9.0nm,1.1s						
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**00 08 29.4**	**+2.3**
BRG				Amp		00 08 35.0	
	comp=Z,9.0nm,1.1s						
PRU	**Pruhonice**	**22.37**	**116**	*e*P	**P**	**00 08 43.5**	**+6.3**
CHVC	**Chvalec**	**22.49**	**113**	*e*P	**P**	**00 08 38.6**	**+0.2**
OSTC	**Ostas**	**22.57**	**113**	*e*P	**P**	**00 08 43.0**	**+3.6**
OSTC				*e*x	x	00 08 59.0	
KHC	**Kasperske Hory**	**22.70**	**119**	*e*P	**P**	**00 08 41.1**	**+0.4**
KHC				*e*x	x	00 08 56.2	
DPC	**Dobruska-Polom**	**22.78**	**113**	*e*P	**P**	**00 08 42.8**	**+1.3**
DPC				*e*x	x	00 08 56.2	
SUW	**Suwalki**	**22.89**	**99**	P	**P**	**00 08 43.2**	**+0.6**
SUW				IAmb	IAmb	00 08 55.0	
	comp=Z,13nm,1.1s						
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**00 08 43.8**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=330,slow=7.7,SNR=6.4						
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**00 08 43.5**	**-0.2**
KRLC	**Kraliky**	**23.18**	**113**	*e*P	**P**	**00 08 46.8**	**+1.1**
KRLC				*e*x	x	00 08 52.4	
EUNU	**Eureka**	**23.61**	**336**	P	**P**	**00 08 51.2**	**+1.4**
VRAC	**Vranov**	**23.71**	**114**	P	**P**	**00 08 50.7**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=261,slow=9.3,SNR=2.2						
MORC	**Moravsky Berou**	**23.72**	**112**	P	**P**	**00 08 52.5**	**+1.4**
MORC				IAmb	IAmb	00 09 04.8	
	comp=Z,15nm,1.6s						
KWP	**Kalwaria Pacla**	**25.92**	**106**	P	**P**	**00 09 11.9**	**+0.8**
PSZ	**Piszkesteto**	**26.14**	**112**	P	**P**	**00 09 13.7**	**+0.5**
PSZ				IAmb	IAmb	00 09 28.2	
	comp=Z,8.8nm,1.2s						
ESDC	**Sonseca Array**	**26.31**	**156**	P	**P**	**00 09 13.4**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=348,slow=10.0,SNR=4.6						
BURAR	**Bucovina Array**	**28.54**	**106**	P	**P**	**00 09 36.0**	**+1.3**
BRTR	**Keskin Array B**	**38.49**	**105**	P	**P**	**00 11 00.7**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=218,slow=7.6,SNR=1.5						
BRTR	**Keskin Array B**	**38.49**	**105**	P	**P**	**00 11 01.7**	**+0.4**
KBZ	**Khabaz**	**39.11**	**93**	P	**P**	**00 11 07.4**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=299,slow=9.4,SNR=5.2						
YKA	**Yellowknife Ar**	**39.17**	**313**	P	**P**	**00 11 06.8**	**+0.2**
	comp=Z,1.8nm,1.1s,baz=42,slow=8.8,SNR=9.8						
AKH	**Akhalkalaki**	**41.25**	**94**	P	**P**	**00 11 26.0**	**+1.7**
AKH				IAmb	IAmb	00 11 32.5	
	comp=Z,10nm,1.0s						
A21K	**Barrow**	**41.37**	**341**	P	**P**	**00 11 26.7**	**+2.1**
ABKAR	**Akbulak array**	**41.96**	**73**	P	**P**	**00 11 30.6**	**+0.8**
ABKAR	**Akbulak array**	**41.96**	**73**	P	**P**	**00 11 31.1**	**+1.3**
ABKAR				IAmb	IAmb	00 11 36.4	
	comp=Z,10.0nm,1.8s						
TIXI	**Tiksi**	**41.97**	**15**	P	**P**	**00 11 31.8**	**+2.3**
TIXI				IAmb	IAmb	00 11 35.3	
	comp=Z,6.8nm,1.2s						
BMAR	**Burnt Mountain**	**42.84**	**333**	P	**P**	**00 11 38.3**	**+1.5**
BRVK	**Borovoye**	**43.09**	**62**	P	**P**	**00 11 40.6**	**+1.6**
RDOG	**Red Dog Mine**	**45.24**	**343**	P	**P**	**00 11 58.4**	**+2.4**
IL31		**45.63**	**332**	P	**P**	**00 12 00.7**	**+1.6**
IL31				IAmb	IAmb	00 12 05.1	
	comp=Z,6.3nm,1.2s						
ILAR	**Eielson Array**	**45.63**	**332**	P	**P**	**00 11 59.9**	**+0.8**
	comp=Z,2.4nm,1.1s,baz=28,slow=6.5,SNR=12						
ILAR				PcP	**PcP**	**00 13 37.1**	**+0.1**
	comp=Z,1.7nm,1.1s,baz=3.8,slow=2.7,SNR=5.3						
ILAR	**Eielson Array**	**45.63**	**332**	P	**P**	**00 12 00.3**	**+1.3**
IMAR	**Indian Mountai**	**45.80**	**337**	P	**P**	**00 12 02.9**	**+2.5**
BCAR	**Beaver Creek A**	**46.05**	**329**	P	**P**	**00 12 03.5**	**+1.0**
WCI	**Wyandotte Cave**	**47.25**	**271**	P	**P**	**00 12 11.8**	**-0.3**
ZAA0	**Zalesovo Array**	**47.59**	**51**	P	**P**	**00 12 16.3**	**+1.8**
ZALV	**Zalesovo Beam**	**47.59**	**51**	P	**P**	**00 12 15.6**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=326,slow=9.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**47.59**	**51**	P	**P**	**00 12 16.4**	**+1.9**
KURK	**Kurchatov**	**48.07**	**58**	P	**P**	**00 12 19.2**	**+0.9**
KURK				IAmb	IAmb	00 12 22.2	
	comp=Z,4.2nm,1.0s						
EGMT	**Eagleton**	**48.85**	**297**	P	**P**	**00 12 25.4**	**+0.9**
RLMT	**Red Lodge**	**51.07**	**295**	P	**P**	**00 12 42.1**	**+0.6**
RLMT				IAmb	IAmb	00 12 52.6	
	comp=Z,9.0nm,1.6s						
KK31	**Karatay Array**	**51.25**	**70**	P	**P**	**00 12 43.7**	**+1.1**
KK31				IAmb	IAmb	00 12 50.0	
	comp=Z,8.1nm,1.6s						
KKAR	**Karatay Array**	**51.25**	**70**	P	**P**	**00 12 44.3**	**+1.7**
BOZ	**Bozeman (W)**	**51.58**	**297**	P	**P**	**00 12 46.3**	**+1.0**
BOZ				IAmb	IAmb	00 12 49.1	
	comp=Z,6.7nm,1.2s						
H17A	**Grant Village**	**52.19**	**295**	P	**P**	**00 12 50.3**	**+0.4**
H17A				IAmb	IAmb	00 12 55.1	
	comp=Z,9.4nm,1.4s						
MAKZ	**Makanchi**	**52.56**	**59**	P	**P**	**00 12 53.3**	**+1.0**
MK31	**Makanchi Array**	**52.68**	**58**	P	**P**	**00 12 55.1**	**+1.8**
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**00 12 53.5**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=330,slow=5.9,SNR=11						
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**00 12 54.1**	**+0.8**
BW06	**Boulder Array**	**53.16**	**293**	P	**P**	**00 12 57.1**	**0.0**
BW06				IAmb	IAmb	00 12 60.0	
	comp=Z,4.5nm,1.1s						
PD31	**Pinedale Array**	**53.16**	**293**	P	**P**	**00 12 56.5**	**-0.6**
PD31				IAmb	IAmb	00 12 60.0	
	comp=Z,4.5nm,1.1s						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**00 12 57.2**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=53,slow=5.7,SNR=11						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**00 12 56.8**	**-0.3**
TOA0	**Torodi Ar. Sit**	**53.20**	**156**	P	**P**	**00 12 57.2**	**-0.1**
TOA0				IAmb	IAmb	00 12 57.6	
	comp=Z,9.3nm,1.8s						
TORD	**Torodi Ar. Bea**	**53.20**	**156**	P	**P**	**00 12 55.7**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=342,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**53.20**	**156**	P	**P**	**00 12 56.4**	**-1.0**
SONM	**Songino Array**	**59.58**	**40**	P	**P**	**00 13 43.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=333,slow=8.3,SNR=3.5						
ULN	**Ulaanbaatar**	**59.74**	**40**	P	**P**	**00 13 45.5**	**+1.7**
ULN				IAmb	IAmb	00 13 47.7	
	comp=Z,6.8nm,1.5s						
WUAZ	**Wupatki**	**60.09**	**290**	P	**P**	**00 13 47.3**	**+0.9**
WUAZ				IAmb	IAmb	00 13 50.2	
	comp=Z,4.7nm,1.1s						
NVAR	**Mina Array Bea**	**60.28**	**297**	P	**P**	**00 13 45.8**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=333,slow=5.2,SNR=1.8						
NIL	**Nilore**	**60.42**	**74**	P	**P**	**00 13 50.3**	**+1.8**
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**00 14 00.7**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=81,slow=3.9,SNR=4.6						
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**00 14 01.0**	**-0.2**
TUC	**Tucson**	**62.65**	**288**	P	**P**	**00 14 04.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P	**P**	**00 16 10.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=316,slow=7.1,SNR=6.5						

IDC 22 00:15:47.2±1.6,**3°.46S**×**130°.82E**,**h0**^{km},**mb3.7**/2, **mb1 3.9**/5,**mb1mx3.6**/41,**mbtmp3.7**/5,**ML3.5**/3,**MS3.0**/2, **Ms1 3.0**/2,**ms1mx2.6**/40,**Error ellipse: s-maj=73.3km s-min=23.0km az=86.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.61**	**10**	Pn	Pn	00 16 29.7	-1.0
	6.4nm,0.3s,baz=253,slow=24,SNR=21						
SIJI				Sn	Sn	00 16 56.6	-6.6
	7.6nm,0.3s,baz=246,slow=23,SNR=7.7						
DAV	**Davao City (W)**	**11.70**	**333**	LR	LR	00 23 36.1	
	comp=Z,60nm,20.0s,baz=246,slow=40						
FITZ	**Fitzroy Crossi**	**15.41**	**199**	Pn	Pn	00 19 24.4	-1.6
	0.3nm,0.3s,baz=29,slow=15,SNR=8.3						
FITZ				Sn	Sn	00 22 10.3	-7.2
	0.1nm,0.3s,baz=125,slow=16,SNR=1.5						
WRA	**Warramunga Arr**	**16.74**	**168**	Pn	Pn	00 19 41.1	-2.1
	0.1nm,0.3s,baz=350,slow=13,SNR=6.5						
WRA				Sn	Sn	00 22 37.5	-12
	0.1nm,0.3s,baz=0.1,slow=23,SNR=2.3						
ASAR	**Alice Springs**	**20.31**	**172**	P	Pn	00 20 26.0	-0.9
	5.3nm,0.6s,baz=350,slow=10,SNR=38						
ASAR				S	S	00 24 06.1	-7.5
	0.5nm,0.8s,baz=312,slow=38,SNR=1.8						
LEM	**Lembang**	**23.35**	**261**	LR	LR	00 30 31.4	
	comp=Z,52nm,18.8s,baz=165,slow=38						
MKAR	**Makanchi Array**	**65.76**	**326**	P	P	00 26 34.6	+0.5
	0.2nm,0.5s,baz=115,slow=8.4,SNR=4.0						

HEL ***22*** *00:32:51.9,67°.89N×20°.01E,h0^{km},ML1.9,Explosion*
UPP 22 00:32:53.0±0.0,**67°.85N**×**20°.20E**,**h0**^{km},**ML2.3, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**25**	P	Pg	00 32 55.4	+0.2
KUA	**Kurravaara**	**0.12**	**25**	*i* P	Pg	00 32 55.4	+0.2
RATU	**Laukkuluspa**	**0.23**	**264**	P	Pg	00 32 57.6	+0.2
RATU				S	Sg	00 33 00.9	+0.4
RATU	**Laukkuluspa**	**0.23**	**264**	*i* P	Pg	00 32 57.6	+0.2
RATU				*i* S	Sg	00 33 00.9	+0.4
KOVU	**Salmi**	**0.38**	**358**	P	Pg	00 33 00.2	0.0
KOVU	**Salmi**	**0.38**	**358**	*i* P	Pg	00 33 00.2	0.0
NIKU	**Nikkaluokta**	**0.44**	**273**	P	Pg	00 33 01.5	+0.1
NIKU	**Nikkaluokta**	**0.44**	**273**	*i* P	Pg	00 33 01.5	+0.1
LANU	**Lannavaara**	**0.70**	**72**	P	Pg	00 33 06.2	-0.2
LANU	**Lannavaara**	**0.70**	**72**	*e*P	Pg	00 33 06.0	-0.4
LANU				*e*S	Sg	00 33 15.6	+0.1
DUNU	**Dundret**	**0.74**	**169**	P	Pg	00 33 06.8	-0.4
DUNU	**Dundret**	**0.74**	**169**	*i* P	Pg	00 33 06.8	-0.4
MASU	**Masugnsbyn**	**0.79**	**119**	P	Pg	00 33 08.0	-0.1
MASU	**Masugnsbyn**	**0.79**	**119**	*i* P	Pg	00 33 08.0	-0.1
SALU	**Saltoluokta**	**0.80**	**235**	P	Pg	00 33 08.1	-0.2
SALU	**Saltoluokta**	**0.80**	**235**	*i* P	Pg	00 33 08.1	-0.2
KIF	**Kilpisjarvi**	**1.18**	**11**	*e*P	Pg	00 33 15.7	0.0
KIF	**Kilpisjarvi**	**1.18**	**11**	*e*PB	Pg	00 33 15.6	-0.1
KIF				MSG		00 33 28.2	
	comp=Z,8.8nm,0.2s						
KIF				*e*SB	Sg	00 33 31.3	+0.4
PAJU	**Pajala**	**1.40**	**125**	P	Pg	00 33 18.5	-1.2
PAJU	**Pajala**	**1.40**	**125**	*e*P	Pg	00 33 18.2	-1.4
	baz=304						
PAJU				*e*SB	Sg	00 33 37.2	-0.5
ERTU	**Ertsjaerv**	**1.51**	**148**	*e*P	Pn	00 33 20.5	-0.7
ERTU				*e*SN	Sn	00 33 42.1	+0.5
TOF	**Tornio**	**2.40**	**136**	*e*PB	Pn	00 33 34.8	+1.3
TOF				MSG		00 34 05.5	
	comp=Z,6.2nm,0.2s						
TOF				*e*SG	Sb	00 34 07.0	-0.2
SGF	**Sodankyl**	**2.45**	**97**	*e*PB	Pb	00 33 36.1	-1.7
	baz=284						
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*P	Pn	00 33 36.2	+0.3
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*PB	Pn	00 33 37.2	+1.3
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb	00 33 38.0	-2.1
RNF				*e*SG	Sb	00 34 12.0	-0.3
BURU	**Burvik**	**3.31**	**171**	*e*P	Pn	00 33 47.7	+1.7
	baz=354						
VRF	**Varrio**	**3.57**	**87**	*e*PG	Pb	00 33 57.0	0.0
OUL	**Oulu**	**3.59**	**138**	*e*PG	Pb	00 33 59.3	+2.0
	baz=326						
MSF	**Maaselka**	**3.99**	**115**	*e*P	Pn	00 33 57.0	+1.7
KU6	**Riekki**	**4.23**	**111**	*e*PG	Pb	00 34 08.9	+0.8
	baz=299						

UPP 22 00:32:57.3±0.2,**67°.89N**×**20°.16E**,**h0**^{km},**ML1.7, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKU	**Nikkaluokta**	**0.43**	**267**	P	Pg	00 33 05.5	0.0
DUNU	**Dundret**	**0.79**	**168**	P	Pg	00 33 12.1	-0.3
SALU	**Saltoluokta**	**0.82**	**232**	P	Pg	00 33 12.8	-0.2
MASU	**Masugnsbyn**	**0.83**	**121**	P	Pg	00 33 12.7	-0.4
PAJU	**Pajala**	**1.43**	**126**	P	Pg	00 33 24.7	0.0

BJI ***22*** *00:39:12.5±0.0,73°.30N×6°.40E,h8^{km},mB5.3/44, mb4.8/53,Ms5.0/43,Ms7 4.8/42*
NAO ***22*** *00:39:13.5±1.1,73°.28N×6°.60E,ML4.7*
IEPN ***22*** *00:39:13.0,73°.06N×6°.01E,h10^{km}*
IDC ***22*** *00:39:15.0±0.3,73°.27N×6°.50E,h0^{km},mb4.6/39, mb1 4.8/45,mb1mx4.7/59,mbtmp4.7/45,ML4.3/6,MS4.5/42, Ms1 4.5/42,ms1mx4.4/49,Error ellipse: s-maj=11.1km s-min=6.9km az=41.0*
MOS ***22*** *00:39:14.8±0.9,73°.28N×6°.46E,h10^{km},mb5.2/112, MS4.6/23,Error ellipse: s-maj=13.6km s-min=3.3km az=95.7*
NEIC ***22*** *00:39:16.5±1.3,73°.25N±0°.07×6°.5E±0°.2,h10^{km}±1^{km}, mb5.1/193,Error ellipse: s-maj=11.3km s-min=10.1km az=186.0*
DNK ***22*** *00:39:16.4±4.6,73°.39N×6°.48E,h28^{km}±141^{km},mb4.8, ML3.9*
GCMT ***22*** *00:39:16.5±0.2,73°.28N±0°.01×6°.41E±0°.04,h12^{km}, MW5.1/134,Moment Tensor Solution. s52,c67; s134,c224; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.38±.08; $M_{\theta\theta}$-4.83±.08; $M_{\phi\phi}$3.45±.08; $M_{r\theta}$2.66±.24; $M_{\theta\phi}$-0.73±.08; $M_{\phi r}$2.06±.23; Best double couple: $M_0$5.41100×10^{16} NP1:ϕ_s309.00000°,δ48.00000°, λ169.00000°. NP2:ϕ_s46.00000°,δ82.00000°,λ42.00000°. Principal axes: T 4.7940, Plg35.0000°, Azm277.0000°; N 1.2350, Plg47.0000°, Azm55.0000°; P -6.0290, Plg22.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BER ***22*** *00:39:18.3±3.8,73°.38N×6°.72E,h22^{km}±29^{km},ML3.0, MS4.3,ML4.7(NAO),Confirmed Earthquake*
BGR ***22*** *00:39:35.0±0.0,72°.09N×7°.46E,h10^{km},mb5.1,Ms4.1*
ISC 22 00:39:15.7±0.5,**73°.24N**±0°.03×**6°.70E**±0°.03,**h4**^{km}±3^{km}, **h5**^{km}**:pP-P**,**n1103**,σ**1^{s}48**/1165,**mb5.1**/264,**MS4.6**/78, **46C-88D,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.66**	**64**	Pn	**Pn**	**00 40 10.8**	**-2.1**
BJO1	**Bjornoya**	**3.66**	**64**	*e*P	**Pn**	**00 40 11.3**	**-1.5**
BJO1				*e*S	**Sn**	**00 40 51.2**	**-5.1**
BJO1				IAML		00 40 54.5	
	comp=Z,46nm,0.5s						
BJO1	**Bjornoya**	**3.66**	**64**	⇑*i*P	**Pn**	**00 40 10.8**	**-2.1**
BJO1				*i* S	**Sn**	**00 40 54.4**	**-1.9**
HSPB	**Hornsund (broa**	**4.41**	**27**	*e*P	**Pn**	**00 40 21.2**	**-2.0**
HSPB	**Hornsund (broa**	**4.41**	**27**	Pn	**Pn**	**00 40 21.1**	**-2.0**
HSPB	**Hornsund (broa**	**4.41**	**27**	*e*P	**Pn**	**00 40 21.2**	**-2.0**
HSPB				IVMs_BB	IVMs_BB	00 41 45.5	
	comp=Z,5μm,11.9s						
HSPB	**Hornsund (broa**	**4.41**	**27**	*e*P	**Pn**	**00 40 20.8**	**-2.4**
HSPB				*e*S	**Sn**	**00 41 13.5**	**-1.3**
JNE	**Jan Mayen East**	**5.14**	**251**	*e*P	**Pn**	**00 40 32.7**	**-0.5**
JNW	**Jan Mayen West**	**5.15**	**252**	*e*P	**Pn**	**00 40 32.4**	**-1.0**
BRBA	**Barentsburg A**	**5.19**	**18**	Pn	**Pn**	**00 40 32.0**	**-1.9**
JMIC	**Jan Mayen**	**5.20**	**252**	Pn	**Pn**	**00 40 31.7**	**-2.3**
	baz=82,slow=3.6,SNR=26						
JMIC				Sn	**Sn**	**00 41 38.2**	**+3.9**
	baz=207,slow=18,SNR=0.8						
JMIC	**Jan Mayen**	**5.20**	**252**	Pn	**Pn**	**00 40 33.0**	**-1.0**
JMIC	**Jan Mayen**	**5.20**	**252**	*e*P	**Pn**	**00 40 32.9**	**-1.0**
JMI	**Jan Mayen**	**5.29**	**252**	*e*P	**Pn**	**00 40 34.1**	**-1.2**
TRO	**Tromso**	**5.32**	**127**	Pn	**Pn**	**00 40 35.2**	**-0.5**
TRO				Sn	**Sn**	**00 41 33.9**	**-3.4**
TRO	**Tromso**	**5.32**	**127**	*e*P	**Pn**	**00 40 35.1**	**-0.5**
TRO				*e*S	**Sn**	**00 41 32.7**	**-4.6**
SPA0	**Spitsbergen Ar**	**5.50**	**21**	Pn	**Pn**	**00 40 36.4**	**-1.8**
	baz=197,slow=16						
SPA0	**Spitsbergen Ar**	**5.50**	**21**		**Pn**	**00 40 36.7**	**-1.5**
SPA0	**Spitsbergen Ar**	**5.50**	**21**	Pn	**Pn**	**00 40 36.4**	**-1.8**
	baz=197,slow=16						
SPITS	**Spitsbergen Ar**	**5.50**	**21**	Pn	**Pn**	**00 40 36.7**	**-1.5**
	baz=204,slow=16,SNR=402						
SPITS				LR	LR	00 42 28.6	
	comp=Z,9μm,19.4s,baz=220,slow=35						
N2VI	**Vinje**	**5.52**	**150**	*e*P	**Pn**	**00 40 37.6**	**-0.9**
N2VI				*e*S	**Sn**	**00 41 35.2**	**-7.0**
LOF	**Lofoten**	**5.61**	**153**	Pn	**Pn**	**00 40 38.7**	**-0.9**
LOF	**Lofoten**	**5.61**	**153**	*e*P	**Pn**	**00 40 39.0**	**-0.6**
LOF				*e*S	**Sn**	**00 41 39.1**	**-5.2**
LOF				IAML		00 41 45.8	
	comp=Z,47nm,0.5s						
LOF				IVMsBB		00 42 25.1	
	comp=Z,4μm,13.0s						
JETT	**Jettan, Norway**	**5.73**	**123**	Pn	**Pn**	**00 40 40.8**	**-0.6**
JETT				Sn	**Sn**	**00 41 44.3**	**-3.1**
N2SV	**S¸rv¥gen**	**5.77**	**156**	*e*P	**Pn**	**00 40 41.4**	**-0.5**
N2SV				*e*S	**Sn**	**00 41 42.9**	**-5.4**
HOPEN	**Hopen**	**5.79**	**47**	Pn	**Pn**	**00 40 39.7**	**-2.4**
HOPEN				Sn	**Sn**	**00 41 41.3**	**-7.4**
HOPEN	**Hopen**	**5.79**	**47**	*e*P	**Pn**	**00 40 40.5**	**-1.5**

HOPEN				IAML		00 42 03.7	
	comp=Z,15nm,0.7s						
HOPEN				IVMs_BB	IVMs_BB	00 42 45.5	
	comp=Z,2µm,8.2s						
HOPEN	**Hopen**	**5.79**	**47**	*e*P	**Pn**	**00 40 39.5**	**-2.6**
HOPEN				*i* S	**Sn**	**00 41 44.4**	**-4.3**
KBS	**Kingsbay**	**5.85**	**10**	⇑*e*P	**Pn**	**00 40 41.4**	**-1.6**
KBS	**Kingsbay**	**5.85**	**10**	Pn	**Pn**	**00 40 40.4**	**-2.5**
KBS	**Kingsbay**	**5.85**	**10**		**Pn**	**00 40 40.3**	**-2.7**
KBS	**Kingsbay**	**5.85**	**10**	*e*P	**Pn**	**00 40 40.4**	**-2.5**
KBS				*e*P	**Pn**	**00 40 40.7**	**-2.3**
KBS				*i* P	**Pn**	**00 40 43.7**	**+0.8**
KBS				IVMs_BB	IVMs_BB	00 42 32.7	
	comp=Z,16µm,13.2s						
KBS	**Kingsbay**	**5.85**	**10**	*e*P	**Pn**	**00 40 40.0**	**-3.0**
KBS				*e*S	**Sn**	**00 41 50.0**	**-0.3**
KBS	**Kingsbay**	**5.85**	**10**	*e*P	**Pn**	**00 40 40.4**	**-2.5**
KBS				*i* P	**Pn**	**00 40 43.7**	**+0.8**
HAMF	**Hammerfest**	**5.88**	**108**	Pn	**Pn**	**00 40 41.8**	**-1.6**
HAMF				Sn	**Sn**	**00 41 43.6**	**-7.4**
HAMF	**Hammerfest**	**5.88**	**108**	*e*P	**Pn**	**00 40 41.7**	**-1.6**
HAMF				IAML		00 41 47.6	
	comp=Z,35nm,0.4s						
STEI	**Steigen**	**6.04**	**148**	Pn	**Pn**	**00 40 44.2**	**-1.4**
STEI				Sn	**Sn**	**00 41 49.6**	**-5.4**
STEI	**Steigen**	**6.04**	**148**	*e*P	**Pn**	**00 40 44.7**	**-0.8**
STEI				IAML		00 41 53.4	
	comp=Z,33nm,0.5s						
STEI				IVMs_BB	IVMs_BB	00 42 32.0	
	comp=Z,3µm,13.4s						
N2IH	**Innhavet**	**6.12**	**145**	*e*P	**Pn**	**00 40 45.8**	**-0.9**
N2IH				IAML		00 41 53.8	
	comp=Z,29nm,0.9s						
N2IH				IVMs_BB	IVMs_BB	00 42 48.8	
	comp=Z,2µm,8.8s						
KIF	**Kilpisjarvi**	**6.23**	**126**	Pn	**Pn**	**00 40 47.7**	**-0.4**
KIF				Sn	**Sn**	**00 41 57.3**	**-2.4**
KIF	**Kilpisjarvi**	**6.23**	**126**	*e*P	**Pn**	**00 40 47.5**	**-0.7**
N2TV	**T¥rnvik**	**6.36**	**149**	*e*P	**Pn**	**00 40 49.7**	**-0.2**
N2TV				*e*S	**Sn**	**00 41 57.0**	**-5.7**
NBB08	**Skaug oppvekst**	**6.46**	**152**	*e*P	**Pn**	**00 40 49.8**	**-1.4**
FAUS	**Fauske**	**6.55**	**150**	*e*P	**Pn**	**00 40 52.3**	**-0.3**
FAUS				*e*S	**Sn**	**00 41 59.9**	**-7.7**
FAUS				IAML		00 42 09.5	
	comp=Z,29nm,0.6s						
FAUS				IVMs_BB	IVMs_BB	00 42 56.2	
	comp=Z,4µm,18.7s						
NBB28	**Valnes**	**6.62**	**153**	*e*P	**Pn**	**00 40 53.5**	**+0.1**
NBB05	**Inndyr**	**6.71**	**155**	*e*P	**Pn**	**00 40 55.4**	**+0.7**
NBB30	**Finnes**	**6.73**	**156**	*e*P	**Pn**	**00 40 55.2**	**+0.2**
NBB30				IAML		00 42 09.1	
	comp=Z,31nm,0.4s						
KTK1	**Kautokeino**	**6.82**	**120**	*e*P	**Pn**	**00 40 56.7**	**+0.4**
ARA0	**ARCESS Array S**	**7.05**	**113**	Pn	**Pn**	**00 40 58.0**	**-1.4**
	baz=324,slow=12						
ARA0				Sn	**Sn**	**00 42 13.6**	**-6.2**
	baz=313,slow=22						
ARA0	**ARCESS Array S**	**7.05**	**113**	Pn	**Pn**	**00 40 58.0**	**-1.4**
	baz=324,slow=12						
ARA0				Sn	**Sn**	**00 42 13.6**	**-6.2**
	baz=313,slow=22						
ARCES	**ARCESS Array B**	**7.05**	**113**	Pn	**Pn**	**00 40 58.3**	**-1.1**
	baz=324,slow=12,SNR=144						
ARCES				Sn	**Sn**	**00 42 14.3**	**-5.5**
	baz=318,slow=23,SNR=3.1						
ARCES				LR	LR	00 43 00.3	
	comp=Z,541nm,20.0s,baz=285,slow=32						
ARCES	**ARCESS Array B**	**7.05**	**113**	P	**Pn**	**00 40 58.7**	**-0.7**
ARCES	**ARCESS Array B**	**7.05**	**113**	Pn	**Pn**	**00 40 58.7**	**-0.7**
KONS	**Konsvik**	**7.12**	**159**	*e*P	**Pn**	**00 41 00.0**	**-0.3**
KONS				*e*S	**Sn**	**00 42 13.1**	**-8.4**
STOK	**Stokkvaagen**	**7.27**	**159**	*e*P	**Pn**	**00 41 02.4**	**0.0**
STOK				*e*S	**Sn**	**00 42 17.9**	**-7.4**
KEV	**Kevo**	**7.32**	**108**	P	**Pn**	**00 41 01.5**	**-1.6**
KEV	**Kevo**	**7.32**	**108**	Pn	**Pn**	**00 41 01.5**	**-1.6**
DAG	**Danmarks Havn**	**7.41**	**310**	*i* P	Pn	00 40 58.9	-5.5
DAG	**Danmarks Havn**	**7.41**	**310**	*i* P	Pn	00 40 58.9	-5.4
DAG				*e*P	Pn	00 40 59.3	-5.1
DAG				*e*S	Sn	00 42 15.3	-13
DAG				IAML		00 42 19.0	
	comp=Z,52nm,0.4s						
DAG	**Danmarks Havn**	**7.41**	**310**	*i* P	Pn	00 40 58.9	-5.5
DAG	**Danmarks Havn**	**7.41**	**310**	*i* P	Pn	00 40 58.9	-5.4
DAG				IAML		00 42 19.0	
	comp=Z,52nm,0.4s						
DBG	**Daneborg**	**7.58**	**291**	Pn	Pn	00 41 01.4	-5.2
DBG				Sn	Sn	00 42 19.9	-13
DBG	**Daneborg**	**7.58**	**291**	*i* P	Pn	00 41 01.3	-5.3
DBG	**Daneborg**	**7.58**	**291**	*i* P	Pn	00 41 01.3	-5.3
MOR8	**Moi Rana**	**7.59**	**156**	*e*P	**Pn**	**00 41 07.2**	**+0.4**
NSS	**Namsos**	**8.95**	**165**	*e*P	**Pn**	**00 41 26.5**	**+1.1**
SCO	**Scoresbysund**	**9.29**	**267**	*i* P	**Pn**	**00 41 27.2**	**-2.8**
SCO	**Scoresbysund**	**9.29**	**267**	Pn	**Pn**	**00 41 26.9**	**-3.1**
SCO	**Scoresbysund**	**9.29**	**267**	*i* P	**Pn**	**00 41 27.3**	**-2.8**
SCO	**Scoresbysund**	**9.29**	**267**	*i* P	**Pn**	**00 41 27.2**	**-2.8**
SCO	**Scoresbysund**	**9.29**	**267**	*i* P	**Pn**	**00 41 27.3**	**-2.8**
TBLU	**Trondheim**	**10.12**	**171**	*e*P	**Pn**	**00 41 38.2**	**-3.2**
TBLU				*e*S	Sn	00 43 22.6	-13
APA0	**Apatity Array**	**10.38**	**110**	Pn	**Pn**	**00 41 42.6**	**-2.4**
	baz=324,slow=12						
APA0	**Apatity Array**	**10.38**	**110**	Pn	**Pn**	**00 41 42.6**	**-2.4**
	baz=324,slow=12						
APA	**Apatity**	**10.52**	**109**	⇑*i*P	**Pn**	**00 41 43.9**	**-3.1**
APA				pmax	pmax		
	comp=Z,34nm,0.7s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
LVZ	**Lovozero**	**10.64**	**106**	*ce*P	**Pn**	**00 41 45.8**	**-2.8**
LVZ	**Lovozero**	**10.64**	**106**	Pn	**Pn**	**00 41 45.8**	**-2.8**
MOL	**Molde**	**10.72**	**178**	*e*P	**Pn**	**00 41 47.9**	**-1.9**
AKN	**Aaknes**	**11.12**	**179**	Pn	**Pn**	**00 41 54.1**	**-1.0**
AKN	**Aaknes**	**11.12**	**179**	Pn	**Pn**	**00 41 54.1**	**-1.0**
DOMB	**Dombas**	**11.29**	**174**	*e*P	**Pn**	**00 41 57.3**	**-0.2**
ZFI2	**Zemlya Franca-**	**11.55**	**32**	⇓*i*P	**Pn**	**00 41 58.6**	**-2.3**
	comp=Z,81nm,0.7s						
ZFI2				*i* S	**Sn**	**00 44 08.4**	**-1.6**
NC204	**NORSAR Array S**	**12.12**	**171**		**Pn**	**00 42 07.7**	**-1.2**
HYA	**Hoyanger**	**12.13**	**181**	*e*P	**Pn**	**00 42 06.9**	**-2.1**
NC303	**NORSAR Array S**	**12.20**	**169**		**Pn**	**00 42 09.2**	**-0.7**
NC405	**NORSAR Array S**	**12.33**	**169**	Pn	**Pn**	**00 42 10.8**	**-0.9**
NB2	**NORSAR Subarra**	**12.37**	**170**	Pn	**Pn**	**00 42 12.3**	**0.0**
	baz=352,slow=14						
NB2	**NORSAR Subarra**	**12.37**	**170**	Pn	**Pn**	**00 42 12.3**	**0.0**
	baz=352,slow=14						
NOA	**NORSAR Array B**	**12.37**	**170**	Pn	**Pn**	**00 42 10.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=260,slow=17,SNR=28						
NOA				Sn	**Sn**	**00 44 22.8**	**-7.7**
	comp=Z,0.0nm,0.3s,baz=337,slow=21,SNR=2.1						
NOA				LR	LR	00 46 52.4	
	comp=Z,3µm,18.2s,baz=350,slow=37						
SKAR	**Skarslia**	**12.63**	**176**	*e*P	**Pn**	**00 42 14.3**	**-1.6**
NRA0	**NORESS Array S**	**12.70**	**169**	Pn	**Pn**	**00 42 16.2**	**-0.5**
	baz=352,slow=16						
NRA0	**NORESS Array S**	**12.70**	**169**	Pn	**Pn**	**00 42 16.2**	**-0.5**
	baz=352,slow=16						
BER	**Bergen**	**12.93**	**183**	*e*P	**Pn**	**00 42 18.0**	**-1.7**
BORG	**Borgarnes**	**13.01**	**244**	LR	LR	00 46 13.9	
	comp=Z,778nm,18.1s,baz=54,slow=32						
SLVR	**Solovky**	**13.04**	**114**	*e*P	Pn	00 42 15.6	-5.8
	comp=Z,37nm,0.7s						
SLVR				*e*S	**Sn**	**00 44 41.6**	**-5.0**
SUMG	**Summit**	**13.05**	**289**	*i* P	**Pn**	**00 42 19.4**	**-2.4**
SUMG				pmax	pmax		
	comp=Z,250nm,1.3s						
SUMG	**Summit**	**13.05**	**289**	Pn	**Pn**	**00 42 19.2**	**-2.7**
SUMG	**Summit**	**13.05**	**289**	*i* P	**Pn**	**00 42 19.4**	**-2.4**
SUMG				IAmb	IAmb	00 42 21.3	
	comp=Z,252nm,1.3s						
SUMG	**Summit**	**13.05**	**289**	*i* P	**Pn**	**00 42 19.4**	**-2.4**
	comp=Z,251nm,1.3s						
SUMG	**Summit**	**13.05**	**289**	*i* P	**Pn**	**00 42 19.4**	**-2.4**
SUMG				IAmb	IAmb	00 42 21.3	
	comp=Z,252nm,1.3s						
ODD1	**Odda**	**13.39**	**180**	*e*P	**Pn**	**00 42 26.6**	**+0.5**
HFS	**Hagfors**	**13.44**	**165**	Pn	**Pn**	**00 42 25.5**	**-1.2**
	comp=Z,1.5nm,0.3s,baz=0.8,slow=12,SNR=42						
HFS				Sn	**Sn**	**00 44 50.0**	**-6.3**
	comp=Z,1.0nm,0.3s,baz=355,slow=25,SNR=2.8						
HFS				LR	LR	00 47 16.8	
	comp=Z,5µm,19.6s,baz=347,slow=36						
HFS	**Hagfors**	**13.44**	**165**	Pn	**Pn**	**00 42 25.8**	**-0.9**
	baz=352,slow=14						
HFS	**Hagfors**	**13.44**	**165**	Pn	**Pn**	**00 42 25.8**	**-0.9**
	baz=352,slow=14						
OSL	**Oslo**	**13.45**	**171**	*e*P	**Pn**	**00 42 26.5**	**-0.5**
KONO	**Kongsberg**	**13.70**	**174**	⇑*e*P	**Pn**	**00 42 28.7**	**-1.6**
KONO				pmax	pmax		
	comp=Z,50nm,1.7s						
KONO	**Kongsberg**	**13.70**	**174**	Pn	**Pn**	**00 42 28.6**	**-1.6**
KONO	**Kongsberg**	**13.70**	**174**	*e*P	**Pn**	**00 42 29.4**	**-0.9**
BLS5	**Blasjo**	**13.88**	**181**	*e*P	**Pn**	**00 42 33.0**	**+0.2**
FIA0	**FINESS Array S**	**13.88**	**138**	Pn	**Pn**	**00 42 31.1**	**-1.8**
	baz=334,slow=9.3						
FIA0	**FINESS Array S**	**13.88**	**138**	Pn	**Pn**	**00 42 31.1**	**-1.8**
	baz=334,slow=9.3						
FIA1	**FINESS Array S**	**13.88**	**138**	Pn	**Pn**	**00 42 31.2**	**-1.6**
FINES	**FINESS Array B**	**13.88**	**138**	Pn	**Pn**	**00 42 31.7**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=335,slow=9.4,SNR=29						
FINES				LR	LR	00 47 37.3	
	comp=Z,3µm,19.6s,baz=334,slow=36						
FINES	**FINESS Array B**	**13.88**	**138**	Pn	**Pn**	**00 42 30.8**	**-2.0**
AAL	**Aland**	**14.07**	**152**	*e*P	**P**	**00 42 43.0**	**-0.3**
KMY	**Karmoy**	**14.10**	**183**	*e*P	**Pn**	**00 42 35.0**	**-0.8**
TMCR	**Tamitsa**	**14.35**	**113**	*e*P	**Pn**	**00 42 36.7**	**-2.4**
TMCR				pmax	pmax		
	comp=Z,73nm,0.9s						
TMCR	**Tamitsa**	**14.35**	**113**	*e*P	**Pn**	**00 42 36.3**	**-2.8**
	comp=Z,156nm,1.4s						
VALR	**Valaam**	**14.96**	**130**	*e*P	**Pn**	**00 42 49.3**	**+1.8**
VALR				pmax	pmax		
	comp=Z,59nm,0.8s						
SNART	**Snartemo**	**14.97**	**179**	*i* P	**Pn**	**00 42 46.5**	**-1.1**
SNART	**Snartemo**	**14.97**	**179**	*i* P	**Pn**	**00 42 46.5**	**-1.1**
HOMB	**Homborsund**	**15.05**	**176**	*e*P	**P**	**00 42 54.6**	**+0.5**
HOMB	**Homborsund**	**15.05**	**176**	*i* P	**P**	**00 42 54.7**	**+0.5**
ICESG	**Greenland Ices**	**15.19**	**277**	*e*P	**Pn**	**00 42 50.6**	**-0.2**
ICESG	**Greenland Ices**	**15.19**	**277**	*e*P	**Pn**	**00 42 50.6**	**-0.2**
BORU	**Boraas**	**15.86**	**168**	*i* P	**Pn**	**00 42 57.8**	**-1.5**
LSH	**Leshukonskoye**	**15.93**	**102**	*e*P	**Pn**	**00 42 53.8**	**-6.3**
	comp=Z,219nm,1.4s						
MTSE	**Matsula**	**16.04**	**146**	*e*P	**Pn**	**00 43 00.9**	**-0.7**
ONAU	**Onsala**	**16.05**	**170**	*i* P	**Pn**	**00 43 00.6**	**-1.1**
PUL	**Pulkovo**	**16.27**	**134**	⇓*e*P	**Pn**	**00 43 03.1**	**-1.5**
PUL				pmax	pmax		
	comp=Z,176nm,1.0s						
VSU	**Vasula**	**16.78**	**141**	*e*P	**Pn**	**00 43 08.9**	**-2.2**
VSU	**Vasula**	**16.78**	**141**	*de*P	**Pn**	**00 43 08.2**	**-2.9**
DRUM	**Mains of Drumt**	**16.81**	**198**	*e*P	**Pn**	**00 43 12.6**	**+1.2**
DRUM				IAmb	IAmb	00 43 16.2	
	comp=Z,99nm,1.1s						
SLIT	**Slitere, Latvi**	**16.85**	**150**	*e*P	**Pn**	**00 43 07.8**	**-4.2**
MUD	**Monsted U'grnd**	**16.89**	**175**	*i* P	**P**	**00 43 15.7**	**+1.2**
MUD	**Monsted U'grnd**	**16.89**	**175**	*i* P	**P**	**00 43 15.8**	**+1.2**
MUD	**Monsted U'grnd**	**16.89**	**175**	*i* P	**P**	**00 43 15.7**	**+1.2**
MUD	**Monsted U'grnd**	**16.89**	**175**	*i* P	**P**	**00 43 15.8**	**+1.2**
DEL	**Delary**	**17.09**	**166**	*i* P	**P**	**00 43 17.0**	**+0.2**
AMDE	**Amderma**	**17.23**	**74**	*e*P	**Pn**	**00 43 12.8**	**-3.9**
	comp=Z,32nm,1.0s						
AMDE				*i* S	**Sn**	**00 46 22.9**	**-5.5**
INVG	**Invergeldie, C**	**17.43**	**200**	*e*P	**Pn**	**00 43 19.6**	**+0.3**
KLMR	**Klimovskoe**	**17.48**	**118**	*e*P	**Pn**	**00 43 18.5**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,167nm,1.3s						
KLMR	**Klimovskoe**	**17.48**	**118**	*e*Pn	**Pn**	**00 43 18.5**	**-1.3**
KLMR				AMP		00 43 29.2	
	comp=Z,167nm,1.3s						
KLMR	**Klimovskoe**	**17.48**	**118**	*e*P	**Pn**	**00 43 18.1**	**-1.7**
	comp=Z,223nm,1.3s						
KLMR				*e*S	**Sn**	**00 46 33.9**	**-0.4**
NUUG	**Nuugaatsiaq**	**17.55**	**294**	*i* P	**Pn**	**00 43 18.8**	**-1.9**
NUUG	**Nuugaatsiaq**	**17.55**	**294**	*i* P	**Pn**	**00 43 18.8**	**-1.9**
LAWE	**Loch Awe, Argy**	**17.74**	**203**	*e*P	**P**	**00 43 23.7**	**-0.2**
COP	**Copenhagen**	**17.78**	**169**	*i* P	**P**	**00 43 24.3**	**-0.1**
COP				pmax	pmax		
	comp=Z,65nm,1.0s						
COP	**Copenhagen**	**17.78**	**169**	*i* P	**P**	**00 43 24.4**	**-0.1**
COP				IAmb	IAmb	00 43 32.9	
	comp=Z,65nm,1.0s						
COP	**Copenhagen**	**17.78**	**169**	*i* P	**P**	**00 43 24.3**	**-0.1**
	comp=Z,65nm,1.0s						
COP	**Copenhagen**	**17.78**	**169**	*i* P	**P**	**00 43 24.4**	**-0.1**
COP				IAmb	IAmb	00 43 32.9	
	comp=Z,65nm,1.0s						
ESY	**Stoneypath**	**17.80**	**197**	*e*P	**Pn**	**00 43 23.7**	**-0.2**
EDI	**Edinburgh**	**17.85**	**198**	*e*P	**Pn**	**00 43 24.2**	**-0.2**
LUNU	**Lund**	**17.89**	**167**	*i* P	**Pn**	**00 43 25.0**	**0.0**
EBL	**Broad Law**	**17.98**	**198**	*e*P	**P**	**00 43 27.1**	**+0.4**
PGBU	**Glenifferbraes**	**18.08**	**201**	*e*P	**P**	**00 43 27.8**	**0.0**
PGBU				IAmb	IAmb	00 43 30.6	
	comp=Z,149nm,1.4s						
LLD	**Lille Linde**	**18.12**	**170**	*e*P	**Pn**	**00 43 27.0**	**-0.8**
LLD	**Lille Linde**	**18.12**	**170**	*e*P	**Pn**	**00 43 27.0**	**-0.8**
LLD	**Lille Linde**	**18.12**	**170**	*i* P	**Pn**	**00 43 27.0**	**-0.8**
LLD	**Lille Linde**	**18.12**	**170**	*e*P	**Pn**	**00 43 27.0**	**-0.8**
ILULI	**Ilulissat**	**18.36**	**286**	P	**Pn**	**00 43 30.2**	**-0.4**
ILULI				pmax	pmax		
	comp=Z,38nm,1.1s						
ILULI	**Ilulissat**	**18.36**	**286**		**Pn**	**00 43 30.2**	**-0.4**
PBUR	**Paburge**	**18.36**	**152**	*e*P	**P**	**00 43 31.9**	**+1.1**
EKA	**Eskdalemuir Ar**	**18.43**	**198**	P	**P**	**00 43 31.6**	**+0.1**
	baz=9.7,slow=10,SNR=23						
EKA	**Eskdalemuir Ar**	**18.43**	**198**	P	**Pn**	**00 43 32.4**	**+0.8**
EKA	**Eskdalemuir Ar**	**18.43**	**198**	P	**Pn**	**00 43 32.4**	**+0.8**
ESK	**Eskdalemuir**	**18.45**	**198**	*e*P	**Pn**	**00 43 32.1**	**+0.3**
ESK	**Eskdalemuir**	**18.45**	**198**	P	**P**	**00 43 31.2**	**-0.6**
ESK				pmax	pmax		
	comp=Z,67nm,1.3s						
ESK	**Eskdalemuir**	**18.45**	**198**	P	**P**	**00 43 31.2**	**-0.6**
BSD	**Bornholm Skovb**	**18.51**	**165**	*e*P	**P**	**00 43 31.6**	**-0.9**
BSD	**Bornholm Skovb**	**18.51**	**165**	*i* P	**P**	**00 43 30.3**	**-2.1**
BSD				pmax	pmax		
	comp=Z,110nm,1.3s						
BSD	**Bornholm Skovb**	**18.51**	**165**	*i* P	**P**	**00 43 30.3**	**-2.1**
BSD				IAmb	IAmb	00 43 35.2	
	comp=Z,112nm,1.3s						
BSD	**Bornholm Skovb**	**18.51**	**165**	*i* P	**P**	**00 43 30.3**	**-2.1**
	comp=Z,111nm,1.3s						
BSD	**Bornholm Skovb**	**18.51**	**165**	*i* P	**P**	**00 43 30.3**	**-2.1**
BSD				IAmb	IAmb	00 43 35.2	
	comp=Z,112nm,1.3s						
TULEG	**Thule**	**18.68**	**315**	*i* P	**P**	**00 43 29.0**	**-5.1**
TULEG				IAmb	IAmb	00 43 35.7	
	comp=Z,77nm,1.2s						
TULEG	**Thule**	**18.68**	**315**	*i* P	**P**	**00 43 29.0**	**-5.1**
TULEG				IAmb	IAmb	00 43 35.7	
	comp=Z,77nm,1.2s						
NEWG	**New Galloway**	**18.74**	**200**	*e*P	**P**	**00 43 34.9**	**-0.2**
NEWG				IAmb	IAmb	00 43 37.6	
	comp=Z,58nm,1.2s						
EDMD	**Edmundbyers**	**18.83**	**196**	*e*P	**P**	**00 43 35.5**	**-0.4**
RGN	**Rugen**	**18.97**	**168**	P	**P**	**00 43 36.9**	**-0.6**
GAL1	**Galloway**	**19.04**	**201**	*e*P	**P**	**00 43 38.2**	**0.0**
GAL1				IAmb	IAmb	00 43 41.3	
	comp=Z,85nm,1.3s						
PABE	**Paberze**	**19.15**	**149**	*e*P	**Pn**	**00 43 40.1**	**-0.2**
ISAL	**Salakas**	**19.43**	**145**	*e*P	**Pn**	**00 43 43.3**	**-0.3**
IIGN	**Ignalina**	**19.66**	**145**	*e*P	**P**	**00 43 45.6**	**+0.6**
SFJD	**Kangerlussuaq**	**19.69**	**281**	P	**P**	**00 43 45.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=72,slow=8.1,SNR=8.8						
SFJD				LR	LR	00 50 18.3	
	comp=Z,2µm,19.9s,baz=44,slow=34						
SFJD	**Kangerlussuaq**	**19.69**	**281**	P	**P**	**00 43 44.6**	**-0.7**
SFJD				IAmb	IAmb	00 43 50.9	
	comp=Z,93nm,1.2s						
SFJD	**Kangerlussuaq**	**19.69**	**281**	*i* P	**Pn**	**00 43 47.7**	**+1.0**
SFJD	**Kangerlussuaq**	**19.69**	**281**	*i* P	**Pn**	**00 43 47.7**	**+1.0**
EUNU	**Eureka**	**20.00**	**330**	P	**P**	**00 43 46.6**	**-2.1**
EUNU				IAmb	IAmb	00 43 50.7	
	comp=Z,201nm,1.3s						
NACGM	**Naroch**	**20.18**	**145**	*i* P	**P**	**00 43 49.9**	**-0.8**
NACGM				*i* P	**P**	**00 43 49.9**	**-0.8**
NACGM				*i* P	**P**	**00 43 49.9**	**-0.8**
NACGM				*i* Pb	**pwP**	**00 43 54.6**	**+0.1**
	comp=Z,101nm,1.2s						
NACGM				*i* PP	**PnPn**	**00 44 07.1**	**+0.4**
NACGM				*i* S	Sn	00 47 44.8	+5.2
NACGM				*i* SSS	SSS	00 48 23.3	
NACGM				*i* LQ	LQ	00 49 28.5	
NACGM				*i* LR	LR	00 50 35.2	
NACGM				*i* Sb	ScP	00 51 26.6	-15
	comp=Z,3µm,20.1s						
SUW	**Suwalki**	**20.49**	**151**	*e*P	**P**	**00 43 53.8**	**-0.3**
SUW				*e*L	L	00 51 19.1	
	comp=Z,3µm,19.8s						
SUW	**Suwalki**	**20.49**	**151**	*e*P	**P**	**00 43 55.2**	**+1.1**
SUW	**Suwalki**	**20.49**	**151**	P	**P**	**00 43 53.5**	**-0.6**
SUW				pmax	pmax		
	comp=Z,414nm,1.2s						
SUW	**Suwalki**	**20.49**	**151**	P	**P**	**00 43 53.5**	**-0.6**
GKP	**Gorka Klasztor**	**20.53**	**162**	*e*P	**P**	**00 43 55.1**	**+0.6**
GKP				*e*L	L	00 51 17.9	
	comp=Z,4µm,18.9s						
GKP	**Gorka Klasztor**	**20.53**	**162**	*e*P	**P**	**00 43 55.0**	**+0.4**
MNK	**Minsk**	**20.75**	**143**	*i* P	**P**	**00 43 56.8**	**-0.1**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**P**	**00 43 56.8**	**-0.1**
	comp=N,58nm,1.0s						
MNK				*i* P	**P**	**00 43 56.8**	**-0.1**
	comp=Z,70nm,1.0s						
MNK				*i* PP	**PnPn**	**00 44 15.0**	**+0.5**
MNK				*i* S	**S**	**00 47 49.6**	**+1.0**
MNK				*i* PcP	PcP	00 47 51.1	-15
MNK				*i* SS	**SnSn**	**00 48 12.6**	**+5.0**
MNK				*i* LQ	LQ	00 49 33.4	
MNK				*i* LR	LR	00 50 57.5	
MNK				*i* LRM	MLR	00 52 27.1	
	comp=Z,264nm,16.4s						
MNK				*i* LRM	MLR	00 53 11.2	
	comp=E,60nm,17.4s						
MNK				*i* LRM	MLR	00 53 11.9	
	comp=N,327nm,17.4s						
MNK	**Minsk**	**20.75**	**143**	*e*P	**P**	**00 43 56.0**	**-0.9**
MNK				*e*		00 44 20.0	
MNK				*e*S	**S**	**00 47 42.0**	**-6.6**
MNK				*e*SS	**SnSn**	**00 48 04.0**	**-3.7**
MNK				MLR	MLR		
	comp=Z,5µm,18.0s						
DSB	**Dublin**	**20.82**	**203**	P	**P**	**00 43 57.0**	**-0.6**
DSB				IAmb	IAmb	00 44 13.3	
	comp=Z,238nm,1.8s						
CWF	**Charnwood Fore**	**20.86**	**194**	*e*P	**P**	**00 43 57.4**	**-0.7**
CWF				IAmb	IAmb	00 43 58.9	
	comp=Z,74nm,1.3s						
NRDL	**Niedersach Rie**	**20.88**	**174**	*e*P	Pn	00 43 59.9	-0.8
	comp=Z,109nm,1.4s,baz=358,slow=10						
RUE	**Ruedersdorf**	**21.06**	**168**	*e*P	**P**	**00 44 01.3**	**+1.1**
	comp=Z,166nm,1.4s,baz=358,slow=10						
FLTG	**Flechtingen**	**21.08**	**172**	*e*P	**P**	**00 44 01.1**	**+0.7**
	comp=Z,122nm,1.3s,baz=358,slow=10						
ASSE	**Asse, Remlinge**	**21.26**	**173**	*e*P	**P**	**00 44 03.5**	**+1.2**
	comp=Z,178nm,1.6s,baz=358,slow=10						
CLZ	**Clausthal**	**21.54**	**174**	*e*P	**P**	**00 44 06.9**	**+1.4**
	comp=Z,159nm,1.5s,baz=358,slow=10						
MOS	**Moscow**	**21.57**	**128**	*e*P	**P**	**00 44 05.0**	**-0.6**
MOS				*e*		00 44 27.5	
MOS				*e*S	**S**	**00 48 05.7**	**+1.0**
MOS				pmax	pmax		
	comp=Z,201nm,1.1s						
MOS				pmax	pmax		
	comp=N,191nm,1.1s						
MOS				MLR	MLR		
	comp=Z,1µm,10.0s						
MCH1	**Michaelchurch**	**21.72**	**196**	*e*P	**P**	**00 44 07.1**	**-0.3**
GTTG	**Gottingen**	**21.82**	**175**	*e*P	**P**	**00 44 10.1**	**+1.7**
	comp=Z,98nm,1.2s,baz=358,slow=10						
STRD	**Stroud**	**21.88**	**195**	*e*P	**P**	**00 44 09.0**	**0.0**
STRD				IAmb	IAmb	00 44 12.3	
	comp=Z,137nm,1.1s						
BUG	**Bochum--Univer**	**21.88**	**179**	*e*P	**P**	**00 44 10.2**	**+1.1**
	comp=Z,198nm,1.2s,baz=358,slow=10						
OBN	**Obninsk**	**21.90**	**130**	P	**P**	**00 44 08.8**	**-0.5**
	comp=Z,54nm,1.3s,baz=326,slow=2.0,SNR=25						
OBN				LR	LR	00 52 30.2	
	comp=Z,392nm,20.9s,baz=342,slow=36						
OBN	**Obninsk**	**21.90**	**130**	⇓P	**P**	**00 44 08.8**	**-0.5**
OBN	**Obninsk**	**21.90**	**130**	*de*P	**P**	**00 44 08.5**	**-0.7**
OBN				*i* *PP	**pwP**	**00 44 12.6**	**-0.5**
OBN				*i* PPP	PPP	00 44 36.0	
OBN				*e*		00 49 08.0	
OBN				pmax	pmax		
	comp=Z,361nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
OBN	**Obninsk**	**21.90**	**130**	P	**P**	**00 44 08.6**	**-0.6**
OLDB	**Oldbury-Upon-S**	**22.02**	**195**	*e*P	**P**	**00 44 10.0**	**-0.6**
OLDB				IAmb	IAmb	00 44 13.0	
	comp=Z,148nm,1.3s						
KIRV	**Kirov**	**22.05**	**109**	P	**P**	**00 44 10.4**	**-0.4**
	comp=Z,38nm,0.8s,baz=337,slow=5.4,SNR=24						
KIRV				LR	LR	00 53 09.2	
	comp=Z,1µm,18.2s,baz=327,slow=38						
KIRV	**Kirov**	**22.05**	**109**	*de*P	**P**	**00 44 10.1**	**-0.7**
SWN1	**Swindon**	**22.11**	**194**	*e*P	**P**	**00 44 12.4**	**+0.8**
SWN1				IAmb	IAmb	00 44 16.9	
	comp=Z,334nm,1.4s						
KASTN	**Kahler Asten**	**22.13**	**177**	*e*P	**P**	**00 44 13.3**	**+1.5**
	comp=Z,131nm,1.4s,baz=358,slow=10						
CLL	**Collm**	**22.18**	**169**	*e*P	**P**	**00 44 12.0**	**-0.3**
CLL				⇓*i*pP	**sP**	**00 44 15.1**	**+2.1**
	comp=Z,72nm,1.3s						
CLL				*i*		00 44 20.6	
	comp=Z,134nm,1.3s						
CLL				*e*S	**S**	**00 48 21.0**	**+4.3**
CLL	**Collm**	**22.18**	**169**	*e*P	**P**	**00 44 12.0**	**-0.3**
CLL				*i*		00 44 20.6	
CLL				*e*S	**S**	**00 48 21.0**	**+4.3**
CLL				pmax	pmax		
	comp=Z,72nm,1.3s						
CLL	**Collm**	**22.18**	**169**	P	**P**	**00 44 11.9**	**-0.3**
CLL				IAmb	IAmb	00 44 21.6	
	comp=Z,113nm,1.3s						
BEL	**Belsk**	**22.32**	**157**	*e*P	**P**	**00 44 14.4**	**+0.7**
BEL				*e*L	L	00 52 35.9	
	comp=Z,3µm,20.2s						
BEBN	**Eben Emael**	**22.53**	**182**	*d*P	**P**	**00 44 16.3**	**+0.3**
BEBN				*d*x	x	00 44 23.9	
BEBN				*d*PnPn	**PnPn**	**00 44 40.5**	**+1.5**
UCC	**Uccle**	**22.55**	**184**	*d*P	**P**	**00 44 16.7**	**+0.5**
UCC				*d*x	x	00 44 24.2	
UCC	**Uccle**	**22.55**	**184**	P	**P**	**00 44 15.8**	**-0.4**
UCC				pmax	pmax		
	comp=Z,130nm,1.2s						
UCC	**Uccle**	**22.55**	**184**	P	**P**	**00 44 15.8**	**-0.4**
UCC				IAmb	IAmb	00 44 19.1	
	comp=Z,130nm,1.2s						
UBBA	**Unterbreizbach**	**22.55**	**175**	*e*P	**P**	**00 44 17.3**	**+1.2**
	comp=Z,108nm,1.6s,baz=358,slow=10						
BRG	**Berggiesshubel**	**22.67**	**168**	*i* P	**P**	**00 44 17.9**	**+0.3**
BRG				Amp		00 44 20.8	
	comp=Z,86nm,1.3s						
BRG				Amp		00 53 03.0	
	comp=N,2.2nm,22.6s						
BRG				Amp		00 53 07.0	
	comp=E,0.6nm,22.6s						
BRG				Amp		00 53 26.0	
	comp=Z,2.8nm,13.3s						
BRG	**Berggiesshubel**	**22.67**	**168**	*i* P	**P**	**00 44 17.8**	**+0.3**
BRG				pmax	pmax		
	comp=Z,86nm,1.3s						
BRG				MLR	MLR		
	comp=N,2µm,22.6s						
BRG				MLR	MLR		
	comp=E,600nm,22.6s						
BRG				MLR	MLR		
	comp=Z,3µm,13.3s						
BRG	**Berggiesshubel**	**22.67**	**168**	*i* P	**P**	**00 44 17.9**	**+0.3**
BRG				Amp		00 44 20.8	
	comp=Z,86nm,1.3s						
BRG				Amp		00 53 03.0	
	comp=N,2.2nm,22.6s						
BRG				Amp		00 53 07.0	
	comp=E,0.6nm,22.6s						
BRG				Amp		00 53 26.0	
	comp=Z,2.8nm,13.3s						
BRG	**Berggiesshubel**	**22.67**	**168**	*e*P	**P**	**00 44 17.8**	**+0.3**
	comp=Z,86nm,1.3s,baz=358,slow=10						
MEM	**Membach**	**22.71**	**181**	*d*P	**P**	**00 44 17.7**	**-0.3**
	comp=Z,60nm,1.2s						
MEM				*d*x	x	00 44 25.4	
BTNL	**Ternell**	**22.74**	**181**	*d*P	**P**	**00 44 18.9**	**+0.6**
BTNL				*d*x	x	00 44 25.6	
BSTI	**Sart Tilman**	**22.74**	**182**	*d*P	**P**	**00 44 19.4**	**+1.0**
BSTI				*d*PnPn	**PnPn**	**00 44 42.5**	**+0.6**
MOX	**Moxa**	**22.78**	**172**	*e*P	**P**	**00 44 19.6**	**+0.9**
	comp=Z,105nm,1.2s,baz=358,slow=10						
MOX				*e*L	L	00 53 31.0	
	comp=Z,868nm,18.7s						
AHRW	**Bad Neuenahr-A**	**22.78**	**179**	*e*P	**P**	**00 44 20.1**	**+1.4**
	comp=Z,163nm,1.2s,baz=358,slow=10						
SNF	**Seneffe**	**22.84**	**184**	*d*P	**P**	**00 44 20.7**	**+1.4**
SNF				*d*PnPn	**PnPn**	**00 44 43.3**	**+0.1**
KSP	**Ksiaz**	**22.86**	**164**	*e*P	**P**	**00 44 20.5**	**+0.9**

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KSP                                  eL     L      00 53 08.6
       comp=Z,3µm,17.5s
BCLA   Clavier           22.91 182   dP     P      00 44 20.3 +0.3
       comp=Z,56nm,1.9s
BCLA                                 dx     x      00 44 28.9
BCLA                                 dx     x      00 44 34.9
BGES   Gesves            22.95 183   dP     P      00 44 20.5  0.0
BGES                                 dx     x      00 44 29.1
PLN    Plauen            22.96 171   eP     P      00 44 21.4 +0.8
       comp=Z,98nm,1.3s,baz=358,slow=10
BHOU   Houvegnez         22.97 181   dP     P      00 44 22.3 +1.6
WERD   Werda             23.00 171   eP     P      00 44 21.7 +0.6
       comp=Z,46nm,1.2s,baz=358,slow=10
BMRD   Maredsous         23.04 183   dP     P      00 44 20.5 -0.9
       comp=Z,56nm,2.7s
PVCC   Panska Ves        23.05 167   eP     P      00 44 21.9 +0.4
PVCC                                  MLR   MLR
       comp=Z,3µm,12.4s
PVCC   Panska Ves        23.05 167   eP     P      00 44 21.9 +0.4
PVCC                                  AMS   AMS    00 53 20.0
       comp=Z,3µm,12.4s
GUNZ   Gunzen            23.09 171   eP     P      00 44 22.7 +0.7
       comp=Z,59nm,1.3s,baz=358,slow=10
CHVC   Chvalec           23.10 165   eP     P      00 44 22.6 +0.6
CHVC                                  AMS   AMS    00 53 30.0
       comp=Z,3µm,11.1s
TNS    Taunus Mts        23.11 177   eP     P      00 44 24.2 +1.9
       comp=Z,136nm,1.3s,baz=358,slow=10
OSTC   Ostas             23.14 164   eP     P      00 44 22.9 +0.4
OSTC                                  AMS   AMS    00 53 30.0
       comp=Z,3µm,13.5s
WERN   Wernitzgruen      23.17 171   eP     P      00 44 24.6 +1.8
       comp=Z,135nm,1.2s,baz=358,slow=10
UPC    Upice             23.17 165   eP     P      00 44 23.8 +1.0
UPC                                   MLR   MLR
       comp=Z,2µm,14.4s
UPC    Upice             23.17 165   eP     P      00 44 23.8 +1.0
UPC                                   AMS   AMS    00 53 20.0
       comp=Z,2µm,14.4s
NKC    Novy Kostel       23.23 171   eP     P      00 44 24.1 +0.7
NKC                                   MLR   MLR
       comp=Z,3µm,13.8s
NKC    Novy Kostel       23.23 171   eP     P      00 44 24.1 +0.7
NKC                                   AMS   AMS    00 53 50.0
       comp=Z,3µm,13.8s
DOU    Dourbes           23.25 183   dP     P      00 44 23.9 +0.4
       comp=Z,41nm,2.5s
DOU                                  dx     x      00 44 30.0
DPC    Dobruska-Polom    23.35 164   eP     P      00 44 24.7  0.0
DPC                                   MLR   MLR
       comp=Z,2µm,14.8s
DPC    Dobruska-Polom    23.35 164   eP     P      00 44 24.7  0.0
DPC                                   AMS   AMS    00 53 40.0
       comp=Z,2µm,14.8s
PRA    Prague            23.50 167   eP     P      00 44 27.7 +1.7
PRA                                   MLR   MLR
       comp=Z,1µm,22.4s
PRA    Prague            23.50 167   eP     P      00 44 27.7 +1.7
PRA                                   AMS   AMS    00 53 20.0
       comp=Z,1µm,22.4s
PRU    Pruhonice         23.59 167   eP     P      00 44 27.4 +0.5
PRU                                   MLR   MLR
       comp=Z,2µm,14.1s
PRU    Pruhonice         23.59 167   eP     P      00 44 27.4 +0.5
PRU                                   AMS   AMS    00 53 50.0
       comp=Z,2µm,14.1s
WLF    Walferdange       23.66 181   dP     P      00 44 27.8 +0.1
WLF                                  dx     x      00 44 34.5
WLF    Walferdange       23.66 181    P     P      00 44 27.7 +0.1
WLF                                   pmax  pmax
       comp=Z,113nm,1.3s
WLF    Walferdange       23.66 181    P     P      00 44 27.7 +0.1
WLF                                   IAmb  IAmb   00 44 31.2
       comp=Z,113nm,1.3s
WLF    Walferdange       23.66 181   eP     P      00 44 29.2 +1.5
       comp=Z,158nm,1.5s,baz=358,slow=10
KRLC   Kraliky           23.66 164   eP     P      00 44 28.6 +0.8
KRLC                                  MLR   MLR
       comp=Z,2µm,13.9s
KRLC   Kraliky           23.66 164   eP     P      00 44 28.6 +0.8
KRLC                                  AMS   AMS    00 53 40.0
       comp=Z,2µm,13.9s
ROTZ   Rotzenmuhle       23.68 171   eP     P      00 44 29.4 +1.5
       comp=Z,105nm,1.4s,baz=358,slow=10
GRA1   Grafenberg Arr    23.71 173    P     P      00 44 28.2  0.0
GRA1                                  IAmb  IAmb   00 44 41.5
       comp=Z,89nm,1.4s
GRF    Grafenberg Arr    23.71 173    P     P      00 44 28.2  0.0
GRF                                   pmax  pmax
       comp=Z,89nm,1.4s
GRF    Grafenberg Arr    23.71 173   eL     L      00 55 11.5
       comp=Z,573nm,21.3s
GRFO   Grafenberg        23.72 173    P     P      00 44 28.0 -0.2
GRFO                                  pmax  pmax
       comp=Z,42nm,1.4s
GRFO   Grafenberg        23.72 173    P     P      00 44 28.0 -0.2
OJC    Ojcow             23.80 159   eP     P      00 44 29.3 +0.3
OJC                                  eL     L      00 53 33.2
       comp=Z,3µm,19.9s
OJC    Ojcow             23.80 159    P     P      00 44 28.7 -0.3
OJC                                   pmax  pmax
       comp=Z,58nm,1.0s
OJC    Ojcow             23.80 159    P     P      00 44 28.7 -0.3
OJC                                   IAmb  IAmb   00 44 49.9
       comp=Z,58nm,1.0s
PBCC   Pribram           23.85 168   eP     P      00 44 31.6 +2.0
OKC    Ostrava-Krasne    24.02 162    AMS   AMS    00 53 40.0
       comp=Z,3µm,16.6s
MORC   Moravsky Berou    24.02 163 ⇑P     P      00 44 31.9 +0.7
MORC   Moravsky Berou    24.02 163⇓iP     P      00 44 31.0 -0.2
MORC   Moravsky Berou    24.02 163    P     P      00 44 31.3 +0.1
MORC                                  pmax  pmax
       comp=Z,78nm,1.2s
MORC   Moravsky Berou    24.02 163    P     P      00 44 31.3 +0.1
MORC                                  IAmb  IAmb   00 44 35.6
       comp=Z,78nm,1.2s
WET    Wettzell          24.33 170   eP     P      00 44 36.1 +2.1
       comp=Z,137nm,1.6s,baz=358,slow=10
TREC   Trest             24.34 166   eP     P      00 44 35.4 +1.3
TREC                                  MLR   MLR
       comp=Z,3µm,12.0s
TREC   Trest             24.34 166   eP     P      00 44 35.4 +1.3
TREC                                  AMS   AMS    00 54 30.0
       comp=Z,3µm,12.0s
KHC    Kasperske Hory    24.38 169deP     P      00 44 35.6 +1.1
KHC                                   pmax  pmax
       comp=Z,129nm,1.7s
KHC    Kasperske Hory    24.38 169   eP     P      00 44 35.7 +1.2
KHC                                  ex     x      00 45 05.0
KHC                                   AMS   AMS    00 54 10.0
       comp=Z,3µm,21.3s
KHC    Kasperske Hory    24.38 169    P     P      00 44 34.7 +0.2
KHC                                   IAmb  IAmb   00 44 38.9
       comp=Z,101nm,1.7s
VRAC   Vranov            24.41 164    P     P      00 44 35.2 +0.5
       comp=Z,58nm,1.0s,baz=358,slow=11,SNR=39
VRAC                                  LR    LR     00 54 17.3
       comp=Z,2µm,19.4s,baz=348,slow=37
VRAC   Vranov            24.41 164 ⇓P     P      00 44 35.8 +1.1
VRAC   Vranov            24.41 164⇓iP     P      00 44 35.4 +0.7
STU    Stuttgart         24.58 176    P     P      00 44 35.9 -0.3
STU                                   pmax  pmax
       comp=Z,32nm,0.8s
STU    Stuttgart         24.58 176    P     P      00 44 35.9 -0.3
STU                                   IAmb  IAmb   00 44 57.3
       comp=Z,32nm,0.8s
STU    Stuttgart         24.58 176   eP     P      00 44 37.7 +1.4
       comp=Z,67nm,1.3s,baz=358,slow=10
AKASG  Malin Array Be    24.63 144    P     P      00 44 36.0 -0.7
       comp=Z,19nm,0.7s,baz=344,slow=9.5,SNR=38
AKASG                                 LR    LR     00 54 12.5
       comp=Z,4µm,18.5s,baz=335,slow=36
AKASG  Malin Array Be    24.63 144    P     P      00 44 35.5 -1.2
AKBB   Malin Array Si    24.63 144    P     P      00 44 36.0 -0.7
AKBB                                  pmax  pmax
       comp=Z,95nm,1.2s
AKBB   Malin Array Si    24.63 144    P     P      00 44 36.0 -0.7
AKBB                                  IAmb  IAmb   00 44 57.2
       comp=Z,95nm,1.2s
KRUC   Moravsky          24.64 165⇓iP     P      00 44 37.3 +0.5
NIE    Niedzica          24.64 158   eP     P      00 44 39.2 +2.3
NIE                                  eL     L      00 54 02.9
       comp=Z,2µm,20.4s
GEC2   GERESS Array S    24.68 169    P     P      00 44 38.0 +0.8
GEC2   GERESS Array S    24.68 169   eP     P      00 44 40.1 +2.8
       comp=Z,129nm,1.3s,baz=358,slow=10
GERES  GERESS Array B    24.68 169    P     P      00 44 38.9 +1.6
       comp=Z,80nm,1.2s,baz=3.4,slow=6.7,SNR=86
GERES                                 LR    LR     00 54 40.5
       comp=Z,2µm,18.8s,baz=346,slow=37
GERES  GERESS Array B    24.68 169    P     P      00 44 37.9 +0.6
LVV    L'vov             24.70 153   eP     P      00 44 37.8 +0.5
LVV                                  e             00 45 15.7
LVV                                  eS     S      00 48 58.4 -0.9
LVV                                   pmax  pmax
       comp=Z,200nm,1.4s
LVV                                   smax  smax
       comp=N,1µm,5.3s
LVV                                   MLR   MLR
       comp=N,3µm,15.0s
LVV                                   MLR   MLR
       comp=Z,4µm,15.0s
LVV                                   MLR   MLR
       comp=E,1µm,14.0s
KWP    Kalwaria Pacla    24.71 155   eP     P      00 44 38.1 +0.6
KWP                                  eL     L      00 54 14.6
       comp=E,4µm,18.7s
KWP    Kalwaria Pacla    24.71 155    P     P      00 44 37.3 -0.2
KWP                                   pmax  pmax
       comp=Z,216nm,1.3s
KWP    Kalwaria Pacla    24.71 155    P     P      00 44 37.3 -0.2
LPSR   Galich'ya Gora    24.76 129   eP     P      00 44 37.7 -0.1
LPSR                                  pmax  pmax
       comp=Z,140nm,1.0s
LPSR                                  MLR   MLR
       comp=Z,2µm,21.0s
LANS   Liptovska Anna    24.82 160   eP     P      00 44 40.2 +1.7
LANS                                  pmax  pmax
       comp=Z,28nm,1.0s
LANS   Liptovska Anna    24.82 160   eP     P      00 44 40.2 +1.7
RES    Resolute Bay      24.90 322    P     P      00 44 39.7 +0.8
       comp=Z,36nm,0.3s,baz=87,slow=2.4,SNR=424
RES                                   LR    LR     00 54 16.0
       comp=Z,2µm,18.6s,baz=32,slow=36
RES    Resolute Bay      24.90 322    P     P      00 44 38.9  0.0
RES                                   pmax  pmax
       comp=Z,38nm,0.5s
RES    Resolute Bay      24.90 322    P     P      00 44 38.9  0.0
JAVC   Velka Javorina    24.95 163⇓iP     P      00 44 41.2 +1.6
BFO    Black Forest      25.00 177    P     P      00 44 40.4 +0.3
BFO                                   pmax  pmax
       comp=Z,157nm,1.3s
BFO    Black Forest      25.00 177    P     P      00 44 40.4 +0.3
BFO    Black Forest      25.00 177   eP     P      00 44 42.6 +2.4
       comp=Z,161nm,1.3s,baz=358,slow=10
ECH    Echery            25.11 179    P     P      00 44 41.9 +0.8
ECH                                   pmax  pmax
       comp=Z,135nm,1.2s
ECH    Echery            25.11 179    P     P      00 44 41.9 +0.8
FUR    Furstenfeldbru    25.24 173   eP     P      00 44 45.0 +2.8
       comp=Z,194nm,1.2s,baz=358,slow=10
SMOL   Smolenice         25.27 163   eP     P      00 44 44.4 +1.9
SMOL                                  pmax  pmax
       comp=Z,79nm,1.3s
SMOL   Smolenice         25.27 163   eP     P      00 44 44.4 +1.9
CRVS   Cervenica-Dubn    25.28 157   eP     P      00 44 44.7 +2.1
CRVS                                  pmax  pmax
       comp=Z,162nm,1.2s
CRVS   Cervenica-Dubn    25.28 157   eP     P      00 44 44.7 +2.1
CRVS                                 eL     L      00 54 48.8
KOLS   Kolonicke sedl    25.35 156   eP     P      00 44 44.5 +1.3
KOLS                                  pmax  pmax
       comp=Z,116nm,1.2s
KOLS   Kolonicke sedl    25.35 156   eP     P      00 44 44.5 +1.3
KOLS                                 eL     L      00 54 43.0
CLF    Chambon-Foret     25.38 187    P     P      00 44 44.8 +1.4
MODS   Modra-Piesok      25.39 163   eP     P      00 44 44.4 +0.8
MODS                                  pmax  pmax
       comp=Z,171nm,1.3s
MODS   Modra-Piesok      25.39 163   eP     P      00 44 44.4 +0.8
MODS                                 eL     L      00 55 11.5
VYHS   Vyhne             25.41 161   eP     P      00 44 44.9 +1.1
VYHS                                  pmax  pmax
       comp=Z,106nm,1.4s
VYHS   Vyhne             25.41 161   eP     P      00 44 44.9 +1.1
VYHS                                 eL     L      00 54 58.8
ZST    Bratislava        25.55 164   eP     P      00 44 47.3 +2.2
ZST                                   pmax  pmax
       comp=Z,288nm,1.4s
ZST    Bratislava        25.55 164   eP     P      00 44 47.3 +2.2
KECS   Kecovo            25.59 158   eP     P      00 44 46.6 +1.2
KECS                                  pmax  pmax
       comp=Z,34nm,1.3s
KECS   Kecovo            25.59 158   eP     P      00 44 46.6 +1.2
UZH    Uzhgorod          25.65 156deP     P      00 44 46.7 +0.8
UZH                                  e             00 45 36.8
UZH                                  e             00 48 19.2
UZH                                  eS     S      00 49 13.4 -1.0
UZH                                  i             00 50 36.3
UZH                                   MLR   MLR
       comp=N,480nm,15.0s
UZH                                   MLR   MLR
       comp=E,350nm,15.0s
UZH                                   MLR   MLR
       comp=Z,260nm,15.0s
UZH                                   MLR   MLR
       comp=N,280nm,10.0s
UZH                                   MLR   MLR
       comp=E,180nm,10.0s
UZH                                   MLR   MLR
       comp=Z,360nm,10.0s
UBR    Ueberruh          25.69 175   eP     P      00 44 48.0 +1.6
       comp=Z,89nm,1.2s,baz=358,slow=10
MOA    Molln             25.70 168   i P    P      00 44 47.6 +1.2
       comp=Z,52nm,1.2s,SNR=6.7
CONA   Conrad Observa    25.73 166   i P    P      00 44 48.4 +1.6
       comp=Z,56nm,1.1s,SNR=22
RJOB   Jochberg          25.73 171   eP     P      00 44 49.3 +2.5
       comp=Z,186nm,1.1s,baz=358,slow=10
RETA   Reutte            25.90 174   eP     P      00 44 51.1 +2.8
       comp=Z,30nm,1.3s
SOP    Sopron            26.02 165⇓eP     P      00 44 51.7 +2.4
SRO    Srobarova         26.04 162   eP     P      00 44 50.8 +1.4
SRO                                   pmax  pmax
       comp=Z,39nm,1.1s
SRO    Srobarova         26.04 162   eP     P      00 44 50.8 +1.4
MOTA   Moosalm           26.06 173   i P    P      00 44 51.4 +1.6
       comp=Z,35nm,1.3s,SNR=6.8
DAVA   Damuels           26.08 175   i P    P      00 44 51.9 +1.9
       comp=Z,100nm,1.2s,SNR=19
WATA   Walderalm         26.08 172   eP     P      00 44 51.5 +1.5
       comp=Z,50nm,1.4s
PSZ    Piszkesteto       26.09 160 ⇓P     P      00 44 51.2 +1.2
PSZ    Piszkesteto       26.09 160⇓eP     P      00 44 51.3 +1.3
PSZ    Piszkesteto       26.09 160    P     P      00 44 50.0  0.0
PSZ                                   pmax  pmax
       comp=Z,70nm,1.3s
PSZ    Piszkesteto       26.09 160    P     P      00 44 50.0  0.0
PSZ                                   IAmb  IAmb   00 45 02.2
       comp=Z,70nm,1.3s
SRO2   Moca              26.10 162   eP     P      00 44 50.5 +0.5
SRO2                                  pmax  pmax
       comp=Z,44nm,1.0s
SRO2   Moca              26.10 162   eP     P      00 44 50.5 +0.5
VSR    Storozhevoye      26.11 130   eP     P      00 44 49.3 -0.7
VSR                                   pmax  pmax
       comp=Z,60nm,1.0s
VSR                                   MLR   MLR
       comp=Z,2µm,25.0s
WTTA   Wattenberg        26.16 172   i P    P      00 44 52.7 +1.9
       comp=Z,61nm,1.3s,SNR=7.0
SQTA   Sankt Quirin      26.18 173   eP     P      00 44 53.9 +3.0
       comp=Z,26nm,1.2s
EGYH   Egyhazaskeszo     26.35 164⇓eP     P      00 44 50.3 -1.9
FETA   Feichten          26.37 174   eP     P      00 44 54.1 +1.5
       comp=Z,17nm,1.2s
VORD   Divnogorie        26.37 130   eP     P      00 44 51.8 -0.6
VORD                                  pmax  pmax
       comp=Z,70nm,1.3s
ARSA   Arzberg           26.38 166   i P    P      00 44 54.4 +1.9
       comp=Z,45nm,1.4s,SNR=15
KBA    Koelnbreinsper    26.42 170   eP     P      00 44 55.3 +2.2
       comp=Z,20nm,1.3s,SNR=5.2
BUD    Budapest          26.43 161⇓eP     P      00 44 56.7 +3.7
ARU    Arti              26.46 101    P     P      00 44 53.8 +0.6
       comp=Z,6.0nm,0.8s,baz=331,slow=6.9,SNR=23
ARU                                   LR    LR     00 56 33.0
       comp=Z,852nm,18.4s,baz=324,slow=39
ARU    Arti              26.46 101d iP    P      00 44 53.7 +0.6
ARU                                   PPP   PPP    00 45 40.8
ARU                                                00 48 13.4
ARU                                   S     S      00 49 29.5 +2.4
ARU                                   pmax  pmax
       comp=Z,47nm,1.1s
ARU                                   MLR   MLR
       comp=Z,1µm,21.0s
ARU    Arti              26.46 101    P     P      00 44 53.7 +0.6
ARU                                   IAmb  IAmb   00 45 10.7
       comp=Z,52nm,1.0s
CSKK   Cskako            26.48 162⇓eP     P      00 44 55.7 +2.2
DAVOX  Davos/Dischmat    26.58 175    P     P      00 44 54.8 +0.2
       comp=Z,6.5nm,0.9s,baz=348,slow=7.1,SNR=5.3
DAVOX                                 LR    LR     00 55 14.3
       comp=Z,1µm,22.0s,baz=339,slow=36
MPLH   Magyarpolny       26.61 163⇓eP     P      00 44 56.3 +1.7
VRH    Novokhopyorsk     26.70 127   eP     P      00 44 55.1 -0.3
VRH                                   pmax  pmax
       comp=Z,40nm,1.4s
VRH                                   MLR   MLR
       comp=Z,990nm,16.0s
ABTA   Abfaltersbach     26.71 171   eP     P      00 44 58.5 +2.9
       comp=Z,38nm,1.2s
SVE    Sverdlovsk        26.71  99⇓eP     P      00 44 56.3 +0.9
SVE                                   pmax  pmax
       comp=Z,34nm,1.3s
BMR    Baia Mare         26.74 154 ⇓P     P      00 44 57.2 +1.4
LTVH   Ltavrtes, Hu      26.83 157⇓eP     P      00 44 59.7 +3.1
MYKA   Terra Mystica     26.88 169   i P    P      00 44 59.2 +2.0
       comp=Z,37nm,1.2s,SNR=7.8
TIH    Tihany            26.91 163⇓eP     P      00 44 58.3 +1.0
SOKA   Soboth            26.91 167   i P    P      00 44 58.9 +1.4
       comp=Z,29nm,1.3s,SNR=11
ZOU    Zoufplan          26.92 170    P     P      00 44 58.4 +0.7
BISS   Bistriski jare    26.95 167   eP     P      00 44 59.4 +1.7
PERS   Pernice           26.96 167   eP     P      00 44 59.7 +1.8
SENIN  Lac Senin/Sane    26.96 179    P     P      00 44 57.9 -0.2
SENIN                                 IAmb  IAmb   00 45 09.3
       comp=Z,39nm,1.1s
SORM   Soroca            26.98 147 ⇑P     P      00 44 57.8 -0.1
BUR08  Bucovina Ar. S    26.99 152    P     P      00 44 58.5 +0.3
BUR08                                 IAmb  IAmb   00 45 03.4
       comp=Z,54nm,1.3s
BURAR  Bucovina Array    27.02 152 ⇑P     P      00 44 59.3 +0.9
BURAR  Bucovina Array    27.02 152    P     P      00 44 58.3 -0.1
BELG   Belogornoye       27.05 118    P     P      00 44 58.2 -0.3
       comp=Z,69nm,1.0s,baz=111,slow=1.5,SNR=31
BELG                                  LR    LR     00 55 50.3
       comp=Z,614nm,21.0s,baz=312,slow=37
BELG   Belogornoye       27.05 118d iP    P      00 44 58.1 -0.4
BELG                                  pmax  pmax
       comp=Z,16nm,1.1s
OBKA   Obir              27.05 168   i P    P      00 45 00.7 +2.0
       comp=Z,56nm,1.2s,SNR=14
FRB    Frobisher Bay     27.13 289    P     P      00 44 57.9 -1.2
       comp=Z,11nm,1.1s,baz=20,slow=8.4,SNR=7.0
FRB                                   LR    LR     00 55 12.0
       comp=Z,351nm,18.6s,baz=32,slow=35
STAL   STALIGIAL         27.20 171    P     P      00 45 00.8 +0.7
BEHE   Becsehely         27.25 165⇓eP     P      00 45 01.0 +0.7
CTI    Castel Tesino     27.37 172    P     P      00 45 02.6 +1.0
CTI                                   pmax  pmax
       comp=Z,49nm,1.2s
CTI    Castel Tesino     27.37 172    P     P      00 45 02.6 +1.0
CTI                                   IAmb  IAmb   00 45 10.9
       comp=Z,49nm,1.2s
PRAR   RASCA             27.41 150 ⇓P     P      00 45 02.3 +0.4
DRGR                     27.51 156 ⇑P     P      00 45 03.8 +1.0
LJU    Ljubljana         27.52 168   eP     P      00 45 04.8 +2.0
MORH   Mrgy, Hungar      27.65 162⇓eP     P      00 45 09.0 +5.0
LEGS   Legarje           27.66 167   eP     P      00 45 05.2 +1.1
CJR    Cluj-Napoca       27.69 155 ⇓P     P      00 45 06.2 +1.8
AMBH   Ambrzfalva        27.72 159⇓eP     P      00 45 06.7 +2.1
BIZ    Bicaz             27.81 151 ⇑P     P      00 45 06.5 +1.1
SIRR   Siria             27.91 158 ⇑P     P      00 45 08.3 +2.0
SSB    Saint Sauveur     28.06 183    P     P      00 45 07.7 -0.1
SSB                                   pmax  pmax
       comp=Z,44nm,1.3s
SSB    Saint Sauveur     28.06 183    P     P      00 45 07.7 -0.1
SSB                                   IAmb  IAmb   00 45 14.5
       comp=Z,44nm,1.3s
MILM   Milestii Mici     28.23 147 ⇑P     P      00 45 08.6 -0.5
TESR   Tescani           28.30 150 ⇑P     P      00 45 10.2 +0.4
VASR   Vaslui            28.34 149 ⇓P     P      00 45 10.8 +0.7
BZS    Buzias            28.54 158 ⇓P     P      00 45 13.0 +1.1
OZUR                     28.59 152 ⇓P     P      00 45 13.2 +0.8
DOPR   Dopca             28.66 152 ⇑P     P      00 45 14.7 +1.6
GHRR                     28.86 149 ⇓P     P      00 45 16.3 +1.6
GZR    Gura Zlata        28.89 156 ⇑P     P      00 45 16.6 +1.5
VRI    Vrincioaia        28.95 150 ⇓P     P      00 45 16.2 +0.7
PLOR   Plostina          28.95 150 ⇓P     P      00 45 16.3 +0.7
LOT    Lotru             28.96 155 ⇑P     P      00 45 17.0 +1.1
VOIR                     29.14 153 ⇑P     P      00 45 18.7 +1.3
ARR    Arges             29.15 154 ⇓P     P      00 45 18.9 +1.5
MLR    Muntele Rosu      29.20 152    P     P      00 45 19.7 +1.7
       comp=Z,4.0nm,0.8s,baz=281,slow=5.2
MLR                                   LR    LR     00 57 14.9
       comp=Z,4µm,18.6s,baz=358,slow=37
MLR    Muntele Rosu      29.20 152 ⇓P     P      00 45 19.9 +2.0
MLR    Muntele Rosu      29.20 152    P     P      00 45 18.9 +0.9
MLR                                   pmax  pmax
       comp=Z,22nm,1.1s
MLR    Muntele Rosu      29.20 152    P     P      00 45 18.9 +0.9
BISRR  Bisoca            29.25 151 ⇓P     P      00 45 20.2 +1.8
NEHR   Nehoiu            29.31 151 ⇑P     P      00 45 20.5 +1.7
MTUR   Matau             29.34 153 ⇓P     P      00 45 21.1 +2.0
HERR   Herculane         29.36 157 ⇓P     P      00 45 21.2 +2.0
MDVR   Moldovita         29.38 158 ⇑P     P      00 45 21.2 +1.8
CFR    Carcaliu          29.83 149 ⇑P     P      00 45 23.5 +0.2
DIVS   Divibare          29.88 161    P     P      00 45 23.7 -0.2
DIVS                                  IAmb  IAmb   00 45 33.0
       comp=Z,40nm,1.3s
OSSC   Osservatorio P    29.88 173    P     P      00 45 25.1 +1.2
HUMR   Humele            30.02 153 ⇑P     P      00 45 26.2 +1.1
TPGR   Topolog           30.18 148 ⇑P     P      00 45 27.1 +0.5
MURB   Monte Urbino      30.19 172    P     P      00 45 27.8 +1.1
HARR   Harsova           30.27 149 ⇓P     P      00 45 28.1 +0.8
JURR   Jurilovca         30.34 148 ⇑P     P      00 45 28.6 +0.8
COPA   Copaceanca        30.44 153 ⇑P     P      00 45 29.4 +0.7
TIRR   Tirgusor          30.57 149 ⇑P     P      00 45 30.5 +0.6
TIRR   Tirgusor          30.57 149    P     P      00 45 30.0 +0.1
TIRR                                  pmax  pmax
       comp=Z,94nm,1.3s
TIRR   Tirgusor          30.57 149    P     P      00 45 30.0 +0.1
NRCA   Norcia            30.64 171    P     P      00 45 32.0 +1.4
TIXI   Tiksi             30.82  32    P     P      00 45 33.3 +1.5
TIXI                                  pmax  pmax
       comp=Z,20nm,1.2s
TIXI   Tiksi             30.82  32    P     P      00 45 33.3 +1.5
PDG    Podgorica         31.46 162 ⇓P     P      00 45 39.0 +1.3
PDG    Podgorica         31.46 162    P     P      00 45 38.6 +0.8
PDG                                   IAmb  IAmb   00 45 46.3
       comp=Z,51nm,1.4s
INTR   Introdacqua       31.50 170    P     P      00 45 39.1 +0.9
INTR                                  IAmb  IAmb   00 45 46.1
       comp=Z,47nm,1.3s
KALB   Balgarevo         31.60 149 ⇓P     P      00 45 40.9 +2.0
VTS    Vitosha           31.69 156 ⇑P     P      00 45 40.2 +0.3
ANN    Anapa             31.83 136   eP     P      00 45 39.1 -1.9
ANN                                  eS     S      00 50 49.3 -2.3
ANN                                   pmax  pmax
       comp=Z,73nm,1.4s
ANN                                   MLR   MLR
       comp=Z,2µm,13.0s
STIP   Stip              32.48 158   i P    P      00 45 46.5 -0.3
BRVK   Borovoye          32.76  93   i P    P      00 45 49.6 +0.5
BRVK                                  pmax  pmax
       comp=Z,17nm,1.3s
BRVK   Borovoye          32.76  93    P     P      00 45 49.4 +0.3
GOF    Gofitskoye        32.78 129⇑iP     P      00 45 50.7 +1.4
GOF                                   pmax  pmax
       comp=Z,128nm,1.0s
TPSR   Tuapse            32.86 135⇑eP     P      00 45 50.5 +0.5
TPSR                                  pmax  pmax
       comp=Z,100nm,1.4s
VAY    Valandovo         32.89 158   i P    P      00 45 51.1 +0.8
OHR    Ohrid             32.91 160   i P    P      00 45 50.2 -0.4
NVR    Nevrokopi         33.01 156    P     P      00 45 51.6 +0.2
KNT    Kendrikon         33.09 157    P     P      00 45 52.5 +0.4
GUZR   Guzeripl'         33.15 133d iP    P      00 45 52.7  0.0
GUZR                                  pmax  pmax
       comp=Z,26nm,1.0s
ABKAR  Akbulak array     33.20 107    P     P      00 45 53.5 +0.5
ABKAR                                 IAmb  IAmb   00 45 56.2
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	comp=Z,73nm,1.8s						
ABKAR	Akbulak array	33.20	107	P	P	00 45 53.3	+0.3
SRS	Serrai	33.21	156	P	P	00 45 53.1	0.0
GRG	Griva	33.23	158	P	P	00 45 54.2	+0.8
FNA	Florina	33.30	159	P	P	00 45 53.7	-0.3
FNA	Florina	33.30	159	P	P	00 45 53.7	-0.3
FNA				pmax	pmax		
	comp=Z,52nm,1.1s						
FNA	Florina	33.30	159	P	P	00 45 53.7	-0.3
KAVA	Kavala	33.44	155	P	P	00 45 55.0	-0.1
SOC	Sochi	33.47	134	eP	P	00 45 54.6	-0.7
SOC				eS	S	00 51 17.8	+0.8
SOC				eSS	SnSn	00 53 21.9	+3.8
SOC				eSSS	SSS	00 53 40.2	
SOC				pmax	pmax		
	comp=Z,14nm,1.1s						
SOC				MLR	MLR		
	comp=Z,872nm,15.0s						
RPOR	Krasnaya Polya	33.47	133	ceP	P	00 45 56.3	+0.9
RPOR				pmax	pmax		
	comp=Z,18nm,1.3s						
SOH	Sokhos	33.47	157	P	P	00 45 55.9	+0.4
ALN	Alexandroupoli	33.73	153	P	P	00 45 59.9	+2.3
KIV	Kislovodsk	33.75	130	⇑P	P	00 45 59.0	+1.1
KIV	Kislovodsk	33.75	130	i P	P	00 45 58.6	+0.7
	SNR=7.8						
KIV	Kislovodsk	33.75	130	eP	P	00 45 58.3	+0.4
KIV				pmax	pmax		
	comp=Z,86nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,15.0s						
KIV	Kislovodsk	33.75	130	P	P	00 45 58.3	+0.4
KIV				IAmb	IAmb	00 46 02.3	
	comp=Z,48nm,1.3s						
BZK	Bozkurt	33.92	142	⇑P	P	00 46 01.2	+1.9
PLG	Polygyros	33.93	157	P	P	00 45 59.7	+0.3
KBZ	Khabaz	34.01	130	P	P	00 46 00.9	+0.9
	comp=Z,14nm,1.0s,baz=299,slow=2.9,SNR=27						
KBZ				LR	LR	01 00 21.3	
	comp=Z,1µm,18.2s,baz=334,slow=37						
KBZ	Khabaz	34.01	130	deP	P	00 46 01.3	+1.3
KBZ				pmax	pmax		
	comp=Z,42nm,1.5s						
ESDC	Sonseca Array	34.05	195	P	P	00 46 00.5	0.0
	comp=Z,6.9nm,1.1s,baz=6.8,slow=6.9,SNR=9.3						
ESDC	Sonseca Array	34.05	195	P	P	00 46 00.5	0.0
LIT	Litokhoron	34.09	158	P	P	00 46 01.1	+0.3
LIT	Litokhoron	34.09	158	P	P	00 46 02.0	+1.2
LIT				pmax	pmax		
	comp=Z,62nm,1.4s						
LIT	Litokhoron	34.09	158	P	P	00 46 02.0	+1.2
C36M	Paulatuk	34.16	331	P	P	00 46 00.4	-0.7
	baz=23						
C36M	Paulatuk	34.16	331	P	P	00 46 00.6	-0.5
PAB	San Pablo	34.20	195	P	P	00 46 02.0	+0.1
PAB				pmax	pmax		
	comp=Z,39nm,1.4s						
PAB	San Pablo	34.20	195	P	P	00 46 02.0	+0.1
PAB				IAmb	IAmb	00 46 04.9	
	comp=Z,39nm,1.4s						
NEY	Neytrino	34.43	131	⇓eP	P	00 46 05.6	+1.7
NEY				pmax	pmax		
	comp=Z,5.0nm,1.7s						
DIKM	Dikmen	34.45	141	⇑P	P	00 46 04.5	+0.6
TIP	Timpagrande	34.49	166	P	P	00 46 04.8	+0.4
CHVG	Ch'k'valeri	34.80	132	⇓P	P	00 46 07.9	+1.0
MDUB	Mudurnu	34.90	146	P	P	00 46 08.3	+0.4
ZEI	Tsey	35.13	129	eP	P	00 46 09.3	-0.7
ZEI				pmax	pmax		
	comp=Z,15nm,1.2s						
AGG	Agios Georgios	35.14	159	P	P	00 46 09.8	-0.1
AGG	Agios Georgios	35.14	159	P	P	00 46 10.2	+0.3
AGG				pmax	pmax		
	comp=Z,83nm,1.4s						
AGG	Agios Georgios	35.14	159	P	P	00 46 10.2	+0.3
GROC	Groznyy	35.17	127	eP	P	00 46 11.3	+1.2
GROC				e		00 47 27.5	
GROC				eS	S	00 51 43.0	-0.3
GROC				pmax	pmax		
	comp=Z,282nm,1.4s						
A21K	Barrow	35.27	351	P	P	00 46 10.1	-0.5
	baz=8.4						
A21K	Barrow	35.27	351	P	P	00 46 10.9	+0.2
DVE	Vedeno	35.48	127	ceP	P	00 46 13.6	+0.8
DVE				pmax	pmax		
	comp=Z,35nm,1.0s						
EFP	Efpalio	35.69	159	P	P	00 46 15.2	+0.7
SERG	Sergoula	35.71	159	P	P	00 46 15.3	+0.5
BR231	Keskin MP Arra	35.77	145	P	P	00 46 16.5	+1.1
BR231				IAmb	IAmb	00 46 19.6	
	comp=Z,30nm,1.4s						
BTLR	Botlikh	35.78	127	ceP	P	00 46 16.4	+1.0
BTLR				pmax	pmax		
	comp=Z,93nm,1.4s						
MAK	Makhachkala	35.80	125	d iP	P	00 46 15.7	+0.2
MAK				e		00 47 34.5	
MAK				eS	S	00 51 53.6	+0.6
MAK				pmax	pmax		
	comp=Z,175nm,1.9s						
MAK				MLR	MLR		
	comp=Z,518nm,12.0s						
KTUT	Trabzon	35.97	135	⇑P	P	00 46 18.7	+1.8
BR131	Keskin Array S	36.03	144	P	P	00 46 18.7	+1.0
BR131				pmax	pmax		
	comp=Z,69nm,2.0s						
BR131	Keskin Array S	36.03	144	P	P	00 46 18.7	+1.0
BR131				IAmb	IAmb	00 46 21.9	
	comp=Z,69nm,1.9s						
BRTR	Keskin Array B	36.03	144	P	P	00 46 18.9	+1.1
	comp=Z,11nm,1.1s,baz=335,slow=5.5,SNR=32						
BRTR				LR	LR	01 02 12.9	
	comp=Z,448nm,19.7s,baz=14,slow=38						
BRTR	Keskin Array B	36.03	144	ceP	P	00 46 19.5	+1.8
BRTR				pmax	pmax		
	comp=Z,11nm,1.1s						
BRTR	Keskin Array B	36.03	144	P	P	00 46 19.2	+1.4
ZAA0	Zalesovo Array	36.17	79	P	P	00 46 18.8	+0.2
ZALV	Zalesovo Beam	36.17	79	P	P	00 46 19.2	+0.7
	comp=Z,4.2nm,0.8s,baz=326,slow=9.7,SNR=12						
ZALV				PcP	PcP	00 48 44.2	+0.4
	comp=Z,1.8nm,0.7s,baz=315,slow=4.6,SNR=3.2						
ZALV				LR	LR	01 03 59.4	
	comp=Z,680nm,20.8s,baz=322,slow=41						
BRZS	Berezniki	36.19	93	eP	P	00 46 18.8	0.0
	comp=Z,9.5nm,1.2s,baz=93						
BRZS	Berezniki	36.19	93	eP	P	00 46 18.8	0.0
BRZS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INK	Inuvik	36.34	336	P	P	00 46 18.4	-1.5
	comp=Z,8.4nm,1.1s,baz=11,slow=13,SNR=8.4						
INK				PcP	PcP	00 48 42.9	-1.1
	comp=Z,4.9nm,1.1s,baz=47,slow=3.4,SNR=3.9						
INK				LR	LR	01 02 55.7	
	comp=Z,599nm,18.6s,baz=14,slow=39						
INK	Inuvik	36.34	336	P	P	00 46 18.3	-1.5
INK				pmax	pmax		
	comp=Z,17nm,1.4s						
INK	Inuvik	36.34	336	P	P	00 46 18.3	-1.5
AKH	Akhalkalaki	36.35	131	⇓P	P	00 46 22.2	+1.7
AKH	Akhalkalaki	36.35	131	P	P	00 46 21.7	+1.2
AKH				pmax	pmax		
	comp=Z,153nm,1.7s						
AKH	Akhalkalaki	36.35	131	P	P	00 46 21.7	+1.2
ITM	Ithomi	36.92	160	P	P	00 46 25.6	+0.4
ITM				IAmb	IAmb	00 46 27.3	
	comp=Z,69nm,1.4s						
KURK	Kurchatov	37.25	87	d iP	P	00 46 28.1	+0.3
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
KURK	Kurchatov	37.25	87	P	P	00 46 28.2	+0.4
AKT	Akhty	37.26	125	c iP	P	00 46 29.0	+0.9
AKT				pmax	pmax		
	comp=Z,77nm,1.1s						
KEST	Kesra	37.61	176	P	P	00 46 31.8	+0.8
	comp=Z,5.5nm,1.0s,baz=229,slow=2.4,SNR=4.2						
KEST				LR	LR	01 02 52.4	
	comp=Z,752nm,19.6s,baz=316,slow=38						
KEST	Kesra	37.61	176	P	P	00 46 32.1	+1.0
GNI	Garni	37.84	130	P	P	00 46 33.6	+0.5
GNI	Garni	37.84	130	deP	P	00 46 34.5	+1.4
GNI				pmax	pmax		
	comp=Z,100nm,1.7s						
GNI	Garni	37.84	130	P	P	00 46 34.8	+1.7
GNI				IAmb	IAmb	00 46 37.4	
	comp=Z,64nm,1.2s						
FCC	Fort Churchill	37.96	304	P	P	00 46 32.6	-1.1
FCC				pmax	pmax		
	comp=Z,15nm,1.1s						
FCC	Fort Churchill	37.96	304	P	P	00 46 32.6	-1.1
SEM	Semipalatinsk	38.00	85	eP	P	00 46 34.1	-0.3
	comp=Z,21nm,1.6s,baz=86						
SEM				eS	S	00 52 27.6	+0.7
	baz=86						
SEM	Semipalatinsk	38.00	85	eP	P	00 46 34.1	-0.3
SEM				eS	S	00 52 27.6	+0.7
SEM				pmax	pmax		
	comp=Z,21nm,1.6s						
BMAR	Burnt Mountain	38.32	343	P	P	00 46 33.8	-2.9
BILL	Bilibino	38.33	12	c iP	P	00 46 37.0	+0.2
BILL				e*PP	sP	00 46 39.5	+2.0
BILL				e*SP	pwP	00 46 42.7	+2.0
BILL				e		00 55 45.1	
BILL				pmax	pmax		
	comp=Z,21nm,1.3s						
BILL				MLR	MLR		
	comp=Z,348nm,15.0s						
BILL	Bilibino	38.33	12	P	P	00 46 35.9	-0.8
EPYK	Eagle Plains	38.57	337	P	P	00 46 37.8	-1.0
	baz=16						
RDOG	Red Dog Mine	38.78	354	P	P	00 46 39.9	-0.7
COLD	Coldfoot	38.96	346	P	P	00 46 41.7	-0.3
	baz=10,SNR=5.6						
COLD	Coldfoot	38.96	346	P	P	00 46 41.5	-0.6
YKA	Yellowknife Ar	38.96	321	P	P	00 46 41.2	-0.9
	comp=Z,13nm,1.0s,baz=25,slow=9.1,SNR=79						
YKA				PcP	PcP	00 48 51.3	-0.9
	comp=Z,2.8nm,1.1s,baz=17,slow=3.5,SNR=5.6						
YKA				LR	LR	01 02 50.1	
	comp=Z,1µm,19.4s,baz=0.0,slow=36						
GAZ	Gaziantep	39.16	140	P	P	00 46 45.3	+1.2
FYU	Fort Yukon	39.22	343	P	P	00 46 44.0	-0.2
FYU				IAmb	IAmb	00 46 46.5	
	comp=Z,60nm,1.5s						
GEVA	Gevas	39.23	132	P	P	00 46 46.2	+1.5
YAK	Yakutsk	39.69	38	LR	LR	01 04 01.0	
	comp=Z,593nm,21.0s,baz=340,slow=37						
YAK	Yakutsk	39.69	38	P	P	00 46 49.2	+1.1
YAK				pmax	pmax		
	comp=Z,18nm,0.5s						
YAK	Yakutsk	39.69	38	P	P	00 46 49.2	+1.1
YAK				IAmb	IAmb	00 47 16.9	
	comp=Z,18nm,0.5s						
MARD	Mardin	39.71	136	P	P	00 46 50.3	+1.5
PRP	Porcupine Dome	40.27	343	P	P	00 46 53.6	+0.5
BOD	Bodaibo	40.34	52	eP	P	00 46 53.0	-0.6
BOD				pmax	pmax		
	comp=Z,19nm,1.6s						
IMAR	Indian Mountai	40.42	348	P	P	00 46 54.4	+0.2
BATG	Bathurst New B	40.59	272	P	P	00 46 56.0	+0.2
BATG				IAmb	IAmb	00 47 28.0	
	comp=Z,72nm,1.6s						
EGAK	Eagle	40.59	339	P	P	00 46 55.3	-0.3
CSS	Mathiatis	40.63	146	P	P	00 46 57.0	+0.8
CSS				IAmb	IAmb	00 46 59.1	
	comp=Z,47nm,1.4s						
DGZ	Jazzator, Alta	40.70	79	⇑eP	P	00 46 58.4	+1.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
POKR	Poker Plat Res	40.83	344	P	P	00 46 57.9	+0.3
	baz=11						
POKR	Poker Plat Res	40.83	344	P	P	00 46 58.2	+0.5
POKR				IAmb	IAmb	00 47 02.8	
	comp=Z,51nm,1.8s						
I23K	Minto, Yukon-K	40.95	345	P	P	00 46 59.0	+0.5
	baz=10,SNR=5.8						
I23K	Minto, Yukon-K	40.95	345	P	P	00 46 58.6	0.0
BTLS	Baital	41.05	95	eP	P	00 47 00.1	+0.4
	comp=Z,14nm,1.7s,baz=95						
BTLS	Baital	41.05	95	eP	P	00 47 00.0	+0.4
BTLS				pmax	pmax		
	comp=Z,14nm,1.7s						
DAWY	Dawson	41.10	338	P	P	00 46 59.5	-0.3
COLA	College	41.10	344	deP	P	00 47 00.7	+0.9
COLA				pmax	pmax		
	comp=Z,12nm,1.3s						
TCOL	CIGO, UAF Yank	41.11	344	P	P	00 46 59.9	+0.1
	baz=11						
IL31		41.13	343	P	P	00 46 59.9	-0.1
ILAR	Eielson Array	41.13	343	P	P	00 47 00.2	+0.2
	comp=Z,6.3nm,0.9s,baz=2.1,slow=6.9,SNR=51						
ILAR				PcP	PcP	00 48 58.4	-0.8
	comp=Z,1.3nm,0.8s,baz=347,slow=2.6,SNR=5.0						
ILAR	Eielson Array	41.13	343	P	P	00 46 59.7	-0.4
MLY	Manley	41.17	346	P	P	00 47 00.6	+0.1
	baz=9.8,SNR=7.1						
CCB	Clear Creek Bu	41.33	344	P	P	00 47 00.8	-0.9
D63A	Stockholm	41.40	273	P	P	00 47 02.2	-0.3
	baz=25						
K27K	Chicken	41.41	340	P	P	00 47 02.4	0.0
	baz=13,SNR=11						
K27K	Chicken	41.41	340	P	P	00 47 02.2	-0.2
K27K				IAmb	IAmb	00 47 04.0	
	comp=Z,49nm,1.6s						
NEA2	Nenana	41.48	344	P	P	00 47 02.1	-0.8
	baz=10						
HDA	Harding Lake	41.49	343	P	P	00 47 02.9	-0.1
	baz=11,SNR=6.0						
LMN	Caledonia Moun	41.52	270	P	P	00 47 03.5	+0.1
LMN				IAmb	IAmb	00 47 16.2	
	comp=Z,51nm,1.4s						
WRH	Wood River Hil	41.52	344	P	P	00 47 03.2	0.0
SCRK	Sand Creek	41.65	341	P	P	00 47 04.4	-0.1
	baz=12,SNR=6.9						
MATQ	Matagami	41.67	284	P	P	00 47 03.6	-1.1
	baz=26,SNR=7.9						
PQI	Presque Isle	41.70	273	P	P	00 47 05.3	+0.3
PQI				IAmb	IAmb	00 48 25.6	
	comp=Z,49nm,1.7s						
MAKZ	Makanchi	41.74	86	P	P	00 47 05.8	+0.5
MAKZ				pmax	pmax		
	comp=Z,13nm,1.3s						
MAKZ	Makanchi	41.74	86	P	P	00 47 05.8	+0.5
KK31	Karatay Array	41.81	100	P	P	00 47 07.0	+1.1
KKAR	Karatay Array	41.81	100	P	P	00 47 06.8	+0.9
KKAR	Karatay Array	41.81	100	P	P	00 47 06.8	+0.9
MK31	Makanchi Array	41.84	86	P	P	00 47 06.4	+0.3
MK31				pmax	pmax		
	comp=Z,13nm,1.3s						
MK31	Makanchi Array	41.84	86	P	P	00 47 06.4	+0.3
MKAR	Makanchi Array	41.84	86	P	P	00 47 07.0	+0.9
	comp=Z,13nm,1.1s,baz=342,slow=6.4,SNR=35						
MKAR				PcP	PcP	00 49 00.6	-1.3
	comp=Z,2.4nm,0.7s,baz=315,slow=4.6,SNR=3.6						
MKAR				LR	LR	01 08 38.1	
	comp=Z,652nm,18.0s,baz=326,slow=42						
MKAR	Makanchi Array	41.84	86	P	P	00 47 06.9	+0.7
D61A	St Aubert, Com	41.85	276	P	P	00 47 05.3	-0.8
	baz=25						
E64A	Bridgewater	41.88	273	P	P	00 47 05.7	-0.7
	baz=25						
DOT	Dot Lake	41.98	341	P	P	00 47 07.2	+0.1
DOT				IAmb	IAmb	00 47 09.3	
	comp=Z,39nm,1.4s						
ZSN	Zaisan	41.99	83	eP	P	00 47 07.5	+0.1
	comp=Z,15nm,1.7s,baz=83						
ZSN	Zaisan	41.99	83	eP	P	00 47 07.4	+0.1
ZSN				pmax	pmax		
	comp=Z,15nm,1.7s						
E63A	Oxbow	42.05	273	P	P	00 47 07.3	-0.5
	baz=25						
LSQQ	Lebel-sur-Quev	42.12	283	P	P	00 47 07.3	-1.0
	baz=25						
SEY	Seymchan	42.15	23	⇑eP	P	00 47 08.8	+0.4
DZA	Taraz	42.24	99	eP	P	00 47 10.5	+1.0
	baz=99						
DZA	Taraz	42.24	99	eP	P	00 47 10.4	+1.0
MCK	McKinley	42.32	344	P	P	00 47 09.7	-0.1
	baz=10						
D60A	Saint Jean D'O	42.33	276	P	P	00 47 09.7	-0.3
	baz=25						
TDK	Taldyqorghan	42.35	91	eP	P	00 47 11.1	+0.8
	comp=Z,12nm,1.1s,baz=91						
TDK	Taldyqorghan	42.35	91	eP	P	00 47 11.1	+0.8
TDK				pmax	pmax		
	comp=Z,11nm,1.1s						
ANM	Nome	42.35	355	P	P	00 47 10.1	+0.1
ANM				pmax	pmax		
	comp=Z,21nm,1.3s						
ANM	Nome	42.35	355	P	P	00 47 10.1	+0.1
LATQ	La Tuque	42.43	278	P	P	00 47 10.6	-0.3
	baz=25						
D59A	Saint-Raymond	42.50	277	P	P	00 47 10.7	-0.8
	baz=25						
F64A	Sherman	42.53	273	P	P	00 47 11.3	-0.5
	baz=24						
IUG	Iuzhnay	42.55	101	eP	P	00 47 13.0	+0.9
	comp=Z,14nm,2.0s,baz=101						
IUG	Iuzhnay	42.55	101	eP	P	00 47 12.9	+0.9
IUG				pmax	pmax		
	comp=Z,14nm,2.0s						
E61A	Lac Etchemin	42.64	275	P	P	00 47 12.5	-0.1
	baz=25,SNR=5.6						
SGDS	Sogindy	42.67	95	eP	P	00 47 13.7	+0.6
	comp=Z,8.7nm,1.5s,baz=96						
SGDS	Sogindy	42.67	95	eP	P	00 47 13.6	+0.6
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MOY	Mondy	42.67	66	eP	P	00 47 15.2	+2.2
MOY				pmax	pmax		
	comp=Z,53nm,2.3s						
D58A	Chemin du LacG	42.72	278	P	P	00 47 12.7	-0.6
	baz=25,SNR=5.6						
KUU	Kurty	42.76	93	eP	P	00 47 13.8	+0.1
	comp=Z,33nm,1.5s,baz=94						
KUU	Kurty	42.76	93	eP	P	00 47 13.7	+0.1
KUU				pmax	pmax		
	comp=Z,33nm,1.5s						
USP	Ospenovka	42.81	96	P	P	00 47 15.0	+0.9
	SNR=14						
DHY	Denali Highway	42.84	343	P	P	00 47 13.5	-0.7
F63A	Nahmakanta, Br	42.90	274	P	P	00 47 14.1	-0.6
	baz=24						
F63A	Nahmakanta, Br	42.90	274	P	P	00 47 14.3	-0.4
F63A				IAmb	IAmb	00 47 18.1	
	comp=Z,54nm,1.5s						
G65A	Princeton	42.91	272	P	P	00 47 13.8	-1.0
	baz=24						
E60A	Ste Agathe de	42.97	276	P	P	00 47 15.1	-0.2
	baz=24,SNR=5.0						
CHKK	Chushkaly	42.99	93	eP	P	00 47 15.9	+0.4
	baz=93						
CHKK	Chushkaly	42.99	93	eP	P	00 47 15.9	+0.4
TAS	Tashkent	43.10	102	P	P	00 47 17.9	+1.4
TAS				pmax	pmax		
	comp=Z,28nm,0.7s						
TAS	Tashkent	43.10	102	P	P	00 47 17.9	+1.4
TAS				IAmb	IAmb	00 47 32.3	
	comp=Z,28nm,0.7s						
VLDQ	Val d'Or	43.11	283	P	P	00 47 15.7	-0.6
CHMS	Chumysh	43.12	95	P	P	00 47 18.5	+1.9
	SNR=6.3						
EKS2	Erkin-Say	43.15	97	P	P	00 47 18.9	+1.9
	SNR=6.8						
F61A	St Evariste	43.20	276	P	P	00 47 17.2	0.0
	baz=24,SNR=6.8						
GEYT	Alibeck	43.21	115	P	P	00 47 19.0	+1.6
	comp=Z,17nm,0.7s,baz=307,slow=8.7,SNR=35						
GEYT				LR	LR	01 07 57.0	
	comp=Z,818nm,18.6s,baz=295,slow=40						
GEYT	Alibeck	43.21	115	P	P	00 47 18.4	+1.0
GYA0B	ALIBECK ARRAY	43.21	115	P	P	00 47 18.4	+1.1
G64A	Maxfield	43.21	273	P	P	00 47 16.7	-0.5
	baz=24						
H66A	Whiting	43.22	271	P	P	00 47 16.6	-0.7
	baz=24						
PKME	Peaks-Kenny Pk	43.35	273	P	P	00 47 18.0	-0.3
	baz=24,SNR=5.8						
PKME	Peaks-Kenny Pk	43.35	273	P	P	00 47 18.4	0.0
PKME				IAmb	IAmb	00 47 29.4	
	comp=Z,21nm,0.8s						
TLY	Talaya	43.36	64	eP	P	00 47 19.6	+1.2
TLY				eSS	SS	00 57 14.0	+15
TLY				pmax	pmax		
	comp=Z,27nm,1.5s						
TLY	Talaya	43.36	64	P	P	00 47 19.0	+0.6
AAK	Ala-Archa	43.38	96	P	P	00 47 20.8	+1.9
	SNR=7.7						
AAK	Ala-Archa	43.38	96	i P	P	00 47 19.5	+0.6
	SNR=12						
AAK	Ala-Archa	43.38	96	deP	P	00 47 20.0	+1.1
AAK				pmax	pmax		
	comp=Z,44nm,1.4s						
AAK	Ala-Archa	43.38	96	P	P	00 47 19.7	+0.9
TKM2	Tokmak 2	43.44	95	P	P	00 47 21.2	+1.8
	SNR=12						
TKM2	Tokmak 2	43.44	95	i P	P	00 47 20.3	+0.9
TKM2				pmax	pmax		
	comp=Z,16nm,1.0s						
F60A	Warwick	43.48	276	P	P	00 47 18.9	-0.5
	baz=24						
FFC	Flin Flon	43.48	307	P	P	00 47 18.1	-1.2
FFC				pmax	pmax		
	comp=Z,33nm,1.3s						
FFC	Flin Flon	43.48	307	P	P	00 47 18.1	-1.2
FFC				IAmb	IAmb	00 47 19.5	
	comp=Z,33nm,1.2s						
E58A	La Victoria	43.49	278	P	P	00 47 18.4	-1.1
	baz=24,SNR=5.8						
KBK	Karagaybulak	43.50	95	P	P	00 47 21.7	+1.9
	SNR=11						
AAA	Alma-Ata	43.56	93	eP	P	00 47 20.4	+0.2
	baz=93						
AAA	Alma-Ata	43.56	93	eP	P	00 47 20.3	+0.2
H65A	Eastbrook	43.57	272	P	P	00 47 19.4	-0.7
	baz=24						
G63A	Kingsbury	43.59	274	P	P	00 47 20.2	-0.1
	baz=24						
TTA	Tatalina	43.60	349	P	P	00 47 20.5	+0.2
TTA				pmax	pmax		
	comp=Z,42nm,1.8s						
TTA	Tatalina	43.60	349	P	P	00 47 20.5	+0.2
TTA				IAmb	IAmb	00 47 26.4	
	comp=Z,42nm,1.8s						
AML	Almayashu	43.62	97	P	P	00 47 20.0	-1.0
	SNR=13						
MDOK	Medeo	43.64	93	eP	P	00 47 21.7	+0.8
	baz=93						
MDOK				eS	S	00 53 52.5	+1.7
	baz=93						
MDOK	Medeo	43.64	93	eP	P	00 47 21.7	+0.8
MDOK				eS	S	00 53 52.5	+1.7
M24K	Tolsona, Glenn	43.69	342	P	P	00 47 20.5	-0.5
	baz=11						
TNSS	Tian-Shan	43.73	93	eP	P	00 47 22.4	+0.4
	baz=94						
TNSS	Tian-Shan	43.73	93	eP	P	00 47 22.3	+0.4
G62A	West of Eustis	43.75	275	P	P	00 47 21.2	-0.4
	baz=24						
UCH	Uchtor	43.77	96	P	P	00 47 24.7	+2.4
	SNR=8.8						
F59A	Saint Guilaume	43.83	277	P	P	00 47 21.5	-0.6
	baz=24						
KPKS	Kokpek	43.84	91	eP	P	00 47 23.3	+0.8
	comp=Z,11nm,1.0s,baz=92						
KPKS	Kokpek	43.84	91	eP	P	00 47 23.2	+0.8
KPKS				pmax	pmax		
	comp=Z,11nm,1.0s						
E56A	St. Veronique	43.84	280	P	P	00 47 22.1	-0.2
	baz=24,SNR=13						
H64A	Troy	43.90	273	P	P	00 47 22.7	-0.1
	baz=24						
G61A	St-Isidore-de-	43.98	276	P	P	00 47 23.4	-0.1
	baz=24						
TRQ	Mont Tremblant	44.00	279	P	P	00 47 23.1	-0.5
N25K	Chitina, Valde	44.03	341	P	P	00 47 23.5	-0.3
	baz=12						
H63A	New Sharon	44.12	274	P	P	00 47 24.4	-0.1
	baz=24						
SATY	Saty	44.13	92	eP	P	00 47 25.3	+0.5
	comp=Z,22nm,1.7s,baz=92						
SATY	Saty	44.13	92	eP	P	00 47 25.3	+0.5
SATY				pmax	pmax		
	comp=Z,22nm,1.7s						
MOQ	Mont Orford	44.17	276	P	P	00 47 24.3	-0.7
PDGK	Podgornoye	44.19	91	i P	P	00 47 25.2	-0.1
PDGK				pmax	pmax		
	comp=Z,18nm,1.1s						
SHLS	Shalkode	44.34	91	eP	P	00 47 28.4	+1.8
	comp=Z,29nm,1.2s,baz=91						
SHLS	Shalkode	44.34	91	eP	P	00 47 28.3	+1.8
SHLS				pmax	pmax		
	comp=Z,29nm,1.2s						
G60A	Masonville	44.38	276	P	P	00 47 26.6	-0.1
	baz=24						
F57A	Harrington	44.41	279	P	P	00 47 26.8	-0.1
	baz=24						
ZAK	Zakamensk	44.45	65	eP	P	00 47 28.4	+1.1

ZAK				e		00 49 12.8	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
H62A	Milan	44.52	275	P	P	00 47 27.6	-0.2
	baz=24						
G59A	Clarenceville	44.65	277	P	P	00 47 28.7	0.0
	baz=24						
I64A	Boothbay	44.68	273	P	P	00 47 29.2	+0.1
	baz=24						
CRQM	Cirque	44.73	339	P	P	00 47 29.4	-0.1
H61A	Lyndonville	44.78	276	P	P	00 47 29.8	-0.1
	baz=24						
H60A	Morristown	44.98	276	P	P	00 47 31.6	+0.1
	baz=24						
FRNY	Flat Rock	44.99	277	P	P	00 47 31.3	-0.2
RC01	Rabbit Creek A	45.00	344	P	P	00 47 31.2	-0.2
	baz=9.5						
LBNH	Lisbon	45.05	275	P	P	00 47 32.2	+0.2
	baz=24						
G57A	Newington	45.14	279	P	P	00 47 32.5	-0.2
	baz=24,SNR=11						
H59A	Cadyville	45.19	277	P	P	00 47 33.0	-0.1
	baz=24						
I62A	Tamworth	45.22	275	P	P	00 47 33.3	0.0
	baz=24						
MA2	Magadan	45.23	25	LR	LR	01 05 22.5	
	comp=Z,489nm,21.1s,baz=352,slow=35						
MA2	Magadan	45.23	25⇓	eP	P	00 47 33.3	0.0
MA2				pmax	pmax		
	comp=Z,28nm,2.5s						
MA2	Magadan	45.23	25	P	P	00 47 34.6	+1.4
MA2				IAmb	IAmb	00 47 48.5	
	comp=Z,47nm,1.9s						
ALGO	Algonquin Park	45.24	282	P	P	00 47 32.7	-0.8
	baz=24,SNR=6.0						
RAGM	Ragged Mountai	45.24	340	P	P	00 47 34.1	+0.7
DLBC	Dease Lake	45.35	330	LR	LR	01 06 58.9	
	comp=Z,994nm,20.8s,baz=34,slow=37						
LONY	Lake Ozonia	45.47	278	P	P	00 47 34.8	-0.5
	baz=24,SNR=5.7						
LONY	Lake Ozonia	45.47	278	P	P	00 47 34.9	-0.5
LONY				IAmb	IAmb	00 47 37.5	
	comp=Z,20nm,1.1s						
H58A	Gabriels	45.54	278	P	P	00 47 35.9	0.0
	baz=24						
J63A	Strafford	45.69	274	P	P	00 47 37.1	+0.1
	baz=23						
G54A	Lake Saint Pet	45.76	282	P	P	00 47 37.0	-0.6
	baz=24,SNR=8.6						
PLVO	Plevna	45.80	281	P	P	00 47 37.3	-0.6
PLVO				IAmb	IAmb	00 47 39.2	
	comp=Z,23nm,0.9s						
I60A	Shoreham	45.81	276	P	P	00 47 37.7	-0.3
	baz=23						
NCB	Newcomb	45.96	277	P	P	00 47 39.2	-0.1
J61A	Chester	46.05	275	P	P	00 47 40.2	+0.3
	baz=23						
WMQ	Urumqi	46.12	83	eP	P	00 47 42.4	+1.9
WMQ				pP	pwP	00 47 47.4	+3.1
WMQ				sP	sP	00 47 53.0	+12
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,350nm,5.3s						
WMQ				LR	LR		
	comp=Z,520nm,12.7s						
WMQ				LR	LR		
	comp=Z,1µm,21.7s						
WMQ				LR	LR		
	comp=Z,480nm,24.5s						
WMQ	Urumqi	46.12	83	P	P	00 47 42.1	+1.6
WMQ				pmax	pmax		
	comp=Z,24nm,1.0s						
WMQ	Urumqi	46.12	83	P	P	00 47 42.1	+1.6
WMQ				IAmb	IAmb	00 47 58.9	
	comp=Z,24nm,1.0s						
ULM	Lac du Bonnet	46.12	300	P	P	00 47 39.2	-1.1
	comp=Z,18nm,0.9s,baz=27,slow=8.0,SNR=31						
ULM				LR	LR	01 06 36.6	
	comp=Z,618nm,19.4s,baz=24,slow=36						
ULM	Lac du Bonnet	46.12	300	P	P	00 47 39.0	-1.4
ULM				pmax	pmax		
	comp=Z,27nm,1.1s						
ULM	Lac du Bonnet	46.12	300	P	P	00 47 39.0	-1.4
ULM				IAmb	IAmb	00 47 40.9	
	comp=Z,27nm,1.1s						
J60A	Lant Hill Farm	46.40	276	P	P	00 47 42.6	0.0
	baz=23						
I57A	Carthage	46.40	279	P	P	00 47 42.7	0.0
	baz=23						
I58A	Old Forge	46.43	278	P	P	00 47 42.5	-0.5
	baz=23						
J59A	Piesco	46.51	277	P	P	00 47 42.3	-1.2
	baz=23,SNR=6.5						
J59A	Piesco	46.51	277	P	P	00 47 43.0	-0.5
J59A				IAmb	IAmb	00 47 45.4	
	comp=Z,16nm,1.0s						
K62A	Royalston	46.59	275	P	P	00 47 44.0	-0.1
	baz=23						
E46A	Sault Ste Mari	46.62	288	P	P	00 47 43.8	-0.6
SADO	Sadowa	46.63	282	P	P	00 47 43.6	-0.9
	comp=Z,26nm,1.0s,baz=26,slow=8.4,SNR=16						
SADO	Sadowa	46.63	282	P	P	00 47 44.1	-0.4
H53A	Bobcaygeon	46.66	282	P	P	00 47 44.2	-0.5
	baz=23						
KSH	Kashi	46.69	96	P	P	00 47 48.5	+3.4
KSH				PP	PP	00 49 37.1	+2.6
KSH				S	S	00 54 36.4	+1.5
KSH				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH				pmax	pmax		
	comp=Z,620nm,6.7s						
KSH				LR	LR		
	comp=Z,760nm,13.2s						
KSH				LR	LR		
	comp=Z,690nm,9.4s						
KSH				LR	LR		
	comp=Z,1µm,13.7s						
J58A	Remsen	46.83	278	P	P	00 47 45.8	-0.2
	baz=23,SNR=5.5						
J58A	Remsen	46.83	278	P	P	00 47 45.3	-0.7
K61A	Williamstown	46.88	276	P	P	00 47 46.7	+0.3
	baz=23						
L61B	Northampton	46.91	275	P	P	00 47 47.0	+0.3
	baz=23						
ZEA	Zeya	46.98	44	eP	P	00 47 49.0	+1.9
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
J57A	Williamstown	46.98	279	P	P	00 47 46.9	-0.3
	baz=23						
J57A	Williamstown	46.98	279	P	P	00 47 47.4	+0.2
J57A				IAmb	IAmb	00 47 48.6	
	comp=Z,16nm,0.9s						
EYMN	Ely	47.11	295	P	P	00 47 47.1	-1.1
	baz=23,SNR=6.8						
EYMN	Ely	47.11	295	P	P	00 47 47.1	-1.1
EYMN				IAmb	IAmb	00 47 48.5	
	comp=Z,26nm,1.3s						
L63A	North Scituate	47.14	274	P	P	00 47 48.3	-0.2
	baz=23						
K59A	Cooperstown	47.24	277	P	P	00 47 49.3	0.0
	baz=23						
B35A	Bob, Littlefor	47.31	297	P	P	00 47 48.8	-0.9
B35A				IAmb	IAmb	00 47 50.6	
	comp=Z,31nm,1.3s						
M64A	Tiverton	47.31	273	P	P	00 47 50.3	+0.5
	baz=23						
E43A	Lone Tree Farm	47.35	290	P	P	00 47 49.3	-0.7
J56A	Wolcott	47.35	279	P	P	00 47 50.3	+0.2
	baz=23						
SONM	Songino Array	47.60	64	P	P	00 47 53.0	+0.8
	comp=Z,3.5nm,0.8s,baz=328,slow=7.1,SNR=18						
SONM				PcP	PcP	00 49 23.1	+1.3
	comp=Z,1.6nm,0.8s,baz=326,slow=3.2,SNR=6.5						
SONM				LR	LR	01 11 56.4	
	comp=Z,352nm,19.0s,baz=345,slow=41						
SONM	Songino Array	47.60	64	P	P	00 47 52.5	+0.3
SONM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	Songino Array	47.60	64	P	P	00 47 52.5	+0.3
HRA	Herat	47.64	113	P	P	00 47 53.5	+0.8
HRA				IAmb	IAmb	00 47 56.7	
	comp=Z,22nm,1.2s						
ULN	Ulaanbaatar	47.75	63	ceP	P	00 47 54.9	+1.6
ULN				pmax	pmax		
	comp=Z,23nm,1.7s						
ULN	Ulaanbaatar	47.75	63	P	P	00 47 53.9	+0.5
ULN				IAmb	IAmb	00 48 05.2	
	comp=Z,20nm,1.2s						
L60A	Shokan	47.78	276	P	P	00 47 53.7	+0.2
	baz=23						
L59A	Walton	47.83	277	P	P	00 47 54.2	+0.2
	baz=23						
M62A	Hamden	47.90	275	P	P	00 47 54.2	-0.2
	baz=22						
AGMN	Agassiz Nation	47.92	299	P	P	00 47 53.5	-1.0
	baz=22,SNR=18						
K56A	Middlesex	48.02	279	P	P	00 47 55.0	-0.3
	baz=23,SNR=5.3						
I51A	Listowel	48.05	283	P	P	00 47 55.3	-0.2
	baz=23,SNR=6.1						
BINY	Binghamton	48.10	278	P	P	00 47 55.8	-0.1
	baz=23,SNR=5.7						
BINY	Binghamton	48.10	278	P	P	00 47 55.3	-0.6
BINY				IAmb	IAmb	00 47 57.5	
	comp=Z,29nm,1.1s						
GLMI	Grayling	48.12	287	P	P	00 47 55.6	-0.4
	baz=23,SNR=5.5						
L58A	Harry Jones Me	48.20	278	P	P	00 47 56.3	-0.4
	baz=23						
MIB	Mutribah	48.35	131	eP		00 47 57.8	
KDAK	Kodiak Island	48.49	345	P	P	00 47 58.3	-0.4
	comp=Z,25nm,1.0s,baz=6.4,slow=12,SNR=5.1						
KDAK	Kodiak Island	48.49	345⇓	eP	P	00 47 58.6	-0.2
KDAK				pmax	pmax		
	comp=Z,44nm,1.0s						
KDAK	Kodiak Island	48.49	345	P	P	00 47 58.5	-0.2
L57A	Andrews Acres	48.53	279	P	P	00 47 59.3	0.0
	baz=23						
M59A	Waymart	48.54	277	P	P	00 47 59.4	+0.1
	baz=22						
RST	Umm Al-Ruwaisa	48.56	131	eP		00 47 59.6	
L56A	Greenwood	48.60	279	P	P	00 48 00.1	+0.2
	baz=23,SNR=6.4						
WVNY	West Valley, N	48.66	281	P	P	00 48 00.1	-0.1
UMR	Umm Al-Rimmam	48.67	130	eP		00 47 59.5	
M58A	Price's Panora	49.00	278	P	P	00 48 02.7	-0.2
	baz=22						
KBD	Kabd	49.03	131	eP		00 48 03.2	
N60A	Cedar Hill Far	49.07	277	P	P	00 48 03.5	+0.1
	baz=22						
N59A	State Game Lan	49.22	277	P	P	00 48 04.6	+0.1
	baz=22						
N59A	State Game Lan	49.22	277	P	P	00 48 04.8	+0.2
N59A				IAmb	IAmb	00 48 07.6	
	comp=Z,43nm,1.4s						
M57A	Sunshine Farm,	49.22	279	P	P	00 48 04.7	+0.2
	baz=22						
M57A	Sunshine Farm,	49.22	279	P	P	00 48 04.6	+0.1
G40A	Rib Lake	49.23	292	P	P	00 48 03.9	-0.8
G40A				IAmb	IAmb	00 48 05.5	
	comp=Z,34nm,1.1s						
RDF	Al-Radifah	49.24	131	eP		00 48 04.3	
MDND	Maddock	49.27	301	P	P	00 48 04.4	-0.5
	baz=22						
ERPA	Erie	49.32	282	P	P	00 48 05.1	-0.2
	baz=22						
KBL	Kabul	49.36	106	P	P	00 48 06.0	+0.1
KBL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBL	Kabul	49.36	106	P	P	00 48 06.0	+0.1
M56A	Emporium	49.39	280	P	P	00 48 05.8	-0.1
	baz=22						
LUPA	Lehigh Univers	49.40	277	P	P	00 48 06.2	+0.3
QRN	Al-Qurain	49.50	130	eP		00 48 06.5	
L53A	Girard	49.54	282	P	P	00 48 06.8	-0.2
	baz=22						
HIA	Hailar	49.56	52	P	P	00 48 08.0	+0.9
HIA				pmax	pmax		
	comp=Z,14nm,1.2s						
HIA	Hailar	49.56	52	P	P	00 48 08.0	+0.9
N58A	Sunbury	49.56	278	P	P	00 48 06.9	-0.2
	baz=22						
F36A	Milaca	49.57	295	P	P	00 48 06.3	-0.9
F36A				IAmb	IAmb	00 48 07.7	
	comp=Z,22nm,1.1s						
O60A	Telford	49.67	277	P	P	00 48 08.2	+0.3
	baz=22						
M54A	Oil Creek Stat	49.79	281	P	P	00 48 08.7	-0.2
	baz=22,SNR=10						
DGMT	Dagmar	49.80	306	P	P	00 48 08.6	-0.3
	baz=21						
DGMT	Dagmar	49.80	306	P	P	00 48 08.5	-0.5
DGMT				IAmb	IAmb	00 48 10.5	
	comp=Z,38nm,1.3s						
N57A	Milroy	49.88	279	P	P	00 48 09.5	0.0
	baz=22						
O59A	Robesonia	49.90	277	P	P	00 48 09.7	0.0
	baz=22						
N56A	West Decatur	49.94	279	P	P	00 48 09.8	-0.3
	baz=22						
SPMN	Marine on St.	49.97	294	P	P	00 48 09.8	-0.4
	baz=22,SNR=9.0						
SPMN	Marine on St.	49.97	294	P	P	00 48 09.6	-0.6
SPMN				IAmb	IAmb	00 48 11.5	
	comp=Z,21nm,0.8s						
SSPA	Standing Stone	50.09	279	P	P	00 48 11.1	0.0
SSPA				IAmb	IAmb	00 48 13.0	
	comp=Z,48nm,1.5s						
PAGS	Pennsylvania G	50.13	278	P	P	00 48 11.3	-0.1
PAGS				IAmb	IAmb	00 48 14.0	
	comp=Z,40nm,1.1s						
M53A	WI Miller and	50.14	282	P	P	00 48 11.1	-0.4
	baz=22,SNR=8.2						
M52A	Chesterland	50.24	283	P	P	00 48 11.9	-0.3
O58A	Lewisberry	50.28	278	P	P	00 48 12.8	+0.1
	baz=22						
N54A	Moraine State	50.38	281	P	P	00 48 13.1	-0.3
	baz=22,SNR=10						
O57A	Amberson	50.41	279	P	P	00 48 13.6	0.0
	baz=22,SNR=5.7						
TAM	Tamanrasset	50.48	181	P	P	00 48 15.2	+0.7
TAM				pmax	pmax		
	comp=Z,19nm,1.3s						
TAM	Tamanrasset	50.48	181	P	P	00 48 15.2	+0.7
P59A	Jarrettsville	50.62	277	P	P	00 48 15.1	-0.1
	baz=22						
O56A	Blue Knob Stat	50.62	279	P	P	00 48 15.3	0.0
	baz=22						
I40A	Norwalk	50.62	292	P	P	00 48 14.2	-1.0
I40A				IAmb	IAmb	00 48 16.5	
	comp=Z,17nm,0.8s						
M51A	Elyria	50.66	283	P	P	00 48 15.0	-0.5
	baz=22,SNR=6.9						
E28A	Huff	50.73	302	P	P	00 48 14.6	-1.4
P58A	Pank, Wackersv	50.98	278	P	P	00 48 18.2	+0.3
	baz=22						
BBB	Bella Bella	51.08	326	LR	LR	01 11 01.2	
	comp=Z,814nm,19.2s,baz=40,slow=37						
NIL	Nilore	51.38	102	P	P	00 48 21.4	+0.4
NIL				pmax	pmax		
	comp=Z,40nm,1.4s						
NIL	Nilore	51.38	102	P	P	00 48 21.4	+0.4
NIL				IAmb	IAmb	00 48 39.5	
	comp=Z,40nm,1.4s						
O53A	New Philadelph	51.39	282	P	P	00 48 21.0	0.0
	baz=22,SNR=9.8						
P56A	Dayton Farm, R	51.41	279	P	P	00 48 20.8	-0.3
	baz=22						
WALA	Waterton Lakes	51.42	314	P	P	00 48 19.9	-1.4
WALA				IAmb	IAmb	00 48 21.4	
	comp=Z,31nm,1.3s						
JFWS	Jewell Farm	51.43	291	P	P	00 48 20.5	-0.7
	baz=22,SNR=5.8						
L44A	Lake County Fo	51.48	289	P	P	00 48 21.3	-0.3
	baz=22						
EGMT	Eagleton	51.50	310	P	P	00 48 21.1	-0.7
	baz=19,SNR=10						
EGMT	Eagleton	51.50	310	P	P	00 48 21.3	-0.5
EGMT				IAmb	IAmb	00 48 22.4	
	comp=Z,25nm,1.1s						
MCWV	Mont Chateau	51.55	280	P	P	00 48 21.7	-0.5
	baz=22						
Q58A	Fox Den Farm,	51.60	278	P	P	00 48 22.2	-0.3
	baz=22						
Q57A	Strasburg	51.72	279	P	P	00 48 23.7	+0.2
	baz=22						
ACSO	Alum Creek Sta	51.91	283	P	P	00 48 23.9	-1.0
	baz=22,SNR=9.8						
Q56A	Snyder Ridge,	51.94	279	P	P	00 48 25.1	0.0
	baz=22						
LAO	LASA Array	51.95	306	P	P	00 48 24.1	-1.0
	baz=20,SNR=6.8						
LAO	LASA Array	51.95	306	P	P	00 48 25.0	-0.2
LAO				IAmb	IAmb	00 48 26.7	
	comp=Z,53nm,1.4s						
KLR	Kul'dur	52.16	43⇓	eP	P	00 48 26.8	+0.2
KLR				pmax	pmax		
	comp=Z,3.0nm,1.6s						
P52A	Corning	52.23	282	P	P	00 48 26.5	-0.7
	baz=22						
R58A	Rapidan	52.29	278	P	P	00 48 25.9	-1.8
	baz=21,SNR=6.4						
SUSD	Miller	52.29	299	P	P	00 48 26.3	-1.4
	baz=21,SNR=9.0						
SUSD	Miller	52.29	299	P	P	00 48 27.2	-0.5
ECSD	EROS Data Cent	52.35	297	P	P	00 48 27.1	-1.0
	baz=21,SNR=37						
ECSD	EROS Data Cent	52.35	297	P	P	00 48 27.0	-1.2
ECSD				IAmb	IAmb	00 48 29.3	
	comp=Z,35nm,0.9s						
R57A	Stanardsville	52.44	278	P	P	00 48 28.4	-0.4
	baz=21						
TYV	Tymovskoe	52.55	34	eP	P	00 48 30.4	+1.0
TYV				eS	S	00 55 59.5	+3.2
TYV				pmax	pmax		
	comp=Z,10.0nm,1.9s						
TYV				pmax	pmax		
	comp=Z,400nm,7.1s						
TYV				smax	smax		
	comp=N,500nm,8.2s						
R56A	Bull Pasture M	52.59	279	P	P	00 48 29.6	-0.4
	baz=21						
JTMT	Jette	52.74	313	P	P	00 48 30.3	-0.8
Q53A	Leroy	52.77	281	P	P	00 48 30.7	-0.6
	baz=21,SNR=7.1						
NEW	Newport	52.84	316	P	P	00 48 31.2	-0.5
	comp=N,10nm,1.1s,baz=18,slow=4.3,SNR=10						
NEW	Newport	52.84	316	P	P	00 48 31.5	-0.2
NEW				pmax	pmax		
	comp=Z,22nm,1.3s						
NEW	Newport	52.84	316	P	P	00 48 30.8	-0.9
	baz=18,SNR=11						
NEW	Newport	52.84	316	P	P	00 48 31.5	-0.2
NEW				IAmb	IAmb	00 48 32.7	
	comp=Z,22nm,1.2s						
R55A	Marlinton	52.91	280	P	P	00 48 32.3	-0.1
	baz=21						
SFIN	Lafayette	52.92	287	P	P	00 48 31.2	-1.2
	baz=21,SNR=5.4						
P49A	Miami Univ. Ec	53.05	285	P	P	00 48 32.1	-1.2
	baz=21,SNR=10						
S57A	Dark Hollow, R	53.06	279	P	P	00 48 33.5	+0.1
	baz=21						
SCIA	State Center	53.16	293	P	P	00 48 33.6	-0.6
	baz=21						
SCIA	State Center	53.16	293	P	P	00 48 33.5	-0.6
B08A	Colville Reser	53.19	318	P	P	00 48 33.5	-0.8
HRY	Holter Researc	53.20	311	P	P	00 48 33.6	-0.9
R54A	Victor	53.25	281	P	P	00 48 34.3	-0.5
	baz=21						
S56A	Natural Bridge	53.31	279	P	P	00 48 35.2	-0.1
	baz=21						
HDIL	Hopedale	53.37	289	P	P	00 48 35.4	-0.2
	baz=21						
HDIL	Hopedale	53.37	289	P	P	00 48 35.1	-0.5
T59A	Double "B" Far	53.39	277	P	P	00 48 36.0	+0.1
	baz=21						
MSO	Missoula	53.54	313	P	P	00 48 36.4	-0.6
	baz=18,SNR=21						
GCMT	Greycliff	53.59	309	P	P	00 48 37.2	-0.2
GTA	Gaotai	53.63	74	P	P	00 48 39.0	+1.2
GTA				pP	pwP	00 48 43.3	+1.7
GTA				sP	sP	00 48 46.1	+7.5
GTA				PcP	PcP	00 49 44.4	+0.3
GTA				S	S	00 56 18.8	+7.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,140nm,5.2s						
GTA				LR	LR		
	comp=Z,200nm,16.7s						
GTA				LR	LR		
	comp=Z,340nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,18.9s						
PGC	Sidney	53.69	321	P	P	00 48 37.5	-0.3
T58A	Grand View Acr	53.70	278	P	P	00 48 35.7	-2.4
	baz=21						
RSSD	Black Hills	53.85	303	P	P	00 48 38.9	-0.5
RSSD				pmax	pmax		
	comp=Z,32nm,1.3s						
RSSD	Black Hills	53.85	303	P	P	00 48 38.7	-0.7
	baz=20						
RSSD	Black Hills	53.85	303	P	P	00 48 38.9	-0.5
RSSD				IAmb	IAmb	00 48 40.0	
	comp=Z,32nm,1.3s						
T57A	Hurt	53.86	279	P	P	00 48 39.4	+0.1
	baz=21						
BLA	Blacksburg	53.99	280	P	P	00 48 40.3	0.0
	baz=21						
SHME	Shamm	54.01	122	P	P	00 48 40.8	+0.4
RAYN	Ar Rayn	54.03	135	i P	P	00 48 40.8	+0.1
	SNR=24						
RAYN	Ar Rayn	54.03	135	P	P	00 48 41.4	+0.6
RAYN				pmax	pmax		
	comp=Z,25nm,1.1s						
RAYN	Ar Rayn	54.03	135	P	P	00 48 41.4	+0.6
RAYN				IAmb	IAmb	00 48 44.1	
	comp=Z,25nm,1.1s						
U59A	Littleton	54.04	277	P	P	00 48 40.8	+0.3
	baz=21						
T56A	Rocky Mt	54.05	279	P	P	00 48 40.8	+0.1
	baz=21						
RLMT	Red Lodge	54.13	308	P	P	00 48 40.8	-0.6
	baz=19,SNR=15						
RLMT	Red Lodge	54.13	308	P	P	00 48 41.2	-0.3
RLMT				IAmb	IAmb	00 48 42.6	
	comp=Z,30nm,1.3s						
BANOM	Banah	54.17	122	P	P	00 48 41.6	0.0
BOZ	Bozeman (W)	54.21	310	P	P	00 48 41.2	-0.8
BOZ				pmax	pmax		
	comp=Z,16nm,1.6s						
BOZ	Bozeman (W)	54.21	310	P	P	00 48 41.2	-0.8
	baz=18						
BOZ	Bozeman (W)	54.21	310	P	P	00 48 41.2	-0.8
U58A	Oxford	54.22	278	P	P	00 48 41.3	-0.6
	baz=21,SNR=6.3						
U57A	Blanch	54.41	278	P	P	00 48 42.9	-0.3
	baz=21						
SKR	Severo-Kuril's	54.59	23	eP	P	00 48 40.1	-4.3
SKR				pmax	pmax		
	comp=Z,300nm,6.6s						
MSFE	Esma-Masafi	54.67	123	i P	P	00 48 45.7	+0.3
	SNR=14						
D03D	Eldon	54.69	320	P	P	00 48 45.1	-0.1
	baz=16,SNR=7.4						
WCI	Wyandotte Cave	54.70	286	P	P	00 48 44.7	-0.7
WCI				pmax	pmax		
	comp=Z,53nm,1.4s						
WCI	Wyandotte Cave	54.70	286	P	P	00 48 44.9	-0.6
	baz=21						
WCI	Wyandotte Cave	54.70	286	P	P	00 48 44.7	-0.7
V59A	Middlesex	54.72	277	P	P	00 48 45.0	-0.5
	baz=21						
MDH	Madha	54.76	122	i P	P	00 48 45.3	-0.7
	SNR=5.9						
U56A	King	54.79	279	P	P	00 48 46.0	0.0
	baz=21						
NAZ	Nazwa, Dubai	54.91	123	P	P	00 48 47.5	+0.5
BGNE	Belgrade	54.93	297	P	P	00 48 46.6	-0.4
	baz=20						
V58A	Windy Hill, Pi	54.94	278	P	P	00 48 46.7	-0.4
	baz=21						
NLWA	Neilton Lookou	54.97	321	P	P	00 48 47.7	+0.4
NLWA				IAmb	IAmb	00 48 49.7	
	comp=Z,28nm,1.1s						
D04E	Lakebay	54.98	320	P	P	00 48 47.4	+0.1
	baz=16,SNR=6.1						
E07A	Sunnyside	55.01	317	P	P	00 48 47.4	-0.2
E07A				IAmb	IAmb	00 48 49.1	
	comp=Z,22nm,1.1s						
U54A	Nelsons Funny	55.03	281	P	P	00 48 47.6	-0.4
	baz=21						
V57A	Coltrane Farms	55.04	279	P	P	00 48 47.6	-0.3
	baz=21						
UOSS	Minazif	55.08	123	i P	P	00 48 48.4	+0.2
	SNR=8.1						

UOSS	Minazif	55.08	123	P	P	00 48 48.3	0.0
H17A	Grant Village	55.12	309	P	P	00 48 48.9	+0.2
	baz=18,SNR=12						
FAQ	Al Faqa, Dubai	55.12	123	P	P	00 48 48.6	0.0
HATD	Hatta, Dubai	55.18	123	i P	P	00 48 49.7	+0.7
	SNR=11						
ASHO	Ashiyiah	55.30	123	i P	P	00 48 50.5	+0.6
	SNR=6.6						
V56A	Mocksville	55.32	279	P	P	00 48 49.5	-0.5
	baz=21,SNR=7.0						
USIN	University of	55.33	287	P	P	00 48 49.0	-0.9
FLWY	Flagg Ranch	55.44	309	P	P	00 48 50.7	-0.3
HHC	Hu-ho-hao-te	55.45	63	eP	P	00 48 52.1	+1.1
HHC				S	S	00 56 37.6	+1.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.2s						
HHC				LR	LR		
	comp=Z,600nm,17.0s						
HHC				LR	LR		
	comp=Z,790nm,14.5s						
HHC				LR	LR		
	comp=Z,750nm,17.0s						
TZTN	Tazewell	55.51	282	P	P	00 48 50.6	-0.6
	baz=20,SNR=6.9						
E04D	Cinebar	55.54	320	P	P	00 48 50.4	-0.9
	baz=16						
IMW	Indian Meadow	55.67	309	P	P	00 48 52.4	-0.4
IMW				IAmb	IAmb	00 48 54.3	
	comp=Z,20nm,1.1s						
W58A	Raeford	55.70	278	P	P	00 48 52.4	-0.2
	baz=20						
W57A	Gilead	55.79	278	P	P	00 48 53.3	+0.1
	baz=20						
BCYI	Bear Canyon	55.83	311	P	P	00 48 53.1	-0.6
K22A	Casper	55.83	305	P	P	00 48 52.2	-1.6
	baz=19,SNR=24						
K22A	Casper	55.83	305	P	P	00 48 52.2	-1.6
SOHO	SOHO	55.94	123	P	P	00 48 54.4	0.0
F05D	White Salmon	55.97	318	P	P	00 48 54.0	-0.5
	baz=16						
W56A	Indian Trail	55.98	279	P	P	00 48 53.5	-1.1
	baz=20						
G08A	Pilot Rock	56.05	316	P	P	00 48 54.5	-0.7
G08A				IAmb	IAmb	00 48 56.6	
	comp=Z,19nm,1.2s						
X58A	Rowland	56.16	278	P	P	00 48 55.8	-0.1
	baz=20						
KMSC	Kings Mountain	56.18	280	P	P	00 48 55.5	-0.7
	baz=20,SNR=7.1						
CCM	Cathedral Cave	56.23	290	P	P	00 48 54.8	-1.6
CCM				pmax	pmax		
	comp=Z,25nm,1.1s						
CCM	Cathedral Cave	56.23	290	P	P	00 48 55.4	-1.0
	baz=20						
CCM	Cathedral Cave	56.23	290	P	P	00 48 54.8	-1.6
CCM				IAmb	IAmb	00 48 56.4	
	comp=Z,24nm,1.1s						
OGNE	Ogallala	56.35	300	P	P	00 48 56.5	-0.8
	baz=19						
YSS	Yuzh-Sakhalins	56.35	35	⇑eP	P	00 48 55.8	-1.3
YSS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TKL	Tuckaleechee C	56.40	282	P	P	00 48 57.2	-0.4
	comp=Z,18nm,1.1s,baz=42,slow=7.9,SNR=12						
BW06	Boulder Array	56.43	308	P	P	00 48 56.9	-1.2
	baz=18,SNR=25						
PD31	Pinedale Array	56.43	308	P	P	00 48 57.2	-0.9
PD31				IAmb	IAmb	00 48 59.2	
	comp=Z,26nm,1.2s						
PDAR	Pinedale Array	56.43	308	P	P	00 48 57.2	-0.9
	comp=Z,15nm,1.1s,baz=35,slow=5.4,SNR=52						
PDAR	Pinedale Array	56.43	308	P	P	00 48 56.8	-1.3
X57A	Johnson Farm,	56.46	278	P	P	00 48 57.7	-0.4
	baz=20						
G05D	Wamic, OR	56.56	318	P	P	00 48 58.2	-0.5
	baz=16						
KSU1	Kansas State U	56.69	295	P	P	00 48 58.5	-1.2
	baz=20						
HLID	Hailey	56.76	312	P	P	00 48 59.3	-1.0
	baz=17,SNR=13						
HLID	Hailey	56.76	312	P	P	00 48 59.7	-0.6
AHID	Auburn Hatcher	56.79	309	P	P	00 48 59.6	-1.0
AHID				IAmb	IAmb	00 49 32.6	
	comp=Z,26nm,1.5s						
G03D	McMinnville, O	56.96	320	P	P	00 49 01.4	-0.1
	baz=15						
USRK	Ussuriysk Ar.	57.02	44	P	P	00 49 01.4	-0.5
	comp=Z,1.4nm,0.9s,baz=163,slow=30,SNR=2.3						
USRK				LR	LR	01 15 16.4	
	comp=Z,498nm,18.3s,baz=340,slow=38						
USRK	Ussuriysk Ar.	57.02	44	P	P	00 49 02.8	+0.9
USRK	Ussuriysk Ar.	57.02	44	P	P	00 49 02.8	+0.9
WVT	Waverly	57.10	286	P	P	00 49 01.3	-1.3
	baz=20						
TEY	Ternei	57.12	40	⇓eP	P	00 49 08.9	+6.3
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
N23A	Red Feather La	57.36	304	P	P	00 49 03.7	-1.1
	baz=18,SNR=21						
BJT	Baijiatuau	57.41	59	P	P	00 49 05.8	+1.1
BJT				pmax	pmax		
	comp=Z,12nm,1.2s						
BJT	Baijiatuau	57.41	59	P	P	00 49 05.8	+1.1
I05D	Terrebonne, OR	57.44	318	P	P	00 49 04.8	-0.2
	baz=16						
H04D	Lebanon	57.53	319	P	P	00 49 04.5	-1.0
	baz=15						
NHSC	New Hope	57.76	278	P	P	00 49 07.2	-0.1
	baz=20						
CBKS	Cedar Bluff	57.78	298	P	P	00 49 06.1	-1.3
	baz=19,SNR=6.0						
LZH	Lanzhou	57.86	72	⇓P	P	00 49 10.0	+1.8
LZH				pP	pwP	00 49 14.4	+2.3
LZH				sP	sP	00 49 17.6	+8.6
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,240nm,7.1s						
LZH				LR	LR		
	comp=Z,600nm,14.6s						
LZH				LR	LR		
	comp=Z,470nm,14.1s						
LZH				LR	LR		
	comp=Z,460nm,16.1s						
HWUT	Hardware Ranch	57.99	309	P	P	00 49 08.4	-0.7
I02D	Swisshome	58.14	320	P	P	00 49 07.9	-1.9
	baz=15						
I04A	Tendick Farm,	58.17	319	P	P	00 49 09.6	-0.5
	baz=15,SNR=6.8						
U40A	Yellville	58.27	291	P	P	00 49 09.2	-1.7
	baz=20,SNR=14						
ISCO	Idaho Springs	58.31	303	P	P	00 49 11.0	-0.5
	baz=18,SNR=13						
KSCO	Kaye Shedlock’	58.32	300	P	P	00 49 10.7	-0.7
	baz=19						
GOGA	Godfrey	58.41	281	P	P	00 49 11.8	0.0
	baz=20,SNR=6.4						
J05D	Fort Rock, OR	58.43	317	P	P	00 49 12.7	+0.6
	baz=16,SNR=14						
I03D	Drain, OR	58.44	319	P	P	00 49 11.0	-1.0
	baz=15						
O20A	White River Ci	58.63	305	P	P	00 49 13.1	-0.5
	baz=18,SNR=27						
J04D	Umpqua Nationa	58.64	318	P	P	00 49 13.3	-0.3
	baz=15,SNR=9.2						
Q24A	Divide	58.99	302	P	P	00 49 15.2	-1.1
	baz=18,SNR=9.1						
Q24A	Divide	58.99	302	P	P	00 49 15.6	-0.7
Q24A				IAmb	IAmb	00 49 17.4	
	comp=Z,20nm,1.1s						
OXF	Oxford	59.05	287	P	P	00 49 14.7	-1.6
	baz=20,SNR=6.2						
KOWA	Kowa	59.06	192	P	P	00 49 16.8	+0.3
KOWA				IAmb	IAmb	00 49 19.4	
	comp=Z,40nm,1.9s						
W41B	Gary Mavity, V	59.22	290	P	P	00 49 17.3	-0.1
	baz=19,SNR=5.1						
DANN	Dangsing	59.38	93	eP	P	00 49 19.4	+0.4
	comp=Z,42nm,0.8s						
X43A	Marvell	59.46	288	P	P	00 49 18.2	-0.9
	baz=19						
K02D	Willamette Mer	59.47	319	P	P	00 49 19.1	0.0
	baz=15,SNR=6.6						
MOD	Modoc Plateau	59.58	316	P	P	00 49 20.3	+0.2
MOD				IAmb	IAmb	00 49 22.2	
	comp=Z,24nm,1.2s						
W39A	Magazine	59.61	291	P	P	00 49 19.1	-1.1
	baz=19						
UALR	University of	59.62	290	P	P	00 49 19.7	-0.5
DUG	Dugway, Tooele	59.62	309	P	P	00 49 19.3	-1.1
	baz=17						
ELK	Elko	59.63	312	P	P	00 49 19.9	-0.7
	comp=Z,3.6nm,1.0s,baz=24,slow=5.5,SNR=8.8						
ELK	Elko	59.63	312	P	P	00 49 20.1	-0.4
ELK				pmax	pmax		
	comp=Z,12nm,1.4s						
ELK	Elko	59.63	312	P	P	00 49 20.1	-0.4
L04D	Klamath Falls	59.67	318	P	P	00 49 20.2	-0.4
	baz=15,SNR=7.1						
L02E	Cave Junction	59.98	319	P	P	00 49 22.0	-0.6
	baz=15						
M04C	Macdoel	60.00	318	P	P	00 49 22.4	-0.5
	baz=15,SNR=9.0						
X40A	Basin Creek Fa	60.02	290	P	P	00 49 21.4	-1.6
	baz=19						
TOA0	Torodi Ar. Sit	60.14	186	P	P	00 49 23.5	-0.5
TOA0				IAmb	IAmb	00 49 26.3	
	comp=Z,31nm,1.4s						
TORD	Torodi Ar. Bea	60.14	186	P	P	00 49 23.6	-0.4
	comp=Z,16nm,1.1s,baz=353,slow=7.9,SNR=28						
TORD				LR	LR	01 16 52.1	
	comp=Z,396nm,18.4s,baz=0.0,slow=38						
TORD	Torodi Ar. Bea	60.14	186	P	P	00 49 23.4	-0.5
MIAR	Mount Ida	60.17	291	P	P	00 49 23.1	-0.9
	baz=19,SNR=22						
YBH	Yreka Blue Hor	60.22	318	P	P	00 49 23.5	-0.9
	comp=Z,2.1nm,0.8s,baz=357,slow=4.8,SNR=6.9						
LSA	Lhasa	60.25	86	P	P	00 49 26.5	+1.3
LSA				pmax	pmax		
	comp=Z,52nm,1.9s						
LSA	Lhasa	60.25	86	P	P	00 49 26.5	+1.3
KKN	Kakani	60.35	92	eP	P	00 49 26.0	+0.4
	comp=Z,60nm,1.2s						
GUN	Gumba	60.41	92	eP	P	00 49 26.7	+0.6
	comp=Z,101nm,1.4s						
DMN	Daman	60.47	92	eP	P	00 49 26.6	+0.1
	comp=Z,64nm,1.3s						
T25A	Trinidad	60.54	301	P	P	00 49 25.8	-1.0
	baz=18						
S22A	4UR Ranch, Cre	60.56	303	P	P	00 49 26.4	-0.6
	baz=18,SNR=6.6						
M02C	Callahan	60.57	318	P	P	00 49 25.6	-1.1
	baz=15						
PKIN	Phulchoki	60.58	92	eP	P	00 49 27.5	+0.3
	comp=Z,61nm,1.3s						
PKI	Pulchoki	60.59	92	eP	P	00 49 27.5	+0.1
	comp=Z,70nm,1.4s						
N02D	Trinity Center	60.95	318	P	P	00 49 28.8	-0.6
	baz=15,SNR=5.6						
XAN	Xi'an	61.17	68	P	P	00 49 32.8	+1.9
XAN				pP	pwP	00 49 36.3	+1.5
XAN				S	S	00 57 55.3	+4.7
XAN				ScS	SKKSac	00 59 21.8	-0.7
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				pmax	pmax		
	comp=Z,280nm,7.6s						
XAN				LR	LR		
	comp=Z,1μm,17.4s						
XAN				LR	LR		
	comp=Z,430nm,17.4s						
XAN				LR	LR		
	comp=Z,1μm,17.3s						
Z41A	Richland Creek	61.17	289	P	P	00 49 30.3	-0.5
	baz=19						
WDC	Whiskeytown Da	61.29	318	P	P	00 49 30.1	-1.5
WDC				pmax	pmax		
	comp=Z,27nm,1.6s						
WDC	Whiskeytown Da	61.29	318	P	P	00 49 30.1	-1.5
WDC				IAmb	IAmb	00 49 36.1	
	comp=Z,27nm,1.6s						
WMOK	Wichita Mounta	61.38	295	P	P	00 49 31.3	-1.0
	baz=18,SNR=11						
O03E	Paynes Creek	61.42	317	P	P	00 49 31.6	-1.0
	baz=15,SNR=9.6						
TAPN	Taplejung	61.47	90	eP	P	00 49 33.6	+0.3
	comp=Z,163nm,1.8s						
RAMN	Ramite	61.52	91	eP	P	00 49 33.9	+0.3
	comp=Z,59nm,1.3s						
BEKR	Beckworth	61.55	316	P	P	00 49 33.6	+0.1
BEKR				IAmb	IAmb	00 49 43.8	
	comp=Z,11nm,1.0s						
O02D	Mt. Diablo Mer	61.73	318	P	P	00 49 34.0	-0.7
	baz=15						
ODAN	Odare	61.84	91	eP	P	00 49 36.4	+0.7
	comp=Z,176nm,1.5s						
R11A	Troy Canyon, C	62.00	311	P	P	00 49 36.1	-0.5
	baz=16,SNR=9.9						
NVAR	Mina Array Bea	62.51	314	P	P	00 49 39.6	-0.5
	comp=Z,3.2nm,0.9s,baz=25,slow=5.5,SNR=18						
NVAR				LR	LR	01 18 32.9	
	comp=Z,361nm,18.7s,baz=3.5,slow=38						
NVAR	Mina Array Bea	62.51	314	P	P	00 49 39.5	-0.6
AFDM	Forest Hills D	62.56	316	P	P	00 49 39.5	-0.7
AFDM				IAmb	IAmb	00 49 41.5	
	comp=Z,13nm,1.3s						
KSRS	Korea Array	62.62	50	P	P	00 49 40.4	-0.1
	comp=Z,0.6nm,0.4s,baz=78,slow=4.6,SNR=1.6						
KSRS				LR	LR	01 19 39.9	
	comp=Z,348nm,18.5s,baz=350,slow=39						
CD2	Chengdu	62.71	74	P	P	00 49 41.0	-0.3
CD2				S	S	00 58 09.8	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,410nm,15.2s						
CD2				LR	LR		
	comp=Z,620nm,13.7s						
CD2				LR	LR		
	comp=Z,530nm,15.2s						
GDXM	Geysers	63.06	317	P	P	00 49 43.7	+0.2
ANMO	Albuquerque	63.13	302	P	P	00 49 43.9	-0.3
	comp=Z,2.6nm,0.8s,baz=18,slow=6.8,SNR=6.2						
ANMO	Albuquerque	63.13	302	⇓eP	P	00 49 44.3	+0.1
ANMO				pmax	pmax		
	comp=Z,31nm,2.5s						
ANMO	Albuquerque	63.13	302	P	P	00 49 43.7	-0.5
	baz=17						
MSTX	Muleshoe	63.14	299	P	P	00 49 43.6	-0.6
	baz=18						
ABTX	Abilene, Hawle	63.60	295	P	P	00 49 46.4	-0.8
	baz=18						
W18A	Petrified Fore	63.76	305	P	P	00 49 47.7	-0.6
	baz=17						
SHL	Shillong	64.36	87	P	P	00 49 52.7	+0.3
SHL				pmax	pmax		
	comp=Z,28nm,1.3s						
SHL	Shillong	64.36	87	P	P	00 49 52.7	+0.3
SHL				IAmb	IAmb	00 49 54.7	
	comp=Z,28nm,1.3s						
CWC	Cottonwood Cre	64.38	313	P	P	00 49 51.7	-0.7
	baz=15						
MPMC	Manual Prospec	64.61	312	P	P	00 49 54.3	+0.3
	baz=15,SNR=6.3						
ENH	Enshi	64.88	69	P	P	00 49 55.9	+0.3
ENH				IAmb	IAmb	00 49 58.1	
	comp=Z,11nm,0.9s						
HKT	Hockley	65.12	291	⇓eP	P	00 49 56.6	-0.4
HKT				pmax	pmax		
	comp=Z,20nm,2.0s						
GSC	Goldstone, Bar	65.19	311	P	P	00 49 57.0	-0.6
	baz=15						
ISA	Isabella, Lake	65.21	313	P	P	00 49 57.6	-0.1
	baz=15,SNR=5.8						
GMRC	Granite Mounta	65.44	310	P	P	00 49 59.1	-0.2
	baz=16						
MJAR	Matsushiro Arr	65.64	41	P	P	00 50 01.0	+0.6
	comp=Z,3.4nm,0.9s,baz=326,slow=6.5,SNR=4.6						
JCT	Junction City	65.68	295	P	P	00 50 00.3	-0.5
	baz=18						
EDW2	Edwards Air Fo	65.86	312	P	P	00 50 01.4	-0.5
	baz=15						
BFSC	Mount Baldy Ra	66.40	312	P	P	00 50 05.1	-0.4
	baz=15						
TUC	Tucson	66.69	305	P	P	00 50 07.1	-0.2
TUC				pmax	pmax		
	comp=Z,41nm,1.8s						
TUC	Tucson	66.69	305	P	P	00 50 07.2	-0.1
	baz=16						
TUC	Tucson	66.69	305	P	P	00 50 07.1	-0.2
TUC				IAmb	IAmb	00 50 16.1	
	comp=Z,41nm,1.8s						
PFO	Pinyon Flats O	66.74	311	⇓eP	P	00 50 08.0	+0.3
PFO				pmax	pmax		
	comp=Z,31nm,2.7s						
PFO	Pinyon Flats O	66.74	311	P	P	00 50 07.1	-0.6
	baz=15						
TPFO	Pinon Flats	66.75	310	P	P	00 50 07.0	-0.7
	baz=15						
DBIC	Dimbokro	66.87	192	LR	LR	01 19 48.0	
	comp=Z,116nm,19.0s,baz=354,slow=36						
IKP	In-Ko-Pah, Jac	67.59	310	P	P	00 50 12.8	-0.2
	baz=15						
833A	Chaparral WMA,	67.62	294	P	P	00 50 13.1	0.0
	baz=18						
MTP	Monte Pirata	67.69	258	P	P	00 50 14.1	+0.4
GYA	Guiyang	67.72	73	⇑P	P	00 50 15.8	+1.8
GYA				sP	pwP	00 50 20.6	+2.7
GYA				S	S	00 59 13.0	+1.1
GYA				pmax	pmax		
	comp=Z,19nm,1.0s						
GYA				pmax	pmax		
	comp=Z,210nm,4.7s						
GYA				LR	LR		
	comp=Z,290nm,21.4s						
GYA				LR	LR		
	comp=Z,200nm,18.9s						
GYA				LR	LR		
	comp=Z,380nm,21.0s						
TX31	Lajitas Ar. Si	67.78	298	P	P	00 50 13.3	-0.9
TXAR	Lajitas Array	67.78	298	P	P	00 50 13.3	-0.9
	comp=Z,2.1nm,0.7s,baz=44,slow=3.8,SNR=13						
TXAR				LR	LR	01 19 45.6	
	comp=Z,327nm,18.2s,baz=0.0,slow=36						
KMI	Kunming	67.89	77	⇑P	P	00 50 15.0	-0.1
KMI				sP	pwP	00 50 22.0	+2.9
KMI				S	S	00 59 19.8	+5.7
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,96nm,4.9s						
KMI				LR	LR		
	comp=Z,220nm,23.6s						
KMI				LR	LR		
	comp=Z,330nm,15.6s						
KMI				LR	LR		
	comp=Z,350nm,26.3s						
HYB	Hyderabad	68.22	102	i P	P	00 50 17.0	-0.1
SDDR	Presa de Saban	68.50	264	P	P	00 50 18.9	+0.1
SDDR				IAmb	IAmb	00 50 25.7	
	comp=Z,20nm,1.1s						
SLVN	Son La	71.81	77	P	P	00 50 39.3	+0.2
CHTO	Chiang Mai	72.78	82	P	P	00 50 45.2	+0.3
CHTO				pmax	pmax		
	comp=Z,17nm,1.2s						
CHTO	Chiang Mai	72.78	82	P	P	00 50 45.2	+0.3
CHTO				IAmb	IAmb	00 50 47.5	
	comp=Z,16nm,1.1s						
CM31	Chiang Mai Arr	73.12	82	P	P	00 50 47.5	+0.6
CM31				IAmb	IAmb	00 50 49.8	
	comp=Z,14nm,1.1s						
CMAR	Chiang Mai Arr	73.12	82	P	P	00 50 46.9	0.0
	comp=Z,1.2nm,0.3s,baz=327,slow=7.5,SNR=15						
CMAR				LR	LR	01 29 11.4	
	comp=Z,108nm,21.4s,baz=48,slow=41						
CMAR	Chiang Mai Arr	73.12	82	ceP	P	00 50 47.5	+0.6
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAIG	Zacatecas	73.75	295	P	P	00 50 51.0	+0.1
SSLB	Suanglung	74.06	60	P	P	00 50 53.0	+0.7
SSLB				IAmb	IAmb	00 50 56.6	
	comp=Z,34nm,1.0s						
MBAR	Mbarara	75.23	155	⇑eP	P	00 51 00.4	+1.0
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MBAR	Mbarara	75.23	155	P	P	00 51 00.3	+1.0
MBAR				IAmb	IAmb	00 51 01.9	
	comp=Z,17nm,1.2s						
QIZ	Qiongzhong	75.66	72	P	P	00 51 00.1	-1.5
QIZ				S	S	01 00 43.6	+0.4
QIZ				LR	LR		
	comp=Z,440nm,16.9s						
QIZ				LR	LR		
	comp=Z,400nm,17.5s						
QIZ				LR	LR		
	comp=Z,430nm,18.6s						
KMBO	Kilima Mbogo	76.64	149	P	P	00 51 08.8	+1.4
	comp=Z,3.2nm,1.1s,baz=333,slow=7.5,SNR=3.8						
KMBO				LR	LR	01 28 41.7	
	comp=Z,117nm,18.6s,baz=90,slow=39						
KMBO	Kilima Mbogo	76.64	149	i P	P	00 51 09.1	+1.6
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SDV	Santo Domingo	77.89	260	P	P	00 51 13.7	-0.8
SDV	Santo Domingo	77.89	260	eP	P	00 51 14.3	-0.2
MTO3	Montecristo	78.07	280	P	P	00 51 15.7	+0.2
MOTC	Monteria, Cord	79.44	265	eP	P	00 51 20.9	-1.9
ZARC	Zaragoza, Cauc	80.43	264	eP	P	00 51 26.9	-1.3
RUSC	La Rusia	81.44	262	eP	P	00 51 33.3	-0.9
MCPB	Macapa, AP	81.69	240	eP	P	00 51 37.2	+2.3
SPBC	San Pablo de B	81.96	263	eP	P	00 51 35.9	-0.5
NORC	Norcasia	82.27	264	eP	P	00 51 37.6	-0.4
CBOC	Ciudad Bolivar	82.31	265	eP	P	00 51 39.1	+0.8
GUY2C	Guyana, Caldas	82.74	264	eP	P	00 51 41.4	+0.5
ROSC	El Rosal	82.80	263	LR	LR	01 24 14.3	
	comp=Z,44nm,21.5s,baz=358,slow=33						
ROSC	El Rosal	82.80	263	P	P	00 51 41.5	+0.4
ROSC				pmax	pmax		
	comp=Z,28nm,1.2s						
ROSC	El Rosal	82.80	263	P	P	00 51 41.5	+0.4
ROSC				IAmb	IAmb	00 52 16.1	
	comp=Z,28nm,1.1s						
CHIC	Chingaza	82.83	262	eP	P	00 51 41.2	-0.1
PLMC	San Jos del P	83.31	265	eP	P	00 51 43.9	+0.5
TOLC	Tolima	83.33	264	eP	P	00 51 44.0	+0.2
RCBR	Riachuelo	83.34	223	eP	P	00 51 46.0	+2.5
MALB	Monte Alegre	83.69	242	eP	P	00 51 47.6	+2.4
ORTC	Ortega, Tolima	83.95	263	eP	P	00 51 45.9	-0.8
ITTB	Itaituba	86.47	242	eP	P	00 51 59.7	+0.6
MACA	Manacapuru-AM	86.62	247	eP	P	00 52 01.6	+1.7
PRPB	Parauapebas	86.74	236	eP	P	00 52 02.6	+2.1
NPGB	Novo Progresso	88.95	241	eP	P	00 52 12.2	+1.2
BDFB	Brasilia	95.45	232	LR	LR	01 28 16.3	
	comp=Z,108nm,21.1s,baz=323,slow=31						
WRA	Warramunga Arr	119.42	59	PKP	PKPdf	00 58 04.8	-0.9
	comp=Z,1.2nm,0.7s,baz=321,slow=2.6,SNR=8.6						
AS31	Alice Springs	122.88	60	PKPdf	PKiKP	00 58 12.3	-0.1
ASAR	Alice Springs	122.88	60	PKP	PKPdf	00 58 11.7	-0.6
	comp=Z,4.3nm,0.7s,baz=350,slow=1.9,SNR=43						
ASAR	Alice Springs	122.88	60	PKPdf	PKPdf	00 58 10.6	-1.6
PLCA	Paso Flores	124.99	245	PKP	PKiKP	00 58 16.1	-0.1
	comp=Z,2.0nm,0.9s,baz=234,slow=4.0,SNR=5.7						
PLCA	Paso Flores	124.99	245		PKiKP	00 58 18.0	+1.8
VNA1	Neumayer--Stat	143.98	188	PKPdf	PKPab	00 58 47.2	-0.3
	baz=73,slow=6.4						
VNA2	Neumayer--Watz	144.22	188	PKPdf	PKPab	00 58 48.5	0.0
	baz=73,slow=6.4						
VNA3	Neumayer Olymp	144.63	189	PKPab	PKPab	00 58 49.6	-0.3
	baz=73,slow=6.4						
SNAA	Sanae	144.81	185	PKPab	PKPab	00 58 50.6	-0.1
	baz=73,slow=6.4						
SNAA	Sanae	144.81	185	PKIKP	PKPab	00 58 50.6	-0.1
SNAA	Sanae	144.81	185	PKPdf	PKPab	00 58 50.6	-0.1
MAW	Mawson	145.29	146	PKPbc	PKPbc	00 58 52.0	-0.2
	comp=Z,6.5nm,0.8s,baz=279,slow=15,SNR=5.1						
MAW	Mawson	145.29	146	PKIKP	PKPbc	00 58 52.0	-0.2
BKZ	Black Stump Fm	145.48	14	PKPdf	PKPdf	00 58 52.4	-1.4
RPZ	Rata Peaks	149.50	23	PKPbc	PKiKP	00 59 05.2	-0.6
	comp=Z,11nm,0.8s,baz=124,slow=18,SNR=3.8						
RPZ	Rata Peaks	149.50	23		PKPbc	00 59 04.5	-0.2
BELA	Belgrano 2	152.78	198		PKPbc	00 59 10.5	-0.9

NEIC ***22*** *00:55:34.9±0.7, 17°.7S±0°.2×174°.8W±0°.2, h255km±18km, mb4.2/10, Error ellipse: s-maj=34.0km s-min=10.9km az=139.0*

NOU ***22*** *00:55:35.6, 17°.75S×174°.77W, h245km, MLv4.8, Tonga Islands*

IDC ***22*** *00:55:36.1±1.8, 17°.52S×174°.18W, h316km±43km, mb4.1/6, mb1 4.2/7, mb1mx3.4/50, mbtmp4.8/7, Error ellipse: s-maj=51.4km s-min=24.8km az=79.0*

ISC 22 00:55:33.9±0.9, **17°.7S**±0°.1×**174°.7W**±0°.1, **h250**km, **n34**, σ**1s.79**/35, **mb4.2**/10, **Tonga Islands**

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

AFI	Afiamalu	4.68	38	P	Pn	00 56 47.9	+2.0
	40nm,0.3s,baz=133,slow=1.5,SNR=45						
AFI				S	S	00 57 41.8	-1.3
	3.3nm,0.3s,baz=36,slow=21,SNR=1.1						
AFI	Afiamalu	4.68	38		Pn	00 56 48.1	+2.2
AFI	Afiamalu	4.68	38	P	Pn	00 56 48.3	+2.4
MSVF	Nonsavu	6.89	268	Pn	Pn	00 57 13.9	+0.7
MSVF	Nonsavu	6.89	268	P	Pn	00 57 14.1	+0.8
DZM	Mont Dzumac	18.25	253	P	P	00 59 29.5	+0.1
MXZ	Matakaoa Point	20.76	196	P	P	00 59 55.1	-0.8
WMGZ	Waiomatatini S	20.98	195	P	P	01 00 01.0	+2.9
HAZ	Te Kaha	21.09	197	P	P	00 59 59.6	+0.5
PKGZ	Pakihiroa	21.13	196	P	P	01 00 02.3	+2.6
RUGZ	Raukumara Rang	21.31	197	P	P	01 00 02.3	+0.8
OPRZ	Ohinepanea	21.53	199	P	P	01 00 00.2	-3.2
URZ	Urewera	21.74	198	P	P	01 00 05.6	+0.2
	26nm,0.4s,baz=334,slow=1.8,SNR=29						
URZ	Urewera	21.74	198	P	P	01 00 05.6	+0.2
TOZ	Tahuroa Road	21.77	201	P	P	01 00 06.8	+1.1
RIGZ	Rimuhau	21.98	196	P	P	01 00 08.9	+1.3
RTZ	Ruatahuna	22.11	197	P	P	01 00 10.4	+1.5
SNGZ	Shannon Statio	22.17	197	P	P	01 00 12.1	+2.8
BKZ	Black Stump Fm	22.76	198	P	P	01 00 14.2	-0.6
RPZ	Rata Peaks	28.63	202	P	P	01 01 05.6	-1.8
	5.0nm,0.6s,baz=15,slow=16,SNR=2.0						
CTAO	Charters Tower	36.95	260	P	P	01 02 19.5	-0.1
CTAO				IAmb	IAmb	01 02 24.7	
	comp=Z,9.6nm,1.1s						
STKA	Stephens Creek	41.84	242	P	P	01 02 59.5	-0.1
	comp=Z,6.7nm,0.7s,baz=89,slow=9.9,SNR=13						
STKA	Stephens Creek	41.84	242	P	P	01 03 00.1	+0.4
WR0	Warramunga Arr	47.94	259	P	P	01 03 47.9	+0.1
WB0	Warramunga Arr	48.10	259	P	P	01 03 48.7	-0.3
WB0				IAmb	IAmb	01 03 49.8	
	comp=Z,6.2nm,0.5s						
WRA	Warramunga Arr	48.13	259	P	P	01 03 48.9	-0.4
	comp=Z,3.3nm,0.4s,baz=98,slow=6.6,SNR=65						
WRA	Warramunga Arr	48.13	259	P	P	01 03 49.1	-0.2
AS31	Alice Springs	48.24	254	P	P	01 03 50.3	+0.2
AS31				IAmb	IAmb	01 03 51.1	
	comp=Z,8.6nm,1.0s						
ASAR	Alice Springs	48.24	254	P	P	01 03 50.0	-0.1
	comp=Z,25nm,0.8s,baz=90,slow=7.9,SNR=187						
ASAR	Alice Springs	48.24	254	P	P	01 03 50.0	-0.1
FITZ	Fitzroy Crossi	56.53	260	P	P	01 04 51.2	+0.4
	comp=Z,2.6nm,0.5s,baz=117,slow=4.2,SNR=7.8						
FITZ	Fitzroy Crossi	56.53	260	P	P	01 04 51.5	+0.7
FITZ				IAmb	IAmb	01 04 56.8	
	comp=Z,6.1nm,1.1s						
PSA00	Pilbara Seismi	61.37	255	P	P	01 05 24.4	+0.4
PSA00				IAmb	IAmb	01 05 30.2	
	comp=Z,6.7nm,1.0s						
FINES	FINESS Array B	133.83	346	PKP	PKPdf	01 14 14.2	-6.4
	comp=Z,3.6nm,1.0s,baz=36,slow=2.6,SNR=4.5						

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*IDC **22** 00:56:13.6±0.9, 52°.61N×168°.13W, h0^{km}, mb4.0/23, mb1 4.2/24, mb1mx4.1/62, mbtmp4.0/24, ML3.8/1, MS3.8/3, Ms1 3.8/3, ms1mx3.3/36, Error ellipse: s-maj=24.7km s-min=12.9km az=4.0*

*AEIC **22** 00:56:15.9±2.1, 52°.39N±0°.04×167°.97W±0°.06, h14^{km}±4^{km}, ML3.8/35, mb4.4/60(NEIC), ML4.1/6(NEIC), Error ellipse: s-maj=5.9km s-min=4.8km az=145.0*

*NEIC **22** 00:56:17.1±1.7, 52°.45N±0°.04×168°.00W±0°.07, h27^{km}±4^{km}, Error ellipse: s-maj=7.3km s-min=4.2km az=135.0*

ISC 22 00:56:16.7±1.5**, 52°.46N**±0°.07×**167°.93W**±0°.04**, h25**^{km}±9^{km}**, n155, σ1^{s}.34**/158**, mb4.3**/41**, MS3.7**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.76	313		Pb	00 56 30.4	-0.9
NIKH	Nikolski High	0.76	313		Sn	00 56 43.3	+0.8
OKSP	Okmok Steeple	0.82	345		Pn	00 56 32.8	0.0
OKSO	Okmok South	0.91	351		Pn	00 56 33.3	-0.6
OKSO					Sn	00 56 48.2	+1.9
OKFG	Magazine Ridge	0.95	1		Pn	00 56 34.5	0.0
OKFG					Sn	00 56 49.7	+2.5
MAPS	Pakushin South	1.48	23		Pb	00 56 42.4	-1.1
MAPS					Sb	00 57 03.0	+1.1
MGOD	Makushin Gods	1.48	25		Pb	00 56 42.5	-1.1
MGOD					Sb	00 57 03.8	+1.7
MREP	Makushin Rep't	1.53	27		Pb	00 56 43.5	-0.9
MNAT	Makushin Natee	1.61	27		Pb	00 56 44.8	-1.0
MNAT					Sb	00 57 07.2	+1.5
MSW	Makushin Switc	1.61	25		Pb	00 56 44.6	-1.2
MSW					Sb	00 57 06.7	+0.9
UNV	Unalaska Valle	1.63	31		Pb	00 56 44.7	-1.4
UNV	Unalaska Valle	1.63	31		Sb	00 57 07.2	+0.9
AKMO	Akutan Morgan	2.00	34		Pb	00 56 50.3	-2.1
AKMO					Sb	00 57 15.9	-1.0
AKRB	Akutan Reef Bi	2.01	33		Pb	00 56 51.0	-1.7
AKLV	Akutan Long Va	2.08	34		Pb	00 56 51.3	-2.4
AKGG	Akutan Green G	2.10	33		Pn	00 56 51.3	+1.1
AKUT	Akutan	2.12	37		Pn	00 56 51.4	+0.9
AKUT				IAML		00 57 38.4	
	comp=E,594nm,1.2s						
WESP	Westdahl Peak	2.80	42		Pn	00 57 01.6	+1.7
WECS	Westdahl Cape	2.80	41		Pn	00 57 01.7	+1.7
WTUG	Tugumak	3.19	40		Pn	00 57 06.4	+1.1
ATKA	Atka Island	3.85	269	Pn	Pn	00 57 14.4	+0.2
SPIA	Saint Paul Isl	4.91	345		Pn	00 57 31.8	+3.0
SDPT	Sand Point	5.27	54		Pn	00 57 35.3	+1.5
SDPT				IAML		00 58 19.0	
	comp=N,135nm,2.8s						
ADK	Adak	5.42	267		Pn	00 57 35.6	-0.2
ADK	Adak	5.42	267	IAML		00 59 36.5	
	comp=N,130nm,4.1s						
ADK				IAML		01 00 11.6	
	comp=N,112nm,3.3s						
CNBA	Chernabura Isl	5.50	61	Pn	Pn	00 57 39.5	+2.7
KIMD	Kanaga Island	5.78	267		Pn	00 57 40.8	+0.1
VNSG	Veniaminof 6	6.35	51		Pn	00 57 51.4	+2.7
CHGN	Chignik	6.76	52		Pn	00 57 57.0	+2.8
OHAK	Old Harbor	9.70	55	Pn	Pn	00 58 35.1	+0.8
KDAK	Kodiak Island	10.27	53	Pn	Pn	00 58 42.2	-0.1
	comp=N,1.9nm,0.3s,baz=208,slow=4.4,SNR=79						
KDAK				Sn	Sn	01 00 32.3	-4.1
	baz=163,slow=19,SNR=1.4						
KDAK	Kodiak Island	10.27	53		Pn	00 58 42.6	+0.4
CNPM	China Poot	11.70	46	Pn	Pn	00 59 03.0	+1.1
BRLK	Bradley Lake	11.97	46	Pn	Pn	00 59 07.5	+1.8
ANM	Nome	12.21	5	Pn	Pn	00 59 10.4	+1.6
TTA	Tatalina	12.26	26	Pn	Pn	00 59 12.3	+2.9
SEW	Seward	12.77	46	Pn	Pn	00 59 17.0	+0.5
KNK	Knik Glacier	13.85	42		Pn	00 59 31.3	0.0
GHO	Glory Hole Cre	13.86	40		Pn	00 59 30.2	-1.2
GLI	Glacier Island	14.17	45	Pn	Pn	00 59 35.9	+0.4
HIN	Hinchinbrook I	14.22	48	Pn	Pn	00 59 36.1	-0.1
KTH	Kantishna Hill	14.25	32	Pn	Pn	00 59 39.1	+2.4
FID	Port Fidalgo	14.38	46		Pn	00 59 37.0	-1.4
SCM	Sheep Creek Mo	14.53	42		Pn	00 59 40.3	-0.2
KLU	Klutina	14.95	44		Pn	00 59 45.7	-0.5
KLU				IAmb	IAmb	00 59 55.2	
	comp=Z,14nm,0.6s						
M24K	Tolsona, Glenn	15.14	42		Pn	00 59 49.1	+0.4
BWN	Browne	15.15	32		P	00 59 52.4	-1.3
BWN				IAmb	IAmb	01 00 10.4	
	comp=Z,30nm,1.2s						
DHY	Denali Highway	15.19	38		Pn	00 59 50.0	+0.5
IMAR	Indian Mountai	15.32	22		P	00 59 54.5	-1.0
N25K	Chitina, Valde	15.57	45	Pn	Pn	00 59 54.3	-0.1
N25K				IAmb	IAmb	01 00 06.8	
	comp=Z,10.0nm,0.9s						
WRH	Wood River Hil	15.80	33		Pn	00 59 58.8	+1.6
I23K	Minto, Yukon-K	15.85	30		Pn	00 59 58.9	+1.0
I23K				IAmb	IAmb	01 00 02.1	
	comp=Z,37nm,1.3s						
PAX	Paxson	15.86	40		P	01 00 00.0	-1.6
CRQM	Cirque	15.89	49		Pn	00 59 59.3	+0.8
CRQM				IAmb	IAmb	01 00 10.0	
	comp=Z,43nm,0.9s						
CCB	Clear Creek Bu	16.01	32		Pn	01 00 00.9	+1.1
TGL	Tana Glacier	16.03	49		P	01 00 01.8	-1.7
TGL				IAmb	IAmb	01 00 11.3	
	comp=Z,31nm,0.8s						
MDM	Murphy Dome	16.07	31	Pn	Pn	01 00 01.3	+0.6
TCOL	CIGO, UAF Yank	16.14	32		Pn	01 00 02.2	+0.7
TCOL				IAmb	IAmb	01 00 03.6	
	comp=Z,11nm,0.8s						
COLA	College	16.14	32		Pn	01 00 02.5	+1.0
COLA				IAmb	IAmb	01 00 03.6	
	comp=Z,13nm,0.8s						
HDA	Harding Lake	16.14	34		P	01 00 03.0	-1.6
IL31		16.39	33		Pn	01 00 05.1	+0.4
ILAR	Eielson Array	16.39	33	Pn	Pn	01 00 04.0	-0.8
	comp=Z,0.3nm,0.3s,baz=223,slow=11,SNR=22						
ILAR	Eielson Array	16.39	33		Pn	01 00 05.1	+0.4
RIDG	Independent Ri	16.51	38	Pn	P	01 00 07.5	-1.3
BARN	Barnard Glacie	16.68	49		P	01 00 09.7	-1.1
BARN				IAmb	IAmb	01 00 24.4	
	comp=Z,12nm,0.8s						
CTGM	Chitina Glacie	16.79	49		P	01 00 11.6	-0.4
CTGM				IAmb	IAmb	01 00 19.2	
	comp=Z,35nm,1.0s						
COLD	Coldfoot	17.17	24		P	01 00 16.8	+0.8
PRP	Porcupine Dome	17.31	32	Pn	Pn	01 00 15.8	-0.6
BCAR	Beaver Creek A	17.39	42		Pn	01 00 17.7	+0.4
BMAR	Burnt Mountain	18.83	28	P	P	01 00 33.4	-0.9
A21K	Barrow	19.60	11	P	P	01 00 43.0	+0.4
A21K				IAmb	IAmb	01 00 44.7	
	comp=Z,23nm,1.4s						
BILL	Bilibino	19.94	331	P	Pn	01 00 48.5	+0.4
PEA0B	Petropavlovsk-	20.69	286	P	P	01 00 54.0	-0.6
PEA0B				IAmb	IAmb	01 01 11.7	
	comp=Z,28nm,1.2s						
PETK	Petropavlovsk-	20.69	286	P	P	01 00 53.8	-0.8
	comp=Z,7.2nm,0.5s,baz=90,slow=14,SNR=28						
EPYK	Eagle Plains	20.81	36	P	P	01 00 55.2	-0.7
INK	Inuvik	22.79	33	P	P	01 01 15.9	-1.1
	comp=Z,3.7nm,0.3s,baz=211,slow=12,SNR=22						
INK				S	S	01 05 18.0	-6.1
	comp=Z,2.2nm,1.1s,baz=30,slow=32,SNR=2.8						
INK	Inuvik	22.79	33	P	P	01 01 15.9	-1.1
INK				IAmb	IAmb	01 01 30.2	
	comp=Z,8.6nm,0.9s						
SEY	Seymchan	23.26	312	P	P	01 01 20.4	-1.4
	comp=Z,1.3nm,0.3s,baz=249,slow=22,SNR=7.3						
YKA	Yellowknife Ar	29.52	49	P	P	01 02 20.4	+1.9
	comp=Z,0.3nm,0.5s,baz=276,slow=7.3,SNR=9.5						
YKA				PcP	PcP	01 05 23.7	+0.6
	comp=Z,0.3nm,0.7s,baz=297,slow=1.4,SNR=3.3						
YKA				ScP	ScP	01 09 05.8	+2.9
	comp=Z,0.3nm,0.9s,baz=260,slow=4.3,SNR=3.7						
YKA				LR	LR	01 16 17.4	
	comp=Z,180nm,18.3s,baz=0.0,slow=41						
YBH	Yreka Blue Hor	32.10	91	P	P	01 02 44.8	+3.1
	comp=Z,0.5nm,0.4s,baz=315,slow=5.7,SNR=1.9						
K05A	Summer Lake	32.65	88	P	P	01 02 48.9	+2.3
K05A				IAmb	IAmb	01 03 05.2	
	comp=Z,4.3nm,0.9s						
ASAJ	Asahikawa	33.38	276	LR	LR	01 15 26.0	
	comp=Z,369nm,20.9s,baz=18,slow=35						
PNTR	Pine Nut	35.58	92	P	P	01 03 14.4	+2.3
PNTR				IAmb	IAmb	01 03 33.1	
	comp=Z,6.8nm,0.8s						
RES	Resolute Bay	35.91	26	P	P	01 03 13.8	-0.4
	comp=Z,0.6nm,0.6s,baz=225,slow=5.7,SNR=1.6						
NVAR	Mina Array Bea	36.79	92	P	P	01 03 23.4	+1.0
	comp=Z,0.5nm,0.5s,baz=318,slow=7.3,SNR=4.1						
NVAR	Mina Array Bea	36.79	92	P	P	01 03 24.7	+2.3
H11N2	WAKE ISLAND Hy	38.08	221	T	T	01 44 36.3	
	baz=24,slow=76						
H11N3	WAKE ISLAND Hy	38.09	220	T	T	01 44 32.7	
	baz=24,slow=76						
H11N1	WAKE ISLAND Hy	38.10	221	T	T	01 44 33.0	
	baz=24,slow=76						
H11S1	WAKE ISLAND Hy	39.27	220	T	T	01 45 44.8	
	baz=24,slow=76						
H11S2	WAKE ISLAND Hy	39.28	220	T	T	01 45 48.8	
	baz=24,slow=76						
H11S3	WAKE ISLAND Hy	39.28	220	T	T	01 45 44.6	
	baz=24,slow=76						
BW06	Boulder Array	39.52	80	P	P	01 03 46.9	+1.4
PD31	Pinedale Array	39.52	80	P	P	01 03 46.8	+1.4
PDAR	Pinedale Array	39.52	80	P	P	01 03 46.5	+1.1
	comp=Z,9.2nm,0.4s,baz=299,slow=4.0,SNR=82						
MJAR	Matsushiro Arr	40.58	269	P	P	01 03 53.4	-0.6
	comp=Z,1.0nm,0.4s,baz=39,slow=8.6,SNR=1.4						
JGF	Kuroka	41.72	268	P	P	01 04 02.8	-0.6
JGF				IAmb	IAmb	01 04 18.7	
	comp=Z,5.6nm,0.8s						
O20A	White River Ci	41.88	83	P	P	01 04 05.8	+0.9
O20A				IAmb	IAmb	01 04 20.4	
	comp=Z,4.7nm,0.8s						
PV01	Paradox Valley	42.92	85	P	P	01 04 15.0	+1.6
PV01				IAmb	IAmb	01 04 33.5	
	comp=Z,10nm,1.5s						
KSRS	Korea Array	46.27	278	P	P	01 04 39.8	+0.1
	comp=Z,2.0nm,0.6s,baz=47,slow=6.7,SNR=3.6						
DAG	Danmarks Havn	49.57	9	*i* P	P	01 05 04.1	-0.7
	comp=Z,12nm,0.7s						
DAG	Danmarks Havn	49.57	9	*i* P	P	01 05 04.2	-0.7
DAG				IAmb	IAmb	01 05 05.1	
	comp=Z,12nm,0.7s						
SPITS	Spitsbergen Ar	49.60	359	P	P	01 05 04.0	-1.1
	comp=Z,4.5nm,0.7s,baz=291,slow=6.0,SNR=5.8						
SUMG	Summit	50.43	18	P	P	01 05 12.6	+0.6
SUMG				IAmb	IAmb	01 05 13.3	
	comp=Z,5.8nm,0.8s						
SUMG	Summit	50.43	18	*i* P	P	01 05 12.8	+0.9
	comp=Z,102nm,0.6s						
SUMG	Summit	50.43	18	*i* P	P	01 05 12.9	+0.9
SUMG				IAmb	IAmb	01 05 13.4	
	comp=Z,103nm,0.6s						
DBG	Daneborg	51.66	11	*i* P	P	01 05 19.1	-1.5
DBG				IAmb	IAmb	01 05 20.0	
	comp=Z,23nm,0.7s						
TX32	Lajitas Array	51.87	90	P	P	01 05 23.8	+1.0
TX32				IAmb	IAmb	01 05 42.7	
	comp=Z,2.8nm,0.9s						
TXAR	Lajitas Array	51.87	90	P	P	01 05 23.8	+0.9
	comp=Z,1.3nm,0.6s,baz=302,slow=5.5,SNR=18						
TXAR	Lajitas Array	51.87	90	P	P	01 05 23.6	+0.7
P40A	Paris	51.92	72	P	P	01 05 23.0	0.0
P40A				IAmb	IAmb	01 05 39.5	
	comp=Z,5.7nm,0.8s						
SONM	Songino Array	52.01	302	P	P	01 05 23.4	-0.4
	comp=Z,1.0nm,0.5s,baz=68,slow=5.7,SNR=9.7						
SONM	Songino Array	52.01	302	P	P	01 05 23.3	-0.4
SONM				IAmb	IAmb	01 05 24.4	
	comp=Z,4.2nm,1.4s						
ICESG	Greenland Ices	52.98	21	*e*P	P	01 05 30.4	-0.5
SCO	Scoresbysund	54.94	13	P	P	01 05 44.9	+0.2
ARB5	ARCESS Array S	57.92	354	P	P	01 06 05.6	-0.4
ARCES	ARCESS Array B	57.92	354	P	P	01 06 05.3	-0.7
	comp=Z,3.8nm,0.8s,baz=8.8,slow=8.7,SNR=8.0						
ARCES	ARCESS Array B	57.92	354	P	P	01 06 05.2	-0.9
ZALV	Zalesovo Beam	57.95	318	P	P	01 06 05.5	-0.9
	comp=Z,0.4nm,0.3s,baz=43,slow=6.5,SNR=2.1						
KURK	Kurchatov	62.89	319	P	P	01 06 39.7	-0.5
KURK				IAmb	IAmb	01 06 41.4	
	comp=Z,4.3nm,1.3s						
BRVK	Borovoye	64.15	325	P	P	01 06 47.9	-0.6
MKAR	Makanchi Array	64.38	314	P	P	01 06 49.3	-0.8
	comp=Z,0.4nm,0.5s,baz=46,slow=6.9,SNR=6.6						
MKAR	Makanchi Array	64.38	314	P	P	01 06 49.5	-0.7
MAKZ	Makanchi	64.50	314	P	P	01 06 49.7	-1.3
MAKZ				IAmb	IAmb	01 06 50.0	
	comp=Z,4.5nm,1.4s						
FIA1	FINESS Array S	65.90	353	P	P	01 06 58.5	-1.2
FINES	FINESS Array B	65.90	353	P	P	01 06 58.8	-0.9
	comp=Z,3.1nm,0.5s,baz=23,slow=7.7,SNR=32						
NC303	NORSAR Array S	66.66	0	P	P	01 07 04.0	-0.7
NB2	NORSAR Subarra	66.85	0	P	P	01 07 05.3	-0.6
	comp=Z,0.9nm,0.6s,baz=360,slow=6.5						
NOA	NORSAR Array B	66.85	0	P	P	01 07 05.1	-0.8
	comp=Z,1.1nm,0.6s,baz=0.1,slow=6.3,SNR=8.7						
KONO	Kongsberg	68.23	1	P	P	01 07 15.2	+0.7
ABKAR	Akbulak array	70.82	329	P	P	01 07 30.5	-0.2
ABKAR				IAmb	IAmb	01 07 32.2	
	comp=Z,6.0nm,1.2s						
ABKAR	Akbulak array	70.82	329	P	P	01 07 30.5	-0.2
AAK	Ala-Archa	71.05	316	P	P	01 07 32.3	-0.1
AAK				IAmb	IAmb	01 07 37.1	
	comp=Z,2.4nm,1.0s						
KK31	Karatay Array	72.30	319	P	P	01 07 39.3	-0.5
KK31				IAmb	IAmb	01 07 39.7	
	comp=Z,1.2nm,0.6s						
KKAR	Karatay Array	72.30	319	P	P	01 07 39.3	-0.5
LSA	Lhasa	73.20	297	P	P	01 07 46.0	+0.2
AKASG	Malin Array Be	76.20	349	P	P	01 08 01.4	-0.9
	comp=Z,1.3nm,0.5s,baz=13,slow=5.9,SNR=6.3						
CMAR	Chiang Mai Arr	77.45	284	P	P	01 08 10.1	+0.3
KWP	Kalwaria Pacla	77.89	353	P	P	01 08 11.9	0.0
NIL	Nilore	79.04	312	P	P	01 08 18.2	-0.3
GERES	GERESS Array B	79.06	359	P	P	01 08 19.1	+0.6
	comp=Z,0.3nm,0.6s,baz=22,slow=6.6,SNR=5.1						
BUR08	Bucovina Ar. S	79.65	351	P	P	01 08 22.3	+0.7
BURAR	Bucovina Array	79.67	351	P	P	01 08 21.9	+0.1
KBL	Kabul	80.15	315	P	P	01 08 23.1	-1.6
KBL				IAmb	IAmb	01 08 25.4	
	comp=Z,5.7nm,1.1s						
KBZ	Khabaz	80.57	338	P	P	01 08 27.3	+0.8
	comp=Z,1.4nm,0.9s,baz=324,slow=3.1,SNR=4.7						
KBA	Koelnbreinsper	80.83	359	*e*P	P	01 08 30.0	+1.8
	comp=Z,7.1nm,0.9s						
SOKA	Soboth	81.21	358	*e*P	P	01 08 32.0	+2.0
	comp=Z,6.2nm,1.2s						
GEYT	Alibeck	81.47	325	P	P	01 08 32.3	+0.8
	comp=Z,3.5nm,1.0s,baz=329,slow=7.6,SNR=7.4						
GEYT	Alibeck	81.47	325	P	P	01 08 31.5	0.0
GEYT				IAmb	IAmb	01 08 33.6	
	comp=Z,3.1nm,1.1s						
GYA0B	ALIBECK ARRAY	81.47	325	P	P	01 08 31.5	-0.1
HRA	Herat	83.08	320	P	P	01 08 40.0	-0.2
TOKA	Tokat	85.19	342	P	P	01 08 51.3	+0.6
BRTR	Keskin Array B	86.30	343	P	P	01 08 56.9	+0.6
	comp=Z,1.2nm,0.8s,baz=16,slow=3.4,SNR=9.9						
BRTR				LR	LR	01 54 46.0	
	comp=Z,25nm,18.9s,baz=354,slow=41						
BRTR	Keskin Array B	86.30	343	P	P	01 08 56.8	+0.5
ESDC	Sonseca Array	87.19	12	P	P	01 09 00.5	0.0
	comp=Z,1.1nm,0.7s,baz=344,slow=4.6,SNR=7.8						

IDC 22 01:03:09.5±2.4**, 2°.89S×133°.18E, h0**^{km}**, mb3.6**/2**, mb1 3.8**/4**, mb1mx3.5**/31**, mbtmp3.6**/4**, ML3.2**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/29**, Error ellipse: s-maj=80.2km s-min=25.3km az=71.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	2.77	316	Pn	Pn	01 03 54.8	-0.4
	2.6nm,0.3s,baz=133,slow=23,SNR=16						
SIJI				Sn	Sn	01 04 24.9	-4.5
	2.8nm,0.3s,baz=268,slow=23,SNR=2.5						
FITZ	Fitzroy Crossi	16.83	206	Pn	Pn	01 06 51.0	-16
	0.1nm,0.3s,baz=42,slow=12,SNR=1.3						
WRA	Warramunga Arr	16.99	176	Pn	Pn	01 07 07.3	-1.5
	0.1nm,0.3s,baz=355,slow=10,SNR=2.0						
WRA				Sn	Sn	01 10 05.4	-13
	0.1nm,0.3s,baz=356,slow=24,SNR=3.0						
ASAR	Alice Springs	20.67	178	P	P	01 07 51.5	+0.4
	5.3nm,0.7s,baz=350,slow=10,SNR=38						
NWAO	Narrogin (SRO)	33.41	205	LR	LR	01 25 26.1	
	comp=Z,45nm,20.5s,baz=214,slow=40						
MKAR	Makanchi Array	66.64	324	P	P	01 14 02.4	+0.3
	0.2nm,0.7s,baz=113,slow=6.0,SNR=1.7						

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*IDC **22** 01:16:38.0±0.6, 3°.33S×130°.91E, h0^{km}, mb4.5/17, mb1 4.5/19, mb1mx4.5/29, mbtmp4.5/19, ML3.9/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/35, Error ellipse: s-maj=21.3km s-min=12.3km az=78.0*

*BJI **22** 01:16:38.8±0.0, 3°.74S×131°.39E, h42^{km}, mB5.2/24, mb4.7/42, Ms4.5/6, Ms7 4.1/6*

*DJA **22** 01:16:41.4±0.2, 3°S±3°×13°1E±°, h10^{km}, M4.7/14, mB5.3/10, mb5.0/14, MLv4.5/12, Mw(mB)4.8/10*

*NEIC **22** 01:16:42.5±1.7, 3°.34S±0°.05×130°.90E±0°.06, h36^{km}±7^{km}, mb4.8/41, Error ellipse: s-maj=8.5km s-min=6.9km az=110.0*

*NOU **22** 01:16:46.4, 3°.70S×130°.68E, h34^{km}, mb5.1, Seram, Indonesia*

ISC 22 01:16:42.2±0.3**, 3°.41S**±0°.04×**130°.97E**±0°.05**, h30**^{km}**, n176, σ1^{s}.73**/173**, mb4.7**/51**, MS3.9**/12**, 1D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.37	69	Pn	Pn	01 17 05.5	+0.3
FAKI				Sn	Sn	01 17 22.1	-0.3
FAKI	Fak Fak	1.37	69	P	Pn	01 17 05.9	+0.6
FAKI				S	Sb	01 17 25.5	+1.1
BNDI	Bandanaira	1.53	224	P	Pb	01 17 09.8	-0.2
MSAI	Masohi	2.04	272	P	Pn	01 17 15.5	+1.0
SIJI	Sorong	2.54	7	Pn	Pn	01 17 20.0	-1.4
	28nm,0.3s,baz=67,slow=3.3,SNR=77						
SIJI				Sn	Sn	01 17 49.0	-2.3
	35nm,0.3s,baz=242,slow=23,SNR=9.5						
SIJI				LR	LR	01 18 36.8	
	comp=Z,2µm,21.3s,baz=218,slow=48						
SWI	Sorong	2.54	7	P	Pn	01 17 19.9	-1.6
NLAI	Namlea	3.86	272	P	Pn	01 17 41.7	+2.1
SAUI	Saumlaki	4.56	176	Pn	Pn	01 17 49.8	+0.6
SAUI				Sn	Sn	01 18 42.8	+1.5
SAUI	Saumlaki	4.56	176	P	Pn	01 17 52.1	+2.9
SANI	Sanana	5.15	285	P	Pn	01 17 55.2	-2.2
	0.6nm1µm144nm,0.7s						
TNTI	Ternate	5.49	319	P	Pn	01 17 56.3	-5.8
BAKI	Biak	5.59	67	P	Pn	01 18 05.6	+2.2
	1.7nm6µm540nm,1.0s						
SMPI	Sarmi	7.86	80	P	Pn	01 18 35.0	+0.4
LUWI	Luwuk	8.52	286	P	Pn	01 18 41.8	-1.8
	4µm57nm,1.0s						
SOEI	Soe	9.17	226	Pn	Pn	01 18 53.0	+0.4
SOEI	Soe	9.17	226	P	Pn	01 18 56.5	+3.8
	2µm178nm,1.6s						
GENI	Genyem	9.22	85	P	Pn	01 18 53.5	+0.2
	168nm,1.2s						
KDU	Kakadu	9.34	171	P	Pn	01 18 54.1	-0.8
	baz=9.4,SNR=111						
MTN	Manton Dam	9.38	179	P	Pn	01 18 55.2	-0.3
	baz=9.4,SNR=28						
MTN	Manton Dam	9.38	179	Pn	Pn	01 18 55.1	-0.4
MTN				Sn	Sn	01 20 39.2	-0.7
APSI	Ampana	9.63	285	P	Pn	01 18 58.8	-0.1
	658nm66nm,0.7s						
JAY	Jayapura	9.77	85	Pn	Pn	01 19 01.4	+0.6
	1.0nm,0.3s,baz=256,slow=17,SNR=2.9						
MRSI	Marisa	9.81	293	P	Pn	01 19 00.7	-0.7
	24nm,0.7s						
BATI	Baumata	9.91	227	Pn	Pn	01 19 06.7	+3.9
	18nm,0.3s,baz=89,slow=1.3,SNR=14						
BATI				LR	LR	01 23 07.3	
	comp=Z,826nm,20.1s,baz=60,slow=39						
BATI	Baumata	9.91	227	P	Pn	01 19 06.5	+3.8
	1µm130nm,0.7s						
MMRI	Maumere	10.12	239	P	Pn	01 19 08.0	+2.5
	3µm130nm,0.4s						
EDFI	Ende, Flores	10.64	240	P	Pn	01 19 17.2	+4.4
	26nm,1.0s						
BNSI	Bone	10.88	264	P	Pn	01 19 18.8	+2.8
	25nm,0.8s						
BKSI	Bulukumba	10.98	260	P	Pn	01 19 19.0	+1.6
	1µm52nm,1.5s						
TTSI	Tana Toraja	11.14	272	P	Pn	01 19 36.2	+17
SPSI	Sidrap Palu	11.19	267	P	Pn	01 19 23.2	+3.0
	821nm29nm,0.7s						
KAPI	Kappang	11.30	261	Pn	Pn	01 19 23.8	+2.1
	1.5nm,0.3s,baz=83,slow=11,SNR=7.1						
KAPI				LR	LR	01 24 51.1	
	comp=Z,911nm,21.4s,baz=78,slow=44						
KAPI	Kappang	11.30	261	Pn	Pn	01 19 20.8	-1.0
MPSI	Mapaga	11.67	288	P	Pn	01 19 40.0	+13
MYLDM	Lahad Datu	15.09	304	Pn	Pn	01 20 10.9	-2.6
FITZ	Fitzroy Crossi	15.51	199	P	Pn	01 20 16.4	-2.5
	baz=16,SNR=9.6						
FITZ	Fitzroy Crossi	15.51	199	Pn	Pn	01 20 14.6	-4.3
	2.2nm,0.3s,baz=34,slow=12,SNR=31						
FITZ				Sn	Sn	01 22 58.6	-11
	1.0nm,0.3s,baz=184,slow=16,SNR=2.8						
FITZ				LR	LR	01 27 57.5	
	comp=Z,292nm,18.1s,baz=32,slow=44						
FITZ	Fitzroy Crossi	15.51	199		Pn	01 20 15.3	-3.6
COEN	Coen	15.97	132	Pn	Pn	01 20 25.0	0.0
WB0	Warramunga Arr	16.60	169	Pn	Pn	01 20 27.9	-5.0
WB0				IAmb	IAmb	01 20 44.9	
	comp=Z,40nm,0.7s						
WRA	Warramunga Arr	16.76	169	Pn	Pn	01 20 30.3	-4.6
	comp=Z,1.3nm,0.3s,baz=356,slow=13,SNR=29						
WRA				Sn	Sn	01 23 29.5	-11
	comp=Z,1.7nm,0.3s,baz=353,slow=24,SNR=5.6						
WRA	Warramunga Arr	16.76	169	Pn	Pn	01 20 33.3	-1.7
WB2	Warramunga Arr	16.77	169	Pn	Pn	01 20 34.7	-0.3
WB2				IAmb	IAmb	01 20 46.3	
	comp=Z,50nm,0.8s						
WC3	Warramunga Arr	16.79	169	P	Pn	01 20 30.1	-5.1
	baz=17						
WR0	Warramunga Arr	16.82	168	P	Pn	01 20 34.1	-1.6
WR0				IAmb	IAmb	01 20 46.9	
	comp=Z,42nm,0.7s						
PMG	Port Moresby	17.15	111	LR	LR	01 29 02.5	

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       comp=Z,433nm,20.1s,baz=310,slow=43
KKM    Kota Kinabalu      17.47 302           Pn       01 20 43.6 -0.3
QIS    Mount Isa          19.01 154  P        P        01 21 02.1 +0.3
       baz=19,SNR=10
MTSU   Mount Surprise     19.63 139  P        Pn       01 21 11.0 +0.9
       baz=20,SNR=26
AS31   Alice Springs      20.34 172           P        01 21 16.9 +0.6
AS31                                 IAmb     IAmb     01 21 21.8
       comp=Z,39nm,0.6s
ASAR   Alice Springs      20.34 172  P        P        01 21 17.2 +1.0
       comp=Z,85nm,0.6s,baz=350,slow=10,SNR=365
ASAR                                 S        S        01 24 55.6 -7.3
       comp=Z,6.2nm,0.9s,baz=358,slow=27,SNR=4.4
ASAR   Alice Springs      20.34 172           P        01 21 16.6 +0.4
ASPA   Alice Springs      20.34 172  P        P        01 21 17.7 +1.4
       baz=20
PSA00  Pilbara Seismi     21.05 210  P        P        01 21 23.1 -0.8
PSA00                                IAmb     IAmb     01 21 24.3
       comp=Z,50nm,0.9s
PSA00  Pilbara Seismi     21.05 210  P        P        01 21 21.8 -2.1
PSA00                                IAmb     IAmb     01 21 24.1
       comp=Z,25nm,1.1s
KSM    Kuching            21.21 283  P        P        01 21 25.5 -0.3
KSM                                  IAmb     IAmb     01 21 28.0
       comp=Z,48nm,0.9s
CTA    Charters Tower     22.30 139  P        P        01 21 38.4 +1.0
       comp=Z,9.6nm,0.7s,baz=321,slow=11,SNR=11
CTAO   Charters Tower     22.30 139  P        P        01 21 37.6 +0.2
CTAO                                 IAmb     IAmb     01 21 50.7
       comp=Z,44nm,1.1s
CISI   Cisompet, Garu     23.41 259  P        P        01 21 46.7 -2.3
LEM    Lembang            23.50 261  LR       LR       01 33 22.4
       comp=Z,473nm,19.2s,baz=82,slow=43
GIRL   Giralia            25.07 219  P        P        01 22 03.8 -0.5
       baz=25,SNR=4.2
MEEK   Meekatharra        25.96 206  P        P        01 22 11.3 -1.0
       baz=26,SNR=14
FORT   Forrest            27.36 185  P        P        01 22 25.4 +0.5
       baz=28,SNR=9.0
FORT   Forrest            27.36 185  P        P        01 22 24.7 -0.2
KMBL   Kambalda           29.10 196  P        P        01 22 40.0 -0.3
       baz=29,SNR=12
MORW   Morawa             29.20 208  P        P        01 22 40.9 -0.3
       baz=29,SNR=5.2
BBOO   Buckleboo          29.64 171  P        P        01 22 45.6 +0.5
       baz=30,SNR=8.8
STKA   Stephens Creek     30.03 162  P        P        01 22 49.9 +1.3
       baz=30,SNR=4.9
STKA   Stephens Creek     30.03 162  P        P        01 22 49.4 +0.8
       comp=Z,10.0nm,0.8s,baz=341,slow=9.7,SNR=15
STKA   Stephens Creek     30.03 162  P        P        01 22 48.4 -0.2
BLDU   Ballidu            30.23 205  P        P        01 22 51.6 +1.2
       baz=30,SNR=8.6
KLBR   Kellerberrin       30.67 202  P        P        01 22 53.7 -0.6
       baz=31,SNR=17
CMSA   Cobar Meteorol     31.23 155  P        P        01 23 00.6 +1.4
       baz=31,SNR=9.6
MUN    Mundaring          31.63 204  P        P        01 23 02.7  0.0
       baz=32,SNR=3.4
NWAO   Narrogin (SRO)     32.06 202  P        P        01 23 06.1 -0.4
       baz=32,SNR=4.4
NWAO   Narrogin (SRO)     32.06 202  P        P        01 23 06.2 -0.4
       comp=Z,5.4nm,0.4s,baz=37,slow=6.6,SNR=12
NWAO   Narrogin (SRO)     32.06 202  P        P        01 23 05.5 -1.0
NWAO                                 IAmb     IAmb     01 23 18.7
       comp=Z,20nm,1.1s
PSI    Prapat             32.62 281  P        P        01 23 10.3 -1.4
       comp=Z,3.8nm,0.4s,baz=180,slow=5.6,SNR=4.2
ARPS   Mount Arapiles     34.68 165  P        P        01 23 31.4 +2.1
       baz=35,SNR=6.8
YNG    Young              34.76 154  P        P        01 23 32.3 +2.3
       baz=35,SNR=9.4
CAN    Canberra           35.88 154  P        P        01 23 39.9 +0.2
SLVN   Son La             36.15 314  P        P        01 23 41.5 -0.7
NJ2    Nanjing            37.09 343  eP       P        01 23 53.1 +3.1
NJ2                                  pmax     pmax
       comp=Z,13nm,0.5s
GYA    Guiyang            37.87 323  eP       P        01 23 58.1 +1.3
GYA                                  pmax     pmax
       comp=Z,8.0nm,1.2s
CM36   Chiang Mai Arr     38.21 306  P        P        01 24 01.0 +1.3
CM04   Chiang Mai Arr     38.24 306  P        P        01 24 02.2 +2.3
CM35   Chiang Mai Arr     38.24 306  P        P        01 24 01.0 +1.0
CM09   Chiang Mai Arr     38.25 306  P        P        01 24 02.6 +2.5
CM01   Chiang Mai Arr     38.27 306  P        P        01 24 02.0 +1.8
CM05   Chiang Mai Arr     38.27 306  P        P        01 24 02.0 +1.8
CM02   Chiang Mai Arr     38.28 306  P        P        01 24 02.0 +1.7
CMAR   Chiang Mai Arr     38.30 306  P        P        01 24 00.4  0.0
       comp=Z,1.6nm,0.4s,baz=132,slow=6.8,SNR=22
CM13   Chiang Mai Arr     38.31 306  P        P        01 24 03.0 +2.5
CM34   Chiang Mai Arr     38.34 306  P        P        01 24 02.0 +1.2
CM32   Chiang Mai Arr     38.48 306  P        P        01 24 11.0 +9.1
CMMT   Chiang Mai         38.48 306  P        P        01 24 03.3 +1.3
CHTO   Chiang Mai         38.48 306  P        P        01 24 01.6 -0.4
CHTO                                 IAmb     IAmb     01 24 03.9
       comp=Z,10nm,1.0s
CM33   Chiang Mai Arr     38.48 306  P        P        01 24 03.0 +1.0
MJAR   Matsushiro Arr     40.31   9  P        P        01 24 14.9 -2.1
       comp=Z,4.2nm,0.8s,baz=184,slow=8.6,SNR=8.3
MJAR                                 LR       LR       01 40 42.7
       comp=Z,43nm,19.7s,baz=185,slow=36
MJAR   Matsushiro Arr     40.31   9  P        P        01 24 15.5 -1.5
KSRS   Korea Array        40.75 356  P        P        01 24 19.4 -1.1
       comp=Z,3.2nm,0.5s,baz=176,slow=13,SNR=6.1
KSRS                                 LR       LR       01 40 26.7
       comp=Z,103nm,19.6s,baz=176,slow=35
XAN    Xi'an              42.65 333  P        P        01 24 35.8 -0.5
XAN                                  pmax     pmax
       comp=Z,12nm,0.9s
CD2    Chengdu            42.87 325  eP       P        01 24 40.0 +1.9
LZH    Lanzhou            46.76 330  ⇓P       P        01 25 10.3 +1.2
LZH                                  pP       pP       01 25 18.0 -0.1
LZH                                  pmax     pmax
       comp=Z,15nm,1.1s
USRK   Ussuriysk Ar.      47.40   1  P        P        01 25 13.6 -0.2
       comp=Z,6.2nm,0.6s,baz=188,slow=7.5,SNR=17
HHC    Hu-ho-hao-te       47.48 340  eP       P        01 25 15.3 +0.7
HHC                                  PcS      PcS      01 30 35.3 -4.7
HHC                                  S        S        01 32 09.8 +2.3
HHC                                  pmax     pmax
       comp=Z,10.0nm,1.0s
HHC                                  pmax     pmax
       comp=Z,160nm,4.9s
HHC                                  LR       LR
       comp=Z,190nm,15.4s
HHC                                  LR       LR
       comp=Z,230nm,15.9s
HHC                                  LR       LR
       comp=Z,200nm,15.2s
SHL    Shillong           47.58 310  P        P        01 25 15.0 -0.7
ASAJ   Asahikawa          48.45  11  LR       LR       01 43 05.9
       comp=Z,146nm,21.6s,baz=198,slow=33
LSA    Lhasa              50.35 314  P        P        01 25 36.1 -1.2
LSA                                  IAmb     IAmb     01 25 47.1
       comp=Z,7.6nm,0.8s
GTA    Gaotai             51.35 329  P        P        01 25 44.8 +0.6
GTA                                  pP       pP       01 25 52.8 -0.5
GTA                                  sP       sP       01 25 57.1 +0.3
GTA                                  pmax     pmax
       comp=Z,6.0nm,1.2s
GTA                                  pmax     pmax
       comp=Z,180nm,5.0s
GTA                                  LR       LR
       comp=Z,140nm,16.4s
GTA                                  LR       LR
       comp=Z,140nm,17.1s
GTA                                  LR       LR
       comp=Z,140nm,17.1s
TAPN   Taplejung          51.71 309  eP       P        01 25 47.4 +0.1
       comp=Z,14nm,0.4s
ODAN   Odare              51.72 308  eP       P        01 25 47.2 -0.1
       comp=Z,30nm,0.7s
RAMN   Ramite             52.38 308  eP       P        01 25 52.5 +0.2
       comp=Z,45nm,0.6s
KLR    Kul'dur            52.43   1  LR       LR       01 47 46.8
       comp=Z,64nm,18.9s,baz=220,slow=36
GUN    Gumba              53.40 309  eP       P        01 26 00.2 +0.3
       comp=Z,27nm,0.6s
PKI    Pulchoki           53.61 308  eP       P        01 26 01.4  0.0
       comp=Z,11nm,0.7s
PKIN   Phulchoki          53.62 308  eP       P        01 26 01.3 -0.1
       comp=Z,9.3nm,0.6s
KKN    Kakani             53.81 308  eP       P        01 26 03.0 +0.2
       comp=Z,18nm,0.7s
DMN    Daman              53.86 308  eP       P        01 26 03.5 +0.3
       comp=Z,20nm,0.6s
ULN    Ulaanbaatar        55.19 341  P        P        01 26 12.3 -0.1
ULN                                  IAmb     IAmb     01 26 14.0
       comp=Z,7.5nm,1.1s
DANN   Dangsing           55.26 308  eP       P        01 26 13.7 +0.3
       comp=Z,23nm,0.7s
SONM   Songino Array      55.38 340  P        P        01 26 14.0 +0.3
       comp=Z,2.6nm,0.8s,baz=166,slow=7.0,SNR=17
SONM                                 LR       LR       01 52 12.9
       comp=Z,45nm,21.6s,baz=164,slow=39
SONM   Songino Array      55.38 340  P        P        01 26 13.2 -0.5
PETK   Petropavlovsk-     60.63  18  P        P        01 26 50.8 +0.5
       comp=Z,3.7nm,0.9s,baz=156,slow=4.0,SNR=4.5
PETK                                 LR       LR       01 49 30.2
       comp=Z,83nm,21.3s,baz=197,slow=33
WMQ    Urumqi             60.96 325  eP       P        01 26 54.1 +1.3
WMQ                                  pP       pP       01 27 00.8 -1.1
WMQ                                  pmax     pmax
       comp=Z,17nm,1.1s
WMQ                                  pmax     pmax
       comp=Z,140nm,4.7s
WMQ                                  LR       LR
       comp=Z,460nm,19.1s
WMQ                                  LR       LR
       comp=Z,160nm,18.1s
MA2    Magadan            64.71  11  LR       LR       01 54 41.6
       comp=Z,60nm,20.2s,baz=226,slow=35
ZSN    Zaisan             64.76 327  eP       P        01 27 17.5 -0.4
       baz=327
SHLS   Shalkode           65.51 321  eP       P        01 27 21.5 -1.6
       comp=Z,10.0nm,1.3s,baz=321
MK31   Makanchi Array     65.79 326  P        P        01 27 24.4 -0.2
MKAR   Makanchi Array     65.79 326  P        P        01 27 24.7 +0.1
       comp=Z,4.5nm,0.8s,baz=122,slow=7.9,SNR=44
MAKZ   Makanchi           65.98 325  P        P        01 27 25.7 -0.2
KSH    Kashi              66.07 316  P        P        01 27 31.4 +4.7
KSH                                  pP       sP       01 27 40.3 +0.9
KSH                                  S        S        01 36 18.3 +5.1
KSH                                  pmax     pmax
       comp=Z,5.0nm,0.5s
KSH                                  pmax     pmax
       comp=Z,440nm,7.7s
SATY   Saty               66.13 320  eP       P        01 27 27.3 +0.3
       comp=Z,5.1nm,1.0s,baz=320
KPKS   Kokpek             66.16 321  eP       P        01 27 26.9 -0.3
       comp=Z,4.2nm,0.9s,baz=321
MDOK   Medeo              67.05 320  eP       P        01 27 32.9  0.0
       baz=320
TNSS   Tian-Shan          67.05 320  eP       P        01 27 33.4 +0.1
       baz=320
TDK    Taldyqorghan       67.11 322  eP       P        01 27 33.2 +0.1
       baz=322
AAA    Alma-Ata           67.16 320  eP       P        01 27 33.9 +0.4
       baz=320
CHKK   Chushkaly          67.42 321  eP       P        01 27 35.0 -0.1
       baz=321
KUU    Kurty              67.85 320  eP       P        01 27 37.6 -0.2
       comp=Z,11nm,0.9s,baz=320
SGDS   Sogindy            68.74 319  eP       P        01 27 43.8 +0.3
       baz=319
ZAA0   Zalesovo Array     68.83 333  P        P        01 27 42.6 -1.1
ZAA0                                 IAmb     IAmb     01 27 57.3
       comp=Z,4.5nm,0.9s
ZALV   Zalesovo Beam      68.83 333  P        P        01 27 43.0 -0.7
       comp=Z,4.7nm,1.0s,baz=101,slow=4.7,SNR=14
ZALV   Zalesovo Beam      68.83 333  P        P        01 27 42.9 -0.8
SEM    Semipalatinsk      68.96 328  eP       P        01 27 45.1 +0.3
       baz=328
BTLS   Baital             69.84 321  eP       P        01 27 50.1  0.0
       baz=321
KURK   Kurchatov          69.99 328  P        P        01 27 50.0 -1.0
DZA    Taraz              70.68 318  eP       P        01 27 54.7 -0.7
       baz=318
IUG    Iuzhnay            71.27 317  eP       P        01 27 58.8 -0.2
       comp=Z,3.5nm,1.0s,baz=317
KKAR   Karatay Array      71.32 318  P        P        01 27 58.2 -1.0
BRZS   Berezniki          72.92 325  eP       P        01 28 08.4 -0.2
       baz=325
HRA    Herat              74.55 307  P        P        01 28 17.1 -1.7
TIXI   Tiksi              74.93 359  P        P        01 28 19.5 -0.4
TIXI                                 IAmb     IAmb     01 28 29.0
       comp=Z,5.7nm,1.1s
BRVK   Borovoye           75.64 327  P        P        01 28 23.4 -1.0
BRVK                                 IAmb     IAmb     01 28 42.8
       comp=Z,12nm,0.9s
VNDA   Vanda              75.88 173  P        P        01 28 26.9 +1.5
       comp=Z,3.2nm,0.8s,baz=2.4,slow=3.7,SNR=6.6
MAW    Mawson             78.63 201  LR       LR       02 02 12.8
       comp=Z,111nm,19.5s,baz=33,slow=35
GEYT   Alibeck            78.66 310  P        P        01 28 42.1 +0.4
       comp=Z,4.0nm,0.7s,baz=191,slow=4.5,SNR=11
GEYT   Alibeck            78.66 310  P        P        01 28 40.9 -0.8
ABKAR  Akbulak array      80.32 321  P        P        01 28 49.9 -0.6
ABKAR  Akbulak array      80.32 321  P        P        01 28 50.1 -0.4
ABKAR                                IAmb     IAmb     01 29 09.9
       comp=Z,4.7nm,0.9s
TTA    Tatalina           85.36  26  P        P        01 29 16.5  0.0
TTA                                  IAmb     IAmb     01 29 18.5
       comp=Z,7.1nm,0.8s
RAYN   Ar Rayn            87.19 294  P        P        01 29 25.1 -1.2
RND    Reindeer           88.63  26  P        P        01 29 32.2 -0.1
RND                                  IAmb     IAmb     01 29 33.3
       comp=Z,5.5nm,0.8s
WRH    Wood River Hil     89.15  25  P        P        01 29 34.7 +0.1
WRH                                  IAmb     IAmb     01 29 37.8
       comp=Z,6.3nm,1.2s
DHY    Denali Highway     89.23  27  P        P        01 29 35.1 -0.2
DHY                                  IAmb     IAmb     01 29 37.7
       comp=Z,5.5nm,1.0s
CCB    Clear Creek Bu     89.30  25  P        P        01 29 35.4 +0.1
CCB                                  IAmb     IAmb     01 29 37.6
       comp=Z,2.6nm,0.9s
ILAR   Eielson Array      89.70  25  P        P        01 29 36.2 -1.0
       comp=Z,0.8nm,0.8s,baz=251,slow=6.0,SNR=5.8
BMAR   Burnt Mountain     90.98  23  P        P        01 29 43.1 -0.1
BCAR   Beaver Creek A     91.76  27  P        P        01 29 46.9  0.0
KMBO   Kilima Mbogo       93.64 269  P        P        01 29 57.2 +0.3
       comp=Z,1.4nm,0.6s,baz=74,slow=3.3,SNR=4.4
ARCES  ARCESS Array B     98.56 340  P        Pdif     01 30 19.4 +1.6
       comp=Z,2.0nm,0.9s,baz=83,slow=7.4,SNR=5.7
ARCES  ARCESS Array B     98.56 340  P        P        01 30 17.7  0.0
PDAR   Pinedale Array    113.68  44  PKKPab   PKKPab   01 46 08.7 -0.3
       comp=Z,0.4nm,0.7s,baz=90,slow=5.7,SNR=4.7
TORD   Torodi Ar. Bea    128.97 284  PKP      PKPdf    01 35 48.5 +0.3
       comp=Z,1.1nm,0.7s,baz=70,slow=1.9,SNR=2.5
CPUP   Villa Florida     149.37 165  PKPbc    PKiKP    01 36 30.4 +0.2
       comp=Z,2.4nm,0.6s,baz=164,slow=4.0,SNR=3.5
CPUP   Villa Florida     149.37 165  PKPdf    PKPdf    01 36 23.9 -0.9
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IDC 22 01:59:33.3±14.0, **19°.32S**×**177°.73W**, **h556**^{km}±174^{km}, **mb2.7**/3, **mb1 3.0**/3, **mb1mx2.8**/29, **mbtmp3.6**/3, **Error ellipse: s-maj=248.2km s-min=51.8km az=167.0, Fiji Islands region**

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Code   Station Name          Δ°  AZ°  Phase ID          Time       Res
                                      Op       ISC      h  m  s    ISC
WRA    Warramunga Arr     45.03 261  P        P        02 06 59.7 -0.5
       0.3nm,0.3s,baz=98,slow=6.6,SNR=8.7
ASAR   Alice Springs      45.05 256  P        P        02 07 00.5 +0.1
       0.8nm,0.5s,baz=90,slow=8.9,SNR=14
TXAR   Lajitas Array      86.20  57  P        P        02 11 16.7  0.0
       0.2nm,0.7s,baz=213,slow=6.5,SNR=2.5
ARCES  ARCESS Array B    127.81 350  PKP      PKPdf    02 17 34.7 -0.7
       2.8nm,0.9s,baz=14,slow=1.6,SNR=5.4
BRTR   Keskin Array B    146.23 314  PKPbc    PKPbc    02 18 11.9 -0.4
       0.8nm,0.5s,baz=92,slow=3.5,SNR=2.9
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*IDC **22** 02:05:12.9±0.8, 41°.94N×119°.67W, h0^{km}, mb2.6/1, mb1 3.5/6, mb1mx3.4/33, mbtmp3.2/6, ML3.4/5, MS2.5/1, Ms1 2.5/1, ms1mx2.3/9, Error ellipse: s-maj=10.4km s-min=5.8km az=9.0*

*ANF **22** 02:05:13.5±1.6, 41°.85N×119°.65W, h5^{km}±15^{km}, ML3.8/15, Error ellipse: s-maj=4.7km s-min=2.8km az=85.0*

*NEIC **22** 02:05:14±1.4, 41°.88N±0°.04×119°.55W±0°.04, h9^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=4.4km az=184.0*

*NEIC **22** 02:05:14.1, 41°.88N×119°.63W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.44; M$_{\theta\theta}$0.65; M$_{\phi\phi}$2.79; M$_{r\theta}$-0.73; M$_{\theta\phi}$3.30; M$_{\phi r}$3.26; Fault plane solution: M$_0$5.66000×10^{14} NP1:ϕ$_s$65.99000°, δ40.45000°, λ-38.32000°. NP2:ϕ$_s$187.01000°, δ66.28000°, λ-123.78000°. Principal axes: T 5.7704, Plg15.0000°, Azm301.0000°; N -0.2243, Plg31.0000°, Azm202.0000°; P -5.5461, Plg55.0000°, Azm53.0000°;*

*SEA **22** 02:05:14.5±2.0, 41°.81N±0°.04×119°.61W±0°.06, h0^{km}±6^{km} Error ellipse: s-maj=6.4km s-min=5.1km az=66.0*

*REN **22** 02:05:14.2±0.4, 41°.90N±0°.04×119°.64W±0°.05, h12^{km}±5^{km}, ML3.9/8, mb3.8/1(NEIC), ML3.5/96(NEIC), ML3.6/50(SEA), Mwr3.8/64(NEIC), Error ellipse: s-maj=5.9km s-min=5.5km az=206.0*

ISC 22 02:05:14.3±1.4, **41°.90N**±0°.03×**119°.62W**±0°.03, **h6**^{km}±12^{km}, **n114**, σ**1^{s}06**/125, **Nevada**

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Code   Station Name          Δ°  AZ°  Phase ID          Time       Res
                                      Op       ISC      h  m  s    ISC
MOD    Modoc Plateau       0.51 271           Pg       02 05 24.1  0.0
MOD                                           Sg       02 05 31.4 +0.5
MOD    Modoc Plateau       0.51 271  IAML              02 05 31.7
       comp=N,10µm,0.7s
MOD                                  IAML              02 05 31.8
       comp=E,17µm,0.6s
LKVW   Lakeview            0.64 301           Pg       02 05 26.5 -0.2
WVOR   Wild Horse Val      0.91  53           Pb       02 05 31.8 -0.7
WVOR                                          Sb       02 05 44.7 -0.2
WVOR   Wild Horse Val      0.91  53  IAML              02 05 48.4
       comp=E,2µm,0.8s
WVOR                                 IAML              02 05 48.5
       comp=E,1µm,0.9s
K05A   Summer Lake         1.26 312           Pn       02 05 38.2 -0.4
K05A   Summer Lake         1.26 312  IAML              02 06 03.6
       comp=N,944nm,1.2s
K05A                                 IAML              02 06 08.2
       comp=E,800nm,0.8s
LASM   Arnica Sink         1.50 259           Pn       02 05 41.0 -0.9
LTIM   Timbered Crate      1.58 244           Pn       02 05 42.3 -0.6
HOG    Hogback Mounta      1.59 283           Pn       02 05 42.6 -0.6
HOG                                           Sg       02 06 07.2 +1.7
M04C   Macdoel             1.66 267  P        Pn       02 05 43.2 -0.9
       baz=86,SNR=215
M04C                                 Sb       Sb       02 06 07.4 +0.7
       baz=86
M04C   Macdoel             1.66 267           Pn       02 05 43.2 -0.9
M04C                                          Sg       02 06 07.7 -0.1
LBCM   Butte Creek Ri      1.68 232           Pn       02 05 43.6 -0.7
K04D   Chiloquin, OR       1.75 295  P        Pn       02 05 44.6 -0.7
       baz=115,SNR=60
K04D                                 Sb       Sg       02 06 10.3 -0.1
       baz=115
K04D   Chiloquin, OR       1.75 295           Pb       02 05 46.4 -0.4
J05D   Fort Rock, OR       1.83 320  P        Pn       02 05 46.3 -0.2
       baz=139,SNR=476
J05D                                 Sb       Sg       02 06 13.1 -0.1
       baz=139
J05D   Fort Rock, OR       1.83 320           Pb       02 05 48.0 -0.3
L04D   Klamath Falls       2.03 280  P        Pn       02 05 48.1 -1.0
       baz=99,SNR=236
L04D                                 Sb       Sb       02 06 17.9 +0.7
       baz=99
L04D   Klamath Falls       2.03 280           Pn       02 05 48.1 -1.0
BEKR   Beckworth           2.10 196           Pn       02 05 49.1 -1.1
BEKR                                 IAML              02 06 21.4
       comp=N,563nm,0.3s
SVIC   Surveyors Ice       2.12 326           Pb       02 05 53.3  0.0
PINE   Pine Mountain       2.13 333           Pn       02 05 49.5 -1.2
PINE                                 IAML              02 06 30.3
       comp=E,252nm,0.9s
PINE                                 IAML              02 06 31.9
       comp=N,227nm,0.8s
I07A   Izee                2.19   2  Pn       Pn       02 05 50.3 -1.0
I07A                                 IAML              02 06 34.5
       comp=E,304nm,1.5s
PAHR   Pah Rah Range       2.19 175  Pn       Pn       02 05 50.4 -1.1
PAHR                                 IAML              02 06 24.8
       comp=N,436nm,0.5s
PAHR                                 IAML              02 06 25.4
       comp=E,364nm,0.5s
J04D   Umpqua Nationa      2.28 307  P        Pn       02 05 52.5 -0.2
       baz=126,SNR=201
O03E   Paynes Creek        2.30 227  P        Pn       02 05 52.2 -0.6
       baz=45,SNR=242
O03E                                 Sb       Sb       02 06 25.2 +0.3
       baz=45
YBH    Yreka Blue Hor      2.32 267  Pn       Pn       02 05 51.7 -1.3
       comp=E,9.9nm,0.3s,baz=77,slow=13,SNR=117
YBH                                  Lg       Lg       02 06 24.7
       comp=E,33nm,0.3s,baz=356,slow=16,SNR=14
YBH    Yreka Blue Hor      2.32 267  Pn       Pn       02 05 51.8 -1.3
YBH                                  IAML              02 06 28.4
       comp=N,304nm,0.7s
M02C   Callahan            2.48 259  P        Pn       02 05 53.6 -1.7
       baz=78,SNR=32
M02C                                 Sb       Sb       02 06 30.3 +0.3
       baz=78
N02D   Trinity Center      2.50 249  P        Pn       02 05 54.0 -1.5
       baz=68,SNR=14
N02D                                 Sb       Sb       02 06 31.6 +1.0
       baz=68
WDC    Whiskeytown Da      2.57 240  Pn       Pn       02 05 55.2 -1.2
WDC                                  IAML              02 06 33.3
       comp=N,323nm,0.5s
HUMO   Hull Mountain       2.58 287  Pn       Pn       02 05 55.4 -1.2
HUMO                                 IAML              02 06 35.7
       comp=N,190nm,0.5s
HUMO                                 IAML              02 06 42.0
       comp=E,148nm,0.7s
VCNR   Virginia City       2.60 181  Pn       Pn       02 05 56.0 -1.0
ORV    Oroville            2.74 212  Pn       Pn       02 05 57.8 -1.1
ORV                                  IAML              02 06 41.7
       comp=E,148nm,0.5s
I05D   Terrebonne, OR      2.75 333  Pb       Pb       02 06 03.7 -0.2
       baz=152,SNR=40
I04A   Tendick Farm,       2.80 314  Pb       Pb       02 06 04.5 -0.2
       baz=132,SNR=66
I04A                                 Sb       Sb       02 06 41.0 +1.7
       baz=132
PNTR   Pine Nut            2.80 180  Pn       Pn       02 05 58.7 -1.1
O02D   Mt. Diablo Mer      2.95 235  P        Pn       02 06 00.2 -1.5
       baz=53,SNR=7.3
O02D                                 Sb       Sb       02 06 44.6 +1.0
       baz=53
L02E   Cave Junction       2.98 276  P        Pn       02 06 01.4 -0.7
       baz=94,SNR=46
L02E                                 Sb       Sb       02 06 45.3 +0.8
       baz=94
K02D   Willamette Mer      3.11 286  P        Pn       02 06 03.4 -0.5
       baz=104,SNR=279
K02D                                 Sb       Sb       02 06 50.2 +2.0
       baz=104
AFDM   Forest Hills D      3.12 200  Pn       Pn       02 06 03.1 -1.0
AFDM                                 IAML              02 06 55.8
       comp=E,88nm,0.7s
MFID   Camas Ranch         3.18  60  Pn       Pn       02 06 04.1 -0.9
KRMB   Red Mountain        3.23 265           Pn       02 06 04.5 -1.2
KRMB                                 IAML              02 07 03.2
       comp=N,112nm,1.5s
KRMB                                 IAML              02 07 03.5
       comp=E,88nm,1.1s
KHMM   Horse Mountain      3.26 253  Pn       Pn       02 06 04.7 -1.3
KHMM                                 IAML              02 07 03.9
       comp=E,120nm,1.1s
KHMM                                 IAML              02 07 07.2
       comp=N,199nm,1.3s
H04A   Detroit Lake        3.36 327  Pn       Pn       02 06 06.2 -1.1
RYN    Ryan                3.37 165  Pn       Pn       02 06 06.6 -1.0
RYN                                  IAML              02 07 04.0
       comp=N,186nm,0.4s
WAKR   Walker              3.39 178  Pn       Pn       02 06 06.9 -1.0
WAKR                                 IAML              02 07 03.1
       comp=N,111nm,0.5s
WAKR                                 IAML              02 07 08.5
       comp=E,116nm,0.8s
BMO    Blue Mountains      3.40  29  Pn       Pn       02 06 07.1 -0.9
G08A   Pilot Rock          3.43   8  Pn       Pn       02 06 07.2 -1.2
J01E   Myrtle Point        3.43 293  P        Pn       02 06 08.8 +0.5
       baz=111,SNR=7.6
KBO    Bosley Butte        3.45 277  Pn       Pn       02 06 07.2 -1.3
JCC    Jacoby Creek,       3.49 254  Pn       Pn       02 06 07.8 -1.2
JCC                                  IAML              02 07 13.5
       comp=N,132nm,1.7s
JCC                                  IAML              02 07 14.4
       comp=E,126nm,1.6s
ELK    Elko                3.49 108  Pn       Pn       02 06 10.5 +1.1
       comp=E,3.6nm,0.3s,baz=297,slow=16,SNR=79
ELK                                  Lg       Lg       02 07 01.9
       comp=E,26nm,0.3s,baz=120,slow=14,SNR=13
ELK                                  LR       LR       02 07 26.3
       comp=E,68nm,18.9s,baz=286,slow=38
ELK    Elko                3.49 108  Pn       Pn       02 06 08.4 -1.0
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ELK				IAML		02 07 08.7	
	comp=E,94nm,0.4s						
ELK				IAML		02 07 10.0	
	comp=E,66nm,0.6s						
NVAR	Mina Array Bea	3.60	163	Pn	Pn	02 06 11.6	+0.7
	comp=E,1.1nm,0.3s,baz=341,slow=12,SNR=14						
NVAR				Pg	Pb	02 06 19.1	+0.5
	comp=E,6.3nm,0.3s,baz=254,slow=25,SNR=25						
NVAR				Lg	Lg	02 07 07.2	
	comp=E,30nm,0.3s,baz=348,slow=32,SNR=12						
NVAR	Mina Array Bea	3.60	163	Pn	Pn	02 06 09.8	-1.1
KEBM	Edson Butte	3.63	287	Pn	Pn	02 06 09.7	-1.4
KEBM				IAML		02 07 16.2	
	comp=N,141nm,1.5s						
KEBM				IAML		02 07 17.2	
	comp=E,145nm,1.1s						
NV11	Mina Array Sit	3.64	162	Pn	Pn	02 06 10.3	-0.9
NV11				IAML		02 07 13.5	
	comp=E,90nm,1.1s						
NV11				IAML		02 07 23.0	
	comp=N,87nm,1.3s						
KCPM	Cahto Peak	3.73	235	Pn	Pn	02 06 11.2	-1.3
KCPM				IAML		02 07 18.7	
	comp=N,77nm,0.8s						
KCPM				IAML		02 07 32.0	
	comp=E,100nm,1.1s						
LHV	Little Huntoon	3.74	166	Pn	Pn	02 06 11.7	-0.8
COR	Corvallis	3.81	316	Pn	Pn	02 06 12.2	-1.2
CMB	Columbia Colle	3.90	189	Pn	Pn	02 06 13.8	-1.0
CMB				IAML		02 07 17.5	
	comp=E,81nm,0.7s						
CMB				IAML		02 07 19.8	
	comp=N,80nm,0.8s						
HOPS	Hopland Field	3.92	223	Pn	Pn	02 06 13.9	-1.1
GDXM	Geysers	3.92	219	Pn	Pn	02 06 14.0	-1.1
GDXM				IAML		02 08 45.5	
	comp=E,54nm,0.3s						
GDXM				IAML		02 08 45.5	
	comp=N,68nm,0.2s						
F07A	Phinny Hill Vi	4.00	357	Pn	Pn	02 06 15.1	-1.1
F07A				IAML		02 07 34.7	
	comp=E,52nm,1.2s						
HLID	Hailey	4.18	65	Sb	Sb	02 07 22.5	+3.4
	baz=248						
HLID	Hailey	4.18	65	Pn	Pn	02 06 17.8	-0.9
HLID				IAML		02 07 29.0	
	comp=E,77nm,1.8s						
HLID				IAML		02 07 34.2	
	comp=E,55nm,0.9s						
TPH	Tonopah	4.24	153	Pn	Pn	02 06 18.6	-0.9
TPH	Tonopah	4.24	153	IAML		02 07 34.1	
	comp=N,91nm,0.5s						
MDPB	Devils Postpil	4.28	174	Pn	Pn	02 06 19.0	-1.2
MDPB				IAML		02 07 29.8	
	comp=E,41nm,0.8s						
OMMB	Old Mammoth Mi	4.30	173	Pn	Pn	02 06 19.5	-1.1
F10A	Beach Ranch, E	4.43	22	Pn	Pn	02 06 20.9	-1.2
F10A				IAML		02 07 44.8	
	comp=E,33nm,1.4s						
E08A	Dider Farm, El	4.61	5	Pn	Pn	02 06 23.6	-0.9
E08A				IAML		02 07 48.5	
	comp=E,36nm,1.4s						
E07A	Sunnyside	4.67	358	Pn	Pn	02 06 24.2	-1.1
E07A				IAML		02 08 01.3	
	comp=E,34nm,2.6s						
R11A	Troy Canyon, C	4.70	138	Pn	Pn	02 06 25.1	-0.8
R11A				IAML		02 07 46.2	
	comp=E,53nm,0.9s						
R11A				IAML		02 07 46.5	
	comp=N,38nm,0.6s						
E09A	Wood Farm, Sta	4.74	12	Pn	Pn	02 06 25.3	-1.0
BGU	Big Grassy Mou	5.05	99		Pn	02 06 29.9	-0.8
BGU				IAML		02 08 07.8	
	comp=N,31nm,0.7s						
HVU	Hansel Valley	5.11	89		Pn	02 06 30.6	-1.0
BCYI	Bear Canyon	5.15	60		Pn	02 06 31.1	-1.0
SPUT	South Promonto	5.41	94		Pn	02 06 34.7	-0.9
DUG	Dugway, Tooele	5.42	106	Pn	Pn	02 06 34.8	-0.9
PSUT	Pine Spring	5.54	125	Pn	Pn	02 06 36.7	-0.8
TPNV	Topopah Spring	5.58	151		Pn	02 06 37.1	-0.9
PRN	Pahroc Range	5.70	140		Pn	02 06 38.8	-0.8
MCMT	McKenzie Canyo	5.74	57		Pn	02 06 39.3	-0.9
HWUT	Hardware Ranch	6.03	90		Pn	02 06 43.4	-0.8
NLU	North Lily Min	6.03	106		Pn	02 06 43.3	-0.9
DLMT	Dillon	6.16	53		Pn	02 06 45.1	-0.9
ECR	Eagle Creek	6.21	76	Pn	Pn	02 06 45.7	-0.9
TCUT	Toone Canyon	6.21	94		Pn	02 06 46.0	-0.8
JLU	Jordanelle	6.29	99		Pn	02 06 46.9	-1.0
TCRU	Three Creeks R	6.39	119	Pn	Pn	02 06 48.1	-1.1
MSO	Missoula	6.39	38	Pn	Pn	02 06 48.2	-0.9
CCUT	Cedar City	6.49	130		Pn	02 06 49.6	-0.8
NEW	Newport	6.61	15	Lg	Lg	02 08 40.7	
	comp=N,0.1nm,0.3s,baz=278,slow=16,SNR=2.7						
SZCU	Shurtz Canyon	6.61	128		Pn	02 06 51.3	-1.0
IMW	Indian Meadow	6.68	70		Pn	02 06 52.2	-1.0
BOZ	Bozeman (W)	6.87	55		Pn	02 06 54.8	-0.8
FLWY	Flagg Ranch	6.90	69	Pn	Pn	02 06 55.1	-1.0
TMUT	Trail Mountain	6.91	109		Pn	02 06 55.4	-0.9
P17A	Butcher Ranch,	7.17	107		Pn	02 06 59.1	-0.7
PD31	Pinedale Array	7.51	80		Pn	02 07 03.6	-0.9
PDAR	Pinedale Array	7.51	80	Pn	Pn	02 07 08.0	+3.5
	comp=N,0.1nm,0.3s,baz=261,slow=12,SNR=14						
PDAR				Pg	Pb	02 07 20.0	-5.0
	comp=N,0.1nm,0.3s,baz=263,slow=13,SNR=6.1						
PDAR				Lg	Lg	02 09 12.2	
	comp=N,0.1nm,0.3s,baz=250,slow=16,SNR=2.6						
RDMU	Red Mountain	7.69	97		Pn	02 07 06.2	-0.8
U15A	North Rim	7.88	131	Pn	Pn	02 07 08.8	-1.0
O20A	White River Ci	8.78	98	Pn	Pn	02 07 21.1	-0.8
PV01	Paradox Valley	9.27	110		Pn	02 07 27.8	-0.9
RWWY	Rawlins	9.27	87		Pn	02 07 27.8	-1.0
N23A	Red Feather La	10.32	91	Pn	Pn	02 07 42.3	-0.8
PHWY	Pilot Hill	10.62	88		Pn	02 07 46.4	-0.9
T25A	Trinidad	12.66	107	Pn	Pn	02 08 14.3	-0.9
TXAR	Lajitas Array	18.00	129	P	P	02 09 27.1	+1.4
	comp=N,0.0nm,0.3s,baz=329,slow=15,SNR=3.1						
S39A	Bolivar	20.61	93	P	P	02 09 53.2	-0.9
S39A				IAmb	IAmb	02 09 58.3	
	comp=Z,4.3nm,1.0s						
YKA	Yellowknife Ar	20.85	7	P	P	02 09 57.0	+0.5
	comp=Z,0.3nm,0.9s,baz=189,slow=10,SNR=4.2						

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*TRN **22** 02:18:45.1, 10°.67N×62°.44W, h66km, MD3.4*
*FUNV **22** 02:18:45.6, 10°.71N×62°.42W, h72km, MW3.6*
ISC 22 02:18:43.5±1.3**, 10°.66N**±0°.04×**62°.46W**±0°.04**, h89**km±14km**,**
n17, σ1s.56/27**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.76	271	eP	Pn	02 19 02.0	+1.5
CRUV				eS	Sn	02 19 12.0	-1.2
TRN	Trinidad (W)	1.04	91	eP	Pn	02 19 04.6	+1.1
TRN				eS	Sn	02 19 17.4	-1.3
TRN	Trinidad (W)	1.04	91	⇑iP	Pn	02 19 04.3	+0.8
TRN				eS	Sn	02 19 17.7	-0.9
GRGR	Grenville	1.66	28	eP	Pn	02 19 12.3	+1.0
GRGR				eS	Sn	02 19 31.5	-0.8
GRGR	Grenville	1.66	28	eP	Pn	02 19 11.1	-0.2
GRGR				eS	Sn	02 19 30.1	-2.3
TOSP	Speyside	2.00	71	eP	Pn	02 19 17.4	+1.8
TOSP				eS	Sn	02 19 38.7	-1.4
GCMP	Grenada, Carri	2.08	29	eP	Pn	02 19 18.2	+1.5
PCRV	Puerto La Cruz	2.19	257	eP	Pn	02 19 19.1	+0.9
PCRV				eS	Sn	02 19 44.0	-0.8
RIOV	Rio Grande	2.66	166	eP	Pn	02 19 26.4	+1.9
RIOV				eS	Sn	02 19 56.1	+0.3
SVB	Belmont	2.85	24	eS	Sn	02 20 00.7	+0.2
MERV	Las Mercedes	4.03	250	eP	Pn	02 19 44.7	+1.8
LUEV	Luepa	4.89	168	eP	Pn	02 19 55.5	+0.6
LUEV				eS	Sn	02 20 46.9	-3.4
BAUV	El Baul	5.76	253	eP	Pn	02 20 08.3	+1.9
BAUV	El Baul	5.76	253	eS	Sn	02 21 10.3	-0.9
BAUV	El Baul	5.76	253	eP	Pn	02 20 07.7	+1.2
BAUV				eS	Sn	02 21 08.4	-2.8
MAPV	Macapo	5.96	263	eP	Pn	02 20 09.8	+0.5
MONV	Montecano	7.47	281	eP	Pn	02 20 30.3	+0.4

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*EAF **22** 02:38:50.3±1.7, 0°.18S×28°.91E, h0km±33km, MD3.0*
*ECGS **22** 02:38:50.6, 0°.58S±0°.03×29°.30E±0°.06, h4km±5km, ML2.7, Error ellipse: s-maj=10.3km s-min=5.2km az=99.3, smi:local/7befa71d-f7c4-460b-84e8-89074a02f9c4 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 35.6512 Y 101.776 Z 8.33004 CovXX 45.3071 XY -5.55143 XZ 12.6241 YY 12.4637 YZ -1.76968 ZZ 31.4853 EllAz1 189.756 Dip1 1.13533 Len1 6.38381 Az2 281.723 Dip2 59.9887 Len2 9.23075 Len3 1.375189e+01*
ISC 22 02:38:50.4±2.3**, 0°.6S**±0°.1×**29°.3E**±0°.1**, h10**km**, n11,**
σ0s.43/13**, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTSH	Kitshanga	0.66	199	i P	Pg	02 39 03.2	0.0
KTSH	Kitshanga	0.66	199	eS	Sb	02 39 12.7	-0.8
RGB	Rumangabo	0.73	172	i S	Sg	02 39 14.3	0.0
RGB	Rumangabo	0.73	172	i P	Pg	02 39 04.4	-0.2
GOM	Goma	1.06	182	eP	Pg	02 39 10.7	-0.2
GOM	Goma	1.06	182	eS	Sg	02 39 24.8	+0.1
BOBN	Bobandana	1.11	193	i S	Sb	02 39 27.3	+0.7
BOBN	Bobandana	1.11	193	eP	Pg	02 39 11.5	-0.4
MBAR	Mbarara	1.47	90	eP	Pn	02 39 17.1	0.0
MBAR				eS	Sn	02 39 36.2	-0.3
LWI	Lwiro	1.68	196	i S	Sb	02 39 43.5	+0.6
TEBE	Entebbe	3.27	78	eP	Pb	02 39 49.0	+0.3
TEBE				eS	Sb	02 40 28.7	0.0

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*IDC **22** 02:41:49.1±2.4, 50°.34N×172°.95W, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/41, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=58.5km s-min=26.0km az=16.0*
*NEIC **22** 02:41:52.7±0.8, 50°.5N±0°.1×173°.0W±0°.1, h25km±9km, Error ellipse: s-maj=15.7km s-min=12.6km az=173.0*
*AEIC **22** 02:41:54.6±2.0, 50°.56N±0°.10×173°.2W±0°.1, h31km±7km, ML3.0/12, Error ellipse: s-maj=14.6km s-min=9.6km az=161.0*
ISC 22 02:41:54.1±1.2**, 50°.5N**±0°.1×**172°.96W**±0°.07**, h35**km**, n19,**
σ1s.39/21**, mb3.7**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.85	336		Pn	02 42 23.0	-0.3
ATKA					Sn	02 42 46.0	+0.4
KOFP	Korovin Flat P	1.90	338		Pn	02 42 24.2	+0.2
KOKL	Mount Kliuchef	1.96	337		Pn	02 42 25.2	+0.2
KOWE	Korovin West	2.02	337		Pn	02 42 26.1	+0.4
GSMY	Great Sitkin M	2.47	309		Pn	02 42 31.4	-0.4
GSTD	Great Sitkin T	2.52	309		Pn	02 42 32.2	-0.4
GSTD					Sn	02 43 01.5	-0.6
ADK	Adak	2.71	302		Pn	02 42 34.6	-0.6
ADK	Adak	2.71	302		Sn	02 43 03.4	-3.2
KIMD	Kanaga Island	2.96	296		Pn	02 42 38.0	-0.6
TAFP	Tanaga Falls P	3.45	296		Sn	02 43 25.0	+0.1
KDAK	Kodiak Island	13.94	51	Pn	Pn	02 45 05.4	-3.5
	0.4nm,0.3s,baz=199,slow=3.8,SNR=13						
KDAK				Sn	Sn	02 47 32.1	-10
	0.1nm,0.3s,baz=172,slow=18,SNR=0.9						
ILAR	Eielson Array	19.75	34	P	P	02 46 20.7	+0.1
	0.1nm,0.3s,baz=227,slow=9.0,SNR=8.7						
SEY	Seymchan	22.38	317	P	P	02 46 51.0	+2.1
	1.1nm,0.2s,baz=347,slow=23,SNR=1.4						
INK	Inuvik	26.12	32	P	P	02 47 26.1	+1.8
	1.5nm,0.6s,baz=238,slow=5.1,SNR=4.3						
PDAR	Pinedale Array	43.01	75	P	P	02 49 50.7	+0.5
	0.8nm,0.7s,baz=306,slow=5.0,SNR=5.7						
TXAR	Lajitas Array	55.09	85	P	P	02 51 22.9	+0.2
	0.4nm,0.8s,baz=296,slow=4.0,SNR=3.5						
ARCES	ARCESS Array B	59.49	353	P	P	02 51 54.5	+1.4
	0.9nm,0.6s,baz=354,slow=9.0,SNR=3.9						
MKAR	Makanchi Array	63.41	312	P	P	02 52 20.3	+0.4
	0.3nm,0.6s,baz=46,slow=10,SNR=3.3						
MKAR	Makanchi Array	63.41	312	P	P	02 52 19.9	0.0

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*IDC **22** 02:43:32.8±5.9, 3°.46S×132°.33E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.5/27, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=386.7km s-min=30.5km az=74.0*
*DJA **22** 02:43:34.0±0.4, 3°S±4°×13°1E±°, h10km, M3.2/6, MLv3.2/6*
ISC 22 02:43:32.0±1.0**, 3°.40S**±0°.10×**130°.91E**±0°.07**, h10**km**, n8,**
σ1s.72/8**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.42	71	P	Pn	02 43 58.0	+0.1
FAKI				S	Sb	02 44 17.5	+0.8
BNDI	Bandanaira	1.50	222	P	Pg	02 44 02.3	+1.4
MSAI	Masohi	1.98	271	P	Pb	02 44 08.3	+0.1
SWI	Sorong	2.54	8	P	Pn	02 44 12.7	-0.6
RKPI	Ransiki, Papua	3.76	60	P	Pn	02 44 30.7	+0.5
WRA	Warramunga Arr	16.78	169	Pn	Pn	02 47 24.0	-3.4
	0.1nm,0.3s,baz=354,slow=13,SNR=2.8						
ASAR	Alice Springs	20.36	172	P	P	02 48 09.5	+0.6
	3.7nm,0.6s,baz=350,slow=10,SNR=26						
MKAR	Makanchi Array	65.75	326	P	P	02 54 25.2	+7.9
	0.4nm,0.8s,baz=128,slow=7.9,SNR=4.3						

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*NNC **22** 03:09:33.5±2.3, 37°.74N×71°.40E, h153km±33km, mb3.0, mpv3.9, Error ellipse: s-maj=20.6km s-min=11.6km az=18.0*
ISC 22 03:09:33.3±2.9**, 37°.7N**±0°.2×**71°.4E**±0°.1**, h150**km**, n15,**
σ0s.78/20**, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.75	21	P	Pn	03 10 43.3	-0.4
	SNR=314						
UCH	Uchtor	5.10	27	P	Pn	03 10 47.7	-0.7
	SNR=15						
EKS2	Erkin-Say	5.26	19	P	Pn	03 10 50.7	+0.4
	SNR=26						
KK31	Karatay Array	5.43	353	⇓P	Pn	03 10 52.8	+0.5
	2.7nm,0.2s,baz=178,slow=13,SNR=161						
KK31				S	Sn	03 11 54.5	+0.5
	4.4nm,0.3s,baz=173,slow=20,SNR=5.6						
AAK	Ala-Archa	5.45	25	P	Pn	03 10 52.8	0.0
	SNR=12						
AAK	Ala-Archa	5.45	25	⇑P	Pn	03 10 52.8	0.0
	7.9nm,0.5s						
AAK				⇓S	Sn	03 11 54.6	-0.3
	5.6nm,0.5s						
KBK	Karagaybulak	5.63	28	P	Pn	03 10 55.3	+0.2
	SNR=9.2						
ULHL	Ulahol	5.85	38	P	Pn	03 10 57.2	-0.9
	SNR=11						
CHMS	Chumysh	5.86	25	P	Pn	03 10 58.0	-0.1
	SNR=14						
USP	Ospenovka	6.02	22	P	Pn	03 10 59.9	-0.4
	SNR=14						
TKM2	Tokmak 2	6.10	30	P	Pn	03 11 00.9	-0.6
	SNR=13						
TKM2	Tokmak 2	6.10	30	⇑P	Pn	03 11 00.8	-0.7
	6.8nm,0.6s						
TKM2				⇑S	Sn	03 12 12.1	+1.6
	3.7nm,0.7s						
MK31	Makanchi Array	12.12	38	P	Pn	03 12 20.6	-0.5
	0.9nm,0.6s,baz=222,slow=14,SNR=13						
AB31	Akbulak array	14.20	328	⇓P	Pn	03 12 48.2	+0.7
	0.2nm,0.3s,baz=134,slow=15,SNR=19						
AB31				⇓S	Sn	03 15 23.0	-1.9
	1.2nm,0.5s,baz=258,slow=36,SNR=5.5						
AKTO	Aktyubinsk	15.91	327	⇑P	P	03 13 09.8	+0.4
	2.6nm,0.9s						
AKTO				⇑S	Sn	03 16 05.5	-0.5
	2.1nm,1.0s						

KRSC 22 03:14:14.8±1.7**, 50°.09N**×**158°.57E, h64**km±35km**, ML3.8,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.68	292	eP	Pn	03 14 43.2	+1.3
SKR				eS	Sn	03 15 04.0	+1.6
KDTR	Khodutka, Kamc	1.75	350	eP	Pn	03 14 45.0	+2.2
KDTR				eS	Sn	03 15 06.4	+2.3
PAU	Pauzhetka	1.77	322	eP	Pn	03 14 45.9	+2.7
PAU				eS	Sn	03 15 08.9	+4.2
RUS	Russkaya	2.34	359	eS	Sn	03 15 20.3	+1.7
MTVR	Mutnovka	2.41	354	eP	Pn	03 14 54.7	+2.8
MTVR				eS	Sn	03 15 22.9	+2.6
GRL	Gorelyy	2.48	353	eP	Pn	03 14 56.0	+3.0
GRL				eS	Sn	03 15 25.5	+3.3
KRMR	Karymshinskiy	2.75	354	eS	Sn	03 15 33.0	+4.4
DALK	Dalny	2.94	2	eP	Pn	03 15 01.8	+2.7
DALK				eS	Sn	03 15 35.4	+2.2
UGLR	Uglovaya	3.12	3	eP	Pn	03 15 05.2	+3.5
SPN	Mys Shipunski	3.14	16	eP	Pn	03 15 04.1	+2.3
SPN				eS	Sn	03 15 39.5	+1.4
SMAR	Somma	3.18	3	eP	Pn	03 15 05.7	+3.2
AVH	Avacha	3.18	2	eP	Pn	03 15 06.5	+4.1
KOK	Koryaka	3.20	1	eP	Pn	03 15 06.3	+3.5
KRER	Koryakskii	3.22	2	eP	Pn	03 15 06.1	+3.1
KRER				eS	Sn	03 15 42.6	+2.4
KRX	Arik	3.27	1	eP	Pn	03 15 06.9	+3.2
GNL	Ganaly	3.63	354	eP	Pn	03 15 12.9	+4.3
KBTR	Krutoberegovo	6.64	21	eP	Pn	03 15 51.7	+2.1

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*SOME **22** 03:16:00.0, 40°.15N×82°.50E, h0km*
*NNC **22** 03:16:02.5±1.0, 40°.16N×82°.44E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=13.4km s-min=6.3km az=54.0*
ISC 22 03:15:56.9±3.8**, 40°.0N**±0°.2×**82°.6E**±0°.1**, h10**km**, n20,**
σ1s.47/28**, 1C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	3.89	324	eP	Pb	03 17 07.2	+1.5
	4.8nm,0.2s						
SHLS				eS	Sb	03 17 55.6	+2.8
	6.6nm,0.2s						
SHLS	Shalkode	3.89	324	Pg	Pb	03 17 07.2	+1.5
	4.8nm,0.2s						
SHLS				Lg	Lg	03 17 55.6	
	6.6nm,0.2s						
PDGK	Podgornoye	4.01	326	Pg	Pg	03 17 13.3	-0.4
	0.4nm,0.1s						
PDGK				Lg	Lg	03 18 06.1	
	2.1nm,0.5s						
PDGK	Podgornoye	4.01	326	⇑Lg	Lg	03 18 05.7	
	3.7nm,0.5s						
UZB	Uzynbulak	4.09	321	eP	Pg	03 17 13.7	-1.5
	1.3nm,0.2s						
UZB				eS	Sg	03 18 06.5	-1.6
	3.2nm,0.3s						
UZB	Uzynbulak	4.09	321	Pg	Pg	03 17 13.6	-1.5
	1.3nm,0.2s						
UZB				Lg	Lg	03 18 06.5	
	3.2nm,0.3s						
SATY	Saty	4.34	315	eP	Pg	03 17 19.1	-1.0
	2.6nm,0.3s						
SATY				eS	Sg	03 18 16.2	0.0
	4.5nm,0.3s						
SATY	Saty	4.34	315	Pg	Pg	03 17 19.1	-1.0
	2.6nm,0.3s						
SATY				Lg	Lg	03 18 16.2	
	4.5nm,0.3s						
KPKS	Kokpek	4.49	321	eP	Pg	03 17 21.4	-1.4
	4.1nm,0.1s						
KPKS				eS	Sg	03 18 20.2	-0.9
	14nm,0.3s						
KPKS	Kokpek	4.49	321	eS	Pg	03 17 21.4	-1.4
	4.1nm,0.2s						
DJR	Jarkent	4.76	335	eP	Pg	03 17 26.9	-1.1
	1.2nm,0.2s						
DJR				eS	Sg	03 18 29.6	0.0
	3.0nm,0.2s						
DJR	Jarkent	4.76	335	Pg	Pg	03 17 26.9	-1.1
	1.2nm,0.2s						
DJR				Lg	Lg	03 18 29.6	
	3.0nm,0.2s						
KURS	Kuram	4.76	318	eP	Pg	03 17 26.8	-1.3
	1.8nm,0.3s						
KURS				eS	Sg	03 18 29.3	-0.5
	2.8nm,0.5s						
KURS	Kuram	4.76	318	Pg	Pg	03 17 26.8	-1.3
	1.8nm,0.3s						
KURS				Lg	Lg	03 18 29.3	
	2.8nm,0.5s						
ARXS	Arharly	5.46	321	eP	Pg	03 17 39.4	-2.0
	1.6nm,0.4s						
ARXS				eS	Sg	03 18 51.0	-1.1
	6.5nm,0.3s						
ARXS	Arharly	5.46	321	Pg	Pg	03 17 39.4	-2.0
	1.6nm,0.4s						
ARXS				Lg	Lg	03 18 51.0	
	6.5nm,0.3s						
KAPS	Kapalarasan	5.75	337	eP	Pg	03 17 45.1	-1.9
	0.9nm,0.6s						
KAPS				eS	Sg	03 19 00.9	-0.5
	1.2nm,0.3s						
KAPS	Kapalarasan	5.75	337	Pg	Pg	03 17 45.1	-1.9
	0.9nm,0.6s						
KAPS				Lg	Lg	03 19 00.9	
	1.2nm,0.3s						
KUU	Kurty	6.03	312	eP	Pg	03 17 50.8	-1.6
	1.6nm,0.1s						
KUU				eS	Sg	03 19 10.3	-0.1
	3.6nm,0.3s						
KUU	Kurty	6.03	312	Pg	Pg	03 17 50.8	-1.6
	1.6nm,0.1s						
KUU				Lg	Lg	03 19 10.3	
	3.6nm,0.3s						

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*BJI **22** 03:16:04.3±0.0, 18°.05S×168°.23E, h173km, mB5.0/6, mb4.5/14*
*NOU **22** 03:16:04.4, 18°.14S×168°.74E, h183km, mb4.7, Vanuatu Islands*
*NEIC **22** 03:16:04.2±1.0, 18°.19S±0°.07×168°.5E±0°.1, h192km±2km, mb4.5/42, Error ellipse: s-maj=14.1km s-min=10.7km az=86.0*
*IDC **22** 03:16:08.2±2.6, 18°.16S×168°.64E, h226km±24km, mb4.1/17, mb1 4.2/17, mb1mx4.1/33, mbtmp4.6/17, Error ellipse: s-maj=13.6km s-min=12.2km az=173.0*
ISC 22 03:16:05.3±0.4**, 18°.12S**±0°.05×**168°.65E**±0°.07**, h200**km**,**
n134, σ1s.18/133**, mb4.5**/41**, 1C-6D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.59	311	P	Pn	03 16 30.4	-2.4
SANVU	Saraoutou	3.00	332	Pn	Pn	03 16 52.8	-2.2
SANVU				Sn	Sn	03 17 29.9	-3.9
SANVU	Saraoutou	3.00	332	P	Pn	03 16 53.3	-1.7
MARNC	Mare, Loyalty	3.40	190	P	Pn	03 16 56.7	-3.0
YATNC	Mamie plateau,	4.26	203	P	Pn	03 17 09.0	-1.3
DZM	Mont Dzumac	4.45	207	Pn	Pn	03 17 09.2	-3.6
DZM	Mont Dzumac	4.45	207	P	Pn	03 17 11.2	-1.6
NOUC	Port Laguerre	4.54	209	P	Pn	03 17 12.5	-1.3
OUENC	Ouen Island, N	4.60	201	P	Pn	03 17 14.3	-0.4
PINNC	Pines Island,	4.61	194	P	Pn	03 17 14.1	-0.7
KOUNC	Koumac, New Ca	4.78	239	P	Pn	03 17 16.8	-0.1
MSVF	Nonsavu	8.95	89	Pn	Pn	03 18 12.6	+1.5
EIDS	Eidsvold	17.84	243	P	Pn	03 20 01.8	+0.3
	baz=18,SNR=15						
ARMA	Armidale	19.74	228	P	P	03 20 20.2	+0.2
	baz=20,SNR=6.7						
RMQ	Roma	20.18	242	P	Pn	03 20 26.9	-2.6
	baz=20,SNR=10						
CTA	Charters Tower	21.25	261	P	P	03 20 36.5	+0.4
	30nm,0.6s,baz=87,slow=12,SNR=44						
CTAO	Charters Tower	21.25	261	P	P	03 20 36.4	+0.2
URZ	Urewera	21.39	161	P	P	03 20 38.0	+0.7
	18nm,0.7s,baz=258,slow=3.7,SNR=14						
URZ	Urewera	21.39	161	P	P	03 20 37.4	+0.1
URZ				IAmb	IAmb	03 20 39.2	
	comp=Z,18nm,0.7s						
BKZ	Black Stump Fm	22.05	164	P	P	03 20 44.3	+0.3
PMG	Port Moresby	22.58	290	P	P	03 20 50.3	+1.2
	comp=Z,34nm,0.8s,baz=114,slow=6.2,SNR=6.5						
MTSU	Mount Surprise	23.13	266	P	P	03 20 55.6	+1.6
	baz=23,SNR=45						
BFZ	Birch Farm	23.42	165	P	P	03 20 56.0	-0.4
TUWZ	Tuamarina	23.67	170	P	P	03 20 59.0	+0.3
MSWZ	Moikau Station	23.90	168	P	P	03 21 00.2	-0.5
PLWZ	Palliser	24.05	168	P	P	03 21 01.5	-0.6
QLP	Quilpie	24.07	245	P	P	03 21 03.2	+0.7
	baz=24,SNR=5.9						
CNB	Canberra Magne	24.22	221	P	P	03 21 05.3	+1.4
	baz=24,SNR=5.8						
CMSA	Cobar Meteorol	24.69	233	P	P	03 21 08.9	+0.9
	baz=25,SNR=12						
LTZ	Lake Taylor	24.78	174	P	P	03 21 09.1	+0.4
RPZ	Rata Peaks	25.60	176	P	P	03 21 17.4	+1.2

	comp=Z,5.5nm,0.5s,baz=20,slow=6.2,SNR=5.7						
RPZ	Rata Peaks	25.60	176	P	P	03 21 15.1	-1.1
RPZ				IAmb	IAmb	03 21 25.3	
	comp=Z,12nm,1.1s						
QIS	Mount Isa	27.50	260	P	P	03 21 34.8	+1.3
	baz=28,SNR=6.2						
STKA	Stephens Creek	28.00	236	P	P	03 21 38.8	+1.1
	baz=28,SNR=42						
STKA	Stephens Creek	28.00	236	P	P	03 21 38.7	+1.1
	comp=Z,17nm,0.6s,baz=63,slow=8.0,SNR=55						
STKA	Stephens Creek	28.00	236	P	P	03 21 36.8	-0.9
HTT	Hallett	30.67	234	P	P	03 22 02.2	+0.8
	baz=31,SNR=5.1						
WR0	Warramunga Arr	32.27	261	P	P	03 22 14.8	-0.6
WR0				IAmb	IAmb	03 22 15.7	
	comp=Z,18nm,1.1s						
WB0	Warramunga Arr	32.42	262		P	03 22 15.6	-1.1
WB2	Warramunga Arr	32.45	261	P	P	03 22 16.6	-0.4
	baz=33						
WB2	Warramunga Arr	32.45	261		P	03 22 15.8	-1.2
WB2				IAmb	IAmb	03 22 17.4	
	comp=Z,17nm,0.9s						
WRA	Warramunga Arr	32.46	261	P	P	03 22 16.5	-0.6
	comp=Z,9.5nm,0.6s,baz=79,slow=6.1,SNR=89						
WRA	Warramunga Arr	32.46	261	P	P	03 22 15.7	-1.4
BBOO	Buckleboo	32.71	237	P	P	03 22 19.6	+0.5
	baz=33,SNR=26						
AS31	Alice Springs	32.88	254	P	P	03 22 19.3	-1.4
ASAR	Alice Springs	32.88	254	P	P	03 22 20.6	-0.1
	comp=Z,50nm,0.7s,baz=83,slow=8.9,SNR=425						
ASAR				S	S	03 27 22.7	-0.8
	comp=Z,1.2nm,0.9s,baz=85,slow=18,SNR=5.9						
ASAR	Alice Springs	32.88	254	P	P	03 22 19.3	-1.4
ASPA	Alice Springs	32.88	254	P	P	03 22 20.8	0.0
	baz=33						
MTN	Manton Dam	36.49	273	P	P	03 22 52.1	+0.4
	baz=37,SNR=5.1						
FAKI	Fak Fak	38.73	289	P	P	03 23 09.2	-1.3
FORT	Forrest	38.84	243	P	P	03 23 11.4	+0.2
	baz=39,SNR=26						
SWI	Sorong	40.52	291	P	P	03 23 24.0	-1.3
	comp=Z,67nm,0.6s						
FITZ	Fitzroy Crossi	40.81	263	P	P	03 23 28.4	+0.8
	baz=41,SNR=37						
KMBL	Kambalda	44.17	243	P	P	03 23 54.4	-0.1
	baz=44,SNR=6.8						
SANI	Sanana	44.78	286	P	P	03 24 00.6	+1.1
MEEK	Meekatharra	46.80	250	P	P	03 24 15.6	+0.4
	baz=47,SNR=16						
KLBR	Kellerberrin	47.70	244	P	P	03 24 21.9	-0.2
	baz=48,SNR=9.5						
NWAO	Narrogin (SRO)	48.24	242	P	P	03 24 25.9	-0.2
	baz=48,SNR=4.7						
TOLI2	Tolitoli	50.81	287		P	03 24 45.0	-0.8
MPSI	Mapaga	51.30	286	P	P	03 24 49.4	-0.1
VNDA	Vanda	59.53	182	P	P	03 25 45.8	-1.3
	comp=Z,1.6nm,0.7s,baz=27,slow=5.9,SNR=8.1						
VNDA	Vanda	59.53	182	P	P	03 25 45.9	-1.3
MJAR	Matsushiro Arr	61.51	332	P	P	03 26 01.3	+0.2
	comp=Z,2.0nm,0.9s,baz=186,slow=7.5,SNR=3.3						
MJAR	Matsushiro Arr	61.51	332	P	P	03 26 00.4	-0.6
NJ2	Nanjing	69.02	316	*e*P	P	03 26 51.1	+1.7
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
PETK	Petropavlovsk-	71.56	353	P	P	03 27 05.8	+1.4
	comp=Z,2.3nm,0.8s,baz=153,slow=9.7,SNR=3.4						
PETK	Petropavlovsk-	71.56	353	P	P	03 27 05.1	+0.8
CMAR	Chiang Mai Arr	77.54	294	P	P	03 27 40.2	+0.7
	comp=Z,1.2nm,0.3s,baz=138,slow=4.3,SNR=6.4						
CMAR	Chiang Mai Arr	77.54	294	P	P	03 27 38.7	-0.8
HHC	Hu-ho-hao-te	79.01	320	*e*P	P	03 27 49.0	+1.7
HHC				S	S	03 37 25.6	-3.9
HHC				SS	SS	03 42 46.1	+5.9
HHC				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,6.3s						
MAW	Mawson	79.26	202	P	P	03 27 48.6	+0.6
	comp=Z,3.7nm,0.8s,baz=96,slow=10,SNR=2.3						
LZH	Lanzhou	81.57	312	⇑P	P	03 28 03.0	+1.9
LZH				pP	pP	03 28 47.3	-1.8
LZH				sP	sP	03 29 04.8	-5.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
BELA	Belgrano 2	83.26	175	P	P	03 28 07.9	-1.1
BILL	Bilibino	85.93	359	P	P	03 28 22.5	+0.3
BILL				IAmb	IAmb	03 28 23.4	
	comp=Z,6.1nm,0.8s						
GTA	Gaotai	85.96	314	*e*P	P	03 28 28.8	+5.6
GTA				pP	pP	03 29 10.8	-1.3
GTA				sP	sP	03 29 31.3	-1.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	85.99	323	P	P	03 28 23.9	+0.7
	comp=Z,0.5nm,0.4s,baz=144,slow=7.4,SNR=3.9						
ORV	Oroville	86.72	47	P	P	03 28 27.0	+0.2
AFDM	Forest Hills D	86.81	47	P	P	03 28 27.7	+0.4
AFDM				IAmb	IAmb	03 28 28.6	
	comp=Z,6.1nm,0.9s						
CMB	Columbia Colle	86.83	48	P	P	03 28 27.8	+0.4
CMB				IAmb	IAmb	03 28 28.6	
	comp=Z,5.5nm,0.8s						
YBH	Yreka Blue Hor	86.89	44	P	P	03 28 28.5	+0.9
	comp=Z,2.4nm,0.8s,baz=158,slow=4.9,SNR=6.4						
YBH	Yreka Blue Hor	86.89	44	P	P	03 28 28.1	+0.5
HUMO	Hull Mountain	87.13	43	P	P	03 28 29.2	+0.5
HUMO				IAmb	IAmb	03 28 30.7	
	comp=Z,4.9nm,0.9s						
MDPB	Devils Postpil	87.59	49	P	P	03 28 31.2	-0.1
WAKR	Walker	87.70	48	P	P	03 28 31.8	0.0
PAHR	Pah Rah Range	88.25	47	P	P	03 28 34.3	+0.1
PAHR				IAmb	IAmb	03 28 35.9	
	comp=Z,5.9nm,1.2s						
LHV	Little Huntoon	88.26	49	P	P	03 28 34.2	+0.2
NVAR	Mina Array Bea	88.48	49	P	P	03 28 35.9	+0.5
	comp=Z,2.2nm,0.8s,baz=228,slow=8.4,SNR=16						
NVAR	Mina Array Bea	88.48	49	P	P	03 28 35.5	0.0
MOD	Modoc Plateau	88.57	45	P	P	03 28 36.0	+0.3
PINE	Pine Mountain	88.98	43	P	P	03 28 37.7	+0.1
PINE				IAmb	IAmb	03 28 39.1	
	comp=Z,4.8nm,0.7s						
HDA	Harding Lake	89.04	18	P	P	03 28 38.0	+0.8
HDA				IAmb	IAmb	03 28 38.7	
	comp=Z,4.3nm,0.8s						
IL31		89.33	17	P	P	03 28 37.4	-1.0
ILAR	Eielson Array	89.33	17	P	P	03 28 37.0	-1.5
	comp=Z,2.2nm,0.8s,baz=236,slow=5.3,SNR=15						
ILAR	Eielson Array	89.33	17	P	P	03 28 36.8	-1.7
TPNV	Topopah Spring	89.37	51	P	P	03 28 39.6	0.0
TPNV				IAmb	IAmb	03 28 40.6	
	comp=Z,3.8nm,0.8s						
WVOR	Wild Horse Val	89.92	45	P	P	03 28 42.3	+0.3
WVOR				IAmb	IAmb	03 28 43.1	
	comp=Z,5.1nm,0.9s						
I07A	Izee	90.04	43	P	P	03 28 42.8	+0.4
I07A				IAmb	IAmb	03 28 44.1	
	comp=Z,5.9nm,0.8s						
SNAA	Sanae	90.25	183	P	P	03 28 42.2	-0.8
SNAA	Sanae	90.25	183	P	P	03 28 42.4	-0.6
SNAA				IAmb	IAmb	03 28 42.6	
	comp=Z,5.9nm,0.9s						
PRN	Pahroc Range	90.43	51	P	P	03 28 44.6	+0.2
PRN				IAmb	IAmb	03 28 46.2	
	comp=Z,5.7nm,0.8s						
W13A	Hualapai Mount	90.44	53	P	P	03 28 44.5	-0.2
W13A				IAmb	IAmb	03 28 46.1	
	comp=Z,3.3nm,0.8s						
VNA3	Neumayer Olymp	90.86	181	P	P	03 28 45.4	-0.3
E07A	Sunnyside	90.88	41	P	P	03 28 46.7	+0.5
G08A	Pilot Rock	90.91	42	P	P	03 28 46.8	+0.3
G08A				IAmb	IAmb	03 28 47.9	
	comp=Z,5.2nm,0.7s						
HAWA	Hanford	91.01	41	P	P	03 28 47.2	+0.5
HAWA				IAmb	IAmb	03 28 48.4	
	comp=Z,5.3nm,0.8s						
VNA2	Neumayer--Watz	91.15	181	P	P	03 28 46.3	-0.7
	baz=172,slow=4.0						
VNA1	Neumayer--Stat	91.44	181	P	P	03 28 47.4	-0.9
U15A	North Rim	92.13	52	P	P	03 28 52.4	-0.1
U15A				IAmb	IAmb	03 28 54.3	
	comp=Z,5.1nm,0.8s						
WUAZ	Wupatki	92.50	54	P	P	03 28 54.2	0.0
WUAZ				IAmb	IAmb	03 28 55.7	
	comp=Z,3.1nm,0.9s						
WMQ	Urumqi	96.03	314	*e*P	P	03 29 11.1	+1.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.7s						
YKA	Yellowknife Ar	99.93	27	P	Pdif	03 29 27.1	+0.2
	comp=Z,1.4nm,0.6s,baz=249,slow=3.9,SNR=31						
MKAR	Makanchi Array	100.55	316	P	Pdif	03 29 31.3	+1.2
	comp=Z,0.3nm,0.5s,baz=106,slow=3.8,SNR=4.4						
ARCES	ARCESS Array B	123.85	345	PKP	PKPdf	03 34 37.5	-1.4
	comp=Z,0.7nm,0.4s,baz=62,slow=2.6,SNR=9.1						
AKASG	Malin Array Be	134.26	325	PKP	PKPdf	03 34 58.6	-0.5
	comp=Z,0.4nm,0.4s,baz=52,slow=2.7,SNR=2.0						
AKASG	Malin Array Be	134.26	325		PKPdf	03 34 59.0	-0.1
GERES	GERESS Array B	143.25	332	PKP	PKPbc	03 35 13.1	-0.2
	comp=Z,0.8nm,0.7s,baz=54,slow=3.5,SNR=6.2						
SOKA	Soboth	144.17	328	P	PKPbc	03 35 16.4	+0.3
	comp=Z,2.8nm,0.6s,SNR=4.2						
OBKA	Obir	144.53	329	*e*P	PKPbc	03 35 17.4	+0.2
	comp=Z,1.2nm,0.5s						
KBA	Koelnbreinsper	144.71	330	*e*P	PKPab	03 35 17.8	0.0
	comp=Z,1.8nm,0.6s						
MEM	Membach	144.75	341	*d*PKPdf	PKPdf	03 35 18.1	0.0
MEM				*d*PKiKP	PKiKP	03 35 22.0	0.0
MYKA	Terra Mystica	144.89	330	P	PKPbc	03 35 18.2	0.0
	comp=Z,4.7nm,0.5s,SNR=4.2						
BSTI	Sart Tilman	144.90	341	*d*PKP	PKPdf	03 35 18.4	0.0
BCLA	Clavier	145.13	341	*d*PKPdf	PKPbc	03 35 18.7	0.0
WATA	Walderalm	145.32	332	*i* P	PKPab	03 35 20.0	-0.1
	comp=Z,1.5nm,0.4s						
ABTA	Abfaltersbach	145.34	331	P	PKPdf	03 35 19.5	0.0
	comp=Z,4.5nm,0.9s,SNR=4.9						
WTTA	Wattenberg	145.35	332	*i* P	PKPbc	03 35 19.9	+0.2
	comp=Z,1.1nm,0.3s						
WLF	Walferdange	145.52	340	*d*PKP	PKPab	03 35 20.8	+0.3
MOTA	Moosalm	145.52	333	*e*P	PKPbc	03 35 20.2	-0.1
	comp=Z,4.6nm,0.8s,SNR=5.6						
RETA	Reutte	145.56	333	*e*P	PKPbc	03 35 20.6	+0.3
	comp=Z,1.8nm,0.6s						
SQTA	Sankt Quirin	145.57	332	P	PKPab	03 35 21.0	0.0
	comp=Z,5.2nm,0.6s,SNR=6.1						
DOU	Dourbes	145.63	342	*d*PKPdf	PKPbc	03 35 20.1	-0.2
FETA	Feichten	145.93	333	*e*P	PKPdf	03 35 21.0	+0.5
	comp=Z,6.0nm,1.0s						
DAVA	Damuels	146.09	334	*i* P	PKPab	03 35 22.9	-0.1
	comp=Z,2.6nm,0.5s						
TORD	Torodi Ar. Bea	166.50	250	PKP	PKPdf	03 35 46.5	-1.0
	comp=Z,1.6nm,0.9s,baz=101,slow=2.3,SNR=3.9						

SOME 22 03:16:15.5, 42°.35N×80°.97E, h0^{km}, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTMS	Ketmen	1.19	338	*e*P	Pb	03 16 39.2	+0.3
	1.6nm,0.1s						
KTMS				*e*S	Sn	03 16 56.4	0.0
	1.3nm,0.1s						
SHLS	Shalkode	1.37	307	*e*P	Pg	03 16 38.1	-3.7
	3.9nm,0.2s						
SHLS				*e*S	Sg	03 16 54.6	-5.0
	3.6nm,0.1s						
UZB	Uzynbulak	1.64	300	*e*P	Pg	03 16 47.9	+1.0
	0.6nm,0.1s						
UZB				*e*S	Sg	03 17 11.0	+2.9
	1.2nm,0.2s						
KPKS	Kokpek	2.01	304	*e*P	Pg	03 16 53.7	-0.4
	1.9nm,0.1s						
SATY	Saty	2.02	291	*e*P	Pg	03 16 54.3	+0.1
	0.9nm,0.1s						
SATY				*e*S	Sg	03 17 22.1	+1.8
	3.1nm,0.3s						

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*TUL **22** 03:23:22.3±0.8, 36°.93N±0°.04×97°.64W±0°.03, h2^{km}±7^{km}, ML3.1, mb_Lg2.9/69(NEIC), Error ellipse: s-maj=5.9km s-min=1.8km az=210.0*

*NEIC **22** 03:23:22.5±0.6, 36°.92N±0°.03×97°.64W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=6.7km s-min=3.0km az=31.0*

*ANF **22** 03:23:24.1±1.4, 36°.84N×97°.68W, h9^{km}±8^{km}, ML3.7/8, Error ellipse: s-maj=5.4km s-min=3.5km az=51.0*

ISC 22 03:23:22.7±1.0**, 36°.92N**±0°.02×**97°.63W**±0°.02**, h7**^{km}±9^{km}**, n78, σ**$0^{s}.78$/67**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.15	51	Pg	Pg	03 23 25.9	0.0
KAN13				Sg	Sg	03 23 28.2	+0.2
KAN01	Argonia South	0.26	336	Pg	Pg	03 23 27.4	-0.3
KAN14	Manchester OK	0.27	279	Pg	Pg	03 23 27.7	-0.3
KAN14				Sg	Sg	03 23 31.4	-0.2
KAN08	Anthony NE Sta	0.41	319		Pg	03 23 30.4	-0.3
KAN08				Sg	Sg	03 23 35.9	-0.2
KAN10	Anthony SW Sta	0.43	299		Pg	03 23 30.7	-0.3
KAN10				Sg	Sg	03 23 36.3	-0.2
KAN12	Harper NE Stat	0.48	322		Pg	03 23 31.6	-0.4
KAN12				Sg	Sg	03 23 37.9	-0.4
CROK	Carrier	0.50	215		Pg	03 23 32.4	+0.1
CROK				Sg	Sg	03 23 39.4	+0.6
T35A	Sooner Cattle	0.90	90		Pg	03 23 39.6	-0.3
T35A				Sg	Sg	03 23 51.4	-0.1
T35B	Sooner Cattle	0.90	90	P		03 23 39.5	
	baz=271,SNR=75						
T35B				S		03 23 51.4	
	baz=271						
QUOK	Quay	1.05	135	Pg	Pg	03 23 42.6	-0.2
OK029	Liberty Lake	1.13	173		Pg	03 23 43.9	-0.3
OK031	S. Brethren Rd	1.15	146		Pg	03 23 44.5	-0.3
OK030	Cody Creek RV	1.20	145		Pg	03 23 45.2	-0.5
U32A	Winter Ranch,	1.23	245		Pg	03 23 45.2	-1.0
U32A	Winter Ranch,	1.23	245	P		03 23 45.1	
	baz=63						
BCOK	Bluff Creek, N	1.26	179	Pg	Pg	03 23 46.3	-0.5
OK025	Westminster Rd	1.35	170		Pn	03 23 48.0	0.0
OKCFA	Oklahoma City	1.50	174		Pn	03 23 50.5	+0.3
OKCSW	OKLAHOMA CITY	1.52	174		Pn	03 23 50.8	+0.5
FNO	Franklin	1.67	174		Pn	03 23 52.7	+0.4
R32A	Long Quarter,	1.73	331		Pn	03 23 53.3	0.0
R32A	Long Quarter,	1.73	331	P		03 23 53.8	
	baz=150,SNR=76						
R32A				S		03 24 16.4	
	baz=150						
TUL1	Leonard	1.79	124	P	Pn	03 23 55.1	+1.0
	baz=305						
TUL1				S	Sb	03 24 19.4	+1.0
	baz=305						
TUL1	Leonard	1.79	124	Pn	Pn	03 23 54.7	+0.7
TUL1	Leonard	1.79	124	P		03 23 54.7	
	baz=305,SNR=87						
TUL1				S		03 24 19.5	
	baz=305						
KSU1	Kansas State U	2.33	20	P	Pn	03 24 03.0	+1.5
	baz=201						
KSU1				S	Sb	03 24 34.1	+0.2
	baz=201						
KSU1	Kansas State U	2.33	20	Pn	Pn	03 24 01.4	-0.1
KSU1	Kansas State U	2.33	20	S		03 24 34.2	
	baz=201						
WMOK	Wichita Mounta	2.37	204	Pn	Pn	03 24 02.1	+0.1
WMOK	Wichita Mounta	2.37	204	P		03 24 02.5	
	baz=22						
CBKS	Cedar Bluff	2.52	319	P	Pn	03 24 05.5	+1.3
	baz=138						
CBKS				S	Sb	03 24 39.2	-0.5
	baz=138						
CBKS	Cedar Bluff	2.52	319	Pn	Pn	03 24 03.9	-0.3
CBKS	Cedar Bluff	2.52	319	P		03 24 04.0	
	baz=138,SNR=32						
CBKS				S		03 24 40.0	
	baz=138						
U38A	Gravette	2.65	99	Pn	Pn	03 24 06.1	+0.2
X37A	Clayton	2.96	141	Pn	Pn	03 24 10.5	+0.4
X37A				IAmb_Lg		03 25 04.3	
	comp=Z,47nm,0.9s						
X37A	Clayton	2.96	141	P		03 24 11.2	
	baz=322						
HHAR	Hobbs	3.04	101		Pn	03 24 11.4	+0.2
HHAR				IAmb_Lg		03 25 05.4	
	comp=Z,29nm,0.7s						
HHAR	Hobbs	3.04	101	P		03 24 12.3	
	baz=283						
S39A	Bolivar	3.52	76		Pn	03 24 18.0	+0.1
S39A	Bolivar	3.52	76	P		03 24 18.8	
	baz=259,SNR=22						
W39A	Magazine	3.56	118	Pn	Pn	03 24 18.7	+0.3
N33A	J Bar K, Exete	3.82	2	Pn	Pn	03 24 21.8	-0.1
N33A				IAmb_Lg		03 25 33.5	
	comp=Z,24nm,0.8s						
U40A	Yellville	3.88	97	P	Pn	03 24 24.5	+1.7
	baz=280						
U40A				S	Sn	03 25 08.7	0.0
	baz=280						
U40A	Yellville	3.88	97	Pn	Pn	03 24 23.0	+0.2
U40A	Yellville	3.88	97	P		03 24 23.4	
	baz=280,SNR=9.8						
U40A				P		03 24 23.4	
	baz=280,SNR=9.8						
MIAR	Mount Ida	4.06	124	Pb	Pb	03 24 35.7	+1.2
	baz=307						
MIAR	Mount Ida	4.06	124	Pn	Pn	03 24 25.5	+0.3
MIAR				IAmb_Lg		03 25 35.3	
	comp=Z,31nm,0.9s						
P38A	Dawn	4.21	49	Pn	Pn	03 24 27.6	+0.4
P38A				IAmb_Lg		03 25 45.7	
	comp=Z,22nm,0.8s						
N35A	Tabor	4.23	21	Pn	Pn	03 24 27.9	+0.3
Z38A	Mt. Pleasant	4.24	149	Pn	Pn	03 24 27.8	+0.1
MGMO	Mountain Grove	4.29	85	Pn	Pn	03 24 28.4	-0.1
MGMO				IAmb_Lg		03 25 41.4	
	comp=Z,25nm,0.7s						
KSCO	Kaye Shedlock'	4.47	299	Pn	Pn	03 24 30.7	-0.3
KSCO				IAmb_Lg		03 25 44.1	
	comp=Z,22nm,0.8s						
R40A	Maddies Statio	4.47	71	Pn	Pn	03 24 31.2	+0.3
R40A	Maddies Statio	4.47	71	P		03 24 31.7	
	baz=254,SNR=12						
BGNE	Belgrade	4.50	355	Pn	Pn	03 24 31.1	-0.3
BGNE				IAmb_Lg		03 25 54.4	
	comp=Z,35nm,0.8s						
BGNE	Belgrade	4.50	355	P		03 24 31.7	
	baz=175,SNR=6.4						
FCAR	Ozark Folk Cen	4.56	101	IAmb_Lg		03 25 44.8	
	comp=Z,34nm,0.8s						
X40A	Basin Creek Fa	4.59	120	Pn	Pn	03 24 32.6	0.0
X40A				IAmb_Lg		03 25 48.2	
	comp=Z,19nm,0.7s						
WHAR	Wooly Hollow	4.62	109	Pn	Pn	03 24 32.8	-0.1
W41B	Gary Mavity, V	4.69	110	Sb	Sg	03 25 48.8	-4.6
	baz=294						
W41B	Gary Mavity, V	4.69	110	Pn	Pn	03 24 34.1	+0.1
W41B				IAmb_Lg		03 25 54.4	
	comp=Z,21nm,0.7s						
WLAR	White Oak Lake	4.90	130	IAmb_Lg		03 26 10.9	
	comp=Z,18nm,0.8s						
WHTX	Lake Whitney,	4.92	178	P	Pn	03 24 37.7	+0.7
	baz=358						
WHTX				S	Sn	03 25 34.0	-0.2
	baz=358						
WHTX	Lake Whitney,	4.92	178	Pn	Pn	03 24 37.2	+0.1
P40A	Paris	5.11	58	IAmb_Lg		03 26 10.0	
	comp=Z,15nm,0.7s						
L34A	Svendsen Farm,	5.14	10	IAmb_Lg		03 26 08.6	
	comp=Z,28nm,0.8s						
N38A	Joes South For	5.17	40	Pn	Pn	03 24 40.5	0.0
N38A				IAmb_Lg		03 26 10.3	
	comp=Z,24nm,0.7s						
CCM	Cathedral Cave	5.20	75	Pn	Pn	03 24 40.8	-0.2
T42A	Van Buren	5.23	87	Pn	Pn	03 24 41.5	+0.1
OGNE	Ogallala	5.29	321	Pn	Pn	03 24 42.0	-0.3
T25A	Trinidad	5.43	274	P	Pn	03 24 44.2	-0.1
	baz=90						
T25A	Trinidad	5.43	274	Pn	Pn	03 24 43.5	-0.8
T25A				IAmb_Lg		03 26 23.5	
	comp=Z,16nm,0.9s						
CCAR	Cane Creek	5.64	120	IAmb_Lg		03 26 25.5	
	comp=Z,21nm,0.8s						
K31A	O'Neill	5.76	352	IAmb_Lg		03 26 36.4	
	comp=Z,23nm,0.7s						
PBMO	Poplar Bluff	5.78	89	IAmb_Lg		03 26 24.0	
	comp=Z,20nm,0.8s						
FVM	French Village	5.83	77	IAmb_Lg		03 26 29.2	
	comp=Z,17nm,0.8s						
X43A	Marvell	5.99	112	IAmb_Lg		03 26 42.8	
	comp=Z,27nm,0.8s						
435B	Jarrell	6.12	180	IAmb_Lg		03 26 41.0	
	comp=Z,13nm,0.8s						
Q24A	Divide	6.29	291	IAmb_Lg		03 26 46.1	
	comp=Z,13nm,0.8s						
N41A	Harden Midland	6.50	52	IAmb_Lg		03 26 51.5	
	comp=Z,14nm,0.8s						
JCT	Junction City	6.67	196	IAmb_Lg		03 27 00.8	
	comp=Z,13nm,0.8s						
S44A	Carbondale	6.72	81	IAmb_Lg		03 26 57.0	
	comp=Z,23nm,0.8s						
SIUC	Southern Illin	6.75	81	IAmb_Lg		03 26 56.9	
	comp=Z,22nm,0.9s						
HDIL	Hopedale	7.46	58	IAmb_Lg		03 27 28.6	
	comp=Z,19nm,0.7s						
N23A	Red Feather La	7.60	304	IAmb_Lg		03 27 36.2	
	comp=Z,18nm,0.9s						
PLAL	Pickwick Lake	7.98	101	IAmb_Lg		03 27 37.0	
	comp=Z,7.9nm,0.9s						
JFWS	Jewell Farm	8.25	41	IAmb_Lg		03 27 48.4	
	comp=Z,17nm,0.8s						
K22A	Casper	8.92	313	IAmb_Lg		03 28 14.7	
	comp=Z,8.8nm,1.1s						
PV04	Paradox Valley	9.06	283	IAmb_Lg		03 28 27.3	
	comp=Z,12nm,0.8s						
W18A	Petrified Fore	9.97	263	IAmb_Lg		03 28 38.3	
	comp=Z,11nm,1.0s						
R49A	Shelbyville	9.98	78	IAmb_Lg		03 29 01.1	
	comp=Z,7.3nm,1.2s						

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*IDC **22** 03:42:32.3±0.7, 29°.20N×81°.02E, h0^{km}, mb3.9/19, mb1 4.1/22, mb1mx4.0/47, mbtmp4.0/22, ML4.0/3, MS3.0/2, Ms1 3.0/2, ms1mx2.7/38, Error ellipse: s-maj=21.5km s-min=15.1km az=49.0*

*NDI **22** 03:42:36.4±3.1, 29°.20N×80°.95E, h10^{km}, ML4.1, mb4.0(NEIC)*

*BJI **22** 03:42:37.2±0.0, 29°.48N×81°.09E, h28^{km}, mB4.6/14, mb4.2/25*

*NEIC **22** 03:42:38.0±1.6, 29°.4N±0°.1×81°.05E±0°.10, h41^{km}±6^{km}, mb4.0/16, Error ellipse: s-maj=18.0km s-min=8.1km az=214.0*

ISC 22 03:42:33.9±0.4**, 29°.27N**±0°.05×**80°.97E**±0°.04**, h10**^{km}**, n80, σ**$1^{s}.55$/91**, mb4.2**/31**, 1C-1D, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DDI	Dehra Dun	2.74	293	*e*P	Pb	03 43 22.0	-1.0
DDI				*e*S	Sb	03 43 55.1	-1.6
DDI				IAML		03 43 55.9	
	comp=N,2µm,0.3s						
DDI				IAML		03 43 56.2	
	comp=E,2µm,0.3s						
NDI	New Delhi	3.34	261	*e*P	Pn	03 43 29.5	+3.3
NDI				*e*x	x	03 43 39.0	
NDI				*e*S	Sn	03 44 07.0	+1.1
SMLA	Simla	3.77	300	*e*P	Pn	03 43 34.9	+2.8
SMLA				*e*S	Sn	03 44 17.9	+1.3
SMLA				IAML		03 44 21.2	
	comp=E,422nm,0.5s						
SMLA				IAML		03 44 21.2	
	comp=N,358nm,0.4s						
BHK	Bhakra	4.48	300	*e*P	Pg	03 44 01.2	+1.5
BHK				*e*S	Sg	03 44 58.0	+0.3
DHRM	DHARAMSHALA	4.99	308	*e*P	Pn	03 43 50.7	+1.6
DHRM				*e*S	Sn	03 44 47.2	+0.2
DHRM				IAML		03 44 49.6	
	comp=N,697nm,0.5s						
DHRM				IAML		03 44 50.1	
	comp=E,635nm,0.6s						
BHPL	Bhopal	6.80	209	*e*P	Pn	03 44 14.2	+0.5
BHPL				*e*S	Sn	03 45 25.9	-5.3
BOK	Bokaro	7.01	140	*e*P	Pn	03 44 16.9	+0.3
BOK				*e*S	Sn	03 45 35.2	-1.3
NIL	Nilore	7.90	305	Pn	Pn	03 44 30.4	+1.5
NGP	Nagpur	8.27	193	*e*P	Pn	03 44 33.3	-0.6
THW	Thamme Wali	8.66	296	P	Pn	03 44 41.2	+1.9
LSA	Lhasa	8.88	85		Pn	03 44 43.5	+0.7
CEP	Cherat	8.96	303	P	Pn	03 44 44.4	+0.9
CEP				S	Sn	03 46 21.0	-3.6
SHL	Shillong	10.38	108	Pn	Pn	03 45 04.0	+1.0
KBL	Kabul	11.41	300	Pn	Pn	03 45 18.2	+1.1
KBL					Sn	03 47 23.9	-0.9
HYB	Hyderabad	12.01	191	*i* P	Pn	03 45 26.0	+0.8
HYB				*e*S	Sn	03 47 31.0	-8.3
POO	Poona	12.52	213	*e*P	Pn	03 45 31.0	-1.2

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           comp=E,15nm,1.0s
POO                                 i S    Sn       03 47 43.0  -8.7
AAK    Ala-Archa        14.32 340   Pn     Pn       03 45 57.9 +1.0
           comp=E,0.2nm,0.3s,baz=187,slow=17,SNR=5.7
AAK                                 Sn     Sn       03 48 15.1   -21
           comp=E,0.1nm,0.3s,baz=264,slow=15,SNR=1.2
AAK    Ala-Archa        14.32 340   Pn     Pn       03 45 57.8 +0.9
WMQ    Urumqi           15.48  19  eP      Pn       03 46 13.4 +1.0
WMQ                                 pP     sP       03 46 22.1 +0.4
WMQ                                 pmax   pmax
           comp=E,17nm,1.1s
WMQ                                 pmax   pmax
           comp=E,200nm,5.5s
KK31   Karatay Array    16.16 331          Pn       03 46 22.0 +0.9
KKAR   Karatay Array    16.16 331          Pn       03 46 20.0  -1.1
KKAR   Karatay Array    16.16 331          Pn       03 46 22.0 +0.9
KKAR                                IAmb   IAmb     03 46 26.8
           comp=Z,2.7nm,0.6s
MK31   Makanchi Array   17.52   3   P      Pn       03 46 38.0  -0.3
MK31                                IAmb   IAmb     03 46 42.3
           comp=Z,11nm,1.1s
MKAR   Makanchi Array   17.52   3   P      Pn       03 46 37.4  -0.9
           comp=Z,0.3nm,0.3s,baz=182,slow=8.3,SNR=22
MKAR                                S      Sn       03 49 44.5  -8.9
           comp=Z,0.1nm,0.3s,baz=181,slow=10,SNR=7.4
MKAR   Makanchi Array   17.52   3          Pn       03 46 36.8  -1.5
MAKZ   Makanchi         17.52   2          Pn       03 46 36.9  -1.4
MAKZ                                IAmb   IAmb     03 46 41.9
           comp=Z,8.2nm,1.0s
GTA    Gaotai           18.53  52  eP      P        03 46 49.1  -1.5
GTA                                 pP     sP       03 46 56.3 +0.9
GTA                                 sP     pP       03 46 59.9 +6.0
GTA                                 pmax   pmax
           comp=Z,2.0nm,1.1s
CMAR   Chiang Mai Arr   19.62 119   P      P        03 47 03.4 +0.8
           comp=Z,0.7nm,0.3s,baz=302,slow=12,SNR=14
CMAR                                LR     LR       03 56 32.8
           comp=Z,13nm,19.6s,baz=65,slow=43
CMAR   Chiang Mai Arr   19.62 119   P      P        03 47 03.0 +0.3
KMI    Kunming          19.80  97 ⇑P       Pn       03 47 07.6 +1.3
KMI                                 pmax   pmax
           comp=Z,10.0nm,1.3s
LZH    Lanzhou          20.39  65 ⇓P       P        03 47 11.8 +0.7
LZH                                 pP     sP       03 47 21.0 +5.0
LZH                                 sP     pP       03 47 28.8   +14
LZH                                 pmax   pmax
           comp=Z,18nm,1.1s
GEYT   Alibeck          20.86 300   P      P        03 47 17.5 +1.4
           comp=Z,1.9nm,0.5s,baz=186,slow=22,SNR=4.5
GEYT   Alibeck          20.86 300   P      P        03 47 16.0   0.0
KURBB  Kurchatov Arra   21.40 356   P      P        03 47 21.8 +0.1
           comp=Z,7.5nm,0.8s,baz=181,slow=10,SNR=48
KURK   Kurchatov        21.49 356   P      P        03 47 22.7 +0.1
SLVN   Son La           22.17 106   P      P        03 47 30.8 +0.6
SLVN                                IAmb   IAmb     03 47 34.2
           comp=Z,9.0nm,1.1s
ZAA0   Zalesovo Array   24.82   5   P      P        03 47 55.2  -0.8
ZAA0                                IAmb   IAmb     03 47 57.6
           comp=Z,8.4nm,1.0s
ZALV   Zalesovo Beam    24.82   5   P      P        03 47 56.5 +0.5
           comp=Z,8.3nm,0.9s,baz=197,slow=9.3,SNR=19
ZALV   Zalesovo Beam    24.82   5   P      P        03 47 55.3  -0.7
BVAR   Borovoye Array   24.98 345   P      P        03 47 57.4  -0.1
           comp=Z,0.4nm,0.5s,baz=144,slow=16,SNR=3.3
BRVK   Borovoye         25.03 345   P      P        03 47 57.3  -0.7
ABKAR  Akbulak array    25.60 327   P      P        03 48 02.7  -0.5
ABKAR  Akbulak array    25.60 327   P      P        03 48 02.9  -0.3
ABKAR                               IAmb   IAmb     03 48 12.1
           comp=Z,4.4nm,0.8s
SONM   Songino Array    26.99  40   P      P        03 48 17.0 +1.1
           comp=Z,0.4nm,0.4s,baz=255,slow=10.0,SNR=3.3
SONM                                PcP    PcP      03 51 38.3 +0.9
           comp=Z,0.6nm,0.9s,baz=202,slow=3.1,SNR=3.0
SONM   Songino Array    26.99  40   P      P        03 48 14.3  -1.6
SONM                                       PcP      03 51 36.5  -0.9
AKTO   Aktyubinsk       27.32 327   P      P        03 48 20.3 +1.6
           comp=Z,0.5nm,0.5s,baz=106,slow=10,SNR=2.3
HHC    Hu-ho-hao-te     27.44  57  eP      P        03 48 20.3 +0.2
HHC                                 pmax   pmax
           comp=Z,6.0nm,0.9s
HHC                                 pmax   pmax
           comp=Z,120nm,4.4s
ARU    Arti             31.44 336   LR     LR       04 03 13.3
           comp=Z,86nm,21.5s,baz=337,slow=39
GSI    Gunungsitoli     32.00 147   P      P        03 49 00.9 +0.3
KBZ    Khabaz           33.52 306   P      P        03 49 13.0  -0.5
           comp=Z,0.9nm,0.7s,baz=237,slow=20,SNR=2.3
AKASG  Malin Array Be   43.99 314   P      P        03 50 41.4 +0.1
           comp=Z,0.2nm,0.3s,baz=79,slow=7.7,SNR=5.6
AKASG  Malin Array Be   43.99 314   P      P        03 50 40.8  -0.5
AKBB   Malin Array Si   43.99 314   P      P        03 50 40.9  -0.3
AKBB                                IAmb   IAmb     03 50 43.4
           comp=Z,3.2nm,0.8s
MLR    Muntele Rosu     45.73 306   P      P        03 50 55.4   0.0
BURAR  Bucovina Array   46.30 309   P      P        03 51 00.2 +0.4
FINES  FINESS Array B   48.08 328   P      P        03 51 14.1 +0.8
           comp=Z,3.7nm,0.9s,baz=169,slow=12,SNR=4.1
FINES  FINESS Array B   48.08 328   P      P        03 51 13.3   0.0
ARCES  ARCESS Array B   50.98 338   P      P        03 51 36.4 +1.0
           comp=Z,2.3nm,0.8s,baz=108,slow=8.8,SNR=5.5
CONA   Conrad Observa   52.60 310  eP      P        03 51 49.6 +1.6
           comp=Z,2.1nm,0.6s
SOKA   Soboth           53.27 308  eP      P        03 51 54.6 +1.7
           comp=Z,1.3nm,0.4s
GERES  GERESS Array B   53.97 311   P      P        03 51 59.2 +1.2
           comp=Z,0.8nm,0.6s,baz=79,slow=6.9,SNR=8.1
NB2    NORSAR Subarra   55.10 326   P      P        03 52 05.7  -0.2
           comp=Z,1.0nm,0.7s,baz=92,slow=6.9
NOA    NORSAR Array B   55.10 326   P      P        03 52 06.0   0.0
           comp=Z,1.0nm,0.7s,baz=93,slow=7.1,SNR=5.8
WTTA   Wattenberg       55.51 309  eP      P        03 52 09.7 +0.4
WATA   Walderalm        55.54 309  eP      P        03 52 10.6 +1.1
           comp=Z,2.1nm,0.6s
SQTA   Sankt Quirin     55.81 309  eP      P        03 52 11.9 +0.5
           comp=Z,1.9nm,0.5s
MOTA   Moosalm          55.86 310  eP      P        03 52 12.0 +0.2
           comp=Z,4.2nm,0.8s
RETA   Reutte           56.07 310  eP      P        03 52 13.9 +0.8
           comp=Z,2.2nm,0.6s
FETA   Feichten         56.16 309  eP      P        03 52 14.1 +0.2
           comp=Z,1.0nm,0.4s
DAVA   Damuels          56.69 310  eP      P        03 52 18.4 +0.7
           comp=Z,3.7nm,0.6s
ESDC   Sonseca Array    68.35 304   P      P        03 53 36.3 +0.6
           comp=Z,1.3nm,0.8s,baz=50,slow=8.0,SNR=5.0
WRA    Warramunga Arr   71.01 127   P      P        03 53 51.5  -0.7
           comp=Z,1.0nm,0.8s,baz=320,slow=6.4,SNR=4.4
ASAR   Alice Springs    73.22 130   P      P        03 54 04.0  -1.3
           comp=Z,0.4nm,0.5s,baz=315,slow=5.8,SNR=5.3
ASAR   Alice Springs    73.22 130   P      P        03 54 04.5  -0.9
TORD   Torodi Ar. Bea   74.43 277   P      P        03 54 12.7   0.0
           comp=Z,1.9nm,0.9s,baz=42,slow=4.0,SNR=5.2
TORD   Torodi Ar. Bea   74.43 277   P      P        03 54 12.1  -0.6
BOSA   Boshof           78.41 228   P      P        03 54 35.4 +0.3
           comp=Z,3.0nm,0.8s,baz=16,slow=3.2,SNR=5.2
ILAR   Eielson Array    79.15  19   P      P        03 54 38.5 +0.1
           comp=Z,0.8nm,0.9s,baz=286,slow=3.6,SNR=7.4
ILAR   Eielson Array    79.15  19   P      P        03 54 37.9  -0.6
YKA    Yellowknife Ar   87.70   7   P      P        03 55 22.2  -0.3
           comp=Z,1.1nm,0.8s,baz=344,slow=4.5,SNR=15
```

NEIC ***22*** *03:56:34.0±1.1, 12.°89N±0.°09×88.°57W±0.°06, h54^{km}±18^{km}, Error ellipse: s-maj=14.3km s-min=5.4km az=207.0*
INET ***22*** *03:56:34.8, 12.°92N×88.°46W, h15^{km}, MW3.2*
SNET ***22*** *03:56:34.5±0.7, 12.°90N×88.°54W, h49^{km}±12^{km}, ML4.0*
ISC 22 03:56:34.0±1.5**, 12.°87N**±0.°08×**88.°54W**±0.°04**, h57**^{km}±14^{km}**,**
n50, σ**0.^{s}49**/67**, 27D, Off coast of central America**

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Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
LCY    Lacayo            0.60  24⇓eP      Pn       03 56 47.1   0.0
LCY    Lacayo            0.60  24⇓eP      Pn       03 56 47.1   0.0
TECA   Tecapa            0.62   4⇓iP      Pn       03 56 47.4  -0.1
TECA   Tecapa            0.62   4⇓iP      Pn       03 56 47.4  -0.1
COEB   Comit de Eme      0.63   1⇓iP      Pn       03 56 47.2  -0.2
COEB                              eS      Sn       03 56 57.1   0.0
COEB                               IAML            03 56 58.1
           comp=Z,4μm,0.4s
COEB   Comit de Eme      0.63   1⇓iP      Pn       03 56 47.2  -0.2
COEB                              eS      Sn       03 56 57.1   0.0
COEB                               IAML            03 56 58.1
           comp=Z,4μm,0.4s
PACA   Pacayal           0.64  20⇓eP      Pn       03 56 47.7 +0.2
PACA   Pacayal           0.64  20⇓eP      Pn       03 56 47.7 +0.2
LCND   La Caada          0.77  55⇓iP      Pn       03 56 48.9  -0.2
LCND                              eS      Sn       03 56 59.9  -0.1
LCND                               IAML            03 57 01.7
           comp=Z,9μm,0.3s
LCND   La Caada          0.77  55⇓iP      Pn       03 56 48.9  -0.2
LCND                              eS      Sn       03 56 59.9  -0.1
LCND                               IAML            03 57 01.7
           comp=Z,9μm,0.3s
CNCH   Conchagua         0.80  60 eP      Pn       03 56 49.3  -0.2
CNCH                              eS      Sn       03 57 01.2 +0.2
CNCH   Conchagua         0.80  60 eP      Pn       03 56 49.3  -0.2
CNCH                              eS      Sn       03 57 01.2 +0.2
COEG   Centro de Oper    0.82 336⇓iP      Pn       03 56 49.5  -0.2
COEG                              eS      Sn       03 57 01.5 +0.4
COEG                               IAML            03 57 06.9
           comp=Z,4μm,0.3s
COEG   Centro de Oper    0.82 336⇓iP      Pn       03 56 49.5  -0.2
COEG                              eS      Sn       03 57 01.5 +0.4
COEG                               IAML            03 57 06.9
           comp=Z,4μm,0.3s
LFRS   El Faro           0.90 326⇓iP      Pn       03 56 50.8  -0.1
LFRS   El Faro           0.90 326⇓iP      Pn       03 56 50.8  -0.1
PAVA   Las Pavas         0.92 336⇓iP      Pn       03 56 51.2 +0.1
PAVA                              eS      Sn       03 57 04.4 +0.8
PAVA   Las Pavas         0.92 336⇓iP      Pn       03 56 51.2 +0.1
PAVA                              eS      Sn       03 57 04.4 +0.8
FAGO   Alcalda de S      0.93  27⇓iP      Pn       03 56 50.7  -0.3
FAGO   Alcalda de S      0.93  27⇓iP      Pn       03 56 50.7  -0.3
LALI   Alcalda de L      0.98 309 eP      Pn       03 56 51.4  -0.3
LALI   Alcalda de L      0.98 309 eP      Pn       03 56 51.4  -0.3
LBRS   Las Brisas        0.99 331⇓iP      Pn       03 56 52.4 +0.4
LBRS   Las Brisas        0.99 331⇓iP      Pn       03 56 52.4 +0.4
SNET   Serv Nac Est T    1.05 321 i P     Pn       03 56 53.2 +0.4
SNET                              eS      Sn       03 57 06.5  -0.2
SNET                               IAML            03 57 12.1
           comp=Z,3μm,0.2s
SNET   Serv Nac Est T    1.05 321 i P     Pn       03 56 53.2 +0.4
SNET                              eS      Sn       03 57 06.5  -0.2
SNET                               IAML            03 57 12.1
           comp=Z,3μm,0.2s
SNET   Serv Nac Est T    1.05 321  Pn     Pn       03 56 53.1 +0.4
SNET                               Sn     Sn       03 57 05.2  -1.5
UEES   Universidad Ev    1.08 321⇓iP      Pn       03 56 53.5 +0.4
UEES   Universidad Ev    1.08 321⇓iP      Pn       03 56 53.5 +0.4
BOQS   Boqueron          1.12 320 eP      Pn       03 56 54.2 +0.4
BOQS   Boqueron          1.12 320 eP      Pn       03 56 54.2 +0.4
CEVE   Cerro Verde       1.42 312 eP      Pn       03 56 58.4 +0.5
CEVE   Cerro Verde       1.42 312 eP      Pn       03 56 58.4 +0.5
SBLS   San Blas          1.43 313 eP      Pn       03 56 58.7 +0.8
SBLS   San Blas          1.43 313 eP      Pn       03 56 58.7 +0.8
CRIN   San Cristobal     1.47  96  Pn     Pn       03 56 58.8 +0.5
CRIN                               Sn     Sn       03 57 17.0 +0.4
TGUH   Tegucigalpa,Un    1.71  46⇓iP      Pn       03 57 01.5  -0.1
TGUH   Tegucigalpa,Un    1.71  46⇓iP      Pn       03 57 01.5  -0.1
TGUH   Tegucigalpa,Un    1.71  46  Pn     Pn       03 57 01.6  -0.1
TGUH                               Sn     Sn       03 57 22.1  -0.4
MTO3   Montecristo       1.72 333⇓iP      Pn       03 57 02.0 +0.2
MTO3   Montecristo       1.72 333⇓iP      Pn       03 57 02.0 +0.2
MTO3   Montecristo       1.72 333  Pn     Pn       03 57 02.0 +0.2
ESQI   Esquipulas        1.85 335⇓iP      Pn       03 57 04.2 +0.6
ESQI   Esquipulas        1.85 335  Pn     Pn       03 57 04.3 +0.7
ESQI                               Sn     Sn       03 57 24.3  -1.6
ACON   Acoyapa           3.41 105  Pn     Pn       03 57 24.2  -0.6
ESPN   Las Esperanzas    4.20  99  Pn     Pn       03 57 35.7 +0.2
PETF   Flores            4.22 343  Pn     Pn       03 57 35.9   0.0
JTS    Las Juntas de     4.35 126  Pn     Pn       03 57 38.0 +0.2
CCIG   Comitan           4.86 315  Pn     Pn       03 57 44.4  -0.4
CCIG                               Sn     Sn       03 58 39.1  -0.8
TEIG   Tepich            7.32   2         Pn       03 58 19.6 +1.3
```

NNC ***22*** *04:08:01.0±2.7, 36.°62N×70.°48E, h142^{km}±36^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=21.9km s-min=14.1km az=25.0*
ISC 22 04:08:01.0±2.8**, 36.°6N**±0.°2×**70.°5E**±0.°1**, h150**^{km}**, n14,**
σ**0.^{s}65**/19**, 6C-4D, Hindu Kush region**

```
Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
AML    Almayashu         6.05  23  P      Pn       04 09 28.5  -0.1
           SNR=107
UCH    Uchtor            6.42  28  P      Pn       04 09 33.5  -0.2
           SNR=14
KK31   Karatay Array     6.48   0  P      Pn       04 09 34.6 +0.7
           4.0nm,0.5s,baz=187,slow=13,SNR=58
KK31                             ⇑S       Sn       04 10 47.1 +0.3
           12nm,0.7s,baz=190,slow=24,SNR=6.9
EKS2   Erkin-Say         6.55  22  P      Pn       04 09 35.2 +0.1
           SNR=19
AAK    Ala-Archa         6.77  26  P      Pn       04 09 38.1 +0.1
           SNR=24
AAK    Ala-Archa         6.77  26 ⇓P      Pn       04 09 37.5  -0.4
           8.9nm,0.4s
AAK                              ⇑S       Sn       04 10 54.9 +0.9
           7.8nm,0.6s
CHMS   Chumysh           7.18  26  P      Pn       04 09 43.3   0.0
           SNR=6.0
USP    Ospenovka         7.33  24  P      Pn       04 09 45.3  -0.1
           SNR=10
TKM2   Tokmak 2          7.43  31  P      Pn       04 09 46.5  -0.4
           SNR=10
TKM2   Tokmak 2          7.43  31 ⇓P      Pn       04 09 45.9  -1.0
           4.0nm,0.5s
TKM2                             ⇑S       Sn       04 11 09.7  -0.3
           1.5nm,0.4s
MAKZ   Makanchi         13.31  37 ⇑P      Pn       04 11 03.8  -0.2
           0.2nm,0.3s
MK31   Makanchi Array   13.45  37 ⇑P      Pn       04 11 06.1 +0.3
           0.6nm,0.5s,baz=225,slow=15,SNR=7.5
AB31   Akbulak array    14.77 332  P      P        04 11 24.2  -0.2
           0.6nm,0.5s,baz=153,slow=13,SNR=20
AB31                             ⇑S       Sn       04 14 04.6  -1.6
           1.2nm,0.7s,baz=154,slow=23,SNR=7.0
AKTO   Aktyubinsk       16.46 331 ⇓P      Pn       04 11 43.8 +0.7
           2.9nm,0.8s
AKTO                             ⇓S       Sn       04 14 47.5 +0.8
           2.2nm,0.8s
```

IDC 22 04:13:11.3±27.0**, 23.°65S**×**179.°67E, h275**^{km}±245^{km}**,**
mb3.8/3**, mb1 3.9**/4**, mb1mx3.5**/23**, mbtmp4.5**/4**, ML4.2**/1**,**
Error ellipse: s-maj=161.7km s-min=49.5km az=23.0,
South of Fiji Islands

```
Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
URZ    Urewera          14.72 188  P      P        04 16 26.7 +0.1
           1.0nm,0.3s,baz=266,slow=7.3,SNR=6.2
STKA   Stephens Creek   34.54 248  P      P        04 19 34.0  -0.3
           1.9nm,0.4s,baz=88,slow=10,SNR=9.3
ASAR   Alice Springs    41.78 260  P      P        04 20 34.2  -0.4
           1.6nm,0.4s,baz=95,slow=8.5,SNR=35
WRA    Warramunga Arr   42.12 266  P      P        04 20 37.6 +0.2
           5.0nm,0.3s,baz=102,slow=8.2,SNR=104
BRTR   Keskin Array B  147.19 307  PKPbc  PKPbc    04 32 21.9  -0.7
           0.8nm,0.5s,baz=151,slow=2.8,SNR=4.8
```

IDC ***22*** *04:13:29.2±1.0, 57.°02S×150.°67W, h0^{km}, mb4.1/5, mb1 4.3/5, mb1mx4.1/24, mbtmp4.1/5, MS3.7/4, Ms1 3.7/4, ms1mx3.4/14, Error ellipse: s-maj=46.9km s-min=25.8km az=7.0*
NEIC ***22*** *04:13:30.2±2.0, 57.°2S±0.°1×151.°0W±0.°2, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=26.5km s-min=11.6km az=143.0*
ISC 22 04:13:30.2±0.8**, 57.°1S**±0.°2×**150.°8W**±0.°1**, h10**^{km}**, n36,**
σ**1.^{s}20**/19**, mb4.3**/7**, MS3.7**/5**, Pacific-Antarctic Ridge**

```
Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
VNDA   Vanda            26.09 201  P      P        04 19 03.9 +0.4
           2.5nm,1.0s,baz=85,slow=11,SNR=2.8
VNDA                               LR     LR       04 26 50.5
           comp=Z,142nm,21.8s,baz=68,slow=31
VNDA   Vanda            26.09 201  P      P        04 19 01.5  -2.0
VNDA                               IAmb   IAmb     04 19 14.3
           comp=Z,28nm,1.8s
RPZ    Rata Peaks       27.36 283  LR     LR       04 28 44.5
           comp=Z,77nm,18.2s,baz=42,slow=33
QSPA   South Pole Qui   33.07 180  P      P        04 20 05.1  -0.7
TBI    Tubuai           33.70   2 eT      T        04 55 19.5
           comp=Z,32nm,0.4s
PPT2   Papeete2         39.43   2 eLR     LR       04 31 32.9
           comp=Z,139nm,24.5s
VAH    Vaihoa           41.83   5 eT      T        05 05 26.6
           comp=Z,43nm,0.3s
GO09   Cerro Castillo   43.89 117  P      P        04 21 37.3 +0.8
SNAA   Sanae            49.59 167  P      P        04 22 21.9 +1.0
SNAA                               IAmb   IAmb     04 22 34.3
           comp=Z,11nm,1.8s
STKA   Stephens Creek   51.91 269  P      P        04 22 41.2 +2.4
           comp=Z,3.3nm,0.9s,baz=133,slow=13,SNR=5.2
STKA   Stephens Creek   51.91 269  P      P        04 22 38.6  -0.2
PLCA   Paso Flores      52.04 108  P      P        04 22 40.9 +1.1
           comp=Z,3.1nm,0.9s,baz=228,slow=9.2,SNR=8.1
PLCA   Paso Flores      52.04 108  P      P        04 22 39.8   0.0
PLCA                               IAmb   IAmb     04 22 41.9
           comp=Z,6.0nm,1.1s
LC01   Cunco            52.69 106  P      P        04 22 43.5  -1.1
LC01                               IAmb   IAmb     04 22 45.9
           comp=Z,5.0nm,0.8s
H03S2  Juan Fernandez   52.70  96  T      T        05 19 35.8
           baz=219,slow=74,SNR=162
H03S1  Juan Fernandez   52.70  96  T      T        05 19 37.1
           baz=219,slow=74,SNR=158
H03S3  Juan Fernandez   52.71  96  T      T        05 19 36.3
           baz=219,slow=74,SNR=144
H03N3  Juan Fernandez   52.98  96  T      T        05 19 58.3
           baz=222,slow=72,SNR=54
H03N2  Juan Fernandez   52.99  96  T      T        05 19 57.4
           baz=222,slow=72,SNR=80
H03N1  Juan Fernandez   53.00  96  T      T        05 19 57.7
           baz=222,slow=72,SNR=49
MAW    Mawson           53.16 195  LR     LR       04 42 30.9
           comp=Z,78nm,18.7s,baz=238,slow=33
AS31   Alice Springs    62.54 268  P      P        04 23 53.5  -0.7
ASAR   Alice Springs    62.54 268  P      P        04 23 54.2 +0.1
           comp=Z,1.7nm,0.7s,baz=142,slow=6.6,SNR=12
ASAR   Alice Springs    62.54 268  P      P        04 23 53.3  -0.8
WRA    Warramunga Arr   65.30 271  P      P        04 24 14.3 +2.0
           comp=Z,1.1nm,0.9s,baz=165,slow=4.5,SNR=4.6
NVAR   Mina Array Bea   99.01  25  LR     LR       05 02 15.5
           comp=Z,56nm,18.1s,baz=306,slow=30
H10S3  ASCENSION HYDR105.02 135  T      T        06 25 40.6
           baz=204,slow=74,SNR=11
H10S2  ASCENSION HYDR105.02 135  T      T        06 25 40.6
           baz=16,slow=74,SNR=6.2
H10N3  ASCENSION HYDR106.10 135  T      T        06 27 13.9
           baz=203,slow=75,SNR=18
H10N1  ASCENSION HYDR106.11 135  T      T        06 27 14.7
           baz=203,slow=75,SNR=15
H10N2  ASCENSION HYDR106.12 135  T      T        06 27 09.7
           baz=203,slow=75,SNR=12
ILAR   Eielson Array   121.56   2  PKP    PKiKP    04 32 22.0  -0.5
           comp=Z,1.1nm,0.9s,baz=233,slow=1.9,SNR=11
ILAR   Eielson Array   121.56   2         PKPdf    04 32 21.7  -0.7
MKAR   Makanchi Array  146.54 275  PKPbc  PKPab    04 33 10.9  -0.9
           comp=Z,4.3nm,0.8s,baz=117,slow=4.2,SNR=48
ZALV   Zalesovo Beam   149.11 288  PKPbc  PKPbc    04 33 16.6  -0.8
           comp=Z,1.7nm,0.7s,baz=113,slow=4.5,SNR=7.0
ZALV   Zalesovo Beam   149.11 288         PKPbc    04 33 16.5  -0.9
```

GCG ***22*** *04:33:05.5±0.5, 14.°53N×92.°82W, h50^{km}, MD4.1*
MEX ***22*** *04:33:10.5±0.8, 14.°48N×92.°25W, h77^{km}±7^{km}, MD4.0*
UCR ***22*** *04:33:12.8±1.5, 14.°54N×92.°25W, h35^{km}±999^{km}, ML3.5*
SNET ***22*** *04:33:13.1±1.3, 14.°55N×92.°23W, h35^{km}±289^{km}, ML3.7*
ISC 22 04:33:11.7±1.5**, 14.°53N**±0.°08×**92.°40W**±0.°06**, h60**^{km}±14^{km}**,**
n27, σ**1.^{s}15**/38**, Near coast of Chiapas**

```
Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
THIG                     0.40  20 eP      Pn       04 33 21.8  -0.8
THIG                              eS      Sn       04 33 31.2 +0.7
PCIG                     1.41 326 eP      Pn       04 33 35.1   0.0
PCIG                              i S     Sn       04 33 53.1 +0.4
FUG    Fuego 3           1.52  93 eP      Pn       04 33 36.2  -0.5
PCG    Pacaya            1.75  94 eP      Pn       04 33 39.9  -0.1
CCIG   Comitan           1.76   8 eP      Pn       04 33 39.3  -0.8
CCIG                              i S     Sn       04 34 00.5  -1.0
NBG    Las Nubes         1.99  88 eP      Pn       04 33 44.1 +0.7
NBG                               eS      Sn       04 34 13.0 +5.7
TGIG                     2.34 343 eP      Pn       04 33 47.5  -0.3
TGIG                              i S     Sn       04 34 16.0 +0.6
MRL    Marmol            2.69  78 eP      Pn       04 33 52.7   0.0
SBLS   San Blas          2.79 104 eP      Pn       04 33 54.1   0.0
SBLS                              eS      Sn       04 34 25.7  -0.9
SBLS   San Blas          2.79 104 eP      Pn       04 33 54.1   0.0
SBLS                              eS      Sn       04 34 25.7  -0.9
CEVE   Cerro Verde       2.79 104 eP      Pn       04 33 53.8  -0.4
CEVE                               IAML            04 34 30.4
           comp=Z,641nm,0.3s
CEVE   Cerro Verde       2.79 104 eP      Pn       04 33 53.8  -0.4
CEVE                               IAML            04 34 30.4
           comp=Z,641nm,0.3s
SNJE   San Jose          2.79 103 eP      Pn       04 33 54.3 +0.1
SNJE                              eS      Sn       04 34 26.5  -0.3
SNJE   San Jose          2.79 103 eP      Pn       04 33 54.3 +0.1
SNJE                              eS      Sn       04 34 26.5  -0.3
UEES   Universidad Ev    3.18 104 eP      Pn       04 33 59.8 +0.5
UEES                               IAML            04 34 42.1
           comp=Z,306nm,0.2s
UEES   Universidad Ev    3.18 104 eP      Pn       04 33 59.8 +0.5
UEES                               IAML            04 34 42.1
           comp=Z,306nm,0.2s
LFRS   El Faro           3.37 105 eP      Pn       04 34 01.9  -0.1
LFRS                              eS      Sn       04 34 39.7  -1.1
LFRS   El Faro           3.37 105 eP      Pn       04 34 01.9  -0.1
LFRS                              eS      Sn       04 34 39.7  -1.1
PETF   Flores            3.40  46 eP      Pn       04 34 02.0  -0.3
PAVA   Las Pavas         3.46 103 eP      Pn       04 34 02.3  -0.9
PAVA                               IAML            04 34 55.5
           comp=Z,96nm,0.3s
PAVA   Las Pavas         3.46 103 eP      Pn       04 34 02.3  -0.9
PAVA                               IAML            04 34 55.5
           comp=Z,96nm,0.3s
COEG   Centro de Oper    3.54 104 eP      Pn       04 34 03.8  -0.5
COEG                               IAML            04 34 55.9
           comp=Z,156nm,0.4s
COEG   Centro de Oper    3.54 104 eP      Pn       04 34 03.8  -0.5
COEG                               IAML            04 34 55.9
           comp=Z,156nm,0.4s
HUIG   Huatulco          3.78 289 eP      Pn       04 34 07.0  -0.5
HUIG                              i S     Sn       04 34 51.9 +1.1
PQSS   Presa 15 de Se    3.84 103 eP      Pn       04 34 08.5 +0.2
LCND   La Caada          4.55 105 eP      Pn       04 34 17.7  -0.3
LCND                               IAML            04 35 13.1
           comp=Z,143nm,0.3s
LCND   La Caada          4.55 105 eP      Pn       04 34 17.7  -0.3
LCND                               IAML            04 35 13.1
           comp=Z,143nm,0.3s
```

REY ***22*** *04:33:18.6, 64.°62N×17.°42W, h11^{km}*
IDC ***22*** *04:33:18.7±0.9, 64.°56N×17.°57W, h0^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.4/35, mbtmp3.4/8, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/49, Error ellipse: s-maj=32.9km s-min=11.7km az=15.0*
ISC 22 04:33:19.1±0.6**, 64.°61N**±0.°02×**17.°40W**±0.°03**, h10**^{km}**, n51,**
σ**1.^{s}68**/63**, mb3.5**/7**, Iceland**

```
Code   Station Name      Δ°   AZ°    Phase ID           Time      Res
                                   Op     ISC       h  m  s     ISC
IDJK   Dyngjujokull      0.13 146  P      Pg       04 33 22.1  -0.2
           baz=144
IDJK                               S      Sg       04 33 24.7 +0.1
           baz=144
IDYN   Dyngjuhals        0.18   5  P      Pg       04 33 22.3  -0.7
           baz=8.0
IDYN                               S      Sg       04 33 25.4  -0.3
           baz=8.0
IGRF   Grimsfjall        0.21 164  P      Pg       04 33 23.1  -0.6
           baz=162
IGRF                               S      Sg       04 33 26.1  -0.7
           baz=162
IURH   Urdarhals         0.24  28  P      Pg       04 33 23.5  -0.5
           baz=30
IURH                               S      Sg       04 33 26.8  -0.6
           baz=30
IKVE   Kverkfjoll        0.32  78  S      Sb       04 33 30.3  -2.1
           baz=79
IHUS   Husbondi          0.34 199  P      Pg       04 33 25.2  -0.7
           baz=198
ISKR   Skrokkalda        0.43 263  P      Pg       04 33 26.6  -0.9
           baz=263
THOR   Thorvaldshraun    0.45  44  P      Pg       04 33 27.1  -0.8
           baz=45
```

THOR				S	Sb	04 33 33.9	-2.1
	baz=45						
IJOK	Jokulheimar	0.47	230	P	Pg	04 33 26.8	-1.5
	baz=229						
IJOK				S	Sg	04 33 34.0	-0.3
	baz=229						
IKRE	Kreppuhraun	0.47	68	P	Pg	04 33 27.4	-1.0
	baz=69						
IKRE				S	Sg	04 33 34.0	-0.5
	baz=69						
IASK	Askja	0.55	36	P	Pg	04 33 28.6	-1.2
	baz=37						
IMKO	Mokollar	0.58	51	P	Pg	04 33 29.4	-1.1
	baz=52						
IMKO				S	Sg	04 33 37.4	-0.8
	baz=52						
IIEY	Innrieyrar	0.61	211	P	Pg	04 33 29.4	-1.5
	baz=210						
IIEY				S	Sg	04 33 37.9	-1.0
	baz=210						
IKSK	Karasker	0.61	138	P	Pg	04 33 29.3	-1.6
	baz=138						
IKSK				S	Sg	04 33 38.0	-0.9
	baz=138						
IKAL	Kalfafell	0.68	191	P	Pg	04 33 30.8	-1.4
	baz=190						
IKAL				S	Sg	04 33 40.5	-0.6
	baz=190						
ISVA	Svartarkot	0.73	5	P	Pg	04 33 31.4	-1.8
	baz=5.6						
IVSH	V-Sauoahnukur	0.75	74	P	Pg	04 33 31.9	-1.6
	baz=74						
IFAG	Fagurholsmyri	0.81	156	P	Pg	04 33 33.0	-1.8
	baz=155						
IMEL	Melhnausar	1.01	18	P	Pg	04 33 36.1	-2.4
	baz=18						
ISNB	Snabyli	1.03	212	P	Pg	04 33 36.6	-2.3
	baz=211						
ISNB				S	Sg	04 33 50.6	-1.7
	baz=211						
IREN	Reynihlio	1.06	11	P	Pg	04 33 36.9	-2.6
	baz=12						
IKVO	Krokottuvotn	1.13	11	P	Pb	04 33 38.2	-2.5
	baz=12						
IRJU	Rjupnafell	1.14	210	P	Pb	04 33 38.7	-2.3
	baz=209						
IGRS	Grimsstaoir	1.16	27	P	Pb	04 33 38.8	-2.5
	baz=28						
IHVO	Lagu-Hvolar	1.26	211	P	Pn	04 33 40.8	-2.0
	baz=210						
ISKI	Skildingahlsh	1.27	7	P	Pn	04 33 40.3	-2.6
	baz=7.4						
IGHA	Grjothals	1.27	14	P	Pn	04 33 40.6	-2.4
	baz=14						
IDIM	Dimmadalss	1.37	8	P	Pn	04 33 42.2	-2.1
	baz=8.5						
IALF	Alftagrof	1.37	216	P	Pn	04 33 42.7	-1.6
	baz=215						
IESK	Eystri-Skogar	1.42	220	P	Pn	04 33 43.2	-1.7
	baz=220						
ISAU	Saurbar	1.45	246	P	Pn	04 33 43.7	-1.7
	baz=246						
IHED	Heoinshofoi	1.48	1	P	Pn	04 33 43.6	-2.1
	baz=1.8						
IBRE	Brettingsstaoi	1.53	352	P	Pn	04 33 44.3	-2.2
	baz=353						
IASM	Asmuli	1.61	242	P	Pn	04 33 45.9	-1.6
	baz=242						
ISIG	Siglufjorour	1.65	338	P	Pn	04 33 46.2	-1.9
	baz=338						
ISOL	Solvholt	1.69	248	P	Pn	04 33 47.2	-1.5
	baz=247						
BORG	Borgarnes	1.69	276	Pg	Pn	04 33 47.0	-1.7
	6.6nm,0.3s,baz=80,slow=7.0,SNR=26						
BORG				Lg	Lg	04 34 11.2	
	7.9nm,0.3s,baz=126,slow=5.9,SNR=7.1						
IKRO	Krokur	1.70	254	P	Pn	04 33 47.0	-1.7
	baz=254						
ILEI	Leirhofn	1.84	12	P	Pn	04 33 49.4	-1.3
	baz=12						
IHRN	Hraun	1.89	324	P	Pn	04 33 50.0	-1.3
	baz=324						
IGRI	Grimsey	1.95	353	P	Pn	04 33 50.6	-1.7
	baz=353						
SCO	Scoresbysund	6.15	346	*e*	Pn	04 34 40.6	-9.2
	baz=169,slow=6.5						
SCO				*i* P	Pn	04 34 51.0	+1.2
SCO				*i* S	Sn	04 36 03.9	+3.9
SCO				IAML		04 36 14.8	
	comp=Z,0.5nm,0.4s						
EKA	Eskdalemuir Ar	11.69	136	Pn	Pn	04 36 06.8	+1.0
	baz=320,slow=13,SNR=5.9						
GERES	GERESS Array B	22.89	119	P	P	04 38 26.0	+3.2
	comp=Z,0.2nm,0.4s,baz=7.6,slow=40,SNR=2.4						
BRTR	Keskin Array B	38.43	105	P	P	04 40 42.1	+1.4
	comp=Z,0.9nm,0.8s,baz=318,slow=5.8,SNR=3.7						
YKA	Yellowknife Ar	39.28	313	P	P	04 40 47.9	+0.5
	comp=Z,0.1nm,0.5s,baz=264,slow=33,SNR=2.4						
ILAR	Eielson Array	45.75	332	P	P	04 41 41.8	+1.8
	comp=Z,0.2nm,0.9s,baz=146,slow=40,SNR=2.6						
MKAR	Makanchi Array	52.72	58	P	P	04 42 34.3	+0.8
	comp=Z,0.6nm,0.9s,baz=347,slow=5.9,SNR=3.6						
TORD	Torodi Ar. Bea	53.08	157	P	P	04 42 36.5	+0.1
	comp=Z,0.5nm,0.7s,baz=329,slow=9.5,SNR=1.9						
PDAR	Pinedale Array	53.23	293	P	P	04 42 38.9	+1.2
	comp=Z,0.4nm,0.7s,baz=59,slow=5.7,SNR=4.8						
KDAK	Kodiak Island	53.26	332	LR	LR	05 06 19.1	
	comp=Z,52nm,20.0s,baz=205,slow=37						

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*ATH **22** 04:46:44.3, 36°.56N×26°.53E, h209^{km}±5^{km}, ML3.9/20,*
Error ellipse: s-maj=5.0km s-min=1.7km az=108.0
*NIC **22** 04:46:53.9±0.0, 36°.70N×26°.74E, h159^{km}±1^{km}, Ml4.5/4*
*ISK **22** 04:46:55.8, 36°.60N×26°.55E, h141^{km}, ML3.5/39*
*IDC **22** 04:46:55.6±0.7, 36°.53N×26°.48E, h137^{km}±8^{km}, mb3.6/11,*
mb1 3.6/16, mb1mx3.4/52, mbtmp4.0/16, Error ellipse:
s-maj=15.1km s-min=9.0km az=147.0
*NEIC **22** 04:46:55.2±1.6, 36°.41N±0°.05×26°.56E±0°.06, h154^{km}±2^{km},*
mb4.3/13, ML3.9(ATH), Error ellipse: s-maj=7.4km
s-min=6.4km az=162.0
*DDA **22** 04:46:58.0, 36°.75N×26°.63E, h129^{km}±9^{km}, MW3.9*
*THE **22** 04:46:58.5, 36°.49N×26°.57E, h150^{km}±2^{km}, ML3.9/14,*
Error ellipse: s-maj=2.2km s-min=0.7km az=351.0
*HLW **22** 04:47:02.6, 35°.99N×26°.87E, h23^{km}±25^{km}, Md4.4, Ml4.7*
ISC 22 04:46:55.3±0.6**, 36°.57N**±0°.04×**26°.51E**±0°.03**, h142**^{km}±5^{km}**,**
n322, σ1^{s}.**80**/377**, mb3.7**/13**, 8C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	Kos Island	0.42	64	P	Pn	04 47 16.1	+0.7
KOSK				S	Sn	04 47 31.2	+0.6
	4μm,0.6s						
KOSK	Kos Island	0.42	64	PG	Pn	04 47 16.1	+0.7
KOSK				SG	Sn	04 47 30.6	0.0
NISR	Nisiros	0.50	85	P	Pn	04 47 16.7	+1.0
NISR				AML	AML	04 47 32.2	
	comp=N,3379μm,0.7s						
NISR				AML	AML	04 47 37.3	
	comp=E,2797μm,1.0s						
NISR	Nisiros	0.50	85	P	Pn	04 47 16.8	+1.0
NISR				S	Sn	04 47 31.5	+0.2
	comp=E,2μm,0.8s						
ANAF	Anafi Island	0.63	250	P	Pn	04 47 18.0	+1.4
ANAF	Anafi Island	0.63	250	P	Pn	04 47 18.1	+1.5
ANAF				S	Sn	04 47 32.8	+0.1
	comp=E,7μm,0.4s						
BODT	Bodrum	0.81	52	P	Pn	04 47 17.9	+0.1
BODT				S	Sn	04 47 34.0	-1.0
BODT	Bodrum	0.81	52	PG	Pn	04 47 18.0	+0.1
BODT				SG	Sn	04 47 34.2	-0.8
YKAV	Yalikavak-Bodr	0.83	48	PG	Pn	04 47 18.4	+0.5
THR8	Santorini-Mono	0.85	259	P	Pn	04 47 19.4	+1.3
THR8	Santorini-Mono	0.85	259	P	Pn	04 47 19.4	+1.3
SANT	Santorini	0.87	257	P	Pn	04 47 19.6	+1.4
SANT				AML	AML	04 47 36.4	
	comp=N,1410μm,0.8s						
SANT				AML	AML	04 47 46.2	
	comp=E,1461μm,0.4s						
SANT	Santorini	0.87	257	P	Pn	04 47 19.7	+1.4
SANT	Santorini	0.87	257	PG	Pn	04 47 19.4	+1.1
SANT	Santorini	0.87	257	Pn	Pn	04 47 19.7	+1.4
SANT				Sn	Sn	04 47 35.9	+0.1
THR7	Fira-Santorini	0.88	261	P	Pn	04 47 20.0	+1.7
SNT1	Gialos, Santor	0.88	260	P	Pn	04 47 19.8	+1.4
SNT1	Gialos, Santor	0.88	260	P	Pn	04 47 19.8	+1.4
SNT1				S	Sn	04 47 36.4	+0.6
	comp=E,1μm,0.6s						
CMBO	Columbo, Santo	0.89	264	P	Pn	04 47 19.0	+0.6
CMBO	Columbo, Santo	0.89	264	P	Pn	04 47 19.0	+0.6
CMBO				S	Sn	04 47 36.2	+0.2
	comp=E,1μm,0.6s						
BDRM	Kayabasi	0.90	56	*i* P	Pn	04 47 18.6	+0.1
BDRM				*i* S	Sn	04 47 35.7	-0.5
BDRM				IAML		04 47 37.0	
	comp=E,491nm,1.0s						
THR3	Thira Island,	0.91	260	P	Pn	04 47 20.2	+1.7
THR3	Thira Island,	0.91	260	P	Pn	04 47 20.1	+1.6
SNT5	Nea Kammeni, S	0.91	260	P	Pn	04 47 20.2	+1.6
SNT5	Nea Kammeni, S	0.91	260	P	Pn	04 47 20.3	+1.7
THR6	Thira Island,	0.92	257	P	Pn	04 47 20.3	+1.6
THR6	Thira Island,	0.92	257	P	Pn	04 47 20.3	+1.6
APE	Apeiranthos	0.93	303	P	Pn	04 47 20.2	+1.5
APE				AML	AML	04 47 37.7	
	comp=N,1762μm,0.6s						
APE				AML	AML	04 47 39.6	
	comp=E,996μm,0.7s						
APE	Apeiranthos	0.93	303	P	Pn	04 47 20.3	+1.5
APE				S	Sn	04 47 36.9	+0.2
	comp=E,692nm,0.7s						
APE	Apeiranthos	0.93	303	PG	Pn	04 47 19.8	+1.0
APE	Apeiranthos	0.93	303	*i* P	Pn	04 47 19.8	+1.0
APE	Apeiranthos	0.93	303	P	Pn	04 47 20.3	+1.5
DATC	Datca-Mugla	0.94	78	PG	Pn	04 47 19.5	+0.6
SAP3	Santorini-Thir	0.95	262	P	Pn	04 47 20.2	+1.3
THR5	Thira Island,	0.95	261	P	Pn	04 47 20.4	+1.6
THR5	Thira Island,	0.95	261	P	Pn	04 47 20.5	+1.6
THR5	Thira Island,	0.95	261	PG	Pn	04 47 20.1	+1.2
DDIM	Aydin, Didim	1.06	33	*i* P	Pn	04 47 21.3	+1.4
KARP	Karpathos	1.15	152	P	Pn	04 47 21.4	+0.7
KARP				AML	AML	04 47 43.1	
	comp=N,2032μm,0.2s						
KARP				AML	AML	04 47 44.1	
	comp=E,2945μm,0.4s						
KARP	Karpathos	1.15	152	P	Pn	04 47 21.5	+0.7
KARP	Karpathos	1.15	152	PN	Pn	04 47 21.6	+0.8
KARP	Karpathos	1.15	152	Pn	Pn	04 47 21.1	+0.3
KARP				Sn	Sn	04 47 39.5	-0.7
KARP	Karpathos	1.15	152	⇑P	Pn	04 47 21.5	+0.7
KARP				AML	AML	04 47 39.5	
	comp=E,2.7nm,0.5s						
KARP				AML	AML	04 47 40.7	
	comp=E,2.3nm,0.3s						
SMG	Samos	1.17	13	P	Pn	04 47 21.9	+1.0
SMG	Samos	1.17	13	P	Pn	04 47 22.0	+1.1
GCAM	G?zelcaml?	1.27	27	PN	Pn	04 47 22.7	+0.9
GCAM	G?zelcaml?	1.27	27	*i* P	Pn	04 47 22.7	+0.9
ARG	Arkhangelos	1.35	105	P	Pn	04 47 23.8	+1.1
ARG				AML	AML	04 47 44.8	
	comp=E,9736μm,0.5s						
ARG				AML	AML	04 47 45.0	
	comp=N,3794μm,0.5s						
ARG	Arkhangelos	1.35	105	P	Pn	04 47 23.9	+1.1
ARG				S	Sn	04 47 42.9	-0.7
	comp=N,3μm,0.5s						
ARG	Arkhangelos	1.35	105	PN	Pn	04 47 23.8	+1.1
ARG	Arkhangelos	1.35	105	S	Sn	04 47 43.8	+0.2
MRSB	Marmaris-Mugla	1.37	83	PN	Pn	04 47 23.4	+0.5
STIA	Sitia Lasithi	1.41	194	P	Pn	04 47 23.4	+0.1
STIA				S	Sn	04 47 43.3	-1.4
TURN	Turunc	1.41	81	PN	Pn	04 47 24.2	+0.9
TURN	Turunc	1.41	81	*i* P	Pn	04 47 24.1	+0.8
TURN				*i* S	Sn	04 47 43.7	-1.0
TURN				IAML		04 47 45.0	
	comp=E,668nm,0.3s						
TURN				IAML		04 47 46.0	
	comp=N,487nm,0.6s						
TNSA	Tinos	1.45	312	P	Pn	04 47 25.3	+1.6
ZKR	Zakros	1.47	189	P	Pn	04 47 25.2	+1.1
ZKR				AML	AML	04 47 48.3	
	comp=E,3415μm,0.3s						
ZKR				AML	AML	04 47 48.7	
	comp=N,2264μm,0.5s						
ZKR	Zakros	1.47	189	P	Pn	04 47 25.3	+1.3
ZKR				S	Sn	04 47 44.5	-1.4
	comp=N,1μm,0.4s						
ZKR	Zakros	1.47	189	PN	Pn	04 47 25.4	+1.4
NPS	Neapolis	1.49	209	P	Pn	04 47 25.1	+0.8
NPS				AML	AML	04 47 46.7	
	comp=N,10402μm,0.3s						
NPS				AML	AML	04 47 48.5	
	comp=E,11190μm,0.6s						
NPS	Neapolis	1.49	209	P	Pn	04 47 25.2	+0.9
NPS				S	Sn	04 47 45.8	-0.6
	comp=E,6μm,0.6s						
DGB	zmir	1.51	11	*i* P	Pn	04 47 25.0	+0.6
YER	Yerkesik	1.53	68	P	Pn	04 47 26.5	+1.8
YER	Yerkesik	1.53	68	PN	Pn	04 47 25.7	+1.0
MULA	Mugla, Merkez-	1.61	64	*i* P	Pn	04 47 27.0	+1.4
MULA				*i* S	Sn	04 47 47.5	-1.2
MULA				IAML		04 47 52.0	
	comp=N,227nm,0.7s						
MULA				IAML		04 47 54.0	
	comp=E,452nm,0.4s						
LAST	Lasithi	1.64	211	P	Pn	04 47 26.7	+0.8
LAST				AML	AML	04 47 50.5	
	comp=N,4170μm,0.4s						
LAST				AML	AML	04 47 51.1	
	comp=E,2026μm,0.5s						
LAST	Lasithi	1.64	211	P	Pn	04 47 26.8	+0.9
LAST				S	Sn	04 47 48.4	-0.9
	comp=E,2μm,0.7s						
ZEYE	Izmir, Urla-Ze	1.67	360	*i* P	Pn	04 47 25.6	-0.5
HRKL	Herakleio	1.70	223	P	Pn	04 47 27.8	+1.3
HRKL				S	Sn	04 47 50.1	-0.2
	comp=E,4μm,0.6s						
HRKL	Herakleio	1.70	223	PN	Pn	04 47 27.8	+1.3
IACM	Heraklion	1.72	223	P	Pn	04 47 27.9	+1.2
KSTL	Kastelli Herak	1.72	223	P	Pn	04 47 27.5	+0.8
KSTL				S	Sn	04 47 48.6	-2.1
DALY	Dalyan (Mula)	1.74	81	PN	Pn	04 47 28.4	+1.5
DALY	Dalyan (Mula)	1.74	81	*i* P	Pn	04 47 28.4	+1.5
DALY				*i* S	Sn	04 47 50.4	-0.8
DALY				IAML		04 47 53.0	
	comp=N,2μm,0.4s						
DALY				IAML		04 47 53.0	
	comp=E,2μm,0.8s						
URLA	Izmir	1.79	2	PN	Pn	04 47 27.9	+0.4
URLA	Izmir	1.79	2	*i* P	Pn	04 47 27.0	-0.5
IDI	Anoyia	1.83	226	P	Pn	04 47 29.0	+0.9
	comp=E,20nm,0.3s,baz=354,slow=5.3,SNR=174						
IDI				S	Sn	04 47 51.9	-1.3
	comp=E,174nm,0.3s,baz=16,slow=22,SNR=31						
IDI	Anoyia	1.83	226	P	Pn	04 47 29.0	+0.9
IDI				AML	AML	04 47 53.9	
	comp=N,2122μm,0.3s						
IDI				AML	AML	04 47 54.5	
	comp=E,2316μm,0.4s						
IDI	Anoyia	1.83	226	P	Pn	04 47 29.0	+0.9
IDI				S	Sn	04 47 52.5	-0.7
	comp=E,1μm,0.5s						
IDI	Anoyia	1.83	226	PN	Pn	04 47 29.0	+0.9
IDI	Anoyia	1.83	226	Pn	Pn	04 47 28.6	+0.4
IDI				Sn	Sn	04 47 51.7	-1.5
FETY	Fethiye	2.07	87	P	Pn	04 47 31.0	+0.1
FETY				S	Sn	04 47 56.5	-1.6
FETY	Fethiye	2.07	87	PN	Pn	04 47 30.9	+0.1
SIVA	Sivas	2.08	222	P	Pn	04 47 32.5	+1.7
SIVA				AML	AML	04 48 02.0	
	comp=N,3775μm,0.6s						
SIVA				AML	AML	04 48 02.5	
	comp=E,5776μm,0.4s						
SIVA	Sivas	2.08	222	P	Pn	04 47 32.6	+1.7
PSRA	Psara	2.11	339	P	Pn	04 47 32.6	+1.4
TAVA	DENIZLI_Tavas	2.12	64	*i* P	Pn	04 47 32.2	+0.6
TAVA				*i* S	Sn	04 47 58.0	-1.3
TAVA				IAML		04 48 01.0	
	comp=N,198nm,0.8s						
TAVA				IAML		04 48 02.0	
	comp=E,132nm,0.7s						
VAM	Vamos	2.20	239	P	Pn	04 47 34.1	+1.7
VAM				AML	AML	04 48 04.4	
	comp=E,1747μm,0.4s						
VAM				AML	AML	04 48 06.5	
	comp=N,1897μm,0.4s						
IMMV	Iera Moni Meta	2.33	242	P	Pn	04 47 35.5	+1.6
IMMV				AML	AML	04 48 05.6	
	comp=N,1775μm,0.3s						
IMMV				AML	AML	04 48 06.9	
	comp=E,1867μm,0.5s						
IMMV	Iera Moni Meta	2.33	242	P	Pn	04 47 34.9	+0.9
IMMV	Iera Moni Meta	2.33	242	PN	Pn	04 47 35.6	+1.6
GOMA	Golmarmara-Man	2.41	27	PN	Pn	04 47 35.6	+0.7
DKL	Dikili	2.52	7	PN	Pn	04 47 37.4	+1.2
MANT	Manisa	2.52	40	*i* P	Pn	04 47 37.4	+1.0
MANT	Manisa	2.52	40	Pn	Pn	04 47 37.9	+1.4
VLY	Voula,Athens	2.52	301	P	Pn	04 47 38.4	+2.2
VLY	Voula,Athens	2.52	301	P	Pn	04 47 38.3	+2.1
KSL	Kastellorizon	2.52	99	P	Pn	04 47 37.2	+0.9
KSL				AML	AML	04 48 09.3	
	comp=E,4997μm,0.5s						
KSL				AML	AML	04 48 09.9	
	comp=N,2644μm,0.6s						
KSL	Kastellorizon	2.52	99	P	Pn	04 47 37.3	+1.1
KSL				S	Sn	04 48 06.3	-1.5
	comp=N,2μm,0.5s						
AKAS	Kas	2.52	97	PN	Pn	04 47 36.7	+0.3
AKAS	Kas	2.52	97	*i* P	Pn	04 47 36.5	0.0
AKAS				*i* S	Sn	04 48 05.1	-3.0
AKAS				IAML		04 48 10.0	
	comp=N,695nm,0.5s						
AKAS				IAML		04 48 10.0	
	comp=E,579nm,0.4s						
AKAS	Kas	2.52	97	Pn	Pn	04 47 36.5	0.0
AKAS				Sn	Sn	04 48 06.2	-1.9
GOLH	Golhisar	2.54	74	*i* P	Pn	04 47 38.7	+2.1
GOLH				*i* S	Sn	04 48 09.4	+1.0
GOLH				IAML		04 48 14.0	
	comp=N,348nm,0.5s						
DION	Dionisos Attik	2.54	307	P	Pn	04 47 38.8	+2.2
DION				AML	AML	04 48 12.5	
	comp=N,1308μm,0.9s						
DION				AML	AML	04 48 13.1	
	comp=E,622μm,1.0s						
KULA	Kula-Manisa	2.59	41	P	Pn	04 47 38.7	+1.5
KULA	Kula-Manisa	2.59	41	PN	Pn	04 47 37.7	+0.5
GVDS	Gavdos	2.62	230	PN	Pn	04 47 39.2	+1.7
GVD	Gavdhos	2.62	229	P	Pn	04 47 39.2	+1.7
GVD				AML	AML	04 48 11.9	
	comp=E,3202μm,0.3s						
GVD				AML	AML	04 48 14.6	
	comp=N,3144μm,0.4s						
GVD	Gavdhos	2.62	229	PN	Pn	04 47 39.3	+1.7
PRK	Paraskevi	2.68	356	P	Pn	04 47 40.4	+2.1
PRK	Paraskevi	2.68	356	P	Pn	04 47 40.6	+2.4
ANKY	Antikythira Is	2.69	256	P	Pn	04 47 39.8	+1.5
ANKY				AML	AML	04 48 15.3	
	comp=N,967μm,0.6s						
ANKY				AML	AML	04 48 16.1	
	comp=E,861μm,1.0s						
SIGR	SIGRI	2.69	349	PN	Pn	04 47 39.5	+1.2
AYVA	Ayvalik	2.74	3	*i* P	Pn	04 47 40.9	+1.9
ELL	Elmali	2.74	85	PN	Pn	04 47 39.8	+0.6
ELL	Elmali	2.74	85	Pn	Pn	04 47 40.2	+1.0
ELL				Sn	Sn	04 48 13.1	+0.1
ELL	Elmali	2.74	85	S	Sn	04 48 10.4	-2.5
DEMR	Demre-Antalya	2.76	96	PN	Pn	04 47 39.9	+0.6
MNVA	Monemvasia	2.79	273	P	Pn	04 47 41.7	+2.0
MNVA				AML	AML	04 48 16.4	
	comp=N,1072μm,0.4s						
MNVA				AML	AML	04 48 17.5	
	comp=E,515μm,0.3s						
KTHA	Kythira Island	2.80	265	P	Pn	04 47 41.4	+1.6
KTHA				AML	AML	04 48 17.2	
	comp=N,851μm,0.5s						
KTHA				AML	AML	04 48 17.3	
	comp=E,1123μm,0.4s						
KTHA	Kythira Island	2.80	265	PN	Pn	04 47 41.4	+1.6
KRND	KRANIDI	2.81	288	P	Pn	04 47 42.0	+2.1
KRND				AML	AML	04 48 17.0	
	comp=N,1333μm,1.1s						
KRND				AML	AML	04 48 18.1	
	comp=E,1444μm,0.8s						
KRND	KRANIDI	2.81	288	P	Pn	04 47 42.1	+2.2
KRND				S	Sn	04 48 16.9	+2.6
	comp=E,708nm,0.7s						
KYMI	Kymi, Euboea I	2.81	318	P	Pn	04 47 41.9	+1.9
VLI	Veliai	2.88	274	P	Pn	04 47 42.0	+1.3
VLI				AML	AML	04 48 17.8	
	comp=N,1595μm,0.5s						
VLI				AML	AML	04 48 19.9	
	comp=E,739μm,0.4s						
VLI	Veliai	2.88	274	P	Pn	04 47 42.2	+1.4
USAK	Uak-Merkez	2.92	42	*i* P	Pn	04 47 42.4	+1.0
KOCA	Canakkale, Ayv	2.94	354	*i* P	Pn	04 47 40.9	-0.7
STEP	BALIKESIR_Sava	2.96	18	*i* P	Pn	04 47 42.3	+0.5
KHAL	Karahalli	2.98	52	*i* P	Pn	04 47 43.3	+1.1
KHAL				*i* S	Sn	04 48 16.3	-2.0
KHAL				IAML		04 48 21.0	
	comp=E,51nm,0.7s						
KHAL				IAML		04 48 23.0	
	comp=N,42nm,0.8s						
VILL	Villia	3.00	303	P	Pn	04 47 44.8	+2.4
BRDR	BURDUR-Merkez	3.05	67	*i* P	Pn	04 47 43.5	+0.4
BRDR				*i* S	Sn	04 48 18.9	-1.2
BRDR				IAML		04 48 22.0	
	comp=E,96nm,0.4s						
KORT	Korkueli	3.11	81	PN	Pn	04 47 44.6	+0.7
KORT	Korkueli	3.11	81	*i* P	Pn	04 47 45.6	+1.7
KORT				*i* S	Sn	04 48 16.5	-5.0
KORT				IAML		04 48 27.0	
	comp=E,370nm,0.5s						
BASM	Basmaki-Afyon	3.13	63	PN	Pn	04 47 44.7	+0.6
LOUT	Loutraki	3.15	298	P	Pn	04 47 46.8	+2.5
SIMA	Simav-Kutahya	3.18	37	PN	Pn	04 47 45.4	+0.6
BALB	Balikesir	3.25	19	PN	Pn	04 47 46.4	+0.9
EZN	Ezine	3.25	358	P	Pn	04 47 47.0	+1.4
EZN	Ezine	3.25	358	PN	Pn	04 47 46.4	+0.8
KEMT	Kemer-ANTALYA	3.26	88	PN	Pn	04 47 46.6	+1.0
BALY	Balya	3.28	15	*i* P	Pn	04 47 46.1	+0.1
BUCA	Burdur, Bucak-	3.33	76	*i* P	Pn	04 47 48.7	+2.0
BUCA				*i* S	Sn	04 48 26.9	+0.5
BUCA				IAML		04 48 29.0	
	comp=E,215nm,0.6s						
BUCA				IAML		04 48 30.0	
	comp=N,210nm,0.5s						
ANTB	Antalya	3.35	83	PN	Pn	04 47 47.6	+0.8
KZIL	AFYON_Kizioren	3.35	59	*i* P	Pn	04 47 48.0	+1.1
GEDZ	Gediz	3.37	42	PN	Pn	04 47 47.9	+0.7
BCK	Bucak	3.38	74	PN	Pn	04 47 47.9	+0.5
DURS	Dursunbey	3.40	27	*i* P	Pn	04 47 48.0	+0.4
VLX	Vlachokerasia	3.40	285	P	Pn	04 47 49.9	+2.3
ISP	Isparta	3.44	67	PN	Pn	04 47 48.7	+0.6
ISP	Isparta	3.44	67	Pn	Pn	04 47 48.5	+0.4
ISP				Sn	Sn	04 48 29.3	+0.3
LKR	Lokris	3.48	308	P	Pn	04 47 50.8	+2.4
LIA	Limnos Island	3.48	343	P	Pn	04 47 50.4	+1.9
ATAL	Atalanti	3.49	308	P	Pn	04 47 50.9	+2.3
GADA	Gvkgeada	3.65	353	PN	Pn	04 47 51.7	+1.0
BAGO	Egridir - ISPA	3.70	66	*i* P	Pn	04 47 51.7	+0.3
BAGO				*i* S	Sn	04 48 30.5	-4.4
BAGO				IAML		04 48 40.0	
	comp=N,10nm,0.6s						
TVSB	Tavsanli	3.70	38	PN	Pn	04 47 52.2	+0.7
ITM	Ithomi	3.72	281	P	Pn	04 47 54.0	+2.3
ITM	Ithomi	3.72	281	Pn	Pn	04 47 53.8	+2.1
ITM				Sn	Sn	04 48 35.9	+0.4
AXAR	Agios Charalam	3.76	307	P	Pn	04 47 54.9	+2.7
KLV	Kalavryta, Ach	3.77	294	P	Pn	04 47 54.6	+2.2
SHUT	Suhut-Afyon	3.77	57	PN	Pn	04 47 52.9	+0.4
LPK	Lapseki	3.80	3	PN	Pn	04 47 53.5	+0.8
GELI	Tayfur-Gelibol	3.82	360	PN	Pn	04 47 53.9	+0.9
KRBG	Karabiga-Canak	3.87	9	PN	Pn	04 47 54.6	+1.1
EDC	Edincik	3.92	15	PN	Pn	04 47 55.0	+0.8
TRIZ	Trizonia	3.96	298	P	Pn	04 47 57.2	+2.5
KCTX	Karacabey (Bur	3.96	21	PN	Pn	04 47 55.6	+0.7
SERG	Sergoula	3.99	299	P	Pn	04 47 57.5	+2.3
AGG	Agios Georgios	4.12	308	P	Pn	04 47 59.8	+2.9
AGG	Agios Georgios	4.12	308	Pn	Pn	04 47 59.7	+2.9
AGG				Sn	Sn	04 48 49.5	+4.8
ULDT	Uludag	4.12	29	*i* P	Pn	04 47 56.7	-0.4
YVAC	Isparta, Yalva	4.13	64	*i* P	Pn	04 47 59.9	+2.7
MAKR	Makrakomi, Fth	4.24	306	P	Pn	04 48 01.7	+3.2
SEDI	Konya, Seydise	4.29	77	*i* P	Pn	04 48 01.2	+1.9
SEDI				*i* S	Sn	04 48 46.8	-2.2
SEDI				IAML		04 48 53.0	
	comp=N,39nm,0.5s						
ALN	Alexandroupoli	4.34	355	Pn	Pn	04 48 01.3	+1.6
LIT	Litokhoron	4.73	319	Pn	Pn	04 48 07.5	+2.5
OSC1	CSNet OBS 1	4.97	127	P	Pn	04 48 06.8	-1.3
AKMS	Akamas	4.98	106	P	Pn	04 48 07.3	-1.1
AKMS				AML	AML	04 49 01.3	

	comp=N,1.1nm,0.7s						
AKMS				AML	AML	04 49 01.5	
	comp=N,1.3nm,0.8s						
ALFC	**Alefka**	**5.14**	**104**	P	**Pn**	**04 48 09.6**	**-1.0**
ALFC				AML	AML	04 49 05.1	
	comp=N,0.9nm,0.4s						
ALFC				AML	AML	04 49 06.4	
	comp=N,0.9nm,0.4s						
SLUM	**Salum**	**5.18**	**192**	P	**Pn**	**04 48 11.2**	**+0.3**
	baz=198						
SLUM				AMP		04 49 00.0	
	baz=198						
SLUM				S	Sn	04 49 00.5	-9.4
	baz=198						
NATA	**Nata**	**5.25**	**108**	P	**Pn**	**04 48 11.0**	**-0.9**
MDUB	**Mudurnu**	**5.36**	**42**	Pn	**Pn**	**04 48 14.8**	**+1.4**
SZAC	**Souni**	**5.50**	**107**	⇑P	**Pn**	**04 48 14.4**	**-0.8**
SZAC				AML	AML	04 49 15.9	
	comp=N,0.9nm,0.4s						
SZAC				AML	AML	04 49 16.1	
	comp=N,1.3nm,0.7s						
ASGA	**Asgata**	**5.77**	**106**	P	**Pn**	**04 48 17.9**	**-0.9**
CSS	**Mathiatis**	**5.77**	**104**	Pn	**Pn**	**04 48 17.5**	**-1.4**
CSS	**Mathiatis**	**5.77**	**104**	⇑P	**Pn**	**04 48 18.2**	**-0.7**
FNA	**Florina**	**5.81**	**318**	Pn	**Pn**	**04 48 21.7**	**+2.2**
BR231	**Keskin MP Arra**	**5.92**	**55**		**Pn**	**04 48 21.3**	**+0.4**
MVOU	**Mavrovouni**	**5.99**	**103**	⇑P	**Pn**	**04 48 20.7**	**-1.2**
OHR	**Ohrid**	**6.36**	**317**	*i* P	**Pn**	**04 48 30.5**	**+3.8**
BRTR	**Keskin Array B**	**6.44**	**59**	P	**Pn**	**04 48 30.6**	**+2.6**
	comp=N,0.3nm,0.3s,baz=157,slow=30,SNR=6.9						
BRTR				S	**Sn**	**04 49 42.7**	**+2.4**
	comp=N,0.4nm,0.3s,baz=223,slow=24,SNR=6.7						
BRTR	**Keskin Array B**	**6.44**	**59**		**Pn**	**04 48 28.2**	**+0.3**
BRTR					**Sn**	**04 49 41.2**	**+0.8**
TIR	**Tirane**	**7.04**	**315**	Pn	**Pn**	**04 48 38.0**	**+2.3**
SWA2		**7.36**	**187**	P	**Pn**	**04 48 39.6**	**-0.6**
	baz=191						
HMYD	**Mayadein**	**7.65**	**151**	P	**Pn**	**04 48 43.1**	**-1.0**
	baz=150						
HNAT	**Natroun**	**7.73**	**152**	P	**Pn**	**04 48 43.8**	**-1.4**
	baz=152						
DQRL	**Deir Qamar**	**7.95**	**108**	*e*P	**Pn**	**04 48 46.0**	**-2.2**
DRME	**Dracevica, Mon**	**7.97**	**317**	*e*Pn	**Pn**	**04 48 49.2**	**+0.9**
KOT	**Kottamia**	**7.98**	**145**	P	**Pn**	**04 48 47.2**	**-1.3**
	baz=144						
HHAG	**Hagoal**	**8.09**	**143**	P	**Pn**	**04 48 49.2**	**-0.7**
	baz=142						
PDG	**Podgorica**	**8.10**	**318**	*e*Pn	**Pn**	**04 48 50.2**	**+0.2**
PDG	**Podgorica**	**8.10**	**318**		**Pn**	**04 48 51.6**	**+1.7**
QRWL	**Qaraoun**	**8.10**	**109**	*e*P	**Pn**	**04 48 49.8**	**-0.4**
RYAN	**Fayoum**	**8.11**	**156**	AMP		04 50 00.0	
	baz=156						
HSAF	**As Saff**	**8.12**	**147**	P	**Pn**	**04 48 49.7**	**-0.7**
	baz=146						
MMAI	**Mount Meron Ar**	**8.13**	**113**	P	**Pn**	**04 48 49.8**	**-0.7**
	comp=N,15nm,0.3s,baz=304,slow=12,SNR=36						
MMAI				S	**Sn**	**04 50 15.2**	**-5.8**
	comp=N,13nm,0.3s,baz=319,slow=28,SNR=9.7						
TIP	**Timpagrande**	**8.14**	**292**	Pn	**Pn**	**04 48 50.0**	**-0.6**
GLL	**Jalalah**	**8.22**	**147**	P	**Pn**	**04 48 51.2**	**-0.6**
	baz=146						
RCY	**Rachaya**	**8.24**	**109**	*e*P	**Pn**	**04 48 50.9**	**-1.2**
SJES	**Sjenica**	**8.36**	**325**	*e*Pn	**Pn**	**04 48 55.4**	**+1.9**
HCY	**Herceg Novi**	**8.53**	**316**	*e*Pn	**Pn**	**04 48 55.7**	**0.0**
SUZ	**Suez**	**8.55**	**140**	P	**Pn**	**04 48 55.6**	**-0.5**
	baz=139						
CEL	**Celeste**	**8.61**	**284**	Pn	**Pn**	**04 48 57.6**	**+0.7**
TREB	**Trebinje**	**8.79**	**317**	*e*Pn	**Pn**	**04 48 59.1**	**-0.1**
BRY	**Bratogost**	**8.81**	**318**	*e*Pn	**Pn**	**04 49 00.2**	**+0.6**
UPM	**Unac-Piva**	**8.83**	**321**	*e*Pn	**Pn**	**04 49 02.2**	**+2.3**
ZAF	**Zafarana**	**8.86**	**143**	P	**Pn**	**04 48 59.5**	**-0.8**
	baz=142						
DBRK	**Dubrovnik**	**8.87**	**316**	*e*Pn	**Pn**	**04 48 58.8**	**-1.5**
DBRK				Sn	**Sn**	**04 50 32.1**	**-6.4**
NBNS	**Bani Suef**	**8.89**	**152**	P	**Pn**	**04 48 59.8**	**-0.9**
	baz=151						
RUDO	**Rudo**	**8.91**	**324**	*e*Pn	**Pn**	**04 49 03.0**	**+2.2**
MLR	**Muntele Rosu**	**8.92**	**357**	P	**Pn**	**04 49 02.4**	**+1.3**
	comp=N,0.0nm,0.3s,baz=128,slow=7.6,SNR=4.4						
MLR	**Muntele Rosu**	**8.92**	**357**	Pn	**Pn**	**04 49 04.2**	**+3.2**
ZNM	**Zenema**	**8.95**	**142**	P	**Pn**	**04 49 00.5**	**-0.9**
	baz=140						
DIVS	**Divibare**	**9.01**	**329**	*e*Pn	**Pn**	**04 49 04.0**	**+1.8**
DIVS	**Divibare**	**9.01**	**329**	Pn	**Pn**	**04 49 04.1**	**+1.8**
BBLS	**Lazići**	**9.09**	**326**	*e*Pn	**Pn**	**04 49 04.9**	**+1.7**
STON	**Ston**	**9.25**	**316**	*e*Pn	**Pn**	**04 49 03.2**	**-2.1**
STON				Sn	**Sn**	**04 50 40.5**	**-7.3**
STON	**Ston**	**9.25**	**316**	*e*Pn	**Pn**	**04 49 02.2**	**-3.1**
HAPS	**Han Pijesak,BI**	**9.46**	**325**	*e*Pn	**Pn**	**04 49 09.6**	**+1.3**
TEKS	**Tekeris**	**9.57**	**329**	*e*Pn	**Pn**	**04 49 12.1**	**+2.4**
TAMRE	**El Minia**	**9.62**	**156**	P	**Pn**	**04 49 09.4**	**-0.9**
	baz=156						
VAE	**Valguarnera**	**9.72**	**279**	S	**Sn**	**04 50 52.4**	**-6.8**
	comp=N,5.0nm,0.3s,baz=104,slow=4.3,SNR=3.2						
BZS	**Buzias**	**9.76**	**339**	⇑P	**Pn**	**04 49 13.0**	**+0.9**
GRB	**Gharib**	**9.83**	**146**	P	**Pn**	**04 49 13.4**	**+0.2**
	baz=145						
EIL	**Elat**	**9.87**	**132**	P	**Pn**	**04 49 12.6**	**-1.1**
	comp=N,2.4nm,0.3s,baz=333,slow=3.4,SNR=21						
EIL				S	Sn	04 50 53.6	-9.3
	comp=N,7.1nm,0.3s,baz=84,slow=6.1,SNR=14						
MAKA	**Makarska**	**9.90**	**316**	*e*Pn	**Pn**	**04 49 13.5**	**-0.4**
MAKA				Sn	**Sn**	**04 50 56.4**	**-7.0**
RICI	**Ricice**	**9.97**	**317**	*e*Pn	**Pn**	**04 49 14.7**	**-0.2**
RICI				Sn	**Sn**	**04 50 58.5**	**-6.6**
HBST	**Basata**	**10.07**	**134**	P	**Pn**	**04 49 15.8**	**-0.7**
	baz=133						
HVAR	**Hvar**	**10.16**	**314**	*e*Pn	**Pn**	**04 49 16.9**	**-0.6**
HKAT	**Jabal Katrina**	**10.21**	**140**	P	**Pn**	**04 49 17.4**	**-1.0**
	baz=139						
DRGR		**10.60**	**346**	⇑P	**Pn**	**04 49 24.6**	**+1.2**
TR1	**Tor 1**	**10.61**	**142**	P	**Pn**	**04 49 22.7**	**-0.8**
	baz=141						
KIJV	**Kijevo**	**10.70**	**317**	*e*Pn	**Pn**	**04 49 24.8**	**+0.2**
KIJV				Sn	**Sn**	**04 51 17.2**	**-5.6**
BLY	**Banja Luka**	**10.80**	**322**	*e*Pn	**Pn**	**04 49 27.1**	**+1.1**
ZIRJ	**Zirje**	**10.91**	**314**	*e*Pn	**Pn**	**04 49 27.7**	**+0.3**
ZIRJ				Sn	**Sn**	**04 51 21.3**	**-6.6**
BURAR	**Bucovina Array**	**11.08**	**355**	⇑P	**Pn**	**04 49 31.5**	**+1.9**
HHRG	**Al Ghardaqah**	**11.08**	**145**	P	**Pn**	**04 49 31.7**	**+1.9**
	baz=145						
UDBI	**Udbina**	**11.39**	**318**	*e*Pn	**Pn**	**04 49 35.1**	**+1.3**
DUGI	**Dugi Otok**	**11.46**	**314**	*e*Pn	**Pn**	**04 49 34.7**	**+0.2**
NVLJ	**Novalja**	**11.91**	**316**	*e*Pn	**Pn**	**04 49 40.8**	**+0.3**
NVLJ				Sn	**Sn**	**04 51 46.2**	**-5.6**
PSZ	**Piszkesteto**	**12.35**	**339**	⇓P	**P**	**04 49 54.2**	**+1.8**
PSZ	**Piszkesteto**	**12.35**	**339**	Pn	**Pn**	**04 49 48.4**	**+2.1**
CRES	**Cresnjev**	**12.43**	**321**	*e*Pn	**Pn**	**04 49 47.6**	**+0.3**
CEY	**Cerknica**	**12.90**	**319**	*e*Pn	**Pn**	**04 49 54.7**	**+1.3**
SOKA	**Soboth**	**13.24**	**323**	*i* Pn	**P**	**04 50 00.5**	**-2.0**
	comp=N,1.7nm,0.4s,SNR=4.1						
SOKA				*e*P	Pn	04 50 04.7	+7.0
	comp=N,4.7nm,0.4s						
OBKA	**Obir**	**13.36**	**322**	*e*Pn	**P**	**04 50 02.7**	**-1.0**
	comp=N,3.7nm,0.5s						
ARSA	**Arzberg**	**13.43**	**326**	*e*P	**P**	**04 50 07.2**	**+2.7**
	comp=N,1.2nm,0.3s						
CONA	**Conrad Observa**	**13.80**	**329**	*e*Pn	**P**	**04 50 07.6**	**-1.1**
	comp=N,1.3nm,0.5s						
KEST	**Kesra**	**13.90**	**272**	P	**P**	**04 50 10.6**	**+0.8**
	comp=N,0.4nm,0.3s,baz=36,slow=3.1,SNR=9.6						
KEST				S	**Sn**	**04 52 33.5**	**-6.6**
	comp=N,0.5nm,0.3s,baz=277,slow=21,SNR=7.0						
KEST	**Kesra**	**13.90**	**272**	Pn	**Pn**	**04 50 05.8**	**-0.4**
MYKA	**Terra Mystica**	**13.90**	**320**	Pn	**P**	**04 50 10.8**	**+1.1**
	comp=N,9.2nm,0.7s,SNR=6.7						
STAL	**STALIGIAL**	**14.15**	**317**	Pn	**Pn**	**04 50 10.8**	**+1.4**
ZOU	**Zoufplan**	**14.20**	**319**	Pn	**Pn**	**04 50 11.9**	**+1.8**
TEOL	**Teolo**	**14.22**	**313**	Pn	**Pn**	**04 50 11.4**	**+1.3**
AKASG	**Malin Array Be**	**14.26**	**7**	P	**P**	**04 50 14.7**	**+1.1**
	comp=N,4.6nm,0.3s,baz=200,slow=11,SNR=16						
AKASG	**Malin Array Be**	**14.26**	**7**	Pn	**P**	**04 50 12.6**	**-1.0**
AKBB	**Malin Array Si**	**14.26**	**7**	Pn	**P**	**04 50 12.6**	**-1.1**
KBA	**Koelnbreinsper**	**14.35**	**321**	*e*Pn	**P**	**04 50 14.1**	**-0.8**
	comp=N,0.5nm,0.3s						
KBA				*i* P	Pn	04 50 17.6	+5.6
	comp=N,16nm,0.5s,SNR=12						
KIV	**Kislovodsk**	**14.37**	**54**	⇑P	**Pn**	**04 50 12.9**	**+0.7**
KBZ	**Khabaz**	**14.42**	**55**	P	**P**	**04 50 18.5**	**+3.1**
	comp=N,0.1nm,0.3s,baz=302,slow=5.1,SNR=4.2						
MOA	**Molln**	**14.45**	**325**	*e*Pn	**Pn**	**04 50 13.8**	**+0.8**
	comp=N,0.5nm,0.4s						
MOA				*e*P	**P**	**04 50 18.4**	**+2.6**
	comp=N,2.8nm,0.6s,SNR=4.5						
OJC	**Ojcow**	**14.48**	**343**	Pn	**P**	**04 50 15.1**	**-0.9**
ABTA	**Abfaltersbach**	**14.57**	**319**	*i* Pn	**P**	**04 50 16.7**	**-0.5**
	comp=N,1.6nm,0.5s,SNR=18						
ABTA				*e*P	Pn	04 50 19.8	+5.2
	comp=N,15nm,0.6s						
CTI	**Castel Tesino**	**14.62**	**315**		**P**	**04 50 17.1**	**-0.6**
VRAC	**Vranov**	**14.64**	**334**	P	**P**	**04 50 19.2**	**+1.4**
	comp=N,2.2nm,0.3s,baz=150,slow=10,SNR=14						
MORC	**Moravsky Berou**	**14.71**	**337**		**P**	**04 50 18.2**	**-0.5**
KRLC	**Kraliky**	**15.22**	**336**	*e*P	**P**	**04 50 26.0**	**+1.6**
WTTA	**Wattenberg**	**15.36**	**319**	*e*Pn	**P**	**04 50 27.9**	**+1.9**
	comp=N,6.1nm,0.6s						
WATA	**Walderalm**	**15.43**	**319**	*i* Pn	**P**	**04 50 28.6**	**+1.8**
	comp=N,10nm,0.6s						
GEC2	**GERESS Array S**	**15.44**	**327**	Pn	**Pn**	**04 50 26.1**	**+0.7**
GEC2				IAmb	IAmb	04 50 30.5	
	comp=Z,8.2nm,0.7s						
GERES	**GERESS Array B**	**15.44**	**327**	P	**P**	**04 50 28.1**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=142,slow=11,SNR=36						
GERES	**GERESS Array B**	**15.44**	**327**		**P**	**04 50 26.6**	**-0.1**
SQTA	**Sankt Quirin**	**15.56**	**318**	*i* Pn	**P**	**04 50 29.8**	**+1.6**
	comp=Z,2.8nm,0.4s,SNR=6.5						
DPC	**Dobruska-Polom**	**15.61**	**335**	*e*P	**P**	**04 50 29.8**	**+1.1**
MOTA	**Moosalm**	**15.69**	**318**	*i* Pn	**P**	**04 50 31.6**	**+1.9**
	comp=Z,2.6nm,0.4s,SNR=6.4						
FETA	**Feichten**	**15.70**	**317**	*i* Pn	**P**	**04 50 32.1**	**+2.2**
	comp=Z,13nm,0.8s,SNR=20						
KHC	**Kasperske Hory**	**15.70**	**327**	*e*P	**P**	**04 50 30.5**	**+0.8**
KHC	**Kasperske Hory**	**15.70**	**327**		**P**	**04 50 30.1**	**+0.4**
KHC				IAmb	IAmb	04 50 33.4	
	comp=Z,12nm,0.8s						
CHVC	**Chvalec**	**15.90**	**335**	*e*P	**P**	**04 50 34.7**	**+2.8**
RETA	**Reutte**	**15.96**	**318**	*i* Pn	**P**	**04 50 34.1**	**+1.5**
	comp=Z,3.2nm,0.5s,SNR=6.1						
PRU	**Pruhonice**	**15.96**	**331**	*e*P	**P**	**04 50 33.3**	**+0.8**
DAVOX	**Davos/Dischmat**	**16.04**	**315**	P	**P**	**04 50 36.6**	**+3.0**
	comp=Z,0.7nm,0.3s,baz=143,slow=15,SNR=8.6						
PRA	**Prague**	**16.07**	**331**	*e*P	**P**	**04 50 36.3**	**+2.6**
DAVA	**Damuels**	**16.33**	**316**	*e*Pn	**P**	**04 50 38.6**	**+1.9**
	comp=Z,5.1nm,0.2s						
NKC	**Novy Kostel**	**17.01**	**328**	*e*P	**Pn**	**04 50 46.0**	**+1.4**
SENIN	**Lac Senin/Sane**	**17.37**	**310**	P	**Pn**	**04 50 49.4**	**+0.3**
SENIN				IAmb	IAmb	04 50 55.6	
	comp=Z,11nm,0.7s						
SUW	**Suwalki**	**17.59**	**353**	P	**Pn**	**04 50 51.9**	**+0.4**
CLL	**Collm**	**17.61**	**331**	P	**Pn**	**04 50 51.9**	**+0.2**
CLL				IAmb	IAmb	04 50 55.1	
	comp=Z,7.7nm,0.9s						
BFO	**Black Forest**	**17.78**	**317**	P	**Pn**	**04 50 53.8**	**0.0**
BFO				IAmb	IAmb	04 50 57.8	
	comp=Z,14nm,1.0s						
BSD	**Bornholm Skovb**	**20.18**	**340**	*i* P	**P**	**04 51 15.0**	**-3.4**
BSD	**Bornholm Skovb**	**20.18**	**340**	*i* P	**P**	**04 51 15.0**	**-3.4**
ESDC	**Sonseca Array**	**24.12**	**287**	P	**P**	**04 51 58.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=80,slow=9.4,SNR=7.6						
ESDC	**Sonseca Array**	**24.12**	**287**	P	**P**	**04 51 56.9**	**-1.0**
FINES	**FINESS Array B**	**24.90**	**360**	P	**P**	**04 52 06.0**	**+1.4**
	comp=Z,3.1nm,0.4s,baz=175,slow=9.4,SNR=33						
FINES				PcP	**PcP**	**04 55 37.0**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=146,slow=1.4,SNR=5.2						
HFS	**Hagfors**	**24.98**	**345**	P	**P**	**04 52 05.7**	**+0.3**
	comp=Z,3.1nm,0.5s,baz=140,slow=12,SNR=19						
NB2	**NORSAR Subarra**	**26.34**	**343**	P	**P**	**04 52 15.5**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=151,slow=9.3						
NB2	**NORSAR Subarra**	**26.34**	**343**	P	**P**	**04 52 16.6**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=151,slow=9.3						
EKA	**Eskdalemuir Ar**	**27.56**	**322**	P	**P**	**04 52 30.7**	**+2.1**
	comp=Z,1.1nm,0.6s,baz=117,slow=9.7,SNR=5.8						
UOSS	**Minazif**	**27.91**	**106**	P	**P**	**04 52 29.7**	**-2.4**
UOSS				IAmb	IAmb	04 52 35.1	
	comp=Z,12nm,1.1s						
TOA0	**Torodi Ar. Sit**	**32.23**	**230**	P	**P**	**04 53 08.2**	**-2.0**
TORD	**Torodi Ar. Bea**	**32.23**	**230**	P	**P**	**04 53 11.8**	**+1.6**
	comp=Z,5.3nm,0.3s,baz=32,slow=8.8,SNR=44						
TORD	**Torodi Ar. Bea**	**32.23**	**230**	P	**P**	**04 53 08.4**	**-1.8**
ARCES	**ARCESS Array B**	**33.03**	**359**	P	**P**	**04 53 16.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=164,slow=6.9,SNR=10						
ARCES	**ARCESS Array B**	**33.03**	**359**	P	**P**	**04 53 17.3**	**+0.7**
KURBB	**Kurchatov Arra**	**39.39**	**52**	P	**P**	**04 54 12.0**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=278,slow=8.8,SNR=13						
KURK	**Kurchatov**	**39.45**	**52**	P	**P**	**04 54 11.0**	**-0.3**
DBIC	**Dimbokro**	**41.30**	**232**	P	**P**	**04 54 28.1**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=241,slow=21,SNR=2.0						
MK31	**Makanchi Array**	**42.09**	**58**	P	**P**	**04 54 32.5**	**-0.5**
MKAR	**Makanchi Array**	**42.09**	**58**	P	**P**	**04 54 34.5**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=266,slow=8.9,SNR=15						
MKAR				ScP	**ScP**	**05 00 02.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=269,slow=3.9,SNR=7.8						
SONM	**Songino Array**	**57.75**	**52**	P	**P**	**04 56 32.7**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=272,slow=8.1,SNR=2.2						
YKA	**Yellowknife Ar**	**76.44**	**343**	P	**P**	**04 58 28.1**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=39,slow=5.6,SNR=5.8						

IDC ***22*** *04:56:07.7±2.1, 6°.36S×155°.00E, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.5/44, mbtmp3.7/5, ML2.6/1, Error ellipse: s-maj=88.6km s-min=27.8km az=131.0*

ISC 22 04:56:15.9±1.7, **6°.4S**±0°.4×**154°.8E**±0°.3, **h56**^{km}, **n6**, σ**0^{s}98**/7, **mb3.4**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.12**	**248**	Pn	**Pn**	**04 58 10.9**	**-0.2**
	3.6nm,0.3s,baz=240,slow=9.9,SNR=3.9						
PMG				Sn	**Sn**	**04 59 41.0**	**-0.5**
	2.1nm,0.3s,baz=7.5,slow=19,SNR=2.6						
WRA	**Warramunga Arr**	**23.98**	**234**	P	**P**	**05 01 26.1**	**+0.6**
	0.7nm,0.7s,baz=57,slow=9.6,SNR=4.9						
ASAR	**Alice Springs**	**26.41**	**227**	P	**P**	**05 01 48.1**	**+0.7**
	0.8nm,0.9s,baz=60,slow=9.0,SNR=1.9						
MKAR	**Makanchi Array**	**82.83**	**319**	P	**P**	**05 08 35.5**	**+1.1**
	0.2nm,0.4s,baz=89,slow=8.4,SNR=4.7						
ILAR	**Eielson Array**	**82.91**	**22**	P	**P**	**05 08 33.5**	**-0.8**
	0.4nm,0.6s,baz=235,slow=6.1,SNR=5.1						
TORD	**Torodi Ar. Bea**	**152.66**	**286**	PKPbc	**PKPbc**	**05 16 06.5**	**-0.9**
	0.4nm,0.8s,baz=95,slow=2.1,SNR=2.2						

IDC 22 05:01:23.9±2.6, **4°.32S**×**130°.47E**, **h0**^{km}, **mb3.3**/1, **mb1 3.6**/3, **mb1mx3.3**/44, **mbtmp3.4**/3, **ML3.4**/2, **Error ellipse: s-maj=145.5km s-min=31.8km az=71.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.98**	**167**	Pn	P	05 05 12.3	-1.5
	0.1nm,0.3s,baz=347,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**19.51**	**171**	P	P	05 05 52.1	-0.8
	0.2nm,0.3s,baz=350,slow=10,SNR=16						
MKAR	**Makanchi Array**	**66.27**	**326**	P	P	05 12 14.1	+0.1
	0.2nm,0.7s,baz=111,slow=6.8,SNR=2.4						

IDC ***22*** *05:08:33.6±0.8, 49°.31S×125°.25E, h0^{km}, mb4.1/6, mb1 4.3/6, mb1mx4.0/21, mbtmp4.1/6, MS4.2/16, Ms1 4.2/16, ms1mx4.0/28, Error ellipse: s-maj=38.8km s-min=21.4km az=105.0*

NEIC ***22*** *05:08:34.2±0.4, 49°.41S±0°.10×125°.4E±0°.3, h10^{km}±1^{km}, mb4.2/6, Error ellipse: s-maj=37.4km s-min=14.1km az=75.0*

GCMT ***22*** *05:08:36.2±0.2, 49°.26S±0°.02×124°.98E±0°.03, h19^{km}, MW5.1/92, Moment Tensor Solution. s43,c53; s92,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.04±.24; M$_{\theta\theta}$1.94±.16; M$_{\phi\phi}$2.10±.16; M$_{r\theta}$1.23±.34; M$_{\theta\phi}$-3.11±.10; M$_{\phi r}$2.13±.34; Best double couple: M$_{0}$5.28600×10^{16} NP1:ϕ_s290.00000°, δ48.00000°, λ-130.00000°. NP2: ϕ_s162.00000°, δ56.00000°, λ-55.00000°. Principal axes: T 5.1840, Plg5.0000°, Azm227.0000°; N 0.2030, Plg29.0000°, Azm320.0000°; P -5.3870, Plg61.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 05:08:34.5±0.7, **49°.4S**±0°.1×**125°.3E**±0°.2, **h10**^{km}, **n43**, σ**1^{s}01**/23, **mb4.1**/8, **MS4.2**/17, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.64**	**326**	T	T	05 29 17.9	
	baz=152,slow=74,SNR=64						
H01W2	**Cape Leeuwin H**	**16.65**	**326**	T	T	05 29 18.7	
	baz=152,slow=74,SNR=64						
H01W3	**Cape Leeuwin H**	**16.66**	**326**	T	T	05 29 16.7	
	baz=152,slow=74,SNR=64						
NWAO	**Narrogin (SRO)**	**17.51**	**337**	LR	LR	05 17 47.2	
	comp=Z,577nm,18.9s,baz=158,slow=32						
STKA	**Stephens Creek**	**21.36**	**41**	P	**P**	**05 13 21.6**	**-0.3**
	4.7nm,0.7s,baz=206,slow=11,SNR=10						
STKA				LR	LR	05 20 02.3	
	comp=Z,1μm,21.9s,baz=209,slow=32						
STKA	**Stephens Creek**	**21.36**	**41**	P	**P**	**05 13 21.4**	**-0.4**
ASAR	**Alice Springs**	**26.56**	**18**	P	**P**	**05 14 11.6**	**-1.0**
	2.1nm,0.5s,baz=194,slow=8.9,SNR=18						
ASAR				PcP	**PcP**	**05 17 39.3**	**+2.4**
	0.6nm,0.9s,baz=66,slow=1.5,SNR=4.2						
ASAR				LR	LR	05 23 38.8	
	comp=Z,1μm,20.7s,baz=198,slow=34						
ASAR	**Alice Springs**	**26.56**	**18**	P	**P**	**05 14 11.7**	**-0.9**
AS31	**Alice Springs**	**26.57**	**18**	P	**P**	**05 14 12.0**	**-0.6**
AS31				IAmb	IAmb	05 14 26.9	
	comp=Z,1.8nm,0.9s						
WRA	**Warramunga Arr**	**30.27**	**17**	P	**P**	**05 14 44.5**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=195,slow=8.2,SNR=3.0						
WRA				LR	LR	05 25 44.0	
	comp=Z,1μm,21.5s,baz=195,slow=34						
VNDA	**Vanda**	**31.45**	**166**	P	**P**	**05 14 56.3**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=323,slow=7.3,SNR=6.2						
VNDA				PcP	**PcP**	**05 17 50.1**	**+1.8**
	comp=Z,3.6nm,1.1s,baz=137,slow=3.5,SNR=3.9						
VNDA				LR	LR	05 26 43.2	
	comp=Z,207nm,18.2s,baz=322,slow=34						
VNDA	**Vanda**	**31.45**	**166**	P	**P**	**05 14 54.9**	**-0.6**
VNDA				IAmb	IAmb	05 14 59.8	
	comp=Z,5.0nm,0.9s						
MAW	**Mawson**	**35.39**	**216**	LR	LR	05 27 37.0	
	comp=Z,336nm,18.9s,baz=64,slow=32						
BATI	**Baumata**	**39.09**	**357**	LR	LR	05 32 42.8	
	comp=Z,421nm,18.0s,baz=207,slow=37						
DZM	**Mont Dzumac**	**42.35**	**65**	*e*LR	LR	05 28 11.1	
	comp=Z,893nm,28.5s						
DZM	**Mont Dzumac**	**42.35**	**65**	LR	LR	05 31 44.5	
	comp=Z,462nm,18.0s,baz=207,slow=33						
PMG	**Port Moresby**	**43.85**	**32**	LR	LR	05 36 05.3	
	comp=Z,268nm,18.9s,baz=166,slow=38						
KAPI	**Kappang**	**44.47**	**352**	LR	LR	05 35 32.8	
	comp=Z,91nm,18.2s,baz=160,slow=36						
JAY	**Jayapura**	**48.53**	**21**	LR	LR	05 38 03.0	
	comp=Z,474nm,19.3s,baz=190,slow=36						
SIJI	**Sorong**	**48.62**	**8**	LR	LR	05 39 42.2	
	comp=Z,90nm,19.9s,baz=53,slow=38						
HNR	**Honiara**	**49.20**	**48**	LR	LR	05 36 21.7	
	comp=Z,476nm,19.6s,baz=214,slow=34						
BELA	**Belgrano 2**	**52.39**	**185**	P	**P**	**05 17 45.7**	**-0.5**
SNAA	**Sanae**	**53.80**	**198**	P	**P**	**05 17 55.4**	**-1.2**
SNAA	**Sanae**	**53.80**	**198**	P	**P**	**05 17 56.4**	**-0.3**
VNA2	**Neumayer--Watz**	**55.29**	**197**	P	**P**	**05 18 06.9**	**-0.5**
	baz=135,slow=6.4						
VNA3	**Neumayer Olymp**	**55.45**	**196**	P	**P**	**05 18 08.2**	**-0.5**
VNA1	**Neumayer--Stat**	**55.68**	**197**	P	**P**	**05 18 09.3**	**-0.9**
H08S2	**Diego Garcia H**	**60.54**	**295**	T	T	06 23 52.4	
	baz=144,slow=76,SNR=8.6						
H08S1	**Diego Carcia H**	**60.55**	**295**	T	T	06 24 02.8	
	baz=144,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	**60.56**	**295**	T	T	06 23 52.7	
	baz=144,slow=76,SNR=14						
TBI	**Tubuai**	**69.64**	**102**	*e*LR	LR	05 40 41.0	
	comp=Z,156nm,30.0s						
CMAR	**Chiang Mai Arr**	**71.48**	**334**	P	**P**	**05 19 56.4**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=187,slow=5.3,SNR=8.9						
CMAR				LR	LR	05 50 02.2	
	comp=Z,48nm,20.3s,baz=198,slow=35						
CMAR	**Chiang Mai Arr**	**71.48**	**334**	P	**P**	**05 19 55.1**	**0.0**
CHTO	**Chiang Mai**	**71.82**	**334**	P	**P**	**05 19 57.2**	**+0.1**
CHTO				IAmb	IAmb	05 19 59.3	
	comp=Z,4.1nm,1.1s						
PPT2	**Papeete2**	**73.74**	**98**	*e*LR	LR	05 42 45.6	
	comp=Z,225nm,29.5s						
BOSA	**Boshof**	**74.88**	**244**	P	**P**	**05 20 15.1**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=146,slow=4.7,SNR=4.6						
KSRS	**Korea Array**	**86.51**	**2**	LR	LR	05 59 43.1	
	comp=Z,64nm,21.1s,baz=148,slow=36						
USRK	**Ussuriysk Ar.**	**93.40**	**5**	LR	LR	06 03 33.2	
	comp=Z,66nm,19.8s,baz=142,slow=35						
H10S2	**ASCENSION HYDR**	**112.13**	**223**	T	T	07 29 44.2	
	baz=150,slow=74,SNR=3.3						
H10S3	**ASCENSION HYDR**	**112.14**	**223**	T	T	07 29 50.1	
	baz=70,slow=74,SNR=8.4						
ILAR	**Eielson Array**	**132.34**	**35**	PKP	**PKPdf**	**05 27 47.0**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=276,slow=3.4,SNR=4.4						
NVAR	**Mina Array Bea**	**134.19**	**79**	PKP	**PKiKP**	**05 27 54.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=197,slow=1.4,SNR=3.9						
YKA	**Yellowknife Ar**	**145.36**	**45**	PKPbc	**PKPab**	**05 28 10.9**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=261,slow=2.4,SNR=33						

CERI ***22*** *05:36:27.0, 36°.14N×97°.29W, h5^{km}*

TUL ***22*** *05:36:27.6±1.3, 36°.13N±0°.01×97°.273W±0°.007, h5^{km}±7^{km}, ML3.0, mb_Lg3.1/85(NEIC), Error ellipse: s-maj=1.7km s-min=0.8km az=174.0*

ANF ***22*** *05:36:27.9±0.3, 36°.10N×97°.24W, h0^{km}, ML3.6/8, Error ellipse: s-maj=4.4km s-min=2.8km az=11.0*

NEIC ***22*** *05:36:27.7±1.0, 36°.139N±0°.005×97°.28W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.8km az=110.0*

ISC 22 05:36:27.5±1.1, **36°.15N**±0°.02×**97°.27W**±0°.02, **h3**^{km}±10^{km}, **n74**, σ**0^{s}84**/51, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.39**	**203**		**Pg**	**05 36 35.0**	**0.0**
OK029				Sg	**Sg**	**05 36 40.0**	**+0.1**
OK031	**S. Brethren Rd**	**0.40**	**119**		**Pg**	**05 36 35.7**	**+0.4**
OK031				Sg	**Sg**	**05 36 41.1**	**+0.6**
OK030	**Cody Creek RV**	**0.46**	**119**		**Pg**	**05 36 36.6**	**+0.3**
OK030				Sg	**Sg**	**05 36 42.7**	**+0.5**
QUOK	**Quay**	**0.46**	**88**	Pg	**Pg**	**05 36 36.9**	**+0.6**
QUOK				Sg	**Sg**	**05 36 43.4**	**+1.2**
BCOK	**Bluff Creek, N**	**0.56**	**209**	Pg	**Pg**	**05 36 38.3**	**-0.1**
OK025	**Westminster Rd**	**0.57**	**185**		**Pg**	**05 36 38.5**	**-0.1**
CROK	**Carrier**	**0.67**	**302**		**Pg**	**05 36 40.8**	**+0.4**
OKCFA	**Oklahoma City**	**0.75**	**191**		**Pg**	**05 36 41.6**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.76**	**190**		**Pg**	**05 36 41.8**	**-0.3**
KAN13	**South Haven SW**	**0.87**	**349**		**Pg**	**05 36 45.0**	**+0.6**
FNO	**Franklin**	**0.90**	**187**		**Pg**	**05 36 44.2**	**-0.6**
KAN14	**Manchester OK**	**0.98**	**325**		**Pg**	**05 36 46.4**	**+0.1**
T35A	**Sooner Cattle**	**0.98**	**39**		**Pg**	**05 36 46.5**	**+0.2**
T35B	**Sooner Cattle**	**0.98**	**39**	P		05 36 46.5	
	baz=219						
T35B				S		05 36 59.5	
	baz=219						
KAN01	**Argonia South**	**1.07**	**339**		**Pg**	**05 36 48.3**	**+0.2**
KAN10	**Anthony SW Sta**	**1.17**	**326**		**Pg**	**05 36 50.0**	**-0.1**
KAN08	**Anthony NE Sta**	**1.21**	**333**		**Pg**	**05 36 50.7**	**-0.1**
TUL1	**Leonard**	**1.23**	**101**	P	**Pg**	**05 36 50.0**	**-1.0**
	baz=281						
TUL1				S	**Sg**	**05 37 06.8**	**-0.1**
	baz=281						
TUL1	**Leonard**	**1.23**	**101**	Pg	**Pg**	**05 36 50.0**	**-1.0**
TUL1	**Leonard**	**1.23**	**101**	P		05 36 49.9	
	baz=281						
TUL1				S		05 37 06.4	
	baz=281						
KAN12	**Harper NE Stat**	**1.28**	**333**		**Pn**	**05 36 52.0**	**-0.4**
U32A	**Winter Ranch,**	**1.42**	**280**		**Pn**	**05 36 53.5**	**-0.6**
U32A	**Winter Ranch,**	**1.42**	**280**	P		05 36 53.6	
	baz=100						
U32A				S		05 37 13.4	
	baz=100						
X34A	**Smith Ranch, M**	**1.61**	**197**	IAmb_Lg		05 37 21.9	
	comp=Z,69nm,0.7s						
WMOK	**Wichita Mounta**	**1.87**	**222**	P	**Pn**	**05 37 00.9**	**+0.4**
	baz=41						
WMOK				S	**Sb**	**05 37 25.7**	**-0.5**
	baz=41						
WMOK	**Wichita Mounta**	**1.87**	**222**	Pn	**Pn**	**05 37 00.6**	**+0.1**
WMOK				IAmb_Lg		05 37 29.0	
	comp=Z,82nm,0.8s						
WMOK	**Wichita Mounta**	**1.87**	**222**	P		05 37 00.5	
	baz=41						
WMOK				S		05 37 25.8	
	baz=41						
X37A	**Clayton**	**2.20**	**135**		**Pn**	**05 37 05.2**	**+0.3**
X37A				IAmb_Lg		05 37 37.8	
	comp=Z,52nm,1.1s						
X37A	**Clayton**	**2.20**	**135**	P		05 37 05.2	
	baz=315						
U38A	**Gravette**	**2.35**	**82**		**Pb**	**05 37 08.9**	**-1.6**
R32A	**Long Quarter,**	**2.54**	**334**		**Pn**	**05 37 09.6**	**0.0**
R32A				IAmb_Lg		05 37 54.5	
	comp=Z,50nm,1.0s						

R32A	**Long Quarter,**	2.54	334	P		05 37 10.3	
	baz=153						
HHAR	**Hobbs**	2.70	86		Pn	05 37 12.8	+1.0
Z35A	**Perchaven, San**	2.81	180	P		05 37 13.8	
	baz=360						
KSU1	**Kansas State U**	2.99	10	Pb	Pg	05 37 23.8	-1.1
	baz=190						
KSU1	**Kansas State U**	2.99	10		Pn	05 37 15.8	+0.1
KSU1				IAmb_Lg		05 38 10.6	
	comp=Z,47nm,0.8s						
W39A	**Magazine**	3.00	108	P	Pn	05 37 16.9	+1.0
	baz=289						
W39A	**Magazine**	3.00	108		Pn	05 37 16.2	+0.4
W39A				IAmb_Lg		05 38 05.9	
	comp=Z,43nm,0.7s						
W39A	**Magazine**	3.00	108	P		05 37 16.6	
	baz=289						
CBKS	**Cedar Bluff**	3.30	324	Pb	Pb	05 37 29.0	+2.3
	baz=143						
CBKS				Sb	Sg	05 38 11.5	-2.1
	baz=143						
CBKS	**Cedar Bluff**	3.30	324	Pn	Pn	05 37 18.6	-1.6
CBKS				IAmb_Lg		05 38 18.9	
	comp=Z,45nm,0.7s						
MIAR	**Mount Ida**	3.42	117	P	Pn	05 37 22.5	+0.8
	baz=299						
MIAR				S	Sn	05 38 04.4	+1.6
	baz=299						
MIAR	**Mount Ida**	3.42	117		Pn	05 37 21.2	-0.5
MIAR				IAmb_Lg		05 38 22.6	
	comp=Z,34nm,1.0s						
MIAR	**Mount Ida**	3.42	117	P		05 37 22.2	
	baz=299						
MIAR				S		05 38 04.1	
	baz=299						
Z38A	**Mt. Pleasant**	3.45	146	Pn	Pn	05 37 21.4	-0.6
Z38A				IAmb_Lg		05 38 23.3	
	comp=Z,72nm,0.9s						
S39A	**Bolivar**	3.52	63		Pn	05 37 22.8	-0.2
S39A	**Bolivar**	3.52	63	P		05 37 24.0	
	baz=245						
U40A	**Yellville**	3.58	85	S	Sn	05 38 07.6	+1.0
	baz=268						
U40A	**Yellville**	3.58	85	P		05 37 24.6	
	baz=268						
U40A				P		05 37 24.6	
	baz=268						
U40A				S		05 38 07.5	
	baz=268						
U40A				S		05 38 07.5	
	baz=268						
AMTX	**Amarillo**	3.81	252	S		05 38 12.7	
	baz=70						
X40A	**Basin Creek Fa**	3.99	113		Pn	05 37 29.6	0.0
X40A				IAmb_Lg		05 38 33.9	
	comp=Z,31nm,0.7s						
MGMO	**Mountain Grove**	4.15	75	IAmb_Lg		05 38 40.8	
	comp=Z,39nm,0.7s						
WHAR	**Wooly Hollow**	4.15	101	IAmb_Lg		05 38 43.5	
	comp=Z,62nm,1.2s						
W41B	**Gary Mavity, V**	4.21	102	P	Pn	05 37 33.3	+0.8
	baz=285						
W41B				S	Sn	05 38 22.1	0.0
	baz=285						
W41B	**Gary Mavity, V**	4.21	102	S		05 38 22.0	
	baz=285						
WLAR	**White Oak Lake**	4.21	125	IAmb_Lg		05 38 50.9	
	comp=Z,30nm,0.8s						
237A	**Washetta, Mont**	4.32	163	P		05 37 33.6	
	baz=344						
P38A	**Dawn**	4.56	39	IAmb_Lg		05 38 50.1	
	comp=Z,24nm,0.8s						
N33A	**J Bar K, Exete**	4.58	358	IAmb_Lg		05 39 03.3	
	comp=Z,28nm,0.8s						
T42A	**Van Buren**	5.05	78	IAmb_Lg		05 39 16.7	
	comp=Z,27nm,0.8s						
CCM	**Cathedral Cave**	5.18	67	IAmb_Lg		05 39 17.9	
	comp=Z,22nm,0.9s						
BGNE	**Belgrade**	5.29	353	IAmb_Lg		05 39 28.4	
	comp=Z,30nm,0.8s						
P40A	**Paris**	5.33	49	IAmb_Lg		05 39 20.1	
	comp=Z,20nm,0.7s						
HBAR	**Harrisburg**	5.41	94	IAmb_Lg		05 39 24.7	
	comp=Z,54nm,0.8s						
PBMO	**Poplar Bluff**	5.55	82	IAmb_Lg		05 39 31.2	
	comp=Z,26nm,0.8s						
FVM	**French Village**	5.77	70	IAmb_Lg		05 39 35.9	
	comp=Z,31nm,0.7s						
PEBM	**Pemiscott Bayo**	6.00	88	IAmb_Lg		05 39 40.5	
	comp=Z,44nm,0.7s						
JCT	**Junction City**	6.04	201	IAmb_Lg		05 39 46.1	
	comp=Z,19nm,0.7s						
OGNE	**Ogallala**	6.07	324	IAmb_Lg		05 39 57.2	
	comp=Z,20nm,0.7s						
SLM	**Saint Louis**	6.13	64	IAmb_Lg		05 39 47.4	
	comp=Z,27nm,0.7s						
342A	**Flagon Creek P**	6.30	138	IAmb_Lg		05 39 59.8	
	comp=Z,34nm,0.8s						
HALT	**Halls**	6.43	90	IAmb_Lg		05 40 08.1	
	comp=Z,24nm,0.9s						
GLAT	**Glass**	6.46	87	IAmb_Lg		05 39 59.9	
	comp=Z,34nm,0.8s						
HICK	**Hickman**	6.50	84	IAmb_Lg		05 40 11.8	
	comp=Z,37nm,0.8s						
W45A	**Hickory Valley**	6.66	96	IAmb_Lg		05 40 05.3	
	comp=Z,36nm,1.2s						
T45A	**Paducah**	7.00	80	IAmb_Lg		05 40 17.6	
	comp=Z,40nm,0.8s						
P43A	**Skaggs, Pawnee**	7.05	58	IAmb_Lg		05 40 12.0	
	comp=Z,32nm,0.9s						
K38A	**Parkersburg**	7.36	27	IAmb_Lg		05 40 42.1	
	comp=Z,27nm,0.9s						
ISCO	**Idaho Springs**	7.53	301	Pn	Pn	05 38 17.5	-0.9
PLAL	**Pickwick Lake**	7.59	96	Pn	Pn	05 38 18.1	-0.8
ECSD	**EROS Data Cent**	7.59	4	Pn	Pn	05 38 17.9	-1.0
N23A	**Red Feather La**	8.28	307	IAmb_Lg		05 41 06.3	
	comp=Z,15nm,0.9s						
SUSD	**Miller**	8.38	352	IAmb_Lg		05 41 12.5	
	comp=Z,14nm,0.8s						
JFWS	**Jewell Farm**	8.66	37	IAmb_Lg		05 41 05.1	
	comp=Z,18nm,0.8s						
P46A	**Rosedale**	8.68	63	IAmb_Lg		05 41 03.2	
	comp=Z,19nm,0.8s						
SFIN	**Lafayette**	9.04	59	IAmb_Lg		05 41 21.0	
	comp=Z,19nm,0.8s						
K22A	**Casper**	9.66	315	IAmb_Lg		05 41 46.6	
	comp=Z,11nm,0.9s						
P48A	**Milroy**	9.94	67	IAmb_Lg		05 41 46.9	
	comp=Z,14nm,0.8s						

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*IDC **22** 05:38:28.5±5.0, 15°.46N×93°.67W, h0^{km}, mb3.3/2, mb1 3.8/3, mb1mx3.5/35, mbtmp3.3/3, MS3.8/4, Ms1 3.8/4, ms1mx3.0/25, Error ellipse: s-maj=164.7km s-min=52.5km az=44.0*

*MEX **22** 05:38:29.1±0.6, 14°.80N×94°.61W, h17^{km}±999^{km}, MD4.2*

ISC 22 05:38:26.7±1.4, **14°.85N**±0°.10×**94°.58W**±0°.05, **h10^{km}, n14, σ1^{s}.96**/17, **MS3.9**/4, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.56	57	*i* P	Pn	05 38 53.4	-1.2
PCIG				*e*S	Sn	05 39 12.6	-2.3
HUIG	**Huatulco**	1.73	302	*e*P	Pn	05 38 55.9	-1.0
HUIG				*e*S	Sn	05 39 15.1	-4.0
THIG		2.24	88	*e*P	Pn	05 39 02.6	-1.3
THIG				*i* S	Sn	05 39 29.4	-2.2
CMIG	**Matias Romero**	2.24	352	Pn	Pn	05 39 04.0	0.0
	52nm,0.3s,baz=169,slow=13,SNR=21						
CMIG				Sn	Sn	05 39 29.8	-1.9
	42nm,0.3s,baz=149,slow=16,SNR=16						
CMIG	**Matias Romero**	2.24	352	*e*P	Pn	05 39 03.7	-0.3
CMIG				*e*S	Sn	05 39 30.0	-1.8
TGIG		2.37	36	*e*P	Pn	05 39 05.3	-0.5
TGIG				*i* S	Sn	05 39 33.1	-1.9
CCIG	**Comitan**	2.75	59	*e*P	Pn	05 39 11.4	+0.3
CCIG				*i* S	Sn	05 39 43.8	-0.7
TXAR	**Lajitas Array**	16.68	331	Pn	P	05 42 23.4	+0.3
	baz=157,slow=9.8,SNR=1.6						
NVAR	**Mina Array Bea**	31.46	323	P	P	05 44 52.3	+3.5
	0.3nm,0.6s,baz=122,slow=8.6,SNR=4.9						
YBH	**Yreka Blue Hor**	36.17	323	LR	LR	06 02 32.4	
	comp=Z,39nm,20.5s,baz=211,slow=40						
BBB	**Bella Bella**	45.81	332	LR	LR	06 08 26.8	
	comp=Z,84nm,19.6s,baz=302,slow=39						
YKA	**Yellowknife Ar**	49.65	348	P	P	05 47 18.6	+0.3
	0.3nm,0.7s,baz=139,slow=8.9,SNR=3.9						
BDFB	**Brasilia**	55.09	121	LR	LR	06 11 29.2	
	comp=Z,232nm,20.5s,baz=140,slow=36						
ILAR	**Eielson Array**	61.08	337	LR	LR	06 18 29.2	
	comp=Z,112nm,19.1s,baz=252,slow=39						

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*IDC **22** 05:39:18.8±1.0, 6°.91N×73°.12W, h151^{km}±50^{km}, mb3.0/4, mb1 3.3/6, mb1mx3.0/36, mbtmp3.5/6, Error ellipse: s-maj=115.7km s-min=8.4km az=133.0*

*RSNC **22** 05:39:19.9±1.1, 6°.80N×73°.11W, h153^{km}±4^{km}, ML3.3, Mw3.6, Fault plane solution: NP1:φ$_s$68.00000°, δ82.00000°, λ-128.00000°.*

ISC 22 05:39:18.5±0.8, **6°.81N**±0°.03×**73°.10W**±0°.03, **h161^{km}**±6^{km}, **n37, σ1^{s}.44**/70, **mb3.4**/4, **5C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.24	202	⇓*i*P	Pn	05 39 40.4	-0.1
BARC				*e*S	Sn	05 39 56.0	-1.3
BARC				*i*		05 39 57.3	
	comp=Z,382nm,0.2s						
PAMC	**Pamplona, Colo**	0.65	37	⇑*i*P	Pn	05 39 43.1	+0.7
PAMC				*e*S	Sn	05 40 00.7	-0.1
PAMC				*i*		05 40 02.7	
	comp=Z,665nm,0.6s						
BRRC	**Barranca, Sant**	0.68	296	⇑*i*P	Pn	05 39 42.3	+0.3
BRRC				*e*S	Sn	05 40 00.0	0.0
BRRC				*i*		05 40 02.8	
	comp=Z,419nm,0.4s						
RUSC	**La Rusia**	0.92	179	⇓*i*P	Pn	05 39 44.2	-0.1
RUSC				*e*S	Sn	05 40 03.0	-0.9
RUSC				*i*		05 40 05.5	
	comp=Z,144nm,0.7s						
TAMC	**Tame, Arauca**	1.35	106	⇓*i*P	Pn	05 39 48.5	+1.0
TAMC				*e*S	Sn	05 40 10.5	+0.8
TAMC				*i*		05 40 10.8	
	comp=Z,68nm,0.5s						
PTBC	**PUERTO BERRIO,**	1.38	259	*e*P	Pn	05 39 46.8	-0.9
PTBC				*e*S	Sn	05 40 08.5	-1.6
PTBC				*i*		05 40 14.3	
	comp=Z,486nm,0.2s						
OCAC	**Ocana**	1.43	351	*e*P	Pn	05 39 48.5	+0.1
OCAC				*e*S	Sn	05 40 11.6	+0.1
OCAC				*i*		05 40 16.0	
	comp=Z,233nm,0.1s						
SPBC	**San Pablo de B**	1.51	220	⇓*i*P	Pn	05 39 49.1	+0.1
SPBC				*e*S	Sn	05 40 11.6	-1.1
ZARC	**Zaragoza, Cauc**	1.88	291	*e*P	Pn	05 39 52.8	-0.1
ZARC				*e*S	Sn	05 40 18.7	-0.7
ZARC				*i*		05 40 24.2	
	comp=Z,251nm,0.3s						
NORC	**Norcasia**	2.16	235	*e*P	Pn	05 39 56.6	+0.4
NORC				*e*S	Sn	05 40 24.2	-1.0
NORC				*i*		05 40 29.2	
	comp=Z,139nm,0.2s						
SMLC	**San Martn de**	2.20	334	*e*P	Pn	05 39 56.7	+0.1
SMLC				*e*S	Sn	05 40 25.4	-0.6
SMLC				*i*		05 40 28.3	
	comp=Z,345nm,0.1s						
CHIC	**Chingaza**	2.26	196	⇑*i*P	Pn	05 39 58.3	+0.5
CHIC				*e*S	Sn	05 40 27.6	-0.4
CHIC				*i*		05 40 35.4	
	comp=Z,82nm,0.6s						
ROSC	**El Rosal**	2.31	212	P	Pn	05 39 59.9	+1.6
	comp=Z,35nm,0.3s,baz=313,slow=7.9,SNR=49						
ROSC				S	Sn	05 40 29.8	+0.8
	comp=Z,30nm,0.3s,baz=133,slow=19,SNR=5.3						
HELC	**Santa Helena**	2.50	256	*e*P	Pn	05 40 01.2	+0.7
HELC				*e*S	Sn	05 40 33.1	+0.3
HELC				*i*		05 40 38.9	
	comp=Z,138nm,0.3s						
UREC	**San Jos de Ur**	2.59	291	*e*P	Pn	05 40 00.3	-1.0
UREC				*e*S	Sn	05 40 31.6	-2.8
UREC				*i*		05 40 37.8	
	comp=Z,162nm,0.2s						
VILC	**Villavicencio,**	2.75	193	*e*P	Pn	05 40 04.0	+0.6
VILC				*e*S	Sn	05 40 37.7	-0.4
VILC				*i*		05 40 44.0	
	comp=Z,99nm,0.3s						
GUY2C	**Guyana, Caldas**	2.75	235	*e*P	Pn	05 40 05.1	+1.4
GUY2C				*e*S	Sn	05 40 39.4	+0.7
GUY2C				*i*		05 40 46.6	
	comp=Z,114nm,0.3s						
PTGC	**Puerto Gaitan,**	2.77	160	⇓*i*P	Pn	05 40 03.1	-0.3
PTGC				*e*S	Sn	05 40 36.5	-1.9
PTGC				*i*		05 40 39.0	
	comp=Z,79nm,0.4s						
RREF	**El Recreo**	2.94	230	*e*P	Pn	05 40 07.1	+0.9
RREF				*e*S	Sn	05 40 43.5	+0.6
RREF				*i*		05 40 50.0	
	comp=Z,126nm,0.3s						
CBOC	**Ciudad Bolivar**	3.05	252	*e*P	Pn	05 40 08.2	+1.1
CBOC				*e*S	Sn	05 40 45.2	+0.5
CBOC				*i*		05 40 53.7	
	comp=Z,40nm,0.5s						
DBBC	**Dabeiba**	3.10	274	*e*P	Pn	05 40 07.8	+0.2
DBBC				*e*S	Sn	05 40 44.1	-1.7
TOLC	**Tolima**	3.13	225	*e*P	Pn	05 40 09.8	+1.5
TOLC				*e*S	Sn	05 40 46.9	0.0
SDV	**Santo Domingo**	3.19	50	P	Pn	05 40 09.8	+0.9
	comp=Z,2.8nm,0.3s,baz=231,slow=9.3,SNR=16						
SDV				S	Sn	05 40 46.6	-1.4
	comp=Z,7.1nm,0.3s,baz=56,slow=23,SNR=20						
SDV	**Santo Domingo**	3.19	50	*e*P	Pn	05 40 09.0	+0.1
SDV				*e*S	Sn	05 40 46.3	-1.7
SDV				*i*		05 40 52.0	
	comp=Z,19nm,0.5s						
MOTC	**Monteria, Cord**	3.21	308	*e*P	Pn	05 40 07.4	-1.6
MOTC				*e*S	Sn	05 40 45.7	-2.4
MOTC				*i*		05 40 48.3	
	comp=Z,53nm,0.3s						
ARGC	**Ariguani, Magd**	3.23	339	*e*P	Pn	05 40 10.6	+1.3
ARGC				*e*S	Sn	05 40 48.9	+0.2
ARGC				*i*		05 40 57.6	
	comp=Z,70nm,0.2s						
ANIL	**Santa Ana**	3.25	225	*e*P	Pn	05 40 11.5	+1.6
ANIL				*e*S	Sn	05 40 51.6	+2.0
ANIL				*i*		05 40 54.2	
	comp=Z,20nm,0.3s						
ORTC	**Ortega, Tolima**	3.59	217	⇑*e*P	Pn	05 40 14.3	+0.4
ORTC				*e*S	Sn	05 40 57.7	+0.8
ORTC				*i*		05 41 03.7	
	comp=Z,63nm,0.4s						
PLMC	**San Jos del P**	3.69	239	*e*P	Pn	05 40 16.1	+0.9
PLMC				*e*S	Sn	05 40 56.4	-2.9
PLMC				*i*		05 41 10.7	
	comp=Z,21nm,0.4s						
GUVC	**San Jose del G**	4.26	174	*e*P	Pn	05 40 22.3	-0.3
GUVC				*e*S	Sn	05 41 11.2	-1.3
GUVC				*i*		05 41 15.6	
	comp=Z,51nm,0.3s						
SMRC	**Santa Marta, M**	4.46	346	*e*P	Pn	05 40 25.6	+0.5
SMRC				*e*S	Sn	05 41 13.1	-4.1
SMRC				*i*		05 41 14.6	
	comp=Z,44nm,0.2s						
MACC	**Macarena, Meta**	4.70	189	⇑*i*P	Pn	05 40 27.0	-1.3
MACC				*e*S	Sn	05 41 17.9	-4.7
MACC				*i*		05 41 27.6	
	comp=Z,12nm,0.4s						
GARC	**Garzon, Huila**	5.18	208	*e*P	Pn	05 40 34.4	-0.4
GARC				*e*S	Sn	05 41 29.8	-4.6
GARC				*i*		05 41 38.5	
	comp=Z,17nm,0.2s						
TXAR	**Lajitas Array**	36.49	312	P	P	05 46 09.5	+1.0
	comp=Z,0.2nm,0.4s,baz=121,slow=9.6,SNR=2.5						
ULM	**Lac du Bonnet**	47.30	340	P	P	05 47 36.0	+0.3
	comp=Z,0.6nm,0.4s,baz=175,slow=11,SNR=2.2						
PDAR	**Pinedale Array**	48.10	324	P	P	05 47 42.5	+0.1
	comp=Z,0.2nm,0.6s,baz=98,slow=6.5,SNR=2.1						
YKA	**Yellowknife Ar**	63.28	340	P	P	05 49 30.1	+0.2
	comp=Z,0.5nm,0.6s,baz=127,slow=7.7,SNR=8.7						

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*IDC **22** 05:46:23.2±0.6, 52°.70S×27°.84E, h0^{km}, mb4.1/12, mb1 4.3/12, mb1mx4.1/26, mbtmp4.2/12, MS3.7/5, Ms1 3.6/5, ms1mx3.3/29, Error ellipse: s-maj=25.4km s-min=16.6km az=58.0*

*NEIC **22** 05:46:25.6±1.7, 52°.6S±0°.1×28°.0E±0°.3, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=25.8km s-min=18.3km az=262.0*

ISC 22 05:46:25.5±0.5, **52°.65S**±0°.08×**27°.9E**±0°.1, **h10^{km}, n45, σ1^{s}.14**/41, **mb4.3**/15, **MS3.5**/5, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	20.90	343	P	P	05 51 08.9	+0.9
	7.6nm,0.9s,baz=143,slow=2.8,SNR=2.2						
SUR				LR	LR	05 57 18.6	
	comp=Z,297nm,19.8s,baz=145,slow=31						
SUR	**Sutherland**	20.90	343	P	P	05 51 09.0	+0.9
SUR				IAmb	IAmb	05 51 20.8	
	comp=Z,55nm,1.6s						
MAW	**Mawson**	22.52	145	P	P	05 51 25.4	+0.5
	comp=Z,1.4nm,0.5s,baz=300,slow=13,SNR=2.2						
MAW				LR	LR	05 58 16.3	
	comp=Z,119nm,20.7s,baz=247,slow=32						
MAW	**Mawson**	22.52	145	P	P	05 51 28.4	+3.5
SNAA	**Sanae**	23.39	204	P	P	05 51 35.7	+1.7
SNAA	**Sanae**	23.39	204	P	P	05 51 33.8	-0.2
BOSA	**Boshof**	24.09	354	P	P	05 51 41.4	+0.3
	comp=Z,3.2nm,0.7s,baz=164,slow=11,SNR=5.9						
BOSA				LR	LR	05 59 20.9	
	comp=Z,137nm,21.3s,baz=170,slow=32						
BOSA	**Boshof**	24.09	354	P	P	05 51 41.5	+0.4
BOSA				IAmb	IAmb	05 51 49.6	
	comp=Z,19nm,1.6s						
VNA2	**Neumayer--Watz**	24.17	208	P	P	05 51 43.0	+1.5
VNA1	**Neumayer--Stat**	24.29	209	P	P	05 51 44.9	+2.4
LBTB	**Lobatse**	27.65	355	LR	LR	06 01 16.7	
	comp=Z,139nm,20.4s,baz=172,slow=32						
BELA	**Belgrano 2**	33.45	200	P	P	05 53 04.1	+0.1
TSUM	**Tsumeb**	34.34	343	P	P	05 53 12.8	+0.4
	comp=Z,2.8nm,0.8s,baz=129,slow=14,SNR=4.2						
TSUM	**Tsumeb**	34.34	343	P	P	05 53 11.9	-0.5
ABPO	**Ambohimpanom**	36.79	31	P	P	05 53 33.5	+0.1
ABPO				IAmb	IAmb	05 53 35.5	
	comp=Z,8.2nm,1.1s						
LSZ	**Lusaka**	37.28	0	P	P	05 53 37.5	-0.1
LSZ				IAmb	IAmb	05 53 46.0	
	comp=Z,10nm,1.6s						
QSPA	**South Pole Qui**	37.57	180	P	P	05 53 39.6	-0.1
QSPA				IAmb	IAmb	05 53 40.6	
	comp=Z,6.2nm,0.8s						
CASY	**Casey**	40.82	142	P	P	05 54 05.1	-1.5
VNDA	**Vanda**	47.00	168	P	P	05 54 55.5	-0.6
	comp=Z,3.7nm,0.6s,baz=232,slow=6.5,SNR=19						
VNDA				LR	LR	06 13 50.4	
	comp=Z,96nm,20.3s,baz=256,slow=35						
VNDA	**Vanda**	47.00	168	P	P	05 54 56.3	+0.2
VNDA				IAmb	IAmb	05 54 57.4	
	comp=Z,4.7nm,0.8s						
H10S2	**ASCENSION HYDR**	55.52	306	T	T	06 56 09.5	
H10S3	**ASCENSION HYDR**	55.54	306	T	T	06 56 13.3	
	SNR=6.0						
PLCA	**Paso Flores**	63.44	237	P	P	05 56 54.8	-0.4
	comp=Z,1.7nm,1.0s,baz=166,slow=5.7,SNR=2.9						
PLCA	**Paso Flores**	63.44	237	P	P	05 56 55.0	-0.2
CPUP	**Villa Florida**	66.73	257	P	P	05 57 15.2	-1.4
	comp=Z,2.1nm,0.7s,baz=105,slow=8.1,SNR=5.7						
TOA0	**Torodi Ar. Sit**	69.31	333	P	P	05 57 33.5	+0.7
TOA0				IAmb	IAmb	05 57 44.0	
	comp=Z,7.4nm,1.4s						
TORD	**Torodi Ar. Bea**	69.31	333	P	P	05 57 32.4	-0.5
	comp=Z,1.3nm,0.6s,baz=172,slow=6.3,SNR=5.7						
TORD	**Torodi Ar. Bea**	69.31	333	P	P	05 57 32.9	0.0
SIV	**San Ignacio**	76.85	261	P	P	05 58 16.7	-1.0
	comp=Z,0.7nm,0.7s,baz=168,slow=4.4,SNR=5.0						
STKA	**Stephens Creek**	77.96	127	P	P	05 58 22.2	-1.5
	comp=Z,1.7nm,0.6s,baz=250,slow=7.5,SNR=4.2						
ASAR	**Alice Springs**	80.64	117	P	P	05 58 38.6	+0.1
	comp=Z,3.0nm,0.9s,baz=215,slow=4.6,SNR=28						
WRA	**Warramunga Arr**	83.87	115	P	P	05 58 54.4	-1.0
	comp=Z,2.8nm,1.0s,baz=215,slow=4.2,SNR=8.6						
WRA	**Warramunga Arr**	83.87	115	P	P	05 58 54.8	-0.6
WB2	**Warramunga Arr**	83.88	115	P	P	05 58 54.2	-1.2
WR0	**Warramunga Arr**	83.97	115	P	P	05 58 56.4	+0.4
WB0	**Warramunga Arr**	84.04	115	P	P	05 58 56.3	0.0
SONM	**Songino Array**	120.26	50	PKP	PKPdf	06 05 15.6	-0.3
	comp=Z,0.5nm,0.8s,baz=192,slow=4.1,SNR=2.4						
SONM	**Songino Array**	120.26	50		PKiKP	06 05 16.1	0.0
ULM	**Lac du Bonnet**	145.64	289	PKPbc	PKPdf	06 06 01.6	-1.4
	comp=Z,2.4nm,0.7s,baz=127,slow=2.9,SNR=6.0						
ULM	**Lac du Bonnet**	145.64	289		PKPdf	06 06 02.5	-0.4
SEY	**Seymchan**	149.63	48	PKPbc	PKPdf	06 06 10.6	+1.5
	comp=Z,1.3nm,0.6s,baz=344,slow=23,SNR=2.0						
PDAR	**Pinedale Array**	150.13	268	PKPbc	PKPdf	06 06 13.3	+2.3
	comp=Z,0.1nm,0.3s,baz=242,slow=44,SNR=2.5						
NVAR	**Mina Array Bea**	152.70	252	PKPbc	PKPbc	06 06 21.7	-0.4
	comp=Z,0.5nm,0.6s,baz=145,slow=2.5,SNR=6.1						
NVAR	**Mina Array Bea**	152.70	252		PKiKP	06 06 23.4	+1.2
YKA	**Yellowknife Ar**	157.94	311	PKPbc	PKPbc	06 06 39.2	
	comp=Z,0.2nm,0.7s,baz=90,slow=2.3,SNR=5.4						

IDC 22 05:46:41.3±12.0, **23°.11N**×**108°.69W, h0^{km}, mb2.8**/1, **mb1 3.5**/4, **mb1mx3.3**/34, **mbtmp3.1**/4, **ML3.5**/3, **Error ellipse: s-maj=179.7km s-min=38.7km az=171.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	1.78	304	Pn	Pn	05 47 12.7	-0.7
	9.4nm,0.3s,baz=99,slow=5.4,SNR=5.0						
TXAR	**Lajitas Array**	7.66	35	Pn	Pn	05 48 34.1	-0.2
	0.1nm,0.3s,baz=96,slow=22,SNR=2.5						
TXAR				Lg	Lg	05 50 31.7	
	0.2nm,0.3s,baz=227,slow=27,SNR=5.8						
NVAR	**Mina Array Bea**	17.34	334	Pn	P	05 50 47.1	+0.6
	0.1nm,0.3s,baz=158,slow=12,SNR=7.4						
PDAR	**Pinedale Array**	19.61	358	P	Pn	05 51 12.8	0.0
	0.1nm,0.3s,baz=178,slow=8.9,SNR=4.7						
YKA	**Yellowknife Ar**	39.57	356	P	P	05 54 14.3	+0.4
	0.1nm,0.7s,baz=167,slow=7.5,SNR=2.0						

IDC 22 05:50:42.5±4.7, **24°.11N**×**109°.64W, h0^{km}, mb3.2**/1, **mb1 3.6**/4, **mb1mx3.4**/34, **mbtmp3.1**/4, **ML3.5**/3, **Error ellipse: s-maj=82.6km s-min=24.1km az=151.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	0.61	270	Pn	Pn	05 50 58.4	-0.1
	12nm,0.3s,baz=75,slow=12,SNR=2.7						
LPIG				LR	LR	05 51 00.4	
	comp=Z,56nm,19.0s,baz=39,slow=29						
TXAR	**Lajitas Array**	7.46	44	Pn	Pn	05 52 34.2	+1.5
	0.1nm,0.3s,baz=198,slow=12,SNR=2.3						
NVAR	**Mina Array Bea**	16.07	335	Pn	P	05 54 33.9	+0.2
	0.1nm,0.3s,baz=151,slow=11,SNR=5.8						
PDAR	**Pinedale Array**	18.61	0	P	P	05 54 59.9	-1.8
	0.1nm,0.3s,baz=159,slow=8.5,SNR=2.6						
YKA	**Yellowknife Ar**	38.52	356	P	P	05 58 06.5	+0.2
	0.4nm,0.9s,baz=169,slow=7.5,SNR=4.1						

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*KRNET **22** 06:23:40.9±0.1, 39°.52N×74°.76E, mb3.4*

*SOME **22** 06:23:43.2, 39°.78N×74°.90E, h10^{km}*

*NNC **22** 06:23:45.9±1.2, 39°.84N×74°.81E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=9.2km s-min=5.4km az=163.0*

ISC 22 06:23:41.1±1.3, **39°.70N**±0°.06×**74°.90E**±0°.03, **h10^{km}, n68, σ1^{s}.66**/106, **41C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	1.12	287	⇑*i*P	Pb	06 24 01.4	-1.2
	baz=98						
SFK				⇑*i*S	Sb	06 24 16.8	-0.5
	baz=98						
OHH	**Osh**	1.82	298	⇑*i*P	Pb	06 24 14.3	-0.1
	baz=4.0						
OHH				⇑*i*S	Sb	06 24 38.6	+1.3
	baz=4.0						
ARSB	**Arslanbob**	2.18	319	⇑*i*P	Pb	06 24 20.9	+0.2
	baz=24						
ARSB				⇑*i*S	Sb	06 24 50.4	+2.6
	baz=24						
ARLS	**Aral**	2.20	349	⇑*i*P	Pg	06 24 22.6	-0.6
	baz=52						
ARLS				⇑*i*S	Sg	06 24 53.3	+1.5
	baz=52						
DRK	**Karamyk**	2.40	266	⇑*i*P	Pn	06 24 21.4	+0.6
	baz=70						
DRK				⇑*i*S	Sn	06 24 50.9	+0.5
	baz=70						
UCH	**Uchtor**	2.54	354	⇑*i*P	Pb	06 24 27.3	+0.3
	baz=56						
UCH				⇑*i*S	Sg	06 25 00.4	-2.3

	baz=56						
UCH	**Uchtor** SNR=30	2.54	354	P	Pb	06 24 27.6	+0.6
AML	**Almayashu** baz=43	2.59	340	⇑*i*P	Pb	06 24 27.6	-0.2
AML	baz=43			⇑*i*S	Sb	06 25 01.3	+1.4
AML	**Almayashu** SNR=24	2.59	340	P	Pb	06 24 27.6	-0.2
ULHL	**Ulahol** baz=22	2.74	21	⇑*i*P	Pb	06 24 30.3	+0.1
ULHL	baz=22			⇑*i*S	Sg	06 25 06.6	-2.4
ULHL	**Ulahol** SNR=7.0	2.74	21	P	Pg	06 24 34.3	+0.8
BOOM	**Boomskoye usch** baz=16	2.89	15	⇑*i*P	Pb	06 24 32.7	-0.2
BOOM	baz=16			⇑*i*S	Sg	06 25 10.7	-3.3
AAK	**Ala-Archa** baz=56	2.95	354	⇓*i*P	Pb	06 24 33.2	-0.6
AAK	baz=56			⇓*i*S	Sb	06 25 11.4	+1.5
AAK	**Ala-Archa** SNR=14	2.95	354	P	Pb	06 24 33.5	-0.2
AAK	**Ala-Archa** 8.5nm,0.6s	2.95	354	⇑Pn	Pb	06 24 32.8	-1.0
AAK	32nm,1.0s			⇑Lg	Lg	06 25 16.6	
KBK	**Karagaybulak** baz=3.0	2.95	1	⇑*i*P	Pb	06 24 33.2	-0.7
KBK	baz=3.0			⇑*i*S	Sb	06 25 11.5	+1.5
KBK	**Karagaybulak** SNR=18	2.95	1	P	Pb	06 24 34.7	+0.9
EKS2	**Erkin-Say** baz=47	3.07	344	⇑*i*P	Pb	06 24 34.8	-1.1
EKS2	baz=47			⇑*i*S	Sb	06 25 13.5	0.0
BTK	**Batken** baz=81	3.16	278	⇑*i*P	Pn	06 24 32.2	+1.3
BTK	baz=81			⇑*i*S	Sn	06 25 10.0	+1.3
TKM2	**Tokmak 2** baz=10.0	3.26	9	⇑*i*P	Pb	06 24 37.8	-1.3
TKM2	baz=10.0			⇑*i*S	Sb	06 25 19.5	+0.6
TKM2	**Tokmak 2** SNR=27	3.26	9	P	Pb	06 24 37.9	-1.3
TKM2	**Tokmak 2** 8.1nm,0.3s	3.26	9	⇑Pn	Pb	06 24 37.6	-1.5
TKM2	27nm,0.7s			⇑Lg	Lg	06 25 27.1	
MRKS	**Merke** 16nm,0.3s	3.29	338	*e*P	Pg	06 24 43.2	-0.9
MRKS	16nm,0.3s			*e*S	Sg	06 25 25.8	-0.9
MRKS	**Merke** 16nm,0.3s	3.29	338	Pg	Pg	06 24 43.2	-0.9
MRKS	16nm,0.3s			Lg	Lg	06 25 25.8	
CHMS	**Chumysh** baz=60	3.29	358	⇓*i*P	Pb	06 24 38.1	-1.5
CHMS	baz=60			⇓*i*S	Sb	06 25 19.8	0.0
CHMS	**Chumysh** SNR=5.4	3.29	358	P	Pb	06 24 39.1	-0.5
MNAS	**Manas** baz=31	3.32	328	⇑*i*P	Pb	06 24 37.3	-2.8
MNAS	baz=31			⇑*i*S	Sb	06 25 18.2	-2.4
TRKS	**Terek-Say** baz=7.0	3.39	304	⇑*i*P	Pn	06 24 36.1	+1.9
TRKS	baz=7.0			⇑*i*S	Sn	06 25 16.7	+2.1
KST	**Kastek** 20nm,0.2s	3.43	13	*e*P	Pg	06 24 44.6	-2.2
KST	25nm,0.4s			*e*S	Sg	06 25 28.0	-3.3
KST	**Kastek** 20nm,0.2s	3.43	13	Pg	Pg	06 24 44.6	-2.2
KST	25nm,0.4s			Lg	Lg	06 25 28.0	
IZV	**Izvestkoviy** 11nm,0.4s	3.57	21	*e*P	Pg	06 24 49.2	-0.3
IZV	21nm,0.3s			*e*S	Sg	06 25 36.0	+0.2
IZV	**Izvestkoviy** 11nm,0.4s	3.57	21	Pg	Pg	06 24 49.2	-0.3
IZV	21nm,0.3s			Lg	Lg	06 25 36.0	
USP	**Ospenovka** baz=57	3.57	355	⇑*e*P	Pb	06 24 41.7	-2.7
USP	baz=57			⇑*i*S	Sb	06 25 25.8	-2.0
USP	**Ospenovka** SNR=6.2	3.57	355	P	Pg	06 24 49.0	-0.5
DGS	**Degeres** 19nm,0.6s	3.60	10	*e*P	Pg	06 24 47.1	-2.9
DGS	17nm,0.3s			*e*S	Sg	06 25 32.2	-4.3
DGS	**Degeres** 19nm,0.6s	3.60	10	Pg	Pg	06 24 47.1	-2.9
DGS	17nm,0.3s			Lg	Lg	06 25 32.2	
MTBS	**Maitube** 8.5nm,0.2s	3.61	18	*e*P	Pg	06 24 51.8	+1.5
MTBS	21nm,0.4s			*e*S	Sg	06 25 40.4	+3.3
MTBS	**Maitube** 8.5nm,0.2s	3.61	18	Pg	Pg	06 24 51.8	+1.5
MTBS	21nm,0.4s			Lg	Lg	06 25 40.4	
TNSS	**Tian-Shan** 9.9nm,0.5s	3.67	24	*e*P	Pg	06 24 51.3	-0.1
TNSS	5.1nm,0.6s			*e*S	Sg	06 25 39.7	+0.7
TNSS	**Tian-Shan** 9.9nm,0.5s	3.67	24	Pg	Pg	06 24 51.3	-0.1
TNSS	5.1nm,0.6s			Lg	Lg	06 25 39.7	
SGDS	**Sogindy** 8.5nm,0.3s	3.75	357	Pg	Pg	06 24 52.1	-0.8
SGDS	16nm,0.4s			Lg	Lg	06 25 41.0	
MDOK	**Medeo** 5.6nm,0.3s	3.82	24	*e*P	Pg	06 24 55.1	+0.9
MDOK	16nm,0.5s			*e*S	Sg	06 25 45.9	+2.3
MDOK	**Medeo** 5.1nm,0.6s	3.82	24	⇑Pg	Pg	06 24 53.8	-0.4
MDOK	20nm,0.8s			⇓Lg	Lg	06 25 46.0	
MDOK	**Medeo** 5.6nm,0.3s	3.82	24	Pg	Pg	06 24 55.1	+0.9
MDOK	16nm,0.5s			Lg	Lg	06 25 45.9	
KOTS	**Kotyrbulak** 18nm,0.3s	3.90	25	*e*P	Pg	06 24 54.4	-1.3
KOTS	85nm,0.6s			*e*S	Sg	06 25 44.9	-1.4
KOTS	**Kotyrbulak** 18nm,0.3s	3.90	25	Pg	Pg	06 24 54.4	-1.3
KOTS	85nm,0.6s			Lg	Lg	06 25 44.9	
KRBS	**Karabastau** 8.5nm,0.3s	4.03	8	*e*P	Pg	06 24 58.1	-0.2
KRBS	8.5nm,0.3s			*e*S	Sg	06 25 51.2	+0.7
KRBS	**Karabastau** 8.5nm,0.3s	4.03	8	Pg	Pg	06 24 58.1	-0.2
KRBS	8.5nm,0.3s			Lg	Lg	06 25 51.2	
KTBS	**Karatobe** 5.7nm,0.3s	4.22	18	*e*P	Pg	06 25 00.8	-1.1
KTBS	27nm,0.4s			*e*S	Sg	06 25 56.1	-0.5
KTBS	**Karatobe** 5.7nm,0.3s	4.22	18	Pg	Pg	06 25 00.8	-1.1
KTBS	27nm,0.4s			Lg	Lg	06 25 56.1	
SATY	**Saty** 3.4nm,0.3s	4.27	37	*e*P	Pg	06 25 01.8	-1.0
SATY	12nm,0.4s			*e*S	Sg	06 25 57.7	-0.3
SATY	**Saty** 3.4nm,0.3s	4.27	37	Pg	Pg	06 25 01.8	-1.0
SATY	12nm,0.4s			Lg	Lg	06 25 57.7	
KUU	**Kurty** 5.9nm,0.3s	4.32	14	*e*P	Pg	06 25 02.9	-0.9
KUU	29nm,0.8s			*e*S	Sg	06 25 59.8	-0.1
KUU	**Kurty** 5.9nm,0.3s	4.32	14	Pg	Pg	06 25 02.9	-0.9
KUU	29nm,0.8s			Lg	Lg	06 25 59.8	
IUG	**Iuzhnay** 14nm,0.4s	4.42	305	*e*P	Pg	06 25 04.6	-1.1
IUG	34nm,0.3s			*e*S	Sg	06 26 02.4	-0.6
IUG	**Iuzhnay** 14nm,0.4s	4.42	305	Pg	Pg	06 25 04.6	-1.1
IUG	34nm,0.3s			Lg	Lg	06 26 02.4	
CHKK	**Chushkaly** 2.5nm,0.1s	4.43	20	*e*P	Pg	06 25 04.6	-1.4
CHKK	14nm,0.3s			*e*S	Sg	06 26 02.4	-1.0
CHKK	**Chushkaly** 2.5nm,0.1s	4.43	20	Pg	Pg	06 25 04.6	-1.4
CHKK	14nm,0.3s			Lg	Lg	06 26 02.4	
KURS	**Kuram** 3.5nm,0.3s	4.51	32	*e*P	Pg	06 25 04.1	-3.3
KURS	5.9nm,0.3s			*e*S	Sg	06 26 01.5	-4.3
KURS	**Kuram** 3.5nm,0.3s	4.51	32	Pg	Pg	06 25 04.1	-3.3
KURS	5.9nm,0.3s			Lg	Lg	06 26 01.5	
KPKS	**Kokpek** 7.0nm,0.4s	4.71	36	*e*P	Pg	06 25 10.2	-1.1
KPKS	14nm,0.4s			*e*S	Sg	06 26 12.0	-0.3
KK31	**Karatay Array** 0.8nm,0.4s,baz=129,slow=14,SNR=14	4.73	317	⇑Pn	Pn	06 24 55.0	+2.5
KK31	0.9nm,0.4s,baz=128,slow=15,SNR=4.6			⇑Pg	Pg	06 25 08.7	-3.0
KK31	2.1nm,0.5s,baz=123,slow=27,SNR=3.9			⇑Sn	Sn	06 25 51.2	+3.7
KK31	4.7nm,0.5s,baz=148,slow=29,SNR=5.6			⇑Lg	Lg	06 26 12.1	
PDGK	**Podgornoye** 3.9nm,1.0s	5.00	42	⇓Pg	Pg	06 25 16.0	-0.8
PDGK	9.2nm,0.7s			⇓Lg	Lg	06 26 23.1	
ARXS	**Arharly** 12nm,0.3s	5.01	25	*e*P	Pg	06 25 16.4	-0.5
ARXS	8.6nm,0.7s			*e*S	Sg	06 26 22.5	+0.7
ARXS	**Arharly** 12nm,0.3s	5.01	25	Pg	Pg	06 25 16.4	-0.5
ARXS	8.6nm,0.7s			Lg	Lg	06 26 22.5	
BTLS	**Baital** 1.9nm,0.3s	5.37	354	*e*P	Pg	06 25 21.6	-2.3
BTLS	5.0nm,0.5s			*e*S	Sg	06 26 31.7	-1.8
BTLS	**Baital** 1.9nm,0.3s	5.37	354	Pg	Pg	06 25 21.6	-2.3
BTLS	5.0nm,0.5s			Lg	Lg	06 26 31.7	
KAPS	**Kapalarasan** 1.4nm,0.3s	6.48	29	Pg	Pg	06 25 42.5	-2.6
KAPS	3.1nm,0.5s			Lg	Lg	06 27 07.4	

IDC 22 06:25:42.6±48.0**, 16°.38S**×**176°.80W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/36**, mbtmp4.1**/3**, Error ellipse: s-maj=895.8km s-min=169.9km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek** 0.5nm,0.3s,baz=87,slow=10.0,SNR=3.1	40.72	240	P	P	06 33 26.0	+0.8
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=95,slow=7.8,SNR=12	46.44	258	P	P	06 34 10.8	-0.7
ASAR	**Alice Springs** 4.1nm,0.4s,baz=89,slow=8.0,SNR=84	46.70	253	P	P	06 34 13.5	-0.1

NNC 22 07:06:29.3±1.2**, 41°.83N**×**78°.18E, h0^{km}, mb3.1, mpv3.0, 3C-1D, Error ellipse: s-maj=9.0km s-min=4.6km az=169.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty** 0.9nm,0.1s	1.24	8	P	Pg	07 06 51.2	-1.9
SATY	3.1nm,0.2s			S	Sg	07 07 08.0	-1.2
KOTS	**Kotyrbulak** 4.2nm,0.1s	1.61	331	P	Pb	07 06 59.7	-0.4
KOTS	11nm,0.4s			S	Sg	07 07 22.8	+1.6
SHLS	**Shalkode** 6.1nm,0.1s	1.63	35	P	Pg	07 07 03.3	+2.7
SHLS	6.0nm,0.3s			S	Sg	07 07 28.5	+6.8
KURS	**Kuram** 2.0nm,0.3s	1.66	360	P	Pn	07 06 59.7	0.0
KURS	4.3nm,0.5s			S	Sg	07 07 22.7	+0.1
IZV	**Izvestkoviy** 2.4nm,0.2s	1.68	317	P	Pn	07 07 00.3	+0.2
IZV	5.7nm,0.1s			S	Sg	07 07 23.7	+0.5
PDGK	**Podgornoye** 0.6nm,0.1s	1.78	32	P	Pn	07 07 01.8	+0.3
PDGK	1.8nm,0.6s			S	Sb	07 07 26.2	+0.2
KST	**Kastek** 2.3nm,0.2s	2.04	307	Pg	Pb	07 07 07.0	-0.5
KST	4.2nm,0.3s			Lg	Lg	07 07 35.2	
KTBS	**Karatobe** 2.1nm,0.1s	2.18	330	Pg	Pb	07 07 09.6	-0.1
KTBS	11nm,0.2s			Lg	Lg	07 07 39.8	
TKM2	**Tokmak 2** 1.4nm,0.6s	2.21	301	⇑Pg	Pn	07 07 08.7	+1.2
TKM2	1.9nm,0.4s			⇑Lg	Lg	07 07 38.1	
CHKK	**Chushkaly** 5.4nm,0.1s	2.21	337	Pg	Pb	07 07 10.0	-0.1
CHKK	10nm,0.3s			Lg	Lg	07 07 40.3	
DGS	**Degeres** 2.0nm,0.1s	2.27	309	Pg	Pb	07 07 10.1	-1.2
DGS	3.8nm,0.2s			Lg	Lg	07 07 40.5	
KTMS	**Ketmen** 4.7nm,0.1s	2.27	44	Pg	Pb	07 07 10.5	-0.9
KTMS	3.4nm,0.1s			Lg	Lg	07 07 41.2	
ARXS	**Arharly** 4.7nm,0.2s	2.40	354	Pg	Pb	07 07 12.3	-1.1
ARXS	2.6nm,0.2s			Lg	Lg	07 07 44.2	
KRBS	**Karabastau** 1.3nm,0.3s	2.63	316	Pg	Pb	07 07 17.3	0.0
KRBS	7.4nm,0.2s			Lg	Lg	07 07 52.9	
DJR	**Jarkent** 1.5nm,0.2s	2.76	25	Pg	Pb	07 07 18.1	-1.6
DJR	2.6nm,0.3s			Lg	Lg	07 07 54.4	
AAK	**Ala-Archa** 1.1nm,0.8s	2.86	288	⇑Pg	Pb	07 07 20.2	-1.1
AAK	2.4nm,0.6s			⇓Lg	Lg	07 07 58.9	

KRNET 22 07:07:08.0±0.1**, 41°.59N**×**77°.91E, h15^{km}, mb2.0, 10C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay** baz=16	0.77	315	⇑*i*P	Pg	07 07 22.6	-0.4
KDJ	baz=16			⇑*i*S	Sg	07 07 32.9	-0.3
PRZ	**Przheval'sk** baz=22	0.97	22	⇑*i*P	Pg	07 07 26.7	0.0
PRZ	baz=22			⇑*i*S	Sn	07 07 40.3	-0.5
ANVS	**Anan'yevo** baz=52	1.21	351	⇓*i*P	Pb	07 07 30.7	0.0
ANVS	baz=52			⇓*i*S	Sg	07 07 47.3	+0.2
ULHL	**Ulahol** baz=98	1.41	298	⇓*i*P	Pb	07 07 33.9	-0.2
ULHL	baz=98			⇓*i*S	Sg	07 07 53.9	+0.4
BOOM	**Boomskoye usch** baz=2.0	1.72	302	⇑*i*P	Pb	07 07 39.6	+0.2
BOOM	baz=2.0			⇑*i*S	Sg	07 08 02.8	-0.7
TKM2	**Tokmak 2** baz=9.0	2.17	309	⇑*i*P	Pb	07 07 46.5	-0.7
TKM2	baz=9.0			⇑*i*S	Sb	07 08 14.7	+0.7
KBK	**Karagaybulak** baz=97	2.45	297	⇑*i*P	Pb	07 07 50.1	-1.7
KBK	baz=97			⇑*i*S	Sb	07 08 21.6	-0.3

IDC ***22*** *07:08:41.6*±*2.6, 10°.84S*×*112°.99E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.5/40, mbtmp3.7/5, ML3.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/32, Error ellipse: s-maj=109.7km s-min=21.8km az=48.0*

DJA ***22*** *07:08:42.7*±*2.0, 11°S*±*4°*×*11°2E*±*°, h33^{km}*±*35^{km}, M4.4/9, mb4.3/6, mB5.2/2, MLv4.4/9, Mw(mB)4.5/2*

ISC 22 07:08:43.8±1.4**, 11°.3S**±0°.1×**112°.5E**±0°.1**, h35^{km}, n17, σ1^{s}.23**/13**, mb3.6**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	3.19	30	P	Pn	07 09 31.5	-0.1
WOJI	**Wonogiri, Jawa**	3.74	335	P	Pn	07 09 38.4	-0.7
WOJI				S	Sn	07 10 20.8	-1.1
UGM	**Wanagama**	3.86	329	P	Pn	07 09 39.9	-0.8
KMMI	**Kalianget**	4.41	19	P	Pn	07 09 48.0	-0.3
TWSI	**Taliwang, Sumb** 0.4nm2µm16nm,0.6s	4.97	60	P	Pn	07 09 56.3	+0.4
PLAI	**Plampang** 0.2nm42nm,1.1s	5.71	66	P	Pn	07 10 06.5	+0.4
EDFI	**Ende, Flores** 7.6nm,0.6s	9.36	75	P	Pn	07 10 56.8	+0.4
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=234,slow=20,SNR=1.7	14.39	120	Pn	Pn	07 12 02.6	-2.5
FITZ	0.1nm,0.3s,baz=95,slow=2.8,SNR=1.6			Sn	Sn	07 14 28.5	-15
FITZ	comp=Z,35nm,19.4s,baz=30,slow=37			LR	LR	07 17 22.4	
NWAO	**Narrogin (SRO)** comp=Z,63nm,18.2s,baz=306,slow=39	22.00	169	LR	LR	07 23 14.4	
WRA	**Warramunga Arr** 0.9nm,0.5s,baz=288,slow=10,SNR=13	22.70	115	P	P	07 13 42.8	+0.2
ASAR	**Alice Springs** 1.0nm,0.7s,baz=297,slow=9.5,SNR=9.5	23.80	124	P	P	07 13 55.3	+1.7
STKA	**Stephens Creek** comp=Z,91nm,18.2s,baz=26,slow=42	33.76	132	LR	LR	07 32 22.9	
H08S2	**Diego Garcia H** baz=204,slow=74,SNR=4.1	39.63	272	T	T	07 58 15.3	
H08S3	**Diego Garcia H** baz=100,slow=74,SNR=4.8	39.64	272	T	T	07 58 14.8	
H08S1	**Diego Carcia H**	39.65	272	T	T	07 58 14.8	
SONM	**Songino Array** 0.4nm,0.5s,baz=168,slow=6.8,SNR=3.9	59.07	355	P	P	07 18 41.0	+0.5
MKAR	**Makanchi Array** 0.9nm,0.5s,baz=158,slow=6.4,SNR=6.0	63.80	337	P	P	07 19 14.1	+1.7

NNC 22 07:19:38.7±11.0**, 36°.73N**×**70°.52E, h0^{km}, mb3.8, mpv3.6, 3D, Error ellipse: s-maj=96.9km s-min=75.9km az=156.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array** 1.9nm,0.3s,baz=176,slow=12,SNR=28	6.37	360	P	Pn	07 21 15.1	+1.3
KK31	1.7nm,0.4s,baz=186,slow=23,SNR=8.4			⇓S	Sn	07 22 29.4	+2.2
AAK	**Ala-Archa** 1.4nm,0.3s	6.65	26	⇓P	Pn	07 21 17.0	-0.8
AAK	3.0nm,1.1s			⇓S	Sn	07 22 33.9	-0.4
AB31	**Akbulak array** 0.2nm,0.3s,baz=160,slow=12,SNR=22	14.70	332	P	Pn	07 23 07.5	-0.3

NEIC ***22*** *07:22:10.5*±*0.9, 17°.7S*±*0°.1*×*178°.8W*±*0°.1, h605^{km}*±*9^{km}, mb4.2/9, Error ellipse: s-maj=21.6km s-min=17.4km az=184.0*

IDC ***22*** *07:22:10.9*±*1.9, 17°.44S*×*178°.87W, h605^{km}*±*18^{km}, mb3.3/7, mb1 3.6/9, mb1mx3.3/26, mbtmp4.2/9, Error ellipse: s-maj=76.7km s-min=15.4km az=149.0*

ISC 22 07:22:10.0±0.7**, 17°.7S**±0°.2×**178°.7W**±0°.1**, h600^{km}, n24, σ0^{s}.67**/26**, mb4.2**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 2.3nm,0.3s,baz=114,slow=3.8,SNR=15	3.08	269	P	P	07 23 30.1	+0.4
AFI	**Afiamalu**	7.68	61	P	P	07 24 07.3	+0.8
SANVU	**Saraoutou**	13.69	277	P	P	07 25 05.2	-0.7
DZM	**Mont Dzumac** 0.4nm,0.3s,baz=96,slow=21,SNR=6.7	14.61	250	P	P	07 25 16.5	+1.7
DZM	**Mont Dzumac**	14.61	250	P	P	07 25 13.5	-1.2
CTAO	**Charters Tower**	33.19	260	P	P	07 27 59.7	+0.8
CTAO	comp=Z,8.5nm,1.1s			IAmb	IAmb	07 28 01.4	
CAN	**Canberra**	33.58	232	P	P	07 28 02.2	+0.1
CAN	comp=Z,8.5nm,1.1s			IAmb	IAmb	07 28 19.9	
STKA	**Stephens Creek** comp=Z,6.3nm,0.7s,baz=88,slow=9.8,SNR=17	38.46	241	P	P	07 28 42.6	+0.4
STKA	**Stephens Creek**	38.46	241	P	P	07 28 42.5	+0.4
WB0	**Warramunga Arr**	44.34	260	P	P	07 29 28.6	-0.1
WB0	comp=Z,6.5nm,0.6s			IAmb	IAmb	07 29 29.2	
WRA	**Warramunga Arr** comp=Z,3.8nm,0.5s,baz=93,slow=7.4,SNR=62	44.38	259	P	P	07 29 28.6	-0.3
WRA	comp=Z,0.5nm,0.5s,baz=96,slow=3.6,SNR=2.0			PcP	PcP	07 30 59.1	-0.4
WRA	**Warramunga Arr**	44.38	259	P	P	07 29 28.7	-0.3
AS31	**Alice Springs**	44.55	254	P	P	07 29 30.7	+0.5
AS31	comp=Z,6.8nm,0.6s			IAmb	IAmb	07 29 31.5	
ASAR	**Alice Springs** comp=Z,25nm,0.6s,baz=88,slow=8.5,SNR=388	44.56	254	P	P	07 29 30.5	+0.2
ASAR	comp=Z,1.2nm,0.7s,baz=99,slow=3.8,SNR=4.2			PcP	PcP	07 30 59.8	-0.2
ASAR	**Alice Springs**	44.56	254	P	P	07 29 30.1	-0.2
JSG	**Sagara**	66.28	322	P	P	07 31 59.9	-0.2
UGM	**Wanagama**	69.36	268	P	P	07 32 19.5	+0.1
QSPA	**South Pole Qui**	72.32	180	P	P	07 32 34.5	-1.3
QSPA	comp=Z,2.2nm,0.9s			IAmb	IAmb	07 32 35.2	
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.7s,baz=222,slow=8.8,SNR=6.8	79.50	44	P	P	07 33 15.8	0.0
NVAR	**Mina Array Bea**	79.50	44	P	P	07 33 16.1	+0.2
ILAR	**Eielson Array** comp=Z,0.3nm,0.4s,baz=218,slow=5.1,SNR=8.0	85.78	13	P	P	07 33 45.6	-0.8
TXAR	**Lajitas Array** comp=Z,0.9nm,0.8s,baz=216,slow=6.2,SNR=10	86.15	58	P	P	07 33 49.6	+0.5
PDAR	**Pinedale Array** comp=Z,0.4nm,0.5s,baz=235,slow=3.4,SNR=5.5	87.42	44	P	P	07 33 54.7	-0.3
PDAR	**Pinedale Array**	87.42	44	P	P	07 33 54.6	-0.4

IDC ***22*** *07:43:07.5*±*0.7, 12°.67N*×*93°.00E, h0^{km}, mb4.0/13, mb1 4.2/15, mb1mx3.9/44, mbtmp4.0/15, ML3.8/2, MS3.3/6, Ms1 3.4/6, ms1mx3.1/45, Error ellipse: s-maj=27.9km s-min=15.9km az=51.0*

NEIC ***22*** *07:43:14.3*±*1.1, 12°.86N*±*0°.06*×*93°.05E*±*0°.07, h35^{km}*±*2^{km}, mb4.0/7, Error ellipse: s-maj=14.1km s-min=8.0km az=127.0*

NDI ***22*** *07:43:14.9*±*1.7, 12°.91N*×*92°.95E, h30^{km}, ML4.1, mb4.0(NEIC)*

ISC 22 07:43:13.4±0.6**, 12°.81N**±0°.07×**93°.03E**±0°.06**, h35^{km}, n57, σ1^{s}.05**/40**, mb4.0**/17**, MS3.5**/3**, Andaman Islands region**

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

DGPR	**DIGLIPUR**	**0.38**	**345**	*e*P	**Pn**	**07 43 22.4**	**0.0**
DGPR				*e*S	**Sn**	**07 43 29.2**	**+0.6**
DGPR				IAML		07 43 33.0	
	comp=N,16µm,0.4s						
DGPR				IAML		07 43 33.0	
	comp=E,12µm,0.3s						
PBA	**Port Blair**	**1.18**	**194**	*e*P	Pn	07 43 35.6	+2.2
PBA				*e*S	Sn	07 43 54.4	+6.1
PBA				IAML		07 43 54.6	
	comp=N,3µm,0.4s						
PBA				IAML		07 43 54.9	
	comp=E,5µm,0.4s						
PBA	**Port Blair**	**1.18**	**194**	Pn	Pn	07 43 35.4	+2.0
PBA				Sn	Sn	07 43 50.4	+2.2
SURT	**Suratani**	**6.83**	**123**	P	Pn	07 44 59.9	+8.8
	comp=E,0.9nm,1.1s						
SRIT	**Nakonsritamara**	**7.69**	**122**	Pn	**Pn**	**07 45 03.9**	**+0.9**
SUKH	**Sukhothai**	**7.89**	**53**	P	Pn	07 45 20.6	+15
	comp=E,15nm,0.8s						
CM05	**Chiang Mai Arr**	**7.96**	**45**	P	Pn	07 45 11.4	+4.7
	comp=E,74nmcomp=E,8.3nm,0.8s						
CM01	**Chiang Mai Arr**	**7.98**	**45**	P	Pn	07 45 12.8	+5.7
	comp=E,8.7nm,0.7s						
CM04	**Chiang Mai Arr**	**7.98**	**45**	P	Pn	07 45 11.0	+4.0
	comp=E,5.6nm,0.6s						
CM02	**Chiang Mai Arr**	**7.99**	**45**	P	Pn	07 45 12.0	+5.0
	comp=E,8.8nm,0.9s						
CM31	**Chiang Mai Arr**	**8.00**	**45**	Pn	**Pn**	**07 45 08.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**8.00**	**45**	Pn	**Pn**	**07 45 08.8**	**+1.6**
	comp=E,0.5nm,0.3s,baz=236,slow=14,SNR=20						
CMAR				Sn	**Sn**	**07 46 33.3**	**-3.2**
	comp=E,0.8nm,0.3s,baz=110,slow=17,SNR=1.4						
CMAR				LR	LR	07 49 07.3	
	comp=E,65nm,19.3s,baz=232,slow=44						
CM09	**Chiang Mai Arr**	**8.02**	**45**	P	Pn	07 45 12.8	+5.3
	comp=E,9.4nm,0.8s						
CM32	**Chiang Mai Arr**	**8.07**	**43**	P	Pn	07 45 16.0	+7.8
CM36	**Chiang Mai Arr**	**8.14**	**45**	P	Pn	07 45 14.0	+4.8
CHTO	**Chiang Mai**	**8.25**	**43**		**Pn**	**07 45 11.6**	**+1.0**
CMMT	**Chiang Mai**	**8.25**	**43**	P	Pn	07 45 16.8	+6.1
	comp=E,3.4nm,0.9s						
CM35	**Chiang Mai Arr**	**8.29**	**44**	P	Pn	07 45 16.0	+4.7
PHIT	**Phitsanulok**	**8.36**	**58**	P	Pn	07 45 27.9	+16
	comp=E,38nm,0.6s						
LAMP	**Lampang**	**8.53**	**47**	P	Pn	07 45 20.1	+5.7
SRAK	**Srakaew**	**8.85**	**81**	P	Pn	07 45 31.2	+12
	comp=E,146nm,0.7s						
CHAI	**Chaiyaphum**	**9.21**	**69**	P	Pn	07 45 30.4	+6.6
VIS	**Vishakhapatnam**	**10.56**	**299**	*e*P	**Pn**	**07 45 41.7**	**-0.6**
VIS				*e*S	Sn	07 47 28.7	-11
PSI	**Prapat**	**11.53**	**149**	LR	LR	07 50 01.8	
	comp=E,174nm,18.4s,baz=274,slow=36						
SHL	**Shillong**	**12.74**	**355**	Pn	**Pn**	**07 46 12.0**	**-0.3**
PALK	**Pallekele**	**13.32**	**247**	Pn	**Pn**	**07 46 18.2**	**-2.0**
	comp=E,0.3nm,0.3s,baz=229,slow=20,SNR=1.8						
PALK				Sn	Sn	07 48 36.0	-11
	comp=E,0.6nm,0.3s,baz=227,slow=17,SNR=2.4						
PALK				LR	LR	07 50 08.4	
	comp=E,55nm,20.5s,baz=145,slow=32						
PALK	**Pallekele**	**13.32**	**247**	Pn	**Pn**	**07 46 21.5**	**+1.3**
HYB	**Hyderabad**	**14.71**	**290**	*i* P	**Pn**	**07 46 39.5**	**+0.4**
HYB				*e*S	**Sn**	**07 49 22.0**	**+1.0**
H08S3	**Diego Garcia H**	**28.79**	**226**	T	T	08 18 58.2	
	baz=261,slow=74,SNR=4.2						
H08S2	**Diego Garcia H**	**28.80**	**226**	T	T	08 18 57.1	
	baz=44,slow=74,SNR=3.0						
H08S1	**Diego Carcia H**	**28.81**	**226**	T	T	08 18 56.0	
KAPI	**Kappang**	**31.91**	**122**	LR	LR	08 05 06.7	
	comp=E,60nm,18.6s,baz=232,slow=41						
MK31	**Makanchi Array**	**35.07**	**347**	P	**P**	**07 50 02.9**	**-0.2**
MKAR	**Makanchi Array**	**35.07**	**347**	P	**P**	**07 50 03.1**	**0.0**
	comp=E,0.9nm,0.7s,baz=166,slow=7.6,SNR=8.3						
MKAR	**Makanchi Array**	**35.07**	**347**	P	**P**	**07 50 03.5**	**+0.5**
MAKZ	**Makanchi**	**35.15**	**347**	P	**P**	**07 50 04.2**	**+0.5**
MAKZ				IAmb	IAmb	07 50 04.5	
	comp=Z,1.3nm,0.6s						
KK31	**Karatay Array**	**35.91**	**331**	P	**P**	**07 50 11.6**	**+1.2**
KK31				IAmb	IAmb	07 50 24.2	
	comp=Z,1.8nm,0.9s						
KKAR	**Karatay Array**	**35.91**	**331**	P	**P**	**07 50 11.0**	**+0.6**
KKAR				IAmb	IAmb	07 50 24.2	
	comp=Z,1.8nm,0.9s						
SONM	**Songino Array**	**36.66**	**15**	P	**P**	**07 50 18.3**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=215,slow=9.7,SNR=2.0						
SONM	**Songino Array**	**36.66**	**15**	P	**P**	**07 50 17.3**	**+0.4**
GEYT	**Alibeck**	**39.89**	**315**	P	**P**	**07 50 44.8**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=152,slow=13,SNR=4.6						
ZALV	**Zalesovo Beam**	**41.55**	**353**	P	**P**	**07 50 57.3**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=186,slow=8.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**41.55**	**353**	P	**P**	**07 50 58.3**	**+0.8**
ABKAR	**Akbulak array**	**45.42**	**330**	P	**P**	**07 51 28.6**	**-0.1**
ABKAR	**Akbulak array**	**45.42**	**330**	P	**P**	**07 51 29.2**	**+0.5**
ABKAR				IAmb	IAmb	07 51 30.1	
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**52.07**	**128**	P	**P**	**07 52 18.3**	**-1.9**
	comp=Z,1.3nm,0.8s,baz=306,slow=8.2,SNR=7.3						
WRA				PcP	**PcP**	**07 53 31.2**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=314,slow=3.3,SNR=5.9						
ASAR	**Alice Springs**	**53.96**	**132**	P	**P**	**07 52 32.8**	**-1.4**
	comp=Z,1.8nm,0.6s,baz=309,slow=6.9,SNR=23						
ASAR				PcP	**PcP**	**07 53 38.8**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=315,slow=5.4,SNR=2.2						
ASAR	**Alice Springs**	**53.96**	**132**	P	**P**	**07 52 33.0**	**-1.1**
AS31	**Alice Springs**	**53.96**	**132**	P	**P**	**07 52 33.0**	**-1.1**
AS31				IAmb	IAmb	07 52 33.2	
	comp=Z,0.9nm,0.6s						
BRTR	**Keskin Array B**	**58.45**	**309**	P	**P**	**07 53 05.5**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=133,slow=6.9,SNR=7.4						
MLR	**Muntele Rosu**	**64.93**	**314**	P	**P**	**07 53 50.7**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=127,slow=2.3,SNR=2.9						
FINES	**FINESS Array B**	**67.88**	**331**	P	**P**	**07 54 07.5**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=270,slow=1.5,SNR=2.1						
ARCES	**ARCESS Array B**	**70.29**	**340**	P	**P**	**07 54 22.7**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=90,slow=6.1,SNR=5.3						
ARCES				LR	LR	08 31 05.8	
	comp=Z,92nm,18.6s,baz=260,slow=41						
GERES	**GERESS Array B**	**73.46**	**317**	P	**P**	**07 54 42.1**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=76,slow=5.6,SNR=12						
NOA	**NORSAR Array B**	**74.93**	**330**	P	**P**	**07 54 50.0**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=90,slow=5.8,SNR=3.7						
NOA				LR	LR	08 29 37.4	
	comp=Z,20nm,18.3s,baz=0.0,slow=37						
EKA	**Eskdalemuir Ar**	**83.07**	**325**	P	**P**	**07 55 35.4**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=67,slow=6.4,SNR=4.0						
PLCA	**Paso Flores**	**148.67**	**204**	PKPbc	**PKiKP**	**08 02 58.3**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=14,slow=10,SNR=3.5						

IDC 22 07:57:29.1±3.3**,43°.68S**×**94°.60E,h0^{km},mb3.8**/3**, mb1 4.0**/3**,mb1mx3.8**/27**,mbtmp3.8**/3**,MS3.7**/2**,Ms1 3.7**/2**, ms1mx3.1**/41**,Error ellipse: s-maj=119.5km s-min=55.8km az=0.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.45**	**66**	T	T	08 19 57.0	
	baz=231,slow=74,SNR=24						
H01W3	**Cape Leeuwin H**	**17.46**	**66**	T	T	08 19 57.8	
	baz=231,slow=74,SNR=20						
H01W1	**Cape Leeuwin H**	**17.47**	**66**	T	T	08 19 58.1	
	baz=231,slow=74,SNR=33						
ASAR	**Alice Springs**	**37.87**	**71**	P	P	08 04 48.0	+0.2
	1.1nm,0.8s,baz=224,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	**40.70**	**67**	P	P	08 05 10.9	-0.5
	0.8nm,0.7s,baz=227,slow=8.1,SNR=6.4						
H08S2	**Diego Garcia H**	**40.78**	**325**	T	T	08 49 08.1	
	baz=153,slow=76,SNR=5.2						
H08S1	**Diego Carcia H**	**40.78**	**325**	T	T	08 49 06.6	
H08S3	**Diego Garcia H**	**40.80**	**325**	T	T	08 49 10.9	
	baz=151,slow=76,SNR=4.5						
PSI	**Prapat**	**46.43**	**6**	LR	LR	08 21 29.0	
	comp=Z,85nm,19.5s,baz=92,slow=31						
SONM	**Songino Array**	**91.72**	**8**	P	P	08 10 38.1	0.0
	0.7nm,0.9s,baz=186,slow=4.3,SNR=4.2						
TLY	**Talaya**	**95.31**	**6**	LR	LR	08 54 09.7	
	comp=Z,39nm,18.7s,baz=77,slow=36						
NVAR	**Mina Array Bea**	**154.75**	**91**	PKPbc	PKPbc	08 17 32.1	-0.1
	0.2nm,0.6s,baz=222,slow=3.6,SNR=2.2						

IDC 22 08:01:07.0±1.5**,44°.58S**×**94°.39E,h0^{km},mb4.2**/5**, mb1 4.4**/5**,mb1mx4.0**/28**,mbtmp4.2**/5**,MS3.9**/7**,Ms1 3.9**/7**, ms1mx3.5**/37**,Error ellipse: s-maj=44.6km s-min=32.6km az=112.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.96**	**64**	T	T	08 23 36.7	
	baz=231,slow=74,SNR=22						
H01W3	**Cape Leeuwin H**	**17.97**	**64**	T	T	08 23 37.1	
	baz=231,slow=74,SNR=25						
H01W1	**Cape Leeuwin H**	**17.98**	**64**	T	T	08 23 40.3	
	baz=231,slow=74,SNR=22						
NWAO	**Narrogin (SRO)**	**21.20**	**65**	LR	LR	08 12 09.1	
	comp=Z,395nm,20.2s,baz=244,slow=31						
FITZ	**Fitzroy Crossi**	**37.15**	**55**	LR	LR	08 21 55.6	
	comp=Z,144nm,18.4s,baz=228,slow=34						
ASAR	**Alice Springs**	**38.30**	**70**	P	P	08 08 29.2	-0.2
	3.8nm,0.9s,baz=226,slow=7.5,SNR=20						
WRA	**Warramunga Arr**	**41.19**	**67**	P	P	08 08 53.0	-0.4
	4.6nm,0.9s,baz=227,slow=8.3,SNR=15						
BATI	**Baumata**	**42.54**	**45**	LR	LR	08 25 16.7	
	comp=Z,201nm,19.8s,baz=244,slow=34						
KAPI	**Kappang**	**45.25**	**37**	LR	LR	08 25 26.2	
	comp=Z,51nm,18.3s,baz=205,slow=32						
QSPA	**South Pole Qui**	**45.56**	**180**	P	P	08 09 28.2	-0.2
	0.9nm,0.2s,baz=296,slow=5.0,SNR=3.4						
SUR	**Sutherland**	**57.06**	**255**	LR	LR	08 29 56.9	
	comp=Z,92nm,19.0s,baz=114,slow=30						
PMG	**Port Moresby**	**57.30**	**69**	LR	LR	08 33 32.5	
	comp=Z,227nm,20.3s,baz=223,slow=34						
JAY	**Jayapura**	**58.42**	**58**	LR	LR	08 34 27.1	
	comp=Z,112nm,18.1s,baz=199,slow=34						
CMAR	**Chiang Mai Arr**	**62.87**	**5**	P	P	08 11 35.1	+0.4
	0.9nm,0.3s,baz=208,slow=7.6,SNR=1.4						
SONM	**Songino Array**	**92.64**	**8**	P	P	08 14 19.5	-0.6
	0.5nm,0.8s,baz=259,slow=1.5,SNR=3.2						
YKA	**Yellowknife Ar**	**155.47**	**33**	PKPab	PKPab	08 21 27.4	+0.3
	0.6nm,0.9s,baz=312,slow=4.2,SNR=4.9						

IDC 22 08:07:08.8±1.4**,44°.47S**×**94°.07E,h0^{km},mb4.1**/6**, mb1 4.2**/6**,mb1mx3.9**/38**,mbtmp4.0**/6**,MS3.8**/1**,Ms1 3.8**/1**, ms1mx3.2**/30**,Error ellipse: s-maj=44.8km s-min=24.3km az=104.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**18.12**	**65**	T	T	08 29 40.8	
	baz=231,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**18.13**	**65**	T	T	08 29 40.9	
	baz=231,slow=74,SNR=6.1						
H01W1	**Cape Leeuwin H**	**18.14**	**65**	T	T	08 29 43.6	
	baz=231,slow=74,SNR=14						
ASAR	**Alice Springs**	**38.49**	**71**	P	P	08 14 32.5	-0.1
	1.2nm,0.7s,baz=224,slow=7.5,SNR=8.8						
LEM	**Lembang**	**39.32**	**22**	LR	LR	08 27 16.3	
	comp=Z,136nm,20.2s,baz=206,slow=31						
WRA	**Warramunga Arr**	**41.35**	**67**	P	P	08 14 56.7	+0.2
	2.5nm,1.0s,baz=225,slow=8.5,SNR=10						
VNDA	**Vanda**	**42.24**	**163**	P	P	08 15 02.7	-0.4
	1.6nm,0.9s,baz=297,slow=6.8,SNR=1.9						
QSPA	**South Pole Qui**	**45.67**	**180**	P	P	08 15 31.2	+0.3
	8.1nm,1.1s,baz=300,slow=6.8,SNR=8.6						
CMAR	**Chiang Mai Arr**	**62.78**	**5**	P	P	08 17 36.7	+0.8
	0.5nm,0.3s,baz=210,slow=8.4,SNR=1.1						
SONM	**Songino Array**	**92.56**	**8**	P	P	08 20 21.4	-0.2
	0.5nm,0.7s,baz=158,slow=1.6,SNR=3.8						
YKA	**Yellowknife Ar**	**155.50**	**33**	PKPab	PKPab	08 27 27.2	-1.8
	0.4nm,0.7s,baz=295,slow=3.3,SNR=5.5						

IDC 22 08:11:19.1±16.0**,42°.27S**×**94°.73E,h0^{km},mb3.7**/2**, mb1 3.9**/2**,mb1mx3.6**/43**,mbtmp3.7**/2**,Error ellipse: s-maj=596.7km s-min=83.2km az=10.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**16.84**	**70**	T	T	08 32 27.8	
	baz=231,slow=74,SNR=14						
H01W3	**Cape Leeuwin H**	**16.85**	**70**	T	T	08 32 28.8	
	baz=231,slow=74,SNR=14						
H01W1	**Cape Leeuwin H**	**16.86**	**70**	T	T	08 32 32.5	
	baz=231,slow=74,SNR=15						
ASAR	**Alice Springs**	**37.34**	**73**	P	P	08 18 33.1	-0.2
	0.7nm,0.7s,baz=226,slow=7.1,SNR=5.8						
WRA	**Warramunga Arr**	**40.08**	**69**	P	P	08 18 56.3	0.0
	0.8nm,0.7s,baz=228,slow=8.3,SNR=6.1						
YKA	**Yellowknife Ar**	**153.38**	**31**	PKPab	PKPab	08 31 29.9	-0.4
	0.1nm,0.5s,baz=305,slow=4.4,SNR=1.4						

IDC ***22*** *08:13:27.1±0.9, 44°.49S×94°.11E, h0^{km}, mb4.2/9, mb1 4.4/9, mb1mx4.1/45, mbtmp4.2/9, MS4.4/1, Ms1 4.4/1, ms1mx3.6/11, Error ellipse: s-maj=32.4km s-min=19.6km az=113.0*

NEIC ***22*** *08:13:29.5±0.7, 44°.6S±0°.1×94°.4E±0°.2, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=27.5km s-min=19.0km az=271.0*

ISC 22 08:13:28.8±0.7**,44°.5S**±0°.1×**94°.2E**±0°.2**,h10^{km},n30, σ0^{s}.59**/24**,mb4.3**/11**,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**18.06**	**65**	T	T	08 35 54.3	
	baz=232						
H01W3	**Cape Leeuwin H**	**18.07**	**65**	T	T	08 35 56.1	
	baz=232						
H01W1	**Cape Leeuwin H**	**18.08**	**65**	T	T	08 35 56.2	
	baz=232						
MAW	**Mawson**	**28.43**	**205**	P	**P**	**08 19 22.3**	**-0.9**
	8.5nm,1.0s,baz=48,slow=15,SNR=4.3						
MAW	**Mawson**	**28.43**	**205**	IAmb	IAmb	08 19 36.9	
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**38.42**	**71**	P	**P**	**08 20 50.4**	**-0.3**
	comp=Z,4.9nm,0.7s,baz=225,slow=7.0,SNR=42						
ASAR	**Alice Springs**	**38.42**	**71**	P	**P**	**08 20 50.6**	**0.0**
AS31	**Alice Springs**	**38.42**	**71**	P	**P**	**08 20 50.4**	**-0.2**
STKA	**Stephens Creek**	**38.83**	**88**	P	**P**	**08 20 54.4**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=231,slow=10,SNR=3.4						
STKA	**Stephens Creek**	**38.83**	**88**	P	**P**	**08 20 53.5**	**-0.5**
WRA	**Warramunga Arr**	**41.29**	**67**	P	**P**	**08 21 14.2**	**-0.2**
	comp=Z,5.1nm,0.8s,baz=228,slow=8.1,SNR=32						
WRA	**Warramunga Arr**	**41.29**	**67**	P	**P**	**08 21 14.1**	**-0.3**
WB2	**Warramunga Arr**	**41.30**	**67**	P	**P**	**08 21 14.4**	**-0.1**
WB2				IAmb	IAmb	08 21 37.7	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**41.45**	**67**	P	**P**	**08 21 15.5**	**-0.3**
WB0				IAmb	IAmb	08 21 16.7	
	comp=Z,9.0nm,0.8s						
VNDA	**Vanda**	**42.20**	**163**	P	**P**	**08 21 21.1**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=304,slow=6.9,SNR=3.6						
VNDA	**Vanda**	**42.20**	**163**	P	**P**	**08 21 21.4**	**+0.1**
VNDA				IAmb	IAmb	08 21 48.9	
	comp=Z,7.3nm,1.2s						
QSPA	**South Pole Qui**	**45.66**	**180**	P	**P**	**08 21 49.4**	**+0.1**
	comp=Z,8.9nm,1.0s,baz=302,slow=4.7,SNR=12						
QSPA	**South Pole Qui**	**45.66**	**180**	P	**P**	**08 21 49.8**	**+0.5**
SNAA	**Sanae**	**50.59**	**204**	P	**P**	**08 22 28.2**	**+0.9**
BELA	**Belgrano 2**	**54.00**	**192**	P	**P**	**08 22 52.4**	**-0.1**
LBTB	**Lobatse**	**57.94**	**265**	LR	LR	08 43 29.6	
	comp=Z,282nm,19.0s,baz=132,slow=31						
CMAR	**Chiang Mai Arr**	**62.79**	**5**	P	**P**	**08 23 55.1**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=187,slow=6.4,SNR=1.3						
CMAR	**Chiang Mai Arr**	**62.79**	**5**	P	**P**	**08 23 55.6**	**+1.2**
MKAR	**Makanchi Array**	**91.50**	**352**	P	**P**	**08 26 33.4**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=167,slow=3.8,SNR=2.1						
SONM	**Songino Array**	**92.56**	**8**	P	**P**	**08 26 40.1**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=191,slow=4.4,SNR=2.3						
EPYK	**Eagle Plains**	**145.19**	**33**		**PKPdf**	**08 33 05.6**	**+0.2**
INK	**Inuvik**	**145.83**	**29**	PKPbc	**PKPdf**	**08 33 06.6**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=22,slow=3.3,SNR=5.0						
INK	**Inuvik**	**145.83**	**29**	PKPdf	**PKPbc**	**08 33 07.2**	**+0.2**
NVAR	**Mina Array Bea**	**155.03**	**93**	PKPbc		08 33 32.5	
	comp=Z,0.4nm,0.6s,baz=222,slow=4.1,SNR=4.4						
YKA	**Yellowknife Ar**	**155.48**	**33**	PKPab	**PKPab**	**08 33 47.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=314,slow=3.2,SNR=13						

IDC ***22*** *08:15:03.5±0.8, 44°.46S×94°.10E, h0^{km}, mb4.4/11, mb1 4.5/11, mb1mx4.2/45, mbtmp4.4/11, MS4.4/8, Ms1 4.3/8, ms1mx4.2/12, Error ellipse: s-maj=25.7km s-min=18.1km az=128.0*

NEIC ***22*** *08:15:05.5±1.0, 44°.50S±0°.09×94°.2E±0°.2, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=24.3km s-min=10.4km az=298.0*

GCMT ***22*** *08:15:08.5±0.2, 44°.43S±0°.01×94°.20E±0°.02, h23^{km}±1^{km}, MW5.0/105, Moment Tensor Solution. s29,c32; s105,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.05±.21; M$_{\theta\theta}$-1.84±.18; M$_{\phi\phi}$1.79±.17; M$_{r\theta}$-0.35±.26; M$_{\theta\phi}$-4.24±.13; M$_{\phi r}$-0.17±.22; Best double couple: M$_0$4.62800×10^{16} NP1:φ$_s$11.00000°,δ86.00000°, λ-3.00000°. NP2:φ$_s$102.00000°,δ87.00000°, λ-176.00000°. Principal axes: T 4.5880, Plg1.0000°, Azm237.0000°; N 0.0830, Plg85.0000°, Azm138.0000°; P -4.6690, Plg5.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 08:15:05.6±0.5**,44°.53S**±0°.09×**94°.2E**±0°.1**,h10^{km},n58, σ0^{s}.84**/43**,mb4.5**/21**,MS4.4**/13**,1D,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**18.07**	**65**	T	T	08 37 35.8	
	baz=231,slow=74,SNR=23						
H01W3	**Cape Leeuwin H**	**18.08**	**65**	T	T	08 37 35.8	
	baz=231,slow=74,SNR=27						
H01W1	**Cape Leeuwin H**	**18.09**	**65**	T	T	08 37 36.3	
	baz=231,slow=74,SNR=25						
NWAO	**Narrogin (SRO)**	**21.31**	**65**	P	**P**	**08 19 52.1**	**-0.4**
	22nm,0.9s,baz=251,slow=7.2,SNR=6.6						
NWAO				LR	LR	08 26 07.3	
	comp=Z,1µm,20.1s,baz=246,slow=31						
NWAO	**Narrogin (SRO)**	**21.31**	**65**	P	**P**	**08 19 51.5**	**-0.9**
NWAO				IAmb	IAmb	08 20 02.9	
	comp=Z,20nm,0.8s						
MAW	**Mawson**	**28.39**	**205**	P	**P**	**08 20 59.7**	**0.0**
	comp=Z,7.9nm,0.9s,baz=44,slow=12,SNR=3.5						
MAW				LR	LR	08 30 17.6	
	comp=Z,697nm,18.2s,baz=59,slow=32						
MAW	**Mawson**	**28.39**	**205**	P	**P**	**08 20 59.6**	**-0.1**
ASAR	**Alice Springs**	**38.42**	**70**	P	**P**	**08 22 26.9**	**-0.5**
	comp=Z,9.2nm,0.7s,baz=226,slow=7.2,SNR=23						
ASAR				LR	LR	08 36 04.4	
	comp=Z,650nm,21.6s,baz=220,slow=33						
ASAR	**Alice Springs**	**38.42**	**70**	P	**P**	**08 22 27.3**	**-0.2**
AS31	**Alice Springs**	**38.43**	**70**	P	**P**	**08 22 27.5**	**0.0**
AS31				IAmb	IAmb	08 22 29.5	
	comp=Z,3.4nm,0.7s						
STKA	**Stephens Creek**	**38.82**	**88**	P	**P**	**08 22 30.4**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=242,slow=5.9,SNR=3.7						
STKA				LR	LR	08 35 34.0	
	comp=Z,382nm,20.2s,baz=222,slow=32						
STKA	**Stephens Creek**	**38.82**	**88**	P	**P**	**08 22 30.7**	**+0.1**
WRA	**Warramunga Arr**	**41.30**	**67**	P	**P**	**08 22 50.6**	**-0.7**
	comp=Z,7.7nm,0.8s,baz=225,slow=8.3,SNR=16						
WRA				LR	LR	08 37 58.4	
	comp=Z,1µm,21.7s,baz=240,slow=33						
WRA	**Warramunga Arr**	**41.30**	**67**	P	**P**	**08 22 49.8**	**-1.5**
WB2	**Warramunga Arr**	**41.31**	**67**	P	**P**	**08 22 50.6**	**-0.8**
WB2				IAmb	IAmb	08 22 51.5	
	comp=Z,13nm,1.0s						
H08S2	**Diego Garcia H**	**41.32**	**326**	T	T	09 06 43.8	
	baz=157,slow=76,SNR=5.2						
H08S1	**Diego Carcia H**	**41.32**	**326**	T	T	09 06 47.9	
	baz=157,slow=76,SNR=5.2						
H08S3	**Diego Garcia H**	**41.34**	**326**	T	T	09 06 50.0	
	baz=157,slow=76,SNR=5.6						
WB0	**Warramunga Arr**	**41.46**	**67**	P	**P**	**08 22 52.0**	**-0.6**
WB0				IAmb	IAmb	08 22 52.5	
	comp=Z,10nm,0.9s						
VNDA	**Vanda**	**42.16**	**163**	P	**P**	**08 22 57.6**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=286,slow=7.3,SNR=8.1						
VNDA				LR	LR	08 38 20.6	
	comp=Z,420nm,20.1s,baz=286,slow=33						
VNDA	**Vanda**	**42.16**	**163**	P	**P**	**08 22 58.5**	**+0.8**
QSPA	**South Pole Qui**	**45.62**	**180**	P	**P**	**08 23 25.6**	**-0.2**
	comp=Z,11nm,1.1s,baz=302,slow=5.8,SNR=5.5						
QSPA	**South Pole Qui**	**45.62**	**180**	P	**P**	**08 23 26.3**	**+0.5**
SNAA	**Sanae**	**50.56**	**204**	P	**P**	**08 24 03.9**	**+0.1**
SNAA	**Sanae**	**50.56**	**204**	P	**P**	**08 24 03.9**	**+0.1**
SNAA				IAmb	IAmb	08 24 14.3	
	comp=Z,7.3nm,1.1s						
VNA2	**Neumayer--Watz**	**52.20**	**204**	P	**P**	**08 24 15.7**	**-0.4**
	baz=110,slow=6.1						
VNA1	**Neumayer--Stat**	**52.59**	**204**	P	**P**	**08 24 18.9**	**0.0**
VNA3	**Neumayer Olymp**	**52.71**	**203**	P	**P**	**08 24 20.2**	**+0.4**
BELA	**Belgrano 2**	**53.96**	**192**	P	**P**	**08 24 28.4**	**-0.5**
BSWZ	**Blackbirch Sta**	**56.00**	**117**	P	**P**	**08 24 44.3**	**+0.1**
BOSA	**Boshof**	**56.01**	**262**	P	**P**	**08 24 43.2**	**-1.4**
	comp=Z,3.2nm,0.8s,baz=76,slow=8.3,SNR=3.3						
LSZ	**Lusaka**	**62.37**	**276**	P	**P**	**08 25 29.6**	**+0.9**
DZM	**Mont Dzumac**	**62.40**	**95**	*e*LR	LR	08 43 51.9	
	comp=Z,249nm,24.8s						
CMAR	**Chiang Mai Arr**	**62.83**	**5**	P	**P**	**08 25 31.1**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=184,slow=5.9,SNR=1.3						
CMAR	**Chiang Mai Arr**	**62.83**	**5**	P	**P**	**08 25 31.3**	**-0.2**
SLVN	**Son La**	**66.14**	**10**	P	**P**	**08 25 52.2**	**-0.9**
SLVN				IAmb	IAmb	08 26 12.1	
	comp=Z,4.7nm,1.0s						
HOPE	**Hope Point**	**72.97**	**208**	P	**P**	**08 26 35.2**	**+0.3**
LSA	**Lhasa**	**73.93**	**357**	P	**P**	**08 26 41.3**	**+0.1**
LSA				IAmb	IAmb	08 27 04.1	
	comp=Z,11nm,1.4s						
WSAR	**Wadi Sarin**	**74.87**	**326**	LR	LR	08 53 02.0	
	comp=Z,142nm,19.8s,baz=160,slow=30						
XAN	**Xi'an**	**79.34**	**12**	P	P	08 27 18.0	+6.7
XAN				pP	PcP	08 27 24.3	+4.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NJ2	**Nanjing**	**79.47**	**21**	*e*P	**P**	**08 27 14.8**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LZH	**Lanzhou**	**80.72**	**8**	⇓P	**P**	**08 27 20.4**	**+1.6**
LZH				pP	pwP	08 27 25.3	+0.2
LZH				sP	PcP	08 27 27.6	+2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
GTA	**Gaotai**	**83.72**	**4**	*e*P	P	08 27 43.1	+8.7
GTA				pP	pwP	08 27 46.4	+5.7
GTA				sP	PcP	08 27 49.3	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,91nm,4.9s						
GTA				LR	LR		
	comp=N,120nm,15.6s						
GTA				LR	LR		
	comp=E,110nm,18.2s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
WMQ	**Urumqi**	**88.16**	**355**	*e*P	**P**	**08 27 57.1**	**+0.9**
KKAR	**Karatay Array**	**89.78**	**343**	P	**P**	**08 28 03.3**	**-0.5**
TBI	**Tubuai**	**90.93**	**125**	*e*LR	LR	08 57 07.8	
	comp=Z,330nm,32.5s						
MKAR	**Makanchi Array**	**91.55**	**352**	P	**P**	**08 28 10.2**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=142,slow=7.3,SNR=1.9						
SONM	**Songino Array**	**92.61**	**8**	P	**P**	**08 28 16.1**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=173,slow=3.9,SNR=4.0						
SONM	**Songino Array**	**92.61**	**8**	P	**P**	**08 28 15.9**	**-1.0**
USRK	**Ussuriysk Ar.**	**94.54**	**26**	LR	LR	09 13 17.2	
	comp=Z,48nm,18.2s,baz=184,slow=37						
PPT2	**Papeete2**	**95.26**	**121**	*e*LR	LR	08 59 12.8	
	comp=Z,355nm,28.8s						
TAOE	**Nuku Hiva Isla**	**107.77**	**123**	*e*LR	LR	09 05 01.4	
	comp=Z,281nm,27.5s						
EPYK	**Eagle Plains**	**145.22**	**33**		**PKPdf**	**08 34 42.5**	**+0.3**
INK	**Inuvik**	**145.86**	**29**	PKPbc	**PKPdf**	**08 34 42.8**	**-0.4**
	comp=Z,4.5nm,1.1s,baz=273,slow=8.4,SNR=3.6						
INK	**Inuvik**	**145.86**	**29**		**PKPdf**	**08 34 43.1**	**-0.1**
NVAR	**Mina Array Bea**	**155.01**	**93**	PKPbc	PKPbc	08 35 07.3	
	comp=Z,0.5nm,0.7s,baz=251,slow=2.8,SNR=3.8						
YKA	**Yellowknife Ar**	**155.51**	**33**	PKPab	**PKPab**	**08 35 24.1**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=309,slow=3.4,SNR=6.7						
TXAR	**Lajitas Array**	**159.24**	**131**	PKPab	**PKPab**	**08 35 42.0**	**+0.7**
	comp=Z,0.7nm,1.0s,baz=219,slow=4.2,SNR=3.9						

KRNET ***22*** *08:19:20.6±0.1, 41°.10N×69°.81E, mb2.6*

ISC 22 08:19:23.0±1.8**,41°.03N**±0°.06×**69°.90E**±0°.09**,h10^{km},n11, σ1^{s}.60**/21**,16C-5D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**1.06**	**61**	⇑*i*P	**Pg**	**08 19 41.4**	**-2.1**
	baz=70						
TRKS				⇑*i*S	**Sg**	**08 19 56.6**	**-0.7**
	baz=70						
BTK	**Batken**	**1.20**	**144**	⇑*i*P	**Pb**	**08 19 45.2**	**-0.6**
	baz=43						
BTK				⇑*i*S	**Sn**	**08 20 03.3**	**+1.1**
	baz=43						

KK31	Karatay Array 1.5nm,0.3s,baz=196,slow=16,SNR=24	2.12	12	Pn	Pn	08 19 59.9	+1.3
KK31	4.8nm,0.5s,baz=204,slow=26,SNR=12			⇑Sn	Sg	08 20 30.7	-0.6
ARSB	Arslanbob baz=84	2.35	82	⇑*i*P	Pn	08 20 03.3	+1.5
ARSB	baz=84			⇑*i*S	Sb	08 20 34.4	-0.2
MNAS	Manas baz=55	2.43	52	⇓*i*P	Pn	08 20 04.1	+1.1
MNAS	baz=55			⇓*i*S	Sb	08 20 35.5	-1.6
AML	Almayashu baz=69	3.05	68	⇑*e*P	Pn	08 20 12.8	+1.1
AML	baz=69			⇑*i*S	Sn	08 20 50.9	+2.4
EKS2	Erkin-Say baz=61	3.33	59	⇑*i*P	Pn	08 20 16.4	+1.2
EKS2	baz=61			⇑*i*S	Sn	08 20 56.8	+1.9
UCH	Uchtor baz=71	3.66	69	⇓*i*P	Pn	08 20 21.3	+1.2
UCH	baz=71			⇓*i*S	Sn	08 21 05.6	+2.0
AAK	Ala-Archa baz=65	3.79	63	⇑*i*P	Pn	08 20 23.1	+1.4
AAK	baz=65			⇑*i*S	Sn	08 21 08.5	+2.1
AAK	Ala-Archa 1.0nm,0.4s	3.79	63	⇑Pg	Pg	08 20 33.8	-1.9
AAK	1.9nm,0.6s			⇓Lg	Lg	08 21 30.9	
USP	Ospenovka baz=57	4.09	55	⇑*i*P	Pn	08 20 26.6	+1.0
USP	baz=57			⇑*i*S	Sn	08 21 15.3	+1.8

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*IDC **22** 08:23:35.4±1.0, 9°.51S×158°.89E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.7/33, mbtmp3.8/6, ML4.6/1, Error ellipse: s-maj=33.4km s-min=15.8km az=172.0*

ISC 22 08:23:39.3±0.9**, 9°.5S**±0°.2×**158°.89E**±0°.08**, h27^{km}, n7, σ0^{s}.67**/8**, mb3.4**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara 67nm,0.3s,baz=202,slow=11,SNR=20	1.05	84	Pn	Pn	08 23 57.7	-0.7
HNR	372nm,0.3s,baz=171,slow=22,SNR=32			Sn	Sb	08 24 12.9	+0.6
JAY	Jayapura 1.9nm,0.3s,baz=231,slow=18,SNR=5.3	19.37	290	P	P	08 28 02.9	-0.4
WRA	Warramunga Arr 0.4nm,0.5s,baz=71,slow=9.8,SNR=5.3	25.86	244	P	P	08 29 09.5	+0.5
STKA	Stephens Creek 0.6nm,0.6s,baz=90,slow=17,SNR=2.0	27.41	213	P	P	08 29 22.8	0.0
ASAR	Alice Springs 0.3nm,0.7s,baz=60,slow=9.3,SNR=2.0	27.69	236	P	P	08 29 25.4	0.0
SONM	Songino Array 0.6nm,0.5s,baz=142,slow=6.4,SNR=4.3	73.56	326	P	P	08 35 10.9	+0.8
MKAR	Makanchi Array 0.3nm,0.5s,baz=96,slow=6.5,SNR=3.7	87.85	318	P	P	08 36 25.9	-0.5

IDC 22 08:34:48.2±2.9**, 44°.19S**×**93°.86E, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/23**, mbtmp3.9**/3**, MS3.7**/6**, Ms1 3.8**/6**, ms1mx3.4**/27**, Error ellipse: s-maj=95.1km s-min=34.4km az=124.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H baz=231,slow=74,SNR=19	18.15	66	T	T	08 57 12.6	
H01W3	Cape Leeuwin H baz=231,slow=74,SNR=20	18.16	66	T	T	08 57 14.8	
H01W1	Cape Leeuwin H baz=231,slow=74,SNR=22	18.16	66	T	T	08 57 13.7	
MAW	Mawson comp=Z,159nm,20.8s,baz=58,slow=30	28.60	204	LR	LR	08 49 11.4	
ASAR	Alice Springs 1.5nm,0.9s,baz=223,slow=7.6,SNR=8.0	38.54	71	P	P	08 42 12.6	+0.1
LEM	Lembang comp=Z,75nm,19.8s,baz=182,slow=34	39.12	22	LR	LR	08 56 47.1	
WRA	Warramunga Arr 1.7nm,0.9s,baz=224,slow=7.3,SNR=5.3	41.39	67	P	P	08 42 35.8	-0.4
VNDA	Vanda comp=Z,95nm,18.3s,baz=306,slow=34	42.55	163	LR	LR	08 58 34.4	
QSPA	South Pole Qui 2.0nm,0.7s,baz=302,slow=4.7,SNR=3.5	45.95	180	P	P	08 43 12.5	-0.1
PALK	Pallekele comp=Z,74nm,18.8s,baz=276,slow=30	52.59	343	LR	LR	09 00 46.5	
CMAR	Chiang Mai Arr comp=Z,70nm,21.6s,baz=185,slow=32	62.52	5	LR	LR	09 07 47.4	
RAR	Rarotonga comp=Z,69nm,19.2s,baz=257,slow=31	86.52	116	LR	LR	09 19 58.2	
YKA	Yellowknife Ar 0.1nm,0.7s,baz=303,slow=3.2,SNR=2.4	155.35	32	PKPab	PKPab	08 55 07.4	-0.3

IDC 22 08:38:56.6±3.5**, 0°.32S**×**136°.71E, h0^{km}, mb3.3**/2**, mb1 3.4**/3**, mb1mx3.3**/26**, mbtmp3.3**/3**, ML3.2**/1**, Error ellipse: s-maj=151.2km s-min=29.4km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr 0.1nm,0.3s,baz=8.8,slow=12,SNR=2.5	19.64	187	P	P	08 43 25.6	-1.4
ASAR	Alice Springs 0.9nm,0.9s,baz=17,slow=11,SNR=9.0	23.36	186	P	P	08 44 07.8	+0.9
MKAR	Makanchi Array 0.2nm,0.6s,baz=120,slow=7.1,SNR=4.6	66.69	323	P	P	08 49 49.4	-0.1

IDC 22 08:48:08.1±55.0**, 5°.01S**×**105°.51E, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.4**/33**, mbtmp3.9**/3**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/45**, Error ellipse: s-maj=994.1km s-min=263.2km az=145.0, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang comp=Z,107nm,20.3s,baz=236,slow=37	14.19	91	LR	LR	08 56 47.9	
WRA	Warramunga Arr 0.3nm,0.4s,baz=287,slow=9.3,SNR=1.7	31.73	120	P	P	08 54 33.6	-0.5
ASAR	Alice Springs 1.0nm,0.3s,baz=303,slow=8.1,SNR=9.3	33.05	127	P	P	08 54 46.0	+0.3
STKA	Stephens Creek 1.3nm,0.4s,baz=297,slow=7.9,SNR=4.5	43.07	133	P	P	08 56 09.8	-0.2

IDC 22 09:02:37.8±2.9**, 5°.89S**×**131°.02E, h60^{km}**±37^{km}**, mb3.7**/1**, mb1 3.8**/5**, mb1mx3.4**/37**, mbtmp3.8**/5**, ML3.7**/3**, Error ellipse: s-maj=88.0km s-min=23.0km az=87.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong baz=217,slow=4.6	4.99	3	P	Pn	09 03 50.6	+0.4
SIJI	2.3nm,0.3s,baz=282,slow=23,SNR=1.6			S	Sn	09 04 37.7	-8.9
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=27,slow=12,SNR=13	13.22	203	P	Pn	09 05 42.6	-0.2
FITZ	0.4nm,0.3s,baz=62,slow=23,SNR=1.7			S	Sn	09 08 03.1	-5.1
WRA	Warramunga Arr 0.3nm,0.3s,baz=351,slow=13,SNR=13	14.34	167	P	Pn	09 05 55.9	-1.9
WRA	0.6nm,0.3s,baz=354,slow=23,SNR=8.5			S	Sn	09 08 31.1	-4.3
ASAR	Alice Springs 0.2nm,0.3s,baz=347,slow=8.8,SNR=15	17.89	171	P	Pn	09 06 43.9	+1.3
ASAR	0.2nm,0.3s,baz=2.5,slow=28,SNR=3.1			S	Sn	09 09 56.1	-5.5
MKAR	Makanchi Array 0.6nm,0.4s,baz=118,slow=8.0,SNR=9.0	67.86	326	P	P	09 13 29.7	-0.1

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*BJI **22** 09:09:15.7±0.0, 42°.00N×119°.70W, h5^{km}, mB5.3/7, mb4.7/10, Ms5.0/3*

*IDC **22** 09:09:15.2±0.5, 41°.62N×119°.65W, h0^{km}, mb4.2/12, mb1 4.3/19, mb1mx4.2/44, mbtmp4.1/19, ML3.6/6, MS4.0/25, Ms1 4.0/25, ms1mx3.8/49, Error ellipse: s-maj=9.0km s-min=5.3km az=15.0*

*SEA **22** 09:09:16.4±3.2, 41°.82N±0°.04×119°.57W±0°.05, h0^{km}±3^{km}, Error ellipse: s-maj=6.1km s-min=4.6km az=221.0*

*ANF **22** 09:09:16.6±0.1, 41°.91N×119°.73W, h0^{km}, ML4.8/21, Error ellipse: s-maj=2.5km s-min=1.7km az=7.0*

*REN **22** 09:09:16.7±2.8, 41°.88N±0°.03×119°.63W±0°.05, h12^{km}±3^{km}, ML4.5/9, mb4.5/82(NEIC), ML4.5/102(SEA), ML4.4/80(NEIC), Mwr4.7/110(NEIC), Error ellipse: s-maj=5.6km s-min=4.4km az=66.0*

*NEIC **22** 09:09:18.0±2.3, 41°.90N±0°.04×119°.67W±0°.05, h5^{km}±3^{km}, Error ellipse: s-maj=6.1km s-min=4.6km az=224.0*

*NEIC **22** 09:09:17.7, 41°.90N×119°.63W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.63; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$1.12; $M_{r\theta}$-0.56; $M_{\theta\phi}$0.17; $M_{\phi r}$-0.66; Fault plane solution: $M_0$1.31000×10^{16} NP1:ϕ_s34.80000°, δ71.70000°, λ-58.43000°. NP2:ϕ_s151.87000°, δ36.01000°, λ-147.72000°. Principal axes: T 1.4064, Plg20.0000°, Azm102.0000°; N -0.2152, Plg30.0000°, Azm204.0000°; P -1.1912, Plg53.0000°, Azm342.0000°;*

*GCMT **22** 09:09:21.7±0.3, 41°.85N±0°.04×119°.58W±0°.03, h19^{km}±1^{km}, MW4.8/72, Moment Tensor Solution. s20,c23; s72,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.17; $M_{\theta\theta}$-0.50±.10; $M_{\phi\phi}$2.08±.10; $M_{r\theta}$-1.17±.33; $M_{\theta\phi}$0.27±.07; $M_{\phi r}$-0.64±.18; Best double couple: $M_0$2.32000×10^{16} NP1:ϕ_s159.00000°, δ41.00000°, λ-137.00000°. NP2: ϕ_s34.00000°, δ63.00000°, λ-57.00000°. Principal axes: T 2.2760, Plg12.0000°, Azm101.0000°; N 0.0910, Plg29.0000°, Azm198.0000°; P -2.3640, Plg58.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 09:09:17.8±1.2**, 41°.94N**±0°.04×**119°.68W**±0°.03**, h6^{km}**±8^{km}**, n307, σ1^{s}.23**/307**, mb4.6**/44**, MS4.1**/19**, 1D, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.47	266	Pg	Pg	09 09 26.7	-0.2
MOD	comp=N,32µm,0.7s			IAML		09 09 34.6	
MOD	Modoc Plateau	0.47	266		Sb	09 09 34.1	-1.5
LKVW	Lakeview	0.58	300		Pb	09 09 29.0	-1.5
LKVW					Sn	09 09 38.7	-3.9
WVOR	Wild Horse Val	0.92	57		Pb	09 09 34.2	-2.1
WVOR	Wild Horse Val	0.92	57		Pb	09 09 35.1	-1.2
WVOR				Sg	Sb	09 09 46.2	-2.6
WVOR	comp=N,15µm,1.1s			IAML		09 09 51.0	
WVOR	comp=N,14µm,1.1s			IAML		09 09 51.6	
K05A	Summer Lake	1.20	312		Pn	09 09 40.4	-0.8
K05A	Summer Lake	1.20	312		Sg	09 09 57.9	+1.6
LASM	Arnica Sink	1.46	257		Pn	09 09 43.3	-1.5
HOG	Hogback Mounta	1.54	282		Pn	09 09 45.3	-0.7
LTIM	Timbered Crate	1.56	241		Pn	09 09 44.6	-1.5
KFAL	Klamath Falls	1.60	282		Sg	09 10 10.0	+0.9
M04C	Macdoel baz=85,SNR=1000	1.62	265	P	Pn	09 09 45.6	-1.4
M04C	baz=85			Sb	Sg	09 10 09.4	-0.5
M04C	Macdoel	1.62	265		Pn	09 09 45.6	-1.4
M04C					Sg	09 10 10.6	+0.7
LBCM	Butte Creek Ri	1.67	229		Pn	09 09 45.9	-1.8
K04D	Chiloquin, OR baz=114,SNR=669	1.68	295	P	Pn	09 09 47.0	-0.9
K04D	baz=114			Sb	Sg	09 10 12.2	+0.2
K04D	Chiloquin, OR	1.68	295		Pn	09 09 47.2	-0.6
K04D					Sg	09 10 13.8	+1.8
HATC	Hat Creek Radi	1.75	231		Pn	09 09 47.2	-1.5
J05D	Fort Rock, OR baz=139,SNR=1000	1.77	320	P	Pn	09 09 48.5	-0.6
J05D	baz=139			Sb	Sg	09 10 16.0	+1.3
J05D	Fort Rock, OR	1.77	320		Pn	09 09 48.9	-0.2
J05D					Sg	09 10 17.0	+2.3
LHEM	Herd Peak	1.92	262		Pn	09 09 50.2	-1.1
M03C	McCloud	1.95	251		Pn	09 09 50.0	-1.4
L04D	Klamath Falls baz=98,SNR=785	1.97	279	P	Pn	09 09 50.5	-1.4
L04D	baz=98			Sb	Sg	09 10 21.1	-0.1
L04D	Klamath Falls	1.97	279		Pn	09 09 50.5	-1.4
L04D					Lg	09 10 22.1	
LGBM	Gray Butte	1.97	253		Pn	09 09 50.8	-1.2
TMBU	Tom Butte, New	1.98	328		Pn	09 09 52.5	+0.4
LMEM	Manzanita Entr	2.00	226		Pn	09 09 51.1	-1.1
B040	Montague	2.05	268		Pn	09 09 50.9	-1.9
B040					Lg	09 10 23.3	
SVIC	Surveyors Ice	2.06	326		Pb	09 09 55.8	+0.1
PINE	Pine Mountain	2.07	334		Pn	09 09 53.6	+0.4
PINE	comp=E,2µm,0.6s			IAML		09 10 27.9	
PINE	comp=N,2µm,1.4s			IAML		09 10 35.6	
BEKR	Beckworth	2.13	194		Pn	09 09 53.3	-0.7
BEKR				Sn	Sn	09 10 21.4	+0.5
BEKR					LR	09 10 22.2	
BEKR	comp=N,2µm,0.3s			IAML		09 10 23.9	
BEKR	comp=E,3µm,0.6s			IAML		09 10 25.3	
I07A	Izee	2.15	3	Pn	Pn	09 09 54.5	+0.2
I07A					LR	09 10 26.5	
I07A	comp=E,2µm,1.7s			IAML		09 10 38.5	
J04D	Umpqua Nationa baz=126,SNR=746	2.22	307	P	Pn	09 09 54.5	-0.8
PAHR	Pah Rah Range	2.24	174		Pn	09 09 53.9	-1.6
PAHR	comp=E,2µm,1.2s			IAML		09 10 30.7	
LCMM	Colby Mountain	2.27	218		Pn	09 09 55.1	-0.8
YBH	Yreka Blue Hor comp=E,29nm,0.3s,baz=62,slow=10,SNR=185	2.27	266	Pn	Pn	09 09 54.1	-1.8
YBH	comp=E,203nm,0.3s,baz=148,slow=11,SNR=12			Lg	Lg	09 10 28.9	
YBH	comp=E,743nm,19.8s,baz=184,slow=40			LR	LR	09 10 46.5	
YBH	Yreka Blue Hor	2.27	266		Pn	09 09 54.1	-1.8
YBH	comp=N,1µm,1.7s			IAML		09 10 35.0	
O03E	Paynes Creek baz=45,SNR=706	2.29	225	P	Pn	09 09 54.2	-2.0
O03E	baz=45			Sb	Sb	09 10 27.8	-0.5
M02C	Callahan baz=77	2.44	258	Sb	Sb	09 10 33.0	+0.6
N02D	Trinity Center baz=67,SNR=336	2.47	248	P	Pn	09 09 56.5	-2.1
N02D	baz=67			Sb	Sb	09 10 34.1	+0.8
HUMO	Hull Mountain	2.52	286		Pn	09 09 57.7	-1.6
HUMO	comp=N,1µm,0.8s			IAML		09 10 38.2	
HUMO	comp=E,1µm,1.9s			IAML		09 10 46.0	
WDC	Whiskeytown Da	2.55	239		Pn	09 09 58.0	-1.6
WDC	comp=N,2µm,0.8s			IAML		09 10 42.0	
WDC	comp=E,1µm,0.9s			IAML		09 10 46.0	
I05D	Terrebonne, OR baz=153	2.69	334	P	Pn	09 10 01.0	-0.6
I04A	Tendick Farm, baz=132,SNR=261	2.73	314	P	Pn	09 10 01.7	-0.6
I04A	baz=132			Sb	Sg	09 10 42.8	-2.8
ORV	Oroville	2.75	211		Pn	09 10 01.3	-1.1
ORV	comp=E,988nm,0.7s			IAML		09 10 43.1	
RUBR	Rubicon Trail	2.91	187		Pn	09 10 06.0	+1.2
RUBR	comp=N,1µm,0.9s			IAML		09 10 50.3	
RUBR	comp=E,1µm,1.7s			IAML		09 11 05.3	
L02E	Cave Junction baz=94,SNR=102	2.93	276	P	Pn	09 10 04.0	-0.9
L02E	baz=94			Sb	Sg	09 10 48.2	-3.7
O02D	Mt. Diablo Mer baz=53,SNR=63	2.93	234	P	Pn	09 10 03.0	-2.0
O02D	baz=53			Sb	Sb	09 10 47.2	+0.5
K02D	Willamette Mer baz=104,SNR=1000	3.05	286	P	Pn	09 10 06.1	-0.5
AFDM	Forest Hills D	3.14	199	Pn	Pn	09 10 08.5	+0.6
SUTB	Sutter Butte	3.14	211		Pn	09 10 08.2	+0.4
KRMB	Red Mountain	3.19	264		Pn	09 10 08.4	-0.2
KRMB	comp=N,788nm,1.7s			IAML		09 11 20.1	
KRMB	comp=E,606nm,2.4s			IAML		09 11 23.9	
MFID	Camas Ranch	3.20	61		Pn	09 10 08.1	-0.7
I03D	Drain, OR baz=122,SNR=33	3.22	304	P	Pn	09 10 08.4	-0.4
I03D	baz=122			Sb	Sg	09 10 58.5	-2.7
KHMM	Horse Mountain	3.23	252		Pn	09 10 09.4	+0.3
KHMM	comp=E,1µm,1.0s			IAML		09 11 06.8	
H04A	Detroit Lake	3.30	327		Pn	09 10 11.2	+1.2
J01E	Myrtle Point baz=110,SNR=18	3.37	293	P	Pn	09 10 11.0	0.0
BMO	Blue Mountains	3.39	30		Pn	09 10 12.6	+1.3
KBO	Bosley Butte	3.39	276		Pn	09 10 11.8	+0.4
H04D	Lebanon baz=138	3.42	320	P	Pn	09 10 11.9	+0.4
RYN	Ryan	3.42	165		Pn	09 10 11.4	-0.4
RYN	comp=N,1µm,0.6s			IAML		09 11 10.9	
WAKR	Walker	3.43	177		Pn	09 10 12.9	+0.9
WAKR	comp=N,733nm,0.8s			IAML		09 11 13.5	
JCC	Jacoby Creek,	3.46	253		Pn	09 10 11.5	-0.6
G05D	Wamic, OR baz=160,SNR=20	3.51	341	P	Pn	09 10 13.2	+0.3
ELK	Elko comp=N,6.3nm,0.3s,baz=293,slow=13,SNR=92	3.55	108	Pn	Pn	09 10 12.2	-1.5
ELK	comp=N,66nm,0.3s,baz=304,slow=16,SNR=69			Pg	Pb	09 10 17.4	-3.8
ELK	comp=N,222nm,0.3s,baz=188,slow=12,SNR=11			Lg	Lg	09 11 04.9	
ELK	Elko	3.55	108		Pn	09 10 13.7	0.0
KEBM	Edson Butte	3.57	287		Pn	09 10 14.4	+0.7
KEBM	comp=N,1µm,1.8s			IAML		09 11 25.5	
NVAR	Mina Array Bea comp=N,4.4nm,0.3s,baz=341,slow=14,SNR=55	3.66	163	Pg	Pn	09 10 14.5	-0.6
NVAR	comp=N,139nm,0.3s,baz=57,slow=43,SNR=4.7			Lg	Lg	09 11 11.6	
NV11	Mina Array Sit	3.69	161		Pn	09 10 15.3	-0.2
NV11	comp=E,542nm,1.7s			IAML		09 11 16.0	
NV11	comp=N,437nm,1.6s			IAML		09 11 26.8	
KCPM	Cahto Peak	3.72	234		Pn	09 10 16.9	+1.0
KCPM	comp=E,899nm,1.4s			IAML		09 11 28.0	
KCPM	comp=N,768nm,1.4s			IAML		09 11 33.1	
I02D	Swisshome baz=124,SNR=13	3.75	307	P	Pn	09 10 17.6	+1.5
LHV	Little Huntoon	3.79	166		Pn	09 10 17.3	+0.6
HOPS	Hopland Field	3.92	222	Pn	Pn	09 10 20.1	+1.7
HOPS	comp=N,472nm,1.8s			IAML		09 11 41.5	
HLID	Hailey baz=248	4.21	66	P	Pn	09 10 21.3	-1.3
HLID	Hailey	4.21	66	Pn	Pn	09 10 22.6	+0.1
HLID	comp=N,430nm,0.9s			IAML		09 11 34.0	
TPH	Tonopah	4.29	153		Pn	09 10 24.7	+0.9
MCCM	Marconi Confer	4.51	214	Pn	Pn	09 10 24.0	-2.7
MCCM	comp=N,256nm,2.2s			IAML		09 11 59.3	
R11A	Troy Canyon, C baz=320	4.76	137	P	Pn	09 10 29.6	-0.6
R11A	Troy Canyon, C	4.76	137	Pn	Pn	09 10 31.0	+0.7
R11A	comp=E,349nm,0.9s			IAML		09 11 49.4	
R11A	comp=N,451nm,0.8s			IAML		09 11 53.1	
E04D	Cinebar baz=155,SNR=7.9	5.06	337	P	Pn	09 10 36.7	+2.5
BGU	Big Grassy Mou	5.10	99		Pn	09 10 34.1	-0.8
D08A	Wollman Farm,	5.15	6	Pn	Pn	09 10 37.7	+2.4
HVU	Hansel Valley	5.16	89		Pn	09 10 35.6	0.0
BCYI	Bear Canyon	5.17	61		Pn	09 10 36.0	+0.1
SAO	San Andreas Ge	5.34	195	Pn	Pn	09 10 37.5	-0.6
SPUT	South Promonto	5.46	94		Pn	09 10 40.5	+0.7
DUG	Dugway, Tooele baz=290	5.47	106	P	Pn	09 10 39.5	-0.5
DUG	Dugway, Tooele	5.47	106	Pn	Pn	09 10 40.0	0.0
PSUT	Pine Spring	5.61	125	Pn	Pn	09 10 42.7	+0.8
CWC	Cottonwood Cre baz=348	5.63	167	P	Pn	09 10 42.5	+0.3
TPNV	Topopah Spring baz=333	5.64	151	P	Pn	09 10 42.4	+0.1
D04E	Lakebay baz=156,SNR=8.8	5.69	338	P	Pn	09 10 46.4	+3.7
MCMT	McKenzie Canyo	5.76	58		Pn	09 10 44.5	+0.6
PRN	Pahroc Range	5.76	140		Pn	09 10 44.8	+0.9
FURC	Furnace Creek, baz=339	5.88	157	P	Pn	09 10 45.9	+0.5
C09A	Chrisman Ranch	5.95	9	Pn	Pn	09 10 47.7	+1.4
NLU	North Lily Min	6.09	106		Pn	09 10 48.8	+0.3
CTU	Camp Tracy	6.10	99	Pn	Pn	09 10 49.0	+0.4
D03D	Eldon baz=155,SNR=12	6.10	338	P	Pn	09 10 49.6	+1.2
VES	Vestal, Richgr baz=356	6.11	175	P	Pn	09 10 49.9	+1.3
MPMC	Manual Prospec baz=345	6.11	163	P	Pn	09 10 48.6	-0.2
DLMT	Dillon	6.17	54		Pn	09 10 50.2	+0.6
NLWA	Neilton Lookou	6.22	333	Pn	Pn	09 10 52.0	+1.9
JLU	Jordanelle	6.34	99		Pn	09 10 52.9	+0.8
MPU	Maple Canyon	6.39	105	Pn	Pn	09 10 53.3	+0.7
MSO	Missoula baz=222	6.39	38	P	Pn	09 10 53.3	+0.8
MSO	Missoula	6.39	38	Pn	Pn	09 10 54.2	+1.7
B08A	Colville Reser	6.43	2	Pn	Pn	09 10 55.6	+2.7
CCUT	Cedar City	6.55	130	Pn	Pn	09 10 55.6	+0.7
B05A	Bryant baz=164,SNR=16	6.55	346	P	Pn	09 10 56.3	+1.7
NEW	Newport comp=N,0.3nm,0.3s,baz=192,slow=13,SNR=9.9	6.58	15	Pn	Pn	09 10 58.1	+3.0
NEW	comp=N,0.5nm,0.3s,baz=106,slow=16,SNR=3.3			Lg	Lg	09 12 50.1	
NEW	comp=N,1µm,19.7s,baz=187,slow=40			LR	LR	09 13 53.7	
NEW	Newport baz=196	6.58	15	P	Pn	09 10 56.0	+0.9
SHOC	Shoshone, Teco baz=337	6.59	155	P	Pn	09 10 55.1	-0.1
LRMC	Laurel Mtn Rad baz=347	6.63	166	P	Pn	09 10 55.2	-0.7
MVU	Marysvale	6.67	119	Pn	Pn	09 10 57.4	+0.9
SZCU	Shurtz Canyon	6.68	128		Pn	09 10 57.5	+0.9
MOOW	Moose Ponds	6.81	72		Pn	09 10 58.6	+0.2
YHL	Hebgen Lake	6.84	62		Pn	09 11 00.7	+1.8
BOZ	Bozeman (W) baz=240	6.88	55	P	Pn	09 10 59.4	0.0
BOZ	Bozeman (W)	6.88	55		Pn	09 11 00.0	+0.7
FLWY	Flagg Ranch	6.92	69	Pn	Pn	09 11 01.1	+1.1
JTMT	Jette	6.96	32		Pn	09 11 02.7	+2.4
GSC	Goldstone, Bar baz=342	7.00	160	P	Pn	09 11 01.7	+0.8
PKM	Mcpherson Peak baz=1.0	7.04	181	P	Pn	09 11 02.6	+1.1
EDW2	Edwards Air Fo baz=350	7.17	169	P	Pn	09 11 02.6	-0.6
HRY	Holter Researc	7.38	47		Pn	09 11 06.8	+0.7
PDAR	Pinedale Array comp=N,0.2nm,0.3s,baz=265,slow=14,SNR=28	7.55	80	Pn	Pn	09 11 10.8	+2.3
PDAR	comp=N,1.0nm,0.3s,baz=261,slow=12,SNR=14			Pg	Pb	09 11 27.8	-1.4
GMRC	Granite Mounta baz=338	7.81	155	P	Pn	09 11 12.8	+0.7
RLMT	Red Lodge baz=250	8.21	64	P	Pn	09 11 18.0	+0.4
IRM	Iron Mountain baz=337	8.55	154	P	Pn	09 11 21.8	-0.3
PFO	Pinyon Flats O comp=N,0.1nm,0.3s,baz=330,slow=1.0,SNR=3.6	8.69	162	Pn	Pn	09 11 25.2	+1.1
PFO	comp=N,0.4nm,0.3s,baz=324,slow=13,SNR=2.4			Lg	Lg	09 13 50.6	
PFO	comp=N,159nm,20.9s,baz=344,slow=36			LR	LR	09 14 19.0	
O20A	White River Ci baz=285	8.83	98	P	Pn	09 11 28.2	+2.0
WUAZ	Wupatki	9.12	132	P	Pn	09 11 31.0	+0.9

	baz=317						
K22A	Casper	9.78	81	P	Pn	09 11 40.0	+0.9
	baz=270						
MVCO	Mesa Verde	9.84	115	P	Pn	09 11 41.2	+1.3
	baz=302						
N23A	Red Feather La	10.37	91	P	Pn	09 11 48.2	+0.9
	baz=280						
PHWY	Pilot Hill	10.67	89		Pn	09 11 52.4	+1.0
S22A	4UR Ranch, Cre	10.73	109	P	Pn	09 11 53.0	+0.8
	baz=297						
ISCO	Idaho Springs	10.87	97	P	Pn	09 11 54.7	+0.6
	baz=286						
Q24A	Divide	11.46	100	P	Pn	09 12 03.4	+1.1
	baz=290						
SDCO	Great Sand Dun	11.68	106	P	Pn	09 12 05.7	+0.6
	baz=295						
TUC	Tucson	11.94	141	P	Pn	09 12 08.6	0.0
	baz=326						
ANMO	Albuquerque	12.49	120	Pn	Pn	09 12 13.3	-2.9
	comp=N,0.2nm,0.3s,baz=307,slow=12,SNR=2.0						
ANMO				Lg	Lg	09 15 51.9	
	comp=N,0.2nm,0.3s,baz=176,slow=22,SNR=2.4						
ANMO				LR	LR	09 17 47.6	
	comp=N,1µm,20.8s,baz=301,slow=42						
ANMO	Albuquerque	12.49	120	P	Pn	09 12 15.5	-0.8
	baz=308						
T25A	Trinidad	12.72	107	P	Pn	09 12 18.8	-0.6
	baz=297						
KSCO	Kaye Shedlock’	13.31	97	P	Pn	09 12 28.3	+1.0
	baz=288						
121A	Cookes Peak, D	13.33	131	P	Pn	09 12 28.2	+0.6
	baz=318						
SUSD	Miller	15.32	74	P	P	09 12 59.6	+0.3
SUSD				IAmb	IAmb	09 13 00.8	
	comp=Z,45nm,1.0s						
MNTX	Cornudas Mount	15.33	127	P	Pn	09 12 55.8	+1.2
	baz=316						
MNTX	Cornudas Mount	15.33	127	P	P	09 12 59.9	+0.3
MSTX	Muleshoe	15.51	115	P	P	09 13 02.0	+0.4
MSTX				IAmb	IAmb	09 13 06.5	
	comp=Z,23nm,1.4s						
AMTX	Amarillo	15.76	111	P	P	09 13 04.8	+0.5
AMTX				IAmb	IAmb	09 13 10.2	
	comp=Z,24nm,1.2s						
R32A	Long Quarter,	16.40	95	P	P	09 13 12.7	+1.2
N33A	J Bar K, Exete	16.74	87	P	Pn	09 13 14.5	+1.7
N33A				IAmb	IAmb	09 13 19.6	
	comp=Z,52nm,0.8s						
ECSD	EROS Data Cent	17.01	76	P	Pn	09 13 15.2	-1.0
	baz=272						
ECSD	EROS Data Cent	17.01	76	P	P	09 13 18.4	+0.3
F33A	5 Mile Ranch,	17.29	69	P	Pn	09 13 21.0	+1.4
DLBC	Dease Lake	17.76	342	P	P	09 13 27.2	+0.8
	comp=Z,0.0nm,0.3s,baz=135,slow=25,SNR=1.7						
DLBC	Dease Lake	17.76	342	IAmb	IAmb	09 13 33.6	
	comp=Z,17nm,1.3s						
KSU1	Kansas State U	17.76	92	P	Pn	09 13 25.5	-0.1
	baz=286						
WMOK	Wichita Mounta	17.88	107	P	Pn	09 13 26.8	-0.3
	baz=300						
WMOK	Wichita Mounta	17.88	107		P	09 13 28.4	+0.7
AGMN	Agassiz Nation	17.93	61	P	Pn	09 13 27.1	-0.5
	baz=258						
AGMN	Agassiz Nation	17.93	61		Pn	09 13 28.5	+0.9
N35A	Tabor	18.06	85		Pn	09 13 29.6	+0.4
N35A				IAmb	IAmb	09 13 43.1	
	comp=Z,45nm,0.9s						
TXAR	Lajitas Array	18.06	129	P	P	09 13 32.0	+2.1
	comp=Z,0.0nm,0.3s,baz=332,slow=10,SNR=9.8						
TXAR				PcP	PcP	09 18 04.3	+0.4
	comp=Z,0.0nm,0.3s,baz=272,slow=2.5,SNR=4.3						
TXAR				LR	LR	09 21 32.7	
	comp=Z,316nm,19.9s,baz=0.0,slow=41						
ULM	Lac du Bonnet	18.43	55	P	P	09 13 33.4	-0.3
	comp=Z,0.1nm,0.3s,baz=256,slow=9.3,SNR=10						
ULM				LR	LR	09 20 46.6	
	comp=Z,350nm,19.5s,baz=252,slow=37						
ULM	Lac du Bonnet	18.43	55	P	P	09 13 33.4	-0.3
F36A	Milaca	19.22	69	P	P	09 13 43.0	+0.6
I37A	Lemond, Waseca	19.32	75	P	P	09 13 43.9	+0.4
B35A	Bob, Littlefor	19.35	62		P	09 13 43.9	+0.1
B35A				IAmb	IAmb	09 13 44.8	
	comp=Z,25nm,1.4s						
LPIG	La Paz	19.42	153	LR	LR	09 21 38.0	
	comp=Z,413nm,18.7s,baz=338,slow=39						
TUL1	Leonard	19.51	100	P	P	09 13 42.4	-3.3
	baz=295						
JCT	Junction City	19.65	119	P	P	09 13 45.8	-1.5
	baz=311						
SCIA	State Center	19.67	81	P	P	09 13 48.5	+1.1
SCIA				IAmb	IAmb	09 13 59.0	
	comp=Z,35nm,1.4s						
SPMN	Marine on St.	19.71	71	P	P	09 13 45.3	-2.6
	baz=270						
SPMN	Marine on St.	19.71	71	P	P	09 13 47.0	-0.8
N38A	Joes South For	19.86	84	P	P	09 13 49.2	-0.3
N38A				IAmb	IAmb	09 13 55.3	
	comp=Z,37nm,1.2s						
K38A	Parkersburg	19.90	79	P	P	09 13 50.6	+0.8
K38A				IAmb	IAmb	09 13 55.4	
	comp=Z,31nm,0.8s						
P38A	Dawn	19.91	88	P	P	09 13 51.5	+1.5
P38A				IAmb	IAmb	09 13 55.9	
	comp=Z,13nm,0.7s						
S39A	Bolivar	20.66	93	P	P	09 13 59.5	+1.3
S39A				IAmb	IAmb	09 14 05.8	
	comp=Z,22nm,0.8s						
HHAR	Hobbs	20.72	97	P	P	09 14 00.6	+1.7
HHAR				IAmb	IAmb	09 14 06.7	
	comp=Z,14nm,0.8s						
EYMN	Ely	20.77	64	P	P	09 13 58.4	-0.9
	baz=264						
YKA	Yellowknife Ar	20.81	7	P	Pn	09 14 00.5	-1.4
	comp=Z,4.3nm,0.9s,baz=187,slow=11,SNR=65						
YKA				LR	LR	09 22 46.8	
	comp=Z,396nm,20.7s,baz=0.0,slow=38						
P40A	Paris	21.05	87		P	09 14 02.7	+0.4
R40A	Maddies Statio	21.24	91	P	P	09 14 05.7	+1.3
W39A	Magazine	21.29	100	P	P	09 14 05.0	0.0
	baz=296						
W39A	Magazine	21.29	100	P	P	09 14 07.1	+2.1
W39A				IAmb	IAmb	09 14 12.0	
	comp=Z,15nm,0.9s						
I40A	Norwalk	21.33	75	P	P	09 14 05.1	-0.3
Z38A	Mt. Pleasant	21.34	106	P	P	09 14 06.1	+0.5
Z38A				IAmb	IAmb	09 14 09.1	
	comp=Z,20nm,0.9s						
833A	Chaparral WMA,	21.37	123	P	P	09 14 06.5	+0.6
	baz=315						
U40A	Yellville	21.50	96	P	P	09 14 04.2	-3.0
	baz=293						
U40A	Yellville	21.50	96	P	P	09 14 07.9	+0.7
U40A				IAmb	IAmb	09 14 14.7	
	comp=Z,13nm,0.9s						
G40A	Rib Lake	21.55	71	P	P	09 14 07.4	-0.3
MGMO	Mountain Grove	21.63	94	P	P	09 14 09.3	+0.7
JFWS	Jewell Farm	21.70	77	P	P	09 14 08.6	-0.8
	baz=277						
JFWS	Jewell Farm	21.70	77	P	P	09 14 09.2	-0.2
JFWS				IAmb	IAmb	09 14 13.0	
	comp=Z,28nm,0.8s						
MIAR	Mount Ida	21.74	101	P	P	09 14 09.7	-0.1
	baz=298						
CCM	Cathedral Cave	22.08	91	P	P	09 14 13.6	+0.1
	baz=289						
CCM	Cathedral Cave	22.08	91	P	P	09 14 13.9	+0.4
CCM				IAmb	IAmb	09 14 19.2	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	22.22	97	P	P	09 14 16.1	+1.1
L42A	Oliver, Polo	22.27	80	P	P	09 14 16.7	+1.2
L42A				IAmb	IAmb	09 14 20.1	
	comp=Z,33nm,0.9s						
WHAR	Wooly Hollow	22.35	98	P	P	09 14 17.6	+1.2
WHAR				IAmb	IAmb	09 14 21.6	
	comp=Z,27nm,1.2s						
W41B	Gary Mavity, V	22.43	98	P	P	09 14 16.8	-0.5
	baz=296						
W41B	Gary Mavity, V	22.43	98	P	P	09 14 17.4	+0.2
W41B				IAmb	IAmb	09 14 22.5	
	comp=Z,28nm,1.3s						
T42A	Van Buren	22.55	93	P	P	09 14 18.6	+0.1
T42A				IAmb	IAmb	09 14 21.6	
	comp=Z,11nm,1.1s						
LCAR	Lake Charles	22.87	95	P	P	09 14 22.7	+0.8
LCAR				IAmb	IAmb	09 14 26.1	
	comp=Z,17nm,1.1s						
P43A	Skaggs, Pawnee	22.90	86	P	P	09 14 21.8	-0.3
P43A				IAmb	IAmb	09 14 33.4	
	comp=Z,19nm,0.8s						
PBMO	Poplar Bluff	23.14	93	P	P	09 14 25.1	+0.4
PBMO				IAmb	IAmb	09 14 28.9	
	comp=Z,9.5nm,0.9s						
FCC	Fort Churchill	23.23	35	P	P	09 14 24.7	-0.7
Q44A	Meyer Farm, Va	23.48	87	P	P	09 14 27.8	-0.3
O44A	Mansfield	23.55	84	P	P	09 14 28.1	-0.6
PARMO	Parma	23.68	93	P	P	09 14 29.8	-0.3
S44A	Carbondale	23.69	90	P	P	09 14 29.9	-0.3
SIUC	Southern Illin	23.71	90	P	P	09 14 30.0	-0.4
SIUC				IAmb	IAmb	09 14 34.1	
	comp=Z,21nm,0.8s						
T45A	Paducah	24.38	91	P	P	09 14 37.5	+0.9
SFIN	Lafayette	24.51	83	P	P	09 14 35.1	-2.7
	baz=284						
SFIN	Lafayette	24.51	83	P	P	09 14 37.0	-0.8
P46A	Rosedale	24.62	84	P	P	09 14 38.0	-0.8
W45A	Hickory Valley	24.71	96	P	P	09 14 40.4	+0.7
USIN	University of	24.78	89	P	P	09 14 39.9	-0.4
BCAR	Beaver Creek A	24.83	336	P	P	09 14 42.8	+2.3
WVT	Waverly	25.32	93	P	P	09 14 43.8	-1.4
	baz=293						
WVT	Waverly	25.32	93	P	P	09 14 44.5	-0.7
WVT				IAmb	IAmb	09 14 50.2	
	comp=Z,14nm,0.9s						
GLMI	Grayling	25.53	72	P	P	09 14 47.5	+0.5
J47A	Sunmer	25.59	75	P	P	09 14 49.2	+1.6
PLAL	Pickwick Lake	25.61	95	P	P	09 14 47.2	-0.5
E46A	Sault Ste Mari	25.63	68	P	P	09 14 48.0	+0.1
E46A				IAmb	IAmb	09 14 52.8	
	comp=Z,21nm,1.2s						
K27K	Chicken	25.64	337	P	P	09 14 48.3	+0.5
	baz=139						
WCI	Wyandotte Cave	25.72	87	P	P	09 14 47.2	-1.6
	baz=289						
WCI	Wyandotte Cave	25.72	87	P	P	09 14 47.6	-1.2
L48A	N Adams	26.11	78	P	P	09 14 53.6	+1.3
L48A				IAmb	IAmb	09 14 58.5	
	comp=Z,20nm,0.9s						
KDAK	Kodiak Island	26.13	319	LR	LR	09 23 33.1	
	comp=Z,413nm,19.7s,baz=139,slow=32						
SCRK	Sand Creek	26.17	336	P	P	09 14 53.0	+0.2
	baz=136						
EPYK	Eagle Plains	26.25	345	P	P	09 14 53.6	+0.3
	baz=150						
Z47A	Carrollton	26.41	99	P	P	09 14 54.6	-0.5
X48A	Hartselle	26.60	96	P	P	09 14 55.3	-1.5
X48A				IAmb	IAmb	09 14 59.5	
	comp=Z,13nm,0.9s						
LRAL	Lakeview Retre	27.28	98	P	P	09 15 01.1	-1.8
	baz=298						
LRAL	Lakeview Retre	27.28	98	P	P	09 15 01.1	-1.8
LRAL				IAmb	IAmb	09 15 06.5	
	comp=Z,14nm,0.9s						
HDA	Harding Lake	27.40	334	P	P	09 15 03.1	-0.6
	baz=132						
INK	Inuvik	27.45	349	P	P	09 15 05.5	+1.5
	comp=Z,3.9nm,0.9s,baz=146,slow=8.6,SNR=10						
INK				LR	LR	09 27 27.9	
	comp=Z,493nm,19.2s,baz=148,slow=39						
INK	Inuvik	27.45	349	P	P	09 15 05.6	+1.5
C36M	Paulatuk	27.57	357	P	P	09 15 06.0	+0.8
	baz=173						
ACSO	Alum Creek Sta	27.58	81	P	P	09 15 04.7	-0.9
	baz=286						
FPAL	Fort Paine	27.63	94	P	P	09 15 07.1	+1.0
FPAL				IAmb	IAmb	09 15 09.9	
	comp=Z,8.3nm,0.9s						
ILAR	Eielson Array	27.63	335	P	P	09 15 08.3	+2.6
	comp=Z,4.8nm,0.8s,baz=150,slow=8.1,SNR=53						
ILAR				LR	LR	09 25 43.2	
	comp=Z,266nm,20.2s,baz=147,slow=35						
ILAR	Eielson Array	27.63	335	P	P	09 15 07.2	+1.4
MCK	McKinley	27.63	332	P	P	09 15 06.5	+0.7
	baz=128						
CCB	Clear Creek Bu	27.84	334	P	P	09 15 09.5	+1.9
CCB				IAmb	IAmb	09 15 11.0	
	comp=Z,6.0nm,1.1s						
POKR	Poker Plat Res	28.04	335	P	P	09 15 09.4	0.0
	baz=132						
CPCT	Cooper Cave	28.06	92	P	P	09 15 09.4	-0.5
CPCT				IAmb	IAmb	09 15 13.2	
	comp=Z,18nm,1.0s						
MDM	Murphy Dome	28.18	334	P	P	09 15 12.9	+2.2
NEA2	Nenana	28.22	333	P	P	09 15 12.6	+1.6
	baz=129						
250A	Grady	28.34	100	P	P	09 15 13.5	+1.2
TKL	Tuckaleechee C	28.53	91	P	P	09 15 12.9	-1.2
	comp=Z,4.0nm,0.8s,baz=200,slow=2.0,SNR=6.0						
TKL				LR	LR	09 26 47.4	
	comp=Z,210nm,21.3s,baz=305,slow=37						
TKL	Tuckaleechee C	28.53	91	IAmb	IAmb	09 15 16.5	
	comp=Z,5.9nm,0.9s						
BPAW	Bear Paw Mtn.	28.58	332	P	P	09 15 16.6	+2.3
BPAW				IAmb	IAmb	09 15 18.4	
	comp=Z,7.0nm,1.0s						
MLY	Manley	29.05	333	P	P	09 15 19.6	+1.1
	baz=128						
Y52A	Lilburn	29.08	94	P	P	09 15 19.0	0.0
152A	Waverly Hall	29.14	97	P	P	09 15 18.7	-0.8
152A				IAmb	IAmb	09 15 23.0	
	comp=Z,14nm,0.8s						
SADO	Sadowa	29.40	71	LR	LR	09 26 21.1	
	comp=Z,295nm,18.4s,baz=305,slow=35						
GOGA	Godfrey	29.73	95	P	P	09 15 21.9	-2.8
	baz=297						
GOGA	Godfrey	29.73	95	P	P	09 15 24.1	-0.6
GOGA				IAmb	IAmb	09 15 27.9	
	comp=Z,12nm,0.8s						
IMAR	Indian Mountai	30.63	333	P	P	09 15 34.3	+1.9
SUMG	Summit	48.00	24	*i* P	P	09 17 57.7	+0.3
	comp=Z,19nm,0.9s						
SUMG	Summit	48.00	24	*i* P	P	09 17 57.8	+0.3
SUMG				IAmb	IAmb	09 17 59.1	
	comp=Z,19nm,0.9s						
DAG	Danmarks Havn	52.04	17	*i* P	P	09 18 27.2	-0.4
DAG	Danmarks Havn	52.04	17	*i* P	P	09 18 27.2	-0.4
BORG	Borgarnes	56.29	31	LR	LR	09 43 36.7	
	comp=Z,202nm,18.9s,baz=309,slow=36						
ARCES	ARCESS Array B	65.93	13	LR	LR	09 50 06.7	
	comp=Z,112nm,18.6s,baz=255,slow=37						
NB2	NORSAR Subarra	69.89	23	P	P	09 20 29.1	0.0
	comp=Z,1.4nm,0.8s,baz=321,slow=6.2						
NOA	NORSAR Array B	69.89	23	P	P	09 20 29.4	+0.3
	comp=Z,2.6nm,0.9s,baz=322,slow=6.2,SNR=8.1						
USRK	Ussuriysk Ar.	72.91	314	LR	LR	09 49 41.8	
	comp=Z,90nm,21.6s,baz=65,slow=33						
FINES	FINESS Array B	73.29	16	P	P	09 20 48.3	-1.2
	comp=Z,7.2nm,1.0s,baz=343,slow=1.5,SNR=6.3						
KLMR	Klimovskoe	76.16	10	*e*P	P	09 21 04.9	-1.3
KLMR				AMP		09 21 11.3	
	comp=Z,17nm,1.5s						
CLL	Collm	78.42	28	*e*P	P	09 21 19.0	0.0
BRG	Berggiesshubel	79.11	28	*e*P	P	09 21 23.2	+0.4
BRG				Amp		09 21 24.6	
	comp=Z,5.1nm,1.1s						
BRG				*i* x	x	09 21 27.1	
BRG				Amp		09 21 28.0	
	comp=Z,6.8nm,1.1s						
BRG	Berggiesshubel	79.11	28	*e*P	P	09 21 23.2	+0.4
BRG				Amp		09 21 24.6	
	comp=Z,5.1nm,1.1s						
BRG				*i* x	x	09 21 27.1	
BRG				Amp		09 21 28.0	
	comp=Z,6.8nm,1.1s						
KIRV	Kirov	79.43	6	LR	LR	10 00 25.5	
	comp=Z,117nm,18.2s,baz=0.9,slow=38						
ESDC	Sonseca Array	80.01	45	P	P	09 21 27.9	-0.1
	comp=Z,1.8nm,0.9s,baz=328,slow=5.7,SNR=5.0						
ESDC				LR	LR	09 53 23.7	
	comp=Z,75nm,18.3s,baz=280,slow=33						
ESDC	Sonseca Array	80.01	45	IAmb	IAmb	09 21 29.0	
	comp=Z,13nm,1.3s						
GERES	GERESS Array B	80.72	29	P	P	09 21 32.5	+0.7
	comp=Z,0.3nm,0.5s,baz=342,slow=6.2,SNR=3.7						
SONM	Songino Array	81.76	331	P	P	09 21 38.2	+0.9
	comp=Z,1.2nm,0.8s,baz=42,slow=4.6,SNR=4.5						
SONM				LR	LR	09 58 43.3	
	comp=Z,158nm,19.1s,baz=10,slow=36						
SONM	Songino Array	81.76	331	IAmb	IAmb	09 21 42.5	
	comp=Z,1.5nm,1.0s						
ARU	Arti	81.99	1	LR	LR	10 01 40.8	
	comp=Z,89nm,18.1s,baz=358,slow=38						
ZAA0	Zalesovo Array	82.20	346	P	P	09 21 39.9	+0.5
ZAA0				IAmb	IAmb	09 21 45.3	
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	82.20	346	P	P	09 21 39.8	+0.4
	comp=Z,2.0nm,0.7s,baz=35,slow=4.2,SNR=8.0						
ZALV				LR	LR	10 03 23.6	
	comp=Z,70nm,18.6s,baz=337,slow=39						
AKASG	Malin Array Be	83.82	19	P	P	09 21 47.9	+0.1
	comp=Z,2.7nm,0.7s,baz=337,slow=4.5,SNR=11						
AKASG				LR	LR	10 00 48.7	
	comp=Z,161nm,18.4s,baz=325,slow=37						
AKASG	Malin Array Be	83.82	19	IAmb	IAmb	09 21 52.7	
	comp=Z,1.4nm,1.1s						
BRVK	Borovoye	84.99	354	P	P	09 21 54.2	+0.5
BRVK				IAmb	IAmb	09 21 54.8	
	comp=Z,5.5nm,0.9s						
HHC	Hu-ho-hao-te	85.44	324	*e*P	P	09 21 55.8	-0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,190nm,7.0s						
HHC				LR	LR		
	comp=Z,140nm,18.9s						
HHC				LR	LR		
	comp=Z,220nm,18.6s						
KURK	Kurchatov	86.35	348	P	P	09 22 00.7	+0.3
KURK				IAmb	IAmb	09 22 01.3	
	comp=Z,3.6nm,0.8s						
BDFB	Brasilia	87.27	114	LR	LR	10 04 55.4	
	comp=Z,89nm,18.8s,baz=284,slow=38						
AKTO	Aktyubinsk	87.99	1	LR	LR	10 04 59.4	
	comp=Z,122nm,19.6s,baz=4.2,slow=38						
ABKAR	Akbulak array	89.19	0	P	P	09 22 14.8	+0.7
ABKAR	Akbulak array	89.19	0	P	P	09 22 14.5	+0.4
MK31	Makanchi Array	89.52	345	P	P	09 22 16.0	+0.2
MKAR	Makanchi Array	89.52	345	P	P	09 22 15.5	-0.3
	comp=Z,1.0nm,0.8s,baz=349,slow=4.9,SNR=10.0						
MKAR	Makanchi Array	89.52	345	P	P	09 22 15.8	0.0
MAKZ	Makanchi	89.56	345	P	P	09 22 16.1	+0.1
MAKZ				IAmb	IAmb	09 22 16.6	
	comp=Z,4.9nm,1.0s						
WMQ	Urumqi	91.16	341	*e*P	P	09 22 23.3	-0.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.1s						
XAN	Xi'an	92.22	321	P	P	09 22 29.6	+1.0
XAN				pP	pP	09 22 35.5	+4.2
XAN				pmax	pmax		
	comp=Z,9.0nm,2.2s						
LZH	Lanzhou	92.74	326	⇓P	P	09 22 27.9	-3.2
LZH				pP	PcP	09 22 33.1	+1.3
LZH				sP	pP	09 22 35.6	+1.8
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
KKAR	Karatay Array	94.85	353	P	P	09 22 40.7	+0.2
BRTR	Keskin Array B	95.18	20	LR	LR	10 05 31.8	
	comp=Z,29nm,19.8s,baz=334,slow=35						
WRA	Warramunga Arr	114.77	265	PKP	PKPdf	09 27 58.3	-1.1
	comp=Z,0.6nm,0.8s,baz=60,slow=2.2,SNR=2.3						
ASAR	Alice Springs	117.33	262	PKP	PKPdf	09 28 03.3	-1.0
	comp=Z,0.5nm,0.9s,baz=60,slow=3.7,SNR=2.9						
BOSA	Boshof	148.67	76	PKPbc	PKPdf	09 29 03.8	+1.6
	comp=Z,3.9nm,1.1s,baz=222,slow=8.2,SNR=3.1						

IDC ***22*** *09:12:00.1±0.8, 19°.54S×174°.40W, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.1/30, mbtmp4.1/9, ML4.2/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/33, Error ellipse: s-maj=41.2km s-min=17.0km az=129.0*

NEIC ***22*** *09:12:01.8±2.2, 19°.6S±0°.1×174°.5W±0°.2, h10^{km}±1^{km}, mb4.9/37, Error ellipse: s-maj=28.8km s-min=18.1km az=133.0*

NOU ***22*** *09:12:06.2, 19°.71S×173°.45W, h85^{km}, mb4.5, Tonga Islands*

ISC 22 09:12:00.8±0.7**, 19°.8S**±0°.1×**174°.0W**±0°.2**, h10^{km}, n90, σ1^{s}68**/71**, mb4.9**/26**, MS3.7**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIUE	Niue	3.94	81	P	Pn	09 12 56.0	-5.4
AFI	Afiamalu	6.21	21	Pn	Pn	09 13 30.6	-2.1
	6.3nm,0.3s,baz=124,slow=3.2,SNR=12						
AFI				Sn	Sn	09 14 32.0	-12
	26nm,0.3s,baz=214,slow=23,SNR=8.1						
AFI	Afiamalu	6.21	21	Pn	Pn	09 13 32.3	-0.4
AFI	Afiamalu	6.21	21	P	Pn	09 13 32.2	-0.5
MSVF	Nonsavu	7.76	284	LR	LR	09 16 29.0	
	comp=Z,92nm,18.9s,baz=87,slow=36						
MSVF	Nonsavu	7.76	284		Pb	09 14 05.1	-11
MSVF	Nonsavu	7.76	284	P	Pb	09 14 04.6	-11
RAR	Rarotonga	13.45	99	P	Pn	09 15 07.5	-4.3
YATNC	Mamie plateau,	17.96	259	P	P	09 16 16.5	+5.1
DZM	Mont Dzumac	18.38	259	*e*LR	LR	09 20 37.9	
	comp=Z,204nm,26.4s						
DZM	Mont Dzumac	18.38	259	P	P	09 16 17.9	+1.8
	0.5nm,0.3s,baz=192,slow=16,SNR=8.9						
DZM				LR	LR	09 22 23.7	
	comp=Z,133nm,18.9s,baz=9.0,slow=34						
DZM	Mont Dzumac	18.38	259	P	P	09 16 16.3	+0.3
DZM	Mont Dzumac	18.38	259	P	P	09 16 19.2	+3.1
OUZ	Omahuta	18.88	213	P	Pn	09 16 22.3	+0.4
MXZ	Matakaoa Point	18.95	199	P	Pn	09 16 23.7	+1.0
WMGZ	Waiomatatini S	19.16	198	P	P	09 16 24.0	-0.3
HAZ	Te Kaha	19.29	200	P	P	09 16 22.6	-3.2
PUZ	Puketiti	19.43	199	P	Pn	09 16 28.8	+0.2
RUGZ	Raukumara Rang	19.52	200	P	P	09 16 22.6	-5.9
TKGZ	Te Karaka	19.90	199	P	Pn	09 16 33.9	-0.2
MWZ	Matawai	19.90	200	P	Pn	09 16 34.2	0.0
URZ	Urewera	19.97	201	P	P	09 16 33.3	+0.1
	12nm,0.5s,baz=293,slow=1.2,SNR=20						
URZ	Urewera	19.97	201	P	P	09 16 32.7	-0.5
URZ	Urewera	19.97	201	P	P	09 16 32.5	-0.8
MUGZ	Murupara	20.28	201	P	P	09 16 36.8	+0.1
SNGZ	Shannon Statio	20.37	200	P	P	09 16 37.9	+0.2
TLZ	Tolley Road	20.60	204	P	Pn	09 16 42.3	-0.1
BKZ	Black Stump Fm	21.00	201	P	P	09 16 42.6	-1.9
HIZ	Hauiti	21.02	205	P	P	09 16 46.5	+1.8
HIZ				IAmb	IAmb	09 17 10.2	
	comp=Z,111nm,1.5s						
TBI	Tubuai	23.13	103	*e*T	T	09 40 53.9	
	comp=Z,14nm,0.3s						
PAE	Paea	23.26	89	*e*T	T	09 40 56.3	
	comp=Z,2.8nm,0.3s						
PPT2	Papeete2	23.27	89	*e*LR	LR	09 22 26.7	
	comp=Z,129nm,24.5s						
PPT2	Papeete2	23.27	89	*e*T	T	09 40 58.7	
	comp=Z,3.7nm,0.3s						
MSWZ	Moikau Station	23.43	201	P	P	09 17 08.7	-1.5
SNZO	South Karori	23.52	202	P	P	09 17 09.3	-1.8
SNZO				IAmb	IAmb	09 17 27.9	
	comp=Z,44nm,1.0s						
BHW	Baring Head	23.55	201	P	P	09 17 09.8	-1.5
PLWZ	Palliser	23.57	200	P	P	09 17 10.3	-1.3
TUWZ	Tuamarina	23.90	203	P	P	09 17 12.8	-1.9
NNZ	Nelson	23.93	204	P	P	09 17 12.6	-2.4
NNZ				IAmb	IAmb	09 17 22.5	
	comp=Z,50nm,1.4s						
QRZ	Quartz Range	23.93	206	P	P	09 17 14.7	-0.4
BSWZ	Blackbirch Sta	24.17	203	P	P	09 17 16.6	-0.7
THZ	Tophouse	24.57	204	P	P	09 17 20.9	-0.2
KHZ	Kahutara	24.91	202	P	P	09 17 24.7	+0.7
KHZ				IAmb	IAmb	09 17 33.6	
	comp=Z,23nm,0.7s						
LTZ	Lake Taylor	25.69	204	P	P	09 17 32.9	+1.7
OXZ	Oxford	26.25	203	P	P	09 17 36.9	+0.8
MQZ	McQueen’s Vall	26.35	202	P	P	09 17 39.1	+2.1
MQZ				IAmb	IAmb	09 17 46.2	
	comp=Z,29nm,1.0s						
RPZ	Rata Peaks	26.95	204	P	P	09 17 44.6	+2.1
	comp=Z,14nm,0.4s,baz=46,slow=3.6,SNR=22						
RPZ	Rata Peaks	26.95	204	P	P	09 17 44.8	+2.3
FOZ	Fox Glacier	27.30	206	P	P	09 17 47.3	+1.8
ODZ	Otahua Downs	28.23	203	P	P	09 17 56.7	+2.8
ODZ				IAmb	IAmb	09 17 59.5	
	comp=Z,40nm,1.5s						
WKZ	Wanaka	28.69	206	P	P	09 17 59.6	+1.5
WKZ				IAmb	IAmb	09 18 06.1	
	comp=Z,37nm,1.3s						
MLZ	Mavora Lakes	29.50	206	P	P	09 18 07.6	+2.4
MLZ				IAmb	IAmb	09 18 13.1	
	comp=Z,10nm,0.6s						
DCZ	Deep Cove	29.98	207	P	P	09 18 11.6	+2.1
DCZ				IAmb	IAmb	09 18 13.6	
	comp=Z,24nm,1.4s						

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WHZ    Wether Hill Ro    29.99 206  P       P        09 18 11.4 +1.9
WHZ                                 IAmb    IAmb     09 18 13.9
       comp=Z,11nm,0.6s
CTAO   Charters Tower    37.27 263  P       P        09 19 11.9 -1.3
STKA   Stephens Creek    41.46 244  P       P        09 19 46.5 -1.6
       comp=Z,1.5nm,0.4s,baz=354,slow=22,SNR=5.4
STKA                                LR      LR       09 35 06.4
       comp=Z,104nm,18.4s,baz=32,slow=34
WR0    Warramunga Arr    48.20 261  P       P        09 20 40.7 -1.2
WR0                                 IAmb    IAmb     09 20 57.1
       comp=Z,16nm,1.5s
ASAR   Alice Springs     48.31 256  P       P        09 20 41.0 -1.7
       comp=Z,1.4nm,0.5s,baz=95,slow=8.5,SNR=32
ASAR   Alice Springs     48.31 256  P       P        09 20 41.6 -1.2
WB0    Warramunga Arr    48.37 261  P       P        09 20 41.9 -1.4
WB0                                 IAmb    IAmb     09 20 49.0
       comp=Z,8.0nm,1.1s
WB2    Warramunga Arr    48.38 261  P       P        09 20 41.4 -1.9
WRAB   Tennant Creek     48.38 261  P       P        09 20 41.6 -1.7
WRA    Warramunga Arr    48.39 261  P       P        09 20 41.5 -2.0
       comp=Z,1.0nm,0.4s,baz=97,slow=7.7,SNR=36
WRA    Warramunga Arr    48.39 261  P       P        09 20 41.9 -1.5
NVAR   Mina Array Bea    77.97  42  P       P        09 24 00.9 +1.2
       comp=Z,0.3nm,0.6s,baz=231,slow=10,SNR=2.4
TLIG   Tlapa             82.84  69  P       P        09 24 31.7 +5.5
TLIG                                IAmb    IAmb     09 24 38.3
       comp=Z,8.6nm,1.3s
NEW    Newport           84.64  34  LR      LR       09 55 33.2
       comp=Z,98nm,18.9s,baz=336,slow=31
RND    Reindeer          85.21  11  P       P        09 24 38.2 +1.0
RND                                 IAmb    IAmb     09 24 39.6
       comp=Z,7.6nm,0.9s
PDAR   Pinedale Array    85.91  42  P       P        09 24 42.0 +0.7
       comp=Z,0.2nm,0.5s,baz=237,slow=9.2,SNR=2.5
PDAR   Pinedale Array    85.91  42  P       P        09 24 41.8 +0.4
WRH    Wood River Hil    86.33  11  IAmb    IAmb     09 24 44.8
       comp=Z,10nm,1.0s
HDA    Harding Lake      86.48  11  IAmb    IAmb     09 24 44.4
       comp=Z,4.9nm,0.7s
TCOL   CIGO, UAF Yank    86.74  11  IAmb    IAmb     09 24 46.1
       comp=Z,11nm,1.0s
COLA   College           86.74  11  P       P        09 24 45.5 +1.0
MDM    Murphy Dome       86.75  11  IAmb    IAmb     09 24 46.7
       comp=Z,11nm,1.3s
ILAR   Eielson Array     86.82  11  P       P        09 24 45.4 +0.3
       comp=Z,0.8nm,0.6s,baz=221,slow=5.2,SNR=11
ILAR   Eielson Array     86.82  11  P       P        09 24 45.2 +0.2
IMAR   Indian Mountai    86.85   8  P       P        09 24 45.3 +0.1
YKA    Yellowknife Ar    94.32  24  P       P        09 25 20.4 +0.3
       comp=Z,0.7nm,0.9s,baz=227,slow=4.3,SNR=9.4
ARCES  ARCESS Array B   128.81 351  PKP     PKiKP    09 31 08.4 -0.2
       comp=Z,1.5nm,0.5s,baz=17,slow=1.5,SNR=22
ARCES  ARCESS Array B   128.81 351          PKPdf    09 31 07.9 -0.1
FINES  FINESS Array B   136.03 346  PKP     PKiKP    09 31 23.4  0.0
       comp=Z,1.3nm,0.5s,baz=0.0,slow=1.9,SNR=9.1
FINES  FINESS Array B   136.03 346          PKPdf    09 31 21.5 -0.2
HFS    Hagfors          139.29 354  PKP     PKPdf    09 31 28.4 +0.5
       comp=Z,0.6nm,0.5s,baz=72,slow=11,SNR=1.5
EKA    Eskdalemuir Ar   143.82   9  PKP     PKPbc    09 31 33.7  0.0
       comp=Z,2.4nm,0.9s,baz=344,slow=2.8,SNR=3.9
AKASG  Malin Array Be   144.06 335  PKP     PKPbc    09 31 34.3 -0.2
       comp=Z,0.9nm,0.3s,baz=37,slow=3.9,SNR=5.9
BRTR   Keskin Array B   149.00 316  PKPbc   PKPbc    09 31 49.0 -0.5
       comp=Z,1.2nm,0.7s,baz=129,slow=3.7,SNR=7.7
BRTR   Keskin Array B   149.00 316          PKPbc    09 31 49.5 -0.1
MLR    Muntele Rosu     149.49 332  PKPbc   PKPbc    09 31 50.9 +0.4
       comp=Z,1.8nm,0.7s,baz=358,slow=3.4,SNR=3.5
MMAI   Mount Meron Ar   150.62 303  PKPbc   PKiKP    09 31 54.6 +0.2
       comp=Z,1.8nm,0.5s,baz=81,slow=5.2,SNR=6.2
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*DNK **22** 09:30:10.5±0.3, 51°.53N×17°.58E, h40^{km}±5^{km}, ML2.5*

*VIE **22** 09:30:10.7, 51°.46N×16°.35E, h0^{km}, mb3.2/1, ML3.1/2 62 km NW of Wroclaw Suspected Mining induced.*

*PRU **22** 09:30:11.5±0.0, 51°.45N×16°.19E, h0^{km}*

*IDC **22** 09:30:12.0±0.7, 51°.45N×16°.04E, h0^{km}, mb3.2/1, mb1 3.5/8, mb1mx3.2/46, mbtmp3.3/8, ML3.0/7, Error ellipse: s-maj=15.2km s-min=6.8km az=105.0*

*BGR **22** 09:30:12.5±0.6, 51°.39N×16°.20E, h1^{km}, ML3.0/10, Error ellipse: s-maj=6.7km s-min=2.2km az=16.0*

ISC 22 09:30:09.5±0.6, **51°.53N**±0°.03×**16°.22E**±0°.02, **h0^{km}, n60,** σ**1^{s}.19**/107, **Poland**

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Code   Station Name        Δ°  AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
KSP    Ksiaz              0.69 176  i Pg    Pg       09 30 23.1 +0.5
KSP                                 eSg     Sg       09 30 30.8 -0.8
KSP    Ksiaz              0.69 176  ePg     Pg       09 30 23.2 +0.5
KSP                                 eSg     Sg       09 30 30.5 -1.0
CHVC   Chvalec            0.95 186  ePG     Pg       09 30 28.1 +0.5
CHVC                                eSG     Sg       09 30 39.4 -0.4
       comp=Z,101nm,0.5s
OSTC   Ostas              0.97 180  ePG     Pg       09 30 28.6 +0.5
OSTC                                eSG     Sg       09 30 40.7  0.0
       comp=Z,156nm,0.9s
UPC    Upice              1.03 187  ePG     Pg       09 30 29.4 +0.2
UPC                                 eSG     Sg       09 30 42.0 -0.5
       comp=Z,272nm,0.4s
DPC    Dobruska-Polom     1.18 177  ePG     Pg       09 30 32.0 -0.1
DPC                                 eSG     Sg       09 30 46.2 -1.1
       comp=Z,114nm,0.6s
DPC    Dobruska-Polom     1.18 177  ePg     Pg       09 30 31.9 -0.2
DPC                                 eSg     Sg       09 30 46.3 -1.1
PVCC   Panska Ves         1.44 227  ePG     Pg       09 30 37.1 -0.1
PVCC                                eSG     Sn       09 30 56.5  0.0
       comp=Z,339nm,0.4s
KRLC   Kraliky            1.50 166  ePG     Pn       09 30 37.7  0.0
KRLC                                eSG     Sg       09 30 57.3 -0.3
       comp=Z,71nm,0.6s
BRG    Berggiesshubel     1.57 246   Pn     Pn       09 30 38.7  0.0
BRG                                  Pg     Pg       09 30 40.5 +0.9
BRG                                  Sg     Sg       09 31 01.0 +1.0
BRG                                  Amp             09 31 01.8
       comp=Z,172nm,0.5s
BRG    Berggiesshubel     1.57 246   Pn     Pn       09 30 38.7  0.0
BRG                                  Pg     Pg       09 30 40.5 +0.9
BRG                                  Sg     Sg       09 31 01.0 +1.0
BRG                                  Amp             09 31 01.8
       comp=Z,172nm,0.5s
BRG    Berggiesshubel     1.57 246  eSg     Sg       09 31 00.8 +0.8
PRA    Prague             1.85 219  ePG     Pb       09 30 43.3 -0.8
PRA                                 eSG     Sb       09 31 07.8 +0.1
       comp=Z,52nm,1.0s
PRU    Pruhonice          1.87 215  ePG     Pb       09 30 44.3 -0.3
PRU                                 eSG     Sb       09 31 09.1 +0.6
       comp=Z,57nm,0.5s
FBE    Freiberg           1.90 252  ePg     Pg       09 30 46.8 +0.9
FBE                                 eSg     Sg       09 31 11.5 +1.0
MORC   Moravsky Berou     1.94 154  ePN     Pn       09 30 43.7 -0.1
MORC                                eSG     Sn       09 31 07.9 -1.1
MORC   Moravsky Berou     1.94 154  ePn     Pn       09 30 43.8  0.0
CLL    Collm              2.02 265  ePn     Pn       09 30 45.0 +0.1
CLL                                 ePg     Pg       09 30 48.0 -0.3
CLL                                 e                09 30 52.0
CLL                                 e                09 31 04.0
CLL                                 eSg     Sg       09 31 16.0 +1.5
       comp=Z,31nm,0.3s
OKC    Ostrava-Krasne     2.09 143  ePG     Pb       09 30 48.7 +0.4
OKC                                 eSG     Sb       09 31 15.1 +0.4
       comp=Z,82nm,0.6s
OKC    Ostrava-Krasne     2.09 143  ePg     Pg       09 30 49.4 -0.1
OKC                                 eSg     Sb       09 31 14.5 -0.2
VRAC   Vranov             2.23 174   Pn     Pn       09 30 48.6 +0.9
       comp=Z,4.9nm,0.3s,baz=341,slow=14,SNR=15
VRAC                                 Lg     Lg       09 31 19.4
       comp=Z,6.0nm,0.3s,baz=102,slow=14,SNR=10
VRAC   Vranov             2.23 174  ePN     Pn       09 30 48.4 +0.6
VRAC                                eSG     Sb       09 31 19.0 +0.1
TREC   Trest              2.28 192  ePG     Pb       09 30 51.8 +0.2
TREC                                eSG     Sb       09 31 20.7 +0.4
       comp=Z,34nm,0.4s
PBCC   Pribram            2.33 218  ePG     Pb       09 30 53.1 +0.8
PBCC                                eSG     Sg       09 31 23.8 -0.3
KRUC   Moravsky           2.47 177  ePN     Pn       09 30 52.0 +1.0
KRUC                                eSG     Sb       09 31 26.4 +0.7
OJC    Ojcow              2.62 119  ePn     Pn       09 30 50.6 -2.5
OJC                                 ePg     Pg       09 30 59.4 -0.3
OJC                                 eSg     Sg       09 31 34.3 +0.7
OJC    Ojcow              2.62 119  eSg     Sg       09 31 34.3 +0.7
TANN   Tannenbergstha     2.62 246  ePn     Pn       09 30 54.2 +1.0
TANN                                eSg     Sg       09 31 32.8 -0.9
NKC    Novy Kostel        2.72 243  ePN     Pn       09 30 55.4 +1.0
NKC                                 ePG     Pg       09 31 00.9 -0.6
NKC                                 eSG     Sg       09 31 38.0 +1.3
       comp=Z,66nm,0.5s
JAVC   Velka Javorina     2.83 160  ePN     Pn       09 30 57.4 +1.4
KHC    Kasperske Hory     2.94 216  ePN     Pn       09 30 58.4 +1.0
KHC                                 ePG     Pb       09 31 02.7  0.0
KHC                                 eSG     Sg       09 31 43.1 -0.7
       comp=Z,26nm,0.6s
MOX    Moxa               3.03 255  ePg     Pg       09 31 08.2 +0.5
ROTZ   Rotzenmuhle        3.10 237  ePn     Pn       09 31 00.8 +1.1
ROTZ                                eSg     Sg       09 31 48.2 -0.9
SMOL   Smolenice          3.12 165  ePG     Pg       09 31 09.7 +0.5
SMOL                                eSG     Sg       09 31 50.1 +0.5
SMOL                                eLG     Lg       09 31 54.9
GEC2   GERESS Array S     3.13 212  ePn     Pn       09 31 01.4 +1.2
GERES  GERESS Array B     3.13 212   Pn     Pn       09 31 01.2 +1.0
       comp=Z,1.6nm,0.3s,baz=35,slow=13,SNR=31
GERES                                Pg     Pb       09 31 07.5 +1.3
       comp=Z,14nm,0.3s,baz=29,slow=17,SNR=56
GERES                                Lg     Lg       09 31 46.6
       comp=Z,11nm,0.3s,baz=32,slow=31,SNR=12
LANS   Liptovska Anna     3.16 138  ePG     Pg       09 31 10.5 +0.4
LANS                                eSG     Sg       09 31 51.4 +0.4
LANS                                eLG     Lg       09 32 06.6
WET    Wettzell           3.21 223  ePn     Pn       09 31 01.7 +0.6
MODS   Modra-Piesok       3.23 167  ePG     Pg       09 31 10.1 -1.3
MODS                                eSG     Sg       09 31 52.0 -1.2
MODS                                eLG     Lg       09 31 57.2
NIE    Niedzica           3.35 127  eP      Pg       09 31 13.2 -0.6
NIE                                 eS      Sg       09 31 57.3 +0.1
ZST    Bratislava         3.38 170  eSG     Sg       09 31 56.8 -1.3
ZST                                 eLG     Lg       09 32 01.0
VYHS   Vyhne              3.47 150  ePG     Pg       09 31 16.4 +0.3
VYHS                                eSG     Sg       09 31 59.3 -1.8
CONA   Conrad Observa     3.61 184  i Pn    Pn       09 31 07.9 +1.1
       comp=Z,3.3nm,0.5s,SNR=4.4
CONA                                i Pg    Pb       09 31 16.3 +2.1
       comp=Z,5.0nm,0.3s
CONA                                i Sg    Sg       09 32 03.8 -1.6
       comp=Z,27nm,0.4s
GRF    Grafenberg Arr     3.67 242  ePn     Pn       09 31 08.9 +1.3
BSD    Bornholm Skovb     3.68 348  eS      Sn       09 31 51.0 -0.5
BSD    Bornholm Skovb     3.68 348  e       Pn       09 31 07.2 -0.4
       baz=155,slow=14
BSD                                 i P     Pn       09 31 08.6 +1.0
BSD                                 eS      Sn       09 31 51.1 -0.5
BSD                                  IAML            09 31 53.3
       comp=Z,4.7nm,0.3s
BSD    Bornholm Skovb     3.68 348  i P     Pn       09 31 08.5 +1.0
MOA    Molln              3.89 200  i Pn    Pn       09 31 11.6 +1.0
       comp=Z,3.4nm,0.3s,SNR=9.4
MOA                                 eSg     Sg       09 32 15.1 +0.6
       comp=Z,23nm,0.5s
CRVS   Cervenica-Dubn     4.27 126  ePG     Pg       09 31 35.5 +4.2
ARSA   Arzberg            4.30 186  i Pn    Pn       09 31 19.7 +3.5
ARSA                                eSg     Sg       09 32 27.9 +0.2
       comp=Z,12nm,0.5s
KOLS   Kolonicke sedl     4.67 121  ePN     Pn       09 31 22.2 +0.9
KOLS                                ePG     Pg       09 31 42.7 +3.7
KBA    Koelnbreinsper     4.83 204  i Pn    Pn       09 31 24.9 +1.2
       comp=Z,3.2nm,0.4s,SNR=5.5
KBA                                 eSg     Sg       09 32 42.6 -2.1
       comp=Z,11nm,0.6s
DAVOX  Davos/Dischmat     6.31 224   Lg     Lg       09 33 28.2
       comp=Z,0.6nm,0.3s,baz=184,slow=20,SNR=2.8
AKASG  Malin Array Be     8.23  91   Pn     Pn       09 32 11.2 +1.2
       comp=Z,1.0nm,0.3s,baz=281,slow=12,SNR=3.6
HFS    Hagfors            8.74 352   Pn     Pn       09 32 18.0 +0.9
       comp=Z,0.2nm,0.3s,baz=168,slow=15,SNR=4.2
NOA    NORSAR Array B     9.93 346   Pn     Pn       09 32 33.4 +0.1
       comp=Z,0.0nm,0.3s,baz=158,slow=12,SNR=2.4
FINES  FINESS Array B    11.32  25   Pn     Pn       09 32 52.1 -0.2
       comp=Z,0.3nm,0.3s,baz=202,slow=11,SNR=6.5
FINES                                Sn     Sn       09 34 55.3 -4.1
       comp=Z,0.3nm,0.3s,baz=217,slow=18,SNR=5.2
EKA    Eskdalemuir Ar    12.16 296   Pn     Pn       09 33 01.7 -2.1
       baz=98,slow=14,SNR=1.8
ARCES  ARCESS Array B    18.59  10   Pn     P        09 34 25.8 -2.1
       baz=195,slow=12,SNR=15
YKA    Yellowknife Ar    59.87 336   P      P        09 40 18.5 +2.2
       comp=Z,0.2nm,0.5s,baz=31,slow=7.5,SNR=6.7
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*BEO **22** 09:30:18.0±0.3, 43°.32N×19°.42E, h0^{km}, ML1.4/8*

RHSSO 22 09:30:17.4±0.3, **43°.34N×19°.43E, h4^{km}**±3^{km}, **ML1.6**/7, **Northwestern Balkan Peninsula**

```
Code   Station Name        Δ°  AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
RUDO   Rudo               0.28 352  ePg     Pg       09 30 23.1 +0.2
RUDO                                eSg     Sg       09 30 26.7  0.0
UPM    Unac-Piva          0.40 251  ePg     Pg       09 30 24.2 -1.0
UPM                                 eSg     Sg       09 30 30.8 +0.3
SJES   Sjenica            0.41 101  ePg     Pg       09 30 25.9 +0.6
SJES                                eSg     Sg       09 30 29.9 -0.7
SJES   Sjenica            0.41 101  ePg     Pg       09 30 24.5 -0.8
SJES                                eSg     Sg       09 30 31.5 +0.9
BBLS   Lazi&#263;i        0.53 358  ePg     Pg       09 30 26.6 -1.0
BBLS                                eSg     Sg       09 30 35.1 +0.6
BBLS   Lazi&#263;i        0.53 358  ePg     Pg       09 30 27.2 -0.4
BBLS                                eSg     Sg       09 30 35.3 +0.8
IVAS   Ivanjica           0.58  65  ePg     Pg       09 30 28.0 -0.6
IVAS                                eSg     Sg       09 30 37.1 +1.0
HAPS   Han Pijesak,Bl     0.82 335  ePg     Pg       09 30 32.5 -0.7
HAPS                                eSg     Sb       09 30 45.1 -0.8
HAPS   Han Pijesak,Bl     0.82 335  ePg     Pg       09 30 32.2 -1.0
HAPS                                eSg     Sg       09 30 43.8 -0.1
DIVS   Divibare           0.86  28  ePg     Pg       09 30 33.8 -0.2
DIVS                                eSg     Sb       09 30 47.0  0.0
DIVS   Divibare           0.86  28  ePg     Pg       09 30 32.8 -1.2
DIVS                                eSg     Sg       09 30 44.7 -0.5
PDG    Podgorica          0.92 188  ePg     Pg       09 30 35.2 +0.3
PDG                                 eSg     Sg       09 30 46.9 +0.1
TREB   Trebinje           1.00 232  eSg     Sg       09 30 36.0  -14
TREB   Trebinje           1.00 232  ePg     Pn       09 30 49.0  +11
TREB   Trebinje           1.00 232  ePg     Pg       09 30 35.9 -0.7
TREB                                eSg     Sg       09 30 50.0 +0.4
GRUS   Gruza              1.09  59  ePg     Pg       09 30 37.8 -0.4
GRUS                                eSg     Sg       09 30 52.6 +0.3
TRUS   Trudelj            1.14  38  ePg     Pg       09 30 38.0 -1.2
TRUS                                eSg     Sn       09 30 55.5 -0.6
DRME   Dracevica, Mon     1.16 189  ePg     Pg       09 30 38.4 -1.3
DRME                                eSg     Sg       09 30 54.2 -0.6
```

ROM 22 09:33:28.5±0.1, **40°.152N**±0°.004×**15°.962E**±0°.005, **h11^{km}, ML1.3**/2, **Error ellipse: s-maj=0.4km s-min=0.3km az=323.0, Southern Italy**

```
Code   Station Name        Δ°  AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
SIRI   Monte Sirino -     0.08 293  P       Pg       09 33 31.2 +0.1
SIRI                                S       Sg       09 33 33.2 +0.3
SCHR   S. Chirico Rap     0.10  61  P       Pg       09 33 31.6 +0.3
SCHR                                S       Sg       09 33 33.7 +0.4
AG11   Viggiano (PZ)      0.18 358  P       Pb       09 33 33.4 -0.5
AG11                                S       Sg       09 33 36.6 +1.3
CUC    Castrocucco        0.19 215  P       Pb       09 33 33.4 -0.7
CUC                                 S       Sg       09 33 37.0 +1.5
MTSN   Montesano sull     0.20 305  P       Pg       09 33 33.3 +0.5
MTSN                                S       Sg       09 33 37.2 +1.4
MTSN                                AML     AML
       comp=E,95μm,1.6s
MTSN                                AML     AML
       comp=N,154μm,0.3s
MCEL   Monticello         0.21 325  P       Pg       09 33 33.6 +0.6
MCEL                                S       Sg       09 33 37.3 +1.2
MCEL                                AML     AML
       comp=N,91μm,1.6s
MCEL                                AML     AML
       comp=E,124μm,0.3s
MGR    Morigerati         0.31 268  P       Pg       09 33 35.2 +0.4
MGR                                 S       Sb       09 33 40.3 -0.9
VULT   Monte Vulture      0.84 342  P       Pg       09 33 43.3 -1.5
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*ANF **22** 09:35:48.8±1.1, 41°.90N×119°.67W, h3^{km}±10^{km}, ML2.7/7, Error ellipse: s-maj=6.9km s-min=3.9km az=83.0*

*REN **22** 09:35:49.1±1.7, 41°.89N±0°.03×119°.64W±0°.03, h7^{km}±6^{km}, ML2.6/5, ML2.8/16(SEA), ML2.5/42(NEIC), Error ellipse: s-maj=4.3km s-min=2.9km az=159.0*

*SEA **22** 09:35:49.6±2.6, 41°.83N±0°.03×119°.62W±0°.03, h0^{km}±7^{km}, Error ellipse: s-maj=4.9km s-min=2.6km az=167.0*

*NEIC **22** 09:35:49.9±1.4, 41°.93N±0°.04×119°.67W±0°.02, h12^{km}±6^{km}, Error ellipse: s-maj=6.2km s-min=1.1km az=160.0*

ISC 22 09:35:49.9±1.3, **41°.91N**±0°.04×**119°.70W**±0°.03, **h7^{km}**±11^{km}, **n39,** σ**1^{s}.09**/45, **Nevada**

```
Code   Station Name        Δ°  AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
MOD    Modoc Plateau      0.45 269  Pg      Pg       09 35 59.0 +0.2
MOD                                 IAML             09 36 12.6
       comp=E,381nm,0.5s
MOD                                 IAML             09 36 12.7
       comp=N,294nm,0.3s
MOD    Modoc Plateau      0.45 269          Sg       09 36 06.3 +1.6
LKVW   Lakeview           0.58 302          Pg       09 36 01.3 +0.1
WVOR   Wild Horse Val     0.94  56          Pg       09 36 06.9 -1.1
WVOR                                IAML             09 36 23.0
       comp=N,211nm,0.7s
WVOR                                IAML             09 36 23.9
       comp=N,119nm,0.8s
WVOR   Wild Horse Val     0.94  56          Sb       09 36 19.8 -1.7
K05A   Summer Lake        1.20 313          Pb       09 36 12.8 -0.4
K05A                                        Sn       09 36 30.5 +0.4
K05A   Summer Lake        1.20 313  IAML             09 36 33.4
       comp=E,74nm,0.9s
K05A                                IAML             09 36 34.0
       comp=N,127nm,1.0s
LASM   Arnica Sink        1.44 258          Pn       09 36 16.0 -0.7
HOG    Hogback Mounta     1.53 283          Pn       09 36 17.7 -0.2
M04C   Macdoel            1.61 266  P       Pn       09 36 18.2 -0.6
       baz=86,SNR=38
M04C                                S       Sb       09 36 40.7 +0.2
       baz=86
M04C   Macdoel            1.61 266          Pn       09 36 18.2 -0.6
LBCM   Butte Creek Ri     1.65 230          Pn       09 36 18.7 -0.7
K04D   Chiloquin, OR      1.68 296  P       Pn       09 36 19.5 -0.4
       baz=114,SNR=15
K04D                                Sb      Sg       09 36 44.1 +0.1
       baz=114
J05D   Fort Rock, OR      1.78 321  Pb      Pb       09 36 22.9 -0.1
       baz=139,SNR=34
J05D                                Sb      Sg       09 36 47.8 +0.6
       baz=139
J05D   Fort Rock, OR      1.78 321          Pb       09 36 22.7 -0.3
LHEM   Herd Peak          1.91 262          Pb       09 36 24.6 -0.6
L04D   Klamath Falls      1.97 280  P       Pn       09 36 23.1 -0.7
       baz=99,SNR=15
L04D                                Sb      Sg       09 36 52.5 -0.6
       baz=99
L04D   Klamath Falls      1.97 280          Pn       09 36 23.4 -0.4
PINE   Pine Mountain      2.09 334  Pn      Pn       09 36 23.9 -1.6
PINE                                IAML             09 36 43.4
       comp=N,24nm,5.0s
PINE                                IAML             09 36 59.2
       comp=E,34nm,0.6s
BEKR   Beckworth          2.11 194  Pn      Pn       09 36 23.9 -1.8
BEKR                                IAML             09 36 57.2
       comp=E,27nm,0.5s
BEKR                                IAML             09 36 59.5
       comp=N,19nm,0.5s
I07A   Izee               2.17   4  Pn      Pn       09 36 26.1 -0.5
PAHR   Pah Rah Range      2.22 174  Pn      Pn       09 36 26.3 -0.9
J04D   Umpqua Nationa     2.22 307  Pb      Pb       09 36 30.3 -0.3
       baz=126,SNR=16
YBH    Yreka Blue Hor     2.26 266  Pn      Pn       09 36 27.0 -0.8
O03E   Paynes Creek       2.27 225  P       Pn       09 36 27.4 -0.5
       baz=45
O03E                                Sb      Sb       09 37 00.6 +1.1
       baz=45
N02D   Trinity Center     2.45 248  Pb      Pb       09 36 32.8 -1.6
       baz=67,SNR=13
N02D                                Sb      Sb       09 37 07.1 +2.4
       baz=67
HUMO   Hull Mountain      2.52 287          Pn       09 36 30.4 -0.9
WDC    Whiskeytown Da     2.52 239          Pn       09 36 30.9 -0.4
WDC                                 IAML             09 37 10.9
       comp=N,14nm,0.8s
VCNR   Virginia City      2.62 179  Pn      Pn       09 36 33.1 +0.3
VCNR                                IAML             09 37 15.3
       comp=N,20nm,0.7s
VCNR                                IAML             09 37 15.5
       comp=E,18nm,0.6s
PNTR   Pine Nut           2.82 178  Pn      Pn       09 36 34.2 -1.5
PNTR                                IAML             09 37 29.2
       comp=E,10nm,2.0s
PNTR                                IAML             09 37 30.4
       comp=N,14nm,2.1s
L02E   Cave Junction      2.92 276  P       Pn       09 36 37.1 +0.3
       baz=94,SNR=7.4
K02D   Willamette Mer     3.05 286  P       Pn       09 36 38.9 +0.3
       baz=104,SNR=41
AFDM   Forest Hills D     3.12 199  Pn      Pn       09 36 39.6  0.0
AFDM                                IAML             09 37 03.9
       comp=E,8.3nm,4.8s
KRMB   Red Mountain       3.18 264  Pn      Pn       09 36 39.7 -0.7
KHMM   Horse Mountain     3.21 252  Pn      Pn       09 36 40.0 -0.9
MFID   Camas Ranch        3.22  61  Pn      Pn       09 36 41.8 +0.8
KBO    Bosley Butte       3.39 277  Pn      Pn       09 36 44.2 +0.9
LHV    Little Huntoon     3.77 166  Pn      Pn       09 36 50.3 +1.8
LHV                                 IAML             09 37 56.9
       comp=N,9.1nm,2.3s
HLID   Hailey             4.22  65  Pn      Pn       09 36 58.1 +3.2
HLID                                IAML             09 38 04.8
       comp=N,6.2nm,0.8s
HLID                                IAML             09 38 05.7
       comp=N,5.9nm,4.5s
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*ANF **22** 09:49:04.8±0.3, 41°.84N×119°.66W, h0^{km}, ML3.6/18, Error ellipse: s-maj=3.1km s-min=2.6km az=134.0*

*IDC **22** 09:49:04.5±0.7, 41°.85N×119°.61W, h0^{km}, mb3.2/2, mb1 3.3/6, mb1mx3.2/53, mbtmp3.1/6, ML3.4/4, Error ellipse: s-maj=13.2km s-min=5.9km az=7.0*

*REN **22** 09:49:06.0±2.8, 41°.87N±0°.03×119°.66W±0°.04, h8^{km}±6^{km}, ML3.4/7, ML3.6/53(SEA), ML3.3/80(NEIC), Error ellipse: s-maj=5.1km s-min=3.4km az=57.0*

*SEA **22** 09:49:06.4±3.1, 41°.84N±0°.03×119°.65W±0°.05, h0^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=3.6km az=63.0*

*NEIC **22** 09:49:07.1±2.3, 41°.89N±0°.03×119°.71W±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=3.7km az=220.0*

ISC 22 09:49:05.8±1.3, **41°.87N**±0°.03×**119°.65W**±0°.02, **h1^{km}**±10^{km}, **n91,** σ**1^{s}.21**/104, **Nevada**

```
Code   Station Name        Δ°  AZ°     Phase ID          Time      Res
                                    Op      ISC       h  m  s     ISC
MOD    Modoc Plateau      0.49 274  Pg      Pg       09 49 15.6 +0.5
MOD                                 Sg      Sg       09 49 22.1 +0.6
LKVW   Lakeview           0.64 304          Pg       09 49 18.2 +0.2
WVOR   Wild Horse Val     0.94  53          Pg       09 49 23.6 -0.3
WVOR   Wild Horse Val     0.94  53          Sg       09 49 36.5 +0.4
K05A   Summer Lake        1.26 313          Pg       09 49 29.6 -0.3
K05A   Summer Lake        1.26 313          Sb       09 49 47.4 +0.1
K05A   Summer Lake        1.26 313          Sg       09 49 47.2 +0.9
LASM   Arnica Sink        1.47 260          Pn       09 49 32.6 -1.0
LTIM   Timbered Crate     1.54 244          Pn       09 49 33.8 -0.8
HOG    Hogback Mounta     1.57 284          Pn       09 49 34.3 -0.8
M04C   Macdoel            1.64 268  P       Pn       09 49 34.9 -1.1
       baz=86,SNR=469
M04C                                Sb      Sb       09 49 58.0 -0.1
       baz=86
M04C   Macdoel            1.64 268          Pn       09 49 34.9 -1.1
LBCM   Butte Creek Ri     1.64 232          Pn       09 49 35.1 -0.8
K04D   Chiloquin, OR      1.73 297  P       Pn       09 49 36.2 -1.0
       baz=115,SNR=338
K04D                                S       Sn       09 50 00.3 +0.2
       baz=115
K04D   Chiloquin, OR      1.73 297          Pn       09 49 36.2 -1.0
J05D   Fort Rock, OR      1.84 321  Pb      Pn       09 49 39.6 +1.0
       baz=140,SNR=965
J05D                                Sb      Sg       09 50 05.2 +0.4
       baz=140
J05D   Fort Rock, OR      1.84 321          Pn       09 49 39.6 +1.0
L04D   Klamath Falls      2.01 281  P       Pn       09 49 39.7 -1.3
       baz=99,SNR=880
L04D                                Sb      Sb       09 50 09.3 +0.6
       baz=99
L04D   Klamath Falls      2.01 281          Pn       09 49 39.7 -1.3
BEKR   Beckworth          2.07 195          Pn       09 49 42.6 +0.7
BEKR                                Sn      Sn       09 50 08.4  0.0
BEKR                                IAML             09 50 14.1
       comp=N,149nm,0.3s
BEKR                                IAML             09 50 22.2
       comp=E,186nm,0.6s
PINE   Pine Mountain      2.15 334  Pn      Pn       09 49 44.6 +1.6
PINE                                IAML             09 50 29.9
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	comp=N,257nm,0.8s						
PAHR	Pah Rah Range	2.17	175	Pn	Pn	09 49 43.5	+0.2
PAHR				Sn	Sn	09 50 11.3	+0.5
PAHR				IAML		09 50 17.1	
	comp=E,124nm,0.6s						
I07A	Izee	2.22	3		Pn	09 49 44.9	+1.0
I07A					LR	09 50 15.9	
I07A				IAML		09 50 17.3	
	comp=N,187nm,0.9s						
I07A				IAML		09 50 26.6	
	comp=E,215nm,1.3s						
O03E	Paynes Creek	2.26	227	P	Pn	09 49 43.6	-0.8
	baz=45,SNR=137						
O03E				Sb	Sb	09 50 16.4	+0.4
	baz=45						
J04D	Umpqua Nationa	2.28	308	P	Pn	09 49 44.1	-0.7
	baz=126,SNR=249						
YBH	Yreka Blue Hor	2.29	268	Pn	Pn	09 49 43.3	-1.5
	comp=E,14nm,0.3s,baz=51,slow=12,SNR=237						
YBH				Lg	Lg	09 50 17.8	
	comp=E,25nm,0.3s,baz=153,slow=19,SNR=7.9						
YBH	Yreka Blue Hor	2.29	268		Pn	09 49 43.2	-1.7
YBH				IAML		09 50 22.4	
	comp=N,137nm,0.8s						
M02C	Callahan	2.45	260	P	Pn	09 49 45.3	-1.7
	baz=78,SNR=20						
M02C				Sb	Sb	09 50 22.2	+0.9
	baz=78						
N02D	Trinity Center	2.46	250	P	Pn	09 49 45.5	-1.7
	baz=68,SNR=100						
N02D				Sb	Sb	09 50 23.1	+1.3
	baz=68						
WDC	Whiskeytown Da	2.53	240		Pn	09 49 46.9	-1.2
WDC				IAML		09 50 27.4	
	comp=N,151nm,0.6s						
HUMO	Hull Mountain	2.56	288		Pn	09 49 47.0	-1.6
HUMO				IAML		09 50 29.6	
	comp=N,121nm,0.9s						
HUMO				IAML		09 50 29.9	
	comp=E,116nm,0.8s						
ORV	Oroville	2.70	212		Pn	09 49 50.3	-0.1
I05D	Terrebonne, OR	2.76	334	Pb	Pb	09 49 55.2	-0.8
	baz=153,SNR=72						
PNTR	Pine Nut	2.77	179	Pn	Pb	09 49 55.1	-1.3
PNTR				IAML		09 50 51.5	
	comp=E,163nm,1.1s						
I04A	Tendick Farm,	2.80	314	Pb	Pb	09 49 56.2	-0.5
	baz=133,SNR=23						
I04A				Sb	Sb	09 50 33.6	+2.2
	baz=133						
O02D	Mt. Diablo Mer	2.91	236	P	Pn	09 49 52.4	-1.0
	baz=53,SNR=12						
L02E	Cave Junction	2.96	277	P	Pn	09 49 53.2	-0.8
	baz=94,SNR=123						
AFDM	Forest Hills D	3.08	199	Pn	Pn	09 49 56.3	+0.6
K02D	Willamette Mer	3.09	287	P	Pn	09 49 55.3	-0.5
	baz=104,SNR=518						
KRMB	Red Mountain	3.21	265		Pn	09 49 57.2	-0.2
MFID	Camas Ranch	3.22	60	Pn	Pn	09 49 57.2	-0.5
KHMM	Horse Mountain	3.23	253	Pn	Pn	09 49 58.1	+0.3
KHMM				IAML		09 50 58.5	
	comp=E,76nm,1.0s						
KHMM				IAML		09 51 04.7	
	comp=N,61nm,1.2s						
I03D	Drain, OR	3.28	305	P	Pn	09 49 57.8	-0.5
	baz=123,SNR=46						
RYN	Ryan	3.35	165		Pn	09 50 01.6	+2.1
RYN				IAML		09 50 56.3	
	comp=E,74nm,1.0s						
RYN				IAML		09 50 59.0	
	comp=N,68nm,0.8s						
WAKR	Walker	3.36	177	Pn	Pn	09 50 01.5	+1.8
WAKR				IAML		09 51 02.3	
	comp=E,43nm,0.8s						
H04A	Detroit Lake	3.37	328	Pn	Pn	09 50 01.6	+2.0
H04A				IAML		09 50 56.3	
	comp=E,41nm,0.8s						
J01E	Myrtle Point	3.42	294	P	Pn	09 50 00.2	0.0
	baz=111,SNR=7.6						
KBO	Bosley Butte	3.42	277	Pn	Pn	09 50 00.5	+0.1
KBO				IAML		09 51 13.6	
	comp=N,98nm,1.5s						
BMO	Blue Mountains	3.44	29	Pn	Pn	09 50 02.0	+1.3
BMO				IAML		09 50 57.2	
	comp=N,52nm,0.4s						
JCC	Jacoby Creek,	3.46	254	Pn	Pn	09 50 00.1	-0.6
JCC				IAML		09 51 06.2	
	comp=E,57nm,2.0s						
JCC				IAML		09 51 09.9	
	comp=N,76nm,2.1s						
G08A	Pilot Rock	3.46	8	Pn	Pn	09 50 02.1	+1.1
H04D	Lebanon	3.48	321	Pb	Pb	09 50 07.3	-1.0
	baz=139,SNR=41						
ELK	Elko	3.51	107	Pn	Pn	09 50 01.0	-0.7
	comp=N,6.9nm,0.3s,baz=296,slow=16,SNR=87						
ELK				Pg	Pb	09 50 06.3	-2.6
	comp=N,11nm,0.3s,baz=294,slow=13,SNR=78						
ELK				Sn	Sn	09 50 42.2	-1.9
	comp=N,8.7nm,0.3s,baz=2.5,slow=24,SNR=7.5						
ELK				Lg	Lg	09 50 52.6	
	comp=N,20nm,0.3s,baz=213,slow=23,SNR=8.6						
ELK	Elko	3.51	107	Pn	Pn	09 50 02.7	+1.0
ELK				IAML		09 50 59.3	
	comp=N,59nm,0.5s						
G05D	Wamic, OR	3.58	341	Pb	Pb	09 50 09.2	-0.8
	baz=160						
NVAR	Mina Array Bea	3.58	163	Pn	Pn	09 50 03.1	+0.3
	comp=N,0.7nm,0.3s,baz=342,slow=12,SNR=8.5						
NVAR				Lg	Lg	09 50 59.4	
	comp=N,9.6nm,0.3s,baz=273,slow=27,SNR=2.6						
KEBM	Edson Butte	3.61	288	Pn	Pn	09 50 03.0	0.0
KEBM				IAML		09 51 10.9	
	comp=N,90nm,1.2s						
KEBM				IAML		09 51 23.5	
	comp=E,91nm,1.1s						
NV11	Mina Array Sit	3.62	161		Pb	09 50 10.5	-0.2
NV11				IAML		09 51 14.2	
	comp=N,37nm,1.2s						
NV11				IAML		09 51 19.2	
	comp=E,37nm,1.3s						
KCPM	Cahto Peak	3.69	235	Pn	Pn	09 50 05.0	+0.8
KCPM				IAML		09 51 20.2	
	comp=N,42nm,1.9s						
KCPM				IAML		09 51 24.6	
	comp=E,44nm,1.4s						
LHV	Little Huntoon	3.72	166		Pn	09 50 07.1	+2.7
COR	Corvallis	3.81	317	Pn	Pn	09 50 04.5	-1.1
COR				IAML		09 51 15.6	
	comp=E,34nm,1.8s						
COR				IAML		09 51 16.1	
	comp=E,33nm,1.1s						
CMB	Columbia Colle	3.87	189		Pn	09 50 07.9	+1.3
CMB				IAML		09 51 19.5	
	comp=E,27nm,1.1s						
HOPS	Hopland Field	3.88	223	Pn	Pn	09 50 07.1	+0.5
HOPS				IAML		09 51 45.0	
	comp=N,33nm,2.2s						
HOPS				IAML		09 52 17.0	
	comp=E,30nm,5.0s						
F07A	Phinny Hill Vi	4.03	357	Pn	Pn	09 50 08.6	-0.1
F07A				IAML		09 51 21.0	
	comp=E,38nm,0.8s						
HLID	Hailey	4.22	65	P	Pn	09 50 10.7	-0.8
	baz=248						
HLID	Hailey	4.22	65	Pn	Pn	09 50 10.9	-0.5
TPH	Tonopah	4.22	153		Pn	09 50 12.6	+1.1
F10A	Beach Ranch, E	4.46	22	Pn	Pn	09 50 13.9	-0.8
F10A				IAML		09 51 30.0	
	comp=N,22nm,0.9s						
F10A				IAML		09 51 48.5	
	comp=E,27nm,1.1s						
BGU	Big Grassy Mou	5.07	98		Pn	09 50 24.8	+1.7
HVU	Hansel Valley	5.14	89		Pn	09 50 26.3	+2.2
BCYI	Bear Canyon	5.19	60		Pn	09 50 26.5	+1.7
SPUT	South Promonto	5.43	93	Pn	Pn	09 50 29.1	+1.0
DUG	Dugway, Tooele	5.43	106		Pn	09 50 29.9	+1.8
PSUT	Pine Spring	5.55	125		Pn	09 50 31.9	+2.1
TPNV	Topopah Spring	5.57	151		Pn	09 50 32.4	+2.4
PRN	Pahroc Range	5.70	140		Pn	09 50 33.4	+1.7
MCMT	McKenzie Canyo	5.78	57		Pn	09 50 34.2	+1.3
NLU	North Lily Min	6.05	106		Pn	09 50 37.0	+0.4
DLMT	Dillon	6.20	53	Pn	Pn	09 50 39.1	+0.5
JLU	Jordanelle	6.31	99	Pn	Pn	09 50 39.3	-1.0
MSO	Missoula	6.43	38	Pn	Pn	09 50 43.0	+1.3
CCUT	Cedar City	6.49	130		Pn	09 50 44.8	+2.1
MVU	Marysvale	6.61	118		Pn	09 50 46.1	+1.7
NEW	Newport	6.64	15	Pg	Pb	09 50 59.6	-2.5
	comp=E,0.1nm,0.3s,baz=262,slow=0.7,SNR=4.0						
NEW				Lg	Lg	09 52 34.7	
	comp=E,0.2nm,0.3s,baz=284,slow=22,SNR=2.4						
YHL	Hebgen Lake	6.86	61	Pn	Pn	09 50 48.2	+0.4
JTMT	Jette	7.01	31	Pn	Pn	09 50 48.4	-1.3
KNB	Kanab	7.17	130	Pn	Pn	09 50 52.5	+0.6
PDAR	Pinedale Array	7.54	80	Pn	Pn	09 50 59.9	+2.8
	comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=1.9						
PDAR	Pinedale Array	7.54	80		Pn	09 50 57.4	+0.3
YKA	Yellowknife Ar	20.88	7	P	P	09 53 49.5	+0.4
	comp=E,0.4nm,0.9s,baz=195,slow=10,SNR=6.6						
KURBB	Kurchatov Arra	86.53	349	P	P	10 01 50.1	-0.2
	comp=E,0.4nm,0.6s,baz=12,slow=5.6,SNR=2.7						

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*NNC **22** 09:55:41.6±5.9, 36.°75N×70.°50E, h66^{km}±194^{km}, mb3.5, mpv3.6, Error ellipse: s-maj=49.6km s-min=38.7km az=152.0*

*IDC **22** 09:55:47.0±9.0, 37.°05N×70.°75E, h200^{km}±59^{km}, mb3.1/1, mb1 2.9/6, mb1mx2.7/66, mbtmp3.5/6, Error ellipse: s-maj=89.3km s-min=43.1km az=171.0*

ISC 22 09:55:41.0±2.4**, 36.°7N**±0.°2×**70.°6E**±0.°1**, h150^{km}, n10, σ0.^{s}97**/14**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.41	359	⇑P	Pn	09 57 13.3	+0.3
	4.8nm,0.6s,baz=186,slow=13,SNR=43						
KK31				S	Sn	09 58 25.0	-0.1
	3.3nm,0.3s,baz=183,slow=22,SNR=9.5						
AAK	Ala-Archa	6.64	25	P	Pn	09 57 17.2	+0.9
	0.5nm,0.3s,baz=197,slow=10.0,SNR=6.2						
AAK				S	Sn	09 58 30.5	-0.6
	0.5nm,0.3s,baz=324,slow=20,SNR=13						
AAK	Ala-Archa	6.64	25	⇓P	Pn	09 57 16.7	+0.4
	2.8nm,0.9s						
AAK				⇓S	Sn	09 58 31.1	0.0
	4.6nm,0.5s						
TKM2	Tokmak 2	7.30	30	⇑P	Pn	09 57 24.9	-0.3
	4.0nm,1.1s						
TKM2				⇑S	Sn	09 58 46.9	0.0
	2.0nm,0.7s						
MKAR	Makanchi Array	13.31	37	P	Pn	09 58 45.6	+1.6
	0.1nm,0.3s,baz=207,slow=11,SNR=4.5						
AB31	Akbulak array	14.77	332	⇑P	P	09 59 05.9	+1.5
	0.4nm,0.3s,baz=156,slow=12,SNR=20						
KURBB	Kurchatov Arra	15.04	20	P	Pn	09 59 06.4	+0.8
	0.1nm,0.3s,baz=208,slow=10,SNR=4.2						
AKTO	Aktyubinsk	16.47	330	P	Pn	09 59 22.8	-0.4
	0.3nm,0.3s,baz=127,slow=11,SNR=4.2						
ZALV	Zalesovo Beam	19.87	25	P	P	09 59 58.5	-1.7
	0.3nm,0.3s,baz=233,slow=9.4,SNR=5.0						
NOA	NORSAR Array B	44.05	323	P	P	10 03 32.7	-0.8
	0.7nm,0.7s,baz=97,slow=7.8,SNR=4.8						

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*IDC **22** 09:58:13.8±3.1, 58.°60N×154.°70W, h0^{km}, mb4.2/1, mb1 3.5/3, mb1mx3.1/61, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=46.4km s-min=14.3km az=60.0*

*NEIC **22** 09:58:23.4±0.8, 58.°84N±0.°03×152.°31W±0.°08, h62^{km}±12^{km}, Error ellipse: s-maj=5.9km s-min=4.5km az=108.0*

*AEIC **22** 09:58:24.2±0.8, 58.°84N±0.°03×152.°30W±0.°06, h56^{km}±8^{km}, ML3.0/100, ML3.2/64(NEIC), Error ellipse: s-maj=4.9km s-min=4.0km az=149.0*

ISC 22 09:58:23.0±1.1**, 58.°86N**±0.°04×**152.°32W**±0.°04**, h68^{km}**±11^{km}**, n127, σ0.^{s}92**/116**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AU22	Augustine Moun	0.74	314		Pn	09 58 38.1	-0.1
AU22					Sn	09 58 49.1	-0.4
AU2	Augustine Isla	0.75	314		Pn	09 58 38.3	0.0
AUP	Augustine Pinn	0.76	312		Pn	09 58 38.6	0.0
AUCH	Augustine Cone	0.77	312		Pn	09 58 38.6	0.0
AUCH					Sn	09 58 49.9	-0.4
AUL	Augustine Lava	0.78	313		Pn	09 58 38.7	0.0
AUL					Sn	09 58 50.4	+0.1
AUW	Augustine West	0.79	311		Pn	09 58 38.8	0.0
CNPM	China Poot	0.87	39		Pn	09 58 40.2	+0.4
CNPM	China Poot	0.87	39	IAML		09 58 54.1	
	comp=E,585nm,0.3s						
HOM	Homer	0.88	23		Pn	09 58 40.1	+0.3
HOM					Sn	09 58 53.0	+0.7
OPT	Oil Point	0.93	330		Pn	09 58 40.5	0.0
OPT					Sn	09 58 53.6	+0.1
KDAK	Kodiak Island	1.09	188	Pg	Pn	09 58 42.8	+0.3
	comp=E,18nm,0.3s,baz=65,slow=7.3,SNR=761						
KDAK				Lg	Lg	09 58 56.9	
	comp=E,32nm,0.3s,baz=39,slow=13,SNR=7.3						
KDAK	Kodiak Island	1.09	188		Pn	09 58 42.9	+0.4
KDAK					Sn	09 58 56.2	-0.7
KDAK	Kodiak Island	1.09	188	IAML		09 59 02.6	
	comp=E,331nm,0.6s						
BRLK	Bradley Lake	1.17	38		Pn	09 58 43.6	0.0
ILS	Iliamna Low So	1.17	341		Pn	09 58 43.6	-0.1
BRSE	Bradley Lake S	1.20	42		Pn	09 58 44.2	+0.3
IVE	Iliamna Volcan	1.22	343		Pn	09 58 44.1	-0.2
IVE					Sn	09 58 59.9	-0.3
KAHC	Katmai Hardscr	1.42	263		Pn	09 58 47.0	+0.1
RED	Redoubt Volcan	1.58	352		Pn	09 58 49.4	+0.3
KBM	Katmai Bkd Mtn	1.62	250		Pn	09 58 50.2	+0.7
RSO	Redoubt South	1.63	352		Pn	09 58 50.1	+0.4
KVTA	Katmai Vly 10	1.63	254		Pn	09 58 50.1	+0.4
REF	Redoubt East F	1.65	353		Pn	09 58 50.4	+0.4
REF					Sn	09 59 10.5	0.0
OHAK	Old Harbor	1.72	198		Pn	09 58 51.1	+0.4
RDT	Redoubt	1.72	359		Pn	09 58 51.4	+0.4
NCT	North Crescent	1.74	350		Pn	09 58 51.5	+0.3
SEW	Seward	1.93	48		Pn	09 58 53.4	-0.1
SLKM	Skilak Lake	1.97	32		Pn	09 58 54.4	+0.2
CAPN	Captain Cook N	2.01	17		Pn	09 58 56.9	+2.3
SPCR	Spurr Chakacha	2.35	1		Pn	09 59 00.4	+1.0
SPCN	Chakachatna No	2.38	2		Pn	09 59 00.9	+1.1
SPBG	Spurr Blockage	2.41	359		Pn	09 59 00.5	+0.3
SPCP	Crater Peak Br	2.42	2		Pn	09 59 01.6	+1.2
SPCG	Spurr Capps Gl	2.45	3		Pn	09 59 01.9	+1.1
SII	Sitkinak Islan	2.51	204	Pn	Pn	09 59 02.0	+0.5
FIS	Fire Island	2.53	24		Pn	09 59 03.0	+1.3
RC01	Rabbit Creek A	2.59	29		Pn	09 59 03.1	+0.5
STLK	Strandline Lak	2.66	5		Pn	09 59 05.0	+1.4
SUA	Susitna One	2.73	16		Pn	09 59 05.2	+0.6
SUA	Susitna One	2.73	16	IAML		09 59 55.2	
	comp=E,69nm,0.8s						
SUA				IAML		09 59 56.9	
	comp=N,63nm,1.0s						
PWL	Port Wells	2.84	43		Pn	09 59 06.1	+0.1
SKT	Skwentna	3.16	7		Pn	09 59 10.9	+0.6
SKT	Skwentna	3.16	7	IAML		09 59 55.2	
	comp=E,64nm,1.0s						
PMR	Palmer	3.17	29		Pn	09 59 10.5	+0.1
KNK	Knik Glacier	3.21	35		Pn	09 59 11.1	+0.1
KNK	Knik Glacier	3.21	35	IAML		10 00 02.7	
	comp=E,45nm,0.6s						
GLI	Glacier Island	3.32	50		Pn	09 59 12.0	-0.5
GLI	Glacier Island	3.32	50	IAML		10 00 36.7	
	comp=N,42nm,3.5s						
HIN	Hinchinbrook I	3.33	60		Pn	09 59 12.9	+0.2
HIN	Hinchinbrook I	3.33	60	IAML		10 00 07.8	
	comp=N,60nm,2.4s						
HIN				IAML		10 00 23.0	
	comp=E,64nm,1.7s						
GHO	Glory Hole Cre	3.38	29		Pn	09 59 13.6	+0.3
GHO	Glory Hole Cre	3.38	29	IAML		09 59 51.8	
	comp=N,63nm,0.6s						
GHO				IAML		10 00 05.2	
	comp=E,48nm,1.2s						
FID	Port Fidalgo	3.51	55		Pn	09 59 14.2	-0.9
FID	Port Fidalgo	3.51	55	IAML		10 00 11.3	
	comp=E,35nm,1.8s						
SML	Sawmill	3.56	32		Pn	09 59 15.5	-0.3
JPK	Jack Peak	3.62	50		Pn	09 59 16.5	-0.2
EYAK	Cordova Ski Ar	3.73	60		Pn	09 59 18.4	+0.2
SCM	Sheep Creek Mo	3.88	38		Pn	09 59 20.9	+0.7
SCM	Sheep Creek Mo	3.88	38	IAML		10 00 06.2	
	comp=E,28nm,0.5s						
SCM				IAML		10 00 25.8	
	comp=N,28nm,2.4s						
PPLA	Purkeypile	4.05	1		Pn	09 59 23.4	+0.8
KLU	Klutina	4.15	48		Pn	09 59 24.4	+0.5
CHGN	Chignik	4.16	235	Pn	Pn	09 59 24.8	+0.9
RAGM	Ragged Mountai	4.17	65	Pn	Pn	09 59 24.9	+0.7
GOAT	Goat Mountain	4.21	63		Pn	09 59 25.3	+0.6
WAT7	Susitna Watana	4.34	22		Pn	09 59 27.2	+0.8
WAT6	Susitna Watana	4.36	29		Pn	09 59 27.4	+0.6
WAT1	Susitna Watana	4.39	23		Pn	09 59 27.8	+0.6
TT01	Tatalina	4.45	338		Pn	09 59 28.4	+0.5
M24K	Tolsona, Glenn	4.46	40	Pn	Pn	09 59 30.0	+2.0
TTA	Tatalina	4.47	338		Pn	09 59 28.6	+0.4
TTA	Tatalina	4.47	338	IAML		10 00 03.1	
	comp=N,18nm,4.4s						
TTA				IAML		10 01 43.6	
	comp=E,16nm,4.6s						
WAT2	Susitna Watana	4.50	22		Pn	09 59 29.5	+0.7
TRF	Thorofare Moun	4.71	11		Pn	09 59 32.6	+0.9
TRF	Thorofare Moun	4.71	11	IAML		10 00 44.8	
	comp=N,25nm,2.8s						
N25K	Chitina, Valde	4.73	51		Pn	09 59 32.6	+0.8
N25K	Chitina, Valde	4.73	51	IAML		10 01 27.5	
	comp=E,16nm,4.9s						
N25K				IAML		10 02 35.8	
	comp=N,14nm,4.6s						
KTH	Kantishna Hill	4.76	8		Pn	09 59 32.8	+0.5
KTH	Kantishna Hill	4.76	8	IAML		10 00 35.7	
	comp=E,25nm,0.9s						
KTH				IAML		10 00 35.7	
	comp=N,24nm,1.2s						
RND	Reindeer	4.86	19		Pn	09 59 33.9	+0.3
RND	Reindeer	4.86	19	IAML		10 00 29.1	
	comp=E,18nm,1.1s						
RND				IAML		10 02 40.3	
	comp=N,16nm,3.7s						
KHIT	Khitrov Hills	4.87	67		Pn	09 59 33.9	+0.2
DHY	Denali Highway	4.87	28		Pn	09 59 34.4	+0.6
DHY	Denali Highway	4.87	28	IAML		10 00 28.8	
	comp=N,19nm,3.9s						
DHY				IAML		10 00 31.9	
	comp=E,17nm,1.0s						
GLB	Gilahina Butte	4.98	55		Pn	09 59 35.6	+0.4
GLB	Gilahina Butte	4.98	55	IAML		10 00 34.3	
	comp=N,18nm,4.5s						
GLB				IAML		10 01 07.1	
	comp=E,14nm,3.9s						
CRQM	Cirque	5.01	64		Pn	09 59 36.6	+0.9
VRDI	Verde Repeater	5.04	58		Pn	09 59 36.2	+0.1
VRDI	Verde Repeater	5.04	58	IAML		10 00 20.1	
	comp=E,15nm,4.9s						
VRDI				IAML		10 00 21.0	
	comp=N,19nm,2.4s						
KULT	Kultieth River	5.08	70		Pn	09 59 37.1	+0.5
TGL	Tana Glacier	5.15	64	Pn	Pn	09 59 38.8	+1.1
TGL				IAML		10 02 52.9	
	comp=E,22nm,4.0s						
MCK	McKinley	5.16	17		Pn	09 59 38.0	+0.4
MCARA	McCarthy VSAT	5.29	57	Pn	Pn	09 59 40.7	+1.3
BPAW	Bear Paw Mtn.	5.30	6		Pn	09 59 40.2	+0.7
BPAW	Bear Paw Mtn.	5.30	6	IAML		10 00 39.3	
	comp=E,16nm,4.9s						
BPAW				IAML		10 01 42.1	
	comp=N,16nm,5.0s						
PAX	Paxson	5.31	36		Pn	09 59 41.5	+1.8
ISLE	Juniper Island	5.34	67		Pn	09 59 40.8	+0.6
MESA	MESA	5.44	71		Pn	09 59 42.5	+0.9
BALM	Baldy	5.47	62		Pn	09 59 42.3	+0.4
BWN	Browne	5.51	13		Pn	09 59 43.2	+0.9
YAH	Yahtse	5.58	70		Pn	09 59 44.3	+0.8
GRNC	Granite Creek	5.66	66		Pn	09 59 45.4	+0.9
RKAV	Rock Avalanche	5.76	71		Pn	09 59 46.9	+0.9
BARN	Barnard Glacie	5.79	63	Pn	Pn	09 59 47.5	+1.1
CHX	Chaix Hills	5.84	73		Pn	09 59 47.8	+0.8
TABL	Table Mountain	5.88	70	Pn	Pn	09 59 48.9	+1.2
CTGM	Chitina Glacie	5.92	64	Pn	Pn	09 59 48.9	+0.9
NEA2	Nenana	5.96	14		Pn	09 59 48.3	-0.2
WRH	Wood River Hil	5.98	18		Pn	09 59 49.0	+0.2
RIDG	Independent Ri	6.08	33	Pn	Pn	09 59 52.4	+2.2
HDA	Harding Lake	6.13	22		Pn	09 59 51.3	+0.5
CCB	Clear Creek Bu	6.19	18		Pn	09 59 51.8	+0.2
DOT	Dot Lake	6.24	36	Pn	Pn	09 59 54.3	+1.9
MLY	Manley	6.24	6		Pn	09 59 53.2	+0.8
PCA	Pinnacle	6.27	73	Pn	Pn	09 59 53.4	+0.5
PS08	TAPS Pump Stn8	6.28	22		Pn	09 59 53.3	+0.5
MDM	Murphy Dome	6.42	16		Pn	09 59 55.4	+0.6
I23K	Minto, Yukon-K	6.47	11		Pn	09 59 55.8	+0.4
IL31		6.47	21		Pn	09 59 55.7	+0.3
ILAR	Eielson Array	6.47	21	Pn	Pn	09 59 55.8	+0.3
	comp=N,0.4nm,0.3s,baz=219,slow=14,SNR=14						
ILAR				Sn	Sn	10 01 02.6	-5.1
	comp=N,1.1nm,0.3s,baz=238,slow=7.5,SNR=13						
PNL	Peninsula	6.67	77		Pn	09 59 57.7	-0.6
IM03		7.18	355		Pn	10 00 05.0	-0.2
IMAR	Indian Mountai	7.18	355		Pn	10 00 06.0	+0.8
PRP	Porcupine Dome	7.40	23	Pn	Pn	10 00 09.4	+1.1
EGAK	Eagle	7.94	37	Pn	Pn	10 00 18.1	+2.6
BMAR	Burnt Mountain	9.28	19	Pn	Pn	10 00 32.7	-1.2
YKA	Yellowknife Ar	18.64	63	P	Pn	10 02 44.9	+9.1
	comp=N,0.0nm,0.3s,baz=275,slow=8.9,SNR=1.9						
ARCES	ARCESS Array B	51.90	1	P	P	10 07 24.3	+0.3
	comp=N,2.7nm,0.9s,baz=16,slow=7.5,SNR=4.2						

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*KOLA **22** 10:00:14.4, 64.°60N×31.°27E, h0^{km}, ML2.0, Karelia*

*HEL **22** 10:00:15.0±0.1, 64.°74N×30.°62E, h0^{km}, ML1.8, Explosion*

*IDC **22** 10:00:16.8±2.7, 64.°70N×30.°41E, h0^{km}, mb1 2.6/2, mb1mx2.5/54, mbtmp2.5/2, ML1.8/2, Error ellipse: s-maj=45.4km s-min=9.0km az=101.0*

ISC 22 10:00:12.9±1.0**, 64.°83N**±0.°03×**31.°14E**±0.°05**, h0^{km}, n23, σ1.^{s}17**/37**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.31	337	PG	Pn	10 00 38.7	+0.3
	baz=170						
KU6				MSG		10 00 55.2	
	comp=Z,4.6nm,0.2s						
KU6				SB	Sn	10 00 56.4	-0.2
MSF	Maaselka	1.40	322	PG	Pg	10 00 39.3	-0.4
	baz=148						
MSF				SG	Sg	10 00 56.9	-0.9
OLKF	Oulanka, Finla	1.66	335	PG	Pg	10 00 44.9	+0.2
OLKF				SN	Sg	10 01 07.8	+1.5
JOF	Joensuu	1.92	178	PG	Pn	10 00 48.2	+1.4
JOF				SG	Sn	10 01 11.5	-0.1
OUL	Oulu	2.25	279	PG	Pn	10 00 51.5	+0.2
OUL				SG	Sn	10 01 17.8	-1.8
RNF	Rovaniemi	2.77	312	PG	Pb	10 01 02.5	-0.7
RNF				SG	Sb	10 01 36.0	-1.6
OUF	Merijarvi	2.80	263	PB	Pn	10 00 58.9	0.0
OUF				MSG		10 01 30.7	
	comp=Z,9.6nm,0.2s						
OUF				SG	Sn	10 01 33.1	-0.2
APA0	Apatity Array	2.89	14	P	Pb	10 01 03.9	-1.3
APA0				S	Sb	10 01 41.0	-0.1
APA	Apatity	2.90	17	S	Sb	10 01 41.1	-0.3
OBF0	Syolatti, Pyha	2.99	267	PB	Pn	10 01 03.0	+1.5
OBF0				SG	Sb	10 01 41.4	-2.4
VRF	Varrio	3.00	349	PB	Pb	10 01 06.3	-0.8
VRF				MSG		10 01 44.6	
	comp=Z,1.9nm,0.2s						
VRF				SG	Sg	10 01 49.7	+0.7
SUF	Sumiainen	3.06	229	PB	Pn	10 01 03.7	+1.2
	baz=38						
SUF				MSG		10 01 38.4	
	comp=Z,3.7nm,0.2s						
SUF				SB	Sn	10 01 40.8	+1.0
TOF	Tornio	3.11	297	MSG		10 01 41.8	
	comp=Z,2.5nm,0.2s						
TOF				SB	Sn	10 01 42.8	+1.9
SGF	Sodankyl	3.23	327	SB	Sb	10 01 49.4	-1.4
KEF	Keuruu	3.88	229	PN	Pn	10 01 12.6	-1.0
ERTU	Ertsjaerv	4.08	299	PB	Pn	10 01 19.3	+2.7
ERTU				SG	Sb	10 02 16.4	+1.0
FIA0	FINESS Array S	4.10	216	SG	Sb	10 02 15.1	-0.8
FINES	FINESS Array B	4.10	216	Pn	Pn	10 01 16.9	+0.1
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=1.1						
FINES				Pg	Pb	10 01 25.0	-0.9
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=1.3						
FINES				Lg	Lg	10 02 14.7	
	comp=Z,0.9nm,0.3s,baz=34,slow=26,SNR=15						
VAF	Ylistaro	4.14	248	PG	Pb	10 01 27.2	+0.6
	baz=61						
VAF				SG	Sb	10 02 17.1	0.0
BURU	Burvik	4.20	271	PN	Pn	10 01 18.1	0.0
UMAU	Umeaa	4.64	263	SG	Sb	10 02 32.5	+1.0
ARCES	ARCESS Array B	5.21	338	Pn	Pn	10 01 33.7	+1.8

	baz=153,slow=12,SNR=22						
ARCES				Sn	Sn	10 02 32.1	-0.5
	baz=153,slow=24,SNR=6.2						
ARCES				Lg	Lg	10 02 53.5	
	baz=161,slow=27,SNR=11						
I43RU	DUBNA INFRASON	8.66	157	i		10 50 50.0	
	baz=348,slow=337,SNR=1.5						

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*DJA **22** 10:17:06.1±0.2, 3°S±3°×12°3E±°, h10^{km}, M4.5/14, mb4.7/3, mB4.8/1, MLv4.5/14, Mw(mB)4.1/1*

*IDC **22** 10:17:10.5±3.5, 2°97S×122°50E, h40^{km}±38^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.7/54, mbtmp4.2/8, ML4.3/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/37, Error ellipse: s-maj=25.1km s-min=18.2km az=63.0*

ISC 22 10:17:09.7±0.8**, 2°93S**±0°06×**122°54E**±0°06**, h35**^{km}**, n27, σ1^{s}14**/25**, mb4.2**/5**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.89	7	P	Pn	10 17 38.4	-1.1
APSI	Ampana	2.20	336	P	Pn	10 17 42.6	-1.1
TTSI	Tana Toraja	2.72	268	P	Pn	10 17 50.2	-0.7
BNSI	Bone	2.83	239	P	Pn	10 17 51.3	-1.2
SPSI	Sidrap Palu	2.95	250	P	Pn	10 17 53.3	-0.8
BKSI	Bulukumba	3.38	225	P	Pn	10 17 59.4	-0.6
MRSI	Marisa	3.44	350	P	Pn	10 18 00.0	-0.8
KAPI	Kappang	3.47	233	Pn	Pn	10 18 01.3	+0.1
	18nm,0.3s,baz=140,slow=5.6,SNR=20						
KAPI				Sn	Sn	10 18 39.4	-1.6
	23nm,0.3s,baz=52,slow=21,SNR=3.9						
KAPI				LR	LR	10 19 04.8	
	comp=Z,165nm,18.4s,baz=94,slow=34						
SANI	Sanana	3.55	76	P	Pn	10 18 00.6	-1.7
GTOI	Gorontalo	3.58	8	P	Pn	10 18 03.7	+1.0
BSSI	Bau Bau, Buton	3.79	213	P	Pn	10 18 05.7	+0.1
MPSI	Mapaga	4.19	321	P	Pn	10 18 09.2	-1.9
NLAI	Namlea	4.56	94	P	Pn	10 18 15.0	-1.2
EDFI	Ende, Flores	5.84	188	P	Pn	10 18 32.9	-1.0
	0.2nm811nm54nm,0.5s						
TNTI	Ternate	6.07	53	P	Pn	10 18 35.8	-1.1
	0.3nm80nm,0.6s						
MSAI	Masohi	6.39	94	P	Pn	10 18 40.1	-1.3
SOEI	Soe	6.99	166	P	Pn	10 19 03.8	+14
SIJI	Sorong	8.96	77	Pn	Pn	10 19 18.5	+1.9
	4.4nm,0.3s,baz=256,slow=11,SNR=9.6						
FITZ	Fitzroy Crossi	15.37	169	Pn	P	10 20 48.8	+0.4
	0.7nm,0.3s,baz=10,slow=7.8,SNR=16						
WRA	Warramunga Arr	20.46	147	P	P	10 21 43.6	-0.8
	2.0nm,0.6s,baz=323,slow=11,SNR=12						
ASAR	Alice Springs	23.36	153	P	P	10 22 15.9	+0.7
	3.2nm,1.0s,baz=338,slow=12,SNR=19						
PSI	Prapat	24.29	283	LR	LR	10 33 20.7	
	comp=Z,91nm,18.6s,baz=268,slow=40						
CMAR	Chiang Mai Arr	31.50	313	P	P	10 23 29.0	+0.5
	1.0nm,0.3s,baz=135,slow=7.5,SNR=10						
STKA	Stephens Creek	33.92	150	P	P	10 23 50.0	+0.4
	4.4nm,0.7s,baz=318,slow=10,SNR=10						
PALK	Pallekele	42.97	284	LR	LR	10 43 02.3	
	comp=Z,43nm,19.1s,baz=146,slow=36						
USRK	Ussuriysk Ar.	47.68	9	P	P	10 25 42.3	-0.4
	1.8nm,0.9s,baz=191,slow=6.6,SNR=6.5						
ASAJ	Asahikawa	50.17	19	P	P	10 26 03.1	+1.3
	4.2nm,0.6s,baz=218,slow=12,SNR=5.2						

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*ANF **22** 10:18:42.6±0.3, 41°86N×119°65W, h0^{km}, ML3.0/11, Error ellipse: s-maj=2.9km s-min=2.4km az=125.0*

*REN **22** 10:18:43.5±2.5, 41°88N±0°03×119°62W±0°03, h9^{km}±4^{km}, ML3.1/6, ML3.1/24(SEA), ML2.8/40(NEIC), Error ellipse: s-maj=5.0km s-min=2.8km az=163.0*

*SEA **22** 10:18:44.1±2.8, 41°84N±0°03×119°60W±0°03, h0^{km}±6^{km}, Error ellipse: s-maj=4.7km s-min=2.6km az=168.0*

*NEIC **22** 10:18:44.7±2.9, 41°86N±0°03×119°63W±0°03, h5^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=2.7km az=176.0*

ISC 22 10:18:41.8±1.3**, 41°83N**±0°03×**119°63W**±0°03**, h1**^{km}±13^{km}**, n53, σ1^{s}10**/67**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	279		Pb	10 18 53.6	0.0
MOD					Sb	10 19 00.9	-0.7
MOD	Modoc Plateau	0.51	279	IAML		10 19 01.1	
	comp=N,2μm,0.4s						
MOD				IAML		10 19 01.2	
	comp=E,2μm,0.4s						
LKVW	Lakeview	0.67	306		Pb	10 18 56.0	-0.4
LKVW					Sb	10 19 05.1	-1.2
WVOR	Wild Horse Val	0.95	50		Pb	10 19 01.1	-0.1
WVOR					Sb	10 19 14.1	-0.3
WVOR	Wild Horse Val	0.95	50	IAML		10 19 17.4	
	comp=E,445nm,0.5s						
WVOR				IAML		10 19 18.1	
	comp=E,257nm,0.6s						
K05A	Summer Lake	1.30	314		Pg	10 19 07.4	+0.7
K05A					Sn	10 19 25.1	-0.2
K05A	Summer Lake	1.30	314	IAML		10 19 25.6	
	comp=E,149nm,0.5s						
K05A				IAML		10 19 25.6	
	comp=N,168nm,0.4s						
LASM	Arnica Sink	1.48	262		Pb	10 19 10.4	+0.2
LTIM	Timbered Crate	1.54	246		Pb	10 19 11.6	+0.4
LTIM					Sg	10 19 33.9	+2.5
HOG	Hogback Mounta	1.60	286		Pb	10 19 12.0	-0.4
LBCM	Butte Creek Ri	1.63	233		Pb	10 19 13.0	+0.2
M04C	Macdoel	1.66	269	P	Pb	10 19 12.6	-0.6
	baz=86,SNR=202						
M04C				Sb	Sg	10 19 36.8	+1.8
	baz=86						
M04C	Macdoel	1.66	269		Pb	10 19 12.6	-0.6
M04C					Sg	10 19 37.3	+2.4
K04D	Chiloquin, OR	1.77	297	P	Pn	10 19 13.8	+0.2
	baz=114,SNR=61						
K04D				Sb	Sg	10 19 39.7	+1.1
	baz=114						
K04D	Chiloquin, OR	1.77	297		Pg	10 19 15.6	-0.1
J05D	Fort Rock, OR	1.88	321	Pb	Pb	10 19 17.2	+0.2
	baz=139,SNR=311						
J05D				Sb	Sg	10 19 42.3	+0.1
	baz=139						
J05D	Fort Rock, OR	1.88	321		Pg	10 19 17.4	-0.5
LHEM	Herd Peak	1.95	265		Pg	10 19 19.2	0.0
M03C	McCloud	1.95	254		Pg	10 19 19.2	0.0
L04D	Klamath Falls	2.03	282	P	Pn	10 19 17.5	+0.2
	baz=99,SNR=24						
L04D				Sb	Sg	10 19 47.5	+0.4
	baz=99						
L04D	Klamath Falls	2.03	282		Pn	10 19 17.6	+0.3
TMBU	Tom Butte, New	2.10	328		Pb	10 19 20.5	-0.2
PAHR	Pah Rah Range	2.13	175	Pn	Pb	10 19 21.4	+0.2
PAHR					LR	10 19 52.1	
PAHR				IAML		10 19 54.6	
	comp=E,34nm,0.7s						
SVIC	Surveyors Ice	2.17	327		Pg	10 19 22.6	-0.8
PINE	Pine Mountain	2.19	334	Pn	Pb	10 19 22.4	+0.1
PINE					LR	10 19 51.6	
PINE				IAML		10 19 53.5	
	comp=E,93nm,0.6s						
PINE				IAML		10 20 01.0	
	comp=N,52nm,0.5s						
O03E	Paynes Creek	2.25	228	P	Pn	10 19 21.3	+1.1
	baz=45,SNR=24						
O03E				Sb	Sg	10 19 54.9	+0.9
	baz=45						
KWBU	Kawak Butte, N	2.29	328		Pg	10 19 25.3	-0.3
YBH	Yreka Blue Hor	2.31	269		Pn	10 19 21.4	+0.3
YBH				IAML		10 19 57.8	
	comp=N,34nm,0.6s						
J04D	Umpqua Nationa	2.31	308	Pb	Pb	10 19 24.8	+0.3
	baz=126,SNR=47						
J04D				Sb	Sg	10 19 55.7	-0.4
	baz=126						
J04D	Umpqua Nationa	2.31	308		Pg	10 19 25.8	-0.4
ASBU	Astronaut Butt	2.37	328		Pb	10 19 25.1	-0.2
M02C	Callahan	2.46	261	P	Pn	10 19 23.2	+0.1
	baz=77,SNR=6.5						
M02C				Sb	Sg	10 20 00.4	-0.4
	baz=77						
N02D	Trinity Center	2.47	251	Pb	Pb	10 19 27.1	+0.2
	baz=68						
N02D				Sb	Sg	10 20 01.0	-0.1
	baz=68						
BBOR	Butler Butte	2.50	296		Pb	10 19 27.7	+0.1
WDC	Whiskeytown Da	2.53	241		Pn	10 19 25.3	+1.3
WDC				IAML		10 20 05.6	
	comp=N,26nm,0.5s						
VCNR	Virginia City	2.53	180	Pn	Pb	10 19 28.4	+0.3
HUMO	Hull Mountain	2.59	289	Pn	Pn	10 19 24.8	-0.1
ORV	Oroville	2.68	213	Pn	Pb	10 19 28.8	-1.7
RUBR	Rubicon Trail	2.80	188	Pn	Pb	10 19 31.1	-1.7
RUBR				IAML		10 20 16.8	
	comp=E,34nm,0.5s						
RUBR				IAML		10 20 20.5	
	comp=N,27nm,1.1s						
I05D	Terrebonne, OR	2.81	334	Pb	Pb	10 19 33.0	+0.3
	baz=152						
I05D				Sb	Sg	10 20 10.1	-1.8
	baz=152						
I04A	Tendick Farm,	2.84	315	Pb	Pb	10 19 34.0	+0.7
	baz=132,SNR=10						
I04A				Sb	Sg	10 20 11.2	-1.7
	baz=132						
O02D	Mt. Diablo Mer	2.91	236	Pb	Pb	10 19 35.5	+1.0
	baz=53						
O02D				Sb	Sg	10 20 14.4	-0.8
	baz=53						
L02E	Cave Junction	2.98	278	P	Pn	10 19 31.4	+1.2
	baz=94,SNR=20						
AFDM	Forest Hills D	3.06	200	Pn	Pb	10 19 34.7	-2.3
K02D	Willamette Mer	3.12	287	P	Pn	10 19 33.1	+0.9
	baz=104,SNR=82						
MFID	Camas Ranch	3.22	59	Pn	Pn	10 19 34.7	+1.1
MFID				IAML		10 20 32.2	
	comp=N,44nm,0.6s						
KRMB	Red Mountain	3.22	266	Pn	Pn	10 19 35.2	+1.6
KRMB				IAML		10 20 43.9	
	comp=E,18nm,3.5s						
KRMB				IAML		10 20 48.8	
	comp=N,19nm,3.6s						
KHMM	Horse Mountain	3.23	254	Pn	Pb	10 19 36.9	-3.2
KHMM				IAML		10 20 01.2	
	comp=E,23nm,4.4s						
KHMM				IAML		10 20 34.9	
	comp=N,24nm,2.6s						
KBO	Bosley Butte	3.45	278	Pn	Pn	10 19 37.4	+0.7
NVAR	Mina Array Bea	3.54	163	Pn	Pb	10 19 42.8	-2.6
HLID	Hailey	4.21	64	P	Pn	10 19 48.4	+1.1
	baz=248						
HLID	Hailey	4.21	64	Pn	Pn	10 19 48.7	+1.3
HLID				IAML		10 20 56.4	
	comp=N,14nm,0.6s						
HLID				IAML		10 21 05.1	
	comp=N,11nm,1.1s						
HVU	Hansel Valley	5.12	88	Pn	Pn	10 20 01.9	+2.1

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*BJI **22** 10:21:07.0±0.0, 44°07N×83°14E, h8^{km}, mB4.7/21, mb4.5/34, ML4.7/10, Ms4.2/23, Ms7 3.9/19*

*NEIC **22** 10:21:07.3±1.6, 44°04N±0°07×83°35E±0°09, h10^{km}±1^{km}, mb4.8/51, Error ellipse: s-maj=12.3km s-min=9.6km az=137.0*

*MOS **22** 10:21:07.6±1.2, 44°05N×83°21E, h21^{km}, mb4.9/23, Error ellipse: s-maj=6.4km s-min=4.9km az=121.7*

*IDC **22** 10:21:09.1±0.4, 44°08N×83°16E, h18^{km}±2^{km}, mb4.2/26, mb1 4.3/36, mb1mx4.2/64, mbtmp4.3/36, ML3.5/9, MS3.7/11, Ms1 3.6/11, ms1mx3.4/48, Error ellipse: s-maj=8.8km s-min=6.8km az=55.0*

*SOME **22** 10:21:09.3, 44°10N×82°88E, h10^{km}, MS4.1*

*NNC **22** 10:21:11.6±0.9, 44°19N×82°80E, h9^{km}±5^{km}, mb5.1, mpv4.8, Error ellipse: s-maj=8.4km s-min=3.2km az=127.0*

ISC 22 10:21:08.4±0.4**, 44°08N**±0°03×**83°12E**±0°02**, h13**^{km}±2^{km}**, h12**^{km}**:pP-P, n347, σ1^{s}95**/385**, mb4.7**/76**, MS3.9**/13**, 42C-19D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.10	253	eP	Pb	10 21 46.3	-0.1
	268nm,0.2s						
KTMS				eS	Sb	10 22 13.5	+1.0
	2μm,0.4s						
KTMS	Ketmen	2.10	253	Pg	Pb	10 21 46.3	-0.1
	268nm,0.2s						
KTMS				Lg	Lg	10 22 13.5	
	2μm,0.4s						
KTMS	Ketmen	2.10	253	eP	Pb	10 21 46.3	-0.1
KTMS				eS	Sb	10 22 13.5	+1.0
DJR	Jarkent	2.41	277	eP	Pb	10 21 52.2	+0.6
	235nm,0.6s						
DJR				eS	Sb	10 22 22.9	+1.7
	9μm,0.6s						
DJR	Jarkent	2.41	277	Pg	Pb	10 21 52.2	+0.6
	235nm,0.6s						
DJR				Lg	Lg	10 22 22.9	
	9μm,0.6s						
DJR	Jarkent	2.41	277	eP	Pb	10 21 52.2	+0.6
DJR				eS	Sb	10 22 23.0	+1.7
PDGK	Podgornoye	2.74	255	Pg	Pb	10 21 57.2	0.0
	379nm,0.4s						
PDGK				Lg	Lg	10 22 31.6	
	2μm,0.5s						
PDGK	Podgornoye	2.74	255	⇑Pn	Pn	10 21 53.8	+1.6
	63nm,0.5s						
PDGK				⇓Pg	Pb	10 21 59.1	+1.8
	564nm,0.6s						
PDGK				⇑Lg	Lg	10 22 33.0	
	3μm,0.6s						
PDGK	Podgornoye	2.74	255	P	Pn	10 21 53.8	+1.6
PDGK				LG	Lg	10 22 32.9	
MK31	Makanchi Array	2.78	348	⇓Pn	Pn	10 21 55.1	+2.5
	12nm,0.2s,baz=159,slow=12,SNR=6133						
MK31				⇓Pg	Pb	10 21 59.8	+2.0
	118nm,0.3s,baz=156,slow=16,SNR=15						
MK31				⇑Lg	Lg	10 22 34.2	
	2μm,0.8s,baz=170,slow=25,SNR=15						
MK31	Makanchi Array	2.78	348	P	Pn	10 21 55.5	+2.9
MK31	Makanchi Array	2.78	348	Pn	Pn	10 21 55.5	+2.9
MKAR	Makanchi Array	2.78	348	Pn	Pn	10 21 55.5	+2.9
	29nm,0.3s,baz=158,slow=15,SNR=1405						
MKAR				Pg	Pb	10 21 59.0	+1.1
	157nm,0.3s,baz=156,slow=16,SNR=76						
MKAR				Sn	Sb	10 22 30.9	-1.0
	117nm,0.3s,baz=167,slow=22,SNR=7.9						
MKAR	Makanchi Array	2.78	348	Pn	Pn	10 21 54.9	+2.3
SHLS	Shalkode	2.81	252	eP	Pn	10 21 53.9	+0.7
	2μm,0.7s						
SHLS				eS	Sn	10 22 27.0	0.0
	10μm,0.7s						
SHLS	Shalkode	2.81	252	Pg	Pn	10 21 53.9	+0.7
	2μm,0.7s						
SHLS				Lg	Lg	10 22 27.0	
	10μm,0.7s						
SHLS	Shalkode	2.81	252	eP	Pn	10 21 53.9	+0.7
SHLS				eS	Sn	10 22 27.0	0.0
MAKZ	Makanchi	2.85	344	⇑Pn	Pn	10 21 55.2	+1.7
	71nm,0.6s						
MAKZ				⇑Pg	Pb	10 22 01.1	+2.1
	458nm,0.6s						
MAKZ				⇑Lg	Lg	10 22 36.8	
	634nm,0.6s						
MAKZ	Makanchi	2.85	344	P	Pn	10 21 56.0	+2.5
MAKZ	Makanchi	2.85	344	Pn	Pn	10 21 56.0	+2.5
KAPS	Kapalarasan	2.94	296	eP	Pb	10 21 60.0	-0.8
	66nm,0.2s						
KAPS				eS	Sb	10 22 36.5	-0.1
	2μm,0.6s						
KAPS	Kapalarasan	2.94	296	Pg	Pb	10 21 60.0	-0.8
	66nm,0.2s						
KAPS				Lg	Lg	10 22 36.5	
	2μm,0.6s						
KAPS	Kapalarasan	2.94	296	eP	Pb	10 22 00.0	-0.8
KAPS				eS	Sb	10 22 36.6	-0.1
UZB	Uzynbulak	3.12	254	eP	Pb	10 22 03.5	-0.3
	172nm,0.5s						
UZB				eS	Sb	10 22 43.2	+1.5
	2μm,0.5s						
UZB	Uzynbulak	3.12	254	Pg	Pb	10 22 03.5	-0.3
	172nm,0.5s						
UZB				Lg	Lg	10 22 43.2	
	2μm,0.5s						
UZB	Uzynbulak	3.12	254	eP	Pb	10 22 03.5	-0.3
UZB				eS	Sb	10 22 43.2	+1.5
KPKS	Kokpek	3.27	261	eP	Pb	10 22 06.9	+0.6
	276nm,0.4s						
KPKS				eS	Sb	10 22 48.2	+2.1
	4μm,0.7s						
KPKS	Kokpek	3.27	261	eP	Pb	10 22 06.9	+0.6
KPKS				eS	Sb	10 22 48.2	+2.1
WMQ	Urumqi	3.31	93	ePn	Pn	10 22 01.3	+1.3
WMQ				Sn	Sn	10 22 39.5	+0.2
WMQ				smax	smax		
	comp=N,1μm,0.7s						
WMQ				smax	smax		
	comp=E,1μm,0.9s						
WMQ	Urumqi	3.31	93	P	Pn	10 22 02.8	+2.8
WMQ	Urumqi	3.31	93		Pn	10 22 02.8	+2.8
TDK	Taldyqorghan	3.49	287	eP	Pb	10 22 10.9	+0.9
	559nm,0.5s						
TDK				eS	Sb	10 22 56.1	+3.6
	3μm,1.0s						
TDK	Taldyqorghan	3.49	287	Pg	Pb	10 22 10.9	+0.9
	559nm,0.5s						
TDK				Lg	Lg	10 22 56.1	
	3μm,1.0s						
SATY	Saty	3.57	255	eP	Pb	10 22 13.7	+2.2
	193nm,0.6s						
SATY				eS	Sg	10 23 00.2	-2.9
	1μm,0.5s						
SATY	Saty	3.57	255	Pg	Pb	10 22 13.7	+2.2
	193nm,0.6s						
SATY				Lg	Lg	10 23 00.2	
	1μm,0.5s						
ZSN	Zaisan	3.59	19	eP	Pb	10 22 14.4	+2.7
	816nm,0.5s						
ZSN				eS	Sg	10 23 01.1	-2.4
	2μm,0.7s						
ZSN	Zaisan	3.59	19	Pg	Pb	10 22 14.4	+2.7
	816nm,0.5s						
ZSN				Lg	Lg	10 23 01.1	
	2μm,0.7s						
KURS	Kuram	3.63	262	eP	Pb	10 22 12.9	+0.5
	62nm,0.6s						
KURS				eS	Sb	10 22 59.5	+3.0
	981nm,0.9s						
KURS	Kuram	3.63	262	Pg	Pb	10 22 12.9	+0.5
	62nm,0.6s						
KURS				Lg	Lg	10 22 59.5	
	981nm,0.9s						
ARXS	Arharly	3.81	274	eP	Pb	10 22 16.1	+0.5
	664nm,0.8s						
ARXS				eS	Sb	10 23 04.3	+2.6
	2μm,0.7s						
ARXS	Arharly	3.81	274	Pg	Pb	10 22 16.1	+0.5
	664nm,0.8s						
ARXS				Lg	Lg	10 23 04.3	
	2μm,0.7s						
CHKK	Chushkaly	4.43	269	eP	Pb	10 22 27.2	+1.1
	67nm,0.9s						
CHKK				eS	Sb	10 23 22.9	+3.5
	1μm,0.5s						
CHKK	Chushkaly	4.43	269	Pg	Pb	10 22 27.2	+1.1
	67nm,0.9s						
CHKK				Lg	Lg	10 23 22.9	
	1μm,0.5s						
KOTS	Kotyrbulak	4.44	261	eP	Pb	10 22 29.2	+2.9
	341nm,0.8s						
KOTS				eS	Sb	10 23 26.4	+6.5
	2μm,0.5s						
KOTS	Kotyrbulak	4.44	261	Pg	Pb	10 22 29.2	+2.9
	341nm,0.8s						
KOTS				Lg	Lg	10 23 26.4	
	2μm,0.5s						
MDOK	Medeo	4.50	260	eP	Pb	10 22 28.5	+1.1
	214nm,0.7s						
MDOK				eS	Sb	10 23 25.9	+4.3
	1μm,0.9s						
MDOK	Medeo	4.50	260	Pg	Pb	10 22 28.5	+1.1
	214nm,0.7s						
MDOK				Lg	Lg	10 23 25.9	
	1μm,0.9s						
KNDC	Almaty	4.55	261	⇓Pn	Pn	10 22 19.0	+2.1
	157nm,0.7s						
KNDC				⇓Pg	Pg	10 22 33.0	-2.5
	999nm,1.1s						
KNDC				⇑Lg	Lg	10 23 30.6	
	3μm,1.0s						
AAA	Alma-Ata	4.59	261	eP	Pb	10 22 29.9	+1.1
	88nm,0.3s						
AAA				eS	Sb	10 23 27.6	+3.7
	553nm,0.6s						
AAA	Alma-Ata	4.59	261	Pg	Pb	10 22 29.9	+1.1
	88nm,0.3s						
AAA				Lg	Lg	10 23 27.6	
	553nm,0.6s						
TNSS	Tian-Shan	4.61	259	eP	Pb	10 22 31.3	+2.1
	148nm,0.6s						
TNSS				eS	Sb	10 23 30.6	+5.7
	194nm,0.6s						
TNSS	Tian-Shan	4.61	259	Pg	Pb	10 22 31.3	+2.1
	148nm,0.6s						
TNSS				Lg	Lg	10 23 30.5	
	194nm,0.6s						
KTBS	Karatobe	4.67	268	eP	Pb	10 22 31.4	+1.3
	66nm,0.6s						
KTBS				eS	Sb	10 23 30.4	+4.2
	2μm,0.9s						
KTBS	Karatobe	4.67	268	Pg	Pb	10 22 31.4	+1.3
	66nm,0.6s						
KTBS				Lg	Lg	10 23 30.4	
	2μm,0.9s						
IZV	Izvestkoviy	4.84	260	eP	Pb	10 22 35.5	+2.3
	125nm,0.6s						
IZV				eS	Sb	10 23 37.7	+6.3
	921nm,0.6s						
IZV	Izvestkoviy	4.84	260	Pg	Pb	10 22 35.5	+2.3
	125nm,0.6s						
IZV				Lg	Lg	10 23 37.7	
	921nm,0.6s						
MTBS	Maitube	4.95	261	eP	Pb	10 22 38.3	+3.4
	120nm,0.4s						
MTBS				eS	Sg	10 23 42.1	-5.1
	774nm,0.9s						
MTBS	Maitube	4.95	261	Pg	Pb	10 22 38.3	+3.4
	120nm,0.4s						
MTBS				Lg	Lg	10 23 42.1	
	774nm,0.9s						
KST	Kastek	5.30	261	eP	Pb	10 22 44.5	+3.6
	203nm,0.5s						
KST				eS	Sb	10 23 52.6	+8.0
	825nm,0.8s						
KST	Kastek	5.30	261	Pg	Pb	10 22 44.5	+3.6
	203nm,0.5s						
KST				Lg	Lg	10 23 52.6	
	825nm,0.8s						
ULHL	Ulahol	5.35	252	P	Pn	10 22 30.2	+2.0
	SNR=96						
KRBS	Karabastau	5.39	269	eP	Pb	10 22 47.2	+4.7
	50nm,0.5s						
KRBS				eS	Sg	10 23 57.2	-4.3
	251nm,0.6s						
KRBS	Karabastau	5.39	269	Pg	Pb	10 22 47.2	+4.7
	50nm,0.5s						
KRBS				Lg	Lg	10 23 57.2	
	251nm,0.6s						
DGS	Degeres	5.40	264	eP	Pb	10 22 47.4	+4.9
	86nm,0.5s						
DGS				eS	Sg	10 23 57.7	-3.8
	826nm,0.6s						
DGS	Degeres	5.40	264	Pg	Pb	10 22 47.4	+4.9
	86nm,0.5s						
DGS				Lg	Lg	10 23 57.7	
	826nm,0.6s						
TKM2	Tokmak 2	5.59	261	P	Pn	10 22 33.5	+2.0
	SNR=47						
TKM2	Tokmak 2	5.59	261	⇑Pn	Pn	10 22 33.0	+1.5
	57nm,0.7s						
TKM2				⇑Pg	Pb	10 22 51.6	+5.6
	76nm,0.5s						
TKM2				⇓Lg	Lg	10 24 02.5	
	346nm,0.6s						
TKM2	Tokmak 2	5.59	261	i P	Pn	10 22 33.0	+1.5
TKM2				pmax	pmax		
	comp=Z,57nm,0.6s						
KBK	Karagaybulak	6.12	259	P	Pn	10 22 41.5	+2.8
	SNR=33						
CHMS	Chumysh	6.18	263	P	Pn	10 22 41.5	+2.1
	SNR=6.6						
SGDS	Sogindy	6.18	267	Pg	Pg	10 23 02.5	-4.1
	comp=Z,29nm,0.8s						
SGDS				Lg	Lg	10 24 23.6	
	comp=Z,124nm,0.7s						
USP	Ospenovka	6.30	266	P	Pn	10 22 43.1	+2.0
	SNR=27						
DGZ	Jazzator, Alta	6.35	26d	iP	Pn	10 22 44.1	+2.3
DGZ				pmax	pmax		
	comp=Z,88nm,0.5s						
AAK	Ala-Archa	6.45	260	Pn	Pn	10 22 45.8	+2.6

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      comp=Z,1.6nm,0.3s,baz=88,slow=7.6,SNR=39
AAK                               Pg     Pb     10 23 06.4 +5.8
      comp=Z,5.9nm,0.3s,baz=60,slow=9.4,SNR=17
AAK                               Lg     Lg     10 24 25.7
      comp=Z,7.7nm,0.3s,baz=325,slow=20,SNR=6.1
AAK                               LR     LR     10 25 26.4
      comp=Z,402nm,19.5s,baz=73,slow=40
AAK   Ala-Archa         6.45 260  P      Pn     10 22 46.3 +3.1
      SNR=13
AAK   Ala-Archa         6.45 260 ⇓Pn     Pn     10 22 44.0 +0.8
      comp=Z,16nm,0.6s
AAK                              ⇓Pg     Pg     10 23 07.7 -4.2
      comp=Z,61nm,0.5s
AAK                              ⇓Lg     Lg     10 24 31.0
      comp=Z,258nm,0.7s
BTLS  Baital            6.55 282  Pg     Pg     10 23 10.1 -3.7
      comp=Z,29nm,0.5s
BTLS                              Lg     Lg     10 24 36.4
      comp=Z,34nm,1.0s
UCH   Uchtor            6.56 257  P      Pn     10 22 48.4 +3.4
      SNR=31
SEM   Semipalatinsk     6.63 344  Pg     Pg     10 23 10.2 -5.0
      comp=Z,71nm,0.6s
SEM                               Lg     Lg     10 24 37.2
      comp=Z,408nm,0.8s
EKS2  Erkin-Say         6.95 261  P      Pn     10 22 52.3 +2.2
      SNR=8.9
KSH   Kashi             7.02 232  Pn     Pn     10 23 01.0  +10
KSH                               LR     LR
      comp=Z,1µm,5.1s
KSH                               LR     LR
      comp=Z,2µm,6.7s
KSH                               LR     LR
      comp=Z,1µm,7.3s
AML   Almayashu         7.17 258  P      Pn     10 22 56.6 +3.3
      SNR=15
KURBB Kurchatov Arra    7.25 336  Pn     Pn     10 22 55.2 +1.3
      comp=Z,1.4nm,0.3s,baz=193,slow=25,SNR=85
KURBB                             Sn     Sn     10 24 14.4 -1.7
      comp=Z,2.9nm,0.3s,baz=137,slow=26,SNR=3.5
KURK  Kurchatov         7.31 337 ⇑Pn     Pn     10 22 54.9 +0.2
      comp=Z,11nm,0.7s
KURK                             ⇓Pg     Pb     10 23 21.7 +6.7
      comp=Z,52nm,1.0s
KURK                             ⇑Lg     Lg     10 24 56.6
      comp=Z,529nm,0.9s
KURK  Kurchatov         7.31 337  P      Pn     10 22 55.2 +0.5
KURK                                            10 24 14.4
KURK  Kurchatov         7.31 337  Pn     Pn     10 22 55.0 +0.3
KK31  Karatay Array     9.20 268 ⇑Pn     Pn     10 23 22.3 +1.4
      comp=Z,8.5nm,0.7s,baz=73,slow=15,SNR=52
KK31                             ⇑Pg            10 23 57.4
      comp=Z,21nm,0.7s,baz=80,slow=15,SNR=5.2
KK31                             ⇑Lg     Lg     10 25 57.6
      comp=Z,94nm,0.8s
KK31  Karatay Array     9.20 268  P      Pn     10 23 22.4 +1.6
KK31  Karatay Array     9.20 268  Pn     Pn     10 23 22.4 +1.6
KKAR  Karatay Array     9.20 268  P      Pn     10 23 22.3 +1.5
KKAR  Karatay Array     9.20 268  Pn     Pn     10 23 22.3 +1.5
KKAR  Karatay Array     9.20 268         Pn     10 23 22.6 +1.8
BRZS  Berezniki         9.25 313  Pg     Pn     10 23 57.3  +36
      comp=Z,14nm,0.8s
BRZS                              Lg     Lg     10 25 57.3
      comp=Z,180nm,0.9s
ZAA0  Zalesovo Array    9.94   6 ⇑Pn     Pn     10 23 30.4 -0.4
      comp=Z,5.7nm,0.9s
ZAA0                             ⇑Sn     Sn     10 25 20.9 -1.3
      comp=Z,9.3nm,0.8s
ZAA0                             ⇓Lg     Lg     10 26 26.1
      comp=Z,36nm,1.1s
ZAA0  Zalesovo Array    9.94   6  Pn     Pn     10 23 30.5 -0.3
ZALV  Zalesovo Beam     9.94   6  Pn     Pn     10 23 30.5 -0.3
      comp=Z,3.4nm,0.3s,baz=189,slow=14,SNR=74
ZALV                              Sn     Sn     10 25 18.8 -3.5
      comp=Z,5.5nm,0.3s,baz=182,slow=24,SNR=7.2
ZALV                              Lg     Lg     10 26 25.6
      comp=Z,2.7nm,0.3s,baz=197,slow=25,SNR=4.3
ZALV                              LR     LR     10 27 31.8
      comp=Z,364nm,18.6s,baz=140,slow=38
ZALV  Zalesovo Beam     9.94   6  Pn     Pn     10 23 30.2 -0.6
BVAR  Borovoye Array   12.28 321  Pn     Pn     10 24 03.2 +0.3
      comp=Z,2.9nm,0.3s,baz=57,slow=16,SNR=24
BRVK  Borovoye         12.35 321 ⇓Pn     Pn     10 24 04.0 +0.1
      comp=Z,17nm,0.7s
BRVK                             ⇓Sn     Sn     10 26 18.0 -3.3
      comp=Z,33nm,0.9s
BRVK                             ⇓Lg     Lg     10 27 36.2
      comp=Z,192nm,1.1s
BRVK  Borovoye         12.35 321  P      Pn     10 24 03.9 +0.1
BRVK                              SN     Sn     10 26 17.9 -3.3
BRVK  Borovoye         12.35 321         Pn     10 24 03.2 -0.6
NIL   Nilore           12.93 220  P      Pn     10 24 12.4 +0.5
NIL   Nilore           12.93 220  Pn     Pn     10 24 12.4 +0.5
GTA   Gaotai           13.31 105 eP      Pn     10 24 16.5 -0.6
GTA                               pP     P      10 24 27.0 +0.2
GTA                               sP            10 24 30.9
GTA                               pmax   pmax
      comp=Z,2.0nm,1.0s
GTA                               pmax   pmax
      comp=Z,70nm,5.6s
GTA                               LR     LR
      comp=Z,320nm,13.1s
GTA                               LR     LR
      comp=Z,220nm,10.2s
GTA                               LR     LR
      comp=Z,240nm,13.4s
CEP   Cherat           13.44 224  P      Pn     10 24 17.8 -1.1
THW   Thamme Wali      14.35 222  P      Pn     10 24 31.3  0.0
KBL   Kabul            14.45 234  P      Pn     10 24 34.1 +1.3
KBL   Kabul            14.45 234  Pn     Pn     10 24 34.1 +1.3
ZAK   Zakamensk        15.05  58 eP      Pn     10 24 40.1 -0.7
ZAK                               pmax   pmax
      comp=Z,7.0nm,1.2s
TLY   Talaya           15.70  54  Pn     Pn     10 24 49.7 +0.6
      comp=Z,0.0nm,0.3s,baz=302,slow=9.5,SNR=1.6
TLY                               Lg     Lg     10 29 27.6
      comp=Z,0.0nm,0.3s,baz=85,slow=7.8,SNR=3.6
TLY                               LR     LR     10 31 07.5
      comp=Z,194nm,20.1s,baz=261,slow=38
TLY   Talaya           15.70  54 eP      P      10 24 55.3 +2.2
TLY                               pmax   pmax
      comp=Z,6.0nm,0.8s
TLY                               MLR    MLR
      comp=Z,374nm,14.0s
DANN  Dangsing         15.71 178 eP      Pn     10 24 49.1 -0.5
LSA   Lhasa            15.71 153  P      P      10 24 55.8 +1.9
LSA                               pmax   pmax
      comp=Z,38nm,0.8s
LSA   Lhasa            15.71 153  P      P      10 24 55.8 +1.9
LSA                               IAmb   IAmb   10 25 03.5
      comp=Z,38nm,0.8s
PYUN  Piuthan          15.95 180 eP      Pn     10 24 50.2 -2.5
      comp=Z,87nm,0.8s
NDI   New Delhi        16.07 199 eP      Pn     10 24 52.5 -1.6
GKN   Gorkha           16.09 175 eP      Pn     10 24 53.8 -0.6
KOLN  Koldanda         16.28 178 eP      Pn     10 24 53.9 -3.0
GUN   Gumba            16.29 171 eP      Pn     10 24 56.4 -0.8
      comp=Z,76nm,0.9s
PKIN  Phulchoki        16.57 173 eP      Pn     10 24 58.3 -2.4
PKI   Pulchoki         16.57 173 eP      Pn     10 24 58.4 -2.4
      comp=Z,86nm,1.0s
SONM  Songino Array    16.60  69  Pn     Pn     10 25 01.9 +1.0
      baz=264,slow=10,SNR=16
SONM                              Lg     Lg     10 29 53.0
      comp=Z,0.2nm,0.3s,baz=269,slow=29,SNR=5.1
SONM                              LR     LR     10 32 11.8
      comp=Z,450nm,20.2s,baz=300,slow=40
SONM  Songino Array    16.60  69  P      Pn     10 25 00.6 -0.2
AB31  Akbulak array    16.70 296  Pn     Pn     10 25 00.6 -1.3
      comp=Z,17nm,1.0s,baz=99,slow=11,SNR=53
ABKAR Akbulak array    16.70 296  Pn     Pn     10 25 00.1 -1.9
ULN   Ulaanbaatar      17.04  69ceP      Pn     10 25 05.7 -0.8
ULN                               pmax   pmax
      comp=Z,13nm,1.7s
ULN   Ulaanbaatar      17.04  69  P      Pn     10 25 05.6 -0.9
TAPN  Taplejung        17.10 166 eP      Pn     10 25 05.1 -2.3
      comp=Z,35nm,0.5s
RAMN  Ramite           17.32 170 eP      Pn     10 25 07.0 -3.1
      comp=Z,90nm,1.0s
ODAN  Odare            17.52 167 eP      Pn     10 25 10.9 -1.7
      comp=Z,50nm,0.5s
LZH   Lanzhou          17.72 110 eP      Pn     10 25 15.1 +0.1
LZH                               pP     pP     10 25 19.1 -1.2
LZH                               sP     sP     10 25 22.1 -0.1
LZH                               pmax   pmax
      comp=Z,19nm,1.0s
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LZH                               LR     LR
      comp=Z,330nm,11.9s
LZH                               LR     LR
      comp=Z,240nm,13.6s
LZH                               LR     LR
      comp=Z,240nm,13.6s
AKTO  Aktyubinsk       18.14 299  P      Pn     10 25 19.6 -0.2
      comp=Z,0.3nm,0.3s,baz=104,slow=14,SNR=10
AKTO                              Lg     Lg     10 30 49.2
      comp=Z,0.2nm,0.3s,baz=317,slow=18,SNR=2.3
AKTO  Aktyubinsk       18.14 299 ⇓Pn     Pn     10 25 20.1 +0.3
      comp=Z,17nm,0.8s
HRA   Herat            18.80 246  P      Pn     10 25 28.9 +0.6
SVE   Sverdlovsk       19.06 320 eP      Pn     10 25 31.8 +0.8
SVE                              eS      S      10 29 09.9 +3.8
SVE                               pmax   pmax
      comp=Z,17nm,0.8s
SHL   Shillong         19.80 156  P      P      10 25 39.4 +0.7
SHL                               pmax   pmax
      comp=Z,58nm,1.1s
SHL   Shillong         19.80 156  P      P      10 25 39.4 +0.7
SHL                               IAmb   IAmb   10 25 47.2
      comp=Z,58nm,1.1s
GEYT  Alibeck          19.80 261  P      P      10 25 39.4 +0.8
      comp=Z,0.7nm,0.3s,baz=80,slow=8.1,SNR=6.8
GYA0B ALIBECK ARRAY    19.80 261  P      P      10 25 39.5 +0.9
ARU   Arti             19.85 317  P      Pn     10 25 40.9 +0.5
      comp=Z,0.0nm,0.3s,baz=130,slow=7.0,SNR=6.7
ARU                               LR     LR     10 33 37.5
      comp=Z,166nm,19.2s,baz=89,slow=38
ARU   Arti             19.85 317c iP     P      10 25 39.7 +0.9
ARU                               S      Sn     10 29 27.4 +4.2
ARU                               pmax   pmax
      comp=Z,11nm,1.9s
ARU   Arti             19.85 317  P      P      10 25 39.7 +0.9
ARU                               IAmb   IAmb   10 25 55.8
      comp=Z,20nm,0.7s
CD2   Chengdu          20.93 122 eP      P      10 25 50.0 -0.8
CD2                               pmax   pmax
      comp=Z,10.0nm,0.5s
HHC   Hu-ho-hao-te     21.19  89 eP      P      10 25 53.1 -0.5
HHC                               sP     pP     10 25 59.1 +1.0
HHC                               PP     PnPn   10 26 15.1 +2.3
HHC                               S      S      10 29 49.3 +0.4
HHC                               SS     SnSn   10 30 20.4  +10
HHC                               pmax   pmax
      comp=Z,15nm,1.0s
HHC                               pmax   pmax
      comp=Z,190nm,4.4s
HHC                               LR     LR
      comp=Z,230nm,11.4s
HHC                               LR     LR
      comp=Z,350nm,11.7s
HHC                               LR     LR
      comp=Z,290nm,11.4s
XAN   Xi'an            22.32 108  P      P      10 26 04.3 -1.5
XAN                               pP     pP     10 26 08.1 -2.2
XAN                               S      S      10 30 02.1 -8.8
XAN                               pmax   pmax
      comp=Z,12nm,1.2s
XAN                               LR     LR
      comp=Z,240nm,11.9s
XAN                               LR     LR
      comp=Z,200nm,11.9s
XAN                               LR     LR
      comp=Z,230nm,11.9s
TIY   Taiyuan          22.98  96 eP      P      10 26 18.0 +5.3
TIY                               pmax   pmax
      comp=Z,27nm,1.0s
BOD   Bodaibo          23.56  43 eP      P      10 26 18.4 +0.1
BOD                               pmax   pmax
      comp=Z,14nm,1.4s
BELG  Belogornoye      24.85 302 i P     P      10 26 30.8 +0.5
BELG                              pmax   pmax
      comp=Z,6.0nm,1.0s
ENH   Enshi            25.00 115  P      P      10 26 31.2 -0.7
ENH                               IAmb   IAmb   10 26 42.3
      comp=Z,16nm,0.6s
KIRV  Kirov            25.23 317  P      P      10 26 33.2 -0.4
      comp=Z,9.0nm,0.4s,baz=94,slow=18,SNR=5.0
KIRV                              LR     LR     10 36 45.1
      comp=Z,99nm,19.3s,baz=134,slow=37
KIRV  Kirov            25.23 317ceP      P      10 26 34.5 +0.8
GYA   Guiyang          25.91 125 eP      P      10 26 39.5 -0.8
GYA                               sP     pP     10 26 46.9 +1.8
GYA                               pmax   pmax
      comp=Z,9.0nm,1.3s
HYB   Hyderabad        26.86 190 i P     P      10 26 55.0 +6.2
ZEI   Tsey             28.33 281 eP      P      10 27 01.9 -0.1
ZEI                               pmax   pmax
      comp=Z,3.0nm,1.1s
PAYA  Payao            28.35 145  P      P      10 27 16.5  +14
CM33  Chiang Mai Arr   28.47 147  P      P      10 27 14.0  +11
CHTO  Chiang Mai       28.47 147  P      P      10 27 01.2 -2.0
CHTO                              pmax   pmax
      comp=Z,6.0nm,1.0s
CHTO  Chiang Mai       28.47 147  P      P      10 27 01.2 -2.0
CMMT  Chiang Mai       28.48 147  P      P      10 27 15.0  +12
CM34  Chiang Mai Arr   28.52 147  P      P      10 27 12.0 +8.3
CM32  Chiang Mai Arr   28.58 148  P      P      10 27 16.0  +12
CM35  Chiang Mai Arr   28.68 147  P      P      10 27 12.0 +6.9
KBZ   Khabaz           28.78 284  P      P      10 27 06.2 +0.4
      comp=Z,3.1nm,0.6s,baz=105,slow=6.6,SNR=12
KBZ                               LR     LR     10 40 54.6
      comp=Z,226nm,18.3s,baz=53,slow=41
KBZ   Khabaz           28.78 284ceP      P      10 27 06.6 +0.8
KBZ                               pmax   pmax
      comp=Z,3.0nm,0.6s
CM15  Chiang Mai Arr   28.79 148  P      P      10 27 14.0 +7.9
CMAR  Chiang Mai Arr   28.80 148  P      P      10 27 06.4 +0.3
      comp=Z,3.3nm,0.8s,baz=320,slow=8.9,SNR=26
CMAR                              pP     sP     10 27 13.2 +0.4
      comp=Z,4.8nm,0.8s,baz=321,slow=9.0,SNR=8.1
CMAR                              PcP    PcP    10 30 15.4 -0.4
      comp=Z,0.4nm,0.3s,baz=335,slow=3.8,SNR=4.2
CMAR  Chiang Mai Arr   28.80 148  P      P      10 27 04.4 -1.7
CM36  Chiang Mai Arr   28.80 147  P      P      10 27 13.0 +6.8
CM09  Chiang Mai Arr   28.83 147  P      P      10 27 14.3 +7.9
CM01  Chiang Mai Arr   28.84 148  P      P      10 27 14.0 +7.5
CM04  Chiang Mai Arr   28.86 147  P      P      10 27 07.0 +0.3
KIV   Kislovodsk       28.87 284 eP      P      10 27 07.3 +0.6
KIV                               pmax   pmax
      comp=Z,16nm,0.9s
KIV                               MLR    MLR
      comp=Z,283nm,15.0s
LAMP  Lampang          29.01 146  P      P      10 27 17.5  +10
UTTA  Uttaradit        30.08 145  P      P      10 27 29.2  +12
VSR   Storozhevoye     30.09 299 eP      P      10 27 15.4 -1.9
VSR                               pmax   pmax
      comp=Z,7.0nm,0.4s
LPSR  Galich'ya Gora   30.17 302 eP      P      10 27 17.8 -0.2
LPSR                              pmax   pmax
      comp=Z,20nm,0.8s
NJ2   Nanjing          30.36 101 eP      P      10 27 17.3 -2.5
NJ2                               pmax   pmax
      comp=Z,10.0nm,0.5s
GEVA  Gevas            30.47 273  P      P      10 27 23.8 +2.8
KLMR  Klimovskoe       30.69 319 eP      P      10 27 21.8 -0.7
KLMR                              pmax   pmax
      comp=Z,9.0nm,0.8s
KLMR  Klimovskoe       30.69 319 eP      P      10 27 21.9 -0.6
KLMR                              AMP           10 27 24.7
      comp=Z,9.0nm,0.8s
SOC   Sochi            31.05 284 eP      P      10 27 24.0 -1.8
SOC                              i S     S      10 32 29.7 -0.8
SOC                              eSS     ScP    10 34 08.6 +4.9
SOC                              eSSS    SSS    10 34 36.9
SOC                               pmax   pmax
      comp=Z,5.0nm,0.3s
SOC                               MLR    MLR
      comp=Z,164nm,19.0s
PBKT  Sadao Pong       31.31 146  P      P      10 27 24.1 -4.2
PBKT                              IAmb   IAmb   10 27 35.6
      comp=Z,24nm,1.4s
OBN   Obninsk          31.55 307deP      P      10 27 30.9 +0.8
OBN                              e              10 27 36.7
OBN                               pmax   pmax
      comp=Z,7.0nm,0.5s
OBN                               MLR    MLR
      comp=Z,258nm,18.0s
UTHA  Uthaitani        31.63 149  P      P      10 27 32.6 +1.4
MIB   Mutribah         31.68 255 eP             10 27 32.0
KBD   Kabd             31.81 254⇓eP             10 27 32.5
RDF   Al-Radifah       32.06 254 eP             10 27 35.1
RST   Umm Al-Ruwaisa   32.10 255 eP             10 27 35.6
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TMCR  Tamitsa          32.21 324 eP      P      10 27 34.4 -1.4
TMCR                              pmax   pmax
      comp=Z,6.0nm,0.6s
MARD  Mardin           32.52 273  P      P      10 27 40.4 +1.4
KLR   Kul'dur          33.31  64  P      P      10 27 46.1 +0.5
      comp=Z,4.4nm,0.9s,baz=282,slow=10,SNR=9.4
KLR   Kul'dur          33.31  64ceP      P      10 27 45.1 -0.5
KLR                               pmax   pmax
      comp=Z,3.0nm,0.7s
QIZ   Qiongzhong       33.52 130  P      P      10 27 45.4 -2.4
QIZ                               S      S      10 33 07.3 -2.2
QIZ                               LR     LR
      comp=Z,93nm,11.4s
QIZ                               LR     LR
      comp=Z,99nm,9.6s
QIZ                               LR     LR
      comp=Z,110nm,13.3s
MALT  Malatya          33.79 276  P      P      10 27 52.8 +2.7
PHET  Kaeng Krachan    34.14 150  P      P      10 28 01.9 +8.7
KSRS  Korea Array      34.23  85  P      P      10 27 52.7 -1.1
      comp=Z,3.9nm,0.9s,baz=283,slow=7.6,SNR=4.2
KSRS                              LR     LR     10 42 49.0
      comp=Z,50nm,18.9s,baz=320,slow=38
USRK  Ussuriysk Ar.    34.65  72  P      P      10 27 57.6 +0.3
      comp=Z,0.7nm,0.7s,baz=297,slow=7.9,SNR=2.8
USRK                              pP     pP     10 28 04.1 +2.0
      comp=Z,2.6nm,0.8s,baz=306,slow=7.7,SNR=8.1
TIXI  Tiksi            35.23  23ceP      P      10 28 01.8 -0.2
TIXI  Tiksi            35.23  23  P      P      10 28 01.9 -0.1
AKASG Malin Array Be   36.38 300  P      P      10 28 12.2  0.0
      comp=Z,2.9nm,0.5s,baz=67,slow=8.9,SNR=6.3
AKASG                             pPcP          10 30 40.4
      comp=Z,0.6nm,0.4s,baz=68,slow=3.9,SNR=5.1
AKBB  Malin Array Si   36.38 300ceP      P      10 28 12.5 +0.4
BR131 Keskin Array S   36.64 281  P      P      10 28 15.0 +0.4
BR131                             pmax   pmax
      comp=Z,24nm,1.3s
BR131 Keskin Array S   36.64 281  P      P      10 28 15.0 +0.4
BR131                             IAmb   IAmb   10 28 16.8
      comp=Z,24nm,1.2s
BRTR  Keskin Array B   36.64 281  P      P      10 28 15.6 +1.0
      comp=Z,5.3nm,0.6s,baz=80,slow=6.5,SNR=36
BRTR  Keskin Array B   36.64 281  P      P      10 28 15.1 +0.4
RAYN  Ar Rayn          36.95 249  P      P      10 28 17.2 -0.1
RAYN                              pmax   pmax
      comp=Z,10.0nm,0.8s
RAYN  Ar Rayn          36.95 249  P      P      10 28 17.2 -0.1
RAYN                              IAmb   IAmb   10 28 18.0
      comp=Z,10nm,0.8s
NACGM Naroch           37.19 307 i P     P      10 28 18.3 -0.6
NACGM                            i P     P      10 28 18.3 -0.6
NACGM                            i P     P      10 28 18.3 -0.6
NACGM                            i Pb    pP     10 28 21.5 -2.1
      comp=Z,25nm,0.9s
NACGM                            i Pb    sP     10 28 22.1 -3.5
      comp=E,20nm,1.4s
NACGM                            i Pb           10 28 22.8
      comp=N,7.0nm,0.7s
NACGM                            i PP    PP     10 29 18.4  -25
NACGM                            i PPP   PPP    10 30 13.5
NACGM                            i PcP   PcP    10 30 48.7  +10
NACGM                            i S     S      10 34 03.8 -1.4
NACGM                            i SS    SnSn   10 36 35.6 -4.1
NACGM                            i SSS   SSS    10 37 07.0
NACGM                            i LQ    LQ     10 40 52.7
NACGM                            i LR    LR     10 43 29.8
NACGM                            i Sb           10 46 30.4
      comp=Z,244nm,18.4s
NACGM                            i Sb           10 47 15.5
      comp=N,139nm,19.9s
FINES FINESS Array B   37.22 318  P      P      10 28 19.5 +0.4
      comp=N,4.2nm,0.7s,baz=109,slow=12,SNR=9.5
FINES                             pPcP          10 30 42.5
      comp=N,3.0nm,0.7s,baz=108,slow=4.2,SNR=4.8
FINES                             LR     LR     10 44 24.3
      comp=N,190nm,19.4s,baz=345,slow=38
SORM  Soroca           37.51 296 ⇑P      P      10 28 21.3 -0.4
SORM  Soroca           37.51 296 ⇑P      P      10 28 21.3 -0.4
ARA0  ARCESS Array S   38.31 331 eP      P      10 28 29.6 +1.4
ARCES ARCESS Array B   38.31 331  P      P      10 28 29.4 +1.2
      comp=N,3.4nm,0.5s,baz=90,slow=7.7,SNR=38
ARCES ARCESS Array B   38.31 331  P      P      10 28 28.6 +0.3
ARCES                             pmax   pmax
      comp=Z,12nm,0.8s
ARCES ARCESS Array B   38.31 331  P      P      10 28 28.6 +0.3
MMAI  Mount Meron Ar   38.43 270  P      P      10 28 30.8 +1.0
      comp=Z,1.2nm,0.5s,baz=49,slow=12,SNR=4.3
KTK1  Kautokeino       39.02 330 eP      P      10 28 35.0 +0.8
PLOR  Plostina         39.28 293 ⇑P      P      10 28 38.7 +1.9
PLOR  Plostina         39.28 293 ⇑P      P      10 28 38.7 +1.9
BIZ   Bicaz            39.31 295 ⇑P      P      10 28 37.6 +0.7
ISR   Istrita          39.59 292 ⇑P      P      10 28 41.3 +2.0
ISR   Istrita          39.59 292 ⇑P      P      10 28 41.3 +2.0
NEHR  Nehoiu           39.65 293 ⇑P      P      10 28 42.0 +2.2
BURAR Bucovina Array   39.68 296 ⇑P      P      10 28 40.8 +0.6
BURAR Bucovina Array   39.68 296 ⇑P      P      10 28 40.8 +0.6
BURAR Bucovina Array   39.68 296  P      P      10 28 40.6 +0.4
BUR08 Bucovina Ar. S   39.69 296  P      P      10 28 41.1 +0.9
MLR   Muntele Rosu     39.87 293 ⇑P      P      10 28 42.7 +1.0
MLR   Muntele Rosu     39.87 293  P      P      10 28 42.2 +0.5
MLR                               pmax   pmax
      comp=Z,4.0nm,0.7s
MLR   Muntele Rosu     39.87 293  P      P      10 28 42.2 +0.5
DOPR  Dopca            40.08 294 ⇑P      P      10 28 45.3 +1.9
VOIR                   40.48 293 ⇑P      P      10 28 47.9 +1.2
VOIR                   40.48 293 ⇑P      P      10 28 47.9 +1.2
ELL   Elmali           40.57 278  P      P      10 28 48.3 +0.6
ELL                               pmax   pmax
      comp=Z,45nm,0.8s
ELL   Elmali           40.57 278  P      P      10 28 48.3 +0.6
TRO   Tromso           40.61 331 eP      P      10 28 49.7 +2.3
KWP   Kalwaria Pacla   40.71 300 eP      P      10 28 50.1 +1.5
KWP   Kalwaria Pacla   40.71 300  P      P      10 28 50.0 +1.5
KWP                               pmax   pmax
      comp=Z,21nm,0.9s
KWP   Kalwaria Pacla   40.71 300  P      P      10 28 50.0 +1.5
KWP                               IAmb   IAmb   10 28 50.7
      comp=Z,21nm,0.9s
KOLS  Kolonicke sedl   41.18 299 eP      P      10 28 53.4 +1.0
KOLS  Kolonicke sedl   41.18 299 eP      P      10 28 53.4 +1.0
LOT   Lotru            41.32 293 ⇑P      P      10 28 55.2 +1.4
ASAJ  Asahikawa        41.88  68  P      P      10 28 58.9 +0.7
      comp=Z,4.3nm,0.8s,baz=17,slow=19,SNR=4.1
JKA   Kamikawa-asahi   41.88  68  P      P      10 28 58.9 +0.7
JKA   Kamikawa-asahi   41.88  68  IAmb   IAmb   10 29 04.5
      comp=Z,42nm,1.5s
FAUS  Fauske           41.89 328 eP      P      10 28 58.7 +0.8
STEI  Steigen          41.89 328 eP      P      10 28 58.4 +0.5
GZR   Gura Zlata       42.00 294 ⇑P      P      10 28 60.0 +0.8
MJAR  Matsushiro Arr   42.00  81  P      P      10 28 59.0 -0.3
      comp=Z,4.6nm,1.0s,baz=283,slow=8.3,SNR=3.3
MJAR  Matsushiro Arr   42.00  81  IAmb   IAmb   10 29 05.0
      comp=Z,2.1nm,0.9s
NIE   Niedzica         42.27 300 eP      P      10 29 03.3 +2.0
MOR8  Moi Rana         42.28 326 eP      P      10 28 60.0 -1.2
OJC   Ojcow            42.34 302 eP      P      10 29 03.1 +1.2
OJC   Ojcow            42.34 302  P      P      10 29 01.8 -0.1
OJC                               pmax   pmax
      comp=Z,14nm,0.8s
OJC   Ojcow            42.34 302  P      P      10 29 01.8 -0.1
OJC                               IAmb   IAmb   10 29 03.6
      comp=Z,14nm,0.8s
SPA0  Spitsbergen Ar   42.52 344 eP      P      10 29 03.4 +0.4
KONS  Konsvik          42.79 326 eP      P      10 29 05.5 +0.3
SEY   Seymchan         42.85  39  P      P      10 29 06.1 +0.3
      comp=Z,1.2nm,0.7s,baz=180,slow=20,SNR=1.8
PSZ   Piszkesteto      43.00 298  P      P      10 29 08.8 +1.5
PSZ                               pmax   pmax
      comp=Z,5.0nm,0.8s
PSZ   Piszkesteto      43.00 298  P      P      10 29 08.8 +1.5
NSS   Namsos           43.47 324 eP      P      10 29 09.5 -1.3
KRLC  Kraliky          44.23 302 eP      P      10 29 17.9 +0.7
KRLC                             e              10 29 26.0
KRLC  Kraliky          44.23 302 eP      P      10 29 17.9 +0.7
KRLC                             ex      x      10 29 26.0
KSP   Ksiaz            44.28 303 eP      P      10 29 18.9 +1.3
NC602 NORSAR Array S   44.30 318  IAmb   IAmb   10 29 18.3
      comp=Z,15nm,0.8s
NC602 NORSAR Array S   44.30 318 eP      P      10 29 17.8 +0.2
DIVS  Divibare         44.32 293  IAmb   IAmb   10 29 30.3
      comp=Z,7.3nm,1.0s
NB2   NORSAR Subarra   44.40 319  P      P      10 29 18.2 -0.2
      comp=Z,3.3nm,0.6s,baz=77,slow=7.9
NB2   NORSAR Subarra   44.40 319  P      P      10 29 18.2 -0.2
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	baz=77,slow=7.9						
NOA	NORSAR Array B	44.40	319	P	P	10 29 18.6	+0.2
	comp=Z,0.6nm,0.3s,baz=69,slow=6.2,SNR=29						
DPC	Dobruska-Polom	44.42	303	eP	P	10 29 19.7	+1.0
DPC				e		10 29 28.8	
DPC	Dobruska-Polom	44.42	303	eP	P	10 29 19.7	+1.0
DPC				ex	x	10 29 28.8	
CHVC	Chvalec	44.51	303	eP	P	10 29 20.4	+1.0
UPC	Upice	44.56	303	eP	P	10 29 20.6	+0.8
UPC	Upice	44.56	303	eP	P	10 29 20.6	+0.8
NAO01	NORSAR Array S	44.59	318	eP	P	10 29 20.3	+0.4
IDI	Anoyia	44.84	279	⇑P	P	10 29 22.1	-0.2
PVCC	Panska Ves	45.42	303	eP	P	10 29 28.1	+1.5
PVCC	Panska Ves	45.42	303	eP	P	10 29 28.1	+1.5
CONA	Conrad Observa	45.54	300	eP	P	10 29 29.7	+2.0
	comp=Z,3.2nm,0.6s						
PRU	Pruhonice	45.62	303	eP	P	10 29 29.9	+1.7
PRU	Pruhonice	45.62	303	eP	P	10 29 29.9	+1.7
BRG	Berggiesshubel	45.68	304	eP	P	10 29 29.5	+0.9
BRG				Amp		10 29 31.8	
	comp=Z,5.9nm,1.0s						
BRG	Berggiesshubel	45.68	304	eP	P	10 29 29.5	+0.9
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG	Berggiesshubel	45.68	304	eP	P	10 29 29.5	+0.9
BRG				Amp		10 29 31.8	
	comp=Z,5.9nm,1.0s						
SKAR	Skarslia	45.86	319	eP	P	10 29 30.6	+0.5
CLL	Collm	46.09	305	i P	P	10 29 32.7	+0.8
	comp=Z,21nm,0.6s						
CLL				i		10 29 39.1	
CLL	Collm	46.09	305	i P	P	10 29 32.7	+0.8
CLL				i		10 29 39.1	
CLL				pmax	pmax		
	comp=Z,21nm,0.6s						
AKN	Aaknes	46.11	321	eP	P	10 29 32.1	+0.2
HOMB	Homborsund	46.40	315	eP	P	10 29 36.0	+1.8
KHC	Kasperske Hory	46.51	302	ceP	P	10 29 37.0	+1.7
KHC				pmax	pmax		
	comp=Z,16nm,1.7s						
KHC	Kasperske Hory	46.51	302	eP	P	10 29 36.0	+0.7
SOKA	Soboth	46.53	298	eP	P	10 29 36.4	+0.8
	comp=Z,2.0nm,0.2s						
GERES	GERESS Array B	46.54	302	P	P	10 29 37.0	+1.4
	comp=Z,1.8nm,0.6s,baz=66,slow=7.6,SNR=15						
GERES	GERESS Array B	46.54	302	P	P	10 29 37.0	+1.4
GERES	GERESS Array B	46.54	302	P	P	10 29 36.2	+0.6
OBKA	Obir	46.91	298	eP	P	10 29 39.6	+1.1
	comp=Z,4.8nm,0.6s						
BER	Bergen	47.36	319	eP	P	10 29 41.4	-0.2
MYKA	Terra Mystica	47.43	299	eP	P	10 29 42.9	+0.3
	comp=Z,1.7nm,0.5s						
KBA	Koelnbreinsper	47.44	299	eP	P	10 29 43.6	+0.9
	comp=Z,3.7nm,0.4s						
BILL	Bilibino	47.57	30	⇓eP	P	10 29 43.8	+0.5
BILL				e*SP	pP	10 29 50.1	+2.0
BILL				e		10 29 54.5	
BILL				i		10 31 13.0	
BILL				SSS	SSS	10 41 08.0	
BILL				pmax	pmax		
	comp=Z,13nm,2.5s						
BILL				MLR	MLR		
	comp=Z,117nm,16.0s						
BILL	Bilibino	47.57	30	P	P	10 29 44.1	+0.9
BILL				IAmb	IAmb	10 29 45.0	
	comp=Z,5.5nm,1.2s						
KMY	Karmoy	47.75	317	eP	P	10 29 45.6	+0.9
WTTA	Wattenberg	48.43	300	eP	P	10 29 51.6	+1.1
	comp=Z,17nm,0.6s						
WATA	Walderalm	48.44	300	eP	P	10 29 51.5	+1.0
	comp=Z,8.2nm,0.6s						
SQTA	Sankt Quirin	48.72	300	eP	P	10 29 53.4	+0.9
	comp=Z,13nm,0.4s						
MOTA	Moosalm	48.73	301	eP	P	10 29 53.6	+0.9
	comp=Z,8.1nm,0.7s						
FETA	Feichten	49.10	300	eP	P	10 29 56.2	+0.7
	comp=Z,5.1nm,0.7s						
DAG	Danmarks Havn	50.15	343	i P	P	10 30 03.1	+0.2
DAG	Danmarks Havn	50.15	343	i P	P	10 30 03.1	+0.2
DAG	Danmarks Havn	50.15	343	i P	P	10 30 03.2	+0.2
BNI	Bardonecchia	52.50	300	IAmb	IAmb	10 30 22.5	
	comp=Z,11nm,0.9s						
IMAR	Indian Mountai	61.88	23	P	P	10 31 26.6	-0.4
COLD	Coldfoot	61.90	21	P	P	10 31 26.9	-0.2
COLD				IAmb	IAmb	10 31 39.2	
	comp=Z,5.3nm,0.8s						
ESBB	Sonseca Array	62.02	299	P	P	10 31 28.8	+0.4
ESDC	Sonseca Array	62.02	299	P	P	10 31 28.8	+0.4
	comp=Z,4.9nm,0.6s,baz=55,slow=6.7,SNR=21						
ESDC	Sonseca Array	62.02	299	P	P	10 31 28.5	+0.1
BMAR	Burnt Mountain	63.11	19	P	P	10 31 34.2	-1.0
BPAW	Bear Paw Mtn.	64.07	23	P	P	10 31 42.1	+0.5
BPAW				IAmb	IAmb	10 31 56.1	
	comp=Z,6.6nm,1.0s						
MBAR	Mbarara	64.36	241	P	P	10 31 43.9	-0.4
MBAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MBAR	Mbarara	64.36	241	P	P	10 31 43.9	-0.4
MBAR				IAmb	IAmb	10 31 44.5	
	comp=Z,5.2nm,0.8s						
INK	Inuvik	64.62	14	P	P	10 31 45.0	0.0
	comp=Z,2.7nm,0.6s,baz=345,slow=1.9,SNR=13						
INK	Inuvik	64.62	14	P	P	10 31 44.1	-1.0
INK				pmax	pmax		
	comp=Z,11nm,1.3s						
INK	Inuvik	64.62	14	P	P	10 31 44.1	-1.0
INK				IAmb	IAmb	10 31 55.1	
	comp=Z,11nm,1.2s						
IL31		64.67	21	P	P	10 31 45.1	-0.3
IL31				IAmb	IAmb	10 31 56.2	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	64.67	21	P	P	10 31 45.0	-0.5
	comp=Z,1.7nm,0.7s,baz=316,slow=5.4,SNR=23						
ILAR				pP	pP	10 31 51.5	+1.0
	comp=Z,1.9nm,0.6s,baz=319,slow=4.1,SNR=12						
DHY	Denali Highway	65.89	23	IAmb	IAmb	10 32 07.1	
	comp=Z,4.1nm,0.7s						
BCAR	Beaver Creek A	67.38	20	P	P	10 32 03.1	+0.2
YKA	Yellowknife Ar	72.83	9	P	P	10 32 35.4	-0.9
	comp=Z,2.9nm,0.7s,baz=347,slow=5.6,SNR=63						
YKA				pP	pP	10 32 42.0	+0.7
	comp=Z,3.0nm,0.5s,baz=348,slow=5.6,SNR=23						
TOA0	Torodi Ar. Sit	74.85	274	P	P	10 32 48.0	-0.9
TOA0				IAmb	IAmb	10 32 57.5	
	comp=Z,8.1nm,0.8s						
TORD	Torodi Ar. Bea	74.85	274	P	P	10 32 48.1	-0.8
	comp=Z,4.9nm,0.4s,baz=40,slow=5.4,SNR=33						
TORD				pP	pP	10 32 55.2	+1.4
	comp=Z,7.6nm,0.7s,baz=38,slow=4.5,SNR=12						
TORD	Torodi Ar. Bea	74.85	274	P	P	10 32 47.6	-1.3
KOWA	Kowa	78.03	279	P	P	10 33 06.6	-0.4
WRAB	Tennant Creek	79.07	132	ceP	P	10 33 12.1	-0.3
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WRAB	Tennant Creek	79.07	132	P	P	10 33 10.9	-1.5
WRAB				IAmb	IAmb	10 33 11.8	
	comp=Z,6.4nm,0.8s						
WRA	Warramunga Arr	79.07	132	P	P	10 33 11.2	-1.2
	comp=Z,4.7nm,0.8s,baz=333,slow=5.8,SNR=19						
WRA				pP	pP	10 33 17.6	+0.1
	comp=Z,3.3nm,0.6s,baz=334,slow=5.2,SNR=9.8						
WRA	Warramunga Arr	79.07	132	P	P	10 33 10.5	-1.9
WRA	Warramunga Arr	79.07	132	P	P	10 33 10.5	-1.9
WB2	Warramunga Arr	79.08	132	P	P	10 33 09.8	-2.6
WR0	Warramunga Arr	79.19	132	P	P	10 33 11.6	-1.5
WR0				IAmb	IAmb	10 33 12.3	
	comp=Z,6.7nm,0.8s						
DRLN	Deer Lake	80.87	335	P	P	10 33 20.4	-1.5
FFC	Flin Flon	81.47	3	P	P	10 33 24.2	-0.8
FFC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FFC	Flin Flon	81.47	3	P	P	10 33 24.2	-0.8
FFC				IAmb	IAmb	10 33 31.2	
	comp=Z,5.4nm,0.8s						
ASAR	Alice Springs	81.89	134	P	P	10 33 26.1	-1.4
	comp=Z,2.9nm,0.8s,baz=330,slow=5.0,SNR=21						
ASAR				pP	PcP	10 33 32.5	-0.7
	comp=Z,1.5nm,0.6s,baz=329,slow=5.3,SNR=7.8						
ASAR	Alice Springs	81.89	134	P	P	10 33 25.7	-1.8
DBIC	Dimbokro	83.96	273	P	P	10 33 37.4	-1.1
	comp=Z,1.9nm,0.5s,baz=38,slow=5.9,SNR=4.9						
DBIC				pP	pP	10 33 44.9	+1.4
	comp=Z,4.7nm,0.8s,baz=21,slow=6.0,SNR=3.2						
ULM	Lac du Bonnet	86.05	359	LR	LR	11 14 36.2	
	comp=Z,34nm,18.8s,baz=349,slow=37						
STKA	Stephens Creek	92.50	133	P	P	10 34 17.3	-1.8
	comp=Z,2.6nm,0.9s,baz=343,slow=9.7,SNR=4.5						
STKA				pP	pP	10 34 23.8	-0.5
	comp=Z,1.8nm,0.7s,baz=332,slow=6.7,SNR=2.5						
STKA	Stephens Creek	92.50	133	P	P	10 34 16.7	-2.4
PDAR	Pinedale Array	92.80	9	LR	LR	11 20 39.3	
	comp=Z,33nm,19.9s,baz=344,slow=38						
NVAR	Mina Array Bea	95.61	17	P	P	10 34 34.2	+0.4
	comp=Z,0.1nm,0.3s,baz=40,slow=2.5,SNR=4.1						

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*THE **22** 10:23:00.3, 37°.41N×20°.11E, h0^{km}±3^{km}, ML3.4/6, Error ellipse: s-maj=3.6km s-min=0.9km az=236.0*

ISC 22 10:22:58.0±2.4, 37°.4N±0°.1×19°.94E±0°.07, h17^{km}±11^{km}, n27, σ1^{s}.57/37, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLMS	Volimes, Zakyn	0.74	51	P	Pb	10 23 12.7	+0.4
VLMS				S	Sn	10 23 21.4	-3.0
	3µm,0.3s						
KEF3	Kipouria, Keph	0.85	23	P	Pn	10 23 16.3	+1.2
KEF3				S	Sn	10 23 27.1	-0.1
	4µm,0.6s						
PSDA	Pessada-Kefalo	0.86	36	P	Pn	10 23 15.5	+0.2
PSDA				S	Sn	10 23 27.1	-0.4
DMLN	Damoulianata-K	0.89	23	P	Pn	10 23 16.6	+0.9
VLS	Valsamata	0.92	34	P	Pn	10 23 16.6	+0.5
VLS				S	Sn	10 23 29.4	+0.5
	1µm,0.2s						
KEF4	Livadi, Kephal	0.92	25	P	Pn	10 23 17.1	+1.0
KEF4				S	Sn	10 23 30.1	+1.1
	9µm,0.3s						
KEF5	Kardakata, Kep	0.96	26	P	Pn	10 23 17.5	+0.9
KEF5				S	Sn	10 23 31.2	+1.4
	7µm,0.5s						
FSK	Fiskardo	1.15	25	P	Pn	10 23 20.7	+1.4
EVGI	Lefkada island	1.33	25	P	Pg	10 23 23.8	+0.2
RLS	Riolos of Patr	1.37	62	P	Pg	10 23 23.5	-0.9
AMT	Artemida-Makis	1.42	85	P	Pn	10 23 23.7	+0.8
AMT				S	Sg	10 23 43.2	-0.5
	570nm,0.6s						
NYDR	Nydri-Lefkada	1.43	25	P	Pg	10 23 25.4	-0.1
DRO	Drossia	1.51	69	P	Pb	10 23 25.8	+0.4
PDO	Prodromos	1.54	40	P	Pg	10 23 26.9	-0.6
EFP	Efpalio	1.85	57	P	Pb	10 23 31.5	+0.1
KLV	Kalavryta, Ach	1.86	70	P	Pn	10 23 30.8	+1.7
TRIZ	Trizonia	1.94	60	P	Pb	10 23 32.4	-0.4
SERG	Sergoula	1.95	59	P	Pb	10 23 32.5	-0.5
ANX	Ano Chora	1.96	53	P	Pb	10 23 33.1	-0.1
EVR	Evrytania	2.10	44	P	Pb	10 23 35.5	-0.2
THL	Klokotos Trika	2.69	37	P	Pn	10 23 43.2	+2.7
DBRK	Dubrovnik	5.42	346	ePn	Pn	10 24 18.8	+0.9
DBRK				Sn	Sn	10 25 15.1	-4.8
STON	Ston	5.71	343	ePn	Pn	10 24 21.9	0.0
HVAR	Hvar	6.34	336	ePn	Pn	10 24 32.3	+1.7
HVAR				Sn	Sn	10 25 40.5	-2.0
RICI	Ricice	6.43	341	ePn	Pn	10 24 34.0	+2.1
KIJV	Kijevo	7.11	339	ePn	Pn	10 24 43.5	+2.4
KIJV				Sn	Sn	10 25 59.6	-1.8
MORI	Morici	7.20	335	ePn	Pn	10 24 44.6	+2.3

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*TEH **22** 10:30:53.9, 28°.48N×52°.94E, h5^{km}, ML3.6*

*IDC **22** 10:30:53.1±1.3, 28°.29N×52°.95E, h0^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.5/53, mbtmp3.7/10, ML3.5/2, Error ellipse: s-maj=29.4km s-min=23.9km az=34.0*

*THR **22** 10:30:56.2±0.4, 28°.52N×53°.06E, h14^{km}±7^{km}, ML3.4*

ISC 22 10:30:55.6±0.7, 28°.44N±0°.05×52°.93E±0°.05, h10^{km}, n33, σ1^{s}.48/36, mb3.8/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	Qir	0.11	71	ePg	Pg	10 30 55.6	-2.7
QIR1				e		10 30 55.9	
	comp=Z,99nm,0.2s						
JHRM	Jahrom	0.57	83	e		10 31 19.9	
	comp=Z,99nm,0.5s						
JHRM				ePg	Pg	10 31 05.1	-1.7
LMD1	Lamerd	1.12	169	ePg	Pn	10 31 17.8	+0.5
LMD1				eSg	Sn	10 31 36.2	+3.4
LMD1				e		10 31 51.5	
	comp=Z,99nm,0.6s						
SHI	Shiraz	1.25	343	ePg	Pn	10 31 19.2	-0.1
SHI				e		10 31 44.9	
	comp=Z,99nm,0.9s						
LAR1	LAR	1.49	121	ePg	Pg	10 31 25.2	+1.0
LAR1				e		10 31 54.6	
	comp=Z,99nm,0.4s						
KAZ1	Kazerun	1.63	317	ePg	Pb	10 31 26.1	+0.2
KAZ1				e		10 38 57.6	
	comp=Z,99nm,0.1s						
KLNJ	Kolanjah	2.81	336	ePn	Pn	10 31 41.0	+0.1
IMEH	Mehriz	3.28	26	ePn	Pn	10 31 48.5	+1.2
IRAM	Ramesheh	3.39	352	ePn	Pn	10 31 49.5	+0.7
ISAD	Sadrabad	3.52	11	ePn	Pn	10 31 52.2	+1.6
NGRK	Negar Kerman	3.54	69	ePn	Pn	10 31 52.6	+1.7
NGRK				e		10 33 01.6	
	comp=Z,99nm,0.6s						
KHGB	Koh Gabri	3.65	57	ePn	Pn	10 31 53.0	+0.7
KHGB				e		10 32 11.8	
	comp=Z,99nm,0.7s						
KRBR	Kerman	3.68	64	ePn	Pn	10 31 53.2	+0.3
KRBR	Kerman	3.68	64	ePn	Pn	10 31 53.2	+0.3
YZKH	Yazd	4.19	20	ePn	Pn	10 32 00.7	+1.1
YZKH				eSg	Sb	10 33 03.0	+2.8
YZKH	Yazd	4.19	20	ePn	Pn	10 32 00.7	+1.1
IZEF	Zefreh	4.47	354	ePn	Pn	10 32 04.9	+1.2
AMIS	Naft Sefid	4.50	316	ePn	Pn	10 32 04.7	+0.8
ANAR	Anarak	4.78	8	ePn	Pn	10 32 09.5	+1.7
IKLH	Kolahrood	5.00	347	ePn	Pn	10 32 10.2	-0.7
TPRV	Parvadeh(Tabas	5.60	34	ePn	Pn	10 32 19.8	+0.8
TNSJ	Nastanj	6.34	29	ePn	Pn	10 32 30.1	+0.9
IVRN	Varamin	6.61	351	ePn	Pn	10 32 33.6	+0.7
WSAR	Wadi Sarin	7.29	134	Pn	Pn	10 32 41.4	-0.8
	comp=Z,1.0nm,0.3s,baz=321,slow=7.6,SNR=7.4						
WSAR				Sn	Sn	10 34 01.5	-3.7
	comp=Z,0.4nm,0.3s,baz=76,slow=17,SNR=2.6						
BRTR	Keskin Array B	19.50	310	P	Pn	10 35 24.9	+0.6
	comp=Z,0.1nm,0.3s,baz=134,slow=14,SNR=5.4						
AKTO	Aktyubinsk	22.30	9	P	P	10 35 55.0	+1.9
	comp=Z,0.6nm,0.4s,baz=171,slow=18,SNR=1.4						
MKAR	Makanchi Array	29.36	43	P	P	10 36 58.1	-0.5
	comp=Z,0.3nm,0.6s,baz=226,slow=12,SNR=2.6						
ZALV	Zalesovo Beam	34.50	33	P	P	10 37 44.0	+0.4
	comp=Z,0.9nm,0.5s,baz=238,slow=8.4,SNR=3.9						
FINES	FINESS Array B	37.53	339	P	P	10 38 08.9	-0.6
	comp=Z,0.7nm,0.3s,baz=148,slow=11,SNR=8.0						
ARCES	ARCESS Array B	44.07	347	P	P	10 39 04.5	+1.1
	comp=Z,1.7nm,0.8s,baz=149,slow=11,SNR=1.3						
TORD	Torodi Ar. Bea	49.89	263	P	P	10 39 48.4	-1.2
	comp=Z,1.0nm,0.7s,baz=46,slow=8.5,SNR=4.1						
ILAR	Eielson Array	85.81	8	P	P	10 43 33.6	-1.4
	comp=Z,0.2nm,0.7s,baz=304,slow=3.7,SNR=4.4						
YKA	Yellowknife Ar	88.83	354	P	P	10 43 49.0	-0.6
	comp=Z,0.4nm,0.8s,baz=9.3,slow=4.8,SNR=8.5						

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*IDC **22** 10:33:34.0±2.8, 31°.91S×70°.00W, h73^{km}±23^{km}, mb3.5/5, mb1 3.8/9, mb1mx3.7/21, mbtmp3.8/9, Error ellipse: s-maj=28.9km s-min=22.3km az=91.0*

*NEIC **22** 10:33:36.1±2.6, 32°.12S±0°.04×70°.3W±0°.2, h110^{km}±8^{km}, Error ellipse: s-maj=24.9km s-min=6.4km az=94.0*

*GUC **22** 10:33:36.0±0.9, 32°.11S×70°.34W, h113^{km}±5^{km}, ML4.5*

ISC 22 10:33:36.2±0.7, 32°.08S±0°.03×70°.19W±0°.08, h111^{km}±7^{km}, n69, σ1^{s}.24/75, mb3.7/7, 3C-6D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA03	San Esteban	0.75	204	⇓iP	Pn	10 33 55.6	+0.5
VA03				i S	Sn	10 34 10.1	+0.6
VA03				IAML		10 34 10.8	
	comp=N,36µm,0.3s						
VA03	San Esteban	0.75	204		Pn	10 33 55.4	+0.2
CO02	Combarbal	1.11	321	⇑iP	Pn	10 33 59.4	+0.7
CO02				i S	Sn	10 34 16.8	+1.0
CO02				IAML		10 34 19.4	
	comp=N,17µm,0.2s						
CO02	Combarbal	1.11	321		Pn	10 33 59.5	+0.7
ROCH	El Roble	1.13	218	⇑iP	Pn	10 33 59.3	+0.3
ROCH				i S	Sn	10 34 16.9	+0.6
ROCH				IAML		10 34 20.5	
	comp=N,8µm,0.2s						
PEL	Peldehue	1.14	201	eP	Pn	10 33 58.5	-0.4
PEL				i S	Sn	10 34 16.4	+0.1
PEL	Peldehue	1.14	201		Pn	10 33 58.5	-0.4
CO03	El Pedregal	1.31	341	eP	Pn	10 34 01.6	+0.7
CO03				i S	Sn	10 34 20.9	+1.2
CO03				IAML		10 34 22.5	
	comp=E,6µm,0.2s						
CO03	El Pedregal	1.31	341		Pn	10 34 01.8	+0.9
MT05	Renca	1.39	199	⇓iP	Pn	10 34 02.2	+0.5
MT05				i S	Sn	10 34 21.6	+0.4
MT05				IAML		10 34 24.0	
	comp=N,9µm,0.3s						
MT05				IAML		10 34 24.5	
	comp=E,9µm,0.3s						
MT05	Renca	1.39	199		Pn	10 34 02.4	+0.6
MT02	Curacav	1.42	214	eP	Pn	10 34 02.1	0.0
MT02				i S	Sn	10 34 21.6	-0.2
MT02	Curacav	1.42	214		Pn	10 34 02.1	0.0
MT03	Universidad Ad	1.44	191	eP	Pn	10 34 03.0	+0.7
MT03				i S	Sn	10 34 22.6	+0.3
MT03				IAML		10 34 25.3	
	comp=E,10µm,0.5s						
LMEL	Las Melosas	1.76	180	⇓iP	Pn	10 34 07.3	+0.9
LMEL				i S	Sn	10 34 30.4	+1.0
LMEL				IAML		10 34 36.0	
	comp=N,14µm,0.0s						
MT09	Talagante	1.82	201	⇓iP	Pn	10 34 06.9	-0.2
MT09				i S	Sn	10 34 30.8	+0.1
MT09				IAML		10 34 35.9	
	comp=N,3µm,0.2s						
GO04	Tololo Observa	1.97	344	⇑iP	Pn	10 34 09.6	+0.5
GO04				i S	Sn	10 34 35.4	+1.2
GO04				IAML		10 34 39.1	
	comp=N,9µm,0.4s						
GO04	Tololo Observa	1.97	344		Pn	10 34 09.7	+0.6
VA05	Santo Domingo	1.98	217	eP	Pn	10 34 08.3	-0.6
VA05				i S	Sn	10 34 32.5	-1.3
VA05				IAML		10 34 42.9	
	comp=N,3µm,0.3s						
CO01	Juntas del Tor	2.10	2	eP	Pn	10 34 12.5	+1.8
CO01				i S	Sn	10 34 39.5	+2.4
CO01	Juntas del Tor	2.10	2		Pn	10 34 12.3	+1.6
BO02	Sierra Bellavi	2.75	190	⇓iP	Pn	10 34 19.1	+0.1
BO02				i S	Sn	10 34 51.6	-0.3
BO02				IAML		10 34 55.0	
	comp=N,1µm,0.2s						
BO02	Sierra Bellavi	2.75	190	Pn	Pn	10 34 19.2	+0.3
BO03	Pichilemu	2.83	211	eP	Pn	10 34 18.4	-1.5
LCO	Las Campanas	3.09	352	Pn	Pn	10 34 23.8	+0.1
AC05	El Transito	3.23	359	⇓iP	Pn	10 34 26.3	+0.8
AC05				eS	Sn	10 35 04.1	+0.7
AC05				IAML		10 35 05.3	
	comp=E,762nm,0.3s						
AC05	El Transito	3.23	359	Pn	Pn	10 34 26.6	+1.2
AC04	Llanos de Chal	3.94	349	eP	Pn	10 34 34.6	-0.1
AC04				eS	Sn	10 35 17.4	-2.6
AC04	Llanos de Chal	3.94	349	Pn	Pn	10 34 34.9	+0.2
GO03	Copiap	4.47	359	eP	Pn	10 34 41.4	-0.6
GO03				eS	Sn	10 35 29.8	-3.2
GO03	Copiap	4.47	359	Pn	Pn	10 34 41.8	-0.1
BI02	San Fabin de	4.66	191	eP	Pn	10 34 43.6	-0.9
BI02	San Fabin de	4.66	191	Pn	Pn	10 34 43.6	-0.9
BI03	Tigo	5.30	205	eP	Pn	10 34 50.1	-2.8
BI03	Tigo	5.30	205	Pn	Pn	10 34 51.9	-1.1
AC02	Maricunga	5.31	10	Pn	Pn	10 34 53.1	-0.5
AC01	Pan de Azucar	5.92	356	Pn	Pn	10 34 59.9	-1.7
GO02	Mina Guanaco	6.91	5	Pn	Pn	10 35 13.2	-2.1
LC01	Cunco	6.94	191	Pn	Pn	10 35 13.4	-1.9
H03N1	Juan Fernandez	7.47	257	T	T	10 42 14.8	
	baz=86,slow=73,SNR=260						
H03N3	Juan Fernandez	7.48	257	T	T	10 42 15.7	
	baz=86,slow=73,SNR=278						
H03N2	Juan Fernandez	7.49	257	T	T	10 42 16.2	
	baz=86,slow=73,SNR=314						
H03S1	Juan Fernandez	7.53	254	T	T	10 42 05.7	
	baz=84,slow=75,SNR=22						
H03S3	Juan Fernandez	7.53	254	T	T	10 42 07.0	
	baz=84,slow=75,SNR=16						
H03S2	Juan Fernandez	7.55	254	T	T	10 42 02.6	
	baz=84,slow=75,SNR=16						
PB10	IPOC Station P	8.54	358	Pn	Pn	10 35 34.0	-3.0
PLCA	Paso Flores	8.64	182	P	Pn	10 35 38.3	-0.1
	comp=E,0.1nm,0.3s,baz=354,slow=15,SNR=5.0						
PLCA	Paso Flores	8.64	182		Pn	10 35 37.7	-0.7
LVC	Limon Verde	9.50	7	P	Pn	10 35 45.3	-5.1
	comp=E,0.6nm,0.3s,baz=156,slow=8.9,SNR=7.6						
LVC				S	Sn	10 37 27.0	-8.5
	comp=E,0.2nm,0.3s,baz=90,slow=20,SNR=2.0						
LVC	Limon Verde	9.50	7		Pn	10 35 46.0	-4.4
CPUP	Villa Florida	12.61	66	P	Pn	10 36 28.8	-2.7
	comp=E,0.2nm,0.3s,baz=291,slow=8.6,SNR=4.9						
MNMC	Minye Minye	12.91	3		Pn	10 36 36.0	+0.3
SIV	San Ignacio	18.04	29	P	P	10 37 38.1	-0.7
	comp=E,0.6nm,0.3s,baz=191,slow=7.8,SNR=10						
EFI	East Falkland	21.51	159	P	P	10 38 15.9	-0.1
SAML	Samuel	23.92	17	P	P	10 38 40.7	+0.8
SAML				IAmb	IAmb	10 38 42.1	
	comp=Z,5.6nm,0.7s						
BDFB	Brasilia	25.97	56	P	P	10 38 58.3	-0.5
	comp=Z,2.3nm,0.5s,baz=180,slow=9.1,SNR=2.3						
SNAA	Sanae	52.78	158	P	P	10 42 40.3	+0.8
QSPA	South Pole Qui	58.15	180	P	P	10 43 16.1	-2.1
QSPA				IAmb	IAmb	10 43 38.1	
	comp=Z,4.3nm,1.4s						
TXAR	Lajitas Array	68.86	329	P	P	10 44 31.4	+2.5
	comp=Z,0.7nm,0.6s,baz=155,slow=9.0,SNR=9.0						
TORD	Torodi Ar. Bea	82.09	69	P	P	10 45 45.3	+0.6
	comp=Z,0.9nm,0.7s,baz=262,slow=5.5,SNR=2.8						
TORD	Torodi Ar. Bea	82.09	69	IAmb	IAmb	10 45 45.9	
	comp=Z,0.9nm,0.8s						
PDAR	Pinedale Array	82.78	332	P	P	10 45 49.1	+1.2
	comp=Z,0.3nm,0.6s,baz=135,slow=8.8,SNR=3.6						
NVAR	Mina Array Bea	83.22	324	P	P	10 45 52.7	+2.4
	comp=Z,0.5nm,0.8s,baz=187,slow=6.4,SNR=3.6						
H11S2	WAKE ISLAND Hy	127.35	270	T	T	13 12 06.9	
	baz=117,slow=75,SNR=9.1						
H11S1	WAKE ISLAND Hy	127.36	270	T	T	13 12 09.0	
	baz=117,slow=75,SNR=10.0						
H11S3	WAKE ISLAND Hy	127.36	270	T	T	13 12 08.3	
	baz=117,slow=75,SNR=6.4						
ZALV	Zalesovo Beam	151.78	32	PKPbc	PKiKP	10 53 18.7	+1.1
	comp=Z,3.3nm,0.4s,baz=299,slow=3.0,SNR=16						
ZALV	Zalesovo Beam	151.78	32		PKiKP	10 53 18.4	+0.7
MKAR	Makanchi Array	154.33	47	PKPbc	PKiKP	10 53 24.0	+0.8
	comp=Z,0.3nm,0.7s,baz=318,slow=1.9,SNR=3.0						
MKAR				PKPab	PKPab	10 53 39.0	+1.2
	comp=Z,0.2nm,0.6s,baz=298,slow=5.1,SNR=4.8						

IDC 22 11:03:28.7±2.8, 7°.15S×129°.73E, h106^{km}±38^{km}, mb3.5/1, mb1 3.6/5, mb1mx3.2/47, mbtmp3.9/5, Error ellipse: s-maj=67.5km s-min=22.0km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.43	14	P	Pn	11 05 01.1	+0.2
	1.5nm,0.3s,baz=176,slow=19,SNR=6.1						
SIJI				S	Sn	11 06 06.8	-6.0
	1.8nm,0.3s,baz=123,slow=23,SNR=7.5						
FITZ	Fitzroy Crossi	11.58	200	P	Pn	11 06 10.8	+0.1
	1.3nm,0.3s,baz=24,slow=8.4,SNR=38						
FITZ				S	Sn	11 08 11.7	-6.5
	1.9nm,0.3s,baz=219,slow=15,SNR=8.8						
WRA	Warramunga Arr	13.48	161	P	Pn	11 06 34.2	-1.5
	0.9nm,0.3s,baz=343,slow=13,SNR=29						
WRA				S	Sn	11 08 55.9	-8.3
	1.3nm,0.3s,baz=334,slow=22,SNR=12						
ASAR	Alice Springs	16.90	167	P	P	11 07 20.4	+1.2
	0.4nm,0.3s,baz=336,slow=8.6,SNR=19						
ASAR				S	Sn	11 10 17.4	-10
	0.2nm,0.3s,baz=351,slow=28,SNR=3.2						
MKAR	Makanchi Array	68.20	327	P	P	11 14 17.8	-0.1
	0.5nm,0.4s,baz=118,slow=8.1,SNR=12						

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*NEIC **22** 11:12:08.8±1.8, 56°.8S±0°.1×25°.4W±0°.2, h10^{km}±1^{km}, mb4.9/34, Error ellipse: s-maj=20.7km s-min=16.3km az=30.0*

*IDC **22** 11:12:11.9±3.2, 56°.80S×25°.60W, h26^{km}±20^{km}, mb4.3/12, mb1 4.4/12, mb1mx4.3/19, mbtmp4.5/12, MS3.8/8, Ms1 3.8/8, ms1mx3.6/16, Error ellipse: s-maj=17.7km s-min=16.5km az=89.0*

ISC 22 11:12:09.1±0.3**, 56°.80S**±0°.07×**25°.46W**±0°.08**, h10^{km}, n135, σ1ˢ.26**/128**, mb4.7**/23**, MS3.8**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.75	287	Pn	Pn	11 13 48.8	+0.8
VNA1	Neumayer--Stat	15.74	159	P	Pn	11 15 50.9	+0.3
VNA3	Neumayer Olymp	15.96	161	P	Pn	11 15 52.9	-0.6
VNA2	Neumayer--Watz	16.14	158	P	Pn	11 15 55.3	-0.3
	baz=324,slow=16						
SNAA	Sanae	17.66	156	P	P	11 16 16.5	+0.6
SNAA	Sanae	17.66	156		Pn	11 16 15.0	0.0
EFI	East Falkland	19.61	271	P	Pn	11 16 38.9	+0.4
EFI				IAmb	IAmb	11 16 40.2	
	comp=Z,58nm,1.1s						
PMSA	Palmer Station	20.15	231	P	P	11 16 44.9	+1.9
	comp=Z,17nm,0.8s,baz=68,slow=5.1,SNR=4.6						
PMSA				LR	LR	11 23 38.3	
	comp=Z,335nm,20.3s,baz=117,slow=34						
PMSA	Palmer Station	20.15	231	IAmb	IAmb	11 17 01.5	
	comp=Z,158nm,1.4s						
BELA	Belgrano 2	21.41	185	P	P	11 16 56.6	+0.1
GO09	Cerro Castillo	27.63	261	P	P	11 17 55.8	-0.7
GO09				IAmb	IAmb	11 18 24.1	
	comp=Z,41nm,1.4s						
PLTB	Pedras Altas	31.71	310	*e*P	P	11 18 32.8	-0.1
PLCA	Paso Flores	33.07	280	P	P	11 18 43.9	-0.9
	comp=Z,1.5nm,0.9s,baz=108,slow=8.2,SNR=3.7						
PLCA				PcP	PcP	11 21 28.8	+0.8
	comp=Z,1.0nm,0.8s,baz=34,slow=3.6,SNR=2.9						
PLCA				LR	LR	11 33 40.3	
	comp=Z,171nm,18.3s,baz=132,slow=39						
PLCA	Paso Flores	33.07	280	IAmb	IAmb	11 18 47.4	
	comp=Z,4.4nm,1.2s						
QSPA	South Pole Qui	33.45	180	P	P	11 18 48.3	+0.4
	comp=Z,14nm,0.6s,baz=216,slow=2.1,SNR=153						
QSPA	South Pole Qui	33.45	180	P	P	11 18 48.2	+0.4
QSPA				IAmb	IAmb	11 18 49.6	
	comp=Z,16nm,0.6s						
CPUP	Villa Florida	38.03	310	P	P	11 19 28.1	+0.7
	comp=Z,16nm,0.9s,baz=150,slow=7.7,SNR=20						
CPUP				PcP	PcP	11 21 41.5	-1.1
	comp=Z,1.2nm,0.5s,baz=109,slow=2.5,SNR=2.9						
CPUP				LR	LR	11 37 01.4	
	comp=Z,74nm,18.1s,baz=166,slow=39						
CPUP	Villa Florida	38.03	310	P	P	11 19 27.7	+0.3
CPUP				IAmb	IAmb	11 19 28.6	
	comp=Z,12nm,0.8s						
MT02	Curacav	38.93	287	P	P	11 19 34.0	-0.8
MT02				IAmb	IAmb	11 19 35.9	
	comp=Z,31nm,1.4s						
MAW	Mawson	38.97	142	P	P	11 19 34.6	-0.2
	comp=Z,4.9nm,1.0s,baz=223,slow=8.8,SNR=2.1						
MAW				LR	LR	11 33 42.5	
	comp=Z,110nm,20.5s,baz=240,slow=33						
TRCB	Terra Rica	39.34	318	*e*P	P	11 19 40.4	+2.0
SJMB	Sao Joao De Ma	39.82	336	*e*P	P	11 19 44.3	+1.9
NAN01	Guarapari, ES	40.42	338	*e*P	P	11 19 48.7	+1.3
CO01	Juntas del Tor	40.99	292	P	P	11 19 50.0	-2.3
AC05	El Transito	42.00	292	P	P	11 19 59.9	-0.6
IPMB	Ipameri, GO	42.34	327	*e*P	P	11 20 05.5	+2.2
AQDB	Aquidauana	42.61	316	*e*P	P	11 20 06.0	+0.8
AC04	Llanos de Chal	42.92	292	P	P	11 20 07.2	-0.6
AC04				IAmb	IAmb	11 20 10.5	
	comp=Z,18nm,1.2s						
AC02	Maricunga	43.07	295	P	P	11 20 09.8	+0.2
AC01	Pan de Azucar	44.37	294	P	P	11 20 19.0	-0.5
AC01				IAmb	IAmb	11 20 34.3	
	comp=Z,22nm,1.4s						
BDFB	Brasilia	44.50	328	P	P	11 20 21.7	+0.9
	comp=Z,2.7nm,0.5s,baz=148,slow=7.2,SNR=2.9						
BDFB				LR	LR	11 38 43.8	
	comp=Z,131nm,19.0s,baz=126,slow=36						
GO02	Mina Guanaco	44.69	296	P	P	11 20 21.9	-0.4
GO02				IAmb	IAmb	11 20 24.3	
	comp=Z,11nm,0.5s						
PP1B	Ponte de Pedra	44.93	318	*e*P	P	11 20 25.5	+1.5
BOSA	Boshof	45.24	73	P	P	11 20 29.2	+2.6
	comp=Z,3.7nm,1.0s,baz=225,slow=10.0,SNR=3.5						
BOSA				LR	LR	11 36 13.1	
	comp=Z,186nm,18.9s,baz=186,slow=32						
PB14	IPOC Station P	45.54	296	P	P	11 20 28.0	-1.1
ARAG	Araguaiana, MT	45.62	323	*e*P	P	11 20 31.5	+2.0
VNDA	Vanda	45.86	182	P	P	11 20 32.1	+1.3
	comp=Z,4.3nm,0.5s,baz=184,slow=7.2,SNR=39						
VNDA				LR	LR	11 37 46.2	
	comp=Z,99nm,19.6s,baz=208,slow=34						
VNDA	Vanda	45.86	182	P	P	11 20 31.6	+0.8
LVC	Limon Verde	46.51	299	P	P	11 20 37.8	+1.0
LVC	Limon Verde	46.51	299	*e*P	P	11 20 38.6	+1.7
PB10	IPOC Station P	46.54	296	P	P	11 20 36.5	-0.2
PB10				IAmb	IAmb	11 20 37.4	
	comp=Z,17nm,1.2s						
PB04	IPOC Station P	47.34	298	P	P	11 20 43.2	0.0
PB09	IPOC Station P	47.36	299	P	P	11 20 44.5	+1.2
PB07	IPOC Station P	47.73	298	P	P	11 20 46.6	+0.4
LBTB	Lobatse	48.33	71	P	P	11 20 53.4	+2.6
	comp=Z,3.1nm,0.8s,baz=245,slow=5.9,SNR=3.1						
H10S2	ASCENSION HYDR	48.47	14	T	T	12 13 50.1	
	baz=32,slow=74,SNR=2.7						
H10S3	ASCENSION HYDR	48.47	14	T	T	12 13 49.0	
	baz=188,slow=74,SNR=6.1						
PATCX	Punta Patache	48.63	299	P	P	11 20 53.5	+0.5
PATCX				IAmb	IAmb	11 20 54.4	
	comp=Z,13nm,0.7s						
PB08	IPOC Station P	48.73	300	P	P	11 20 55.1	+1.0
SNDB	Serra Nova Dou	48.95	326	*e*P	P	11 20 57.7	+2.2
TSUM	Tsumeb	49.24	58	P	P	11 20 57.9	+0.2
TSUM				IAmb	IAmb	11 21 00.7	
	comp=Z,12nm,1.4s						
H10N1	ASCENSION HYDR	49.59	14	T	T	12 15 15.0	
	baz=189						
H10N3	ASCENSION HYDR	49.59	14	T	T	12 15 14.1	
	baz=189,slow=74,SNR=5.2						
H10N2	ASCENSION HYDR	49.60	14	T	T	12 15 15.4	
	baz=189,slow=74,SNR=2.7						
SMTB	Santa Maria do	50.85	331	*e*P	P	11 21 11.8	+1.9
VILB	Vilhena	51.19	315	*e*P	P	11 21 13.7	+1.2
CASY	Casey	52.87	159	P	P	11 21 25.5	+1.1
CASY				IAmb	IAmb	11 21 25.8	
	comp=Z,15nm,0.8s						
PRPB	Parauapebas	54.02	330	*e*P	P	11 21 35.7	+2.3
NPGB	Novo Progresso	54.89	323	*e*P	P	11 21 40.5	+0.8
ETMB	Extrema	56.48	310	*e*P	P	11 21 51.7	+0.5
ITTB	Itaituba	57.53	323	*e*P	P	11 21 59.2	+0.7
MALB	Monte Alegre	59.43	326	*e*P	P	11 22 13.5	+1.7
MCPB	Macapa, AP	60.19	329	*e*P	P	11 22 18.2	+1.1
MACA	Manacapuru-AM	60.36	319	*e*P	P	11 22 19.1	+0.8
CZSB	Cruzeiro do Su	61.20	304	*e*P	P	11 22 23.6	-0.3
DBIC	Dimbokro	65.47	23	P	P	11 22 51.6	-0.6
	comp=Z,1.5nm,0.5s,baz=182,slow=7.5,SNR=3.9						
DBIC				LR	LR	11 46 32.7	
	comp=Z,47nm,19.5s,baz=316,slow=32						
MACC	Macarena, Meta	70.48	308	*e*P	P	11 23 23.4	-0.3
OTAV	Otavalo	70.87	302	P	P	11 23 26.1	-0.6
OTAV				IAmb	IAmb	11 23 26.2	
	comp=Z,8.0nm,0.6s						
GARC	Garzon, Huila	71.25	306	*e*P	P	11 23 28.4	-0.4
BETC	Betania	71.66	306	*e*P	P	11 23 31.2	+0.2
MARP	Paez Belalcaza	72.04	306	*e*P	P	11 23 34.2	+0.7
CHIC	Chingaza	72.66	309	*e*P	P	11 23 38.7	+1.3
ORTC	Ortega, Tolima	72.67	307	*e*P	P	11 23 35.9	-1.1
TOA0	Torodi Ar. Sit	73.26	28	P	P	11 23 39.7	-0.7
TORD	Torodi Ar. Bea	73.26	28	P	P	11 23 40.2	-0.1
	comp=Z,3.0nm,0.6s,baz=205,slow=6.1,SNR=13						
TORD	Torodi Ar. Bea	73.26	28	P	P	11 23 40.0	-0.3
RUSC	La Rusia	73.52	310	*e*P	P	11 23 39.2	-3.3
GUY2C	Guyana, Caldas	73.90	308	*e*P	P	11 23 44.6	-0.1
NORC	Norcasia	73.99	308	*e*P	P	11 23 42.9	-1.9
PLMC	San Jos del P	74.02	307	*e*P	P	11 23 44.9	-0.1
PAMC	Pamplona, Colo	74.66	311	*e*P	P	11 23 49.0	-0.1
PTBC	PUERTO BERRIO,	74.68	309	*e*P	P	11 23 46.8	-1.9
HELC	Santa Helena	74.83	308	*e*P	P	11 23 49.0	-1.1
SDV	Santo Domingo	75.22	314	P	P	11 23 53.1	+1.0
SDV				IAmb	IAmb	11 24 04.7	
	comp=Z,7.5nm,0.8s						
SDV	Santo Domingo	75.22	314	*e*P	P	11 23 52.6	+0.6
SDV	Santo Domingo	75.22	314	*e*P	P	11 23 52.8	+0.8
ZARC	Zaragoza, Cauc	75.71	309	*e*P	P	11 23 53.5	-1.2
UREC	San Jos de Ur	76.23	309	*e*P	P	11 23 56.9	-0.8
SMLC	San Martn de	76.55	310	*e*P	P	11 23 58.4	-1.0
LTZ	Lake Taylor	79.67	193	P	P	11 24 16.1	-0.4
BFZ	Birch Farm	81.17	197	P	P	11 24 24.9	+0.4
MRZ	Mangatainoka R	81.29	196	P	P	11 24 25.3	+0.1
ANWZ	Angora Road	81.35	197	P	P	11 24 20.7	-4.7
PRHZ	Porangahau	81.51	197	P	P	11 24 16.0	-10
PXZ	Pawanui	81.70	197	P	P	11 24 16.6	-11
KAHZ	Kahuranaki	81.93	197	P	P	11 24 22.1	-6.6
BKZ	Black Stump Fm	82.61	197	P	P	11 24 32.6	+0.4
BKZ	Black Stump Fm	82.61	197	P	P	11 24 32.5	+0.3
LREZ	Lake Rotokare	82.64	195	P	P	11 24 43.2	+11
PKVZ	Pokaka	82.67	196	P	P	11 24 33.2	+0.7
OTVZ	Oturere	82.74	196	P	P	11 24 33.9	+0.8
ETVZ	East Tongariro	82.76	196	P	P	11 24 33.5	+0.4
TMVZ	Te Maari	82.78	196	P	P	11 24 33.9	+0.6
RIGZ	Rimuhau	82.85	198	P	P	11 24 34.8	+1.3
VRZ	Vera Road	82.92	196	P	P	11 24 33.8	0.0
MWZ	Matawai	83.25	198	P	P	11 24 36.5	+0.9
HIZ	Hauiti	83.50	196	P	P	11 24 35.7	-1.1
MTO3	Montecristo	88.39	299	P	P	11 25 01.2	-0.1
MTO3				IAmb	IAmb	11 25 06.1	
	comp=Z,6.3nm,0.8s						
ASAR	Alice Springs	97.97	161	P	P	11 25 44.5	-0.9
	comp=Z,1.4nm,0.9s,baz=185,slow=4.3,SNR=15						
MVU	Marysvale	119.56	296	PKPdf	PKiKP	11 31 00.1	+1.5
PDAR	Pinedale Array	121.55	301	PKP	PKPdf	11 31 01.3	-1.0
	comp=Z,0.3nm,0.4s,baz=114,slow=5.8,SNR=6.4						
NVAR	Mina Array Bea	122.57	291	PKP	PKPdf	11 31 02.3	-2.0
	comp=Z,0.4nm,0.6s,baz=99,slow=2.9,SNR=3.8						
CMAR	Chiang Mai Arr	123.91	109	PKP	PKPdf	11 31 06.9	-0.3
	comp=Z,1.9nm,0.9s,baz=237,slow=4.0,SNR=8.4						
CMAR	Chiang Mai Arr	123.91	109		PKPdf	11 31 06.5	-0.7
FINES	FINESS Array B	124.61	27	PKP	PKPdf	11 31 06.9	-0.3
	comp=Z,1.2nm,0.6s,baz=169,slow=1.9,SNR=8.3						
MSO	Missoula	126.66	301	PKPdf	PKiKP	11 31 12.4	+0.2
AKTO	Aktyubinsk	127.02	53	PKP	PKPdf	11 31 11.6	-0.5
	comp=Z,0.7nm,0.4s,baz=211,slow=6.6,SNR=4.5						
KKAR	Karatay Array	127.63	67	PKPdf	PKPdf	11 31 11.3	-2.3
KSH	Kashi	127.85	74	PKP	PKiKP	11 31 17.3	+2.4
AAK	Ala-Archa	129.33	70	PKP	PKPdf	11 31 16.2	-0.9
	comp=Z,0.8nm,0.5s,baz=157,slow=4.7,SNR=3.9						
ARCES	ARCESS Array B	131.29	21	PKP	PKPdf	11 31 19.5	-0.3
	comp=Z,2.7nm,0.9s,baz=128,slow=1.5,SNR=5.5						
MKAR	Makanchi Array	136.22	71	PKP	PKPdf	11 31 27.6	-2.1
	comp=Z,0.9nm,1.0s,baz=239,slow=0.7,SNR=4.6						
CD2	Chengdu	136.54	105	PKP	PKPdf	11 31 31.0	+0.1
KURBB	Kurchatov Arra	136.76	64	PKP	PKiKP	11 31 31.7	-0.6
	comp=Z,0.4nm,0.8s,baz=237,slow=1.6,SNR=5.9						
KURK	Kurchatov	136.86	64		PKiKP	11 31 31.7	-0.8
WMQ	Urumqi	137.12	78	*e*PKP	PKiKP	11 31 32.6	-0.8
WMQ				AMB	AMB		
	comp=Z,110nm,4.1s						
YKA	Yellowknife Ar	137.37	317	PKhKP	PKPdf	11 31 26.1	-5.2
	comp=Z,3.1nm,0.8s,baz=118,slow=3.0,SNR=21						
YKA				PKP	pPKPdf	11 31 31.4	-1.9
	comp=Z,2.7nm,0.6s,baz=117,slow=3.3,SNR=38						
YKA				PP	PP	11 34 14.4	-3.3
	comp=Z,0.3nm,0.7s,baz=115,slow=7.1,SNR=3.7						
YKA				SKPbc	SKPbc	11 35 02.6	-1.7
	comp=Z,0.3nm,0.8s,baz=116,slow=1.6,SNR=4.4						
GTA	Gaotai	140.73	92	*e*PKP	PKPdf	11 31 36.8	-1.6
NJ2	Nanjing	145.13	120	*e*PKPbc	PKPdf	11 31 46.3	+0.1
HHC	Hu-ho-hao-te	148.15	101	*e*PKPbc	PKPdf	11 31 52.3	+1.1
HHC				LR	LR		
	comp=Z,140nm,22.0s						
HHC				LR	LR		
	comp=Z,140nm,21.4s						
SONM	Songino Array	149.82	86	PKPbc	PKPbc	11 31 58.0	-0.5
	comp=Z,6.1nm,0.6s,baz=222,slow=3.4,SNR=18						
SONM	Songino Array	149.82	86		PKPbc	11 31 57.1	-1.4
TLY	Talaya	150.41	78	PKPbc	PKPbc	11 31 59.4	-0.2
	comp=Z,2.0nm,0.5s,baz=278,slow=7.1,SNR=4.0						
ILAR	Eielson Array	151.33	310	PKPbc	PKPbc	11 32 01.3	0.0
	comp=Z,12nm,0.9s,baz=134,slow=1.9,SNR=74						
PETK	Petropavlovsk-	175.87	208	PKPab	PKPab	11 33 56.4	-0.7
	comp=Z,2.8nm,0.9s,baz=138,slow=6.6,SNR=3.9						

IDC 22 11:15:15.3±5.7**, 27°.99N**×**89°.10E, h0^{km}, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.3**/41**, mbtmp3.4**/4**, ML3.4**/1**, Error ellipse: s-maj=387.7km s-min=24.5km az=63.0, Bhutan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.52	346	P	Pn	11 19 45.5	0.0
	0.1nm,0.3s,baz=172,slow=11,SNR=6.8						
KURBB	Kurchatov Arra	23.99	343	P	P	11 20 30.8	-0.7
	0.7nm,0.8s,baz=166,slow=9.4,SNR=4.8						
WRA	Warramunga Arr	64.69	132	P	P	11 25 55.6	+0.2
	0.7nm,0.8s,baz=326,slow=6.6,SNR=5.6						
ASAR	Alice Springs	67.11	135	P	P	11 26 10.8	-0.2
	0.4nm,0.6s,baz=318,slow=5.7,SNR=5.4						

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*NOU **22** 11:31:37.5, 38°.20S×175°.73E, h233^{km}, MLv3.5, North Island, New Zealand*

WEL 22 11:31:40.6, 38°S±2°×**17°6E**±°**, h211**^{km}±6^{km}**, M2.7**/54**, MLv2.7**/54**, Error ellipse: s-maj=0.0km s-min=0.0km az=27.2, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.22	244	P	Pn	11 32 08.5	+0.3
KMRZ	Kaimai	0.41	17	P	Pn	11 32 08.8	+0.1
KARZ	Kaharoa	0.42	59	P	Pn	11 32 08.7	0.0
TOZ	Tahuroa Road	0.55	336	P	Pn	11 32 09.4	+0.2
TGRZ	Tauranga	0.63	37	P	Pn	11 32 09.1	-0.4
HATZ	Hinemaiaia	0.70	160	P	Pn	11 32 09.6	-0.1
OPRZ	Ohinepanea	0.72	58	P	Pn	11 32 09.6	-0.2
KATZ	Kakaramea	0.74	186	P	Pn	11 32 10.4	+0.3
MRHZ	Matea Rd	0.78	141	P	Pn	11 32 09.9	-0.2
MRHZ				S	S	11 32 31.3	-1.9
HIZ	Hauiti	0.78	249	P	Pn	11 32 10.4	+0.3
MUGZ	Murupara	0.81	108	P	Pn	11 32 10.1	-0.2
KRVZ	Karewarewa	0.87	188	P	Pn	11 32 10.8	+0.1
TMVZ	Te Maari	0.88	184	P	Pn	11 32 11.0	+0.2
WTVZ	West Tongariro	0.89	190	P	Pn	11 32 10.9	0.0
ETVZ	East Tongariro	0.90	184	P	Pn	11 32 11.1	+0.2
OTVZ	Oturere	0.93	186	P	Pn	11 32 11.2	+0.1
OTVZ				S	S	11 32 34.2	-0.9
NGZ	Ngauruhoe	0.95	189	P	Pn	11 32 11.4	+0.1
RTZ	Ruatahuna	1.01	113	P	Pn	11 32 11.4	-0.1
RTZ				S	S	11 32 36.0	+0.4
MTHZ	Maungataniwha	1.03	127	P	Pn	11 32 11.8	+0.1
MTHZ				S	S	11 32 34.1	-1.7
FWVZ	Far West T-bar	1.04	190	P	Pn	11 32 11.8	-0.1
TUVZ	Tukino	1.04	186	P	Pn	11 32 11.8	0.0
URZ	Urewera	1.04	92	P	Pn	11 32 11.2	-0.5
BKZ	Black Stump Fm	1.08	150	P	Pn	11 32 11.8	-0.2
WNVZ	Wahianoa	1.10	188	P	Pn	11 32 12.2	-0.1
PKVZ	Pokaka	1.11	198	P	Pn	11 32 12.1	-0.1
MOVZ	Moawhango	1.17	181	P	Pn	11 32 12.2	-0.4
NMHZ	Naumai	1.17	138	P	Pn	11 32 13.5	+0.8
MTVZ	Mangateitei	1.18	192	P	Pn	11 32 12.6	0.0
VRZ	Vera Road	1.20	222	P	Pn	11 32 13.1	+0.3
RAHZ	Arahi	1.22	124	P	Pn	11 32 13.5	+0.6
MKAZ	Moumakai	1.23	336	P	Pn	11 32 13.3	+0.2
BHHZ	Black Hill Sta	1.27	170	P	Pn	11 32 13.0	-0.4
KWHZ	Kaweka Forest	1.29	158	P	Pn	11 32 13.6	+0.1
RAGZ	Rawiri	1.31	102	P	Pn	11 32 13.9	+0.2
SNGZ	Shannon Statio	1.33	115	P	Pn	11 32 14.2	+0.3
MWZ	Matawai	1.37	95	P	Pn	11 32 14.0	-0.2
ARHZ	Aropaoanui	1.40	138	P	Pn	11 32 14.8	+0.5
MCHZ	McNeill Hill	1.40	150	P	Pn	11 32 15.0	+0.7
WHHZ	Waihua	1.41	127	P	Pn	11 32 15.0	+0.6
ETAZ	East Tamaki Re	1.45	332	P	Pn	11 32 14.9	+0.1
KRHZ	Kereru	1.48	162	P	Pn	11 32 15.0	0.0
AWAZ	Awhitu Peninsu	1.48	322	P	Pn	11 32 14.7	-0.3
KUZ	Kuaotunu	1.49	358	P	Pn	11 32 15.1	0.0
RUGZ	Raukumara Rang	1.52	80	P	Pn	11 32 14.3	-1.2
WIAZ	Waiheke Island	1.53	340	P	Pn	11 32 15.7	+0.2
WTAZ	Waiatarua	1.62	323	P	Pn	11 32 16.9	+0.6
RIGZ	Rimuhau	1.62	108	P	Pn	11 32 16.6	+0.3
MBAZ	Motutapu North	1.62	334	P	Pn	11 32 16.3	0.0
TKGZ	Te Karaka	1.63	98	P	Pn	11 32 16.9	+0.6
WAZ	Wanganui	1.64	202	P	Pn	11 32 16.3	-0.1
HAZ	Te Kaha	1.65	74	P	Pn	11 32 15.5	-0.9
KNZ	Kokohu	1.67	119	P	Pn	11 32 16.9	+0.2
NEZ	North Egmont	1.68	231	P	Pn	11 32 17.8	+0.9
PKE	Pukeiti	1.70	235	P	Pn	11 32 17.7	+0.7
PNHZ	Pukenui	1.71	169	P	Pn	11 32 16.7	-0.4
TWGZ	Tauwhareparae	1.73	89	P	Pn	11 32 17.7	+0.4
CKHZ	Cape Kidnapper	1.74	145	P	Pn	11 32 17.7	+0.4
KHEZ	Kahui Hut	1.75	232	P	Pn	11 32 18.1	+0.7
KAHZ	Kahuranaki	1.77	152	P	Pn	11 32 18.0	+0.3
PRGZ	Paritu Road	1.78	113	P	Pn	11 32 17.9	+0.2
NBEZ	Newall Road No	1.82	235	P	Pn	11 32 18.8	+0.7
TSZ	Takapari Road	1.83	176	P	Pn	11 32 17.8	-0.4
PKGZ	Pakihiroa	1.84	80	P	Pn	11 32 18.2	-0.2
MHGZ	Mahia Peninsul	1.90	120	P	Pn	11 32 19.3	+0.5
WPHZ	Waipukurau	1.90	165	P	Pn	11 32 18.5	-0.3
CNGZ	Carnagh Statio	1.92	98	P	Pn	11 32 19.8	+0.7
PXZ	Pawanui	1.98	155	P	Pn	11 32 19.4	-0.2
OHWZ	Ohakea	2.00	190	P	Pn	11 32 19.8	0.0
DVHZ	Dannevirke	2.08	172	P	Pn	11 32 19.9	-0.8
MXZ	Matakaoa Point	2.10	72	P	Pn	11 32 20.9	0.0
WMGZ	Waiomatatini S	2.12	80	P	Pn	11 32 20.9	-0.2
PRHZ	Porangahau	2.13	162	P	Pn	11 32 20.7	-0.5
POWZ	Post Office Ro	2.15	180	P	Pn	11 32 20.6	-0.8
ANWZ	Angora Road	2.29	167	P	Pn	11 32 22.2	-0.6
PRWZ	Pori Road	2.32	177	P	Pn	11 32 22.4	-0.7
MRZ	Mangatainoka R	2.43	184	P	Pn	11 32 23.1	-1.2
BFZ	Birch Farm	2.47	172	P	Pn	11 32 23.6	-1.1
TIWZ	Tintock	2.54	178	P	Pn	11 32 24.4	-1.1
OGWZ	Otaki Gorge	2.62	190	P	Pn	11 32 25.4	-1.0
HOWZ	Holdsworth Sta	2.67	184	P	Pn	11 32 25.4	-1.5
KIW	Kapiti Island	2.71	194	P	Pn	11 32 26.0	-1.4
TMWZ	Te Maipa	2.87	178	P	Pn	11 32 27.7	-1.6
CAW	Cannon Point	2.92	191	P	Pn	11 32 28.3	-1.5
MTW	Mount Morrison	2.93	184	P	Pn	11 32 28.1	-1.8
DUWZ	D'Urville Isla	2.94	209	P	Pn	11 32 28.5	-1.6
WEL	Wellington	3.15	194	P	Pn	11 32 30.7	-1.7
PAWZ	Paruwai Farm	3.16	185	P	Pn	11 32 30.6	-1.9
TRWZ	Traveller	3.16	181	P	Pn	11 32 30.8	-1.7
TCW	Tory Channel	3.19	201	P	Pn	11 32 31.4	-1.5
MSWZ	Moikau Station	3.21	187	P	Pn	11 32 31.1	-2.0
BHW	Baring Head	3.25	192	P	Pn	11 32 31.7	-1.9
PLWZ	Palliser	3.36	187	P	Pn	11 32 32.7	-2.2
TUWZ	Tuamarina	3.49	203	P	Pn	11 32 34.6	-1.8
NNZ	Nelson	3.51	211	P	Pn	11 32 34.4	-2.3
QRZ	Quartz Range	3.61	223	P	Pn	11 32 35.2	-2.7
BSWZ	Blackbirch Sta	3.77	202	P	Pn	11 32 38.1	-1.8
THZ	Tophouse	4.16	211	P	Pn	11 32 41.8	-2.9
KHZ	Kahutara	4.52	202	P	Pn	11 32 47.1	-1.9
DSZ	Denniston Nort	4.65	220	P	Pn	11 32 47.2	-3.6
GVZ	Greta Valley S	5.17	203	P	Pn	11 32 54.9	-2.4
LTZ	Lake Taylor	5.27	209	P	Pn	11 32 55.5	-3.2
AMCZ	Amberley	5.48	205	P	Pn	11 32 58.7	-2.6
INZ	Inchbonnie	5.58	215	P	Pn	11 32 59.4	-3.0
OXZ	Oxford	5.83	208	P	Pn	11 33 02.0	-3.7
OKCZ	Okains Bay	5.86	200	P	Pn	11 33 03.4	-2.7
MQZ	McQueen's Vall	5.96	202	P	Pn	11 33 03.5	-3.8
AKCZ	Akaroa Harbour	6.04	200	P	Pn	11 33 05.5	-2.8
RACZ	Rakaia	6.14	206	P	Pn	11 33 06.2	-3.4
WACZ	Wakanui South	6.43	206	P	Pn	11 33 10.0	-3.4
RPZ	Rata Peaks	6.54	212	P	Pn	11 33 11.8	-3.1
ARCZ	Arundel	6.69	210	P	Pn	11 33 13.2	-3.6
TMZ	Timaru	7.12	209	P	Pn	11 33 18.8	-3.5
ODZ	Otahua Downs	7.82	208	P	Pn	11 33 28.6	-2.7

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*IDC **22** 11:39:52.9±1.7, 62°.99N×28°.33E, h0^{km}, mb1 3.0/3, mb1mx2.8/49, mbtmp3.0/3, ML2.1/3, Error ellipse: s-maj=24.5km s-min=7.0km az=108.0*

*HEL **22** 11:39:54.5±0.1, 63°.13N×27°.70E, h0^{km}, ML1.9, Explosion*

ISC 22 11:39:54.5±0.9**, 63°.14N**±0°.02×**27°.62E**±0°.05**, h0^{km}, n26, σ1ˢ.52**/38**, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUF	Sumiainen	0.79	238	PG	Pg	11 40 09.2	-0.4
KAF	Kangasniemi	1.20	211	PG	Pg	11 40 16.0	-1.4
	baz=36						
KAF				SG	Sg	11 40 32.2	-0.7
KEF	Keuruu	1.60	234	PG	Pn	11 40 23.8	-0.2
KEF				MSG		11 40 43.2	
	comp=Z,6.2nm,0.2s						
KEF				SG	Sg	11 40 45.2	-0.6
JOF	Joensuu	1.70	96	PG	Pn	11 40 24.4	-1.0
JOF				SN	Sn	11 40 46.4	-1.4
OUF	Merijarvi	1.78	315	PG	Pn	11 40 27.0	+0.7
	baz=134						
OUF				MSG		11 40 48.4	
	comp=Z,9.1nm,0.2s						
FIA0	FINESS Array S	1.85	204	PG	Pn	11 40 27.4	0.0
	baz=22						
FIA0				SG	Sn	11 40 51.9	+0.4
FINES	FINESS Array B	1.85	204	Pn	Pn	11 40 27.4	0.0
	comp=Z,0.4nm,0.3s,baz=28,slow=17,SNR=14						
FINES				Lg	Lg	11 40 51.8	
	comp=Z,1.7nm,0.3s,baz=29,slow=29,SNR=19						
OBF0	Syolatti, Pyha	2.02	314	PG	Pg	11 40 32.8	-0.5
OUL	Oulu	2.09	340	PG	Pn	11 40 32.3	+1.6
	baz=156						
OUL				SG	Sg	11 41 01.9	+0.3
VAF	Ylistaro	2.25	270	PG	Pb	11 40 35.0	-1.0
	baz=87						
VAF				MSG		11 41 02.4	
	comp=Z,8.2nm,0.2s						
VAF				SG	Sg	11 41 05.5	-1.1
VJF	Virojoki	2.61	181	PB	Pn	11 40 39.4	+1.6
VJF				MSG		11 41 11.2	
	comp=Z,3.1nm,0.2s						
VJF				SG	Sn	11 41 12.9	+2.7
PVF	Pernaja	2.74	198	PG	Pb	11 40 43.9	-0.3
PVF				MSG		11 41 15.1	
	comp=Z,2.1nm,0.2s						
PVF				SG	Sb	11 41 20.2	+2.0
MSF	Maaselka	2.85	12	PB	Pn	11 40 42.3	+1.2
	baz=192						
MSF				SB	Sn	11 41 19.3	+3.2
NUR	Nurmijrvi	2.99	209	SG	Sb	11 41 26.9	+1.3
KU6	Riekki	3.06	18	PB	Pn	11 40 45.8	+1.8
KU6				MSG		11 41 24.1	
	comp=Z,3.3nm,0.2s						
BURU	Burvik	3.12	300	PG	Pb	11 40 49.7	-0.9
UMAU	Umeaa	3.20	287	PN	Pn	11 40 47.1	+1.2
UMAU				SB	Sb	11 41 31.6	+0.2
TOF	Tornio	3.27	336	PB	Pb	11 40 51.3	-2.0
OLKF	Oulanka, Finla	3.28	13	PB	Pn	11 40 50.5	+3.4
OLKF				SG	Sb	11 41 33.8	-0.2
KALU	Kalix	3.29	328	PN	Pn	11 40 46.7	-0.5
ERTU	Ertsjaerv	4.13	328	PN	Pn	11 41 00.6	+1.8
	baz=138						
PAJU	Pajala	4.34	336	PN	Pn	11 41 03.2	+1.6
HEMU	Hemsoen	4.41	268	PN	Pn	11 41 04.7	+2.2
ARCES	ARCESS Array B	6.48	353	Pn	Pn	11 41 31.2	+0.3
	baz=170,slow=15,SNR=5.0						
ARCES				Sn	Sn	11 42 42.5	-2.9
	baz=172,slow=23,SNR=3.0						
HFS	Hagfors	7.28	252	Pn	Pn	11 41 43.1	+1.1
	comp=Z,0.1nm,0.3s,baz=79,slow=15,SNR=2.6						
NOA	NORSAR Array B	7.98	262	Pn	Pn	11 41 52.2	+0.7
	comp=Z,0.0nm,0.3s,baz=34,slow=19,SNR=2.6						

IDC 22 11:46:04.2±8.4**, 2°.82N**×**124°.24E, h306**^{km}±85^{km}**, mb3.2**/6**, mb1 3.4**/6**, mb1mx2.9**/56**, mbtmp3.9**/6**, Error ellipse: s-maj=88.8km s-min=18.3km az=61.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	20.84	176	P	P	11 50 23.5	+0.3
	3.3nm,0.4s,baz=1.0,slow=7.1,SNR=26						
WRA	Warramunga Arr	24.70	157	P	P	11 50 57.8	-0.6
	1.7nm,0.3s,baz=333,slow=11,SNR=44						
WRA				PcP	PcP	11 54 26.2	-0.4
	0.4nm,0.9s,baz=332,slow=2.3,SNR=3.3						
ASAR	Alice Springs	27.96	161	P	P	11 51 27.4	-0.1
	0.4nm,0.4s,baz=341,slow=7.4,SNR=22						
STKA	Stephens Creek	38.25	156	P	P	11 52 56.3	+0.6
	0.4nm,0.3s,baz=346,slow=8.3,SNR=3.2						
MKAR	Makanchi Array	56.91	327	P	P	11 55 18.0	-0.1
	0.3nm,0.4s,baz=121,slow=8.9,SNR=9.9						
AKTO	Aktyubinsk	72.84	322	P	P	11 57 00.0	0.0
	0.6nm,0.5s,baz=79,slow=5.2,SNR=2.8						

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*IDC **22** 11:56:14.5±1.1, 13°.54S×111°.93W, h0^{km}, mb4.1/12, mb1 4.3/12, mb1mx4.2/26, mbtmp4.1/12, MS4.6/17, Ms1 4.6/17, ms1mx4.5/19, Error ellipse: s-maj=39.7km s-min=18.3km az=50.0*

*NEIC **22** 11:56:17.2±2.3, 13°.40S±0°.08×111°.6W±0°.1, h10^{km}±1^{km}, mb4.7/104, Error ellipse: s-maj=22.9km s-min=13.4km az=278.0*

*GCMT **22** 11:56:21.2±0.1, 13°.40S±0°.01×111°.69W±0°.01, h15^{km}, MW5.3/140, Moment Tensor Solution. s102,c165; s140,c268; Duration: 1ˢ.1 Moment tensor: Scale 10^{17}*

Nm; M_{rr}-0.05±.01; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-0.05±.01; $M_{r\theta}$-0.26±.04; $M_{\theta\phi}$1.06±.01; $M_{\phi r}$0.12±.04; Best double couple: $M_0$1.10200×10^{17} NP1:ϕ_s183.00000°,δ76.00000°, λ-174.00000°. NP2:ϕ_s91.00000°,δ84.00000°, λ-14.00000°. Principal axes: T 1.0980, Plg6.0000°, Azm138.0000°; N 0.0070, Plg75.0000°, Azm250.0000°; P -1.1050, Plg14.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 11:56:16.8±0.5**,13°.5S**±0°.1×**111°.77W**±0°.09**,h10^{km},n130,** σ**1^{s}33**/85**,mb4.7**/54**,MS4.7**/23**,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.77	171	LR	LR	12 03 29.2	
	comp=Z,4µm,18.7s,baz=348,slow=32						
RKT	Rikitea	24.00	243	eLQ	LQ	12 06 18.0	
	2µm,29.0s						
RKT				eLR	LR	12 07 25.7	
	comp=Z,4µm,28.0s						
TAOE	Nuku Hiva Isla	28.21	276	eLR	LR	12 09 12.3	
	comp=Z,3µm,25.0s						
TAOE	Nuku Hiva Isla	28.21	276	eT	T	12 31 26.6	
	17nm,0.2s						
ATAH	Atahualpa	33.41	82	LR	LR	12 13 24.8	
	comp=Z,1µm,18.6s,baz=260,slow=31						
CMIG	Matias Romero	34.65	29	LR	LR	12 14 16.9	
	comp=Z,2µm,19.9s,baz=211,slow=31						
MTO3	Montecristo	35.49	40	P	P	12 03 16.0	+1.9
MTO3				IAmb	IAmb	12 03 25.6	
	comp=Z,11nm,1.1s						
H03N2	Juan Fernandez	35.85	129	T	T	12 41 12.8	
	baz=300,slow=76,SNR=318						
H03N3	Juan Fernandez	35.87	129	T	T	12 41 13.8	
	baz=300,slow=76,SNR=481						
H03N1	Juan Fernandez	35.87	129	T	T	12 41 14.0	
	baz=300,slow=76,SNR=244						
PPT	Papeete	36.62	259	LR	LR	12 12 40.5	
	comp=Z,198nm,20.9s,baz=76,slow=27						
PPT2	Papeete2	36.62	259	eS	S	12 09 06.0	-0.9
	comp=Z,716nm,24.5s						
PPT2				eLQ	LQ	12 11 45.0	
	comp=Z,3µm,32.2s						
PPT2				eLR	LR	12 13 11.7	
	comp=Z,1µm,29.0s						
TBI	Tubuai	36.99	249	eS	S	12 09 09.9	-2.4
	comp=Z,203nm,29.2s						
TBI				eLQ	LQ	12 11 57.9	
	comp=Z,2µm,33.5s						
TBI				eLR	LR	12 13 28.9	
	comp=Z,2µm,26.8s,baz=74						
TBI	Tubuai	36.99	249	eT	T	12 42 24.1	
	comp=Z,6.4nm,0.3s						
PETF	Flores	37.15	36	P	P	12 03 27.9	-0.2
PB08	IPOC Station P	41.24	105	P	P	12 04 02.6	-0.2
PB09	IPOC Station P	41.25	108	P	P	12 04 03.0	+0.4
PB09				IAmb	IAmb	12 04 18.3	
	comp=Z,20nm,1.3s						
ROSC	El Rosal	41.39	66	LR	LR	12 18 24.5	
	comp=Z,380nm,18.2s,baz=244,slow=32						
LVC	Limon Verde	41.62	109	P	P	12 04 06.7	+0.8
	comp=Z,2.0nm,0.8s,baz=264,slow=10,SNR=4.1						
AC02	Maricunga	41.97	115	P	P	12 04 09.3	+0.4
AC02				IAmb	IAmb	12 04 10.9	
	comp=Z,17nm,1.5s						
BI02	San Fabin de	42.90	130	P	P	12 04 15.1	-0.7
833A	Chaparral WMA,	43.25	16	P	P	12 04 19.4	+0.9
TX31	Lajitas Ar. Si	43.28	10	P	P	12 04 19.7	+0.8
TX31				IAmb	IAmb	12 04 21.4	
	comp=Z,32nm,1.4s						
TX32	Lajitas Array	43.28	10	P	P	12 04 19.6	+0.8
TXAR	Lajitas Array	43.28	10	P	P	12 04 20.5	+1.6
	comp=Z,2.7nm,1.1s,baz=198,slow=8.4,SNR=12						
TXAR				LR	LR	12 19 02.1	
	comp=Z,327nm,18.9s,baz=0.0,slow=32						
TXAR	Lajitas Array	43.28	10	P	P	12 04 18.2	-0.6
PLCA	Paso Flores	45.03	135	P	P	12 04 33.7	+0.8
	comp=Z,1.5nm,0.7s,baz=291,slow=7.7,SNR=5.3						
PLCA	Paso Flores	45.03	135	IAmb	IAmb	12 04 52.8	
	comp=Z,11nm,1.4s						
MNTX	Cornudas Mount	45.34	8	P	P	12 04 34.8	-0.4
MNTX				IAmb	IAmb	12 04 42.1	
	comp=Z,12nm,1.2s						
121A	Cookes Peak, D	45.91	5	P	P	12 04 40.7	+0.8
121A				IAmb	IAmb	12 04 54.2	
	comp=Z,12nm,1.1s						
SDV	Santo Domingo	46.49	64	P	P	12 04 45.0	+0.2
	comp=Z,5.7nm,0.8s,baz=191,slow=12,SNR=4.8						
SDV				LR	LR	12 22 23.8	
	comp=Z,364nm,18.1s,baz=239,slow=34						
SDV	Santo Domingo	46.49	64	P	P	12 04 44.9	0.0
SDV				IAmb	IAmb	12 04 51.6	
	comp=Z,15nm,1.1s						
X18A	Snowflake	47.78	2	P	P	12 04 55.7	+1.2
X18A				IAmb	IAmb	12 04 56.7	
	comp=Z,9.8nm,1.2s						
MSTX	Muleshoe	47.96	10	P	P	12 04 53.4	-2.5
W13A	Hualapai Mount	48.35	358	P	P	12 05 00.9	+1.9
W13A				IAmb	IAmb	12 05 09.9	
	comp=Z,12nm,1.4s						
WUAZ	Wupatki	48.73	0	P	P	12 05 02.7	+0.8
WUAZ				IAmb	IAmb	12 05 13.6	
	comp=Z,12nm,1.4s						
SIV	San Ignacio	49.00	100	P	P	12 05 03.6	-0.5
	comp=Z,1.9nm,0.9s,baz=283,slow=7.5,SNR=7.1						
U15A	North Rim	49.64	359	P	P	12 05 08.0	-1.0
SHPR	Sheep Range	49.82	356	P	P	12 05 10.0	-0.2
SHPR				IAmb	IAmb	12 05 20.7	
	comp=Z,9.6nm,1.1s						
KNB	Kanab	50.24	359	P	P	12 05 12.9	-0.4
X37A	Clayton	50.28	18	P	P	12 05 12.3	-1.2
X37A				IAmb	IAmb	12 05 20.8	
	comp=Z,22nm,1.5s						
MVCO	Mesa Verde	50.51	3	P	P	12 05 15.9	+0.4
MVCO				IAmb	IAmb	12 05 27.5	
	comp=Z,9.2nm,1.2s						
PRN	Pahroc Range	50.71	357	IAmb	IAmb	12 05 24.8	
	comp=Z,14nm,1.5s						
CCUT	Cedar City	50.78	358	P	P	12 05 17.5	0.0
T25A	Trinidad	50.82	8	IAmb	IAmb	12 05 24.8	
	comp=Z,9.9nm,1.4s						
X40A	Basin Creek Fa	50.99	20	IAmb	IAmb	12 05 19.8	
	comp=Z,12nm,1.4s						
SDCO	Great Sand Dun	51.29	6	IAmb	IAmb	12 05 28.6	
	comp=Z,9.2nm,1.1s						
PV01	Paradox Valley	51.43	3	P	P	12 05 21.9	-0.5
PV13	Radium Mtn., P	51.44	3	P	P	12 05 22.4	0.0
W41B	Gary Mavity, V	51.81	20	P	P	12 05 23.2	-1.8
WHAR	Wooly Hollow	51.90	20	IAmb	IAmb	12 05 44.6	
	comp=Z,14nm,1.3s						
LRAL	Lakeview Retre	51.95	27	IAmb	IAmb	12 05 32.9	
	comp=Z,16nm,1.2s						
NVAR	Mina Array Bea	52.00	353	P	P	12 05 27.0	+0.4
	comp=Z,1.8nm,0.6s,baz=179,slow=10,SNR=17						
NVAR				LR	LR	12 22 20.6	
	comp=Z,849nm,21.6s,baz=174,slow=30						
NVAR	Mina Array Bea	52.00	353	P	P	12 05 26.4	-0.2
KAN01	Argonia South	52.06	14	P	P	12 05 26.7	-0.1
RYN	Ryan	52.22	353	P	P	12 05 29.1	+0.9
RYN				IAmb	IAmb	12 05 37.6	
	comp=Z,15nm,1.5s						
CPUP	Villa Florida	52.41	113	LR	LR	12 23 18.9	
	comp=Z,1µm,21.9s,baz=278,slow=31						
456A	Hilliard	52.44	33	P	P	12 05 30.4	+0.6
FCAR	Ozark Folk Cen	52.50	20	P	P	12 05 29.8	-0.3
152A	Waverly Hall	52.68	29	IAmb	IAmb	12 05 39.7	
	comp=Z,20nm,1.4s						
P17A	Butcher Ranch,	52.69	1	P	P	12 05 30.9	-0.7
U40A	Yellville	52.69	19	P	P	12 05 30.1	-1.5
PNTR	Pine Nut	52.80	352	P	P	12 05 32.5	-0.1
PNTR				IAmb	IAmb	12 05 40.1	
	comp=Z,13nm,1.3s						
PTGA	Pitinga	52.81	81	P	P	12 05 31.7	-1.2
PTGA				IAmb	IAmb	12 05 37.8	
	comp=Z,9.5nm,1.2s						
LCAR	Lake Charles	52.99	21	P	P	12 05 32.8	-0.9
VCNR	Virginia City	53.02	352	P	P	12 05 34.6	+0.5
PLAL	Pickwick Lake	53.18	24	IAmb	IAmb	12 05 41.1	
	comp=Z,17nm,1.2s						
DUG	Dugway, Tooele	53.41	359	P	P	12 05 38.1	+1.1
MGMO	Mountain Grove	53.60	19	IAmb	IAmb	12 05 55.1	
	comp=Z,11nm,1.2s						
T42A	Van Buren	53.88	20	IAmb	IAmb	12 05 40.6	
	comp=Z,9.0nm,1.2s						
CTU	Camp Tracy	53.90	0	P	P	12 05 39.7	-0.8
WVOR	Wild Horse Val	55.99	354	P	P	12 05 56.2	+0.5
WVOR				IAmb	IAmb	12 06 03.1	
	comp=Z,10nm,1.3s						
PDAR	Pinedale Array	56.01	2	P	P	12 05 54.2	-1.6
	comp=Z,0.6nm,0.5s,baz=183,slow=8.9,SNR=8.6						
PDAR				LR	LR	12 26 26.6	
	comp=Z,487nm,18.1s,baz=190,slow=32						
PDAR	Pinedale Array	56.01	2	P	P	12 05 53.2	-2.6
K22A	Casper	56.06	5	IAmb	IAmb	12 05 57.5	
	comp=Z,15nm,1.3s						
IMW	Indian Meadow	57.10	1	IAmb	IAmb	12 06 17.8	
	comp=Z,14nm,1.4s						
FLWY	Flagg Ranch	57.29	1	P	P	12 06 03.3	-1.7
FLWY				IAmb	IAmb	12 06 11.2	
	comp=Z,22nm,1.4s						
I07A	Izee	57.72	353	IAmb	IAmb	12 06 15.3	
	comp=Z,9.7nm,1.2s						
MCMT	McKenzie Canyo	58.04	359	P	P	12 06 09.8	-0.5
BMO	Blue Mountains	58.27	355	P	P	12 06 10.9	-0.8
BMO				IAmb	IAmb	12 06 24.9	
	comp=Z,8.7nm,1.5s						
G08A	Pilot Rock	58.85	354	P	P	12 06 16.2	+0.4
G08A				IAmb	IAmb	12 06 16.7	
	comp=Z,12nm,1.5s						
F36A	Milaca	61.32	14	P	P	12 06 30.8	-1.7
F36A				IAmb	IAmb	12 06 49.8	
	comp=Z,5.5nm,0.9s						
BDFB	Brasilia	61.54	101	P	P	12 06 34.8	0.0
	comp=Z,2.5nm,0.6s,baz=246,slow=12,SNR=3.8						
BDFB				LR	LR	12 31 20.4	
	comp=Z,288nm,18.5s,baz=278,slow=34						
BDFB	Brasilia	61.54	101	IAmb	IAmb	12 06 41.1	
	comp=Z,11nm,1.3s						
M54A	Oil Creek Stat	62.23	27	P	P	12 06 39.4	+0.7
ULM	Lac du Bonnet	64.97	11	LR	LR	12 32 21.8	
	comp=Z,254nm,19.8s,baz=214,slow=33						
J58A	Remsen	65.67	28	P	P	12 07 00.6	-0.8
J59A	Piesco	66.11	29	P	P	12 07 04.8	+0.6
ACCN	Adirondack Com	66.45	29	P	P	12 07 09.8	+3.4
DLBC	Dease Lake	73.21	350	P	P	12 07 47.6	-0.2
	comp=Z,1.8nm,0.8s,baz=167,slow=11,SNR=3.3						
YKA	Yellowknife Ar	75.76	359	P	P	12 08 01.8	-0.6
	comp=Z,0.7nm,0.8s,baz=171,slow=5.6,SNR=14						
YKA				LR	LR	12 38 25.5	
	comp=Z,745nm,18.3s,baz=0.0,slow=33						
TARA	Tarawa	76.04	275	P	P	12 08 08.2	+3.1
VNDA	Vanda	76.14	193	LR	LR	12 34 33.4	
	comp=Z,318nm,20.5s,baz=90,slow=30						
QSPA	South Pole Qui	76.62	180	P	P	12 08 07.8	+0.2
QSPA				IAmb	IAmb	12 08 22.7	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	77.56	250	eLR	LR	12 32 20.1	
	comp=Z,527nm,26.9s						
RIDG	Independent Ri	81.08	346	IAmb	IAmb	12 08 39.4	
	comp=Z,16nm,1.3s						
DHY	Denali Highway	81.15	344	IAmb	IAmb	12 08 33.4	
	comp=Z,17nm,1.5s						
RND	Reindeer	81.81	344	P	P	12 08 35.1	-0.6
ILAR	Eielson Array	82.43	346	P	P	12 08 38.0	-0.9
	comp=Z,0.4nm,0.8s,baz=171,slow=5.0,SNR=4.6						
ILAR				LR	LR	12 37 57.3	
	comp=Z,195nm,19.4s,baz=139,slow=30						
ILAR	Eielson Array	82.43	346	P	P	12 08 38.2	-0.7
CCB	Clear Creek Bu	82.55	345	IAmb	IAmb	12 08 45.5	
	comp=Z,10nm,1.4s						
PRP	Porcupine Dome	82.73	346	P	P	12 08 41.5	+0.8
PRP				IAmb	IAmb	12 08 46.3	
	comp=Z,5.0nm,1.1s						
MDM	Murphy Dome	82.91	345	P	P	12 08 41.4	-0.1
BPAW	Bear Paw Mtn.	82.94	344	IAmb	IAmb	12 08 47.4	
	comp=Z,14nm,1.3s						
INK	Inuvik	83.06	352	P	P	12 08 41.5	-0.5
	comp=Z,2.4nm,0.9s,baz=182,slow=3.8,SNR=4.7						
INK	Inuvik	83.06	352	P	P	12 08 40.9	-1.1
INK				IAmb	IAmb	12 08 48.9	
	comp=Z,4.8nm,1.1s						
I23K	Minto, Yukon-K	83.35	345	P	P	12 08 43.1	-0.5
BMAR	Burnt Mountain	84.15	348	P	P	12 08 45.7	-2.0
COLD	Coldfoot	85.22	346	IAmb	IAmb	12 09 00.4	
	comp=Z,13nm,1.3s						
H11S2	WAKE ISLAND Hy	86.39	290	T	T	13 44 29.3	
	baz=106,slow=74,SNR=147						
H11S1	WAKE ISLAND Hy	86.40	290	T	T	13 44 29.0	
	baz=106,slow=74,SNR=105						
H11S3	WAKE ISLAND Hy	86.41	290	T	T	13 44 31.2	
	baz=106,slow=74,SNR=89						
H11N3	WAKE ISLAND Hy	86.53	291	T	T	13 44 41.4	
	baz=106,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	86.54	291	T	T	13 44 41.1	
	baz=106,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	86.54	291	T	T	13 44 43.2	
	baz=106,slow=75,SNR=16						
RES	Resolute Bay	88.62	4	IAmb	IAmb	12 09 20.8	
	comp=Z,6.2nm,1.4s						
RDOG	Red Dog Mine	89.16	343	IAmb	IAmb	12 09 10.1	
	comp=Z,4.5nm,0.6s						
STKA	Stephens Creek	96.62	235	LR	LR	12 45 24.3	
	comp=Z,395nm,21.6s,baz=72,slow=31						
MAW	Mawson	99.04	178	LR	LR	12 50 20.8	
	comp=Z,377nm,20.6s,baz=212,slow=33						
NJ2	Nanjing	130.27	301	ePKP	PKPdf	12 15 28.3	+0.4
HHC	Hu-ho-hao-te	133.45	314	ePKP	PKPdf	12 15 34.3	+0.5
HHC				SKS	SKSdf	12 22 40.4	-5.1
HHC				LR	LR		
	comp=Z,220nm,20.5s						
HHC				LR	LR		
	comp=Z,170nm,20.7s						
HHC				LR	LR		
	comp=Z,250nm,20.0s						
XAN	Xi'an	137.87	306	PKP	PKiKP	12 15 47.1	+2.9
XAN				LR	LR		
	comp=Z,210nm,24.9s						
XAN				LR	LR		
	comp=Z,340nm,23.8s						
XAN				LR	LR		
	comp=Z,420nm,23.9s						
BRTR	Keskin Array B	139.91	43	PKP	PKPdf	12 15 46.3	+0.4
	comp=Z,0.7nm,0.8s,baz=190,slow=4.8,SNR=3.5						
GTA	Gaotai	142.05	319	ePKP	PKiKP	12 15 51.9	-0.8
GTA				pPKP	sPKPdf	12 15 57.9	+5.2
KBZ	Khabaz	142.84	31	PKP	PKPdf	12 15 48.7	-2.0
	comp=Z,1.6nm,0.8s,baz=16,slow=3.2,SNR=4.3						
MKAR	Makanchi Array	144.75	343	PKP	PKPab	12 15 51.5	-1.3
	comp=Z,1.3nm,0.7s,baz=61,slow=0.3,SNR=5.7						
WMQ	Urumqi	145.46	335	ePKPbc	PKPbc	12 15 55.4	0.0
CMAR	Chiang Mai Arr	150.09	284	PKPbc	PKPbc	12 16 07.8	-1.0
	comp=Z,3.6nm,0.9s,baz=63,slow=1.6,SNR=12						
CMAR	Chiang Mai Arr	150.09	284		PKPbc	12 16 08.8	+0.1
KSH	Kashi	153.18	347	PKPbc	PKPdf	12 16 10.9	+2.9

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*SOME **22** 11:56:46.9,38°.43N×72°.62E,h15^{km}*

*IDC **22** 11:56:48.1±11.0,37°.30N×72°.27E,h176^{km}±63^{km},mb3.4/6, mb1 3.4/11,mb1mx3.0/49,mbtmp3.9/11,Error ellipse: s-maj=123.6km s-min=31.3km az=3.0*

*NNC **22** 11:56:53.4±2.4,38°.02N×72°.15E,h0^{km},mb4.1,mpv3.8, Error ellipse: s-maj=18.2km s-min=15.6km az=2.0*

ISC 22 11:56:46.8±0.9**,37°.40N**±0°.07×**72°.16E**±0°.09**,h150^{km},n37,** σ**1^{s}70**/46**,mb3.6**/6**,2C-3D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.87	14	P	Pn	11 58 00.8	+2.0
	SNR=189						
IUG	Iuzhnay	5.02	342	eP	Pn	11 58 03.7	+3.2
	97nm,0.3s						
IUG				eS	Sn	11 58 58.8	+0.8
	290nm,0.3s						
UCH	Uchtor	5.15	20	P	Pn	11 58 04.3	+1.8
	SNR=23						
EKS2	Erkin-Say	5.40	13	P	Pn	11 58 07.6	+2.0
	SNR=11						
MRKS	Merke	5.40	8	eP	Pn	11 58 07.4	+1.8
	44nm,0.3s						
MRKS				eS	Sn	11 59 05.0	-2.1
	39nm,0.4s						
DZA	Taraz	5.52	354	eP	Pn	11 58 09.8	+2.7
	138nm,0.1s						
DZA				eS	Sn	11 59 09.3	-0.6
	200nm,0.3s						
AAK	Ala-Archa	5.53	18	P	Pn	11 58 09.5	+2.2
	8.4nm,0.3s,baz=179,slow=6.0,SNR=93						
AAK				S	Sn	11 59 09.1	-1.1
	3.4nm,0.3s,baz=352,slow=22,SNR=15						
AAK	Ala-Archa	5.53	18	P	Pn	11 58 09.6	+2.2
	SNR=31						
AAK	Ala-Archa	5.53	18	⇑P	Pn	11 58 09.3	+2.0
	12nm,0.4s						
AAK				⇓S	Sn	11 59 08.7	-1.5
	19nm,0.7s						
KBK	Karagaybulak	5.67	21	P	Pn	11 58 11.5	+2.3
	SNR=7.5						
ULHL	Ulahol	5.77	32	P	Pn	11 58 12.1	+1.5
	SNR=8.9						
KK31	Karatay Array	5.83	348	⇑P	Pn	11 58 13.2	+2.0
	2.5nm,0.2s,baz=160,slow=10,SNR=156						
KK31				S	Sn	11 59 14.7	-2.7
	14nm,0.3s,baz=160,slow=22,SNR=23						
BRLS	Borolday	5.90	343	eP	Pn	11 58 14.2	+2.1
	26nm,0.4s						
BRLS				eS	Sn	11 59 16.7	-2.1
	25nm,0.6s						
CHMS	Chumysh	5.93	19	P	Pn	11 58 14.3	+1.8
	SNR=6.9						
TKM2	Tokmak 2	6.11	24	P	Pn	11 58 16.9	+1.8
	SNR=6.0						
TKM2	Tokmak 2	6.11	24	⇓P	Pn	11 58 16.5	+1.4
	5.6nm,0.8s						
TKM2				⇓S	Sn	11 59 23.1	-1.1
	3.9nm,0.7s						
USP	Ospenovka	6.13	16	P	Pn	11 58 16.2	+1.0
	SNR=7.8						
KST	Kastek	6.34	26	eP	Pn	11 58 21.6	+3.5
	11nm,0.4s						
KST				eS	Sn	11 59 29.1	-0.5
	13nm,0.8s						
MK31	Makanchi Array	12.02	35	P	P	11 59 40.2	+0.4
	0.5nm,0.4s,baz=208,slow=10,SNR=10						
MKAR	Makanchi Array	12.02	35	P	Pn	11 59 34.9	+1.7
	0.1nm,0.3s,baz=211,slow=12,SNR=3.9						
DANN	Dangsing	13.27	129	eP	Pn	11 59 49.5	-0.3
	15nm,0.3s						
KURBB	Kurchatov Arra	13.98	17	P	Pn	12 00 01.0	+2.7
	0.1nm,0.3s,baz=206,slow=11,SNR=15						
KKN	Kakani	14.62	127	eP	P	12 00 08.2	-0.8
DMN	Daman	14.63	128	eP	Pn	12 00 06.9	0.0
PKI	Pulchoki	14.85	127	eP	Pn	12 00 10.0	+0.3
	8.6nm,0.4s						
GUN	Gumba	14.92	125	eP	P	12 00 12.4	-0.1
	17nm,0.4s						
RAMN	Ramite	16.04	126	eP	Pn	12 00 24.2	-0.1
	33nm,0.6s						
TAPN	Taplejung	16.50	123	eP	Pn	12 00 31.8	+1.9
AKTO	Aktyubinsk	16.50	327	P	Pn	12 00 30.4	+0.9
	0.5nm,0.3s,baz=119,slow=9.5,SNR=6.8						
ODAN	Odare	16.62	125	eP	P	12 00 30.9	-0.2
ZALV	Zalesovo Beam	18.71	24	P	P	12 00 53.0	-0.5
	0.9nm,0.3s,baz=219,slow=9.6,SNR=20						
ARU	Arti	21.11	339	P	P	12 01 18.8	-0.5
	0.4nm,0.3s,baz=350,slow=24,SNR=3.5						
FINES	FINESS Array B	37.27	325	P	P	12 03 43.6	-0.1
	3.2nm,0.9s,baz=123,slow=10,SNR=2.6						
ARCES	ARCESS Array B	40.68	337	P	P	12 04 12.1	+0.1
	0.9nm,0.4s,baz=105,slow=7.9,SNR=11						
NOA	NORSAR Array B	44.23	322	P	P	12 04 40.5	-0.3
	0.6nm,0.5s,baz=94,slow=7.6,SNR=2.7						
INK	Inuvik	72.86	10	P	P	12 07 57.8	-0.9
	0.7nm,0.4s,baz=324,slow=4.8,SNR=4.6						
YKA	Yellowknife Ar	80.30	3	P	P	12 08 39.2	-1.4
	0.6nm,0.6s,baz=1.4,slow=5.3,SNR=18						

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*SJA **22** 12:07:05.1±0.6,19°.65S×71°.62W,h10^{km},ML4.5,MW4.0*

*IDC **22** 12:07:16.3±0.7,19°.96S×70°.70W,h0^{km},mb4.1/10, mb1 4.3/13,mb1mx4.2/29,mbtmp4.2/13,ML4.0/3,MS3.8/2, Ms1 3.9/2,ms1mx3.2/24,Error ellipse: s-maj=21.7km s-min=13.7km az=53.0*

*NEIC **22** 12:07:18.4±1.6,20°.09S±0°.01×70°.88W±0°.09,h18^{km}±4^{km}, Error ellipse: s-maj=11.5km s-min=1.7km az=94.0*

*VAO **22** 12:07:19.8±0.5,20°.07S×70°.70W,h10^{km},mb4.5*

*GUC **22** 12:07:19.5±0.7,20°.05S×70°.91W,h34^{km}±3^{km},ML4.3*

ISC 22 12:07:17.6±1.3**,20°.08S**±0°.03×**70°.91W**±0°.05**,h13^{km}**±8^{km}**, n103,** σ**1^{s}22**/110**,mb4.3**/10**,9C-4D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.76	105	⇓iP	Pb	12 07 32.6	0.0
TA02				i S	Sb	12 07 42.9	0.0
TA02				IAML		12 07 44.9	
	comp=N,27µm,0.1s						
TA01	Diego Aracena	0.84	125	⇓iP	Pb	12 07 34.2	+0.2
TA01				i S	Sb	12 07 45.5	+0.3
TA01				IAML		12 07 47.5	
	comp=N,17µm,0.4s						
TA01	Diego Aracena	0.84	125		Pb	12 07 34.1	+0.1
PSGC	Pisagua	0.88	57	⇓iP	Pg	12 07 34.5	-0.3
PSGC				i S	Sg	12 07 45.5	-0.9
PSGC				IAML		12 07 48.6	
	comp=E,12µm,0.4s						
PSGCX	Pisagua	0.88	57		Pg	12 07 34.5	-0.3
HMBC	Humberstone	0.98	102	⇓iP	Pb	12 07 36.2	-0.4
HMBC				i S	Sb	12 07 49.7	+0.3
HMBC				IAML		12 07 57.5	
	comp=E,33µm,0.9s						
PATCX	Punta Patache	1.02	136	⇑iP	Pg	12 07 37.4	0.0
PATCX				i S	Sb	12 07 50.3	-0.3
PATCX				IAML		12 07 57.7	
	comp=N,8µm,0.4s						
PATCX	Punta Patache	1.02	136		Pb	12 07 37.3	0.0
MNMC	Minye Minye	1.56	53	⇑iP	Pn	12 07 45.3	0.0
MNMC				i S	Sn	12 08 05.6	+0.1
MNMC	Minye Minye	1.56	53		Pn	12 07 45.1	-0.2
MNMCX	Minye Minye	1.56	53	eP	Pg	12 07 50.0	+2.4
MNMCX				IAML		12 08 21.9	
	comp=Z,5µm,0.5s						
PB08	IPOC Station P	1.65	92	⇑iP	Pn	12 07 46.8	+0.1
PB08				i S	Sn	12 08 08.4	+0.4
PB08				IAML		12 08 12.9	
	comp=E,6µm,0.3s						
PB08	IPOC Station P	1.65	92		Pn	12 07 46.8	+0.1
PB08	IPOC Station P	1.65	92	eP	Sg	12 08 10.0	-0.9
PB08				IAML		12 08 25.0	
	comp=Z,2µm,0.9s						
AP01	Chacalluta	1.78	18	⇑iP	Pn	12 07 47.6	-0.6
AP01				i S	Sb	12 08 12.2	-0.2
AP01				IAML		12 08 15.3	
	comp=N,17µm,0.3s						
AP01	Chacalluta	1.78	18		Pn	12 07 48.2	+0.1
PB07	IPOC Station P	1.90	150	⇑iP	Pn	12 07 49.7	-0.2
PB07				i S	Sg	12 08 19.2	+0.4
PB07				IAML		12 08 30.3	
	comp=E,3µm,0.5s						
PB07	IPOC Station P	1.90	150		Pn	12 07 49.8	-0.2
PB07	IPOC Station P	1.90	150	eP	Pn	12 07 49.9	0.0
PB07				eS	Sg	12 08 21.1	+2.3
PB07				IAML		12 08 27.7	
	comp=Z,3µm,0.5s						
PB16	IPOC Station P	2.18	38	⇑iP	Pn	12 07 54.4	+0.2
PB16				i S	Sb	12 08 24.1	-0.5
PB16				IAML		12 08 30.1	
	comp=N,4µm,0.6s						
PB16	IPOC Station P	2.18	38	Pn	Pn	12 07 54.2	0.0
PB16	IPOC Station P	2.18	38	eP	Pg	12 07 59.2	-0.4
PB16				IAML		12 08 43.5	
	comp=Z,2µm,0.6s						
PB03	IPOC Station P	2.24	151	⇑iP	Pn	12 07 54.3	-0.3
PB03				i S	Sg	12 08 28.5	-1.1
PB03				IAML		12 08 39.5	
	comp=E,2µm,0.5s						
PB03	IPOC Station P	2.24	151	eP	Pn	12 07 54.6	+0.1
PB03				eS	Sg	12 08 31.4	+1.8
PB03				IAML		12 08 38.9	
	comp=Z,2µm,0.9s						
PB09	IPOC Station P	2.31	138	⇑iP	Pn	12 07 56.8	+1.2
PB09				eS	Sg	12 08 30.7	-1.3
PB09				IAML		12 08 40.0	
	comp=E,3µm,0.2s						
PB09	IPOC Station P	2.31	138		Pn	12 07 56.8	+1.2
PB09	IPOC Station P	2.31	138	eP	Pb	12 07 59.2	-0.1
PB09				eS	Sg	12 08 31.6	-0.5
PB09				IAML		12 08 45.9	
	comp=Z,3µm,0.8s						
PB04	IPOC Station P	2.35	163	eP	Pn	12 07 55.5	-0.6
PB04				eS	Sg	12 08 32.5	-0.8
PB04	IPOC Station P	2.35	163		Pn	12 07 55.6	-0.6
PB04	IPOC Station P	2.35	163	eP	Pn	12 07 55.5	-0.6
PB04				eS	Sg	12 08 34.9	+1.5
PB04				IAML		12 08 45.4	
	comp=Z,2µm,0.4s						

LVC	Limon Verde	3.13	144	Pn	Pn	12 08 08.4	+1.4
	comp=Z,8.9nm,0.3s,baz=312,slow=9.3,SNR=75						
LVC				Sn	Sn	12 08 45.2	+0.7
	comp=Z,45nm,0.3s,baz=51,slow=18,SNR=6.0						
LVC				LR	LR	12 08 49.9	
	comp=Z,99nm,20.8s,baz=317,slow=30						
LVC				Lg	Lg	12 08 55.4	
	comp=Z,92nm,0.3s,baz=145,slow=6.5,SNR=10.0						
LVC	Limon Verde	3.13	144	⇑*i*P	Pn	12 08 08.4	+1.4
LVC				*i*S	Sb	12 08 53.6	+1.9
LVC	Limon Verde	3.13	144	*e*P	Pn	12 08 08.4	+1.4
LVC				*e*S	Sg	12 08 55.1	-3.2
LVC				IAML		12 09 01.0	
	comp=Z,773nm,0.6s						
LVC	Limon Verde	3.13	144	*e*P	Pn	12 08 08.4	+1.4
LVC				*e*S	Sn	12 08 45.0	+0.5
PB10	IPOC Station P	3.43	175	*e*P	Pn	12 08 09.4	-1.4
PB10				IAML		12 09 33.6	
	comp=E,285nm,0.4s						
PB10	IPOC Station P	3.43	175	Pn	Pn	12 08 09.8	-1.1
PB10	IPOC Station P	3.43	175	*e*P	Pn	12 08 09.5	-1.3
PB10				*e*S	Sn	12 08 53.6	+2.2
PB10				IAML		12 09 22.5	
	comp=Z,222nm,0.7s						
PB14	IPOC Station P	4.55	174	Pn	Pn	12 08 25.0	-1.5
PB14	IPOC Station P	4.55	174	*e*P	Pn	12 08 25.4	-1.1
PB14				IAML		12 09 56.3	
	comp=Z,165nm,1.1s						
GO02	Mina Guanaco	5.20	167	Pn	Pn	12 08 35.0	-0.5
YJA	Yavi	5.45	113	*e*P	Pn	12 08 42.3	+3.3
HJA	Humahuaca	5.99	122	*e*P	Pn	12 08 50.0	+3.6
AC01	Pan de Azucar	6.05	177	Pn	Pn	12 08 47.3	+0.5
AC02	Maricunga	6.92	167		Pn	12 08 59.3	0.0
FSA	Cafayete	7.52	144	*e*P	Pb	12 09 18.4	-10
AC04	Llanos de Chal	8.09	181	Pn	Pn	12 09 11.7	-3.1
AHML	Horco Molle	8.41	144	*e*P	Pb	12 09 31.4	-12
AC05	El Transito	8.74	176	Pn	Pn	12 09 22.5	-1.3
LCO	Las Campanas	8.89	179	Pn	Pn	12 09 25.6	-0.6
CO01	Juntas del Tor	9.88	176	Pn	Pn	12 09 39.9	+0.2
SIV	San Ignacio	10.20	68	Pn	Pn	12 09 43.0	-0.9
	comp=Z,4.3nm,0.3s,baz=275,slow=8.6,SNR=48						
SIV				LR	LR	12 14 04.2	
	comp=Z,299nm,21.3s,baz=286,slow=41						
ETMB	Extrema	11.16	25	*e*P	Pn	12 09 58.7	+1.6
PTLB	Pontes e Lacer	12.12	70	*e*P	Pn	12 10 10.0	-0.1
CZSB	Cruzeiro do Su	12.40	352	*e*P	Pn	12 10 17.8	+3.8
VILB	Vilhena	12.47	57	*e*P	Pn	12 10 15.2	+0.2
SAML	Samuel	13.35	35	Pn	Pn	12 10 24.9	-2.0
CPUP	Villa Florida	13.95	119	Pn	Pn	12 10 35.8	+0.8
	comp=Z,0.1nm,0.3s,baz=0.0,slow=3.0,SNR=1.9						
CPUP	Villa Florida	13.95	119	*e*P	Pn	12 10 35.8	+0.8
AQDB	Aquidauana	14.28	94	*e*P	Pn	12 10 39.7	0.0
H03N1	Juan Fernandez	15.10	207	T	T	12 26 39.8	
	baz=31,slow=74,SNR=67						
H03N2	Juan Fernandez	15.10	207	T	T	12 26 34.8	
	baz=31,slow=74,SNR=99						
H03N3	Juan Fernandez	15.11	207	T	T	12 26 34.8	
	baz=31,SNR=95						
BI02	San Fabin de	16.52	181	P	Pn	12 11 10.5	+1.2
BI02				IAmb	IAmb	12 11 25.8	
	comp=Z,20nm,1.4s						
PTGB	Pitanga	18.02	108	*e*P	P	12 11 29.5	+1.0
ITAB	Concordia	18.61	116	*e*P	Pn	12 11 36.0	+1.0
CPSB	Cacapava Do Su	18.83	127	*e*P	Pn	12 11 38.2	+0.5
ITRB	Iturama	19.33	92	*e*P	Pn	12 11 43.6	-0.3
MACA	Manacapuru-AM	19.55	32	*e*P	P	12 11 45.5	+0.2
FRTB	Fartura	20.09	103	*e*P	P	12 11 51.5	+0.4
CNLB	Canela	20.39	121	*e*P	P	12 11 53.5	-0.8
PLCA	Paso Flores	20.59	179	P	Pn	12 11 58.7	0.0
	comp=Z,3.8nm,0.7s,baz=6.4,slow=11,SNR=9.6						
PLCA	Paso Flores	20.59	179	P	P	12 11 56.4	0.0
PLCA	Paso Flores	20.59	179	*e*P	Pn	12 11 58.6	-0.1
IPMB	Ipameri, GO	21.56	88	*e*P	P	12 12 06.1	-1.0
PTGA	Pitinga	22.01	30	P	P	12 12 10.2	-1.7
	comp=Z,8.1nm,0.6s,baz=204,slow=14,SNR=14						
PTGA	Pitinga	22.01	30	P	P	12 12 09.9	-2.0
PTGA				IAmb	IAmb	12 12 13.2	
	comp=Z,14nm,1.1s						
BDFB	Brasilia	22.23	82	P	P	12 12 13.6	-0.7
	comp=Z,7.9nm,0.9s,baz=274,slow=13,SNR=3.3						
LL01	San Ignacio de	22.27	183	P	P	12 12 13.2	-1.2
LL01				IAmb	IAmb	12 12 17.7	
	comp=Z,16nm,1.3s						
SMTB	Santa Maria do	25.15	67	*e*P	P	12 12 42.8	0.0
MCPB	Macapa, AP	26.92	46	*e*P	P	12 13 00.7	+1.9
RCBR	Riachuelo	36.83	72	P	P	12 14 24.9	-1.0
	comp=Z,16nm,0.9s,baz=48,slow=0.6,SNR=5.0						
TXAR	Lajitas Array	58.41	326	P	P	12 17 13.2	0.0
	comp=Z,0.7nm,0.9s,baz=126,slow=9.1,SNR=3.1						
DBIC	Dimbokro	70.15	75	P	P	12 18 28.5	-1.9
	comp=Z,2.5nm,0.8s,baz=232,slow=6.4,SNR=3.7						
DBIC	Dimbokro	70.15	75	IAmb	IAmb	12 18 54.9	
	comp=Z,7.5nm,1.1s						
PDAR	Pinedale Array	71.96	331	P	P	12 18 42.3	+1.2
	comp=Z,0.2nm,0.5s,baz=126,slow=9.1,SNR=2.9						
NVAR	Mina Array Bea	73.23	323	P	P	12 18 50.9	+2.1
	comp=Z,1.2nm,0.9s,baz=163,slow=6.2,SNR=7.1						
TORD	Torodi Ar. Bea	78.66	71	P	P	12 19 18.6	-1.4
	comp=Z,8.2nm,0.8s,baz=256,slow=5.3,SNR=26						
ESDC	Sonseca Array	86.16	45	LR	LR	12 57 46.4	
	comp=Z,83nm,18.2s,baz=290,slow=35						
YKA	Yellowknife Ar	89.24	341	P	P	12 20 13.1	+0.3
	comp=Z,1.9nm,0.8s,baz=133,slow=5.4,SNR=36						
H11S2	WAKE ISLAND Hy	125.83	279	T	T	14 45 52.0	
	baz=101,slow=74,SNR=43						
H11S1	WAKE ISLAND Hy	125.84	279	T	T	14 45 50.5	
	baz=101,slow=74,SNR=20						
H11S3	WAKE ISLAND Hy	125.85	279	T	T	14 45 40.4	
	baz=101,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	125.88	280	T	T	14 45 47.4	
	baz=102,slow=74,SNR=9.8						
H11N2	WAKE ISLAND Hy	125.89	280	T	T	14 45 51.7	
	baz=102,slow=74,SNR=15						
H11N1	WAKE ISLAND Hy	125.90	280	T	T	14 45 55.6	
	baz=102,slow=74,SNR=6.0						
ASAR	Alice Springs	130.24	210	PKP	PKPdf	12 26 28.5	+0.1
	comp=Z,0.5nm,0.8s,baz=129,slow=1.3,SNR=4.7						
WRA	Warramunga Arr	133.16	213	PKP	PKPdf	12 26 34.4	+0.4
	comp=Z,0.4nm,0.6s,baz=151,slow=1.8,SNR=5.8						
ZALV	Zalesovo Beam	141.43	23	PKP	PKPdf	12 26 45.9	-2.2
	comp=Z,1.0nm,0.7s,baz=354,slow=1.4,SNR=6.2						
MKAR	Makanchi Array	145.53	33	PKPbc	PKPbc	12 26 55.9	+0.2
	comp=Z,6.2nm,0.8s,baz=321,slow=3.4,SNR=20						
MKAR	Makanchi Array	145.53	33		PKPdf	12 26 55.4	-0.2
KLR	Kul'dur	145.73	333	PKPbc	PKPdf	12 26 56.0	+0.2
	comp=Z,4.4nm,1.1s,baz=67,slow=4.0,SNR=9.0						
MJAR	Matsushiro Arr	149.73	309	PKPbc	PKiKP	12 27 08.5	-0.1
	comp=Z,1.9nm,0.6s,baz=122,slow=0.9,SNR=5.6						
SONM	Songino Array	152.23	4	PKPbc	PKiKP	12 27 14.0	+0.5
	comp=Z,2.1nm,0.8s,baz=345,slow=1.8,SNR=9.9						

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*SOME **22** 12:11:31.1, 43°.80N×83°.13E, h10^{km}*
*NNC **22** 12:11:35.6±1.1, 44°.02N×82°.93E, h0^{km}, mb3.6, mpv3.2,*
Error ellipse: s-maj=11.0km s-min=4.0km az=132.0
ISC 22 12:11:34.3±1.5**, 43°.89N**±0°.07×**82°.99E**±0°.07**, h10**^{km}**, n35,**
σ**1^{s}99**/53**, 4C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	2.35	282	*e*P	Pb	12 12 17.9	+1.1
	5.0nm,0.3s						
DJR				*e*S	Sg	12 12 52.0	+2.3
	80nm,0.4s						
DJR	Jarkent	2.35	282	Pg	Pb	12 12 17.9	+1.1
	5.0nm,0.3s						
DJR				Lg	Lg	12 12 52.0	
	80nm,0.4s						
PDGK	Podgornoye	2.60	259	Pg	Pb	12 12 22.1	+1.0
	2.2nm,0.3s						
PDGK				Lg	Lg	12 12 59.3	
	25nm,0.5s						
PDGK	Podgornoye	2.60	259	⇓Pn	Pb	12 12 20.2	-0.9
	2.4nm,0.5s						
PDGK				⇑Pg	Pg	12 12 24.8	+0.6
	4.6nm,0.4s						
PDGK				⇓Lg	Lg	12 12 58.3	
	41nm,0.7s						
SHLS	Shalkode	2.67	255	*e*P	Pn	12 12 18.8	+1.3
	46nm,0.3s						
SHLS				*e*S	Sb	12 12 53.8	-1.3
	69nm,0.4s						
SHLS	Shalkode	2.67	255	Pg	Pn	12 12 18.8	+1.3
	46nm,0.3s						
SHLS				Lg	Lg	12 12 53.8	
	69nm,0.4s						
MK31	Makanchi Array	2.94	351	Pn	Pn	12 12 22.1	+1.0
	0.3nm,0.3s,baz=149,slow=14,SNR=137						
MK31				Pg	Pb	12 12 27.4	+0.4
	2.3nm,0.3s,baz=159,slow=17,SNR=11						
MK31				⇑Lg	Lg	12 13 03.9	
	3.4nm,0.2s,baz=166,slow=22,SNR=11						
KAPS	Kapalarasan	2.95	300	*e*P	Pb	12 12 26.4	-0.5
	2.5nm,0.3s						
KAPS				*e*S	Sb	12 13 06.4	+3.3
	25nm,0.3s						
KAPS	Kapalarasan	2.95	300	Pg	Pb	12 12 26.4	-0.5
	2.5nm,0.3s						
KAPS				Lg	Lg	12 13 06.4	
	25nm,0.3s						
UZB	Uzynbulak	2.98	257	*e*P	Pb	12 12 29.0	+1.4
	1.1nm,0.1s						
UZB				*e*S	Sg	12 13 11.4	+1.4
	16nm,0.5s						
UZB	Uzynbulak	2.98	257	Pg	Pb	12 12 29.0	+1.4
	1.1nm,0.1s						
UZB				Lg	Lg	12 13 11.4	
	16nm,0.5s						
MAKZ	Makanchi	3.00	347	⇑Pn	Pn	12 12 23.1	+1.1
	1.9nm,0.8s						
MAKZ				⇓Pg	Pb	12 12 27.9	0.0
	2.9nm,0.5s						
MAKZ				⇓Lg	Lg	12 13 04.7	
	5.2nm,0.3s						
KPKS	Kokpek	3.15	264	*e*P	Pb	12 12 31.1	+0.6
	3.6nm,0.1s						
KPKS				*e*S	Sg	12 13 14.8	-0.8
	43nm,0.4s						
SATY	Saty	3.44	258	*e*P	Pb	12 12 36.9	+1.5
	3.9nm,0.2s						
SATY				*e*S	Sg	12 13 24.4	-0.3
	33nm,0.3s						
SATY	Saty	3.44	258	Pg	Pb	12 12 36.9	+1.5
	3.9nm,0.2s						
SATY				Lg	Lg	12 13 24.4	
	33nm,0.3s						
KURS	Kuram	3.52	265	*e*P	Pb	12 12 38.2	+1.5
	1.8nm,0.5s						
KURS				*e*S	Sg	12 13 26.6	-0.7
	12nm,0.6s						
KURS	Kuram	3.52	265	Pg	Pb	12 12 38.2	+1.5
	1.8nm,0.5s						
KURS				Lg	Lg	12 13 26.6	
	12nm,0.6s						
ZSN	Zaisan	3.79	20	*e*P	Pb	12 12 40.9	-0.5
	23nm,0.4s						
ZSN				*e*S	Sb	12 13 30.5	+3.1
	37nm,0.5s						
ZSN	Zaisan	3.79	20	Pg	Pb	12 12 40.9	-0.5
	23nm,0.4s						
ZSN				Lg	Lg	12 13 30.5	
	37nm,0.5s						
KOTS	Kotyrbulak	4.32	263	*e*P	Pb	12 12 52.5	+2.1
	8.6nm,0.5s						
KOTS				*e*S	Sg	12 13 51.0	-2.0
	19nm,0.4s						
KOTS	Kotyrbulak	4.32	263	Pg	Pb	12 12 52.5	+2.1
	8.6nm,0.5s						
KOTS				Lg	Lg	12 13 51.0	
	19nm,0.4s						
MDOK	Medeo	4.38	262	*e*P	Pb	12 12 53.7	+2.2
	2.4nm,0.5s						
MDOK				*e*S	Sg	12 13 53.8	-1.2
	13nm,0.5s						
MDOK	Medeo	4.38	262	Pg	Pg	12 12 56.0	-2.2
	2.6nm,0.4s						
MDOK				Lg	Lg	12 13 54.7	
	12nm,0.8s						
MDOK	Medeo	4.38	262	Pg	Pb	12 12 53.7	+2.2
	2.4nm,0.5s						
MDOK				Lg	Lg	12 13 53.8	
	13nm,0.5s						
TNSS	Tian-Shan	4.48	261	*e*P	Pb	12 12 54.4	+1.0
	2.7nm,0.5s						
TNSS				*e*S	Sg	12 13 55.1	-3.1
	4.0nm,0.7s						
TNSS	Tian-Shan	4.48	261	Pg	Pb	12 12 54.3	+1.0
	2.7nm,0.5s						
TNSS				Lg	Lg	12 13 55.1	
	4.0nm,0.7s						
KTBS	Karatobe	4.57	270	*e*P	Pb	12 12 57.1	+2.5
	1.1nm,0.4s						
KTBS				*e*S	Sg	12 13 59.2	-1.8
	16nm,0.6s						
KTBS	Karatobe	4.57	270	Pg	Pb	12 12 57.1	+2.5
	1.1nm,0.4s						
KTBS				Lg	Lg	12 13 59.2	
	16nm,0.6s						
KUU	Kurty	4.81	272	*e*P	Pb	12 13 00.6	+2.0
	1.2nm,0.2s						
KUU				*e*S	Sg	12 14 06.0	-2.6
	12nm,0.3s						
KUU	Kurty	4.81	272	Pg	Pb	12 13 00.6	+2.0
	1.2nm,0.2s						
KUU				Lg	Lg	12 14 06.0	
	12nm,0.3s						
KST	Kastek	5.18	263	*e*P	Pg	12 13 09.7	-3.9
	5.7nm,1.1s						
KST				*e*S	Sg	12 14 20.5	-0.2
	7.8nm,0.8s						
KST	Kastek	5.18	263	Pg	Pg	12 13 09.7	-3.9
	5.7nm,1.1s						
KST				Lg	Lg	12 14 20.5	
	7.8nm,0.8s						
DGS	Degeres	5.28	265	*e*P	Pg	12 13 11.6	-3.9
	1.8nm,0.5s						
DGS				*e*S	Sg	12 14 23.6	-0.3
	9.6nm,0.9s						
DGS	Degeres	5.28	265	Pg	Pg	12 13 11.6	-3.9
	1.8nm,0.5s						
DGS				Lg	Lg	12 14 23.6	
	9.6nm,0.9s						
TKM2	Tokmak 2	5.47	262	⇑Pg	Pg	12 13 16.0	-3.1
	2.5nm,0.9s						
TKM2				⇓Lg	Lg	12 14 29.9	
	7.0nm,0.7s						

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*SOME **22** 12:21:51.6, 43°.38N×84°.85E, h15^{km}*
*NNC **22** 12:21:53.7±1.8, 43°.36N×84°.74E, h0^{km}, mb3.8, mpv3.3,*
Error ellipse: s-maj=14.7km s-min=7.0km az=138.0
ISC 22 12:21:56.1±2.1**, 43°.48N**±0°.08×**84°.56E**±0°.09**, h10**^{km}**, n31,**
σ**2^{s}53**/43**, 2C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	3.07	271	*e*P	Pb	12 22 51.0	+0.2
	7.2nm,0.2s						
KTMS				*e*S	Sg	12 23 34.2	-0.4
	58nm,0.3s						
KTMS	Ketmen	3.07	271	Pg	Pb	12 22 51.0	+0.2
	7.2nm,0.2s						
KTMS				Lg	Lg	12 23 34.2	
	58nm,0.3s						
DJR	Jarkent	3.55	285	*e*P	Pb	12 23 00.6	+1.5
	2.1nm,0.3s						
DJR				*e*S	Sg	12 23 50.2	0.0
	12nm,0.2s						
DJR	Jarkent	3.55	285	Pg	Pb	12 23 00.6	+1.5
	2.1nm,0.3s						
DJR				Lg	Lg	12 23 50.2	
	12nm,0.2s						
MK31	Makanchi Array	3.68	335	Pn	Pn	12 22 55.0	+1.9
	0.1nm,0.1s,baz=145,slow=14,SNR=33						
MK31				Pg	Pg	12 23 04.3	-2.4
	0.6nm,0.2s,baz=151,slow=17,SNR=24						
MK31				⇓Lg	Lg	12 23 56.5	
	1.7nm,0.3s,baz=143,slow=30,SNR=5.9						
PDGK	Podgornoye	3.70	269	Pg	Pb	12 23 02.6	+1.0
	2.2nm,0.6s						
PDGK				Lg	Lg	12 23 54.1	
	8.7nm,0.3s						
PDGK	Podgornoye	3.70	269	⇓Pg	Pg	12 23 05.8	-1.2
	1.6nm,0.3s						
PDGK				⇑Lg	Lg	12 23 56.1	
	7.8nm,0.3s						
SHLS	Shalkode	3.74	267	*e*P	Pn	12 22 57.1	+3.1
	10nm,0.3s						
SHLS				*e*S	Sb	12 23 44.1	-3.6
	66nm,0.4s						
SHLS	Shalkode	3.74	267	Pg	Pn	12 22 57.1	+3.1
	10nm,0.3s						
SHLS				Lg	Lg	12 23 44.1	
	66nm,0.4s						
MAKZ	Makanchi	3.80	332	⇑Pg	Pg	12 23 06.5	-2.3
	4.8nm,0.8s						
MAKZ				⇓Lg	Lg	12 24 00.9	
	1.9nm,0.4s						
ZSN	Zaisan	3.98	3	*e*P	Pb	12 23 04.9	-1.4
	2.7nm,0.3s						
ZSN				*e*S	Sb	12 23 57.3	+2.9
	16nm,0.6s						
ZSN	Zaisan	3.98	3	Pg	Pb	12 23 04.9	-1.4
	2.7nm,0.3s						
ZSN				Lg	Lg	12 23 57.3	
	16nm,0.6s						
UZB	Uzynbulak	4.06	267	*e*P	Pb	12 23 09.8	+2.0
	0.7nm,0.2s						
UZB				*e*S	Sg	12 24 06.3	-0.1
	9.7nm,0.4s						
UZB	Uzynbulak	4.06	267	Pg	Pb	12 23 09.7	+2.0
	0.7nm,0.2s						
UZB				Lg	Lg	12 24 06.3	
	9.7nm,0.4s						
KAPS	Kapalarasan	4.14	298	*e*P	Pg	12 23 13.1	-2.4
	1.9nm,0.5s						
KAPS				*e*S	Sg	12 24 11.6	+2.4
	22nm,0.5s						
KAPS	Kapalarasan	4.14	298	Pg	Pg	12 23 13.1	-2.4
	1.9nm,0.5s						
KAPS				Lg	Lg	12 24 11.6	
	22nm,0.5s						
KPKS	Kokpek	4.28	272	*e*P	Pb	12 23 13.3	+1.8
	3.8nm,0.2s						
KPKS				*e*S	Sg	12 24 11.7	-1.8
	29nm,0.7s						
SATY	Saty	4.52	267	*e*P	Pg	12 23 18.9	-3.7
	2.7nm,0.4s						
SATY				*e*S	Sg	12 24 22.0	+0.9
	12nm,0.3s						
SATY	Saty	4.52	267	Pg	Pg	12 23 18.9	-3.7
	2.7nm,0.4s						
SATY				Lg	Lg	12 24 22.0	
	12nm,0.3s						
KURS	Kuram	4.65	272	*e*P	Pg	12 23 21.8	-3.4
	2.1nm,0.4s						
KURS				*e*S	Sg	12 24 26.7	+1.2
	6.7nm,0.6s						
KURS	Kuram	4.65	272	Pg	Pg	12 23 21.8	-3.4
	2.1nm,0.4s						
KURS				Lg	Lg	12 24 26.7	
	6.7nm,0.6s						
ARXS	Arharly	4.93	281	*e*P	Pb	12 23 24.1	+1.6
	2.7nm,0.2s						
ARXS				*e*S	Sg	12 24 30.8	-3.5
	8.7nm,0.4s						
ARXS	Arharly	4.93	281	Pg	Pb	12 23 24.2	+1.6
	2.7nm,0.2s						
ARXS				Lg	Lg	12 24 30.8	
	8.7nm,0.4s						
KOTS	Kotyrbulak	5.44	270	*e*P	Pg	12 23 36.4	-3.9
	6.6nm,0.3s						
KOTS				*e*S	Sg	12 24 51.5	+0.8
	13nm,0.5s						
KOTS	Kotyrbulak	5.44	270	Pg	Pg	12 23 36.4	-3.9
	6.6nm,0.3s						
KOTS				Lg	Lg	12 24 51.5	
	13nm,0.5s						
MDOK	Medeo	5.49	269	*e*P	Pg	12 23 37.2	-4.1
	1.3nm,0.2s						
MDOK				*e*S	Sg	12 24 53.6	+1.2
	4.0nm,0.4s						
MDOK	Medeo	5.49	269	Pg	Pg	12 23 37.2	-4.1
	1.3nm,0.2s						
MDOK				Lg	Lg	12 24 53.6	
	4.0nm,0.4s						
TNSS	Tian-Shan	5.58	268	*e*P	Pg	12 23 40.3	-2.7
	1.1nm,0.3s						
TNSS				*e*S	Sg	12 24 58.2	+2.9
	2.8nm,0.4s						
TNSS	Tian-Shan	5.58	268	Pg	Pg	12 23 40.3	-2.7
	1.1nm,0.3s						
TNSS				Lg	Lg	12 24 58.2	
	2.8nm,0.4s						
TKM2	Tokmak 2	6.58	268	⇓Lg	Lg	12 25 28.3	
	2.6nm,0.6s						
KURBB	Kurchatov Arra	8.24	332	⇓Lg	Lg	12 26 21.1	
	9.6nm,1.1s						

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*DNK **22** 12:29:06.5±2.4, 81°.78N×3°.58W, h15^{km}±145^{km}, ML2.9*
*BER **22** 12:29:09.3±2.7, 81°.78N×3°.77W, h14^{km}±189^{km}, ML2.3,*
ML2.9(DNK), Confirmed Earthquake
ISC 22 12:29:10.5±4.6**, 81°.3N**±0°.4×**3°.73W**±0°.07**, h10**^{km}**, n12,**
σ**0^{s}70**/19**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	3.61	124	*i*P	Pn	12 30 06.2	-0.2
KBS				*i*S	Sn	12 30 48.8	-0.2
KBS				IAML		12 30 52.9	
	comp=Z,12nm,0.3s						
KBS	Kingsbay	3.61	124	*e*P	Pn	12 30 06.0	-0.4
KBS				*e*S	Sn	12 30 47.5	-1.4
KBS	Kingsbay	3.61	124	*i*P	Pn	12 30 06.2	-0.2
KBS				*i*S	Sn	12 30 48.8	-0.2
KBS				IAML		12 30 52.9	
	comp=Z,12nm,0.3s						
BRBA	Barentsburg A	4.58	127	*e*P	Pn	12 30 20.9	+1.3
DAG	Danmarks Havn	5.37	219	*e*	Pn	12 30 30.0	-0.5
	baz=34,slow=16						
DAG				*i*P	Pn	12 30 30.6	+0.1
DAG				*i*S	Sn	12 31 32.6	+0.3
DAG				IAML		12 31 43.9	
	comp=Z,6.7nm,0.3s						
DAG	Danmarks Havn	5.37	219	*i*P	Pn	12 30 30.6	+0.1
DAG				*i*S	Sn	12 31 32.5	+0.3
DAG	Danmarks Havn	5.37	219	*e*	Pn	12 30 30.0	-0.5
	baz=34,slow=16						
DAG				*i*P	Pn	12 30 30.6	+0.1
DAG				*i*S	Sn	12 31 32.6	+0.3
DAG				IAML		12 31 43.9	
	comp=Z,6.7nm,0.3s						
HSPB	Hornsund (broa	5.63	130	*e*P	Pn	12 30 35.2	+1.2
HSPB	Hornsund (broa	5.63	130	*e*P	Pn	12 30 34.9	+0.9
ZFI2	Zemlya Franca-	7.78	68	*e*P	Pn	12 30 53.6	-10
ZFI2				*e*S	Sn	12 32 12.4	-19
	comp=Z,7.7nm,0.6s						
DBG	Daneborg	7.83	215	*i*P	Pn	12 31 03.4	-0.7
DBG				*i*S	Sn	12 32 29.2	-3.4
DBG				IAML		12 32 36.8	
	comp=Z,3.5nm,0.4s						
DBG	Daneborg	7.83	215	*i*P	Pn	12 31 03.4	-0.7
DBG				*i*S	Sn	12 32 29.2	-3.4
DBG				IAML		12 32 36.8	
	comp=Z,3.5nm,0.4s						

IDC 22 12:32:14.5±514.0**, 56°.91N×32°.57E, h0**^{km}**, Error ellipse:**
s-maj=198.7km s-min=58.2km az=93.0, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.56	92	*i*		12 49 50.0	
	baz=277,slow=308,SNR=0.2						
I26DE	FREYUNG INFRAS	13.92	243	*i*		13 57 10.0	
	baz=52,slow=332,SNR=1.9						
I31KZ	AKTYUBINSK INF	16.37	103	*i*		14 10 00.0	
	baz=303,slow=322,SNR=1.0						

IDC 22 13:22:03.2±6.3**, 4°.02S×151°.54E, h0**^{km}**, mb3.9**/4**,**
mb1 4.1/4**, mb1mx3.6**/34**, mbtmp3.9**/4**, Error ellipse:**
s-maj=100.3km s-min=73.5km az=31.0, New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.05	225	P	P	13 27 10.2	-0.2
	0.5nm,0.3s,baz=50,slow=10.0,SNR=8.6						
ASAR	Alice Springs	25.91	219	P	P	13 27 37.0	-0.3
	0.4nm,0.3s,baz=53,slow=8.7,SNR=8.3						
FITZ	Fitzroy Crossi	28.95	239	P	P	13 28 05.0	+0.5
	2.0nm,0.3s,baz=63,slow=8.4,SNR=28						
STKA	Stephens Creek	29.24	198	P	P	13 28 06.7	-0.2
	2.0nm,0.8s,baz=0.0,slow=5.1,SNR=3.3						

IDC 22 13:29:30.1±2.4, 22°.42S×179°.34W, h590km±18km, mb3.4/7, mb1 3.5/10, mb1mx3.2/30, mbtmp4.4/10, Error ellipse: s-maj=38.6km s-min=21.3km az=123.0

ISC 22 13:29:30.1±1.2, 22°.42S±0°.10×179°.2W±0°.2, h600km, n34, σ2ˢ03/37, mb4.0/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.32**	**331**	P	**P**	**13 31 05.4**	**-0.3**
	14nm,0.3s,baz=261,slow=23,SNR=89						
MSVF				S	**S**	**13 32 21.6**	**-2.1**
	baz=303,slow=22,SNR=3.1						
DZM	**Mont Dzumac**	**13.28**	**269**	P	**P**	**13 32 22.8**	**+1.0**
	0.5nm,0.3s,baz=114,slow=20,SNR=1.7						
HAZ	**Te Kaha**	**15.50**	**189**	P	**P**	**13 32 44.5**	**+1.9**
RUGZ	**Raukumara Rang**	**15.72**	**189**	P	**P**	**13 32 46.5**	**+1.8**
TWGZ	**Tauwhareparae**	**15.89**	**188**	P	**P**	**13 32 48.8**	**+2.6**
KARZ	**Kaharoa**	**16.03**	**193**	P	**P**	**13 32 51.3**	**+3.8**
URZ	**Urewera**	**16.10**	**190**	P	**P**	**13 32 47.8**	**-0.2**
	1.3nm,0.3s,baz=280,slow=4.2,SNR=12						
URZ				S	**S**	**13 35 24.7**	**-4.8**
	0.5nm,0.3s,baz=167,slow=21,SNR=6.0						
URZ	**Urewera**	**16.10**	**190**	P	**P**	**13 32 48.2**	**+0.1**
MWZ	**Matawai**	**16.11**	**189**	P	**P**	**13 32 49.0**	**+0.8**
MUGZ	**Murupara**	**16.37**	**191**	P	**P**	**13 32 51.7**	**+1.1**
RIGZ	**Rimuhau**	**16.44**	**188**	P	**P**	**13 32 53.0**	**+1.7**
TLZ	**Tolley Road**	**16.48**	**195**	P	**P**	**13 32 55.9**	**+4.2**
SNGZ	**Shannon Statio**	**16.57**	**189**	P	**P**	**13 32 53.4**	**+1.0**
RAHZ	**Arahi**	**16.74**	**190**	P	**P**	**13 32 55.7**	**+1.7**
NMHZ	**Naumai**	**16.97**	**191**	P	**P**	**13 32 54.0**	**-2.1**
BKZ	**Black Stump Fm**	**17.09**	**191**	P	**P**	**13 32 57.5**	**+0.2**
TMVZ	**Te Maari**	**17.20**	**193**	P	**P**	**13 33 00.4**	**+2.1**
ETVZ	**East Tongariro**	**17.22**	**193**	P	**P**	**13 33 00.4**	**+1.9**
OTVZ	**Oturere**	**17.25**	**194**	P	**P**	**13 32 60.0**	**+1.1**
KWHZ	**Kaweka Forest**	**17.35**	**191**	P	**P**	**13 32 54.8**	**-4.8**
BHHZ	**Black Hill Sta**	**17.48**	**192**	P	**P**	**13 33 01.6**	**+0.8**
PXZ	**Pawanui**	**17.87**	**190**	P	**P**	**13 33 06.0**	**+1.7**
TSZ	**Takapari Road**	**18.05**	**192**	P	**P**	**13 33 08.0**	**+2.0**
BFZ	**Birch Farm**	**18.61**	**191**	P	**P**	**13 33 12.6**	**+1.7**
MRZ	**Mangatainoka R**	**18.71**	**192**	P	**P**	**13 33 12.3**	**+0.4**
CTA	**Charters Tower**	**32.22**	**268**	P	**P**	**13 35 10.7**	**-0.2**
	4.4nm,0.4s,baz=98,slow=10,SNR=7.1						
STKA	**Stephens Creek**	**35.95**	**246**	P	**P**	**13 35 42.0**	**+0.2**
	2.4nm,0.5s,baz=94,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**43.00**	**259**	P	**P**	**13 36 38.0**	**-0.4**
	6.2nm,0.7s,baz=101,slow=7.7,SNR=74						
ASAR				PcP	**PcP**	**13 38 15.6**	**+0.9**
	0.5nm,0.5s,baz=104,slow=4.2,SNR=4.5						
WRA	**Warramunga Arr**	**43.24**	**264**	P	**P**	**13 36 39.1**	**-1.1**
	1.8nm,0.3s,baz=92,slow=6.3,SNR=83						
FITZ	**Fitzroy Crossi**	**51.67**	**264**	P	**P**	**13 37 42.5**	**-0.5**
	1.4nm,0.4s,baz=90,slow=11,SNR=8.8						
PETK	**Petropavlovsk-**	**77.84**	**346**	P	**P**	**13 40 26.9**	**+0.5**
	1.0nm,0.7s,baz=196,slow=9.0,SNR=2.2						
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	**13 41 27.7**	**+2.0**
	1.1nm,0.8s,baz=134,slow=3.1,SNR=6.9						
AKASG	**Malin Array Be**	**144.10**	**329**	PKP	**PKPdf**	**13 47 57.5**	**-0.6**
	1.4nm,0.4s,baz=47,slow=4.4,SNR=5.7						
BRTR	**Keskin Array B**	**147.22**	**309**	PKPbc	**PKiKP**	**13 48 07.2**	**-1.8**
	0.4nm,0.6s,baz=116,slow=3.4,SNR=3.1						

JMA 22 13:54:29.3, 39°.06N×140°.86E, h7km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s30.00000°, δ49.00000°, λ52.00000°. NP2:ϕ_s260.00000°, δ53.00000°, λ126.00000°. Principal axes: T Plg62.0000°, Azm232.0000°; N Plg28.0000°, Azm57.0000°; P Plg2.0000°, Azm326.0000°;

JMA Felt II J1.

IDC 22 13:54:34.3±2.5, 39°.06N×140°.75E, h50km±26km, mb3.4/5, mb1 3.5/9, mb1mx3.2/62, mbtmp3.5/9, ML2.8/4 Error ellipse: s-maj=33.9km s-min=17.7km az=109.0

ISC 22 13:54:29.3±1.0, 39°.07N±0°.03×140°.90E±0°.03, h8km±8km, n24, σ1ˢ20/27, mb3.8/5, 2C-6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**116**	⇓P	**Pg**	**13 54 35.1**	**+0.2**
JMK				eS	**Sg**	**13 54 39.3**	**+0.7**
JRG	**Rokugo**	**0.38**	**328**	⇓P	**Pg**	**13 54 36.8**	**0.0**
JRG				eS	**Sg**	**13 54 42.6**	**+0.8**
JYK	**Kaneyama**	**0.45**	**250**	⇑P	**Pg**	**13 54 37.5**	**-0.5**
JYK				S	**Sg**	**13 54 42.9**	**-0.9**
JOM	**Ohasama**	**0.50**	**38**	⇑P	**Pb**	**13 54 39.5**	**-0.9**
JOM				S	**Sb**	**13 54 46.7**	**-1.2**
JKMT	**Kesennumamotoy**	**0.52**	**120**	⇓P	**Pg**	**13 54 39.4**	**0.0**
JKMT				S	**Sg**	**13 54 46.9**	**+0.7**
OFUJ	**Ofunato**	**0.60**	**89**	⇓P	**Pb**	**13 54 41.3**	**-0.7**
OFUJ				S	**Sb**	**13 54 49.8**	**-0.9**
JIO	**Ouri**	**0.71**	**150**	⇓P	**Pg**	**13 54 42.6**	**-0.4**
JIO				S	**Sg**	**13 54 52.2**	**-0.1**
JOU	**Okura**	**0.73**	**194**	⇓P	**Pg**	**13 54 43.0**	**-0.4**
JOU				S	**Sg**	**13 54 52.4**	**-0.5**
MAT	**Matsushiro**	**3.30**	**221**	P	**Pn**	**13 55 22.2**	**+0.9**
MAT				eS	**Sn**	**13 56 02.8**	**+2.1**
MJAR	**Matsushiro Arr**	**3.30**	**221**	P	**Pn**	**13 55 22.5**	**+1.2**
	0.3nm,0.3s,baz=26,slow=14,SNR=16						
ASAJ	**Asahikawa**	**5.20**	**14**	P	**Pn**	**13 55 49.8**	**+2.5**
	0.6nm,0.3s,baz=193,slow=6.7,SNR=7.5						
USRK	**Ussuriysk Ar.**	**8.41**	**310**	P	**Pn**	**13 56 30.9**	**-0.4**
	baz=115,slow=14,SNR=6.3						
KSRS	**Korea Array**	**10.33**	**265**	P	**Pn**	**13 57 00.7**	**+3.0**
	0.4nm,0.3s,baz=74,slow=13,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**29.57**	**123**	T	T	14 31 04.2	
	baz=317,slow=75,SNR=105						
H11N1	**WAKE ISLAND Hy**	**29.58**	**123**	T	T	14 31 04.9	
	baz=317,slow=75,SNR=80						
H11N3	**WAKE ISLAND Hy**	**29.59**	**123**	T	T	14 31 05.5	
	baz=317,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**30.34**	**125**	T	T	14 32 05.8	
	baz=318,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**30.34**	**125**	T	T	14 31 55.9	
	baz=318,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**30.35**	**125**	T	T	14 31 59.1	
	baz=318,slow=76,SNR=16						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**14 02 25.4**	**-1.2**
	0.3nm,0.7s,baz=94,slow=9.9,SNR=4.5						
ILAR	**Eielson Array**	**48.00**	**33**	P	**P**	**14 03 08.8**	**+0.5**
	0.8nm,0.9s,baz=262,slow=7.1,SNR=4.9						
INK	**Inuvik**	**52.77**	**28**	P	**P**	**14 03 44.4**	**+0.1**
	1.2nm,1.0s,baz=315,slow=8.8,SNR=3.8						
WRA	**Warramunga Arr**	**59.03**	**187**	P	**P**	**14 04 28.0**	**-1.6**
	0.7nm,0.4s,baz=5.7,slow=7.2,SNR=6.2						
ASAR	**Alice Springs**	**62.75**	**187**	P	**P**	**14 04 54.5**	**-0.4**
	0.4nm,0.6s,baz=358,slow=6.1,SNR=4.7						

IDC 22 13:58:11.7±3.0, 5°.14S×133°.58E, h0km, mb3.5/1, mb1 3.8/5, mb1mx3.5/34, mbtmp3.6/5, ML3.7/4, Error ellipse: s-maj=122.6km s-min=25.2km az=80.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.83**	**331**	Pn	Pn	13 59 24.6	-1.1
	1.5nm,0.3s,baz=225,slow=24,SNR=11						
SIJI				Sn	Sn	14 00 13.2	-9.2
	1.8nm,0.3s,baz=99,slow=19,SNR=3.3						
WRA	**Warramunga Arr**	**14.73**	**177**	Pn	Pn	14 01 40.2	-1.4
	0.2nm,0.3s,baz=357,slow=13,SNR=11						
FITZ	**Fitzroy Crossi**	**15.04**	**210**	Pn	Pn	14 01 45.7	+0.1
	0.5nm,0.3s,baz=32,slow=11,SNR=12						
FITZ				Sn	Sn	14 04 26.2	-6.9
	0.2nm,0.3s,baz=299,slow=19,SNR=4.8						
ASAR	**Alice Springs**	**18.42**	**179**	P	Pn	14 02 28.7	0.0
	0.3nm,0.3s,baz=2.9,slow=10,SNR=29						
MKAR	**Makanchi Array**	**68.69**	**325**	P	P	14 09 17.6	+0.4
	0.3nm,0.6s,baz=116,slow=6.2,SNR=2.6						

IDC 22 14:06:40.1±1.8, 4°.26S×140°.42E, h96km±18km, mb3.2/3, mb1 3.5/5, mb1mx3.3/22, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.6/15, Error ellipse: s-maj=51.3km s-min=16.8km az=105.0

ISC 22 14:06:35.0±0.9, 4°.5S±0°.1×139°.9E±0°.3, h35km, n7, σ3ˢ65/10, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.12**	**22**	P	**Pn**	**14 07 10.4**	**+2.5**
	7.8nm,0.3s,baz=182,slow=21,SNR=34						
JAY				S	**Sn**	**14 07 31.9**	**-1.2**
	10nm,0.3s,baz=174,slow=23,SNR=8.5						
WRA	**Warramunga Arr**	**16.29**	**199**	P	**P**	**14 10 26.2**	**+2.3**
	0.4nm,0.3s,baz=18,slow=13,SNR=17						
WRA				S	**Sn**	**14 13 18.9**	**-2.1**
	0.1nm,0.3s,baz=16,slow=24,SNR=3.8						
DAV	**Davao City (W)**	**18.36**	**309**	LR	LR	14 18 28.1	
	comp=Z,38nm,18.5s,baz=80,slow=38						
FITZ	**Fitzroy Crossi**	**19.44**	**225**	P	**Pn**	**14 11 04.7**	**+4.7**
	0.2nm,0.3s,baz=39,slow=14,SNR=1.3						
FITZ				S	**S**	**14 14 33.3**	**-3.4**
	0.1nm,0.3s,baz=97,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**19.93**	**196**	P	**Pn**	**14 11 08.8**	**+3.1**
	2.5nm,0.8s,baz=24,slow=7.2,SNR=34						
ASAR				S	**S**	**14 14 42.6**	**-3.9**
	0.2nm,0.8s,baz=185,slow=40,SNR=2.0						
MKAR	**Makanchi Array**	**71.93**	**322**	P	**P**	**14 17 53.9**	**-0.9**
	0.6nm,0.9s,baz=103,slow=7.9,SNR=4.0						
ILAR	**Eielson Array**	**86.95**	**24**	P	**P**	**14 19 12.1**	**-4.1**
	0.2nm,0.6s,baz=282,slow=4.7,SNR=1.6						

JSN 22 14:08:21.1±0.5, 16°.13N×77°.66W, h30km±999km, MD3.9

ISC 22 14:08:21.1±1.3, 16°.48N±0°.06×77°.7W±0°.1, h10km, n20, σ1ˢ03/21, 2D, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCJ	**Malvern**	**1.44**	**359**	iP	**Pg**	**14 08 49.0**	**+0.3**
MTDJ	**Mount Denham**	**1.75**	**4**	⇓eP	**Pb**	**14 08 53.3**	**0.0**
HOJ	**Hope**	**1.75**	**30**	iP	**Pb**	**14 08 53.0**	**-0.4**
STH	**Stony Hill**	**1.79**	**27**	iP	**Pb**	**14 08 53.4**	**-0.6**
STH				iS	**Sg**	**14 09 18.0**	**-0.7**
GWJ	**Greenwich**	**1.82**	**29**	iP	**Pb**	**14 08 54.0**	**-0.7**
BBJ	**Bamboo Saint A**	**1.93**	**11**	⇓iP	**Pb**	**14 08 56.2**	**-0.3**
BNJ	**Bonny Gate**	**1.96**	**20**	iP	**Pb**	**14 08 56.6**	**-0.3**
CMJ	**Castle Mountai**	**2.06**	**37**	iP	**Pn**	**14 08 57.1**	**+1.3**
SMRC	**Santa Marta, M**	**6.25**	**147**	eP	**Pn**	**14 09 52.7**	**-0.7**
CRJC	**Cerrejon, Guaj**	**7.14**	**139**	eP	**Pn**	**14 10 05.3**	**-0.5**
ARGC	**Ariguani, Magd**	**7.37**	**153**	eP	**Pn**	**14 10 10.9**	**+2.0**
BCIP	**Isla Barro Col**	**7.57**	**196**	eP	**Pn**	**14 10 09.2**	**-2.4**
CAPC	**Capurgana**	**7.80**	**178**	eP	**Pn**	**14 10 14.8**	**+0.1**
MOTC	**Monteria, Cord**	**7.90**	**165**	eP	**Pn**	**14 10 15.0**	**-1.0**
SMLC	**San Martn de**	**8.40**	**155**	eP	**Pn**	**14 10 23.7**	**+0.8**
UREC	**San Jos de Ur**	**8.92**	**166**	eP	**Pn**	**14 10 30.8**	**+0.7**
OCAC	**Ocana**	**9.22**	**152**	eP	**Pn**	**14 10 34.9**	**+0.5**
ZARC	**Zaragoza, Cauc**	**9.34**	**163**	eP	**Pn**	**14 10 37.0**	**+1.1**
SDV	**Santo Domingo**	**10.20**	**137**	eP	**Pn**	**14 10 46.8**	**-1.0**
PAMC	**Pamplona, Colo**	**10.30**	**151**	eP	**Pn**	**14 10 50.1**	**+0.7**

CRAAG 22 14:22:48.1, 36°.28N×2°.97E, Ml2.8

MDD 22 14:22:49.7±0.6, 36°.25N×2°.95E, h5km±9km, mb4.0/6, Error ellipse: s-maj=9.6km s-min=8.7km az=20.0, PRXIMO

ISC 22 14:22:48.3±1.3, 36°.32N±0°.07×3°.07E±0°.07, h11km±12km, n13, σ2ˢ20/19, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**0.15**	**217**	P	**Pg**	**14 22 50.9**	**-1.0**
EMHD	**Djebel Mahouad**	**0.15**	**217**	P	**Pg**	**14 22 50.9**	**-1.0**
ADJB	**Djebel Djouab**	**0.34**	**119**	P	**Pb**	**14 22 57.1**	**+0.6**
ADJB	**Djebel Djouab**	**0.34**	**119**	P	**Pb**	**14 22 57.1**	**+0.6**
ABA	**Alger-Bouzarea**	**0.48**	**357**	P	**Pb**	**14 22 59.9**	**+1.1**
ABA	**Alger-Bouzarea**	**0.48**	**357**	P	**Pb**	**14 22 59.9**	**+1.1**
EIBI	**Ibiza**	**3.02**	**334**	P	**Pn**	**14 23 37.7**	**+1.6**
	8.2nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**14 24 11.1**	**-1.2**
	8.8nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.44**	**357**	P	**Pn**	**14 23 44.0**	**+2.1**
	3.2nm,0.2s,SNR=7.0						
ETOS				S	**Sn**	**14 24 21.1**	**-1.7**
	4.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.34**	**304**	P	**Pn**	**14 23 56.0**	**+1.8**
	1.5nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**14 24 42.8**	**-2.1**
	0.7nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**4.82**	**293**	P	**Pn**	**14 24 03.6**	**+2.6**
	1.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.90**	**326**	P	**Pn**	**14 24 03.9**	**+1.9**
	3.2nm,0.2s,SNR=13						
EMOS				S	**Sn**	**14 24 55.8**	**-3.0**
	0.9nm,0.4s,SNR=7.9						
CFON	**Fontmartina**	**5.45**	**355**	P	**Pn**	**14 24 11.3**	**+1.7**
	1.5nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**14 25 08.3**	**-4.0**
	2.9nm,0.2s,SNR=7.9						
CSOR	**Sort**	**6.23**	**347**	P	**Pn**	**14 24 21.8**	**+1.6**
	0.7nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**14 25 28.7**	**-2.7**
	1.2nm,0.4s,SNR=4.0						

MAN 22 14:49:17.2, 19°.50N×121°.28E, h9km, MS5.2

MAN INTENSITY V - CALAYAN ISLAND; INTENSITY III - BASCO.

MOS 22 14:49:18.3±1.0, 19°.40N×121°.54E, h28km, mb5.1/61, MS4.6/17, Error ellipse: s-maj=7.1km s-min=4.0km az=108.4

GCMT 22 14:49:18.0±0.1, 19°.53N±0°.01×121°.18E±0°.01, h28km, MW5.3/138, Moment Tensor Solution. s103,c158; s138,c248; Duration: 1ˢ0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.74±.02; $M_{\theta\theta}$0.91±.01; $M_{\phi\phi}$-0.16±.01; $M_{r\theta}$0.28±.02; $M_{\theta\phi}$-0.09±.01; $M_{\phi r}$0.41±.03; Best double couple: $M_0$0.97800×10^{17} NP1:ϕ_s119.00000°, δ43.00000°, λ-49.00000°. NP2:ϕ_s249.00000°, δ59.00000°, λ-121.00000°. Principal axes: T 0.9560, Plg9.0000°, Azm1.0000°; N 0.0420, Plg26.0000°, Azm266.0000°; P -0.9990, Plg62.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 22 14:49:20.0±1.9, 19°.50N±0°.06×121°.33E±0°.07, h30km±4km, mb5.0/106 Error ellipse: s-maj=11.2km s-min=7.9km az=127.0

BJI 22 14:49:19.4±0.0, 19°.74N×121°.31E, h12km, mB5.0/56, mb4.8/76, ML4.9/4, Ms4.9/83, Ms7 4.8/78

IDC 22 14:49:20.4±2.5, 19°.40N×121°.44E, h30km±17km, mb4.6/35, mb1 4.7/39, mb1mx4.6/51, mbtmp4.8/39, ML5.1/4, MS4.5/13, Ms1 4.5/13, ms1mx4.1/25, Error ellipse: s-maj=12.1km s-min=8.2km az=76.0

KLM 22 14:49:26, 19°.73N×121°.14E, h88km, mb5.0

ISC 22 14:49:20.0±0.5, 19°.48N±0°.02×121°.44E±0°.04, h25km±3km, h25km:pP-P, n607, σ1ˢ82/646, mb4.9/168, MS4.6/44, 79C-37D, Fault plane solution: NP1:ϕ_s160.26993°, δ56.91073°, λ-13.83532°. NP2:ϕ_s257.92764°, δ78.44258°, λ-146.13461°. Principal axes: T Plg14.1448°, Azm25.1927°; N Plg54.4406°, Azm274.5502°; P Plg31.8509°, Azm124.2003°; Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.36**	**155**	eP	**Pn**	**14 49 42.6**	**-0.7**
SGCP				eS	**Sb**	**14 50 03.9**	**+2.1**
APYP	**Conner**	**1.62**	**187**	eP	**Pn**	**14 49 45.1**	**-1.9**
APYP				eS	**Sn**	**14 50 07.2**	**+0.1**
CVP	**Callao Caves**	**1.80**	**168**	⇑eP	**Pn**	**14 49 49.6**	**0.0**
CVP				iS	**Sb**	**14 50 17.4**	**+2.9**
SIPP	**Brgy, Tapao**	**1.81**	**211**	⇓iP	**Pn**	**14 49 50.0**	**+0.4**
SIPP				iS	**Sb**	**14 50 21.0**	**+6.3**
ABRA	**Dolores**	**1.95**	**201**	eP	**Pn**	**14 49 49.0**	**-2.5**
ABRA				eS	**Sn**	**14 50 15.9**	**+0.7**
CAUP	**Cauayan**	**2.55**	**172**	eP	**Pn**	**14 50 01.4**	**+1.6**
CAUP				eS	**Sb**	**14 50 40.4**	**+4.4**
BCP	**Baguio City**	**3.15**	**195**	⇑iP	**Pn**	**14 50 10.5**	**+2.3**
BCP				iS	**Sn**	**14 50 40.9**	**-4.2**
TWG	**Pinlang**	**3.34**	**354**		**Pn**	**14 50 07.5**	**-3.2**
BALP	**Baler**	**3.72**	**178**	eP	**Pn**	**14 50 16.6**	**+0.7**
BALP				eS	**Sn**	**14 51 02.9**	**+4.0**
TPUB	**Ta-pu**	**3.88**	**349**		**Pn**	**14 50 16.5**	**-1.5**
YULB	**Yu-li**	**3.90**	**358**	Pn	**Pn**	**14 50 17.6**	**-0.7**
SSLB	**Suanglung**	**4.31**	**354**	Pn	**Pn**	**14 50 23.8**	**-0.2**
NACB	**Ninganchiao**	**4.67**	**2**		**Pn**	**14 50 28.2**	**-0.8**
POLP	**Polilio Island**	**4.75**	**174**	eP	**Pn**	**14 50 30.4**	**+0.4**
POLP				eS	**Sn**	**14 51 27.2**	**+2.9**
YHNB	**Yeheng**	**5.17**	**359**	Pn	**Pn**	**14 50 36.2**	**+0.4**
YOJ	**Yonaguni jima**	**5.17**	**16**	P	**Pn**	**14 50 36.3**	**+0.6**
YOJ	**Yonaguni jima**	**5.17**	**16**	Pn	**Pn**	**14 50 36.3**	**+0.6**
LQP	**Lukban**	**5.34**	**179**	eP	**Pn**	**14 50 40.0**	**+1.6**
LQP				iS	**Sb**	**14 51 53.4**	**-3.1**
TGY	**Tagaytay City**	**5.37**	**185**	Pn	Pn	14 50 43.5	+4.8
	92nm,0.3s,baz=143,slow=2.2,SNR=8.5						
TATO	**Taipei**	**5.47**	**0**		**Pn**	**14 50 40.6**	**+0.7**
GQP	**Guinayangan**	**5.63**	**170**	⇓eP	**Pn**	**14 50 44.1**	**+2.0**
GQP				eS	**Sn**	**14 51 47.8**	**+1.8**
KNMB	**Chin-men Tao**	**5.71**	**331**	Pn	**Pn**	**14 50 40.3**	**-2.9**
PGP	**Puerto Galera**	**5.96**	**185**	⇓eP	**Pn**	**14 50 50.2**	**+3.4**
QZH	**Quanzhou**	**6.04**	**335**	iPn	**Pn**	**14 50 45.8**	**-2.0**
QZH				Sn	**Sn**	**14 51 51.8**	**-4.4**
QZH				LR	LR		
	comp=N,4µm,11.2s						
QZH				LR	LR		
	comp=E,5µm,16.5s						
QZH				LR	LR		
	comp=Z,4µm,13.3s						
MCO	**Taipa Grande**	**7.83**	**291**	P	**Pn**	**14 51 11.0**	**-1.4**
GZH	**Guangzhou**	**8.36**	**297**	P	**Pn**	**14 51 16.8**	**-2.8**
GZH				S	**Sn**	**14 52 46.4**	**-6.8**
GZH				smax	smax		
	comp=N,370nm,0.7s						
GZH				smax	smax		
	comp=E,250nm,0.8s						
JOW	**Kunigami**	**9.64**	**39**	Pn	**Pn**	**14 51 37.9**	**+0.6**
	42nm,0.3s,baz=231,slow=12,SNR=29						
QIZ	**Qiongzhong**	**10.96**	**270**	P	**Pn**	**14 51 53.5**	**-1.9**
QIZ				pmax	pmax		
	comp=Z,24nm,1.1s						
QIZ				LR	LR		
	comp=N,1µm,10.8s						
QIZ				LR	LR		
	comp=E,3µm,13.7s						
QIZ				LR	LR		
	comp=Z,3µm,14.3s						
QIZ	**Qiongzhong**	**10.96**	**270**	Pn	**Pn**	**14 51 52.9**	**-2.5**
SSE	**Sheshan**	**11.57**	**359**	P	**Pn**	**14 52 04.5**	**+0.9**
SSE				S	**Sn**	**14 54 15.4**	**+3.4**
SSE				pmax	pmax		
	comp=Z,16nm,0.8s						
SSE				pmax	pmax		
	comp=Z,120nm,4.4s						
SSE				LR	LR		
	comp=N,770nm,15.0s						
SSE				LR	LR		
	comp=E,1µm,19.5s						
NJ2	**Nanjing**	**12.73**	**350**	⇓P	**Pn**	**14 52 19.1**	**-0.4**
NJ2				pP	**P**	**14 52 26.3**	**-4.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,350nm,3.5s						
NJ2				LR	LR		
	comp=N,2µm,12.8s						
NJ2				LR	LR		
	comp=E,3µm,15.9s						
NJ2				LR	LR		
	comp=Z,4µm,19.9s						
WHN	**Wuhan**	**12.75**	**331**	P	**Pn**	**14 52 21.5**	**+1.8**
WHN				S	**Sn**	**14 54 38.8**	**-2.1**
WHN				LR	LR		
	comp=N,4µm,13.7s						
WHN				LR	LR		
	comp=E,7µm,13.1s						
WHN				LR	LR		
	comp=Z,10µm,13.9s						
DAV	**Davao City (W)**	**12.97**	**161**	Pn	**Pn**	**14 52 21.8**	**-1.1**
	52nm,0.3s,baz=352,slow=4.9,SNR=1.8						
DAV				LR	LR	14 58 05.2	
	comp=Z,4µm,19.9s,baz=345,slow=41						
KKM	**Kota Kinabalu**	**14.29**	**202**		**P**	**14 52 48.2**	**+0.3**
JSU	**Suzuyama**	**14.47**	**32**	Pn	**Pn**	**14 52 42.7**	**-0.5**
MYLDM	**Lahad Datu**	**14.50**	**192**	Pn	**Pn**	**14 52 43.7**	**-0.1**
ENH	**Enshi**	**15.26**	**317**	Pn	**Pn**	**14 52 52.5**	**-1.4**
ENH				IAmb	IAmb	14 52 56.6	
	comp=Z,149nm,1.3s						
GYA	**Guiyang**	**15.27**	**300**	eP	**Pn**	**14 52 54.0**	**-0.2**
GYA				pP	P	14 53 01.3	+2.5
GYA				sP	pP	14 53 06.0	+0.8
GYA				S	**Sn**	**14 55 44.5**	**+1.8**
GYA				pmax	pmax		
	comp=Z,17nm,1.7s						
GYA				LR	LR		
	comp=Z,1µm,16.0s						
GYA				LR	LR		
	comp=Z,2µm,12.3s						
GYA				LR	LR		
	comp=Z,3µm,13.3s						
UBPT	**Khong Chiam**	**15.80**	**257**	P	**P**	**14 53 05.0**	**+0.3**
JNU	**Nakatsue**	**15.99**	**30**	Pn	**P**	**14 53 05.1**	**-1.6**
	comp=Z,4.0nm,0.3s,baz=196,slow=7.3,SNR=27						
JNU	**Nakatsue**	**15.99**	**30**	Pn	**Pn**	**14 53 03.2**	**-0.2**
SLVN	**Son La**	**16.54**	**279**	P	**Pn**	**14 53 11.2**	**+0.7**
JTU	**Tsushima**	**16.57**	**24**	P	**P**	**14 53 13.2**	**+0.2**
JTU				IAmb	IAmb	14 53 17.1	
	comp=Z,278nm,1.4s						
TIA	**Tai'an**	**17.10**	**348**	P	**P**	**14 53 18.3**	**-0.6**
TIA				pmax	pmax		
	comp=Z,170nm,1.4s						
TIA				LR	LR		
	comp=Z,2µm,15.4s						
TIA				LR	LR		
	comp=Z,2µm,17.1s						
TIA				LR	LR		
	comp=Z,2µm,14.1s						
NONG	**Nongkai**	**17.38**	**268**	P	**P**	**14 53 24.0**	**+1.8**
	comp=Z,36nm,2.0s						
TJN	**Taejon**	**17.62**	**16**	ceP	**P**	**14 53 24.9**	**+0.3**
JMN	**Monobe**	**18.00**	**35**	P	**P**	**14 53 29.4**	**+0.4**
KMI	**Kunming**	**18.19**	**291**	⇓P	**P**	**14 53 33.6**	**+2.3**
KMI				sP	sP	14 53 43.3	+2.8
KMI				PP	**PnPn**	**14 53 46.9**	**+4.4**
KMI				S	**Sn**	**14 56 46.4**	**-7.2**
KMI				SS	**SnSn**	**14 57 16.3**	**+8.9**
KMI				pmax	pmax		
	comp=Z,16nm,1.7s						
KMI				pmax	pmax		
	comp=Z,310nm,6.8s						
KMI				LR	LR		
	comp=Z,2µm,11.5s						
KMI				LR	LR		
	comp=Z,2µm,12.5s						
KMI				LR	LR		
	comp=Z,2µm,13.9s						
TOLI2	**Tolitoli**	**18.27**	**182**	P	**Pn**	**14 53 31.4**	**-0.5**
XAN	**Xi'an**	**18.29**	**325**	P	**P**	**14 53 32.3**	**+0.2**
XAN				pP	sP	14 53 41.0	-0.7
XAN				pmax	pmax		
	comp=Z,66nm,1.4s						
XAN				pmax	pmax		
	comp=Z,750nm,7.2s						
XAN				LR	LR		
	comp=Z,3µm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,16.3s						
XAN				LR	LR		
	comp=Z,4µm,15.3s						
INCN	**Inchon**	**18.50**	**13**	P	**P**	**14 53 32.6**	**-1.8**
INCN				pmax	pmax		
	comp=Z,208nm,1.5s						
INCN	**Inchon**	**18.50**	**13**		**P**	**14 53 32.6**	**-1.8**
INCN				IAmb	IAmb	14 53 37.6	
	comp=Z,208nm,1.5s						
JHS	**Saijyo**	**18.59**	**31**	P	**P**	**14 53 35.3**	**-0.2**
JHS				IAmb	IAmb	14 53 49.2	
	comp=Z,96nm,1.2s						
KSAR	**Wonju Array Be**	**18.76**	**16**	P	**P**	**14 53 36.5**	**-0.7**
KSAR	**Wonju Array Be**	**18.76**	**16**	P	**P**	**14 53 36.5**	**-0.7**
KSRS	**Korea Array**	**18.78**	**16**	P	**Pn**	**14 53 38.0**	**0.0**
	comp=Z,3.6nm,0.3s,baz=199,slow=11,SNR=134						
KSRS				PcP	**PcP**	**14 58 03.7**	**-0.5**
	baz=188,slow=2.7,SNR=4.8						
KSRS				LR	LR	15 00 44.0	
	comp=Z,1µm,21.1s,baz=202,slow=36						
KSRS	**Korea Array**	**18.78**	**16**	P	**Pn**	**14 53 38.0**	**0.0**
GTOI	**Gorontalo**	**18.79**	**175**	P	**Pn**	**14 53 39.6**	**+1.3**
	comp=Z,631nmcomp=Z,45nm,1.1s						
KS19	**Wonju Array Si**	**18.81**	**16**	P	**Pn**	**14 53 38.2**	**-0.2**
CHAI	**Chaiyaphum**	**18.87**	**262**	P	**Pn**	**14 53 43.2**	**+3.9**
	comp=Z,27nm,0.8s						
MRSI	**Marisa**	**18.89**	**178**	P	**Pn**	**14 53 43.3**	**+3.8**
	comp=Z,2µmcomp=Z,1µmcomp=Z,105nm,0.8s						
KMSI	**Cibinong**	**18.95**	**172**	P	Pn	14 53 47.9	+7.7
MPSI	**Mapaga**	**19.09**	**185**	P	**Pn**	**14 53 47.0**	**+5.2**
	comp=Z,2µmcomp=Z,618nmcomp=Z,19nm,0.8s						
SRAK	**Srakaew**	**19.35**	**257**	P	**P**	**14 53 43.8**	**-0.1**
	comp=Z,3µmcomp=Z,124nm,0.7s						
DL2	**Dalian**	**19.36**	**0**	P	**P**	**14 53 43.8**	**+0.1**
DL2				S	**S**	**14 57 20.8**	**-0.5**
DL2				pmax	pmax		
	comp=Z,38nm,1.2s						

DL2				pmax	pmax		
	comp=Z,480nm,7.9s						
DL2				LR	LR		
	comp=Z,2µm,14.3s						
DL2				LR	LR		
	comp=Z,2µm,14.7s						
DL2				LR	LR		
	comp=Z,2µm,18.9s						
CD2	Chengdu	19.61	309	P	Pn	14 53 47.8	-0.3
CD2				sP	pwP	14 53 58.0	+1.7
CD2				S	S	14 57 22.8	-3.8
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
CD2				pmax	pmax		
	comp=Z,600nm,5.3s						
CD2				LR	LR		
	comp=Z,4µm,22.1s						
CD2				LR	LR		
	comp=Z,3µm,15.7s						
CD2				LR	LR		
	comp=Z,3µm,15.7s						
TIY	Taiyuan	19.79	338	*e*P	Pn	14 53 50.8	+0.6
TIY				PP	sP	14 54 07.9	+10
TIY				pmax	pmax		
	comp=Z,80nm,1.0s						
TIY				pmax	pmax		
	comp=Z,550nm,4.8s						
TIY				LR	LR		
	comp=Z,4µm,16.2s						
TIY				LR	LR		
	comp=Z,720nm,12.2s						
TIY				LR	LR		
	comp=Z,3µm,15.8s						
UTTA	Uttaradit	19.87	268	P	Pn	14 53 52.2	+0.9
	comp=Z,20nm,0.8s						
JWT	Wachi	20.00	35	Pn	Pn	14 53 53.6	+1.0
JWT				IAmb	IAmb	14 53 56.0	
	comp=Z,58nm,0.8s						
PHIT	Phitsanulok	20.09	267	P	Pn	14 53 57.2	+3.4
	comp=Z,152nm,1.0s						
APSI	Ampana	20.27	179	P	Pn	14 53 59.6	+3.8
	comp=Z,960nmcomp=Z,88nm,1.3s						
PAYA	Payao	20.35	273	P	Pn	14 53 58.8	+2.0
	comp=Z,3µmcomp=Z,354nm,0.9s						
LUWI	Luwuk	20.44	176	P	P	14 53 54.8	-0.9
LUWI				IAmb	IAmb	14 54 07.3	
	comp=Z,113nm,1.0s						
LUWI	Luwuk	20.44	176	P	Pn	14 54 01.0	+3.1
	comp=Z,2µmcomp=Z,139nm,1.2s						
JCJ	Chichijima	20.49	64	LR	LR	15 00 18.4	
	comp=Z,984nm,19.8s,baz=258,slow=32						
LAMP	Lampang	20.64	271	P	Pn	14 54 04.5	+4.2
	comp=Z,291nmcomp=Z,28nm,0.8s						
SUKH	Sukhothai	20.78	268	P	Pn	14 54 04.6	+2.7
	comp=Z,24nm,0.8s						
PATY	Pattaya	20.80	255	P	Pn	14 54 02.5	+0.4
	comp=Z,48nm,1.2s						
KSM	Kuching	20.95	213	P	P	14 54 00.8	-0.5
KSM				IAmb	IAmb	14 54 05.9	
	comp=Z,52nm,1.1s						
KSM	Kuching	20.95	213	P	P	14 54 02.0	+0.7
INU	Inuyama	20.95	38	P	Pn	14 54 02.4	-1.4
BJT	Baijiatuau	20.97	349	P	P	14 54 01.3	+0.1
BJT				pmax	pmax		
	comp=Z,122nm,1.0s						
BJT	Baijiatuau	20.97	349	P	P	14 54 01.3	+0.1
BJI	Beijing	20.99	349	P	P	14 54 02.3	+0.9
BJI				S	S	14 57 54.8	+0.8
BJI				pmax	pmax		
	comp=Z,83nm,1.2s						
BJI				LR	LR		
	comp=Z,1µm,17.7s						
BJI				LR	LR		
	comp=Z,1µm,19.6s						
BJI				LR	LR		
	comp=Z,1µm,22.5s						
CM34	Chiang Mai Arr	21.07	272	P	P	14 54 03.0	+0.5
CM35	Chiang Mai Arr	21.08	272	P	P	14 54 04.0	+1.4
BKB	Balikpapan	21.09	193	P	P	14 54 02.5	-0.2
CM36	Chiang Mai Arr	21.15	271	P	P	14 54 07.0	+3.6
CM09	Chiang Mai Arr	21.26	271	P	P	14 54 07.2	+2.6
	comp=Z,220nmcomp=Z,28nm,0.9s						
CMMT	Chiang Mai	21.26	272	P	P	14 54 05.8	+1.2
	comp=Z,299nmcomp=Z,23nm,1.0s						
CM33	Chiang Mai Arr	21.26	272	P	P	14 54 06.0	+1.4
CHTO	Chiang Mai	21.26	272	P	P	14 54 04.4	-0.2
CHTO				pmax	pmax		
	comp=Z,41nm,1.0s						
CHTO	Chiang Mai	21.26	272	P	P	14 54 04.4	-0.2
CM04	Chiang Mai Arr	21.27	271	P	P	14 54 08.1	+3.3
	comp=Z,166nmcomp=Z,19nm,0.9s						
JHJ	Hachijo jima 2	21.28	47	P	P	14 54 05.8	+1.1
	comp=Z,196nm,0.8s,baz=34,slow=11,SNR=2.5						
MTKI	Muara Teweh, K	21.29	198	P	P	14 54 08.0	+3.1
	comp=Z,2µmcomp=Z,104nm,0.8s						
CM01	Chiang Mai Arr	21.29	271	P	P	14 54 08.9	+4.0
	comp=Z,255nmcomp=Z,17nm,1.0s						
CM02	Chiang Mai Arr	21.30	271	P	P	14 54 08.0	+3.0
	comp=Z,193nmcomp=Z,22nm,1.0s						
CM31	Chiang Mai Arr	21.30	271	P	P	14 54 09.4	+4.4
	comp=Z,6µmcomp=Z,627nm,1.0s						
CM31	Chiang Mai Arr	21.30	271	P	P	14 54 04.2	-0.9
CMAR	Chiang Mai Arr	21.30	271	P	P	14 54 05.5	+0.5
	comp=Z,2.8nm,0.7s,baz=67,slow=9.6,SNR=23						
CMAR				PcP	PcP	14 58 09.9	+0.7
	comp=Z,4.4nm,0.7s,baz=75,slow=1.0,SNR=15						
CMAR				ScP	ScP	15 01 42.4	-2.3
	comp=Z,1.4nm,0.8s,baz=112,slow=0.9,SNR=6.6						
CMAR				LR	LR	15 03 03.2	
	comp=Z,912nm,19.0s,baz=126,slow=39						
CMAR	Chiang Mai Arr	21.30	271	P	P	14 54 05.0	0.0
CM05	Chiang Mai Arr	21.31	271	P	P	14 54 08.4	+3.3
	comp=Z,157nmcomp=Z,11nm,0.9s						
CM15	Chiang Mai Arr	21.32	271	P	P	14 54 08.5	+3.3
	comp=Z,191nmcomp=Z,27nm,0.8s						
UTHA	Uthaitani	21.33	263	P	P	14 54 07.0	+1.6
	comp=Z,437nmcomp=Z,44nm,1.0s						
CM13	Chiang Mai Arr	21.34	271	P	P	14 54 08.5	+3.0
	comp=Z,144nmcomp=Z,19nm,0.9s						
CM32	Chiang Mai Arr	21.37	272	P	P	14 54 09.0	+3.2
PHET	Kaeng Krachan	21.93	256	P	P	14 54 14.0	+2.2
	comp=Z,790nmcomp=Z,28nm,0.8s						
MHMT	Maesarieng	22.29	271	P	P	14 54 18.9	+3.3
	comp=Z,1µmcomp=Z,28nm,0.9s						
SNY	Shenyang	22.35	4	⇓P	P	14 54 16.9	+0.8
SNY				S	S	14 58 16.9	-3.5
SNY				pmax	pmax		
	comp=Z,42nm,0.6s						
SNY				pmax	pmax		
	comp=Z,320nm,6.6s						
SNY				LR	LR		
	comp=Z,1µm,12.3s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SNY				LR	LR		
	comp=Z,2µm,14.2s						
SWI	Sorong	22.40	153	P	P	14 54 21.1	+4.3
SIJI	Sorong	22.40	153	P	P	14 54 16.8	-0.1
	comp=Z,29nm,0.7s,baz=355,slow=11,SNR=13						
TTSI	Tana Toraja	22.44	184	P	P	14 54 24.2	+7.0
MAJO	Matsushiro	22.48	37	P	P	14 54 18.0	+0.5
MAJO				pmax	pmax		
	comp=Z,137nm,1.4s						
MAJO	Matsushiro	22.48	37	P	P	14 54 18.0	+0.5
MAJO				IAmb	IAmb	14 54 30.1	
	comp=Z,136nm,1.4s						
MAT	Matsushiro	22.48	37	P	P	14 54 18.4	+0.8
MAT				S	S	14 58 23.8	+0.9
MJAR	Matsushiro Arr	22.48	37	P	P	14 54 18.7	+1.1
	comp=Z,3.3nm,0.5s,baz=279,slow=15,SNR=16						
MJAR				PcP	PcP	14 58 12.3	+1.0
	comp=Z,2.5nm,0.7s,baz=156,slow=1.4,SNR=3.0						
MJAR	Matsushiro Arr	22.48	37	P	P	14 54 17.4	-0.2
MJAR				pmax	pmax		
	comp=Z,71nm,1.4s						
MJAR	Matsushiro Arr	22.48	37	P	P	14 54 17.4	-0.2
LZH	Lanzhou	22.66	321	⇓P	P	14 54 20.6	+1.0
LZH				pP	sP	14 54 27.3	-1.2
LZH				sP	pwP	14 54 33.4	+3.8
LZH				S	S	14 58 20.6	-5.8
LZH				SS	Sn	14 59 04.5	+24
LZH				pmax	pmax		
	comp=Z,57nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,14.7s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
HHC	Hu-ho-hao-te	22.91	340	*e*P	P	14 54 22.5	+0.3
HHC				PP	PnPn	14 54 51.0	+3.9
HHC				S	S	14 58 32.3	+1.6
HHC				pmax	pmax		
	comp=Z,97nm,1.0s						
HHC				pmax	pmax		
	comp=Z,750nm,5.5s						
HHC				LR	LR		
	comp=Z,3µm,14.9s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
HHC				LR	LR		
	comp=Z,3µm,13.2s						
BTO	Baotou	23.22	338	*e*P	P	14 54 27.3	+2.0
KBKI	Kotabaru	23.22	193	P	P	14 54 25.5	+0.1
SPSI	Sidrap Palu	23.36	184	P	P	14 54 27.8	+1.1
TRTT	Trang	24.06	244	P	P	14 54 33.0	-0.5
KAPI	Kappang	24.40	184	P	P	14 54 35.9	-0.7
	comp=Z,19nm,0.3s,baz=181,slow=19,SNR=1.3						
MSHR	Mys Shultsa	24.45	18	*ce*P	P	14 54 35.9	-0.9
MSHR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MYKOM	Kota Tinggi	24.61	227	P	P	14 54 39.0	+0.5
KULM	Kulim	24.68	238	P	P	14 54 38.8	-0.4
KULM	Kulim	24.68	238	P	P	14 54 39.0	-0.2
IPM	Ipoh	24.87	236	P	P	14 54 39.7	-1.2
IPM				IAmb	IAmb	14 54 56.2	
	comp=Z,68nm,1.5s						
IPM	Ipoh	24.87	236	P	P	14 54 41.0	+0.1
MDJ	Mudanjiang	25.97	13	P	P	14 54 51.0	+0.4
MDJ				S	S	14 59 24.0	+4.4
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				LR	LR		
	comp=Z,1µm,21.5s						
MDJ				LR	LR		
	comp=Z,2µm,22.3s						
MDJ				LR	LR		
	comp=Z,1µm,20.6s						
MDJ	Mudanjiang	25.97	13	P	P	14 54 51.9	+1.3
MDJ				IAmb	IAmb	14 54 55.1	
	comp=Z,82nm,1.4s						
USA0B	Ussuriysk Arra	26.18	17	P	P	14 54 51.8	-0.7
USA0B				pmax	pmax		
	comp=Z,30nm,1.0s						
USA0B	Ussuriysk Arra	26.18	17	P	P	14 54 51.8	-0.7
USA0B				IAmb	IAmb	14 54 56.5	
	comp=Z,30nm,0.9s						
USRK	Ussuriysk Ar.	26.18	17	P	P	14 54 52.4	-0.1
	comp=Z,15nm,0.7s,baz=210,slow=7.2,SNR=22						
USRK				PcP	PcP	14 58 17.4	-1.7
	comp=Z,1.6nm,0.6s,baz=217,slow=3.7,SNR=4.3						
USRK				LR	LR	15 06 20.7	
	comp=Z,1µm,18.7s,baz=172,slow=39						
USRK	Ussuriysk Ar.	26.18	17	P	P	14 54 51.8	-0.7
GTA	Gaotai	27.25	321	⇓P	P	14 55 03.3	+1.0
GTA				PP	PnPn	14 55 46.8	+0.5
GTA				PcP	PcP	14 58 23.0	+1.1
GTA				S	S	14 59 38.0	-2.1
GTA				sS	sS	14 59 53.6	+2.6
GTA				ScP	ScP	15 02 01.1	+0.3
GTA				PcS	PcS	15 02 03.8	+0.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,42nm,4.2s						
GTA				LR	LR		
	comp=Z,1µm,16.4s						
GTA				LR	LR		
	comp=Z,1µm,16.4s						
GTA				LR	LR		
	comp=Z,1µm,16.0s						
PSI	Prapat	27.55	236	P	P	14 55 05.1	-0.2
	comp=Z,6.1nm,0.6s,baz=1.0,slow=2.8,SNR=3.6						
PSI				PcP	PcP	14 58 22.2	-0.8
	comp=Z,19nm,1.0s,baz=180,slow=4.3,SNR=6.6						
PSI				LR	LR	15 05 23.4	
	comp=Z,932nm,20.6s,baz=89,slow=35						
LSA	Lhasa	29.29	296	P	P	14 55 23.3	+2.3
LSA				LR	LR		
	comp=Z,2µm,14.2s						
LSA				LR	LR		
	comp=Z,2µm,14.2s						
LSA				LR	LR		
	comp=Z,3µm,16.4s						
BATI	Baumata	29.58	176	P	P	14 55 20.4	-2.8
	comp=Z,57nm,0.5s,baz=218,slow=1.4,SNR=8.4						
ULN	Ulaanbaatar	30.64	341	*ce*P	P	14 55 33.6	+1.2
ULN				pmax	pmax		
	comp=Z,47nm,1.7s						
ULN	Ulaanbaatar	30.64	341	P	P	14 55 32.1	-0.3
ULN				IAmb	IAmb	14 55 40.7	
	comp=Z,19nm,0.8s						
KLR	Kul'dur	30.82	13	P	P	14 55 33.7	-0.1
	comp=Z,12nm,0.6s,baz=208,slow=7.4,SNR=50						
KLR				PcP	PcP	14 58 30.0	-0.5
	comp=Z,4.7nm,0.6s,baz=197,slow=2.3,SNR=5.4						
KLR	Kul'dur	30.82	13	*ce*P	P	14 55 34.1	+0.3
KLR				pmax	pmax		
	comp=Z,61nm,1.5s						
SONM	Songino Array	30.82	340	P	P	14 55 33.9	-0.1
	comp=Z,4.7nm,0.7s,baz=158,slow=9.2,SNR=22						
SONM	Songino Array	30.82	340	P	P	14 55 33.2	-0.8
SONM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SONM	Songino Array	30.82	340	P	P	14 55 33.2	-0.8
TAPN	Taplejung	31.86	291	*e*P	P	14 55 44.8	+1.2
	comp=Z,32nm,0.9s						
YUK	Yuzh-Kuril'sk	31.87	34	*e*P	P	14 55 42.0	-1.1
YUK				*i* S	S	15 00 53.4	+1.0
YUK				pmax	pmax		
	comp=N,15nm,2.1s						
YUK				pmax	pmax		
	comp=Z,28nm,2.1s						
YUK				MLR	MLR		
	comp=Z,979nm,23.0s						
YUK				MLR	MLR		
	comp=N,982nm,18.0s						
YUK				MLR	MLR		
	comp=E,598nm,12.0s						
ODAN	Odare	32.08	290	*e*P	P	14 55 46.1	+0.6
	comp=E,39nm,0.7s						
YSS	Yuzh-Sakhalins	32.48	28	*e*P	P	14 55 50.7	+2.3
YSS				*e*S	S	15 01 08.5	+6.8
YSS				*e*		15 01 23.4	
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				MLR	MLR		
	comp=E,800nm,18.0s						
YSS				MLR	MLR		
	comp=Z,800nm,18.0s						
RAMN	Ramite	32.79	290	*e*P	P	14 55 52.2	+0.5
	comp=Z,34nm,0.6s						
GUN	Gumba	33.53	291	*e*P	P	14 55 59.1	+0.8
	comp=Z,82nm,0.9s						
PKI	Pulchoki	33.91	291	*e*P	P	14 56 01.6	0.0
	comp=Z,20nm,0.8s						
PKIN	Phulchoki	33.92	291	*e*P	P	14 56 01.3	-0.3
	comp=Z,13nm,0.6s						
KKN	Kakani	34.05	291	*e*P	P	14 56 02.6	0.0
	comp=Z,30nm,0.8s						
ZAK	Zakamensk	34.05	339	*e*P	P	14 56 02.9	+0.7
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
DMN	Daman	34.18	291	*e*P	P	14 56 03.3	-0.6
	comp=Z,42nm,1.1s						
ZEA	Zeya	34.49	6	*e*P	P	14 56 06.2	+0.4
ZEA				*e*S	S	15 01 35.1	+2.4
ZEA				*e*		15 06 23.4	
ZEA				pmax	pmax		
	comp=N,20nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,6.1s						
ZEA				smax	smax		
	comp=N,200nm,14.0s						
GKN	Gorkha	34.64	291	*e*P	P	14 56 07.2	-0.5
TLY	Talaya	35.05	341	P	P	14 56 11.1	+0.4
	comp=N,7.2nm,0.7s,baz=172,slow=7.8,SNR=9.9						
TLY	Talaya	35.05	341	*c i*P	P	14 56 11.2	+0.4
TLY				*e*		14 57 31.4	
TLY				*e*S	S	15 01 42.7	+1.2
TLY				pmax	pmax		
	comp=Z,62nm,1.5s						
TLY				MLR	MLR		
	comp=Z,4µm,19.0s						
IRK	Irkutsk	35.34	342	*e*P	P	14 56 13.4	+0.1
IRK				pmax	pmax		
	comp=Z,53nm,1.6s						
DANN	Dangsing	35.44	292	*e*P	P	14 56 14.5	-0.3
	comp=Z,28nm,0.8s						
TYV	Tymovskoe	35.53	23	*e*P	P	14 56 18.1	+3.3
TYV				pmax	pmax		
	comp=Z,100nm,8.2s						
TYV				pmax	pmax		
	comp=Z,13nm,1.4s						
MOY	Mondy	35.91	338	*e*P	P	14 56 19.0	+0.7
MOY				pmax	pmax		
	comp=Z,49nm,1.9s						
WMQ	Urumqi	37.20	318	*e*P	P	14 56 31.8	+2.5
WMQ				pP	sP	14 56 38.9	-0.5
WMQ				sP	pP	14 56 41.6	+5.1
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
WMQ				LR	LR		
	comp=Z,1µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,18.1s						
WMQ				LR	LR		
	comp=Z,980nm,16.3s						
FITZ	Fitzroy Crossi	37.57	173	P	P	14 56 30.9	-1.7
PMG	Port Moresby	38.29	136	P	P	14 56 38.7	0.0
	comp=Z,7.2nm,0.6s,baz=359,slow=13,SNR=4.0						
BOD	Bodaibo	38.68	354	*e*P	P	14 56 42.4	+0.9
BOD				pmax	pmax		
	comp=Z,24nm,1.6s						
COCO	West Island	39.72	220	P	P	14 56 49.4	-1.3
COCO	West Island	39.72	220	P	P	14 56 49.4	-1.3
DGZ	Jazzator, Alta	40.54	326	⇓*e*P	P	14 56 58.2	+0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HYB	Hyderabad	40.66	274	*i* P	P	14 56 58.0	-0.6
ZSN	Zaisan	40.74	322	*e*P	P	14 57 00.8	+2.0
	baz=322						
ZSN				*e*S	S	15 03 12.8	+4.8
	baz=322						
ZSN	Zaisan	40.74	322	*e*P	P	14 57 00.8	+2.0
ZSN				*e*S	S	15 03 12.7	+4.8
WB0	Warramunga Arr	41.02	161	P	P	14 56 58.8	-2.5
WB0				IAmb	IAmb	14 57 00.7	
	comp=Z,24nm,0.7s						
WRAB	Tennant Creek	41.16	161	*i* P	P	14 57 01.0	-1.5
WRAB				pmax	pmax		
	comp=Z,25nm,0.7s						
WRAB	Tennant Creek	41.16	161	P	P	14 56 59.6	-2.9
WRAB				IAmb	IAmb	14 57 02.0	
	comp=Z,27nm,0.7s						
WRA	Warramunga Arr	41.17	161	P	P	14 57 00.8	-1.8
	comp=Z,26nm,0.7s,baz=342,slow=9.0,SNR=123						
WRA				S	S	15 03 05.7	-8.9
	comp=Z,1.9nm,0.9s,baz=345,slow=15,SNR=4.6						
WRA	Warramunga Arr	41.17	161	P	P	14 56 59.7	-2.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	41.17	161	P	P	14 56 59.7	-2.9
WB2	Warramunga Arr	41.17	161	P	P	14 56 59.8	-2.8
WB2				IAmb	IAmb	14 57 02.1	
	comp=Z,33nm,0.7s						
WR0	Warramunga Arr	41.24	161	IAmb	IAmb	14 57 02.6	
	comp=Z,35nm,0.7s						
PALK	Pallekele	41.34	259	P	P	14 57 04.2	0.0
	comp=Z,7.3nm,0.8s,baz=161,slow=9.9,SNR=4.5						
SKR	Severo-Kuril’s	41.47	33	*e*P	P	14 56 59.5	-5.2
SKR				pmax	pmax		
	comp=Z,100nm,6.1s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
MK31	Makanchi Array	41.97	320	*i* P	P	14 57 09.5	+0.6
MK31				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK31	Makanchi Array	41.97	320	IAmb	IAmb	14 57 22.9	
	comp=Z,28nm,1.1s						
MKAR	Makanchi Array	41.97	320	P	P	14 57 09.7	+0.8
	comp=Z,4.3nm,0.5s,baz=115,slow=9.6,SNR=75						
MKAR				LR	LR	15 17 53.4	
	comp=Z,516nm,19.4s,baz=112,slow=41						
MAKZ	Makanchi	42.16	319	P	P	14 57 11.2	+0.6
MAKZ				pmax	pmax		
	comp=Z,28nm,1.1s						
MAKZ	Makanchi	42.16	319	P	P	14 57 11.2	+0.6
MAKZ				IAmb	IAmb	14 57 24.5	
	comp=Z,28nm,1.1s						
SHLS	Shalkode	42.34	313	*e*P	P	14 57 10.9	-1.3
	baz=314						
SHLS	Shalkode	42.34	313	*e*P	P	14 57 10.9	-1.3
PDGK	Podgornoye	42.38	314	*i* P	P	14 57 13.6	+1.1
PDGK				pmax	pmax		
	comp=Z,12nm,0.8s						
H11S3	WAKE ISLAND Hy	42.70	84	T	T	15 42 58.4	
	baz=277,slow=75,SNR=479						
H11S1	WAKE ISLAND Hy	42.71	84	T	T	15 42 54.6	
	baz=277,slow=75,SNR=322						
H11N1	WAKE ISLAND Hy	42.72	82	T	T	15 42 56.4	
	baz=277,slow=75,SNR=1551						
H11S2	WAKE ISLAND Hy	42.72	84	T	T	15 42 55.9	
	baz=277,slow=75,SNR=313						
H11N2	WAKE ISLAND Hy	42.72	82	T	T	15 42 56.7	
	baz=277,slow=75,SNR=855						
H11N3	WAKE ISLAND Hy	42.73	82	T	T	15 42 57.7	
	baz=277,slow=75,SNR=796						
YAK	Yakutsk	42.90	6	P	P	14 57 16.2	0.0
	comp=Z,17nm,0.6s,baz=265,slow=0.8,SNR=12						
YAK	Yakutsk	42.90	6	*e*P	P	14 57 15.7	-0.5
YAK				*e**PP	pP	14 57 23.3	-0.3
YAK				*e*		14 58 57.0	
YAK				*e*		14 59 05.3	
YAK				*e*PPP	PPP	14 59 26.9	
YAK				*e*S	S	15 03 38.1	-1.2
YAK				*e**SS	sS	15 03 52.1	+0.7
YAK				*e*SS	SS	15 06 50.6	-0.5
YAK				*e*		15 07 09.7	
YAK				*e*SSS	SSS	15 07 28.2	
YAK				pmax	pmax		
	comp=Z,20nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,25nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK				smax	smax		
	comp=N,63nm,3.5s						
YAK				smax	smax		
	comp=E,58nm,3.2s						
YAK				MLR	MLR		
	comp=Z,551nm,19.0s						
YAK				MLR	MLR		
	comp=N,375nm,21.0s						
YAK				MLR	MLR		
	comp=E,713nm,19.0s						
KPKS	Kokpek	42.98	314	*e*P	P	14 57 18.5	+1.2
	comp=E,12nm,2.0s,baz=314						
KPKS	Kokpek	42.98	314	*e*P	P	14 57 18.5	+1.2
KPKS				pmax	pmax		
	comp=Z,13nm,2.0s						
SATY	Saty	43.03	313	*e*P	P	14 57 19.3	+1.5
	baz=313						
SATY				*e*S	S	15 03 46.0	+3.8
	baz=313						
SATY	Saty	43.03	313	*e*P	P	14 57 19.3	+1.5
SATY				*e*S	S	15 03 46.0	+3.8
PEA0B	Petropavlovsk-	43.69	31	*ce*P	P	14 57 23.2	+0.4
PEA0B	Petropavlovsk-	43.69	31	IAmb	IAmb	14 57 26.8	
	comp=Z,47nm,1.1s						
PETK	Petropavlovsk-	43.69	31	P	P	14 57 22.4	-0.4
	comp=Z,15nm,0.8s,baz=223,slow=3.7,SNR=35						
PETK				LR	LR	15 16 02.0	
	comp=Z,468nm,20.2s,baz=227,slow=37						
PETK	Petropavlovsk-	43.69	31	P	P	14 57 24.1	+1.3
PETK	Petropavlovsk-	43.69	31	P	P	14 57 24.1	+1.3

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TDK   Taldyqorghan     43.71 316 eP     P      14 57 24.9 +1.7
      comp=Z,6.0nm,0.5s,baz=316
TDK                              LR     LR     15 15 52.6
      comp=Z,591nm,17.3s,baz=316
TDK   Taldyqorghan     43.71 316 eP     P      14 57 24.8 +1.7
TDK                              pmax   pmax
      comp=Z,6.0nm,0.5s
TDK                              MLR    MLR
      comp=Z,591nm,17.0s
KSH   Kashi            43.79 307  P     P      14 57 28.8 +4.8
KSH                               pP    sP     14 57 39.1 +5.0
KSH                               S     S      15 03 52.6  -0.7
KSH                               SS    SS     15 07 03.1  -6.4
KSH                               pmax  pmax
      comp=Z,130nm,1.8s
KSH                               pmax  pmax
      comp=Z,310nm,5.2s
KSH                               LR    LR
      comp=Z,570nm,9.2s
KSH                               LR    LR
      comp=Z,560nm,8.7s
KSH                               LR    LR
      comp=Z,630nm,9.9s
MDOK  Medeo            44.01 313 eP     P      14 57 27.2 +1.5
      baz=312
MDOK                             eS     S      15 04 00.7 +4.2
      baz=312
MDOK                              LR    LR     15 16 03.2
      comp=Z,491nm,17.2s,baz=312
MDOK  Medeo            44.01 313 eP     P      14 57 27.2 +1.5
MDOK                             eS     S      15 04 00.7 +4.2
MDOK                              MLR   MLR
      comp=Z,491nm,17.0s
TNSS  Tian-Shan        44.04 312 eP     P      14 57 28.4 +2.1
      baz=312
TNSS  Tian-Shan        44.04 312 eP     P      14 57 28.3 +2.1
PET   Petropavlovsk    44.11  32 eP     P      14 57 28.4 +2.3
PET                              eS     S      15 03 59.2 +2.0
PET                               pmax  pmax
      comp=Z,29nm,0.6s
PET                               MLR   MLR
      comp=Z,500nm,19.0s
AAA   Alma-Ata         44.12 313 eP     P      14 57 28.5 +2.0
      baz=312
AAA                               LR    LR     15 16 08.8
      comp=Z,453nm,16.3s,baz=312
AAA   Alma-Ata         44.12 313 eP     P      14 57 28.4 +2.0
AAA                               MLR   MLR
      comp=Z,453nm,16.0s
CHKK  Chushkaly        44.27 313 eP     P      14 57 29.3 +1.7
      baz=313
CHKK  Chushkaly        44.27 313 eP     P      14 57 29.3 +1.7
ZAA0  Zalesovo Array   44.36 330  IAmb  IAmb   14 57 39.0
      comp=Z,14nm,0.7s
ZALV  Zalesovo Beam    44.36 330  P     P      14 57 28.3 +0.2
      comp=Z,8.1nm,0.7s,baz=119,slow=8.5,SNR=30
ZALV                              LR    LR     15 16 58.4
      comp=Z,713nm,18.6s,baz=134,slow=37
ZALV  Zalesovo Beam    44.36 330 i P    P      14 57 28.7 +0.6
ZALV                              pmax  pmax
      comp=Z,8.0nm,0.7s
ZALV  Zalesovo Beam    44.36 330  P     P      14 57 28.7 +0.6
AS31  Alice Springs    44.57 164  P     P      14 57 28.7  -1.5
ASAR  Alice Springs    44.57 164  P     P      14 57 27.9  -2.3
      comp=Z,21nm,0.7s,baz=340,slow=6.9,SNR=150
ASAR                              S     S      15 04 02.7  -2.0
      comp=Z,1.1nm,0.9s,baz=352,slow=19,SNR=5.3
ASAR  Alice Springs    44.57 164  P     P      14 57 28.6  -1.6
KUU   Kurty            44.73 313 eP     P      14 57 32.4 +1.1
      comp=Z,10nm,0.8s,baz=313
KUU                              eS     S      15 04 10.4 +3.8
      baz=313
KUU   Kurty            44.73 313 eP     P      14 57 32.4 +1.1
KUU                              eS     S      15 04 10.4 +3.8
KUU                               pmax  pmax
      comp=Z,10.0nm,0.8s
SEM   Semipalatinsk    44.84 323 eP     P      14 57 33.2 +0.9
      comp=Z,5.3nm,1.3s,baz=323
SEM                              eS     S      15 04 12.3 +3.8
      baz=323
SEM   Semipalatinsk    44.84 323 eP     P      14 57 33.2 +0.9
SEM                              eS     S      15 04 12.3 +3.8
SEM                               pmax  pmax
      comp=Z,5.0nm,1.3s
TKM2  Tokmak 2         44.95 312  P     P      14 57 36.5 +3.1
      SNR=5.5
TKM2  Tokmak 2         44.95 312 i P    P      14 57 34.4 +1.1
NIL   Nilore           44.97 298  P     P      14 57 31.0  -2.4
NIL                               pmax  pmax
      comp=Z,23nm,0.9s
NIL   Nilore           44.97 298  P     P      14 57 31.0  -2.4
NIL                               IAmb  IAmb   14 57 48.0
      comp=Z,23nm,0.8s
MA2   Magadan          45.25  21  P     P      14 57 35.7 +0.6
      comp=Z,2.9nm,0.6s,baz=243,slow=13,SNR=3.0
MA2   Magadan          45.25  21 i P    P      14 57 34.8  -0.4
MA2                               pmax  pmax
      comp=Z,8.0nm,0.8s
KBK   Karagaybulak     45.34 311  P     P      14 57 39.5 +3.1
      SNR=13
UCH   Uchtor           45.53 311  P     P      14 57 42.3 +4.1
      SNR=12
CHMS  Chumysh          45.57 312  P     P      14 57 40.2 +2.2
      SNR=8.0
AAK   Ala-Archa        45.65 311  P     P      14 57 40.2 +1.3
      comp=Z,2.7nm,0.6s,baz=122,slow=5.1,SNR=18
AAK   Ala-Archa        45.65 311 i P    P      14 57 40.9 +2.1
AAK                               pmax  pmax
      comp=Z,16nm,0.8s
USP   Ospenovka        45.82 312  P     P      14 57 43.0 +3.0
      SNR=6.7
KURK  Kurchatov        45.91 323ceP     P      14 57 41.6 +1.1
KURK                              pmax  pmax
      comp=Z,21nm,1.3s
KURK  Kurchatov        45.91 323  P     P      14 57 40.0  -0.5
KURK                              IAmb  IAmb   14 57 56.6
      comp=Z,33nm,1.1s
KURBB Kurchatov Arra   45.92 323  P     P      14 57 41.3 +0.7
      comp=Z,11nm,0.8s,baz=121,slow=7.4,SNR=96
AML   Almayashu        46.10 310  P     P      14 57 46.3 +3.7
      SNR=16
EKS2  Erkin-Say        46.17 311  P     P      14 57 45.7 +2.9
      SNR=6.8
BTLS  Baital           46.64 314 eP     P      14 57 47.8 +1.4
      comp=Z,2.6nm,1.0s,baz=314
BTLS                             eS     S      15 04 38.0 +3.9
      baz=314
BTLS  Baital           46.64 314 eP     P      14 57 47.7 +1.4
BTLS                             eS     S      15 04 38.0 +3.9
BTLS                              pmax  pmax
      comp=Z,3.0nm,1.0s
HNR   Honiara          47.59 124  LR    LR     15 15 28.9
      comp=Z,660nm,20.6s,baz=292,slow=33
DZA   Taraz            47.97 311 eP     P      14 57 58.5 +1.6
      comp=Z,5.1nm,0.8s,baz=311
DZA                               LR    LR     15 19 06.8
      comp=Z,267nm,17.7s,baz=311
DZA   Taraz            47.97 311 eP     P      14 57 58.4 +1.6
DZA                               pmax  pmax
      comp=Z,5.0nm,0.8s
DZA                               MLR   MLR
      comp=Z,267nm,18.0s
SEY   Seymchan         48.32  18 i P    P      14 58 00.8 +1.7
KK31  Karatay Array    48.61 311  IAmb  IAmb   14 58 04.3
      comp=Z,8.0nm,0.8s
IUG   Iuzhnay          48.76 309 eP     P      14 58 04.8 +1.8
      comp=Z,7.8nm,1.0s,baz=309
IUG   Iuzhnay          48.76 309 eP     P      14 58 04.8 +1.8
IUG                               pmax  pmax
      comp=Z,8.0nm,1.0s
BRZS  Berezniki        49.11 320 eP     P      14 58 07.2 +1.7
      comp=Z,5.0nm,1.3s,baz=320
BRZS  Berezniki        49.11 320 eP     P      14 58 07.1 +1.7
BRZS                              pmax  pmax
      comp=Z,5.0nm,1.3s
BRVK  Borovoye         51.58 323ceP     P      14 58 25.2 +1.2
BRVK                              pmax  pmax
      comp=Z,13nm,1.0s
BRVK  Borovoye         51.58 323  P     P      14 58 23.1  -0.9
BRVK                              IAmb  IAmb   14 58 42.2
      comp=Z,34nm,1.4s
NWAO  Narrogin (SRO)   52.27 184  P     P      14 58 27.7  -1.6
NWAO                              pmax  pmax
      comp=Z,36nm,0.7s
NWAO  Narrogin (SRO)   52.27 184  P     P      14 58 27.7  -1.6
NWAO  Narrogin (SRO)   52.27 184  P     P      14 58 27.6  -1.7

NWAO                              IAmb  IAmb   14 58 29.4
      comp=Z,29nm,0.7s
TIXI  Tiksi            52.36   3ceP     P      14 58 29.2  -0.3
TIXI  Tiksi            52.36   3  P     P      14 58 26.9  -2.6
TIXI                              IAmb  IAmb   14 58 44.0
      comp=Z,13nm,0.7s
STKA  Stephens Creek   54.60 159  P     P      14 58 45.3  -1.2
      comp=Z,4.4nm,0.7s,baz=341,slow=7.7,SNR=18
STKA                              LR    LR     15 23 52.8
      comp=Z,252nm,20.6s,baz=355,slow=38
STKA  Stephens Creek   54.60 159  P     P      14 58 44.8  -1.7
STKA                              pmax  pmax
      comp=Z,1.0nm,0.7s
STKA  Stephens Creek   54.60 159  P     P      14 58 44.8  -1.7
BILL  Bilibino         56.02  19ceP     P      14 58 56.1  -0.2
BILL                             i *SP  pP     14 59 01.8  -2.1
BILL                             e             14 59 10.4
BILL                             e             14 59 54.8
BILL                              S     S      15 06 34.0  -9.0
BILL                              pmax  pmax
      comp=Z,9.0nm,0.6s
BILL                              MLR   MLR
      comp=Z,531nm,17.0s
BILL  Bilibino         56.02  19  P     P      14 58 55.8  -0.6
BILL                              IAmb  IAmb   14 59 03.3
      comp=Z,22nm,1.1s
ABKAR Akbulak array    56.95 317  P     P      14 59 03.0  -0.2
ABKAR Akbulak array    56.95 317  IAmb  IAmb   14 59 05.2
      comp=Z,18nm,1.2s
GEYT  Alibeck          57.46 303  P     P      14 59 07.0  -0.1
      comp=Z,8.1nm,0.9s,baz=174,slow=5.7,SNR=13
SVE   Sverdlovsk       58.00 326ceP     P      14 59 11.5 +1.0
SVE                               pmax  pmax
      comp=Z,31nm,0.9s
ARU   Arti             59.03 325d iP    P      14 59 17.6  -0.1
ARU                                            15 00 04.9
ARU                                            15 01 24.9
ARU                               S     S      15 07 26.0 +3.2
ARU                                            15 09 00.7
ARU                               SS    SS     15 11 20.9 +4.3
ARU                               pmax  pmax
      comp=Z,15nm,0.5s
ARU                               MLR   MLR
      comp=Z,979nm,16.0s
ARU   Arti             59.03 325  P     P      14 59 16.9  -0.7
DZM   Mont Dzumac      60.33 131 eP     P      14 59 27.0  -0.2
      comp=Z,50nm,1.2s
DZM   Mont Dzumac      60.33 131 eLR    LR     15 17 13.0
      comp=Z,1µm,22.2s
DZM   Mont Dzumac      60.33 131  P     P      14 59 26.9  -0.3
DZM                               IAmb  IAmb   14 59 28.5
      comp=Z,15nm,0.7s
KIRV  Kirov            64.22 326ceP     P      14 59 52.9 +0.3
BELG  Belogornoye      64.97 319 i P    P      14 59 57.3  -0.3
BELG                              pmax  pmax
      comp=Z,4.0nm,0.9s
ANM   Nome             65.36  27  IAmb  IAmb   15 00 05.6
      comp=Z,14nm,1.0s
RDF   Al-Radifah       67.11 294 eP            15 00 10.9
MIB   Mutribah         67.14 295 eP            15 00 10.9
GNI   Garni            67.71 306ceP     P      15 00 17.3 +1.6
GNI                               pmax  pmax
      comp=Z,15nm,1.3s
ZEI   Tsey             68.03 309 eP     P      15 00 17.1  -0.5
ZEI                               pmax  pmax
      comp=Z,9.0nm,0.9s
KBZ   Khabaz           68.64 310  P     P      15 00 21.2   0.0
      comp=Z,8.1nm,0.9s,baz=146,slow=2.3,SNR=20
KBZ   Khabaz           68.64 310ceP     P      15 00 21.7 +0.5
KBZ                               pmax  pmax
      comp=Z,14nm,1.0s
VRH   Novokhopyorsk    68.68 318 eP     P      15 00 20.8  -0.5
VRH                               pmax  pmax
      comp=Z,30nm,0.7s
KIV   Kislovodsk       68.77 311 eP     P      15 00 22.8 +0.7
KIV                               pmax  pmax
      comp=Z,64nm,1.1s
KIV                               MLR   MLR
      comp=Z,1µm,17.0s
NEY   Neytrino         68.83 310 i P    P      15 00 23.4 +0.8
NEY                               pmax  pmax
      comp=Z,2.0nm,0.8s
A21K  Barrow           69.12  20  P     P      15 00 24.8 +1.1
      baz=269
KLMR  Klimovskoe       69.27 329 eP     P      15 00 23.5  -1.3
KLMR                              pmax  pmax
      comp=Z,43nm,1.3s
KLMR                              MLR   MLR
      comp=Z,1µm,12.0s
KLMR  Klimovskoe       69.27 329 eP     P      15 00 23.5  -1.3
KLMR                              AMP          15 00 25.8
      comp=Z,43nm,1.3s
KLMR                             e             15 01 57.6
KLMR                              LQ    LQ     15 25 45.3
KLMR                              LQ    LQ     15 25 45.3
KLMR                              LR    LR     15 29 47.1
KLMR                              AMP          15 33 15.6
      comp=Z,1µm,12.4s
TTA   Tatalina         69.47  29  P     P      15 00 25.6  -0.5
TTA                               pmax  pmax
      comp=Z,20nm,1.4s
TTA   Tatalina         69.47  29  P     P      15 00 25.6  -0.5
TTA                               IAmb  IAmb   15 00 47.0
      comp=Z,20nm,1.4s
TMCR  Tamitsa          69.79 332 eP     P      15 00 27.1  -0.8
TMCR                              pmax  pmax
      comp=Z,26nm,0.5s
LPSR  Galich'ya Gora   70.27 320 eP     P      15 00 30.0  -1.0
LPSR                              pmax  pmax
      comp=Z,20nm,0.8s
VSR   Storozhevoye     70.28 319 eP     P      15 00 30.1  -1.1
VSR                               pmax  pmax
      comp=Z,10.0nm,0.7s
MOS   Moscow           70.68 323 eP     P      15 00 33.2  -0.3
SOC   Sochi            70.95 310 eP     P      15 00 34.1  -1.3
SOC                              e             15 03 12.5
SOC                              ePPP   PPP    15 04 56.9
SOC                              eS     S      15 09 51.4 +1.7
SOC                               pmax  pmax
      comp=Z,26nm,1.0s
SOC                               MLR   MLR
      comp=Z,383nm,16.0s
RSO   Redoubt South    71.21  31  P     P      15 00 36.8  -0.1
OBN   Obninsk          71.35 323⇓eP     P      15 00 37.4  -0.2
OBN                               *SP   pP     15 00 45.0  -0.1
OBN                              eS     S      15 09 49.0  -4.9
OBN                               pmax  pmax
      comp=Z,14nm,0.6s
OBN                               MLR   MLR
      comp=Z,390nm,17.0s
APA   Apatity          71.43 336⇓iP     P      15 00 24.7   -13
APA                               pmax  pmax
      comp=Z,8.0nm,0.9s
APA                               MLR   MLR
      comp=Z,1µm,18.0s
COLD  Coldfoot         71.59  24  P     P      15 00 40.0 +1.1
      baz=276
KDAK  Kodiak Island    71.61  34  LR    LR     15 31 05.1
      comp=Z,200nm,21.6s,baz=260,slow=35
KDAK  Kodiak Island    71.61  34  P     P      15 00 38.5  -0.7
KDAK                              pmax  pmax
      comp=Z,19nm,0.9s
KDAK  Kodiak Island    71.61  34  P     P      15 00 38.5  -0.7
KDAK                              IAmb  IAmb   15 00 49.8
      comp=Z,19nm,0.8s
MLY   Manley           71.62  27  P     P      15 00 40.2 +1.1
      baz=277
BPAW  Bear Paw Mtn.    71.62  28  IAmb  IAmb   15 01 00.6
      comp=Z,12nm,0.9s
KTH   Kantishna Hill   71.71  28  P     P      15 00 39.4  -0.3
KTH                               IAmb  IAmb   15 00 49.4
      comp=Z,9.1nm,0.8s
TRF   Thorofare Moun   72.00  28  P     P      15 00 41.2  -0.5
SUA   Susitna One      72.06  30  IAmb  IAmb   15 00 56.7
      comp=Z,14nm,0.7s
I23K  Minto, Yukon-K   72.18  26  P     P      15 00 43.5 +1.1
      baz=278
ANN   Anapa            72.37 312 eP     P      15 00 43.3  -0.6
ANN                              eS     S      15 10 04.6  -1.4
ANN                               pmax  pmax
      comp=Z,33nm,1.2s
ANN                               MLR   MLR
      comp=Z,448nm,17.0s
NEA2  Nenana           72.38  27  P     P      15 00 44.6 +0.9
      baz=278

MCK   McKinley         72.56  28  P     P      15 00 45.4 +0.6
      baz=279
MDM   Murphy Dome      72.68  26  IAmb  IAmb   15 00 52.0
      comp=Z,9.8nm,0.6s
WRH   Wood River Hil   72.82  27  P     P      15 00 45.6  -0.6
ILAR  Eielson Array    73.28  27  P     P      15 00 48.2  -0.8
      comp=Z,2.6nm,0.6s,baz=266,slow=4.9,SNR=24
ILAR  Eielson Array    73.28  27  P     P      15 00 48.0  -1.0
HDA   Harding Lake     73.32  27  P     P      15 00 47.8  -1.4
ARA0  ARCESS Array S   73.98 339 eP     P      15 00 52.9  -0.1
ARCES ARCESS Array B   73.98 339  P     P      15 00 53.1 +0.1
      comp=Z,4.6nm,0.7s,baz=79,slow=8.0,SNR=14
ARCES ARCESS Array B   73.98 339  P     P      15 00 51.4  -1.6
ARCES                             pmax  pmax
      comp=Z,9.0nm,0.8s
ARCES ARCESS Array B   73.98 339  P     P      15 00 51.4  -1.6
M24K  Tolsona, Glenn   74.09  29  P     P      15 00 54.3 +0.5
      baz=282
KLU   Klutina          74.33  30  IAmb  IAmb   15 01 05.4
      comp=Z,7.8nm,0.6s
RIDG  Independent Ri   74.35  27  IAmb  IAmb   15 01 14.8
      comp=Z,9.5nm,0.7s
SCRK  Sand Creek       74.67  27  P     P      15 00 58.0 +0.7
      baz=283
KTK1  Kautokeino       74.89 338 eP     P      15 00 59.9 +1.6
GLB   Gilahina Butte   75.33  30  IAmb  IAmb   15 01 27.3
      comp=Z,25nm,1.5s
K27K  Chicken          75.48  27  P     P      15 01 03.0 +1.2
      baz=285
FIA1  FINESS Array S   75.62 330  IAmb  IAmb   15 01 03.7
      comp=Z,24nm,0.8s
FINES FINESS Array B   75.62 330  P     P      15 01 02.3  -0.4
      comp=Z,20nm,0.7s,baz=86,slow=6.3,SNR=49
FINES FINESS Array B   75.62 330 i P    P      15 01 02.7 +0.1
FINES                             pmax  pmax
      comp=Z,20nm,0.7s
FINES FINESS Array B   75.62 330  P     P      15 01 02.1  -0.5
EGAK  Eagle            75.67  26  IAmb  IAmb   15 01 08.8
      comp=Z,14nm,0.7s
VSU   Vasula           76.04 327 eP     P      15 01 05.2 +0.2
TRO   Tromso           76.18 339 eP     P      15 01 05.5  -0.1
BRTR  Keskin Array B   76.18 307  P     P      15 01 05.3  -1.1
      comp=Z,1.4nm,0.6s,baz=116,slow=5.6,SNR=11
BRTR  Keskin Array B   76.18 307 i P    P      15 01 06.3  -0.1
BRTR                              pmax  pmax
      comp=Z,2.0nm,0.6s
BRTR  Keskin Array B   76.18 307  P     P      15 01 06.0  -0.4
PKE   Pukeiti          76.28 141  P     P      15 00 57.8  -8.9
HIZ   Hauiti           76.37 140  P     P      15 01 09.4 +2.2
MNK   Minsk            76.40 323 i P    P      15 01 06.3  -0.9
      comp=E,3.0nm,0.9s
MNK                              i P    P      15 01 06.3  -0.9
      comp=N,12nm,1.1s
MNK                              i P    P      15 01 06.3  -0.9
      comp=Z,30nm,0.9s
MNK                              i PP   PP     15 03 58.9 +0.2
MNK                              i PPP  PPP    15 05 45.9
MNK                              i S    S      15 10 54.0 +3.1
MNK                              i SS   SS     15 15 51.8 +6.9
MNK                              i SSS  SSS    15 19 15.4
MNK                              i LQ   LQ     15 29 55.8
MNK                              i LR   LR     15 34 43.1
MNK                              i LRM  MLR    15 35 36.8
      comp=N,415nm,23.0s
MNK                              i LRM  MLR    15 36 20.2
      comp=Z,217nm,17.7s
MNK                              i LRM  MLR    15 36 27.9
      comp=E,28nm,16.0s
MNK   Minsk            76.40 323 eP     P      15 01 08.0 +0.8
MMAI  Mount Meron Ar   76.44 300  P     P      15 01 08.0 +0.1
      comp=E,0.5nm,0.3s,baz=63,slow=9.6,SNR=4.7
QRZ   Quartz Range     76.48 143  P     P      15 01 08.6 +0.9
AKASG Malin Array Be   76.55 319  P     P      15 01 07.3  -0.8
      comp=E,5.6nm,0.6s,baz=64,slow=6.0,SNR=18
AKASG Malin Array Be   76.55 319  P     P      15 01 07.7  -0.4
AKASG                             pmax  pmax
      comp=Z,3.0nm,0.9s
AKASG Malin Array Be   76.55 319  P     P      15 01 07.7  -0.4
AKBB  Malin Array Si   76.55 319  P     P      15 01 06.8  -1.3
AKBB                              pmax  pmax
      comp=Z,7.0nm,0.7s
AKBB  Malin Array Si   76.55 319  P     P      15 01 06.8  -1.3
DAWY  Dawson           76.61  27  IAmb  IAmb   15 01 14.2
      comp=Z,10nm,0.8s
VRZ   Vera Road        76.70 140  P     P      15 01 10.9 +1.9
NACGM Naroch           76.92 324 i P    P      15 01 09.9  -0.2
NACGM                            i P    P      15 01 09.9  -0.2
NACGM                            i P    P      15 01 09.9  -0.2
NACGM                            i PcP  PcP    15 01 44.9   +24
NACGM                            i PP   PP     15 04 23.3   +20
NACGM                            i PPP  PPP    15 06 16.4
NACGM                            i SKS  S      15 11 03.3 +6.8
NACGM                            i S    ScS    15 11 47.1   +22
NACGM                            i PS   PnS    15 12 25.4   +49
NACGM                            i SS   SS     15 17 40.0
NACGM                            i SSS  SSS    15 21 20.0
NACGM                            i LQ   LQ     15 30 17.6
NACGM                            i LR   LR     15 35 57.0
EPYK  Eagle Plains     76.98  24  P     P      15 01 10.2  -0.1
      baz=289
EPYK  Eagle Plains     76.98  24  IAmb  IAmb   15 01 13.9
      comp=Z,14nm,0.8s
WTVZ  West Tongariro   77.20 140  P     P      15 01 13.5 +1.5
NNZ   Nelson           77.22 142  P     P      15 01 11.8  -0.1
NGZ   Ngauruhoe        77.24 140  P     P      15 01 13.7 +1.4
TMVZ  Te Maari         77.27 140  P     P      15 01 13.8 +1.4
OTVZ  Oturere          77.27 140  P     P      15 01 14.1 +1.6
ETVZ  East Tongariro   77.28 140  P     P      15 01 14.2 +1.7
MTSE  Matsula          77.44 328 eP     P      15 01 10.6  -2.3
MOVZ  Moawhango        77.48 140  P     P      15 01 14.0 +0.5
INK   Inuvik           77.48  22  IAmb  IAmb   15 01 16.7
      comp=Z,13nm,1.1s
RPZ   Rata Peaks       77.58 146  P     P      15 01 13.6  -0.3
RPZ                               IAmb  IAmb   15 01 15.3
      comp=Z,34nm,1.3s
BHHZ  Black Hill Sta   77.72 140  P     P      15 01 15.5 +0.6
SORM  Soroca           77.76 317 ⇑P     P      15 01 13.6  -1.3
SORM  Soroca           77.76 317 ⇑P     P      15 01 13.6  -1.3
BKZ   Black Stump Fm   77.78 139  P     P      15 01 15.7 +0.6
OGWZ  Otaki Gorge      78.01 141  P     P      15 01 16.4 +0.1
STEI  Steigen          78.03 338 eP     P      15 01 16.4 +0.3
FAUS  Fauske           78.22 338 eP     P      15 01 17.3 +0.2
TLCR                   78.24 314 ⇓P     P      15 01 17.6  -0.1
TLCR                   78.24 314 ⇓P     P      15 01 17.6  -0.1
HOWZ  Holdsworth Sta   78.26 141  P     P      15 01 17.5  -0.3
PABE  Paberze          78.30 325 eP     P      15 01 17.7  -0.1
SLIT  Slitere, Latvi   78.54 327 eP     P      15 01 18.4  -0.6
BFZ   Birch Farm       78.56 141  P     P      15 01 18.8  -0.6
TPGR  Topolog          78.60 314 ⇑P     P      15 01 19.6  -0.1
CFR   Carcaliu         78.70 314 ⇑P     P      15 01 19.8  -0.4
CFR   Carcaliu         78.70 314 ⇑P     P      15 01 19.8  -0.4
TIRR  Tirgusor         78.72 313 ⇑P     P      15 01 20.1  -0.2
TIRR  Tirgusor         78.72 313 ⇑P     P      15 01 20.1  -0.2
HARR  Harsova          78.98 314 ⇑P     P      15 01 22.2 +0.4
HARR  Harsova          78.98 314 ⇑P     P      15 01 22.2 +0.4
MOR8  Moi Rana         79.00 337 eP     P      15 01 19.4  -2.1
SUW   Suwalki          79.19 324 eP     P      15 01 22.5  -0.2
SUW   Suwalki          79.19 324 eP     P      15 01 22.1  -0.7
ICOR  Ion Corvin       79.23 313 ⇑P     P      15 01 24.0 +0.9
PBUR  Paburge          79.23 326 eP     P      15 01 22.8  -0.1
ODBI  Odobesti         79.27 315 ⇓P     P      15 01 22.9  -0.4
TESR  Tescani          79.32 316 ⇑P     P      15 01 23.2  -0.4
VRI   Vrincioaia       79.46 315 ⇓P     P      15 01 24.4   0.0
VRI   Vrincioaia       79.46 315 ⇓P     P      15 01 24.4   0.0
PLOR  Plostina         79.51 315 ⇑P     P      15 01 24.7   0.0
PLOR  Plostina         79.51 315 ⇑P     P      15 01 24.7   0.0
BIZ   Bicaz            79.55 316 ⇑P     P      15 01 25.0 +0.1
BISRR Bisoca           79.56 315 ⇓P     P      15 01 25.1   0.0
BURAR Bucovina Array   79.93 317 ⇑P     P      15 01 27.0   0.0
BURAR Bucovina Array   79.93 317 ⇑P     P      15 01 27.0   0.0
BURAR Bucovina Array   79.93 317  P     P      15 01 27.0   0.0
UPP   Uppsala          80.07 330 eP     P      15 01 27.2  -0.1
MLR   Muntele Rosu     80.09 315 ⇑P     P      15 01 28.6 +0.6
MLR   Muntele Rosu     80.09 315 ⇑P     P      15 01 28.6 +0.6
MLR   Muntele Rosu     80.09 315  IAmb  IAmb   15 01 29.2
      comp=Z,11nm,0.7s
C36M  Paulatuk         80.14  19  P     P      15 01 27.1  -0.5
      baz=300
C36M  Paulatuk         80.14  19  IAmb  IAmb   15 01 31.5
      comp=Z,18nm,1.2s
DOPR  Dopca            80.32 315 ⇑P     P      15 01 29.1   0.0
NSS   Namsos           80.62 336 eP     P      15 01 29.4  -0.9
ARCR  ARCALIA          80.65 317 ⇑P     P      15 01 30.9 +0.1
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VOIR		80.71	315	⇑P	P	15 01 31.1	-0.2
VOIR		80.71	315	⇑P	P	15 01 31.1	-0.2
KWP	Kalwaria Pacla	80.87	319	eP	P	15 01 32.3	+0.4
ARR	Arges	81.01	315	⇑P	P	15 01 33.3	+0.5
DAG	Danmarks Havn	81.03	351	i P	P	15 01 31.2	-1.1
DAG				pmax	pmax		
	comp=Z,15nm,0.8s						
DAG	Danmarks Havn	81.03	351	i P	P	15 01 31.2	-1.1
	comp=Z,15nm,0.8s						
DAG	Danmarks Havn	81.03	351	i P	P	15 01 31.2	-1.1
DAG				IAmb	IAmb	15 01 32.7	
	comp=Z,15nm,0.8s						
HUMR	Humele	81.04	314	⇑P	P	15 01 32.7	-0.2
KOLS	Kolonicke sedl	81.37	319	eP	P	15 01 34.9	+0.3
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KOLS	Kolonicke sedl	81.37	319	eP	P	15 01 34.9	+0.3
UZH	Uzhgorod	81.46	319	eP	P	15 01 35.4	+0.3
UZH				e		15 01 45.5	
LOT	Lotru	81.56	315	⇑P	P	15 01 35.9	+0.1
DRGR		81.81	317	⇑P	P	15 01 36.8	-0.3
DRGR		81.81	317	⇑P	P	15 01 36.8	-0.3
CRVS	Cervenica-Dubn	81.88	319	eP	P	15 01 38.1	+0.8
CRVS				pmax	pmax		
	comp=Z,28nm,1.6s						
CRVS	Cervenica-Dubn	81.88	319	eP	P	15 01 38.1	+0.8
OPO	Ambohidratompo	82.07	247	P	P	15 01 38.2	-0.8
	comp=Z,13nm,0.8s,baz=8.1,slow=4.8,SNR=8.0						
NIE	Niedzica	82.42	320	eP	P	15 01 40.9	+0.7
OJC	Ojcow	82.43	321	eP	P	15 01 40.5	+0.3
OJC	Ojcow	82.43	321	IAmb	IAmb	15 01 41.3	
	comp=Z,12nm,0.7s						
NC602	NORSAR Array S	82.48	332	IAmb	IAmb	15 01 57.9	
	comp=Z,11nm,0.9s						
NB2	NORSAR Subarra	82.48	333	P	P	15 01 39.3	-1.0
	comp=Z,9.2nm,0.8s,baz=64,slow=5.3						
NB2	NORSAR Subarra	82.48	333	P	P	15 01 39.3	-1.0
	baz=64,slow=5.3						
NOA	NORSAR Array B	82.48	333	P	P	15 01 39.3	-1.0
	comp=Z,7.1nm,0.7s,baz=64,slow=5.0,SNR=56						
HERR	Herculane	82.65	315	⇓P	P	15 01 41.6	+0.2
SIRR	Siria	82.67	316	⇑P	P	15 01 41.3	-0.2
NAO01	NORSAR Array S	82.71	332	eP	P	15 01 39.5	-2.0
VTS	Vitosha	82.86	313	⇑P	P	15 01 43.2	+0.4
VTS	Vitosha	82.86	313	⇑P	P	15 01 43.2	+0.4
DOMB	Dombas	82.93	334	eP	P	15 01 42.2	-0.3
OSL	Oslo	83.20	332	eP	P	15 01 44.0	+0.1
DBG	Daneborg	83.25	350	i P	P	15 01 43.4	-0.6
DBG				IAmb	IAmb	15 01 45.0	
	comp=Z,14nm,0.9s						
BSD	Bornholm Skovb	83.27	326	i P	P	15 01 43.0	-1.4
BSD	Bornholm Skovb	83.27	326	i P	P	15 01 43.0	-1.4
BSD	Bornholm Skovb	83.27	326	i P	P	15 01 43.0	-1.4
MOL	Molde	83.29	335	eP	P	15 01 43.7	-0.6
VYHS	Vyhne	83.65	319	eP	P	15 01 47.1	+0.5
VYHS				pmax	pmax		
	comp=Z,31nm,1.9s						
VYHS	Vyhne	83.65	319	eP	P	15 01 47.1	+0.5
AKN	Aaknes	83.71	335	eP	P	15 01 47.0	+0.5
KONO	Kongsberg	83.84	332	eP	P	15 01 46.4	-0.8
SKAR	Skarslia	83.91	333	eP	P	15 01 47.4	-0.3
MORC	Moravsky Berou	83.95	321	eP	P	15 01 47.9	-0.2
JAVC	Velka Javorina	84.23	320	eP	P	15 01 50.8	+1.3
KSP	Ksiaz	84.26	322	eP	P	15 01 50.2	+0.6
KRLC	Kraliky	84.28	321	eP	P	15 01 49.6	-0.2
KRLC				e		15 01 58.8	
KRLC	Kraliky	84.28	321	eP	P	15 01 49.6	-0.2
KRLC				epP	pwP	15 01 58.8	-1.0
OSTC	Ostas	84.42	322	eP	P	15 01 55.0	+4.6
DPC	Dobruska-Polom	84.44	322	eP	P	15 01 50.6	0.0
DPC				e		15 01 55.2	
DPC	Dobruska-Polom	84.44	322	eP	P	15 01 50.6	0.0
DPC				epP	PcP	15 01 55.2	+1.0
UPC	Upice	84.56	322	eP	P	15 01 51.6	+0.5
UPC	Upice	84.56	322	eP	P	15 01 51.6	+0.5
HYA	Hoyanger	84.56	334	eP	P	15 01 50.3	-0.5
LLD	Lille Linde	84.58	327	eP	P	15 01 50.2	-0.8
LLD	Lille Linde	84.58	327	i P	P	15 01 50.2	-0.8
LLD	Lille Linde	84.58	327	eP	P	15 01 50.2	-0.8
VRAC	Vranov	84.70	321	⇑P	P	15 01 50.3	-1.5
VRAC	Vranov	84.70	321	eP	P	15 01 52.4	+0.5
VRAC	Vranov	84.70	321	⇑P	P	15 01 50.3	-1.5
KRUC	Moravsky	84.92	320	eP	P	15 01 53.0	+0.1
ODD1	Odda	85.02	333	eP	P	15 01 53.4	+0.1
ASK	Askoy	85.33	334	eP	P	15 01 54.3	-0.4
BLS5	Blasjo	85.34	332	eP	P	15 01 54.9	0.0
SNART	Snartemo	85.56	331	eP	P	15 01 55.3	-0.6
MUD	Monsted U'grnd	85.57	329	i P	P	15 01 56.3	+0.3
MUD				pmax	pmax		
	comp=Z,22nm,0.7s						
MUD	Monsted U'grnd	85.57	329	i P	P	15 01 56.3	+0.3
	comp=Z,22nm,0.7s						
MUD	Monsted U'grnd	85.57	329	i P	P	15 01 56.3	+0.3
MUD				IAmb	IAmb	15 01 56.8	
	comp=Z,22nm,0.7s						
BRG	Berggiesshubel	85.60	323	⇑iP	P	15 01 56.7	+0.4
BRG				Amp		15 01 57.5	
	comp=Z,9.9nm,0.9s						
BRG	Berggiesshubel	85.60	323	⇑iP	P	15 01 56.7	+0.4
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRG	Berggiesshubel	85.60	323	⇑iP	P	15 01 56.7	+0.4
BRG				Amp		15 01 57.5	
	comp=Z,9.9nm,0.9s						
PRU	Pruhonice	85.63	322	eP	P	15 01 56.6	+0.1
PRU	Pruhonice	85.63	322	eP	P	15 01 56.6	+0.1
CONA	Conrad Observa	85.70	319	eP	P	15 01 57.5	+0.5
	comp=Z,16nm,1.9s						
CLL	Collm	85.94	323	eP	P	15 01 57.0	-1.0
CLL				eS	S	15 12 30.0	-0.1
CLL				ePS	PnS	15 13 30.0	+1.1
CLL				eSSSS		15 24 36.0	
CLL				Lm	MLR	15 44 00.0	
	comp=N,400nm,19.1s						
CLL				Lm	MLR	15 44 00.0	
	comp=E,400nm,19.0s						
CLL				Lm	MLR	15 44 00.0	
	comp=Z,600nm,18.0s						
CLL	Collm	85.94	323	eP	P	15 01 57.0	-1.0
CLL				eS	S	15 12 30.0	-0.1
CLL				MLR	MLR		
	comp=Z,600nm,18.0s						
ARSA	Arzberg	86.19	319	eP	P	15 01 58.6	-0.8
	comp=Z,3.9nm,0.8s						
GROS	Grobnik	86.54	318	i P	P	15 02 01.1	-0.1
KHC	Kasperske Hory	86.57	321	eP	P	15 02 01.8	+0.6
KHC	Kasperske Hory	86.57	321	eP	P	15 02 01.8	+0.6
GERES	GERESS Array B	86.62	321	P	P	15 02 01.0	-0.5
	comp=Z,1.9nm,0.6s,baz=73,slow=4.6,SNR=14						
GERES	GERESS Array B	86.62	321	P	P	15 01 59.8	-1.8
BISS	Bistriski jare	86.69	319	i P	P	15 02 02.0	+0.2
MOA	Molln	86.71	320	eP	P	15 02 01.5	-0.4
	comp=Z,4.6nm,0.6s						
SOKA	Soboth	86.74	319	eP	P	15 02 01.9	-0.2
	comp=Z,4.9nm,0.7s						
OBKA	Obir	87.11	319	eP	P	15 02 03.6	-0.4
	comp=Z,6.0nm,1.0s						
SUMG	Summit	87.18	354	i P	P	15 02 04.2	+0.1
SUMG				pmax	pmax		
	comp=Z,52nm,1.1s						
SUMG	Summit	87.18	354	i P	P	15 02 04.2	+0.1
	comp=Z,52nm,1.1s						
SUMG	Summit	87.18	354	i P	P	15 02 04.3	+0.1
SUMG				IAmb	IAmb	15 02 05.8	
	comp=Z,52nm,1.1s						
YKA	Yellowknife Ar	87.19	23	P	P	15 02 03.8	-0.1
	comp=Z,8.1nm,0.6s,baz=317,slow=4.0,SNR=66						
YKA				PKKPbc	PKKPbc	15 19 53.2	-3.5
	comp=Z,0.4nm,0.5s,baz=120,slow=3.3,SNR=9.7						
YKA	Yellowknife Ar	87.19	23	i P	P	15 02 04.0	+0.1
YKA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GBRS	Gornja Briga	87.36	318	i P	P	15 02 05.7	+0.5
KBA	Koelnbreinsper	87.61	319	eP	P	15 02 03.9	-2.6
	comp=Z,2.3nm,0.6s						
MYKA	Terra Mystica	87.62	319	eP	P	15 02 03.5	-2.9
	comp=Z,1.9nm,0.5s						
UPNV	Upernavik	87.95	359	i P	P	15 02 07.2	-0.1
UPNV				IAmb	IAmb	15 02 08.1	
	comp=Z,5.4nm,0.6s						
ABTA	Abfaltersbach	88.27	319	eP	P	15 02 08.2	-1.3
	comp=Z,3.3nm,0.6s						
WTTA	Wattenberg	88.57	320	eP	P	15 02 10.2	-0.8
	comp=Z,7.5nm,0.6s						
WATA	Walderalm	88.57	320	eP	P	15 02 10.6	-0.4
	comp=Z,3.6nm,0.6s						
SQTA	Sankt Quirin	88.85	320	eP	P	15 02 09.8	-2.4
	comp=Z,3.7nm,0.6s						
MOTA	Moosalm	88.85	320	eP	P	15 02 11.4	-1.0
	comp=Z,3.4nm,1.1s						
FETA	Feichten	89.23	320	eP	P	15 02 13.6	-0.5
	comp=Z,2.2nm,0.7s						
DAVA	Damuels	89.61	321	eP	P	15 02 12.8	-3.1
	comp=Z,6.5nm,1.0s						
MBAR	Mbarara	90.86	270	ceP	P	15 02 23.7	+1.4
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.7s						
I03D	Drain, OR	93.63	41	P	P	15 02 35.2	+0.9
	baz=301						
I04A	Tendick Farm,	94.16	41	P	P	15 02 36.9	0.0
	baz=302						
J04D	Umpqua Nationa	94.64	41	P	P	15 02 39.6	+0.4
	baz=302						
PPT2	Papeete2	94.79	107	eLR	LR	15 33 11.0	
	comp=Z,412nm,28.0s						
L04D	Klamath Falls	95.05	42	P	P	15 02 41.2	+0.1
	baz=302						
PINE	Pine Mountain	95.06	40	P	P	15 02 41.2	+0.1
PINE				IAmb	IAmb	15 02 43.2	
	comp=Z,5.8nm,0.9s						
J05D	Fort Rock, OR	95.15	41	P	P	15 02 42.1	+0.5
	baz=303						
TBI	Tubuai	96.72	112	eLR	LR	15 34 06.2	
	comp=Z,244nm,29.5s						
BEKR	Beckworth	97.56	43	P	P	15 02 51.8	-0.8
BEKR				IAmb	IAmb	15 03 13.6	
	comp=Z,3.3nm,1.0s						
NVAR	Mina Array Bea	99.68	43	P	Pdif	15 03 02.6	+0.4
	comp=Z,1.5nm,0.7s,baz=297,slow=5.3,SNR=17						
NVAR				LR	LR	15 39 26.9	
	comp=Z,110nm,22.0s,baz=290,slow=30						
TAOE	Nuku Hiva Isla	100.78	96	eLR	LR	15 36 03.0	
	comp=Z,424nm,23.3s						
RKT	Rikitea	109.48	108	eLR	LR	15 39 54.0	
	comp=Z,280nm,27.5s						
MNTX	Cornudas Mount	112.14	42	P	PKiKP	15 07 53.9	0.0
	baz=312						
TORD	Torodi Ar. Bea	112.40	294	PKKPab	PKKPab	15 18 52.5	-1.3
	comp=Z,3.0nm,0.7s,baz=260,slow=4.5,SNR=9.7						
TXAR	Lajitas Array	114.83	43	PKP	PKPdf	15 07 59.3	+0.1
	comp=Z,2.7nm,0.7s,baz=191,slow=0.7,SNR=16						
U40A	Yellville	115.69	30	P	PKiKP	15 07 59.7	-0.9
	baz=324						
U40A	Yellville	115.69	30		PKiKP	15 07 59.1	-1.5
JCT	Junction City	116.43	39	PKIKP	PKPdf	15 08 01.1	-1.1
JCT	Junction City	116.43	39	P	PKiKP	15 08 02.4	+0.2
	baz=316						
JCT	Junction City	116.43	39	PKPdf	PKPdf	15 08 01.1	-1.1
MIAR	Mount Ida	116.79	32	P	PKiKP	15 08 03.2	+0.4
	baz=323						
WVT	Waverly	118.14	27	PKIKP	PKPdf	15 08 03.8	-1.5
WVT	Waverly	118.14	27	P	PKPdf	15 08 04.5	-0.8
	baz=329						
WVT	Waverly	118.14	27	PKPdf	PKPdf	15 08 03.8	-1.5
T50A	Nancy	118.58	24	PKPdf	PKPdf	15 08 04.5	-1.7
SNAA	Sanae	118.86	197	PKPdf	PKPdf	15 08 04.3	-1.3
TZTN	Tazewell	119.48	23	P	PKPdf	15 08 07.2	-0.7
	baz=333						
R57A	Stanardsville	119.55	18	P	PKPdf	15 08 07.9	-0.1
	baz=338						
TKL	Tuckaleechee C	120.18	24	PKIKP	PKPdf	15 08 08.7	-0.5
TKL	Tuckaleechee C	120.18	24		PKPdf	15 08 08.7	-0.5
VNA2	Neumayer--Watz	120.50	197	PKPdf	PKPdf	15 08 07.8	-0.9
VNA1	Neumayer--Stat	120.89	197	PKPdf	PKPdf	15 08 08.9	-0.5
VNA3	Neumayer Olymp	120.95	197	PKPdf	PKPdf	15 08 07.7	-1.8
LRAL	Lakeview Retre	121.13	28	P	PKPdf	15 08 10.5	-0.6
	baz=329						
Y52A	Lilburn	121.65	25		PKPdf	15 08 11.3	-0.8
PAULI	Pauline	121.65	22		PKPdf	15 08 11.2	-0.9
V59A	Middlesex	121.98	19	P	PKPdf	15 08 11.6	-1.0
	baz=338						
GOGA	Godfrey	122.28	25	P	PKiKP	15 08 13.5	0.0
	baz=332						
CMIG	Matias Romero	129.06	47	PKP	PKiKP	15 08 27.2	-0.2
	baz=328,slow=2.8						
FDF	Fort de France	145.91	4	PKP2	PKPdf	15 08 56.5	-1.1
FDF	Fort de France	145.91	4	PKPdf	PKPdf	15 08 56.5	-1.1
SMLC	San Martn de	148.01	30	eP	PKPdf	15 09 01.3	+0.1
UREC	San Jos de Ur	148.19	33	eP	PKPdf	15 09 02.2	+0.7
ZARC	Zaragoza, Cauc	148.76	32	eP	PKPdf	15 09 03.0	+0.6
OCAC	Ocana	148.85	29	eP	PKPdf	15 09 03.6	+0.9
SDV	Santo Domingo	149.41	24	PKP	PKPdf	15 09 03.3	-0.3
	comp=Z,52nm,0.8s,baz=291,slow=0.3,SNR=17						
SDV				PKPbc	PKPbc	15 09 07.2	-0.9
	comp=Z,52nm,0.8s,baz=306,slow=2.2,SNR=31						
SDV	Santo Domingo	149.41	24	PKPdf	PKPdf	15 09 03.5	-0.2
SDV	Santo Domingo	149.41	24	eP	PKPdf	15 09 04.1	+0.4
CBOC	Ciudad Bolivar	149.51	36	eP	PKPbc	15 09 07.6	-0.7
BRRC	Barranca, Sant	149.66	31	eP	PKiKP	15 09 09.2	-0.4
PTBC	PUERTO BERRIO,	149.77	33	eP	PKPdf	15 09 03.8	-0.3
PAMC	Pamplona, Colo	149.93	29	eP	PKPbc	15 09 09.6	-0.2
PCRV	Puerto La Cruz	149.93	12	PKPbc	PKPbc	15 09 06.9	-2.3
	comp=Z,11nm,0.6s,baz=197,slow=3.7,SNR=7.1						
PLMC	San Jos del P	150.14	38	eP	PKPdf	15 09 05.5	+0.8
BARC	Barichara	150.36	30	eP	PKPbc	15 09 09.5	-1.0
NORC	Norcasia	150.38	34	eP	PKPdf	15 09 07.1	+2.0
GUY2C	Guyana, Caldas	150.40	36	eP	PKPdf	15 09 06.4	+0.7
RREF	El Recreo	150.68	36	eP	PKPbc	15 09 10.8	-0.9
SPBC	San Pablo de B	150.73	33	eP	PKPbc	15 09 10.1	-1.1
YOTC	Yotoco, Valle	150.85	39	eP	PKPdf	15 09 06.7	+0.8
TOLC	Tolima	150.95	36	eP	PKPdf	15 09 07.1	+0.8
ANIL	Santa Ana	150.98	37	eP	PKPbc	15 09 11.3	-0.7
RUSC	La Rusia	151.01	31	eP	PKPdf	15 09 07.1	+0.5
ROSC	El Rosal	151.28	34	PKP	PKPdf	15 09 07.8	+1.0
	comp=Z,6.0nm,0.3s,baz=186,slow=20,SNR=7.3						
ROSC				PKPbc	PKiKP	15 09 13.7	+0.3
	comp=Z,43nm,0.7s,baz=49,slow=4.1,SNR=15						
ROSC	El Rosal	151.28	34	eP	PKPbc	15 09 12.7	-0.1
ORTC	Ortega, Tolima	151.55	37	eP	PKPbc	15 09 12.2	-0.8
CHIC	Chingaza	151.77	33	eP	PKPbc	15 09 14.1	+0.1
MARP	Paez Belalcaza	151.99	39	eP	PKPdf	15 09 09.1	+1.3
PCON	Cinco Dias	152.13	41	eP	PKiKP	15 09 15.6	+0.2
OTAV	Otavalo	152.35	47	eP	PKPdf	15 09 09.7	+1.1
GCUF	Volcan Galeras	152.37	44	eP	PKiKP	15 09 16.1	+0.4
BETC	Betania	152.43	39	eP	PKPbc	15 09 14.9	-0.2
GARC	Garzon, Huila	152.79	40	eP	PKiKP	15 09 16.3	0.0
PTGC	Puerto Gaitan,	152.94	31	eP	PKPbc	15 09 13.1	-3.0
PLCA	Paso Flores	156.46	157	PKPbc	PKPbc	15 09 23.6	
	comp=Z,2.3nm,0.7s,baz=202,slow=4.5,SNR=7.5						
PLCA				PKPab	PKPab	15 09 41.3	-0.2
	comp=Z,5.3nm,0.7s,baz=222,slow=5.7,SNR=12						
ATAH	Atahualpa	157.16	60	PKP	PKPdf	15 09 15.6	+0.5
	comp=Z,7.3nm,1.0s,baz=250,slow=2.7,SNR=8.5						
BO02	Sierra Bellavi	161.29	147	PKPab	PKPab	15 10 03.0	+0.3
PTGA	Pitinga	161.31	4	PKP	PKPdf	15 09 18.2	-1.3
	comp=Z,2.0nm,0.3s,baz=146,slow=2.3,SNR=5.9						
PTGA				PKPab	PKPab	15 10 02.0	-1.0
	comp=Z,1.2nm,0.3s,baz=353,slow=8.7,SNR=4.8						
LCO	Las Campanas	165.43	133	PKP2	PKPab	15 10 22.5	+1.2
LCO	Las Campanas	165.43	133	PKPab	PKPab	15 10 22.5	+1.2
SAML	Samuel	168.61	24	PKP2	PKPab	15 10 34.0	-1.2
SAML	Samuel	168.61	24	PKPab	PKPab	15 10 34.0	-1.2
PB07	IPOC Station P	169.16	104		PKPdf	15 09 25.0	-1.0
BDFB	Brasilia	169.24	289	PKP	PKPdf	15 09 25.5	-0.7
	comp=Z,1.7nm,0.3s,baz=225,slow=5.9,SNR=3.0						
PB16	IPOC Station P	169.57	86		PKPdf	15 09 27.2	+0.4
LVC	Limon Verde	169.84	110	PKPab	PKPab	15 10 40.9	-0.3
	comp=Z,3.6nm,0.7s,baz=250,slow=3.9,SNR=3.8						
CPUP	Villa Florida	173.09	189	PKPab	PKPab	15 10 54.6	-0.1
	comp=Z,3.4nm,1.0s,baz=153,slow=2.9,SNR=5.0						
SIV	San Ignacio	175.78	35	PKP	PKPdf	15 09 28.8	-0.1
	comp=Z,5.3nm,0.8s,baz=143,slow=0.6,SNR=9.0						

IDC ***22*** *14:50:55.0±4.6, 19°.44N×121°.44E, h33km±34km, mb4.3/25, mb1 4.4/28, mb1mx4.3/50, mbtmp4.5/28, ML4.4/3 Error ellipse: s-maj=17.0km s-min=13.5km az=83.0*

ISC 22 14:50:56.9±0.5**, 19°.46N**±0°.09×**121°.5E**±0°.1**, h52km, n42, σ0s.85**/41**, mb4.4**/24**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	9.64	39	Pn	Pn	14 53 11.2	-1.9
	17nm,0.3s,baz=250,slow=14,SNR=5.0						
JNU	Nakatsue	15.99	30	Pn	Pn	14 54 39.2	+0.7
	0.4nm,0.3s,baz=198,slow=21,SNR=1.1						
KSRS	Korea Array	18.79	16	P	P	14 55 11.5	-0.5
	1.4nm,0.3s,baz=200,slow=12,SNR=5.9						
CMAR	Chiang Mai Arr	21.34	271	P	P	14 55 38.6	-1.2
	2.2nm,0.9s,baz=87,slow=8.2,SNR=1.1						
CMAR				PcP	PcP	14 59 44.0	+1.3
	2.3nm,0.8s,baz=45,slow=0.7,SNR=4.3						
SIJI	Sorong	22.37	153	P	P	14 55 51.3	+0.4
	9.2nm,0.5s,baz=193,slow=22,SNR=1.9						
MJAR	Matsushiro Arr	22.48	37	P	P	14 55 52.2	+0.3
	3.1nm,0.4s,baz=197,slow=8.6,SNR=8.1						
USRK	Ussuriysk Ar.	26.19	17	P	P	14 56 26.8	+0.2
	5.3nm,0.7s,baz=210,slow=6.9,SNR=5.3						
KLR	Kul'dur	30.83	13	P	P	14 57 08.2	+0.4
	6.0nm,0.7s,baz=243,slow=7.6,SNR=5.0						
KLR				PcP	PcP	15 00 03.5	-0.3
	0.6nm,0.3s,baz=166,slow=3.3,SNR=3.7						
SONM	Songino Array	30.85	340	P	P	14 57 08.6	+0.3
	3.6nm,0.7s,baz=160,slow=10,SNR=2.3						
WRA	Warramunga Arr	41.14	161	P	P	14 58 35.4	-0.8
	4.9nm,0.5s,baz=343,slow=9.2,SNR=4.8						
WRA				PcP	PcP	15 00 36.5	+1.5
	3.0nm,0.8s,baz=346,slow=3.3,SNR=4.7						
PALK	Pallekele	41.37	259	P	P	14 58 38.3	0.0
	7.5nm,0.9s,baz=138,slow=12,SNR=2.2						
MKAR	Makanchi Array	42.01	320	P	P	14 58 43.4	+0.3
	6.6nm,0.6s,baz=122,slow=8.3,SNR=4.4						
MKAR				PcP	PcP	15 00 37.8	+0.3
	3.2nm,0.7s,baz=97,slow=5.6,SNR=4.1						
H11S3	WAKE ISLAND Hy	42.67	84	T	T	15 44 27.2	
	baz=278,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	42.68	84	T	T	15 44 28.1	
	baz=278,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	42.69	82	T	T	15 44 29.1	
	baz=277,slow=75,SNR=31						
H11S2	WAKE ISLAND Hy	42.69	84	T	T	15 44 28.4	
	baz=278,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	42.69	82	T	T	15 44 30.3	
	baz=277,slow=75,SNR=19						
H11N3	WAKE ISLAND Hy	42.70	82	T	T	15 44 30.3	
	baz=277,slow=75,SNR=20						
YAK	Yakutsk	42.92	6	P	P	14 58 50.0	-0.2
	6.8nm,0.4s,baz=328,slow=1.1,SNR=2.6						
PETK	Petropavlovsk-	43.69	31	P	P	14 58 57.3	+0.7
	11nm,0.8s,baz=185,slow=2.7,SNR=9.6						
ZALV	Zalesovo Beam	44.40	330	P	P	14 59 03.3	+1.1
	3.8nm,0.7s,baz=113,slow=8.5,SNR=2.3						
ASAR	Alice Springs	44.54	164	P	P	14 59 03.2	-0.5
	6.2nm,0.8s,baz=347,slow=6.5,SNR=5.1						
MA2	Magadan	45.26	21	P	P	14 59 10.5	+1.5
	4.3nm,0.9s,baz=166,slow=6.7,SNR=2.2						
AAK	Ala-Archa	45.70	311	P	P	14 59 14.0	+1.0
	1.4nm,0.6s,baz=125,slow=7.9,SNR=1.4						
KURBB	Kurchatov Arra	45.96	323	P	P	14 59 15.7	+1.0
	8.6nm,0.6s,baz=119,slow=7.5,SNR=6.0						
KURBB				PcP	PcP	15 00 50.1	-0.7
	1.0nm,0.6s,baz=123,slow=3.1,SNR=1.5						
ILAR	Eielson Array	73.28	27	P	P	15 02 21.8	-0.8
	2.0nm,0.7s,baz=271,slow=4.6,SNR=5.4						
ARCES	ARCESS Array B	74.01	339	P	P	15 02 26.8	0.0
	3.4nm,0.8s,baz=76,slow=8.5,SNR=2.3						
FINES	FINESS Array B	75.66	330	P	P	15 02 36.1	-0.2
	12nm,0.7s,baz=94,slow=7.6,SNR=11						
BRTR	Keskin Array B	76.22	307	P	P	15 02 40.0	-0.2
	0.8nm,0.5s,baz=116,slow=3.8,SNR=4.6						
AKASG	Malin Array Be	76.59	319	P	P	15 02 40.7	-1.1
	2.9nm,0.7s,baz=65,slow=6.1,SNR=4.4						
NB2	NORSAR Subarra	82.52	333	P	P	15 03 13.2	-0.7
	comp=Z,5.6nm,0.7s,baz=64,slow=5.3						
NOA	NORSAR Array B	82.52	333	P	P	15 03 13.3	-0.7
	comp=Z,4.8nm,0.6s,baz=62,slow=5.0,SNR=9.9						
GERES	GERESS Array B	86.66	321	P	P	15 03 35.1	-0.1
	comp=Z,0.5nm,0.5s,baz=72,slow=6.3,SNR=2.1						
YKA	Yellowknife Ar	87.20	23	P	P	15 03 37.8	+0.4
	comp=Z,3.5nm,0.5s,baz=316,slow=3.8,SNR=9.7						
NVAR	Mina Array Bea	99.67	44	P	Pdif	15 04 37.6	+2.0
	comp=Z,0.8nm,0.7s,baz=283,slow=5.0,SNR=5.0						
TXAR	Lajitas Array	114.82	43	PKP	PKPdf	15 09 32.6	+0.1
	comp=Z,1.6nm,0.8s,baz=211,slow=0.5,SNR=6.0						
CMIG	Matias Romero	129.05	47	PKP	PKiKP	15 10 01.2	+0.5
	comp=Z,2.4nm,0.6s,baz=356,slow=3.3,SNR=5.5						
SDV	Santo Domingo	149.41	24	PKP	PKPdf	15 10 37.4	+0.4
	comp=Z,32nm,0.8s,baz=305,slow=7.1,SNR=1.8						
SDV				PKPbc	PKPbc	15 10 41.5	+0.1
	comp=Z,29nm,0.7s,baz=356,slow=1.8,SNR=9.7						
PCRV	Puerto La Cruz	149.94	12	PKPbc	PKPbc	15 10 41.3	-1.2
	comp=Z,6.3nm,0.5s,baz=270,slow=1.0,SNR=2.8						
PTGA	Pitinga	161.34	5	PKP	PKPdf	15 10 52.2	-0.6
	comp=Z,1.2nm,0.3s,baz=321,slow=22,SNR=1.7						
CPUP	Villa Florida	173.07	189	PKPab	PKPab	15 12 28.0	0.0
	comp=Z,1.5nm,0.4s,baz=226,slow=5.1,SNR=3.6						
SIV	San Ignacio	175.78	36	PKP	PKPdf	15 11 02.4	+0.3
	comp=Z,1.8nm,0.7s,baz=139,slow=1.8,SNR=4.9						

JMA ***22*** *14:59:47.4±0.1, 24°.40N×121°.96E, h41km*

TAP ***22*** *14:59:47.5, 24°.44N×121°.96E, h31km, ML2.6, D*

ISC 22 14:59:48.1±1.0**, 24°.42N**±0°.02×**122°.01E**±0°.03**, h25km**±6km**, n70, σ0s.70**/127**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao	0.18	279	i P	Pb	14 59 53.3	-0.3
	baz=275						
ENAH				i S	Sb	14 59 57.5	+0.3
	baz=275						
TWC	Suao	0.23	323	i P	Pb	14 59 54.0	-0.2
	baz=331						
TWC				i S	Sb	14 59 58.4	0.0
	baz=331						
ENA	Nanau	0.24	272	i P	Pb	14 59 53.9	-0.5
	baz=266						
ENA				i S	Sb	14 59 58.5	0.0
	baz=266						
ILA	Ilan	0.41	326	S	Sb	15 00 03.4	+0.5
	baz=326						
TWE	Neicheng	0.43	314	i P	Pb	14 59 56.6	-0.6
	baz=317						
TWE				i S	Sb	15 00 03.0	-0.3
	baz=317						
NACB	Ninganchiao	0.45	237	P	Pb	14 59 56.9	-0.6
	baz=236						
NACB				S	Sb	15 00 04.7	+0.9
	baz=236						
ENTT	Nioudou	0.46	299	i P	Pb	14 59 57.0	-0.6
	baz=299						
ENTT				i S	Sb	15 00 03.8	-0.3
	baz=299						
NTC	Toucheng	0.46	340	i P	Pb	14 59 57.3	-0.4
	baz=343						
NTC				i S	Sb	15 00 04.6	+0.4
	baz=343						
NDT	Datong Townshi	0.48	292	i P	Pb	14 59 57.5	-0.6
	baz=292						
NDT				i S	Sb	15 00 04.5	-0.4
	baz=292						
TWD	Chiawan	0.51	228	i P	Pb	14 59 58.0	-0.4
	baz=223						
TWD				i S	Sb	15 00 06.4	+1.0
	baz=223						
ETLH	Xiulin Townshi	0.52	246	P	Pb	14 59 58.1	-0.7
	baz=243						
ETLH				S	Sb	15 00 06.2	+0.2
	baz=243						
NNSB	Datong	0.57	271	P	Pb	14 59 58.8	-0.7
	baz=272						
NNSB				S	Sb	15 00 07.3	0.0
	baz=272						
NNSH	Datong	0.57	271	i P	Pb	14 59 58.9	-0.7
	baz=272						
NNSH				S	Sb	15 00 07.2	-0.1
	baz=272						
TIPB	Shuangxi	0.57	343	i P	Pb	14 59 59.3	-0.3
	baz=349						
TIPB				i S	Sb	15 00 07.4	0.0
	baz=349						
HWA	Hwalien	0.57	220	eP	Pb	14 59 59.8	+0.2
	baz=214						
NNS	Nan Shan	0.58	272	i P	Pb	14 59 58.9	-0.9
	baz=273						
NNS				i S	Sb	15 00 07.1	-0.5
	baz=273						
NWLT	Wulai	0.58	308	i P	Pb	14 59 58.8	-0.9
	baz=309						
NWLT				i S	Sb	15 00 06.4	-1.2
	baz=309						
TWB1	Santiao Chiao	0.58	358	S	Sb	15 00 08.1	+0.5
	baz=3.0						
YHNB	Yeheng	0.62	293	P	Pb	14 59 59.6	-0.9
	baz=298						
YHNB				S	Sb	15 00 08.1	-0.8
	baz=298						

NSK	Sanguang baz=298	0.64	293	*i* P	Pb	14 59 59.9	-0.9
NSK	baz=298			*i* S	Sb	15 00 08.6	-0.8
TWA	Mucha baz=321	0.68	325	*e*P	Pb	15 00 01.4	+0.1
TWA	baz=321			S	Sb	15 00 10.6	+0.3
NWF	Wu-fen Shan baz=338	0.68	343	*i* P	Pb	15 00 01.4	0.0
NWF	baz=338			S	Sb	15 00 10.4	-0.1
WFSB	Wu-fen Shan baz=338	0.68	343	P	Pb	15 00 01.4	0.0
WFSB	baz=338			S	Sb	15 00 10.1	-0.3
NHDH	Xindian Distri baz=318	0.69	321	*e*P	Pb	15 00 01.2	-0.4
NHDH	baz=318			S	Sb	15 00 11.0	+0.2
FUSS	Fushou baz=254	0.72	256	P	Pb	15 00 01.3	-0.8
FUSS	baz=254			S	Sb	15 00 11.3	-0.4
WHF	Hehuan Shan baz=245	0.73	248	*i* P	Pb	15 00 01.7	-0.8
WHF	baz=245			*i* S	Sb	15 00 12.1	-0.2
TWT	Tachien baz=256	0.78	258	*i* P	Pb	15 00 02.4	-0.7
TWT	baz=256			*i* S	Sb	15 00 13.5	+0.2
TDCB	Techi baz=256	0.79	258	P	Pb	15 00 02.4	-0.9
TDCB	baz=256			S	Sb	15 00 13.2	-0.5
ESL	Shilin baz=232	0.80	221	*i* P	Pb	15 00 02.3	-1.1
ESL	baz=232			*e*S	Sb	15 00 14.1	+0.3
YM01	YM01 baz=343	0.82	331	P	Pb	15 00 02.2	-1.7
YM01	baz=343			S	Sb	15 00 15.0	+0.5
YM10	YM10 baz=342	0.83	331	P	Pb	15 00 03.9	-0.1
YM10	baz=342			S	Sn	15 00 16.1	+0.2
YM11	YM11 baz=343	0.84	332	P	Pb	15 00 03.8	-0.3
YM11	baz=343			*e*S	Sb	15 00 14.7	-0.3
CHGB	Renai baz=243	0.84	245	P	Pb	15 00 03.6	-0.7
CHGB	baz=243			S	Sb	15 00 15.6	+0.4
YM05	YM05 baz=343	0.84	332	P	Pb	15 00 03.5	-0.7
YM05	baz=343			S	Sn	15 00 16.2	+0.1
YM04	YM04 baz=341	0.84	330	P	Pb	15 00 03.9	-0.3
YM04	baz=341			*e*S	Sb	15 00 14.9	-0.3
YM08	YM08 baz=345	0.85	334	*e*P	Pb	15 00 04.5	+0.2
YM08	baz=345			*e*S	Sn	15 00 16.5	+0.2
TWS1	Kuangyinshan baz=331	0.86	322	*i* P	Pb	15 00 04.3	-0.1
TWS1	baz=331			*i* S	Sn	15 00 16.8	+0.3
YM03	YM03 baz=342	0.86	331	*e*P	Pb	15 00 04.0	-0.5
YM03	baz=342			*e*S	Sb	15 00 15.4	-0.3
ANP	Anpu baz=332	0.88	330	P	Pb	15 00 04.3	-0.5
EGFH	Guangfu baz=227	0.92	215	*e*S	Sb	15 00 17.5	+0.3
YOJ	Yonaguni jima	0.92	87	P	Pb	15 00 04.9	-0.5
YOJ				S	Sb	15 00 16.8	-0.4
NCUH	Zhongli baz=306	0.92	306	S	Sn	15 00 18.8	+0.8
LIOB	Emei baz=284	0.93	284	*i* P	Pb	15 00 05.4	-0.2
LIOB	baz=284			*i* S	Sn	15 00 18.5	+0.4
NSTT	Nanjuang baz=282	0.94	283	*i* P	Pb	15 00 05.9	+0.1
NSTT	baz=282			*i* S	Sb	15 00 18.3	+0.5
WHP	Taichung City baz=261	0.98	262	*i* P	Pb	15 00 06.0	-0.5
WHP	baz=261			*i* S	Sb	15 00 19.0	0.0
WPL	Puli Township baz=246	1.04	247	*e*P	Pn	15 00 07.3	+0.2
WPL	baz=246			*e*S	Sn	15 00 21.4	+0.5
DPDB	Guoxing baz=248	1.06	249	P	Pn	15 00 07.0	-0.4
DPDB	baz=248			S	Sb	15 00 20.9	-0.3
HGSD	Ruisui baz=222	1.07	210	P	Pn	15 00 07.3	-0.2
HGSD	baz=222			S	Sn	15 00 24.5	+3.0
EHY	Hungye baz=213	1.11	215	*i* P	Pn	15 00 07.8	-0.2
EHY	baz=213			*e*S	Sb	15 00 21.8	-0.8
SMLT	Sun Moon Lake baz=232	1.14	242	*i* P	Pb	15 00 09.3	0.0
SSLB	Suanglung baz=229	1.15	237	P	Pn	15 00 08.5	-0.1
SSLB	baz=229			S	Sb	15 00 23.8	-0.1
TYC	Yuchr baz=243	1.17	244	*i* P	Pn	15 00 08.5	-0.4
TYC	baz=243			S	Sb	15 00 24.0	-0.4
YULB	Yu-li baz=211	1.21	212	P	Pn	15 00 07.8	-1.7
YULB	baz=211			S	Sn	15 00 23.9	-1.3
EYUL	Yuli baz=222	1.24	211	*e*P	Pn	15 00 09.7	-0.2
TWF1	Yuli baz=220	1.25	211	P	Pn	15 00 09.8	-0.1
WJS	Zhushan baz=229	1.31	243	P	Pn	15 00 11.4	+0.6
WJS	baz=229			S	Sb	15 00 29.4	+0.9
YUS	Yu-Shan baz=214	1.34	226	*i* P	Pn	15 00 11.4	-0.2
YUS	baz=214			*i* S	Sn	15 00 29.4	+0.5
FULB	Fuli baz=219	1.38	208	P	Pn	15 00 11.3	-0.5
ALS	Alishan baz=219	1.43	231	*i* P	Pn	15 00 13.4	+0.7
ALS	baz=219			*i* S	Sb	15 00 33.4	+1.4
CHN5	Tsauling baz=235	1.47	236	*i* P	Pn	15 00 14.0	+1.0
CHN5	baz=235			S	Sb	15 00 33.2	+0.2
ELDTW	Lidau baz=216	1.52	217	*i* P	Pn	15 00 13.6	-0.3
ELDTW	baz=216			S	Sb	15 00 34.3	-0.4
WDLH	Douliu baz=241	1.53	242	*e*S	Sb	15 00 35.6	+0.9
EDH	Donghe baz=185	1.58	204	*e*P	Pn	15 00 15.0	+0.5
EDH	baz=185			S	Sn	15 00 31.9	-2.2
CHN4	Tsaushan baz=230	1.68	231	*i* P	Pb	15 00 17.5	-0.8
CHN4	baz=230			*i* S	Sb	15 00 39.8	+0.8
TPUB	Ta-pu baz=215	1.68	229	P	Pn	15 00 17.4	+1.4
TPUB	baz=215			S	Sb	15 00 39.5	+0.3
STYT	Tauyuan baz=210	1.70	223	P	Pn	15 00 17.6	+1.4
WTP	Ta-pu baz=214	1.73	228	*i* P	Pb	15 00 18.2	-1.0
WTP	baz=214			*i* S	Sb	15 00 41.2	+0.6
TWK	Hsinying baz=230	1.80	231	*i* P	Pn	15 00 18.8	+1.1
TWK	baz=230			*i* S	Sb	15 00 43.4	+0.7
CHN1	Nanshi baz=228	1.83	228	P	Pb	15 00 19.8	-1.2
CHN1	baz=228			S	Sb	15 00 44.4	+1.0
SLGT	Liugui baz=221	1.89	222	P	Pb	15 00 21.0	-1.0
SLGT	baz=221			S	Sb	15 00 46.0	+0.8

SEA ***22*** *15:07:05.8±3.1, 41°.83N±0°.03×119°.60W±0°.04, h0^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=3.8km az=172.0*
NEIC ***22*** *15:07:05.4±3.5, 41°.87N±0°.04×119°.61W±0°.03, h2^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=2.2km az=158.0*
REN ***22*** *15:07:05.1±3.6, 41°.87N±0°.03×119°.65W±0°.02, h8^{km}±6^{km}, ML2.7/7, ML3.0/9(SEA), ML2.5/74(NEIC), Error ellipse: s-maj=4.7km s-min=2.2km az=193.0*
ANF ***22*** *15:07:05.6±0.8, 41°.83N×119°.77W, h0^{km}, ML2.9/7, Error ellipse: s-maj=6.9km s-min=3.5km az=110.0*
ISC 22 15:07:05.1±1.3**, 41°.86N**±0°.03×**119°.63W**±0°.03**, h1**^{km}±11^{km}**, n64, σ1^{s}19**/70**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.51	275		Pg	15 07 15.0	+0.1
MOD	comp=E,467nm,0.6s			IAML		15 07 22.4	
MOD	comp=N,419nm,0.6s			IAML		15 07 23.6	
MOD	Modoc Plateau	0.51	275		Sg	15 07 22.0	+0.6
LKVW	Lakeview	0.65	304		Pg	15 07 17.4	-0.2
WVOR	Wild Horse Val	0.93	52		Pg	15 07 22.9	-0.1
WVOR	comp=N,158nm,0.6s			IAML		15 07 39.5	
WVOR	comp=N,99nm,0.7s			IAML		15 07 39.8	
WVOR	Wild Horse Val	0.93	52		Sn	15 07 39.1	-0.5
K05A	Summer Lake	1.27	313		Pg	15 07 28.8	-0.8
K05A	Summer Lake	1.27	313		Sg	15 07 46.6	+0.5
K05A	Summer Lake comp=E,156nm,0.8s	1.27	313	IAML		15 07 49.7	
K05A	comp=N,208nm,0.9s			IAML		15 07 50.3	
LASM	Arnica Sink	1.48	260		Pn	15 07 32.0	-1.1
LTIM	Timbered Crate	1.56	244		Pn	15 07 33.3	-0.8
LTIM					Sg	15 07 56.2	+1.1
HOG	Hogback Mounta	1.59	284		Pn	15 07 33.7	-0.9
LBCM	Butte Creek Ri	1.65	232		Pn	15 07 34.6	-0.8
M04C	Macdoel baz=86,SNR=106	1.65	268	P	Pn	15 07 34.3	-1.1
M04C	baz=86			Sb	Sn	15 07 57.6	+0.2
M04C	Macdoel	1.65	268		Pn	15 07 34.4	-1.1
M04C					Sg	15 07 58.9	+0.6
K04D	Chiloquin, OR baz=115	1.75	296	P	Pn	15 07 37.0	+0.2
K04D	baz=115			S	Sn	15 07 59.6	-0.2
K04D	Chiloquin, OR	1.75	296		Pn	15 07 37.1	+0.4
J05D	Fort Rock, OR baz=140,SNR=190	1.85	321	P	Pn	15 07 38.9	+0.8
J05D	baz=140			Sb	Sg	15 08 05.1	+0.5
J05D	Fort Rock, OR	1.85	321		Pn	15 07 38.9	+0.8
LHEM	Herd Peak	1.95	264		Pn	15 07 40.6	+1.0
L04D	Klamath Falls baz=99,SNR=11	2.02	281	P	Pn	15 07 39.2	-1.3
L04D	baz=99			Sb	Sb	15 08 08.4	-0.1
TMBU	Tom Butte, New	2.07	328		Pn	15 07 42.5	+1.4
BEKR	Beckworth	2.07	196		Pn	15 07 42.3	+1.2
BEKR	comp=E,38nm,0.5s			IAML		15 08 13.6	
BEKR	comp=N,26nm,0.4s			IAML		15 08 13.7	
SVIC	Surveyors Ice	2.14	327		Pb	15 07 44.3	-0.6
SVIC					LR	15 08 13.5	
PINE	Pine Mountain	2.16	334		Pb	15 07 44.1	-1.0
PINE	comp=E,43nm,0.6s			IAML		15 08 15.5	
PAHR	Pah Rah Range	2.16	175		Pb	15 07 44.6	-0.5
PAHR	comp=E,25nm,0.7s			IAML		15 08 15.1	
I07A	Izee	2.22	2		Pb	15 07 46.0	-0.1
O03E	Paynes Creek baz=45,SNR=5.9	2.27	227	P	Pn	15 07 43.2	-0.6
O03E	baz=45			Sb	Sb	15 08 14.9	-0.6
J04D	Umpqua Nationa baz=126	2.29	308	Pb	Pb	15 07 46.5	-0.9
YBH	Yreka Blue Hor	2.31	268		Pn	15 07 43.2	-1.1
M02C	Callahan baz=78	2.46	260	Sg	Sg	15 08 23.4	-0.9
N02D	Trinity Center baz=68,SNR=7.6	2.48	250	Pb	Pn	15 07 48.7	+2.0
N02D	baz=68			Sg	Sb	15 08 23.3	+1.8
WDC	Whiskeytown Da	2.54	241		Pn	15 07 46.8	-0.7
WDC	comp=N,23nm,0.7s			IAML		15 08 26.7	
VCNR	Virginia City	2.56	180		Pn	15 07 49.2	+1.2
VCNR	comp=N,36nm,0.9s			IAML		15 08 29.2	
VCNR	comp=E,36nm,1.0s			IAML		15 08 29.2	
HUMO	Hull Mountain	2.58	288		Pn	15 07 46.7	-1.3
HUMO	comp=N,15nm,0.8s			IAML		15 08 28.4	
HUMO	Hull Mountain	2.58	288		LR	15 08 25.1	
ORV	Oroville	2.71	212		Pn	15 07 51.4	+1.6
PNTR	Pine Nut	2.77	180		Pb	15 07 55.9	+0.3
PNTR	comp=N,29nm,0.8s			IAML		15 08 39.6	
PNTR	comp=E,27nm,0.9s			IAML		15 08 48.1	
RUBR	Rubicon Trail	2.84	188		Pb	15 07 56.1	-0.6
RUBR	comp=E,22nm,2.7s			IAML		15 08 46.5	
RUBR	comp=N,14nm,2.9s			IAML		15 09 16.5	
O02D	Mt. Diablo Mer baz=53	2.92	236	Sb	Sb	15 08 35.2	+0.8
L02E	Cave Junction baz=94	2.98	277	Sb	Sb	15 08 36.4	+0.6
AFDM	Forest Hills D	3.09	200	Pn	Pn	15 07 58.3	+3.3
K02D	Willamette Mer baz=104,SNR=25	3.11	287	P	Pn	15 07 56.1	+0.7
MFID	Camas Ranch	3.20	60		Pn	15 07 57.2	+0.5
MFID	comp=N,19nm,0.7s			IAML		15 08 49.8	
KRMB	Red Mountain	3.22	265	Pn	Pn	15 07 57.2	+0.2
KRMB	comp=E,15nm,4.9s			IAML		15 08 41.0	
KHMM	Horse Mountain	3.24	254		Pn	15 07 58.8	+1.6
KHMM	comp=N,14nm,3.3s			IAML		15 08 48.4	
RYN	Ryan	3.34	165	Pn	Pn	15 08 00.7	+2.1
RYN	comp=N,13nm,0.7s			IAML		15 08 57.6	
RYN	comp=E,11nm,0.6s			IAML		15 08 58.4	
WAKR	Walker	3.36	177		Pn	15 08 01.9	+3.1
WAKR	comp=N,8.1nm,4.7s			IAML		15 08 37.2	
H04A	Detroit Lake	3.38	327	Pn	Pn	15 08 02.2	+3.1
H04A	comp=E,9.8nm,4.9s			IAML		15 08 24.2	
H04A	comp=N,9.3nm,4.8s			IAML		15 08 58.5	
BMO	Blue Mountains	3.43	29	Pn	Pn	15 07 59.9	+0.1
BMO	comp=N,7.1nm,4.6s			IAML		15 09 19.3	
KBO	Bosley Butte	3.44	277	Pn	Pn	15 07 59.6	-0.3
JCC	Jacoby Creek,	3.47	254	Pn	Pn	15 07 58.3	-1.9
ELK	Elko	3.49	107		Pn	15 07 59.9	-0.8
NVAR	Mina Array Bea	3.58	163		Pn	15 08 02.6	+0.7
NV11	Mina Array Sit	3.61	161	Pn	Pn	15 08 03.2	+0.9
NV11	comp=N,6.6nm,0.6s			IAML		15 09 02.8	
NV11	comp=E,5.5nm,2.9s			IAML		15 09 08.6	
LHV	Little Huntoon	3.71	166	Pn	Pn	15 08 02.9	-0.6
CMB	Columbia Colle	3.87	189	Pn	Pn	15 08 04.8	-1.0
CMB	comp=E,8.2nm,5.0s			IAML		15 08 33.2	
CMB	comp=N,4.8nm,4.5s			IAML		15 08 37.8	
HLID	Hailey	4.20	64		Pn	15 08 11.9	+1.4
HLID	comp=N,7.7nm,1.4s			IAML		15 09 21.3	
TPH	Tonopah	4.21	153	Pn	Pn	15 08 10.2	-0.4
MDPB	Devils Postpil	4.25	174	Pn	Pn	15 08 09.3	-1.8
MDPB	comp=N,4.3nm,4.9s			IAML		15 10 29.3	
MDPB	comp=E,4.2nm,4.4s			IAML		15 10 53.4	
R11A	Troy Canyon, C	4.68	137	Pn	Pn	15 08 15.3	-1.8
R11A	comp=E,5.1nm,4.6s			IAML		15 09 16.4	
R11A	comp=N,3.3nm,0.5s			IAML		15 09 37.3	
HVU	Hansel Valley	5.12	89	Pn	Pn	15 08 23.3	+0.2
DUG	Dugway, Tooele	5.42	106	Pn	Pn	15 08 25.7	-1.4
TPNV	Topopah Spring	5.56	151	Pn	Pn	15 08 28.4	-0.8
PRN	Pahroc Range	5.68	140	Pn	Pn	15 08 29.6	-1.1

TAP 22 15:29:43.4, 22°.78N×120°.89E, h9^{km}±1^{km}**, ML1.1, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	Pinlang baz=78	0.17	76	*i* P	Pg	15 29 47.8	+0.7
TWG	baz=78			S	Sg	15 29 50.6	+1.0
TWGBT	Beinan baz=78	0.18	78	P	Pg	15 29 47.8	+0.6
TWGBT	baz=78			S	Sg	15 29 50.6	+0.7
ECL	Taimali baz=153	0.19	162	*i* P	Pg	15 29 47.9	+0.5
ECL	baz=153			S	Sg	15 29 50.6	+0.5
TSMG	Majia baz=252	0.24	252	P	Pg	15 29 48.5	+0.3
TSMG	baz=252			*e*S	Sg	15 29 51.6	+0.2
SSD	Sandimen baz=262	0.24	262	*i* P	Pg	15 29 48.5	+0.3
SSD	baz=262			S	Sg	15 29 51.8	+0.2
LONT	Longtian baz=60	0.26	60	P	Pg	15 29 49.3	+0.7
LONT	baz=60			S	Sg	15 29 52.8	+0.7
MASBT	Mashibuluo baz=235	0.29	235	P	Pg	15 29 49.5	+0.3
MASBT	baz=235			S	Sg	15 29 53.2	+0.1
SLGT	Liugui baz=319	0.31	314	P	Pg	15 29 50.2	+0.6
SLGT	baz=319			S	Sg	15 29 54.0	+0.2
SLGT	Liugui baz=232	0.31	314	P	Pg	15 29 50.1	+0.4
SLGT	baz=232			S	Sg	15 29 54.0	+0.2
EAST	Anshuo baz=184	0.40	186	P	Pg	15 29 51.9	+0.7
EAST	baz=184			S	Sg	15 29 57.2	+0.8
SSPT	Xinbi baz=214	0.42	225	*e*P	Pb	15 29 52.6	-0.4
SCZT	Fangliau baz=216	0.47	212	P	Pg	15 29 53.0	+0.3
SCZT	baz=216			*e*S	Sg	15 29 59.9	+0.9

TAP 22 15:29:45.7, 23°.10N×120°.79E, h2^{km}±1^{km}**, ML0.6, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STYT	Tauyuan baz=336	0.07	332	*i* P	Pg	15 29 47.8	+0.6
STYT	baz=336			S	Sg	15 29 49.3	+1.1
SGST	Jiashian baz=264	0.20	265	P	Pg	15 29 50.5	+1.0
SGST	baz=264			S	Sg	15 29 53.8	+1.8
WTP	Ta-pu baz=312	0.22	311	P	Pg	15 29 51.1	+1.1
WTP	baz=312			S	Sg	15 29 55.4	+2.5
TPUB	Ta-pu baz=322	0.25	323	P	Pb	15 29 51.9	-1.1
TPUB	baz=322			S	Sb	15 29 56.3	-1.5

DJA ***22*** *15:46:22.9±0.6, 1°N±4°×12°0E±°, h10^{km}, M4.2/6, MLv4.2/6*
IDC ***22*** *15:46:24.9±30.0, 2°.33N×123°.15E, h0^{km}, mb4.4/3, mb1 4.6/3, mb1mx3.6/54, mbtmp4.4/3, Error ellipse: s-maj=497.8km s-min=304.5km az=148.0*
NEIC ***22*** *15:46:24.8±1.7, 0°.98N±0°.08×119°.86E±0°.07, h18^{km}±8^{km}, mb4.6/14, Error ellipse: s-maj=13.5km s-min=8.6km az=214.0*
ISC 22 15:46:23.4±0.8**, 0°.94N**±0°.05×**119°.77E**±0°.06**, h10**^{km}**, n27, σ1^{s}28**/30**, mb4.6**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	Mapaga	0.61	168	P	Pn	15 46 39.0	+0.9
MPSI				S	Sn	15 46 49.1	+1.1
TOLI2	Tolitoli	1.03	80		Pg	15 46 43.3	+0.1
TOLI2				Sg	Sg	15 46 54.4	-2.2
MRSI	Marisa	2.22	102	P	Pn	15 47 01.4	+1.1
APSI	Ampana	2.63	134	P	Pb	15 47 08.6	-2.0
LUWI	Luwuk	3.59	123		Pn	15 47 22.1	+3.0
LUWI	Luwuk	3.59	123	P	Pn	15 47 22.0	+2.8
TTSI	Tana Toraja	3.95	179	P	Pn	15 47 25.5	+1.3
MYLDM	Lahad Datu	4.40	343		Pn	15 47 31.5	+1.2
KKM	Kota Kinabalu	6.19	325	Pn	Pn	15 47 55.8	+0.8
KKM				Sn	Sn	15 49 06.0	0.0
MTN	Manton Dam	17.73	141	P	P	15 50 32.0	+0.5
MTN	comp=Z,67nm,1.4s			IAmb	IAmb	15 51 06.1	
XMIS	Christmas Isla	18.05	231	P	Pn	15 50 33.5	-1.1
XMIS	comp=Z,19nm,0.8s			IAmb	IAmb	15 51 19.4	
FITZ	Fitzroy Crossi	19.78	163	P	Pn	15 50 55.0	-0.4
WB0	Warramunga Arr	25.08	146	P	P	15 51 47.7	-0.7
WB0	comp=Z,28nm,1.6s			IAmb	IAmb	15 51 55.3	
WRAB	Tennant Creek	25.19	146	P	P	15 51 49.3	-0.1
WRAB	comp=Z,8.3nm,0.6s			IAmb	IAmb	15 51 49.5	
WRA	Warramunga Arr comp=Z,4.0nm,0.4s,baz=336,slow=9.4,SNR=67	25.19	146	P	P	15 51 49.0	-0.4
WRA	Warramunga Arr	25.19	146	P	P	15 51 48.2	-1.2
WB2	Warramunga Arr	25.20	146	P	P	15 51 49.1	-0.4
WC3	Warramunga Arr	25.22	146	P	P	15 51 49.1	-0.6
WC3	comp=Z,6.6nm,0.6s			IAmb	IAmb	15 51 49.8	
WR0	Warramunga Arr	25.32	146	P	P	15 51 49.5	-1.0
WR0	comp=Z,8.5nm,0.6s			IAmb	IAmb	15 51 50.1	
AS31	Alice Springs	28.05	152	P	P	15 52 15.1	-0.1
ASAR	Alice Springs comp=Z,2.6nm,0.7s,baz=339,slow=10,SNR=53	28.05	152	P	P	15 52 15.2	-0.1
ASAR	Alice Springs	28.05	152	P	P	15 52 15.3	+0.1
BBOO	Buckleboo	36.92	157	P	P	15 53 31.4	-1.3
BBOO	comp=Z,14nm,1.2s			IAmb	IAmb	15 53 51.8	
STKA	Stephens Creek comp=Z,3.3nm,0.6s,baz=343,slow=9.2,SNR=6.5	38.63	150	P	P	15 53 47.4	+0.3
STKA	Stephens Creek	38.63	150	P	P	15 53 47.5	+0.4
ARMA	Armidale	43.50	139	P	P	15 54 29.1	+1.8
CAN	Canberra	45.23	146	P	P	15 54 42.4	+1.2

KRSC ***22*** *15:47:45.7±2.4, 50°.49N×157°.22E, h112^{km}±23^{km}, ML3.8*
MOS ***22*** *15:47:47.5±0.7, 50°.75N×156°.68E, h130^{km}, mb4.4/2, Error ellipse: s-maj=26.7km s-min=4.5km az=71.0*
IDC ***22*** *15:47:50.6±1.8, 51°.06N×156°.27E, h140^{km}±17^{km}, mb3.3/6, mb1 3.5/9, mb1mx3.2/59, mbtmp3.8/9, Error ellipse: s-maj=43.5km s-min=15.3km az=131.0*
NEIC ***22*** *15:47:50.0±1.8, 51°.0N±0°.1×156°.3E±0°.2, h138^{km}±8^{km}, mb4.6/34, Error ellipse: s-maj=22.4km s-min=11.8km az=131.0*
ISC 22 15:47:47.9±0.8**, 50°.66N**±0°.08×**156°.82E**±0°.09**, h122**^{km}±6^{km}**,**
n109, σ1^{s}24/126**, mb4.5**/24**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.45	274	⇓iPN	Pn	15 48 05.9	+0.2
SKR				eS	Sn	15 48 18.3	-0.9
SKR				pmax	pmax		
	comp=Z,261nm,0.3s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
SKR				smax	smax		
	comp=N,3μm,0.6s						
SKR	Severo-Kuril's	0.45	274	eP	Pn	15 48 05.9	+0.2
SKR				eS	Sn	15 48 18.7	-0.5
PAU	Pauzhetka	0.81	360	ePN	Pn	15 48 07.9	-0.4
PAU						15 48 23.5	
PAU	Pauzhetka	0.81	360	eP	Pn	15 48 07.6	-0.7
KDTR	Khodutka, Kamc	1.40	34	PN	Pn	15 48 14.8	+0.6
KDTR				S	Sn	15 48 33.9	-0.4
KDTR	Khodutka, Kamc	1.40	34	eP	Pn	15 48 14.8	+0.6
KDTR				eS	Sn	15 48 33.9	-0.4
MTVR	Mutnovka	2.02	24	PN	Pn	15 48 22.3	+0.6
MTVR				S	Sn	15 48 48.4	+0.7
MTVR	Mutnovka	2.02	24	eP	Pn	15 48 22.3	+0.6
MTVR				eS	Sn	15 48 48.4	+0.7
GRL	Gorelyy	2.05	22	PN	Pn	15 48 22.9	+0.8
GRL				S	Sn	15 48 49.6	+1.2
GRL	Gorelyy	2.05	22	eP	Pn	15 48 22.9	+0.8
GRL				eS	Sn	15 48 49.6	+1.2
RUS	Russkaya	2.07	30	PN	Pn	15 48 22.5	+0.3
RUS				S	Sn	15 48 48.5	0.0
RUS	Russkaya	2.07	30	eP	Pn	15 48 22.5	+0.3
RUS				eS	Sn	15 48 48.5	0.0
APC	Apacha	2.28	5	PN	Pn	15 48 23.5	-1.4
APC	Apacha	2.28	5	eP	Pn	15 48 23.5	-1.4
KRMR	Karymshinskiy	2.33	20	PN	Pn	15 48 26.2	+0.8
KRMR	Karymshinskiy	2.33	20	eP	Pn	15 48 26.2	+0.8
PEA0B	Petropavlovsk-	2.52	12	PN	Pn	15 48 27.5	-0.4
PEA0B	Petropavlovsk-	2.52	12		Pn	15 48 27.5	-0.4
PETK	Petropavlovsk-	2.52	12	P	Pn	15 48 27.5	-0.4
	comp=N,6.4nm,0.3s,baz=178,slow=11,SNR=516						
PETK				S	Sn	15 48 57.3	-1.3
	comp=N,1.0nm,0.3s,baz=183,slow=22,SNR=5.6						
PETK	Petropavlovsk-	2.52	12		Pn	15 48 27.4	-0.5
PET	Petropavlovsk	2.63	25	ePN	Pn	15 48 29.8	+0.5
PET				eS	Sn	15 49 00.4	-0.8
PET				pmax	pmax		
	comp=Z,30nm,0.4s						
PET				smax	smax		
	comp=E,59nm,0.7s						
PET				smax	smax		
	comp=N,66nm,0.5s						
PET	Petropavlovsk	2.63	25	eP	Pn	15 48 29.4	+0.1
PET				eS	Sn	15 49 00.4	-0.8
PET	Petropavlovsk	2.63	25	Pn	Pn	15 48 29.4	+0.1
DALK	Dalny	2.66	26	PN	Pn	15 48 30.1	+0.4
DALK				S	Sn	15 49 01.1	-0.9
DALK	Dalny	2.66	26	eP	Pn	15 48 30.1	+0.4
DALK				eS	Sn	15 49 01.1	-0.9
UGLR	Uglovaya	2.84	25	PN	Pn	15 48 33.3	+1.1
UGLR	Uglovaya	2.84	25	eP	Pn	15 48 33.3	+1.1
KOK	Koryaka	2.87	22	PN	Pn	15 48 33.8	+1.3
KOK	Koryaka	2.87	22	eP	Pn	15 48 33.8	+1.3
AVH	Avacha	2.87	24	PN	Pn	15 48 33.8	+1.3
AVH	Avacha	2.87	24	eP	Pn	15 48 33.8	+1.3
SMAR	Somma	2.88	24	PN	Pn	15 48 33.9	+1.1
SMAR	Somma	2.88	24	eP	Pn	15 48 33.9	+1.1
KRER	Koryakskii	2.91	23	PN	Pn	15 48 34.2	+1.1
KRER				S	Sn	15 49 09.2	+1.2
KRER	Koryakskii	2.91	23	eP	Pn	15 48 34.2	+1.1
KRER				eS	Sn	15 49 09.2	+1.2
SDLR	Sedlovina	2.92	25	PN	Pn	15 48 33.8	+0.6
SDLR				S	Sn	15 49 08.5	+0.3
SDLR	Sedlovina	2.92	25	eP	Pn	15 48 33.8	+0.6
SDLR				eS	Sn	15 49 08.5	+0.3
KRX	Arik	2.93	22	PN	Pn	15 48 34.3	+0.9
KRX	Arik	2.93	22	eP	Pn	15 48 34.3	+0.9
GNL	Ganaly	3.12	12	PN	Pn	15 48 35.7	-0.1
GNL	Ganaly	3.12	12	eP	Pn	15 48 35.7	-0.1
SPN	Mys Shipunski	3.15	38	PN	Pn	15 48 36.6	+0.5
SPN	Mys Shipunski	3.15	38	eP	Pn	15 48 36.6	+0.5
MKZ	Mys Kozlova	4.92	36	PN	Pn	15 48 58.9	-0.7
MKZ	Mys Kozlova	4.92	36	eP	Pn	15 48 58.9	-0.7
KZV	Kizimen	4.94	24	PN	Pn	15 49 00.5	+0.5
KZV	Kizimen	4.94	24	eP	Pn	15 49 00.5	+0.5
TUMD	Tumrok D	5.04	24	eP	Pn	15 49 02.0	+0.7
TUMR	Tumrok	5.05	22	PN	Pn	15 49 02.6	+1.1
TUMR	Tumrok	5.05	22	eP	Pn	15 49 02.6	+1.1
ESO	Esso	5.40	11	PN	Pn	15 49 06.3	+0.2
ESO	Esso	5.40	11	eP	Pn	15 49 06.3	+0.2
KBTR	Krutoberegovo	6.62	30	PN	Pn	15 49 21.8	-0.6
KBTR	Krutoberegovo	6.62	30	eP	Pn	15 49 21.8	-0.6
BKI	Bering	7.16	47	PN	Pn	15 49 29.7	-0.1
BKI	Bering	7.16	47	eP	Pn	15 49 29.7	-0.1
BKI				eS	Sn	15 50 41.4	-8.2
KUR	Kuril'sk	8.10	231	PN	Pn	15 49 42.8	+0.3
KUR				S	Sn	15 51 08.5	-3.8
JKA	Kamikawa-asahi	11.64	241		Pn	15 50 31.4	+1.3
ASAJ	Asahikawa	11.64	241	P	Pn	15 50 31.4	+1.3
	comp=N,0.3nm,0.3s,baz=312,slow=22,SNR=1.7						
ERM	Erimo	12.78	233	PN	Pn	15 50 43.9	-1.1
ERM	Erimo	12.78	233	Pn	Pn	15 50 43.9	-1.1
BILL	Bilibino	18.05	11	P	P	15 51 48.4	-0.8
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL	Bilibino	18.05	11	P	P	15 51 48.4	-0.8
YAK	Yakutsk	18.70	318	P	P	15 51 52.3	-4.0
	comp=Z,0.1nm,0.3s,baz=94,slow=0.7,SNR=5.3						
YAK	Yakutsk	18.70	318	P	P	15 51 52.1	-4.3
GAMB	Gambell	21.23	40	P	P	15 52 23.3	-0.2
GAMB				IAmb	IAmb	15 52 28.6	
	comp=Z,28nm,1.7s						
ANM	Nome	24.10	40	P	P	15 52 52.6	+0.9
ANM				pmax	pmax		
	comp=Z,20nm,2.0s						
ANM	Nome	24.10	40	P	P	15 52 52.6	+0.9
BPAW	Bear Paw Mtn.	30.20	44	P	P	15 53 48.0	+1.7
BPAW				IAmb	IAmb	15 54 56.2	
	comp=Z,11nm,1.4s						
SUA	Susitna One	30.36	49	P	P	15 53 46.1	-1.7
SUA				IAmb	IAmb	15 54 20.1	
	comp=Z,19nm,1.4s						
TRF	Thorofare Moun	30.50	45	P	P	15 53 50.1	+1.0
TRF				IAmb	IAmb	15 53 52.4	
	comp=Z,35nm,1.8s						
COLD	Coldfoot	30.73	37	P	P	15 53 51.0	+0.1
COLD				IAmb	IAmb	15 54 26.2	
	comp=Z,18nm,2.0s						
I23K	Minto, Yukon-K	30.93	42	P	P	15 53 53.4	+0.8
I23K				IAmb	IAmb	15 54 14.6	
	comp=Z,21nm,1.9s						
CCB	Clear Creek Bu	31.59	43	P	P	15 53 59.0	+0.6
HDA	Harding Lake	31.96	43	P	P	15 54 02.2	+0.5
HDA				IAmb	IAmb	15 54 08.8	
	comp=Z,19nm,1.8s						
IL31		31.98	42	P	P	15 54 00.4	-1.4
ILAR	Eielson Array	31.98	42	P	P	15 54 02.3	+0.5
	comp=Z,0.6nm,0.7s,baz=265,slow=6.3,SNR=11						
PRP	Porcupine Dome	32.54	41	P	P	15 54 07.1	+0.2
PRP				IAmb	IAmb	15 54 08.0	
	comp=Z,19nm,1.9s						
FYU	Fort Yukon	32.65	39	P	P	15 54 08.8	+1.2
FYU				IAmb	IAmb	15 54 14.1	
	comp=Z,30nm,1.7s						
RIDG	Independent Ri	32.92	44	P	P	15 54 10.1	-0.1
RIDG				IAmb	IAmb	15 54 29.1	
	comp=Z,35nm,1.8s						
DOT	Dot Lake	33.28	44	P	P	15 54 12.6	-0.6
CRQM	Cirque	34.11	49	P	P	15 54 23.0	+2.4
K27K	Chicken	34.12	43	P	P	15 54 20.5	+0.1
K27K				IAmb	IAmb	15 55 33.8	
	comp=Z,16nm,1.7s						
EGAK	Eagle	34.43	42	P	P	15 54 23.2	+0.2
EGAK				IAmb	IAmb	15 55 35.0	
	comp=Z,30nm,1.9s						
MESA	MESA	34.80	50	P	P	15 54 26.7	+0.2
CTGM	Chitina Glacie	34.94	49	P	P	15 54 27.6	0.0
DAWY	Dawson	35.28	43	P	P	15 54 30.2	-0.3
DAWY				IAmb	IAmb	15 54 33.1	
	comp=Z,21nm,1.9s						
YOJ	Yonaguni jima	36.91	238	P	P	15 54 45.4	+0.7
YOJ	Yonaguni jima	36.91	238	P	P	15 54 45.4	+0.7
INK	Inuvik	37.04	35	P	P	15 54 45.1	-0.1
	comp=Z,0.5nm,0.4s,baz=271,slow=8.4,SNR=2.4						
SSLB	Suanglung	38.57	239	P	P	15 54 58.0	-0.7
C36M	Paulatuk	40.20	33	P	P	15 55 11.5	-0.2
EUNU	Eureka	44.79	13	P	P	15 55 47.7	-1.0
EUNU				IAmb	IAmb	15 57 20.9	
	comp=Z,20nm,1.9s						
YKA	Yellowknife Ar	46.34	40	P	P	15 56 00.2	-0.7
	comp=Z,0.8nm,0.8s,baz=299,slow=7.3,SNR=8.5						
MK31	Makanchi Array	47.39	296	P	P	15 56 02.5	-6.9
MK31	Makanchi Array	47.39	296	P	P	15 56 02.5	-6.9
CMAR	Chiang Mai Arr	55.67	257	ScP	ScP	16 01 54.8	-1.8
	comp=Z,0.3nm,0.5s,baz=46,slow=5.2,SNR=4.1						
FCC	Fort Churchill	56.65	36	P	P	15 57 17.6	-0.1
FCC				pmax	pmax		
	comp=Z,11nm,1.8s						
FCC	Fort Churchill	56.65	36	P	P	15 57 17.6	-0.1
FCC				IAmb	IAmb	15 58 05.1	
	comp=Z,11nm,1.8s						
HRY	Holter Researc	56.68	55	P	P	15 57 17.8	-0.5
PDAR	Pinedale Array	60.52	58	P	P	15 57 47.6	+2.5
	comp=Z,0.6nm,0.9s,baz=308,slow=4.4,SNR=3.6						
PDAR	Pinedale Array	60.52	58	P	P	15 57 46.1	+1.1
WR0	Warramunga Arr	73.00	202	P	P	15 59 06.2	+2.2
WRAB	Tennant Creek	73.02	202	P	P	15 59 05.5	+1.4
WRAB	Tennant Creek	73.02	202	P	P	15 59 05.5	+1.4
WRAB				IAmb	IAmb	16 01 42.2	
	comp=Z,31nm,1.6s						
WB2	Warramunga Arr	73.03	202	P	P	15 59 05.0	+0.8
WB2				IAmb	IAmb	15 59 58.2	
	comp=Z,19nm,1.4s						
WRA	Warramunga Arr	73.03	202	P	P	15 59 05.5	+1.3
	comp=Z,0.4nm,0.6s,baz=16,slow=6.2,SNR=1.4						
AS31	Alice Springs	76.72	202	P	P	15 59 27.6	+2.2
ASAR	Alice Springs	76.72	202	P	P	15 59 27.8	+2.4
	comp=Z,0.5nm,0.5s,baz=13,slow=5.1,SNR=20						

JMA ***22*** *15:50:57.1±0.1, 24°.04N×122°.26E, h27^{km}±3^{km}, M2.0*
TAP ***22*** *15:50:57.1, 24°.11N×122°.28E, h27^{km}, ML2.6, D*
ISC 22 15:50:56.9±1.0**, 24°.06N**±0°.02×**122°.27E**±0°.02**, h26**^{km}±11^{km}**,**
n95, σ0^{s}66/180**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao baz=315	0.57	313	P	Pb	15 51 07.9	-0.5
ENAH	baz=315			eS	Sb	15 51 16.2	+0.1
ENA	Nanau baz=311	0.61	307	P	Pb	15 51 08.4	-0.6
ENA	baz=311			eS	Sb	15 51 17.2	+0.1
TWD	Chiawan baz=267	0.62	272	eP	Pb	15 51 09.6	+0.5
TWD	baz=267			eS	Sn	15 51 18.6	-0.4
NACB	Ninganchiao baz=262	0.63	280	P	Pb	15 51 09.4	+0.1
NACB	baz=262			eS	Sn	15 51 19.2	-0.1
TWC	Suao baz=322	0.67	325	P	Pb	15 51 08.9	-1.0
TWC	baz=322			S	Sb	15 51 17.9	-0.9
JYNG	Yonagunijimaku	0.73	58	P	Pb	15 51 11.2	+0.2
JYNG				S	Sb	15 51 20.9	+0.3
ETLH	Xiulin Townshi baz=278	0.73	282	P	Pb	15 51 11.1	-0.1
ETLH	baz=278			eS	Sn	15 51 22.1	-0.1
YOJ	Yonaguni jima	0.79	59	P	Pb	15 51 11.8	-0.1
YOJ				S	Sb	15 51 22.1	-0.1
YOJ	Yonaguni jima baz=61	0.79	59	P	Pb	15 51 11.8	-0.1
YOJ	baz=61			S	Sn	15 51 22.8	-0.4
ESL	Shilin baz=239	0.80	252	eP	Pb	15 51 11.7	-0.5
ESL	baz=239			S	Sb	15 51 23.3	+0.5
ILA	Ilan baz=323	0.85	326	P	Pb	15 51 12.4	-0.6
ILA	baz=323			S	Sn	15 51 24.3	-0.5
TWE	Neicheng baz=323	0.86	320	P	Pb	15 51 12.9	-0.2
TWE	baz=323			eS	Sb	15 51 24.3	0.0
ENTT	Nioudou baz=319	0.86	312	eP	Pb	15 51 13.1	-0.2
ENTT	baz=319			eS	Sn	15 51 24.7	-0.5
EGFH	Guangfu baz=241	0.86	243	eP	Pn	15 51 13.0	-0.4
EGFH	baz=241			eS	Sb	15 51 24.9	+0.5
NDT	Datong Townshi baz=314	0.88	308	P	Pb	15 51 13.9	+0.4
NDT	baz=314			eS	Sb	15 51 24.6	-0.2
NTC	Toucheng baz=341	0.89	333	eP	Pb	15 51 13.7	0.0
NTC	baz=341			eS	Sb	15 51 24.8	-0.3
NNSH	Datong baz=291	0.89	295	eP	Pn	15 51 13.3	-0.5
NNSH	baz=291			eS	Sn	15 51 25.7	-0.3
NNSB	Datong baz=291	0.89	295	P	Pn	15 51 13.7	-0.2
NNSB	baz=291			eS	Sn	15 51 26.1	+0.2
NNS	Nan Shan baz=292	0.90	295	P	Pb	15 51 14.4	+0.4
NNS	baz=292			S	Sn	15 51 26.8	+0.4
WHF	Hehuan Shan baz=262	0.92	275	P	Pn	15 51 14.3	-0.3
WHF	baz=262			eS	Sn	15 51 27.4	+0.2
FUSS	Fushou baz=278	0.95	281	P	Pb	15 51 15.2	+0.2
FUSS	baz=278			eS	Sb	15 51 26.1	-1.2
HGSD	Ruisui baz=233	0.96	234	eP	Pn	15 51 14.9	+0.1
HGSD	baz=233			eS	Sb	15 51 27.5	+0.3
TWB1	Santiao Chiao baz=343	0.98	345	eP	Pn	15 51 14.2	-0.7
TWB1	baz=343			eS	Sb	15 51 27.4	-0.4
TIPB	Shuangxi baz=333	0.99	336	P	Pn	15 51 15.3	0.0
TIPB	baz=333			S	Sb	15 51 27.5	-0.7
NWLT	Wulai baz=313	1.00	316	eP	Pn	15 51 15.3	0.0
NWLT	baz=313			eS	Sn	15 51 28.9	+0.3
CHGB	Renai baz=255	1.00	270	eP	Pn	15 51 15.4	-0.1
CHGB	baz=255			S	Sn	15 51 29.5	+0.5
YHNB	Yeheng baz=293	1.02	307	P	Pb	15 51 15.8	-0.2
YHNB	baz=293			eS	Sn	15 51 28.6	-0.5
TWT	Tachien baz=267	1.02	281	eP	Pn	15 51 15.9	+0.2
TWT	baz=267			eS	Sn	15 51 29.6	+0.4
EHY	Hungye baz=236	1.03	238	P	Pn	15 51 15.3	-0.4
EHY	baz=236			eS	Sn	15 51 29.2	-0.1
NSK	Sanguang baz=293	1.03	307	P	Pn	15 51 15.8	0.0
NSK	baz=293			eS	Sb	15 51 30.0	+0.6
TDCB	Techi baz=267	1.03	281	eP	Pn	15 51 16.1	+0.2
TDCB	baz=267			eS	Sn	15 51 29.2	-0.4
NWF	Wu-fen Shan baz=348	1.10	336	eP	Pn	15 51 16.9	+0.2
NWF	baz=348			eS	Sn	15 51 29.8	-1.4
WFSB	Wu-fen Shan baz=348	1.10	336	eP	Pn	15 51 16.8	+0.1
WFSB	baz=348			eS	Sn	15 51 30.1	-1.0
TWA	Mucha baz=323	1.11	326	eP	Pn	15 51 17.0	+0.2
TWA	baz=323			S	Sb	15 51 31.9	+0.4
YULB	Yu-li baz=247	1.11	233	eP	Pn	15 51 16.6	-0.2
YULB	baz=247			eS	Sn	15 51 30.7	-0.7
EYUL	Yuli baz=219	1.12	231	eP	Pn	15 51 16.7	-0.3
EYUL	baz=219			S	Sb	15 51 32.8	+0.9
NHDH	Xindian Distri baz=332	1.13	323	eP	Pb	15 51 18.6	+0.9
NHDH	baz=332			eS	Sn	15 51 31.3	-0.4
TWF1	Yuli baz=246	1.14	232	eP	Pn	15 51 17.1	-0.1
TWF1	baz=246			S	Sn	15 51 32.0	+0.1
TATO	Taipei baz=319	1.16	322	eP	Pn	15 51 17.7	+0.3
BACT	New Taipei Cit baz=319	1.20	321	eP	Pb	15 51 19.2	+0.3
BACT	baz=319			eS	Sn	15 51 33.1	-0.4
WPL	Puli Township baz=258	1.20	268	eP	Pn	15 51 18.3	+0.3
WPL	baz=258			eS	Sn	15 51 33.4	-0.2
DPDB	Guoxing baz=259	1.23	269	eP	Pn	15 51 19.0	+0.5
DPDB	baz=259			eS	Sn	15 51 34.3	0.0
WHP	Taichung City baz=268	1.23	280	eP	Pb	15 51 19.4	-0.1
WHP	baz=268			eS	Sb	15 51 36.1	+1.1
SSLB	Suanglung baz=256	1.23	258	eP	Pn	15 51 19.1	+0.5
SSLB	baz=256			eS	Sn	15 51 34.3	-0.1
FULB	Fuli baz=214	1.24	226	P	Pn	15 51 18.0	-0.6
FULB	baz=214			eS	Sn	15 51 34.0	-0.6
YM01	YM01 baz=341	1.25	330	P	Pb	15 51 19.4	-0.6
YM01	baz=341			S	Sn	15 51 35.0	+0.1
SMLT	Sun Moon Lake baz=251	1.27	262	eP	Pn	15 51 19.1	0.0
SMLT	baz=251			eS	Sn	15 51 35.6	+0.3
CHKT	Chengkung baz=210	1.27	221	eP	Pn	15 51 18.0	-0.9
CHKT	baz=210			eS	Sn	15 51 34.1	-1.0
YM10	YM10 baz=341	1.27	330	eP	Pb	15 51 19.5	-0.6
YM10	baz=341			eS	Sn	15 51 34.7	-0.5
YM11	YM11 baz=342	1.27	330	eP	Pb	15 51 19.7	-0.5
YM11	baz=342			eS	Sn	15 51 34.6	-0.8
YM05	YM05 baz=341	1.27	330	eP	Pn	15 51 19.2	+0.1
YM05	baz=341			eS	Sn	15 51 34.9	-0.5
YM04	YM04 baz=341	1.28	329	eP	Pb	15 51 19.9	-0.5
YM04	baz=341			eS	Sn	15 51 35.5	0.0
YM08	YM08 baz=344	1.28	331	eP	Pn	15 51 19.5	+0.3
LIOB	Emei baz=295	1.28	297	P	Pb	15 51 20.6	+0.2
LIOB	baz=295			eS	Sb	15 51 36.4	-0.1
NSTT	Nanjuang baz=294	1.29	296	eP	Pb	15 51 20.4	-0.1
NSTT	baz=294			eS	Sb	15 51 36.2	-0.4
TWS1	Kuangyinshan baz=331	1.29	323	eS	Sb	15 51 37.6	+0.8
YM03	YM03 baz=340	1.30	329	eP	Pn	15 51 19.2	-0.2
YM03	baz=340			eS	Sn	15 51 35.2	-0.8
TYC	Yuchr baz=262	1.30	263	eP	Pn	15 51 19.8	+0.4
TYC	baz=262			eS	Sn	15 51 36.1	+0.1
ANP	Anpu baz=326	1.31	329	eP	Pn	15 51 19.8	+0.1
WHYT	Xinyi Township baz=242	1.35	255	eS	Sb	15 51 38.8	+0.5
TWY	Chenhua baz=331	1.35	333	eP	Pn	15 51 20.7	+0.6
TWY	baz=331			eS	Sn	15 51 37.6	+0.3
IRIF	Iriomote-Funau	1.36	78	P	Pb	15 51 21.4	-0.3
IRIF				S	Sb	15 51 39.4	+0.7
TWQ1	Liyutan baz=280	1.40	282	eP	Pb	15 51 22.4	+0.1
TWQ1	baz=280			eS	Sb	15 51 40.1	+0.4
EDH	Donghe baz=210	1.40	219	P	Pn	15 51 19.5	-1.3
EDH	baz=210			S	Sn	15 51 37.4	-1.0
HATJ	Hateruma jima	1.40	90	P	Pb	15 51 22.0	-0.4
HATJ				S	Sb	15 51 41.0	+1.1
WJS	Zhushan baz=259	1.43	261	eS	Sb	15 51 42.0	+1.2
ELDTW	Lidau baz=221	1.44	233	eP	Pn	15 51 21.2	-0.3
ELDTW	baz=221			eS	Sn	15 51 38.8	-0.8
ALS	Alishan baz=247	1.45	248	P	Pn	15 51 22.7	+0.9
ALS	baz=247			eS	Sn	15 51 40.6	+0.5
WNT	Mingjian baz=262	1.46	263	eP	Pb	15 51 23.1	-0.3
WNT	baz=262			eS	Sb	15 51 42.4	+0.8
WNT1	Nantou City baz=251	1.46	264	eP	Pb	15 51 23.5	+0.1
CHN5	Tsauling baz=252	1.53	253	P	Pb	15 51 24.3	-0.3
CHN5	baz=252			eS	Sb	15 51 43.9	+0.3
LONT	Longtian baz=223	1.55	223	eP	Pn	15 51 22.8	-0.1
LONT	baz=223			eS	Sn	15 51 42.2	0.0
LDUT	Ludao baz=209	1.56	208	eP	Pn	15 51 21.9	-1.1
LDUT	baz=209			eS	Sn	15 51 40.9	-1.6
JKRS	Kuro-shima	1.60	83	P	Pb	15 51 25.4	-0.4
JKRS				S	Sb	15 51 45.5	0.0
WGK	Gukeng baz=256	1.61	257	eS	Sb	15 51 46.0	+0.2
WDLH	Douliu baz=244	1.63	257	eS	Sb	15 51 46.9	+0.5
STYT	Tauyuan baz=237	1.65	238	eP	Pn	15 51 25.4	+1.1

STYT	baz=237			eS	Sn	15 51 45.6	+0.8
TPUB	Ta-pu baz=243	1.68	244	eP	Pb	15 51 26.6	-0.6
TPUB	baz=243			eS	Sb	15 51 47.5	-0.5
CHN4	Tsaushan baz=245	1.69	246	eP	Pb	15 51 26.9	-0.5
CHN4	baz=245			eS	Sb	15 51 48.3	0.0
WTP	Ta-pu baz=242	1.72	242	eP	Pn	15 51 26.8	+1.5
WTP	baz=242			eS	Sb	15 51 48.6	-0.6
JIJ	Ishigaki jima	1.74	80	P	Pn	15 51 26.1	+0.7
JIJ				S	Sn	15 51 47.4	+0.7
WTK	Tuku baz=246	1.76	258	eS	Sb	15 51 50.5	+0.3
TWK	Hsinying baz=244	1.81	245	eP	Pn	15 51 27.9	+1.4
TWK	baz=244			eS	Sb	15 51 50.8	-1.0
CHN1	Nanshi baz=241	1.82	242	eP	Pn	15 51 27.8	+1.2
CHN1	baz=241			S	Sb	15 51 51.7	-0.2
SGST	Jiashian baz=238	1.83	238	eP	Pn	15 51 28.4	+1.7
SGST	baz=238			S	Sb	15 51 52.5	+0.3
ECL	Taimali baz=221	1.89	220	eP	Pn	15 51 26.8	-0.8
ECL	baz=221			eS	Sn	15 51 49.3	-1.3
WSF	Szhu baz=257	1.92	258	eP	Pn	15 51 29.8	+1.8
WSF	baz=257			eS	Sb	15 51 54.0	-0.8
JISG	Ishigakijimahi	1.93	74	P	Pn	15 51 28.5	+0.4
JISG				eS	Sn	15 51 52.2	+0.6
SSD	Sandimen baz=223	1.99	229	eP	Pn	15 51 30.4	+1.4
SSD	baz=223			eS	Sn	15 51 54.5	+1.3
CHN3	Shinhua baz=241	2.00	241	eP	Pb	15 51 31.4	-1.3
CHN3	baz=241			eS	Sb	15 51 57.1	0.0
SCST	Cishan baz=235	2.01	235	eP	Pn	15 51 31.1	+2.0
SCST	baz=235			S	Sb	15 51 57.3	0.0
TSMG	Majia baz=223	2.01	228	eP	Pn	15 51 30.2	+1.0
TSMG	baz=223			eS	Sn	15 51 54.9	+1.3
MASBT	Mashibuluo baz=221	2.08	227	eP	Pn	15 51 31.4	+1.2
MASBT	baz=221			eS	Sn	15 51 56.6	+1.2
LAY	Lan-yu baz=208	2.12	198	eP	Pn	15 51 31.1	+0.4
LAY	baz=208			eS	Sn	15 51 54.8	-1.5
EAST	Anshuo baz=219	2.12	218	eP	Pn	15 51 30.7	-0.1
EAST	baz=219			eS	Sn	15 51 55.4	-1.0

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*IDC **22** 15:52:26.2±0.6, 42°.18N×74°.99E, h0^{km}, mb4.2/23, mb1 4.4/30, mb1mx4.2/51, mbtmp4.3/30, ML4.0/7, MS3.6/17, Ms1 3.6/17, ms1mx3.5/42, Error ellipse: s-maj=9.0km s-min=7.2km az=32.0*

*KNET **22** 15:52:26.5±0.4, 42°.23N×75°.03E, h18^{km}±2^{km}, ml4.5, Error ellipse: s-maj=2.9km s-min=2.0km az=165.0*

*SOME **22** 15:52:27.9, 42°.20N×75°.02E, h20^{km}, MS4.4*

*KRNET **22** 15:52:27.6±0.1, 42°.24N×74°.99E, h17^{km}, mb5.2*

*NNC **22** 15:52:28.2±0.4, 42°.29N×75°.01E, h0^{km}, mb5.4, mpv5.2, Error ellipse: s-maj=3.3km s-min=1.5km az=171.0*

*MOS **22** 15:52:28.6±1.4, 42°.35N×74°.87E, h16^{km}, mb4.8/38, Error ellipse: s-maj=4.8km s-min=4.2km az=63.8*

MOS Felt (IV) at Ala-Archa, Kyzyl-Debe, Don-Alysh; (III-IV) at Epkin, Cholpon, Kuyruchuk, Kyzart; (III) at Kochkorka, Teplyi klyuchi, Kemin, Bishkek, Shopokov, Kara-Balta; (II-III) at Almati.

*BJI **22** 15:52:28.0±0.0, 42°.40N×74°.90E, h15^{km}, mB4.6/24, mb4.3/34, ML4.8/8, Ms4.2/28, Ms7 4.0/28*

*NEIC **22** 15:52:30.7±2.0, 42°.36N±0°.06×74°.95E±0°.08, h21^{km}±5^{km}, mb4.9/77, Error ellipse: s-maj=9.1km s-min=8.0km az=204.0*

ISC 22 15:52:28.3±0.9**, 42°.28N**±0°.02×**74°.96E**±0°.01**, h8**^{km}±5^{km}**, n398, σ1^{s}.61**/526**, mb4.6**/102**, MS3.8**/22**, 58C-40D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor baz=69	0.34	261	⇑iP	Pg	15 52 34.9	-0.3
UCH	baz=69			⇑iS	Sg	15 52 40.0	+0.4
UCH	Uchtor 1µm,0.2s,SNR=4503	0.34	261	P	Pg	15 52 34.9	-0.3
UCH	10µm,0.2s			⇑S	Sg	15 52 40.5	+0.9
KBK	Karagaybulak baz=55	0.38	358	⇓iP	Pg	15 52 36.4	+0.6
KBK	baz=55			⇓iS	Sg	15 52 42.2	+1.4
KBK	Karagaybulak 6µm,0.1s	0.38	358	P	Pg	15 52 36.3	+0.6
KBK	54µm,0.2s			⇑S	Sb	15 52 42.9	-0.5
AAK	Ala-Archa 2µm,0.3s,baz=137,slow=9.1,SNR=4085	0.50	316	Pg	Pg	15 52 38.6	+0.6
AAK	4µm,0.3s,baz=316,slow=19,SNR=36			Lg	Lg	15 52 46.1	
AAK	Ala-Archa baz=18	0.50	316	⇑iP	Pg	15 52 38.5	+0.4
AAK	baz=18			⇑iS	Sg	15 52 45.5	+0.9
AAK	Ala-Archa 3µm,0.2s,SNR=9541	0.50	316	P	Pg	15 52 38.4	+0.4
AAK	32µm,0.4s			⇓S	Sg	15 52 46.2	+1.6
AAK	Ala-Archa 866nm,0.2s	0.50	316	⇑P	Pg	15 52 38.4	+0.4
AAK				⇑S	Sg	15 52 46.0	+1.4
AAK	Ala-Archa	0.50	316	PG	Pg	15 52 38.2	+0.2
AAK						15 52 46.3	
AAK	Ala-Archa	0.50	316		Pg	15 52 38.2	+0.2
AAK				Sg	Sb	15 52 46.3	-0.6
FRU1	Bishkek baz=35	0.58	335	⇓iP	Pg	15 52 39.9	+0.3
FRU1	baz=35			⇓iS	Sb	15 52 48.8	-0.5
ARLS	Aral baz=33	0.63	229	⇓iP	Pg	15 52 39.5	-1.1
ARLS	baz=33			⇓iS	Sg	15 52 48.0	-0.9
CHMS	Chumysh baz=47	0.74	348	⇓iP	Pg	15 52 42.4	-0.1
CHMS	baz=47			⇓iS	Sg	15 52 52.8	+0.7
CHMS	Chumysh 1µm,0.2s,SNR=864	0.74	348	P	Pg	15 52 42.4	-0.1
CHMS	4µm,0.2s			⇑S	Sb	15 52 53.5	-0.1
BOOM	Boomskoye usch baz=70	0.75	73	⇑iP	Pg	15 52 41.3	-1.5
BOOM	baz=70			⇑iS	Sg	15 52 51.5	-1.1
TKM2	Tokmak 2 3µm,0.3s,SNR=4336	0.79	36	P	Pg	15 52 42.7	-0.9
TKM2	18µm,0.5s			⇑S	Sg	15 52 53.8	-0.1
TKM2	Tokmak 2 1µm,0.3s	0.79	36	⇓P	Pg	15 52 42.7	-0.9
TKM2	8µm,0.6s			⇑S	Sg	15 52 53.6	-0.4
TKM2	Tokmak 2	0.79	36	PG	Pg	15 52 42.7	-0.9
TKM2				S	Sg	15 52 53.6	-0.4
ULHL	Ulahol 2µm,0.2s,SNR=5623	0.95	92	P	Pg	15 52 44.1	-2.5
ULHL	8µm,0.2s			⇑S	Sg	15 52 56.6	-2.3
AML	Almayashu baz=64	0.95	262	⇑iP	Pg	15 52 46.1	-0.6
AML	baz=64			⇑iS	Sg	15 52 58.8	-0.3
AML	Almayashu 1µm,0.2s,SNR=3624	0.95	262	P	Pg	15 52 45.8	-0.9
AML	6µm,0.2s			⇑S	Sg	15 52 59.3	+0.2
EKS2	Erkin-Say baz=96	0.96	294	⇑iP	Pg	15 52 46.3	-0.4
EKS2	baz=96			⇑iS	Sg	15 52 59.2	0.0
EKS2	Erkin-Say 3µm,0.4s,SNR=4505	0.96	294	P	Pg	15 52 46.5	-0.2
EKS2	10µm,0.6s			⇑S	Sn	15 53 01.4	-0.6
USP	Ospenovka baz=41	1.04	341	⇑iP	Pg	15 52 48.2	-0.2
USP	baz=41			⇑iS	Sg	15 53 02.1	+0.1
USP	Ospenovka 288nm,0.2s,SNR=3201	1.04	341	P	Pg	15 52 48.0	-0.4
USP	8µm,0.5s			⇓S	Sb	15 53 03.1	+0.6
KST	Kastek baz=41	1.06	44	eP	Pg	15 52 47.5	-1.2
KST	baz=41			eS	Sg	15 53 02.1	-0.4
KST	Kastek 1µm,0.4s	1.06	44	eP	Pg	15 52 47.5	-1.2
KST	10µm,0.6s			eS	Sg	15 53 02.1	-0.4
KST	Kastek 1µm,0.4s	1.06	44	P	Pg	15 52 47.4	-1.2
KST	10µm,0.6s			S	Sg	15 53 02.1	-0.4
KST	Kastek	1.06	44	ePG	Pg	15 52 47.5	-1.2
KST				eS	Sg	15 53 02.1	-0.4
DGS	Degeres baz=29	1.13	31	eP	Pg	15 52 49.5	-0.5
DGS	baz=29			eS	Sb	15 53 05.2	+0.2
DGS	Degeres 4µm,0.5s	1.13	31	eP	Pg	15 52 49.5	-0.5
DGS	6µm,0.3s			eS	Sb	15 53 05.2	+0.2
DGS	Degeres 4µm,0.5s	1.13	31	P	Pg	15 52 49.5	-0.5
DGS	6µm,0.3s			S	Sb	15 53 05.2	+0.2
DGS	Degeres	1.13	31	ePG	Pg	15 52 49.5	-0.5
DGS				eS	Sb	15 53 05.2	+0.2
SGDS	Sogindy 1µm,0.3s	1.20	348	P	Pb	15 52 50.9	-0.4
SGDS	4µm,0.5s			S	Sn	15 53 07.7	-0.2
MRKS	Merke baz=92	1.37	290	eP	Pn	15 52 54.1	+0.4
MRKS	baz=92			eS	Sg	15 53 13.3	+1.0
MRKS	Merke 1µm,0.4s	1.37	290	eP	Pn	15 52 54.1	+0.4
MRKS	5µm,0.4s			eS	Sg	15 53 13.3	+1.0
MRKS	Merke 1µm,0.4s	1.37	290	P	Pn	15 52 54.1	+0.4
MRKS	5µm,0.4s			S	Sg	15 53 13.3	+1.0
MRKS	Merke	1.37	290	ePG	Pn	15 52 54.1	+0.4
MRKS				eS	Sg	15 53 13.3	+1.0
MTBS	Maitube baz=49	1.37	51	eP	Pn	15 52 52.9	-0.9
MTBS	baz=49			eS	Sb	15 53 11.5	-0.5
MTBS	Maitube 2µm,0.6s	1.37	51	eP	Pn	15 52 52.9	-0.9
MTBS	7µm,0.2s			eS	Sb	15 53 11.5	-0.5
MTBS	Maitube 2µm,0.6s	1.37	51	P	Pn	15 52 52.9	-0.9
MTBS	7µm,0.2s			S	Sb	15 53 11.5	-0.5
MTBS	Maitube	1.37	51	ePG	Pn	15 52 52.9	-0.9
MTBS				eS	Sb	15 53 11.5	-0.5
IZV	Izvestkoviy baz=56	1.43	58	eP	Pn	15 52 54.0	-0.7
IZV	baz=56			eS	Sn	15 53 13.0	-0.9
IZV	Izvestkoviy 463nm,0.3s	1.43	58	eP	Pn	15 52 54.0	-0.7
IZV	2µm,0.5s			eS	Sn	15 53 12.9	-0.9
IZV	Izvestkoviy 463nm,0.3s	1.43	58	P	Pn	15 52 53.9	-0.7
IZV	2µm,0.5s			S	Sn	15 53 12.9	-0.9
IZV	Izvestkoviy	1.43	58	ePG	Pn	15 52 54.0	-0.7
IZV				eS	Sn	15 53 12.9	-0.9
KRBS	Karabastau baz=19	1.51	20	eP	Pn	15 52 56.3	+0.7
KRBS	baz=19			eS	Sg	15 53 17.2	+0.4
KRBS	Karabastau 3µm,0.4s	1.51	20	eP	Pn	15 52 56.3	+0.7
KRBS	10µm,0.5s			eS	Sg	15 53 17.2	+0.4
KRBS	Karabastau 3µm,0.4s	1.51	20	P	Pn	15 52 56.3	+0.7
KRBS	10µm,0.5s			S	Sg	15 53 17.2	+0.4
KRBS	Karabastau	1.51	20	ePG	Pn	15 52 56.3	+0.7
KRBS				eS	Sg	15 53 17.2	+0.4
TNSS	Tian-Shan baz=60	1.65	62	eP	Pn	15 52 57.9	0.0
TNSS	baz=60			eS	Sn	15 53 19.8	+0.4
TNSS	Tian-Shan 754nm,0.4s	1.65	62	eP	Pn	15 52 57.9	0.0
TNSS	3µm,0.5s			eS	Sn	15 53 19.8	+0.4
TNSS	Tian-Shan 754nm,0.4s	1.65	62	P	Pn	15 52 57.9	0.0
TNSS	3µm,0.5s			S	Sn	15 53 19.8	+0.4
TNSS	Tian-Shan	1.65	62	ePN	Pn	15 52 57.9	0.0
TNSS				eS	Sn	15 53 19.8	+0.4
KDJ	Kajisay baz=93	1.65	94	⇑iP	Pn	15 52 57.2	-0.5
KDJ	baz=93			⇑iS	Sn	15 53 19.1	-0.1
AAA	Alma-Ata baz=55	1.71	56	eP	Pb	15 52 59.8	-0.2
AAA	baz=55			eS	Sg	15 53 22.7	-0.6
AAA	Alma-Ata 1µm,0.2s	1.71	56	eP	Pb	15 52 59.8	-0.2
AAA	6µm,0.6s			eS	Sg	15 53 22.7	-0.6
AAA	Alma-Ata 1µm,0.2s	1.71	56	P	Pb	15 52 59.8	-0.2
AAA	6µm,0.6s			S	Sg	15 53 22.7	-0.6
AAA	Alma-Ata	1.71	56	ePN	Pb	15 52 59.8	-0.2
AAA				eS	Sg	15 53 22.7	-0.6
KNDC	Almaty 2µm,0.3s	1.75	57	⇓P	Pb	15 53 00.3	-0.3
KNDC	8µm,0.6s			⇑S	Sb	15 53 22.1	-0.6
ARSB	Arslanbob baz=39	1.76	238	⇑iP	Pn	15 52 59.7	+0.5
ARSB	baz=39			⇑iS	Sn	15 53 22.6	+0.7
MDOK	Medeo baz=58	1.77	59	eP	Pn	15 53 00.0	+0.6
MDOK	baz=58			eS	Sb	15 53 23.7	+0.2
MDOK	Medeo 1µm,0.3s	1.77	59	eP	Pn	15 53 00.0	+0.6
MDOK	4µm,0.5s			eS	Sb	15 53 23.8	+0.2
MDOK	Medeo 935nm,0.4s	1.77	59	⇑P	Pn	15 52 59.9	+0.6
MDOK	3µm,0.4s			⇑S	Sb	15 53 23.4	-0.1
MDOK	Medeo 1µm,0.3s	1.77	59	Pg	Pn	15 53 00.0	+0.6
MDOK	4µm,0.5s			Lg	Lg	15 53 23.8	
MDOK	Medeo	1.77	59	ePN	Pn	15 53 00.0	+0.6
MDOK				eS	Sb	15 53 23.8	+0.2
MNAS	Manas baz=79	1.83	277	⇑iP	Pn	15 53 01.4	+1.2
MNAS	baz=79			⇑iS	Sb	15 53 25.5	+0.2
KOTS	Kotyrbulak 4µm,0.4s	1.85	58	eP	Pb	15 53 02.0	-0.4
KOTS	31µm,0.5s			eS	Sb	15 53 26.7	+1.0
KOTS	Kotyrbulak 4µm,0.4s	1.85	58	P	Pn	15 53 01.0	+0.6
KOTS	31µm,0.5s			S	Sb	15 53 26.7	+1.0
KOTS	Kotyrbulak	1.85	58	ePN	Pb	15 53 02.0	-0.4
KOTS				eS	Sb	15 53 26.7	+1.0
KUU	Kurty baz=30	1.90	32	eP	Pb	15 53 02.9	-0.4
KUU	baz=30			eS	Sb	15 53 28.2	+1.1
KUU	Kurty 7µm,0.5s	1.90	32	eP	Pb	15 53 02.9	-0.4
KUU	7µm,0.7s			eS	Sb	15 53 28.2	+1.1
KUU	Kurty 7µm,0.5s	1.90	32	Pg	Pb	15 53 02.9	-0.4
KUU	7µm,0.7s			Lg	Lg	15 53 28.2	
KUU	Kurty	1.90	32	ePN	Pb	15 53 02.9	-0.4
KUU				eS	Sb	15 53 28.2	+1.1
KTBS	Karatobe 4µm,0.3s	1.91	41	eP	Pb	15 53 03.0	-0.3
KTBS	11µm,0.7s			eS	Sb	15 53 28.6	+1.3
KTBS	Karatobe 4µm,0.3s	1.91	41	P	Pb	15 53 03.0	-0.3
KTBS	11µm,0.7s			S	Sb	15 53 28.6	+1.3
KTBS	Karatobe	1.91	41	ePN	Pb	15 53 03.1	-0.3
KTBS				eS	Sb	15 53 28.6	+1.3
ANVS	Anan'yevo baz=74	2.06	75	⇓iP	Pn	15 53 03.7	+0.4
ANVS	baz=74			⇓iS	Sn	15 53 30.1	+0.8
CHKK	Chushkaly 3µm,0.6s	2.16	43	eP	Pb	15 53 07.1	-0.6
CHKK	9µm,0.4s			eS	Sb	15 53 35.9	+1.3
CHKK	Chushkaly 3µm,0.6s	2.16	43	Pg	Pb	15 53 07.1	-0.6
CHKK	9µm,0.4s			Lg	Lg	15 53 35.9	
CHKK	Chushkaly	2.16	43	ePN	Pb	15 53 07.1	-0.6
CHKK				eS	Sb	15 53 35.9	+1.3
OHH	Osh baz=25	2.40	224	⇓iP	Pn	15 53 08.8	+0.9
OHH	baz=25			⇓iS	Sn	15 53 38.1	+0.6
PRZ	Przheval'sk baz=83	2.55	84	⇓iP	Pn	15 53 11.1	+1.0
PRZ	baz=83			⇓iS	Sn	15 53 41.7	+0.2
KURS	Kuram 703nm,0.7s	2.65	62	eP	Pb	15 53 15.6	-0.4
KURS	2µm,0.7s			eS	Sb	15 53 50.8	+2.2
KURS	Kuram 703nm,0.7s	2.65	62	Pg	Pb	15 53 15.6	-0.4
KURS	2µm,0.7s			Lg	Lg	15 53 50.8	
KURS	Kuram	2.65	62	ePN	Pb	15 53 15.6	-0.4
KURS				eS	Sb	15 53 50.8	+2.2
SATY	Saty 711nm,0.7s	2.66	72	eP	Pb	15 53 15.3	-0.8
SATY	6µm,0.4s			eS	Sb	15 53 49.6	+0.7
SATY	Saty 711nm,0.7s	2.66	72	Pg	Pb	15 53 15.3	-0.8
SATY	6µm,0.4s			Lg	Lg	15 53 49.6	
SATY	Saty	2.66	72	ePN	Pb	15 53 15.3	-0.8
SATY				eS	Sb	15 53 49.6	+0.7
ZHN	Zhinishke 326nm,0.2s	2.71	70	eP	Pb	15 53 16.4	-0.6
ZHN	1µm,0.2s			eS	Sb	15 53 51.4	+1.0
ZHN	Zhinishke 326nm,0.2s	2.71	70	Pg	Pb	15 53 16.4	-0.6
ZHN	1µm,0.2s			Lg	Lg	15 53 51.4	
ZHN	Zhinishke	2.71	70	ePN	Pb	15 53 16.4	-0.6
ZHN				eS	Sb	15 53 51.4	+1.0
DZA	Taraz 2µm,0.3s	2.75	284	eP	Pb	15 53 18.0	+0.3
DZA	6µm,0.6s			eS	Sg	15 53 54.8	-1.9
DZA	Taraz	2.75	284	ePN	Pb	15 53 18.0	+0.3
DZA				eS	Sg	15 53 54.8	-1.9
BTLS	Baital 265nm,0.3s	2.84	347	eP	Pb	15 53 20.2	+1.0
BTLS	4µm,0.5s			eS	Sg	15 53 58.2	-1.3
BTLS	Baital 265nm,0.3s	2.84	347	Pg	Pb	15 53 20.2	+1.0
BTLS	4µm,0.5s			Lg	Lg	15 53 58.2	
BTLS	Baital	2.84	347	ePN	Pb	15 53 20.2	+1.0
BTLS				eS	Sg	15 53 58.2	-1.3
ARXS	Arharly 1µm,0.4s	2.85	46	eP	Pb	15 53 18.6	-0.8
ARXS	9µm,0.9s			eS	Sb	15 53 55.6	+1.2
ARXS	Arharly 1µm,0.4s	2.85	46	Pg	Pb	15 53 18.6	-0.8
ARXS	9µm,0.9s			Lg	Lg	15 53 55.6	
ARXS	Arharly	2.85	46	ePN	Pb	15 53 18.6	-0.8
ARXS				eS	Sb	15 53 55.6	+1.2
KSH	Kashi	2.86	164	Pn	Pb	15 53 20.6	+0.9
KSH				Sn	Sg	15 53 58.8	-1.5
TRKS	Terek-Say baz=56	2.95	257	⇓iP	Pn	15 53 16.9	+1.3
TRKS	baz=56			⇓iS	Sn	15 53 52.1	+0.9
KPKS	Kokpek 1µm,0.5s	2.98	65	eP	Pb	15 53 21.4	-0.2
KPKS	18µm,0.5s			eS	Sb	15 54 00.9	+2.7
KPKS	Kokpek	2.98	65	ePN	Pb	15 53 21.4	-0.2
KPKS				eS	Sb	15 54 00.9	+2.7
UZB	Uzynbulak 475nm,0.3s	3.11	72	eP	Pb	15 53 23.6	-0.4
UZB	3µm,0.5s			eS	Sb	15 54 03.8	+1.7
UZB	Uzynbulak 475nm,0.3s	3.11	72	Pg	Pb	15 53 23.6	-0.4
UZB	3µm,0.5s			Lg	Lg	15 54 03.8	
UZB	Uzynbulak	3.11	72	ePN	Pb	15 53 23.6	-0.4
UZB				eS	Sb	15 54 03.8	+1.7
KK31	Karatay Array 107nm,0.8s,baz=98,slow=12,SNR=2159	3.38	286	⇑Pn	Pn	15 53 23.6	+2.2
KK31	364nm,0.7s,baz=95,slow=16,SNR=25			⇑Pg	Pb	15 53 29.5	+1.1
KK31	424nm,0.4s,baz=103,slow=28,SNR=11			⇓Lg	Lg	15 54 15.6	
KK31	Karatay Array	3.38	286	PN	Pn	15 53 23.6	+2.2
KK31	Karatay Array	3.38	286	Pn	Pn	15 53 23.6	+2.2
KKAR	Karatay Array	3.38	286	PN	Pn	15 53 23.1	+1.7
KKAR	Karatay Array	3.38	286	Pn	Pn	15 53 23.1	+1.7
KKAR	Karatay Array	3.38	286		Pn	15 53 23.3	+1.9
SHLS	Shalkode 390nm,0.6s	3.43	74	eP	Pg	15 53 33.6	-0.4
SHLS	3µm,0.6s			eS	Sg	15 54 21.4	+3.0
SHLS	Shalkode 390nm,0.6s	3.43	74	Pg	Pg	15 53 33.6	-0.4
SHLS	3µm,0.6s			Lg	Lg	15 54 21.4	
SHLS	Shalkode	3.43	74	ePN	Pg	15 53 33.6	-0.4
SHLS				eS	Sg	15 54 21.4	+3.0
PDGK	Podgornoye 107nm,0.6s	3.49	71	Pg	Pb	15 53 29.3	-1.1
PDGK				Lg	Lg	15 54 14.2	

	2μm,1.0s						
PDGK	Podgornoye	3.49	71	⇓Pn	Pn	15 53 23.3	+0.3
	321nm,0.5s						
PDGK				⇑Lg	Lg	15 54 19.0	
	4μm,0.8s						
PDGK	Podgornoye	3.49	71	PN	Pn	15 53 23.3	+0.3
IUG	Iuzhnay	3.67	270	*e*P	Pb	15 53 34.3	+1.0
	730nm,0.4s						
IUG				*e*S	Sg	15 54 22.9	-3.1
	3μm,0.7s						
IUG	Iuzhnay	3.67	270	Pg	Pb	15 53 34.3	+1.0
	730nm,0.4s						
IUG				Lg	Lg	15 54 22.9	
	3μm,0.7s						
IUG	Iuzhnay	3.67	270	*e*PN	Pb	15 53 34.3	+1.0
IUG				*e*S	Sg	15 54 22.9	-3.1
DRK	Karamyk	3.68	222	⇑*i*P	Pn	15 53 25.7	-0.1
	baz=22						
DRK				⇑*i*S	Sn	15 54 08.9	-0.6
	baz=22						
TDK	Taldyqorghan	3.69	41	*e*P	Pb	15 53 34.5	+0.7
	2μm,0.5s						
TDK				*e*S	Sg	15 54 23.2	-3.7
	4μm,1.1s						
TDK	Taldyqorghan	3.69	41	Pg	Pb	15 53 33.1	-0.6
	930nm,0.7s						
TDK				Lg	Lg	15 54 21.1	
	4μm,1.1s						
TDK	Taldyqorghan	3.69	41	*e*PN	Pb	15 53 34.5	+0.7
TDK				*e*S	Sg	15 54 23.2	-3.7
BTK	Batken	3.84	236	⇑*i*P	Pn	15 53 28.4	+0.7
	baz=37						
BTK				⇑*i*S	Sn	15 54 12.2	-0.8
	baz=37						
CHM	Chimkent	3.98	272	*e*P	Pb	15 53 40.4	+1.8
	6.5nm,0.2s						
CHM				*e*S	Sg	15 54 32.5	-3.5
	3μm,0.6s						
CHM	Chimkent	3.98	272	*e*PN	Pb	15 53 40.4	+1.8
CHM				*e*S	Sg	15 54 32.5	-3.5
KAPS	Kapalarasan	4.38	45	*e*P	Pb	15 53 47.6	+2.2
	250nm,0.5s						
KAPS				*e*S	Sg	15 54 45.7	-3.1
	1μm,0.6s						
KAPS	Kapalarasan	4.38	45	Pg	Pb	15 53 47.6	+2.2
	250nm,0.5s						
KAPS				Lg	Lg	15 54 45.7	
	1μm,0.6s						
KAPS	Kapalarasan	4.38	45	*e*PN	Pb	15 53 47.6	+2.2
KAPS				*e*S	Sg	15 54 45.7	-3.1
MAKZ	Makanchi	6.75	46	⇓Pn	Pn	15 54 08.6	+1.0
	42nm,0.7s						
MAKZ				⇓Lg	Lg	15 56 01.3	
	436nm,1.0s						
MAKZ	Makanchi	6.75	46	PN	Pn	15 54 08.6	+1.0
MAKZ	Makanchi	6.75	46	Pn	Pn	15 54 08.6	+1.0
MK31	Makanchi Array	6.91	47	⇓Pn	Pn	15 54 11.1	+1.3
	38nm,0.5s						
MK31				⇓Sn	Sn	15 55 30.0	+1.3
	33nm,0.5s						
MK31				⇓Lg	Lg	15 56 06.5	
	345nm,0.7s						
MK31	Makanchi Array	6.91	47	PN	Pn	15 54 11.1	+1.3
MK31				SN	Sn	15 55 29.9	+1.3
MK31	Makanchi Array	6.91	47	Pn	Pn	15 54 10.8	+1.0
MKAR	Makanchi Array	6.91	47	Pn	Pn	15 54 11.3	+1.5
	12nm,0.3s,baz=226,slow=14,SNR=235						
MKAR				Sn	Sn	15 55 31.3	+2.7
	16nm,0.3s,baz=226,slow=25,SNR=5.2						
MKAR				Lg	Lg	15 56 02.5	
	13nm,0.3s,baz=226,slow=32,SNR=3.9						
MKAR				LR	LR	15 56 56.1	
	comp=Z,495nm,19.8s,baz=242,slow=39						
MKAR	Makanchi Array	6.91	47	Pn	Pn	15 54 10.8	+1.0
KURBB	Kurchatov Arra	8.70	15	Pn	Pn	15 54 33.6	-0.6
	1.7nm,0.3s,baz=187,slow=13,SNR=64						
KURBB				Sn	Sn	15 56 10.2	-2.3
	1.6nm,0.3s,baz=198,slow=28,SNR=5.4						
KURBB				Lg	Lg	15 56 59.6	
	4.8nm,0.3s,baz=202,slow=30,SNR=13						
NIL	Nilore	8.72	189	P	Pn	15 54 36.0	+1.3
NIL	Nilore	8.72	189	Pn	Pn	15 54 36.0	+1.3
CEP	Cherat	8.78	197	P	Pn	15 54 35.5	-0.1
KURK	Kurchatov	8.81	15	⇑Pn	Pn	15 54 35.5	-0.3
	54nm,1.0s						
KURK				⇓Lg	Lg	15 57 05.6	
	659nm,1.0s						
KURK	Kurchatov	8.81	15	P	Pn	15 54 33.7	-2.0
KURK						15 56 10.2	
KURK	Kurchatov	8.81	15	Pn	Pn	15 54 35.1	-0.6
KBL	Kabul	9.01	213	P	Pn	15 54 40.7	+1.8
KBL	Kabul	9.01	213		Pn	15 54 40.6	+1.8
WMQ	Urumqi	9.45	76	*e*P	Pn	15 54 49.9	+5.2
WMQ				S	Sn	15 56 34.8	+3.7
WMQ				smax	smax		
	comp=N,180nm,1.1s						
WMQ				smax	smax		
	comp=E,160nm,0.9s						
WMQ	Urumqi	9.45	76	P	Pn	15 54 44.6	-0.1
WMQ	Urumqi	9.45	76	Pn	Pn	15 54 44.6	-0.1
THW	Thamme Wali	9.81	196	P	Pn	15 54 50.4	+0.8
THN	Thein Dam	9.85	176	*e*P	Pn	15 54 50.5	+0.4
BVAR	Borovoye Array	11.18	346	Pn	Pn	15 55 05.8	-2.5
	1.2nm,0.3s,baz=147,slow=13,SNR=24						
BVAR				Sn	Sn	15 57 12.2	-1.1
	2.8nm,0.3s,baz=141,slow=19,SNR=5.2						
BVAR				Lg	Lg	15 58 17.3	
	6.3nm,0.3s,baz=132,slow=26,SNR=2.3						
BRVK	Borovoye	11.23	345	⇓Pn	Pn	15 55 07.8	-1.2
	12nm,0.7s						
BRVK				⇑Sn	Sn	15 57 17.5	+2.9
	43nm,0.6s						
BRVK				⇓Lg	Lg	15 58 25.2	
	604nm,1.2s						
BRVK	Borovoye	11.23	345	*ce*P	Pn	15 55 07.9	-1.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	Borovoye	11.23	345	Pn	Pn	15 55 07.7	-1.2
DGZ	Jazzator, Alta	11.40	45	*c i*P	Pn	15 55 13.4	+1.9
AB31	Akbulak array	12.58	309	⇑Pn	Pn	15 55 26.3	-1.1
	comp=Z,37nm,0.7s,baz=134,slow=11,SNR=4.9						
AB31				⇑Sn	Sn	15 57 47.1	-0.6
	comp=Z,11nm,0.6s,baz=112,slow=24,SNR=4.6						
AB31				⇓Lg	Lg	15 59 08.4	
	comp=Z,46nm,0.8s						
AB31	Akbulak array	12.58	309	P	Pn	15 55 26.3	-1.1
AB31				SN	Sn	15 57 47.1	-0.6
ABKAR	Akbulak array	12.58	309	Pn	Pn	15 55 26.2	-1.3
ABKAR	Akbulak array	12.58	309	Pn	Pn	15 55 25.9	-1.5
HRA	Herat	12.71	236		Pn	15 55 30.3	+0.8
ZAA0	Zalesovo Array	13.39	26	⇑Pn	Pn	15 55 38.3	-0.1
	comp=Z,2.9nm,0.4s						
ZAA0				⇑Sn	Sn	15 58 08.7	+1.5
	comp=Z,4.5nm,0.6s						
ZAA0				⇑Lg	Lg	15 59 32.3	
	comp=Z,16nm,0.8s						
ZAA0	Zalesovo Array	13.39	26	Pn	Pn	15 55 37.2	-1.1
ZALV	Zalesovo Beam	13.39	26	Pn	Pn	15 55 38.1	-0.2
	comp=Z,4.5nm,0.3s,baz=220,slow=17,SNR=50						
ZALV				Sn	Sn	15 58 02.7	-4.5
	comp=Z,2.0nm,0.3s,baz=222,slow=26,SNR=6.2						
ZALV				Lg	Lg	15 59 27.3	
	comp=Z,1.7nm,0.3s,baz=213,slow=25,SNR=2.0						
ZALV				LR	LR	16 01 08.6	
	comp=Z,140nm,18.8s,baz=218,slow=39						
GEYT	Alibeck	13.61	257	Pn	Pn	15 55 38.5	-3.0
	comp=Z,1.1nm,0.3s,baz=72,slow=9.5,SNR=14						
GEYT				Sn	Sn	15 58 03.1	-10
	comp=Z,0.4nm,0.3s,baz=66,slow=15,SNR=1.5						
GEYT				LR	LR	16 00 46.7	
	comp=Z,105nm,22.0s,baz=35,slow=37						
GEYT	Alibeck	13.61	257	Pn	Pn	15 55 38.1	-3.4
GYA0	ALIBECK ARRAY	13.61	257	P	P	15 55 48.7	-1.9
GYA0B	ALIBECK ARRAY	13.61	257	⇑Pn	Pn	15 55 43.7	+2.2
GYA0B				⇓Lg	Lg	15 59 40.2	
GYA0B	ALIBECK ARRAY	13.61	257	Pn	Pn	15 55 39.6	-1.9
AKTO	Aktyubinsk	14.24	311	Pn	Pn	15 55 48.6	-1.5
	comp=Z,2.4nm,0.3s,baz=120,slow=14,SNR=39						
AKTO				Sn	Sn	15 58 19.5	-8.6
	comp=Z,0.4nm,0.3s,baz=2.2,slow=18,SNR=1.3						
AKTO				Lg	Lg	16 00 00.7	
	comp=Z,0.7nm,0.3s,baz=47,slow=2.2,SNR=4.1						
AKTO				LR	LR	16 01 54.6	
	comp=Z,240nm,19.5s,baz=128,slow=40						
AKTO	Aktyubinsk	14.24	311	⇑Pn	Pn	15 55 49.4	-0.7
	comp=Z,52nm,1.1s						
AKTO				⇓Sn	Sn	15 58 29.7	+1.6
	comp=Z,63nm,1.4s						
AKTO				⇓Lg	Lg	15 59 59.6	
	comp=Z,77nm,1.1s						
DANN	Dangsing	15.63	150	*e*P	Pn	15 56 04.8	-4.3
	comp=Z,32nm,0.5s						
KKN	Kakani	16.72	147	*e*P	Pn	15 56 18.7	-4.4
	comp=Z,21nm,0.7s						
DMN	Daman	16.81	147	*e*P	Pn	15 56 21.3	-2.9
	comp=Z,28nm,0.9s						
GUN	Gumba	16.87	145	*e*P	Pn	15 56 20.6	-4.4
	comp=Z,20nm,0.7s						
PKIN	Phulchoki	16.96	147	*e*P	Pn	15 56 21.9	-4.2
PKI	Pulchoki	16.97	147	*e*P	Pn	15 56 21.6	-4.7
	comp=Z,29nm,0.8s						
SVE	Sverdlovsk	17.22	333	*e*P	Pn	15 56 26.9	-2.0
SVE				*e*S	Sn	15 59 30.6	-10
SVE				pmax	pmax		
	comp=Z,21nm,1.0s						
SVE				MLR	MLR		
	comp=Z,439nm,15.0s						
ARU	Arti	17.67	329	P	Pn	15 56 33.0	-1.5
	comp=Z,0.0nm,0.3s,baz=145,slow=8.1,SNR=28						
ARU				S	Sn	15 59 41.9	-9.4
	comp=Z,0.0nm,0.3s,baz=292,slow=16,SNR=1.9						
ARU				Lg	Lg	16 01 45.2	
	comp=Z,0.0nm,0.3s,baz=346,slow=23,SNR=3.2						
ARU				LR	LR	16 03 37.5	
	comp=Z,191nm,20.5s,baz=132,slow=38						
ARU	Arti	17.67	329	*d i*P	Pn	15 56 32.7	-1.8
ARU				S	Sn	15 59 47.8	-3.5
ARU				pmax	pmax		
	comp=Z,13nm,0.7s						
ARU	Arti	17.67	329		Pn	15 56 32.3	-2.2
RAMN	Ramite	18.02	144	*e*P	Pn	15 56 35.8	-3.4
	comp=Z,26nm,0.6s						
LSA	Lhasa	18.10	129	P	P	15 56 42.4	+1.5
LSA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LSA	Lhasa	18.10	129		P	15 56 42.4	+1.5
TAPN	Taplejung	18.17	141	*e*P	Pn	15 56 39.1	-2.1
	comp=Z,22nm,0.8s						
ODAN	Odare	18.44	143	*e*P	P	15 56 41.8	-2.6
	comp=Z,32nm,0.7s						
GTA	Gaotai	19.00	90	*e*P	Pn	15 56 51.3	+0.2
GTA				pP	sP	15 56 59.5	+4.4
GTA				sP	pP	15 57 03.6	+10
GTA				pmax	pmax		
	comp=Z,31nm,4.1s						
GTA				LR	LR		
	comp=Z,340nm,10.5s						
GTA				LR	LR		
	comp=Z,270nm,10.9s						
GTA				LR	LR		
	comp=Z,340nm,11.3s						
MOY	Mondy	20.00	53	*e*P	Pn	15 57 02.6	-0.3
MOY				pmax	pmax		
	comp=Z,14nm,1.7s						
BELG	Belogornoye	20.99	308	P	P	15 57 12.3	+0.5
	comp=Z,59nm,0.6s,baz=254,slow=1.4,SNR=22						
BELG				LR	LR	16 06 23.3	
	comp=Z,175nm,19.9s,baz=117,slow=40						
BELG	Belogornoye	20.99	308	*d i*P	P	15 57 12.2	+0.5
BELG				pmax	pmax		
	comp=Z,13nm,0.8s						
ZAK	Zakamensk	21.07	58	*e*P	P	15 57 13.8	+1.0
ZAK				pmax	pmax		
	comp=Z,23nm,0.9s						
GROC	Groznyy	21.40	282	*e*P	P	15 57 16.0	-0.3
GROC				*e*		15 57 35.7	
GROC				pmax	pmax		
	comp=Z,17nm,0.6s						
DDFL	Dedoflistskaro	21.46	278	P	P	15 57 19.0	+2.0
TLY	Talaya	21.59	54	P	P	15 57 21.1	+2.8
	comp=Z,2.7nm,0.7s,baz=206,slow=6.7,SNR=4.3						
TLY	Talaya	21.59	54	*e*P	P	15 57 23.9	+5.7
TLY				pmax	pmax		
	comp=Z,14nm,1.2s						
TLY				MLR	MLR		
	comp=Z,575nm,14.0s						
TLY	Talaya	21.59	54		P	15 57 20.9	+2.7
KZRT	Kazreti	22.74	278	P	P	15 57 34.6	+3.9
GNI	Garni	22.78	275	P	P	15 57 29.8	-1.4
	comp=Z,11nm,0.9s,baz=355,slow=20,SNR=2.7						
GNI				LR	LR	16 07 57.0	
	comp=Z,139nm,18.4s,baz=91,slow=41						
GNI	Garni	22.78	275	P	P	15 57 32.7	+1.4
GNI				pmax	pmax		
	comp=Z,31nm,1.1s						
GNI	Garni	22.78	275		P	15 57 32.7	+1.4
GNI				IAmb	IAmb	15 57 45.0	
	comp=Z,31nm,1.1s						
SONM	Songino Array	22.79	65	P	P	15 57 31.6	+0.3
	comp=Z,3.6nm,0.7s,baz=270,slow=10,SNR=13						
SONM				Lg	Lg	16 04 23.2	
	comp=Z,0.2nm,0.4s,baz=39,slow=35,SNR=1.8						
SONM				LR	LR	16 06 40.0	
	comp=Z,273nm,19.2s,baz=320,slow=37						
SONM	Songino Array	22.79	65	P	P	15 57 32.2	+0.9
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	Songino Array	22.79	65		P	15 57 32.2	+0.9
KIRV	Kirov	22.83	324	P	P	15 57 30.8	-0.6
	comp=Z,12nm,0.6s,baz=140,slow=8.2,SNR=6.5						
KIRV				Lg	Lg	16 04 27.7	
	comp=Z,7.9nm,0.6s,baz=359,slow=21,SNR=2.6						
KIRV	Kirov	22.83	324	*ce*P	P	15 57 32.2	+0.8
ZEI	Tsey	22.84	282	*e*P	P	15 57 33.9	+2.0
ZEI				pmax	pmax		
	comp=Z,11nm,1.3s						
LZH	Lanzhou	23.16	96	⇓P	P	15 57 35.4	+0.2
LZH				pP	sP	15 57 42.8	+2.8
LZH				sP	pP	15 57 47.3	+8.8
LZH				S	S	16 01 45.8	-1.3
LZH				sS	Sn	16 01 59.8	-4.1
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
LZH				pmax	pmax		
	comp=Z,99nm,6.0s						
LZH				LR	LR		
	comp=Z,370nm,14.1s						
LZH				LR	LR		
	comp=Z,490nm,14.6s						
LZH				LR	LR		
	comp=Z,450nm,15.6s						
GOF	Gofitskoye	23.18	288	⇑*e*P	P	15 57 32.8	-2.4
GOF				pmax	pmax		
	comp=Z,25nm,0.6s						
UOSS	Minazif	23.22	228	P	P	15 57 36.3	+0.6
ULN	Ulaanbaatar	23.23	65	P	P	15 57 36.4	+0.5
ULN				pmax	pmax		
	comp=Z,57nm,1.7s						
ULN	Ulaanbaatar	23.23	65		P	15 57 36.4	+0.5
ULN				IAmb	IAmb	15 57 43.2	
	comp=Z,57nm,1.7s						
KBZ	Khabaz	23.42	284	P	P	15 57 38.1	+0.5
	comp=Z,2.4nm,0.7s,baz=82,slow=8.8,SNR=8.0						
KBZ				LR	LR	16 08 33.7	
	comp=Z,119nm,18.9s,baz=66,slow=41						
KIV	Kislovodsk	23.55	285	*e*P	P	15 57 39.0	0.0
KIV				*e*S	S	16 01 53.1	0.0
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,238nm,14.0s						
KIV	Kislovodsk	23.55	285		P	15 57 39.8	+0.8
KIV				IAmb	IAmb	15 58 00.1	
	comp=Z,20nm,0.8s						
NEY	Neytrino	23.62	283	*i* P	P	15 57 41.4	+1.6
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VRH	Novokhopyorsk	24.29	303	*e*P	P	15 57 46.0	+0.2
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
GEVA	Gevas	24.58	271	P	P	15 57 49.7	+0.9
HYB	Hyderabad	24.97	172	*i* P	P	15 57 56.0	+3.7
GUZR	Guzeripl'	25.38	286	*d i*P	P	15 57 57.1	+1.2
MIB	Mutribah	25.45	250	*e*P		15 57 52.1	
CD2	Chengdu	25.63	107	P	P	15 58 00.9	+2.6
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,330nm,12.2s						
CD2				LR	LR		
	comp=Z,300nm,12.5s						
CD2				LR	LR		
	comp=Z,420nm,21.6s						
SOC	Sochi	25.73	285	*e*P	P	15 58 01.5	+2.5
SOC				*e*		15 58 33.9	
SOC				*e*S	S	16 02 31.1	+3.3
SOC				*e*SS	SnSn	16 03 22.3	0.0
SOC				*e*SSS	SSS	16 03 43.6	
SOC				pmax	pmax		
	comp=Z,25nm,0.9s						
SOC				MLR	MLR		
	comp=Z,208nm,17.0s						
VORD	Divnogorie	25.78	302	*e*P	P	15 57 59.0	-0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RDF	Al-Radifah	25.84	248	*e*P		15 57 55.8	
RST	Umm Al-Ruwaisa	25.87	250	*e*P		15 57 56.2	
VSR	Storozhevoye	25.89	303	*e*P	P	15 57 59.6	-0.7
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KOPT	Kop Dagi	25.95	277		P	15 58 02.0	+0.6
MARD	Mardin	26.62	271	P	P	15 58 08.5	+1.3
MARD				IAmb	IAmb	15 58 09.5	
	comp=Z,14nm,0.7s						
HHC	Hu-ho-hao-te	27.29	81	*e*P	P	15 58 14.8	+1.5
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.4s						
HHC				LR	LR		
	comp=Z,270nm,11.8s						
HHC				LR	LR		
	comp=Z,370nm,12.4s						
HHC				LR	LR		
	comp=Z,350nm,11.7s						
MALT	Malatya	28.01	274	P	P	15 58 22.4	+2.7
OBN	Obninsk	28.02	311	⇓*e*P	P	15 58 19.9	+0.4
OBN						15 59 06.0	
OBN				*e*PPP	PPP	15 59 17.0	
OBN						16 01 34.0	
OBN				pmax	pmax		
	comp=Z,14nm,1.7s						
OBN				MLR	MLR		
	comp=Z,107nm,15.0s						
KLMR	Klimovskoe	28.31	323	*e*P	P	15 58 19.5	-2.4
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	Klimovskoe	28.31	323	*e*P	P	15 58 19.6	-2.4
KLMR				AMP		15 58 31.3	
	comp=Z,16nm,1.5s						
KMI	Kunming	28.57	118	⇑P	P	15 58 28.9	+4.0
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				LR	LR		
	comp=Z,130nm,16.0s						
KMI				LR	LR		
	comp=Z,260nm,18.3s						
KMI				LR	LR		
	comp=Z,290nm,23.5s						
BOD	Bodaibo	28.99	44	*e*P	P	15 58 32.3	+4.2
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GAZ	Gaziantep	29.31	273	P	P	15 58 32.3	+1.1
GYA	Guiyang	30.34	111	⇑P	P	15 58 44.8	+4.3
GYA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TMCR	Tamitsa	30.41	329	*e*P	P	15 58 40.2	-0.3
TMCR				pmax	pmax		
	comp=Z,12nm,0.6s						
ILGA	Ilgaz	30.63	282	P	P	15 58 44.1	+1.0
ILGA				IAmb	IAmb	15 58 45.1	
	comp=Z,6.8nm,0.7s						
RAYN	Ar Rayn	30.79	242	P	P	15 58 44.1	-0.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	30.79	242		P	15 58 44.1	-0.3
BR131	Keskin Array S	31.08	279	P	P	15 58 47.4	+0.5
BR131				pmax	pmax		
	comp=Z,13nm,0.8s						
BR131	Keskin Array S	31.08	279		P	15 58 47.4	+0.5
BR131				IAmb	IAmb	15 58 48.5	
	comp=Z,13nm,0.8s						
BRTR	Keskin Array B	31.08	279	P	P	15 58 47.8	+0.8
	comp=Z,6.4nm,0.7s,baz=92,slow=8.8,SNR=52						
BRTR	Keskin Array B	31.08	279	*ce*P	P	15 58 47.7	+0.8
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRTR	Keskin Array B	31.08	279	P	P	15 58 47.5	+0.6
CMAR	Chiang Mai Arr	31.29	132	P	P	15 58 48.5	-0.3
	comp=Z,0.2nm,0.3s,baz=324,slow=9.0,SNR=2.3						
CMAR				LR	LR	16 14 40.4	
	comp=Z,62nm,19.3s,baz=295,slow=43						
CMAR	Chiang Mai Arr	31.29	132	*ce*P	P	15 58 55.4	+6.6
AKASG	Malin Array Be	32.15	301	P	P	15 58 56.2	+0.1
	comp=Z,2.8nm,0.8s,baz=74,slow=9.0,SNR=16						
AKASG				PP	PnPn	15 59 54.8	-6.8
	comp=Z,1.4nm,0.6s,baz=72,slow=14,SNR=4.5						
AKASG				LR	LR	16 14 31.3	
	comp=Z,155nm,19.2s,baz=295,slow=41						
AKASG	Malin Array Be	32.15	301	P	P	15 58 55.7	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	32.15	301	P	P	15 58 55.7	-0.3
AKBB	Malin Array Si	32.15	301	P	P	15 58 55.7	-0.3
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	32.15	301	P	P	15 58 55.7	-0.3
AKBB				IAmb	IAmb	15 58 57.3	
	comp=Z,7.5nm,0.8s						
MDUB	Mudurnu	32.63	282	P	P	15 59 00.4	-0.1
LVZ	Lovozero	33.43	334	P	P	15 59 08.1	+1.0
LVZ				pmax	pmax		
	comp=Z,88nm,1.4s						
LVZ	Lovozero	33.43	334	P	P	15 59 08.1	+1.0
APA	Apatity	33.69	333	⇑*i*P	P	15 59 19.2	+10
APA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,500nm,15.0s						
FIA1	FINESS Array S	34.68	320	P	P	15 59 18.1	+0.1
FIA1				IAmb	IAmb	15 59 55.3	
	comp=Z,25nm,1.4s						
FINES	FINESS Array B	34.69	320	P	P	15 59 18.5	+0.4
	comp=Z,2.3nm,0.6s,baz=97,slow=9.7,SNR=9.2						
FINES				PP	PP	16 00 35.3	-1.1
	comp=Z,2.1nm,0.7s,baz=107,slow=14,SNR=3.3						
FINES				LR	LR	16 14 17.4	
	comp=Z,125nm,18.9s,baz=82,slow=38						
FINES	FINESS Array B	34.69	320	*i* P	P	15 59 18.7	+0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	34.69	320	P	P	15 59 18.3	+0.3
ELL	Elmali	34.88	276	P	P	15 59 20.1	0.0
ELL				pmax	pmax		
	comp=Z,77nm,1.6s						
ELL	Elmali	34.88	276	P	P	15 59 20.1	0.0
MLR	Muntele Rosu	35.04	292	P	P	15 59 22.9	+1.5
MLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MLR	Muntele Rosu	35.04	292	P	P	15 59 22.9	+1.5
MLR				IAmb	IAmb	15 59 24.1	
	comp=Z,9.8nm,1.1s						
BURAR	Bucovina Array	35.12	296	P	P	15 59 22.0	0.0
BUR08	Bucovina Ar. S	35.12	296	P	P	15 59 22.3	+0.2
MANT	Manisa	35.21	280	P	P	15 59 22.7	-0.5
PALK	Pallekele	35.23	170	P	P	15 59 26.6	+3.4
PALK				pmax	pmax		
	comp=Z,36nm,1.5s						
PALK	Pallekele	35.23	170	P	P	15 59 26.6	+3.4
PALK				IAmb	IAmb	15 59 27.7	
	comp=Z,36nm,1.4s						
NJ2	Nanjing	36.09	92	*e*P	P	15 59 32.0	+1.6
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
ALN	Alexandroupoli	36.21	285	P	P	15 59 31.7	+0.3
ALN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ALN	Alexandroupoli	36.21	285	P	P	15 59 31.7	+0.3
KWP	Kalwaria Pacla	36.43	300	P	P	15 59 33.6	+0.5
KWP				pmax	pmax		
	comp=Z,14nm,0.7s						
KWP	Kalwaria Pacla	36.43	300	P	P	15 59 33.6	+0.5
KWP				IAmb	IAmb	15 59 35.7	
	comp=Z,14nm,0.7s						
KEV	Kevo	36.74	334	P	P	15 59 34.6	-0.9
KEV				pmax	pmax		
	comp=Z,49nm,1.4s						

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KEV    Kevo              36.74 334  P      P      15 59 34.6 -0.9
KOLS   Kolonicke sedl    36.82 299 ePP     PP     16 01 02.3 +2.1
ARCES  ARCESS Array B    37.15 334  P      P      15 59 39.9 +0.8
       comp=Z,6.7nm,0.5s,baz=102,slow=9.4,SNR=66
ARCES                               LR     LR     16 15 22.3
       comp=Z,156nm,18.5s,baz=280,slow=37
ARCES  ARCESS Array B    37.15 334  P      P      15 59 39.7 +0.7
ARCES                               pmax   pmax
       comp=Z,10.0nm,0.8s
ARCES  ARCESS Array B    37.15 334  P      P      15 59 39.7 +0.7
NIE    Niedzica          38.01 300 eP      P      15 59 48.5 +1.8
OJC    Ojcow             38.19 301 eP      P      15 59 48.8 +0.7
OJC    Ojcow             38.19 301  P      P      15 59 47.8 -0.3
OJC                                 pmax   pmax
       comp=Z,8.0nm,0.8s
OJC    Ojcow             38.19 301  P      P      15 59 47.8 -0.3
PSZ    Piszkesteto       38.58 298  P      P      15 59 52.0 +0.6
PSZ                                 pmax   pmax
       comp=Z,5.0nm,0.9s
PSZ    Piszkesteto       38.58 298  P      P      15 59 52.0 +0.6
TIXI   Tiksi             39.26  24⇑eP      P      15 59 57.2 +0.4
TIXI   Tiksi             39.26  24  P      P      15 59 55.9 -0.9
KLR    Kul'dur           39.41  60  P      P      15 59 58.6 +0.3
       comp=Z,0.8nm,0.7s,baz=280,slow=19,SNR=1.9
KLR    Kul'dur           39.41  60 i P     P      16 00 00.6 +2.3
KLR                                 pmax   pmax
       comp=Z,10.0nm,2.5s
DIVS   Divibare          39.49 292  P      P      16 00 00.1 +0.9
MORC   Moravsky Berou    39.70 301 eP      P      16 00 01.4 +0.6
MORC   Moravsky Berou    39.70 301  P      P      16 00 00.2 -0.6
MORC                                pmax   pmax
       comp=Z,4.0nm,0.7s
MORC   Moravsky Berou    39.70 301  P      P      16 00 00.2 -0.6
CSKK   Cskako            39.78 297 eP      P      16 00 02.4 +1.0
JAVC   Velka Javorina    39.81 300 eP      P      16 00 11.5  +10
KRLC   Kraliky           40.12 302 eP      P      16 00 04.6 +0.3
KRLC   Kraliky           40.12 302 eP      P      16 00 04.6 +0.3
DPC    Dobruska-Polom    40.35 302 eP      P      16 00 06.9 +0.7
DPC    Dobruska-Polom    40.35 302 eP      P      16 00 06.9 +0.7
KSRS   Korea Array       40.39  79  P      P      16 00 05.3 -1.3
       comp=Z,0.8nm,0.8s,baz=278,slow=8.5,SNR=1.4
KSRS                                LR     LR     16 16 55.3
       comp=Z,54nm,20.2s,baz=87,slow=36
VRAC   Vranov            40.41 301 eP      P      16 00 08.1 +1.5
CHVC   Chvalec           40.47 303 eP      P      16 00 08.3 +1.1
UPC    Upice             40.52 303 eP      P      16 00 08.2 +0.7
UPC    Upice             40.52 303 eP      P      16 00 08.2 +0.7
KRUC   Moravsky          40.59 300 eP      P      16 00 09.2 +1.1
CONA   Conrad Observa    41.21 299 i P     P      16 00 13.5 +0.2
       comp=Z,5.5nm,0.9s,SNR=4.9
PVCC   Panska Ves        41.41 303 eP      P      16 00 15.8 +0.9
PVCC   Panska Ves        41.41 303 eP      P      16 00 15.8 +0.9
PRU    Pruhonice         41.55 302 eP      P      16 00 16.6 +0.6
PRU    Pruhonice         41.55 302 eP      P      16 00 16.6 +0.6
NC405  NORSAR Array S    41.57 319  P      P      16 00 15.7 -0.4
NC405                               IAmb   IAmb   16 00 17.3
       comp=Z,20nm,0.8s
NC405                               PP     PP     16 01 45.2 -6.6
ARSA   Arzberg           41.61 298 eP      P      16 00 16.3 -0.3
       comp=Z,1.2nm,0.6s
NC602  NORSAR Array S    41.68 319  P      P      16 00 17.0 +0.1
NC602                               IAmb   IAmb   16 01 37.4
       comp=Z,54nm,1.6s
NC602                               PP     PP     16 01 49.5 -3.5
NC303  NORSAR Array S    41.73 319  P      P      16 00 18.0 +0.6
NB201  NORSAR Array S    41.78 319  P      P      16 00 17.6 -0.2
NB2    NORSAR Subarra    41.82 319  P      P      16 00 18.0 -0.1
       comp=Z,5.7nm,0.6s,baz=88,slow=8.6
NOA    NORSAR Array B    41.82 319  P      P      16 00 18.1  0.0
       comp=Z,4.5nm,0.6s,baz=87,slow=8.2,SNR=20
NOA                                 LR     LR     16 18 20.9
       comp=Z,148nm,18.6s,baz=90,slow=37
NAO01  NORSAR Array S    41.99 319  P      P      16 00 19.5  0.0
NAO01                               IAmb   IAmb   16 01 34.9
       comp=Z,56nm,1.4s
NC204  NORSAR Array S    42.02 319  P      P      16 00 20.1 +0.3
NC204                               IAmb   IAmb   16 01 50.6
       comp=Z,43nm,1.4s
NBO00  NORSAR Array S    42.03 319  P      P      16 00 19.7 -0.1
NBO00                               IAmb   IAmb   16 00 59.2
       comp=Z,59nm,1.6s
SOKA   Soboth            42.09 297 eP      P      16 00 20.2 -0.4
       comp=Z,4.6nm,1.0s
CLL    Collm             42.20 304 i P     P      16 00 21.8 +0.5
       comp=Z,9.0nm,1.0s
CLL                                ePP     PP     16 01 58.0 -0.8
CLL                                 LV            16 18 00.0
       comp=Z,100nm,18.6s
CLL    Collm             42.20 304 i P     P      16 00 21.8 +0.5
CLL                                 pmax   pmax
       comp=Z,9.0nm,1.0s
CLL    Collm             42.20 304  P      P      16 00 20.4 -0.9
GEC2   GERESS Array S    42.36 301  P      P      16 00 22.9 +0.1
GERES  GERESS Array B    42.36 301  P      P      16 00 23.8 +1.0
       comp=Z,3.1nm,0.6s,baz=68,slow=8.7,SNR=26
GERES                               LR     LR     16 19 31.1
       comp=Z,121nm,18.9s,baz=76,slow=38
GERES  GERESS Array B    42.36 301  P      P      16 00 23.2 +0.4
KHC    Kasperske Hory    42.37 301ceP      P      16 00 24.1 +1.3
KHC                                 pmax   pmax
       comp=Z,16nm,2.5s
KHC    Kasperske Hory    42.37 301 eP      P      16 00 23.1 +0.3
KHC    Kasperske Hory    42.37 301  P      P      16 00 23.4 +0.7
OBKA   Obir              42.46 297 eP      P      16 00 23.8 +0.2
       comp=Z,9.5nm,1.0s
KBA    Koelnbreinsper    43.08 298 eP      P      16 00 28.9 +0.1
       comp=Z,1.5nm,0.6s
TRI    Trieste           43.22 296  P      P      16 00 29.8 +0.2
TRI                                 pmax   pmax
       comp=Z,17nm,0.8s
TRI    Trieste           43.22 296  P      P      16 00 29.8 +0.2
TRI                                 IAmb   IAmb   16 00 31.1
       comp=Z,18nm,0.8s
WTTA   Wattenberg        44.14 299 eP      P      16 00 37.2 -0.1
       comp=Z,3.9nm,0.5s
WATA   Walderalm         44.16 299 eP      P      16 00 36.6 -0.7
       comp=Z,4.9nm,0.6s
INTR   Introdacqua       44.39 291  P      P      16 00 39.1 -0.2
INTR                                IAmb   IAmb   16 00 40.5
       comp=Z,24nm,0.9s
SQTA   Sankt Quirin      44.43 299 eP      P      16 00 39.1 -0.5
       comp=Z,1.6nm,0.5s
MOTA   Moosalm           44.46 299 eP      P      16 00 39.6 -0.2
       comp=Z,4.2nm,0.8s
NRCA   Norcia            44.63 293  P      P      16 00 41.1 -0.1
NRCA                                IAmb   IAmb   16 01 38.8
       comp=Z,16nm,1.1s
RETA   Reutte            44.63 300 eP      P      16 00 41.1 -0.1
       comp=Z,12nm,0.9s
TEOL   Teolo             44.73 296  P      P      16 00 42.4 +0.6
TEOL                                IAmb   IAmb   16 00 43.3
       comp=Z,18nm,0.7s
DAVA   Damuels           45.27 300 eP      P      16 00 46.3 +0.1
       comp=Z,21nm,0.8s
BFO    Black Forest      45.92 301  P      P      16 00 51.7 +0.4
BFO                                 pmax   pmax
       comp=Z,30nm,1.7s
BFO    Black Forest      45.92 301  P      P      16 00 51.7 +0.4
BFO                                 IAmb   IAmb   16 00 53.4
       comp=Z,30nm,1.7s
VLC    Villacollemand    46.00 295  P      P      16 00 52.5 +0.6
VLC                                 IAmb   IAmb   16 00 54.5
       comp=Z,17nm,0.7s
MSSA   Maissana          46.53 296  P      P      16 00 56.4 +0.3
SENIN  Lac Senin/Sane    47.25 299  P      P      16 01 01.9  0.0
SENIN                               IAmb   IAmb   16 01 02.4
       comp=Z,22nm,1.6s
BNI    Bardonecchia      48.13 298  P      P      16 01 08.9 +0.2
BNI                                 pmax   pmax
       comp=Z,15nm,0.9s
BNI    Bardonecchia      48.13 298  P      P      16 01 08.9 +0.2
BNI                                 IAmb   IAmb   16 01 10.8
       comp=Z,16nm,0.9s
MJAR   Matsushiro Arr    48.21  75  P      P      16 01 11.3 +2.0
       comp=Z,4.8nm,0.9s,baz=275,slow=7.6,SNR=5.7
SSB    Saint Sauveur     49.44 299  P      P      16 01 18.7 +0.1
SSB                                 pmax   pmax
       comp=Z,30nm,1.5s
SSB    Saint Sauveur     49.44 299  P      P      16 01 18.7 +0.1
SSB                                 IAmb   IAmb   16 01 19.6
       comp=Z,30nm,1.5s
ESK    Eskdalemuir       50.44 313  P      P      16 01 26.6 +0.6
ESK                                 pmax   pmax
       comp=Z,51nm,1.5s
ESK    Eskdalemuir       50.44 313  P      P      16 01 26.6 +0.6
LFF    La Frestale       52.04 300 eP      P      16 01 38.5 +0.4
LFF                                 pmax   pmax
       comp=Z,46nm,1.4s
BILL   Bilibino          52.07  28⇓eP      P      16 01 37.6 -0.5
BILL                               e              16 01 43.2
BILL                                SSS    SSS    16 14 19.0
BILL                                pmax   pmax
       comp=Z,3.0nm,1.3s
BILL                                MLR    MLR
       comp=Z,81nm,19.0s
PETK   Petropavlovsk-    53.75  48  LR     LR     16 24 43.1
       comp=Z,76nm,19.6s,baz=122,slow=36
ESDC   Sonseca Array     57.57 296  P      P      16 02 17.8 -0.6
       comp=Z,2.5nm,0.7s,baz=51,slow=7.6,SNR=12
CISI   Cisompet, Garu    57.96 141  P      P      16 02 24.0 +2.7
ANM    Nome              63.52  25  P      P      16 02 59.2 +0.7
ANM                                 pmax   pmax
       comp=Z,15nm,1.8s
ANM    Nome              63.52  25  P      P      16 02 59.2 +0.7
ANM                                 IAmb   IAmb   16 04 25.0
       comp=Z,16nm,1.8s
AMKA   Amchitka          65.98  42  P      P      16 03 17.3 +2.6
INK    Inuvik            67.68  11  P      P      16 03 25.1 -0.2
       comp=Z,2.6nm,0.9s,baz=340,slow=7.9,SNR=5.4
INK    Inuvik            67.68  11  P      P      16 03 25.1 -0.2
INK                                 pmax   pmax
       comp=Z,6.0nm,1.1s
INK    Inuvik            67.68  11  P      P      16 03 25.1 -0.2
INK                                 IAmb   IAmb   16 03 25.9
       comp=Z,5.6nm,1.1s
C36M   Paulatuk          67.80   7  P      P      16 03 25.3 -0.8
C36M                                IAmb   IAmb   16 03 36.3
       comp=Z,21nm,1.8s
MDM    Murphy Dome       67.90  18  P      P      16 03 26.7 -0.1
MDM                                 IAmb   IAmb   16 04 04.7
       comp=Z,7.6nm,1.4s
BPAW   Bear Paw Mtn.     67.94  20  P      P      16 03 26.0 -1.1
BPAW                                IAmb   IAmb   16 04 48.5
       comp=Z,26nm,1.8s
ILAR   Eielson Array     68.37  18  P      P      16 03 28.7 -1.0
       comp=Z,0.5nm,0.7s,baz=328,slow=4.8,SNR=7.6
ILAR   Eielson Array     68.37  18  P      P      16 03 28.9 -0.8
ILAR   Eielson Array     68.37  18  P      P      16 03 28.9 -0.8
KTH    Kantishna Hill    68.41  20  P      P      16 03 29.6 -0.5
PPLA   Purkeypile        68.61  21  P      P      16 03 29.4 -2.0
TOA0   Torodi Ar. Sit    68.92 269  P      P      16 03 32.6 -1.3
TOA0                                IAmb   IAmb   16 03 33.4
       comp=Z,7.6nm,0.8s
TORD   Torodi Ar. Bea    68.92 269  P      P      16 03 32.6 -1.3
       comp=Z,6.4nm,0.7s,baz=43,slow=5.6,SNR=20
TORD   Torodi Ar. Bea    68.92 269  P      P      16 03 32.3 -1.7
SKT    Skwentna          69.54  21         P      16 03 41.6 +4.5
SKT                                 IAmb   IAmb   16 03 49.7
       comp=Z,10nm,1.2s
DHY    Denali Highway    69.69  19  P      P      16 03 41.6 +3.4
DHY                                 IAmb   IAmb   16 04 03.0
       comp=Z,16nm,1.7s
RIDG   Independent Ri    69.71  18  P      P      16 03 37.2 -1.0
SUA    Susitna One       70.18  21  P      P      16 03 41.9 +0.8
PAX    Paxson            70.24  18  P      P      16 03 41.6 +0.1
PAX                                 pmax   pmax
       comp=Z,11nm,1.4s
PAX    Paxson            70.24  18  P      P      16 03 41.5 +0.1
PAX                                 IAmb   IAmb   16 03 43.7
       comp=Z,10nm,1.4s
NIKH   Nikolski High     70.38  35  P      P      16 03 43.3 +0.9
SCM    Sheep Creek Mo    70.76  20  P      P      16 03 43.7 -0.9
SCM    Sheep Creek Mo    70.76  20  P      P      16 03 43.7 -0.9
AKUT   Akutan            70.83  33  P      P      16 03 44.8 -0.2
KOWA   Kowa              72.30 274  P      P      16 03 53.4 -1.1
KOWA                                IAmb   IAmb   16 03 54.4
       comp=Z,8.0nm,0.9s
BALM   Baldy             72.65  18  P      P      16 03 57.5 +1.4
BALM                                IAmb   IAmb   16 04 24.2
       comp=Z,33nm,1.7s
YKA    Yellowknife Ar    75.29   5  P      P      16 04 10.8 -0.6
       comp=Z,1.0nm,0.7s,baz=355,slow=5.5,SNR=23
FCC    Fort Churchill    78.91 354  P      P      16 04 30.8 -0.9
FCC                                 pmax   pmax
       comp=Z,11nm,1.7s
FCC    Fort Churchill    78.91 354  P      P      16 04 30.8 -0.9
FCC                                 IAmb   IAmb   16 05 13.1
       comp=Z,11nm,1.7s
WRA    Warramunga Arr    82.62 125  P      P      16 04 49.8 -2.3
       comp=Z,0.8nm,0.9s,baz=325,slow=4.1,SNR=2.6
BOSA   Boshof            84.11 222  P      P      16 04 58.7 -1.0
       comp=Z,2.2nm,0.8s,baz=70,slow=2.7,SNR=3.0
ASAR   Alice Springs     85.21 128  P      P      16 05 03.4 -1.9
       comp=Z,0.7nm,0.9s,baz=317,slow=5.3,SNR=3.4
PDAR   Pinedale Array    95.24   3  P      P      16 05 52.1 -0.6
       comp=Z,0.4nm,0.7s,baz=352,slow=2.7,SNR=4.4
```

BJI ***22*** *15:55:41.9±0.0, 12°.48S×167°.07E, h104^{km}, mB5.0/23, mb4.9/46*

NEIC ***22*** *15:55:43.8±1.9, 12°.97S±0°.08×166°.87E±0°.09, h119^{km}±6^{km}, mb4.7/114, Error ellipse: s-maj=14.2km s-min=9.7km az=61.0*

IDC ***22*** *15:55:45.2±2.7, 13°.04S×166°.92E, h135^{km}±23^{km}, mb4.1/18, mb1 4.2/20, mb1mx4.1/39, mbtmp4.5/20, MS3.7/3, Ms1 3.7/3, ms1mx3.1/25, Error ellipse: s-maj=17.2km s-min=14.2km az=102.0*

NOU ***22*** *15:55:46.2, 13°.02S×166°.81E, h127^{km}, mb4.7, Vanuatu Islands*

ISC 22 15:55:42.2±0.3, **12°.86S**±0°.05×**166°.93E**±0°.06, **h100**^{km}, **n169**, σ**1^{s}24**/171, **mb4.7**/77, **2C-1D**, **Santa Cruz Islands**

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Code   Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC      h  m  s    ISC
SANVU  Saraoutou          2.58 174  Pn     Pn     15 56 22.8 +0.4
SANVU                               Sn     Sn     15 56 53.2 -0.1
SANVU  Saraoutou          2.58 174  P      Pn     15 56 25.0 +2.6
DVP    Devils Point       4.99 166  P      Pn     15 56 58.3 +3.6
HNR    Honiara            7.65 296  P      Pn     15 57 34.3 +3.3
       45nm,0.3s,baz=197,slow=6.0,SNR=20
HNR                                 S      Sn     15 58 56.6 +0.5
       68nm,0.3s,baz=234,slow=23,SNR=8.3
HNR    Honiara            7.65 296         Pn     15 57 33.6 +2.7
HNR                                 Sn     Sn     15 58 56.9 +0.7
HNR    Honiara            7.65 296  P      Pn     15 57 34.1 +3.1
       273nm,0.9s
KOUNC  Koumac, New Ca     8.05 198  P      Pn     15 57 37.9 +1.5
MARNC  Mare, Loyalty      8.64 173  P      Pn     15 57 45.3 +1.0
YATNC  Mamie plateau,     9.15 180  P      Pn     15 57 52.4 +1.1
DZM    Mont Dzumac        9.17 183  P      Pn     15 57 52.9 +1.2
       4.4nm,0.3s,baz=196,slow=16,SNR=40
DZM    Mont Dzumac        9.17 183  P      Pn     15 57 52.9 +1.2
NOUC   Port Laguerre      9.21 184  P      Pn     15 57 54.0 +1.9
OUENC  Ouen Island, N     9.51 180  P      Pn     15 57 58.0 +1.9
PINNC  Pines Island,      9.71 177  P      Pn     15 58 01.2 +2.3
MSVF   Nonsavu           11.77 116  P      Pn     15 58 30.9 +4.0
FUNA   Funafuti          12.80  72  P      P      15 58 46.5 -1.0
RABL   Rabaul            16.94 299  P      P      15 59 34.9 +1.3
RABL                                IAmb   IAmb   15 59 47.0
       comp=Z,31nm,0.6s
EIDS   Eidsvold          19.44 228  P      P      16 00 02.4 +1.5
EIDS                                IAmb   IAmb   16 00 42.9
       comp=Z,50nm,1.6s
AFI    Afiamalu          20.74  95  P      Pn     16 00 19.5 +1.2
AFI                                 IAmb   IAmb   16 00 20.7
       comp=Z,33nm,0.9s
CTA    Charters Tower    21.08 247  P      P      16 00 18.9 +0.3
       comp=Z,10nm,1.0s,baz=77,slow=13,SNR=6.3
CTAO   Charters Tower    21.08 247  P      P      16 00 18.8 +0.3
CTAO                                IAmb   IAmb   16 01 01.2
       comp=Z,84nm,1.7s
ARMA   Armidale          22.48 217  P      P      16 00 32.7 -0.8
BKZ    Black Stump Fm    27.53 164  P      P      16 01 18.6 -0.9
BKZ                                 IAmb   IAmb   16 01 45.2
       comp=Z,24nm,1.4s
CAN    Canberra          27.62 213  P      P      16 01 18.2 -2.1
QRZ    Quartz Range      28.29 171  P      P      16 01 26.1 -0.1
BFZ    Birch Farm        28.89 165  P      P      16 01 29.4 -2.1
BHW    Baring Head       29.27 168  P      P      16 01 32.5 -2.4
STKA   Stephens Creek    29.99 227  P      P      16 01 41.4 +0.1
       comp=Z,3.4nm,0.6s,baz=52,slow=9.7,SNR=4.9
STKA                                PcP    PcP    16 04 40.3 -1.2
       comp=Z,1.8nm,0.5s,baz=92,slow=0.3,SNR=5.4
STKA                                LR     LR     16 11 39.9
       comp=Z,94nm,21.3s,baz=39,slow=32
STKA   Stephens Creek    29.99 227  P      P      16 01 39.6 -1.8
LTZ    Lake Taylor       30.17 172  P      P      16 01 41.5 -1.4
LTZ                                 IAmb   IAmb   16 01 59.8
       comp=Z,21nm,1.5s
RPZ    Rata Peaks        30.95 174  P      P      16 01 46.9 -2.8
       comp=Z,4.7nm,0.7s,baz=298,slow=4.8,SNR=5.9
RPZ    Rata Peaks        30.95 174  IAmb   IAmb   16 02 33.9
       comp=Z,17nm,1.2s
WR0    Warramunga Arr    31.82 253  P      P      16 01 56.5 -1.2
WR0                                 IAmb   IAmb   16 02 41.5
       comp=Z,30nm,1.8s
WKZ    Wanaka            31.91 177  P      P      16 01 56.6 -1.4
WKZ                                 IAmb   IAmb   16 02 32.7
       comp=Z,27nm,1.3s
WRAB   Tennant Creek     32.00 253  P      P      16 01 57.1 -2.1
WB2    Warramunga Arr    32.00 253  P      P      16 01 57.7 -1.5
WB2                                 IAmb   IAmb   16 02 10.4
       comp=Z,15nm,1.4s
WRA    Warramunga Arr    32.01 253  P      P      16 01 57.6 -1.7
       comp=Z,1.3nm,0.6s,baz=85,slow=9.3,SNR=14
WRA                                 PcP    PcP    16 04 45.5 -1.6
       comp=Z,0.8nm,0.9s,baz=87,slow=3.5,SNR=2.9
WRA    Warramunga Arr    32.01 253  P      P      16 01 56.4 -2.9
MLZ    Mavora Lakes      32.41 178  P      P      16 02 01.1 -1.5
MLZ                                 IAmb   IAmb   16 02 27.9
       comp=Z,27nm,1.4s
AS31   Alice Springs     33.07 246  P      P      16 02 07.0 -1.6
ASAR   Alice Springs     33.07 246  P      P      16 02 07.0 -1.7
       comp=Z,2.4nm,0.6s,baz=69,slow=10,SNR=43
ASAR                                pP     pP     16 02 32.7 +2.9
       comp=Z,2.8nm,0.7s,baz=74,slow=9.8,SNR=7.9
ASAR                                PcP    PcP    16 04 48.5 -1.6
       comp=Z,1.9nm,0.8s,baz=74,slow=2.1,SNR=10
ASAR                                LR     LR     16 14 37.8
       comp=Z,149nm,18.2s,baz=70,slow=34
TAU    Tasmania Unive    34.41 206  P      P      16 02 20.4 +0.5
NWAO   Narrogin (SRO)    49.44 238  P      P      16 04 21.4 -0.9
NWAO   Narrogin (SRO)    49.44 238  P      P      16 04 21.5 -0.9
NWAO                                IAmb   IAmb   16 04 28.8
       comp=Z,69nm,1.8s
KKM    Kota Kinabalu     53.77 287  P      P      16 04 54.5 -0.5
JMN    Monobe            56.01 327  P      P      16 05 11.5 +0.9
MJAR   Matsushiro Arr    56.11 332  P      P      16 05 10.3 -0.9
       comp=Z,2.7nm,0.9s,baz=165,slow=7.8,SNR=6.4
MJAR   Matsushiro Arr    56.11 332  IAmb   IAmb   16 05 12.1
       comp=Z,2.6nm,0.8s
MAT    Matsushiro        56.11 332  P      P      16 05 10.6 -0.6
MAT                                eS      S      16 12 55.0 +2.4
JSU    Suzuyama          56.30 322  P      P      16 05 13.1 +0.4
JNU    Nakatsue          57.22 324  P      P      16 05 19.1 -0.1
       comp=Z,18nm,1.0s,baz=180,slow=1.6,SNR=6.7
JNU    Nakatsue          57.22 324  P      P      16 05 19.4 +0.2
JHS    Saijyo            57.39 327  P      P      16 05 20.6 +0.3
SSLB   Suanglung         57.85 309  P      P      16 05 22.9 -0.9
YHNB   Yeheng            58.03 310  P      P      16 05 25.4 +0.3
KSRS   Korea Array       62.02 325  P      P      16 05 52.5 +0.6
       comp=Z,2.0nm,0.7s,baz=192,slow=10.0,SNR=5.9
NJ2    Nanjing           64.12 315 eP      P      16 06 07.0 +1.0
NJ2                                 pmax   pmax
       comp=Z,12nm,0.5s
VNDA   Vanda             64.71 181  P      P      16 06 10.0 +0.8
VNDA                                IAmb   IAmb   16 06 45.0
       comp=Z,17nm,1.6s
USRK   Ussuriysk Ar.     65.08 333  P      P      16 06 13.1 +1.1
       comp=Z,7.7nm,0.9s,baz=141,slow=6.4,SNR=9.5
USRK   Ussuriysk Ar.     65.08 333  P      P      16 06 12.9 +0.9
PETK   Petropavlovsk-    66.18 354  P      P      16 06 19.1 +0.2
       comp=Z,3.4nm,0.9s,baz=144,slow=5.3,SNR=4.9
PETK   Petropavlovsk-    66.18 354  P      P      16 06 19.9 +1.0
ENH    Enshi             69.94 309  P      P      16 06 42.1 -0.9
ENH                                 IAmb   IAmb   16 06 43.4
       comp=Z,12nm,0.8s
NONG   Nongkai           70.02 295  P      P      16 06 43.9 +0.2
GYA    Guiyang           70.39 304 ⇑P      P      16 06 46.3 +0.4
GYA                                 pmax   pmax
       comp=Z,9.0nm,1.0s
SLVN   Son La            70.58 298  P      P      16 06 46.2 -1.0
BJT    Baijiatuau        70.61 321  P      P      16 06 45.9 -0.9
BJT                                 IAmb   IAmb   16 06 47.5
       comp=Z,9.7nm,1.0s
BJI    Beijing           70.61 321  P      P      16 06 47.5 +0.7
BJI                                 pmax   pmax
       comp=Z,6.0nm,0.4s
XAN    Xi'an             72.19 312  P      P      16 06 56.8 +0.3
XAN                                 pP     pwP    16 07 26.8 +5.3
XAN                                 pmax   pmax
       comp=Z,15nm,0.7s
KMI    Kunming           73.05 301 ⇓P      P      16 07 02.9 +0.9
KMI                                 pmax   pmax
       comp=Z,23nm,0.6s
KMI    Kunming           73.05 301  P      P      16 07 02.5 +0.4
LAMP   Lampang           73.31 294  P      P      16 07 04.4 +1.0
CM04   Chiang Mai Arr    73.85 294  P      P      16 07 07.5 +0.9
CM01   Chiang Mai Arr    73.87 294  P      P      16 07 07.8 +1.2
CM05   Chiang Mai Arr    73.88 294  P      P      16 07 07.0 +0.3
CM02   Chiang Mai Arr    73.89 294  P      P      16 07 07.0 +0.2
CM31   Chiang Mai Arr    73.90 294  P      P      16 07 07.5 +0.7
CM31                                IAmb   IAmb   16 07 08.5
       comp=Z,10.0nm,0.8s
CMAR   Chiang Mai Arr    73.90 294  P      P      16 07 07.5 +0.6
       comp=Z,6.1nm,0.8s,baz=124,slow=4.6,SNR=47
CMAR                                pP     pwP    16 07 34.2  0.0
       comp=Z,1.2nm,0.8s,baz=119,slow=5.1,SNR=2.3
CMAR   Chiang Mai Arr    73.90 294  P      P      16 07 07.4 +0.6
CMAR                                pP     pwP    16 07 35.0 +0.7
CM13   Chiang Mai Arr    73.92 294  P      P      16 07 07.8 +0.8
HHC    Hu-ho-hao-te      73.96 319 eP      P      16 07 08.0 +1.1
HHC                                 PP     PP     16 09 50.9 -2.5
HHC                                 SS     SS     16 21 20.5 +2.4
HHC                                 pmax   pmax
       comp=Z,12nm,1.2s
HHC                                 pmax   pmax
       comp=Z,140nm,6.4s
CMMT   Chiang Mai        74.01 294  P      P      16 07 07.0 -0.5
CHTO   Chiang Mai        74.02 294  P      P      16 07 07.7 +0.1
HIA    Hailar            74.51 330  P      P      16 07 09.4 -0.4
CD2    Chengdu           74.62 307  P      P      16 07 11.5 +0.6
CD2                                 pmax   pmax
       comp=Z,20nm,0.6s
LZH    Lanzhou           76.83 312 ⇑P      P      16 07 24.9 +1.4
LZH                                 pP     sP     16 07 56.4 -2.9
LZH                                 pmax   pmax
       comp=Z,29nm,1.3s
QSPA   South Pole Qui    77.15 180  P      P      16 07 24.4 -0.3
QSPA                                IAmb   IAmb   16 07 26.5
       comp=Z,14nm,1.1s
GAMB   Gambell           78.15  10  P      P      16 07 30.7 +0.8
GAMB                                IAmb   IAmb   16 07 31.3
       comp=Z,10nm,1.0s
CNPM   China Poot        79.63  20  P      P      16 07 38.7 +0.5
YAK    Yakutsk           80.16 343  P      P      16 07 40.5 -0.5
YAK                                 IAmb   IAmb   16 07 41.8
       comp=Z,19nm,1.1s
ULN    Ulaanbaatar       80.44 324  P      P      16 07 42.9 -0.2
BILL   Bilibino          80.69 360  P      P      16 07 43.4 -0.3
BILL                                IAmb   IAmb   16 07 44.9
       comp=Z,16nm,0.9s
SONM   Songino Array     80.81 324  P      P      16 07 45.3 +0.3
       comp=Z,1.9nm,0.6s,baz=138,slow=6.1,SNR=12
SONM   Songino Array     80.81 324  P      P      16 07 44.7 -0.3
TTA    Tatalina          80.83  16  P      P      16 07 45.8 +1.2
TTA                                 IAmb   IAmb   16 07 51.3
       comp=Z,23nm,1.6s
GTA    Gaotai            81.14 314  P      P      16 07 47.4 +0.4
GTA                                 pP     pP     16 08 13.1 +0.7
GTA                                 sP     sP     16 08 25.1 +2.2
GTA                                 pmax   pmax
       comp=Z,8.0nm,1.2s
GTA                                 LR     LR
       comp=Z,74nm,13.8s
GTA                                 LR     LR
       comp=Z,70nm,16.0s
GTA                                 LR     LR
       comp=Z,100nm,14.9s
SUA    Susitna One       81.24  19  P      P      16 07 47.6 +0.7
SUA                                 IAmb   IAmb   16 07 48.8
       comp=Z,13nm,1.1s
SKT    Skwentna          81.39  18  P      P      16 07 48.8 +1.2
SKT                                 IAmb   IAmb   16 08 14.9
       comp=Z,18nm,1.5s
PMR    Palmer            81.86  20  P      P      16 07 49.5 -0.5
PMR                                 IAmb   IAmb   16 08 00.2
       comp=Z,27nm,1.7s
PPLA   Purkeypile        81.89  18  P      P      16 07 51.6 +1.3
PPLA                                IAmb   IAmb   16 08 20.6
       comp=Z,20nm,1.4s
KNK    Knik Glacier      81.95  20  P      P      16 07 51.1 +0.5
KNK                                 IAmb   IAmb   16 07 52.2
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	comp=Z,28nm,1.5s						
GHO	**Glory Hole Cre**	**82.06**	**20**	P	**P**	**16 07 51.0**	**-0.2**
GHO				IAmb	IAmb	16 08 05.8	
	comp=Z,19nm,1.2s						
SML	**Sawmill**	**82.28**	**20**	P	**P**	**16 07 53.0**	**+0.7**
SML				IAmb	IAmb	16 08 05.0	
	comp=Z,15nm,1.3s						
SCM	**Sheep Creek Mo**	**82.63**	**20**	P	**P**	**16 07 54.5**	**+0.3**
SCM				IAmb	IAmb	16 08 26.3	
	comp=Z,20nm,1.3s						
KTH	**Kantishna Hill**	**82.76**	**18**	P	**P**	**16 07 54.3**	**-0.5**
KTH				IAmb	IAmb	16 08 30.1	
	comp=Z,22nm,1.6s						
MCCM	**Marconi Confer**	**82.84**	**48**	P	**P**	**16 07 56.2**	**+0.5**
KLU	**Klutina**	**82.87**	**21**	P	**P**	**16 07 55.5**	**+0.1**
TRF	**Thorofare Moun**	**82.87**	**18**	P	**P**	**16 07 55.5**	**0.0**
TRF				IAmb	IAmb	16 08 18.5	
	comp=Z,23nm,1.6s						
BPAW	**Bear Paw Mtn.**	**83.16**	**17**	P	**P**	**16 07 56.2**	**-0.6**
M24K	**Tolsona, Glenn**	**83.21**	**20**	P	**P**	**16 07 58.7**	**+1.6**
RND	**Reindeer**	**83.28**	**18**	P	**P**	**16 07 57.4**	**0.0**
RND				IAmb	IAmb	16 07 58.3	
	comp=Z,5.7nm,0.5s						
KHMM	**Horse Mountain**	**83.30**	**46**	P	**P**	**16 07 59.8**	**+1.6**
KHMM				IAmb	IAmb	16 08 30.3	
	comp=Z,14nm,1.3s						
N25K	**Chitina, Valde**	**83.41**	**21**	P	**P**	**16 07 58.6**	**+0.5**
N25K				IAmb	IAmb	16 07 59.4	
	comp=Z,19nm,1.4s						
DHY	**Denali Highway**	**83.50**	**19**	P	**P**	**16 07 59.1**	**+0.4**
DHY				IAmb	IAmb	16 08 00.4	
	comp=Z,16nm,1.5s						
VRDI	**Verde Repeater**	**83.56**	**22**	P	**P**	**16 07 59.8**	**+0.7**
RDOG	**Red Dog Mine**	**83.57**	**11**	P	**P**	**16 07 59.8**	**+1.1**
GLB	**Gilahina Butte**	**83.58**	**21**	P	**P**	**16 08 00.1**	**+1.1**
GLB				IAmb	IAmb	16 08 00.7	
	comp=Z,17nm,1.3s						
BALM	**Baldy**	**83.84**	**22**	P	**P**	**16 08 00.6**	**+0.2**
BALM				IAmb	IAmb	16 08 01.4	
	comp=Z,19nm,1.4s						
BARN	**Barnard Glacie**	**84.11**	**22**	P	**P**	**16 08 02.6**	**+0.7**
CTGM	**Chitina Glacie**	**84.17**	**23**	P	**P**	**16 08 02.4**	**+0.3**
CTGM				IAmb	IAmb	16 08 03.9	
	comp=Z,9.1nm,1.0s						
WRH	**Wood River Hil**	**84.28**	**18**	P	**P**	**16 08 02.0**	**-0.4**
WRH				IAmb	IAmb	16 08 02.8	
	comp=Z,21nm,1.4s						
YBH	**Yreka Blue Hor**	**84.34**	**45**	P	**P**	**16 08 03.6**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=194,slow=2.1,SNR=12						
YBH	**Yreka Blue Hor**	**84.34**	**45**	P	**P**	**16 08 03.9**	**+0.5**
ORV	**Oroville**	**84.37**	**47**	P	**P**	**16 08 03.4**	**-0.1**
I23K	**Minto, Yukon-K**	**84.41**	**17**	P	**P**	**16 08 03.4**	**+0.3**
I23K				IAmb	IAmb	16 08 26.0	
	comp=Z,18nm,1.8s						
CCB	**Clear Creek Bu**	**84.50**	**18**	P	**P**	**16 08 02.7**	**-0.8**
CCB				IAmb	IAmb	16 08 03.7	
	comp=Z,6.7nm,0.6s						
HUMO	**Hull Mountain**	**84.51**	**44**	P	**P**	**16 08 05.0**	**+0.9**
AFDM	**Forest Hills D**	**84.53**	**48**	P	**P**	**16 08 04.2**	**-0.1**
HDA	**Harding Lake**	**84.59**	**18**	P	**P**	**16 08 03.6**	**-0.4**
MDM	**Murphy Dome**	**84.60**	**18**	P	**P**	**16 08 03.2**	**-0.8**
MDM				IAmb	IAmb	16 08 04.4	
	comp=Z,19nm,1.2s						
MENT	**Mentasta**	**84.61**	**20**	P	**P**	**16 08 04.0**	**-0.2**
CMB	**Columbia Colle**	**84.63**	**49**	P	**P**	**16 08 04.5**	**-0.4**
TCOL	**CIGO, UAF Yank**	**84.64**	**18**	P	**P**	**16 08 03.6**	**-0.6**
COLA	**College**	**84.65**	**18**	P	**P**	**16 08 03.5**	**-0.8**
RIDG	**Independent Ri**	**84.78**	**19**	P	**P**	**16 08 04.7**	**-0.4**
RIDG				IAmb	IAmb	16 08 06.2	
	comp=Z,20nm,1.4s						
IL31		**84.86**	**18**	P	**P**	**16 08 04.5**	**-0.8**
IL31				IAmb	IAmb	16 08 05.8	
	comp=Z,11nm,0.9s						
ILAR	**Eielson Array**	**84.86**	**18**	P	**P**	**16 08 04.8**	**-0.6**
	comp=Z,5.6nm,0.7s,baz=246,slow=5.0,SNR=88						
ILAR	**Eielson Array**	**84.86**	**18**	P	**P**	**16 08 04.5**	**-0.8**
POKR	**Poker Plat Res**	**84.95**	**18**	P	**P**	**16 08 05.4**	**-0.4**
POKR				IAmb	IAmb	16 08 06.0	
	comp=Z,9.3nm,0.8s						
DOT	**Dot Lake**	**84.98**	**20**	P	**P**	**16 08 05.9**	**-0.1**
BEKR	**Beckworth**	**85.30**	**48**	P	**P**	**16 08 08.8**	**+0.4**
MDPB	**Devils Postpil**	**85.47**	**50**	IAmb	IAmb	16 08 13.9	
	comp=Z,8.7nm,1.2s						
COLD	**Coldfoot**	**85.73**	**15**	P	**P**	**16 08 10.7**	**+1.1**
COLD				IAmb	IAmb	16 08 11.8	
	comp=Z,7.3nm,1.0s						
K05A	**Summer Lake**	**85.96**	**45**	IAmb	IAmb	16 08 13.2	
	comp=Z,7.2nm,0.9s						
NVAR	**Mina Array Bea**	**86.31**	**49**	P	**P**	**16 08 13.9**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=233,slow=8.0,SNR=15						
NVAR				LR	LR	16 39 37.1	
	comp=Z,42nm,19.8s,baz=300,slow=30						
EGAK	**Eagle**	**86.68**	**20**	IAmb	IAmb	16 08 15.9	
	comp=Z,7.5nm,0.8s						
I07A	**Izee**	**87.39**	**44**	P	**P**	**16 08 18.9**	**+0.5**
I07A				IAmb	IAmb	16 08 19.9	
	comp=Z,5.9nm,0.9s						
E07A	**Sunnyside**	**88.04**	**41**	IAmb	IAmb	16 08 22.7	
	comp=Z,5.1nm,0.7s						
TIXI	**Tiksi**	**88.08**	**349**	P	**P**	**16 08 20.3**	**-0.7**
G08A	**Pilot Rock**	**88.18**	**43**	IAmb	IAmb	16 08 23.4	
	comp=Z,5.8nm,1.1s						
PRN	**Pahroc Range**	**88.43**	**51**	P	**P**	**16 08 24.3**	**+0.7**
PRN				IAmb	IAmb	16 08 25.2	
	comp=Z,6.1nm,1.1s						
F10A	**Beach Ranch, E**	**89.55**	**43**	IAmb	IAmb	16 08 29.5	
	comp=Z,5.9nm,0.8s						
LCMT	**Little Creek M**	**89.69**	**52**	P	**P**	**16 08 30.0**	**+0.5**
U15A	**North Rim**	**90.27**	**53**	IAmb	IAmb	16 08 34.8	
	comp=Z,4.4nm,0.9s						
MVU	**Marysvale**	**90.89**	**51**	P	**P**	**16 08 36.5**	**+1.3**
MSU	**Marysvale**	**90.92**	**51**	P	**P**	**16 08 36.2**	**+0.9**
WMQ	**Urumqi**	**91.19**	**315**	*e*P	**P**	**16 08 36.9**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.7s						
TXAR	**Lajitas Array**	**95.68**	**61**	P	**P**	**16 08 57.1**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=230,slow=5.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**95.70**	**324**	P	**P**	**16 08 55.0**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=6.3,SNR=5.8						
MAKZ	**Makanchi**	**95.84**	**317**	P	**P**	**16 08 56.8**	**-0.7**
YKA	**Yellowknife Ar**	**96.05**	**27**	P	**P**	**16 08 56.8**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=253,slow=4.2,SNR=11						
ARCES	**ARCESS Array B**	**118.37**	**346**	PKP	**PKPdf**	**16 14 15.3**	**-2.1**
	comp=Z,1.6nm,0.6s,baz=66,slow=3.2,SNR=7.0						
FINES	**FINESS Array B**	**123.88**	**339**	PKP	**PKPdf**	**16 14 26.3**	**-1.8**
	comp=Z,1.9nm,0.9s,baz=180,slow=14,SNR=1.3						
BOSA	**Boshof**	**124.56**	**221**	PKP	**PKPdf**	**16 14 28.1**	**-2.6**
	comp=Z,0.9nm,0.6s,baz=22,slow=20,SNR=3.6						
NOA	**NORSAR Array B**	**128.75**	**345**	PKP	**PKPdf**	**16 14 35.2**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=28,slow=1.9,SNR=2.2						
KEST	**Kesra**	**149.55**	**322**	PKPbc	**PKPbc**	**16 15 19.2**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=225,slow=21,SNR=1.7						
ESDC	**Sonseca Array**	**152.11**	**345**	PKPbc	**PKPbc**	**16 15 24.3**	**-2.0**
	comp=Z,2.1nm,1.1s,baz=341,slow=2.7,SNR=4.4						
ESDC				PKPab	**PKPab**	**16 15 36.5**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=19,slow=3.9,SNR=8.0						
ESDC	**Sonseca Array**	**152.11**	**345**		**PKPbc**	**16 15 25.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**165.61**	**273**	PKPab	**PKPab**	**16 16 34.2**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=85,slow=4.3,SNR=5.8						

VAO ***22*** *16:06:48.8±0.6, 26°.87S×70°.13W, h10^{km}, mb4.6*

NEIC ***22*** *16:07:38.2±2.2, 24°.28S±0°.05×67°.0W±0°.1, h164^{km}±8^{km}, mb4.2/6, Md3.7(SJA), Error ellipse: s-maj=14.9km s-min=4.4km az=111.0*

IDC ***22*** *16:07:39.0±1.7, 24°.25S×67°.04W, h167^{km}±17^{km}, mb3.6/3, mb1 3.7/7, mb1mx3.4/27, mbtmp4.1/7, Error ellipse: s-maj=23.6km s-min=20.3km az=146.0*

GUC ***22*** *16:07:40.7±0.7, 24°.22S×67°.54W, h197^{km}±9^{km}, ML4.5*

ISC 22 16:07:40.0±0.5**, 24°.20S**±0°.04×**67°.35W**±0°.06**, h200**^{km}**, n78, σ1^{s}53**/94**, mb4.0**/4**, 6C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.14**	**317**	P	**Pn**	**16 08 21.1**	**+0.7**
	59nm,0.3s,baz=129,slow=8.1,SNR=665						
LVC				S	**Sn**	**16 08 51.3**	**-0.4**
	131nm,0.3s,baz=190,slow=9.0,SNR=15						
LVC	**Limon Verde**	**2.14**	**317**	*e*P	**Pn**	**16 08 21.1**	**+0.7**
LVC				*e*S	**Sn**	**16 08 51.7**	**0.0**
GO02	**Mina Guanaco**	**2.26**	**244**	⇑*i*P	**Pn**	**16 08 21.6**	**0.0**
GO02				*i* S	**Sn**	**16 08 53.3**	**-0.6**
GO02				IAML		16 08 58.7	
	comp=N,814nm,0.3s						
GO02	**Mina Guanaco**	**2.26**	**244**		**Pn**	**16 08 21.5**	**0.0**
GO02				Sn	**Sn**	**16 08 53.6**	**-0.3**
PB14	**IPOC Station P**	**2.82**	**261**	⇑*i*P	**Pn**	**16 08 27.9**	**0.0**
PB14				*i* S	**Sn**	**16 09 04.0**	**-1.2**
PB14	**IPOC Station P**	**2.82**	**261**		**Pn**	**16 08 27.9**	**0.0**
PB14				Sn	**Sn**	**16 09 03.8**	**-1.4**
PB09	**IPOC Station P**	**2.96**	**323**	⇓*i*P	**Pn**	**16 08 30.8**	**+1.4**
PB09				*i* S	**Sn**	**16 09 08.5**	**+0.5**
PB09				IAML		16 09 09.8	
	comp=N,909nm,0.4s						
PB09	**IPOC Station P**	**2.96**	**323**		**Pn**	**16 08 30.7**	**+1.2**
PB09				Sn	**Sn**	**16 09 08.1**	**+0.1**
PB10	**IPOC Station P**	**3.02**	**282**	⇑*i*P	**Pn**	**16 08 30.7**	**+0.8**
PB10				*i* S	**Sn**	**16 09 07.5**	**-1.2**
PB10				IAML		16 09 14.0	
	comp=N,613nm,0.4s						
PB10	**IPOC Station P**	**3.02**	**282**		**Pn**	**16 08 30.6**	**+0.8**
PB03	**IPOC Station P**	**3.08**	**314**	*e*P	**Pn**	**16 08 31.5**	**+0.7**
PB03				*i* S	**Sn**	**16 09 09.6**	**-0.9**
PB03				IAML		16 09 10.9	
	comp=E,2μm,0.3s						
AC02	**Maricunga**	**3.08**	**211**	⇑*i*P	**Pn**	**16 08 30.5**	**-0.6**
AC02				*e*S	**Sn**	**16 09 12.6**	**+1.5**
AC02	**Maricunga**	**3.08**	**211**		**Pn**	**16 08 30.3**	**-0.8**
PB04	**IPOC Station P**	**3.18**	**305**	*e*P	**Pn**	**16 08 33.1**	**+1.1**
PB04				*e*S	**Sn**	**16 09 11.2**	**-1.3**
PB04	**IPOC Station P**	**3.18**	**305**		**Pn**	**16 08 33.0**	**+1.1**
PB07	**IPOC Station P**	**3.40**	**316**	⇓*i*P	**Pn**	**16 08 35.3**	**+0.7**
PB07				*i* S	**Sn**	**16 09 16.1**	**-1.2**
PB07	**IPOC Station P**	**3.40**	**316**	Pn	**Pn**	**16 08 35.3**	**+0.7**
AC01	**Pan de Azucar**	**3.53**	**236**	⇑*i*P	**Pn**	**16 08 34.9**	**-1.1**
AC01				*e*S	**Sn**	**16 09 16.9**	**-3.1**
AC01	**Pan de Azucar**	**3.53**	**236**	Pn	**Pn**	**16 08 34.9**	**-1.1**
PB02	**IPOC Station P**	**3.71**	**320**	*e*P	**Pn**	**16 08 36.2**	**-2.1**
PB02				*e*S	**Sn**	**16 09 21.8**	**-2.2**
PATCX	**Punta Patache**	**4.25**	**322**	Pn	**Pn**	**16 08 45.9**	**+0.8**
GO03	**Copiap**	**4.27**	**217**	⇑*i*P	**Pn**	**16 08 43.2**	**-2.0**
GO03				*i* S	**Sn**	**16 09 32.9**	**-3.6**
GO03	**Copiap**	**4.27**	**217**	Pn	**Pn**	**16 08 43.2**	**-2.0**
PB08	**IPOC Station P**	**4.37**	**337**	⇓*i*P	**Pn**	**16 08 47.7**	**+0.8**
PB08				*e*S	**Sn**	**16 09 38.6**	**-0.7**
PB08	**IPOC Station P**	**4.37**	**337**		**Pn**	**16 08 47.8**	**+0.8**
TA01	**Diego Aracena**	**4.47**	**323**	*e*P	**Pn**	**16 08 46.9**	**-0.8**
TA01				*e*S	**Sn**	**16 09 37.2**	**-3.7**
TA01	**Diego Aracena**	**4.47**	**323**		**Pn**	**16 08 46.9**	**-0.8**
TA02	**Huaiquique**	**4.68**	**326**	*e*P	**Pn**	**16 08 48.4**	**-2.1**
AC04	**Llanos de Chal**	**5.21**	**219**	Pn	**Pn**	**16 08 54.7**	**-2.4**
PSGCX	**Pisagua**	**5.25**	**330**	Pn	**Pn**	**16 08 56.7**	**-1.2**
AC05	**El Transito**	**5.31**	**209**	Pn	**Pn**	**16 08 56.5**	**-2.0**
MNMC	**Minye Minye**	**5.46**	**337**		**Pn**	**16 09 00.4**	**-0.2**
LCO	**Las Campanas**	**5.66**	**211**	Pn	**Pn**	**16 09 00.5**	**-2.6**
PB16	**IPOC Station P**	**6.17**	**341**	Pn	**Pn**	**16 09 10.3**	**+0.2**
CO01	**Juntas del Tor**	**6.26**	**202**		**Pn**	**16 09 09.5**	**-1.3**
AP01	**Chacalluta**	**6.44**	**334**	Pn	**Pn**	**16 09 13.5**	**+0.5**
GO04	**Tololo Observa**	**6.70**	**207**		**Pn**	**16 09 13.2**	**-3.3**
CO03	**El Pedregal**	**7.25**	**203**	Pn	**Pn**	**16 09 21.8**	**-1.8**
ZON	**Zonda**	**7.42**	**189**	Pn	**Pn**	**16 09 23.2**	**-2.4**
CO02	**Combarbal**	**7.69**	**204**	Pn	**Pn**	**16 09 27.1**	**-2.2**
VA03	**San Esteban**	**8.99**	**198**	Pn	**Pn**	**16 09 45.8**	**-0.4**
ROC1	**El Roble**	**9.32**	**199**	Pn	**Pn**	**16 09 48.6**	**-2.1**
MT02	**Curacav**	**9.62**	**199**	Pn	**Pn**	**16 09 51.6**	**-2.7**
SIV	**San Ignacio**	**10.07**	**37**	P	**Pn**	**16 09 57.4**	**-2.8**
	comp=E,0.7nm,0.3s,baz=228,slow=13,SNR=26						
SIV				S	Sn	16 11 37.9	-15
	comp=E,0.3nm,0.3s,baz=223,slow=15,SNR=4.1						
BO02	**Sierra Bellavi**	**10.97**	**195**	Pn	**Pn**	**16 10 11.1**	**-0.7**
AQDB	**Aquidauana**	**11.40**	**73**	*e*P	**Pn**	**16 10 15.9**	**-1.4**
BI02	**San Fabin de**	**12.88**	**194**	Pn	**Pn**	**16 10 35.5**	**-0.4**
SAML	**Samuel**	**15.68**	**15**		**P**	**16 11 09.3**	**-1.2**
SAML	**Samuel**	**15.68**	**15**	*e*P	**Pn**	**16 11 10.7**	**+0.2**
PLCA	**Paso Flores**	**16.71**	**188**	P	**Pn**	**16 11 22.9**	**+0.1**
	comp=E,0.2nm,0.3s,baz=31,slow=15,SNR=6.6						
PLCA	**Paso Flores**	**16.71**	**188**	P	**P**	**16 11 21.1**	**-0.6**
PLCA				IAmb	IAmb	16 11 31.5	
	comp=Z,4.8nm,0.8s						
ARAG	**Araguaiana, MT**	**16.86**	**63**	*e*P	**Pn**	**16 11 24.5**	**-0.2**
IPMB	**Ipameri, GO**	**18.89**	**75**	*e*P	**P**	**16 11 44.9**	**-0.7**
PARB	**Paraibuna**	**19.90**	**92**	*e*P	P	16 11 47.3	-9.2
BDFB	**Brasilia**	**20.05**	**68**	P	**P**	**16 11 57.6**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=237,slow=11,SNR=15						
BDFB	**Brasilia**	**20.05**	**68**	P	**P**	**16 11 57.5**	**-0.8**
PEXB	**Peixe**	**21.70**	**60**	*e*P	**P**	**16 12 13.8**	**-1.5**
ITTB	**Itaituba**	**22.67**	**31**	*e*P	**P**	**16 12 24.0**	**-0.5**
SMTB	**Santa Maria do**	**24.26**	**54**	*e*P	**P**	**16 12 39.4**	**+0.4**
SDBA	**SAO DESIDERIO**	**24.28**	**65**	*e*P	**P**	**16 12 38.4**	**-0.8**
PRPB	**Parauapebas**	**24.59**	**46**	*e*P	**P**	**16 12 42.5**	**+0.5**
MALB	**Monte Alegre**	**25.57**	**32**	*e*P	**P**	**16 12 50.2**	**-0.5**
GDU01	**Guandu, BA**	**28.20**	**73**	*e*P	**P**	**16 13 10.9**	**-3.4**
NBPS	**Pedro II - PI**	**31.78**	**56**	*e*P	**P**	**16 13 45.4**	**-0.5**
VNA3	**Neumayer Olymp**	**57.07**	**161**	P	**P**	**16 17 06.9**	**+2.0**
VNA2	**Neumayer--Watz**	**57.64**	**160**	P	**P**	**16 17 10.1**	**+1.3**
	baz=300,slow=4.2						
SNAA	**Sanae**	**59.27**	**161**	P	**P**	**16 17 21.2**	**+1.0**
SNAA	**Sanae**	**59.27**	**161**	P	**P**	**16 17 21.5**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=273,slow=8.6,SNR=7.8						
SNAA	**Sanae**	**59.27**	**161**	P	**P**	**16 17 21.6**	**+1.4**
SNAA				IAmb	IAmb	16 17 36.1	
	comp=Z,5.4nm,1.3s						
QSPA	**South Pole Qui**	**66.01**	**180**	P	**P**	**16 18 07.8**	**+3.0**
QSPA				IAmb	IAmb	16 18 08.5	
	comp=Z,2.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.93**	**69**	P	**P**	**16 19 11.3**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=256,slow=5.4,SNR=9.6						
TORD	**Torodi Ar. Bea**	**76.93**	**69**	IAmb	IAmb	16 19 12.6	
	comp=Z,2.6nm,1.1s						
YKA	**Yellowknife Ar**	**94.20**	**340**	P	**P**	**16 20 39.2**	**+3.6**
	comp=Z,0.2nm,0.7s,baz=124,slow=5.4,SNR=4.4						
ASAR	**Alice Springs**	**128.14**	**205**	PKP	**PKiKP**	**16 26 25.0**	**+1.3**
	comp=Z,0.6nm,1.0s,baz=146,slow=1.7,SNR=5.6						
WRA	**Warramunga Arr**	**131.31**	**208**	PKP	**PKiKP**	**16 26 31.9**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=147,slow=1.9,SNR=1.4						
ZALV	**Zalesovo Beam**	**143.72**	**28**	PKP	**PKiKP**	**16 26 52.4**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=311,slow=5.7,SNR=3.9						
MKAR	**Makanchi Array**	**146.88**	**39**	PKPbc	**PKiKP**	**16 27 01.7**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=293,slow=3.9,SNR=14						
MKAR	**Makanchi Array**	**146.88**	**39**		**PKiKP**	**16 27 01.8**	**+0.8**

VAO ***22*** *16:15:26.7±0.9, 23°.08S×70°.92W, h10^{km}, mb4.6*

NEIC ***22*** *16:15:37.6±1.9, 22°.97S±0°.04×70°.33W±0°.09, h52^{km}±2^{km}, mb4.4/8, ML4.5(GUC), Error ellipse: s-maj=12.6km s-min=4.2km az=107.0*

IDC ***22*** *16:15:37.9±0.7, 23°.08S×70°.20W, h51^{km}±5^{km}, mb4.0/11, mb1 4.1/13, mb1mx4.0/27, mbtmp4.2/13, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=19.5km s-min=7.1km az=163.0*

GUC ***22*** *16:15:37.4±0.8, 22°.99S×70°.22W, h48^{km}±16^{km}, ML4.5*

ISC 22 16:15:37.4±0.5**, 23°.01S**±0°.03×**70°.26W**±0°.05**, h48**^{km}±5^{km}**, n111, σ1^{s}33**/113**, mb4.4**/12**, 1C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	**IPOC Station P**	**0.57**	**208**	⇑*i*P	**Pn**	**16 15 50.2**	**+0.8**
PB10	**IPOC Station P**	**0.57**	**208**	⇓*i*P	**Pn**	**16 15 50.1**	**+0.8**
PB10				*i* S	**Sn**	**16 15 59.3**	**+1.3**
PB10	**IPOC Station P**	**0.57**	**208**		**Pn**	**16 15 49.6**	**+0.2**
PB10				Sn	**Sn**	**16 15 59.4**	**+1.4**
PB04	**IPOC Station P**	**0.68**	**9**	⇓*i*P	**Pn**	**16 15 51.4**	**+0.4**
PB04				*i* S	**Sn**	**16 16 01.3**	**+0.5**
PB04				IAML		16 16 02.3	
	comp=N,39μm,0.4s						
PB04	**IPOC Station P**	**0.68**	**9**		**Pn**	**16 15 50.6**	**-0.4**
PB04				Sn	**Sn**	**16 16 01.0**	**+0.2**
PB03	**IPOC Station P**	**1.07**	**26**	⇓*i*P	**Pn**	**16 15 56.5**	**+0.3**
PB03				*i* S	**Sn**	**16 16 10.5**	**+0.5**
PB03				IAML		16 16 11.6	
	comp=N,15μm,0.5s						
LVC	**Limon Verde**	**1.31**	**73**	P	**Pn**	**16 16 00.7**	**+1.1**
	comp=N,942nm,0.3s,baz=247,slow=9.3,SNR=967						
LVC				S	**Sn**	**16 16 16.1**	**0.0**
	comp=N,3μm,0.3s,baz=354,slow=22,SNR=38						
LVC				LR	LR	16 16 45.1	
	comp=N,1μm,20.3s,baz=274,slow=52						
LVC	**Limon Verde**	**1.31**	**73**	*e*P	**Pn**	**16 16 00.4**	**+0.7**
LVC				*e*S	**Sn**	**16 16 16.6**	**+0.4**
LVC	**Limon Verde**	**1.31**	**73**		**Pn**	**16 16 00.3**	**+0.7**
LVC	**Limon Verde**	**1.31**	**73**	*e*P	**Pn**	**16 16 00.8**	**+1.2**
PB07	**IPOC Station P**	**1.32**	**15**	⇓*i*P	**Pn**	**16 16 00.2**	**+0.5**
PB07				*i* S	**Sn**	**16 16 16.9**	**+0.7**
PB07				IAML		16 16 20.8	
	comp=E,12μm,0.8s						
PB07	**IPOC Station P**	**1.32**	**15**	Pn	**Pn**	**16 15 59.7**	**0.0**
PB09	**IPOC Station P**	**1.53**	**38**	⇓*i*P	**Pn**	**16 16 03.6**	**+1.1**
PB09				IAML		16 16 27.4	
	comp=N,6μm,0.5s						
PB09	**IPOC Station P**	**1.53**	**38**		**Pn**	**16 16 03.5**	**+1.0**
PB14	**IPOC Station P**	**1.61**	**185**	⇓*i*P	**Pn**	**16 16 04.0**	**+0.3**
PB14				*e*S	**Sn**	**16 16 23.3**	**-0.2**
PB14	**IPOC Station P**	**1.61**	**185**		**Pn**	**16 16 03.8**	**+0.1**
PB02	**IPOC Station P**	**1.72**	**12**	*i* P	**Pn**	**16 16 05.2**	**+0.3**
PB02				*i* S	**Sn**	**16 16 26.6**	**+0.9**
PB02				IAML		16 16 40.6	
	comp=E,9μm,0.6s						
PATCX	**Punta Patache**	**2.18**	**3**	*e*P	**Pn**	**16 16 11.2**	**-0.1**
PATCX				IAML		16 16 54.4	
	comp=N,3μm,0.3s						
PATCX	**Punta Patache**	**2.18**	**3**		**Pn**	**16 16 10.7**	**-0.6**
GO02	**Mina Guanaco**	**2.23**	**164**	⇓*i*P	**Pn**	**16 16 13.8**	**+1.6**
GO02				*i* S	**Sn**	**16 16 40.7**	**+2.1**
GO02				IAML		16 16 47.7	
	comp=E,6μm,0.6s						
GO02	**Mina Guanaco**	**2.23**	**164**		**Pn**	**16 16 13.7**	**+1.6**
TA01	**Diego Aracena**	**2.43**	**2**	*e*P	**Pn**	**16 16 14.1**	**-0.6**
TA01				*e*S	**Sn**	**16 16 42.4**	**-0.9**
TA01				IAML		16 16 54.5	
	comp=N,3μm,0.6s						
TA01	**Diego Aracena**	**2.43**	**2**		**Pn**	**16 16 14.1**	**-0.6**
HMBC	**Humberstone**	**2.74**	**7**	*e*P	**Pn**	**16 16 18.8**	**-0.3**
HMBC				*e*S	**Sn**	**16 16 58.8**	**+7.8**
HMBC				IAML		16 17 13.4	
	comp=N,3μm,0.5s						
PB08	**IPOC Station P**	**3.04**	**20**		**Pn**	**16 16 24.0**	**+0.7**
AC01	**Pan de Azucar**	**3.14**	**186**	*e*P	**Pn**	**16 16 23.6**	**-0.6**
AC01				*e*S	**Sn**	**16 16 58.9**	**-1.7**
AC01				IAML		16 17 12.8	
	comp=E,1μm,0.5s						
AC01	**Pan de Azucar**	**3.14**	**186**	Pn	**Pn**	**16 16 23.8**	**-0.6**
PSGC	**Pisagua**	**3.40**	**2**	*e*P	**Pn**	**16 16 27.2**	**-0.8**
PSGC				IAML		16 17 28.9	
	comp=N,847nm,0.5s						
PSGCX	**Pisagua**	**3.40**	**2**	Pn	**Pn**	**16 16 27.0**	**-1.0**
MNMC	**Minye Minye**	**3.91**	**9**		**Pn**	**16 16 35.1**	**-0.1**
AC02	**Maricunga**	**3.94**	**165**	Pn	**Pn**	**16 16 37.7**	**+1.9**
GO03	**Copiap**	**4.56**	**180**	Pn	**Pn**	**16 16 42.9**	**-1.0**
AP01	**Chacalluta**	**4.62**	**359**	Pn	**Pn**	**16 16 44.6**	**0.0**
PB16	**IPOC Station P**	**4.71**	**9**	Pn	**Pn**	**16 16 46.3**	**-0.1**
AC04	**Llanos de Chal**	**5.22**	**188**	Pn	**Pn**	**16 16 50.0**	**-2.9**
AC05	**El Transito**	**5.80**	**180**	Pn	**Pn**	**16 17 00.1**	**-0.9**
LCO	**Las Campanas**	**5.99**	**184**	Pn	**Pn**	**16 17 02.0**	**-1.7**
CO01	**Juntas del Tor**	**6.94**	**179**		**Pn**	**16 17 16.5**	**-0.2**
GO04	**Tololo Observa**	**7.15**	**184**		**Pn**	**16 17 17.7**	**-1.9**
CO03	**El Pedregal**	**7.81**	**183**	Pn	**Pn**	**16 17 26.1**	**-2.3**
CO02	**Combarbal**	**8.19**	**184**	Pn	**Pn**	**16 17 30.9**	**-2.8**
ZON	**Zonda**	**8.62**	**171**	Pn	**Pn**	**16 17 42.9**	**+3.4**
VA03	**San Esteban**	**9.72**	**181**	Pn	**Pn**	**16 17 57.0**	**+2.3**
ROC1	**El Roble**	**9.95**	**184**	Pn	**Pn**	**16 17 58.7**	**+0.8**
MT02	**Curacav**	**10.24**	**184**	Pn	**Pn**	**16 18 02.1**	**+0.5**
SIV	**San Ignacio**	**11.13**	**53**	P	**Pn**	**16 18 11.5**	**-2.5**
	comp=N,2.3nm,0.3s,baz=247,slow=12,SNR=21						
SIV				LR	LR	16 22 35.5	
	comp=N,228nm,21.2s,baz=106,slow=38						
BO02	**Sierra Bellavi**	**11.75**	**182**	Pn	**Pn**	**16 18 23.5**	**+1.1**
CPUP	**Villa Florida**	**12.22**	**108**	P	**Pn**	**16 18 28.0**	**-0.7**
	comp=N,0.3nm,0.3s,baz=264,slow=9.4,SNR=5.2						
CPUP				LR	LR	16 23 27.2	
	comp=N,192nm,21.8s,baz=230,slow=39						
CPUP	**Villa Florida**	**12.22**	**108**		**Pn**	**16 18 30.2**	**+1.5**
NNA	**Nana**	**12.63**	**329**	LR	LR	16 23 29.3	
	comp=N,80nm,18.5s,baz=191,slow=37						
H03N1	**Juan Fernandez**	**12.88**	**214**	T	T	16 31 55.4	
	baz=38,slow=72,SNR=138						
H03N2	**Juan Fernandez**	**12.89**	**214**	T	T	16 32 00.0	
	baz=38,slow=72,SNR=84						
H03N3	**Juan Fernandez**	**12.90**	**214**	T	T	16 31 58.0	
	baz=38,slow=72,SNR=99						
VA04	**Juan Fernndez**	**13.00**	**214**	Pn	**Pn**	**16 18 39.4**	**+0.1**
BI02	**San Fabin de**	**13.63**	**183**	Pn	**Pn**	**16 18 46.6**	**-1.5**
AQDB	**Aquidauana**	**13.77**	**82**	*e*P	**Pn**	**16 18 50.0**	**+0.1**
TRCB	**Terra Rica**	**16.25**	**93**	*e*P	**Pn**	**16 19 21.0**	**-1.4**
PTGB	**Pitanga**	**16.73**	**99**	*e*P	**Pn**	**16 19 28.6**	**0.0**
PLCA	**Paso Flores**	**17.67**	**181**	P	**Pn**	**16 19 38.6**	**-1.4**
	comp=N,0.1nm,0.3s,baz=350,slow=14,SNR=6.6						
PLCA	**Paso Flores**	**17.67**	**181**		**P**	**16 19 41.4**	**+0.9**
CNLB	**Canela**	**18.51**	**114**	*e*P	**Pn**	**16 19 50.1**	**-0.3**
ITRB	**Iturama**	**18.83**	**84**	*e*P	**P**	**16 19 52.8**	**-0.5**
ARAG	**Araguaiana, MT**	**18.85**	**71**	*e*P	**P**	**16 19 52.6**	**-0.9**
FRTB	**Fartura**	**19.04**	**95**	*e*P	**Pn**	**16 19 55.8**	**-0.9**
BB19B	**Bebedouro**	**20.24**	**89**	*e*P	**P**	**16 20 06.7**	**-2.0**
SPB	**Sao Paulo**	**20.98**	**96**	*e*P	Pn	16 20 17.8	-2.0
PET01	**Itanhaem-SP**	**21.09**	**98**	*e*P	**P**	**16 20 19.3**	**+1.5**
IPMB	**Ipameri, GO**	**21.25**	**80**	*e*P	**P**	**16 20 19.8**	**+0.2**
NPGB	**Novo Progresso**	**21.39**	**44**	*e*P	**P**	**16 20 20.3**	**-0.9**
VAO	**Valinhos**	**21.44**	**95**	*e*P	**P**	**16 20 21.2**	**-0.5**
MACA	**Manacapuru-AM**	**21.80**	**27**	*e*P	**P**	**16 20 23.4**	**-2.1**
BDFB	**Brasilia**	**22.22**	**75**	P	**P**	**16 20 28.9**	**-1.2**
	comp=N,2.8nm,0.4s,baz=260,slow=13,SNR=4.1						
BDFB	**Brasilia**	**22.22**	**75**	P	**P**	**16 20 31.0**	**+0.8**
BDFB				IAmb	IAmb	16 20 48.5	
	comp=Z,11nm,0.9s						
ITTB	**Itaituba**	**23.26**	**39**	*e*P	**P**	**16 20 39.2**	**-1.5**
MAN01	**Angra dos Reis**	**24.21**	**95**	*e*P	**P**	**16 20 49.7**	**0.0**
PTGA	**Pitinga**	**24.30**	**26**	P	**P**	**16 20 49.3**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=211,slow=8.1,SNR=4.3						
PTGA	**Pitinga**	**24.30**	**26**	IAmb	IAmb	16 21 14.7	
	comp=Z,7.1nm,1.0s						
OTAV	**Otavalo**	**24.44**	**340**	*e*P	P	16 20 43.8	-8.4
VAS01	**Vassouras-RJ**	**24.75**	**94**	*e*P	**P**	**16 20 54.4**	**-0.2**
SMTB	**Santa Maria do**	**25.89**	**61**	*e*P	**P**	**16 21 04.4**	**-0.6**
SDBA	**SAO DESIDERIO**	**26.32**	**71**	*e*P	**P**	**16 21 07.7**	**-1.2**
NBPS	**Pedro II - PI**	**33.44**	**61**	*e*P	**P**	**16 22 10.8**	**-1.2**
RCBR	**Riachuelo**	**37.26**	**68**	P	**P**	**16 22 44.9**	**+0.1**
	comp=Z,5.3nm,0.6s,baz=324,slow=5.9,SNR=2.1						
H06E1	**SOCORRO T-PHAS**	**57.47**	**313**	T	T	17 27 22.0	
	SNR=7.2						
VNA2	**Neumayer--Watz**	**59.66**	**160**	P	**P**	**16 25 36.8**	**+0.6**
	baz=280,slow=9.9						
TXAR	**Lajitas Array**	**61.17**	**327**	P	**P**	**16 25 47.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=114,slow=5.9,SNR=4.3						
SNAA	**Sanae**	**61.27**	**161**	P	**P**	**16 25 47.8**	**+0.4**
SNAA	**Sanae**	**61.27**	**161**	P	**P**	**16 25 47.6**	**+0.3**
SNAA				IAmb	IAmb	16 26 03.9	
	comp=Z,9.5nm,1.4s						
DBIC	**Dimbokro**	**70.36**	**74**	P	**P**	**16 26 46.0**	**-0.7**
	comp=Z,3.7nm,0.6s,baz=236,slow=6.3,SNR=7.2						
DBIC	**Dimbokro**	**70.36**	**74**	IAmb	IAmb	16 27 06.4	
	comp=Z,9.6nm,1.2s						
PDAR	**Pinedale Array**	**74.80**	**331**	P	**P**	**16 27 13.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=129,slow=8.1,SNR=4.6						
NVAR	**Mina Array Bea**	**75.92**	**323**	P	**P**	**16 27 21.2**	**+2.0**
	comp=Z,0.8nm,0.6s,baz=152,slow=5.7,SNR=5.9						
SUR	**Sutherland**	**78.90**	**120**	LR	LR	16 57 55.1	
	comp=Z,35nm,21.5s,baz=218,slow=32						
TORD	**Torodi Ar. Bea**	**79.04**	**71**	P	**P**	**16 27 36.3**	**-0.6**
	comp=Z,6.2nm,0.7s,baz=254,slow=5.0,SNR=19						
TORD	**Torodi Ar. Bea**	**79.04**	**71**	P	**P**	**16 27 36.1**	**-0.8**
MAW	**Mawson**	**83.25**	**164**	P	**P**	**16 27 59.2**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=207,slow=11,SNR=1.9						
MAW	**Mawson**	**83.25**	**164**	IAmb	IAmb	16 28 05.0	
	comp=Z,6.8nm,1.6s						
BOSA	**Boshof**	**83.84**	**118**	P	**P**	**16 28 02.0**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=247,slow=3.5,SNR=10						
BOSA				pP	**pP**	**16 28 16.0**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=264,slow=3.4,SNR=3.1						
BOSA				LR	LR	17 01 44.1	
	comp=Z,21nm,19.5s,baz=158,slow=33						
YKA	**Yellowknife Ar**	**92.19**	**341**	P	**P**	**16 28 41.7**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=133,slow=4.9,SNR=27						
YKA				pP	**pP**	**16 28 56.2**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=130,slow=5.2,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**126.81**	**276**	T	T	18 54 02.3	
	baz=106,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**126.82**	**276**	T	T	18 54 04.5	
	baz=106,slow=75,SNR=45						
H11S3	**WAKE ISLAND Hy**	**126.83**	**276**	T	T	18 54 02.5	
	baz=106,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy**	**126.94**	**278**	T	T	18 54 10.3	
	baz=106,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**126.95**	**278**	T	T	18 54 10.7	
	baz=106,slow=74,SNR=21						
H11N1	**WAKE ISLAND Hy**	**126.95**	**278**	T	T	18 54 11.6	
	baz=106,slow=74,SNR=16						
ASAR	**Alice Springs**	**128.00**	**208**	PKP	**PKiKP**	**16 34 39.0**	**-0.4**

	comp=Z,0.5nm,0.8s,baz=144,slow=2.3,SNR=5.4						
ASAR				pPKP	**pPKPdf**	**16 34 54.9**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=137,slow=1.6,SNR=2.8						
WRA	**Warramunga Arr**	**131.02**	**211**	PKP	**PKPdf**	**16 34 44.7**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=148,slow=1.4,SNR=1.8						
ZALV	**Zalesovo Beam**	**143.85**	**25**	PKP	**PKPdf**	**16 35 07.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=318,slow=1.9,SNR=2.0						
ZALV				pPKP	**pPKPdf**	**16 35 21.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=270,slow=3.0,SNR=4.3						
KSH	**Kashi**	**147.02**	**52**	PKP	**PKPbc**	**16 35 15.3**	**+0.2**
MKAR	**Makanchi Array**	**147.59**	**36**	PKPbc	**PKPbc**	**16 35 16.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=318,slow=3.2,SNR=11						
MKAR				pPKPbc	**pPKPbc**	**16 35 31.5**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=330,slow=3.1,SNR=13						
MKAR	**Makanchi Array**	**147.59**	**36**		**PKPbc**	**16 35 16.4**	**+0.1**

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*NEIC **22** 16:22:45.7±0.8, 17°.8N±0°.2×68°.62W±0°.05, h83km±20km, Error ellipse: s-maj=25.6km s-min=6.3km az=183.0*

*RSPR **22** 16:22:46.6, 17°.79N×68°.56W, h94km±5km, MD3.4/13*

*OSPL **22** 16:22:49.4±0.5, 18°.60N×68°.59W, h10km±6km, ML2.2*

ISC 22 16:22:45.6±1.4**, 17°.9N**±0°.1**×68°.61W**±0°.04**, h95**km**, n51, σ0s.61**/65**, 11C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**1.17**	**321**		**Pn**	**16 23 06.7**	**-0.9**
SDD	**Santo Domingo**	**1.36**	**295**	Pn	**Pn**	**16 23 10.0**	**+0.1**
SDD				IAML		16 23 29.3	
	comp=N,133nm,0.2s						
SDD	**Santo Domingo**	**1.36**	**295**	*e*S	**Sn**	**16 23 27.5**	**-0.8**
SDD				IAML		16 23 29.8	
	comp=Z,30nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.44**	**85**	⇑*e*P	**Pn**	**16 23 11.0**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.44**	**85**	*e*S	**Sn**	**16 23 29.2**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.44**	**85**		**Pn**	**16 23 11.0**	**+0.2**
CRPR					**Sn**	**16 23 29.2**	**-0.7**
MLPR	**Magueyes Islan**	**1.50**	**86**	⇑*e*P	**Pn**	**16 23 10.7**	**-0.9**
MLPR	**Magueyes Islan**	**1.50**	**86**		**Pn**	**16 23 10.7**	**-0.9**
AGPR	**Aguadilla, PR**	**1.55**	**67**	⇑*e*P	**Pn**	**16 23 12.9**	**+0.7**
AGPR	**Aguadilla, PR**	**1.55**	**67**	*e*S	**Sn**	**16 23 32.9**	**+0.6**
AGPR	**Aguadilla, PR**	**1.55**	**67**		**Pn**	**16 23 12.9**	**+0.7**
AGPR					**Sn**	**16 23 32.9**	**+0.6**
AGPR	**Aguadilla, PR**	**1.55**	**67**	*i* P	**Pn**	**16 23 13.0**	**+0.8**
AGPR				*e*S	**Sn**	**16 23 31.0**	**-1.4**
AGPR				IAML		16 23 41.4	
	comp=Z,51nm,0.3s						
GBPR	**Guanica, Bosqu**	**1.65**	**86**	⇓*e*P	**Pn**	**16 23 14.2**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.65**	**86**	*e*S	**Sn**	**16 23 35.2**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.65**	**86**		**Pn**	**16 23 14.2**	**+0.7**
GBPR					**Sn**	**16 23 35.2**	**+0.5**
BANI	**BANI**	**1.74**	**288**	Pn	**Pn**	**16 23 15.1**	**+0.4**
BANI					**Sn**	**16 23 36.8**	**-0.1**
AOPR	**Arecibo Observ**	**1.83**	**75**	⇑*e*P	**Pn**	**16 23 15.7**	**-0.1**
AOPR	**Arecibo Observ**	**1.83**	**75**	*e*S	**Sn**	**16 23 39.3**	**+0.4**
AOPR	**Arecibo Observ**	**1.83**	**75**		**Pn**	**16 23 15.7**	**-0.1**
AOPR					**Sn**	**16 23 39.3**	**+0.4**
OBIP	**Obispado Ponce**	**1.92**	**85**	⇑*e*P	**Pn**	**16 23 17.3**	**+0.4**
OBIP	**Obispado Ponce**	**1.92**	**85**		**Pn**	**16 23 17.3**	**+0.4**
CELP	**Cerrillos**	**1.95**	**84**	⇓*e*P	**Pn**	**16 23 17.3**	**0.0**
CELP	**Cerrillos**	**1.95**	**84**	*e*S	**Sn**	**16 23 40.9**	**-0.6**
CELP	**Cerrillos**	**1.95**	**84**		**Pn**	**16 23 17.3**	**0.0**
CELP					**Sn**	**16 23 40.9**	**-0.6**
ICMP	**Isla Caja de M**	**1.99**	**89**	⇑*e*P	**Pn**	**16 23 17.9**	**+0.1**
ICMP	**Isla Caja de M**	**1.99**	**89**	*e*S	**Sn**	**16 23 42.2**	**-0.2**
ICMP	**Isla Caja de M**	**1.99**	**89**		**Pn**	**16 23 17.9**	**+0.1**
ICMP					**Sn**	**16 23 42.2**	**-0.2**
EMPR	**Esperanza - Ma**	**2.07**	**73**	⇓*e*P	**Pn**	**16 23 19.3**	**+0.4**
EMPR	**Esperanza - Ma**	**2.07**	**73**	*e*S	**Sn**	**16 23 44.8**	**+0.5**
EMPR	**Esperanza - Ma**	**2.07**	**73**		**Pn**	**16 23 19.3**	**+0.4**
EMPR					**Sn**	**16 23 44.8**	**+0.5**
SJG	**San Juan**	**2.36**	**84**	Pn	**Pn**	**16 23 22.7**	**+0.1**
SJG				IAML		16 23 53.9	
	comp=Z,50nm,0.2s						
SJG				IAML		16 23 59.0	
	comp=Z,42nm,0.3s						
IGPR	**InterUniversit**	**2.39**	**87**	⇑*e*P	**Pn**	**16 23 23.2**	**+0.1**
IGPR	**InterUniversit**	**2.39**	**87**	*e*S	**Sn**	**16 23 51.7**	**-0.1**
IGPR	**InterUniversit**	**2.39**	**87**		**Sn**	**16 23 51.7**	**-0.1**
IGPR	**InterUniversit**	**2.39**	**87**	Pn	**Pn**	**16 23 23.0**	**-0.1**
GCPR	**Guaynabo City**	**2.44**	**79**	Pn	**Pn**	**16 23 23.6**	**-0.3**
PDPR	**Patillas Dam,**	**2.47**	**86**	Pn	**Pn**	**16 23 24.0**	**-0.2**
HUMP	**Col San Antoni**	**2.64**	**84**	⇑*e*P	**Pn**	**16 23 26.5**	**0.0**
HUMP	**Col San Antoni**	**2.64**	**84**	*e*S	**Sn**	**16 23 58.1**	**+0.2**
HUMP	**Col San Antoni**	**2.64**	**84**		**Pn**	**16 23 26.5**	**0.0**
HUMP					**Sn**	**16 23 58.1**	**+0.2**
CBYP	**Canovanas**	**2.65**	**81**	⇑*e*P	**Pn**	**16 23 26.5**	**-0.2**
CBYP	**Canovanas**	**2.65**	**81**	*e*S	**Sn**	**16 23 57.6**	**-0.6**
CBYP	**Canovanas**	**2.65**	**81**		**Pn**	**16 23 26.5**	**-0.2**
CBYP					**Sn**	**16 23 57.6**	**-0.6**
SDDR	**Presa de Saban**	**2.77**	**294**	Pn	**Pn**	**16 23 29.7**	**+1.5**
SDDR				IAML		16 24 08.0	
	comp=Z,28nm,0.7s						
SDDR				IAML		16 24 09.8	
	comp=Z,36nm,0.5s						
SDDR	**Presa de Saban**	**2.77**	**294**	*i* P	**Pn**	**16 23 29.8**	**+1.6**
SDDR				*e*S	**Sn**	**16 23 59.2**	**-1.7**
SDDR				IAML		16 24 14.1	
	comp=Z,12nm,0.5s						
MTP	**Monte Pirata**	**2.92**	**85**	⇑*e*P	**Pn**	**16 23 30.5**	**+0.3**
MTP	**Monte Pirata**	**2.92**	**85**	*e*S	**Sn**	**16 24 04.8**	**+0.2**
MTP	**Monte Pirata**	**2.92**	**85**		**Pn**	**16 23 30.5**	**+0.3**
MTP					**Sn**	**16 24 04.8**	**+0.2**
CUPR	**Culebra, Puert**	**3.20**	**82**	⇑*e*P	**Pn**	**16 23 33.4**	**-0.5**
CUPR	**Culebra, Puert**	**3.20**	**82**	*e*S	**Sn**	**16 24 10.4**	**-0.7**
CUPR	**Culebra, Puert**	**3.20**	**82**		**Pn**	**16 23 33.4**	**-0.5**
CUPR					**Sn**	**16 24 10.4**	**-0.7**

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*IDC **22** 16:50:48.5±2.1, 0°.56S×19°.14W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.7/40, mbtmp4.0/6, ML4.4/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=110.1km s-min=31.6km az=149.0*

*NEIC **22** 16:50:49.6±1.1, 0°.4S±0°.1×19°.3W±0°.2, h10km±2km, mb4.1/7, Error ellipse: s-maj=27.0km s-min=16.4km az=287.0*

ISC 22 16:50:49.7±0.9**, 0°.4S**±0°.1**×19°.3W**±0°.1**, h10**km**, n21, σ0s.83**/13**, mb3.8**/5**, MS3.4**/4**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**8.81**	**147**	T	T	17 02 06.2	
	baz=328,slow=74,SNR=60						
H10N3	**ASCENSION HYDR**	**8.81**	**147**	T	T	17 02 05.0	
	baz=328,slow=74,SNR=95						
H10N1	**ASCENSION HYDR**	**8.83**	**147**	T	T	17 02 07.6	
	baz=328,slow=74,SNR=86						
ASCN	**Ascension**	**8.97**	**147**	Pn	**Pn**	**16 53 00.3**	**+0.9**
H10S3	**ASCENSION HYDR**	**9.68**	**152**	T	T	17 03 13.0	
	baz=248,slow=74,SNR=24						
H10S2	**ASCENSION HYDR**	**9.69**	**151**	T	T	17 03 12.3	
	baz=332,slow=74,SNR=11						
DBIC	**Dimbokro**	**16.05**	**64**	Pn	**Pn**	**16 54 34.7**	**-0.9**
	1.8nm,0.3s,baz=239,slow=15,SNR=23						
DBIC	**Dimbokro**	**16.05**	**64**		**Pn**	**16 54 34.3**	**-1.3**
RCBR	**Riachuelo**	**17.41**	**252**	P	**P**	**16 54 54.5**	**+0.3**
	0.9nm,0.3s,baz=335,slow=1.1,SNR=2.6						
RCBR				LR	LR	16 59 53.9	
	comp=Z,94nm,21.2s,baz=42,slow=31						
RCBR	**Riachuelo**	**17.41**	**252**	IAmb	IAmb	16 55 13.2	
	comp=Z,19nm,1.1s						
KOWA	**Kowa**	**21.17**	**45**	P	**P**	**16 55 35.4**	**0.0**
	comp=Z,12nm,0.8s,baz=220,slow=8.7,SNR=30						
KOWA				LR	LR	17 03 05.7	
	comp=Z,62nm,18.1s,baz=196,slow=35						
KOWA	**Kowa**	**21.17**	**45**	P	**P**	**16 55 35.2**	**-0.1**
TOA0	**Torodi Ar. Sit**	**24.80**	**56**	P	**P**	**16 56 12.1**	**-0.1**
TOA0				IAmb	IAmb	16 56 23.0	
	comp=Z,3.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**24.80**	**56**	P	**P**	**16 56 11.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=228,slow=11,SNR=2.4						
TORD				LR	LR	17 04 50.4	
	comp=Z,40nm,19.0s,baz=235,slow=34						
KEST	**Kesra**	**44.77**	**34**	LR	LR	17 19 23.7	
	comp=Z,87nm,18.3s,baz=321,slow=38						
VSL	**Villasalto**	**47.60**	**30**	P	**P**	**16 59 26.3**	**+0.5**
HOPE	**Hope Point**	**55.54**	**192**	P	**P**	**17 00 23.7**	**-1.3**
BRTR	**Keskin Array B**	**62.60**	**44**	P	**P**	**17 01 15.5**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=227,slow=9.7,SNR=2.4						
AKASG	**Malin Array Be**	**65.44**	**32**	P	**P**	**17 01 32.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=237,slow=6.5,SNR=2.6						
FINES	**FINESS Array B**	**70.65**	**21**	LR	LR	17 34 06.9	
	comp=Z,67nm,18.2s,baz=32,slow=37						
ASAR	**Alice Springs**	**144.66**	**134**	PKP	**PKPdf**	**17 10 27.2**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=228,slow=2.7,SNR=11						

WEL 22 17:22:09.4, 39°.2S±1°.0**×17°8E**±°**, h20**km±2km**, M3.4**/18**, ML3.7**/18**, MLv3.4**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=90.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.13**	**60**	P	Pg	17 22 16.0	+2.3
KNZ	**Kokohu**	**0.21**	**341**	P	Pg	17 22 15.1	+0.4
KNZ				S	Sg	17 22 19.5	+1.4
PRGZ	**Paritu Road**	**0.31**	**18**	P	Pb	17 22 17.6	+1.3
WHHZ	**Waihua**	**0.43**	**289**	P	Pb	17 22 18.8	+0.3
WHHZ				S	Sn	17 22 26.3	-1.6
RIGZ	**Rimuhau**	**0.51**	**0**	P	Pg	17 22 20.3	+0.5
RIGZ				S	Sn	17 22 29.0	-0.9
SNGZ	**Shannon Statio**	**0.55**	**323**	P	Pg	17 22 20.5	0.0
SNGZ				S	Sg	17 22 28.7	+0.8
ARHZ	**Aropaoanui**	**0.60**	**265**	P	Pg	17 22 21.9	+0.6
RAHZ	**Arahi**	**0.61**	**300**	P	Pg	17 22 21.5	-0.1
RAHZ				S	Sg	17 22 30.7	+0.9
CKHZ	**Cape Kidnapper**	**0.69**	**230**	P	Pn	17 22 23.9	-0.2
NMHZ	**Naumai**	**0.75**	**279**	P	Pg	17 22 24.3	0.0
RAGZ	**Rawiri**	**0.77**	**339**	P	Pb	17 22 24.1	-0.1
RAGZ				S	Sg	17 22 35.4	+0.5
TKGZ	**Te Karaka**	**0.78**	**5**	P	Pg	17 22 24.7	0.0
TKGZ				S	Sn	17 22 36.9	+0.5
MTHZ	**Maungataniwha**	**0.81**	**297**	P	Pb	17 22 24.4	-0.4
MTHZ				S	Sg	17 22 35.9	-0.1
CNGZ	**Carnagh Statio**	**0.81**	**26**	P	Pg	17 22 25.5	+0.2
MCHZ	**McNeill Hill**	**0.86**	**254**	P	Pg	17 22 26.2	-0.1
RTZ	**Ruatahuna**	**0.86**	**314**	P	Pb	17 22 25.3	-0.4
RTZ				S	Sg	17 22 37.3	-0.3
KAHZ	**Kahuranaki**	**0.90**	**230**	P	Pg	17 22 26.7	-0.2
MWZ	**Matawai**	**0.90**	**348**	P	Pb	17 22 26.0	-0.4
MWZ				S	Sb	17 22 38.3	+0.3
BKZ	**Black Stump Fm**	**0.99**	**273**	P	Pb	17 22 27.5	-0.4
TWGZ	**Tauwhareparae**	**1.05**	**9**	P	Pb	17 22 28.8	-0.3
KWHZ	**Kaweka Forest**	**1.06**	**258**	P	Pb	17 22 28.7	-0.5
PXZ	**Pawanui**	**1.07**	**220**	P	Pb	17 22 28.3	-0.9
MUGZ	**Murupara**	**1.07**	**313**	P	Pb	17 22 28.7	-0.6
URZ	**Urewera**	**1.08**	**332**	P	Pn	17 22 28.6	-0.9
MRHZ	**Matea Rd**	**1.12**	**290**	P	Pn	17 22 29.6	-0.4
KRHZ	**Kereru**	**1.16**	**248**	P	Pn	17 22 29.9	-0.7
PUZ	**Puketiti**	**1.21**	**19**	P	Pn	17 22 30.3	-1.0
RUGZ	**Raukumara Rang**	**1.25**	**357**	P	Pn	17 22 30.8	-1.2
ALRZ	**Allen Road**	**1.29**	**300**	P	Pb	17 22 33.5	+0.5
RRRZ	**Republican Roa**	**1.31**	**312**	P	Pb	17 22 34.0	+0.6
WPHZ	**Waipukurau**	**1.32**	**230**	P	Pn	17 22 32.0	-0.8
HATZ	**Hinemaiaia**	**1.34**	**284**	P	Pg	17 22 35.2	-0.1
BHHZ	**Black Hill Sta**	**1.34**	**258**	P	Pn	17 22 32.5	-0.7
PKGZ	**Pakihiroa**	**1.35**	**11**	P	Pn	17 22 32.5	-0.7
PRHZ	**Porangahau**	**1.36**	**219**	P	Pn	17 22 32.6	-0.8
TARZ	**Mount Tarawera**	**1.39**	**315**	P	Pb	17 22 35.2	+0.4
PNHZ	**Pukenui**	**1.39**	**240**	P	Pn	17 22 32.7	-1.1
HAZ	**Te Kaha**	**1.46**	**1**	P	Pn	17 22 33.8	-0.9
HLRZ	**Highlands Stat**	**1.47**	**311**	P	Pg	17 22 38.3	+0.5
MKRZ	**Makatiti**	**1.48**	**316**	P	Pg	17 22 38.7	+0.7
WMGZ	**Waiomatatini S**	**1.49**	**20**	P	Pn	17 22 34.4	-0.7
HSRZ	**Hossack Road**	**1.49**	**307**	P	Pb	17 22 36.9	+0.4
RITZ	**Rihia Road**	**1.50**	**279**	P	Pg	17 22 38.7	+0.3
OMRZ	**Omania**	**1.56**	**315**	P	Pb	17 22 38.1	+0.5
MOVZ	**Moawhango**	**1.57**	**262**	P	Pn	17 22 36.4	+0.1
RATZ	**Rangitukua**	**1.59**	**282**	P	Pg	17 22 40.6	+0.5
ETVZ	**East Tongariro**	**1.60**	**272**	P	Pb	17 22 37.9	-0.5
TMVZ	**Te Maari**	**1.60**	**273**	P	Pn	17 22 37.6	+0.8
TSZ	**Takapari Road**	**1.62**	**238**	P	Pn	17 22 35.7	-1.3
KATZ	**Kakaramea**	**1.63**	**278**	P	Pb	17 22 38.4	-0.4
OTVZ	**Oturere**	**1.63**	**271**	P	Pb	17 22 38.6	-0.3
DVHZ	**Dannevirke**	**1.64**	**228**	P	Pn	17 22 35.9	-1.3
TUVZ	**Tukino**	**1.64**	**268**	P	Pb	17 22 38.8	-0.3
KRVZ	**Karewarewa**	**1.65**	**274**	P	Pb	17 22 39.0	-0.4
OPRZ	**Ohinepanea**	**1.67**	**325**	P	Pn	17 22 36.4	-1.1
NGZ	**Ngauruhoe**	**1.68**	**271**	P	Pb	17 22 39.7	-0.1
WNVZ	**Wahianoa**	**1.68**	**266**	P	Pb	17 22 40.8	+0.9
WHVZ	**Whangaehu Hut**	**1.69**	**267**	P	Pg	17 22 41.3	-0.7
WTVZ	**West Tongariro**	**1.69**	**273**	P	Pb	17 22 40.4	+0.4
FWVZ	**Far West T-bar**	**1.72**	**268**	P	Pb	17 22 39.7	-0.7
TWVZ	**Taurewa**	**1.81**	**274**	P	Pb	17 22 42.7	+0.7
BFZ	**Birch Farm**	**1.87**	**218**	P	Pn	17 22 38.6	-1.8
PKVZ	**Pokaka**	**1.88**	**267**	P	Pg	17 22 45.4	-0.1
TIWZ	**Tintock**	**2.12**	**222**	P	Pn	17 22 42.3	-1.6
MRZ	**Mangatainoka R**	**2.21**	**229**	P	Pn	17 22 43.6	-1.4
TMWZ	**Te Maipa**	**2.37**	**217**	P	Pn	17 22 45.3	-1.9
HIZ	**Hauiti**	**2.38**	**286**	P	Pg	17 22 54.4	-0.7
HOWZ	**Holdsworth Sta**	**2.41**	**225**	P	Pn	17 22 46.1	-1.6
OGWZ	**Otaki Gorge**	**2.55**	**230**	P	Pn	17 22 48.3	-1.4
MTW	**Mount Morrison**	**2.60**	**221**	P	Pn	17 22 48.2	-2.2
KIW	**Kapiti Island**	**2.74**	**232**	P	Pn	17 22 50.6	-1.7
PAWZ	**Paruwai Farm**	**2.80**	**219**	P	Pn	17 22 50.5	-2.7
NEZ	**North Egmont**	**2.85**	**268**	P	Pn	17 22 56.4	+2.5
KHEZ	**Kahui Hut**	**2.91**	**267**	P	Pn	17 22 56.3	+1.5
PKE	**Pukeiti**	**2.93**	**269**	P	Pn	17 22 56.0	+1.0
PLWZ	**Palliser**	**3.03**	**218**	P	Pn	17 22 53.5	-2.9
CTZ	**Chatham Island**	**6.18**	**139**	P	Pn	17 23 40.4	+0.9

IDC 22 17:48:24.7±5.4**, 26°.42N×126°.43E, h128**km±52km**, mb3.0**/5**, mb1 3.2**/6**, mb1mx3.0**/34**, mbtmp3.4**/6**, Error ellipse: s-maj=42.9km s-min=20.2km az=76.0, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**11.07**	**6**	P	Pn	17 50 58.8	-0.6
	0.0nm,0.3s,baz=184,slow=12,SNR=4.1						
SONM	**Songino Array**	**26.54**	**329**	P	P	17 53 52.3	+1.8
	0.2nm,0.4s,baz=149,slow=8.6,SNR=2.3						
MKAR	**Makanchi Array**	**40.21**	**312**	P	P	17 55 47.5	-1.1
	0.2nm,0.5s,baz=92,slow=10,SNR=5.4						
WRA	**Warramunga Arr**	**46.72**	**170**	P	P	17 56 40.5	-0.5
	0.5nm,0.8s,baz=350,slow=9.3,SNR=2.5						
ASAR	**Alice Springs**	**50.31**	**171**	P	P	17 57 08.8	+0.3
	0.2nm,0.8s,baz=355,slow=8.1,SNR=5.6						
YKA	**Yellowknife Ar**	**79.03**	**24**	P	P	18 00 14.2	-0.1
	0.5nm,0.8s,baz=307,slow=4.8,SNR=8.4						

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*HLW **22** 18:01:07.2, 35°.35N×23°.84E, h15km±14km, Md4.4*

*ATH **22** 18:01:08.5, 35°.26N×23°.28E, h64km±3km, ML3.7/5, Error ellipse: s-maj=5.8km s-min=1.3km az=49.0*

*ISK **22** 18:01:08.5, 35°.28N×23°.33E, h72km, ML3.6/17*

*IDC **22** 18:01:11.0±1.5, 35°.42N×23°.16E, h65km±14km, mb3.6/17, mb1 3.6/22, mb1mx3.5/46, mbtmp3.8/22, MS2.9/3, Ms1 2.9/3, ms1mx2.5/37, Error ellipse: s-maj=16.8km s-min=13.1km az=8.0*

*THE **22** 18:01:10.7, 35°.22N×23°.24E, h26km, ML3.4/7, Error ellipse: s-maj=1.0km s-min=0.4km az=40.0*

ISC 22 18:01:08.9±0.8**, 35°.19N**±0°.04**×23°.21E**±0°.05**, h53**km±8km**, n108, σ1s.46**/126**, mb3.8**/17**, 6C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.68**	**7**	P	**Pn**	**18 01 22.5**	**-0.1**
ANKY				S	**Sn**	**18 01 34.4**	**+2.0**
ANKY				AML	AML	18 01 35.8	
	comp=N,6125µm,0.5s						
ANKY				AML	AML	18 01 36.6	
	comp=E,6216µm,0.8s						
ANKY	**Antikythira Is**	**0.68**	**7**	P	**Pn**	**18 01 22.6**	**+0.1**
ANKY				S	**Sn**	**18 01 32.7**	**+0.3**
IMMV	**Iera Moni Meta**	**0.69**	**67**	P	**Pn**	**18 01 22.9**	**+0.3**
IMMV				S	**Sn**	**18 01 33.6**	**+0.9**
IMMV				AML	AML	18 01 35.4	
	comp=N,21897µm,0.7s						
IMMV				AML	AML	18 01 35.5	
	comp=E,16778µm,1.0s						
IMMV	**Iera Moni Meta**	**0.69**	**67**	P	**Pn**	**18 01 22.9**	**+0.3**
IMMV				S	**Sn**	**18 01 32.6**	**0.0**
	comp=E,10µm,0.8s						
IMMV	**Iera Moni Meta**	**0.69**	**67**	PG	**Pn**	**18 01 22.9**	**+0.3**
IMMV				SG	**Sn**	**18 01 33.3**	**+0.7**
GVD	**Gavdhos**	**0.80**	**116**	P	**Pn**	**18 01 25.3**	**+1.2**
GVD				S	**Sn**	**18 01 38.0**	**+2.8**
GVD				AML	AML	18 01 45.3	
	comp=E,6583µm,0.5s						
GVD				AML	AML	18 01 45.5	
	comp=N,8653µm,0.4s						
GVD	**Gavdhos**	**0.80**	**116**	P	**Pn**	**18 01 25.3**	**+1.2**
GVD				S	**Sn**	**18 01 36.5**	**+1.3**
	comp=N,4µm,0.5s						
GVD	**Gavdhos**	**0.80**	**116**	PG	**Pn**	**18 01 25.3**	**+1.2**
GVDS	**Gavdos**	**0.80**	**115**	P	**Pn**	**18 01 25.0**	**+1.0**
GVDS				S	**Sn**	**18 01 36.4**	**+1.2**
	comp=N,3µm,0.4s						
GVDS	**Gavdos**	**0.80**	**115**	PG	**Pn**	**18 01 25.1**	**+1.0**
GVDS				SG	**Sn**	**18 01 36.1**	**+0.9**
VAM	**Vamos**	**0.84**	**75**	P	**Pn**	**18 01 25.5**	**+0.9**
VAM				S	**Sn**	**18 01 36.9**	**+0.8**
VAM				AML	AML	18 01 41.5	
	comp=E,12596µm,0.7s						
VAM				AML	AML	18 01 45.0	
	comp=N,13238µm,0.8s						
VAM	**Vamos**	**0.84**	**75**	P	**Pn**	**18 01 25.5**	**+0.9**
VAM				S	**Sn**	**18 01 37.1**	**+1.0**
	comp=N,6µm,0.7s						
KTHA	**Kythira Island**	**1.07**	**354**	P	**Pn**	**18 01 28.9**	**+1.2**
KTHA				S	**Sn**	**18 01 44.0**	**+2.4**
KTHA				AML	AML	18 01 49.2	
	comp=E,4435µm,0.6s						
KTHA				AML	AML	18 01 49.7	
	comp=N,2604µm,0.7s						
KTHA	**Kythira Island**	**1.07**	**354**	P	**Pn**	**18 01 28.9**	**+1.2**
KTHA				S	**Sn**	**18 01 42.9**	**+1.3**
	comp=N,2µm,0.7s						
KTHA	**Kythira Island**	**1.07**	**354**	PG	**Pn**	**18 01 27.9**	**+0.2**
PRNS	**Prines Rethymn**	**1.07**	**80**	P	**Pn**	**18 01 27.4**	**-0.3**
PRNS				S	**Sn**	**18 01 41.0**	**-0.6**
KTHR	**Kythira**	**1.08**	**351**	P	**Pn**	**18 01 28.9**	**+1.1**
KTHR				S	**Sn**	**18 01 42.7**	**+0.9**
	comp=N,2µm,0.7s						
SIVA	**Sivas**	**1.33**	**97**	P	**Pn**	**18 01 33.1**	**+2.1**
SIVA				S	**Sn**	**18 01 50.6**	**+3.0**
IDI	**Anoyia**	**1.38**	**85**	P	**Pn**	**18 01 33.4**	**+1.5**
	comp=N,40nm,0.3s,baz=277,slow=17,SNR=94						
IDI				S	**Sn**	**18 01 52.7**	**+3.6**
	comp=N,44nm,0.3s,baz=17,slow=23,SNR=12						
IDI	**Anoyia**	**1.38**	**85**	P	**Pn**	**18 01 33.3**	**+1.3**
IDI	**Anoyia**	**1.38**	**85**	P	**Pn**	**18 01 33.2**	**+1.3**
IDI				S	**Sn**	**18 01 50.6**	**+1.5**
	comp=N,852nm,0.7s						
IDI	**Anoyia**	**1.38**	**85**	⇓P	**Pn**	**18 01 33.8**	**+1.9**
IDI	**Anoyia**	**1.38**	**85**	PN	**Pn**	**18 01 31.7**	**-0.2**
MNVA	**Monemvasia**	**1.50**	**355**	P	**Pn**	**18 01 36.1**	**+2.7**
VLI	**Veliai**	**1.54**	**352**	P	**Pn**	**18 01 35.3**	**+1.3**
VLI				S	**Sn**	**18 01 55.4**	**+2.5**
VLI	**Veliai**	**1.54**	**352**	P	**Pn**	**18 01 35.1**	**+1.1**
HRKL	**Herakleio**	**1.56**	**85**	PN	**Pn**	**18 01 33.9**	**-0.3**
LAST	**Lasithi**	**1.86**	**90**	P	**Pn**	**18 01 41.3**	**+2.8**
NPS	**Neapolis**	**1.97**	**87**	P	**Pn**	**18 01 42.2**	**+2.3**
THR5	**Thira Island,**	**2.13**	**54**	PN	**Pn**	**18 01 41.4**	**-0.6**
THR3	**Thira Island,**	**2.16**	**55**	P	**Pn**	**18 01 43.9**	**+1.5**
SANT	**Santorini**	**2.18**	**57**	⇑P	**Pn**	**18 01 42.7**	**0.0**
SANT	**Santorini**	**2.18**	**57**	PN	**Pn**	**18 01 41.9**	**-0.8**
KRND	**KRANIDI**	**2.19**	**359**	P	**Pn**	**18 01 44.5**	**+1.7**
CMBO	**Columbo, Santo**	**2.20**	**54**	P	**Pn**	**18 01 42.9**	**0.0**
ITM	**Ithomi**	**2.24**	**333**	PN	**Pn**	**18 01 44.3**	**+0.8**
ZKR	**Zakros**	**2.47**	**91**	P	**Pn**	**18 01 49.3**	**+2.7**
ZKR	**Zakros**	**2.47**	**91**	P	**Pn**	**18 01 48.7**	**+2.0**
ZKR	**Zakros**	**2.47**	**91**	PN	**Pn**	**18 01 46.4**	**-0.3**
APE	**Apeiranthos**	**2.66**	**44**	⇑P	**Pn**	**18 01 48.9**	**-0.4**
APE	**Apeiranthos**	**2.66**	**44**	PN	**Pn**	**18 01 49.1**	**-0.2**
VLY	**Voula,Athens**	**2.70**	**10**	P	**Pn**	**18 01 50.9**	**+1.1**
DION	**Dionisos Attik**	**2.94**	**11**	P	**Pn**	**18 01 53.9**	**+0.7**
KARP	**Karpathos**	**3.25**	**83**	PN	**Pn**	**18 01 57.5**	**+0.1**
LKR	**Lokris**	**3.46**	**357**	P	**Pn**	**18 02 00.9**	**+0.7**
ATAL	**Atalanti**	**3.50**	**358**	P	**Pn**	**18 02 02.0**	**+1.2**
BODT	**Bodrum**	**3.81**	**59**	PN	**Pn**	**18 02 05.1**	**0.0**
AGG	**Agios Georgios**	**3.89**	**350**	PN	**Pn**	**18 02 06.5**	**+0.4**
SLUM	**Salum**	**4.05**	**155**	P	**Pn**	**18 02 09.4**	**+1.0**
	baz=163						
GCAM	**G?zelcaml?**	**4.10**	**51**	PN	**Pn**	**18 02 08.9**	**-0.1**
ARG	**Arkhangelos**	**4.13**	**74**	PN	**Pn**	**18 02 09.9**	**+0.5**
URLA	**Izmir**	**4.17**	**40**	PN	**Pn**	**18 02 09.2**	**-0.8**
TURN	**Turunc**	**4.38**	**67**	PN	**Pn**	**18 02 13.0**	**+0.2**
YER	**Yerkesik**	**4.54**	**63**	PN	**Pn**	**18 02 15.1**	**0.0**
DALY	**Dalyan (Mula)**	**4.71**	**68**	PN	**Pn**	**18 02 17.5**	**+0.2**
FETY	**Fethiye**	**4.98**	**71**	PN	**Pn**	**18 02 20.9**	**-0.2**
OUR	**Ouranopolis**	**5.17**	**7**	PN	**Pn**	**18 02 23.8**	**+0.1**
AKAS	**Kas**	**5.31**	**77**	PN	**Pn**	**18 02 25.4**	**-0.3**
ELL	**Elmali**	**5.65**	**72**	PN	**Pn**	**18 02 29.6**	**-0.8**
KORT	**Korkueli**	**6.06**	**71**	PN	**Pn**	**18 02 35.2**	**-0.8**
SWA2		**6.23**	**162**	P	**Pn**	**18 02 38.8**	**+0.6**
	baz=166						
SWA2				S	**Sn**	**18 03 45.4**	**-2.7**
	baz=166						
DBRK	**Dubrovnik**	**8.44**	**334**	*e*Pn	**Pn**	**18 03 05.8**	**-2.7**
DBRK				Sn	Sn	18 04 30.8	-11
STON	**Ston**	**8.78**	**332**	*e*Pn	**Pn**	**18 03 10.0**	**-3.2**
STON				Sn	Sn	18 04 38.8	-12
HFRF	**Wahat Farafira**	**9.13**	**150**	P	**Pn**	**18 03 17.6**	**-0.4**
	baz=153						
HFRF				S	Sn	18 04 53.0	-6.2
	baz=153						
BRTR	**Keskin Array B**	**9.45**	**58**	P	**Pn**	**18 03 23.6**	**+1.2**
	comp=N,0.1nm,0.3s,baz=231,slow=13,SNR=16						
BRTR				LR	LR	18 07 34.7	
	comp=N,47nm,20.3s,baz=312,slow=41						
RICI	**Ricice**	**9.53**	**332**	*e*Pn	**Pn**	**18 03 20.1**	**-3.3**
RICI				Sn	Sn	18 04 57.2	-12
HVAR	**Hvar**	**9.54**	**329**	*e*Pn	**Pn**	**18 03 20.4**	**-3.1**
HVAR				Sn	Sn	18 04 58.9	-10
KIJV	**Kijevo**	**10.24**	**331**	*e*Pn	**Pn**	**18 03 30.9**	**-2.3**
KIJV				Sn	Sn	18 05 15.4	-11
ZIRJ	**Zirje**	**10.27**	**328**	*e*Pn	**Pn**	**18 03 32.0**	**-1.6**
ZIRJ				Sn	Sn	18 05 16.5	-11
VOIR		**10.33**	**7**	⇑P	**Pn**	**18 03 33.2**	**-1.2**
MMAI	**Mount Meron Ar**	**10.34**	**99**	P	**Pn**	**18 03 32.7**	**-1.9**
	comp=N,3.1nm,0.3s,baz=287,slow=15,SNR=2.4						
MMAI				S	Sn	18 05 20.1	-9.0
	comp=N,1.3nm,0.3s,baz=315,slow=55,SNR=1.0						
MORI	**Morici**	**10.42**	**329**	*e*Pn	**Pn**	**18 03 33.1**	**-2.4**
MORI				Sn	Sn	18 05 20.3	-10
BZS	**Buzias**	**10.48**	**354**	⇓P	**Pn**	**18 03 34.3**	**-2.1**
MLR	**Muntele Rosu**	**10.50**	**11**	P	**Pn**	**18 03 37.1**	**+0.3**
	comp=N,0.3nm,0.3s,baz=160,slow=14,SNR=3.8						
MLR	**Muntele Rosu**	**10.50**	**11**	⇑P	**Pn**	**18 03 35.6**	**-1.1**
PLOR	**Plostina**	**10.97**	**13**	⇑P	**Pn**	**18 03 42.8**	**-0.2**
VRI	**Vrincioaia**	**10.99**	**13**	⇑P	**Pn**	**18 03 43.5**	**+0.1**
HDK1	**Dakhla**	**11.00**	**149**	P	**Pn**	**18 03 42.8**	**-0.8**
	baz=152						
EIL	**Elat**	**11.34**	**116**	P	**Pn**	**18 03 46.8**	**-1.4**
	comp=N,0.4nm,0.3s,baz=321,slow=1.8,SNR=7.4						
EIL				S	Sn	18 05 41.8	-12
	comp=N,0.3nm,0.3s,baz=35,slow=14,SNR=1.5						
VYHS	**Vyhne**	**13.68**	**348**	*e*PN	**Pn**	**18 04 23.4**	**+3.3**
MODS	**Modra-Piesok**	**13.89**	**343**	*e*PN	**P**	**18 04 29.8**	**+0.3**
VRAC	**Vranov**	**14.92**	**343**	LR	LR	18 11 42.2	
	comp=N,58nm,19.1s,baz=218,slow=43						
GERES	**GERESS Array B**	**15.35**	**336**	P	**Pn**	**18 04 39.7**	**-2.3**
	comp=N,0.1nm,0.3s,baz=230,slow=35,SNR=2.6						
KRLC	**Kraliky**	**15.60**	**344**	*e*P	**P**	**18 04 49.0**	**+0.5**
KHC	**Kasperske Hory**	**15.63**	**336**	*e*P	**P**	**18 04 50.0**	**+1.1**
DPC	**Dobruska-Polom**	**15.96**	**344**	*e*P	**P**	**18 04 53.3**	**+0.8**
AKASG	**Malin Array Be**	**16.11**	**14**	P	**Pn**	**18 04 48.9**	**-2.7**
	comp=N,0.3nm,0.3s,baz=199,slow=11,SNR=4.4						
UPC	**Upice**	**16.18**	**343**	*e*P	**P**	**18 04 57.0**	**+2.1**
KBZ	**Khabaz**	**17.40**	**55**	P	**P**	**18 05 08.4**	**-0.1**
	comp=N,0.1nm,0.3s,baz=243,slow=14,SNR=4.1						
ESDC	**Sonseca Array**	**22.00**	**290**	P	**P**	**18 05 59.4**	**+0.9**
	comp=N,0.5nm,0.8s,baz=76,slow=9.2,SNR=1.9						
BELG	**Belogornoye**	**24.44**	**38**	P	**P**	**18 06 21.6**	**-0.8**
	comp=N,4.4nm,0.7s,baz=188,slow=5.0,SNR=5.5						
HFS	**Hagfors**	**25.71**	**349**	P	**P**	**18 06 32.8**	**-1.0**
	comp=N,1.7nm,0.5s,baz=154,slow=11,SNR=15						
FINES	**FINESS Array B**	**26.34**	**3**	P	**P**	**18 06 38.2**	**-1.2**
	comp=N,1.2nm,0.6s,baz=153,slow=13,SNR=9.0						
NOA	**NORSAR Array B**	**26.99**	**347**	LR	LR	18 19 19.7	
	comp=N,30nm,21.0s,baz=350,slow=41						
EKA	**Eskdalemuir Ar**	**27.11**	**326**	P	**P**	**18 06 46.6**	**+0.1**
	comp=N,0.8nm,0.7s,baz=223,slow=43,SNR=2.3						
TORD	**Torodi Ar. Bea**	**29.31**	**227**	P	**P**	**18 07 08.3**	**+1.8**
	comp=N,1.2nm,0.6s,baz=33,slow=9.2,SNR=3.5						
ARU	**Arti**	**31.99**	**37**	P	**P**	**18 07 28.8**	**-0.9**
	comp=N,0.3nm,0.4s,baz=212,slow=5.3,SNR=4.3						
ARCES	**ARCESS Array B**	**34.42**	**1**	P	**P**	**18 07 48.0**	**-2.8**
	comp=N,1.0nm,0.4s,baz=190,slow=9.9,SNR=1.4						
BVAR	**Borovoye Array**	**37.49**	**47**	P	**P**	**18 08 16.3**	**-0.9**
	comp=N,0.4nm,0.7s,baz=296,slow=8.1,SNR=5.2						
DBIC	**Dimbokro**	**38.36**	**229**	P	**P**	**18 08 26.2**	**+1.4**
	comp=N,1.2nm,0.4s,baz=136,slow=8.8,SNR=3.4						
MKAR	**Makanchi Array**	**45.09**	**56**	P	**P**	**18 09 19.7**	**0.0**
	comp=N,0.6nm,0.4s,baz=268,slow=8.0,SNR=22						
ZALV	**Zalesovo Beam**	**46.14**	**46**	P	**P**	**18 09 27.0**	**-0.7**

	comp=N,0.9nm,0.4s,baz=263,slow=9.3,SNR=5.9						
SONM	Songino Array	60.70	50	P	P	18 11 15.3	+0.5
	comp=N,0.2nm,0.3s,baz=280,slow=8.6,SNR=3.5						
CMAR	Chiang Mai Arr	68.16	82	P	P	18 12 04.5	+0.8
	comp=N,0.5nm,0.7s,baz=295,slow=7.2,SNR=6.4						
YKA	Yellowknife Ar	76.92	341	P	P	18 12 55.6	+0.5
	comp=N,0.5nm,0.8s,baz=40,slow=6.2,SNR=10						
USRK	Ussuriysk Ar.	77.94	44	P	P	18 13 01.6	+0.4
	comp=N,2.6nm,0.7s,baz=298,slow=5.6,SNR=6.1						
KSRS	Korea Array	79.52	52	P	P	18 13 10.8	+0.9
	comp=N,1.1nm,0.6s,baz=310,slow=6.1,SNR=4.5						
ASAR	Alice Springs	119.63	99	PKP	PKPdf	18 19 53.5	+0.4
	comp=N,1.0nm,1.1s,baz=341,slow=2.0,SNR=4.4						

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*IDC **22** 18:05:13.4±0.8, 67°.04N×21°.43E, h0^{km}, mb1 2.8/4, mb1mx2.8/38, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=12.6km s-min=6.6km az=128.0*

*NAO **22** 18:05:13.1±1.0, 67°.09N×21°.32E, ML2.4*

*BER **22** 18:05:14.2±3.1, 67°.00N×20°.75E, h0^{km}, ML1.8, ML2.4(NAO), Suspected explosion*

ISC 22 18:05:12.1±0.8**, 67°.05N**±0°.04×**20°.87E**±0°.08**, h0^{km}, n19, σ0^{s}.94**/26**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALU	Saltoluokta	0.98	291	eP	Pg	18 05 30.4	-0.4
KIF	Kilpisjarvi	1.97	359	Pn	Pb	18 05 47.7	-1.1
KIF				Sn	Sb	18 06 14.2	+0.4
KIF	Kilpisjarvi	1.97	359	Pn	Pb	18 05 47.7	-1.1
KIF				Sn	Sb	18 06 14.2	+0.4
KTK1	Kautokeino	2.17	23	Pn	Pn	18 05 50.5	+1.1
KTK1				Sn	Sn	18 06 18.2	+1.2
KTK1	Kautokeino	2.17	23	eP	Pn	18 05 50.2	+0.8
KTK1				eS	Sn	18 06 17.7	+0.8
KTK1				IAML		18 06 27.6	
	comp=Z,12nm,0.2s						
I37NO	I37NO	2.21	338	i		18 22 50.0	
	baz=151,slow=331,SNR=0.7						
ARA0	ARCESS Array S	3.04	32	Pn	Pn	18 06 01.1	-0.3
	baz=205,slow=16						
ARA0				Lg	Lg	18 06 43.3	
ARA0	ARCESS Array S	3.04	32	Pn	Pn	18 06 01.1	-0.3
	baz=205,slow=16						
ARCES	ARCESS Array B	3.04	32	Pn	Pn	18 06 01.1	-0.2
	baz=214,slow=14,SNR=49						
ARCES				Sn	Sn	18 06 38.4	0.0
	baz=211,slow=24,SNR=8.1						
APA0	Apatity Array	4.73	78	Pn	Pn	18 06 25.1	+0.5
	baz=260,slow=11						
APA0	Apatity Array	4.73	78	Pn	Pn	18 06 25.1	+0.5
	baz=260,slow=11						
FIA0	FINESS Array S	6.06	156	Pn	Pn	18 06 44.1	+1.2
	baz=346,slow=14						
FIA0	FINESS Array S	6.06	156	Pn	Pn	18 06 44.1	+1.2
	baz=346,slow=14						
FINES	FINESS Array B	6.06	156	Pn	Pn	18 06 44.0	+1.2
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=6.9						
FINES				Sn	Sn	18 07 51.4	-1.4
	comp=Z,0.1nm,0.3s,baz=345,slow=26,SNR=1.6						
NOA	NORSAR Array B	7.36	220	Pn	Pn	18 07 00.5	-0.2
	comp=Z,0.0nm,0.3s,baz=54,slow=6.0,SNR=1.2						
NOA				Sn	Sn	18 08 27.1	+2.3
	comp=Z,0.0nm,0.3s,baz=295,slow=14,SNR=1.1						
NOA				Lg	Lg	18 09 06.0	
	comp=Z,0.0nm,0.3s,baz=31,slow=7.3,SNR=1.6						
HFS	Hagfors	7.63	208	Pn	Pn	18 07 04.8	+0.3
	comp=Z,0.1nm,0.3s,baz=41,slow=13,SNR=0.9						
HFS				Sn	Sn	18 08 31.1	-0.4
	comp=Z,0.1nm,0.3s,baz=30,slow=27,SNR=1.3						
HFS				Lg	Lg	18 09 13.6	
	comp=Z,0.1nm,0.3s,baz=38,slow=34,SNR=1.7						
HFS	Hagfors	7.63	208	Pn	Pn	18 07 04.7	+0.3
	baz=35,slow=14						
HFS	Hagfors	7.63	208	Pn	Pn	18 07 04.7	+0.3
	baz=35,slow=14						
SPITS	Spitsbergen Ar	11.27	355	Pn	Pn	18 07 53.3	-0.8
	baz=154,slow=14,SNR=2.1						

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*ATH **22** 18:31:20.7, 41°.34N×20°.56E, h6^{km}±3^{km}, ML2.3/5, Error ellipse: s-maj=3.7km s-min=2.0km az=28.0*

*SKO **22** 18:31:21.4, 41°.15N×20°.44E, h19^{km}*

*TIR **22** 18:31:21.2, 41°.20N×20°.49E, h0^{km}±3^{km}, Md3.0*

*BEO **22** 18:31:22.2±0.5, 41°.15N×20°.50E, h5^{km}±3^{km}, ML2.2/7*

*THE **22** 18:31:22.1, 41°.20N×20°.48E, h0^{km}±1^{km}, ML2.1/6, Error ellipse: s-maj=1.0km s-min=0.3km az=244.0*

ISC 22 18:31:22.3±1.0**, 41°.20N**±0°.02×**20°.48E**±0°.02**, h7^{km}**±9^{km}**, n62, σ1^{s}.26**/92**, 1C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.26	110	⇑iPg	Pg	18 31 27.9	+0.6
OHR				i Sg	Sg	18 31 33.0	+2.2
OHR				eLg	Lg	18 31 33.0	
	comp=N,780nm,0.3s						
OHR				eLg	Lg	18 31 33.3	
	comp=E,271nm,0.4s						
PHP	Peshkopia	0.49	357	P	Pg	18 31 31.4	-0.3
PHP				S	Sb	18 31 38.8	-1.8
	comp=E,130nm,0.6s						
PHP	Peshkopia	0.49	357	P	Pg	18 31 31.5	-0.3
	baz=356						
PHP				S	Sb	18 31 40.3	-0.4
	baz=356						
TIR	Tirane	0.49	288	P	Pg	18 31 30.9	-0.8
TIR				AML	AML	18 31 42.0	
	comp=E,890μm,0.3s						
TIR				AML	AML	18 31 45.1	
	comp=N,706μm,0.4s						
TIR	Tirane	0.49	288	P	Pg	18 31 31.1	-0.6
TIR				S	Sb	18 31 38.8	-1.7
	comp=N,158nm,0.3s						
TIR	Tirane	0.49	288	ePg	Pg	18 31 30.9	-0.8
TIR				eSg	Sb	18 31 39.5	-1.0
TIR	Tirane	0.49	288	P	Pg	18 31 31.2	-0.6
	baz=288						
TIR				S	Sb	18 31 39.0	-1.5
	baz=288						
TIR	Tirane	0.49	288	i Pg	Pg	18 31 31.1	-0.6
FNA	Florina	0.80	121	P	Pb	18 31 37.1	-1.3
FNA				S	Sg	18 31 47.3	-0.6
FNA				AML	AML	18 31 54.2	
	comp=N,947μm,0.3s						
FNA				AML	AML	18 31 54.4	
	comp=E,818μm,0.3s						
FNA	Florina	0.80	121	P	Pb	18 31 37.2	-1.3
FNA				S	Sb	18 31 49.0	-0.4
	comp=E,438nm,0.3s						
FNA	Florina	0.80	121	P	Pb	18 31 37.3	-1.2
	baz=121						
FNA				S	Sb	18 31 49.4	-0.1
	baz=121						
FNA	Florina	0.80	121	i Pg	Pb	18 31 37.1	-1.3
NEST	Nestorio	0.89	151	P	Pb	18 31 38.9	-1.3
NEST				S	Sn	18 31 52.8	-1.8
NEST				AML	AML	18 31 53.3	
	comp=E,384μm,0.4s						
NEST				AML	AML	18 31 53.6	
	comp=N,439μm,0.3s						
NEST	Nestorio	0.89	151	P	Pb	18 31 38.9	-1.3
NEST				S	Sb	18 31 52.1	-0.2
	comp=N,168nm,0.4s						
PUK	Puka	0.95	333	P	Pg	18 31 40.0	-0.6
	baz=333						
PUK				S	Sn	18 31 56.0	0.0
	baz=333						
SKO	Skopje	1.06	43	ePg	Pg	18 31 41.1	-1.5
SKO				eSg	Sb	18 31 56.9	0.0
SKO	Skopje	1.06	43	i Pg	Pn	18 31 43.2	-0.3
SKO				i Sg	Sb	18 31 57.0	0.0
PENT	Pentalofos	1.12	153	P	Pn	18 31 43.7	-0.8
PENT				S	Sn	18 32 00.8	+0.6
PENT				AML	AML	18 32 03.7	
	comp=N,152μm,0.7s						
PENT				AML	AML	18 32 07.3	
	comp=E,116μm,0.7s						
PENT	Pentalofos	1.12	153	P	Pb	18 31 43.3	-0.7
ULC	Ulcinj	1.20	310	i Pg	Pg	18 31 44.0	-1.4
BCI	Bajram Curri	1.21	345	P	Pn	18 31 46.1	+0.5
	baz=345						
BCI				S	Sn	18 32 04.0	+1.7
	baz=345						
KZN	Kozani	1.32	132	P	Pn	18 31 46.5	-0.8
KZN				S	Sn	18 32 05.6	+0.4
KZN				AML	AML	18 32 11.6	
	comp=N,156μm,0.5s						
KZN				AML	AML	18 32 12.4	
	comp=E,183μm,0.4s						
KZN	Kozani	1.32	132	P	Pb	18 31 47.0	-0.5
KZN				S	Sn	18 32 06.6	+1.4
	comp=E,82nm,0.4s						
SRN	Sarande	1.37	196	P	Pg	18 31 49.5	+1.0
	baz=196						
SRN				S	Sn	18 32 09.8	+3.7
	baz=196						
STIP	Stip	1.38	68	i Pn	Pg	18 31 50.7	+2.0
DRME	Dracevica, Mon	1.39	316	ePn	Pn	18 31 47.0	-1.0
KPRO	Kipourio	1.41	151	P	Pg	18 31 48.5	-0.9
GJIK	Gjilan	1.45	29	i Pn	Pg	18 31 50.9	+0.8
GRG	Griva	1.47	99	P	Pb	18 31 49.2	-0.8
GRG				S	Sg	18 32 09.9	+0.3
	comp=E,40nm,0.7s						
GRG	Griva	1.47	99	i Pn	Pg	18 31 49.3	-1.2
PDG	Podgorica	1.53	324	ePn	Pb	18 31 50.3	-0.8
PDG				eSg	Sg	18 32 12.5	+0.9
PDG	Podgorica	1.53	324	ePn	Pb	18 31 50.0	-1.0
PDG	Podgorica	1.53	324	i Pn	Pb	18 31 50.3	-0.8
KEK	Kerkira	1.57	200	P	Pb	18 31 51.1	-0.6
KEK	Kerkira	1.57	200	P	Pn	18 31 50.2	-0.4
VAY	Valandovo	1.58	85	ePg	Pb	18 31 50.8	-1.0
VAY				eSg	Sb	18 32 11.5	-0.5
IGT	Igoumenitsa	1.67	184	P	Pg	18 31 53.3	-0.9
IGT				S	Sg	18 32 18.1	+2.3
IGT	Igoumenitsa	1.67	184	P	Pg	18 31 53.4	-0.9
	baz=185						
IGT				S	Sg	18 32 19.3	+3.5
	baz=185						
KNT	Kendrikon	1.83	90	P	Pn	18 31 53.8	-0.3
LIT	Litokhoron	1.88	125	P	Pn	18 31 54.5	-0.4
LIT	Litokhoron	1.88	125	P	Pn	18 31 54.7	-0.2
HCY	Herceg Novi	1.94	311	ePn	Pb	18 31 56.6	-1.4
BOSS	Bosilegrad	1.98	48	ePn	Pn	18 31 56.1	-0.1
BOSS				eSg	Sg	18 32 26.3	+0.4
THL	Klokotos Trika	2.01	144	P	Pb	18 31 57.3	-1.8
SJES	Sjenica	2.10	350	ePn	Pn	18 31 57.9	0.0
SJES				eSg	Sg	18 32 29.9	+0.2
SJES	Sjenica	2.10	350	ePn	Pb	18 32 00.7	0.0
TREB	Trebinje	2.20	314	ePn	Pb	18 32 02.3	-0.1
BRY	Bratogost	2.23	320	ePn	Pb	18 32 01.2	-1.9
DBRK	Dubrovnik	2.28	311	ePn	Pb	18 32 03.9	+0.2
DBRK				Sn	Sg	18 32 36.8	+1.3
UPM	Unac-Piva	2.32	330	ePn	Pb	18 32 04.3	-0.3
SRS	Serrai	2.35	91	P	Pn	18 32 00.5	-0.9
IVAS	Ivanjica	2.39	354	ePn	Pb	18 32 03.6	-2.1
IVAS				eSg	Sg	18 32 38.9	-0.2
STON	Ston	2.66	310	ePn	Pb	18 32 09.8	-0.4
STON				Sn	Sb	18 32 44.6	+1.5
STON	Ston	2.66	310	ePn	Pn	18 32 04.9	-0.7
BBLS	Lazići	2.78	344	ePn	Pn	18 32 08.4	+1.1
BBLS	Lazići	2.78	344	ePn	Pb	18 32 11.1	-1.3
DIVS	Divibare	2.92	353	ePn	Pn	18 32 10.5	+1.3
DIVS	Divibare	2.92	353	ePn	Pn	18 32 11.1	+1.9
HAPS	Han Pijesak,Bl	3.10	339	ePn	Pn	18 32 13.0	+1.3
RICI	Ricice	3.38	314	ePn	Pn	18 32 15.9	+0.4
RICI				Sn	Sn	18 32 59.0	+3.2
HVAR	Hvar	3.59	305	ePn	Pb	18 32 22.9	-3.2
KIJV	Kijevo	4.11	314	ePn	Pn	18 32 26.3	+0.8

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*IDC **22** 19:12:06.3±1.1, 56°.02S×25°.43W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx4.0/15, mbtmp4.1/3, MS3.6/3, Ms1 3.5/3, ms1mx3.2/21, Error ellipse: s-maj=49.3km s-min=32.5km az=83.0*

*NEIC **22** 19:12:11.4±0.5, 56°.0S±0°.2×25°.6W±0°.1, h31^{km}±11^{km}, mb4.5/6, Error ellipse: s-maj=27.1km s-min=8.9km az=188.0*

ISC 22 19:12:07.9±1.0**, 56°.0S**±0°.2×**25°.4W**±0°.2**, h10^{km}, n15, σ0^{s}.43**/12**, mb4.3**/5**, MS3.6**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.58	281	Pn	Pn	19 13 44.6	0.0
PLCA	Paso Flores	32.98	278	LR	LR	19 32 30.9	
	comp=Z,55nm,18.1s,baz=161,slow=37						
CPUP	Villa Florida	37.56	309	P	P	19 19 21.9	-0.3
	1.5nm,0.4s,baz=181,slow=12,SNR=3.0						
CPUP	Villa Florida	37.56	309	P	P	19 19 21.9	-0.3
ZON	Zonda	38.75	291	P	P	19 19 32.1	-0.2
ZON				IAmb	IAmb	19 19 45.6	
	comp=Z,5.3nm,0.7s						
AC05	El Transito	41.74	292	P	P	19 19 57.5	+0.4
BOSA	Boshof	45.01	74	LR	LR	19 36 48.4	
	comp=Z,121nm,18.7s,baz=216,slow=33						
LVC	Limon Verde	46.16	298	P	P	19 20 33.6	+0.7
LVC				IAmb	IAmb	19 20 36.2	
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	46.63	182	P	P	19 20 35.6	0.0
	comp=Z,1.4nm,0.9s,baz=180,slow=7.2,SNR=6.0						
VNDA	Vanda	46.63	182	P	P	19 20 35.9	+0.3
VNDA				IAmb	IAmb	19 20 41.1	
	comp=Z,8.8nm,1.5s						
TORD	Torodi Ar. Bea	72.57	28	P	P	19 23 35.1	+0.1
	comp=Z,2.1nm,0.7s,baz=206,slow=6.2,SNR=5.6						
TORD	Torodi Ar. Bea	72.57	28	P	P	19 23 35.5	+0.5
ROSC	El Rosal	72.64	308	LR	LR	19 57 14.6	
	comp=Z,30nm,20.3s,baz=85,slow=37						
SONM	Songino Array	149.74	85	PKPbc	PKPbc	19 31 56.5	-0.6
	comp=Z,0.3nm,0.6s,baz=225,slow=4.9,SNR=2.6						
ILAR	Eielson Array	150.85	311	PKPbc	PKPbc	19 31 58.6	-0.4
	comp=Z,1.1nm,0.9s,baz=116,slow=2.1,SNR=9.7						

IDC 22 19:12:09.2±2.1**, 1°.21N**×**127°.24E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/35**, mbtmp3.4**/3**, Error ellipse: s-maj=157.6km s-min=26.0km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.14	162	P	P	19 17 06.3	-0.4
	0.4nm,0.4s,baz=342,slow=11,SNR=4.5						
ASAR	Alice Springs	25.56	166	P	P	19 17 40.2	+0.2
	0.5nm,0.4s,baz=350,slow=14,SNR=8.8						
MKAR	Makanchi Array	59.91	326	P	P	19 22 17.0	-0.1
	0.2nm,0.3s,baz=117,slow=7.5,SNR=6.1						

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*ISK **22** 19:27:45.6, 37°.40N×36°.31E, h6^{km}, ML4.0/33*

*IDC **22** 19:27:45.9±0.7, 37°.34N×36°.32E, h0^{km}, mb3.7/15, mb1 3.8/24, mb1mx3.7/51, mbtmp3.7/24, ML3.7/8, MS3.0/6, Ms1 3.0/6, ms1mx2.6/49, Error ellipse: s-maj=13.8km s-min=12.2km az=3.0*

*NIC **22** 19:27:46.9±0.0, 37°.52N×36°.34E, h15^{km}±11^{km}, Ml3.8/5*

*DDA **22** 19:27:46.5, 37°.36N×36°.31E, h8^{km}±2^{km}, MW4.3*

*NEIC **22** 19:27:47.0±3.1, 37°.39N±0°.06×36°.36E±0°.05, h8^{km}±2^{km}, Error ellipse: s-maj=8.2km s-min=5.9km az=188.0*

ISC 22 19:27:46.7±1.1**, 37°.37N**±0°.02×**36°.30E**±0°.01**, h3^{km}**±7^{km}**, n213, σ1^{s}.39**/249**, mb3.9**/22**, 23C-14D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.21	10	⇑iP	Pg	19 27 51.0	+0.2
ANDN				i S	Sg	19 27 54.5	+0.8
ANDN				IAML		19 27 56.0	
	comp=N,74μm,0.4s						
ANDN				IAML		19 27 57.0	
	comp=E,76μm,0.3s						
KAMA	Osmaniye	0.35	122	⇑iP	Pg	19 27 53.5	+0.2
KAMA				i S	Sg	19 27 58.4	+0.4
KAMA				IAML		19 28 03.0	
	comp=N,3μm,0.7s						
KAMA				IAML		19 28 05.0	
	comp=E,3μm,0.5s						
KOZT	Kozan	0.39	287	PG	Pb	19 27 54.6	-1.7
KOZT				SG	Sg	19 27 59.7	+0.4
HCB	Kahramanmara	0.49	93	⇑iP	Pg	19 27 56.1	0.0
HCB				i S	Sg	19 28 02.9	+0.5
HCB				IAML		19 28 06.0	
	comp=N,2μm,0.5s						
HCB				IAML		19 28 10.0	
	comp=E,2μm,0.3s						
KMRS	Kahramanmaras	0.50	74	PG	Pg	19 27 55.6	-0.7
KMRS				SG	Sg	19 28 02.5	-0.3
CEYT	Ceyhan	0.57	231	PG	Pg	19 27 57.6	+0.1
KAHM	Kahramanmaras,	0.57	75	⇑iP	Pg	19 27 57.4	-0.2
KAHM				i S	Sg	19 28 04.7	-0.3
SAIM	ADANA	0.63	344	⇓iP	Pg	19 27 58.4	-0.4
SAIM				i S	Sb	19 28 08.6	-1.1
SAIM				IAML		19 28 11.0	
	comp=N,9μm,0.3s						
SAIM				IAML		19 28 12.0	
	comp=E,9μm,0.4s						
KHMN	Narli-Kahraman	0.69	88	PG	Pg	19 27 59.6	-0.2
GAZ	Gaziantep	0.76	105	PG	Pg	19 28 00.9	-0.2
GAZ	Gaziantep	0.76	105	Pg	Pg	19 28 01.0	-0.2
GAZ	Gaziantep	0.76	105	⇑P	Pg	19 28 01.7	+0.5
GAZ				S	Sb	19 28 13.4	+0.1
GAZ				AML	AML	19 28 16.3	
	comp=E,13nm,0.4s						
GAZ				AML	AML	19 28 16.3	
	comp=E,13nm,0.4s						
GAZ				AML	AML	19 28 18.8	
	comp=E,14nm,0.6s						
GAZ				AML	AML	19 28 18.8	
	comp=E,14nm,0.6s						
KUZU	Kuzuini	0.86	133	⇑iP	Pb	19 28 03.8	-0.5
KUZU				i S	Sg	19 28 15.3	+0.9
KUZU				IAML		19 28 21.0	
	comp=N,3μm,0.3s						
KUZU				IAML		19 28 21.0	
	comp=E,6μm,0.6s						
KARA	Karaisali	1.00	264	PG	Pg	19 28 04.9	-0.9
GZT	Gaziantep	1.01	90	⇑iP	Pg	19 28 05.9	-0.2
GZT				i S	Sb	19 28 22.2	+1.5
YAHY	KAYSERI_Yahyal	1.03	315	⇓iP	Pg	19 28 05.8	-0.8
YAHY				i S	Sn	19 28 22.0	-1.3
YAHY				IAML		19 28 25.0	
	comp=E,1μm,1.1s						
YAHY				IAML		19 28 27.0	
	comp=N,1μm,0.5s						
SARI	SarD1z-Kayseri	1.04	5	PG	Pg	19 28 05.2	-1.4
KRTD	Karatas-Adana	1.05	223	PG	Pb	19 28 06.6	-0.8
CMRD	Camardi-Nigde	1.08	286	PG	Pg	19 28 06.8	-0.6
KRTS	Karatas	1.08	223	PN	Pb	19 28 07.4	-0.7
ELBS	KAHRAMANMARAS_	1.16	35	i P	Pg	19 28 08.0	-0.9
ELBS				i S	Sb	19 28 25.8	+0.7
ELBS				IAML		19 28 27.0	
	comp=E,4μm,0.7s						
ELBS				IAML		19 28 32.0	
	comp=N,3μm,0.7s						
GULE	Gulek	1.21	266	⇓iP	Pg	19 28 08.8	-1.1
GULE				i S	Sn	19 28 30.6	+2.8
DED	Mersin	1.26	252	⇓iP	Pg	19 28 09.3	-1.6
DED				i S	Sn	19 28 29.5	+0.7
DED				IAML		19 28 31.0	
	comp=E,1μm,0.5s						
DED				IAML		19 28 36.0	
	comp=N,591nm,0.5s						
NIDE	Nigde/Merkez-G	1.36	298	⇓iP	Pg	19 28 11.4	-1.3
NIDE				i S	Sn	19 28 34.4	+3.0
NIDE				IAML		19 28 39.0	
	comp=N,1μm,0.8s						
NIDE				IAML		19 28 39.0	
	comp=E,2μm,0.7s						
BNN	Bunyan	1.52	347	PN	Pn	19 28 13.7	-1.3
DARE	Darende-Malaty	1.52	38	PN	Pn	19 28 13.8	-1.1
NIG	Nigde	1.53	299	PN	Pn	19 28 13.9	-1.3
CUGUR	Gurin_SVAS	1.56	29	⇓iP	Pn	19 28 15.8	+0.4
CUGUR				i S	Sn	19 28 36.7	+0.4
CUGUR				IAML		19 28 42.0	
	comp=N,5μm,0.4s						
CUGUR				IAML		19 28 42.0	
	comp=E,4μm,0.3s						
AKCD	Akcadag	1.58	54	⇑iP	Pn	19 28 15.3	-0.5
AKCD				i S	Sn	19 28 36.9	0.0
AKCD				IAML		19 28 42.0	
	comp=N,5μm,0.5s						
AKCD				IAML		19 28 46.0	
	comp=E,4μm,0.7s						
ATAB	Bozova	1.59	86	i P	Pn	19 28 14.4	-1.4
ATAB				i S	Sn	19 28 37.4	+0.3
ATAB				IAML		19 28 47.0	
	comp=N,0.8nm,0.5s						
ATAB				IAML		19 28 47.0	
	comp=E,2μm,0.6s						
GUNE	Kayseri	1.62	341	i P	Pg	19 28 17.7	-0.1
GUNE				i S	Sg	19 28 41.1	+2.4
GUNE				IAML		19 28 47.0	
	comp=E,2μm,0.8s						
GUNE				IAML		19 29 01.0	
	comp=N,2μm,0.8s						
KERG	Konya-Eregli	1.73	272	⇓iP	Pn	19 28 16.9	-0.9
KERG				i S	Sg	19 28 44.5	+2.2
KERG				IAML		19 28 56.0	
	comp=N,449nm,0.5s						
KERG				IAML		19 28 56.0	
	comp=E,272nm,0.7s						
AVNS	Nevsehir-Avano	1.83	322	⇓iP	Pn	19 28 19.4	+0.2
AVNS				i S	Sg	19 28 48.0	+2.4
AVNS				IAML		19 28 54.0	
	comp=E,1μm,0.7s						
AVNS				IAML		19 28 57.0	
	comp=N,1μm,0.9s						
SURC	SANLIURFA_SURC	1.92	104	⇑iP	Pn	19 28 19.0	-1.3
SURC				i S	Sb	19 28 47.6	+0.9
MALT	Malatya	1.93	60	PN	Pn	19 28 19.6	-1.0
CUALT	Altinyayla-SIV	1.94	11	i P	Pn	19 28 21.4	+0.8
CUALT				i S	Sb	19 28 47.9	+0.6
CUALT				IAML		19 28 52.0	
	comp=E,1μm,0.7s						
CUALT				IAML		19 28 57.0	
	comp=N,1μm,0.7s						
KIZK	Mersin	1.94	243	PN	Pn	19 28 20.2	-0.4
KIZK	Mersin	1.94	243	i P	Pn	19 28 19.6	-0.9
KIZK				i S	Sg	19 28 52.1	+3.2
HEKM	Malatya_Hekimh	2.00	41	i P	Pn	19 28 21.7	+0.1
HEKM				i S	Sg	19 28 52.0	+1.1
HEKM				IAML		19 28 55.0	
	comp=E,2μm,0.7s						
HEKM				IAML		19 28 58.0	
	comp=N,1μm,0.5s						
CUSAR	Sarkisla-SIVAS	2.05	359	i P	Pn	19 28 22.5	+0.3
CUSAR				i S	Sg	19 28 55.0	+2.6
CUSAR				IAML		19 29 00.0	
	comp=E,357nm,0.4s						
CUSAR				IAML		19 29 05.0	
	comp=N,558nm,1.1s						
SLFK	Silifke-Mersin	2.12	243	PN	Pn	19 28 22.9	-0.1
SILI	Silifke-Mersin	2.15	243	PN	Pn	19 28 23.3	-0.1
CUKAN	kangal_SIVAS	2.15	25	i P	Pn	19 28 24.4	+0.8
CUKAN				i S	Sb	19 28 54.3	+0.8
CUKAN				IAML		19 29 14.0	
	comp=E,654nm,0.6s						
CUKAN				IAML		19 29 16.0	
	comp=N,523nm,0.7s						
SANL	SANLIURFA_Merk	2.16	94	i P	Pn	19 28 22.3	-1.3
SANL				i S	Sb	19 28 55.4	+1.8
SANL				IAML		19 29 02.0	
	comp=N,769nm,0.5s						
SANL				IAML		19 29 05.0	
	comp=E,1μm,0.8s						
SIRC	Yozgat	2.16	336	i P	Pn	19 28 23.7	0.0
SIRC				i S	Sg	19 28 55.8	-0.4
SIRC				IAML		19 29 04.0	
	comp=E,190nm,0.9s						
KEBE	Keben-Mersin	2.27	247	PN	Pn	19 28 24.8	-0.3
ARPR	Arapgir-MALATY	2.35	42	PN	Pn	19 28 25.7	-0.7
SULT	Sultanhani-AKS	2.35	291	PN	Pn	19 28 26.1	-0.2
AKSY	AKSARAY - Alti	2.38	303	i P	Pn	19 28 27.6	+0.9
AKSY				i S	Sg	19 29 03.9	+0.9
IKL	Isikli	2.38	242	PN	Pn	19 28 26.4	-0.2
ELZG	Elazig	2.41	61	i P	Pn	19 28 26.9	-0.3
ELZG				i S	Sb	19 29 03.1	+2.2
TEVE	Tevekalti-Mers	2.47	249	PN	Pn	19 28 27.9	0.0
GULN	MERSIN_Gulnar	2.51	243	i P	Pn	19 28 27.1	-1.3
YAYX	Yaylak	2.51	309	PN	Pn	19 28 28.1	-0.4
EREN	Erenkoy	2.51	224	PN	Pn	19 28 28.5	+0.1
EREN	Erenkoy	2.51	224	i P	Pn	19 28 28.4	+0.1
AKKU	Akkuyu-Mersin	2.51	242	PN	Pn	19 28 28.3	-0.1
KEMA	Kemaliye	2.57	42	i P	Pn	19 28 29.2	-0.1
KEMA				i S	Sg	19 29 09.0	-0.1
KEMA				IAML		19 29 12.0	
	comp=N,611nm,0.8s						
KEMA				IAML		19 29 18.0	
	comp=E,518nm,0.7s						
KIRS	Kırehir-Merke	2.57	314	i P	Pn	19 28 29.8	+0.5
KIRS				i S	Sg	19 29 08.5	-0.8
SCER	sogukcermik	2.57	14	i P	Pn	19 28 30.1	+0.7
SCER				i S	Sb	19 29 05.8	+0.1
BERE	Bereket-Mersin	2.67	248	PN	Pn	19 28 30.8	+0.1

SERE	Sereflikochisa	2.67	307	PN	Pn	19 28 30.3	-0.4
KKBE	Karaman, Kazim	2.68	268	*i* P	Pb	19 28 32.7	-2.7
KKBE				IAML		19 29 20.0	
	comp=E,185nm,1.1s						
KKBE				IAML		19 29 26.0	
	comp=N,187nm,1.5s						
CDAG	Cicekdag	2.71	327	*i* P	Pn	19 28 32.3	+1.0
CDAG				IAML		19 29 23.0	
	comp=E,258nm,1.0s						
CDAG				IAML		19 29 36.0	
	comp=N,175nm,1.6s						
ILIC	ilic-Erzincan	2.74	40	PN	Pn	19 28 31.2	-0.5
CUZAR	Zara_SIVAS	2.77	24	*i* P	Pn	19 28 32.6	+0.5
CUZAR				*i* S	Sn	19 29 05.7	-0.5
CKRK	Yozgat, Cekere	2.77	347	*i* P	Pn	19 28 32.7	+0.6
CKRK				IAML		19 29 19.0	
	comp=E,234nm,0.6s						
CKRK				IAML		19 29 25.0	
	comp=N,367nm,1.3s						
REFA	Refahiye_ERZN	2.80	43	*i* P	Pb	19 28 38.2	+0.7
ERMK	Ermenek	2.80	256	*i* P	Pn	19 28 33.6	+0.9
TEKE	Tekeli-Mersin	2.83	245	PN	Pn	19 28 33.1	+0.3
ALIN	Konya, Altinte	2.86	290	*i* P	Pn	19 28 33.5	+0.2
TOKA	Tokat	2.95	3	*i* P	Pn	19 28 35.2	+0.6
TOKA				IAML		19 29 57.0	
	comp=N,35nm,0.4s						
TOKA				IAML		19 29 57.0	
	comp=E,0.5nm,0.4s						
TOKA	Tokat	2.95	3		Pn	19 28 34.7	+0.2
TOKT	Tokat	2.95	4	PN	Pn	19 28 34.3	-0.3
KOVA	Elazig, Kovanc	3.08	63	*i* P	Pn	19 28 38.2	+1.8
KOVA				*i* S	Sg	19 29 25.0	-0.6
DIYA	Diyarbakir	3.09	79	*i* P	Pn	19 28 36.2	-0.2
CORM	Corum	3.09	336	PN	Pn	19 28 36.3	-0.2
TNCL	Tunceli-Merkez	3.09	55	*i* P	Pn	19 28 38.2	+1.6
HWQ	Hawqa	3.10	185	*e*P	Pn	19 28 37.5	+0.8
RSDY	Resadiye-TOKAT	3.13	15	PN	Pn	19 28 36.3	-0.7
BR131	Keskin Array S	3.14	319		Pn	19 28 37.8	+0.5
BRTR	Keskin Array B	3.14	319	Pn	Pn	19 28 38.5	+1.3
	comp=E,4.7nm,0.3s,baz=141,slow=14,SNR=136						
BRTR				Sn	Sg	19 29 27.4	-0.2
	comp=E,3.6nm,0.3s,baz=272,slow=31,SNR=3.6						
BRTR				LR	LR	19 30 02.5	
	comp=E,141nm,19.2s,baz=134,slow=43						
BRTR	Keskin Array B	3.14	319	PN	Pn	19 28 37.0	-0.2
BRTR	Keskin Array B	3.14	319		Pn	19 28 37.5	+0.3
KMER	Konya-Meram	3.15	278	*i* P	Pn	19 28 39.4	+2.1
KONT	Konya--Tatoy	3.18	282	PN	Pn	19 28 37.9	+0.3
KONT	Konya--Tatoy	3.18	282	*i* P	Pn	19 28 39.6	+2.0
MVOU	Mavrovouni	3.19	223	⇑P	Pn	19 28 38.7	+1.0
MVOU				AML	AML	19 29 29.9	
	comp=E,0.5nm,0.9s						
MVOU				AML	AML	19 29 31.3	
	comp=E,0.6nm,0.7s						
SUSE	Susehri	3.20	27	*i* P	Pn	19 28 38.0	-0.1
KKUL	Konya-Kulu	3.21	305	*i* P	Pn	19 28 39.9	+1.7
KKUL				IAML		19 29 39.0	
	comp=E,364nm,1.5s						
KKUL				IAML		19 29 49.0	
	comp=N,202nm,1.5s						
DELI	KIRIKKALE	3.22	325	*i* P	Pn	19 28 39.3	+1.0
DELI				IAML		19 29 33.0	
	comp=E,74nm,1.9s						
DELI				IAML		19 29 37.0	
	comp=N,60nm,0.7s						
LADK	Ladik-KONYA	3.22	286	PN	Pn	19 28 38.5	+0.2
AFSR	Afar-Bala (An	3.27	310	PN	Pn	19 28 38.9	-0.1
BBAL	Bala	3.30	312	*i* P	Pn	19 28 41.8	+2.3
BBAL				IAML		19 29 27.0	
	comp=E,57nm,0.6s						
BBAL				IAML		19 29 32.0	
	comp=N,47nm,0.5s						
ERBA	Erbaa	3.33	6	*i* P	Pn	19 28 40.8	+1.1
GAZI	Gazipasa	3.39	252	PN	Pn	19 28 40.6	+0.1
GAZI	Gazipasa	3.39	252	*i* P	Pn	19 28 42.0	+1.4
GAZI				IAML		19 29 45.0	
	comp=N,166nm,1.6s						
GAZI				IAML		19 29 46.0	
	comp=E,149nm,1.2s						
CSS	Mathiatis	3.40	226	Pn	Pn	19 28 40.3	-0.3
CSS	Mathiatis	3.40	226	⇓P	Pn	19 28 41.6	+1.0
HANI	Diyarbakir_Han	3.41	71	*i* P	Pn	19 28 39.6	-1.3
CTAK	Corum_Osmancik	3.48	341	*i* P	Pn	19 28 43.2	+1.3
CTAK				IAML		19 29 29.0	
	comp=E,46nm,0.7s						
CTAK				IAML		19 29 33.0	
	comp=N,44nm,0.6s						
BHL	Bhannes	3.50	189	*e*P	Pn	19 28 42.4	+0.3
KDHN	Kadinhani	3.50	290	*i* P	Pn	19 28 44.0	+1.8
ALUC	Giresun/Alucra	3.54	32	*i* P	Pn	19 28 43.3	+0.5
LEF	Lefka	3.55	232	*i* P	Pn	19 28 41.9	-0.8
ASGA	Asgata	3.57	225	P	Pn	19 28 43.8	+0.8
ASGA				S	Sn	19 29 28.3	+2.6
ASGA				AML	AML	19 29 34.0	
	comp=N,0.5nm,1.7s						
ASGA				AML	AML	19 29 34.0	
	comp=N,0.5nm,1.7s						
ASGA				AML	AML	19 29 34.8	
	comp=N,0.4nm,1.4s						
ASGA				AML	AML	19 29 34.8	
	comp=N,0.4nm,1.4s						
MARD	Mardin	3.57	90	*i* P	Pn	19 28 42.0	-1.2
MARD	Mardin	3.57	90		Pn	19 28 41.6	-1.5
KELT	Kelkit	3.61	39	*i* P	Pn	19 28 43.9	+0.2
SEDI	Konya, Seydise	3.62	273	*i* P	Pb	19 28 48.8	-2.5
BR231	Keskin MP Arra	3.70	313		Pn	19 28 43.3	-1.6
DQRL	Deir Qamar	3.70	189	*e*P	Pn	19 28 45.5	+0.6
ALFC	Alefka	3.71	235	⇑P	Pn	19 28 45.6	+0.6
ALFC				AML	AML	19 29 29.4	
	comp=N,0.7nm,0.6s						
ALFC				AML	AML	19 29 30.5	
	comp=N,0.8nm,0.8s						
HAVZ	Havza	3.73	353	*i* P	Pn	19 28 45.9	+0.7
DOGA	KONYA_Doganhis	3.74	283	*i* P	Pn	19 28 47.3	+1.8
KEPZ	Antalya-Kepez	3.78	264	*i* P	Pn	19 28 46.7	+0.8
KEPZ				IAML		19 29 41.0	
	comp=E,38nm,0.6s						
KEPZ				IAML		19 29 51.0	
	comp=N,84nm,0.9s						
SZAC	Souni	3.80	228	⇑P	Pn	19 28 47.0	+0.8
SZAC				S	Sn	19 29 34.0	+2.5
SZAC				AML	AML	19 29 38.5	
	comp=N,0.7nm,0.4s						
SZAC				AML	AML	19 29 38.5	
	comp=N,0.7nm,0.4s						
SZAC				AML	AML	19 29 42.1	
	comp=N,0.5nm,0.5s						
SZAC				AML	AML	19 29 42.1	
	comp=N,0.5nm,0.5s						
QRWL	Qaraoun	3.85	188	*e*P	Pn	19 28 47.9	+1.0
AKMS	Akamas	3.97	235	P	Pn	19 28 49.1	+0.6
NATA	Nata	3.97	231	P	Pn	19 28 49.4	+0.9
BTMN	Batman	3.98	81	*i* P	Pb	19 28 58.6	+1.0
SAMS	Samsun-Alacam	3.99	359	*i* P	Pn	19 28 49.4	+0.6
KAGI	orum-Kargı	4.02	340	*i* P	Pn	19 28 51.6	+2.4
ILGA	Ilgaz	4.19	332		Pn	19 28 53.2	+1.5
KOPT	Kop Dagi	4.22	50		Pn	19 28 50.1	-2.0
CMDR	Camlidere-ANKA	4.31	317	*i* P	Pn	19 28 55.7	+2.3
BOYA	Sinop/Boyabat-	4.34	344	*i* P	Pn	19 28 54.5	+0.9
MMAI	Mount Meron Ar	4.41	190	Pn	Pn	19 28 55.1	+0.6
	comp=N,4.2nm,0.3s,baz=12,slow=14,SNR=23						
MMAI				Sn	Sn	19 29 43.5	-2.9
	comp=N,12nm,0.3s,baz=358,slow=27,SNR=12						
KTUT	Trabzon	4.51	36	⇑P	Pb	19 29 07.6	+1.2
MMLI	Mount Malkishu	4.97	189	⇑P	Pn	19 29 04.2	+1.9
MDUB	Mudurnu	5.04	309		Pn	19 29 00.2	-3.1
ELL	Elmali	5.15	265		Pn	19 29 06.2	+1.5
OSC2	CSNet OBS 4	5.41	219	P	Pn	19 29 08.8	+0.6
GEVA	Gevas	5.43	78		Pn	19 29 09.8	+1.0
KZIT	Kziot	6.64	194	⇑P	Pn	19 29 26.8	+1.6
CHVG	Ch'k'valeri	6.95	38	⇑P	Pb	19 29 39.6	-8.4
GNI	Garni	7.16	65	Pn	Pn	19 29 34.7	+2.3
	comp=N,0.2nm,0.3s,baz=210,slow=17,SNR=1.6						
GNI	Garni	7.16	65		Pn	19 29 28.1	-4.3
EIL	Elat	7.76	189	Pn	Pn	19 29 38.6	-2.0
	comp=N,0.5nm,0.3s,baz=101,slow=16,SNR=1.6						
EIL				Sn	Sn	19 31 10.1	+1.1
	comp=N,0.2nm,0.3s,baz=324,slow=19,SNR=1.6						
EIL				LR	LR	19 33 03.6	
	comp=N,60nm,18.6s,baz=322,slow=41						
KBZ	Khabaz	8.10	36	LR	LR	19 32 55.3	
	comp=N,75nm,18.6s,baz=331,slow=38						
TIRR	Tirgusor	9.26	322	⇑P	Pn	19 30 02.5	+1.5
IDI	Anoyia	9.44	261	Pn	Pn	19 30 03.8	+0.2
	comp=N,1.8nm,0.3s,baz=73,slow=13,SNR=11						
IDI	Anoyia	9.44	261	⇓P	Pn	19 30 09.9	+6.3
IDI	Anoyia	9.44	261		Pn	19 30 02.6	-1.0
TPGR	Topolog	9.55	324	⇑P	Pn	19 30 06.2	+1.2
CFR	Carcaliu	9.92	324	⇑P	Pn	19 30 10.9	+0.8
BISRR	Bisoca	10.88	322	⇓P	Pn	19 30 24.9	+1.6
VRI	Vrincioaia	11.10	323	⇓P	Pn	19 30 27.1	+0.8
PLOR	Plostina	11.13	323	⇓P	Pn	19 30 27.9	+1.3
MLR	Muntele Rosu	11.23	320	Pn	Pn	19 30 30.6	+2.5
	comp=N,0.2nm,0.3s,baz=135,slow=16,SNR=1.9						
MLR				Sn	Sn	19 32 39.6	+5.4
	comp=N,0.2nm,0.3s,baz=125,slow=16,SNR=1.6						
MLR				LR	LR	19 35 16.8	
	comp=N,77nm,20.0s,baz=68,slow=40						
TESR	Tescani	11.61	325	⇑P	Pn	19 30 34.4	+1.2
BIZ	Bicaz	12.18	325	⇑P	Pn	19 30 42.8	+1.8
SORM	Soroca	12.23	334	⇑P	Pn	19 30 42.8	+1.0
LOT	Lotru	12.38	315	⇓P	Pn	19 30 44.7	+0.8
BURAR	Bucovina Array	13.09	325	⇑P	Pn	19 30 55.7	+2.2
BURAR	Bucovina Array	13.09	325		Pn	19 30 54.3	+0.8
AKASG	Malin Array Be	14.26	341	Pn	Pn	19 31 07.7	-1.6
	comp=N,0.4nm,0.3s,baz=156,slow=12,SNR=5.0						
AKASG	Malin Array Be	14.26	341		Pn	19 31 07.5	-1.8
KWP	Kalwaria Pacla	15.70	326	P	P	19 31 34.8	+1.9
CRVS	Cervenica-Dubn	15.78	322	*e*P	P	19 31 37.9	+4.1
RAYN	Ar Rayn	15.91	148	P	P	19 31 36.5	+1.1
VYHS	Vyhne	16.90	317	*e*PN	Pn	19 31 39.1	-5.1
GEYT	Alibeck	17.29	81	P	Pn	19 31 49.9	+0.8
	comp=N,0.2nm,0.3s,baz=258,slow=11,SNR=1.7						
GEYT	Alibeck	17.29	81	P	Pn	19 31 47.0	-2.1
VAE	Valguarnera	17.38	277	P	P	19 31 52.5	+0.8
	comp=N,1.2nm,0.3s,baz=224,slow=14,SNR=1.4						
OBKA	Obir	18.53	306	*e*Pn	Pn	19 32 10.6	+6.2
	comp=N,2.7nm,0.7s						
SUW	Suwalki	18.95	336	P	P	19 32 07.4	-1.3
SUW				IAmb	IAmb	19 32 10.9	
	comp=Z,12nm,0.8s						
MYKA	Terra Mystica	19.16	306	*e*Pn	P	19 32 09.8	-1.4
	comp=Z,2.9nm,0.6s						
DPC	Dobruska-Polom	19.31	319	*e*P	Pn	19 32 14.6	+0.8
ZOU	Zoufplan	19.56	305		Pn	19 32 17.0	-0.1
ZOU				IAmb	IAmb	19 32 18.2	
	comp=Z,27nm,1.1s						
CHVC	Chvalec	19.58	319	*e*P	Pn	19 32 17.4	+0.3
ABTA	Abfaltersbach	19.93	306	*e*Pn	Pn	19 32 20.5	-0.7
	comp=Z,8.6nm,1.3s						
GERES	GERESS Array B	20.01	312	P	P	19 32 21.1	+0.6
	comp=Z,0.8nm,0.6s,baz=116,slow=11,SNR=8.8						
GERES	GERESS Array B	20.01	312	P	P	19 32 20.4	-0.1
PRU	Pruhonice	20.08	316	*e*P	Pn	19 32 22.3	-0.6
TEOL	Teolo	20.08	301	P	P	19 32 21.5	+0.3
KHC	Kasperske Hory	20.21	313	*e*P	P	19 32 22.9	+0.2
CTI	Castel Tesino	20.28	303	P	P	19 32 23.7	+0.2
CTI				IAmb	IAmb	19 32 25.1	
	comp=Z,17nm,1.1s						
AKTO	Aktyubinsk	20.29	43	P	P	19 32 24.1	+0.6
	comp=Z,0.8nm,0.6s,baz=229,slow=12,SNR=2.7						
WTTA	Wattenberg	20.66	306	*e*Pn	P	19 32 28.1	+0.4
	comp=Z,14nm,1.4s						
WATA	Walderalm	20.73	307	*e*Pn	Pn	19 32 29.7	-1.0
	comp=Z,9.7nm,1.1s						
SQTA	Sankt Quirin	20.93	306	*e*Pn	P	19 32 29.9	-0.6
	comp=Z,7.3nm,1.1s						
MOTA	Moosalm	21.03	306	*e*Pn	P	19 32 32.2	+0.5
	comp=Z,11nm,1.6s						
FETA	Feichten	21.17	305	*e*Pn	P	19 32 35.4	+2.2
	comp=Z,5.9nm,1.0s						
RETA	Reutte	21.30	306	*e*Pn	P	19 32 33.8	-0.7
	comp=Z,4.8nm,1.0s						
CLL	Collm	21.60	318	*e*(P)	P	19 32 38.0	+0.5
DAVOX	Davos/Dischmat	21.66	304	P	P	19 32 40.0	+1.5
	comp=Z,2.0nm,0.8s,baz=144,slow=19,SNR=2.8						
DAVA	Damuels	21.81	305	*e*Pn	P	19 32 39.1	-0.9
	comp=Z,5.0nm,0.9s						
BFO	Black Forest	23.12	307	P	P	19 32 52.5	-1.4
BFO				IAmb	IAmb	19 32 54.8	
	comp=Z,21nm,1.2s						
BNI	Bardonecchia	23.47	298	P	P	19 32 57.3	-0.3
BNI				IAmb	IAmb	19 33 01.4	
	comp=Z,20nm,1.2s						
ECH	Echery	23.83	306	P	P	19 32 59.2	-1.7
ARU	Arti	24.20	31	P	P	19 33 03.5	-0.8
	comp=Z,0.3nm,0.4s,baz=191,slow=13,SNR=1.7						
FINES	FINESS Array B	24.94	348	P	P	19 33 10.2	-0.7
	comp=Z,3.1nm,0.9s,baz=145,slow=15,SNR=5.0						
KKAR	Karatay Array	26.62	67	P	P	19 33 24.0	-2.3
HFS	Hagfors	26.96	335	P	P	19 33 28.8	-0.4
	comp=Z,1.8nm,0.6s,baz=116,slow=10,SNR=5.9						
HFS				LR	LR	19 46 19.5	
	comp=Z,61nm,19.8s,baz=340,slow=41						
NOA	NORSAR Array B	28.46	334	P	P	19 33 41.2	-1.4
	comp=Z,0.5nm,0.7s,baz=126,slow=9.3,SNR=3.4						
AAK	Ala-Archa	29.55	68	LR	LR	19 47 41.9	
	comp=Z,53nm,18.4s,baz=314,slow=40						
ARCES	ARCESS Array B	32.75	353	P	P	19 34 20.5	0.0
	comp=Z,0.9nm,0.6s,baz=163,slow=9.4,SNR=6.3						
MK31	Makanchi Array	34.97	60	P	P	19 34 40.2	+0.1
MKAR	Makanchi Array	34.97	60	P	P	19 34 41.3	+1.3
	comp=Z,1.1nm,0.9s,baz=271,slow=5.9,SNR=9.7						
MKAR	Makanchi Array	34.97	60	P	P	19 34 40.9	+0.8
ZALV	Zalesovo Beam	36.93	47	P	P	19 34 56.0	-0.6
	comp=Z,0.5nm,0.5s,baz=265,slow=11,SNR=2.0						
TOA0	Torodi Ar. Sit	39.16	241	P	P	19 35 14.6	-1.3
TOA0				IAmb	IAmb	19 35 17.1	
	comp=Z,6.9nm,0.9s						
TORD	Torodi Ar. Bea	39.16	241	P	P	19 35 15.2	-0.7
	comp=Z,5.4nm,0.9s,baz=40,slow=8.1,SNR=14						
TORD	Torodi Ar. Bea	39.16	241	P	P	19 35 15.2	-0.7
DBIC	Dimbokro	48.27	241	P	P	19 36 28.4	-0.8
	comp=Z,2.7nm,0.6s,baz=15,slow=7.5,SNR=5.6						
TIC	Toumodi	48.40	241	*e*P	P	19 36 32.2	+1.9
KIC	Kosan Boka	48.41	241	*e*P	P	19 36 29.0	-1.3
	comp=Z,5.9nm,0.6s						
LIC	Lamto	48.71	241	*e*P	P	19 36 32.1	-0.5
	comp=Z,5.2nm,0.5s						
SONM	Songino Array	51.00	55	P	P	19 36 49.5	-0.3
	comp=Z,0.3nm,0.9s,baz=297,slow=9.4,SNR=2.5						
CMAR	Chiang Mai Arr	57.48	91	P	P	19 37 35.2	-2.1
	comp=Z,0.5nm,0.8s,baz=297,slow=8.0,SNR=6.6						
YKA	Yellowknife Ar	77.76	347	P	P	19 39 44.5	-0.2
	comp=Z,0.5nm,0.7s,baz=32,slow=5.8,SNR=9.4						
MDM	Murphy Dome	77.94	2	P	P	19 39 45.1	-0.6

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*IDC **22** 19:30:04.7±0.9, 8°.18S×148°.96E, h0^{km}, mb3.9/12, mb1 4.0/14, mb1mx3.9/36, mbtmp3.9/14, ML4.0/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/33, Error ellipse: s-maj=29.5km s-min=16.1km az=115.0*

ISC 22 19:30:09.5±0.9, **8°.2S**±0°.1×**149°.0E**±0°.2, **h35^{km}, n17, σ0^{s}57**/15, **mb3.8**/11, **MS3.3**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.20	237	Pn	Pn	19 30 43.8	+0.3
	19nm,0.3s,baz=30,slow=5.7,SNR=55						
PMG				Sn	Sn	19 31 10.1	+0.6
	44nm,0.3s,baz=166,slow=19,SNR=4.7						
PMG				LR	LR	19 31 37.0	
	comp=Z,97nm,20.7s,baz=78,slow=43						
WRA	Warramunga Arr	18.40	229	P	Pn	19 34 21.7	-0.2
	0.5nm,0.3s,baz=44,slow=9.8,SNR=21						
ASAR	Alice Springs	21.13	222	P	P	19 34 51.3	-0.2
	1.6nm,0.8s,baz=48,slow=8.4,SNR=20						
STKA	Stephens Creek	24.55	195	P	P	19 35 25.7	-0.3
	2.1nm,0.9s,baz=12,slow=15,SNR=4.2						
FITZ	Fitzroy Crossi	24.78	244	P	P	19 35 26.9	-1.3
	2.8nm,0.6s,baz=61,slow=8.8,SNR=12						
FITZ				LR	LR	19 46 21.9	
	comp=Z,44nm,19.7s,baz=72,slow=40						
AFI	Afiamalu	38.85	102	LR	LR	19 51 29.0	
	comp=Z,242nm,20.4s,baz=258,slow=33						
LEM	Lembang	41.06	269	LR	LR	19 57 08.7	
	comp=Z,42nm,18.9s,baz=166,slow=40						
KSRS	Korea Array	49.52	338	P	P	19 38 55.9	-0.8
	1.6nm,0.8s,baz=152,slow=7.3,SNR=5.2						
CMAR	Chiang Mai Arr	56.06	299	P	P	19 39 45.5	0.0
	0.6nm,0.8s,baz=131,slow=5.5,SNR=5.9						
PETK	Petropavlovsk-	61.52	6	P	P	19 40 22.8	+0.1
	1.6nm,0.9s,baz=181,slow=12,SNR=1.8						
SONM	Songino Array	67.30	330	P	P	19 41 01.2	+0.4
	0.8nm,0.9s,baz=140,slow=5.7,SNR=5.4						
VNDA	Vanda	69.62	177	P	P	19 41 14.8	+0.1
	1.1nm,0.9s,baz=330,slow=3.4,SNR=2.2						
MKAR	Makanchi Array	80.46	320	P	P	19 42 18.4	+0.6
	0.2nm,0.8s,baz=123,slow=4.5,SNR=2.2						
MAW	Mawson	81.01	203	P	P	19 42 20.5	+0.2
	6.4nm,0.9s,baz=63,slow=14,SNR=2.8						
ILAR	Eielson Array	86.71	23	P	P	19 42 49.8	+0.4
	0.3nm,0.7s,baz=248,slow=4.5,SNR=2.0						
NVAR	Mina Array Bea	97.12	52	P	Pdif	19 43 41.4	+2.6
	0.3nm,0.7s,baz=237,slow=9.5,SNR=2.0						
TORD	Torodi Ar. Bea	147.54	282	PKPbc	PKPab	19 49 52.7	-0.5
	0.8nm,0.5s,baz=43,slow=3.1,SNR=2.2						

IDC 22 19:37:01.2±1.8, **3°.88S**×**128°.82E, h0^{km}, mb3.0**/2, **mb1 3.3**/4, **mb1mx3.2**/35, **mbtmp3.2**/4, **ML3.0**/2, **Error ellipse: s-maj=52.5km s-min=28.7km az=84.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.86	39	Pn	Pn	19 38 00.5	-1.4
	1.4nm,0.3s,baz=77,slow=23,SNR=31						
SIJI				Sn	Sn	19 38 38.7	-9.3
	2.5nm,0.3s,baz=250,slow=23,SNR=8.7						
WRA	Warramunga Arr	16.85	162	Pn	Pn	19 40 59.4	+0.6
	0.0nm,0.3s,baz=335,slow=11,SNR=1.0						
ASAR	Alice Springs	20.28	166	P	P	19 41 38.3	-0.4
	0.2nm,0.4s,baz=351,slow=10,SNR=5.1						
MKAR	Makanchi Array	64.99	327	P	P	19 47 43.6	+0.5
	0.2nm,0.7s,baz=111,slow=6.3,SNR=2.4						

IDC 22 19:39:16.7±1.9, **10°.03S**×**124°.31E, h0^{km}, mb3.3**/1, **mb1 3.5**/4, **mb1mx3.3**/33, **mbtmp3.3**/4, **ML2.9**/3, **Error ellipse: s-maj=30.3km s-min=12.8km az=171.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.66	254	Pg	Pg	19 39 29.5	+0.1
	405nm,0.3s,baz=156,slow=6.2,SNR=350						
BATI				Lg	Lg	19 39 38.6	
	290nm,0.3s,baz=150,slow=20,SNR=10						
FITZ	Fitzroy Crossi	8.13	171	Pn	Pn	19 41 15.7	-0.4
	0.1nm,0.3s,baz=354,slow=9.2,SNR=9.2						
FITZ				Sn	Sn	19 42 37.8	-11
	0.6nm,0.3s,baz=114,slow=22,SNR=9.0						
WRA	Warramunga Arr	13.82	137	Pn	Pn	19 42 34.6	+0.6
	0.1nm,0.3s,baz=310,slow=14,SNR=2.6						
WRA				Sn	Sn	19 44 58.8	-10
	0.1nm,0.3s,baz=306,slow=25,SNR=1.1						
ASAR	Alice Springs	16.37	147	Pn	Pn	19 43 08.1	0.0
	0.1nm,0.3s,baz=317,slow=12,SNR=5.2						
ASAR				Sn	Sn	19 45 59.2	-11
	0.1nm,0.3s,baz=310,slow=21,SNR=4.0						
MKAR	Makanchi Array	67.85	330	P	P	19 50 16.7	-0.2
	0.1nm,0.4s,baz=144,slow=8.2,SNR=1.6						

NOU 22 19:44:38.2, 32°.86S×178°.01W, h352^{km}, mb4.0, South of Kermadec Islands, South of Kermadec Islands

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WEL 22 19:45:28.1±0.8, **36°S**±9°×**17°8E**±1°0, **h236^{km}**±10^{km}, **M3.5**/33, **ML3.8**/4, **MLv3.5**/33, **Error ellipse: s-maj=0.0km s-min=0.0km az=125.7, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.83	184	P	Pn	19 46 07.7	0.0
MXZ				S	S	19 46 38.0	-1.0
WMGZ	Waiomatatini S	2.08	181	P	Pn	19 46 10.6	+0.5
WMGZ				S	S	19 46 44.4	+1.2
HAZ	Te Kaha	2.09	195	P	Pn	19 46 10.1	-0.1
HAZ				S	S	19 46 43.1	-0.2
PKGZ	Pakihiroa	2.17	188	P	Pn	19 46 12.1	+1.1
PKGZ				S	S	19 46 44.4	-0.4
RUGZ	Raukumara Rang	2.31	196	P	Pn	19 46 12.2	-0.3
TWGZ	Tauwhareparae	2.47	189	P	Pn	19 46 14.5	+0.5
OPRZ	Ohinepanea	2.60	215	P	Pn	19 46 16.9	+1.5
MWZ	Matawai	2.70	196	P	Pn	19 46 15.9	-0.5
URZ	Urewera	2.74	203	P	Pn	19 46 16.9	+0.1
CNGZ	Carnagh Statio	2.75	184	P	Pn	19 46 17.9	+1.0
RAGZ	Rawiri	2.88	197	P	Pn	19 46 18.8	+0.3
TARZ	Mount Tarawera	2.94	212	P	Pn	19 46 21.0	+1.8
RIGZ	Rimuhau	3.02	190	P	Pn	19 46 19.8	-0.1
MUGZ	Murupara	3.05	206	P	Pn	19 46 20.9	+0.6
MUGZ				S	S	19 47 02.8	+1.4
RTZ	Ruatahuna	3.11	202	P	Pn	19 46 20.5	-0.4
SNGZ	Shannon Statio	3.17	196	P	Pn	19 46 22.0	+0.4
PRGZ	Paritu Road	3.21	188	P	Pn	19 46 22.6	+0.6
PRRZ	Plateau Road	3.21	210	P	Pn	19 46 21.5	-0.6
KNZ	Kokohu	3.34	191	P	Pn	19 46 23.2	-0.2
WCZ	Waipu Caves	3.35	265	P	Pn	19 46 22.1	-1.6
RAHZ	Arahi	3.36	199	P	Pn	19 46 23.9	+0.2
MTHZ	Maungataniwha	3.37	202	P	Pn	19 46 24.4	+0.5
MTHZ				S	S	19 47 09.6	+1.7
MHGZ	Mahia Peninsul	3.44	187	P	Pn	19 46 24.0	-0.6
WHHZ	Waihua	3.48	196	P	Pn	19 46 24.0	-1.0
MRHZ	Matea Rd	3.50	207	P	Pn	19 46 24.2	-1.1
NMHZ	Naumai	3.60	201	P	Pn	19 46 26.4	-0.3
WATZ	Wairara	3.68	215	P	Pn	19 46 28.4	+0.9
ARHZ	Aropaoanui	3.71	198	P	Pn	19 46 27.4	-0.4
BKZ	Black Stump Fm	3.77	204	P	Pn	19 46 27.8	-0.7
BKZ				S	S	19 47 17.1	+0.8
MCHZ	McNeill Hill	3.96	200	P	Pn	19 46 30.3	-0.4
MCHZ				S	S	19 47 22.2	+1.9
HIZ	Hauiti	4.00	225	P	Pn	19 46 33.0	+1.8
CKHZ	Cape Kidnapper	4.07	195	P	Pn	19 46 31.3	-0.7
WTVZ	West Tongariro	4.07	213	P	Pn	19 46 32.1	-0.1
OTVZ	Oturere	4.08	212	P	Pn	19 46 32.3	-0.1
TWVZ	Taurewa	4.11	215	P	Pn	19 46 32.9	+0.3
NGZ	Ngauruhoe	4.12	213	P	Pn	19 46 33.1	+0.3
TUVZ	Tukino	4.17	212	P	Pn	19 46 33.2	-0.2
BHHZ	Black Hill Sta	4.20	206	P	Pn	19 46 33.3	-0.4
BHHZ				S	S	19 47 25.1	-0.6
FWVZ	Far West T-bar	4.21	212	P	Pn	19 46 33.7	-0.2
KRHZ	Kereru	4.24	202	P	Pn	19 46 33.6	-0.5
KRHZ				S	S	19 47 24.7	-1.7
KAHZ	Kahuranaki	4.24	197	P	Pn	19 46 34.0	-0.2
WNVZ	Wahianoa	4.25	212	P	Pn	19 46 34.3	0.0
MOVZ	Moawhango	4.25	210	P	Pn	19 46 33.2	-1.1
PKVZ	Pokaka	4.33	214	P	Pn	19 46 34.3	-0.8
PNHZ	Pukenui	4.54	203	P	Pn	19 46 36.8	-0.9
PNHZ				S	S	19 47 31.8	-1.2
WPHZ	Waipukurau	4.61	200	P	Pn	19 46 37.1	-1.5
WPHZ				S	S	19 47 34.4	-0.1
TSZ	Takapari Road	4.75	204	P	Pn	19 46 39.3	-1.0
PRHZ	Porangahau	4.75	197	P	Pn	19 46 39.5	-0.7
PRHZ				S	S	19 47 39.4	+1.8
DVHZ	Dannevirke	4.90	201	P	Pn	19 46 41.6	-0.6
DVHZ				S	S	19 47 39.9	-1.1
ANWZ	Angora Road	4.97	198	P	Pn	19 46 42.7	-0.2
POWZ	Post Office Ro	5.11	204	P	Pn	19 46 44.0	-0.7
PRWZ	Pori Road	5.20	201	P	Pn	19 46 45.6	-0.2
BFZ	Birch Farm	5.24	199	P	Pn	19 46 44.8	-1.5
MRZ	Mangatainoka R	5.42	204	P	Pn	19 46 46.7	-1.8
TIWZ	Tintock	5.42	201	P	Pn	19 46 47.6	-1.0
CPWZ	Castlepoint	5.46	198	P	Pn	19 46 49.1	0.0
HOWZ	Holdsworth Sta	5.65	203	P	Pn	19 46 49.8	-1.7
OGWZ	Otaki Gorge	5.70	206	P	Pn	19 46 50.1	-1.9
TMWZ	Te Maipa	5.73	200	P	Pn	19 46 50.8	-1.6
KIW	Kapiti Island	5.83	208	P	Pn	19 46 51.7	-2.0
MTW	Mount Morrison	5.89	202	P	Pn	19 46 52.5	-1.9
CAW	Cannon Point	5.99	205	P	Pn	19 46 53.4	-2.3
TRWZ	Traveller	6.06	200	P	Pn	19 46 55.1	-1.5
PAWZ	Paruwai Farm	6.12	202	P	Pn	19 46 55.5	-1.9
DUWZ	D’Urville Isla	6.19	214	P	Pn	19 46 56.1	-2.2
MSWZ	Moikau Station	6.20	203	P	Pn	19 46 56.2	-2.2
BHW	Baring Head	6.32	205	P	Pn	19 46 57.6	-2.3
PLWZ	Palliser	6.34	202	P	Pn	19 46 57.9	-2.3
TCW	Tory Channel	6.38	210	P	Pn	19 46 58.0	-2.5
TUWZ	Tuamarina	6.70	211	P	Pn	19 47 02.0	-2.6
QRZ	Quartz Range	6.90	221	P	Pn	19 47 06.7	-0.5
BSWZ	Blackbirch Sta	6.96	210	P	Pn	19 47 05.9	-2.1
THZ	Tophouse	7.42	214	P	Pn	19 47 12.2	-1.7
KHZ	Kahutara	7.69	208	P	Pn	19 47 14.7	-2.6
GVZ	Greta Valley S	8.35	209	P	Pn	19 47 23.1	-2.7
LTZ	Lake Taylor	8.52	212	P	Pn	19 47 25.6	-2.3

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*IDC **22** 20:29:25.6±3.6, 33°.48N×45°.46E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/36, mbtmp3.6/5, Error ellipse: s-maj=82.2km s-min=34.3km az=26.0*

*ISN **22** 20:29:27.9±1.1, 33°.67N×45°.69E, h0^{km}±5^{km}, ML3.1*

*TEH **22** 20:29:29.0, 33°.67N×45°.68E, h12^{km}, ML3.7*

ISC 22 20:29:29.1±0.8, 33°.68N±0°.04×45°.63E±0°.05, h10^{km}, n36, σ1s45/40, mb3.6/4, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBDR	Badra	0.62	156	ePg	Pg	20 29 40.5	-0.6
IBDR				eSg	Sg	20 29 50.0	+0.7
IBDR				AML	AML	20 30 00.6	
	comp=N,396nm,0.4s						
IBDR				AML	AML	20 30 05.5	
	comp=E,344nm,0.6s						
IGHG	Ghaleghazi	1.01	50	ePg	Pg	20 29 48.5	-0.1
IGHG				e		20 29 49.6	
	comp=Z,99nm,0.2s						
IGHG				eSg	Sg	20 30 02.5	+0.7
BHD	Baghdad	1.12	249	ePn	Pn	20 29 51.5	+0.6
BHD				eSn	Sn	20 30 09.0	+2.6
BHD				AML	AML	20 30 14.3	
	comp=E,4μm,0.6s						
IDHR	Dehrash	1.19	31	ePg	Pb	20 29 51.0	-1.0
IDHR				e		20 30 12.4	
	comp=Z,99nm,0.3s						
KCHF	Cheshme Sefid,	1.31	63	ePg	Pn	20 29 53.4	-0.3
KCHF				e		20 30 15.7	
	comp=Z,99nm,0.4s						
KER	Kermanshah	1.43	60	ePg	Pn	20 29 56.0	+0.7
ILIN	Lien	1.65	41	ePg	Pn	20 30 00.0	+1.5
ILIN				e		20 30 23.9	
	comp=Z,99nm,0.3s						
IKFM	Kafar-mosalman	1.85	94	ePg	Pn	20 30 03.0	+2.1
IKFM				e		20 30 31.3	
	comp=Z,99nm,0.5s						
IBZA	Bozab	2.01	66	e		20 30 35.4	
	comp=Z,99nm,0.3s						
IBZA				ePn	Pn	20 30 04.7	+1.3
IDOB	Doab	2.12	86	ePn	Pn	20 30 06.3	+1.4
IKMR	Kamar-syah	2.30	93	e		20 30 46.7	
	comp=Z,99nm,0.4s						
IKMR				ePn	Pn	20 30 08.9	+1.8
IALM	Almabolaq	2.41	60	ePn	Pn	20 30 11.0	+2.2
HSRG	Sareghieh	2.68	54	ePn	Pn	20 30 14.9	+2.2
HSRG				e		20 30 58.1	
	comp=Z,99nm,0.8s						
NSR	Nassriya	2.70	171	ePn	Pn	20 30 14.0	+1.5
NSR				eSn	Sn	20 30 45.5	+0.3
MAHB	Mahabad	3.08	1	ePn	Pn	20 30 20.1	+2.1
MAHB				e		20 30 58.5	
	comp=Z,99nm,0.4s						
AMIS	Naft Sefid	3.68	122	ePn	Pn	20 30 27.5	+1.4
QABG	Abgarm-Qazvin	3.83	57	ePn	Pn	20 30 29.0	+0.6
IRAZ	Razeghan	3.94	63	ePn	Pn	20 30 31.1	+1.2
QSDN	Sirdan	4.04	45	ePn	Pn	20 30 33.3	+2.0
ISRB	Sarab	4.45	21	ePn	Pn	20 30 38.5	+1.6
IQOM	Qom	4.65	74	ePn	Pn	20 30 40.6	+0.9
QAM	Ghamsar	4.84	87	ePn	Pn	20 30 43.5	+1.3
QALM	Alamut, Qazvin	4.94	55	ePn	Pn	20 30 44.9	+1.2
IKLH	Kolahrood	4.98	93	ePn	Pn	20 30 46.9	+2.7
IKLH				e		20 30 49.7	
	comp=Z,99nm,0.4s						
IVRN	Varamin	5.21	74	ePn	Pn	20 30 48.4	+1.2
KRSH	Karshahi	5.42	85	ePn	Pn	20 30 51.3	+1.1
IZEF	Zefreh	5.66	96	ePn	Pn	20 30 55.8	+2.2
KLNJ	Kolanjah	5.70	116	ePn	Pn	20 30 55.4	+1.2
IRAM	Ramesheh	5.98	106	ePn	Pn	20 30 59.4	+1.4
IFIR	Firoozkooh	6.18	70	ePn	Pn	20 31 01.8	+1.0
GENO	Geno	11.03	122	ePn	Pn	20 32 06.4	-0.7
AKASG	Malin Array Be	20.83	330	P	P	20 34 09.6	-1.1
	comp=Z,0.5nm,0.4s,baz=138,slow=9.7,SNR=4.8						
MKAR	Makanchi Array	30.61	54	P	P	20 35 43.8	+0.5
	comp=Z,0.6nm,0.5s,baz=251,slow=9.5,SNR=18						
ZALV	Zalesovo Beam	34.18	42	P	P	20 36 13.8	-0.6
	comp=Z,0.4nm,0.3s,baz=249,slow=8.9,SNR=4.3						
CMAR	Chiang Mai Arr	49.71	94	P	P	20 38 20.5	-1.2
	comp=Z,0.2nm,0.5s,baz=286,slow=7.9,SNR=1.9						
YKA	Yellowknife Ar	82.85	351	P	P	20 41 52.8	-0.6
	comp=Z,0.1nm,0.5s,baz=35,slow=5.6,SNR=1.9						

IDC 22 20:30:25.1±2.6, 11°.15N×125°.88E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/34, mbtmp3.5/4, Error ellipse: s-maj=105.1km s-min=24.8km az=56.0, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	27.02	289	P	P	20 36 09.1	0.0
	0.6nm,0.7s,baz=101,slow=6.7,SNR=6.5						
WRA	Warramunga Arr	31.99	165	P	P	20 36 53.2	0.0
	0.4nm,0.7s,baz=346,slow=10,SNR=2.1						
ASAR	Alice Springs	35.48	167	P	P	20 37 23.4	-0.1
	0.3nm,0.5s,baz=351,slow=7.5,SNR=6.0						
MKAR	Makanchi Array	51.10	323	P	P	20 39 29.5	-0.1
	0.2nm,0.5s,baz=116,slow=6.8,SNR=2.8						

*IDC **22** 21:01:05.3±3.4, 43°.23N×104°.96W, h0^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.3/36, mbtmp3.4/4, ML2.5/1, MS2.5/1, Ms1 2.5/1, ms1mx1.9/21, Error ellipse: s-maj=79.7km s-min=11.6km az=154.0*

*NEIC **22** 21:01:08.9±1.2, 43°.81N±0°.02×105°.19W±0°.08, h0^{km}±2^{km}, ML3.1/66, Error ellipse: s-maj=9.9km s-min=3.1km az=103.0*

ISC 22 21:01:08.2±0.9, 43°.82N±0°.05×105°.10W±0°.06, h0^{km}, n79, σ0s93/82, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.82	69		Pn	21 01 28.0	+0.7
K22A	Casper	1.57	222	Pn	Pn	21 01 34.9	-2.6
K22A				IAML		21 02 00.8	
	comp=N,243nm,0.6s						
K22A				IAML		21 02 00.9	
	comp=E,192nm,0.6s						
PHWY	Pilot Hill	2.54	186	Pn	Pn	21 01 50.8	-0.1
PHWY				Sn	Sn	21 02 24.0	+1.4
PHWY				IAML		21 02 30.0	
	comp=E,66nm,0.6s						
RWWY	Rawlins	2.64	217	Pn	Pn	21 01 52.6	+0.3
RWWY					Sn	21 02 26.2	+1.1
RWWY				IAML		21 02 27.5	
	comp=E,119nm,0.7s						
RWWY				IAML		21 02 28.1	
	comp=E,109nm,0.8s						
LAO	LASA Array	2.97	345		Pn	21 01 56.9	+0.2
N23A	Red Feather La	2.99	192		Pn	21 01 57.6	+0.4
N23A				Sn	Sb	21 02 37.2	-2.5
N23A				IAML		21 02 43.5	
	comp=E,54nm,0.5s						
N23A				IAML		21 02 46.3	
	comp=N,65nm,0.5s						
RLMT	Red Lodge	3.25	295		Pn	21 02 00.6	-0.1
RLMT				IAML		21 02 57.4	
	comp=N,36nm,0.4s						
PD31	Pinedale Array	3.42	254		Pn	21 02 02.2	-0.9
PDAR	Pinedale Array	3.42	254	Pn	Pn	21 02 02.4	-0.7
	comp=N,6.9nm,0.3s,baz=74,slow=18,SNR=45						
PDAR				Sn	Sn	21 02 47.0	+2.5
	comp=N,7.7nm,0.3s,baz=97,slow=32,SNR=14						
PDAR	Pinedale Array	3.42	254		Pn	21 02 02.1	-0.9
BW06	Boulder Array	3.42	254		Pn	21 02 02.5	-0.6
BW06				IAML		21 02 51.7	
	comp=N,30nm,0.6s						
OGNE	Ogallala	3.67	141	Pn	Pn	21 02 08.1	+1.8
YNE	Yellowstone No	3.71	290		Pn	21 02 06.4	-0.6
YMP	Mirror Lake Pl	3.74	286		Pn	21 02 07.1	-0.5
LKWY	Lake	3.88	283		Pn	21 02 09.4	0.0
LKWY				IAML		21 02 40.4	
	comp=N,31nm,0.7s						
H17A	Grant Village	3.98	280		Pn	21 02 11.0	+0.2
H17A				IAML		21 03 12.8	
	comp=N,22nm,0.6s						
LOHW	Long Hollow	4.00	269		Pn	21 02 10.5	-0.4
ISCO	Idaho Springs	4.04	186		Pn	21 02 12.1	+0.5
FLWY	Flagg Ranch	4.05	276		Pn	21 02 11.8	+0.1
FLWY				IAML		21 03 27.1	
	comp=N,23nm,1.7s						
FLWY				IAML		21 03 35.8	
	comp=N,18nm,2.8s						
MOOW	Moose Ponds	4.09	271		Pn	21 02 11.9	-0.3
SNOW	Snow King Moun	4.12	267		Pn	21 02 12.4	-0.2
SNOW				IAML		21 03 30.4	
	comp=N,26nm,0.9s						
SNOW				IAML		21 03 30.8	
	comp=N,19nm,0.9s						
YPP	Pitchstone Pla	4.14	278		Pn	21 02 12.6	-0.3
REDW	Red Top Meadow	4.20	266		Pn	21 02 13.7	-0.1
REDW				IAML		21 03 34.4	
	comp=N,23nm,0.8s						
IMW	Indian Meadow	4.22	273		Pn	21 02 13.7	-0.4
IMW				IAML		21 03 24.9	
	comp=N,16nm,0.8s						
IMW				IAML		21 03 49.5	
	comp=N,20nm,0.7s						
O20A	White River Ci	4.37	213	IAML		21 03 28.3	
	comp=N,26nm,1.2s						
O20A				IAML		21 03 30.5	
	comp=E,31nm,0.7s						
YHB	Horse Butte	4.47	284		Pn	21 02 16.3	-1.2
YHL	Hebgen Lake	4.48	285		Pn	21 02 17.9	+0.2
AHID	Auburn Hatcher	4.51	258		Pn	21 02 18.6	+0.7
AHID				IAML		21 03 32.9	
	comp=E,21nm,4.5s						
AHID				IAML		21 03 35.0	
	comp=N,25nm,0.8s						
ECR	Eagle Creek	4.63	263		Pn	21 02 21.0	+1.3
RDMU	Red Mountain	4.65	227		Pn	21 02 20.1	+0.2
DGMT	Dagmar	4.69	7		Pn	21 02 20.7	+0.4
SMCO	Snowmass	4.85	197	Pn	Pn	21 02 21.6	-1.2
SMCO				IAML		21 04 17.7	
	comp=N,18nm,0.8s						
Q24A	Divide	4.86	180		Pn	21 02 22.9	0.0
Q24A				IAML		21 03 45.9	
	comp=N,11nm,1.7s						
Q24A				IAML		21 03 46.2	
	comp=E,18nm,1.9s						
BOZ	Bozeman (W)	4.98	293	Pn	Pn	21 02 23.3	-1.1
BOZ				IAML		21 03 44.6	
	comp=E,14nm,0.9s						
BOZ				IAML		21 03 58.5	
	comp=E,12nm,4.7s						
KSCO	Kaye Shedlock'	5.16	158	Pn	Pn	21 02 26.9	+0.1
HWUT	Hardware Ranch	5.25	247	Pn	Pn	21 02 27.8	-0.3
HWUT				IAML		21 04 01.6	
	comp=E,16nm,1.1s						
EGMT	Eagleton	5.31	324	Pn	Pn	21 02 29.3	+0.5
HRY	Holter Researc	5.56	304		Pn	21 02 33.0	+0.8
MDND	Maddock	5.56	42	Pn	Pn	21 02 32.7	+0.5
DLMT	Dillon	5.57	289	Pn	Pn	21 02 31.7	-0.8
CTU	Camp Tracy	5.84	240	Pn	Pn	21 02 34.6	-1.6
PV22	Blue Mesa, Par	5.97	209	Pn	Pn	21 02 38.1	0.0
SPUT	South Promonto	5.98	248	Pn	Pn	21 02 38.2	+0.1
BCYI	Bear Canyon	6.00	278	Pn	Pn	21 02 39.9	+1.4
HVU	Hansel Valley	6.00	253	Pn	Pn	21 02 37.6	-0.9
PV07	Paradox Valley	6.01	208	Pn	Pn	21 02 38.8	+0.2
PV15	Paradox Valley	6.04	206	Pn	Pn	21 02 39.9	+0.8
P17A	Butcher Ranch,	6.06	226		Pn	21 02 39.1	-0.1
SDCO	Great Sand Dun	6.08	183	Pn	Pn	21 02 40.1	+0.5
PV23	Carpenter Ridg	6.12	210	Pn	Pn	21 02 40.1	-0.2
PV04	Paradox Valley	6.14	209	Pn	Pn	21 02 40.4	+0.1
ECSD	EROS Data Cent	6.14	88	Pn	Pn	21 02 43.1	+2.8
PV12	Saucer Basin,	6.17	208	Pn	Pn	21 02 41.1	+0.3
PV14	Lion Creek, Pa	6.20	210		Pn	21 02 40.8	-0.4
PV10	Paradox Valley	6.20	210	Pn	Pn	21 02 42.1	+0.8
PV11	David Mesa, Pa	6.21	209		Pn	21 02 41.4	0.0
S22A	4UR Ranch, Cre	6.21	193	Pn	Pn	21 02 40.8	-0.7
PV16	Nyswonger Mesa	6.22	209		Pn	21 02 42.0	+0.6
SRU	San Rafael Swe	6.22	223	Pn	Pn	21 02 40.1	-1.4
PV19	Morning Glory	6.24	209	Pn	Pn	21 02 41.4	-0.4
PV03	Paradox Valley	6.24	208		Pn	21 02 42.0	+0.2
PV02	Paradox Valley	6.25	207	Pn	Pn	21 02 42.3	+0.4
PV17	East Wray Mesa	6.26	209	Pn	Pn	21 02 41.9	-0.1
PV01	Paradox Valley	6.26	206	Pn	Pn	21 02 41.8	-0.3
PV18	Skein Mesa, Pa	6.27	209	Pn	Pn	21 02 41.9	-0.3
PV13	Radium Mtn., P	6.32	208	Pn	Pn	21 02 42.5	-0.4
TMUT	Trail Mountain	6.44	227		Pn	21 02 44.6	+0.1
BGU	Big Grassy Mou	6.55	246	Pn	Pn	21 02 45.8	-0.1
JTMT	Jette	7.52	305	Pn	Pn	21 02 59.4	+0.1
MSU	Marysvale	7.53	228	Pn	Pn	21 02 58.8	-0.6
MVU	Marysvale	7.55	228	Pn	Pn	21 02 59.6	-0.2
MFID	Camas Ranch	7.80	271	Pn	Pn	21 03 01.9	-1.1
MTPU	Mount Pierson	7.88	225	Pn	Pn	21 03 03.8	-0.6
PKCU	Pink Cliffs	8.40	223	Pn	Pn	21 03 11.0	-0.6
PSUT	Pine Spring	8.45	234	Pn	Pn	21 03 12.0	-0.1
ULM	Lac du Bonnet	8.99	41	Pn	Pn	21 03 19.4	+0.1
	comp=E,0.8nm,0.3s,baz=232,slow=13,SNR=8.2						
ULM				Sn	Sn	21 04 58.5	-2.8
	comp=E,0.3nm,0.3s,baz=351,slow=19,SNR=1.6						
ULM				Lg	Lg	21 05 50.1	
	comp=E,0.2nm,0.3s,baz=131,slow=19,SNR=1.6						
TXAR	Lajitas Array	14.51	175	LR	LR	21 08 59.1	
	comp=E,20nm,18.4s,baz=0.0,slow=34						
YKA	Yellowknife Ar	19.51	347	P	Pn	21 05 38.5	+0.6
	comp=E,0.1nm,0.4s,baz=162,slow=13,SNR=2.2						
MKAR	Makanchi Array	89.53	355	P	P	21 14 07.7	+0.4
	comp=E,0.3nm,0.7s,baz=17,slow=5.1,SNR=4.4						

ANF 22 21:04:46.4±0.6, 38°.32N×81°.15W, h18^{km}±4^{km}, ML2.4/8, ML2.4/5, Error ellipse: s-maj=8.7km s-min=5.4km az=64.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R54A	Victor	0.18	138	P	Pg	21 04 51.1	-0.1
	baz=316						
Q53A	Leroy	0.62	331	P	Pb	21 04 58.5	-0.2
	baz=151						
R55A	Marlinton	0.81	92	P	Pb	21 05 01.7	-0.2
	baz=273						
BLA	Blacksburg	1.24	152	P	Pn	21 05 09.0	0.0
	baz=333						
R56A	Bull Pasture M	1.37	86	P	Pn	21 05 10.8	0.0
	baz=267						
T56A	Rocky Mt	1.56	145	P	Pb	21 05 14.1	-0.6
	baz=326						
U56A	King	2.06	163	S	Sn	21 05 44.3	-1.0
	baz=343						

ANF 22 21:04:51.8±1.2, 38°.06N×81°.49W, h20^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=2.8km az=47.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R54A	Victor	0.41	73	S	Sb	21 05 06.7	+0.7
	baz=252						
Q53A	Leroy	0.80	358	S	Sb	21 05 18.2	+0.9
	baz=178						
R55A	Marlinton	1.10	78	P	Pn	21 05 11.8	-0.3
	baz=259						
R55A				S	Sn	21 05 26.9	+0.2
	baz=259						
BLA	Blacksburg	1.20	135	S	Sn	21 05 29.9	+0.8
	baz=315						
P52A	Corning	1.65	342	S	Sn	21 05 39.9	-0.3
	baz=162						
R56A	Bull Pasture M	1.68	77	P	Pn	21 05 20.4	+0.3
	baz=259						
R56A				S	Sb	21 05 41.9	-0.8
	baz=259						
Q56A	Snyder Ridge,	2.05	61	Sb	Sb	21 05 55.1	+1.7
	baz=242						
O53A	New Philadelph	2.20	6	P	Pn	21 05 27.4	+0.4
	baz=186						
O53A				S	Sn	21 05 55.3	+1.7
	baz=186						

*NEIC **22** 21:10:55.5±2.1, 6°.20S±0°.05×129°.99E±0°.05, h128^{km}±8^{km}, mb4.3/23, Error ellipse: s-maj=8.6km s-min=6.2km az=50.0*

*DJA **22** 21:10:57.4±0.3, 6°S±3°×13°0E±°, h154^{km}±8^{km}, M4.6/11, mb4.6/9, mB5.3/5, MLv4.6/11, Mw(mB)4.7/5*

*IDC **22** 21:10:57.4±2.0, 6°.21S×130°.03E, h137^{km}±20^{km}, mb3.7/8, mb1 3.9/12, mb1mx3.7/25, mbtmp4.3/12, MS2.6/1, Ms1 2.6/1, ms1mx2.2/25, Error ellipse: s-maj=17.5km s-min=12.8km az=77.0*

*NOU **22** 21:11:01.2, 6°.69S×129°.98E, h139^{km}, mb4.5, Banda Sea*

ISC 22 21:10:57.1±0.4, 6°.24S±0°.04×130°.14E±0°.06, h150^{km}, n65, σ2s11/66, mb4.2/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.72	352	P	Pn	21 11 29.3	+0.3
SAUI	Saumlaki	2.08	147	Pn	Pn	21 11 32.3	-0.9
SAUI					Sn	21 11 58.3	-2.7
SAUI	Saumlaki	2.08	147	P	Pn	21 11 35.5	+2.3
MSAI	Masohi	3.11	337	P	Pn	21 11 46.6	+0.7
FAKI	Fak Fak	3.91	33	Pn	Pn	21 11 55.0	-1.1
FAKI				Sn	Sn	21 12 36.0	-6.1
FAKI	Fak Fak	3.91	33	P	Pn	21 11 55.1	-1.1
FAKI				S	Sn	21 12 39.2	-2.9
SIJI	Sorong	5.45	12	P	Pn	21 12 15.3	-1.1
	25nm,0.3s,baz=214,slow=22,SNR=99						
SIJI				S	Sn	21 13 11.7	-6.8
	20nm,0.3s,baz=220,slow=22,SNR=17						
SWI	Sorong	5.45	12	P	Pn	21 12 15.4	-1.1
MTN	Manton Dam	6.64	172	Pn	Pn	21 12 31.9	-0.5
MTN				Sn	Sn	21 13 43.3	-3.7
SOEI	Soe	6.79	239	Pn	Pn	21 12 33.3	-1.1
SOEI	Soe	6.79	239	P	Pn	21 12 34.8	+0.4
	0.4nm63nm,1.1s						
BATI	Baumata	7.53	238	P	Pn	21 12 44.1	-0.1
	24nm,0.3s,baz=105,slow=3.1,SNR=14						
BATI				S	Sn	21 14 07.2	-1.2
	17nm,0.3s,baz=82,slow=23,SNR=7.9						
BATI	Baumata	7.53	238	P	Pn	21 12 43.9	-0.3
	0.2nm63nm,0.8s						
EDFI	Ende, Flores	8.74	253	P	Pn	21 13 00.8	+0.3
	7.7nm,1.0s						
KMSI	Cibinong	9.14	318	P	Pn	21 12 58.6	-7.1
	2μm177nm,0.8s						
KNRA	Kununurra	9.48	188	Pn	Pn	21 13 09.0	-1.3
KAPI	Kappang	10.41	276	LR	LR	21 17 59.6	
	comp=Z,30nm,19.8s,baz=98,slow=41						
FITZ	Fitzroy Crossi	12.58	200	P	Pn	21 13 48.1	-2.8
	3.0nm,0.3s,baz=19,slow=11,SNR=43						
FITZ				S	Sn	21 15 58.8	-11
	5.9nm,0.3s,baz=303,slow=20,SNR=9.0						
FITZ	Fitzroy Crossi	12.58	200	Pn	Pn	21 13 48.6	-2.3
WB0	Warramunga Arr	14.07	163	Pn	Pn	21 14 08.2	-1.7
WRAB	Tennant Creek	14.22	164		Pn	21 14 10.4	-1.4
WRA	Warramunga Arr	14.22	164	P	Pn	21 14 09.6	-2.3
	2.0nm,0.3s,baz=337,slow=13,SNR=38						
WRA				S	Sn	21 16 34.4	-15
	0.9nm,0.3s,baz=347,slow=22,SNR=4.0						
WRA	Warramunga Arr	14.22	164		Pn	21 14 09.5	-2.4
WB2	Warramunga Arr	14.23	164	Pn	Pn	21 14 10.7	-1.2
WR0	Warramunga Arr	14.30	163		Pn	21 14 11.2	-1.6
COEN	Coen	14.95	122		P	21 14 21.8	-1.0
COEN				IAmb	IAmb	21 14 26.9	
	comp=Z,21nm,0.5s						
JAGI	Jajag, Banyuwa	16.01	261		Pn	21 14 32.0	-2.1
JAGI				IAmb	IAmb	21 14 34.6	
	comp=Z,14nm,1.0s						
PMG	Port Moresby	17.15	102	P	Pn	21 14 50.6	+2.7
	comp=Z,1.4nm,0.3s,baz=299,slow=6.9,SNR=12						
PMG	Port Moresby	17.15	102		Pn	21 14 51.5	+3.5
AS31	Alice Springs	17.70	169		Pn	21 14 55.3	+0.8
AS31				IAmb	IAmb	21 14 58.0	
	comp=Z,9.4nm,0.4s						
ASAR	Alice Springs	17.71	169	P	Pn	21 14 55.4	+0.8
	comp=Z,4.0nm,0.3s,baz=343,slow=10,SNR=102						
ASAR				S	S	21 18 03.5	-6.0
	comp=Z,1.3nm,0.3s,baz=357,slow=28,SNR=8.5						
PSA00	Pilbara Seismi	18.21	212		Pn	21 14 59.4	-1.0
PSA00	Pilbara Seismi	18.21	212	P	P	21 14 58.2	-0.6
PSA00				IAmb	IAmb	21 14 59.7	
	comp=Z,11nm,0.5s						
KKM	Kota Kinabalu	18.49	311		P	21 15 01.2	-0.8
KKM				IAmb	IAmb	21 15 07.5	
	comp=Z,16nm,1.1s						
CTA	Charters Tower	20.85	133	P	Pn	21 15 30.4	-1.2
	comp=Z,4.7nm,0.8s,baz=300,slow=13,SNR=7.1						
CTAO	Charters Tower	20.85	133	P	Pn	21 15 30.4	-1.2
CTAO				IAmb	IAmb	21 15 36.1	
	comp=Z,7.8nm,1.0s						
CISI	Cisompet, Garu	22.20	265	P	P	21 15 40.2	-1.4
GIRL	Giralia	22.39	222	P	P	21 15 43.0	-0.3
FORT	Forrest	24.50	184	P	P	21 16 03.6	+1.1
MORW	Morawa	26.33	209	P	P	21 16 19.6	+0.5
MORW				IAmb	IAmb	21 16 25.4	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	27.01	169	P	P	21 16 26.2	+1.0
BBOO				IAmb	IAmb	21 16 40.3	
	comp=Z,7.9nm,1.1s						
EIDS	Eidsvold	27.63	136	P	P	21 16 33.0	+2.2
STKA	Stephens Creek	27.67	159	P	P	21 16 32.8	+1.8
	comp=Z,1.7nm,0.4s,baz=331,slow=9.8,SNR=8.9						
STKA	Stephens Creek	27.67	159	P	P	21 16 32.1	+1.1
NWAO	Narrogin (SRO)	29.15	203	P	P	21 16 44.8	+0.7
	comp=Z,2.4nm,0.3s,baz=48,slow=7.5,SNR=6.0						
NWAO	Narrogin (SRO)	29.15	203	P	P	21 16 43.7	-0.4
NWAO				IAmb	IAmb	21 16 46.1	
	comp=Z,7.8nm,0.8s						
NWAO	Narrogin (SRO)	29.15	203	P	P	21 16 43.5	-0.6
NWAO				IAmb	IAmb	21 16 54.4	
	comp=Z,18nm,1.1s						
BKNI	Bangkinang	29.77	282	P	P	21 16 49.0	-0.8
CMAR	Chiang Mai Arr	39.35	309	P	P	21 18 13.2	+1.0
	comp=Z,1.5nm,0.9s,baz=136,slow=7.6,SNR=8.9						
JWT	Wachi	41.59	6	P	P	21 18 30.7	+0.5
JWT				IAmb	IAmb	21 18 44.3	
	comp=Z,1.9nm,0.5s						
LZH	Lanzhou	48.80	332	eP	P	21 19 31.4	+4.1
LZH				pP	pP	21 20 00.5	+0.6
LZH				sP	sP	21 20 14.8	-1.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC	Hu-ho-hao-te	49.87	342	eP	P	21 19 36.3	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
SONM	Songino Array	57.77	341	P	P	21 20 34.2	+1.7
	comp=Z,0.3nm,0.6s,baz=150,slow=6.9,SNR=2.8						
SONM	Songino Array	57.77	341	IAmb	IAmb	21 20 37.2	
	comp=Z,0.8nm,1.1s						
WMQ	Urumqi	62.83	327	eP	P	21 21 08.5	+1.5
PETK	Petropavlovsk-	63.56	18	P	P	21 21 13.2	+1.7
	comp=Z,2.0nm,0.7s,baz=132,slow=2.2,SNR=4.7						
KSH	Kashi	67.55	317	P	P	21 21 44.8	+7.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,350nm,4.9s						
MKAR	Makanchi Array	67.67	327	P	P	21 21 39.1	+1.1
	comp=Z,1.5nm,0.6s,baz=125,slow=7.7,SNR=22						
MKAR	Makanchi Array	67.67	327	P	P	21 21 38.9	+0.8
MAKZ	Makanchi	67.85	326	P	P	21 21 40.3	+1.2
VNDA	Vanda	73.19	173	P	P	21 22 12.4	+1.4
	comp=Z,2.0nm,1.0s,baz=322,slow=8.9,SNR=5.9						
VNDA	Vanda	73.19	173	P	P	21 22 11.7	+0.7
MAW	Mawson	75.71	201	P	P	21 22 24.1	-1.5
ABKAR	Akbulak array	82.00	322	P	P	21 23 00.5	+0.2
RAYN	Ar Rayn	87.56	294	P	P	21 23 29.6	+0.8
RAYN				IAmb	IAmb	21 23 30.2	
	comp=Z,2.4nm,0.7s						

*UCR **22** 21:23:34.4±1.9, 10°.37N×86°.50W, h10^{km}, MW4.7, mb4.5(NEIC)*

*IDC **22** 21:23:36.8±1.1, 11°.24N×85°.71W, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.8/37, mbtmp3.8/7, ML3.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/29, Error ellipse: s-maj=60.0km s-min=15.5km az=55.0*

*INET **22** 21:23:38.2, 10°.36N×86°.34W, h16^{km}, MW4.0*

*NEIC **22** 21:23:40.0±1.9, 10°.50N±0°.09×86°.20W±0°.08, h35^{km}±2^{km}, mb4.5/15, Error ellipse: s-maj=17.2km s-min=9.2km az=218.0*

ISC 22 21:23:35.2±0.8, 10°.39N±0°.06×86°.34W±0°.05, h10^{km}, n63, σ1s42/64, mb4.4/14, MS3.3/5, 3C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.80	66	eP	Pn	21 23 52.8	+0.2
ORTG	Ortega, Santa	0.87	92	eP	Pb	21 23 53.2	+0.7
ORTG				eS	Sn	21 24 11.4	+5.0
DUNO	Dulce Nombre,	0.89	110	eP	Pb	21 23 53.1	+0.3
DUNO				eS	Sb	21 24 05.1	+0.3
GBS3	Finca Las Img	0.95	66	i P	Pn	21 23 54.7	-0.1
LAPC	Finca la Perla	0.97	67⇑	iP	Pg	21 23 53.7	-0.2
PLVR	Palo Verde	0.98	93	eP	Pg	21 23 53.8	-0.2
PLVR				eS	Sn	21 24 10.8	+1.6
BUEV	Buena Vista	1.00	66	i P	Pn	21 23 55.7	+0.2
GB1A	Borinquen Arri	1.02	65	eP	Pn	21 23 55.9	+0.1
GPS3	Bodega del ICE	1.02	69	i P	Pn	21 23 56.0	+0.2
GPS2	Hotel Rincn d	1.04	70	eP	Pn	21 23 56.2	+0.3
GPS1	Guardaparques	1.05	69	i P	Pg	21 23 55.4	0.0
BUAI	Buenos Aires	1.10	64	i P	Pg	21 23 56.4	-0.1
LIM1	Limonal	1.11	74⇑	iP	Pn	21 23 57.1	+0.1

COLC	Colonia	1.15	76	*i* P	Pn	21 23 57.6	+0.1
HORNC	Hornillas	1.19	74	⇑*i*P	Pn	21 23 58.2	+0.2
CUI	Cuipilapa	1.19	77	*i* P	Pb	21 23 57.5	-0.4
ACAL	Aguas Claras	1.31	79	*i* P	Pg	21 24 00.2	-0.1
JTS	Las Juntas de	1.37	94	Pn	Pn	21 24 00.7	+0.2
	56nm,0.3s,baz=338,slow=7.2,SNR=94						
JTS				Sn	Sg	21 24 19.8	+0.4
	90nm,0.3s,baz=16,slow=10.0,SNR=5.6						
JTS	Las Juntas de	1.37	94	*e*P	Pn	21 24 00.5	0.0
JTS	Las Juntas de	1.37	94		Pn	21 24 00.9	+0.4
LAFE	Finca La Fe, P	1.52	112	*e*P	Pn	21 24 01.8	-0.8
MASN	Masaya	1.60	7	*e*P	Pn	21 24 03.0	-0.6
ARE1	Arenal 1	1.60	87	*e*P	Pb	21 24 05.1	+0.2
CEDE	Laguna Cedeo	1.61	87	*e*P	Pn	21 24 04.4	+0.5
JACO	JACO, Garabito	1.81	114	*e*P	Pn	21 24 07.3	+0.8
COVE	Coope Vega, Sa	1.94	80	*e*P	Pg	21 24 12.5	+0.1
ACON	Acoyapa	1.94	36	Pn	Pn	21 24 09.2	+0.9
HDC	Heredia	2.23	100	*e*P	Pb	21 24 15.7	0.0
HDC	Heredia	2.23	100	Pn	Pn	21 24 14.1	+1.7
CRIN	San Cristobal	2.40	343	Pn	Pn	21 24 16.8	+2.2
CVTR	Volcan Turrial	2.57	98	*e*P	Pb	21 24 20.5	-1.2
ESPN	Las Esperanzas	2.69	48	*e*P	Pn	21 24 19.2	+0.7
ESPN	Las Esperanzas	2.69	48	Pn	Pn	21 24 19.5	+1.0
EDDO	Dominical	2.69	115	*e*P	Pg	21 24 26.8	-0.1
TGUH	Tegucigalpa,Un	3.75	346		Pn	21 24 36.6	+3.2
CMIG	Matias Romero	10.64	310	Pn	Pn	21 26 09.9	+2.1
	0.4nm,0.3s,baz=108,slow=11,SNR=4.2						
HUMP	Col San Antoni	21.29	66	P	P	21 28 18.5	-3.7
LRAL	Lakeview Retre	22.54	359	P	P	21 28 36.2	+0.8
GOGA	Godfrey	23.06	6	P	P	21 28 41.5	+0.5
GOGA				IAmb	IAmb	21 28 43.0	
	comp=Z,13nm,1.0s						
HODGE	Hodges	24.02	8	P	P	21 28 49.9	-0.5
HODGE				IAmb	IAmb	21 28 51.7	
	comp=Z,15nm,0.8s						
FPAL	Fort Paine	24.05	1	P	P	21 28 50.2	-0.5
JSC	Jenkinsville	24.23	10	P	P	21 28 51.9	-0.4
JSC				IAmb	IAmb	21 28 54.1	
	comp=Z,9.8nm,0.8s						
PAULI	Pauline	24.66	9	P	P	21 28 56.2	-0.1
PAULI				IAmb	IAmb	21 28 58.2	
	comp=Z,13nm,0.7s						
BG3	Lake Jocassee	24.68	7	P	P	21 28 56.5	0.0
BG3				IAmb	IAmb	21 28 58.4	
	comp=Z,13nm,0.7s						
SWET	Sewanee	24.71	1	P	P	21 28 56.7	0.0
TX31	Lajitas Ar. Si	24.85	322	P	P	21 29 00.1	+1.9
TX31				IAmb	IAmb	21 29 10.8	
	comp=Z,10nm,0.8s						
TX32	Lajitas Array	24.85	322	P	P	21 29 00.5	+2.4
TXAR	Lajitas Array	24.85	322	P	P	21 28 59.2	+1.1
	comp=Z,2.1nm,0.8s,baz=133,slow=9.1,SNR=8.1						
TXAR	Lajitas Array	24.85	322	P	P	21 29 00.1	+1.9
MIAR	Mount Ida	24.93	346	P	P	21 28 58.8	+0.1
MIAR				IAmb	IAmb	21 29 16.0	
	comp=Z,18nm,1.5s						
FDF	Fort de France	24.95	77	P	P	21 28 55.4	-3.8
CPCT	Cooper Cave	25.00	4	P	P	21 28 59.6	+0.3
CPCT				IAmb	IAmb	21 29 01.0	
	comp=Z,11nm,0.8s						
KMSC	Kings Mountain	25.06	10	P	P	21 28 57.8	-2.1
TKL	Tuckaleechee C	25.26	5	LR	LR	21 37 46.3	
	comp=Z,66nm,20.1s,baz=5.5,slow=35						
SADO	Sadowa	34.81	9	P	P	21 30 21.7	-4.5
	comp=Z,3.6nm,0.7s,baz=236,slow=7.3,SNR=2.7						
SADO				LR	LR	21 44 22.4	
	comp=Z,62nm,20.7s,baz=268,slow=37						
PDAR	Pinedale Array	38.09	332	P	P	21 30 55.8	+1.2
	comp=Z,0.6nm,0.8s,baz=115,slow=6.2,SNR=3.8						
ELK	Elko	39.56	325	LR	LR	21 49 22.0	
	comp=Z,76nm,18.5s,baz=310,slow=39						
NVAR	Mina Array Bea	39.96	320	LR	LR	21 48 30.5	
	comp=Z,41nm,20.5s,baz=324,slow=38						
ULM	Lac du Bonnet	40.51	351	P	P	21 31 11.3	-3.1
	comp=Z,1.7nm,0.8s,baz=168,slow=9.3,SNR=2.9						
BDFB	Brasilia	45.93	124	LR	LR	21 51 18.9	
	comp=Z,71nm,18.2s,baz=260,slow=36						
YKA	Yellowknife Ar	55.87	345	P	P	21 33 10.5	-2.3
	comp=Z,0.6nm,0.7s,baz=135,slow=8.1,SNR=12						
YKA				PcP	PcP	21 34 12.3	+0.8
	comp=Z,0.4nm,0.6s,baz=137,slow=4.7,SNR=8.6						
ILAR	Eielson Array	68.33	336	P	P	21 34 35.6	-0.9
	comp=Z,0.4nm,0.7s,baz=117,slow=5.2,SNR=4.2						
CMAR	Chiang Mai Arr	150.86	350	PKPbc	PKPbc	21 43 29.9	+0.8
	comp=Z,0.4nm,0.3s,baz=317,slow=5.9,SNR=6.3						
CMAR				PKPab	PKPab	21 43 36.3	+0.2
	comp=Z,0.4nm,0.3s,baz=354,slow=4.1,SNR=5.1						

IDC 22 22:34:44.2±2.5**, 6°98S×129°20E, h0km, mb3.4**/1**, mb1 3.3**/3**, mb1mx3.2**/26**, mbtmp3.2**/3**, ML3.1**/2**, Error ellipse: s-maj=199.5km s-min=33.3km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.82	159	Pn	Pn	22 38 01.5	0.0
	0.1nm,0.3s,baz=332,slow=14,SNR=5.7						
WRA				Sn	Sn	22 40 20.7	-15
	0.1nm,0.3s,baz=326,slow=22,SNR=2.4						
ASAR	Alice Springs	17.19	165	P	Pn	22 38 46.0	-0.1
	0.0nm,0.3s,baz=352,slow=11,SNR=1.5						
MKAR	Makanchi Array	67.78	327	P	P	22 45 44.0	0.0
	0.2nm,0.4s,baz=121,slow=7.2,SNR=4.3						

IDC ***22*** *23:14:22.7±4.3, 4°08S×153°30E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/36, mbtmp3.5/2, MS3.3/1, Ms1 3.3/1, ms1mx2.9/14, Error ellipse: s-maj=199.1km s-min=53.3km az=120.0*

NEIC ***22*** *23:14:35.9±1.0, 4°4S±0°1×153°48E±0°07, h115km±9km, mb4.3/14, Error ellipse: s-maj=21.2km s-min=9.5km az=192.0*

ISC 22 23:14:34.5±0.8**, 4°6S**±0°1×**153°6E**±0°1**, h100km, n20, σ1°64**/21**, mb4.0**/9**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.51	284	Pn	Pn	23 15 00.8	-0.1
RABL				Sn	Sn	23 15 22.5	+1.5
DZM	Mont Dzumac	21.38	146	P	P	23 19 13.7	-0.5
DZM				IAmb	IAmb	23 19 14.3	
	comp=Z,6.5nm,0.9s						
WB0	Warramunga Arr	24.07	230	P	P	23 19 40.7	-0.1
WR0	Warramunga Arr	24.08	229	P	P	23 19 40.6	-0.3
WC3	Warramunga Arr	24.20	229	P	P	23 19 41.9	-0.1
WC3				IAmb	IAmb	23 19 59.5	
	comp=Z,5.5nm,1.1s						
WB2	Warramunga Arr	24.21	229	P	P	23 19 42.6	+0.5
WB2				IAmb	IAmb	23 19 49.0	
	comp=Z,4.2nm,0.7s						
WRA	Warramunga Arr	24.22	229	P	P	23 19 42.5	+0.3
	comp=Z,1.1nm,0.5s,baz=53,slow=9.6,SNR=8.7						
WRA	Warramunga Arr	24.22	229	P	P	23 19 45.2	+3.0
ARMA	Armidale	25.78	184	P	P	23 19 53.2	-3.1
ASAR	Alice Springs	26.88	223	P	P	23 20 06.6	+0.3
	comp=Z,0.3nm,0.4s,baz=52,slow=9.5,SNR=3.0						
ASAR				LR	LR	23 29 55.1	
	comp=Z,65nm,20.1s,baz=320,slow=34						
FITZ	Fitzroy Crossi	30.49	242	P	P	23 20 37.5	-0.9
FORT	Forrest	35.49	220	P	P	23 21 21.9	+0.2
NNZ	Nelson	40.56	157	P	P	23 22 07.2	+3.1
LTZ	Lake Taylor	41.50	159	P	P	23 22 13.3	+1.4
LTZ				IAmb	IAmb	23 22 15.4	
	comp=Z,8.1nm,1.2s						
RPZ	Rata Peaks	41.91	161	P	P	23 22 16.8	+1.5
RPZ				IAmb	IAmb	23 22 28.0	
	comp=Z,6.5nm,1.0s						
WMQ	Urumqi	76.13	317	P	P	23 26 09.9	-1.9
RSO	Redoubt South	77.04	24	P	P	23 26 19.4	+2.8
BRLK	Bradley Lake	77.43	25	P	P	23 26 17.9	-0.7
BRLK				IAmb	IAmb	23 26 22.1	
	comp=Z,11nm,1.0s						
G08A	Pilot Rock	91.39	45	P	P	23 27 28.9	-0.8
G08A				IAmb	IAmb	23 27 31.0	
	comp=Z,3.5nm,0.8s						
TORD	Torodi Ar. Bea	151.02	289	PKPbc	PKPbc	23 34 17.1	+0.2
	comp=Z,0.8nm,0.8s,baz=46,slow=1.7,SNR=4.3						

ISK ***22*** *23:19:22.7, 43°60N×45°54E, h5km, ML3.8/10*

IDC ***22*** *23:19:22.6±0.5, 43°50N×45°46E, h0km, mb4.0/18, mb1 4.1/25, mb1mx3.9/49, mbtmp4.0/25, ML3.6/7, MS3.1/11, Ms1 3.1/11, ms1mx2.8/48, Error ellipse: s-maj=7.8km s-min=6.4km az=161.0*

NORS ***22*** *23:19:23.5±0.0, 43°61N×45°61E, h11km, MPVA4.9*

TIF ***22*** *23:19:23.3, 43°79N×45°55E, h29km±1km*

MOS ***22*** *23:19:23.9±0.0, 43°59N×45°55E, h12km, MPVA4.8*

MOS ***22*** *23:19:24.4±0.9, 43°71N×45°59E, h14km, mb4.3/5, Error ellipse: s-maj=4.3km s-min=3.5km az=123.0*

NEIC ***22*** *23:19:24.6±2.0, 43°63N±0°06×45°55E±0°08, h10km±1km, mb4.2/24, Error ellipse: s-maj=10.4km s-min=9.8km az=185.0*

DRS ***22*** *23:19:25.3±0.0, 43°66N×45°43E, h18km, ML4.2/10*

NNC ***22*** *23:19:32.9±1.8, 43°69N×46°87E, h0km, mb4.2, Error ellipse: s-maj=17.0km s-min=10.4km az=85.0*

ISC 22 23:19:26.8±0.7**, 43°59N**±0°02×**45°56E**±0°02**, h31km**±5km**, n281, σ1°98**/378**, mb4.0**/36**, MS3.1**/4**, 36C-12D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	Groznyy	0.43	156	*e*Pg	Pb	23 19 34.2	-1.9
GROC				*e*Sg	Sb	23 19 42.0	-0.4
GROC	Groznyy	0.43	156	⇓*i*PG	Pb	23 19 33.8	-2.3
GROC				*e*		23 19 40.8	
GROC				pmax	pmax		
	comp=Z,2µm,0.3s						
GROC				smax	smax		
	comp=E,8µm,0.4s						
GROC				smax	smax		
	comp=N,11µm,0.5s						
TRKR	Terskaya	0.61	283	*i* Pg	Pb	23 19 38.0	-1.1
TRKR				*e*Sg	Sb	23 19 47.7	+0.2
TRKR	Terskaya	0.61	283	⇑*i*PG	Pb	23 19 38.0	-1.1
TRKR				*e*S	Sb	23 19 48.3	+0.8
KMGR	Komgaron	0.73	224	*e*Pg	Pb	23 19 39.6	-1.5
KMGR				*e*Sg	Sn	23 19 51.4	+0.1
KMGR	Komgaron	0.73	224	*e*PG	Pb	23 19 39.9	-1.2
KMGR				*e*S	Sn	23 19 52.7	+1.5
DVE	Vedeno	0.76	146	*e*Pg	Pb	23 19 39.1	-2.4
DVE				*e*Sg	Sb	23 19 50.1	-1.5
DVE	Vedeno	0.76	146	*e*PG	Pb	23 19 39.4	-2.2
DVE				*e*S	Sb	23 19 50.5	-1.1
BTKR	Batakoyurt	0.77	254	*e*Pg	Pb	23 19 40.7	-1.0
BTKR				*e*Sg	Sn	23 19 52.8	+0.7
BTKR	Batakoyurt	0.77	254	*e*PG	Pb	23 19 40.8	-1.0
BTKR				*e*S	Sn	23 19 53.8	+1.7
VLKR	Vladikavkaz	0.84	230	*e*Pg	Pb	23 19 42.2	-0.7
VLKR				*e*Sg	Sn	23 19 55.7	+1.9
VLKR	Vladikavkaz	0.84	230	⇑*i*PG	Pb	23 19 42.3	-0.6
VLKR				*e*S	Sn	23 19 55.9	+2.0
PRTR	Priterechnaya	0.94	280	*i* Pg	Pn	23 19 43.8	0.0
PRTR				*e*Sg	Sn	23 19 58.2	+2.1
PRTR	Priterechnaya	0.94	280	*i* PG	Pn	23 19 43.8	0.0
PRTR				*e*S	Sn	23 19 58.2	+2.1
DLMR	Dylym	0.94	123	*e*Pg	Pn	23 19 42.9	-0.9
	comp=N,945nm,0.7s						
DLMR				*e*Pg	Pn	23 19 43.0	-0.9
DLMR				*e*Sg	Sb	23 19 56.8	+0.1
DLMR				*e*Sg	Sn	23 19 57.8	+1.6
	comp=N,5µm,0.4s						
DLMR	Dylym	0.94	123	*e*PG	Pn	23 19 43.0	-0.9
DLMR				*e*S	Sb	23 19 56.8	+0.1
ARNR	Ardon	1.01	247	*e*Pg	Pn	23 19 45.2	+0.3
ARNR				*e*Sg	Sn	23 20 01.2	+3.2
ARNR	Ardon	1.01	247	⇓*i*PG	Pn	23 19 45.3	+0.4
ARNR				*e*S	Sn	23 20 01.3	+3.2
BTLR	Botlikh	1.05	152	*e*Sg	Sn	23 20 12.5	+14
	comp=N,848nm,0.6s						
BTLR	Botlikh	1.05	152	⇑*e*PG	Pn	23 19 44.2	-1.2
BTLR				*e*		23 19 58.3	
BTLR				pmax	pmax		
	comp=Z,848nm,0.6s						
BTLR				smax	smax		
	comp=N,3µm,0.5s						
DBC	Dubki	1.09	121	*i* Pg	Pn	23 19 45.6	-0.4
	comp=N,722nm,0.5s						
DBC				*e*Sg	Sn	23 20 01.1	+0.9
	comp=N,3µm,0.4s						
DBC	Dubki	1.09	121	*e*PG	Pn	23 19 45.6	-0.4
DBC				*e*S	Sn	23 20 01.0	+0.9
STDR	Stavd-Durt	1.11	259	*i* Pg	Pn	23 19 47.2	+1.0
STDR				*e*Sg	Sb	23 20 05.1	+3.6
STDR	Stavd-Durt	1.11	259	⇑*i*PG	Pn	23 19 47.2	+1.0
STDR				*e*S	Sb	23 20 05.0	+3.5
PNSH	Pansheti	1.18	216	P	Pn	23 19 42.5	-4.8
PNSH				S	Sn	23 19 57.9	-4.5
LACR	Lac	1.20	231	*i* Pg	Pn	23 19 47.0	-0.5
LACR				*e*Sg	Sb	23 20 04.5	+0.4
LACR	Lac	1.20	231	*e*PG	Pn	23 19 47.0	-0.5
LACR				*e*S	Sb	23 20 04.7	+0.6
KORR	Kora	1.20	246	*e*Pg	Pn	23 19 47.6	+0.2
KORR				*e*Sg	Sb	23 20 06.2	+2.1
KORR	Kora	1.20	246	*e*PG	Pn	23 19 47.9	+0.5
KORR				*e*S	Sb	23 20 06.1	+2.1
KRNR	Karanay	1.25	127	*e*Pg	Pn	23 19 49.0	+0.7
	comp=N,692nm,0.4s						
KRNR				*e*Pg	Pn	23 19 49.0	+0.7
KRNR				*e*Sg	Sb	23 20 06.6	+1.1
KRNR				*e*Sg	Sb	23 20 06.7	+1.1
	comp=N,3µm,0.5s						
KRNR	Karanay	1.25	127	⇑*e*PG	Pn	23 19 48.9	+0.7
KRNR				*e*		23 20 06.6	
KRNR				pmax	pmax		
	comp=Z,692nm,0.4s						
KRNR				smax	smax		
	comp=N,3µm,0.5s						
LSNR	Lesken	1.30	257	*i* Pg	Pn	23 19 49.2	+0.4
LSNR				*e*Sg	Sb	23 20 07.9	+1.0
LSNR	Lesken	1.30	257	*e*PG	Pn	23 19 49.5	+0.7
LSNR				*e*S	Sb	23 20 09.1	+2.2
XNZR	Khunzakh	1.35	141	*e*Pg	Pn	23 19 50.5	+0.9
XNZR				*e*Sg	Sb	23 20 08.7	+0.3
XNZR	Khunzakh	1.35	141	⇑*i*PG	Pn	23 19 50.7	+1.1
XNZR				*e*S	Sb	23 20 09.7	+1.3
BUJR	Buynaksk	1.37	123	*i* Pg	Pn	23 19 51.4	+1.6
	comp=N,1µm,0.7s						
BUJR				*e*Sg	Sb	23 20 12.1	+3.1
	comp=N,6µm,0.7s						
BUJR	Buynaksk	1.37	123	⇑*i*PG	Pn	23 19 51.4	+1.6
BUJR				*e*		23 20 12.0	
BUJR				pmax	pmax		
	comp=Z,1µm,0.7s						
BUJR				smax	smax		
	comp=N,6µm,0.7s						
NCK	Nalchik	1.43	267	*e*Pg	Pn	23 19 51.1	+0.5
NCK				*e*Sg	Sb	23 20 10.9	+0.3
NCK	Nalchik	1.43	267	*e*PG	Pn	23 19 51.1	+0.5
NCK				*e*S	Sb	23 20 10.9	+0.3
ARKR	Arakani	1.45	133	*e*Pg	Pn	23 19 51.4	+0.6
ARKR				*i* Pg	Pb	23 19 51.9	-1.2
	comp=N,460nm,0.5s						
ARKR				*e*Sg	Sb	23 20 12.5	+1.4
ARKR				*e*Sg	Sn	23 20 12.9	+4.2
	comp=N,2µm,0.7s						
ARKR	Arakani	1.45	133	*e*PG	Pn	23 19 51.4	+0.6
ARKR				*e*S	Sb	23 20 12.5	+1.4
ZEI	Tsey	1.45	237	*i* Pg	Pn	23 19 50.8	-0.3
ZEI				*e*Sg	Sn	23 20 10.2	+1.0
ZEI	Tsey	1.45	237	*e*PG	Pn	23 19 50.8	-0.3
ZEI				*e*S	Sb	23 20 10.9	-0.6
KANR	Karaman	1.46	105	*i* Pg	Pb	23 19 53.4	+0.1
KANR				*e*Sg	Sb	23 20 15.5	+3.9
KANR	Karaman	1.46	105	*e*PG	Pb	23 19 53.4	+0.1
KANR				*e*S	Sb	23 20 15.5	+3.9
MAK	Makhachkala	1.56	113	*e*Pg	Pn	23 19 54.1	+1.8
MAK				*e*Sg	Sb	23 20 16.4	+2.2
MAK	Makhachkala	1.56	113	⇑*i*PG	Pn	23 19 53.8	+1.5
MAK				*e*		23 20 15.6	
MAK				pmax	pmax		
	comp=Z,521nm,0.4s						
MAK				smax	smax		
	comp=E,7µm,0.3s						
MAK				smax	smax		
	comp=E,6µm,0.3s						
KBTC	Kuba-Taba	1.57	279	*e*Pg	Pn	23 19 53.7	+1.2
KBTC				*e*Sg	Sb	23 20 15.7	+0.9
KBTC	Kuba-Taba	1.57	279	*e*PG	Pn	23 19 53.8	+1.2
KBTC				*e*S	Sb	23 20 16.0	+1.2
GNBR	Gunib	1.58	139	*e*Pg	Pn	23 19 54.3	+1.5
	comp=E,1µm,0.8s						
GNBR				*e*Sg	Sb	23 20 16.1	+1.0
	comp=E,5µm,0.6s						
GNBR	Gunib	1.58	139	*e*PN	Pn	23 19 54.3	+1.5
GNBR				*e*S	Sb	23 20 16.1	+1.0
DIGR	Digorskoe uzhe	1.60	245	*e*Pg	Pn	23 19 52.8	-0.3
DIGR				*e*Sg	Sn	23 20 13.5	+0.7
DIGR	Digorskoe uzhe	1.60	245	*e*PN	Pn	23 19 53.4	+0.3
LGD	Lagodekhi	1.83	164	P	Pn	23 19 57.5	+1.4
LGD				S	Sb	23 20 23.1	+1.0
LGD	Lagodekhi	1.83	164	*e*Pg	Pn	23 19 57.4	+1.4
LGD				*e*Sg	Sb	23 20 22.0	0.0
LGD	Lagodekhi	1.83	164	*e*PN	Pn	23 19 57.4	+1.4
PYA1	Pyatigorsk	1.84	286	*e*Pg	Pn	23 19 56.4	+0.1
PYA1				*e*Sg	Sb	23 20 22.1	-0.3
PYA1	Pyatigorsk	1.84	286	*e*PN	Pn	23 19 56.4	+0.1
PYA1				*e*S	Sb	23 20 22.1	-0.3
SEAG	Tbilisi Sea	1.91	197	P	Pn	23 19 59.2	+2.0
SEAG				S	Sb	23 20 25.2	+0.9
SGKR	Sergokala	1.91	126	*e*Pg	Pn	23 19 59.2	+2.0
	comp=E,544nm,0.6s						
SGKR				*e*Sg	Sb	23 20 25.8	+1.3
	comp=E,2µm,0.6s						
SGKR	Sergokala	1.91	126	*e*PN	Pn	23 19 59.2	+2.0
SGKR				*e*S	Sb	23 20 25.8	+1.3
KBZ	Khabaz	1.93	275	Pn	Pn	23 19 57.2	-0.2
	comp=E,35nm,0.3s,baz=99,slow=10,SNR=211						
KBZ				Pg	Pb	23 19 59.9	-1.4
	comp=E,37nm,0.3s,baz=102,slow=13,SNR=71						
KBZ				Lg	Lg	23 20 23.4	
	comp=E,97nm,0.3s,baz=331,slow=15,SNR=15						
KBZ	Khabaz	1.93	275	*e*Pg	Pn	23 19 57.1	-0.4
KBZ				*e*Sg	Sn	23 20 22.2	+1.5
BTNK	Botanikuri	1.99	197	P	Pn	23 20 00.5	+2.2
BTNK				S	Sb	23 20 27.4	+0.8
BTNK	Botanikuri	1.99	197	PN	Pn	23 20 00.5	+2.2
BEYR	Belyy Ugol+	2.03	283	*e*Pg	Pn	23 19 58.8	0.0
BEYR				*e*Sg	Sn	23 20 24.5	+1.4
BEYR	Belyy Ugol+	2.03	283	*e*PN	Pn	23 19 58.8	0.0
URKR	Urkarakh	2.09	132	*e*Pg	Pn	23 20 02.2	+2.5
	comp=E,572nm,0.6s						
URKR				*e*Sg	Sb	23 20 31.8	+2.1
	comp=E,1µm,1.0s						
URKR	Urkarakh	2.09	132	⇓*e*PN	Pn	23 20 02.2	+2.5
URKR				*e*S	Sb	23 20 29.5	-0.1
NEY	Neytrino	2.09	262	*e*Pg	Pn	23 20 01.1	+1.3
NEY				*e*Sg	Sn	23 20 27.6	+2.7
NEY	Neytrino	2.09	262	*e*PN	Pn	23 20 01.1	+1.3
NEY				*e*S	Sb	23 20 28.9	-0.9
KVAR	Kislovodsk Arr	2.10	281	Pn	Pn	23 20 00.7	+0.7
	baz=114,slow=20,SNR=30						
KVAR				Lg	Lg	23 20 27.4	
	baz=208,slow=15,SNR=22						
ZKTA	Zakatala	2.10	158	PN	Pn	23 20 02.2	+2.3
KIV	Kislovodsk	2.11	281	PN	Pn	23 20 00.2	+0.1
KIV				SN	Sn	23 20 27.6	+2.4
KIV	Kislovodsk	2.11	281	*e*Pg	Pn	23 19 59.8	-0.2
KIV				*e*Sg	Sn	23 20 26.6	+1.4
KIV	Kislovodsk	2.11	281	⇑*e*PN	Pn	23 19 59.8	-0.2
KIV	Kislovodsk	2.11	281		Pn	23 20 00.1	+0.1
DDFL	Dedoflistskaro	2.19	169	P	Pb	23 20 05.2	-0.4
DDFL	Dedoflistskaro	2.19	169	PN	Pb	23 20 04.7	-1.0
ALER	Alexandrovskoy	2.23	303	*e*Pg	Pn	23 20 02.6	+1.0
ALER				*e*Sg	Sn	23 20 32.1	+3.9
ALER	Alexandrovskoy	2.23	303	*e*PN	Pn	23 20 02.6	+1.0
ALER				*e*S	Sn	23 20 32.1	+3.9
TKB	Tkibuli	2.25	237	P	Pn	23 20 03.2	+1.3
GOF	Gofitskoye	2.32	310	*e*Pn	Pn	23 20 03.8	+0.9
GOF				*e*Sn	Sn	23 20 32.9	+2.5
GOF	Gofitskoye	2.32	310	⇑*i*PN	Pn	23 20 03.8	+0.9
GOF				*i* S	Sn	23 20 33.8	+3.4
GOF				pmax	pmax		
	comp=Z,120nm,0.5s						
GOF				smax	smax		
	comp=N,884nm,0.5s						
GOF				smax	smax		
	comp=E,790nm,0.4s						
BRNG	Burnasheti	2.34	214	P	Pn	23 20 04.7	+1.4
BRNG				S	Sb	23 20 36.2	-0.8
KZRT	Kazreti	2.36	202	P	Pn	23 20 04.6	+1.1
KZRT				S	Sb	23 20 36.8	-0.7
KZRT	Kazreti	2.36	202	PN	Pn	23 20 04.6	+1.1
DMNI	Dmanisi	2.48	205	P	Pn	23 20 05.9	+0.8
DMNI				S	Sb	23 20 38.4	-2.4
AKT	Akhty	2.65	142	*e*Pn	Pb	23 20 11.8	-1.9
	comp=E,240nm,0.6s						
AKT				*e*Sn	Sb	23 20 48.3	+2.5
	comp=E,617nm,0.6s						
AKT	Akhty	2.65	142	*e*PN	Pn	23 20 10.5	+3.0
AKT				*e*S	Sb	23 20 45.3	-0.5
AKH	Akhalkalaki	2.66	216	P	Pn	23 20 09.2	+1.5
AKH				S	Sb	23 20 43.7	-2.4
AKH	Akhalkalaki	2.66	216	PN	Pn	23 20 08.2	+0.5
AKH	Akhalkalaki	2.66	216	*e*Pn	Pn	23 20 08.8	+1.1
AKH				*e*Sn	Sn	23 20 41.8	+2.8
AKH	Akhalkalaki	2.66	216	*e*PN	Pn	23 20 08.8	+1.1
AKH				*e*S	Sn	23 20 41.8	+2.8
AKH	Akhalkalaki	2.66	216	Pn	Pn	23 20 08.6	+0.9
SEKA	Sheki	2.67	152	PN	Pn	23 20 09.5	+1.7
CHVG	Ch'k'valeri	2.69	252	P	Pn	23 20 09.5	+1.7
ABS	Abastumani	2.73	229	P	Pn	23 20 11.3	+2.7
MNGR	Mingechevir, A	3.04	158	PN	Pn	23 20 15.8	+3.1
AHMR	Akhmetovskaya	3.31	281	*e*Pn	Pn	23 20 17.6	+1.1
AHMR				*e*Sn	Sn	23 20 58.5	+3.8
KARS	Kars	3.49	213	PN	Pn	23 20 20.1	+1.1
KARS	Kars	3.49	213	PN	Pn	23 20 20.1	+1.1
GNI	Garni	3.49	190	Pn	Pn	23 20 20.1	+1.0
	comp=E,1.1nm,0.3s,baz=352,slow=8.3,SNR=6.8						
GNI				Pg	Pb	23 20 25.7	-2.2
	comp=E,20nm,0.3s,baz=350,slow=5.5,SNR=42						
GNI				Sn	Sn	23 20 55.8	-3.6
	comp=E,8.5nm,0.3s,baz=194,slow=21,SNR=2.6						
GNI				Lg	Lg	23 21 13.2	
	comp=E,15nm,0.3s,baz=216,slow=7.7,SNR=6.5						
GNI				LR	LR	23 21 55.8	
	comp=E,248nm,19.5s,baz=25,slow=45						
GNI	Garni	3.49	190	PN	Pn	23 20 20.1	+1.0
GNI	Garni	3.49	190		Pn	23 20 19.8	+0.7
LABN	Labinsk	3.63	288	*e*Pn	Pn	23 20 22.6	+1.6
LABN				*e*Sn	Sn	23 21 07.5	+4.8
LABN	Labinsk	3.63	288	*e*PN	Pn	23 20 22.5	+1.6
LABN				*e*S	Sn	23 21 07.5	+4.8
TASB	TASBURUN-IGDIR	3.74	196	PN	Pn	23 20 23.6	+1.2
RPOR	Krasnaya Polya	3.84	273	*e*Pn	Pn	23 20 25.5	+1.7
RPOR				*e*Sn	Sn	23 21 09.6	+1.7
RPOR	Krasnaya Polya	3.84	273	*e*PN	Pn	23 20 25.5	+1.7
RPOR				*e*S	Sn	23 21 09.6	+1.7
SENK	Senkaya-Erzuru	3.85	219	PN	Pn	23 20 25.2	+1.1
GUZR	Guzeripl'	3.96	278	*e*Pn	Pn	23 20 26.9	+1.5
GUZR				*e*Sn	Sn	23 21 12.9	+2.1
GUZR	Guzeripl'	3.96	278	*e*PN	Pn	23 20 26.9	+1.5
GUZR				*e*S	Sn	23 21 12.9	+2.1
VSLR	Vesyoloye	4.02	270	*e*Pn	Pn	23 20 28.1	+2.0
VSLR				*e*Sn	Sn	23 21 13.6	+1.4
VSLR	Vesyoloye	4.02	270	*e*PN	Pn	23 20 28.1	+2.0
VSLR				*e*S	Sn	23 21 13.6	+1.4
ERBR	Yeremizino-Bor	4.20	302	*e*Pn	Pn	23 20 29.5	+0.9
ERBR				*e*Sn	Sn	23 21 16.2	-0.3
ERBR	Yeremizino-Bor	4.20	302	*e*PN	Pn	23 20 29.5	+0.9
ERBR				*e*S	Sn	23 21 16.2	-0.3
SOC	Sochi	4.24	272	*e*Pn	Pn	23 20 30.9	+1.7
SOC				*e*Sn	Sn	23 21 18.5	+0.9
SOC	Sochi	4.24	272	*e*PN	Pn	23 20 29.1	-0.1
SOC				*e*		23 20 39.1	
SOC				*e*		23 21 20.1	
SOC				*e*SS	Sb	23 21 31.9	+0.6
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,194nm,12.0s						
AGRB	Hanur-Agry	4.45	206	PN	Pn	23 20 33.8	+1.5
LZRR	Lazarevskoye	4.49	277	*e*Pn	Pn	23 20 36.1	+3.5
LZRR				*e*Sn	Sn	23 21 25.3	+1.6
LZRR	Lazarevskoye	4.49	277	*e*PN	Pn	23 20 36.1	+3.5
LZRR				*e*S	Sn	23 21 25.3	+1.6
CLDR	Caldiran	4.61	196	PN	Pn	23 20 36.1	+1.5
TPSR	Tuapse	4.70	278	*e*Pn	Pn	23 20 36.9	+1.4
TPSR				*e*Sn	Sn	23 21 29.8	+0.9
TPSR	Tuapse	4.70	278	*e*PN	Pn	23 20 36.9	+1.4
TPSR				*e*S	Sn	23 21 29.8	+0.9
MLAZ	Malazgirt-MUS	4.99	208	PN	Pn	23 20 41.4	+1.7
BAYT	Aydıntepe-Bayb	5.15	233	PN	Pn	23 20 43.6	+1.8
KOPT	Kop Dagi	5.20	228		Pn	23 20 43.0	+0.3
YEDI	Yedisu-Bingol	5.60	224	PN	Pn	23 20 50.1	+2.0

ANN	Anapa	5.96	284	ePn	Pn	23 20 56.6	+3.7
ANN				eSn	Sn	23 22 04.9	+4.9
ANN	Anapa	5.96	284	eP	Pn	23 20 56.8	+4.0
ANN				eS	Sn	23 22 05.0	+4.9
ANN				pmax	pmax		
	comp=Z,14nm,0.7s						
VRH	Novokhopyorsk	8.04	343	eP	Pn	23 21 23.8	+2.4
VRH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VSR	Storozhevoye	8.77	333	eP	Pn	23 21 30.3	-1.0
VSR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BELG	Belogornoye	8.92	8	Pn	Pn	23 21 32.9	-0.4
	comp=Z,3.3nm,0.3s,baz=178,slow=17,SNR=13						
BELG				Sn	Sn	23 23 09.1	-3.4
	comp=Z,4.6nm,0.3s,baz=201,slow=21,SNR=10						
BELG				LR	LR	23 25 56.4	
	comp=Z,48nm,21.8s,baz=125,slow=44						
BELG	Belogornoye	8.92	8	i P	Pn	23 21 34.5	+1.2
VORR	Voronezh	9.15	334	P	Pn	23 21 42.0	+5.5
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
BRTR	Keskin Array B	9.72	251	Pn	Pn	23 21 47.1	+2.5
	comp=Z,0.0nm,0.3s,baz=96,slow=10,SNR=4.5						
BRTR	Keskin Array B	9.72	251		Pn	23 21 44.6	0.0
LPSR	Galich'ya Gora	10.04	336	eP	Pn	23 21 47.7	-1.0
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKTO	Aktyubinsk	10.91	47	Pn	Pn	23 21 59.9	-0.8
	comp=Z,0.5nm,0.3s,baz=237,slow=3.9,SNR=16						
AKTO				Sn	Sn	23 23 54.1	-7.4
	comp=Z,0.9nm,0.3s,baz=45,slow=20,SNR=3.1						
AKTO				LR	LR	23 27 00.0	
	comp=Z,60nm,20.8s,baz=249,slow=42						
AKTO	Aktyubinsk	10.91	47	⇑Pn	Pn	23 21 59.8	-0.9
	comp=Z,4.4nm,0.5s						
AKTO				⇓Sn	Sn	23 23 55.4	-6.2
	comp=Z,26nm,0.8s						
AKTO	Aktyubinsk	10.91	47	P	Pn	23 21 59.8	-0.9
AKTO				SN	Sn	23 23 55.4	-6.2
GEYT	Alibeck	11.07	116	Pn	Pn	23 22 01.6	-1.5
	comp=Z,0.7nm,0.3s,baz=294,slow=16,SNR=9.5						
GEYT	Alibeck	11.07	116	Pn	Pn	23 22 01.1	-1.9
GYA0	ALIBECK ARRAY	11.07	116	P	Pn	23 22 01.3	-1.7
GYA0B	ALIBECK ARRAY	11.07	116	⇓Pn	Pn	23 22 01.0	-2.0
GYA0B				⇓Sn	Sn	23 23 57.8	-7.9
GYA0B	ALIBECK ARRAY	11.07	116	Pn	Pn	23 22 01.0	-2.0
AB31	Akbulak array	11.43	55	⇑Pn	Pn	23 22 05.9	-1.8
	comp=Z,4.0nm,0.5s,baz=242,slow=11,SNR=96						
AB31				⇓Sn	Sn	23 24 05.2	-9.0
	comp=Z,15nm,0.6s,baz=241,slow=19,SNR=14						
AB31	Akbulak array	11.43	55	P	Pn	23 22 05.9	-1.8
ABKAR	Akbulak array	11.43	55	Pn	Pn	23 22 07.1	-0.6
ABKAR	Akbulak array	11.43	55	Pn	Pn	23 22 07.5	-0.2
CFR	Carcaliu	12.56	283	⇑P	P	23 22 32.2	-2.2
CFR	Carcaliu	12.56	283	⇑P	P	23 22 32.3	-2.2
HARR	Harsova	12.71	281	⇑P	P	23 22 37.4	+1.3
HARR	Harsova	12.71	281	⇑P	P	23 22 37.4	+1.3
SORM	Soroca	12.82	297	⇓P	Pn	23 22 29.1	+2.4
SORM	Soroca	12.82	297	⇓P	Pn	23 22 29.1	+2.4
OBN	Obninsk	12.92	336	Sn	Sn	23 24 43.5	-7.0
	comp=Z,0.5nm,0.3s,baz=252,slow=20,SNR=1.9						
OBN	Obninsk	12.92	336	⇓eP	Pn	23 22 30.7	+2.7
OBN				S	Sn	23 24 52.0	+1.4
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKASG	Malin Array Be	13.18	308	Pn	Pn	23 22 27.9	-3.7
	comp=Z,1.1nm,0.3s,baz=106,slow=12,SNR=6.0						
AKBB	Malin Array Si	13.18	308	ceP	Pn	23 22 31.5	-0.1
MOS	Moscow	13.19	340	eP	Pn	23 22 37.7	+6.0
MOS				eS	Sn	23 24 50.3	-6.8
MMAI	Mount Meron Ar	13.22	220	LR	LR	23 28 53.8	
	comp=Z,66nm,18.6s,baz=70,slow=44						
VRI	Vrincioaia	13.58	286	⇑P	Pn	23 22 36.1	-1.0
VRI	Vrincioaia	13.58	286	⇑P	Pn	23 22 36.1	-1.0
PLOR	Plostina	13.63	286	⇑P	Pn	23 22 41.4	+3.5
PLOR	Plostina	13.63	286	⇑P	Pn	23 22 41.4	+3.5
TESR	Tescani	13.68	289	⇑P	Pn	23 22 37.4	-1.1
MLR	Muntele Rosu	14.12	285	Pn	Pn	23 22 45.6	+1.0
	comp=Z,0.1nm,0.3s,baz=76,slow=12,SNR=1.5						
MLR	Muntele Rosu	14.12	285	⇑P	Pn	23 22 49.5	+4.9
DOPR	Dopca	14.52	286	⇑P	P	23 22 58.3	+2.1
VOIR		14.74	284	⇑P	Pn	23 22 56.4	+3.3
VOIR		14.74	284	⇑P	Pn	23 22 56.4	+3.3
BURAR	Bucovina Array	14.79	293	⇑P	Pn	23 22 51.4	-2.2
BURAR	Bucovina Array	14.79	293	⇑P	Pn	23 22 51.4	-2.2
BURAR	Bucovina Array	14.79	293		Pn	23 22 51.3	-2.3
BUR08	Bucovina Ar. S	14.80	293	Pn	Pn	23 22 51.0	-2.9
KIRV	Kirov	15.20	8	Sn	Sn	23 25 36.0	-10
	comp=Z,1.4nm,0.3s,baz=193,slow=22,SNR=7.1						
KIRV				LR	LR	23 30 01.8	
	comp=Z,110nm,19.1s,baz=200,slow=42						
ARU	Arti	15.29	28	Pn	Pn	23 22 56.7	-3.5
	comp=Z,0.0nm,0.3s,baz=220,slow=8.7,SNR=12						
ARU				Sn	Sn	23 25 38.7	-10
	comp=Z,0.0nm,0.3s,baz=253,slow=19,SNR=2.9						
ARU				LR	LR	23 29 23.0	
	comp=Z,90nm,18.4s,baz=203,slow=39						
ARU	Arti	15.29	28	P	Pn	23 22 56.4	-3.8
ARU				S	Sn	23 25 44.2	-4.2
ARU	Arti	15.29	28		Pn	23 22 56.9	-3.3
ARU				IAmb	IAmb	23 23 05.6	
	comp=Z,5.9nm,0.6s						
MNK	Minsk	15.87	320	i P	P	23 23 14.5	+3.5
	comp=E,2.0nm,1.3s						
MNK				i P	P	23 23 14.5	+3.5
	comp=N,14nm,1.5s						
MNK				i P	P	23 23 14.5	+3.5
	comp=Z,11nm,1.3s						
MNK				i PP	sP	23 23 23.8	+0.5
MNK				i S	S	23 26 19.2	+3.2
MNK				i SS	SnSn	23 26 34.6	+19
MNK				i LQ	LQ	23 28 09.5	
MNK				i LR	LR	23 29 25.4	
MNK				i LRM	MLR	23 31 27.1	
	comp=Z,46nm,14.9s						
MNK				i LRM	MLR	23 31 28.4	
	comp=E,11nm,13.7s						
MNK				i LRM	MLR	23 31 36.1	
	comp=N,208nm,24.3s						
EIL	Elat	16.27	215	LR	LR	23 29 36.8	
	comp=N,41nm,21.9s,baz=92,slow=38						
SVE	Sverdlovsk	16.34	31	eP	Pn	23 23 09.9	-3.7
SVE				eS	Sn	23 26 03.2	-11
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
GZR	Gura Zlata	16.35	284	⇑P	P	23 23 17.9	+1.3
DRGR		16.41	289	⇑P	P	23 23 19.5	+2.3
DRGR		16.41	289	⇑P	P	23 23 19.5	+2.3
KWP	Kalwaria Pacla	16.79	299	P	Pn	23 23 17.6	-1.8
KWP				pmax	pmax		
	comp=Z,11nm,1.1s						
KWP	Kalwaria Pacla	16.79	299		Pn	23 23 17.6	-1.8
KWP				IAmb	IAmb	23 24 05.2	
	comp=Z,11nm,1.1s						
KOLS	Kolonicke sedl	16.93	297	eP	P	23 23 27.4	+4.4
KOLS	Kolonicke sedl	16.93	297	eP	P	23 23 27.4	+4.4
BZS	Buzias	17.16	285	⇓P	Pn	23 23 22.1	-1.8
BZS	Buzias	17.16	285	⇓P	Pn	23 23 22.2	-1.8
KLMR	Klimovskoe	17.67	350	eP	Pn	23 23 25.7	-4.5
KLMR				e		23 26 36.6	
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
KLMR	Klimovskoe	17.67	350	ePn	Pn	23 23 25.7	-4.5
KLMR				AMP		23 23 27.8	
	comp=Z,17nm,1.5s						
KLMR				eSn	Sn	23 26 36.6	-9.3
KLMR				eSn	Sn	23 26 36.6	-9.3
KLMR				eSn	Sn	23 26 36.6	-9.3
KK31	Karatay Array	18.14	83	⇑Pn	Pn	23 23 35.0	-1.3
	comp=Z,4.6nm,0.8s,baz=145,slow=6.1,SNR=25						
KK31				Sn	Sn	23 26 48.5	-9.2
	comp=Z,3.9nm,0.8s,baz=287,slow=17,SNR=4.1						
KK31	Karatay Array	18.14	83	P	Pn	23 23 34.9	-1.3
KK31				SN	Sn	23 26 48.5	-9.2
KK31	Karatay Array	18.14	83		Pn	23 23 35.5	-0.8
KKAR	Karatay Array	18.14	83	P	Pn	23 23 35.5	-0.8
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	Karatay Array	18.14	83	P	Pn	23 23 35.5	-0.8
KKAR	Karatay Array	18.14	83		Pn	23 23 34.9	-1.4
BRVK	Borovoye	18.89	51	⇑Pn	P	23 23 45.2	+0.7
	comp=Z,5.4nm,0.7s						
BRVK	Borovoye	18.89	51	i P	P	23 23 45.1	+0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	18.89	51		P	23 23 45.8	+1.4
BRVK				IAmb	IAmb	23 23 52.9	
	comp=Z,7.5nm,0.8s						
BVAR	Borovoye Array	18.94	51	P	P	23 23 43.9	-1.1
	comp=Z,0.6nm,0.3s,baz=263,slow=10.0,SNR=7.3						
BVAR				S	Sn	23 27 06.3	-10
	comp=Z,0.9nm,0.3s,baz=267,slow=32,SNR=7.1						
VYHS	Vyhne	19.14	294	eP	Pn	23 23 49.6	+1.3
VYHS	Vyhne	19.14	294	ePN	Pn	23 23 49.6	+1.3
PDG	Podgorica	19.25	276	P	P	23 23 49.1	+0.7
PDG				IAmb	IAmb	23 24 01.5	
	comp=Z,51nm,1.6s						
RAYN	Ar Rayn	20.02	180	P	P	23 23 57.6	+0.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	20.02	180	P	P	23 23 57.6	+0.6
SMOL	Smolenice	20.07	294	eP	P	23 23 59.5	+2.1
SMOL	Smolenice	20.07	294	ePN	P	23 23 59.5	+2.1
KBL	Kabul	20.30	109	P	P	23 24 02.1	+1.8
KBL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBL	Kabul	20.30	109		P	23 24 02.0	+1.8
UOSS	Minazif	20.54	151	P	P	23 24 03.5	+0.8
UOSS				IAmb	IAmb	23 24 14.3	
	comp=Z,24nm,1.6s						
VRAC	Vranov	20.68	296	LR	LR	23 33 31.1	
	comp=Z,60nm,19.9s,baz=40,slow=41						
DPC	Dobruska-Polom	20.97	299	eP	Pn	23 24 12.1	+2.2
DPC	Dobruska-Polom	20.97	299	eP	Pn	23 24 12.1	+2.2
TMCR	Tamitsa	21.05	351	eP	P	23 24 07.1	-0.8
TMCR				pmax	pmax		
	comp=Z,15nm,1.4s						
CONA	Conrad Observa	21.10	292	eP	P	23 24 09.6	+1.0
AAK	Ala-Archa	21.11	83	P	P	23 24 09.7	+0.9
	comp=Z,2.8nm,0.7s,baz=210,slow=10,SNR=7.7						
AAK	Ala-Archa	21.11	83	⇑Pn	P	23 24 11.1	+2.2
	comp=Z,3.5nm,0.7s						
AAK	Ala-Archa	21.11	83	i P	P	23 24 09.4	+0.6
AAK				pmax	pmax		
	comp=Z,22nm,1.6s						
AAK	Ala-Archa	21.11	83	P	P	23 24 09.4	+0.6
AAK				IAmb	IAmb	23 24 23.1	
	comp=Z,3.7nm,0.8s						
CHVC	Chvalec	21.17	300	eP	P	23 24 19.0	+10
FIA1	FINESS Array S	21.30	334	P	P	23 24 10.1	-0.4
FIA1				IAmb	IAmb	23 24 48.8	
	comp=Z,96nm,2.0s						
FINES	FINESS Array B	21.30	334	P	P	23 24 10.2	-0.3
	comp=Z,4.7nm,0.8s,baz=138,slow=12,SNR=11						
FINES				S	S	23 27 56.9	-8.3
	comp=Z,4.8nm,0.9s,baz=135,slow=24,SNR=5.3						
FINES	FINESS Array B	21.30	334	P	P	23 24 09.7	-0.8
SOKA	Soboth	21.69	289	eP	P	23 24 21.0	+6.0
	comp=Z,0.8nm,0.5s						
OBKA	Obir	22.03	288	eP	P	23 24 20.1	+1.5
GERES	GERESS Array B	22.55	295	P	P	23 24 24.1	-0.2
	comp=Z,1.0nm,0.6s,baz=102,slow=9.0,SNR=9.7						
GERES	GERESS Array B	22.55	295	P	P	23 24 25.8	+1.5
GERES	GERESS Array B	22.55	295	P	P	23 24 25.8	+1.5
KHC	Kasperske Hory	22.64	295	ceP	P	23 24 26.1	+1.0
KHC				pmax	pmax		
	comp=Z,15nm,1.6s						
KHC	Kasperske Hory	22.64	295	eP	P	23 24 26.9	+1.8
KBA	Koelnbreinsper	22.82	290	eP	P	23 24 28.3	+1.2
	comp=Z,1.9nm,0.6s						
CLL	Collm	23.18	301	eP	P	23 24 32.0	+1.4
	comp=Z,5.0nm,1.2s						
CLL				ePPP	PPP	23 25 02.0	
CLL	Collm	23.18	301	eP	P	23 24 32.0	+1.4
CLL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURBB	Kurchatov Arra	23.38	61	P	P	23 24 34.3	+1.7
	comp=Z,1.5nm,0.6s,baz=270,slow=12,SNR=18						
ABTA	Abfaltersbach	23.41	289	eP	P	23 24 33.6	+0.5
	comp=Z,1.1nm,0.5s						
KURK	Kurchatov	23.44	61	P	P	23 24 34.6	+1.5
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	Kurchatov	23.44	61	P	P	23 24 34.6	+1.5
KURK				IAmb	IAmb	23 25 13.0	
	comp=Z,6.0nm,1.0s						
WTTA	Wattenberg	23.97	291	eP	P	23 24 38.5	0.0
	comp=Z,1.2nm,0.4s						
SQTA	Sankt Quirin	24.27	291	eP	P	23 24 41.6	+0.5
	comp=Z,1.7nm,0.4s						
MOTA	Moosalm	24.33	291	eP	P	23 24 42.8	+1.0
	comp=Z,1.8nm,0.5s						
RETA	Reutte	24.55	291	eP	P	23 24 43.6	-0.1
	comp=Z,1.8nm,0.6s						
FETA	Feichten	24.61	290	eP	P	23 24 45.7	+1.4
	comp=Z,3.5nm,0.8s						
DAVA	Damuels	25.16	291	eP	P	23 24 50.6	+1.4
	comp=Z,4.4nm,0.6s						
DAVOX	Davos/Dischmat	25.21	290	P	P	23 24 50.6	+0.8
	comp=Z,4.9nm,0.7s,baz=99,slow=8.5,SNR=10.0						
HFS	Hagfors	25.35	322	P	P	23 24 50.8	+0.1
	comp=Z,1.5nm,0.3s,baz=116,slow=9.8,SNR=12						
MAKZ	Makanchi	25.72	70	P	P	23 24 55.2	+1.0
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	Makanchi	25.72	70	P	P	23 24 55.2	+1.0
MAKZ				IAmb	IAmb	23 25 35.8	
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	25.93	70	P	P	23 24 57.2	+1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	25.93	70	P	P	23 24 57.2	+1.0
MKAR	Makanchi Array	25.93	70	P	P	23 24 57.1	+0.9
	comp=Z,0.5nm,0.5s,baz=266,slow=9.5,SNR=12						
MKAR	Makanchi Array	25.93	70	P	P	23 24 57.2	+1.1
MKAR	Makanchi Array	25.93	70	P	P	23 24 57.2	+1.1
NC602	NORSAR Array S	26.58	322	P	P	23 25 01.4	-0.4
NC405	NORSAR Array S	26.66	323	P	P	23 25 02.2	-0.3
NB201	NORSAR Array S	26.82	323		P	23 25 05.2	+1.2
NOA	NORSAR Array B	26.85	323	P	P	23 25 05.0	+0.8
	comp=Z,0.9nm,0.8s,baz=118,slow=8.5,SNR=2.8						
NOA				LR	LR	23 35 33.6	
	comp=Z,13nm,21.2s,baz=40,slow=36						
NC303	NORSAR Array S	26.86	323	P	P	23 25 05.6	+1.3
ZALV	Zalesovo Beam	27.54	54	P	P	23 25 11.0	+0.6
	comp=Z,0.8nm,0.6s,baz=292,slow=8.7,SNR=2.0						
ZALV	Zalesovo Beam	27.54	54	P	P	23 25 11.0	+0.6
ARCES	ARCESS Array B	27.96	345	P	P	23 25 14.8	+0.6
	comp=Z,4.8nm,1.1s,baz=146,slow=9.8,SNR=2.9						
SPITS	Spitsbergen Ar	36.57	350	P	P	23 26 30.5	+1.2
	comp=Z,7.9nm,0.8s,baz=134,slow=12,SNR=1.3						
SONM	Songino Array	41.73	62	P	P	23 27 13.7	+0.8
	comp=Z,0.2nm,0.5s,baz=282,slow=8.7,SNR=2.2						
TOA0	Torodi Ar. Sit	48.27	245	P	P	23 28 04.3	-0.7
TOA0				IAmb	IAmb	23 28 32.0	
	comp=Z,9.8nm,1.6s						
TORD	Torodi Ar. Bea	48.27	245	P	P	23 28 04.5	-0.5
	comp=Z,3.7nm,1.0s,baz=44,slow=7.4,SNR=11						
TORD	Torodi Ar. Bea	48.27	245	P	P	23 28 05.0	0.0
DBIC	Dimbokro	57.37	245	P	P	23 29 11.5	-0.7
	comp=Z,1.8nm,0.6s,baz=0.5,slow=7.0,SNR=4.4						
SEY	Seymchan	59.02	31	P	P	23 29 25.1	+2.0
	comp=Z,1.0nm,0.3s,baz=302,slow=3.9,SNR=4.6						
KSRS	Korea Array	60.47	65	LR	LR	23 58 15.1	
	comp=Z,21nm,19.6s,baz=120,slow=38						
ILAR	Eielson Array	71.54	6	P	P	23 30 45.2	+1.0
	comp=Z,0.3nm,0.8s,baz=335,slow=4.0,SNR=2.6						
CCB	Clear Creek Bu	71.59	6	P	P	23 30 45.5	+1.0
CCB				IAmb	IAmb	23 31 00.7	
	comp=Z,12nm,1.6s						
EGAK	Eagle	71.84	3	P	P	23 30 44.1	-1.9
COCO	West Island	72.53	127	i P	P	23 30 53.9	+3.2
YKA	Yellowknife Ar	73.07	351	P	P	23 30 54.3	+1.0
	comp=Z,1.3nm,0.6s,baz=18,slow=6.3,SNR=22						
YKA	Yellowknife Ar	73.07	351	ceP	P	23 30 54.2	+0.9
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	Newport	87.27	349	P	P	23 32 11.6	+1.5
	comp=Z,3.0nm,0.7s,baz=17,slow=5.2,SNR=5.4						
JAY	Jayapura	95.46	88	LR	LR	00 18 52.0	
	comp=Z,60nm,21.0s,baz=344,slow=37						

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*IDC **22** 23:27:50.2±0.7, 43.°58N×45.°47E, h0km, mb3.2/4, mb1 3.4/9, mb1mx3.3/49, mbtmp3.4/9, ML2.6/3, MS2.3/1, Ms1 2.3/1, ms1mx1.9/21, Error ellipse: s-maj=8.6km s-min=8.1km az=149.0*

*NORS **22** 23:27:51.8±0.0, 43.°61N×45.°66E, h18km, MPVA4.1*

*MOS **22** 23:27:51.9±0.7, 43.°74N×45.°61E, h10km, mb3.9/1, Error ellipse: s-maj=5.1km s-min=4.4km az=105.0*

*MOS **22** 23:27:52.8±0.0, 43.°55N×45.°56E, h19km, MPVA4.0*

*DRS **22** 23:27:55.1±0.0, 43.°45N×45.°53E, h16km, ML3.4/10*

ISC 22 23:27:54.1±0.9, 43.°63N±0.°03×45.°59E±0.°02, h29km±8km, n105, σ1.s94/198, mb3.2/4, 16C-16D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	Groznyy	0.45	160	i Pg	Pb	23 28 02.0	-1.7
GROC				eSg	Sb	23 28 09.8	-0.4
GROC	Groznyy	0.45	160	⇓iPG	Pb	23 28 02.0	-1.7
GROC				eS	Sb	23 28 09.8	-0.4
TRKR	Terskaya	0.63	279	i Pg	Pb	23 28 06.2	-0.3
TRKR				eSg	Sn	23 28 16.7	+0.7
TRKR	Terskaya	0.63	279	ePG	Pb	23 28 06.2	-0.3
TRKR				eS	Sn	23 28 16.8	+0.7
KMGR	Komgaron	0.78	223	i Pg	Pb	23 28 07.9	-1.2
KMGR				eSg	Sb	23 28 19.8	+0.5
KMGR	Komgaron	0.78	223	i PG	Pb	23 28 07.9	-1.2
KMGR				eS	Sb	23 28 19.8	+0.5
DVE	Vedeno	0.78	149	i Pg	Pb	23 28 07.2	-1.9
DVE				eSg	Sb	23 28 17.9	-1.4
DVE	Vedeno	0.78	149	⇑iPG	Pb	23 28 07.2	-1.9
DVE				eS	Sb	23 28 18.0	-1.4
BTKR	Batakoyurt	0.80	252	ePg	Pb	23 28 09.1	-0.4
BTKR				eSg	Sb	23 28 20.3	+0.2
BTKR	Batakoyurt	0.80	252	ePG	Pb	23 28 09.4	-0.1
BTKR				eS	Sn	23 28 23.9	+3.5
VLKR	Vladikavkaz	0.88	229	ePg	Pb	23 28 10.4	-0.5
VLKR				eSg	Sn	23 28 24.0	+1.6
VLKR	Vladikavkaz	0.88	229	ePG	Pb	23 28 10.5	-0.4
VLKR				eS	Sn	23 28 24.4	+2.0
DLMR	Dylym	0.94	126	⇑ePg	Pb	23 28 10.7	-1.1
	217nm,0.5s						
DLMR				ePg	Pb	23 28 10.8	-1.1
DLMR				eSg	Sn	23 28 24.6	+0.8
DLMR				⇑eSg	Sn	23 28 24.7	+0.8
	1µm,0.5s						
DLMR	Dylym	0.94	126	ePG	Pb	23 28 10.8	-1.1
DLMR				eS	Sn	23 28 24.6	+0.8
PRTR	Priterechnaya	0.95	278	ePg	Pb	23 28 12.0	0.0
PRTR				eSg	Sn	23 28 26.4	+2.3
PRTR	Priterechnaya	0.95	278	ePG	Pb	23 28 12.1	+0.1
PRTR				eS	Sn	23 28 26.8	+2.7
ARNR	Ardon	1.05	245	ePg	Pb	23 28 13.5	-0.1
ARNR				eSg	Sn	23 28 29.6	+3.1
ARNR	Ardon	1.05	245	ePG	Pb	23 28 13.8	+0.2
ARNR				eS	Sn	23 28 29.9	+3.4
BTLR	Botlikh	1.07	154	⇓ePg	Pn	23 28 12.0	-1.1
	111nm,0.2s						
BTLR				⇓eSg	Sb	23 28 25.5	-2.1
	655nm,0.3s						
BTLR	Botlikh	1.07	154	ePG	Pn	23 28 12.1	-1.1
BTLR				eS	Sb	23 28 27.1	-0.5
DBC	Dubki	1.09	123	⇑ePg	Pn	23 28 13.3	-0.1
	106nm,0.3s						
DBC				⇑eSg	Sn	23 28 28.6	+1.0
	433nm,0.4s						
DBC	Dubki	1.09	123	⇑iPG	Pn	23 28 13.3	-0.1
DBC				eS	Sn	23 28 28.5	+0.9
STDR	Stavd-Durt	1.14	257	ePg	Pb	23 28 15.2	+0.1
STDR				eSg	Sb	23 28 32.7	+3.1
STDR	Stavd-Durt	1.14	257	ePG	Pb	23 28 15.5	+0.4
STDR				eS	Sb	23 28 33.4	+3.8
KORR	Kora	1.23	244	ePg	Pn	23 28 16.1	+0.7
KORR				eSg	Sb	23 28 32.9	+0.6
KORR	Kora	1.23	244	ePG	Pb	23 28 16.5	-0.3
KORR				eS	Sb	23 28 35.0	+2.7
LACR	Lac	1.24	230	i Pg	Pn	23 28 15.0	-0.5
LACR				eSg	Sn	23 28 31.6	+0.3
LACR	Lac	1.24	230	ePG	Pn	23 28 15.5	0.0
LACR				eS	Sb	23 28 33.0	+0.5
KRNR	Karanay	1.25	129	ePg	Pb	23 28 16.7	-0.3
KRNR				⇑iPg	Pb	23 28 16.8	-0.3
	110nm,0.5s						
KRNR				eSg	Sb	23 28 33.8	+0.9
KRNR				⇓eSg	Sn	23 28 33.9	+2.3
	328nm,0.2s						
KRNR	Karanay	1.25	129	⇑iPG	Pb	23 28 16.8	-0.3
KRNR				e		23 28 33.9	
KRNR				pmax	pmax		
	comp=Z,110nm,0.5s						
KRNR				smax	smax		
	comp=N,328nm,0.2s						
LSNR	Lesken	1.33	255	ePg	Pb	23 28 17.7	-0.6
LSNR				eSg	Sb	23 28 36.2	+1.2
LSNR	Lesken	1.33	255	ePG	Pb	23 28 17.8	-0.6
LSNR				i S	Sb	23 28 37.8	+2.7
XNZR	Khunzakh	1.36	143	ePg	Pb	23 28 18.4	-0.6
XNZR				eSg	Sb	23 28 37.1	+1.1
XNZR	Khunzakh	1.36	143	ePG	Pb	23 28 18.4	-0.6
XNZR				eS	Sb	23 28 37.1	+1.1
BUJR	Buynaksk	1.37	125	⇑iPg	Pb	23 28 19.4	+0.3
	comp=N,237nm,0.3s						
BUJR				i Pg	Pb	23 28 19.4	+0.3
BUJR				⇑eSg	Sb	23 28 39.3	+3.1
	comp=N,973nm,0.6s						
BUJR				eSg	Sb	23 28 39.3	+3.1
BUJR	Buynaksk	1.37	125	i PG	Pb	23 28 19.4	+0.3
BUJR				eS	Sb	23 28 39.3	+3.1
KANR	Karaman	1.45	107	ePg	Pb	23 28 20.8	+0.4
KANR				⇓ePg	Pn	23 28 21.6	+3.3
KANR				eSg	Sb	23 28 42.9	+4.5
KANR				⇓eSg	Sb	23 28 42.9	+4.5
KANR	Karaman	1.45	107	ePG	Pb	23 28 20.8	+0.4
KANR				eS	Sb	23 28 42.9	+4.5
ARKR	Arakani	1.45	134	i Pg	Pb	23 28 19.8	-0.7
ARKR				⇑iPg	Pb	23 28 20.1	-0.4
	comp=N,71nm,0.4s						
ARKR				eSg	Sb	23 28 40.6	+2.1
ARKR				⇑eSg	Sb	23 28 40.7	+2.1
	comp=N,376nm,0.5s						
ARKR	Arakani	1.45	134	⇑iPG	Pb	23 28 20.1	-0.4
ARKR				e		23 28 40.6	
ARKR				pmax	pmax		
	comp=Z,71nm,0.4s						
ARKR				smax	smax		
	comp=N,376nm,0.5s						
NCK	Nalchik	1.46	265	ePg	Pn	23 28 19.5	+1.1
NCK				eSg	Sb	23 28 38.9	+0.3
NCK	Nalchik	1.46	265	ePG	Pn	23 28 19.5	+1.1
NCK				eS	Sb	23 28 38.9	+0.3
ZEI	Tsey	1.49	236	i Pg	Pn	23 28 19.0	-0.1
ZEI				eSg	Sn	23 28 38.5	+0.8
ZEI	Tsey	1.49	236	ePG	Pn	23 28 19.1	0.0
MAK	Makhachkala	1.55	115	ePg	Pb	23 28 21.8	-0.3
MAK				eSg	Sb	23 28 42.8	+1.5
MAK	Makhachkala	1.55	115	ePG	Pb	23 28 21.8	-0.3
MAK				eS	Sb	23 28 42.8	+1.5
KBTC	Kuba-Taba	1.59	278	ePg	Pn	23 28 21.1	+0.8
KBTC				eSg	Sb	23 28 43.8	+1.3
KBTC	Kuba-Taba	1.59	278	ePG	Pn	23 28 21.5	+1.2
KBTC				eS	Sb	23 28 44.8	+2.3
GNBR	Gunib	1.60	140	⇓iPg	Pb	23 28 22.5	-0.5
	comp=N,111nm,0.8s						
GNBR				⇓eSg	Sb	23 28 44.3	+1.6
	comp=N,662nm,0.5s						
GNBR	Gunib	1.60	140	⇓iPN	Pb	23 28 22.5	-0.5
GNBR				eS	Sb	23 28 43.8	+1.1
DIGR	Digorskoe uzhe	1.64	244	ePg	Pn	23 28 20.9	-0.1
DIGR				eSg	Sn	23 28 42.5	+1.2
DIGR	Digorskoe uzhe	1.64	244	ePN	Pn	23 28 21.6	+0.5
PYA1	Pyatigorsk	1.85	284	ePg	Pn	23 28 24.8	+0.9
PYA1				eSg	Sb	23 28 49.4	-0.7
PYA1	Pyatigorsk	1.85	284	ePN	Pn	23 28 24.8	+0.9
PYA1				eS	Sb	23 28 49.4	-0.7
LGD	Lagodekhi	1.86	165	P	Pn	23 28 25.5	+1.5
LGD				S	Sb	23 28 48.7	-1.4
LGD	Lagodekhi	1.86	165	ePg	Pb	23 28 25.8	-1.5
LGD				eSg	Sb	23 28 49.5	-0.6
LGD	Lagodekhi	1.86	165	ePN	Pb	23 28 25.8	-1.5
SGKR	Sergokala	1.92	127	⇓iPg	Pb	23 28 27.3	-1.0
	comp=N,84nm,0.6s						
SGKR				⇓eSg	Sb	23 28 54.4	+2.6
	comp=N,426nm,0.8s						
SGKR	Sergokala	1.92	127	ePN	Pb	23 28 27.3	-1.0
SGKR				eS	Sb	23 28 54.4	+2.6
SEAG	Tbilisi Sea	1.95	198	P	Pn	23 28 27.1	+1.9
SEAG				S	Sn	23 28 51.1	+2.4
KBZ	Khabaz	1.96	274	Pn	Pn	23 28 25.6	+0.4
	comp=N,3.6nm,0.3s,baz=124,slow=12,SNR=37						

KBZ				Pg	**Pb**	**23 28 27.6**	**-1.4**
	comp=N,4.7nm,0.3s,baz=86,slow=17,SNR=18						
KBZ				Lg	Lg	23 28 50.3	
	comp=N,11nm,0.3s,baz=226,slow=20,SNR=9.1						
KBZ	**Khabaz**	**1.96**	**274**	*e*Pg	**Pn**	**23 28 25.4**	**+0.2**
KBZ				*e*Sg	**Sn**	**23 28 50.6**	**+1.8**
BEYR	**Belyy Ugol+**	**2.04**	**282**	*e*Pg	**Pn**	**23 28 27.0**	**+0.5**
BEYR				*e*Sg	**Sn**	**23 28 52.2**	**+1.2**
BEYR	**Belyy Ugol+**	**2.04**	**282**	*e*PN	**Pn**	**23 28 27.0**	**+0.5**
URKR	**Urkarakh**	**2.10**	**134**	⇓*i*Pg	**Pb**	**23 28 30.6**	**-0.9**
	comp=N,82nm,0.5s						
URKR				⇓*e*Sg	**Sb**	**23 28 59.4**	**+2.2**
	comp=N,216nm,0.8s						
URKR	**Urkarakh**	**2.10**	**134**	⇓*i*PN	**Pb**	**23 28 30.5**	**-0.9**
URKR				*e*		23 28 59.3	
URKR				pmax	pmax		
	comp=Z,82nm,0.5s						
URKR				smax	smax		
	comp=N,216nm,0.8s						
KVAR	**Kislovodsk Arr**	**2.12**	**280**	Pn	**Pn**	**23 28 28.6**	**+1.0**
	baz=252,slow=20,SNR=4.8						
KVAR				Lg	Lg	23 28 55.5	
	baz=187,slow=8.1,SNR=21						
NEY	**Neytrino**	**2.12**	**261**	*e*Pg	**Pn**	**23 28 29.3**	**+1.6**
NEY				*e*Sg	**Sb**	**23 28 56.5**	**-1.4**
NEY	**Neytrino**	**2.12**	**261**	*e*PN	**Pb**	**23 28 30.0**	**-1.9**
NEY				*e*S	**Sb**	**23 28 58.0**	**+0.1**
KIV	**Kislovodsk**	**2.13**	**280**	*i* PN	**Pn**	**23 28 28.4**	**+0.7**
DDFL	**Dedoflistskaro**	**2.22**	**170**	P	**Pb**	**23 28 33.3**	**-0.2**
DDFL	**Dedoflistskaro**	**2.22**	**170**	PN	**Pb**	**23 28 33.2**	**-0.2**
ALER	**Alexandrovskoy**	**2.23**	**301**	*e*Pn	**Pn**	**23 28 30.8**	**+1.7**
ALER				*e*Sn	**Sb**	**23 29 01.0**	**+0.1**
ALER	**Alexandrovskoy**	**2.23**	**301**	*e*PN	**Pn**	**23 28 30.8**	**+1.7**
ALER				*e*S	**Sb**	**23 29 01.0**	**+0.1**
GOF	**Gofitskoye**	**2.32**	**309**	*i* Pn	**Pn**	**23 28 32.1**	**+1.9**
GOF				*e*Sn	**Sb**	**23 29 02.4**	**-1.1**
GOF	**Gofitskoye**	**2.32**	**309**	⇑*i*PN	**Pn**	**23 28 32.1**	**+1.9**
GOF				*e*S	**Sb**	**23 29 02.3**	**-1.1**
BRNG	**Burnasheti**	**2.39**	**214**	P	**Pn**	**23 28 32.9**	**+1.5**
BRNG				S	**Sn**	**23 29 03.1**	**+3.4**
KZRT	**Kazreti**	**2.41**	**202**	P	**Pn**	**23 28 32.8**	**+1.2**
KZRT				S	**Sn**	**23 29 02.4**	**+2.4**
KZRT	**Kazreti**	**2.41**	**202**	PN	**Pn**	**23 28 32.7**	**+1.2**
DMNI	**Dmanisi**	**2.52**	**205**	P	**Pn**	**23 28 33.8**	**+0.6**
DMNI				S	**Sn**	**23 29 06.1**	**+3.2**
AKT	**Akhty**	**2.67**	**143**	*e*Pn	**Pb**	**23 28 38.3**	**-2.9**
AKT				*e*Sn	**Sn**	**23 29 08.9**	**+2.4**
AKT	**Akhty**	**2.67**	**143**	*e*PN	**Pb**	**23 28 38.3**	**-2.9**
AKT				*e*S	**Sn**	**23 29 08.9**	**+2.4**
AKH	**Akhalkalaki**	**2.70**	**216**	*e*Pn	**Pn**	**23 28 37.5**	**+1.8**
AKH				*e*Sn	**Sn**	**23 29 07.5**	**0.0**
AKH	**Akhalkalaki**	**2.70**	**216**	*e*PN	**Pn**	**23 28 37.5**	**+1.8**
ABS	**Abastumani**	**2.77**	**228**	P	**Pb**	**23 28 42.4**	**-0.6**
AHMR	**Akhmetovskaya**	**3.33**	**281**	*e*Pn	**Pn**	**23 28 45.0**	**+0.8**
AHMR				*e*Sn	**Sn**	**23 29 24.2**	**+1.5**
GNI	**Garni**	**3.53**	**191**	Pn	**Pn**	**23 28 49.4**	**+2.3**
	comp=N,0.4nm,0.3s,baz=75,slow=16,SNR=2.4						
GNI				Pg	**Pb**	**23 28 55.4**	**-0.6**
	comp=N,3.2nm,0.3s,baz=306,slow=8.7,SNR=14						
GNI				Sn	**Sn**	**23 29 29.1**	**+1.1**
	comp=N,2.5nm,0.3s,baz=6.0,slow=21,SNR=3.2						
GNI				Lg	Lg	23 29 40.6	
	comp=N,4.1nm,0.3s,baz=357,slow=16,SNR=4.9						
GNI				LR	LR	23 30 39.1	
	comp=N,44nm,21.0s,baz=346,slow=49						
GUZR	**Guzeripl'**	**3.98**	**277**	*e*Pn	**Pn**	**23 28 54.5**	**+1.4**
GUZR				*e*Sn	**Sn**	**23 29 38.8**	**+0.1**
GUZR	**Guzeripl'**	**3.98**	**277**	*e*PN	**Pn**	**23 28 54.5**	**+1.4**
GUZR				*e*S	**Sn**	**23 29 38.8**	**+0.1**
BELG	**Belogornoye**	**8.88**	**8**	Pn	**Pn**	**23 29 58.8**	**-1.4**
	comp=N,0.8nm,0.3s,baz=217,slow=4.8,SNR=4.2						
BELG				Sn	**Sn**	**23 31 38.5**	**-0.6**
	comp=N,0.7nm,0.3s,baz=90,slow=20,SNR=3.2						
BELG	**Belogornoye**	**8.88**	**8**	*i* P	**Pn**	**23 30 01.5**	**+1.3**
AKTO	**Aktyubinsk**	**10.87**	**47**	Pn	**Pn**	**23 30 27.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=233,slow=14,SNR=2.0						
AKTO				Sn	**Sn**	**23 32 21.7**	**-6.4**
	comp=N,0.2nm,0.3s,baz=117,slow=16,SNR=2.4						
AKTO	**Aktyubinsk**	**10.87**	**47**	⇓Pn	**Pn**	**23 30 29.3**	**+1.8**
	comp=N,2.6nm,1.1s						
AKTO				⇑Sn	**Sn**	**23 32 21.1**	**-7.0**
	comp=N,4.0nm,0.6s						
AKTO	**Aktyubinsk**	**10.87**	**47**	P	**Pn**	**23 30 29.3**	**+1.8**
AKTO				SN	**Sn**	**23 32 21.5**	**-6.6**
AB31	**Akbulak array**	**11.38**	**55**	⇑Pn	**Pn**	**23 30 35.7**	**+1.1**
	comp=N,1.2nm,0.5s,baz=234,slow=12,SNR=40						
AB31				⇓Sn	**Sn**	**23 32 37.2**	**-3.5**
	comp=N,0.9nm,0.3s,baz=243,slow=18,SNR=6.8						
AB31	**Akbulak array**	**11.38**	**55**	P	**Pn**	**23 30 35.7**	**+1.1**
AB31				SN	**Sn**	**23 32 37.2**	**-3.5**
ARU	**Arti**	**15.25**	**28**	Pn	**Pn**	**23 31 23.3**	**-3.8**
	comp=N,0.0nm,0.3s,baz=246,slow=18,SNR=2.5						
ARU				Sn	**Sn**	**23 34 04.6**	**-10**
	comp=N,0.0nm,0.3s,baz=131,slow=9.3,SNR=1.4						
BRVK	**Borovoye**	**18.85**	**51**	*i* P	**Pn**	**23 32 13.1**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**21.27**	**334**	P	**P**	**23 32 37.2**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=153,slow=12,SNR=1.1						
KURBB	**Kurchatov Arra**	**23.34**	**61**	P	**P**	**23 33 00.8**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=266,slow=12,SNR=3.8						
KURK	**Kurchatov**	**23.40**	**61**	*i* P	**P**	**23 33 02.0**	**+1.7**
MKAR	**Makanchi Array**	**25.90**	**70**	P	**P**	**23 33 24.0**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=270,slow=8.6,SNR=4.4						
MKAR	**Makanchi Array**	**25.90**	**70**	*i* P	**P**	**23 33 23.6**	**+0.3**
YKA	**Yellowknife Ar**	**73.04**	**351**	P	**P**	**23 39 21.1**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=22,slow=6.3,SNR=4.0						
YKA	**Yellowknife Ar**	**73.04**	**351**	*i* P	**P**	**23 39 22.2**	**+1.5**

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*IDC **22** 23:37:17.7±1.4, 3°.39S×130°.74E, h0^{km}, mb3.8/3, mb1 4.0/6, mb1mx3.7/28, mbtmp3.9/6, ML3.3/3, Error ellipse: s-maj=48.1km s-min=21.1km az=79.0*

*NEIC **22** 23:37:20.6±1.7, 3°.51S±0°.09×130°.9E±0°.1, h33^{km}±8^{km}, mb4.0/9, Error ellipse: s-maj=17.9km s-min=12.6km az=109.0*

*DJA **22** 23:37:20.4±0.4, 3°S±5°×13°1E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 22 23:37:20.4±0.7, 3°.50S±0°.06×131°.06E±0°.06, h30^{km}, n21, σ2ˢ.92/23, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.32**	**64**	Pn	**Pb**	**23 37 44.7**	**+0.2**
FAKI	**Fak Fak**	**1.32**	**64**	P	**Pb**	**23 37 44.0**	**-0.5**
FAKI				S	**Sb**	**23 38 04.0**	**+2.9**
BNDI	**Bandanaira**	**1.54**	**229**	P	**Pb**	**23 37 50.3**	**+2.0**
MSAI	**Masohi**	**2.13**	**274**	P	**Pn**	**23 37 53.6**	**-0.4**
SIJI	**Sorong**	**2.62**	**4**	Pn	**Pn**	**23 37 60.0**	**-0.7**
	3.4nm,0.3s,baz=238,slow=19,SNR=18						
SIJI				Sn	**Sn**	**23 38 29.1**	**-2.4**
	5.3nm,0.3s,baz=169,slow=23,SNR=8.6						
SWI	**Sorong**	**2.62**	**4**	P	**Pn**	**23 38 00.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**15.45**	**200**	Pn	**Pn**	**23 40 56.8**	**+0.5**
	0.1nm,0.3s,baz=20,slow=11,SNR=6.4						
FITZ				Sn	**Sn**	**23 43 38.7**	**-7.9**
	0.1nm,0.3s,baz=270,slow=17,SNR=1.6						
FITZ	**Fitzroy Crossi**	**15.45**	**200**	Pn	**Pn**	**23 40 55.6**	**-0.7**
FITZ				IAmb	IAmb	23 40 57.0	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**15.84**	**132**	Pn	**Pn**	**23 41 00.2**	**-1.2**
COEN				IAmb	IAmb	23 41 02.5	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**16.49**	**169**	Pn	**Pn**	**23 41 09.2**	**-0.5**
WB0				IAmb	IAmb	23 41 21.9	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**16.65**	**169**	Pn	**P**	**23 41 14.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=348,slow=11,SNR=2.9						
WRA				Sn	**Sn**	**23 44 08.8**	**-7.1**
	comp=Z,0.3nm,0.3s,baz=359,slow=23,SNR=7.0						
WB2	**Warramunga Arr**	**16.66**	**169**	Pn	**Pn**	**23 41 11.7**	**-0.1**
WC3	**Warramunga Arr**	**16.68**	**169**	Pn	**Pn**	**23 41 12.0**	**0.0**
WC3				IAmb	IAmb	23 41 23.5	
	comp=Z,13nm,1.3s						
WR0	**Warramunga Arr**	**16.71**	**169**		**Pn**	**23 41 13.9**	**+1.5**
AS31	**Alice Springs**	**20.24**	**172**	P	Pn	23 41 56.2	+0.9
AS31				IAmb	IAmb	23 42 04.0	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**20.24**	**172**	P	Pn	23 41 56.2	+0.9
	comp=Z,3.5nm,0.4s,baz=350,slow=10,SNR=37						
ASAR				S	**S**	**23 45 42.3**	**+3.3**
	comp=Z,0.8nm,0.8s,baz=344,slow=16,SNR=4.8						
ASAR	**Alice Springs**	**20.24**	**172**	P	Pn	23 41 55.8	+0.5
CTA	**Charters Tower**	**22.17**	**139**	P	**P**	**23 42 18.8**	**+4.6**
	comp=Z,2.9nm,0.8s,baz=335,slow=12,SNR=2.2						
MQZ	**McQueen's Vall**	**54.33**	**144**	P	**P**	**23 46 44.3**	**+0.1**
MKAR	**Makanchi Array**	**65.92**	**326**	P	**P**	**23 48 04.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=120,slow=7.2,SNR=5.3						
MAKZ	**Makanchi**	**66.11**	**325**	P	**P**	**23 48 04.6**	**-0.2**

JMA 22 23:55:47.5±0.2, 37°.78N×144°.53E, h39^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.48**	**283**	P	Pn	23 56 26.6	+1.3
JIKH				S	Sn	23 56 55.5	+1.2
OFUJ	**Ofunato**	**2.59**	**301**	P	Pn	23 56 28.3	+1.4
OFUJ				*e*S	Sn	23 56 58.8	+1.6
JIO	**Ouri**	**2.60**	**286**	P	Pn	23 56 28.7	+1.8
JIO				*e*S	Sn	23 56 59.1	+1.9
JKMT	**Kesennumamotoy**	**2.62**	**294**	P	Pn	23 56 28.7	+1.5
JKMT				*e*S	Sn	23 56 59.5	+1.8
JMK	**Ichinoseki**	**2.85**	**295**	*e*S	Sn	23 57 05.6	+2.1
JOM	**Ohasama**	**3.05**	**305**	*e*S	Sn	23 57 11.2	+2.8
JFT	**Otama**	**3.34**	**267**	P	Pn	23 56 40.3	+3.1
JFT				*e*S	Sn	23 57 18.2	+2.6
JYK	**Kaneyama**	**3.47**	**290**	P	Pn	23 56 41.6	+2.6
JYK				*e*S	Sn	23 57 21.8	+3.0
JRY	**Ryogami san**	**4.84**	**250**	P	Pn	23 56 58.9	+1.1
JRY				*e*S	Sn	23 57 51.5	-1.2
NEM2	**Nemuro 2**	**5.66**	**9**	P	Pn	23 57 06.3	-2.6
NEM2				*e*S	Sn	23 58 07.6	-4.9
JTKR	**Abashiri--Toko**	**6.20**	**356**	P	Pn	23 57 16.0	-0.4
JTKR				*e*S	Sn	23 58 22.0	-4.0

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*IDC **23** 00:05:45.4±1.3, 10°.36S×124°.09E, h0^{km}, mb4.0/2, mb1 3.9/5, mb1mx3.6/32, mbtmp3.8/5, ML3.5/3, Error ellipse: s-maj=32.0km s-min=9.6km az=21.0*

*NEIC **23** 00:05:46.4±2.5, 10°.63S±0°.03×123°.9E±0°.1, h10^{km}±2^{km}, mb4.2/4, Error ellipse: s-maj=17.1km s-min=4.6km az=81.0*

*DJA **23** 00:05:49.0±1.2, 10°S±9°×12°4E±°, h10^{km}, M3.2/5, MLv3.2/5*

ISC 23 00:05:45.7±0.7, 10°.64S±0°.07×123°.97E±0°.09, h10^{km}, n21, σ1ˢ.87/25, mb4.2/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.52**	**325**	Pg	**Pg**	**00 05 55.2**	**-0.7**
	438nm,0.3s,baz=104,slow=5.0,SNR=94						
BATI				Lg	Lg	00 05 58.8	
	729nm,0.3s,baz=140,slow=18,SNR=32						
BATI	**Baumata**	**0.52**	**325**	P	**Pg**	**00 05 55.8**	**-0.1**
BATI				S	**Sg**	**00 06 02.1**	**-0.7**
SOEI	**Soe**	**0.92**	**19**	Pg	**Pn**	**00 06 05.2**	**+0.4**
SOEI	**Soe**	**0.92**	**19**	P	**Pn**	**00 06 05.0**	**+0.1**
MMRI	**Maumere**	**2.62**	**319**		**Pn**	**00 06 29.9**	**+1.8**
MMRI	**Maumere**	**2.62**	**319**	P	**Pn**	**00 06 30.1**	**+2.0**
EDFI	**Ende, Flores**	**2.93**	**310**	P	**Pn**	**00 06 32.3**	**-0.1**
MTN	**Manton Dam**	**7.35**	**108**	Pn	**Pn**	**00 07 36.9**	**+3.7**
FITZ	**Fitzroy Crossi**	**7.59**	**168**	Pn	**Pn**	**00 07 41.0**	**+4.6**
	0.5nm,0.3s,baz=356,slow=10,SNR=26						
FITZ				Sn	**Sn**	**00 09 03.2**	**+0.6**
	1.4nm,0.3s,baz=288,slow=20,SNR=7.6						
WB0	**Warramunga Arr**	**13.54**	**133**	Pn	**Pn**	**00 08 59.0**	**+1.0**
WRA	**Warramunga Arr**	**13.62**	**134**	Pn	**Pn**	**00 09 00.1**	**+1.1**
	0.2nm,0.3s,baz=309,slow=15,SNR=7.6						
WRA				Sn	**Sn**	**00 11 26.8**	**-3.7**
	0.2nm,0.3s,baz=300,slow=22,SNR=3.4						
WB2	**Warramunga Arr**	**13.63**	**134**	Pn	**Pn**	**00 09 00.5**	**+1.4**
WR0	**Warramunga Arr**	**13.77**	**134**	Pn	**Pn**	**00 09 02.4**	**+1.2**
GIRL	**Giralia**	**15.14**	**217**	Pn	**Pn**	**00 09 19.7**	**-0.1**
AS31	**Alice Springs**	**16.05**	**145**	Pn	**P**	**00 09 34.7**	**-0.4**
ASAR	**Alice Springs**	**16.05**	**145**	Pn	**Pn**	**00 09 34.0**	**+2.3**
	0.4nm,0.3s,baz=317,slow=12,SNR=21						
ASAR				Sn	**Sn**	**00 12 27.4**	**-2.4**
	0.1nm,0.3s,baz=308,slow=21,SNR=4.6						
MK31	**Makanchi Array**	**68.21**	**331**	P	**P**	**00 16 47.1**	**+0.7**
MK31				IAmb	IAmb	00 16 47.4	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**68.21**	**331**	P	**P**	**00 16 46.8**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=138,slow=7.6,SNR=16						
KBL	**Kabul**	**68.73**	**314**	P	**P**	**00 16 49.4**	**-0.8**
KBL				IAmb	IAmb	00 17 07.0	
	comp=Z,2.8nm,1.4s						
ZALV	**Zalesovo Beam**	**72.38**	**337**	P	**P**	**00 17 10.9**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=150,slow=4.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**72.38**	**337**	P	**P**	**00 17 11.3**	**-0.5**

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*NEIC **23** 00:10:52.4±1.5, 5°.27N±0°.08×96°.20E±0°.09, h187^{km}±7^{km}, mb4.0/12, Error ellipse: s-maj=14.5km s-min=9.7km az=51.0*

*IDC **23** 00:10:59.3±5.6, 5°.29N×96°.07E, h262^{km}±61^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.1/41, mbtmp3.9/7, Error ellipse: s-maj=41.0km s-min=14.7km az=59.0*

ISC 23 00:10:52.8±0.7, 5°.21N±0°.06×96°.17E±0°.08, h200^{km}, n24, σ1ˢ.56/26, mb3.7/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**0.78**	**89**	Pn	**Pn**	**00 11 19.7**	**-1.5**
GSI	**Gunungsitoli**	**4.13**	**160**	Pn	**Pn**	**00 11 55.6**	**-0.7**
GSI					**Sn**	**00 12 43.9**	**-2.3**
KULM	**Kulim**	**4.46**	**89**	Pn	**Pn**	**00 11 58.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**13.44**	**11**	P	**P**	**00 13 59.6**	**+1.1**
	0.5nm,0.3s,baz=197,slow=12,SNR=10						
CMAR				S	**Sn**	**00 16 25.9**	**-0.2**
	0.5nm,0.3s,baz=182,slow=25,SNR=2.0						
CHTO	**Chiang Mai**	**13.79**	**11**	Pn	**Pn**	**00 13 59.5**	**-0.7**
PALK	**Pallekele**	**15.51**	**278**	P	**P**	**00 14 23.1**	**+1.6**
	0.4nm,0.3s,baz=51,slow=13,SNR=1.6						
PALK				S	**S**	**00 17 09.7**	**-4.1**
	0.4nm,0.3s,baz=294,slow=19,SNR=1.9						
PALK	**Pallekele**	**15.51**	**278**		**Pn**	**00 14 21.9**	**+0.5**
PALK				IAmb	IAmb	00 14 35.7	
	comp=Z,11nm,1.1s						
COCO	**West Island**	**17.30**	**178**	P	**Pn**	**00 14 43.7**	**+1.0**
FITZ	**Fitzroy Crossi**	**37.17**	**129**	P	**P**	**00 17 46.0**	**+1.1**
FITZ				IAmb	IAmb	00 17 47.9	
	comp=Z,4.6nm,0.9s						
KBL	**Kabul**	**38.50**	**323**	P	**P**	**00 17 56.7**	**+0.6**
KBL				IAmb	IAmb	00 18 02.7	
	comp=Z,1.4nm,1.1s						
MK31	**Makanchi Array**	**43.13**	**346**	P	**P**	**00 18 33.7**	**+0.3**
MKAR	**Makanchi Array**	**43.13**	**346**	P	**P**	**00 18 33.5**	**0.0**
	comp=Z,0.5nm,0.4s,baz=160,slow=9.2,SNR=20						
MAKZ	**Makanchi**	**43.22**	**346**	P	**P**	**00 18 33.6**	**-0.5**
SONM	**Songino Array**	**43.36**	**10**	P	**P**	**00 18 35.7**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=192,slow=7.9,SNR=3.7						
SONM	**Songino Array**	**43.36**	**10**	IAmb	IAmb	00 18 43.4	
	comp=Z,1.0nm,1.3s						
WB0	**Warramunga Arr**	**45.05**	**125**	P	**P**	**00 18 50.4**	**+1.3**
WB0				IAmb	IAmb	00 19 00.7	
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**45.09**	**125**	P	**P**	**00 18 50.6**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=303,slow=10,SNR=21						
WRAB	**Tennant Creek**	**45.09**	**125**	P	**P**	**00 18 47.7**	**-1.7**
WB2	**Warramunga Arr**	**45.10**	**125**	P	**P**	**00 18 51.1**	**+1.6**
WB2				IAmb	IAmb	00 19 07.3	
	comp=Z,3.5nm,1.1s						
WR0	**Warramunga Arr**	**45.26**	**125**	P	**P**	**00 18 52.3**	**+1.5**
WR0				IAmb	IAmb	00 18 57.9	
	comp=Z,18nm,1.5s						
AS31	**Alice Springs**	**46.68**	**130**	P	**P**	**00 19 03.8**	**+2.0**
AS31				IAmb	IAmb	00 19 03.9	
	comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**46.68**	**130**	P	**P**	**00 19 03.6**	**+1.9**
	comp=Z,2.3nm,0.5s,baz=301,slow=7.8,SNR=32						
ASAR	**Alice Springs**	**46.68**	**130**	P	**P**	**00 19 03.0**	**+1.2**
ZALV	**Zalesovo Beam**	**49.46**	**351**	P	**P**	**00 19 21.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=182,slow=7.6,SNR=3.4						

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*IDC **23** 00:20:17.3±1.3, 1°.85N×89°.55E, h0^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.7/33, mbtmp3.7/10, ML4.2/3, Error ellipse: s-maj=37.6km s-min=20.7km az=41.0*

*NEIC **23** 00:20:23.1±2.6, 2°.3N±0°.1×90°.16E±0°.05, h10^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=23.4km s-min=7.7km az=185.0*

ISC 23 00:20:20.2±1.1, 2°.1N±0°.2×89°.98E±0°.09, h10^{km}, n38, σ1ˢ.70/31, mb3.7/9, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**7.63**	**95**	Pn	**Pn**	**00 22 12.3**	**+0.7**
LHMI	**Lhok Sumawe**	**7.64**	**65**	Pn	**Pn**	**00 22 10.6**	**-1.1**
RPSI	**Rantau Prapat**	**8.96**	**86**		**Sn**	**00 24 09.4**	**-1.6**
PSI	**Prapat**	**8.97**	**85**	Pn	Pn	00 22 34.5	+4.5
	0.7nm,0.3s,baz=180,slow=17,SNR=1.9						
PSI				Sn	**Sn**	**00 24 09.4**	**-1.9**
	1.2nm,0.3s,baz=360,slow=18,SNR=3.5						
PALK	**Pallekele**	**10.60**	**300**	Pn	Pn	00 22 46.7	-5.6
	1.1nm,0.3s,baz=167,slow=13,SNR=5.8						
PALK				Sn	Sn	00 24 31.2	-20
	6.4nm,0.3s,baz=134,slow=18,SNR=8.2						
KULM	**Kulim**	**11.13**	**73**	Pn	**Pn**	**00 23 00.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**18.53**	**28**	P	**Pn**	**00 24 40.6**	**+3.5**
	0.7nm,0.3s,baz=215,slow=11,SNR=6.0						
H08S2	**Diego Garcia H**	**19.92**	**241**	T	T	00 45 06.7	
	baz=60,slow=76,SNR=26						
H08S3	**Diego Garcia H**	**19.92**	**241**	T	T	00 45 12.9	
	baz=60,slow=76,SNR=39						
H08S1	**Diego Carcia H**	**19.94**	**241**	T	T	00 45 15.4	
	baz=60,slow=76,SNR=18						
NIL	**Nilore**	**35.12**	**335**	P	**P**	**00 27 13.6**	**-0.4**
NIL				IAmb	IAmb	00 27 23.7	
	comp=Z,5.8nm,0.7s						
H01W3	**Cape Leeuwin H**	**43.16**	**151**	T	T	01 14 17.2	
	baz=324,slow=75,SNR=6.4						
H01W2	**Cape Leeuwin H**	**43.17**	**151**	T	T	01 14 34.6	
	baz=324,slow=75,SNR=6.3						
H01W1	**Cape Leeuwin H**	**43.18**	**151**	T	T	01 14 31.0	
	baz=324,slow=75,SNR=6.8						
MKAR	**Makanchi Array**	**45.07**	**353**	P	**P**	**00 28 36.1**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=156,slow=9.3,SNR=4.0						
SONM	**Songino Array**	**47.77**	**15**	P	**P**	**00 28 58.8**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=194,slow=9.2,SNR=15						
SONM	**Songino Array**	**47.77**	**15**	P	**P**	**00 28 58.1**	**+0.4**
WRA	**Warramunga Arr**	**48.69**	**119**	P	**P**	**00 29 05.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=294,slow=8.5,SNR=5.3						
ASAR	**Alice Springs**	**49.78**	**124**	P	**P**	**00 29 14.1**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=294,slow=8.0,SNR=4.5						
ASAR	**Alice Springs**	**49.78**	**124**	P	**P**	**00 29 15.3**	**+1.9**
ZALV	**Zalesovo Beam**	**51.91**	**356**	P	**P**	**00 29 27.8**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=157,slow=7.5,SNR=1.9						
AB07	**Akbulak array**	**53.56**	**336**	P	**P**	**00 29 44.0**	**+2.7**
AB06	**Akbulak array**	**53.58**	**336**		**P**	**00 29 43.8**	**+2.5**
AB08	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 43.5**	**+2.2**
AB03	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 43.7**	**+2.3**
AB01	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 43.6**	**+2.2**
AB31	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 43.0**	**+1.7**
ABKAR	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 40.9**	**-0.5**
ABKAR	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 41.8**	**+0.4**
ABKAR				IAmb	IAmb	00 29 56.2	
	comp=Z,2.2nm,1.0s						
AB02	**Akbulak array**	**53.58**	**336**	P	**P**	**00 29 42.7**	**+1.3**
AB04	**Akbulak array**	**53.59**	**336**	P	**P**	**00 29 43.1**	**+1.7**
AB05	**Akbulak array**	**53.60**	**336**	P	**P**	**00 29 44.0**	**+2.5**
AB09	**Akbulak array**	**53.60**	**336**	P	**P**	**00 29 41.0**	**-0.4**
USA0B	**Ussuriysk Arra**	**56.03**	**35**	P	**P**	**00 29 59.6**	**+0.4**
USRK	**Ussuriysk Ar.**	**56.03**	**35**	P	**P**	**00 29 57.9**	**-1.4**
BRTR	**Keskin Array B**	**63.27**	**314**	P	**P**	**00 30 47.1**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=119,slow=7.8,SNR=1.7						
GERES	**GERESS Array B**	**79.44**	**319**	P	**P**	**00 32 26.3**	**-0.7**
	comp=Z,0.1nm,0.2s,baz=100,slow=3.0,SNR=1.6						
TXAR	**Lajitas Array**	**146.17**	**22**	PKPbc	**PKPdf**	**00 39 59.3**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=322,slow=2.8,SNR=1.6						

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*HEL **23** 00:26:44.9±0.0, 67°.83N×20°.21E, h0^{km}, ML1.7, ML1.9(UPP), Explosion*

UPP 23 00:26:44.4±0.0, 67°.83N×20°.20E, h0^{km}, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**23**	P	Pg	00 26 47.1	+0.2
KUA				S	Sg	00 26 49.1	+0.4
KUA	**Kurravaara**	**0.13**	**23**	*i* P	Pg	00 26 47.1	+0.2
KUA				*i* S	Sg	00 26 49.1	+0.4
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	00 26 49.0	+0.2
RATU				S	Sg	00 26 52.0	+0.2
RATU	**Laukkuluspa**	**0.23**	**268**	*i* P	Pg	00 26 49.0	+0.2
RATU				*i* S	Sg	00 26 52.0	+0.2
KOVU	**Salmi**	**0.39**	**358**	P	Pg	00 26 51.9	0.0
KOVU	**Salmi**	**0.39**	**358**	*i* P	Pg	00 26 51.9	0.0
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	00 26 52.9	+0.1
NIKU	**Nikkaluokta**	**0.44**	**275**	*i* P	Pg	00 26 52.9	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 26 57.7	-0.2
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	00 26 57.6	-0.3
LANU				*e*S	Sg	00 27 07.3	+0.2
DUNU	**Dundret**	**0.73**	**169**	P	Pg	00 26 57.9	-0.4
DUNU	**Dundret**	**0.73**	**169**	*i* P	Pg	00 26 57.9	-0.4
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	00 26 59.2	-0.2
MASU	**Masugnsbyn**	**0.78**	**118**	*i* P	Pg	00 26 59.2	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 26 59.2	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	*e*P	Pg	00 26 59.9	+0.4
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	00 26 59.2	-0.3
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pg	00 27 06.6	-0.8
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PB	Pg	00 27 07.5	+0.2
KIF				MSG		00 27 22.9	
	comp=Z,6.0nm,0.2s						
KIF				*e*SB	Sb	00 27 23.4	-0.5
PAJU	**Pajala**	**1.39**	**124**	P	Pg	00 27 09.7	-1.2
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	00 27 09.5	-1.4
	baz=303						
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	Pn	00 27 11.5	-1.0
	baz=325						
ERTU				*e*SN	Sn	00 27 34.2	+1.4
KALU	**Kalix**	**2.34**	**146**	*e*SB	Sn	00 27 54.7	+1.3
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	00 27 26.1	+1.3
	baz=314						
TOF				MSG		00 27 55.3	
	comp=Z,2.7nm,0.2s						
SGF	**Sodankyl**	**2.45**	**96**	*e*PG	Pb	00 27 28.3	-0.9
	baz=279						
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	00 27 29.1	+1.9
	baz=310						
RNF				*e*SG	Sb	00 28 03.9	+0.4
KU6	**Riekki**	**4.22**	**111**	*e*SG	Sg	00 28 56.6	-3.2

UPP 23 00:26:47.6±0.1, 67°.85N×20°.18E, h0^{km}, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.12**	**28**	P	Pg	00 26 50.2	+0.2
KUA				S	Sg	00 26 51.9	+0.4
RATU	**Laukkuluspa**	**0.23**	**265**	S	Sg	00 26 55.4	+0.6
KOVU	**Salmi**	**0.38**	**359**	P	Pg	00 26 54.9	+0.1
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	00 27 01.1	-0.1
SALU	**Saltoluokta**	**0.79**	**235**	P	Pg	00 27 02.5	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pn	00 27 12.8	-1.6
PAJU				S	Sg	00 27 31.4	-1.0
PAJU	**Pajala**	**1.40**	**125**	*e*SN	Sg	00 27 31.5	-1.0

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*IDC **23** 00:29:36.6±0.6, 12°.67N×92°.98E, h0^{km}, mb4.0/17, mb1 4.1/19, mb1mx4.0/46, mbtmp4.0/19, ML4.1/2, MS3.1/5, Ms1 3.2/5, ms1mx3.0/33, Error ellipse: s-maj=23.5km s-min=13.5km az=51.0*

*NEIC **23** 00:29:41.1±1.7, 12°.5N±0°.1×92°.9E±0°.1, h33^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=20.9km s-min=20.5km az=178.0*

*NDI **23** 00:29:42.3±3.9, 12°.87N×92°.80E, h10^{km}, ML4.1*

ISC 23 00:29:42.3±0.5, 12°.72N±0°.07×92°.76E±0°.05, h35^{km}, n78, σ1ˢ.96/77, mb4.1/20, 3C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.49**	**20**	⇑*i*P	**Pn**	**00 29 51.9**	**-0.9**
DGPR				*e*S	**Sn**	**00 29 58.1**	**-2.0**
DGPR				IAML		00 29 59.5	
	comp=N,22μm,0.6s						
DGPR				IAML		00 29 59.5	
	comp=E,10μm,0.4s						
PBA	**Port Blair**	**1.06**	**181**	*e*P	Pn	00 30 04.4	+3.8
PBA				*e*S	Sn	00 30 23.2	+9.2
PBA				IAML		00 30 23.9	
	comp=E,6μm,0.4s						
PBA				IAML		00 30 24.6	
	comp=N,4μm,0.2s						
PHET	**Kaeng Krachan**	**6.71**	**88**	P	**Pn**	**00 31 18.0**	**-0.4**
	comp=N,0.6nmcomp=N,2μmcomp=N,158nm,0.6s						

UTHA	Uthaitani	7.08	66	P	Pn	00 31 24.8	+1.4
	comp=N,354nmcomp=N,33nm,0.7s						
MHMT	Maesarieng	7.37	42	P	Pn	00 31 30.7	+3.3
	comp=N,0.2nmcomp=N,1µmcomp=N,25nm,0.7s						
PATY	Pattaya	7.91	88	P	Pn	00 31 37.0	+2.1
SUKH	Sukhothai	8.15	54	P	Pn	00 31 40.3	+2.1
	comp=N,23nm,0.9s						
CM13	Chiang Mai Arr	8.20	45	P	Pn	00 31 40.2	+1.3
	comp=N,5.9nm,0.9s						
CM05	Chiang Mai Arr	8.21	46	P	Pn	00 31 40.0	+0.9
	comp=N,81nmcomp=N,10.0nm,0.9s						
CM01	Chiang Mai Arr	8.24	46	P	Pn	00 31 40.0	+0.6
	comp=N,94nmcomp=N,11nm,0.9s						
CM04	Chiang Mai Arr	8.24	46	P	Pn	00 31 40.5	+1.1
	comp=N,109nmcomp=N,11nm,0.8s						
CM02	Chiang Mai Arr	8.24	46	P	Pn	00 31 40.0	+0.6
	comp=N,70nmcomp=N,9.9nm,0.9s						
CMAR	Chiang Mai Arr	8.25	45	Pn	Pn	00 31 38.2	-1.3
	comp=N,0.7nm,0.3s,baz=234,slow=15,SNR=28						
CMAR				Sn	Sn	00 33 02.6	-9.0
	comp=N,0.8nm,0.3s,baz=237,slow=27,SNR=5.2						
CMAR				LR	LR	00 35 15.5	
	comp=N,68nm,18.7s,baz=266,slow=42						
CM09	Chiang Mai Arr	8.28	46	P	Pn	00 31 41.4	+1.5
	comp=N,110nmcomp=N,12nm,0.9s						
CM32	Chiang Mai Arr	8.32	44	P	Pn	00 31 42.0	+1.5
CM36	Chiang Mai Arr	8.40	46	P	Pn	00 31 42.0	+0.4
CHTO	Chiang Mai	8.50	44	Pn	Pn	00 31 43.7	+0.8
CMMT	Chiang Mai	8.50	44	P	Pn	00 31 43.7	+0.7
	comp=N,4.2nm,0.8s						
CM33	Chiang Mai Arr	8.50	44	P	Pn	00 31 44.0	+1.0
CM35	Chiang Mai Arr	8.55	45	P	Pn	00 31 44.0	+0.4
CM34	Chiang Mai Arr	8.66	44	P	Pn	00 31 46.0	+0.8
LAMP	Lampang	8.78	48	P	Pn	00 31 48.8	+1.9
	comp=N,31nm,0.7s						
SRAK	Srakaew	9.13	81	P	Pn	00 31 60.0	+8.4
CHAI	Chaiyaphum	9.49	69	P	Pn	00 31 59.3	+2.7
	comp=N,33nm,1.0s						
SAIH	SAIHA	9.72	1	eP	Pn	00 31 60.0	+0.2
VIS	Vishakhapatnam	10.37	300	eP	Pn	00 32 10.5	+2.0
VIS				eS	Sn	00 33 58.3	-5.3
PSI	Prapat	11.59	148	LR	LR	00 36 18.5	
	comp=N,109nm,19.3s,baz=272,slow=35						
KOHI	KOHIMA	13.00	5	⇑eP	Pn	00 32 41.7	-3.0
PALK	Pallekele	13.04	247	Pn	Pn	00 32 47.6	+2.3
	comp=N,1.1nm,0.3s,baz=15,slow=18,SNR=1.7						
PALK				Sn	Sn	00 35 05.0	-4.3
	comp=N,1.2nm,0.3s,baz=80,slow=19,SNR=1.9						
PALK				LR	LR	00 37 04.3	
	comp=N,107nm,20.7s,baz=152,slow=34						
TEZP	TEZPUR	13.83	0	eP	Pn	00 32 51.4	-4.4
HYB	Hyderabad	14.49	291	i P	Pn	00 33 07.0	+2.0
HYB				eS	Sn	00 35 41.0	-3.5
ZIRO	ZIRO	14.77	4	⇑eP	Pn	00 33 06.7	-2.1
ODAN	Odare	14.94	341	eP	Pn	00 33 11.0	-0.2
RAMN	Ramite	15.29	339	eP	Pn	00 33 16.2	+0.4
TAPN	Taplejung	15.30	343	eP	Pn	00 33 15.3	-0.8
PKI	Pulchoki	16.30	336	eP	Pn	00 33 29.6	+0.7
PKIN	Phulchoki	16.31	336	eP	Pn	00 33 29.6	+0.6
	comp=N,8.2nm,0.3s						
DANN	Dangsing	17.67	333	eP	Pn	00 33 46.5	+0.4
	comp=N,12nm,0.6s						
BHPL	Bhopal	17.93	308	eP	P	00 33 52.0	+2.7
BHPL				eS	Sn	00 36 59.6	-8.5
BHPL				IAML		00 37 05.7	
	comp=N,57nm,0.3s						
BHPL				IAML		00 37 05.7	
	comp=E,57nm,0.4s						
SMLA	Simla	23.29	324	eP	P	00 34 49.3	+2.3
DHRM	DHARAMSHALA	24.62	325	eP	P	00 35 00.7	+1.0
H08S3	Diego Garcia H	28.54	226	T	T	01 05 24.3	
	baz=44,slow=76,SNR=5.3						
H08S2	Diego Garcia H	28.54	226	T	T	01 05 17.3	
	baz=44,slow=76,SNR=6.6						
H08S1	Diego Carcia H	28.56	226	T	T	01 05 29.0	
	baz=44,slow=76,SNR=3.1						
KBL	Kabul	30.57	319	P	P	00 35 53.1	0.0
MK31	Makanchi Array	35.09	347	P	P	00 36 32.8	+0.6
MK31				IAmb	IAmb	00 36 45.9	
	comp=Z,2.8nm,1.1s						
MKAR	Makanchi Array	35.09	347	P	P	00 36 31.9	-0.3
	comp=Z,1.3nm,0.7s,baz=168,slow=7.6,SNR=15						
MKAR	Makanchi Array	35.09	347	P	P	00 36 32.3	+0.1
MAKZ	Makanchi	35.17	347	P	P	00 36 33.4	+0.6
MAKZ				IAmb	IAmb	00 36 46.3	
	comp=Z,2.1nm,0.9s						
KKAR	Karatay Array	35.86	332	P	P	00 36 40.5	+1.6
SONM	Songino Array	36.82	15	P	P	00 36 48.3	+1.2
	comp=Z,0.2nm,0.5s,baz=200,slow=11,SNR=2.4						
KURBB	Kurchatov Arra	39.55	346	P	P	00 37 10.1	+0.3
	comp=Z,1.2nm,0.6s,baz=163,slow=8.1,SNR=5.4						
GEYT	Alibeck	39.76	315	P	P	00 37 13.3	+1.5
	comp=Z,3.1nm,0.7s,baz=148,slow=8.7,SNR=7.8						
GEYT	Alibeck	39.76	315	IAmb	IAmb	00 37 15.8	
	comp=Z,2.8nm,0.7s						
KSRS	Korea Array	39.89	46	P	P	00 37 10.0	-2.9
	comp=Z,1.1nm,0.8s,baz=239,slow=9.3,SNR=2.2						
ZALV	Zalesovo Beam	41.61	353	P	P	00 37 26.8	0.0
	comp=Z,1.1nm,0.4s,baz=180,slow=8.0,SNR=8.3						
ZALV				LR	LR	00 58 43.9	
	comp=Z,29nm,18.0s,baz=56,slow=42						
ABKAR	Akbulak array	45.37	330	P	P	00 37 58.7	+1.5
ABKAR				IAmb	IAmb	00 38 10.4	
	comp=Z,3.2nm,0.8s						
ABKAR	Akbulak array	45.37	330	P	P	00 37 58.3	+1.2
WRA	Warramunga Arr	52.23	128	P	P	00 38 48.0	-2.3
	comp=Z,2.1nm,0.7s,baz=309,slow=7.7,SNR=14						
WRA				PcP	PcP	00 40 00.5	-1.1
	comp=Z,0.7nm,0.5s,baz=319,slow=2.9,SNR=9.4						
KBZ	Khabaz	52.65	316	P	P	00 38 55.2	+2.2
	comp=Z,0.4nm,0.5s,baz=50,slow=7.9,SNR=1.8						
YSS	Yuzh-Sakhalins	53.91	40	P	P	00 39 00.9	-1.3
ASAR	Alice Springs	54.10	132	P	P	00 39 02.1	-1.9
	comp=Z,2.0nm,0.4s,baz=310,slow=6.8,SNR=40						
ASAR				PcP	PcP	00 40 08.6	-0.1
	comp=Z,0.7nm,0.6s,baz=311,slow=3.6,SNR=4.9						
ASAR	Alice Springs	54.10	132	P	P	00 39 01.0	-3.1
BR131	Keskin Array S	58.30	309	P	P	00 39 33.7	-0.3
BRTR	Keskin Array B	58.30	309	P	P	00 39 34.8	+0.8
	comp=Z,1.6nm,0.7s,baz=129,slow=7.3,SNR=16						
BRTR	Keskin Array B	58.30	309	P	P	00 39 34.2	+0.2
AKASG	Malin Array Be	63.55	321	P	P	00 40 09.2	-0.1
	comp=Z,0.5nm,0.4s,baz=87,slow=5.5,SNR=2.5						
STKA	Stephens Creek	64.44	135	P	P	00 40 13.2	-2.1
	comp=Z,1.5nm,0.7s,baz=336,slow=10.0,SNR=3.2						
BURAR	Bucovina Array	65.59	317	P	P	00 40 24.0	+1.3
BUR08	Bucovina Ar. S	65.60	317	P	P	00 40 24.0	+1.1
FINES	FINESS Array B	67.82	332	P	P	00 40 36.0	-0.6
	comp=Z,2.3nm,0.8s,baz=115,slow=8.6,SNR=7.5						
ARCES	ARCESS Array B	70.28	340	P	P	00 40 52.0	+0.3
	comp=Z,1.8nm,0.9s,baz=91,slow=5.0,SNR=9.0						
GEC2	GERESS Array S	73.34	317	P	P	00 41 11.9	+1.3
GEC2				IAmb	IAmb	00 41 13.1	
	comp=Z,3.3nm,0.9s						
GERES	GERESS Array B	73.34	317	P	P	00 41 11.8	+1.1
	comp=Z,1.7nm,0.7s,baz=84,slow=6.1,SNR=18						
NOA	NORSAR Array B	74.87	330	P	P	00 41 19.3	0.0
	comp=Z,0.6nm,0.6s,baz=89,slow=5.8,SNR=3.8						
NOA				LR	LR	01 19 08.8	
	comp=Z,16nm,18.6s,baz=0.0,slow=40						
TORD	Torodi Ar. Bea	88.17	283	P	P	00 42 32.0	+1.6
	comp=Z,1.0nm,0.9s,baz=68,slow=4.0,SNR=3.6						
NVAR	Mina Array Bea	121.41	28	PKP	PKPdf	00 48 33.1	+0.4
	comp=Z,0.2nm,0.4s,baz=276,slow=2.2,SNR=4.0						
PLCA	Paso Flores	148.48	205	PKPbc	PKPbc	00 49 25.4	-0.3
	comp=Z,2.4nm,0.9s,baz=79,slow=4.0,SNR=4.2						

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*NEIC **23** 01:11:56.1±1.2, 60°.64N±0°.03×150°.27W±0°.06, h42^{km}±10^{km}, Error ellipse: s-maj=4.2km s-min=3.6km az=103.0*

AEIC 23 01:11:56±1.4**, 60°.63N**±0°.03×**150°.24W**±0°.06**, h42**^{km}±7^{km}**, ML3.2, ML3.5**/10(NEIC)**, Error ellipse: s-maj=4.1km s-min=3.6km az=93.0, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLKM	Skilak Lake	0.13	176		Pn	01 12 03.1	0.0
SLKM					Sn	01 12 08.4	+0.3
CAPN	Captain Cook N	0.47	287		Pn	01 12 07.2	+0.8
FIS	Fire Island	0.51	1		Pn	01 12 07.4	+0.4
RC01	Rabbit Creek A	0.52	28		Pn	01 12 06.7	-0.4
RC01					Sn	01 12 15.2	+0.3
SEW	Seward	0.66	143		Pn	01 12 08.5	-0.4
SEW					Sn	01 12 18.4	+0.2
SUA	Susitna One	0.87	344		Pn	01 12 11.3	-0.6
SUA					Sn	01 12 23.6	+0.2
BRSE	Bradley Lake S	0.93	196		Pn	01 12 12.5	-0.2
BRSE					Sn	01 12 25.1	+0.3
BRLK	Bradley Lake	0.93	201		Pn	01 12 12.8	+0.2
PWL	Port Wells	0.96	76		Pn	01 12 13.2	+0.1
PWL					Sn	01 12 26.7	+1.1
RDT	Redoubt	1.07	268		Pn	01 12 14.1	-0.5
SPCG	Spurr Capps Gl	1.09	308		Pn	01 12 14.4	-0.5
PMR	Palmer	1.10	29		Pn	01 12 15.0	0.0
PMR					Sn	01 12 29.4	+0.5
PMR	Palmer	1.10	29	IAML		01 12 30.9	
	comp=E,1µm,0.5s						
PMR				IAML		01 12 30.9	
	comp=N,2µm,0.3s						
SPCR	Spurr Chakacha	1.12	301		Pn	01 12 14.6	-0.6
SPCN	Chakachatna No	1.12	303		Pn	01 12 14.8	-0.4
SPCN					Sn	01 12 30.5	+1.0
SPCP	Crater Peak Br	1.13	305		Pn	01 12 15.1	-0.4
STLK	Strandline Lak	1.16	319		Pn	01 12 15.6	-0.3
KNK	Knik Glacier	1.17	47		Pn	01 12 16.1	+0.2
CKL	Chakachamna La	1.17	300		Pn	01 12 15.4	-0.6
HOM	Homer	1.21	216		Pn	01 12 16.8	+0.5
HOM					Sn	01 12 32.8	+1.3
SPBG	Spurr Blockage	1.22	302		Pn	01 12 15.2	-1.3
CNPM	China Poot	1.22	205		Pn	01 12 16.7	+0.2
REF	Redoubt East F	1.23	264		Pn	01 12 16.2	-0.6
REF					Sn	01 12 32.2	-0.1
RSO	Redoubt South	1.25	263		Pn	01 12 16.8	-0.4
RED	Redoubt Volcan	1.27	261		Pn	01 12 16.6	-0.8
RED					Sn	01 12 33.3	0.0
GHO	Glory Hole Cre	1.31	29		Pn	01 12 18.1	+0.3
NCT	North Crescent	1.33	268		Pn	01 12 17.7	-0.4
NCT					Sn	01 12 35.0	+0.2
SKT	Skwentna	1.49	336		Pn	01 12 20.5	+0.2
SKT					Sn	01 12 39.9	+1.4
SML	Sawmill	1.50	37		Pn	01 12 20.6	+0.2
IVE	Iliamna Volcan	1.52	247		Pn	01 12 20.4	-0.3
IVE					Sn	01 12 39.1	-0.1
GLI	Glacier Island	1.56	80		Pn	01 12 20.3	-0.9
GLI					Sn	01 12 39.7	-0.6
ILS	Iliamna Low So	1.56	246		Pn	01 12 21.2	-0.2
CUT	Chulitna	1.78	360		Sn	01 12 47.8	+2.3
OPT	Oil Point	1.79	238		Pn	01 12 24.7	+0.3
JPK	Jack Peak	1.83	75		Pn	01 12 24.5	-0.5
SCM	Sheep Creek Mo	1.85	48		Pn	01 12 25.8	+0.5
FID	Port Fidalgo	1.85	85		Pn	01 12 24.0	-1.3
HIN	Hinchinbrook I	1.86	96		Pn	01 12 25.5	+0.1
AUP	Augustine Pinn	2.05	233		Pn	01 12 28.7	+0.7
AUCH	Augustine Cone	2.06	233		Pn	01 12 28.1	0.0
AUW	Augustine West	2.06	233		Pn	01 12 28.8	+0.7
EYAK	Cordova Ski Ar	2.22	90		Pn	01 12 29.4	-0.8
DIV	Divide	2.24	75		Pn	01 12 30.2	-0.4
KLU	Klutina	2.27	66		Pn	01 12 31.1	+0.1
WAT6	Susitna Watana	2.29	30		Pn	01 12 31.9	+0.5
WAT7	Susitna Watana	2.30	16		Pn	01 12 32.0	+0.5
WAT1	Susitna Watana	2.34	19		Pn	01 12 33.0	+0.9
HUR	Hurricane	2.37	7		Pn	01 12 33.5	+1.1
M24K	Tolsona, Glenn	2.45	51		Pn	01 12 34.5	+1.0
PPLA	Purkeypile	2.45	339		Pn	01 12 33.9	+0.3
WAT2	Susitna Watana	2.47	18		Pn	01 12 34.0	+0.3
PS12	TAPS Pump St12	2.62	69		Pn	01 12 35.5	-0.3
PS11	TAPS Pump St11	2.71	56		Pn	01 12 36.8	-0.3
GOAT	Goat Mountain	2.72	89		Pn	01 12 36.2	-1.0
BMRM	Bremner River	2.78	81		Pn	01 12 37.2	-0.9
DHY	Denali Highway	2.80	28		Pn	01 12 39.0	+0.6
TRF	Thorofare Moun	2.83	360		Pn	01 12 40.0	+1.2
RND	Reindeer	2.86	13		Pn	01 12 40.4	+1.3
N25K	Chitina, Valde	2.91	68		Pn	01 12 39.8	+0.1
KTH	Kantishna Hill	2.95	354		Pn	01 12 42.4	+2.0
KDAK	Kodiak Island	3.10	204	Pn	Pn	01 12 41.7	-0.7
KDAK				IAML		01 13 33.7	
	comp=N,66nm,3.0s						
KAHC	Katmai Hardscr	3.13	233		Pn	01 12 42.7	-0.2
MCK	McKinley	3.17	11		Pn	01 12 44.9	+1.5
GLB	Gilahina Butte	3.23	73		Pn	01 12 43.9	-0.3
PAX	Paxson	3.26	42		Pn	01 12 45.1	+0.5
VRDI	Verde Repeater	3.37	77		Pn	01 12 45.3	-0.8
CHUM	Lake Minchumin	3.40	344		Pn	01 12 47.5	+1.1
KVTA	Katmai Vly 10	3.43	231		Pn	01 12 47.4	+0.6
KCE	Katmai Mt Cerb	3.48	229		Pn	01 12 48.0	+0.3
KABR	Katmai Barrier	3.49	226		Pn	01 12 48.1	+0.4
BPAW	Bear Paw Mtn.	3.50	355		Pn	01 12 48.4	+0.6
TT01	Tatalina	3.57	312		Pn	01 12 48.8	0.0
TTA	Tatalina	3.58	313		Pn	01 12 49.1	+0.1
MCARA	McCarthy VSAT	3.59	75		Pn	01 12 48.9	-0.2
OHAK	Old Harbor	3.77	206		Pn	01 12 50.1	-1.3
OHAK	Old Harbor	3.77	206	IAML		01 14 01.9	
	comp=N,82nm,3.2s						
OHAK				IAML		01 15 00.3	
	comp=E,73nm,2.9s						
PTPK	Patty Peak	3.84	78		Pn	01 12 52.4	-0.2
KIAG	Kiagna River	3.88	82		Pn	01 12 52.4	-0.8
BALM	Baldy	3.88	81		Pn	01 12 52.6	-0.7
WRH	Wood River Hil	3.98	14		Pn	01 12 55.4	+1.0
NEA2	Nenana	4.01	7		Pn	01 12 55.7	+0.9
RIDG	Independent Ri	4.01	37		Pn	01 12 55.8	+0.9
HDA	Harding Lake	4.08	20		Pn	01 12 57.0	+1.1
CCB	Clear Creek Bu	4.18	15		Pn	01 12 58.0	+0.8
DOT	Dot Lake	4.19	41		Pn	01 12 57.5	+0.1
PS08	TAPS Pump Stn8	4.23	20		Pn	01 12 59.1	+1.3
CTGM	Chitina Glacie	4.38	82		Pn	01 13 00.0	+0.1
TCOL	CIGO, UAF Yank	4.39	13		Pn	01 13 00.1	+0.1
COLA	College	4.39	13		Pn	01 12 59.8	-0.3
IL31		4.43	19		Pn	01 13 01.5	+0.9
MDM	Murphy Dome	4.44	11		Pn	01 13 01.6	+0.9
SCRK	Sand Creek	4.45	38		Pn	01 13 01.0	+0.1
LOGN	Logan Glacier	4.54	84		Pn	01 13 02.4	+0.2
I23K	Minto, Yukon-K	4.55	5		Pn	01 13 02.8	+0.7
POKR	Poker Plat Res	4.68	15		Pn	01 13 04.5	+0.5
BC03		4.69	55		Pn	01 13 04.8	+0.8
YUK2	White River	4.69	72		Pn	01 13 04.4	+0.1
BVCY	Beaver Creek	4.83	64		Pn	01 13 06.7	+0.6
YUK3	Moose Creek	4.87	72		Pn	01 13 06.8	+0.1
K27K	Chicken	5.11	45		Pn	01 13 11.0	+1.2
K27K	Chicken	5.11	45	IAML		01 14 33.7	
	comp=N,15nm,1.5s						
PRP	Porcupine Dome	5.35	22		Pn	01 13 14.1	+0.8
IM03		5.60	345		Pn	01 13 17.8	+1.3
YUK4	Talbot Arm	5.69	78		Pn	01 13 18.9	+0.8
EGAK	Eagle	5.89	41		Pn	01 13 20.8	+0.2
DAWY	Dawson	6.11	51		Pn	01 13 23.8	+0.1
COLD	Coldfoot	6.62	0	Pn	Pn	01 13 31.0	+0.4
BM03	Burnt Mountain	7.24	17		Pn	01 13 39.3	+0.1

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*KRNET **23** 01:11:59.0±0.1, 42°.15N×77°.23E, h21^{km}, mb2.4*
*NNC **23** 01:12:01.0±0.9, 42°.18N×77°.29E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=6.5km s-min=2.9km az=12.0*
*SOME **23** 01:12:00.3, 42°.15N×77°.25E, h10^{km}*

ISC 23 01:12:00.7±0.9**, 42°.16N**±0°.04×**77°.19E**±0°.02**, h11**^{km}±6^{km}**, n38,** σ**1^{s}10**/72**, 14C-8D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	0.03	195	⇑iP	Pg	01 12 02.7	-0.3
	baz=36						
KDJ				⇑iS	Sg	01 12 05.3	+0.8
	baz=36						
ULHL	Ulahol	0.71	277	⇓iP	Pg	01 12 13.3	-1.2
	baz=78						
ULHL				⇓iS	Sg	01 12 23.2	-0.6
	baz=78						
ANVS	Anan'yevo	0.71	29	⇓eP	Pg	01 12 12.8	-1.8
	baz=26						
ANVS				⇓iS	Sg	01 12 22.4	-1.5
	baz=26						
TNSS	Tian-Shan	0.89	348	eP	Pg	01 12 17.9	-0.1
	1.7nm,0.1s						
TNSS				eS	Sb	01 12 30.7	+0.1
	2.3nm,0.2s						
TNSS	Tian-Shan	0.89	348	P	Pg	01 12 17.9	-0.1
	1.7nm,0.1s						
TNSS				S	Sb	01 12 30.7	+0.1
	2.3nm,0.2s						
IZV	Izvestkoviy	0.97	334	eP	Pg	01 12 19.5	0.0
	0.9nm,0.1s						
IZV				eS	Sb	01 12 33.6	+0.9
	6.3nm,0.1s						
IZV	Izvestkoviy	0.97	334	P	Pg	01 12 19.6	+0.2
	0.9nm,0.1s						
IZV				S	Sb	01 12 34.0	+1.3
	6.3nm,0.1s						
BOOM	Boomskoye usch	0.98	290	⇓iP	Pg	01 12 18.3	-1.4
	baz=90						
BOOM				⇓iS	Sg	01 12 32.3	-0.2
	baz=90						
MDOK	Medeo	1.01	354	eP	Pg	01 12 19.7	-0.4
	1.1nm,0.1s						
MDOK				eS	Sb	01 12 33.6	+0.1
	5.5nm,0.3s						
MDOK	Medeo	1.01	354	Pg	Pg	01 12 19.7	-0.4
	1.1nm,0.1s						
MDOK				Lg	Lg	01 12 33.6	
	5.5nm,0.3s						
KOTS	Kotyrbulak	1.07	357	eP	Pg	01 12 21.1	-0.3
	4.2nm,0.2s						
KOTS				eS	Sb	01 12 36.2	+0.7
	3.6nm,0.2s						
MTBS	Maitube	1.12	330	eP	Pb	01 12 22.2	+0.1
	0.6nm,0.1s						
MTBS				eS	Sn	01 12 37.9	+0.1
	2.4nm,0.1s						
KST	Kastek	1.26	315	eP	Pb	01 12 25.1	+0.4
	0.6nm,0.1s						
KST				eS	Sg	01 12 43.0	+1.6
	1.6nm,0.4s						
SATY	Saty	1.27	45	eP	Pn	01 12 23.2	-1.3
	3.6nm,0.2s						
SATY				eS	Sb	01 12 39.7	-1.4
	8.2nm,0.1s						
SATY	Saty	1.27	45	P	Pn	01 12 23.2	-1.3
	3.6nm,0.2s						
SATY				S	Sb	01 12 39.7	-1.4
	8.2nm,0.1s						
ZHN	Zhinishke	1.36	42	eP	Pn	01 12 25.0	-0.8
	1.1nm,0.2s						
ZHN				eS	Sb	01 12 42.9	-0.9
	1.4nm,0.2s						
TKM2	Tokmak 2	1.40	303	⇓iP	Pn	01 12 25.4	-1.0
	baz=3.0						
TKM2				⇓iS	Sn	01 12 44.5	-0.5
	baz=3.0						
DGS	Degeres	1.50	316	eP	Pb	01 12 29.3	+0.6
	0.8nm,0.4s						
DGS				eS	Sg	01 12 50.1	+1.0
	1.2nm,0.2s						
DGS	Degeres	1.50	316	P	Pb	01 12 29.3	+0.6
	0.8nm,0.4s						
DGS				S	Sg	01 12 50.1	+1.0
	1.2nm,0.2s						
KURS	Kuram	1.51	28	eP	Pb	01 12 28.5	-0.2
	0.5nm,0.1s						
KURS				eS	Sg	01 12 48.8	-0.4
	1.1nm,0.3s						
KTBS	Karatobe	1.59	347	eP	Pb	01 12 30.7	+0.5
	0.6nm,0.3s						
KTBS				eS	Sg	01 12 52.5	+0.5
	7.9nm,0.2s						
KTBS	Karatobe	1.59	347	P	Pb	01 12 30.7	+0.5
	0.6nm,0.3s						
KTBS				S	Sg	01 12 52.5	+0.5
	7.9nm,0.2s						
UZB	Uzynbulak	1.67	53	eP	Pn	01 12 29.8	-0.3
	4.3nm,0.2s						
UZB				eS	Sn	01 12 51.1	-0.5
	4.1nm,0.2s						
UZB	Uzynbulak	1.67	53	P	Pn	01 12 29.7	-0.3
	4.3nm,0.2s						
UZB				S	Sb	01 12 51.7	-1.0
	4.1nm,0.2s						
KPKS	Kokpek	1.70	40	eP	Pb	01 12 31.4	-0.7
	6.0nm,0.2s						
KPKS				eS	Sg	01 12 54.0	-1.6
	3.6nm,0.2s						
KBK	Karagaybulak	1.73	287	⇑iP	Pn	01 12 31.3	+0.4
	baz=87						
KBK				⇑iS	Sn	01 12 54.0	+0.8
	baz=87						
KUU	Kurty	1.84	340	eP	Pb	01 12 34.8	+0.4
	0.6nm,0.1s						
KUU				eS	Sg	01 12 59.8	-0.1
	3.7nm,0.2s						
KUU	Kurty	1.84	340	P	Pb	01 12 34.8	+0.4
	0.6nm,0.1s						
KUU				S	Sg	01 12 59.8	-0.1
	3.7nm,0.2s						
SHLS	Shalkode	1.95	59	eP	Pg	01 12 40.4	+2.3
	3.9nm,0.3s						
SHLS				eS	Sg	01 13 09.1	+5.7
	7.1nm,0.3s						
SHLS	Shalkode	1.95	59	Pg	Pg	01 12 40.4	+2.3
	3.9nm,0.3s						
SHLS				Lg	Lg	01 13 09.1	
	7.1nm,0.3s						
UCH	Uchtor	1.99	273	⇑iP	Pn	01 12 34.1	-0.6
	baz=73						
UCH				⇑iS	Sn	01 12 59.3	-0.6
	baz=73						
AAK	Ala-Archa	2.05	284	⇑iP	Pn	01 12 35.4	+0.1
	baz=84						
AAK				⇑iS	Sn	01 13 01.2	+0.2
	baz=84						
PDGK	Podgornoye	2.06	55	Pg	Pb	01 12 37.2	-1.0
	0.4nm,0.2s						
PDGK				Lg	Lg	01 13 03.6	
	2.5nm,0.5s						
ARXS	Arharly	2.10	13	eP	Pb	01 12 38.7	-0.2
	1.1nm,0.2s						
ARXS				eS	Sb	01 13 06.3	+1.3
	5.6nm,0.3s						
ARXS	Arharly	2.10	13	Pg	Pb	01 12 38.7	-0.2
	1.1nm,0.2s						
ARXS				Lg	Lg	01 13 06.3	
	5.6nm,0.3s						
USP	Ospenovka	2.27	300	⇑iP	Pn	01 12 38.3	+0.1
	baz=0.0						
USP				⇑iS	Sn	01 13 06.6	+0.4
	baz=0.0						
EKS2	Erkin-Say	2.58	282	⇑iP	Pn	01 12 42.5	0.0
	baz=83						
EKS2				⇑iS	Sn	01 13 13.9	0.0
	baz=83						
AML	Almayashu	2.60	270	⇑iP	Pn	01 12 42.7	-0.4
	baz=71						
AML				⇑iS	Sn	01 13 14.8	-0.1
	baz=71						

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*VAO **23** 01:25:32.5±1.7, 30°.04S×72°.24W, h38^{km}, mb4.5*
*IDC **23** 01:25:32.8±0.7, 29°.84S×71°.47W, h0^{km}, mb4.2/10, mb1 4.2/13, mb1mx4.1/27, mbtmp4.1/13, ML3.8/3, MS3.3/7, Ms1 3.3/7, ms1mx3.1/25, Error ellipse: s-maj=28.8km s-min=18.0km az=96.0*
*NEIC **23** 01:25:38.5±2.5, 29°.84S±0°.07×71°.7W±0°.2, h45^{km}±2^{km}, Error ellipse: s-maj=20.0km s-min=9.0km az=100.0*
*GUC **23** 01:25:39.1±1.6, 29°.84S×71°.46W, h64^{km}±19^{km}, ML4.4*
*SJA **23** 01:25:40.1±0.7, 29°.78S×71°.52W, h32^{km}±2^{km}, ML4.3, MW4.4*

ISC 23 01:25:37.4±1.1**, 29°.76S**±0°.03×**71°.71W**±0°.05**, h32**^{km}±8^{km}**, n98,** σ**1^{s}78**/103**, mb4.4**/12**, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	0.89	117	⇑iP	Pb	01 25 54.9	+0.2
GO04				i S	Sn	01 26 06.3	+0.4
GO04	Tololo Observa	0.89	117	eP	Pb	01 25 55.3	+0.7
GO04				eS	Sn	01 26 06.5	+0.6
LCO	Las Campanas	1.16	50		Pb	01 25 59.6	+0.6
CO03	El Pedregal	1.39	141	eP	Pn	01 26 01.6	+0.9
CO03				i S	Sn	01 26 17.8	-0.3
CO03				IAML		01 26 19.0	
	comp=N,21µm,0.1s						
CO01	Juntas del Tor	1.42	99	⇑iP	Pb	01 26 03.0	-0.5
CO01				i S	Sb	01 26 19.0	-2.5
CO01				IAML		01 26 20.5	
	comp=N,12µm,0.3s						
AC05	El Transito	1.56	54	⇑iP	Pn	01 26 05.0	+1.9
AC05				i S	Sb	01 26 24.6	-0.6
AC05				IAML		01 26 25.9	
	comp=E,5µm,0.4s						
CO02	Combarbal	1.56	157	⇓iP	Pn	01 26 04.6	+1.6
CO02				i S	Sn	01 26 23.1	+0.8
CO02				IAML		01 26 24.9	
	comp=E,28µm,0.3s						
AC04	Llanos de Chal	1.65	20	eP	Pn	01 26 06.5	+2.4

AC04				*i* S	Sn	01 26 26.1	+1.9
AROD	Rodeo	1.99	102	*e*P	Pb	01 26 12.2	-0.9
AROD				*e*S	Sb	01 26 35.9	-1.7
ACDV	Cuesta del Vie	2.29	101	*e*P	Pn	01 26 15.3	+2.2
ACDV				IAML		01 26 46.7	
	comp=Z,3µm,0.5s						
ACCO	Cerro Coronel	2.44	110	*e*P	Pb	01 26 19.0	-1.7
GO03	Copiap	2.52	31	*e*P	Pn	01 26 18.4	+2.2
GO03				*i* S	Sn	01 26 48.8	+2.9
GO03				IAML		01 27 01.3	
	comp=E,1µm,0.5s						
GO03	Copiap	2.52	31	*e*P	Pn	01 26 18.4	+2.2
AGUA	GUANDACOL	2.82	85	*e*P	Pb	01 26 25.1	-2.1
AGUA				IAML		01 27 02.0	
	comp=Z,2µm,0.4s						
RTLS	Leoncito	2.91	135	*e*P	Pn	01 26 25.7	+4.0
RTLS				IAML		01 27 06.5	
	comp=Z,2µm,0.6s						
ZON	Zonda	3.16	125	*e*P	Pn	01 26 28.8	+3.8
ZON				IAML		01 27 23.8	
	comp=Z,536nm,1.3s						
AUSP	Uspallata	3.16	141	*e*P	Pn	01 26 29.2	+4.0
AUSP				*e*S	Sn	01 27 06.2	+4.1
RTLL	Cerro Villicun	3.20	120	*e*P	Pn	01 26 28.6	+3.1
RTLL				IAML		01 27 26.9	
	comp=Z,698nm,0.4s						
VCA	Vinchina	3.23	72	*e*P	Pb	01 26 31.4	-2.8
VCA				IAML		01 27 17.4	
	comp=Z,1µm,0.3s						
ROC1	El Roble	3.26	170	*e*P	Pn	01 26 28.0	+1.5
RTCV	Cerro Valdivia	3.44	128	*e*P	Pn	01 26 32.7	+3.8
RTCV				IAML		01 27 15.1	
	comp=Z,391nm,1.0s						
PEL	Peldehue	3.48	166	Pn	Pn	01 26 30.7	+1.3
PEL	Peldehue	3.48	166	*e*P	Pn	01 26 31.3	+1.9
AC01	Pan de Azucar	3.73	16	IAML		01 27 49.6	
	comp=E,282nm,0.2s						
ASAL	Salagasta	3.75	140	*e*P	Pn	01 26 37.0	+3.9
ASAL				IAML		01 27 41.8	
	comp=Z,697nm,1.7s						
ARCO	CERRO ARCO	3.88	143	*e*P	Pn	01 26 39.8	+4.8
ARCO				IAML		01 27 33.5	
	comp=Z,472nm,0.4s						
AAGR	Agrelo	4.13	144	*e*P	Pn	01 26 43.1	+4.7
AAGR				IAML		01 27 47.6	
	comp=Z,405nm,0.6s						
PB14	IPOC Station P	5.25	13	*e*P	Pb	01 27 05.5	-3.2
PB14				IAML		01 28 35.7	
	comp=Z,124nm,0.5s						
CYA	Choya	5.34	77	*e*P	Pn	01 26 57.3	+2.4
CYA				IAML		01 28 17.1	
	comp=Z,190nm,0.7s						
COIS	El Sosneado	5.62	162	*e*P	Pn	01 27 00.2	+1.4
RFA	San Rafael	5.70	152	*e*P	Pn	01 27 02.0	+2.1
RFA				IAML		01 28 57.3	
	comp=Z,122nm,1.3s						
MRA	San Martin	5.79	119	*e*P	Pn	01 27 02.6	+1.5
MRA				IAML		01 28 09.6	
	comp=Z,198nm,0.4s						
PB10	IPOC Station P	6.31	10	*e*P	Pn	01 27 08.2	0.0
PB10				IAML		01 29 07.1	
	comp=Z,44nm,1.1s						
TCA	Tanti	6.34	106	*e*P	Pn	01 27 09.7	+1.0
TCA				IAML		01 28 54.7	
	comp=Z,218nm,2.3s						
AHML	Horco Molle	6.36	64	*e*P	Pn	01 27 11.4	+2.5
AHML				IAML		01 29 14.9	
	comp=Z,45nm,1.5s						
H03N1	Juan Fernandez	7.15	237	Pn	Pn	01 27 20.8	+1.3
	baz=114,slow=18,SNR=460						
H03N1				Sn	Sn	01 28 34.3	-5.2
	baz=109,slow=20,SNR=19						
H03N1				T	T	01 34 50.9	
	baz=66,slow=72,SNR=747						
H03N2	Juan Fernandez	7.17	237	Pn	Pn	01 27 20.8	+1.1
	baz=114,slow=18,SNR=336						
H03N2				Sn	Sn	01 28 34.2	-5.7
	baz=109,slow=20,SNR=16						
H03N2				T	T	01 34 51.1	
	baz=66,slow=72,SNR=701						
H03N3	Juan Fernandez	7.17	237	Pn	Pn	01 27 20.6	+0.8
	baz=114,slow=18,SNR=566						
H03N3				Sn	Sn	01 28 34.0	-5.9
	baz=109,slow=20,SNR=13						
H03N3				T	T	01 34 51.1	
	baz=66,slow=72,SNR=582						
PB06	IPOC Station P	7.29	16	Pn	Pn	01 27 22.7	+0.9
H03S3	Juan Fernandez	7.34	235	Pn	Pn	01 27 22.5	+0.4
	baz=352,slow=21,SNR=30						
H03S3				Sn	Sn	01 28 37.9	-6.3
H03S1	Juan Fernandez	7.35	235	Pn	Pn	01 27 22.3	+0.1
	baz=352,slow=21,SNR=23						
H03S1				Sn	Sn	01 28 37.5	-6.8
H03S2	Juan Fernandez	7.36	235	Pn	Pn	01 27 22.5	+0.2
	baz=352,slow=21,SNR=33						
H03S2				Sn	Sn	01 28 37.9	-6.7
LVC	Limon Verde	7.55	20	Pn	Pn	01 27 25.1	-0.5
	comp=Z,0.3nm,0.3s,baz=215,slow=12,SNR=1.2						
LVC				Sn	Sn	01 28 48.3	-2.1
	comp=Z,4.2nm,0.3s,baz=232,slow=17,SNR=3.2						
LVC				LR	LR	01 30 29.0	
	comp=Z,148nm,18.7s,baz=228,slow=39						
PLCA	Paso Flores	10.99	175	Pn	Pn	01 28 11.1	-1.3
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=6.1						
PLCA				LR	LR	01 32 41.9	
	comp=Z,77nm,19.1s,baz=360,slow=39						
ITQB	Itaqui	13.12	93	*e*P	Pn	01 28 40.5	-1.0
CPUP	Villa Florida	13.15	78	LR	LR	01 34 09.4	
	comp=Z,147nm,21.8s,baz=222,slow=40						
CPUP	Villa Florida	13.15	78	*e*P	Pn	01 28 44.7	+2.7
PLTB	Pedras Altas	15.70	102	*e*P	Pn	01 29 16.5	+0.3
CPSB	Cacapava Do Su	15.84	97	*e*P	Pn	01 29 18.7	+0.7
SIV	San Ignacio	16.84	38	Pn	Pn	01 29 30.1	-0.7
	comp=Z,1.1nm,0.3s,baz=239,slow=12,SNR=13						
SIV				LR	LR	01 37 13.8	
	comp=Z,89nm,18.9s,baz=268,slow=42						
ITAB	Concordia	17.40	86	*e*P	Pn	01 29 38.7	+1.0
CNLB	Canela	18.16	94	*e*P	Pn	01 29 47.2	0.0
PTGB	Pitanga	18.18	79	*e*P	Pn	01 29 48.0	+0.6
NNA	Nana	18.32	344	LR	LR	01 35 18.7	
	comp=Z,52nm,20.2s,baz=179,slow=32						
TRCB	Terra Rica	18.45	72	*e*P	P	01 29 51.5	+1.1
VILB	Vilhena	19.84	35	*e*P	P	01 30 06.5	+0.7
PCMB	Pacaembu	20.12	71	*e*P	P	01 30 09.0	+0.2
ETMB	Extrema	20.50	16	*e*P	P	01 30 11.7	-1.1
FRTB	Fartura	20.80	77	*e*P	P	01 30 15.8	-0.4
ITRB	Iturama	21.80	68	*e*P	P	01 30 26.1	-0.8
CZSB	Cruzeiro do Su	21.94	357	*e*P	P	01 30 25.5	-2.8
SAML	Samuel	22.20	23	P	P	01 30 31.4	+0.3
SAML				IAmb	IAmb	01 30 34.4	
	comp=Z,5.3nm,0.9s						
SPB	Sao Paulo	22.53	80	*e*P	P	01 30 33.6	-1.0
BB19B	Bebedouro	22.63	73	*e*P	P	01 30 34.1	-1.7
ARAG	Araguaiana, MT	23.03	57	*e*P	P	01 30 37.7	-2.2
VAO	Valinhos	23.14	79	*e*P	P	01 30 40.2	-0.9
CLDB	Colider	23.95	42	*e*P	P	01 30 47.8	-1.1
IPMB	Ipameri, GO	24.43	67	*e*P	P	01 30 52.6	-0.7
BSCB	Bom Sucesso	25.81	76	*e*P	P	01 31 05.4	-0.5
BDFB	Brasilia	25.92	62	P	P	01 31 05.3	-1.6
	comp=Z,3.8nm,0.5s,baz=234,slow=10.0,SNR=9.0						
BDFB				LR	LR	01 41 27.8	
	comp=Z,74nm,18.8s,baz=250,slow=37						
SNDB	Serra Nova Dou	25.95	51	*e*P	P	01 31 06.7	-0.3
NPGB	Novo Progresso	27.34	37	*e*P	P	01 31 18.8	-0.8
PEXB	Peixe	27.95	56	*e*P	P	01 31 24.6	-0.6
JANB	Januaria	29.16	66	*e*P	P	01 31 34.7	-1.2
BSFB	Barra de Sao F	30.08	76	*e*P	P	01 31 43.1	-0.8
RPN	Rapa Nui	33.09	265	LR	LR	01 41 47.4	
	comp=Z,138nm,18.7s,baz=28,slow=29						
NBPS	Pedro II - PI	38.15	54	*e*P	P	01 32 53.8	-0.2
VNA3	Neumayer Olymp	53.19	159	P	P	01 34 50.9	-1.1
TLIG	Tlapa	53.71	328	P	P	01 34 55.8	-0.8
TLIG				IAmb	IAmb	01 34 58.6	
	comp=Z,6.6nm,1.2s						
VNA2	Neumayer--Watz	53.82	158	P	P	01 34 56.4	-0.3
	baz=284,slow=8.8						
SNAA	Sanae	55.41	159	P	P	01 35 07.7	-0.6
SNAA	Sanae	55.41	159	P	P	01 35 07.6	-0.7
	comp=Z,3.0nm,0.8s,baz=277,slow=8.7,SNR=12						
QSPA	South Pole Qui	60.46	180	P	P	01 35 44.0	+0.1
	comp=Z,2.1nm,0.7s,baz=141,slow=4.5,SNR=7.0						
QSPA	South Pole Qui	60.46	180	P	P	01 35 40.9	-3.0
DBIC	Dimbokro	73.59	72	P	P	01 37 07.2	-0.6
	comp=Z,4.8nm,0.7s,baz=221,slow=5.8,SNR=9.6						
MAW	Mawson	77.16	164	P	P	01 37 27.2	-0.2
	comp=Z,12nm,1.1s,baz=198,slow=6.4,SNR=2.6						
PDAR	Pinedale Array	80.12	333	P	P	01 37 46.0	+1.6
	comp=Z,0.2nm,0.6s,baz=119,slow=7.3,SNR=2.0						
NVAR	Mina Array Bea	80.58	325	P	P	01 37 48.7	+1.8
	comp=Z,0.1nm,0.3s,baz=147,slow=5.4,SNR=1.7						
BOSA	Boshof	81.81	118	P	P	01 37 52.9	-0.8
	comp=Z,4.1nm,0.9s,baz=263,slow=4.7,SNR=6.9						
TORD	Torodi Ar. Bea	82.52	70	P	P	01 37 56.6	-0.7
	comp=Z,3.9nm,0.8s,baz=255,slow=4.8,SNR=13						
YKA	Yellowknife Ar	98.14	341	P	P	01 39 10.7	+0.3
	comp=Z,0.1nm,0.2s,baz=134,slow=5.6,SNR=1.5						
WRA	Warramunga Arr	124.57	210	PKP	PKPdf	01 44 33.2	-0.9
	comp=Z,0.6nm,0.6s,baz=165,slow=1.6,SNR=6.0						
KK31	Karatay Array	147.10	56	PKPbc	PKPdf	01 45 16.2	+1.4
KKAR	Karatay Array	147.10	56	PKPbc	PKPdf	01 45 15.8	+1.0
AAK	Ala-Archa	150.06	55	PKPbc	PKPdf	01 45 24.5	+4.6
ZALV	Zalesovo Beam	150.44	28	PKPbc	PKPbc	01 45 25.4	+0.3
	comp=Z,4.0nm,0.6s,baz=298,slow=3.3,SNR=25						
MKAR	Makanchi Array	153.62	43	PKPbc	PKPbc	01 45 33.3	+0.6
	comp=Z,0.2nm,0.6s,baz=318,slow=1.9,SNR=2.5						
MKAR				PKPab	pPKPbc	01 45 45.0	+2.3
	comp=Z,1.3nm,0.9s,baz=305,slow=4.3,SNR=8.6						
SONM	Songino Array	161.90	4	PKPab	PKPab	01 46 21.6	+0.6
	comp=Z,0.2nm,0.6s,baz=343,slow=2.6,SNR=3.7						

TAP 23 01:46:24.7, 24°.21N×122°.17E, h53km±1km, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao	0.41	306	*e*P	Pn	01 46 35.6	+0.6
	baz=312						
ENAH				*e*S	Sn	01 46 43.3	+0.9
	baz=312						
ENA	Nanau	0.45	299	*e*P	Pn	01 46 34.9	-0.6
	baz=305						
ENA				*e*S	Sn	01 46 43.6	+0.4
	baz=305						
NACB	Ninganchiao	0.53	266	P	Pn	01 46 35.8	-0.6
	baz=266						
NACB				*e*S	Sn	01 46 44.8	-0.1
	baz=266						
TWD	Chiawan	0.54	256	*e*P	Pn	01 46 35.6	-0.9
	baz=249						
TWD				*e*S	Sn	01 46 45.0	-0.1
	baz=249						
ETLH	Xiulin Townshi	0.63	270	*e*P	Pn	01 46 37.6	-0.2
	baz=270						
ETLH				*e*S	Sn	01 46 46.9	-0.2
	baz=270						
NNSB	Datong	0.75	287	*e*P	Pn	01 46 39.0	-0.3
	baz=287						
NNSB				*e*S	Sn	01 46 49.9	-0.1
	baz=287						
NNSH	Datong	0.75	287	*e*S	Sn	01 46 50.3	+0.3
	baz=287						
NWLT	Wulai	0.83	313	*e*P	Pn	01 46 40.8	+0.5
	baz=303						
NWLT				*e*S	Sn	01 46 51.9	+0.2
	baz=303						
WHF	Hehuan Shan	0.83	266	*e*P	Pn	01 46 41.1	+0.5
	baz=256						
WHF				*e*S	Sn	01 46 52.1	-0.1
	baz=256						
YHNB	Yeheng	0.86	302	P	Pn	01 46 40.8	+0.2
	baz=302						
YHNB				*e*S	Sn	01 46 53.2	+0.8
	baz=302						
NSK	Sanguang	0.87	302	*e*P	Pn	01 46 41.3	+0.4
	baz=302						
NSK				*e*S	Sn	01 46 52.4	-0.3
	baz=302						
TDCB	Techi	0.93	273	*e*P	Pn	01 46 42.5	+0.8
	baz=273						
TDCB				*e*S	Sn	01 46 54.4	+0.3
	baz=273						

JMA 23 01:46:45.7±0.2, 25°.07N×123°.23E, h145km±3km, M2.3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.64	198	P	Pn	01 47 07.5	+0.2
JYNG	Yonagunijimaku	0.67	203	P	Pn	01 47 07.7	+0.2
IRIF	Iriomote-Funau	0.86	148	P	Pn	01 47 08.8	-0.1
IRIF				S	Sn	01 47 27.0	+0.6
JIJ	Ishigaki jima	1.09	130	P	Pn	01 47 10.7	-0.1
JIJ				S	Sn	01 47 29.4	-0.5
JKRS	Kuro-shima	1.09	139	P	Pn	01 47 11.1	+0.3
JKRS				S	Sn	01 47 30.4	+0.5
JISG	Ishigakijimahi	1.09	116	P	Pn	01 47 11.1	+0.3
JISG				S	Sn	01 47 30.2	+0.3
HATJ	Hateruma jima	1.14	152	P	Pn	01 47 11.5	+0.3
HATJ				*e*S	Sn	01 47 31.4	+0.7
JTJ	Tarama	1.40	107	P	Pn	01 47 14.4	+0.6
JTJ				S	Sn	01 47 35.6	+0.3
JIRB	Irabujima	1.78	97	*e*S	Sn	01 47 42.2	-0.4
JIKM	Ikemajima	1.84	94	*e*S	Sn	01 47 43.8	0.0
JMJ2	Miyako jima3	1.93	99	*e*S	Sn	01 47 45.6	-0.2

GUC ***23*** *02:08:58.4±0.6, 22°.83S×67°.07W, h249km±8km, ML4.5*
IDC ***23*** *02:08:58.1±6.0, 22°.99S×66°.39W, h229km±60km, mb2.9/4, mb1 3.3/6, mb1mx3.2/19, mbtmp3.7/6, Error ellipse: s-maj=39.9km s-min=24.9km az=146.0*
VAO ***23*** *02:09:01.6±2.6, 22°.81S×66°.56W, h288km±20km, mb4.2*
ISC 23 02:08:57.1±0.7, 22°.91S±0°.08×66°.84W±0°.07, h250km, n34, σ1ˢ.53/41, mb3.1/4, 7C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.94	278	*e*P	Pn	02 09 39.2	-0.2
LVC				*i* S	S	02 10 11.0	-1.7
PB09	IPOC Station P	2.49	296	⇑*i*P	Pn	02 09 44.8	+0.3
PB09				*i* S	S	02 10 19.9	-1.9
PB09				IAML		02 10 22.5	
	comp=E,366nm,0.6s						
PB07	IPOC Station P	3.06	292	⇑*i*P	Pn	02 09 50.6	+0.1
PB07				*i* S	S	02 10 30.0	-2.6
PB07				IAML		02 10 30.8	
	comp=N,902nm,0.2s						
PB05	IPOC Station P	3.10	270	⇑*i*P	Pn	02 09 51.0	+0.1
PB05				*i* S	S	02 10 31.4	-2.0
PB04	IPOC Station P	3.11	280	⇑*i*P	Pn	02 09 51.1	+0.1
PB04				*i* S	S	02 10 31.2	-2.4
PB04				IAML		02 10 35.5	
	comp=E,658nm,0.5s						
PB10	IPOC Station P	3.47	259	⇑*i*P	Pn	02 09 55.6	+0.7
PB10				*i* S	S	02 10 38.2	-2.4
PB10				IAML		02 10 42.1	
	comp=E,422nm,0.2s						
PB08	IPOC Station P	3.50	322	⇑*i*P	Pn	02 09 55.9	+0.3
PB08				*i* S	S	02 10 39.8	-2.0
PB08				IAML		02 10 41.6	
	comp=N,514nm,0.6s						
PB14	IPOC Station P	3.69	242	⇑*i*P	Pn	02 09 58.1	+0.5
PB14				*i* S	S	02 10 44.0	-1.5
PB14				IAML		02 10 45.8	
	comp=E,287nm,0.3s						
CPSB	Cacapava Do Su	14.11	125	*e*P	P	02 12 07.6	+0.5
PCMB	Pacaembu	14.48	88	*e*P	P	02 12 11.3	-0.1
ITRB	Iturama	15.68	81	*e*P	P	02 12 23.3	-1.3
ARAG	Araguaiana, MT	15.88	66	*e*P	P	02 12 26.2	-0.6
FRTB	Fartura	15.90	95	*e*P	P	02 12 26.2	-0.8
CLDB	Colider	15.95	43	*e*P	Pn	02 12 28.2	-0.7
PLCA	Paso Flores	18.05	189	P	Pn	02 12 52.3	-1.0
	comp=E,0.1nm,0.3s,baz=4.0,slow=13,SNR=4.6						
IPMB	Ipameri, GO	18.12	78	*e*P	P	02 12 50.5	-0.8
VAO	Valinhos	18.30	94	*e*P	P	02 12 52.3	-0.9
SNDB	Serra Nova Dou	18.37	56	*e*P	P	02 12 52.2	-1.7
BDFB	Brasilia	19.17	71	P	P	02 13 01.4	-1.2
	comp=E,0.7nm,0.3s,baz=239,slow=13,SNR=21						
ITTB	Itaituba	21.33	32	*e*P	P	02 13 23.1	-2.0
JANB	Januaria	22.67	74	*e*P	P	02 13 36.1	-1.3
SMTB	Santa Maria do	23.15	56	*e*P	P	02 13 41.6	-0.2
SDBA	SAO DESIDERIO	23.33	67	*e*P	P	02 13 42.3	-1.2
PRPB	Parauapebas	23.37	47	*e*P	P	02 13 42.6	-1.2
MALB	Monte Alegre	24.23	32	*e*P	P	02 13 51.5	0.0
SJMB	Sao Joao De Ma	24.33	85	*e*P	P	02 13 51.4	-1.1
BSFB	Barra de Sao F	24.61	85	*e*P	P	02 13 54.0	-1.0
GDU01	Guandu, BA	27.41	75	*e*P	P	02 14 18.6	-1.4
NBPS	Pedro II - PI	30.68	57	*e*P	P	02 14 48.0	-1.0
TORD	Torodi Ar. Bea	76.04	69	P	P	02 20 17.6	+0.1
	comp=E,1.1nm,0.7s,baz=242,slow=5.1,SNR=4.3						
PDAR	Pinedale Array	76.29	329	P	P	02 20 22.6	+4.0
	comp=E,0.1nm,0.4s,baz=147,slow=8.6,SNR=2.0						
NVAR	Mina Array Bea	77.78	321	P	P	02 20 32.7	+5.6
	comp=E,0.1nm,0.3s,baz=124,slow=8.8,SNR=3.3						
YKA	Yellowknife Ar	93.16	340	P	P	02 21 45.8	+3.4
	comp=E,0.1nm,0.4s,baz=120,slow=5.2,SNR=1.8						
MKAR	Makanchi Array	145.59	39	PKPbc	PKiKP	02 28 09.1	-0.5
	comp=E,0.6nm,0.6s,baz=314,slow=4.0,SNR=8.4						

IDC ***23*** *02:09:04.5±2.2, 32°.28S×178°.15W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/24, mbtmp3.9/3, ML3.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/38, Error ellipse: s-maj=66.0km s-min=41.1km az=137.0*
ISC 23 02:09:06.0±2.5, 32°.5S±0°.2×177°.9W±0°.4, h20km, n7, σ0ˢ.63/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.04	214	Pn	Pn	02 10 48.4	+0.5
	0.9nm,0.3s,baz=340,slow=22,SNR=1.7						
URZ				Sn	Sn	02 12 06.5	-0.7
	3.4nm,0.3s,baz=208,slow=20,SNR=11						
ASAR	Alice Springs	43.10	269	P	P	02 17 05.3	+0.3
	0.6nm,0.5s,baz=110,slow=7.6,SNR=7.2						
WRA	Warramunga Arr	44.27	274	P	P	02 17 14.3	-0.2
	1.0nm,0.4s,baz=113,slow=8.1,SNR=16						
QSPA	South Pole Qui	57.62	180	LR	LR	02 41 37.0	
	comp=Z,50nm,19.6s,baz=53,slow=34						
KBZ	Khabaz	146.29	301	PKPbc	PKPab	02 28 46.1	+0.4
	0.7nm,0.7s,baz=106,slow=7.4,SNR=2.2						
FINES	FINESS Array B	147.12	339	PKPbc	PKPab	02 28 47.8	-0.6
	1.1nm,0.4s,baz=44,slow=3.9,SNR=25						
BRTR	Keskin Array B	153.59	295	PKPbc	PKPbc	02 29 03.1	-0.2
	0.4nm,0.9s,baz=8.1,slow=3.7,SNR=2.4						

BGR ***23*** *03:06:51.5±0.0, 64°.71N×20°.88W, h10km, mb4.5*
MOS ***23*** *03:07:02.8±1.6, 64°.55N×17°.59W, h10km, mb4.6/40, Error ellipse: s-maj=10.4km s-min=6.4km az=111.1*
REY ***23*** *03:07:02.5, 64°.67N×17°.39W, h8km*
NEIC ***23*** *03:07:03.0±1.4, 64°.65N±0°.07×17°.5W±0°.1, h7km±3km, mb4.6/68, Error ellipse: s-maj=10.0km s-min=8.1km az=181.0*
IDC ***23*** *03:07:04.2±0.5, 64°.51N×17°.63W, h0km, mb3.9/22, mb1 4.1/25, mb1mx4.0/46, mbtmp3.9/25, ML3.3/3, MS3.4/13, Ms1 3.4/13, ms1mx3.1/49, Error ellipse: s-maj=16.9km s-min=8.5km az=18.0*
ISC 23 03:07:03.0±0.7, 64°.67N±0°.02×17°.43W±0°.02, h2km±4km, n262, σ1ˢ.68/274, mb4.4/93, MS3.3/12, 7C, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.12	14	P	Pg	03 07 05.2	-0.2
	baz=4.3						
IDYN				S	Sg	03 07 07.8	+0.8
	baz=4.3						
IDJK	Dyngjujokull	0.19	153	P	Pg	03 07 06.2	-0.5
	baz=158						
IURH	Urdarhals	0.19	39	P	Pg	03 07 06.4	-0.3
	baz=34						
IHAM	Hamarinn	0.26	221	P	Pg	03 07 08.0	+0.2
	baz=225						
IGRF	Grimsfjall	0.28	165	P	Pg	03 07 07.8	-0.5
	baz=169						
IKVE	Kverkfjoll	0.33	88	P	Pg	03 07 08.9	-0.3
	baz=88						
IKVE				S	Sg	03 07 13.7	+0.2
	baz=88						
IHUS	Husbondi	0.39	194	P	Pg	03 07 09.9	-0.5
	baz=197						
IHUS				S	Sg	03 07 16.1	+0.6
	baz=197						
THOR	Thorvaldshraun	0.42	51	P	Pg	03 07 10.1	-0.9
	baz=49						
ISKR	Skrokkalda	0.42	255	P	Pg	03 07 10.8	-0.3
	baz=256						
IKRE	Kreppuhraun	0.47	75	P	Pg	03 07 10.8	-1.1
	baz=74						
IKRE				S	Sg	03 07 16.4	-1.5
	baz=74						
IJOK	Jokulheimar	0.49	224	P	Pg	03 07 11.5	-0.9
	baz=226						
IASK	Askja	0.51	41	P	Pg	03 07 11.7	-1.0
	baz=39						
IASK				S	Sg	03 07 18.6	-0.7
	baz=39						
IMKO	Mokollar	0.56	56	P	Pg	03 07 12.5	-1.2
	baz=55						
IIEY	Innrieyrar	0.65	208	P	Pg	03 07 14.2	-1.3
	baz=209						
IKSK	Karasker	0.66	140	P	Pg	03 07 13.6	-2.0
	baz=142						
ISVA	Svartarkot	0.67	6	P	Pg	03 07 14.4	-1.4
	baz=4.8						
IKAL	Kalfafell	0.73	189	P	Pg	03 07 15.7	-1.3
	baz=190						
IKAL				S	Sg	03 07 26.0	-0.5
	baz=190						
IVSH	V-Sauoahnukur	0.74	79	P	Pg	03 07 15.4	-1.8
	baz=78						
IFAG	Fagurholsmyri	0.87	157	P	Pg	03 07 17.7	-1.8
	baz=158						
IHVE	Hveravellir	0.94	283	P	Pg	03 07 19.4	-1.5
	baz=283						
IMEL	Melhnausar	0.96	20	P	Pg	03 07 19.3	-2.0
	baz=18						
IREN	Reynihlio	1.00	13	P	Pg	03 07 19.9	-2.3
	baz=12						
IKVO	Krokottuvotn	1.07	12	P	Pg	03 07 21.0	-2.5
	baz=11						
ISNB	Snabyli	1.07	210	P	Pg	03 07 21.8	-1.7
	baz=211						
IGRS	Grimsstaoir	1.12	29	P	Pb	03 07 21.9	-3.1
	baz=28						
IFED	Fedgar	1.18	238	P	Pb	03 07 23.7	-2.3
	baz=238						
IRJU	Rjupnafell	1.19	208	P	Pb	03 07 23.7	-2.5
	baz=209						
ISKI	Skildingahlsh	1.22	8	P	Pn	03 07 23.5	-3.5
	baz=7.0						
IGHA	Grjothals	1.22	15	P	Pn	03 07 23.7	-3.3
	baz=14						
IMJO	Mjoaskard	1.23	234	P	Pn	03 07 24.5	-2.6
	baz=234						
IGYG	Gygjarholskot	1.27	253	P	Pn	03 07 25.0	-2.7
	baz=254						
IHVO	Lagu-Hvolar	1.31	209	P	Pn	03 07 26.1	-2.1
	baz=210						
IHAU	Haukadalur	1.31	239	P	Pn	03 07 26.2	-2.1
	baz=239						
IDIM	Dimmadalss	1.31	9	P	Pn	03 07 25.0	-3.3
	baz=8.2						
IHED	Heoinshofoi	1.42	2	P	Pn	03 07 26.6	-3.1
	baz=1.3						
IESK	Eystri-Skogar	1.45	218	P	Pn	03 07 27.9	-2.3
	baz=219						
ISAU	Saurbar	1.47	244	P	Pn	03 07 27.8	-2.6
	baz=244						
IBRE	Brettingsstaoi	1.47	352	P	Pn	03 07 27.8	-2.7
	baz=352						
IGIL	Gilhagi	1.48	17	P	Pn	03 07 28.1	-2.5
	baz=17						
ISIG	Siglufjorour	1.59	338	P	Pn	03 07 29.6	-2.5
	baz=337						
IASM	Asmuli	1.62	240	P	Pn	03 07 31.0	-1.6
	baz=241						
BORG	Borgarnes	1.67	274	Pg	Pn	03 07 31.5	-1.7
	16nm,0.3s,baz=93,slow=8.5,SNR=80						
BORG				Lg	Lg	03 07 54.3	
	7.5nm,0.3s,baz=358,slow=22,SNR=14						
BORG	Borgarnes	1.67	274	P	Pn	03 07 32.0	-1.2
BORG						03 07 53.5	
BORG	Borgarnes	1.67	274		Pn	03 07 32.0	-1.2
BORG				Sn	Sn	03 07 53.5	-1.7
IKRO	Krokur	1.70	252	P	Pn	03 07 31.8	-1.8
	baz=252						
ISOL	Solvholt	1.70	246	P	Pn	03 07 31.9	-1.7
	baz=246						
IHEI	Heioarbar	1.72	256	P	Pn	03 07 32.3	-1.6
	baz=256						
ILEI	Leirhofn	1.79	12	P	Pn	03 07 32.5	-2.3
	baz=12						
IHRN	Hraun	1.83	323	P	Pn	03 07 33.7	-1.7
	baz=323						

IGRI	Grimsey	1.89	353	P	Pn	03 07 33.9	-2.4
	baz=352						
SCO	Scoresbysund	6.09	346	e	Pn	03 08 27.4	-6.4
	baz=166,slow=7.9						
SCO				i P	Pn	03 08 34.0	+0.2
SCO				i S	Sn	03 09 47.0	+3.1
SCO				IAML		03 10 03.5	
	comp=Z,1.5nm,0.5s						
EKA	Eskdalemuir Ar	11.74	136	Pn	Pn	03 09 51.2	-0.1
	baz=328,slow=13,SNR=9.5						
ESK	Eskdalemuir	11.74	136	P	Pn	03 09 50.6	-0.7
ESK	Eskdalemuir	11.74	136	Pn	Pn	03 09 50.6	-0.7
DAG	Danmarks Havn	12.17	359	i P	Pn	03 10 01.3	+4.3
DAG	Danmarks Havn	12.17	359	i P	Pn	03 10 01.3	+4.3
DAG	Danmarks Havn	12.17	359	i P	Pn	03 10 01.4	+4.3
NC204	NORSAR Array S	13.20	92	Pn	Pn	03 10 10.9	-0.4
NBO00	NORSAR Array S	13.32	93	Pn	Pn	03 10 12.7	-0.1
NOA	NORSAR Array B	13.51	92	Pn	Pn	03 10 13.6	-1.8
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.5						
NOA				LR	LR	03 15 13.9	
	comp=Z,93nm,20.9s,baz=300,slow=36						
NC405	NORSAR Array S	13.69	92	Pn	Pn	03 10 15.9	-1.9
SFJD	Kangerlussuaq	13.69	295	LR	LR	03 15 11.2	
	comp=Z,163nm,21.4s,baz=84,slow=36						
SFJD	Kangerlussuaq	13.69	295	P	Pn	03 10 16.0	-1.8
SFJD	Kangerlussuaq	13.69	295	Pn	Pn	03 10 16.0	-1.8
HFS	Hagfors	15.02	93	Pn	P	03 10 39.6	-1.9
	baz=306,slow=12,SNR=2.6						
HFS				LR	LR	03 16 10.6	
	comp=Z,123nm,19.1s,baz=266,slow=36						
ARCES	ARCESS Array B	17.09	55	P	P	03 11 06.8	+2.3
	baz=306,slow=15,SNR=3.8						
ARCES				LR	LR	03 16 24.1	
	comp=Z,112nm,19.4s,baz=325,slow=32						
MSF	Maaselka	19.13	65	P	Pn	03 11 27.4	-0.3
WLF	Walferdange	19.55	129	P	Pn	03 11 31.8	-1.0
WLF				pmax	pmax		
	comp=Z,28nm,1.6s						
WLF	Walferdange	19.55	129	P	Pn	03 11 31.8	-1.0
FINES	FINESS Array B	19.68	79	P	Pn	03 11 34.8	+0.5
	comp=Z,0.1nm,0.3s,baz=330,slow=11,SNR=7.6						
FINES				LR	LR	03 18 32.2	
	comp=Z,126nm,21.8s,baz=330,slow=35						
TULEG	Thule	19.86	327	P	P	03 11 30.9	-3.9
TULEG				IAmb	IAmb	03 11 42.9	
	comp=Z,48nm,1.7s						
MOX	Moxa	20.68	119	P	Pn	03 11 46.4	+0.2
MOX				pmax	pmax		
	comp=Z,11nm,1.2s						
CLL	Collm	20.68	116	i P	Pn	03 11 44.4	-1.8
	comp=Z,21nm,1.6s						
CLL				i		03 11 53.9	
CLL				Lm	MLR	03 19 00.0	
	comp=Z,100nm,20.6s						
CLL	Collm	20.68	116	i P	Pn	03 11 44.4	-1.8
CLL				pmax	pmax		
	comp=Z,21nm,1.6s						
CLL	Collm	20.68	116	P	P	03 11 43.9	0.0
GRA1	Grafenberg Arr	21.31	121	P	P	03 11 51.9	+1.2
GRA1				IAmb	IAmb	03 12 11.2	
	comp=Z,31nm,1.4s						
GRF	Grafenberg Arr	21.31	121	P	P	03 11 51.9	+1.2
GRF				pmax	pmax		
	comp=Z,31nm,1.4s						
GRF	Grafenberg Arr	21.31	121	eP	P	03 11 53.0	+2.2
	comp=Z,28nm,1.6s,baz=322,slow=10						
GRFO	Grafenberg	21.31	121	P	P	03 11 48.8	-1.9
GRFO				pmax	pmax		
	comp=Z,19nm,1.5s						
GRFO	Grafenberg	21.31	121	P	P	03 11 48.8	-1.9
NKC	Novy Kostel	21.33	118	P	P	03 11 52.7	+1.8
NKC				pmax	pmax		
	comp=Z,5.0nm,2.2s						
NKC	Novy Kostel	21.33	118	eP	P	03 11 55.7	+4.8
BRG	Berggiesshubel	21.39	115	eP	P	03 11 51.8	+0.2
BRG				Amp		03 11 55.6	
	comp=Z,14nm,1.3s						
BRG	Berggiesshubel	21.39	115	eP	P	03 11 51.7	+0.2
BRG				pmax	pmax		
	comp=Z,14nm,1.3s						
BRG	Berggiesshubel	21.39	115	eP	P	03 11 51.8	+0.2
BRG				Amp		03 11 55.6	
	comp=Z,14nm,1.3s						
BFO	Black Forest	21.43	127	P	P	03 11 51.4	-0.6
BFO				pmax	pmax		
	comp=Z,16nm,1.3s						
BFO	Black Forest	21.43	127	P	P	03 11 51.4	-0.6
VSU	Vasula	21.54	86⇑	eP	P	03 11 53.0	0.0
VSU				pmax	pmax		
	comp=Z,46nm,1.1s						
VALR	Valaam	21.74	76	i P	P	03 11 56.3	+1.1
VALR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
FRB	Frobisher Bay	21.77	291	P	P	03 11 58.1	+2.6
	comp=Z,4.1nm,1.0s,baz=59,slow=12,SNR=4.8						
FRB				LR	LR	03 20 10.8	
	comp=Z,98nm,18.1s,baz=52,slow=36						
PRU	Pruhonice	22.33	116	eP	P	03 12 04.2	+2.6
PRU	Pruhonice	22.33	116	eP	P	03 12 04.2	+2.6
KSP	Ksiaz	22.34	112	eP	P	03 12 03.1	+1.3
CHVC	Chvalec	22.44	113	eP	P	03 12 04.9	+2.0
OSTC	Ostas	22.53	113	eP	P	03 12 05.8	+2.0
OSTC				ex	x	03 12 15.8	
KHC	Kasperske Hory	22.65	119	P	P	03 12 04.3	-0.8
KHC				pmax	pmax		
	comp=Z,14nm,1.6s						
KHC	Kasperske Hory	22.65	119	eP	P	03 12 07.9	+2.8
KHC	Kasperske Hory	22.65	119	P	P	03 12 04.3	-0.8
DPC	Dobruska-Polom	22.74	113	eP	P	03 12 06.0	0.0
DPC	Dobruska-Polom	22.74	113	eP	P	03 12 06.0	0.0
SUW	Suwalki	22.86	98	IAmb	IAmb	03 12 16.7	
	comp=Z,22nm,1.1s						
DAVA	Damuels	22.86	126	eP	P	03 12 06.2	-1.3
	comp=Z,14nm,1.5s						
GEC2	GERESS Array S	22.93	119	P	P	03 12 07.9	-0.2
GERES	GERESS Array B	22.93	119	P	P	03 12 09.8	+1.7
	comp=Z,1.2nm,0.9s,baz=327,slow=9.5,SNR=7.3						
GERES				LR	LR	03 21 13.1	
	comp=Z,107nm,20.8s,baz=314,slow=37						
RETA	Reutte	23.00	125	eP	P	03 12 06.8	-2.0
	comp=Z,7.0nm,1.4s						
KRLC	Kraliky	23.14	113	eP	P	03 12 11.2	+1.0
KRLC	Kraliky	23.14	113	eP	P	03 12 11.2	+1.0
MOTA	Moosalm	23.24	125	eP	P	03 12 11.9	+0.5
	comp=Z,12nm,1.3s						
DAVOX	Davos/Dischmat	23.30	127	P	P	03 12 13.8	+1.8
	comp=Z,2.2nm,1.0s,baz=341,slow=18,SNR=2.3						
DAVOX				LR	LR	03 21 00.5	
	comp=Z,59nm,19.1s,baz=346,slow=36						
TMCR	Tamitsa	23.32	66	eP	P	03 12 10.4	-1.4
TMCR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SQTA	Sankt Quirin	23.38	125	eP	P	03 12 13.2	+0.4
	comp=Z,4.2nm,0.9s						
FETA	Feichten	23.39	126	eP	P	03 12 12.7	-0.2
	comp=Z,7.8nm,1.4s						
BEL	Belsk	23.42	105	eP	P	03 12 15.0	+2.1
WATA	Walderalm	23.42	124	eP	P	03 12 14.4	+1.3
	comp=Z,7.5nm,1.2s						
VRAC	Vranov	23.67	114	P	P	03 12 17.8	+2.3
	comp=Z,1.5nm,0.5s,baz=333,slow=13,SNR=5.0						
VRAC				LR	LR	03 21 20.7	
	comp=Z,84nm,20.2s,baz=332,slow=36						
VRAC	Vranov	23.67	114	eP	P	03 12 16.8	+1.3
MORC	Moravsky Berou	23.67	112	eP	P	03 12 16.3	+0.7
MORC	Moravsky Berou	23.67	112	P	P	03 12 15.0	-0.6
MORC				pmax	pmax		
	comp=Z,32nm,1.9s						
MORC	Moravsky Berou	23.67	112	P	P	03 12 15.0	-0.6
MORC				IAmb	IAmb	03 12 19.3	
	comp=Z,32nm,1.9s						
NACGM	Naroch	23.79	93	i P	P	03 12 18.0	+1.4
NACGM				i P	P	03 12 18.0	+1.4
NACGM				i P	P	03 12 18.0	+1.4
NACGM				i Pb	sP	03 12 20.6	+2.7
	comp=Z,11nm,0.7s						
NACGM				i PP	PnPn	03 12 45.8	+2.0
NACGM				i PPP	PPP	03 12 53.7	
NACGM				i S	S	03 16 34.2	+1.6
NACGM				i SS	Sn	03 16 45.8	-8.2
NACGM				i SSS	SSS	03 17 39.6	
NACGM				i LQ	LQ	03 20 12.2	
NACGM				i LR	LR	03 21 30.6	
NACGM				i Sb		03 21 44.5	
	comp=E,174nm,22.2s						
KRUC	Moravsky	23.79	115	eP	P	03 12 17.5	+0.8
MOA	Molln	23.97	119	eP	P	03 12 18.1	-0.3
	comp=E,7.2nm,1.7s						
OJC	Ojcow	24.24	109	P	P	03 12 19.9	-1.0
OJC				pmax	pmax		
	comp=Z,16nm,1.5s						
OJC	Ojcow	24.24	109	P	P	03 12 19.9	-1.0
ABTA	Abfaltersbach	24.25	123	eP	P	03 12 19.3	-1.8
	comp=Z,4.3nm,1.2s						
KBA	Koelnbreinsper	24.27	122	eP	P	03 12 19.8	-1.7
	comp=Z,12nm,2.1s						
JAVC	Velka Javorina	24.45	113	eP	P	03 12 23.2	+0.2
CONA	Conrad Observa	24.51	117	eP	P	03 12 24.1	+0.7
	comp=Z,13nm,2.1s						
MNK	Minsk	24.53	93	i P	P	03 12 22.3	-1.2
	comp=E,4.0nm,1.3s						
MNK				i P	P	03 12 22.3	-1.2
	comp=N,16nm,1.1s						
MNK				i P	P	03 12 22.3	-1.2
	comp=Z,7.0nm,0.8s						
MNK				i PP	PnPn	03 12 53.2	-0.8
MNK				i S	S	03 16 42.0	-2.5
MNK				i SS	SnSn	03 17 29.6	+1.3
MNK				i LQ	LQ	03 20 01.4	
MNK				i LR	LR	03 21 53.3	
MNK				i LRM	MLR	03 22 46.0	
	comp=E,22nm,32.2s						
MNK				i LRM	MLR	03 22 46.0	
	comp=N,74nm,14.8s						
MNK				i LRM	MLR	03 22 46.0	
	comp=Z,26nm,15.9s						
MNK	Minsk	24.53	93	eP	P	03 12 24.0	+0.5
CTI	Castel Tesino	24.55	125	P	P	03 12 23.1	-0.7
CTI				pmax	pmax		
	comp=Z,42nm,1.8s						
CTI	Castel Tesino	24.55	125	P	P	03 12 23.1	-0.7
MODS	Modra-Piesok	24.69	115	eP	P	03 12 26.0	+0.9
MODS	Modra-Piesok	24.69	115	eP	P	03 12 25.9	+0.9
MYKA	Terra Mystica	24.76	122	eP	P	03 12 24.2	-1.5
	comp=Z,7.4nm,1.3s						
NIE	Niedzica	25.06	109	eP	P	03 12 30.2	+1.8
OBKA	Obir	25.20	121	eP	P	03 12 30.7	+1.0
	comp=Z,29nm,2.1s						
VYHS	Vyhne	25.21	112	eP	P	03 12 30.9	+1.2
VYHS				pmax	pmax		
	comp=Z,20nm,1.6s						
VYHS	Vyhne	25.21	112	eP	P	03 12 30.9	+1.2
SOKA	Soboth	25.23	120	eP	P	03 12 29.4	-0.6
	comp=Z,5.5nm,1.3s						
KLMR	Klimovskoe	25.57	72	eP	P	03 12 31.5	-1.3
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLMR	Klimovskoe	25.57	72	eP	P	03 12 31.6	-1.3
KLMR				AMP		03 12 36.9	
	comp=Z,15nm,1.3s						
KWP	Kalwaria Pacla	25.88	106	eP	P	03 12 38.9	+3.1
KWP	Kalwaria Pacla	25.88	106	P	P	03 12 34.4	-1.4
KWP				pmax	pmax		
	comp=Z,25nm,1.1s						
KWP	Kalwaria Pacla	25.88	106	P	P	03 12 34.4	-1.4
CSKK	Cskako	25.90	115	eP	P	03 12 33.4	-2.5
CRVS	Cervenica-Dubn	25.94	109	eP	P	03 12 37.3	+1.0
CRVS	Cervenica-Dubn	25.94	109	eP	P	03 12 37.3	+1.0
PSZ	Piszkesteto	26.09	112	eP	P	03 12 36.3	-1.5
PSZ	Piszkesteto	26.09	112	P	P	03 12 36.5	-1.3
PSZ				pmax	pmax		
	comp=Z,20nm,1.4s						
PSZ	Piszkesteto	26.09	112	P	P	03 12 36.5	-1.3
PSZ				IAmb	IAmb	03 12 42.4	
	comp=Z,20nm,1.4s						
TIH	Tihany	26.14	116	eP	P	03 12 32.4	-5.7
ESDC	Sonseca Array	26.25	156	P	P	03 12 40.4	+1.2
	comp=Z,1.4nm,0.8s,baz=348,slow=8.8,SNR=6.6						
KOLS	Kolonicke sedl	26.25	108	eP	P	03 12 42.5	+3.3
KOLS				pmax	pmax		
	comp=Z,49nm,2.4s						
KOLS	Kolonicke sedl	26.25	108	eP	P	03 12 42.4	+3.3
RES	Resolute Bay	26.48	324	P	P	03 12 44.4	+3.4
	comp=Z,2.1nm,1.0s,baz=114,slow=5.4,SNR=3.5						
RES				LR	LR	03 23 31.4	
	comp=Z,63nm,21.2s,baz=83,slow=37						
UZH	Uzhgorod	26.50	108	eP	P	03 12 41.7	+0.4
UZH				i		03 12 45.0	
LATE	Laterza	27.62	129	P	P	03 12 50.9	-0.6
AKASG	Malin Array Be	27.82	98	P	P	03 12 54.1	+0.9
	comp=Z,0.2nm,0.3s,baz=325,slow=9.8,SNR=4.9						
OBN	Obninsk	27.85	84	eP	P	03 12 53.5	+0.1
OBN				ePPP	PPP	03 13 46.7	
OBN				e		03 16 09.9	
OBN				pmax	pmax		
	comp=Z,33nm,1.7s						
OBN	Obninsk	27.85	84	P	P	03 12 52.9	-0.5
KEST	Kesra	33.14	138	LR	LR	03 26 37.1	
	comp=Z,62nm,20.6s,baz=240,slow=36						
BELG	Belogornoye	34.46	79	i P	P	03 13 51.7	+0.1
BELG				pmax	pmax		
	comp=Z,4.0nm,2.0s						
ARU	Arti	36.05	66	i P	P	03 14 07.7	+2.4
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
C36M	Paulatuk	36.84	325	P	P	03 14 10.9	-0.9
C36M				IAmb	IAmb	03 14 17.1	
	comp=Z,12nm,1.3s						
ANTO	Ankara	37.98	106	P	P	03 14 22.0	0.0
ANTO	Ankara	37.98	106	P	P	03 14 22.0	0.0
BR131	Keskin Array S	38.45	105	P	P	03 14 23.8	-2.2
BR131				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BR131	Keskin Array S	38.45	105	P	P	03 14 23.8	-2.2
BRTR	Keskin Array B	38.45	105	P	P	03 14 29.4	+3.4
	comp=Z,1.6nm,0.9s,baz=335,slow=7.5,SNR=8.4						
KIV	Kislovodsk	38.81	92	eP	P	03 14 31.0	+2.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,123nm,16.0s						
KBZ	Khabaz	39.09	93	P	P	03 14 33.9	+2.8
	comp=Z,3.2nm,0.8s,baz=311,slow=8.6,SNR=8.7						
KBZ	Khabaz	39.09	93	eP	P	03 14 33.2	+2.1
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	39.23	313	P	P	03 14 34.1	+2.0
	comp=Z,4.5nm,1.1s,baz=44,slow=8.6,SNR=20						
YKA				PcP	PcP	03 16 42.9	+2.0
	comp=Z,0.3nm,0.5s,baz=71,slow=3.9,SNR=6.4						
YKA	Yellowknife Ar	39.23	313	eP	P	03 14 32.9	+0.8
YKA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NEY	Neytrino	39.40	93	i P	P	03 14 37.6	+3.7
NEY				pmax	pmax		
	comp=Z,1.0nm,1.2s						
E46A	Sault Ste Mari	39.80	276	P	P	03 14 36.0	-1.1
INK	Inuvik	39.85	329	P	P	03 14 35.5	-1.7
INK				pmax	pmax		
	comp=Z,15nm,1.7s						
INK	Inuvik	39.85	329	P	P	03 14 35.5	-1.7
FFC	Flin Flon	40.62	297	P	P	03 14 42.5	-1.2
FFC				pmax	pmax		
	comp=Z,16nm,1.5s						
FFC	Flin Flon	40.62	297	P	P	03 14 42.5	-1.2
FFC				IAmb	IAmb	03 14 48.9	
	comp=Z,16nm,1.4s						
KOPT	Kop Dagi	41.10	98	P	P	03 14 48.0	-0.2
AKH	Akhalkalaki	41.23	94	P	P	03 14 48.2	-0.9
AKH				pmax	pmax		
	comp=Z,29nm,1.2s						
AKH	Akhalkalaki	41.23	94	P	P	03 14 48.2	-0.9
A21K	Barrow	41.43	341	P	P	03 14 48.5	-1.7
TIXI	Tiksi	42.02	15	P	P	03 14 55.7	+0.7
TIXI				pmax	pmax		
	comp=Z,12nm,1.1s						
TIXI	Tiksi	42.02	15	P	P	03 14 55.7	+0.7
TIXI				IAmb	IAmb	03 15 00.8	
	comp=Z,12nm,1.1s						
GNI	Garni	42.80	94	ceP	P	03 15 04.3	+2.3
GNI				pmax	pmax		
	comp=Z,25nm,1.7s						
GNI	Garni	42.80	94	P	P	03 15 01.6	-0.4
BRVK	Borovoye	43.10	62	ceP	P	03 15 05.2	+1.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.4s						
BRVK	Borovoye	43.10	62	P	P	03 15 04.1	0.0
MARD	Mardin	43.48	100	P	P	03 15 07.8	+0.3
N49A	Columbus Grove	44.13	271	P	P	03 15 11.9	-0.6
N49A				IAmb	IAmb	03 15 18.1	
	comp=Z,18nm,1.3s						
DAWY	Dawson	44.71	328	P	P	03 15 17.3	+0.4
DAWY				IAmb	IAmb	03 15 22.1	
	comp=Z,13nm,1.3s						
PRP	Porcupine Dome	44.76	332	P	P	03 15 16.3	-1.1
PRP				IAmb	IAmb	03 15 40.1	
	comp=Z,18nm,1.6s						
IL31		45.69	332	P	P	03 15 23.1	-1.5
ILAR	Eielson Array	45.69	332	P	P	03 15 27.2	+2.6
	comp=Z,4.1nm,1.1s,baz=19,slow=6.5,SNR=16						
ILAR				PcP	PcP	03 17 04.0	+1.7
	comp=Z,1.2nm,1.0s,baz=359,slow=3.9,SNR=5.7						
ILAR				LR	LR	03 36 59.7	
	comp=Z,62nm,18.1s,baz=152,slow=39						
TCOL	CIGO, UAF Yank	45.80	333	P	P	03 15 25.1	-0.3
BPAW	Bear Paw Mtn.	47.09	334	P	P	03 15 35.0	-0.7
BILL	Bilibino	47.55	358	eP	P	03 15 41.2	+2.1
BILL				e		03 17 13.0	
BILL				e		03 17 32.3	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZAA0	Zalesovo Array	47.61	51	P	P	03 15 38.9	-0.8
ZAA0				IAmb	IAmb	03 16 00.9	
	comp=Z,9.4nm,1.9s						
ZALV	Zalesovo Beam	47.61	51	P	P	03 15 42.5	+2.7
	comp=Z,0.8nm,0.7s,baz=334,slow=8.8,SNR=4.1						
ZALV	Zalesovo Beam	47.61	51	eP	P	03 15 43.1	+3.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
Q44A	Meyer Farm, Va	47.88	274	P	P	03 15 40.8	-1.2
USIN	University of	48.09	272	P	P	03 15 43.0	-0.6
KURK	Kurchatov	48.09	58	ceP	P	03 15 45.2	+1.7
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	48.09	58	P	P	03 15 42.7	-0.8
KURK				IAmb	IAmb	03 15 46.8	
	comp=Z,6.3nm,0.9s						
ANM	Nome	48.94	342	P	P	03 15 49.8	-0.1
ANM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ANM	Nome	48.94	342	P	P	03 15 49.8	-0.1
ANM				IAmb	IAmb	03 15 57.4	
	comp=Z,10.0nm,1.4s						
YNE	Yellowstone No	51.50	295	P	P	03 16 08.9	-0.9
BOZ	Bozeman (W)	51.63	297	P	P	03 16 10.5	-0.2
BOZ				pmax	pmax		
	comp=Z,12nm,1.3s						
BOZ	Bozeman (W)	51.63	297	P	P	03 16 10.5	-0.2
BOZ				IAmb	IAmb	03 16 16.4	
	comp=Z,12nm,1.2s						
DGZ	Jazzator, Alta	52.05	53	i P	P	03 16 15.9	+2.1
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SEY	Seymchan	52.48	6	P	P	03 16 18.9	+2.3
	comp=Z,2.6nm,0.9s,baz=16,slow=3.3,SNR=4.9						
MAKZ	Makanchi	52.57	59	P	P	03 16 18.9	+1.4
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MAKZ	Makanchi	52.57	59	P	P	03 16 18.9	+1.4
MK31	Makanchi Array	52.70	58	P	P	03 16 18.5	+0.1
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	52.70	58	P	P	03 16 18.5	+0.1
MKAR	Makanchi Array	52.70	58	P	P	03 16 19.8	+1.3
	comp=Z,1.8nm,0.9s,baz=331,slow=4.5,SNR=15						
MCMT	McKenzie Canyo	52.74	297	P	P	03 16 19.2	+0.1
T35A	Sooner Cattle	52.76	279	P	P	03 16 19.2	+0.2
TORD	Torodi Ar. Bea	53.13	156	P	P	03 16 21.8	-0.1
	comp=Z,1.5nm,0.9s,baz=345,slow=6.9,SNR=3.8						
BW06	Boulder Array	53.20	293	P	P	03 16 21.3	-1.2
BW06				IAmb	IAmb	03 16 27.2	
	comp=Z,11nm,1.2s						
PD31	Pinedale Array	53.20	293	P	P	03 16 21.6	-0.9
PD31				IAmb	IAmb	03 16 27.2	
	comp=Z,10nm,1.3s						
PDAR	Pinedale Array	53.20	293	P	P	03 16 23.9	+1.4
	comp=Z,2.4nm,0.9s,baz=60,slow=5.5,SNR=16						
PDAR				LR	LR	03 38 17.6	
	comp=Z,56nm,21.9s,baz=322,slow=35						
REDW	Red Top Meadow	53.21	295	P	P	03 16 22.4	-0.1
REDW				IAmb	IAmb	03 16 28.3	
	comp=Z,8.7nm,1.4s						
AAK	Ala-Archa	53.23	67	ceP	P	03 16 24.5	+1.9
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AAK	Ala-Archa	53.23	67	P	P	03 16 22.4	-0.2
AAK				IAmb	IAmb	03 16 26.0	
	comp=Z,9.6nm,1.4s						
KAN14	Manchester OK	53.34	280	P	P	03 16 22.4	-0.8
TLY	Talaya	55.38	40	P	P	03 16 40.7	+2.7
	comp=Z,1.7nm,0.4s,baz=330,slow=8.1,SNR=3.6						
TLY	Talaya	55.38	40	IAmb	IAmb	03 16 42.4	
	comp=Z,6.8nm,1.3s						
KSH	Kashi	56.47	68	P	P	03 16 49.1	+3.0
KSH				PP	PP	03 18 56.3	+5.0
KSH				S	S	03 24 38.3	+0.5
KSH				sS	sS	03 24 52.9	+13
KSH				pmax	pmax		
	comp=Z,17nm,1.3s						
KSH				pmax	pmax		
	comp=Z,180nm,5.7s						
KSH				LR	LR		
	comp=N,200nm,4.4s						
KSH				LR	LR		
	comp=E,310nm,5.1s						
KSH				LR	LR		
	comp=Z,330nm,5.4s						
SRU	San Rafael Swe	56.69	292	P	P	03 16 47.3	-0.4
SRU				pmax	pmax		
	comp=Z,17nm,1.8s						
SRU	San Rafael Swe	56.69	292	P	P	03 16 47.3	-0.4
SPIA	Saint Paul Isl	56.72	343	P	P	03 16 44.6	-2.8
WMQ	Urumqi	57.21	56	eP	P	03 16 53.1	+1.9
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,77nm,6.5s						
DBIC	Dimbokro	58.59	165	P	P	03 16 59.9	-1.1
	comp=Z,2.4nm,0.8s,baz=353,slow=11,SNR=3.1						
SONM	Songino Array	59.62	40	P	P	03 17 09.9	+1.9
	comp=Z,0.4nm,0.4s,baz=330,slow=5.2,SNR=4.3						
U15A	North Rim	59.71	291	P	P	03 17 07.6	-1.4
U15A				IAmb	IAmb	03 17 13.1	
	comp=Z,4.2nm,1.1s						
ULN	Ulaanbaatar	59.77	40	ceP	P	03 17 10.7	+1.6
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	59.77	40	P	P	03 17 08.6	-0.5
ULN				IAmb	IAmb	03 17 13.3	
	comp=Z,5.1nm,1.0s						
WUAZ	Wupatki	60.13	290	P	P	03 17 11.6	-0.1
KHMM	Horse Mountain	60.20	303	P	P	03 17 11.7	-0.4
NVAR	Mina Array Bea	60.33	297	P	P	03 17 15.7	+2.6
	comp=Z,0.8nm,0.9s,baz=32,slow=5.3,SNR=4.7						
NIL	Nilore	60.42	74	P	P	03 17 13.1	-0.5
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	Nilore	60.42	74	P	P	03 17 13.1	-0.5
UOSS	Minazif	60.75	93	P	P	03 17 15.8	-0.1
SHPR	Sheep Range	60.78	294	P	P	03 17 15.4	-0.8
SHPR				IAmb	IAmb	03 17 21.8	
	comp=Z,5.4nm,1.4s						
X16A	Lo Mia Camp, P	61.11	290	P	P	03 17 18.2	-0.3
X16A				IAmb	IAmb	03 17 23.1	
	comp=Z,3.6nm,1.0s						
MDPB	Devils Postpil	61.32	298	P	P	03 17 18.9	-1.0
MDPB				IAmb	IAmb	03 17 26.1	
	comp=Z,11nm,1.8s						
TXAR	Lajitas Array	62.31	280	P	P	03 17 28.5	+1.9
	comp=Z,1.0nm,0.9s,baz=49,slow=5.7,SNR=4.0						
319A	Douglas	62.88	286	P	P	03 17 29.9	-0.4
GTA	Gaotai	65.28	49	eP	P	03 17 47.8	+1.8
GTA				pP	sP	03 17 51.4	+4.0
GTA				sP	pP	03 17 53.9	+6.9
GTA				S	S	03 26 37.6	+7.5
GTA				SS	ScS	03 27 39.8	-2.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,5.1s						
GTA				LR	LR		
	comp=N,55nm,18.2s						
GTA				LR	LR		
	comp=E,490nm,18.5s						
GTA				LR	LR		

	comp=Z,92nm,18.5s						
HHC	**Hu-ho-hao-te**	**67.49**	**40**	*e*P	**P**	**03 18 00.6**	**+0.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,7.0s						
LZH	**Lanzhou**	**69.61**	**48**	⇑P	**P**	**03 18 12.6**	**-0.9**
LZH				pP	sP	03 18 17.5	+2.7
LZH				sP	pP	03 18 19.5	+5.0
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
ASCN	**Ascension**	**72.44**	**177**	P	**P**	**03 18 29.1**	**-1.4**
CD2	**Chengdu**	**74.34**	**50**	P	**P**	**03 18 42.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	**Nakatsue**	**79.41**	**27**	P	**P**	**03 19 13.3**	**+3.0**
	comp=Z,12nm,0.9s,baz=314,slow=2.3,SNR=3.6						
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P	**P**	**03 19 36.4**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=317,slow=3.8,SNR=4.2						
ANA2	**Anatahan**	**98.21**	**16**	P	**P**	**03 20 39.8**	**-1.8**
ASAR	**Alice Springs**	**134.94**	**38**	PKP	**PKiKP**	**03 26 25.0**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=339,slow=4.6,SNR=5.1						
ASAR	**Alice Springs**	**134.94**	**38**	PKIKP	**PKiKP**	**03 26 25.0**	**+0.4**

IDC ***23*** *03:33:20.4±3.4, 37°.86N×72°.86E, h102^{km}±26^{km}, mb3.6/9, mb1 3.7/14, mb1mx3.3/46, mbtmp4.1/14, Error ellipse: s-maj=29.7km s-min=22.0km az=178.0*

NNC ***23*** *03:33:23.8±3.3, 38°.18N×72°.63E, h130^{km}±63^{km}, mb3.7, mpv4.2, Error ellipse: s-maj=33.5km s-min=21.4km az=168.0*

NEIC ***23*** *03:33:23.9±2.3, 38°.17N±0°.06×72°.8E±0°.1, h132^{km}±9^{km}, mb4.1/6, Error ellipse: s-maj=11.8km s-min=9.0km az=100.0*

BJI ***23*** *03:33:25.3±0.0, 38°.19N×73°.10E, h158^{km}, mB4.3/2, mb4.1/4*

ISC 23 03:33:22.1±0.5, **37°.99N**±0°.05×**72°.87E**±0°.06, **h127**^{km}, **n57**, σ**1^{s}.83**/63, **mb3.9**/10, **7C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.87**	**57**	P	**Pn**	**03 34 04.3**	**-2.7**
KSH				S	Sn	03 34 31.8	-10
KSH				smax	smax		
	comp=N,570nm,0.3s						
KSH				smax	smax		
	comp=E,420nm,0.3s						
AML	**Almayashu**	**4.18**	**8**	P	**Pn**	**03 34 24.8**	**+0.2**
	SNR=854						
TAS	**Tashkent**	**4.32**	**321**	Pn	**Pn**	**03 34 24.3**	**-1.8**
NIL	**Nilore**	**4.34**	**176**	Pn	**Pn**	**03 34 30.2**	**+3.7**
UCH	**Uchtor**	**4.42**	**16**	P	**Pn**	**03 34 28.2**	**+0.5**
	SNR=119						
KBL	**Kabul**	**4.63**	**223**	Pn	**Pn**	**03 34 34.1**	**+3.8**
EKS2	**Erkin-Say**	**4.72**	**8**	P	**Pn**	**03 34 32.1**	**+0.7**
	SNR=62						
AAK	**Ala-Archa**	**4.80**	**15**	P	**Pn**	**03 34 33.1**	**+0.4**
	30nm,0.3s,baz=198,slow=13,SNR=60						
AAK				S	**Sn**	**03 35 26.1**	**-1.4**
	16nm,0.3s,baz=148,slow=24,SNR=19						
AAK	**Ala-Archa**	**4.80**	**15**	P	**Pn**	**03 34 33.6**	**+0.9**
	SNR=50						
AAK	**Ala-Archa**	**4.80**	**15**	⇓P	**Pn**	**03 34 33.5**	**+0.9**
	24nm,0.3s						
AAK				⇑S	**Sn**	**03 35 25.9**	**-1.6**
	72nm,0.5s						
KBK	**Karagaybulak**	**4.92**	**18**	P	**Pn**	**03 34 35.2**	**+1.0**
	SNR=24						
ULHL	**Ulahol**	**4.97**	**30**	P	**Pn**	**03 34 35.3**	**+0.3**
	SNR=60						
CHMS	**Chumysh**	**5.20**	**15**	P	**Pn**	**03 34 38.6**	**+0.7**
	SNR=44						
TKM2	**Tokmak 2**	**5.34**	**22**	P	**Pn**	**03 34 40.4**	**+0.5**
	SNR=24						
TKM2	**Tokmak 2**	**5.34**	**22**	⇑P	**Pn**	**03 34 40.3**	**+0.3**
	7.3nm,0.4s						
TKM2				⇑S	**Sn**	**03 35 40.0**	**-0.5**
	8.0nm,0.5s						
KK31	**Karatay Array**	**5.41**	**341**	P	**Pn**	**03 34 40.5**	**-0.1**
	16nm,0.3s,baz=163,slow=13,SNR=455						
KK31				⇑S	**Sn**	**03 35 36.7**	**-5.1**
	43nm,0.2s,baz=165,slow=22,SNR=5.5						
KK31	**Karatay Array**	**5.41**	**341**	Pn	**Pn**	**03 34 40.2**	**-0.4**
KKAR	**Karatay Array**	**5.41**	**341**		**Pn**	**03 34 40.2**	**-0.4**
USP	**Ospenovka**	**5.41**	**13**	P	**Pn**	**03 34 41.0**	**+0.3**
	SNR=40						
MDOK	**Medeo**	**6.07**	**30**	⇑P	**Pn**	**03 34 50.0**	**+0.4**
	8.4nm,0.6s						
MDOK				S	**Sn**	**03 35 60.0**	**+2.1**
	13nm,0.7s						
DHRM	**DHARAMSHALA**	**6.38**	**153**	*e*P	**Pn**	**03 34 55.8**	**+1.8**
DHRM				*e*S	**Sn**	**03 36 03.9**	**-1.8**
DHRM				IAML		03 36 12.2	
	comp=E,210nm,0.3s						
DHRM				IAML		03 36 12.3	
	comp=N,138nm,0.3s						
PDGK	**Podgornoye**	**7.33**	**41**	⇑P	**Pn**	**03 35 06.2**	**-0.4**
	comp=N,9.1nm,0.6s						
SMLA	**Simla**	**7.71**	**151**	*e*P	**Pn**	**03 35 13.4**	**+1.8**
SMLA				*e*S	**Sn**	**03 36 33.0**	**-4.5**
SMLA				IAML		03 36 33.5	
	comp=N,97nm,0.6s						
SMLA				IAML		03 36 34.4	
	comp=E,82nm,0.7s						
DDI	**Dehra Dun**	**8.77**	**149**	*e*S	**Sn**	**03 36 57.6**	**-5.7**
MAKZ	**Makanchi**	**11.08**	**34**	⇓P	**Pn**	**03 35 56.4**	**-0.5**
	comp=E,16nm,1.2s						
MAKZ	**Makanchi**	**11.08**	**34**	Pn	**Pn**	**03 35 56.7**	**-0.1**
MK31	**Makanchi Array**	**11.21**	**35**		**Pn**	**03 35 58.5**	**-0.1**
MKAR	**Makanchi Array**	**11.21**	**35**	P	**Pn**	**03 35 58.5**	**-0.1**
	comp=E,0.2nm,0.3s,baz=218,slow=14,SNR=21						
GEYT	**Alibeck**	**11.65**	**274**	P	**Pn**	**03 36 02.8**	**-1.6**
	comp=E,1.0nm,0.3s,baz=103,slow=13,SNR=5.3						
GEYT				S	Sn	03 38 03.2	-9.5
	comp=E,1.8nm,0.3s,baz=108,slow=24,SNR=6.0						
WMQ	**Urumqi**	**12.63**	**58**	*e*P	**Pn**	**03 36 17.3**	**0.0**
KURBB	**Kurchatov Arra**	**13.26**	**16**	P	**Pn**	**03 36 22.4**	**-2.8**
	comp=E,0.2nm,0.3s,baz=206,slow=12,SNR=21						
KURK	**Kurchatov**	**13.36**	**16**	Pn	**Pn**	**03 36 23.9**	**-2.7**
AB31	**Akbulak array**	**14.62**	**324**	P	**Pn**	**03 36 40.2**	**-2.4**
	comp=E,4.9nm,0.4s,baz=138,slow=12,SNR=201						
AB31				⇑S	Sn	03 39 07.7	-16
	comp=E,7.3nm,0.6s,baz=134,slow=24,SNR=20						
ABKAR	**Akbulak array**	**14.62**	**324**		**Pn**	**03 36 40.6**	**-2.0**
BVAR	**Borovoye Array**	**15.13**	**354**	P	**Pn**	**03 36 47.5**	**-1.6**
	comp=E,0.9nm,0.3s,baz=161,slow=14,SNR=11						
BVAR				S	Sn	03 39 24.9	-12
	comp=E,0.3nm,0.3s,baz=165,slow=22,SNR=3.6						
BRVK	**Borovoye**	**15.17**	**354**		**Pn**	**03 36 47.8**	**-1.7**
BHPL	**Bhopal**	**15.21**	**164**	*e*P	**Pn**	**03 36 49.5**	**-0.9**
BHPL				*e*S	Sn	03 39 28.3	-11
AKTO	**Aktyubinsk**	**16.33**	**324**	P	**P**	**03 37 04.5**	**0.0**
	comp=E,4.2nm,0.3s,baz=110,slow=9.6,SNR=52						
AKTO				S	Sn	03 39 51.0	-14
	comp=E,0.6nm,0.3s,baz=0.1,slow=13,SNR=6.7						
AKTO	**Aktyubinsk**	**16.33**	**324**	⇓P	**P**	**03 37 04.4**	**-0.1**
	comp=E,10nm,0.5s						
LSA	**Lhasa**	**17.27**	**113**	P	**Pn**	**03 37 16.9**	**+0.9**
LSA				IAmb	IAmb	03 37 22.3	
	comp=Z,7.5nm,0.7s						
ZAA0	**Zalesovo Array**	**17.95**	**23**	P	**P**	**03 37 21.9**	**-0.3**
ZALV	**Zalesovo Beam**	**17.95**	**23**	P	**Pn**	**03 37 23.2**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=214,slow=11,SNR=23						
ARU	**Arti**	**20.77**	**337**	P	**P**	**03 37 53.7**	**+1.0**
	comp=Z,3.8nm,0.5s,baz=147,slow=7.2,SNR=12						
ARU	**Arti**	**20.77**	**337**	P	**P**	**03 37 52.4**	**-0.3**
GNI	**Garni**	**21.91**	**284**	P	**P**	**03 38 05.4**	**+0.1**
GNI				IAmb	IAmb	03 38 16.0	
	comp=Z,7.4nm,1.1s						
BELG	**Belogornoye**	**22.73**	**317**	P	**P**	**03 38 15.3**	**+2.2**
	comp=Z,15nm,0.7s,baz=314,slow=0.9,SNR=6.3						
LZH	**Lanzhou**	**24.75**	**85**	⇓P	**P**	**03 38 30.5**	**-1.5**
LZH				pP	pP	03 39 04.0	+3.9
LZH				sP	sP	03 39 21.9	+6.3
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
FINES	**FINESS Array B**	**37.11**	**325**	P	**P**	**03 40 21.4**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=114,slow=10.0,SNR=14						
ARCES	**ARCESS Array B**	**40.35**	**336**	P	**P**	**03 40 48.4**	**+1.5**
	comp=Z,2.7nm,0.9s,baz=116,slow=9.9,SNR=4.0						
NB2	**NORSAR Subarra**	**44.10**	**322**	P	**P**	**03 41 18.5**	**+1.1**
	comp=Z,1.5nm,0.6s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.10**	**322**	P	**P**	**03 41 18.6**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=107,slow=7.1,SNR=5.4						
ZOU	**Zoufplan**	**44.18**	**301**	P	**P**	**03 41 18.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**67.23**	**269**	P	**P**	**03 44 04.1**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=54,slow=7.3,SNR=2.5						
INK	**Inuvik**	**72.19**	**10**	P	**P**	**03 44 34.5**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=331,slow=8.3,SNR=1.7						
INK	**Inuvik**	**72.19**	**10**	IAmb	IAmb	03 44 56.9	
	comp=Z,6.0nm,1.5s						
YKA	**Yellowknife Ar**	**79.68**	**4**	P	**P**	**03 45 16.9**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=354,slow=5.2,SNR=7.4						
WRA	**Warramunga Arr**	**81.54**	**123**	P	**P**	**03 45 26.7**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=331,slow=5.3,SNR=2.2						

MOS ***23*** *03:42:53.9±0.0, 43°.55N×45°.56E, h12^{km}, MPVA3.5*

NORS ***23*** *03:42:53.9±0.0, 43°.61N×45°.62E, h18^{km}, MPVA3.5*

DRS ***23*** *03:43:00.2±0.0, 43°.43N×45°.81E, h16^{km}, ML2.4/6*

ISC 23 03:42:52.4±1.2, **43°.76N**±0°.04×**45°.63E**±0°.03, **h10**^{km}±9^{km}, **n33**, σ**1^{s}.17**/65, **4C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.57**	**168**	*e*Pg	**Pg**	**03 43 03.2**	**-0.2**
GROC				*e*Sg	**Sg**	**03 43 10.2**	**-0.7**
TRKR	**Terskaya**	**0.65**	**267**	*e*Pg	**Pn**	**03 43 07.9**	**+0.1**
TRKR				*e*Sg	**Sn**	**03 43 18.2**	**+0.1**
DVE	**Vedeno**	**0.88**	**155**	*e*Pg	**Pg**	**03 43 08.7**	**-0.6**
DVE				*e*Sg	**Sg**	**03 43 19.3**	**-1.4**
BTKR	**Batakoyurt**	**0.88**	**245**	*e*Pg	**Pn**	**03 43 11.0**	**0.0**
BTKR				*e*Sg	**Sb**	**03 43 21.9**	**+0.3**
KMGR	**Komgaron**	**0.89**	**219**	*e*Pg	**Pg**	**03 43 09.4**	**-0.2**
KMGR				*e*Sg	**Sg**	**03 43 20.1**	**-1.1**
PRTR	**Priterechnaya**	**0.98**	**270**	*e*Pg	**Pn**	**03 43 13.7**	**+1.5**
PRTR				*e*Sg	**Sn**	**03 43 27.9**	**+1.7**
VLKR	**Vladikavkaz**	**0.99**	**225**	*e*Pg	**Pb**	**03 43 11.3**	**-0.5**
VLKR				*e*Sg	**Sg**	**03 43 24.5**	**+0.1**
ARNR	**Ardon**	**1.14**	**240**	*e*Pg	**Pg**	**03 43 15.4**	**+1.1**
ARNR				*e*Sg	**Sn**	**03 43 30.4**	**+0.3**
DBC	**Dubki**	**1.14**	**130**	⇓*e*Pg	**Pg**	**03 43 15.2**	**+0.8**
	22nm,0.6s						
DBC				⇓*e*Sg	**Sn**	**03 43 30.2**	**-0.2**
	40nm,0.7s						
BTLR	**Botlikh**	**1.17**	**158**	⇑*e*Pg	**Pg**	**03 43 14.8**	**-0.1**
	20nm,0.6s						
BTLR				⇑*e*Sg	**Sb**	**03 43 28.0**	**-2.2**
	67nm,0.3s						
STDR	**Stavd-Durt**	**1.20**	**252**	*e*Pg	**Pg**	**03 43 17.0**	**+1.5**
STDR				*e*Sg	**Sg**	**03 43 34.9**	**+3.7**
KRNR	**Karanay**	**1.32**	**134**	⇓*i*Pg	**Pg**	**03 43 18.5**	**+0.8**
	17nm,0.5s						
KRNR				⇓*e*Sg	**Sn**	**03 43 33.9**	**-0.8**
	38nm,0.4s						
KORR	**Kora**	**1.32**	**240**	*e*Pg	**Pg**	**03 43 17.9**	**+0.1**
KORR				*e*Sg	**Sg**	**03 43 36.1**	**+1.1**
LACR	**Lac**	**1.34**	**227**	*e*Pg	**Pn**	**03 43 17.1**	**-0.4**
LACR				*e*Sg	**Sn**	**03 43 33.3**	**-2.1**
LSNR	**Lesken**	**1.40**	**251**	*e*Pg	**Pg**	**03 43 19.2**	**0.0**
LSNR				*e*Sg	**Sg**	**03 43 38.3**	**+1.0**
BUJR	**Buynaksk**	**1.43**	**130**	⇑*e*Pg	**Pg**	**03 43 21.0**	**+1.2**
	31nm,0.6s						
BUJR				⇑*e*Sg	**Sg**	**03 43 41.0**	**+2.7**
	106nm,0.6s						
NCK	**Nalchik**	**1.50**	**261**	*e*Pg	**Pg**	**03 43 21.5**	**+0.3**
NCK				*e*Sg	**Sb**	**03 43 39.8**	**+0.3**
ARKR	**Arakani**	**1.52**	**139**	⇓*e*Pg	**Pg**	**03 43 21.5**	**-0.2**
	9.7nm,0.5s						
ARKR				⇓*e*Sg	**Sg**	**03 43 42.5**	**+1.1**
	31nm,0.5s						
KBTC	**Kuba-Taba**	**1.61**	**273**	*e*Pg	**Pg**	**03 43 23.7**	**+0.3**
KBTC				*e*Sg	**Sg**	**03 43 45.1**	**+0.9**
GNBR	**Gunib**	**1.68**	**144**	⇓*i*Pg	**Pg**	**03 43 24.0**	**-0.7**
	24nm,0.8s						
GNBR				⇓*e*Sg	**Sg**	**03 43 45.5**	**-0.9**
	89nm,0.5s						
DIGR	**Digorskoe uzhe**	**1.72**	**241**	*e*Pg	**Pn**	**03 43 23.2**	**+0.5**
DIGR				*e*Sg	**Sn**	**03 43 44.3**	**-0.6**
PYA1	**Pyatigorsk**	**1.86**	**280**	*e*Pg	**Pg**	**03 43 27.7**	**-0.3**
PYA1				*e*Sg	**Sg**	**03 43 51.9**	**-0.2**
LGD	**Lagodekhi**	**1.97**	**167**	P	**Pb**	**03 43 28.8**	**+0.4**
LGD				S	**Sn**	**03 43 49.1**	**-1.7**
LGD	**Lagodekhi**	**1.97**	**167**	*e*Pg	**Pb**	**03 43 28.1**	**-0.3**
LGD				*e*Sg	**Sn**	**03 43 51.5**	**+0.7**
KBZ	**Khabaz**	**1.98**	**270**	*e*Pg	**Pb**	**03 43 28.0**	**-0.6**
KBZ				*e*Sg	**Sb**	**03 43 52.8**	**-0.5**
BEYR	**Belyy Ugol+**	**2.05**	**278**	*e*Pg	**Pg**	**03 43 30.6**	**-1.2**
BEYR				*e*Sg	**Sb**	**03 43 55.0**	**-0.4**
NEY	**Neytrino**	**2.17**	**258**	*e*Pg	**Pb**	**03 43 31.1**	**-0.9**
NEY				*e*Sg	**Sb**	**03 43 58.1**	**-1.0**
ALER	**Alexandrovskoy**	**2.20**	**298**	*e*Pn	**Pg**	**03 43 33.2**	**-1.3**
ALER				*e*Sn	**Sg**	**03 44 01.4**	**-1.6**
DDFL	**Dedoflistskaro**	**2.34**	**171**	P	**Pb**	**03 43 34.4**	**-0.3**
BRNG	**Burnasheti**	**2.51**	**213**	P	**Pn**	**03 43 34.4**	**+0.9**
BRNG				S	**Sn**	**03 44 05.2**	**+0.8**
BKRG	**Bakuriani**	**2.53**	**219**	P	**Pn**	**03 43 35.6**	**+1.9**
BKRG				S	**Sn**	**03 44 04.7**	**0.0**
KZRT	**Kazreti**	**2.54**	**201**	P	**Pb**	**03 43 35.9**	**-2.2**
KZRT				S	**Sn**	**03 44 07.0**	**+2.2**
AKT	**Akhty**	**2.75**	**145**	*e*Pn	**Pn**	**03 43 38.3**	**+1.5**
AKT				*e*Sn	**Sn**	**03 44 10.4**	**+0.3**

MOS ***23*** *03:47:26.7±1.1, 17°.00S×168°.46E, h224^{km}, mb6.3/52, Error ellipse: s-maj=7.3km s-min=5.7km az=120.5*

BJI ***23*** *03:47:26.5±0.0, 17°.05S×168°.45E, h210^{km}, mB6.4/76, mb5.9/84*

NEIC ***23*** *03:47:27, 17°.03S×168°.53E, h223^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.91; $M_{\theta\theta}$-1.40; $M_{\phi\phi}$0.48; $M_{r\theta}$0.18; $M_{\theta\phi}$-0.64; $M_{\phi r}$-0.61; Fault plane solution: $M_0$1.52000×10^{19} NP1:ϕ_s105.61000°, δ56.96000°, λ139.86000°. NP2:ϕ_s220.30000°, δ57.29000°, λ40.39000°. Principal axes: T 1.4438, Plg50.0000°, Azm73.0000°; N 0.1475, Plg40.0000°, Azm253.0000°; P -1.5913, Plg0.0000°, Azm343.0000°;*

IDC ***23*** *03:47:27.5±0.4, 17°.05S×168°.50E, h217^{km}±3^{km}, mb5.6/42, mb1 5.7/45, mb1mx5.6/46, mbtmp6.2/45 Error ellipse: s-maj=6.3km s-min=5.7km az=27.0*

NEIC ***23*** *03:47:27.1±1.4, 17°.03S±0°.07×168°.52E±0°.08, h220^{km}±1^{km}, mb6.1/416, Mwb6.7/69, Mwc6.8/165, Mww6.8, Mwc6.8(GCMT), Error ellipse: s-maj=10.6km s-min=9.5km az=88.0*

NOU ***23*** *03:47:28.6, 17°.05S×168°.38E, h220^{km}, ML6.4, Vanuatu Islands*

BGR ***23*** *03:47:29.5±0.0, 17°.12S×168°.45E, h227^{km}*

NEIC ***23*** *03:47:32, 16°.90S×168°.32E, h230^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.07; $M_{\theta\theta}$-1.76; $M_{\phi\phi}$0.69; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.78; $M_{\phi r}$-0.90; Fault plane solution: $M_0$1.94000×10^{19} NP1:ϕ_s108.00000°, δ54.00000°, λ145.00000°. NP2:ϕ_s220.00000°, δ63.00000°, λ41.00000°. Principal axes: T 1.8667, Plg48.0000°, Azm78.0000°; N 0.1468, Plg42.0000°, Azm248.0000°; P -2.0135, Plg5.0000°, Azm342.0000°;*

GCMT ***23*** *03:47:33.1±0.0, 17°.06S×168°.36E, h231^{km}, MW6.8/173, Moment Tensor Solution. s171,c467; s173,c844; Duration: 6^{s}.0 Moment tensor: Scale 10^{19}Nm; M_{rr}1.02±.01; $M_{\theta\theta}$-1.69±.01; $M_{\phi\phi}$0.66±.01; $M_{r\theta}$0.12±.01; $M_{\theta\phi}$-0.87±.01; $M_{\phi r}$-0.74±.00; Best double couple: $M_0$1.85700×10^{19} NP1:ϕ_s107.00000°, δ57.00000°, λ145.00000°. NP2:ϕ_s217.00000°, δ61.00000°, λ38.00000°. Principal axes: T 1.7340, Plg46.0000°, Azm74.0000°; N 0.2440, Plg44.0000°, Azm249.0000°; P -1.9790, Plg2.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *03:47:33, 17°.05S×168°.34E, h231^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.06; $M_{\theta\theta}$-1.71; $M_{\phi\phi}$0.65; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.89; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.92000×10^{19} NP1:ϕ_s106.00000°, δ57.00000°, λ144.00000°. NP2:ϕ_s217.00000°, δ61.00000°, λ39.00000°. Principal axes: T 1.8058, Plg47.0000°, Azm73.0000°; N 0.2076, Plg43.0000°, Azm249.0000°; P -2.0134, Plg2.0000°, Azm341.0000°;*

NEIC ***23*** *03:47:46.5, 17°.22S×168°.18E, h203^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.92; $M_{\theta\theta}$-1.59; $M_{\phi\phi}$0.68; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.79; $M_{\phi r}$-0.68; Fault plane solution: $M_0$1.72000×10^{19} NP1:ϕ_s217.74000°, δ63.96000°, λ38.75000°. NP2:ϕ_s108.33000°, δ55.78000°, λ147.94000°. Principal axes: T 1.5745, Plg45.0000°, Azm76.0000°; N 0.2887, Plg44.0000°, Azm246.0000°; P -1.8631, Plg5.0000°, Azm341.0000°;*

ISC 23 03:47:27.5±0.2, **17°.06S**±0°.03×**168°.56E**±0°.03, **h224**^{km}±1^{km}, **h224^{km}:pP-P**, **n2120**, σ**2^{s}.23**/2227, **mb6.1**/387, **149C-102D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.74**	**208**	P	**Pn**	**03 47 58.2**	**-0.2**
SANVU	**Saraoutou**	**2.07**	**321**		**Pn**	**03 48 07.4**	**-1.1**
SANVU	**Saraoutou**	**2.07**	**321**	P	**Pn**	**03 48 08.3**	**-0.3**
MARNC	**Mare, Loyalty**	**4.42**	**186**	P	**Pn**	**03 48 35.3**	**0.0**
YATNC	**Mamie plateau,**	**5.21**	**197**	P	**Pn**	**03 48 44.4**	**-0.8**
	18μm,0.8s						
KOUNC	**Koumac, New Ca**	**5.33**	**229**	P	**Pn**	**03 48 48.1**	**+1.5**
	50μm,1.3s						
DZM	**Mont Dzumac**	**5.36**	**201**	*e*Pn	**Pn**	**03 48 47.4**	**+0.2**
	127μm,1.4s						
DZM	**Mont Dzumac**	**5.36**	**201**	P	**Pn**	**03 48 47.5**	**+0.2**
	329nm,0.3s,baz=56,slow=18,SNR=774						
DZM				S	**S**	**03 49 50.8**	**+0.4**
	667nm,0.3s,baz=142,slow=20,SNR=7.4						
DZM	**Mont Dzumac**	**5.36**	**201**		**Pn**	**03 48 47.3**	**+0.1**
NOUC	**Port Laguerre**	**5.44**	**203**	P	**Pn**	**03 48 49.3**	**+1.2**
	42μm,1.7s						
OUENC	**Ouen Island, N**	**5.56**	**197**	P	**Pn**	**03 48 50.8**	**+1.2**
	39μm,2.0s						
PINNC	**Pines Island,**	**5.62**	**191**	P	**Pn**	**03 48 51.0**	**+0.7**
	46μm,0.8s						
HNR	**Honiara**	**11.30**	**311**	P	**Pn**	**03 50 02.9**	**-0.2**
	57nm,0.3s,baz=147,slow=7.9,SNR=139						
HNR	**Honiara**	**11.30**	**311**	P	**Pn**	**03 50 02.4**	**-0.7**
HNR	**Honiara**	**11.30**	**311**	Pn	**Pn**	**03 50 02.4**	**-0.7**
HNR	**Honiara**	**11.30**	**311**	P	**Pn**	**03 50 03.4**	**+0.3**
	9μm,1.7s						
NFK	**Norfolk Island**	**11.94**	**183**	P	**Pn**	**03 50 11.9**	**+0.9**
	baz=12,SNR=87						
NFK	**Norfolk Island**	**11.94**	**183**	P	**Pn**	**03 50 12.2**	**+1.2**
	17μm,1.5s						
FUNA	**Funafuti**	**13.40**	**52**	Pn	**Pn**	**03 50 29.1**	**-0.3**
LHI	**Lord Howe Isla**	**16.78**	**209**	P	**P**	**03 51 09.1**	**+0.6**
	baz=17,SNR=14						
LHI	**Lord Howe Isla**	**16.78**	**209**	P	**P**	**03 51 08.3**	**-0.2**
LHI	**Lord Howe Isla**	**16.78**	**209**	P	**Pn**	**03 51 10.4**	**+0.4**
	2μm,1.1s						
RAO	**Raoul Island**	**17.35**	**137**	P	**Pn**	**03 51 16.2**	**-0.6**
	49nm,0.3s,baz=314,slow=17,SNR=10						
RAO				S	**S**	**03 54 28.3**	**+4.7**
	51nm,0.3s,baz=270,slow=23,SNR=1.7						
RAO	**Raoul Island**	**17.35**	**137**		**P**	**03 51 13.4**	**-1.4**
RAO	**Raoul Island**	**17.35**	**137**	P	**Pn**	**03 51 17.6**	**+0.8**
EIDS	**Eidsvold**	**18.25**	**240**	P	**P**	**03 51 25.3**	**+0.8**
	baz=18,SNR=341						
EIDS	**Eidsvold**	**18.25**	**240**	P	**P**	**03 51 24.8**	**+0.2**
OUZ	**Omahuta**	**18.63**	**167**	P	**P**	**03 51 29.5**	**+0.9**
TARA	**Tarawa**	**18.80**	**14**	P	**P**	**03 51 30.1**	**-0.5**
TARA	**Tarawa**	**18.80**	**14**	P	**P**	**03 51 31.9**	**+1.3**
	7μm,1.0s						
AFI	**Afiamalu**	**19.21**	**83**	P	**P**	**03 51 36.2**	**+1.1**
	8.7nm,0.3s,baz=260,slow=12,SNR=23						
AFI				ScP	**ScP**	**03 59 05.5**	**+2.5**
	1.9nm,0.3s,baz=268,slow=6.6,SNR=5.7						
AFI	**Afiamalu**	**19.21**	**83**	P	**P**	**03 51 34.8**	**-0.3**
AFI				IAmb	IAmb	03 51 42.0	
	comp=Z,653nm,0.8s						
AFI	**Afiamalu**	**19.21**	**83**	P	**P**	**03 51 36.8**	**+1.7**
	comp=Z,1μm,1.6s						
ARMA	**Armidale**	**20.38**	**226**	P	**P**	**03 51 47.5**	**0.0**
	baz=20,SNR=173						
ARMA	**Armidale**	**20.38**	**226**	P	**P**	**03 51 48.6**	**+1.1**
ARMA				IAmb	IAmb	03 51 56.6	
	comp=Z,970nm,1.1s						
RABL	**Rabaul**	**20.54**	**307**	P	**P**	**03 51 47.9**	**-1.4**
RABL	**Rabaul**	**20.54**	**307**	P	**P**	**03 51 49.0**	**-0.3**
	comp=Z,3μm,1.1s						
NIUE	**Niue**	**20.55**	**99**	P	**P**	**03 51 48.6**	**-0.8**
	baz=21,SNR=9.5						
NIUE	**Niue**	**20.55**	**99**	P	**P**	**03 51 48.4**	**-1.0**
NIUE	**Niue**	**20.55**	**99**	P	**P**	**03 51 50.9**	**+1.5**
	comp=Z,2μm,1.9s						
RMQ	**Roma**	**20.61**	**240**	P	**P**	**03 51 50.0**	**0.0**
	baz=21,SNR=737						
CTA	**Charters Tower**	**21.35**	**258**	P	**P**	**03 51 57.8**	**+0.2**
	comp=Z,354nm,0.6s,baz=83,slow=12,SNR=262						
CTA				pP	**pP**	**03 52 34.2**	**+0.7**
	comp=Z,532nm,0.8s,baz=80,slow=13,SNR=3.6						
CTA				S	**S**	**03 55 41.7**	**+1.7**
	comp=Z,94nm,1.2s,baz=275,slow=16,SNR=1.8						
CTA				ScP	**ScP**	**03 59 10.8**	**+2.8**
	comp=Z,68nm,1.1s,baz=106,slow=5.1,SNR=4.1						
CTAO	**Charters Tower**	**21.35**	**258**	P	**P**	**03 51 56.8**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,967nm,0.8s						
CTAO	**Charters Tower**	**21.35**	**258**	P	**P**	**03 51 56.8**	**-0.8**
HIZ	**Hauiti**	**22.07**	**167**	P	**P**	**03 52 05.2**	**+0.9**
PMG	**Port Moresby**	**22.16**	**287**	P	**P**	**03 52 05.7**	**+0.3**
	comp=Z,1μm,1.0s,baz=90,slow=8.1,SNR=115						
PMG				pP	**pP**	**03 52 44.2**	**+1.8**
	comp=Z,628nm,1.0s,baz=89,slow=7.0,SNR=1.2						
PMG				S	**S**	**03 55 54.5**	**+1.5**
	comp=Z,163nm,1.1s,baz=246,slow=21,SNR=3.4						
PMG				ScP	**ScP**	**03 59 13.4**	**+3.3**
	comp=Z,135nm,1.0s,baz=79,slow=2.6,SNR=8.4						
PMG	**Port Moresby**	**22.16**	**287**	P	**P**	**03 52 05.1**	**-0.3**
PMG	**Port Moresby**	**22.16**	**287**	P	**P**	**03 52 05.7**	**+0.3**
	comp=Z,2μm,1.4s						
URZ	**Urewera**	**22.41**	**162**	P	**P**	**03 52 08.4**	**+0.9**
	comp=Z,2μm,0.8s,baz=1.8,slow=4.0,SNR=440						
URZ				pP	**pP**	**03 52 47.2**	**+1.1**
	comp=Z,334nm,0.7s,baz=46,slow=20,SNR=0.9						
URZ				S	**S**	**03 56 00.2**	**+3.6**
	comp=Z,182nm,0.9s,baz=192,slow=22,SNR=6.0						
URZ				ScS	**ScS**	**04 02 59.3**	**+3.6**
	comp=Z,11nm,0.8s,baz=125,slow=18,SNR=3.8						
URZ	**Urewera**	**22.41**	**162**	P	**P**	**03 52 08.1**	**+0.7**
URZ				P	**S**	**03 56 02.2**	**+5.6**
MGCD	**Mangrove Creek**	**22.48**	**221**	P	**P**	**03 52 09.5**	**+1.4**
	baz=22,SNR=146						
PUZ	**Puketiti**	**22.60**	**160**	P	**P**	**03 52 09.2**	**0.0**
PUZ				P	**S**	**03 56 03.0**	**+3.3**
TWGZ	**Tauwhareparae**	**22.60**	**160**	P	**P**	**03 52 09.8**	**+0.5**
TWGZ				P	**S**	**03 56 03.7**	**+3.9**
MWZ	**Matawai**	**22.61**	**161**	P	**P**	**03 52 09.6**	**+0.3**
MWZ				P	**S**	**03 56 02.5**	**+2.7**
RTZ	**Ruatahuna**	**22.70**	**163**	P	**P**	**03 52 10.5**	**+0.3**
RAGZ	**Rawiri**	**22.72**	**162**	P	**P**	**03 52 12.4**	**+2.1**
TKGZ	**Te Karaka**	**22.80**	**161**	P	**P**	**03 52 10.1**	**-0.8**
RIV	**Riverview**	**22.86**	**220**	P	**P**	**03 52 13.6**	**+2.0**
	baz=23,SNR=22						
MTHZ	**Maungataniwha**	**22.89**	**163**	P	**P**	**03 52 12.3**	**+0.5**
CNGZ	**Carnagh Statio**	**22.95**	**160**	P	**P**	**03 52 12.6**	**+0.2**
SNGZ	**Shannon Statio**	**22.96**	**162**	P	**P**	**03 52 12.7**	**+0.3**
TUVZ	**Tukino**	**22.97**	**166**	P	**P**	**03 52 15.4**	**+2.7**
RAHZ	**Arahi**	**23.01**	**163**	P	**P**	**03 52 13.4**	**+0.5**
RIGZ	**Rimuhau**	**23.02**	**161**	P	**P**	**03 52 13.2**	**+0.2**
BKZ	**Black Stump Fm**	**23.09**	**164**	P	**P**	**03 52 13.6**	**0.0**
BKZ	**Black Stump Fm**	**23.09**	**164**	P	**P**	**03 52 14.1**	**+0.5**
NMHZ	**Naumai**	**23.11**	**163**	P	**P**	**03 52 14.9**	**+1.1**
MTSU	**Mount Surprise**	**23.13**	**264**	P	**P**	**03 52 14.0**	**-0.2**
	baz=23,SNR=966						
MOVZ	**Moawhango**	**23.13**	**166**	P	**P**	**03 52 15.8**	**+1.8**
WHHZ	**Waihua**	**23.20**	**163**	P	**P**	**03 52 15.4**	**+0.8**
PRGZ	**Paritu Road**	**23.25**	**161**	P	**P**	**03 52 15.3**	**+0.2**
BHHZ	**Black Hill Sta**	**23.28**	**165**	P	**P**	**03 52 16.0**	**+0.6**
KNZ	**Kokohu**	**23.28**	**162**	P	**P**	**03 52 15.2**	**-0.1**
ARHZ	**Aropaoanui**	**23.31**	**163**	P	**P**	**03 52 16.1**	**+0.5**
MCHZ	**McNeill Hill**	**23.40**	**164**	P	**P**	**03 52 17.1**	**+0.7**
MHGZ	**Mahia Peninsul**	**23.47**	**162**	P	**P**	**03 52 17.4**	**+0.3**
KRHZ	**Kereru**	**23.50**	**165**	P	**P**	**03 52 17.5**	**+0.1**
PNHZ	**Pukenui**	**23.72**	**165**	P	**P**	**03 52 19.3**	**-0.1**
KAHZ	**Kahuranaki**	**23.78**	**164**	P	**P**	**03 52 19.7**	**-0.1**
TSZ	**Takapari Road**	**23.80**	**166**	P	**P**	**03 52 18.5**	**-1.5**
WPHZ	**Waipukurau**	**23.92**	**165**	P	**P**	**03 52 21.2**	**+0.1**
PXZ	**Pawanui**	**24.00**	**164**	P	**P**	**03 52 21.4**	**-0.4**
KNTN	**Kanton**	**24.02**	**56**	P	**P**	**03 52 21.2**	**-1.1**
KNTN	**Kanton**	**24.02**	**56**	P	**P**	**03 52 23.4**	**+1.1**
	comp=Z,2μm,1.1s						
POWZ	**Post Office Ro**	**24.07**	**166**	P	**P**	**03 52 23.6**	**+1.1**
DVHZ	**Dannevirke**	**24.07**	**166**	P	**P**	**03 52 22.2**	**-0.3**
PRHZ	**Porangahau**	**24.16**	**165**	P	**P**	**03 52 23.9**	**+0.6**
PRWZ	**Pori Road**	**24.27**	**166**	P	**P**	**03 52 24.9**	**+0.6**
ANWZ	**Angora Road**	**24.30**	**165**	P	**P**	**03 52 24.1**	**-0.4**
OGWZ	**Otaki Gorge**	**24.35**	**168**	P	**P**	**03 52 24.5**	**-0.5**
QLP	**Quilpie**	**24.45**	**243**	P	**P**	**03 52 25.4**	**-0.6**
	baz=24,SNR=67						

BFZ	Birch Farm	24.46	166	P	P	03 52 25.1	-0.9
TIWZ	Tintock	24.46	166	P	P	03 52 26.6	+0.5
HOWZ	Holdsworth Sta	24.50	167	P	P	03 52 25.4	-1.0
COEN	Coen	24.64	274	P	P	03 52 27.4	-0.5
COEN				IAmb	IAmb	03 53 21.3	
	comp=Z,1µm,1.4s						
TMWZ	Te Maipa	24.78	167	P	P	03 52 28.3	-0.7
YNG	Young	24.91	223	P	P	03 52 30.6	+0.4
	baz=25,SNR=33						
CNB	Canberra Magne	24.96	220	P	P	03 52 30.8	+0.1
	baz=25,SNR=76						
CAN	Canberra	25.18	220	P	P	03 52 32.3	-0.4
CAN				pmax	pmax		
	comp=Z,1µm,1.3s						
CAN	Canberra	25.18	220	P	P	03 52 32.3	-0.4
CAN				IAmb	IAmb	03 53 26.9	
	comp=Z,1µm,1.3s						
CMSA	Cobar Meteorol	25.26	231	P	P	03 52 32.7	-0.6
	baz=25,SNR=159						
MANU	Manus Island	25.63	303	IAmb	IAmb	03 53 30.4	
	comp=Z,1µm,1.2s						
KWAJ	Kwajalein Atol	25.72	358	P	P	03 52 36.1	-1.5
KWAJ				pmax	pmax		
	comp=Z,3µm,1.5s						
KWAJ	Kwajalein Atol	25.72	358	P	P	03 52 36.1	-1.5
KWAJ	Kwajalein Atol	25.72	358	P	P	03 52 37.9	+0.4
	comp=Z,979nm,1.0s						
PATS	Pohnpei	25.82	336	P	P	03 52 38.4	-0.1
	baz=26,SNR=25						
PATS	Pohnpei	25.82	336	P	P	03 52 37.7	-0.8
RPZ	Rata Peaks	26.65	176	P	P	03 52 46.6	+0.9
	comp=Z,290nm,0.7s,baz=335,slow=2.0,SNR=101						
RPZ				ScS	ScS	04 03 16.1	+3.2
	comp=Z,109nm,1.2s,baz=258,slow=22,SNR=6.5						
QIS	Mount Isa	27.61	258	P	P	03 52 54.3	-0.1
	baz=28,SNR=73						
STKA	Stephens Creek	28.52	234	P	P	03 53 02.2	-0.3
	baz=28,SNR=176						
STKA	Stephens Creek	28.52	234	P	P	03 53 02.9	+0.5
	comp=Z,517nm,0.8s,baz=56,slow=8.4,SNR=361						
STKA				pP	pP	03 53 46.0	0.0
	comp=Z,564nm,1.2s,baz=63,slow=9.8,SNR=2.7						
STKA				PcP	PcP	03 56 09.2	+1.0
	comp=Z,253nm,1.0s,baz=31,slow=8.3,SNR=4.7						
STKA				ScP	ScP	03 59 29.8	+1.6
	comp=Z,47nm,0.8s,baz=68,slow=1.7,SNR=4.9						
STKA				ScS	ScS	04 03 24.0	+2.2
	comp=Z,19nm,1.1s,baz=223,slow=22,SNR=7.4						
STKA				PKiKP	PKiKP	04 03 44.8	+1.8
	comp=Z,8.1nm,0.8s,baz=64,slow=2.5,SNR=4.7						
STKA				P3KPbc		04 25 13.6	
	comp=Z,11nm,0.9s,baz=259,slow=5.7,SNR=13						
STKA	Stephens Creek	28.52	234	P	P	03 53 02.0	-0.4
STKA				IAmb	IAmb	03 53 47.9	
	comp=Z,460nm,1.5s						
MMPI	Merauke	28.74	284	P	P	03 53 05.5	+1.0
	comp=Z,44µmcomp=Z,33µmcomp=Z,1µm,1.3s						
WHZ	Wether Hill Ro	28.75	181	IAmb	IAmb	03 53 09.8	
	comp=Z,668nm,1.0s						
TOO	Toolangi	28.79	220	P	P	03 53 05.3	+0.5
	baz=29,SNR=17						
TOO	Toolangi	28.79	220	P	P	03 53 04.1	-0.7
TOO				pmax	pmax		
	comp=Z,992nm,1.5s						
TOO	Toolangi	28.79	220	P	P	03 53 04.1	-0.7
TOO				IAmb	IAmb	03 53 59.6	
	comp=Z,992nm,1.5s						
RAR	Rarotonga	30.18	103	P	P	03 53 18.3	+1.2
	comp=Z,131nm,0.8s,baz=261,slow=5.1,SNR=14						
RAR	Rarotonga	30.18	103	P	P	03 53 17.5	+0.4
RAR				pmax	pmax		
	comp=Z,2µm,2.0s						
RAR	Rarotonga	30.18	103	P	P	03 53 17.5	+0.4
RAR	Rarotonga	30.18	103	P	P	03 53 20.9	+3.8
	comp=Z,637nm,2.5s						
ARPS	Mount Arapiles	30.70	225	P	P	03 53 21.6	+0.1
	baz=31,SNR=28						
JAY	Jayapura	30.95	295	P	P	03 53 23.9	-0.1
	comp=Z,108nm,0.9s,baz=132,slow=4.2,SNR=11						
JAY				pP	pP	03 54 09.2	+1.2
	comp=Z,133nm,0.9s,baz=176,slow=22,SNR=1.6						
JAY				ScP	ScP	03 59 39.2	+2.9
	comp=Z,80nm,1.0s,baz=256,slow=3.8,SNR=4.6						
JAY	Jayapura	30.95	295	P	P	03 53 23.5	-0.5
	comp=Z,2µmcomp=Z,89nm,0.9s						
HTT	Hallett	31.22	233	P	P	03 53 25.6	-0.6
	baz=31,SNR=158						
GENI	Genyem	31.38	294	P	P	03 53 27.6	-0.1
	comp=Z,29µmcomp=Z,16µmcomp=Z,680nm,1.2s						
WR0	Warramunga Arr	32.35	260	IAmb	IAmb	03 53 39.4	
	comp=Z,383nm,1.1s						
WB0	Warramunga Arr	32.49	260	IAmb	IAmb	03 53 40.6	
	comp=Z,930nm,1.3s						
WB2	Warramunga Arr	32.53	260	P	P	03 53 36.0	-1.8
	baz=32						
WB2	Warramunga Arr	32.53	260	IAmb	IAmb	03 53 40.9	
	comp=Z,335nm,0.9s						
WRAB	Tennant Creek	32.53	260c	iP	P	03 53 36.0	-1.8
WRAB				pmax	pmax		
	comp=Z,663nm,1.7s						
WRAB	Tennant Creek	32.53	260	P	P	03 53 35.4	-2.3
WRAB				IAmb	IAmb	03 53 40.9	
	comp=Z,312nm,0.9s						
WRA	Warramunga Arr	32.54	260	P	P	03 53 36.7	-1.1
	comp=Z,181nm,0.9s,baz=91,slow=9.2,SNR=262						
WRA				pP	pP	03 54 21.2	-0.5
	comp=Z,85nm,1.1s,baz=89,slow=9.5,SNR=1.6						
WRA				PcP	PcP	03 56 19.1	0.0
	comp=Z,118nm,0.8s,baz=90,slow=2.6,SNR=8.3						
WRA				S	S	03 58 36.0	-0.6
	comp=Z,80nm,1.1s,baz=86,slow=14,SNR=6.4						
WRA				ScP	ScP	03 59 43.0	+1.4
	comp=Z,163nm,1.2s,baz=86,slow=3.8,SNR=9.2						
WRA				PKiKP	PKiKP	04 03 46.6	+0.7
	comp=Z,12nm,0.9s,baz=21,slow=0.4,SNR=8.9						
WRA				P3KPbc		04 25 00.9	
	comp=Z,11nm,0.9s,baz=283,slow=2.8,SNR=21						
SMPI	Sarmi	32.94	294	P	P	03 53 40.8	-0.6
	comp=Z,11µmcomp=Z,8µmcomp=Z,361nm,1.1s						
AS31	Alice Springs	33.08	253	P	P	03 53 41.0	-1.6
ASAR	Alice Springs	33.08	253	P	P	03 53 41.0	-1.6
	comp=Z,2µm,0.8s,baz=79,slow=9.2,SNR=1147						
ASAR				pP	pP	03 54 25.7	-0.8
	comp=Z,120nm,0.7s,baz=79,slow=8.2,SNR=0.6						
ASAR				PcP	PcP	03 56 21.8	+1.2
	comp=Z,126nm,0.9s,baz=91,slow=3.3,SNR=5.9						
ASAR				S	S	03 58 43.0	-1.9
	comp=Z,93nm,1.0s,baz=84,slow=16,SNR=7.4						
ASAR				ScP	ScP	03 59 45.2	+1.7
	comp=Z,151nm,1.1s,baz=91,slow=3.8,SNR=10						
ASAR				PKiKP	PKiKP	04 03 47.9	+1.6
	comp=Z,5.0nm,0.8s,baz=68,slow=3.0,SNR=5.4						
ASAR				P3KPbc		04 24 58.9	
	comp=Z,3.7nm,1.0s,baz=268,slow=3.6,SNR=12						
ASPA	Alice Springs	33.09	253	P	P	03 53 41.0	-1.6
	baz=33						
BBOO	Buckleboo	33.21	236	P	P	03 53 42.7	-0.8
	baz=33,SNR=353						
BBOO	Buckleboo	33.21	236	P	P	03 53 42.7	-0.8
KDU	Kakadu	35.11	272	P	P	03 53 58.3	-1.7
	baz=35,SNR=258						
H11S2	WAKE ISLAND Hy	35.38	357	P	P	03 54 04.8	+2.9
	baz=192,slow=6.7,SNR=5.5						
H11S3	WAKE ISLAND Hy	35.38	357	P	P	03 54 01.5	-0.4
	baz=192,slow=6.7,SNR=6.6						
H11S1	WAKE ISLAND Hy	35.40	357	P	P	03 54 04.5	+2.4
	baz=192,slow=6.7,SNR=5.6						
BAKI	Biak	35.60	293	P	P	03 54 04.6	+0.4
	comp=Z,30µmcomp=Z,15µmcomp=Z,927nm,1.3s						
WAKE	Wake Island	36.17	357	P	P	03 54 07.0	-1.8
WAKE				IAmb	IAmb	03 54 12.0	
	comp=Z,1µm,1.5s						
MTN	Manton Dam	36.36	271	P	P	03 54 09.5	-1.2
	baz=36,SNR=176						
MTN	Manton Dam	36.36	271	IAmb	IAmb	03 54 14.5	
	comp=Z,493nm,0.8s						
KMPI	Kaimana, Papua	36.69	287	P	P	03 54 14.3	+0.9
	comp=Z,18µmcomp=Z,916nm,0.7s						
RKPI	Ransiki, Papua	37.17	291	P	P	03 54 18.4	+0.9
	comp=Z,1µm,1.1s						
SAUI	Saumlaki	37.41	279	P	P	03 54 18.4	-1.1
	comp=Z,38µmcomp=Z,22µmcomp=Z,2µm,1.0s						
MCQ	Macquarie Isla	38.09	189	P	P	03 54 26.0	+1.5
	baz=38,SNR=5.6						
MCQ	Macquarie Isla	38.09	189	IAmb	IAmb	03 54 34.1	
	comp=Z,993nm,1.3s						
MCQ	Macquarie Isla	38.09	189	P	P	03 54 26.5	+1.9
	comp=Z,677nm,1.3s						
KNRA	Kununurra	38.16	266	P	P	03 54 25.6	-0.1
	baz=38,SNR=18						
KNRA	Kununurra	38.16	266	P	P	03 54 24.5	-1.2
KNRA				IAmb	IAmb	03 54 30.0	
	comp=Z,775nm,0.8s						
FAKI	Fak Fak	38.32	287	P	P	03 54 26.1	-1.0
FAKI	Fak Fak	38.32	287	P	P	03 54 26.7	-0.4
	comp=Z,16µmcomp=Z,1µm,1.3s						
XMAS	Kiritimati	38.54	64	P	P	03 54 28.8	-0.1
XMAS				IAmb	IAmb	03 54 33.5	
	comp=Z,676nm,0.8s						
XMAS	Kiritimati	38.54	64	P	P	03 54 32.9	+4.0
	comp=Z,997nm,1.8s						
FORT	Forrest	39.24	242	P	P	03 54 33.4	-1.1
	baz=39,SNR=320						
TBI	Tubuai	39.79	106	eP	P	03 54 39.3	+0.2
	comp=Z,426nm,1.0s						
TBI				eS	S	04 00 25.9	-0.6
	comp=Z,33µm,28.8s						
TBI				eLQ	LQ	04 04 07.7	
	comp=Z,72µm,24.5s						
TBI				eLR	LR	04 05 44.3	
	comp=Z,25µm,30.0s						
BNDI	Bandanaira	39.86	284	P	P	03 54 39.6	-0.3
	comp=Z,32µmcomp=Z,36µmcomp=Z,2µm,1.2s						
PAE	Paea	39.90	97	eP	P	03 54 40.2	+0.1
	comp=Z,63nm,1.1s						
PAE	Paea	39.90	97	ePcP	PcP	03 56 39.8	-1.4
	comp=Z,35nm,1.0s						
PAE				eScP	ScP	04 00 07.6	-1.2
	comp=Z,50nm,1.5s						
PPT2	Papeete2	39.91	97	eP	P	03 54 40.5	+0.2
	comp=Z,322nm,1.0s						
PPT2	Papeete2	39.91	97	ePcP	PcP	03 56 39.8	-1.5
	comp=Z,315nm,1.0s						
PPT2				eScP	ScP	04 00 07.7	-1.2
	comp=Z,161nm,1.4s						
PPT2				eS	S	04 00 29.2	+0.6
	comp=Z,24µm,26.5s						
PPT2				eLQ	LQ	04 04 13.9	
	comp=Z,119µm,24.2s						
PPT2				eLR	LR	04 05 51.9	
	comp=Z,34µm,26.8s						
PPT	Papeete	39.92	97	P	P	03 54 40.3	0.0
	comp=Z,314nm,0.9s,baz=70,slow=4.0,SNR=12						
PPT				PcP	PcP	03 56 43.4	+2.2
	comp=Z,372nm,0.9s,baz=325,slow=4.6,SNR=6.9						
PPT				ScP	ScP	04 00 12.4	+3.6
	comp=Z,63nm,1.0s,baz=133,slow=20,SNR=4.2						
PPTF	Pamatai, Papee	39.92	97	P	P	03 54 39.9	-0.5
PPTF				IAmb	IAmb	03 54 46.8	
	comp=Z,387nm,0.9s						
SIJI	Sorong	40.06	290	ScP	ScP	04 00 12.8	+3.3
	comp=Z,30nm,0.8s,baz=119,slow=5.8,SNR=4.0						
SIJI				S	S	04 00 31.5	+0.7
	comp=Z,45nm,1.0s,baz=4.2,slow=23,SNR=8.1						
SWI	Sorong	40.07	290	P	P	03 54 41.3	-0.3
	comp=Z,27µmcomp=Z,7µmcomp=Z,830nm,1.1s						
ANA2	Anatahan	40.11	325	P	P	03 54 41.3	-0.5
ANA2				IAmb	IAmb	03 54 45.7	
	comp=Z,572nm,0.9s						
ANA2	Anatahan	40.11	325	P	P	03 54 42.6	+0.8
	comp=Z,699nm,0.7s						
TIAR	Tiarei	40.14	97	eP	P	03 54 42.2	+0.1
	comp=Z,121nm,0.9s						
TIAR	Tiarei	40.14	97	ePcP	PcP	03 56 40.2	-1.8
	comp=Z,64nm,0.9s						
TIAR				eScP	ScP	04 00 08.4	-1.4
	comp=Z,59nm,1.3s						
TVO	Taravao	40.20	98	eP	P	03 54 42.8	+0.1
	comp=Z,53nm,0.8s						
TVO	Taravao	40.20	98	ePcP	PcP	03 56 40.6	-1.6
	comp=Z,54nm,0.8s						
TVO				eScP	ScP	04 00 08.4	-1.7
	comp=Z,29nm,1.2s						
SARN	Sarigan	40.37	325	P	P	03 54 43.2	-0.7
	comp=Z,433nm,1.1s						
FITZ	Fitzroy Crossi	40.86	262	P	P	03 54 47.0	-0.9
	baz=41,SNR=1000						
FITZ	Fitzroy Crossi	40.86	262	P	P	03 54 48.1	+0.2
	comp=Z,2µm,0.8s,baz=121,slow=7.9						
FITZ				pP	pP	03 55 33.5	+0.2
	comp=Z,217nm,0.8s,baz=90,slow=9.6,SNR=1.4						
FITZ				S	S	04 00 40.5	-1.9
	comp=Z,35nm,1.0s,baz=252,slow=22,SNR=2.4						
FITZ	Fitzroy Crossi	40.86	262	IAmb	IAmb	03 54 52.9	
	comp=Z,2µm,0.8s						
MSAI	Masohi	41.20	285	P	P	03 54 49.5	-1.3
	comp=Z,1µmcomp=Z,125nm,0.6s						
MEH	Mehetia	41.32	98	eP	P	03 54 51.9	+0.2
	comp=Z,184nm,1.2s						
MEH	Mehetia	41.32	98	ePcP	PcP	03 56 44.0	-1.8
	comp=Z,71nm,1.1s						
MEH				eScP	ScP	04 00 13.0	-1.4
	comp=Z,73nm,1.3s						
VAH	Vaihoa	42.06	94	eP	P	03 54 57.8	+0.1
	comp=Z,413nm,1.1s						
VAH	Vaihoa	42.06	94	ePcP	PcP	03 56 46.3	-2.0
	comp=Z,200nm,1.1s						
VAH				eScP	ScP	04 00 16.0	-1.4
	comp=Z,252nm,1.4s						
NLAI	Namlea	42.93	284	P	P	03 55 04.9	+0.1
	comp=Z,13µmcomp=Z,719nm,1.1s						
SOEI	Soe	43.61	274	P	P	03 55 09.9	-0.4
SOEI				IAmb	IAmb	03 55 41.2	
	comp=Z,1µm,0.9s						
SOEI	Soe	43.61	274	P	P	03 55 11.5	+1.2
	comp=Z,46µmcomp=Z,14µmcomp=Z,2µm,1.0s						
BATI	Baumata	44.08	273	P	P	03 55 14.4	+0.5
	comp=Z,2µm,0.8s,baz=142,slow=6.8						
BATI				S	S	04 01 33.1	+3.6
	comp=Z,85nm,0.9s,baz=286,slow=20,SNR=3.9						
BATI	Baumata	44.08	273	P	P	03 55 15.1	+1.2
	comp=Z,26µmcomp=Z,16µmcomp=Z,2µm,1.0s						
TNTI	Ternate	44.28	289	P	P	03 55 13.9	-1.7
TNTI	Ternate	44.28	289	P	P	03 55 13.9	-1.7
	comp=Z,13µmcomp=Z,9µmcomp=Z,149nm,2.5s						
SANI	Sanana	44.41	285	P	P	03 55 15.8	-0.7
	comp=Z,30µmcomp=Z,14µmcomp=Z,486nm,1.0s						
KMBL	Kambalda	44.56	242	P	P	03 55 16.0	-1.5
	baz=44,SNR=62						
MMRI	Maumere	45.83	275	P	P	03 55 26.8	-0.9
MMRI				IAmb	IAmb	03 55 42.0	
	comp=Z,1µm,1.2s						
MMRI	Maumere	45.83	275	P	P	03 55 27.3	-0.4
	comp=Z,34µmcomp=Z,18µmcomp=Z,917nm,0.7s						
PSA00	Pilbara Seismi	46.04	256	IAmb	IAmb	03 56 25.6	
	comp=Z,1µm,1.5s						
MBWA	Marble Bar	46.17	257	P	P	03 55 27.6	-2.7
EDFI	Ende, Flores	46.33	274	P	P	03 55 30.8	-0.9
	comp=Z,20µmcomp=Z,7µmcomp=Z,455nm,1.3s						
BASI	Baing, Sumba	47.02	272	P	P	03 55 38.2	+1.2
	comp=Z,26µmcomp=Z,13µmcomp=Z,1µm,1.2s						
MEEK	Meekatharra	47.07	249	P	P	03 55 35.9	-1.4
	baz=47,SNR=627						
SGSI	Sangihe	47.22	292	P	P	03 55 39.7	+1.2
	comp=Z,6µmcomp=Z,449nm,1.0s						
KMSI	Cibinong	47.28	287	P	P	03 55 38.7	-0.2
	comp=Z,540nm,1.2s						
WSI	Waingapu	47.42	272	P	P	03 55 39.8	-0.2
	comp=Z,35µmcomp=Z,2µm,0.6s						
LUWI	Luwuk	47.76	285	P	P	03 55 41.7	-0.9
LUWI				IAmb	IAmb	03 56 36.3	
	comp=Z,1µm,1.4s						
LUWI	Luwuk	47.76	285	P	P	03 55 43.0	+0.4
	comp=Z,31µmcomp=Z,18µmcomp=Z,390nm,1.2s						
KLBR	Kellerberrin	48.09	243	P	P	03 55 43.3	-1.7
	baz=48,SNR=167						
GTOI	Gorontalo	48.19	287	P	P	03 55 45.9	0.0
	comp=Z,4µmcomp=Z,311nm,1.1s						
BSSI	Bau Bau, Buton	48.19	277	P	P	03 55 46.0	0.0
	comp=Z,18µmcomp=Z,6µmcomp=Z,290nm,1.2s						
DDMP	Don Marcelino,	48.19	295	eP	P	03 55 44.1	-1.8
DDMP	Don Marcelino,	48.19	295	eP	S	04 02 10.9	-17
WBSI	Waikabubak, Su	48.30	272	P	P	03 55 46.4	-0.4
	comp=Z,41µmcomp=Z,13µmcomp=Z,1µm,0.8s						
NWAO	Narrogin (SRO)	48.66	241	P	P	03 55 47.9	-1.3
	baz=49,SNR=40						
NWAO	Narrogin (SRO)	48.66	241	P	P	03 55 48.0	-1.3
NWAO				pmax	pmax		
	comp=Z,1µm,1.3s						
NWAO	Narrogin (SRO)	48.66	241	P	P	03 55 48.0	-1.3
NWAO				IAmb	IAmb	03 55 55.2	
	comp=Z,1µm,1.2s						
NWAO	Narrogin (SRO)	48.66	241	P	P	03 55 46.8	-2.4
BKSI	Bulukumba	48.79	278	P	P	03 55 50.0	-0.5
	comp=Z,35µmcomp=Z,7µmcomp=Z,412nm,1.1s						
APSI	Ampana	48.85	284	P	P	03 55 51.3	+0.4
	comp=Z,21µmcomp=Z,9µmcomp=Z,507nm,1.3s						
BLDU	Ballidu	48.91	244	P	P	03 55 50.7	-0.5
	baz=49,SNR=36						
BNSI	Bone	49.09	279	P	P	03 55 52.9	+0.1
	comp=Z,24µmcomp=Z,12µmcomp=Z,390nm,1.1s						
MRSI	Marisa	49.11	286	P	P	03 55 50.8	-2.1
	comp=Z,28µmcomp=Z,5µmcomp=Z,280nm,0.9s						
KCP	Kidapawan	49.17	296⇑	iP	P	03 55 52.8	-0.6
KCP	Kidapawan	49.17	296⇓	eP	S	04 02 45.1	+3.2
KAPI	Kappang	49.23	278	P	P	03 55 53.3	-0.6
KAPI				pmax	pmax		
	comp=Z,2µm,1.5s						
KAPI	Kappang	49.23	278	P	P	03 55 53.2	-0.6
KAPI				IAmb	IAmb	03 56 01.3	
	comp=Z,2µm,1.4s						
KAPI	Kappang	49.23	278	P	P	03 55 52.8	-1.1
MORW	Morawa	49.42	246	P	P	03 55 53.9	-1.2
	baz=49,SNR=42						
MORW	Morawa	49.42	246	IAmb	IAmb	03 56 01.3	
	comp=Z,584nm,1.2s						
MUN	Mundaring	49.44	242	P	P	03 55 53.9	-1.3
	baz=49,SNR=34						
SPSI	Sidrap Palu	49.55	280	P	P	03 55 55.0	-1.2
	comp=Z,32µmcomp=Z,5µmcomp=Z,314nm,1.9s						
BUKP	Musuan	49.63	296	eP	P	03 55 58.3	+1.4
BUKP	Musuan	49.63	296	eP	P	03 55 58.3	+1.4
GLSP	General Luna,	49.71	299	eP	P	03 55 56.5	-0.9
GLSP	General Luna,	49.71	299	eP	S	04 02 40.7	-8.5
TTSI	Tana Toraja	49.81	281	P	P	03 55 57.9	-0.3
	comp=Z,29µmcomp=Z,6µmcomp=Z,182nm,0.8s						
PLAI	Plampang	50.04	273	P	P	03 55 59.3	-0.7
	comp=Z,42µmcomp=Z,12µmcomp=Z,1µm,0.9s						
CGP	Cagayan de Oro	50.23	297⇓	eP	P	03 56 03.2	+1.9
KIP	Kipapa	50.37	42	P	P	03 56 02.2	0.0
KIP				pmax	pmax		
	comp=Z,847nm,1.9s						
KIP	Kipapa	50.37	42	P	P	03 56 02.2	0.0
KIP				IAmb	IAmb	03 57 19.4	
	comp=Z,847nm,1.9s						
KHU	Kahuku	50.42	46	P	P	03 56 02.9	0.0
KHU				pmax	pmax		
	comp=Z,3µm,1.9s						
KHU	Kahuku	50.42	46	P	P	03 56 02.9	0.0
TOLI2	Tolitoli	50.42	286	P	P	03 56 01.5	-1.3
TOLI2				IAmb	IAmb	03 56 58.5	
	comp=Z,845nm,1.5s						
KHLU	Kahalu`u	50.47	45	P	P	03 56 02.5	-0.6
KHLU				IAmb	IAmb	03 56 07.3	
	comp=Z,2µm,1.8s						
TAOE	Nuku Hiva Isla	50.53	87	eP	P	03 56 04.1	+0.4
	comp=Z,3µm,1.0s						
TAOE				eS	S	04 02 59.3	-1.5
	comp=Z,11µm,26.0s						
TAOE	Nuku Hiva Isla	50.53	87	P	P	03 56 03.9	+0.2
TAOE				IAmb	IAmb	03 56 09.4	
	comp=Z,770nm,0.8s						
TAOE	Nuku Hiva Isla	50.53	87	P	P	03 56 05.2	+1.5
	comp=Z,1µm,1.0s						
MWH	Moku‘aweowe	50.60	46	P	P	03 56 02.9	-1.7
MWH				IAmb	IAmb	03 56 08.4	
	comp=Z,1µm,1.7s						
AIN	Ainahou	50.62	46	IAmb	IAmb	03 56 09.3	
	comp=Z,346nm,0.7s						
HLP	Hilina Pali	50.67	46	P	P	03 56 03.4	-1.1
HLP				IAmb	IAmb	03 56 09.0	
	comp=Z,952nm,1.5s						
SDHHI	Sand Hill	50.74	46	IAmb	IAmb	03 56 09.1	
	comp=Z,2µm,2.0s						
HMH	Humu‘ula Sheep	50.76	46	IAmb	IAmb	03 56 09.9	
	comp=Z,606nm,0.9s						
UWE	Uwekahuna	50.76	46	IAmb	IAmb	03 56 09.3	
	comp=Z,1µm,1.8s						
OBL	Observatory Le	50.77	46	P	P	03 56 05.2	-0.1
OBL				IAmb	IAmb	03 56 17.2	
	comp=Z,713nm,1.5s						
PUH	Pauahi	50.78	46	IAmb	IAmb	03 56 09.4	
	comp=Z,2µm,2.0s						
HATHI	Halema‘uma‘u T	50.78	46	IAmb	IAmb	03 56 11.6	
	comp=Z,1µm,1.8s						
JCJ	Chichijima	50.81	329	ScP	ScP	04 00 55.0	+1.4
	comp=Z,190nm,0.6s,baz=245,slow=22,SNR=4.0						
JCJ	Chichijima	50.81	329	P	P	03 56 04.3	-1.1
JCJ				IAmb	IAmb	03 56 09.4	
	comp=Z,1µm,1.0s						
POHA	Pohakuloa	50.83	45	P	P	03 56 06.0	+0.1
TWSI	Taliwang, Sumb	50.92	273	P	P	03 56 06.4	-0.1
	comp=Z,25µmcomp=Z,22µmcomp=Z,1µm,1.0s						
MPSI	Mapaga	50.94	285	P	P	03 56 05.7	-0.9
	comp=Z,31µmcomp=Z,9µmcomp=Z,512nm,1.6s						
MSLP	Maasin	50.95	299	eP	P	03 56 06.7	+0.1
HLK	Haleakala	51.04	44	IAmb	IAmb	03 56 11.6	
	comp=Z,679nm,1.2s						
PAGZ	Pagadian	51.06	295	eP	P	03 56 07.6	+0.1
PAGZ	Pagadian	51.06	295	eP	S	04 03 05.9	-1.9
GIRL	Giralia	51.17	254	P	P	03 56 08.0	-0.3
	baz=51,SNR=8.4						
BESP	Borongan	51.25	301	eP	P	03 56 08.4	-0.5
H01W1	Cape Leeuwin H	51.41	239	P	P	03 56 10.6	+1.1
	baz=110,slow=7.4,SNR=45						
H01W3	Cape Leeuwin H	51.42	239	P	P	03 56 10.8	+1.2
	baz=110,slow=7.4,SNR=31						
H01W2	Cape Leeuwin H	51.42	239	P	P	03 56 10.9	+1.3
	baz=110,slow=7.4,SNR=35						
DNP	Denpasar	52.53	272	P	P	03 56 19.2	+0.8
	comp=Z,40µmcomp=Z,55µmcomp=Z,2µm,0.8s						
CNOP	Candoni, Negro	52.67	297	eP	P	03 56 17.9	-1.4
SRBI	Singaraja	52.68	273	P	P	03 56 19.5	0.0
	comp=Z,37µmcomp=Z,23µmcomp=Z,542nm,1.6s						
RKT	Rikitea	53.11	106	eS	S	04 03 35.4	-0.1
	comp=Z,26µm,29.2s						
RKT				eLQ	LQ	04 09 34.6	
	comp=Z,72µm,34.0s						
GUIM	Jordan	53.12	298	eP	P	03 56 21.7	-0.9
GUIM	Jordan	53.12	298	eP	S	04 03 32.0	-3.7
BKB	Balikpapan	53.16	282	P	P	03 56 24.3	+1.4
BKB				IAmb	IAmb	03 57 23.0	
	comp=Z,2µm,1.6s						
BKB	Balikpapan	53.16	282	P	P	03 56 25.4	+2.4
	comp=Z,41µmcomp=Z,23µmcomp=Z,206nm,1.7s						
KBKI	Kotabaru	53.17	279	P	P	03 56 22.1	-0.9
	comp=Z,1µmcomp=Z,5µmcomp=Z,216nm,0.9s						
PVCP	Virac	53.39	302	eP	P	03 56 24.5	-0.1
PVCP	Virac	53.39	302	eP	S	04 03 44.8	+5.4
JAGI	Jajag, Banyuwa	53.60	272	P	P	03 56 24.4	-1.8
	comp=Z,34µmcomp=Z,14µmcomp=Z,613nm,0.9s						
ABJI	Asem Bagus	53.69	273	P	P	03 56 27.3	+0.4
	comp=Z,32µmcomp=Z,18µmcomp=Z,744nm,1.0s						
KMMI	Kalianget	54.15	274	P	P	03 56 30.5	+0.3
	comp=Z,33µmcomp=Z,11µmcomp=Z,333nm,0.9s						
MYLDM	Lahad Datu	54.16	290	IAmb	IAmb	03 57 37.6	
	comp=Z,651nm,1.3s						
BBKI	Banjar Baru	54.37	278	P	P	03 56 32.6	+0.8
	comp=Z,20µmcomp=Z,13µmcomp=Z,194nm,1.2s						
MTKI	Muara Teweh, K	55.14	281	P	P	03 56 37.0	-0.3
	comp=Z,19µmcomp=Z,6µmcomp=Z,122nm,0.9s						
BOAC	Boac	55.20	300	eP	P	03 56 39.7	+2.0
SJMP	San Jose	55.29	299	eP	P	03 56 38.7	+0.5
LQP	Lukban	55.80	301⇑	eP	P	03 56 44.1	+1.9
SPMM	Sapulut	55.81	288	P	P	03 56 42.0	-0.1
BUSP	Coron	55.83	298	eP	P	03 56 43.0	+0.8
BUSP	Coron	55.83	298	eP	P	03 56 43.0	+0.8
PWJI	Pagerwojo	55.96	272	P	P	03 56 42.7	-0.4
	comp=Z,30µmcomp=Z,6µmcomp=Z,420nm,0.9s						
ENPP	El Nido	56.09	297	eP	P	03 56 44.0	0.0
ENPP	El Nido	56.09	297	eP	S	04 04 11.2	-4.2
TBJI	Tambak Boyo	56.23	273	P	P	03 56 45.5	+0.4
	comp=Z,20µmcomp=Z,14µmcomp=Z,652nm,0.9s						
BATP	Bataraza	56.37	293	eP	P	03 56 43.5	-2.5
BATP	Bataraza	56.37	293	eP	S	04 04 22.7	+3.6
MACP	Maragondon, Ca	56.55	301	eP	P	03 56 46.4	-0.9
MACP	Maragondon, Ca	56.55	301	eP	S	04 04 23.6	+2.2
KKM	Kota Kinabalu	56.59	289	IAmb	IAmb	03 57 47.5	
	comp=Z,844nm,1.3s						
LUBP	Lubang	56.67	300	eP	P	03 56 46.0	-2.1
CAUP	Cauayan	57.11	304	eP	P	03 56 52.0	+1.0
UGM	Wanagama	57.21	272	P	P	03 56 52.3	+0.3
	comp=Z,33µmcomp=Z,12µmcomp=Z,1µm,1.0s						
SMRI	Semarang	57.52	272	P	P	03 56 54.1	0.0
	comp=Z,36µmcomp=Z,24µmcomp=Z,850nm,1.0s						
CVP	Callao Caves	57.53	305⇑	eP	P	03 56 57.5	+3.5
SMPP	San Manuel, Pa	57.59	302	eP	P	03 56 54.0	-0.5
SMPP	San Manuel, Pa	57.59	302	eP	S	04 04 33.0	-2.0
PBKI	Pangkalan Bun	57.61	278	P	P	03 56 55.8	+1.1
	comp=Z,10µmcomp=Z,395nm,1.1s						
STKI	Sintang	58.70	281	P	P	03 57 03.1	+0.8

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JSG    Sagara           59.00 331    P       P       03 57 04.6 +0.7
JSG                                  IAmb    IAmb    03 57 09.3
       comp=Z,584nm,0.9s
JYT    Yasato           59.40 334    P       P       03 57 06.3 -0.3
JCJI   Jatiwangi        59.74 272    P       P       03 57 08.7 -0.7
       comp=Z,33µmcomp=Z,24µmcomp=Z,999nm,1.4s
CISI   Cisompet, Garu   59.89 271    P       P       03 57 09.7 -0.8
       comp=Z,35µmcomp=Z,13µmcomp=Z,809nm,0.8s
INU    Inuyama          60.10 330    IAmb    IAmb    03 57 16.6
       comp=Z,1µm,1.9s
LEM    Lembang          60.27 272    P       P       03 57 12.8 -0.4
       comp=Z,18µmcomp=Z,8µmcomp=Z,806nm,0.9s
KSM    Kuching          60.28 282    P       P       03 57 12.2 -0.9
KSM                                  IAmb    IAmb    03 58 11.9
       comp=Z,421nm,1.0s
KSM    Kuching          60.28 282    P       P       03 57 12.0 -1.0
MJAR   Matsushiro Arr   60.53 332    P       P       03 57 14.2 -0.1
       comp=Z,64nm,0.7s,baz=170,slow=7.2,SNR=44
MJAR                                 ScP     ScP     04 01 39.6 +3.5
       comp=Z,48nm,1.1s,baz=167,slow=4.1,SNR=9.1
MJAR                                 PKP2bc          04 26 32.0
       comp=Z,3.3nm,0.4s,baz=355,slow=3.9,SNR=5.0
MAJO   Matsushiro       60.54 332c iP       P       03 57 14.1 -0.2
MAJO                                 pmax    pmax
       comp=Z,249nm,1.0s
MAJO   Matsushiro       60.54 332    P       P       03 57 14.3  0.0
MAT    Matsushiro       60.54 332    P       P       03 57 13.7 -0.6
MAT                                  S       S       04 05 11.8 -0.3
MJB9   Matsu-Tunnel     60.54 332    P       P       03 57 13.7 -0.7
MJB9                                 IAmb    IAmb    03 58 38.4
       comp=Z,358nm,0.5s
JMM    Marumori         60.55 335    IAmb    IAmb    03 57 19.9
       comp=Z,355nm,1.0s
VNDA   Vanda            60.57 182    P       P       03 57 14.4 +0.4
       comp=Z,45nm,0.7s,baz=359,slow=7.4,SNR=110
VNDA                                 PKP2bc          04 26 34.0
       comp=Z,7.4nm,1.2s,baz=229,slow=4.2,SNR=5.6
VNDA   Vanda            60.57 182    P       P       03 57 14.2 +0.2
VNDA                                 pmax    pmax
       comp=Z,373nm,1.5s
VNDA   Vanda            60.57 182    P       P       03 57 14.2 +0.2
SBA    Scott Base       60.82 180    P       P       03 57 16.4 +0.8
SBA                                  pmax    pmax
       comp=Z,624nm,1.3s
SBA    Scott Base       60.82 180    P       P       03 57 16.4 +0.8
SBA                                  IAmb    IAmb    03 58 11.6
       comp=Z,624nm,1.2s
JWT    Wachi            60.83 329    IAmb    IAmb    03 57 21.7
       comp=Z,324nm,0.9s
TWG    Pinlang          61.05 309    IAmb    IAmb    03 57 34.1
       comp=Z,271nm,1.0s
CBJI   Citeko           61.12 272    P       P       03 57 18.0 -0.7
       comp=Z,32µmcomp=Z,20µmcomp=Z,1µm,0.9s
DBJI   Dramaga          61.18 272    P       P       03 57 18.9 -0.2
       comp=Z,32µmcomp=Z,19µmcomp=Z,836nm,0.9s
XMI    Christmas Isla   61.20 267    P       P       03 57 19.8 +0.5
       comp=Z,931nm,0.8s
YULB   Yu-li            61.23 310    IAmb    IAmb    03 57 25.3
       comp=Z,424nm,1.0s
XMIS   Christmas Isla   61.23 267    P       P       03 57 19.1 -0.4
XMIS                                 IAmb    IAmb    03 57 24.3
       comp=Z,747nm,1.0s
XMIS   Christmas Isla   61.23 267    P       P       03 57 19.9 +0.4
       comp=Z,776nm,1.0s
TPI    Tanjungpandan    61.41 276    P       P       03 57 20.7 +0.1
       comp=Z,38µmcomp=Z,5µmcomp=Z,127nm,0.8s
JNU    Nakatsue         61.53 324    P       P       03 57 21.4 +0.4
       comp=Z,72nm,0.6s,baz=106,slow=4.1,SNR=29
JNU    Nakatsue         61.53 324    IAmb    IAmb    03 57 25.0
       comp=Z,1µm,2.0s
JSD    Sado             61.76 333    IAmb    IAmb    03 57 27.2
       comp=Z,249nm,0.6s
CASY   Casey            61.86 203    P       P       03 57 23.6 +0.8
CASY                                 IAmb    IAmb    03 58 23.8
       comp=Z,524nm,1.4s
TATO   Taipei           62.04 311    P       P       03 57 24.5 -0.1
TATO   Taipei           62.04 311    P       P       03 57 22.5 -2.0
BLSI   Bandar Lampung   62.94 273    P       P       03 57 29.9 -0.9
       comp=Z,202nm,0.7s
JTM    Tenmabayashi     62.97 337    IAmb    IAmb    03 57 34.5
       comp=Z,685nm,1.5s
PPBI   Pangkal Pinang   63.03 276    P       P       03 57 31.9 +0.5
       comp=Z,37µmcomp=Z,258nm,1.8s
ERM    Erimo            63.29 339  i P       P       03 57 34.4 +1.9
ERM                                  pmax    pmax
       comp=Z,503nm,2.2s
KASI   Kota Agung       63.61 272    P       P       03 57 34.1 -1.1
       comp=Z,30µmcomp=Z,8µmcomp=Z,518nm,1.0s
KLSI                    63.62 273    P       P       03 57 33.3 -2.0
       comp=Z,1µmcomp=Z,41nm,1.5s
KNMB   Chin-men Tao     64.01 309    IAmb    IAmb    03 57 42.0
       comp=Z,700nm,1.1s
PMBI   Palembang        64.10 275    P       P       03 57 37.9 -0.5
PMBI   Palembang        64.10 275    P       P       03 57 39.6 +1.2
       comp=Z,29µmcomp=Z,14µmcomp=Z,794nm,1.1s
QZH    Quanzhou         64.13 309⇓iP       P       03 57 39.3 +1.0
QZH                                  pP      pP      03 58 30.6 +0.8
QZH                                  sP      sP      03 58 56.5 +2.4
QZH                                  S       S       04 05 58.8 +1.5
QZH                                  pmax    pmax
       comp=Z,510nm,0.7s
QZH                                  pmax    pmax
       comp=Z,2µm,3.3s
QZH                                  LR      LR
       comp=Z,10µm,20.8s
QZH                                  LR      LR
       comp=Z,8µm,20.6s
QZH                                  LR      LR
       comp=Z,11µm,18.3s
LWLI   Liwa             64.17 273    P       P       03 57 38.3 -0.7
       comp=Z,11µmcomp=Z,462nm,1.0s
MDSI   Maura Dua        64.21 273    P       P       03 57 37.8 -1.3
       comp=Z,29µmcomp=Z,4µmcomp=Z,134nm,1.0s
YUK    Yuzh-Kuril'sk    64.25 342   eP       P       03 57 39.9 +1.2
YUK                                i *PP     pP      03 58 30.4 +0.4
YUK                                i *SP     sP      03 58 58.4 +4.4
YUK                                i S       S       04 06 00.0 +2.0
YUK                                i                 04 07 08.0
YUK                                  pmax    pmax
       comp=Z,1µm,1.2s
YUK                                  pmax    pmax
       comp=E,270nm,0.7s
YUK                                  pmax    pmax
       comp=N,921nm,1.1s
YUK                                  pmax    pmax
       comp=Z,1µm,2.0s
JEW    Eniwo            64.61 338    IAmb    IAmb    03 57 45.4
       comp=Z,746nm,1.4s
KUR    Kuril'sk         64.79 344   eP       P       03 57 43.2 +1.1
KUR                                 eS       S       04 06 07.8 +3.2
KUR                                 e                04 07 14.8
KUR                                i SS      SS      04 10 24.4 +3.6
KUR                                  pmax    pmax
       comp=Z,2µm,2.0s
KUR                                  pmax    pmax
       comp=N,606nm,1.9s
KUR                                  pmax    pmax
       comp=E,782nm,1.7s
KUR                                  MLR     MLR
       comp=Z,8µm,18.0s
KUR                                  MLR     MLR
       comp=N,9µm,20.0s
KUR                                  MLR     MLR
       comp=E,4µm,20.0s
LHSI   Lahat            65.03 274    P       P       03 57 43.5 -0.9
       comp=E,24µmcomp=E,5µmcomp=E,140nm,2.0s
DSRI   Dabo             65.03 278    P       P       03 57 44.7 +0.3
       comp=E,17µmcomp=E,3µmcomp=E,113nm,1.7s
JKA    Kamikawa-asahi   65.34 340    P       P       03 57 46.1 +0.3
JKA                                  IAmb    IAmb    03 57 51.0
       comp=Z,460nm,0.9s
ASAJ   Asahikawa        65.35 340    P       P       03 57 47.0 +1.2
       comp=Z,246nm,0.7s,baz=228,slow=8.0,SNR=34
ASAJ   Asahikawa        65.35 340    P       P       03 57 46.1 +0.3
ASAJ                                 pmax    pmax
       comp=Z,460nm,0.9s
MNAI   Manna            65.41 273    P       P       03 57 45.4 -1.5
MNAI   Manna            65.41 273    P       P       03 57 45.9 -1.0
       comp=Z,29µmcomp=Z,14µmcomp=Z,589nm,1.4s
JMBI   JAMBI            65.56 276    P       P       03 57 49.6 +1.8
       comp=Z,7µmcomp=Z,585nm,1.2s
TJN    Taejon           65.88 324c iP       P       03 57 49.5 +0.2
KSI    Kapahiang        65.96 274    P       P       03 57 49.6 -0.9
       comp=Z,13µmcomp=Z,300nm,0.8s
HKC    Hong Kong Obse   66.05 305 ⇑P       P       03 57 52.0 +1.3
SSE    Sheshan          66.06 316    P       P       03 57 51.1 +0.5
SSE                                  pP      pP      03 58 42.8 +0.7
SSE                                  sP      sP      03 59 07.3 +1.1
SSE                                  S       S       04 06 21.8 +1.3
SSE                                  pmax    pmax
       comp=Z,59nm,1.1s
SSE                                  LR      LR
       comp=Z,3µm,16.2s
SSE    Sheshan          66.06 316    IAmb    IAmb    03 57 54.3
       comp=Z,693nm,1.5s
KSRS   Korea Array      66.35 326    P       P       03 57 53.4 +1.0
       comp=Z,22nm,0.9s,baz=151,slow=6.1,SNR=37
KSRS                                 PP      PP      04 00 18.8 -2.9
       comp=Z,13nm,1.0s,baz=144,slow=8.4,SNR=4.2
KSRS                                 ScP             04 02 06.0
       comp=Z,20nm,1.0s,baz=145,slow=6.0,SNR=5.8
KSRS                                 PKP2bc          04 26 20.0
       comp=Z,7.3nm,1.1s,baz=332,slow=3.1,SNR=4.4
MYKOM  Kota Tinggi      66.45 280    P       P       03 57 54.0 +0.5
INCN   Inchon           67.08 325    P       P       03 57 57.1 +0.1
INCN                                 pmax    pmax
       comp=Z,1µm,1.6s
INCN   Inchon           67.08 325    P       P       03 57 57.1 +0.1
INCN                                 IAmb    IAmb    03 58 02.5
       comp=Z,1µm,1.6s
INCN   Inchon           67.08 325    P       P       03 57 56.0 -1.0
GZH    Guangzhou        67.12 305    P       P       03 57 58.8 +1.4
GZH                                  pP      pP      03 58 48.0 -1.3
GZH                                  S       S       04 06 37.3 +3.8
GZH                                  ScS     SKiKP   04 07 34.3 +0.3
GZH                                  SS      SS      04 11 01.6 +4.0
GZH                                  pmax    pmax
       comp=Z,4µm,2.7s
RGRI   Rengat           67.20 277    P       P       03 57 59.6 +1.4
       comp=Z,75µmcomp=Z,288nm,0.9s
YSS    Yuzh-Sakhalins   67.82 341c iP       P       03 58 02.7 +1.4
YSS                                e*PP      pP      03 58 54.7 +1.6
YSS                                e*SP      sP      03 59 18.9 +1.8
YSS                                e                 04 00 30.9
YSS                                ePPP      PPP     04 02 11.4
YSS                                eS        S       04 06 40.1 -0.9
YSS                                eSSS      SSS     04 14 12.7
YSS                                  pmax    pmax
       comp=Z,8µm,2.8s
YSS                                  pmax    pmax
       comp=N,3µm,2.4s
YSS                                  pmax    pmax
       comp=Z,700nm,1.2s
YSS                                  smax    smax
       comp=N,20µm,18.0s
YSS                                  MLR     MLR
       comp=Z,10µm,16.0s
YSS    Yuzh-Sakhalins   67.82 341    P       P       03 58 01.5 +0.2
SDSI   Sungai Dareh     67.89 276    P       P       03 58 00.8 -1.7
       comp=Z,3µmcomp=Z,150nm,1.1s
QIZ    Qiongzhong       67.95 299    P       P       03 58 03.5 +0.8
QIZ                                  pP      pP      03 58 53.8 -0.8
QIZ                                  sP      sP      03 59 12.4 -6.2
QIZ                                  PP      PP      04 00 35.1 -0.8
QIZ                                  S       S       04 06 46.0 +2.4
QIZ                                  sS      sS      04 08 13.8 +1.6
QIZ                                  SS      SS      04 11 07.0 -3.6
QIZ                                  pmax    pmax
       comp=Z,79nm,1.8s
QIZ                                  pmax    pmax
       comp=Z,2µm,4.6s
NJ2    Nanjing          68.20 316 ⇑P       P       03 58 04.8 +0.8
NJ2                                  pP      pP      03 58 56.3 +0.4
NJ2                                  ScP             04 02 11.8
NJ2                                  S       S       04 06 44.3 -1.8
NJ2                                  sS      sS      04 08 18.8 +2.6
NJ2                                  pmax    pmax
       comp=Z,500nm,1.0s
NJ2                                  pmax    pmax
       comp=Z,2µm,4.0s
NJ2                                  LR      LR
       comp=Z,13µm,15.2s
NJ2                                  LR      LR
       comp=Z,13µm,16.1s
NJ2                                  LR      LR
       comp=Z,19µm,22.3s
TEY    Ternei           68.30 336⇓eP       P       03 58 03.8 -0.5
TEY                                e                 03 58 58.6
TEY                                e                 04 06 43.7
TEY                                  pmax    pmax
       comp=Z,30nm,2.0s
TEY                                  pmax    pmax
       comp=Z,700nm,2.6s
SKR    Severo-Kuril's   68.33 352   eP       P       03 58 03.7 -0.7
SKR                                 eS       S       04 06 41.2 -5.7
SKR                                e*SS      pS      04 07 44.3 -1.4
SKR                                eSSS      SSS     04 14 14.6
SKR                                  pmax    pmax
       comp=Z,187nm,1.2s
SKR                                  pmax    pmax
       comp=Z,3µm,2.6s
SKR                                  pmax    pmax
       comp=Z,2µm,9.9s
SKR                                  MLR     MLR
       comp=Z,3µm,16.0s
MSHR   Mys Shultsa      68.61 331c iP       P       03 58 06.6 +0.3
MSHR                                 pmax    pmax
       comp=Z,514nm,2.0s
BKNI   Bangkinang       68.64 277    IAmb    IAmb    03 58 14.6
       comp=Z,663nm,1.0s
BKNI   Bangkinang       68.64 277    P       P       03 58 07.4 +0.2
       comp=Z,29µmcomp=Z,10µmcomp=Z,834nm,1.1s
AMKA   Amchitka         68.79   7    P       P       03 58 08.7 +1.4
PDSI   Padang           68.81 276    P       P       03 58 06.2 -2.1
       comp=Z,15µmcomp=Z,136nm,0.7s
COCO   West Island      69.23 263    P       P       03 58 11.4 +0.6
COCO                                 pmax    pmax
       comp=Z,764nm,1.2s
COCO   West Island      69.23 263    P       P       03 58 11.4 +0.6
COCO                                 IAmb    IAmb    03 58 19.0
       comp=Z,764nm,1.2s
USA0B  Ussuriysk Arra   69.52 333c iP       P       03 58 12.6 +0.7
USRK   Ussuriysk Ar.    69.52 333    P       P       03 58 13.4 +1.5
       comp=Z,102nm,0.8s,baz=146,slow=4.4,SNR=79
USRK                                 PP      PP      04 00 48.5 -0.4
       comp=Z,25nm,1.0s,baz=132,slow=8.5,SNR=4.3
USRK                                 PKP2bc          04 26 13.2
       comp=Z,12nm,1.1s,baz=306,slow=1.6,SNR=8.8
SMY    Shemya           69.67   4    P       P       03 58 13.0 +0.5
SMY                                  pmax    pmax
       comp=Z,351nm,0.9s
SMY    Shemya           69.67   4    P       P       03 58 13.0 +0.5
SMY                                  IAmb    IAmb    03 58 16.5
       comp=Z,351nm,0.9s
ADK    Adak             69.85  10    P       P       03 58 14.0 +0.3
ADK                                  pmax    pmax
       comp=Z,2µm,2.0s
ADK    Adak             69.85  10    P       P       03 58 13.9 +0.3
UGL    Uglegorsk        69.93 342   eP       P       03 58 15.7 +1.5
UGL                                 eS       S       04 07 08.7 +3.1
UGL                                  pmax    pmax
       comp=N,3µm,4.0s
UGL                                  pmax    pmax
       comp=E,3µm,3.0s
UGL                                  pmax    pmax
       comp=Z,7µm,3.0s
UGL                                  pmax    pmax
       comp=Z,500nm,1.3s
IPM    Ipoh             70.01 281    P       P       03 58 16.0 +0.4
MNSI   Mandailing Nat   70.18 277    P       P       03 58 15.4 -1.2
       comp=Z,24µmcomp=Z,6µmcomp=Z,451nm,0.8s
PET    Petropavlovsk    70.32 354c iP       P       03 58 16.4 -0.1
PET                                e*PP      pwP     03 59 11.8 +0.7
PET                                e*SP      sP      03 59 32.7 +1.0
PET                                i S       S       04 07 11.2 +1.2
PET                                eSP       SKSac   04 07 54.8 -1.2
PET                                  pmax    pmax
       comp=Z,533nm,1.4s
PET                                  pmax    pmax
       comp=Z,4µm,15.3s
PET                                  pmax    pmax
       comp=Z,4µm,11.9s
PET    Petropavlovsk    70.32 354    P       P       03 58 16.7 +0.2
PET                                  IAmb    IAmb    03 58 20.5
       comp=Z,783nm,1.4s
WHN    Wuhan            70.42 312 ⇑P       P       03 58 17.8 +0.2
WHN                                  pP      pP      03 59 11.3 +1.5
WHN                                  sP      sP      03 59 36.0 +2.2
WHN                                  S       S       04 07 11.8 -0.3
WHN                                  LR      LR
       comp=Z,52µm,18.5s
WHN                                  LR      LR
       comp=Z,22µm,16.1s
WHN                                  LR      LR
       comp=Z,36µm,21.5s
PEA0B  Petropavlovsk-   70.51 353c iP       P       03 58 18.4 +0.7
PETK   Petropavlovsk-   70.51 353    P       P       03 58 18.2 +0.5
       comp=Z,276nm,0.8s,baz=147,slow=6.9,SNR=111
PETK                                 PKiKP   PKiKP   04 04 26.8 +0.9
       comp=Z,3.2nm,0.6s,baz=100,slow=4.4,SNR=2.7
PETK                                 PKP2ab          04 26 13.8
       comp=Z,10.0nm,1.1s,baz=60,slow=8.9,SNR=6.6
ATKA   Atka Island      70.59  11    P       P       03 58 20.3 +2.1
KULM   Kulim            70.64 282    P       P       03 58 18.7 -0.7
KULM   Kulim            70.64 282    P       P       03 58 20.0 +0.7
DL2    Dalian           70.90 323⇑iP       P       03 58 19.8 -0.5
DL2                                  pP      pP      03 59 11.6 -1.1
DL2                                  sP      sP      03 59 32.9 -3.7
DL2                                  PP      PP      04 01 08.8 +7.9
DL2                                  S       S       04 07 18.8 +1.5
DL2                                  sS      sS      04 08 48.9 +2.5
DL2                                  pmax    pmax
       comp=Z,1µm,0.7s
DL2                                  pmax    pmax
       comp=Z,4µm,5.9s
MDJ    Mudanjiang       70.91 332    P       P       03 58 21.4 +1.1
MDJ                                  pP      pP      03 59 11.9 -0.9
MDJ                                  sP      sP      03 59 37.0 +0.2
MDJ                                  PP      PP      04 01 01.9 +1.0
MDJ                                  S       S       04 07 21.4 +4.2
MDJ                                  sS      sS      04 08 51.4 +3.6
MDJ                                  SS      SS      04 12 00.8 +5.5
MDJ                                  pmax    pmax
       comp=Z,310nm,1.1s
MDJ                                  pmax    pmax
       comp=Z,3µm,4.1s
MDJ    Mudanjiang       70.91 332    P       P       03 58 20.2 -0.1
MDJ                                  IAmb    IAmb    03 58 25.2
       comp=Z,531nm,1.0s
TYV    Tymovskoe        71.36 343   eP       P       03 58 24.5 +1.7
TYV                                 eS       S       04 07 23.3 +1.3
TYV                                  pmax    pmax
       comp=Z,6µm,2.5s
TYV                                  pmax    pmax
       comp=Z,514nm,1.6s
TYV                                  smax    smax
       comp=E,37nm,2.5s
TYV                                  smax    smax
       comp=E,7µm,9.6s
SNY    Shenyang         71.82 326 ⇑P       P       03 58 25.8  0.0
SNY                                  pP      pP      03 59 18.9 +0.7
SNY                                  S       S       04 07 27.1 -0.7
SNY                                  pmax    pmax
       comp=E,190nm,1.7s
SNY                                  pmax    pmax
       comp=E,4µm,4.1s
SNY                                  LR      LR
       comp=E,6µm,20.3s
SNY                                  LR      LR
       comp=E,5µm,20.8s
SNY                                  LR      LR
       comp=E,12µm,20.1s
TIA    Tai'an           71.89 318    P       P       03 58 26.3 -0.1
TIA                                  pP      pP      03 59 19.4 +0.6
TIA                                  sP      sP      03 59 41.5 -1.2
TIA                                  S       S       04 07 28.8 -0.1
TIA                                  pmax    pmax
       comp=E,160nm,1.1s
TIA                                  pmax    pmax
       comp=E,3µm,5.6s
TIA                                  LR      LR
       comp=E,6µm,21.2s
TIA                                  LR      LR
       comp=E,8µm,20.6s
TIA                                  LR      LR
       comp=E,12µm,22.1s
TSI    Tuntungan        72.00 280    P       P       03 58 27.1 -0.4
       comp=E,600nm,0.9s
GSI    Gunungsitoli     72.24 277    IAmb    IAmb    03 58 36.2
       comp=Z,496nm,1.0s
GSI    Gunungsitoli     72.24 277    P       P       03 58 29.4 +0.5
       comp=Z,29µmcomp=Z,8µmcomp=Z,560nm,0.9s
QSPA   South Pole Qui   72.98 180    PKiKP   PKiKP   04 04 32.0 +2.7
       comp=Z,30nm,1.2s,baz=61,slow=5.5,SNR=2.4
QSPA                                 S       SKiKP   04 07 41.3 -0.3
       comp=Z,32nm,1.1s,baz=171,slow=20,SNR=11
QSPA   South Pole Qui   72.98 180    P       P       03 58 32.9 +0.4
GRNR   Gornyy           73.20 339⇑iP       P       03 58 35.2 +1.4
GRNR                                eS       S       04 07 45.2 +2.2
GRNR                                 pmax    pmax
       comp=E,50nm,1.2s
GRNR                                 pmax    pmax
       comp=N,60nm,1.1s
GRNR                                 pmax    pmax
       comp=Z,210nm,1.1s
GRNR                                 smax    smax
       comp=N,5.0nm,1.0s
TPTI                    73.23 279    P       P       03 58 33.9 -0.9
       comp=N,3µmcomp=N,93nm,1.0s
KLR    Kul'dur          73.63 336    P       P       03 58 38.1 +1.8
       comp=N,121nm,0.8s,baz=120,slow=3.9,SNR=6.0
KLR                                  PKiKP   PKiKP   04 04 32.0 +1.4
       comp=N,5.5nm,1.0s,baz=270,slow=2.0,SNR=2.4
KLR    Kul'dur          73.63 336c iP       P       03 58 36.8 +0.5
KLR                                  pmax    pmax
       comp=Z,1µm,1.9s
ENH    Enshi            73.80 309    P       P       03 58 37.1 -0.6
ENH                                  IAmb    IAmb    03 58 41.8
       comp=Z,930nm,1.3s
UNV    Unalaska Valle   73.80  15    IAmb    IAmb    03 58 40.6
       comp=Z,251nm,0.9s
NKL    Nikolayevsk      73.95 343   eP       P       03 58 37.8 -0.2
NKL                                 e                03 59 29.8
NKL                                 eS       S       04 07 58.7 +7.5
NKL                                  pmax    pmax
       comp=E,34nm,0.7s
NKL                                  pmax    pmax
       comp=N,10.0nm,0.6s
NKL                                  pmax    pmax
       comp=Z,707nm,1.3s
NKL                                  pmax    pmax
       comp=Z,376nm,1.6s
NKL                                  smax    smax
       comp=E,99nm,1.3s
NKL                                  smax    smax
       comp=N,22nm,1.7s
GYA    Guiyang          74.05 305 ⇑P       P       03 58 39.8 +0.4
GYA                                  pP      pP      03 59 32.8 +0.8
GYA                                  sP      sP      03 59 53.8 -2.0
GYA                                  S       S       04 07 54.3 +0.5
GYA                                  ScS     ScS     04 08 30.9 +2.1
GYA                                  SS      SS      04 12 43.3 -0.8
GYA                                  pmax    pmax
       comp=N,170nm,1.5s
GYA                                  pmax    pmax
       comp=N,3µm,3.5s
LHMI   Lhok Sumawe      74.09 281    IAmb    IAmb    03 59 12.0
       comp=Z,310nm,1.1s
LHMI   Lhok Sumawe      74.09 281    P       P       03 58 40.3 +0.6
       comp=Z,28µmcomp=Z,7µmcomp=Z,278nm,0.9s
AKUT   Akutan           74.25  15    IAmb    IAmb    03 58 42.5
       comp=Z,522nm,1.2s
MLSI   Meulaboh, Aceh   74.29 280    P       P       03 58 40.6 -0.3
       comp=Z,38µmcomp=Z,8µmcomp=Z,658nm,1.1s
BJT    Baijiatuau       74.84 321    P       P       03 58 43.7 +0.2
BJT                                  pmax    pmax
       comp=Z,2µm,1.8s
BJT    Baijiatuau       74.84 321    P       P       03 58 43.6 +0.2
BJI    Beijing          74.85 321    P       P       03 58 44.3 +0.8
BJI                                  pP      pP      03 59 35.8 -0.7
BJI                                  sP      sP      03 59 59.4 -0.9
BJI                                  S       S       04 08 04.4 +2.6
BJI                                  sS      sS      04 09 34.1 -0.2
BJI                                  pmax    pmax
       comp=Z,2µm,4.5s
BJI                                  LR      LR
       comp=Z,11µm,21.5s
BJI                                  LR      LR
       comp=Z,12µm,17.4s
BJI                                  LR      LR
       comp=Z,13µm,20.5s
RPN    Rapa Nui         75.57 114    P       P       03 58 49.9 +1.9
       comp=Z,692nm,1.0s,baz=282,slow=4.8,SNR=19
RPN    Rapa Nui         75.57 114    P       P       03 58 48.8 +0.8
RPN                                  pmax    pmax
       comp=Z,2µm,1.4s
RPN    Rapa Nui         75.57 114    P       P       03 58 48.8 +0.8
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TIY	**Taiyuan**	**75.81**	**317**	*e*P	**P**	**03 58 51.0**	**+1.9**
TIY				pP	**pP**	**03 59 45.3**	**+3.2**
TIY				S	**S**	**04 08 15.3**	**+2.7**
TIY				pmax	pmax		
	comp=Z,1µm,1.6s						
TIY				pmax	pmax		
	comp=Z,4µm,4.5s						
SUKH	**Sukhothai**	**76.04**	**293**	P	**P**	**03 58 52.0**	**+1.2**
XAN	**Xi'an**	**76.17**	**312**	P	**P**	**03 58 51.5**	**+0.3**
XAN				pP	pP	03 59 44.8	+0.6
XAN				sP	sP	04 00 08.8	+0.9
XAN				S	**S**	**04 08 11.3**	**-5.4**
XAN				pmax	pmax		
	comp=Z,660nm,2.1s						
XAN				pmax	pmax		
	comp=Z,7µm,4.1s						
XAN				LR	LR		
	comp=Z,6µm,22.8s						
XAN				LR	LR		
	comp=Z,7µm,20.6s						
XAN				LR	LR		
	comp=Z,14µm,21.7s						
CNBA	**Chernabura Isl**	**76.56**	**18**	IAmb	IAmb	03 58 56.0	
	comp=Z,1µm,1.6s						
PAYA	**Payao**	**76.58**	**295**	P	**P**	**03 58 54.0**	**+0.2**
KMI	**Kunming**	**76.58**	**302**	⇑P	**P**	**03 58 55.4**	**+1.4**
KMI				pP	pP	03 59 47.3	+0.2
KMI				sP	sP	04 00 10.3	-0.6
KMI				S	**S**	**04 08 21.8**	**-0.1**
KMI				SKS	**SKSac**	**04 08 42.8**	**-1.9**
KMI				sS	sS	04 09 53.9	+0.9
KMI				SS	**SS**	**04 13 22.1**	**-0.5**
KMI				pmax	pmax		
	comp=Z,390nm,1.5s						
KMI				pmax	pmax		
	comp=Z,5µm,4.8s						
KMI				LR	LR		
	comp=Z,4µm,21.9s						
KMI				LR	LR		
	comp=Z,4µm,24.2s						
KMI				LR	LR		
	comp=Z,5µm,26.7s						
KMI	**Kunming**	**76.58**	**302**	IAmb	IAmb	03 58 59.4	
	comp=Z,726nm,0.9s						
SDPT	**Sand Point**	**76.76**	**18**	P	**P**	**03 58 53.8**	**-0.1**
CM36	**Chiang Mai Arr**	**76.92**	**294**	P	**P**	**03 58 56.0**	**+0.3**
CM35	**Chiang Mai Arr**	**76.93**	**294**	P	**P**	**03 58 56.0**	**+0.3**
CM04	**Chiang Mai Arr**	**76.97**	**294**	P	**P**	**03 58 56.8**	**+0.8**
CM01	**Chiang Mai Arr**	**77.00**	**294**	P	**P**	**03 58 57.0**	**+0.9**
CM34	**Chiang Mai Arr**	**77.00**	**295**	P	**P**	**03 58 57.0**	**+0.9**
CM05	**Chiang Mai Arr**	**77.00**	**294**	P	**P**	**03 58 57.0**	**+0.8**
CM31	**Chiang Mai Arr**	**77.03**	**294**	P	**P**	**03 58 57.9**	**+1.6**
CM31	**Chiang Mai Arr**	**77.03**	**294**	P	**P**	**03 58 56.9**	**+0.6**
CM31				IAmb	IAmb	03 59 02.2	
	comp=Z,645nm,1.1s						
CMAR	**Chiang Mai Arr**	**77.03**	**294**	P	**P**	**03 58 57.4**	**+1.1**
	comp=Z,410nm,1.0s,baz=126,slow=4.1,SNR=200						
CMAR				PKiKP	**PKiKP**	**04 04 37.1**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=223,slow=0.8,SNR=4.2						
CMAR				PKKPbc	**PKKPbc**	**04 18 02.4**	**-0.1**
	comp=Z,8.2nm,1.0s,baz=287,slow=3.7,SNR=7.4						
CMAR				PKPPKP		04 25 59.1	
	comp=Z,1.7nm,0.4s,baz=284,slow=4.0,SNR=7.3						
CMAR	**Chiang Mai Arr**	**77.03**	**294**	*i* P	**P**	**03 58 56.9**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,410nm,1.0s						
CM15	**Chiang Mai Arr**	**77.04**	**294**	P	**P**	**03 58 57.0**	**+0.6**
CM33	**Chiang Mai Arr**	**77.16**	**294**	P	**P**	**03 58 57.0**	**-0.1**
CHTO	**Chiang Mai**	**77.16**	**294**	P	**P**	**03 58 57.6**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,466nm,0.9s						
CHTO	**Chiang Mai**	**77.16**	**294**	P	**P**	**03 58 57.6**	**+0.6**
CHTO				IAmb	IAmb	03 59 02.1	
	comp=Z,466nm,0.9s						
CHTO	**Chiang Mai**	**77.16**	**294**	P	**P**	**03 58 56.1**	**-1.0**
CM32	**Chiang Mai Arr**	**77.19**	**294**	P	**P**	**03 58 58.0**	**+0.8**
MA2	**Magadan**	**77.73**	**351**	P	**P**	**03 58 58.8**	**-0.5**
	comp=Z,113nm,0.6s,baz=160,slow=5.6,SNR=37						
MA2	**Magadan**	**77.73**	**351**	P	**P**	**03 58 58.6**	**-0.7**
MA2				IAmb	IAmb	03 59 02.0	
	comp=Z,226nm,0.9s						
MHMT	**Maesarieng**	**77.80**	**293**	P	**P**	**03 59 01.9**	**+1.4**
HHC	**Hu-ho-hao-te**	**78.15**	**319**	*e*P	**P**	**03 59 03.3**	**+1.1**
HHC				pP	pP	03 59 58.1	+2.7
HHC				sP	sP	04 00 21.8	+2.7
HHC				S	**S**	**04 08 34.8**	**-3.1**
HHC				pmax	pmax		
	comp=Z,420nm,1.2s						
HHC				pmax	pmax		
	comp=Z,5µm,6.6s						
CD2	**Chengdu**	**78.40**	**307**	⇑*i*P	**P**	**03 59 04.5**	**+0.8**
CD2				pP	pP	03 59 56.0	-1.0
CD2				S	**S**	**04 08 42.1**	**+1.2**
CD2				SKS	**SKSac**	**04 08 57.8**	**+0.6**
CD2				sS	sS	04 10 14.3	+2.0
CD2				SS	**SS**	**04 13 51.4**	**+1.9**
CD2				pmax	pmax		
	comp=Z,340nm,1.4s						
CD2				pmax	pmax		
	comp=Z,5µm,5.3s						
CD2				LR	LR		
	comp=Z,20µm,21.2s						
CD2				LR	LR		
	comp=Z,16µm,20.9s						
ZEA	**Zeya**	**78.92**	**336*c***	*e*P	**P**	**03 59 06.5**	**+0.6**
ZEA				*e**PP	**pP**	**04 00 00.3**	**+1.0**
ZEA				*e**SP	**sP**	**04 00 27.6**	**+4.7**
ZEA				*e*S	**S**	**04 08 48.2**	**+3.0**
ZEA				*e*SS	**SS**	**04 13 55.4**	**-0.7**
ZEA				pmax	pmax		
	comp=E,1µm,3.5s						
ZEA				pmax	pmax		
	comp=N,2µm,5.7s						
ZEA				pmax	pmax		
	comp=Z,4µm,4.2s						
ZEA				pmax	pmax		
	comp=N,220nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,330nm,0.9s						
ZEA				smax	smax		
	comp=Z,5µm,8.9s						
ZEA				smax	smax		
	comp=N,14µm,10.6s						
HIA	**Hailar**	**78.92**	**330**	P	**P**	**03 59 05.8**	**-0.2**
HIA				pmax	pmax		
	comp=Z,630nm,1.6s						
HIA	**Hailar**	**78.92**	**330**	P	**P**	**03 59 05.8**	**-0.2**
HIA				IAmb	IAmb	03 59 10.4	
	comp=Z,630nm,1.6s						
BTO	**Baotou**	**78.98**	**319**	*e*P	**P**	**03 59 08.1**	**+1.4**
PBA	**Port Blair**	**80.15**	**285**	*e*P	P	03 59 12.8	-0.5
MAW	**Mawson**	**80.19**	**202**	P	**P**	**03 59 13.1**	**+0.5**
	comp=Z,172nm,0.9s,baz=112,slow=6.4,SNR=37						
MAW				pP	**pP**	**04 00 06.8**	**+0.8**
	comp=Z,147nm,1.1s,baz=91,slow=6.8,SNR=2.8						
MAW				PKiKP	**PKiKP**	**04 04 41.4**	**+1.4**
	comp=Z,7.3nm,0.8s,baz=148,slow=10,SNR=1.6						
MAW	**Mawson**	**80.19**	**202**	P	**P**	**03 59 13.0**	**+0.4**
DGPR	**DIGLIPUR**	**80.49**	**287**	*e*P	**P**	**03 59 14.7**	**-0.5**
DGPR				IAmb	IAmb	03 59 20.0	
	comp=Z,727nm,0.9s						
SEY	**Seymchan**	**80.74**	**353**	P	**P**	**03 59 15.6**	**+0.2**
	comp=Z,274nm,0.8s,baz=141,slow=6.2						
SEY	**Seymchan**	**80.74**	**353**	⇑*i*P	**P**	**03 59 14.6**	**-0.8**
LZH	**Lanzhou**	**80.80**	**312**	⇓P	**P**	**03 59 18.1**	**+1.5**
LZH				pP	pP	04 00 13.1	+2.9
LZH				sP	sP	04 00 34.5	+0.6
LZH				S	**S**	**04 09 07.1**	**+1.1**
LZH				sS	sS	04 10 41.4	+0.9
LZH				SS	**SS**	**04 14 28.0**	**+2.7**
LZH				pmax	pmax		
	comp=Z,620nm,1.1s						
LZH				pmax	pmax		
	comp=Z,6µm,7.6s						
LZH				LR	LR		
	comp=Z,6µm,16.7s						
LZH				LR	LR		
	comp=Z,9µm,16.1s						
LZH				LR	LR		
	comp=Z,8µm,18.6s						
KDAK	**Kodiak Island**	**81.22**	**20**	P	**P**	**03 59 18.6**	**+0.6**
	comp=Z,143nm,0.8s,baz=275,slow=2.4,SNR=33						
KDAK				PKiKP	**PKiKP**	**04 04 42.7**	**+1.0**
	comp=Z,7.7nm,0.9s,baz=166,slow=4.2,SNR=4.2						
KDAK	**Kodiak Island**	**81.22**	**20*c***	*i*P	**P**	**03 59 19.9**	**+1.8**
KDAK				pmax	pmax		
	comp=Z,1µm,2.1s						
KDAK	**Kodiak Island**	**81.22**	**20**	P	**P**	**03 59 17.7**	**-0.3**
KDAK				IAmb	IAmb	03 59 21.3	
	comp=Z,284nm,1.1s						
GAMB	**Gambell**	**82.03**	**9**	IAmb	IAmb	03 59 26.5	
	comp=Z,1µm,1.9s						
PAF	**Port-aux-Franc**	**82.54**	**221**	P	**P**	**03 59 26.1**	**+0.8**
PAF				pmax	pmax		
	comp=Z,1µm,0.9s						
PAF	**Port-aux-Franc**	**82.54**	**221**	P	**P**	**03 59 26.1**	**+0.8**
HOM	**Homer**	**83.00**	**19**	P	**P**	**03 59 27.5**	**+0.2**
	baz=218,SNR=23						
HOM				S	**S**	**04 09 27.3**	**+0.2**
	baz=218						
LKP	**Lekhapani**	**83.12**	**301**	*e*P	**P**	**03 59 27.8**	**-0.9**
BRLK	**Bradley Lake**	**83.33**	**19**	IAmb	IAmb	03 59 33.8	
	comp=Z,682nm,1.0s						
CIT	**Chita**	**83.70**	**329**	*e*P	**P**	**03 59 31.8**	**+0.7**
CIT				*e*		04 00 27.5	
CIT				*e*		04 00 52.7	
CIT				*e*		04 02 55.6	
CIT				*e*S	**S**	**04 09 33.9**	**-0.7**
CIT				pmax	pmax		
	comp=Z,1µm,2.1s						
SAIH	**SAIHA**	**83.71**	**296**	*e*P	**P**	**03 59 31.9**	**0.0**
SAIH				IAmb	IAmb	03 59 37.3	
	comp=Z,682nm,1.2s						
IMP	**Imphal**	**83.75**	**298**	*e*P	**P**	**03 59 31.4**	**-0.7**
IMP				IAmb	IAmb	03 59 35.6	
	comp=Z,745nm,0.7s						
MOKO	**MOKOCHONG**	**83.83**	**300**	*e*P	**P**	**03 59 32.1**	**-0.4**
MOKO				IAmb	IAmb	03 59 36.4	
	comp=Z,722nm,0.9s						
DIBR	**DIBRUGARH**	**83.94**	**301**	*e*P	**P**	**03 59 33.0**	**+0.1**
DIBR				IAmb	IAmb	03 59 38.7	
	comp=Z,3µm,1.5s						
KOHI	**KOHIMA**	**83.94**	**299**	*e*P	**P**	**03 59 32.1**	**-1.0**
KOHI				IAmb	IAmb	03 59 37.6	
	comp=Z,1µm,1.3s						
CAPN	**Captain Cook N**	**84.03**	**19**	P	**P**	**03 59 32.7**	**+0.3**
	baz=218						
CAPN				S	**S**	**04 09 38.3**	**+1.0**
	baz=218						
SEW	**Seward**	**84.05**	**20**	IAmb	IAmb	03 59 37.3	
	comp=Z,447nm,1.1s						
BELA	**Belgrano 2**	**84.31**	**175**	P	**P**	**03 59 32.6**	**-1.2**
Q23K	**Middleton Isla**	**84.58**	**21**	P	**P**	**03 59 35.3**	**+0.1**
	baz=223						
Q23K				S	**S**	**04 09 42.0**	**-0.7**
	baz=223						
YAK	**Yakutsk**	**84.61**	**343**	P	**P**	**03 59 35.6**	**+0.3**
	comp=Z,179nm,0.6s,baz=132,slow=3.0,SNR=80						
YAK				S	**SKSac**	**04 09 38.1**	**+0.7**
	comp=Z,9.0nm,0.4s,baz=332,slow=23,SNR=14						
YAK				PKKPbc	**PKKPbc**	**04 17 46.7**	**-1.0**
	comp=Z,9.8nm,0.4s,baz=241,slow=1.6,SNR=4.5						
YAK	**Yakutsk**	**84.61**	**343*c***	*i*P	**P**	**03 59 35.2**	**-0.1**
YAK				*e**PP	**pP**	**04 00 28.7**	**-0.8**
YAK				*e*		04 02 52.9	
YAK				*e*S	**SKSac**	**04 09 35.0**	**-2.4**
YAK				*e**SS	sS	04 11 04.6	-12
YAK				pmax	pmax		
	comp=Z,1µm,1.4s						
YAK				pmax	pmax		
	comp=N,473nm,1.8s						
YAK				pmax	pmax		
	comp=E,275nm,1.6s						
YAK				pmax	pmax		
	comp=Z,965nm,3.8s						
YAK				pmax	pmax		
	comp=E,370nm,2.0s						
YAK				pmax	pmax		
	comp=N,652nm,3.4s						
YAK				smax	smax		
	comp=N,15µm,10.6s						
YAK				smax	smax		
	comp=E,12µm,9.3s						
YAK	**Yakutsk**	**84.61**	**343**	P	**P**	**03 59 35.2**	**-0.1**
KCPM	**Cahto Peak**	**84.69**	**46**	IAmb	IAmb	03 59 42.2	
	comp=Z,617nm,1.0s						
SILR	**SILCHAR**	**84.70**	**298**	*e*P	**P**	**03 59 38.7**	**+2.0**
SUA	**Susitna One**	**84.70**	**18**	IAmb	IAmb	03 59 40.6	
	comp=Z,465nm,1.2s						
RC01	**Rabbit Creek A**	**84.72**	**19**	P	**P**	**03 59 34.9**	**-1.1**
	baz=220,SNR=63						
RC01				S	**S**	**04 09 42.7**	**-1.4**
	baz=220						
HOPS	**Hopland Field**	**84.72**	**47**	IAmb	IAmb	03 59 41.5	
	comp=Z,730nm,1.3s						
ULN	**Ulaanbaatar**	**84.74**	**324*c***	*i*P	**P**	**03 59 36.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,792nm,1.6s						
ULN	**Ulaanbaatar**	**84.74**	**324**	P	**P**	**03 59 36.4**	**-0.2**
ULN	**Ulaanbaatar**	**84.74**	**324**	P	**P**	**03 59 36.2**	**-0.4**
GDXM	**Geysers**	**84.83**	**47**	IAmb	IAmb	03 59 42.4	
	comp=Z,713nm,1.6s						
ZIRO	**ZIRO**	**84.84**	**301**	*e*P	**P**	**03 59 38.0**	**+0.4**
ZIRO				IAmb	IAmb	03 59 41.6	
	comp=Z,482nm,1.0s						
SNCC	**San Nicolas Is**	**84.86**	**53**	P	**P**	**03 59 37.8**	**+0.5**
	baz=246,SNR=26						
SNCC				S	**S**	**04 09 46.8**	**+0.1**
	baz=246						
SNCC	**San Nicolas Is**	**84.86**	**53**	IAmb	IAmb	03 59 42.4	
	comp=Z,782nm,1.3s						
BILL	**Bilibino**	**84.88**	**359*d***	*i*P	**P**	**03 59 36.1**	**-0.5**
BILL				*e*		04 02 54.6	
BILL				*i* S	**S**	**04 09 43.1**	**-2.3**
BILL				*e*SSS	SSS	04 18 56.1	
BILL				pmax	pmax		
	comp=Z,1µm,1.5s						
BILL				MLR	MLR		
	comp=Z,4µm,18.0s						
BILL	**Bilibino**	**84.88**	**359**	P	**P**	**03 59 36.2**	**-0.4**
SAO	**San Andreas Ge**	**84.90**	**49**	IAmb	IAmb	03 59 42.4	
	comp=Z,722nm,1.4s						
JCC	**Jacoby Creek,**	**84.90**	**45**	IAmb	IAmb	03 59 42.5	
	comp=Z,556nm,1.3s						
SCZ2	**Santa Cruz Isl**	**85.08**	**52**	P	**P**	**03 59 38.4**	**0.0**
	baz=246,SNR=52						
SCZ2				S	**S**	**04 09 49.0**	**+0.1**
	baz=246						
SONM	**Songino Array**	**85.10**	**323**	P	**P**	**03 59 38.6**	**+0.3**
	comp=Z,90nm,0.6s,baz=134,slow=3.6,SNR=271						
SONM				PKiKP	**PKiKP**	**04 04 49.6**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=186,slow=2.3,SNR=1.2						
SONM				S	**SKSac**	**04 09 41.8**	**+0.3**
	comp=Z,12nm,1.1s,baz=152,slow=6.5,SNR=6.5						
SONM				PKKPbc	**PKKPbc**	**04 17 44.7**	**-1.3**
	comp=Z,5.1nm,0.8s,baz=274,slow=2.6,SNR=9.9						
SONM				PKPPKP	**P'P'df**	**04 25 47.2**	**-2.5**
	comp=Z,8.3nm,1.1s,baz=247,slow=2.2,SNR=11						
GTA	**Gaotai**	**85.17**	**314**	P	**P**	**03 59 39.0**	**+0.1**
GTA				pP	pP	04 00 32.3	-0.7
GTA				sP	sP	04 00 54.3	-2.1
GTA				SKS	**SKSac**	**04 09 40.1**	**-2.2**
GTA				S	**S**	**04 09 52.8**	**+3.0**
GTA				sS	sS	04 11 19.3	-5.6
GTA				SS	**SS**	**04 15 33.5**	**+3.9**
GTA				pmax	pmax		
	comp=Z,260nm,1.3s						
GTA				pmax	pmax		
	comp=Z,4µm,6.0s						
GTA				LR	LR		
	comp=Z,6µm,18.2s						
GTA				LR	LR		
	comp=Z,7µm,20.7s						
GTA				LR	LR		
	comp=Z,10µm,20.7s						
SBC	**Santa Barbara**	**85.20**	**52**	P	**P**	**03 59 39.6**	**+0.6**
	baz=246,SNR=6.1						
SBC				S	**S**	**04 09 51.7**	**+1.7**
	baz=246						
PMR	**Palmer**	**85.29**	**19**	IAmb	IAmb	03 59 42.5	
	comp=Z,214nm,0.9s						
BELO	**BELONIA**	**85.31**	**296**	*e*P	**P**	**03 59 40.9**	**+1.1**
KRMB	**Red Mountain**	**85.31**	**44**	IAmb	IAmb	03 59 44.9	
	comp=Z,672nm,1.4s						
PKM	**Mcpherson Peak**	**85.31**	**52**	P	**P**	**03 59 40.3**	**+0.5**
	baz=246,SNR=128						
PKM				S	**S**	**04 09 49.6**	**-1.9**
	baz=246						
SMMC	**Simmler**	**85.35**	**51**	P	**P**	**03 59 40.5**	**+0.7**
	baz=245,SNR=68						
SMMC				S	**S**	**04 09 53.0**	**+1.4**
	baz=245						
KNK	**Knik Glacier**	**85.36**	**19**	IAmb	IAmb	03 59 43.3	
	comp=Z,236nm,0.9s						
TEZP	**TEZPUR**	**85.37**	**299**	*e*P	**P**	**03 59 39.1**	**-0.8**
TEZP				IAmb	IAmb	03 59 44.8	
	comp=Z,2µm,1.5s						
GLI	**Glacier Island**	**85.40**	**20**	P	**P**	**03 59 40.0**	**+0.7**
GLI				IAmb	IAmb	03 59 43.2	
	comp=Z,228nm,0.9s						
PPLA	**Purkeypile**	**85.41**	**17**	IAmb	IAmb	04 00 39.5	
	comp=Z,346nm,1.6s						
KBO	**Bosley Butte**	**85.42**	**43**	IAmb	IAmb	03 59 45.3	
	comp=Z,823nm,1.5s						
O02D	**Mt. Diablo Mer**	**85.45**	**46**	P	**P**	**03 59 41.3**	**+1.0**
	baz=243,SNR=327						
O02D				S	**S**	**04 09 50.9**	**-1.5**
	baz=243						
SCI2	**San Clemente I**	**85.50**	**54**	P	**P**	**03 59 40.7**	**+0.2**
	baz=246,SNR=38						
SCI2				S	**S**	**04 09 52.6**	**-0.4**
	baz=246						
FID	**Port Fidalgo**	**85.51**	**20**	IAmb	IAmb	03 59 43.6	
	comp=Z,174nm,0.8s						
CUT	**Chulitna**	**85.57**	**18**	P	**P**	**03 59 39.2**	**-0.9**
	baz=219,SNR=20						
KEBM	**Edson Butte**	**85.65**	**43**	IAmb	IAmb	03 59 46.1	
	comp=Z,772nm,1.6s						
SML	**Sawmill**	**85.70**	**19**	IAmb	IAmb	03 59 47.7	
	comp=Z,488nm,1.3s						
SHL	**Shillong**	**85.76**	**298**	*e*P	**P**	**03 59 41.9**	**-0.3**
SHL				IAmb	IAmb	03 59 47.0	
	comp=Z,295nm,1.0s						
WDC	**Whiskeytown Da**	**85.80**	**45**	P	**P**	**03 59 41.9**	**+0.1**
WDC				pmax	pmax		
	comp=Z,790nm,1.4s						
WDC	**Whiskeytown Da**	**85.80**	**45**	P	**P**	**03 59 41.9**	**+0.1**
WDC				IAmb	IAmb	03 59 46.8	
	comp=Z,790nm,1.4s						
L02E	**Cave Junction**	**85.80**	**44**	P	**P**	**03 59 42.4**	**+0.6**
	baz=243,SNR=33						
L02E				S	**S**	**04 09 56.3**	**+0.7**
	baz=243						
N02D	**Trinity Center**	**85.86**	**45**	P	**P**	**03 59 43.2**	**+1.0**
	baz=243,SNR=348						
N02D				S	**S**	**04 09 57.1**	**+0.7**
	baz=243						
M02C	**Callahan**	**85.95**	**45**	P	**P**	**03 59 43.3**	**+0.6**
	baz=243,SNR=194						
M02C				S	**S**	**04 10 00.2**	**+3.0**
	baz=243						
FMP	**Fort Macarthur**	**85.99**	**53**	P	**P**	**03 59 43.3**	**+0.5**
	baz=246,SNR=9.3						
FMP				S	**S**	**04 10 00.3**	**+2.6**
	baz=246						
K02D	**Willamette Mer**	**86.01**	**43**	P	**P**	**03 59 43.4**	**+0.5**
	baz=242,SNR=82						
K02D				S	**S**	**04 09 59.4**	**+1.7**
	baz=242						
OSI	**Osito Audit: C**	**86.02**	**52**	P	**P**	**03 59 43.4**	**+0.3**
	baz=246						
OSI				S	**S**	**04 09 59.4**	**+1.3**
	baz=246						
SCM	**Sheep Creek Mo**	**86.04**	**19**	IAmb	IAmb	03 59 51.2	
	comp=Z,288nm,0.8s						
J01E	**Myrtle Point**	**86.05**	**43**	P	**P**	**03 59 43.3**	**+0.4**
	baz=242,SNR=39						
J01E				S	**S**	**04 09 59.6**	**+1.8**
	baz=242						
ORV	**Oroville**	**86.07**	**47**	IAmb	IAmb	03 59 47.8	
	comp=Z,430nm,1.2s						
GUWA	**GUWAHATI**	**86.14**	**299**	*e*P	**P**	**03 59 42.6**	**-1.2**
GUWA				IAmb	IAmb	03 59 48.3	
	comp=Z,210nm,1.0s						
ARVC	**Arvin**	**86.15**	**52**	P	**P**	**03 59 43.9**	**+0.3**
	baz=246,SNR=70						
ARVC				S	**S**	**04 10 01.1**	**+1.9**
	baz=246						
DECC	**Green Verdugo**	**86.17**	**53**	P	**P**	**03 59 43.6**	**-0.3**
	baz=246,SNR=6.3						
DECC				S	**S**	**04 10 00.7**	**+1.1**
	baz=246						
O03E	**Paynes Creek**	**86.18**	**46**	P	**P**	**03 59 43.9**	**+0.1**
	baz=244,SNR=238						
O03E				S	**S**	**04 09 59.2**	**-0.3**
	baz=244						
YBH	**Yreka Blue Hor**	**86.20**	**44**	P	**P**	**03 59 45.0**	**+1.2**
	comp=Z,214nm,1.1s						
YBH	**Yreka Blue Hor**	**86.20**	**44**	IAmb	IAmb	03 59 49.0	
	comp=Z,812nm,1.5s						
VOG	**Valley Oaks Go**	**86.22**	**50**	P	**P**	**03 59 43.8**	**-0.1**
	baz=246,SNR=8.6						
VOG				S	**S**	**04 09 59.3**	**-0.5**
	baz=246						
VES	**Vestal, Richgr**	**86.25**	**51**	P	**P**	**03 59 43.8**	**-0.3**
	baz=246,SNR=81						
VES				S	**S**	**04 10 01.6**	**+1.4**
	baz=246						
PASC	**Pasadena Art C**	**86.25**	**53**	IAmb	IAmb	03 59 48.6	
	comp=Z,266nm,1.1s						
KTH	**Kantishna Hill**	**86.28**	**17**	IAmb	IAmb	03 59 48.3	
	comp=Z,224nm,1.0s						
DIB	**Dawson Inlet,**	**86.35**	**31**	P	**P**	**03 59 45.3**	**+1.2**
DIB				IAmb	IAmb	03 59 48.6	
	comp=Z,754nm,1.6s						
MWC	**Mount Wilson**	**86.37**	**53**	IAmb	IAmb	03 59 49.4	
	comp=Z,431nm,1.1s						
TRF	**Thorofare Moun**	**86.38**	**17**	IAmb	IAmb	03 59 49.0	
	comp=Z,257nm,0.8s						
HUMO	**Hull Mountain**	**86.43**	**43**	IAmb	IAmb	03 59 50.1	
	comp=Z,994nm,1.8s						
CCX	**Cicese**	**86.54**	**55**	IAmb	IAmb	03 59 50.3	
	comp=Z,414nm,1.3s						
I02D	**Swisshome**	**86.54**	**42**	P	**P**	**03 59 45.8**	**+0.5**
	baz=242,SNR=8.7						
I02D				S	**S**	**04 10 03.6**	**+1.0**
	baz=242						
109C	**Camp Elliot, M**	**86.58**	**54**	P	**P**	**03 59 46.0**	**+0.2**
	baz=247,SNR=29						
109C				S	**S**	**04 10 05.8**	**+2.3**
	baz=247						
109C	**Camp Elliot, M**	**86.58**	**54**	IAmb	IAmb	03 59 50.4	
	comp=Z,347nm,1.2s						
M24K	**Tolsona, Glenn**	**86.61**	**20**	P	**P**	**03 59 45.6**	**+0.3**
	baz=223						
M24K	**Tolsona, Glenn**	**86.61**	**20**	IAmb	IAmb	03 59 54.3	
	comp=Z,278nm,0.9s						
ISA	**Isabella, Lake**	**86.63**	**51**	P	**P**	**03 59 45.9**	**-0.1**
ISA				pmax	pmax		
	comp=Z,2µm,1.8s						
ISA	**Isabella, Lake**	**86.63**	**51**	P	**P**	**03 59 46.6**	**+0.5**
	baz=246,SNR=308						
ISA				S	**S**	**04 10 06.6**	**+2.6**
	baz=246						
ISA	**Isabella, Lake**	**86.63**	**51**	P	**P**	**03 59 45.9**	**-0.1**
CRQM	**Cirque**	**86.66**	**22**	IAmb	IAmb	03 59 50.5	
	comp=Z,266nm,1.0s						
I03D	**Drain, OR**	**86.67**	**42**	P	**P**	**03 59 46.4**	**+0.5**
	baz=243,SNR=32						
I03D				S	**S**	**04 10 05.8**	**+1.9**
	baz=243						
EDW2	**Edwards Air Fo**	**86.68**	**52**	P	**P**	**03 59 46.7**	**+0.4**
	baz=247,SNR=271						
EDW2				S	**S**	**04 10 07.3**	**+2.8**
	baz=247						
MESA	**MESA**	**86.68**	**22**	IAmb	IAmb	03 59 51.0	
	comp=Z,191nm,0.9s						
BFSC	**Mount Baldy Ra**	**86.68**	**53**	P	**P**	**03 59 46.4**	**-0.1**
	baz=247,SNR=152						
BFSC				S	**S**	**04 10 06.8**	**+2.1**
	baz=247						
L04D	**Klamath Falls**	**86.69**	**44**	P	**P**	**03 59 46.3**	**0.0**
	baz=244,SNR=135						
L04D				S	**S**	**04 10 04.8**	**+0.4**
	baz=244						
N25K	**Chitina, Valde**	**86.76**	**20**	P	**P**	**03 59 46.1**	**0.0**
	baz=224						
N25K				S	**S**	**04 10 04.2**	**+0.1**
	baz=224						
RND	**Reindeer**	**86.76**	**18**	IAmb	IAmb	03 59 49.8	
	comp=Z,285nm,1.2s						
MURC	**Murrieta**	**86.79**	**54**	P	**P**	**03 59 47.1**	**+0.2**
	baz=247,SNR=50						
MURC				S	**S**	**04 10 08.3**	**+2.8**
	baz=247						
M04C	**Macdoel**	**86.81**	**45**	P	**P**	**03 59 47.3**	**+0.4**
	baz=244,SNR=198						
M04C				S	**S**	**04 10 06.9**	**+1.4**
	baz=244						

SYO	Syowa Base	86.83	196	⇓eP	P	03 59 45.8	-0.5
SYO	Syowa Base	86.83	196	⇑iPcP	PcP	03 59 47.8	-0.5
SYO	Syowa Base	86.83	196	⇑ipP	pP	04 00 41.4	+0.7
SYO	Syowa Base	86.83	196	⇑isP	sP	04 01 03.0	-1.2
SYO	Syowa Base	86.83	196	⇓iPP	PP	04 03 10.8	-0.9
ISLE	Juniper Island	86.83	22	IAmb	IAmb	03 59 51.2	
	comp=Z,222nm,0.9s						
BAR	Barrett	86.84	55	IAmb	IAmb	03 59 51.6	
	comp=Z,281nm,1.3s						
TKX	Tecate	86.85	55	IAmb	IAmb	03 59 50.7	
	comp=Z,574nm,1.7s						
VRDI	Verde Repeater	86.88	21	IAmb	IAmb	03 59 50.8	
	comp=Z,481nm,1.8s						
YAH	Yahtse	86.88	22	P	P	03 59 47.5	+0.7
GLB	Gilahina Butte	86.91	21	IAmb	IAmb	03 59 51.4	
	comp=Z,215nm,1.0s						
MDPB	Devils Postpil	86.98	49	IAmb	IAmb	03 59 52.8	
	comp=Z,520nm,1.1s						
MCK	McKinley	86.99	18	P	P	03 59 46.6	-0.5
	baz=220,SNR=67						
BEKR	Beckworth	86.99	47	IAmb	IAmb	03 59 52.6	
	comp=Z,480nm,1.1s						
OMMB	Old Mammoth Mi	87.03	49	IAmb	IAmb	03 59 53.1	
	comp=Z,674nm,1.4s						
BOD	Bodaibo	87.10	334	⇓iP	P	03 59 47.1	-0.6
BOD				eS	SKSac	04 09 51.9	-1.2
BOD				pmax	pmax		
	comp=Z,578nm,1.8s						
COR	Corvallis	87.11	42	P	P	03 59 48.1	+0.1
COR				pmax	pmax		
	comp=Z,968nm,1.7s						
COR	Corvallis	87.11	42	P	P	03 59 48.1	+0.1
COR				IAmb	IAmb	03 59 53.2	
	comp=Z,968nm,1.7s						
MONP2	Monument Peak	87.11	54	P	P	03 59 49.0	+0.3
	baz=248,SNR=126						
MONP2				S	S	04 10 10.4	+1.4
	baz=248						
MCARA	McCarthy VSAT	87.14	21	IAmb	IAmb	03 59 52.6	
	comp=Z,262nm,1.2s						
LRMC	Laurel Mtn Rad	87.15	52	P	P	03 59 48.9	+0.3
	baz=247,SNR=251						
LRMC				S	S	04 10 12.2	+3.1
	baz=247						
ESJX	Sierra Juarez	87.15	55	IAmb	IAmb	03 59 52.9	
	comp=Z,310nm,1.4s						
MLAC	Mammoth, Mammo	87.15	49	P	P	03 59 49.2	+0.4
	baz=246,SNR=73						
MLAC				S	S	04 10 11.7	+2.4
	baz=246						
TABL	Table Mountain	87.15	22	IAmb	IAmb	03 59 53.1	
	comp=Z,332nm,1.2s						
BWN	Browne	87.17	17	IAmb	IAmb	03 59 52.2	
	comp=Z,494nm,1.0s						
PNTR	Pine Nut	87.20	48	IAmb	IAmb	03 59 53.9	
	comp=Z,607nm,1.2s						
CWC	Cottonwood Cre	87.23	51	P	P	03 59 49.2	+0.2
	baz=246						
CWC				S	S	04 10 12.1	+2.1
	baz=246						
K04D	Chiloquin, OR	87.23	44	P	P	03 59 49.1	+0.2
	baz=244,SNR=49						
K04D				S	S	04 10 11.1	+1.5
	baz=244						
PCA	Pinnacle	87.25	23	IAmb	IAmb	03 59 52.4	
	comp=Z,321nm,1.2s						
BBRC	Big Bear Solar	87.25	53	P	P	03 59 49.3	0.0
	baz=247,SNR=23						
BBRC				S	S	04 10 10.0	-0.3
	baz=247						
VCNR	Virginia City	87.25	48	IAmb	IAmb	03 59 54.1	
	comp=Z,297nm,1.1s						
IKP	In-Ko-Pah, Jac	87.27	55	P	P	03 59 49.7	+0.5
	baz=248,SNR=76						
IKP				S	S	04 10 12.2	+1.9
	baz=248						
J04D	Umpqua Nationa	87.27	43	P	P	03 59 49.5	+0.3
	baz=244,SNR=111						
J04D				S	S	04 10 10.7	+0.6
	baz=244						
I04A	Tendick Farm,	87.32	43	P	P	03 59 49.2	0.0
	baz=243,SNR=67						
I04A				S	S	04 10 09.9	-0.3
	baz=243						
PFO	Pinyon Flats O	87.36	54	P	P	03 59 49.8	+0.1
	comp=Z,61nm,1.0s,baz=254,slow=4.6,SNR=37						
PFO				PP	PP	04 03 17.5	-0.2
	comp=Z,20nm,1.1s,baz=253,slow=6.1,SNR=5.8						
PFO	Pinyon Flats O	87.36	54c	iP	P	03 59 50.4	+0.7
PFO				pmax	pmax		
	comp=Z,494nm,1.6s						
PFO	Pinyon Flats O	87.36	54	P	P	03 59 49.9	+0.2
	baz=248,SNR=55						
PFO				S	S	04 10 13.2	+2.0
	baz=248						
PFO	Pinyon Flats O	87.36	54	P	P	03 59 49.7	+0.1
PFO				IAmb	IAmb	03 59 54.4	
	comp=Z,356nm,1.4s						
TPFO	Pinon Flats	87.36	54	P	P	03 59 49.9	+0.2
	baz=248,SNR=58						
TPFO				S	S	04 10 13.2	+2.0
	baz=248						
TIN	Tinemaha, Big	87.36	50	P	P	03 59 50.2	+0.6
	baz=246,SNR=83						
TIN				S	S	04 10 14.3	+3.2
	baz=246						
RDOG	Red Dog Mine	87.39	10	IAmb	IAmb	03 59 52.5	
	comp=Z,446nm,1.6s						
BARN	Barnard Glacie	87.39	22	IAmb	IAmb	03 59 54.3	
	comp=Z,261nm,1.0s						
RRX	Edison Barstow	87.43	52	P	P	03 59 49.8	-0.1
	baz=247,SNR=5.9						
RRX				S	S	04 10 11.4	-0.2
	baz=247						
H04D	Lebanon	87.44	42	P	P	03 59 50.2	+0.5
	baz=243,SNR=44						
H04D				S	S	04 10 13.1	+1.9
	baz=243						
MPMC	Manual Prospec	87.52	51	P	P	03 59 50.5	0.0
	baz=247,SNR=221						
MPMC				S	S	04 10 15.0	+2.2
	baz=247						
NEA2	Nenana	87.61	17	P	P	03 59 49.2	-0.8
	baz=220,SNR=54						
NEA2				S	S	04 10 11.4	-0.5
	baz=220						
PAHR	Pah Rah Range	87.61	47	IAmb	IAmb	03 59 55.6	
	comp=Z,856nm,1.4s						
SWSC	Sam W. Stewart	87.62	55	P	P	03 59 51.0	+0.3
	baz=248,SNR=85						
SWSC				S	S	04 10 14.9	+1.5
	baz=248						
GSC	Goldstone, Bar	87.74	52	P	P	03 59 51.6	+0.2
	baz=247,SNR=130						
GSC				S	S	04 10 16.5	+1.9
	baz=247						
GSC	Goldstone, Bar	87.74	52	IAmb	IAmb	03 59 56.2	
	comp=Z,984nm,1.8s						
RYN	Ryan	87.78	49	IAmb	IAmb	03 59 56.5	
	comp=Z,427nm,1.2s						
WRH	Wood River Hil	87.79	17	IAmb	IAmb	03 59 54.4	
	comp=Z,252nm,1.2s						
LSA	Lhasa	87.84	302	P	P	03 59 53.0	+0.5
LSA				pmax	pmax		
	comp=Z,480nm,2.1s						
LSA				LR	LR		
	comp=Z,15µm,26.3s						
LSA				LR	LR		
	comp=Z,18µm,24.9s						
LSA				LR	LR		
	comp=Z,18µm,28.5s						
LSA	Lhasa	87.84	302	P	P	03 59 52.6	+0.1
LSA	Lhasa	87.84	302	P	P	03 59 52.0	-0.5
LSA				pmax	pmax		
	comp=Z,128nm,0.9s						
LSA	Lhasa	87.84	302	P	P	03 59 52.0	-0.5
LSA	Lhasa	87.84	302	P	P	03 59 50.0	-2.4
BELC	Belle Mtn. Jos	87.86	54	P	P	03 59 52.4	+0.3
	baz=248,SNR=274						
BELC				S	S	04 10 17.6	+1.7
	baz=248						
NVAR	Mina Array Bea	87.86	49	P	P	03 59 52.6	+0.6
	comp=Z,116nm,0.8s,baz=230,slow=6.8,SNR=125						
NVAR				PKiKP	PKiKP	04 04 56.3	+2.9
	comp=Z,1.3nm,0.6s,baz=214,slow=3.1,SNR=5.6						
NVAR				PKKPbc	PKKPbc	04 17 39.6	+0.7
	comp=Z,9.0nm,0.7s,baz=84,slow=3.3,SNR=27						
NVAR				PKPPKP	P'P'df	04 25 40.5	-4.8
	comp=Z,4.9nm,1.0s,baz=82,slow=2.0,SNR=8.4						
H04A	Detroit Lake	87.86	42	IAmb	IAmb	03 59 56.0	
	comp=Z,618nm,1.4s						
J05D	Fort Rock, OR	87.87	43	P	P	03 59 52.4	+0.5
	baz=244,SNR=380						
J05D				S	S	04 10 17.7	+2.1
	baz=244						
MOD	Modoc Plateau	87.89	45	IAmb	IAmb	03 59 56.8	
	comp=Z,425nm,1.1s						
HEC	Hector,Ludlow	87.92	53	P	P	03 59 52.2	0.0
	baz=248,SNR=177						
HEC				S	S	04 10 18.4	+2.1
	baz=248						
I23K	Minto, Yukon-K	87.95	16	P	P	03 59 51.1	-0.4
	baz=220,SNR=34						
I23K				S	S	04 10 15.1	0.0
	baz=220						
NV11	Mina Array Sit	87.97	49	IAmb	IAmb	03 59 57.3	
	comp=Z,740nm,1.4s						
F04D	Rainier, OR	87.98	40	P	P	03 59 52.8	+0.7
	baz=243,SNR=18						
F04D				S	S	04 10 18.3	+2.1
	baz=243						
GRAC	Grapevine Rang	87.98	50	P	P	03 59 53.2	+0.8
	baz=247,SNR=146						
GRAC				S	S	04 10 18.2	+1.5
	baz=247						
MENT	Mentasta	88.00	20	IAmb	IAmb	03 59 57.2	
	comp=Z,337nm,1.7s						
CCB	Clear Creek Bu	88.00	17	P	P	03 59 51.0	-0.8
NLWA	Neilton Lookou	88.06	39	IAmb	IAmb	03 59 57.7	
	comp=Z,551nm,1.4s						
HDA	Harding Lake	88.07	18	P	P	03 59 50.9	-1.3
	baz=222						
HDA				S	S	04 10 14.6	-1.7
	baz=222						
HDA				S	S	04 10 14.6	-1.7
	baz=222						
HDA	Harding Lake	88.07	18	IAmb	IAmb	03 59 56.1	
	comp=Z,439nm,1.2s						
MDM	Murphy Dome	88.12	17	IAmb	IAmb	03 59 55.9	
	comp=Z,370nm,1.2s						
FURC	Furnace Creek,	88.14	51	P	P	03 59 53.1	0.0
	baz=247,SNR=143						
FURC				S	S	04 10 17.4	-0.7
	baz=247						
BC3	Big Chuckawall	88.15	54	P	P	03 59 53.9	+0.5
	baz=248,SNR=103						
BC3				S	S	04 10 23.7	+5.1
	baz=248						
TCOL	CIGO, UAF Yank	88.16	17	P	P	03 59 50.6	-1.9
	baz=221,SNR=53						
TCOL				S	S	04 10 15.6	-1.5
	baz=221						
TCOL	CIGO, UAF Yank	88.16	17	IAmb	IAmb	03 59 56.1	
	comp=Z,345nm,1.1s						
ZAK	Zakamensk	88.16	324	eP	P	03 59 53.2	+0.2
ZAK				e		04 10 00.9	
ZAK				pmax	pmax		
	comp=Z,247nm,1.5s						
COLA	College	88.16	17c	iP	P	03 59 51.4	-1.1
COLA				pmax	pmax		
	comp=Z,338nm,1.1s						
COLA	College	88.16	17	P	P	03 59 51.3	-1.2
COLA				IAmb	IAmb	03 59 56.1	
	comp=Z,341nm,1.1s						
RIDG	Independent Ri	88.21	19	IAmb	IAmb	03 59 57.0	
	comp=Z,316nm,1.3s						
I05D	Terrebonne, OR	88.26	42	P	P	03 59 53.9	+0.3
	baz=244,SNR=108						
I05D				S	S	04 10 19.1	0.0
	baz=244						
ILAR	Eielson Array	88.36	18	P	P	03 59 52.9	-0.6
	comp=Z,74nm,0.7s,baz=234,slow=3.6,SNR=146						
ILAR				PKiKP	PKiKP	04 04 54.1	+1.0
	comp=Z,2.0nm,0.6s,baz=227,slow=2.2,SNR=6.6						
ILAR				S	SKSac	04 10 02.3	+1.9
	comp=Z,1.8nm,1.0s,baz=224,slow=5.9,SNR=2.6						
ILAR				PKKP	PKKPdf	04 17 33.5	+0.5
	comp=Z,6.5nm,1.1s,baz=352,slow=1.7,SNR=5.5						
ILAR				PKPPKP	P'P'df	04 25 43.9	+1.2
	comp=Z,8.3nm,1.0s,baz=357,slow=1.8,SNR=15						
SHOC	Shoshone, Teco	88.37	52	P	P	03 59 54.2	0.0
	baz=248,SNR=215						
SHOC				S	S	04 10 23.2	+2.8
	baz=248						
DOT	Dot Lake	88.39	19	IAmb	IAmb	03 59 57.8	
	comp=Z,272nm,1.4s						
GMRC	Granite Mounta	88.41	53	P	P	03 59 54.8	+0.1
	baz=248,SNR=94						
GMRC				S	S	04 10 24.4	+3.3
	baz=248						
GLA	Glamis	88.42	55	P	P	03 59 55.3	+0.7
	baz=248,SNR=58						
GLA				S	S	04 10 25.0	+3.9
	baz=248						
GLA	Glamis	88.42	55	IAmb	IAmb	03 59 59.9	
	comp=Z,559nm,1.2s						
BESE	Bessie Mountai	88.42	26	IAmb	IAmb	03 59 59.7	
	comp=Z,349nm,1.3s						
POKR	Poker Plat Res	88.46	17	P	P	03 59 52.7	-1.3
	baz=222,SNR=67						
POKR				S	S	04 10 18.0	-2.0
	baz=222						
POKR	Poker Plat Res	88.46	17	IAmb	IAmb	03 59 57.4	
	comp=Z,422nm,1.7s						
E04D	Cinebar	88.47	40	P	P	03 59 55.0	+0.6
	baz=243,SNR=140						
E04D				S	S	04 10 21.1	+0.4
	baz=243						
IRK	Irkutsk	88.56	326	eP	P	03 59 54.0	-0.7
IRK				e		04 00 50.8	
IRK				eS	SKSac	04 10 01.0	-1.1
IRK				pmax	pmax		
	comp=Z,424nm,3.5s						
IRM	Iron Mountain	88.58	54	P	P	03 59 55.4	+0.1
	baz=248,SNR=205						
IRM				S	S	04 10 24.7	+2.2
	baz=248						
D03D	Eldon	88.59	39	P	P	03 59 55.4	+0.4
	baz=243,SNR=60						
D03D				S	S	04 10 23.8	+1.9
	baz=243						
TLY	Talaya	88.61	326	P	P	03 59 55.6	+0.7
	comp=Z,36nm,0.6s,baz=152,slow=3.4,SNR=32						
TLY				pP	pP	04 00 50.3	+0.7
	comp=Z,5.5nm,0.5s,baz=135,slow=2.9,SNR=0.9						
TLY				S	SKSac	04 10 03.5	+1.0
	comp=Z,2.9nm,0.8s,baz=300,slow=19,SNR=5.7						
TLY	Talaya	88.61	326c	iP	P	03 59 53.2	-1.8
TLY				e*PP	pP	04 00 51.6	+2.0
TLY				e*SP	sP	04 01 15.8	+2.8
TLY				e		04 10 03.1	
TLY				eS	S	04 10 21.0	-0.9
TLY				eSS	SS	04 16 25.6	+6.6
TLY				pmax	pmax		
	comp=Z,596nm,1.7s						
TLY	Talaya	88.61	326	P	P	03 59 54.7	-0.3
TLY	Talaya	88.61	326	P	P	03 59 54.2	-0.7
D04E	Lakebay	88.62	39	P	P	03 59 56.3	+1.2
	baz=243,SNR=27						
D04E				S	S	04 10 23.4	+1.3
	baz=243						
SCRK	Sand Creek	88.65	19	P	P	03 59 54.6	-0.5
	baz=225						
SCRK				S	S	04 10 22.1	0.0
	baz=225						
G05D	Wamic, OR	88.67	42	P	P	03 59 55.6	+0.1
	baz=244,SNR=60						
G05D				S	S	04 10 25.2	+2.4
	baz=244						
BCAR	Beaver Creek A	88.72	20	P	P	03 59 53.2	-2.1
TPNV	Topopah Spring	88.78	51	P	P	03 59 56.6	+0.2
	baz=248,SNR=274						
TPNV				S	S	04 10 25.7	+1.1
	baz=248						
TPNV	Topopah Spring	88.78	51	IAmb	IAmb	04 00 01.2	
	comp=Z,501nm,1.3s						
F05D	White Salmon	88.86	41	P	P	03 59 56.7	+0.4
	baz=244,SNR=72						
F05D				S	S	04 10 24.5	0.0
	baz=244						
LON	Longmire	89.02	40	IAmb	IAmb	04 00 01.4	
	comp=Z,320nm,1.4s						
LPIG	La Paz	89.07	65	P	P	03 59 59.6	+1.8
	comp=Z,183nm,1.1s,baz=100,slow=2.6,SNR=14						
113A	Mohawk Valley,	89.15	55	IAmb	IAmb	04 00 02.9	
	comp=Z,478nm,1.4s						
PMSA	Palmer Station	89.17	160	P	P	03 59 58.1	+0.7
PMSA				IAmb	IAmb	04 00 01.8	
	comp=Z,381nm,0.8s						
PMSA	Palmer Station	89.17	160	eP	P	03 59 59.1	+1.6
NEE2	Needles Airpor	89.20	53	P	P	03 59 58.5	+0.4
	baz=249,SNR=34						
NEE2				S	S	04 10 30.2	+2.0
	baz=249						
SLBS	Sierra La Lagu	89.25	65	P	P	03 59 59.5	+0.8
BWNR	Bhubaneshwar	89.27	291	eP	P	03 59 59.0	+0.3
K27K	Chicken	89.29	20	P	P	03 59 57.7	-0.2
	baz=227						
K27K				S	S	04 10 26.6	-1.1
	baz=227						
COLD	Coldfoot	89.35	15	P	P	03 59 58.3	+0.2
	baz=219						
COLD				S	S	04 10 30.1	+1.9
	baz=219						
A04D	Lummi Island	89.36	38	P	P	03 59 59.3	+0.8
	baz=243,SNR=34						
A04D				S	S	04 10 29.0	0.0
	baz=243						
PDMCI	Parker Dam,Lak	89.40	54	P	P	03 59 59.7	+0.6
	baz=249,SNR=168						
PDMCI				S	S	04 10 32.7	+2.7
	baz=249						
SHPR	Sheep Range	89.43	52	IAmb	IAmb	04 00 04.5	
	comp=Z,791nm,1.7s						
B05A	Bryant	89.52	39	P	P	03 59 59.7	+0.4
	baz=244,SNR=107						
B05A				S	S	04 10 31.8	+1.4
	baz=244						
214A	Organ Pipe Nat	89.62	56	P	P	04 00 00.7	+0.5
	baz=250						
214A				S	S	04 10 34.8	+2.5
	baz=250						
214A	Organ Pipe Nat	89.62	56	IAmb	IAmb	04 00 05.4	
	comp=Z,504nm,1.4s						
R11A	Troy Canyon, C	89.80	50	P	P	04 00 01.1	0.0
	baz=248,SNR=62						
R11A				S	S	04 10 33.5	-0.4
	baz=248						
F07A	Phinny Hill Vi	89.83	41	IAmb	IAmb	04 00 06.2	
	comp=Z,527nm,1.2s						
TAPN	Taplejung	89.88	299	eP	P	04 00 01.4	-0.5
	comp=Z,374nm,1.3s						
W13A	Hualapai Mount	89.88	53	IAmb	IAmb	04 00 06.6	
	comp=Z,300nm,1.1s						
ODAN	Odare	89.99	298	eP	P	04 00 01.6	-0.7
	comp=Z,252nm,1.0s						
B06A	Marblemount	90.00	39	IAmb	IAmb	04 00 05.8	
	comp=Z,847nm,1.9s						
MOY	Mondy	90.05	325	eP	P	04 00 01.0	-0.8
MOY				pmax	pmax		
	comp=Z,668nm,3.0s						
PALK	Pallekele	90.06	278c	iP	P	04 00 03.8	+1.1
PALK				pmax	pmax		
	comp=Z,217nm,0.9s						
PALK	Pallekele	90.06	278	P	P	04 00 02.9	+0.2
PALK				IAmb	IAmb	04 00 08.1	
	comp=Z,174nm,1.0s						
PALK	Pallekele	90.06	278	P	P	04 00 01.4	-1.3
C06D	Leavenworth	90.09	39	P	P	04 00 02.2	+0.2
	baz=244,SNR=22						
C06D				S	S	04 10 36.6	+0.7
	baz=244						
E07A	Sunnyside	90.15	41	IAmb	IAmb	04 00 07.8	
	comp=Z,423nm,1.0s						
BOK	Bokaro	90.30	295	eP	P	04 00 03.5	-0.1
BOK				IAmb	IAmb	04 00 07.2	
	comp=Z,144nm,1.2s						
DLBC	Dease Lake	90.42	28	IAmb	IAmb	04 00 07.4	
	comp=Z,523nm,1.8s						
RAMN	Ramite	90.69	298	eP	P	04 00 05.2	-0.4
	comp=Z,193nm,1.3s						
NVL	N'lazarevskaya	90.92	188	⇓iP	P	04 00 05.3	-0.2
NVL				e*PP	pP	04 01 01.1	+0.8
NVL				eS	SKSac	04 10 11.6	-3.9
NVL				e		04 10 33.9	
NVL				eSSS	SSS	04 20 31.4	
NVL				pmax	pmax		
	comp=Z,397nm,0.8s						
ELK	Elko	90.94	48	P	P	04 00 06.2	-0.2
	comp=Z,80nm,1.1s,baz=232,slow=4.3,SNR=50						
ELK	Elko	90.94	48	IAmb	IAmb	04 00 11.1	
	comp=Z,206nm,1.2s						
BMAR	Burnt Mountain	90.95	16	P	P	04 00 03.8	-1.8
LCMT	Little Creek M	91.05	52	IAmb	IAmb	04 00 11.8	
	comp=Z,205nm,1.1s						
BMO	Blue Mountains	91.09	43	IAmb	IAmb	04 00 11.2	
	comp=Z,289nm,1.3s						
CCUT	Cedar City	91.15	51	IAmb	IAmb	04 00 12.7	
	comp=Z,298nm,1.3s						
E09A	Wood Farm, Sta	91.21	41	IAmb	IAmb	04 00 11.6	
	comp=Z,365nm,1.4s						
B08A	Colville Reser	91.22	39	IAmb	IAmb	04 00 11.4	
	comp=Z,613nm,1.7s						
SNAA	Sanae	91.29	183	P	P	04 00 06.4	-0.9
SNAA				S	S	04 10 45.0	-1.2
SNAA	Sanae	91.29	183	pP	pP	04 01 02.8	+0.7
SNAA	Sanae	91.29	183	sP	sP	04 01 28.4	+2.9
SNAA	Sanae	91.29	183c	iP	P	04 00 07.1	-0.2
SNAA				pmax	pmax		
	comp=Z,311nm,1.0s						
SNAA	Sanae	91.29	183	P	P	04 00 06.5	-0.9
SNAA				IAmb	IAmb	04 00 12.1	
	comp=Z,284nm,1.0s						
A21K	Barrow	91.33	11	P	P	04 00 07.2	+0.1
	baz=213						
A21K				S	S	04 10 45.5	-0.4
	baz=213						
A21K	Barrow	91.33	11	IAmb	IAmb	04 00 11.4	
	comp=Z,328nm,1.4s						
TUC	Tucson	91.36	57	P	P	04 00 08.7	+0.4
TUC				pmax	pmax		
	comp=Z,186nm,1.0s						
TUC	Tucson	91.36	57	P	P	04 00 08.7	+0.4
	baz=251						
TUC				S	S	04 10 50.2	+2.0
	baz=251						
TUC	Tucson	91.36	57	P	P	04 00 08.7	+0.4
TUC				IAmb	IAmb	04 00 13.5	
	comp=Z,186nm,1.0s						
SZCU	Shurtz Canyon	91.37	51	IAmb	IAmb	04 00 13.4	
	comp=Z,232nm,1.3s						
MFID	Camas Ranch	91.52	45	IAmb	IAmb	04 00 13.5	
	comp=Z,220nm,1.2s						
X16A	Lo Mia Camp, P	91.54	55	IAmb	IAmb	04 00 15.1	
	comp=Z,237nm,1.1s						
U15A	North Rim	91.56	52	IAmb	IAmb	04 00 14.6	
	comp=Z,226nm,1.0s						
GUN	Gumba	91.60	299	eP	P	04 00 09.1	-0.8
	comp=Z,249nm,1.1s						
C09A	Chrisman Ranch	91.64	40	IAmb	IAmb	04 00 13.5	
	comp=Z,189nm,1.4s						
PKI	Pulchoki	91.89	298	eP	P	04 00 10.4	-0.8
	comp=Z,494nm,1.5s						
PKIN	Phulchoki	91.90	298	eP	P	04 00 10.6	-0.6
	comp=Z,376nm,1.5s						
VNA3	Neumayer Olymp	91.91	181	P	P	04 00 08.8	-1.3
VNA3				S	S	04 10 51.2	-0.5
VNA3	Neumayer Olymp	91.91	181	pP	pP	04 01 04.2	-0.7
VNA3	Neumayer Olymp	91.91	181	sP	sP	04 01 26.1	-2.3
WUAZ	Wupatki	91.96	54	P	P	04 00 11.6	+0.5
	baz=250,SNR=97						
WUAZ				S	S	04 10 58.7	+5.2
	baz=250						
KKN	Kakani	92.06	298	eP	P	04 00 11.3	-0.6
	comp=Z,281nm,1.4s						
DMN	Daman	92.16	298	eP	P	04 00 11.8	-0.6
	comp=Z,362nm,1.2s						
MDRS	Chennai	92.18	283	eP	P	04 00 12.7	+0.4
MDRS				IAmb	IAmb	04 00 16.5	
	comp=Z,156nm,1.3s						
VNA2	Neumayer--Watz	92.19	181	P	P	04 00 10.7	-0.7
	baz=181,slow=5.3						
VNA2				S	S	04 10 53.3	-0.8
VNA2	Neumayer--Watz	92.19	181	pP	pP	04 01 03.1	-3.1
VNA2	Neumayer--Watz	92.19	181	sP	sP	04 01 26.7	-2.9
319A	Douglas	92.27	58	IAmb	IAmb	04 00 18.4	
	comp=Z,287nm,0.9s						
DUG	Dugway, Tooele	92.47	49	P	P	04 00 13.7	+0.3
	baz=250						
DUG				S	S	04 11 00.1	+2.2
	baz=250						

DUG	**Dugway, Tooele**	**92.47**	**49**	IAmb	IAmb	04 00 17.8	
	comp=Z,343nm,1.9s						
VNA1	**Neumayer--Stat**	**92.49**	**181**	P	**P**	**04 00 11.9**	**-0.8**
VNA1				S	**S**	**04 10 56.6**	**0.0**
VNA1	**Neumayer--Stat**	**92.49**	**181**	pP	pP	04 01 08.8	+1.3
TIXI	**Tiksi**	**92.49**	**348**	P	**P**	**04 00 11.2**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,409nm,2.0s						
TIXI	**Tiksi**	**92.49**	**348**	P	**P**	**04 00 11.2**	**-1.3**
TIXI				IAmb	IAmb	04 00 15.7	
	comp=Z,409nm,2.0s						
HLID	**Hailey**	**92.53**	**45**	P	**P**	**04 00 14.1**	**+0.4**
	baz=249						
HLID				S	**S**	**04 11 00.9**	**+2.6**
	baz=249						
EPYK	**Eagle Plains**	**92.54**	**19**	P	**P**	**04 00 12.0**	**-0.9**
	baz=231						
EPYK				S	**S**	**04 10 58.9**	**+1.9**
	baz=231						
EPYK	**Eagle Plains**	**92.54**	**19**	IAmb	IAmb	04 00 17.6	
	comp=Z,226nm,1.3s						
NEW	**Newport**	**92.54**	**40**	P	**P**	**04 00 13.2**	**-0.2**
	comp=Z,54nm,1.2s,baz=247,slow=4.1,SNR=26						
NEW				PKiKP	**PKiKP**	**04 05 01.8**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=198,slow=5.0,SNR=1.7						
NEW	**Newport**	**92.54**	**40**	P	**P**	**04 00 13.0**	**-0.4**
	baz=247,SNR=34						
NEW				S	**S**	**04 10 57.3**	**-0.6**
	baz=247						
GKN	**Gorkha**	**92.67**	**298**	*e*P	**P**	**04 00 13.6**	**-1.0**
	comp=Z,297nm,1.2s						
HVU	**Hansel Valley**	**93.04**	**47**	IAmb	IAmb	04 00 20.5	
	comp=Z,377nm,1.8s						
W18A	**Petrified Fore**	**93.09**	**54**	P	**P**	**04 00 16.6**	**+0.1**
	baz=251,SNR=35						
W18A				S	**S**	**04 11 08.7**	**+5.0**
	baz=251						
W18A	**Petrified Fore**	**93.09**	**54**	IAmb	IAmb	04 00 21.1	
	comp=Z,230nm,1.4s						
GO10	**Punta Arenas**	**93.36**	**149**	P	**P**	**04 00 18.4**	**+1.2**
KOLN	**Koldanda**	**93.48**	**298**	*e*P	**P**	**04 00 16.9**	**-1.5**
	comp=Z,285nm,1.3s						
DANN	**Dangsing**	**93.51**	**298**	*e*P	**P**	**04 00 17.0**	**-1.7**
	comp=Z,66nm,0.6s						
USHA	**Ushuaia**	**93.65**	**151**	P	**P**	**04 00 19.8**	**+1.4**
	comp=Z,87nm,0.9s,baz=239,slow=0.6,SNR=6.8						
GO09	**Cerro Castillo**	**93.75**	**147**	IAmb	IAmb	04 00 24.4	
	comp=Z,182nm,1.1s						
SRU	**San Rafael Swe**	**93.77**	**50**	IAmb	IAmb	04 00 22.6	
	comp=Z,211nm,2.0s						
121A	**Cookes Peak, D**	**93.83**	**57**	P	**P**	**04 00 20.2**	**+0.3**
	baz=252,SNR=30						
121A				S	**S**	**04 11 14.1**	**+3.9**
	baz=252						
121A	**Cookes Peak, D**	**93.83**	**57**	IAmb	IAmb	04 00 24.8	
	comp=Z,227nm,1.6s						
121A	**Cookes Peak, D**	**93.83**	**57**	P		04 00 19.9	
	baz=252,SNR=30						
121A				S		04 11 16.6	
	baz=252						
MG01	**Puerto William**	**93.96**	**151**	P	**P**	**04 00 20.4**	**+0.6**
MG01				IAmb	IAmb	04 00 24.3	
	comp=Z,143nm,0.9s						
MSO	**Missoula**	**94.01**	**42**	P	**P**	**04 00 19.0**	**-1.2**
	baz=249,SNR=14						
MSO				S	**S**	**04 11 10.3**	**-0.7**
	baz=249						
PYUN	**Piuthan**	**94.09**	**298**	*e*P	**P**	**04 00 19.4**	**-1.8**
	comp=Z,187nm,1.0s						
KIDD	**KIDD Seismic O**	**94.64**	**58**	P		04 00 23.7	
	baz=253						
KIDD				S		04 11 21.7	
	baz=253						
MVCO	**Mesa Verde**	**94.69**	**53**	P	**P**	**04 00 23.2**	**-0.6**
	baz=252						
MVCO				S	**S**	**04 11 20.7**	**+3.1**
	baz=252						
INK	**Inuvik**	**94.70**	**18**	PKiKP	**PKiKP**	**04 05 04.6**	**+0.8**
	comp=Z,6.4nm,0.6s,baz=137,slow=2.2,SNR=14						
INK				PKKP	**PKKPdf**	**04 17 21.5**	**-0.2**
	comp=Z,8.1nm,1.0s,baz=102,slow=2.0,SNR=5.9						
INK	**Inuvik**	**94.70**	**18**	IAmb	IAmb	04 00 26.8	
	comp=Z,262nm,1.6s						
PV12	**Saucer Basin,**	**94.80**	**52**	P	**P**	**04 00 24.2**	**-0.1**
PV12				IAmb	IAmb	04 00 28.7	
	comp=Z,158nm,1.4s						
REDW	**Red Top Meadow**	**94.91**	**46**	IAmb	IAmb	04 00 28.9	
	comp=Z,132nm,1.4s						
Y22A	**Socorro**	**94.91**	**56**	P		04 00 24.7	
	baz=253						
Y22A				S		04 11 22.0	
	baz=253						
PV07	**Paradox Valley**	**94.96**	**51**	IAmb	IAmb	04 00 29.2	
	comp=Z,149nm,1.6s						
HYB	**Hyderabad**	**94.98**	**287**	*i* P	**P**	**04 00 24.0**	**-1.2**
HYB				*e*pP	**pP**	**04 01 20.0**	**+0.3**
HYB				*e*SKS	**SKSac**	**04 10 36.0**	**-3.7**
HYB				*e*		04 11 25.0	
HYB	**Hyderabad**	**94.98**	**287**	*e*P	**P**	**04 00 23.9**	**-1.4**
HYB				IAmb	IAmb	04 00 27.3	
	comp=Z,86nm,1.0s						
Y22D	**IRIS PASSCAL I**	**94.98**	**56**	P	**P**	**04 00 25.1**	**0.0**
	baz=253						
Y22D				S	**S**	**04 11 23.6**	**+3.5**
	baz=253						
Y22D	**IRIS PASSCAL I**	**94.98**	**56**	P		04 00 25.1	
	baz=253						
PV15	**Paradox Valley**	**95.05**	**52**	IAmb	IAmb	04 00 29.6	
	comp=Z,156nm,1.6s						
BOZ	**Bozeman (W)**	**95.10**	**44**	P	**P**	**04 00 24.6**	**-0.7**
	baz=251,SNR=31						
BOZ				S	**S**	**04 11 21.5**	**+0.9**
	baz=251						
MOOW	**Moose Ponds**	**95.10**	**46**	P	**P**	**04 00 24.8**	**-0.7**
WMQ	**Urumqi**	**95.23**	**314**	P	**P**	**04 00 26.1**	**+0.2**
WMQ				pP	pP	04 01 24.4	+3.7
WMQ				sP	sP	04 01 41.8	-2.2
WMQ				PP	**PP**	**04 04 19.3**	**-0.1**
WMQ				SKS	**SKSac**	**04 10 39.8**	**-0.3**
WMQ				S	**S**	**04 11 21.6**	**0.0**
WMQ				SS	**SS**	**04 18 00.6**	**+6.2**
WMQ				pmax	pmax		
	comp=Z,150nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.7s						
WMQ				LR	LR		
	comp=Z,6µm,24.1s						
WMQ				LR	LR		
	comp=Z,5µm,18.1s						
WMQ				LR	LR		
	comp=Z,5µm,20.5s						
WMQ	**Urumqi**	**95.23**	**314**	P	**P**	**04 00 25.4**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,237nm,0.8s						
WMQ	**Urumqi**	**95.23**	**314**	P	**P**	**04 00 25.4**	**-0.5**
H17A	**Grant Village**	**95.42**	**45**	P	**P**	**04 00 27.8**	**+0.8**
	baz=252,SNR=17						
H17A				S	**S**	**04 11 23.5**	**-0.2**
	baz=252						
MNTX	**Cornudas Mount**	**95.54**	**59**	P	**P**	**04 00 27.2**	**-0.3**
	baz=253,SNR=42						
MNTX				S	**S**	**04 11 26.6**	**+1.9**
	baz=253						
MNTX	**Cornudas Mount**	**95.54**	**59**	P		04 00 27.6	
	baz=253,SNR=7.0						
MNTX				S		04 11 24.8	
	baz=253						
NGP	**Nagpur**	**95.56**	**290**	*e*P	**P**	**04 00 26.6**	**-1.2**
ANMO	**Albuquerque**	**95.60**	**55**	P	**P**	**04 00 27.9**	**0.0**
	comp=Z,24nm,0.9s,baz=230,slow=4.8,SNR=26						
ANMO	**Albuquerque**	**95.60**	**55***c*	*e*P	**P**	**04 00 27.6**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,58nm,1.1s						
ANMO	**Albuquerque**	**95.60**	**55**	P	**P**	**04 00 27.2**	**-0.8**
	baz=253						
ANMO				S	**S**	**04 11 27.4**	**+1.9**
	baz=253						
ANMO	**Albuquerque**	**95.60**	**55**	P	**P**	**04 00 27.4**	**-0.5**
ANMO	**Albuquerque**	**95.60**	**55**	P		04 00 27.1	
	baz=253,SNR=61						
ANMO				S		04 11 29.0	
	baz=253						
BW06	**Boulder Array**	**95.62**	**47**	P	**P**	**04 00 26.8**	**-1.0**
	baz=252,SNR=40						
BW06				S	**S**	**04 11 25.4**	**0.0**
	baz=252						
BW06	**Boulder Array**	**95.62**	**47**	IAmb	IAmb	04 00 33.6	
	comp=Z,133nm,1.8s						
PDAR	**Pinedale Array**	**95.62**	**47**	P	**P**	**04 00 27.4**	**-0.5**
	comp=Z,7.7nm,0.7s,baz=214,slow=1.9,SNR=38						
PDAR				PKiKP	**PKiKP**	**04 05 08.8**	**+2.2**
	comp=Z,1.7nm,0.6s,baz=214,slow=2.9,SNR=1.9						
PDAR				PKKP	**PKKPbc**	**04 17 17.6**	**-1.7**
	comp=Z,23nm,0.8s,baz=86,slow=4.5,SNR=43						
PDAR				PKPPKP		04 25 29.4	
	comp=Z,3.6nm,1.0s,baz=73,slow=3.0,SNR=9.1						
O20A	**White River Ci**	**95.77**	**50**	P	**P**	**04 00 28.4**	**-0.2**
	baz=253,SNR=34						
O20A				S	**S**	**04 11 27.7**	**+1.0**
	baz=253						
S22A	**4UR Ranch, Cre**	**96.12**	**53**	P	**P**	**04 00 30.3**	**0.0**
	baz=253,SNR=36						
S22A				S	**S**	**04 11 34.5**	**+4.4**
	baz=253						
S22A	**4UR Ranch, Cre**	**96.12**	**53**	IAmb	IAmb	04 00 35.0	
	comp=Z,125nm,1.6s						
TX31	**Lajitas Ar. Si**	**96.30**	**61**	P		04 00 30.9	
	baz=254						
TX32	**Lajitas Array**	**96.30**	**61**	IAmb	IAmb	04 00 35.9	
	comp=Z,140nm,1.4s						
TXAR	**Lajitas Array**	**96.30**	**61**	P	**P**	**04 00 31.8**	**+0.6**
	comp=Z,20nm,0.9s,baz=227,slow=5.1,SNR=36						
TXAR				PKKP	**PKKPbc**	**04 17 16.8**	**+0.3**
	comp=Z,7.5nm,0.9s,baz=104,slow=4.0,SNR=17						
TXAR				PKPPKP		04 25 28.9	
	comp=Z,2.7nm,1.1s,baz=104,slow=2.9,SNR=5.9						
RLMT	**Red Lodge**	**96.53**	**45**	P	**P**	**04 00 31.9**	**-0.1**
	baz=252,SNR=29						
RLMT				S	**S**	**04 11 35.9**	**+2.7**
	baz=252						
RWWY	**Rawlins**	**96.97**	**49**	IAmb	IAmb	04 00 37.7	
	comp=Z,103nm,1.3s						
EGMT	**Eagleton**	**97.09**	**42**	P	**P**	**04 00 33.7**	**-0.4**
	baz=252						
EGMT				S	**S**	**04 11 38.8**	**+1.4**
	baz=252						
SDCO	**Great Sand Dun**	**97.13**	**53**	P		04 00 34.9	
	baz=254,SNR=17						
SDCO				S		04 11 41.8	
	baz=254						
SDCO	**Great Sand Dun**	**97.13**	**53**	P	**P**	**04 00 34.2**	**-0.7**
	baz=254,SNR=17						
SDCO				S	**S**	**04 11 42.2**	**+3.5**
	baz=254						
SDCO	**Great Sand Dun**	**97.13**	**53**	IAmb	IAmb	04 04 09.8	
	comp=Z,41nm,0.7s						
DGZ	**Jazzator, Alta**	**97.24**	**320***c*	*i*P	**P**	**04 00 34.3**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,120nm,1.0s						
GO07	**Milladeo Hill,**	**97.35**	**139**	P	Pdif	04 00 36.5	+1.0
GO07				IAmb	IAmb	04 00 40.6	
	comp=Z,178nm,1.1s						
BHPL	**Bhopal**	**97.57**	**292**	*e*P	**P**	**04 00 36.0**	**-0.9**
BHPL				IAmb	IAmb	04 00 39.9	
	comp=Z,35nm,0.9s						
ISCO	**Idaho Springs**	**97.61**	**51**	P	**P**	**04 00 36.4**	**-0.7**
	baz=254,SNR=6.3						
ISCO				S	**S**	**04 11 45.9**	**+3.2**
	baz=254						
ISCO	**Idaho Springs**	**97.61**	**51**	IAmb	IAmb	04 04 19.5	
	comp=Z,69nm,0.6s						
ISCO	**Idaho Springs**	**97.61**	**51**	P		04 00 36.7	
	baz=254,SNR=6.3						
ISCO				S		04 11 43.4	
	baz=254						
N23A	**Red Feather La**	**97.66**	**50**	P	Pdif	04 00 37.4	+0.2
	baz=254,SNR=24						
N23A				S	**S**	**04 11 45.6**	**+2.6**
	baz=254						
N23A	**Red Feather La**	**97.66**	**50**	IAmb	IAmb	04 03 01.4	
	comp=Z,44nm,0.6s						
K22A	**Casper**	**97.72**	**48**	P	**P**	**04 00 36.6**	**-0.7**
	baz=254,SNR=14						
K22A				S	**S**	**04 11 43.8**	**+0.5**
	baz=254						
K22A	**Casper**	**97.72**	**48**	P		04 00 37.0	
	baz=254,SNR=14						
K22A				S		04 11 38.5	
	baz=254						
Q24A	**Divide**	**97.73**	**52**	P	**P**	**04 00 37.4**	**-0.2**
	baz=254						
Q24A				S	**S**	**04 11 48.5**	**+4.7**
	baz=254						
Q24A	**Divide**	**97.73**	**52**	IAmb	IAmb	04 04 01.2	
	comp=Z,212nm,1.3s						
T25A	**Trinidad**	**97.80**	**54**	P	**P**	**04 00 37.1**	**-0.7**
	baz=255,SNR=9.0						
T25A				S	**S**	**04 11 47.8**	**+3.5**
	baz=255						
PHWY	**Pilot Hill**	**98.12**	**49**	IAmb	IAmb	04 04 34.7	
	comp=Z,40nm,0.6s						
C36M	**Paulatuk**	**98.17**	**19**	P	**P**	**04 00 37.0**	**-1.4**
	baz=243,SNR=63						
C36M				S	**S**	**04 11 42.1**	**-3.3**
	baz=243						
ZSN	**Zaisan**	**98.21**	**317**	*e*P	**P**	**04 00 37.9**	**-1.3**
	comp=Z,29nm,1.2s,baz=317						
ZSN				*e*S	**SKSac**	**04 10 53.8**	**-1.4**
	baz=317						
ZSN	**Zaisan**	**98.21**	**317**	*e*P	**P**	**04 00 37.8**	**-1.3**
ZSN				*e*S	**SKSac**	**04 10 53.7**	**-1.4**
ZSN				pmax	pmax		
	comp=Z,29nm,1.2s						
MSTX	**Muleshoe**	**98.27**	**57**	P	**P**	**04 00 38.7**	**-1.2**
	baz=255						
MSTX				S	**S**	**04 11 49.8**	**+1.7**
	baz=255						
MSTX	**Muleshoe**	**98.27**	**57**	IAmb	IAmb	04 02 20.3	
	comp=Z,62nm,0.9s						
MSTX	**Muleshoe**	**98.27**	**57**	P		04 00 39.1	
	baz=255						
MSTX				S		04 11 51.2	
	baz=255						
VA04	**Juan Fernndez**	**98.40**	**129**	P	**P**	**04 00 40.1**	**-0.3**
VA04				IAmb	IAmb	04 00 44.8	
	comp=Z,66nm,0.9s						
DDI	**Dehra Dun**	**98.84**	**299**	*e*P	Pdif	04 00 42.1	-0.3
LAO	**LASA Array**	**99.01**	**44**	P		04 00 42.3	
	baz=255,SNR=5.5						
LAO	**LASA Array**	**99.02**	**44**	P	**Pdif**	**04 00 42.5**	**-0.3**
	baz=255						
YKA	**Yellowknife Ar**	**99.04**	**27**	P	**Pdif**	**04 00 42.2**	**-0.2**
	comp=Z,28nm,0.7s,baz=252,slow=3.9,SNR=86						
YKA				PP	**PP**	**04 04 46.4**	**-1.5**
	comp=Z,6.7nm,1.0s,baz=253,slow=7.5,SNR=5.0						
YKA				PKiKP	**PKiKP**	**04 05 11.4**	**-0.3**
	comp=Z,4.0nm,0.6s,baz=234,slow=0.8,SNR=32						
YKA				S	**SKSac**	**04 10 57.3**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=258,slow=4.3,SNR=4.7						
YKA				PKKPbc	**PKKPbc**	**04 17 08.7**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=69,slow=2.7,SNR=9.2						
YKA				PKPPKP		04 25 22.8	
	comp=Z,4.2nm,1.1s,baz=65,slow=2.5,SNR=6.2						
AMTX	**Amarillo**	**99.37**	**56**	P	**Pdif**	**04 00 43.8**	**-0.9**
	baz=256						
POO	**Poona**	**99.59**	**286**⇑	*i*P	**Pdif**	**04 00 44.0**	**-2.0**
	comp=Z,50nm,1.5s						
POO				*e*P	**Pdif**	**04 00 44.7**	**-1.3**
KSCO	**Kaye Shedlock’**	**99.64**	**52**	P	**Pdif**	**04 00 45.1**	**-0.8**
	baz=256						
833A	**Chaparral WMA,**	**99.66**	**63**	P	**Pdif**	**04 00 45.4**	**-0.6**
	baz=256						
MKAR	**Makanchi Array**	**99.73**	**316**	P	**Pdif**	**04 00 46.3**	**+0.3**
	comp=Z,16nm,0.5s,baz=89,slow=6.0,SNR=174						
MKAR				PKiKP	**PKiKP**	**04 05 13.7**	**+0.3**
	comp=Z,9.5nm,0.5s,baz=220,slow=0.5,SNR=24						
MKAR				S	**SKSac**	**04 10 57.5**	**-5.3**
	comp=Z,7.4nm,1.1s,baz=107,slow=3.5,SNR=3.6						
MKAR				PKKPbc	**PKKPbc**	**04 17 04.6**	**-3.1**
	comp=Z,13nm,0.6s,baz=281,slow=3.7,SNR=28						
SMLA	**Simla**	**99.78**	**300**	*e*P	**Pdif**	**04 00 45.1**	**-1.4**
SMLA				IAmb	IAmb	04 00 49.0	
	comp=Z,43nm,0.8s						
JCT	**Junction City**	**99.84**	**61**	P		04 00 47.0	
	baz=256						
JCT	**Junction City**	**99.84**	**61**	P	**Pdif**	**04 00 45.6**	**-1.2**
	baz=256						
RSSD	**Black Hills**	**99.86**	**47**	P	**Pdif**	**04 00 47.1**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,39nm,1.2s						
RSSD	**Black Hills**	**99.86**	**47**	P	**Pdif**	**04 00 45.8**	**-1.1**
	baz=256						
RSSD	**Black Hills**	**99.86**	**47**	Pdif	**Pdif**	**04 00 47.1**	**+0.3**
RSSD	**Black Hills**	**99.86**	**47**	P		04 00 46.5	
	baz=256,SNR=9.9						
MAKZ	**Makanchi**	**99.95**	**316**	P	**Pdif**	**04 00 46.5**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,288nm,2.0s						
MAKZ	**Makanchi**	**99.95**	**316**	Pdif	**Pdif**	**04 00 46.5**	**-0.4**
MAKZ				IAmb	IAmb	04 00 51.0	
	comp=Z,288nm,2.0s						
ZALV	**Zalesovo Beam**	**99.99**	**323**	P	**Pdif**	**04 00 46.8**	**-0.1**
	comp=Z,33nm,0.9s,baz=108,slow=4.8,SNR=64						
ZALV				PKiKP	**PKiKP**	**04 05 14.9**	**+1.3**
	comp=Z,11nm,0.7s,baz=157,slow=4.0,SNR=10						
ZALV				S	**SKSac**	**04 11 02.0**	**-1.6**
	comp=Z,27nm,1.0s,baz=97,slow=5.8,SNR=4.1						
ZALV				PKKPbc	**PKKPbc**	**04 17 05.1**	**-2.1**
	comp=Z,4.6nm,0.5s,baz=288,slow=4.1,SNR=10						
ZALV				PKPPKP		04 25 15.1	
	comp=Z,2.8nm,0.9s,baz=260,slow=4.1,SNR=5.1						
ABTX	**Abilene, Hawle**	**100.48**	**59**	P		04 00 49.3	
	baz=256						
ABTX	**Abilene, Hawle**	**100.48**	**59**	P	**Pdif**	**04 00 48.7**	**-0.9**
	baz=256						
OGNE	**Ogallala**	**100.54**	**50**	P	**Pdif**	**04 00 49.1**	**-0.7**
	baz=257						
OGNE	**Ogallala**	**100.54**	**50**	P		04 00 51.0	
	baz=257						
PLCA	**Paso Flores**	**100.58**	**138**	P	**Pdif**	**04 00 51.2**	**+1.1**
	comp=Z,19nm,1.0s,baz=223,slow=5.3,SNR=20						
PLCA				PP	**PP**	**04 04 59.4**	**-0.1**
	comp=Z,14nm,1.1s,baz=227,slow=11,SNR=6.5						
PLCA				PKKPbc	**PKKPbc**	**04 17 05.6**	**+0.7**
	comp=Z,15nm,1.0s,baz=54,slow=3.3,SNR=10						
PLCA				SKKPbc	SKKPbc	04 20 23.4	+0.9
	comp=Z,2.0nm,0.7s,baz=137,slow=2.8,SNR=4.9						
PLCA	**Paso Flores**	**100.58**	**138**	Pdif	**Pdif**	**04 00 50.1**	**0.0**
DHRM	**DHARAMSHALA**	**100.76**	**300**	*e*P	**Pdif**	**04 00 49.0**	**-2.1**
DHRM				IAmb	IAmb	04 00 53.4	
	comp=Z,49nm,1.1s						
DGMT	**Dagmar**	**100.78**	**43**	P		04 00 51.9	
	baz=257						
DGMT	**Dagmar**	**100.79**	**43**	P	**Pdif**	**04 00 49.7**	**-1.0**
	baz=257						
SHLS	**Shalkode**	**100.82**	**312**	*e*P	**Pdif**	**04 00 48.3**	**-2.7**
	comp=Z,14nm,1.8s,baz=312						
SHLS	**Shalkode**	**100.82**	**312**	*e*P	**Pdif**	**04 00 48.3**	**-2.7**
SHLS				pmax	pmax		
	comp=Z,14nm,1.8s						
CMIG	**Matias Romero**	**100.94**	**75**	P	**Pdif**	**04 00 53.1**	**+1.2**
	comp=Z,5.5nm,1.1s,baz=246,slow=2.7,SNR=10						
CMIG				PP	**PP**	**04 05 02.3**	**-1.0**
	comp=Z,6.0nm,1.0s,baz=252,slow=8.1,SNR=4.4						
KPKS	**Kokpek**	**101.44**	**312**	*e*P	**Pdif**	**04 00 52.0**	**-1.8**
	baz=312						
KPKS	**Kokpek**	**101.44**	**312**	*e*P	**Pdif**	**04 00 51.9**	**-1.8**
SATY	**Saty**	**101.55**	**312**	*e*P	**Pdif**	**04 00 52.4**	**-2.0**
	baz=312						
SATY	**Saty**	**101.55**	**312**	*e*P	**Pdif**	**04 00 52.3**	**-2.0**
WMOK	**Wichita Mounta**	**101.66**	**57**	P	**Pdif**	**04 00 53.1**	**-1.7**
	baz=257						
435B	**Jarrell**	**101.77**	**61**	P	**Pdif**	**04 00 53.6**	**-1.8**
	baz=257						
CBKS	**Cedar Bluff**	**101.79**	**53**	P	**Pdif**	**04 00 56.3**	**+1.0**
	baz=258						
SEM	**Semipalatinsk**	**101.89**	**319**	*e*P	**Pdif**	**04 00 53.7**	**-2.0**
	comp=Z,12nm,1.3s,baz=319						
SEM	**Semipalatinsk**	**101.89**	**319**	*e*P	**Pdif**	**04 00 53.7**	**-2.0**
SEM				pmax	pmax		
	comp=Z,12nm,1.3s						
TDK	**Taldyqorghan**	**101.96**	**314**	*e*P	**Pdif**	**04 00 54.5**	**-1.5**
	baz=314						
TDK	**Taldyqorghan**	**101.96**	**314**	*e*P	**Pdif**	**04 00 54.4**	**-1.5**
WHTX	**Lake Whitney,**	**102.14**	**60**	P	**Pdif**	**04 00 56.0**	**-1.0**
	baz=257						
MDOK	**Medeo**	**102.54**	**311**	*e*P	**Pdif**	**04 00 57.0**	**-1.8**
	baz=312						
MDOK	**Medeo**	**102.54**	**311**	*e*P	**Pdif**	**04 00 56.9**	**-1.8**
Z35A	**Perchaven, San**	**102.59**	**59**	P		04 00 59.4	
	baz=258						
KSH	**Kashi**	**102.60**	**308**	P	**Pdif**	**04 01 00.9**	**+1.9**
KSH				PP	**PKiKP**	**04 05 18.8**	**-0.2**
KSH				SKS	**SKSac**	**04 11 17.9**	**+0.8**
KSH				S	**Sdif**	**04 12 23.5**	**-0.6**
KSH				SS	**SS**	**04 19 40.3**	**+2.8**
KSH				pmax	pmax		
	comp=Z,18nm,1.1s						
KSH				pmax	pmax		
	comp=Z,1µm,5.6s						
KSH				LR	LR		
	comp=Z,3µm,12.0s						
KSH				LR	LR		
	comp=Z,4µm,13.1s						
KSH				LR	LR		
	comp=Z,13µm,18.8s						
AAA	**Alma-Ata**	**102.65**	**311**	*e*P	**Pdif**	**04 00 57.1**	**-2.0**
	baz=312						
AAA	**Alma-Ata**	**102.65**	**311**	*e*P	**Pdif**	**04 01 03.7**	**+4.6**
AAA				*e*S	**Sdif**	**04 12 26.2**	**+2.0**
AAA				MLR	MLR		
	comp=Z,2µm,21.0s						
KURK	**Kurchatov**	**102.97**	**319**	*i* P	**Pdif**	**04 00 59.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,48nm,1.8s						
KURK	**Kurchatov**	**102.97**	**319**	Pdif	**Pdif**	**04 01 00.0**	**-0.2**
KURBB	**Kurchatov Arra**	**103.01**	**319**	P	**Pdif**	**04 01 01.2**	**+0.9**
	comp=Z,5.7nm,0.6s,baz=94,slow=4.8,SNR=4.7						
KURBB				PKKPab	**PKKPbc**	**04 16 58.2**	**-0.1**
	comp=Z,13nm,0.7s,baz=284,slow=3.6,SNR=19						
HKT	**Hockley**	**103.06**	**62**	P		04 01 00.5	
	baz=258						
KUU	**Kurty**	**103.19**	**312**	*e*Pdif	**Pdif**	**04 00 59.1**	**-2.4**
	baz=312						
KUU	**Kurty**	**103.19**	**312**	*e*P	**Pdif**	**04 00 59.0**	**-2.4**
SUSD	**Miller**	**103.49**	**47**	P		04 01 03.4	
	baz=259						
SUSD	**Miller**	**103.49**	**47**	P	**Pdif**	**04 01 01.1**	**-1.7**
	baz=259						
237A	**Washetta, Mont**	**103.51**	**60**	P		04 01 03.7	
	baz=258						
MDND	**Maddock**	**103.67**	**44**	P		04 01 03.5	
	baz=260						
MDND	**Maddock**	**103.67**	**44**	P	**Pdif**	**04 01 02.5**	**-0.9**
	baz=260						
KSU1	**Kansas State U**	**104.24**	**53**	P	**Pdif**	**04 01 04.5**	**-1.7**
	baz=260						
TUL1	**Leonard**	**104.29**	**56**	P	**Pdif**	**04 01 05.3**	**-1.2**
	baz=259						
AAK	**Ala-Archa**	**104.29**	**311**	Pdiff	**Pdif**	**04 01 07.7**	**+1.2**
	comp=Z,5.5nm,0.9s,baz=152,slow=5.0,SNR=6.6						
AAK				PKiKP	**PKiKP**	**04 05 22.8**	**+0.8**
	comp=Z,5.9nm,0.8s,baz=54,slow=5.6,SNR=2.9						
SGDS	**Sogindy**	**104.33**	**311**	*e*Pdif	**Pdif**	**04 01 04.5**	**-2.1**
	baz=311						
SGDS	**Sogindy**	**104.33**	**311**	*e*P	**Pdif**	**04 01 04.4**	**-2.1**
NATX	**Nacogdoches**	**104.42**	**61**	P	**Pdif**	**04 01 06.7**	**-0.4**
	baz=259						
BTLS	**Baital**	**105.01**	**313**	*e*Pdif	**Pdif**	**04 01 07.4**	**-2.1**
	baz=313						
BTLS				*e*PKiKP	**PKiKP**	**04 05 22.3**	**-0.8**
	baz=313						
BTLS	**Baital**	**105.01**	**313**	*e*P	**Pdif**	**04 01 07.3**	**-2.1**
ECSD	**EROS Data Cent**	**105.03**	**48**	P	**PKiKP**	**04 05 21.7**	**-1.5**
	baz=261						
U38A	**Gravette**	**105.50**	**56**	P		04 01 13.3	
	baz=260						
F33A	**5 Mile Ranch,**	**105.58**	**46**	P		04 01 12.2	
	baz=262						
W39A	**Magazine**	**105.77**	**58**	P	**PKiKP**	**04 05 22.9**	**-1.8**
	baz=260						
MIAR	**Mount Ida**	**105.83**	**58**	P	**PKiKP**	**04 05 23.6**	**-1.3**
	baz=260						
AGMN	**Agassiz Nation**	**106.22**	**44**	P	**PKiKP**	**04 05 25.8**	**+0.6**
	baz=262						
Z41A	**Richland Creek**	**106.24**	**60**	P	**PKiKP**	**04 05 25.7**	**+0.1**
	baz=260						
X40A	**Basin Creek Fa**	**106.42**	**58**	P	**PKiKP**	**04 05 26.1**	**+0.1**
	baz=260						
ULM	**Lac du Bonnet**	**106.45**	**42**	Pdiff	**Pdif**	**04 01 18.1**	**+2.4**
	comp=Z,4.4nm,0.9s,baz=318,slow=4.5,SNR=4.1						
ULM				PKiKP	**PKiKP**	**04 05 26.4**	**+0.8**
	comp=Z,16nm,0.6s,baz=273,slow=2.1,SNR=16						
ULM				SKiKP	**SKiKP**	**04 08 41.5**	**+2.0**
	comp=Z,16nm,0.9s,baz=250,slow=1.5,SNR=3.9						
ULM				PKKPbc	**PKKPbc**	**04 16 47.3**	**-0.6**
	comp=Z,12nm,0.8s,baz=86,slow=2.7,SNR=9.5						
BRZS	**Berezniki**	**106.62**	**318**	*e*Pdif	**Pdif**	**04 01 15.1**	**-1.4**
	baz=318						
BRZS				*e*PKiKP	**PKiKP**	**04 05 24.3**	**-1.5**
	baz=318						
BRZS	**Berezniki**	**106.62**	**318**	*e*P	**Pdif**	**04 01 15.1**	**-1.4**

U40A	Yellville baz=261	106.71	56	P	PKiKP	04 05 26.3	-0.2
W41B	Gary Mavity, V baz=261	107.01	58	P		04 01 20.0	
W41B	Gary Mavity, V baz=261	107.01	58	P	PKiKP	04 05 26.2	-0.8
SCIA	State Center baz=262	107.23	51	P	PKiKP	04 05 27.3	+0.1
143A	Socs Landing, baz=261	107.30	60	P		04 01 22.1	
F36A	Milaca baz=263	107.50	47	P		04 01 20.4	
SPMN	Marine on St. baz=264	107.93	47	P		04 01 22.7	
VBMS	Vicksburg baz=261	107.97	61	P	PKiKP	04 05 27.6	-1.3
LCAR	Lake Charles baz=262	108.02	57	P		04 01 22.9	
T42A	Van Buren baz=262	108.21	56	P		04 01 24.7	
CCM	Cathedral Cave baz=262	108.22	55	P	PKiKP	04 05 27.8	-1.4
BVAR	Borovoye Array comp=Z,7.7nm,0.6s,baz=58,slow=3.6,SNR=11	108.33	321	PKiKP	PKiKP	04 05 29.4	+0.4
BVAR	 comp=Z,2.8nm,0.7s,baz=184,slow=2.0,SNR=4.1			SKiKP	SKiKP	04 08 44.3	+1.4
BVAR	 comp=Z,1.6nm,0.5s,baz=34,slow=5.4,SNR=5.9			PKKPbc	PKKPbc	04 16 42.2	+0.1
JTS	Las Juntas de comp=Z,10nm,1.1s,baz=250,slow=20,SNR=3.5	108.60	85	PKiKP	PKiKP	04 05 31.3	+0.6
PBMO	Poplar Bluff baz=262	108.70	56	P		04 01 27.7	
L40A	Anamosa baz=264	108.73	51	P		04 01 26.2	
EYMN	Ely baz=266	109.09	44	P		04 01 28.9	
EYMN	Ely baz=266	109.09	44	P	PKiKP	04 05 30.0	-0.6
OXF	Oxford baz=262	109.22	59	P		04 01 28.1	
NNA	Nana comp=Z,5.5nm,0.5s,baz=243,slow=8.5,SNR=3.6	109.24	110	PKiKP	PKiKP	04 05 33.1	+1.2
W45A	Hickory Valley baz=263	109.49	58	P		04 01 29.6	
JFWS	Jewell Farm baz=265	109.53	50	P	PKiKP	04 05 31.1	-0.5
ATAH	Atahualpa comp=Z,7.8nm,1.0s,baz=285,slow=11,SNR=4.7	109.61	104	Pdiff	Pdif	04 01 37.5	+6.3
ATAH	 comp=Z,9.6nm,0.7s,baz=272,slow=4.2,SNR=5.1			PKiKP	PKiKP	04 05 34.1	+1.0
P43A	Skaggs, Pawnee baz=264	109.75	53	P		04 01 26.1	
L42A	Oliver, Polo baz=265	109.87	51	P		04 01 30.9	
HDIL	Hopedale baz=264	110.02	52	P	PKiKP	04 05 32.0	-0.5
HDIL	Hopedale baz=264	110.02	52	P		04 01 31.6	
Z47A	Carrollton baz=262	110.15	60	P		04 01 34.4	
WVT	Waverly baz=264	110.70	57	P	PKiKP	04 05 33.4	-0.5
WVT	Waverly baz=264	110.70	57	P		04 01 36.9	
BRAL	Brewton baz=262	110.73	63	P	PKiKP	04 05 32.7	-1.5
LRAL	Lakeview Retre baz=263	111.02	61	P	PKiKP	04 05 34.2	-0.4
LVC	Limon Verde comp=Z,21nm,0.8s,baz=328,slow=1.7,SNR=14	111.34	123	PKKPbc	PKKPbc	04 16 32.1	+0.2
LPA	La Plata	112.03	140	*e*PKIKP	PKiKP	04 05 40.6	+4.0
LPA				PP	PP	04 06 16.5	-6.7
LPA				pPP		04 07 07.6	
LPA				PPP	PPP	04 08 43.8	
LPA				PKIKS		04 09 10.7	
LPA				SKS	SKSac	04 11 57.7	-0.4
LPA				SKIKS		04 12 28.1	
LPA				SDIFF	Sdif	04 13 41.9	-1.0
LPA				PS	Sdif	04 13 42.1	-0.8
LPA				PSP	PSP	04 17 00.7	
LPA				SS	SS	04 21 43.5	+0.6
LPA				SSS	SSS	04 26 01.0	
WCI	Wyandotte Cave baz=265	112.12	55	P		04 01 41.1	
WCI	Wyandotte Cave baz=265	112.12	55	P	PKiKP	04 05 36.4	-0.1
U49A	Red Boiling Sp baz=265	112.39	57	P		04 01 42.6	
Z51A	Franklin baz=264	112.57	61	P		04 01 45.0	
P49A	Miami Univ. Ec baz=267	113.44	54	P	PKiKP	04 05 38.7	-0.3
V51A	Loudon baz=265	113.48	58	P		04 01 48.2	
Y52A	Lilburn baz=265	113.55	60	P		04 01 47.9	
Y52A	 baz=265			P		04 01 47.9	
GLMI	Grayling baz=269	113.70	48	P	PKiKP	04 05 39.4	0.0
TIGA	Tifton baz=264,SNR=8.0	113.71	63	P	PKiKP	04 05 39.2	-0.6
TIGA	Tifton baz=264,SNR=8.0	113.71	63	P		04 05 38.7	
W52A	Murphy baz=265,SNR=5.2	113.77	59	P		04 05 37.7	
TULEG	Thule	113.85	12	*i* P	PKiKP	04 05 38.5	-0.3
TULEG				*i*		04 06 34.6	
TULEG	 comp=Z,5µm,19.3s			IAMs_20	IAMs_20	04 49 45.0	
N49A	Columbus Grove baz=268	113.92	52	P		04 05 40.0	
N49A	 baz=268			P		04 05 40.0	
SVE	Sverdlovsk	113.92	325	*e*PKIKP	PKiKP	04 05 39.7	+0.3
SVE	 comp=Z,138nm,1.2s			pmax	pmax		
E46A	Sault Ste Mari baz=270	113.93	46	P		04 05 39.4	
TKL	Tuckaleechee C comp=Z,36nm,1.0s,baz=160,slow=7.0,SNR=14	113.94	58	PKiKP	PKiKP	04 05 41.0	+0.8
TKL	Tuckaleechee C	113.94	58	*i* PKIKP	PKiKP	04 05 41.0	+0.8
GOGA	Godfrey baz=265,SNR=7.7	114.00	61	P		04 05 36.8	
GOGA	Godfrey baz=265,SNR=7.7	114.00	61	P	PKPdf	04 05 39.5	-0.8
V52A	Sevierville baz=266,SNR=14	114.09	58	P		04 05 40.0	
TZTN	Tazewell baz=266	114.18	57	P	PKPdf	04 05 40.0	-0.6
AAM	Ann Arbor baz=269	114.35	51	P	PKPdf	04 05 39.9	-0.8
CASEE	Lake Jocassee baz=266	114.57	59	P		04 05 41.0	
MHTO	MHTO SNR=16	114.72	286	P	PKiKP	04 05 42.2	+0.2
V53A	Saluda baz=266,SNR=9.3	114.72	58	P		04 05 41.4	
V53A	 baz=266,SNR=9.3			P		04 05 41.4	
P51A	Williamsport baz=268,SNR=5.9	114.72	54	P		04 05 42.2	
P51A	 baz=268,SNR=5.9			P		04 05 42.2	
ACSO	Alum Creek Sta baz=268,SNR=7.6	114.81	53	P	PKPdf	04 05 40.6	-1.0
ACSO	Alum Creek Sta baz=268,SNR=7.6	114.81	53	P		04 05 42.5	
JMDO	Jabal Madar SNR=10	114.82	287	P	PKPdf	04 05 41.6	-0.7
DQM	DQM SNR=7.0	114.93	284	P	PKPdf	04 05 41.5	-0.9
BIDO	Bidbid SNR=5.0	114.97	288	P	PKPdf	04 05 41.6	-0.8
SMDO	Samad SNR=14	114.97	288	P	PKPdf	04 05 41.2	-1.4
ARU	Arti comp=Z,48nm,0.7s,baz=99,slow=2.4,SNR=47	115.10	325	PKP	PKiKP	04 05 41.7	0.0
ARU	 comp=Z,6.2nm,0.5s,baz=40,slow=1.1,SNR=5.8			SKP		04 08 57.9	
ARU	 comp=Z,6.0nm,0.5s,baz=282,slow=2.7,SNR=12			PKKPbc	PKKPbc	04 16 17.9	-2.0
ARU	Arti	115.10	325	P	Pdif	04 01 54.6	+0.6
ARU				*i*		04 05 41.2	
ARU						04 06 39.3	
ARU						04 12 11.7	
ARU				PS	PKKPab	04 16 26.4	+3.2
ARU				SS	SS	04 22 25.4	+1.7
ARU	Arti	115.10	325	PKiKP	PKiKP	04 05 41.4	-0.3
K50A	Casco	115.12	50	PKiKP	PKPdf	04 05 42.5	+0.3
DWPF	Disney Wildern baz=263	115.20	67	P	PKPdf	04 05 42.0	-0.8
DWPF	Disney Wildern	115.20	67		PKPdf	04 05 42.1	-0.7
DWPF	Disney Wildern baz=263	115.20	67	P		04 05 42.3	
Q52A	Bidwell baz=268,SNR=9.7	115.32	55	P		04 05 42.2	
Q52A	 baz=268,SNR=9.7			P		04 05 42.2	
P52A	Corning baz=268,SNR=9.3	115.44	54	P	PKPdf	04 05 41.4	-1.5
P52A	Corning	115.44	54		PKPdf	04 05 42.5	-0.4
PAULI	Pauline baz=266	115.48	59	P		04 05 42.5	
HAW	Hawthorne Fire baz=266	115.55	61	P		04 05 42.1	
U54A	Nelsons Funny baz=267,SNR=11	115.57	57	P	PKPdf	04 05 42.9	-0.4
U54A	Nelsons Funny baz=267,SNR=11	115.57	57	P		04 05 42.9	
U54A	 baz=267,SNR=11			P		04 05 42.9	
O52A	Adamsville baz=269,SNR=10	115.68	53	P		04 05 43.2	
O52A	 baz=269,SNR=10			P		04 05 43.2	
O52A	Adamsville	115.68	53		PKPdf	04 05 42.7	-0.6
BSY	Bisya SNR=14	115.70	287	P	PKPdf	04 05 42.8	-1.1
HOQ	Hoqain SNR=7.2	115.72	288	P	PKPdf	04 05 43.1	-0.9
KMSC	Kings Mountain baz=267,SNR=15	115.89	59	P	PKPdf	04 05 42.8	-1.1
KMSC	Kings Mountain baz=267,SNR=15	115.89	59	P		04 05 41.5	
Q53A	Leroy baz=268,SNR=8.4	115.89	55	P	PKPdf	04 05 43.1	-0.7
P53A	Whipple baz=269,SNR=20	116.01	54	P		04 05 43.7	
P53A	 baz=269,SNR=20			P		04 05 43.7	
V55A	Taylorsville baz=267,SNR=10	116.03	58	P		04 05 42.8	
V55A	 baz=267,SNR=10			P		04 05 42.8	
AKTO	Aktyubinsk comp=Z,56nm,0.6s,baz=97,slow=6.4,SNR=40	116.03	318	PKP	PKPdf	04 05 43.4	-0.3
AKTO	 comp=Z,25nm,0.8s,baz=118,slow=2.2,SNR=8.9			SKP		04 08 58.6	
AKTO	 comp=Z,6.4nm,0.7s,baz=92,slow=1.9,SNR=8.4			PKKPbc	PKKPbc	04 16 14.4	-2.0
S54A	Dingess, Beckl baz=268,SNR=9.2	116.03	56	P	PKPdf	04 05 43.4	-0.7
S54A	Dingess, Beckl baz=268,SNR=9.2	116.03	56	P		04 05 42.4	
S54A	 baz=268,SNR=9.2			P		04 05 42.4	
M52A	Chesterland baz=270	116.06	52	P		04 05 43.2	
M52A	 baz=270			P		04 05 43.2	
O53A	New Philadelph baz=269,SNR=16	116.16	53	P	PKPdf	04 05 43.6	-0.7
GEYT	Alibeck comp=Z,52nm,0.7s,baz=128,slow=2.4,SNR=25	116.27	304	PKP	PKiKP	04 05 45.0	+0.4
GEYT	 comp=Z,5.7nm,0.7s,baz=214,slow=0.5,SNR=2.6			SKP		04 09 00.8	
GEYT	 comp=Z,11nm,0.9s,baz=249,slow=4.1,SNR=6.6			PKKPbc	PKKPbc	04 16 14.6	-0.6
GYA0B	ALIBECK ARRAY	116.27	304		PKPdf	04 05 44.5	-0.1
I51A	Listowel baz=271	116.28	49	P	PKPdf	04 05 43.5	-1.0
R54A	Victor baz=268,SNR=13	116.29	55	P	PKPdf	04 05 43.9	-0.7
ARQ	Araqi SNR=7.4	116.40	288	P	PKPdf	04 05 44.1	-1.1
Q54A	Coxs Mills baz=269,SNR=20	116.43	55	P		04 05 44.2	
Q54A	 baz=269,SNR=20			P		04 05 44.2	
N53A	Lisbon baz=270,SNR=17	116.45	53	P		04 05 44.1	
N53A	 baz=270,SNR=17			P		04 05 44.1	
SOHO	SOHO SNR=72	116.50	289	*i* P	PKPdf	04 05 44.3	-1.1
SOHO	SOHO	116.50	289	P	PKPdf	04 05 44.6	-0.8
W56A	Indian Trail baz=267,SNR=8.8	116.51	59	P	PKPdf	04 05 44.5	-0.6
M53A	WI Miller and baz=270,SNR=15	116.57	52	P	PKPdf	04 05 43.9	-1.1
BIRD	Birdtown, Kers baz=267	116.58	59	P		04 05 44.1	
V56A	Mocksville baz=268,SNR=11	116.61	58	P	PKPdf	04 05 44.8	-0.5
158A	Hollywood baz=266	116.69	62	P	PKPdf	04 05 45.3	-0.2
BLA	Blacksburg baz=268,SNR=20	116.72	57	P	PKPdf	04 05 44.9	-0.6
BLA	Blacksburg baz=268,SNR=20	116.72	57	P		04 05 44.7	
U56A	King baz=268,SNR=9.9	116.72	58	P	PKPdf	04 05 44.8	-0.7
U56A	King baz=268,SNR=9.9	116.72	58	P		04 05 45.1	
U56A	 baz=268,SNR=9.9			P		04 05 45.1	
NHSC	New Hope baz=266,SNR=7.2	116.73	61	P	PKPdf	04 05 44.5	-1.0
NHSC	New Hope	116.73	61	PKPdf	PKiKP	04 05 46.4	+0.9
NHSC	New Hope baz=266,SNR=7.2	116.73	61	P		04 05 44.0	
SOCY	Socotra	116.74	275	PKPdf	PKPdf	04 05 44.5	-1.7
O54A	Avella baz=270,SNR=22	116.80	53	P		04 05 45.3	
O54A	 baz=270,SNR=22			P		04 05 45.3	
MDH	Madha	116.86	290	P	PKPdf	04 05 45.0	-1.0
X57A	Johnson Farm, baz=267	116.87	60	P	PKPdf	04 05 45.4	-0.4
L53A	Girard baz=271,SNR=10	116.88	51	P	PKPdf	04 05 44.8	-0.8
UOSS	Minazif SNR=10	116.91	290	*i* P	PKPdf	04 05 45.0	-1.2
UOSS	Minazif	116.91	290	PKPdf	PKPdf	04 05 45.1	-1.2
UOSS	Minazif	116.91	290	P	PKPdf	04 05 44.9	-1.2
BANOM	Banah	116.94	291	P	PKPdf	04 05 46.1	-0.2
HATD	Hatta, Dubai SNR=46	116.95	290	*i* P	PKPdf	04 05 45.6	-0.7
HATD	Hatta, Dubai SNR=33	116.95	290	P	PKPdf	04 05 45.0	-1.3
R55A	Marlinton baz=269,SNR=27	116.98	55	P	PKPdf	04 05 45.4	-0.6
R55A	Marlinton baz=269,SNR=27	116.98	55	P		04 05 44.7	
R55A	 baz=269,SNR=27			P		04 05 44.7	
W57A	Gilead baz=268,SNR=19	116.99	59	P	PKPdf	04 05 45.4	-0.6
W57A	Gilead baz=268,SNR=19	116.99	59	P		04 05 44.7	
W57A	 baz=268,SNR=19			P		04 05 44.7	
MSFE	Esma-Masafi SNR=33	117.00	290	*i* P	PKPdf	04 05 45.7	-0.7
MASF	Masafi SNR=17	117.00	290	P	PKPdf	04 05 45.0	-1.3
ASHO	Ashiyiah SNR=12	117.00	289	*i* P	PKPdf	04 05 45.6	-0.8
ASHO	Ashiyiah SNR=22	117.00	289	P	PKPdf	04 05 45.5	-0.8
T56A	Rocky Mt baz=268,SNR=15	117.02	57	P	PKPdf	04 05 45.4	-0.6
UPAO	U. Pittsburgh baz=270	117.07	53	P		04 05 45.7	
ERPA	Erie baz=271	117.08	51	P	PKPdf	04 05 45.4	-0.6
ERPA	Erie baz=271,SNR=8.3	117.08	51	P		04 05 45.3	
N54A	Moraine State baz=270,SNR=15	117.09	52	P	PKPdf	04 05 45.5	-0.6
N54A	Moraine State baz=270,SNR=15	117.09	52	P		04 05 45.5	
SHME	Shamm SNR=11	117.09	291	*i* P	PKPdf	04 05 45.6	-0.8
SHME	Shamm SNR=8.6	117.09	291	P	PKPdf	04 05 45.7	-0.8
KBS	Kingsbay	117.12	355	*e*PKPdf	PKiKP	04 05 46.1	+1.1
KBS				*e*SP	SP	04 16 23.2	+5.3
KBS				*e*SS	SS	04 22 56.9	+8.2
V57A	Coltrane Farms baz=268,SNR=16	117.19	58	P	PKPdf	04 05 45.9	-0.5
Y58A	Scranton baz=267,SNR=7.1	117.20	60	P	PKPdf	04 05 45.7	-0.8
Y58A	Scranton baz=267,SNR=7.1	117.20	60	P		04 05 45.6	
Y58A	 baz=267,SNR=7.1			P		04 05 45.6	
ALNE	Al Ain SNR=6.9	117.20	289	*i* P	PKPdf	04 05 46.1	-0.6
ALNE	Al Ain SNR=17	117.20	289	P	PKPdf	04 05 45.7	-1.1
MCWV	Mont Chateau baz=270,SNR=5.7	117.21	54	P	PKPdf	04 05 45.3	-1.0
MCWV	Mont Chateau baz=270,SNR=5.7	117.21	54	P		04 05 45.1	
ROSC	El Rosal comp=Z,40nm,0.6s,baz=118,slow=8.4,SNR=16	117.32	93	PKP	PKPdf	04 05 47.6	-0.1
ROSC	 comp=Z,14nm,0.9s,baz=105,slow=2.1,SNR=4.2			PP	PP	04 07 02.5	+0.3
M54A	Oil Creek Stat baz=271,SNR=23	117.33	52	P		04 05 45.9	
M54A	Oil Creek Stat baz=271,SNR=23	117.33	52	P	PKPdf	04 05 45.8	-0.7
SPA0	Spitsbergen Ar	117.38	354		PKiKP	04 05 45.6	+0.1
SPA0	Spitsbergen Ar	117.38	354	*e*PKPdf	PKiKP	04 05 45.7	+0.1
SPA0				*e*SKSac	SKSac	04 12 15.8	-0.8
SPA0				*e*SP	SP	04 16 19.5	-0.7
SPITS	Spitsbergen Ar comp=Z,44nm,0.5s,baz=91,slow=5.8,SNR=108	117.38	354	PKP	PKPdf	04 05 45.3	-0.2
SPITS	 comp=Z,44nm,1.1s,baz=67,slow=11,SNR=3.6			PP	PP	04 07 00.3	0.0
SPITS	 comp=Z,78nm,1.1s,baz=91,slow=5.8,SNR=5.3			SKP		04 09 01.7	
SPITS	 comp=Z,5.5nm,0.5s,baz=164,slow=6.6,SNR=13			PKKPbc	PKKPbc	04 16 11.3	-1.2
NAZ	Nazwa, Dubai SNR=12	117.40	290	*i* P	PKPdf	04 05 46.4	-0.7
NAZ	Nazwa, Dubai SNR=20	117.40	290	P	PKPdf	04 05 45.6	-1.5
S56A	Natural Bridge baz=269,SNR=9.1	117.41	56	P	PKPdf	04 05 46.0	-0.8
FAQ	Al Faqa, Dubai SNR=6.6	117.43	289	*i* P	PKPdf	04 05 47.1	-0.1
FAQ	Al Faqa, Dubai SNR=7.0	117.43	289	P	PKPdf	04 05 46.6	-0.6
UMQ	Umm Al-Quwin SNR=5.8	117.46	290	*i* P	PKiKP	04 05 47.6	+0.4
X58A	Rowland baz=268,SNR=8.0	117.50	60	P	PKPdf	04 05 46.7	-0.3
X58A	Rowland baz=268,SNR=8.0	117.50	60	P		04 05 46.3	
X58A	 baz=268,SNR=8.0			P		04 05 46.3	
R56A	Bull Pasture M baz=270,SNR=17	117.55	55	P	PKPdf	04 05 46.6	-0.5
UMZA	Um Al Zommool	117.56	287	P	PKiKP	04 05 47.7	+0.2
U57A	Blanch baz=269,SNR=16	117.57	57	P	PKPdf	04 05 46.5	-0.6
SADO	Sadowa comp=Z,52nm,1.0s,baz=274,slow=3.6,SNR=20	117.60	48	PKP	PKPdf	04 05 46.8	-0.1
SADO	 comp=Z,12nm,1.0s,baz=277,slow=6.8,SNR=4.6			PP	PP	04 07 02.3	-0.6
SADO	 comp=Z,15nm,0.7s,baz=307,slow=5.1,SNR=5.6			SKP		04 09 00.0	
W58A	Raeford baz=268,SNR=13	117.61	59	P	PKPdf	04 05 46.3	-0.8
RBK	Rabkut SNR=9.7	117.62	281	P	PKPdf	04 05 46.4	-1.3
T57A	Hurt baz=269,SNR=21	117.64	57	P	PKPdf	04 05 46.4	-0.8
T57A	Hurt	117.64	57		PKPdf	04 05 46.6	-0.7
T57A	Hurt baz=269,SNR=21	117.64	57	P		04 05 46.2	
T57A	 baz=269,SNR=21			P		04 05 46.2	
HOPEN	Hopen	117.65	351	*e*PKPdf	PKPdf	04 05 45.4	-0.7
HOPEN	 comp=Z,1µm,2.9s			IVmBBB		04 05 51.8	
HOPEN				*e*SP	SP	04 16 24.9	+2.2
HOPEN				*e*SS	SS	04 22 59.7	+4.1
ASUD	Al Ashush, Dub SNR=18	117.66	289	*i* P	PKPdf	04 05 47.3	-0.2
ASUD	Al Ashush, Dub SNR=10	117.66	289	P	PKPdf	04 05 46.5	-1.1
Q56A	Snyder Ridge, baz=270,SNR=11	117.72	55	P	PKPdf	04 05 46.4	-0.9
Q56A	Snyder Ridge, baz=270,SNR=11	117.72	55	P		04 05 46.3	
Q56A	 baz=270,SNR=11			P		04 05 46.3	
V58A	Windy Hill, Pi baz=268,SNR=9.3	117.73	58	P		04 05 46.5	
V58A	 baz=268,SNR=9.3			P		04 05 46.5	
V58A	Windy Hill, Pi baz=268,SNR=9.3	117.73	58	P	PKPdf	04 05 47.1	-0.3
Y59A	Loris baz=268,SNR=5.6	117.86	60	P	PKPdf	04 05 47.1	-0.6
Y59A	Loris baz=268,SNR=5.6	117.86	60	P		04 05 45.8	
Y59A	 baz=268,SNR=5.6			P		04 05 45.8	
DOK	Doka SNR=8.9	117.88	282	P	PKiKP	04 05 49.0	+0.8
S57A	Dark Hollow, R baz=270,SNR=7.8	117.89	56	P	PKPdf	04 05 46.7	-1.0
S57A	Dark Hollow, R	117.89	56		PKiKP	04 05 47.9	+0.2
S57A	Dark Hollow, R baz=270,SNR=7.8	117.89	56	P		04 05 46.9	
S57A	 baz=270,SNR=7.8			P		04 05 46.9	
AJN	Ajban SNR=6.1	117.96	289	*i* P	PKPdf	04 05 47.6	-0.5
AJN	Ajban SNR=10	117.96	289	P	PKPdf	04 05 46.6	-1.5
CPUP	Villa Florida comp=Z,29nm,1.1s,baz=329,slow=1.3,SNR=17	117.96	133	PKP	PKPdf	04 05 47.8	-0.4
CPUP	 comp=Z,19nm,1.1s,baz=251,slow=10.0,SNR=7.3			PP	PP	04 07 04.7	-0.4
CPUP	 comp=Z,7.0nm,0.9s,baz=302,slow=3.4,SNR=3.4			SKP		04 09 03.5	
CPUP	 comp=Z,11nm,1.0s,baz=64,slow=2.2,SNR=10.0			PKKPbc	PKKPbc	04 16 09.1	0.0
P56A	Dayton Farm, R baz=270,SNR=9.7	117.99	54	P	PKPdf	04 05 46.8	-1.0
H53A	Bobcaygeon baz=273,SNR=8.6	118.01	48	P	PKPdf	04 05 47.2	-0.5
M55A	Ridgway baz=272,SNR=21	118.01	52	P		04 05 46.9	
M55A	 baz=272,SNR=21			P		04 05 46.9	
WHFO	Wadi Hawf SNR=6.4	118.10	282	P	PKPdf	04 05 47.4	-1.3
WVNY	West Valley, N baz=272,SNR=24	118.10	51	P		04 05 46.9	
X59A	McDuffie Farm, baz=268	118.11	60	P	PKPdf	04 05 47.4	-0.7
O56A	Blue Knob Stat baz=271,SNR=18	118.19	53	P	PKPdf	04 05 47.8	-0.5
O56A	Blue Knob Stat baz=271,SNR=18	118.19	53	P		04 05 47.5	
MATQ	Matagami baz=277	118.19	42	P	PKPdf	04 05 47.9	0.0
U58A	Oxford baz=269,SNR=17	118.20	58	P	PKPdf	04 05 47.8	-0.5
T58A	Grand View Acr baz=269,SNR=24	118.22	57	P	PKPdf	04 05 47.5	-0.8
R57A	Stanardsville baz=270,SNR=11	118.24	55	P	PKPdf	04 05 47.1	-1.2
W59A	Clinton baz=268,SNR=7.5	118.26	59	P	PKPdf	04 05 47.4	-1.1
ALGO	Algonquin Park baz=274,SNR=22	118.29	47	P	PKPdf	04 05 47.3	-0.9
G54A	Lake Saint Pet baz=274,SNR=25	118.30	47	P	PKPdf	04 05 47.4	-0.8
Q57A	Strasburg baz=271,SNR=12	118.32	55	P	PKPdf	04 05 47.5	-1.0
N56A	West Decatur baz=272,SNR=19	118.38	52	P	PKPdf	04 05 47.6	-1.0
Y60A	Bolivia baz=268	118.41	60	P	PKPdf	04 05 48.2	-0.5
V59A	Middlesex	118.44	58	P	PKPdf	04 05 48.2	-0.6

	baz=269,SNR=8.6						
ABTO	Aybut	118.44	281	P	PKPdf	04 05 48.7	-0.6
M56A	Emporium	118.44	52	P	PKPdf	04 05 48.0	-0.6
	baz=272,SNR=20						
HSPB	Hornsund (broa	118.49	353	*e*PKPdf	PKiKP	04 05 48.9	+1.2
HSPB				*e*SKSac	SKSac	04 12 19.4	-1.1
HSPB				*e*SP	SP	04 16 30.1	-0.1
HSPB				*e*SS	SS	04 23 08.1	+1.7
S58A	Poland Farm, P	118.61	56	P	PKPdf	04 05 48.6	-0.4
	baz=270,SNR=25						
P57A	Homestead Farm	118.62	54	P	PKPdf	04 05 48.2	-0.9
	baz=271,SNR=17						
P57A	Homestead Farm	118.62	54	P		04 05 48.4	
	baz=271,SNR=17						
P57A				P		04 05 48.4	
	baz=271,SNR=17						
X60A	Albert Glenn T	118.62	60	P	PKPdf	04 05 48.5	-0.6
	baz=268,SNR=10						
R58A	Rapidan	118.65	55	P	PKPdf	04 05 48.2	-0.9
	baz=270,SNR=12						
SSPA	Standing Stone	118.69	53	P	PKPdf	04 05 48.4	-0.7
	baz=272						
SSPA	Standing Stone	118.69	53	PKPdf	PKPdf	04 05 48.7	-0.4
SSPA	Standing Stone	118.69	53	P		04 05 48.6	
	baz=272,SNR=14						
LSQQ	Lebel-sur-Quev	118.70	43	P	PKPdf	04 05 47.8	-1.1
	baz=277						
CNNC	Cliffs of the	118.71	59	P	PKPdf	04 05 48.9	-0.4
	baz=269,SNR=7.4						
CNNC	Cliffs of the	118.71	59	P		04 05 49.1	
	baz=269,SNR=7.4						
UPNV	Upernavik	118.75	14	*i* P	PKPdf	04 05 47.2	-1.1
UPNV				*i*		04 07 08.0	
UPNV				IAMs_20	IAMs_20	04 44 18.8	
	comp=Z,29µm,92.6s						
R58B	Mineral	118.75	56	P	PKPdf	04 05 48.4	-0.9
	baz=270,SNR=20						
R58B	Mineral	118.75	56	P		04 05 48.7	
	baz=270,SNR=20						
R58B				P		04 05 48.7	
	baz=270,SNR=20						
U59A	Littleton	118.81	58	P		04 05 48.1	
	baz=270,SNR=7.6						
U59A				P		04 05 48.1	
	baz=270,SNR=7.6						
U59A	Littleton	118.81	58	P	PKPdf	04 05 48.7	-0.7
	baz=270,SNR=7.6						
W60A	Pink Hill	118.85	59	P	PKPdf	04 05 48.6	-1.0
	baz=269,SNR=9.2						
L56A	Greenwood	118.88	51	P	PKPdf	04 05 48.9	-0.6
	baz=273,SNR=29						
L56A	Greenwood	118.88	51	P		04 05 48.3	
	baz=273,SNR=29						
L56A				P		04 05 48.3	
	baz=273,SNR=29						
Q58A	Fox Den Farm,	118.89	55	P	PKPdf	04 05 49.1	-0.4
	baz=271,SNR=14						
O57A	Amberson	118.90	53	P	PKPdf	04 05 48.8	-0.8
	baz=272,SNR=18						
N57A	Milroy	118.95	53	P	PKPdf	04 05 49.1	-0.5
	baz=272,SNR=25						
T59A	Double "B" Far	119.01	57	P	PKPdf	04 05 49.6	-0.2
	baz=270,SNR=32						
T59A	Double "B" Far	119.01	57	P		04 05 48.7	
	baz=270,SNR=32						
T59A				P		04 05 48.7	
	baz=270,SNR=32						
K56A	Middlesex	119.03	50	P	PKPdf	04 05 48.8	-1.0
	baz=273,SNR=6.3						
CBN	Corbin Frederi	119.14	55	P	PKPdf	04 05 49.1	-0.9
	baz=271,SNR=8.2						
CBN	Corbin Frederi	119.14	55	P		04 05 50.9	
	baz=271,SNR=8.2						
P58A	Pank, Wackersv	119.18	54	P	PKPdf	04 05 49.2	-0.9
	baz=272,SNR=9.3						
S59A	Mechanicsville	119.21	56	P	PKPdf	04 05 49.5	-0.7
	baz=271,SNR=12						
V60A	Jim Taylor Roa	119.23	58	P	PKPdf	04 05 49.3	-1.0
	baz=269,SNR=5.5						
M57A	Sunshine Farm,	119.24	52	P		04 05 50.0	
	baz=273,SNR=20						
M57A				P		04 05 50.0	
	baz=273,SNR=20						
M57A	Sunshine Farm,	119.24	52	P	PKPdf	04 05 49.7	-0.5
	baz=273,SNR=20						
M57A	Sunshine Farm,	119.24	52		PKPdf	04 05 50.1	0.0
U60A	Pendleton	119.32	57	P	PKPdf	04 05 49.7	-0.7
	baz=270,SNR=7.5						
J56A	Wolcott	119.33	50	P	PKPdf	04 05 49.2	-1.1
	baz=274,SNR=6.2						
J56A	Wolcott	119.33	50	P		04 05 49.6	
	baz=274,SNR=6.2						
J56A				P		04 05 49.6	
	baz=274,SNR=6.2						
R59A	King George, V	119.35	55	P	PKPdf	04 05 49.9	-0.5
	baz=271,SNR=12						
L57A	Andrews Acres	119.42	51	P	PKPdf	04 05 50.0	-0.5
	baz=273,SNR=23						
O58A	Lewisberry	119.45	53	P	PKPdf	04 05 49.5	-1.1
	baz=272,SNR=31						
W61A	Ground Anchor	119.45	59	P	PKPdf	04 05 50.2	-0.5
	baz=269,SNR=8.6						
KIRV	Kirov	119.50	328	PKP	PKPdf	04 05 49.9	-0.1
	comp=Z,122nm,0.7s,baz=78,slow=1.0,SNR=28						
KIRV				PKKPbc	PKKPbc	04 16 04.8	+0.6
	comp=Z,37nm,0.8s,baz=269,slow=1.3,SNR=12						
KIRV	Kirov	119.50	328*c*	*i*PKIKP	PKPdf	04 05 49.7	-0.3
SDMD	Soldier's Deli	119.53	54	P		04 05 50.4	
	baz=272						
N58A	Sunbury	119.58	52	P	PKPdf	04 05 50.0	-0.8
	baz=273,SNR=16						
N58A	Sunbury	119.58	52	P		04 05 50.4	
	baz=273,SNR=16						
N58A				P		04 05 50.4	
	baz=273,SNR=16						
E55A	Montcerf-Lytto	119.62	46	P	PKPdf	04 05 49.8	-0.9
	baz=276,SNR=23						
K57A	Scipio Center	119.62	50	P	PKPdf	04 05 49.9	-0.9
	baz=274,SNR=15						
T60A	Surry	119.66	57	P	PKPdf	04 05 50.4	-0.7
	baz=270,SNR=12						
T60A	Surry	119.66	57	P		04 05 50.7	
	baz=270,SNR=12						
T60A				P		04 05 50.7	
	baz=270,SNR=12						
Q59A	Harwood	119.69	55	P	PKPdf	04 05 50.5	-0.5
	baz=272,SNR=9.8						
S60A	Water View	119.72	56	P	PKPdf	04 05 50.7	-0.5
	baz=271,SNR=21						
M58A	Price's Panora	119.74	52	P	PKPdf	04 05 50.5	-0.7
	baz=273,SNR=14						
R60A	Leonardtown, M	119.77	55	P	PKPdf	04 05 51.0	-0.2
	baz=271,SNR=7.0						
V61A	Roper	119.79	58	P	PKPdf	04 05 50.7	-0.6
	baz=270,SNR=6.4						
V61A	Roper	119.79	58	P		04 05 51.3	
	baz=270,SNR=6.4						
V61A				P		04 05 51.3	
	baz=270,SNR=6.4						
P59A	Jarrettsville	119.84	54	P	PKPdf	04 05 50.8	-0.5
	baz=272						
U61A	Possum Corner	119.90	58	P	PKPdf	04 05 51.0	-0.5
	baz=270,SNR=6.4						
JRN	Qarnain Island	119.93	289	P	PKPdf	04 05 50.9	-1.1
	SNR=13						
J57A	Williamstown	119.95	49	P	PKPdf	04 05 50.6	-0.9
	baz=275,SNR=13						
J57A	Williamstown	119.95	49	P		04 05 50.7	
	baz=275,SNR=13						
J57A				P		04 05 50.7	
	baz=275,SNR=13						
O59A	Robesonia	120.00	53	P		04 05 51.1	
	baz=273						
O59A	Robesonia	120.00	53	P	PKPdf	04 05 50.9	-0.8
	baz=273						
BINY	Binghamton	120.05	51	P	PKPdf	04 05 51.4	-0.3
	baz=274,SNR=19						
BINY	Binghamton	120.05	51	P		04 05 50.7	
	baz=274,SNR=19						
I57A	Carthage	120.15	49	P	PKPdf	04 05 50.9	-0.9
	baz=275,SNR=14						
WCNY	West Carthage	120.15	49	P		04 05 50.9	
	baz=275,SNR=19						
DAG	Danmarks Havn	120.16	2	*i* PKIKP	PKPdf	04 05 49.0	-1.9
DAG				MLR	MLR		
	comp=Z,6µm,20.0s						
DAG	Danmarks Havn	120.16	2	*i* P	PKPdf	04 05 49.0	-1.9
	comp=Z,6µm,20.0s						
DAG	Danmarks Havn	120.16	2	*i* P	PKKPab	04 16 01.4	+0.9
	comp=Z,16nm,0.9s						
DAG	Danmarks Havn	120.16	2	*i* P	PKPdf	04 05 49.0	-1.9
DAG				IAMs_20	IAMs_20	04 48 41.2	
	comp=Z,6µm,20.2s						
DAG	Danmarks Havn	120.16	2	IAmb	IAmb	04 16 04.5	
	comp=Z,16nm,0.9s						
DAG				*i* P	PKKPab	04 16 01.4	+0.9
L58A	Harry Jones Me	120.16	51	P	PKPdf	04 05 51.9	-0.1
	baz=274,SNR=28						
BJO1	Bjornoya	120.17	351	*e*PKPdf	PKiKP	04 05 53.0	+2.0
BJO1				*e*SP	SP	04 16 51.6	+6.3
BJO1				*e*SS	SS	04 23 28.4	+0.5
NUUG	Nuugaatsiaq	120.25	14	*i* P	PKPdf	04 05 50.6	-0.5
NUUG				*i*		04 07 19.2	
NUUG				IAMs_20	IAMs_20	05 01 23.9	
	comp=Z,5µm,20.5s						
KSPA	Keystone Colle	120.25	52	P		04 05 51.0	
	baz=274,SNR=16						
K58A	Earlville	120.26	50	P	PKPdf	04 05 51.3	-0.8
	baz=274,SNR=20						
K58A	Earlville	120.26	50	P		04 05 51.2	
	baz=274,SNR=20						
N59A	State Game Lan	120.29	52	P	PKPdf	04 05 51.5	-0.7
	baz=273,SNR=8.1						
N59A	State Game Lan	120.29	52	PKPdf	PKPdf	04 05 51.5	-0.7
N59A	State Game Lan	120.29	52	P		04 05 51.2	
	baz=273,SNR=8.1						
E56A	St. Veronique	120.31	46	P	PKPdf	04 05 51.3	-0.7
	baz=277,SNR=20						
Q60A	Greensboro	120.32	54	P	PKPdf	04 05 52.1	-0.2
	baz=272,SNR=16						
P60A	Greenville	120.45	54	P	PKPdf	04 05 51.7	-0.8
	baz=273,SNR=21						
P60A	Greenville	120.45	54	P		04 05 51.6	
	baz=273,SNR=21						
J58A	Remsen	120.47	49	P	PKPdf	04 05 51.7	-0.8
	baz=275,SNR=16						
J58A	Remsen	120.47	49	P		04 05 52.0	
	baz=275,SNR=16						
J58A				P		04 05 52.0	
	baz=275,SNR=16						
S61A	Accomac	120.50	56	P	PKPdf	04 05 52.2	-0.5
	baz=272						
M59A	Waymart	120.50	52	P	PKPdf	04 05 52.3	-0.3
	baz=274,SNR=29						
G57A	Newington	120.51	47	P	PKPdf	04 05 52.1	-0.4
	baz=276,SNR=9.5						
PSUB	Penn St. - Bra	120.58	53	P		04 05 52.0	
	baz=273						
O60A	Telford	120.60	53	P	PKPdf	04 05 52.7	-0.1
	baz=273,SNR=22						
F57A	Harrington	120.64	47	P	PKPdf	04 05 52.0	-0.7
	baz=277,SNR=6.0						
I58A	Old Forge	120.67	49	P	PKPdf	04 05 52.3	-0.6
	baz=276,SNR=17						
Q61A	Milford	120.73	55	P	PKPdf	04 05 52.3	-0.8
	baz=272						
L59A	Walton	120.75	51	P		04 05 52.5	
	baz=275,SNR=18						
L59A				P		04 05 52.5	
	baz=275,SNR=18						
L59A	Walton	120.75	51	P	PKPdf	04 05 52.5	-0.6
	baz=275,SNR=18						
N60A	Cedar Hill Far	120.80	52	P	PKPdf	04 05 51.7	-1.4
	baz=274,SNR=16						
K59A	Cooperstown	120.84	50	P	PKPdf	04 05 52.6	-0.6
	baz=275,SNR=16						
LONY	Lake Ozonia	120.85	48	P	PKPdf	04 05 52.6	-0.6
	baz=276,SNR=19						
BMNY	Brushton-Moira	120.88	48	P		04 05 52.4	
	baz=277,SNR=17						
E57A	Chemin Saint G	120.94	46	P	PKPdf	04 05 52.5	-0.8
	baz=278,SNR=53						
J59A	Piesco	121.03	49	P	PKPdf	04 05 52.8	-0.7
	baz=276,SNR=20						
J59A	Piesco	121.03	49	P		04 05 52.9	
	baz=276,SNR=20						
J59A				P		04 05 52.9	
	baz=276,SNR=20						
SIV	San Ignacio	121.07	121	PKP	PKPdf	04 05 53.5	-0.9
	comp=Z,28nm,0.6s,baz=278,slow=1.5,SNR=25						
SIV				PP	PP	04 07 27.3	+0.5
	comp=Z,31nm,1.1s,baz=251,slow=7.7,SNR=5.6						
SIV				SKP		04 09 10.4	
	comp=Z,12nm,0.9s,baz=304,slow=3.6,SNR=3.9						
SIV				PKKPbc	PKKPbc	04 15 57.9	+0.3
	comp=Z,13nm,0.9s,baz=96,slow=5.8,SNR=13						
P61A	Hammonton	121.11	54	P	PKPdf	04 05 53.0	-0.8
	baz=273,SNR=6.0						
P61A	Hammonton	121.11	54	P		04 05 53.6	
	baz=273,SNR=6.0						
P61A				P		04 05 53.6	
	baz=273,SNR=6.0						
M60A	Port Jervis	121.12	52	P	PKPdf	04 05 53.4	-0.4
	baz=274,SNR=13						
PANJ	Princeton	121.13	53	P		04 05 52.3	
	baz=274,SNR=12						
ODNJ	Ogdensburg	121.16	52	P		04 05 52.3	
	baz=274,SNR=15						
H58A	Gabriels	121.16	48	P	PKPdf	04 05 53.2	-0.6
	baz=277,SNR=21						
G58A	Ormstown	121.16	47	P	PKPdf	04 05 53.1	-0.6
	baz=277,SNR=30						
HCNY	Howe Caverns	121.18	50	P		04 05 52.6	
	baz=275,SNR=9.9						
NCB	Newcomb	121.18	49	P		04 05 52.7	
	baz=276,SNR=23						
BRNJ	Basking Ridge	121.22	52	P		04 05 53.4	
	baz=274,SNR=16						
F58A	St-Lin Laurent	121.24	46	P	PKPdf	04 05 53.3	-0.5
	baz=278						
O61A	Allentown	121.26	53	P	PKPdf	04 05 53.2	-0.9
	baz=274						
L60A	Shokan	121.37	51	P	PKPdf	04 05 54.1	-0.2
	baz=275,SNR=7.3						
LVZ	Lovozero	121.40	341	*i* PKIKP	PKPdf	04 05 52.5	-1.1
LVZ	Lovozero	121.40	341	PKPdf	PKPdf	04 05 52.7	-0.9
N61A	South Mountain	121.42	52	P	PKPdf	04 05 54.4	0.0
	baz=274,SNR=7.5						
NPNY	Mohonk Preserv	121.45	51	P		04 05 53.3	
	baz=275						
H59A	Cadyville	121.48	48	P	PKPdf	04 05 54.4	0.0
	baz=277,SNR=14						
FRNY	Flat Rock	121.53	48	P		04 05 53.8	
	baz=277,SNR=13						
E58A	La Victoria	121.54	46	P	PKPdf	04 05 53.6	-0.8
	baz=278,SNR=36						
K60A	Five Rivers En	121.56	50	P	PKPdf	04 05 54.3	-0.2
	baz=276						
BRNY	Black Rk. Fore	121.58	52	P		04 05 54.4	
	baz=275,SNR=18						
ACCN	Adirondack Com	121.64	49	P		04 05 53.8	
	baz=276,SNR=8.6						
PAL	Palisades	121.69	52	P	PKPdf	04 05 54.6	-0.3
	baz=275,SNR=11						
PAL	Palisades	121.69	52	P		04 05 54.3	
	baz=275,SNR=11						
D58A	Chemin du LacG	121.70	45	P	PKPdf	04 05 53.6	-1.1
	baz=279,SNR=35						
LATQ	La Tuque	121.72	45	P	PKPdf	04 05 53.7	-1.0
	baz=279,SNR=16						
M61A	Granite Spring	121.77	52	P	PKPdf	04 05 54.6	-0.4
	baz=275,SNR=12						
G59A	Clarenceville	121.78	47	P	PKPdf	04 05 54.5	-0.4
	baz=278,SNR=11						
J60A	Lant Hill Farm	121.84	49	P	PKPdf	04 05 54.6	-0.5
	baz=276,SNR=10						
L61A	Hillsdale 1, H	121.85	51	P	PKPdf	04 05 54.9	-0.3
	baz=276,SNR=8.0						
I60A	Shoreham	121.86	49	P	PKPdf	04 05 55.1	0.0
	baz=277,SNR=32						
SDV	Santo Domingo	121.93	90	PKP	PKPdf	04 05 55.6	-0.8
	comp=Z,149nm,1.0s,baz=267,slow=1.7,SNR=38						
SDV				SKP		04 09 10.3	
	comp=Z,48nm,1.1s,baz=247,slow=2.3,SNR=4.5						
SDV	Santo Domingo	121.93	90	*e*P	PKiKP	04 05 57.1	+0.6
SUR	Sutherland	121.94	212	PKP	PKiKP	04 05 56.2	0.0
	comp=Z,78nm,1.0s,baz=314,slow=1.1,SNR=19						
SUR				PKKPbc	PKKPbc	04 15 54.0	-1.1
	comp=Z,12nm,0.9s,baz=319,slow=2.6,SNR=8.4						
SUR	Sutherland	121.94	212		PKiKP	04 05 56.4	+0.3
F59A	Saint Guilaume	121.95	46	P	PKPdf	04 05 55.0	-0.1
	baz=278,SNR=9.2						
APA	Apatity	121.97	341	⇓*i*PKIKP	PKPdf	04 05 53.7	-0.9
APA				*i*		04 06 54.0	
APA				*i*		04 07 29.0	
APA				*i*		04 12 33.0	
APA				*i*		04 17 02.0	
APA				pmax	pmax		
	comp=Z,135nm,1.0s						
K61A	Williamstown	122.01	50	P	PKPdf	04 05 55.0	-0.4
	baz=276,SNR=9.6						
E59A	St. Maurice	122.05	46	P	PKPdf	04 05 54.8	-0.6
	baz=279						
MCVT	Middlebury Col	122.06	49	P		04 05 54.3	
	baz=277,SNR=7.8						
BELG	Belogornoye	122.12	322	PKP	PKiKP	04 05 55.6	+0.1
	comp=Z,899nm,1.0s,baz=85,slow=0.6,SNR=89						
BELG				SKP		04 09 10.2	
	comp=Z,91nm,0.9s,baz=307,slow=2.2,SNR=4.8						
BELG	Belogornoye	122.12	322*c*	*i*PKIKP	PKPdf	04 05 55.0	-0.3
VT1	Waterbury	122.19	48	P		04 05 55.5	
	baz=278						
H60A	Morristown	122.19	48	P	PKPdf	04 05 55.4	-0.4
	baz=278,SNR=9.1						
KEV	Kevo	122.29	345	PKIKP	PKPdf	04 05 54.8	-0.3
KEV	Kevo	122.29	345	PKPdf	PKPdf	04 05 54.8	-0.3
TMCR	Tamitsa	122.31	337	*e*PKIKP	PKPdf	04 05 54.2	-1.1
TMCR				pmax	pmax		
	comp=Z,268nm,1.3s						
SUMG	Summit	122.33	9	*i* PKIKP	PKPdf	04 05 55.0	-0.7
SUMG	Summit	122.33	9	*i* P	PKPdf	04 05 55.0	-0.7
SUMG	Summit	122.33	9	*i* P	PKKPab	04 15 52.7	+1.1
	comp=Z,115nm,0.9s						
SUMG	Summit	122.33	9	*i* P	PKPdf	04 05 55.0	-0.7
SUMG	Summit	122.33	9	IAmb	IAmb	04 15 56.1	
	comp=Z,115nm,0.9s						
SUMG				*i* P	PKKPab	04 15 52.8	+1.1
ILULI	Ilulissat	122.36	16	*i* PKIKP	PKPdf	04 05 55.1	-0.2
ILULI	Ilulissat	122.36	16	*i* P	PKPdf	04 05 55.1	-0.2
ILULI	Ilulissat	122.36	16	*i* P	PKPdf	04 05 55.1	-0.2
BOSA	Boshof	122.37	218	PKP	PKiKP	04 05 57.1	+0.1
	comp=Z,95nm,1.0s,baz=164,slow=1.8,SNR=31						
BOSA				PKKPbc	PKKPbc	04 15 52.2	-1.0
	comp=Z,6.6nm,0.7s,baz=295,slow=3.1,SNR=8.0						
G60A	Masonville	122.38	47	P	PKPdf	04 05 55.4	-0.7
	baz=278,SNR=12						
HAMF	Hammerfest	122.40	347	*e*PKPdf	PKPdf	04 05 55.0	-0.4
HAMF				*e*PP	PP	04 07 31.0	-3.6
HAMF				*e*SP	SP	04 17 02.7	-2.5
M62A	Hamden	122.41	51	P	PKPdf	04 05 55.9	-0.3
	baz=276,SNR=6.2						
D59A	Saint-Raymond	122.42	45	P	PKPdf	04 05 55.5	-0.6
	baz=280,SNR=19						
J61A	Chester	122.45	49	P	PKPdf	04 05 56.0	-0.3
	baz=277,SNR=15						
J61A	Chester	122.45	49	P		04 05 55.9	
	baz=277,SNR=15						
J61A				P		04 05 55.9	
	baz=277,SNR=15						
L61B	Northampton	122.47	50	P	PKPdf	04 05 55.6	-0.7
	baz=276,SNR=12						
L61B	Northampton	122.47	50	P		04 05 55.8	
	baz=276,SNR=12						
F60A	Warwick	122.51	46	P	PKPdf	04 05 56.1	-0.2
	baz=279,SNR=53						
L62A	Suffield	122.53	51	P	PKPdf	04 05 55.2	-1.2
	baz=276						
DBG	Daneborg	122.54	3	*i* P	PKPdf	04 05 55.1	-0.5
DBG	Daneborg	122.54	3	IAmb	IAmb	04 15 55.3	
	comp=Z,17nm,0.7s						
DBG				*i* P	PKKPab	04 15 52.6	+2.5
HNH	Hanover	122.60	49		PKPdf	04 05 56.3	-0.2
I61A	Oroboro, Fairl	122.63	48	P	PKiKP	04 05 56.8	0.0
	baz=278,SNR=16						
QUA2	Belchertown	122.73	50	P		04 05 55.9	
	baz=277						
H61A	Lyndonville	122.75	48	P	PKPdf	04 05 56.8	0.0
	baz=278,SNR=8.2						
K62A	Royalston	122.77	50	P	PKPdf	04 05 56.5	-0.4
	baz=277,SNR=5.6						
LBNH	Lisbon	122.79	48	P	PKPdf	04 05 56.6	-0.3
	baz=278,SNR=9.5						
LBNH	Lisbon	122.79	48	P		04 05 56.6	
	baz=278,SNR=9.5						
E60A	Ste Agathe de	122.79	46	P	PKPdf	04 05 56.6	-0.2
	baz=280,SNR=29						
ARA0	ARCESS Array S	122.81	345	*e*P	PKiKP	04 05 56.4	0.0
ARCES	ARCESS Array B	122.81	345	PKP	PKPdf	04 05 56.3	+0.1
	comp=Z,157nm,0.8s,baz=59,slow=1.7,SNR=117						
ARCES				PKKPbc	PKKPab	04 15 49.8	+0.7
	comp=Z,30nm,0.9s,baz=228,slow=2.9,SNR=18						
ARCES				SKKPbc	SKKPbc	04 19 20.6	-0.8
	comp=Z,11nm,1.1s,baz=184,slow=2.7,SNR=3.6						
G61A	St-Isidore-de-	122.91	47	P	PKPdf	04 05 56.5	-0.6
	baz=279,SNR=22						
J62A	Henniker	123.01	49	P	PKPdf	04 05 57.3	-0.1
	baz=278,SNR=10						
D60A	Saint Jean D'O	123.05	45	P	PKPdf	04 05 56.3	-0.9
	baz=281,SNR=28						
M63A	Gales Ferry	123.05	51	P	PKPdf	04 05 56.7	-0.7
	baz=276						
F61A	St Evariste	123.17	46	P	PKPdf	04 05 57.7	+0.1
	baz=280,SNR=12						
I62A	Tamworth	123.26	48	P	PKPdf	04 05 57.9	+0.1
	baz=278,SNR=8.5						
I62A	Tamworth	123.26	48	P		04 05 56.9	
	baz=278,SNR=8.5						
I62A				P		04 05 56.9	
	baz=278,SNR=8.5						
K63A	Dunstable	123.28	50	P	PKPdf	04 05 57.7	-0.2
	baz=277,SNR=7.3						
HRV	Adam Dziewonsk	123.28	50	P		04 05 57.7	
	baz=277,SNR=8.8						
H62A	Milan	123.28	48	P	PKiKP	04 05 58.0	-0.1
	baz=279,SNR=16						
H62A	Milan	123.28	48	P		04 05 56.8	
	baz=279,SNR=16						
H62A				P		04 05 56.8	
	baz=279,SNR=16						
HRV	Adam Dziewonsk	123.28	50	PKIKP	PKiKP	04 05 58.2	+0.1
HRV	Adam Dziewonsk	123.28	50	P	PKPdf	04 05 57.4	-0.5
	baz=277						
HRV	Adam Dziewonsk	123.28	50		PKiKP	04 05 58.2	+0.1
KLMR	Klimovskoe	123.31	333	*e*PKIKP	PKPdf	04 05 55.7	-1.6
KLMR				*e*		04 12 35.0	
KLMR				pmax	pmax		
	comp=Z,629nm,1.4s						
KLMR	Klimovskoe	123.31	333	*e*PKPdf	PKPdf	04 05 55.7	-1.6
KLMR				AMP		04 06 00.8	
	comp=Z,629nm,1.4s						
KLMR				*e*SKSac	SKSac	04 12 35.1	-2.4
KLMR				*e*SKSac	SKSac	04 12 35.1	-2.4
KLMR				*e*SKKSac	SKKSac	04 14 10.8	-5.9
KLMR				*e*SKKSac	SKKSac	04 14 10.8	-5.9
KLMR				*e*PKKS		04 20 04.9	
KLMR				*e*PKKS		04 20 04.9	
L63A	North Scituate	123.32	51	P	PKPdf	04 05 56.9	-1.1
	baz=277						
E61A	Lac Etchemin	123.43	45	P	PKPdf	04 05 58.1	0.0
	baz=281,SNR=56						
D61A	St Aubert, Com	123.49	44	P	PKPdf	04 05 57.7	-0.4
	baz=281,SNR=50						
J63A	Strafford	123.53	49	P	PKPdf	04 05 58.3	0.0
	baz=278,SNR=5.7						
G62A	West of Eustis	123.62	47	P	PKPdf	04 05 58.3	-0.1
	baz=280,SNR=16						
G62A	West of Eustis	123.62	47	P		04 05 58.3	
	baz=280						
G62A				P		04 05 58.3	
	baz=280						
M64A	Tiverton	123.66	51	P	PKPdf	04 05 58.0	-0.6
	baz=277						
UNH	University of	123.71	49	P		04 05 58.4	
	baz=278,SNR=5.7						
KTK1	Kautokeino	123.74	346	*e*PKPdf	PKPdf	04 05 56.3	-1.7
KTK1				*e*SS	SS	04 24 05.9	-7.5
I63A	Otisfield	123.77	48	P	PKPdf	04 05 58.8	+0.1
	baz=279,SNR=16						
L64A	Middleborough	123.89	51	P	PKPdf	04 05 58.7	-0.3
	baz=278						
SFJD	Kangerlussuaq	124.03	17	*i* PKIKP	PKPdf	04 05 57.7	-0.8
SFJD				MLR	MLR		
	comp=Z,490nm,18.0s						
SFJD	Kangerlussuaq	124.03	17	PKPdf	PKPdf	04 05 57.9	-0.6
SFJD	Kangerlussuaq	124.03	17	*i* P	PKPdf	04 05 57.7	-0.8
	comp=Z,480nm,18.0s						
SFJD	Kangerlussuaq	124.03	17	*i* P	PKPdf	04 05 57.8	-0.8
SFJD				IAMs_20	IAMs_20	05 03 21.8	
	comp=Z,480nm,18.1s						
H63A	New Sharon	124.06	47	P	PKPdf	04 05 59.3	0.0
	baz=280,SNR=7.3						
MAK	Makhachkala	124.07	311	*e*P	Pdif	04 02 32.0	-2.2

MAK				*i*		04 05 59.5	
MAK				*e*		04 06 57.1	
MAK				*e*		04 07 48.7	
MAK				*e*PPP	PPP	04 10 22.9	
MAK				*e*		04 12 39.5	
MAK				*e*SS	SS	04 24 23.4	+4.0
MAK				*e*SSS	SSS	04 29 02.2	
MAK				pmax	pmax		
	comp=Z,659nm,0.9s						
M65A	**Busby, Falmout**	**124.08**	**51**	P	**PKPdf**	**04 05 59.1**	**-0.3**
	baz=277						
TRO	**Tromso**	**124.20**	**348**	*e*PKPdf	**PKPdf**	**04 05 55.9**	**-2.9**
TRO				IVmB_BB		04 06 00.7	
	comp=Z,3µm,1.7s						
TRO				*e*PP	**PP**	**04 07 44.1**	**-2.5**
TRO				*e*SKPdf	**SKiKP**	**04 09 10.8**	**-2.8**
TRO				*e*SS	**SS**	**04 24 19.7**	**+0.6**
G63A	**Kingsbury**	**124.27**	**47**	P	**PKPdf**	**04 05 59.7**	**0.0**
	baz=280,SNR=21						
D62A	**Allapoint, All**	**124.27**	**44**	P	**PKPdf**	**04 05 59.2**	**-0.4**
	baz=282						
D62A	**Allapoint, All**	**124.27**	**44**	P		04 05 59.2	
	baz=282						
D62A				P		04 05 59.2	
	baz=282						
L65A	**Cape Cod Natio**	**124.45**	**50**	P	**PKPdf**	**04 06 00.0**	**-0.1**
	baz=278						
I64A	**Boothbay**	**124.47**	**48**	P	**PKPdf**	**04 05 59.9**	**-0.1**
	baz=280,SNR=10						
PKME	**Peaks-Kenny Pk**	**124.47**	**46**	P	**PKPdf**	**04 05 59.9**	**-0.1**
	baz=281,SNR=33						
PKME	**Peaks-Kenny Pk**	**124.47**	**46**	P		04 05 59.5	
	baz=281,SNR=33						
F63A	**Nahmakanta, Br**	**124.52**	**46**	P	**PKPdf**	**04 05 59.8**	**-0.4**
	baz=281,SNR=30						
F63A	**Nahmakanta, Br**	**124.52**	**46**	P		04 05 59.6	
	baz=281,SNR=30						
F63A				P		04 05 59.6	
	baz=281,SNR=30						
H64A	**Troy**	**124.64**	**47**	P	**PKPdf**	**04 06 00.1**	**-0.3**
	baz=280,SNR=15						
LBTB	**Lobatse**	**124.75**	**222**	PKP	**PKiKP**	**04 06 01.8**	**0.0**
	comp=Z,63nm,0.7s,baz=158,slow=3.1,SNR=42						
LBTB				PKKPbc	**PKKPbc**	**04 15 44.2**	**+0.3**
	comp=Z,11nm,1.0s,baz=247,slow=2.6,SNR=6.0						
LBTB	**Lobatse**	**124.75**	**222**		**PKPdf**	**04 06 01.0**	**-0.5**
E63A	**Oxbow**	**124.83**	**45**	P	**PKPdf**	**04 06 00.3**	**-0.4**
	baz=282,SNR=27						
E63A	**Oxbow**	**124.83**	**45**	P		04 05 59.2	
	baz=282,SNR=27						
E63A				P		04 05 59.2	
	baz=282,SNR=27						
G64A	**Maxfield**	**124.84**	**46**	P	**PKPdf**	**04 06 00.3**	**-0.5**
	baz=281,SNR=38						
D63A	**Stockholm**	**124.91**	**44**	P	**PKPdf**	**04 06 00.3**	**-0.5**
	baz=283,SNR=23						
F64A	**Sherman**	**125.00**	**46**	P	**PKPdf**	**04 06 00.5**	**-0.6**
	baz=282,SNR=14						
F64A	**Sherman**	**125.00**	**46**	P		04 06 00.3	
	baz=282,SNR=14						
F64A				P		04 06 00.3	
	baz=282,SNR=14						
ICESG	**Greenland Ices**	**125.09**	**12**	*i* P	**PKPdf**	**04 05 59.7**	**-1.3**
ICESG	**Greenland Ices**	**125.09**	**12**	IAmb	IAmb	04 15 43.5	
	comp=Z,33nm,0.7s						
ICESG				*i* P	**PKKPab**	**04 15 43.0**	**+3.2**
FRTB	**Fartura**	**125.22**	**136**	*e*P	**PKiKP**	**04 06 03.7**	**+1.0**
E64A	**Bridgewater**	**125.24**	**45**	P	**PKPdf**	**04 06 00.9**	**-0.6**
	baz=283,SNR=28						
GROC	**Groznyy**	**125.27**	**311**	*i* PKIKP	**PKiKP**	**04 06 02.1**	**+0.1**
GROC				*e*		04 06 58.9	
GROC				*e*		04 07 21.5	
GROC				*e*		04 07 53.2	
GROC				*e*		04 12 47.4	
GROC				pmax	pmax		
	comp=Z,625nm,1.3s						
H65A	**Eastbrook**	**125.31**	**47**	P	**PKPdf**	**04 06 01.2**	**-0.5**
	baz=281,SNR=15						
NUUK	**Nuuk**	**125.57**	**20**	*i* P	**PKPdf**	**04 06 01.2**	**-0.4**
NUUK				IAMs_20	IAMs_20	05 03 16.0	
	comp=Z,6µm,17.1s						
G65A	**Princeton**	**125.68**	**46**	P		04 06 01.5	
	baz=282,SNR=23						
G65A				P		04 06 01.5	
	baz=282,SNR=23						
G65A	**Princeton**	**125.68**	**46**	P	**PKPdf**	**04 06 02.2**	**-0.1**
	baz=282,SNR=23						
EMMW	**East Machias**	**125.86**	**47**	P		04 06 02.1	
	baz=282						
MATP	**Matopo**	**125.92**	**228**	PKP	**PKPdf**	**04 06 04.0**	**+0.1**
	comp=Z,138nm,1.0s,baz=149,slow=2.1,SNR=10.0						
MATP				SKP		04 09 18.4	
	comp=Z,27nm,1.1s,baz=93,slow=2.4,SNR=4.8						
MATP				PKKPbc	**PKKPab**	**04 15 39.5**	**-0.1**
	comp=Z,18nm,1.2s,baz=298,slow=7.7,SNR=5.3						
H66A	**Whiting**	**125.94**	**47**	P	**PKPdf**	**04 06 02.5**	**-0.4**
	baz=282,SNR=9.3						
VRH	**Novokhopyorsk**	**125.98**	**322**	*e*PKIKP	**PKPdf**	**04 06 02.4**	**-0.3**
VRH				*e*		04 08 02.3	
VRH				*e*SP	SP	04 17 31.3	-6.5
VRH				pmax	pmax		
	comp=Z,410nm,0.8s						
N2IH	**Innhavet**	**126.20**	**348**	*e*P	**PKPdf**	**04 06 02.7**	**+0.1**
SCO	**Scoresbysund**	**126.21**	**4**	*i* PKIKP	**PKPdf**	**04 06 01.9**	**-0.7**
SCO				MLR	MLR		
	comp=Z,4µm,19.0s						
SCO	**Scoresbysund**	**126.21**	**4**	PKPdf	**PKPdf**	**04 06 02.7**	**+0.1**
SCO	**Scoresbysund**	**126.21**	**4**	*i* P	**PKPdf**	**04 06 01.9**	**-0.7**
	comp=Z,4µm,19.0s						
SCO	**Scoresbysund**	**126.21**	**4**	*i* P	**PKPdf**	**04 06 01.9**	**-0.7**
SCO				IAMs_20	IAMs_20	04 55 35.0	
	comp=Z,4µm,18.6s						
STEI	**Steigen**	**126.37**	**348**	*e*PKPdf	**PKPdf**	**04 06 02.8**	**-0.2**
STEI				IVmB_BB		04 06 05.2	
	comp=Z,4µm,1.7s						
STEI				*e*SKPdf	**SKPdf**	**04 09 12.6**	**-4.4**
STEI				*e*SP	SP	04 17 34.4	-5.6
STEI				*e*SS	**SS**	**04 24 43.7**	**-2.4**
RAYN	**Ar Rayn**	**126.48**	**287**	*i* P	**PKPdf**	**04 06 04.9**	**+0.2**
	SNR=49						
RAYN	**Ar Rayn**	**126.48**	**287**	PKIKP	**PKiKP**	**04 06 05.7**	**+0.6**
RAYN	**Ar Rayn**	**126.48**	**287**	PKPdf	**PKiKP**	**04 06 05.7**	**+0.6**
MOS	**Moscow**	**126.51**	**328**	*i* PKIKP	**PKPdf**	**04 06 01.4**	**-2.2**
MOS				*e*		04 06 59.6	
MOS				*e*		04 07 58.6	
MOS				*e*		04 12 42.3	
MOS				*e*PS	PS	04 18 12.8	+3.8
MOS				*e*SS	SS	04 24 42.6	-6.2
MOS				pmax	pmax		
	comp=Z,467nm,1.2s						
LOF	**Lofoten**	**126.53**	**349**	*e*PKPdf	**PKPdf**	**04 06 00.9**	**-2.4**
LOF				IVmB_BB		04 06 05.3	
	comp=Z,3µm,1.6s						
LOF				*e*pPKPdf	**pPKPdf**	**04 06 58.4**	**-2.4**
LOF				*e*PP	**PP**	**04 08 01.2**	**-0.8**
LOF				*e*SKPdf	**SKiKP**	**04 09 19.6**	**+1.3**
LOF				*e*SS	**SS**	**04 24 47.9**	**-0.2**
GNI	**Garni**	**126.53**	**308**	P	**PKiKP**	**04 06 05.0**	**+0.1**
GNI	**Garni**	**126.53**	**308***c*	*i*PKIKP	**PKPdf**	**04 06 04.5**	**+0.1**
GNI	**Garni**	**126.53**	**308**	PKPdf	**PKiKP**	**04 06 04.9**	**0.0**
GNI	**Garni**	**126.53**	**308**	P	**PKPdf**	**04 06 03.6**	**-0.8**
N2ST	**Straumen**	**126.79**	**347**	*e*P	**PKPdf**	**04 06 02.1**	**-1.7**
FAUS	**Fauske**	**126.83**	**347**	*e*PKPdf	**PKPdf**	**04 05 59.5**	**-4.4**
FAUS				IVmB_BB		04 06 06.9	
	comp=Z,2µm,4.0s						
FAUS				*e*PP	**PP**	**04 08 02.5**	**-1.5**
FAUS				*e*SKPdf	**SKPdf**	**04 09 17.6**	**-0.2**
FAUS				*e*SS	**SS**	**04 24 51.8**	**0.0**
GOF	**Gofitskoye**	**126.84**	**314**⇑	*e*PKIKP	**PKPdf**	**04 06 04.8**	**+0.2**
GOF				pmax	pmax		
	comp=Z,337nm,1.1s						
TASB	**TASBURUN-IGDIR**	**126.94**	**307**	*e*P	**PKiKP**	**04 06 05.6**	**0.0**
LPSR	**Galich'ya Gora**	**127.10**	**324**	*e*PKIKP	**PKPdf**	**04 06 04.7**	**-0.1**
LPSR				*e*		04 08 08.1	
LPSR				pmax	pmax		
	comp=Z,800nm,1.1s						
AGPR	**Aguadilla, PR**	**127.15**	**80**	PKPdf	**PKiKP**	**04 06 08.4**	**+1.9**
NBB28	**Valnes**	**127.16**	**348**	*e*P	**PKPdf**	**04 06 04.4**	**-0.1**
KBZ	**Khabaz**	**127.24**	**312**	PKP	**PKiKP**	**04 06 05.8**	**-0.1**
	comp=Z,64nm,1.1s,baz=78,slow=1.2,SNR=30						
KBZ				PP	**PP**	**04 08 07.9**	**+0.1**
	comp=Z,18nm,1.0s,baz=82,slow=10.0,SNR=4.6						
VORR	**Voronezh**	**127.29**	**323**	*e*PKIKP	**PKPdf**	**04 06 04.0**	**-1.2**
VORR				pmax	pmax		
	comp=Z,1µm,1.2s						
CLDR	**Caldiran**	**127.31**	**306**	*e*P	**PKPdf**	**04 06 05.6**	**-0.4**
OBN	**Obninsk**	**127.32**	**328**	⇑P	**PKPdf**	**04 06 04.8**	**-0.4**
OBN	**Obninsk**	**127.32**	**328***c*	*i*PKIKP	**PKPdf**	**04 06 04.2**	**-1.0**
OBN				*e*		04 07 02.7	
OBN				*e*		04 08 07.9	
OBN				*e*PPP	PPP	04 10 53.2	
OBN				*e*		04 12 55.4	
OBN				*e*SS	SS	04 25 01.0	+2.1
OBN				pmax	pmax		
	comp=Z,691nm,1.4s						
OBN				MLR	MLR		
	comp=Z,5µm,20.0s						
OBN	**Obninsk**	**127.32**	**328**		**PKPdf**	**04 06 05.2**	**0.0**
N2RO	**R,st**	**127.33**	**349**	*e*P	**PKPdf**	**04 06 02.1**	**-2.7**
KIV	**Kislovodsk**	**127.34**	**313**	⇓P	**PKiKP**	**04 06 06.5**	**+0.2**
KIV	**Kislovodsk**	**127.34**	**313**	*i* P	**PKPdf**	**04 06 05.7**	**-0.1**
	SNR=50						
KIV	**Kislovodsk**	**127.34**	**313**	*e*P	**Pdif**	**04 02 47.5**	**-1.4**
KIV				*i*		04 06 05.7	
KIV				*e**PP	**pPKPdf**	**04 07 00.2**	**-3.0**
KIV				*e*		04 08 07.0	
KIV				*e*		04 12 50.2	
KIV				*e*PS	PS	04 18 15.8	-1.3
KIV				*e*SS	SS	04 25 01.2	+0.9
KIV				pmax	pmax		
	comp=Z,689nm,1.0s						
KIV	**Kislovodsk**	**127.34**	**313**	P	**PKPdf**	**04 06 05.1**	**-0.6**
AOPR	**Arecibo Observ**	**127.47**	**80**	*e*P	**PKPdf**	**04 06 06.8**	**+0.2**
AOPR	**Arecibo Observ**	**127.47**	**80**		**PKPdf**	**04 06 06.8**	**+0.2**
BB19B	**Bebedouro**	**127.48**	**135**	*e*P	**PKiKP**	**04 06 09.6**	**+2.4**
VSR	**Storozhevoye**	**127.48**	**322**	*e*PKIKP	**PKPdf**	**04 06 05.5**	**-0.1**
VSR				*e*		04 08 13.8	
VSR				*e*SP	SP	04 17 42.7	-8.2
VSR				*e*SS	SS	04 25 18.4	+17
VSR				pmax	pmax		
	comp=Z,540nm,1.6s						
NBB30	**Finnes**	**127.49**	**348**	*e*P	**PKPdf**	**04 05 59.6**	**-5.5**
VORD	**Divnogorie**	**127.50**	**322**	*e*PKIKP	**PKPdf**	**04 06 05.6**	**0.0**
VORD				*e*		04 08 10.9	
VORD				pmax	pmax		
	comp=Z,370nm,1.3s						
KIBK	**Kibwezi**	**127.52**	**253**	P	**PKPdf**	**04 06 05.2**	**-1.8**
	SNR=31						
KARS	**Kars**	**127.71**	**308**	*e*P	**PKiKP**	**04 06 07.4**	**+0.2**
PUL	**Pulkovo**	**127.77**	**335**	*i* PKIKP	**PKPdf**	**04 06 05.9**	**0.0**
CUKT	**Cukurca**	**127.81**	**304**	*e*P	**PKPdf**	**04 06 05.3**	**-1.6**
AGRB	**Hanur-Agry**	**127.95**	**307**	*e*P	**PKiKP**	**04 06 07.7**	**-0.1**
SJG	**San Juan**	**128.01**	**80**	PKIKP	**PKPdf**	**04 06 06.8**	**-0.8**
SJG	**San Juan**	**128.01**	**80**		**PKPdf**	**04 06 06.8**	**-0.8**
KONS	**Konsvik**	**128.03**	**348**	*e*PKPdf	**PKPdf**	**04 06 05.2**	**-1.0**
MOR8	**Moi Rana**	**128.03**	**347**	*e*PKPdf	**PKPdf**	**04 06 06.1**	**-0.2**
MOR8				IVmB_BB		04 06 07.4	
	comp=Z,3µm,2.6s						
MOR8				*e*PP	**PP**	**04 08 07.7**	**-4.3**
MOR8				*e*SKPdf	**SKiKP**	**04 09 20.9**	**-0.5**
MOR8				*e*SP	**SP**	**04 17 56.2**	**+1.7**
MOR8				*e*SS	**SS**	**04 25 05.6**	**-1.3**
CHVG	**Ch'k'valeri**	**128.03**	**311**	⇓P	**PKiKP**	**04 06 07.9**	**+0.3**
CHVG	**Ch'k'valeri**	**128.03**	**311**	⇓PKIKP	**PKiKP**	**04 06 07.9**	**+0.3**
AKDM	**Akdamar-Van**	**128.15**	**306**	*e*P	**PKPdf**	**04 06 07.9**	**+0.3**
ISOG	**Isortoq, Green**	**128.19**	**14**	*i* P	**PKPdf**	**04 06 05.0**	**-1.5**
STOK	**Stokkvaagen**	**128.19**	**348**	*e*PKPdf	**PKiKP**	**04 06 07.1**	**0.0**
SENK	**Senkaya-Erzuru**	**128.27**	**308**	*e*P	**PKiKP**	**04 06 08.4**	**0.0**
FIA1	**FINESS Array S**	**128.34**	**338**	PKPdf	**PKPdf**	**04 06 07.2**	**+0.3**
FINES	**FINESS Array B**	**128.34**	**338**	PKhKP	PKPpre	04 05 47.0	
	comp=Z,0.8nm,0.3s,baz=45,slow=4.1,SNR=8.6						
FINES				PKP	**PKiKP**	**04 06 07.7**	**+0.1**
	comp=Z,103nm,0.8s,baz=41,slow=2.3,SNR=34						
FINES				SKPbc	SKPbc	04 09 07.0	
	comp=Z,31nm,0.6s,baz=58,slow=3.4,SNR=11						
MLAZ	**Malazgirt-MUS**	**128.36**	**307**	*e*P	**PKiKP**	**04 06 08.6**	**0.0**
ANGG	**Ammassalik, Gr**	**128.44**	**14**	*i* P	**PKPdf**	**04 06 05.0**	**-2.0**
SIRT	**Sirnak**	**128.70**	**305**	*e*P	**PKPdf**	**04 06 08.2**	**-0.3**
GURO	**Guroymak-BITLI**	**128.86**	**306**	*e*P	**PKiKP**	**04 06 09.5**	**-0.1**
LSZ	**Lusaka**	**129.39**	**233**	PKIKP	**PKPdf**	**04 06 10.8**	**+0.3**
LSZ	**Lusaka**	**129.39**	**233**	PKPdf	**PKPdf**	**04 06 10.8**	**+0.3**
KARO	**Karliova-Bingo**	**129.48**	**307**	*e*P	**PKiKP**	**04 06 11.1**	**+0.2**
SOC	**Sochi**	**129.51**	**313**	*i* PKIKP	**PKPdf**	**04 06 08.8**	**-0.9**
SOC				*e*		04 07 07.5	
SOC				*e*		04 08 19.5	
SOC				*e*		04 12 57.1	
SOC				*e*PS	PS	04 18 06.8	-29
SOC				*e*SS	SS	04 25 21.9	-5.0
SOC				*e*SSS	SSS	04 30 20.5	
SOC				pmax	pmax		
	comp=Z,105nm,1.1s						
SVAN	**Silvan-Diyarba**	**129.57**	**306**	*e*P	**PKPdf**	**04 06 10.3**	**+0.2**
KOPT	**Kop Dagi**	**129.76**	**308**	PKPdf	**PKiKP**	**04 06 12.6**	**+1.0**
NRS	**Narsarsuaq**	**129.77**	**21**	*i* PKIKP	**PKPdf**	**04 06 08.8**	**-0.8**
NRS				MLR	MLR		
	comp=Z,7µm,21.0s						
NRS	**Narsarsuaq**	**129.77**	**21**	*i* P	**PKPdf**	**04 06 08.8**	**-0.8**
NRS				*i*		04 06 26.0	
	comp=Z,7µm,21.0s						
NRS	**Narsarsuaq**	**129.77**	**21**	*i* P	**PKPdf**	**04 06 08.8**	**-0.8**
NRS				*i*		04 06 26.0	
NRS				IAMs_20	IAMs_20	04 57 27.9	
	comp=Z,7µm,20.7s						
BBSR	**BB Station**	**129.77**	**62**		**PKPdf**	**04 06 10.4**	**-0.2**
IPMB	**Ipameri, GO**	**129.78**	**132**	*e*P	**PKiKP**	**04 06 14.1**	**+2.1**
BNGB	**Bingl**	**129.82**	**307**	*e*P	**PKPdf**	**04 06 10.9**	**+0.2**
YEDI	**Yedisu-Bingol**	**129.84**	**307**	*e*P	**PKPdf**	**04 06 10.9**	**+0.2**
NSS	**Namsos**	**129.98**	**347**	*e*PKPdf	**PKPdf**	**04 06 05.2**	**-4.8**
NSS				IVmB_BB		04 06 12.0	
	comp=Z,3µm,2.8s						
NSS				*e*SP	SP	04 18 09.9	-1.5
NSS				*e*SS	**SS**	**04 25 30.8**	**+0.1**
VSU	**Vasula**	**130.04**	**335**	*e*P	**PKPdf**	**04 06 08.9**	**-1.3**
KTUT	**Trabzon**	**130.10**	**310**	⇓P	**PKiKP**	**04 06 12.5**	**+0.7**
KTUT	**Trabzon**	**130.10**	**310**	⇓P	**SKPab**	**04 09 15.2**	**+2.5**
KTUT	**Trabzon**	**130.10**	**310**	*e*P	**PKPdf**	**04 06 10.9**	**-0.1**
NPGB	**Novo Progresso**	**130.42**	**115**	*e*P	**PKiKP**	**04 06 15.6**	**+2.3**
DYBB	**Diyarbakir**	**130.43**	**306**	*e*P	**PKPdf**	**04 06 11.9**	**+0.1**
FURI	**Furi**	**130.60**	**267**	PKPdf	**PKiKP**	**04 06 14.2**	**+0.2**
ANN	**Anapa**	**130.74**	**315**	*i* PKIKP	**PKPdf**	**04 06 11.6**	**-0.4**
ANN				*i*		04 07 08.1	
ANN				*i*		04 08 29.5	
ANN				*e*		04 12 58.9	
ANN				*e*SS	SS	04 25 39.2	-2.5
ANN				pmax	pmax		
	comp=Z,217nm,1.2s						
SEUS	**St. Eustatius**	**130.91**	**81**	*e*P	**PKPdf**	**04 06 12.3**	**-0.9**
SEUS	**St. Eustatius**	**130.91**	**81**		**PKPdf**	**04 06 12.3**	**-0.9**
MTSE	**Matsula**	**131.02**	**336**	*e*P	**PKiKP**	**04 06 12.8**	**-0.3**
SKI	**Saint Kitts**	**131.12**	**82**	*e*P	**PKPdf**	**04 06 12.5**	**-1.1**
SKI	**Saint Kitts**	**131.12**	**82**	PKIKP	**PKPdf**	**04 06 12.5**	**-1.1**
SKI	**Saint Kitts**	**131.12**	**82**		**PKPdf**	**04 06 12.5**	**-1.1**
TRN	**Trinidad (W)**	**131.18**	**91**	*e*P	**PKPdf**	**04 06 12.1**	**-1.7**
TRN	**Trinidad (W)**	**131.18**	**91**	*e*	**PP**	**04 08 31.9**	**-2.4**
GRGR	**Grenville**	**131.27**	**89**	*e*P	**PKPdf**	**04 06 08.5**	**-5.4**
GRGR	**Grenville**	**131.27**	**89**	*e*	**PP**	**04 08 30.0**	**-4.9**
GRGR	**Grenville**	**131.27**	**89**		**PKPdf**	**04 06 08.5**	**-5.4**
ILIC	**ilic-Erzincan**	**131.34**	**308**	*e*P	**PKPdf**	**04 06 13.9**	**+0.4**
AAL	**Aland**	**131.34**	**340**	*e*P	**PKPdf**	**04 06 12.6**	**-0.1**
BDFB	**Brasilia**	**131.45**	**130**	PKhKP	PKPpre	04 06 02.0	
	comp=Z,5.3nm,0.6s,baz=1.0,slow=1.7,SNR=7.7						
BDFB				PKP	**PKiKP**	**04 06 16.3**	**+0.9**
	comp=Z,70nm,1.0s,baz=227,slow=1.7,SNR=21						
BDFB				PP	**PP**	**04 08 35.6**	**+0.4**
	comp=Z,15nm,1.1s,baz=239,slow=7.9,SNR=1.7						
BDFB				SKPbc	**SKPab**	**04 09 20.2**	**+1.0**
	comp=Z,43nm,0.9s,baz=316,slow=2.0,SNR=8.5						
BDFB	**Brasilia**	**131.45**	**130**	PKPdf	**PKPdf**	**04 06 14.5**	**+0.1**
TBLU	**Trondheim**	**131.47**	**347**	*e*PKPdf	**PKPdf**	**04 06 10.2**	**-2.6**
TBLU				IVmB_BB		04 06 15.2	
	comp=Z,3µm,4.7s						
TBLU				*e*SKPdf	**SKPab**	**04 09 22.1**	**+4.4**
TBLU				*e*SP	**SP**	**04 18 16.3**	**-7.9**
TBLU				*e*SS	**SS**	**04 25 48.4**	**-0.5**
GCMP	**Grenada, Carri**	**131.56**	**88**	*e*P	**PKPdf**	**04 06 08.1**	**-6.3**
GCMP	**Grenada, Carri**	**131.56**	**88**	*e*	**PP**	**04 08 35.6**	**-1.1**
MLYT	**Lee's Yard**	**131.56**	**83**	*e*P	**PKPdf**	**04 06 12.7**	**-1.7**
MALT	**Malatya**	**131.68**	**306**	*e*P	**PKPdf**	**04 06 14.4**	**+0.2**
SVB	**Belmont**	**131.88**	**87**	*e*P	**PKPdf**	**04 06 13.0**	**-2.1**
SVB	**Belmont**	**131.88**	**87**		**PKPdf**	**04 06 13.0**	**-2.1**
MNK	**Minsk**	**131.95**	**330**	*i* PKP	**PKiKP**	**04 06 14.7**	**-0.3**
	comp=E,14nm,1.4s						
MNK				*i* PKP	**PKiKP**	**04 06 14.7**	**-0.3**
	comp=N,75nm,1.2s						
MNK				*i* PKP	**PKiKP**	**04 06 14.7**	**-0.3**
	comp=Z,240nm,1.0s						
MNK				*i* pPKP	**pPKPdf**	**04 07 11.3**	**-0.3**
MNK				*i* sPKP		04 07 33.9	
MNK				*i* PP	**PP**	**04 08 38.3**	**+0.6**
MNK				*i* SKP		04 09 28.5	
MNK				*i* PKS		04 09 51.2	
MNK				*i* PPP	PPP	04 11 29.8	
MNK				*i* SKS	**SKSdf**	**04 13 04.8**	**+0.9**
MNK				*i* SP	**SP**	**04 18 29.3**	**+0.2**
MNK				*i* PS	PS	04 18 54.7	-1.4
MNK				*i* SPP	SPP	04 19 47.7	
MNK				*i* PPS	PPS	04 20 07.2	
MNK				*i* SS	**SS**	**04 25 56.0**	**+0.6**
MNK				*i* SSS	SSS	04 30 51.4	
MNK				*i* LRM	MLR	05 04 09.6	
	comp=E,304nm,20.3s						
MNK				*i* LRM	MLR	05 04 09.6	
	comp=N,1µm,15.9s						
MNK				*i* LRM	MLR	05 04 09.6	
	comp=Z,2µm,19.5s						
MNK	**Minsk**	**131.95**	**330**⇑	*e*PKIKP	**PKPdf**	**04 06 14.0**	**0.0**
MNK				*e*		04 07 12.0	
MNK				*e*		04 08 34.0	
MNK				*e*PPP	PPP	04 11 38.0	
MNK				*e*		04 13 08.0	
MNK				*e*PS	**SP**	**04 18 21.0**	**-8.1**
MNK				pmax	pmax		
	comp=Z,900nm,1.0s						
TBG	**Guadaloupe-3**	**131.95**	**84**	*e*P	**PKiKP**	**04 06 16.3**	**+0.1**
TDBA	**Terre de Bas,**	**131.96**	**84**	*e*P	**PKPdf**	**04 06 13.5**	**-1.6**
ANBD	**Bethesda, Anti**	**132.01**	**82**	*e*P	**PKPdf**	**04 06 13.5**	**-1.7**
RSDY	**Resadiye-TOKAT**	**132.04**	**309**	*e*P	**PKPdf**	**04 06 14.7**	**0.0**
DSLB	**Salisbury**	**132.10**	**84**	*e*P	**PKPdf**	**04 06 15.7**	**+0.3**
MDN	**Morne-Daniel**	**132.11**	**85**	*e*P	**PKPdf**	**04 06 13.8**	**-1.7**
ISAL	**Salakas**	**132.12**	**332**	*e*P	**PKPdf**	**04 06 14.4**	**+0.1**
LODK	**Lodwar**	**132.13**	**259**	P	**PKPdf**	**04 06 14.2**	**-1.5**
	SNR=12						
TOSP	**Speyside**	**132.16**	**90**	*e*P	**PKPdf**	**04 06 13.4**	**-2.1**
TOSP	**Speyside**	**132.16**	**90**	*e*	**PP**	**04 08 40.1**	**-0.5**
TOSP	**Speyside**	**132.16**	**90**	PKPdf	**PKPdf**	**04 06 15.4**	**-0.1**
SLB	**Belfond**	**132.19**	**87**	*e*P	**PKPdf**	**04 06 14.7**	**-1.0**
ABD	**La Joyeuse, An**	**132.19**	**83**	*e*P	**PKPdf**	**04 06 15.6**	**0.0**
IIGN	**Ignalina**	**132.21**	**332**	*e*P	**PKiKP**	**04 06 16.1**	**+0.5**
NACGM	**Naroch**	**132.22**	**331**	*i* PKP	**PKPdf**	**04 06 15.1**	**+0.5**
NACGM				*i* PKP	**PKiKP**	**04 06 15.7**	**0.0**
NACGM				*i* PKP	**PKiKP**	**04 06 15.7**	**0.0**
NACGM				*i* pPKP	**pPKPdf**	**04 07 07.0**	**-5.1**
NACGM				*i* sPKP		04 07 27.5	
NACGM				*i* PPP	PPP	04 12 36.6	
NACGM				*i* SKS		04 15 20.6	
NACGM				*i* SKKS	SKKPbc	04 18 10.6	-37
NACGM				*i* PS	PS	04 20 13.8	+75
NACGM				*i* PS	PS	04 20 13.8	+75
NACGM				*i* SS	SS	04 25 39.4	-19
NACGM				*i* SSS	SSS	04 31 10.7	
FDF	**Fort de France**	**132.24**	**85**	*e*P	**PKPdf**	**04 06 12.9**	**-2.9**
FDF	**Fort de France**	**132.24**	**85**	PKIKP	**PKPdf**	**04 06 12.9**	**-2.9**
FDF	**Fort de France**	**132.24**	**85**		**PKPdf**	**04 06 12.9**	**-2.9**
DLPL	**La Plaine**	**132.25**	**85**	*e*P	**PKiKP**	**04 06 16.4**	**-0.5**
MCLT	**Moule a Chique**	**132.26**	**87**	*e*P	**PKPdf**	**04 06 13.3**	**-2.5**
BIM	**Bigot**	**132.28**	**86**	*e*P	**PKPdf**	**04 06 12.9**	**-2.9**
SLBI	**Saint Lucia, B**	**132.28**	**86**	*e*P	**PKPdf**	**04 06 12.6**	**-3.2**
MAGL	**Barre de l'ile**	**132.31**	**84**	*e*P	**PKPdf**	**04 06 14.0**	**-1.8**
UPP	**Uppsala**	**132.35**	**341**	*e*P	**PKPdf**	**04 06 13.1**	**-1.5**
SLIT	**Slitere, Latvi**	**132.36**	**336**	*e*P	**PKPdf**	**04 06 12.0**	**-2.7**
MPOM	**Morne Pois Mar**	**132.47**	**86**	*e*P	**PKPdf**	**04 06 14.4**	**-1.7**
ILAM	**Ilet Lapin Mar**	**132.51**	**85**	*e*P	**PKPdf**	**04 06 12.2**	**-4.0**
MOL	**Molde**	**132.64**	**348**	*e*PKPdf	**PKPdf**	**04 06 14.4**	**-0.6**
MOL				IVmB_BB		04 06 18.2	
	comp=Z,3µm,4.1s						
MOL				*e*pPKPdf	**pPKPdf**	**04 07 10.7**	**-1.8**
MOL				*e*SKPdf	**SKPab**	**04 09 24.8**	**+2.1**
MOL				*e*SP	SKKPbc	04 18 34.6	-12
TOKA	**Tokat**	**132.69**	**309**	PKPdf	**PKPdf**	**04 06 15.5**	**-0.5**
DOMB	**Dombas**	**132.80**	**347**	*e*PKPdf	**PKPdf**	**04 06 14.2**	**-1.3**
DOMB				IVmB_BB		04 06 17.9	
	comp=Z,3µm,2.9s						
DOMB				*e*pPKPdf	**pPKPdf**	**04 07 11.9**	**-1.0**
DOMB				*e*SKPdf	**SKPdf**	**04 09 28.6**	**-0.7**
DOMB				*e*SP	SKKPbc	04 18 35.2	-11
DOMB				*e*SS	**SS**	**04 26 10.3**	**+5.2**
KVT	**Kavak**	**132.81**	**311**	*e*P	**PKPdf**	**04 06 16.4**	**+0.3**
GAZ	**Gaziantep**	**132.86**	**305**	*e*P	**PKPdf**	**04 06 16.5**	**+0.1**
SIM	**Simferopol'**	**132.91**	**316***c*	*i*PKIKP	**PKiKP**	**04 06 17.2**	**-0.2**
SIM				*i*		04 07 15.0	
SIM				pmax	pmax		
	comp=Z,267nm,1.1s						
KMRS	**Kahramanmaras**	**133.03**	**306**	*e*P	**PKPdf**	**04 06 15.9**	**-0.8**
AKN	**Aaknes**	**133.10**	**348**	*e*PKPdf	**PKPdf**	**04 06 16.0**	**0.0**
AKN				IVmB_BB		04 06 18.8	
	comp=Z,4µm,2.7s						
AKN				*e*SKPdf	**SKiKP**	**04 09 28.5**	**-3.3**
AKN				*e*SS	**SS**	**04 26 14.8**	**+6.2**
PABE	**Paberze**	**133.11**	**333**	*e*P	**PKPdf**	**04 06 15.0**	**-1.1**
SNOP	**Sinop**	**133.14**	**312**	*e*P	**PKPdf**	**04 06 16.8**	**+0.1**
NB2	**NORSAR Subarra**	**133.19**	**345**	PKPdf	**PKPdf**	**04 06 08.8**	**-7.4**
	comp=Z,2µm,3.3s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**133.19**	**345**	PKPdf	**PKPdf**	**04 06 08.8**	**-7.4**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**133.19**	**345**	PKP	**PKPdf**	**04 06 16.7**	**+0.4**
	comp=Z,16nm,0.6s,baz=64,slow=1.9,SNR=19						
NOA				PP	**PP**	**04 08 44.1**	**-1.1**
	comp=Z,7.9nm,1.1s,baz=28,slow=6.0,SNR=3.4						
NOA				SKPbc	**SKPbc**	**04 09 23.6**	**+0.6**
	comp=Z,186nm,1.0s,baz=32,slow=2.6,SNR=25						
SARI	**SarD1z-Kayseri**	**133.21**	**307**	*e*P	**PKPdf**	**04 06 16.3**	**-0.9**
DIKM	**Dikmen**	**133.21**	**312**	⇓P	**PKPdf**	**04 06 16.6**	**-0.2**
DIKM	**Dikmen**	**133.21**	**312**	⇑P	**SKPab**	**04 09 26.3**	**+0.3**
DIKM	**Dikmen**	**133.21**	**312**	*e*P	**PKPdf**	**04 06 16.9**	**+0.1**
AKASG	**Malin Array Be**	**133.35**	**325**	PKhKP	PKPpre	04 06 04.0	
	comp=Z,3.9nm,0.5s,baz=52,slow=3.7,SNR=19						
AKASG				PKP	**PKPdf**	**04 06 16.9**	**+0.1**
	comp=Z,87nm,0.8s,baz=46,slow=2.9,SNR=28						
AKASG				PP	**PP**	**04 08 45.8**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=48,slow=5.8,SNR=5.0						
AKASG				SKPbc	**SKPab**	**04 09 25.7**	**-0.5**
	comp=Z,414nm,1.1s,baz=50,slow=4.3,SNR=30						
AKBB	**Malin Array Si**	**133.35**	**325**	PKIKP	**PKPdf**	**04 06 16.0**	**-0.8**
AKBB	**Malin Array Si**	**133.35**	**325**	PKPdf	**PKPdf**	**04 06 16.0**	**-0.8**
NC602	**NORSAR Array S**	**133.37**	**345**	*e*PKPdf	**PKPdf**	**04 06 15.8**	**-0.7**
NC602				IVmB_BB		04 06 20.3	
	comp=Z,3µm,4.7s						
NC602				*e*SKPdf	**SKiKP**	**04 09 29.9**	**-2.6**
NC602				*e*SS	**SS**	**04 26 07.2**	**-4.7**
NAO01	**NORSAR Array S**	**133.44**	**345**	PKPdf	**PKPdf**	**04 06 16.9**	**+0.2**
BBGH	**Gun Hill**	**133.47**	**88**	*e*P	**PKiKP**	**04 06 21.4**	**+2.1**
BNN	**Bunyan**	**133.53**	**308**	*e*P	**PKPdf**	**04 06 16.1**	**-1.6**
PBUR	**Paburge**	**133.62**	**335**	*e*P	**PKPdf**	**04 06 16.3**	**-0.8**
MALB	**Monte Alegre**	**133.78**	**110**	*e*P	**PKiKP**	**04 06 21.2**	**+1.2**
KOZT	**Kozan**	**133.87**	**306**	*e*P	**PKPdf**	**04 06 17.7**	**-0.5**
BZK	**Bozkurt**	**134.01**	**312**	⇓P	**PKPdf**	**04 06 18.8**	**+0.5**
BZK	**Bozkurt**	**134.01**	**312**	⇑P	**SKPab**	**04 09 28.4**	**-1.0**
TSUM	**Tsumeb**	**134.03**	**220**	PKhKP	PKPpre	04 06 08.7	
	comp=Z,8.3nm,0.8s,baz=120,slow=4.0,SNR=12						
TSUM				PKP	**PKiKP**	**04 06 20.3**	**-0.3**
	comp=Z,17nm,0.7s,baz=173,slow=1.7,SNR=11						
TSUM				SKPbc	**SKPab**	**04 09 30.0**	**-0.4**
	comp=Z,28nm,1.2s,baz=75,slow=3.0,SNR=6.8						
TSUM				PKKP	**PKKPdf**	**04 16 06.5**	**+0.5**
	comp=Z,8.0nm,1.1s,baz=305,slow=9.7,SNR=4.2						
TSUM	**Tsumeb**	**134.03**	**220**		PKPpre	04 06 08.4	
TSUM					**PKPdf**	**04 06 19.4**	**+0.1**
CEYT	**Ceyhan**	**134.03**	**305**	*e*P	**PKPdf**	**04 06 18.7**	**+0.2**
CORM	**Corum**	**134.09**	**310**	*e*P	**PKPdf**	**04 06 17.7**	**-1.0**
SKAR	**Skarslia**	**134.18**	**347**	*e*PKPdf	**PKPdf**	**04 06 17.9**	**-0.2**
SKAR				IVmB_BB		04 06 22.9	
	comp=Z,3µm,3.5s						
SKAR				*e*PKSdf	PKSdf	04 09 52.4	-1.9
SKAR				*e*SP	SP	04 18 41.5	-6.0
SKAR				*e*SS	**SS**	**04 26 21.0**	**-0.7**
HYA	**Hoyanger**	**134.19**	**348**	*e*PKPdf	**PKPdf**	**04 06 17.9**	**0.0**
HYA				*e*SKPdf	**SKPab**	**04 09 31.2**	**+1.7**
OSL	**Oslo**	**134.26**	**345**	*e*PKPdf	**PKPdf**	**04 06 18.3**	**+0.1**
OSL				IVmB_BB		04 06 20.7	
	comp=Z,3µm,3.6s						
OSL				*e*PP	**PP**	**04 08 54.3**	**+2.4**
OSL				*e*SKPdf	**SKPab**	**04 09 31.5**	**+1.6**
OSL				*e*SS	**SS**	**04 26 19.9**	**-2.7**
HWQ	**Hawqa**	**134.40**	**301**	*e*P	**PKiKP**	**04 06 20.7**	**-0.2**
SUW	**Suwalki**	**134.43**	**332**	*e*PKP	PKPpre	04 06 05.8	
SUW				*e*pPKPdf	pPKPdf	04 07 15.3	-0.8
SUW				*e*SKPdf	**SKPbc**	**04 09 28.4**	**+1.1**
SUW				*e*SKKSac	**SKKSac**	**04 15 25.6**	**-0.5**
SUW				*e*SP	**SKKPbc**	**04 18 47.0**	**+7.1**

SUW				eSS	SS	04 26 24.8	-0.4
SUW	Suwalki	134.43	332	eP	PKPpre	04 06 08.4	
KARA	Karaisali	134.52	306	eP	PKPdf	04 06 19.2	-0.2
SUE	Sulen	134.56	349	ePKPdf	PKPdf	04 06 16.1	-2.6
SUE				eSKPdf	SKiKP	04 09 34.7	-0.1
SUE				eSP	SP	04 18 48.5	-2.0
SUE				eSS	SS	04 26 31.7	+5.8
BHL	Bhannes	134.71	301	eP	PKPdf	04 06 20.3	+0.3
KONO	Kongsberg	134.80	345	PKIKP	PKPdf	04 06 18.8	-0.4
KONO	Kongsberg	134.80	345		PKPdf	04 06 18.8	-0.4
KONO	Kongsberg	134.80	345	ePKPdf	PKPdf	04 06 12.9	-6.3
KONO				eSKPdf	SKPab	04 09 32.9	+0.7
KONO				eSS	SS	04 26 28.5	-0.5
MBAR	Mbarara	134.89	251	PKIKP	PKPdf	04 06 20.2	-0.8
MBAR	Mbarara	134.89	251	PKPdf	PKPdf	04 06 20.2	-0.8
BRTR	Keskin Array B	134.95	309	PKhKP	PKPpre	04 06 06.8	
	comp=Z,2.5nm,0.6s,baz=136,slow=3.5,SNR=19						
BRTR				PKP	PKiKP	04 06 21.7	-0.2
	comp=Z,105nm,1.0s,baz=139,slow=3.4,SNR=37						
BRTR				PP	PP	04 08 58.4	+0.7
	comp=Z,69nm,1.2s,baz=104,slow=5.2,SNR=11						
BRTR				SKPbc	SKPab	04 09 31.8	-2.0
	comp=Z,42nm,0.9s,baz=147,slow=4.1,SNR=10						
BRTR				SKKPbc	SKKPbc	04 18 37.8	+0.4
	comp=Z,4.9nm,1.0s,baz=258,slow=4.3,SNR=1.6						
ASK	Askoy	135.01	348	ePKPdf	PKPdf	04 06 15.1	-4.4
ASK				IVmB_BB		04 06 24.2	
	comp=Z,8µm,3.7s						
ASK				eSKPdf	SKPab	04 09 32.7	-0.4
ASK				eSP	SKKPbc	04 18 52.7	+15
BER	Bergen	135.07	348	ePKPdf	PKPdf	04 06 17.5	-2.2
BER				eSKPdf	SKPab	04 09 34.3	+1.0
BER				eSP	SKKPbc	04 18 48.3	+10
SORM	Soroca	135.14	323	⇑P	PKPpre	04 06 07.5	
SORM	Soroca	135.14	323	⇓P	SKiKP	04 09 31.5	-4.9
SORM	Soroca	135.14	323	⇑PKHKP	PKPpre	04 06 07.5	
ODD1	Odda	135.24	347	ePKPdf	PKPdf	04 06 20.0	-0.2
ODD1				eSKPdf	SKPab	04 09 34.2	-0.1
ODD1				eSS	SS	04 26 28.8	-5.5
KIS	Kishinev	135.42	321	i PKP	PKPdf	04 06 20.0	-0.8
	comp=Z,1µm,3.6s						
KIS				i pPKP	pPKPdf	04 07 08.0	-10
KIS				esPKP		04 07 18.0	
KIS	Kishinev	135.42	321	eSKS	SKSdf	04 13 08.0	-2.3
KIS				⇑iPP	SKPbc	04 09 32.0	+1.3
	comp=Z,4µm,12.7s						
KIS				i SKKS	SKKSac	04 15 33.0	+0.5
KIS				LRM	MLR	05 04 54.0	
	comp=Z,2µm,21.0s						
KIS	Kishinev	135.42	321	i PKIKP	PKPdf	04 06 20.0	-0.8
KIS				e		04 07 18.0	
KIS				e		04 13 08.0	
KIS				pmax	pmax		
	comp=Z,1µm,3.6s						
AFSR	Afar-Bala (An	135.45	309	eP	PKPdf	04 06 19.9	-1.3
MILM	Milestii Mici	135.46	321	⇑P	PKPpre	04 06 11.0	
MILM	Milestii Mici	135.46	321	⇑P	SKiKP	04 09 32.0	-5.1
ANTO	Ankara	135.53	310	⇓P	SKPdf	04 09 34.1	-1.0
LOD	Lodumlu	135.55	310	eP	PKPdf	04 06 19.3	-2.1
PRPB	Parauapebas	135.60	118	eP	PKPdf	04 06 22.4	+0.2
BLS5	Blasjo	135.72	347	ePKPdf	PKPdf	04 06 20.1	-0.9
BLS5				IVmB_BB		04 06 26.1	
	comp=Z,5µm,3.7s						
BLS5				ePKSdf	PP	04 09 57.7	+57
BLS5				eSP	SP	04 18 57.8	-2.8
BLS5				eSS	SS	04 26 35.5	-4.5
KEBE	Keben-Mersin	135.75	305	eP	PKPdf	04 06 21.2	-0.6
SDBA	SAO DESIDERIO	135.84	129	eP	PKiKP	04 06 23.6	-0.7
TEVE	Tevekalti-Mers	135.97	305	eP	PKPdf	04 06 21.7	-0.5
IAS	Iasi	136.07	322	⇑P	PKiKP	04 06 23.8	+0.1
IAS	Iasi	136.07	322	⇓P	SKiKP	04 09 37.2	-1.2
IAS	Iasi	136.07	322	⇑PKIKP	PKiKP	04 06 23.8	+0.1
KMY	Karmoy	136.17	348	ePKPdf	PKPdf	04 06 22.1	+0.4
KMY				eSKPdf	SKPdf	04 09 35.7	+0.3
KMY				eSS	SS	04 26 42.0	-3.2
VASR	Vaslui	136.21	321	⇑P	PKPdf	04 06 16.2	-6.0
VASR	Vaslui	136.21	321	⇓P	SKiKP	04 09 35.5	-3.2
TLCR		136.25	319	⇓P	PKPdf	04 06 18.2	-4.2
TLCR		136.25	319	⇓P	SKiKP	04 09 35.5	-3.3
TLCR		136.25	319	⇓PKIKP	PKPdf	04 06 18.2	-4.2
HOMB	Homborsund	136.28	345	ePKPdf	PKPdf	04 06 21.8	-0.2
HOMB				epPKPdf	pPKPdf	04 07 17.9	-1.6
HOMB				ePP	PP	04 09 04.4	-0.2
HOMB				eSP	SP	04 19 02.4	-2.8
HOMB	Homborsund	136.28	345	i P	PKPpre	04 06 12.0	
HOMB				i		04 09 34.9	
JURR	Jurilovca	136.40	318	⇑P	PKPdf	04 06 15.5	-7.1
JURR	Jurilovca	136.40	318	⇓P	SKiKP	04 09 35.9	-3.2
MCPB	Macapa, AP	136.41	109	eP	PKiKP	04 06 25.1	-0.4
MDUB	Mudurnu	136.50	311	eP	PKPdf	04 06 21.5	-1.6
VARL	Varlezi	136.53	320	⇑P	PKiKP	04 06 24.6	0.0
SNART	Snartemo	136.53	346	ePKPdf	PKPdf	04 06 17.2	-5.3
SNART				ePP	PP	04 09 06.3	+0.1
SNART	Snartemo	136.53	346	i P	PKPpre	04 06 12.0	
SNART				i P	PKPpre	04 06 12.0	
SNART				i		04 09 35.5	
LVV	L'vov	136.61	327	ePKHKP	PKPpre	04 06 13.1	
LVV				e		04 26 48.3	
TPGR	Topolog	136.65	318	⇑P	PKPdf	04 06 19.9	-3.3
TPGR	Topolog	136.65	318	⇑P	SKiKP	04 09 36.4	-3.3
CFR	Carcaliu	136.69	319	⇓P	PKPdf	04 06 16.4	-6.7
CFR	Carcaliu	136.69	319	⇓P	SKiKP	04 09 36.5	-3.2
CFR	Carcaliu	136.69	319	⇓PKIKP	PKPdf	04 06 16.4	-6.7
LEF	Lefka	136.71	303	⇑P	PKPdf	04 06 19.3	-4.3
LEF	Lefka	136.71	303	⇓P	SKPdf	04 09 37.0	-0.2
GHRR		136.72	320	⇑P	SKiKP	04 09 37.4	-2.4
SCHL	Schela	136.73	319	⇓P	PKPdf	04 06 23.5	+0.3
PRAR	RASCA	136.77	323	⇓P	PKPdf	04 06 17.5	-5.8
TIRR	Tirgusor	136.83	318	⇓P	PKPdf	04 06 19.1	-4.4
TIRR	Tirgusor	136.83	318	⇓P	PKPdf	04 06 19.1	-4.4
TIRR	Tirgusor	136.83	318	⇓P	SKiKP	04 09 37.3	-2.7
TIRR	Tirgusor	136.83	318	PKIKP	PKPdf	04 06 22.5	-1.0
TIRR	Tirgusor	136.83	318	PKPdf	PKPdf	04 06 22.5	-1.0
EFOR	EFORIE	136.86	317	⇑P	PKPdf	04 06 20.4	-3.1
EFOR	EFORIE	136.86	317	⇓P	SKiKP	04 09 39.9	-0.2
BEL	Belsk	136.95	331	ePKP	PKPdf	04 06 15.7	-7.8
BEL				epPKPdf	pPKPdf	04 07 23.1	+2.0
BEL				eSKPdf	SKPbc	04 09 37.1	+1.9
BEL				eSKKSac	SKKSac	04 15 42.1	+0.8
BEL				eSP	SKKPbc	04 18 40.5	+10
MFTR	Murfatlar	136.95	317	⇑P	PKPdf	04 06 19.0	-4.7
MFTR	Murfatlar	136.95	317	⇑P	SKiKP	04 09 38.0	-2.3
TESR	Tescani	136.96	321	⇓P	PKPpre	04 06 14.9	
TESR	Tescani	136.96	321	⇑P	SKiKP	04 09 36.7	-3.6
BSD	Bornholm Skovb	136.98	338	eP	PKPpre	04 06 14.8	
BSD	Bornholm Skovb	136.98	338	i PKHKP	PKPpre	04 06 14.9	
BSD				MLR	MLR		
	comp=Z,6µm,21.0s						
BSD	Bornholm Skovb	136.98	338	i P	PKPpre	04 06 14.9	
BSD				i		04 07 23.5	
BSD				i		04 09 36.6	
	comp=Z,6µm,21.0s						
BSD	Bornholm Skovb	136.98	338	i P	PKPpre	04 06 14.9	
BSD				i		04 07 23.5	
BSD				i		04 09 36.7	
BSD				IAMs_20	IAMs_20	05 10 15.1	
	comp=Z,6µm,21.3s						
PETR	Petresti	136.99	320	⇑P	SKiKP	04 09 38.9	-1.4
MANR	Mangalia	137.00	317	⇓P	PKPdf	04 06 20.4	-3.4
MANR	Mangalia	137.00	317	⇑P	SKiKP	04 09 37.6	-2.8
SAUV	Serdivan-Sakar	137.03	312	eP	PKPdf	04 06 18.7	-5.3
TLBR	Topalu	137.03	318	⇑P	PKPdf	04 06 20.3	-3.6
TLBR	Topalu	137.03	318	⇓P	SKiKP	04 09 37.8	-2.6
HARR	Harsova	137.04	318	⇑P	PKPdf	04 06 18.7	-5.2
HARR	Harsova	137.04	318	⇑P	SKiKP	04 09 37.8	-2.7
HARR	Harsova	137.04	318	⇑PKIKP	PKPdf	04 06 18.7	-5.2
SRCK	Saricakaya, Es	137.05	311	eP	PKPdf	04 06 23.2	-0.9
BIZ	Bicaz	137.06	322	⇑P	PKPpre	04 06 15.5	
BIZ	Bicaz	137.06	322	⇓P	SKiKP	04 09 38.4	-2.1
ODBI	Odobesti	137.08	320	⇓P	SKiKP	04 09 38.8	-1.7
GOET	G??ttrup	137.18	344	i P	PKPdf	04 06 19.5	-4.2
GOET				i		04 07 23.0	
GOET				i		04 09 37.2	
GOET	G??ttrup	137.18	344	eP	PKPdf	04 06 19.5	-4.2
GOET				i		04 07 23.1	
GOET				i		04 09 37.3	
BURAR	Bucovina Array	137.21	324	⇓P	PKPpre	04 06 15.6	
BURAR	Bucovina Array	137.21	324	⇓P	SKiKP	04 09 39.6	-1.3
BURAR	Bucovina Array	137.21	324	⇓PKHKP	PKPpre	04 06 15.6	
VRI	Vrincioaia	137.23	321	⇑P	PKPdf	04 06 17.6	-6.6
VRI	Vrincioaia	137.23	321	⇑P	SKiKP	04 09 38.8	-2.0
VRI	Vrincioaia	137.23	321	⇑PKIKP	PKPdf	04 06 17.6	-6.6
PLOR	Plostina	137.28	321	⇑P	PKPpre	04 06 14.9	
PLOR	Plostina	137.28	321	⇑PKHKP	PKPpre	04 06 14.9	
ICOR	Ion Corvin	137.38	318	⇑P	PKPdf	04 06 19.9	-4.5
ICOR	Ion Corvin	137.38	318	⇓P	SKiKP	04 09 41.6	+0.4
BISRR	Bisoca	137.40	320	⇑P	PKPdf	04 06 20.2	-4.4
BISRR	Bisoca	137.40	320	⇑P	SKiKP	04 09 39.6	-1.7
KWP	Kalwaria Pacla	137.41	327	eSS	SS	04 27 01.8	+0.8
KWP	Kalwaria Pacla	137.41	327	ePKP	PKPdf	04 06 16.7	-7.7
KWP	Kalwaria Pacla	137.41	327	epPKPdf	pPKPdf	04 07 21.3	-0.8
KWP	Kalwaria Pacla	137.41	327	eSKPdf	SKPdf	04 09 38.4	+0.3
KWP	Kalwaria Pacla	137.41	327	eSKKSac	SKKSac	04 15 44.5	+0.2
KWP	Kalwaria Pacla	137.41	327	eSP	SP	04 18 42.6	-33
KWP	Kalwaria Pacla	137.41	327	eSKKSdf	SKKSdf	04 22 38.9	-13
AMRR	Amara	137.45	319	⇑P	PKiKP	04 06 27.7	+1.1
AMRR	Amara	137.45	319	⇓P	SKiKP	04 09 39.7	-1.6
AMRR	Amara	137.45	319	⇑PKIKP	PKiKP	04 06 27.7	+1.1
HRT	Hereke	137.46	312	eP	PKPdf	04 06 24.4	-0.4
GKP	Gorka Klasztor	137.49	335	eSS	SS	04 27 01.7	+0.2
GKP	Gorka Klasztor	137.49	335	eP	PKPdf	04 06 18.2	-6.2
GKP	Gorka Klasztor	137.49	335	ePKP	PKPdf	04 06 17.3	-7.1
GKP	Gorka Klasztor	137.49	335	epPKPdf	pPKPdf	04 07 23.8	+2.0
GKP	Gorka Klasztor	137.49	335	ePP	PP	04 09 12.5	+0.1
GKP	Gorka Klasztor	137.49	335	eSKPdf	SKPbc	04 09 38.1	+1.4
GKP	Gorka Klasztor	137.49	335	eSKKSac	SKKSac	04 15 45.9	+1.5
GKP	Gorka Klasztor	137.49	335	eSP	SP	04 18 47.8	-28
PGOR	Pogoanele	137.53	319	⇓P	SKiKP	04 09 40.9	-0.6
OZUR		137.68	321	⇑P	PKPpre	04 06 13.8	
MUD	Monsted U'grnd	137.70	343	i P	PKPdf	04 06 17.8	-6.8
MUD				i		04 07 24.6	
MUD				i		04 09 38.4	
MUD	Monsted U'grnd	137.70	343	i P	PKPdf	04 06 17.8	-6.8
MUD				i		04 07 24.7	
MUD				i		04 09 38.5	
ISR	Istrita	137.71	320	⇑P	PKPdf	04 06 18.5	-6.7
ISR	Istrita	137.71	320	⇑P	SKiKP	04 09 40.6	-1.3
ISR	Istrita	137.71	320	⇑PKIKP	PKPdf	04 06 18.5	-6.7
NEHR	Nehoiu	137.71	320	⇓P	PKPdf	04 06 19.0	-6.1
NEHR	Nehoiu	137.71	320	⇑P	SKiKP	04 09 29.6	-12
LLD	Lille Linde	137.73	340	ePKIKP	PKPdf	04 06 19.6	-5.1
LLD	Lille Linde	137.73	340	i P	PKPdf	04 06 19.6	-5.1
LLD				i		04 09 38.1	
LLD				i		04 09 39.6	
LLD	Lille Linde	137.73	340	eP	PKPdf	04 06 19.7	-5.1
LLD				i		04 09 38.2	
LLD				i		04 09 39.7	
ISK	Istanbul-Kandi	137.80	313	P	PKPdf	04 06 24.3	-1.1
ISK	Istanbul-Kandi	137.80	313	eP	PKPdf	04 06 24.5	-0.9
KAVV	Kandilli-Istan	137.80	313	eP	PKPdf	04 06 24.1	-1.3
ISP	Isparta	137.84	308	PKIKP	PKPdf	04 06 26.0	+0.3
ISP	Isparta	137.84	308	PKPdf	PKPdf	04 06 26.0	+0.3
LEHL	Lehliu	137.84	319	⇑P	PKPdf	04 06 20.6	-4.7
LEHL	Lehliu	137.84	319	⇑P	SKiKP	04 09 39.9	-2.2
MLR	Muntele Rosu	137.89	320	⇓P	PKPdf	04 06 18.0	-7.6
MLR	Muntele Rosu	137.89	320	⇑P	SKiKP	04 09 28.1	-14
DOPR	Dopca	137.99	321	⇑P	PKPpre	04 06 16.6	
DOPR	Dopca	137.99	321	⇑P	SKiKP	04 09 40.6	-1.9
RGN	Rugen	137.99	339	ePKPbc	PKPpre	04 06 16.3	
	baz=37,slow=3.1						
ARCR	ARCALIA	137.99	323	⇓P	PKiKP	04 06 27.0	-0.7
ARCR	ARCALIA	137.99	323	⇑P	SKiKP	04 09 34.9	-7.5
KOLS	Kolonicke sedl	138.06	327	ePKP	PKPdf	04 06 17.9	-7.7
KOLS				e		04 07 26.0	
KOLS				eSKPDF		04 09 42.7	
KOLS				e		04 18 47.0	
KOLS				eSS	SS	04 27 20.6	+12
SULR		138.10	319	⇓P	PKPdf	04 06 20.7	-5.0
SULR		138.10	319	⇓P	SKiKP	04 09 32.1	-11
BMR	Baia Mare	138.15	325	⇑P	PKPdf	04 06 19.8	-6.0
BMR	Baia Mare	138.15	325	⇓P	SKiKP	04 09 40.9	-1.7
BMR	Baia Mare	138.15	325	⇑PKIKP	PKPdf	04 06 19.8	-6.0
UZH	Uzhgorod	138.24	326d	i PKHKP	PKPpre	04 06 18.6	
UZH				i		04 06 25.8	
UZH				e		04 13 16.7	
UZH				MLR	MLR		
	comp=N,750nm,18.0s						
UZH				MLR	MLR		
	comp=E,700nm,18.0s						
UZH				MLR	MLR		
	comp=Z,300nm,18.0s						
VOIR		138.46	321	⇓P	PKPdf	04 06 20.1	-6.4
VOIR		138.46	321	⇓P	SKiKP	04 09 42.1	-1.3
OJC	Ojcow	138.49	330	eSP	SP	04 18 59.5	-25
OJC	Ojcow	138.49	330	ePKP	PKPdf	04 06 18.8	-7.6
OJC	Ojcow	138.49	330	epPKPdf	pPKPdf	04 07 23.1	-0.9
OJC	Ojcow	138.49	330	eSKPdf	SKPdf	04 09 40.9	+1.0
CRVS	Cervenica-Dubn	138.51	327	ePKIKP	PKPdf	04 06 21.3	-5.2
CRVS				eSS	SS	04 27 08.8	-5.1
CRVS	Cervenica-Dubn	138.51	327	ePKP	PKPdf	04 06 21.3	-5.2
CRVS				e		04 07 26.5	
CRVS				eSKPDF		04 09 43.7	
CRVS				e		04 19 05.5	
CRVS				eSS	SS	04 27 08.8	-5.1
CJR	Cluj-Napoca	138.63	323	⇓P	PKPdf	04 06 24.6	-2.2
CJR	Cluj-Napoca	138.63	323	⇓P	SKiKP	04 09 42.4	-1.4
CJR	Cluj-Napoca	138.63	323	⇓PKIKP	PKPdf	04 06 24.6	-2.2
ARR	Arges	138.75	321	⇓P	PKPdf	04 06 20.2	-6.9
ARR	Arges	138.75	321	⇑P	SKiKP	04 09 43.8	-0.3
NIE	Niedzica	138.77	329	eSS	SS	04 27 18.3	+1.3
NIE	Niedzica	138.77	329	ePKP	PKPdf	04 06 19.6	-7.4
NIE	Niedzica	138.77	329	epPKPdf	pPKPdf	04 07 23.5	-1.1
NIE	Niedzica	138.77	329	eSKPdf	SKiKP	04 09 42.3	-1.6
NIE	Niedzica	138.77	329	eSKKSac	SKKSac	04 15 53.0	+0.6
NIE	Niedzica	138.77	329	eSP	SP	04 18 57.1	-30
HUMR	Humele	138.97	320	⇑P	PKPdf	04 06 21.7	-5.7
HUMR	Humele	138.97	320	⇑P	SKiKP	04 09 42.0	-2.5
KULA	Kula-Manisa	139.01	310	P	PKPdf	04 06 26.3	-1.5
TMAB	Tom-Au,PA,Br	139.01	115	eP	PKiKP	04 06 31.3	+0.6
COPA	Copaceanca	139.01	319	⇑P	PKPdf	04 06 22.9	-4.6
COPA	Copaceanca	139.01	319	⇑P	SKiKP	04 09 45.3	+0.8
KSL	Kastellorizon	139.05	306	P	PKiKP	04 06 29.6	-0.5
EDRB	Edirne	139.07	315	P	PKPdf	04 06 19.7	-8.0
DRGR		139.09	324	⇑P	PKPdf	04 06 20.9	-6.8
DRGR		139.09	324	⇓P	SKiKP	04 09 43.2	-1.6
SKMB	Sankelmark Bun	139.12	342	ePKPbc	PKPdf	04 06 20.0	-7.3
	baz=37,slow=3.1						
LTVH	Ltavrtes, Hu	139.19	325	eP	PKPdf	04 06 21.7	-6.0
LOT	Lotru	139.22	322	⇓P	PKPdf	04 06 22.8	-5.2
LOT	Lotru	139.22	322	⇑P	SKiKP	04 09 37.4	-7.7
KECS	Kecovo	139.27	327	ePKIKP	PKPdf	04 06 22.9	-5.0
KECS	Kecovo	139.27	327	eSKPDF		04 09 44.2	
KECS	Kecovo	139.27	327	ePKP	PKPdf	04 06 22.9	-5.0
FETY	Fethiye	139.29	307	P	PKPdf	04 06 26.6	-1.7
LANS	Liptovska Anna	139.36	329	ePKIKP	PKPdf	04 06 23.0	-5.0
LANS	Liptovska Anna	139.36	329	eSKPDF		04 09 45.9	
LANS	Liptovska Anna	139.36	329	ePKP	PKPdf	04 06 23.0	-5.0
RUE	Ruedersdorf	139.46	336	ePKPbc	PKPdf	04 06 20.7	-7.3
	baz=37,slow=3.1						
DEV	Deva	139.49	323	⇑P	PKPdf	04 06 28.1	-0.2
DEV	Deva	139.49	323	⇑PKIKP	PKPdf	04 06 28.1	-0.2
BSEG	Bad Segeberg	139.50	340	ePKPbc	PKPdf	04 06 21.0	-7.0
	baz=37,slow=3.1						
OKC	Ostrava-Krasne	139.53	330	epPKP	pPKPdf	04 07 22.7	-3.2
KPL	Plockton	139.56	355	eP	PKPdf	04 06 23.6	-4.5
KSP	Ksiaz	139.67	333	eSKKPdf	SKKPdf	04 19 07.2	-2.9
KSP	Ksiaz	139.67	333	ePKP	PKPdf	04 06 21.2	-7.2
KSP	Ksiaz	139.67	333	epPKPdf	pPKPdf	04 07 25.6	-0.4
KSP	Ksiaz	139.67	333	eSKPdf	SKPbc	04 09 43.0	+0.1
GZR	Gura Zlata	139.84	322	⇑P	PKPdf	04 06 23.7	-5.4
GZR	Gura Zlata	139.84	322	⇓P	SKiKP	04 09 31.0	-15
MORC	Moravsky Berou	139.86	331	⇓P	PKPdf	04 06 23.6	-5.4
MORC	Moravsky Berou	139.86	331	e		04 18 56.7	
MORC	Moravsky Berou	139.86	331	⇓PKIKP	PKPdf	04 06 23.6	-5.4
MORC	Moravsky Berou	139.86	331	ePKP	PKPdf	04 06 19.4	-10
MORC	Moravsky Berou	139.86	331	e	pPKPdf	04 07 21.5	-4.9
MORC	Moravsky Berou	139.86	331	ePP	PP	04 09 23.4	-3.8
MORC	Moravsky Berou	139.86	331	e		04 16 01.3	
OSTC	Ostas	139.91	333	ePKP	PKPdf	04 06 21.4	-7.6
OSTC				epPKP	pPKPdf	04 07 18.0	-8.4
OSTC				eSKP		04 09 45.1	
OSTC				eSKKS		04 16 00.8	
OSTC				AMS	AMS	05 09 00.0	
	comp=Z,8µm,22.8s						
PSZ	Piszkesteto	139.94	327	⇓P	PKPdf	04 06 22.0	-7.1
PSZ	Piszkesteto	139.94	327	⇑P	SKiKP	04 09 31.4	-15
PSZ	Piszkesteto	139.94	327	eP	PKPdf	04 06 24.1	-5.1
ENEZ	Enez	139.95	314	P	PKPdf	04 06 24.1	-5.2
ALN	Alexandroupoli	139.96	314	P	PKPdf	04 06 24.5	-4.8
CHVC	Chvalec	139.96	333	ePKP	PKPdf	04 06 20.8	-8.3
CHVC				eSKP		04 09 44.7	
CHVC				AMS	AMS	05 09 00.0	
	comp=Z,8µm,21.5s						
SRE	Strehaia	139.98	321	⇑P	PKPdf	04 06 23.4	-5.8
SIRR	Siria	139.99	324	⇓P	PKPdf	04 06 23.1	-6.1
SIRR	Siria	139.99	324	⇑P	SKiKP	04 09 44.6	-2.0
KRLC	Kraliky	140.00	332	ePKP	PKPdf	04 06 20.4	-8.8
KRLC				eSKP		04 09 45.1	
KRLC				eSKKS		04 16 01.4	
KRLC				AMS	AMS	05 09 20.0	
	comp=Z,6µm,19.5s						
DPC	Dobruska-Polom	140.01	332	ePKP	PKPdf	04 06 19.8	-9.4
DPC				epPKP	pPKPdf	04 07 18.0	-8.6
DPC				eSKP		04 09 46.1	
DPC				eSKKS		04 16 02.8	
DPC				AMS	AMS	05 09 40.0	
	comp=Z,7µm,20.9s						
UPC	Upice	140.03	333	ePKP	PKPdf	04 06 17.9	-11
UPC				eSKP		04 09 44.6	
UPC				eSKKS		04 16 02.3	
UPC				AMS	AMS	05 09 50.0	
	comp=Z,8µm,21.7s						
HLG	Helgoland	140.04	342	ePKPbc	PKPdf	04 06 23.5	-5.5
	baz=37,slow=3.1						
VYHS	Vyhne	140.10	328	ePKHKP	PKPdf	04 06 23.0	-6.4
VYHS				eSS	SS	04 28 12.7	+40
VYHS	Vyhne	140.10	328	ePKP	PKPdf	04 06 22.9	-6.4
VYHS				e		04 07 29.0	
VYHS				eSKPDF		04 09 49.2	
VYHS				e		04 19 13.8	
VYHS				eSS	SS	04 28 12.7	+40
ARG	Arkhangelos	140.16	306	P	PKiKP	04 06 33.6	+1.2
RDO	Rodhopi	140.19	315	P	PKPdf	04 06 25.8	-3.9
EZN	Ezine	140.20	313	P	PKPdf	04 06 23.2	-6.6
BAIL	Bailesti	140.24	320	⇓P	PKPdf	04 06 24.9	-4.8
INVG	Invergeldie, C	140.31	354	eP	PKPdf	04 06 23.9	-5.5
HERR	Herculane	140.34	322	⇑P	PKPdf	04 06 24.2	-5.7
HERR	Herculane	140.34	322	⇑P	SKiKP	04 09 30.5	-17
GADA	Gvkgeada	140.35	313	P	PKPdf	04 06 24.3	-5.8
BZS	Buzias	140.39	323	⇓P	PKPdf	04 06 24.8	-5.1
BZS	Buzias	140.39	323	⇓PKIKP	PKPdf	04 06 24.8	-5.1
JAVC	Velka Javorina	140.43	330	ePKP	PKPdf	04 06 23.4	-6.6
JAVC				e		04 07 25.7	
JAVC				e		04 16 08.2	
JAVC				e		04 19 05.2	
AMBH	Ambrzfalva	140.46	325	⇓eP	PKPdf	04 06 25.2	-4.8
PRK	Paraskevi	140.47	312	P	PKPdf	04 06 26.9	-3.4
SMTH	Samothraki Isl	140.49	314	P	PKPdf	04 06 26.8	-3.5
BODT	Bodrum	140.51	308	P	PKPdf	04 06 27.8	-2.7
FLTG	Flechtingen	140.52	338	ePKPbc	PKPdf	04 06 24.2	-5.7
	baz=37,slow=3.1						
EAB	Aberfoyle	140.57	354	eP	PKPdf	04 06 25.5	-4.5
LAWE	Loch Awe, Argy	140.60	355	eP	PKPdf	04 06 26.1	-3.9
VRAC	Vranov	140.63	331	⇓P	PKPdf	04 06 25.0	-5.3
VRAC	Vranov	140.63	331	⇑P	SKPab	04 09 53.3	-5.0
VRAC	Vranov	140.63	331	ePKP	PKPdf	04 06 22.7	-7.6
VRAC				e		04 07 24.4	
VRAC				ePP	PP	04 09 25.9	-6.0
VRAC				e		04 16 04.7	
VRAC				e		04 19 05.2	
SMG	Samos	140.64	309	P	PKPdf	04 06 31.6	+0.9
ESY	Stoneypath	140.64	352	eP	PKPdf	04 06 24.2	-5.9
BRG	Berggiesshubel	140.64	335	i PKP	PKPdf	04 06 23.3	-7.0
BRG				Amp		04 06 26.1	
	comp=Z,51nm,1.0s						
BRG				i x	x	04 06 33.5	
BRG				Amp		04 06 34.0	
	comp=Z,295nm,1.3s						
BRG				pPKP	pPKPdf	04 07 29.9	+2.2
BRG				Amp		04 07 34.0	
	comp=Z,236nm,1.8s						
BRG				PP	PP	04 09 48.0	+16
BRG				SKP		04 09 49.0	
BRG				Amp		04 09 50.4	
	comp=Z,359nm,1.6s						
BRG	Berggiesshubel	140.64	335	pPP		04 10 48.0	
BRG	Berggiesshubel	140.64	335	i PKP	PKPdf	04 06 23.3	-7.0
BRG				Amp		04 06 26.1	
	comp=Z,51nm,1.0s						
BRG				i x	x	04 06 33.5	
BRG				Amp		04 06 34.0	
	comp=Z,295nm,1.3s						
BRG				pPKP	pPKPdf	04 07 29.9	+2.2
BRG				Amp		04 07 34.0	
	comp=Z,236nm,1.8s						
BRG				PP	PP	04 09 48.0	+16
BRG				SKP		04 09 49.0	
BRG				Amp		04 09 50.4	
	comp=Z,359nm,1.6s						
BRG	Berggiesshubel	140.64	335	pPP		04 10 48.0	
BRG	Berggiesshubel	140.64	335	ePKPbc	PKPdf	04 06 24.7	-5.6
	baz=37,slow=3.1						
PVCC	Panska Ves	140.64	334	ePKP	PKPdf	04 06 21.9	-8.4
PVCC				eSKP		04 09 46.3	
BUD	Budapest	140.67	327	⇓eP	PKPdf	04 06 25.4	-4.9
CLL	Collm	140.68	336	ePKPpre	PKPpre	04 06 24.0	
CLL				i PKPdf	PKPdf	04 06 28.4	-1.9
	comp=Z,52nm,0.7s						
CLL				i PKiKP	PKiKP	04 06 30.8	-2.2
	comp=Z,163nm,1.5s						
CLL				i		04 06 33.5	
CLL				epPKPdf	pPKPdf	04 07 25.0	-2.8
CLL				ePP	PP	04 09 28.0	-4.0
CLL				i SKPdf	SKPdf	04 09 43.0	-0.6
CLL				i SKPbc	SKiKP	04 09 48.4	+0.7
	comp=Z,130nm,1.0s						
CLL				i PKSdf	PKSdf	04 10 02.1	-3.9
	comp=Z,281nm,1.7s						
CLL				i		04 10 38.3	
CLL				esPP		04 10 46.0	
CLL				e		04 11 46.0	
CLL				e(PPP)		04 12 42.0	
CLL				esPPP		04 13 48.0	
CLL				eSKKSac	SKKSac	04 16 04.0	+0.8
CLL				eSdif	Sdif	04 17 44.0	+3.0
CLL				eSKSP		04 19 12.0	
CLL				eSPP	SPP	04 21 36.0	
CLL				esPPS		04 23 03.0	
CLL				eSS	SS	04 27 47.0	+8.3
CLL				e(sSS)		04 28 57.0	
CLL				esPSS		04 29 40.0	
CLL				eSSS	SSS	04 32 48.0	
CLL				e(sSSS)		04 34 48.0	
CLL				e		04 38 42.0	
CLL	Collm	140.68	336	ePKHKP	PKPpre	04 06 24.0	
CLL				i		04 06 28.4	
CLL				e		04 07 25.0	
CLL				pmax	pmax		
	comp=Z,52nm,0.7s						
CLL	Collm	140.68	336	ePKPbc	PKPdf	04 06 24.8	-5.5
	baz=37,slow=3.1						
EDI	Edinburgh	140.70	353	eP	PKPdf	04 06 26.3	-3.9
NRDL	Niedersach Rie	140.78	339	ePKPbc	PKPdf	04 06 25.5	-4.8
	baz=37,slow=3.1						
SMOL	Smolenice	140.79	329	ePKIKP	PKPdf	04 06 26.6	-4.0
SMOL	Smolenice	140.79	329	ePKP	PKPdf	04 06 26.6	-4.0
SMOL				e		04 07 30.7	
SMOL				eSKPDF		04 09 47.8	
BANR	Banloc	140.80	323	⇑P	PKPdf	04 06 21.8	-8.9
BANR	Banloc	140.80	323	⇑P	SKiKP	04 09 47.9	-0.2
MDVR	Moldovita	140.81	322	⇓P	PKPdf	04 06 22.7	-8.1
MDVR	Moldovita	140.81	322	⇓P	SKiKP	04 09 36.6	-12
SRO	Srobarova	140.82	328	ePKIKP	PKPdf	04 06 27.5	-3.1
SRO	Srobarova	140.82	328	ePKP	PKPdf	04 06 27.5	-3.1
SRO				eSKPDF		04 09 48.0	
EBL	Broad Law	140.83	352	eP	PKPdf	04 06 24.4	-6.0
FBE	Freiberg	140.84	335	ePKPbc	PKPdf	04 06 25.4	-5.2
	baz=37,slow=3.1						
ASSE	Asse, Remlinge	140.88	338	ePKPbc	PKPdf	04 06 25.6	-5.0
	baz=37,slow=3.1						
KRUC	Moravsky	140.90	331	ePKP	PKPdf	04 06 22.2	-8.6
KRUC				e		04 07 24.0	
KRUC				ePP	PP	04 09 25.9	-7.6
KRUC				e		04 16 07.4	
KRUC				e		04 19 06.6	
KAVA	Kavala	140.95	315	P	PKPdf	04 06 26.9	-4.2
MODS	Modra-Piesok	140.96	329	ePKHKP	PKPdf	04 06 25.9	-5.0
MODS				eSS	SS	04 27 46.3	+3.9
MODS	Modra-Piesok	140.96	329	ePKP	PKPdf	04 06 25.9	-5.0
MODS				e		04 07 29.5	
MODS				eSKPDF		04 09 48.2	
MODS				e		04 19 17.4	
MODS				eSS	SS	04 27 46.3	+3.9

LIA	Limnos Island	140.97	313	P	PKPdf	04 06 28.7	-2.5
THAS	Thassos island	140.99	314	P	PKPdf	04 06 28.2	-3.0
VTS	Vitosha	141.02	318	⇑P	PKPdf	04 06 27.5	-3.9
VTS	Vitosha	141.02	318	⇑P	SKiKP	04 09 27.9	-21
VTS	Vitosha	141.02	318	⇑PKIKP	PKPdf	04 06 27.5	-3.9
PRA	Prague	141.04	333	ePKP	PKPdf	04 06 22.1	-8.9
PRA				ex	x	04 07 20.9	
PRU	Pruhonice	141.05	333	ePKHKP	PKPdf	04 06 22.4	-8.6
PRU				MLR	MLR		
	comp=Z,6µm,22.6s						
PRU	Pruhonice	141.05	333	ePKP	PKPdf	04 06 22.4	-8.6
PRU				ex	x	04 07 20.1	
PRU				eSKP		04 09 48.8	
PRU				eSKKS		04 16 06.7	
PRU				AMS	AMS	05 04 40.0	
	comp=Z,6µm,22.6s						
KARP	Karpathos	141.11	306		PKPdf	04 06 30.3	-1.3
CSKK	Cskako	141.14	328	eP	PKPdf	04 06 26.8	-4.5
TREC	Trest	141.15	332	ePKP	PKPdf	04 06 23.8	-7.5
TREC				AMS	AMS	05 10 10.0	
	comp=Z,8µm,21.5s						
ZST	Bratislava	141.16	329	ePKIKP	PKPdf	04 06 30.6	-0.7
ZST				e		04 07 32.9	
ZST				eSS	SS	04 27 49.7	+5.0
ZST	Bratislava	141.16	329	ePKP	PKPdf	04 06 30.6	-0.7
ZST				e		04 07 32.9	
ZST				eSKPDF		04 09 50.9	
ZST				eSS	SS	04 27 49.7	+5.0
NVR	Nevrokopi	141.23	316	P	PKPdf	04 06 25.4	-6.3
CLZ	Clausthal	141.23	338	ePKPbc	PKPdf	04 06 26.4	-4.9
	baz=37,slow=3.1						
NEUB	Neuenburg	141.23	337	ePKPbc	PKPdf	04 06 26.1	-5.1
	baz=37,slow=3.1						
ESK	Eskdalemuir	141.30	352	eP	PKPdf	04 06 27.5	-3.8
ESK	Eskdalemuir	141.30	352	PKIKP	PKPdf	04 06 31.5	+0.2
ESK	Eskdalemuir	141.30	352	PKPdf	PKPdf	04 06 31.5	+0.2
SRS	Serrai	141.52	316	P	PKPdf	04 06 27.4	-4.8
EGYH	Egyhazaskeszo	141.58	328	eP	PKPdf	04 06 24.4	-7.6
TANN	Tannenbergstha	141.59	335	ePKPbc	PKPdf	04 06 27.0	-5.0
	baz=37,slow=3.1						
EDMD	Edmundbyers	141.60	351	eP	PKPdf	04 06 27.8	-4.0
OUR	Ouranopolis	141.61	314	P	PKPdf	04 06 28.5	-3.8
NEWG	New Galloway	141.62	353	eP	PKPdf	04 06 28.4	-3.5
GTTG	Gottingen	141.62	338	ePKPbc	PKPdf	04 06 27.3	-4.7
	baz=37,slow=3.1						
WERD	Werda	141.63	335	ePKPbc	PKPdf	04 06 27.2	-4.9
	baz=37,slow=3.1						
TIH	Tihany	141.63	327	eP	PKPdf	04 06 28.4	-3.8
MPLH	Magyarpolny	141.64	328	eP	PKPdf	04 06 26.5	-5.6
PLN	Plauen	141.66	336	ePKPbc	PKPdf	04 06 27.4	-4.7
	baz=37,slow=3.1						
MORH	Mrgy, Hungar	141.68	326	eP	PKPdf	04 06 26.5	-5.7
MORH	Mrgy, Hungar	141.68	326	⇑iP	PKPdf	04 06 24.8	-7.4
GUNZ	Gunzen	141.68	335	ePKPbc	PKPdf	04 06 27.5	-4.7
	baz=37,slow=3.1						
IBBN	Ibbenburen	141.71	341	ePKPbc	PKPdf	04 06 28.2	-3.9
	baz=37,slow=3.1						
WERN	Wernitzgruen	141.72	335	ePKPbc	PKPdf	04 06 27.7	-4.6
	baz=37,slow=3.1						
NKC	Novy Kostel	141.74	335	epPKP	pPKPdf	04 07 25.3	-4.5
NKC				eSKKS		04 16 12.8	
NKC				AMS	AMS	05 11 10.0	
	comp=Z,6µm,19.2s						
MOX	Moxa	141.74	336	ePKPbc	PKPdf	04 06 27.8	-4.5
	baz=37,slow=3.1						
SOP	Sopron	141.78	329	eP	PKPdf	04 06 26.5	-5.9
SOH	Sokhos	141.81	316	P	PKPdf	04 06 29.2	-3.6
APE	Apeiranthos	141.84	309	⇑P	PKPdf	04 06 29.4	-3.5
APE	Apeiranthos	141.84	309	⇑PKIKP	PKPdf	04 06 29.4	-3.5
GAL1	Galloway	141.91	354	eP	PKPdf	04 06 28.7	-3.7
CONA	Conrad Observa	141.95	330	iP	PKPdf	04 06 29.4	-3.5
	comp=Z,191nm,1.4s,SNR=92						
KNT	Kendrikon	141.96	316	P	PKPdf	04 06 27.6	-5.3
PLG	Polygyros	141.96	315	P	PKPdf	04 06 28.6	-4.4
KESW	Keswick, Cumbr	142.00	352	eP	PKPdf	04 06 29.1	-3.5
STIA	Sitia Lasithi	142.05	306	P	PKPdf	04 06 30.2	-3.1
HORT	Hortiatis	142.09	315	P	PKPdf	04 06 26.4	-6.9
VAY	Valandovo	142.09	317	iP	PKPdf	04 06 27.8	-5.3
KHC	Kasperske Hory	142.11	333	e		04 09 49.5	
KHC	Kasperske Hory	142.11	333	ePKP	PKPdf	04 06 26.7	-6.3
KHC				epPKP	pPKPdf	04 07 26.3	-4.2
KHC				ex	x	04 08 26.5	
KHC				eSKP		04 09 49.5	
KHC				ex	x	04 16 14.9	
KHC				AMS	AMS	05 10 50.0	
	comp=Z,7µm,24.2s						
SANT	Santorini	142.14	308	⇓P	PKPdf	04 06 33.6	+0.1
THE	Thessaloniki	142.16	315	P	PKPdf	04 06 29.0	-4.3
ROTZ	Rotzenmuhle	142.20	335	ePKPbc	PKPdf	04 06 29.1	-4.0
	baz=37,slow=3.1						
UBBA	Unterbreizbach	142.20	338	ePKPbc	PKPdf	04 06 29.1	-3.8
	baz=37,slow=3.1						
DIVS	Divibare	142.21	322	⇑iP	PKPdf	04 06 28.3	-5.1
TEKS	Tekeris	142.21	323	⇑iP	PKPdf	04 06 28.8	-4.5
GEC2	GERESS Array S	142.27	333	ePKPbc	PKPdf	04 06 29.5	-3.8
	baz=37,slow=3.1						
GERES	GERESS Array B	142.27	333	PKhKP	PKPpre	04 06 28.7	
	comp=Z,18nm,0.5s,baz=37,slow=3.3,SNR=80						
GERES				PKP	PKPdf	04 06 33.1	-0.3
	comp=Z,30nm,0.6s,baz=5.3,slow=0.8,SNR=41						
GERES				SKPbc	SKiKP	04 09 52.5	+1.3
	comp=Z,48nm,1.0s,baz=48,slow=2.0,SNR=7.2						
GRG	Griva	142.38	316	P	PKPdf	04 06 29.8	-3.9
HPK	Haverah Park	142.40	350	eP	PKPdf	04 06 29.4	-3.9
NPS	Neapolis	142.40	306	P	PKPdf	04 06 30.7	-3.2
WET	Wettzell	142.40	334	ePKPbc	PKPdf	04 06 29.8	-3.7
	baz=37,slow=3.1						
KASTN	Kahler Asten	142.44	339	ePKPbc	PKPdf	04 06 30.2	-3.3
	baz=37,slow=3.1						
BEHE	Becsehely	142.50	328	⇑iP	PKPdf	04 06 31.5	-2.2
SKO	Skopje	142.50	318	iP	PKPdf	04 06 30.7	-3.2
IOMK	Kirk Michael	142.50	353	eP	PKPdf	04 06 29.7	-3.7
LAST	Lasithi	142.54	306	P	PKPdf	04 06 31.0	-3.3
ARSA	Arzberg	142.59	329	iP	PKPdf	04 06 30.6	-3.3
	comp=Z,208nm,1.2s,SNR=38						
XOR	Xorichti	142.59	314	P	PKPdf	04 06 29.4	-4.8
NEO	Neokhori	142.59	313	P	PKPdf	04 06 30.3	-3.9
BUG	Bochum--Univer	142.61	341	ePKPbc	PKPdf	04 06 31.2	-2.5
	baz=37,slow=3.1						
WIM	Isle of Man	142.62	353	eP	PKPdf	04 06 31.4	-2.3
GRF	Grafenberg Arr	142.65	336	ePKPbc	PKPdf	04 06 30.8	-3.1
	baz=37,slow=3.1						
GRFO	Grafenberg	142.66	336	PKIKP	PKPdf	04 06 32.3	-1.6
GRFO	Grafenberg	142.66	336	PKPdf	PKPdf	04 06 32.3	-1.6
LMK	Market Rasen	142.66	349	eP	PKPdf	04 06 31.7	-2.0
PTL	Penteli	142.68	311	P	PKPdf	04 06 32.0	-2.3
BBLS	Lazići	142.69	322	⇑iP	PKPdf	04 06 28.6	-5.6
SJES	Sjenica	142.70	321	⇑iP	PKPdf	04 06 30.5	-3.8
LIT	Litokhoron	142.74	315	P	PKPdf	04 06 28.4	-6.0
MOA	Molln	142.75	331	iP	PKPdf	04 06 31.2	-2.9
	comp=Z,72nm,0.7s,SNR=105						
MOA				eS	Sdif	04 17 52.3	-6.2
	comp=Z,14nm,1.4s						
ATHU	Athens Univers	142.77	311	P	PKPdf	04 06 33.3	-1.2
KOGS	Kog	142.78	328	ePKPdf	PKPdf	04 06 29.7	-4.5
KOGS				eSKKSac	SKKSac	04 16 13.7	-2.0
VLY	Voula,Athens	142.81	311	P	PKPdf	04 06 31.0	-3.5
ATH	Athens Observa	142.82	311	P	PKPdf	04 06 29.8	-4.7
HAPS	Han Pijesak,BI	142.82	323	⇑iP	PKPdf	04 06 30.9	-3.6
RUDO	Rudo	142.85	322	eP	PKPdf	04 06 31.6	-2.9
IDI	Anoyia	142.95	306	P	PKPdf	04 06 32.1	-2.9
IDI	Anoyia	142.95	306	⇓P	PKPdf	04 06 31.9	-3.0
IDI	Anoyia	142.95	306	⇓P	SKiKP	04 09 47.4	-5.7
LBWR	Ladybower, Pea	142.95	350	eP	PKPdf	04 06 31.6	-2.7
IVA	Berane	142.97	321	⇑iPKP	PKPdf	04 06 31.9	-2.9
ATAL	Atalanti	143.01	313	P	PKPab	04 06 29.8	-0.9
PLE	Pljevlja	143.01	322	⇑iPKP	PKPbc	04 06 31.8	-0.6
VILL	Villia	143.03	312	P	PKPbc	04 06 32.6	+0.1
LKR	Lokris	143.04	313	P	PKPab	04 06 27.5	-3.3
PVY	Plav	143.08	320	⇑iPKP	PKPbc	04 06 32.2	-0.4
SIVA	Sivas	143.10	306	P	PKPbc	04 06 32.1	-0.6
KZN	Kozani	143.12	316	P	PKPab	04 06 30.0	-1.2
FNA	Florina	143.15	317	P	PKPab	04 06 31.0	-0.2
PRNS	Prines Rethymn	143.22	307	P	PKPbc	04 06 32.5	-0.5
SOKA	Soboth	143.23	329	iP	PKPab	04 06 32.0	+0.6
	comp=Z,390nm,1.4s,SNR=130						
SOKA				eS	SKPbc	04 09 47.2	-5.0
	comp=Z,107nm,1.2s						
SOKA				eS	SKSac	04 13 28.6	-2.1
	comp=Z,8.6nm,1.2s						
AXAR	Agios Charalam	143.23	313	P	PKPab	04 06 31.0	-0.6
TNS	Taunus Mts	143.25	339	ePKPbc	PKPbc	04 06 32.5	-0.2
	baz=37,slow=3.1						
PHP	Peshkopia	143.28	319	P	PKPab	04 06 31.1	-0.6
THL	Klokotos Trika	143.31	314	P	PKPab	04 06 29.8	-2.0
WME	Myndd Eilian	143.32	353	eP	PKPab	04 06 31.8	+0.4
ZAG	Zagreb	143.33	327	⇑iP	PKPbc	04 06 33.2	+0.2
WPS	Cemaes, Angles	143.34	353	eP	PKPab	04 06 31.4	0.0
AGG	Agios Georgios	143.34	314	P	PKPab	04 06 31.6	-0.4
LOUT	Loutraki	143.34	312	P	PKPbc	04 06 33.7	+0.4
OHR	Ohrid	143.35	318	iP	PKPbc	04 06 33.1	-0.1
UPM	Unac-Piva	143.37	322	eP	PKPab	04 06 32.1	-0.1
UPM	Unac-Piva	143.37	322	⇑iPKP	PKPab	04 06 32.7	+0.5
EPID	Epidavros	143.40	311	P	PKPbc	04 06 32.9	-0.6
BLY	Banja Luka	143.41	325	⇑iP	PKPbc	04 06 32.9	-0.3
WLF1	Llynfaes	143.43	353	eP	PKPab	04 06 31.9	+0.1
VAM	Vamos	143.44	307	P	PKPab	04 06 31.8	-0.7
AHRW	Bad Neuenahr-A	143.44	340	ePKPbc	PKPbc	04 06 33.5	+0.4
	baz=37,slow=3.1						
KRND	KRANIDI	143.47	311	P	PKPbc	04 06 33.1	-0.5
MAKR	Makrakomi, Fth	143.49	314	P	PKPbc	04 06 33.9	+0.2
YRC	Rhoscolyn	143.49	353	eP	PKPbc	04 06 33.4	+0.3
PRIJ	Prijedor	143.51	326	⇑iP	PKPdf	04 06 34.6	-0.9
CWF	Charnwood Fore	143.52	350	eP	PKPab	04 06 30.6	-1.7
THAL	Thalero	143.54	312	P	PKPbc	04 06 33.6	-0.2
NEST	Nestorio	143.54	316	P	PKPab	04 06 33.1	+0.2
NKY	Niksic	143.55	321	⇑iPKP	PKPab	04 06 33.3	+0.5
KPRO	Kipourio	143.56	315	P	PKPab	04 06 32.4	-0.5
OBKA	Obir	143.58	329	iP	PKPab	04 06 33.2	+0.4
	comp=Z,248nm,1.4s,SNR=47						
OBKA				eS	SKPbc	04 09 52.7	-0.4
	comp=Z,75nm,1.3s						
OBKA				eS	SKSac	04 13 37.5	+6.1
	comp=Z,14nm,1.3s						
IMMV	Iera Moni Meta	143.58	307	P	PKPab	04 06 32.8	-0.3
PENT	Pentalofos	143.59	316	P	PKPab	04 06 32.6	-0.5
NKME	Niksic	143.60	321	⇑iPKP	PKPbc	04 06 33.7	-0.2
CRES	Cresnjev	143.61	328	⇑iP	PKPbc	04 06 33.5	-0.3
PDG	Podgorica	143.61	320	⇓P	PKPab	04 06 30.5	-2.4
PDG	Podgorica	143.61	320	⇑iP	PKPab	04 06 33.1	+0.2
TTG	Podgorica	143.61	320	⇑iPKP	PKPbc	04 06 33.4	-0.4
KBN	Korca	143.61	317	P	PKPab	04 06 31.6	-1.5
BEBN	Eben Emael	143.66	342	dPKPdf	PKPab	04 06 32.0	-0.8
BEBN				dpPKPdf	pPKPdf	04 07 31.3	-1.8
IGLA	Glengowla, Co	143.69	358	eP	PKPab	04 06 32.6	-0.2
BTNL	Ternell	143.71	341	dPKPdf	PKPab	04 06 33.5	+0.4
BTNL				dpPKP	pPKPdf	04 07 33.2	-0.1
GVDS	Gavdos	143.72	306	P	PKPab	04 06 33.8	+0.2
GVD	Gavdhos	143.72	306	P	PKPab	04 06 32.9	-0.7
MEM	Membach	143.72	341	dPKPdf	PKPab	04 06 33.5	+0.4
OZLJ	Ozalj	143.74	328	P	PKPbc	04 06 34.5	+0.4
CEME	Cevo	143.75	321	⇑iPKP	PKPab	04 06 33.9	+0.3
KBA	Koelnbreinsper	143.75	331	iP	PKPbc	04 06 34.3	-0.1
	comp=Z,557nm,1.4s,SNR=172						
KBA				iS	SKPbc	04 09 48.7	-4.9
	comp=Z,121nm,1.1s,SNR=11						
KBA				eS	SKSac	04 13 35.8	+3.9
	comp=Z,21nm,1.2s						
EVR	Evrytania	143.75	314	P	PKPab	04 06 32.3	-1.5
BRY	Bratogost	143.76	322	eP	PKPab	04 06 33.6	-0.1
BRY	Bratogost	143.76	322	⇑iPKP	PKPab	04 06 33.7	0.0
LLW	Llanuwychllyn	143.77	352	eP	PKPab	04 06 32.6	-0.6
MOZS	Mozjanca	143.79	329	ePKPdf	PKPbc	04 06 34.0	-0.3
MOZS				iPKiKP	PKPdf	04 06 37.2	+1.1
DRME	Dracevica, Mon	143.79	320	⇑iP	PKPab	04 06 33.6	0.0
DRME	Dracevica, Mon	143.79	320	⇑iPKP	PKPbc	04 06 34.1	-0.3
SERG	Sergoula	143.81	313	P	PKPbc	04 06 34.9	+0.3
TRIZ	Trizonia	143.82	313	P	PKPab	04 06 33.6	-0.3
ANX	Ano Chora	143.82	313	P	PKPab	04 06 33.6	-0.4
TIR	Tirane	143.83	318	P	PKPbc	04 06 34.2	-0.3
TIR	Tirane	143.83	318	⇓P	PKPab	04 06 32.9	-0.9
TIR	Tirane	143.83	318	⇓PKIKP	PKPab	04 06 32.9	-0.9
FUR	Furstenfeldbru	143.83	334	ePKPbc	PKPbc	04 06 34.6	+0.3
	baz=37,slow=3.1						
ULC	Ulcinj	143.88	320	⇑iPKP	PKPbc	04 06 34.5	-0.2
BSTI	Sart Tilman	143.88	342	dPKPdf	PKPbc	04 06 34.1	-0.3
VLI	Veliai	143.89	310	P	PKPab	04 06 33.1	-1.1
BUM	Brajici-Budva	143.90	321	⇑iPKP	PKPab	04 06 34.2	0.0
KLV	Kalavryta, Ach	143.91	312	P	PKPab	04 06 32.8	-1.5
EFP	Efpalio	143.91	313	P	PKPab	04 06 34.0	-0.2
LJU	Ljubljana	143.92	329	ePKPdf	PKPab	04 06 34.1	+0.1
LJU				iPKiKP	PKPdf	04 06 38.0	+1.8
LJU				epPKPdf	pPKPdf	04 07 29.4	-4.4
LJU				e		04 09 55.0	
LJU				eSKKSac	SKKSac	04 16 20.4	-1.8
LJU				e		04 19 49.6	
LJU				e		04 28 13.3	
LJU	Ljubljana	143.92	329	⇑iP	PKPab	04 06 34.3	+0.3
MYKA	Terra Mystica	143.93	330	iP	PKPab	04 06 33.8	-0.3
	comp=Z,553nm,1.6s,SNR=111						
MYKA				iS	SKPbc	04 09 52.7	-1.2
	comp=Z,89nm,0.8s,SNR=10.0						
MYKA				eS	SKKPab	04 17 56.5	-4.7
	comp=Z,22nm,1.6s						
BHOU	Houvegnez	143.95	341	dPKPdf	PKPab	04 06 34.3	+0.3
BHOU				dpPKPdf	pPKPdf	04 07 33.3	-0.4
ANKY	Antikythira Is	143.95	308	P	PKPab	04 06 34.5	0.0
LSK	Leskovik	143.97	316	P	PKPab	04 06 34.7	+0.1
KTHA	Kythira Island	143.98	309	P	PKPab	04 06 33.8	-0.8
TREB	Trebinje	143.99	321	eP	PKPab	04 06 34.6	+0.2
KTHR	Kythira	144.02	309	P	PKPab	04 06 34.5	-0.3
VLX	Vlachokerasia	144.03	311	P	PKPab	04 06 34.7	-0.2
TRIP	Tripoli	144.04	311	P	PKPab	04 06 35.0	+0.1
UCC	Uccle	144.04	343	dPKPdf	PKPab	04 06 34.1	-0.2
UCC				dpPKP	pPKPdf	04 07 32.5	-1.3
JAN	Janina	144.05	315	P	PKPbc	04 06 35.1	-0.2
UPR	University Cam	144.06	313	P	PKPdf	04 06 37.4	+0.7
HCY	Herceg Novi	144.06	321	eP	PKPab	04 06 34.6	-0.1
HCY	Herceg Novi	144.06	321	⇑iPKP	PKPab	04 06 33.9	-0.8
BCLA	Clavier	144.10	342	dPKPdf	PKPbc	04 06 35.3	+0.2
DBRK	Dubrovnik	144.13	322	P	PKPab	04 06 34.0	-1.0
CADS	Cadrg	144.18	330	ePKPdf	PKPab	04 06 34.5	-0.6
STU	Stuttgart	144.18	337	ePKPbc	PKPbc	04 06 35.7	+0.3
	baz=37,slow=3.1						
CEY	Cerknica	144.19	329	⇑iP	PKPab	04 06 35.3	+0.2
BGES	Gesves	144.20	342	dPKPdf	PKPab	04 06 34.6	-0.4
RICI	Ricice	144.22	323	P	PKPab	04 06 34.9	-0.4
VOJS	Vojsko	144.25	329	ePKPdf	PKPab	04 06 34.9	-0.5
DRO	Drossia	144.26	312	P	PKPbc	04 06 35.9	-0.1
STON	Ston	144.28	322	P	PKPab	04 06 34.6	-0.9
KIJV	Kijevo	144.31	325	P	PKPab	04 06 34.9	-0.7
UDBI	Udbina	144.32	326	P	PKPab	04 06 35.6	-0.1
SNF	Seneffe	144.32	343	dPKPdf	PKPab	04 06 35.2	-0.1
PDO	Prodromos	144.33	314	P	PKPab	04 06 35.8	-0.1
WATA	Walderalm	144.35	333	iP	PKPab	04 06 35.9	+0.1
	comp=Z,546nm,1.6s,SNR=186						
WATA				iS	SKPbc	04 09 54.8	-0.1
	comp=Z,100nm,1.0s,SNR=7.6						
WATA				eS	SKSdf	04 13 18.4	-6.9
	comp=Z,3.5nm,0.6s						
WATA				eP	PKKPdf	04 15 38.0	-8.9
	comp=Z,12nm,1.2s						
RCHB	Rochefort	144.36	342	dPKPdf	PKPab	04 06 32.3	-3.2
RCHB				dpPKP	pPKPdf	04 07 34.7	+0.3
BMRD	Maredsous	144.37	342	dPKPdf	PKPbc	04 06 35.8	0.0
BMRD				dx	x	04 06 42.8	
ABTA	Abfaltersbach	144.37	331	iP	PKPab	04 06 35.2	-0.7
	comp=Z,390nm,1.0s,SNR=417						
ABTA				iS	SKPbc	04 09 55.0	+0.1
	comp=Z,171nm,1.4s,SNR=8.7						
ABTA				eS	SKSdf	04 13 23.5	-1.6
	comp=Z,20nm,0.7s						
WTTA	Wattenberg	144.38	333	iP	PKPbc	04 06 36.3	0.0
	comp=Z,800nm,1.4s,SNR=245						
WTTA				iS	SKPbc	04 09 55.1	+0.1
	comp=Z,162nm,1.1s,SNR=6.7						
WTTA				eP	PKKPdf	04 15 48.5	+1.6
	comp=Z,32nm,1.3s						
RLS	Riolos of Patr	144.38	313	P	PKPbc	04 06 36.2	-0.1
AXS	Araxos	144.38	313	P	PKPab	04 06 35.8	-0.2
MAKA	Makarska	144.42	323	P	PKPbc	04 06 36.1	-0.1
AST1	Astakos	144.43	314	P	PKPbc	04 06 36.6	+0.2
ITM	Ithomi	144.44	311	P	PKPab	04 06 35.8	-0.5
AMT	Artemida-Makis	144.44	312	P	PKPab	04 06 35.8	-0.6
RIY	Rijeka	144.45	328	⇑iP	PKPab	04 06 35.8	-0.2
IGT	Igoumenitsa	144.46	316	P	PKPab	04 06 36.1	-0.2
WLF	Walferdange	144.50	340	dPKPdf	PKPab	04 06 36.1	0.0
WLF				dpPKP	pPKPdf	04 07 35.5	+0.8
WLF	Walferdange	144.50	340	ePKPbc	PKPdf	04 06 36.9	-0.3
	baz=37,slow=3.1						
MCH1	Michaelchurch	144.51	351	eP	PKPab	04 06 33.9	-2.2
SRN	Sarande	144.51	316	P	PKPab	04 06 36.2	-0.3
SKDS	Skadanscina	144.53	329	ePKPdf	PKPbc	04 06 36.5	0.0
SKDS				epPKPdf	pPKPdf	04 07 32.0	-2.9
VLO	Vlora	144.53	317	P	PKPdf	04 06 37.1	-0.3
ELSH	Elham, Standar	144.54	346	eP	PKPab	04 06 34.0	-2.1
MOTA	Moosalm	144.54	333	iP	PKPab	04 06 36.1	-0.5
	comp=Z,1µm,1.4s,SNR=540						
MOTA				eS	SKiKP	04 09 56.2	+0.2
	comp=Z,149nm,1.1s						
MOTA				eP	PKKPdf	04 15 42.1	-4.4
	comp=Z,26nm,1.2s						
IWEX	Carrickbyrne,	144.57	355	eP	PKPab	04 06 35.5	-0.8
RETA	Reutte	144.58	334	iP	PKPab	04 06 36.2	-0.4
	comp=Z,937nm,1.5s,SNR=327						
RETA				eS	SKPbc	04 09 55.3	-0.1
	comp=Z,76nm,1.1s						
STRD	Stroud	144.59	350	eP	PKPab	04 06 34.8	-1.6
TSLK	Tsoukalades, L	144.59	314	P	PKPab	04 06 36.5	-0.3
SQTA	Sankt Quirin	144.60	333	iP	PKPab	04 06 36.3	-0.4
	comp=Z,1µm,1.5s,SNR=572						
SQTA				iS	SKiKP	04 09 56.4	+0.3
	comp=Z,153nm,1.2s,SNR=6.8						
SQTA				iS	SKSdf	04 13 14.1	-11
	comp=Z,15nm,0.6s,SNR=6.7						
DOU	Dourbes	144.60	342	dPKPdf	PKPab	04 06 36.3	-0.2
LKD2	Lefkada island	144.61	314	P	PKPab	04 06 36.2	-0.7
NYDR	Nydri-Lefkada	144.61	314	P	PKPab	04 06 36.2	-0.7
STAL	STALIGIAL	144.64	331	PKPbc	PKPab	04 06 36.3	-0.5
EVGI	Lefkada island	144.69	314	P	PKPab	04 06 36.6	-0.6
PYL	PYLOS	144.69	311	P	PKPab	04 06 36.1	-1.2
UBR	Ueberruh	144.70	335	ePKPbc	PKPbc	04 06 37.2	+0.2
	baz=37,slow=3.1						
DRAG	Dragano-Lefkad	144.71	314	P	PKPab	04 06 36.7	-0.6
KEK	Kerkira	144.73	316	P	PKPbc	04 06 36.5	-0.8
OLDB	Oldbury-Upon-S	144.76	350	eP	PKPbc	04 06 34.3	-2.7
NVLJ	Novalja	144.77	327	P	PKPbc	04 06 37.1	-0.1
SWN1	Swindon	144.78	350	eP	PKPbc	04 06 35.2	-1.9
MORI	Morici	144.78	325	P	PKPbc	04 06 36.4	-1.0
RSBS	Rosebush, Pemb	144.79	353	eP	PKPbc	04 06 34.2	-2.8
HVAR	Hvar	144.81	324	P	PKPbc	04 06 36.8	-0.7
FSK	Fiskardo	144.83	314	P	PKPbc	04 06 36.7	-0.9
VSK1	VASILIKIADES	144.85	314	P	PKPbc	04 06 37.0	-0.8
WOL	Wolverton	144.87	349	eP	PKPbc	04 06 34.5	-2.9
BFO	Black Forest	144.87	337	PKIKP	PKPab	04 06 37.7	+0.1
BFO	Black Forest	144.87	337		PKPab	04 06 37.7	+0.1
BFO	Black Forest	144.87	337	ePKPbc	PKPab	04 06 37.7	+0.1
	baz=37,slow=3.1						
BATH	Bath	144.94	350	eP	PKPbc	04 06 35.6	-1.9
VLS	Valsamata	144.94	313	P	PKPbc	04 06 37.5	-0.6
ZIRJ	Zirje	144.96	325	P	PKPab	04 06 38.0	0.0
FETA	Feichten	144.96	333	iP	PKPbc	04 06 37.8	-0.2
	comp=Z,1µm,1.3s,SNR=458						
FETA				eS	SKiKP	04 09 57.5	+0.5
	comp=Z,212nm,1.1s						
FETA				eS	SKSdf	04 13 15.3	-11
	comp=Z,11nm,0.5s						
PSDA	Pessada-Kefalo	144.98	313	P	PKPbc	04 06 37.1	-1.0
KEF5	Kardakata, Kep	144.98	314	P	PKPbc	04 06 37.8	-0.3
HMNX	Herstmonceux	144.98	347	eP	PKPbc	04 06 35.6	-2.0
KEF4	Livadi, Kephal	145.02	314	P	PKPbc	04 06 37.5	-0.7
VLMS	Volimes, Zakyn	145.03	313	P	PKPbc	04 06 37.6	-0.7
DUGI	Dugi Otok	145.05	326	P	PKPbc	04 06 38.2	0.0
DMLN	Damoulianata-K	145.06	314	P	PKPdf	04 06 38.5	0.0
KEF3	Kipouria, Keph	145.10	313	P	PKPbc	04 06 38.2	-0.3
DAVA	Damuels	145.11	334	iP	PKPbc	04 06 38.0	-0.4
	comp=Z,1µm,1.4s,SNR=552						
DAVA				eS	SKSdf	04 13 16.1	-10
	comp=Z,14nm,0.8s						
NBMO	Morrinhos-CE	145.26	123	eP	PKPab	04 06 40.2	+0.1
NBRF	Rio Formoso -	145.32	136	eP	PKPab	04 06 40.5	+0.3
NBPA	Parau_RN	145.98	130	eP	PKPab	04 06 43.2	+0.4
DYA	Yadsworthy	146.17	351	eP	PKPdf	04 06 39.5	-0.4
CCA1	Carnmenellis	146.58	353	eP	PKPdf	04 06 39.1	-1.5
SHEL	Horse Pasture	146.71	190	PKP2	PKPbc	04 06 44.2	+0.3
SHEL	Horse Pasture	146.71	190		PKPbc	04 06 44.2	+0.3
RCBR	Riachuelo	146.81	131	PKIKP	PKPdf	04 06 43.2	+1.0
RCBR	Riachuelo	146.81	131	PKPbc	PKPdf	04 06 43.2	+1.0
RCBR	Riachuelo	146.81	131	eP	PKPbc	04 06 44.4	0.0
TIP	Timpagrande	147.00	318	⇓P	PKPdf	04 06 40.2	-1.6
TIP	Timpagrande	147.00	318		PKPdf	04 06 41.1	-0.7
TIP				PKPbc	PKPab	04 06 45.6	-0.6
AQU	L'Aquila	147.05	325	⇑iP	PKPbc	04 06 43.0	-1.2
JSA	Saint Aubin	147.08	349	eP	PKPdf	04 06 39.1	-2.4
CASP	Castiglione de	148.08	328		PKPdf	04 06 42.1	-1.3
CASP				PKPbc	PKPbc	04 06 46.7	-0.2
CASP				PKPab	PKPab	04 06 50.7	+0.4
H07N1	FLORES T-PHASE	151.70	33	ePKP	PKPbc	04 06 52.6	-3.1
H07S1	FLORES T-PHASE	151.88	34	ePKP	PKPdf	04 06 49.9	+0.4
MAHO	Mahon	153.47	332	PKP	PKPdf	04 06 52.5	+0.7
PCED	Cedros	153.74	32	ePKP	PKPdf	04 06 53.2	+1.0
PGRA	Graciosa	153.78	30	ePKP	PKPdf	04 06 52.5	+0.3
KEST	Kesra	153.78	319	PKP	PKPdf	04 06 52.9	+0.5
	comp=Z,31nm,1.1s,baz=318,slow=3.7,SNR=7.7						
KEST				PKPbc	PKiKP	04 07 01.4	+0.8
	comp=Z,118nm,0.8s,baz=216,slow=2.1,SNR=21						
HOR	Horta	153.85	32	ePKP	PKPdf	04 06 53.1	+0.8
ROSA	Rosais	153.90	31	ePKP	PKPdf	04 06 52.3	-0.1
PCAN	Candelaria	153.97	32	ePKP	PKPdf	04 06 53.4	+0.8
PICO	Pico	153.98	31	ePKP	PKPdf	04 06 53.4	+0.8
PMAN	Manadas	154.04	31	ePKP	PKPdf	04 06 53.3	+0.7
PID	Ribeirinha	154.17	31	ePKP	PKPdf	04 06 54.4	+1.6
PAGU	Agualva, Azore	154.37	29	ePKP	PKPdf	04 06 54.4	+1.3
ADH	Angra Heroismo	154.43	30	ePKP	PKPdf	04 06 54.1	+1.0
PSCM	Serra do Cume	154.45	29	ePKP	PKPdf	04 06 54.4	+1.2
CAEH	'Ain El Ouahch	154.56	324	P	PKPdf	04 06 53.3	-0.1
CKFL	Kef-Lekhel	154.90	324	P	PKPdf	04 06 54.3	+0.3
PBRG	Braganca	155.01	352	ePKPdf	PKPdf	04 06 54.0	+0.1
PBRG	Braganca	155.01	352	ePKPab	PKPab	04 07 21.7	+2.4
PBRG				iLQ	LQ	04 07 54.4	
PBRG	Braganca	155.01	352	ePP	PP	04 10 55.8	+0.7
PBRG	Braganca	155.01	352	eSS	SS	04 30 25.3	+6.4
PGAV	Gavieira, Arco	155.03	354	ePKPdf	PKPdf	04 06 54.5	+0.5
PGAV	Gavieira, Arco	155.03	354	ePKPab	PKPab	04 07 21.8	+2.4
PGAV				iLQ	LQ	04 07 50.9	
PGAV	Gavieira, Arco	155.03	354	ePP	PP	04 10 58.5	+3.2
PGAV	Gavieira, Arco	155.03	354	eSS	SS	04 30 23.3	+4.2
CASM	Ain Smara	155.13	324	P	PKPdf	04 06 53.9	-0.4
DFRA	Djebel Bou Aff	155.27	325	P	PKPdf	04 06 55.1	+0.6
POLO	Lamas de Olo	155.57	353	ePKPdf	PKPdf	04 06 55.1	+0.3
POLO	Lamas de Olo	155.57	353	ePKPab	PKPab	04 07 24.6	+2.9
POLO				iLQ	LQ	04 07 51.9	
POLO	Lamas de Olo	155.57	353	ePP	PP	04 10 58.8	+0.5
POLO	Lamas de Olo	155.57	353	eSS	SS	04 30 28.6	+3.7
PVRL	Vila Real	155.66	353	ePKPdf	PKPdf	04 06 54.8	0.0
PVRL	Vila Real	155.66	353	ePKPab	PKPab	04 07 22.5	+0.5
PVRL				iLQ	LQ	04 07 55.3	
PVRL	Vila Real	155.66	353	ePP	PP	04 11 00.6	+1.9
MVO	Moncorvo	155.68	352	ePKPdf	PKPdf	04 06 55.0	+0.1
MVO	Moncorvo	155.68	352	ePKPab	PKPab	04 07 23.1	+0.9
MVO				iLQ	LQ	04 07 52.2	
MVO	Moncorvo	155.68	352	ePP	PP	04 10 57.7	-1.2
MVO	Moncorvo	155.68	352	eSS	SS	04 30 34.2	+8.1
UCM	Universidad Co	155.77	345	PKP	PKPdf	04 06 53.9	-1.1
SET	Setif	155.78	325	P	PKPdf	04 06 55.0	-0.2
PSET	Sete Cidades	155.81	28	ePKP	PKPdf	04 06 57.2	+2.1
PDA	Ponta Delgada	155.90	28	ePKP	PKPdf	04 06 55.0	-0.1
PCALD	Caldeiras da R	155.94	28	ePKP	PKPdf	04 06 54.9	-0.3
GRON	Grota Negra	155.94	28	ePKP	PKPdf	04 06 56.1	+0.8
CMLA	Cha da Macela	155.94	28	ePKP	PKPdf	04 06 55.9	+0.7
CMLA	Cha da Macela	155.95	28	P		04 06 57.3	
EKNA	AfricaArray -	155.97	240	⇑eP	PKPdf	04 06 56.5	+0.5
BART	Pico Bartolome	156.09	28	ePKP	PKPdf	04 06 56.1	+0.6
PVIS	Viseu	156.23	353	ePKPdf	PKPdf	04 06 55.7	+0.1
PVIS	Viseu	156.23	353	ePKPab	PKPab	04 07 24.9	+0.4
PVIS				iLQ	LQ	04 07 55.3	
MTE	Manteigas	156.50	353	ePKPdf	PKPdf	04 06 56.1	+0.1
MTE	Manteigas	156.50	353	ePKPab	PKPab	04 07 28.8	+3.1
MTE				iLQ	LQ	04 07 56.1	
MTE	Manteigas	156.50	353	ePP	PP	04 11 04.3	+0.9
MTE	Manteigas	156.50	353	eSS	SS	04 30 41.3	+6.4
ESDC	Sonseca Array	156.55	345	PKP	PKPdf	04 06 56.1	+0.1
	comp=Z,18nm,1.1s,baz=351,slow=2.4,SNR=20						
ESDC				PKPab	PKPab	04 07 27.0	+1.0
	comp=Z,39nm,0.7s,baz=11,slow=3.8,SNR=11						
ESDC				PP	PP	04 11 06.2	+2.5
	comp=Z,34nm,1.2s,baz=18,slow=5.0,SNR=6.8						
PSMA	Santa Maria	156.75	29	ePKP	PKPdf	04 06 57.4	+1.1
PAB	San Pablo	156.76	346	PKIKP	PKPdf	04 06 55.8	-0.5
PAB	San Pablo	156.76	346		PKPdf	04 06 55.8	-0.5
PAB				PKPab	PKPab	04 07 27.5	+0.6
PAB	San Pablo	156.76	346	P		04 06 57.1	
PSMN	Pico do Norte,	156.78	29	ePKP	PKPdf	04 06 56.9	+0.6
COI	Coimbra	156.79	354	ePKPdf	PKPdf	04 06 55.3	-0.9
COI	Coimbra	156.79	354	ePKPab	PKPab	04 07 27.5	+0.7
COI				iLQ	LQ	04 07 56.4	

COI	Coimbra	156.79	354	eSS	SS	04 30 42.3	+4.6
PCAS	Casmilo, Conde	156.95	354	ePKPdf	PKPdf	04 06 56.6	+0.1
PCAS	Casmilo, Conde	156.95	354	ePKPab	PKPab	04 07 30.7	+3.1
PCAS				i LQ	LQ	04 07 57.1	
PCAS	Casmilo, Conde	156.95	354	ePP	PP	04 11 07.2	+1.5
PCAS	Casmilo, Conde	156.95	354	eSS	SS	04 30 41.8	+2.3
PCBR	Castelo Branco	157.04	352	ePKPdf	PKPdf	04 06 57.2	+0.6
PCBR	Castelo Branco	157.04	352	ePKPab	PKPab	04 07 28.2	+0.3
PCBR				i LQ	LQ	04 07 56.5	
PCBR	Castelo Branco	157.04	352	ePP	PP	04 11 06.4	+0.1
PMRV	Marv??o	157.44	352	ePKPdf	PKPdf	04 06 57.1	0.0
PMRV	Marv??o	157.44	352	ePKPab	PKPab	04 07 32.7	+3.0
PMRV				i LQ	LQ	04 07 57.3	
PMRV	Marv??o	157.44	352	eSS	SS	04 30 47.0	+2.2
PSBE	So Bento	157.51	355	ePKPdf	PKPdf	04 06 59.3	+2.1
PSBE	So Bento	157.51	355	ePKPab	PKPab	04 07 33.0	+3.0
PSBE				i LQ	LQ	04 07 57.6	
PSBE	So Bento	157.51	355	ePP	PP	04 11 11.6	+2.8
PSBE	So Bento	157.51	355	eSS	SS	04 30 50.5	+5.0
CART	Cartagena	157.58	338	PKP	PKPdf	04 06 56.1	-1.2
SESP	Santiago Espad	157.61	341	P		04 06 59.3	
PMTG	Montargil	157.90	353	ePKPdf	PKPdf	04 06 57.5	-0.2
PMTG	Montargil	157.90	353	ePKPab	PKPab	04 07 34.4	+2.8
PMTG				i LQ	LQ	04 07 57.5	
PMTG	Montargil	157.90	353	ePP	PP	04 11 14.0	+3.1
PMTG	Montargil	157.90	353	eSS	SS	04 30 54.6	+5.1
PESTR	Estremoz	158.02	352	eSS	SS	04 30 56.4	+5.5
PESTR	Estremoz	158.02	352		PKPdf	04 06 58.0	+0.2
PESTR				PKPab	PKPab	04 07 32.6	+0.4
PESTR	Estremoz	158.02	352	P		04 06 59.9	
PMAFR	Mafra	158.11	355	ePKPdf	PKPdf	04 06 58.6	+0.7
PMAFR	Mafra	158.11	355	ePKPab	PKPab	04 07 35.6	+3.0
PMAFR				i LQ	LQ	04 07 57.4	
PMAFR	Mafra	158.11	355	eSS	SS	04 30 56.8	+5.0
LIS	Lisbon	158.33	355	ePKPdf	PKPdf	04 06 57.3	-0.9
LIS	Lisbon	158.33	355	ePKPdf	PKPdf	04 06 58.1	-0.1
LIS	Lisbon	158.33	355	ePKPab	PKPab	04 07 34.0	+0.5
LIS				i LQ	LQ	04 07 58.5	
LIS	Lisbon	158.33	355	ePP	PP	04 11 13.4	+0.1
EVO	Evora	158.40	353	PKP	PKPdf	04 06 59.0	+0.7
EVO	Evora	158.40	353	ePKPdf	PKPdf	04 06 58.6	+0.3
EVO	Evora	158.40	353	ePKPab	PKPab	04 07 36.5	+2.6
EVO				i LQ	LQ	04 07 58.4	
EVO	Evora	158.40	353	ePP	PP	04 11 15.0	+1.3
HORN	Hornachuelos	158.59	346	P		04 06 59.5	
PBAR	Barrancos	158.62	350	ePKPdf	PKPdf	04 06 58.7	+0.1
PBAR	Barrancos	158.62	350	ePKPab	PKPab	04 07 35.6	+0.8
PBAR				i LQ	LQ	04 07 56.6	
PBAR	Barrancos	158.62	350	eSS	SS	04 31 00.4	+3.2
PNCL	Nicolau / Gran	158.88	354	ePKPdf	PKPdf	04 06 59.2	+0.3
PNCL	Nicolau / Gran	158.88	354	ePKPab	PKPab	04 07 36.8	+0.9
PNCL				i LQ	LQ	04 07 59.3	
PNCL	Nicolau / Gran	158.88	354	ePP	PP	04 11 19.7	+3.5
PNCL	Nicolau / Gran	158.88	354	eSS	SS	04 31 06.9	+7.0
PBEJ	Beja	158.88	352	ePKPdf	PKPdf	04 06 59.4	+0.5
PBEJ	Beja	158.88	352	ePKPab	PKPab	04 07 36.9	+0.9
PBEJ				i LQ	LQ	04 08 00.8	
PBEJ	Beja	158.88	352	ePP	PP	04 11 16.3	0.0
MESJ	Messejana	159.11	353	ePKPdf	PKPdf	04 06 58.2	-0.9
MESJ				eSS	SS	04 31 05.1	+2.8
MESJ	Messejana	159.11	353	ePKPdf	PKPdf	04 06 59.5	+0.4
MESJ	Messejana	159.11	353	ePKPab	PKPab	04 07 38.5	+1.6
MESJ				i LQ	LQ	04 08 00.0	
MESJ	Messejana	159.11	353	ePP	PP	04 11 17.8	+0.3
PCVE	Castro Verde	159.29	352	ePKPdf	PKPdf	04 06 59.2	-0.2
PCVE	Castro Verde	159.29	352	ePKPab	PKPab	04 07 39.1	+1.3
PCVE				i LQ	LQ	04 07 59.9	
PCVE	Castro Verde	159.29	352	ePP	PP	04 11 16.1	-2.4
PCVE	Castro Verde	159.29	352	eSS	SS	04 31 08.5	+4.2
EMAL	Malaga-Limoner	159.42	344	PKP	PKPdf	04 06 56.7	-2.9
PTEO	Sao Teotonio	159.46	354	ePKPdf	PKPdf	04 07 00.9	+1.4
PTEO	Sao Teotonio	159.46	354	ePKPab	PKPab	04 07 40.4	+1.9
PTEO				i LQ	LQ	04 08 00.0	
PTEO	Sao Teotonio	159.46	354	ePP	PP	04 11 21.1	+1.7
PVAQ	Vaqueiros	159.47	352	ePKPdf	PKPdf	04 06 59.6	0.0
PVAQ	Vaqueiros	159.47	352	ePKPab	PKPab	04 07 39.8	+1.3
PVAQ				i LQ	LQ	04 08 00.0	
PVAQ	Vaqueiros	159.47	352	ePP	PP	04 11 21.2	+1.7
PVAQ	Vaqueiros	159.47	352	eSS	SS	04 30 59.6	-6.6
PVAQ	Vaqueiros	159.47	352	P		04 07 00.7	
PBDV	Barranco-do-Ve	159.66	352	ePKPdf	PKPdf	04 07 00.2	+0.4
PBDV	Barranco-do-Ve	159.66	352	ePKPab	PKPab	04 07 42.5	+3.1
PBDV				i LQ	LQ	04 08 00.2	
PBDV	Barranco-do-Ve	159.66	352	ePP	PP	04 11 22.1	+1.6
PBDV	Barranco-do-Ve	159.66	352	eSS	SS	04 31 11.9	+3.6
MORF	Marmelete	159.69	354	ePKPdf	PKPdf	04 06 58.9	-1.0
MORF				eSS	SS	04 31 11.1	+2.6
MORF	Marmelete	159.69	354	ePKPdf	PKPdf	04 06 59.6	-0.3
MORF	Marmelete	159.69	354	ePKPab	PKPab	04 07 41.1	+1.6
MORF				i LQ	LQ	04 08 00.1	
MORF	Marmelete	159.69	354	ePP	PP	04 11 23.4	+2.7
MORF	Marmelete	159.69	354	eSS	SS	04 31 12.2	+3.7
PFVI	Vila Bisbo	159.88	354	ePKPdf	PKPdf	04 07 00.0	0.0
PFVI	Vila Bisbo	159.88	354	ePKPab	PKPab	04 07 43.7	+3.4
PFVI				i LQ	LQ	04 08 00.4	
PFVI	Vila Bisbo	159.88	354	eSS	SS	04 31 16.8	+6.4
SFS	San Fernando	160.12	347	PKP	PKPdf	04 07 00.4	+0.1
MELI	Melilla	160.32	339	PKP	PKPdf	04 06 58.7	-1.9
CEU	Ceuta	160.48	345	PKP	PKPdf	04 06 56.6	-4.1
PVLZ	Peæn de	160.87	342	PKP	PKPdf	04 06 58.5	-2.7
IFR	Ifrane	162.66	342	PKP	PKPdf	04 07 02.7	-0.6
TAM	Tamanrasset	163.06	292	PKIKP	PKPdf	04 07 04.0	0.0
TAM						04 07 54.5	
TAM	Tamanrasset	163.06	292		PKPdf	04 07 04.0	0.0
TAM				PKPab	PKPab	04 07 54.5	-0.6
MDT	Midelt	163.15	340	P		04 07 04.5	
AVE	Averroes	163.43	348	PKP	PKPdf	04 07 02.0	-1.9
PMPST	Porto Santo, M	163.46	15	ePKPdf	PKPdf	04 07 04.4	+0.5
PMPST	Porto Santo, M	163.46	15	ePKPab	PKPab	04 07 59.2	+3.1
PMPST	Porto Santo, M	163.46	15	ePP	PP	04 11 41.7	+0.9
PMOZ	Porto Moniz, M	163.47	17	ePKPdf	PKPdf	04 07 06.9	+2.9
PMOZ	Porto Moniz, M	163.47	17	ePKPab	PKPab	04 07 59.4	+3.1
PMPS	Porto Santo	163.48	15	ePKPdf	PKPdf	04 07 03.9	0.0
PMPS	Porto Santo	163.48	15	ePKPab	PKPab	04 07 59.3	+3.1
PMAR	Madeira	163.64	17	ePKPdf	PKPdf	04 07 04.8	+0.5
PMAR	Madeira	163.64	17	ePKPab	PKPab	04 08 00.5	+3.3
PMAR	Madeira	163.64	17	ePP	PP	04 11 45.2	+3.2
FUL	Funchal	163.72	17	ePKPdf	PKPdf	04 07 03.9	-0.2
FUL	Funchal	163.72	17	ePKPab	PKPab	04 08 00.6	+3.3
GOLM	Goulmima	164.28	339	P		04 07 06.0	
SRHM	Skhour des Reh	164.33	349	P		04 07 06.0	
TZRR	Tazzarine	165.33	340	P		04 07 06.0	
OUZM	OUZ	165.57	344	P		04 07 07.0	
ZGR	Zagora	165.96	339	P		04 07 07.0	
TORD	Torodi Ar. Bea	166.73	255	PKP	PKPdf	04 07 06.5	-0.7
	comp=Z,119nm,0.9s,baz=8.0,slow=0.9,SNR=98						
TORD				pPKP	pPKPdf	04 08 05.1	+0.1
	comp=Z,33nm,1.2s,baz=68,slow=4.0,SNR=1.8						
KIC	Kosan Boka	167.50	212	ePKIKP	PKPdf	04 07 05.8	-2.0
	comp=Z,1μm,1.5s						
LIC	Lamto	167.53	211	ePKIKP	PKPdf	04 07 05.6	-2.2
	comp=Z,1μm,1.4s						
DBIC	Dimbokro	167.83	213	PKP	PKPdf	04 07 07.3	-0.7
	comp=Z,252nm,1.1s,baz=127,slow=1.9,SNR=41						
TIC	Toumodi	167.89	212	ePKIKP	PKPdf	04 07 05.2	-2.8
SACV	Santiago Islan	168.12	98		PKPdf	04 07 08.2	+0.1
SACV	Santiago Islan	168.12	98	P		04 07 08.4	
KOWA	Kowa	172.41	251	PKPab	PKPab	04 08 36.0	-0.4
	comp=Z,61nm,0.8s,baz=99,slow=5.3,SNR=8.6						
KOWA	Kowa	172.41	251		PKPdf	04 07 09.6	-0.9
MBO	M'Bour	174.07	116		PKPdf	04 07 11.1	0.0
MBO					PKPab	04 08 43.9	+0.2

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*IDC **23** 03:55:06.3±3.8, 17°.02S×168°.54E, h224^{km}±36^{km}, mb4.1/7, mb1 4.2/8, mb1mx3.8/50, mbtmp4.6/8, Error ellipse: s-maj=32.3km s-min=24.2km az=27.0*

ISC 23 03:55:08.5±0.9**, 17°.2S**±0°.1×**168°.5E**±0°.2**, h250^{km}, n11, σ1^{s}03**/12**, mb4.3**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.27	202	P	Pn	03 56 27.6	-0.1
	3.7nm,0.3s,baz=80,slow=12,SNR=1.8						
DZM				S	S	03 57 30.0	-0.9
	10nm,0.3s,baz=302,slow=23,SNR=5.5						
URZ	Urewera	22.32	162	P	P	03 59 46.7	+1.3
	36nm,0.8s,baz=242,slow=3.5,SNR=6.7						
ASAR	Alice Springs	33.04	253	P	P	04 01 20.4	-0.5
	3.7nm,0.5s,baz=79,slow=9.1,SNR=5.5						
FITZ	Fitzroy Crossi	40.83	262	P	P	04 02 26.5	+0.2
	22nm,1.0s,baz=90,slow=5.0,SNR=6.4						
CMAR	Chiang Mai Arr	77.05	294	P	P	04 06 35.5	+0.9
	1.7nm,0.3s,baz=131,slow=4.0,SNR=4.4						
SEY	Seymchan	80.83	353	P	P	04 06 53.7	-0.4
	5.3nm,0.7s,baz=159,slow=8.4,SNR=5.4						
SONM	Songino Array	85.17	323	P	P	04 07 17.4	+0.6
	3.8nm,1.0s,baz=145,slow=5.0,SNR=5.2						
ILAR	Eielson Array	88.46	18	P	P	04 07 30.0	-2.0
	1.6nm,0.7s,baz=240,slow=4.9,SNR=2.0						
ARCES	ARCESS Array B	122.90	345	PKP	PKPdf	04 13 34.1	-0.1
	2.3nm,0.5s,baz=73,slow=2.0,SNR=16						
DAVOX	Davos/Dischmat	145.59	334	PKPbc	PKPbc	04 14 18.5	+0.5
	8.1nm,0.6s,baz=254,slow=2.4,SNR=4.2						
KEST	Kesra	153.84	319	PKPbc	PKiKP	04 14 39.6	+1.0
	6.2nm,0.8s,baz=0.0,slow=3.0,SNR=2.0						

INET 23 03:57:12.8, 12°.11N×87°.23W, h70^{km}, ML3.5, Near coast of Nicaragua

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MAN 23 03:57:19.7, 12°.13N×123°.91E, h3^{km}, mb4.7, ML3.5, MS3.4, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.83	63	eP	Pg	03 57 35.8	+0.2
CNP				eS	Sb	03 57 48.0	-0.3
CNP	Catarman	0.83	63	eP	Pg	03 57 35.8	+0.2
CNP				eS	Sb	03 57 48.0	-0.3
OCLP	Ormoc	1.27	147	eP	Pg	03 57 43.7	-0.4
OCLP				eS	Sn	03 58 02.4	+0.4
OCLP	Ormoc	1.27	147	eP	Pg	03 57 43.7	-0.4
OCLP				eS	Sn	03 58 02.4	+0.4
PVCP	Virac	1.48	9	eP	Pn	03 57 46.1	-1.1
PVCP				eS	Sn	03 58 07.1	+0.1
SCSP	San Jose Seism	1.56	346	eP	Pn	03 57 47.2	-1.2
SCSP				eS	Sg	03 58 10.9	+1.0
SCSP	San Jose Seism	1.56	346	eP	Pn	03 57 47.2	-1.2
SCSP				eS	Sg	03 58 10.9	+1.0
AUQP	San Andres	1.69	315	eP	Pn	03 57 50.6	+0.5
AUQP				eS	Sg	03 58 16.6	+2.7
AUQP	San Andres	1.69	315	eP	Pn	03 57 50.6	+0.5
AUQP				eS	Sg	03 58 16.6	+2.7
LLP	Lapu-Lapu	1.80	178	⇓iP	Pn	03 57 50.8	-0.9
LLP				i S	Sg	03 58 17.4	-0.3
OTRP	Odiongan	1.86	277	eP	Pn	03 57 51.7	-0.7
OTRP				eS	Sn	03 58 16.6	+0.1
OTRP	Odiongan	1.86	277	eP	Pn	03 57 51.7	-0.7
OTRP				eS	Sn	03 58 16.6	+0.1
GUIM	Jordan	1.98	221	eP	Pn	03 57 54.8	+0.8
GUIM				eS	Sn	03 58 19.5	+0.2
MSLP	Maasin	2.19	155	eP	Pb	03 57 59.8	-0.2
MSLP				eS	Sg	03 58 31.7	+1.5
GQP	Guinayangan	2.27	321	⇓eP	Pn	03 57 58.9	+0.9
GQP				eS	Sn	03 58 27.4	+0.8
JAP	San Jose, Anti	2.36	235	⇑eP	Pb	03 58 02.5	-0.4
JAP				eS	Sb	03 58 33.0	+0.6
LQP	Lukban	3.03	311	⇑eP	Pn	03 58 10.1	+1.3
LQP				i S	Sg	03 59 00.7	+3.5

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*IDC **23** 04:00:40.6±0.9, 37°.15N×97°.63W, h0^{km}, mb3.7/2, mb1 4.0/7, mb1mx3.8/57, mbtmp3.7/7, ML3.5/5, MS4.4/2, Ms1 4.4/2, ms1mx3.7/56, Error ellipse: s-maj=14.2km s-min=10.5km az=111.0*

*NEIC **23** 04:00:41.5±1.0, 37°.10N±0°.03×97°.66W±0°.06, h5^{km}±5^{km}, mb_Lg3.7/135, Error ellipse: s-maj=6.6km s-min=4.7km az=80.0*

*ANF **23** 04:00:41.1±0.1, 37°.08N×97°.67W, h5^{km}, ML4.6/18, Error ellipse: s-maj=1.9km s-min=1.9km az=156.0*

ISC 23 04:00:41.2±0.9**, 37°.10N**±0°.02×**97°.64W**±0°.02**, h9^{km}**±6^{km}**, n175, σ1^{s}13**/177**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.11	302		Pg	04 00 43.5	-0.4
KAN13	South Haven SW	0.15	122		Pg	04 00 44.7	+0.2
KAN13				Sg	Sg	04 00 47.2	+0.4
KS21	Milan North St	0.19	355		Pg	04 00 45.1	-0.2
KS21				Sg	Sg	04 00 47.9	-0.1
KAN14	Manchester OK	0.29	242		Pg	04 00 46.9	-0.1
KAN08	Anthony NE Sta	0.29	297		Pg	04 00 47.0	-0.2
KAN12	Harper NE Stat	0.35	305		Pg	04 00 47.9	-0.2
KAN10	Anthony SW Sta	0.36	275		Pg	04 00 48.3	-0.1
CROK	Carrier	0.65	205		Pg	04 00 53.7	0.0
T35A	Sooner Cattle	0.92	101		Pg	04 00 58.8	-0.2
T35B	Sooner Cattle	0.92	101	P		04 00 58.6	
	baz=281,SNR=219						
T35B				S		04 01 11.2	
	baz=281						
QUOK	Quay	1.19	141		Pg	04 01 03.6	-0.4
OK029	Liberty Lake	1.30	173		Pb	04 01 05.7	-0.2
U32A	Winter Ranch,	1.31	237	Pn	Pn	04 01 05.3	-0.4
U32A	Winter Ranch,	1.31	237	P		04 01 05.3	
	baz=56						
U32A				S		04 01 23.4	
	baz=56						
OK031	S. Brethren Rd	1.31	150		Pn	04 01 05.8	0.0
OK030	Cody Creek RV	1.35	149		Pn	04 01 06.3	0.0
BCOK	Bluff Creek, N	1.44	179	Pn	Pb	04 01 08.0	-0.2
OK025	Westminster Rd	1.53	171		Pb	04 01 09.4	-0.4
R32A	Long Quarter,	1.57	328	Pn	Pn	04 01 09.9	+0.4
R32A	Long Quarter,	1.57	328	P		04 01 09.8	
	baz=148,SNR=932						
R32A				S		04 01 31.0	
	baz=148						
OKCFA	Oklahoma City	1.68	175		Pn	04 01 11.4	+0.5
OKCSW	OKLAHOMA CITY	1.69	174		Pb	04 01 12.0	-0.6
FNO	Franklin	1.84	174		Pn	04 01 13.7	+0.6
TUL1	Leonard	1.90	128	P	Pn	04 01 14.5	+0.7
	baz=309						
TUL1				Sb	Sb	04 01 41.0	+1.0
	baz=309						
TUL1	Leonard	1.90	128	Pn	Pn	04 01 14.7	+0.8
TUL1	Leonard	1.90	128	P		04 01 14.8	
	baz=309,SNR=194						
TUL1				S		04 01 41.1	
	baz=309						
W35A	Tecumseh	2.04	162		Pn	04 01 16.7	+1.0
KSU1	Kansas State U	2.16	22	P	Pn	04 01 18.7	+1.2
	baz=203						
KSU1				S	Sb	04 01 46.6	-0.9
	baz=203						
KSU1	Kansas State U	2.16	22	Pn	Pn	04 01 18.6	+1.1
KSU1	Kansas State U	2.16	22	P		04 01 18.6	
	baz=203,SNR=56						
KSU1				S		04 01 48.0	
	baz=203						
CBKS	Cedar Bluff	2.39	317	P	Pn	04 01 21.1	+0.5
	baz=136,SNR=36						
CBKS				Sb	Sb	04 01 55.3	+1.3
	baz=136						
CBKS	Cedar Bluff	2.39	317		Pn	04 01 21.4	+0.8
CBKS	Cedar Bluff	2.39	317	P		04 01 21.2	
	baz=136,SNR=36						
CBKS				S		04 01 55.3	
	baz=136						
WMOK	Wichita Mounta	2.53	202	P	Pn	04 01 22.6	+0.1
	baz=21,SNR=20						
WMOK				Sb	Sb	04 01 59.0	+0.9
	baz=21						
WMOK	Wichita Mounta	2.53	202	Pn	Pn	04 01 22.9	+0.3
WMOK	Wichita Mounta	2.53	202	P		04 01 23.2	
	baz=21,SNR=68						
U38A	Gravette	2.69	103	Pn	Pn	04 01 26.1	+1.3
U38A				IAmb_Lg		04 02 08.0	
	comp=Z,247nm,0.8s						
U38A	Gravette	2.69	103	P		04 01 25.7	
	baz=285,SNR=21						
HHAR	Hobbs	3.08	104		Pn	04 01 31.4	+1.3
HHAR				IAmb_Lg		04 02 28.2	
	comp=Z,177nm,0.7s						
HHAR	Hobbs	3.08	104	P		04 01 31.4	
	baz=286						
X37A	Clayton	3.11	143		Pn	04 01 30.9	+0.4
X37A	Clayton	3.11	143	P		04 01 31.3	
	baz=324						
S39A	Bolivar	3.49	79		Pn	04 01 36.4	+0.7
S39A				IAmb_Lg		04 02 41.1	
	comp=Z,137nm,0.8s						
S39A	Bolivar	3.49	79	P		04 01 36.3	
	baz=262,SNR=61						
N33B	J Bar K, Exete	3.64	2	P		04 01 38.0	
	baz=183,SNR=22						
N33B				S		04 02 21.5	
	baz=183						
N33A	J Bar K, Exete	3.64	2	Pn	Pn	04 01 37.6	-0.2
W39A	Magazine	3.65	120	P	Pn	04 01 38.5	+0.6
	baz=302						
W39A				Sb	Sb	04 02 33.4	+3.0
	baz=302						
W39A	Magazine	3.65	120		Pn	04 01 38.6	+0.7
W39A				IAmb_Lg		04 02 44.3	
	comp=Z,164nm,0.7s						
Z35A	Perchaven, San	3.77	175	Pn	Pn	04 01 40.9	+1.3
Z35A				IAmb_Lg		04 02 45.9	
	comp=Z,126nm,1.0s						
Z35A	Perchaven, San	3.77	175	P		04 01 40.6	
	baz=355,SNR=21						
Z35A				S		04 02 25.5	
	baz=355						
U40A	Yellville	3.92	99	P	Pn	04 01 42.5	+1.0
	baz=282,SNR=5.7						
U40A				S	Sn	04 02 28.6	+0.9
	baz=282						
U40A	Yellville	3.92	99		Pn	04 01 42.6	+1.0
U40A				IAmb_Lg		04 02 47.3	
	comp=Z,254nm,0.8s						
U40A	Yellville	3.92	99	P		04 01 42.6	
	baz=282,SNR=39						
U40A				P		04 01 42.6	
	baz=282,SNR=39						
U40A				S		04 02 28.7	
	baz=282						
U40A				S		04 02 28.7	
	baz=282						
AMTX	Amarillo	3.95	237	P	Pn	04 01 43.0	+0.8
	baz=55						
AMTX	Amarillo	3.95	237		Pn	04 01 43.6	+1.5
AMTX				IAmb_Lg		04 02 53.2	
	comp=Z,139nm,0.7s						
AMTX	Amarillo	3.95	237	P		04 01 43.3	
	baz=55						
N35A	Tabor	4.07	22		Pn	04 01 44.9	+1.2
P38A	Dawn	4.10	51		Pn	04 01 44.9	+0.8
P38A				IAmb_Lg		04 02 51.2	
	comp=Z,130nm,0.7s						
P38A	Dawn	4.10	51	P		04 01 44.9	
	baz=233,SNR=41						
MIAR	Mount Ida	4.17	126	P	Pn	04 01 45.8	+0.8
	baz=309,SNR=10						
MIAR	Mount Ida	4.17	126		Pn	04 01 46.0	+0.9
MIAR				IAmb_Lg		04 02 53.7	
	comp=Z,176nm,1.0s						
MIAR	Mount Ida	4.17	126	P		04 01 46.0	
	baz=309,SNR=18						
MGMO	Mountain Grove	4.29	88		Pn	04 01 47.9	+1.1
MGMO				IAmb_Lg		04 02 55.9	
	comp=Z,139nm,0.9s						
BGNE	Belgrade	4.33	355	P	Pn	04 01 48.0	+0.7
	baz=175						
BGNE				S	Sn	04 02 38.3	+0.4
	baz=175						
BGNE	Belgrade	4.33	355	Pn	Pn	04 01 47.9	+0.7
BGNE	Belgrade	4.33	355	P		04 01 47.7	
	baz=175,SNR=12						
KSCO	Kaye Shedlock'	4.38	297	P	Pn	04 01 48.3	+0.2
	baz=114,SNR=18						
KSCO				S	Sn	04 02 39.4	+0.2
	baz=114						
KSCO	Kaye Shedlock'	4.38	297	Pn	Pn	04 01 48.3	+0.2
KSCO	Kaye Shedlock'	4.38	297	P		04 01 48.8	
	baz=114,SNR=7.9						
Z38A	Mt. Pleasant	4.40	150		Pn	04 01 48.5	+0.3
Z38A				IAmb_Lg		04 03 04.3	
	comp=Z,209nm,0.8s						
R40A	Maddies Statio	4.42	73		Pn	04 01 50.0	+1.4
R40A	Maddies Statio	4.42	73	P		04 01 49.5	
	baz=256,SNR=52						
FCAR	Ozark Folk Cen	4.60	103		Pn	04 01 51.5	+0.4
FCAR				IAmb_Lg		04 03 09.4	
	comp=Z,157nm,0.7s						
WHAR	Wooly Hollow	4.69	111		Pn	04 01 53.0	+0.9
WHAR				IAmb_Lg		04 03 12.1	
	comp=Z,158nm,0.9s						
X40A	Basin Creek Fa	4.69	122	P	Pn	04 01 53.2	+0.9
	baz=305,SNR=7.1						
X40A				S	Sn	04 02 47.2	+0.4
	baz=305						
X40A	Basin Creek Fa	4.69	122		Pn	04 01 53.5	+1.3
X40A				IAmb_Lg		04 03 10.5	
	comp=Z,124nm,0.7s						
X40A	Basin Creek Fa	4.69	122	P		04 01 53.4	
	baz=305,SNR=6.3						
X40A				P		04 01 53.4	
	baz=305,SNR=6.3						
ABTX	Abilene, Hawle	4.75	201	P	Pn	04 01 52.9	-0.2
	baz=20						
ABTX				S	Sn	04 02 47.9	-0.6
	baz=20						
ABTX	Abilene, Hawle	4.75	201	Pn	Pn	04 01 53.4	+0.2
W41B	Gary Mavity, V	4.77	112	P	Pn	04 01 53.9	+0.7
	baz=295						
W41B	Gary Mavity, V	4.77	112		Pn	04 01 54.1	+0.9
W41B	Gary Mavity, V	4.77	112	P		04 01 54.1	
	baz=295						
UALR	University of	4.88	117	Pn	Pn	04 01 55.9	+1.0
UALR				IAmb_Lg		04 03 23.5	
	comp=Z,173nm,1.0s						
L34A	Svendsen Farm,	4.96	11	Pn	Pn	04 01 56.4	+0.4
L34A				IAmb_Lg		04 03 17.7	
	comp=Z,170nm,0.8s						
WLAR	White Oak Lake	5.02	131	Pn	Pn	04 01 58.0	+1.2
WLAR				IAmb_Lg		04 03 33.9	
	comp=Z,84nm,0.7s						
P40A	Paris	5.03	59		Pn	04 01 58.0	+1.2
P40A				IAmb_Lg		04 03 22.2	
	comp=Z,97nm,0.8s						
P40A	Paris	5.03	59	P		04 01 57.6	
	baz=243,SNR=10						
N38A	Joes South For	5.04	42		Pn	04 01 57.6	+0.5
N38A				IAmb_Lg		04 03 26.3	
	comp=Z,126nm,0.8s						
N38A	Joes South For	5.04	42	P		04 01 57.8	
	baz=224,SNR=20						
WHTX	Lake Whitney,	5.09	178	P	Pn	04 01 58.2	+0.5
	baz=358						
WHTX				S	Sn	04 02 56.5	-0.2
	baz=358						
WHTX	Lake Whitney,	5.09	178	Pn	Pn	04 01 57.9	+0.2
WHTX					LR	04 03 22.0	
WHTX	Lake Whitney,	5.09	178	P		04 01 58.2	
	baz=358,SNR=27						
OGNE	Ogallala	5.15	320	P	Pn	04 01 59.6	+1.0
	baz=137,SNR=9.5						
OGNE				S	Sn	04 02 58.8	+0.7
	baz=137						
OGNE	Ogallala	5.15	320		Pn	04 01 59.7	+1.1
OGNE				IAmb_Lg		04 03 31.9	
	comp=Z,114nm,0.7s						
OGNE	Ogallala	5.15	320	P		04 02 00.2	
	baz=137,SNR=9.0						
CCM	Cathedral Cave	5.17	77	P	Pn	04 01 59.7	+0.9
	baz=261						
CCM				S	Sn	04 02 59.6	+1.0
	baz=261						
CCM	Cathedral Cave	5.17	77		Pn	04 01 59.5	+0.7
CCM				IAmb_Lg		04 03 31.5	
	comp=Z,133nm,1.0s						
CCM	Cathedral Cave	5.17	77	P		04 01 59.5	
	baz=261,SNR=15						
MSTX	Muleshoe	5.22	235	P	Pn	04 01 59.8	+0.2
	baz=52						
MSTX				Sb	Sb	04 03 19.1	+3.5
	baz=52						
MSTX	Muleshoe	5.22	235	Pn	Pn	04 02 00.7	+1.1
MSTX	Muleshoe	5.22	235	P		04 02 00.3	
	baz=52						
T42A	Van Buren	5.24	89	Pn	Pn	04 02 01.1	+1.4
T42A				IAmb_Lg		04 03 32.9	
	comp=Z,115nm,0.7s						
T42A	Van Buren	5.24	89	P		04 02 00.6	
	baz=273,SNR=6.5						
237A	Washetta, Mont	5.30	163		Pn	04 02 01.1	+0.5
237A	Washetta, Mont	5.30	163	P		04 02 00.9	
	baz=344,SNR=17						
LCAR	Lake Charles	5.32	99	Pn	Pn	04 02 01.3	+0.5
LCAR					Sn	04 03 02.2	-0.1

LCAR				IAmb_Lg		04 03 30.8	
	comp=Z,151nm,1.1s						
T25A	**Trinidad**	**5.41**	**273**	P	**Pn**	**04 02 02.5**	**+0.2**
	baz=88						
T25A	**Trinidad**	**5.41**	**273**	Pn	**Pn**	**04 02 03.0**	**+0.7**
T25A				IAmb_Lg		04 03 40.5	
	comp=Z,130nm,0.8s						
Z41A	**Richland Creek**	**5.51**	**133**	S	**Sn**	**04 03 05.8**	**-1.1**
	baz=315						
K31A	**O'Neill**	**5.59**	**352**	Pn	**Pn**	**04 02 05.3**	**+0.7**
CCAR	**Cane Creek**	**5.74**	**122**		**Sg**	**04 03 44.8**	**-0.7**
CCAR				IAmb_Lg		04 03 47.2	
	comp=Z,98nm,0.9s						
PBMO	**Poplar Bluff**	**5.78**	**91**	Pn	**Pn**	**04 02 08.2**	**+1.0**
PBMO				IAmb_Lg		04 03 47.5	
	comp=Z,175nm,0.7s						
FVM	**French Village**	**5.80**	**79**	Pn	**Pn**	**04 02 07.8**	**+0.3**
NATX	**Nacogdoches**	**5.86**	**154**	P	**Pn**	**04 02 09.2**	**+0.8**
	baz=336						
NATX				S	**Sn**	**04 03 14.1**	**-1.6**
	baz=336						
SCIA	**State Center**	**5.90**	**34**	P	**Pn**	**04 02 09.8**	**+1.0**
	baz=217						
SCIA	**State Center**	**5.90**	**34**	Pn	**Pn**	**04 02 09.7**	**+0.9**
SCIA					**Sg**	**04 03 53.0**	**+2.4**
SCIA				IAmb_Lg		04 03 58.2	
	comp=Z,130nm,0.8s						
SLM	**Saint Louis**	**6.06**	**73**	Pn	**Pn**	**04 02 12.2**	**+1.2**
SLM					**Sn**	**04 03 18.0**	**-2.5**
X43A	**Marvell**	**6.06**	**113**	Pn	**Pn**	**04 02 12.6**	**+1.5**
X43A				IAmb_Lg		04 03 55.2	
	comp=Z,158nm,1.0s						
LPAR	**Lepanto**	**6.11**	**102**	IAmb_Lg		04 03 57.1	
	comp=Z,156nm,0.7s						
Q24A	**Divide**	**6.21**	**290**	P	**Pn**	**04 02 13.4**	**0.0**
	baz=105						
Q24A	**Divide**	**6.21**	**290**	Pn	**Pn**	**04 02 13.7**	**+0.2**
Q24A				IAmb_Lg		04 04 07.7	
	comp=Z,74nm,0.9s						
SDCO	**Great Sand Dun**	**6.29**	**278**	Pn	**Pn**	**04 02 15.3**	**+0.8**
435B	**Jarrell**	**6.30**	**180**	P	**Pn**	**04 02 14.1**	**-0.2**
	baz=360						
435B	**Jarrell**	**6.30**	**180**		**Pn**	**04 02 13.8**	**-0.5**
435B				IAmb_Lg		04 04 03.9	
	comp=Z,100nm,0.7s						
435B	**Jarrell**	**6.30**	**180**	P		04 02 14.3	
	baz=360						
N41A	**Harden Midland**	**6.40**	**54**	Pn	**Pn**	**04 02 16.6**	**+0.9**
N41A				IAmb_Lg		04 04 05.6	
	comp=Z,109nm,0.8s						
N41A	**Harden Midland**	**6.40**	**54**	P		04 02 16.2	
	baz=238						
HENM	**Henderson Moun**	**6.56**	**91**	Pn	**Pn**	**04 02 18.8**	**+1.0**
HENM					LR	04 04 09.3	
ECSD	**EROS Data Cent**	**6.68**	**6**	P	**Pn**	**04 02 19.2**	**-0.3**
	baz=187						
ECSD	**EROS Data Cent**	**6.68**	**6**		**Pn**	**04 02 19.6**	**0.0**
ECSD	**EROS Data Cent**	**6.68**	**6**	P		04 02 19.1	
	baz=187,SNR=32						
K38A	**Parkersburg**	**6.69**	**33**	Pn	**Pn**	**04 02 20.5**	**+0.8**
K38A				IAmb_Lg		04 04 24.4	
	comp=Z,95nm,0.8s						
S44A	**Carbondale**	**6.70**	**82**	Pn	**Pn**	**04 02 21.1**	**+1.3**
S44A					**Sn**	**04 03 35.1**	**-1.2**
SIUC	**Southern Illin**	**6.73**	**82**	Pn	**Pn**	**04 02 21.3**	**+1.0**
SIUC					**Sn**	**04 03 38.3**	**+1.2**
SIUC				IAmb_Lg		04 04 23.1	
	comp=Z,135nm,0.7s						
143A	**Socs Landing,**	**6.74**	**129**	IAmb_Lg		04 04 29.9	
	comp=Z,58nm,0.8s						
HICK	**Hickman**	**6.77**	**92**	Pn	**Pn**	**04 02 23.0**	**+2.2**
HALT	**Halls**	**6.79**	**98**	Pn	**Pn**	**04 02 21.8**	**+0.8**
ISCO	**Idaho Springs**	**6.81**	**296**	P	**Pn**	**04 02 22.0**	**+0.3**
	baz=111						
ISCO	**Idaho Springs**	**6.81**	**296**	Pn	**Pn**	**04 02 23.0**	**+1.3**
ISCO	**Idaho Springs**	**6.81**	**296**	P		04 02 22.0	
	baz=111,SNR=14						
JCT	**Junction City**	**6.84**	**196**	P	**Pn**	**04 02 21.5**	**-0.3**
	baz=14						
JCT	**Junction City**	**6.84**	**196**	Pn	**Pn**	**04 02 22.2**	**+0.4**
JCT				IAmb_Lg		04 04 25.8	
	comp=Z,82nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.87**	**66**		**Pn**	**04 02 22.1**	**0.0**
P43A	**Skaggs, Pawnee**	**6.87**	**66**	P		04 02 22.3	
	baz=251						
L40A	**Anamosa**	**7.01**	**43**		**Pn**	**04 02 24.4**	**+0.3**
L40A				IAmb_Lg		04 04 23.2	
	comp=Z,68nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.04**	**73**	Pn	**Pn**	**04 02 25.6**	**+1.0**
Q44A	**Meyer Farm, Va**	**7.04**	**73**	P		04 02 25.3	
	baz=258						
W45A	**Hickory Valley**	**7.11**	**103**	IAmb_Lg		04 04 31.2	
	comp=Z,110nm,0.8s						
OXF	**Oxford**	**7.17**	**109**	P	**Pn**	**04 02 26.1**	**-0.1**
	baz=294						
OXF	**Oxford**	**7.17**	**109**		**Pn**	**04 02 26.7**	**+0.4**
T45A	**Paducah**	**7.19**	**88**	Pn	**Pn**	**04 02 28.0**	**+1.4**
T45A					**Sn**	**04 03 50.9**	**+2.4**
Y45A	**Yeager Farm, C**	**7.35**	**114**	IAmb_Lg		04 04 53.4	
	comp=Z,83nm,0.8s						
HDIL	**Hopedale**	**7.37**	**60**	P	**Pn**	**04 02 28.9**	**-0.2**
	baz=245,SNR=6.7						
HDIL	**Hopedale**	**7.37**	**60**		**Pn**	**04 02 30.4**	**+1.3**
PHWY	**Pilot Hill**	**7.38**	**307**	Pn	**Pn**	**04 02 29.4**	**0.0**
GDL2	**Guadalupe Moun**	**7.38**	**231**	Pn	**Pn**	**04 02 29.2**	**-0.1**
SUSD	**Miller**	**7.41**	**353**	IAmb_Lg		04 04 36.8	
	comp=Z,98nm,0.8s						
ANMO	**Albuquerque**	**7.46**	**256**	Pn	**Pn**	**04 02 34.3**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=304,slow=2.0,SNR=1.7						
ANMO				Pg	Pb	04 02 57.1	+6.1
	comp=Z,1.1nm,0.3s,baz=75,slow=19,SNR=9.0						
ANMO				Lg	Lg	04 04 32.7	
	comp=Z,2.3nm,0.3s,baz=340,slow=19,SNR=7.3						
ANMO				LR	LR	04 04 59.8	
	comp=Z,2µm,20.6s,baz=117,slow=35						
ANMO	**Albuquerque**	**7.46**	**256**		**Pn**	**04 02 31.4**	**+0.9**
N23A	**Red Feather La**	**7.50**	**303**	P	**Pn**	**04 02 31.4**	**+0.4**
	baz=118						
N23A	**Red Feather La**	**7.50**	**303**	Pn	**Pn**	**04 02 31.8**	**+0.7**
N23A				IAmb_Lg		04 04 44.7	
	comp=Z,86nm,0.8s						
I37A	**Lemond, Waseca**	**7.63**	**24**	IAmb_Lg		04 04 54.9	
	comp=Z,81nm,0.8s						
O44A	**Mansfield**	**7.80**	**64**	IAmb_Lg		04 04 51.6	
	comp=Z,109nm,0.7s						
L42A	**Oliver, Polo**	**7.87**	**49**	Pn	**Pn**	**04 02 36.5**	**+0.6**
L42A				IAmb_Lg		04 04 52.0	
	comp=Z,87nm,0.9s						
L42A	**Oliver, Polo**	**7.87**	**49**	P		04 02 36.3	
	baz=234,SNR=6.4						
BNM	**Barren Site**	**7.89**	**251**	Pn	**Pn**	**04 02 37.1**	**+0.7**
WVT	**Waverly**	**7.95**	**94**	Pn	**Pn**	**04 02 38.4**	**+1.4**
WVT				IAmb_Lg		04 05 03.5	
	comp=Z,63nm,0.7s						
JFWS	**Jewell Farm**	**8.12**	**42**	P	**Pn**	**04 02 39.5**	**+0.2**
	baz=227						
JFWS	**Jewell Farm**	**8.12**	**42**	Pn	**Pn**	**04 02 40.0**	**+0.7**
JFWS				IAmb_Lg		04 05 22.8	
	comp=Z,44nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.14**	**251**	IAmb_Lg		04 05 15.6	
	comp=Z,102nm,0.8s						
146A	**Union**	**8.34**	**120**	IAmb_Lg		04 05 26.9	
	comp=Z,44nm,0.9s						
MNTX	**Cornudas Mount**	**8.36**	**232**	Pn	**Pn**	**04 02 43.8**	**+1.2**
RSSD	**Black Hills**	**8.54**	**327**	P	**Pn**	**04 02 45.8**	**+0.6**
	baz=143						
RSSD	**Black Hills**	**8.54**	**327**	Pn	**Pn**	**04 02 46.3**	**+1.0**
RSSD	**Black Hills**	**8.54**	**327**	P		04 02 46.3	
	baz=143,SNR=7.3						
P46A	**Rosedale**	**8.57**	**70**	Pn	**Pn**	**04 02 47.2**	**+1.6**
M44A	**Midewin, Midew**	**8.59**	**57**	IAmb_Lg		04 05 14.7	
	comp=Z,66nm,0.8s						
I40A	**Norwalk**	**8.64**	**36**	Pn	**Pn**	**04 02 47.1**	**+0.6**
RWWY	**Rawlins**	**8.71**	**305**	IAmb_Lg		04 05 29.7	
	comp=Z,77nm,1.3s						
Z47A	**Carrollton**	**8.75**	**114**	IAmb_Lg		04 05 36.4	
	comp=Z,54nm,0.9s						
F33A	**5 Mile Ranch,**	**8.80**	**6**	Pn	**Pn**	**04 02 49.3**	**+0.8**
F33A				IAmb_Lg		04 05 22.5	
	comp=Z,50nm,0.9s						
K22A	**Casper**	**8.80**	**312**	IAmb_Lg		04 05 32.8	
	comp=Z,56nm,1.1s						
V48A	**Smith Brothers**	**8.82**	**96**	IAmb_Lg		04 05 22.4	
	comp=Z,47nm,0.8s						
SFIN	**Lafayette**	**8.87**	**65**	P	**Pn**	**04 02 49.6**	**+0.1**
	baz=252						
SFIN	**Lafayette**	**8.87**	**65**	Pn	**Pn**	**04 02 50.6**	**+1.0**
SPMN	**Marine on St.**	**8.90**	**23**	P	**Pn**	**04 02 50.5**	**+0.5**
	baz=206						
PV11	**David Mesa, Pa**	**8.98**	**281**	IAmb_Lg		04 05 29.9	
	comp=Z,38nm,1.0s						
BLO	**Bloomington**	**9.00**	**73**	IAmb_Lg		04 05 25.9	
	comp=Z,82nm,0.7s						
L44A	**Lake County Fo**	**9.06**	**53**	P	**Pn**	**04 02 51.6**	**-0.6**
	baz=239						
WCI	**Wyandotte Cave**	**9.07**	**79**	Pn	**Pn**	**04 02 53.5**	**+1.1**
K43A	**Burlington**	**9.08**	**49**	Pn	**Pn**	**04 02 52.4**	**-0.1**
K43A				IAmb_Lg		04 05 30.0	
	comp=Z,75nm,0.9s						
CLTN	**Cedars of Leba**	**9.15**	**93**	IAmb_Lg		04 05 34.3	
	comp=Z,50nm,1.0s						
TX31	**Lajitas Ar. Si**	**9.24**	**215**	Pn	**Pn**	**04 02 54.8**	**0.0**
TX32	**Lajitas Array**	**9.24**	**215**	Pn	**Pn**	**04 02 54.8**	**0.0**
TXAR	**Lajitas Array**	**9.24**	**215**	Pn	**Pn**	**04 02 53.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=44,slow=11,SNR=18						
TXAR				Pg		04 03 26.7	
	comp=Z,1.0nm,0.3s,baz=25,slow=13,SNR=6.5						
TXAR				Lg	Lg	04 05 29.6	
	comp=Z,1.1nm,0.3s,baz=35,slow=33,SNR=3.8						
F36A	**Milaca**	**9.29**	**18**	Pn	**Pn**	**04 02 56.5**	**+1.2**
F36A				IAmb_Lg		04 05 36.5	
	comp=Z,42nm,1.1s						
I42A	**Draeger Farm,**	**9.50**	**42**	Pn	**Pn**	**04 02 58.3**	**+0.2**
I42A				IAmb_Lg		04 05 36.2	
	comp=Z,56nm,1.3s						
LRAL	**Lakeview Retre**	**9.62**	**112**	IAmb_Lg		04 05 50.9	
	comp=Z,37nm,1.1s						
Y49A	**Blount Mountai**	**9.71**	**106**	IAmb_Lg		04 05 57.7	
	comp=Z,44nm,0.8s						
E28A	**Huff**	**9.74**	**347**	IAmb_Lg		04 06 02.1	
	comp=Z,56nm,0.9s						
P48A	**Milroy**	**9.89**	**72**	Pn	**Pn**	**04 03 03.2**	**-0.4**
P48A				IAmb_Lg		04 06 05.7	
	comp=Z,55nm,0.8s						
G40A	**Rib Lake**	**9.90**	**32**	Pn	**Pn**	**04 03 04.7**	**+0.9**
T50A	**Nancy**	**10.23**	**87**	Pn	**Pn**	**04 03 10.0**	**+1.7**
PD31	**Pinedale Array**	**10.76**	**305**	Pn	**Pn**	**04 03 16.6**	**+1.0**
PDAR	**Pinedale Array**	**10.76**	**305**	Pn	**Pn**	**04 03 15.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=122,slow=16,SNR=1.7						
PDAR				Pg		04 03 59.6	
	comp=Z,0.6nm,0.3s,baz=116,slow=15,SNR=4.6						
PDAR				Lg	Lg	04 06 15.8	
	comp=Z,0.7nm,0.3s,baz=114,slow=27,SNR=3.8						
TKL	**Tuckaleechee C**	**11.27**	**93**	Pn	**Pn**	**04 03 22.5**	**0.0**
	comp=Z,0.3nm,0.3s,baz=279,slow=9.1,SNR=2.0						
TKL				Lg	Lg	04 06 31.3	
	comp=Z,1.6nm,0.3s,baz=28,slow=16,SNR=9.3						
TKL				LR	LR	04 07 11.9	
	comp=Z,3µm,19.6s,baz=88,slow=35						
L48A	**N Adams**	**11.29**	**61**	Pn	**Pn**	**04 03 23.2**	**+0.4**
DGMT	**Dagmar**	**12.34**	**339**	P	**Pn**	**04 03 35.4**	**-1.7**
	baz=155						
GLMI	**Grayling**	**12.50**	**48**	P	**Pn**	**04 03 37.6**	**-1.7**
	baz=236						
ULM	**Lac du Bonnet**	**13.21**	**5**	Pn	**Pn**	**04 03 44.9**	**-4.1**
	comp=Z,0.6nm,0.3s,baz=187,slow=12,SNR=6.3						
ULM				Sn	Sn	04 06 04.2	-12
	comp=Z,0.7nm,0.3s,baz=282,slow=9.1,SNR=1.7						
ULM				Lg	Lg	04 07 29.9	
	comp=Z,0.3nm,0.3s,baz=273,slow=19,SNR=1.0						
SADO	**Sadowa**	**15.92**	**55**	Pn	**Pn**	**04 04 19.6**	**-5.8**
	comp=Z,0.2nm,0.3s,baz=282,slow=9.3,SNR=1.3						
CMIG	**Matias Romero**	**20.07**	**172**	P	Pn	04 05 17.5	+0.7
	comp=Z,2.8nm,0.7s,baz=51,slow=0.7,SNR=6.9						
ILAR	**Eielson Array**	**39.98**	**330**	P	**P**	**04 08 16.7**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=100,slow=7.1,SNR=4.2						

ROM 23 04:03:54.4±0.1,44°.130N±0°.006×11°.138E±0°.007, h10^{km},ML2.1/1,2C-3D,Error ellipse: s-maj=0.7km s-min=0.5km az=350.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.04**	**344**	⇓*e*P	Pg	04 03 56.2	-0.2
FNVD				S	Sg	04 03 57.4	-0.4
MTCR	**Monte La Croce**	**0.14**	**225**	⇑*e*P	Pg	04 03 58.4	+0.6
MTCR				S	Sg	04 04 01.2	+1.1
MTCR				AML	AML		
	comp=E,4100µm,1.1s						
MTCR				AML	AML		
	comp=N,4295µm,0.3s						
MTCR				AML	AML		
	comp=E,4105µm,1.1s						
PTF	**Prato**	**0.18**	**196**	⇓*e*P	Pg	04 03 58.9	+0.7
PTF				S	Sg	04 04 01.9	+1.1
ZCCA	**Zocca**	**0.25**	**332**	⇓*e*P	Pg	04 04 00.5	+0.9
ZCCA				S	Sg	04 04 05.7	+2.7
ZCCA				AML	AML		
	comp=N,798µm,0.4s						
ZCCA				AML	AML		
	comp=E,432µm,0.9s						
ZCCA				AML	AML		
	comp=N,826µm,0.5s						
ZCCA				AML	AML		
	comp=E,494µm,0.5s						
BRIS	**BRISIGHELLA**	**0.27**	**86**	P	Pn	04 04 03.9	-0.6
BRIS				S	Sb	04 04 11.5	+5.4
BRIS				AML	AML		
	comp=E,150µm,0.7s						
BRIS				AML	AML		
	comp=N,321µm,0.4s						
POPM	**Popiglio**	**0.29**	**253**	P	Pg	04 04 00.6	+0.4
POPM				S	Sg	04 04 05.3	+1.3
POPM				AML	AML		
	comp=E,902µm,0.8s						
POPM				AML	AML		
	comp=N,2355µm,0.2s						
MTRZ	**Monterenzio**	**0.34**	**44**	P	Pg	04 04 00.4	-0.8
MTRZ				AML	AML		
	comp=N,813µm,0.8s						
MTRZ				AML	AML		
	comp=E,816µm,1.1s						
MTRZ				AML	AML		
	comp=N,808µm,0.8s						
MTRZ				AML	AML		
	comp=N,812µm,0.8s						
MTRZ				AML	AML		
	comp=E,816µm,1.1s						
MTRZ				AML	AML		
	comp=E,783µm,1.1s						
RUFI	**Rufina**	**0.40**	**137**	P	Pg	04 04 02.4	+0.2
RUFI				S	Sb	04 04 08.7	-0.9
BDI	**Bagni Di Lucca**	**0.40**	**260**	P	Pg	04 04 02.3	+0.1
BDI				S	Sg	04 04 08.4	+0.9
BDI				AML	AML		
	comp=N,676µm,0.3s						
BDI				AML	AML		
	comp=N,611µm,0.3s						
BDI				AML	AML		
	comp=E,480µm,1.5s						
BDI				AML	AML		
	comp=E,486µm,1.5s						
LMD	**Lutirano**	**0.41**	**97**	P	Pg	04 04 02.3	-0.2
LMD				S	Sb	04 04 09.3	-1.0
LMD				AML	AML		
	comp=N,158µm,0.9s						
LMD				AML	AML		
	comp=E,150µm,1.6s						
MAIM	**Mastiano**	**0.51**	**245**	P	Pg	04 04 04.4	0.0
MAIM				S	Sb	04 04 12.1	-1.0
MAIM				AML	AML		
	comp=N,215µm,1.4s						
MAIM				AML	AML		
	comp=N,216µm,1.4s						
MAIM				AML	AML		
	comp=E,181µm,0.4s						
VLC	**Villacollemand**	**0.54**	**273**	P	Pb	04 04 05.7	-0.4
VLC				S	Sb	04 04 13.3	-0.6
VLC				AML	AML		
	comp=E,110µm,0.7s						
VLC				AML	AML		
	comp=N,169µm,1.0s						
VLC				AML	AML		
	comp=E,95µm,0.6s						
VLC				AML	AML		
	comp=N,174µm,1.0s						
SFI	**Santa Sofia**	**0.56**	**114**	P	Pg	04 04 05.3	+0.1
SFI				S	Sb	04 04 13.9	-0.5
SFI				AML	AML		
	comp=N,239µm,0.7s						
SFI				AML	AML		
	comp=E,222µm,0.2s						
ERBM	**Eremo**	**0.60**	**299**	P	Pb	04 04 06.6	-0.4
PII	**Pisa**	**0.60**	**228**	⇑P	Pg	04 04 06.1	0.0
PII				S	Sg	04 04 14.7	+0.7
PII				AML	AML		
	comp=N,530µm,0.3s						
PII				AML	AML		
	comp=N,530µm,0.3s						
PII				AML	AML		
	comp=E,495µm,0.2s						
OSSC	**Osservatorio P**	**0.61**	**173**	P	Pb	04 04 08.0	+0.8
OSSC				S	Sb	04 04 16.6	+0.7
CSNT	**Castellina Chi**	**0.67**	**170**	P	Pg	04 04 07.5	+0.2
CSNT				S	Sb	04 04 17.2	-0.3
PLMA	**Palmaria, Port**	**0.93**	**266**	P	Pn	04 04 13.4	-0.2
PLMA				S	Sb	04 04 24.8	-0.3
ATFO	**Monte Foce - G**	**1.29**	**126**	S	Sn	04 04 37.0	+1.0
FDMO	**Fiordimonte**	**1.79**	**127**	S	Sn	04 04 48.0	-0.3
MTCE	**Montecelio**	**2.41**	**150**	S	Sg	04 05 12.0	+0.1

ATH 23 04:05:39.1,39°.10N×23°.55E,h16^{km}±1^{km},ML1.5/1,Error ellipse: s-maj=2.0km s-min=1.0km az=84.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.25**	**78**	P	Pg	04 05 44.4	-0.2
NEO	**Neokhori**	**0.33**	**310**	P	Pg	04 05 45.9	-0.1
NEO				S	Sg	04 05 50.7	-0.1
NEO				AML	AML	04 05 50.9	
	comp=E,194µm,0.1s						
NEO				AML	AML	04 05 51.3	
	comp=N,327µm,0.2s						
SMIA	**Simia**	**0.34**	**231**	P	Pg	04 05 46.1	-0.1
SMIA				S	Sg	04 05 51.2	+0.2
XOR	**Xorichti**	**0.39**	**314**	P	Pg	04 05 47.1	+0.1
XOR				S	Sg	04 05 52.4	-0.1
VOL2	**Volos**	**0.54**	**300**	P	Pn	04 05 51.9	-0.3
VOL2				S	Sn	04 06 00.4	-0.5
ATAL	**Atalanti**	**0.58**	**226**	P	Pg	04 05 50.5	0.0
ATAL				S	Sg	04 05 58.3	+0.2
LKR	**Lokris**	**0.62**	**224**	P	Pg	04 05 51.0	-0.2
LKR				S	Sg	04 05 59.6	+0.1
AXAR	**Agios Charalam**	**0.77**	**245**	P	Pg	04 05 53.2	-0.9
AGG	**Agios Georgios**	**0.95**	**266**	P	Pb	04 05 56.4	-0.8
AGG				S	Sb	04 06 09.8	+0.1
MAKR	**Makrakomi, Fth**	**1.11**	**266**	P	Pb	04 05 59.4	-0.5
MAKR				S	Sn	04 06 14.7	-0.3

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*JMA **23** 04:09:32.7±0.2,34°.29N×140°.40E,h55^{km}±3^{km},M3.6*
JMA Felt I J1.
*IDC **23** 04:09:33.9±1.4,34°.18N×140°.16E,h85^{km}±16^{km},mb3.3/3, mb1 3.7/4,mb1mx3.3/55,mbtmp3.6/4,Error ellipse: s-maj=39.6km s-min=7.8km az=75.0*

ISC 23 04:09:32.3±1.0,34°.26N±0°.04×140°.42E±0°.06,h64^{km}±10^{km}, n24,σ0ˢ.61/27,mb3.8/3,5C-3D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.55**	**8**	⇑P	**Pn**	**04 09 44.9**	**+0.2**
BSO3				X		04 09 54.3	
BSO1	**Boso 1**	**0.61**	**49**	⇓P	**Pn**	**04 09 45.2**	**+0.1**
BSO1				X		04 09 56.1	
BSO4	**Boso 4**	**0.73**	**355**	⇑P	**Pn**	**04 09 47.3**	**+0.3**
JMKN	**Mikurajimanish**	**0.78**	**242**	⇑P	**Pn**	**04 09 47.9**	**+0.2**
JMKN				S	**Sn**	**04 09 59.4**	**+0.4**
TATJ	**Tateyama 2**	**0.89**	**331**	⇑P	**Pn**	**04 09 49.4**	**+0.4**
JKUC	**kamogawauchiur**	**0.92**	**349**	⇑P	**Pn**	**04 09 49.4**	**0.0**
JIM2	**Oshima 3**	**0.94**	**299**	⇓P	**Pn**	**04 09 49.4**	**-0.2**
JIM2				S	**Sn**	**04 10 01.6**	**-0.9**
JTHY	**Toshimahigashi**	**0.97**	**286**	P	**Pn**	**04 09 50.5**	**+0.4**
JKO	**Kozu shima**	**1.06**	**266**	P	**Pn**	**04 09 51.6**	**+0.3**
JKO				S	**Sn**	**04 10 05.7**	**+0.3**
JHJ2	**Mitsune**	**1.25**	**204**	P	**Pn**	**04 09 54.1**	**+0.4**
JHJ2				S	**Sn**	**04 10 10.2**	**+0.5**
JHJ	**Hachijo jima 2**	**1.26**	**205**	P	**Pn**	**04 09 54.1**	**+0.4**
	71nm,0.3s,baz=116,slow=23,SNR=24						
JHJ				S	**Sn**	**04 10 09.9**	**+0.1**
	306nm,0.3s,baz=269,slow=23,SNR=9.6						
KTJ3	**Kamata3**	**1.30**	**302**	⇓P	**Pn**	**04 09 54.0**	**-0.4**
KTJ3				S	**Sn**	**04 10 09.7**	**-1.2**
JIZS	**Izushimoda**	**1.35**	**290**	P	**Pn**	**04 09 55.3**	**+0.3**
JIZS				S	**Sn**	**04 10 12.5**	**+0.3**
MJAR	**Matsushiro Arr**	**2.91**	**322**	P	**Pn**	**04 10 17.6**	**+1.5**
	1.7nm,0.3s,baz=160,slow=13,SNR=43						
MJAR				S	**Sn**	**04 10 50.4**	**+0.5**
	1.3nm,0.3s,baz=143,slow=26,SNR=12						
MAT	**Matsushiro**	**2.91**	**322**	P	**Pn**	**04 10 16.7**	**+0.6**
MAT				S	**Sn**	**04 10 50.4**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**27.57**	**115**	T	T	04 44 11.2	
	baz=306,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.58**	**115**	T	T	04 44 16.2	
	baz=306,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.59**	**115**	T	T	04 44 23.1	
	baz=306,slow=75						
H11S3	**WAKE ISLAND Hy**	**28.17**	**117**	T	T	04 45 06.6	
	baz=308						
H11S1	**WAKE ISLAND Hy**	**28.18**	**117**	T	T	04 45 05.6	
	baz=308						
H11S2	**WAKE ISLAND Hy**	**28.19**	**117**	T	T	04 45 07.7	
	baz=308						
ILAR	**Eielson Array**	**52.27**	**31**	P	**P**	**04 18 37.2**	**+0.4**
	1.0nm,1.0s,baz=279,slow=7.0,SNR=1.3						
WRA	**Warramunga Arr**	**54.21**	**187**	P	**P**	**04 18 50.3**	**-1.2**
	0.9nm,0.5s,baz=5.7,slow=7.9,SNR=13						
YKA	**Yellowknife Ar**	**66.61**	**29**	P	**P**	**04 20 15.6**	**0.0**
	0.1nm,0.6s,baz=304,slow=5.4,SNR=4.1						

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*IDC **23** 04:09:51.6±1.7,0°.40S×132°.67E,h0^{km},mb3.7/2, mb1 3.9/3,mb1mx3.5/46,mbtmp3.7/3,ML3.3/1,Error ellipse: s-maj=27.5km s-min=18.8km az=170.0*
*DJA **23** 04:09:52.0±1.5,0°S±17°×13°3E±°,h10^{km},M4.0/4, MLv4.0/4*

ISC 23 04:09:52.8±1.7,0°.5S±0°.1×132°.6E±0°.1,h10^{km},n6,σ0ˢ.77/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	**Sorong**	**1.41**	**255**	Pg	**Pb**	**04 10 19.4**	**+0.1**
	100nm,0.3s,baz=54,slow=19,SNR=98						
SIJI				Lg	Lg	04 10 38.3	
	128nm,0.3s,baz=242,slow=23,SNR=12						
SWI	**Sorong**	**1.42**	**255**	P	**Pn**	**04 10 18.0**	**-0.7**
SWI				S	**Sn**	**04 10 37.8**	**+0.4**
FAKI	**Fak Fak**	**2.43**	**189**	P	**Pb**	**04 10 36.3**	**-0.4**
WRA	**Warramunga Arr**	**19.39**	**175**	P	**Pn**	**04 14 20.2**	**-0.1**
	0.1nm,0.3s,baz=354,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**23.06**	**177**	P	**P**	**04 14 59.9**	**+1.2**
	2.2nm,0.7s,baz=351,slow=10,SNR=15						
MKAR	**Makanchi Array**	**64.39**	**324**	P	**P**	**04 20 29.1**	**-0.2**
	0.6nm,0.7s,baz=114,slow=8.2,SNR=4.9						

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*IDC **23** 04:25:25.7±4.3,37°.19N×72°.18E,h181^{km}±33^{km},mb3.3/7, mb1 3.5/13,mb1mx3.1/67,mbtmp4.1/13,MS4.1/1, Ms1 4.1/1,ms1mx3.3/37,Error ellipse: s-maj=39.0km s-min=22.7km az=169.0*
*NEIC **23** 04:25:28.3±1.5,37°.47N±0°.06×72°.13E±0°.10,h197^{km}±9^{km}, mb4.1/5,Error ellipse: s-maj=12.3km s-min=7.7km az=56.0*
*NNC **23** 04:25:32.6±2.5,37°.81N×72°.14E,h191^{km}±36^{km},mb2.9, mpv3.9,Error ellipse: s-maj=26.3km s-min=13.6km az=11.0*

ISC 23 04:25:27.1±0.6,37°.37N±0°.06×72°.27E±0°.07,h200^{km},n46, σ1ˢ.75/51,mb3.6/8,4C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIL	**Nilore**	**3.80**	**168**		**Pn**	**04 26 28.9**	**+2.5**
KBL	**Kabul**	**3.85**	**224**		**Pn**	**04 26 28.2**	**+1.0**
AML	**Almayashu**	**4.88**	**13**	P	**Pn**	**04 26 40.3**	**+0.1**
	SNR=108						
UCH	**Uchtor**	**5.15**	**19**	P	**Pn**	**04 26 43.9**	**+0.2**
	SNR=11						
EKS2	**Erkin-Say**	**5.41**	**12**	P	**Pn**	**04 26 48.0**	**+1.2**
	SNR=44						
AAK	**Ala-Archa**	**5.53**	**17**	P	**Pn**	**04 26 49.0**	**+0.6**
	5.0nm,0.3s,baz=184,slow=6.1,SNR=70						
AAK				S	**Sn**	**04 27 50.5**	**-2.1**

	4.4nm,0.3s,baz=199,slow=11,SNR=8.4						
AAK	**Ala-Archa**	**5.53**	**17**	P	**Pn**	**04 26 49.0**	**+0.6**
	SNR=13						
AAK	**Ala-Archa**	**5.53**	**17**	⇓P	**Pn**	**04 26 48.9**	**+0.6**
	9.2nm,0.5s						
AAK				⇑S	**Sn**	**04 27 49.9**	**-2.8**
	46nm,0.8s						
AAK	**Ala-Archa**	**5.53**	**17**		**Pn**	**04 26 48.8**	**+0.4**
KBK	**Karagaybulak**	**5.67**	**20**	P	**Pn**	**04 26 51.7**	**+1.6**
	SNR=8.7						
ULHL	**Ulahol**	**5.75**	**31**	P	**Pn**	**04 26 51.1**	**-0.1**
	SNR=11						
KK31	**Karatay Array**	**5.88**	**347**	P	**Pn**	**04 26 52.5**	**-0.2**
	1.9nm,0.2s,baz=159,slow=12,SNR=60						
KK31				⇑S	**Sn**	**04 27 55.2**	**-5.3**
	33nm,0.4s,baz=166,slow=21,SNR=19						
KK31	**Karatay Array**	**5.88**	**347**		**Pn**	**04 26 52.5**	**-0.2**
KKAR	**Karatay Array**	**5.88**	**347**		**Pn**	**04 26 52.5**	**-0.3**
CHMS	**Chumysh**	**5.93**	**18**	P	**Sn**	**04 27 58.9**	**-3.0**
	SNR=6.3						
DHRM	**DHARAMSHALA**	**6.09**	**146**	*e*P	**Pn**	**04 26 56.1**	**+0.4**
DHRM				*e*S	**Sn**	**04 28 02.3**	**-3.5**
DHRM				IAML		04 28 03.8	
	comp=E,184nm,0.5s						
DHRM				IAML		04 28 05.3	
	comp=N,177nm,0.4s						
TKM2	**Tokmak 2**	**6.10**	**24**	P	**Pn**	**04 26 56.2**	**+0.5**
	SNR=6.9						
TKM2	**Tokmak 2**	**6.10**	**24**	⇑P	**Pn**	**04 26 55.8**	**+0.1**
	comp=N,13nm,0.7s						
TKM2				⇓S	**Sn**	**04 28 02.8**	**-3.1**
	comp=N,9.2nm,0.6s						
USP	**Ospenovka**	**6.13**	**15**	P	**Pn**	**04 26 55.5**	**-0.5**
	SNR=10.0						
SMLA	**Simla**	**7.43**	**146**	*e*P	**Pn**	**04 27 13.4**	**+0.6**
SMLA				*e*S	**Sn**	**04 28 32.3**	**-4.7**
SMLA				IAML		04 28 35.7	
	comp=N,91nm,0.4s						
SMLA				IAML		04 28 36.8	
	comp=E,178nm,0.5s						
GYA0B	**ALIBECK ARRAY**	**11.24**	**277**	Pn	**Pn**	**04 28 01.7**	**-0.5**
MAKZ	**Makanchi**	**11.86**	**34**	Pn	**Pn**	**04 28 10.0**	**-0.1**
MK31	**Makanchi Array**	**11.99**	**35**	Pn	**Pn**	**04 28 11.9**	**+0.2**
MKAR	**Makanchi Array**	**11.99**	**35**	P	**Pn**	**04 28 13.1**	**+1.4**
	comp=E,0.5nm,0.3s,baz=189,slow=8.8,SNR=12						
KURBB	**Kurchatov Arra**	**13.99**	**17**	P	**P**	**04 28 39.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=203,slow=11,SNR=29						
KURK	**Kurchatov**	**14.09**	**17**	P	**P**	**04 28 39.6**	**-0.1**
BHPL	**Bhopal**	**14.77**	**161**	*e*P	P	04 28 59.3	+12
AB31	**Akbulak array**	**14.86**	**327**	⇑P	**Pn**	**04 28 47.8**	**+0.5**
	comp=E,0.9nm,0.4s,baz=139,slow=13,SNR=28						
ABKAR	**Akbulak array**	**14.86**	**327**		**Pn**	**04 28 47.3**	**-0.1**
BVAR	**Borovoye Array**	**15.71**	**356**	P	**Pn**	**04 28 59.5**	**+1.8**
	comp=E,0.6nm,0.3s,baz=200,slow=14,SNR=5.3						
BRVK	**Borovoye**	**15.75**	**356**		**P**	**04 28 58.1**	**+0.2**
BRVK				IAmb	IAmb	04 28 59.9	
	comp=Z,3.7nm,0.8s						
AKTO	**Aktyubinsk**	**16.57**	**327**	P	**Pn**	**04 29 09.1**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=124,slow=10,SNR=15						
AKTO				S	**S**	**04 32 07.0**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=18,slow=23,SNR=5.0						
AKTO	**Aktyubinsk**	**16.57**	**327**	⇓P	**Pn**	**04 29 09.1**	**+1.0**
	comp=Z,2.4nm,0.5s						
ZAA0	**Zalesovo Array**	**18.71**	**24**	P	**P**	**04 29 31.0**	**+0.7**
ZALV	**Zalesovo Beam**	**18.71**	**24**	P	**P**	**04 29 31.6**	**+1.3**
	comp=Z,2.3nm,0.3s,baz=220,slow=10.0,SNR=70						
ARU	**Arti**	**21.17**	**339**	P	**P**	**04 29 57.7**	**+1.2**
	comp=Z,1.2nm,0.2s,baz=130,slow=16,SNR=1.2						
ARU	**Arti**	**21.17**	**339**	P	**P**	**04 29 56.6**	**+0.1**
GNI	**Garni**	**21.61**	**286**	P	**P**	**04 30 01.0**	**-0.5**
SONM	**Songino Array**	**27.01**	**56**	P	**P**	**04 30 53.1**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=270,slow=8.6,SNR=2.3						
ILGA	**Ilgaz**	**29.93**	**289**	P	**P**	**04 31 15.3**	**-1.3**
ILGA				IAmb	IAmb	04 31 23.9	
	comp=Z,4.3nm,0.7s						
OBN	**Obninsk**	**29.96**	**318**	LR	LR	04 44 13.9	
	comp=Z,368nm,19.3s,baz=50,slow=38						
FINES	**FINESS Array B**	**37.34**	**325**	P	**P**	**04 32 21.2**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=116,slow=9.4,SNR=1.7						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**04 32 49.7**	**+1.8**
	comp=Z,0.7nm,0.4s,baz=115,slow=8.8,SNR=8.2						
HFS	**Hagfors**	**43.02**	**321**	P	**P**	**04 33 07.7**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=116,slow=10,SNR=5.9						
TORD	**Torodi Ar. Bea**	**66.75**	**269**	P	**P**	**04 35 57.3**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=47,slow=5.6,SNR=8.8						
YKA	**Yellowknife Ar**	**80.33**	**3**	P	**P**	**04 37 16.9**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=359,slow=5.3,SNR=14						

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*PRU **23** 04:26:58.5±0.0, 43°.82N×11°.12E, h0^{km}*
*LDG **23** 04:27:05.4±0.1, 44°.14N×11°.24E, h10^{km}, Ml3.1/27, Error ellipse: s-maj=2.5km s-min=2.3km az=58.0*
ROM 23 04:27:05.6±0.1, **44°.119N**±0°.007×**11°.135E**±0°.009, **h8**^{km}**, ML3.1**/15**, Error ellipse: s-maj=0.7km s-min=0.7km az=237.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.05**	**350**	P	Pg	04 27 07.2	-0.3
FNVD				S	Sg	04 27 08.5	-0.3
MTCR	**Monte La Croce**	**0.14**	**227**	P	Pg	04 27 09.3	+0.7
MTCR				S	Sg	04 27 12.1	+1.4
MTCR				AML	AML		
	comp=N,43850µm,0.3s						
MTCR				AML	AML		
	comp=E,36200µm,1.0s						
MTCR				AML	AML		
	comp=N,43850µm,0.3s						
MTCR				AML	AML		
	comp=E,36250µm,1.0s						
PTF	**Prato**	**0.17**	**196**	P	Pg	04 27 09.8	+0.8
ZCCA	**Zocca**	**0.26**	**334**	P	Pg	04 27 11.4	+0.7
ZCCA				S	Sb	04 27 16.7	-0.4
ZCCA				AML	AML		
	comp=E,5570µm,0.4s						
ZCCA				AML	AML		
	comp=N,10005µm,0.5s						
ZCCA				AML	AML		
	comp=E,6150µm,0.5s						
ZCCA				AML	AML		
	comp=N,9135µm,0.4s						
ZCCA				AML	AML		
	comp=N,10010µm,0.4s						
ZCCA				AML	AML		
	comp=E,5575µm,0.4s						
ZCCA				AML	AML		
	comp=N,10015µm,0.5s						
BRIS	**BRISIGHELLA**	**0.27**	**83**	P	Pn	04 27 14.8	-1.1
BRIS				AML	AML		
	comp=E,1935µm,0.5s						
BRIS				AML	AML		
	comp=N,4715µm,1.2s						
POPM	**Popiglio**	**0.28**	**255**	P	Pg	04 27 11.6	+0.4
POPM				S	Sg	04 27 16.3	+1.3
POPM				AML	AML		
	comp=E,8030µm,1.4s						
POPM				AML	AML		
	comp=N,20750µm,0.3s						
POPM				AML	AML		
	comp=E,8110µm,0.2s						
CRMI	**Carmignano**	**0.35**	**200**	P	Pg	04 27 12.9	+0.4
CRMI				S	Sb	04 27 19.0	-0.7
MTRZ	**Monterenzio**	**0.35**	**43**	P	Pg	04 27 11.5	-1.0
MTRZ				AML	AML		
	comp=N,9970µm,0.8s						
MTRZ				AML	AML		
	comp=N,9935µm,0.8s						
MTRZ				AML	AML		
	comp=N,10045µm,0.8s						
MTRZ				AML	AML		
	comp=E,11050µm,0.6s						
MTRZ				AML	AML		
	comp=E,10600µm,0.6s						
FIR	**Firenze**	**0.36**	**166**	P	Pb	04 27 14.4	+0.3
FIR				S	Sb	04 27 19.2	-0.6
RUFI	**Rufina**	**0.39**	**136**	P	Pg	04 27 13.4	+0.3
RUFI				S	Sb	04 27 19.6	-1.2
RUFI				AML	AML		
	comp=E,1860µm,1.5s						
RUFI				AML	AML		
	comp=N,2215µm,0.6s						
BDI	**Bagni Di Lucca**	**0.39**	**262**	P	Pg	04 27 13.5	+0.3
BDI				S	Sg	04 27 19.3	+0.9
LMD	**Lutirano**	**0.41**	**96**	P	Pg	04 27 13.6	-0.1
LMD				AML	AML		
	comp=N,1975µm,0.4s						
LMD				AML	AML		
	comp=E,2020µm,1.0s						
CARD	**Cardoso**	**0.48**	**259**	P	Pb	04 27 16.7	+0.5
CARD				S	Sg	04 27 22.1	+0.9
MAIM	**Mastiano**	**0.51**	**246**	P	Pg	04 27 15.8	+0.4
MAIM				S	Sb	04 27 23.2	-1.0
MODE	**Modena**	**0.53**	**345**	P	Pb	04 27 17.1	0.0
VLC	**Villacollemand**	**0.54**	**275**	P	Pg	04 27 16.4	+0.4
VLC				S	Sb	04 27 24.3	-0.9
VLC				AML	AML		
	comp=E,1250µm,0.6s						
VLC				AML	AML		
	comp=N,2490µm,0.6s						
VLC				AML	AML		
	comp=N,2495µm,0.6s						
VLC				AML	AML		
	comp=E,1295µm,0.6s						
VLC				AML	AML		
	comp=N,2440µm,0.6s						
SFI	**Santa Sofia**	**0.56**	**112**	P	Pg	04 27 16.3	0.0
SFI				S	Sb	04 27 25.1	-0.6
ASQU	**Asqua**	**0.57**	**124**	P	Pb	04 27 17.7	-0.2
ASQU				S	Sb	04 27 25.6	-0.5
FIU	**Minerbio Fiu**	**0.58**	**26**	P	Pb	04 27 18.1	+0.2
ERBM	**Eremo**	**0.60**	**300**	P	Pb	04 27 17.9	-0.4
ERBM				AML	AML		
	comp=N,1335µm,1.1s						
ERBM				AML	AML		
	comp=E,852µm,1.2s						
ERBM				AML	AML		
	comp=N,1330µm,1.1s						
OSSC	**Osservatorio P**	**0.60**	**172**	P	Pb	04 27 18.2	-0.1
OSSC				AML	AML		
	comp=N,2350µm,0.5s						
OSSC				AML	AML		
	comp=E,2295µm,0.5s						
OSSC				AML	AML		
	comp=N,2105µm,0.8s						
OSSC				AML	AML		
	comp=E,2140µm,1.4s						
OSSC				AML	AML		
	comp=N,2350µm,0.5s						
RAVA	**Ravarino**	**0.64**	**359**	AML	AML		
	comp=E,3200µm,1.4s						
RAVA				AML	AML		
	comp=N,4790µm,0.7s						
CSNT	**Castellina Chi**	**0.66**	**170**	P	Pb	04 27 19.7	+0.4
CSNT				S	Sb	04 27 28.2	-0.3
CSNT				AML	AML		
	comp=E,1285µm,1.2s						
CSNT				AML	AML		
	comp=N,1930µm,0.6s						
CMPO	**Campotto Po**	**0.67**	**46**	P	Pn	04 27 20.5	-0.7
NOVE	**Novellara**	**0.74**	**336**	AML	AML		
	comp=N,6020µm,0.5s						
NOVE				AML	AML		
	comp=E,7975µm,0.6s						
CAVE	**Cavezzo**	**0.75**	**353**	AML	AML		
	comp=N,3585µm,0.3s						
CAVE				AML	AML		
	comp=E,5725µm,0.4s						
ATPI	**Pietralunga -**	**1.14**	**126**	AML	AML		
	comp=N,514µm,0.7s						
ATPI				AML	AML		
	comp=E,422µm,0.6s						
TEOL	**Teolo**	**1.30**	**17**	P	Pg	04 27 31.0	+0.5
ATCC	**AVT- Casa Cast**	**1.44**	**130**	AML	AML		
	comp=E,736µm,1.0s						
ATCC				AML	AML		
	comp=N,426µm,1.0s						
PGF	**Pioggiola**	**2.21**	**226**	*e*Pn	Pn	04 27 41.9	-0.7
PGF				*e*Sn	Sn	04 28 09.0	-1.2
	comp=N,6.4nm,0.3s						
MUGIO	**Muggio**	**2.33**	**321**	AML	AML		
	comp=N,114µm,0.5s						
MUGIO				AML	AML		
	comp=E,89µm,0.6s						
MOSI	**Grossmontoni**	**2.53**	**351**	AML	AML		
	comp=E,267µm,0.7s						
MOSI				AML	AML		
	comp=N,372µm,0.8s						
SBF	**Sospel**	**2.68**	**266**	*e*Pn	Pn	04 27 48.5	-0.6
SBF				*e*Sn	Sn	04 28 19.9	-1.8
	comp=N,63nm,0.6s						
ABTA	**Abfaltersbach**	**2.80**	**20**	Pn	Pn	04 27 52.6	+1.9
	comp=N,3.3nm,0.3s,SNR=4.3						
ABTA				*e*Sn	Sn	04 28 25.9	+1.2
	comp=N,6.0nm,0.3s						
RISI	**Rein**	**2.91**	**13**	AML	AML		
	comp=E,151µm,0.4s						
RISI				AML	AML		
	comp=N,200µm,0.5s						
FETA	**Feichten**	**2.92**	**355**	*e*Pn	Pn	04 27 54.2	+1.9
	SNR=7.5						
FETA				*e*Sn	Sn	04 28 27.2	-0.4
	comp=N,11nm,0.6s						
MYKA	**Terra Mystica**	**3.07**	**34**	*e*Pn	Pn	04 27 54.9	+0.5
	comp=N,5.3nm,0.7s						
MYKA				*e*Sn	Sn	04 28 29.7	-1.6
	comp=N,7.7nm,0.4s						
SQTA	**Sankt Quirin**	**3.10**	**1**	Pn	Pn	04 27 56.8	+1.9
	comp=N,2.5nm,0.2s,SNR=7.2						
SQTA				*e*Sn	Sn	04 28 33.9	+1.7
	comp=N,26nm,0.4s						
WTTA	**Wattenberg**	**3.16**	**6**	Pn	Pn	04 27 58.2	+2.5
	comp=N,4.2nm,0.4s,SNR=5.4						
WTTA				*e*Sn	Sn	04 28 35.1	+1.3
	comp=N,20nm,0.6s						
WTTA	**Wattenberg**	**3.16**	**6**	AML	AML		
	comp=N,100µm,0.8s						
WTTA				AML	AML		
	comp=E,116µm,1.4s						
MBDF	**Montbardon**	**3.19**	**283**	*e*P	Pn	04 27 58.3	+2.3
MBDF				*e*Sn	Sn	04 28 31.7	-2.5
	comp=E,22nm,0.7s						
MOTA	**Moosalm**	**3.23**	**360**	Pn	Pn	04 27 57.6	+1.0
	comp=E,9.3nm,0.4s,SNR=9.3						
MOTA				*e*Sn	Sn	04 28 37.3	+2.0
	comp=E,16nm,0.5s						
WATA	**Walderalm**	**3.23**	**5**	*e*Sn	Sn	04 28 38.7	+3.3
	comp=E,18nm,0.4s						
DAVA	**Damuels**	**3.29**	**345**	Pn	Pn	04 27 59.3	+1.9
	comp=E,11nm,0.5s,SNR=4.6						
DAVA				*e*Sn	Sn	04 28 39.4	+2.6
	comp=E,37nm,0.5s						
FRF	**La Foret Royal**	**3.29**	**262**	*e*Pn	Pn	04 27 56.6	-0.8
FRF				*e*Sn	Sn	04 28 34.5	-2.2
	comp=E,22nm,0.5s						
KBA	**Koelnbreinsper**	**3.34**	**27**	*e*Pn	Pn	04 27 59.5	+1.3
	comp=E,3.5nm,0.3s						
KBA				*e*Sn	Sn	04 28 39.3	+1.2
	comp=E,6.8nm,0.5s						
RETA	**Reutte**	**3.38**	**356**	Pn	Pn	04 27 59.4	+0.8
	comp=E,14nm,0.4s,SNR=5.6						
RETA				*e*Sn	Sn	04 28 40.1	+1.2
	comp=E,12nm,0.5s						
OBKA	**Obir**	**3.39**	**44**	*e*Pn	Pn	04 27 59.8	+1.0
	comp=E,2.1nm,0.4s						
LPG	**La Plagne**	**3.41**	**295**	*e*P	Pn	04 28 01.7	+2.4
LPL	**La Plagne**	**3.43**	**296**	*e*P	Pn	04 28 01.5	+2.0
LPL				*e*Sn	Sn	04 28 37.1	-3.3
	comp=E,26nm,0.8s						
LMR	**La Mourre**	**3.44**	**258**	*e*P	Pn	04 28 01.7	+2.3
LMR				*e*Sn	Sn	04 28 38.8	-1.6
	comp=E,4.2nm,0.5s						
SOKA	**Soboth**	**3.75**	**46**	*e*Pn	Pn	04 28 03.7	-0.1
	comp=E,1.5nm,0.4s						
SOKA				*e*Sn	Sn	04 28 48.2	0.0
	comp=E,4.8nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.84**	**284**	*e*P	Pn	04 28 07.5	+2.5
ORIF				*e*Sn	Sn	04 28 46.6	-3.8
	comp=E,15nm,0.8s						
SMRF	**Simiane la Rot**	**4.01**	**270**	*e*P	Pn	04 28 09.2	+1.9
SMRF				*e*Sn	Sn	04 28 50.6	-3.9
	comp=E,3.6nm,0.5s						
MOA	**Molln**	**4.32**	**29**	Pn	Pn	04 28 12.2	+0.7
	comp=E,2.1nm,0.3s,SNR=10						
MOA				*e*Sn	Sn	04 29 02.8	+0.7
	comp=E,5.8nm,0.5s						
CABF	**La Chapelle**	**4.34**	**307**	*e*P	Pn	04 28 13.8	+1.9
CABF				*e*Sn	Sn	04 28 58.7	-4.0
	comp=E,28nm,0.7s						
ARSA	**Arzberg**	**4.39**	**43**	*e*Pn	Pn	04 28 12.2	-0.3
	comp=E,3.4nm,0.6s						
VIVF	**Saint-Julien-l**	**4.68**	**281**	*e*P	Pn	04 28 19.0	+2.5
HINF	**Hinteralfeld**	**4.75**	**323**	*e*P	Pn	04 28 17.8	+0.3
HINF				*e*Sn	Sn	04 29 07.7	-5.0
	comp=E,13nm,0.5s						
CONA	**Conrad Observa**	**5.03**	**39**	*e*Pn	Pn	04 28 21.7	+0.3
	comp=E,1.7nm,0.4s						
CONA				*e*Sn	Sn	04 29 20.0	+0.2
	comp=E,5.0nm,0.6s						
CDF	**Champ du Feu**	**5.06**	**329**	*e*P	Pn	04 28 22.0	+0.3
CDF				*e*Sn	Sn	04 29 14.9	-5.4
	comp=E,8.0nm,0.3s						
HAU	**Haudompre**	**5.12**	**321**	*e*P	Pn	04 28 23.0	+0.5
HAU				*e*Sn	Sn	04 29 16.6	-5.1
	comp=E,24nm,0.5s						
LASF	**Ste Croix**	**5.24**	**272**	*e*P	Pn	04 28 26.7	+2.5
LASF				*e*Sn	Sn	04 29 20.9	-3.9
	comp=E,5.9nm,0.6s						
KHC	**Kasperske Hory**	**5.29**	**18**	*e*PN	Pn	04 28 24.6	-0.2
KHC				*e*PG	Pg	04 28 47.5	+0.7
KHC				*e*SN	Sn	04 29 23.2	-2.7
SMF	**Signal de Mont**	**5.72**	**299**	*e*P	Pn	04 28 34.3	+3.5
SMF				*e*Sn	Sn	04 29 31.7	-4.9
	comp=E,6.3nm,0.5s						
PAGF	**Fort de Pagny**	**5.80**	**322**	*e*Sn	Sn	04 29 32.8	-5.8
	comp=E,8.5nm,0.5s						
SFTF	**Sexfontaines**	**5.88**	**316**	*e*P	Pn	04 28 33.9	+0.9
	baz=135						
SFTF				*e*Sn	Sn	04 29 33.9	-6.6
	comp=E,3.0nm,0.3s						
LOR	**Lormes**	**5.99**	**304**	*e*P	Pn	04 28 36.4	+2.0
	baz=123						
LOR				*e*Sn	Sn	04 29 37.9	-5.3
	comp=E,12nm,0.6s						
MODS	**Modra-Piesok**	**6.02**	**43**	*e*PN	Pn	04 28 33.4	-1.4
MODS				*e*SN	Sn	04 29 40.5	-3.4
MEZF	**Maizieres J’vi**	**6.08**	**318**	*e*Pn	Pn	04 28 34.5	-1.1
MEZF				*e*Sn	Sn	04 29 40.4	-4.9
	comp=E,10.0nm,0.6s						
AVF	**Avril sur Loir**	**6.09**	**299**	*e*P	Pn	04 28 38.8	+3.0
AVF				*e*Sn	Sn	04 29 40.2	-5.4
	comp=E,1.3nm,0.3s						
SSF	**Saint Saulge**	**6.11**	**301**	*e*P	Pn	04 28 38.8	+2.8
SSF				*e*Sn	Sn	04 29 40.7	-5.4
	comp=E,6.7nm,0.6s						
NKC	**Novy Kostel**	**6.18**	**8**	*e*SN	Sn	04 29 43.8	-4.1
BGF	**Bois d'Agland**	**6.33**	**296**	*e*P	Pn	04 28 42.1	+3.0
BGF				*e*Sn	Sn	04 29 46.1	-5.4
	comp=E,9.3nm,0.5s						
MTLF	**Montolieu**	**6.51**	**266**	*e*P	Pn	04 28 44.8	+3.3
MTLF				*e*Sn	Sn	04 29 50.7	-5.2
	comp=E,5.7nm,0.3s						
CAF	**Calviac**	**6.54**	**280**	*e*P	Pn	04 28 45.2	+3.3
TCF	**Toulx Ste Croi**	**6.67**	**292**	*e*P	Pn	04 28 47.0	+3.2
HYF	**Humbligny**	**6.73**	**301**	*e*Pn	Pn	04 28 42.7	-1.9
HYF				*e*Sn	Sn	04 29 56.2	-5.2
BRG	**Berggiesshubel**	**7.02**	**15**	Pn	Pn	04 28 49.0	+0.5
BRG				Amp		04 28 51.7	
	comp=Z,2.6nm,0.7s						
BRG	**Berggiesshubel**	**7.02**	**15**	Pn	Pn	04 28 49.0	+0.5
BRG				Amp		04 28 51.7	
	comp=Z,2.6nm,0.7s						
CLL	**Collm**	**7.30**	**9**	*i* Pn	Pn	04 28 51.1	-1.3
CLL				*e*Sg	Sg	04 31 04.0	+4.2
LFF	**La Frestale**	**7.47**	**280**	*e*Pn	Pn	04 28 53.4	-1.4
LFF				*e*Sn	Sn	04 30 13.3	-6.4
	comp=Z,2.1nm,0.3s						
ETSF	**Etsaut**	**8.59**	**266**	*e*P	Pn	04 29 14.6	+4.4
FLN	**La Foliniere**	**9.27**	**304**	*e*Pn	Pn	04 29 16.8	-2.5

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*LDG **23** 04:28:12.3±0.1, 44°.15N×11°.24E, h10^{km}, Ml3.3/22, Error ellipse: s-maj=1.8km s-min=1.4km az=104.0*
*GEN **23** 04:28:13, 44°.14N×11°.14E, h10^{km}±4^{km}, Ml3.2*
ROM 23 04:28:13.5±0.1, **44°.137N**±0°.005×**11°.123E**±0°.006, **h9**^{km}**, ML3.2**/28**, 5C-1D, Error ellipse: s-maj=0.6km s-min=0.3km az=0.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.03**	**0**	⇓P	Pg	04 28 15.0	-0.3
FNVD				S	Sg	04 28 16.8	+0.2
MTCR	**Monte La Croce**	**0.14**	**219**	⇑P	Pg	04 28 17.3	+0.6
MTCR				S	Sg	04 28 20.2	+1.3
MTCR				AML	AML		
	comp=E,65600µm,0.9s						
MTCR				AML	AML		
	comp=N,85550µm,0.3s						
MTCR				AML	AML		
	comp=E,65550µm,0.9s						
MTCR				AML	AML		
	comp=N,85700µm,0.3s						
MTCR				AML	AML		
	comp=E,65600µm,0.9s						
MTCR				AML	AML		
	comp=N,85400µm,0.3s						
MTCR				AML	AML		
	comp=N,85400µm,0.3s						
MTCR				AML	AML		
	comp=E,65600µm,0.9s						
PTF	**Prato**	**0.18**	**192**	P	Pg	04 28 17.8	+0.5
ZCCA	**Zocca**	**0.24**	**334**	P	Pg	04 28 19.2	+0.8
ZCCA				AML	AML		
	comp=E,9250µm,0.7s						
ZCCA				AML	AML		
	comp=E,9250µm,0.8s						
ZCCA				AML	AML		
	comp=N,13450µm,0.5s						
ZCCA				AML	AML		
	comp=N,14200µm,0.5s						
ZCCA				AML	AML		
	comp=E,9065µm,0.8s						
POPM	**Popiglio**	**0.28**	**251**	P	Pg	04 28 19.6	+0.5
POPM				S	Sb	04 28 24.7	-0.8
POPM	**Popiglio**	**0.28**	**251**	P	Pg	04 28 19.6	+0.5
POPM				S	Sb	04 28 24.7	-0.8
POPM	**Popiglio**	**0.28**	**251**	⇑P	Pg	04 28 19.6	+0.5
POPM				S	Sb	04 28 24.6	-0.9
POPM				AML	AML		
	comp=N,50100µm,0.2s						
POPM				AML	AML		
	comp=E,14600µm,0.3s						
POPM				AML	AML		
	comp=N,50100µm,0.2s						
BRIS	**BRISIGHELLA**	**0.28**	**87**	P	Pn	04 28 23.1	-0.7
BRIS				S	Sb	04 28 30.7	+5.2
BRIS				AML	AML		
	comp=E,3255µm,0.5s						
BRIS				AML	AML		
	comp=N,4930µm,0.4s						
MTRZ	**Monterenzio**	**0.34**	**46**	P	Pg	04 28 19.6	-0.8
MTRZ				AML	AML		
	comp=N,20450µm,0.4s						
MTRZ				AML	AML		
	comp=E,17850µm,0.8s						
MTRZ				AML	AML		
	comp=N,20500µm,0.4s						
MTRZ				AML	AML		
	comp=E,17800µm,0.8s						
MTRZ				AML	AML		
	comp=N,20400µm,0.4s						
MTRZ				AML	AML		
	comp=E,17400µm,0.8s						
CRMI	**Carmignano**	**0.36**	**198**	P	Pg	04 28 21.0	+0.3
CRMI				S	Sb	04 28 27.3	-0.7
FIR	**Firenze**	**0.38**	**165**	P	Pb	04 28 21.7	-0.6
FIR				S	Sb	04 28 27.5	-0.7
BDI	**Bagni Di Lucca**	**0.39**	**259**	P	Pg	04 28 21.5	+0.4
BDI				S	Sb	04 28 27.6	-1.0
BDI				AML	AML		
	comp=E,9175µm,1.1s						
BDI				AML	AML		
	comp=N,11250µm,0.8s						
BDI				AML	AML		
	comp=E,9185µm,1.1s						
BDI				AML	AML		
	comp=N,11850µm,0.8s						
BDI				AML	AML		
	comp=N,11300µm,0.8s						
BDI				AML	AML		
	comp=E,7550µm,1.2s						
RUFI	**Rufina**	**0.41**	**137**	⇑P	Pg	04 28 21.5	0.0
RUFI				S	Sg	04 28 28.0	+1.2
RUFI				AML	AML		
	comp=E,2640µm,0.7s						
RUFI				AML	AML		
	comp=N,2635µm,0.6s						
RUFI				AML	AML		
	comp=E,2645µm,0.7s						

RUFI				AML	AML		
	comp=N,2625μm,0.6s						
LMD	**Lutirano**	**0.42**	**98**	P	Pg	04 28 21.5	-0.3
LMD				S	Sg	04 28 28.3	+0.9
CARD	**Cardoso**	**0.47**	**257**	P	Pg	04 28 23.1	+0.4
CARD				S	Sb	04 28 30.4	-0.7
CARD	**Cardoso**	**0.47**	**257**	P	Pg	04 28 22.9	+0.2
CARD				S	Sb	04 28 30.3	-0.9
CARD	**Cardoso**	**0.47**	**257**	P	Pg	04 28 23.0	+0.3
CARD				S	Sb	04 28 30.1	-1.0
CARD				AML	AML		
	comp=N,8525μm,0.6s						
CARD				AML	AML		
	comp=N,8530μm,0.6s						
CARD				AML	AML		
	comp=E,5435μm,0.6s						
MAIM	**Mastiano**	**0.51**	**244**	P	Pg	04 28 23.3	-0.1
MAIM				S	Sb	04 28 31.5	-0.5
MAIM	**Mastiano**	**0.51**	**244**	P	Pg	04 28 23.6	+0.3
MAIM				S	Sb	04 28 31.3	-0.8
MAIM	**Mastiano**	**0.51**	**244**	P	Pg	04 28 23.4	+0.1
MAIM				S	Sb	04 28 31.2	-0.8
MAIM				AML	AML		
	comp=N,2980μm,0.4s						
MAIM				AML	AML		
	comp=E,2820μm,0.4s						
MODE	**Modena**	**0.51**	**346**	P	Pb	04 28 25.6	+1.0
SARO	**Sassorosso**	**0.52**	**275**	P	Pg	04 28 24.0	+0.3
SARO				S	Sb	04 28 32.4	-0.2
SARO	**Sassorosso**	**0.52**	**275**	P	Pg	04 28 24.0	+0.3
SARO				S	Sb	04 28 32.4	-0.2
VLC	**Villacollemand**	**0.53**	**273**	⇑P	Pg	04 28 24.3	+0.5
VLC				S	Sb	04 28 32.3	-0.5
VLC				AML	AML		
	comp=N,4185μm,1.0s						
VLC				AML	AML		
	comp=E,2100μm,1.1s						
VLC				AML	AML		
	comp=N,4200μm,1.0s						
VLC				AML	AML		
	comp=E,2195μm,0.7s						
SFI	**Santa Sofia**	**0.57**	**114**	P	Pg	04 28 24.3	-0.3
SFI				S	Sb	04 28 33.3	-0.7
SFI				AML	AML		
	comp=E,2670μm,0.9s						
SFI				AML	AML		
	comp=N,2615μm,0.4s						
SFI				AML	AML		
	comp=E,2530μm,0.3s						
SFI				AML	AML		
	comp=N,2745μm,0.4s						
SFI				AML	AML		
	comp=N,2620μm,0.4s						
SFI				AML	AML		
	comp=E,2535μm,0.3s						
ERBM	**Eremo**	**0.58**	**299**	P	Pb	04 28 25.6	-0.3
ERBM				AML	AML		
	comp=E,1280μm,1.4s						
ERBM				AML	AML		
	comp=E,1285μm,1.4s						
ERBM				AML	AML		
	comp=N,1895μm,1.2s						
PII	**Pisa**	**0.60**	**226**	P	Pg	04 28 25.0	-0.1
PII				S	Sg	04 28 33.3	+0.4
PII				AML	AML		
	comp=N,3840μm,0.3s						
PII				AML	AML		
	comp=E,4265μm,1.4s						
OSSC	**Osservatorio P**	**0.62**	**172**	P	Pg	04 28 25.9	+0.4
OSSC				S	Sb	04 28 35.5	+0.2
OSSC				AML	AML		
	comp=E,3190μm,0.9s						
OSSC				AML	AML		
	comp=N,2565μm,0.8s						
OSSC				AML	AML		
	comp=E,2510μm,0.8s						
OSSC				AML	AML		
	comp=E,3195μm,0.9s						
OSSC				AML	AML		
	comp=E,2515μm,0.8s						
OSSC				AML	AML		
	comp=N,3115μm,0.6s						
CSNT	**Castellina Chi**	**0.68**	**170**	P	Pg	04 28 26.8	+0.3
CSNT				S	Sb	04 28 36.9	0.0
CSNT				AML	AML		
	comp=N,3270μm,0.7s						
CSNT				AML	AML		
	comp=E,1855μm,1.6s						
EQUI	**Equi**	**0.70**	**273**	P	Pg	04 28 27.1	+0.1
EQUI				S	Sb	04 28 37.6	0.0
EQUI	**Equi**	**0.70**	**273**	P	Pg	04 28 27.1	+0.1
EQUI				S	Sb	04 28 37.6	0.0
EQUI	**Equi**	**0.70**	**273**	P	Pg	04 28 27.1	+0.1
EQUI				S	Sb	04 28 37.1	-0.5
EQUI				AML	AML		
	comp=E,1080μm,0.6s						
EQUI				AML	AML		
	comp=N,1350μm,0.9s						
NOVE	**Novellara**	**0.72**	**336**	AML	AML		
	comp=E,12400μm,0.7s						
NOVE				AML	AML		
	comp=N,7965μm,0.8s						
CAVE	**Cavezzo**	**0.73**	**353**	AML	AML		
	comp=N,4685μm,0.9s						
CAVE				AML	AML		
	comp=E,6465μm,0.4s						
CRE	**Caprese Michel**	**0.79**	**131**	P	Pb	04 28 30.1	+0.7
CRE				AML	AML		
	comp=E,1125μm,0.8s						
CRE				AML	AML		
	comp=E,1120μm,0.8s						
CRE				AML	AML		
	comp=N,1550μm,0.4s						
GRAM	**Graiana**	**0.84**	**295**	P	Pb	04 28 30.3	0.0
GRAM				S	Sn	04 28 43.9	-0.1
GRAM	**Graiana**	**0.84**	**295**	P	Pb	04 28 30.3	0.0
GRAM				S	Sn	04 28 43.9	-0.1
GRAM	**Graiana**	**0.84**	**295**	⇑P	Pb	04 28 30.1	-0.2
GRAM				AML	AML		
	comp=N,4395μm,0.4s						
GRAM				AML	AML		
	comp=E,6785μm,0.4s						
PLMA	**Palmaria, Port**	**0.92**	**265**	P	Pb	04 28 31.5	-0.1
PLMA				AML	AML		
	comp=E,996μm,0.6s						
PLMA				AML	AML		
	comp=N,964μm,1.4s						
SSP9	**Sansepolcro**	**0.92**	**127**	P	Pb	04 28 31.7	0.0
SSP9				AML	AML		
	comp=E,939μm,1.4s						
SSP9				AML	AML		
	comp=N,978μm,1.6s						
PARC	**Parchiule**	**0.94**	**121**	P	Pb	04 28 32.4	+0.4
PARC				AML	AML		
	comp=E,892μm,0.5s						
PARC				AML	AML		
	comp=E,892μm,0.5s						
PARC				AML	AML		
	comp=N,733μm,0.7s						
CAFI	**Castiglion Fio**	**1.01**	**143**	P	Pb	04 28 33.2	0.0
CAFI				S	Sb	04 28 47.0	+0.4
CAFI				AML	AML		
	comp=E,1045μm,0.5s						
CAFI				AML	AML		
	comp=N,904μm,1.6s						
CAFI				AML	AML		
	comp=E,1063μm,0.5s						
CAFI				AML	AML		
	comp=N,737μm,0.9s						
CAFI				AML	AML		
	comp=E,1046μm,0.5s						
CAFI				AML	AML		
	comp=E,1062μm,0.5s						
CAFI				AML	AML		
	comp=N,738μm,0.9s						
CAFI				AML	AML		
	comp=N,1272μm,1.2s						
BADI	**Badiali**	**1.03**	**127**	P	Pn	04 28 34.1	0.0
BADI				AML	AML		
	comp=E,874μm,0.6s						
BADI				AML	AML		
	comp=N,666μm,0.6s						
BADI				AML	AML		
	comp=N,722μm,0.7s						
BADI				AML	AML		
	comp=E,870μm,0.6s						
FSSB	**Fossombrone**	**1.28**	**110**	P	Pg	04 28 38.3	+0.4
FSSB				AML	AML		
	comp=E,735μm,0.4s						
FSSB				AML	AML		
	comp=N,1255μm,0.5s						
TEOL	**Teolo**	**1.28**	**17**	P	Pg	04 28 38.7	+0.5
TEOL				AML	AML		
	comp=N,2625μm,0.5s						
TEOL				AML	AML		
	comp=E,2810μm,1.0s						
GORR	**Gorreto**	**1.39**	**290**	AML	AML		
	comp=N,1141μm,1.3s						
GORR				AML	AML		
	comp=E,1345μm,0.6s						
ARVD	**Arcevia**	**1.46**	**115**	AML	AML		
	comp=E,522μm,0.8s						
ARVD				AML	AML		
	comp=N,353μm,1.1s						
CTI	**Castel Tesino**	**1.95**	**11**	P	Pn	04 28 47.1	+0.2
CTI				AML	AML		
	comp=N,293μm,0.3s						
CTI				AML	AML		
	comp=E,344μm,1.2s						
MABI	**Malga Bissina**	**1.97**	**348**	P	Pb	04 28 48.7	-0.9
FINB	**Finale Ligure**	**2.01**	**272**	P	Pn	04 28 47.5	-0.2
FINB				AML	AML		
	comp=E,176μm,0.4s						
FINB				AML	AML		
	comp=N,163μm,0.5s						
PGF	**Pioggiola**	**2.22**	**225**	*e*Pn	Pn	04 28 48.6	-2.0
PGF	**Pioggiola**	**2.22**	**225**	*e*P	Pn	04 28 51.1	+0.5
PGF				*e*Sn	Sn	04 29 14.7	-3.4
	comp=N,15nm,0.3s						
STAL	**STALIGIAL**	**2.40**	**27**	P	Pn	04 28 53.3	+0.2
SBF	**Sospel**	**2.67**	**265**	*e*P	Pn	04 28 57.5	+0.7
SBF				*e*Sn	Sn	04 29 26.1	-3.3
	comp=N,114nm,0.6s						
ABTA	**Abfaltersbach**	**2.79**	**20**	*e*Pn	Pg	04 29 07.1	+0.2
	comp=N,5.6nm,0.3s						
ABTA				*e*Sn	Sn	04 29 32.2	0.0
	comp=N,23nm,0.6s						
FETA	**Feichten**	**2.90**	**355**	*e*Pn	Pb	04 29 04.6	-0.9
	comp=N,10nm,0.3s						
FETA				*e*Sn	Sn	04 29 37.2	+2.2
	comp=N,4.8nm,0.4s						
SQTA	**Sankt Quirin**	**3.08**	**1**	*e*Pn	Pn	04 29 05.3	+2.8
	comp=N,14nm,0.3s						
SQTA				*e*Sn	Sn	04 29 41.1	+1.6
	comp=N,47nm,0.5s						
WTTA	**Wattenberg**	**3.15**	**6**	*e*Pn	Pn	04 29 06.5	+3.1
	comp=N,30nm,0.7s						
WTTA				*e*Sn	Sn	04 29 42.0	+0.8
	comp=N,22nm,0.6s						
MBDF	**Montbardon**	**3.17**	**282**	*e*P	Pn	04 29 05.0	+1.3
MBDF				*e*Sn	Sn	04 29 38.2	-3.5
	comp=N,18nm,0.6s						
MOTA	**Moosalm**	**3.21**	**360**	*e*Pn	Pn	04 29 06.4	+2.2
	comp=N,7.5nm,0.5s						
MOTA				*e*Sn	Sn	04 29 44.2	+1.6
	comp=N,20nm,0.6s						
WATA	**Walderalm**	**3.21**	**6**	*e*Pn	Pn	04 29 07.4	+3.1
	comp=N,8.0nm,0.2s						
WATA				*e*Sn	Sn	04 29 42.8	0.0
	comp=N,17nm,0.6s						
DAVA	**Damuels**	**3.27**	**345**	*e*Sn	Sn	04 29 45.2	+1.0
	comp=N,15nm,0.5s						
FRF	**La Foret Royal**	**3.29**	**261**	*e*P	Pn	04 29 06.2	+1.0
FRF				*e*Sn	Sn	04 29 40.9	-3.5
	comp=N,54nm,0.6s						
RETA	**Reutte**	**3.36**	**356**	*e*Pn	Pn	04 29 08.4	+2.2
	comp=N,13nm,0.3s						
RETA				*e*Sn	Sn	04 29 44.1	-2.2
	comp=N,1.8nm,0.2s						
LPG	**La Plagne**	**3.40**	**295**	*e*P	Pn	04 29 08.0	+1.1
LPG				*e*Sn	Sn	04 29 43.3	-4.1
	comp=N,27nm,0.6s						
LPL	**La Plagne**	**3.41**	**295**	*e*P	Pn	04 29 08.4	+1.3
LPL				*e*Sn	Sn	04 29 44.5	-3.3
	comp=N,29nm,0.6s						
LMR	**La Mourre**	**3.44**	**258**	*e*Pg	Pg	04 29 17.5	-1.9
LMR				*e*Sn	Sn	04 29 44.1	-4.0
	comp=N,7.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.83**	**284**	*e*P	Pn	04 29 14.5	+1.8
SMRF	**Simiane la Rot**	**4.00**	**270**	*e*P	Pn	04 29 16.4	+1.4
SMRF				*e*Sn	Sn	04 29 58.3	-3.8
	comp=N,19nm,0.6s						
MOA	**Molln**	**4.31**	**29**	*e*Pn	Pn	04 29 21.1	+1.9
	comp=N,1.0nm,0.1s						
MOA				*e*Sn	Sn	04 30 11.1	+1.5
	comp=N,7.0nm,0.4s						
CABF	**La Chapelle**	**4.33**	**307**	*e*P	Pn	04 29 21.8	+2.3
CABF				*e*Sn	Sn	04 30 05.2	-4.9
	comp=N,17nm,0.6s						
VIVF	**Saint-Julien-l**	**4.67**	**281**	*e*P	Pn	04 29 25.8	+1.6
HINF	**Hinteralfeld**	**4.73**	**323**	*e*P	Pn	04 29 26.3	+1.2
HINF				*e*Sn	Sn	04 30 14.8	-5.3
	comp=N,24nm,0.6s						
CDF	**Champ du Feu**	**5.04**	**329**	*e*P	Pn	04 29 30.1	+0.8
CDF				*e*Sn	Sn	04 30 21.5	-6.2
	comp=N,16nm,0.7s						
HAU	**Haudompre**	**5.10**	**321**	*e*P	Pn	04 29 31.3	+1.2
HAU				*e*Sn	Sn	04 30 23.2	-5.9
	comp=N,38nm,0.8s						
LASF	**Ste Croix**	**5.23**	**272**	*e*P	Pn	04 29 34.0	+2.1
LASF				*e*Sn	Sn	04 30 26.9	-5.5
	comp=N,1.9nm,0.2s						
SMF	**Signal de Mont**	**5.71**	**299**	*e*P	Pn	04 29 40.0	+1.6
SMF				*e*Sn	Sn	04 30 37.1	-7.0
	comp=N,36nm,1.1s						
PAGF	**Fort de Pagny**	**5.79**	**322**	*e*P	Pn	04 29 41.3	+1.8
SFTF	**Sexfontaines**	**5.87**	**316**	*e*P	Pn	04 29 42.2	+1.6
	baz=135						
LOR	**Lormes**	**5.97**	**304**	*e*P	Pn	04 29 43.8	+1.7
	baz=113						
LOR				*e*Sn	Sn	04 30 44.7	-5.9
	comp=N,14nm,0.5s						
MODS	**Modra-Piesok**	**6.01**	**43**	*e*SN	Sn	04 30 49.5	-2.0
MEZF	**Maizieres J'vi**	**6.06**	**318**	*e*P	Pn	04 29 45.2	+2.0
	baz=138						
AVF	**Avril sur Loir**	**6.07**	**299**	*e*P	Pn	04 29 45.4	+2.0
AVF				*e*Sn	Sn	04 30 47.1	-5.9
	comp=N,1.9nm,0.4s						
SSF	**Saint Saulge**	**6.09**	**301**	*e*P	Pn	04 29 45.4	+1.7
SSF				*e*Sn	Sn	04 30 47.5	-6.0
	comp=N,11nm,0.6s						
BGF	**Bois d'Agland**	**6.32**	**295**	*e*P	Pn	04 29 49.2	+2.5
BGF				*e*Sn	Sn	04 30 52.8	-6.2
	comp=N,18nm,0.7s						
MTLF	**Montolieu**	**6.50**	**266**	*e*P	Pn	04 29 51.3	+2.0
CAF	**Calviac**	**6.52**	**280**	*e*P	Pn	04 29 51.9	+2.3
CAF	**Calviac**	**6.52**	**280**	*e*Sn	Pn	04 29 51.5	+1.9
	comp=N,2.3nm,0.4s						
TCF	**Toulx Ste Croi**	**6.65**	**292**	*e*P	Pn	04 29 53.8	+2.4
TCF				*e*Sn	Sn	04 31 00.7	-6.6
	comp=N,3.4nm,0.5s						
TCF	**Toulx Ste Croi**	**6.65**	**292**	*e*Sn	Pn	04 29 53.8	+2.4
	comp=N,3.5nm,0.5s						
HYF	**Humbligny**	**6.71**	**301**	*e*P	Pn	04 29 54.7	+2.5
HYF				*e*Sn	Sn	04 31 02.1	-6.7
BRG	**Berggiesshubel**	**7.00**	**15**	Pn	Pn	04 29 57.1	+0.9
BRG				Amp		04 29 59.2	
	comp=Z,2.7nm,0.6s						
BRG				*e*x	x	04 31 04.6	
BRG				Amp		04 31 15.8	
	comp=Z,4.0nm,0.7s						
BRG				*e*x	x	04 32 13.2	
BRG				Amp		04 32 16.9	
	comp=Z,7.2nm,1.2s						
BRG	**Berggiesshubel**	**7.00**	**15**	Pn	Pn	04 29 57.1	+0.9
BRG				Amp		04 29 59.2	
	comp=Z,2.7nm,0.6s						
BRG				*e*x	x	04 31 04.6	
BRG				Amp		04 31 15.8	
	comp=Z,4.0nm,0.7s						
BRG				*e*x	x	04 32 13.2	
BRG				Amp		04 32 16.9	
	comp=Z,7.2nm,1.2s						
CLL	**Collm**	**7.29**	**9**	*i* Pn	Pn	04 30 00.0	0.0
CLL				*i* Sn	Sn	04 31 14.9	-7.9
CLL				*e*Sg	Sg	04 32 14.0	+6.8

IDC 23 04:33:06.3±2.4**, 7°.75S**×**130°.29E, h0**^{km}**, mb3.4**/1**,**
mb1 3.7/3**, mb1mx3.4**/29**, mbtmp3.5**/3**, ML3.5**/2**, Error**
ellipse: s-maj=124.3km s-min=33.7km az=69.0,

Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.74**	**162**	Pn	Pn	04 36 09.2	+0.3
	0.3nm,0.3s,baz=346,slow=12,SNR=11						
WRA				Sn	Sn	04 38 25.9	-5.8
	0.6nm,0.3s,baz=337,slow=20,SNR=8.2						
ASAR	**Alice Springs**	**16.20**	**168**	Pn	Pn	04 36 55.2	-0.4
	0.1nm,0.3s,baz=344,slow=11,SNR=7.0						
MKAR	**Makanchi Array**	**69.01**	**327**	P	P	04 44 13.8	0.0
	0.3nm,0.7s,baz=120,slow=6.8,SNR=0.9						

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*ATH **23** 04:45:24.0, 36°.69N×26°.67E, h205^{km}±7^{km}, ML3.4/2, Error*
ellipse: s-maj=7.3km s-min=2.0km az=44.0
*ISK **23** 04:45:35.9, 36°.64N×26°.74E, h135^{km}±1^{km}, ML2.9/15*
*IDC **23** 04:45:37.9±3.5, 36°.45N×27°.01E, h169^{km}±36^{km}, mb3.3/4,*
mb1 3.2/5, mb1mx2.9/46, mbtmp3.7/5, Error ellipse:
s-maj=67.5km s-min=19.1km az=142.0
*THE **23** 04:45:38.0, 36°.61N×26°.72E, h151^{km}±4^{km}, ML3.3/9, Error*
ellipse: s-maj=4.6km s-min=0.9km az=101.0
*DDA **23** 04:45:44.7, 36°.95N×27°.34E, h88^{km}±2^{km}, ML2.6*
ISC 23 04:45:35.5±0.8**, 36°.66N**±0°.04×**26°.79E**±0°.03**, h140**^{km}±6^{km}**,**
n77, σ1^{s}**.85**/106**, mb3.8**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.58**	**46**	P	**Pn**	**04 45 56.1**	**-0.1**
BODT	**Bodrum**	**0.58**	**46**	PG	**Pn**	**04 45 56.1**	**-0.1**
BODT				SG	**Sn**	**04 46 11.9**	**0.0**
BDRM	**Kayabasi**	**0.66**	**52**	*i* P	**Pn**	**04 45 57.5**	**+0.8**
BDRM				*i* S	**Sn**	**04 46 09.4**	**-3.4**
DATC	**Datca-Mugla**	**0.71**	**82**	PG	**Pn**	**04 45 57.7**	**+0.7**
ANAF	**Anafi Island**	**0.87**	**250**	P	**Pn**	**04 45 58.7**	**+0.5**
ANAF	**Anafi Island**	**0.87**	**250**	P	**Pn**	**04 45 58.9**	**+0.6**
ANAF				S	**Sn**	**04 46 13.0**	**-2.6**
MLSB	**Milas**	**1.01**	**51**	PG	**Pn**	**04 46 00.3**	**+0.8**
SMG	**Samos**	**1.05**	**2**	P	**Pn**	**04 46 00.3**	**+0.5**
SMG	**Samos**	**1.05**	**2**	P	**Pn**	**04 46 00.5**	**+0.7**
THR8	**Santorini-Mono**	**1.09**	**257**	P	**Pn**	**04 46 00.4**	**+0.3**
APE	**Apeiranthos**	**1.09**	**292**	P	**Pn**	**04 46 00.5**	**+0.3**
APE	**Apeiranthos**	**1.09**	**292**	P	**Pn**	**04 46 00.6**	**+0.3**
APE	**Apeiranthos**	**1.09**	**292**	PG	**Pn**	**04 46 00.4**	**+0.2**
APE				SG	**Sn**	**04 46 18.0**	**-1.0**
GCAM	**G?zelcaml?**	**1.10**	**19**	PN	**Pn**	**04 46 01.1**	**+0.9**
SANT	**Santorini**	**1.11**	**255**	P	**Pn**	**04 46 00.7**	**+0.3**
SANT	**Santorini**	**1.11**	**255**	PG	**Pn**	**04 46 00.4**	**0.0**
SNT1	**Gialos, Santor**	**1.12**	**258**	P	**Pn**	**04 46 00.6**	**+0.1**
KARP	**Karpathos**	**1.15**	**165**	P	**Pn**	**04 46 01.1**	**+0.2**
KARP				AML	AML	04 46 23.2	
	comp=N,2401μm,0.3s						
KARP				AML	AML	04 46 23.8	
	comp=E,1659μm,0.3s						
KARP	**Karpathos**	**1.15**	**165**	P	**Pn**	**04 46 00.8**	**0.0**
KARP				S	**Sn**	**04 46 19.5**	**-0.5**
	comp=E,1μm,0.2s						
KARP	**Karpathos**	**1.15**	**165**	PN	**Pn**	**04 46 01.1**	**+0.2**
THR6	**Thira Island,**	**1.16**	**255**	P	**Pn**	**04 46 01.4**	**+0.6**
ARG	**Arkhangelos**	**1.17**	**112**	P	**Pn**	**04 46 02.1**	**+1.3**
ARG	**Arkhangelos**	**1.17**	**112**	P	**Pn**	**04 46 02.1**	**+1.3**
ARG				S	**Sn**	**04 46 20.5**	**+0.3**
ARG	**Arkhangelos**	**1.17**	**112**	PN	**Pn**	**04 46 01.9**	**+1.0**
ARG				SN	**Sn**	**04 46 20.5**	**+0.3**
TURN	**Turunc**	**1.17**	**84**	PN	**Pn**	**04 46 02.1**	**+1.2**
TURN				SN	**Sn**	**04 46 20.9**	**+0.6**
TURN	**Turunc**	**1.17**	**84**	*i* P	**Pn**	**04 46 02.0**	**+1.1**
TURN				*i* S	**Sn**	**04 46 17.0**	**-3.3**
YER	**Yerkesik**	**1.29**	**68**	P	**Pn**	**04 46 03.8**	**+1.7**
YER	**Yerkesik**	**1.29**	**68**	PN	**Pn**	**04 46 03.4**	**+1.3**
MULA	**Mugla, Merkez-**	**1.36**	**64**	*i* P	**Pn**	**04 46 04.6**	**+1.7**
MULA				*i* S	**Sn**	**04 46 22.0**	**-1.9**
DALY	**Dalyan (Mula)**	**1.50**	**83**	PN	**Pn**	**04 46 05.9**	**+1.6**
DALY				SN	**Sn**	**04 46 27.3**	**+1.0**
DALY	**Dalyan (Mula)**	**1.50**	**83**	*i* P	**Pn**	**04 46 05.8**	**+1.4**
DALY				*i* S	**Sn**	**04 46 21.8**	**-4.5**
STIA	**Sitia Lasithi**	**1.56**	**202**	P	**Pn**	**04 46 04.2**	**-0.8**
STIA				S	**Sn**	**04 46 25.8**	**-1.7**
ZKR	**Zakros**	**1.61**	**197**	P	**Pn**	**04 46 06.0**	**+0.5**
ZKR	**Zakros**	**1.61**	**197**	P	**Pn**	**04 46 06.1**	**+0.5**
ZKR				S	**Sn**	**04 46 27.6**	**-0.9**
	comp=E,188nm,0.5s						
ZKR	**Zakros**	**1.61**	**197**	PN	**Pn**	**04 46 05.9**	**+0.3**
ZKR				SN	**Sn**	**04 46 27.7**	**-0.8**
NPS	**Neapolis**	**1.69**	**215**	P	**Pn**	**04 46 06.2**	**-0.3**
NPS	**Neapolis**	**1.69**	**215**	P	**Pn**	**04 46 06.2**	**-0.3**
NPS				S	**Sn**	**04 46 28.3**	**-1.8**
	comp=E,238nm,0.2s						
LAST	**Lasithi**	**1.84**	**216**	P	**Pn**	**04 46 07.9**	**-0.3**
LAST	**Lasithi**	**1.84**	**216**	P	**Pn**	**04 46 07.9**	**-0.3**
LAST				S	**Sn**	**04 46 31.1**	**-2.1**
FETY	**Fethiye**	**1.84**	**90**	PN	**Pn**	**04 46 08.4**	**+0.2**
FETY	**Fethiye**	**1.84**	**90**	*i* P	**Pn**	**04 46 08.2**	**-0.1**
FETY				*i* S	Sn	04 46 24.1	-9.2
TAVA	**DENIZLI_Tavas**	**1.88**	**64**	*i* P	**Pn**	**04 46 10.1**	**+1.4**
TAVA				*i* S	**Sn**	**04 46 28.0**	**-6.2**
HRKL	**Herakleio**	**1.92**	**226**	P	**Pn**	**04 46 09.5**	**+0.4**
IDI	**Anoyia**	**2.06**	**229**	P	**Pn**	**04 46 10.3**	**-0.6**
IDI				AML	AML	04 46 36.7	
	comp=N,361μm,0.3s						
IDI				AML	AML	04 46 38.2	
	comp=E,293μm,0.3s						
IDI	**Anoyia**	**2.06**	**229**	P	**Pn**	**04 46 10.3**	**-0.6**
IDI				S	**Sn**	**04 46 35.5**	**-2.4**
	comp=E,162nm,0.4s						
CAEL	**Denizli, Camel**	**2.08**	**76**	*i* P	**Pn**	**04 46 12.5**	**+1.4**
CAEL				*i* S	**Sn**	**04 46 32.1**	**-6.4**
CAEL				IAML		04 46 42.0	
	comp=E,52nm,0.5s						
CAEL				IAML		04 46 56.0	
	comp=N,96nm,2.3s						
GOLH	**Golhisar**	**2.29**	**75**	*i* P	**Pn**	**04 46 15.5**	**+1.8**
GOLH				*i* S	**Sn**	**04 46 36.2**	**-6.8**
SIVA	**Sivas**	**2.30**	**225**	P	**Pn**	**04 46 13.9**	**+0.3**
SIVA	**Sivas**	**2.30**	**225**	P	**Pn**	**04 46 13.9**	**+0.3**
SIVA				S	**Sn**	**04 46 42.0**	**-0.9**
AKAS	**Kas**	**2.31**	**100**	PN	**Pn**	**04 46 14.0**	**+0.1**
AKAS	**Kas**	**2.31**	**100**	*i* P	**Pn**	**04 46 14.3**	**+0.3**
AKAS				*i* S	Sn	04 46 34.4	-9.0
KSL	**Kastellorizon**	**2.31**	**102**	P	**Pn**	**04 46 15.0**	**+1.2**
VAM	**Vamos**	**2.44**	**240**	P	**Pn**	**04 46 14.9**	**-0.6**
VAM	**Vamos**	**2.44**	**240**	P	**Pn**	**04 46 14.9**	**-0.6**
VAM				S	**Sn**	**04 46 44.0**	**-2.2**
	comp=N,322nm,0.3s						
ELL	**Elmali**	**2.51**	**87**	PN	**Pn**	**04 46 17.9**	**+1.5**
IMMV	**Iera Moni Meta**	**2.57**	**243**	P	**Pn**	**04 46 16.9**	**-0.2**
IMMV	**Iera Moni Meta**	**2.57**	**243**	P	**Pn**	**04 46 16.9**	**-0.2**
IMMV				S	**Sn**	**04 46 46.7**	**-2.3**
	comp=N,292nm,0.4s						
KHAL	**Karahalli**	**2.74**	**51**	*i* P	**Pn**	**04 46 20.6**	**+1.3**
KHAL				*i* S	**Sn**	**04 46 46.0**	**-7.1**
GVDS	**Gavdos**	**2.85**	**231**	P	**Pn**	**04 46 20.2**	**-0.3**
GVDS				S	**Sn**	**04 46 54.5**	**-0.8**
	comp=N,210nm,0.5s						
GVD	**Gavdhos**	**2.85**	**231**	P	**Pn**	**04 46 20.7**	**+0.2**
GVD	**Gavdhos**	**2.85**	**231**	P	**Pn**	**04 46 20.8**	**+0.2**
GVD				S	**Sn**	**04 46 53.8**	**-1.6**
	comp=N,235nm,0.5s						
ANKY	**Antikythira Is**	**2.93**	**255**	P	**Pn**	**04 46 20.5**	**-1.1**
ANKY	**Antikythira Is**	**2.93**	**255**	P	**Pn**	**04 46 20.5**	**-1.1**
ANKY				S	**Sn**	**04 46 54.6**	**-2.5**
KTHA	**Kythira Island**	**3.03**	**263**	P	**Pn**	**04 46 23.6**	**+0.7**
VLI	**Veliai**	**3.10**	**272**	P	**Pn**	**04 46 23.5**	**-0.3**
VLI	**Veliai**	**3.10**	**272**	P	**Pn**	**04 46 24.1**	**+0.4**
VLI				S	**Sn**	**04 46 58.0**	**-3.0**
	comp=N,125nm,0.3s						
ITM	**Ithomi**	**3.93**	**279**	P	**Pn**	**04 46 35.5**	**+0.9**
KLV	**Kalavryta, Ach**	**3.95**	**292**	P	**Pn**	**04 46 35.9**	**+1.1**
AMT	**Artemida-Makis**	**4.16**	**284**	P	**Pn**	**04 46 38.4**	**+0.9**
ANX	**Ano Chora**	**4.32**	**298**	P	**Pn**	**04 46 42.1**	**+2.3**
BRTR	**Keskin Array B**	**6.20**	**58**	P	**Pn**	**04 47 07.2**	**+2.3**
	comp=N,0.0nm,0.3s,baz=234,slow=15,SNR=3.4						
AKASG	**Malin Array Be**	**14.14**	**6**	P	**Pn**	**04 48 52.9**	**+3.5**
	comp=N,0.6nm,0.3s,baz=196,slow=11,SNR=3.4						
KBZ	**Khabaz**	**14.18**	**55**	P	**P**	**04 48 54.0**	**+0.9**
	comp=N,0.1nm,0.3s,baz=243,slow=11,SNR=7.0						
TORD	**Torodi Ar. Bea**	**32.47**	**230**	P	**P**	**04 51 52.4**	**-0.3**
	comp=N,0.9nm,0.5s,baz=32,slow=9.1,SNR=7.0						
KURBB	**Kurchatov Arra**	**39.15**	**52**	P	**P**	**04 52 49.1**	**-0.2**
	comp=N,0.6nm,0.4s,baz=273,slow=8.7,SNR=6.2						
MKAR	**Makanchi Array**	**41.85**	**58**	P	**P**	**04 53 10.7**	**-0.8**
	comp=N,0.5nm,0.5s,baz=267,slow=8.5,SNR=8.6						

ZALV	**Zalesovo Beam**	43.01	47	P	P	04 53 19.7	-1.1
	comp=N,0.7nm,0.3s,baz=270,slow=8.2,SNR=2.9						

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*IDC **23** 04:47:46.1±2.4, 4°.21S×152°.90E, h0^{km}, mb4.2/5, mb1 4.4/5, mb1mx3.6/42, mbtmp4.2/5, Error ellipse: s-maj=52.0km s-min=31.1km az=11.0*

*NEIC **23** 04:47:53.8±0.9, 4°.3S±0°.2×152°.85E±0°.05, h54^{km}±11^{km}, mb4.2/7, Error ellipse: s-maj=30.3km s-min=7.4km az=179.0*

ISC 23 04:47:52.0±1.0**, 4°.3S**±0°.2×**153°.0E**±0°.1**, h35^{km}, n14, σ0^{s}.79**/12**, mb4.2**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	0.79	278	Pn	Pn	04 48 07.5	+0.8
KWAJ	**Kwajalein Atol**	19.58	48	P	Pn	04 52 18.5	-0.1
DZM	**Mont Dzumac**	21.97	145	P	P	04 52 43.4	+0.2
	3.5nm,0.5s,baz=226,slow=8.6,SNR=12						
DZM	**Mont Dzumac**	21.97	145	IAmb	IAmb	04 52 44.3	
	comp=Z,18nm,1.2s						
WB0	**Warramunga Arr**	23.73	228	P	P	04 53 00.3	-0.9
WB0				IAmb	IAmb	04 53 02.2	
	comp=Z,6.3nm,0.8s						
WR0	**Warramunga Arr**	23.74	228	P	P	04 53 00.8	-0.4
WR0				IAmb	IAmb	04 53 26.4	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	23.88	228	P	P	04 53 02.3	-0.3
	comp=Z,4.2nm,0.5s,baz=54,slow=9.7,SNR=60						
AS31	**Alice Springs**	26.61	222	P	P	04 53 26.4	-1.0
ASAR	**Alice Springs**	26.61	222	P	P	04 53 26.9	-0.5
	comp=Z,1.5nm,0.4s,baz=56,slow=8.7,SNR=20						
FITZ	**Fitzroy Crossi**	30.03	241	P	P	04 53 56.6	-1.2
	comp=Z,1.3nm,0.4s,baz=55,slow=10,SNR=11						
LTZ	**Lake Taylor**	41.98	159	P	P	04 55 40.5	+0.7
LTZ				IAmb	IAmb	04 55 43.2	
	comp=Z,4.7nm,0.8s						
VNDA	**Vanda**	73.31	178	P	P	04 59 19.5	0.0
	comp=Z,2.9nm,1.1s,baz=322,slow=4.2,SNR=4.6						
VNDA	**Vanda**	73.31	178	IAmb	IAmb	04 59 22.7	
	comp=Z,3.3nm,1.0s						
TORD	**Torodi Ar. Bea**	150.29	289	PKPbc	PKPbc	05 07 39.9	-0.8
	comp=Z,0.9nm,0.7s,baz=64,slow=3.4,SNR=2.5						

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*IDC **23** 04:48:56.3±11.0, 29°.54N×80°.72E, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.2/52, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=223.2km s-min=77.2km az=138.0*

*NDI **23** 04:49:07.1±1.3, 29°.71N×80°.44E, h18^{km}±22^{km}, ML3.1*

ISC 23 04:49:01.0±1.3**, 29°.72N**±0°.07×**80°.87E**±0°.08**, h17^{km}, n12, σ2^{s}.42**/16**, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	2.51	284	*e*P	Pn	04 49 42.6	+1.4
DDI				*e*S	Sn	04 50 08.2	-3.3
NDI	**New Delhi**	3.36	253	*e*P	Pb	04 50 01.9	+1.8
NDI				*e*S	Sn	04 50 28.1	-4.2
NDI				*e*x	x	04 52 18.5	
NDI	**New Delhi**	3.36	253	*e*P	Pg	04 50 05.0	-0.4
NDI				*e*S	Sg	04 50 49.0	+0.1
SMLA	**Simla**	3.49	295	*e*P	Pn	04 49 55.2	+0.6
SMLA				*i* x	x	04 50 01.1	
SMLA				*e*x	x	04 50 41.7	
SMLA				IAML		04 50 45.2	
	comp=N,70nm,0.2s						
SMLA				IAML		04 50 45.4	
	comp=E,87nm,0.4s						
BHGR	**Bahadurgarh**	3.59	254	*e*S	Sb	04 50 48.9	+1.6
SONA	**Sohna**	3.63	247	*e*P	Pn	04 49 58.3	+1.9
DHRM	**DHARAMSHALA**	4.66	304	*e*P	Pn	04 50 13.5	+2.6
BHPL	**Bhopal**	7.15	206	*e*P	Pn	04 50 47.8	+2.8
BHPL				*e*S	Sn	04 52 01.9	-4.0
MKAR	**Makanchi Array**	17.08	3	P	Pn	04 53 00.2	+1.2
	comp=E,0.2nm,0.3s,baz=183,slow=12,SNR=9.5						
KURBB	**Kurchatov Arra**	20.95	356	P	P	04 53 41.5	-1.5
	comp=E,0.4nm,0.5s,baz=181,slow=10.0,SNR=5.5						
ZALV	**Zalesovo Beam**	24.38	6	P	P	04 54 17.8	-0.3
	comp=E,0.6nm,0.5s,baz=188,slow=8.7,SNR=2.9						
FINES	**FINESS Array B**	47.66	328	P	P	04 57 34.7	-1.4
	comp=E,1.8nm,0.8s,baz=104,slow=8.0,SNR=5.9						

IDC 23 04:50:59.6±9.4**, 37°.16N**×**70°.18E, h216^{km}**±61^{km}**, mb3.5**/1**, mb1 2.9**/5**, mb1mx2.6**/51**, mbtmp3.5**/5**, Error ellipse: s-maj=91.6km s-min=60.6km az=170.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	6.40	30	P	Pn	04 52 31.8	-0.5
	0.4nm,0.3s,baz=200,slow=12,SNR=4.1						
AAK				S	S	04 53 46.1	+0.3
	0.6nm,0.3s,baz=140,slow=11,SNR=11						
MKAR	**Makanchi Array**	13.17	39	P	P	04 54 00.5	-0.6
	0.1nm,0.3s,baz=233,slow=14,SNR=3.2						
BVAR	**Borovoye Array**	15.87	0	P	Pn	04 54 32.7	+1.3
	0.2nm,0.3s,baz=171,slow=10,SNR=2.2						
ZALV	**Zalesovo Beam**	19.60	26	P	P	04 55 11.1	-0.3
	0.4nm,0.3s,baz=216,slow=10,SNR=5.7						
ARCES	**ARCESS Array B**	40.28	338	P	P	04 58 14.9	-0.4
	2.5nm,0.9s,baz=119,slow=7.3,SNR=4.6						

IDC 23 04:57:32.7±15.0**, 6°.06S**×**129°.10E, h272^{km}**±175^{km}**, mb2.6**/1**, mb1 3.1**/4**, mb1mx2.8**/36**, mbtmp3.7**/4**, Error ellipse: s-maj=130.5km s-min=48.9km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	12.44	195	P	Pn	05 00 19.6	-1.6
	0.1nm,0.3s,baz=8.7,slow=13,SNR=1.4						
FITZ				S	S	05 02 32.1	-7.5
	0.1nm,0.3s,baz=18,slow=14,SNR=2.2						
WRA	**Warramunga Arr**	14.71	160	P	Pn	05 00 49.0	+0.2
	0.2nm,0.3s,baz=341,slow=12,SNR=5.5						
ASAR	**Alice Springs**	18.11	166	P	P	05 01 25.4	+0.2
	0.7nm,0.3s,baz=345,slow=12,SNR=33						
MKAR	**Makanchi Array**	66.95	327	P	P	05 07 56.4	+0.1
	0.1nm,0.4s,baz=124,slow=7.2,SNR=4.2						

IDC 23 05:16:38.0±5.7**, 3°.88S**×**145°.20E, h245^{km}**±54^{km}**, mb3.2**/3**, mb1 3.5**/5**, mb1mx3.0**/42**, mbtmp3.8**/5**, Error ellipse: s-maj=78.3km s-min=25.4km az=107.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	4.69	287	P	Pn	05 17 50.5	+0.6
	1.7nm,0.3s,baz=104,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	19.16	213	P	P	05 20 42.1	-1.4
	0.2nm,0.3s,baz=34,slow=10,SNR=12						
ASAR	**Alice Springs**	22.49	208	P	P	05 21 18.7	+1.6
	1.9nm,1.1s,baz=36,slow=8.8,SNR=6.9						
FITZ	**Fitzroy Crossi**	23.80	232	P	P	05 21 29.4	+0.4
	3.4nm,0.9s,baz=53,slow=10,SNR=1.9						
ILAR	**Eielson Array**	84.26	24	P	P	05 28 41.5	-0.5
	0.7nm,0.8s,baz=246,slow=5.6,SNR=3.0						

NNC 23 05:52:17.4±7.4**, 37°.11N**×**71°.15E, h0^{km}, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=71.6km s-min=49.0km az=142.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	6.01	356	Pn	Pn	05 53 47.4	-0.3
	0.6nm,0.4s,baz=183,slow=13,SNR=9.6						
KK31				⇑Sn	Sn	05 54 58.1	+0.9
	1.9nm,0.6s,baz=174,slow=23,SNR=3.1						
AAK	**Ala-Archa**	6.09	24	⇓Pn	Pn	05 53 50.0	+1.1
	1.6nm,0.3s						
AAK				⇑Sn	Sn	05 55 02.1	+2.7
	4.0nm,0.6s						
TKM2	**Tokmak 2**	6.74	29	⇑Pn	Pn	05 53 57.0	-0.8
	0.8nm,0.5s						
TKM2				⇓Sn	Sn	05 55 14.5	-0.8
	2.3nm,0.9s						

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*JMA **23** 05:58:20.5±0.1, 43°.30N×145°.35E, h75^{km}±1^{km}, M2.9*

*SKHL **23** 05:58:21.2±0.2, 43°.21N×145°.33E, h67^{km}±6^{km}, mb4.4/2*

ISC 23 05:58:21.1±2.1**, 43°.30N**±0°.06×**145°.34E**±0°.06**, h71^{km}**±13^{km}**, n14, σ0^{s}.41**/26**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	0.25	211	P	Pn	05 58 32.2	+0.2
JKHN				*e*S	Sn	05 58 40.7	+0.7
NMR	**Nemuro--Hokkai**	0.29	76	*i* P	Pn	05 58 31.9	-0.4
NMR				*i* S	Sn	05 58 40.0	-0.5
NEM2	**Nemuro 2**	0.30	77	P	Pn	05 58 32.2	-0.2
NEM2				*e*S	Sn	05 58 40.8	+0.2
JNK	**Nakash**	0.54	303	P	Pn	05 58 33.7	-0.6
JNK				*e*S	Sn	05 58 43.6	-0.5
JNSB	**Nemuroshibetsu**	0.54	333	P	Pn	05 58 34.1	-0.2
JNSB				*e*S	Sn	05 58 44.3	+0.2
JAK	**Akkeshi**	0.56	238	P	Pn	05 58 34.4	-0.1
JAK				*e*S	Sn	05 58 44.9	+0.5
JRA	**Rausu**	0.66	346	P	Pn	05 58 35.5	-0.1
JRA				*e*S	Sn	05 58 46.7	+0.4
GRPR	**Tuman**	0.76	24	*e*P	Pn	05 58 36.7	-0.1
GRPR				AMB	AMB	05 58 37.0	
	131nm,0.2s						
GRPR				*i* S	Sn	05 58 48.2	-0.2
GRPR				A	A	05 58 49.0	
	556nm,0.3s						
GRPR				A	A	05 58 49.0	
	937nm,0.3s						
YUK	**Yuzh-Kuril'sk**	0.83	27	*e*P	Pn	05 58 37.7	+0.2
YUK				AMB	AMB	05 58 39.0	
	256nm,0.3s						
YUK				*i* S	Sn	05 58 50.3	+0.6
YUK				A	A	05 58 51.0	
	567nm,0.3s						
YUK				A	A	05 58 51.0	
	978nm,0.3s						
JAR	**Ashorobuto**	1.14	271	P	Pn	05 58 41.4	0.0
JAR				*e*S	Sn	05 58 56.9	+0.3
JOB	**Onbets**	1.17	251	P	Pn	05 58 41.9	+0.2
JOB				*e*S	Sn	05 58 57.6	+0.4
JTKR	**Abashiri--Toko**	1.24	304	P	Pn	05 58 42.6	0.0
JMP	**Maruseppu**	1.60	297	P	Pn	05 58 47.5	+0.1
JCH	**Churui**	1.60	245	P	Pn	05 58 47.1	-0.3
JCH				*e*S	Sn	05 59 06.4	-0.9

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*DRS **23** 06:08:44.1±0.0, 41°.60N×46°.39E, h10^{km}, ML2.5/6*

*AZER **23** 06:08:46.4±0.1, 41°.53N×46°.65E, h29^{km}, ml3.1/25, Error ellipse: s-maj=1.4km s-min=0.8km az=342.0*

*DDA **23** 06:08:51.7, 41°.76N×45°.87E, h8^{km}±3^{km}, ML2.3*

ISC 23 06:08:47.9±0.9**, 41°.52N**±0°.02×**46°.63E**±0°.02**, h29^{km}**±7^{km}**, n42, σ1^{s}.59**/81**, 6C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKTA	**Zakatala**	0.12	359	P	Pb	06 08 53.0	-0.2
	SNR=257						
ZKTA				S	Sb	06 08 57.9	+1.0
DDFL	**Dedoflistskaro**	0.39	259	P	Pn	06 08 59.4	+1.7
DDFL	**Dedoflistskaro**	0.39	259	*i* P	Pn	06 08 59.3	+1.7
DDFL				*i* S	Sn	06 09 05.2	+1.1
LGD	**Lagodekhi**	0.42	318	P	Pn	06 08 57.3	-0.8
LGD				S	Sn	06 09 05.2	+0.2
SEKA	**Sheki**	0.53	126	Pg	Pb	06 08 56.8	-2.0
	SNR=79						
SEKA				Sg	Sb	06 09 04.6	-1.7
MNGR	**Mingechevir, A**	0.82	155	P	Pb	06 09 03.4	-0.3
	SNR=5.0						
MNGR				S	Sb	06 09 16.2	+1.8
AKT	**Akhty**	0.83	93	⇓*e*Pg	Pb	06 09 01.0	-2.9
	42nm,0.2s						
AKT				⇓*i*Sg	Sb	06 09 11.2	-3.5
	354nm,0.4s						
GNBR	**Gunib**	0.90	16	⇑*e*Pg	Pn	06 09 04.7	0.0
	52nm,0.5s						
GNBR				⇑*e*Sg	Sn	06 09 15.8	-1.0
	91nm,0.5s						
GANJ	**Ganja**	0.91	195	P	Pb	06 09 04.1	-1.0
	SNR=53						
GANJ				S	Sb	06 09 17.1	+0.4
GDB	**GEDABAY**	1.04	220	P	Pn	06 09 06.2	-0.4
	SNR=908						
GDB				S	Sn	06 09 21.3	+1.0
QZX	**Qazax, Azerbai**	1.05	244	P	Pn	06 09 07.0	+0.3
	SNR=38						
QZX				S	Sn	06 09 23.0	+2.5
QBL	**Gabala**	1.08	122	P	Pn	06 09 05.7	-1.4
QBL				S	Sn	06 09 19.9	-1.2
ARKR	**Arakani**	1.11	14	⇓*e*Pg	Pb	06 09 07.9	-0.7
	38nm,0.4s						
ARKR				⇓*e*Sg	Sn	06 09 22.5	+0.4
	60nm,0.7s						
BTLR	**Botlikh**	1.18	345	⇑*e*Pg	Pb	06 09 09.9	+0.2
	29nm,0.5s						
BTLR				⇑*e*Sg	Sn	06 09 25.9	+2.2
	45nm,0.3s						
XNQ	**Khinaliq**	1.19	107	P	Pn	06 09 07.3	-1.5
	SNR=7.2						
XNQ				S	Sn	06 09 25.0	+0.8
QSAR	**Qusar**	1.23	90	P	Pn	06 09 08.8	-0.3
	SNR=11						
QSAR				S	Sn	06 09 24.9	+0.1
KRNR	**Karanay**	1.32	9	⇓*e*Pg	Pb	06 09 11.0	-1.1
	11nm,0.4s						
KRNR				⇓*e*Sg	Sb	06 09 28.5	-0.2
	51nm,1.0s						
BRDA	**Brd**	1.33	161	P	Pn	06 09 11.2	+0.8
	SNR=12						
BRDA				S	Sb	06 09 30.2	+1.5
BUJR	**Buynaksk**	1.35	15	⇑*e*Pg	Pb	06 09 14.2	+1.6
	65nm,0.4s						
BUJR				⇑*e*Sg	Sb	06 09 30.8	+1.3
	156nm,0.8s						
BTNK	**Botanikuri**	1.38	277	P	Pb	06 09 13.3	+0.2
BTNK				S	Sb	06 09 33.1	+2.8
BTNK	**Botanikuri**	1.38	277	*i* P	Pb	06 09 13.0	-0.1
BTNK				*i* S	Sb	06 09 28.4	-1.9
BTNK				IAML		06 09 35.0	
	comp=E,411nm,0.1s						
IML	**Ismayilli**	1.38	121	P	Pn	06 09 10.8	-0.5
	SNR=7.6						
IML				S	Sn	06 09 30.1	+1.5
AGDM	**Agdam**	1.46	165	P	Pn	06 09 12.6	+0.3
	SNR=38						
AGDM				S	Sn	06 09 32.1	+1.6
ZRD	**Zardab**	1.48	147	Pn	Pn	06 09 13.0	+0.4
	SNR=11						
ZRD				Sn	Sn	06 09 33.8	+3.0
KDMR	**Kurdemir**	1.65	134	Pn	Pn	06 09 15.0	+0.2
KDMR				Sn	Sn	06 09 36.9	+2.0
PQL	**Pirkuli**	1.66	116	Pn	Pn	06 09 15.8	+0.6
	SNR=13						
PQL				Sn	Sn	06 09 38.7	+3.2
KZRT	**Kazreti**	1.68	266	P	Pn	06 09 14.7	-0.7
KZRT				S	Sb	06 09 39.0	+0.1
KZRT	**Kazreti**	1.68	266	*i* P	Pb	06 09 16.3	-1.8
KZRT				*i* S	Sn	06 09 34.2	-1.7
SIZA	**Siyzn**	1.77	104	Pg	Pn	06 09 18.9	+2.3
	SNR=4.9						
SIZA				Sg	Sb	06 09 42.9	+1.4
DMNI	**Dmanisi**	1.84	265	P	Pb	06 09 18.2	-2.8
DMNI				S	Sb	06 09 44.2	+0.6
ATGJ	**Altiaghaj**	1.87	110	Pg	Pn	06 09 20.1	+2.1
	SNR=5.4						
ATGJ				Sn	Sn	06 09 43.5	+2.9
BLQ	**Beylaqan**	1.94	158	Sn	Sn	06 09 43.1	+0.9
BRNG	**Burnasheti**	2.10	274	P	Pb	06 09 24.1	-1.3
BRNG				S	Sb	06 09 51.5	+0.4
QRD	**Qoradiz**	2.13	165	Pn	Pn	06 09 21.6	+0.2
QRD				Sn	Sn	06 09 47.9	+1.0
HYR	**Heyderabad**	2.25	217	Pg	Pb	06 09 26.4	-1.5
	SNR=7.0						
HYR				Sg	Sb	06 09 58.0	+2.7
BKRG	**Bakuriani**	2.34	277	P	Pb	06 09 27.3	-2.1
EAK	**Akyaka**	2.43	251	*i* P	Pb	06 09 28.8	-2.1
EAK				*i* S	Sn	06 09 49.8	-4.8
EAK				IAML		06 10 06.0	
	comp=N,28nm,0.5s						
EAK				IAML		06 10 09.0	
	comp=E,21nm,0.8s						
ORD	**Ordubad**	2.64	191	Pn	Pn	06 09 29.0	+0.5
	SNR=5.5						
ORD				Sn	Sn	06 10 00.4	+0.8
GLBA	**Clilabad**	2.65	149	Pn	Pn	06 09 29.6	+1.0
	SNR=3.3						
GLBA				Sn	Sn	06 10 00.3	+0.6
YRD	**Yardimli**	2.88	154	Pn	Pn	06 09 32.0	-0.1
	SNR=3.6						
YRD				Sn	Sn	06 10 05.0	-0.8
LRK	**Lerik**	3.16	155	Pn	Pn	06 09 36.0	+0.1
	SNR=4.4						
LRK				Sn	Sn	06 10 12.1	-0.6
ASTR	**Astara**	3.39	150	Pn	Pn	06 09 38.6	-0.3
ASTR				Sn	Sn	06 10 17.8	-0.3

WEL 23 06:29:51.8, 47°S±13°×**16°5E**±1°1**, h6^{km}**±26^{km}**, M3.9**/12**, mB4.0**/1**, ML3.9**/12**, MLv3.9**/12**, Mw(mB)3.0**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=160.4, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	1.21	44	P	Pg	06 30 12.1	-2.9
DCZ	**Deep Cove**	1.97	37	P	Pn	06 30 21.9	-3.7
WHZ	**Wether Hill Ro**	2.06	57	P	Pn	06 30 25.1	-1.9
WHZ				S	Sn	06 30 49.5	-3.5
MLZ	**Mavora Lakes**	2.49	48	P	Pn	06 30 31.8	-1.1
MLZ				S	Sn	06 31 01.3	-2.3
SYZ	**Scrubby Hill**	2.57	80	P	Pn	06 30 33.8	0.0
SYZ				S	Sn	06 31 03.0	-2.4
MSZ	**Milford Sound**	2.93	37	P	Pn	06 30 37.2	-1.7
TUZ	**Tuapeka**	3.07	71	P	Pn	06 30 40.0	-0.8
TUZ				S	Sn	06 31 14.8	-3.1
EAZ	**Earnscleugh**	3.23	57	P	Pn	06 30 41.7	-1.2
EAZ				S	Sn	06 31 17.3	-4.4
WKZ	**Wanaka**	3.32	49	P	Pn	06 30 44.2	-0.1
HHSZ	**Highcliff Hill**	3.73	74	P	Pn	06 30 49.1	-0.7
JCZ	**Jackson Bay**	3.78	39	P	Pn	06 30 49.6	-1.0
ODZ	**Otahua Downs**	4.12	63	P	Pn	06 30 52.2	-3.0
LBZ	**Lake Benmore**	4.24	53	P	Pn	06 30 53.9	-3.0
FOZ	**Fox Glacier**	4.66	43	P	Pn	06 31 00.7	-2.0
TMZ	**Timaru**	4.70	57	P	Pn	06 31 00.6	-2.6
GCSZ	**Gaunt Creek Bo**	5.07	44	P	Pn	06 31 05.8	-2.5
RPZ	**Rata Peaks**	5.15	52	P	Pn	06 31 05.8	-3.6
LTZ	**Lake Taylor**	6.44	51	P	Pn	06 31 24.2	-2.9
DSZ	**Denniston Nort**	6.97	43	P	Pn	06 31 31.0	-3.5
THZ	**Tophouse**	7.50	48	P	Pn	06 31 38.9	-2.8
QRZ	**Quartz Range**	8.04	42	P	Pn	06 31 46.0	-3.0

WEL 23 06:32:01.5, 40°S±1°×**17°6E**±°**, h23^{km}**±2^{km}**, M2.1**/24**, ML2.2**/8**, MLv2.1**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=87.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVHZ	**Dannevirke**	0.15	62	P	Pb	06 32 06.9	+0.4
POWZ	**Post Office Ro**	0.17	262	P	Pb	06 32 07.2	+0.5
PRWZ	**Pori Road**	0.19	185	P	Pn	06 32 08.0	-1.0
TSZ	**Takapari Road**	0.31	355	P	Pb	06 32 08.5	-0.1
BFZ	**Birch Farm**	0.37	149	P	Pb	06 32 10.4	+0.9
ANWZ	**Angora Road**	0.38	104	P	Pn	06 32 10.7	-0.8
MRZ	**Mangatainoka R**	0.43	227	P	Pb	06 32 06.2	-4.3
WPHZ	**Waipukurau**	0.46	49	P	Pb	06 32 11.6	+0.6
PNHZ	**Pukenui**	0.48	19	P	Pb	06 32 11.3	-0.1
PRHZ	**Porangahau**	0.50	78	P	Pn	06 32 12.8	-0.5
HOWZ	**Holdsworth Sta**	0.64	214	P	Pb	06 32 14.4	+0.3
TMWZ	**Te Maipa**	0.74	186	P	Pb	06 32 16.1	+0.3
OGWZ	**Otaki Gorge**	0.77	234	P	Pb	06 32 16.3	+0.1
KRHZ	**Kereru**	0.78	22	P	Pb	06 32 16.1	-0.3
MTW	**Mount Morrison**	0.87	205	P	Pb	06 32 17.3	-0.7
BHHZ	**Black Hill Sta**	0.88	3	P	Pb	06 32 17.5	-0.6
KAHZ	**Kahuranaki**	0.89	50	P	Pb	06 32 17.8	-0.5
KIW	**Kapiti Island**	0.96	239	P	Pb	06 32 19.1	-0.4
MOVZ	**Moawhango**	0.98	349	P	Pb	06 32 19.2	-0.7
WAZ	**Wanganui**	0.99	308	P	Pb	06 32 20.3	+0.4
KWHZ	**Kaweka Forest**	1.00	19	P	Pn	06 32 19.5	-0.6
CAW	**Cannon Point**	1.02	223	P	Pn	06 32 19.4	-1.0
WNVZ	**Wahianoa**	1.08	344	P	Pn	06 32 21.1	-0.3
TUVZ	**Tukino**	1.13	346	P	Pn	06 32 22.2	+0.1
NGZ	**Ngauruhoe**	1.23	346	P	Pn	06 32 23.5	+0.1
OTVZ	**Oturere**	1.23	348	P	Pn	06 32 23.5	+0.1
BKZ	**Black Stump Fm**	1.26	18	P	Pn	06 32 23.6	-0.1
TMVZ	**Te Maari**	1.27	350	P	Pn	06 32 24.1	+0.1
WTVZ	**West Tongariro**	1.29	346	P	Pn	06 32 24.4	+0.2
KRVZ	**Karewarewa**	1.30	348	P	Pn	06 32 24.6	+0.3
PLWZ	**Palliser**	1.32	205	P	Pn	06 32 23.0	-1.6
BHW	**Baring Head**	1.34	219	P	Pb	06 32 26.1	+0.1
NEZ	**North Egmont**	1.83	306	P	Pn	06 32 32.9	+1.4

ROM 23 06:49:09.2±0.1**, 44°.140N**±0°.005×**11°.131E**±0°.009**, h10^{km}, ML1.9**/1**, 3C, Error ellipse: s-maj=0.7km s-min=0.5km az=122.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	0.03	349	P	Pg	06 49 11.1	0.0
FNVD				S	Sg	06 49 12.7	+0.1
MTCR	**Monte La Croce**	0.15	220	⇑P	Pg	06 49 13.2	+0.6
MTCR				S	Sg	06 49 15.9	+1.0
PTF	**Prato**	0.19	194	P	Pg	06 49 13.7	+0.5
PTF				S	Sg	06 49 17.1	+1.3
ZCCA	**Zocca**	0.24	332	P	Pg	06 49 15.3	+1.2
POPM	**Popiglio**	0.29	251	P	Pg	06 49 15.5	+0.5
POPM				S	Sg	06 49 20.0	+1.2
POPM				AML	AML		
	comp=E,320µm,0.2s						
POPM				AML	AML		
	comp=N,378µm,0.2s						
MTRZ	**Monterenzio**	0.34	45	P	Pg	06 49 15.4	-0.5
BDI	**Bagni Di Lucca**	0.39	259	P	Pb	06 49 17.7	-0.6
BDI				S	Sb	06 49 23.4	-1.0
RUFI	**Rufina**	0.41	137	P	Pg	06 49 17.8	+0.6
NDIM	**Novi di Modena**	0.77	348	S	Sb	06 49 35.0	-0.1
PE3	**Peglio**	1.08	114	P	Pn	06 49 33.9	+3.4
PE3				S	Sn	06 49 46.0	+0.4
PE3				AML	AML		
	comp=N,4750µm,0.1s						
PE3				AML	AML		
	comp=E,2365µm,0.1s						
APEC	**Apecchio**	1.10	121	P	Pg	06 49 27.4	-2.9
LEOD	**Capriano del C**	1.50	332	S	Sg	06 49 57.0	-0.5
GAG1	**Gagliole**	1.67	122	P	Pg	06 49 45.5	+4.3
VIVA	**Pratoni del Vi**	2.67	153	P	Pn	06 49 48.9	-3.4
VIVA				S	Sg	06 50 39.0	+3.9
LATB	**Latina**	2.97	152	⇑P	Pg	06 50 06.2	+0.2
PTRJ	**Pietraroja**	3.74	137	S	Sg	06 51 09.0	-0.2
VULT	**Monte Vulture**	4.59	132	⇑P	Pn	06 50 21.3	+2.5

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*IDC **23** 06:49:18.7±0.7, 54°.46N×117°.29W, h0^{km}, mb3.3/1, mb1 3.8/11, mb1mx3.5/70, mbtmp3.5/11, ML3.6/9, Error ellipse: s-maj=11.0km s-min=7.3km az=79.0*

*PGC **23** 06:49:20.0, 54°.43N×117°.30W, h1^{km}, ML4.4, ML4.1/10, 180km Nne of Jasper, Alberta Alberta, Canada*

*NEIC **23** 06:49:20, 54°.43N×117°.30W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.28; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.16; $M_{r\theta}$-0.02; $M_{\theta\phi}$0.35; $M_{\phi r}$-0.06; Fault plane solution: $M_0$4.30000×10^{15} NP1:ϕ_s162.00000°, δ54.00000°, λ127.00000°. NP2:ϕ_s290.00000°, δ50.00000°, λ50.00000°. Principal axes: T 0.3098, Plg61.0000°, Azm133.0000°; N 0.1833, Plg29.0000°, Azm318.0000°; P -0.4932, Plg2.0000°, Azm227.0000°;*

*NEIC **23** 06:49:21.2±1.3, 54°.47N±0°.06×117°.26W±0°.09, h15^{km}±1^{km} Error ellipse: s-maj=9.4km s-min=6.0km az=214.0*

ISC 23 06:49:19.7±0.5**, 54°.61N**±0°.03×**117°.08W**±0°.03**, h10^{km}, n122, σ2^{s}.14**/165**, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NBC4	**NorthernBC 4**	2.33	299	Pn	Pn	06 49 58.7	+0.7
NBC4				Sn	Sn	06 50 27.1	+0.5
NBC4	**NorthernBC 4**	2.33	299	Pn	Pn	06 49 58.7	+0.7
NBC4				Sn	Sn	06 50 27.1	+0.5
MNB	**Mounoet Dainar**	2.54	198	Pn	Pn	06 49 59.7	-1.4
MNB	**Mounoet Dainar**	2.54	198	Pn	Pn	06 49 59.7	-1.4
EDM	**Edmonton**	2.60	121	Pn	Pn	06 50 03.2	+1.4
EDM				Sn	Sn	06 50 34.7	+1.2
EDM				Sg	Sb	06 50 40.8	+2.4
EDM	**Edmonton**	2.60	121	Pn	Pn	06 50 03.2	+1.4
EDM				Sn	Sn	06 50 34.7	+1.2
BLBC	**Blue River**	2.88	208	Pn	Pn	06 50 04.1	-1.7
BLBC	**Blue River**	2.88	208	Pn	Pn	06 50 04.1	-1.7

BMBC	**Bull Mountain**	3.23	299	Pn	Pn	06 50 10.9	+0.5
BMBC				Sn	Sn	06 50 48.5	-0.4
BMBC	**Bull Mountain**	3.23	299	Pn	Pn	06 50 10.9	+0.5
SLEB	**Sale Mountain**	3.50	191	Pn	Pn	06 50 12.8	-1.6
SLEB				Sn	Sn	06 50 51.7	-4.3
SLEB				Sg	Sb	06 51 00.2	-4.3
FSB	**Fort Saint Jam**	4.22	271	Pn	Pn	06 50 23.8	-0.3
NBC5	**NorthernBC 5**	4.29	315	Pn	Pn	06 50 25.8	+0.8
NBC5				Sn	Sn	06 51 14.9	-0.2
UBRB	**Upper Baezaeko**	4.50	250	Pn	Pn	06 50 25.9	-2.0
NBC6	**NorthernBC 6**	4.63	331	Pn	Pn	06 50 30.5	+0.9
NBC6				Sg	Sg	06 51 44.9	-3.3
LLLB	**Lillooet**	4.96	218	Pn	Pn	06 50 32.6	-1.6
LLLB				Pg	Pb	06 50 45.3	-1.2
LLLB				Sg	Sb	06 51 47.0	+0.8
FNBB	**Fort Nelson**	5.39	325	Pn	Pn	06 50 40.8	+0.7
NBC3	**NorthernBC 3**	5.41	340	Pn	Pn	06 50 41.6	+1.3
NBC3				Pg	Pb	06 50 58.7	+4.6
NBC3				Sn	Sn	06 51 41.9	-0.6
NBC3				Sg	Sg	06 52 10.1	-3.1
PNT	**Penticton**	5.53	198	Pn	Pn	06 50 39.6	-2.3
PNT				Sg	Sb	06 52 02.5	+0.1
WSLR	**Whistler**	5.74	221	Pn	Pn	06 50 42.8	-2.1
WSLR				Pg	Pb	06 50 59.9	0.0
WSLR				Sg	Sb	06 52 10.7	+2.1
HOPB	**Hope**	5.87	209	Pn	Pn	06 50 43.9	-2.8
HOPB				Pg	Pb	06 51 02.0	0.0
HOPB				Sg	Sb	06 52 14.1	+1.7
WALA	**Waterton Lakes**	5.89	159	Pn	Pn	06 50 46.5	-0.6
WALA				Pg	Pb	06 51 02.7	+0.3
WALA				Sg	Sb	06 52 19.6	+6.5
WALA	**Waterton Lakes**	5.89	159		Pn	06 50 46.8	-0.3
NBC2	**NorthernBC 2**	5.96	333	Pn	Pn	06 50 48.5	+0.7
NBC2				Sn	Sn	06 51 56.9	+0.8
NBC2				Sg	Sg	06 52 24.9	-5.8
WPB	**Watts Point**	6.23	220	Pg	Pb	06 51 06.9	-1.2
NBC1	**NorthernBC 1**	6.25	327	Pn	Pn	06 50 52.7	+0.8
NBC1				Sn	Sn	06 52 04.3	+1.0
NBC1				Sg	Sg	06 52 36.2	-3.9
NEW	**Newport**	6.35	180	Pn	Pn	06 50 51.6	-1.7
	0.9nm,0.3s,baz=11,slow=14,SNR=8.3						
NEW				Lg	Lg	06 52 27.1	
	3.5nm,0.3s,baz=325,slow=8.9,SNR=3.8						
NEW	**Newport**	6.35	180	Pn	Pn	06 50 51.8	-1.6
B08A	**Colville Reser**	6.41	194	Pn	Pn	06 50 52.3	-1.8
B08A				Sn	Sn	06 52 01.9	-5.4
B08A				Sg	Sb	06 52 29.4	+1.5
B08A	**Colville Reser**	6.41	194	Pn	Pn	06 50 53.2	-0.9
A05A	**Maple Falls**	6.42	211	Pg	Pb	06 51 12.3	+1.0
A05A				Sn	Sn	06 52 03.5	-3.8
A05A				Sg	Sb	06 52 30.4	+2.4
BIB	**Bowen Island**	6.47	219	Pg	Pb	06 51 13.2	+1.0
MBW	**Mount Baker**	6.55	209	Pg	Pb	06 51 14.1	+0.3
B06A	**Marblemount**	6.69	206	Pg	Pb	06 51 17.7	+1.8
B06A				Sg	Sb	06 52 38.6	+2.9
B06A	**Marblemount**	6.69	206	Pn	Pn	06 50 56.6	-1.2
RPW	**Rockport**	6.76	206	Pg	Pb	06 51 18.5	+1.3
KITB	**Kitimat**	6.78	270	Pn	Pn	06 50 58.0	-1.1
C09A	**Chrisman Ranch**	6.86	187	Pn	Pn	06 51 00.5	+0.3
NLLB	**Nanaimo Lost L**	6.87	221	Sg	Sb	06 52 47.0	+5.8
GHNB	**Nanoose**	6.91	223	Sg	Sb	06 52 46.5	+4.4
BSMT	**Bassoo Peak**	6.92	167	Pn	Pn	06 50 59.6	-1.6
BSMT				Pg	Pb	06 51 21.8	+1.8
GOBB	**Galiano Island**	6.93	218	Pg	Pb	06 51 21.6	+1.6
SNB	**Saturna Island**	6.96	215	Sg	Sb	06 52 47.0	+3.5
YBMT	**Yellow Bay**	7.02	163	Pn	Pn	06 51 01.4	-1.1
YBMT				Pg	Pb	06 51 23.2	+1.6
BBB	**Bella Bella**	7.03	254	Pn	Pn	06 50 59.0	-3.6
	0.6nm,0.3s,baz=303,slow=14,SNR=2.1						
BBB				Lg	Lg	06 52 51.4	
	4.9nm,0.3s,baz=172,slow=18,SNR=2.2						
BBB	**Bella Bella**	7.03	254	Sn	Sn	06 52 20.8	-1.6
BBB				Sg	Sb	06 52 53.0	+7.4
BBB	**Bella Bella**	7.03	254		Pn	06 50 59.9	-2.6
JTMT	**Jette**	7.09	165	Pn	Pn	06 51 02.0	-1.5
JTMT				Pg	Pb	06 51 25.4	+2.5
JTMT	**Jette**	7.09	165		Pn	06 51 02.1	-1.4
JCW	**Jim Creek**	7.10	207	Pg	Pb	06 51 23.9	+0.9
BHMT	**Big Hole Peak**	7.15	169	Pn	Pn	06 51 02.6	-1.7
BHMT				Pg	Pb	06 51 26.1	+2.3
B010	**North Saanich**	7.16	216	Sg	Sb	06 52 52.9	+3.5
B011	**North Saanich**	7.16	216	Pg	Pb	06 51 22.6	-1.4
B011				Sg	Sb	06 52 52.7	+3.4
PGC	**Sidney**	7.16	216	Sg	Sb	06 52 52.6	+3.3
B009	**North Saanich**	7.16	216	Sg	Sb	06 52 53.1	+3.7
BTB	**Buttle Lake**	7.32	229	Pn	Pn	06 51 08.8	+2.1
BTB				Sg	Sb	06 53 02.1	+8.0
MGB	**Mount Grey**	7.33	223	Pn	Pn	06 51 07.0	+0.2
SWMT	**Swartz Lake**	7.37	163	Pn	Pn	06 51 05.6	-1.7
SWMT				Pg	Pb	06 51 30.8	+3.3
FBMT	**Ferry Basin**	7.40	166	Pn	Pn	06 51 06.2	-1.6
FBMT				Pg	Pb	06 51 31.1	+2.9
LTY	**Liberty**	7.70	199	Pn	Pn	06 51 11.5	-0.3
SLMT	**Seeley Lake**	7.71	161	Pn	Pn	06 51 10.5	-1.6
SLMT				Pg	Pb	06 51 36.5	+3.0
OVMT	**Ovando**	7.98	159	Pn	Pn	06 51 14.8	-0.9
OVMT				Pg	Pb	06 51 38.8	+0.8
YKA	**Yellowknife Ar**	8.02	8	Pn	Pn	06 51 16.1	+0.2
	0.6nm,0.3s,baz=187,slow=13,SNR=33						
YKA				Sn	Sn	06 52 44.5	-2.0
	3.8nm,0.3s,baz=186,slow=22,SNR=5.6						
YKA				Lg	Lg	06 53 30.8	
	5.8nm,0.3s,baz=186,slow=28,SNR=12						
EGMT	**Eagleton**	8.03	142		Pn	06 51 15.3	-1.0
MSO	**Missoula**	8.04	164	Pn	Pn	06 51 15.0	-1.5
DLBC	**Dease Lake**	8.12	303	Pn	Pn	06 51 16.9	-0.7
	0.8nm,0.3s,baz=105,slow=8.3,SNR=6.4						
DLBC				Sn	Sn	06 52 46.7	-2.7
	0.3nm,0.3s,baz=356,slow=23,SNR=1.6						
DLBC				Lg	Lg	06 53 33.4	
	1.1nm,0.3s,baz=180,slow=26,SNR=1.8						
DLBC	**Dease Lake**	8.12	303	Pn	Pn	06 51 17.3	-0.2
DLBC				Pg	Pg	06 51 49.2	-5.8
DLBC				Sg	Sg	06 53 34.8	-5.2
DLBC	**Dease Lake**	8.12	303		Pn	06 51 18.2	+0.7
FMW	**Mount Fremont**	8.21	203	Pn	Pn	06 51 18.3	-0.7
LYMT	**Lyon Mountain**	8.22	156	Pn	Pn	06 51 19.0	-0.2
NLWA	**Neilton Lookou**	8.39	213	Pn	Pn	06 51 20.0	-1.3
BPMT	**Black Pine Rid**	8.50	163	Pn	Pn	06 51 20.9	-2.0
BPMT				Pg	Pb	06 51 52.7	+5.8
HRY	**Holter Researc**	8.58	155	Pn	Pn	06 51 22.3	-1.6
HRY				Pg	Pg	06 51 52.0	-12
HRY	**Holter Researc**	8.58	155		Pn	06 51 22.5	-1.4
ELMT	**Elliston**	8.60	158	Pn	Pn	06 51 23.6	-0.7
ELMT				Pg	Pg	06 51 52.1	-12
F10A	**Beach Ranch, E**	8.64	181		Pn	06 51 23.7	-1.1
FFC	**Flin Flon**	8.76	83	Pn	Pn	06 51 30.0	+3.8
HBMT	**Mount Humbug**	9.28	160	Pn	Pn	06 51 32.7	-0.9
BOZ	**Bozeman (W)**	9.67	157		Pn	06 51 38.3	-0.6
DLMT	**Dillon**	9.69	161		Pn	06 51 39.2	0.0
BMO	**Blue Mountains**	9.77	181	Pn	Pn	06 51 39.5	-0.6
MCMT	**McKenzie Canyo**	10.16	163		Pn	06 51 44.0	-1.7
YHL	**Hebgen Lake**	10.48	156		Pn	06 51 48.5	-1.6
TPMT	**Tepee Creek**	10.49	158	Pn	Pn	06 51 49.8	-0.4
YHB	**Horse Butte**	10.57	157		Pn	06 51 50.9	-0.4
BCYI	**Bear Canyon**	10.58	165	Pn	Pn	06 51 51.0	-0.4
YHH	**Holmes Hill**	10.62	155	Pn	Pn	06 51 51.6	-0.4
YNE	**Yellowstone No**	10.63	152		Pn	06 51 51.5	-0.7
YMR	**Madison River**	10.70	156		Pn	06 51 51.8	-1.3
RLMT	**Red Lodge**	10.74	149		Pn	06 51 52.4	-1.2
YMP	**Mirror Lake Pl**	10.84	153	Pn	Pn	06 51 55.3	+0.2
LKWY	**Lake**	10.94	154	Pn	Pn	06 51 56.7	+0.3
HLID	**Hailey**	11.19	170	Pn	Pn	06 51 59.3	-0.4
MOOW	**Moose Ponds**	11.62	157	Pn	Pn	06 52 06.3	+0.6
PDAR	**Pinedale Array**	12.84	154	Pn	Pn	06 52 22.3	0.0
	0.1nm,0.3s,baz=357,slow=9.0,SNR=7.3						
FCC	**Fort Churchill**	13.28	62	Pn	Pn	06 52 25.8	-2.2
KUKN	**Kugluktuk,NWT**	13.30	3	Pn	Pn	06 52 26.5	-1.7
YBH	**Yreka Blue Hor**	13.41	198	Pn	Pn	06 52 29.3	-0.7
	0.1nm,0.3s,baz=170,slow=14,SNR=1.3						
RSSD	**Black Hills**	13.48	136	Pn	Pn	06 52 29.9	-1.1
ULM	**Lac du Bonnet**	13.63	100	Pn	Pn	06 52 30.4	-2.5
	0.2nm,0.3s,baz=0.8,slow=8.9,SNR=1.6						
ULM				Lg	Lg	06 56 22.7	
	0.6nm,0.3s,baz=32,slow=22,SNR=2.1						
ULM	**Lac du Bonnet**	13.63	100	Pn	Pn	06 52 32.1	-0.8
ELK	**Elko**	13.92	174	Lg	Lg	06 56 31.3	
	0.1nm,0.3s,baz=272,slow=18,SNR=6.6						
DAWY	**Dawson**	14.72	319	P	P	06 52 55.8	+1.9
DAWY	**Dawson**	14.72	319	Pn	Pn	06 52 49.2	+1.4
BALM	**Baldy**	14.85	306	Pn	Pn	06 52 49.2	-0.4
EPLO	**Experimental L**	15.13	99	Pn	Pn	06 52 51.3	-2.0
C36M	**Paulatuk**	15.14	350	Pn	Pn	06 52 49.5	-3.7
BCAR	**Beaver Creek A**	15.25	314		Pn	06 52 56.7	+1.9
INK	**Inuvik**	15.74	337	Pn	Pn	06 52 58.3	-2.8
	0.6nm,0.3s,baz=142,slow=4.9,SNR=13						
INK	**Inuvik**	15.74	337	Pn	Pn	06 52 58.7	-2.4
EGAK	**Eagle**	15.74	320		P	06 53 06.2	+1.1
EGAK				IAmb	IAmb	06 53 58.8	
	comp=Z,22nm,1.9s						
K27K	**Chicken**	15.76	317		P	06 53 07.0	+1.7
TMUT	**Trail Mountain**	15.82	163		Pn	06 53 02.6	-0.1
NVAR	**Mina Array Bea**	16.20	183	Pn	Pn	06 53 04.6	-2.8
	comp=Z,0.1nm,0.3s,baz=11,slow=1.8,SNR=2.3						
MSU	**Marysvale**	16.44	166		Pn	06 53 10.9	+0.3
RIDG	**Independent Ri**	16.78	314	P	P	06 53 18.9	+2.2
MTPU	**Mount Pierson**	16.90	167	P	Pn	06 53 17.5	+1.0
PV14	**Lion Creek, Pa**	17.14	158	P	P	06 53 21.8	+0.7
PV14				IAmb	IAmb	06 53 23.3	
	comp=Z,28nm,1.8s						
PV11	**David Mesa, Pa**	17.24	158	P	P	06 53 22.4	+0.2
PV11				IAmb	IAmb	06 53 48.0	
	comp=Z,11nm,1.2s						
PV01	**Paradox Valley**	17.47	157	P	P	06 53 24.7	0.0
PV01				IAmb	IAmb	06 53 27.7	
	comp=Z,10.0nm,1.6s						
ILAR	**Eielson Array**	17.97	316	P	Pn	06 53 29.6	+0.3
	comp=Z,0.1nm,0.3s,baz=116,slow=11,SNR=11						
TXAR	**Lajitas Array**	27.05	154	P	P	06 55 02.9	+0.8
	comp=Z,0.4nm,0.7s,baz=357,slow=8.3,SNR=4.8						

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*STR **23** 06:51:18.1±0.7, 44°N±4°×1°2E±°, h0^{km}, MLv4.7/6, smi:scs/0.7/LOCSAT earthModelID smi:scs/0.7/alpes_taup-2.11 preliminary*

*IDC **23** 06:51:19.6±0.5, 44°.16N×11°.13E, h0^{km}, mb4.2/24, mb1 4.3/35, mb1mx4.1/62, mbtmp4.2/35, ML3.7/11, MS3.7/13, Ms1 3.7/13, ms1mx3.4/56, Error ellipse: s-maj=10.5km s-min=8.7km az=114.0*

*PDG **23** 06:51:19.4±0.0, 44°.13N×11°.13E, h5^{km}±2^{km}, ML4.4/11, Error ellipse: s-maj=1.3km s-min=3.6km az=0.0*

*MOS **23** 06:51:19.9±1.0, 44°.21N×11°.16E, h13^{km}, mb4.6/28, Error ellipse: s-maj=5.4km s-min=3.2km az=69.6*

*NEIC **23** 06:51:20.1±2.1, 44°.09N±0°.04×11°.21E±0°.05, h9^{km}±4^{km}, Error ellipse: s-maj=6.1km s-min=4.2km az=206.0*

*NEIC **23** 06:51:20, 44°.13N×11°.14E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.50; $M_{\theta\theta}$4.49; $M_{\phi\phi}$2.01; $M_{r\theta}$-1.42; $M_{\theta\phi}$-2.76; $M_{\phi r}$0.16; Fault plane solution: $M_0$6.55000×10^{15} NP1:ϕ_s117.66000°, δ50.90000°, λ-96.64000°. NP2:ϕ_s308.12000°, δ39.57000°, λ-81.91000°. Principal axes: T 6.4047, Plg6.0000°, Azm212.0000°; N 0.2791, Plg5.0000°, Azm122.0000°; P -6.6838, Plg82.0000°, Azm350.0000°;*

*IASPEI **23** 06:51:20.5±0.8, 44°.13N±0°.02×11°.13E±0°.02, h11^{km}±5^{km}, mb4.5/57, MS3.9/8 Error ellipse: s-maj=3.2km s-min=2.3km az=27.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **23** 06:51:20.3±0.1, 44°.128N±0°.006×11°.121E±0°.007, h10^{km}, ML4.1/1, Mw4.3, Error ellipse: s-maj=0.5km s-min=0.5km az=5.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.52; $M_{\theta\theta}$1.75; $M_{\phi\phi}$0.77; $M_{r\theta}$-1.23; $M_{\theta\phi}$-1.40; $M_{\phi r}$0.97; Fault plane solution: $M_0$3.05891×10^{15} NP1:ϕ_s127.00000°, δ60.00000°, λ-88.00000°. NP2:ϕ_s304.00000°, δ30.00000°, λ-93.00000°.*

*LDG **23** 06:51:20.5±0.2, 44°.07N×11°.15E, h10^{km}, Md3.7/2, Ml3.9/45 Error ellipse: s-maj=3.7km s-min=3.4km az=61.0*

*GEN **23** 06:51:20, 44°.13N×11°.14E, h10^{km}±5^{km}, Ml4.3*

*PRU **23** 06:51:21.0±0.0, 44°.17N×11°.37E, h0^{km}, M4.7*

*BGR **23** 06:51:26.1±0.5, 44°.40N×11°.17E, h10^{km}, ML4.5, Error ellipse: s-maj=8.9km s-min=6.7km az=112.0*

ISC 23 06:51:20.8±0.7, **44°.15N**±0°.01×**11°.13E**±0°.01, **h13**^{km}±4^{km}, **n687**, σ**2^{s}.03**/810, **mb4.5**/57, **MS3.9**/8, **65C-64D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	0.02	356	⇓P	Pg	06 51 22.1	-1.2
FNVD				S	Sg	06 51 23.5	-1.5
MTCR	**Monte La Croce**	0.15	217	⇑P	Pg	06 51 24.1	-0.4
MTCR				S	Sg	06 51 26.9	-0.3
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
MTCR				AML	AML		
PTF	**Prato**	0.19	192	P	Pg	06 51 24.6	-0.5
ZCCA	**Zocca**	0.23	332		Pb	06 51 26.3	-0.5
ZCCA	**Zocca**	0.23	332	⇑P	Pb	06 51 26.3	-0.5
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
ZCCA				AML	AML		
BRIS	**BRISIGHELLA**	0.28	89	⇑P	Pn	06 51 29.3	-1.2
BRIS				AML	AML		
	comp=E,18050µm,1.1s						
BRIS				AML	AML		
	comp=N,37350µm,0.8s						
BRIS				AML	AML		
	comp=N,37350µm,0.8s						
POPM	**Popiglio**	0.28	249	P	Pg	06 51 26.4	-0.3
POPM				S	Sg	06 51 31.4	+0.8
POPM	**Popiglio**	0.28	249	⇑P	Pg	06 51 26.4	-0.3
POPM				S	Sg	06 51 31.0	+0.3
MTRZ	**Monterenzio**	0.34	47	⇑P	Pg	06 51 26.4	-1.2
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
MTRZ				AML	AML		
CRMI	**Carmignano**	0.37	197	⇑P	Pg	06 51 27.6	-0.7
CRMI				S	Sg	06 51 33.8	+0.4
CRMI				AML	AML		
	comp=E,40200µm,1.2s						
CRMI				AML	AML		
	comp=N,5405µm,0.9s						
CRMI				AML	AML		
	comp=N,44350µm,0.9s						
CRMI				AML	AML		
	comp=E,5805µm,1.2s						
CRMI				AML	AML		
	comp=E,40200µm,1.2s						
CRMI				AML	AML		
	comp=E,40200µm,1.2s						
CRMI				AML	AML		
	comp=N,44350µm,0.9s						
CRMI				AML	AML		
	comp=E,5810µm,1.2s						
FIR	**Firenze**	0.39	166	P	Pg	06 51 27.9	-0.6
BDI	**Bagni Di Lucca**	0.39	258	P	Pg	06 51 28.2	-0.4
BDI				S	Sg	06 51 34.4	+0.5
BDI				AML	AML		
	comp=E,87500µm,0.7s						
BDI				AML	AML		
BDI				AML	AML		
	comp=E,79350µm,1.0s						
BDI				AML	AML		
BDI				AML	AML		
BDI				AML	AML		
	comp=E,79350µm,1.0s						
RUFI	**Rufina**	0.41	138	⇑P	Pg	06 51 28.0	-1.0
RUFI				S	Sg	06 51 35.1	+0.5
RUFI				AML	AML		
	comp=E,17150µm,0.6s						
RUFI				AML	AML		
	comp=E,17200µm,1.0s						
RUFI				AML	AML		
	comp=E,17100µm,0.6s						
RUFI				AML	AML		
	comp=N,19250µm,1.6s						
LMD	**Lutirano**	0.42	99	⇑P	Pg	06 51 27.9	-1.3
LMD				AML	AML		
	comp=N,25150µm,0.9s						
LMD				AML	AML		
	comp=E,18100µm,0.9s						
LMD				AML	AML		
	comp=E,18100µm,0.9s						
LMD				AML	AML		
	comp=N,25150µm,0.9s						
CARD	**Cardoso**	0.48	256	P	Pg	06 51 29.3	-0.9
CARD				S	Sg	06 51 36.8	+0.2
CARD	**Cardoso**	0.48	256	⇑P	Pg	06 51 29.4	-0.9
CARD				S	Sg	06 51 36.9	+0.2
CARD				AML	AML		
	comp=N,75450µm,0.4s						
CARD				AML	AML		
	comp=E,64000µm,0.7s						
CARD				AML	AML		
	comp=E,64000µm,0.7s						
CARD				AML	AML		
	comp=N,75450µm,0.4s						
MODE	**Modena**	0.50	345	P	Pb	06 51 32.0	+0.7
MODE				AML	AML		
MODE				AML	AML		
MAIM	**Mastiano**	0.51	243	P	Pg	06 51 29.8	-1.0
MAIM				S	Sg	06 51 38.0	+0.3
MAIM	**Mastiano**	0.51	243	⇑P	Pg	06 51 30.0	-0.9
MAIM				S	Sg	06 51 38.0	+0.3
MAIM				AML	AML		
	comp=E,25100µm,0.7s						
MAIM				AML	AML		
	comp=N,27250µm,0.9s						
MAIM				AML	AML		
	comp=E,25100µm,0.7s						
SARO	**Sassorosso**	0.52	274	P	Pg	06 51 30.5	-0.6
SARO				S	Sg	06 51 38.7	+0.7
VLC	**Villacollemand**	0.53	272	Pg	Pg	06 51 30.7	-0.6
VLC				Sg	Sb	06 51 39.1	-0.4
VLC	**Villacollemand**	0.53	272	⇑P	Pg	06 51 30.6	-0.6
VLC				S	Sb	06 51 39.2	-0.3
VLC				AML	AML		
	comp=E,40800µm,0.8s						
VLC				AML	AML		
	comp=N,50200µm,0.6s						
VLC				AML	AML		
	comp=E,41350µm,0.8s						
VLC				AML	AML		
	comp=N,48900µm,0.6s						
VLC				AML	AML		
	comp=E,41350µm,0.8s						
VLC				AML	AML		
	comp=N,50200µm,0.6s						
VLC				AML	AML		
	comp=N,48900µm,0.6s						
VLC				AML	AML		
	comp=E,40750µm,0.8s						
FIU	**Minerbio Fiu**	0.56	28	P	Pn	06 51 33.4	-0.9
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
FIU				AML	AML		
SFI	**Santa Sofia**	0.57	115	P	Pg	06 51 30.8	-1.2
SFI				S	Sg	06 51 39.6	0.0
SFI				AML	AML		
	comp=E,18450µm,1.0s						
SFI				AML	AML		
	comp=N,20850µm,1.1s						
SFI				AML	AML		
	comp=E,18450µm,1.0s						
SFI				AML	AML		
	comp=N,20850µm,1.1s						
SFI				AML	AML		
	comp=E,19000µm,1.3s						
SFI				AML	AML		
	comp=N,15750µm,1.1s						
ERBM	**Eremo**	0.58	298	⇑P	Pg	06 51 32.2	+0.1
ERBM				AML	AML		
	comp=E,21150µm,1.0s						
ERBM				AML	AML		
	comp=N,25700µm,1.3s						
ERBM				AML	AML		
	comp=N,25650µm,1.3s						
ERBM				AML	AML		
	comp=E,21150µm,1.0s						
ERBM				AML	AML		
	comp=N,25650µm,1.3s						
ASQU	**Asqua**	0.59	126	P	Pg	06 51 31.6	-0.8
ASQU				AML	AML		
	comp=N,13150µm,0.9s						
ASQU				AML	AML		
	comp=E,9435µm,0.6s						
PII	**Pisa**	0.61	226	⇑P	Pg	06 51 31.8	-0.8
PII				S	Sg	06 51 40.4	-0.2
PII				AML	AML		
	comp=E,55600µm,0.8s						
PII				AML	AML		
	comp=N,49500µm,0.3s						
PII				AML	AML		
	comp=E,55600µm,0.8s						
RAVA	**Ravarino**	0.61	360	P	Pn	06 51 34.5	-0.5
RAVA				AML	AML		
	comp=E,88950µm,0.5s						
RAVA				AML	AML		
RAVA				AML	AML		
	comp=E,88950µm,0.5s						
RAVA				AML	AML		
	comp=E,88950µm,0.5s						
RAVA				AML	AML		
OSSC	**Osservatorio P**	0.63	172		Pg	06 51 32.0	-1.1
OSSC	**Osservatorio P**	0.63	172	P	Pg	06 51 32.0	-1.1
OSSC				AML	AML		
	comp=E,26300µm,0.9s						
OSSC				AML	AML		
	comp=N,31700µm,0.7s						
OSSC				AML	AML		
	comp=E,30700µm,0.7s						
OSSC				AML	AML		
	comp=N,26300µm,0.9s						
OSSC				AML	AML		
	comp=N,31650µm,0.7s						
OSSC				AML	AML		
	comp=E,26300µm,0.8s						
OSSC				AML	AML		
	comp=N,26250µm,0.9s						
OSSC				AML	AML		
	comp=N,31650µm,0.7s						
OSSC				AML	AML		
	comp=E,30700µm,0.7s						
CSNT	**Castellina Chi**	0.69	170	P	Pg	06 51 33.1	-1.0
CSNT				S	Sg	06 51 43.3	+0.2
CSNT				AML	AML		
	comp=E,12900µm,1.6s						
CSNT				AML	AML		
	comp=N,19600µm,0.6s						
CSNT				AML	AML		
	comp=N,19600µm,0.6s						
CSNT				AML	AML		
	comp=E,12850µm,1.6s						
EQUI	**Equi**	0.70	272	P	Pg	06 51 33.2	-1.1
EQUI				S	Sg	06 51 43.2	-0.4
EQUI	**Equi**	0.70	272	⇑P	Pg	06 51 33.3	-1.1
EQUI				AML	AML		
	comp=E,11300µm,0.8s						
EQUI				AML	AML		
	comp=N,21250µm,0.7s						
NOVE	**Novellara**	0.71	336	P	Pn	06 51 36.1	-0.4
NOVE				AML	AML		
NOVE				AML	AML		
NOVE				AML	AML		
CAVE	**Cavezzo**	0.72	353	P	Pn	06 51 36.7	+0.1
CAVE				AML	AML		
CAVE				AML	AML		
	comp=N,82850µm,0.8s						
CAVE				AML	AML		
	comp=N,82850µm,0.8s						
FIVI	**Fivizzano**	0.72	278	P	Pg	06 51 34.6	-0.3
CRE	**Caprese Michel**	0.80	131	P	Pg	06 51 35.9	-0.3
CRE				AML	AML		
	comp=E,12550µm,0.9s						
CRE				AML	AML		
	comp=N,10990µm,0.9s						
FERS	**Ferrara-Casagl**	0.81	21	⇑P	Pn	06 51 39.1	+1.2
FERS				AML	AML		
	comp=E,46450µm,1.4s						
FERS				AML	AML		
	comp=N,58450µm,0.7s						
FERS				AML	AML		
	comp=N,58450µm,0.7s						
FERS				AML	AML		
	comp=E,46450µm,1.4s						
GRAM	**Graiana**	0.83	295	P	Pg	06 51 36.5	-0.4
GRAM				S	Sb	06 51 48.8	+0.5
GRAM	**Graiana**	0.83	295	P	Pg	06 51 36.3	-0.6

GRAM				AML	AML		
	comp=E,60150µm,1.4s						
GRAM				AML	AML		
	comp=E,60150µm,1.4s						
GRAM				AML	AML		
	comp=N,35500µm,0.5s						
PRMA	**PARMA**	**0.85**	**317**		**Pn**	**06 51 38.8**	**+0.5**
PRMA					**Sn**	**06 51 51.7**	**+1.1**
PLMA	**Palmaria, Port**	**0.92**	**264**	P	**Pb**	**06 51 37.5**	**-1.1**
PLMA				AML	AML		
	comp=E,12750µm,0.4s						
PLMA				AML	AML		
	comp=N,12550µm,0.6s						
SSP9	**Sansepolcro**	**0.93**	**128**	P	**Pb**	**06 51 38.1**	**-0.6**
SSP9				AML	AML		
	comp=E,8805µm,1.3s						
SSP9				AML	AML		
	comp=N,11155µm,1.4s						
SSP9				AML	AML		
	comp=E,9930µm,1.2s						
SSP9				AML	AML		
	comp=N,11035µm,1.3s						
PARC	**Parchiule**	**0.95**	**121**	P	**Pb**	**06 51 38.0**	**-1.0**
PARC				AML	AML		
	comp=E,5310µm,1.6s						
PARC				AML	AML		
	comp=N,5905µm,0.7s						
PARC				AML	AML		
	comp=E,5950µm,1.3s						
GAZZ	**Gazzo Veronese**	**0.97**	**359**	*e*Pg	**Pn**	**06 51 41.4**	**+1.4**
CAFI	**Castiglion Fio**	**1.02**	**143**	⇑P	**Pb**	**06 51 39.5**	**-0.8**
CAFI				S	**Sb**	**06 51 53.5**	**-0.1**
CAFI				AML	AML		
	comp=E,5500µm,1.1s						
CAFI				AML	AML		
	comp=E,5420µm,1.1s						
CAFI				AML	AML		
	comp=E,5425µm,1.1s						
CAFI				AML	AML		
	comp=N,6660µm,1.0s						
CAFI				AML	AML		
	comp=N,6270µm,1.0s						
BADI	**Badiali**	**1.03**	**128**	⇓P	**Pb**	**06 51 40.2**	**-0.2**
BADI				AML	AML		
	comp=N,5990µm,0.8s						
BADI				AML	AML		
	comp=E,9560µm,1.0s						
PE3	**Peglio**	**1.09**	**114**	P	**Pb**	**06 51 41.3**	**-0.1**
PE3				AML	AML		
	comp=E,13650µm,1.0s						
PE3				AML	AML		
	comp=N,17850µm,0.8s						
ADRI	**Adria, Italy**	**1.09**	**35**	*e*Pg	**Pg**	**06 51 42.2**	**+0.4**
APEC	**Apecchio**	**1.11**	**122**	P	**Pb**	**06 51 41.7**	**0.0**
APEC				AML	AML		
	comp=N,1720µm,1.1s						
APEC				AML	AML		
	comp=E,1645µm,0.6s						
APEC				AML	AML		
	comp=E,7530µm,0.6s						
APEC				AML	AML		
	comp=N,8520µm,1.1s						
ATPI	**Pietralunga -**	**1.16**	**127**	P	**Pb**	**06 51 42.2**	**-0.4**
ATPI				AML	AML		
	comp=E,5090µm,0.9s						
ATPI				AML	AML		
	comp=N,5590µm,1.5s						
MSSA	**Maissana**	**1.17**	**279**		**Pn**	**06 51 43.0**	**+0.2**
MSSA	**Maissana**	**1.17**	**279**	P	**Pb**	**06 51 42.2**	**-0.6**
MSSA				AML	AML		
	comp=E,12400µm,0.8s						
MSSA				AML	AML		
	comp=N,12100µm,0.6s						
NARO	**Abbazia di Nar**	**1.18**	**116**	P	**Pb**	**06 51 43.0**	**0.0**
NARO				AML	AML		
	comp=N,3450µm,0.7s						
NARO				AML	AML		
	comp=E,3820µm,1.0s						
PIEI	**Pieia**	**1.19**	**120**	P	**Pn**	**06 51 42.8**	**-0.3**
PIEI				AML	AML		
	comp=E,3565µm,1.3s						
PIEI				AML	AML		
	comp=N,3720µm,1.5s						
ATVO	**AVT- Monte Val**	**1.20**	**129**	P	**Pn**	**06 51 42.5**	**-0.8**
ATVO				AML	AML		
	comp=E,7925µm,0.9s						
ATVO				AML	AML		
	comp=N,8615µm,1.6s						
PESA	**Pesaro**	**1.25**	**99**	AML	AML		
	comp=N,9415µm,1.3s						
PESA				AML	AML		
	comp=E,8575µm,1.0s						
TEOL	**Teolo**	**1.27**	**18**	*e*Pg	**Pg**	**06 51 45.4**	**+0.1**
TEOL				*e*Sg	**Sg**	**06 52 05.0**	**+3.1**
TEOL	**Teolo**	**1.27**	**18**		**Pn**	**06 51 43.5**	**-0.8**
TEOL	**Teolo**	**1.27**	**18**	⇓P	**Pn**	**06 51 44.2**	**-0.1**
TEOL				AML	AML		
	comp=E,62150µm,0.8s						
TEOL				AML	AML		
	comp=N,37850µm,0.8s						
TEOL				AML	AML		
	comp=E,62150µm,0.8s						
TEOL				AML	AML		
	comp=N,37850µm,0.8s						
FSSB	**Fossombrone**	**1.28**	**110**	P	**Pn**	**06 51 44.4**	**+0.1**
FSSB				AML	AML		
	comp=E,6710µm,0.7s						
FSSB				AML	AML		
	comp=N,7230µm,0.5s						
MURB	**Monte Urbino**	**1.35**	**131**		**Pn**	**06 51 44.3**	**-0.9**
MURB	**Monte Urbino**	**1.35**	**131**	P	**Pn**	**06 51 45.1**	**-0.2**
MURB				AML	AML		
	comp=N,10710µm,1.0s						
MURB				AML	AML		
	comp=E,14000µm,1.3s						
MURB				AML	AML		
	comp=N,10910µm,1.0s						
MURB				AML	AML		
	comp=E,14000µm,1.3s						
MURB				AML	AML		
	comp=E,13650µm,1.3s						
BOB	**Bobbio (Coli)**	**1.35**	**298**	P	**Pg**	**06 51 46.9**	**+0.1**
CASP	**Castiglione de**	**1.37**	**188**		**Pn**	**06 51 43.9**	**-1.6**
CASP	**Castiglione de**	**1.37**	**188**	⇑P	**Pn**	**06 51 44.1**	**-1.4**
CASP				AML	AML		
	comp=N,2565µm,1.2s						
CASP				AML	AML		
	comp=E,3175µm,0.9s						
TREG	**Tregnago**	**1.38**	**1**	AML	AML		
	comp=N,11850µm,1.1s						
TREG				AML	AML		
	comp=E,12000µm,0.7s						
GORR	**Gorreto**	**1.39**	**290**	P	**Pg**	**06 51 47.4**	**-0.1**
GORR				S	**Sb**	**06 52 04.7**	**+0.4**
GORR	**Gorreto**	**1.39**	**290**	P	**Pb**	**06 51 46.9**	**+0.3**
SACS	**San Casciano d**	**1.42**	**156**	P	**Pn**	**06 51 45.4**	**-0.8**
SACS				AML	AML		
	comp=N,3485µm,1.0s						
SACS				AML	AML		
	comp=N,3455µm,1.0s						
SACS				AML	AML		
	comp=E,3170µm,1.1s						
SACS				AML	AML		
	comp=E,3110µm,1.1s						
MGAB	**Montegabbione**	**1.43**	**149**	⇑P	**Pn**	**06 51 46.2**	**-0.2**
MGAB				AML	AML		
	comp=E,5580µm,0.9s						
MGAB				AML	AML		
	comp=N,5740µm,0.8s						
MGAB				AML	AML		
	comp=N,5675µm,1.5s						
MGAB				AML	AML		
	comp=E,5795µm,0.9s						
MARN	**Marana (Italy)**	**1.49**	**2**	*e*Pg	**Pb**	**06 51 48.1**	**-0.2**
BALD	**Monte Baldo**	**1.55**	**352**	*e*Pn	**Pn**	**06 51 48.7**	**+0.5**
ASSB	**Assisi San Ben**	**1.57**	**134**	P	**Pn**	**06 51 47.1**	**-1.2**
ASSB				AML	AML		
	comp=N,4345µm,0.8s						
ASSB				AML	AML		
	comp=E,4085µm,1.2s						
CNCS	**Concesio**	**1.59**	**336**	AML	AML		
	comp=N,13500µm,0.7s						
CNCS				AML	AML		
	comp=E,10645µm,0.4s						
LATE	**Laterza**	**1.61**	**162**		**Pn**	**06 51 48.4**	**-0.5**
EL6	**Elcito**	**1.65**	**119**	⇓P	**Pg**	**06 51 52.6**	**+0.2**
EL6				AML	AML		
	comp=N,5700µm,1.2s						
EL6				AML	AML		
	comp=E,4985µm,0.9s						
MAGA	**Magasa**	**1.67**	**348**	⇓P	**Pn**	**06 51 49.8**	**+0.1**
MAGA				AML	AML		
	comp=E,39550µm,0.7s						
MAGA				AML	AML		
	comp=N,15150µm,0.8s						
MAGA				AML	AML		
	comp=E,39550µm,0.7s						
CING	**Cingoli**	**1.69**	**116**	⇓P	**Pg**	**06 51 53.1**	**0.0**
CING				AML	AML		
	comp=E,1870µm,0.8s						
CING				AML	AML		
	comp=N,3510µm,0.9s						
CESI	**CESI - Serrava**	**1.73**	**131**	⇑P	**Pn**	**06 51 50.1**	**-0.4**
CESI				AML	AML		
	comp=E,1130µm,0.9s						
CESI				AML	AML		
	comp=N,1101µm,0.8s						
DOSS	**Dosso del Somm**	**1.73**	**1**	⇓*e*Pn	**Pn**	**06 51 50.6**	**-0.1**
DOSS				*e*Sn	**Sg**	**06 52 16.1**	**-0.5**
CGRP	**Cima Grappa**	**1.80**	**15**	*e*Pn	**Pn**	**06 51 51.7**	**+0.1**
CGRP				*e*Sn	**Sg**	**06 52 17.8**	**-0.9**
MTLO	**Montello**	**1.80**	**22**	*e*Pn	**Pn**	**06 51 51.8**	**+0.3**
MTLO				*e*Sn	**Sb**	**06 52 17.2**	**+1.1**
FDMO	**Fiordimonte**	**1.81**	**127**	⇑P	**Pn**	**06 51 51.7**	**+0.2**
FDMO				AML	AML		
	comp=E,2065µm,0.7s						
FDMO				AML	AML		
	comp=N,2535µm,1.3s						
CESX	**Cesi**	**1.87**	**145**	⇓P	**Pn**	**06 51 53.1**	**+0.7**
CESX				AML	AML		
	comp=E,2545µm,1.6s						
CESX				AML	AML		
	comp=N,2375µm,0.9s						
ED06	**Collalto TV**	**1.88**	**24**	*e*Pn	**Pn**	**06 51 52.8**	**+0.3**
MILN	**Milano**	**1.90**	**315**	AML	AML		
	comp=N,4265µm,0.8s						
MILN				AML	AML		
	comp=E,6840µm,1.3s						
PANI	**Panarotta**	**1.91**	**4**	*e*Pn	**Pb**	**06 51 54.8**	**-0.8**
PANI				*e*Sn	**Sg**	**06 52 20.9**	**-1.3**
CTI	**Castel Tesino**	**1.94**	**11**	P	**Pn**	**06 51 53.5**	**+0.1**
CTI	**Castel Tesino**	**1.94**	**11**		**Pn**	**06 51 53.5**	**+0.1**
CTI	**Castel Tesino**	**1.94**	**11**	⇓P	**Pn**	**06 51 53.2**	**-0.3**
CTI				AML	AML		
	comp=N,4480µm,0.7s						
CTI				AML	AML		
	comp=E,5210µm,0.7s						
NRCA	**Norcia**	**1.95**	**132**		**Pn**	**06 51 52.9**	**-0.8**
NRCA	**Norcia**	**1.95**	**132**	P	**Pn**	**06 51 53.4**	**-0.2**
NRCA				AML	AML		
	comp=N,1800µm,0.7s						
NRCA				AML	AML		
	comp=E,1625µm,1.6s						
NRCA				AML	AML		
	comp=N,1760µm,0.6s						
NRCA				AML	AML		
	comp=E,1630µm,0.9s						
MABI	**Malga Bissina**	**1.96**	**347**	⇓P	**Pn**	**06 51 54.0**	**+0.2**
MABI				AML	AML		
	comp=E,2105µm,0.8s						
MABI				AML	AML		
	comp=N,1710µm,0.6s						
PP3	**Marolino**	**1.96**	**112**	P	**Pb**	**06 51 55.3**	**-0.9**
PP3				AML	AML		
	comp=E,4825µm,0.8s						
PP3				AML	AML		
	comp=N,4420µm,0.9s						
VARN	**Col Varnada, M**	**1.97**	**20**	⇑*e*Pn	**Pn**	**06 51 53.7**	**-0.2**
QLNO	**Quiliano**	**2.00**	**276**	⇓P	**Pn**	**06 51 54.2**	**-0.1**
QLNO				AML	AML		
	comp=E,2365µm,1.1s						
QLNO				AML	AML		
	comp=N,4410µm,0.7s						
FINB	**Finale Ligure**	**2.02**	**272**	⇑P	**Pn**	**06 51 53.9**	**-0.5**
FINB				AML	AML		
	comp=N,2360µm,1.1s						
FINB				AML	AML		
	comp=E,2545µm,0.6s						
LNSS	**Leonessa**	**2.08**	**137**	⇑P	**Pn**	**06 51 55.4**	**-0.1**
LNSS				AML	AML		
	comp=E,3955µm,0.8s						
LNSS				AML	AML		
	comp=N,2530µm,1.0s						
POLC	**Polcenigo**	**2.12**	**27**	P	**Pn**	**06 51 55.7**	**-0.1**
POLC				AML	AML		
	comp=E,4545µm,0.9s						
POLC				AML	AML		
	comp=N,4730µm,1.4s						
RORO	**Rocca Rossa**	**2.20**	**270**	P	**Pn**	**06 51 57.8**	**+0.8**
RORO				S	**Sb**	**06 52 29.5**	**+2.0**
RORO	**Rocca Rossa**	**2.20**	**270**	⇓P	**Pn**	**06 51 57.6**	**+0.6**
RORO				AML	AML		
	comp=N,1420µm,0.8s						
RORO				AML	AML		
	comp=E,1485µm,1.3s						
PGF	**Pioggiola**	**2.23**	**225**	*e*Pn	**Pn**	**06 51 55.5**	**-1.9**
PGF				*e*Sn	**Sn**	**06 52 21.6**	**-3.2**
	comp=E,111nm,0.4s						
PGF	**Pioggiola**	**2.23**	**225**	P	**Pn**	**06 51 54.6**	**-2.8**
PGF				AML	AML		
	comp=E,1310µm,0.7s						
PGF				AML	AML		
	comp=N,1170µm,1.3s						
RM33	**Pellescritta (**	**2.24**	**136**	P	**Pn**	**06 51 57.3**	**-0.2**
RM33				AML	AML		
	comp=E,1875µm,1.4s						
RM33				AML	AML		
	comp=N,1655µm,1.5s						
MUGIO	**Muggio**	**2.31**	**321**	⇓P	**Pn**	**06 51 59.0**	**+0.5**
MUGIO				AML	AML		
	comp=E,2085µm,1.6s						
MUGIO				AML	AML		
	comp=N,2540µm,1.1s						
CAMP	**Campotosto**	**2.32**	**133**	⇑P	**Pn**	**06 51 59.0**	**+0.3**
CAMP				AML	AML		
	comp=N,1450µm,0.8s						
CAMP				AML	AML		
	comp=E,1475µm,0.9s						
KOSI	**Kohlern**	**2.32**	**4**	⇓P	**Pb**	**06 52 00.9**	**-1.6**
KOSI				AML	AML		
	comp=N,4245µm,0.8s						
KOSI				AML	AML		
	comp=E,5700µm,1.1s						
APPI	**Appiano**	**2.33**	**2**	⇓P	**Pn**	**06 51 59.6**	**+0.7**
APPI				AML	AML		
	comp=N,2920µm,1.3s						
APPI				AML	AML		
	comp=E,3295µm,0.8s						
IMI	**Imperia**	**2.34**	**265**	P	**Pn**	**06 51 58.2**	**-0.8**
TERO	**Teramo**	**2.36**	**129**	⇑P	**Pn**	**06 52 00.6**	**+1.4**
TERO				AML	AML		
	comp=N,776µm,1.0s						
TERO				AML	AML		
	comp=N,1930µm,1.1s						
TERO				AML	AML		
	comp=E,702µm,1.5s						
TERO				AML	AML		
	comp=E,1740µm,1.5s						
GBOS	**Grotte di Boss**	**2.37**	**273**	P	**Pn**	**06 51 58.8**	**-0.5**
GBOS	**Grotte di Boss**	**2.37**	**273**	⇑P	**Pn**	**06 51 58.8**	**-0.5**
GBOS				AML	AML		
	comp=N,1555µm,1.5s						
GBOS				AML	AML		
	comp=E,1340µm,1.0s						
FIAM	**Fiamignano**	**2.38**	**142**	P	**Pn**	**06 51 58.5**	**-1.0**
FIAM				AML	AML		
	comp=N,1605µm,1.0s						
FIAM				AML	AML		
	comp=E,1680µm,1.0s						
BRMO	**Bormio**	**2.39**	**347**	⇓P	**Pn**	**06 52 00.8**	**+1.2**
BRMO				AML	AML		
	comp=E,1800µm,1.3s						
BRMO				AML	AML		
	comp=N,2180µm,0.8s						
MGRO	**Montegrosso**	**2.39**	**269**	P	**Pn**	**06 51 59.3**	**-0.4**
MGRO	**Montegrosso**	**2.39**	**269**	⇑P	**Pn**	**06 51 59.2**	**-0.6**
MGRO				AML	AML		
	comp=E,3405µm,0.6s						
MGRO				AML	AML		
	comp=N,2730µm,0.6s						
TRI	**Trieste**	**2.44**	**49**	P	**Pn**	**06 51 59.4**	**-0.8**
TRI				S	**Sn**	**06 52 30.0**	**+0.1**
TRI	**Trieste**	**2.44**	**49**	Pn	**Pn**	**06 51 59.2**	**-1.1**
TRI	**Trieste**	**2.44**	**49**	⇓P	**Pn**	**06 51 59.4**	**-0.8**
TRI				S	**Sn**	**06 52 31.0**	**+1.1**
TRI				AML	AML		
	comp=N,1112µm,1.3s						
TRI				AML	AML		
	comp=E,1615µm,0.9s						
AQU	**L'Aquila**	**2.44**	**136**	P	**Pn**	**06 52 00.7**	**+0.3**
AQU	**L'Aquila**	**2.44**	**136**	*e*Pn	**Pn**	**06 52 00.6**	**+0.3**
AQU	**L'Aquila**	**2.44**	**136**	Pn	**Pn**	**06 52 00.7**	**+0.3**
SMPL	**Sampolo**	**2.46**	**214**	P	**Pn**	**06 52 01.6**	**+1.1**
SMPL	**Sampolo**	**2.46**	**214**	P	**Pn**	**06 52 01.6**	**+1.1**
MONC	**Moncucco Torin**	**2.46**	**293**	⇓P	**Pb**	**06 52 05.8**	**+0.9**
SKDS	**Skadanscina**	**2.49**	**55**	⇓*i*Pn	**Pn**	**06 52 00.0**	**-0.9**
SKDS				*e*Sn	**Sn**	**06 52 33.0**	**+1.9**
SKDS				IAML		06 53 00.8	
	comp=Z,1µm,1.0s						
MOSI	**Grossmontoni**	**2.50**	**351**	⇑P	**Pb**	**06 52 05.1**	**-0.6**
MOSI				AML	AML		
	comp=E,5360µm,1.0s						
MOSI				AML	AML		
	comp=N,7845µm,0.8s						
SABO	**M.te Sabotino**	**2.54**	**43**	⇓P	**Pn**	**06 52 01.5**	**-0.1**
SABO				AML	AML		
	comp=E,3205µm,1.0s						
SABO				AML	AML		
	comp=N,5495µm,0.8s						
GEPF	**Gemona**	**2.56**	**33**	⇓P	**Pn**	**06 52 01.9**	**0.0**
GEPF				AML	AML		
	comp=E,1405µm,0.9s						
GEPF				AML	AML		
	comp=N,2200µm,0.7s						
SAOF	**Saorge**	**2.58**	**268**	P	**Pn**	**06 52 02.0**	**-0.2**
SAOF	**Saorge**	**2.58**	**268**	P	**Pn**	**06 52 02.0**	**-0.2**
SAOF	**Saorge**	**2.58**	**268**	⇑P	**Pn**	**06 52 00.3**	**-1.9**
SAOF				AML	AML		
	comp=N,3750µm,0.8s						
SAOF				AML	AML		
	comp=E,2220µm,0.7s						
ABSI	**Aberstueckl**	**2.58**	**3**	⇓P	**Pn**	**06 52 02.7**	**+0.3**
ABSI				AML	AML		
	comp=N,4675µm,0.8s						
ABSI				AML	AML		
	comp=E,5700µm,0.8s						
FAGN	**Fagnano**	**2.60**	**135**	⇑P	**Pn**	**06 52 04.0**	**+1.5**
FAGN				AML	AML		
	comp=E,2100µm,1.0s						
FAGN				AML	AML		
	comp=N,1730µm,0.6s						
RIY	**Rijeka**	**2.67**	**63**	*e*Pn	**Pn**	**06 52 03.7**	**+0.3**
RIY				Sn	**Sn**	**06 52 31.4**	**-4.1**
RIY	**Rijeka**	**2.67**	**63**	*e*Pn	**Pn**	**06 52 02.1**	**-1.3**
SBF	**Sospel**	**2.68**	**265**	*e*Pn	**Pn**	**06 52 03.1**	**-0.5**
SBF				*e*Sn	**Sn**	**06 52 33.6**	**-2.3**
	comp=N,458nm,0.5s						
SBF	**Sospel**	**2.68**	**265**	P	**Pn**	**06 52 04.6**	**+1.0**
SBF				SN	**Sn**	**06 52 35.7**	**-0.2**
VIVA	**Pratoni del Vi**	**2.68**	**153**	S	**Sn**	**06 52 35.0**	**-1.0**
TURF	**col de Turini**	**2.70**	**268**	P	**Pn**	**06 52 03.9**	**0.0**
TURF	**col de Turini**	**2.70**	**268**	P	**Pn**	**06 52 03.9**	**0.0**
FVI	**Forni Avoltri**	**2.71**	**25**	P	**Pn**	**06 52 05.8**	**+1.7**
FVI				AML	AML		
	comp=E,1246µm,0.9s						
FVI				AML	AML		
	comp=N,1600µm,0.8s						
VOJS	**Vojsko**	**2.71**	**45**	⇓*i*Pn	**Pn**	**06 52 03.6**	**-0.5**
VOJS				*e*Sn	**Sn**	**06 52 37.1**	**+0.3**
VOJS				IAML		06 53 07.0	
	comp=Z,3µm,1.2s						
NVLJ	**Novalja**	**2.72**	**80**	*e*Pn	**Pn**	**06 52 04.3**	**+0.3**
NVLJ				Sn	**Sn**	**06 52 32.5**	**-4.3**
ESCA	**l'Escarene**	**2.73**	**265**	P	**Pb**	**06 52 08.3**	**-1.0**
ESCA	**l'Escarene**	**2.73**	**265**	P	**Pb**	**06 52 08.3**	**-1.0**
STV	**Sant Anna di V**	**2.73**	**273**	⇑P	**Pn**	**06 52 04.6**	**+0.2**
STV				AML	AML		
	comp=E,760µm,1.6s						
STV				AML	AML		
	comp=N,1370µm,1.3s						
ZOU	**Zoufplan**	**2.74**	**28**	Pn	**Pn**	**06 52 04.6**	**0.0**
PTCC	**Patocco-Chiusa**	**2.75**	**34**	⇓P	**Pn**	**06 52 04.2**	**-0.4**
PTCC				AML	AML		
	comp=N,1151µm,1.6s						
PTCC				AML	AML		
	comp=E,1260µm,1.3s						
TRAV	**Traversella**	**2.76**	**301**	⇑P	**Pn**	**06 52 05.7**	**+0.9**
TRAV				AML	AML		
	comp=N,2080µm,0.7s						
TRAV				AML	AML		
	comp=E,1910µm,0.9s						
DAVOX	**Davos/Dischmat**	**2.78**	**342**	Pn	**Pn**	**06 52 05.9**	**+0.8**
	comp=E,8.3nm,0.3s,baz=158,slow=14,SNR=143						
DAVOX				Sn	**Sn**	**06 52 40.2**	**+1.7**
	comp=E,37nm,0.3s,baz=337,slow=7.4,SNR=6.2						
DAVOX				Lg	Lg	06 52 46.8	
	comp=E,32nm,0.3s,baz=315,slow=20,SNR=6.6						
DAVOX				LR	LR	06 53 12.7	
	comp=E,426nm,19.9s,baz=242,slow=41						
DAVOX	**Davos/Dischmat**	**2.78**	**342**	⇓P	**Pn**	**06 52 07.1**	**+2.0**
DAVOX				AML	AML		
	comp=E,1110µm,0.7s						
DAVOX				AML	AML		
	comp=N,1375µm,0.7s						
ABTA	**Abfaltersbach**	**2.78**	**20**	*e*Pn	**Pn**	**06 52 05.9**	**+1.0**
	comp=N,57nm,0.5s,SNR=22						
ABTA				*e*Sn	**Sn**	**06 52 39.1**	**+0.8**
	comp=N,412nm,0.9s						
ABTA	**Abfaltersbach**	**2.78**	**20**		**Pn**	**06 52 05.9**	**+1.0**
ABTA					**Sn**	**06 52 39.1**	**+0.8**
CADS	**Cadrg**	**2.78**	**41**	⇓*i*Pn	**Pn**	**06 52 04.3**	**-0.7**
ROSI	**Rosskopf**	**2.79**	**4**	⇓P	**Pn**	**06 52 07.2**	**+1.9**
ROSI				AML	AML		
	comp=E,3375µm,1.0s						
ROSI				AML	AML		
	comp=N,7535µm,0.8s						
CEY	**Cerknica**	**2.83**	**55**	*e*Pn	**Pn**	**06 52 04.3**	**-1.4**
DUGI	**Dugi Otok**	**2.84**	**92**	*e*Pn	**Pn**	**06 52 06.7**	**+1.0**
DUGI				Sn	**Sn**	**06 52 35.9**	**-3.8**
RISI	**Rein**	**2.88**	**13**	⇓P	**Pn**	**06 52 07.8**	**+1.3**
RISI				AML	AML		
	comp=N,3485µm,0.5s						
RISI				AML	AML		
	comp=E,2640µm,0.4s						
FETA	**Feichten**	**2.89**	**355**	*e*Pn	**Pn**	**06 52 08.5**	**+1.9**
	comp=E,104nm,0.5s,SNR=88						
FETA				*e*Sn	**Sn**	**06 52 39.2**	**-2.0**
	comp=E,234nm,0.7s						
FETA	**Feichten**	**2.89**	**355**		**Pn**	**06 52 08.5**	**+1.9**
FETA					**Sn**	**06 52 39.2**	**-2.0**
FUSIO	**Fusio**	**2.89**	**324**	P	**Pn**	**06 52 07.2**	**+0.6**
FUSIO				AML	AML		
	comp=N,1444µm,0.9s						
FUSIO				AML	AML		
	comp=E,1930µm,0.5s						
RSP	**Reno Superiore**	**2.93**	**291**	⇑P	**Pn**	**06 52 08.6**	**+1.5**
RSP				AML	AML		
	comp=N,932µm,0.9s						
RSP				AML	AML		
	comp=E,1210µm,1.0s						
RSP				AML	AML		
	comp=N,944µm,0.9s						
RSP				AML	AML		
	comp=E,1195µm,1.0s						
ACOM	**Acomizza, Ital**	**2.93**	**34**	⇓P	**Pn**	**06 52 07.3**	**+0.1**
ACOM				AML	AML		
	comp=E,2750µm,0.9s						
ACOM				AML	AML		
	comp=N,3390µm,1.0s						
INTR	**Introdacqua**	**2.95**	**135**	Pn	**Pn**	**06 52 07.2**	**-0.1**
INTR	**Introdacqua**	**2.95**	**135**	P	**Pn**	**06 52 08.7**	**+1.3**
INTR				AML	AML		
	comp=N,1665µm,1.1s						
INTR				AML	AML		
	comp=E,1670µm,1.0s						
MYKA	**Terra Mystica**	**3.05**	**35**	*e*Pn	**Pn**	**06 52 08.9**	**+0.2**
	comp=E,29nm,0.6s,SNR=18						
MYKA				*e*Sn	**Sn**	**06 52 47.2**	**+2.1**
	comp=E,72nm,0.4s						
MYKA	**Terra Mystica**	**3.05**	**35**		**Pn**	**06 52 08.9**	**+0.2**
MYKA					**Sn**	**06 52 47.2**	**+2.1**
CALF	**Calern**	**3.06**	**264**	P	**Pn**	**06 52 08.9**	**0.0**
CALF	**Calern**	**3.06**	**264**	P	**Pn**	**06 52 08.9**	**0.0**
LJU	**Ljubljana**	**3.07**	**51**	*e*Pn	**Pn**	**06 52 08.8**	**-0.1**
LJU	**Ljubljana**	**3.07**	**51**	⇓P	**Pn**	**06 52 09.0**	**+0.1**
LJU				AML	AML		
	comp=E,6150µm,1.5s						

LJU				AML	AML		
	comp=N,4575µm,1.3s						
SQTA	**Sankt Quirin**	3.07	1	*e*Pn	Pn	06 52 10.9	+1.9
	comp=N,102nm,0.4s,SNR=54						
SQTA				*e*Sn	Sn	06 52 47.3	+1.5
	comp=N,717nm,0.6s						
SQTA	**Sankt Quirin**	3.07	1	P	Pn	06 52 11.0	+1.9
SQTA						06 52 47.3	
SQTA	**Sankt Quirin**	3.07	1		Pn	06 52 10.9	+1.9
SQTA					Sn	06 52 47.3	+1.5
SURF	**Saint Ours**	3.11	278	P	Pn	06 52 09.8	+0.1
SURF	**Saint Ours**	3.11	278	P	Pn	06 52 09.8	+0.1
VISS	**Visnje**	3.11	57	*i* Pn	Pn	06 52 09.3	-0.2
VISS				*e*Sn	Sn	06 52 46.6	+0.1
VISS				IAML		06 53 24.3	
	comp=Z,1µm,1.6s						
EMBD	**Embd, Matterta**	3.12	313	P	Pb	06 52 14.0	-2.0
EMBD	**Embd, Matterta**	3.12	313	P	Pb	06 52 14.0	-2.0
EMBD	**Embd, Matterta**	3.12	313	P	Pn	06 52 12.6	+3.0
EMBD	**Embd, Matterta**	3.12	313	P	Pn	06 52 12.6	+3.0
LSD	**Lago del Serru**	3.13	296	⇑P	Pn	06 52 12.4	+2.4
LSD				AML	AML		
	comp=E,762µm,1.3s						
LSD				AML	AML		
	comp=N,586µm,1.2s						
WTTA	**Wattenberg**	3.14	6	*i* Pn	Pn	06 52 12.0	+2.0
	comp=N,45nm,0.4s,SNR=39						
WTTA				*e*Sn	Sn	06 52 48.5	+1.1
	comp=N,371nm,0.8s						
WTTA	**Wattenberg**	3.14	6	P	Pn	06 52 12.0	+2.0
WTTA						06 52 48.5	
WTTA	**Wattenberg**	3.14	6		Pn	06 52 12.0	+2.0
WTTA					Sn	06 52 48.5	+1.1
WTTA	**Wattenberg**	3.14	6	*e*Pn	Pn	06 52 11.4	+1.4
WTTA	**Wattenberg**	3.14	6	*e*Pn	Pn	06 52 11.4	+1.4
WTTA	**Wattenberg**	3.14	6	⇓P	Pn	06 52 11.4	+1.4
WTTA				AML	AML		
	comp=E,2685µm,1.3s						
WTTA				AML	AML		
	comp=N,2520µm,1.1s						
PLONS	**Plons/SG**	3.15	338	*e*Pn	Pn	06 52 12.5	+2.4
PLONS	**Plons/SG**	3.15	338	*e*Pn	Pn	06 52 12.5	+2.4
PLONS	**Plons/SG**	3.15	338	⇑P	Pn	06 52 11.8	+1.7
PLONS				AML	AML		
	comp=E,883µm,1.2s						
PLONS				AML	AML		
	comp=N,783µm,1.0s						
MBDF	**Montbardon**	3.17	282	*e*Pn	Pn	06 52 09.5	-1.0
MBDF				*e*Sn	Sn	06 52 45.0	-3.2
	comp=N,363nm,0.5s						
MOTA	**Moosalm**	3.20	360	*i* Pn	Pn	06 52 12.8	+2.0
	comp=N,136nm,0.5s,SNR=81						
MOTA				*e*Sn	Sn	06 52 52.2	+3.3
	comp=N,920nm,1.1s						
MOTA	**Moosalm**	3.20	360		Pn	06 52 12.8	+2.0
MOTA					Sn	06 52 52.2	+3.3
WATA	**Walderalm**	3.21	5	*i* Pn	Pn	06 52 13.2	+2.3
	comp=N,73nm,0.3s,SNR=59						
WATA				*e*Sn	Sb	06 52 53.4	-3.2
	comp=N,364nm,0.6s						
WATA	**Walderalm**	3.21	5		Pn	06 52 13.2	+2.3
WATA					Sb	06 52 53.4	-3.2
BOJS	**Bojanci**	3.23	64	⇓P	Pn	06 52 11.3	+0.2
BOJS				AML	AML		
	comp=N,964µm,1.5s						
BOJS				AML	AML		
	comp=E,790µm,0.9s						
DAVA	**Damuels**	3.26	345	*i* Pn	Pn	06 52 14.1	+2.4
	comp=E,41nm,0.3s,SNR=31						
DAVA				*e*Sn	Sn	06 52 52.7	+2.4
	comp=E,230nm,0.5s						
DAVA	**Damuels**	3.26	345		Pn	06 52 14.1	+2.4
DAVA					Sn	06 52 52.7	+2.4
DAVA	**Damuels**	3.26	345	*e*Pn	Pn	06 52 14.0	+2.4
DAVA	**Damuels**	3.26	345	*e*Pn	Pn	06 52 14.0	+2.4
DIX	**Grande Dixence**	3.27	308	⇓P	Pb	06 52 16.3	-2.4
ZUGS	**Zugspitze, Sch**	3.27	358	*e*Pn	Pn	06 52 14.2	+2.3
ZUGS	**Zugspitze, Sch**	3.27	358	*e*Pn	Pn	06 52 14.2	+2.3
FRF	**La Foret Royal**	3.29	261	*e*Pn	Pn	06 52 11.0	-1.0
FRF				*e*Sn	Sn	06 52 47.6	-3.3
	comp=E,2µm,1.0s						
BNI	**Bardonecchia**	3.30	287	P	Pn	06 52 13.7	+1.4
BNI	**Bardonecchia**	3.30	287	Pn	Pn	06 52 13.7	+1.4
ZIRJ	**Zirje**	3.30	97	*e*Pn	Pn	06 52 13.1	+1.0
ZIRJ				Sn	Sn	06 52 47.4	-3.8
OGAG	**Argentiere**	3.31	277	P	Pn	06 52 14.4	+2.2
OGAG	**Argentiere**	3.31	277	P	Pn	06 52 14.4	+2.2
OGAG	**Argentiere**	3.31	277	P	Pb	06 52 16.7	-2.6
OGAG	**Argentiere**	3.31	277	P	Pb	06 52 16.7	-2.6
OBER	**Oberstdorf**	3.31	350	*e*Pn	Pn	06 52 14.5	+2.2
OBER	**Oberstdorf**	3.31	350	*e*Pn	Pn	06 52 14.5	+2.2
MORI	**Morici**	3.32	93	*e*Pn	Pn	06 52 13.8	+1.5
MORI				Sn	Sn	06 52 47.3	-4.3
BNALP	**Bannalp**	3.32	326	P	Pn	06 52 15.1	+2.6
BNALP				AML	AML		
	comp=N,1205µm,0.8s						
BNALP				AML	AML		
	comp=E,842µm,0.7s						
KBA	**Koelnbreinsper**	3.32	27	*i* Pn	Pn	06 52 13.8	+1.4
	comp=E,19nm,0.3s,SNR=26						
KBA				*e*Sn	Sn	06 52 52.5	+0.6
	comp=E,242nm,0.8s						
KBA	**Koelnbreinsper**	3.32	27	P	Pn	06 52 13.9	+1.4
KBA						06 52 52.5	
KBA	**Koelnbreinsper**	3.32	27		Pn	06 52 13.8	+1.4
KBA					Sn	06 52 52.5	+0.6
KBA	**Koelnbreinsper**	3.32	27	*e*Pn	Pn	06 52 13.5	+1.0
KBA	**Koelnbreinsper**	3.32	27	*e*Pn	Pn	06 52 13.5	+1.0
OGMO	**Fort Saint-Gob**	3.34	290	P	Pb	06 52 19.1	-0.7
OGMO	**Fort Saint-Gob**	3.34	290	P	Pb	06 52 19.1	-0.7
OGMO	**Fort Saint-Gob**	3.34	290	P	Pn	06 52 15.4	+2.7
OGMO	**Fort Saint-Gob**	3.34	290	P	Pn	06 52 15.4	+2.7
RETA	**Reutte**	3.35	356	*i* Pn	Pn	06 52 14.9	+2.0
	comp=E,93nm,0.3s,SNR=99						
RETA				*e*Sn	Sn	06 52 55.4	+2.9
	comp=E,101nm,0.4s						
RETA	**Reutte**	3.35	356		Pn	06 52 14.8	+2.0
RETA					Sn	06 52 55.4	+2.9
PART	**Garmisch-Parte**	3.35	360	*e*Pn	Pn	06 52 14.8	+2.0
PART	**Garmisch-Parte**	3.35	360	*e*Pn	Pn	06 52 14.8	+2.0
OBKA	**Obir**	3.38	44	*e*Pn	Pn	06 52 13.4	+0.1
	comp=E,19nm,0.5s						
OBKA	**Obir**	3.38	44		Pn	06 52 13.4	+0.1
OBKA	**Obir**	3.38	44	*e*Pn	Pn	06 52 14.8	+1.6
OBKA	**Obir**	3.38	44	*e*Pn	Pn	06 52 14.8	+1.6
LPG	**La Plagne**	3.39	295	*e*P	Pn	06 52 15.1	+1.5
LPG				*e*Sn	Sn	06 52 50.2	-3.6
	comp=E,4µm,1.9s						
LPL	**La Plagne**	3.41	295	*e*P	Pn	06 52 15.6	+1.8
LPL				*e*Sn	Sn	06 52 50.9	-3.3
	comp=E,112nm,0.6s						
LPL	**La Plagne**	3.41	295	P	Pn	06 52 14.6	+0.8
OZLJ	**Ozalj**	3.42	63	*e*Pn	Pn	06 52 14.0	+0.4
OZLJ				Sn	Sn	06 52 49.2	-4.8
LMR	**La Mourre**	3.44	258	*e*Pn	Pn	06 52 12.6	-1.4
LMR				*e*Sn	Sn	06 52 50.4	-4.2
	comp=E,130nm,0.6s						
SENIN	**Lac Senin/Sane**	3.49	311	Pn	Pn	06 52 18.2	+3.2
CRES	**Cresnjev**	3.50	60	*e*Pn	Pn	06 52 13.6	-1.3
RSL	**Roselend**	3.55	297	P	Pn	06 52 19.5	+3.9
RSL	**Roselend**	3.55	297	P	Pn	06 52 19.5	+3.9
RSL	**Roselend**	3.55	297	P	Pn	06 52 19.2	+3.5
RSL	**Roselend**	3.55	297	P	Pn	06 52 19.2	+3.5
UBR	**Ueberruh**	3.60	349	*e*Pn	Pn	06 52 18.0	+1.7
UBR	**Ueberruh**	3.60	349	*e*Pn	Pn	06 52 18.0	+1.7
WILA	**Wila**	3.62	335	*e*Pn	Pn	06 52 17.7	+1.2
WILA	**Wila**	3.62	335	*e*Pn	Pn	06 52 17.7	+1.2
BLAF	**les Blancs**	3.67	269	P	Pn	06 52 19.8	+2.6
BLAF	**les Blancs**	3.67	269	P	Pn	06 52 19.8	+2.6
ZUR	**Degenried**	3.68	332	P	Pn	06 52 20.9	+3.5
ZUR	**Degenried**	3.68	332	P	Pn	06 52 20.9	+3.5
ZUR	**Degenried**	3.68	332	P	Pn	06 52 19.5	+2.1
ZUR				Sn	Sn	06 53 02.0	+1.4
ZUR	**Degenried**	3.68	332	P	Pn	06 52 19.5	+2.1
ZUR				Sn	Sn	06 53 02.0	+1.4
GDM	**Grand'Maison**	3.73	288	P	Pn	06 52 22.0	+3.9
SOKA	**Soboth**	3.74	46	*e*Pn	Pn	06 52 18.5	+0.4
	comp=E,18nm,0.4s						
SOKA				*e*Sn	Sn	06 53 00.2	-1.8
	comp=E,54nm,0.7s						
SOKA	**Soboth**	3.74	46		Pn	06 52 18.5	+0.4
SOKA					Sn	06 53 00.2	-1.8
PTRJ	**Pietraroja**	3.74	137	S	Sg	06 53 20.0	-1.0
BE1	**Monatshausen**	3.77	1	*e*Pn	Pn	06 52 20.0	+1.5
BE1				*e*Sg	Sb	06 53 16.9	+4.3
BE1	**Monatshausen**	3.77	1	*e*Pn	Pn	06 52 20.0	+1.5
BE1				*e*Sg	Sb	06 53 16.9	+4.3
KIJV	**Kijevo**	3.81	90	Sn	Sn	06 52 59.1	-4.5
ORIF	**Oris-en-Rattie**	3.83	283	*e*P	Pn	06 52 21.6	+2.2
ORIF				*e*Sn	Sn	06 53 00.4	-3.9
	comp=E,292nm,0.7s						
ORIF	**Oris-en-Rattie**	3.83	283	P	Pn	06 52 21.7	+2.2
ORIF				AML	AML		
	comp=E,756µm,1.2s						
ORIF				AML	AML		
	comp=N,655µm,1.1s						
ASEAF	**Site Antares,**	3.86	251	P	Pn	06 52 20.3	+0.9
ASEAF	**Site Antares,**	3.86	251	P	Pn	06 52 20.3	+0.9
PTJ	**Puntijarka**	3.86	61	*e*Pn	Pn	06 52 20.1	+0.3
ARTF	**Artigues**	3.89	264	P	Pn	06 52 21.1	+1.0
ARTF	**Artigues**	3.89	264	P	Pn	06 52 21.1	+1.0
TORNY	**Torny/Romont**	3.94	313	P	Pn	06 52 24.4	+3.5
TORNY	**Torny/Romont**	3.94	313	P	Pn	06 52 24.4	+3.5
TORNY	**Torny/Romont**	3.94	313	P	Pn	06 52 23.4	+2.6
TORNY	**Torny/Romont**	3.94	313	P	Pn	06 52 23.4	+2.6
BSTF	**la Bastide-des**	3.96	268	P	Pn	06 52 22.2	+1.0
BSTF	**la Bastide-des**	3.96	268	P	Pn	06 52 22.2	+1.0
HVAR	**Hvar**	3.98	102	*e*Pn	Pn	06 52 22.9	+1.5
SULZ	**Cheisacher**	3.98	329	P	Pn	06 52 22.8	+1.3
SULZ	**Cheisacher**	3.98	329	*e*Pn	Pn	06 52 22.6	+1.1
SULZ	**Cheisacher**	3.98	329	*e*Pn	Pn	06 52 22.6	+1.1
BALST	**Balsthal**	3.99	324	P	Pn	06 52 23.2	+1.6
BALST	**Balsthal**	3.99	324	P	Pn	06 52 23.2	+1.6
BALST	**Balsthal**	3.99	324	P	Pn	06 52 23.3	+1.6
BALST				Sn	Sn	06 53 09.1	+0.8
BALST	**Balsthal**	3.99	324	P	Pn	06 52 23.3	+1.6
BALST				Sn	Sn	06 53 09.1	+0.8
BALST	**Balsthal**	3.99	324	*e*Pn	Pn	06 52 22.5	+0.9
BALST	**Balsthal**	3.99	324	*e*Pn	Pn	06 52 22.5	+0.9
SMRF	**Simiane la Rot**	4.00	269	*e*P	Pn	06 52 22.8	+1.0
SMRF				*e*Sn	Sn	06 53 04.3	-4.3
	comp=N,109nm,0.7s						
FUR	**Furstenfeldbru**	4.02	1	*e*Pn	Pn	06 52 22.9	+0.9
FUR	**Furstenfeldbru**	4.02	1	*e*Pn	Pn	06 52 22.9	+0.9
SLE	**Schleitheim**	4.06	334	P	Pn	06 52 23.0	+0.4
SLE				S	Sn	06 53 09.6	-0.3
SLE	**Schleitheim**	4.06	334	*e*Pn	Pn	06 52 23.4	+0.9
SLE	**Schleitheim**	4.06	334	*e*Pn	Pn	06 52 23.4	+0.9
KW1	**Garching a.d.**	4.11	14	*e*Pn	Pn	06 52 24.9	+1.8
KW1	**Garching a.d.**	4.11	14	*e*Pn	Pn	06 52 24.9	+1.8
OGSM	**Saint Maurice**	4.13	293	P	Pn	06 52 26.4	+3.0
SGRT	**San Giovanni R**	4.15	124	Pn	Pn	06 52 23.0	-0.8
BOURR	**Bourrignon**	4.24	321	P	Pn	06 52 26.5	+1.5
BOURR	**Bourrignon**	4.24	321	P	Pn	06 52 26.5	+1.5
BOURR	**Bourrignon**	4.24	321	P	Pn	06 52 26.2	+1.2
BOURR				Sn	Sn	06 53 14.6	+0.3
BOURR	**Bourrignon**	4.24	321	P	Pn	06 52 26.2	+1.2
BOURR				Sn	Sn	06 53 14.6	+0.3
KALN	**Kalnik**	4.26	60	*e*Pn	Pn	06 52 24.9	-0.4
BRANT	**Les Verrieres**	4.30	312	P	Pn	06 52 27.7	+1.9
BRANT	**Les Verrieres**	4.30	312	P	Pn	06 52 27.7	+1.9
BRANT	**Les Verrieres**	4.30	312	P	Pn	06 52 27.9	+2.0
BRANT				S	Sn	06 53 16.8	+1.0
BRANT	**Les Verrieres**	4.30	312	P	Pn	06 52 27.9	+2.0
BRANT				S	Sn	06 53 16.8	+1.0
MOA	**Molln**	4.30	29	*i* Pn	Pn	06 52 26.9	+1.0
	comp=N,5.4nm,0.1s,SNR=27						
MOA				*e*Sn	Sn	06 53 13.7	-2.2
	comp=N,55nm,0.6s						
MOA	**Molln**	4.30	29		Pn	06 52 26.9	+1.0
MOA					Sn	06 53 13.7	-2.2
MOA	**Molln**	4.30	29	*e*Pn	Pn	06 52 27.3	+1.4
MOA	**Molln**	4.30	29	*e*Pn	Pn	06 52 27.3	+1.4
CABF	**La Chapelle**	4.32	307	*e*P	Pn	06 52 28.3	+2.1
CABF				*e*Sn	Sn	06 53 12.9	-3.5
	comp=N,119nm,0.7s						
MAKA	**Makarska**	4.36	99	*e*Pn	Pn	06 52 28.4	+1.8
OG35	**Corcelles**	4.37	298	P	Pn	06 52 29.8	+3.1
OG35	**Corcelles**	4.37	298	P	Pn	06 52 29.8	+3.1
OG35	**Corcelles**	4.37	298	P	Pn	06 52 29.9	+3.1
OG35				S	Sn	06 53 19.8	+2.3
OG35	**Corcelles**	4.37	298	P	Pn	06 52 29.9	+3.1
OG35				S	Sn	06 53 19.8	+2.3
ARSA	**Arzberg**	4.37	43	*i* Pn	Pn	06 52 27.0	+0.2
	comp=N,19nm,0.4s,SNR=16						
ARSA	**Arzberg**	4.37	43		Pn	06 52 27.0	+0.2
ARSA	**Arzberg**	4.37	43	*e*Pn	Pn	06 52 27.6	+0.8
ARSA	**Arzberg**	4.37	43	*e*Pn	Pn	06 52 27.6	+0.8
ARSA	**Arzberg**	4.37	43	⇑P	Pn	06 52 26.6	-0.2
BLY	**Banja Luka**	4.38	80	*e*Pn	Pn	06 52 27.6	+0.7
RICI	**Ricice**	4.40	96	*e*Pn	Pn	06 52 29.0	+1.8
RICI				Sn	Sn	06 53 13.5	-4.7
CHMF	**Charmoille**	4.41	316	P	Pn	06 52 28.8	+1.5
CHMF	**Charmoille**	4.41	316	P	Pn	06 52 28.8	+1.5
CHMF	**Charmoille**	4.41	316	Pn	Pn	06 52 29.1	+1.7
CHMF				Sn	Sn	06 53 19.3	+0.8
CHMF	**Charmoille**	4.41	316	Pn	Pn	06 52 29.1	+1.7
CHMF				Sn	Sn	06 53 19.3	+0.8
KIZ	**Kirchzarten**	4.42	331	S	Sn	06 53 17.6	-1.0
NORI	**Noerdlinger Ri**	4.59	356	*e*Pn	Pn	06 52 29.3	-0.5
NORI	**Noerdlinger Ri**	4.59	356	*e*Pn	Pn	06 52 29.3	-0.5
VULT	**Monte Vulture**	4.60	132	⇓P	Pb	06 52 39.5	-1.9
BFO	**Black Forest**	4.61	336	P	Pn	06 52 31.0	+0.9
BFO	**Black Forest**	4.61	336		Pn	06 52 31.0	+0.9
BFO	**Black Forest**	4.61	336	*e*Pn	Pn	06 52 30.3	+0.2
BFO	**Black Forest**	4.61	336	*e*Pn	Pn	06 52 30.3	+0.2
MOF	**Molkenrain**	4.63	325	P	Pn	06 52 31.4	+0.9
VIVF	**Saint-Julien-l**	4.67	281	*e*P	Pn	06 52 31.9	+1.0
VIVF				*e*Sn	Sn	06 53 21.3	-3.7
	comp=N,16nm,0.4s						
HINF	**Hinteralfeld**	4.73	322	*e*P	Pn	06 52 32.7	+1.0
HINF				*e*Sn	Sn	06 53 22.8	-3.5
	comp=N,161nm,0.5s						
OPP	**Oppenau**	4.80	336	P	Pn	06 52 33.5	+0.8
STU	**Stuttgart**	4.81	345	P	Pn	06 52 31.9	-1.0
STU	**Stuttgart**	4.81	345		Pn	06 52 31.9	-1.0
STU	**Stuttgart**	4.81	345	*e*Pn	Pn	06 52 33.6	+0.7
STU	**Stuttgart**	4.81	345	*e*Pn	Pn	06 52 33.6	+0.7
SSB	**Saint Sauveur**	4.83	286	P	Pn	06 52 34.2	+1.1
SSB	**Saint Sauveur**	4.83	286		Pn	06 52 34.2	+1.1
VSL	**Villasalto**	4.83	196	Pn	Pn	06 52 34.0	+1.0
VSL	**Villasalto**	4.83	196	⇓P	Pn	06 52 36.3	+3.2
ECH	**Echery**	4.91	327	P	Pn	06 52 35.1	+0.9
ECH				P	Pn	06 52 35.8	+1.5
ECH				S	Sn	06 53 30.8	-0.1
ECH	**Echery**	4.91	327	P	Pn	06 52 34.1	-0.1
ECH	**Echery**	4.91	327		Pn	06 52 34.1	-0.1
STON	**Ston**	4.95	103	*e*Pn	Pn	06 52 35.2	+0.5
STON				Sn	Sn	06 53 28.4	-3.3
STON	**Ston**	4.95	103	*e*Pn	Pn	06 52 34.9	+0.2
WLS	**Welschbruch**	5.00	330	Pn	Pn	06 52 36.3	+0.8
WLS				Sn	Sn	06 53 32.1	-1.1
CONA	**Conrad Observa**	5.02	39	*i* Pn	Pn	06 52 35.7	0.0
	comp=N,6.0nm,0.2s,SNR=20						
CONA	**Conrad Observa**	5.02	39		Pn	06 52 35.7	0.0
GEC2	**GERESS Array S**	5.03	20		Pn	06 52 35.4	-0.5
GEC2	**GERESS Array S**	5.03	20	*e*Pn	Pn	06 52 36.0	+0.2
GEC2	**GERESS Array S**	5.03	20	*e*Pn	Pn	06 52 36.0	+0.2
GERES	**GERESS Array B**	5.03	20	Pn	Pn	06 52 36.1	+0.3
	comp=N,6.4nm,0.3s,baz=194,slow=12,SNR=110						
GERES				Sn	Sn	06 53 34.1	+0.3
	comp=N,7.3nm,0.3s,baz=227,slow=25,SNR=7.4						
GERES				Lg	Lg	06 53 59.0	
	comp=N,2.7nm,0.3s,baz=209,slow=24,SNR=1.3						
GERES				LR	LR	06 54 49.2	
	comp=N,773nm,20.4s,baz=178,slow=42						
CDF	**Champ du Feu**	5.03	329	*e*P	Pn	06 52 36.8	+0.9
CDF				*e*Sn	Sn	06 53 29.7	-4.2
	comp=N,78nm,0.5s						
HAU	**Haudompre**	5.09	321	*e*P	Pn	06 52 37.8	+1.1
HAU				*e*Sn	Sn	06 53 30.7	-4.6
	comp=N,350nm,0.6s						
WET	**Wettzell**	5.14	13	*e*Pn	Pn	06 52 37.4	0.0
WET				*e*Sg	Sg	06 54 02.3	-3.5
WET	**Wettzell**	5.14	13	*e*Pn	Pn	06 52 37.4	0.0
WET				*e*Sg	Sg	06 54 02.3	-3.5
SOP	**Sopron**	5.18	45	*e*PN	Pn	06 52 38.1	+0.2
LASF	**Ste Croix**	5.23	272	*e*Pn	Pn	06 52 37.5	-1.2
LASF				*e*Sn	Sn	06 53 33.5	-5.4
	comp=N,47nm,0.9s						
KHC	**Kasperske Hory**	5.26	18	*e*P	Pn	06 52 39.2	+0.1
KHC				*e*		06 53 39.0	
KHC				MLR	MLR		
	comp=Z,3µm,11.9s						
KHC	**Kasperske Hory**	5.26	18	*e*PN	Pn	06 52 39.2	+0.1
KHC				*e*PG	Pg	06 52 59.0	-2.5
KHC				*e*SN	Sn	06 53 39.0	-0.6
KHC				AMS	AMS	06 54 50.0	
	comp=Z,3µm,11.9s						
KHC	**Kasperske Hory**	5.26	18		Pn	06 52 38.7	-0.4
SUBF	**Surbourg**	5.28	336	Pn	Pn	06 52 39.8	+0.5
DBRK	**Dubrovnik**	5.32	104	*e*Pn	Pn	06 52 41.8	+1.9
MATE	**Matera**	5.41	128	⇑P	Pn	06 52 40.6	-0.4
MPLH	**Magyarpolny**	5.42	54	*e*PN	Pn	06 52 41.9	+0.7
EGYH	**Egyhazaskeszo**	5.43	51	*e*PN	Pn	06 52 44.0	+2.6
TREB	**Trebinje**	5.45	103	*e*Pn	Pn	06 52 42.4	+0.8
BRY	**Bratogost**	5.53	100	*e*Pn	Pn	06 52 45.2	+2.3
BRY	**Bratogost**	5.53	100	*e*Pn	Pn	06 52 43.8	+0.9
BRY				*i* Sn	Sn	06 53 47.5	+1.1
GRFO	**Grafenberg**	5.55	1	P	Pn	06 52 42.4	-0.5
GRFO	**Grafenberg**	5.55	1		Pn	06 52 42.4	-0.5
GRA1	**Grafenberg Arr**	5.55	1		Pn	06 52 42.6	-0.3
GRF	**Grafenberg Arr**	5.55	1	P	Pn	06 52 42.6	-0.3
GRF	**Grafenberg Arr**	5.55	1	*e*Pn	Pn	06 52 41.8	-1.2
GRF				*e*Sg	Sg	06 54 13.7	-5.1
GRF	**Grafenberg Arr**	5.55	1	*e*Pn	Pn	06 52 41.8	-1.2
GRF				*e*Sg	Sg	06 54 13.7	-5.1
HAPS	**Han Pijesak,BI**	5.63	88	*e*Pn	Pn	06 52 44.4	+0.1
ROTZ	**Rotzenmuhle**	5.67	7	*e*Pn	Pn	06 52 43.6	-1.0
ROTZ	**Rotzenmuhle**	5.67	7	*e*Pn	Pn	06 52 43.6	-1.0
MORH	**Mrgy, Hungar**	5.70	66	*e*PN	Pn	06 52 43.9	-1.2
MORH	**Mrgy, Hungar**	5.70	66	*e*Pn	Pn	06 52 42.1	-3.0
SMF	**Signal de Mont**	5.71	299	*e*P	Pn	06 52 47.0	+1.9
SMF				*e*Sn	Sn	06 53 45.8	-4.6
	comp=Z,71nm,0.5s						
UPM	**Unac-Piva**	5.72	97	*e*Pn	Pn	06 52 48.2	+2.7
UPM	**Unac-Piva**	5.72	97	⇑*i*Pn	Pn	06 52 46.4	+0.9
UPM				*i* Sn	Sn	06 53 52.1	+1.0
PAGF	**Fort de Pagny**	5.78	322	*e*P	Pn	06 52 47.9	+1.8
	baz=142						
PAGF				*e*Sn	Sn	06 53 46.4	-5.8
	comp=Z,22nm,0.4s						
ZST	**Bratislava**	5.80	44	*e*P	Pn	06 52 46.4	0.0
ZST				*e*		06 53 51.1	
ZST				smax	smax		
	comp=N,478nm,1.5s						
ZST	**Bratislava**	5.80	44	*e*PN	Pn	06 52 46.4	0.0
ZST				*e*SN	Sn	06 53 51.1	-1.6
ZST				*e*LG	Lg	06 54 53.0	
SFTF	**Sexfontaines**	5.86	316	*e*P	Pn	06 52 48.9	+1.7
	baz=133						
SFTF				*e*Sn	Sn	06 53 48.3	-5.9
	comp=N,217nm,0.8s						
NKME	**Niksic**	5.86	101	⇑*i*Pn	Pn	06 52 48.4	+1.1
NKME				*i* Sn	Sn	06 53 55.5	+1.1
PBCC	**Pribram**	5.88	19	*e*PN	Pn	06 52 47.7	+0.2
CEME	**Cevo**	5.90	103	⇓*i*Pn	Pn	06 52 49.0	+1.1
CEME				*i* Sn	Sn	06 53 56.5	+1.1
TREC	**Trest**	5.96	29	*e*P	Pn	06 52 48.1	-0.5
TREC	**Trest**	5.96	29	*e*PN	Pn	06 52 48.1	-0.5
BUM	**Brajici-Budva**	5.97	105	⇓*i*Pn	Pn	06 52 49.9	+1.1
BUM				*i* Sn	Sn	06 53 58.0	+1.0
LOR	**Lormes**	5.97	304	*e*P	Pn	06 52 50.4	+1.7
	baz=123						
LOR				*e*Sn	Sn	06 53 52.1	-4.8
	comp=N,75nm,0.5s						
BBLS	**Lazići**	5.98	90	*e*Pn	Pn	06 52 49.4	+0.5
MODS	**Modra-Piesok**	6.00	43	*e*P	Pn	06 52 48.2	-1.0
MODS				*e*		06 53 54.7	
MODS				MLR	MLR		
	comp=Z,200nm,1.2s						
MODS	**Modra-Piesok**	6.00	43	*e*PN	Pn	06 52 48.2	-1.0
MODS				*e*SN	Sn	06 53 54.7	-3.1
MODS				*e*LG	Lg	06 54 57.0	
PLE	**Pljevlja**	6.04	95	⇓*i*Pn	Pn	06 52 50.9	+1.0
PLE				*i* Sn	Sn	06 53 59.9	+1.0
MEZF	**Maizieres J'vi**	6.05	318	*e*P	Pn	06 52 52.1	+2.2
	baz=135						
MEZF				*e*Sn	Sn	06 53 52.4	-6.6
	comp=Z,51nm,0.6s						
AVF	**Avril sur Loir**	6.07	299	*e*P	Pn	06 52 51.9	+1.8
AVF				*e*Sn	Sn	06 53 54.0	-5.4
	comp=Z,26nm,0.6s						
AVF	**Avril sur Loir**	6.07	299	P	Pn	06 52 51.7	+1.6
AVF				SN	Sn	06 53 58.4	-1.0
SSF	**Saint Saulge**	6.09	301	*e*P	Pn	06 52 52.3	+1.9
SSF				*e*Sn	Sn	06 53 54.5	-5.3
	comp=Z,27nm,0.5s						
SAVF	**Savonnieres en**	6.10	319	*e*P	Pn	06 52 52.7	+2.2
SAVF				*e*Sn	Sn	06 53 54.8	-5.3
	comp=Z,40nm,0.6s						
KRUC	**Moravsky**	6.11	35	*e*PN	Pn	06 52 49.6	-1.1
NKC	**Novy Kostel**	6.16	8	*e*P	Pn	06 52 50.8	-0.5
NKC	**Novy Kostel**	6.16	8	*e*PN	Pn	06 52 50.8	-0.5
SMOL	**Smolenice**	6.17	43	*e*P	Pn	06 52 52.3	+0.8
SMOL				*e*		06 54 04.5	
SMOL	**Smolenice**	6.17	43	*e*PN	Pn	06 52 52.3	+0.8
SMOL				*e*SN	Sn	06 54 04.5	+2.6
PDG	**Podgorica**	6.18	103	⇓P	Pn	06 52 54.0	+2.4
PDG	**Podgorica**	6.18	103	*e*Pn	Pn	06 52 53.0	+1.4
TTG	**Podgorica**	6.18	103	*e*Pn	Pn	06 52 52.7	+1.1
TTG				*i* Sn	Sn	06 54 03.1	+1.1
DRME	**Dracevica, Mon**	6.21	106	*e*Pn	Pn	06 52 53.1	+1.0
DRME	**Dracevica, Mon**	6.21	106	⇑*i*Pn	Pn	06 52 53.2	+1.1
DRME				*i* Sn	Sn	06 54 03.9	+1.0
ABH	**Alteburg**	6.24	338	P	Pn	06 52 53.8	+1.3
PRU	**Pruhonice**	6.29	21	*e*P	Pn	06 52 52.8	-0.3
PRU				*e*		06 54 02.9	
PRU				MLR	MLR		
	comp=Z,2µm,11.5s						
PRU	**Pruhonice**	6.29	21	*e*PN	Pn	06 52 52.8	-0.3
PRU				*e*SN	Sn	06 54 02.9	-1.9
PRU				AMS	AMS	06 55 30.0	
	comp=Z,2µm,11.5s						
BGF	**Bois d'Agland**	6.31	295	*e*P	Pn	06 52 55.3	+1.9
BGF				*e*Sn	Sn	06 54 00.4	-5.0
	comp=Z,57nm,0.5s						
ULC	**Ulcinj**	6.33	107	⇓*i*Pn	Pn	06 52 54.9	+1.1
ULC				*i* Sn	Sn	06 54 06.8	+0.8
PRA	**Prague**	6.34	20	AMS	AMS	06 55 30.0	
	comp=Z,1µm,12.9s						
TNS	**Taunus Mts**	6.35	344	*e*Pn	Pn	06 52 54.1	+0.2
TNS	**Taunus Mts**	6.35	344	*e*Pn	Pn	06 52 54.1	+0.2
DIVS	**Divibare**	6.38	87	*e*Pn	Pn	06 52 53.0	-1.5
VRAC	**Vranov**	6.38	34	Pn	Pn	06 52 54.2	-0.2
	comp=Z,2.2nm,0.3s,baz=234,slow=11,SNR=6.0						
VRAC				Lg	Lg	06 54 45.4	
	comp=Z,1.0nm,0.3s,baz=136,slow=20,SNR=1.7						
VRAC	**Vranov**	6.38	34	*e*PN	Pn	06 52 53.4	-1.0
SJES	**Sjenica**	6.47	95	*e*Pn	Pn	06 52 57.3	+1.5
WLF	**Walferdange**	6.49	330	*d*Pn	Pn	06 52 57.8	+2.0
WLF	**Walferdange**	6.49	330	P	Pn	06 52 56.4	+0.6
WLF	**Walferdange**	6.49	330		Pn	06 52 56.4	+0.6
WLF	**Walferdange**	6.49	330	*e*Pn	Pn	06 52 57.6	+1.8
WLF	**Walferdange**	6.49	330	*e*Pn	Pn	06 52 57.6	+1.8
IVA	**Berane**	6.50	98	⇑*i*Pn	Pn	06 52 57.3	+1.2
IVA				*i* Sn	Sn	06 54 11.1	+0.9
MTLF	**Montolieu**	6.50	266	*e*P	Pn	06 52 57.1	+1.0
MTLF				*e*Sn	Sn	06 54 05.2	-4.9
	comp=Z,55nm,0.7s						
MOX	**Moxa**	6.51	3	P	Pn	06 52 56.8	+0.6
MOX	**Moxa**	6.51	3	*e*Pn	Pn	06 52 55.5	-0.6
MOX	**Moxa**	6.51	3	*e*Pn	Pn	06 52 55.5	-0.6
CAF	**Calviac**	6.52	280	*e*Pn	Pn	06 52 56.2	-0.2
CAF	**Calviac**	6.52	280	*e*P	Pn	06 52 59.5	+3.1
CAF				*e*Sn	Sn	06 54 04.9	-5.7
	comp=Z,3.4nm,0.4s						
CAF	**Calviac**	6.52	280	P	Pn	06 52 56.7	+0.3
JAVC	**Velka Javorina**	6.53	41	*e*PN	Pn	06 52 57.3	+0.9
PVY	**Plav**	6.62	100	*e*Pn	Pn	06 52 58.9	+1.1
PVY				*i* Sn	Sn	06 54 14.0	+0.8
TCF	**Toulx Ste Croi**	6.65	292	*e*P	Pn	06 53 00.1	+2.0
TCF				*e*Sn	Sn	06 54 08.1	-5.6
	comp=Z,30nm,0.5s						
HYF	**Humbligny**	6.71	301	*e*P	Pn	06 53 01.6	+2.7
HYF				*e*Sn	Sn	06 54 09.0	-6.2
PVCC	**Panska Ves**	6.80	19	*e*P	Pn	06 53 00.1	0.0
PVCC	**Panska Ves**	6.80	19	*e*PN	Pn	06 53 00.1	0.0
VYHS	**Vyhne**	6.88	48	*e*P	Pn	06 53 02.2	+0.9
VYHS				*e*		06 54 18.9	
VYHS	**Vyhne**	6.88	48	*e*PN	Pn	06 53 02.1	+0.8
VYHS				*e*SN	Sn	06 54 18.9	-0.5
RJF	**Les Rejaudoux**	6.94	283	*e*P	Pn	06 53 05.0	+2.9
RJF				*e*Sn	Sn	06 54 15.2	-5.7
	comp=Z,1.6nm,0.3s						
BRG	**Berggiesshubel**	6.99	15	Pn	Pn	06 53 03.1	+0.3

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BRG                                 Amp              06 53 06.7
      comp=Z,26nm,0.8s
BRG                                ex      x         06 54 22.9
BRG                                ex      x         06 55 10.6
BRG                                 Amp              06 55 23.6
      comp=Z,163nm,1.2s
BRG                                 Amp              06 56 10.0
      comp=N,2.0nm,10.3s
BRG                                 Amp              06 56 11.0
      comp=E,1.4nm,10.3s
BRG                                 Amp              06 56 13.0
      comp=Z,2.6nm,10.3s
BRG   Berggiesshubel    6.99  15    P       Pn       06 53 03.0 +0.3
BRG                                e                 06 54 22.9
BRG                                 pmax    pmax
      comp=Z,26nm,0.8s
BRG                                 MLR     MLR
      comp=N,2µm,10.3s
BRG                                 MLR     MLR
      comp=E,1µm,10.3s
BRG                                 MLR     MLR
      comp=Z,3µm,10.3s
BRG   Berggiesshubel    6.99  15    Pn      Pn       06 53 03.1 +0.3
BRG                                 Amp              06 53 06.7
      comp=Z,26nm,0.8s
BRG                                ex      x         06 54 22.9
BRG                                ex      x         06 55 10.6
BRG                                 Amp              06 55 23.6
      comp=Z,163nm,1.2s
BRG                                 Amp              06 56 10.0
      comp=N,2.0nm,10.3s
BRG                                 Amp              06 56 11.0
      comp=E,1.4nm,10.3s
BRG                                 Amp              06 56 13.0
      comp=Z,2.6nm,10.3s
TIR   Tirane            7.01 110 ⥣P       Pn       06 53 04.5 +1.4
TIR   Tirane            7.01 110 ⥣P       Pn       06 53 04.5 +1.4
KRLC  Kraliky           7.07  31   eP      Pn       06 53 03.6 -0.3
KRLC                                MLR     MLR
      comp=Z,2µm,10.4s
KRLC  Kraliky           7.07  31   ePN     Pn       06 53 03.6 -0.3
KRLC                                AMS     AMS      06 56 00.0
      comp=Z,2µm,10.4s
VAE   Valguarnera       7.11 158    Pn      Pn       06 53 05.6 +1.1
      comp=Z,3.0nm,0.3s,baz=181,slow=12,SNR=2.1
MORC  Moravsky Berou    7.14  36   ePN     Pn       06 53 04.8  0.0
MORC  Moravsky Berou    7.14  36    P       Pn       06 53 04.2 -0.6
MORC  Moravsky Berou    7.14  36            Pn       06 53 04.2 -0.6
DPC   Dobruska-Polom    7.14  28   eP      Pn       06 53 03.7 -1.2
DPC                                 MLR     MLR
      comp=Z,1µm,13.7s
DPC   Dobruska-Polom    7.14  28   ePN     Pn       06 53 03.7 -1.2
DPC                                 AMS     AMS      06 56 00.0
      comp=Z,1µm,13.7s
PSZ   Piszkesteto       7.17  55 ⥣P       Pn       06 53 07.6 +2.3
PSZ   Piszkesteto       7.17  55 ⥣P       Pn       06 53 07.6 +2.3
UPC   Upice             7.18  26   eP      Pn       06 53 04.2 -1.1
UPC                                 MLR     MLR
      comp=Z,2µm,11.6s
UPC   Upice             7.18  26   ePN     Pn       06 53 04.2 -1.1
UPC                                 AMS     AMS      06 56 00.0
      comp=Z,2µm,11.6s
CHVC  Chvalec           7.26  26   ePN     Pn       06 53 05.6 -0.9
CLL   Collm             7.28   9   ePn     Pn       06 53 06.0 -0.6
      comp=Z,40nm,0.6s
CLL                                eSn     Sn       06 54 13.0  -16
CLL                                e                 06 54 20.0
CLL                                e                 06 54 33.0
CLL                                e                 06 54 38.0
CLL                                e                 06 54 48.0
CLL                                e                 06 54 57.0
CLL                                eSg     Sg       06 55 08.0 -6.1
      comp=Z,112nm,1.0s
CLL                                eLmax             06 55 50.0
CLL   Collm             7.28   9   eP      Pn       06 53 06.0 -0.6
CLL                                 pmax    pmax
      comp=Z,40nm,0.6s
CLL   Collm             7.28   9            Pn       06 53 06.0 -0.6
OSTC  Ostas             7.28  27    AMS     AMS      06 56 10.0
      comp=Z,1µm,13.3s
MEM   Membach           7.34 334   dPb     Pb       06 53 27.7 -0.2
GIVF  Givet             7.34 326   eP      Pn       06 53 09.7 +2.1
GIVF                               eSn     Sn       06 54 25.0 -5.7
      comp=Z,25nm,0.6s
BCLA  Clavier           7.42 330   dPnPn   PnPn     06 53 16.6 +0.5
BCLA                               dPg     Pg       06 53 42.0 -0.7
DOU   Dourbes           7.43 326   dPn     Pn       06 53 09.1 +0.3
DOU                                dx      x         06 53 34.4
DOU                                dPg     Pg       06 53 42.4 -0.5
LFF   La Frestale       7.46 280   eP      Pn       06 53 12.8 +3.6
LFF                                eSn     Sn       06 54 27.4 -6.3
      comp=Z,28nm,0.9s
BGES  Gesves            7.47 329   dPn     Pn       06 53 11.8 +2.5
BGES                               dPg     Pg       06 53 42.9 -0.7
BMRD  Maredsous         7.52 327   dPb     Pb       06 53 29.4 -1.6
KSP   Ksiaz             7.56  26   ePn     Pn       06 53 09.5 -1.0
KSP                                eSn     Sn       06 54 31.6 -4.3
BAIF  Baives            7.56 324   eP      Pn       06 53 12.7 +2.1
BZS   Buzias            7.60  75 ⥣P       Pn       06 53 12.8 +1.7
BZS   Buzias            7.60  75 ⥣P       Pn       06 53 12.8 +1.7
MDVR  Moldovita         7.60  82 ⥣P       Pn       06 53 02.3 -8.9
LANS  Liptovska Anna    7.61  46   eP      Pn       06 53 13.9 +2.6
LANS  Liptovska Anna    7.61  46   ePN     Pn       06 53 13.9 +2.6
SNF   Seneffe           7.88 326   dPn     Pn       06 53 15.3 +0.5
SNF                                dx      x         06 53 34.3
EPF   Esparros          7.91 266   ePn     Pn       06 53 14.4 -1.0
EPF   Esparros          7.91 266   eP      Pn       06 53 19.4 +4.0
EPF                                eSn     Sn       06 54 37.3 -7.5
      comp=Z,37nm,1.1s
HERR  Herculane         8.11  81 ⥣P       Pn       06 53 18.8 +0.8
NIE   Niedzica          8.21  47   ePn     Pn       06 53 24.9 +5.4
MFF   Saint Martin d    8.31 291   eP      Pn       06 53 24.5 +3.7
MFF                                eSn     Sn       06 54 47.8 -6.6
      comp=Z,4.4nm,0.5s
MFF   Saint Martin d    8.31 291    P       Pn       06 53 23.2 +2.4
OJC   Ojcow             8.47  41   ePn     Pn       06 53 35.0  +12
KEST  Kesra             8.52 190    Pn      Pn       06 53 25.0 +1.2
      comp=Z,0.4nm,0.3s,baz=227,slow=7.5,SNR=2.7
KEST                                LR      LR       06 56 14.4
      comp=Z,359nm,21.1s,baz=27,slow=35
DRGR                    8.56  68 ⥣P       Pn       06 53 26.3 +1.9
DRGR                    8.56  68 ⥣P       Pn       06 53 26.3 +1.9
CRVS  Cervenica-Dubn    8.56  53   eP      Pn       06 53 26.9 +2.5
CRVS  Cervenica-Dubn    8.56  53   ePN     Pn       06 53 26.9 +2.5
ETSF  Etsaut            8.58 266   eP      Pn       06 53 28.6 +3.9
ETSF                               eSn     Sn       06 54 53.6 -7.7
      comp=Z,5.2nm,0.6s
UZH   Uzhgorod          8.92  56   eP      Pn       06 53 33.0 +3.8
UZH                                eS      Sn       06 55 12.8 +3.3
UZH                                 MLR     MLR
      comp=N,250nm,10.0s
UZH                                 MLR     MLR
      comp=E,250nm,10.0s
UZH                                 MLR     MLR
      comp=Z,200nm,10.0s
VTS   Vitosha           8.95  96 ⥥P       Pn       06 53 31.8 +2.0
VTS   Vitosha           8.95  96 ⥥P       Pn       06 53 31.8 +2.0
LDF   La Druitiere      8.96 304   eP      Pn       06 53 32.6 +2.9
LDF                                eSn     Sn       06 55 03.4 -6.9
      comp=Z,26nm,1.0s
SJPF  Ste Jean          9.02 268   eP      Pn       06 53 34.4 +3.8
SJPF                               eSn     Sn       06 55 05.1 -6.8
      comp=Z,9.0nm,0.7s
KOLS  Kolonicke sedl    9.05  54   eP      Pn       06 53 37.7 +6.7
KOLS  Kolonicke sedl    9.05  54   ePN     Pn       06 53 37.7 +6.7
FLN   La Foliniere      9.24 304   eP      Pn       06 53 37.6 +4.0
FLN                                eSn     Sn       06 55 09.8 -7.6
      comp=Z,2.7nm,0.5s
GRR   Gorron            9.32 301   ePn     Pn       06 53 33.0 -1.7
GRR   Gorron            9.32 301   eP      Pn       06 53 38.7 +4.0
GRR                                eSn     Sn       06 55 12.6 -6.6
      comp=Z,13nm,0.7s
KWP   Kalwaria Pacla    9.64  51   ePn     Pn       06 53 42.2 +3.1
ARR   Arges             9.69  78 ⥣P       Pn       06 53 42.8 +3.0
VOIR                    9.98  78 ⥣P       Pn       06 53 47.7 +3.8
VOIR                    9.98  78 ⥣P       Pn       06 53 47.7 +3.8
SGMF  Saint Gilles     10.33 298   eP      Pn       06 53 50.8 +2.2
SGMF                               eSn     Sn       06 55 36.0 -8.2
      comp=Z,7.7nm,0.8s
BURAR Bucovina Array   10.42  66 ⥣P       Pn       06 53 52.9 +3.1
BURAR Bucovina Array   10.42  66 ⥣P       Pn       06 53 52.9 +3.1
MLR   Muntele Rosu     10.62  78    Pn      Pn       06 53 54.1 +1.5
      comp=Z,0.2nm,0.3s,baz=295,slow=12,SNR=2.0
MLR                                 LR      LR       06 58 27.9
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      comp=Z,656nm,21.7s,baz=270,slow=40
MLR   Muntele Rosu     10.62  78 ⥣P       Pn       06 53 55.3 +2.7
QUIF  Quistinic        10.63 296   ePn     Pn       06 53 51.1 -1.4
QUIF                               eSn     Sn       06 55 43.5 -7.8
      comp=Z,1.6nm,0.4s
ROSF  Rostrenen        10.81 298   ePn     Pn       06 53 53.5 -1.6
ROSF                               eSn     Sn       06 55 47.8 -8.1
      comp=Z,7.3nm,0.6s
VRI   Vrincioaia       11.18  76 ⥥P       Pn       06 53 53.6 -6.6
VRI   Vrincioaia       11.18  76 ⥥P       Pn       06 53 53.6 -6.6
ESDC  Sonseca Array    12.09 254    Pn      Pn       06 54 12.8  0.0
      comp=Z,0.1nm,0.3s,baz=65,slow=13,SNR=19
PAB   San Pablo        12.42 254    P       Pn       06 54 18.1 +0.9
PAB   San Pablo        12.42 254            Pn       06 54 18.1 +0.9
AKASG Malin Array Be   13.88  55    Pn      Pn       06 54 36.7 -0.3
      baz=245,slow=13,SNR=2.3
AKBB  Malin Array Si   13.88  55⥣eP      Pn       06 54 37.2 +0.2
EKA   Eskdalemuir Ar   14.48 326    Pn      Pn       06 54 47.2 +2.0
      baz=132,slow=14,SNR=2.6
NACGM Naroch           14.77  38  i Sb               07 01 12.9
      comp=Z,459nm,25.6s
NACGM Naroch           14.77  38  i P      Pn       06 54 49.5 +0.4
NACGM Naroch           14.77  38  i P      Pn       06 54 49.5 +0.4
NACGM Naroch           14.77  38  i P      Pn       06 54 49.5 +0.4
NACGM Naroch           14.77  38  i Pb     Pn       06 54 51.1 +2.0
      comp=Z,13nm,1.2s
NACGM Naroch           14.77  38  i PP     P        06 54 57.9 +2.8
NACGM Naroch           14.77  38  i PPP    PPP      06 55 05.5
NACGM Naroch           14.77  38  i S      Sn       06 57 32.6 +0.2
NACGM Naroch           14.77  38  i SS     S        06 57 50.5 -0.4
NACGM Naroch           14.77  38  i SSS    SSS      06 58 12.7
NACGM Naroch           14.77  38  i LQ     LQ       06 59 07.4
NACGM Naroch           14.77  38  i LR     LR       07 00 13.6
MNK   Minsk            15.02  40  i LRM    MLR      07 01 13.6
      comp=Z,288nm,21.0s
MNK   Minsk            15.02  40  i P      Pn       06 54 48.7 -3.7
MNK   Minsk            15.02  40  i P      Pn       06 54 48.7 -3.7
MNK   Minsk            15.02  40  i P      Pn       06 54 48.7 -3.7
MNK   Minsk            15.02  40  i PP     P        06 54 56.7 -1.1
MNK   Minsk            15.02  40  i PPP    PPP      06 55 04.4
MNK   Minsk            15.02  40  i S      Sn       06 57 33.3 -5.1
MNK   Minsk            15.02  40  i SS     S        06 57 48.8 -7.3
MNK   Minsk            15.02  40  i SSS    SSS      06 58 01.4
MNK   Minsk            15.02  40  i LQ     LQ       06 59 11.4
MNK   Minsk            15.02  40  i LR     LR       06 59 50.4
MNK   Minsk            15.02  40  i LRM    MLR      07 01 13.6
      comp=E,15nm,19.6s
MNK   Minsk            15.02  40  i LRM    MLR      07 01 13.6
      comp=N,187nm,17.4s
HFS   Hagfors          16.09   5    Pn      P        06 55 08.8 -0.9
      comp=N,0.2nm,0.3s,baz=179,slow=12,SNR=1.9
NC602 NORSAR Array S   16.62   1    P       P        06 55 14.7 -0.9
NC602                               IAmb    IAmb     06 55 17.6
      comp=Z,121nm,1.4s
PFVI  Vila Bisbo       16.66 252    P       P        06 55 15.3 -0.9
PFVI                                IAmb    IAmb     06 55 36.7
      comp=Z,115nm,1.4s
MDT   Midelt           16.69 233    LR      LR       07 01 06.7
      comp=Z,208nm,19.0s,baz=25,slow=35
NB2   NORSAR Subarra   16.92   0    P       P        06 55 20.8 +1.8
      comp=Z,4.2nm,0.6s,baz=179,slow=14
NOA   NORSAR Array B   16.92   0    Pn      Pn       06 55 16.8 -0.2
      comp=Z,0.0nm,0.3s,baz=182,slow=11,SNR=20
NOA                                 LR      LR       07 02 12.7
      comp=Z,100nm,18.1s,baz=190,slow=39
NB201 NORSAR Array S   16.93   0    P       Pn       06 55 16.0 -1.1
NB201                               IAmb    IAmb     06 55 32.0
      comp=Z,88nm,1.4s
NC405 NORSAR Array S   17.00   1    P       Pn       06 55 16.8 -1.2
NC405                               IAmb    IAmb     06 55 21.9
      comp=Z,52nm,0.8s
NC303 NORSAR Array S   17.11   0    P       Pn       06 55 19.2 -0.1
NC303                               IAmb    IAmb     06 55 28.3
      comp=Z,47nm,1.1s
NC204 NORSAR Array S   17.16 359    P       Pn       06 55 19.2 -0.8
VSU   Vasula           17.27  28⥣eP      Pn       06 55 21.5 +0.2
VSU                                 pmax    pmax
      comp=Z,140nm,1.3s
BR131 Keskin Array S   17.31  97    P       Pn       06 55 21.0 -1.1
BR131                               pmax    pmax
      comp=Z,10.0nm,1.3s
BR131 Keskin Array S   17.31  97    P       Pn       06 55 21.0 -1.1
BRTR  Keskin Array B   17.31  97    P       P        06 55 24.2 +0.7
      comp=Z,0.1nm,0.3s,baz=269,slow=10,SNR=2.9
BRTR                                PcP     PcP      07 00 04.7 +0.4
      comp=Z,0.1nm,0.3s,baz=46,slow=3.6,SNR=3.7
ANN   Anapa            18.76  79   eP      P        06 55 37.4 -1.9
ANN                                eS      Sn       06 59 06.8 -2.6
ANN                                 pmax    pmax
      comp=Z,46nm,0.8s
ANN                                 MLR     MLR
      comp=N,297nm,17.0s
ANN                                 MLR     MLR
      comp=Z,331nm,14.0s
FINES FINESS Array B   19.45  22    P       P        06 55 47.1 +0.3
      comp=Z,0.4nm,0.3s,baz=185,slow=7.1,SNR=14
FINES                               LR      LR       07 03 51.5
      comp=Z,510nm,21.2s,baz=174,slow=39
OBN   Obninsk          19.68  47    LR      LR       07 04 15.7
      comp=Z,77nm,18.6s,baz=336,slow=40
OBN   Obninsk          19.68  47   eP      P        06 55 49.9 +0.6
OBN                                 pmax    pmax
      comp=Z,41nm,1.7s
OBN                                 MLR     MLR
      comp=Z,222nm,13.0s
VSR   Storozhevoye     20.08  59   eP      P        06 55 54.3 +0.7
VSR                                 pmax    pmax
      comp=Z,10.0nm,1.1s
VORD  Divnogorie       20.11  60   eP      P        06 55 53.6 -0.4
VORD                                pmax    pmax
      comp=Z,10.0nm,1.0s
LPSR  Galich'ya Gora   20.21  55   eP      Pn       06 55 56.6 -0.4
LPSR                                pmax    pmax
      comp=Z,10.0nm,0.9s
MOS   Moscow           20.48  46   eP      P        06 55 58.9 +0.9
MOS                                e                 06 56 16.7
VRH   Novokhopyorsk    21.66  60   eP      P        06 56 11.8 +1.0
VRH                                 pmax    pmax
      comp=Z,20nm,0.8s
TAM   Tamanrasset      21.80 194    P       P        06 56 12.4 -0.2
TAM                                 pmax    pmax
      comp=Z,11nm,1.0s
TAM   Tamanrasset      21.80 194    P       P        06 56 12.4 -0.2
KIV   Kislovodsk       22.62  79   eP      P        06 56 23.3 +2.1
KIV                                 pmax    pmax
      comp=Z,54nm,1.1s
KIV                                 MLR     MLR
      comp=Z,173nm,14.0s
KVAR  Kislovodsk Arr   22.62  79    LR      LR       07 07 31.7
      comp=Z,217nm,18.6s,baz=36,slow=43
KBZ   Khabaz           22.81  80    P       P        06 56 23.5 +0.4
      comp=Z,3.2nm,1.0s,baz=287,slow=8.3,SNR=4.3
KBZ   Khabaz           22.81  80⥥eP      P        06 56 26.1 +3.0
ZEI   Tsey             23.75  82   eP      P        06 56 35.5 +2.7
ZEI                                 pmax    pmax
      comp=Z,11nm,1.5s
KLMR  Klimovskoe       23.76  35   eP      P        06 56 31.7 -0.7
KLMR                                pmax    pmax
      comp=Z,65nm,1.5s
KLMR  Klimovskoe       23.76  35   eP      P        06 56 31.8 -0.7
KLMR                                AMP              06 56 39.0
      comp=Z,65nm,1.5s
GNI   Garni            25.14  87    P       P        06 56 48.1 +2.6
      comp=Z,11nm,0.8s,baz=182,slow=7.5,SNR=6.1
GNI   Garni            25.14  87⥣eP      P        06 56 47.4 +1.9
GNI                                 pmax    pmax
      comp=Z,32nm,1.3s
GNI   Garni            25.14  87    P       P        06 56 45.1 -0.5
GNI                                 IAmb    IAmb     06 56 49.8
      comp=Z,25nm,1.1s
BELG  Belogornoye      25.43  58    P       P        06 56 49.1 +1.3
      comp=Z,19nm,0.8s,baz=292,slow=5.4,SNR=8.4
ARCES ARCESS Array B   26.49  11    PcP     PcP      07 00 21.6 -0.1
      comp=Z,3.2nm,0.9s,baz=220,slow=2.4,SNR=2.2
BORG  Borgarnes        27.43 330    LR      LR       07 09 08.8
      comp=Z,207nm,19.2s,baz=320,slow=39
KIRV  Kirov            27.48  45⥥eP      P        06 57 07.5 +1.3
TOA0  Torodi Ar. Sit   31.93 198    P       P        06 57 44.1 -2.0
TOA0                                IAmb    IAmb     06 57 47.3
      comp=Z,7.3nm,1.1s
TORD  Torodi Ar. Bea   31.93 198    P       P        06 57 46.5 +0.4
      comp=Z,3.9nm,0.9s,baz=6.7,slow=9.4,SNR=12
TORD                                PcP     PcP      07 00 37.0 +0.7
      comp=Z,1.0nm,0.7s,baz=350,slow=2.1,SNR=3.7
AKTO  Aktyubinsk       31.98  62    P       P        06 57 46.9 +0.6
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      comp=Z,1.9nm,0.6s,baz=275,slow=10,SNR=6.7
ARU   Arti             32.04  50    P       P        06 57 47.3 +0.5
      comp=Z,0.7nm,0.3s,baz=256,slow=7.3,SNR=6.8
ARU   Arti             32.04  50c iP      P        06 57 47.2 +0.5
ARU                                                  06 58 47.2
ARU                                 S       S        07 02 59.3 +1.3
ARU                                 SS      SnSn     07 04 43.5 -3.9
ARU                                 pmax    pmax
      comp=Z,12nm,1.3s
ARU   Arti             32.04  50    P       P        06 57 44.7 -2.1
ARU                                 IAmb    IAmb     06 57 49.6
      comp=Z,14nm,1.3s
SVE   Sverdlovsk       33.20  50   eP      P        06 57 58.8 +1.9
ABKAR Akbulak array    33.39  64    P       P        06 57 57.9 -0.7
SPA0  Spitsbergen Ar   34.21   2    P       P        06 58 05.6 +0.1
GEYT  Alibeck          35.59  83    P       P        06 58 20.1 +2.2
      comp=Z,4.0nm,0.7s,baz=237,slow=15,SNR=5.6
BRVK  Borovoye         39.09  55    P       P        06 58 46.8 -0.5
BRVK                                pmax    pmax
      comp=Z,7.0nm,1.3s
BRVK  Borovoye         39.09  55    P       P        06 58 46.8 -0.5
DBIC  Dimbokro         39.87 205    P       P        06 58 54.4 +0.3
      comp=Z,3.1nm,0.8s,baz=280,slow=4.0,SNR=3.3
HRA   Herat            40.19  86    P       P        06 58 56.4 -0.5
UOSS  Minazif          41.19 103    P       P        06 59 03.5 -1.5
UOSS                                IAmb    IAmb     06 59 09.0
      comp=Z,8.0nm,0.8s
KK31  Karatay Array    42.18  70    P       P        06 59 11.9 -1.1
KK31                                pmax    pmax
      comp=Z,6.0nm,1.3s
KK31  Karatay Array    42.18  70    P       P        06 59 11.8 -1.1
KKAR  Karatay Array    42.18  70    P       P        06 59 12.5 -0.4
KKAR                                pmax    pmax
      comp=Z,6.0nm,1.3s
KKAR  Karatay Array    42.18  70    P       P        06 59 12.5 -0.4
KURBB Kurchatov Arra   44.66  57    P       P        06 59 33.3 +0.4
      comp=Z,1.8nm,0.8s,baz=309,slow=7.8,SNR=9.5
KURBB                               PcP     PP       07 01 16.3 -0.7
      comp=Z,0.2nm,0.3s,baz=300,slow=3.9,SNR=4.4
KURK  Kurchatov        44.69  57⥣eP      P        06 59 33.9 +0.9
KURK                                pmax    pmax
      comp=Z,6.0nm,1.3s
KURK  Kurchatov        44.69  57    P       P        06 59 32.2 -0.9
KURK                                IAmb    IAmb     06 59 36.7
      comp=Z,10nm,1.5s
ZALV  Zalesovo Beam    47.21  51    P       P        06 59 53.6 +0.8
      comp=Z,1.3nm,0.8s,baz=304,slow=8.8,SNR=4.2
ZALV                                LR      LR       07 21 48.1
      comp=Z,142nm,20.2s,baz=264,slow=39
FRB   Frobisher Bay    47.23 323    P       P        06 59 53.8 +1.0
      comp=Z,5.1nm,0.7s,baz=78,slow=8.8,SNR=14
KSH   Kashi            47.42  72    P       P        06 59 56.3 +1.4
KSH                                 sP      sP       07 00 01.5 +0.4
KSH                                 pmax    pmax
      comp=Z,8.0nm,0.9s
KSH                                 pmax    pmax
      comp=Z,330nm,6.3s
MK31  Makanchi Array   48.39  60    P       P        07 00 01.7 -0.5
MK31                                pmax    pmax
      comp=Z,6.0nm,1.5s
MK31  Makanchi Array   48.39  60    P       P        07 00 01.7 -0.5
MK31                                IAmb    IAmb     07 00 05.7
      comp=Z,6.0nm,1.5s
MKAR  Makanchi Array   48.39  60    P       P        07 00 03.0 +0.7
      comp=Z,1.7nm,0.6s,baz=289,slow=6.2,SNR=26
MKAR                                PcP     PcP      07 01 29.4 +0.8
      comp=Z,0.7nm,0.8s,baz=320,slow=3.5,SNR=2.3
MKAR                                LR      LR       07 23 38.3
      comp=Z,112nm,19.1s,baz=323,slow=40
MKAR  Makanchi Array   48.39  60  i P      P        07 00 03.5 +1.3
MKAR                                pmax    pmax
      comp=Z,2.0nm,0.6s
DGZ   Jazzator, Alta   50.32  55⥣eP      P        07 00 18.7 +1.7
DGZ                                 pmax    pmax
      comp=Z,10.0nm,2.1s
WMQ   Urumqi           53.13  62   eP      P        07 00 39.9 +1.8
D62A  Allapoint, All   53.80 303    P       P        07 00 42.5 -0.2
D62A                                IAmb    IAmb     07 01 00.3
      comp=Z,12nm,1.4s
TLY   Talaya           58.44  47⥣eP      P        07 01 18.0 +2.1
TLY                                 pmax    pmax
      comp=Z,7.0nm,1.5s
TLY   Talaya           58.44  47    P       P        07 01 15.8 -0.1
TLY                                 IAmb    IAmb     07 01 28.4
      comp=Z,3.9nm,1.0s
SONM  Songino Array    62.07  49    P       P        07 01 40.8 -0.2
      comp=Z,1.6nm,0.9s,baz=296,slow=7.6,SNR=10
SONM                                LR      LR       07 31 39.0
      comp=Z,183nm,18.2s,baz=338,slow=39
ULN   Ulaanbaatar      62.41  49⥥eP      P        07 01 43.7 +0.4
ULN                                 pmax    pmax
      comp=Z,8.0nm,2.0s
GTA   Gaotai           63.15  60   eP      P        07 01 50.0 +1.7
GTA                                 pP      sP       07 01 57.6 +3.0
GTA                                 sP      pP       07 02 00.8 +8.0
GTA                                 pmax    pmax
      comp=Z,1.0nm,0.8s
GTA                                 pmax    pmax
      comp=Z,2.0nm,1.0s
GTA                                 pmax    pmax
      comp=Z,53nm,7.4s
GTA                                 LR      LR
      comp=N,99nm,21.4s
GTA                                 LR      LR
      comp=E,250nm,21.1s
GTA                                 LR      LR
      comp=Z,150nm,18.5s
YAK   Yakutsk          63.26  28⥥eP      P        07 01 51.2 +2.7
YAK                                 pmax    pmax
      comp=Z,9.0nm,0.6s
YKA   Yellowknife Ar   65.19 335    P       P        07 02 02.0 +0.9
      comp=Z,4.9nm,0.7s,baz=50,slow=7.1,SNR=21
BILL  Bilibino         66.58  10   eP      P        07 02 10.7 +0.7
BILL                               e                 07 02 44.0
BILL                               e                 07 04 37.0
BILL                               ePPP    PPP      07 06 13.7
BILL                                pmax    pmax
      comp=Z,11nm,2.2s
BILL                                MLR     MLR
      comp=Z,99nm,18.0s
ULM   Lac du Bonnet    66.61 318    P       P        07 02 09.8 -0.7
      comp=Z,8.4nm,0.7s,baz=53,slow=6.0,SNR=10
LZH   Lanzhou          67.70  61    sP      sP       07 02 24.6 +0.4
LZH   Lanzhou          67.70  61    pmax    pmax
      comp=Z,17nm,1.3s
LZH   Lanzhou          67.70  61 ⥣P       P        07 02 17.3 -0.6
LZH   Lanzhou          67.70  61    pP      pP       07 02 22.4 -0.1
SEY   Seymchan         68.88  18⥥eP      P        07 02 26.2 +1.6
HHC   Hu-ho-hao-te     69.31  53   eP      P        07 02 27.5 -0.3
HHC   Hu-ho-hao-te     69.31  53    pmax    pmax
      comp=Z,12nm,1.1s
HHC   Hu-ho-hao-te     69.31  53    pmax    pmax
      comp=Z,120nm,6.6s
ILAR  Eielson Array    70.06 350    P       P        07 02 33.4 +1.6
      comp=Z,0.8nm,0.8s,baz=9.1,slow=6.6,SNR=12
COLA  College          70.08 351⥥eP      P        07 02 33.5 +1.6
COLA                                pmax    pmax
      comp=Z,13nm,2.2s
CD2   Chengdu          70.95  65    P       P        07 02 36.1 -1.8
CD2   Chengdu          70.95  65    pmax    pmax
      comp=Z,20nm,0.5s
MA2   Magadan          71.44  20⥥eP      P        07 02 43.2 +2.9
MA2                                 pmax    pmax
      comp=Z,6.0nm,1.1s
XAN   Xi'an            72.20  60    pP      pP       07 03 04.3  +14
XAN   Xi'an            72.20  60    pmax    pmax
      comp=Z,12nm,0.9s
XAN   Xi'an            72.20  60    P       P        07 02 47.3 +1.9
KLR   Kul'dur          73.52  36    P       P        07 02 52.9  0.0
      comp=Z,1.8nm,0.8s,baz=12,slow=8.8,SNR=5.6
KLR   Kul'dur          73.52  36⥥eP      P        07 02 54.0 +1.1
EGMT  Eagleton         74.55 323    P       P        07 02 59.5 +0.4
KSU1  Kansas State U   74.61 310    P       P        07 02 59.6 +0.2
RSSD  Black Hills      74.86 318    P       P        07 03 02.1 +1.0
RSSD                                pmax    pmax
      comp=Z,5.0nm,0.9s
RSSD  Black Hills      74.86 318    P       P        07 03 02.1 +1.0
RSSD                                IAmb    IAmb     07 03 03.3
      comp=Z,4.9nm,0.9s
HHAR  Hobbs            75.06 306    P       P        07 03 02.4 +0.2
X40A  Basin Creek Fa   75.65 304    P       P        07 03 05.7 +0.1
X40A                                IAmb    IAmb     07 03 06.7
      comp=Z,9.0nm,0.9s
CMAR  Chiang Mai Arr   75.85  78    P       P        07 03 07.5 +0.6
      comp=Z,2.0nm,0.5s,baz=304,slow=7.4,SNR=14
```

CMAR	**Chiang Mai Arr**	**75.85**	**78**	*i* P	**P**	**07 03 08.3**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HRY	**Holter Researc**	**76.46**	**324**	P	**P**	**07 03 10.9**	**+0.8**
CBKS	**Cedar Bluff**	**76.53**	**311**	P	**P**	**07 03 10.4**	**-0.1**
CBKS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CBKS	**Cedar Bluff**	**76.53**	**311**	P	**P**	**07 03 10.4**	**-0.1**
OK030	**Cody Creek RV**	**76.95**	**308**	P	**P**	**07 03 13.0**	**+0.1**
OK031	**S. Brethren Rd**	**76.96**	**308**	P	**P**	**07 03 12.6**	**-0.3**
YNE	**Yellowstone No**	**76.99**	**321**	P	**P**	**07 03 13.6**	**+0.4**
K22A	**Casper**	**77.17**	**318**	P	**P**	**07 03 13.8**	**-0.5**
K22A				IAmb	IAmb	07 03 16.4	
	comp=Z,9.9nm,1.1s						
BOZ	**Bozeman (W)**	**77.25**	**323**	P	**P**	**07 03 15.8**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOZ	**Bozeman (W)**	**77.25**	**323**	P	**P**	**07 03 15.8**	**+1.2**
BOZ				IAmb	IAmb	07 03 18.5	
	comp=Z,4.6nm,0.9s						
NEW	**Newport**	**77.37**	**327**	P	**P**	**07 03 14.8**	**-0.3**
NEW				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NEW	**Newport**	**77.37**	**327**	P	**P**	**07 03 14.8**	**-0.3**
NEW				IAmb	IAmb	07 03 19.6	
	comp=Z,7.9nm,1.2s						
OK029	**Liberty Lake**	**77.42**	**308**	P	**P**	**07 03 15.7**	**+0.1**
DLMT	**Dillon**	**77.85**	**323**	P	**P**	**07 03 18.7**	**+0.7**
DLMT				IAmb	IAmb	07 03 21.5	
	comp=Z,9.9nm,1.1s						
U32A	**Winter Ranch,**	**77.88**	**309**	P	**P**	**07 03 18.7**	**+0.6**
PDAR	**Pinedale Array**	**78.52**	**320**	P	**P**	**07 03 22.4**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=54,slow=5.3,SNR=11						
KSRS	**Korea Array**	**80.68**	**46**	P	**P**	**07 03 34.5**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=321,slow=4.5,SNR=3.1						
ANMO	**Albuquerque**	**83.00**	**313**	P	**P**	**07 03 47.7**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=56,slow=4.7,SNR=6.6						
TXAR	**Lajitas Array**	**85.72**	**307**	P	**P**	**07 04 01.4**	**+1.8**
	comp=Z,5.7nm,0.9s,baz=67,slow=5.8,SNR=47						
NVAR	**Mina Array Bea**	**85.95**	**323**	P	**P**	**07 04 02.9**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=47,slow=5.0,SNR=5.9						
PFO	**Pinyon Flats O**	**89.08**	**319**	P	**P**	**07 04 16.5**	**+0.7**
	comp=Z,2.2nm,0.9s,baz=338,slow=3.9,SNR=4.1						
PFO	**Pinyon Flats O**	**89.08**	**319**	IAmb	IAmb	07 04 24.3	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr**	**127.32**	**82**	PKP	**PKiKP**	**07 10 28.3**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=313,slow=1.9,SNR=1.8						
ASAR	**Alice Springs**	**129.38**	**86**	PKP	**PKPdf**	**07 10 28.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=310,slow=1.4,SNR=5.7						
VNDA	**Vanda**	**144.50**	**169**	PKP	PKPbc	07 10 54.3	+0.4
	comp=Z,1.1nm,0.8s,baz=221,slow=5.3,SNR=3.8						

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*IDC **23** 06:52:06.1±3.0, 25°.58N×124°.66E, h116^{km}±28^{km}, mb3.3/9, mb1 3.5/10, mb1mx3.2/64, mbtmp3.6/10, Error ellipse: s-maj=24.8km s-min=15.8km az=70.0*

*JMA **23** 06:52:06.8±0.2, 25°.42N×124°.57E, h127^{km}±5^{km}, M3.7*

ISC 23 06:52:07.0±0.7**, 25°.45N**±0°.08×**124°.61E**±0°.06**, h128**^{km}±8^{km}**, n34, **σ1^{s}.**94**/48**, mb3.6**/9**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**0.78**	**132**	P	**Pn**	**06 52 27.8**	**+0.1**
JIKM				S	**Sn**	**06 52 43.6**	**+0.2**
JIRB	**Irabujima**	**0.80**	**141**	P	**Pn**	**06 52 27.5**	**-0.4**
JIRB				S	**Sn**	**06 52 43.2**	**-0.6**
JTJ	**Tarama**	**0.81**	**174**	P	**Pn**	**06 52 27.7**	**-0.3**
JTJ				S	**Sn**	**06 52 43.9**	**0.0**
JISG	**Ishigakijimahi**	**0.90**	**198**	P	**Pn**	**06 52 28.2**	**-0.6**
JISG				S	**Sn**	**06 52 44.5**	**-0.8**
JMJ2	**Miyako jima3**	**0.96**	**137**	P	**Pn**	**06 52 29.5**	**+0.2**
JMJ2				S	**Sn**	**06 52 46.7**	**+0.5**
JOGS	**Gusukube**	**0.99**	**134**	P	**Pn**	**06 52 30.0**	**+0.4**
JOGS				S	**Sn**	**06 52 47.2**	**+0.4**
JIJ	**Ishigaki jima**	**1.17**	**202**	P	**Pn**	**06 52 30.5**	**-0.8**
JIJ				S	**Sn**	**06 52 48.0**	**-1.8**
JKRS	**Kuro-shima**	**1.33**	**205**	P	**Pn**	**06 52 32.5**	**-0.5**
JKRS				S	**Sn**	**06 52 51.4**	**-1.4**
IRIF	**Iriomote-Funau**	**1.37**	**216**	P	**Pn**	**06 52 32.8**	**-0.7**
IRIF				S	**Sn**	**06 52 53.1**	**-0.6**
HATJ	**Hateruma jima**	**1.57**	**208**	P	**Pn**	**06 52 35.0**	**-0.8**
HATJ				*e*S	**Sn**	**06 52 56.8**	**-0.9**
YOJ	**Yonaguni jima**	**1.76**	**236**	P	**Pn**	**06 52 37.7**	**-0.2**
YOJ				*e*S	**Sn**	**06 53 01.8**	**+0.3**
JYNG	**Yonagunijimaku**	**1.81**	**237**	P	**Pn**	**06 52 38.8**	**+0.2**
JYNG				*e*S	**Sn**	**06 53 03.1**	**+0.4**
JKE	**Kume jima 2**	**2.14**	**66**	P	**Pn**	**06 52 43.0**	**+0.4**
JKE				*e*S	**Sn**	**06 53 10.8**	**+1.0**
JOW	**Kunigami**	**3.57**	**67**	P	**Pn**	**06 52 59.6**	**-1.3**
	2.4nm,0.3s,baz=146,slow=23,SNR=1.9						
JOW				S	**Sn**	**06 53 39.2**	**-3.5**
	4.7nm,0.3s,baz=136,slow=25,SNR=2.2						
KSRS	**Korea Array**	**12.29**	**12**	P	**Pn**	**06 54 58.9**	**+1.2**
	0.2nm,0.3s,baz=195,slow=13,SNR=5.7						
KLR	**Kul'dur**	**24.38**	**11**	P	**P**	**06 57 13.5**	**+0.4**
	0.4nm,0.4s,baz=196,slow=18,SNR=1.8						
CM35	**Chiang Mai Arr**	**24.52**	**259**	P	**P**	**06 57 18.0**	**+3.3**
CM33	**Chiang Mai Arr**	**24.65**	**260**	P	**P**	**06 57 21.0**	**+5.1**
CMMT	**Chiang Mai**	**24.65**	**260**	P	**P**	**06 57 20.0**	**+4.1**
CM01	**Chiang Mai Arr**	**24.78**	**259**	P	**P**	**06 57 16.0**	**-1.1**
CM31	**Chiang Mai Arr**	**24.78**	**259**	P	**P**	**06 57 17.8**	**+0.7**
CM02	**Chiang Mai Arr**	**24.78**	**259**	P	**P**	**06 57 12.0**	**-5.1**
CM32	**Chiang Mai Arr**	**24.80**	**259**	P	**P**	**06 57 11.0**	**-6.2**
CM05	**Chiang Mai Arr**	**24.80**	**259**	P	**P**	**06 57 14.4**	**-2.9**
CM15	**Chiang Mai Arr**	**24.80**	**259**	P	**P**	**06 57 18.7**	**+1.4**
CM13	**Chiang Mai Arr**	**24.82**	**259**	P	**P**	**06 57 17.0**	**-0.5**
MKAR	**Makanchi Array**	**39.66**	**314**	P	**P**	**06 59 25.7**	**-0.7**
	1.1nm,0.7s,baz=96,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**40.95**	**325**	P	**P**	**06 59 35.8**	**-1.0**
	0.5nm,0.2s,baz=100,slow=8.3,SNR=3.8						
KURBB	**Kurchatov Arra**	**43.21**	**318**	P	**P**	**06 59 55.4**	**+0.3**
	0.8nm,0.9s,baz=111,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**46.10**	**167**	P	**P**	**07 00 19.1**	**+0.7**
	0.6nm,0.4s,baz=349,slow=8.8,SNR=7.9						
ASAR	**Alice Springs**	**49.65**	**169**	P	**P**	**07 00 47.3**	**+1.6**
	0.7nm,0.5s,baz=353,slow=7.9,SNR=16						
ILAR	**Eielson Array**	**66.65**	**28**	P	**P**	**07 02 42.2**	**-1.4**
	0.2nm,0.8s,baz=274,slow=4.1,SNR=4.2						
YKA	**Yellowknife Ar**	**80.58**	**24**	P	**P**	**07 04 05.3**	**+0.4**
	0.5nm,0.6s,baz=310,slow=4.7,SNR=5.1						
NVAR	**Mina Array Bea**	**93.37**	**44**	P	**P**	**07 05 08.2**	**+0.1**
	0.1nm,0.3s,baz=283,slow=5.5,SNR=1.7						

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*NEIC **23** 06:52:43.9±1.1, 10°.3S±0°.1×78°.1W±0°.2, h60^{km}±36^{km}, mb3.6/2, Error ellipse: s-maj=36.2km s-min=6.8km az=64.0*

ARE 23 06:52:38±4.7**, 10°.31S**±0°.09×**78°.6W**±0°.2**, h36**^{km}±10^{km}**, Error ellipse: s-maj=0.0km s-min=0.0km az=156.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.38**	**135**		Pn	06 53 16.5	+2.0
NNA				Sn	Sn	06 53 42.0	-0.5
OTAV	**Otavalo**	**10.48**	**1**	Pn	Pn	06 55 11.8	+5.6
AP01	**Chacalluta**	**11.30**	**136**	Pn	Pn	06 55 19.3	+2.3
SAML	**Samuel**	**15.23**	**86**	Pn	Pn	06 56 09.1	-1.4
SDV	**Santo Domingo**	**20.64**	**23**	P	P	06 57 15.8	+1.0
SDV				IAmb	IAmb	06 57 16.8	
	comp=Z,4.9nm,1.1s						
PTGA	**Pitinga**	**20.80**	**64**	P	P	06 57 15.2	-1.2
PTGA				IAmb	IAmb	06 57 16.3	
	comp=Z,2.6nm,0.9s						

ROM 23 06:58:12.6±0.1**, 44°.128N**±0°.009×**11°.15E**±0°.01**, h8**^{km}**, ML2.0**/8**, Error ellipse: s-maj=1.0km s-min=0.6km az=347.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.04**	**339**	P	Pg	06 58 14.3	0.0
FNVD				S	Sg	06 58 15.7	+0.1
MTCR	**Monte La Croce**	**0.15**	**226**	P	Pg	06 58 16.3	+0.6
MTCR				S	Sg	06 58 19.0	+1.1
PTF	**Prato**	**0.18**	**198**	P	Pg	06 58 16.7	+0.5
PTF				S	Sg	06 58 20.2	+1.5
ZCCA	**Zocca**	**0.25**	**332**	P	Pb	06 58 18.8	-0.7
ZCCA				AML	AML		
	comp=E,420μm,0.3s						
ZCCA				AML	AML		
	comp=N,334μm,1.5s						
ZCCA				AML	AML		
	comp=E,420μm,0.3s						
ZCCA				AML	AML		
	comp=N,381μm,0.4s						
POPM	**Popiglio**	**0.29**	**254**	P	Pg	06 58 18.6	+0.3
POPM				S	Sg	06 58 23.4	+1.2
POPM				AML	AML		
	comp=E,1745μm,0.4s						
POPM				AML	AML		
	comp=N,2645μm,0.2s						
MTRZ	**Monterenzio**	**0.34**	**43**	P	Pg	06 58 18.6	-0.7
MTRZ				AML	AML		
	comp=E,658μm,0.4s						
MTRZ				AML	AML		
	comp=N,592μm,1.0s						
MTRZ				AML	AML		
	comp=E,675μm,0.4s						
MTRZ				AML	AML		
	comp=N,612μm,1.0s						
RUFI	**Rufina**	**0.39**	**137**	P	Pb	06 58 21.3	-0.4
LMD	**Lutirano**	**0.41**	**97**	P	Pg	06 58 20.9	+0.4
LMD				AML	AML		
	comp=N,180μm,1.1s						
LMD				AML	AML		
	comp=E,139μm,0.6s						
MAIM	**Mastiano**	**0.52**	**246**	P	Pb	06 58 23.5	-0.4
MAIM				S	Sg	06 58 30.4	+1.1
MAIM				AML	AML		
	comp=N,166μm,1.4s						
MAIM				AML	AML		
	comp=E,134μm,0.4s						
VLC	**Villacollemand**	**0.55**	**274**	P	Pg	06 58 23.7	+0.5
VLC				S	Sb	06 58 31.8	-0.6
VLC				AML	AML		
	comp=N,158μm,0.3s						
VLC				AML	AML		
	comp=E,152μm,0.8s						
VLC				AML	AML		
	comp=E,164μm,0.8s						
VLC				AML	AML		
	comp=N,174μm,1.0s						
SFI	**Santa Sofia**	**0.55**	**113**	P	Pg	06 58 23.2	0.0
SFI				S	Sb	06 58 32.1	-0.6
ASQU	**Asqua**	**0.57**	**125**	P	Pb	06 58 24.3	-0.6
PII	**Pisa**	**0.60**	**228**	P	Pg	06 58 24.0	-0.2
PII				S	Sg	06 58 32.6	+0.5
PII				AML	AML		
	comp=E,354μm,0.3s						
PII				AML	AML		
	comp=N,267μm,0.2s						
OSSC	**Osservatorio P**	**0.61**	**173**	P	Pb	06 58 25.8	+0.3
OSSC				AML	AML		
	comp=E,124μm,0.8s						
OSSC				AML	AML		
	comp=N,156μm,1.4s						
EQUI	**Equi**	**0.71**	**273**	P	Pn	06 58 28.2	-0.8
EQUI				S	Sb	06 58 37.8	+0.6

ROM 23 06:58:47.8±0.1**, 44°.159N**±0°.006×**11°.13E**±0°.01**, h10**^{km}**, Md1.2**/4**, Error ellipse: s-maj=0.9km s-min=0.5km az=311.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.01**	**332**	P	Pg	06 58 49.7	0.0
FNVD				S	Sg	06 58 51.0	0.0
FNVD				END			
MTCR	**Monte La Croce**	**0.16**	**216**	P	Pg	06 58 52.0	+0.6
MTCR				S	Sg	06 58 54.9	+1.0
MTCR				AML	AML		
	comp=E,1240μm,1.3s						
MTCR				AML	AML		
	comp=N,1725μm,0.2s						
MTCR				AML	AML		
	comp=E,2890μm,0.2s						
MTCR				AML	AML		
	comp=N,2564μm,0.3s						
MTCR				END			
PTF	**Prato**	**0.20**	**192**	P	Pg	06 58 52.8	+0.7
PTF				S	Sg	06 58 56.3	+1.3
PTF				END			
POPM	**Popiglio**	**0.29**	**247**	P	Pg	06 58 54.3	+0.7
POPM				S	Sb	06 58 59.1	-1.0
POPM				AML	AML		
	comp=E,918μm,0.2s						
POPM				AML	AML		
	comp=N,860μm,0.3s						
POPM				AML	AML		
	comp=E,964μm,0.4s						
POPM				AML	AML		
	comp=N,1425μm,0.2s						
POPM				END			
MTRZ	**Monterenzio**	**0.33**	**48**	P	Pg	06 58 54.4	+0.1
RUFI	**Rufina**	**0.42**	**139**	P	Pg	06 58 56.5	+0.4
LMD	**Lutirano**	**0.42**	**101**	P	Pg	06 58 56.5	+0.3

ROM 23 07:02:41.8±0.1**, 44°.152N**±0°.005×**11°.132E**±0°.009**, h10**^{km}**, Md1.4**/8**, 1C-1D, Error ellipse: s-maj=0.8km s-min=0.6km az=292.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.02**	**339**	P	Pg	07 02 43.6	-0.1
FNVD				S	Sg	07 02 44.8	-0.2
FNVD				END			
MTCR	**Monte La Croce**	**0.16**	**218**	⇑P	Pg	07 02 46.0	+0.6
MTCR				S	Sg	07 02 48.8	+1.0
MTCR				AML	AML		
	comp=E,25950μm,0.3s						
MTCR				AML	AML		
	comp=N,28450μm,1.2s						
MTCR				END			
PTF	**Prato**	**0.20**	**193**	P	Pg	07 02 46.6	+0.7
PTF				S	Sg	07 02 50.2	+1.5
PTF				END			
ZCCA	**Zocca**	**0.23**	**331**	P	Pg	07 02 47.9	+1.3
ZCCA				AML	AML		
	comp=E,7250μm,0.7s						
ZCCA				AML	AML		
	comp=N,12600μm,0.5s						
ZCCA				AML	AML		
	comp=E,7150μm,0.4s						
ZCCA				AML	AML		
	comp=N,12350μm,0.5s						
ZCCA				END			
POPM	**Popiglio**	**0.29**	**249**	P	Pg	07 02 48.2	+0.6
POPM				S	Sb	07 02 53.0	-1.1
POPM				END			
MTRZ	**Monterenzio**	**0.33**	**47**	P	Pg	07 02 48.1	-0.3
MTRZ				AML	AML		
	comp=E,624μm,0.6s						
MTRZ				AML	AML		
	comp=N,432μm,0.7s						
MTRZ				AML	AML		
	comp=E,644μm,0.6s						
MTRZ				AML	AML		
	comp=N,417μm,0.7s						
MTRZ				AML	AML		
	comp=E,15850μm,0.5s						
MTRZ				AML	AML		
	comp=N,18600μm,0.5s						
MTRZ				AML	AML		
	comp=E,16200μm,0.5s						
MTRZ				AML	AML		
	comp=N,18500μm,0.5s						
MTRZ				END			
RUFI	**Rufina**	**0.41**	**139**	P	Pg	07 02 50.5	+0.6
RUFI				S	Sb	07 02 56.8	-0.8
RUFI				AML	AML		
	comp=E,2945μm,0.7s						
RUFI				AML	AML		
	comp=N,4920μm,0.6s						
RUFI				END			
PII	**Pisa**	**0.61**	**226**	P	Pg	07 02 53.7	0.0
PII				AML	AML		
	comp=E,4850μm,0.4s						
PII				AML	AML		
	comp=N,4660μm,0.3s						
PII				END			
PE3	**Peglio**	**1.09**	**114**	⇓P	Pg	07 02 55.3	-7.4
PE3				S	Sn	07 03 24.0	+5.7
PE3				AML	AML		
	comp=E,737μm,0.1s						
PE3				AML	AML		
	comp=N,1555μm,0.1s						
LEOD	**Capriano del C**	**1.49**	**332**	S	Sn	07 03 17.0	-11
EUCT	**Pavia**	**1.77**	**307**	P	Pn	07 03 06.5	-6.0
EUCT				S	Sb	07 03 37.0	+0.4
EUCT				AML	AML		
	comp=E,1345μm,1.0s						
EUCT				AML	AML		
	comp=N,1745μm,0.3s						
TRI	**Trieste**	**2.43**	**49**	S	Sn	07 03 49.0	-2.5
PTQR	**Pietraquaria**	**2.70**	**141**	P	Pn	07 03 16.8	-8.6

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*VIE **23** 07:03:34.8±0.5, 43°.85N×11°.18E, h10^{km}, mb2.7/14, ml3.0/17, Error ellipse: s-maj=4.2km s-min=2.9km az=19.0 10 km NNW of Florence*

*ROM **23** 07:03:37.7±0.1, 44°.154N±0°.009×11°.11E±0°.01, h8^{km}, ML3.0/3, Error ellipse: s-maj=1.0km s-min=0.8km az=333.0*

*PRU **23** 07:03:40.9±0.0, 44°.30N×11°.29E, h0^{km}*

ISC 23 07:03:37.8±0.8**, 44°.15N**±0°.02×**11°.12E**±0°.03**, h10**^{km}±5^{km}**, n55, **σ1^{s}.**11**/77**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.01**	**357**	P	**Pg**	**07 03 39.2**	**-0.5**
FNVD				S	**Sg**	**07 03 40.5**	**-0.5**
MTCR	**Monte La Croce**	**0.16**	**216**	P	**Pg**	**07 03 41.5**	**+0.2**
MTCR				S	**Sg**	**07 03 44.5**	**+0.7**
MTCR				AML	AML		
	comp=E,25900μm,0.3s						
MTCR				AML	AML		
	comp=E,25950μm,0.3s						
MTCR				AML	AML		
	comp=N,28450μm,1.2s						
MTCR				AML	AML		
	comp=E,25950μm,0.3s						
MTCR				AML	AML		
	comp=N,28450μm,1.2s						
PTF	**Prato**	**0.20**	**191**	P	**Pg**	**07 03 42.2**	**+0.2**
ZCCA	**Zocca**	**0.22**	**332**	P	**Pg**	**07 03 43.3**	**+0.8**
ZCCA				AML	AML		
	comp=E,7245μm,0.7s						
ZCCA				AML	AML		
	comp=N,12600μm,0.5s						
ZCCA				AML	AML		
	comp=E,7150μm,0.4s						
ZCCA				AML	AML		
	comp=N,12350μm,0.5s						
ZCCA				AML	AML		
	comp=E,7250μm,0.7s						
BRIS	**BRISIGHELLA**	**0.28**	**91**	P	**Pg**	**07 03 46.8**	**+3.4**
POPM	**Popiglio**	**0.29**	**248**	P	**Pg**	**07 03 43.7**	**+0.2**
POPM				S	**Sg**	**07 03 48.4**	**+1.0**
POPM	**Popiglio**	**0.29**	**248**	P	**Pg**	**07 03 43.7**	**+0.2**
POPM				S	**Sg**	**07 03 48.5**	**+1.0**
POPM				AML	AML		
	comp=E,16500μm,0.2s						
POPM				AML	AML		
	comp=N,17900μm,1.2s						
POPM				AML	AML		
	comp=N,17900μm,1.2s						
MTRZ	**Monterenzio**	**0.33**	**48**	P	**Pg**	**07 03 43.8**	**-0.6**
MTRZ				AML	AML		
	comp=N,10655μm,1.5s						
MTRZ				AML	AML		
	comp=N,10810μm,1.5s						
MTRZ				AML	AML		
	comp=E,15850μm,0.5s						
MTRZ				AML	AML		
	comp=N,18600μm,0.5s						
MTRZ				AML	AML		
	comp=N,18500μm,0.5s						
MTRZ				AML	AML		
	comp=N,18550μm,0.5s						
MTRZ				AML	AML		
	comp=E,16200μm,0.5s						
MTRZ				AML	AML		
	comp=E,15850μm,0.5s						
BDI	**Bagni Di Lucca**	**0.39**	**257**	P	**Pg**	**07 03 45.4**	**-0.1**
BDI				AML	AML		
	comp=E,7620μm,0.5s						
BDI				AML	AML		
	comp=N,6875μm,0.8s						
BDI				AML	AML		
	comp=N,6775μm,0.8s						
BDI				AML	AML		
	comp=E,6580μm,0.5s						
RUFI	**Rufina**	**0.42**	**138**	P	**Pb**	**07 03 46.8**	**-0.6**
RUFI				AML	AML		
	comp=E,2920μm,0.7s						
RUFI				AML	AML		
	comp=N,4910μm,0.6s						
RUFI				AML	AML		
	comp=E,2940μm,0.7s						
RUFI				AML	AML		
	comp=E,2933μm,0.7s						
RUFI				AML	AML		
	comp=N,4915μm,0.6s						
CARD	**Cardoso**	**0.48**	**255**	P	**Pg**	**07 03 46.7**	**-0.5**
CARD				S	**Sg**	**07 03 54.0**	**+0.5**
CARD	**Cardoso**	**0.48**	**255**	P	**Pg**	**07 03 46.6**	**-0.6**
IMOL	**Imola, Italy**	**0.49**	**65**	AML	AML		
	comp=N,3860μm,1.2s						
IMOL				AML	AML		
	comp=E,4020μm,1.2s						
MAIM	**Mastiano**	**0.52**	**242**	P	**Pg**	**07 03 47.1**	**-0.8**
MAIM				S	**Sg**	**07 03 55.4**	**+0.8**
SARO	**Sassorosso**	**0.52**	**274**	P	**Pg**	**07 03 47.9**	**-0.1**
SARO				S	**Sg**	**07 03 56.8**	**+2.0**
VLC	**Villacollemand**	**0.53**	**271**	P	**Pg**	**07 03 48.2**	**0.0**
VLC				AML	AML		
	comp=N,2385μm,1.0s						
VLC				AML	AML		
	comp=N,2345μm,1.4s						
VLC				AML	AML		
	comp=E,1565μm,0.9s						
VLC				AML	AML		
	comp=E,1605μm,0.9s						
ERBM	**Eremo**	**0.57**	**298**	P	**Pg**	**07 03 49.3**	**+0.3**
ERBM				AML	AML		
	comp=N,1290μm,1.6s						
ERBM				AML	AML		
	comp=E,1135μm,1.4s						
SFI	**Santa Sofia**	**0.58**	**115**	P	**Pb**	**07 03 48.9**	**-1.2**
ASQU	**Asqua**	**0.60**	**126**	P	**Pb**	**07 03 50.2**	**-0.2**
ASQU				S	**Sb**	**07 03 58.1**	**-0.9**
PII	**Pisa**	**0.61**	**225**	P	**Pg**	**07 03 50.4**	**+0.7**
PII				AML	AML		
	comp=E,4855μm,0.4s						
PII				AML	AML		
	comp=N,4655μm,0.3s						
PII				AML	AML		
	comp=N,4660μm,0.3s						
PII				AML	AML		
	comp=E,4850μm,0.4s						
OSSC	**Osservatorio P**	**0.64**	**172**	P	**Pb**	**07 03 51.3**	**+0.3**
CSNT	**Castellina Chi**	**0.69**	**170**	P	**Pb**	**07 03 52.2**	**+0.2**
CRE	**Caprese Michel**	**0.80**	**132**	P	**Pn**	**07 03 54.4**	**-0.9**
ZOVE	**Zovencedo**	**1.32**	**11**	P	**Pg**	**07 04 03.2**	**0.0**
TREG	**Tregnago**	**1.37**	**1**	P	**Pg**	**07 04 04.4**	**+0.3**
EUCT	**Pavia**	**1.76**	**307**	AML	AML		
	comp=E,3020μm,0.1s						
EUCT				AML	AML		
	comp=N,3815μm,0.1s						
RIY	**Rijeka**	**2.67**	**63**	*e*Pn	**Pn**	**07 04 21.3**	**+0.5**
RIY				Sn	**Sn**	**07 04 52.1**	**-1.0**
NVLJ	**Novalja**	**2.72**	**80**	*e*Pn	**Pn**	**07 04 22.4**	**+0.9**
NVLJ				Sn	**Sn**	**07 04 53.1**	**-1.3**
ABTA	**Abfaltersbach**	**2.77**	**20**	*e*Pn	**Pn**	**07 04 23.0**	**+0.7**
	comp=N,1.4nm,0.2s						
ABTA				*e*Sn	**Sb**	**07 05 00.5**	**-1.0**
	comp=N,13nm,0.5s						
DUGI	**Dugi Otok**	**2.84**	**92**	*e*Pn	**Pn**	**07 04 23.2**	**0.0**
FETA	**Feichten**	**2.88**	**355**	Pn	**Pn**	**07 04 25.8**	**+1.9**
	comp=N,5.5nm,0.3s,SNR=4.7						
FETA				*e*Sn	**Sb**	**07 05 05.5**	**+0.8**
	comp=N,3.8nm,0.4s						
MYKA	**Terra Mystica**	**3.04**	**35**	*e*Pn	**Pn**	**07 04 26.1**	**0.0**
	comp=N,1.9nm,0.3s						
SQTA	**Sankt Quirin**	**3.07**	**1**	Pn	**Pn**	**07 04 28.0**	**+1.6**
	comp=N,6.6nm,0.2s,SNR=8.8						
SQTA				*e*Sn	**Sb**	**07 05 08.5**	**-1.6**
	comp=N,10nm,0.3s						
WTTA	**Wattenberg**	**3.13**	**6**	Pn	**Pn**	**07 04 28.5**	**+1.1**
	comp=N,1.7nm,0.2s,SNR=4.7						

WTTA				*e*Sn	**Sb**	**07 05 10.2**	**-1.8**
	comp=N,21nm,0.6s						
MOTA	**Moosalm**	**3.19**	**360**	Pn	**Pn**	**07 04 29.6**	**+1.4**
	comp=N,3.8nm,0.3s,SNR=5.5						
MOTA				*e*Sn	**Sb**	**07 05 11.5**	**-2.2**
	comp=N,7.2nm,0.3s						
WATA	**Walderalm**	**3.20**	**6**	*e*Pn	**Pn**	**07 04 29.4**	**+1.1**
	comp=N,0.9nm,0.1s						
WATA				*e*Sn	**Sb**	**07 05 11.0**	**-2.9**
	comp=N,6.6nm,0.3s						
DAVA	**Damuels**	**3.25**	**345**	*e*Pn	**Pn**	**07 04 30.5**	**+1.4**
	comp=N,1.1nm,0.2s						
DAVA				*e*Sn	**Sb**	**07 05 13.8**	**-1.7**
	comp=N,21nm,0.4s						
ZIRJ	**Zirje**	**3.31**	**97**	*e*Pn	**Pn**	**07 04 30.9**	**+1.3**
ZIRJ				Sn	**Sn**	**07 05 08.1**	**-0.8**
KBA	**Koelnbreinsper**	**3.31**	**27**	*e*Pn	**Pn**	**07 04 30.7**	**+0.8**
	comp=N,1.9nm,0.2s						
MORI	**Morici**	**3.32**	**93**	*e*Pn	**Pn**	**07 04 30.9**	**+1.1**
MORI				Sn	**Sn**	**07 05 09.7**	**+0.4**
RETA	**Reutte**	**3.34**	**356**	*e*Pn	**Pn**	**07 04 31.8**	**+1.6**
	comp=N,6.7nm,0.3s						
OBKA	**Obir**	**3.37**	**45**	*e*Pn	**Pn**	**07 04 30.5**	**-0.1**
	comp=N,0.5nm,0.2s						
OZLJ	**Ozalj**	**3.42**	**63**	*e*Pn	**Pn**	**07 04 31.3**	**+0.2**
OZLJ				Sn	**Sn**	**07 05 10.1**	**-1.5**
SOKA	**Soboth**	**3.73**	**46**	*e*Pn	**Pn**	**07 04 35.3**	**-0.3**
	comp=N,1.0nm,0.2s						
KIJV	**Kijevo**	**3.81**	**90**	*e*Pn	**Pn**	**07 04 37.4**	**+0.8**
PTJ	**Puntijarka**	**3.85**	**61**	*e*Pn	**Pn**	**07 04 37.8**	**+0.5**
MOA	**Molln**	**4.29**	**30**	Pn	**Pn**	**07 04 44.0**	**+0.7**
	comp=N,1.3nm,0.2s,SNR=6.3						
ARSA	**Arzberg**	**4.37**	**43**	*e*Pn	**Pn**	**07 04 44.0**	**-0.3**
	comp=N,1.8nm,0.3s						
RICI	**Ricice**	**4.40**	**97**	*e*Pn	**Pn**	**07 04 45.0**	**+0.4**
RICI				Sn	**Sn**	**07 05 36.8**	**+0.8**
CONA	**Conrad Observa**	**5.01**	**39**	*e*Pn	**Pn**	**07 04 53.2**	**+0.1**
	comp=N,2.4nm,0.4s						
KHC	**Kasperske Hory**	**5.26**	**18**	*e*PN	**Pn**	**07 04 56.2**	**-0.3**
KHC				*e*x	x	07 05 06.0	
KHC				*e*SN	**Sn**	**07 05 55.9**	**-1.2**
MODS	**Modra-Piesok**	**6.00**	**43**	*e*PN	**Pn**	**07 05 06.4**	**-0.2**
BRG	**Berggiesshubel**	**6.99**	**15**	Pn	**Pn**	**07 05 21.7**	**+1.5**
BRG				Amp		07 05 22.9	
	comp=Z,3.0nm,0.6s						
BRG				*e*x	x	07 07 35.8	
BRG				Amp		07 07 50.1	
	comp=Z,3.3nm,0.9s						
BRG	**Berggiesshubel**	**6.99**	**15**	Pn	**Pn**	**07 05 21.7**	**+1.5**
BRG				Amp		07 05 22.9	
	comp=Z,3.0nm,0.6s						
BRG				*e*x	x	07 07 35.8	
BRG				Amp		07 07 50.1	
	comp=Z,3.3nm,0.9s						
CLL	**Collm**	**7.27**	**9**	*e*Pn	**Pn**	**07 05 25.0**	**+1.0**
CLL				*i*		07 05 33.6	
CLL				*e*Sn	**Sn**	**07 06 47.0**	**+0.4**
CLL				*e*Sg	**Sg**	**07 07 33.0**	**+2.1**
	comp=Z,19nm,1.6s						

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*KRNET **23** 07:06:45.7±0.1, 41°.68N×78°.23E, h22^{km}, mb2.5*
*NNC **23** 07:06:47.0±3.0, 41°.83N×78°.27E, h0^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=21.0km s-min=14.7km az=156.0, Suspected Mining explosion.*
ISC 23 07:06:46.0±2.8**, 41°.7N**±0°.1×**78°.18E**±0°.08**, h0^{km}, n14, σ0^s.72**/23**, 15C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.83**	**11**	⇑*i*P	**Pg**	**07 07 01.3**	**-0.6**
	baz=9.0						
PRZ				⇑*i*S	**Sg**	**07 07 12.5**	**-0.3**
	baz=9.0						
KDJ	**Kajisay**	**0.88**	**302**	⇑*i*P	**Pg**	**07 07 02.3**	**-0.6**
	baz=0.0						
KDJ				⇑*i*S	**Sg**	**07 07 14.7**	**+0.4**
	baz=0.0						
ANVS	**Anan'yevo**	**1.18**	**341**	⇑*i*P	**Pg**	**07 07 07.8**	**-0.8**
	baz=39						
ANVS				⇑*i*S	**Sg**	**07 07 23.7**	**-0.2**
	baz=39						
ULHL	**Ulahol**	**1.56**	**292**	⇑*i*P	**Pn**	**07 07 14.7**	**-0.5**
	baz=91						
ULHL				⇑*i*S	**Sg**	**07 07 35.9**	**-0.2**
	baz=91						
IZV	**Izvestkoviy**	**1.80**	**320**	P	**Pn**	**07 07 18.1**	**-0.3**
	3.6nm,0.2s						
IZV				S	**Sn**	**07 07 42.3**	**+0.3**
	5.6nm,0.3s						
BOOM	**Boomskoye usch**	**1.86**	**297**	⇑*i*P	**Pn**	**07 07 19.6**	**+0.3**
	baz=96						
BOOM				⇑*i*S	**Sn**	**07 07 43.8**	**+0.2**
	baz=96						
KST	**Kastek**	**2.15**	**311**	Pg	**Pn**	**07 07 23.8**	**+0.6**
	6.2nm,0.4s						
KST				Lg	Lg	07 07 51.8	
	5.7nm,0.4s						
TKM2	**Tokmak 2**	**2.29**	**304**	⇑*i*P	**Pn**	**07 07 25.3**	**+0.1**
	baz=3.0						
TKM2				⇑*i*S	**Sn**	**07 07 54.1**	**-0.2**
	baz=3.0						
TKM2	**Tokmak 2**	**2.29**	**304**	⇓P	**Pn**	**07 07 27.0**	**+1.8**
	2.3nm,0.3s						
TKM2				⇑S	**Sb**	**07 07 57.2**	**-0.1**
	3.1nm,0.4s						
CHKK	**Chushkaly**	**2.36**	**338**	Pg	**Pn**	**07 07 26.9**	**+0.9**
	22nm,0.4s						
CHKK				Lg	Lg	07 07 57.4	
	13nm,0.3s						
DGS	**Degeres**	**2.38**	**312**	Pg	**Pn**	**07 07 27.9**	**+1.6**
	7.3nm,0.4s						
DGS				Lg	Lg	07 07 59.2	
	5.8nm,0.4s						
MNBS	**Baschi**	**2.42**	**4**	Pg	**Pn**	**07 07 27.5**	**+0.6**
	5.5nm,0.4s						
MNBS				Lg	Lg	07 07 58.7	
	14nm,0.4s						
ARXS	**Arharly**	**2.56**	**354**	Pg	**Pn**	**07 07 29.5**	**+0.7**
	20nm,0.4s						
ARXS				Lg	Lg	07 08 01.9	
	4.9nm,0.3s						
KBK	**Karagaybulak**	**2.60**	**293**	⇑*i*P	**Pn**	**07 07 29.7**	**+0.2**
	baz=93						
KBK				⇑*i*S	**Sn**	**07 08 02.3**	**+0.4**
	baz=93						

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*NNC **23** 07:07:53.6±2.4, 41°.89N×78°.40E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=15.9km s-min=15.4km az=40.0, Suspected Mining explosion.*
*KRNET **23** 07:07:54.0±0.1, 41°.70N×78°.06E, h16^{km}, mb2.7*
ISC 23 07:07:52.7±2.3**, 41°.81N**±0°.10×**78°.24E**±0°.08**, h0^{km}, n17, σ0^s.84**/30**, 18C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.69**	**10**	⇑*i*P	**Pn**	**07 08 10.0**	**+0.1**
	baz=17						
PRZ				⇑*i*S	**Sn**	**07 08 21.6**	**+0.2**
	baz=17						
KDJ	**Kajisay**	**0.85**	**293**	⇑*i*P	**Pg**	**07 08 08.9**	**-0.1**
	baz=4.0						
KDJ				⇑*i*S	**Sg**	**07 08 19.3**	**-0.7**
	baz=4.0						
ANVS	**Anan'yevo**	**1.06**	**337**	⇑*i*P	**Pn**	**07 08 15.3**	**+0.3**
	baz=45						
ANVS				⇑*i*S	**Sn**	**07 08 30.5**	**-0.1**
	baz=45						
ULHL	**Ulahol**	**1.55**	**287**	⇑*i*P	**Pn**	**07 08 21.1**	**-0.6**
	baz=92						
ULHL				⇑*i*S	**Sg**	**07 08 41.4**	**-1.1**
	baz=92						
KOTS	**Kotyrbulak**	**1.65**	**330**	P	**Pb**	**07 08 23.5**	**-0.6**
	11nm,0.2s						
KOTS				S	**Sg**	**07 08 46.3**	**+0.6**
	15nm,0.3s						
IZV	**Izvestkoviy**	**1.72**	**316**	P	**Pb**	**07 08 24.9**	**-0.3**
	5.9nm,0.1s						
IZV				S	**Sg**	**07 08 49.0**	**+1.1**
	14nm,0.2s						
BOOM	**Boomskoye usch**	**1.84**	**293**	⇑*i*P	**Pb**	**07 08 26.7**	**-0.6**
	baz=97						
BOOM				⇑*e*S	**Sn**	**07 08 49.8**	**+0.1**
	baz=97						
KST	**Kastek**	**2.09**	**307**	Pg	**Pb**	**07 08 31.0**	**-0.5**
	8.8nm,0.3s						
KST				Lg	Lg	07 08 60.0	
	8.6nm,0.3s						
CHKK	**Chushkaly**	**2.24**	**336**	Pg	**Pb**	**07 08 34.4**	**+0.3**
	22nm,0.3s						
CHKK				Lg	Lg	07 09 05.3	
	22nm,0.4s						
TKM2	**Tokmak 2**	**2.25**	**301**	*i* P	**Pn**	**07 08 32.5**	**+1.1**
	baz=5.0						
TKM2				*i* S	**Sb**	**07 09 01.2**	**-1.6**
	baz=5.0						
TKM2	**Tokmak 2**	**2.25**	**301**	P	**Pb**	**07 08 34.7**	**+0.4**
	2.6nm,0.2s						
TKM2				⇓S	**Sg**	**07 09 05.1**	**+0.1**
	4.7nm,0.4s						
DGS	**Degeres**	**2.32**	**309**	Pg	**Pb**	**07 08 35.3**	**-0.1**
	11nm,0.3s						
DGS				Lg	Lg	07 09 06.9	
	6.9nm,0.3s						
ARXS	**Arharly**	**2.42**	**353**	Pg	**Pb**	**07 08 36.4**	**-0.8**
	21nm,0.2s						
ARXS				Lg	Lg	07 09 08.7	
	12nm,0.2s						
KBK	**Karagaybulak**	**2.59**	**290**	⇑*i*P	**Pn**	**07 08 37.1**	**+1.2**
	baz=93						
KBK				⇑*i*S	**Sn**	**07 09 09.3**	**+1.1**
	baz=93						
UCH	**Uchtor**	**2.81**	**280**	⇑*i*P	**Pn**	**07 08 39.6**	**+0.4**
	baz=82						
UCH				⇑*i*S	**Sn**	**07 09 13.0**	**-1.0**
	baz=82						
AAK	**Ala-Archa**	**2.90**	**288**	⇑*i*P	**Pn**	**07 08 41.7**	**+1.4**
	baz=91						
AAK				⇑*i*S	**Sn**	**07 09 16.7**	**+0.8**
	baz=91						
EKS2	**Erkin-Say**	**3.42**	**286**	⇑*i*P	**Pn**	**07 08 48.9**	**+1.5**
	baz=88						
EKS2				⇑*e*S	**Sn**	**07 09 29.3**	**+0.6**
	baz=88						

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*IDC **23** 07:17:25.1±0.8, 28°.33N×142°.65E, h0^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.8/42, mbtmp3.7/13, ML2.9/2, Error ellipse: s-maj=27.3km s-min=14.5km az=94.0*
*NEIC **23** 07:17:29.0±1.3, 28°.30N±0°.06×142°.7E±0°.2, h27^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=29.1km s-min=8.4km az=92.0*
ISC 23 07:17:29.0±0.7**, 28°.33N**±0°.06×**142°.6E**±0°.1**, h25^{km}, n28, σ0^s.60**/30**, mb4.1**/16**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.28**	**197**	Pn	**Pn**	**07 17 51.1**	**-0.2**
	13nm,0.3s,baz=316,slow=21,SNR=2.7						
JCJ				Sn	**Sb**	**07 18 09.2**	**+0.7**
	56nm,0.3s,baz=88,slow=22,SNR=13						
JCJ	**Chichijima**	**1.28**	**197**		**Pn**	**07 17 51.0**	**-0.3**
JCJ				Sn	**Sn**	**07 18 06.9**	**-0.7**
MJAR	**Matsushiro Arr**	**8.99**	**337**	Pn	**Pn**	**07 19 37.6**	**+0.4**
	0.3nm,0.3s,baz=277,slow=31,SNR=5.5						
MAJO	**Matsushiro**	**9.00**	**337**	Pn	**Pn**	**07 19 36.7**	**-0.6**
USRK	**Ussuriysk Ar.**	**17.98**	**335**	P	**P**	**07 21 37.5**	**0.0**
	baz=139,slow=9.1,SNR=5.6						
SONM	**Songino Array**	**34.10**	**315**	P	**P**	**07 24 11.0**	**-0.7**
	0.5nm,0.4s,baz=120,slow=8.8,SNR=4.0						
WR0	**Warramunga Arr**	**48.63**	**190**	P	**P**	**07 26 10.8**	**-0.1**
WR0				IAmb	IAmb	07 26 36.7	
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**48.65**	**190**	P	**P**	**07 26 11.2**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=12,slow=8.5,SNR=18						
ZALV	**Zalesovo Beam**	**48.81**	**318**	P	**P**	**07 26 12.8**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=128,slow=6.5,SNR=2.9						
FITZ	**Fitzroy Crossi**	**48.98**	**202**	P	**P**	**07 26 13.9**	**+0.3**
MK31	**Makanchi Array**	**49.99**	**309**	P	**P**	**07 26 20.8**	**-0.3**
MKAR	**Makanchi Array**	**49.99**	**309**	P	**P**	**07 26 21.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=85,slow=9.8,SNR=5.3						
AS31	**Alice Springs**	**52.37**	**190**	P	**P**	**07 26 38.0**	**-1.1**
ASAR	**Alice Springs**	**52.37**	**190**	P	**P**	**07 26 38.7**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=17,slow=11,SNR=6.5						
KURK	**Kurchatov**	**52.40**	**314**	P	**P**	**07 26 39.9**	**+0.9**
BRVK	**Borovoye**	**57.46**	**317**	P	**P**	**07 27 16.2**	**+0.6**
BRVK				IAmb	IAmb	07 27 28.2	
	comp=Z,2.2nm,0.8s						
KK02	**Karatay Array**	**58.68**	**305**	P	**P**	**07 27 24.6**	**+0.3**
KK31	**Karatay Array**	**58.68**	**305**	P	**P**	**07 27 24.6**	**+0.2**
KK31				IAmb	IAmb	07 27 33.8	
	comp=Z,1.8nm,1.1s						
KK01	**Karatay Array**	**58.68**	**305**	P	**P**	**07 27 24.4**	**+0.1**
INK	**Inuvik**	**61.76**	**25**	P	**P**	**07 27 44.8**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=314,slow=4.7,SNR=4.9						
INK	**Inuvik**	**61.76**	**25**	P	**P**	**07 27 44.1**	**-0.9**
INK				IAmb	IAmb	07 27 54.1	
	comp=Z,3.8nm,1.4s						
AB31	**Akbulak array**	**64.51**	**314**	P	**P**	**07 28 04.1**	**+0.5**
AB31				IAmb	IAmb	07 28 22.9	
	comp=Z,4.5nm,1.4s						
ABKAR	**Akbulak array**	**64.51**	**314**	P	**P**	**07 28 04.1**	**+0.5**
ABKAR				IAmb	IAmb	07 28 22.9	
	comp=Z,4.5nm,1.4s						
YKA	**Yellowknife Ar**	**70.89**	**29**	P	**P**	**07 28 42.6**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=296,slow=5.9,SNR=4.0						
FINES	**FINESS Array B**	**77.01**	**334**	P	**P**	**07 29 19.1**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=176,slow=38,SNR=1.4						
KBZ	**Khabaz**	**77.45**	**313**	P	**P**	**07 29 22.6**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=108,slow=6.7,SNR=4.0						
NVAR	**Mina Array Bea**	**79.47**	**52**	P	**P**	**07 29 34.3**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=302,slow=3.3,SNR=3.1						
TXAR	**Lajitas Array**	**94.57**	**53**	P	**P**	**07 30 49.0**	**+1.1**
	comp=Z,1.1nm,1.2s,baz=306,slow=3.0,SNR=3.6						

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*SOME **23** 07:38:01.6, 44°.20N×83°.23E, h10^{km}*
*NNC **23** 07:38:04.8±2.5, 44°.20N×83°.14E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=22.6km s-min=8.0km az=125.0*
ISC 23 07:38:02.8±1.5**, 44°.27N**±0°.06×**83°.31E**±0°.07**, h10^{km}, n28, σ1^s.73**/43**, 1C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.29**	**250**	*e*P	**Pb**	**07 38 43.5**	**-0.8**
	13nm,0.2s						
KTMS				*e*S	**Sb**	**07 39 13.8**	**+1.0**
	60nm,0.3s						
KTMS	**Ketmen**	**2.29**	**250**	Pg	**Pb**	**07 38 43.5**	**-0.8**
	13nm,0.2s						
KTMS				Lg	Lg	07 39 13.8	
	60nm,0.3s						
DJR	**Jarkent**	**2.53**	**273**	*e*P	**Pb**	**07 38 48.5**	**+0.2**
	7.0nm,0.3s						
DJR				*e*S	**Sg**	**07 39 22.4**	**-1.6**
	12nm,0.2s						
DJR	**Jarkent**	**2.53**	**273**	Pg	**Pb**	**07 38 48.5**	**+0.2**
	7.0nm,0.3s						
DJR				Lg	Lg	07 39 22.4	
	12nm,0.2s						
MK31	**Makanchi Array**	**2.63**	**344**	⇓Pn	**Pb**	**07 38 50.1**	**+0.1**
	0.5nm,0.2s,baz=159,slow=17,SNR=7.8						
MK31				⇓Sn	**Sb**	**07 39 23.1**	**+0.8**
	2.2nm,0.2s,baz=160,slow=24,SNR=13						
MAKZ	**Makanchi**	**2.71**	**340**	⇑Pn	**Pb**	**07 38 51.8**	**+0.5**
	1.0nm,0.3s						
MAKZ				⇓Sn	**Sb**	**07 39 26.3**	**+1.6**
	7.1nm,0.4s						
PDGK	**Podgornoye**	**2.92**	**253**	Pg	**Pb**	**07 38 54.3**	**-0.8**
	1.2nm,0.2s						
PDGK				Lg	Lg	07 39 32.1	
	8.4nm,0.4s						
PDGK	**Podgornoye**	**2.92**	**253**	⇓Pn	**Pb**	**07 38 53.6**	**-1.4**
	0.6nm,0.3s						
PDGK				⇓Sn	**Sb**	**07 39 31.3**	**+0.4**
	7.6nm,0.5s						
KAPS	**Kapalarasan**	**3.00**	**291**	*e*P	**Pb**	**07 38 57.2**	**+1.0**
	3.3nm,0.2s						
KAPS				*e*S	**Sg**	**07 39 36.6**	**-2.4**
	16nm,0.5s						
KAPS	**Kapalarasan**	**3.00**	**291**	Pg	**Pb**	**07 38 57.2**	**+1.0**
	3.3nm,0.2s						
KAPS				Lg	Lg	07 39 36.6	
	16nm,0.5s						
SHLS	**Shalkode**	**3.00**	**250**	*e*P	**Pn**	**07 38 51.0**	**+0.5**
	7.5nm,0.2s						
SHLS				*e*S	**Sn**	**07 39 26.4**	**-0.3**
	78nm,0.4s						
SHLS	**Shalkode**	**3.00**	**250**	Pg	**Pn**	**07 38 51.0**	**+0.5**
	7.5nm,0.2s						
SHLS				Lg	Lg	07 39 26.4	
	78nm,0.4s						
UZB	**Uzynbulak**	**3.31**	**252**	*e*P	**Pb**	**07 39 00.9**	**-0.7**
	0.5nm,0.1s						
UZB				*e*S	**Sb**	**07 39 43.1**	**+1.2**
	4.3nm,0.2s						
UZB	**Uzynbulak**	**3.31**	**252**	Pg	**Pb**	**07 39 00.9**	**-0.7**
	0.8nm,0.2s						
UZB				Lg	Lg	07 39 43.1	
	7.0nm,0.4s						
ZSN	**Zaisan**	**3.36**	**18**	*e*P	**Pb**	**07 39 03.4**	**+0.8**
	5.3nm,0.1s						
ZSN				*e*S	**Sg**	**07 39 47.2**	**-3.6**
	7.6nm,0.3s						
ZSN	**Zaisan**	**3.36**	**18**	Pg	**Pb**	**07 39 03.3**	**+0.8**
	5.6nm,0.2s						
ZSN				Lg	Lg	07 39 47.3	
	13nm,0.6s						
KPKS	**Kokpek**	**3.44**	**258**	*e*P	**Pb**	**07 39 03.2**	**-0.7**
	3.8nm,0.2s						
KPKS				*e*S	**Sb**	**07 39 47.1**	**+1.3**
	26nm,0.5s						
MNBS	**Baschi**	**3.54**	**269**	*e*P	**Pb**	**07 39 04.7**	**-0.9**
	8.8nm,0.3s						
MNBS				*e*S	**Sb**	**07 39 49.9**	**+1.3**
	13nm,0.3s						
MNBS	**Baschi**	**3.54**	**269**	Pg	**Pb**	**07 39 04.7**	**-0.9**
	8.8nm,0.3s						
MNBS				Lg	Lg	07 39 49.9	
	13nm,0.3s						
SATY	**Saty**	**3.76**	**253**	*e*P	**Pb**	**07 39 09.4**	**+0.1**
	0.8nm,0.1s						
SATY				*e*S	**Sb**	**07 39 57.8**	**+2.8**
	4.1nm,0.1s						
SATY	**Saty**	**3.76**	**253**	Pg	**Pb**	**07 39 09.4**	**+0.1**
	1.2nm,0.2s						
SATY				Lg	Lg	07 39 57.8	
	12nm,0.3s						
ARXS	**Arharly**	**3.94**	**271**	*e*P	**Pb**	**07 39 12.2**	**-0.3**
	13nm,0.5s						
ARXS				*e*S	**Sb**	**07 40 02.9**	**+2.7**
	9.1nm,0.4s						
ARXS	**Arharly**	**3.94**	**271**	Pg	**Pb**	**07 39 12.2**	**-0.3**
	13nm,0.5s						
ARXS				Lg	Lg	07 40 02.9	
	9.1nm,0.4s						
TNSS	**Tian-Shan**	**4.78**	**257**	*e*P	**Pb**	**07 39 30.3**	**+3.5**
	0.9nm,0.2s						
TNSS				*e*S	**Sg**	**07 40 34.0**	**-2.3**
	0.9nm,0.4s						
TNSS	**Tian-Shan**	**4.78**	**257**	Pg	**Pb**	**07 39 30.6**	**+3.8**
	1.4nm,0.3s						
TNSS				Lg	Lg	07 40 33.9	
	2.2nm,0.4s						
KTBS	**Karatobe**	**4.82**	**266**	*e*P	**Pb**	**07 39 29.8**	**+2.5**
	0.6nm,0.2s						
KTBS				*e*S	**Sg**	**07 40 33.0**	**-4.4**
	3.1nm,0.4s						
KUU	**Kurty**	**5.04**	**268**	Pg	**Pb**	**07 39 32.4**	**+1.4**
	0.8nm,0.1s						
KUU				Lg	Lg	07 40 37.3	
	3.2nm,0.4s						
KST	**Kastek**	**5.47**	**260**	Pg	**Pb**	**07 39 40.6**	**+2.2**
	1.8nm,0.5s						
KST				Lg	Lg	07 40 51.2	
	2.5nm,0.7s						

IDC 23 07:49:50.0±1.6**, 0°.55N**×**146°.86E, h0^{km}, mb3.7**/6**, mb1 4.0**/6**, mb1mx3.7**/31**, mbtmp3.7**/6**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/35**, Error ellipse: s-maj=52.8km s-min=23.8km az=101.0, Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.78**	**210**	P	P	07 55 04.0	-0.5
	0.9nm,0.6s,baz=32,slow=11,SNR=12						
BATI	**Baumata**	**25.43**	**245**	LR	LR	08 05 26.4	
	comp=Z,74nm,20.3s,baz=316,slow=37						
ASAR	**Alice Springs**	**27.17**	**207**	P	P	07 55 35.9	+0.5
	0.7nm,0.8s,baz=34,slow=8.5,SNR=6.8						
CMAR	**Chiang Mai Arr**	**50.27**	**294**	P	P	07 58 48.5	-0.2
	1.8nm,0.3s,baz=117,slow=6.3,SNR=6.6						
SONM	**Songino Array**	**58.69**	**329**	P	P	07 59 49.5	-0.1
	0.7nm,0.8s,baz=123,slow=5.5,SNR=4.2						
MKAR	**Makanchi Array**	**72.42**	**319**	P	P	08 01 18.5	+0.2
	0.5nm,0.8s,baz=132,slow=7.0,SNR=4.4						
ILAR	**Eielson Array**	**79.56**	**24**	P	P	08 01 58.6	0.0
	0.2nm,0.5s,baz=235,slow=6.3,SNR=4.6						

NNC 23 08:31:22.5±3.1**, 54°.18N**×**86°.66E, h0^{km}, mb3.9, mpv3.5, 3C-4D, Error ellipse: s-maj=28.9km s-min=20.2km az=163.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.02**	**238**	⇑Pn	Pn	08 32 53.1	+0.5
	2.5nm,0.7s						
KURK				⇓Sn	Sn	08 34 02.8	+0.6
	0.6nm,0.4s						
KURK				⇑Lg	Lg	08 34 36.7	
	8.6nm,1.1s						
KURBB	**Kurchatov Arra**	**6.12**	**238**	⇓Pn	Pn	08 32 54.0	0.0
	3.2nm,0.5s						
KURBB				⇓Sn	Sn	08 34 04.9	+0.2
	5.1nm,0.6s						
KURBB				⇓Lg	Lg	08 34 41.2	
	19nm,1.2s						
MK31	**Makanchi Array**	**7.90**	**202**	Pn	Pn	08 33 19.1	+0.6
	baz=27,slow=13,SNR=13						
MK31				Sn	Sn	08 34 49.3	+0.7
	0.3nm,0.4s,baz=23,slow=25,SNR=4.4						
MK31				⇑Lg	Lg	08 35 34.8	
	2.5nm,0.8s,baz=22,slow=31,SNR=6.7						

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*IDC **23** 08:39:23.1±1.7, 23°.42S×177°.01W, h0^{km}, mb3.9/8, mb1 4.2/8, mb1mx3.9/29, mbtmp3.9/8, Error ellipse: s-maj=96.9km s-min=21.4km az=153.0*
ISC 23 08:39:40.4±0.8**, 23°.8S**±0°.2×**177°.0W**±0°.2**, h150^{km}, n20, σ1^s.05**/14**, mb3.5**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.29**	**248**	P	**P**	**08 46 39.2**	**+1.2**
	1.1nm,0.4s,baz=103,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**44.75**	**260**	P	**P**	**08 47 38.9**	**-0.3**
	0.9nm,0.5s,baz=97,slow=7.2,SNR=25						
WRA	**Warramunga Arr**	**45.14**	**265**	P	**P**	**08 47 41.2**	**-1.1**
	0.4nm,0.5s,baz=101,slow=8.3,SNR=6.6						
NVAR	**Mina Array Bea**	**82.83**	**43**	P	**P**	**08 51 48.4**	**+0.1**
	0.6nm,0.8s,baz=223,slow=7.2,SNR=4.3						
H03S2	**Juan Fernandez**	**83.36**	**124**	T	T	10 23 45.3	
	baz=245,slow=74,SNR=28						
H03S1	**Juan Fernandez**	**83.37**	**124**	T	T	10 23 46.4	
	baz=245,slow=74,SNR=31						
H03S3	**Juan Fernandez**	**83.38**	**124**	T	T	10 23 45.2	
	baz=245,slow=74,SNR=36						
H03N2	**Juan Fernandez**	**83.52**	**124**	T	T	10 23 52.8	
	baz=250,slow=72,SNR=14						
H03N3	**Juan Fernandez**	**83.52**	**124**	T	T	10 23 40.9	
	baz=250,slow=72,SNR=19						
H03N1	**Juan Fernandez**	**83.53**	**124**	T	T	10 23 46.2	
	baz=250,slow=72,SNR=11						
SNAA	**Sanae**	**84.66**	**178**	P	**P**	**08 51 56.7**	**-0.2**
VNA3	**Neumayer Olymp**	**84.76**	**176**	P	**P**	**08 51 57.1**	**-0.3**
VNA2	**Neumayer--Watz**	**85.21**	**177**	P	**P**	**08 51 59.7**	**+0.2**
	baz=190,slow=3.1						
TXAR	**Lajitas Array**	**88.09**	**57**	P	**P**	**08 52 15.0**	**+0.7**
	0.3nm,0.9s,baz=207,slow=5.2,SNR=5.7						
SEY	**Seymchan**	**89.82**	**347**	P	**P**	**08 52 22.1**	**+0.6**
	0.6nm,0.4s,baz=219,slow=5.5,SNR=2.1						
PDAR	**Pinedale Array**	**90.76**	**43**	P	**P**	**08 52 26.4**	**-0.2**
	0.4nm,0.9s,baz=270,slow=1.5,SNR=3.5						
ILAR	**Eielson Array**	**91.36**	**12**	P	**P**	**08 52 28.8**	**+0.2**
	0.3nm,0.7s,baz=204,slow=5.9,SNR=1.9						
ARCES	**ARCESS Array B**	**132.36**	**350**	PKP	**PKPdf**	**08 58 36.1**	**+0.1**
	6.1nm,1.1s,baz=288,slow=1.2,SNR=4.6						
HFS	**Hagfors**	**142.97**	**351**	PKhKP	**PKPdf**	**08 58 52.8**	**-2.9**
	0.6nm,0.3s,baz=99,slow=4.7,SNR=5.3						
AKASG	**Malin Array Be**	**146.36**	**330**	PKPbc	**PKPbc**	**08 59 03.6**	**+0.3**
	3.6nm,0.6s,baz=46,slow=4.7,SNR=9.8						

IDC 23 08:50:00.4±1.9**, 54°.47N**×**83°.62E, h0^{km}, mb1 2.7**/2**,**

mb1mx2.7/42, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=16.3km s-min=9.9km az=161.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.88	126	*i*		08 55 30.0	
	baz=307,slow=337,SNR=2.7						
ZALV	Zalesovo Beam	0.88	126	Pg	Pg	08 50 16.9	-0.3
	5.6nm,0.3s,baz=310,slow=17,SNR=47						
ZALV				Lg	Lg	08 50 30.3	
	8.0nm,0.3s,baz=305,slow=31,SNR=15						
KURBB	Kurchatov Arra	4.95	221	Pn	Pn	08 51 16.4	+0.5
	0.1nm,0.3s,baz=39,slow=13,SNR=4.6						
KURBB				Lg	Lg	08 52 39.1	
	0.1nm,0.3s,baz=44,slow=32,SNR=5.2						
MKAR	Makanchi Array	7.74	187	Pn	Pn	08 51 54.0	-0.2
	0.3nm,0.3s,baz=15,slow=13,SNR=14						
MKAR				Lg	Lg	08 54 06.1	
	0.1nm,0.3s,baz=3.1,slow=29,SNR=3.0						

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*IDC **23** 08:59:32.4±0.6, 50°.34N×159°.70E, h0^{km}, mb4.0/18, mb1 4.2/20, mb1mx4.0/54, mbtmp4.0/20, ML2.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/45, Error ellipse: s-maj=19.2km s-min=13.5km az=161.0*

*KRSC **23** 08:59:33.8±1.8, 50°.47N×159°.62E, h82^{km}±35^{km}, ML4.3*

*MOS **23** 08:59:37.9±1.1, 50°.63N×159°.68E, h48^{km}, mb4.5/21, Error ellipse: s-maj=10.8km s-min=4.0km az=96.3*

*NEIC **23** 08:59:44.7±1.4, 51°.4N±0°.1×160°.3E±0°.1, h35^{km}±6^{km}, mb4.4/20, Error ellipse: s-maj=18.5km s-min=11.3km az=204.0*

ISC 23 08:59:35.2±4.4, **50°.54N**±0°.05×**159°.63E**±0°.04, **h13**^{km}±27^{km}, **n129**, σ**1^{s}.48**/159, **mb4.4**/36, **9C-5D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.60	323	PN	Pn	09 00 02.7	-0.5
KDTR				S	Sb	09 00 23.2	-1.6
KDTR	Khodutka, Kamc	1.60	323	*e*P	Pn	09 00 02.7	-0.5
KDTR				*e*S	Sb	09 00 23.2	-1.6
PAU	Pauzhetka	2.01	299	PN	Pn	09 00 08.8	0.0
PAU				S	Sn	09 00 33.6	-0.1
PAU	Pauzhetka	2.01	299	*e*P	Pn	09 00 08.8	0.0
PAU				*e*S	Sn	09 00 33.6	-0.1
RUS	Russkaya	2.02	340	PN	Pn	09 00 08.3	-0.7
RUS				S	Sn	09 00 33.6	-0.5
RUS	Russkaya	2.02	340	*e*P	Pn	09 00 08.3	-0.7
RUS				*e*S	Sn	09 00 33.6	-0.5
MTVR	Mutnovka	2.15	336	PN	Pn	09 00 10.6	-0.2
MTVR				S	Sn	09 00 37.2	-0.2
MTVR	Mutnovka	2.15	336	*e*P	Pn	09 00 10.6	-0.2
MTVR				*e*S	Sn	09 00 37.2	-0.2
GRL	Gorelyy	2.24	335	PN	Pn	09 00 12.4	+0.3
GRL				S	Sb	09 00 40.6	-2.6
GRL	Gorelyy	2.24	335	*e*P	Pn	09 00 12.4	+0.3
GRL				*e*S	Sb	09 00 40.6	-2.6
SKR	Severo-Kuril's	2.24	275	*e*PN	Pn	09 00 10.7	-1.3
SKR				*e*S	Sn	09 00 37.0	-2.5
SKR				pmax	pmax		
	comp=Z,197nm,0.6s						
SKR				smax	smax		
	comp=E,2μm,0.5s						
SKR				smax	smax		
	comp=N,2μm,0.6s						
SKR	Severo-Kuril's	2.24	275	*e*P	Pn	09 00 10.5	-1.5
SKR				*e*S	Sn	09 00 36.7	-2.8
KRMR	Karymshinskiy	2.48	338	PN	Pn	09 00 16.1	+0.9
KRMR				S	Sb	09 00 46.9	-3.0
KRMR	Karymshinskiy	2.48	338	*e*P	Pn	09 00 16.1	+0.9
KRMR				*e*S	Sb	09 00 46.9	-3.0
DALK	Dalny	2.56	348	PN	Pn	09 00 16.0	-0.3
DALK				S	Sn	09 00 46.2	-1.0
DALK	Dalny	2.56	348	*e*P	Pn	09 00 16.0	-0.3
DALK				*e*S	Sn	09 00 46.2	-1.0
PET	Petropavlovsk	2.56	347	*e*PN	Pn	09 00 16.1	-0.3
PET				*e*S	Sn	09 00 47.0	-0.4
PET				smax	smax		
	comp=E,123nm,0.5s						
PET				smax	smax		
	comp=N,268nm,0.5s						
PET	Petropavlovsk	2.56	347	*e*P	Pn	09 00 16.0	-0.3
PET				*e*S	Sn	09 00 46.5	-0.9
PET	Petropavlovsk	2.56	347		Pn	09 00 15.2	-1.2
PET				Sn	Sn	09 00 36.7	-11
SPN	Mys Shipunski	2.58	5	PN	Pn	09 00 16.4	-0.2
SPN				S	Sn	09 00 46.2	-1.6
SPN	Mys Shipunski	2.58	5	*e*P	Pn	09 00 16.4	-0.2
SPN				*e*S	Sn	09 00 46.2	-1.6
NLC	Nalytchevo	2.64	356	PN	Pn	09 00 18.3	+0.8
NLC				S	Sn	09 00 49.4	0.0
NLC	Nalytchevo	2.64	356	*e*P	Pn	09 00 18.3	+0.8
NLC				*e*S	Sn	09 00 49.4	0.0
UGLR	Uglovaya	2.72	350	PN	Pn	09 00 20.3	+1.6
UGLR	Uglovaya	2.72	350	*e*P	Pn	09 00 20.3	+1.6
SMAR	Somma	2.78	350	PN	Pn	09 00 20.1	+0.5
SMAR	Somma	2.78	350	*e*P	Pn	09 00 20.1	+0.5
SDLR	Sedlovina	2.78	351	PN	Pn	09 00 19.2	-0.4
SDLR	Sedlovina	2.78	351	*e*P	Pn	09 00 19.2	-0.4
AVH	Avacha	2.79	349	PN	Pn	09 00 20.2	+0.6
AVH				S	Sn	09 00 52.3	-0.8
AVH	Avacha	2.79	349	*e*P	Pn	09 00 20.2	+0.6
AVH				*e*S	Sn	09 00 52.3	-0.8
KRER	Koryakskii	2.82	349	PN	Pn	09 00 20.7	+0.5
KRER	Koryakskii	2.82	349	*e*P	Pn	09 00 20.7	+0.5
KOK	Koryaka	2.83	348	PN	Pn	09 00 20.5	+0.4
KOK	Koryaka	2.83	348	*e*P	Pn	09 00 20.5	+0.4
PEA0B	Petropavlovsk-	2.84	336	PN	Pn	09 00 21.1	+0.9
PEA0B	Petropavlovsk-	2.84	336		Pn	09 00 21.1	+0.9
PEA0B				Sn	Sn	09 00 48.0	-6.2
PETK	Petropavlovsk-	2.84	336	Pn	Pn	09 00 20.8	+0.5
	comp=N,2.7nm,0.3s,baz=132,slow=18,SNR=72						
PETK				Sn	Sb	09 00 56.5	-3.8
	comp=N,3.7nm,0.3s,baz=142,slow=15,SNR=3.5						
PETK				LR	LR	09 01 42.5	
	comp=N,298nm,20.9s,baz=151,slow=43						
KRX	Arik	2.89	348	PN	Pn	09 00 21.1	+0.1
KRX				S	Sn	09 00 56.3	+0.6
KRX	Arik	2.89	348	*e*P	Pn	09 00 21.1	+0.1
KRX				*e*S	Sn	09 00 56.3	+0.6
GNL	Ganaly	3.33	342	PN	Pn	09 00 28.6	+1.6
GNL				S	Sn	09 01 06.4	-0.1
GNL	Ganaly	3.33	342	*e*P	Pn	09 00 28.6	+1.6
GNL				S	Sn	09 01 06.4	-0.1
MKZ	Mys Kozlova	4.22	17	PN	Pn	09 00 38.6	-0.6
MKZ				S	Sn	09 01 24.9	-3.5
MKZ	Mys Kozlova	4.22	17	*e*P	Pn	09 00 38.6	-0.6
MKZ				*e*S	Sn	09 01 24.9	-3.5
KZV	Kizimen	4.60	5	PN	Pn	09 00 45.8	+1.2
KZV				S	Sn	09 01 35.8	-2.1
KZV	Kizimen	4.60	5	*e*P	Pn	09 00 45.8	+1.2
KZV				*e*S	Sn	09 01 35.8	-2.1
TUMD	Tumrok D	4.70	5	*e*P	Pn	09 00 46.4	+0.7
TUMD				*e*S	Sn	09 01 39.0	-1.1
TUMR	Tumrok	4.76	4	PN	Pn	09 00 46.4	-0.4
TUMR	Tumrok	4.76	4	*e*P	Pn	09 00 48.3	+1.5
KBTR	Krutoberegovo	5.99	17	PN	Pn	09 01 03.0	-0.5
KBTR	Krutoberegovo	5.99	17	*e*P	Pn	09 01 03.0	-0.5
KBTR				*e*S	Sn	09 02 08.7	-3.2
KBG	Krutoberegovo	6.02	17	*e*S	Sn	09 02 11.1	-1.4
BKI	Bering	6.05	37	PN	Pn	09 01 02.7	-1.5
BKI	Bering	6.05	37	*e*P	Pn	09 01 02.7	-1.5
SMKR	Semkarok	6.16	10	PN	Pn	09 01 07.9	+2.1
SMKR	Semkarok	6.16	10	P	Pn	09 01 07.9	+2.1
SRKR	Sorokina	6.20	8	PN	Pn	09 01 08.0	+1.6
SRKR	Sorokina	6.20	8	P	Pn	09 01 08.0	+1.6
MA2	Magadan	10.37	334	LR	LR	09 08 01.7	
	comp=N,129nm,18.1s,baz=134,slow=48						
AMKA	Amchitka	12.43	79	Pn	Pn	09 02 31.8	+0.1
BILL	Bilibino	17.86	8	⇑*e*P	P	09 03 48.6	+4.9
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLR	Kul'dur	17.97	277	Pn	P	09 03 45.4	+0.2
	comp=Z,0.1nm,0.3s,baz=75,slow=4.7,SNR=3.8						
KLR	Kul'dur	17.97	277	⇓*e*P	P	09 03 46.9	+1.8
KLR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
JSD	Sado	19.67	239	P	Pn	09 04 19.2	+14
YAK	Yakutsk	20.00	317	*e*P	P	09 04 04.6	-2.6
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ANM	Nome	23.05	39	P	P	09 04 37.3	-2.6
ANM				pmax	pmax		
	comp=Z,19nm,1.3s						
ANM	Nome	23.05	39	P	P	09 04 37.3	-2.6
ANM				IAmb	IAmb	09 04 41.8	
	comp=Z,19nm,1.3s						
TIXI	Tiksi	25.31	338	*d i*P	P	09 05 02.5	+1.4
TIXI				pmax	pmax		
	comp=Z,29nm,0.7s						
TIXI	Tiksi	25.31	338		P	09 05 02.1	+1.0
TIXI				IAmb	IAmb	09 05 18.1	
	comp=Z,10nm,0.8s						
KSRS	Korea Array	26.07	252	P	P	09 05 08.2	0.0
	comp=Z,1.3nm,0.7s,baz=50,slow=8.6,SNR=5.7						
BOD	Bodaibo	27.22	303	*e*P	P	09 05 18.3	-0.2
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s						
IMAR	Indian Mountai	28.13	39	P	P	09 05 23.9	-2.6
I23K	Minto, Yukon-K	29.83	41	P	P	09 05 39.9	-1.7
COLA	College	30.46	42	⇑*i*P	P	09 05 47.1	0.0
COLA				pmax	pmax		
	comp=Z,21nm,3.1s						
IL31		30.87	42	P	P	09 05 49.1	-1.6
ILAR	Eielson Array	30.87	42	P	P	09 05 50.1	-0.7
	comp=Z,0.9nm,0.7s,baz=251,slow=7.5,SNR=13						
M24K	Tolsona, Glenn	31.24	47	P	P	09 05 53.2	-0.9
RIDG	Independent Ri	31.76	44	P	P	09 05 57.7	-1.0
BCAR	Beaver Creek A	33.18	45	P	P	09 06 09.2	-2.0
EGAK	Eagle	33.32	42	P	P	09 06 10.6	-1.7
SONM	Songino Array	34.28	287	P	P	09 06 22.4	+1.5
	comp=Z,0.2nm,0.5s,baz=74,slow=41,SNR=1.7						
INK	Inuvik	36.10	35	P	P	09 06 36.9	+0.7
	comp=Z,0.8nm,0.7s,baz=18,slow=5.0,SNR=3.1						
DGZ	Jazzator, Alta	44.58	298	⇑*e*P	P	09 07 48.6	+1.7
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	45.27	41	P	P	09 07 51.9	0.0
	comp=Z,0.7nm,1.0s,baz=297,slow=6.9,SNR=6.1						
YKA	Yellowknife Ar	45.27	41	*e*P	P	09 07 54.8	+2.9
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	Kurchatov	48.87	304	⇑*e*P	P	09 08 21.7	+1.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURBB	Kurchatov Arra	48.97	303	P	P	09 08 20.9	0.0
	comp=Z,2.9nm,0.6s,baz=62,slow=7.6,SNR=11						
MK31	Makanchi Array	49.04	297	*d i*P	P	09 08 23.7	+2.1
MKAR	Makanchi Array	49.04	297	P	P	09 08 21.9	+0.3
	comp=Z,0.9nm,0.5s,baz=59,slow=6.5,SNR=11						
MKAR				LR	LR	09 29 56.7	
	comp=Z,37nm,18.1s,baz=19,slow=37						
BVAR	Borovoye Array	51.78	310	P	P	09 08 43.7	+1.5
	comp=Z,0.7nm,0.4s,baz=290,slow=30,SNR=7.4						
BRVK	Borovoye	51.81	310	⇑*e*P	P	09 08 44.2	+1.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,3.4s						
WVOR	Wild Horse Val	54.16	65	P	P	09 09 00.7	+0.6
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVOR	Wild Horse Val	54.16	65	P	P	09 09 00.7	+0.6
WVOR				IAmb	IAmb	09 09 01.4	
	comp=Z,5.7nm,1.0s						
ARU	Arti	55.10	318	⇑*e*P	P	09 09 05.9	-0.6
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AAK	Ala-Archa	55.97	297	P	P	09 09 21.2	+8.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	Ala-Archa	55.97	297	P	P	09 09 21.2	+8.0
AAK				IAmb	IAmb	09 09 25.7	
	comp=Z,3.0nm,0.7s						
BOZ	Bozeman (W)	56.08	58	P	P	09 09 14.1	+0.2
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BOZ	Bozeman (W)	56.08	58	P	P	09 09 14.1	+0.2
BOZ				IAmb	IAmb	09 09 15.0	
	comp=Z,7.0nm,1.4s						
NVAR	Mina Array Bea	56.92	68	P	P	09 09 20.6	+0.4
	comp=Z,1.1nm,0.7s,baz=294,slow=8.0,SNR=9.6						
YHH	Holmes Hill	57.02	58	P	P	09 09 21.3	+0.5
CMAR	Chiang Mai Arr	57.39	259	P	P	09 09 23.9	+0.5
	comp=Z,1.2nm,0.3s,baz=49,slow=33,SNR=4.5						
CMAR	Chiang Mai Arr	57.39	259	*ce*P	P	09 09 24.8	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MOOW	Moose Ponds	57.76	59	P	P	09 09 26.5	+0.6
KK31	Karatay Array	57.90	300	P	P	09 09 33.9	+7.2
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	57.90	300	P	P	09 09 33.9	+7.2
KK31				IAmb	IAmb	09 09 38.7	
	comp=Z,2.8nm,0.8s						
REDW	Red Top Meadow	57.95	59	P	P	09 09 27.7	+0.4
REDW				IAmb	IAmb	09 09 29.3	
	comp=Z,5.3nm,1.2s						
R11A	Troy Canyon, C	58.58	67	P	P	09 09 32.2	+0.4
DUG	Dugway, Tooele	58.95	63	P	P	09 09 34.9	+0.7
DUG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DUG	Dugway, Tooele	58.95	63	P	P	09 09 34.9	+0.7
DUG				IAmb	IAmb	09 09 35.6	
	comp=Z,4.3nm,1.1s						
BW06	Boulder Array	59.05	59	P	P	09 09 34.9	-0.1
BW06				IAmb	IAmb	09 09 36.1	
	comp=Z,4.5nm,1.1s						
PDAR	Pinedale Array	59.05	59	P	P	09 09 35.2	+0.2
	comp=Z,2.4nm,0.9s,baz=304,slow=3.6,SNR=15						
SRU	San Rafael Swe	60.98	63	P	P	09 09 48.7	+0.4
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SRU	San Rafael Swe	60.98	63	P	P	09 09 48.7	+0.4
FINES	FINESS Array B	62.36	337	P	P	09 09 56.5	-0.3
	comp=Z,1.0nm,0.7s,baz=62,slow=4.5,SNR=4.0						
FINES	FINESS Array B	62.36	337	*e*P	P	09 09 58.6	+1.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BELG	Belogornoye	62.49	320	⇓*e*P	P	09 09 59.0	+1.1
BELG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MOS	Moscow	63.66	328	*e*P	P	09 10 04.9	-0.7
MOS				*e*		09 10 15.2	
OBN	Obninsk	64.52	328	*e*P	P	09 10 11.9	+0.6
OBN				*e*		09 10 43.8	
OBN				*e*		09 12 31.7	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO	Albuquerque	66.22	64	*ce*P	P	09 10 23.8	+0.9
ANMO				pmax	pmax		
	comp=Z,9.0nm,2.5s						
GEYT	Alibeck	68.25	303	P	P	09 10 35.5	0.0
	comp=Z,3.4nm,0.5s,baz=264,slow=3.0,SNR=5.5						
AKASG	Malin Array Be	70.66	329	P	P	09 10 49.7	-0.4
	comp=Z,0.4nm,0.3s,baz=29,slow=6.6,SNR=2.2						
KBZ	Khabaz	71.20	317	P	P	09 10 53.3	-0.2
	comp=Z,2.8nm,0.9s,baz=217,slow=7.8,SNR=5.4						
KBZ	Khabaz	71.20	317	⇑*e*P	P	09 10 53.9	+0.4
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TX32	Lajitas Array	71.93	66	P	P	09 10 58.4	+0.1
TX32				IAmb	IAmb	09 10 58.8	
	comp=Z,5.3nm,1.2s						
TXAR	Lajitas Array	71.93	66	P	P	09 10 58.0	-0.3
	comp=Z,1.1nm,0.6s,baz=301,slow=4.3,SNR=17						
WRAB	Tennant Creek	73.62	205	⇓*i*P	P	09 11 05.9	-2.2
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WRA	Warramunga Arr	73.64	205	P	P	09 11 05.9	-2.3
	comp=Z,6.1nm,1.0s,baz=20,slow=5.8,SNR=19						
WRA	Warramunga Arr	73.64	205	*e*P	P	09 11 06.5	-1.7
WRA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ASAR	Alice Springs	77.30	204	P	P	09 11 27.1	-2.2
	comp=Z,1.9nm,0.7s,baz=14,slow=5.4,SNR=18						

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*IDC **23** 09:11:18.4±0.8, 37°.15N×141°.01E, h0^{km}, mb4.0/14, mb1 4.1/16, mb1mx3.9/42, mbtmp4.0/16, ML4.0/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=21.7km s-min=17.2km az=99.0*

*NEIC **23** 09:11:23.1±1.6, 37°.09N±0°.01×141°.13E±0°.09, h35^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=12.6km s-min=3.0km az=96.0*

*NIED **23** 09:11:23.5, 37°.11N×141°.05E, h36^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$0.14; M$_{\phi\phi}$0.03; M$_{r\theta}$0.46; M$_{\theta\phi}$0.50; M$_{\phi r}$1.24; Fault plane solution: M$_0$1.41000×10^{15} NP1: φ$_s$199.00000°, δ85.00000°, λ-108.00000°. NP2: φ$_s$93.00000°, δ18.00000°, λ-17.00000°.*

*JMA **23** 09:11:23.5±0.1, 37°.11N×141°.05E, h36^{km}±1^{km}, M4.1*

JMA Felt III J1.

ISC 23 09:11:22.9±1.3, **37°.09N**±0°.04×**141°.13E**±0°.06, **h32**^{km}±8^{km}, **n68**, σ**1^{s}.47**/69, **mb4.1**/21, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.27	272	P	Pn	09 11 30.2	-0.5
ONAJ				S	Sn	09 11 34.8	-0.9
JFK	Kawauchi	0.34	323	P	Pb	09 11 31.1	-0.1
JFK				*i* S	Sn	09 11 36.3	-1.3
JFFD	Fukushimafurud	0.46	270	P	Pn	09 11 32.4	-0.9
JFFD				S	Sb	09 11 38.4	-1.2
JHO	Hitachi	0.66	224	P	Pn	09 11 35.2	-0.8
JHO				S	Sn	09 11 43.8	-1.5
JFT	Otama	0.77	304	P	Pn	09 11 37.4	-0.1
JFT				S	Sn	09 11 47.1	-0.8
JMM	Marumori	0.82	341	P	Pn	09 11 37.7	-0.5
JMM				S	Sn	09 11 48.2	-1.0
JMM	Marumori	0.82	341		Pn	09 11 37.7	-0.5
JMM				Sn	Sn	09 11 48.7	-0.5
JYT	Yasato	1.15	222	Pn	Pn	09 11 42.4	-0.3
JYT				Sn	Sn	09 11 56.5	-0.8
JFY	Yanaizu	1.18	286	P	Pn	09 11 43.2	0.0
JFY				S	Sn	09 11 57.9	-0.4
JOU	Okura	1.32	344	P	Pn	09 11 45.6	+0.4
JOU				S	Sn	09 12 02.7	+0.9
JIO	Ouri	1.37	7	P	Pn	09 11 46.0	+0.2
JIO				S	Sn	09 12 02.6	-0.2
JYS	Shirataka	1.41	323	P	Pn	09 11 46.9	+0.5
JYS				S	Sn	09 12 05.2	+1.3
MJAR	Matsushiro Arr	2.41	258	Pg	Pn	09 12 01.2	+1.1
	4.7nm,0.3s,baz=80,slow=17,SNR=172						
MJAR				LR	LR	09 13 07.3	
	comp=Z,322nm,18.9s,baz=60,slow=47						
MAJO	Matsushiro	2.41	258		Pn	09 12 01.6	+1.5
MAT	Matsushiro	2.41	258	P	Pn	09 12 01.5	+1.4
MAT				S	Sn	09 12 31.6	+3.0
MJB9	Matsu-Tunnel	2.41	258	Pn	Pn	09 12 02.9	+2.8
JSD	Sado	2.47	293		Pn	09 12 00.4	-0.5
JGF	Kuroka	3.39	245		Pn	09 12 15.8	+2.1
JTM	Tenmabayashi	3.69	359	Pn	Pn	09 12 19.6	+1.9
INU	Inuyama	3.76	244		Pn	09 12 20.8	+2.2
JHJ	Hachijo jima 2	4.12	196	Pn	Pn	09 12 24.9	+1.4
	38nm,0.3s,baz=344,slow=21,SNR=11						
JHJ2	Mitsune	4.12	196	Pn	Pn	09 12 27.3	+3.8
JWT	Wachi	4.97	250		Pn	09 12 37.8	+2.4
ERM	Erimo	5.16	17	Pn	Pn	09 12 39.1	+1.3
JMN	Monobe	6.81	243	Pn	Pn	09 13 03.1	+2.6
JHS	Saijyo	6.82	255	Pn	Pn	09 13 04.4	+3.7
ASAJ	Asahikawa	7.11	9	Pn	Pn	09 13 04.8	+0.3
	1.9nm,0.3s,baz=184,slow=16,SNR=10.0						
JKA	Kamikawa-asahi	7.11	9		Pn	09 13 05.9	+1.3
USRK	Ussuriysk Ar.	9.93	318	Pn	Pn	09 13 46.5	+3.3
	baz=130,slow=13,SNR=13						
USRK				LR	LR	09 17 20.9	
	comp=Z,115nm,20.2s,baz=102,slow=37						
KSRS	Korea Array	10.54	276	Pn	Pn	09 13 55.0	+3.4
	0.4nm,0.3s,baz=85,slow=13,SNR=8.3						
KSRS				LR	LR	09 17 42.8	
	comp=Z,117nm,19.9s,baz=88,slow=37						
KLR	Kul'dur	13.92	334	LR	LR	09 19 38.9	
	comp=Z,98nm,19.4s,baz=162,slow=36						
MA2	Magadan	23.34	12	LR	LR	09 26 18.6	
	comp=Z,53nm,20.5s,baz=170,slow=39						
SONM	Songino Array	27.57	304	P	P	09 17 06.2	-0.8
	1.4nm,0.5s,baz=108,slow=8.5,SNR=6.9						
H11N2	WAKE ISLAND Hy	28.37	120	T	T	09 47 05.3	
	baz=313,slow=75,SNR=346						
H11N1	WAKE ISLAND Hy	28.38	121	T	T	09 47 06.3	
	baz=313,slow=75,SNR=512						
H11N3	WAKE ISLAND Hy	28.39	120	T	T	09 47 06.3	
	baz=313,slow=75,SNR=330						
H11S1	WAKE ISLAND Hy	29.08	123	T	T	09 48 07.4	
	baz=315,slow=75,SNR=206						
H11S3	WAKE ISLAND Hy	29.08	123	T	T	09 48 00.3	
	baz=315,slow=75,SNR=168						
H11S2	WAKE ISLAND Hy	29.09	123	T	T	09 48 06.9	
	baz=315,slow=75,SNR=130						
ZALV	Zalesovo Beam	41.71	312	P	P	09 19 08.2	-0.3
	2.7nm,0.5s,baz=92,slow=6.6,SNR=13						
MK31	Makanchi Array	43.90	302	P	P	09 19 25.7	-0.7
MKAR	Makanchi Array	43.90	302	P	P	09 19 26.1	-0.2
	2.1nm,0.7s,baz=88,slow=10,SNR=27						
MAKZ	Makanchi	44.11	302	P	P	09 19 28.1	0.0
MAKZ				IAmb	IAmb	09 19 28.5	
	comp=Z,3.2nm,0.9s						
KURK	Kurchatov	45.72	308	P	P	09 19 40.0	-0.7
KURK				IAmb	IAmb	09 19 41.1	
	comp=Z,5.8nm,0.7s						
HNR	Honiara	49.53	155	*e*P	P	09 20 17.0	+6.3
ILAR	Eielson Array	49.56	32	P	P	09 20 11.4	+1.0
	comp=Z,0.4nm,0.6s,baz=264,slow=5.4,SNR=6.5						
BVAR	Borovoye Array	50.37	312	P	P	09 20 17.0	+0.3
	comp=Z,0.3nm,0.3s,baz=207,slow=9.6,SNR=4.2						
KK31	Karatay Array	52.90	300	P	P	09 20 33.4	-2.4
WB0	Warramunga Arr	56.91	188	P	P	09 21 04.9	0.0
WR0	Warramunga Arr	57.08	187	P	P	09 21 04.8	-1.2
WR0				IAmb	IAmb	09 21 34.1	
	comp=Z,11nm,1.4s						
WB2	Warramunga Arr	57.09	188	P	P	09 21 03.5	-2.6
WB2				IAmb	IAmb	09 21 25.7	
	comp=Z,7.8nm,1.2s						
WRA	Warramunga Arr	57.09	188	P	P	09 21 06.0	-0.1
	comp=Z,0.7nm,0.8s,baz=5.5,slow=6.9,SNR=6.6						
C36M	Paulatuk	57.47	25	P	P	09 21 07.9	-0.3
C36M				IAmb	IAmb	09 21 23.5	
	comp=Z,3.7nm,1.4s						
ABKAR	Akbulak array	57.73	310	P	P	09 21 10.1	-0.3
ABKAR				IAmb	IAmb	09 21 19.8	
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	60.81	188	P	P	09 21 32.5	+0.5
	comp=Z,0.2nm,0.7s,baz=179,slow=18,SNR=1.4						
ARCES	ARCESS Array B	63.86	339	P	P	09 21 51.4	-0.4
	comp=Z,2.5nm,0.9s,baz=62,slow=7.8,SNR=8.4						
FINES	FINESS Array B	68.66	332	P	P	09 22 22.1	-0.5
	comp=Z,2.0nm,0.6s,baz=49,slow=7.8,SNR=10						
KBZ	Khabaz	70.69	311	P	P	09 22 35.2	-0.2
	comp=Z,2.2nm,0.9s,baz=295,slow=1.3,SNR=5.5						
NC204	NORSAR Array S	74.00	337	P	P	09 22 55.1	0.0
NB2	NORSAR Subarra	74.05	337	P	P	09 22 54.7	-0.6
	comp=Z,0.9nm,0.6s,baz=41,slow=6.2						
NOA	NORSAR Array B	74.05	337	P	P	09 22 54.4	-0.9
	comp=Z,1.0nm,0.7s,baz=39,slow=5.9,SNR=5.0						
AKASG	Malin Array Be	74.11	322	P	P	09 22 55.2	-0.6
	comp=Z,2.2nm,0.4s,baz=48,slow=6.3,SNR=16						
AKBB	Malin Array Si	74.11	322	P	P	09 22 55.6	-0.2
AKBB				IAmb	IAmb	09 22 55.9	
	comp=Z,3.2nm,0.7s						
GERES	GERESS Array B	82.54	328	P	P	09 23 42.2	-0.3
	comp=Z,0.4nm,0.4s,baz=40,slow=8.1,SNR=2.2						
TXAR	Lajitas Array	90.26	52	P	P	09 24 22.4	+1.7
	comp=Z,0.1nm,0.5s,baz=318,slow=3.1,SNR=5.2						
H03N2	Juan Fernandez	147.25	96	T	T	12 15 55.1	
	baz=291,slow=76,SNR=157						
H03N3	Juan Fernandez	147.26	96	T	T	12 15 55.4	
	baz=291,slow=76,SNR=148						
H03N1	Juan Fernandez	147.27	96	T	T	12 15 58.5	
	baz=291,slow=76,SNR=143						

IDC 23 09:34:46.9±2.5, **7°.25S**×**129°.27E**, **h0**^{km}, **mb3.7**/2, **mb1 3.9**/4, **mb1mx3.5**/33, **mbtmp3.7**/4, **ML3.7**/2, **Error ellipse: s-maj=351.0km s-min=27.0km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.54	159	Pn	Pn	09 37 58.6	-1.9
	0.3nm,0.3s,baz=351,slow=13,SNR=13						
WRA				Sn	Sn	09 40 21.4	-10
	0.9nm,0.3s,baz=339,slow=21,SNR=14						
ASAR	Alice Springs	16.92	165	Pn	P	09 38 46.7	-0.7
	0.3nm,0.3s,baz=342,slow=9.5,SNR=23						
ASAR				Sn	Sn	09 41 44.8	-9.3
	0.4nm,0.3s,baz=336,slow=13,SNR=8.7						
STKA	Stephens Creek	27.07	156	P	P	09 40 31.4	+0.1
	0.7nm,0.5s,baz=321,slow=17,SNR=2.9						
MKAR	Makanchi Array	68.04	327	P	P	09 45 48.3	0.0
	0.4nm,0.6s,baz=116,slow=8.0,SNR=5.4						

STR **23** *09:56:14.5±1.1, 44˚N±6˚×1˚1E±˚, h0^{km}, MLv3.4/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
GEN **23** *09:56:15, 44˚.14N×11˚.15E, h10^{km}±3^{km}, Ml3.3*
LDG **23** *09:56:16.8±0.2, 44˚.12N×11˚.19E, h10^{km}, Ml3.3/28, Error ellipse: s-maj=3.8km s-min=3.2km az=77.0*
IASPEI **23** *09:56:16.5±0.8, 44˚.12N±0˚.02×11˚.13E±0˚.02, h10^{km}±6^{km}, mb3.7/6, Error ellipse: s-maj=3.5km s-min=2.6km az=24.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
IDC **23** *09:56:16.8±1.3, 44˚.33N×10˚.92E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.5/39, mbtmp3.7/8, ML3.2/2, MS3.0/4, Ms1 3.0/4, ms1mx2.5/55, Error ellipse: s-maj=20.2km s-min=16.7km az=96.0*
ROM **23** *09:56:16.1±0.1, 44˚.132N±0˚.006×11˚.132E±0˚.006, h9^{km}, ML3.4/55, Error ellipse: s-maj=0.7km s-min=0.3km az=4.0*
PRU **23** *09:56:17.0±0.0, 44˚.17N×11˚.24E, h0^{km}*
BGR **23** *09:56:18.1±3.4, 44˚.01N×11˚.26E, h10^{km}, ML3.5/7, Error ellipse: s-maj=56.7km s-min=12.2km az=6.0*
ISC 23 09:56:16.8±0.8**, 44˚.10N**±0˚.02×**11˚.11E**±0˚.01**, h9^{km}**±5^{km}**, n174, σ1^{s}88**/232**, mb3.7**/6**, 7C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.07**	**8**	⇓P	**Pg**	**09 56 17.8**	**-1.3**
FNVD				S	**Sg**	**09 56 19.6**	**-1.1**
MTCR	**Monte La Croce**	**0.11**	**228**	P	**Pg**	**09 56 20.0**	**+0.5**
MTCR				S	**Sg**	**09 56 23.0**	**+1.5**
MTCR				AML	AML		
	comp=N,74850µm,1.1s						
MTCR				AML	AML		
	comp=E,73000µm,1.4s						
MTCR				AML	AML		
	comp=E,72950µm,1.4s						
MTCR				AML	AML		
	comp=N,74850µm,1.1s						
MTCR				AML	AML		
	comp=N,74850µm,1.1s						
MTCR				AML	AML		
	comp=E,72950µm,1.4s						
PTF	**Prato**	**0.14**	**191**	⇓P	**Pg**	**09 56 20.5**	**+0.5**
SEI	**Scarperia**	**0.18**	**104**	P	**Pg**	**09 56 19.9**	**-0.8**
SEI				S	**Sg**	**09 56 23.5**	**+0.1**
SEI				AML	AML		
	comp=E,80850µm,0.3s						
SEI				AML	AML		
	comp=E,80850µm,0.3s						
SEI				AML	AML		
POPM	**Popiglio**	**0.26**	**258**	P	**Pg**	**09 56 22.4**	**+0.3**
POPM				S	**Sg**	**09 56 27.2**	**+1.6**
POPM	**Popiglio**	**0.26**	**258**	⇑P	**Pg**	**09 56 22.4**	**+0.3**
POPM				S	**Sg**	**09 56 27.5**	**+1.9**
POPM				AML	AML		
	comp=N,54800µm,0.2s						
POPM				AML	AML		
	comp=E,34500µm,0.1s						
POPM				AML	AML		
	comp=E,34550µm,0.1s						
POPM				AML	AML		
	comp=N,54800µm,0.2s						
ZCCA	**Zocca**	**0.27**	**339**	⇓P	**Pg**	**09 56 22.2**	**-0.1**
ZCCA				AML	AML		
	comp=E,10075µm,1.5s						
ZCCA				AML	AML		
	comp=N,10075µm,0.4s						
ZCCA				AML	AML		
	comp=N,10070µm,0.4s						
ZCCA				AML	AML		
	comp=E,11520µm,1.4s						
ZCCA				AML	AML		
	comp=N,9765µm,0.8s						
ZCCA				AML	AML		
	comp=E,10080µm,1.5s						
BRIS	**BRISIGHELLA**	**0.29**	**80**	P	**Pb**	**09 56 25.2**	**+0.9**
BRIS				AML	AML		
	comp=N,8985µm,0.6s						
BRIS				AML	AML		
	comp=E,3730µm,0.4s						
CRMI	**Carmignano**	**0.33**	**198**	P	**Pg**	**09 56 23.9**	**+0.6**
CRMI				S	**Sb**	**09 56 30.0**	**-0.1**
FIR	**Firenze**	**0.34**	**162**	P	**Pb**	**09 56 25.3**	**+0.3**
FIR				S	**Sb**	**09 56 30.3**	**-0.3**
BDI	**Bagni Di Lucca**	**0.37**	**264**	⇑P	**Pg**	**09 56 24.1**	**-0.1**
BDI				S	**Sg**	**09 56 30.5**	**+1.4**
BDI				AML	AML		
	comp=N,14400µm,0.3s						
BDI				AML	AML		
	comp=N,14450µm,0.3s						
BDI				AML	AML		
	comp=E,10030µm,0.4s						
BDI				AML	AML		
	comp=N,14500µm,0.3s						
BDI				AML	AML		
	comp=E,9510µm,1.0s						
MTRZ	**Monterenzio**	**0.38**	**43**	⇑P	**Pg**	**09 56 22.2**	**-2.1**
MTRZ				AML	AML		
	comp=E,22550µm,0.9s						
MTRZ				AML	AML		
	comp=N,19200µm,0.8s						
MTRZ				AML	AML		
	comp=E,22550µm,0.9s						
MTRZ				AML	AML		
	comp=N,19050µm,0.8s						
MTRZ				AML	AML		
	comp=E,22900µm,0.9s						
MTRZ				AML	AML		
	comp=N,19050µm,0.8s						
MTRZ				AML	AML		
	comp=E,22550µm,0.9s						
MTRZ				AML	AML		
	comp=E,22900µm,0.9s						
RUFI	**Rufina**	**0.39**	**132**	P	**Pg**	**09 56 24.2**	**-0.3**
RUFI				S	**Sg**	**09 56 30.3**	**+0.7**
RUFI				AML	AML		
	comp=E,3930µm,0.4s						
RUFI				AML	AML		
	comp=N,5050µm,0.7s						
RUFI				AML	AML		
	comp=E,3925µm,0.4s						
RUFI				AML	AML		
	comp=N,5055µm,0.7s						
LMD	**Lutirano**	**0.43**	**93**	⇑P	**Pg**	**09 56 24.1**	**-1.2**
LMD				AML	AML		
	comp=E,3980µm,1.6s						
LMD				AML	AML		
	comp=N,5410µm,0.9s						
LMD				AML	AML		
	comp=N,5415µm,0.9s						
CARD	**Cardoso**	**0.46**	**261**	P	**Pg**	**09 56 25.8**	**+0.1**
CARD				S	**Sg**	**09 56 33.3**	**+1.5**
CARD	**Cardoso**	**0.46**	**261**	P	**Pg**	**09 56 25.4**	**-0.4**
CARD				S	**Sg**	**09 56 33.0**	**+1.2**
CARD				AML	AML		
	comp=N,7590µm,0.4s						
CARD				AML	AML		
	comp=E,5980µm,1.0s						
CARD				AML	AML		
	comp=E,5975µm,1.0s						
MAIM	**Mastiano**	**0.48**	**248**	P	**Pg**	**09 56 26.0**	**-0.3**
MAIM				S	**Sg**	**09 56 34.3**	**+1.8**
MAIM	**Mastiano**	**0.48**	**248**	⇑P	**Pg**	**09 56 25.9**	**-0.3**
MAIM				S	**Sg**	**09 56 34.1**	**+1.5**
MAIM				AML	AML		
	comp=E,2855µm,0.3s						
MAIM				AML	AML		
	comp=N,3980µm,0.8s						
SARO	**Sassorosso**	**0.52**	**280**	P	**Pg**	**09 56 26.6**	**-0.3**
SARO				S	**Sg**	**09 56 34.6**	**+0.9**
VLC	**Villacollemand**	**0.52**	**277**	⇑P	**Pg**	**09 56 26.6**	**-0.4**
VLC				S	**Sg**	**09 56 35.2**	**+1.3**
VLC				AML	AML		
	comp=E,2610µm,1.2s						
VLC				AML	AML		
	comp=N,4510µm,0.7s						
VLC				AML	AML		
	comp=N,4500µm,0.7s						
VLC				AML	AML		
	comp=N,4505µm,0.7s						
VLC				AML	AML		
	comp=E,2600µm,1.2s						
VLC				AML	AML		
	comp=N,4495µm,0.7s						
MODE	**Modena**	**0.54**	**348**	AML	AML		
	comp=E,10640µm,0.7s						
MODE				AML	AML		
	comp=E,10615µm,0.7s						
MODE				AML	AML		
	comp=N,11050µm,0.7s						
PII	**Pisa**	**0.57**	**228**	P	**Pg**	**09 56 27.7**	**-0.1**
PII				S	**Sg**	**09 56 36.7**	**+1.5**
PII				AML	AML		
	comp=N,6080µm,1.3s						
PII				AML	AML		
	comp=E,6870µm,0.4s						
SFI	**Santa Sofia**	**0.57**	**110**	P	**Pg**	**09 56 26.9**	**-1.0**
SFI				S	**Sb**	**09 56 36.1**	**-1.0**
SFI				AML	AML		
	comp=N,4285µm,0.7s						
SFI				AML	AML		
	comp=E,3475µm,0.3s						
SFI				AML	AML		
	comp=N,4285µm,0.7s						
SFI				AML	AML		
	comp=E,3480µm,0.3s						
SFI				AML	AML		
	comp=N,4235µm,0.9s						
SFI				AML	AML		
	comp=E,4140µm,1.0s						
ASQU	**Asqua**	**0.58**	**121**	P	**Pg**	**09 56 27.4**	**-0.6**
ASQU				AML	AML		
	comp=E,2795µm,1.0s						
ASQU				AML	AML		
	comp=N,2960µm,1.2s						
OSSC	**Osservatorio P**	**0.58**	**170**	P	**Pg**	**09 56 28.6**	**+0.5**
OSSC				AML	AML		
	comp=N,6725µm,0.7s						
OSSC				AML	AML		
	comp=E,6660µm,0.7s						
OSSC				AML	AML		
	comp=N,8220µm,1.3s						
OSSC				AML	AML		
	comp=E,8375µm,1.3s						
ERBM	**Eremo**	**0.59**	**303**	P	**Pg**	**09 56 28.3**	**-0.1**
ERBM				AML	AML		
	comp=E,1625µm,1.5s						
ERBM				AML	AML		
	comp=E,1630µm,1.5s						
ERBM				AML	AML		
	comp=N,2230µm,1.4s						
FIU	**Minerbio Fiu**	**0.61**	**27**	P	**Pg**	**09 56 28.8**	**+0.3**
FIU				AML	AML		
	comp=E,11275µm,1.2s						
FIU				AML	AML		
	comp=N,12015µm,1.0s						
FIU				AML	AML		
	comp=N,11980µm,1.0s						
FIU				AML	AML		
	comp=E,11285µm,1.2s						
CSNT	**Castellina Chi**	**0.64**	**168**	P	**Pg**	**09 56 29.6**	**+0.3**
CSNT				AML	AML		
	comp=E,4445µm,0.5s						
CSNT				AML	AML		
	comp=N,5095µm,0.6s						
RAVA	**Ravarino**	**0.66**	**1**	P	**Pg**	**09 56 30.1**	**+0.5**
EQUI	**Equi**	**0.69**	**276**	P	**Pg**	**09 56 29.8**	**-0.4**
EQUI				S	**Sg**	**09 56 40.0**	**+0.7**
EQUI	**Equi**	**0.69**	**276**	P	**Pg**	**09 56 29.8**	**-0.4**
EQUI				AML	AML		
	comp=N,1945µm,0.8s						
EQUI				AML	AML		
	comp=E,1310µm,0.2s						
NOVE	**Novellara**	**0.75**	**338**	P	**Pb**	**09 56 32.6**	**+0.6**
NOVE				AML	AML		
	comp=E,5230µm,0.8s						
NOVE				AML	AML		
	comp=N,5275µm,0.4s						
GRAM	**Graiana**	**0.84**	**298**	P	**Pg**	**09 56 32.8**	**-0.4**
GRAM	**Graiana**	**0.84**	**298**	P	**Pg**	**09 56 32.7**	**-0.4**
GRAM				AML	AML		
	comp=N,3245µm,0.4s						
GRAM				AML	AML		
	comp=E,5195µm,0.3s						
SSP9	**Sansepolcro**	**0.91**	**125**	P	**Pg**	**09 56 34.4**	**+0.1**
SSP9				AML	AML		
	comp=E,2215µm,0.5s						
SSP9				AML	AML		
	comp=N,1830µm,0.7s						
SSP9				AML	AML		
	comp=N,1805µm,0.7s						
SSP9				AML	AML		
	comp=E,2216µm,0.5s						
PLMA	**Palmaria, Port**	**0.91**	**267**	P	**Pb**	**09 56 34.0**	**-0.7**
PLMA				AML	AML		
	comp=E,1056µm,0.9s						
PLMA				AML	AML		
	comp=N,1320µm,0.7s						
PARC	**Parchiule**	**0.93**	**118**	P	**Pg**	**09 56 34.6**	**-0.2**
PARC				AML	AML		
	comp=E,1120µm,1.6s						
PARC				AML	AML		
	comp=N,1385µm,0.7s						
CAFI	**Castiglion Fio**	**0.99**	**141**	P	**Pb**	**09 56 35.4**	**-0.7**
CAFI				AML	AML		
	comp=E,1570µm,0.7s						
CAFI				AML	AML		
	comp=N,1480µm,1.0s						
CAFI				AML	AML		
	comp=N,1430µm,1.0s						
CAFI				AML	AML		
	comp=E,1600µm,0.7s						
BADI	**Badiali**	**1.01**	**125**	P	**Pb**	**09 56 36.0**	**-0.5**
BADI				AML	AML		
	comp=E,1590µm,1.6s						
BADI				AML	AML		
	comp=N,1435µm,0.5s						
BADI				AML	AML		
	comp=E,1585µm,1.6s						
BADI				AML	AML		
	comp=N,1430µm,0.5s						
GROG	**Isola di Gorgo**	**1.11**	**233**	P	**Pb**	**09 56 37.8**	**-0.4**
GROG				AML	AML		
	comp=E,1460µm,1.1s						
GROG				AML	AML		
	comp=N,1395µm,0.8s						
MSSA	**Maissana**	**1.17**	**281**	P	**Pn**	**09 56 39.1**	**-0.2**
MSSA				AML	AML		
	comp=N,904µm,0.9s						
MSSA				AML	AML		
	comp=E,1046µm,0.7s						
PIEI	**Pieia**	**1.18**	**118**	P	**Pb**	**09 56 39.1**	**-0.2**
PIEI				AML	AML		
	comp=E,1003µm,0.5s						
PIEI				AML	AML		
	comp=N,670µm,1.6s						
ATVO	**AVT- Monte Val**	**1.18**	**127**	P	**Pb**	**09 56 39.1**	**-0.4**
ATVO				AML	AML		
	comp=N,2075µm,0.6s						
ATVO				AML	AML		
	comp=E,1395µm,0.8s						
MPAG	**Monte Paganucc**	**1.28**	**111**	AML	AML		
	comp=E,1215µm,1.4s						
MPAG				AML	AML		
	comp=N,1215µm,0.7s						
CASP	**Castiglione de**	**1.32**	**188**	P	**Pn**	**09 56 40.3**	**-1.1**
CASP				AML	AML		
	comp=N,489µm,0.5s						
CASP				AML	AML		
	comp=E,518µm,1.6s						
TEOL	**Teolo**	**1.32**	**17**	P	**Pn**	**09 56 40.3**	**-1.2**
TEOL				AML	AML		
	comp=N,3770µm,1.0s						
TEOL				AML	AML		
	comp=E,6275µm,1.4s						
BOB	**Bobbio (Coli)**	**1.36**	**300**	P	**Pg**	**09 56 44.1**	**+1.1**
BOB				AML	AML		
	comp=N,2465µm,0.9s						
BOB				AML	AML		
	comp=E,2100µm,1.1s						
BOB				AML	AML		
	comp=E,1855µm,1.2s						
BOB				AML	AML		
	comp=N,2545µm,0.9s						
ATCC	**AVT- Casa Cast**	**1.44**	**129**	AML	AML		
	comp=N,1550µm,1.0s						
ATCC				AML	AML		
	comp=E,2065µm,1.3s						
ATCC				AML	AML		
	comp=N,1555µm,1.0s						
ATCC				AML	AML		
	comp=E,2070µm,1.3s						
CELB	**S.Piero in Cam**	**1.50**	**206**	P	**Pn**	**09 56 43.0**	**-1.0**
ROVR	**Rover Verones**	**1.55**	**359**	P	**Pn**	**09 56 43.7**	**-1.0**
ROVR				AML	AML		
	comp=N,540µm,0.3s						
ROVR				AML	AML		
	comp=E,302µm,1.4s						
MAGA	**Magasa**	**1.71**	**349**	P	**Pn**	**09 56 46.8**	**-0.1**
MAGA				AML	AML		
	comp=E,2660µm,0.4s						
MAGA				AML	AML		
	comp=N,1355µm,0.5s						
FDMO	**Fiordimonte**	**1.79**	**126**	AML	AML		
	comp=N,617µm,0.9s						
FDMO				AML	AML		
	comp=E,389µm,0.5s						
CESX	**Cesi**	**1.83**	**144**	AML	AML		
	comp=N,644µm,1.3s						
CESX				AML	AML		
	comp=E,579µm,0.6s						
PCP	**Piancastagn**	**1.89**	**284**	P	**Pn**	**09 56 48.5**	**-0.9**
FINB	**Finale Ligure**	**2.01**	**273**	AML	AML		
	comp=N,224µm,0.9s						
FINB				AML	AML		
	comp=E,215µm,0.8s						
POLC	**Polcenigo**	**2.17**	**27**	AML	AML		
	comp=N,900µm,0.5s						
POLC				AML	AML		
	comp=E,650µm,0.6s						
PGF	**Pioggiola**	**2.19**	**226**	P	**Pn**	**09 56 53.0**	**-0.4**
PGF				S	**Sn**	**09 57 20.8**	**+0.2**
PGF	**Pioggiola**	**2.19**	**226**	*e*Pn	**Pn**	**09 56 52.9**	**-0.5**
PGF				*e*Sn	**Sn**	**09 57 19.4**	**-1.2**
	comp=E,23nm,0.3s						
GBOS	**Grotte di Boss**	**2.36**	**275**	P	**Pn**	**09 56 54.9**	**-0.9**
GBOS				AML	AML		
	comp=E,134µm,1.1s						
GBOS				AML	AML		
	comp=N,166µm,1.2s						
MGRO	**Montegrosso**	**2.38**	**270**	P	**Pn**	**09 56 55.3**	**-0.9**
MGRO				AML	AML		
	comp=E,455µm,0.6s						
MGRO				AML	AML		
	comp=N,261µm,1.1s						
SMPL	**Sampolo**	**2.41**	**214**	P	**Pn**	**09 56 57.0**	**+0.6**
STAL	**STALIGIAL**	**2.44**	**27**	P	**Pn**	**09 56 55.6**	**-1.3**
TRI	**Trieste**	**2.48**	**49**	AML	AML		
	comp=N,180µm,1.2s						
TRI				AML	AML		
	comp=E,178µm,0.9s						
SKDS	**Skadanscina**	**2.52**	**54**	*i* Pn	**Pn**	**09 56 56.2**	**-1.7**
SKDS				*e*Sn	**Sn**	**09 57 29.0**	**+0.1**
SKDS				IAML		09 57 49.4	
	comp=Z,56nm,0.4s						
MOSI	**Grossmontoni**	**2.55**	**351**	AML	AML		
	comp=E,703µm,0.7s						
MOSI				AML	AML		
	comp=N,685µm,1.3s						
SAOF	**Saorge**	**2.56**	**269**	P	**Pn**	**09 56 58.3**	**-0.2**
SAOF	**Saorge**	**2.56**	**269**	AML	AML		
	comp=N,396µm,0.9s						
SAOF				AML	AML		
	comp=E,242µm,0.7s						
SABO	**M.te Sabotino**	**2.58**	**42**	P	**Pn**	**09 56 57.4**	**-1.4**
SABO				AML	AML		
	comp=E,389µm,0.7s						
SABO				AML	AML		
	comp=N,422µm,0.5s						
ABSI	**Aberstueckl**	**2.63**	**3**	AML	AML		
	comp=E,643µm,0.8s						
ABSI				AML	AML		
	comp=N,600µm,0.5s						
SBF	**Sospel**	**2.66**	**266**	*e*Pn	**Pn**	**09 56 59.6**	**-0.3**
SBF				*e*Sn	**Sn**	**09 57 31.0**	**-1.3**
	comp=N,40nm,0.4s						
TURF	**col de Turini**	**2.68**	**269**	P	**Pn**	**09 57 00.3**	**0.0**
TURF				S	**Sn**	**09 57 33.3**	**+0.3**
NVLJ	**Novalja**	**2.74**	**79**	*e*Pn	**Pn**	**09 57 00.4**	**-0.5**
NVLJ				Sn	**Sn**	**09 57 31.7**	**-2.4**
VOJS	**Vojsko**	**2.76**	**45**	*i* Pn	**Pn**	**09 56 59.5**	**-1.7**
VOJS				*e*Sn	**Sn**	**09 57 33.4**	**-1.3**
VOJS				IAML		09 58 02.5	
	comp=Z,202nm,1.0s						
DAVOX	**Davos/Dischmat**	**2.82**	**343**	Pg	**Pn**	**09 57 04.0**	**+1.8**
	comp=Z,3.0nm,0.3s,baz=157,slow=10,SNR=16						
DAVOX				Lg	Lg	09 57 38.2	
	comp=Z,5.2nm,0.3s,baz=9.3,slow=23,SNR=3.1						
CADS	**Cadrg**	**2.83**	**40**	*i* Pn	**Pn**	**09 57 00.8**	**-1.3**
ABTA	**Abfaltersbach**	**2.83**	**20**	*e*Pn	**Pn**	**09 57 02.8**	**+0.6**
	comp=Z,9.1nm,0.3s						
ABTA				*e*Sn	**Sn**	**09 57 38.3**	**+1.9**
	comp=Z,63nm,0.7s						
DUGI	**Dugi Otok**	**2.85**	**91**	*e*Pn	**Pn**	**09 57 03.7**	**+1.3**
ISO	**Isola**	**2.92**	**273**	P	**Pn**	**09 57 03.7**	**+0.2**
RISI	**Rein**	**2.93**	**13**	AML	AML		
	comp=N,396µm,0.4s						
RISI				AML	AML		
	comp=E,349µm,0.5s						
FETA	**Feichten**	**2.93**	**355**	*e*Pn	**Pn**	**09 57 05.1**	**+1.3**
	comp=E,8.5nm,0.3s,SNR=17						
FETA				*e*Sn	**Sn**	**09 57 41.3**	**+2.1**
	comp=E,29nm,0.8s						
ACOM	**Acomizza, Ital**	**2.98**	**34**	AML	AML		
	comp=N,304µm,1.4s						
ACOM				AML	AML		
	comp=E,290µm,0.8s						
CALF	**Calern**	**3.04**	**265**	P	**Pn**	**09 57 05.0**	**-0.2**
CALF				S	**Sn**	**09 57 40.8**	**-1.1**
MYKA	**Terra Mystica**	**3.10**	**34**	*i* Pn	**Pn**	**09 57 05.5**	**-0.4**
	comp=E,15nm,0.6s,SNR=5.9						
MYKA				*e*Sn	**Sg**	**09 57 57.7**	**+1.5**
	comp=E,45nm,0.7s						
LJU	**Ljubljana**	**3.11**	**50**	AML	AML		
	comp=N,562µm,1.2s						
LJU				AML	AML		
	comp=E,520µm,1.3s						
SURF	**Saint Ours**	**3.11**	**279**	P	**Pn**	**09 57 06.2**	**0.0**
SQTA	**Sankt Quirin**	**3.12**	**1**	*i* Pn	**Pn**	**09 57 07.4**	**+1.1**
	comp=E,23nm,0.5s,SNR=18						
SQTA				*e*Sn	**Sn**	**09 57 45.2**	**+1.4**
	comp=E,58nm,0.4s						
MBDF	**Montbardon**	**3.17**	**283**	*e*Pn	**Pn**	**09 57 06.5**	**-0.5**
MBDF				*e*Sn	**Sn**	**09 57 43.8**	**-1.2**
	comp=E,24nm,0.7s						
WTTA	**Wattenberg**	**3.19**	**6**	*i* Pn	**Pn**	**09 57 09.3**	**+2.1**
	comp=E,13nm,0.2s,SNR=6.0						
WTTA				*e*Sn	**Sg**	**09 57 59.7**	**+0.6**
	comp=E,33nm,0.4s						
PLONS	**Plons/SG**	**3.19**	**338**	*e*Pn	**Pn**	**09 57 09.0**	**+1.8**
PLONS	**Plons/SG**	**3.19**	**338**	AML	AML		
	comp=E,90µm,1.0s						
PLONS				AML	AML		
	comp=N,107µm,1.2s						
MOTA	**Moosalm**	**3.25**	**360**	*i* Pn	**Pn**	**09 57 09.3**	**+1.3**
	comp=N,33nm,0.5s,SNR=12						
MOTA				*e*Sn	**Sn**	**09 57 49.0**	**+2.1**
	comp=N,28nm,0.4s						
WATA	**Walderalm**	**3.25**	**6**	*i* Pn	**Pn**	**09 57 10.2**	**+2.1**
	comp=N,14nm,0.3s,SNR=14						
WATA				*e*Sn	**Sn**	**09 57 48.9**	**+1.9**
	comp=N,29nm,0.4s						
FRF	**La Foret Royal**	**3.27**	**262**	*e*Pn	**Pn**	**09 57 07.9**	**-0.4**
FRF	**La Foret Royal**	**3.27**	**262**	*e*P	**Pn**	**09 57 10.9**	**+2.6**
FRF				*e*Sn	**Sn**	**09 57 45.0**	**-2.3**
	comp=N,63nm,0.7s						
DAVA	**Damuels**	**3.30**	**345**	*i* Pn	**Pn**	**09 57 10.8**	**+2.0**
	comp=N,15nm,0.4s,SNR=10						
DAVA				*e*Sn	**Sn**	**09 57 50.7**	**+2.4**
	comp=N,81nm,0.4s						
DAVA	**Damuels**	**3.30**	**345**	*e*Pn	**Pn**	**09 57 10.7**	**+2.0**
ZIRJ	**Zirje**	**3.31**	**96**	*e*Pn	**Pn**	**09 57 09.4**	**+0.6**
ZIRJ				Sn	**Sn**	**09 57 46.5**	**-1.6**
ZUGS	**Zugspitze, Sch**	**3.32**	**358**	*e*Pn	**Pn**	**09 57 10.9**	**+1.8**
MORI	**Morici**	**3.33**	**92**	*e*Pn	**Pn**	**09 57 10.1**	**+1.1**
MORI				Sn	**Sn**	**09 57 47.8**	**-0.8**
OBER	**Oberstdorf**	**3.36**	**350**	*e*Pn	**Pn**	**09 57 11.2**	**+1.7**
KBA	**Koelnbreinsper**	**3.37**	**27**	*i* Pn	**Pn**	**09 57 10.3**	**+0.6**
	comp=N,18nm,0.4s,SNR=7.6						
KBA				*e*Sn	**Sn**	**09 57 50.1**	**+0.2**
KBA	**Koelnbreinsper**	**3.37**	**27**	*e*Pn	**Pn**	**09 57 10.2**	**+0.5**
RETA	**Reutte**	**3.40**	**356**	*i* Pn	**Pn**	**09 57 11.3**	**+1.3**
	comp=N,27nm,0.5s,SNR=14						

RETA				*e*Sn	**Sn**	**09 57 52.6**	**+2.2**
	comp=N,16nm,0.4s						
PART	**Garmisch-Parte**	**3.40**	**0**	*e*Pn	**Pn**	**09 57 11.5**	**+1.5**
LPG	**La Plagne**	**3.40**	**296**	*e*P	**Pn**	**09 57 12.8**	**+2.5**
LPG				*e*Sn	**Sn**	**09 57 48.8**	**-2.1**
	comp=N,43nm,0.8s						
OBKA	**Obir**	**3.42**	**44**	*e*Pn	**Pn**	**09 57 09.7**	**-0.6**
	comp=N,7.6nm,0.4s						
OBKA				*e*Sn	**Sn**	**09 57 53.0**	**+1.9**
	comp=N,57nm,0.6s						
LMR	**La Mourre**	**3.42**	**259**	*e*Pn	**Pn**	**09 57 09.7**	**-0.6**
LMR	**La Mourre**	**3.42**	**259**	*e*P	**Pn**	**09 57 13.2**	**+2.9**
LMR				*e*Sn	**Sn**	**09 57 48.5**	**-2.4**
	comp=N,17nm,0.5s						
LPL	**La Plagne**	**3.42**	**296**	*e*P	**Pn**	**09 57 13.0**	**+2.5**
LPL				*e*Sn	**Sn**	**09 57 48.6**	**-2.7**
	comp=N,18nm,0.5s						
UBR	**Ueberruh**	**3.65**	**349**	*e*Pn	**Pn**	**09 57 14.6**	**+1.1**
SOKA	**Soboth**	**3.78**	**46**	*e*Pn	**Pn**	**09 57 14.4**	**-0.9**
	comp=N,8.3nm,0.5s						
SOKA				*e*Sn	**Sn**	**09 57 58.3**	**-1.6**
	comp=N,10nm,0.5s						
KIJV	**Kijevo**	**3.82**	**90**	*e*Pn	**Pn**	**09 57 16.4**	**+0.6**
KIJV				Sn	**Sn**	**09 57 59.1**	**-1.7**
ORIF	**Oris-en-Rattie**	**3.83**	**284**	P	**Pn**	**09 57 18.0**	**+2.0**
ORIF	**Oris-en-Rattie**	**3.83**	**284**	*e*P	**Pn**	**09 57 18.0**	**+2.0**
ORIF				*e*Sn	**Sn**	**09 57 59.1**	**-2.1**
	comp=N,52nm,1.0s						
ARTF	**Artigues**	**3.87**	**264**	P	**Pn**	**09 57 17.0**	**+0.5**
HVAR	**Hvar**	**3.98**	**102**	*e*Pn	**Pn**	**09 57 20.1**	**+2.1**
HVAR				Sn	**Sn**	**09 58 03.5**	**-1.3**
SMRF	**Simiane la Rot**	**3.99**	**270**	*e*P	**Pn**	**09 57 19.8**	**+1.6**
SMRF				*e*Sn	**Sn**	**09 58 02.7**	**-2.4**
	comp=N,11nm,0.6s						
RUSF	**Rustrel**	**4.06**	**270**	P	**Pn**	**09 57 20.2**	**+1.1**
CABF	**La Chapelle**	**4.34**	**307**	*e*P	**Pn**	**09 57 24.6**	**+1.6**
CABF				*e*Sn	**Sn**	**09 58 10.7**	**-3.0**
	comp=N,25nm,0.8s						
MOA	**Molln**	**4.35**	**29**	*i* Pn	**Pn**	**09 57 23.8**	**+0.7**
	comp=N,17nm,0.7s,SNR=5.9						
MOA				*e*Sn	**Sn**	**09 58 14.8**	**+0.9**
	comp=N,9.9nm,0.3s						
MOA	**Molln**	**4.35**	**29**	*e*Pn	**Pn**	**09 57 23.6**	**+0.6**
RICI	**Ricice**	**4.40**	**96**	*e*Pn	**Pn**	**09 57 25.6**	**+1.8**
RICI				Sn	**Sn**	**09 58 14.2**	**-1.0**
ARSA	**Arzberg**	**4.42**	**43**	*e*Pn	**Pn**	**09 57 23.3**	**-0.7**
	comp=N,9.3nm,0.5s						
ARSA				*e*Sn	**Sn**	**09 58 14.5**	**-1.0**
	comp=N,6.2nm,0.6s						
ARSA	**Arzberg**	**4.42**	**43**	*e*Pn	**Pn**	**09 57 23.3**	**-0.7**
NORI	**Noerdlinger Ri**	**4.63**	**356**	*e*Pn	**Pn**	**09 57 27.1**	**+0.1**
BFO	**Black Forest**	**4.65**	**336**	*e*Pn	**Pn**	**09 57 27.5**	**+0.2**
VIVF	**Saint-Julien-l**	**4.67**	**282**	*e*Pn	**Pn**	**09 57 26.6**	**-0.9**
VIVF				*e*Sn	**Sn**	**09 58 17.9**	**-3.8**
	comp=N,7.8nm,0.7s						
HINF	**Hinteralfeld**	**4.76**	**323**	*e*Pn	**Pn**	**09 57 27.6**	**-1.1**
HINF				*e*Sn	**Sn**	**09 58 19.8**	**-4.1**
	comp=N,27nm,0.7s						
CONA	**Conrad Observa**	**5.06**	**39**	*e*Pn	**Pn**	**09 57 32.3**	**-0.6**
	comp=N,4.1nm,0.5s						
CONA				*e*Sn	**Sn**	**09 58 29.3**	**-2.2**
	comp=N,8.2nm,0.4s						
CDF	**Champ du Feu**	**5.07**	**330**	*e*Pn	**Pn**	**09 57 31.5**	**-1.5**
CDF				*e*Sn	**Sn**	**09 58 26.5**	**-5.1**
	comp=N,26nm,0.8s						
GEC2	**GERESS Array S**	**5.07**	**20**	*e*Pn	**Pn**	**09 57 32.3**	**-0.8**
GERES	**GERESS Array B**	**5.07**	**20**	Pn	**Pn**	**09 57 31.9**	**-1.2**
	comp=N,1.2nm,0.3s,baz=194,slow=12,SNR=35						
GERES				Sn	**Sn**	**09 58 28.9**	**-2.9**
	comp=N,1.9nm,0.3s,baz=192,slow=19,SNR=8.2						
GERES				LR	LR	09 59 44.7	
	comp=N,75nm,20.2s,baz=168,slow=42						
HAU	**Haudompre**	**5.12**	**321**	*e*P	**Pn**	**09 57 34.2**	**+0.5**
HAU				*e*Sn	**Sn**	**09 58 28.4**	**-4.5**
	comp=N,30nm,0.6s						
WET	**Wettzell**	**5.19**	**13**	*e*Pn	**Pn**	**09 57 35.2**	**+0.6**
LASF	**Ste Croix**	**5.22**	**272**	*e*Pn	**Pn**	**09 57 34.3**	**-0.8**
LASF				*e*Sn	**Sn**	**09 58 31.9**	**-3.5**
	comp=N,2.6nm,0.3s						
SOP	**Sopron**	**5.23**	**45**	*e*PN	**Pn**	**09 57 34.4**	**-0.7**
KHC	**Kasperske Hory**	**5.31**	**18**	*e*PN	**Pn**	**09 57 35.5**	**-0.8**
KHC				*e*x	x	09 57 58.0	
KHC				*e*SN	**Sn**	**09 58 34.7**	**-2.9**
KHC				*e*SG	**Sg**	**09 59 10.0**	**+2.7**
MPLH	**Magyarpolny**	**5.46**	**53**⇑	*e*PN	**Pn**	**09 57 38.5**	**+0.3**
SMF	**Signal de Mont**	**5.72**	**299**	*e*Pn	**Pn**	**09 57 40.9**	**-1.0**
SMF				*e*Sn	**Sn**	**09 58 42.9**	**-4.7**
ROTZ	**Rotzenmuhle**	**5.72**	**7**	*e*Pn	**Pn**	**09 57 40.4**	**-1.5**
MORH	**Mrgy, Hungar**	**5.73**	**66**	*e*PN	**Pn**	**09 57 39.9**	**-2.1**
PAGF	**Fort de Pagny**	**5.81**	**322**	*e*P	**Pn**	**09 57 44.1**	**+1.0**
	baz=144						
PAGF				*e*Sn	**Sn**	**09 58 43.5**	**-6.3**
	comp=N,6.6nm,0.6s						
ZST	**Bratislava**	**5.84**	**43**	*e*PN	**Pn**	**09 57 42.3**	**-1.2**
SFTF	**Sexfontaines**	**5.88**	**316**	*e*P	**Pn**	**09 57 46.2**	**+2.1**
	baz=137						
LOR	**Lormes**	**5.99**	**304**	*e*Pn	**Pn**	**09 57 44.9**	**-0.7**
	baz=125						
LOR				*e*Sn	**Sn**	**09 58 49.9**	**-4.3**
	comp=N,24nm,0.6s						
MODS	**Modra-Piesok**	**6.05**	**43**	*e*PN	**Pn**	**09 57 44.4**	**-2.0**
MODS				*e*SN	**Sn**	**09 58 47.9**	**-7.8**
MEZF	**Maizieres J'vi**	**6.08**	**319**	*e*Pn	**Pn**	**09 57 45.2**	**-1.6**
	baz=136						
MEZF				*e*Sn	**Sn**	**09 58 51.6**	**-4.9**
	comp=N,6.6nm,0.4s						
AVF	**Avril sur Loir**	**6.08**	**299**	*e*P	**Pn**	**09 57 48.8**	**+1.9**
AVF				*e*Sn	**Sn**	**09 58 51.4**	**-5.1**
	comp=N,4.8nm,0.7s						
SSF	**Saint Saulge**	**6.10**	**302**	*e*Pn	**Pn**	**09 57 46.9**	**-0.2**
SSF				*e*Sn	**Sn**	**09 58 52.4**	**-4.6**
	comp=N,11nm,0.6s						
SAVF	**Savonnieres en**	**6.13**	**320**	*e*P	**Pn**	**09 57 49.1**	**+1.6**
	baz=141						
SAVF				*e*Sn	**Sn**	**09 58 51.6**	**-6.0**
	comp=N,16nm,0.6s						
KRUC	**Moravsky**	**6.16**	**34**	*e*PN	**Pn**	**09 57 46.8**	**-1.1**
NKC	**Novy Kostel**	**6.20**	**8**	*e*PN	**Pn**	**09 57 47.0**	**-1.5**
BGF	**Bois d'Agland**	**6.32**	**296**	*e*Pn	**Pn**	**09 57 49.4**	**-0.7**
BGF				*e*Sn	**Sn**	**09 58 57.6**	**-4.8**
	comp=N,15nm,0.7s						
PRU	**Pruhonice**	**6.34**	**20**	*e*PN	**Pn**	**09 57 48.9**	**-1.5**
PRU				*e*SN	**Sn**	**09 58 59.4**	**-3.5**
TNS	**Taunus Mts**	**6.39**	**344**	*e*Pn	**Pn**	**09 57 51.7**	**+0.6**
VRAC	**Vranov**	**6.43**	**34**	*e*PN	**Pn**	**09 57 50.5**	**-1.1**
MTLF	**Montolieu**	**6.49**	**266**	*e*Pn	**Pn**	**09 57 52.1**	**-0.3**
MTLF				*e*Sn	**Sn**	**09 59 02.6**	**-3.9**
	comp=N,2.1nm,0.4s						
MOX	**Moxa**	**6.56**	**3**	*e*Pn	**Pn**	**09 57 53.7**	**+0.3**
JAVC	**Velka Javorina**	**6.57**	**41**	*e*PN	**Pn**	**09 57 52.3**	**-1.3**
TCF	**Toulx Ste Croi**	**6.66**	**292**	*e*P	**Pn**	**09 57 57.8**	**+3.0**
TCF				*e*Sn	**Sn**	**09 59 05.2**	**-5.5**
	comp=N,4.7nm,0.6s						
HYF	**Humbligny**	**6.72**	**301**	*e*Pn	**Pn**	**09 57 54.7**	**-1.0**
VYHS	**Vyhne**	**6.92**	**48**	*e*PN	**Pn**	**09 57 58.0**	**-0.4**
VYHS				*e*		09 59 16.8	
BRG	**Berggiesshubel**	**7.04**	**15**	Pn	**Pn**	**09 58 00.1**	**0.0**
BRG				Amp		09 58 02.5	
	comp=Z,6.1nm,0.8s						
BRG				*e*x	x	09 59 45.0	
BRG				Amp		10 00 26.9	
	comp=Z,10nm,1.1s						
BRG	**Berggiesshubel**	**7.04**	**15**	Pn	**Pn**	**09 58 00.1**	**0.0**
BRG				Amp		09 58 02.5	
	comp=Z,6.1nm,0.8s						
BRG				*e*x	x	09 59 45.0	
BRG				Amp		10 00 26.9	
	comp=Z,10nm,1.1s						
CLL	**Collm**	**7.33**	**9**	*e*Pn	**Pn**	**09 58 02.0**	**-1.9**
	comp=Z,10.0nm,0.4s						
CLL				*e*		09 59 22.0	
CLL				*e*		09 59 34.0	
CLL				*e*		09 59 50.0	
CLL				Lm	MLR	10 00 00.0	
	comp=Z,100nm,19.2s						
CLL				*e*Sg	**Sg**	**10 00 15.0**	**+3.2**
	comp=Z,35nm,1.6s						
MLR	**Muntele Rosu**	**10.64**	**77**	LR	LR	10 02 59.4	
	comp=Z,92nm,19.2s,baz=126,slow=38						
FINES	**FINESS Array B**	**19.50**	**22**	P	**P**	**10 00 44.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=222,slow=5.1,SNR=4.2						
FINES				LR	LR	10 08 37.2	
	comp=Z,41nm,19.2s,baz=227,slow=38						
KBZ	**Khabaz**	**22.83**	**80**	P	**P**	**10 01 23.5**	**+3.5**
	comp=Z,2.0nm,0.8s,baz=342,slow=9.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**31.89**	**198**	LR	LR	10 17 08.2	
	comp=Z,51nm,20.3s,baz=320,slow=39						
KURBB	**Kurchatov Arra**	**44.70**	**57**	P	**P**	**10 04 30.9**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=194,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**48.43**	**60**	P	**P**	**10 04 59.3**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=279,slow=8.1,SNR=3.5						
YKA	**Yellowknife Ar**	**65.23**	**335**	P	**P**	**10 06 58.0**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=51,slow=7.0,SNR=12						
ULM	**Lac du Bonnet**	**66.63**	**318**	P	**P**	**10 07 05.8**	**-1.6**
	comp=Z,1.7nm,0.5s,baz=35,slow=6.2,SNR=3.9						
TXAR	**Lajitas Array**	**85.73**	**307**	P	**P**	**10 08 57.9**	**+1.4**
	comp=Z,0.9nm,1.1s,baz=61,slow=3.8,SNR=5.4						

DDA 23 10:10:40.1,38°.49N×27°.14E,h8^{km}±3^{km},ML1.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	**0.47**	**354**	*i* P	Pg	10 10 49.7	+0.4
ZEDA				IAML		10 10 56.0	
	comp=N,45nm,0.3s						
ZEDA				*i* S	Sg	10 10 56.2	+0.6
ZEDA				IAML		10 10 58.0	
	comp=E,34nm,0.3s						
STEP	**BALIKESIR_Sava**	**0.99**	**27**	*i* P	Pb	10 10 59.5	-0.2
STEP				*i* S	Sb	10 11 13.5	+0.6
STEP				IAML		10 11 17.0	
	comp=E,13nm,0.4s						
STEP				IAML		10 11 18.0	
	comp=N,18nm,0.8s						
BAYC	**CANAKKALE_Bayr**	**1.33**	**340**	*i* P	Pg	10 11 05.5	-0.1
BAYC				*i* S	Sg	10 11 22.7	-0.1
BAYC				IAML		10 11 28.0	
	comp=N,7.0nm,0.6s						
BAYC				IAML		10 11 30.0	
	comp=E,11nm,1.1s						

ISK 23 10:10:51.6,37°.19N×27°.94E,h0^{km}±1^{km},ML1.7/3, Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.17**	**310**	PG	Pg	10 10 57.4	+2.5
MLSB				SG	Sg	10 11 01.2	+4.1
YER	**Yerkesik**	**0.28**	**100**	PG	Pb	10 10 58.7	-0.8
YER				SG	Sb	10 11 03.9	-0.9
TURN	**Turunc**	**0.48**	**149**	PG	Pb	10 11 01.9	-0.9
TURN				SG	Sb	10 11 09.5	-0.9

ISK ***23*** *10:19:42.1,40°.07N×28°.59E,h5^{km},ML4.5/51*

MED_RC ***23*** *10:19:42.0±0.6,40°.16N×28°.61E,h10^{km},MW4.5/9, Moment Tensor Solution.Mantle waves: s9,c9; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.35±.45; M$_{\theta\theta}$4.00±.45; M$_{\phi\phi}$-0.65±.43; M$_{r\theta}$4.51±1.54; M$_{\theta\phi}$-0.24±.38; M$_{\phi r}$-1.93±1.85; Best double couple: M$_0$6.15000×10^{15} NP1:φ$_s$74.00000°,δ21.00000°,λ-124.00000°. NP2: φ$_s$290.00000°,δ72.00000°,λ-78.00000°. Principal axes: T 6.3100, Plg26.0000°, Azm10.0000°; N -0.3000, Plg12.0000°, Azm106.0000°; P -6.0000, Plg61.0000°, Azm218.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***23*** *10:19:43.6,40°.06N×28°.65E,h1^{km},ML4.4/8 Error ellipse: s-maj=1.0km s-min=0.5km az=55.0*

DDA ***23*** *10:19:43.0,40°.05N×28°.58E,h13^{km}±1^{km},MW4.3*

IDC ***23*** *10:19:43.3±0.7,40°.02N×28°.60E,h0^{km},mb4.0/20, mb1 4.0/26,mb1mx3.9/59,mbtmp3.9/26,ML3.8/7,MS3.4/22, Ms1 3.4/22,ms1mx3.2/52,Error ellipse: s-maj=12.7km s-min=9.0km az=32.0*

MOS ***23*** *10:19:43.1±1.1,40°.05N×28°.59E,h9^{km},mb4.4/19,Error ellipse: s-maj=5.7km s-min=4.0km az=91.1*

NEIC ***23*** *10:19:44.6±2.5,40°.07N±0°.04×28°.60E±0°.04,h10^{km}±1^{km}, Error ellipse: s-maj=7.6km s-min=4.4km az=210.0*

SOF ***23*** *10:19:47.8,40°.24N×28°.27E,h17^{km},MD4.3*

ISC 23 10:19:43.4±1.0,40°.07N±0°.01×28°.59E±0°.01,h1^{km}±6^{km}, n393,σ1^{s}43/460,mb4.2/38,MS3.5/12,34C-33D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORLT	**Orhaneli**	**0.23**	**95**	PG	**Pg**	**10 19 47.9**	**0.0**
ORLT				SG	**Sg**	**10 19 52.3**	**+1.4**
ORLT	**Orhaneli**	**0.23**	**95**	Pg	**Pg**	**10 19 47.9**	**0.0**
KCTX	**Karacabey (Bur**	**0.27**	**318**	Pg	**Pg**	**10 19 48.9**	**+0.4**
KCTX				Sg	**Sg**	**10 19 53.7**	**+1.7**
MDNY	**Mudanya-Bursa**	**0.37**	**37**	PG	**Pg**	**10 19 50.9**	**+0.3**
MDNY				SG	**Sg**	**10 19 57.0**	**+1.6**
MDNY	**Mudanya-Bursa**	**0.37**	**37**	Pg	**Pg**	**10 19 50.8**	**+0.3**
ULDT	**Uludag**	**0.42**	**80**⇑	*i*P	**Pg**	**10 19 51.6**	**+0.1**
ULDT				*i* S	**Sg**	**10 19 57.2**	**+0.2**
ULDT				IAML		10 19 58.0	
	comp=N,10μm,0.3s						
DST	**Dursunbey**	**0.46**	**177**	PG	**Pg**	**10 19 52.3**	**0.0**
DST	**Dursunbey**	**0.46**	**177**	P	**Pg**	**10 19 51.8**	**-0.4**
DST	**Dursunbey**	**0.46**	**177**	Pg	**Pg**	**10 19 51.8**	**-0.4**
DURS	**Dursunbey**	**0.47**	**191**⇑	*i*P	**Pg**	**10 19 52.5**	**0.0**
DURS				*i* S	**Sg**	**10 19 58.9**	**+0.3**
DURS				IAML		10 20 00.0	
	comp=N,9μm,0.4s						
DURS				IAML		10 20 02.0	
	comp=E,9μm,1.0s						
GEMT	**Gemlik**	**0.59**	**51**	PG	**Pg**	**10 19 54.9**	**+0.3**
GEMT	**Gemlik**	**0.59**	**51**	Pg	**Pg**	**10 19 55.0**	**+0.3**
EDC	**Edincik**	**0.62**	**297**	PG	**Pg**	**10 19 55.3**	**0.0**
EDC				SG	**Sg**	**10 20 05.3**	**+1.9**
EDC	**Edincik**	**0.62**	**297**	P	**Pg**	**10 19 55.3**	**0.0**
EDC	**Edincik**	**0.62**	**297**	Pg	**Pg**	**10 19 55.3**	**0.0**
BALB	**Balikesir**	**0.69**	**232**	PG	**Pg**	**10 19 56.9**	**+0.2**
BALB				SG	**Sg**	**10 20 06.9**	**+1.2**
BALB	**Balikesir**	**0.69**	**232**	Pg	**Pg**	**10 19 56.7**	**0.0**
TRML	**Termal-Yalova**	**0.70**	**39**	PG	**Pg**	**10 19 57.0**	**+0.2**
CFTB	**Yalova**	**0.80**	**42**	PG	**Pg**	**10 19 58.1**	**-0.7**
BALY	**Balya**	**0.82**	**247**⇓	*i*P	**Pg**	**10 19 58.0**	**-1.1**
BALY				*i* S	**Sg**	**10 20 09.0**	**-0.6**
BALY				IAML		10 20 15.0	
	comp=E,5μm,0.4s						
BALY				IAML		10 20 16.0	
	comp=N,11μm,0.8s						
MAR9	**Marsite Statio**	**0.88**	**309**	PG	**Pg**	**10 19 59.9**	**-0.2**
MAR9	**Marsite Statio**	**0.88**	**309**	Pg	**Pg**	**10 19 59.9**	**-0.2**
TVSB	**Tavsanli**	**0.91**	**132**	PG	**Pg**	**10 19 59.5**	**-1.3**
TVSB	**Tavsanli**	**0.91**	**132**	Pg	**Pg**	**10 19 59.5**	**-1.3**
AVCI	**Avcilar-stanb**	**0.93**	**6**	PG	**Pg**	**10 20 01.3**	**+0.1**
AVCI	**Avcilar-stanb**	**0.93**	**6**		**Pg**	**10 20 01.6**	**+0.4**
ADVT	**Abdulvahap**	**0.95**	**67**	PG	**Pg**	**10 20 01.3**	**-0.3**
ADVT	**Abdulvahap**	**0.95**	**67**		**Pg**	**10 20 02.8**	**+1.2**
STEP	**BALIKESIR_Sava**	**0.96**	**225**⇑	*i*P	**Pg**	**10 20 01.9**	**0.0**
STEP				*i* S	**Sg**	**10 20 15.0**	**+0.6**
STEP				IAML		10 20 21.0	
	comp=N,12μm,0.4s						
STEP				IAML		10 20 24.0	
	comp=E,10μm,0.6s						
CAVI	**Cavuskoy**	**0.97**	**82**	PG	**Pg**	**10 20 01.5**	**-0.4**
CAVI	**Cavuskoy**	**0.97**	**82**	Pg	**Pg**	**10 20 01.4**	**-0.6**
BILE	**Bilecik/Merkez**	**0.99**	**84**⇑	*i*P	**Pg**	**10 20 01.8**	**-0.6**
BILE				*i* S	**Sn**	**10 20 18.6**	**-0.5**
BILE				IAML		10 20 20.0	
	comp=N,5μm,0.5s						
BILE				IAML		10 20 21.0	
	comp=E,6μm,0.4s						
DEMI	**Demirci**	**1.03**	**175**⇑	*i*P	**Pg**	**10 20 02.7**	**-0.4**
DEMI				*i* S	**Sn**	**10 20 19.4**	**-0.7**
SIMA	**Simav-Kutahya**	**1.03**	**163**	PG	**Pg**	**10 20 03.0**	**-0.1**
SIMA	**Simav-Kutahya**	**1.03**	**163**	Pg	**Pg**	**10 20 02.0**	**-1.0**
KRBG	**Karabiga-Canak**	**1.04**	**289**	PG	**Pg**	**10 20 03.4**	**0.0**
KRBG	**Karabiga-Canak**	**1.04**	**289**	Pg	**Pg**	**10 20 03.4**	**0.0**
KAVV	**Kandilli-Istan**	**1.06**	**20**	PG	**Pg**	**10 20 03.7**	**+0.1**
KAVV				SG	**Sb**	**10 20 19.4**	**+0.6**
ISK	**Istanbul-Kandi**	**1.06**	**19**	P	**Pg**	**10 20 03.6**	**-0.1**
ISK				S	**Sb**	**10 20 18.9**	**+0.1**
	comp=E,11μm,0.4s						
ISK	**Istanbul-Kandi**	**1.06**	**19**	PG	**Pg**	**10 20 03.6**	**-0.1**
ISK	**Istanbul-Kandi**	**1.06**	**19**	P	**Pg**	**10 20 03.6**	**-0.1**
ISK	**Istanbul-Kandi**	**1.06**	**19**	Pg	**Pg**	**10 20 03.6**	**-0.1**
ELBA	**Catalca**	**1.08**	**354**⇑	*i*P	**Pg**	**10 20 04.2**	**+0.1**
ELBA				*i* S	**Sg**	**10 20 18.6**	**+0.4**
ELBA				IAML		10 20 20.0	
	comp=N,3μm,0.5s						
HRT	**Hereke**	**1.11**	**47**	PN	**Pb**	**10 20 04.1**	**-1.4**
HRT	**Hereke**	**1.11**	**47**	P	**Pb**	**10 20 04.0**	**-1.4**
AUBOZ	**BOZOYUK**	**1.12**	**98**	PN	**Pb**	**10 20 04.2**	**-1.3**
AUBOZ	**BOZOYUK**	**1.12**	**98**	*i* P	**Pb**	**10 20 03.1**	**-2.5**
AUBOZ				*i* S	**Sn**	**10 20 21.9**	**-0.4**
AUBOZ				IAML		10 20 23.0	
	comp=E,4μm,0.3s						
AUBOZ				IAML		10 20 25.0	
	comp=N,5μm,0.6s						
BGKT	**Bogazkoy**	**1.12**	**7**	PN	**Pb**	**10 20 04.7**	**-0.8**
ANDZ	**Kutahya, Merke**	**1.15**	**119**⇑	*i*P	**Pb**	**10 20 04.6**	**-1.5**
ANDZ				*i* S	**Sn**	**10 20 23.5**	**+0.3**
ANDZ				IAML		10 20 24.0	
	comp=N,4μm,0.6s						
ANDZ				IAML		10 20 25.0	
	comp=E,3μm,0.4s						
SHAP	**Saphane-Kutahy**	**1.15**	**155**	PN	**Pb**	**10 20 05.4**	**-0.7**
CTKS	**Kestanelik-??a**	**1.17**	**357**	PN	**Pb**	**10 20 05.4**	**-1.0**
GDZ	**Gediz**	**1.20**	**145**⇑	*i*P	**Pb**	**10 20 04.5**	**-2.4**
GDZ				*i* S	**Sn**	**10 20 23.5**	**-0.8**
GDZ				IAML		10 20 26.0	
	comp=N,2μm,0.6s						
GDZ				IAML		10 20 47.0	
	comp=E,679nm,1.1s						
SLVT	**Silivri**	**1.20**	**346**	PN	**Pb**	**10 20 06.2**	**-0.7**
GEDZ	**Gediz**	**1.20**	**148**	PN	**Pb**	**10 20 06.4**	**-0.6**
MAR4	**Marsite Statio**	**1.22**	**307**	PN	**Pn**	**10 20 06.6**	**-1.1**
TKR	**Tekirdag**	**1.22**	**319**	PN	**Pn**	**10 20 06.7**	**-0.9**
KLYT	**Kilyos**	**1.23**	**16**	PN	**Pn**	**10 20 06.9**	**-0.8**
SART	**Tekirdag**	**1.24**	**300**	*i* P	**Pn**	**10 20 05.4**	**-2.6**
SART				*i* S	**Sb**	**10 20 24.0**	**-0.3**
SART				IAML		10 20 26.0	
	comp=N,7μm,0.7s						
SART				IAML		10 20 26.0	
	comp=E,3μm,1.1s						
RKY	**Sarkoy-Tekirda**	**1.25**	**300**	PN	**Pn**	**10 20 07.1**	**-0.9**
KUTH	**Kutahya**	**1.29**	**121**	PN	**Pn**	**10 20 08.2**	**-0.5**
BUHA	**Balikesir, Bur**	**1.30**	**245**	*i* P	**Pn**	**10 20 07.5**	**-1.2**
BUHA				*i* S	**Sb**	**10 20 25.5**	**-0.2**
AKHS	**Akhisar**	**1.33**	**207**	*i* P	**Pn**	**10 20 08.1**	**-1.0**
AKHS				*i* S	**Sb**	**10 20 26.7**	**0.0**
AKHS				IAML		10 20 30.0	
	comp=E,4μm,0.4s						
SILT	**Sile**	**1.35**	**36**	PN	**Pn**	**10 20 08.5**	**-0.8**
GEYV	**SAKARYA_Geyve**	**1.37**	**72**⇑	*i*P	**Pn**	**10 20 09.1**	**-0.5**
GEYV				*i* S	**Sg**	**10 20 29.5**	**+2.2**
GEYV				IAML		10 20 36.0	
	comp=N,4μm,0.5s						
GEYV				IAML		10 20 52.0	
	comp=E,2μm,1.1s						
USAK	**Uak-Merkez**	**1.39**	**166**⇑	*i*P	**Pn**	**10 20 09.4**	**-0.6**
USAK				*i* S	**Sb**	**10 20 28.6**	**+0.1**
USAK				IAML		10 20 31.0	
	comp=N,3μm,0.3s						
USAK				IAML		10 20 34.0	
	comp=E,4μm,0.8s						
CTYL	**Yalikoy Yolu**	**1.42**	**351**	PN	**Pn**	**10 20 10.1**	**-0.3**
LPK	**Lapseki**	**1.44**	**283**	PN	**Pn**	**10 20 09.2**	**-1.3**
BORA	**Eskisehir**	**1.44**	**97**	PN	**Pn**	**10 20 10.3**	**-0.4**
BORA	**Eskisehir**	**1.44**	**97**⇑	*i*P	**Pn**	**10 20 10.0**	**-0.7**
BORA				*i* S	**Sg**	**10 20 31.8**	**+2.1**
BORA				IAML		10 20 35.0	
	comp=N,723nm,0.3s						
BORA				IAML		10 20 35.0	
	comp=E,930nm,0.3s						
SPNC	**Sapanca-Adapaz**	**1.45**	**64**	PN	**Pn**	**10 20 10.6**	**-0.1**
GOMA	**Golmarmara-Man**	**1.46**	**201**	PN	**Pn**	**10 20 10.4**	**-0.4**
SAUV	**Serdivan-Sakar**	**1.48**	**63**	PN	**Pn**	**10 20 10.9**	**-0.3**
GULT	**Gulveren**	**1.52**	**76**	PN	**Pn**	**10 20 11.8**	**+0.1**
KULA	**Kula-Manisa**	**1.55**	**178**	P	**Pn**	**10 20 11.3**	**-0.9**
KULA				S	**Sn**	**10 20 32.1**	**-0.9**
KULA	**Kula-Manisa**	**1.55**	**178**	PN	**Pn**	**10 20 11.6**	**-0.6**
SRCK	**Saricakaya, Es**	**1.56**	**90**	PN	**Pn**	**10 20 12.4**	**+0.1**
SRCK	**Saricakaya, Es**	**1.56**	**90**	*i* P	**Pn**	**10 20 12.5**	**+0.3**
SRCK				*i* S	**Sg**	**10 20 34.4**	**+0.8**
SRCK				IAML		10 20 40.0	
	comp=E,2μm,0.9s						
SRCK				IAML		10 20 44.0	
	comp=N,1μm,0.3s						
MANT	**Manisa**	**1.57**	**181**	*i* P	**Pn**	**10 20 13.1**	**+0.4**
MANT				*i* S	**Sn**	**10 20 33.5**	**-0.3**
MANT				IAML		10 20 37.0	
	comp=E,3μm,0.4s						
MANT				IAML		10 20 38.0	
	comp=N,2μm,0.6s						
MANT	**Manisa**	**1.57**	**181**		**Pn**	**10 20 12.4**	**-0.3**
MANT				Sn	**Sn**	**10 20 33.1**	**-0.7**
KAND	**Kocaeli-Kandir**	**1.59**	**49**⇑	*i*P	**Pn**	**10 20 12.1**	**-0.6**
KAND				*i* S	**Sn**	**10 20 33.5**	**-0.4**
KAND				IAML		10 20 36.0	
	comp=N,1μm,0.6s						
KAND				IAML		10 20 39.0	
	comp=E,2μm,0.5s						
KAYN	**Sakarya, Kayna**	**1.61**	**56**⇑	*i*P	**Pn**	**10 20 12.2**	**-0.7**
KAYN				*i* S	**Sg**	**10 20 35.8**	**+0.8**
KAYN				IAML		10 20 39.0	
	comp=E,928nm,0.5s						
KAYN				IAML		10 20 39.0	
	comp=N,1μm,0.5s						
BAYC	**CANAKKALE_Bayr**	**1.61**	**259**	*i* P	**Pn**	**10 20 11.9**	**-1.0**
BAYC				*i* S	**Sn**	**10 20 32.8**	**-1.4**
BAYC				IAML		10 20 38.0	
	comp=E,4μm,0.6s						
BAYC				IAML		10 20 41.0	
	comp=N,3μm,0.8s						
ZEDA	**zmir-Bergama**	**1.61**	**227**	*i* P	**Pn**	**10 20 11.6**	**-1.3**
ZEDA				*i* S	**Sn**	**10 20 33.5**	**-0.8**
VIZE	**Kirklareli, Vi**	**1.61**	**340**	*i* P	**Pn**	**10 20 12.2**	**-0.9**
VIZE				*i* S	**Sn**	**10 20 33.2**	**-1.2**
DKL	**Dikili**	**1.64**	**233**	PN	**Pn**	**10 20 12.8**	**-0.5**
KESN	**Edirne-Kesan**	**1.64**	**298**	*i* P	**Pn**	**10 20 12.7**	**-1.1**
KESN				*i* S	**Sb**	**10 20 36.3**	**+0.3**
AYVA	**Ayvalik**	**1.65**	**243**	*i* P	**Pn**	**10 20 12.6**	**-0.9**
AYVA				*i* S	**Sb**	**10 20 36.3**	**+0.4**
AYVA				IAML		10 20 41.0	
	comp=E,8μm,0.6s						
AYVA				IAML		10 20 41.0	
	comp=N,11μm,0.7s						
GELI	**Tayfur-Gelibol**	**1.66**	**282**	PN	**Pn**	**10 20 12.8**	**-0.7**
AUKIR	**Kırka- Seyitga**	**1.69**	**117**	*i* P	**Pb**	**10 20 15.6**	**+0.3**
AUKIR				*i* S	**Sg**	**10 20 39.2**	**+1.4**
AUKIR				IAML		10 20 45.0	
	comp=E,3μm,1.1s						
ERIK	**Erikli-Kesan**	**1.70**	**291**	PN	**Pn**	**10 20 14.4**	**+0.3**
EZN	**Ezine**	**1.76**	**263**	P	**Pn**	**10 20 14.5**	**-0.4**
EZN				S	**Sb**	**10 20 38.4**	**-0.6**
	comp=E,5μm,0.7s						
EZN	**Ezine**	**1.76**	**263**	PN	**Pn**	**10 20 14.6**	**-0.4**
EZN	**Ezine**	**1.76**	**263**	P	**Pn**	**10 20 14.5**	**-0.4**
PHSR	**Pinarhisar**	**1.76**	**333**	PN	**Pn**	**10 20 14.7**	**-0.3**
SGAZ	**Eskisehir, Sey**	**1.81**	**107**	*i* P	**Pn**	**10 20 15.9**	**+0.1**
SGAZ				*i* S	**Sb**	**10 20 40.3**	**-0.3**
SGAZ				IAML		10 20 46.0	
	comp=E,2μm,0.5s						
SGAZ				IAML		10 20 46.0	
	comp=N,987nm,0.5s						
UKOP	**Uzunkopru-Edir**	**1.83**	**306**	PN	**Pn**	**10 20 15.7**	**-0.3**
KHAL	**Karahalli**	**1.83**	**157**	*i* P	**Pn**	**10 20 15.6**	**-0.5**
KHAL				*i* S	**Sb**	**10 20 41.6**	**+0.4**
AFYO	**Afyonkarahisar**	**1.84**	**134**	*i* P	**Pn**	**10 20 16.6**	**+0.4**
AFYO				*i* S	**Sg**	**10 20 44.7**	**+2.2**
ECEA	**Canakkale, Ece**	**1.86**	**270**	*i* P	**Pn**	**10 20 16.0**	**-0.3**
ECEA				*i* S	**Sg**	**10 20 43.5**	**+0.5**
KHL	**Karahalli**	**1.89**	**157**	PN	**Pn**	**10 20 16.6**	**-0.2**
SAHE	**Sakarya_HENDEK**	**1.90**	**65**	*i* P	**Pn**	**10 20 16.4**	**-0.5**
SAHE				*i* S	**Sg**	**10 20 44.9**	**+0.6**
BTAS	**Taskesti**	**1.91**	**74**	*i* P	**Pn**	**10 20 16.1**	**-1.0**
BTAS				*i* S	**Sg**	**10 20 46.3**	**+1.6**
BTAS				IAML		10 20 52.0	
	comp=N,2μm,0.5s						
BTAS				IAML		10 21 24.0	
	comp=E,794nm,1.3s						
CAVK	**Edirne/Enez-Ca**	**1.95**	**289**	*i* P	**Pn**	**10 20 17.3**	**-0.4**
CAVK				*i* S	**Sb**	**10 20 45.7**	**+1.1**
CAVK				IAML		10 20 48.0	
	comp=N,3μm,0.8s						
CAVK				IAML		10 20 51.0	
	comp=E,5μm,0.7s						
BOZC	**Bozcaada**	**1.96**	**264**	PN	**Pn**	**10 20 17.4**	**-0.4**
PRK	**Paraskevi**	**1.97**	**246**	P	**Pn**	**10 20 18.2**	**+0.3**
PRK				S	**Sb**	**10 20 45.2**	**+0.1**
	comp=E,11μm,0.8s						
ENEZ	**Enez**	**1.98**	**290**	P	**Pn**	**10 20 17.6**	**-0.4**
ENEZ				S	**Sn**	**10 20 44.2**	**+0.8**
	comp=E,10μm,0.7s						
ENEZ	**Enez**	**1.98**	**290**	PN	**Pn**	**10 20 17.9**	**-0.1**

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ARMN  Kirklareli, Me    2.00 334 i P    Pn     10 20 17.8 -0.6
ARMN                             i S    Sn     10 20 38.4 -5.6
ARMN                               IAML        10 20 52.0
      comp=N,556nm,0.5s
ARMN                               IAML        10 20 54.0
      comp=E,731nm,0.6s
CIFT  Cifteler, Eski    2.03 110   PN   Pn     10 20 18.7 -0.1
CIFT  Cifteler, Eski    2.03 110 i P    Pn     10 20 18.3 -0.5
CIFT                             i S    Sg     10 20 50.8 +2.2
MDUB  Mudurnu           2.03  78   PN   Pn     10 20 18.7 -0.2
MDUB  Mudurnu           2.03  78   Pn   Pn     10 20 17.6 -1.3
GOKA  anakkale-Gk       2.06 274 i P    Pn     10 20 19.0 -0.2
GOKA                             i S    Sb     10 20 48.6 +0.9
GOKA                               IAML        10 20 50.0
      comp=E,19µm,0.5s
GOKA                               IAML        10 20 55.0
      comp=Z,4µm,0.6s
GADA  Gvkgeada          2.07 274   P    Pn     10 20 19.1 -0.1
GADA                               S    Sb     10 20 47.6 -0.3
      comp=Z,6µm,0.5s
GADA  Gvkgeada          2.07 274   PN   Pn     10 20 19.2  0.0
ALN   Alexandroupoli    2.11 294   P    Pn     10 20 19.1 -0.7
ALN                                S    Sb     10 20 48.6 -0.5
      comp=Z,4µm,0.6s
ALN   Alexandroupoli    2.11 294   PN   Pn     10 20 19.6 -0.2
ALN   Alexandroupoli    2.11 294   P    Pn     10 20 18.3 -1.5
ALN   Alexandroupoli    2.11 294   Pn   Pn     10 20 18.3 -1.5
SHUT  Suhut-Afyon       2.14 134   PN   Pn     10 20 20.3 -0.1
AUMIH MIHALICIK         2.23  94   PN   Pn     10 20 21.6  0.0
AUMIH MIHALICIK         2.23  94 i P    Pn     10 20 21.9 +0.3
AUMIH                            i S    Sg     10 20 56.0 +1.0
AUMIH                              IAML        10 21 01.0
      comp=E,1µm,0.4s
AUMIH                              IAML        10 21 07.0
      comp=N,871nm,1.2s
EDRB  Edirne            2.26 322   P    Pn     10 20 21.8 -0.1
EDRB  Edirne            2.26 322   PN   Pn     10 20 21.9  0.0
SIGR  SIGRI             2.28 249   P    Pn     10 20 21.4 -0.7
SIGR                               S    Sn     10 20 51.0 +0.2
      comp=N,9µm,0.7s
SVRH  Sivrihisar-ESK    2.34 104   PN   Pn     10 20 23.1  0.0
AUSIV SIVRIHISAR        2.36 105   PN   Pn     10 20 23.4 +0.1
AUSIV SIVRIHISAR        2.36 105 i P    Pn     10 20 23.5 +0.2
AUSIV                              IAML        10 21 14.0
      comp=E,181nm,1.3s
AUSIV                              IAML        10 21 17.0
      comp=N,396nm,1.4s
SMTH  Samothraki Isl    2.38 281   P    Pn     10 20 22.7 -0.8
SMTH                               S    Sb     10 20 55.6 -1.2
      comp=N,3µm,0.8s
YUVA  Yuva-Kibriscik    2.39  81   PN   Pn     10 20 23.6 -0.2
BASM  Basmaki-Afyon     2.43 152   PN   Pn     10 20 24.2 -0.1
KDZE  Karadeniz Ereo    2.50  59   PN   Pn     10 20 25.8 +0.6
RDO   Rodhopi           2.56 296   P    Pn     10 20 25.7 -0.3
GCAM  G?zelcaml?        2.59 205 i P    Pn     10 20 23.5 -2.9
GCAM                             i S    Sg     10 21 05.5 -1.1
GCAM                               IAML        10 21 13.0
      comp=N,2µm,1.0s
GCAM                               IAML        10 21 15.0
      comp=E,1µm,1.4s
LIA   Limnos Island     2.62 267   P    Pn     10 20 26.4 -0.5
BRDR  BURDUR-Merkez     2.63 154 i P    Pb     10 20 32.9 +1.5
BRDR                             i S    Sg     10 21 12.1 +4.1
BRDR                               IAML        10 21 17.0
      comp=N,757nm,1.4s
BRDR                               IAML        10 21 21.0
      comp=E,828nm,0.9s
BAGO  Egridir - ISPA    2.69 140 i P    Pn     10 20 28.7 +0.9
BAGO                             i S    Sg     10 21 12.5 +2.8
BAGO                               IAML        10 21 23.0
      comp=E,392nm,2.1s
BAGO                               IAML        10 21 28.0
      comp=N,298nm,1.5s
ISP   Isparta           2.70 146   P    Pn     10 20 27.8 -0.2
ISP   Isparta           2.70 146   Pn   Pn     10 20 27.8 -0.2
SMG   Samos             2.73 211   P    Pn     10 20 28.7 +0.4
BCAM  Yenicaga          2.75  73 i P    Pn     10 20 28.0 -0.8
BCAM                               IAML        10 21 22.0
      comp=N,380nm,0.7s
BCAM                               IAML        10 21 24.0
      comp=E,275nm,0.7s
JMB   Yambol            2.83 328   P    Pn     10 20 30.5 +0.7
JMB   Yambol            2.83 328   P    Pn     10 20 30.5 +0.7
GRDE  Gerede-Bolu       2.86  74   PN   Pn     10 20 30.8 +0.6
KDZ   Kurdzhali         2.88 304 i P    Pn     10 20 28.5 -1.9
KDZ   Kurdzhali         2.88 304 i P    Pn     10 20 28.5 -1.9
YER   Yerkesik          2.94 185   P    Pn     10 20 30.6 -0.7
THAS  Thassos island    3.01 282   P    Pn     10 20 30.9 -1.2
DIM   Dimitrovgrad      3.04 312   P    Pn     10 20 32.8 +0.1
DIM   Dimitrovgrad      3.04 312   P    Pn     10 20 32.8 +0.1
BTIN  Bartın            3.19  59 i P    Pn     10 20 33.9 -0.7
BR231 Keskin MP Arra    3.22  93   Pn   Pn     10 20 36.2 +0.9
KAVA  Kavala            3.24 288   P    Pn     10 20 35.0 -0.4
RZN   Rozhen            3.35 300 i P    Pn     10 20 37.1  0.0
RZN   Rozhen            3.35 300 i P    Pn     10 20 37.1  0.0
ELL   Elmali            3.47 162   P    Pn     10 20 38.6 -0.1
ELL   Elmali            3.47 162        Pn     10 20 38.6 -0.1
BBAL  Bala              3.53  97 i P    Pn     10 20 39.5  0.0
BBAL                             i S    Sg     10 21 41.1 +4.3
BBAL                               IAML        10 21 54.0
      comp=N,184nm,1.3s
BBAL                               IAML        10 22 00.0
      comp=E,180nm,0.9s
PLD   Plovdiv           3.58 306   P    Pn     10 20 40.0 +0.1
PLD   Plovdiv           3.58 306   P    Pn     10 20 40.0 +0.1
SZH   Strazhica         3.77 329   P    Pn     10 20 42.8 +0.2
SZH   Strazhica         3.77 329   P    Pn     10 20 42.8 +0.2
KYMI  Kymi, Euboea I    3.77 249   P    Pn     10 20 42.3 -0.3
ALIN  Konya, Altinte    3.77 117 i P    Pn     10 20 43.8 +1.1
ALIN                             i S    Sg     10 21 45.3 +0.8
NVR   Nevrokopi         3.82 291   P    Pn     10 20 42.1 -1.2
RAZG  Razgrad           3.83 337 ⇓P    Pn     10 20 44.8 +1.4
RAZG  Razgrad           3.83 337        Pn     10 20 44.8 +1.4
APE   Apeiranthos       3.84 220   P    Pn     10 20 42.7 -0.9
APE   Apeiranthos       3.84 220 ⇑P    Pb     10 20 53.8 +1.9
APE   Apeiranthos       3.84 220⇓eP    Pn     10 20 42.6 -1.0
BR131 Keskin Array S    3.90  93d iP    Pn     10 20 44.1 -0.5
BR131 Keskin Array S    3.90  93   Pn   Pn     10 20 44.0 -0.5
BRTR  Keskin Array B    3.90  93   Pn   Pn     10 20 44.6 +0.1
      comp=E,1.5nm,0.3s,baz=258,slow=10,SNR=52
BRTR                               Pg   Pg     10 20 56.4 -1.7
      comp=E,8.0nm,0.3s,baz=273,slow=16,SNR=48
BRTR                               Sn   Sn     10 21 30.4 -0.7
      comp=E,5.2nm,0.3s,baz=285,slow=29,SNR=8.8
BRTR                               Lg   Lg     10 21 49.5
      comp=E,4.8nm,0.3s,baz=261,slow=25,SNR=6.9
BRTR                               LR   LR     10 22 33.4
      comp=E,84nm,20.1s,baz=58,slow=44
AKAS  Kas               3.91 168        Pn     10 20 46.1 +1.4
SRS   Serrai            3.95 287   P    Pn     10 20 44.6 -0.5
PVL   Pavlikeni         3.98 323   P    Pn     10 20 45.5  0.0
PVL   Pavlikeni         3.98 323   P    Pn     10 20 45.5  0.0
MMB   Musomiste         3.99 294 i P    Pn     10 20 45.3 -0.4
MMB   Musomiste         3.99 294 i P    Pn     10 20 45.3 -0.4
ICOR  Ion Corvin        4.09 352 ⇓P    Pn     10 20 49.2 +2.2
MFTR  Murfatlar         4.11 358 ⇑P    Pn     10 20 49.6 +2.3
DION  Dionisos Attik    4.13 243   P    Pn     10 20 47.1 -0.6
AKSY  AKSARAY - Alti    4.25 108 i P    Pn     10 20 49.8 +0.5
AKSY                             i S    Sg     10 22 01.2 +1.3
TIRR  Tirgusor          4.39 358 ⇓P    Pn     10 20 52.2 +1.1
TIRR  Tirgusor          4.39 358   P    Pn     10 20 51.0 -0.1
TIRR  Tirgusor          4.39 358   Pn   Pn     10 20 51.0 -0.1
TIRR  Tirgusor          4.39 358        Pn     10 20 52.2 +1.1
TLBR  Topalu            4.49 355 ⇓P    Pn     10 20 54.3 +1.8
KKB   Krupnik           4.54 295   P    Pn     10 20 53.9 +0.6
KKB   Krupnik           4.54 295   P    Pn     10 20 53.9 +0.6
HARR  Harsova           4.64 354 ⇑P    Pn     10 20 57.0 +2.4
KARP  Karpathos         4.65 195        Pn     10 20 55.1 +0.3
LIT   Litokhoron        4.68 272   P    Pn     10 20 55.2  0.0
LIT   Litokhoron        4.68 272   Pn   Pn     10 20 55.2  0.0
JURR  Jurilovca         4.70   2 ⇓P    Pn     10 20 57.6 +2.2
VAY   Valandovo         4.75 287 i Pn   Pn     10 20 56.4 +0.4
VTS   Vitosha           4.77 304 ⇓P    Pn     10 20 58.2 +1.7
VTS   Vitosha           4.77 304   P    Pn     10 20 57.0 +0.5
VTS   Vitosha           4.77 304   P    Pn     10 20 57.0 +0.5
COPA  Copaceanca        4.78 329 ⇓P    Pn     10 20 56.5  0.0
COPA  Copaceanca        4.78 329        Pn     10 20 56.5  0.0
TPGR  Topolog           4.79 359 ⇑P    Pn     10 20 57.8 +1.2
TPGR  Topolog           4.79 359        Pn     10 20 57.8 +1.2
BOYA  Sinop/Boyabat-    4.85  70 i P    Pb     10 21 06.0 -3.1
BOYA                             i S    Sg     10 22 18.1 -1.0
BOYA                               IAML        10 22 29.0
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      comp=N,96nm,1.8s
BOYA                               IAML        10 23 53.0
      comp=E,23nm,1.9s
MPEP  Malo Peshtene     4.90 314   P    Pn     10 20 58.2 +0.1
MPEP  Malo Peshtene     4.90 314   P    Pn     10 20 58.2 +0.1
AGG   Agios Georgios    4.95 260   P    Pn     10 20 58.5 -0.4
AGG   Agios Georgios    4.95 260   P    Pn     10 20 58.8 -0.1
AGG   Agios Georgios    4.95 260   Pn   Pn     10 20 58.8 -0.1
AVNS  Nevsehir-Avano    5.00 103 i P    Pg     10 21 16.6 -2.7
AVNS                               IAML        10 22 42.0
      comp=N,159nm,1.3s
AVNS                               IAML        10 23 07.0
      comp=E,85nm,1.4s
CFR   Carcaliu          5.12 356 ⇓P    Pn     10 21 02.0 +0.9
CFR   Carcaliu          5.12 356   P    Pn     10 21 02.0 +0.9
CFR   Carcaliu          5.12 356        Pn     10 21 02.0 +0.9
TLCR                    5.12   2 ⇓P    Pn     10 21 03.0 +1.8
STIP  Stip              5.12 291 i Pn   Pn     10 20 59.0 -2.2
ISR   Istrita           5.27 344 ⇓P    Pn     10 21 05.0 +1.8
ANX   Ano Chora         5.38 256   P    Pn     10 21 05.2 +0.4
GIUM  Giurgiulesti      5.42 357 ⇓P    Pn     10 21 07.8 +2.5
FNA   Florina           5.55 280   P    Pn     10 21 07.6 +0.4
FNA   Florina           5.55 280        Pn     10 21 07.6 +0.4
IDI   Anoyia            5.60 213   Pn   Pn     10 21 08.1 +0.3
      comp=E,1.9nm,0.3s,baz=153,slow=17,SNR=16
IDI                                Sn   Sn     10 22 10.1 -2.8
      comp=E,2.5nm,0.3s,baz=42,slow=11,SNR=1.9
IDI                                LR   LR     10 23 50.6
      comp=E,282nm,20.9s,baz=76,slow=44
IDI   Anoyia            5.60 213   Pn   Pn     10 21 06.5 -1.3
NEHR  Nehoiu            5.62 343 ⇑P    Pn     10 21 10.5 +2.4
BISRR Bisoca            5.65 346 ⇑P    Pn     10 21 10.9 +2.4
MLR   Muntele Rosu      5.76 341   Pn   Pn     10 21 11.9 +1.8
      comp=E,6.1nm,0.3s,baz=143,slow=5.4,SNR=35
MLR                                Sn   Sn     10 22 18.1 +1.3
      comp=E,1.9nm,0.3s,baz=255,slow=21,SNR=1.8
MLR                                Lg   Lg     10 22 44.3
      comp=E,0.5nm,0.3s,baz=89,slow=16,SNR=3.6
MLR   Muntele Rosu      5.76 341 ⇓P    Pn     10 21 12.1 +2.0
MLR   Muntele Rosu      5.76 341   Pn   Pn     10 21 11.5 +1.4
SEV   Sevastopol'       5.84  38 eP    Pn     10 21 10.0 -1.1
SEV                              eS    Sn     10 22 13.8 -4.9
VARL  Varlezi           5.85 355 ⇑P    Pn     10 21 13.8 +2.6
PLOR  Plostina          5.95 347 ⇓P    Pn     10 21 15.9 +3.3
VRI   Vrincioaia        5.95 347 ⇓P    Pn     10 21 14.9 +2.2
ITM   Ithomi            5.96 243   Pn   Pn     10 21 13.5 +0.7
VOIR                    5.96 335 ⇓P    Pn     10 21 14.3 +1.4
VOIR                    5.96 335   P    Pn     10 21 14.3 +1.4
VOIR                    5.96 335        Pn     10 21 14.3 +1.4
OHR   Ohrid             6.02 282 i Pn   Pn     10 21 14.9 +1.2
YAL   Yalta             6.04  41 eP    Pn     10 21 12.5 -1.3
YAL                              eS    Sn     10 22 18.5 -5.1
ARR   Arges             6.04 332 ⇓P    Pn     10 21 16.1 +2.2
ALU   Alushta           6.30  41 eP    Pn     10 21 16.7 -0.7
ALU                              eS    Sn     10 22 26.7 -3.4
DOPR  Dopca             6.35 339 ⇑P    Pn     10 21 19.9 +1.8
SIM   Simferopol'       6.36  38 eP    Pn     10 21 17.3 -0.9
SIM                              i             10 22 26.3
SIM                                pmax pmax
      comp=Z,74nm,0.3s
OZUR                    6.37 342 ⇓P    Pn     10 21 20.5 +2.2
LOT   Lotru             6.44 328 ⇑P    Pn     10 21 20.9 +1.4
LOT   Lotru             6.44 328        Pn     10 21 20.9 +1.4
HERR  Herculane         6.63 319 ⇑P    Pn     10 21 21.4 -0.5
HERR  Herculane         6.63 319        Pn     10 21 21.4 -0.5
MDB   Medias            6.81 334 ⇑P    Pn     10 21 26.0 +1.6
MDB   Medias            6.81 334   P    Pn     10 21 26.0 +1.6
MDB   Medias            6.81 334        Pn     10 21 26.0 +1.6
GZR   Gura Zlata        6.83 323 ⇓P    Pn     10 21 24.3 -0.4
GZR   Gura Zlata        6.83 323        Pn     10 21 24.3 -0.4
MILM  Milestii Mici     6.85   1 ⇓P    Pn     10 21 26.7 +1.8
MILM  Milestii Mici     6.85   1        Pn     10 21 26.7 +1.8
KIS   Kishinev          6.93   1 eP    Pn     10 21 21.0 -5.0
KIS   Kishinev          6.93   1 ePP   Pn     10 21 29.0 +3.0
KIS                              eLR   LR     10 24 04.0
      comp=Z,400nm,15.0s
KIS   Kishinev          6.93   1 eP    Pn     10 21 21.0 -5.0
KIS                                MLR  MLR
      comp=Z,400nm,15.0s
KIS                                MLR  MLR
      comp=N,500nm,17.0s
MDVR  Moldovita         6.93 315 ⇑P    Pn     10 21 26.2 +0.1
MDVR  Moldovita         6.93 315        Pn     10 21 26.2 +0.1
BIZ   Bicaz             7.10 346 ⇑P    Pn     10 21 30.4 +2.0
BZS   Buzias            7.55 320 ⇑P    Pn     10 21 34.4 -0.1
BZS   Buzias            7.55 320   P    Pn     10 21 34.4 -0.1
BZS   Buzias            7.55 320        Pn     10 21 34.4 -0.1
DIVS  Divibare          7.56 305   Pn   Pn     10 21 35.5 +0.8
ARCR  ARCALIA           7.66 338 ⇓P    Pn     10 21 37.4 +1.4
ARCR  ARCALIA           7.66 338        Pn     10 21 37.4 +1.4
BURAR Bucovina Array    7.93 343 ⇓P    Pn     10 21 41.7 +1.9
BURAR Bucovina Array    7.93 343        Pn     10 21 41.7 +1.9
BUR08 Bucovina Ar. S    7.96 343        Pn     10 21 40.9 +0.7
DRGR                    7.96 329 ⇑P    Pn     10 21 41.5 +1.2
DRGR                    7.96 329   P    Pn     10 21 41.5 +1.2
DRGR                    7.96 329        Pn     10 21 41.5 +1.2
SIRR  Siria             8.00 323 ⇑P    Pn     10 21 40.7  0.0
SIRR  Siria             8.00 323        Pn     10 21 40.7  0.0
BMR   Baia Mare         8.45 336 ⇑P    Pn     10 21 48.3 +1.5
BMR   Baia Mare         8.45 336   P    Pn     10 21 48.3 +1.5
BMR   Baia Mare         8.45 336        Pn     10 21 48.3 +1.5
MMAI  Mount Meron Ar    8.92 140   Pn   Pn     10 21 53.1 -0.3
      comp=N,1.7nm,0.3s,baz=316,slow=12,SNR=5.0
KOPT  Kop Dagi          9.13  86   Pn   Pn     10 21 57.1 +0.6
MORH  Mrgy, Hungar      9.52 313 eP    Pn     10 22 01.2 -0.2
UZH   Uzhgorod          9.67 334 i P    Pn     10 22 05.3 +1.7
UZH                              eS    Sn     10 23 55.1 +2.2
UZH                                MLR  MLR
      comp=N,350nm,11.0s
UZH                                MLR  MLR
      comp=E,260nm,11.0s
UZH                                MLR  MLR
      comp=Z,100nm,11.0s
KOLS  Kolonicke sedl    9.94 335 eP    Pn     10 22 09.4 +2.1
KOLS  Kolonicke sedl    9.94 335 ePN   Pn     10 22 09.4 +2.1
KWP   Kalwaria Pacla   10.43 338 eP    Pn     10 22 17.1 +3.1
KWP   Kalwaria Pacla   10.43 338   P    Pn     10 22 17.2 +3.1
KWP   Kalwaria Pacla   10.43 338        Pn     10 22 10.9 -3.1
AKASG Malin Array Be   10.64   2   Pn   Pn     10 22 16.4 -0.5
      comp=Z,1.5nm,0.3s,baz=181,slow=12,SNR=10
AKASG                              Sn   Sn     10 24 09.2 -7.4
      comp=Z,1.6nm,0.3s,baz=187,slow=21,SNR=3.1
AKASG                              LR   LR     10 26 58.5
      comp=Z,347nm,18.6s,baz=185,slow=41
AKBB  Malin Array Si   10.64   2⇓eP    Pn     10 22 16.7 -0.2
AKBB  Malin Array Si   10.64   2        Pn     10 22 13.4 -3.5
VYHS  Vyhne            10.94 324 eP    Pn     10 22 18.9 -2.1
VYHS  Vyhne            10.94 324 ePN   Pn     10 22 18.9 -2.1
NIE   Niedzica         11.04 331 eP    Pn     10 22 20.8 -1.7
KIV   Kislovodsk       11.18  65 eP    Pn     10 22 25.0 +0.6
KIV                                pmax pmax
      comp=Z,16nm,0.9s
KIV                                MLR  MLR
      comp=Z,81nm,12.0s
EIL   Elat             11.61 151   LR   LR     10 28 22.6
      comp=Z,98nm,20.4s,baz=326,slow=45
ARSA  Arzberg          11.87 312 ePn   Pn     10 22 31.3 -2.4
      comp=Z,7.3nm,1.1s
CONA  Conrad Observa   12.06 315 ePn   Pn     10 22 33.2 -3.3
      comp=Z,5.9nm,1.1s
OBKA  Obir             12.08 307 ePn   Pn     10 22 33.7 -3.0
      comp=Z,13nm,1.5s
PNSH  Pansheti         12.31  73   P    Pn     10 22 38.5 -1.5
GNI   Garni            12.37  84   LR   LR     10 27 58.7
      comp=Z,84nm,18.6s,baz=302,slow=40
GNI   Garni            12.37  84⇑eP    Pn     10 22 42.0 +1.3
VRAC  Vranov           12.56 321   LR   LR     10 27 42.8
      comp=Z,179nm,19.2s,baz=124,slow=38
VSR   Storozhevoye     13.36  30 eP    Pn     10 22 52.6 -1.4
VSR                                pmax pmax
      comp=Z,10.0nm,0.5s
ABTA  Abfaltersbach    13.45 305 ePn   Pn     10 22 52.5 -2.9
      comp=Z,4.1nm,0.9s
GERES GERESS Array B   13.77 314   Pn   Pn     10 23 01.3 +1.6
      comp=Z,0.1nm,0.3s,baz=154,slow=37,SNR=3.2
GERES                              LR   LR     10 29 36.8
      comp=Z,80nm,18.6s,baz=126,slow=43
KHC   Kasperske Hory   14.00 315 eP    P      10 23 11.5 +0.5
KHC   Kasperske Hory   14.00 315 eP    P      10 23 11.5 +0.5
WTTA  Wattenberg       14.21 306 ePn   Pn     10 23 05.5 -0.3
      comp=Z,10nm,1.1s
WATA  Walderalm        14.28 306 ePn   P      10 23 11.7 -2.5
      comp=Z,12nm,1.1s
```

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VRH   Novokhopyorsk    14.41  35 eP    Pn     10 23 06.1 -2.2
VRH                                pmax pmax
      comp=Z,10.0nm,0.6s
MNK   Minsk            14.45 358 i P    Pn     10 23 06.9 -2.0
      comp=E,3.0nm,0.9s
MNK                              i P    Pn     10 23 06.9 -2.0
      comp=N,22nm,1.0s
MNK                              i P    Pn     10 23 06.9 -2.0
      comp=Z,7.0nm,0.6s
MNK                              i PP   P      10 23 14.8 -1.1
MNK                              i PPP  PPP    10 23 22.5
MNK                              i S    Sn     10 25 47.8 -1.9
MNK                              i SS   SnSn   10 26 03.3 +1.2
MNK                              i SSS  SSS    10 26 15.8
MNK                              i LQ   LQ     10 27 00.9
MNK                              i LR   LR     10 28 07.5
MNK                              i LRM  MLR    10 29 21.4
      comp=E,3.0nm,13.0s
MNK                              i LRM  MLR    10 29 21.4
      comp=N,186nm,18.1s
MNK                              i LRM  MLR    10 29 21.4
      comp=Z,151nm,17.4s
SQTA  Sankt Quirin     14.46 305 ePn   Pn     10 23 08.0 -1.2
      comp=Z,4.6nm,0.9s
MOTA  Moosalm          14.57 306 ePn   Pn     10 23 09.7 -1.0
      comp=Z,1.3nm,0.5s
FETA  Feichten         14.68 304 ePn   Pn     10 23 07.4 -5.0
      comp=Z,7.8nm,1.3s
RETA  Reutte           14.84 306 ePn   Pn     10 23 13.7 -0.7
      comp=Z,6.5nm,0.9s
NACGM Naroch           14.89 356 i P    Pn     10 23 10.9 -4.1
NACGM                            i P    Pn     10 23 10.9 -4.1
NACGM                            i P    Pn     10 23 10.9 -4.1
NACGM                            i Pb   P      10 23 13.1 -7.7
      comp=Z,15nm,1.2s
NACGM                            i PP   PnPn   10 23 19.9 -2.9
NACGM                            i PPP  PPP    10 23 28.0
NACGM                            i S    Sn     10 25 59.1 -1.4
NACGM                            i SS   S      10 26 17.0 -1.9
NACGM                            i SSS  SSS    10 26 31.7
NACGM                            i LQ   LQ     10 27 37.3
NACGM                            i LR   LR     10 28 05.2
NACGM                            i Sb          10 28 37.4
      comp=Z,274nm,24.8s
DAVOX Davos/Dischmat   15.14 302   Pn   Pn     10 23 21.0 +2.4
      comp=Z,0.3nm,0.3s,baz=119,slow=14,SNR=1.4
DAVOX                              LR   LR     10 28 45.6
      comp=Z,62nm,21.7s,baz=102,slow=36
DAVOX Davos/Dischmat   15.14 302   P    Pn     10 23 21.0 +2.4
DAVA  Damuels          15.32 304 ePn   Pn     10 23 19.2 -1.6
      comp=Z,15nm,1.1s
CLL   Collm            15.61 321 e(P)  P      10 23 27.0 -1.9
CLL                                LmV         10 31 00.0
      comp=Z,200nm,19.0s
CLL   Collm            15.61 321 eP    P      10 23 27.0 -1.9
OBN   Obninsk          15.97  17   LR   LR     10 30 01.6
      comp=Z,55nm,19.4s,baz=194,slow=39
OBN   Obninsk          15.97  17 eP    P      10 23 31.8 -0.9
OBN                                pmax pmax
      comp=Z,8.0nm,0.9s
BNI   Bardonecchia     16.88 294   P    Pn     10 23 40.9  0.0
BNI                                pmax pmax
      comp=Z,14nm,1.0s
BNI   Bardonecchia     16.88 294   P    Pn     10 23 40.9  0.0
BNI                                IAmb IAmb   10 23 47.0
      comp=Z,14nm,1.0s
LPG   La Plagne        16.91 296 eP    P      10 23 44.9 +1.3
ECH   Echery           17.37 305   P    P      10 23 48.4 +0.1
ECH                                pmax pmax
      comp=Z,6.0nm,0.9s
ECH   Echery           17.37 305        P      10 23 48.4 +0.1
BELG  Belogornoye      17.97  40   LR   LR     10 32 19.2
      comp=Z,93nm,19.9s,baz=129,slow=42
BELG  Belogornoye      17.97  40⇓eP    P      10 23 55.2 +0.3
BELG                               pmax pmax
      comp=Z,3.0nm,0.9s
FINES FINESS Array B   21.46 357   P    P      10 24 33.5 +0.6
      comp=Z,2.7nm,0.7s,baz=166,slow=9.8,SNR=5.0
FINES                              LR   LR     10 33 09.6
      comp=Z,187nm,18.3s,baz=164,slow=38
FINES FINESS Array B   21.46 357ceP    P      10 24 34.5 +1.6
FINES                              pmax pmax
      comp=Z,3.0nm,0.7s
MFF   Saint Martin d   21.82 297 eP    P      10 24 41.2 +4.2
MFF                                pmax pmax
      comp=Z,12nm,0.9s
KLMR  Klimovskoe       21.88  14 eP    P      10 24 35.5 -1.9
KLMR                               pmax pmax
      comp=Z,22nm,1.3s
KLMR  Klimovskoe       21.88  14 eP    P      10 24 35.5 -1.9
KLMR                               AMP         10 24 42.4
      comp=Z,22nm,1.3s
HFS   Hagfors          22.14 340   P    P      10 24 40.3 +0.1
      comp=Z,4.3nm,1.0s,baz=296,slow=7.8,SNR=2.7
HFS                                LR   LR     10 34 49.2
      comp=Z,209nm,19.3s,baz=148,slow=41
KIRV  Kirov            22.80  29   LR   LR     10 33 42.2
      comp=Z,84nm,21.3s,baz=238,slow=37
GEYT  Alibeck          23.00  86   P    P      10 24 50.4 +0.8
      comp=Z,10nm,0.9s,baz=269,slow=11,SNR=10
AKTO  Aktyubinsk       23.02  53   P    P      10 24 51.3 +1.6
      comp=Z,2.5nm,0.9s,baz=253,slow=11,SNR=8.1
AKTO                               LR   LR     10 35 58.6
      comp=Z,69nm,19.1s,baz=274,slow=42
NB2   NORSAR Subarra   23.57 339   P    P      10 25 00.2 +5.0
      comp=Z,6.3nm,1.1s,baz=145,slow=9.3
NOA   NORSAR Array B   23.57 339   P    P      10 24 55.5 +0.3
      comp=Z,2.2nm,0.7s,baz=146,slow=11,SNR=6.4
NOA                                LR   LR     10 35 49.7
      comp=Z,237nm,18.0s,baz=150,slow=41
NC204 NORSAR Array S   23.89 339   P    P      10 24 56.9 -1.5
ABKAR Akbulak array    23.97  57   P    P      10 24 57.8 -1.3
ABKAR                              IAmb IAmb   10 25 23.2
      comp=Z,6.5nm,1.4s
ESDC  Sonseca Array    24.92 280   P    P      10 25 08.8 +0.9
      comp=Z,5.5nm,0.9s,baz=73,slow=8.9,SNR=15
ARU   Arti             25.52  40   P    P      10 25 13.2  0.0
      comp=Z,1.7nm,0.5s,baz=251,slow=7.1,SNR=9.4
ARU                                LR   LR     10 37 17.4
      comp=Z,96nm,18.3s,baz=259,slow=41
ARU   Arti             25.52  40d iP    P      10 25 14.0 +0.8
ARU                                            10 25 48.4
ARU                                S    S      10 29 42.4 +1.1
ARU                                pmax pmax
      comp=Z,26nm,1.6s
ARU   Arti             25.52  40   P    P      10 25 13.1 -0.1
EKA   Eskdalemuir Ar   25.97 317   P    P      10 25 17.1 -0.1
      comp=Z,0.5nm,0.4s,baz=115,slow=9.6,SNR=3.5
ARCES ARCESS Array B   29.57 358   LR   LR     10 37 59.5
      comp=Z,144nm,18.2s,baz=140,slow=37
BRVK  Borovoye         31.01  51⇓eP    P      10 26 03.9 +1.7
BRVK                               pmax pmax
      comp=Z,13nm,3.0s
KK31  Karatay Array    31.27  71   P    P      10 26 06.0 +1.3
KK31                               pmax pmax
      comp=Z,6.0nm,1.7s
KK31  Karatay Array    31.27  71   P    P      10 26 06.0 +1.3
KK31                               IAmb IAmb   10 26 25.3
      comp=Z,5.9nm,1.6s
KKAR  Karatay Array    31.27  71   P    P      10 26 05.9 +1.2
KKAR                               pmax pmax
      comp=Z,6.0nm,1.7s
KKAR  Karatay Array    31.27  71   P    P      10 26 05.9 +1.2
KKAR                               IAmb IAmb   10 26 25.3
      comp=Z,5.9nm,1.6s
AAK   Ala-Archa        34.23  70   P    P      10 26 31.1 +0.3
      comp=Z,0.8nm,0.4s,baz=264,slow=5.5,SNR=4.9
AAK   Ala-Archa        34.23  70   P    P      10 26 31.4 +0.6
AAK                                pmax pmax
      comp=Z,3.0nm,1.1s
AAK   Ala-Archa        34.23  70   P    P      10 26 31.4 +0.6
AAK                                IAmb IAmb   10 26 33.7
      comp=Z,2.8nm,1.1s
TOA0  Torodi Ar. Sit   35.75 229   P    P      10 26 42.5 -1.3
TOA0                               IAmb IAmb   10 26 44.5
      comp=Z,4.1nm,0.8s
TORD  Torodi Ar. Bea   35.75 229   P    P      10 26 43.4 -0.5
      comp=Z,3.9nm,0.8s,baz=36,slow=9.4,SNR=9.0
TORD                               LR   LR     10 44 26.5
      comp=Z,41nm,19.6s,baz=50,slow=42
NIL   Nilore           36.01  86   P    P      10 26 46.8 +0.8
NIL                                pmax pmax
      comp=Z,5.0nm,0.9s
NIL   Nilore           36.01  86   P    P      10 26 46.8 +0.8
KURBB Kurchatov Arra   36.01  56   P    P      10 26 45.8  0.0
      comp=Z,2.0nm,0.7s,baz=279,slow=9.2,SNR=13
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KURK	**Kurchatov**	**36.07**	**56**	⇓iP	**P**	**10 26 47.5**	**+1.2**
KURK				pmax	pmax		
	comp=Z,13nm,2.5s						
KURK	**Kurchatov**	**36.07**	**56**	P	**P**	**10 26 46.5**	**+0.2**
KURK				IAmb	IAmb	10 26 48.5	
	comp=Z,4.8nm,1.1s						
MAKZ	**Makanchi**	**38.71**	**62**	P	**P**	**10 27 08.9**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MAKZ	**Makanchi**	**38.71**	**62**	P	**P**	**10 27 08.9**	**+0.1**
MK31	**Makanchi Array**	**38.92**	**62**	P	**P**	**10 27 10.4**	**-0.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	**38.92**	**62**	P	**P**	**10 27 10.4**	**-0.2**
MKAR	**Makanchi Array**	**38.92**	**62**	P	**P**	**10 27 10.6**	**0.0**
	comp=Z,1.5nm,0.7s,baz=277,slow=7.6,SNR=15						
ZALV	**Zalesovo Beam**	**39.71**	**50**	P	**P**	**10 27 17.6**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=267,slow=8.9,SNR=9.2						
ZALV				LR	LR	10 45 11.0	
	comp=Z,46nm,18.6s,baz=170,slow=38						
ZALV	**Zalesovo Beam**	**39.71**	**50**	i P	**P**	**10 27 18.6**	**+1.6**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMBO	**Kilima Mbogo**	**41.76**	**167**	LR	LR	10 49 51.9	
	comp=Z,53nm,18.2s,baz=92,slow=43						
DGZ	**Jazzator, Alta**	**41.80**	**56**	⇓eP	**P**	**10 27 36.0**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WMQ	**Urumqi**	**43.31**	**65**	eP	**P**	**10 27 49.5**	**+2.7**
TLY	**Talaya**	**51.32**	**50**	LR	LR	10 56 13.1	
	comp=Z,40nm,18.7s,baz=11,slow=43						
TLY	**Talaya**	**51.32**	**50**	⇓eP	**P**	**10 28 51.4**	**+2.4**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GTA	**Gaotai**	**53.36**	**66**	eP	**P**	**10 29 05.8**	**+1.3**
GTA				pP		10 29 09.0	
GTA				sP		10 29 11.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**54.34**	**54**	P	**P**	**10 29 12.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=280,slow=8.4,SNR=7.6						
SONM	**Songino Array**	**54.34**	**54**	P	**P**	**10 29 12.0**	**+0.5**
ULN	**Ulaanbaatar**	**54.73**	**54**	⇓eP	**P**	**10 29 16.2**	**+1.8**
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TIXI	**Tiksi**	**55.61**	**22**	⇓eP	**P**	**10 29 22.7**	**+2.5**
LZH	**Lanzhou**	**57.71**	**68**	⇑P	**P**	**10 29 35.1**	**-0.8**
LZH				pP		10 29 39.6	
LZH				sP		10 29 42.3	
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC	**Hu-ho-hao-te**	**60.73**	**60**	eP	**P**	**10 29 56.6**	**0.0**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,6.9s						
CMAR	**Chiang Mai Arr**	**63.47**	**88**	P	**P**	**10 30 14.4**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=309,slow=8.5,SNR=6.9						
CMAR	**Chiang Mai Arr**	**63.47**	**88**	ceP	**P**	**10 30 15.8**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL	**Bilibino**	**67.63**	**16**	eP	**P**	**10 30 42.7**	**+1.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BOSA	**Boshof**	**68.40**	**183**	P	**P**	**10 30 46.6**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=340,slow=8.8,SNR=3.2						
USRK	**Ussuriysk Ar.**	**71.48**	**48**	P	**P**	**10 31 05.5**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=270,slow=5.3,SNR=4.3						
KSRS	**Korea Array**	**73.19**	**55**	P	**P**	**10 31 15.9**	**+0.1**
	comp=Z,2.5nm,1.0s,baz=50,slow=33,SNR=5.0						
YKA	**Yellowknife Ar**	**73.59**	**343**	P	**P**	**10 31 17.5**	**-0.2**
	comp=Z,1.2nm,1.1s,baz=33,slow=6.1,SNR=6.7						
YKA	**Yellowknife Ar**	**73.59**	**343**	i P	**P**	**10 31 18.0**	**+0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**75.41**	**40**	P	**P**	**10 31 31.1**	**+2.5**
ILAR	**Eielson Array**	**75.44**	**358**	P	**P**	**10 31 29.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=343,slow=3.8,SNR=7.2						
ULM	**Lac du Bonnet**	**77.72**	**327**	LR	LR	11 09 35.4	
	comp=Z,76nm,20.0s,baz=264,slow=38						
PFO	**Pinyon Flats O**	**99.88**	**331**	i P	**Pdif**	**10 33 27.6**	**-2.4**

WEL 23 10:22:18.9,41°S±2°×17°3E±°,h151km±3km,M3.5/55, MLv3.5/55,Error ellipse: s-maj=0.0km s-min=0.0km az=89.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.40**	**79**	P	Pn	10 22 39.8	-0.1
NNZ				S	Sn	10 22 54.9	-1.0
THZ	**Tophouse**	**0.47**	**176**	P	Pn	10 22 40.4	0.0
THZ				S	Sn	10 22 55.0	-1.7
QRZ	**Quartz Range**	**0.53**	**332**	P	Pn	10 22 39.9	-0.7
QRZ				S	Sn	10 22 53.8	-3.3
TUWZ	**Tuamarina**	**0.82**	**100**	P	Pn	10 22 42.9	+0.5
TUWZ				S	Sn	10 22 59.7	-0.5
BSWZ	**Blackbirch Sta**	**0.87**	**119**	P	Pn	10 22 43.3	+0.6
BSWZ				S	Sn	10 23 01.3	+0.4
DSZ	**Denniston Nort**	**0.91**	**240**	P	Pn	10 22 42.2	-0.9
DSZ				S	Sn	10 22 57.8	-3.8
DUWZ	**D'Urville Isla**	**0.94**	**59**	P	Pn	10 22 43.7	+0.3
DUWZ				S	Sn	10 23 02.0	0.0
TCW	**Tory Channel**	**1.07**	**86**	P	Pn	10 22 45.1	+0.7
TCW				S	Sn	10 23 03.7	-0.1
CMWZ	**Cape Campbell**	**1.11**	**114**	P	Pn	10 22 45.6	+0.9
CMWZ				S	Sn	10 23 05.3	+0.8
KHZ	**Kahutara**	**1.23**	**156**	P	Pn	10 22 46.5	+0.7
KHZ				S	Sn	10 23 04.9	-1.5
WEL	**Wellington**	**1.44**	**90**	P	Pn	10 22 48.3	+0.4
BHW	**Baring Head**	**1.52**	**95**	P	Pn	10 22 49.0	+0.3
BHW				S	Sn	10 23 10.2	-1.3
LTZ	**Lake Taylor**	**1.55**	**196**	P	Pn	10 22 49.3	+0.2
LTZ				S	Sn	10 23 10.3	-2.0
KIW	**Kapiti Island**	**1.61**	**75**	P	Pn	10 22 50.1	+0.4
KIW				S	Sn	10 23 12.9	-0.4
CAW	**Cannon Point**	**1.67**	**84**	P	Pn	10 22 50.6	+0.2
CAW				S	Sn	10 23 13.7	-0.9
GVZ	**Greta Valley S**	**1.67**	**176**	P	Pn	10 22 51.1	+0.7
INZ	**Inchbonnie**	**1.77**	**216**	P	Pn	10 22 51.1	-0.3
INZ				S	Sn	10 23 13.5	-3.1
MSWZ	**Moikau Station**	**1.80**	**95**	P	Pn	10 22 52.1	+0.3
MSWZ				S	Sn	10 23 15.9	-1.2
OGWZ	**Otaki Gorge**	**1.81**	**75**	P	Pn	10 22 52.3	+0.3
OGWZ				S	Sn	10 23 17.1	-0.1
PLWZ	**Palliser**	**1.82**	**99**	P	Pn	10 22 52.4	+0.3
PLWZ				S	Sn	10 23 16.3	-1.3
AMCZ	**Amberley**	**1.89**	**185**	P	Pn	10 22 53.1	+0.4
PAWZ	**Paruwai Farm**	**1.93**	**93**	P	Pn	10 22 53.5	+0.2
MTW	**Mount Morrison**	**2.00**	**87**	P	Pn	10 22 54.1	+0.1
MTW				S	Sn	10 23 20.4	-0.6
NMEZ	**Namu Road**	**2.04**	**23**	P	Pn	10 22 55.4	+0.9
HOWZ	**Holdsworth Sta**	**2.04**	**80**	P	Pn	10 22 54.7	+0.1
OXZ	**Oxford**	**2.12**	**196**	P	Pn	10 22 54.9	-0.5
TRWZ	**Traveller**	**2.13**	**94**	P	Pn	10 22 56.1	+0.4
MRZ	**Mangatainoka R**	**2.15**	**74**	P	Pn	10 22 55.7	-0.2
OHWZ	**Ohakea**	**2.16**	**60**	P	Pn	10 22 56.7	+0.7
NBEZ	**Newall Road No**	**2.17**	**21**	P	Pn	10 22 56.9	+0.8
LREZ	**Lake Rotokare**	**2.18**	**33**	P	Pn	10 22 57.7	+1.4
KHEZ	**Kahui Hut**	**2.19**	**24**	P	Pn	10 22 57.0	+0.6
PREZ	**Palmer Road**	**2.19**	**27**	P	Pn	10 22 57.3	+0.9
NEZ	**North Egmont**	**2.23**	**25**	P	Pn	10 22 57.3	+0.3
WAZ	**Wanganui**	**2.23**	**47**	P	Pn	10 22 58.1	+1.2
PKE	**Pukeiti**	**2.27**	**23**	P	Pn	10 22 58.0	+0.7
TMWZ	**Te Maipa**	**2.29**	**86**	P	Pn	10 22 57.8	+0.2
DREZ	**Durham Road**	**2.34**	**26**	P	Pn	10 22 58.7	+0.5
TIWZ	**Tintock**	**2.35**	**78**	P	Pn	10 22 58.2	0.0
WVZ	**Waitaha Valley**	**2.38**	**221**	P	Pn	10 22 57.8	-0.8
POWZ	**Post Office Ro**	**2.38**	**69**	P	Pn	10 22 58.5	-0.2
MQZ	**McQueen's Vall**	**2.41**	**184**	P	Pn	10 22 58.6	-0.3
OKCZ	**Okains Bay**	**2.43**	**177**	P	Pn	10 22 59.7	+0.5
PRWZ	**Pori Road**	**2.47**	**74**	P	Pn	10 22 59.8	0.0
RACZ	**Rakaia**	**2.49**	**192**	P	Pn	10 22 59.5	-0.4
AKCZ	**Akaroa Harbour**	**2.57**	**179**	P	Pn	10 23 01.1	+0.2
VRZ	**Vera Road**	**2.61**	**34**	P	Pn	10 23 02.4	+1.0
BFZ	**Birch Farm**	**2.63**	**78**	P	Pn	10 23 01.6	-0.1
TSZ	**Takapari Road**	**2.66**	**63**	P	Pn	10 23 01.9	-0.2
DVHZ	**Dannevirke**	**2.70**	**69**	P	Pn	10 23 02.1	-0.5
WACZ	**Wakanui South**	**2.75**	**196**	P	Pn	10 23 02.9	-0.2
GCSZ	**Gaunt Creek Bo**	**2.76**	**222**	P	Pn	10 23 02.5	-0.7
RPZ	**Rata Peaks**	**2.76**	**208**	P	Pn	10 23 02.2	-1.1
PKVZ	**Pokaka**	**2.76**	**44**	P	Pn	10 23 03.9	+0.5
ANWZ	**Angora Road**	**2.86**	**74**	P	Pn	10 23 05.0	+0.4
WNVZ	**Wahianoa**	**2.87**	**48**	P	Pn	10 23 05.3	+0.4
PNHZ	**Pukenui**	**2.89**	**63**	P	Pn	10 23 04.6	-0.4
FWVZ	**Far West T-bar**	**2.90**	**46**	P	Pn	10 23 06.4	+1.1
MOVZ	**Moawhango**	**2.91**	**50**	P	Pn	10 23 05.1	-0.1
ARCZ	**Arundel**	**2.93**	**205**	P	Pn	10 23 04.3	-1.0
TUVZ	**Tukino**	**2.94**	**47**	P	Pn	10 23 06.6	+0.8
NGZ	**Ngauruhoe**	**2.98**	**46**	P	Pn	10 23 07.8	+1.5
WPHZ	**Waipukurau**	**2.99**	**67**	P	Pn	10 23 05.9	-0.3
WTVZ	**West Tongariro**	**3.02**	**45**	P	Pn	10 23 07.1	+0.4
OTVZ	**Oturere**	**3.02**	**46**	P	Pn	10 23 07.0	+0.2
BHHZ	**Black Hill Sta**	**3.04**	**55**	P	Pn	10 23 06.7	-0.2
PRHZ	**Porangahau**	**3.04**	**71**	P	Pn	10 23 06.7	-0.2
KRVZ	**Karewarewa**	**3.06**	**45**	P	Pn	10 23 08.3	+1.1
ETVZ	**East Tongariro**	**3.07**	**46**	P	Pn	10 23 07.9	+0.6
TMVZ	**Te Maari**	**3.08**	**46**	P	Pn	10 23 08.1	+0.6
KRHZ	**Kereru**	**3.15**	**59**	P	Pn	10 23 07.8	-0.4
FOZ	**Fox Glacier**	**3.17**	**224**	P	Pn	10 23 07.4	-1.1
HIZ	**Hauiti**	**3.17**	**30**	P	Pn	10 23 08.4	-0.1
PXZ	**Pawanui**	**3.29**	**69**	P	Pn	10 23 09.6	-0.4
KWHZ	**Kaweka Forest**	**3.30**	**57**	P	Pn	10 23 10.5	+0.2
TMZ	**Timaru**	**3.37**	**203**	P	Pn	10 23 10.3	-0.8
KAHZ	**Kahuranaki**	**3.41**	**65**	P	Pn	10 23 11.2	-0.4
MCHZ	**McNeill Hill**	**3.46**	**59**	P	Pn	10 23 12.0	-0.3
BKZ	**Black Stump Fm**	**3.50**	**54**	P	Pn	10 23 12.3	-0.5
TLZ	**Tolley Road**	**3.61**	**36**	P	Pn	10 23 14.9	+0.8
LBZ	**Lake Benmore**	**3.66**	**212**	P	Pn	10 23 13.8	-1.0
RAHZ	**Arahi**	**4.02**	**55**	P	Pn	10 23 19.3	-0.2
ODZ	**Otahua Downs**	**4.08**	**203**	P	Pn	10 23 19.4	-0.7
JCZ	**Jackson Bay**	**4.09**	**226**	P	Pn	10 23 19.3	-1.1
TOZ	**Tahuroa Road**	**4.11**	**31**	P	Pn	10 23 21.1	+0.5
MHGZ	**Mahia Peninsul**	**4.42**	**63**	P	Pn	10 23 23.7	-0.9
AWAZ	**Awhitu Peninsu**	**4.45**	**19**	P	Pn	10 23 26.5	+1.4
RAGZ	**Rawiri**	**4.48**	**53**	P	Pn	10 23 27.7	+2.1
WKZ	**Wanaka**	**4.51**	**217**	P	Pn	10 23 22.7	-3.2
MKAZ	**Moumakai**	**4.55**	**24**	P	Pn	10 23 27.7	+1.3
RIGZ	**Rimuhau**	**4.57**	**57**	P	Pn	10 23 25.4	-1.3
ETAZ	**East Tamaki Re**	**4.62**	**21**	P	Pn	10 23 29.1	+1.7
MWZ	**Matawai**	**4.65**	**52**	P	Pn	10 23 26.8	-1.0
EAZ	**Earnscleugh**	**4.71**	**212**	P	Pn	10 23 26.7	-1.8
WIAZ	**Waiheke Island**	**4.83**	**22**	P	Pn	10 23 31.8	+1.7
TWGZ	**Tauwhareparae**	**5.03**	**53**	P	Pn	10 23 31.7	-1.1
MLZ	**Mavora Lakes**	**5.34**	**219**	P	Pn	10 23 36.2	-0.6
WHZ	**Wether Hill Ro**	**5.82**	**216**	P	Pn	10 23 41.3	-1.8
CTZ	**Chatham Island**	**8.14**	**111**	P	Pn	10 24 17.4	+3.2

ZUR 23 10:31:01.2,47°.45N×7°.86E,h10km±1km,MLh1.5/9,8C-4D, Error ellipse: s-maj=2.6km s-min=0.6km az=36.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROTHE	**Rothenfluh**	**0.05**	**62**	⇓Pg	Pg	10 31 03.7	+0.3
	0.6nm,SNR=89						
ROTHE				⇓Pg	Pg	10 31 03.7	+0.3
EMMET	**Emmethof**	**0.11**	**98**	⇓Pg	Pg	10 31 04.4	+0.3
EMMET				⇓Pg	Pg	10 31 04.4	+0.3
	0.2nm,SNR=23						
SFRA	**Frenkendorf**	**0.11**	**297**	Sg	Sg	10 31 06.3	+0.2
	0.9nm,SNR=12						
SFRA				Sg	Sg	10 31 06.3	+0.2
SAUR	**Augst-Roemermu**	**0.12**	**312**	Pg	Pg	10 31 04.3	+0.1
	0.5nm,SNR=4.9						
SAUR				Pg	Pg	10 31 04.3	+0.1
SAUR				Sg	Sg	10 31 06.4	+0.1
BALST	**Balsthal**	**0.16**	**223**	⇑Pg	Pg	10 31 04.8	0.0
BALST				⇑Pg	Pg	10 31 04.8	0.0
	0.3nm,SNR=62						
BALST				Sg	Sg	10 31 07.9	+0.5
SBEG	**Bettingen Gewe**	**0.18**	**313**	Sg	Sg	10 31 08.0	+0.3
SBEG				Sg	Sg	10 31 08.0	+0.3
	0.3nm,SNR=10.0						
SRER	**Reinach, Raine**	**0.18**	**289**	Sg	Sg	10 31 08.7	+0.7
SRHH	**Riehen, Zur Ho**	**0.19**	**313**	Sg	Sg	10 31 08.3	+0.3
	0.3nm,SNR=5.9						
SRHH				Sg	Sg	10 31 08.3	+0.3
SULZ	**Cheisacher**	**0.19**	**66**	⇑Pg	Pg	10 31 05.8	+0.5
	0.1nm,SNR=14						
SULZ				⇑Pg	Pg	10 31 05.8	+0.5
SULZ				Sg	Sg	10 31 08.6	+0.5
OTER2	**Otterbach 2 (B**	**0.21**	**307**	Sg	Sg	10 31 08.4	-0.3
DAGMA	**Lutertal, Dagm**	**0.25**	**154**	Sg	Sg	10 31 10.1	+0.5
ACHB	**Acheberg**	**0.30**	**63**	Sg	Sg	10 31 12.1	+0.7
METMA	**Mettma DE**	**0.37**	**46**	Sg	Sg	10 31 14.0	+0.4
	0.1nm,SNR=9.8						
METMA				Sg	Sg	10 31 14.0	+0.4
BERGE	**Lenzkirch (DE)**	**0.47**	**27**	⇑Pg	Pg	10 31 10.9	+0.3
	0.1nm,SNR=21						
BERGE				⇑Pg	Pg	10 31 10.9	+0.3
BERGE				Sg	Sg	10 31 17.3	+0.5
KIZ	**Kirchzarten**	**0.51**	**5**	Pg	Pg	10 31 11.4	+0.3
KIZ				Pg	Pg	10 31 11.4	+0.3
	SNR=8.3						
SLE	**Schleitheim**	**0.53**	**54**	⇑Pg	Pg	10 31 11.9	+0.3
SLE				⇑Pg	Pg	10 31 11.9	+0.3
	0.1nm,SNR=45						

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*STR **23** 10:31:03.9±0.4,47°.6N±0°.9×°±°,h3km±1km,MLv1.6/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

*LDG **23** 10:31:04.8±0.1,47°.46N×7°.84E,h11km,Ml2.3/15,Error ellipse: s-maj=1.5km s-min=1.0km az=156.0*

ZUR 23 10:31:04.2,47°.45N×7°.85E,h11km±1km,MLh1.8/8,2D, Error ellipse: s-maj=2.3km s-min=0.7km az=49.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROTHE	**Rothenfluh**	**0.06**	**58**	⇓Pg	Pg	10 31 06.8	+0.3
	0.8nm,SNR=12						
ROTHE				⇓Pg	Pg	10 31 06.8	+0.3
ROTHE				Sg	Sg	10 31 08.5	+0.3
EMMET	**Emmethof**	**0.11**	**95**	Sg	Sg	10 31 09.2	+0.1
	0.6nm,SNR=20						
EMMET				Sg	Sg	10 31 09.2	+0.1
SFRA	**Frenkendorf**	**0.11**	**300**	Pg	Pg	10 31 07.4	+0.3
	1.8nm,SNR=9.7						
SFRA				Pg	Pg	10 31 07.4	+0.3
SFRA				Sg	Sg	10 31 09.3	+0.2
SAUR	**Augst-Roemermu**	**0.12**	**315**	Pg	Pg	10 31 07.5	+0.3
SAUR				Pg	Pg	10 31 07.5	+0.3
	1.9nm,SNR=13						
SAUR				Sg	Sg	10 31 09.5	+0.1
BALST	**Balsthal**	**0.15**	**224**	Sg	Sg	10 31 10.2	0.0
	0.4nm,SNR=5.6						
BALST				Sg	Sg	10 31 10.2	0.0
SBEG	**Bettingen Gewe**	**0.18**	**314**	Sg	Sg	10 31 11.1	+0.3
	0.5nm,SNR=12						
SBEG				Sg	Sg	10 31 11.1	+0.3
SRER	**Reinach, Raine**	**0.18**	**291**	Sg	Sg	10 31 11.7	+0.7
SRER				Sg	Sg	10 31 11.7	+0.7
	0.5nm,SNR=4.4						
SRHH	**Riehen, Zur Ho**	**0.19**	**315**	Sg	Sg	10 31 11.3	+0.2
SRHH				Sg	Sg	10 31 11.3	+0.2
	0.7nm,SNR=11						
SULZ	**Cheisacher**	**0.19**	**65**	Sg	Sg	10 31 11.8	+0.5
	0.4nm,SNR=30						
SULZ				Sg	Sg	10 31 11.8	+0.5
OTER2	**Otterbach 2 (B**	**0.21**	**308**	Sg	Sg	10 31 11.5	-0.3
DAGMA	**Lutertal, Dagm**	**0.24**	**153**	Sg	Sg	10 31 13.2	+0.6
DAGMA				Sg	Sg	10 31 13.2	+0.6
	0.1nm,SNR=5.9						
ACHB	**Acheberg**	**0.31**	**63**	Sg	Sg	10 31 15.2	+0.7
	0.3nm,SNR=7.2						
ACHB				Sg	Sg	10 31 15.2	+0.7
BOBI	**Bbikon, Wasse**	**0.34**	**73**	Sg	Sb	10 31 16.9	-1.0
BOBI				Sg	Sb	10 31 16.9	-1.0
	0.1nm,SNR=11						
METMA	**Mettma DE**	**0.38**	**46**	Sg	Sg	10 31 17.1	+0.3
	0.2nm,SNR=27						
METMA				Sg	Sg	10 31 17.1	+0.3
BERGE	**Lenzkirch (DE)**	**0.48**	**27**	Sg	Sg	10 31 20.2	+0.3
BERGE				Sg	Sg	10 31 20.2	+0.3
	0.2nm,SNR=33						
KIZ	**Kirchzarten**	**0.51**	**5**	Sg	Sg	10 31 18.1	-2.8
HINF	**Hinteralfeld**	**0.77**	**299**	ePg	Pb	10 31 19.4	-0.2
HINF				eSg	Sg	10 31 29.4	+0.3
CHMF	**Charmoille**	**0.84**	**257**	Pg	Pg	10 31 17.5	-2.9
CHMF				Pn	Pb	10 31 20.6	-0.2
CHMF				Sg	Sg	10 31 28.6	-2.8
ECH	**Echery**	**0.90**	**329**	Pn	Pg	10 31 19.0	-2.5
ECH				Sn	Sg	10 31 30.2	-3.0
CDF	**Champ du Feu**	**1.04**	**338**	ePg	Pb	10 31 24.5	+0.2
CDF				eSg	Sg	10 31 37.8	0.0
	4.6nm,0.2s						
OPP	**Oppenau**	**1.07**	**12**	Pg	Pb	10 31 21.6	-3.2
OPP				Sg	Sg	10 31 35.4	-3.4
HAU	**Haudompre**	**1.16**	**299**	ePg	Pn	10 31 26.3	-0.1
HAU				eSg	Sg	10 31 41.4	-0.1
	23nm,0.3s						
CABF	**La Chapelle**	**1.47**	**236**	ePn	Pn	10 31 29.7	-1.0
CABF	**La Chapelle**	**1.47**	**236**	ePg	Pg	10 31 32.6	+0.3
CABF				eSn	Sn	10 31 47.6	-2.3
CABF				eSg	Sg	10 31 51.4	0.0
	6.0nm,0.2s						
PAGF	**Fort de Pagny**	**1.81**	**309**	ePn	Pn	10 31 35.0	-0.3
PAGF				eSn	Sn	10 31 56.2	-2.0
PAGF				eSg	Sg	10 32 01.2	-1.1
	4.5nm,0.3s						
SFTF	**Sexfontaines**	**2.04**	**293**	ePn	Pn	10 31 37.5	-1.0
	baz=115						
SFTF				eSg	Sg	10 32 08.9	-0.9
	2.8nm,0.2s						
LOR	**Lormes**	**2.72**	**268**	ePg	Pg	10 31 55.6	-0.7
LOR				eSn	Sn	10 32 16.5	-4.2
LOR				eSg	Sg	10 32 30.1	-1.4
	3.0nm,0.2s						
MBDF	**Montbardon**	**2.82**	**196**	ePn	Pn	10 31 48.7	-0.6
MBDF				eSg	Sg	10 32 33.5	-1.3
	1.0nm,0.4s						
SMF	**Signal de Mont**	**2.86**	**255**	ePg	Pg	10 31 57.7	-1.2
SMF				eSg	Sg	10 32 34.3	-1.6
	3.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.88**	**209**	ePn	Pn	10 31 49.1	-0.9
ORIF				eSg	Sg	10 32 35.3	-1.2
	2.4nm,0.3s						
SSF	**Saint Saulge**	**2.98**	**264**	ePn	Pn	10 31 49.8	-1.6
SSF				eSn	Sn	10 32 24.3	-2.9
	1.7nm,0.3s						
AVF	**Avril sur Loir**	**3.14**	**260**	ePg	Pg	10 32 02.8	-1.5
AVF				eSg	Sg	10 32 42.8	-2.2
	0.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.41**	**222**	eSg	Sg	10 32 51.2	-2.3
	2.5nm,0.3s						
BGF	**Bois d'Agland**	**3.54**	**257**	ePn	Pn	10 31 56.9	-2.1
BGF				eSg	Sg	10 32 55.1	-2.7
	3.4nm,0.3s						
LDF	**La Druitiere**	**5.47**	**285**	eP	Pn	10 32 27.6	+2.0

IDC 23 10:33:37.5±4.9,3°.70S×145°.01E,h0km,mb3.9/3, mb1 4.3/4,mb1mx3.7/38,mbtmp4.1/4,ML4.2/1,Error ellipse: s-maj=144.4km s-min=31.4km az=99.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.21**	**212**	P	P	10 38 03.5	+0.3
	0.7nm,0.3s,baz=38,slow=12,SNR=35						
ASAR	**Alice Springs**	**22.57**	**207**	P	P	10 38 39.4	-0.2
	2.5nm,0.6s,baz=34,slow=10,SNR=33						
FITZ	**Fitzroy Crossi**	**23.76**	**232**	P	P	10 38 51.9	0.0
	5.2nm,0.6s,baz=49,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**74.48**	**321**	P	P	10 45 18.0	+0.1
	0.9nm,1.0s,baz=111,slow=6.6,SNR=4.4						

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*GCG **23** 10:51:08.2±3.1,15°.49N×95°.10W,h31km±999km,MD4.9*

*IDC **23** 10:51:09.3±0.9,15°.46N×94°.47W,h0km,mb4.1/15, mb1 4.3/17,mb1mx4.1/51,mbtmp4.2/17,ML3.8/2,MS3.5/10, Ms1 3.5/10,ms1mx3.2/33,Error ellipse: s-maj=30.4km s-min=10.2km az=61.0*

*MEX **23** 10:51:14.8±0.8,15°.34N×94°.61W,h16km±8km,MD4.4*

*NEIC **23** 10:51:15.7±2.1,15°.44N±0°.06×94°.57W±0°.04,h42km±5km, Error ellipse: s-maj=8.4km s-min=5.4km az=191.0*

ISC 23 10:51:15.1±1.0,15°.40N±0°.05×94°.61W±0°.03,h46km±10km, n253,σ1^{s}36/267,mb4.3/41,MS3.4/10,1D,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.38**	**77**	eP	**Pn**	**10 51 35.6**	**-2.3**
PCIG				i S	**Sn**	**10 51 52.0**	**-3.0**
PCIG		**1.38**	**77**		**Pn**	**10 51 35.6**	**-2.3**
PCIG					**Sn**	**10 51 52.0**	**-3.0**
HUIG	**Huatulco**	**1.49**	**285**	eP	**Pn**	**10 51 37.5**	**-2.0**
HUIG				i S	**Sn**	**10 51 54.9**	**-2.8**
HUIG	**Huatulco**	**1.49**	**285**		**Pn**	**10 51 37.5**	**-2.0**
HUIG					**Sn**	**10 51 54.9**	**-2.8**
CMIG	**Matias Romero**	**1.71**	**351**	Pg	**Pn**	**10 51 40.8**	**-1.6**
	143nm,0.3s,baz=160,slow=11,SNR=673						
CMIG				Lg	Lg	10 52 00.9	
	4µm,0.3s,baz=30,slow=14,SNR=77						
CMIG				LR	LR	10 52 23.7	
	comp=Z,692nm,20.8s,baz=158,slow=44						
CMIG	**Matias Romero**	**1.71**	**351**	eP	**Pn**	**10 51 40.9**	**-1.6**
CMIG				eS	**Sn**	**10 52 01.2**	**-1.9**
PANG	**Puerto Angel**	**1.81**	**279**	eP	**Pn**	**10 51 42.0**	**-1.9**
PANG				eS	**Sn**	**10 52 02.9**	**-2.8**
PANG	**Puerto Angel**	**1.81**	**279**		**Pn**	**10 51 42.0**	**-1.9**
PANG					**Sn**	**10 52 02.9**	**-2.8**
TGBT	**Tuxtla Gutierr**	**2.01**	**47**	eP	**Pn**	**10 51 45.6**	**-0.9**
TGBT				eS	**Sn**	**10 52 09.3**	**-1.2**
TGBT	**Tuxtla Gutierr**	**2.01**	**47**		**Pn**	**10 51 45.6**	**-0.9**
TGBT					**Sn**	**10 52 09.3**	**-1.2**
PEIG	**Puerto Escondi**	**2.51**	**284**	eP	**Pn**	**10 51 51.9**	**-1.6**
PEIG				eS	**Sn**	**10 52 22.2**	**-0.7**
CCIG	**Comitan**	**2.54**	**69**		**Pn**	**10 51 53.6**	**-0.4**
OXBJ	**Oaxaca**	**2.62**	**310**	eP	**Pn**	**10 51 55.6**	**+0.5**
OXBJ				eS	**Sn**	**10 52 27.1**	**+1.2**
OXBJ	**Oaxaca**	**2.62**	**310**		**Pn**	**10 51 55.6**	**+0.5**
OXBJ					**Sn**	**10 52 27.1**	**+1.2**
TUIG	**Tuzandepetl**	**2.63**	**4**	eP	**Pn**	**10 51 54.4**	**-0.7**
TUIG				eS	**Sn**	**10 52 25.9**	**+0.1**
TUIG	**Tuzandepetl**	**2.63**	**4**		**Pn**	**10 51 54.4**	**-0.7**
TUIG					**Sn**	**10 52 25.9**	**+0.1**
VHO	**Vista Hermosa**	**2.63**	**310**	eP	**Pn**	**10 51 56.0**	**+0.7**
VHO				eS	**Sn**	**10 52 25.9**	**-0.2**
RTAL	**Retalhuleu**	**2.95**	**107**		**Pn**	**10 51 58.9**	**-0.6**
RTAL				Sn	**Sn**	**10 52 33.0**	**-0.7**
HUEH	**Huehuetenango**	**3.00**	**91**		**Pn**	**10 52 00.9**	**+0.5**
HUEH				Sn	**Sn**	**10 52 36.7**	**+1.3**
YOIG	**Yosondua**	**3.17**	**298**	eP	**Pn**	**10 52 03.3**	**+0.5**
YOIG				i S	**Sn**	**10 52 39.2**	**-0.3**
PNIG	**Pinotepa**	**3.52**	**287**	eP	**Pn**	**10 52 06.7**	**-0.7**
PNIG				i S	**Sn**	**10 52 47.6**	**-0.3**
PNIG	**Pinotepa**	**3.52**	**287**		**Pn**	**10 52 06.7**	**-0.7**
PNIG					**Sn**	**10 52 47.6**	**-0.3**
TOIG	**Toxpalan**	**3.57**	**319**	eP	**Pn**	**10 52 10.1**	**+2.0**
FUG	**Fuego 3**	**3.77**	**104**	eP	**Pn**	**10 52 10.9**	**0.0**
PCG	**Pacaya**	**4.00**	**104**	eP	**Pn**	**10 52 14.9**	**+0.7**
NBG	**Las Nubes**	**4.20**	**100**	eP	**Pn**	**10 52 17.4**	**+0.4**
TLIG	**Tlapa**	**4.36**	**300**	Pn	**Pn**	**10 52 20.8**	**+1.8**
TLIG				Sn	**Sn**	**10 53 11.6**	**+2.9**
MRL	**Marmol**	**4.77**	**93**	eP	**Pn**	**10 52 25.0**	**+0.3**
MRL				eS	**Sn**	**10 53 25.5**	**+6.7**
PETF	**Flores**	**4.81**	**71**		**Pn**	**10 52 24.5**	**-0.5**
PETF				Sn	**Sn**	**10 53 14.6**	**-4.8**
ESQI	**Esquipulas**	**5.16**	**99**		**Pn**	**10 52 30.4**	**+0.4**
MTO3	**Montecristo**	**5.17**	**100**		**Pn**	**10 52 30.3**	**0.0**
MTO3				Sn	**Sn**	**10 53 28.4**	**-0.4**
SNET	**Serv Nac Est T**	**5.48**	**107**	Pn	**Pn**	**10 52 34.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**7.23**	**100**	Pn	**Pn**	**10 52 57.1**	**-1.2**
MOIG	**Morelia**	**7.58**	**305**		**Pn**	**10 53 06.6**	**+3.3**
TEIG	**Tepich**	**7.71**	**51**	Pn	**Pn**	**10 53 03.4**	**-1.5**
CRIN	**San Cristobal**	**7.81**	**109**	Pn	**Pn**	**10 53 08.2**	**+1.9**
ACON	**Acoyapa**	**9.79**	**109**	Pn	**Pn**	**10 53 32.8**	**-0.5**
ZAIG	**Zacatecas**	**10.50**	**316**	Pn	**Pn**	**10 53 44.6**	**+1.2**
JTS	**Las Juntas de**	**10.70**	**117**	Pn	**Pn**	**10 53 44.7**	**-1.2**
	1.5nm,0.3s,baz=5.2,slow=21,SNR=7.7						
JTS				Lg	Lg	10 56 31.4	
	baz=193,slow=19,SNR=4.8						
JTS	**Las Juntas de**	**10.70**	**117**	Pn	**Pn**	**10 53 46.9**	**+1.0**
833A	**Chaparral WMA,**	**13.61**	**342**	P	**Pn**	**10 54 26.8**	**+1.3**
	baz=159,SNR=22						
833A	**Chaparral WMA,**	**13.61**	**342**	Pn	**Pn**	**10 54 27.8**	**+2.3**
435B	**Jarrell**	**15.56**	**350**	P	**Pn**	**10 54 52.4**	**+1.0**
	baz=169,SNR=14						
435B	**Jarrell**	**15.56**	**350**		**Pn**	**10 54 52.4**	**+1.0**
JCT	**Junction City**	**15.75**	**343**	P	**Pn**	**10 54 54.6**	**+0.7**
	baz=161,SNR=5.8						
JCT	**Junction City**	**15.75**	**343**	Pn	**Pn**	**10 54 54.0**	**+0.1**
342A	**Flagon Creek P**	**16.04**	**7**	Pn	**Pn**	**10 54 56.2**	**-1.4**

342A				IAmb	IAmb	10 55 00.3	
	comp=Z,46nm,1.1s						
TX32	Lajitas Array	16.19	330		Pn	10 55 00.6	+1.0
TXAR	Lajitas Array	16.19	330	Pn	Pn	10 55 00.7	+1.1
	comp=Z,0.0nm,0.3s,baz=155,slow=13,SNR=17						
TX31	Lajitas Ar. Si	16.19	330		Pn	10 55 00.8	+1.2
TX31				IAmb	IAmb	10 55 21.2	
	comp=Z,44nm,1.4s						
237A	Washetta, Mont	16.57	356	Pn	Pn	10 55 06.2	+2.0
237A				IAmb	IAmb	10 55 29.6	
	comp=Z,30nm,0.8s						
WHTX	Lake Whitney,	16.72	352	P	Pn	10 55 06.9	+0.7
	baz=170,SNR=7.3						
WHTX	Lake Whitney,	16.72	352	Pn	Pn	10 55 07.5	+1.3
143A	Socs Landing,	17.48	9	P	Pn	10 55 14.0	-1.5
143A				IAmb	IAmb	10 55 20.3	
	comp=Z,29nm,0.7s						
ABTX	Abilene, Hawle	17.75	346	P	Pn	10 55 19.5	+0.6
	baz=163,SNR=12						
ABTX	Abilene, Hawle	17.75	346		Pn	10 55 19.9	+0.9
ABTX				IAmb	IAmb	10 55 27.1	
	comp=Z,33nm,0.9s						
Z38A	Mt. Pleasant	17.79	359		P	10 55 22.9	+3.2
Z38A				IAmb	IAmb	10 55 23.9	
	comp=Z,28nm,0.8s						
Z41A	Richland Creek	17.86	5	Pn	Pn	10 55 20.5	+0.3
Z41A				IAmb	IAmb	10 55 27.3	
	comp=Z,20nm,0.6s						
Z35A	Perchaven, San	18.02	353	Pn	P	10 55 22.1	-0.1
Z35A				IAmb	IAmb	10 55 30.2	
	comp=Z,26nm,0.7s						
WLAR	White Oak Lake	18.26	4	P	P	10 55 25.6	+0.8
WLAR				IAmb	IAmb	10 55 54.0	
	comp=Z,20nm,0.9s						
352A	Blakely	18.29	27	P	P	10 55 26.0	+0.8
Z47A	Carrollton	18.69	17	P	P	10 55 28.8	-0.8
Z47A				IAmb	IAmb	10 55 34.8	
	comp=Z,17nm,0.9s						
LRAL	Lakeview Retre	18.87	20	P	P	10 55 31.1	-0.5
	baz=203						
LRAL	Lakeview Retre	18.87	20	P	P	10 55 31.6	0.0
GDL2	Guadalupe Moun	18.94	334	P	P	10 55 33.5	+1.0
Y45A	Yeager Farm, C	18.95	13	P	P	10 55 32.4	-0.1
Y45A				IAmb	IAmb	10 55 35.7	
	comp=Z,29nm,0.9s						
MNTX	Cornudas Mount	18.97	331	P	P	10 55 33.4	+0.7
	baz=146						
MNTX	Cornudas Mount	18.97	331	P	Pn	10 55 34.6	+0.8
MIAR	Mount Ida	19.09	3	P	P	10 55 33.1	-0.9
	baz=183						
MIAR	Mount Ida	19.09	3	P	P	10 55 33.5	-0.5
X37A	Clayton	19.12	358	P	Pn	10 55 36.2	+0.7
X37A				IAmb	IAmb	10 55 44.6	
	comp=Z,20nm,0.6s						
X34A	Smith Ranch, M	19.34	352	P	P	10 55 37.6	+0.9
152A	Waverly Hall	19.41	26	P	Pn	10 55 40.0	+1.1
152A				IAmb	IAmb	10 55 41.1	
	comp=Z,25nm,1.2s						
OXF	Oxford	19.60	13	P	Pn	10 55 41.7	+0.5
OXF				IAmb	IAmb	10 55 44.4	
	comp=Z,20nm,0.8s						
WMOK	Wichita Mounta	19.62	350	P	P	10 55 40.0	+0.2
	baz=168,SNR=5.7						
WMOK	Wichita Mounta	19.62	350	P	P	10 55 39.5	-0.4
W39A	Magazine	19.73	2	P	P	10 55 40.4	-0.5
	baz=182						
W39A	Magazine	19.73	2	P	P	10 55 40.7	-0.3
W39A				IAmb	IAmb	10 55 47.9	
	comp=Z,12nm,0.8s						
W35A	Tecumseh	19.78	355	P	P	10 55 41.2	-0.3
Z51A	Franklin	19.79	24	P	P	10 55 43.2	+1.6
Z51A				IAmb	IAmb	10 55 45.8	
	comp=Z,18nm,1.1s						
W41B	Gary Mavity, V	19.81	6	P	P	10 55 40.9	-0.9
	baz=186						
W41B	Gary Mavity, V	19.81	6	P	Pn	10 55 43.9	+0.3
MSTX	Muleshoe	19.91	340	P	P	10 55 43.4	+0.3
	baz=156,SNR=9.2						
MSTX	Muleshoe	19.91	340	P	P	10 55 44.5	+1.4
MSTX				IAmb	IAmb	10 55 48.8	
	comp=Z,21nm,1.1s						
WHAR	Wooly Hollow	19.92	6	P	P	10 55 44.9	+1.9
FNO	Franklin	19.94	353	P	P	10 55 43.9	+0.6
154A	Montrose	20.08	29	P	P	10 55 46.1	+1.3
X48A	Hartselle	20.16	18	P	Pn	10 55 48.2	+0.3
X48A				IAmb	IAmb	10 55 52.4	
	comp=Z,11nm,0.7s						
UREC	San Jos de Ur	20.16	110	*e*P	P	10 55 44.9	-1.0
OK025	Westminster Rd	20.25	354	P	P	10 55 46.7	+0.1
BCOK	Bluff Creek, N	20.36	353	P	P	10 55 48.4	+0.6
AMTX	Amarillo	20.42	343	P	P	10 55 48.7	+0.1
	baz=160						
AMTX	Amarillo	20.42	343	P	P	10 55 48.6	+0.1
TUL1	Leonard	20.46	357	P	P	10 55 48.6	-0.3
	baz=176						
TUL1	Leonard	20.46	357	P	P	10 55 50.6	+1.8
TUL1				IAmb	IAmb	10 56 09.9	
	comp=Z,20nm,0.8s						
OK029	Liberty Lake	20.48	353	P	P	10 55 50.1	+1.1
OK029				IAmb	IAmb	10 55 52.1	
	comp=Z,26nm,1.1s						
FCAR	Ozark Folk Cen	20.53	6	P	P	10 55 47.8	-1.9
FCAR				IAmb	IAmb	10 55 53.2	
	comp=Z,8.9nm,0.7s						
OK030	Cody Creek RV	20.54	355	P	P	10 55 48.2	-1.6
OK030				IAmb	IAmb	10 56 10.1	
	comp=Z,17nm,0.6s						
OK031	S. Brethren Rd	20.57	355	P	P	10 55 48.5	-1.6
OK031				IAmb	IAmb	10 56 16.9	
	comp=Z,16nm,0.7s						
CBOC	Ciudad Bolivar	20.57	115	*e*P	P	10 55 51.8	+1.3
GOGA	Godfrey	20.58	27	P	P	10 55 48.7	-1.5
	baz=212						
GOGA	Godfrey	20.58	27	P	P	10 55 48.7	-1.5
GOGA				IAmb	IAmb	10 55 55.5	
	comp=Z,18nm,1.0s						
Y52A	Lilburn	20.71	26	P	P	10 55 52.2	+0.5
Y52A				IAmb	IAmb	10 55 56.8	
	comp=Z,18nm,0.8s						
QUOK	Quay	20.78	355	P	P	10 55 53.8	+1.5
319A	Douglas	20.80	322	P	P	10 55 55.1	+2.3
HHAR	Hobbs	20.81	2	P	P	10 55 53.9	+1.2
PLMC	San Jos del P	20.82	118	*e*P	P	10 55 53.5	+0.4
LCAR	Lake Charles	20.82	8	P	P	10 55 51.5	-1.2
121A	Cookes Peak, D	20.84	327	P	P	10 55 53.7	+0.4
	baz=142,SNR=6.2						
121A	Cookes Peak, D	20.84	327	P	P	10 55 55.0	+1.8
121A				IAmb	IAmb	10 55 56.7	
	comp=Z,14nm,0.9s						
ZARC	Zaragoza, Cauc	20.88	110	*e*P	P	10 55 51.5	-2.1
U40A	Yellville	20.93	4	P	P	10 55 54.4	+0.4
	baz=184,SNR=6.4						
U40A	Yellville	20.93	4	P	P	10 55 53.8	-0.2
U40A				IAmb	IAmb	10 56 15.5	
	comp=Z,14nm,1.1s						
U38A	Gravette	20.96	1	P	P	10 55 53.3	-1.0
X51A	Calhoun	21.01	23	P	P	10 55 55.4	+0.6
SMLC	San Martn de	21.12	106	*e*P	P	10 55 54.1	-2.1
CROK	Carrier	21.24	352	P	P	10 55 56.7	-0.6
YOTC	Yotoco, Valle	21.25	120	*e*P	P	10 55 57.9	+0.1
U32A	Winter Ranch,	21.26	350	P	P	10 55 58.3	+0.7
GUY2C	Guyana, Caldas	21.44	116	*e*P	P	10 55 60.0	-0.2
T35A	Sooner Cattle	21.50	356	P	P	10 55 58.2	-1.9
WVT	Waverly	21.52	15	P	P	10 56 00.2	-0.1
	baz=198						
WVT	Waverly	21.52	15	P	P	10 56 00.7	+0.4
WVT				IAmb	IAmb	10 56 05.7	
	comp=Z,9.7nm,0.8s						
BNM	Barren Site	21.59	332	P	P	10 56 02.8	+1.4
RREF	El Recreo	21.62	117	*e*P	P	10 56 03.1	+0.9
PBMO	Poplar Bluff	21.62	9	P	P	10 56 01.6	+0.3
PTBC	PUERTO BERRIO,	21.64	112	*e*P	P	10 56 03.1	+1.4
Y22D	IRIS PASSCAL I	21.66	331	P	P	10 56 01.8	-0.2
	baz=146						
KAN13	South Haven SW	21.68	354	P	P	10 56 03.2	+1.2
KAN14	Manchester OK	21.68	353	P	P	10 56 02.0	0.0
NORC	Norcasia	21.71	115	*e*P	P	10 56 02.4	-0.2
LENM	Lemitar	21.76	331	P	P	10 56 04.2	+1.1
MGMO	Mountain Grove	21.77	5	P	P	10 56 03.1	+0.1
T42A	Van Buren	21.77	8	P	P	10 56 03.1	+0.2
T42A				IAmb	IAmb	10 56 25.0	
	comp=Z,17nm,1.4s						
TOLC	Tolima	21.80	118	*e*P	P	10 56 05.0	+1.2
HODGE	Hodges	21.82	28	P	P	10 56 04.6	+1.1
KAN01	Argonia South	21.85	353	P	P	10 56 04.0	+0.2
NHSC	New Hope	21.96	34	P	P	10 56 04.2	-0.7
	baz=220						
ANMO	Albuquerque	22.19	333	P	P	10 56 09.0	+1.3
	comp=Z,3.0nm,0.9s,baz=151,slow=11,SNR=13						
ANMO	Albuquerque	22.19	333	P	P	10 56 08.3	+0.7
	baz=148						
ANMO	Albuquerque	22.19	333	P	P	10 56 08.0	+0.3
MARP	Paez Belalcaza	22.22	122	*e*P	P	10 56 11.0	+2.7
ORTC	Ortega, Tolima	22.22	119	*e*P	P	10 56 08.4	+0.4
S39A	Bolivar	22.24	3	P	P	10 56 08.0	0.0
TUC	Tucson	22.36	322	P	P	10 56 10.3	+0.8
	baz=135						
SPBC	San Pablo de B	22.37	113	*e*P	P	10 56 08.2	-1.6
TKL	Tuckaleechee C	22.39	24	P	P	10 56 08.9	-0.7
	comp=Z,5.7nm,1.0s,baz=190,slow=8.5,SNR=3.2						
TKL				LR	LR	11 06 19.1	
	comp=Z,57nm,19.4s,baz=174,slow=41						
ROSC	El Rosal	22.54	116	P	P	10 56 11.6	-0.3
	comp=Z,13nm,0.7s,baz=147,slow=7.1,SNR=8.1						
ROSC	El Rosal	22.54	116	P	P	10 56 09.3	-2.5
BARC	Barichara	22.76	110	*e*P	P	10 56 12.6	-1.5
CCM	Cathedral Cave	22.77	7	P	P	10 56 13.0	-0.6
	baz=188						
CCM	Cathedral Cave	22.77	7	P	P	10 56 13.7	+0.1
R40A	Maddies Statio	22.90	5	P	P	10 56 14.2	-0.8
R40A				IAmb	IAmb	10 56 27.7	
	comp=Z,12nm,0.8s						
RUSC	La Rusia	23.15	112	*e*P	P	10 56 16.6	-1.7
CHIC	Chingaza	23.15	115	*e*P	P	10 56 18.5	+0.3
R32A	Long Quarter,	23.22	352	P	P	10 56 18.2	0.0
T25A	Trinidad	23.34	340	P	P	10 56 19.3	-0.3
	baz=155						
T25A	Trinidad	23.34	340	P	P	10 56 18.9	-0.7
T25A				IAmb	IAmb	10 56 46.9	
	comp=Z,16nm,1.1s						
214A	Organ Pipe Nat	23.38	318	P	P	10 56 20.3	+0.4
	baz=130						
X18A	Snowflake	23.53	327	P	P	10 56 22.9	+1.5
W57A	Gilead	23.65	31	P	P	10 56 21.1	-1.2
	baz=217						
KSU1	Kansas State U	23.68	356	P	P	10 56 22.4	-0.1
	baz=175						
CBKS	Cedar Bluff	23.76	350	P	P	10 56 23.4	+0.1
	baz=167						
CBKS	Cedar Bluff	23.76	350	P	P	10 56 23.5	+0.1
WCI	Wyandotte Cave	23.90	16	P	P	10 56 23.5	-1.1
	baz=200						
U54A	Nelsons Funny	23.93	26	P	P	10 56 23.7	-1.3
	baz=212						
X16A	Lo Mia Camp, P	24.26	324	P	P	10 56 31.1	+2.9
SDCO	Great Sand Dun	24.26	339	P	P	10 56 28.6	+0.3
	baz=153						
SDCO	Great Sand Dun	24.26	339	P	P	10 56 30.5	+2.2
SDV	Santo Domingo	24.31	103	P	P	10 56 29.2	+0.4
	comp=Z,5.1nm,0.8s,baz=289,slow=3.4,SNR=6.0						
SDV				LR	LR	11 07 04.3	
	comp=Z,66nm,18.5s,baz=260,slow=40						
S22A	4UR Ranch, Cre	24.75	336	P	P	10 56 33.9	+1.1
	baz=150						
S22A	4UR Ranch, Cre	24.75	336	P	P	10 56 34.1	+1.4
MVCO	Mesa Verde	24.98	333	P	P	10 56 35.0	+0.2
	baz=146						
MVCO	Mesa Verde	24.98	333	P	P	10 56 36.4	+1.6
MVCO				IAmb	IAmb	10 56 56.9	
	comp=Z,5.4nm,0.8s						
WUAZ	Wupatki	25.04	326	P	P	10 56 36.8	+1.6
	baz=139,SNR=6.8						
WUAZ	Wupatki	25.04	326	P	P	10 56 38.9	+3.7
WUAZ				IAmb	IAmb	10 56 39.9	
	comp=Z,10nm,0.9s						
S54A	Dingess, Beckl	25.23	25	P	P	10 56 36.0	-0.8
	baz=211						
PV01	Paradox Valley	25.79	334	P	P	10 56 44.0	+1.9
PV01				IAmb	IAmb	10 57 06.8	
	comp=Z,6.9nm,0.9s						
PV02	Paradox Valley	25.92	334	P	P	10 56 45.5	+2.3
PV03	Paradox Valley	26.01	334	P	P	10 56 45.7	+1.6
PV03				IAmb	IAmb	10 56 54.3	
	comp=Z,9.7nm,1.2s						
PV12	Saucer Basin,	26.04	334	P	P	10 56 45.0	+0.6
PV12				IAmb	IAmb	10 56 54.8	
	comp=Z,12nm,1.1s						
SMCO	Snowmass	26.06	338	P	P	10 56 45.3	+0.6
SMCO				IAmb	IAmb	10 56 53.1	
	comp=Z,6.3nm,0.9s						
PV17	East Wray Mesa	26.07	334	P	P	10 56 46.1	+1.5
PV17				IAmb	IAmb	10 56 56.0	
	comp=Z,7.4nm,1.0s						
PV07	Paradox Valley	26.08	334	P	P	10 56 46.5	+1.8
PV07				IAmb	IAmb	10 57 12.1	
	comp=Z,15nm,1.4s						
PV04	Paradox Valley	26.15	334	P	P	10 56 47.2	+1.9
PV04				IAmb	IAmb	10 57 02.0	
	comp=Z,7.0nm,0.9s						
ISCO	Idaho Springs	26.15	341	P	P	10 56 46.5	+1.0
	baz=155						
ISCO	Idaho Springs	26.15	341	P	P	10 56 46.4	+1.0
BC3	Big Chuckawall	26.18	318	P	P	10 56 46.8	+1.3
	baz=129						
PV14	Lion Creek, Pa	26.18	334	P	P	10 56 47.1	+1.4
PV22	Blue Mesa, Par	26.22	334	P	P	10 56 47.6	+1.6
PV22				IAmb	IAmb	10 56 48.5	
	comp=Z,7.2nm,0.9s						
PV23	Carpenter Ridg	26.24	334	P	P	10 56 47.9	+1.7
PV23				IAmb	IAmb	10 57 13.8	
	comp=Z,9.2nm,0.9s						
OGNE	Ogallala	26.26	347	P	P	10 56 46.8	+0.6
	baz=163						
OGNE	Ogallala	26.26	347	P	P	10 56 47.0	+0.9
IRM	Iron Mountain	26.30	319	P	P	10 56 48.3	+1.8
	baz=130						
PFO	Pinyon Flats O	26.81	316	LR	LR	11 07 27.1	
	comp=Z,160nm,18.5s,baz=23,slow=36						
GMRC	Granite Mounta	27.03	319	P	P	10 56 54.2	+1.0
	baz=130						
O20A	White River Ci	27.37	337	P	P	10 56 56.9	+0.6
	baz=150						
ATAH	Atahualpa	27.56	143	LR	LR	11 06 24.2	
	comp=Z,91nm,18.8s,baz=274,slow=33						
ECSD	EROS Data Cent	28.30	357	P	P	10 57 04.0	-0.2
	baz=176						
ECSD	EROS Data Cent	28.30	357	IAmb	IAmb	10 57 05.5	
	comp=Z,4.4nm,0.8s						
MPMC	Manual Prospec	28.99	319	P	P	10 57 11.7	+0.9
	baz=129						
K22A	Casper	29.03	342	P	P	10 57 11.2	+0.2
	baz=156						
L53A	Girard	29.22	22	P	P	10 57 10.4	-2.1
	baz=209						
HWUT	Hardware Ranch	29.95	334	P	P	10 57 21.1	+1.9
PDAR	Pinedale Array	30.14	338	P	P	10 57 21.1	+0.1
	comp=Z,1.3nm,0.9s,baz=148,slow=8.7,SNR=6.0						
PDAR				LR	LR	11 11 26.6	
	comp=Z,82nm,21.4s,baz=306,slow=40						
HVU	Hansel Valley	30.61	333	P	P	10 57 26.5	+1.5
ELK	Elko	30.97	329	P	P	10 57 29.9	+1.6
	comp=Z,2.1nm,0.8s,baz=96,slow=4.8,SNR=12						
ELK				LR	LR	11 11 18.2	
	comp=Z,87nm,21.8s,baz=226,slow=39						
ELK	Elko	30.97	329	P	P	10 57 30.1	+1.8
NVAR	Mina Array Bea	31.01	322	P	P	10 57 30.8	+2.1
	comp=Z,1.8nm,0.9s,baz=136,slow=9.1,SNR=12						
NVAR				LR	LR	11 11 03.1	
	comp=Z,126nm,19.4s,baz=189,slow=39						
REDW	Red Top Meadow	31.14	337	P	P	10 57 31.0	+1.3
REDW				IAmb	IAmb	10 57 31.8	
	comp=Z,6.1nm,0.8s						
LOHW	Long Hollow	31.26	337	IAmb	IAmb	10 57 32.7	
	comp=Z,5.0nm,0.8s						
RLMT	Red Lodge	32.11	340	P	P	10 57 38.2	-0.1
	baz=152						
YNE	Yellowstone No	32.26	339	P	P	10 57 40.5	+0.9
NNA	Nana	32.40	146	LR	LR	11 08 35.3	
	comp=Z,76nm,19.0s,baz=312,slow=32						
MDND	Maddock	32.62	354	P	P	10 57 42.2	-0.2
	baz=171						
HLID	Hailey	32.77	333	P	P	10 57 43.9	0.0
	baz=143,SNR=7.7						
HLID	Hailey	32.77	333	P	P	10 57 45.2	+1.2
HLID				IAmb	IAmb	10 57 48.8	
	comp=Z,4.0nm,0.8s						
AGMN	Agassiz Nation	32.83	358	P	P	10 57 42.7	-1.5
	baz=178						
AGMN	Agassiz Nation	32.83	358	P	P	10 57 42.5	-1.7
DLMT	Dillon	33.50	337	IAmb	IAmb	10 57 52.9	
	comp=Z,5.9nm,0.8s						
WVOR	Wild Horse Val	33.94	327	IAmb	IAmb	10 58 17.0	
	comp=Z,6.2nm,1.2s						
HRY	Holter Researc	34.37	339	P	P	10 57 59.0	+1.2
ULM	Lac du Bonnet	34.78	359	P	P	10 58 00.3	-0.8
	comp=Z,2.8nm,0.9s,baz=176,slow=12,SNR=4.5						
EGMT	Eagleton	34.86	342	P	P	10 58 02.0	0.0
	baz=154						
MSO	Missoula	35.24	337	P	P	10 58 04.7	-0.6
	baz=146						
F10A	Beach Ranch, E	35.90	333	P	P	10 58 11.6	+0.7
JTMT	Jette	36.13	337	P	P	10 58 13.3	+0.4
JTMT				IAmb	IAmb	10 58 14.4	
	comp=Z,3.7nm,0.7s						
MATQ	Matagami	36.95	18	P	P	10 58 16.7	-3.1
	baz=208						
NEW	Newport	37.66	335	P	P	10 58 25.9	0.0
	baz=143						
FFC	Flin Flon	39.66	353	P	P	10 58 42.3	-0.1
FFC				IAmb	IAmb	10 58 42.8	
	comp=Z,5.3nm,0.6s						
A04D	Lummi Island	40.43	331	P	P	10 58 49.6	+0.7
	baz=135						
MNMC	Minye Minye	42.23	143	P	P	10 59 04.5	+0.2
MNMC				IAmb	IAmb	10 59 05.8	
	comp=Z,7.3nm,1.0s						
SIV	San Ignacio	45.49	132	P	P	10 59 29.2	-1.1
	comp=Z,4.5nm,0.8s,baz=312,slow=8.2,SNR=18						
AC02	Maricunga	48.73	149	P	P	10 59 57.3	+1.3
YKA	Yellowknife Ar	49.12	348	P	P	10 59 57.3	-0.5
	comp=Z,2.5nm,0.7s,baz=149,slow=7.7,SNR=49						
CPUP	Villa Florida	55.09	138	LR	LR	11 25 54.2	
	comp=Z,74nm,18.1s,baz=283,slow=38						
LC01	Cunco	58.05	159	IAmb	IAmb	11 01 04.0	
	comp=Z,4.9nm,0.8s						
LC01				P	P	11 01 04.2	+0.6
PLCA	Paso Flores	60.15	159	P	P	11 01 18.2	+0.1
	comp=Z,4.4nm,0.9s,baz=337,slow=8.2,SNR=7.8						
PLCA	Paso Flores	60.15	159	P	P	11 01 19.1	+1.0
HDA	Harding Lake	60.42	337	P	P	11 01 19.1	-0.6
	baz=118						
ILAR	Eielson Array	60.57	337	P	P	11 01 20.7	0.0
	comp=Z,1.8nm,0.9s,baz=139,slow=4.5,SNR=17						
MCK	McKinley	60.88	336	P	P	11 01 22.9	0.0
	baz=116						
NEA2	Nenana	61.32	336	P	P	11 01 25.2	-0.6
	baz=116						
I23K	Minto, Yukon-K	61.68	337	P	P	11 01 28.0	-0.1
	baz=116						
I23K	Minto, Yukon-K	61.68	337	P	P	11 01 29.0	+0.9
I23K				IAmb	IAmb	11 01 29.1	
	comp=Z,3.1nm,0.8s						
COLD	Coldfoot	62.92	339	P	P	11 01 36.6	+0.2
	baz=116						
IMAR	Indian Mountai	63.69	337	P	P	11 01 41.0	-0.5
EKA	Eskdalemuir Ar	78.32	36	P	P	11 03 10.1	-0.2
	comp=Z,1.5nm,0.6s,baz=286,slow=6.6,SNR=2.3						
SNF	Seneffe	83.81	39	*d*pP	pP	11 03 53.8	+0.6
NOA	NORSAR Array B	84.12	28	P	P	11 03 40.6	-0.5
	comp=Z,1.2nm,0.9s,baz=278,slow=9.4,SNR=1.9						
NOA				LR	LR	11 41 34.1	
	comp=Z,22nm,18.4s,baz=295,slow=36						
ARCES	ARCESS Array B	85.60	18	P	P	11 03 48.8	+0.5
	comp=Z,6.8nm,1.2s,baz=31,slow=2.8,SNR=1.7						
VYHS	Vyhne	93.34	38	*e*P	P	11 04 23.4	-2.0
KSH	Kashi	124.67	9	PKP	PKiKP	11 10 12.1	+1.5

IDC ***23*** *10:51:29.8±3.4, 53°.21N×63°.11E, h0^{km}, mb3.2/1, mb1 3.2/2, mb1mx2.9/50, mbtmp3.1/2, ML2.8/1, Error ellipse: s-maj=91.3km s-min=18.0km az=12.0*

NNC ***23*** *10:51:30.4±3.7, 53°.39N×62°.95E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=52.8km s-min=11.3km az=155.0, Suspected Mining explosion.*

ISC 23 10:51:32.8±1.5**, 54°.1N**±0°.2×**63°.58E**±0°.07**, h0^{km}, n7, σ1ˢ.05**/6**, 4C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRVK	Borovoye	4.13	102	⇑Pg	Pg	10 52 51.4	-0.5
	0.9nm,0.5s						
BRVK				⇓Lg	Lg	10 53 48.7	
	6.6nm,0.6s						
BVAR	Borovoye Array	4.20	102	Pn	Pn	10 52 38.4	+0.3
	0.5nm,0.3s,baz=250,slow=15,SNR=4.1						
BVAR				Sn	Sn	10 53 27.8	-0.1
	0.3nm,0.3s,baz=280,slow=18,SNR=2.1						
BVAR				Lg	Lg	10 53 53.1	
	1.1nm,0.3s,baz=287,slow=28,SNR=4.6						
AKTO	Aktyubinsk	5.01	225	⇑Pg	Pn	10 52 48.0	-1.1
	1.7nm,0.7s						
AKTO				⇑Lg	Lg	10 53 43.4	
	5.3nm,0.7s						
I31KZ	AKTYUBINSK INF	5.02	225	*i*		11 15 30.0	
	baz=43,slow=339,SNR=49						
AB31	Akbulak array	5.35	206	⇑Pg	Pn	10 52 55.0	+1.1
	0.4nm,0.3s,baz=24,slow=15,SNR=6.6						
AB31				⇓Lg	Lg	10 53 55.1	
	7.1nm,0.7s,baz=15,slow=26,SNR=11						
I46RU	ZALESOVO INFRA	12.49	82	*i*		12 11 00.0	
	baz=270,slow=332,SNR=2.7						
FINES	FINESS Array B	21.05	305	P	P	10 56 18.6	+0.6
	0.6nm,0.6s,baz=91,slow=11,SNR=3.6						

IDC 23 11:23:10.0±1.0**, 18°.58N**×**145°.78E, h0^{km}, mb3.5**/7**, mb1 3.8**/7**, mb1mx3.5**/45**, mbtmp3.5**/7**, Error ellipse: s-maj=36.0km s-min=22.9km az=115.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.90	197	P	P	11 30 45.9	0.0
	0.5nm,0.5s,baz=5.3,slow=8.9,SNR=7.8						
ASAR	Alice Springs	43.56	196	P	P	11 31 15.3	-0.6
	0.3nm,0.8s,baz=22,slow=8.0,SNR=1.7						
CMAR	Chiang Mai Arr	44.31	278	P	P	11 31 22.6	+0.5
	0.6nm,0.4s,baz=66,slow=6.8,SNR=5.6						
KURBB	Kurchatov Arra	61.46	318	P	P	11 33 27.8	-0.5
	0.5nm,0.8s,baz=94,slow=7.0,SNR=4.4						
ILAR	Eielson Array	63.71	26	P	P	11 33 44.0	+0.8
	0.2nm,0.6s,baz=240,slow=6.4,SNR=5.0						
YKA	Yellowknife Ar	78.05	28	P	P	11 35 08.4	-1.9
	0.1nm,0.6s,baz=289,slow=5.3,SNR=2.9						
NVAR	Mina Array Bea	83.15	52	P	P	11 35 39.4	+0.9
	0.6nm,0.6s,baz=264,slow=5.9,SNR=5.5						

SOME ***23*** *12:15:39.4, 40°.77N×69°.78E, h5^{km}*

KRNET ***23*** *12:15:39.0±0.1, 40°.98N×69°.38E, mb2.9*

NNC ***23*** *12:15:40.2±3.0, 40°.93N×69°.59E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=21.2km s-min=11.3km az=24.0*

ISU ***23*** *12:15:42, 41°.10N×69°.70E, h5^{km}, Hypocentre not reviewed by the ISC*

ISC 23 12:15:40.9±1.8**, 40°.88N**±0°.06×**69°.28E**±0°.08**, h10^{km}, n26, σ2ˢ.20**/45**, 20C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.45	1	*e*P		12 15 50.0	
IUG	Iuzhnay	1.39	24	*e*P	Pg	12 16 06.8	-0.8
	188nm,0.3s						
IUG				*e*S	Sg	12 16 26.4	+0.8
	119nm,0.3s						
BTK	Batken	1.43	124	⇑*i*P	Pn	12 16 06.1	-0.9
	baz=30						
BTK				⇑*i*S	Sn	12 16 26.1	+0.2
	baz=30						
BTK	Batken	1.43	124	*e*P		12 16 06.0	
BTK				*e*S		12 16 26.0	
CHM	Chimkent	1.46	9	*e*P	Pg	12 16 09.9	+1.0
	6.3nm,0.6s						
CHM				*e*S	Sg	12 16 31.7	+3.8
	498nm,0.3s						
BRLS	Borolday	2.19	11	*e*P	Pn	12 16 14.8	-2.6
	55nm,0.2s						
BRLS				*e*S	Sn	12 16 40.7	-3.9
	56nm,0.4s						
KK31	Karatay Array	2.41	22	⇓Pg	Pb	12 16 22.4	-1.9
	5.4nm,0.3s,baz=196,slow=16,SNR=219						
KK31				Lg	Lg	12 16 52.7	
	15nm,0.4s,baz=201,slow=25,SNR=18						
ARSB	Arslanbob	2.83	80	⇑*e*P	Pn	12 16 26.7	+0.4
	baz=82						
ARSB				⇑*i*S	Sn	12 17 01.3	+0.7
	baz=82						
ARSB	Arslanbob	2.83	80	*e*P		12 16 27.0	

ARSB				eS		12 17 01.0	
MNAS	Manas	2.90	55	⇑iP	Pn	12 16 27.5	+0.2
	baz=56						
MNAS				⇑iS	Sn	12 17 01.7	-0.6
	baz=56						
SFK	Sufi-Kurgan	3.33	104	⇑iP	Pn	12 16 33.9	+0.6
	baz=6.0						
SFK				⇑iS	Sn	12 17 14.7	+1.6
	baz=6.0						
MRKS	Merke	3.49	56	eP	Pb	12 16 40.7	-2.1
	6.0nm,0.3s						
MRKS				eS	Sb	12 17 25.0	-0.3
	14nm,0.4s						
MRKS	Merke	3.49	56	Pg	Pb	12 16 40.4	-2.4
	6.0nm,0.3s						
MRKS				Lg	Lg	12 17 25.0	
	14nm,0.4s						
AML	Almayashu	3.54	68	⇑iP	Pn	12 16 36.4	+0.1
	baz=69						
AML				⇑iS	Sn	12 17 17.9	-0.6
	baz=69						
EKS2	Erkin-Say	3.80	61	⇑iP	Pn	12 16 39.5	-0.2
	baz=62						
EKS2				⇑iS	Sn	12 17 24.2	-0.4
	baz=62						
ARLS	Aral	3.92	74	⇓iP	Pn	12 16 41.7	+0.4
	baz=75						
ARLS				⇓iS	Sn	12 17 27.6	+0.2
	baz=75						
UCH	Uchtor	4.15	69	⇓iP	Pn	12 16 44.6	-0.1
	baz=70						
UCH				⇓iS	Sn	12 17 33.3	-0.2
	baz=70						
AAK	Ala-Archa	4.28	64	⇑iP	Pn	12 16 46.3	+0.1
	baz=65						
AAK				⇑iS	Sn	12 17 35.8	-0.4
	baz=65						
AAK	Ala-Archa	4.28	64	⇑Pg	Pb	12 16 53.6	-2.7
	1.9nm,0.3s						
AAK				⇑Lg	Lg	12 17 47.7	
	2.5nm,0.5s						
USP	Ospenovka	4.56	57	⇑iP	Pn	12 16 49.9	-0.1
	baz=57						
USP				⇑iS	Sn	12 17 42.1	-0.9
	baz=57						
KBK	Karagaybulak	4.59	65	⇑iP	Pn	12 16 50.2	-0.4
	baz=66						
KBK				⇑iS	Sn	12 17 43.2	-0.9
	baz=66						
TKM2	Tokmak 2	5.13	65	⇓Pg	Pb	12 17 07.6	-3.3
	1.5nm,0.5s						
TKM2				⇓Lg	Lg	12 18 11.7	
	3.1nm,0.5s						
DGS	Degeres	5.38	62	eP	Pb	12 17 13.7	-1.3
	3.3nm,0.6s						
DGS				eS	Sb	12 18 21.2	+1.6
	3.4nm,0.6s						
DGS	Degeres	5.38	62	Pg	Pb	12 17 13.7	-1.3
	3.3nm,0.6s						
DGS				Lg	Lg	12 18 21.2	
	3.4nm,0.6s						
KST	Kastek	5.43	64	eP	Pb	12 17 16.2	+0.3
	2.7nm,0.3s						
KST				eS	Sb	12 18 26.0	+4.8
	6.1nm,0.5s						
KST	Kastek	5.43	64	Pg	Pb	12 17 16.2	+0.3
	2.7nm,0.3s						
KST				Lg	Lg	12 18 26.5	
	6.1nm,0.5s						
BTLS	Baital	5.43	38	eP	Pb	12 17 17.1	+1.2
	0.9nm,0.3s						
BTLS				eS	Sb	12 18 26.9	+5.8
	5.4nm,0.7s						
BTLS	Baital	5.43	38	Pg	Pb	12 17 17.1	+1.2
	0.9nm,0.3s						
BTLS				Lg	Lg	12 18 26.9	
	5.4nm,0.7s						
KOTS	Kotyrbulak	6.29	65	eP	Pb	12 17 33.4	+2.9
	5.9nm,0.4s						
KOTS				eS	Sg	12 18 55.5	-7.1
	4.4nm,0.4s						

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*IDC **23** 12:18:37.4±2.3, 4°.00S×129°.16E, h190^{km}±29^{km}, mb3.4/3, mb1 3.6/6, mb1mx3.2/30, mbtmp4.0/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/17, Error ellipse: s-maj=37.3km s-min=11.5km az=72.0*

ISC 23 12:18:37.9±0.9**, 4°.00S**±0°.07×**129°.3E**±0°.1**, h200^{km}, n7, σ1^{s}.32**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.70	33	P	Pn	12 19 36.3	+0.2
	16nm,0.3s,baz=215,slow=22,SNR=51						
SIJI				S	Sn	12 20 21.5	-0.2
	18nm,0.3s,baz=228,slow=22,SNR=26						
FITZ	Fitzroy Crossi	14.45	194	P	Pn	12 21 53.5	+0.1
	0.2nm,0.3s,baz=18,slow=14,SNR=2.8						
WRA	Warramunga Arr	16.60	163	P	Pn	12 22 19.0	-0.5
	1.2nm,0.3s,baz=346,slow=12,SNR=46						
WRA				S	S	12 25 19.6	-2.4
	0.1nm,0.3s,baz=335,slow=20,SNR=2.8						
ASAR	Alice Springs	20.06	168	P	P	12 22 57.0	+1.0
	2.9nm,0.3s,baz=343,slow=11,SNR=79						
ASAR				S	S	12 26 32.1	+1.6
	0.5nm,0.5s,baz=350,slow=23,SNR=6.2						
CMAR	Chiang Mai Arr	37.29	308	P	P	12 25 30.3	-0.7
	0.5nm,0.3s,baz=144,slow=8.2,SNR=4.9						
SONM	Songino Array	55.38	341	LR	LR	12 55 33.9	
	comp=Z,46nm,19.5s,baz=266,slow=40						
MKAR	Makanchi Array	65.33	326	P	P	12 28 59.0	+0.3
	0.7nm,0.3s,baz=113,slow=8.1,SNR=34						

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*BJI **23** 12:53:18.2±0.0, 32°.68N×89°.42E, h8^{km}, mb3.8/6, ML3.5/3*

*IDC **23** 12:53:23.7±4.6, 32°.69N×89°.21E, h49^{km}±45^{km}, mb3.4/5, mb1 3.6/9, mb1mx3.2/75, mbtmp3.6/9, ML3.2/4, MS2.6/1, Ms1 2.8/1, ms1mx2.4/28, Error ellipse: s-maj=57.3km s-min=24.0km az=68.0*

ISC 23 12:53:19.1±1.3**, 32°.7N**±0°.1×**89°.4E**±0°.3**, h10^{km}, n12, σ0^{s}.69**/12**, mb3.7**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	3.32	153	Pg	Pb	12 54 19.3	+0.9
LSA				Sg	Sg	12 55 05.3	-0.6
LSA				smax	smax		
	comp=N,190nm,0.7s						
LSA				smax	smax		
	comp=E,150nm,1.3s						
GTA	Gaotai	10.78	48	eP	Pn	12 55 58.9	+5.3
GTA				pP		12 56 02.9	
GTA				sP		12 56 06.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	Urumqi	11.21	354	eP	Pn	12 56 00.9	+1.4
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MKAR	Makanchi Array	15.12	341	P	Pn	12 56 52.3	-0.4
	0.0nm,0.3s,baz=148,slow=13,SNR=5.0						
CMAR	Chiang Mai Arr	16.55	146	P	P	12 57 14.2	+0.2
	0.1nm,0.3s,baz=334,slow=10.0,SNR=1.6						
CMAR				LR	LR	13 03 60.0	
	comp=Z,19nm,18.1s,baz=210,slow=38						
KURBB	Kurchatov Arra	19.65	339	P	P	12 57 47.9	0.0
	0.0nm,0.3s,baz=144,slow=11,SNR=9.5						
SONM	Songino Array	19.87	35	P	Pn	12 57 51.8	-0.4
	0.1nm,0.3s,baz=226,slow=13,SNR=11						
ZALV	Zalesovo Beam	21.52	353	P	P	12 58 07.9	-0.1
	1.7nm,0.6s,baz=175,slow=12,SNR=9.2						
SEY	Seymchan	49.23	33	P	P	13 02 07.5	+0.1
	0.6nm,0.6s,baz=260,slow=9.2,SNR=4.4						
WRA	Warramunga Arr	67.70	134	P	P	13 04 16.7	-0.1
	0.5nm,0.8s,baz=308,slow=9.6,SNR=2.7						
ILAR	Eielson Array	73.45	22	P	P	13 04 50.8	-0.6
	0.6nm,0.9s,baz=305,slow=4.2,SNR=5.7						
YKA	Yellowknife Ar	83.22	11	P	P	13 05 44.7	-0.6
	0.3nm,0.8s,baz=336,slow=5.0,SNR=4.5						

IDC 23 12:54:10.1±24.0**, 1°.93N**×**127°.84E, h501**^{km}±334^{km}**, mb2.9**/6**, mb1 3.0**/6**, mb1mx2.6**/56**, mbtmp3.7**/6**, Error ellipse: s-maj=116.0km s-min=49.5km az=40.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.02	186	P	P	12 58 09.5	+0.6
	2.1nm,0.7s,baz=13,slow=11,SNR=1.6						
WRA	Warramunga Arr	22.65	164	P	P	12 58 32.5	-0.3
	0.7nm,0.6s,baz=343,slow=11,SNR=17						
ASAR	Alice Springs	26.12	167	P	P	12 59 03.6	+0.1
	0.2nm,0.3s,baz=350,slow=7.3,SNR=16						
STKA	Stephens Creek	36.07	160	P	P	13 00 28.5	-0.3
	0.5nm,0.3s,baz=321,slow=6.5,SNR=3.9						
MKAR	Makanchi Array	59.66	325	P	P	13 03 25.5	0.0
	0.4nm,0.4s,baz=114,slow=7.8,SNR=9.5						
KURBB	Kurchatov Arra	63.84	327	P	P	13 03 52.7	0.0
	0.6nm,0.3s,baz=128,slow=6.1,SNR=6.3						

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*IDC **23** 12:57:00.9±4.5, 4°.20S×104°.61E, h166^{km}±28^{km}, mb2.9/3, mb1 3.1/4, mb1mx2.8/57, mbtmp3.5/4, Error ellipse: s-maj=144.3km s-min=23.7km az=52.0*

*DJA **23** 12:57:02.1±0.3, 5°S±4°×10°4E±°, h162^{km}±3^{km}, M4.0/18, mb4.4/3, mB4.9/2, MLv3.9/18, Mw(mB)4.2/2*

ISC 23 12:57:00.9±0.9**, 4°.51S**±0°.07×**104°.42E**±0°.07**, h150^{km}, n23, σ2^{s}.80**/29**, mb3.2**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDSI	Maura Dua	0.24	276	P	Pn	12 57 24.3	+3.0
MDSI				S	Sn	12 57 40.9	+4.2
KLSI		0.36	119	P	Pn	12 57 25.3	+3.6
KLSI				S	Sn	12 57 42.7	+5.3
LWLI	Liwa	0.61	215	P	Pn	12 57 26.0	+2.9
KASI	Kota Agung	1.01	175	P	Pn	12 57 28.0	+2.2
LHSI	Lahat	1.12	307	P	Pn	12 57 29.9	+3.1
LHSI				S	Sn	12 57 50.6	+4.1
BLSI	Bandar Lampung	1.19	136	P	Pn	12 57 30.4	+3.0
MNAI	Manna	1.46	276	P	Pn	12 57 32.7	+2.6
PMBI	Palembang	1.61	13	P	Pn	12 57 34.8	+3.0
KSI	Kapahiang	2.01	295	P	Pn	12 57 38.7	+2.4
MASI	Maura Aman, Be	2.56	302	P	Pn	12 57 44.9	+2.0
JMBI	JAMBI	2.96	345	P	Pn	12 57 50.6	+2.7
DBJI	Dramaga	3.08	131	P	Pn	12 57 51.9	+2.5
SKJI	Sukabumi	3.27	139	P	Pn	12 57 52.9	+1.2
TPI	Tanjungpandan	3.67	62	P	Pn	12 57 59.9	+3.0
LEM	Lembang	3.93	126	P	Pn	12 58 02.9	+2.4
	6.1nm,0.3s,baz=308,slow=18,SNR=2.9						
LEM				S	Sn	12 58 47.9	+1.3
	4.6nm,0.3s,baz=17,slow=23,SNR=1.4						
CISI	Cisompet, Garu	4.54	132	P	Pn	12 58 08.7	+0.4
SDSI	Sungai Dareh	4.64	320	P	Pn	12 58 10.3	+0.6
PDSI	Padang	5.33	312	P	Pn	12 58 18.8	0.0
MNSI	Mandailing Nat	7.15	317	P	Pn	12 58 43.3	+0.2
	0.3nm1µm39nm,0.8s						
JAGI	Jajag, Banyuwa	10.44	113	P	Pn	12 59 27.0	+0.1
WRA	Warramunga Arr	32.93	120	P	P	13 03 19.8	-1.5
	0.5nm,0.9s,baz=297,slow=9.1,SNR=2.0						
WRA				PcP	PcP	13 05 59.5	-2.8
	0.2nm,0.4s,baz=300,slow=1.9,SNR=2.0						
ASAR	Alice Springs	34.22	127	P	P	13 03 31.5	-1.1
	0.3nm,0.3s,baz=298,slow=7.5,SNR=24						
ASAR				PcP	PcP	13 06 03.7	-2.3
	0.3nm,0.4s,baz=304,slow=2.6,SNR=8.5						
MKAR	Makanchi Array	54.71	342	P	P	13 06 11.1	-3.6
	0.2nm,0.6s,baz=150,slow=9.0,SNR=4.7						

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*ATH **23** 13:06:40.5, 38°.69N×26°.10E, h41^{km}±5^{km}, ML3.0/4, Error ellipse: s-maj=5.9km s-min=1.5km az=320.0*

*DDA **23** 13:06:40.4, 38°.64N×26°.12E, h10^{km}±3^{km}, ML3.0*

*ISK **23** 13:06:40.2, 38°.66N×26°.14E, h8^{km}, ML3.1/15*

*THE **23** 13:06:41.5, 38°.68N×26°.12E, h15^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=2.4km s-min=0.9km az=352.0*

ISC 23 13:06:40.4±1.1**, 38°.65N**±0°.02×**26°.20E**±0°.03**, h9**^{km}±9^{km}**, n43, σ0^{s}.99**/67**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESE	eme	0.33	165	PG	Pb	13 06 48.3	0.0
CESE				SG	Sb	13 06 53.4	-0.2
URLA	Izmir	0.42	132	PG	Pb	13 06 49.2	-0.8
URLA				SG	Sb	13 06 56.6	+0.1
URLA	Izmir	0.42	132	iP	Pb	13 06 49.3	-0.7
URLA				iS	Sb	13 06 56.1	-0.4
URLA				IAML		13 06 57.0	
	comp=E,594nm,0.3s						
ZEYE	Izmir, Urla-Ze	0.47	149	iP	Pb	13 06 50.9	0.0
ZEYE				iS	Sb	13 06 57.9	0.0
ZEYE				IAML		13 07 00.0	
	comp=N,1µm,0.2s						
ZEYE				IAML		13 07 02.0	
	comp=E,2µm,0.4s						
PSRA	Psara	0.51	258	P	Pg	13 06 51.0	+0.8
PSRA				S	Sg	13 06 57.9	+1.0
PRK	Paraskevi	0.60	6	P	Pb	13 06 52.9	-0.1
PRK				S	Sg	13 07 01.3	+1.3
PRK				AML	AML	13 07 05.7	
	comp=E,3613µm,0.4s						
PRK				AML	AML	13 07 05.9	
	comp=N,4051µm,0.4s						
PRK	Paraskevi	0.60	6	P	Pb	13 06 53.5	+0.4
PRK				S	Sb	13 07 01.7	0.0
	comp=N,2µm,0.4s						
SIGR	SIGRI	0.62	335	P	Pg	13 06 52.0	-0.4
SIGR				AML	AML	13 07 04.8	
	comp=E,2487µm,0.3s						
SIGR				AML	AML	13 07 05.3	
	comp=N,1973µm,0.2s						
SIGR	SIGRI	0.62	335	P	Pg	13 06 52.3	-0.1
SIGR				S	Sg	13 07 00.5	-0.1
	comp=N,1µm,0.3s						
SIGR	SIGRI	0.62	335	PG	Pg	13 06 52.1	-0.4
DKL	Dikili	0.70	52	PG	Pn	13 06 54.9	-1.5
ZEDA	zmir-Bergama	0.76	65	iP	Pn	13 06 57.2	0.0
ZEDA				iS	Sn	13 07 07.8	-1.0
ZEDA				IAML		13 07 09.0	
	comp=N,671nm,0.6s						
ZEDA				IAML		13 07 10.0	
	comp=E,651nm,0.4s						
AYVA	Ayvalik	0.77	30	iP	Pb	13 06 55.2	-0.7
AYVA				iS	Sb	13 07 07.0	+0.6
AYVA				IAML		13 07 07.0	
	comp=E,426nm,0.5s						
AYVA				IAML		13 07 08.0	
	comp=N,867nm,0.3s						
DGB	zmir	0.80	137	iP	Pn	13 06 56.9	-0.9
DGB				iS	Sn	13 07 08.8	-1.0
DGB				IAML		13 07 09.0	
	comp=E,550nm,0.3s						
KOCA	Canakkale, Ayv	0.86	357	iP	Pg	13 06 57.2	+0.3
KOCA				iS	Sg	13 07 09.4	+1.3
KOCA				IAML		13 07 10.0	
	comp=E,571nm,0.4s						
KOCA				IAML		13 07 10.0	
	comp=N,523nm,0.4s						
SMG	Samos	1.06	151	P	Pn	13 07 01.3	-0.1
SMG				S	Sn	13 07 17.1	+0.8
SMG				AML	AML	13 07 18.2	
	comp=E,3912µm,0.5s						
SMG				AML	AML	13 07 19.1	
	comp=N,3742µm,0.4s						
SMG	Samos	1.06	151	P	Pn	13 07 01.4	-0.1
SMG				S	Sn	13 07 16.7	+0.4
	comp=N,2µm,0.5s						
BUHA	Balikesir, Bur	1.10	39	iP	Pn	13 07 01.3	-0.6
BUHA				iS	Sn	13 07 17.6	+0.4
BUHA				IAML		13 07 19.0	
	comp=E,365nm,0.4s						
BUHA				IAML		13 07 21.0	
	comp=N,407nm,0.4s						
BAYC	CANAKKALE_Bayr	1.13	14	iP	Pg	13 07 01.3	-0.7
BAYC				iS	Sb	13 07 16.6	-0.2
BAYC				IAML		13 07 20.0	
	comp=E,215nm,0.4s						
BAYC				IAML		13 07 20.0	
	comp=N,153nm,0.5s						
EZN	Ezine	1.18	5	P	Pg	13 07 01.9	-1.2
EZN				S	Sg	13 07 18.4	-0.1
	comp=N,372nm,0.5s						
EZN	Ezine	1.18	5	PN	Pg	13 07 02.9	-0.2
BOZC	Bozcaada	1.20	355	PN	Pg	13 07 02.8	-0.6
BOZC	Bozcaada	1.20	355	iP	Pg	13 07 02.8	-0.6
BOZC				iS	Sg	13 07 18.4	-0.6
BOZC				IAML		13 07 20.0	
	comp=N,188nm,0.3s						
BOZC				IAML		13 07 20.0	
	comp=E,178nm,0.2s						
GCAM	G?zelcaml?	1.25	139	PN	Pn	13 07 05.1	+1.1
GCAM	G?zelcaml?	1.25	139	iP	Pn	13 07 05.5	+1.5
GCAM				iS	Sn	13 07 22.2	+1.4
GCAM				IAML		13 07 25.0	
	comp=E,280nm,0.6s						
GCAM				IAML		13 07 25.0	
	comp=N,417nm,0.4s						
AKHS	Akhisar	1.29	79	iP	Pn	13 07 06.6	+2.0
AKHS				iS	Sn	13 07 24.3	+2.4
AKHS				IAML		13 07 26.0	
	comp=E,259nm,0.4s						
TNSA	Tinos	1.37	217	P	Pn	13 07 05.7	+0.1
STEP	BALIKESIR_Sava	1.39	58	iP	Pn	13 07 06.5	+0.5
STEP				iS	Sn	13 07 26.6	+2.1
STEP				IAML		13 07 29.0	
	comp=E,622nm,0.4s						
STEP				IAML		13 07 29.0	
	comp=N,511nm,0.5s						
KARY	Karystos	1.51	247	P	Pn	13 07 06.8	-0.8
KARY				AML	AML	13 07 25.8	
	comp=E,474µm,0.4s						
KARY				AML	AML	13 07 31.1	
	comp=N,415µm,0.2s						
KARY	Karystos	1.51	247	P	Pn	13 07 07.2	-0.4
KARY				S	Sn	13 07 25.6	-1.8
	comp=N,182nm,0.3s						
BALY	Balya	1.56	45	iP	Pn	13 07 07.3	-0.9
BALY				iS	Sn	13 07 30.8	+2.2
GADA	Gvkgeada	1.56	352	PN	Pn	13 07 08.6	+0.3
BALB	Balikesir	1.64	52	PN	Pg	13 07 10.4	-1.5
APE	Apeiranthos	1.66	199	P	Pn	13 07 09.7	0.0
APE	Apeiranthos	1.66	199	P	Pn	13 07 09.7	0.0
APE	Apeiranthos	1.66	199	PN	Pn	13 07 10.1	+0.4
GELI	Tayfur-Gelibol	1.76	7	PN	Pn	13 07 11.5	+0.5
LPK	Lapseki	1.78	14	PN	Pn	13 07 11.9	+0.6
BODT	Bodrum	1.81	150	PN	Pb	13 07 12.9	-0.8
MANT	Manisa	1.86	94	iP	Pg	13 07 17.3	+1.3
MANT				iS	Sg	13 07 41.0	+0.9
KULA	Kula-Manisa	1.94	93	PN	Pg	13 07 15.2	-2.3
KRBG	Karabiga-Canak	1.94	26	PN	Pb	13 07 14.7	-1.2
YER	Yerkesik	2.24	132	PN	Pb	13 07 19.7	-1.3

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*IDC **23** 13:07:13.9±1.3, 15°.40S×67°.10E, h0^{km}, mb3.9/8, mb1 4.1/8, mb1mx3.8/34, mbtmp3.9/8, MS3.5/2, Ms1 3.5/2, ms1mx3.0/31, Error ellipse: s-maj=45.2km s-min=25.4km az=43.0*

*NEIC **23** 13:07:14.4±2.4, 15°.5S±0°.2×67°.0E±0°.1, h10^{km}±1^{km}, mb4.4/12, Error ellipse: s-maj=28.3km s-min=18.8km az=147.0*

ISC 23 13:07:14.2±0.8**, 15°.5S**±0°.2×**67°.1E**±0°.1**, h10^{km}, n31, σ1^{s}.26**/23**, mb4.2**/13**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.43	35	T	T	13 17 31.3	
	baz=215,slow=76,SNR=6.3						
H08S2	Diego Garcia H	9.45	35	T	T	13 17 31.9	
	baz=215,slow=76,SNR=6.9						
H08S3	Diego Garcia H	9.45	35	T	T	13 17 37.0	
	baz=215,slow=76,SNR=5.3						
RER	Riviere de l'E	12.13	241	Pn	Pn	13 10 07.2	0.0
ABPO	Ambohimpanom	19.26	257		P	13 11 38.3	-0.9
PALK	Pallekele	26.35	32	LR	LR	13 20 31.3	
	comp=Z,90nm,20.4s,baz=314,slow=30						
LBTB	Lobatse	39.90	249	LR	LR	13 28 36.0	
	comp=Z,88nm,20.9s,baz=34,slow=32						
BOSA	Boshof	40.68	244	P	P	13 14 54.5	-0.7
CMAR	Chiang Mai Arr	46.09	44	P	P	13 15 40.0	+1.2
	0.3nm,0.3s,baz=239,slow=7.4,SNR=4.3						
H01W3	Cape Leeuwin H	46.29	124	T	T	14 05 13.4	
	baz=282,slow=75,SNR=12						
H01W2	Cape Leeuwin H	46.29	124	T	T	14 05 11.6	
	baz=282,slow=75,SNR=13						
H01W1	Cape Leeuwin H	46.31	124	T	T	14 05 14.7	
	baz=282,slow=75,SNR=12						
CHTO	Chiang Mai	46.34	44	P	P	13 15 37.5	-3.3
CHTO				IAmb	IAmb	13 15 44.0	
	comp=Z,5.5nm,1.4s						
KBL	Kabul	49.80	2	P	P	13 16 07.6	+0.1
LSA	Lhasa	50.59	27	P	P	13 16 13.2	-0.6
LSA				IAmb	IAmb	13 16 16.6	
	comp=Z,6.9nm,1.3s						
ASAR	Alice Springs	63.02	109	P	P	13 17 42.7	+0.8
	comp=Z,1.2nm,1.0s,baz=280,slow=6.2,SNR=6.3						
AS31	Alice Springs	63.02	109	P	P	13 17 40.5	-1.4
BRTR	Keskin Array B	63.16	332	P	P	13 17 43.4	+0.9
	comp=Z,0.7nm,0.7s,baz=183,slow=4.9,SNR=4.0						
MAKZ	Makanchi	63.45	11	P	P	13 17 44.3	+0.1
MAKZ				IAmb	IAmb	13 17 50.9	
	comp=Z,3.3nm,1.1s						
MK31	Makanchi Array	63.50	12	P	P	13 17 43.3	-1.2
MK31				IAmb	IAmb	13 17 46.1	
	comp=Z,4.2nm,1.5s						
MKAR	Makanchi Array	63.50	12	P	P	13 17 44.7	+0.2
	comp=Z,0.8nm,0.6s,baz=193,slow=5.9,SNR=10						
WRA	Warramunga Arr	63.87	105	P	P	13 17 49.3	+1.7
	comp=Z,1.4nm,0.8s,baz=269,slow=6.0,SNR=8.1						
WB2	Warramunga Arr	63.88	105	P	P	13 17 48.3	+0.7
WRAB	Tennant Creek	63.88	105	P	P	13 17 47.7	+0.1
ABKAR	Akbulak array	64.78	355	P	P	13 17 51.0	-1.8
ABKAR				IAmb	IAmb	13 17 59.9	
	comp=Z,3.8nm,1.1s						
ZALV	Zalesovo Beam	70.82	11	P	P	13 18 31.1	+0.3
	comp=Z,1.2nm,0.6s,baz=207,slow=6.1,SNR=6.6						
SONM	Songino Array	72.17	27	P	P	13 18 40.4	+1.1
	comp=Z,2.7nm,0.7s,baz=214,slow=6.6,SNR=12						
ESDC	Sonseca Array	85.81	313	P	P	13 19 56.1	+2.0
	comp=Z,1.4nm,0.8s,baz=96,slow=4.5,SNR=4.7						
ILAR	Eielson Array	125.64	17	PKP	PKiKP	13 26 16.1	+0.3
	comp=Z,0.3nm,0.8s,baz=307,slow=3.3,SNR=2.9						
YKA	Yellowknife Ar	133.05	1	PKP	PKiKP	13 26 30.5	-0.3
	comp=Z,0.1nm,0.6s,baz=351,slow=1.9,SNR=3.8						
PDAR	Pinedale Array	152.67	355	PKPbc	PKiKP	13 27 12.8	+0.8
	comp=Z,0.6nm,0.6s,baz=70,slow=2.1,SNR=8.2						

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*NNC **23** 13:08:11.9±2.7, 41°.00N×72°.55E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=22.8km s-min=9.2km az=173.0*

*SOME **23** 13:08:13.7, 41°.15N×72°.55E, h15^{km}*

*KRNET **23** 13:08:13.5±0.1, 41°.18N×72°.50E, h12^{km}, mb2.5*

ISC 23 13:08:13.7±1.1**, 41°.17N**±0°.03×**72°.54E**±0°.03**, h13**^{km}±11^{km}**, n23, σ0^{s}.74**/39**, 21C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.37	64	⇓iP	Pg	13 08 21.3	+0.1
	baz=69						
ARSB				⇓iS	Sb	13 08 27.1	-0.9
	baz=69						
OHH	Osh	0.67	164	⇑iP	Pb	13 08 27.0	-0.3
	baz=61						
OHH				⇑iS	Sb	13 08 36.7	+0.3
	baz=61						
AML	Almayashu	1.30	41	⇓iP	Pb	13 08 38.2	0.0
	baz=43						
AML				⇓iS	Sg	13 08 56.5	+0.9
	baz=43						
MNAS	Manas	1.32	359	⇑iP	Pb	13 08 38.7	+0.2
	baz=0.0						
MNAS				⇑iS	Sn	13 08 56.0	+0.4
	baz=0.0						
SFK	Sufi-Kurgan	1.36	147	⇓iP	Pg	13 08 39.5	-0.5
	baz=46						
SFK				⇓iS	Sg	13 08 58.6	+0.9
	baz=46						
ARLS	Aral	1.51	62	⇑iP	Pg	13 08 42.8	+0.1
	baz=63						
ARLS				⇑iS	Sg	13 09 03.3	+0.9
	baz=63						
MRKS	Merke	1.66	18	eP	Pg	13 08 45.7	+0.1
	1.5nm,0.2s						
MRKS				eS	Sg	13 09 07.7	+0.5
	7.6nm,0.2s						
MRKS	Merke	1.66	18	Pg	Pg	13 08 45.0	-0.7
	1.5nm,0.2s						
MRKS				Lg	Lg	13 09 11.5	
	7.6nm,0.2s						
BTK	Batken	1.71	230	⇑iP	Pb	13 08 45.1	0.0
	baz=29						
BTK				⇑iS	Sg	13 09 09.0	+0.1
	baz=29						
EKS2	Erkin-Say	1.76	31	⇑iP	Pb	13 08 45.6	-0.3
	baz=33						
EKS2				⇑iS	Sg	13 09 09.9	-0.4

	baz=33						
UCH	**Uchtor**	**1.82**	**54**	⇓*i*P	**Pg**	**13 08 48.0**	**-0.7**
	baz=55						
UCH				⇓*i*S	**Sg**	**13 09 13.2**	**+0.9**
	baz=55						
AAK	**Ala-Archa**	**2.07**	**44**	⇑*i*P	**Pb**	**13 08 51.7**	**+0.4**
	baz=45						
AAK				⇑*i*S	**Sg**	**13 09 19.6**	**-0.8**
	baz=45						
AAK	**Ala-Archa**	**2.07**	**44**	⇑Pg	**Pg**	**13 08 52.5**	**-1.0**
	2.9nm,0.7s						
AAK				⇓Lg	Lg	13 09 21.3	
	3.7nm,0.5s						
IUG	**Iuzhnay**	**2.12**	**298**	*e*P	**Pg**	**13 08 53.9**	**-0.5**
	1.6nm,0.1s						
IUG				*e*S	**Sg**	**13 09 21.9**	**0.0**
	24nm,0.4s						
IUG	**Iuzhnay**	**2.12**	**298**	Pg	**Pb**	**13 08 51.7**	**-0.4**
	0.7nm,0.1s						
IUG				Lg	Lg	13 09 22.7	
	24nm,0.4s						
KBK	**Karagaybulak**	**2.33**	**50**	⇑*i*P	**Pb**	**13 08 55.1**	**-0.7**
	baz=50						
KBK				⇑*i*S	**Sb**	**13 09 26.1**	**+1.6**
	baz=50						
KK31	**Karatay Array**	**2.46**	**323**	⇑Pg	**Pb**	**13 08 59.2**	**+1.4**
	0.3nm,0.2s,baz=140,slow=16,SNR=3.7						
KK31				⇑Lg	Lg	13 09 31.7	
	1.9nm,0.3s,baz=135,slow=27,SNR=8.7						
USP	**Ospenovka**	**2.56**	**34**	⇑*e*P	**Pb**	**13 08 57.9**	**-1.5**
	baz=35						
USP				⇑*i*S	**Sb**	**13 09 30.5**	**-0.3**
	baz=35						
TKM2	**Tokmak 2**	**2.87**	**51**	⇑Pg	**Pg**	**13 09 08.7**	**-0.1**
	0.7nm,0.4s						
TKM2				⇑Lg	Lg	13 09 41.1	
	0.9nm,0.3s						
KST	**Kastek**	**3.16**	**52**	*e*P	**Pg**	**13 09 13.4**	**-0.9**
	1.3nm,0.1s						
KST				*e*S	**Sg**	**13 09 55.3**	**0.0**
	5.6nm,0.3s						
KST	**Kastek**	**3.16**	**52**	Pg	**Pb**	**13 09 10.7**	**+0.8**
	0.6nm,0.1s						
KST				Lg	Lg	13 09 55.3	
	5.6nm,0.3s						
DGS	**Degeres**	**3.17**	**48**	*e*P	**Pg**	**13 09 13.3**	**-1.2**
	1.1nm,0.4s						
DGS				*e*S	**Sg**	**13 09 55.1**	**-0.6**
	2.5nm,0.6s						
DGS	**Degeres**	**3.17**	**48**	Pg	**Pb**	**13 09 10.7**	**+0.7**
	1.3nm,0.4s						
DGS				Lg	Lg	13 09 55.0	
	2.5nm,0.6s						

*IDC **23** 13:23:41.1±2.2, 15°.25S×67°.20E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.6/28, mbtmp3.7/6, MS3.7/7, Ms1 3.7/7, ms1mx3.3/32, Error ellipse: s-maj=79.7km s-min=28.3km az=49.0*

*NEIC **23** 13:23:41.7±1.8, 15°.4S±0°.2×67°.1E±0°.2, h10^{km}±2^{km}, mb4.2/3, Error ellipse: s-maj=28.8km s-min=26.0km az=171.0*

ISC 23 13:23:41.4±1.1, **15°.5S**±0°.2×**67°.1E**±0°.2, **h10**^{km}, **n22**, σ**1**^{s}**11**/10, **mb4.0**/7, **MS3.8**/7, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.39**	**35**	T	T	13 35 26.8	
	baz=215,slow=76,SNR=57						
H08S2	**Diego Garcia H**	**9.40**	**35**	T	T	13 35 23.0	
	baz=215,slow=76,SNR=62						
H08S3	**Diego Garcia H**	**9.41**	**35**	T	T	13 35 29.7	
	baz=215,slow=76,SNR=119						
ABPO	**Ambohimpanom**	**19.32**	**257**	P	**P**	**13 28 06.7**	**-0.3**
ABPO				IAmb	IAmb	13 28 08.6	
	comp=Z,18nm,1.2s						
PALK	**Pallekele**	**26.32**	**32**	LR	LR	13 37 44.9	
	comp=Z,60nm,18.1s,baz=313,slow=32						
KMBO	**Kilima Mbogo**	**32.74**	**293**	LR	LR	13 41 23.4	
	comp=Z,60nm,18.4s,baz=90,slow=32						
BOSA	**Boshof**	**40.73**	**244**	LR	LR	13 45 21.2	
	comp=Z,139nm,18.4s,baz=131,slow=32						
CMAR	**Chiang Mai Arr**	**46.05**	**44**	LR	LR	13 48 44.7	
	comp=Z,94nm,20.1s,baz=212,slow=33						
H01W3	**Cape Leeuwin H**	**46.25**	**124**	T	T	14 21 35.8	
	baz=282,slow=75,SNR=7.2						
H01W2	**Cape Leeuwin H**	**46.25**	**124**	T	T	14 21 38.3	
	baz=282,slow=75,SNR=7.6						
H01W1	**Cape Leeuwin H**	**46.27**	**124**	T	T	14 21 38.2	
	baz=282,slow=75,SNR=7.9						
FITZ	**Fitzroy Crossi**	**55.89**	**102**	P	**P**	**13 33 17.9**	**-2.0**
ASAR	**Alice Springs**	**62.98**	**109**	P	**P**	**13 34 10.0**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=270,slow=5.6,SNR=4.3						
ASAR				LR	LR	13 59 41.3	
	comp=Z,73nm,18.4s,baz=166,slow=34						
AS31	**Alice Springs**	**62.98**	**109**	P	**P**	**13 34 08.4**	**-0.5**
AS31				IAmb	IAmb	13 34 21.9	
	comp=Z,1.5nm,1.4s						
BRTR	**Keskin Array B**	**63.17**	**332**	P	**P**	**13 34 10.5**	**+0.6**
	comp=Z,1.2nm,1.0s,baz=134,slow=8.3,SNR=3.8						
MKAR	**Makanchi Array**	**63.48**	**12**	P	**P**	**13 34 10.9**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=210,slow=7.0,SNR=5.5						
WRA	**Warramunga Arr**	**63.82**	**105**	P	**P**	**13 34 15.8**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=269,slow=6.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**70.80**	**11**	P	**P**	**13 34 57.4**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=235,slow=5.1,SNR=2.6						
SONM	**Songino Array**	**72.14**	**27**	P	**P**	**13 35 06.7**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=222,slow=5.4,SNR=6.3						
KSRS	**Korea Array**	**77.67**	**45**	LR	LR	14 10 21.4	
	comp=Z,40nm,19.2s,baz=160,slow=36						
URZ	**Urewera**	**95.50**	**132**	LR	LR	14 14 49.4	
	comp=Z,85nm,18.9s,baz=318,slow=32						
PDAR	**Pinedale Array**	**152.66**	**355**	PKPbc	**PKiKP**	**13 43 39.4**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=82,slow=3.1,SNR=4.9						

*INET **23** 13:23:42.8, 12°.13N×86°.68W, h108^{km}, ML3.7*

SNET 23 13:23:43.1±1.0, **11°.75N×87°.10W**, **h60**^{km}±38^{km}, **ML3.4**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGN	**Cerro Negro**	**0.84**	**28**	*e*S	Sn	13 24 11.6	+0.7
CNCH	**Conchagua**	**1.68**	**335**	*e*P	Pn	13 24 10.4	+0.1
CNCH				*e*S	Sn	13 24 32.2	+1.3
LCND	**La Caada**	**1.73**	**333**	*e*P	Pn	13 24 10.7	-0.3
LCND				*e*S	Sn	13 24 32.5	+0.5
LCND				*e*S		13 24 33.6	
LCND				IAML		13 24 39.3	
	comp=Z,285nm,0.3s						
PACA	**Pacayal**	**2.09**	**325**	*e*P	Pn	13 24 16.8	+1.0
PACA				*e*S	Sn	13 24 42.6	+1.8
FAGO	**Alcalda de S**	**2.17**	**333**	*e*S	Sn	13 24 43.2	+0.5
COEB	**Comit de Eme**	**2.23**	**321**	IAML		13 24 50.1	
	comp=Z,184nm,0.3s						
LFRS	**El Faro**	**2.67**	**314**	*e*S	Sn	13 24 56.8	+1.6
JAYA	**Jayaque - finc**	**2.98**	**310**	*e*P	Pn	13 24 28.4	+0.4
JAYA				*e*S	Sn	13 25 02.6	0.0
CEVE	**Cerro Verde**	**3.22**	**310**	*e*S	Sn	13 25 10.9	+2.2
CEVE				IAML		13 25 19.1	
	comp=Z,158nm,0.3s						

*IDC **23** 13:26:22.0±2.0, 1°.34N×100°.25W, h0^{km}, mb4.1/8, mb1 4.4/9, mb1mx4.1/36, mbtmp4.1/9, ML2.9/1, MS3.8/12, Ms1 3.8/12, ms1mx3.6/24, Error ellipse: s-maj=81.2km s-min=40.9km az=90.0*

*NEIC **23** 13:26:21.8±1.1, 1°.4N±0°.1×99°.4W±0°.2, h10^{km}±2^{km}, mb4.3/19, Error ellipse: s-maj=36.2km s-min=5.2km az=130.0*

ISC 23 13:26:23.0±2.0, **1°.4N**±0°.3×**99°.5W**±0°.2, **h10**^{km}, **n46**, σ**0**^{s}**98**/33, **mb4.3**/16, **MS3.8**/10, **West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**16.21**	**16**	Pn	**P**	**13 30 16.0**	**+1.9**
	0.0nm,0.3s,baz=216,slow=6.3,SNR=2.9						
CMIG				LR	LR	13 34 50.0	
	comp=Z,536nm,18.7s,baz=194,slow=31						
ESQI	**Esquipulas**	**16.44**	**37**		**Pn**	**13 30 13.1**	**-1.0**
ESQI				IAmb	IAmb	13 30 24.4	
	comp=Z,37nm,1.3s						
JTS	**Las Juntas de**	**16.90**	**58**	LR	LR	13 35 12.8	
	comp=Z,275nm,20.4s,baz=328,slow=30						
TGUH	**Tegucigalpa,Un**	**17.40**	**43**	Pn	**Pn**	**13 30 24.8**	**-1.5**
ZAIG	**Zacatecas**	**21.43**	**352**	P	**P**	**13 31 11.1**	**-0.6**
ATAH	**Atahualpa**	**22.68**	**112**	LR	LR	13 38 41.1	
	comp=Z,79nm,21.0s,baz=262,slow=32						
LPIG	**La Paz**	**24.87**	**336**	LR	LR	13 38 52.2	
	comp=Z,308nm,20.4s,baz=196,slow=30						
NNA	**Nana**	**26.13**	**121**	LR	LR	13 40 27.1	
	comp=Z,96nm,18.3s,baz=272,slow=32						
TXAR	**Lajitas Array**	**28.04**	**352**	P	**P**	**13 32 15.0**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=176,slow=11,SNR=18						
TXAR				LR	LR	13 42 00.3	
	comp=Z,318nm,18.6s,baz=0.0,slow=34						
MNTX	**Cornudas Mount**	**30.62**	**350**	P	**P**	**13 32 36.8**	**-0.7**
MNTX				IAmb	IAmb	13 32 37.7	
	comp=Z,4.5nm,1.1s						
ANMO	**Albuquerque**	**33.98**	**350**	P	**P**	**13 33 07.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=179,slow=6.9,SNR=5.2						
WUAZ	**Wupatki**	**35.68**	**343**	P	**P**	**13 33 20.7**	**-1.0**
WUAZ				IAmb	IAmb	13 33 23.4	
	comp=Z,5.0nm,1.0s						
PFO	**Pinyon Flats O**	**35.76**	**335**	P	**P**	**13 33 21.0**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=151,slow=10,SNR=4.3						
MVCO	**Mesa Verde**	**36.57**	**348**	P	**P**	**13 33 29.4**	**0.0**
MVCO				IAmb	IAmb	13 33 29.9	
	comp=Z,5.7nm,1.1s						
R40A	**Maddies Statio**	**37.28**	**9**	P	**P**	**13 33 35.8**	**+0.6**
GSC	**Goldstone, Bar**	**37.37**	**336**	P	**P**	**13 33 35.1**	**-1.0**
GSC				IAmb	IAmb	13 33 36.4	
	comp=Z,3.9nm,0.8s						
LCMT	**Little Creek M**	**37.63**	**342**	P	**P**	**13 33 37.9**	**-0.4**
SMCO	**Snowmass**	**38.19**	**351**	P	**P**	**13 33 43.8**	**+0.4**
TPNV	**Topopah Spring**	**38.60**	**338**	P	**P**	**13 33 46.4**	**-0.2**
TPNV				IAmb	IAmb	13 33 48.7	
	comp=Z,9.0nm,1.2s						
O20A	**White River Ci**	**39.35**	**349**	P	**P**	**13 33 52.3**	**-0.5**
O20A				IAmb	IAmb	13 34 00.5	
	comp=Z,9.3nm,1.2s						
H03N2	**Juan Fernandez**	**39.72**	**153**	T	T	14 17 38.7	
	baz=329,slow=78,SNR=6.4						
H03N1	**Juan Fernandez**	**39.73**	**153**	T	T	14 17 42.9	
	baz=329,slow=78,SNR=8.9						
H03N3	**Juan Fernandez**	**39.73**	**153**	T	T	14 17 43.7	
	baz=329,slow=78,SNR=6.5						
MPU	**Maple Canyon**	**39.97**	**345**	P	**P**	**13 33 56.8**	**-1.3**
NVAR	**Mina Array Bea**	**40.68**	**337**	P	**P**	**13 34 03.3**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=150,slow=9.3,SNR=4.0						
NVAR				LR	LR	13 46 18.2	
	comp=Z,82nm,18.6s,baz=223,slow=30						
HWUT	**Hardware Ranch**	**41.46**	**346**	P	**P**	**13 34 08.7**	**-1.7**
HWUT				IAmb	IAmb	13 34 18.0	
	comp=Z,8.0nm,1.1s						
PNTR	**Pine Nut**	**41.76**	**336**	P	**P**	**13 34 13.0**	**+0.2**
PNTR				IAmb	IAmb	13 34 14.5	
	comp=Z,8.1nm,1.0s						
BW06	**Boulder Array**	**42.14**	**349**	P	**P**	**13 34 15.2**	**-0.7**
PDAR	**Pinedale Array**	**42.14**	**349**	P	**P**	**13 34 15.6**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=150,slow=9.3,SNR=19						
PDAR				PcP	**PcP**	**13 36 12.4**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=151,slow=2.1,SNR=3.3						
PDAR				LR	LR	13 49 12.6	
	comp=Z,138nm,21.9s,baz=266,slow=33						
RSSD	**Black Hills**	**42.71**	**355**	P	**P**	**13 34 20.3**	**-0.2**
HLID	**Hailey**	**44.02**	**344**	P	**P**	**13 34 31.2**	**+0.1**
MCMT	**McKenzie Canyo**	**44.81**	**346**	P	**P**	**13 34 37.7**	**+0.3**
PINE	**Pine Mountain**	**46.31**	**338**	P	**P**	**13 34 48.6**	**-0.7**
ULM	**Lac du Bonnet**	**48.74**	**3**	P	**P**	**13 35 08.6**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=152,slow=8.0,SNR=7.3						
ULM				LR	LR	13 54 34.4	
	comp=Z,94nm,18.0s,baz=270,slow=35						
PLCA	**Paso Flores**	**49.54**	**151**	LR	LR	13 51 59.6	
	comp=Z,158nm,19.4s,baz=336,slow=31						
YKA	**Yellowknife Ar**	**61.97**	**352**	P	**P**	**13 36 43.0**	**0.0**
	comp=Z,1.9nm,0.9s,baz=156,slow=6.9,SNR=14						
YKA				PcP	**PcP**	**13 37 24.3**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=155,slow=3.2,SNR=4.4						
YKA				LR	LR	14 03 19.1	
	comp=Z,195nm,18.6s,baz=0.0,slow=36						
ILAR	**Eielson Array**	**71.81**	**341**	P	**P**	**13 37 45.2**	**-0.3**
	comp=Z,4.5nm,1.0s,baz=149,slow=5.1,SNR=40						
H11N3	**WAKE ISLAND Hy**	**92.94**	**290**	T	T	15 21 22.6	
	baz=86						
H11N2	**WAKE ISLAND Hy**	**92.95**	**290**	T	T	15 21 18.5	
	baz=86						
H11N1	**WAKE ISLAND Hy**	**92.95**	**290**	T	T	15 21 35.0	
	baz=86						
H11S2	**WAKE ISLAND Hy**	**93.19**	**288**	T	T	15 21 38.7	
	baz=88						
H11S1	**WAKE ISLAND Hy**	**93.19**	**289**	T	T	15 21 38.7	
	baz=88						
H11S3	**WAKE ISLAND Hy**	**93.20**	**288**	T	T	15 21 39.9	
	baz=88						
NOA	**NORSAR Array B**	**98.64**	**27**	LR	LR	14 22 09.9	
	comp=Z,10nm,19.9s,baz=285,slow=34						
MKAR	**Makanchi Array**	**131.96**	**358**	PKP	**PKiKP**	**13 45 38.5**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=46,slow=3.5,SNR=4.6						
CMAR	**Chiang Mai Arr**	**153.20**	**318**	PKPbc	**PKPbc**	**13 46 20.2**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=308,slow=1.5,SNR=5.6						

*SEA **23** 13:47:51.9±1.7, 45°.71N±0°.03×118°.55W±0°.04, h21^{km}±7^{km}, ML3.6/99, ML3.3/44(NEIC), Error ellipse: s-maj=4.4km s-min=4.1km az=104.0*

*ANF **23** 13:47:51.9±0.6, 45°.84N×118°.58W, h22^{km}±6^{km}, ML3.5/12, Error ellipse: s-maj=5.0km s-min=2.8km az=150.0*

*NEIC **23** 13:47:51.3±1.2, 45°.75N±0°.03×118°.56W±0°.04, h14^{km}±6^{km}, Error ellipse: s-maj=4.4km s-min=4.1km az=51.0*

ISC 23 13:47:51.5±1.4, **45°.77N**±0°.02×**118°.54W**±0°.02, **h13**^{km}±11^{km}, **n66**, σ**0**^{s}**86**/79, **Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNOR	**Lincton Mounta**	**0.20**	**61**		**Pb**	**13 47 57.9**	**+0.7**
YPT	**Yellepit**	**0.40**	**313**		**Pb**	**13 48 01.0**	**+0.5**
G08A	**Pilot Rock**	**0.56**	**212**		**Pg**	**13 48 02.0**	**-0.6**
G08A	**Pilot Rock**	**0.56**	**212**	IAML		13 48 11.1	
	comp=E,3μm,0.2s						
G08A				IAML		13 48 11.7	
	comp=N,2μm,0.2s						
E09A	**Wood Farm, Sta**	**0.79**	**20**		**Pb**	**13 48 07.5**	**+0.4**
E09A					**Sn**	**13 48 19.9**	**0.0**
E08A	**Dider Farm, El**	**0.80**	**334**		**Pb**	**13 48 07.7**	**+0.4**
E08A					**Sn**	**13 48 19.9**	**-0.4**
REDWA	**Red Mountain**	**0.82**	**310**		**Pb**	**13 48 07.7**	**+0.2**
WIW	**Wooded Island**	**0.84**	**322**		**Pb**	**13 48 08.1**	**+0.2**
WIW					**Sn**	**13 48 20.2**	**-0.9**
WIW	**Wooded Island**	**0.84**	**322**		**Pb**	**13 48 08.1**	**+0.2**
H2OWA	**Water**	**0.88**	**316**		**Pg**	**13 48 08.7**	**+0.2**
HAWA	**Hanford**	**0.93**	**312**		**Pg**	**13 48 09.3**	**-0.1**
HAWA					**Sn**	**13 48 22.8**	**-0.6**
HAWA	**Hanford**	**0.93**	**312**	IAML		13 48 23.6	
	comp=N,566nm,0.2s						
HAWA				IAML		13 48 23.7	
	comp=N,858nm,0.2s						
F10A	**Beach Ranch, E**	**0.94**	**77**		**Pb**	**13 48 09.3**	**-0.4**
RSW	**Rattlesnake Hi**	**0.96**	**311**		**Pg**	**13 48 09.9**	**-0.2**
MJ2	**May Junction 2**	**0.97**	**324**		**Pn**	**13 48 10.4**	**-0.3**
F07A	**Phinny Hill Vi**	**0.98**	**278**		**Pg**	**13 48 10.1**	**-0.3**
OT3	**Othello 3**	**1.02**	**332**		**Pg**	**13 48 11.1**	**0.0**
OT3					**Sn**	**13 48 25.3**	**-0.3**
SNIWA	**Snively Ranch**	**1.04**	**312**		**Pb**	**13 48 11.0**	**-0.3**
GBL	**Gable Mountain**	**1.04**	**323**		**Pb**	**13 48 11.4**	**0.0**
GBB	**Gable Butte**	**1.13**	**318**		**Pb**	**13 48 12.3**	**-0.5**
GBB					**Sn**	**13 48 28.8**	**+0.6**
BLTW	**Bickleton**	**1.15**	**278**		**Pb**	**13 48 12.6**	**-0.6**
CRF	**Corfu**	**1.21**	**331**		**Pn**	**13 48 13.8**	**-0.2**
E07A	**Sunnyside**	**1.21**	**311**		**Pn**	**13 48 13.5**	**-0.6**
E07A				IAML		13 48 31.9	
	comp=N,853nm,0.6s						
E07A				IAML		13 48 33.1	
	comp=E,653nm,0.3s						
BMO	**Blue Mountains**	**1.27**	**136**	Pn	**Pn**	**13 48 13.3**	**-1.7**
D08A	**Wollman Farm,**	**1.31**	**349**		**Pn**	**13 48 14.6**	**-0.9**
D08A				IAML		13 48 36.7	
	comp=N,636nm,0.1s						
VTHM	**Trough**	**1.54**	**248**		**Pn**	**13 48 17.6**	**-1.1**
I07A	**Izee**	**1.82**	**202**		**Pn**	**13 48 22.0**	**-0.6**
I07A				IAML		13 48 49.2	
	comp=E,323nm,0.8s						
I07A				IAML		13 48 50.1	
	comp=N,231nm,0.4s						
CROR	**Criterion Ridg**	**1.90**	**246**		**Pn**	**13 48 23.0**	**-0.6**
VIPM	**Ingram Point**	**1.94**	**230**		**Pn**	**13 48 24.1**	**-0.1**
G05D	**Wamic, OR**	**2.02**	**256**	P	**Pn**	**13 48 24.4**	**-0.8**
	baz=75,SNR=22						
G05D				Sb	**Sb**	**13 48 53.8**	**+0.6**
	baz=75						
G05D	**Wamic, OR**	**2.02**	**256**		**Pn**	**13 48 24.7**	**-0.6**
C09A	**Chrisman Ranch**	**2.04**	**5**		**Pn**	**13 48 24.9**	**-0.6**
F05D	**White Salmon**	**2.04**	**274**	P	**Pn**	**13 48 24.7**	**-0.9**
	baz=94,SNR=23						
F05D				S	**Sn**	**13 48 49.4**	**-1.5**
	baz=94						
LTY	**Liberty**	**2.09**	**316**		**Pn**	**13 48 25.8**	**-0.5**
LTY				IAML		13 49 04.3	
	comp=N,115nm,0.4s						
WTV	**Waterville**	**2.16**	**334**		**Pn**	**13 48 27.4**	**+0.2**
HIYU	**Hiyu Mountain**	**2.32**	**263**		**Pn**	**13 48 29.0**	**-0.4**
TDH	**Tom, Dick, Har**	**2.33**	**259**		**Pn**	**13 48 28.9**	**-0.8**
I05D	**Terrebonne, OR**	**2.45**	**235**	P	**Pn**	**13 48 30.9**	**-0.3**
	baz=54						
I05D				S	**Sn**	**13 49 00.7**	**-0.2**
	baz=54						
I05D	**Terrebonne, OR**	**2.45**	**235**		**Pn**	**13 48 31.1**	**0.0**
I05D					**Pb**	**13 48 36.2**	**+0.9**
LON	**Longmire**	**2.47**	**294**		**Pn**	**13 48 31.1**	**-0.4**
NLW	**Nelson Butte**	**2.61**	**333**		**Pn**	**13 48 34.1**	**+0.6**
NEW	**Newport**	**2.67**	**21**	P	**Pn**	**13 48 33.0**	**-1.2**
	baz=201						
NEW				S	**Sn**	**13 49 03.3**	**-3.2**
	baz=201						
NEW	**Newport**	**2.67**	**21**		**Pn**	**13 48 34.0**	**-0.2**
NEW				IAML		13 49 16.7	
	comp=N,93nm,0.3s						
NEW				IAML		13 49 18.8	
	comp=N,68nm,0.5s						
KWBU	**Kawak Butte, N**	**2.82**	**225**		**Pb**	**13 48 42.5**	**+0.7**
C05A	**Tolt Reservoir**	**2.90**	**313**		**Pb**	**13 48 41.1**	**-1.9**
MFID	**Camas Ranch**	**3.05**	**140**		**Pn**	**13 48 38.7**	**-0.8**
J05D	**Fort Rock, OR**	**3.15**	**219**	P	**Pn**	**13 48 41.6**	**+0.8**
	baz=37,SNR=36						
H04D	**Lebanon**	**3.22**	**249**	Pb	**Pb**	**13 48 48.3**	**-0.2**
	baz=67						
H04D				Sb	**Sb**	**13 49 29.8**	**+2.2**
	baz=67						
MSO	**Missoula**	**3.36**	**70**	P	**Pn**	**13 48 44.3**	**+0.6**
	baz=252						
MSO	**Missoula**	**3.36**	**70**		**Pn**	**13 48 43.0**	**-0.7**
MSO				IAML		13 49 39.3	
	comp=N,41nm,0.8s						
MSO				IAML		13 49 41.6	
	comp=N,58nm,0.8s						
I04A	**Tendick Farm,**	**3.39**	**236**	Pb	**Pb**	**13 48 50.8**	**-0.7**
	baz=54,SNR=24						
I04A				Sb	**Sb**	**13 49 35.0**	**+2.4**
	baz=54						
JTMT	**Jette**	**3.53**	**54**		**Pn**	**13 48 47.0**	**+0.9**
J04D	**Umpqua Nationa**	**3.59**	**226**	Pb	**Pb**	**13 48 55.1**	**+0.1**
	baz=44,SNR=16						
PNT	**Penticton**	**3.62**	**349**		**Pn**	**13 48 48.9**	**+1.7**
HLID	**Hailey**	**3.68**	**125**	P	**Pn**	**13 48 48.0**	**-0.2**
	baz=308						
HLID				S	**Sn**	**13 49 32.0**	**+0.5**
	baz=308						
HLID	**Hailey**	**3.68**	**125**		**Pn**	**13 48 47.5**	**-0.7**
BCYI	**Bear Canyon**	**3.92**	**110**		**Pn**	**13 48 51.6**	**0.0**
I03D	**Drain, OR**	**4.00**	**240**	P	**Pn**	**13 48 52.6**	**+0.2**
	baz=58						
MCMT	**McKenzie Canyo**	**4.13**	**101**		**Pn**	**13 48 54.2**	**-0.2**
DLMT	**Dillon**	**4.20**	**93**		**Pn**	**13 48 55.1**	**-0.1**
DLMT				IAML		13 50 08.1	
	comp=N,30nm,1.5s						
DLMT				IAML		13 50 19.9	
	comp=N,35nm,1.2s						
HRY	**Holter Researc**	**4.75**	**76**		**Pn**	**13 49 02.7**	**-0.2**
BOZ	**Bozeman (W)**	**4.85**	**90**	P	**Pn**	**13 49 04.8**	**+0.6**
	baz=274						
BOZ				S	**Sn**	**13 49 58.5**	**-1.7**
	baz=274						
BOZ	**Bozeman (W)**	**4.85**	**90**		**Pn**	**13 49 04.5**	**+0.3**
BOZ				IAML		13 50 01.2	
	comp=N,21nm,0.4s						
BOZ				IAML		13 50 32.3	
	comp=N,17nm,1.5s						
YHL	**Hebgen Lake**	**5.27**	**97**		**Pn**	**13 49 10.2**	**0.0**
YHL				IAML		13 50 37.2	
	comp=E,20nm,0.9s						
YHL				IAML		13 50 40.6	
	comp=N,18nm,1.2s						
YHB	**Horse Butte**	**5.29**	**99**		**Pn**	**13 49 11.4**	**+1.2**
YHB				IAML		13 50 28.5	
	comp=N,13nm,3.9s						
YHB				IAML		13 50 37.3	
	comp=E,14nm,0.8s						
IMW	**Indian Meadow**	**5.72**	**106**		**Pn**	**13 49 16.4**	**+0.1**

*IDC **23** 13:59:06.8±1.9, 15°.20S×67°.35E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/37, mbtmp3.7/7, MS3.9/13, Ms1 3.9/13, ms1mx3.5/38, Error ellipse: s-maj=71.4km s-min=26.8km az=47.0*

*GCMT **23** 13:59:26.0±0.4, 15°.37S±0°.05×67°.17E±0°.04, h20^{km}±1^{km}, MW4.9/70, Moment Tensor Solution. s15,c15; s70,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.95±.29; M$_{\theta\theta}$1.59±.16; M$_{\phi\phi}$2.37±.18; M$_{r\theta}$-0.77±.47; M$_{\theta\phi}$0.23±.11; M$_{\phi r}$0.01±.45; Best double couple: M$_0$3.24700×10^{16} NP1:φ$_s$189.00000°, δ44.00000°, λ-101.00000°. NP2: φ$_s$24.00000°, δ47.00000°, λ-80.00000°. Principal axes: T 2.4390, Plg2.0000°, Azm107.0000°; N 1.6260, Plg8.0000°, Azm197.0000°; P -4.0550, Plg82.0000°, Azm2.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 13:59:08.3±1.9, **15°.2S**±0°.4×**67°.3E**±0°.4, **h10**^{km}, **n25**, σ**0**^{s}**76**/9, **mb3.8**/7, **MS3.9**/13, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.07**	**34**	T	T	14 11 05.9	
	baz=215,slow=76,SNR=83						
H08S2	**Diego Garcia H**	**9.08**	**34**	T	T	14 11 06.7	
	baz=215,slow=76,SNR=110						
H08S3	**Diego Garcia H**	**9.09**	**34**	T	T	14 11 07.5	
	baz=215,slow=76,SNR=126						
PALK	**Pallekele**	**25.99**	**32**	LR	LR	14 11 44.5	
	comp=Z,49nm,20.1s,baz=312,slow=29						
KMBO	**Kilima Mbogo**	**32.84**	**292**	LR	LR	14 17 18.9	
	comp=Z,116nm,18.1s,baz=102,slow=33						
PSI	**Prapat**	**36.03**	**63**	LR	LR	14 18 34.9	
	comp=Z,338nm,18.9s,baz=263,slow=32						
LBTB	**Lobatse**	**40.24**	**249**	LR	LR	14 21 27.5	
	comp=Z,397nm,18.0s,baz=71,slow=33						
BOSA	**Boshof**	**41.03**	**244**	LR	LR	14 21 07.3	
	comp=Z,270nm,20.6s,baz=175,slow=32						
CMAR	**Chiang Mai Arr**	**45.72**	**44**	LR	LR	14 25 18.9	
	comp=Z,269nm,19.2s,baz=236,slow=34						
H01W3	**Cape Leeuwin H**	**46.21**	**124**	T	T	14 57 20.3	
	baz=282,slow=75,SNR=11						
H01W2	**Cape Leeuwin H**	**46.22**	**124**	T	T	14 57 29.6	
	baz=282,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**46.23**	**124**	T	T	14 57 21.4	
	baz=282,slow=75,SNR=11						
MAW	**Mawson**	**52.41**	**182**	LR	LR	14 26 15.7	
	comp=Z,64nm,19.6s,baz=248,slow=31						
KBZ	**Khabaz**	**62.80**	**340**	LR	LR	14 35 26.0	
	comp=Z,58nm,20.1s,baz=167,slow=35						
ASAR	**Alice Springs**	**62.85**	**109**	P	**P**	**14 09 35.0**	**0.0**
	0.3nm,0.7s,baz=290,slow=6.3,SNR=5.3						
ASAR				LR	LR	14 34 59.3	
	comp=Z,162nm,18.2s,baz=250,slow=34						
BRTR	**Keskin Array B**	**63.06**	**331**	P	**P**	**14 09 35.7**	**-0.3**
	0.4nm,0.8s,baz=145,slow=3.5,SNR=1.6						
MKAR	**Makanchi Array**	**63.19**	**11**	P	**P**	**14 09 36.1**	**-0.5**
	0.4nm,0.6s,baz=218,slow=7.7,SNR=5.9						
WRA	**Warramunga Arr**	**63.68**	**105**	P	**P**	**14 09 40.9**	**+0.4**
	0.6nm,0.8s,baz=271,slow=5.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**70.51**	**11**	P	**P**	**14 10 22.5**	**-0.6**
	0.7nm,0.6s,baz=214,slow=7.2,SNR=4.5						
ZALV				LR	LR	14 40 54.1	
	comp=Z,59nm,20.0s,baz=24,slow=36						
SONM	**Songino Array**	**71.82**	**27**	P	**P**	**14 10 31.7**	**+0.4**
	1.4nm,0.9s,baz=218,slow=6.4,SNR=5.2						
SONM				LR	LR	14 40 45.3	
	comp=Z,94nm,21.9s,baz=205,slow=35						
AKASG	**Malin Array Be**	**73.66**	**336**	P	**P**	**14 10 43.2**	**+1.2**
	0.2nm,0.3s,baz=147,slow=4.3,SNR=1.3						
KSRS	**Korea Array**	**77.34**	**45**	LR	LR	14 44 26.8	
	comp=Z,54nm,21.3s,baz=222,slow=35						
MJAR	**Matsushiro Arr**	**84.26**	**50**	LR	LR	14 49 44.5	

	comp=Z,52nm,19.9s,baz=225,slow=36						
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=345,slow=2.2,SNR=1.7	**132.78**	**1**	PKP	**PKPdf**	**14 18 22.9**	**-0.4**
PDAR	**Pinedale Array** 0.4nm,0.8s,baz=122,slow=2.3,SNR=3.8	**152.44**	**355**	PKPbc	**PKPbc**	**14 19 04.5**	**-0.9**

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*NOU **23** 14:09:54.7, 16°.92S×169°.22E, h228^{km}, MLv4.5, Vanuatu Islands*
*NEIC **23** 14:09:59.6±1.2, 17°.6S±0°.2×165°.9E±0°.2, h14^{km}±7^{km}, mb4.6/5, Error ellipse: s-maj=32.5km s-min=10.4km az=140.0*
*IDC **23** 14:10:07.1±8.4, 17°.72S×164°.70E, h0^{km}, mb4.1/4, mb1 4.2/4, mb1mx3.7/29, mbtmp4.1/4, ML2.8/1, MS4.2/1, Ms1 4.2/1, ms1mx2.9/32, Error ellipse: s-maj=161.2km s-min=29.6km az=46.0*
ISC 23 14:09:55.8±0.9**, 17°.77S**±0°.05×**166°.37E**±0°.08**, h10**^{km}**, n18,** σ**0^{s}83**/17**, mb4.5**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.73**	**89**	P	**Pg**	**14 10 29.5**	**+0.5**
SANVU	**Saraoutou**	**2.44**	**19**	Pn	**Pb**	**14 10 39.9**	**+0.1**
SANVU	**Saraoutou**	**2.44**	**19**	P	**Pb**	**14 10 39.8**	**+0.1**
MARNC	**Mare, Loyalty**	**4.01**	**157**	P	**Pb**	**14 11 05.1**	**-1.5**
DZM	**Mont Dzumac** 0.4nm,0.3s,baz=178,slow=13,SNR=15	**4.28**	**179**	Pn	**Pg**	**14 11 18.7**	**+0.8**
DZM	0.4nm,0.3s,baz=206,slow=12,SNR=2.0			Sn	**Sg**	**14 12 14.5**	**+1.0**
DZM	**Mont Dzumac**	**4.28**	**179**	P	**Pg**	**14 11 19.0**	**+1.1**
PINNC	**Pines Island,**	**4.93**	**168**	P	**Pb**	**14 11 22.1**	**-0.1**
RAO	**Raoul Island** comp=Z,632nm,19.9s,baz=138,slow=29	**18.37**	**131**	LR	LR	14 19 40.6	
STKA	**Stephens Creek** 1.3nm,0.7s,baz=70,slow=13,SNR=3.9	**26.43**	**233**	P	**P**	**14 15 33.4**	**+0.5**
STKA	**Stephens Creek** comp=Z,2.2nm,1.4s	**26.43**	**233**	IAmb	IAmb	14 15 34.4	
WB2	**Warramunga Arr**	**30.36**	**261**	P	**P**	**14 16 07.8**	**-0.2**
WB2	comp=Z,14nm,1.4s			IAmb	IAmb	14 16 19.7	
WRA	**Warramunga Arr** comp=Z,0.2nm,0.3s,baz=89,slow=9.3,SNR=7.1	**30.37**	**261**	P	**P**	**14 16 07.7**	**-0.5**
AS31	**Alice Springs**	**30.88**	**254**	P	**P**	**14 16 12.6**	**-0.1**
AS31	comp=Z,3.0nm,0.4s			IAmb	IAmb	14 16 13.5	
ASAR	**Alice Springs** comp=Z,3.7nm,0.4s,baz=79,slow=9.3,SNR=195	**30.88**	**254**	P	**P**	**14 16 13.1**	**+0.3**
BBOO	**Buckleboo**	**31.09**	**235**	P	**P**	**14 16 15.2**	**+0.7**
FORT	**Forrest**	**37.07**	**242**	P	**P**	**14 17 05.4**	**-0.9**
FORT	comp=Z,15nm,1.1s			IAmb	IAmb	14 17 13.7	
FITZ	**Fitzroy Crossi** comp=Z,1.9nm,0.4s,baz=97,slow=9.2,SNR=13	**38.70**	**263**	P	**P**	**14 17 19.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**38.70**	**263**	P	**P**	**14 17 19.0**	**-1.2**

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*JMA **23** 14:11:14.7±0.1, 24°.27N×121°.83E, h69^{km}±1^{km}, M2.8*
*TAP **23** 14:11:15.2, 24°.30N×121°.83E, h66^{km}, ML3.3, B*
ISC 23 14:11:15.8±1.2**, 24°.28N**±0°.02×**121°.89E**±0°.02**, h61**^{km}±5^{km}**,** **n108,** σ**0^{s}82**/211**, 1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	**Nanao** baz=348	**0.18**	**337**	P	**Pn**	**14 11 25.5**	**+0.1**
ENAH	baz=348			*e*S	**Sn**	**14 11 32.6**	**+0.4**
ENA	**Nanau** baz=327	**0.20**	**317**	P	**Pn**	**14 11 25.4**	**0.0**
ENA	baz=327			S	**Sn**	**14 11 33.0**	**+0.7**
NACB	**Ninganchiao** baz=250	**0.29**	**248**	P	**Pn**	**14 11 25.7**	**-0.3**
NACB	baz=250			*e*S	**Sn**	**14 11 33.2**	**-0.2**
TWC	**Suao** baz=9.0	**0.33**	**354**	P	**Pn**	**14 11 26.5**	**+0.2**
TWC	baz=9.0			S	**Sn**	**14 11 34.5**	**+0.6**
TWD	**Chiawan** baz=234	**0.33**	**233**	P	**Pn**	**14 11 26.2**	**-0.1**
TWD	baz=234			*e*S	**Sn**	**14 11 34.1**	**+0.2**
ETLH	**Xiulin Townshi** baz=253	**0.38**	**259**	P	**Pn**	**14 11 26.5**	**-0.3**
ETLH	baz=253			S	**Sn**	**14 11 34.4**	**-0.4**
HWA	**Hwalien** baz=203	**0.40**	**221**	*e*P	**Pn**	**14 11 27.3**	**+0.4**
HWA	baz=203			*e*S	**Sn**	**14 11 35.6**	**+0.7**
ENTT	**Nioudou** baz=321	**0.46**	**321**	*i* P	**Pn**	**14 11 27.3**	**-0.2**
ENTT	baz=321			*e*S	**Sn**	**14 11 36.3**	**+0.3**
NDT	**Datong Townshi** baz=307	**0.47**	**313**	*e*P	**Pn**	**14 11 27.4**	**-0.1**
NDT	baz=307			*e*S	**Sn**	**14 11 36.2**	**+0.1**
TWE	**Neicheng** baz=338	**0.48**	**335**	⇓*i*P	**Pn**	**14 11 27.7**	**+0.1**
TWE	baz=338			S	**Sn**	**14 11 37.1**	**+0.7**
NNSB	**Datong** baz=283	**0.48**	**288**	P	**Pn**	**14 11 27.5**	**-0.3**
NNSB	baz=283			S	**Sn**	**14 11 36.4**	**-0.2**
NNSH	**Datong** baz=287	**0.48**	**288**	P	**Pn**	**14 11 27.7**	**-0.1**
NNSH	baz=287			*e*S	**Sn**	**14 11 36.4**	**-0.3**
NNS	**Nan Shan** baz=288	**0.49**	**289**	*i* P	**Pn**	**14 11 27.6**	**-0.4**
NNS	baz=288			*e*S	**Sn**	**14 11 36.5**	**-0.4**
ILA	**Ilan** baz=349	**0.50**	**345**	*e*P	**Pn**	**14 11 28.2**	**+0.3**
ILA	baz=349			*e*S	**Sn**	**14 11 38.0**	**+1.4**
EGS	baz=15	**0.56**	**4**	*e*P	**Pn**	**14 11 28.8**	**+0.2**
EGS	baz=15			*e*S	**Sn**	**14 11 38.3**	**+0.5**
NTC	**Toucheng** baz=7.0	**0.57**	**355**	*e*P	**Pn**	**14 11 29.1**	**+0.4**
NTC	baz=7.0			*e*S	**Sn**	**14 11 39.0**	**+0.9**
WHF	**Hehuan Shan** baz=249	**0.58**	**257**	P	**Pn**	**14 11 29.0**	**-0.3**
WHF	baz=249			*e*S	**Sn**	**14 11 38.6**	**-0.4**
FUSS	**Fushou** baz=263	**0.59**	**267**	P	**Pn**	**14 11 29.1**	**+0.1**
FUSS	baz=263			S	**Sn**	**14 11 38.8**	**0.0**
NWLT	**Wulai** baz=320	**0.61**	**325**	*e*P	**Pn**	**14 11 28.8**	**-0.2**
NWLT	baz=320			*e*S	**Sn**	**14 11 38.5**	**-0.2**
YHNB	**Yeheng** baz=304	**0.61**	**310**	P	**Pn**	**14 11 28.7**	**-0.4**
YHNB	baz=304			*e*S	**Sn**	**14 11 37.8**	**-1.1**
NSK	**Sanguang** baz=304	**0.62**	**309**	P	**Pn**	**14 11 28.9**	**-0.4**
NSK	baz=304			*e*S	**Sn**	**14 11 38.4**	**-0.7**
ESL	**Shilin** baz=221	**0.62**	**222**	*e*P	**Pn**	**14 11 28.3**	**-1.0**
ESL	baz=221			*e*S	**Sn**	**14 11 37.9**	**-1.1**
TWT	**Tachien** baz=265	**0.65**	**268**	P	**Pn**	**14 11 30.0**	**+0.3**
TWT	baz=265			*e*S	**Sn**	**14 11 40.2**	**+0.3**
TDCB	**Techi** baz=265	**0.67**	**268**	P	**Pn**	**14 11 30.0**	**+0.1**
TDCB	baz=265			*e*S	**Sn**	**14 11 39.8**	**-0.4**
CHGB	**Renai** baz=242	**0.69**	**251**	P	**Pn**	**14 11 30.1**	**-0.1**
CHGB	baz=242			*e*S	**Sn**	**14 11 40.6**	**-0.2**
TIPB	**Shuangxi** baz=351	**0.69**	**355**	P	**Pn**	**14 11 30.4**	**+0.3**
TIPB	baz=351			*e*S	**Sn**	**14 11 40.8**	**+0.3**
TWB1	**Santiao Chiao** baz=21	**0.73**	**7**	P	**Pn**	**14 11 30.3**	**-0.2**
TWB1	baz=21			*e*S	**Sn**	**14 11 41.1**	**-0.1**
EGFH	**Guangfu** baz=216	**0.74**	**215**	P	**Pn**	**14 11 29.7**	**-1.0**
EGFH	baz=216			*e*S	**Sn**	**14 11 40.6**	**-0.9**
TWA	**Mucha** baz=331	**0.75**	**338**	P	**Pn**	**14 11 30.6**	**-0.2**
TWA	baz=331			*e*S	**Sn**	**14 11 41.5**	**-0.2**
NHDH	**Xindian Distri** baz=328	**0.76**	**334**	*e*P	**Pn**	**14 11 30.2**	**-0.5**
NHDH	baz=328			*e*S	**Sn**	**14 11 41.3**	**-0.5**
NWF	**Wu-fen Shan** baz=357	**0.79**	**353**	*e*P	**Pn**	**14 11 31.4**	**0.0**
NWF	baz=357			*e*S	**Sn**	**14 11 43.0**	**+0.2**
WFSB	**Wu-fen Shan** baz=357	**0.79**	**353**	P	**Pn**	**14 11 31.6**	**+0.3**
WFSB	baz=357			*e*S	**Sn**	**14 11 42.9**	**+0.3**
WHP	**Taichung City** baz=268	**0.86**	**270**	P	**Pn**	**14 11 32.8**	**+0.6**
WHP	baz=268			*e*S	**Sn**	**14 11 44.6**	**+0.4**
TNOU	**National Taiwa** baz=6.0	**0.87**	**353**	P	**Pn**	**14 11 32.1**	**-0.1**
TNOU	baz=6.0			*e*S	**Sn**	**14 11 44.3**	**-0.1**
LIOB	**Emei** baz=295	**0.87**	**295**	*e*P	**Pn**	**14 11 32.0**	**-0.3**
LIOB	baz=295			*e*S	**Sn**	**14 11 44.4**	**-0.1**
NSTT	**Nanjuang** baz=294	**0.88**	**293**	*e*P	**Pn**	**14 11 32.0**	**-0.3**
NSTT	baz=294			S	**Sn**	**14 11 44.1**	**-0.5**
WPL	**Puli Township** baz=249	**0.89**	**253**	*e*P	**Pn**	**14 11 32.7**	**+0.2**
WPL	baz=249			*e*S	**Sn**	**14 11 45.4**	**+0.5**
HGSD	**Ruisui** baz=212	**0.89**	**208**	*e*P	**Pn**	**14 11 32.2**	**-0.3**
HGSD	baz=212			*e*S	**Sn**	**14 11 45.1**	**+0.3**
NTY	**Taoyuan** baz=326	**0.89**	**323**	*e*P	**Pn**	**14 11 32.2**	**-0.4**
NTY	baz=326			*e*S	**Sn**	**14 11 44.6**	**-0.3**
YM01	**YM01** baz=335	**0.91**	**341**	*e*P	**Pn**	**14 11 31.2**	**-1.6**
YM01	baz=335			*e*S	**Sn**	**14 11 43.8**	**-1.5**
DPDB	**Guoxing** baz=246	**0.91**	**254**	*e*P	**Pn**	**14 11 33.2**	**+0.4**
DPDB	baz=246			*e*S	**Sn**	**14 11 45.9**	**+0.5**
YM10	**YM10** baz=336	**0.92**	**341**	P	**Pn**	**14 11 32.3**	**-0.6**
YM10	baz=336			*e*S	**Sn**	**14 11 44.6**	**-1.0**
TWS1	**Kuangyinshan** baz=336	**0.92**	**332**	*e*P	**Pn**	**14 11 32.5**	**-0.4**
TWS1	baz=336			*e*S	**Sn**	**14 11 45.2**	**-0.3**
YM04	**YM04** baz=334	**0.93**	**340**	P	**Pn**	**14 11 32.3**	**-0.7**
YM04	baz=334			S	**Sn**	**14 11 44.5**	**-1.2**
YM11	**YM11** baz=336	**0.93**	**342**	*e*P	**Pn**	**14 11 32.4**	**-0.6**
YM11	baz=336			*e*S	**Sn**	**14 11 44.9**	**-0.8**
YM05	**YM05** baz=335	**0.93**	**342**	P	**Pn**	**14 11 32.3**	**-0.7**
YM05	baz=335			*e*S	**Sn**	**14 11 44.6**	**-1.2**
EHY	**Hungye** baz=208	**0.93**	**214**	*e*P	**Pn**	**14 11 31.6**	**-1.4**
EHY	baz=208			*e*S	**Sn**	**14 11 44.6**	**-1.1**
HSN1	**Hsinchu** baz=315	**0.93**	**302**	*e*S	**Sn**	**14 11 46.1**	**+0.3**
NCU	**National Centr** baz=319	**0.94**	**317**	P	**Pn**	**14 11 32.5**	**-0.5**
NCU	baz=319			*e*S	**Sn**	**14 11 45.3**	**-0.6**
NCUH	**Zhongli** baz=319	**0.94**	**317**	*e*P	**Pn**	**14 11 32.4**	**-0.7**
NCUH	baz=319			*e*S	**Sn**	**14 11 45.2**	**-0.6**
YM08	**YM08** baz=337	**0.94**	**343**	*e*P	**Pn**	**14 11 32.4**	**-0.8**
YM08	baz=337			*e*S	**Sn**	**14 11 45.5**	**-0.5**
YM03	**YM03** baz=335	**0.95**	**341**	P	**Pn**	**14 11 32.5**	**-0.8**
YM03	baz=335			*e*S	**Sn**	**14 11 45.0**	**-1.2**
ANP	**Anpu** baz=334	**0.96**	**340**	*e*P	**Pn**	**14 11 32.6**	**-0.9**
ANP	baz=334			*e*S	**Sn**	**14 11 44.8**	**-1.7**
NTST	**Danshui** baz=329	**0.96**	**336**	*e*P	**Pn**	**14 11 32.9**	**-0.6**
NTST	baz=329			*e*S	**Sn**	**14 11 46.0**	**-0.5**
SBCB	**Hsinchu** baz=314	**0.97**	**302**	*e*P	**Pn**	**14 11 33.8**	**+0.4**
SBCB	baz=314			*e*S	**Sn**	**14 11 46.2**	**-0.3**
JYNG	**Yonagunijimaku**	**0.98**	**80**	P	**Pn**	**14 11 33.9**	**+0.3**
JYNG				*e*S	**Sn**	**14 11 47.5**	**+0.7**
HSN	**Hsinchu** baz=317	**0.98**	**302**	*e*S	**Sn**	**14 11 46.0**	**-0.9**
SSLB	**Suanglung** baz=234	**0.99**	**240**	*e*P	**Pn**	**14 11 33.7**	**-0.1**
SSLB	baz=234			*e*S	**Sn**	**14 11 46.8**	**-0.2**
SMLT	**Sun Moon Lake** baz=236	**0.99**	**246**	*e*P	**Pn**	**14 11 34.1**	**+0.2**
SMLT	baz=236			*e*S	**Sn**	**14 11 48.3**	**+1.1**
TYC	**Yuchr** baz=240	**1.01**	**248**	P	**Pn**	**14 11 34.4**	**+0.3**
TYC	baz=240			*e*S	**Sn**	**14 11 48.0**	**+0.4**
TWQ1	**Liyutan** baz=272	**1.02**	**274**	*e*P	**Pn**	**14 11 34.0**	**-0.1**
TWQ1	baz=272			*e*S	**Sn**	**14 11 47.7**	**0.0**
TWY	**Chenhua** baz=339	**1.02**	**345**	*e*P	**Pn**	**14 11 34.0**	**-0.2**
TWY	baz=339			*e*S	**Sn**	**14 11 47.4**	**-0.4**
NMLH	**Miaoli** baz=284	**1.03**	**284**	*e*P	**Pn**	**14 11 34.1**	**-0.2**
NMLH	baz=284			*e*S	**Sn**	**14 11 48.0**	**0.0**
NSY	**Sanyi** baz=277	**1.04**	**278**	*e*S	**Sn**	**14 11 48.4**	**+0.2**
YULB	**Yu-li** baz=206	**1.04**	**212**	*e*P	**Pn**	**14 11 32.6**	**-1.8**
YOJ	**Yonaguni jima**	**1.04**	**80**	P	**Pn**	**14 11 34.5**	**+0.1**
YOJ				*e*S	**Sn**	**14 11 49.0**	**+0.8**
YOJ	**Yonaguni jima** baz=81	**1.04**	**80**	*e*P	**Pn**	**14 11 34.5**	**+0.1**
YOJ	baz=81			*e*S	**Sn**	**14 11 49.0**	**+0.8**
EYUL	**Yuli** baz=210	**1.07**	**209**	*e*P	**Pn**	**14 11 35.1**	**+0.4**
EYUL	baz=210			*e*S	**Sn**	**14 11 47.5**	**-1.4**
TWF1	**Yuli** baz=211	**1.07**	**210**	*e*P	**Pn**	**14 11 33.9**	**-0.9**
TWF1	baz=211			*e*S	**Sn**	**14 11 46.9**	**-2.1**
WHYT	**Xinyi Township** baz=234	**1.11**	**239**	*e*P	**Pn**	**14 11 36.3**	**+0.9**
WHYT	baz=234			*e*S	**Sn**	**14 11 51.5**	**+1.5**
WWF	**Wufeng** baz=267	**1.11**	**258**	*e*P	**Pn**	**14 11 35.8**	**+0.4**
WWF	baz=267			*e*S	**Sn**	**14 11 51.1**	**+1.2**
TCU	**Taichung** baz=271	**1.11**	**263**	*e*P	**Pn**	**14 11 35.1**	**-0.2**
TCU	baz=271			*e*S	**Sn**	**14 11 50.2**	**+0.2**
WDJ	**Dajia District** baz=272	**1.14**	**274**	*e*P	**Pn**	**14 11 35.7**	**0.0**
WDJ	baz=272			*e*S	**Sn**	**14 11 50.5**	**0.0**
WJS	**Zhushan** baz=256	**1.16**	**247**	*e*P	**Pn**	**14 11 36.6**	**+0.6**
WJS	baz=256			*e*S	**Sn**	**14 11 53.2**	**+2.2**
WNT1	**Nantou City** baz=248	**1.17**	**252**	*e*P	**Pn**	**14 11 36.6**	**+0.6**
WNT1	baz=248			*e*S	**Sn**	**14 11 53.1**	**+1.9**
WNT	**Mingjian** baz=259	**1.17**	**250**	P	**Pn**	**14 11 36.8**	**+0.6**
WNT	baz=259			*e*S	**Sn**	**14 11 53.2**	**+1.9**
FULB	**Fuli** baz=208	**1.21**	**207**	*e*P	**Pn**	**14 11 36.6**	**0.0**
FULB	baz=208			*e*S	**Sn**	**14 11 52.4**	**+0.2**
WCHH	**Zhanghua** baz=270	**1.23**	**261**	*e*P	**Pn**	**14 11 36.6**	**-0.3**
WCHH	baz=270			*e*S	**Sn**	**14 11 52.7**	**0.0**
ALS	**Alishan** baz=220	**1.25**	**232**	P	**Pn**	**14 11 38.1**	**+0.6**
ALS	baz=220			*e*S	**Sn**	**14 11 54.2**	**+0.5**
CHKT	**Chengkung** baz=193	**1.27**	**202**	*e*P	**Pn**	**14 11 36.8**	**-0.7**
CHKT	baz=193			*e*S	**Sn**	**14 11 52.4**	**-1.3**
CHN5	**Tsauling** baz=245	**1.30**	**239**	P	**Pn**	**14 11 38.5**	**+0.6**
CHN5	baz=245			*e*S	**Sn**	**14 11 55.9**	**+1.5**
ELDTW	**Lidau** baz=205	**1.35**	**216**	*e*P	**Pn**	**14 11 37.9**	**-0.7**
ELDTW	baz=205			*e*S	**Sn**	**14 11 54.5**	**-1.2**
WGK	**Gukeng** baz=240	**1.35**	**244**	*e*P	**Pn**	**14 11 39.1**	**+0.6**
WGK	baz=240			*e*S	**Sn**	**14 11 57.4**	**+1.9**
PCYT	**Pengchaiyu** baz=11	**1.35**	**7**	*e*P	**Pn**	**14 11 38.0**	**-0.5**
PCYT	baz=11			*e*S	**Sn**	**14 11 55.2**	**-0.4**
WDLH	**Douliu** baz=254	**1.37**	**245**	*e*P	**Pn**	**14 11 39.1**	**+0.4**
WDLH	baz=254			*e*S	**Sn**	**14 11 57.9**	**+1.9**
EDH	**Donghe** baz=202	**1.41**	**202**	*e*P	**Pn**	**14 11 38.5**	**-0.9**
EDH	baz=202			*e*S	**Sn**	**14 11 56.0**	**-1.0**
CHN2	**Minshiung** baz=249	**1.49**	**240**	*e*P	**Pn**	**14 11 41.2**	**+0.8**
CHN2	baz=249			*e*S	**Sn**	**14 12 01.1**	**+2.2**
WTK	**Tuku** baz=256	**1.49**	**247**	*e*P	**Pn**	**14 11 40.7**	**+0.3**
WTK	baz=256			*e*S	**Sn**	**14 11 59.6**	**+0.6**
CHN4	**Tsaushan** baz=227	**1.50**	**232**	*e*P	**Pn**	**14 11 41.3**	**+0.7**
CHN4	baz=227			*e*S	**Sn**	**14 12 01.2**	**+1.9**
TPUB	**Ta-pu** baz=217	**1.51**	**230**	*e*P	**Pn**	**14 11 41.4**	**+0.7**
TPUB	baz=217			*e*S	**Sn**	**14 12 00.7**	**+1.3**
STYT	**Tauyuan** baz=209	**1.52**	**223**	P	**Pn**	**14 11 41.5**	**+0.7**
STYT	baz=209			*e*S	**Sn**	**14 12 00.4**	**+0.7**
LONT	**Longtian** baz=199	**1.54**	**207**	*e*P	**Pn**	**14 11 39.5**	**-1.6**
LONT	baz=199			*e*S	**Sn**	**14 11 58.2**	**-1.8**
CHY	**Chiayi** baz=248	**1.55**	**240**	*e*P	**Pn**	**14 11 41.6**	**+0.4**
CHY	baz=248			*e*S	**Sn**	**14 12 01.7**	**+1.4**
WTP	**Ta-pu** baz=223	**1.56**	**229**	P	**Pn**	**14 11 41.9**	**+0.6**
WTP	baz=223			*e*S	**Sn**	**14 12 01.8**	**+1.2**
TWK	**Hsinying** baz=226	**1.63**	**232**	*e*P	**Pn**	**14 11 43.2**	**+0.8**
TWK	baz=226			*e*S	**Sn**	**14 12 03.6**	**+1.1**
TWGBT	**Beinan** baz=199	**1.64**	**207**	*e*P	**Pn**	**14 11 40.7**	**-1.6**
TWGBT	baz=199			*e*S	**Sn**	**14 12 00.8**	**-1.6**
TWG	**Pinlang** baz=199	**1.64**	**207**	*e*P	**Pn**	**14 11 41.1**	**-1.3**
TWG	baz=199			*e*S	**Sn**	**14 12 00.8**	**-1.6**
LDUT	**Ludao** baz=187	**1.65**	**194**	*e*P	**Pn**	**14 11 41.4**	**-1.1**
LDUT	baz=187			*e*S	**Sn**	**14 12 01.2**	**-1.4**
CHN1	**Nanshi** baz=223	**1.66**	**229**	*e*P	**Pn**	**14 11 43.1**	**+0.4**
CHN1	baz=223			*e*S	**Sn**	**14 12 03.9**	**+1.0**
IRIF	**Iriomote-Funau**	**1.68**	**88**	P	**Pn**	**14 11 42.9**	**0.0**
IRIF				*e*S	**Sn**	**14 12 03.7**	**+0.2**
SGST	**Jiashian** baz=219	**1.69**	**225**	P	**Pn**	**14 11 43.3**	**+0.2**
SGST	baz=219			*e*S	**Sn**	**14 12 05.6**	**+1.8**
ICHU	**Yijhu** baz=223	**1.73**	**238**	*e*P	**Pn**	**14 11 44.0**	**+0.3**
ICHU	baz=223			*e*S	**Sn**	**14 12 06.4**	**+1.6**
HATJ	**Hateruma jima**	**1.77**	**97**	P	**Pn**	**14 11 44.8**	**+0.7**
HATJ				*e*S	**Sn**	**14 12 06.9**	**+1.4**
JKRS	**Kuro-shima**	**1.94**	**91**	P	**Pn**	**14 11 46.7**	**+0.3**
JKRS				S	**Sn**	**14 12 10.7**	**+1.0**
JIJ	**Ishigaki jima**	**2.06**	**87**	P	**Pn**	**14 11 47.7**	**-0.4**
JIJ				S	**Sn**	**14 12 12.0**	**-0.7**
JISG	**Ishigakijimahi**	**2.23**	**82**	P	**Pn**	**14 11 50.1**	**-0.3**
JISG				S	**Sn**	**14 12 16.4**	**-0.4**
JTJ	**Tarama**	**2.59**	**81**	P	**Pn**	**14 11 56.0**	**+0.7**
JTJ				S	**Sn**	**14 12 26.2**	**+0.6**
JIRB	**Irabujima**	**3.04**	**79**	S	**Sn**	**14 12 36.4**	**-0.3**

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*VAO **23** 14:12:20.4±0.6, 18°.04S×69°.52W, h54^{km}±5^{km}, mb5.3*
*MOS **23** 14:12:26.6±1.2, 17°.98S×69°.29W, h113^{km}, mb5.0/9, Error ellipse: s-maj=12.8km s-min=9.2km az=107.3*
*NEIC **23** 14:12:26.3±1.7, 17°.99S±0°.06×69°.41W±0°.09, h110^{km}±5^{km}, mb5.2/56, Mww4.8, ML5.0(GUC), Error ellipse: s-maj=12.8km s-min=8.6km az=79.0*
*NEIC **23** 14:12:27, 18°.05S×69°.48W, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.14; M$_{\theta\theta}$-0.83; M$_{\phi\phi}$0.69; M$_{r\theta}$1.07; M$_{\theta\phi}$-0.22; M$_{\phi r}$-1.28; Fault plane solution: M$_0$1.85000×10^{16} NP1:φ$_s$225.00000°, δ25.00000°, λ3.00000°. NP2:φ$_s$133.00000°, δ89.00000°, λ115.00000°. Principal axes: T 1.9941, Plg41.0000°, Azm66.0000°; N -0.3219, Plg25.0000°, Azm312.0000°; P -1.6721, Plg39.0000°, Azm200.0000°;*
*GUC **23** 14:12:29.3±0.8, 18°.14S×69°.49W, h118^{km}±5^{km}, ML5.0*
*IDC **23** 14:12:29.0±0.3, 18°.01S×69°.25W, h128^{km}±2^{km}, mb4.5/23, mb1 4.6/27, mb1mx4.5/38, mbtmp5.0/27, MS3.5/7, Ms1 3.5/7, ms1mx3.2/27, Error ellipse: s-maj=10.5km s-min=8.7km az=94.0*
*GCMT **23** 14:12:31.3±0.4, 18°.06S±0°.03×69°.60W±0°.03, h146^{km}±5^{km}, MW5.0/74, Moment Tensor Solution. s13,c14; s74,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.48±.20; M$_{\theta\theta}$-0.04±.22; M$_{\phi\phi}$0.51±.26; M$_{r\theta}$1.67±.11; M$_{\theta\phi}$-0.15±.32; M$_{\phi r}$-2.89±.16; Best double couple: M$_0$3.37800×10^{16} NP1:φ$_s$184.00000°, δ5.00000°, λ-57.00000°. NP2: φ$_s$330.00000°, δ86.00000°, λ-93.00000°. Principal axes: T 3.3940, Plg41.0000°, Azm63.0000°; N -0.0310,*

Plg3.0000°, Azm330.0000°; P -3.3620, Plg49.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 23 14:12:27.3±0.3**, 18°.08S**±0°.04×**69°.38W**±0°.05**, h120**^{km}±3^{km}**, h120**^{km}**:pP-P, n446,** σ1**^{s}**.20**/456**, mb5.0**/57**, 9C-13D, Fault plane solution: NP1:** ϕ_s242.75240°, δ22.38800°, λ3.78548°. **NP2:** ϕ_s149.25151°, δ88.55910°, λ112.34396°. **Principal axes:** T Plg42.1899°, Azm80.5247°; N Plg22.3365°, Azm328.6593°; P Plg39.4963°, Azm218.8644°; **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.28	205	⇑eP	Pn	14 12 46.3	+1.3
PB16				iS	Sn	14 12 59.9	+1.7
PB16				IAML		14 13 01.5	
	comp=N,41µm,0.8s						
PB16	IPOC Station P	0.28	205		Pn	14 12 45.4	+0.4
AP01	Chacalluta	0.96	252	⇑iP	Pn	14 12 48.9	0.0
AP01				eS	Sn	14 13 04.7	-0.6
AP01				IAML		14 13 06.4	
	comp=E,60µm,0.5s						
AP01	Chacalluta	0.96	252		Pn	14 12 48.6	-0.4
MNMC	Minye Minye	1.07	191	eP	Pn	14 12 51.3	+0.9
MNMC				iS	Sn	14 13 08.6	+0.8
MNMC				IAML		14 13 12.6	
	comp=E,43µm,0.4s						
MNMC	Minye Minye	1.07	191		Pn	14 12 50.2	-0.2
MNMC				Sn	Sn	14 13 09.0	+1.2
PSGC	Pisagua	1.67	205	⇑eP	Pn	14 12 56.4	-0.4
PSGC				iS	Sn	14 13 17.5	-1.9
PSGC				IAML		14 13 19.2	
	comp=N,24µm,0.4s						
PSGCX	Pisagua	1.67	205		Pn	14 12 56.1	-0.7
PSGCX				Sn	Sn	14 13 18.5	-0.9
PB08	IPOC Station P	2.06	174	eP	Pn	14 13 03.3	+1.3
PB08				iS	Sn	14 13 29.2	+0.7
PB08				IAML		14 13 31.3	
	comp=E,5µm,0.6s						
PB08	IPOC Station P	2.06	174		Pn	14 13 03.2	+1.2
PB08				Sn	Sn	14 13 30.4	+1.9
HMBC	Humberstone	2.24	192	⇑eP	Pn	14 13 03.5	-0.4
HMBC				iS	Sn	14 13 30.5	-1.6
HMBC				IAML		14 13 38.7	
	comp=N,9µm,0.5s						
TA02	Huaiquique	2.29	198	eP	Pn	14 13 04.6	+0.1
TA02				iS	Sn	14 13 30.4	-2.6
TA01	Diego Aracena	2.59	197	eP	Pn	14 13 07.3	-1.0
TA01				iS	Sn	14 13 36.2	-3.5
TA01	Diego Aracena	2.59	197		Pn	14 13 07.3	-1.0
PATCX	Punta Patache	2.82	195	⇓eP	Pn	14 13 10.5	-0.9
PATCX				eS	Sn	14 13 39.1	-6.2
PATCX				IAML		14 14 02.1	
	comp=E,3µm,0.7s						
PATCX	Punta Patache	2.82	195	Pn	Pn	14 13 11.0	-0.5
PB02	IPOC Station P	3.26	188	eP	Pn	14 13 16.7	-0.5
PB02				iS	Sn	14 13 52.4	-3.3
PB07	IPOC Station P	3.66	187	⇓eP	Pn	14 13 22.2	-0.3
PB07				iS	Sn	14 14 02.6	-2.6
PB07	IPOC Station P	3.66	187		Pn	14 13 21.7	-0.8
PB09	IPOC Station P	3.70	178	⇓eP	Pn	14 13 23.5	+0.4
PB09				IAML		14 14 36.4	
	comp=E,3µm,0.8s						
PB09	IPOC Station P	3.70	178		Pn	14 13 23.3	+0.2
PB04	IPOC Station P	4.29	190		Pn	14 13 30.0	-1.0
LVC	Limon Verde	4.53	174	P	Pn	14 13 35.4	+1.0
	comp=E,158nm,0.3s,baz=353,slow=11,SNR=1290						
LVC				S	Sn	14 14 24.1	-2.2
	comp=E,138nm,0.3s,baz=324,slow=17,SNR=11						
LVC				LR	LR	14 15 53.7	
	comp=E,382nm,18.9s,baz=336,slow=45						
LVC	Limon Verde	4.53	174	Pn	Pn	14 13 35.1	+0.8
PB06	IPOC Station P	4.61	182		Pn	14 13 34.3	-0.9
PB15	IPOC Station P	5.11	181		Pn	14 13 40.9	-1.0
PB10	IPOC Station P	5.52	191	Pn	Pn	14 13 44.6	-2.7
PB14	IPOC Station P	6.58	188	Pn	Pn	14 13 59.0	-3.0
GO02	Mina Guanaco	7.05	182	Pn	Pn	14 14 06.0	-2.3
AC01	Pan de Azucar	8.11	188	Pn	Pn	14 14 18.2	-4.1
SIV	San Ignacio	8.22	77	P	Pn	14 14 23.0	-0.8
	comp=E,59nm,0.3s,baz=269,slow=14,SNR=178						
SIV				S	Sn	14 15 52.1	-3.0
	comp=E,6.5nm,0.3s,baz=358,slow=23,SNR=7.3						
SIV				LR	LR	14 17 51.1	
	comp=E,456nm,19.0s,baz=268,slow=40						
AC02	Maricunga	8.72	179	Pn	Pn	14 14 29.0	-2.0
NNA	Nana	9.41	309	P	Pn	14 14 38.4	-1.6
	comp=E,13nm,0.3s,baz=138,slow=12,SNR=9.6						
NNA				S	Sn	14 16 20.5	-3.5
	comp=E,9.2nm,0.3s,baz=266,slow=15,SNR=4.6						
NNA				LR	LR	14 19 16.1	
	comp=E,152nm,18.7s,baz=132,slow=43						
NNA	Nana	9.41	309	deP	Pn	14 14 38.1	-1.9
NNA				pmax	pmax		
	comp=Z,67nm,1.0s						
NNA	Nana	9.41	309	Pn	Pn	14 14 38.0	-1.9
PTLB	Pontes e Lacer	10.16	77	eP	Pn	14 14 45.0	-5.0
VILB	Vilhena	10.21	61	eP	Pn	14 14 46.2	-4.6
AC05	El Transito	10.74	184	Pn	Pn	14 14 53.6	-4.3
CZSB	Cruzeiro do Su	10.78	342	eP	Pn	14 14 50.9	-7.6
SAML	Samuel	10.89	34	P	Pn	14 14 58.1	-1.8
SAML	Samuel	10.89	34	Pn	Pn	14 14 58.1	-1.8
SAML	Samuel	10.89	34	eP	Pn	14 14 54.8	-5.1
LCO	Las Campanas	10.95	186	P	Pn	14 14 55.5	-5.4
LCO	Las Campanas	10.95	186	Pn	Pn	14 14 55.5	-5.3
CO01	Juntas del Tor	11.86	183		Pn	14 15 09.1	-3.9
GO04	Tololo Observa	12.11	186	Pn	Pn	14 15 11.4	-4.8
AQDB	Aquidauana	13.14	103	eP	Pn	14 15 24.4	-5.1
PP1B	Ponte de Pedra	13.82	90	eP	Pn	14 15 35.9	-2.4
CPUP	Villa Florida	13.85	128	P	Pn	14 15 37.2	-1.3
	comp=Z,0.9nm,0.3s,baz=298,slow=12,SNR=20						
CPUP				LR	LR	14 22 10.3	
	comp=Z,43nm,18.9s,baz=298,slow=42						
VA03	San Esteban	14.66	184		Pn	14 15 49.5	+0.5
CLDB	Colider	14.97	63	eP	Pn	14 15 50.6	-2.4
TRCB	Terra Rica	16.38	109	eP	Pn	14 16 09.0	-1.5
ITQB	Itaqui	16.39	137	eP	Pn	14 16 07.2	-3.2
BO02	Sierra Bellavi	16.70	184		Pn	14 16 13.6	-0.5
BO02				IAmb	IAmb	14 16 18.3	
	comp=Z,83nm,0.9s						
ARAG	Araguaiana, MT	16.98	85	eP	Pn	14 16 16.4	-1.3
MACA	Manacapuru-AM	17.10	31	eP	Pn	14 16 17.9	-1.3
PCMB	Pacaembu	17.41	105	eP	P	14 16 20.7	-1.6
PTGB	Pitanga	17.42	115	eP	P	14 16 22.8	+0.3
NPGB	Novo Progresso	17.52	53	eP	P	14 16 22.8	-0.8
H03N1	Juan Fernandez	17.53	207	T	T	14 34 10.6	
	baz=29,slow=73,SNR=34						
H03N2	Juan Fernandez	17.53	207	T	T	14 33 53.4	
	baz=29,slow=73,SNR=19						
H03N3	Juan Fernandez	17.54	207	T	T	14 33 52.9	
	baz=29,slow=73,SNR=16						
ITRB	Iturama	18.07	98	eP	P	14 16 29.2	-0.6
ITAB	Concordia	18.33	123	eP	P	14 16 32.6	+0.2
SNDB	Serra Nova Dou	18.49	73	eP	P	14 16 34.1	-0.1
BI02	San Fabin de	18.59	185		Pn	14 16 37.1	+0.2
CPSB	Cacapava Do Su	19.00	133	eP	P	14 16 39.7	0.0
ITTB	Itaituba	19.08	46	eP	P	14 16 40.0	-0.7
FRTB	Fartura	19.26	109	eP	P	14 16 42.5	-0.1
PTGA	Pitinga	19.57	29	P	P	14 16 45.1	-0.8
	comp=Z,20nm,0.3s,baz=209,slow=12,SNR=90						
PTGA				S	S	14 20 19.5	-1.0
	comp=Z,0.5nm,0.3s,baz=324,slow=19,SNR=3.0						
PTGA				LR	LR	14 25 17.9	
	comp=Z,125nm,20.9s,baz=194,slow=40						
PTGA	Pitinga	19.57	29	P	P	14 16 45.3	-0.7
PTGA				IAmb	IAmb	14 16 50.1	
	comp=Z,73nm,0.8s						
PLTB	Pedras Altas	19.73	137	eP	P	14 16 47.0	-0.5
BB19B	Bebedouro	19.87	102	eP	P	14 16 48.7	-0.6
IPMB	Ipameri, GO	20.13	93	eP	P	14 16 50.9	-1.3
OTAV	Otavalo	20.27	333	eP	Pn	14 16 57.6	+0.5
OTAV	Otavalo	20.27	333	eP	P	14 16 51.1	-2.9
CNLB	Canela	20.29	127	eP	P	14 16 52.6	-1.2
BDFB	Brasilia	20.59	86	P	P	14 16 57.0	-0.2
	comp=Z,88nm,0.6s,baz=256,slow=11,SNR=42						
BDFB	Brasilia	20.59	86	P	P	14 16 57.0	-0.2
BDFB	Brasilia	20.59	86	P	P	14 16 57.0	-0.2
BDFB				IAmb	IAmb	14 17 00.5	
	comp=Z,95nm,0.6s						
LC01	Cunco	20.86	185	P	P	14 16 59.9	+0.2
GARC	Garzon, Huila	21.02	343	eP	P	14 16 58.9	-2.9
PEXB	Peixe	21.19	77	eP	P	14 17 02.6	-0.9
PCON	Cinco Dias	21.42	340	eP	P	14 17 08.7	+2.2
PET01	Itanhaem-SP	21.51	110	eP	P	14 17 06.5	-0.3
VAO	Valinhos	21.55	107	eP	P	14 17 06.0	-1.3
MALB	Monte Alegre	21.91	44	eP	P	14 17 09.7	-1.4
PRPB	Parauapebas	22.46	61	eP	P	14 17 15.3	-1.5
PLCA	Paso Flores	22.60	182	P	P	14 17 18.6	+0.7
	comp=Z,41nm,1.0s,baz=2.5,slow=11,SNR=50						
PLCA	Paso Flores	22.60	182	P	P	14 17 18.7	+0.7
PLCA				pmax	pmax		
	comp=Z,68nm,1.1s						
PLCA	Paso Flores	22.60	182	P	P	14 17 18.7	+0.7
PLCA	Paso Flores	22.60	182	eP	P	14 17 17.9	0.0
PARB	Paraibuna	22.82	107	eP	P	14 17 19.2	-1.1
SMTB	Santa Maria do	23.07	69	eP	P	14 17 22.4	-0.2
BSCB	Bom Sucesso	23.37	101	eP	P	14 17 25.1	-0.4
RREF	El Recreo	23.58	345	eP	P	14 17 28.3	+0.3
PLMC	San Jos del P	23.83	343	eP	P	14 17 29.2	-0.4
GUY2C	Guyana, Caldas	23.89	345	eP	P	14 17 30.4	-0.3
RUSC	La Rusia	24.10	351	eP	P	14 17 31.4	-1.0
NORC	Norcasia	24.11	347	eP	P	14 17 30.7	-1.4
JANB	Januaria	24.21	87	eP	P	14 17 32.1	-1.0
SDBA	SAO DESIDERIO	24.27	80	eP	P	14 17 33.0	-0.7
MAN01	Angra dos Reis	24.27	106	eP	P	14 17 33.8	+0.3
MCPB	Macapa, AP	24.50	46	eP	P	14 17 34.8	-0.8
CBOC	Ciudad Bolivar	24.67	344	eP	P	14 17 36.3	-1.1
VAS01	Vassouras-RJ	24.69	104	eP	P	14 17 38.4	+1.0
BARC	Barichara	24.80	351	eP	P	14 17 37.8	-0.8
HELC	Santa Helena	24.86	345	eP	P	14 17 37.4	-1.9
PTBC	PUERTO BERRIO,	24.97	348	eP	P	14 17 35.6	-4.2
DUB01	Friburgo-RJ	25.66	103	eP	P	14 17 47.9	+1.7
ZARC	Zaragoza, Cauc	25.98	348	eP	P	14 17 46.7	-2.3
TMAB	Tom-Au,PA,Br	26.07	56	eP	P	14 17 51.1	+1.2
SJMB	Sao Joao De Ma	26.76	96	eP	P	14 17 56.0	0.0
SDV	Santo Domingo	26.82	357	P	P	14 17 55.3	-1.4
	comp=Z,4.3nm,0.4s,baz=232,slow=5.2,SNR=6.0						
SDV	Santo Domingo	26.82	357	eP	P	14 17 55.4	-1.4
BSFB	Barra de Sao F	27.07	96	eP	P	14 17 59.0	+0.1
SMLC	San Martn de	27.11	350	eP	P	14 17 55.6	-3.5
ALF01	Guarapari-ES	27.14	100	eP	P	14 18 00.5	+1.0
RIB01	Linhares ES	27.47	97	eP	P	14 18 01.9	-0.5
MDP	Montagnes des	28.34	37	P	P	14 18 09.2	-0.9
	comp=Z,15nm,0.5s,baz=214,slow=8.5,SNR=12						
PCRV	Puerto La Cruz	28.46	10	P	P	14 18 10.9	-0.3
	comp=Z,7.8nm,0.6s,baz=6.6,slow=9.7,SNR=3.6						
GDU01	Guandu, BA	28.97	86	eP	P	14 18 14.1	-1.7
ROSB	Rosrio	28.99	62	eP	P	14 18 15.5	-0.5
NBMO	Morrinhos-CE	32.27	66	eP	P	14 18 44.7	-0.2
NBPA	Parau_RN	33.80	73	eP	P	14 18 59.0	+0.8
NBRF	Rio Formoso -	34.55	79	eP	P	14 19 05.5	+0.8
RCBR	Riachuelo	34.87	74	P	P	14 19 07.5	+0.1
	comp=Z,32nm,0.8s,baz=241,slow=9.6,SNR=14						
RCBR	Riachuelo	34.87	74	P	P	14 19 06.9	-0.6
RCBR				pmax	pmax		
	comp=Z,34nm,0.9s						
RCBR	Riachuelo	34.87	74	P	P	14 19 06.9	-0.6
RCBR				IAmb	IAmb	14 19 09.5	
	comp=Z,34nm,0.8s						
RCBR	Riachuelo	34.87	74	eP	P	14 19 08.8	+1.3
NBPV	Pedro Velho	35.20	75	eP	P	14 19 10.9	+0.6
CRPR	Cabo Rojo, PR	35.93	4	P	P	14 19 14.8	-1.5
CRPR				IAmb	IAmb	14 19 15.4	
	comp=Z,66nm,1.3s						
PDPR	Patillas Dam,	36.02	5	P	P	14 19 14.9	-2.2
PDPR				IAmb	IAmb	14 19 16.5	
	comp=Z,39nm,1.1s						
USHA	Ushuaia	36.69	179	P	P	14 19 23.4	+1.0
	comp=Z,76nm,0.9s,baz=18,slow=16,SNR=6.1						
BRAL	Brewton	51.82	341	P	P	14 21 23.6	+0.5
	baz=158						
GOGA	Godfrey	52.94	345	P	P	14 21 31.7	+0.4
	baz=163						
LRAL	Lakeview Retre	53.54	342	P	P	14 21 35.4	-0.3
	baz=159						
W56A	Indian Trail	53.98	349	P	P	14 21 38.8	-0.1
	baz=167						
HKT	Hockley	54.13	332	⇑eP	P	14 21 42.2	+2.2
HKT				pmax	pmax		
	comp=Z,16nm,1.4s						
KMSC	Kings Mountain	54.13	348	P	P	14 21 39.5	-0.5
	baz=166						
Y49A	Blount Mountai	54.14	342	P	P	14 21 39.0	-1.1
V59A	Middlesex	54.20	351	P	P	14 21 39.9	-0.5
	baz=170						
V57A	Coltrane Farms	54.56	350	P	P	14 21 43.0	-0.1
	baz=168						
V56A	Mocksville	54.62	349	P	P	14 21 43.4	-0.1
	baz=167						
X48A	Hartselle	54.88	342	IAmb	IAmb	14 21 45.7	
	comp=Z,31nm,0.8s						
U57A	Blanch	55.02	350	P	P	14 21 45.5	-0.9
	baz=168						
T59A	Double "B" Far	55.29	352	P	P	14 21 47.4	-0.9
	baz=170						
T60A	Surry	55.35	353	P	P	14 21 49.2	+0.5
	baz=172						
U54A	Nelsons Funny	55.56	348	P	P	14 21 50.1	-0.3
	baz=166						
T57A	Hurt	55.56	350	P	P	14 21 50.3	+0.1
	baz=169						
T56A	Rocky Mt	55.72	350	P	P	14 21 51.9	+0.5
	baz=168						
BLA	Blacksburg	55.97	349	P	P	14 21 54.1	+0.9
	baz=167						
S58A	Poland Farm, P	55.99	352	P	P	14 21 53.8	+0.6
	baz=170						
X43A	Marvell	56.16	339	P	P	14 21 55.3	+0.7
	baz=155						
S57A	Dark Hollow, R	56.27	351	P	P	14 21 55.8	+0.5
	baz=169						
R58B	Mineral	56.31	352	P	P	14 21 55.8	+0.2
	baz=170						
R58A	Rapidan	56.66	352	P	P	14 21 57.9	-0.1
	baz=170						
WVT	Waverly	56.67	342	P	P	14 21 57.4	-0.8
WVT				pmax	pmax		
	comp=Z,22nm,0.6s						
WVT	Waverly	56.67	342	P	P	14 21 57.3	-0.8
	baz=159						
WVT	Waverly	56.67	342	P	P	14 21 57.4	-0.8
WVT				IAmb	IAmb	14 21 57.9	
	comp=Z,22nm,0.6s						
S54A	Dingess, Beckl	56.70	349	P	P	14 21 58.0	-0.4
	baz=166						
S54A	Dingess, Beckl	56.70	349	P	P	14 21 57.8	-0.6
S54A				IAmb	IAmb	14 21 59.0	
	comp=Z,20nm,0.8s						
R57A	Stanardsville	56.73	351	P	P	14 21 58.4	-0.1
	baz=170						
X40A	Basin Creek Fa	56.84	337	P	P	14 21 59.8	+0.4
	baz=153						
R55A	Marlinton	56.96	350	P	P	14 22 00.7	+0.5
	baz=168						
R54A	Victor	57.01	349	P	P	14 22 00.2	-0.3
	baz=167,SNR=5.3						
Q59A	Harwood	57.05	353	P	P	14 22 00.8	0.0
	baz=172						
MIAR	Mount Ida	57.17	336	P	P	14 22 01.7	0.0
	baz=152,SNR=5.8						
W41B	Gary Mavity, V	57.24	338	P	P	14 22 02.4	+0.3
	baz=154						
Q58A	Fox Den Farm,	57.25	352	P	P	14 22 01.9	-0.2
	baz=171						
WHAR	Wooly Hollow	57.35	338	IAmb	IAmb	14 22 04.5	
	comp=Z,14nm,0.8s						
Q57A	Strasburg	57.44	352	P	P	14 22 03.7	+0.2
	baz=170						
Q56A	Snyder Ridge,	57.55	351	P	P	14 22 04.5	+0.2
	baz=169						
TXAR	Lajitas Array	57.59	324	P	P	14 22 05.3	+0.4
	comp=Z,0.6nm,0.6s,baz=145,slow=9.3,SNR=7.9						
TXAR				pP	pP	14 22 35.8	+0.5
	comp=Z,2.9nm,0.9s,baz=144,slow=8.7,SNR=7.2						
LCAR	Lake Charles	57.66	339	IAmb	IAmb	14 22 05.7	
	comp=Z,16nm,0.7s						
T45A	Paducah	57.74	342	P	P	14 22 04.9	-0.7
P58A	Pank, Wackersv	57.74	353	P	P	14 22 06.3	+0.7
	baz=171						
P59A	Jarrettsville	57.76	354	P	P	14 22 05.8	0.0
	baz=172						
Q54A	Coxs Mills	57.77	349	IAmb	IAmb	14 22 06.1	
	comp=Z,16nm,1.0s						
Q53A	Leroy	57.77	349	P	P	14 22 05.5	-0.3
	baz=166,SNR=7.3						
P57A	Homestead Farm	57.83	352	P	P	14 22 06.4	+0.3
	baz=170						
W39A	Magazine	57.83	336	P	P	14 22 07.2	+0.9
	baz=152						
WCI	Wyandotte Cave	58.22	344	P	P	14 22 08.0	-1.0
	baz=161						
MCWV	Mont Chateau	58.26	351	P	P	14 22 09.5	+0.2
	baz=168						
O57A	Amberson	58.49	353	P	P	14 22 11.0	+0.1
	baz=171						
U40A	Yellville	58.51	338	P	P	14 22 10.8	-0.3
	baz=154,SNR=6.9						
T42A	Van Buren	58.51	340	IAmb	IAmb	14 22 11.8	
	comp=Z,13nm,0.7s						
P52A	Corning	58.63	348	P	P	14 22 11.4	-0.5
	baz=166						
O56A	Blue Knob Stat	58.67	352	P	P	14 22 12.7	+0.5
	baz=170						
N60A	Cedar Hill Far	58.88	355	P	P	14 22 12.7	-0.8
	baz=174						
PAL	Palisades	58.93	356	P	P	14 22 12.8	-1.0
	baz=175						
SSPA	Standing Stone	58.94	352	P	P	14 22 13.9	-0.1
	baz=171						
N59A	State Game Lan	58.99	354	P	P	14 22 14.0	-0.3
	baz=173						
N58A	Sunbury	59.01	354	P	P	14 22 14.1	-0.3
	baz=172						
O53A	New Philadelph	59.06	349	P	P	14 22 14.3	-0.4
	baz=167						
P49A	Miami Univ. Ec	59.08	346	P	P	14 22 14.1	-0.8
	baz=163						
M61A	Granite Spring	59.22	356	P	P	14 22 15.1	-0.7
	baz=175						
M60A	Port Jervis	59.30	355	P	P	14 22 16.6	+0.2
	baz=174						
ACSO	Alum Creek Sta	59.38	348	P	P	14 22 16.0	-0.9
	baz=165						
CCM	Cathedral Cave	59.50	340	P	P	14 22 17.7	-0.1
CCM				pmax	pmax		
	comp=Z,23nm,0.7s						
CCM	Cathedral Cave	59.50	340	P	P	14 22 17.9	+0.1
	baz=156						
CCM	Cathedral Cave	59.50	340	P	P	14 22 17.7	-0.1
CCM				IAmb	IAmb	14 22 19.0	
	comp=Z,23nm,0.7s						
M58A	Price’s Panora	59.51	354	P	P	14 22 17.7	-0.2
	baz=172,SNR=5.4						
N53A	Lisbon	59.54	350	IAmb	IAmb	14 22 18.9	
	comp=Z,34nm,1.1s						
M57A	Sunshine Farm,	59.55	353	P	P	14 22 17.9	-0.2
	baz=171						
N54A	Moraine State	59.56	351	P	P	14 22 17.9	-0.3
	baz=168						
M59A	Waymart	59.58	355	P	P	14 22 17.9	-0.4
	baz=173						
L63A	North Scituate	59.67	358	P	P	14 22 18.5	-0.5
	baz=178						
L64A	Middleborough	59.72	359	P	P	14 22 18.7	-0.6
	baz=178						
S39A	Bolivar	59.87	338	P	P	14 22 18.6	-1.8
S39A				IAmb	IAmb	14 22 21.5	
	comp=Z,19nm,0.8s						
L60A	Shokan	59.93	356	P	P	14 22 20.4	-0.3
	baz=175						
M54A	Oil Creek Stat	60.04	351	P	P	14 22 21.1	-0.4
	baz=169,SNR=5.2						
L58A	Harry Jones Me	60.12	354	P	P	14 22 21.8	-0.2
	baz=173						
M53A	WI Miller and	60.13	350	P	P	14 22 21.6	-0.5
	baz=168,SNR=5.1						
L57A	Andrews Acres	60.17	354	P	P	14 22 22.2	-0.2
	baz=172						
L59A	Walton	60.19	355	P	P	14 22 22.2	-0.3
	baz=174						
BINY	Binghamton	60.28	354	P	P	14 22 23.0	-0.2
	baz=173						
HRV	Adam Dziewonsk	60.31	358	P	P	14 22 22.9	-0.3
	baz=178						
L56A	Greenwood	60.38	353	P	P	14 22 23.6	-0.2
	baz=171						
SFIN	Lafayette	60.45	345	P	P	14 22 22.9	-1.4
	baz=161,SNR=5.2						
K61A	Williamstown	60.55	357	P	P	14 22 25.5	+0.5
	baz=176						
L53A	Girard	60.57	351	P	P	14 22 24.6	-0.5
	baz=168,SNR=7.6						
ERPA	Erie	60.69	351	P	P	14 22 25.5	-0.3
	baz=168,SNR=5.4						
K59A	Cooperstown	60.76	355	P	P	14 22 26.2	-0.2
	baz=174						
K58A	Earlville	60.81	355	P	P	14 22 26.5	-0.2
	baz=173						
K57A	Scipio Center	60.86	354	P	P	14 22 26.4	-0.6
	baz=172						
J63A	Strafford	61.07	359	P	P	14 22 28.5	+0.1
	baz=178						
J60A	Lant Hill Farm	61.13	357	P	P	14 22 28.6	-0.2
	baz=176						
J61A	Chester	61.19	357	P	P	14 22 29.3	+0.1
	baz=177						
L48A	N Adams	61.32	347	IAmb	IAmb	14 22 29.9	
	comp=Z,30nm,0.7s						
J59A	Piesco	61.42	356	P	P	14 22 31.0	+0.2
	baz=174						
J59A	Piesco	61.42	356	P	P	14 22 29.9	-0.9
J59A				IAmb	IAmb	14 22 32.4	
	comp=Z,21nm,0.9s						
I58A	Old Forge	61.68	355	P	P	14 22 32.6	+0.1
	baz=174						
I60A	Shoreham	61.72	357	P	P	14 22 33.0	+0.3
	baz=176						
I61A	Oroboro, Fairl	61.76	358	P	P	14 22 33.6	+0.6
	baz=177						
LBNH	Lisbon	62.06	358	P	P	14 22 35.3	+0.2
	baz=177						
BELA	Belgrano 2	62.18	172	P	P	14 22 35.7	+0.1
KSU1	Kansas State U	62.33	336	P	P	14 22 37.6	+0.6
	baz=151						
H58A	Gabriels	62.34	356	P	P	14 22 36.7	-0.2
	baz=175						
H61A	Lyndonville	62.35	358	P	P	14 22 37.2	+0.2
	baz=177						
H64A	Troy	62.41	0	P	P	14 22 37.8	+0.4
	baz=180						
H63A	New Sharon	62.44	359	P	P	14 22 37.7	+0.2
	baz=179						
H65A	Eastbrook	62.48	1	P	P	14 22 38.0	+0.2
	baz=181						
I51A	Listowel	62.49	351	P	P	14 22 37.6	-0.4
	baz=168						
H59A	Cadyville	62.54	357	P	P	14 22 38.2	-0.1
	baz=175						
LONY	Lake Ozonia	62.57	356	P	P	14 22 38.6	+0.1
	baz=174						
H66A	Whiting	62.59	2	P	P	14 22 38.6	+0.1
	baz=182						
L42A	Oliver, Polo	62.65	343	IAmb	IAmb	14 22 39.4	
	comp=Z,26nm,0.6s						
G63A	Kingsbury	62.89	360	P	P	14 22 40.9	+0.4
	baz=180						
H53A	Bobcaygeon	62.91	353	P	P	14 22 40.5	-0.2
	baz=170						
G60A	Masonville	62.93	358	P	P	14 22 41.4	+0.6
	baz=177						
G59A	Clarenceville	62.95	357	P	P	14 22 40.9	0.0
	baz=176						
G65A	Princeton	62.99	1	P	P	14 22 41.4	+0.2
	baz=182						
G65A	Princeton	62.99	1	P	P	14 22 40.9	-0.3
G62A	West of Eustis	63.00	359	P	P	14 22 41.6	+0.4
	baz=179						
G64A	Maxfield	63.03	0	P	P	14 22 41.7	+0.3
	baz=181						
PKME	Peaks-Kenny Pk	63.04	0	P	P	14 22 41.7	+0.2
	baz=180						
G58A	Ormstown	63.06	356	P	P	14 22 41.5	-0.2
	baz=175						
G57A	Newington	63.08	356	P	P	14 22 41.5	-0.3
	baz=174						
G61A	St-Isidore-de-	63.09	358	P	P	14 22 42.0	+0.1
	baz=178						
ANMO	Albuquerque	63.41	326	⇓eP	P	14 22 45.6	+1.1
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.3s						
VNA3	Neumayer Olymp	63.45	162	P	P	14 22 45.3	+1.3
F64A	Sherman	63.64	1	P	P	14 22 45.4	-0.1
	baz=181						
VNA1	Neumayer--Stat	63.65	161	P	P	14 22 47.0	+1.7
JFWS	Jewell Farm	63.66	343	P	P	14 22 45.3	-0.4

	baz=158,SNR=7.2						
G54A	**Lake Saint Pet**	**63.66**	**353**	P	**P**	**14 22 45.0**	**-0.7**
	baz=171						
F59A	**Saint Guilaume**	**63.70**	**357**	P	**P**	**14 22 45.6**	**-0.3**
	baz=176						
LMN	**Caledonia Moun**	**63.76**	**4**	P	**P**	**14 22 46.0**	**-0.3**
LMN				IAmb	IAmb	14 24 08.7	
	comp=Z,53nm,1.2s						
F61A	**St Evariste**	**63.76**	**359**	P	**P**	**14 22 46.1**	**-0.2**
	baz=178						
F60A	**Warwick**	**63.78**	**358**	P	**P**	**14 22 46.0**	**-0.4**
	baz=177						
VNA2	**Neumayer--Watz**	**64.01**	**161**	P	**P**	**14 22 48.8**	**+1.1**
	baz=289,slow=7.4						
E60A	**Ste Agathe de**	**64.17**	**358**	P	**P**	**14 22 49.0**	**+0.1**
	baz=178						
E63A	**Oxbow**	**64.20**	**1**	P	**P**	**14 22 49.5**	**+0.4**
	baz=181						
E64A	**Bridgewater**	**64.21**	**1**	P	**P**	**14 22 48.8**	**-0.4**
	baz=182						
ALGO	**Algonquin Park**	**64.21**	**353**	P	**P**	**14 22 48.6**	**-0.6**
	baz=171						
E61A	**Lac Etchemin**	**64.21**	**359**	P	**P**	**14 22 49.5**	**+0.2**
	baz=179						
E58A	**La Victoria**	**64.24**	**357**	P	**P**	**14 22 48.9**	**-0.5**
	baz=176,SNR=7.5						
E57A	**Chemin Saint G**	**64.33**	**356**	P	**P**	**14 22 49.7**	**-0.3**
	baz=175						
E55A	**Montcerf-Lytto**	**64.51**	**355**	P	**P**	**14 22 50.9**	**-0.3**
	baz=173						
E56A	**St. Veronique**	**64.52**	**356**	P	**P**	**14 22 50.9**	**-0.3**
	baz=174,SNR=5.2						
D60A	**Saint Jean D'O**	**64.70**	**359**	P	**P**	**14 22 52.2**	**-0.1**
	baz=178						
D59A	**Saint-Raymond**	**64.82**	**358**	P	**P**	**14 22 53.2**	**+0.1**
	baz=177						
D63A	**Stockholm**	**64.82**	**1**	P	**P**	**14 22 53.2**	**+0.1**
	baz=181						
D62A	**Allapoint, All**	**64.86**	**0**	P	**P**	**14 22 53.2**	**-0.2**
	baz=180,SNR=7.6						
D62A	**Allapoint, All**	**64.86**	**0**	P	**P**	**14 22 53.5**	**+0.1**
D62A				IAmb	IAmb	14 22 54.3	
	comp=Z,35nm,0.8s						
D58A	**Chemin du LacG**	**64.94**	**357**	P	**P**	**14 22 54.0**	**0.0**
	baz=176,SNR=12						
D61A	**St Aubert, Com**	**64.98**	**359**	P	**P**	**14 22 54.5**	**+0.3**
	baz=179						
BATG	**Bathurst New B**	**65.12**	**2**	P	**P**	**14 22 55.2**	**+0.1**
BATG				IAmb	IAmb	14 22 55.9	
	comp=Z,31nm,0.8s						
LATQ	**La Tuque**	**65.23**	**357**	P	**P**	**14 22 55.9**	**+0.1**
	baz=176						
SNAA	**Sanae**	**65.65**	**161**	P	**P**	**14 22 59.4**	**+1.1**
SNAA	**Sanae**	**65.65**	**161**	⇓*e*P	**P**	**14 22 59.0**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,12nm,1.1s						
SNAA	**Sanae**	**65.65**	**161**	P	**P**	**14 22 59.5**	**+1.2**
E43A	**Lone Tree Farm**	**66.10**	**347**	IAmb	IAmb	14 23 01.7	
	comp=Z,36nm,0.7s						
VLDQ	**Val d'Or**	**66.28**	**354**	IAmb	IAmb	14 23 03.4	
	comp=Z,17nm,0.7s						
ECSD	**EROS Data Cent**	**66.38**	**339**	P	**P**	**14 23 03.8**	**+0.5**
	baz=152						
ECSD	**EROS Data Cent**	**66.38**	**339**	P	**P**	**14 23 03.6**	**+0.3**
ECSD				IAmb	IAmb	14 23 37.4	
	comp=Z,47nm,1.6s						
SPMN	**Marine on St.**	**66.51**	**342**	P	**P**	**14 23 04.6**	**+0.6**
	baz=156						
LSQQ	**Lebel-sur-Quev**	**67.17**	**355**	P	**P**	**14 23 07.9**	**-0.3**
	baz=172						
F36A	**Milaca**	**67.30**	**342**	P	**P**	**14 23 08.6**	**-0.4**
F36A				IAmb	IAmb	14 23 41.9	
	comp=Z,19nm,0.8s						
IRM	**Iron Mountain**	**67.79**	**320**	P	**P**	**14 23 13.6**	**+1.1**
	baz=133						
LIC	**Lamto**	**67.91**	**75**	*e*P	**P**	**14 23 12.9**	**-0.7**
	comp=Z,22nm,0.4s						
MATQ	**Matagami**	**67.93**	**354**	P	**P**	**14 23 12.2**	**-0.7**
	baz=172,SNR=9.4						
TIC	**Toumodi**	**68.08**	**75**	*e*P	**P**	**14 23 14.0**	**-0.6**
KIC	**Kosan Boka**	**68.22**	**75**	*e*P	**P**	**14 23 15.1**	**-0.5**
	comp=Z,67nm,0.4s						
DBIC	**Dimbokro**	**68.23**	**75**	P	**P**	**14 23 15.4**	**-0.2**
	comp=Z,77nm,0.8s,baz=220,slow=6.2,SNR=79						
DBIC				pP	**pP**	**14 23 46.9**	**+0.1**
	comp=Z,15nm,0.7s,baz=204,slow=3.6,SNR=1.9						
DBIC	**Dimbokro**	**68.23**	**75**	P	**P**	**14 23 15.4**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,89nm,0.8s						
DBIC	**Dimbokro**	**68.23**	**75**	P	**P**	**14 23 15.4**	**-0.2**
TPFO	**Pinon Flats**	**68.24**	**319**	P	**P**	**14 23 15.0**	**-0.4**
	baz=131						
PFO	**Pinyon Flats O**	**68.24**	**319**	⇓*e*P	**P**	**14 23 15.4**	**0.0**
PFO				pmax	pmax		
	comp=Z,29nm,3.5s						
PFO	**Pinyon Flats O**	**68.24**	**319**	P	**P**	**14 23 15.1**	**-0.3**
	baz=131						
EDW2	**Edwards Air Fo**	**70.03**	**319**	P	**P**	**14 23 27.2**	**+0.8**
	baz=131						
NVL	**N'lazarevskaya**	**70.18**	**160**	*e*P	**P**	**14 23 27.5**	**+0.9**
NVL				*e**PP	**pP**	**14 23 59.6**	**+1.8**
NVL				*e*S	S	14 32 20.2	-7.8
NVL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AGMN	**Agassiz Nation**	**70.19**	**342**	P	**P**	**14 23 28.1**	**+1.2**
	baz=153						
MPMC	**Manual Prospec**	**70.49**	**320**	P	**P**	**14 23 30.4**	**+1.1**
	baz=131						
R11A	**Troy Canyon, C**	**70.91**	**323**	P	**P**	**14 23 32.6**	**+0.8**
	baz=133						
BW06	**Boulder Array**	**70.94**	**330**	P	**P**	**14 23 32.9**	**+0.9**
	baz=140						
PDAR	**Pinedale Array**	**70.94**	**330**	P	**P**	**14 23 33.3**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=121,slow=7.5,SNR=10.0						
PDAR				pP	**pP**	**14 24 03.7**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=112,slow=7.7,SNR=6.4						
ULM	**Lac du Bonnet**	**71.94**	**342**	P	**P**	**14 23 37.5**	**0.0**
	comp=Z,11nm,0.5s,baz=155,slow=6.1,SNR=26						
ULM				pP	**pP**	**14 24 09.4**	**+0.6**
	comp=Z,15nm,0.7s,baz=155,slow=4.9,SNR=7.6						
ULM	**Lac du Bonnet**	**71.94**	**342**	P	**P**	**14 23 36.9**	**-0.5**
ULM				pmax	pmax		
	comp=Z,17nm,0.9s						
ULM	**Lac du Bonnet**	**71.94**	**342**	P	**P**	**14 23 36.9**	**-0.5**
QSPA	**South Pole Qui**	**72.10**	**180**	P	**P**	**14 23 39.5**	**+1.1**
	comp=Z,7.5nm,0.7s,baz=175,slow=3.1,SNR=73						
QSPA				pP	**pP**	**14 24 11.2**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=236,slow=1.5,SNR=4.5						
QSPA	**South Pole Qui**	**72.10**	**180**	P	**P**	**14 23 39.8**	**+1.3**
KOWA	**Kowa**	**72.10**	**68**	P	**P**	**14 23 39.0**	**-0.1**
KOWA				IAmb	IAmb	14 23 40.9	
	comp=Z,40nm,0.9s						
NVAR	**Mina Array Bea**	**72.54**	**322**	P	**P**	**14 23 42.7**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=135,slow=7.5,SNR=6.1						
NVAR				pP	**pP**	**14 24 14.7**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=141,slow=6.0,SNR=5.0						
HLID	**Hailey**	**73.92**	**328**	P	**P**	**14 23 50.6**	**+1.1**
	baz=136						
BOZ	**Bozeman (W)**	**74.05**	**331**	P	**P**	**14 23 51.3**	**+1.1**
	baz=138						
EGMT	**Eagleton**	**75.05**	**333**	P	**P**	**14 23 57.0**	**+1.1**
	baz=140						
O03E	**Paynes Creek**	**75.81**	**321**	P	**P**	**14 24 00.4**	**0.0**
	baz=129						
MSO	**Missoula**	**76.05**	**330**	P	**P**	**14 24 02.2**	**+0.7**
	baz=137						
O02D	**Mt. Diablo Mer**	**76.33**	**321**	P	**P**	**14 24 04.1**	**+0.8**
	baz=128						
TORD	**Torodi Ar. Bea**	**76.66**	**71**	P	**P**	**14 24 05.0**	**-0.5**
	comp=Z,54nm,0.8s,baz=252,slow=5.4,SNR=149						
TORD				pP	**pP**	**14 24 38.6**	**+1.2**
	comp=Z,8.6nm,0.7s,baz=252,slow=5.2,SNR=2.1						
TORD				LR	LR	14 57 35.8	
	comp=Z,76nm,18.6s,baz=345,slow=35						
M04C	**Macdoel**	**76.77**	**322**	P	**P**	**14 24 06.6**	**+0.8**
	baz=129						
N02D	**Trinity Center**	**76.78**	**321**	P	**P**	**14 24 06.4**	**+0.6**
	baz=128						
J05D	**Fort Rock, OR**	**77.39**	**324**	P	**P**	**14 24 10.6**	**+1.3**
	baz=130						
I05D	**Terrebonne, OR**	**78.12**	**325**	P	**P**	**14 24 14.7**	**+1.5**
	baz=130						
MORF	**Marmelete**	**79.36**	**45**	*e*P	**P**	**14 24 21.1**	**+1.0**
MORF	**Marmelete**	**79.36**	**45**	*e*P	**P**	**14 24 21.6**	**+1.5**
	comp=Z,50nm,2.2s						
PTEO	**Sao Teotonio**	**79.44**	**45**	*e*P	**P**	**14 24 21.9**	**+1.5**
	comp=Z,72nm,1.3s						
PNCL	**Nicolau / Gran**	**79.87**	**44**	*e*P	**P**	**14 24 23.9**	**+1.1**
MESJ	**Messejana**	**79.93**	**45**	*e*P	**P**	**14 24 24.1**	**+1.0**
MESJ	**Messejana**	**79.93**	**45**	*e*P	**P**	**14 24 24.6**	**+1.5**
PCVE	**Castro Verde**	**79.94**	**45**	*e*P	**P**	**14 24 24.2**	**+1.0**
PVAQ	**Vaqueiros**	**80.04**	**45**	*e*P	**P**	**14 24 23.6**	**-0.1**
VNDA	**Vanda**	**80.13**	**190**	P	**P**	**14 24 24.9**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=128,slow=4.3,SNR=11						
VNDA				pP	**pP**	**14 24 57.4**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=158,slow=3.6,SNR=3.0						
PMTG	**Montargil**	**80.58**	**44**	*e*P	**P**	**14 24 27.5**	**+0.9**
SUR	**Sutherland**	**80.70**	**121**	P	**P**	**14 24 28.1**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=232,slow=7.0,SNR=6.5						
SUR	**Sutherland**	**80.70**	**121**	P	**P**	**14 24 28.4**	**+0.6**
SUR				IAmb	IAmb	14 27 08.4	
	comp=Z,48nm,1.6s						
D04E	**Lakebay**	**80.71**	**326**	P	**P**	**14 24 27.6**	**+0.6**
	baz=129						
PBAR	**Barrancos**	**80.90**	**45**	*e*P	**P**	**14 24 29.8**	**+1.5**
PCAS	**Casmilo, Conde**	**80.93**	**43**	*e*P	**P**	**14 24 30.1**	**+1.7**
TSUM	**Tsumeb**	**81.47**	**107**	P	**P**	**14 24 32.4**	**+0.4**
	comp=Z,8.5nm,0.8s,baz=251,slow=5.6,SNR=7.7						
TSUM	**Tsumeb**	**81.47**	**107**	P	**P**	**14 24 32.4**	**+0.4**
PCBR	**Castelo Branco**	**81.48**	**43**	*e*P	**P**	**14 24 31.9**	**+0.6**
	comp=Z,10nm,1.5s						
MTE	**Manteigas**	**81.74**	**43**	*e*P	**P**	**14 24 33.8**	**+1.1**
	comp=Z,29nm,1.0s						
PVRL	**Vila Real**	**82.09**	**42**	*e*P	**P**	**14 24 35.3**	**+0.7**
POLO	**Lamas de Olo**	**82.09**	**42**	*e*P	**P**	**14 24 35.1**	**+0.5**
	comp=Z,18nm,1.8s						
MVO	**Moncorvo**	**82.47**	**42**	*e*P	**P**	**14 24 37.2**	**+0.6**
	comp=Z,32nm,1.4s						
PAB	**San Pablo**	**83.41**	**45**	P	**P**	**14 24 41.9**	**+0.5**
PAB				pmax	pmax		
	comp=Z,19nm,0.9s						
PAB	**San Pablo**	**83.41**	**45**	P	**P**	**14 24 41.9**	**+0.5**
PAB				IAmb	IAmb	14 24 43.4	
	comp=Z,19nm,0.8s						
ESDC	**Sonseca Array**	**83.73**	**45**	P	**P**	**14 24 43.9**	**+0.9**
	comp=Z,12nm,0.9s,baz=255,slow=5.3,SNR=38						
ESDC				pP	**pP**	**14 25 17.7**	**+2.5**
	comp=Z,2.9nm,0.8s,baz=248,slow=6.0,SNR=3.0						
ESDC				LR	LR	15 01 12.3	
	comp=Z,39nm,18.4s,baz=110,slow=35						
BOSA	**Boshof**	**85.45**	**118**	P	**P**	**14 24 52.5**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=272,slow=3.1,SNR=8.5						
LBTB	**Lobatse**	**86.86**	**115**	P	**P**	**14 24 59.6**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=255,slow=5.7,SNR=5.5						
YKA	**Yellowknife Ar**	**87.83**	**341**	P	**P**	**14 25 03.4**	**+0.8**
	comp=Z,4.3nm,0.7s,baz=129,slow=4.9,SNR=5.2						
YKA				pP	**pP**	**14 25 36.1**	**+1.0**
	comp=Z,6.4nm,0.7s,baz=130,slow=5.4,SNR=8.0						
ICESG	**Greenland Ices**	**89.50**	**10**	*i* P	**P**	**14 25 11.4**	**+0.6**
ICESG				*i*		14 25 46.0	
MATP	**Matopo**	**90.88**	**112**	P	**P**	**14 25 19.0**	**+0.8**
	comp=Z,5.1nm,0.6s,baz=238,slow=4.2,SNR=15						
KEST	**Kesra**	**91.61**	**53**	P	**P**	**14 25 21.1**	**0.0**
	comp=Z,6.4nm,0.6s,baz=273,slow=4.6,SNR=2.7						
SUMG	**Summit**	**92.77**	**9**	*i* P	**P**	**14 25 26.6**	**+0.6**
SUMG				*i*		14 26 00.6	
SUMG	**Summit**	**92.77**	**9**	*i* P	**P**	**14 25 26.6**	**+0.6**
SUMG				*i*		14 26 00.6	
SUMG	**Summit**	**92.77**	**9**	*i* P	**P**	**14 25 26.7**	**+0.6**
SUMG				*i*		14 26 00.6	
GERES	**GERESS Array B**	**98.97**	**42**	P	**P**	**14 25 54.0**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=245,slow=2.8,SNR=8.7						
HDA	**Harding Lake**	**100.89**	**334**	P	**Pdif**	**14 26 03.1**	**+0.7**
	baz=109						
ILAR	**Eielson Array**	**100.98**	**335**	PP	**PP**	**14 30 13.6**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=102,slow=6.5,SNR=4.9						
RC01	**Rabbit Creek A**	**101.08**	**331**	P	**Pdif**	**14 26 03.8**	**+0.6**
	baz=107						
VYHS	**Vyhne**	**102.16**	**43**	*e*P	**Pdif**	**14 26 08.9**	**+0.5**
VYHS	**Vyhne**	**102.16**	**43**	*e*PDIFF	**Pdif**	**14 26 08.9**	**+0.5**
BRTR	**Keskin Array B**	**111.20**	**54**	PP	**PP**	**14 31 24.6**	**-4.1**
	comp=Z,0.6nm,0.7s,baz=230,slow=8.8,SNR=2.4						
OBN	**Obninsk**	**113.74**	**37**	*i* PKIKP	**PKiKP**	**14 30 51.7**	**+0.3**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**118.29**	**50**	PKP	**PKiKP**	**14 31 00.9**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=131,slow=8.8,SNR=4.1						
KBZ				pPKP	**pPKPdf**	**14 31 36.2**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=66,slow=0.2,SNR=3.8						
BILL	**Bilibino**	**119.19**	**339**	*e*PKIKP	**PKiKP**	**14 31 02.4**	**+0.8**
BILL				*e*		14 32 23.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BELG	**Belogornoye**	**120.56**	**39**	⇓*i*PKIKP	**PKiKP**	**14 31 04.8**	**+0.1**
STKA	**Stephens Creek**	**122.12**	**211**	PKP	**PKiKP**	**14 31 08.9**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=120,slow=8.3,SNR=3.8						
ARU	**Arti**	**125.55**	**33**	*i* PKIKP	**PKiKP**	**14 31 15.1**	**+0.6**
ARU						14 38 16.1	
ARU	**Arti**	**125.55**	**33**	PKPdf	**PKiKP**	**14 31 15.2**	**+0.6**
SEY	**Seymchan**	**126.79**	**338**	⇓*i*PKIKP	**PKiKP**	**14 31 18.0**	**+1.2**
H11N3	**WAKE ISLAND Hy**	**126.92**	**281**	T	T	16 51 04.7	
	baz=100,slow=74,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**126.93**	**280**	T	T	16 51 02.4	
	baz=100,slow=75,SNR=27						
H11N2	**WAKE ISLAND Hy**	**126.94**	**281**	T	T	16 51 10.2	
	baz=100,slow=74,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**126.94**	**281**	T	T	16 51 05.8	
	baz=100,slow=74,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**126.94**	**280**	T	T	16 50 57.3	
	baz=100,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hy**	**126.95**	**280**	T	T	16 51 04.6	
	baz=100,slow=75,SNR=15						
PET	**Petropavlovsk**	**129.05**	**325**	⇑*i*PKIKP	**PKiKP**	**14 31 22.1**	**+0.5**
PETK	**Petropavlovsk-**	**129.54**	**325**	pPKP	pPKPdf	14 31 56.9	+1.1
	comp=Z,5.1nm,1.0s,baz=105,slow=3.5,SNR=2.9						
ASAR	**Alice Springs**	**132.69**	**210**	PKhKP	PKPpre	14 31 20.9	
	comp=Z,0.4nm,1.0s,baz=122,slow=1.9,SNR=4.1						
ASAR				PKP	**PKPdf**	**14 31 28.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=136,slow=1.5,SNR=16						
ASAR				pPKP	pPKPdf	14 32 03.5	+0.6
	comp=Z,2.2nm,1.0s,baz=145,slow=2.6,SNR=5.4						
ASAR				SKPbc	**SKPbc**	**14 34 44.5**	**-0.7**
	comp=Z,3.9nm,1.2s,baz=154,slow=3.3,SNR=6.4						
BRVK	**Borovoye**	**133.12**	**32**	PKIKP	**PKiKP**	**14 31 30.2**	**+0.4**
BRVK	**Borovoye**	**133.12**	**32**	PKPdf	**PKiKP**	**14 31 30.2**	**+0.4**
YAK	**Yakutsk**	**134.10**	**348**	⇓*i*PKIKP	**PKiKP**	**14 31 32.5**	**+1.0**
WRA	**Warramunga Arr**	**135.62**	**213**	PKhKP	PKPpre	14 31 20.3	
	comp=Z,0.3nm,0.6s,baz=168,slow=1.1,SNR=1.6						
WRA				PKP	**PKPdf**	**14 31 34.7**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=160,slow=1.7,SNR=9.5						
WRA				pPKP	pPKPdf	14 32 09.6	+1.2
	comp=Z,1.2nm,0.8s,baz=148,slow=1.8,SNR=3.6						
WRA				SKPbc	**SKPbc**	**14 34 54.6**	**-0.3**
	comp=Z,4.1nm,1.0s,baz=141,slow=2.7,SNR=11						
BRZS	**Berezniki**	**136.04**	**35**	*e*PKP	**PKiKP**	**14 31 35.2**	**-0.7**
	baz=35						
BRZS				*e*PP	**PP**	**14 34 16.1**	**+1.3**
	baz=35						
BRZS	**Berezniki**	**136.04**	**35**	*e*PKIKP	**PKiKP**	**14 31 35.2**	**-0.7**
BRZS				*e*		14 34 16.0	
IUG	**Iuzhnay**	**138.02**	**46**	*e*PKP	**PKPdf**	**14 31 39.0**	**+0.7**
	baz=46						
IUG				*i* PP	**PP**	**14 34 28.7**	**+1.1**
	baz=46						
IUG	**Iuzhnay**	**138.02**	**46**	*e*PKIKP	**PKPdf**	**14 31 38.9**	**+0.7**
DZA	**Taraz**	**138.61**	**45**	*e*PKP	**PKPdf**	**14 31 39.5**	**+0.2**
	baz=45						
DZA	**Taraz**	**138.61**	**45**	*e*PKIKP	**PKPdf**	**14 31 39.4**	**+0.2**
KURK	**Kurchatov**	**138.67**	**31**	⇑*e*PKIKP	**PKPdf**	**14 31 40.0**	**+1.0**
ZALV	**Zalesovo Beam**	**139.03**	**23**	PKhKP	PKPpre	14 31 34.5	
	comp=Z,0.9nm,0.5s,baz=265,slow=2.0,SNR=2.6						
ZALV				PKP	**PKPdf**	**14 31 40.1**	**+0.6**
	comp=Z,6.8nm,0.6s,baz=292,slow=2.1,SNR=28						
ZALV				pPKP	pPKPdf	14 32 14.9	+1.4
	comp=Z,9.2nm,0.7s,baz=293,slow=2.7,SNR=8.1						
ZALV				SKPbc	**SKPbc**	**14 35 04.1**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=302,slow=2.5,SNR=7.1						
BTLS	**Baital**	**139.39**	**40**	*e*PKP	**PKPdf**	**14 31 41.1**	**+0.5**
	baz=40						
BTLS	**Baital**	**139.39**	**40**	*e*PKIKP	**PKPdf**	**14 31 41.0**	**+0.5**
SEM	**Semipalatinsk**	**139.66**	**30**	*e*PKP	**PKPdf**	**14 31 41.6**	**+0.4**
	baz=30						
SEM	**Semipalatinsk**	**139.66**	**30**	*e*PKIKP	**PKPdf**	**14 31 41.5**	**+0.4**
AAK	**Ala-Archa**	**140.82**	**44**	⇓*e*PKIKP	**PKPdf**	**14 31 44.3**	**+0.9**
KUU	**Kurty**	**141.38**	**41**	*e*PKP	**PKPdf**	**14 31 44.8**	**+0.6**
	baz=40						
KUU	**Kurty**	**141.38**	**41**	*e*PKIKP	**PKPdf**	**14 31 44.8**	**+0.6**
CHKK	**Chushkaly**	**141.81**	**40**	*i* PKP	**PKPdf**	**14 31 45.1**	**+0.1**
	baz=40						
MTBS	**Maitube**	**141.83**	**42**	*i* PKP	**PKPdf**	**14 31 45.1**	**0.0**
	baz=42						
MDOK	**Medeo**	**142.20**	**41**	*e*PKP	**PKPdf**	**14 31 45.8**	**-0.1**
	baz=41						
MDOK	**Medeo**	**142.20**	**41**	*e*PKIKP	**PKPdf**	**14 31 45.7**	**-0.1**
MAKZ	**Makanchi**	**142.90**	**33**	PKHKP	**PKPdf**	**14 31 43.2**	**-3.6**
MAKZ	**Makanchi**	**142.90**	**33**	PKPdf	**PKPdf**	**14 31 43.2**	**-3.6**
KPKS	**Kokpek**	**143.05**	**40**	*e*PKP	**PKPdf**	**14 31 47.9**	**+0.6**
	baz=40						
KPKS				*i* PP	**PP**	**14 34 59.3**	**+1.3**
	baz=40						
KPKS	**Kokpek**	**143.05**	**40**	*e*PKIKP	**PKPdf**	**14 31 47.9**	**+0.6**
MK31	**Makanchi Array**	**143.07**	**33**	⇑*i*PKIKP	**PKPdf**	**14 31 48.0**	**+0.9**
MK31	**Makanchi Array**	**143.07**	**33**	PKPdf	PKPbc	14 31 43.7	-0.6
MKAR	**Makanchi Array**	**143.07**	**33**	PKhKP	**PKPdf**	**14 31 43.8**	**-3.4**
	comp=Z,1.4nm,0.6s,baz=316,slow=3.1,SNR=12						
MKAR				pPKP	**pPKPdf**	**14 32 20.7**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=345,slow=1.4,SNR=4.4						
KSH	**Kashi**	**143.21**	**47**	PKP	PKPbc	14 31 45.6	+0.6
DGZ	**Jazzator, Alta**	**143.35**	**25**	⇓*i*PKIKP	**PKPdf**	**14 31 48.4**	**+0.7**
SHLS	**Shalkode**	**143.70**	**40**	*e*PKP	**PKPdf**	**14 31 48.9**	**+0.4**
	baz=39						
SHLS	**Shalkode**	**143.70**	**40**	*e*PKIKP	**PKPdf**	**14 31 48.8**	**+0.4**
ZSN	**Zaisan**	**143.90**	**30**	*i* PKP	**PKPdf**	**14 31 48.6**	**+0.1**
	baz=30						
KLR	**Kul'dur**	**144.54**	**336**	⇑*e*PKIKP	**PKiKP**	**14 31 51.5**	**-1.8**
IRK	**Irkutsk**	**145.54**	**7**	*e*PKP2	**PKPab**	**14 31 51.7**	**-0.2**
IRK				pmax	pmax		
	comp=Z,42nm,1.8s						
MOY	**Mondy**	**145.63**	**11**	*e*PKP2	**PKPab**	**14 31 53.0**	**+0.6**
MOY				pmax	pmax		
	comp=Z,30nm,1.5s						
TLY	**Talaya**	**146.02**	**8**	*e*PKP2	**PKPab**	**14 31 54.7**	**+0.9**
TLY				pmax	pmax		
	comp=Z,32nm,0.8s						
ZAK	**Zakamensk**	**147.24**	**9**	*e*PKIKP	**PKPdf**	**14 31 54.8**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	**Urumqi**	**147.88**	**32**	*e*PKPbc	**PKPdf**	**14 31 54.4**	**-1.1**
WMQ				LR	LR		
	comp=Z,610nm,29.2s						
WMQ				LR	LR		
	comp=Z,580nm,29.2s						
WMQ				LR	LR		
	comp=Z,120nm,21.9s						
USRK	**Ussuriysk Ar.**	**148.37**	**330**	PKPbc	**PKiKP**	**14 32 00.8**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=53,slow=3.6,SNR=9.1						
USRK				pPKPbc	**pPKPab**	**14 32 34.2**	**-2.1**
	comp=Z,15nm,0.8s,baz=31,slow=1.4,SNR=15						
HYB	**Hyderabad**	**149.47**	**86**	*i* PKP	**PKPbc**	**14 32 03.5**	**+0.1**
MJAR	**Matsushiro Arr**	**149.52**	**313**	PKPbc	**PKPbc**	**14 32 03.4**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=96,slow=1.2,SNR=7.1						
MJAR				pPKPbc	**pPKPab**	**14 32 37.3**	**-3.7**
	comp=Z,8.9nm,1.0s,baz=213,slow=0.8,SNR=7.7						
SONM	**Songino Array**	**150.12**	**6**	PKPbc	**PKiKP**	**14 32 05.0**	**0.0**
	comp=Z,12nm,0.7s,baz=198,slow=4.2,SNR=4.2						
SONM				pPKPbc	**pPKPab**	**14 32 39.4**	**-4.0**
	comp=Z,12nm,0.7s,baz=323,slow=1.5,SNR=11						
ULN	**Ulaanbaatar**	**150.15**	**5**	⇓*e*PKIKP	**PKPdf**	**14 32 01.6**	**+2.5**
KSRS	**Korea Array**	**155.44**	**325**	pPKPbc	pPKPbc	14 32 51.2	+1.2
	comp=Z,2.5nm,0.8s,baz=28,slow=1.8,SNR=5.1						
HHC	**Hu-ho-hao-te**	**157.29**	**358**	*e*PKP	**PKPdf**	**14 32 09.6**	**+0.2**
LZH	**Lanzhou**	**161.09**	**17**	*e*PKP	**PKPdf**	**14 32 15.4**	**+1.3**
LZH				pPKP	pPKPdf	14 32 43.0	-5.4
NJ2	**Nanjing**	**164.22**	**333**	*e*PKP	**PKPdf**	**14 32 16.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**168.90**	**86**	PKPab	**PKPab**	**14 33 32.2**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=274,slow=6.2,SNR=17						
KMI	**Kunming**	**169.86**	**45**	*e*PKP	**PKPdf**	**14 32 21.0**	**-0.7**
KMI				LR	LR		
	comp=Z,320nm,17.6s						
KMI				LR	LR		
	comp=Z,300nm,16.1s						
KMI				LR	LR		
	comp=Z,290nm,18.7s						
QIZ	**Qiongzhong**	**178.80**	**38**	PKP	**PKPdf**	**14 32 22.3**	**-2.2**
QIZ				PP	**PP**	**14 38 08.3**	**-0.8**
QIZ				SS	SS	14 59 40.3	-0.1
QIZ				LR	LR		
	comp=Z,260nm,19.2s						
QIZ				LR	LR		
	comp=Z,340nm,16.1s						
QIZ				LR	LR		
	comp=Z,330nm,20.1s						

*DNK **23** 14:17:36.0±3.2, 58°.37N×6°.21E, h18^{km}±20^{km}, ML1.9*
*BER **23** 14:17:37.6±1.3, 58°.28N×6°.36E, h0^{km}, ML1.8, Explosion*
UPP 23 14:17:36.5±2.8**, 58°.52N×6°.50E, h0**^{km}**, ML1.5, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	**Snartemo**	**0.42**	**116**	*e*P	Pg	14 17 45.5	+1.0
SNART				IAML		14 17 55.6	
	comp=Z,111nm,0.8s						
SNART	**Snartemo**	**0.42**	**116**	*e*	Pg	14 17 45.1	+0.6
	baz=276,slow=16						
SNART				*i* P	Pb	14 17 45.5	-1.2
SNART				*i* S	Sg	14 17 51.5	+1.7
SNART				IAML		14 17 55.9	
	comp=Z,22nm,0.4s						
BLS5	**Blasjo**	**0.90**	**359**	*e*P	Pn	14 17 57.8	+1.3
KMY	**Karmoy**	**0.95**	**317**	*e*P	Pn	14 17 57.1	+0.1
KMY				IAML		14 18 15.5	
	comp=Z,25nm,0.3s						
HOMB	**Homborsund**	**1.09**	**103**	*e*P	Pb	14 17 58.2	+0.1
HOMB				IAML		14 18 16.1	
	comp=Z,22nm,0.5s						
HOMB	**Homborsund**	**1.09**	**103**	*e*	Pg	14 17 55.0	-2.3
	baz=258,slow=16						
HOMB				*i* P	Pb	14 17 57.5	-0.6
HOMB				*i* S	Sn	14 18 15.1	+0.5
HOMB				IAML		14 18 16.7	
	comp=Z,13nm,0.3s						
ODD1	**Odda**	**1.40**	**3**	*e*P	Pb	14 18 06.5	+3.1
KONO	**Kongsberg**	**1.96**	**53**	*e*P	Pb	14 18 13.2	+0.2
SKAR	**Skarslia**	**2.35**	**22**	*e*P	Pb	14 18 20.3	+0.5
STRU	**Stroemstad**	**2.49**	**76**	P	Pn	14 18 18.0	-0.2
STRU				S	Sn	14 18 49.2	-0.1
HYA	**Hoyanger**	**2.66**	**357**	*e*P	Pb	14 18 23.2	-1.7
TJOU	**Tjoern**	**2.75**	**98**	P	Pn	14 18 21.8	0.0
VANU	**Vaenersborg**	**2.92**	**88**	P	Pn	14 18 24.5	+0.4
VANU	**Vaenersborg**	**2.92**	**88**	P	Pn	14 18 24.5	+0.4
VANU	**Vaenersborg**	**2.92**	**88**	P	Pn	14 18 24.5	+0.4
ONAU	**Onsala**	**3.10**	**109**	P	Pn	14 18 26.2	-0.3
FINU	**Finntorp**	**3.22**	**72**	P	Pn	14 18 28.1	-0.1
FINU	**Finntorp**	**3.22**	**72**	P	Pn	14 18 28.1	-0.1
FINU	**Finntorp**	**3.22**	**72**	P	Pn	14 18 28.1	-0.1
NBO00	**NORSAR Array S**	**3.32**	**39**	*e*P	Pn	14 18 31.8	+2.1
BORU	**Boraas**	**3.45**	**102**	P	Pn	14 18 31.5	+0.2
NC204	**NORSAR Array S**	**3.50**	**36**	*e*P	Pn	14 18 34.8	+2.6
NB201	**NORSAR Array S**	**3.51**	**42**	*e*P	Pn	14 18 33.6	+1.4
NASU	**Vaermlandsnaes**	**3.51**	**80**	P	Pn	14 18 32.9	+0.7
NASU	**Vaermlandsnaes**	**3.51**	**80**	P	Pn	14 18 32.9	+0.7
NASU	**Vaermlandsnaes**	**3.51**	**80**	P	Pn	14 18 32.9	+0.7

IDC 23 14:35:23.4±3.5**, 26°.05S×29°.38E, h0**^{km}**, mb1 3.3**/4**, mb1mx3.2**/37**, mbtmp3.3**/4**, ML2.7**/4**, Error ellipse: s-maj=31.9km s-min=22.5km az=111.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.57**	**286**	Pn	Pn	14 36 21.4	+1.3
	0.5nm,0.3s,baz=108,slow=15,SNR=7.1						
LBTB				Pg	Pb	14 36 28.9	+1.4
	2.1nm,0.3s,baz=102,slow=16,SNR=23						
LBTB				Lg	Lg	14 37 18.0	
	5.8nm,0.3s,baz=200,slow=22,SNR=9.4						
BOSA	**Boshof**	**4.47**	**234**	Pn	Pn	14 36 33.4	+0.9
	0.1nm,0.3s,baz=58,slow=15,SNR=1.1						
BOSA				Pg	Pb	14 36 45.4	+2.5
	0.8nm,0.3s,baz=56,slow=14,SNR=11						
BOSA				Sn	Sn	14 37 26.3	+0.9
	0.7nm,0.3s,baz=32,slow=15,SNR=3.7						
BOSA				Lg	Lg	14 37 42.5	
	2.1nm,0.3s,baz=336,slow=20,SNR=7.9						
I47ZA	**BOSHOF INFRASO**	**4.49**	**234**	*i*		15 01 30.0	
	baz=51,slow=296,SNR=1.1						
MATP	**Matopo**	**5.65**	**352**	Pn	Pn	14 36 47.3	-1.5
	0.7nm,0.3s,baz=170,slow=14,SNR=11						
MATP				Sn	Sn	14 37 50.0	-4.6
	0.7nm,0.3s,baz=66,slow=20,SNR=2.6						
MATP				Lg	Lg	14 38 13.6	
	1.3nm,0.3s,baz=93,slow=19,SNR=6.8						
SUR	**Sutherland**	**9.79**	**228**	Pn	Pn	14 37 45.2	-0.4
	0.1nm,0.3s,baz=45,slow=10.0,SNR=2.0						
SUR				Sn	Sn	14 39 30.0	-6.3
	0.1nm,0.3s,baz=336,slow=20,SNR=1.8						

I35NA	TSUMEB INFRASO	12.85	300	*i*		15 47 10.0	
	baz=127,slow=310,SNR=2.6						

DJA ***23*** *14:41:15.3±2.0, 2˚N±4˚×12˚7E±˚, h12^{km}±21^{km}, M3.8/8, mb4.0/1, MLv3.7/8*

IDC ***23*** *14:41:18.2±4.4, 2°.27N×126°.68E, h56^{km}±44^{km}, mb3.4/8, mb1 3.6/9, mb1mx3.4/31, mbtmp3.7/9, ML3.2/1, Error ellipse: s-maj=43.0km s-min=15.9km az=71.0*

ISC 23 14:41:17.9±0.8**, 2°.29N**±0°.08×**126°.78E**±0°.09**, h53^{km}, n13, σ0^s.87**/14**, mb3.7**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.62	159	P	Pn	14 41 43.3	-0.8
SGSI	Sangihe	1.86	318	P	Pn	14 41 47.6	+0.2
GTOI	Gorontalo	4.11	246	P	Pn	14 42 19.7	+1.5
SANI	Sanana	4.38	190	P	Pn	14 42 22.0	+0.1
SIJI	Sorong	5.48	125	P	Pn	14 42 38.8	+1.8
	0.7nm,0.3s,baz=104,slow=22,SNR=2.6						
FITZ	Fitzroy Crossi	20.29	183	P	P	14 45 49.4	0.0
	0.9nm,0.4s,baz=7.0,slow=10,SNR=1.3						
WRA	Warramunga Arr	23.31	162	P	P	14 46 20.7	-0.7
	1.6nm,0.5s,baz=338,slow=11,SNR=13						
ASAR	Alice Springs	26.72	165	P	P	14 46 52.7	+0.2
	0.3nm,0.3s,baz=347,slow=12,SNR=14						
ASAR				PcP	PcP	14 50 15.1	+0.1
	0.3nm,0.4s,baz=348,slow=2.1,SNR=7.3						
CMAR	Chiang Mai Arr	31.66	302	P	P	14 47 36.0	-0.4
	0.4nm,0.4s,baz=117,slow=6.5,SNR=6.4						
STKA	Stephens Creek	36.78	159	P	P	14 48 20.5	0.0
	1.3nm,0.6s,baz=327,slow=9.3,SNR=6.5						
USRK	Ussuriysk Ar.	41.99	6	P	P	14 49 03.6	-0.2
	1.6nm,0.7s,baz=188,slow=7.3,SNR=5.5						
SONM	Songino Array	48.67	342	P	P	14 49 57.5	+0.6
	0.4nm,0.7s,baz=159,slow=8.6,SNR=2.7						
MKAR	Makanchi Array	58.76	326	P	P	14 51 09.7	-0.9
	0.3nm,0.3s,baz=121,slow=7.5,SNR=12						

IDC ***23*** *14:59:56.8±0.7, 15°.39S×67°.06E, h0^{km}, mb4.0/13, mb1 4.1/13, mb1mx3.8/51, mbtmp4.0/13, MS4.1/12, Ms1 4.1/12, ms1mx3.7/40, Error ellipse: s-maj=25.3km s-min=19.5km az=44.0*

NEIC ***23*** *14:59:58.2±1.4, 15°.34S±0°.06×67°.0E±0°.2, h10^{km}±1^{km}, mb4.7/13, Error ellipse: s-maj=28.6km s-min=9.4km az=261.0*

GCMT ***23*** *15:00:01.2±0.3, 15°.19S±0°.02×67°.03E±0°.02, h13^{km}±1^{km}, MW4.9/86, Moment Tensor Solution. s29,c32; s86,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.80±.17; $M_{\theta\theta}$0.93±.11; $M_{\phi\phi}$1.87±.12; $M_{r\theta}$1.01±.29; $M_{\theta\phi}$-0.80±.08; $M_{\phi r}$1.47±.30; Best double couple: $M_0$3.01000×10^{16} NP1:ϕ_s316.00000°, δ38.00000°, λ-123.00000°. NP2: ϕ_s176.00000°, δ59.00000°, λ-67.00000°. Principal axes: T 2.4760, Plg11.0000°, Azm249.0000°; N 1.0690, Plg20.0000°, Azm343.0000°; P -3.5440, Plg67.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 14:59:58.5±0.7**, 15°.4S**±0°.1×**67°.0E**±0°.2**, h10^{km}, n48, σ0^s.74**/30**, mb4.4**/19**, MS4.0**/11**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	9.33	35	T	T	15 11 38.1	
	baz=214,slow=75,SNR=351						
H08S2	Diego Garcia H	9.34	35	T	T	15 11 38.9	
	baz=214,slow=75,SNR=514						
H08S3	Diego Garcia H	9.35	35	T	T	15 11 39.6	
	baz=214,slow=75,SNR=643						
OPO	Ambohidratompo	19.26	258	LR	LR	15 10 10.6	
	comp=Z,267nm,19.5s,baz=260,slow=32						
PALK	Pallekele	26.25	32	LR	LR	15 14 09.6	
	comp=Z,266nm,18.1s,baz=311,slow=32						
KMBO	Kilima Mbogo	32.62	293	LR	LR	15 17 40.3	
	comp=Z,201nm,19.7s,baz=98,slow=33						
ATD	Arta Tunnel	35.89	317	LR	LR	15 19 43.7	
	comp=Z,190nm,20.4s,baz=96,slow=33						
WSAR	Wadi Sarin	39.23	348	LR	LR	15 20 38.9	
	comp=Z,130nm,18.1s,baz=168,slow=32						
LBTB	Lobatse	39.93	249	LR	LR	15 21 59.4	
	comp=Z,681nm,19.4s,baz=107,slow=33						
LEM	Lembang	40.65	83	LR	LR	15 21 50.1	
	comp=Z,204nm,18.6s,baz=227,slow=32						
CMAR	Chiang Mai Arr	46.01	44	P	P	15 08 22.9	+0.5
	0.3nm,0.4s,baz=239,slow=6.2,SNR=2.5						
H01W3	Cape Leeuwin H	46.38	124	T	T	15 57 52.0	
	baz=282,slow=75,SNR=24						
H01W2	Cape Leeuwin H	46.38	124	T	T	15 57 54.7	
	baz=282,slow=75,SNR=21						
H01W1	Cape Leeuwin H	46.40	124	T	T	15 57 53.8	
	baz=282,slow=75,SNR=23						
NWAO	Narrogin (SRO)	48.56	120	LR	LR	15 24 19.3	
	comp=Z,168nm,20.6s,baz=185,slow=30						
BRTR	Keskin Array B	63.03	332	P	P	15 10 26.9	+0.9
	0.9nm,1.0s,baz=178,slow=4.3,SNR=2.8						
ASAR	Alice Springs	63.09	109	P	P	15 10 26.1	-0.6
	1.9nm,0.9s,baz=267,slow=5.3,SNR=14						
AS31	Alice Springs	63.09	109	P	P	15 10 27.6	+0.9
MAKZ	Makanchi	63.32	11	P	P	15 10 27.5	-0.2
MAKZ				IAmb	IAmb	15 10 33.6	
	comp=Z,5.5nm,1.3s						
MK31	Makanchi Array	63.37	12	P	P	15 10 27.1	-0.9
MKAR	Makanchi Array	63.37	12	P	P	15 10 27.2	-0.7
	comp=Z,1.2nm,0.8s,baz=210,slow=7.7,SNR=3.7						
WRA	Warramunga Arr	63.92	105	P	P	15 10 32.0	-0.2
	comp=Z,3.4nm,0.8s,baz=267,slow=6.1,SNR=14						
WB2	Warramunga Arr	63.94	105	P	P	15 10 30.5	-1.8
WRAB	Tennant Creek	63.94	105	P	P	15 10 32.1	-0.2
WR0	Warramunga Arr	64.11	105	P	P	15 10 34.3	+0.8
WR0				IAmb	IAmb	15 10 35.9	
	comp=Z,8.6nm,1.1s						
ABKAR	Akbulak array	64.64	355	P	P	15 10 35.7	-0.5
ABKAR				IAmb	IAmb	15 10 42.4	
	comp=Z,8.4nm,1.4s						
KURK	Kurchatov	66.57	8	P	P	15 10 47.5	-1.1
KURK				IAmb	IAmb	15 10 55.0	
	comp=Z,6.5nm,1.2s						
BRVK	Borovoye	68.19	2	P	P	15 10 58.6	-0.3
BRVK				IAmb	IAmb	15 11 00.9	
	comp=Z,4.7nm,1.1s						
SNAA	Sanae	69.22	199	LR	LR	15 35 26.2	
	comp=Z,303nm,20.5s,baz=20,slow=31						
TORD	Torodi Ar. Bea	70.58	290	P	P	15 11 13.1	-1.4
	comp=Z,1.2nm,0.9s,baz=104,slow=6.1,SNR=3.0						
ZAA0	Zalesovo Array	70.69	11	P	P	15 11 13.1	-1.2
ZAA0				IAmb	IAmb	15 11 20.8	
	comp=Z,8.3nm,1.1s						
ZALV	Zalesovo Beam	70.69	11	P	P	15 11 13.8	-0.5
	comp=Z,2.3nm,0.8s,baz=197,slow=4.5,SNR=7.8						
TOO	Toolangi	71.74	125	P	P	15 11 21.4	+0.1
SONM	Songino Array	72.06	27	P	P	15 11 23.0	+0.1
	comp=Z,3.0nm,0.9s,baz=215,slow=6.5,SNR=16						
ULN	Ulaanbaatar	72.36	27	P	P	15 11 24.7	-0.1
AKASG	Malin Array Be	73.65	336	P	P	15 11 32.9	+0.8
	comp=Z,1.0nm,0.8s,baz=144,slow=5.1,SNR=1.9						
DBIC	Dimbokro	74.49	282	P	P	15 11 38.2	+0.4
	comp=Z,3.3nm,0.8s,baz=120,slow=4.1,SNR=3.6						
QSPA	South Pole Qui	74.72	180	P	P	15 11 38.5	+0.1
	comp=Z,3.5nm,1.1s,baz=294,slow=1.2,SNR=11						
QSPA	South Pole Qui	74.72	180	P	P	15 11 38.9	+0.4
QSPA				IAmb	IAmb	15 11 41.6	
	comp=Z,5.5nm,1.1s						
GERES	GERESS Array B	79.46	327	P	P	15 12 05.8	+0.6
	comp=Z,0.2nm,0.5s,baz=134,slow=7.0,SNR=2.1						
JHJ	Hachijo jima 2	84.43	54	LR	LR	15 49 51.3	
	comp=Z,105nm,18.8s,baz=58,slow=36						
ESDC	Sonseca Array	85.70	313	P	P	15 12 38.0	0.0
	comp=Z,0.7nm,0.6s,baz=125,slow=5.2,SNR=3.7						
KLR	Kul'dur	85.90	36	LR	LR	15 54 03.6	
	comp=Z,146nm,18.3s,baz=222,slow=38						
ASAJ	Asahikawa	90.53	44	LR	LR	15 51 59.9	
	comp=Z,109nm,18.9s,baz=240,slow=34						
ILAR	Eielson Array	125.51	17	PKP	PKPdf	15 18 58.9	-0.6
	comp=Z,0.3nm,0.6s,baz=330,slow=3.1,SNR=2.6						
YKA	Yellowknife Ar	132.91	1	PKP	PKPdf	15 19 13.6	0.0
	comp=Z,0.4nm,0.8s,baz=358,slow=2.2,SNR=6.8						
PDAR	Pinedale Array	152.53	355	PKPbc	PKPbc	15 19 55.5	-0.3
	comp=Z,1.3nm,0.8s,baz=85,slow=2.4,SNR=9.5						
NVAR	Mina Array Bea	156.54	11	PKPab	PKPab	15 20 23.6	+0.5
	comp=Z,0.2nm,0.5s,baz=349,slow=3.0,SNR=3.6						

IDC ***23*** *15:04:04.3±1.0, 38°.37S×93°.46W, h0^{km}, mb4.2/9, mb1 4.4/9, mb1mx4.2/24, mbtmp4.2/9, MS4.0/11, Ms1 4.0/11, ms1mx3.8/21, Error ellipse: s-maj=27.9km s-min=24.7km az=160.0*

NEIC ***23*** *15:04:05.2±1.7, 38°.3S±0°.1×93°.7W±0°.2, h10^{km}±1^{km}, mb4.6/29, Error ellipse: s-maj=24.7km s-min=20.8km az=271.0*

GCMT ***23*** *15:04:09.2±0.4, 38°.36S±0°.02×93°.39W±0°.03, h34^{km}±1^{km}, MW5.1/76, Moment Tensor Solution. s23,c24; s76,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.69±.35; $M_{\theta\theta}$3.21±.28; $M_{\phi\phi}$-1.52±.28; $M_{r\theta}$0.05±.24; $M_{\theta\phi}$-4.62±.15; $M_{\phi r}$0.27±.23; Best double couple: $M_0$5.20300×10^{16} NP1:ϕ_s257.00000°, δ86.00000°, λ-177.00000°. NP2: ϕ_s166.00000°, δ87.00000°, λ-4.00000°. Principal axes: T 6.0360, Plg1.0000°, Azm211.0000°; N -1.6660, Plg84.0000°, Azm309.0000°; P -4.3700, Plg6.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 15:04:05.3±0.8**, 38°.3S**±0°.1×**93°.6W**±0°.1**, h10^{km}, n56, σ1^s.11**/45**, mb4.5**/19**, MS4.0**/9**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	12.66	74	T	T	15 20 04.3	
	baz=244,slow=74,SNR=2820						
H03S1	Juan Fernandez	12.68	74	T	T	15 20 05.3	
	baz=244,slow=74,SNR=2300						
H03S3	Juan Fernandez	12.68	74	T	T	15 20 04.1	
	baz=244,slow=74,SNR=2771						
H03N3	Juan Fernandez	12.83	72	T	T	15 20 04.8	
	baz=249,slow=72,SNR=2484						
H03N2	Juan Fernandez	12.83	72	T	T	15 20 11.5	
	baz=249,slow=72,SNR=1740						
H03N1	Juan Fernandez	12.85	72	T	T	15 20 03.8	
	baz=249,slow=72,SNR=2082						
BI03	Tigo	16.36	91		Pn	15 07 55.6	+0.6
BI03				IAmb	IAmb	15 08 00.6	
	comp=Z,35nm,0.8s						
LL01	San Ignacio de	16.63	111	Pn	Pn	15 07 59.2	+0.8
LC01	Cunco	16.97	99	P	P	15 08 05.6	+0.8
RPN	Rapa Nui	17.30	306	LR	LR	15 12 45.7	
	comp=Z,561nm,21.1s,baz=132,slow=30						
BI02	San Fabin de	17.77	92	P	P	15 08 13.8	+0.1
PLCA	Paso Flores	17.92	105	P	P	15 08 17.0	+1.7
	comp=Z,0.1nm,0.3s,baz=275,slow=13,SNR=7.0						
PLCA				LR	LR	15 13 16.6	
	comp=Z,244nm,19.9s,baz=272,slow=31						
PLCA	Paso Flores	17.92	105	P	P	15 08 17.6	+2.3
PEL	Peldehue	19.27	81	P	Pn	15 08 31.3	+0.2
PEL				IAmb	IAmb	15 08 36.8	
	comp=Z,50nm,1.5s						
CO02	Combarbal	19.83	76	P	Pn	15 08 37.9	-0.1
CO02				IAmb	IAmb	15 08 41.8	
	comp=Z,24nm,0.9s						
GO04	Tololo Observa	20.47	73	P	P	15 08 44.5	+1.0
GO04				IAmb	IAmb	15 08 45.0	
	comp=Z,28nm,1.1s						
CO01	Juntas del Tor	21.10	74	P	P	15 08 51.2	+0.9
LCO	Las Campanas	21.14	71	P	P	15 08 51.0	+0.3
LCO				IAmb	IAmb	15 08 55.2	
	comp=Z,32nm,1.0s						
ZON	Zonda	21.47	79	P	P	15 08 54.9	+0.9
ZON				IAmb	IAmb	15 08 59.0	
	comp=Z,30nm,1.2s						
AC05	El Transito	21.55	71	P	P	15 08 55.7	+0.7
AC05				IAmb	IAmb	15 09 06.4	
	comp=Z,23nm,0.9s						
GO03	Copiap	22.26	68	P	P	15 09 01.1	-1.4
GO03				IAmb	IAmb	15 09 07.7	
	comp=Z,22nm,1.1s						
AC02	Maricunga	23.50	68	P	P	15 09 15.8	-0.1
PB14	IPOC Station P	23.94	62	P	P	15 09 19.3	-0.7
PB14				IAmb	IAmb	15 09 23.8	
	comp=Z,12nm,1.0s						
GO02	Mina Guanaco	24.17	64	P	P	15 09 21.6	-0.6
GO02				IAmb	IAmb	15 09 32.2	
	comp=Z,20nm,1.1s						
PB15	IPOC Station P	25.51	61	P	P	15 09 33.0	-1.1
PB04	IPOC Station P	25.64	58	P	P	15 09 35.4	+0.1
PB06	IPOC Station P	25.77	60	P	P	15 09 35.5	-1.1
PB07	IPOC Station P	26.23	58	P	P	15 09 41.2	+0.5
PB07				IAmb	IAmb	15 09 42.1	
	comp=Z,14nm,0.9s						
LVC	Limon Verde	26.29	61	P	P	15 09 41.9	+0.5
	comp=Z,22nm,0.9s,baz=231,slow=8.1,SNR=11						
LVC				LR	LR	15 17 27.1	
	comp=Z,394nm,20.6s,baz=219,slow=31						
LVC	Limon Verde	26.29	61	P	P	15 09 42.0	+0.5
PB09	IPOC Station P	26.62	59	P	P	15 09 45.1	+0.9
PATCX	Punta Patache	26.70	56	P	P	15 09 44.5	-0.4
PB08	IPOC Station P	27.83	56	P	P	15 09 54.5	-0.8
PB08				IAmb	IAmb	15 10 01.2	
	comp=Z,6.4nm,0.9s						
MNMC	Minye Minye	28.28	54	P	P	15 09 59.7	+0.5
MNMC				IAmb	IAmb	15 10 02.3	
	comp=Z,17nm,1.2s						
NNA	Nana	30.17	34	LR	LR	15 19 07.5	
	comp=Z,443nm,21.0s,baz=208,slow=30						
CPUP	Villa Florida	32.68	79	P	P	15 10 37.0	-0.8
	comp=Z,3.5nm,0.9s,baz=258,slow=6.8,SNR=5.5						
CPUP				LR	LR	15 22 21.9	
	comp=Z,120nm,18.7s,baz=244,slow=34						
ATAH	Atahualpa	33.95	28	P	P	15 10 50.0	+0.6
	comp=Z,11nm,0.8s,baz=198,slow=8.3,SNR=7.1						
SIV	San Ignacio	36.19	61	P	P	15 11 08.2	-0.1
	comp=Z,4.0nm,0.9s,baz=247,slow=10,SNR=12						
SIV				LR	LR	15 24 39.6	
	comp=Z,115nm,19.4s,baz=196,slow=34						
SAML	Samuel	40.02	51	P	P	15 11 39.4	-1.2
OTAV	Otavalo	40.82	24	P	P	15 11 47.5	-0.2
BDFB	Brasilia	45.89	73	P	P	15 12 27.8	-0.5
	comp=Z,2.0nm,0.4s,baz=236,slow=11,SNR=3.2						
BDFB				LR	LR	15 30 41.4	
	comp=Z,136nm,18.6s,baz=178,slow=35						
ROSC	El Rosal	46.51	27	LR	LR	15 30 12.4	
	comp=Z,260nm,18.3s,baz=246,slow=34						
PTGA	Pitinga	48.48	48	LR	LR	15 30 47.4	
	comp=Z,241nm,19.1s,baz=258,slow=33						
PTGA	Pitinga	48.48	48	P	P	15 12 47.3	-1.1
PTGA				IAmb	IAmb	15 12 57.6	
	comp=Z,7.4nm,1.2s						
QSPA	South Pole Qui	51.91	180	P	P	15 13 14.1	+0.2
	comp=Z,2.0nm,0.9s,baz=65,slow=4.5,SNR=5.5						
QSPA	South Pole Qui	51.91	180	P	P	15 13 14.3	+0.4
QSPA				IAmb	IAmb	15 13 15.6	
	comp=Z,5.7nm,1.2s						
VNA3	Neumayer Olymp	52.32	156	P	P	15 13 14.5	-2.2
VNA1	Neumayer--Stat	52.88	155	P	P	15 13 15.7	-5.1
SNAA	Sanae	54.37	157	P	P	15 13 31.6	-0.3
TXAR	Lajitas Array	67.96	351	P	P	15 15 05.2	+0.8
	comp=Z,0.3nm,0.5s,baz=170,slow=12,SNR=2.0						
TXAR				LR	LR	15 39 44.4	
	comp=Z,88nm,18.7s,baz=0.0,slow=32						
CPRX	Cap Rock	71.63	351	P	P	15 15 29.2	+2.2
NVAR	Mina Array Bea	79.69	340	P	P	15 16 14.3	+1.1
	comp=Z,1.0nm,0.8s,baz=176,slow=6.2,SNR=5.9						
NVAR				LR	LR	15 42 44.4	
	comp=Z,101nm,18.8s,baz=236,slow=29						
PDAR	Pinedale Array	82.00	348	P	P	15 16 26.2	+0.7
	comp=Z,0.8nm,0.7s,baz=159,slow=5.2,SNR=9.4						
LRM	Limekiln Ridge	85.46	347	P	P	15 16 39.4	-3.7
USRK	Ussuriysk Ar.	145.59	295	PKPbc	PKPdf	15 23 44.0	+0.6
	comp=Z,2.4nm,0.7s,baz=164,slow=5.1,SNR=5.7						
KBZ	Khabaz	147.01	66	PKPbc	PKPbc	15 23 47.8	-0.1
	comp=Z,1.0nm,0.6s,baz=226,slow=2.6,SNR=2.9						

TAP 23 15:04:14.6, 21°.45N×121°.30E, h52^{km}±1^{km}, ML2.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSEB	Hengchuen, Pin	0.58	320	P	Pn	15 04 27.8	+0.8
	baz=309						
TSEB				S	Sn	15 04 38.0	+2.0
	baz=309						
LAY	Lan-yu	0.63	22	P	Pn	15 04 27.9	+0.3
	baz=22						
LAY				S	Sn	15 04 37.4	+0.4
	baz=22						
TWKBT	Hengchun	0.67	317	P	Pn	15 04 28.8	+0.8
	baz=311						
TWKBT				*e*S	Sn	15 04 39.4	+1.6
	baz=311						
TWK1	Hengchun	0.67	317	P	Pn	15 04 28.6	+0.4
	baz=311						
TWK1				S	Sn	15 04 38.9	+0.9
	baz=311						
HEN	Hengchun	0.76	316	*e*P	Pn	15 04 30.2	+1.0
	baz=311						
SLIU	Shizi	0.89	328	*i* P	Pn	15 04 31.6	+0.5
	baz=335						
SLIU				*e*S	Sn	15 04 43.1	+0.1
	baz=335						
TAW	Tawu	0.97	337	*i* P	Pn	15 04 32.4	+0.3
	baz=346						
TAW				*e*S	Sn	15 04 45.6	+0.7
	baz=346						
EAST	Anshuo	1.02	336	P	Pn	15 04 33.1	+0.4
	baz=343						
EAST				*e*S	Sn	15 04 46.6	+0.6
	baz=343						
SCZT	Fangliau	1.11	325	P	Pn	15 04 35.5	+1.5
	baz=316						
ECL	Taimali	1.18	344	*i* P	Pn	15 04 34.8	-0.1
	baz=345						
ECL				*e*S	Sn	15 04 49.8	-0.2
	baz=345						
LDUT	Ludao	1.22	7	*e*P	Pn	15 04 35.7	+0.3
	baz=7.0						
LDUT				*e*S	Sn	15 04 52.2	+1.3
	baz=7.0						
SSPT	Xinbi	1.23	326	*e*P	Pn	15 04 37.8	+2.3
	baz=337						
WLCH	Liuqiu	1.24	316	*e*P	Pn	15 04 35.1	-0.5
	baz=316						
WLCH				*e*S	Sn	15 04 52.5	+1.2
	baz=316						
TTN	Taitung	1.30	354	*e*P	Pn	15 04 38.7	+2.2
	baz=2.0						
MASBT	Mashibuluo	1.31	332	*i* P	Pn	15 04 38.0	+1.4
	baz=341						
MASBT				*e*S	Sn	15 04 53.0	0.0
	baz=341						
TWGBT	Beinan	1.37	351	P	Pn	15 04 37.4	-0.1
	baz=344						
TWGBT				*e*S	Sn	15 04 54.5	-0.1
	baz=344						
TWG	Pinlang	1.38	351	P	Pn	15 04 37.4	-0.1
	baz=344						
TWG				*e*S	Sn	15 04 54.5	-0.2
	baz=344						
TSMG	Majia	1.39	334	*e*P	Pn	15 04 38.9	+1.3
	baz=341						
SSD	Sandimen	1.43	334	*e*P	Pn	15 04 39.0	+0.8
	baz=342						
LONT	Longtian	1.45	354	*e*P	Pn	15 04 38.9	+0.3
	baz=347						
SCST	Cishan	1.61	332	*e*P	Pn	15 04 41.8	+1.1
	baz=332						
SLGT	Liugui	1.65	338	*e*P	Pn	15 04 41.3	+0.1
	baz=338						
SLGT				*e*S	Sn	15 05 00.0	-1.3
	baz=338						
SLGT	Liugui	1.65	338	*e*P	Pn	15 04 41.3	+0.1
	baz=228						

TAP 23 15:04:20.6, 23°.72N×121°.48E, h7^{km}, ML2.4, 4C-8D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGFH	Guangfu	0.07	225	*i* P	Pg	15 04 22.6	+0.1
	baz=229						
EGFH				*e*S	Sg	15 04 24.3	+0.5
	baz=229						
ESL	Shilin	0.10	334	⇓*i*P	Pg	15 04 23.2	+0.3
	baz=334						
ESL				*i* S	Sg	15 04 24.8	+0.2
	baz=334						
HGSD	Ruisui	0.23	193	⇑*i*P	Pg	15 04 26.1	+0.9
	baz=206						
HGSD				*e*S	Sg	15 04 30.7	+2.3
	baz=206						
EHY	Hungye	0.26	215	*i* P	Pg	15 04 25.7	0.0
	baz=225						
EHY				S	Sg	15 04 29.2	0.0
	baz=225						
HWA	Hwalien	0.28	24	*i* P	Pg	15 04 27.0	+0.9
	baz=13						
HWA				S	Sb	15 04 32.0	-0.9
	baz=13						
YULB	Yu-li	0.37	208	⇑*i*P	Pg	15 04 27.9	+0.1
	baz=221						
YULB				*e*S	Sg	15 04 32.8	+0.2
	baz=221						
TWD	Chiawan	0.37	16	⇓*i*P	Pg	15 04 28.2	+0.4
	baz=3.0						
TWD				*i* S	Sg	15 04 33.0	+0.2
	baz=3.0						
TWF1	Yuli	0.40	205	*i* P	Pg	15 04 28.6	+0.1
	baz=216						
TWF1				*e*S	Sg	15 04 33.8	0.0
	baz=216						
CHGB	Renai	0.44	320	*i* P	Pg	15 04 29.7	+0.5
	baz=327						
CHGB				*e*S	Sg	15 04 36.0	+0.9
	baz=327						
NACB	Ninganchiao	0.46	13	⇓*i*P	Pg	15 04 29.5	-0.1
	baz=9.0						
NACB				*e*S	Sg	15 04 36.1	+0.4
	baz=9.0						
WHF	Hehuan Shan	0.47	335	⇓*i*P	Pg	15 04 29.9	+0.2
	baz=332						
WHF				S	Sg	15 04 36.5	+0.5
	baz=332						
ETLH	Xiulin Townshi	0.48	360	⇓P	Pg	15 04 30.1	+0.1
	baz=356						
ETLH				*e*S	Sg	15 04 37.2	+0.8
	baz=356						
SSLB	Suanglung	0.49	278	⇓*i*P	Pg	15 04 30.6	+0.5
	baz=280						
SSLB				*e*S	Sg	15 04 36.8	+0.3
	baz=280						
YUS	Yu-Shan	0.54	245	*e*S	Sg	15 04 38.8	+0.5
	baz=257						
FULB	Fuli	0.55	199	*e*P	Pb	15 04 32.6	+0.1
	baz=220						
FULB				*e*S	Sb	15 04 40.6	0.0
	baz=220						
SMLT	Sun Moon Lake	0.56	287	P	Pg	15 04 32.0	+0.6
	baz=288						
SMLT				*e*S	Sg	15 04 39.6	+0.9
	baz=288						
WPL	Puli Township	0.56	301	P	Pb	15 04 32.4	-0.4
	baz=300						
WPL				*e*S	Sg	15 04 39.6	+0.8
	baz=300						
FUSS	Fushou	0.57	337	*i* P	Pg	15 04 32.2	+0.6
	baz=335						
FUSS				*e*S	Sg	15 04 39.9	+0.8
	baz=335						
WHYT	Xinyi Township	0.58	268	*e*P	Pb	15 04 33.0	-0.1
	baz=268						
DPDB	Guoxing	0.60	302	*e*P	Pb	15 04 33.1	-0.3
	baz=301						
DPDB				*e*S	Sb	15 04 41.2	-0.9
	baz=301						
TWT	Tachien	0.60	332	*e*P	Pg	15 04 32.5	+0.3
	baz=329						
TWT				*e*S	Sg	15 04 40.5	+0.3
	baz=329						
TYC	Yuchr	0.60	288	*i* P	Pg	15 04 32.7	+0.5
	baz=298						
TYC				*e*S	Sg	15 04 40.9	+0.8
	baz=298						
TDCB	Techi	0.61	331	*e*P	Pg	15 04 32.9	+0.5
	baz=329						
TDCB				*e*S	Sg	15 04 40.5	+0.1
	baz=329						
CHKT	Chengkung	0.63	190	*e*P	Pb	15 04 33.5	-0.3
	baz=175						
ALS	Alishan	0.66	252	⇓*i*P	Pb	15 04 34.4	-0.2
	baz=253						
ALS				*e*S	Sg	15 04 42.8	+0.9
	baz=253						
ELDTW	Lidau	0.68	219	P	Pg	15 04 33.6	-0.1
	baz=219						
WJS	Zhushan	0.70	278	*e*P	Pb	15 04 34.9	-0.2
	baz=280						
WJS				*e*S	Sn	15 04 47.2	-0.8

	baz=280						
NNSB	**Datong**	**0.71**	**353**	P	Pg	15 04 34.6	+0.2
	baz=350						
NNSB				eS	Sg	15 04 43.5	-0.1
	baz=350						
NNSH	**Datong**	**0.71**	**353**	eP	Pg	15 04 34.5	+0.2
	baz=343						
NNSH				eS	Sg	15 04 43.8	+0.2
	baz=343						
NNS	**Nan Shan**	**0.72**	**352**	⇑iP	Pg	15 04 35.1	+0.5
	baz=350						
NNS				eS	Sg	15 04 44.5	+0.5
	baz=350						
WHP	**Taichung City**	**0.74**	**319**	⇑iP	Pb	15 04 35.8	-0.1
	baz=316						
WHP				eS	Sg	15 04 45.4	+0.8
	baz=316						
ENA	**Nanau**	**0.74**	**18**	eP	Pg	15 04 35.0	+0.1
	baz=4.0						
ENA				eS	Sg	15 04 45.3	+0.7
	baz=4.0						
CHN5	**Tsauling**	**0.75**	**261**	eP	Pb	15 04 36.3	+0.3
	baz=255						
CHN5				eS	Sb	15 04 47.1	+0.7
	baz=255						
WNT	**Mingjian**	**0.75**	**282**	eP	Pn	15 04 37.2	-0.4
	baz=289						
WNT				eS	Sn	15 04 48.6	-0.6
	baz=289						
EDH	**Donghe**	**0.76**	**193**	eP	Pb	15 04 36.3	+0.1
	baz=181						
EDH				eS	Sn	15 04 50.0	+0.5
	baz=181						
ENAH	**Nanao**	**0.79**	**22**	eP	Pg	15 04 35.1	-0.7
	baz=6.0						
WGK	**Gukeng**	**0.84**	**268**	eP	Pn	15 04 38.6	-0.3
	baz=270						
WGK				eS	Sn	15 04 51.1	-0.4
	baz=270						
STYT	**Tauyuan**	**0.87**	**230**	eP	Pb	15 04 37.6	-0.4
	baz=227						
STYT				eS	Sb	15 04 50.0	+0.2
	baz=227						
WDLH	**Douliu**	**0.87**	**268**	P	Pn	15 04 39.3	+0.1
	baz=270						
WDLH				eS	Sn	15 04 51.6	-0.5
	baz=270						
LONT	**Longtian**	**0.87**	**202**	eP	Pb	15 04 38.0	-0.1
	baz=215						
NDT	**Datong Townshi**	**0.88**	**2**	eP	Pg	15 04 37.8	+0.3
	baz=349						
NDT				eS	Sg	15 04 48.5	-0.5
	baz=349						
TPUB	**Ta-pu**	**0.89**	**242**	eP	Pn	15 04 39.0	-0.5
	baz=253						
TPUB				eS	Sn	15 04 52.0	-0.6
	baz=253						
CHN4	**Tsaushan**	**0.90**	**246**	eP	Pn	15 04 39.3	-0.3
	baz=249						
CHN4				eS	Sb	15 04 50.9	+0.3
	baz=249						
TWQ1	**Liyutan**	**0.90**	**314**	eP	Pn	15 04 39.9	+0.2
	baz=320						
TWQ1				eS	Sn	15 04 54.8	+1.8
	baz=320						
ENTT	**Nioudou**	**0.92**	**5**	eP	Pb	15 04 39.3	+0.4
	baz=5.0						
WTP	**Ta-pu**	**0.93**	**240**	eP	Pn	15 04 39.6	-0.5
	baz=243						
WTP				eS	Sb	15 04 51.5	-0.1
	baz=243						
TWC	**Suao**	**0.95**	**21**	eP	Pg	15 04 38.8	0.0
	baz=9.0						
TWC				eS	Sb	15 04 52.5	+0.5
	baz=9.0						
YHNB	**Yeheng**	**0.95**	**354**	⇓P	Pb	15 04 39.3	-0.2
	baz=350						
YHNB				eS	Sg	15 04 51.0	-0.2
	baz=350						
NSY	**Sanyi**	**0.96**	**317**	eP	Pn	15 04 41.2	+0.7
	baz=316						
NSK	**Sanguang**	**0.96**	**353**	P	Pb	15 04 39.5	-0.1
	baz=350						
NSK				eS	Sg	15 04 51.5	0.0
	baz=350						
WDJ	**Dajia District**	**0.99**	**309**	eP	Pn	15 04 40.8	-0.2
	baz=309						
CHY	**Chiayi**	**1.00**	**257**	eP	Pn	15 04 41.6	+0.6
	baz=260						
CHY				eS	Sn	15 04 55.9	+0.6
	baz=260						
WTK	**Tuku**	**1.00**	**268**	eP	Pb	15 04 40.1	-0.2
	baz=271						
WTK				eS	Sn	15 04 55.4	-0.1
	baz=271						
NSTT	**Nanjuang**	**1.01**	**334**	eP	Pn	15 04 41.0	-0.1
	baz=334						
TWE	**Neicheng**	**1.01**	**10**	eP	Pg	15 04 40.1	+0.1
	baz=355						
TWE				eS	Sb	15 04 54.0	+0.1
	baz=355						
LIOB	**Emei**	**1.02**	**335**	eP	Pn	15 04 41.3	0.0
	baz=335						
TWK	**Hsinying**	**1.02**	**244**	eP	Pn	15 04 41.5	+0.2
	baz=247						
TWK				eS	Sn	15 04 55.6	-0.3
	baz=247						
CHN1	**Nanshi**	**1.03**	**239**	eP	Pn	15 04 41.8	+0.4
	baz=242						
CHN1				eS	Sn	15 04 56.1	0.0
	baz=242						
SGST	**Jiashian**	**1.04**	**233**	eP	Pb	15 04 41.2	+0.2
	baz=236						
SGST				eS	Sn	15 04 56.3	-0.2
	baz=236						
NWLT	**Wulai**	**1.05**	**1**	eP	Pb	15 04 41.0	-0.1
	baz=356						
NWLT				eS	Sg	15 04 54.4	-0.1
	baz=356						
WSF	**Szhu**	**1.16**	**266**	eP	Pg	15 04 42.3	-0.5
	baz=265						
ICHU	**Yijhu**	**1.16**	**252**	eP	Pg	15 04 42.2	-0.7
	baz=265						
NTC	**Toucheng**	**1.17**	**16**	eP	Pg	15 04 42.6	-0.5
	baz=15						
TIPB	**Shuangxi**	**1.28**	**14**	eP	Pg	15 04 45.3	0.0
	baz=7.0						
TIPB				eS	Sb	15 05 01.2	-0.7
	baz=7.0						

ATH ***23*** *15:09:58.0, 34°.65N×25°.59E, h15^{km}±5^{km}, ML2.7/1, Error ellipse: s-maj=6.6km s-min=1.6km az=1.0*

THE ***23*** *15:09:57.6, 34°.65N×25°.59E, h17^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=2.2km s-min=0.9km az=349.0*

ISC 23 15:09:57.6±2.3**, 34°.7N**±0°.1×**25°.59E**±0°.04**, h13**^{km}±14^{km}**,**
n10, σ0^{s}.36/16**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.52**	**350**	P	**Pg**	**15 10 07.6**	**-0.2**
LAST				S	**Sg**	**15 10 15.3**	**+0.5**
LAST	**Lasithi**	**0.52**	**350**	P	**Pg**	**15 10 07.6**	**-0.2**
LAST				S	**Sb**	**15 10 16.2**	**+0.1**
	275nm,0.4s						
NPS	**Neapolis**	**0.61**	**2**	P	**Pg**	**15 10 09.2**	**-0.4**
NPS	**Neapolis**	**0.61**	**2**	P	**Pg**	**15 10 09.6**	**0.0**
STIA	**Sitia Lasithi**	**0.69**	**37**	P	**Pg**	**15 10 10.7**	**-0.4**
STIA				S	**Sb**	**15 10 21.1**	**+0.1**
ZKR	**Zakros**	**0.70**	**48**	P	**Pg**	**15 10 11.4**	**+0.2**
ZKR				S	**Sb**	**15 10 21.5**	**+0.3**
SIVA	**Sivas**	**0.74**	**300**	P	**Pg**	**15 10 11.7**	**-0.2**
SIVA				S	**Sb**	**15 10 22.9**	**+0.6**
SIVA				AML	AML	15 10 27.2	
	comp=E,1949μm,0.7s						
SIVA				AML	AML	15 10 27.5	
	comp=N,904μm,0.6s						
SIVA	**Sivas**	**0.74**	**300**	P	**Pg**	**15 10 11.8**	**-0.1**
SIVA				S	**Sg**	**15 10 22.0**	**+0.4**
	comp=N,712nm,0.6s						
IDI	**Anoyia**	**0.86**	**318**	P	**Pb**	**15 10 14.1**	**-0.3**
VAM	**Vamos**	**1.37**	**304**	P	**Pb**	**15 10 22.7**	**-0.4**

NEIC ***23*** *15:10:38.8±2.8, 35°.99N±0°.05×31°.04E±0°.06, h86^{km}±10^{km}, Error ellipse: s-maj=9.0km s-min=5.4km az=140.0*

IDC ***23*** *15:10:38.8±1.4, 36°.04N×31°.17E, h80^{km}±15^{km}, mb3.7/14, mb1 3.8/19, mb1mx3.6/44, mbtmp4.0/19, MS3.7/1, Ms1 3.7/1, ms1mx2.3/41, Error ellipse: s-maj=12.4km s-min=10.1km az=86.0*

ISK ***23*** *15:10:38.2, 35°.97N×31°.03E, h95^{km}±1^{km}, ML3.9/33*

DDA ***23*** *15:10:39.1, 36°.02N×31°.04E, h56^{km}±6^{km}, MW3.9*

NIC ***23*** *15:10:39.6±0.0, 35°.92N×31°.04E, h17^{km}±4^{km}, Ml4.2/7*

HLW ***23*** *15:10:39.7, 35°.81N×30°.84E, h15^{km}±11^{km}, Md3.9*

THE ***23*** *15:10:42.0, 36°.08N×30°.97E, h57^{km}±6^{km}, ML4.0/3, Error ellipse: s-maj=6.9km s-min=2.2km az=183.0*

ISC 23 15:10:38.7±0.7**, 36°.00N**±0°.03×**31°.03E**±0°.02**, h88**^{km}±7^{km}**,**
n187, σ1^{s}.27/235**, mb3.9**/16**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMT	**Kemer-ANTALYA**	**0.72**	**328**	PG	**Pn**	**15 10 56.2**	**+1.0**
DEMR	**Demre-Antalya**	**0.94**	**285**	PG	**Pn**	**15 10 58.5**	**+0.9**
ANTB	**Antalya**	**0.95**	**341**	PG	**Pn**	**15 10 58.9**	**+1.2**
ALAN	**Alanya-ANTALYA**	**0.98**	**55**	PG	**Pn**	**15 10 58.6**	**+0.6**
KEPZ	**Antalya-Kepez**	**1.01**	**27**	iP	**Pn**	**15 10 59.0**	**+0.5**
KEPZ				IAML		15 11 13.0	
	comp=E,3μm,1.0s						
GAZI	**Gazipasa**	**1.06**	**77**	PG	**Pn**	**15 10 59.4**	**+0.4**
GAZI	**Gazipasa**	**1.06**	**77**	iP	**Pn**	**15 10 59.4**	**+0.4**
GAZI				iS	**Sn**	**15 11 12.4**	**-1.9**
KORT	**Korkueli**	**1.14**	**331**	PN	**Pn**	**15 11 01.3**	**+1.2**
KORT				SN	**Sn**	**15 11 17.5**	**+1.4**
KORT	**Korkueli**	**1.14**	**331**	iP	**Pn**	**15 11 02.0**	**+1.9**
ELL	**Elmali**	**1.18**	**310**	PN	**Pn**	**15 11 01.7**	**+1.2**
ELL	**Elmali**	**1.18**	**310**		**Pn**	**15 11 01.9**	**+1.5**
ELL	**Elmali**	**1.18**	**310**	P	**Pn**	**15 11 01.9**	**+1.5**
ELL				S	**Sn**	**15 11 18.8**	**+2.0**
AKAS	**Kas**	**1.18**	**282**	PN	**Pn**	**15 11 00.6**	**+0.1**
AKAS	**Kas**	**1.18**	**282**	iP	**Pn**	**15 10 59.7**	**-0.8**
AKAS				IAML		15 11 17.0	
	comp=N,375nm,0.3s						
AKAS				IAML		15 11 25.0	
	comp=E,443nm,0.5s						
AKAS	**Kas**	**1.18**	**282**		**Pn**	**15 11 00.2**	**-0.3**
KSL	**Kastellorizon**	**1.19**	**278**	P	**Pn**	**15 11 01.5**	**+1.1**
KSL				S	**Sn**	**15 11 17.5**	**+0.8**
BUCA	**Burdur, Bucak-**	**1.38**	**344**	iP	**Pn**	**15 11 03.5**	**+0.6**
BUCA				iS	**Sn**	**15 11 21.4**	**+0.1**
BUCA				IAML		15 11 27.0	
	comp=N,350nm,0.4s						
BUCA				IAML		15 11 30.0	
	comp=E,403nm,0.6s						
AKMS	**Akamas**	**1.44**	**132**	P	**Pn**	**15 11 05.0**	**+1.4**
AKMS				S	**Sn**	**15 11 22.8**	**+0.3**
AKMS				AML	AML	15 11 23.8	
	comp=E,13nm,0.3s						
AKMS				AML	AML	15 11 23.8	
	comp=E,13nm,0.3s						
AKMS				AML	AML	15 11 24.1	
	comp=E,12nm,0.2s						
AKMS				AML	AML	15 11 24.1	
	comp=E,12nm,0.2s						
BCK	**Bucak**	**1.50**	**346**	PN	**Pn**	**15 11 05.5**	**+1.0**
ALFC	**Alefka**	**1.53**	**123**	P	**Pn**	**15 11 05.3**	**+0.5**
ALFC				S	**Sn**	**15 11 24.0**	**-0.4**
ALFC				AML	AML	15 11 26.1	
	comp=E,34nm,0.2s						
ALFC				AML	AML	15 11 26.1	
	comp=E,34nm,0.2s						
ALFC				AML	AML	15 11 26.2	
	comp=E,22nm,0.2s						
ALFC				AML	AML	15 11 26.2	
	comp=E,22nm,0.2s						
SEDI	**Konya, Seydise**	**1.56**	**22**	iP	**Pn**	**15 11 06.5**	**+1.2**
SEDI				iS	**Sn**	**15 11 22.5**	**-2.9**
SEDI				IAML		15 11 27.0	
	comp=N,688nm,0.4s						
SEDI				IAML		15 11 28.0	
	comp=E,963nm,0.4s						
BOZY	**Bozyazi-Mersin**	**1.58**	**85**	PN	**Pn**	**15 11 06.4**	**+1.1**
ERMK	**Ermenek**	**1.65**	**66**	iP	**Pn**	**15 11 08.4**	**+1.9**
ERMK				iS	**Sn**	**15 11 28.7**	**+1.3**
ERMK				IAML		15 11 31.0	
	comp=E,1μm,0.3s						
ERMK				IAML		15 11 31.0	
	comp=N,1μm,0.4s						
TEKE	**Tekeli-Mersin**	**1.69**	**84**	PN	**Pn**	**15 11 07.8**	**+1.0**
FETY	**Fethiye**	**1.70**	**293**	P	**Pn**	**15 11 07.2**	**+0.3**
FETY				S	**Sn**	**15 11 27.4**	**-0.9**
FETY	**Fethiye**	**1.70**	**293**	PN	**Pn**	**15 11 07.3**	**+0.3**
GOLH	**Golhisar**	**1.71**	**317**	iP	**Pn**	**15 11 09.4**	**+2.2**
GOLH				iS	**Sn**	**15 11 29.8**	**+1.0**
GOLH				IAML		15 11 37.0	
	comp=N,581nm,0.5s						
GOLH				IAML		15 11 47.0	
	comp=E,1μm,1.5s						
AKDN	**Akdeniz- Kıbrı**	**1.72**	**113**	PN	**Pn**	**15 11 07.9**	**+0.7**
NATA	**Nata**	**1.75**	**134**	P	**Pn**	**15 11 09.1**	**+1.6**
NATA				S	**Sn**	**15 11 30.5**	**+1.1**
NATA				AML	AML	15 11 31.8	
	comp=E,12nm,0.2s						
NATA				AML	AML	15 11 31.8	
	comp=E,12nm,0.2s						
NATA				AML	AML	15 11 31.8	
	comp=E,18nm,0.2s						
NATA				AML	AML	15 11 31.8	
	comp=E,18nm,0.2s						
LEF	**Lefka**	**1.75**	**120**	PN	**Pn**	**15 11 07.6**	**+0.1**
CAEL	**Denizli, Camel**	**1.78**	**310**	iP	**Pn**	**15 11 10.0**	**+1.9**
CAEL				iS	**Sn**	**15 11 28.0**	**-2.4**
CAEL				IAML		15 11 34.0	
	comp=N,760nm,0.9s						
CAEL				IAML		15 11 42.0	
	comp=E,540nm,0.8s						
BERE	**Bereket-Mersin**	**1.81**	**78**	PN	**Pn**	**15 11 09.3**	**+0.9**
BRDR	**BURDUR-Merkez**	**1.87**	**336**	iP	**Pn**	**15 11 10.8**	**+1.6**
BRDR				iS	**Sn**	**15 11 32.8**	**+0.4**
BRDR				IAML		15 11 35.0	
	comp=E,435nm,0.4s						
BRDR				IAML		15 11 36.0	
	comp=N,296nm,0.5s						
ISP	**Isparta**	**1.87**	**347**	PN	**Pn**	**15 11 10.3**	**+1.1**
ISP	**Isparta**	**1.87**	**347**		**Pn**	**15 11 10.5**	**+1.3**
YORU	**Yoruktepe-Mers**	**1.93**	**85**	PN	**Pn**	**15 11 10.8**	**+0.9**
SZAC	**Souni**	**1.95**	**129**	P	**Pn**	**15 11 11.6**	**+1.4**
SZAC				S	**Sn**	**15 11 35.8**	**+1.5**
SZAC				AML	AML	15 11 36.8	
	comp=N,10nm,0.2s						
SZAC				AML	AML	15 11 36.8	
	comp=N,10nm,0.2s						
SZAC				AML	AML	15 11 39.5	
	comp=N,9.4nm,0.2s						
SZAC				AML	AML	15 11 39.5	
	comp=N,9.4nm,0.2s						
KKBE	**Karaman, Kazim**	**1.96**	**51**	iP	**Pn**	**15 11 12.3**	**+1.9**
KKBE				iS	**Sn**	**15 11 34.9**	**+0.3**
KKBE				IAML		15 11 36.0	
	comp=E,646nm,0.7s						
KKBE				IAML		15 11 36.0	
	comp=N,478nm,0.3s						
OREN	**Orenkoy-Mersin**	**1.98**	**83**	PN	**Pn**	**15 11 11.3**	**+0.8**
BAGO	**Egridir - ISPA**	**2.00**	**354**	iP	**Pn**	**15 11 11.4**	**+0.5**
BAGO				iS	**Sn**	**15 11 34.5**	**-0.9**
BAGO				IAML		15 11 39.0	
	comp=E,97nm,0.4s						
BAGO				IAML		15 11 39.0	
	comp=N,83nm,0.3s						
AKK1	**Akkuyu-Mersin**	**2.04**	**85**	PN	**Pn**	**15 11 12.4**	**+1.1**
GULN	**MERSIN_Gulnar**	**2.04**	**84**	iP	**Pn**	**15 11 12.4**	**+1.1**
GULN				iS	**Sn**	**15 11 36.6**	**+0.4**
GULN				IAML		15 11 38.0	
	comp=E,229nm,0.4s						
GULN				IAML		15 11 39.0	
	comp=N,287nm,0.2s						
AKK2	**Akkuyu-Mersin**	**2.04**	**85**	PN	**Pn**	**15 11 12.3**	**+1.0**
AKKU	**Akkuyu-Mersin**	**2.04**	**85**	PN	**Pn**	**15 11 12.4**	**+1.0**
TEPK	**Tepekoy-MERSIN**	**2.05**	**83**	PN	**Pn**	**15 11 12.6**	**+1.1**
KMER	**Konya-Meram**	**2.07**	**31**	iP	**Pn**	**15 11 13.2**	**+1.4**
KMER				iS	**Sn**	**15 11 36.1**	**-0.9**
BASM	**Basmaki-Afyon**	**2.07**	**338**	PN	**Pn**	**15 11 13.1**	**+1.2**
DALY	**Dalyan (Mula)**	**2.09**	**294**	PN	**Pn**	**15 11 13.2**	**+1.3**
DALY	**Dalyan (Mula)**	**2.09**	**294**	iP	**Pn**	**15 11 13.2**	**+1.3**
DALY				iS	**Sn**	**15 11 37.2**	**-0.1**
DALY				IAML		15 11 38.0	
	comp=E,290nm,0.5s						
DALY				IAML		15 11 40.0	
	comp=N,406nm,0.3s						
ATHAL	**Athalassa**	**2.11**	**113**	P	**Pn**	**15 11 13.0**	**+0.7**
ATHAL				S	**Sn**	**15 11 37.4**	**-0.4**
ATHAL				AML	AML	15 11 43.2	
	comp=N,7.0nm,0.5s						
ATHAL				AML	AML	15 11 43.2	
	comp=N,7.0nm,0.5s						
YESI	**Yesilovacik-Me**	**2.12**	**84**	PN	**Pn**	**15 11 13.5**	**+1.1**
CSS	**Mathiatis**	**2.14**	**118**	PN	**Pn**	**15 11 12.8**	**+0.1**
CSS	**Mathiatis**	**2.14**	**118**		**Pn**	**15 11 12.7**	**+0.1**
CSS	**Mathiatis**	**2.14**	**118**	P	**Pn**	**15 11 13.0**	**+0.3**
CSS				S	**Sn**	**15 11 37.3**	**-1.3**
CSS				AML	AML	15 11 42.7	
	comp=N,0.7nm,0.3s						
CSS				AML	AML	15 11 42.7	
	comp=N,0.7nm,0.3s						
CSS				AML	AML	15 11 45.7	
	comp=N,0.9nm,0.4s						
CSS				AML	AML	15 11 45.7	
	comp=N,0.9nm,0.4s						
TISA	**Tisan-Mersin**	**2.15**	**85**	PN	**Pn**	**15 11 13.9**	**+1.1**
IKL	**Isikli**	**2.16**	**83**	PN	**Pn**	**15 11 14.1**	**+1.2**
DOGA	**KONYA_Doganhis**	**2.17**	**13**	iP	**Pn**	**15 11 14.5**	**+1.3**
DOGA				IAML		15 11 42.0	
	comp=E,258nm,0.6s						
DOGA				IAML		15 11 43.0	
	comp=N,280nm,0.6s						
ASGA	**Asgata**	**2.17**	**123**	P	**Pn**	**15 11 14.3**	**+1.1**
ASGA				S	**Sn**	**15 11 39.9**	**+0.4**
ASGA				AML	AML	15 11 44.5	
	comp=N,2.9nm,0.2s						
ASGA				AML	AML	15 11 44.5	
	comp=N,2.9nm,0.2s						
ASGA				AML	AML	15 11 51.6	
	comp=N,3.9nm,0.5s						
ASGA				AML	AML	15 11 51.6	
	comp=N,3.9nm,0.5s						
AKIN	**Akıncılar- Kıb**	**2.21**	**116**	PN	**Pn**	**15 11 13.9**	**+0.3**
KEBE	**Keben-Mersin**	**2.21**	**78**	PN	**Pn**	**15 11 15.2**	**+1.5**
KONT	**Konya--Tatoy**	**2.22**	**28**	PN	**Pn**	**15 11 15.0**	**+1.3**
KONT	**Konya--Tatoy**	**2.22**	**28**	iP	**Pn**	**15 11 15.1**	**+1.3**
KONT				IAML		15 11 44.0	
	comp=N,143nm,0.4s						
KONT				IAML		15 11 46.0	
	comp=E,180nm,0.5s						
TAVA	**DENIZLI_Tavas**	**2.25**	**311**	iP	**Pn**	**15 11 15.4**	**+1.3**
TAVA				iS	**Sn**	**15 11 40.1**	**-1.2**
TAVA				IAML		15 11 43.0	
	comp=N,157nm,0.5s						
TAVA				IAML		15 11 45.0	
	comp=E,210nm,0.8s						
YVAC	**Isparta, Yalva**	**2.28**	**4**	iP	**Pn**	**15 11 15.3**	**+0.7**
YVAC				iS	**Sn**	**15 11 41.5**	**-0.5**
YVAC				IAML		15 11 43.0	
	comp=E,110nm,0.4s						
YVAC				IAML		15 11 45.0	
	comp=N,90nm,0.7s						
MVOU	**Mavrovouni**	**2.33**	**114**	P	**Pn**	**15 11 15.2**	**0.0**
ARG	**Arkhangelos**	**2.37**	**276**	P	**Pn**	**15 11 16.6**	**+1.0**
ARG				S	**Sn**	**15 11 42.9**	**-1.0**
	comp=N,770nm,0.3s						
ARG	**Arkhangelos**	**2.37**	**276**	PN	**Pn**	**15 11 16.6**	**+1.0**
KZIL	**AFYON_Kizioren**	**2.37**	**343**	iP	**Pn**	**15 11 16.6**	**+0.8**
KZIL				iS	**Sn**	**15 11 42.5**	**-1.7**
KZIL				IAML		15 11 46.0	
	comp=E,176nm,0.5s						
KZIL				IAML		15 11 46.0	
	comp=N,213nm,0.8s						
SILI	**Silifke-Mersin**	**2.37**	**80**	PN	**Pn**	**15 11 17.0**	**+1.3**
TURN	**Turunc**	**2.38**	**290**	PN	**Pn**	**15 11 17.0**	**+1.2**
TURN	**Turunc**	**2.38**	**290**	iP	**Pn**	**15 11 17.1**	**+1.3**
TURN				iS	**Sn**	**15 11 44.2**	**-0.1**
SLFK	**Silifke-Mersin**	**2.39**	**80**	PN	**Pn**	**15 11 17.0**	**+1.1**
MRSB	**Marmaris-Mugla**	**2.40**	**288**	PN	**Pn**	**15 11 17.2**	**+1.1**
LADK	**Ladik-KONYA**	**2.44**	**25**	PN	**Pn**	**15 11 16.5**	**-0.3**
YER	**Yerkesik**	**2.49**	**298**	P	**Pn**	**15 11 18.9**	**+1.5**
YER				S	**Sn**	**15 11 46.7**	**-0.3**
YER	**Yerkesik**	**2.49**	**298**	PN	**Pn**	**15 11 18.5**	**+1.1**
OSC1	**CSNet OBS 1**	**2.50**	**175**	P	**Pn**	**15 11 18.8**	**+1.3**
OSC1				S	**Sn**	**15 11 47.1**	**-0.1**
MULA	**Mugla, Merkez-**	**2.52**	**301**	iP	**Pn**	**15 11 19.1**	**+1.3**
MULA				IAML		15 11 48.0	
	comp=N,169nm,0.5s						
MULA				IAML		15 11 51.0	
	comp=E,302nm,0.3s						
KIZK	**Mersin**	**2.56**	**78**	PN	**Pn**	**15 11 19.6**	**+1.4**
KIZK	**Mersin**	**2.56**	**78**	iP	**Pn**	**15 11 19.6**	**+1.4**
KIZK				IAML		15 11 53.0	
	comp=E,198nm,0.5s						
KIZK				IAML		15 12 02.0	
	comp=N,198nm,0.3s						
SHUT	**Suhut-Afyon**	**2.58**	**352**	PN	**Pn**	**15 11 19.8**	**+1.2**
EREN	**Erenkoy**	**2.59**	**99**	PN	**Pn**	**15 11 19.6**	**+0.9**
EREN	**Erenkoy**	**2.59**	**99**	iP	**Pn**	**15 11 19.1**	**+0.4**
EREN				iS	**Sn**	**15 11 49.9**	**+0.5**
EREN				IAML		15 11 51.0	
	comp=E,374nm,0.5s						
EREN				IAML		15 11 51.0	
	comp=N,341nm,0.6s						
KHL	**Karahalli**	**2.62**	**333**	PN	**Pn**	**15 11 20.2**	**+1.1**
KDHN	**Kadinhani**	**2.66**	**19**	iP	**Pn**	**15 11 20.2**	**+0.4**
KDHN				IAML		15 11 50.0	
	comp=N,165nm,0.5s						
KDHN				IAML		15 11 54.0	
	comp=E,100nm,0.6s						
KHAL	**Karahalli**	**2.67**	**333**	iP	**Pn**	**15 11 20.4**	**+0.6**
KHAL				iS	**Sn**	**15 11 49.5**	**-1.9**
KHAL				IAML		15 11 52.0	
	comp=E,255nm,0.3s						
KHAL				IAML		15 11 52.0	
	comp=N,160nm,0.3s						
ALIN	**Konya, Altinte**	**2.73**	**32**	iP	**Pn**	**15 11 21.6**	**+1.0**
ALIN				IAML		15 11 52.0	
	comp=E,73nm,0.4s						
ALIN				IAML		15 11 54.0	
	comp=N,71nm,0.5s						
DATC	**Datca-Mugla**	**2.83**	**287**	PN	**Pn**	**15 11 22.9**	**+1.1**
AFYO	**Afyonkarahisar**	**2.85**	**348**	iP	**Pn**	**15 11 23.5**	**+1.3**
AFYO				iS	**Sn**	**15 11 54.1**	**-1.5**
AFYO				IAML		15 12 01.0	
	comp=N,256nm,0.7s						
AFYO				IAML		15 12 08.0	
	comp=E,201nm,0.7s						
KERG	**Konya-Eregli**	**2.86**	**59**	iP	**Pn**	**15 11 23.5**	**+1.2**
KERG				IAML		15 11 58.0	
	comp=E,355nm,0.4s						
KERG				IAML		15 12 09.0	
	comp=N,302nm,0.4s						
MLSB	**Milas**	**2.92**	**297**	PN	**Pn**	**15 11 23.9**	**+0.8**
SULT	**Sultanhani-AKS**	**2.96**	**41**	PN	**Pn**	**15 11 24.8**	**+1.1**
BDRM	**Kayabasi**	**3.08**	**291**	iP	**Pn**	**15 11 26.6**	**+1.3**
BDRM				iS	**Sn**	**15 12 00.1**	**-1.0**
BDRM				IAML		15 12 02.0	
	comp=N,678nm,0.4s						
BDRM				IAML		15 12 05.0	
	comp=E,360nm,0.3s						
OSC2	**CSNet OBS 4**	**3.09**	**160**	P	**Pn**	**15 11 25.9**	**+0.6**
OSC2				S	**Sn**	**15 12 01.5**	**+0.2**
KULA	**Kula-Manisa**	**3.15**	**324**	P	**Pn**	**15 11 26.4**	**+0.2**
KULA				S	**Sn**	**15 12 01.1**	**-1.7**
KULA	**Kula-Manisa**	**3.15**	**324**	PN	**Pn**	**15 11 26.7**	**+0.5**
MANT	**Manisa**	**3.18**	**322**	iP	**Pn**	**15 11 26.7**	**-0.1**
MANT				iS	**Sn**	**15 11 59.1**	**-4.7**
MANT				IAML		15 12 03.0	
	comp=E,100nm,0.4s						
MANT				IAML		15 12 03.0	
	comp=N,167nm,0.3s						
MANT	**Manisa**	**3.18**	**322**		**Pn**	**15 11 27.2**	**+0.4**
KARP	**Karpathos**	**3.18**	**263**	P	**Pn**	**15 11 28.0**	**+1.3**
KARP				S	**Sn**	**15 12 04.0**	**+0.4**
	comp=N,1μm,0.3s						
KARP	**Karpathos**	**3.18**	**263**	PN	**Pn**	**15 11 27.5**	**+0.9**
KARP	**Karpathos**	**3.18**	**263**		**Pn**	**15 11 27.9**	**+1.3**
BODT	**Bodrum**	**3.18**	**291**	P	**Pn**	**15 11 26.9**	**+0.3**
BODT				S	**Sn**	**15 12 02.9**	**-0.7**
BODT	**Bodrum**	**3.18**	**291**	PN	**Pn**	**15 11 26.8**	**+0.2**
DED	**Mersin**	**3.18**	**71**	iP	**Pn**	**15 11 27.8**	**+1.2**
DED				IAML		15 12 06.0	
	comp=E,131nm,0.2s						
DED				IAML		15 12 11.0	
	comp=N,156nm,0.4s						
YKAV	**Yalikavak-Bodr**	**3.23**	**292**	PN	**Pn**	**15 11 28.2**	**+1.0**
GULE	**Gulek**	**3.27**	**66**	iP	**Pn**	**15 11 30.4**	**+2.4**
GULE				IAML		15 12 11.0	
	comp=N,448nm,0.5s						
GULE				IAML		15 12 14.0	

	comp=E,387nm,0.4s						
GEDZ	Gediz	3.31	337	PN	Pn	15 11 29.5	+1.2
GDZ	Gediz	3.32	339	*i* P	Pn	15 11 28.0	-0.6
GDZ				*i* S	Sn	15 12 04.8	-2.4
GDZ				IAML		15 12 07.0	
	comp=E,26nm,0.6s						
GDZ				IAML		15 12 08.0	
	comp=N,26nm,0.6s						
SHAP	Saphane-Kutahy	3.35	335	PN	Pn	15 11 29.9	+1.0
CIFT	Cifteler, Eski	3.36	0	PN	Pn	15 11 29.6	+0.5
CIFT	Cifteler, Eski	3.36	0	*i* P	Pn	15 11 29.5	+0.5
DDIM	Aydin, Didim	3.38	297	*i* P	Pn	15 11 29.4	+0.1
AKSY	AKSARAY - Alti	3.43	39	*i* P	Pn	15 11 31.1	+1.1
AUSIV	SIVRIHISAR	3.46	7	PN	Pn	15 11 30.8	+0.3
AUSIV	SIVRIHISAR	3.46	7	*i* P	Pn	15 11 30.8	+0.3
AUSIV				*i* S	Sn	15 12 07.4	-3.1
SVRH	Sivrihisar-ESK	3.47	6	PN	Pn	15 11 30.8	+0.3
SIMA	Simav-Kutahya	3.49	333	PN	Pn	15 11 30.2	-0.6
GCAM	G?zelcaml?	3.49	300	*i* P	Pn	15 11 31.0	+0.3
KKUL	Konya-Kulu	3.50	25	*i* P	Pn	15 11 32.1	+1.0
KKUL				IAML		15 12 13.0	
	comp=N,30nm,0.4s						
KKUL				IAML		15 12 37.0	
	comp=E,36nm,0.6s						
SGAZ	Eskisehir, Sey	3.53	358	*i* P	Pn	15 11 31.6	+0.3
SGAZ				IAML		15 12 11.0	
	comp=E,65nm,0.5s						
SGAZ				IAML		15 12 12.0	
	comp=N,69nm,0.4s						
DEMI	Demirci	3.56	329	*i* P	Pn	15 11 32.1	+0.4
DEMI				IAML		15 12 12.0	
	comp=N,70nm,0.3s						
DEMI				IAML		15 12 14.0	
	comp=E,115nm,0.3s						
ANDZ	Kutahya, Merke	3.62	346	*i* P	Pn	15 11 33.2	+0.6
ANDZ				*i* S	Sn	15 12 13.3	-1.0
SMG	Samos	3.77	298	P	Pn	15 11 34.9	+0.3
SMG				S	Sn	15 12 16.8	-1.2
	comp=E,572nm,0.4s						
AKHS	Akhisar	3.85	319	*i* P	Pn	15 11 36.0	+0.3
KIRS	Kırehir-Merke	3.88	35	*i* P	Pn	15 11 37.0	+0.9
KIRS				IAML		15 12 22.0	
	comp=N,13nm,0.5s						
KIRS				IAML		15 12 42.0	
	comp=E,17nm,2.1s						
AUMIH	MIHALICIK	3.88	5	*i* P	Pn	15 11 36.8	+0.6
BORA	Eskisehir	3.90	353	*i* P	Pn	15 11 36.8	+0.3
BORA				IAML		15 12 20.0	
	comp=E,17nm,0.3s						
BORA				IAML		15 12 22.0	
	comp=N,9.6nm,0.3s						
DURS	Dursunbey	4.13	331	*i* P	Pn	15 11 39.9	+0.4
BRTR	Keskin Array B	4.25	28	P	Pn	15 11 41.8	+0.5
	comp=N,6.2nm,0.3s,baz=217,slow=15,SNR=98						
BRTR				S	Sn	15 12 27.9	-1.9
	comp=N,5.9nm,0.3s,baz=200,slow=24,SNR=15						
BR131	Keskin Array S	4.25	28		Pn	15 11 41.7	+0.5
BHL	Bhannes	4.33	117	*e*P	Pn	15 11 42.0	-0.3
DQRL	Deir Qamar	4.38	120	*e*P	Pn	15 11 42.6	-0.3
HWQ	Hawqa	4.38	112	*e*P	Pn	15 11 43.5	+0.6
KIBS	BOLU	4.46	8	*i* P	Pn	15 11 44.8	+0.7
MDUB	Mudurnu	4.47	2		Pn	15 11 42.8	-1.4
NPS	Neapolis	4.48	262	P	Pn	15 11 45.5	+1.3
GEYV	SAKARYA_Geyve	4.52	353	*i* P	Pn	15 11 45.2	+0.5
SANT	Santorini	4.53	276	P	Pn	15 11 45.8	+1.0
QRWL	Qaraoun	4.54	121	*e*P	Pn	15 11 45.5	+0.4
THR3	Thira Island,	4.57	277	P	Pn	15 11 46.5	+1.0
DELI	KIRIKKALE	4.60	29	*i* P	Pn	15 11 46.5	+0.6
CMDR	Camlidere-ANKA	4.63	14	*i* P	Pn	15 11 47.0	+0.6
RCY	Rachaya	4.67	121	*e*P	Pn	15 11 47.8	+0.8
MMAI	Mount Meron Ar	4.67	128	P	Pn	15 11 47.9	+1.0
	comp=N,30nm,0.3s,baz=309,slow=12,SNR=240						
MMAI				S	Sn	15 12 38.7	-1.3
	comp=N,119nm,0.3s,baz=314,slow=14,SNR=5.9						
BCAM	Yenicaga	4.88	9	*i* P	Pn	15 11 50.0	+0.3
IDI	Anoyia	5.05	264	P	Pn	15 11 52.7	+0.6
	comp=N,17nm,0.3s,baz=98,slow=11,SNR=19						
IDI				S	Sn	15 12 47.1	-2.1
	comp=N,13nm,0.3s,baz=259,slow=23,SNR=8.5						
GAZ	Gaziantep	5.11	75		Pn	15 11 53.3	+0.5
ILGA	Ilgaz	5.47	22	Pn	Pn	15 11 57.8	-0.1
KOT	Kottamia	6.09	173	P	Pn	15 12 06.9	+0.8
	baz=171						
HHAG	Hagoal	6.09	171	P	Pn	15 12 06.9	+0.6
	baz=169						
HHAG				S	Sn	15 13 11.7	-2.9
	baz=169						
HNAT	Natroun	6.36	183	P	Pn	15 12 06.5	-3.3
	baz=182						
HSAF	As Saff	6.38	176	P	Pn	15 12 10.7	+0.6
	baz=174						
GLL	Jalalah	6.43	175	P	Pn	15 12 11.4	+0.6
	baz=173						
ZNM	Zenema	6.78	166	P	Pn	15 12 16.8	+1.2
	baz=164						
ZAF	Zafarana	6.82	169	P	Pn	15 12 16.8	+0.7
	baz=167						
EIL	Elat	7.12	151	P	Pn	15 12 21.0	+0.8
	comp=N,6.2nm,0.3s,baz=298,slow=3.8,SNR=70						
EIL				S	Sn	15 13 37.5	-2.0
	comp=N,6.6nm,0.3s,baz=60,slow=13,SNR=9.2						
NBNS	Bani Suef	7.36	178	P	Pn	15 12 23.9	+0.5
	baz=176						
ITM	Ithomi	7.42	282	Pn	Pn	15 12 25.6	+1.4
SWA2		8.21	216	P	Pn	15 12 35.4	+0.3
	baz=217						
TAMRE	El Minia	8.29	181	P	Pn	15 12 36.5	+0.4
	baz=179						
HFRF	Wahat Farafira	9.12	195	P	Pn	15 12 47.7	+0.2
	baz=195						
HFRF				S	Sn	15 14 22.0	-6.5
	baz=195						
DIVS	Divibare	11.70	317	Pn	Pn	15 13 19.5	-3.0
RAFF	Raffo Rosso	13.45	280	Pn	Pn	15 13 44.8	-1.1
KOLS	Kolonicke sedl	14.44	336	*e*P	P	15 14 05.2	+2.3
AKASG	Malin Array Be	14.76	355	P	P	15 14 05.5	-0.9
	comp=N,2.3nm,0.3s,baz=173,slow=9.2,SNR=21						
AKBB	Malin Array Si	14.76	355	P	P	15 14 05.7	-0.7
KEST	Kesra	17.58	276	P	P	15 14 36.6	-1.3
KEST				IAmb	IAmb	15 14 37.5	
	comp=Z,17nm,1.2s						
GERES	GERESS Array B	18.07	321	P	Pn	15 14 45.1	+1.2
	comp=Z,0.2nm,0.3s,baz=122,slow=9.3,SNR=5.9						
KHC	Kasperske Hory	18.32	321	*e*P	Pn	15 14 47.0	+0.3
AKTO	Aktyubinsk	24.22	45	P	P	15 15 47.3	+0.3
	comp=Z,3.4nm,0.6s,baz=255,slow=8.3,SNR=16						
ABKAR	Akbulak array	24.88	49	P	P	15 15 53.9	+0.8
KIRV	Kirov	25.64	22	P	P	15 15 59.0	-0.7
	comp=Z,7.2nm,0.4s,baz=251,slow=3.2,SNR=6.2						
FINES	FINESS Array B	25.66	354	P	P	15 15 59.3	-0.6
	comp=Z,2.8nm,0.4s,baz=158,slow=11,SNR=36						
FIA1	FINESS Array S	25.66	355	P	P	15 15 59.5	-0.5
HFS	Hagfors	26.62	341	P	P	15 16 10.8	+2.2
	comp=Z,0.7nm,0.4s,baz=126,slow=12,SNR=5.7						
ARU	Arti	27.62	34	P	P	15 16 17.7	+0.1
	comp=Z,1.1nm,0.3s,baz=259,slow=16,SNR=4.2						
ESDC	Sonseca Array	27.77	288	P	P	15 16 20.8	+1.6
	comp=Z,0.6nm,0.7s,baz=91,slow=9.4,SNR=3.0						
NOA	NORSAR Array B	28.06	339	P	P	15 16 23.3	+1.8
	comp=Z,0.9nm,0.9s,baz=152,slow=10,SNR=3.8						
MDT	Midelt	29.48	274	P	P	15 16 36.9	+2.4
	comp=Z,3.3nm,0.8s,baz=123,slow=3.8,SNR=4.8						
KBL	Kabul	30.94	81	P	P	15 16 43.4	-4.2
KBL				IAmb	IAmb	15 16 45.2	
	comp=Z,5.1nm,1.5s						
ARCES	ARCESS Array B	33.73	357	P	P	15 17 10.9	-0.3
	comp=Z,1.5nm,0.5s,baz=168,slow=8.1,SNR=33						
TORD	Torodi Ar. Bea	34.83	237	P	P	15 17 23.4	+2.0
	comp=Z,1.4nm,0.9s,baz=33,slow=9.0,SNR=4.0						
MK31	Makanchi Array	39.30	58	P	P	15 17 58.8	-0.1
MK31				IAmb	IAmb	15 17 59.9	
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	39.30	58	P	P	15 17 59.5	+0.6
	comp=Z,0.8nm,0.6s,baz=270,slow=8.8,SNR=13						
MKAR				LR	LR	15 38 18.1	
	comp=Z,96nm,18.2s,baz=200,slow=42						
ZALV	Zalesovo Beam	40.96	47	P	P	15 18 12.4	-0.1
	comp=Z,1.0nm,0.3s,baz=266,slow=9.0,SNR=5.6						
CMAR	Chiang Mai Arr	61.73	87	P	P	15 20 48.7	+0.7
	comp=Z,0.3nm,0.3s,baz=291,slow=8.2,SNR=2.4						
YKA	Yellowknife Ar	78.03	344	P	P	15 22 27.1	-0.1
	comp=Z,0.2nm,0.8s,baz=26,slow=5.8,SNR=2.8						

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*IDC **23** 15:18:33.5±0.8, 15°.25S×67°.17E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx3.9/36, mbtmp4.0/11, MS4.1/26, Ms1 4.1/26, ms1mx4.0/37, Error ellipse: s-maj=29.0km s-min=20.0km az=60.0*

*NEIC **23** 15:18:35.1±1.2, 15°.2S±0°.1×67°.3E±0°.1, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=29.4km s-min=7.9km az=213.0*

*GCMT **23** 15:18:38.1±0.2, 15°.38S±0°.02×67°.21E±0°.02, h12^{km}, MW5.0/100, Moment Tensor Solution. s34,c39; s100,c141; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.30±.08; M$_{\theta\theta}$1.30±.09; M$_{\phi\phi}$2.00±.09; M$_{r\theta}$-1.77±.37; M$_{\theta\phi}$-1.29±.07; M$_{\phi r}$0.91±.32; Best double couple: M$_0$3.70900×10^{16} NP1:φ$_s$332.00000°, δ31.00000°, λ-71.00000°. NP2:φ$_s$130.00000°, δ61.00000°, λ-101.00000°. Principal axes: T 3.4800, Plg15.0000°, Azm228.0000°; N 0.4580, Plg10.0000°, Azm136.0000°; P -3.9380, Plg72.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 15:18:35.2±0.8**, 15°.3S**±0°.1×**67°.3E**±0°.2**, h10**^{km}**, n60, σ1^s.37**/43**, mb4.4**/20**, MS4.2**/26**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	9.15	35	T	T	15 30 14.6	
	baz=214,slow=76,SNR=586						
H08S2	Diego Garcia H	9.16	35	T	T	15 30 15.4	
	baz=214,slow=76,SNR=854						
H08S3	Diego Garcia H	9.17	35	T	T	15 30 16.1	
	baz=214,slow=76,SNR=1482						
OPO	Ambohidratompo	19.47	257	LR	LR	15 28 48.2	
	comp=Z,218nm,18.3s,baz=246,slow=32						
PALK	Pallekele	26.07	32	LR	LR	15 32 46.7	
	comp=Z,373nm,18.2s,baz=2.2,slow=33						
KMBO	Kilima Mbogo	32.78	293	LR	LR	15 36 07.4	
	comp=Z,268nm,18.8s,baz=97,slow=32						
BOSA	Boshof	40.94	244	LR	LR	15 40 25.1	
	comp=Z,553nm,19.0s,baz=90,slow=32						
RAYN	Ar Rayn	44.03	331	P	P	15 26 42.5	-0.8
CMAR	Chiang Mai Arr	45.80	44	P	P	15 26 58.9	+1.4
	1.7nm,1.0s,baz=234,slow=9.0,SNR=11						
CMAR				LR	LR	15 44 06.5	
	comp=Z,600nm,19.9s,baz=243,slow=33						
H01W3	Cape Leeuwin H	46.26	124	T	T	16 16 31.4	
	baz=282,slow=75,SNR=37						
H01W2	Cape Leeuwin H	46.27	124	T	T	16 16 30.7	
	baz=282,slow=75,SNR=42						
H01W1	Cape Leeuwin H	46.28	124	T	T	16 16 31.9	
	baz=282,slow=75,SNR=39						
NIL	Nilore	48.99	7	P	P	15 27 20.0	-2.0
NIL				IAmb	IAmb	15 27 24.5	
	comp=Z,3.6nm,0.8s						
KBL	Kabul	49.57	2	P	P	15 27 27.3	+0.6
KAPI	Kappang	52.55	85	LR	LR	15 46 39.6	
	comp=Z,354nm,21.7s,baz=236,slow=32						
GEYT	Alibeck	53.61	351	LR	LR	15 48 16.1	
	comp=Z,134nm,21.4s,baz=45,slow=33						
FITZ	Fitzroy Crossi	55.81	102	LR	LR	15 48 11.9	
	comp=Z,419nm,21.2s,baz=250,slow=32						
FORT	Forrest	57.42	117	P	P	15 28 22.8	-1.6
AAK	Ala-Archa	58.01	6	LR	LR	15 52 53.5	
	comp=Z,203nm,19.0s,baz=198,slow=36						
AAK	Ala-Archa	58.01	6	P	P	15 28 27.7	-0.6
KK31	Karatay Array	58.17	3	P	P	15 28 29.9	+0.7
KK31				IAmb	IAmb	15 28 30.5	
	comp=Z,5.7nm,1.4s						
KKAR	Karatay Array	58.17	3	P	P	15 28 29.9	+0.7
KKAR				IAmb	IAmb	15 28 30.5	
	comp=Z,5.7nm,1.4s						
TGY	Tagaytay City	60.58	64	LR	LR	15 51 07.6	
	comp=Z,160nm,19.3s,baz=108,slow=32						
KBZ	Khabaz	62.80	340	LR	LR	15 53 30.3	
	comp=Z,88nm,22.0s,baz=152,slow=33						
ASAR	Alice Springs	62.92	109	P	P	15 29 02.6	+0.4
	comp=Z,2.2nm,1.0s,baz=272,slow=5.8,SNR=10						
ASAR				LR	LR	15 54 06.4	
	comp=Z,358nm,18.2s,baz=250,slow=34						
AS31	Alice Springs	62.92	109	P	P	15 29 03.4	+1.1
BR131	Keskin Array S	63.05	331	P	P	15 29 02.8	0.0
BRTR	Keskin Array B	63.05	331	P	P	15 29 02.5	-0.3
	comp=Z,0.9nm,0.8s,baz=169,slow=6.9,SNR=5.8						
BRTR				LR	LR	15 55 43.6	
	comp=Z,52nm,18.5s,baz=110,slow=35						
KIV	Kislovodsk	63.07	340	P	P	15 29 02.7	-0.1
MAKZ	Makanchi	63.20	11	P	P	15 29 02.9	-0.6
MK31	Makanchi Array	63.25	12	P	P	15 29 04.0	+0.2
MK31				IAmb	IAmb	15 29 05.1	
	comp=Z,4.1nm,1.3s						
MKAR	Makanchi Array	63.25	12	P	P	15 29 03.2	-0.7
	comp=Z,2.3nm,0.9s,baz=208,slow=6.9,SNR=17						
MKAR				LR	LR	15 56 36.5	
	comp=Z,140nm,18.1s,baz=180,slow=36						
WRA	Warramunga Arr	63.75	105	P	P	15 29 07.8	0.0
	comp=Z,2.2nm,0.9s,baz=271,slow=6.1,SNR=10.0						
WRA				LR	LR	15 52 59.0	
	comp=Z,164nm,21.6s,baz=275,slow=32						
WB2	Warramunga Arr	63.76	105	P	P	15 29 07.9	0.0
WRAB	Tennant Creek	63.76	105	P	P	15 29 07.5	-0.3
ABKAR	Akbulak array	64.57	355	P	P	15 29 10.9	-1.5
ABKAR				IAmb	IAmb	15 29 16.9	
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	66.46	8	P	P	15 29 23.7	-0.9
KURK				IAmb	IAmb	15 29 26.1	
	comp=Z,4.1nm,1.2s						
BRVK	Borovoye	68.10	2	P	P	15 29 34.4	-0.6
BRVK				IAmb	IAmb	15 29 36.8	
	comp=Z,3.6nm,0.9s						
STKA	Stephens Creek	68.95	119	LR	LR	15 54 42.1	
	comp=Z,210nm,21.6s,baz=215,slow=31						
ZAA0	Zalesovo Array	70.57	11	P	P	15 29 49.7	-0.6
ZAA0				IAmb	IAmb	15 29 51.8	
	comp=Z,3.7nm,0.9s						
ZALV	Zalesovo Beam	70.57	11	P	P	15 29 49.6	-0.6
	comp=Z,3.7nm,0.9s,baz=210,slow=6.1,SNR=14						
ZALV				LR	LR	16 01 01.9	
	comp=Z,147nm,18.3s,baz=208,slow=36						
TORD	Torodi Ar. Bea	70.74	290	LR	LR	15 58 53.7	
	comp=Z,106nm,20.1s,baz=100,slow=34						
SONM	Songino Array	71.89	27	P	P	15 29 58.7	+0.2
	comp=Z,2.8nm,0.9s,baz=216,slow=5.6,SNR=13						
SONM				LR	LR	16 00 49.2	
	comp=Z,188nm,20.0s,baz=202,slow=35						
AKASG	Malin Array Be	73.66	336	P	P	15 30 08.0	-0.8
	comp=Z,1.0nm,0.8s,baz=136,slow=4.7,SNR=1.9						
KEST	Kesra	74.63	314	LR	LR	16 02 01.3	
	comp=Z,121nm,21.4s,baz=317,slow=35						
DBIC	Dimbokro	74.67	281	LR	LR	16 02 07.6	
	comp=Z,102nm,18.4s,baz=114,slow=35						
QSPA	South Pole Qui	74.81	180	P	P	15 30 16.1	+0.5
	comp=Z,2.2nm,1.0s,baz=342,slow=0.4,SNR=9.5						
QSPA	South Pole Qui	74.81	180	P	P	15 30 15.8	+0.2
QSPA				IAmb	IAmb	15 30 22.9	
	comp=Z,9.5nm,1.4s						
MNK	Minsk	77.14	338	*i* P	P	15 30 29.0	+0.2
	comp=E,2.0nm,1.0s						
MNK				*i* P	P	15 30 29.0	+0.2
	comp=N,10.0nm,0.7s						
MNK				*i* P	P	15 30 29.0	+0.2
	comp=Z,15nm,0.8s						
MNK				*i* PcP	PcP	15 30 39.8	+0.3
MNK				*i* PP	PP	15 33 21.7	-1.1
MNK				*i* PPP	PPP	15 35 08.7	
MNK				*i* S	S	15 40 19.9	+2.1
MNK				*i* ScS	ScS	15 40 52.9	+6.9
MNK				*i* SS	SS	15 45 15.0	-0.9
MNK				*i* SSS	SSS	15 48 38.7	
MNK				*i* LQ	LQ	15 59 20.0	
MNK				*i* LR	LR	16 04 17.2	
MNK				*i* LRM	MLR	16 06 46.3	
	comp=Z,51nm,17.4s						
MNK				*i* LRM	MLR	16 06 54.2	
	comp=E,4.0nm,14.4s						
MNK				*i* LRM	MLR	16 07 05.1	
	comp=N,99nm,18.1s						
KSRS	Korea Array	77.43	45	LR	LR	16 06 24.0	
	comp=N,92nm,18.1s,baz=228,slow=37						
KLMR	Klimovskoe	79.05	347	*e*P	P	15 30 38.0	-1.2
KLMR				AMP		15 30 40.4	
	comp=Z,20nm,1.5s						
GERES	GERESS Array B	79.50	327	P	P	15 30 41.8	-0.4
	comp=Z,0.3nm,0.7s,baz=126,slow=3.4,SNR=4.1						
USRK	Ussuriysk Ar.	83.43	41	LR	LR	16 08 58.8	
	comp=Z,77nm,18.7s,baz=213,slow=36						
MJAR	Matsushiro Arr	84.35	50	LR	LR	16 09 31.0	
	comp=Z,85nm,18.9s,baz=280,slow=36						
ESDC	Sonseca Array	85.79	313	P	P	15 31 15.3	+0.3
	comp=Z,1.3nm,0.9s,baz=90,slow=4.4,SNR=4.2						
ESDC				LR	LR	16 11 21.4	
	comp=Z,51nm,18.2s,baz=155,slow=37						
ARCES	ARCESS Array B	89.53	346	LR	LR	16 11 07.3	
	comp=Z,57nm,20.8s,baz=350,slow=35						
ILAR	Eielson Array	125.37	17	PKP	PKPdf	15 37 35.0	-0.9
	comp=Z,0.3nm,0.7s,baz=321,slow=2.7,SNR=4.1						
YKA	Yellowknife Ar	132.82	1	PKP	PKPdf	15 37 50.4	+0.3
	comp=Z,0.3nm,0.7s,baz=7.7,slow=2.2,SNR=3.9						
PDAR	Pinedale Array	152.47	355	PKPbc	PKPbc	15 38 31.6	-0.7
	comp=Z,1.1nm,0.7s,baz=18,slow=1.2,SNR=9.5						
NVAR	Mina Array Bea	156.42	11	PKPab	PKPab	15 38 59.5	+0.3
	comp=Z,0.7nm,0.7s,baz=356,slow=2.2,SNR=6.0						

TAP 23 15:42:16.5, 23°.07N×121°.34E, h22^{km}±1^{km}**, ML1.1, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FULB	Fuli	0.14	344	*e*S	Sb	15 42 28.3	+1.9
	baz=343						
LONT	Longtian	0.25	230	*e*P	Pb	15 42 23.4	+0.8
	baz=230						
LONT				*e*S	Sb	15 42 28.1	+1.2
	baz=230						
EYUL	Yuli	0.28	357	*e*S	Sn	15 42 31.9	+0.9
	baz=356						
TWF1	Yuli	0.29	353	*e*S	Sb	15 42 29.0	+1.3
	baz=354						
ELDTW	Lidau	0.32	293	*e*P	Pb	15 42 24.3	+0.6
	baz=292						
ELDTW				*e*S	Sb	15 42 29.3	+0.8
	baz=292						
YULB	Yu-li	0.33	354	P	Pb	15 42 24.2	+0.5
	baz=353						
YULB				*e*S	Sb	15 42 29.2	+0.6
	baz=353						
TWGBT	Beinan	0.34	224	*e*P	Pb	15 42 24.1	+0.2
	baz=223						
TWGBT				*e*S	Sb	15 42 29.4	+0.5
	baz=223						
LDUT	Ludao	0.41	163	*e*S	Sb	15 42 32.4	+1.6
	baz=162						
HGSD	Ruisui	0.43	11	*e*S	Sn	15 42 34.3	-0.4
	baz=10.0						
EHY	Hungye	0.44	358	*e*P	Pb	15 42 25.6	+0.1
	baz=359						
EHY				*e*S	Sb	15 42 32.1	+0.4
	baz=359						
STYT	Tauyuan	0.54	280	*e*S	Sb	15 42 35.6	+0.7
	baz=280						
ALS	Alishan	0.66	312	*e*S	Sn	15 42 39.9	-0.8
	baz=312						
WTP	Ta-pu	0.69	285	*e*P	Pn	15 42 30.6	-0.4
	baz=285						
WTP				*e*S	Sn	15 42 40.3	-0.8
	baz=285						
TPUB	Ta-pu	0.69	290	*e*P	Pn	15 42 31.0	0.0
	baz=289						
TPUB				*e*S	Sn	15 42 40.8	-0.3
	baz=289						
SSD	Sandimen	0.72	244	*e*S	Sn	15 42 41.1	-0.8
	baz=243						

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*IDC **23** 15:42:15.7±8.5, 24°.49N×124°.48E, h94^{km}±49^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.3/36, mbtmp4.0/8, Error ellipse: s-maj=109.1km s-min=31.5km az=8.0*

*JMA **23** 15:42:24.7±0.2, 25°.48N×124°.59E, h114^{km}±5^{km}, M3.8*

ISC 23 15:42:23.8±0.8**, 25°.5N**±0°.1×**124°.65E**±0°.07**, h126**^{km}±13^{km}**, n22, σ0^s.68**/36**, mb3.8**/6**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.76	135	P	Pn	15 42 44.7	+0.5
JIKM				S	Sn	15 42 59.7	+0.1
JIRB	Irabujima	0.79	143	P	Pn	15 42 44.6	+0.2
JIRB				S	Sn	15 42 59.3	-0.7
JTJ	Tarama	0.82	177	P	Pn	15 42 44.9	+0.2
JTJ				S	Sn	15 42 59.9	-0.5
JISG	Ishigakijimahi	0.92	200	P	Pn	15 42 45.7	+0.1
JISG				S	Sn	15 43 01.1	-1.0
JMJ2	Miyako jima3	0.94	139	P	Pn	15 42 46.4	+0.6
JMJ2				S	Sn	15 43 02.7	+0.3
JOGS	Gusukube	0.98	135	P	Pn	15 42 46.9	+0.8
JOGS				S	Sn	15 43 03.3	+0.3
JIJ	Ishigaki jima	1.19	203	P	Pn	15 42 47.9	-0.3
JIJ				S	Sn	15 43 05.0	-1.7
JKRS	Kuro-shima	1.35	206	P	Pn	15 42 49.9	0.0
JKRS				S	Sn	15 43 09.0	-0.8
IRIF	Iriomote-Funau	1.40	217	P	Pn	15 42 50.4	-0.1
IRIF				S	Sn	15 43 10.0	-0.7
HATJ	Hateruma jima	1.60	209	P	Pn	15 42 52.7	0.0
HATJ				S	Sn	15 43 14.2	-0.5
YOJ	Yonaguni jima	1.79	237	P	Pn	15 42 55.6	+0.6
YOJ				*e*S	Sn	15 43 18.6	-0.2
JYNG	Yonagunijimaku	1.85	237	P	Pn	15 42 56.3	+0.6
JYNG				*e*S	Sn	15 43 19.6	-0.4
JKE	Kume jima 2	2.11	65	P	Pn	15 42 59.0	+0.2
JKE				*e*S	Sn	15 43 26.1	+0.4
JAGN	Aguni-jima	2.59	64	P	Pn	15 43 05.2	+0.3
JOW	Kunigami	3.53	66	P	Pn	15 43 16.2	-1.0
	50nm,0.3s,baz=158,slow=9.1,SNR=260						
JOW				S	Sn	15 43 56.9	-1.7
	baz=131,slow=20,SNR=1.0						
KSRS	Korea Array	12.28	12	P	P	15 45 21.3	0.0
	0.3nm,0.3s,baz=197,slow=11,SNR=7.1						
SONM	Songino Array	26.57	332	P	P	15 47 51.2	+1.0
	0.4nm,0.5s,baz=153,slow=11,SNR=2.8						
MKAR	Makanchi Array	39.68	314	P	P	15 49 43.7	+0.1
	1.6nm,0.5s,baz=99,slow=9.7,SNR=28						
ZALV	Zalesovo Beam	40.96	325	P	P	15 49 53.3	-0.6
	0.7nm,0.4s,baz=122,slow=9.7,SNR=5.2						
KURBB	Kurchatov Arra	43.22	318	P	P	15 50 12.4	+0.1
	0.4nm,0.4s,baz=102,slow=9.1,SNR=7.5						
FINES	FINESS Array B	71.93	330	P	P	15 53 32.7	-0.4
	1.9nm,0.9s,baz=95,slow=4.7,SNR=3.7						
YKA	Yellowknife Ar	80.55	24	P	P	15 54 22.5	+0.6
	0.9nm,0.5s,baz=308,slow=4.7,SNR=18						

WEL 23 15:43:35.9±1.5**, 31°S**±28°×**17°9E**±5°0**, h332**^{km}±77^{km}**, M4.2**/11**, mB4.3**/3**, MLv4.2**/11**, Mw(mB)3.5**/3**, Error ellipse: s-maj=0.1km s-min=0.0km az=109.1, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	6.57	189	P	Pn	15 45 12.6	-0.1
HAZ				S	S	15 46 31.7	+0.5
PKGZ	Pakihiroa	6.67	187	P	Pn	15 45 14.8	+0.9
RUGZ	Raukumara Rang	6.79	190	P	Pn	15 45 15.4	0.0
RUGZ				S	S	15 46 35.7	-0.4
PUZ	Puketiti	6.83	186	P	Pn	15 45 15.8	+0.1
PUZ				S	S	15 46 36.2	-0.6
TWGZ	Tauwhareparae	6.96	188	P	Pn	15 45 18.3	+1.0
TWGZ				S	S	15 46 39.9	+0.2
KMRZ	Kaimai	7.07	201	P	Pn	15 45 17.3	-1.3
URZ	Urewera	7.17	193	P	Pn	15 45 19.0	-0.8
URZ				S	S	15 46 46.5	+2.3
MWZ	Matawai	7.17	190	P	Pn	15 45 19.4	-0.5
MWZ				S	S	15 46 44.4	+0.1
CNGZ	Carnagh Statio	7.24	186	P	Pn	15 45 22.1	+1.5
UTU	Utuhina	7.31	199	P	Pn	15 45 21.6	+0.2
RAGZ	Rawiri	7.35	191	P	Pn	15 45 21.9	-0.1
RAGZ				S	S	15 46 49.8	+1.6
MUGZ	Murupara	7.45	194	P	Pn	15 45 22.8	-0.3
RIGZ	Rimuhau	7.51	188	P	Pn	15 45 23.7	-0.1
RTZ	Ruatahuna	7.54	193	P	Pn	15 45 24.2	-0.1
BKZ	Black Stump Fm	8.17	195	P	Pn	15 45 30.7	-1.1
KAHZ	Kahuranaki	8.71	192	P	Pn	15 45 36.1	-2.1
MRZ	Mangatainoka R	9.81	196	P	Pn	15 45 47.8	-3.6

NOU 23 16:00:59.5, 36°.24S×176°.94E, h472^{km}**, MLv4.5, Off E. Coast of N. Island, N.Z., Off east coast of North Island**

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*NOU **23** 16:01:15.3, 37°.26S×176°.53E, h359^{km}, MLv4.2, North Island, New Zealand*

*IDC **23** 16:01:17.3±0.8, 37°.36S×176°.03E, h319^{km}±14^{km}, mb2.9/2,* *mb1 3.3/4, mb1mx3.1/28, mbtmp3.9/4, Error ellipse: s-maj=35.4km s-min=21.1km az=120.0*

*WEL **23** 16:01:17.0, 37°S±5°×17°7E±°, h345^{km}±8^{km}, M3.5/84, MLv3.5/84, Error ellipse: s-maj=0.0km s-min=0.0km az=178.7*

ISC 23 16:01:17.0±1.0**, 37°.41S**±0°.07×**176°.45E**±0°.08**, h341**^{km}±7^{km}**,
n169,** σ**1**^{s}.**31**/176**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYRZ	**Mayor Island**	**0.21**	**309**	P	**Pn**	**16 02 00.3**	**+0.4**
TGRZ	**Tauranga**	**0.35**	**205**	P	**Pn**	**16 02 00.5**	**+0.6**
OPRZ	**Ohinepanea**	**0.44**	**169**	P	**Pn**	**16 02 00.2**	**+0.2**
KMRZ	**Kaimai**	**0.59**	**223**	P	**Pn**	**16 02 01.4**	**+1.0**
MARZ	**Manawahe**	**0.60**	**162**	P	**Pn**	**16 02 01.0**	**+0.5**
MARZ				S	**S**	**16 02 34.4**	**-0.8**
WHRZ	**Whale Island**	**0.61**	**137**	P	**Pn**	**16 02 02.1**	**+1.6**
KARZ	**Kaharoa**	**0.63**	**195**	P	**Pn**	**16 02 01.3**	**+0.8**
OMRZ	**Omania**	**0.69**	**185**	P	**Pn**	**16 02 01.5**	**+0.9**
NGRZ	**Ngongotaha**	**0.72**	**197**	P	**Pn**	**16 02 02.0**	**+1.3**
MKRZ	**Makatiti**	**0.72**	**179**	P	**Pn**	**16 02 02.5**	**+1.7**
EDRZ	**Edgecumbe**	**0.73**	**161**	P	**Pn**	**16 02 01.7**	**+0.8**
UTU	**Utuhina**	**0.79**	**195**	P	**Pn**	**16 02 02.4**	**+1.5**
TOZ	**Tahuroa Road**	**0.81**	**247**	P	**Pn**	**16 02 02.3**	**+1.3**
TARZ	**Mount Tarawera**	**0.82**	**177**	P	**Pn**	**16 02 02.4**	**+1.3**
HLRZ	**Highlands Stat**	**0.84**	**185**	P	**Pn**	**16 02 02.6**	**+1.4**
KUZ	**Kuaotunu**	**0.88**	**319**	P	**Pn**	**16 02 01.2**	**-0.2**
HSRZ	**Hossack Road**	**0.91**	**190**	P	**Pn**	**16 02 02.9**	**+1.5**
RRRZ	**Republican Roa**	**0.93**	**177**	P	**Pn**	**16 02 02.4**	**+0.9**
GRRZ	**Galatos Road**	**0.97**	**196**	P	**Pn**	**16 02 03.1**	**+1.5**
HRRZ	**Handcock Road**	**0.98**	**187**	P	**Pn**	**16 02 02.9**	**+1.2**
URZ	**Urewera**	**0.99**	**148**	P	**Pn**	**16 02 01.7**	**+0.1**
	111nm,0.3s,baz=296,slow=6.1,SNR=1901						
URZ				S	**S**	**16 02 35.5**	**-1.9**
	62nm,0.3s,baz=186,slow=22,SNR=24						
URZ	**Urewera**	**0.99**	**148**	P	**Pn**	**16 02 01.8**	**+0.1**
URZ				S	**S**	**16 02 35.5**	**-1.9**
MKAZ	**Moumakai**	**1.07**	**286**	P	**Pn**	**16 02 02.8**	**+0.7**
PRRZ	**Plateau Road**	**1.08**	**182**	P	**Pn**	**16 02 02.9**	**+0.9**
MUGZ	**Murupara**	**1.09**	**166**	P	**Pn**	**16 02 02.6**	**+0.5**
HAZ	**Te Kaha**	**1.12**	**108**	P	**Pn**	**16 02 01.6**	**-0.5**
HAZ				S	**S**	**16 02 35.2**	**-3.2**
RUGZ	**Raukumara Rang**	**1.12**	**120**	P	**Pn**	**16 02 01.7**	**-0.7**
RUGZ				S	**S**	**16 02 35.2**	**-3.6**
WPRZ	**Whakapapatarin**	**1.13**	**191**	P	**Pn**	**16 02 03.5**	**+1.2**
ALRZ	**Allen Road**	**1.15**	**184**	P	**Pn**	**16 02 03.5**	**+1.2**
TLZ	**Tolley Road**	**1.16**	**218**	P	**Pn**	**16 02 03.5**	**+1.1**
KUTZ	**Kaahu Road**	**1.18**	**204**	P	**Pn**	**16 02 04.1**	**+1.6**
WIAZ	**Waiheke Island**	**1.22**	**300**	P	**Pn**	**16 02 03.1**	**+0.4**
MWZ	**Matawai**	**1.26**	**137**	P	**Pn**	**16 02 03.2**	**+0.3**
MWZ				S	**S**	**16 02 38.2**	**-1.5**
RTZ	**Ruatahuna**	**1.27**	**161**	P	**Pn**	**16 02 03.6**	**+0.6**
ETAZ	**East Tamaki Re**	**1.30**	**290**	P	**Pn**	**16 02 03.8**	**+0.7**
WHTZ	**Whakaora**	**1.31**	**197**	P	**Pn**	**16 02 05.1**	**+1.9**
RAGZ	**Rawiri**	**1.32**	**145**	P	**Pn**	**16 02 04.0**	**+0.7**
PKGZ	**Pakihiroa**	**1.38**	**111**	P	**Pn**	**16 02 03.6**	**+0.1**
MBAZ	**Motutapu North**	**1.40**	**297**	P	**Pn**	**16 02 04.2**	**+0.5**
GRZ	**Great Barrier**	**1.41**	**325**	P	**Pn**	**16 02 03.2**	**-0.6**
WATZ	**Wairara**	**1.41**	**203**	P	**Pn**	**16 02 05.3**	**+1.6**
MRHZ	**Matea Rd**	**1.42**	**181**	P	**Pn**	**16 02 04.7**	**+0.9**
TWGZ	**Tauwhareparae**	**1.44**	**123**	P	**Pn**	**16 02 04.4**	**+0.5**
MTHZ	**Maungataniwha**	**1.47**	**168**	P	**Pn**	**16 02 04.8**	**+0.8**
AWAZ	**Awhitu Peninsu**	**1.48**	**283**	P	**Pn**	**16 02 05.1**	**+1.0**
MXZ	**Matakaoa Point**	**1.49**	**96**	P	**Pn**	**16 02 03.7**	**-0.4**
HATZ	**Hinemaiaia**	**1.50**	**191**	P	**Pn**	**16 02 05.2**	**+1.1**
TKGZ	**Te Karaka**	**1.51**	**133**	P	**Pn**	**16 02 04.7**	**+0.5**
ABAZ	**Army Bay**	**1.53**	**302**	P	**Pn**	**16 02 04.9**	**+0.5**
SNGZ	**Shannon Statio**	**1.54**	**153**	P	**Pn**	**16 02 05.4**	**+1.0**
RATZ	**Rangitukua**	**1.54**	**200**	P	**Pn**	**16 02 05.8**	**+1.4**
WTAZ	**Waiatarua**	**1.57**	**287**	P	**Pn**	**16 02 05.7**	**+1.0**
PUZ	**Puketiti**	**1.58**	**115**	P	**Pn**	**16 02 04.0**	**-0.6**
RAHZ	**Arahi**	**1.58**	**162**	P	**Pn**	**16 02 05.9**	**+1.2**
WMGZ	**Waiomatatini S**	**1.61**	**105**	P	**Pn**	**16 02 04.7**	**-0.1**
RVAZ	**Riverhead Bore**	**1.62**	**293**	P	**Pn**	**16 02 05.2**	**+0.2**
RITZ	**Rihia Road**	**1.63**	**196**	P	**Pn**	**16 02 06.7**	**+1.7**
RIGZ	**Rimuhau**	**1.66**	**142**	P	**Pn**	**16 02 06.0**	**+0.9**
KATZ	**Kakaramea**	**1.67**	**201**	P	**Pn**	**16 02 06.7**	**+1.4**
HIZ	**Hauiti**	**1.67**	**228**	P	**Pn**	**16 02 07.2**	**+2.1**
NMHZ	**Naumai**	**1.70**	**171**	P	**Pn**	**16 02 07.2**	**+1.7**
BKZ	**Black Stump Fm**	**1.75**	**179**	P	**Pn**	**16 02 06.8**	**+1.0**
CNGZ	**Carnagh Statio**	**1.75**	**128**	P	**Pn**	**16 02 06.6**	**+0.9**
WHHZ	**Waihua**	**1.77**	**160**	P	**Pn**	**16 02 07.4**	**+1.6**
KRVZ	**Karewarewa**	**1.79**	**200**	P	**Pn**	**16 02 07.5**	**+1.4**
TMVZ	**Te Maari**	**1.80**	**199**	P	**Pn**	**16 02 07.5**	**+1.4**
ETVZ	**East Tongariro**	**1.81**	**198**	P	**Pn**	**16 02 07.6**	**+1.4**
WTVZ	**West Tongariro**	**1.83**	**201**	P	**Pn**	**16 02 07.8**	**+1.5**
TWVZ	**Taurewa**	**1.83**	**205**	P	**Pn**	**16 02 07.8**	**+1.4**
OTVZ	**Oturere**	**1.85**	**199**	P	**Pn**	**16 02 08.0**	**+1.4**
KNZ	**Kokohu**	**1.87**	**149**	P	**Pn**	**16 02 07.3**	**+0.9**
NGZ	**Ngauruhoe**	**1.88**	**200**	P	**Pn**	**16 02 08.1**	**+1.4**
PRGZ	**Paritu Road**	**1.89**	**143**	P	**Pn**	**16 02 07.6**	**+1.0**
ARHZ	**Aropaoanui**	**1.90**	**167**	P	**Pn**	**16 02 08.2**	**+1.5**
TUVZ	**Tukino**	**1.95**	**198**	P	**Pn**	**16 02 08.7**	**+1.5**
FWVZ	**Far West T-bar**	**1.97**	**201**	P	**Pn**	**16 02 08.8**	**+1.4**
WHVZ	**Whangaehu Hut**	**1.98**	**200**	P	**Pn**	**16 02 09.0**	**+1.4**
KWHZ	**Kaweka Forest**	**2.01**	**181**	P	**Pn**	**16 02 08.9**	**+1.4**
WNVZ	**Wahianoa**	**2.02**	**199**	P	**Pn**	**16 02 09.1**	**+1.4**
MCHZ	**McNeill Hill**	**2.04**	**175**	P	**Pn**	**16 02 09.3**	**+1.7**
MOVZ	**Moawhango**	**2.06**	**195**	P	**Pn**	**16 02 08.9**	**+1.0**
PKVZ	**Pokaka**	**2.06**	**204**	P	**Pn**	**16 02 09.3**	**+1.4**
MHGZ	**Mahia Peninsul**	**2.08**	**147**	P	**Pn**	**16 02 09.3**	**+1.3**
BHHZ	**Black Hill Sta**	**2.09**	**188**	P	**Pn**	**16 02 09.3**	**+1.2**
MTVZ	**Mangateitei**	**2.11**	**201**	P	**Pn**	**16 02 09.8**	**+1.5**
VRZ	**Vera Road**	**2.16**	**217**	P	**Pn**	**16 02 10.6**	**+2.0**
KRHZ	**Kereru**	**2.23**	**181**	P	**Pn**	**16 02 10.3**	**+1.2**
WCZ	**Waipu Caves**	**2.24**	**310**	P	**Pn**	**16 02 09.1**	**-0.2**
CKHZ	**Cape Kidnapper**	**2.29**	**168**	P	**Pn**	**16 02 11.3**	**+1.8**
MHEZ	**Mangahewa**	**2.35**	**225**	P	**Pn**	**16 02 13.2**	**+3.2**
KAHZ	**Kahuranaki**	**2.40**	**172**	P	**Pn**	**16 02 12.2**	**+1.8**
DREZ	**Durham Road**	**2.50**	**224**	P	**Pn**	**16 02 13.2**	**+1.9**
PNHZ	**Pukenui**	**2.50**	**184**	P	**Pn**	**16 02 12.5**	**+1.2**
LREZ	**Lake Rotokare**	**2.60**	**218**	P	**Pn**	**16 02 14.2**	**+2.2**
WAZ	**Wanganui**	**2.60**	**206**	P	**Pn**	**16 02 13.6**	**+1.5**
NEZ	**North Egmont**	**2.62**	**224**	P	**Pn**	**16 02 14.8**	**+2.5**
PKE	**Pukeiti**	**2.63**	**227**	P	**Pn**	**16 02 15.1**	**+2.8**
PREZ	**Palmer Road**	**2.63**	**222**	P	**Pn**	**16 02 15.0**	**+2.6**
PXZ	**Pawanui**	**2.63**	**173**	P	**Pn**	**16 02 13.9**	**+1.6**
WPHZ	**Waipukurau**	**2.65**	**180**	P	**Pn**	**16 02 14.1**	**+1.7**
TSZ	**Takapari Road**	**2.67**	**188**	P	**Pn**	**16 02 13.8**	**+1.1**
KHEZ	**Kahui Hut**	**2.68**	**225**	P	**Pn**	**16 02 15.3**	**+2.5**
NBEZ	**Newall Road No**	**2.75**	**227**	P	**Pn**	**16 02 16.1**	**+2.8**
NMEZ	**Namu Road**	**2.84**	**225**	P	**Pn**	**16 02 16.7**	**+2.6**
PRHZ	**Porangahau**	**2.85**	**177**	P	**Pn**	**16 02 15.9**	**+1.7**
DVHZ	**Dannevirke**	**2.89**	**184**	P	**Pn**	**16 02 15.8**	**+1.2**
OHWZ	**Ohakea**	**2.92**	**197**	P	**Pn**	**16 02 16.8**	**+2.0**
POWZ	**Post Office Ro**	**3.02**	**190**	P	**Pn**	**16 02 16.9**	**+1.1**
ANWZ	**Angora Road**	**3.04**	**180**	P	**Pn**	**16 02 17.8**	**+1.8**
PRWZ	**Pori Road**	**3.16**	**187**	P	**Pn**	**16 02 18.6**	**+1.5**
OUZ	**Omahuta**	**3.18**	**313**	P	**Pn**	**16 02 16.5**	**-0.9**
BFZ	**Birch Farm**	**3.27**	**183**	P	**Pn**	**16 02 19.5**	**+1.4**
MRZ	**Mangatainoka R**	**3.31**	**191**	P	**Pn**	**16 02 19.4**	**+0.9**
TIWZ	**Tintock**	**3.38**	**187**	P	**Pn**	**16 02 20.5**	**+1.3**
CPWZ	**Castlepoint**	**3.50**	**183**	P	**Pn**	**16 02 22.3**	**+2.1**
OGWZ	**Otaki Gorge**	**3.54**	**196**	P	**Pn**	**16 02 21.7**	**+1.0**
HOWZ	**Holdsworth Sta**	**3.55**	**191**	P	**Pn**	**16 02 21.7**	**+0.9**
KIW	**Kapiti Island**	**3.64**	**199**	P	**Pn**	**16 02 22.7**	**+0.9**
TMWZ	**Te Maipa**	**3.71**	**186**	P	**Pn**	**16 02 23.7**	**+1.3**
MTW	**Mount Morrison**	**3.81**	**191**	P	**Pn**	**16 02 24.1**	**+0.8**
CAW	**Cannon Point**	**3.84**	**196**	P	**Pn**	**16 02 24.6**	**+0.9**
DUWZ	**D'Urville Isla**	**3.91**	**209**	P	**Pn**	**16 02 25.0**	**+0.6**
TRWZ	**Traveller**	**4.02**	**188**	P	**Pn**	**16 02 26.9**	**+1.3**
PAWZ	**Paruwai Farm**	**4.04**	**191**	P	**Pn**	**16 02 26.7**	**+0.9**
WEL	**Wellington**	**4.08**	**198**	P	**Pn**	**16 02 27.1**	**+1.0**
MSWZ	**Moikau Station**	**4.10**	**193**	P	**Pn**	**16 02 27.2**	**+0.8**
TCW	**Tory Channel**	**4.15**	**203**	P	**Pn**	**16 02 27.7**	**+0.9**
BHW	**Baring Head**	**4.17**	**197**	P	**Pn**	**16 02 27.8**	**+0.7**
PLWZ	**Palliser**	**4.25**	**192**	P	**Pn**	**16 02 28.8**	**+0.8**
TUWZ	**Tuamarina**	**4.45**	**205**	P	**Pn**	**16 02 30.9**	**+0.8**
NNZ	**Nelson**	**4.48**	**211**	P	**Pn**	**16 02 30.7**	**+0.3**
QRZ	**Quartz Range**	**4.57**	**221**	P	**Pn**	**16 02 31.0**	**-0.4**
CMWZ	**Cape Campbell**	**4.66**	**201**	P	**Pn**	**16 02 34.0**	**+1.7**
BSWZ	**Blackbirch Sta**	**4.73**	**204**	P	**Pn**	**16 02 34.2**	**+1.1**
THZ	**Tophouse**	**5.13**	**211**	P	**Pn**	**16 02 37.7**	**+0.1**
KHZ	**Kahutara**	**5.47**	**203**	P	**Pn**	**16 02 42.3**	**+0.9**
DSZ	**Denniston Nort**	**5.62**	**218**	P	**Pn**	**16 02 42.7**	**-0.3**
GVZ	**Greta Valley S**	**6.13**	**204**	P	**Pn**	**16 02 49.7**	**+0.8**
LTZ	**Lake Taylor**	**6.24**	**210**	P	**Pn**	**16 02 50.3**	**0.0**
AMCZ	**Amberley**	**6.44**	**206**	P	**Pn**	**16 02 53.2**	**+0.8**
INZ	**Inchbonnie**	**6.54**	**214**	P	**Pn**	**16 02 53.5**	**-0.1**
OXZ	**Oxford**	**6.79**	**208**	P	**Pn**	**16 02 56.5**	**-0.1**
OKCZ	**Okains Bay**	**6.81**	**201**	P	**Pn**	**16 02 57.9**	**+1.2**
MQZ	**McQueen's Vall**	**6.92**	**203**	P	**Pn**	**16 02 58.0**	**+0.1**
AKCZ	**Akaroa Harbour**	**6.99**	**202**	P	**Pn**	**16 02 59.9**	**+1.0**
RACZ	**Rakaia**	**7.11**	**206**	P	**Pn**	**16 03 00.7**	**+0.4**
WVZ	**Waitaha Valley**	**7.14**	**216**	P	**Pn**	**16 03 00.5**	**-0.1**
WACZ	**Wakanui South**	**7.40**	**207**	P	**Pn**	**16 03 04.6**	**+0.9**
RPZ	**Rata Peaks**	**7.51**	**211**	P	**Pn**	**16 03 05.1**	**0.0**
	6.2nm,0.3s,baz=0.4,slow=16,SNR=44						
RPZ				S	**S**	**16 04 30.7**	**-2.3**
	1.8nm,0.3s,baz=300,slow=23,SNR=8.5						
RPZ	**Rata Peaks**	**7.51**	**211**	P	**Pn**	**16 03 05.1**	**0.0**
GCSZ	**Gaunt Creek Bo**	**7.52**	**216**	P	**Pn**	**16 03 05.0**	**-0.1**
ARCZ	**Arundel**	**7.65**	**210**	P	**Pn**	**16 03 06.8**	**0.0**
FOZ	**Fox Glacier**	**7.93**	**218**	P	**Pn**	**16 03 09.6**	**-0.4**
TMZ	**Timaru**	**8.09**	**209**	P	**Pn**	**16 03 13.0**	**+1.1**
LBZ	**Lake Benmore**	**8.42**	**212**	P	**Pn**	**16 03 16.5**	**+0.6**
ODZ	**Otahua Downs**	**8.78**	**208**	P	**Pn**	**16 03 21.6**	**+1.4**
JCZ	**Jackson Bay**	**8.83**	**219**	P	**Pn**	**16 03 21.2**	**+0.3**
WKZ	**Wanaka**	**9.28**	**215**	P	**Pn**	**16 03 26.0**	**-0.2**
EAZ	**Earnscleugh**	**9.47**	**212**	P	**Pn**	**16 03 28.7**	**+0.2**
HHSZ	**Highcliff Hill**	**9.52**	**205**	P	**P**	**16 03 32.4**	**+1.1**
MSZ	**Milford Sound**	**9.69**	**219**	P	**Pn**	**16 03 30.9**	**-0.2**
MLZ	**Mavora Lakes**	**10.11**	**216**	P	**Pn**	**16 03 37.9**	**+1.8**
WHZ	**Wether Hill Ro**	**10.59**	**214**	P	**Pn**	**16 03 42.1**	**+0.3**
SYZ	**Scrubby Hill**	**10.61**	**208**	P	**P**	**16 03 44.6**	**+1.3**
APZ	**The Paps**	**11.30**	**211**	P	**P**	**16 03 52.5**	**+1.3**
DZM	**Mont Dzumac**	**17.57**	**328**	P	**P**	**16 05 00.8**	**+0.8**
	0.4nm,0.3s,baz=141,slow=14,SNR=7.8						
ASAR	**Alice Springs**	**38.80**	**278**	P	**P**	**16 08 09.2**	**-0.9**
	0.5nm,0.6s,baz=122,slow=7.6,SNR=14						
WRA	**Warramunga Arr**	**40.46**	**284**	P	**P**	**16 08 22.2**	**-1.5**
	0.5nm,0.4s,baz=121,slow=7.7,SNR=9.9						
FINES	**FINESS Array B**	**149.67**	**332**	PKPbc	**PKiKP**	**16 20 27.8**	**+1.2**
	0.5nm,0.3s,baz=74,slow=4.1,SNR=6.3						

IDC 23 16:01:34.9±4.2**, 7°.17S**×**146°.69E, h116**^{km}±86^{km}**, mb3.0**/3**,
mb1 3.2**/5**, mb1mx3.0**/26**, mbtmp3.4**/5**, ML3.0**/1**, Error
ellipse: s-maj=125.4km s-min=38.7km az=102.0,
Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.27**	**168**	P	Pn	16 02 12.2	+0.6
	2.0nm,0.3s,baz=350,slow=6.1,SNR=18						
PMG				S	Sn	16 02 40.0	+0.4
	6.0nm,0.3s,baz=199,slow=21,SNR=12						
WRA	**Warramunga Arr**	**17.46**	**222**	P	Pn	16 05 31.1	-0.2
	0.1nm,0.3s,baz=43,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**20.49**	**215**	P	P	16 06 04.9	+1.1
	0.2nm,0.4s,baz=52,slow=9.7,SNR=13						
FITZ	**Fitzroy Crossi**	**23.21**	**240**	P	P	16 06 30.3	-1.5
	3.1nm,0.9s,baz=62,slow=10,SNR=1.8						
CMAR	**Chiang Mai Arr**	**53.54**	**299**	P	P	16 10 44.1	0.0
	0.4nm,0.5s,baz=120,slow=6.2,SNR=4.7						

IDC 23 16:15:19.5±8.1**, 26°.15S**×**28°.49E, h0**^{km}**, mb1 2.5**/1**,
mb1mx2.5**/49**, mbtmp2.5**/1**, ML2.4**/1**, Error ellipse:
s-maj=81.3km s-min=54.3km az=139.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**3.78**	**229**	Pn	Pn	16 16 18.5	-0.7
	0.2nm,0.3s,baz=51,slow=14,SNR=1.4						
BOSA				Pg	Pb	16 16 29.6	+2.4
	0.4nm,0.3s,baz=56,slow=18,SNR=2.2						
BOSA				Sn	Sn	16 17 04.9	+0.5
	0.3nm,0.3s,baz=16,slow=21,SNR=1.4						
BOSA				Lg	Lg	16 17 19.8	
	1.2nm,0.3s,baz=347,slow=20,SNR=7.1						
I47ZA	**BOSHOF INFRASO**	**3.80**	**229**	*i*		16 38 40.0	
	baz=51,slow=312,SNR=2.3						
I35NA	**TSUMEB INFRASO**	**12.22**	**302**	*i*		17 25 50.0	
	baz=127,slow=311,SNR=4.9						

IDC 23 16:19:08.3±4.8**, 39°.14N**×**110°.19E, h0**^{km}**, mb3.6**/2**,
mb1 3.8**/3**, mb1mx3.3**/56**, mbtmp3.6**/3**, Error ellipse:
s-maj=99.5km s-min=22.8km az=86.0, Western Nei
Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.12**	**344**	Pn	Pn	16 21 22.0	+0.7
	baz=164,slow=13,SNR=6.8						
SONM				Sn	Sn	16 23 04.2	-0.5
	0.1nm,0.3s,baz=156,slow=25,SNR=2.4						
SONM				Lg	Lg	16 23 55.4	
	0.1nm,0.3s,baz=166,slow=30,SNR=4.2						
MKAR	**Makanchi Array**	**21.72**	**300**	P	P	16 24 01.8	+0.8
	1.9nm,0.9s,baz=99,slow=11,SNR=14						
CMAR	**Chiang Mai Arr**	**22.80**	**209**	P	P	16 24 12.2	-0.5
	1.2nm,0.4s,baz=15,slow=9.2,SNR=18						

IDC 23 16:25:07.0±5.7**, 39°.09N**×**110°.45E, h0**^{km}**, mb3.1**/2**,
mb1 3.3**/3**, mb1mx3.0**/55**, mbtmp3.2**/3**, ML2.5**/1**, Error
ellipse: s-maj=117.9km s-min=25.6km az=85.0, Western
Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.22**	**343**	Pn	Pn	16 27 21.9	+0.6
	0.0nm,0.3s,baz=162,slow=14,SNR=2.5						
SONM				Lg	Lg	16 29 59.6	
	0.1nm,0.3s,baz=156,slow=29,SNR=2.7						
MKAR	**Makanchi Array**	**21.92**	**300**	P	P	16 30 01.8	-0.1
	0.6nm,0.8s,baz=102,slow=10,SNR=5.2						
CMAR	**Chiang Mai Arr**	**22.86**	**209**	P	P	16 30 11.9	-0.1
	0.7nm,0.7s,baz=8.6,slow=9.8,SNR=8.0						

IDC 23 16:25:52.0±3.1**, 4°.44S**×**133°.52E, h0**^{km}**, mb3.2**/1**,
mb1 3.8**/5**, mb1mx3.5**/27**, mbtmp3.6**/5**, ML3.6**/4**, Error
ellipse: s-maj=117.7km s-min=25.6km az=78.0, Irian
Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.20**	**327**	Pn	Pn	16 26 58.4	+0.9
	0.5nm,0.3s,baz=139,slow=20,SNR=6.8						
SIJI				Sn	Sn	16 27 35.6	-12
	1.9nm,0.3s,baz=162,slow=22,SNR=5.9						
WRA	**Warramunga Arr**	**15.43**	**177**	Pn	Pn	16 29 30.2	-1.1
	0.2nm,0.3s,baz=355,slow=13,SNR=10						
WRA				Sn	Sn	16 32 17.4	-5.6
	0.2nm,0.3s,baz=360,slow=23,SNR=3.0						
FITZ	**Fitzroy Crossi**	**15.61**	**209**	Pn	Pn	16 29 32.8	-0.8
	0.4nm,0.3s,baz=31,slow=12,SNR=16						
FITZ				Sn	Sn	16 32 22.2	-5.2
	0.4nm,0.3s,baz=165,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**19.12**	**179**	P	Pn	16 30 17.8	+0.2
	0.3nm,0.3s,baz=5.4,slow=12,SNR=24						
ASAR				S	Sn	16 33 44.8	-7.6
	0.0nm,0.3s,baz=356,slow=26,SNR=4.4						
MKAR	**Makanchi Array**	**68.09**	**325**	P	P	16 36 53.3	-0.4
	0.1nm,0.5s,baz=124,slow=7.2,SNR=2.8						

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*DNK **23** 16:31:05.6±2.9, 51°.39N×15°.37E, h0^{km}±161^{km}, ML2.1*

*IPEC **23** 16:31:07.0±0.3, 51°.59N×16°.24E, h0^{km}±1^{km}, ML2.4/3, Error ellipse: s-maj=3.5km s-min=1.8km az=60.0*

*PRU **23** 16:31:09.0±0.0, 51°.51N×16°.11E, h0^{km}*

*VIE **23** 16:31:10.8±1.0, 51°.33N×15°.91E, h0^{km}, mb2.4/3, ml2.7/6, Error ellipse: s-maj=8.0km s-min=7.4km az=44.0 81 km WNW of Wroclaw Suspected Mining induced.*

ISC 23 16:31:07.0±0.9**, 51°.56N**±0°.03×**16°.14E**±0°.02**, h0**^{km}**, n32,**
σ**0**^{s}.**96**/68**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**172**	*i* Pg	**Pg**	**16 31 21.7**	**+0.9**
KSP				*e*Sg	**Sg**	**16 31 30.9**	**+0.8**
CHVC	**Chvalec**	**0.97**	**183**	*e*PG	**Pb**	**16 31 26.5**	**-0.2**
CHVC				*e*SG	**Sg**	**16 31 38.9**	**+0.7**
	comp=Z,48nm,0.5s						
OSTC	**Ostas**	**1.00**	**177**	*e*PG	**Pb**	**16 31 27.0**	**-0.3**
OSTC				*e*SG	**Sg**	**16 31 40.0**	**+0.8**
UPC	**Upice**	**1.05**	**184**	*e*PG	**Pg**	**16 31 27.7**	**+0.5**
UPC				*e*SG	**Sg**	**16 31 41.6**	**+0.7**
	comp=Z,107nm,0.5s						
DPC	**Dobruska-Polom**	**1.22**	**174**	*e*PG	**Pg**	**16 31 30.4**	**+0.1**
DPC				*e*SG	**Sg**	**16 31 45.7**	**-0.3**
	comp=Z,49nm,0.4s						
PVCC	**Panska Ves**	**1.43**	**225**	*e*PG	**Pb**	**16 31 34.8**	**+0.3**
PVCC				*e*SG	**Sn**	**16 31 54.0**	**+0.3**
	comp=Z,130nm,0.3s						
KRLC	**Kraliky**	**1.54**	**164**	*e*PG	**Pn**	**16 31 35.7**	**-0.1**
KRLC				*e*SG	**Sg**	**16 31 56.3**	**-0.1**
	comp=Z,33nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**244**	Pg	**Pg**	**16 31 37.1**	**+0.5**
BRG				Sg	**Sg**	**16 31 57.3**	**+0.8**
BRG				Amp		16 31 58.4	
	comp=Z,120nm,0.3s						
BRG	**Berggiesshubel**	**1.54**	**244**	Pg	**Pg**	**16 31 37.1**	**+0.5**
BRG				Sg	**Sg**	**16 31 57.3**	**+0.8**
BRG				Amp		16 31 58.4	
	comp=Z,120nm,0.3s						
PRU	**Pruhonice**	**1.87**	**213**	*e*PG	**Pb**	**16 31 41.6**	**-0.4**
PRU				*e*SG	**Sb**	**16 32 06.1**	**+0.2**
	comp=Z,53nm,0.4s						
CLL	**Collm**	**1.98**	**264**	*e*Pn	**Pn**	**16 31 43.0**	**+1.2**
CLL				*e*Pg	**Pg**	**16 31 45.0**	**+0.1**
CLL				*e*		16 31 49.0	
CLL				*e*Sg	**Sg**	**16 32 11.0**	**+0.4**
	comp=Z,45nm,0.8s						
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN	**Pn**	**16 31 42.1**	**0.0**
MORC				*e*SG	**Sb**	**16 32 09.8**	**+0.2**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn	**Pn**	**16 31 42.0**	**0.0**
	baz=336						
MORC				*e*Sg	**Sb**	**16 32 09.7**	**+0.2**
	comp=Z,22nm,0.3s,baz=336						
VRAC	**Vranov**	**2.27**	**172**	*e*PN	**Pn**	**16 31 46.1**	**+0.3**
VRAC				*e*SG	**Sg**	**16 32 19.2**	**-0.7**
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**16 31 46.1**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sg**	**16 32 19.2**	**-0.7**
	comp=Z,20nm,0.4s,baz=354						
TREC	**Trest**	**2.30**	**191**	*e*PN	**Pn**	**16 31 46.8**	**+0.6**
PBCC	**Pribram**	**2.32**	**217**	*e*PG	**Pb**	**16 31 50.2**	**+0.5**
KRUC	**Moravsky**	**2.50**	**176**	*e*PN	**Pn**	**16 31 49.5**	**+0.5**
KRUC				*e*SG	**Sg**	**16 32 26.1**	**-1.3**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**16 31 49.4**	**+0.5**
	baz=358						
KRUC				*e*Sg	**Sg**	**16 32 26.1**	**-1.3**
	comp=Z,18nm,0.5s,baz=358						
OJC	**Ojcow**	**2.68**	**119**	*e*Pn	**Pn**	**16 31 50.4**	**-1.0**
OJC				*e*Pg	**Pg**	**16 32 00.1**	**+1.8**
OJC				*e*Sn	**Sn**	**16 32 22.8**	**-1.6**
OJC				*e*Sg	**Sg**	**16 32 35.3**	**+2.4**
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**16 31 52.3**	**+0.8**
NKC				*e*PG	**Pg**	**16 31 58.8**	**+0.3**
NKC				*e*SG	**Sg**	**16 32 33.3**	**0.0**
	comp=Z,72nm,0.3s						
JAVC	**Velka Javorina**	**2.88**	**159**	*e*PN	**Pn**	**16 31 54.3**	**+0.2**
KHC	**Kasperske Hory**	**2.93**	**215**	*e*PN	**Pn**	**16 31 55.1**	**+0.2**
KHC				*e*PG	**Pb**	**16 32 01.4**	**+1.3**
KHC				*e*SN	**Sn**	**16 32 30.1**	**-0.7**
KHC				*e*SG	**Sg**	**16 32 39.6**	**-1.5**
	comp=Z,14nm,0.5s						
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**16 32 09.7**	**+1.1**
LANS				*e*SG	**Sg**	**16 32 49.7**	**-0.6**
MODS	**Modra-Piesok**	**3.27**	**167**	*e*PG	**Pg**	**16 32 08.7**	**-1.0**
MODS				*e*SG	**Sg**	**16 32 52.0**	**0.0**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**16 32 02.5**	**-0.5**
VYHS				*e*PG	**Pg**	**16 32 14.5**	**0.0**
VYHS				*e*SG	**Sg**	**16 33 01.3**	**+1.1**
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**16 32 04.7**	**+0.2**
BSD				*i* S	**Sn**	**16 32 46.3**	**-1.8**
BSD	**Bornholm Skovb**	**3.64**	**349**	*e*	**Pn**	**16 32 04.0**	**-0.5**
	baz=186,slow=12						
BSD				*i* P	Pb	16 32 04.8	-7.3
BSD				*i* S	**Sn**	**16 32 46.4**	**-1.8**
BSD				IAML		16 33 12.7	
	comp=Z,1.9nm,0.3s						
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn	**Pn**	**16 32 05.5**	**+0.9**
	comp=Z,0.7nm,0.1s						
CONA				*e*Sg	**Sg**	**16 33 02.5**	**-1.3**
	comp=Z,12nm,0.3s						
MOA	**Molln**	**3.91**	**199**	*i* Pn	**Pn**	**16 32 09.1**	**+0.8**
	comp=Z,2.3nm,0.2s						
MOA				*e*Sg	**Sg**	**16 33 12.4**	**0.0**
	comp=Z,5.9nm,0.3s						
ARSA	**Arzberg**	**4.33**	**186**	*i* Pn	**Pn**	**16 32 15.0**	**+0.9**
	comp=Z,1.0nm,0.2s						
ARSA				Sg	**Sg**	**16 33 24.9**	**-1.1**
	comp=Z,7.4nm,0.6s						
SQTA	**Sankt Quirin**	**5.40**	**218**	*i* Pn	**Pn**	**16 32 29.4**	**+0.5**
	comp=Z,0.9nm,0.1s						
SQTA				Sg	**Sg**	**16 33 56.9**	**-3.6**
	comp=Z,0.7nm,0.1s						

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*JMA **23** 16:38:42.4±0.1, 24°.50N×122°.85E, h103^{km}±1^{km}, M1.9*

*TAP **23** 16:38:42.5, 24°.60N×122°.87E, h100^{km}, ML2.5, C*

ISC 23 16:38:43.5±1.5**, 24°.52N**±0°.06×**122°.87E**±0°.03**, h94**^{km}±9^{km}**,
n58,** σ**0**^{s}.**85**/90**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.10**	**134**	P	**Pn**	**16 38 56.9**	**+0.2**
JYNG				S	**Sn**	**16 39 07.3**	**+0.8**
YOJ	**Yonaguni jima**	**0.14**	**114**	P	**Pn**	**16 38 57.0**	**+0.2**
YOJ				*e*S	**Sn**	**16 39 07.3**	**+0.6**
YOJ	**Yonaguni jima**	**0.14**	**114**	*i* P	**Pn**	**16 38 57.0**	**+0.2**
	baz=144						
YOJ				*i* S	**Sn**	**16 39 07.4**	**+0.7**
	baz=144						
IRIF	**Iriomote-Funau**	**0.81**	**103**	P	**Pn**	**16 39 01.4**	**0.0**
IRIF				S	**Sn**	**16 39 15.1**	**+0.3**
TWC	**Suao**	**0.93**	**276**	*e*P	**Pn**	**16 39 02.1**	**-0.6**
	baz=271						
TWB1	**Santiao Chiao**	**0.94**	**302**	*e*P	**Pn**	**16 39 02.3**	**-0.5**
	baz=292						
HATJ	**Hateruma jima**	**0.97**	**118**	*e*S	**Sn**	**16 39 18.9**	**+1.0**
ENA	**Nanau**	**1.03**	**265**	*e*P	**Pn**	**16 39 03.5**	**-0.3**
	baz=255						
ENA				*e*S	**Sn**	**16 39 19.3**	**+0.2**
	baz=255						
TIPB	**Shuangxi**	**1.05**	**296**	*e*P	**Pn**	**16 39 03.6**	**-0.5**
	baz=286						
JKRS	**Kuro-shima**	**1.08**	**105**	P	**Pn**	**16 39 04.0**	**-0.3**
JKRS				S	**Sn**	**16 39 20.8**	**+0.7**
TWE	**Neicheng**	**1.11**	**281**	*e*P	**Pn**	**16 39 04.3**	**-0.5**
	baz=272						
JIJ	**Ishigaki jima**	**1.17**	**97**	P	**Pn**	**16 39 05.2**	**-0.3**
JIJ				S	**Sn**	**16 39 21.6**	**-0.4**
NACB	**Ninganchiao**	**1.21**	**254**	*e*P	**Pn**	**16 39 05.1**	**-0.8**
	baz=244						
NDT	**Datong Townshi**	**1.24**	**274**	*e*P	**Pn**	**16 39 06.5**	**+0.3**
	baz=269						
NDT				*e*S	**Sn**	**16 39 23.0**	**-0.3**
	baz=269						
NWLT	**Wulai**	**1.27**	**282**	*e*P	**Pn**	**16 39 06.2**	**-0.4**
	baz=284						
ETLH	**Xiulin Townshi**	**1.30**	**256**	*e*P	**Pn**	**16 39 06.5**	**-0.6**
	baz=248						
JISG	**Ishigakijimahi**	**1.32**	**87**	P	**Pn**	**16 39 06.8**	**-0.4**
JISG				S	**Sn**	**16 39 24.2**	**-0.8**
NNSB	**Datong**	**1.36**	**266**	*e*P	**Pn**	**16 39 07.3**	**-0.4**
	baz=256						
NNSH	**Datong**	**1.36**	**266**	*e*P	**Pn**	**16 39 07.7**	**-0.1**
	baz=255						
NNSH				*e*S	**Sn**	**16 39 25.3**	**-0.9**
	baz=255						
YHNB	**Yeheng**	**1.37**	**277**	*e*P	**Pn**	**16 39 07.7**	**-0.2**
	baz=265						
YHNB				*e*S	**Sn**	**16 39 25.5**	**-0.8**
	baz=265						
NSK	**Sanguang**	**1.38**	**277**	*e*P	**Pn**	**16 39 07.8**	**-0.3**
	baz=265						
NSK				*e*S	**Sn**	**16 39 25.7**	**-0.9**
	baz=265						
ESL	**Shilin**	**1.49**	**242**	*e*P	**Pn**	**16 39 08.6**	**-0.7**
	baz=244						
ESL				*e*S	**Sn**	**16 39 27.7**	**-1.1**
	baz=244						
FUSS	**Fushou**	**1.50**	**260**	*e*P	**Pn**	**16 39 09.6**	**-0.1**
	baz=256						
FUSS				*e*S	**Sn**	**16 39 29.2**	**-0.4**
	baz=256						
WHF	**Hehuan Shan**	**1.51**	**256**	*e*P	**Pn**	**16 39 09.5**	**-0.5**
	baz=253						
EGFH	**Guangfu**	**1.56**	**238**	*e*P	**Pn**	**16 39 09.9**	**-0.4**
	baz=232						
TWT	**Tachien**	**1.56**	**261**	*e*P	**Pn**	**16 39 10.6**	**+0.2**
	baz=253						
TWT				*e*S	**Sn**	**16 39 30.5**	**-0.3**
	baz=253						

TDCB	**Techi**	**1.58**	**261**	*e*P	**Pn**	**16 39 10.8**	**+0.2**
	baz=253						
TDCB				*e*S	**Sn**	**16 39 30.2**	**-0.9**
	baz=253						
CHGB	**Renai**	**1.61**	**254**	*e*P	**Pn**	**16 39 10.8**	**-0.3**
	baz=244						
CHGB				*e*S	**Sn**	**16 39 30.9**	**-1.1**
	baz=244						
HGSD	**Ruisui**	**1.67**	**233**	*e*P	**Pn**	**16 39 11.0**	**-0.6**
	baz=228						
HGSD				*e*S	**Sn**	**16 39 32.2**	**-0.7**
	baz=228						
JTJ	**Tarama**	**1.68**	**85**	P	**Pn**	**16 39 11.6**	**0.0**
JTJ				S	**Sn**	**16 39 32.6**	**-0.4**
LIOB	**Emei**	**1.69**	**275**	*e*P	**Pn**	**16 39 11.6**	**-0.3**
	baz=270						
LIOB				*e*S	**Sn**	**16 39 33.3**	**-0.2**
	baz=270						
NSTT	**Nanjuang**	**1.70**	**274**	*e*S	**Sn**	**16 39 33.3**	**-0.4**
	baz=270						
EHY	**Hungye**	**1.74**	**235**	*e*P	**Pn**	**16 39 11.7**	**-0.8**
	baz=241						
WHP	**Taichung City**	**1.77**	**263**	*e*P	**Pn**	**16 39 13.7**	**+0.7**
	baz=256						
WHP				*e*S	**Sn**	**16 39 35.7**	**+0.4**
	baz=256						
YULB	**Yu-li**	**1.82**	**232**	*e*P	**Pn**	**16 39 12.9**	**-0.7**
	baz=239						
EYUL	**Yuli**	**1.83**	**231**	*e*P	**Pn**	**16 39 13.5**	**-0.2**
	baz=227						
DPDB	**Guoxing**	**1.84**	**255**	*e*P	**Pn**	**16 39 14.2**	**+0.4**
	baz=250						
TWF1	**Yuli**	**1.85**	**231**	*e*P	**Pn**	**16 39 13.4**	**-0.5**
	baz=238						
TWF1				*e*S	**Sn**	**16 39 36.0**	**-1.0**
	baz=238						
SSLB	**Suanglung**	**1.89**	**248**	*e*P	**Pn**	**16 39 14.3**	**-0.2**
	baz=241						
SMLT	**Sun Moon Lake**	**1.91**	**251**	*e*P	**Pn**	**16 39 15.6**	**+0.9**
	baz=245						
SMLT				*e*S	**Sn**	**16 39 39.9**	**+1.4**
	baz=245						
TYC	**Yuchr**	**1.94**	**252**	*e*P	**Pn**	**16 39 15.7**	**+0.8**
	baz=244						
TYC				*e*S	**Sn**	**16 39 40.9**	**+1.9**
	baz=244						
FULB	**Fuli**	**1.95**	**228**	*e*P	**Pn**	**16 39 14.6**	**-0.7**
	baz=220						
FULB				*e*S	**Sn**	**16 39 39.4**	**-0.1**
	baz=220						
WJS	**Zhushan**	**2.07**	**251**	*e*P	**Pn**	**16 39 17.9**	**+1.1**
	baz=248						
WJS				*e*S	**Sn**	**16 39 43.5**	**+1.3**
	baz=248						
EDH	**Donghe**	**2.10**	**223**	*e*P	**Pn**	**16 39 16.4**	**-0.8**
	baz=219						
EDH				*e*S	**Sn**	**16 39 41.1**	**-1.8**
	baz=219						
JIRB	**Irabujima**	**2.12**	**81**	*e*S	**Sn**	**16 39 43.1**	**-0.2**
ALS	**Alishan**	**2.14**	**242**	*e*P	**Pn**	**16 39 18.6**	**+0.7**
	baz=235						
ELDTW	**Lidau**	**2.15**	**232**	*e*P	**Pn**	**16 39 17.3**	**-0.6**
	baz=226						
ELDTW				*e*S	**Sn**	**16 39 43.0**	**-1.3**
	baz=226						
CHN5	**Tsauling**	**2.20**	**246**	*e*P	**Pn**	**16 39 19.6**	**+1.0**
	baz=237						
CHN5				*e*S	**Sn**	**16 39 47.5**	**+2.1**
	baz=237						
LDUT	**Ludao**	**2.24**	**215**	*e*P	**Pn**	**16 39 18.2**	**-0.8**
	baz=212						
LDUT				*e*S	**Sn**	**16 39 44.4**	**-1.8**
	baz=212						
STYT	**Tauyuan**	**2.36**	**235**	*e*P	**Pn**	**16 39 21.7**	**+1.1**
	baz=230						
STYT				*e*S	**Sn**	**16 39 50.4**	**+1.4**
	baz=230						
TWGBT	**Beinan**	**2.36**	**224**	*e*P	**Pn**	**16 39 19.9**	**-0.7**
	baz=230						
TWG	**Pinlang**	**2.36**	**225**	*e*P	**Pn**	**16 39 20.0**	**-0.6**
	baz=230						
TPUB	**Ta-pu**	**2.38**	**240**	*e*P	**Pn**	**16 39 22.2**	**+1.3**
	baz=232						
CHN4	**Tsaushan**	**2.38**	**241**	*e*P	**Pn**	**16 39 20.6**	**-0.3**
	baz=240						
WTP	**Ta-pu**	**2.42**	**239**	*e*P	**Pn**	**16 39 22.9**	**+1.4**
	baz=245						
SLGT	**Liugui**	**2.54**	**234**	*e*P	**Pn**	**16 39 24.5**	**+1.5**
	baz=225						
SLGT				*e*S	**Sn**	**16 39 55.4**	**+2.1**
	baz=225						
SSD	**Sandimen**	**2.71**	**230**	*e*P	**Pn**	**16 39 26.6**	**+1.4**
	baz=229						
MASBT	**Mashibuluo**	**2.79**	**228**	*e*P	**Pn**	**16 39 27.2**	**+0.8**
	baz=225						

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*IDC **23** 16:38:38.5±3.0, 32.°18S×179.°12W, h0^{km}, mb3.2/2, mb1 3.6/3, mb1mx3.5/20, mbtmp3.5/3, ML4.1/1, Error ellipse: s-maj=72.4km s-min=45.7km az=111.0*

*WEL **23** 16:38:54.3±1.3, 33°S±21°×18°0W±3°1, h174^{km}±46^{km}, M3.9/15, mB4.5/8, ML4.4/15, MLv4.2/15, Mw(mB)3.6/8, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1*

ISC 23 16:38:49.2±2.0, **32.°42S**±0.°10×**179.°7E**±0.°2, **h35**^{km}, **n40**, σ**2**^{s}.**01**/53, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.26**	**192**	P	**Pn**	**16 40 08.8**	**+3.5**
MXZ				S	**Sn**	**16 41 04.6**	**0.0**
WMGZ	**Waiomatatini S**	**5.49**	**191**	P	**Pn**	**16 40 10.4**	**+1.9**
WMGZ				S	**Sn**	**16 41 09.5**	**-0.8**
HAZ	**Te Kaha**	**5.55**	**196**	P	**Pn**	**16 40 10.7**	**+1.4**
HAZ				S	**Sn**	**16 41 15.9**	**+4.0**
PKGZ	**Pakihiroa**	**5.62**	**193**	P	**Pn**	**16 40 11.1**	**+0.8**
PKGZ				S	**Sn**	**16 41 11.6**	**-2.0**
RUGZ	**Raukumara Rang**	**5.78**	**196**	P	**Pn**	**16 40 13.7**	**+1.1**
TWGZ	**Tauwhareparae**	**5.92**	**193**	P	**Pn**	**16 40 18.3**	**+3.9**
TWGZ				S	**Sn**	**16 41 19.0**	**-1.9**
TWGZ	**Tauwhareparae**	**5.92**	**193**	P	**Sn**	**16 41 20.6**	**-0.3**
MWZ	**Matawai**	**6.16**	**196**	P	**Pn**	**16 40 18.8**	**+1.0**
MWZ				S	**Sn**	**16 41 26.1**	**-0.9**
CNGZ	**Carnagh Statio**	**6.17**	**191**	P	**Pn**	**16 40 17.6**	**-0.3**
URZ	**Urewera**	**6.20**	**199**	Pn	**Pn**	**16 40 19.1**	**+0.9**
	3.4nm,0.3s,baz=318,slow=0.8,SNR=26						
URZ				Sn	**Sn**	**16 41 28.1**	**+0.2**
	0.4nm,0.3s,baz=320,slow=19,SNR=1.5						
URZ	**Urewera**	**6.20**	**199**	P	**Pn**	**16 40 18.9**	**+0.7**
URZ				S	**Sn**	**16 41 27.6**	**-0.3**
RAGZ	**Rawiri**	**6.34**	**197**	P	**Pn**	**16 40 20.7**	**+0.4**
RAGZ				S	**Sn**	**16 41 31.8**	**+0.3**
RIGZ	**Rimuhau**	**6.47**	**194**	P	**Pn**	**16 40 22.7**	**+0.8**
RIGZ				S	**Sn**	**16 41 31.7**	**-2.9**
MUGZ	**Murupara**	**6.50**	**201**	P	**Pn**	**16 40 23.1**	**+0.7**
SNGZ	**Shannon Statio**	**6.63**	**196**	P	**Pn**	**16 40 25.5**	**+1.2**
SNGZ				S	**Sn**	**16 41 37.7**	**-0.9**
PRGZ	**Paritu Road**	**6.66**	**193**	P	**Pn**	**16 40 27.4**	**+2.9**
RAHZ	**Arahi**	**6.83**	**198**	P	**Pn**	**16 40 29.0**	**+2.1**
RAHZ				S	**Sn**	**16 41 43.6**	**+0.3**
MTHZ	**Maungataniwha**	**6.83**	**199**	P	**Pn**	**16 40 28.6**	**+1.6**
MTHZ				S	**Sn**	**16 41 44.1**	**+0.6**
MHGZ	**Mahia Peninsul**	**6.88**	**192**	P	**Pn**	**16 40 29.6**	**+2.1**
NMHZ	**Naumai**	**7.07**	**199**	P	**Pn**	**16 40 31.9**	**+1.7**
ARHZ	**Aropaoanui**	**7.17**	**197**	P	**Pn**	**16 40 33.1**	**+1.5**
BKZ	**Black Stump Fm**	**7.22**	**200**	P	**Pn**	**16 40 32.3**	**0.0**
BKZ				S	**Sn**	**16 41 53.3**	**+0.2**
MCHZ	**McNeill Hill**	**7.42**	**198**	P	**Pn**	**16 40 36.4**	**+1.4**
TMVZ	**Te Maari**	**7.43**	**205**	P	**Pn**	**16 40 38.5**	**+3.2**
ETVZ	**East Tongariro**	**7.45**	**205**	P	**Pn**	**16 40 38.4**	**+2.9**
MTVZ	**Mangateitei**	**7.76**	**205**	P	Pn	16 41 00.6	+21
BFZ	**Birch Farm**	**8.70**	**198**	P	**Pn**	**16 40 50.7**	**-1.9**
MRZ	**Mangatainoka R**	**8.87**	**201**	P	**Pn**	**16 40 51.7**	**-3.2**
OGWZ	**Otaki Gorge**	**9.14**	**202**	P	**Pn**	**16 40 57.3**	**-1.3**
KIW	**Kapiti Island**	**9.27**	**203**	P	**Pn**	**16 40 58.1**	**-2.2**
CAW	**Cannon Point**	**9.44**	**202**	P	**Pn**	**16 40 59.8**	**-2.8**
DUWZ	**D'Urville Isla**	**9.57**	**208**	P	**Pn**	**16 41 04.0**	**-0.5**
TCW	**Tory Channel**	**9.79**	**205**	P	**Pn**	**16 41 05.3**	**-2.3**
TUWZ	**Tuamarina**	**10.11**	**206**	P	**Pn**	**16 41 09.9**	**-1.9**
NNZ	**Nelson**	**10.14**	**208**	P	**Pn**	**16 41 10.6**	**-1.7**
THZ	**Tophouse**	**10.79**	**208**	P	**Pn**	**16 41 19.4**	**-1.8**
KHZ	**Kahutara**	**11.12**	**204**	P	**Pn**	**16 41 22.4**	**-3.2**
ASAR	**Alice Springs**	**41.12**	**270**	P	**P**	**16 46 32.1**	**+2.0**
	0.3nm,0.9s,baz=108,slow=8.0,SNR=1.7						
WRA	**Warramunga Arr**	**42.30**	**276**	P	**P**	**16 46 42.2**	**+2.5**
	0.2nm,0.5s,baz=114,slow=7.9,SNR=1.9						
FINES	**FINESS Array B**	**146.32**	**337**	PKPbc	**PKPdf**	**16 58 20.1**	**-4.1**
	2.0nm,0.9s,baz=21,slow=1.9,SNR=5.4						

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*NEIC **23** 17:03:48.4±2.4, 20.°6S±0.°1×178.°4W±0.°1, h539^{km}±8^{km}, mb4.5/47, Error ellipse: s-maj=20.2km s-min=15.3km az=115.0*

*IDC **23** 17:03:51.2±3.5, 20.°60S×178.°48W, h570^{km}±39^{km}, mb3.2/14, mb1 3.4/15, mb1mx3.3/34, mbtmp4.1/15, Error ellipse: s-maj=21.4km s-min=17.1km az=130.0*

ISC 23 17:03:49.0±0.5, **20.°62S**±0.°09×**178.°35W**±0.°09, **h550**^{km}, **n96**, σ**1**^{s}.**53**/95, **mb4.2**/36, **4C**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.16**	**44**	P	**P**	**17 05 57.5**	**-1.1**
DZM	**Mont Dzumac**	**14.24**	**261**	P	**P**	**17 06 50.4**	**-0.3**
	0.1nm,0.3s,baz=114,slow=15,SNR=2.1						
OUZ	**Omahuta**	**16.18**	**204**	P	**P**	**17 07 11.5**	**+1.4**
HIZ	**Hauiti**	**18.77**	**197**	P	**P**	**17 07 35.7**	**+2.0**
HIZ				IAmb	IAmb	17 07 41.4	
	comp=Z,18nm,1.0s						
HIZ	**Hauiti**	**18.77**	**197**	P	**P**	**17 07 35.8**	**+2.0**
NMHZ	**Naumai**	**18.88**	**192**	P	**P**	**17 07 38.5**	**+3.6**
BKZ	**Black Stump Fm**	**19.01**	**192**	P	**P**	**17 07 33.3**	**-2.7**
BKZ				IAmb	IAmb	17 07 42.8	
	comp=Z,19nm,1.6s						
BKZ	**Black Stump Fm**	**19.01**	**192**	P	**P**	**17 07 33.4**	**-2.5**
TMVZ	**Te Maari**	**19.13**	**194**	P	**P**	**17 07 35.8**	**-1.3**
OTVZ	**Oturere**	**19.19**	**194**	P	**P**	**17 07 36.5**	**-1.1**
BHHZ	**Black Hill Sta**	**19.41**	**193**	P	**P**	**17 07 37.5**	**-2.1**
BFZ	**Birch Farm**	**20.52**	**192**	P	**P**	**17 07 46.8**	**-2.8**
BFZ				IAmb	IAmb	17 08 09.2	
	comp=Z,21nm,1.1s						
BFZ	**Birch Farm**	**20.52**	**192**	P	**P**	**17 07 47.1**	**-2.5**
MRZ	**Mangatainoka R**	**20.64**	**193**	P	**P**	**17 07 43.5**	**-7.1**
MSWZ	**Moikau Station**	**21.43**	**193**	P	**P**	**17 07 57.4**	**-0.4**
SNZO	**South Karori**	**21.45**	**194**	P	**P**	**17 07 58.3**	**+0.4**
BHW	**Baring Head**	**21.51**	**194**	P	**P**	**17 07 57.4**	**-1.0**
PLWZ	**Palliser**	**21.58**	**193**	P	**P**	**17 07 57.6**	**-1.5**
QRZ	**Quartz Range**	**21.59**	**199**	P	**P**	**17 07 58.8**	**-0.4**
QRZ	**Quartz Range**	**21.59**	**199**	P	**P**	**17 07 58.9**	**-0.4**
NNZ	**Nelson**	**21.70**	**197**	P	**P**	**17 07 59.1**	**-1.1**
NNZ				IAmb	IAmb	17 08 04.1	
	comp=Z,20nm,1.2s						
NNZ	**Nelson**	**21.70**	**197**	P	**P**	**17 07 58.7**	**-1.5**
TUWZ	**Tuamarina**	**21.75**	**196**	P	**P**	**17 07 59.5**	**-1.1**
BSWZ	**Blackbirch Sta**	**22.04**	**196**	P	**P**	**17 08 02.1**	**-1.1**
THZ	**Tophouse**	**22.34**	**197**	P	**P**	**17 08 04.2**	**-1.8**
THZ				IAmb	IAmb	17 08 06.6	
	comp=Z,5.7nm,0.5s						
THZ	**Tophouse**	**22.34**	**197**	P	**P**	**17 08 04.6**	**-1.4**
KHZ	**Kahutara**	**22.78**	**196**	P	**P**	**17 08 07.9**	**-1.9**
WKZ	**Wanaka**	**26.31**	**201**	P	**P**	**17 08 39.8**	**-1.2**
WHZ	**Wether Hill Ro**	**27.61**	**201**	P	**P**	**17 08 52.9**	**+0.5**
WHZ				IAmb	IAmb	17 08 53.5	
	comp=Z,24nm,1.2s						
ARMA	**Armidale**	**28.72**	**244**	P	**P**	**17 09 03.6**	**+1.1**
ARMA				IAmb	IAmb	17 09 09.4	
	comp=Z,27nm,1.6s						
CTAO	**Charters Tower**	**33.15**	**265**	P	**P**	**17 09 41.0**	**+0.5**
CTAO				IAmb	IAmb	17 09 48.2	
	comp=Z,19nm,1.4s						
PMG	**Port Moresby**	**35.05**	**283**	P	**P**	**17 09 56.5**	**+0.1**
PMG				IAmb	IAmb	17 10 09.9	
	comp=Z,19nm,1.1s						
TOO	**Toolangi**	**35.56**	**234**	P	**P**	**17 09 60.0**	**-0.5**
TOO				IAmb	IAmb	17 10 03.8	
	comp=Z,15nm,1.5s						
COEN	**Coen**	**37.26**	**274**	P	**P**	**17 10 15.4**	**+0.7**
COEN				IAmb	IAmb	17 10 27.8	
	comp=Z,15nm,1.4s						
STKA	**Stephens Creek**	**37.44**	**244**	P	**P**	**17 10 16.0**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=79,slow=8.1,SNR=3.0						
WR0	**Warramunga Arr**	**44.07**	**262**	P	**P**	**17 11 08.3**	**-0.5**
AS31	**Alice Springs**	**44.17**	**257**	P	**P**	**17 11 09.6**	**0.0**
ASAR	**Alice Springs**	**44.17**	**257**	P	**P**	**17 11 09.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=87,slow=8.5,SNR=40						
ASAR				PcP	**PcP**	**17 12 40.4**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=94,slow=4.6,SNR=7.0						
WB0	**Warramunga Arr**	**44.23**	**262**	P	**P**	**17 11 09.4**	**-0.6**
WB0				IAmb	IAmb	17 11 24.4	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**44.24**	**262**	P	**P**	**17 11 09.6**	**-0.5**
WB2				IAmb	IAmb	17 11 28.9	
	comp=Z,11nm,1.3s						
WRAB	**Tennant Creek**	**44.25**	**262**	P	**P**	**17 11 09.6**	**-0.6**
WRAB				IAmb	IAmb	17 11 28.9	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.26**	**262**	P	**P**	**17 11 09.8**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=96,slow=7.1,SNR=46						
MTN	**Manton Dam**	**48.83**	**271**	P	**P**	**17 11 44.5**	**-0.4**
FAKI	**Fak Fak**	**51.20**	**283**	P	**P**	**17 12 02.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.68**	**263**	P	**P**	**17 12 13.7**	**+0.9**
SBA	**Scott Base**	**57.73**	**184**	P	**P**	**17 12 49.6**	**+2.7**
SBA				IAmb	IAmb	17 13 02.4	
	comp=Z,25nm,1.6s						
VNDA	**Vanda**	**57.76**	**185**	P	**P**	**17 12 48.3**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=24,slow=7.2,SNR=6.7						
VNDA	**Vanda**	**57.76**	**185**	IAmb	IAmb	17 12 49.0	
	comp=Z,2.5nm,0.9s						
VNDA				pP	pP	17 14 31.9	-2.1
QSPA	**South Pole Qui**	**69.45**	**180**	P	**P**	**17 14 02.8**	**+0.7**
UGM	**Wanagama**	**69.63**	**269**	P	**P**	**17 14 03.6**	**-0.4**
MJAR	**Matsushiro Arr**	**70.11**	**324**	P	**P**	**17 14 05.0**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=166,slow=5.6,SNR=4.2						
ADK	**Adak**	**72.20**	**1**	P	**P**	**17 14 18.1**	**-0.1**
JKA	**Kamikawa-asahi**	**73.67**	**332**	P	**P**	**17 14 27.8**	**+1.1**
ASAJ	**Asahikawa**	**73.67**	**332**	P	**P**	**17 14 28.4**	**+1.6**
	comp=Z,25nm,1.2s,baz=176,slow=2.7,SNR=4.9						
SSLB	**Suanglung**	**73.76**	**304**	P	**P**	**17 14 26.5**	**-1.3**
SSLB				IAmb	IAmb	17 14 54.2	
	comp=Z,7.2nm,0.8s						
TPUB	**Ta-pu**	**73.76**	**303**	P	**P**	**17 14 26.9**	**-0.9**
TPUB				IAmb	IAmb	17 14 44.9	
	comp=Z,50nm,1.4s						
PEA0B	**Petropavlovsk-**	**76.30**	**345**	P	**P**	**17 14 41.2**	**-0.1**
PEA0B				IAmb	IAmb	17 14 41.2	
	comp=Z,50nm,1.6s						
PETK	**Petropavlovsk-**	**76.30**	**345**	P	**P**	**17 14 41.3**	**0.0**
	comp=Z,3.4nm,0.7s,baz=133,slow=9.3,SNR=16						
KSRS	**Korea Array**	**76.76**	**319**	P	**P**	**17 14 45.1**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=127,slow=7.0,SNR=5.0						
USRK	**Ussuriysk Ar.**	**78.88**	**326**	P	**P**	**17 14 56.9**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=103,slow=3.3,SNR=2.3						
KHMM	**Horse Mountain**	**79.45**	**39**	P	**P**	**17 15 00.6**	**+1.9**
KHMM				IAmb	IAmb	17 15 16.6	
	comp=Z,27nm,1.6s						
BELA	**Belgrano 2**	**79.48**	**173**	P	**P**	**17 14 57.8**	**-0.3**
SII	**Sitkinak Islan**	**79.53**	**13**	P	**P**	**17 14 58.8**	**+0.2**
KRMB	**Red Mountain**	**79.76**	**38**	P	**P**	**17 15 02.2**	**+2.0**
KRMB				IAmb	IAmb	17 15 08.3	
	comp=Z,31nm,1.6s						
YBH	**Yreka Blue Hor**	**80.59**	**39**	P	**P**	**17 15 05.7**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=137,slow=2.9,SNR=7.1						
YBH	**Yreka Blue Hor**	**80.59**	**39**	IAmb	IAmb	17 15 07.0	
	comp=Z,2.6nm,0.8s						
NVAR	**Mina Array Bea**	**81.34**	**44**	P	**P**	**17 15 09.7**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=224,slow=8.4,SNR=8.2						
MOD	**Modoc Plateau**	**82.12**	**40**	P	**P**	**17 15 13.6**	**+1.1**
MOD				IAmb	IAmb	17 15 18.9	
	comp=Z,11nm,1.6s						
K05A	**Summer Lake**	**82.26**	**39**	P	**P**	**17 15 14.9**	**+1.7**
K05A				IAmb	IAmb	17 15 15.6	
	comp=Z,7.0nm,1.0s						
PINE	**Pine Mountain**	**82.88**	**38**	P	**P**	**17 15 17.5**	**+1.2**
I07A	**Izee**	**83.89**	**38**	P	**P**	**17 15 22.9**	**+1.7**
U15A	**North Rim**	**84.29**	**48**	P	**P**	**17 15 25.0**	**+1.4**
SUA	**Susitna One**	**84.75**	**13**	P	**P**	**17 15 25.1**	**+0.1**
SUA				IAmb	IAmb	17 15 50.5	
	comp=Z,38nm,1.6s						
GSI	**Gunungsitoli**	**84.91**	**273**	P	**P**	**17 15 28.0**	**+1.2**
G08A	**Pilot Rock**	**84.91**	**38**	P	**P**	**17 15 26.9**	**+0.7**
F10A	**Beach Ranch, E**	**86.30**	**38**	P	**P**	**17 15 33.4**	**+0.6**
F10A				IAmb	IAmb	17 15 34.3	
	comp=Z,3.8nm,0.7s						
TXAR	**Lajitas Array**	**87.40**	**57**	P	**P**	**17 15 39.9**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=234,slow=4.2,SNR=3.7						
ILAR	**Eielson Array**	**88.50**	**13**	P	**P**	**17 15 41.6**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=218,slow=5.3,SNR=16						
PDAR	**Pinedale Array**	**89.28**	**43**	P	**P**	**17 15 47.5**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=205,slow=2.3,SNR=11						
CMAR	**Chiang Mai Arr**	**89.84**	**290**	P	**P**	**17 15 51.9**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=108,slow=2.9,SNR=5.2						
MKAR	**Makanchi Array**	**111.04**	**313**	PKiKP	**PKiKP**	**17 21 19.2**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=109,slow=0.6,SNR=6.3						
ARCES	**ARCESS Array B**	**128.98**	**349**	PKP	**PKPdf**	**17 21 52.8**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=340,slow=1.7,SNR=8.9						
FINES	**FINESS Array B**	**135.79**	**343**	PKP	**PKPdf**	**17 22 05.8**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=102,slow=2.0,SNR=5.1						
KVAR	**Kislovodsk Arr**	**138.79**	**314**	PKhKP	**PKPdf**	**17 22 09.8**	**-3.2**
	comp=Z,2.5nm,0.8s,baz=274,slow=17,SNR=1.7						
HFS	**Hagfors**	**139.60**	**351**	PKhKP	PKPpre	17 22 05.0	
	comp=Z,1.1nm,0.4s,baz=45,slow=6.7,SNR=9.1						
AKASG	**Malin Array Be**	**142.96**	**331**	PKhKP	**PKPdf**	**17 22 16.8**	**-3.3**
	comp=Z,5.9nm,0.4s,baz=45,slow=4.3,SNR=48						
EKA	**Eskdalemuir Ar**	**145.15**	**5**	PKPbc	**PKPdf**	**17 22 23.2**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=342,slow=4.5,SNR=2.7						
BRTR	**Keskin Array B**	**146.67**	**312**	PKPbc	**PKPbc**	**17 22 29.1**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=135,slow=5.6,SNR=7.9						
MMAI	**Mount Meron Ar**	**147.59**	**299**	PKPbc	**PKPbc**	**17 22 32.7**	**+0.5**
	comp=Z,1.7nm,0.4s,baz=76,slow=7.0,SNR=12						
OSTC	**Ostas**	**147.98**	**342**	⇑*e*PKP	**PKPbc**	**17 22 33.3**	**+0.7**
CLL	**Collm**	**148.10**	**346**		**PKPbc**	**17 22 32.4**	**-0.4**
DPC	**Dobruska-Polom**	**148.14**	**342**	⇑*e*PKP	**PKPbc**	**17 22 33.2**	**+0.2**
KRLC	**Kraliky**	**148.25**	**341**	⇑*e*PKP	**PKPbc**	**17 22 33.3**	**0.0**
EIL	**Elat**	**148.62**	**293**	PKPbc	**PKPbc**	**17 22 34.4**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=60,slow=8.1,SNR=2.5						
KHC	**Kasperske Hory**	**149.99**	**344**	⇑*e*PKP	**PKPbc**	**17 22 37.6**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**17 22 45.8**	**+0.2**
GERES	**GERESS Array B**	**150.22**	**344**	PKPbc	**PKPbc**	**17 22 38.2**	**0.0**
	comp=Z,0.9nm,0.5s,baz=29,slow=3.0,SNR=8.2						

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*MEX **23** 17:06:09.8±0.5, 14.°62N×92.°11W, h96^{km}±4^{km}, MD4.2*

*GCG **23** 17:06:11.4±0.5, 14.°86N×92.°18W, h18^{km}±4^{km}, MD4.0*

ISC 23 17:06:12.1±1.5, **14.°74N**±0.°08×**92.°26W**±0.°05, **h79**^{km}±11^{km}, **n10**, σ**0**^{s}.**87**/19, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.17**	**357**	*e*P	**Pn**	**17 06 22.8**	**-0.9**
THIG				*i* S	**Sn**	**17 06 32.9**	**+0.7**
PCIG		**1.34**	**316**	*e*P	**Pn**	**17 06 35.6**	**+0.3**
PCIG				*e*S	**Sn**	**17 06 54.3**	**+1.5**
FUG	**Fuego 3**	**1.40**	**102**	*e*P	**Pn**	**17 06 35.6**	**-0.6**
FUG				*e*S	**Sn**	**17 06 54.6**	**+0.1**
CCIG	**Comitan**	**1.54**	**4**	*i* P	**Pn**	**17 06 37.1**	**-1.0**
CCIG				*i* S	**Sn**	**17 06 57.8**	**+0.1**
PCG	**Pacaya**	**1.63**	**102**	*e*P	**Pn**	**17 06 39.0**	**-0.4**
PCG				*e*S	**Sn**	**17 07 01.1**	**+1.1**
NBG	**Las Nubes**	**1.85**	**94**	*e*P	**Pn**	**17 06 42.0**	**-0.3**
TGIG		**2.19**	**338**	*i* P	**Pn**	**17 06 45.7**	**-0.9**
TGIG				*i* S	**Sn**	**17 07 13.6**	**+0.6**
MRL	**Marmol**	**2.51**	**82**	*e*P	**Pn**	**17 06 51.1**	**+0.1**
MRL				*e*S	**Sn**	**17 07 21.2**	**+0.3**
CMIG	**Matias Romero**	**3.44**	**313**	*e*P	**Pn**	**17 07 03.1**	**-0.4**
CMIG				*e*S	**Sn**	**17 07 44.2**	**+1.1**
HUIG	**Huatulco**	**3.86**	**286**	*e*P	**Pn**	**17 07 07.8**	**-1.3**
HUIG				*i* S	**Sn**	**17 07 53.8**	**+0.6**

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*IDC **23** 17:10:57.6±1.3, 25.°99N×127.°84E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.3/50, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=43.2km s-min=19.4km az=99.0*

*JMA **23** 17:11:01.7±0.2, 25.°99N×128.°13E, h42^{km}±2^{km}, M3.1*

ISC 23 17:11:01.1±1.2, **25.°95N**±0.°05×**128.°20E**±0.°04, **h31**^{km}±9^{km}, **n16**, σ**1**^{s}.**07**/26, **mb3.7**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.42**	**298**	P	**Pb**	**17 11 10.5**	**+0.1**
JJT3				S	**Sb**	**17 11 17.2**	**+0.5**
JNTH	**Nagotoyohara**	**0.59**	**345**	P	**Pb**	**17 11 12.8**	**-0.3**
JNTH				S	**Sb**	**17 11 20.4**	**-0.8**
JOW	**Kunigami**	**0.88**	**4**	Pn	**Pn**	**17 11 17.5**	**-0.1**
	78nm,0.3s,baz=113,slow=25,SNR=472						
JOW				Sn	**Sn**	**17 11 28.1**	**-1.2**
	101nm,0.3s,baz=96,slow=26,SNR=10.0						
JOW	**Kunigami**	**0.88**	**4**	P	**Pb**	**17 11 17.7**	**-0.3**
JOW				S	**Sn**	**17 11 28.6**	**-0.7**
JAGN	**Aguni-jima**	**1.07**	**307**	P	**Pn**	**17 11 19.9**	**-0.1**
JAGN				*e*S	**Sn**	**17 11 33.2**	**-0.7**
JYRO	**Yoronjima**	**1.10**	**12**	P	**Pn**	**17 11 20.5**	**+0.1**
JYRO				S	**Sn**	**17 11 34.0**	**-0.6**
JIH	**Iheya**	**1.10**	**349**	P	**Pn**	**17 11 20.8**	**+0.3**
JIH				*e*S	**Sn**	**17 11 34.4**	**-0.3**
JKE	**Kume jima 2**	**1.32**	**287**	P	**Pn**	**17 11 22.9**	**-0.6**
JOKE	**Okinoerabujima**	**1.45**	**13**	P	**Pn**	**17 11 25.4**	**+0.1**
JTK	**Tokunoshima**	**1.95**	**20**	P	**Pn**	**17 11 32.5**	**+0.3**
JTK				*e*S	**Sn**	**17 11 55.5**	**-0.2**
JMZ	**Minamidaito 2**	**2.73**	**92**	P	**Pn**	**17 11 42.8**	**0.0**
JMZ				S	**Sn**	**17 12 12.7**	**-2.1**
JKDJ	**Kitadaitoujima**	**2.79**	**89**	P	**Pn**	**17 11 43.9**	**+0.2**
JKDJ				S	**Sn**	**17 12 15.1**	**-1.3**
JNU	**Nakatsue**	**7.52**	**17**	Pn	**Pn**	**17 12 51.5**	**+2.7**
	0.2nm,0.3s,baz=262,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**41.70**	**312**	P	**P**	**17 18 45.7**	**-1.4**
	0.3nm,0.7s,baz=96,slow=11,SNR=4.4						
WRA	**Warramunga Arr**	**46.00**	**172**	P	**P**	**17 19 23.4**	**+1.6**
	0.7nm,0.8s,baz=353,slow=8.3,SNR=2.6						
ASAR	**Alice Springs**	**49.63**	**173**	P	**P**	**17 19 51.6**	**+1.6**
	1.4nm,1.2s,baz=350,slow=7.1,SNR=5.6						

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*STR **23** 17:13:00.1±1.7, 44°N±6°×1°1E±1°5, h0^{km}, MLv3.6/10, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*MOS **23** 17:13:01.5±1.0, 44.°30N×11.°11E, h10^{km}, mb4.2/9, Error ellipse: s-maj=8.6km s-min=5.4km az=56.7*

*ROM **23** 17:13:02.0±0.1, 44.°135N±0.°006×11.°126E±0.°006, h9^{km}, ML3.5/54, Error ellipse: s-maj=0.7km s-min=0.3km az=18.0*

*PRU **23** 17:13:02.3±0.0, 44.°16N×11.°26E, h0^{km}*

*GEN **23** 17:13:02, 44.°13N×11.°12E, h8^{km}±5^{km}, Ml3.3*

*IASPEI **23** 17:13:02.5±0.9, 44.°13N±0.°02×11.°14E±0.°02, h9^{km}±6^{km}, mb3.8/13, Error ellipse: s-maj=3.5km s-min=2.6km az=24.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*IDC **23** 17:13:02.0±1.0, 44.°27N×11.°11E, h0^{km}, mb3.8/8, mb1 3.8/12, mb1mx3.6/47, mbtmp3.7/12, ML3.5/3, MS2.4/3, Ms1 2.4/3, ms1mx2.3/50, Error ellipse: s-maj=23.5km s-min=13.7km az=125.0*

*LDG **23** 17:13:03.4±0.1, 44.°06N×11.°19E, h10^{km}, Ml3.4/21, Error ellipse: s-maj=2.9km s-min=1.8km az=32.0*

ISC 23 17:13:02.6±0.7, **44.°14N**±0.°02×**11.°13E**±0.°01, **h9**^{km}±4^{km}, **n278**, σ**1**^{s}.**75**/343, **mb3.8**/13, **31C-8D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.03**	**357**	⇓P	**Pg**	**17 13 03.8**	**-0.7**
FNVD				S	**Sg**	**17 13 05.4**	**-0.4**
FNVD				AML	AML		
FNVD				AML	AML		
MTCR	**Monte La Croce**	**0.14**	**220**	⇑P	**Pg**	**17 13 06.0**	**+0.1**
MTCR				S	**Sg**	**17 13 08.8**	**+0.6**
MTCR				AML	AML		
	comp=E,50250µm,0.5s						
MTCR				AML	AML		
	comp=N,36550µm,1.2s						
MTCR				AML	AML		
	comp=N,36600µm,1.2s						
MTCR				AML	AML		
	comp=N,36550µm,1.2s						
MTCR				AML	AML		
	comp=N,36550µm,1.2s						
PTF	**Prato**	**0.18**	**193**	⇓P	**Pg**	**17 13 06.5**	**0.0**
SEI	**Scarperia**	**0.19**	**116**	⇑P	**Pg**	**17 13 05.9**	**-0.6**
SEI				S	**Sg**	**17 13 09.2**	**0.0**
SEI				AML	AML		
	comp=E,95500µm,0.4s						
SEI				AML	AML		
ZCCA	**Zocca**	**0.24**	**333**	⇑*e*P	**Pg**	**17 13 08.0**	**+0.5**
ZCCA				S	**Sg**	**17 13 11.7**	**+0.9**
ZCCA				AML	AML		
	comp=E,9485µm,0.5s						
ZCCA				AML	AML		
	comp=E,11000µm,0.5s						
ZCCA				AML	AML		
	comp=E,9490µm,0.5s						
ZCCA				AML	AML		
	comp=N,13950µm,1.5s						

ZCCA				AML	AML		
	comp=N,13950µm,1.5s						
ZCCA				AML	AML		
	comp=N,13850µm,1.5s						
ZCCA				AML	AML		
	comp=N,13850µm,1.5s						
ZCCA				AML	AML		
	comp=E,9490µm,0.5s						
POPM	Popiglio	0.28	251	P	Pg	17 13 08.2	-0.1
POPM				S	Sb	17 13 13.0	-1.7
POPM	Popiglio	0.28	251	⇑P	Pg	17 13 08.2	-0.1
POPM				S	Sb	17 13 13.0	-1.7
POPM				AML	AML		
	comp=E,12510µm,0.6s						
POPM				AML	AML		
	comp=N,26650µm,1.1s						
POPM				AML	AML		
	comp=E,12500µm,0.6s						
POPM				AML	AML		
	comp=E,12500µm,0.6s						
POPM				AML	AML		
	comp=N,26650µm,1.1s						
MTRZ	Monterenzio	0.34	46	⇑*i*P	Pg	17 13 08.2	-1.3
MTRZ				AML	AML		
	comp=E,31650µm,0.7s						
MTRZ				AML	AML		
	comp=N,31850µm,0.8s						
MTRZ				AML	AML		
	comp=N,32100µm,0.7s						
MTRZ				AML	AML		
	comp=E,32400µm,0.7s						
MTRZ				AML	AML		
	comp=E,31650µm,0.7s						
MTRZ				AML	AML		
	comp=N,32100µm,0.7s						
MTRZ				AML	AML		
	comp=N,31850µm,0.8s						
MTRZ				AML	AML		
	comp=E,32400µm,0.7s						
FIR	Firenze	0.38	165	P	Pg	17 13 09.6	-0.4
BDI	Bagni Di Lucca	0.39	259	⇑*e*P	Pg	17 13 09.8	-0.4
BDI				S	Sb	17 13 16.3	-1.5
BDI				AML	AML		
	comp=E,8180µm,1.0s						
BDI				AML	AML		
	comp=N,8435µm,0.7s						
BDI				AML	AML		
	comp=E,8175µm,1.0s						
BDI				AML	AML		
	comp=N,9205µm,0.7s						
BDI				AML	AML		
	comp=N,8425µm,0.7s						
BDI				AML	AML		
	comp=E,7765µm,1.1s						
RUFI	Rufina	0.41	137	⇑*e*P	Pg	17 13 09.8	-0.8
RUFI				S	Sg	17 13 16.4	+0.4
RUFI				AML	AML		
	comp=E,5780µm,1.2s						
RUFI				AML	AML		
	comp=N,7475µm,0.6s						
RUFI				AML	AML		
	comp=E,5770µm,1.2s						
RUFI				AML	AML		
	comp=N,7470µm,0.6s						
RUFI				AML	AML		
	comp=E,5790µm,1.2s						
RUFI				AML	AML		
	comp=N,7495µm,0.6s						
LMD	Lutirano	0.42	98	P	Pg	17 13 09.7	-1.2
LMD				AML	AML		
	comp=E,5110µm,1.1s						
LMD				AML	AML		
	comp=N,6670µm,0.7s						
CARD	Cardoso	0.48	257	P	Pg	17 13 11.5	-0.4
CARD				S	Sb	17 13 19.1	-1.3
CARD	Cardoso	0.48	257	P	Pg	17 13 11.5	-0.4
MODE	Modena	0.51	346	P	Pb	17 13 13.8	0.0
MAIM	Mastiano	0.51	244	P	Pg	17 13 11.7	-0.8
MAIM				S	Sb	17 13 19.7	-1.5
MAIM	Mastiano	0.51	244	⇑*e*P	Pg	17 13 11.7	-0.8
MAIM				S	Sb	17 13 19.8	-1.4
MAIM				AML	AML		
	comp=E,3215µm,0.6s						
MAIM				AML	AML		
	comp=N,4755µm,0.6s						
SARO	Sassorosso	0.52	275	P	Pg	17 13 12.4	-0.5
VLC	Villacollemand	0.53	273	⇑*e*P	Pg	17 13 12.4	-0.5
VLC				S	Sb	17 13 20.7	-1.3
VLC				AML	AML		
	comp=E,2095µm,0.8s						
VLC				AML	AML		
	comp=E,2195µm,0.8s						
VLC				AML	AML		
	comp=N,4495µm,1.4s						
VLC				AML	AML		
	comp=N,4460µm,1.4s						
FIU	Minerbio Fiu	0.57	28	P	Pb	17 13 15.0	+0.3
FIU				AML	AML		
	comp=E,10395µm,0.6s						
FIU				AML	AML		
	comp=N,11150µm,1.6s						
FIU				AML	AML		
	comp=E,10380µm,0.6s						
SFI	Santa Sofia	0.57	114	⇑*e*P	Pg	17 13 12.6	-1.2
SFI				S	Sb	17 13 21.6	-1.4
SFI				AML	AML		
	comp=E,5130µm,0.6s						
SFI				AML	AML		
	comp=E,4250µm,0.5s						
SFI				AML	AML		
	comp=N,4715µm,1.6s						
SFI				AML	AML		
	comp=N,4755µm,1.0s						
SFI				AML	AML		
	comp=E,5125µm,0.6s						
SFI				AML	AML		
	comp=E,4245µm,0.5s						
ERBM	Eremo	0.58	299	P	Pg	17 13 13.9	0.0
ERBM				AML	AML		
	comp=E,2215µm,0.8s						
ERBM				AML	AML		
	comp=N,2815µm,1.2s						
ERBM				AML	AML		
	comp=E,2210µm,0.8s						
ERBM				AML	AML		
	comp=N,2820µm,1.2s						
ASQU	Asqua	0.59	125	P	Pg	17 13 13.5	-0.6
ASQU				S	Sb	17 13 22.3	-1.3
ASQU				AML	AML		
	comp=E,4960µm,0.4s						
ASQU				AML	AML		
	comp=N,4335µm,0.5s						
ASQU				AML	AML		
	comp=N,4330µm,0.5s						
PII	Pisa	0.60	226	⇑P	Pg	17 13 13.6	-0.7
PII				S	Sb	17 13 22.5	-1.3
PII				AML	AML		
	comp=N,7975µm,0.5s						
PII				AML	AML		
	comp=E,6675µm,0.9s						
RAVA	Ravarino	0.62	360	AML	AML		
	comp=N,6930µm,1.3s						
RAVA				AML	AML		
	comp=E,8615µm,1.5s						
RAVA				AML	AML		
	comp=E,8620µm,1.5s						
RAVA				AML	AML		
	comp=N,6940µm,1.3s						
OSSC	Osservatorio P	0.62	172	P	Pg	17 13 14.4	-0.2
OSSC				S	Sb	17 13 24.4	-0.1
OSSC				AML	AML		
	comp=N,12400µm,0.8s						
OSSC				AML	AML		
	comp=E,12550µm,0.8s						
OSSC				AML	AML		
	comp=E,13600µm,0.6s						
OSSC				AML	AML		
	comp=N,13600µm,0.6s						
CMPO	Campotto Po	0.66	48	P	Pn	17 13 17.5	-0.6
CSNT	Castellina Chi	0.68	170	P	Pg	17 13 15.5	-0.2
CSNT				S	Sb	17 13 25.7	-0.4
CSNT				AML	AML		
	comp=E,6900µm,0.3s						
CSNT				AML	AML		
	comp=N,12200µm,0.5s						
EQUI	Equi	0.70	273	P	Pg	17 13 15.2	-0.9
EQUI	Equi	0.70	273	P	Pg	17 13 15.7	-0.4
EQUI				AML	AML		
	comp=E,1550µm,0.8s						
EQUI				AML	AML		
	comp=N,2390µm,1.0s						
NOVE	Novellara	0.72	336	AML	AML		
	comp=N,5645µm,0.9s						
NOVE				AML	AML		
	comp=E,6890µm,0.8s						
NOVE				AML	AML		
	comp=N,5640µm,0.9s						
CAVE	Cavezzo	0.73	353	AML	AML		
	comp=N,6740µm,1.0s						
CAVE				AML	AML		
	comp=E,6255µm,0.6s						
CRE	Caprese Michel	0.79	131	P	Pb	17 13 18.0	-0.6
CRE				AML	AML		
	comp=N,5915µm,0.3s						
CRE				AML	AML		
	comp=E,3685µm,1.4s						
GRAM	Graiana	0.84	295	P	Pb	17 13 18.7	-0.7
GRAM	Graiana	0.84	295	P	Pb	17 13 18.8	-0.7
GRAM				AML	AML		
	comp=N,4185µm,0.7s						
GRAM				AML	AML		
	comp=E,3900µm,0.4s						
SSP9	Sansepolcro	0.92	127	P	Pb	17 13 20.0	-0.8
SSP9				AML	AML		
	comp=E,2250µm,1.3s						
SSP9				AML	AML		
	comp=N,2470µm,1.5s						
SSP9				AML	AML		
	comp=N,2420µm,1.5s						
SSP9				AML	AML		
	comp=E,2300µm,1.3s						
PLMA	Palmaria, Port	0.92	265	P	Pg	17 13 19.8	-0.6
PLMA				AML	AML		
	comp=N,1155µm,1.3s						
PLMA				AML	AML		
	comp=E,988µm,1.0s						
PARC	Parchiule	0.94	121	P	Pg	17 13 20.1	-0.6
PARC				AML	AML		
	comp=N,2020µm,0.6s						
PARC				AML	AML		
	comp=E,1880µm,1.4s						
GAZZ	Gazzo Veronese	0.98	359	*e*Pg	Pn	17 13 23.0	+0.5
CAFI	Castiglion Fio	1.01	143	P	Pg	17 13 21.3	-0.8
CAFI				AML	AML		
	comp=N,1830µm,1.6s						
CAFI				AML	AML		
	comp=E,3095µm,1.3s						
BADI	Badiali	1.02	127	P	Pg	17 13 21.8	-0.6
BADI				AML	AML		
	comp=E,2195µm,1.0s						
BADI				AML	AML		
	comp=N,1785µm,0.6s						
BADI				AML	AML		
	comp=E,2200µm,1.0s						
ADRI	Adria, Italy	1.10	35	*e*Pg	Pn	17 13 24.3	0.0
ATPI	Pietralunga -	1.15	126	P	Pg	17 13 23.9	-0.9
ATPI				AML	AML		
	comp=E,1760µm,0.6s						
ATPI				AML	AML		
	comp=N,2180µm,0.9s						
NARO	Abbazia di Nar	1.18	116	P	Pg	17 13 24.6	-0.7
NARO				AML	AML		
	comp=E,916µm,0.9s						
NARO				AML	AML		
	comp=N,1018µm,1.6s						
PIEI	Pieia	1.18	120	P	Pb	17 13 24.6	-0.7
PIEI				AML	AML		
	comp=N,933µm,0.4s						
PIEI				AML	AML		
	comp=E,1505µm,0.5s						
ATVO	AVT- Monte Val	1.20	129	P	Pb	17 13 24.2	-1.3
ATVO				AML	AML		
	comp=E,2535µm,0.6s						
ATVO				AML	AML		
	comp=N,2110µm,0.7s						
PESA	Pesaro	1.25	98	AML	AML		
	comp=E,2845µm,0.8s						
PESA				AML	AML		
	comp=N,2100µm,0.6s						
FSSB	Fossombrone	1.27	110	P	Pg	17 13 26.7	-0.4
FSSB				AML	AML		
	comp=E,2660µm,0.5s						
FSSB				AML	AML		
	comp=N,3990µm,0.5s						
TEOL	Teolo	1.28	17	*e*Pg	Pb	17 13 26.4	-0.6
TEOL				*e*Sg	Sn	17 13 46.6	+2.6
TEOL	Teolo	1.28	17	P	Pn	17 13 25.7	-1.1
TEOL				AML	AML		
	comp=E,6410µm,0.8s						
TEOL				AML	AML		
	comp=N,3760µm,0.8s						
FRON	Frontone	1.31	118	P	Pg	17 13 27.2	-0.7
FRON				AML	AML		
	comp=N,1835µm,0.6s						
FRON				AML	AML		
	comp=E,1535µm,0.6s						
BOB	Bobbio (Coli)	1.36	298	AML	AML		
	comp=E,1910µm,1.2s						
BOB				AML	AML		
	comp=N,3065µm,1.1s						
BOB				AML	AML		
	comp=N,3160µm,1.1s						
BOB				AML	AML		
	comp=E,1825µm,0.9s						
CASP	Castiglione de	1.36	188	P	Pn	17 13 26.0	-1.8
CASP				AML	AML		
	comp=N,554µm,0.8s						
CASP				AML	AML		
	comp=E,964µm,0.7s						
GORR	Gorreto	1.40	290	P	Pg	17 13 29.7	+0.3
GORR				AML	AML		
	comp=E,3775µm,0.6s						
GORR				AML	AML		
	comp=N,2965µm,1.0s						
MGAB	Montegabbione	1.42	149	P	Pn	17 13 26.6	-2.0
MGAB				AML	AML		
	comp=E,1590µm,0.5s						
MGAB				AML	AML		
	comp=N,1140µm,1.6s						
MGAB				AML	AML		
	comp=N,1185µm,1.1s						
MGAB				AML	AML		
	comp=E,1540µm,0.5s						
ARVD	Arcevia	1.46	115	P	Pg	17 13 30.1	-0.6
ARVD				AML	AML		
	comp=E,807µm,1.2s						
ARVD				AML	AML		
	comp=N,995µm,1.5s						
MARN	Marana (Italy)	1.50	2	*e*Pg	Pn	17 13 29.3	-0.5
MARN				*e*Sg	Sg	17 13 51.2	+0.3
ROVR	Rover Verones	1.51	359	P	Pn	17 13 28.7	-1.3
ROVR				AML	AML		
	comp=E,301µm,0.8s						
ROVR				AML	AML		
	comp=E,932µm,0.9s						
ROVR				AML	AML		
	comp=N,1232µm,0.3s						
ROVR				AML	AML		
	comp=N,485µm,0.3s						
BALD	Monte Baldo	1.56	352	*e*Pn	Pn	17 13 30.2	-0.6
BALD				*e*Sn	Sg	17 13 53.5	+0.7
ASSB	Assisi San Ben	1.56	134	AML	AML		
	comp=N,972µm,1.1s						
ASSB				AML	AML		
	comp=E,931µm,0.7s						
MAGA	Magasa	1.68	348	P	Pn	17 13 31.7	-0.6
MAGA				AML	AML		
	comp=E,2395µm,0.8s						
MAGA				AML	AML		
	comp=N,1410µm,0.4s						
DOSS	Dosso del Somm	1.74	1	*e*Pn	Pn	17 13 32.2	-1.0
FDMO	Fiordimonte	1.80	127	P	Pn	17 13 32.8	-1.1
FDMO				AML	AML		
	comp=N,847µm,1.5s						
FDMO				AML	AML		
	comp=E,701µm,0.8s						
CGRP	Cima Grappa	1.81	15	*e*Pn	Pn	17 13 33.1	-1.0
CSP1	Cessapalombo	1.84	124	P	Pn	17 13 33.4	-1.0
CSP1				AML	AML		
	comp=E,1478µm,0.5s						
CSP1				AML	AML		
	comp=N,1544µm,0.5s						
CESX	Cesi	1.86	145	P	Pn	17 13 34.0	-0.7
CESX				AML	AML		
	comp=N,1012µm,0.5s						
CESX				AML	AML		
	comp=E,814µm,0.4s						
ED06	Collalto TV	1.88	24	*e*Pn	Pn	17 13 34.3	-0.7
MABI	Malga Bissina	1.97	347	P	Pn	17 13 36.1	-0.2
MABI				AML	AML		
	comp=N,151µm,0.3s						
MABI				AML	AML		
	comp=E,196µm,0.7s						
MNTP	Montappone	1.97	120	AML	AML		
	comp=N,1730µm,0.7s						
MNTP				AML	AML		
	comp=E,2485µm,0.7s						
LNSS	Leonessa	2.07	137	P	Pn	17 13 36.7	-1.0
LNSS				AML	AML		
	comp=N,1185µm,1.2s						
LNSS				AML	AML		
	comp=E,1066µm,0.4s						
POLC	Polcenigo	2.13	27	P	Pn	17 13 37.5	-0.8
POLC				AML	AML		
	comp=E,660µm,0.7s						
POLC				AML	AML		
	comp=N,820µm,0.5s						
PGF	Pioggiola	2.22	225	P	Pn	17 13 38.9	-0.8
PGF				S	Sn	17 14 06.9	-0.4
PGF	Pioggiola	2.22	225	*e*Pn	Pn	17 13 38.4	-1.3
PGF	Pioggiola	2.22	225	*e*P	Pn	17 13 40.7	+1.0
PGF				*e*Sn	Sn	17 14 05.0	-2.3
	comp=N,140nm,0.8s						
PGF	Pioggiola	2.22	225	P	Pn	17 13 38.8	-0.9
PGF				SN	Sn	17 14 06.2	-1.1
RM33	Pellescritta (	2.23	136	P	Pn	17 13 38.9	-0.9
RM33				AML	AML		
	comp=N,795µm,0.6s						
RM33				AML	AML		
	comp=E,630µm,1.6s						
KOSI	Kohlern	2.33	4	P	Pb	17 13 42.7	-2.3
KOSI				AML	AML		
	comp=N,374µm,0.7s						
KOSI				AML	AML		
	comp=E,534µm,1.4s						
AQU	L'Aquila	2.44	136	*e*Pn	Pn	17 13 42.8	+0.1
TRI	Trieste	2.45	49	P	Pn	17 13 41.2	-1.5
SKDS	Skadanscina	2.49	55	*i* Pn	Pn	17 13 41.8	-1.5
SKDS				*i* Sn	Sb	17 14 16.8	-1.6
SKDS				IAML		17 14 43.5	
	comp=Z,109nm,0.6s						
SABO	M.te Sabotino	2.54	43	P	Pn	17 13 43.0	-1.1
SABO				AML	AML		
	comp=N,664µm,0.6s						
SABO				AML	AML		
	comp=E,466µm,0.6s						
GEPF	Gemona	2.57	33	AML	AML		
	comp=N,254µm,0.6s						
GEPF				AML	AML		
	comp=E,206µm,0.6s						
SAOF	Saorge	2.58	268	P	Pn	17 13 44.3	-0.3
ABSI	Aberstueckl	2.59	3	P	Pn	17 13 44.5	-0.4
ABSI				AML	AML		
	comp=E,645µm,0.9s						
ABSI				AML	AML		
	comp=N,607µm,0.8s						
VCEL	Villa Celiera	2.64	130	AML	AML		
	comp=N,700µm,1.5s						
VCEL				AML	AML		
	comp=E,697µm,0.5s						
RIY	Rijeka	2.67	62	*e*Pn	Pn	17 13 43.8	-2.0
RIY				Sn	Sn	17 14 15.4	-2.8
SBF	Sospel	2.68	265	*e*Pn	Pn	17 13 45.2	-0.8
SBF				*e*Sn	Sn	17 14 17.0	-1.5
	comp=E,146nm,0.7s						
SBF	Sospel	2.68	265	P	Pn	17 13 45.9	-0.1
SBF				S	Sg	17 14 27.0	-1.6
TURF	col de Turini	2.70	268	P	Pn	17 13 45.9	-0.5
NVLJ	Novalja	2.72	80	*e*Pn	Pn	17 13 45.1	-1.3
NVLJ				Sn	Sn	17 14 17.7	-1.7
VOJS	Vojsko	2.72	45	*i* Pn	Pn	17 13 45.4	-1.2
ESCA	l'Escarene	2.73	265	P	Pn	17 13 46.1	-0.5
PTCC	Patocco-Chiusa	2.76	34	P	Pn	17 13 45.6	-1.5
PTCC				AML	AML		
	comp=E,178µm,0.6s						
PTCC				AML	AML		
	comp=N,170µm,0.5s						
DAVOX	Davos/Dischmat	2.79	342	Pn	Pn	17 13 49.1	+1.5
	comp=N,2.6nm,0.3s,baz=172,slow=21,SNR=34						
DAVOX				Sn	Sn	17 14 20.0	-1.4
	comp=N,5.0nm,0.3s,baz=214,slow=5.5,SNR=6.2						
DAVOX				LR	LR	17 14 43.8	
	comp=N,46nm,21.4s,baz=82,slow=38						
ABTA	Abfaltersbach	2.79	20	*e*Pn	Pn	17 13 47.2	-0.3
	comp=N,12nm,0.4s						
ABTA				Sn	Sn	17 14 23.2	+2.0
	comp=N,52nm,0.6s						
CADS	Cadrg	2.79	41	*i* Pn	Pn	17 13 46.4	-1.1
CEY	Cerknica	2.84	55	*e*Pn	Pn	17 13 46.4	-1.8
DUGI	Dugi Otok	2.84	92	*e*Pn	Pn	17 13 47.8	-0.3
DUGI				Sn	Sn	17 14 20.9	-1.5
RISI	Rein	2.89	13	AML	AML		
	comp=E,361µm,0.4s						
RISI				AML	AML		
	comp=N,600µm,0.6s						
FETA	Feichten	2.90	355	*e*Pn	Pn	17 13 50.4	+1.3
	comp=N,28nm,0.3s,SNR=19						
FETA				Sn	Sn	17 14 25.1	+0.9
	comp=N,25nm,0.7s						
ISO	Isola	2.93	272	P	Pn	17 13 49.5	0.0
MYKA	Terra Mystica	3.06	35	*e*Pn	Pn	17 13 50.7	-0.5
	comp=N,12nm,0.4s,SNR=6.0						
MYKA				*i* Sn	Sn	17 14 29.0	+1.0
	comp=N,20nm,0.4s						
CALF	Calern	3.06	264	P	Pn	17 13 50.9	-0.4
LJU	Ljubljana	3.07	50	*e*Pn	Pn	17 13 50.4	-0.9
SQTA	Sankt Quirin	3.08	1	*e*Pn	Pn	17 13 52.7	+1.1
	comp=N,34nm,0.3s,SNR=16						
SQTA				*e*Sn	Sn	17 14 30.4	+1.8
	comp=N,58nm,0.4s						
VISS	Visnje	3.12	56	*i* Pn	Pn	17 13 51.1	-0.8
VISS				*e*Sn	Sn	17 14 28.2	-1.1
VISS				IAML		17 14 59.5	
	comp=Z,71nm,0.6s						
MBDF	Montbardon	3.17	282	*e*Pn	Pn	17 13 53.3	+0.4
MBDF	Montbardon	3.17	282	*e*P	Pb	17 13 56.1	-3.2
MBDF				*e*Sn	Sn	17 14 29.1	-1.8
	comp=Z,46nm,0.7s						
VNDS	Vrh nad Dolski	3.20	51	*i* Pn	Pn	17 13 52.5	-0.6
VNDS				*e*Sn	Sn	17 14 31.4	0.0
VNDS				IAML		17 14 58.2	
	comp=Z,220nm,1.1s						
MOTA	Moosalm	3.21	360	*e*Pn	Pn	17 13 54.7	+1.4
	comp=Z,34nm,0.6s,SNR=12						
MOTA				*e*Sn	Sn	17 14 33.9	+2.1
	comp=Z,25nm,0.4s						
WATA	Walderalm	3.21	5	*i* Pn	Pn	17 13 55.1	+1.7
	comp=Z,17nm,0.3s,SNR=13						
WATA				*e*Sn	Sn	17 14 34.3	+2.4
	comp=Z,26nm,0.4s						
DAVA	Damuels	3.27	345	*i* Pn	Pn	17 13 56.0	+1.8
	comp=Z,13nm,0.3s,SNR=12						
DAVA				*i* Sn	Sn	17 14 34.8	+1.5
	comp=Z,24nm,0.3s						
FRF	La Foret Royal	3.29	261	*e*Pn	Pn	17 13 53.9	-0.4
FRF	La Foret Royal	3.29	261	*e*P	Pn	17 13 56.2	+1.9
FRF				*e*Sn	Sn	17 14 31.4	-2.2
	comp=Z,22nm,0.3s						
FRF	La Foret Royal	3.29	261	P	Pn	17 13 53.7	-0.6
FRF				S	Sn	17 14 29.3	-4.3
ZIRJ	Zirje	3.30	97	*e*Pn	Pn	17 13 54.8	+0.4
ZIRJ				Sn	Sn	17 14 32.8	-1.0
OGAG	Argentiere	3.31	277	Pn	Pb	17 13 58.4	-3.1
MORI	Morici	3.32	93	*e*Pn	Pn	17 13 55.2	+0.5
MORI				Sn	Sn	17 14 32.6	-1.6
KBA	Koelnbreinsper	3.33	27	*i* Pn	Pn	17 13 55.6	+0.6
	comp=Z,17nm,0.3s,SNR=6.9						
KBA				*i* Sn	Sn	17 14 36.7	+1.9
	comp=Z,22nm,0.5s						
UDBI	Udbina	3.35	82	*e*Pn	Pn	17 13 54.0	-1.2
UDBI				Sn	Sn	17 14 33.3	-1.9
RETA	Reutte	3.36	356	*e*Pn	Pn	17 13 57.0	+1.7
	comp=Z,31nm,0.4s,SNR=13						
OBKA	Obir	3.38	44	*i* Pn	Pn	17 13 55.3	-0.4
	comp=Z,12nm,0.6s						
LPG	La Plagne	3.40	295	*e*P	Pb	17 13 59.4	-3.7
LPG				*e*Sn	Sn	17 14 34.7	-1.9

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      comp=Z,38nm,0.6s
LPG   La Plagne          3.40 295  P      Pn      17 13 58.4 +2.3
LPL   La Plagne          3.42 295 ePn     Pn      17 13 57.2 +0.9
LPL   La Plagne          3.42 295 eP      Pb      17 13 59.4 -4.0
LPL                               eSn     Sn      17 14 36.2 -0.8
      comp=Z,54nm,0.9s
OZLJ  Ozalj              3.42  63 ePn     Pn      17 13 54.8 -1.3
OZLJ                               Sn     Sn      17 14 33.2 -3.5
LMR   La Mourre          3.44 258 ePn     Pn      17 13 55.8 -0.6
LMR   La Mourre          3.44 258 eP      Pn      17 13 58.5 +2.1
LMR                               eSn     Sn      17 14 34.8 -2.4
      comp=Z,5.6nm,0.2s
CRES  Cresnjev           3.51  60 ePn     Pn      17 13 55.9 -1.4
RSL   Roselend           3.55 297  Pn     Pn      17 14 01.3 +3.2
SOKA  Soboth             3.75  46 ePn     Pn      17 14 00.1 -0.6
      comp=Z,12nm,0.5s
SOKA                              i Sn    Sn      17 14 44.6 -0.3
      comp=Z,7.0nm,0.4s
KIJV  Kijevo             3.81  90 ePn     Pn      17 14 01.4 -0.1
KIJV                               Sn     Sn      17 14 44.9 -1.4
ORIF  Oris-en-Rattie     3.83 284  P      Pn      17 14 03.6 +1.7
ORIF  Oris-en-Rattie     3.83 284 eP      Pn      17 14 05.2 +3.3
ORIF                              eSn     Sn      17 14 44.8 -2.2
      comp=Z,34nm,0.6s
ASEAF Site Antares,      3.85 251  P      Pn      17 14 02.0 +0.2
PTJ   Puntijarka         3.86  61 ePn     Pn      17 14 00.9 -1.4
PTJ                                Sn     Sn      17 14 44.3 -3.5
BSTF  la Bastide-des     3.96 268  P      Pn      17 14 04.0 +0.4
HVAR  Hvar               3.98 102 ePn     Pn      17 14 04.5 +0.7
HVAR                               Sn     Sn      17 14 49.7 -0.8
SMRF  Simiane la Rot     4.00 270 ePn     Pn      17 14 04.1 -0.1
SMRF  Simiane la Rot     4.00 270 eP      Pn      17 14 07.4 +3.2
SMRF                              eSn     Sn      17 14 49.4 -1.8
      comp=Z,13nm,0.6s
RUSF  Rustrel            4.07 269  P      Pn      17 14 05.7 +0.6
OGSM  Saint Maurice      4.13 293  Pn     Pn      17 14 07.6 +1.8
MGRS  Mrkonjic Grad      4.29  84 ePn     Pn      17 14 08.6 +0.5
MOA   Molln              4.31  29 ePn     Pn      17 14 08.7 +0.3
      comp=Z,9.4nm,0.4s,SNR=8.7
MOA                               eSn     Sn      17 14 59.7 +1.0
      comp=Z,16nm,0.6s
CABF  La Chapelle        4.33 307 ePn     Pn      17 14 10.0 +1.4
CABF  La Chapelle        4.33 307 eP      Pn      17 14 12.1 +3.5
MAKA  Makarska           4.36  99 ePn     Pn      17 14 09.6 +0.6
MAKA                               Sn     Sn      17 14 58.5 -1.4
ARSA  Arzberg            4.38  43 i Pn    Pn      17 14 08.5 -0.8
      comp=Z,13nm,0.7s
BLY   Banja Luka         4.38  80 ePn     Pn      17 14 08.4 -0.9
RICI  Ricice             4.39  96 ePn     Pn      17 14 10.5 +1.0
RICI                               Sn     Sn      17 14 59.1 -1.7
CHMF  Charmoille         4.42 316  P      Pn      17 14 10.4 +0.6
KIZ   Kirchzarten        4.42 331  P      Pn      17 14 09.8 -0.1
MOF   Molkenrain         4.64 325  P      Pn      17 14 13.4 +0.4
VIVF  Saint-Julien-l     4.67 281 ePn     Pn      17 14 12.3 -1.0
VIVF  Saint-Julien-l     4.67 281 eP      Pn      17 14 16.8 +3.5
VIVF                              eSn     Sn      17 15 05.4 -2.3
      comp=Z,8.0nm,0.5s
VIVF  Saint-Julien-l     4.67 281  P      Pn      17 14 12.9 -0.4
HINF  Hinteralfeld       4.73 323 ePn     Pn      17 14 14.1 -0.1
HINF  Hinteralfeld       4.73 323 eP      Pn      17 14 17.7 +3.5
HINF                              eSn     Sn      17 15 07.3 -1.9
      comp=Z,30nm,0.6s
HINF  Hinteralfeld       4.73 323  P      Pn      17 14 13.9 -0.3
HINF                               S      Sn      17 15 06.1 -3.1
OPP   Oppenau            4.81 336  P      Pn      17 14 15.2 -0.1
SSB   Saint Sauveur      4.83 286  Pn     Pn      17 14 17.3 +1.8
ECH   Echery             4.92 327  P      Pn      17 14 16.8  0.0
STON  Ston               4.95 103 ePn     Pn      17 14 16.7 -0.4
STON                               Sn     Sn      17 15 12.8 -1.5
STON  Ston               4.95 103 ePn     Pn      17 14 17.1  0.0
CONA  Conrad Observa     5.02  39 ePn     Pn      17 14 17.0 -1.2
      comp=Z,3.8nm,0.3s
CONA                              eSn     Sn      17 15 16.7 +0.3
      comp=Z,4.2nm,0.3s
GERES GERESS Array B     5.03  20  Pn     Pn      17 14 17.7 -0.6
      comp=Z,1.2nm,0.3s,baz=193,slow=12,SNR=55
GERES                              Sn     Sn      17 15 15.3 -1.3
      comp=Z,2.3nm,0.3s,baz=194,slow=22,SNR=6.2
CDF   Champ du Feu       5.04 329 ePn     Pn      17 14 18.1 -0.3
CDF   Champ du Feu       5.04 329 eP      Pn      17 14 22.0 +3.6
CDF                               eSn     Sn      17 15 12.8 -4.0
      comp=Z,22nm,0.6s
HAU   Haudompre          5.10 321 ePn     Pn      17 14 19.5 +0.3
HAU   Haudompre          5.10 321 eP      Pn      17 14 22.9 +3.7
HAU                               eSn     Sn      17 15 16.0 -2.2
      comp=Z,17nm,0.4s
SOP   Sopron             5.19  45 ePN     Pn      17 14 19.7 -0.7
LASF  Ste Croix          5.23 272 ePn     Pn      17 14 21.1  0.0
LASF  Ste Croix          5.23 272 eP      Pn      17 14 24.7 +3.6
KHC   Kasperske Hory     5.27  18 eP      Pn      17 14 20.7 -0.9
KHC                               e               17 15 20.2
KHC   Kasperske Hory     5.27  18 ePN     Pn      17 14 20.7 -0.9
KHC                               eSN     Sn      17 15 20.2 -2.3
DBRK  Dubrovnik          5.32 104 ePn     Pn      17 14 22.1 -0.2
DBRK                               Sn     Sn      17 15 22.9 -0.7
MPLH  Magyarpolny        5.42  54⇑ePN     Pn      17 14 21.8 -1.8
TREB  Trebinje           5.45 103 ePn     Pn      17 14 23.6 -0.4
BRY   Bratogost          5.53 100 ePn     Pn      17 14 25.8 +0.6
MORH  Mrgy, Hungar       5.71  66 ePn     Pn      17 14 23.6 -3.9
SMF   Signal de Mont     5.71 299 ePn     Pn      17 14 28.4 +0.8
SMF   Signal de Mont     5.71 299 eP      Pn      17 14 31.5 +3.9
SMF                               eSn     Sn      17 15 30.6 -2.6
      comp=Z,15nm,0.7s
UPM   Unac-Piva          5.72  97 ePn     Pn      17 14 29.4 +1.5
PAGF  Fort de Pagny      5.79 322 ePn     Pn      17 14 29.4 +0.8
      baz=141
PAGF                              eSn     Sn      17 15 30.8 -4.3
ZST   Bratislava         5.80  44 eP      Pn      17 14 27.6 -1.3
ZST                               e               17 15 31.4
ZST   Bratislava         5.80  44 ePN     Pn      17 14 27.6 -1.3
ZST                               eSN     Sn      17 15 31.4 -4.1
SFTF  Sexfontaines       5.87 316 ePn     Pn      17 14 30.3 +0.6
SFTF  Sexfontaines       5.87 316 eP      Pn      17 14 33.8 +4.1
      baz=136
LOR   Lormes             5.97 304 ePn     Pn      17 14 31.9 +0.7
      baz=126
LOR   Lormes             5.97 304 eP      Pn      17 14 35.7 +4.5
      baz=124
LOR                               eSn     Sn      17 15 36.7 -3.0
      comp=Z,11nm,0.5s
LOR   Lormes             5.97 304  P      Pn      17 14 31.8 +0.6
LOR                                SN     Sn      17 15 39.4 -0.3
BBLS  Lazi&#263;i        5.98  90 ePn     Pn      17 14 31.5 +0.2
MODS  Modra-Piesok       6.01  43 eP      Pn      17 14 29.9 -1.8
MODS                              e               17 15 35.4
MODS  Modra-Piesok       6.01  43 ePN     Pn      17 14 29.9 -1.8
MODS                              eSN     Sn      17 15 35.4 -5.2
MEZF  Maizieres J’vi     6.06 318 ePn     Pn      17 14 33.9 +1.5
      baz=140
MEZF                              eSn     Sn      17 15 38.9 -2.9
      comp=Z,9.1nm,0.4s
AVF   Avril sur Loir     6.08 299 ePn     Pn      17 14 34.3 +1.7
AVF   Avril sur Loir     6.08 299  P      Pn      17 14 33.3 +0.7
SSF   Saint Saulge       6.09 301 ePn     Pn      17 14 33.2 +0.4
SSF   Saint Saulge       6.09 301 eP      Pn      17 14 37.4 +4.6
SSF                               eSn     Sn      17 15 39.5 -3.1
SAVF  Savonnieres en     6.11 319 ePn     Pn      17 14 33.8 +0.8
SAVF  Savonnieres en     6.11 319 eP      Pn      17 14 37.6 +4.6
SAVF                              eSn     Sn      17 15 40.1 -2.8
      comp=Z,6.4nm,0.3s
KRUC  Moravsky           6.12  35 ePN     Pn      17 14 32.2 -1.0
NKC   Novy Kostel        6.17   8 eP      Pn      17 14 32.1 -1.7
NKC   Novy Kostel        6.17   8 ePN     Pn      17 14 32.1 -1.7
PDG   Podgorica          6.17 103 ePn     Pn      17 14 34.9 +1.0
DRME  Dracevica, Mon     6.21 106 ePn     Pn      17 14 34.5 +0.1
PRU   Pruhonice          6.30  21 eP      Pn      17 14 34.3 -1.4
PRU   Pruhonice          6.30  21 ePN     Pn      17 14 34.3 -1.4
BGF   Bois d'Agland      6.32 295 ePn     Pn      17 14 35.9  0.0
BGF   Bois d'Agland      6.32 295 eP      Pn      17 14 40.0 +4.1
BGF                               eSn     Sn      17 15 45.6 -2.5
      comp=Z,9.3nm,0.4s
DIVS  Divibare           6.38  87 ePn     Pn      17 14 34.0 -2.9
VRAC  Vranov             6.39  34  Pn     Pn      17 14 35.2 -1.7
      comp=Z,0.4nm,0.3s,baz=224,slow=15,SNR=2.4
VRAC                               LR     LR      17 16 40.4
      comp=Z,24nm,19.8s,baz=248,slow=35
VRAC  Vranov             6.39  34 ePN     Pn      17 14 36.0 -0.9
SJES  Sjenica            6.47  95 ePn     Pn      17 14 37.2 -1.0
MTLF  Montolieu          6.50 266  P      Pn      17 14 38.6 +0.1
MTLF  Montolieu          6.50 266 ePn     Pn      17 14 38.7 +0.2
MTLF  Montolieu          6.50 266 eP      Pn      17 14 41.9 +3.4
CAF   Calviac            6.52 280 ePn     Pn      17 14 40.1 +1.3
JAVC  Velka Javorina     6.53  41 ePN     Pn      17 14 38.6 -0.3
VYHS  Vyhne              6.89  48 eP      Pn      17 14 41.0 -2.8
VYHS                              e               17 15 59.8
VYHS  Vyhne              6.89  48 ePN     Pn      17 14 41.0 -2.8
VYHS                              eSN     Sn      17 15 59.8 -2.5
RJF   Les Rejaudoux      6.94 283 eP      Pn      17 14 49.3 +4.8
BRG   Berggiesshubel     7.00  15  Pn     Pn      17 14 45.6 +0.3
BRG                                Amp            17 14 46.3
      comp=Z,10nm,0.6s
BRG                               ex      x       17 15 18.0
BRG                               ex      x       17 16 02.8
BRG                               ex      x       17 16 50.1
BRG                                Amp            17 16 59.9
      comp=Z,10nm,1.1s
BRG   Berggiesshubel     7.00  15  P      Pn      17 14 45.6 +0.3
BRG                               e               17 16 02.8
BRG                                pmax   pmax
      comp=Z,10.0nm,0.6s
BRG   Berggiesshubel     7.00  15  Pn     Pn      17 14 45.6 +0.3
BRG                                Amp            17 14 46.3
      comp=Z,10nm,0.6s
BRG                               ex      x       17 15 18.0
BRG                               ex      x       17 16 02.8
BRG                               ex      x       17 16 50.1
BRG                                Amp            17 16 59.9
      comp=Z,10nm,1.1s
KRLC  Kraliky            7.08  31 eP      Pn      17 14 44.0 -2.4
KRLC  Kraliky            7.08  31 ePN     Pn      17 14 44.0 -2.4
MORC  Moravsky Berou     7.15  36 ePN     Pn      17 14 47.3  0.0
CLL   Collm              7.29   9 i Pn    Pn      17 14 47.9 -1.3
      comp=Z,12nm,0.7s
CLL                               e               17 14 54.0
CLL                               e               17 16 10.0
CLL                               e               17 16 32.0
CLL                               eSg     Sg      17 16 48.0 -8.3
      comp=Z,22nm,1.3s
CLL   Collm              7.29   9 i P     Pn      17 14 47.9 -1.3
CLL                                pmax   pmax
      comp=Z,12nm,0.7s
GIVF  Givet              7.35 326 eP      Pn      17 14 54.8 +4.7
BZS   Buzias             7.60  75 ⇑P      Pn      17 14 54.0 +0.5
BZS   Buzias             7.60  75 ⇑P      Pn      17 14 54.0 +0.5
MDVR  Moldovita          7.60  81 ⇑P      Pn      17 14 53.3 -0.3
EPF   Esparros           7.91 266 ePn     Pn      17 15 00.3 +2.5
HERR  Herculane          8.11  81 ⇑P      Pn      17 15 00.5  0.0
GZR   Gura Zlata         8.39  77 ⇑P      Pn      17 15 05.0 +0.6
KEST  Kesra              8.51 190  Pn     Pn      17 15 13.4 +7.3
      comp=Z,0.9nm,0.3s,baz=311,slow=3.4,SNR=5.4
DEV   Deva               8.53  74 ⇑P      Pn      17 15 05.7 -0.5
DEV   Deva               8.53  74 ⇑P      Pn      17 15 05.7 -0.5
DRGR                     8.56  68 ⇑P      Pn      17 15 08.3 +1.5
DRGR                     8.56  68 ⇑P      Pn      17 15 08.3 +1.5
ETSF  Etsaut             8.58 266 ePn     Pn      17 15 08.0 +0.9
VTS   Vitosha            8.95  96 ⇑P      Pn      17 15 13.6 +1.4
VTS   Vitosha            8.95  96 ⇑P      Pn      17 15 13.6 +1.4
ARR   Arges              9.69  78 ⇑P      Pn      17 15 24.0 +1.8
VOIR                     9.99  78 ⇑P      Pn      17 15 28.6 +2.3
VOIR                     9.99  78 ⇑P      Pn      17 15 28.6 +2.3
BURAR Bucovina Array    10.42  66 ⇑P      Pn      17 15 34.6 +2.3
BURAR Bucovina Array    10.42  66 ⇑P      Pn      17 15 34.6 +2.3
MLR   Muntele Rosu      10.62  78  LR     LR      17 20 38.1
      comp=Z,61nm,19.9s,baz=210,slow=43
ESDC  Sonseca Array     12.09 254  Pn     Pn      17 15 56.0 +0.9
      comp=Z,0.1nm,0.3s,baz=52,slow=15,SNR=2.2
AKASG Malin Array Be    13.88  55  Pn     Pn      17 16 18.6 -0.8
      baz=246,slow=12,SNR=1.7
NOA   NORSAR Array B    16.93   0  Pn     P       17 17 01.9 +0.3
      comp=Z,0.0nm,0.3s,baz=181,slow=11,SNR=4.2
VSU   Vasula            17.28  28⇓eP      P       17 17 07.1 +1.8
VSU                                pmax   pmax
      comp=Z,87nm,1.5s
ANN   Anapa             18.77  79 eP      P       17 17 17.4 -4.4
ANN                               eS      Sn      17 20 46.6 -5.5
ANN                                pmax   pmax
      comp=Z,64nm,1.1s
FINES FINESS Array B    19.46  22  Pn     P       17 17 24.1 -5.2
      comp=Z,0.1nm,0.3s,baz=197,slow=18,SNR=1.5
OBN   Obninsk           19.69  47 eP      Pn      17 17 32.4 -0.8
OBN                                pmax   pmax
      comp=Z,3.0nm,0.8s
KIV   Kislovodsk        22.62  79 eP      P       17 18 06.2 +2.5
KIV                                pmax   pmax
      comp=Z,20nm,1.1s
KBZ   Khabaz            22.82  80  P      P       17 18 08.7 +3.0
      comp=Z,1.4nm,0.9s,baz=294,slow=11,SNR=5.1
KBZ   Khabaz            22.82  80⇓iP      P       17 18 08.3 +2.7
KBZ                                pmax   pmax
      comp=Z,6.0nm,1.6s
GNI   Garni             25.14  87deP      P       17 18 30.6 +2.5
GNI                                pmax   pmax
      comp=Z,14nm,1.7s
BELG  Belogornoye       25.43  58  P      P       17 18 32.2 +1.8
      comp=Z,7.0nm,0.8s,baz=270,slow=4.0,SNR=3.8
BELG  Belogornoye       25.43  58⇓eP      P       17 18 33.3 +2.9
BELG                               pmax   pmax
      comp=Z,1.0nm,0.9s
TORD  Torodi Ar. Bea    31.93 198  P      P       17 19 31.4 +2.8
      comp=Z,0.8nm,0.6s,baz=8.7,slow=10,SNR=3.6
BRVK  Borovoye          39.09  55⇑eP      P       17 20 31.5 +1.6
BRVK                               pmax   pmax
      comp=Z,9.0nm,3.5s
KURK  Kurchatov         44.69  57⇓eP      P       17 21 16.7 +1.1
KURK                               pmax   pmax
      comp=Z,5.0nm,1.7s
MKAR  Makanchi Array    48.40  60  P      P       17 21 44.8  0.0
      comp=Z,0.4nm,0.6s,baz=276,slow=6.1,SNR=6.0
SONM  Songino Array     62.08  49  P      P       17 23 24.5 +0.9
      comp=Z,0.6nm,0.8s,baz=285,slow=7.3,SNR=2.3
ULN   Ulaanbaatar       62.42  49⇓eP      P       17 23 26.3 +0.4
ULN                                pmax   pmax
      comp=Z,6.0nm,2.5s
YKA   Yellowknife Ar    65.20 335  P      P       17 23 43.9 +0.1
      comp=Z,0.5nm,0.7s,baz=46,slow=6.4,SNR=7.7
YKA   Yellowknife Ar    65.20 335ceP      P       17 23 45.0 +1.2
YKA                                pmax   pmax
      comp=Z,1.0nm,0.7s
BILL  Bilibino          66.59  10 eP      P       17 23 52.8 +0.1
BILL                              e               17 26 17.9
BILL                               pmax   pmax
      comp=Z,2.0nm,1.4s
ULM   Lac du Bonnet     66.61 318  P      P       17 23 52.1 -1.0
      comp=Z,2.1nm,0.7s,baz=37,slow=3.4,SNR=4.6
DGAR  Diego Garcia      75.31 116ceP      P       17 24 47.0 +0.7
CMAR  Chiang Mai Arr    75.85  78  P      P       17 24 49.6 +0.1
      comp=Z,0.3nm,0.4s,baz=315,slow=8.3,SNR=5.4
PDAR  Pinedale Array    78.52 320  P      P       17 25 05.2 +0.7
      comp=Z,0.2nm,0.5s,baz=77,slow=5.6,SNR=2.0
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NIED ***23*** *17:36:38.0, 34°.45N×139°.72E, h115^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.01; $M_{\theta\theta}$0.51; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.79; $M_{\phi r}$-0.96; Fault plane solution: $M_0$1.33000×10^{15} NP1: ϕ_s345.00000°, δ88.00000°, λ-45.00000°. NP2: ϕ_s77.00000°, δ45.00000°, λ-178.00000°.*

JMA ***23*** *17:36:37.9±0.1, 34°.45N×139°.72E, h115^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s70.00000°, δ42.00000°, λ179.00000°. NP2: ϕ_s160.00000°, δ89.00000°, λ48.00000°. Principal axes: T Plg32.0000°, Azm36.0000°; N Plg42.0000°, Azm161.0000°; P Plg31.0000°, Azm284.0000°;*

IDC ***23*** *17:36:38.2±0.5, 34°.38N×139°.50E, h122^{km}±5^{km}, mb3.6/20, mb1 3.8/21, mb1mx3.6/46, mbtmp3.9/21 Error ellipse: s-maj=15.3km s-min=7.1km az=72.0*

BJI ***23*** *17:36:38.0±0.0, 34°.40N×139°.70E, h129^{km}, mB4.9/12, mb4.5/22*

NEIC ***23*** *17:36:38.5±2.8, 34°.41N±0°.05×139°.69E±0°.08, h124^{km}±7^{km}, mb4.7/57, Error ellipse: s-maj=9.7km s-min=7.8km az=88.0*

ISC 23 17:36:37.6±0.6**, 34°.42N**±0°.04×**139°.73E**±0°.05**, h118**^{km}±5^{km}**, n134, σ1^s.49**/144**, mb4.5**/51**, 7C-13D, Fault plane solution: NP1:**ϕ_s184.19096°**,** δ88.55751°**,** λ33.05788°. **NP2:** ϕ_s93.25231°**,** δ56.95394°**,** λ178.27905°. **Principal axes:** T Plg23.7906°, Azm53.8244°**;** N Plg56.9142°, Azm186.4060°**;** P Plg21.5796°, Azm313.7826°**; Near south coast of eastern Honshu**

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Code  Station Name       Δ°   AZ°   Phase ID            Time     Res
                                  Op      ISC          h  m  s    ISC
JTHY  Toshimahigashi     0.38 287  P      Pn      17 36 55.0 +0.4
JTHY                               S      Sn      17 37 08.1 +0.6
JNIO  Niijimaoohara      0.38 261  P      Pn      17 36 54.8 +0.2
JIM2  Oshima 3           0.39 321 ⇑P      Pn      17 36 54.6 -0.1
JIM2                               S      Sn      17 37 07.3 -0.4
JMKN  Mikurajimanish     0.53 192  P      Pn      17 36 55.9 +0.3
JMKN                               S      Sn      17 37 09.5 +0.4
BSO3  Boso 3             0.75  59 ⇓P      Pn      17 36 58.0 +1.1
JIZS  Izushimoda         0.76 294 ⇑P      Pn      17 36 57.3 +0.1
JIZS                               S      Sn      17 37 11.8 -0.3
JOD2  Odawara 2          1.00 328  P      Pn      17 36 59.4  0.0
JOD2                               S      Sn      17 37 15.3 -0.7
BSO1  Boso 1             1.06  77  P      Pn      17 37 00.4 +1.0
JFNN  Fujinakano         1.16 313  P      Pn      17 37 01.3 +0.3
JFNN                               S      Sn      17 37 18.8  0.0
JHJ   Hachijo jima 2     1.29 178  P      Pn      17 37 03.5 +0.9
      204nm,0.3s,baz=334,slow=24,SNR=139
JHJ                                S      Sn      17 37 22.5 +1.0
      900nm,0.3s,baz=24,slow=18,SNR=25
JSG   Sagara             1.30 282         Pn      17 37 03.2 +0.7
JHJ2  Mitsune            1.30 177 ⇓P      Pn      17 37 03.4 +0.8
JHJ2                               S      Sn      17 37 22.8 +1.2
JHJ2  Mitsune            1.30 177         Pn      17 37 03.5 +0.8
SHZ3  Shizuoka 3         1.41 298  P      Pn      17 37 04.1 +0.2
JYN   Shimob             1.45 318 ⇓P      Pn      17 37 04.7 +0.3
TK04  Tokai 4            1.53 269 ⇑P      Pn      17 37 05.7 +0.6
TK04                               S      Sn      17 37 27.3 +1.2
TK02  Tokai 2            1.70 255 ⇑P      Pn      17 37 07.6 +0.6
TK02                               S      Sn      17 37 30.9 +1.5
JRY   Ryogami san        1.73 337 ⇓P      Pn      17 37 08.3 +0.6
JRY                                S      Sn      17 37 30.7  0.0
JYT   Yasato             1.85  12  Pn     Pn      17 37 08.5 -0.6
JAG   Ashikaga           2.02 354 ⇑P      Pn      17 37 10.9 -0.3
JGF   Kuroka             2.28 302  Pn     Pn      17 37 14.8 +0.3
INU   Inuyama            2.41 293         Pn      17 37 16.2  0.0
MJAR  Matsushiro Arr     2.46 330  P      Pn      17 37 16.8  0.0
      3.5nm,0.3s,baz=146,slow=9.6,SNR=235
MJAR                               S      Sn      17 37 46.0 -0.8
      3.5nm,0.3s,baz=230,slow=52,SNR=4.2
MAJO  Matsushiro         2.46 330  Pn     Pn      17 37 17.1 +0.3
MAT   Matsushiro         2.46 330  P      Pn      17 37 17.1 +0.3
MAT                                S      Sn      17 37 46.4 -0.5
MJB9  Matsu-Tunnel       2.46 330         Pn      17 37 19.6 +2.7
JMM   Marumori           3.55  14         Pn      17 37 30.3 -0.8
JWT   Wachi              3.66 285         Pn      17 37 32.7 +0.2
JSD   Sado               3.80 342  Pn     Pn      17 37 34.4 -0.1
JMN   Monobe             4.90 264  Pn     Pn      17 37 49.5 +0.3
JHS   Saijyo             5.47 278         Pn      17 37 58.0 +1.1
JTM   Tenmabayashi       6.45   9  Pn     Pn      17 38 09.7 -0.3
JNU   Nakatsue           7.48 263  P      Pn      17 38 24.4 +0.4
      2.1nm,0.3s,baz=59,slow=2.3,SNR=15
JCJ   Chichijima         7.60 163  P      Pn      17 38 20.2 -5.4
      50nm,0.3s,baz=130,slow=23,SNR=9.3
JCJ                                S      Sn      17 39 42.8 -7.3
      22nm,0.3s,baz=245,slow=17,SNR=2.1
JCJ   Chichijima         7.60 163  Pn     Pn      17 38 24.0 -1.6
ERM   Erimo              8.05  19  Pn     Pn      17 38 29.1 -2.6
JEW   Eniwo              8.52   9  Pn     Pn      17 38 36.7 -1.3
JTU   Tsushima           8.53 274  Pn     Pn      17 38 39.2 +1.1
ASAJ  Asahikawa          9.94  12  P      Pn      17 38 54.5 -2.6
      2.3nm,0.3s,baz=215,slow=14,SNR=34
JKA   Kamikawa-asahi     9.94  12  Pn     Pn      17 38 54.7 -2.5
KSRS  Korea Array       10.04 291  P      Pn      17 39 00.7 +2.2
      0.4nm,0.3s,baz=106,slow=14,SNR=17
KS19  Wonju Array Si    10.09 291  Pn     Pn      17 39 01.1 +1.8
USRK  Ussuriysk Ar.     11.46 331  P      Pn      17 39 21.7 +4.2
      baz=142,slow=9.0,SNR=6.1
KLR   Kul'dur           15.94 341  P      Pn      17 40 11.8 -3.1
      0.6nm,0.3s,baz=157,slow=11,SNR=12
NJ2   Nanjing           17.62 268 eP      Pn      17 40 35.9 +0.3
NJ2                                pmax   pmax
      comp=Z,12nm,0.5s
SSLB  Suanglung         19.49 242  P      P       17 40 53.9 -1.5
SSLB                               IAmb   IAmb    17 41 07.6
      comp=Z,33nm,1.4s
TPUB  Ta-pu             20.02 241  P      P       17 41 01.0 -0.1
TPUB                               IAmb   IAmb    17 41 34.2
      comp=Z,70nm,1.4s
PETK  Petropavlovsk-    22.64  29  P      P       17 41 30.2 +1.8
      comp=Z,1.7nm,0.8s,baz=260,slow=8.4,SNR=4.4
HHC   Hu-ho-hao-te      23.15 294 eP      P       17 41 31.9 -1.7
HHC                                pmax   pmax
      comp=Z,8.0nm,0.8s
HHC                                pmax   pmax
      comp=Z,160nm,5.0s
ULN   Ulaanbaatar       27.80 309  P      P       17 42 15.9 +0.3
H11N2 WAKE ISLAND Hy    28.16 114  T      T       18 11 36.9
      baz=306,slow=75,SNR=34
H11N1 WAKE ISLAND Hy    28.16 114  T      T       18 11 38.9
      baz=306,slow=75,SNR=33
H11N3 WAKE ISLAND Hy    28.18 114  T      T       18 11 26.1
      baz=306,slow=75,SNR=29
SONM  Songino Array     28.22 308  P      P       17 42 18.0 -1.3
      comp=Z,0.7nm,0.5s,baz=107,slow=8.5,SNR=3.8
WAKE  Wake Island       28.25 115  P      P       17 42 19.8 +0.2
H11S3 WAKE ISLAND Hy    28.76 117  T      T       18 12 23.2
      baz=311,slow=74
H11S1 WAKE ISLAND Hy    28.76 117  T      T       18 13 03.0
      baz=311,slow=74
H11S2 WAKE ISLAND Hy    28.77 117  T      T       18 12 40.0
      baz=311
LZH   Lanzhou           29.25 284 ⇑P      P       17 42 29.6 +1.0
LZH                                pP     pP      17 42 56.3 +2.2
LZH                                sP     sP      17 43 11.3 +3.2
LZH                                pmax   pmax
      comp=Z,18nm,1.3s
SMY   Shemya            30.51  43  P      P       17 42 37.0 -2.2
KMI   Kunming           33.26 264 eP      P       17 43 03.4 -0.6
KMI                                pmax   pmax
      comp=Z,7.0nm,0.5s
WMQ   Urumqi            40.86 299 eP      P       17 44 09.0 +1.2
WMQ                                pmax   pmax
      comp=Z,25nm,0.7s
WMQ                                pmax   pmax
      comp=Z,120nm,6.9s
WMQ                                LR     LR
      comp=Z,710nm,29.1s
WMQ                                LR     LR
      comp=Z,1µm,28.8s
WMQ                                LR     LR
      comp=Z,260nm,29.2s
ZAA0  Zalesovo Array    42.72 315  P      P       17 44 22.3 -0.3
ZALV  Zalesovo Beam     42.72 315  P      P       17 44 22.4 -0.3
      comp=Z,1.4nm,0.3s,baz=116,slow=7.7,SNR=12
ZALV                               ScP    ScP     17 49 51.1 -0.9
      comp=Z,0.5nm,0.6s,baz=123,slow=5.5,SNR=3.8
MK31  Makanchi Array    44.40 304  P      P       17 44 35.9 -0.4
MKAR  Makanchi Array    44.40 304  P      P       17 44 35.7 -0.5
      comp=Z,2.4nm,0.6s,baz=89,slow=9.9,SNR=41
ANM   Nome              44.54  30  P      P       17 44 39.6 +2.4
ANM                                IAmb   IAmb    17 44 39.7
      comp=Z,15nm,1.7s
MAKZ  Makanchi          44.61 304  P      P       17 44 37.4 -0.6
KURK  Kurchatov         46.51 310  P      P       17 44 52.0 -0.8
KURK                               IAmb   IAmb    17 44 52.8
      comp=Z,7.0nm,0.8s
TTA   Tatalina          48.35  33  P      P       17 45 09.3 +2.3
TTA                                IAmb   IAmb    17 45 09.9
      comp=Z,23nm,1.6s
OHAK  Old Harbor        49.62  41  P      P       17 45 17.9 +1.4
RSO   Redoubt South     49.81  37  P      P       17 45 20.0 +1.7
KDAK  Kodiak Island     49.97  40  P      P       17 45 20.6 +1.4
      comp=Z,6.3nm,0.5s,baz=254,slow=0.9,SNR=27
KDAK  Kodiak Island     49.97  40  P      P       17 45 20.7 +1.4
PPLA  Purkeypile        50.10  34  P      P       17 45 23.1 +2.7
PPLA                               IAmb   IAmb    17 45 56.0
      comp=Z,28nm,1.5s
KSH   Kashi             50.26 296  P      P       17 45 24.9 +3.0
KSH                                PP     PP      17 47 26.0 +7.9
KSH                                pmax   pmax
      comp=Z,5.0nm,0.7s
KSH                                pmax   pmax
      comp=Z,210nm,6.7s
SKT   Skwentna          50.40  35  P      P       17 45 23.7 +1.2
AAK   Ala-Archa         50.56 300  P      P       17 45 23.7 -0.5
CNPM  China Poot        50.60  38  P      P       17 45 25.5 +1.5
BPAW  Bear Paw Mtn.     50.66  32  P      P       17 45 26.6 +2.2
BPAW                               IAmb   IAmb    17 45 38.5
      comp=Z,12nm,1.7s
KTH   Kantishna Hill    50.69  33  P      P       17 45 25.6 +1.0
KTH                                IAmb   IAmb    17 46 01.4
      comp=Z,29nm,1.7s
BRLK  Bradley Lake      50.76  38  P      P       17 45 25.0 -0.3
COLD  Coldfoot          51.10  28  P      P       17 45 30.1 +2.4
COLD                               IAmb   IAmb    17 45 37.9
      comp=Z,13nm,1.8s
```

GSI	Gunungsitoli	51.28	239	P	P	17 45 28.0	-1.7
GSI				IAmb	IAmb	17 45 49.2	
	comp=Z,11nm,1.0s						
RND	Reindeer	51.62	33	P	P	17 45 34.3	+2.7
GHO	Glory Hole Cre	51.64	35	P	P	17 45 33.8	+2.0
GHO				IAmb	IAmb	17 45 34.1	
	comp=Z,15nm,1.2s						
MDM	Murphy Dome	51.86	31	P	P	17 45 35.6	+2.2
KNK	Knik Glacier	51.88	36	P	P	17 45 35.3	+1.7
SML	Sawmill	51.92	35	P	P	17 45 35.8	+1.9
WRH	Wood River Hil	51.93	32	P	P	17 45 36.2	+2.4
WRH				IAmb	IAmb	17 46 08.2	
	comp=Z,18nm,1.8s						
CCB	Clear Creek Bu	52.05	31	P	P	17 45 36.1	+1.4
POKR	Poker Plat Res	52.20	31	P	P	17 45 37.0	+1.2
POKR				IAmb	IAmb	17 45 39.1	
	comp=Z,5.7nm,0.8s						
DHY	Denali Highway	52.30	33	P	P	17 45 37.9	+1.1
DHY				IAmb	IAmb	17 46 02.9	
	comp=Z,17nm,1.6s						
SCM	Sheep Creek Mo	52.39	35	P	P	17 45 39.0	+1.6
IL31		52.44	31	P	P	17 45 38.7	+1.2
IL31				IAmb	IAmb	17 45 40.4	
	comp=Z,19nm,1.7s						
ILAR	Eielson Array	52.44	31	P	P	17 45 38.5	+0.9
	comp=Z,1.1nm,0.7s,baz=273,slow=6.4,SNR=16						
PRP	Porcupine Dome	52.98	30	P	P	17 45 43.4	+1.7
KLU	Klutina	53.09	35	P	P	17 45 44.6	+2.1
KLU				IAmb	IAmb	17 45 45.6	
	comp=Z,17nm,1.4s						
KK31	Karatay Array	53.28	301	P	P	17 45 43.9	-0.3
KK31				IAmb	IAmb	17 45 44.9	
	comp=Z,5.5nm,0.9s						
KKAR	Karatay Array	53.28	301	P	P	17 45 43.3	-0.8
KKAR				IAmb	IAmb	17 45 44.9	
	comp=Z,5.5nm,0.9s						
RIDG	Independent Ri	53.39	32	P	P	17 45 45.5	+0.9
RIDG				IAmb	IAmb	17 45 55.2	
	comp=Z,29nm,1.8s						
WB0	Warramunga Arr	54.12	186	P	P	17 45 50.6	+0.2
WB0				IAmb	IAmb	17 46 03.6	
	comp=Z,17nm,1.4s						
WB2	Warramunga Arr	54.30	186	P	P	17 45 50.8	-0.9
WB2				IAmb	IAmb	17 46 16.2	
	comp=Z,21nm,1.6s						
WR0	Warramunga Arr	54.30	186	P	P	17 45 50.7	-1.0
WR0				IAmb	IAmb	17 46 00.8	
	comp=Z,24nm,1.6s						
WRA	Warramunga Arr	54.30	186	P	P	17 45 50.7	-0.9
	comp=Z,0.5nm,0.4s,baz=0.6,slow=7.6,SNR=14						
WRA				pP	pP	17 46 20.5	+1.1
	comp=Z,0.5nm,0.5s,baz=4.0,slow=7.6,SNR=2.1						
MCARA	McCarthy VSAT	54.48	35	P	P	17 45 55.3	+2.7
MCARA				IAmb	IAmb	17 46 10.6	
	comp=Z,24nm,1.6s						
BALM	Baldy	54.86	36	P	P	17 45 57.3	+1.9
EGAK	Eagle	54.88	31	P	P	17 45 56.6	+1.2
EGAK				IAmb	IAmb	17 46 06.8	
	comp=Z,13nm,1.6s						
ISLE	Juniper Island	54.93	36	P	P	17 45 55.8	-0.2
INK	Inuvik	57.34	26	P	P	17 46 14.5	+1.8
	comp=Z,1.5nm,0.6s,baz=309,slow=8.6,SNR=6.9						
INK	Inuvik	57.34	26	P	P	17 46 12.2	-0.5
ASAR	Alice Springs	58.02	186	P	P	17 46 17.9	-0.2
	comp=Z,0.8nm,1.0s,baz=21,slow=12,SNR=9.3						
ASAR				pP	pP	17 46 46.2	+0.1
	comp=Z,0.2nm,0.4s,baz=3.0,slow=6.4,SNR=1.8						
ABKAR	Akbulak array	58.59	311	P	P	17 46 21.4	-0.4
ABKAR				IAmb	IAmb	17 46 22.0	
	comp=Z,5.7nm,1.1s						
GEYT	Alibeck	63.91	299	P	P	17 46 57.2	-0.7
	comp=Z,1.5nm,0.7s,baz=112,slow=1.6,SNR=2.6						
ARCES	ARCESS Array B	65.96	339	P	P	17 47 10.9	+0.3
	comp=Z,1.7nm,0.8s,baz=57,slow=7.2,SNR=4.9						
YKA	Yellowknife Ar	66.76	29	P	P	17 47 16.1	+0.4
	comp=Z,0.4nm,0.5s,baz=300,slow=5.7,SNR=8.0						
FIA1	FINESS Array S	70.48	332	P	P	17 47 39.0	+0.1
FIA1				IAmb	IAmb	17 48 18.1	
	comp=Z,23nm,1.4s						
FINES	FINESS Array B	70.48	332	P	P	17 47 39.0	0.0
	comp=Z,1.5nm,0.3s,baz=55,slow=6.3,SNR=17						
PINE	Pine Mountain	73.09	48	P	P	17 47 56.0	+0.9
K05A	Summer Lake	73.68	49	P	P	17 48 01.3	+2.7
K05A				IAmb	IAmb	17 48 02.0	
	comp=Z,9.7nm,1.1s						
BMO	Blue Mountains	74.72	46	P	P	17 48 06.6	+2.1
JTMT	Jette	74.84	42	P	P	17 48 07.3	+2.1
WVOR	Wild Horse Val	75.24	49	P	P	17 48 09.8	+2.3
AKASG	Malin Array Be	75.52	322	P	P	17 48 08.2	-0.6
	comp=Z,0.6nm,0.4s,baz=49,slow=5.9,SNR=3.6						
NC204	NORSAR Array S	76.03	337	P	P	17 48 11.8	+0.2
NOA	NORSAR Array B	76.06	337	P	P	17 48 12.0	+0.2
	comp=Z,0.9nm,0.7s,baz=44,slow=5.7,SNR=3.4						
ILULI	Ilulissat	76.37	4	P	P	17 48 14.1	+0.9
ILULI				IAmb	IAmb	17 48 24.8	
	comp=Z,28nm,1.5s						
FCC	Fort Churchill	76.95	26	P	P	17 48 17.2	+0.5
NVAR	Mina Array Bea	77.67	52	P	P	17 48 22.6	+1.1
	comp=Z,0.2nm,0.3s,baz=279,slow=6.4,SNR=3.1						
BRTR	Keskin Array B	79.55	311	P	P	17 48 31.4	-0.1
	comp=Z,0.4nm,0.8s,baz=51,slow=7.6,SNR=2.2						
PDAR	Pinedale Array	80.49	44	P	P	17 48 38.0	+1.3
	comp=Z,0.4nm,0.7s,baz=324,slow=2.8,SNR=2.6						
CLL	Collm	82.67	330	*e*P	P	17 48 48.0	+0.3
GERES	GERESS Array B	84.19	328	P	P	17 48 54.9	-0.8
	comp=Z,0.3nm,0.4s,baz=49,slow=6.1,SNR=4.1						
TXAR	Lajitas Array	92.81	51	P	P	17 49 36.5	-0.6
	comp=Z,0.5nm,0.7s,baz=260,slow=1.5,SNR=3.4						

REY ***23*** *18:07:02.9, 64°.67N×17°.47W, h1*^{km}
IDC ***23*** *18:07:03.3±0.8, 64°.64N×17°.49W, h0*^{km}*, mb3.6/9, mb1 3.8/10, mb1mx3.6/36, mbtmp3.6/10, ML4.1/1, Error ellipse: s-maj=26.2km s-min=11.1km az=10.0*
NEIC ***23*** *18:07:05.5±1.9, 64°.61N±0°.08×17°.65W±0°.10, h12*^{km}*±6*^{km}*, mb4.4/12, Error ellipse: s-maj=12.2km s-min=4.0km az=157.0*
ISC 23 18:07:04.6±0.5**, 64°.69N**±0°.03×**17°.47W**±0°.02**, h10**^{km}**, n62, σ1ˢ.92**/78**, mb3.8**/14**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDJK	Dyngjujokull	0.21	150	P	Pg	18 07 07.5	-1.5
	baz=149						
IDJK				S	Sg	18 07 11.6	-0.5
	baz=149						
IHAM	Hamarinn	0.26	216	P	Pg	18 07 08.1	-1.7
	baz=218						
IHAM				S	Sg	18 07 12.4	-0.9
	baz=218						
IKVE	Kverkfjoll	0.34	91	P	Pg	18 07 10.1	-1.3
	baz=89						
ISKR	Skrokkalda	0.41	253	P	Pg	18 07 11.2	-1.5
	baz=254						
ISKR				S	Sb	18 07 17.8	-2.5
	baz=254						
THOR	Thorvaldshraun	0.42	53	P	Pg	18 07 11.5	-1.4
	baz=52						
THOR				S	Sg	18 07 18.0	-0.5
	baz=52						
IKRE	Kreppuhraun	0.48	78	P	Pg	18 07 12.2	-1.7
	baz=76						
IKRE				S	Sg	18 07 19.2	-1.0
	baz=76						
IJOK	Jokulheimar	0.49	222	P	Pg	18 07 12.2	-2.0
	baz=223						
IASK	Askja	0.51	43	P	Pg	18 07 12.9	-1.6
	baz=42						
IIEY	Innrieyrar	0.66	206	P	Pg	18 07 15.2	-2.0
	baz=206						
IIEY				S	Sg	18 07 24.6	-1.2
	baz=206						
IKSK	Karasker	0.68	140	P	Pg	18 07 15.0	-2.8
	baz=139						
IVSH	V-Sauoahnukur	0.76	80	P	Pg	18 07 16.8	-2.4
	baz=79						
IVSH				S	Sg	18 07 27.5	-1.6
	baz=79						
IADA	Aoalbol	0.88	67	P	Pg	18 07 18.8	-2.7
	baz=66						
IADA				S	Sg	18 07 30.7	-2.1
	baz=66						
IHVE	Hveravellir	0.92	283	P	Pg	18 07 19.4	-2.7
	baz=283						
IHVE				S	Sg	18 07 32.0	-2.1
	baz=283						
ISKI	Skildingahlsh	1.21	9	P	Pb	18 07 24.6	-2.9
	baz=8.6						
ISKI				S	Sb	18 07 41.1	-1.9
	baz=8.6						
IGHA	Grjothals	1.21	16	P	Pb	18 07 24.5	-3.1
	baz=16						
IGRA	Granastaoir	1.24	358	P	Pn	18 07 24.9	-3.0
	baz=358						
IGYG	Gygjarholskot	1.25	252	P	Pn	18 07 25.1	-3.0
	baz=253						
IDIM	Dimmadalss	1.30	10	P	Pn	18 07 26.1	-2.7
	baz=9.7						
IHAU	Haukadalur	1.30	238	P	Pn	18 07 26.2	-2.6
	baz=238						
IHLA	Hella	1.32	344	P	Pn	18 07 26.6	-2.4
	baz=344						
IHLA				S	Sb	18 07 44.7	-1.7
	baz=344						
IHED	Heoinshofoi	1.40	3	P	Pn	18 07 27.5	-2.6
	baz=2.7						
IHED				S	Sb	18 07 47.1	-1.6
	baz=2.7						
IALF	Alftagrof	1.42	213	P	Pn	18 07 27.6	-2.7
	baz=213						
IGIL	Gilhagi	1.48	18	P	Pn	18 07 28.4	-2.8
	baz=18						
IMID	Miomork	1.48	227	P	Pn	18 07 29.3	-1.9
	baz=227						
ISIG	Siglufjorour	1.57	338	P	Pn	18 07 30.4	-2.1
	baz=338						
ISIG				S	Sb	18 07 51.8	-1.8
	baz=338						
IASM	Asmuli	1.62	239	P	Pn	18 07 31.3	-1.8
	baz=240						
BORG	Borgarnes	1.66	274	Pg	Pn	18 07 31.7	-1.9
	15nm,0.3s,baz=86,slow=8.8,SNR=39						
BORG				Lg	Lg	18 07 55.4	
	8.5nm,0.3s,baz=53,slow=16,SNR=10						
BORG	Borgarnes	1.66	274		Pn	18 07 31.5	-2.1
BORG				Sn	Sb	18 07 53.5	-2.4
IKRO	Krokur	1.69	251	P	Pn	18 07 32.2	-1.9
	baz=252						
ISOL	Solvholt	1.69	245	P	Pn	18 07 32.2	-1.9
	baz=245						
ILEI	Leirhofn	1.78	13	P	Pn	18 07 33.4	-1.9
	baz=13						
IHRN	Hraun	1.81	323	P	Pn	18 07 33.8	-1.9
	baz=324						
IKAS	Kald??rsel	2.02	253	P	Pn	18 07 37.3	-1.2
	baz=253						
SCO	Scoresbysund	6.07	346		Pn	18 08 34.6	+0.5
SCO				Sn	Sn	18 09 45.4	+1.8
SCO	Scoresbysund	6.07	346	*e*	Pn	18 08 30.4	-3.7
	baz=157,slow=8.6						
SCO				*i* P	Pn	18 08 34.5	+0.3
SCO				*e*S	Sn	18 09 47.8	+4.2
SUMG	Summit	10.93	325	Pn	Pn	18 09 41.6	+0.5
EKA	Eskdalemuir Ar	11.77	136	Pn	Pn	18 09 53.0	+0.8
	baz=323,slow=13,SNR=7.6						
ILULI	Ilulissat	13.79	304	Pn	Pn	18 10 21.8	+2.1
CLL	Collm	20.70	116	*e*P	Pn	18 11 46.0	-0.9
	comp=Z,8.0nm,1.3s						
GERES	GERESS Array B	22.95	119	P	P	18 12 08.4	-0.4
	comp=Z,0.4nm,0.7s,baz=318,slow=6.7,SNR=5.3						
PKME	Peaks-Kenny Pk	34.22	261	P	P	18 13 51.0	+1.1
BRTR	Keskin Array B	38.47	105	P	P	18 14 28.0	+1.5
	comp=Z,0.8nm,0.8s,baz=330,slow=11,SNR=3.3						
YKA	Yellowknife Ar	39.21	313	P	P	18 14 33.0	+0.8
	comp=Z,0.7nm,1.0s,baz=45,slow=9.0,SNR=6.2						
TIXI	Tiksi	42.01	15	P	P	18 14 57.6	+2.4
TIXI				IAmb	IAmb	18 14 59.1	
	comp=Z,9.1nm,1.4s						
ILAR	Eielson Array	45.67	332	P	P	18 15 26.9	+2.1
	comp=Z,1.4nm,1.1s,baz=19,slow=4.6,SNR=7.3						
ILAR	Eielson Array	45.67	332	P	P	18 15 26.0	+1.2
MDM	Murphy Dome	45.77	333	P	P	18 15 26.7	+1.2
IMAR	Indian Mountai	45.84	337	P	P	18 15 26.6	+0.4
ZALV	Zalesovo Beam	47.61	51	P	P	18 15 39.6	-0.4
	comp=Z,0.2nm,0.3s,baz=320,slow=13,SNR=1.7						
KURK	Kurchatov	48.09	58	P	P	18 15 44.4	+0.6
KURK				IAmb	IAmb	18 15 45.9	
	comp=Z,2.4nm,1.0s						
SML	Sawmill	48.63	331	P	P	18 15 47.9	0.0
YAK	Yakutsk	51.25	19	P	P	18 16 08.8	+1.1
MK31	Makanchi Array	52.70	58	P	P	18 16 19.0	+0.2
MKAR	Makanchi Array	52.70	58	P	P	18 16 17.9	-0.9
	comp=Z,0.9nm,0.9s,baz=292,slow=7.6,SNR=6.3						
TORD	Torodi Ar. Bea	53.16	156	P	P	18 16 22.2	-0.2
	comp=Z,0.5nm,0.4s,baz=348,slow=6.1,SNR=3.1						
BW06	Boulder Array	53.18	293	P	P	18 16 23.0	+0.4
BW06				IAmb	IAmb	18 16 25.0	
	comp=Z,5.9nm,1.4s						
PD31	Pinedale Array	53.18	293	P	P	18 16 22.9	+0.2
PDAR	Pinedale Array	53.18	293	P	P	18 16 23.6	+1.0
	comp=Z,1.6nm,1.0s,baz=54,slow=3.8,SNR=7.3						
AAK	Ala-Archa	53.24	67	P	P	18 16 25.5	+2.5
AAK				IAmb	IAmb	18 16 28.7	
	comp=Z,12nm,1.8s						
HWUT	Hardware Ranch	54.95	294	P	P	18 16 36.6	+1.1
HWUT				IAmb	IAmb	18 16 43.1	
	comp=Z,7.4nm,1.5s						
PV13	Radium Mtn., P	56.80	290	P	P	18 16 50.3	+1.5
SONM	Songino Array	59.62	40	P	P	18 17 08.4	+0.1
	comp=Z,0.7nm,1.0s,baz=343,slow=4.5,SNR=2.5						

NAO ***23*** *18:14:16.9±4.6, 71°.21N×12°.55W, ML3.8*
BER ***23*** *18:14:21.2±2.1, 71°.34N×12°.49W, h10*^{km}*, ML2.5, Confirmed Earthquake*
NEIC ***23*** *18:14:21.8±2.7, 71°.47N±0°.08×12°.5W±0°.2, h8*^{km}*±5*^{km}*, mb4.3/5, Error ellipse: s-maj=11.6km s-min=6.9km az=194.0*
IDC ***23*** *18:14:22.2±0.9, 71°.41N×11°.97W, h0*^{km}*, mb3.5/8, mb1 3.8/11, mb1mx3.6/44, mbtmp3.6/11, ML2.9/3, MS3.3/17, Ms1 3.4/17, ms1mx3.2/41, Error ellipse: s-maj=26.9km s-min=16.3km az=23.0*
ISC 23 18:14:21.3±4.0**, 71°.50N**±0°.06×**12°.32W**±0°.04**, h5**^{km}±27^{km}**, n52, σ2ˢ.84**/56**, mb3.6**/11**, MS3.2**/11**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.30	114	*e*P	Pn	18 14 44.9	-1.1
JMI				*e*S	Sb	18 14 59.2	-3.7
JMI				IAML		18 14 59.8	
	comp=Z,170nm,0.7s						
JMIC	Jan Mayen	1.34	111	Pn	Pn	18 14 44.2	-2.3
	baz=162,slow=3.9,SNR=2.8						
JMIC				LR	LR	18 14 59.6	
	comp=Z,240nm,21.9s,baz=326,slow=31						
JMIC				Sn	Sb	18 14 59.8	-4.3
	baz=276,slow=21,SNR=6.0						
JMIC	Jan Mayen	1.34	111	Pg	Pn	18 14 42.0	-4.6
JMIC				Lg	Lg	18 15 00.1	
JMIC	Jan Mayen	1.34	111		Pn	18 14 44.2	-2.3
JMIC					Sb	18 14 59.8	-4.3
JMIC	Jan Mayen	1.34	111	*e*P	Pn	18 14 43.9	-2.7
JMIC				*e*S	Sb	18 15 00.3	-3.9
JMIC				IAML		18 15 05.0	
	comp=Z,160nm,0.5s						
JNW	Jan Mayen West	1.34	109	*e*P	Pn	18 14 44.7	-2.0
JNW				*e*S	Sb	18 15 00.1	-4.2
JNW				IAML		18 15 01.4	
	comp=Z,196nm,0.4s						
JNE	Jan Mayen East	1.40	109	*e*P	Pn	18 14 45.5	-1.9
JNE				*e*S	Sn	18 15 00.7	-5.4
JNE				IAML		18 15 01.7	
	comp=Z,119nm,0.5s						
SCO	Scoresbysund	3.31	257	Pn	Pn	18 15 10.7	-3.0
SCO				Sn	Sn	18 15 46.9	-6.4
SCO	Scoresbysund	3.31	257	*i* P	Pn	18 15 10.0	-3.7
SCO				*i* P	Pn	18 15 10.0	-3.7
SCO				*e*P	Pb	18 15 14.5	-5.9
SCO	Scoresbysund	3.31	257	*i* P	Pn	18 15 10.0	-3.7
SCO				*i* P	Pn	18 15 10.0	-3.7
SCO				*e*P	Pb	18 15 14.5	-5.9
DBG	Daneborg	3.66	324	Pn	Pn	18 15 17.6	-0.8
DBG				Sn	Sn	18 15 57.3	-4.6
DBG	Daneborg	3.66	324	*e*P	Pn	18 15 17.7	-0.8
DBG				*e*S	Sn	18 15 57.6	-4.3
DBG				IAML		18 16 01.5	
	comp=Z,7.8nm,0.3s						
DBG	Daneborg	3.66	324	*i* P	Pn	18 15 15.6	-2.8
DBG				*i* S	Sn	18 15 56.7	-5.2
DBG				IAML		18 16 01.5	
	comp=Z,7.8nm,0.3s						
DAG	Danmarks Havn	5.58	345	*e*	Pn	18 15 43.1	-1.6
	baz=156,slow=16						
DAG				*i* P	Pn	18 15 44.0	-0.7
DAG				*i* P	Pn	18 15 45.0	+0.3
DAG				*i* S	Sn	18 16 44.1	-4.9
DAG				IAML		18 16 49.0	
	comp=Z,7.9nm,0.3s						
BORG	Borgarnes	7.56	211	Pn	Pn	18 16 13.2	+1.3
	comp=Z,0.8nm,0.3s,baz=11,slow=14,SNR=1.6						
BORG				LR	LR	18 18 38.1	
	comp=Z,187nm,21.1s,baz=353,slow=34						
BORG	Borgarnes	7.56	211	Pn	Pn	18 16 11.9	0.0
SUMG	Summit	8.11	290		Pn	18 16 19.1	-0.8
KBS	Kingsbay	9.58	29	Pn	Pn	18 16 40.2	+0.6
KBS	Kingsbay	9.58	29	Pn	Pn	18 16 40.1	+0.6
KBS	Kingsbay	9.58	29	*e*P	Pn	18 16 38.0	-1.6
KBS				*e*		18 16 42.6	
KBS				*e*S	Sn	18 18 17.6	-10
KBS				IAML		18 18 28.4	
	comp=Z,4.4nm,0.7s						
SPA0	Spitsbergen Ar	9.92	35	Pn	Pn	18 16 43.4	-0.9
	baz=231,slow=12						
SPA0	Spitsbergen Ar	9.92	35	Pn	Pn	18 16 46.1	+1.9
SPA0	Spitsbergen Ar	9.92	35	*e*P	Pn	18 16 43.7	-0.5
SPITS	Spitsbergen Ar	9.92	35	Pn	Pn	18 16 43.4	-0.9
	baz=229,slow=14,SNR=28						
ARCES	ARCESS Array B	12.63	81	Pn	Pn	18 17 20.8	-0.5
	baz=300,slow=11,SNR=1.7						
ARCES				LR	LR	18 21 16.9	
	comp=Z,120nm,19.3s,baz=270,slow=33						
NC204	NORSAR Array S	13.68	127	Pn	Pn	18 17 36.8	+1.2
NOA	NORSAR Array B	14.00	127	LR	LR	18 22 39.2	
	comp=Z,77nm,18.7s,baz=315,slow=36						
SFJD	Kangerlussuaq	14.10	270	LR	LR	18 22 51.0	
	comp=Z,159nm,18.7s,baz=343,slow=36						
HFS	Hagfors	15.41	124	LR	LR	18 23 14.0	
	comp=Z,107nm,19.8s,baz=275,slow=35						
FINES	FINESS Array B	17.95	104	P	Pn	18 18 31.6	+0.3
	comp=Z,0.1nm,0.3s,baz=319,slow=17,SNR=2.5						
FINES				LR	LR	18 24 31.7	
	comp=Z,109nm,18.8s,baz=324,slow=34						
EUNU	Eureka	18.48	328		P	18 18 35.7	-1.9
FRB	Frobisher Bay	21.92	278	P	P	18 19 19.2	+4.3
	comp=Z,1.3nm,0.7s,baz=39,slow=13,SNR=2.1						
FRB				LR	LR	18 26 56.7	
	comp=Z,82nm,21.3s,baz=78,slow=34						
RES	Resolute Bay	22.40	316	LR	LR	18 26 42.0	
	comp=Z,36nm,20.9s,baz=212,slow=33						
GERES	GERESS Array B	25.71	138	P	P	18 19 54.1	+2.0
	comp=Z,0.2nm,0.3s,baz=352,slow=13,SNR=2.7						
GERES				LR	LR	18 30 31.8	
	comp=Z,47nm,18.6s,baz=342,slow=38						
VRAC	Vranov	25.92	134	LR	LR	18 29 20.5	
	comp=Z,44nm,19.2s,baz=356,slow=35						
DAVOX	Davos/Dischmat	26.93	145	LR	LR	18 29 42.1	
	comp=Z,55nm,20.2s,baz=272,slow=34						
AKASG	Malin Array Be	27.95	116	LR	LR	18 30 48.4	
	comp=Z,61nm,19.6s,baz=0.0,slow=36						
YKA	Yellowknife Ar	36.12	310	P	P	18 21 25.5	+1.9
	comp=Z,0.8nm,0.8s,baz=36,slow=8.8,SNR=9.9						
KBZ	Khabaz	38.30	106	P	P	18 21 43.9	+1.7
	comp=Z,2.0nm,1.0s,baz=286,slow=9.2,SNR=3.1						
BRTR	Keskin Array B	39.25	119	LR	LR	18 38 40.5	
	comp=Z,39nm,18.0s,baz=353,slow=37						
IL18	Eielson Array	40.52	332	P	P	18 22 01.1	+0.5
IL31		40.52	332	P	P	18 22 00.8	+0.3
IL31				IAmb	IAmb	18 22 06.2	
	comp=Z,15nm,1.8s						
ILAR	Eielson Array	40.52	332	P	P	18 22 03.0	+2.5
	comp=Z,0.4nm,1.0s,baz=1.5,slow=6.7,SNR=2.3						
MDM	Murphy Dome	40.54	333	P	P	18 22 02.0	+1.2
MDM				IAmb	IAmb	18 22 10.2	
	comp=Z,12nm,1.7s						
TTA	Tatalina	43.53	337	P	P	18 22 25.3	0.0
SEY	Seymchan	45.43	10	LR	LR	18 41 35.2	
	comp=Z,259nm,20.7s,baz=153,slow=36						
BRLK	Bradley Lake	45.88	332	P	P	18 22 44.2	+0.3
MKAR	Makanchi Array	47.86	67	P	P	18 23 02.2	+2.6
	comp=Z,0.3nm,0.8s,baz=338,slow=6.2,SNR=2.6						
MKAR				LR	LR	18 46 43.8	
	comp=Z,28nm,18.1s,baz=17,slow=41						
GEYT	Alibeck	48.35	94	P	P	18 23 06.5	+3.0
	comp=Z,0.9nm,0.4s,baz=352,slow=8.7,SNR=2.2						
GEYT				LR	LR	18 44 58.5	
	comp=Z,59nm,18.2s,baz=300,slow=38						
TORD	Torodi Ar. Bea	58.94	164	P	P	18 24 20.7	-0.5
	comp=Z,1.0nm,1.1s,baz=316,slow=8.1,SNR=2.2						
TXAR	Lajitas Array	62.91	281	LR	LR	18 53 45.9	
	comp=Z,68nm,19.3s,baz=0.0,slow=38						
CMAR	Chiang Mai Arr	79.15	64	P	P	18 26 27.9	+1.2
	comp=Z,0.4nm,0.7s,baz=311,slow=5.8,SNR=5.1						

NAO ***23*** *18:19:43.8±4.5, 71°.28N×12°.42W, ML3.3*
BER ***23*** *18:19:49.4±0.9, 71°.48N×13°.47W, h1*^{km}*±16*^{km}*, ML2.5, Confirmed Earthquake*
ISC 23 18:19:45.5±1.2**, 71°.40N**±0°.10×**13°.64W**±0°.05**, h10**^{km}**, n16, σ1ˢ.48**/19**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.72	102	Pg	Pn	18 20 09.4	-5.9
JMIC				Lg	Lg	18 20 25.1	
JMIC	Jan Mayen	1.72	102	*e*P	Pb	18 20 17.2	+0.2
JMIC				*e*S	Sb	18 20 39.5	+0.9
SCO	Scoresbysund	2.88	255	*i* P	Pb	18 20 36.0	-0.8
SCO	Scoresbysund	2.88	255	*i* P	Pb	18 20 36.0	-0.8
SCO	Scoresbysund	2.88	255	*i* P	Pb	18 20 36.0	-0.8
SCO	Scoresbysund	2.88	255	*i* P	Pb	18 20 36.0	-0.8
SCO	Scoresbysund	2.88	255	*i* P	Pb	18 20 36.0	-0.8
DBG	Daneborg	3.51	329	Pn	Pn	18 20 42.5	+2.7
DBG				Sn	Sn	18 21 21.9	+0.5
DBG	Daneborg	3.51	329	*e*P	Pn	18 20 42.6	+2.7
DBG				*e*S	Sn	18 21 22.3	+0.9
DAG	Danmarks Havn	5.57	348	*e*P	Pn	18 21 09.6	+1.4
DAG				*e*S	Sn	18 22 09.4	-2.7
HSPB	Hornsund (broa	9.61	41	*e*P	Pn	18 22 02.9	-0.7
BRBA	Barentsburg A	9.79	35	*e*P	Pn	18 22 05.3	-0.7
KBS	Kingsbay	9.87	29	Pn	Pn	18 22 05.2	-1.8
KBS	Kingsbay	9.87	29	*e*P	Pn	18 22 06.4	-0.6
KBS				*e*S	Sn	18 23 45.8	-12
KBS				IAML		18 23 52.9	
	comp=Z,4.3nm,0.7s						
SPA0	Spitsbergen Ar	10.24	35	Pn	Pn	18 22 11.5	-0.7
	baz=225,slow=14						
SPA0	Spitsbergen Ar	10.24	35	*e*P	Pn	18 22 11.2	-1.0
SPA0				*e*S	Sn	18 23 57.1	-10
SPA0				IAML		18 23 58.7	
	comp=Z,2.1nm,0.8s						

IDC ***23*** *18:23:24.7±0.9, 0°.51S×121°.98E, h0*^{km}*, mb3.8/5, mb1 4.0/7, mb1mx3.7/38, mbtmp3.9/7, ML3.5/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/50, Error ellipse: s-maj=39.1km s-min=17.7km az=66.0*
NEIC ***23*** *18:23:24.7±1.9, 0°.53S±0°.06×121°.85E±0°.05, h3*^{km}*±5*^{km}*, mb4.4/11, Error ellipse: s-maj=10.4km s-min=4.4km az=221.0*
DJA ***23*** *18:23:25.8±0.2, 0°S±2°×12°2E±°, h10*^{km}*, M4.3/16, mb4.5/7, mB4.6/2, MLv4.2/16, Mw(mB)3.8/2*
ISC 23 18:23:26.0±0.6**, 0°.51S**±0°.04×**121°.84E**±0°.04**, h10**^{km}**, n45, σ1ˢ.38**/45**, mb4.2**/12**, MS3.2**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.44	206	P	Pg	18 23 32.3	-2.3
MRSI	Marisa	0.99	6	P	Pg	18 23 43.3	-1.7
MRSI				S	Sg	18 23 57.2	-0.7
LUWI	Luwuk	1.07	119		Pg	18 23 45.6	-0.9
LUWI				Sn	Sn	18 24 01.2	-0.7
LUWI	Luwuk	1.07	119	P	Pg	18 23 45.7	-0.9
GTOI	Gorontalo	1.63	46	P	Pn	18 23 52.8	-2.0
TOLI2	Tolitoli	1.93	327		Pn	18 23 58.8	-0.1
TOLI2				Sn	Sn	18 24 21.3	-1.9
MPSI	Mapaga	2.12	293	P	Pn	18 23 59.3	-2.2
KMSI	Cibinong	2.40	63	P	Pn	18 24 03.5	-1.8
TTSI	Tana Toraja	3.23	219	P	Pn	18 24 16.8	+0.1
SPSI	Sidrap Palu	4.01	211	P	Pn	18 24 28.0	+0.5
BNSI	Bone	4.23	204	P	Pn	18 24 30.9	+0.3

SANI	Sanana	4.42	110	P	Pn	18 24 32.8	-0.3
KAPI	Kappang	4.94	205	Pn	Pn	18 24 39.9	-0.3
	9.0nm,0.3s,baz=21,slow=6.2,SNR=15						
KAPI				Sn	Sn	18 25 37.0	-0.4
	5.8nm,0.3s,baz=46,slow=23,SNR=6.6						
KAPI	Kappang	4.94	205		Pn	18 24 39.7	-0.6
KAPI				Sn	Sn	18 25 36.2	-1.2
BKB	Balikpapan	5.00	261	Pn	Pn	18 24 41.7	+0.6
BKSI	Bulukumba	5.08	200	P	Pn	18 24 42.3	+0.1
	0.2nm41nm,0.7s						
TNTI	Ternate	5.67	77	Pn	Pn	18 24 53.5	+3.1
TNTI	Ternate	5.67	77	P	Pn	18 24 48.7	-1.7
	0.2nm23nm,0.9s						
NLAI	Namlea	5.91	117	P	Pn	18 24 55.5	+1.8
	0.3nm92nm,0.9s						
DAV	Davao City (W)	8.40	26	LR	LR	18 28 50.1	
	comp=Z,97nm,20.1s,baz=176,slow=39						
SIJI	Sorong	9.43	92	Pn	Pn	18 25 39.6	-2.4
	0.1nm,0.3s,baz=31,slow=18,SNR=1.8						
SOEI	Soe	9.49	165	Pn	Pn	18 25 43.6	+0.6
BATI	Baumata	9.80	169	LR	LR	18 30 05.0	
	comp=Z,216nm,19.5s,baz=140,slow=41						
FAKI	Fak Fak	10.67	103	Pn	Pn	18 25 59.1	0.0
SDSI	Sungai Dareh	20.41	269	P	P	18 28 02.9	-0.6
	8.3nm,1.2s						
WB0	Warramunga Arr	22.75	148	P	P	18 28 27.0	-1.5
WB0				IAmb	IAmb	18 28 50.8	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	22.86	148	P	P	18 28 28.6	-1.1
WRAB				IAmb	IAmb	18 29 07.2	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	22.86	148	P	P	18 28 29.1	-0.7
	comp=Z,2.4nm,0.7s,baz=330,slow=10,SNR=14						
WB2	Warramunga Arr	22.87	148	P	P	18 28 28.8	-1.0
WB2				IAmb	IAmb	18 28 39.8	
	comp=Z,19nm,1.4s						
WR0	Warramunga Arr	22.98	148	P	P	18 28 30.0	-1.0
ASAR	Alice Springs	25.82	154	P	P	18 28 57.9	+0.2
	comp=Z,0.8nm,0.8s,baz=326,slow=6.1,SNR=8.0						
ASAR				PcP	PcP	18 32 27.0	-0.3
	comp=Z,0.3nm,0.8s,baz=352,slow=2.2,SNR=4.9						
JOW	Kunigami	27.88	12	LR	LR	18 39 10.2	
	comp=Z,74nm,21.2s,baz=140,slow=34						
CMAR	Chiang Mai Arr	29.36	311	P	P	18 29 33.5	+4.1
	comp=Z,0.5nm,0.9s,baz=118,slow=5.6,SNR=1.7						
CMAR				LR	LR	18 41 12.9	
	comp=Z,32nm,21.1s,baz=105,slow=36						
KSRS	Korea Array	38.19	8	LR	LR	18 46 42.1	
	comp=Z,38nm,19.6s,baz=132,slow=37						
USRK	Ussuriysk Ar.	45.43	10	LR	LR	18 51 28.2	
	comp=Z,50nm,19.4s,baz=148,slow=37						
SONM	Songino Array	50.00	346	P	P	18 32 21.8	+1.2
	comp=Z,1.8nm,1.0s,baz=165,slow=7.7,SNR=6.9						
MK31	Makanchi Array	58.45	329	P	P	18 33 23.0	+0.9
MKAR	Makanchi Array	58.45	329	P	P	18 33 23.2	+1.1
	comp=Z,2.2nm,0.8s,baz=131,slow=7.2,SNR=20						
MAKZ	Makanchi	58.62	329	P	P	18 33 23.0	-0.3
MAKZ				IAmb	IAmb	18 33 26.1	
	comp=Z,2.1nm,0.9s						
KBL	Kabul	60.39	311	P	P	18 33 35.8	-0.3
AAK	Ala-Archa	60.40	321	P	P	18 33 37.0	+1.1
AAK				IAmb	IAmb	18 33 48.8	
	comp=Z,7.3nm,1.4s						
ZAA0	Zalesovo Array	62.30	336	P	P	18 33 47.9	-0.4
ZAA0				IAmb	IAmb	18 34 21.0	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	62.30	336	P	P	18 33 48.3	0.0
	comp=Z,0.5nm,0.4s,baz=131,slow=4.1,SNR=7.1						
KURK	Kurchatov	62.84	331	P	P	18 33 52.6	+0.6
BRTR	Keskin Array B	88.94	310	LR	LR	19 22 17.6	
	comp=Z,14nm,19.0s,baz=356,slow=40						

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*JMA **23** 18:27:17.3±0.2, 45°.78N×143°.25E, h334^{km}, M3.2*
*IDC **23** 18:27:18.4±1.1, 45°.81N×143°.20E, h330^{km}±16^{km}, mb2.9/6, mb1 3.1/12, mb1mx2.9/41, mbtmp3.7/12, Error ellipse: s-maj=27.8km s-min=15.7km az=158.0*
ISC 23 18:27:17.9±0.7**, 45°.58N**±0°.06×**143°.25E**±0°.08**, h350^{km}, n29, σ1^{s}.66**/37**, mb3.1**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	Keihoku	0.99	255	P	Pn	18 28 01.8	-1.8
JWK2				*e*S	S	18 28 35.6	-4.6
JRR	Rishiri	1.44	253	P	Pn	18 28 04.0	-1.7
ASAJ	Asahikawa	1.53	198	P	Pn	18 28 05.8	-0.5
	4.1nm,0.3s,baz=15,slow=6.7,SNR=38						
ASAJ	Asahikawa	1.53	198	P	Pn	18 28 05.8	-0.5
JRBN	Rebuntou	1.54	265	P	Pn	18 28 03.6	-2.6
JTKR	Abashiri--Toko	1.67	163	P	Pn	18 28 06.7	-0.4
JTKR				*e*S	S	18 28 45.3	-1.3
JKK2	Kamakawa 2	1.74	192	P	Pn	18 28 07.2	-0.4
JHR	Hokuryu	2.13	211	P	Pn	18 28 10.0	-0.2
JAR	Ashorobuto	2.31	171	P	Pn	18 28 11.9	+0.3
JAR				*e*S	S	18 28 53.7	-0.9
JFR	Furan	2.46	191	P	Pn	18 28 12.8	+0.1
JAK	Akkeshi	2.78	158	P	Pn	18 28 14.8	-0.6
JAK				*e*S	S	18 28 58.6	-3.0
JCH	Churui	2.96	178	P	Pn	18 28 16.1	-0.9
JCH				*e*S	S	18 29 00.4	-4.1
JEW	Eniwo	3.03	206	P	Pn	18 28 18.5	+0.9
JNBK	Urakawa-nobuka	3.31	186	P	Pn	18 28 20.1	-0.1
JNBK				*e*S	S	18 29 07.7	-2.7
JKB	Kayabe	4.02	204	P	Pn	18 28 27.0	-0.2
JKB				*e*S	S	18 29 21.0	-2.0
JOSM	Okushiri--Mats	4.43	219	P	Pn	18 28 31.8	+0.4
JOT	Ohata	4.49	202	P	Pn	18 28 32.1	+0.1
JOT				*e*S	S	18 29 29.5	-2.4
USRK	Ussuriysk Ar.	8.12	264	P	Pn	18 29 13.3	0.0
	baz=70,slow=8.5,SNR=4.4						
KLR	Kul'dur	8.61	299	P	Pn	18 29 17.8	-1.4
	0.2nm,0.3s,baz=105,slow=11,SNR=8.3						
MJAR	Matsushiro Arr	9.79	205	P	P	18 29 36.5	+1.4
	0.2nm,0.3s,baz=8.2,slow=12,SNR=14						
PETK	Petropavlovsk-	12.05	46	P	Pn	18 30 00.7	+0.7
	0.1nm,0.3s,baz=248,slow=7.6,SNR=1.5						
MA2	Magadan	14.73	15	P	P	18 30 28.6	-0.7
	0.3nm,0.3s,baz=204,slow=9.6,SNR=5.9						
SEY	Seymchan	18.16	13	P	P	18 31 05.1	-1.0
	0.3nm,0.3s,baz=208,slow=9.7,SNR=20						
SONM	Songino Array	25.22	289	P	P	18 32 14.7	+1.6
	0.4nm,0.4s,baz=79,slow=7.5,SNR=2.2						
ZALV	Zalesovo Beam	37.67	305	P	P	18 34 01.3	+0.8
	1.2nm,0.5s,baz=106,slow=5.2,SNR=4.1						
MKAR	Makanchi Array	41.28	294	P	P	18 34 31.1	+1.0
	0.3nm,0.6s,baz=82,slow=8.0,SNR=1.8						
ILAR	Eielson Array	41.69	37	P	P	18 34 33.1	+0.1
	0.2nm,0.5s,baz=269,slow=8.7,SNR=4.7						
YKA	Yellowknife Ar	55.82	33	P	P	18 36 20.5	+1.2
	0.3nm,0.4s,baz=306,slow=6.2,SNR=7.9						
FINES	FINESS Array B	61.96	331	P	P	18 37 01.7	+0.5
	2.0nm,1.0s,baz=46,slow=8.2,SNR=3.8						

WEL 23 18:43:14.9±0.6**, 40°S**±3°×**17°3E**±°**, h155^{km}**±5^{km}**, M4.0**/133**, MLv4.0**/133**, Error ellipse: s-maj=0.0km s-min=0.0km az=101.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.60	144	P	Pn	18 43 38.3	+0.9
DUWZ				S	Sn	18 43 56.3	+1.5
QRZ	Quartz Range	0.87	234	P	Pn	18 43 39.0	-0.1
QRZ				S	Sn	18 43 57.7	-0.1
NNZ	Nelson	0.90	183	P	Pn	18 43 39.6	+0.2
NNZ				S	Sn	18 43 58.8	+0.6
NMEZ	Namu Road	0.96	20	P	Pn	18 43 40.3	+0.4
NMEZ				S	Sn	18 44 01.4	+2.4
NBEZ	Newall Road No	1.09	17	P	Pn	18 43 41.3	+0.3
TCW	Tory Channel	1.09	145	P	Pn	18 43 42.0	+1.0
TCW				S	Sn	18 44 01.6	+0.6
KHEZ	Kahui Hut	1.11	23	P	Pn	18 43 41.6	+0.4
PREZ	Palmer Road	1.11	30	P	Pn	18 43 41.7	+0.4
LREZ	Lake Rotokare	1.12	41	P	Pn	18 43 41.8	+0.6
NEZ	North Egmont	1.16	26	P	Pn	18 43 41.7	0.0
TUWZ	Tuamarina	1.18	162	P	Pn	18 43 42.3	+0.6
TUWZ				S	Sn	18 44 02.7	+0.4
PKE	Pukeiti	1.19	20	P	Pn	18 43 42.1	+0.1
KIW	Kapiti Island	1.24	117	P	Pn	18 43 43.1	+0.8
KIW				S	Sn	18 44 03.3	0.0
DREZ	Durham Road	1.26	27	P	Pn	18 43 42.9	+0.3
WAZ	Wanganui	1.30	65	P	Pn	18 43 43.8	+0.8
WEL	Wellington	1.39	135	P	Pn	18 43 44.5	+0.7
OGWZ	Otaki Gorge	1.40	112	P	Pn	18 43 44.7	+0.8
OGWZ				S	Sn	18 44 06.2	+0.1
MHEZ	Mangahewa	1.41	29	P	Pn	18 43 44.4	+0.5
OHWZ	Ohakea	1.43	86	P	Pn	18 43 45.3	+1.2
OHWZ				S	Sn	18 44 08.5	+1.9
BSWZ	Blackbirch Sta	1.44	167	P	Pn	18 43 44.8	+0.5
BSWZ				S	Sn	18 44 07.5	+0.7
CAW	Cannon Point	1.46	123	P	Pn	18 43 45.2	+0.7
THZ	Tophouse	1.50	196	P	Pn	18 43 44.6	-0.4
THZ				S	Sn	18 44 08.2	+0.1
BHW	Baring Head	1.54	136	P	Pn	18 43 45.6	+0.4
BHW				S	Sn	18 44 08.0	-0.6
CMWZ	Cape Campbell	1.54	158	P	Pn	18 43 46.6	+1.2
VRZ	Vera Road	1.56	41	P	Pn	18 43 45.3	-0.2
MRZ	Mangatainoka R	1.66	103	P	Pn	18 43 47.0	+0.4
MRZ				S	Sn	18 44 10.4	-0.4
HOWZ	Holdsworth Sta	1.68	111	P	Pn	18 43 47.2	+0.4
HOWZ				S	Sn	18 44 10.6	-0.6
MSWZ	Moikau Station	1.75	129	P	Pn	18 43 47.9	+0.3
MTW	Mount Morrison	1.77	119	P	Pn	18 43 48.2	+0.4
POWZ	Post Office Ro	1.77	93	P	Pn	18 43 48.0	+0.2
PKVZ	Pokaka	1.78	56	P	Pn	18 43 47.7	-0.3
MTVZ	Mangateitei	1.81	60	P	Pn	18 43 48.1	-0.2
PAWZ	Paruwai Farm	1.84	126	P	Pn	18 43 48.8	+0.2
PLWZ	Palliser	1.85	133	P	Pn	18 43 48.9	+0.1
DSZ	Denniston Nort	1.90	221	P	Pn	18 43 48.2	-1.0
TIWZ	Tintock	1.91	105	P	Pn	18 43 49.7	+0.3
WNVZ	Wahianoa	1.93	60	P	Pn	18 43 49.3	-0.4
DRZ	Dome Shelter	1.93	58	P	Pn	18 43 49.6	-0.3
FWVZ	Far West T-bar	1.94	58	P	Pn	18 43 49.3	-0.6
PRWZ	Pori Road	1.94	98	P	Pn	18 43 50.2	+0.5
TSZ	Takapari Road	1.94	83	P	Pn	18 43 49.7	-0.1
WHVZ	Whangaehu Hut	1.94	59	P	Pn	18 43 49.6	-0.3
TWVZ	Taurewa	1.97	52	P	Pn	18 43 49.4	-0.8
MOVZ	Moawhango	1.99	64	P	Pn	18 43 49.7	-0.7
TUVZ	Tukino	1.99	59	P	Pn	18 43 50.2	-0.3
NGZ	Ngauruhoe	2.01	56	P	Pn	18 43 50.1	-0.6
TRWZ	Traveller	2.01	123	P	Pn	18 43 50.7	+0.2
TMWZ	Te Maipa	2.02	114	P	Pn	18 43 50.9	+0.3
WTVZ	West Tongariro	2.04	55	P	Pn	18 43 50.3	-0.7
OTVZ	Oturere	2.06	57	P	Pn	18 43 50.7	-0.6
DVHZ	Dannevirke	2.08	90	P	Pn	18 43 51.1	-0.2
KRVZ	Karewarewa	2.08	55	P	Pn	18 43 50.6	-0.8
KHZ	Kahutara	2.10	178	P	Pn	18 43 51.1	-0.4
ETVZ	East Tongariro	2.10	57	P	Pn	18 43 51.2	-0.5
HIZ	Hauiti	2.10	32	P	Pn	18 43 50.7	-0.9
TMVZ	Te Maari	2.11	56	P	Pn	18 43 51.3	-0.5
PNHZ	Pukenui	2.15	80	P	Pn	18 43 51.8	-0.3
BFZ	Birch Farm	2.16	101	P	Pn	18 43 52.3	+0.1
BHHZ	Black Hill Sta	2.17	69	P	Pn	18 43 51.5	-1.0
CPWZ	Castlepoint	2.18	107	P	Pn	18 43 53.1	+0.7
KATZ	Kakaramea	2.19	53	P	Pn	18 43 52.1	-0.6
RITZ	Rihia Road	2.29	55	P	Pn	18 43 53.5	-0.3
RATZ	Rangitukua	2.30	52	P	Pn	18 43 53.5	-0.5
ANWZ	Angora Road	2.31	95	P	Pn	18 43 54.1	+0.1
KRHZ	Kereru	2.34	74	P	Pn	18 43 53.8	-0.6
WATZ	Wairara	2.39	48	P	Pn	18 43 54.3	-0.7
PRHZ	Porangahau	2.44	90	P	Pn	18 43 55.4	-0.1
KWHZ	Kaweka Forest	2.45	70	P	Pn	18 43 55.1	-0.7
HATZ	Hinemaiaia	2.49	56	P	Pn	18 43 55.0	-1.2
TLZ	Tolley Road	2.56	40	P	Pn	18 43 55.9	-1.2
KUTZ	Kaahu Road	2.59	46	P	Pn	18 43 56.7	-0.7
BKZ	Black Stump Fm	2.61	65	P	Pn	18 43 56.4	-1.4
LTZ	Lake Taylor	2.62	199	P	Pn	18 43 56.2	-1.6
PXZ	Pawanui	2.63	85	P	Pn	18 43 57.4	-0.4
MCHZ	McNeill Hill	2.65	72	P	Pn	18 43 57.6	-0.5
GVZ	Greta Valley S	2.67	187	P	Pn	18 43 57.1	-1.3
KAHZ	Kahuranaki	2.68	80	P	Pn	18 43 58.0	-0.6
MRHZ	Matea Rd	2.73	58	P	Pn	18 43 57.3	-1.9
INZ	Inchbonnie	2.84	211	P	Pn	18 43 58.4	-2.1
ALRZ	Allen Road	2.84	53	P	Pn	18 43 59.1	-1.4
NMHZ	Naumai	2.86	66	P	Pn	18 44 00.2	-0.6
CKHZ	Cape Kidnapper	2.86	78	P	Pn	18 44 00.3	-0.4
PRRZ	Plateau Road	2.91	52	P	Pn	18 43 59.8	-1.6
AMCZ	Amberley	2.92	192	P	Pn	18 43 59.7	-1.7
ARHZ	Aropaoanui	2.93	70	P	Pn	18 44 00.5	-1.0
MTHZ	Maungataniwha	3.00	62	P	Pn	18 44 00.8	-1.8
NGRZ	Ngongotaha	3.07	45	P	Pn	18 44 02.3	-1.1
RAHZ	Arahi	3.14	65	P	Pn	18 44 02.8	-1.4
TARZ	Mount Tarawera	3.15	50	P	Pn	18 44 02.9	-1.6
MUGZ	Murupara	3.16	56	P	Pn	18 44 02.2	-2.4
WHHZ	Waihua	3.17	68	P	Pn	18 44 03.4	-1.3
OXZ	Oxford	3.19	199	P	Pn	18 44 02.1	-2.7
MKRZ	Makatiti	3.19	48	P	Pn	18 44 04.4	-0.7
RTZ	Ruatahuna	3.22	59	P	Pn	18 44 02.9	-2.4
SNGZ	Shannon Statio	3.37	64	P	Pn	18 44 05.6	-1.7
AWAZ	Awhitu Peninsu	3.38	16	P	Pn	18 44 06.6	-0.7
TGRZ	Tauranga	3.38	41	P	Pn	18 44 06.1	-1.3
OKCZ	Okains Bay	3.42	185	P	Pn	18 44 05.2	-2.6
WVZ	Waitaha Valley	3.42	215	P	Pn	18 44 05.2	-2.6
MQZ	McQueen's Vall	3.44	190	P	Pn	18 44 04.8	-3.2
MKAZ	Moumakai	3.47	23	P	Pn	18 44 07.7	-0.8
WTAZ	Waiatarua	3.49	15	P	Pn	18 44 08.3	-0.5
URZ	Urewera	3.50	55	P	Pn	18 44 05.9	-3.0
KNZ	Kokohu	3.51	70	P	Pn	18 44 06.9	-2.0
RACZ	Rakaia	3.55	196	P	Pn	18 44 06.6	-2.7
RAGZ	Rawiri	3.57	61	P	Pn	18 44 07.5	-2.3
AKCZ	Akaroa Harbour	3.58	186	P	Pn	18 44 06.9	-2.9
MHGZ	Mahia Peninsul	3.63	73	P	Pn	18 44 08.9	-1.5
PRGZ	Paritu Road	3.69	69	P	Pn	18 44 09.4	-2.0
RIGZ	Rimuhau	3.70	66	P	Pn	18 44 09.2	-2.3
MBAZ	Motutapu North	3.72	18	P	Pn	18 44 10.3	-1.3
MWZ	Matawai	3.73	59	P	Pn	18 44 09.2	-2.7
WIAZ	Waiheke Island	3.75	21	P	Pn	18 44 11.6	-0.6
GCSZ	Gaunt Creek Bo	3.80	217	P	Pn	18 44 09.7	-3.0
WACZ	Wakanui South	3.82	198	P	Pn	18 44 10.2	-2.7
RPZ	Rata Peaks	3.84	207	P	Pn	18 44 10.4	-2.7
TKGZ	Te Karaka	3.89	63	P	Pn	18 44 11.7	-2.2
KUZ	Kuaotunu	3.98	27	P	Pn	18 44 13.6	-1.5
ARCZ	Arundel	4.00	204	P	Pn	18 44 11.8	-3.5
RUGZ	Raukumara Rang	4.04	56	P	Pn	18 44 12.4	-3.5
CNGZ	Carnagh Statio	4.11	65	P	Pn	18 44 14.7	-2.1
TWGZ	Tauwhareparae	4.11	60	P	Pn	18 44 14.3	-2.5
FOZ	Fox Glacier	4.21	219	P	Pn	18 44 14.5	-3.4
HAZ	Te Kaha	4.23	54	P	Pn	18 44 14.5	-3.8
PKGZ	Pakihiroa	4.34	58	P	Pn	18 44 16.8	-3.0
PUZ	Puketiti	4.35	61	P	Pn	18 44 16.9	-3.0
TMZ	Timaru	4.45	203	P	Pn	18 44 17.9	-3.3
WMGZ	Waiomatatini S	4.60	59	P	Pn	18 44 19.8	-3.3
MXZ	Matakaoa Point	4.68	56	P	Pn	18 44 21.0	-3.2
LBZ	Lake Benmore	4.73	210	P	Pn	18 44 21.1	-3.8
JCZ	Jackson Bay	5.11	221	P	Pn	18 44 26.1	-3.8
ODZ	Otahua Downs	5.16	203	P	Pn	18 44 27.1	-3.4
WKZ	Wanaka	5.57	215	P	Pn	18 44 32.0	-4.0
EAZ	Earnscleugh	5.78	210	P	Pn	18 44 33.8	-4.9
HHSZ	Highcliff Hill	5.95	200	P	Pn	18 44 38.4	-2.4
MSZ	Milford Sound	5.97	221	P	Pn	18 44 37.5	-3.7
MLZ	Mavora Lakes	6.39	216	P	Pn	18 44 43.1	-3.7
WHZ	Wether Hill Ro	6.88	214	P	Pn	18 44 48.7	-4.5
SYZ	Scrubby Hill	6.97	205	P	Pn	18 44 50.7	-3.7
APZ	The Paps	7.62	210	P	Pn	18 44 58.4	-4.8
CTZ	Chatham Island	8.14	118	P	Pn	18 45 09.9	-0.2

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*DNK **23** 18:55:14.3±1.5, 71°.38N×13°.13W, h44^{km}±29^{km}, ML2.3*
BER 23 18:55:14.6±1.6**, 71°.43N**×**13°.37W, h10^{km}, ML1.6, ML2.3**(DNK)**, Confirmed Earthquake, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCO	Scoresbysund	2.97	255	*i* P	Pn	18 55 59.1	-2.6
SCO				*i* S	Sn	18 56 33.8	-3.5
SCO				IAML		18 56 38.5	
	comp=Z,1.3nm,0.4s						
SCO	Scoresbysund	2.97	255	*i* P	Pn	18 55 59.0	-2.7
SCO				*i* S	Sn	18 56 33.7	-3.6
SCO	Scoresbysund	2.97	255	*i* P	Pn	18 55 59.1	-2.6
SCO				*i* S	Sn	18 56 33.8	-3.5
SCO				IAML		18 56 38.5	
	comp=Z,1.3nm,0.4s						
DBG	Daneborg	3.53	328	*i* P	Pn	18 56 08.0	-1.4
DBG				*i* S	Sn	18 56 47.4	-3.7
DBG				IAML		18 56 49.9	
	comp=Z,2.9nm,0.5s						
DBG	Daneborg	3.53	328	*i* P	Pn	18 56 08.0	-1.4
DBG				*i* S	Sn	18 56 47.4	-3.7
DBG				IAML		18 56 49.9	
	comp=Z,2.9nm,0.5s						
DAG	Danmarks Havn	5.56	347	*i* P	Pn	18 56 36.0	-1.2
DAG				*i* S	Sn	18 57 33.4	-7.6
DAG				IAML		18 57 38.3	
	comp=Z,6.5nm,0.3s						
DAG	Danmarks Havn	5.56	347	*i* P	Pn	18 56 36.0	-1.2
DAG				*i* S	Sn	18 57 33.4	-7.6
DAG	Danmarks Havn	5.56	347	*i* P	Pn	18 56 36.0	-1.2
DAG				*i* S	Sn	18 57 33.4	-7.6
DAG				IAML		18 57 38.3	
	comp=Z,6.5nm,0.3s						

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*IDC **23** 18:57:10.7±1.3, 29°.76N×68°.27E, h0^{km}, mb3.7/11, mb1 3.8/12, mb1mx3.5/55, mbtmp3.7/12, ML3.5/1, MS3.0/2, Ms1 3.1/2, ms1mx2.5/44, Error ellipse: s-maj=29.7km s-min=22.6km az=133.0*
ISC 23 18:57:13.8±0.8**, 29°.6N**±0°.1×**68°.2E**±0°.1**, h24^{km}, n25, σ3^{s}.14**/35**, mb3.7**/10**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	10.63	236	Pn	Pn	18 59 46.4	+1.8
	0.3nm,0.3s,baz=108,slow=5.1,SNR=9.3						
WSAR				Sn	Sn	19 01 36.1	-6.9
	1.1nm,0.3s,baz=285,slow=17,SNR=14						
WBK	Wadi Bani Khal	10.80	232	P	Pn	18 59 49.6	+2.7
	SNR=6.8						
WBK				S	Sn	19 01 41.0	-6.0
JLN	Jalan Bani Buh	10.81	229	P	Pn	18 59 48.3	+1.2
JLN				S	Sn	19 01 43.3	-4.1
BIDO	Bidbid	10.83	239	P	Pn	18 59 50.3	+2.9
BIDO				S	Sn	19 01 45.4	-2.4
BANOM	Banah	11.14	254	P	Pn	18 59 54.3	+2.7
BANOM				S	Sn	19 01 52.4	-3.0
SMDO	Samad	11.16	237	P	Pn	18 59 53.9	+1.9
SMDO				S	Sn	19 01 52.3	-3.9
HOQ	Hoqain	11.41	241	P	Pn	18 59 56.9	+1.5
HOQ				S	Sn	19 01 57.9	-4.2
JMDO	Jabal Madar	11.56	234	P	Pn	18 59 58.8	+1.4
JMDO				S	Sn	19 02 01.6	-4.1
ASHO	Ashiyiah	11.85	249	P	Pn	19 00 05.7	+4.4
ASHO				S	Sn	19 02 11.9	-0.9
BSY	Bisya	11.98	238	P	Pn	19 00 07.3	+4.2
BSY				S	Sn	19 02 12.9	-3.1
ARQ	Araqi	12.15	242	P	Pn	19 00 09.9	+4.5
	SNR=14						
ARQ				S	Sn	19 02 18.9	-1.3
AAK	Ala-Archa	14.00	20	LR	LR	19 05 58.9	
	comp=Z,38nm,19.1s,baz=161,slow=38						
WHFO	Wadi Hawf	17.55	232	P	P	19 01 21.1	+3.3
	SNR=10						
ABTO	Aybut	18.26	232	P	P	19 01 29.3	+3.5
MKAR	Makanchi Array	20.41	29	P	P	19 01 46.4	-2.6
	0.7nm,0.7s,baz=206,slow=11,SNR=7.9						
AKTO	Aktyubinsk	22.21	343	P	P	19 02 07.6	-0.7
	1.1nm,0.5s,baz=188,slow=15,SNR=1.6						
KURBB	Kurchatov Arra	22.43	17	P	P	19 02 07.9	-2.7
	1.6nm,0.7s,baz=209,slow=11,SNR=5.3						
BVAR	Borovoye Array	23.49	3	P	P	19 02 19.8	-1.8
	0.8nm,0.5s,baz=80,slow=3.3,SNR=7.1						
SONM	Songino Array	34.51	47	P	P	19 03 59.9	-0.2
	0.4nm,0.6s,baz=251,slow=4.4,SNR=2.0						
ARCES	ARCESS Array B	46.78	341	P	P	19 05 40.9	-0.1
	1.6nm,0.6s,baz=103,slow=5.2,SNR=8.2						
HFS	Hagfors	47.29	326	P	P	19 05 44.6	-0.4
	3.9nm,1.0s,baz=67,slow=11,SNR=4.7						
NOA	NORSAR Array B	48.70	327	P	P	19 05 54.8	-1.1
	0.6nm,0.6s,baz=105,slow=6.9,SNR=1.5						
NOA				LR	LR	19 28 30.4	
	comp=Z,28nm,18.1s,baz=10.0,slow=39						
TORD	Torodi Ar. Bea	63.29	270	P	P	19 07 42.2	+1.2
	0.6nm,0.5s,baz=66,slow=5.1,SNR=5.3						
ASAR	Alice Springs	82.38	123	P	P	19 09 34.9	+0.8
	0.2nm,0.7s,baz=317,slow=6.3,SNR=1.7						
YKA	Yellowknife Ar	88.23	1	P	P	19 10 03.0	+0.3
	0.6nm,0.7s,baz=354,slow=4.9,SNR=8.4						

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*NAO **23** 18:59:03.4±4.6, 71°.29N×12°.28W, ML4.2*
*IDC **23** 18:59:04.0±1.3, 70°.75N×12°.62W, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.3/54, mbtmp3.6/6, ML2.8/1, MS3.3/11, Ms1 3.3/11, ms1mx3.1/41, Error ellipse: s-maj=35.1km s-min=21.8km az=17.0*
*DNK **23** 18:59:08.0±1.4, 71°.55N×13°.36W, h11^{km}±20^{km}, ML2.5*
*BER **23** 18:59:08.6±1.6, 71°.44N×13°.03W, h10^{km}, ML2.0, ML2.5(DNK), Confirmed Earthquake*
ISC 23 18:59:07.0±0.8**, 71°.55N**±0°.06×**13°.02W**±0°.04**, h10^{km}, n36, σ1^{s}.43**/32**, mb3.6**/6**, MS3.2**/7**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.56	109	Pn	Pn	18 59 28.6	-6.2
	baz=308,slow=18,SNR=2.4						
JMIC				Sn	Sn	18 59 43.8	-11
	baz=221,slow=23,SNR=3.6						
JMIC	Jan Mayen	1.56	109	Pg	Pn	18 59 28.8	-6.0
JMIC				Lg	Lg	18 59 43.2	
JMIC	Jan Mayen	1.56	109	*e*P	Pn	18 59 33.1	-1.7
JMIC				*e*S	Sn	18 59 54.2	-0.8
JMIC				IAML		18 59 55.5	
	comp=Z,76nm,0.6s						
SCO	Scoresbysund	3.11	254	*i* P	Pn	18 59 55.4	-0.7
SCO				*i* S	Sn	19 00 30.9	-2.2
SCO				IAML		19 00 32.7	
	comp=Z,2.5nm,0.4s						
SCO	Scoresbysund	3.11	254	*i* P	Pn	18 59 55.3	-0.7
SCO				*i* S	Sn	19 00 30.9	-2.2
SCO	Scoresbysund	3.11	254	*i* P	Pn	18 59 55.4	-0.7
SCO				*i* S	Sn	19 00 30.9	-2.2
SCO				IAML		19 00 32.7	
	comp=Z,2.5nm,0.4s						
DBG	Daneborg	3.49	326	Pn	Pn	19 00 02.0	+0.8
DBG				Sn	Sn	19 00 41.5	-0.9
DBG	Daneborg	3.49	326	*e*P	Pn	19 00 01.7	+0.5
DBG				*e*S	Sn	19 00 41.4	-1.1
DBG				IAML		19 00 43.2	
	comp=Z,5.5nm,0.4s						
DBG	Daneborg	3.49	326	*i* P	Pn	19 00 01.8	+0.5
DBG				*i* S	Sn	19 00 41.0	-1.5
DBG				IAML		19 00 43.2	
	comp=Z,5.5nm,0.4s						
DAG	Danmarks Havn	5.47	346	*e*P	Pn	19 00 29.1	+0.8
DAG				*e*S	Sn	19 01 29.2	-2.0
DAG				IAML		19 01 31.8	
	comp=Z,8.2nm,0.4s						
DAG	Danmarks Havn	5.47	346	*e*	Pn	19 00 28.1	-0.2
	baz=169,slow=18						
DAG				*i* P	Pn	19 00 29.4	+1.1
DAG				*e*S	Sn	19 01 28.0	-3.2
DAG				IAML		19 01 31.8	
	comp=Z,8.2nm,0.4s						
BRBA	Barentsburg A	9.55	35	*e*P	Pn	19 01 24.7	+0.4
KBS	Kingsbay	9.64	29	Pn	Pn	19 01 24.8	-0.6
KBS	Kingsbay	9.64	29	*e*P	Pn	19 01 24.3	-1.2
KBS	Kingsbay	9.64	29	*i* P	Pn	19 01 24.6	-0.8
SPA0	Spitsbergen Ar	10.01	36	Pn	Pn	19 01 30.4	-0.1
	baz=238,slow=12						
SPA0	Spitsbergen Ar	10.01	36	*e*P	Pn	19 01 29.9	-0.6
SPITS	Spitsbergen Ar	10.01	36	Pn	Pn	19 01 30.6	+0.1
	baz=230,slow=13,SNR=41						
ARCES	ARCESS Array B	12.84	80	Pn	Pn	19 02 07.8	-1.4
	baz=303,slow=15,SNR=1.2						
ARCES				LR	LR	19 05 50.3	
	comp=Z,117nm,18.5s,baz=285,slow=32						
SFJD	Kangerlussuaq	13.88	269	LR	LR	19 07 58.5	
	comp=Z,72nm,20.6s,baz=353,slow=38						
NOA	NORSAR Array B	14.21	126	LR	LR	19 07 14.0	
	comp=Z,98nm,18.2s,baz=330,slow=36						
HFS	Hagfors	15.63	123	LR	LR	19 08 09.9	
	comp=Z,107nm,18.0s,baz=302,slow=36						
FINES	FINESS Array B	18.18	104	P	Pn	19 03 17.4	-1.7
	comp=Z,0.1nm,0.3s,baz=316,slow=8.0,SNR=5.5						
FRB	Frobisher Bay	21.69	277	LR	LR	19 12 33.8	
	comp=Z,67nm,20.6s,baz=28,slow=37						
RES	Resolute Bay	22.21	316	LR	LR	19 12 48.0	
	comp=Z,127nm,21.8s,baz=54,slow=36						
VRAC	Vranov	26.12	133	LR	LR	19 15 42.3	
	comp=Z,53nm,18.2s,baz=320,slow=39						
DAVOX	Davos/Dischmat	27.10	144	LR	LR	19 14 49.6	
	comp=Z,47nm,18.9s,baz=18,slow=36						
ARU	Arti	32.42	79	LR	LR	19 16 42.2	
	comp=Z,54nm,19.5s,baz=309,slow=33						
YKA	Yellowknife Ar	35.91	309	P	P	19 06 09.9	+3.2
	comp=Z,0.8nm,0.8s,baz=36,slow=9.2,SNR=7.3						
AKTO	Aktyubinsk	37.35	85	P	P	19 06 19.3	+0.2
	comp=Z,0.6nm,0.4s,baz=340,slow=12,SNR=4.3						

ILAR	Eielson Array	40.37	332	P	P	19 06 49.1	+4.9
	comp=Z,0.5nm,0.9s,baz=10,slow=5.5,SNR=4.6						
MKAR	Makanchi Array	48.05	67	P	P	19 07 46.8	+0.9
	comp=Z,0.4nm,0.8s,baz=350,slow=7.3,SNR=4.0						
GEYT	Alibeck	48.57	94	LR	LR	19 29 35.0	
	comp=Z,41nm,20.3s,baz=250,slow=38						
PDAR	Pinedale Array	52.07	292	LR	LR	19 28 43.1	
	comp=Z,74nm,18.2s,baz=310,slow=34						
TORD	Torodi Ar. Bea	59.05	163	P	P	19 08 59.7	-7.2
	comp=Z,0.5nm,0.9s,baz=7.8,slow=12,SNR=4.2						
CMAR	Chiang Mai Arr	79.32	64	P	P	19 11 13.2	+0.6
	comp=Z,0.8nm,1.0s,baz=323,slow=7.2,SNR=5.4						

IDC 23 19:00:29.3±4.3**, 16°.89S**×**177°.00W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/35**, mbtmp4.0**/3**, Error ellipse: s-maj=199.0km s-min=38.4km az=139.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.30	240	P	P	19 08 09.4	+0.9
	1.1nm,0.6s,baz=80,slow=6.1,SNR=3.9						
WRA	Warramunga Arr	46.15	258	P	P	19 08 55.1	-0.9
	0.4nm,0.7s,baz=93,slow=7.2,SNR=5.7						
ASAR	Alice Springs	46.37	253	P	P	19 08 57.1	-0.6
	4.9nm,0.6s,baz=89,slow=8.2,SNR=96						
BRTR	Keskin Array B	145.00	317	PKPbc	PKPab	19 20 07.8	-0.6
	1.2nm,0.8s,baz=29,slow=6.6,SNR=6.9						
MMAI	Mount Meron Ar	146.70	305	PKPbc	PKPdf	19 20 12.2	+0.2
	1.7nm,0.6s,baz=88,slow=7.8,SNR=4.8						
GERES	GERESS Array B	146.96	347	PKPbc	PKPbc	19 20 13.7	-0.3
	0.4nm,0.5s,baz=20,slow=3.1,SNR=4.8						

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*IDC **23** 19:04:28.7±14.0, 36°.11N×71°.93E, h116^{km}±77^{km}, mb3.5/3, mb1 3.5/9, mb1mx3.0/62, mbtmp3.9/9, ML3.5/6, Error ellipse: s-maj=139.7km s-min=43.7km az=178.0*

*NEIC **23** 19:04:38.7±2.7, 37°.04N±0°.06×71°.88E±0°.07, h146^{km}±8^{km}, mb4.0/4, Error ellipse: s-maj=9.5km s-min=7.0km az=205.0*

*NNC **23** 19:04:45.7±8.7, 37°.53N×71°.69E, h174^{km}±135^{km}, mb2.8, mpv3.7, Error ellipse: s-maj=86.4km s-min=45.3km az=6.0*

ISC 23 19:04:38.4±0.8**, 37°.03N**±0°.06×**71°.80E**±0°.07**, h150^{km}, n33, σ1^{s}.76**/42**, mb3.9**/4**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	3.34	223		Pn	19 05 31.1	+0.7
KBL				Sn	Sn	19 06 08.7	-1.8
NIL	Nilore	3.57	160		Pn	19 05 33.0	-0.1
NIL				Sn	Sn	19 06 13.8	-1.7
AML	Almayashu	5.30	15	P	Pn	19 05 56.6	+0.4
	SNR=19						
UCH	Uchtor	5.60	21	P	Pn	19 06 00.7	+0.5
	SNR=25						
EKS2	Erkin-Say	5.83	14	P	Pn	19 06 03.9	+1.0
	SNR=18						
AAK	Ala-Archa	5.98	19	P	Pn	19 06 05.9	+1.1
	5.1nm,0.3s,baz=190,slow=5.7,SNR=98						
AAK				S	Sn	19 07 11.3	-1.1
	2.1nm,0.3s,baz=200,slow=10,SNR=16						
AAK	Ala-Archa	5.98	19	P	Pn	19 06 06.0	+1.1
	SNR=18						
AAK	Ala-Archa	5.98	19	⇑P	Pn	19 06 06.0	+1.1
	8.9nm,0.5s						
AAK				⇓S	Sn	19 07 11.7	-0.7
	23nm,0.8s						
AAK	Ala-Archa	5.98	19		Pn	19 06 05.3	+0.4
AAK				Sn	Sn	19 07 11.4	-1.1
KK31	Karatay Array	6.15	351	⇑P	Pn	19 06 07.4	+0.4
	2.9nm,0.3s,baz=179,slow=14,SNR=83						
KK31				⇑S	Sn	19 07 13.6	-2.9
	20nm,0.4s,baz=170,slow=22,SNR=24						
KK31	Karatay Array	6.15	351		Pn	19 06 07.4	+0.4
KK31				Sn	Sn	19 07 13.3	-3.1
KKAR	Karatay Array	6.15	351		Pn	19 06 07.5	+0.4
KKAR				Sn	Sn	19 07 12.6	-3.8
CHMS	Chumysh	6.38	20	P	Pn	19 06 11.1	+1.0
	SNR=5.8						
TKM2	Tokmak 2	6.57	25	⇓P	Pn	19 06 16.6	+3.8
	2.2nm,0.7s						
TKM2				⇑S	Sn	19 07 22.8	-4.0
	3.6nm,0.7s						
GEYT	Alibeck	10.92	279	S	Sn	19 09 09.8	-1.3
	0.4nm,0.3s,baz=67,slow=27,SNR=1.8						
MAKZ	Makanchi	12.36	35	Pn	Pn	19 07 27.4	-1.7
MKAR	Makanchi Array	12.49	35	P	Pn	19 07 32.5	+1.6
	0.1nm,0.3s,baz=208,slow=11,SNR=2.0						
KURBB	Kurchatov Arra	14.43	17	P	P	19 07 59.5	+1.5
	0.1nm,0.3s,baz=209,slow=10,SNR=4.6						
KURK	Kurchatov	14.53	18	P	P	19 07 59.0	-0.2
AB31	Akbulak array	14.96	329	⇑P	Pn	19 08 02.8	+0.7
	0.4nm,0.5s,baz=132,slow=15,SNR=14						
ABKAR	Akbulak array	14.96	329		Pn	19 08 01.7	-0.4
BVAR	Borovoye Array	16.03	357	P	P	19 08 18.3	+2.5
	0.2nm,0.3s,baz=158,slow=12,SNR=5.7						
BRVK	Borovoye	16.07	357	P	P	19 08 17.8	+1.6
AKTO	Aktyubinsk	16.66	328	P	Pn	19 08 24.4	+1.5
	0.3nm,0.3s,baz=123,slow=6.4,SNR=6.2						
AKTO	Aktyubinsk	16.66	328	⇓P	P	19 08 22.7	0.0
	1.8nm,0.6s						
ZAA0	Zalesovo Array	19.17	24	P	P	19 08 49.1	-1.0
ZAA0				IAmb	IAmb	19 08 51.4	
	comp=Z,3.8nm,0.7s						
ZALV	Zalesovo Beam	19.17	24	P	P	19 08 50.8	+0.7
	comp=Z,0.4nm,0.3s,baz=226,slow=11,SNR=19						
ARCES	ARCESS Array B	40.91	337	P	P	19 12 06.8	+1.3
	comp=Z,2.7nm,0.8s,baz=107,slow=7.9,SNR=3.8						
HFS	Hagfors	43.06	322	P	P	19 12 22.5	-0.4
	comp=Z,2.4nm,0.9s,baz=106,slow=11,SNR=4.6						
NC602	NORSAR Array S	44.17	322	P	P	19 12 35.8	+3.9
TIXI	Tiksi	45.05	22	P	P	19 12 39.0	+0.4
TIXI				IAmb	IAmb	19 12 39.7	
	comp=Z,1.7nm,0.3s						
IMAR	Indian Mountai	71.48	18	P	P	19 15 42.0	-0.2
YKA	Yellowknife Ar	80.69	3	P	P	19 16 33.3	-1.0
	comp=Z,0.3nm,0.5s,baz=356,slow=5.3,SNR=5.3						

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*INET **23** 19:17:01.0, 9°.87N×86°.40W, h15^{km}, MW3.6*

*IDC **23** 19:17:06.9±1.5, 11°.39N×85°.29W, h0^{km}, mb3.4/5, mb1 3.8/5, mb1mx3.7/27, mbtmp3.4/5, Error ellipse: s-maj=106.4km s-min=15.3km az=68.0*

*UCR **23** 19:17:06.1±1.6, 10°.31N×86°.29W, h12^{km}±18^{km}, MW4.0, mb4.3(NEIC)*

*NEIC **23** 19:17:09.5±1.1, 10°.49N±0°.03×86°.09W±0°.06, h36^{km}±14^{km}, mb4.3/13, Error ellipse: s-maj=9.2km s-min=3.9km az=98.0*

ISC 23 19:17:05.7±0.8**, 10°.43N**±0°.06×**86°.19W**±0°.06**, h10^{km}, n53, σ0^{s}.85**/55**, 8C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.65	64	*e*P	Pn	19 17 21.8	+0.8
GUAI	GUAI	0.69	103	⇑*i*P	Pb	19 17 20.7	+0.9
GUAI				*i* S	Sn	19 17 32.0	-0.2
ORTG	Ortega, Santa	0.72	95	*e*P	Pn	19 17 21.7	-0.4
ORTG				*e*S	Sn	19 17 33.3	0.0
DUNO	Dulce Nombre,	0.77	117	*e*P	Pb	19 17 21.5	+0.3
GBS3	Finca Las Img	0.81	64	⇑*i*P	Pn	19 17 23.5	+0.4
LAPC	Finca la Perla	0.82	66	⇑*i*P	Pb	19 17 22.8	+0.7
PLVR	Palo Verde	0.83	95	*e*P	Pb	19 17 22.4	0.0
BUEV	Buena Vista	0.86	64	*e*P	Pn	19 17 24.4	+0.5
GB1A	Borinquen Arri	0.87	64	*e*P	Pn	19 17 24.6	+0.5
GPS3	Bodega del ICE	0.88	68	*i* P	Pn	19 17 24.6	+0.5
GPS2	Hotel Rincn d	0.89	69	⇑*i*P	Pn	19 17 24.8	+0.4
GPS1	Guardaparques	0.90	67	⇑*i*P	Pb	19 17 24.0	+0.6
BUAI	Buenos Aires	0.96	62	*i* P	Pb	19 17 24.7	+0.3
LIM1	Limonal	0.96	74	⇑*i*P	Pn	19 17 25.9	+0.6
COLC	Colonia	1.00	76	*i* P	Pn	19 17 26.4	+0.6
CUI	Cuipilapa	1.04	77	*e*P	Pb	19 17 26.1	+0.4
HORNC	Hornillas	1.04	74	⇑*i*P	Pn	19 17 26.9	+0.5
ACAL	Aguas Claras	1.16	80	⇑*i*P	Pn	19 17 28.7	+0.7
JTS	Las Juntas de	1.23	96	Pg	Pb	19 17 29.0	0.0
	16nm,0.3s,baz=334,slow=7.4,SNR=36						
JTS				Lg	Lg	19 17 57.0	
	54nm,0.3s,baz=134,slow=19,SNR=7.6						
JTS	Las Juntas de	1.23	96		Pb	19 17 28.9	0.0
LAFE	Finca La Fe, P	1.41	116	*e*P	Pn	19 17 29.9	-1.4
ARE1	Arenal 1	1.45	89	*e*P	Pg	19 17 33.6	0.0
CEDE	Laguna Cedeo	1.47	88	*e*P	Pb	19 17 33.2	+0.1
JACO	JACO, Garabito	1.69	117	*e*P	Pn	19 17 36.0	+0.7
COVE	Coope Vega, Sa	1.79	80	*e*P	Pb	19 17 38.4	-0.1
ACON	Acoyapa	1.83	33		Pn	19 17 37.7	+0.5
HDC	Heredia	2.09	102		Pn	19 17 40.4	-0.5
LCR2	La Lucha 2	2.26	107	*e*P	Pn	19 17 44.9	+1.6
RIMA	Rio Macho	2.39	106	*e*P	Pn	19 17 46.7	+1.6
CRIN	San Cristobal	2.41	340		Pn	19 17 46.1	+0.8
CVTR	Volcan Turrial	2.43	99	*e*P	Pn	19 17 45.8	-0.1
ESPN	Las Esperanzas	2.56	46		Pn	19 17 46.9	-0.3
DRK0	Durika	3.13	111	*e*P	Pn	19 17 56.1	+0.9
TGUH	Tegucigalpa,Un	3.76	344	Pn	Pn	19 18 03.4	-0.5
MTO3	Montecristo	5.01	322		Pn	19 18 23.1	+1.9
CMIG	Matias Romero	10.73	309	Pn	Pn	19 19 38.4	-1.1
	0.3nm,0.3s,baz=26,slow=12,SNR=1.6						
Y49A	Blount Mountai	23.32	360	P	P	19 22 12.3	-1.8
HODGE	Hodges	23.96	8	P	P	19 22 20.2	-0.1
HODGE				IAmb	IAmb	19 22 24.9	
	comp=Z,15nm,1.2s						
FPAL	Fort Paine	24.01	1	P	P	19 22 20.7	0.0
FPAL				IAmb	IAmb	19 22 21.5	
	comp=Z,6.1nm,0.8s						
PLAL	Pickwick Lake	24.50	356	P	P	19 22 24.4	-0.8
PLAL				IAmb	IAmb	19 22 49.2	
	comp=Z,12nm,1.4s						
TXAR	Lajitas Array	24.91	322	P	P	19 22 29.5	+0.3
	comp=Z,0.7nm,0.6s,baz=133,slow=10.0,SNR=10						
TXAR	Lajitas Array	24.91	322	P	P	19 22 29.9	+0.7
TX31	Lajitas Ar. Si	24.91	322	P	P	19 22 29.8	+0.6
TX31				IAmb	IAmb	19 22 52.6	
	comp=Z,11nm,1.3s						
TX32	Lajitas Array	24.91	322	P	P	19 22 29.8	+0.6
V53A	Saluda	25.32	6	P	P	19 22 32.6	-0.1
V51A	Loudon	25.32	4	P	P	19 22 32.0	-0.6
V51A				IAmb	IAmb	19 22 33.5	
	comp=Z,10nm,0.9s						
SDCO	Great Sand Dun	32.27	331	P	P	19 23 35.2	+0.3
PV17	East Wray Mesa	34.43	327	P	P	19 23 55.5	+1.7
PV17				IAmb	IAmb	19 23 55.6	
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	38.13	332	P	P	19 24 25.1	-0.2
	comp=Z,0.3nm,0.6s,baz=128,slow=10,SNR=2.5						
REDW	Red Top Meadow	39.19	331	P	P	19 24 34.2	-0.1
NVAR	Mina Array Bea	40.03	320	P	P	19 24 43.4	+2.1
	comp=Z,0.4nm,0.4s,baz=128,slow=8.2,SNR=5.7						
YKA	Yellowknife Ar	55.88	345	P	P	19 26 41.2	-2.1
	comp=Z,0.1nm,0.3s,baz=137,slow=7.8,SNR=5.3						
ILAR	Eielson Array	68.36	336	P	P	19 28 06.6	-0.5
	comp=Z,0.3nm,0.9s,baz=145,slow=6.5,SNR=2.6						

WEL 23 19:36:19.6, 44°S±2°×**17°2E**±°**, h14^{km}**±3^{km}**, M2.4**/13**, mB5.8**/1**, ML2.5**/12**, MLv2.4**/13**, Mw(mB)5.3**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=130.6, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RACZ	Rakaia	0.08	207	P	Pg	19 36 23.7	+1.2
MQZ	McQueen's Vall	0.34	99	P	Pb	19 36 27.7	+0.2
OXZ	Oxford	0.35	341	P	Pg	19 36 26.6	-0.1
WACZ	Wakanui South	0.38	221	P	Pb	19 36 29.1	+0.9
AKCZ	Akaroa Harbour	0.56	113	P	Pb	19 36 32.2	+0.8
AMCZ	Amberley	0.58	35	P	Pb	19 36 32.0	+0.4
OKCZ	Okains Bay	0.64	97	P	Pb	19 36 33.4	+0.8
ARCZ	Arundel	0.79	248	P	Pb	19 36 35.7	+0.6
RPZ	Rata Peaks	0.83	265	P	Pb	19 36 36.4	+0.6
LTZ	Lake Taylor	0.87	4	P	Pg	19 36 36.5	0.0
GVZ	Greta Valley S	0.92	42	P	Pn	19 36 38.2	-0.1
INZ	Inchbonnie	1.08	329	P	Pn	19 36 40.3	0.0
TMZ	Timaru	1.12	229	P	Pg	19 36 41.2	-0.1
GCSZ	Gaunt Creek Bo	1.40	283	P	Pg	19 36 46.3	-0.2
LBZ	Lake Benmore	1.62	242	P	Pg	19 36 51.4	+0.6
FOZ	Fox Glacier	1.73	273	P	Pb	19 36 50.9	-0.3
ODZ	Otahua Downs	1.78	218	P	Pn	19 36 50.3	+0.3
THZ	Tophouse	1.96	16	P	Pn	19 36 51.9	-0.7
SYZ	Scrubby Hill	3.60	216	P	Pb	19 37 19.6	-3.4
WPRZ	Whakapapatarin	5.94	32	P	Pn	19 37 47.4	+0.1

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*IDC **23** 19:48:22.3±1.5, 36°.72N×141°.29E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.4/4, ML2.5/1, Error ellipse: s-maj=34.9km s-min=27.3km az=164.0*

*JMA **23** 19:48:24.5±0.1, 36°.81N×141°.30E, h39^{km}±1^{km}, M3.6*

ISC 23 19:48:24.3±1.8**, 36°.82N**±0°.04×**141°.32E**±0°.08**, h16^{km}**±9^{km}**, n19, σ0^{s}.72**/23**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.50	304	P	Pg	19 48 34.9	+0.6
ONAJ				S	Sg	19 48 42.3	+1.2
JHO	Hitachi	0.64	251	P	Pg	19 48 36.5	-0.3
JHO				S	Sg	19 48 45.3	+0.1
JFK	Kawauchi	0.65	327	P	Pg	19 48 37.1	0.0
JFK				S	Sg	19 48 45.9	+0.1
JFFD	Fukushimafurud	0.66	294	P	Pg	19 48 37.0	-0.3
JFFD				S	Sg	19 48 45.9	-0.2
JHYU	Hitachinakayam	0.76	231	P	Pb	19 48 38.3	-0.8
JHYU				S	Sb	19 48 48.5	-0.7
JFT	Otama	1.05	312	P	Pb	19 48 43.8	-0.3
JFT				S	Sb	19 48 57.1	-0.5
JMM	Marumori	1.13	338	P	Pn	19 48 44.1	-1.3
JMM				S	Sb	19 48 58.7	-1.1
JFY	Yanaizu	1.42	295	P	Pn	19 48 49.5	+0.1
JFY				S	Sn	19 49 07.3	-0.5
MJAR	Matsushiro Arr	2.51	265	Pn	Pn	19 49 04.2	-0.3
	1.0nm,0.3s,baz=338,slow=8.9,SNR=40						
MJAR				Sn	Sn	19 49 35.5	+0.6
	1.5nm,0.3s,baz=93,slow=31,SNR=6.3						
MAT	Matsushiro	2.52	265	P	Pn	19 49 05.4	+0.9
MAT				*e*S	Sn	19 49 35.3	+0.4
H11N2	WAKE ISLAND Hy	28.11	120	T	T	20 23 33.3	
	baz=313,slow=75,SNR=55						
H11N1	WAKE ISLAND Hy	28.11	120	T	T	20 23 39.0	
	baz=313,slow=75,SNR=62						
H11N3	WAKE ISLAND Hy	28.12	120	T	T	20 23 39.9	
	baz=313,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	28.81	122	T	T	20 24 30.9	
	baz=315,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.81	122	T	T	20 24 32.4	
	baz=315,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	28.82	122	T	T	20 24 32.2	
	baz=315,slow=76,SNR=24						
MKAR	Makanchi Array	44.17	302	P	P	19 56 32.5	+0.3
	0.6nm,0.7s,baz=88,slow=9.8,SNR=7.2						
ILAR	Eielson Array	49.72	32	P	P	19 57 16.6	+1.3
	0.7nm,0.8s,baz=262,slow=6.3,SNR=4.1						
WRA	Warramunga Arr	56.84	188	P	P	19 58 07.8	-0.3
	0.2nm,0.4s,baz=5.8,slow=7.3,SNR=4.9						

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*NEIC **23** 19:50:53.4±2.1, 24°.34S±0°.08×66°.7W±0°.1, h135^{km}±10^{km}, mb4.1/3, Md3.5(SJA), Error ellipse: s-maj=15.5km s-min=11.8km az=95.0*

*IDC **23** 19:50:55.9±2.4, 24°.23S×66°.96W, h158^{km}±28^{km}, mb3.4/2, mb1 3.4/6, mb1mx3.2/36, mbtmp3.9/6, Error ellipse: s-maj=35.7km s-min=26.5km az=156.0*

*GUC **23** 19:50:56.9±0.5, 24°.32S×67°.56W, h228^{km}±11^{km}, ML4.1*

ISC 23 19:50:56.1±0.7**, 24°.23S**±0°.05×**67°.28W**±0°.06**, h200^{km}, n50, σ1^{s}.59**/59**, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.69	107	*e*P	Pn	19 51 30.7	-1.0
LVC	Limon Verde	2.21	317	P	Pn	19 51 38.2	+0.9
	17nm,0.3s,baz=136,slow=11,SNR=249						
LVC				S	Sn	19 52 08.2	-1.0
	47nm,0.3s,baz=17,slow=21,SNR=61						
LVC	Limon Verde	2.21	317		Pn	19 51 37.8	+0.5
PB15	IPOC Station P	2.25	296		Pn	19 51 38.5	+0.9
GO02	Mina Guanaco	2.30	246	*e*P	Pn	19 51 38.3	+0.2
GO02				*e*S	Sn	19 52 09.9	-0.9
GO02				IAML		19 52 11.3	
	comp=E,625nm,0.3s						
GO02	Mina Guanaco	2.30	246		Pn	19 51 38.4	+0.2
PB06	IPOC Station P	2.60	305		Pn	19 51 41.6	+0.3
PB14	IPOC Station P	2.88	262	⇑*e*P	Pn	19 51 44.7	0.0
PB14				*e*S	Sn	19 52 20.3	-2.2
PB14	IPOC Station P	2.88	262		Pn	19 51 44.6	0.0
PB05	IPOC Station P	3.02	297	⇑*i*P	Pn	19 51 46.5	+0.4
PB05				*i* S	Sn	19 52 22.7	-2.4
PB05				IAML		19 52 26.5	
	comp=N,279nm,0.5s						
PB09	IPOC Station P	3.03	323	*e*P	Pn	19 51 47.9	+1.5
PB09				*e*S	Sn	19 52 25.6	+0.1
PB09				IAML		19 52 26.3	
	comp=N,371nm,0.5s						
PB09	IPOC Station P	3.03	323		Pn	19 51 47.8	+1.5
AC02	Maricunga	3.08	212	Pn	Pn	19 51 47.5	+0.2
PB10	IPOC Station P	3.08	283	*e*P	Pn	19 51 46.5	-0.3
PB10				*i* S	Sn	19 52 24.3	-2.0
PB10				IAML		19 52 29.3	
	comp=E,134nm,0.2s						
PB10	IPOC Station P	3.08	283		Pn	19 51 47.3	+0.5
PB04	IPOC Station P	3.25	305	*e*P	Pn	19 51 49.6	+0.7
PB04				*e*S	Sn	19 52 28.2	-2.0
PB04	IPOC Station P	3.25	305		Pn	19 51 49.5	+0.6
PB07	IPOC Station P	3.46	316	⇑*e*P	Pn	19 51 52.2	+0.6
PB07				*e*S	Sn	19 52 32.6	-2.3
PB07	IPOC Station P	3.46	316		Pn	19 51 52.0	+0.5
AC01	Pan de Azucar	3.56	237	⇑*i*P	Pn	19 51 51.7	-0.8
AC01				*e*S	Sn	19 52 33.3	-3.5
AC01	Pan de Azucar	3.56	237		Pn	19 51 51.7	-0.8
PB02	IPOC Station P	3.77	320	*e*P	Pn	19 51 55.5	+0.2
PB02				*e*S	Sn	19 52 39.4	-2.2
GO03	Copiap	4.28	218		Pn	19 51 59.5	-1.9
PATCX	Punta Patache	4.31	321	Pn	Pn	19 52 02.3	+0.3
PB08	IPOC Station P	4.43	337		Pn	19 52 05.0	+1.3
TA01	Diego Aracena	4.53	323		Pn	19 52 04.2	-0.4
AC04	Llanos de Chal	5.22	220	Pn	Pn	19 52 11.6	-1.8
AC05	El Transito	5.31	210	Pn	Pn	19 52 13.4	-1.2
PSGCX	Pisagua	5.32	330	Pn	Pn	19 52 13.7	-1.1
MNMC	Minye Minye	5.52	337		Pn	19 52 17.6	+0.1
LCO	Las Campanas	5.66	212	Pn	Pn	19 52 17.6	-1.7
PB16	IPOC Station P	6.23	340	Pn	Pn	19 52 27.5	+0.5
CO01	Juntas del Tor	6.25	203	Pn	Pn	19 52 26.7	-0.1
AP01	Chacalluta	6.50	333	Pn	Pn	19 52 33.4	+3.5
GO04	Tololo Observa	6.69	207	Pn	Pn	19 52 30.7	-1.9
CO03	El Pedregal	7.24	204	Pn	Pn	19 52 38.8	-0.8
CO02	Combarbal	7.69	205	Pn	Pn	19 52 43.3	-2.1
CPUP	Villa Florida	9.24	105	Pn	Pn	19 52 55.0	-11
ROC1	El Roble	9.31	200	Pn	Pn	19 53 06.1	-0.5
MT02	Curacav	9.61	200	Pn	Pn	19 53 09.7	-0.6
SIV	San Ignacio	10.06	37	P	Pn	19 53 14.5	-1.8
	comp=E,0.5nm,0.3s,baz=225,slow=16,SNR=7.1						
SIV				S	Sn	19 55 03.7	-5.1
	comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=1.4						
BI02	San Fabin de	12.86	195	Pn	Pn	19 53 52.0	+0.2
PLCA	Paso Flores	16.68	189	P	Pn	19 54 40.3	+1.7
	comp=E,0.1nm,0.3s,baz=17,slow=15,SNR=3.2						
PLCA	Paso Flores	16.68	189		Pn	19 54 40.7	+2.1
PLCA				IAmb	IAmb	19 54 41.1	
	comp=Z,6.5nm,1.4s						
BDFB	Brasilia	20.01	68	P	P	19 55 13.7	-0.1
	comp=Z,1.2nm,0.3s,baz=245,slow=12,SNR=8.6						
BDFB	Brasilia	20.01	68	P	P	19 55 13.2	-0.7
BDFB				IAmb	IAmb	19 55 15.9	
	comp=Z,7.0nm,0.9s						
TORD	Torodi Ar. Bea	76.89	69	P	P	20 02 28.5	+1.9
	comp=Z,0.6nm,0.7s,baz=256,slow=5.8,SNR=1.8						
BOSA	Boshof	80.85	117	P	P	20 02 51.1	+2.8
	comp=Z,0.9nm,0.6s,baz=333,slow=8.7,SNR=3.2						
BOSA	Boshof	80.85	117	IAmb	IAmb	20 03 13.1	
	comp=Z,14nm,1.5s						
MKAR	Makanchi Array	146.87	40	PKPbc	PKiKP	20 10 19.0	+1.8
	comp=Z,0.5nm,0.6s,baz=278,slow=4.3,SNR=6.9						

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*IDC **23** 20:15:30.2±0.7, 62°.86N×148°.53W, h76^{km}±5^{km}, mb3.6/13, mb1 3.8/18, mb1mx3.6/42, mbtmp3.8/18, MS3.2/4, Ms1 3.2/4, ms1mx2.8/34, Error ellipse: s-maj=12.5km s-min=8.8km az=106.0*

*NEIC **23** 20:15:30.7±1.5, 62°.85N±0°.04×148°.26W±0°.07, h74^{km}±3^{km}, Error ellipse: s-maj=5.7km s-min=4.6km az=166.0*

*AEIC **23** 20:15:30±1.2, 62°.81N±0°.03×148°.30W±0°.08, h71^{km}±3^{km}, ML3.9, mb4.1/14(NEIC), ML4.2/17(NEIC), Error ellipse: s-maj=5.6km s-min=3.7km az=76.0*

*ANF **23** 20:15:30.8±0.3, 62°.85N×148°.28W, h74^{km}±6^{km}, ML4.2/13, Error ellipse: s-maj=2.6km s-min=1.7km az=84.0*

ISC 23 20:15:30.6±0.5**, 62°.84N**±0°.03×**148°.28W**±0°.03**, h74^{km}**±4^{km}**, n177, σ1^{s}.04**/210**, mb4.0**/24**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAT1	Susitna Watana	0.12	264		Pn	20 15 41.1	-0.3
WAT1					Sn	20 15 49.4	0.0
WAT2	Susitna Watana	0.18	311		Pn	20 15 41.5	-0.3
WAT2					Sn	20 15 50.1	+0.1
WAT7	Susitna Watana	0.26	268		Pn	20 15 41.7	-0.4
WAT7					Sn	20 15 50.4	-0.1
WAT6	Susitna Watana	0.36	136		Pn	20 15 42.2	-0.6
WAT6					Sn	20 15 51.1	-0.7
DHY	Denali Highway	0.47	60		Pn	20 15 43.8	0.0
DHY					Sn	20 15 54.1	+0.7
RND	Reindeer	0.62	336		Pn	20 15 45.1	+0.1
RND					Sn	20 15 56.1	+0.4
HUR	Hurricane	0.64	283		Pn	20 15 44.8	-0.3
MCK	McKinley	0.94	342	P	Pn	20 15 49.0	+0.4
	baz=162,SNR=380						
MCK				S	Sn	20 16 02.8	+0.8
	baz=162						
MCK	McKinley	0.94	342		Pn	20 15 49.0	+0.4
MCK					Sn	20 16 03.2	+1.2
CUT	Chulitna	1.02	245	P	Pn	20 15 49.1	-0.4
	baz=65,SNR=76						
CUT				S	Sn	20 16 03.5	-0.1
	baz=65						
CUT	Chulitna	1.02	245		Pn	20 15 49.1	-0.4
SML	Sawmill	1.04	181		Pn	20 15 49.2	-0.6
SML					Sn	20 16 05.0	+0.9
TRF	Thorofare Moun	1.10	305		Pn	20 15 50.9	+0.2
TRF					Sn	20 16 06.6	+0.9
SCM	Sheep Creek Mo	1.11	156		Pn	20 15 50.3	-0.4
SCM					Sn	20 16 06.7	+1.0
GHO	Glory Hole Cre	1.11	196		Pn	20 15 50.2	-0.5
M24K	Tolsona, Glenn	1.23	126	P	Pn	20 15 52.6	+0.5
	baz=307,SNR=812						
M24K				S	Sn	20 16 09.5	+1.2
	baz=307						
M24K	Tolsona, Glenn	1.23	126		Pn	20 15 52.6	+0.5
PAX	Paxson	1.29	83		Pn	20 15 53.3	+0.3
PAX				Sn	Sn	20 16 09.1	-0.8
PMR	Palmer	1.32	198		Pn	20 15 52.9	-0.4
PMR					Sn	20 16 10.8	+0.5
KTH	Kantishna Hill	1.39	302		Pn	20 15 54.9	+0.6
KTH					Sn	20 16 13.2	+1.0
BWN	Browne	1.44	339		Pn	20 15 54.9	+0.1
KNK	Knik Glacier	1.44	183		Pn	20 15 54.8	0.0
PS11	TAPS Pump St11	1.51	119		Pn	20 15 56.5	+0.7
WRH	Wood River Hil	1.64	3		Pn	20 15 57.5	+0.1
HDA	Harding Lake	1.68	20	P	Pn	20 15 58.5	+0.4
	baz=201,SNR=158						
HDA				S	Sn	20 16 19.3	+0.5
	baz=201						
HDA				S	Sn	20 16 19.3	+0.5
	baz=201						
HDA	Harding Lake	1.68	20		Pn	20 15 58.5	+0.4
SKT	Skwentna	1.74	242		Pn	20 15 58.9	0.0
KLU	Klutina	1.75	140		Pn	20 15 58.7	-0.3
BPAW	Bear Paw Mtn.	1.75	317		Pn	20 15 58.9	-0.1
NEA2	Nenana	1.79	349	P	Pn	20 15 59.3	-0.2
	baz=169,SNR=90						
NEA2				S	Sn	20 16 20.7	-0.7
	baz=169						
NEA2	Nenana	1.79	349		Pn	20 15 59.4	-0.2
PPLA	Purkeypile	1.79	273		Pn	20 15 59.7	+0.1
RIDG	Independent Ri	1.79	58		Pn	20 16 00.5	+0.9
SUA	Susitna One	1.80	221		Pn	20 16 00.1	+0.3
CCB	Clear Creek Bu	1.82	6		Pn	20 16 00.0	+0.1
PS08	TAPS Pump Stn8	1.83	20		Pn	20 16 00.3	+0.4
RC01	Rabbit Creek A	1.89	202	P	Pn	20 16 00.8	0.0
	baz=21,SNR=96						
RC01				S	Sn	20 16 24.4	+0.6
	baz=21						
RC01	Rabbit Creek A	1.89	202		Pn	20 16 01.1	+0.3
JPK	Jack Peak	1.96	155		Pn	20 16 01.2	-0.6
VMT	TAPS TI Valdez	1.98	152		Pn	20 16 01.2	-0.8
PWL	Port Wells	1.99	181		Pn	20 16 01.8	-0.4
PS12	TAPS Pump St12	2.01	132		Pn	20 16 02.3	-0.2
IL31		2.03	17	Pn	Pn	20 16 03.0	+0.4
IL31				Sn	Sn	20 16 27.1	-0.1
ILAR	Eielson Array	2.03	17	P	Pn	20 16 02.6	-0.1
	24nm,0.3s,baz=199,slow=14,SNR=387						

ILAR				S	Sn	20 16 28.1	+0.9
	178nm,0.3s,baz=204,slow=36,SNR=19						
TCOL	CIGO, UAF Yank	2.05	5	P	Pn	20 16 03.2	+0.3
	baz=186,SNR=63						
TCOL				S	Sn	20 16 27.1	-0.4
	baz=186						
TCOL	CIGO, UAF Yank	2.05	5		Pn	20 16 03.2	+0.3
COLA	College	2.05	5		Pn	20 16 03.2	+0.3
GLI	Glacier Island	2.05	164		Pn	20 16 02.2	-0.7
DOT	Dot Lake	2.07	65	Pn	Pn	20 16 03.5	+0.2
DIV	Divide	2.09	144		Pn	20 16 02.5	-1.0
MENT	Mentasta	2.09	85		Pn	20 16 03.9	+0.4
MENT				IAML		20 16 40.6	
	comp=N,2µm,0.8s						
MENT				IAML		20 16 48.0	
	comp=E,2µm,0.6s						
CHUM	Lake Minchumin	2.10	302		Pn	20 16 03.6	+0.1
N25K	Chitina, Valde	2.12	124	P	Pn	20 16 04.0	-0.1
	baz=307,SNR=39						
N25K				S	Sn	20 16 29.7	+0.1
	baz=307						
N25K	Chitina, Valde	2.12	124		Pn	20 16 04.0	-0.1
MDM	Murphy Dome	2.12	1		Pn	20 16 04.4	+0.4
STLK	Strandline Lak	2.14	233		Pn	20 16 04.7	+0.5
SCRK	Sand Creek	2.24	58	P	Pn	20 16 05.7	+0.1
	baz=241,SNR=88						
SCRK				S	Sn	20 16 33.0	+0.6
	baz=241						
SCRK	Sand Creek	2.24	58		Pn	20 16 05.7	+0.1
FID	Port Fidalgo	2.27	157		Pn	20 16 05.4	-0.5
POKR	Poker Plat Res	2.31	9	P	Pn	20 16 07.0	+0.5
	baz=190,SNR=28						
POKR				S	Sn	20 16 33.6	-0.4
	baz=190						
POKR	Poker Plat Res	2.31	9		Pn	20 16 07.0	+0.5
SPCG	Spurr Capps Gl	2.35	230		Pn	20 16 08.0	+0.9
I23K	Minto, Yukon-K	2.36	349	P	Pn	20 16 07.5	+0.3
	baz=168,SNR=108						
I23K	Minto, Yukon-K	2.36	349		Pn	20 16 07.4	+0.3
SPCP	Crater Peak Br	2.41	231		Pn	20 16 08.7	+0.7
SPCN	Chakachatna No	2.45	230		Pn	20 16 09.9	+1.5
PS07	TAPS Pump Stn7	2.48	0		Pn	20 16 09.4	+0.7
SPCR	Spurr Chakacha	2.48	230		Pn	20 16 09.9	+1.1
SPBG	Spurr Blockage	2.50	232		Pn	20 16 09.8	+0.8
SLKM	Skilak Lake	2.52	202		Pn	20 16 09.3	0.0
GLB	Gilahina Butte	2.53	122		Pn	20 16 09.5	+0.1
BMRM	Bremner River	2.56	136		Pn	20 16 09.2	-0.7
HIN	Hinchinbrook I	2.60	160		Pn	20 16 09.7	-0.6
EYAK	Cordova Ski Ar	2.60	151		Pn	20 16 09.8	-0.6
VRDI	Verde Repeater	2.79	123		Pn	20 16 12.8	-0.3
SEW	Seward	2.81	192		Pn	20 16 13.2	+0.1
MCARA	McCarthy VSAT	2.87	118		Pn	20 16 14.6	+0.5
PRP	Porcupine Dome	2.94	23		Pn	20 16 15.9	+0.7
BC03		2.98	83		Pn	20 16 15.3	-0.1
PS06	TAPS Pump Stn6	3.09	349		Pn	20 16 17.5	+0.5
HMT	Hamilton	3.16	141		Pn	20 16 18.3	+0.2
NCT	North Crescent	3.18	226		Pn	20 16 19.1	+0.7
RSO	Redoubt South	3.20	224		Pn	20 16 19.2	+0.5
PTPK	Patty Peak	3.21	119		Pn	20 16 19.1	+0.3
CRQM	Cirque	3.21	128		Pn	20 16 18.5	-0.4
RED	Redoubt Volcan	3.24	223		Pn	20 16 19.3	+0.1
BERG	Berg Lake	3.29	136		Pn	20 16 19.0	-0.7
TGL	Tana Glacier	3.33	127		Pn	20 16 19.5	-0.8
BRSE	Bradley Lake S	3.33	202		Pn	20 16 20.2	-0.1
BRLK	Bradley Lake	3.33	203		Pn	20 16 20.6	+0.2
BALM	Baldy	3.34	120		Pn	20 16 20.0	-0.5
KHIT	Khitrov Hills	3.40	133		Pn	20 16 20.7	-0.6
KIAG	Kiagna River	3.40	122		Pn	20 16 20.6	-0.8
BVCY	Beaver Creek	3.45	94		Pn	20 16 22.7	+0.7
GRIN	Grindle Hills	3.50	135		Pn	20 16 22.3	-0.3
TTA	Tatalina	3.54	275	Pn	Pn	20 16 22.8	-0.4
TTA				IAML		20 17 03.4	
	comp=E,286nm,0.5s						
TTA				IAML		20 17 03.4	
	comp=N,261nm,0.7s						
TT01	Tatalina	3.55	274		Pn	20 16 22.9	-0.2
MID	Middleton Isla	3.55	164	Pn	Pn	20 16 24.3	+1.1
HOM	Homer	3.58	208	P	Pn	20 16 24.1	+0.4
	baz=26						
HOM				S	Sn	20 17 04.0	-0.8
	baz=26						
BARN	Barnard Glacie	3.60	117		Pn	20 16 24.6	+0.5
BARN	Barnard Glacie	3.60	117	IAML		20 17 33.7	
	comp=E,240nm,0.7s						
CNPM	China Poot	3.62	205		Pn	20 16 24.5	+0.2
YUK2	White River	3.63	104		Pn	20 16 25.3	+0.9
IVE	Iliamna Volcan	3.63	221		Pn	20 16 25.0	+0.5
ILS	Iliamna Low So	3.70	221		Pn	20 16 26.1	+0.8
EGAK	Eagle	3.71	55		Pn	20 16 25.4	0.0
EGAK				IAML		20 17 26.7	
	comp=E,352nm,0.8s						
EGAK				IAML		20 17 47.5	
	comp=E,386nm,0.8s						
KULT	Kultieth River	3.72	132		Pn	20 16 25.6	-0.1
SNH	Sunshine Point	3.73	133		Pn	20 16 25.8	0.0
GRNC	Granite Creek	3.75	121		Pn	20 16 25.5	-0.7
CTGM	Chitina Glacie	3.79	117		Pn	20 16 27.0	+0.4
YUK3	Moose Creek	3.81	103		Pn	20 16 27.9	+0.9
SVW2	Sparrevohn	3.87	246	Pn	Pn	20 16 28.3	+0.7
FYU	Fort Yukon	3.96	18		Pn	20 16 29.9	+1.1
OPT	Oil Point	4.00	219		Pn	20 16 30.0	+0.7
LOGN	Logan Glacier	4.00	117		Pn	20 16 29.7	+0.1
PS05	TAPS Pump Stn5	4.11	347		Pn	20 16 32.4	+1.5
TABL	Table Mountain	4.17	122		Pn	20 16 32.5	+0.6
DAWY	Dawson	4.17	69	Pn	Pn	20 16 32.0	+0.2
COLD	Coldfoot	4.48	350	P	Pn	20 16 36.5	+0.7
	baz=169,SNR=88						
COLD				S	Sn	20 17 25.4	-1.2
	baz=169						
COLD	Coldfoot	4.48	350	Pn	Pn	20 16 36.6	+0.8
PCA	Pinnacle	4.73	122		Pn	20 16 39.3	-0.2
YUK4	Talbot Arm	4.77	104		Pn	20 16 40.6	+0.5
BM03	Burnt Mountain	4.85	17		Pn	20 16 41.9	+0.9
YUK6	Outpost Mounta	5.06	108		Pn	20 16 43.7	-0.4
BCPM	Bancas Point	5.07	121		Pn	20 16 44.5	+0.5
BCPM	Bancas Point	5.07	121	IAML		20 17 42.6	
	comp=N,173nm,0.9s						
BCPM				IAML		20 17 42.9	
	comp=E,190nm,0.3s						
PNL	Peninsula	5.34	123		Pn	20 16 47.7	0.0
HYT	Haines Junctio	5.49	107	Pn	Pn	20 16 50.4	+0.6
KDAK	Kodiak Island	5.51	205	P	Pn	20 16 48.1	-1.8
	comp=E,1.1nm,0.3s,baz=38,slow=10,SNR=38						
KDAK				S	Sn	20 17 44.6	-7.2
	comp=E,14nm,0.3s,baz=148,slow=22,SNR=19						
KDAK	Kodiak Island	5.51	205	Pn	Pn	20 16 47.8	-2.2
PS04	TAPS Pump Stn4	5.62	356		Pn	20 16 52.8	+1.3
KABU	Katmai Buttres	5.74	220		Pn	20 16 53.1	-0.1
OHAK	Old Harbor	6.17	206	Pn	Pn	20 16 56.7	-2.2
WHY	Whitehorse	6.73	103		Pn	20 17 06.2	-0.4
SKAG	Skagway	7.12	113	Pn	Pn	20 17 11.5	-0.5
ANM	Nome	7.78	290		Pn	20 17 22.0	+1.1
BESE	Bessie Mountai	7.84	117	Pn	Pn	20 17 20.7	-1.2
INK	Inuvik	8.20	42	P	Pn	20 17 26.7	+0.2
	comp=E,0.6nm,0.3s,baz=228,slow=16,SNR=16						
INK				S	Sn	20 18 53.5	-3.8
	comp=E,0.6nm,0.3s,baz=302,slow=16,SNR=3.1						
INK				LR	LR	20 20 24.4	
	comp=E,67nm,21.5s,baz=138,slow=36						
INK	Inuvik	8.20	42		Pn	20 17 26.2	-0.3
CHGN	Chignik	8.33	223	Pn	Pn	20 17 27.9	-0.4
SIT	Sitka	8.70	126	Pn	Pn	20 17 32.8	-0.7
SDPT	Sand Point	9.77	225	Pn	Pn	20 17 49.1	+1.0
DLBC	Dease Lake	9.98	108	P	Pn	20 17 50.9	-0.1
	comp=E,0.2nm,0.3s,baz=295,slow=11,SNR=3.2						
DLBC				LR	LR	20 22 15.0	
	comp=E,108nm,18.8s,baz=180,slow=40						
DLBC	Dease Lake	9.98	108	Pn	Pn	20 17 51.5	+0.6
GAMB	Gambell	10.56	285	Pn	Pn	20 17 59.7	+1.0
YKA	Yellowknife Ar	15.37	76	P	Pn	20 19 02.9	+0.1
	comp=E,0.4nm,0.3s,baz=286,slow=9.7,SNR=20						
YKA				ScP	ScP	20 27 28.8	-0.3
	comp=E,0.1nm,0.3s,baz=312,slow=0.9,SNR=5.3						
ADK	Adak	18.66	247	P	Pn	20 19 44.5	+1.0
NLWA	Neilton Lookou	20.64	127	P	P	20 20 04.8	+0.9
LON	Longmire	21.94	125	P	P	20 20 20.4	+2.6
LON				IAmb	IAmb	20 20 20.5	
	comp=Z,5.4nm,0.9s						
LTY	Liberty	21.95	122	P	P	20 20 17.0	-0.9
LTY				IAmb	IAmb	20 20 18.3	
	comp=Z,16nm,1.6s						
NEW	Newport	22.57	116	LR	LR	20 29 15.8	
	comp=Z,67nm,21.9s,baz=227,slow=36						
H04A	Detroit Lake	23.56	128	P	P	20 20 34.6	+0.4
H04A				IAmb	IAmb	20 20 55.6	
	comp=Z,5.1nm,0.9s						
EUNU	Eureka	24.13	22	P	P	20 20 39.0	0.0
JTMT	Jette	24.16	113	P	P	20 20 40.3	+0.6
JTMT				IAmb	IAmb	20 20 42.5	
	comp=Z,5.6nm,0.9s						
F10A	Beach Ranch, E	24.37	119	P	P	20 20 41.7	+0.2
PINE	Pine Mountain	24.78	127	P	P	20 20 46.7	+1.2
PINE				IAmb	IAmb	20 20 49.7	
	comp=Z,5.8nm,0.9s						
I07A	Izee	25.06	125	P	P	20 20 50.4	+2.5
I07A				IAmb	IAmb	20 21 18.2	
	comp=Z,6.2nm,1.1s						
K05A	Summer Lake	25.73	129	P	P	20 20 55.3	+1.3
K05A				IAmb	IAmb	20 21 22.9	
	comp=Z,16nm,1.4s						
FCC	Fort Churchill	26.08	74	P	P	20 20 56.9	+0.2
SEY	Seymchan	26.22	297	P	P	20 20 56.5	-1.4
	comp=Z,0.9nm,0.8s,baz=65,slow=14,SNR=6.3						
JCC	Jacoby Creek,	26.35	135	P	P	20 21 01.9	+2.5
ELK	Elko	29.55	123	P	P	20 21 29.2	+1.0
	comp=Z,1.0nm,0.7s,baz=246,slow=7.9,SNR=3.6						
PDAR	Pinedale Array	30.15	113	P	P	20 21 33.1	-0.3
	comp=Z,1.9nm,0.9s,baz=331,slow=5.8,SNR=7.8						
NVAR	Mina Array Bea	30.44	129	P	P	20 21 37.0	+0.9
	comp=Z,1.1nm,0.8s,baz=321,slow=8.2,SNR=4.3						
ULM	Lac du Bonnet	30.58	90	P	P	20 21 36.7	-0.2
	comp=Z,3.1nm,0.7s,baz=273,slow=12,SNR=3.7						
TXAR	Lajitas Array	44.09	118	P	P	20 23 31.8	+0.6
	comp=Z,1.2nm,0.7s,baz=330,slow=5.9,SNR=15						
TXAR				sP	sP	20 24 01.4	+3.3
	comp=Z,0.8nm,0.8s,baz=345,slow=9.1,SNR=4.0						
TXAR				PcP	PP	20 25 15.1	+0.1
	comp=Z,0.3nm,0.5s,baz=343,slow=3.9,SNR=3.4						
TXAR				LR	LR	20 45 21.1	
	comp=Z,61nm,19.6s,baz=0.0,slow=40						
ARCES	ARCESS Array B	47.83	3	P	P	20 23 59.4	-0.7
	comp=Z,2.1nm,0.8s,baz=357,slow=9.0,SNR=4.2						
KSRS	Korea Array	54.73	284	pP	pP	20 25 10.8	-0.2
	comp=Z,2.2nm,0.7s,baz=29,slow=7.2,SNR=7.4						
SONM	Songino Array	54.91	307	P	P	20 24 53.8	+0.4
	comp=Z,0.7nm,1.0s,baz=39,slow=7.4,SNR=2.4						
SONM				pP	pP	20 25 12.7	+0.2
	comp=Z,1.6nm,0.7s,baz=19,slow=6.0,SNR=6.9						
FINES	FINESS Array B	55.96	3	P	P	20 24 59.3	-1.1
	comp=Z,1.7nm,0.6s,baz=4.8,slow=9.4,SNR=8.8						
FINES				pP	pP	20 25 18.2	-1.3
	comp=Z,0.7nm,0.6s,baz=337,slow=4.4,SNR=1.3						
ZALV	Zalesovo Beam	56.37	325	P	P	20 25 01.3	-2.2
	comp=Z,0.4nm,0.6s,baz=32,slow=12,SNR=2.4						
ZALV				pP	pP	20 25 21.4	-1.3
	comp=Z,1.1nm,0.7s,baz=33,slow=5.7,SNR=4.3						
HHC	Hu-ho-hao-te	58.83	299	*e*P	P	20 25 25.6	+4.4
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
MKAR	Makanchi Array	63.55	324	P	P	20 25 50.8	-2.0
	comp=Z,0.3nm,0.5s,baz=42,slow=6.9,SNR=7.3						
MKAR				pP	pP	20 26 10.2	-2.2
	comp=Z,1.1nm,0.7s,baz=42,slow=6.8,SNR=7.9						
GTA	Gaotai	64.58	307	*e*P	P	20 26 11.3	+11
GTA				pP	pP	20 26 16.0	-3.4
GTA				sP	sP	20 26 19.0	-8.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.7s						
AKASG	Malin Array Be	66.78	2	P	P	20 26 12.2	-1.5
	comp=Z,0.6nm,0.5s,baz=6.3,slow=6.0,SNR=2.0						
AKASG				pP	pP	20 26 32.1	-1.2
	comp=Z,0.9nm,0.5s,baz=357,slow=7.5,SNR=2.0						
ESDC	Sonseca Array	73.90	28	P	P	20 26 57.7	+0.4
	comp=Z,0.9nm,1.0s,baz=340,slow=8.2,SNR=3.4						
ESDC				pP	pP	20 27 17.6	+0.4
	comp=Z,0.9nm,0.8s,baz=345,slow=4.3,SNR=5.0						
CMAR	Chiang Mai Arr	83.63	298	pP	pP	20 28 09.4	-1.7
	comp=Z,0.6nm,0.5s,baz=10,slow=5.6,SNR=3.9						

IDC 23 20:23:20.3±44.0, 52°.75S×139°.94E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.6/26, mbtmp3.5/3, MS3.5/1, Ms1 3.4/1, ms1mx3.0/13, Error ellipse: s-maj=814.5km s-min=167.7km az=141.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	20.90	4	P	P	20 28 03.8	-0.2
	1.5nm,0.7s,baz=157,slow=14,SNR=4.7						
STKA				LR	LR	20 34 59.2	
	comp=Z,130nm,18.3s,baz=200,slow=33						
H01W1	Cape Leeuwin H	25.56	304	T	T	20 54 38.2	
	baz=139,slow=75,SNR=26						
H01W2	Cape Leeuwin H	25.57	304	T	T	20 54 38.6	
	baz=139,slow=75,SNR=33						
H01W3	Cape Leeuwin H	25.58	304	T	T	20 54 39.4	
	baz=139,slow=75,SNR=30						
ASAR	Alice Springs	29.40	349	P	P	20 29 25.5	+0.3
	0.3nm,0.6s,baz=169,slow=9.1,SNR=4.1						
WRA	Warramunga Arr	33.03	350	P	P	20 29 57.0	-0.2
	0.8nm,0.9s,baz=179,slow=8.2,SNR=2.3						

*IDC **23** 20:28:31.3±0.7, 30°.16S×177°.71W, h0^{km}, mb4.4/10, mb1 4.5/11, mb1mx4.3/24, mbtmp4.3/11, ML4.0/1, MS3.8/2, Ms1 3.7/2, ms1mx3.2/27, Error ellipse: s-maj=21.2km s-min=17.9km az=87.0*

*NEIC **23** 20:28:36±1.4, 30°.17S±0°.05×177°.9W±0°.1, h34^{km}±5^{km}, mb4.6/23, Error ellipse: s-maj=17.1km s-min=6.7km az=96.0*

ISC 23 20:28:36.6±0.6, 30°.24S±0°.05×177°.84W±0°.10, h35^{km}, n81, σ1^{s}.90/70, mb4.5/17, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.99	356	Pn	Pn	20 28 52.6	-1.4
	585nm,0.3s,baz=75,slow=9.9,SNR=21						
RAO				Sn	Sn	20 29 03.0	-3.6
	2µm,0.3s,baz=103,slow=23,SNR=27						
RAO	Raoul Island	0.99	356	Sn	Sn	20 29 04.7	-1.9
OUZ	Omahuta	8.75	233	Pn	Pn	20 30 41.3	+0.6
URZ	Urewera	9.02	206	Pn	Pn	20 30 41.7	-2.6
	0.8nm,0.3s,baz=271,slow=5.9,SNR=7.1						
URZ				Sn	Sn	20 32 24.1	-0.6
	5.3nm,0.3s,baz=194,slow=20,SNR=23						
URZ	Urewera	9.02	206	Pn	Pn	20 30 42.0	-2.3
URZ				Sn	Sn	20 32 24.1	-0.6
RIGZ	Rimuhau	9.19	202	P	Sn	20 32 28.5	-0.4
PRGZ	Paritu Road	9.35	201	P	Sn	20 32 32.2	-0.5
SNGZ	Shannon Statio	9.40	204	P	Sn	20 32 34.2	+0.2
MHGZ	Mahia Peninsul	9.55	200	P	Sn	20 32 31.6	-6.1
RAHZ	Arahi	9.61	204	P	Sn	20 32 40.8	+1.7
MTHZ	Maungataniwha	9.64	206	P	Sn	20 32 40.5	+0.5
WHHZ	Waihua	9.70	203	P	Sn	20 32 41.9	+0.5
NMHZ	Naumai	9.87	205	P	Sn	20 32 46.3	+0.7
BKZ	Black Stump Fm	10.05	206	Pn	Pn	20 30 55.4	-3.0
BKZ	Black Stump Fm	10.05	206	P	Sn	20 32 47.6	-2.4
KWHZ	Kaweka Forest	10.30	206	P	Sn	20 32 54.9	-1.2
TMVZ	Te Maari	10.32	209	P	Sn	20 32 56.0	-0.8
ETVZ	East Tongariro	10.34	209	P	Sn	20 32 55.1	-2.0
BFZ	Birch Farm	11.48	203	Pn	Pn	20 31 13.2	-4.8
MSWZ	Moikau Station	12.47	205	Pn	Pn	20 31 27.4	-4.2
NNZ	Nelson	13.06	211	Pn	Pn	20 31 36.0	-3.6
KHZ	Kahutara	13.99	207	Pn	Pn	20 31 46.9	-5.3
RPZ	Rata Peaks	16.09	210	Pn	Pn	20 32 19.3	-0.8
	0.5nm,0.3s,baz=45,slow=16,SNR=1.9						
RPZ				Sn	Sn	20 35 02.1	-15
	0.5nm,0.3s,baz=108,slow=18,SNR=1.6						
DZM	Mont Dzumac	16.27	296	Pn	P	20 32 26.1	+0.8
	0.1nm,0.3s,baz=115,slow=18,SNR=4.8						
DZM				LR	LR	20 37 35.5	
	comp=Z,331nm,18.0s,baz=80,slow=33						
DZM	Mont Dzumac	16.27	296	P	Pn	20 32 22.6	-0.1
FOZ	Fox Glacier	16.51	213	Pn	Pn	20 32 25.5	+0.1
ODZ	Otahua Downs	17.34	208		P	20 32 36.7	-0.1
ODZ				IAmb	IAmb	20 32 39.6	
	comp=Z,24nm,1.3s						
ARMA	Armidale	26.31	262	P	P	20 34 10.3	+1.1
ARMA				IAmb	IAmb	20 34 56.5	
	comp=Z,22nm,1.4s						
EIDS	Eidsvold	27.86	272	P	P	20 34 23.4	+0.3
EIDS				IAmb	IAmb	20 34 33.6	
	comp=Z,15nm,1.3s						
CAN	Canberra	28.25	251	P	P	20 34 27.6	+1.0
CTA	Charters Tower	33.91	279	P	P	20 35 18.5	+2.1
	comp=Z,7.9nm,0.8s,baz=108,slow=12,SNR=10						
CTAO	Charters Tower	33.91	279	P	P	20 35 16.7	+0.2
CTAO				IAmb	IAmb	20 35 23.6	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	34.65	257	P	P	20 35 25.0	+2.3
	comp=Z,3.0nm,0.5s,baz=103,slow=13,SNR=12						
STKA				LR	LR	20 47 14.9	
	comp=Z,129nm,18.9s,baz=131,slow=32						
STKA	Stephens Creek	34.65	257	P	P	20 35 24.6	+1.9
BBOO	Buckleboo	39.14	254	P	P	20 36 00.9	0.0
AS31	Alice Springs	43.25	267	P	P	20 36 34.8	-0.1
ASAR	Alice Springs	43.25	267	P	P	20 36 34.5	-0.4
	comp=Z,2.6nm,0.6s,baz=104,slow=7.3,SNR=43						
WR0	Warramunga Arr	44.05	272	P	P	20 36 40.8	-0.5
WR0				IAmb	IAmb	20 36 42.9	
	comp=Z,7.2nm,0.8s						
WC3	Warramunga Arr	44.19	272	P	P	20 36 41.8	-0.6
WC3				IAmb	IAmb	20 36 44.8	
	comp=Z,11nm,0.8s						
WB2	Warramunga Arr	44.22	272	P	P	20 36 42.4	-0.2
WB2				IAmb	IAmb	20 36 44.7	
	comp=Z,9.1nm,0.7s						
WRAB	Tennant Creek	44.22	272	P	P	20 36 42.3	-0.4
WRAB				IAmb	IAmb	20 36 44.6	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	44.23	272	P	P	20 36 42.2	-0.5
	comp=Z,8.5nm,0.7s,baz=110,slow=7.9,SNR=39						
WB0	Warramunga Arr	44.25	272	P	P	20 36 42.3	-0.6
WB0				IAmb	IAmb	20 36 45.2	
	comp=Z,10nm,0.7s						
FORT	Forrest	46.22	255	P	P	20 36 57.6	-0.8
WAKE	Wake Island	51.45	341	P	P	20 37 37.6	-0.8
FITZ	Fitzroy Crossi	52.49	270	P	P	20 37 47.5	+1.1
	comp=Z,3.0nm,0.7s,baz=135,slow=4.3,SNR=3.5						
QSPA	South Pole Qui	59.87	180	P	P	20 38 40.9	+2.3
	comp=Z,5.0nm,0.6s,baz=28,slow=2.1,SNR=6.5						
QSPA	South Pole Qui	59.87	180	P	P	20 38 38.9	+0.3
BELA	Belgrano 2	69.93	172	P	P	20 39 44.0	+0.3
MYLDM	Lahad Datu	70.27	289	P	P	20 39 44.8	-1.9
SNAA	Sanae	78.31	178	P	P	20 40 33.8	+1.1
SNAA	Sanae	78.31	178	P	P	20 40 32.9	+0.2
	comp=Z,2.2nm,1.0s,baz=281,slow=5.2,SNR=3.3						
SNAA	Sanae	78.31	178	P	P	20 40 33.3	+0.5
SNAA				IAmb	IAmb	20 41 01.5	
	comp=Z,13nm,1.6s						
VNA3	Neumayer Olymp	78.46	176	P	P	20 40 34.5	+1.0
VNA2	Neumayer--Watz	78.89	177	P	P	20 40 37.3	+1.4
VNA1	Neumayer--Stat	79.12	176	P	P	20 40 38.6	+1.6
H03S2	Juan Fernandez	80.44	124	T	T	22 10 09.8	
	baz=238,slow=74,SNR=18						
H03S1	Juan Fernandez	80.45	124	T	T	22 10 12.1	
	baz=238,slow=74,SNR=17						
H03S3	Juan Fernandez	80.46	123	T	T	22 09 57.8	
	baz=238,slow=74,SNR=18						
H03N3	Juan Fernandez	80.63	123	T	T	22 10 12.1	
	baz=241,slow=72,SNR=15						
H03N2	Juan Fernandez	80.63	123	T	T	22 10 10.9	
	baz=241,slow=72,SNR=14						
H03N1	Juan Fernandez	80.65	123	T	T	22 10 11.4	
	baz=241,slow=72,SNR=18						
PLCA	Paso Flores	82.52	133	P	P	20 40 56.0	+0.1
	comp=Z,1.3nm,0.8s,baz=265,slow=7.3,SNR=2.9						
PLCA	Paso Flores	82.52	133	IAmb	IAmb	20 41 03.6	
	comp=Z,3.4nm,1.1s						
PETK	Petropavlovsk-	85.69	346	P	P	20 41 12.4	+1.1
	comp=Z,3.1nm,0.8s,baz=151,slow=6.5,SNR=2.4						
NVAR	Mina Array Bea	88.03	43	P	P	20 41 24.0	+0.6
	comp=Z,1.2nm,0.8s,baz=226,slow=8.5,SNR=6.2						
MKAR	Makanchi Array	117.77	310	PKP	PKPdf	20 47 17.2	-1.8
	comp=Z,0.4nm,0.6s,baz=79,slow=0.6,SNR=4.4						
H10S2	ASCENSION HYDR	137.81	155	T	T	23 21 47.3	
	baz=53,slow=74,SNR=12						
H10S3	ASCENSION HYDR	137.81	155	T	T	23 21 44.9	
	baz=167,slow=74,SNR=12						
H10N3	ASCENSION HYDR	138.90	154	T	T	23 23 50.1	
	baz=204						
H10N1	ASCENSION HYDR	138.90	154	T	T	23 24 27.7	
	baz=204,slow=74						
H10N2	ASCENSION HYDR	138.91	154	T	T	23 23 57.0	
	baz=204,slow=74						
FINES	FINESS Array B	145.04	340	PKPbc	PKPbc	20 48 07.3	-1.6
	comp=Z,7.7nm,0.7s,baz=54,slow=3.2,SNR=21						
NB2	NORSAR Subarra	148.61	352	PKP	PKPbc	20 48 17.8	-1.5
	comp=Z,17nm,1.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	148.61	352	PKPbc	PKPbc	20 48 18.6	-0.7
	comp=Z,1.4nm,0.7s,baz=17,slow=4.2,SNR=4.8						
AKASG	Malin Array Be	151.25	323	PKPbc	PKPbc	20 48 24.6	-1.3
	comp=Z,2.5nm,0.5s,baz=52,slow=3.1,SNR=10.0						
BRTR	Keskin Array B	152.64	299	PKPbc	PKPbc	20 48 28.8	-0.9
	comp=Z,2.0nm,1.0s,baz=48,slow=2.1,SNR=2.2						
CLL	Collm	157.45	342	*e*PKPab	PKPab	20 49 02.0	+1.7
KHC	Kasperske Hory	159.23	338	*e*P	PKPdf	20 48 36.5	+5.6
KHC	Kasperske Hory	159.23	338	*e*PKPDF	PKPdf	20 48 36.5	+5.6
TORD	Torodi Ar. Bea	162.99	178	PKPab	PKPab	20 49 25.6	+0.4
	comp=Z,1.4nm,0.8s,baz=154,slow=3.5,SNR=2.4						

NOU 23 20:29:05.2, 32°.62S×178°.52W, h0^{km}, mb4.3, South of Kermadec Islands, South of Kermadec Islands

*IDC **23** 20:35:31.3±0.4, 29°.55S×60°.81E, h0^{km}, mb4.5/24, mb1 4.6/25, mb1mx4.5/36, mbtmp4.5/25, ML4.5/1, MS4.1/27, Ms1 4.1/27, ms1mx4.0/48, Error ellipse: s-maj=15.1km s-min=13.3km az=36.0*

*MOS **23** 20:35:31.3±1.1, 29°.47S×60°.83E, h10^{km}, mb4.8/27, Error ellipse: s-maj=12.0km s-min=6.1km az=95.6*

*BJI **23** 20:35:32.7±0.0, 29°.00S×60°.61E, h6^{km}, mB5.2/23, mb4.7/42, Ms5.0/4, Ms7 4.7/6*

*NEIC **23** 20:35:33.5±1.4, 29°.46S±0°.09×60°.8E±0°.1, h15^{km}±1^{km}, mb5.0/56, Error ellipse: s-maj=15.0km s-min=12.4km az=56.0*

*GCMT **23** 20:35:33.5±0.3, 29°.43S±0°.01×60°.67E±0°.02, h14^{km}±1^{km}, MW5.0/104, Moment Tensor Solution. s32,c34; s104,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.13±.15; $M_{\theta\theta}$2.61±.13; $M_{\phi\phi}$-1.48±.11; $M_{r\theta}$0.70±.21; $M_{\theta\phi}$2.23±.09; $M_{\phi r}$-1.15±.27; Best double couple: $M_0$3.44300×10^{16} NP1:ϕ_s26.00000°,δ66.00000°, λ-158.00000°. NP2:ϕ_s287.00000°,δ70.00000°, λ-25.00000°. Principal axes: T 3.5980, Plg2.0000°, Azm337.0000°; N -0.3090, Plg58.0000°, Azm71.0000°; P -3.2890, Plg32.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 20:35:33.1±0.3, 29°.43S±0°.06×60°.73E±0°.07, h10^{km}, n343, σ1^{s}.44/332, mb4.9/104, MS4.2/29, 6C-15D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.38	330		Pn	20 37 45.6	-2.9
ABPO	Ambohimpanom	16.08	307	P	P	20 39 23.0	+0.1
ABPO				pmax	pmax		
	comp=Z,16nm,0.8s						
ABPO	Ambohimpanom	16.08	307	P	P	20 39 23.0	+0.1
OPO	Ambohidratompo	16.41	308	Pn	Pn	20 39 24.1	+0.3
	comp=Z,1.8nm,0.3s,baz=133,slow=12,SNR=9.9						
OPO				Sn	Sn	20 42 12.8	-13
	comp=Z,1.2nm,0.3s,baz=132,slow=15,SNR=2.8						
PAF	Port-aux-Franc	21.17	163	P	P	20 40 19.0	+0.6
PAF	Port-aux-Franc	21.17	163	P	P	20 40 19.0	+0.6
H08S1	Diego Carcia H	24.33	29	T	T	21 06 14.8	
	baz=205,slow=76,SNR=6.0						
H08S2	Diego Garcia H	24.34	29	T	T	21 06 15.6	
	baz=205,slow=76,SNR=3.5						
H08S3	Diego Garcia H	24.35	29	T	T	21 06 17.7	
	baz=205,slow=76,SNR=44						
DGAR	Diego Garcia	24.53	29	P	P	20 40 52.2	-0.8
DGAR				pmax	pmax		
	comp=Z,261nm,1.3s						
DGAR	Diego Garcia	24.53	29	P	P	20 40 52.2	-0.8
BOSA	Boshof	30.95	263	P	P	20 41 49.7	-1.0
	comp=Z,8.8nm,0.8s,baz=111,slow=8.1,SNR=17						
BOSA				LR	LR	20 52 24.9	
	comp=Z,540nm,19.4s,baz=104,slow=33						
BOSA	Boshof	30.95	263	P	P	20 41 49.4	-1.2
BOSA				pmax	pmax		
	comp=Z,93nm,2.0s						
BOSA	Boshof	30.95	263	P	P	20 41 49.4	-1.2
LBTB	Lobatse	31.47	270	P	P	20 41 54.6	-0.6
LBTB				pmax	pmax		
	comp=Z,16nm,0.9s						
LBTB	Lobatse	31.47	270	P	P	20 41 54.6	-0.6

LBTB				IAmb	IAmb	20 41 55.2	
	comp=Z,16nm,0.9s						
LSZ	Lusaka	33.09	288	P	P	20 42 09.5	0.0
LSZ				pmax	pmax		
	comp=Z,33nm,1.6s						
LSZ	Lusaka	33.09	288	P	P	20 42 09.4	0.0
LSZ				IAmb	IAmb	20 42 11.1	
	comp=Z,33nm,1.6s						
SUR	Sutherland	34.24	255	P	P	20 42 18.4	-1.0
	comp=Z,12nm,1.1s,baz=67,slow=12,SNR=3.8						
SUR	Sutherland	34.24	255	P	P	20 42 18.9	-0.5
KMBO	Kilima Mbogo	35.95	317	P	P	20 42 35.2	+0.9
	comp=Z,1.8nm,0.8s,baz=112,slow=8.8,SNR=2.9						
KMBO				LR	LR	20 54 39.9	
	comp=Z,409nm,19.4s,baz=102,slow=32						
MAW	Mawson	38.22	179	LR	LR	20 55 35.4	
	comp=Z,467nm,18.6s,baz=357,slow=32						
TSUM	Tsumeb	40.41	275	P	P	20 43 12.9	+1.0
	comp=Z,17nm,1.0s,baz=111,slow=7.1,SNR=18						
TSUM	Tsumeb	40.41	275	P	P	20 43 12.3	+0.4
TSUM				IAmb	IAmb	20 43 13.7	
	comp=Z,52nm,1.4s						
MBAR	Mbarara	40.48	310	P	P	20 43 14.8	+2.3
	comp=Z,2.4nm,0.3s,baz=186,slow=8.1,SNR=3.7						
MBAR	Mbarara	40.48	310⇑	eP	P	20 43 15.0	+2.5
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MBAR	Mbarara	40.48	310	P	P	20 43 14.2	+1.7
SYO	Syowa Base	41.48	191⇓	eP	P	20 43 20.4	+0.6
H01W2	Cape Leeuwin H	45.10	111	T	T	21 32 10.8	
	baz=262,slow=75,SNR=29						
H01W3	Cape Leeuwin H	45.10	111	T	T	21 32 10.7	
	baz=262,slow=75,SNR=32						
H01W1	Cape Leeuwin H	45.12	111	T	T	21 32 11.5	
	baz=262,slow=75,SNR=32						
HYB	Hyderabad	49.65	23	i P	P	20 44 25.0	-0.1
HYB				e		20 44 34.0	
UGM	Wanagama	51.34	76	P	P	20 44 35.6	-2.5
SNAA	Sanae	54.08	200	P	P	20 44 57.0	-0.8
SNAA	Sanae	54.08	200	P	P	20 44 56.9	-0.8
	comp=Z,5.0nm,0.9s,baz=82,slow=5.9,SNR=13						
SNAA	Sanae	54.08	200⇓	eP	P	20 44 56.6	-1.1
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SNAA	Sanae	54.08	200	P	P	20 44 56.9	-0.8
JAGI	Jajag, Banyuwa	54.15	79	P	P	20 44 59.3	+0.5
UOSS	Minazif	54.24	355	P	P	20 44 57.9	-1.3
RAYN	Ar Rayn	54.65	343	P	P	20 45 01.9	-0.3
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RAYN	Ar Rayn	54.65	343	P	P	20 45 01.9	-0.3
VNA2	Neumayer--Watz	55.35	202	P	P	20 45 06.3	-0.5
	baz=86,slow=7.8						
VNA3	Neumayer Olymp	56.13	202	P	P	20 45 11.6	-0.8
FORT	Forrest	57.44	110	P	P	20 45 20.1	-2.2
FORT				IAmb	IAmb	20 45 56.8	
	comp=Z,18nm,0.9s						
FITZ	Fitzroy Crossi	59.82	95	P	P	20 45 38.3	-0.8
FITZ				IAmb	IAmb	20 46 09.3	
	comp=Z,22nm,1.2s						
CM31	Chiang Mai Arr	60.22	43	P	P	20 45 41.7	+0.1
CMAR	Chiang Mai Arr	60.22	43	P	P	20 45 42.0	+0.4
	comp=Z,2.9nm,0.8s,baz=230,slow=7.4,SNR=22						
CHTO	Chiang Mai	60.49	42	P	P	20 45 45.1	+1.6
CHTO				pmax	pmax		
	comp=Z,22nm,1.8s						
CHTO	Chiang Mai	60.49	42	P	P	20 45 45.1	+1.6
CHTO				IAmb	IAmb	20 46 05.7	
	comp=Z,22nm,1.8s						
QSPA	South Pole Qui	60.73	180	P	P	20 45 43.7	-1.0
	comp=Z,28nm,1.1s,baz=272,slow=4.0,SNR=19						
QSPA	South Pole Qui	60.73	180	P	P	20 45 44.4	-0.3
QSPA				IAmb	IAmb	20 45 55.0	
	comp=Z,21nm,0.9s						
BELA	Belgrano 2	62.57	194	P	P	20 45 55.5	-1.3
HRA	Herat	63.49	1	P	P	20 46 02.5	-1.1
NIL	Nilore	63.85	12	P	P	20 46 04.8	-0.9
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	Nilore	63.85	12	P	P	20 46 04.8	-0.9
NIL				IAmb	IAmb	20 46 15.1	
	comp=Z,6.6nm,0.8s						
VNDA	Vanda	63.86	166	P	P	20 46 04.2	-1.2
	comp=Z,6.0nm,1.0s,baz=278,slow=6.4,SNR=12						
VNDA				LR	LR	21 12 14.4	
	comp=Z,495nm,18.0s,baz=214,slow=35						
VNDA	Vanda	63.86	166	P	P	20 46 04.2	-1.2
KBL	Kabul	64.11	8	P	P	20 46 07.8	+0.1
KBL				pmax	pmax		
	comp=Z,12nm,1.4s						
KBL	Kabul	64.11	8	P	P	20 46 07.8	+0.1
KBL				IAmb	IAmb	20 46 46.1	
	comp=Z,12nm,1.4s						
SBA	Scott Base	64.74	167	P	P	20 46 11.6	+0.5
SBA				pmax	pmax		
	comp=Z,17nm,1.2s						
SBA	Scott Base	64.74	167	P	P	20 46 11.6	+0.5
SBA				IAmb	IAmb	20 46 44.0	
	comp=Z,17nm,1.1s						
ASAR	Alice Springs	64.75	104	P	P	20 46 10.8	-1.2
	comp=Z,4.3nm,0.7s,baz=244,slow=6.0,SNR=36						
ASAR				LR	LR	21 10 43.5	
	comp=Z,92nm,18.8s,baz=191,slow=33						
AS31	Alice Springs	64.75	104	P	P	20 46 10.5	-1.6
SLVN	Son La	65.40	45	P	P	20 46 16.8	+0.6
SLVN				IAmb	IAmb	20 46 39.2	
	comp=Z,28nm,1.6s						
LSA	Lhasa	65.58	29	P	P	20 46 17.9	+0.2
LSA				pmax	pmax		
	comp=Z,18nm,1.5s						
LSA	Lhasa	65.58	29	P	P	20 46 17.9	+0.2
LSA				IAmb	IAmb	20 46 58.9	
	comp=Z,18nm,1.5s						
WRA	Warramunga Arr	66.59	100	P	P	20 46 23.4	-0.6
	comp=Z,5.2nm,0.9s,baz=245,slow=6.0,SNR=26						
WRAB	Tennant Creek	66.61	100	P	P	20 46 23.4	-0.7
WRAB				pmax	pmax		
	comp=Z,38nm,1.4s						
WRAB	Tennant Creek	66.61	100	P	P	20 46 23.4	-0.7
WB0	Warramunga Arr	66.71	100	P	P	20 46 24.5	-0.3
WB0				IAmb	IAmb	20 46 46.1	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	66.76	101	P	P	20 46 24.4	-0.7
WR0				IAmb	IAmb	20 46 46.4	
	comp=Z,15nm,1.1s						
GEYT	Alibeck	67.05	358	P	P	20 46 27.5	+1.1
	comp=Z,1.0nm,0.5s,baz=162,slow=15,SNR=4.1						
GEYT				LR	LR	21 13 37.2	
	comp=Z,120nm,20.3s,baz=230,slow=34						
GYA0B	ALIBECK ARRAY	67.05	358	P	P	20 46 26.1	-0.4
GYA0B				IAmb	IAmb	20 47 02.4	
	comp=Z,8.5nm,1.1s						
QIZ	Qiongzhong	67.56	51	P	P	20 46 30.3	+0.3
QIZ				S	S	20 55 29.8	+2.9
KMI	Kunming	67.60	41	eP	P	20 46 31.5	+1.1
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI				LR	LR		
	comp=Z,95nm,5.8s						
KMI				LR	LR		
	comp=Z,140nm,6.7s						
KMI				LR	LR		
	comp=Z,120nm,7.4s						
STKA	Stephens Creek	68.00	115	P	P	20 46 32.0	-0.7
	comp=Z,2.3nm,0.8s,baz=270,slow=4.0,SNR=3.2						
STKA				LR	LR	21 12 04.1	
	comp=Z,152nm,18.3s,baz=221,slow=32						
STKA	Stephens Creek	68.00	115⇓	eP	P	20 46 33.1	+0.4
MARD	Mardin	68.98	343	P	P	20 46 39.3	+0.6
MARD				IAmb	IAmb	20 48 20.2	
	comp=Z,13nm,0.8s						
GAZ	Gaziantep	69.83	340	P	P	20 46 44.3	+0.5
GAZ				IAmb	IAmb	20 46 58.5	
	comp=Z,13nm,0.8s						
KSH	Kashi	70.05	12	P	P	20 46 42.5	-2.7
KSH				pP	pP	20 46 46.4	-0.3
KSH				S	S	20 55 54.8	-1.1
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
KSH				pmax	pmax		
	comp=Z,270nm,4.6s						
KSH				LR	LR		
	comp=Z,440nm,5.3s						
MALT	Malatya	70.54	342	P	P	20 46 49.7	+1.4
GNI	Garni	70.80	347	P	P	20 46 50.6	+0.8
GNI				pmax	pmax		
	comp=Z,18nm,1.1s						
GNI	Garni	70.80	347	P	P	20 46 50.6	+0.8
GNI				IAmb	IAmb	20 47 16.3	
	comp=Z,18nm,1.1s						
TOA0	Torodi Ar. Sit	70.92	298	P	P	20 46 51.3	+0.3
TOA0				IAmb	IAmb	20 46 52.5	
	comp=Z,8.8nm,0.9s						
TORD	Torodi Ar. Bea	70.92	298	P	P	20 46 51.7	+0.7
	comp=Z,7.0nm,0.8s,baz=111,slow=5.3,SNR=13						
MNGR	Mingechevir, A	70.98	349	P	P	20 46 51.1	+0.4
GANJ	Ganja	70.99	348	P	P	20 46 51.2	+0.4
SEKA	Sheki	71.39	349	P	P	20 46 53.2	-0.1
IUG	Iuzhnay	71.74	7	eP	P	20 46 54.8	-0.6
	comp=Z,2.9nm,1.0s,baz=7.2						
IUG	Iuzhnay	71.74	7	eP	P	20 46 54.8	-0.6
IUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DDFL	Dedoflistskaro	71.80	348	P	P	20 46 58.8	+3.0
ZKTA	Zakatala	71.90	349	P	P	20 46 57.1	+0.8
DBIC	Dimbokro	72.43	288	P	P	20 47 00.7	+0.6
	comp=Z,3.7nm,0.8s,baz=100,slow=11,SNR=3.1						
DBIC				LR	LR	21 17 32.9	
	comp=Z,149nm,18.9s,baz=112,slow=35						
DZA	Taraz	72.62	8	eP	P	20 47 00.2	-0.4
	comp=Z,4.2nm,0.8s,baz=8.1						
DZA				eS	S	20 56 25.6	+0.2
	baz=8.1						
DZA	Taraz	72.62	8	eP	P	20 47 00.1	-0.5
DZA				eS	S	20 56 25.6	+0.2
DZA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CD2	Chengdu	72.65	38	P	P	20 47 02.6	+1.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
SIJI	Sorong	72.67	81	LR	LR	21 12 26.9	
	comp=Z,52nm,21.6s,baz=136,slow=30						
KK31	Karatay Array	72.74	7	P	P	20 47 00.8	-0.4
KK31				pmax	pmax		
	comp=Z,11nm,1.2s						
KK31	Karatay Array	72.74	7	P	P	20 47 00.8	-0.4
KKAR	Karatay Array	72.74	7	P	P	20 47 00.7	-0.6
KKAR				pmax	pmax		
	comp=Z,11nm,1.2s						
KKAR	Karatay Array	72.74	7	P	P	20 47 00.7	-0.6
AAK	Ala-Archa	72.82	11⇓	eP	P	20 47 02.3	+0.3
AAK				pmax	pmax		
	comp=Z,35nm,1.5s						
AAK	Ala-Archa	72.82	11	P	P	20 47 01.8	-0.1
AAK				IAmb	IAmb	20 47 23.2	
	comp=Z,11nm,1.1s						
TOKA	Tokat	72.96	341	P	P	20 47 02.6	-0.1
TOKA				IAmb	IAmb	20 47 24.3	
	comp=Z,14nm,1.2s						
BR131	Keskin Array S	73.27	338d	iP	P	20 47 04.9	+0.2
BR131	Keskin Array S	73.27	338	P	P	20 47 04.2	-0.5
BR131				IAmb	IAmb	20 47 06.0	
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	73.27	338	P	P	20 47 04.8	+0.1
	comp=Z,4.9nm,0.9s,baz=162,slow=8.3,SNR=25						
BRTR				LR	LR	21 16 32.5	
	comp=Z,46nm,19.6s,baz=144,slow=34						
ZEI	Tsey	73.51	347	eP	P	20 47 06.3	+0.2
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GROC	Groznyy	73.57	349	eP	P	20 47 06.3	+0.2
GROC				e		20 47 22.6	
GROC				e		20 49 49.6	
GROC				eS	SKiKP	20 56 39.1	+2.4
GROC				pmax	pmax		
	comp=Z,38nm,1.2s						
MDOK	Medeo	73.78	12	eP	P	20 47 07.2	-0.5
	baz=12						
MDOK				eS	S	20 56 39.0	+0.1
	baz=12						
MDOK	Medeo	73.78	12	eP	P	20 47 07.1	-0.5
MDOK				eS	S	20 56 38.9	+0.1
SATY	Saty	73.94	13	eP	P	20 47 07.0	-1.5
	comp=Z,4.2nm,1.3s,baz=13						
SATY	Saty	73.94	13	eP	P	20 47 07.0	-1.5
SATY				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NEY	Neytrino	74.19	346⇓	iP	P	20 47 11.1	+1.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SHLS	Shalkode	74.25	14	eP	P	20 47 10.4	+0.1
	comp=Z,4.2nm,1.0s,baz=14						
SHLS	Shalkode	74.25	14	eP	P	20 47 10.4	+0.1
SHLS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KUU	Kurty	74.36	12	eP	P	20 47 10.1	-0.7
	comp=Z,7.6nm,1.0s,baz=12						
KUU	Kurty	74.36	12	eP	P	20 47 10.0	-0.7
KUU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KPKS	Kokpek	74.39	13	eP	P	20 47 10.3	-0.8
	comp=Z,3.5nm,1.0s,baz=14						
KPKS	Kokpek	74.39	13	eP	P	20 47 10.3	-0.8
KPKS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHKK	Chushkaly	74.44	12	eP	P	20 47 10.6	-0.6
	baz=12						
CHKK	Chushkaly	74.44	12	eP	P	20 47 10.6	-0.6
KBZ	Khabaz	74.61	347	P	P	20 47 13.0	+0.7
	comp=Z,3.1nm,0.7s,baz=199,slow=5.9,SNR=11						
KBZ				LR	LR	21 17 60.0	
	comp=Z,260nm,21.6s,baz=156,slow=34						
KBZ	Khabaz	74.61	347⇓	eP	P	20 47 12.9	+0.7
KBZ				pmax	pmax		
	comp=Z,11nm,1.6s						
MDUB	Mudurnu	74.75	337	P	P	20 47 12.0	-1.2
KIV	Kislovodsk	74.88	347	eP	P	20 47 13.9	0.0
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV	Kislovodsk	74.88	347	P	P	20 47 13.7	-0.2
KIV				IAmb	IAmb	20 47 28.8	
	comp=Z,13nm,0.8s						
BTLS	Baital	75.10	10	eP	P	20 47 14.1	-1.0
	baz=9.7						
BTLS	Baital	75.10	10	eP	P	20 47 14.0	-1.0
TDK	Taldyqorghan	75.81	13	eP	P	20 47 18.1	-1.1
	comp=Z,6.9nm,0.8s,baz=13						
TDK	Taldyqorghan	75.81	13	eP	P	20 47 18.0	-1.1
TDK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KOWA	Kowa	76.18	296	P	P	20 47 22.6	+0.7
KOWA				IAmb	IAmb	20 47 23.8	
	comp=Z,15nm,1.1s						
LZH	Lanzhou	76.76	35	⇓P	P	20 47 26.5	+1.6
LZH				pP	pwP	20 47 31.4	-2.4
LZH				sP	PcP	20 47 33.1	-3.1
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
AGG	Agios Georgios	76.94	330	P	P	20 47 25.1	-0.6
AGG				pmax	pmax		
	comp=Z,92nm,1.8s						
AGG	Agios Georgios	76.94	330	P	P	20 47 25.1	-0.6
WMQ	Urumqi	76.97	20	eP	P	20 47 27.8	+2.0
WMQ				sP	pwP	20 47 35.4	+0.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.5s						
WMQ				LR	LR		
	comp=Z,710nm,28.8s						
ALN	Alexandroupoli	77.00	334	P	P	20 47 25.7	-0.2
ALN				pmax	pmax		
	comp=Z,47nm,1.4s						
ALN	Alexandroupoli	77.00	334	P	P	20 47 25.7	-0.2
GTA	Gaotai	77.56	30	P	P	20 47 29.8	+0.5
GTA				pP	pwP	20 47 39.0	+0.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
XAN	Xi'an	77.85	39	P	P	20 47 31.6	+0.7
XAN				pP	pwP	20 47 38.4	-1.5
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
MAKZ	Makanchi	78.28	15	P	P	20 47 32.4	-0.6
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAKZ	Makanchi	78.28	15	P	P	20 47 32.4	-0.6
ABKAR	Akbulak array	78.33	359	P	P	20 47 32.7	-0.5
ABKAR	Akbulak array	78.33	359	IAmb	IAmb	20 47 44.2	
	comp=Z,15nm,1.1s						
MK31	Makanchi Array	78.33	15⇓	iP	P	20 47 33.2	-0.1
MKAR	Makanchi Array	78.33	15	P	P	20 47 33.2	-0.1
	comp=Z,3.5nm,0.8s,baz=198,slow=6.0,SNR=24						
MKAR				LR	LR	21 19 51.8	
	comp=Z,100nm,19.6s,baz=218,slow=34						
ZSN	Zaisan	79.56	16	eP	P	20 47 39.6	-0.4
	comp=Z,3.4nm,0.9s,baz=16						
ZSN	Zaisan	79.56	16	eP	P	20 47 39.6	-0.4
ZSN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRZS	Berezniki	79.77	8	eP	P	20 47 40.6	-0.5
	baz=7.8						
BRZS	Berezniki	79.77	8	eP	P	20 47 40.6	-0.5
KEST	Kesra	80.86	320	LR	LR	21 24 54.5	
	comp=Z,284nm,18.8s,baz=154,slow=37						
SEM	Semipalatinsk	81.35	12	eP	P	20 47 48.8	-1.0
	comp=Z,3.2nm,0.9s,baz=12						
SEM	Semipalatinsk	81.35	12	eP	P	20 47 48.8	-1.0
SEM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	81.35	11	P	P	20 47 49.4	-0.1
KURK				pmax	pmax		
	comp=Z,40nm,1.6s						
KURK	Kurchatov	81.35	11	P	P	20 47 49.4	-0.1
KURK				IAmb	IAmb	20 48 12.4	
	comp=Z,40nm,1.6s						
VRH	Novokhopyorsk	82.01	348	eP	P	20 47 53.9	+0.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	82.25	347	eP	P	20 47 52.9	-1.3
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BELG	Belogornoye	82.28	352	LR	LR	21 27 39.4	
	comp=Z,84nm,18.0s,baz=164,slow=38						
BELG	Belogornoye	82.28	352d	iP	P	20 47 54.3	0.0
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DGZ	Jazzator, Alta	82.29	17⇑	eP	P	20 47 55.6	+0.9
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	Nanjing	82.36	47	eP	P	20 47 56.9	+1.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
VSR	Storozhevoye	82.52	347	eP	P	20 47 56.3	+0.7
VSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	82.56	6	P	P	20 47 55.1	-0.7
BRVK				pmax	pmax		
	comp=Z,12nm,1.4s						
BRVK	Borovoye	82.56	6	P	P	20 47 55.1	-0.7
BRVK				IAmb	IAmb	20 48 05.9	
	comp=Z,12nm,1.4s						
RPZ	Rata Peaks	83.29	137	LR	LR	21 17 12.2	
	comp=Z,417nm,19.4s,baz=217,slow=30						
LPSR	Galich'ya Gora	83.88	347	eP	P	20 48 03.6	+1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TIA	Tai'an	84.09	43	P	P	20 48 05.8	+1.6
TIA				pmax	pmax		
	comp=Z,11nm,1.2s						
HHC	Hu-ho-hao-te	84.30	36	eP	P	20 48 06.4	+1.2
HHC				sP	pwP	20 48 14.3	+0.2
HHC				pmax	pmax		
	comp=Z,12nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,6.8s						
AKASG	Malin Array Be	84.51	340	P	P	20 48 05.9	0.0
	comp=Z,3.9nm,0.8s,baz=156,slow=5.1,SNR=13						
AKBB	Malin Array Si	84.51	340⇑	eP	P	20 48 07.0	+1.1
AKBB				pmax	pmax		
	comp=Z,12nm,1.0s						
AKBB	Malin Array Si	84.51	340	IAmb	IAmb	20 48 10.0	
	comp=Z,11nm,1.0s						
UZH	Uzhgorod	84.98	336	eP	P	20 48 07.5	-0.8
UZH				e		20 48 11.3	
PSZ	Piszkesteto	85.28	334	P	P	20 48 10.3	+0.4
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PSZ	Piszkesteto	85.28	334	P	P	20 48 10.3	+0.4
ARU	Arti	85.54	359	LR	LR	21 25 15.6	
	comp=Z,79nm,18.9s,baz=157,slow=35						
ARU	Arti	85.54	359d	iP	P	20 48 11.5	+0.6
ARU						20 51 26.1	
ARU				S	S	20 58 36.0	-6.2
ARU				SS	SS	21 04 21.3	+2.5
ARU				pmax	pmax		
	comp=Z,20nm,1.2s						
ARU	Arti	85.54	359	P	P	20 48 10.9	+0.1
ZALV	Zalesovo Beam	85.62	14	P	P	20 48 11.0	-0.3
	comp=Z,4.1nm,0.8s,baz=222,slow=4.0,SNR=16						
ZALV				LR	LR	21 23 20.1	
	comp=Z,94nm,19.6s,baz=226,slow=34						
ZALV	Zalesovo Beam	85.62	14	i P	P	20 48 13.6	+2.2
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SVE	Sverdlovsk	85.92	360	eP	P	20 48 14.6	+1.8
SVE				pmax	pmax		
	comp=Z,50nm,1.5s						
BJI	Beijing	86.18	39	P	P	20 48 16.5	+2.0
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN	Obninsk	86.72	346	LR	LR	21 27 18.9	
	comp=Z,34nm,18.4s,baz=172,slow=36						
OBN	Obninsk	86.72	346c	iP	P	20 48 17.8	+1.1
OBN				e		20 51 40.1	
OBN				ePPP	PPP	20 53 36.0	
OBN				pmax	pmax		
	comp=Z,27nm,1.4s						
OBN				MLR	MLR		
	comp=Z,143nm,18.0s						
CONA	Conrad Observa	86.90	332	P	P	20 48 19.6	+1.6
	comp=Z,9.7nm,1.5s						
MOS	Moscow	87.10	347	eP	P	20 48 22.5	+3.9
SONM	Songino Array	87.17	29	P	P	20 48 19.1	-0.2
	comp=Z,2.0nm,1.0s,baz=200,slow=3.9,SNR=8.3						
SONM				LR	LR	21 25 08.8	
	comp=Z,161nm,20.0s,baz=314,slow=34						
ABTA	Abfaltersbach	87.43	329	eP	P	20 48 22.5	+1.9
	comp=Z,11nm,1.1s						
ULN	Ulaanbaatar	87.47	29⇑	eP	P	20 48 21.1	+0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULN	Ulaanbaatar	87.47	29	P	P	20 48 20.4	-0.5
VRAC	Vranov	87.70	333	LR	LR	21 26 12.2	
	comp=Z,48nm,20.1s,baz=141,slow=35						
KIRV	Kirov	88.19	354⇓	eP	P	20 48 25.7	+2.0
MNK	Minsk	88.26	342	i P	P	20 48 24.9	+0.7
MNK				i P	P	20 48 24.9	+0.7
	comp=N,13nm,1.1s						
MNK				i P	P	20 48 24.9	+0.7
	comp=Z,14nm,0.8s						
MNK				i PP	PP	20 51 53.1	+1.1
MNK				i PPP	PPP	20 53 46.8	
MNK				i S	SKSac	20 58 52.2	-0.4
MNK				i PS	PnS	21 00 12.1	+0.4
MNK				i SS	SS	21 04 58.4	-0.3
MNK				i SSS	SSS	21 08 32.3	
MNK				i LR	LR	21 25 38.3	
MNK				i LRM	MLR	21 28 48.6	
	comp=Z,52nm,19.6s						
MNK				i LRM	MLR	21 28 50.8	
	comp=N,109nm,21.0s						
MNK				i LRM	MLR	21 29 03.9	
	comp=E,1.0nm,8.3s						
WATA	Walderalm	88.30	329	eP	P	20 48 27.6	+2.8
	comp=E,7.9nm,1.2s						
SQTA	Sankt Quirin	88.38	329	P	P	20 48 27.3	+2.2
	comp=E,9.8nm,1.2s						
FETA	Feichten	88.44	328	eP	P	20 48 28.0	+2.5
	comp=E,8.6nm,1.0s						
MOTA	Moosalm	88.52	329	eP	P	20 48 27.1	+1.2
	comp=E,10.0nm,1.2s						
GERES	GERESS Array B	88.52	331	P	P	20 48 26.0	+0.3
	comp=E,0.5nm,0.7s,baz=183,slow=4.9,SNR=4.7						
GERES				LR	LR	21 27 28.9	
	comp=E,45nm,19.3s,baz=147,slow=35						
GERES	GERESS Array B	88.52	331	P	P	20 48 26.0	+0.3
DAVOX	Davos/Dischmat	88.66	328	LR	LR	21 31 12.9	
	comp=E,62nm,18.3s,baz=126,slow=38						
RETA	Reutte	88.78	329	i P	P	20 48 29.2	+2.3
	comp=E,8.4nm,1.3s						
NACGM	Naroch	88.92	341	i P	P	20 48 21.5	-5.8
NACGM				i P	P	20 48 21.5	-5.8
NACGM				i P	P	20 48 21.5	-5.8
NACGM				i Pb	pP	20 48 27.5	-1.3
	comp=E,28nm,1.6s						
NACGM				i Pb	sP	20 48 30.2	+0.8

	comp=N,19nm,1.4s						
NACGM				*i* Pb	**PcP**	**20 48 31.2**	**+2.4**
	comp=Z,18nm,0.9s						
NACGM				*i* PP	PP	20 51 41.4	-16
NACGM				*i* PPP	PPP	20 53 39.2	
NACGM				*i* S	**SKSac**	**20 58 46.7**	**-10**
NACGM				*i* PS	**PnS**	**21 00 09.3**	**-10**
NACGM				*i* SS	SS	21 04 53.3	-15
NACGM				*i* SSS	SSS	21 08 59.5	
NACGM				*i* SKKS	SKKSdf	21 12 52.0	-24
NACGM				*i* LQ	LQ	21 23 26.1	
NACGM				*i* LR	LR	21 28 22.9	
NACGM				*i* Sb		21 38 08.1	
	comp=Z,94nm,11.5s						
DAVA	**Damuels**	**89.03**	**328**	*e*P	**P**	**20 48 31.3**	**+3.0**
	comp=Z,8.9nm,1.0s						
TLY	**Talaya**	**89.13**	**25**	LR	LR	21 25 28.2	
	comp=Z,121nm,21.6s,baz=222,slow=34						
TLY	**Talaya**	**89.13**	**25**⇓	*e*P	**P**	**20 48 31.2**	**+2.8**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.9s						
SUW	**Suwalki**	**89.22**	**339**	P	**P**	**20 48 30.1**	**+1.4**
SUW				pmax	pmax		
	comp=Z,33nm,1.1s						
SUW	**Suwalki**	**89.22**	**339**	P	**P**	**20 48 30.1**	**+1.4**
BRG	**Berggiesshubel**	**89.98**	**333**	*e*P	**P**	**20 48 36.1**	**+3.7**
BRG				Amp		20 48 38.3	
	comp=Z,5.6nm,1.2s						
BRG	**Berggiesshubel**	**89.98**	**333**	*e*P	**P**	**20 48 36.1**	**+3.7**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRG	**Berggiesshubel**	**89.98**	**333**	*e*P	**P**	**20 48 36.1**	**+3.7**
BRG				Amp		20 48 38.3	
	comp=Z,5.6nm,1.2s						
CLL	**Collm**	**90.70**	**332**	*e*P	**P**	**20 48 35.0**	**-0.7**
CLL				*e*PP	**PP**	**20 52 13.0**	**+1.5**
CLL	**Collm**	**90.70**	**332**	*e*P	**P**	**20 48 35.0**	**-0.7**
ESDC	**Sonseca Array**	**91.32**	**316**	P	**P**	**20 48 40.4**	**+1.4**
	comp=Z,2.3nm,1.0s,baz=117,slow=4.1,SNR=9.0						
KSRS	**Korea Array**	**91.55**	**47**	P	**P**	**20 48 40.4**	**+0.4**
	comp=Z,3.8nm,0.9s,baz=235,slow=4.4,SNR=9.5						
KSRS				LR	LR	21 28 11.8	
	comp=Z,39nm,20.0s,baz=146,slow=34						
KLMR	**Klimovskoe**	**91.61**	**350**	*e*P	**P**	**20 48 40.5**	**+0.8**
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
KLMR	**Klimovskoe**	**91.61**	**350**	*e*P	**P**	**20 48 40.6**	**+0.8**
KLMR				AMP		20 48 50.3	
	comp=Z,22nm,1.3s						
FINES	**FINESS Array B**	**94.81**	**344**	LR	LR	21 31 53.0	
	comp=Z,60nm,20.4s,baz=130,slow=36						
MJAR	**Matsushiro Arr**	**97.91**	**53**	LR	LR	21 30 35.7	
	comp=Z,46nm,20.8s,baz=55,slow=34						
NOA	**NORSAR Array B**	**98.71**	**338**	LR	LR	21 33 53.4	
	comp=Z,72nm,19.3s,baz=135,slow=35						
KLR	**Kul'dur**	**100.56**	**39**⇓	*e*P	**Pdif**	**20 49 20.4**	**-0.3**
KLR				pmax	pmax		
	comp=Z,15nm,3.0s						
SEY	**Seymchan**	**116.50**	**31**⇓	*i*PKIKP	**PKiKP**	**20 54 16.9**	**+0.4**
BILL	**Bilibino**	**122.75**	**26**	*i* PKIKP	**PKPdf**	**20 54 27.4**	**-1.0**
BILL				*e*		20 56 07.8	
BILL				*e*PPP	PPP	20 58 43.7	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
IMAR	**Indian Mountai**	**137.76**	**20**		**PKPdf**	**20 54 56.7**	**-0.2**
COLA	**College**	**140.28**	**19**⇑	*i*PKIKP	**PKiKP**	**20 55 04.1**	**+0.1**
WRH	**Wood River Hil**	**140.51**	**19**		**PKPdf**	**20 55 02.9**	**+0.9**
ILAR	**Eielson Array**	**140.62**	**18**	PKP	**PKPdf**	**20 55 01.2**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=317,slow=3.4,SNR=17						
ILAR	**Eielson Array**	**140.62**	**18**		**PKPdf**	**20 55 00.2**	**-1.9**
DAWY	**Dawson**	**143.06**	**15**	PKPdf	**PKPdf**	**20 55 05.2**	**-1.4**
P59A	**Jarrettsville**	**143.57**	**298**	P	PKPbc	20 55 05.5	-0.1
	baz=87						
L57A	**Andrews Acres**	**143.69**	**302**	P	PKPbc	20 55 06.5	+0.6
	baz=84						
T60A	**Surry**	**143.85**	**294**	P	PKPbc	20 55 07.0	+0.5
	baz=90						
T60A	**Surry**	**143.85**	**294**		PKPbc	20 55 06.9	+0.5
SDMD	**Soldier's Deli**	**143.89**	**297**		PKPab	20 55 06.1	+0.2
O58A	**Lewisberry**	**143.91**	**299**	P	PKPbc	20 55 06.6	+0.1
	baz=86,SNR=5.8						
W61A	**Ground Anchor**	**144.00**	**290**	P	PKPbc	20 55 07.5	+0.5
	baz=93						
R59A	**King George, V**	**144.15**	**295**	P	PKPbc	20 55 08.1	+0.8
	baz=89						
P58A	**Pank, Wackersv**	**144.24**	**298**	P	PKPbc	20 55 08.4	+0.9
	baz=87						
V60A	**Jim Taylor Roa**	**144.25**	**291**	P	PKPbc	20 55 08.4	+0.8
	baz=92						
S59A	**Mechanicsville**	**144.30**	**295**	P	PKPbc	20 55 08.4	+0.6
	baz=89						
N57A	**Milroy**	**144.34**	**300**	P	PKPbc	20 55 08.5	+0.6
	baz=85						
VRDI	**Verde Repeater**	**144.38**	**20**		**PKPdf**	**20 55 09.0**	**-0.2**
MCARA	**McCarthy VSAT**	**144.38**	**19**		**PKPdf**	**20 55 08.9**	**0.0**
O57A	**Amberson**	**144.45**	**299**	P	**PKPdf**	**20 55 09.3**	**-0.5**
	baz=86						
T59A	**Double "B" Far**	**144.51**	**293**	P	**PKPab**	**20 55 08.0**	**-0.2**
	baz=90						
H53A	**Bobcaygeon**	**144.55**	**307**	P	**PKPab**	**20 55 08.3**	**+0.1**
	baz=79						
Q58A	**Fox Den Farm,**	**144.57**	**297**	P	**PKPab**	**20 55 08.3**	**-0.1**
	baz=87,SNR=8.7						
SSPA	**Standing Stone**	**144.61**	**300**	P	**PKPab**	**20 55 08.0**	**-0.5**
	baz=85						
SSPA	**Standing Stone**	**144.61**	**300**	PKPdf	PKPbc	20 55 08.9	+0.2
U59A	**Littleton**	**144.70**	**292**	P	**PKPab**	**20 55 09.0**	**0.0**
	baz=91						
R58B	**Mineral**	**144.76**	**295**	P	**PKPab**	**20 55 08.8**	**-0.3**
	baz=89,SNR=5.7						
P57A	**Homestead Farm**	**144.79**	**298**	P	**PKPab**	**20 55 09.3**	**+0.1**
	baz=86						
CRQM	**Cirque**	**144.84**	**20**		**PKPdf**	**20 55 09.9**	**-0.1**
N56A	**West Decatur**	**144.89**	**300**	P	**PKPab**	**20 55 09.5**	**-0.1**
	baz=84						
S58A	**Poland Farm, P**	**144.90**	**294**	P	**PKPab**	**20 55 09.6**	**-0.1**
	baz=89						
V59A	**Middlesex**	**145.05**	**291**	P	**PKPbc**	**20 55 10.3**	**+0.1**
	baz=92,SNR=6.0						
Q57A	**Strasburg**	**145.13**	**297**	P	**PKPab**	**20 55 10.8**	**+0.2**
	baz=87						
O56A	**Blue Knob Stat**	**145.16**	**299**	P	**PKPdf**	**20 55 11.1**	**+0.1**
	baz=85						
R57A	**Stanardsville**	**145.25**	**296**	P	**PKPdf**	**20 55 11.1**	**0.0**
	baz=88						
T58A	**Grand View Acr**	**145.29**	**293**	P	**PKPbc**	**20 55 11.0**	**0.0**
	baz=90,SNR=6.2						
U58A	**Oxford**	**145.31**	**292**	P	**PKPbc**	**20 55 10.7**	**-0.3**
	baz=90						
P56A	**Dayton Farm, R**	**145.43**	**298**	P	**PKPbc**	**20 55 11.3**	**-0.1**
	baz=86						
S57A	**Dark Hollow, R**	**145.61**	**295**	P	**PKPbc**	**20 55 12.1**	**+0.1**
	baz=88						
Q56A	**Snyder Ridge,**	**145.73**	**297**	P	**PKPbc**	**20 55 12.3**	**-0.1**
	baz=86						
V58A	**Windy Hill, Pi**	**145.76**	**291**	P	**PKPbc**	**20 55 12.6**	**+0.1**
	baz=91						
W58A	**Raeford**	**145.84**	**290**	P	**PKPbc**	**20 55 12.8**	**+0.1**
	baz=92						
T57A	**Hurt**	**145.87**	**293**	P	**PKPbc**	**20 55 12.9**	**0.0**
	baz=89,SNR=6.1						
R56A	**Bull Pasture M**	**145.94**	**296**	P	**PKPbc**	**20 55 13.4**	**+0.2**
	baz=87						
U57A	**Blanch**	**145.94**	**292**	P	**PKPab**	**20 55 13.6**	**0.0**
	baz=90,SNR=5.1						
FCC	**Fort Churchill**	**145.96**	**337**	PKP2	**PKPdf**	**20 55 12.0**	**+0.4**
FCC	**Fort Churchill**	**145.96**	**337**	PKPdf	**PKPdf**	**20 55 12.0**	**+0.4**
S56A	**Natural Bridge**	**146.10**	**295**	P	**PKPbc**	**20 55 13.3**	**-0.3**
	baz=88						
L53A	**Girard**	**146.22**	**302**	P	**PKPbc**	**20 55 13.8**	**+0.1**
	baz=81						
V57A	**Coltrane Farms**	**146.30**	**291**	P	**PKPbc**	**20 55 14.2**	**0.0**
	baz=90						
HYT	**Haines Junctio**	**146.32**	**16**		**PKPbc**	**20 55 13.7**	**+0.1**
W57A	**Gilead**	**146.46**	**290**	P	**PKPbc**	**20 55 14.6**	**-0.1**
	baz=92						
T56A	**Rocky Mt**	**146.49**	**293**	P	**PKPbc**	**20 55 14.8**	**+0.1**
	baz=89						
R55A	**Marlinton**	**146.51**	**296**	P	**PKPbc**	**20 55 15.2**	**+0.4**
	baz=87						
U56A	**King**	**146.79**	**292**	P	**PKPbc**	**20 55 15.7**	**+0.1**
	baz=89						
YKA	**Yellowknife Ar**	**146.79**	**356**	PKPbc	**PKPbc**	**20 55 14.3**	**-0.4**
	comp=Z,5.0nm,0.7s,baz=5.1,slow=2.9,SNR=50						
BLA	**Blacksburg**	**146.80**	**294**	P	**PKPab**	**20 55 16.5**	**-0.4**
	baz=88						
V56A	**Mocksville**	**146.88**	**291**	P	**PKPbc**	**20 55 16.5**	**+0.6**
	baz=90						
W56A	**Indian Trail**	**146.94**	**290**	P	**PKPbc**	**20 55 16.3**	**+0.2**
	baz=91						
O53A	**New Philadelph**	**147.17**	**299**	P	**PKPbc**	**20 55 16.9**	**+0.3**
	baz=83						
R54A	**Victor**	**147.20**	**296**	P	**PKPbc**	**20 55 16.9**	**+0.2**
	baz=86						
S54A	**Dingess, Beckl**	**147.48**	**295**	P	**PKPbc**	**20 55 17.5**	**-0.1**
	baz=87						
KMSC	**Kings Mountain**	**147.56**	**290**	P	**PKPbc**	**20 55 17.6**	**-0.2**
	baz=91						
Q53A	**Leroy**	**147.56**	**297**	P	**PKPbc**	**20 55 17.8**	**+0.1**
	baz=85						
U54A	**Nelsons Funny**	**147.94**	**293**	P	**PKPbc**	**20 55 18.5**	**-0.4**
	baz=88						
P52A	**Corning**	**147.95**	**299**	P	**PKPbc**	**20 55 19.4**	**+0.7**
	baz=83						
HODGE	**Hodges**	**148.30**	**288**		**PKPbc**	**20 55 19.9**	**+0.1**
ACSO	**Alum Creek Sta**	**148.52**	**300**	P	**PKPbc**	**20 55 20.3**	**+0.1**
	baz=81						
TIGA	**Tifton**	**149.25**	**283**	P	**PKPbc**	**20 55 21.6**	**-0.7**
	baz=96						
GOGA	**Godfrey**	**149.28**	**287**	P	**PKPbc**	**20 55 21.5**	**-0.8**
	baz=92						
TZTN	**Tazewell**	**149.33**	**293**	P	**PKPbc**	**20 55 22.2**	**-0.2**
	baz=87						
P49A	**Miami Univ. Ec**	**149.94**	**299**	P	**PKPbc**	**20 55 23.1**	**-0.6**
	baz=81						
P49A	**Miami Univ. Ec**	**149.94**	**299**		**PKPbc**	**20 55 23.1**	**-0.6**
X51A	**Calhoun**	**150.46**	**289**		**PKPbc**	**20 55 25.2**	**0.0**
TEIG	**Tepich**	**150.49**	**259**		**PKPbc**	**20 55 25.1**	**-0.5**
W50A	**Signal Mountai**	**150.82**	**290**		**PKPbc**	**20 55 26.0**	**-0.1**
FPAL	**Fort Paine**	**151.08**	**289**		**PKPbc**	**20 55 26.9**	**+0.2**
FPAL				PKPab	**pPKPab**	**20 55 35.3**	**-0.5**
SWET	**Sewanee**	**151.32**	**290**		**PKPbc**	**20 55 27.4**	**+0.2**
WCI	**Wyandotte Cave**	**151.35**	**297**	PKIKP	**PKPbc**	**20 55 26.5**	**-0.6**
WCI	**Wyandotte Cave**	**151.35**	**297**	P	**PKPbc**	**20 55 25.9**	**-1.3**
	baz=82						
WCI	**Wyandotte Cave**	**151.35**	**297**		**PKPbc**	**20 55 26.5**	**-0.6**
SFIN	**Lafayette**	**151.58**	**301**	P	**PKPbc**	**20 55 26.3**	**-1.2**
	baz=78						
EYMN	**Ely**	**151.74**	**319**	P	**PKPbc**	**20 55 26.9**	**-0.8**
	baz=59						
EYMN	**Ely**	**151.74**	**319**		**PKPbc**	**20 55 26.3**	**-1.4**
FFC	**Flin Flon**	**151.81**	**339**	PKPab	**PKPab**	**20 55 36.5**	**-0.1**
LRAL	**Lakeview Retre**	**152.23**	**286**	P	**PKPbc**	**20 55 27.9**	**-1.4**
	baz=91						
OLIL	**Olney**	**152.67**	**298**		**PKPbc**	**20 55 30.0**	**-0.1**
OLIL					**PKPab**	**20 55 40.5**	**-0.3**
ULM	**Lac du Bonnet**	**152.72**	**326**	PKPbc	**PKPbc**	**20 55 29.2**	**-0.6**
	comp=Z,6.2nm,1.0s,baz=171,slow=2.2,SNR=5.4						
ULM	**Lac du Bonnet**	**152.72**	**326**	PKIKP	**PKPdf**	**20 55 21.9**	**-0.9**
ULM						20 55 28.6	
ULM						20 55 39.2	
ULM	**Lac du Bonnet**	**152.72**	**326**	PKPdf	**PKPdf**	**20 55 21.9**	**-0.9**
ULM					**PKPbc**	**20 55 28.6**	**-1.3**
ULM				PKPab	**PKPab**	**20 55 39.2**	**-1.4**
WVT	**Waverly**	**152.81**	**292**	PKIKP	**PKPbc**	**20 55 30.0**	**-0.5**
WVT						20 55 40.0	
WVT	**Waverly**	**152.81**	**292**	P	**PKPbc**	**20 55 29.7**	**-0.7**
	baz=85						
WVT	**Waverly**	**152.81**	**292**		**PKPbc**	**20 55 30.0**	**-0.5**
WVT				PKPab	**PKPab**	**20 55 40.0**	**-1.5**
JCT	**Junction City**	**163.09**	**278**	PKIKP	**PKPdf**	**20 55 35.8**	**-0.4**
JCT	**Junction City**	**163.09**	**278**	P	**PKPdf**	**20 55 36.2**	**0.0**
	baz=92						
JCT	**Junction City**	**163.09**	**278**		**PKPdf**	**20 55 35.8**	**-0.4**
BW06	**Boulder Array**	**164.56**	**332**	P	**PKPdf**	**20 55 38.0**	**+0.6**
	baz=34						
PDAR	**Pinedale Array**	**164.56**	**332**	PKP	**PKPdf**	**20 55 36.9**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=116,slow=2.1,SNR=4.8						
PDAR	**Pinedale Array**	**164.56**	**332**		**PKPdf**	**20 55 36.6**	**-0.8**
ISCO	**Idaho Springs**	**164.74**	**316**	P	**PKPdf**	**20 55 37.8**	**0.0**
	baz=51						
I02D	**Swisshome**	**164.91**	**13**	P	**PKPdf**	**20 55 38.0**	**+0.7**
	baz=344						
TXAR	**Lajitas Array**	**166.39**	**273**	PKP	**PKPdf**	**20 55 40.1**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=134,slow=5.1,SNR=2.2						
SPUT	**South Promonto**	**166.91**	**337**		**PKPab**	**20 56 40.0**	**-2.6**
MNTX	**Cornudas Mount**	**167.81**	**284**	P	**PKPdf**	**20 55 40.5**	**+0.5**
	baz=83						
MNTX	**Cornudas Mount**	**167.81**	**284**		**PKPdf**	**20 55 40.4**	**+0.3**
ANMO	**Albuquerque**	**167.83**	**300**	P	**PKPdf**	**20 55 41.2**	**+1.1**
	baz=67						
DUG	**Dugway, Tooele**	**168.03**	**335**	P	**PKPdf**	**20 55 41.4**	**+1.3**
	baz=28						
NVAR	**Mina Array Bea**	**170.99**	**355**	PKP	**PKPdf**	**20 55 43.1**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=76,slow=4.7,SNR=0.6						
MPMC	**Manual Prospec**	**173.22**	**348**	P	**PKPdf**	**20 55 44.8**	**+1.7**
	baz=13						
PDMCI	**Parker Dam,Lak**	**173.47**	**319**	P	**PKPdf**	**20 55 44.8**	**+1.9**
	baz=43						
LRMC	**Laurel Mtn Rad**	**173.82**	**348**	P	**PKPdf**	**20 55 45.6**	**+2.4**
	baz=13						
GMRC	**Granite Mounta**	**173.84**	**331**	P	**PKPdf**	**20 55 45.6**	**+2.4**
	baz=31						
214A	**Organ Pipe Nat**	**173.89**	**296**	P	**PKPdf**	**20 55 45.4**	**+2.2**
	baz=67						
HEC	**Hector,Ludlow**	**174.07**	**336**	P	**PKPdf**	**20 55 46.0**	**+2.8**
	baz=26						
IRM	**Iron Mountain**	**174.12**	**324**	P	**PKPdf**	**20 55 45.8**	**+2.6**
	baz=38						
EDW2	**Edwards Air Fo**	**174.46**	**349**	P	**PKPdf**	**20 55 46.3**	**+2.9**
	baz=12						
BELC	**Belle Mtn. Jos**	**174.66**	**329**	P	**PKPdf**	**20 55 46.8**	**+3.2**
	baz=32						
BC3	**Big Chuckawall**	**174.67**	**323**	P	**PKPdf**	**20 55 46.5**	**+2.9**
	baz=39						
PFO	**Pinyon Flats O**	**175.19**	**331**	P	**PKPab**	**20 55 46.4**	**+2.7**
	baz=31						
TPFO	**Pinon Flats**	**175.19**	**331**	P	**PKPdf**	**20 55 46.7**	**+3.0**
	baz=31						
MONP2	**Monument Peak**	**175.77**	**325**	P	**PKPdf**	**20 55 46.8**	**+2.8**
	baz=36						

NAO ***23*** *20:43:42.2±2.4, 78°.37N×7°.62E, h2^{km}±20^{km}, ML2.6*
BER ***23*** *20:43:43.5±2.9, 78°.44N×7°.10E, h15^{km}±15^{km}, ML2.5, ML2.6(NAO), Confirmed Earthquake*
DNK ***23*** *20:43:44.8±3.4, 78°.41N×7°.72E, h59^{km}, ML3.1*
IEPN ***23*** *20:43:46.0, 78°.36N×7°.39E, h10^{km}*
ISC 23 20:43:41.7±1.4**, 78°.31N**±0°.06×**6°.86E**±0°.05**, h29**^{km}±14^{km}**, n28, σ2^{s}.40**/47**, 4C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.18**	**56**	Pg	**Pb**	**20 44 03.1**	**-0.3**
KBS				Lg	Lg	20 44 15.3	
KBS	**Kingsbay**	**1.18**	**56**⇑	*i*P	**Pb**	**20 44 03.0**	**-0.3**
KBS				*e*S	**Sn**	**20 44 15.2**	**-2.0**
KBS				IAML		20 44 19.4	
	comp=Z,278nm,0.3s						
KBS	**Kingsbay**	**1.18**	**56**⇑	*i*P	**Pb**	**20 44 03.0**	**-0.3**
KBS				*i* S	**Sn**	**20 44 14.9**	**-2.3**
KBS	**Kingsbay**	**1.18**	**56**⇑	*i*P	**Pb**	**20 44 03.0**	**-0.3**
KBS				*i* S	**Sn**	**20 44 14.8**	**-2.4**
KBS				IAML		20 44 19.6	
	comp=Z,402nm,0.3s						
BRBA	**Barentsburg A**	**1.54**	**96**	Pg	**Pb**	**20 44 08.7**	**-0.7**
BRBA				Lg	Lg	20 44 26.2	
BRBA	**Barentsburg A**	**1.54**	**96**	*e*P	**Pb**	**20 44 08.9**	**-0.4**
BRBA				*e*S	**Sb**	**20 44 26.6**	**-1.8**
BRBA				IAML		20 44 30.3	
	comp=Z,130nm,0.5s						
SPA0	**Spitsbergen Ar**	**1.95**	**89**	Pg	**Pb**	**20 44 15.7**	**-0.8**
	baz=274,slow=11						
SPA0				Lg	Lg	20 44 38.5	
	baz=266,slow=28						
SPA0	**Spitsbergen Ar**	**1.95**	**89**	Pg	**Pb**	**20 44 15.7**	**-0.8**
	baz=274,slow=11						
SPA0				*e*Sg	**Sb**	**20 44 38.6**	**-1.7**
SPA0	**Spitsbergen Ar**	**1.95**	**89**⇑	*i*P	**Pb**	**20 44 15.7**	**-0.8**
SPA0				*i* S	**Sb**	**20 44 38.6**	**-1.7**
HSPB	**Hornsund (broa**	**2.28**	**121**	Pn	**Pn**	**20 44 19.7**	**+2.4**
HSPB				Sn	**Sn**	**20 44 45.1**	**+0.8**
HSPB	**Hornsund (broa**	**2.28**	**121**	*e*P	**Pb**	**20 44 20.1**	**-1.9**
HSPB				*e*S	**Sn**	**20 44 46.4**	**+2.1**
HSPB				IAML		20 44 46.8	
	comp=Z,38nm,0.3s						
HSPB	**Hornsund (broa**	**2.28**	**121**	*e*P	**Pn**	**20 44 19.9**	**+2.7**
HSPB				*i* S	**Sn**	**20 44 45.2**	**+0.9**
HOPEN	**Hopen**	**4.35**	**105**	*e*P	**Pn**	**20 44 47.8**	**+2.2**
HOPEN				*e*S	**Sn**	**20 45 35.0**	**-0.2**
HOPEN				IAML		20 45 36.4	
	comp=Z,29nm,0.2s						
HOPEN	**Hopen**	**4.35**	**105**	*e*P	**Pn**	**20 44 47.6**	**+2.0**
HOPEN				*e*S	**Sn**	**20 45 34.6**	**-0.7**
BJO1	**Bjornoya**	**4.77**	**137**	*e*P	**Pn**	**20 44 56.2**	**+4.8**
BJO1				*e*S	**Sn**	**20 45 46.4**	**+0.8**
BJO1				IAML		20 45 54.5	
	comp=Z,14nm,0.5s						
BJO1	**Bjornoya**	**4.77**	**137**	*e*P	Pn	20 44 57.1	+5.7
BJO1				*e*S	**Sn**	**20 45 48.3**	**+2.7**
DAG	**Danmarks Havn**	**5.70**	**267**	*e*P	**Pn**	**20 45 05.9**	**+1.8**
DAG				*i*		20 46 04.9	
DAG				*e*S	**Sn**	**20 46 05.3**	**-3.2**
DAG				IAML		20 46 08.8	
	comp=Z,6.2nm,0.3s						
DAG	**Danmarks Havn**	**5.70**	**267**	*i* P	**Pn**	**20 45 05.5**	**+1.4**
DAG				*i*		20 46 04.8	
DAG	**Danmarks Havn**	**5.70**	**267**	*i* P	**Pn**	**20 45 05.6**	**+1.4**
DAG				*i*		20 46 04.9	
DAG				IAML		20 46 08.8	
	comp=Z,6.2nm,0.3s						
DBG	**Daneborg**	**7.50**	**252**	Pn	**Pn**	**20 45 30.9**	**+2.1**
DBG				Sn	**Sn**	**20 46 49.5**	**-3.2**
DBG	**Daneborg**	**7.50**	**252**	*e*P	**Pn**	**20 45 31.8**	**+3.0**
DBG				*e*S	**Sn**	**20 46 49.5**	**-3.2**
DBG				IAML		20 46 55.1	
	comp=Z,4.1nm,0.4s						
DBG	**Daneborg**	**7.50**	**252**	*i* P	**Pn**	**20 45 32.0**	**+3.2**
DBG				*i* S	**Sn**	**20 46 49.3**	**-3.3**
DBG				IAML		20 46 55.1	
	comp=Z,4.1nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.66**	**52**	*e*P	**Pn**	**20 45 32.2**	**+1.3**
ZFI2				*e*S	**Sn**	**20 46 51.6**	**-5.0**
	comp=Z,2.8nm,2.0s						
ARA0	**ARCESS Array S**	**10.14**	**140**	Pn	**Pn**	**20 46 06.9**	**+1.9**
ARA0				Sn	**Sn**	**20 47 53.9**	**-3.6**
	baz=334,slow=37						
ARA0	**ARCESS Array S**	**10.14**	**140**	Pn	**Pn**	**20 46 06.9**	**+1.9**
ARA0				Sn	**Sn**	**20 47 53.9**	**-3.6**
	baz=334,slow=37						
SUMG	**Summit**	**12.39**	**267**	*i* P	**Pn**	**20 46 39.0**	**+3.0**
SUMG				*i*		20 48 47.0	
SUMG				IAML		20 48 54.6	
	comp=Z,2.4nm,0.3s						
SUMG	**Summit**	**12.39**	**267**	*i* P	**Pn**	**20 46 39.0**	**+3.0**
SUMG				*i*		20 48 47.0	
SUMG	**Summit**	**12.39**	**267**	*i* P	**Pn**	**20 46 39.0**	**+3.0**
SUMG				*i*		20 48 47.0	
SUMG				IAML		20 48 54.6	
	comp=Z,2.4nm,0.3s						

NEIC ***23*** *21:00:51.4±2.1, 32°.6S±0°.1×177°.4W±0°.2, h35^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=27.0km s-min=19.2km az=145.0*
IDC ***23*** *21:00:51.8±2.2, 32°.12S×178°.26W, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.8/31, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=63.2km s-min=38.4km az=135.0*
ISC 23 21:00:51.1±1.2**, 32°.5S**±0°.1×**177°.4W**±0°.2**, h35**^{km}**, n31, σ1^{s}.69**/31**, mb4.1**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.16**	**214**	Pn	**Pn**	**21 02 18.9**	**-0.6**
WMGZ	**Waiomatatini S**	**6.32**	**212**	P	**Pn**	**21 02 22.5**	**+0.7**
PKGZ	**Pakihiroa**	**6.53**	**213**	P	**Pn**	**21 02 24.9**	**+0.2**
HAZ	**Te Kaha**	**6.56**	**215**	P	**Pn**	**21 02 25.8**	**+0.7**
RUGZ	**Raukumara Rang**	**6.78**	**215**	P	**Pn**	**21 02 30.1**	**+1.9**
TWGZ	**Tauwhareparae**	**6.81**	**212**	P	**Pn**	**21 02 30.3**	**+1.8**
CNGZ	**Carnagh Statio**	**6.97**	**210**	P	**Pn**	**21 02 31.5**	**+0.9**
MWZ	**Matawai**	**7.15**	**214**	P	**Pn**	**21 02 34.4**	**+1.3**
URZ	**Urewera**	**7.29**	**216**	Pn	**Pn**	**21 02 36.8**	**+1.8**
	1.5nm,0.3s,baz=12,slow=9.3,SNR=9.8						
URZ				Sn	**Sn**	**21 03 54.2**	**-2.3**
	0.8nm,0.3s,baz=142,slow=19,SNR=1.7						
RIGZ	**Rimuhau**	**7.34**	**211**	P	**Pn**	**21 02 37.7**	**+1.9**
MKRZ	**Makatiti**	**7.54**	**220**	P	Pn	21 02 48.3	+10
SNGZ	**Shannon Statio**	**7.59**	**213**	P	**Pn**	**21 02 42.1**	**+2.9**
RTZ	**Ruatahuna**	**7.63**	**215**	P	**Pn**	**21 02 42.3**	**+2.5**
MTHZ	**Maungataniwha**	**7.88**	**215**	P	**Pn**	**21 02 46.0**	**+2.8**
OUZ	**Omahuta**	**7.96**	**248**	Pn	**Pn**	**21 02 45.9**	**+1.7**
BKZ	**Black Stump Fm**	**8.30**	**215**	Pn	**Pn**	**21 02 51.0**	**+2.1**
BFZ	**Birch Farm**	**9.63**	**210**	Pn	**Pn**	**21 03 08.0**	**+0.8**
KHZ	**Kahutara**	**12.23**	**213**	Pn	**Pn**	**21 03 44.5**	**+1.8**
MLZ	**Mavora Lakes**	**17.05**	**217**		**Pn**	**21 04 46.9**	**+0.1**
MLZ				IAmb	IAmb	21 04 48.8	
	comp=Z,7.8nm,0.9s						
WHZ	**Wether Hill Ro**	**17.51**	**216**		**Pn**	**21 04 52.9**	**+0.6**
WHZ				IAmb	IAmb	21 04 58.7	
	comp=Z,14nm,1.0s						
CTAO	**Charters Tower**	**34.67**	**282**	P	**P**	**21 07 38.3**	**+0.8**
BBOO	**Buckleboo**	**38.93**	**257**	P	**P**	**21 08 11.3**	**-2.3**
ASAR	**Alice Springs**	**43.53**	**269**	P	**P**	**21 08 52.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=109,slow=8.0,SNR=9.0						
WR0	**Warramunga Arr**	**44.53**	**274**	P	**P**	**21 09 00.1**	**+0.5**
WR0				IAmb	IAmb	21 09 01.6	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**44.70**	**274**	P	**P**	**21 09 01.9**	**+1.0**
WB2				IAmb	IAmb	21 09 09.6	
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**44.71**	**274**	P	**P**	**21 09 00.7**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=113,slow=8.1,SNR=15						
WB0	**Warramunga Arr**	**44.74**	**274**	P	**P**	**21 09 01.2**	**0.0**
WB0				IAmb	IAmb	21 09 18.6	
	comp=Z,3.8nm,0.9s						
FORT	**Forrest**	**46.03**	**257**	P	**P**	**21 09 11.2**	**-0.1**
CBX	**Cerro Bola**	**86.26**	**48**	P	**P**	**21 13 29.6**	**+0.3**
FINES	**FINESS Array B**	**147.27**	**339**	PKPbc	**PKiKP**	**21 20 34.1**	**+1.9**
	comp=Z,1.4nm,0.6s,baz=35,slow=5.1,SNR=13						
HFS	**Hagfors**	**151.38**	**348**	PKPbc	**PKPab**	**21 20 45.1**	**-3.5**
	comp=Z,3.2nm,0.9s,baz=64,slow=3.4,SNR=2.4						

JMA ***23*** *21:07:38.5±0.3, 44°.00N×147°.98E, h0^{km}, M4.0*
SKHL ***23*** *21:07:39.6±0.5, 44°.47N×148°.09E, h60^{km}±6^{km}, mb4.7/3*
ISC 23 21:07:32.5±2.4**, 44°.28N**±0°.06×**148°.2E**±0°.1**, h2**^{km}±13^{km}**, n22, σ2^{s}.24**/34**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.98**	**345**	*i* P	**Pn**	**21 07 54.0**	**+0.7**
KUR				AMB	AMB	21 07 54.0	
	210nm,0.3s						
KUR				*i* S	**Sg**	**21 08 05.2**	**+1.2**
KUR				A	A	21 08 06.0	
	1µm,0.3s						
KUR				A	A	21 08 06.0	
	1µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.71**	**262**	*e*P	**Pg**	**21 08 05.5**	**+0.2**
YUK				AMB	AMB	21 08 06.9	
	560nm,0.4s						
YUK				*e*S	**Sn**	**21 08 24.6**	**-1.1**
YUK				A	A	21 08 27.0	
	340nm,0.3s						
YUK				A	A	21 08 27.0	
	460nm,0.3s						
GRPR	**Tuman**	**1.78**	**261**	*e*P	**Pg**	**21 08 06.5**	**-0.1**
GRPR				AMB	AMB	21 08 10.0	
	323nm,0.3s						
GRPR				*e*S	**Sb**	**21 08 27.5**	**-1.1**
GRPR				A	A	21 08 32.0	
	657nm,0.2s						
GRPR				A	A	21 08 32.0	
	222nm,0.2s						
NEM2	**Nemuro 2**	**2.01**	**244**	P	**Pb**	**21 08 10.2**	**+0.5**
NEM2				*e*S	**Sb**	**21 08 33.6**	**-1.6**
NMR	**Nemuro--Hokkai**	**2.02**	**244**	*i* P	**Pg**	**21 08 10.5**	**-0.7**
NMR				*i* S	**Sb**	**21 08 34.2**	**-1.2**
GLVR	**Golovnino**	**2.02**	**255**	*e*P	**Pb**	**21 08 10.2**	**+0.3**
GLVR				*e*S	**Sb**	**21 08 33.8**	**-1.6**
JRA	**Rausu**	**2.25**	**262**	P	**Pg**	**21 08 15.0**	**-0.7**
JRA				*e*S	**Sb**	**21 08 42.0**	**-0.2**
JKHN	**Kushirohamanak**	**2.52**	**243**	*e*S	**Sb**	**21 08 46.7**	**-3.1**
JAK	**Akkeshi**	**2.86**	**244**	P	**Pb**	**21 08 22.4**	**-1.8**
JAK				*e*S	**Sn**	**21 08 55.0**	**+1.0**
JTKR	**Abashiri--Toko**	**3.12**	**266**	P	**Pb**	**21 08 28.3**	**-0.3**
JAR	**Ashorobuto**	**3.37**	**255**	P	**Pb**	**21 08 30.6**	**-2.3**
JAR				*e*S	**Sn**	**21 09 08.6**	**+2.0**
JCH	**Churui**	**3.91**	**246**	P	**Pn**	**21 08 37.1**	**+3.6**
JCH				*e*S	**Sn**	**21 09 21.3**	**+1.4**
JKK2	**Kamakawa 2**	**3.96**	**266**	P	**Pb**	**21 08 40.9**	**-2.1**
JFR	**Furan**	**4.23**	**257**	P	**Pb**	**21 08 44.0**	**-3.5**
JNBK	**Urakawa-nobuka**	**4.46**	**245**	P	**Pn**	**21 08 44.6**	**+3.5**
JWK2	**Keihoku**	**4.61**	**285**	P	Pn	21 08 48.1	+4.9

YSS	**Yuzh-Sakhalins**	**4.67**	**307**	*e*P	**Pn**	**21 08 45.4**	**+1.5**
JKB	**Kayabe**	**5.78**	**248**	P	**Pn**	**21 09 03.5**	**+4.3**
JKB				*e*S	**Sn**	**21 10 07.6**	**+1.6**
JOT	**Ohata**	**6.01**	**244**	P	**Pn**	**21 09 06.1**	**+3.7**
JOT				*e*S	**Sn**	**21 10 11.4**	**-0.4**
JANG	**Nango**	**6.32**	**234**	P	**Pn**	**21 09 09.4**	**+2.8**
JANG				*e*S	**Sn**	**21 10 17.1**	**-2.2**
JOM	**Ohasama**	**7.05**	**229**	*e*S	**Sn**	**21 10 33.7**	**-3.8**
JMK	**Ichinoseki**	**7.47**	**227**	*e*S	**Sn**	**21 10 45.1**	**-2.6**

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*IDC **23** 21:10:46.5±0.6, 28°.21S×12°.92W, h0^{km}, mb4.1/14, mb1 4.2/14, mb1mx4.1/40, mbtmp4.1/14, MS3.9/5, Ms1 3.9/5, ms1mx3.6/21, Error ellipse: s-maj=20.6km s-min=16.6km az=143.0*

*NEIC **23** 21:10:47.1±2.2, 28°.4S±0°.2×12°.9W±0°.1, h8^{km}±4^{km}, mb4.6/16, Error ellipse: s-maj=24.4km s-min=15.7km az=157.0*

ISC 23 21:10:47.7±0.6**, 28°.3S**±0°.1×**12°.91W**±0°.10**, h10^{km}, n38, σ0s.98**/32**, mb4.2**/19**, MS3.6**/5**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**13.97**	**30**	Pn	**Pn**	**21 14 08.3**	**+2.4**
TSUM	**Tsumeb**	**29.28**	**79**	LR	LR	21 26 03.5	
	comp=Z,128nm,21.3s,baz=254,slow=31						
SUR	**Sutherland**	**29.31**	**106**	P	**P**	**21 16 49.0**	**-1.8**
SUR				IAmb	IAmb	21 16 50.0	
	comp=Z,8.7nm,1.1s						
BOSA	**Boshof**	**33.46**	**100**	P	**P**	**21 17 26.8**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=251,slow=7.2,SNR=4.4						
LBTB	**Lobatse**	**34.47**	**94**	LR	LR	21 28 31.5	
	comp=Z,113nm,21.0s,baz=252,slow=31						
LBTB	**Lobatse**	**34.47**	**94**	P	**P**	**21 17 36.1**	**+0.1**
BDFB	**Brasilia**	**34.78**	**284**	P	**P**	**21 17 37.6**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=107,slow=11,SNR=5.8						
BDFB	**Brasilia**	**34.78**	**284**	IAmb	IAmb	21 17 45.8	
	comp=Z,5.5nm,0.6s						
DBIC	**Dimbokro**	**35.65**	**14**	P	**P**	**21 17 45.2**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=195,slow=9.2,SNR=4.9						
DBIC				LR	LR	21 29 45.6	
	comp=Z,108nm,18.7s,baz=140,slow=32						
DBIC	**Dimbokro**	**35.65**	**14**	P	**P**	**21 17 45.2**	**-0.8**
DBIC				IAmb	IAmb	21 17 58.0	
	comp=Z,8.6nm,1.0s						
MATP	**Matopo**	**38.38**	**88**	P	**P**	**21 18 09.2**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=250,slow=12,SNR=4.6						
CPUP	**Villa Florida**	**39.35**	**262**	P	**P**	**21 18 17.4**	**0.0**
	comp=Z,4.7nm,1.1s,baz=135,slow=6.7,SNR=3.2						
LSZ	**Lusaka**	**40.11**	**80**	P	**P**	**21 18 22.8**	**-1.2**
KOWA	**Kowa**	**43.43**	**13**	P	**P**	**21 18 51.0**	**+0.1**
KOWA				IAmb	IAmb	21 18 51.6	
	comp=Z,6.6nm,0.8s						
TOA0	**Torodi Ar. Sit**	**43.58**	**21**	P	**P**	**21 18 51.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**43.58**	**21**	P	**P**	**21 18 51.4**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=195,slow=6.8,SNR=7.7						
TORD				LR	LR	21 33 43.0	
	comp=Z,238nm,19.1s,baz=190,slow=32						
TORD	**Torodi Ar. Bea**	**43.58**	**21**	P	**P**	**21 18 51.8**	**-0.3**
SNAA	**Sanae**	**43.75**	**175**	P	**P**	**21 18 54.7**	**+1.7**
	comp=Z,0.7nm,0.2s,baz=22,slow=11,SNR=18						
SIV	**San Ignacio**	**45.99**	**275**	P	**P**	**21 19 12.6**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=112,slow=8.3,SNR=7.9						
PLCA	**Paso Flores**	**48.29**	**239**	P	**P**	**21 19 29.5**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=138,slow=4.9,SNR=4.6						
PLCA	**Paso Flores**	**48.29**	**239**	IAmb	IAmb	21 19 33.0	
	comp=Z,4.0nm,1.1s						
BO02	**Sierra Bellavi**	**49.16**	**247**	P	**P**	**21 19 36.0**	**0.0**
BI02	**San Fabin de**	**49.27**	**245**	P	**P**	**21 19 35.8**	**-1.1**
CO01	**Juntas del Tor**	**49.52**	**253**	P	**P**	**21 19 38.8**	**-0.2**
CO01				IAmb	IAmb	21 19 49.6	
	comp=Z,5.8nm,1.1s						
GO04	**Tololo Observa**	**50.07**	**253**	P	**P**	**21 19 42.5**	**-0.8**
GO04				IAmb	IAmb	21 19 57.2	
	comp=Z,9.7nm,1.0s						
SAML	**Samuel**	**50.98**	**282**	P	**P**	**21 19 51.4**	**+1.5**
SAML				IAmb	IAmb	21 19 59.6	
	comp=Z,7.1nm,0.9s						
PB16	**IPOC Station P**	**52.51**	**268**	P	**P**	**21 20 01.7**	**-0.3**
QSPA	**South Pole Qui**	**61.91**	**180**	P	**P**	**21 21 08.3**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=227,slow=2.9,SNR=2.2						
KEST	**Kesra**	**67.08**	**20**	LR	LR	21 49 55.3	
	comp=Z,195nm,18.0s,baz=170,slow=35						
ESDC	**Sonseca Array**	**68.16**	**7**	P	**P**	**21 21 47.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=188,slow=6.9,SNR=1.6						
BRTR	**Keskin Array B**	**80.38**	**35**	P	**P**	**21 23 00.6**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=208,slow=4.2,SNR=7.3						
BRTR	**Keskin Array B**	**80.38**	**35**	P	**P**	**21 23 00.2**	**+0.8**
MLR	**Muntele Rosu**	**81.52**	**26**	P	**P**	**21 23 05.1**	**-0.2**
	comp=Z,6.7nm,1.1s,baz=194,slow=11,SNR=4.1						
MLR	**Muntele Rosu**	**81.52**	**26**	IAmb	IAmb	21 23 13.2	
	comp=Z,5.9nm,0.8s						
AKASG	**Malin Array Be**	**87.05**	**25**	P	**P**	**21 23 32.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=224,slow=5.1,SNR=2.6						
SEY	**Seymchan**	**144.07**	**11**	PKP	**PKPdf**	**21 30 22.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=284,slow=4.2,SNR=2.4						
KSRS	**Korea Array**	**146.07**	**64**	PKPbc	**PKPab**	**21 30 28.7**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=294,slow=4.1,SNR=3.6						
MA2	**Magadan**	**146.81**	**15**	PKPbc	**PKPbc**	**21 30 29.3**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=343,slow=14,SNR=1.7						

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*MOS **23** 21:16:27.7±1.2, 56°.40S×26°.68W, h46^{km}, mb5.4/5, Error ellipse: s-maj=17.4km s-min=10.1km az=108.4*

*IDC **23** 21:16:28.7±1.4, 56°.37S×26°.67W, h48^{km}±12^{km}, mb4.6/19, mb1 4.6/20, mb1mx4.5/25, mbtmp4.8/20, ML4.5/1, MS4.2/15, Ms1 4.2/15, ms1mx4.2/21, Error ellipse: s-maj=13.8km s-min=12.2km az=70.0*

*NEIC **23** 21:16:29.1±1.3, 56°.37S±0°.10×26°.7W±0°.2, h49^{km}±4^{km}, mb5.1/91, Error ellipse: s-maj=15.1km s-min=11.6km az=207.0*

*GCMT **23** 21:16:31.1±0.2, 56°.46S±0°.02×26°.28W±0°.02, h39^{km}, MW5.1/104, Moment Tensor Solution. s61,c81; s104,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.14±.23; $M_{\theta\theta}$-0.18±.18; $M_{\phi\phi}$-3.96±.15; $M_{r\theta}$2.02±.16; $M_{\theta\phi}$2.90±.10; $M_{\phi r}$2.61±.14; Best double couple: $M_0$5.96500×10^{16} NP1:ϕ_s124.00000°, δ45.00000°, λ43.00000°. NP2:ϕ_s0.00000°, δ61.00000°, λ126.00000°. Principal axes: T 6.1920, Plg57.0000°, Azm321.0000°; N -0.4510, Plg31.0000°, Azm161.0000°; P -5.7370, Plg9.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 21:16:27.3±0.2**, 56°.42S**±0°.05×**26°.58W**±0°.05**, h35^{km}, n394, σ1s.32**/400**, mb5.1**/66**, MS4.2**/15**, 6C-7D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.04**	**287**	P	**Pn**	**21 17 57.0**	**+2.9**
HOPE				SN	**Sn**	**21 19 02.7**	**+0.8**
HOPE	**Hope Point**	**6.04**	**287**		**Pn**	**21 17 58.0**	**+3.9**
VNA1	**Neumayer--Stat**	**16.32**	**158**	P	**P**	**21 20 16.1**	**+0.1**
VNA3	**Neumayer Olymp**	**16.53**	**161**	P	**P**	**21 20 18.5**	**+0.1**
VNA2	**Neumayer--Watz**	**16.72**	**158**	P	**P**	**21 20 21.6**	**+1.1**
	baz=323,slow=14						
SNAA	**Sanae**	**18.27**	**156**	P	**Pn**	**21 20 38.6**	**+0.9**
SNAA	**Sanae**	**18.27**	**156**	P	**Pn**	**21 20 38.2**	**+0.6**
	1.5nm,0.3s,baz=289,slow=10,SNR=30						
SNAA				S	**Sn**	**21 23 51.2**	**-9.0**
	0.2nm,0.3s,baz=317,slow=18,SNR=1.3						
SNAA				PcP	**PcP**	**21 25 08.5**	**+0.4**
	0.2nm,0.3s,baz=246,slow=4.4,SNR=2.3						
SNAA				ScP	**ScP**	**21 28 38.3**	**-2.2**
	0.1nm,0.3s,baz=1.8,slow=5.1,SNR=4.9						
SNAA	**Sanae**	**18.27**	**156**	P	**Pn**	**21 20 38.5**	**+0.9**
EFI	**East Falkland**	**18.98**	**271**	P	**Pn**	**21 20 47.0**	**+0.7**
EFI				pmax	pmax		
	comp=Z,83nm,1.2s						
EFI	**East Falkland**	**18.98**	**271**	P	**Pn**	**21 20 47.0**	**+0.7**
PMSA	**Palmer Station**	**19.92**	**230**	LR	LR	21 27 25.9	
	comp=Z,1μm,20.7s,baz=112,slow=33						
PMSA	**Palmer Station**	**19.92**	**230**	P	**Pn**	**21 20 57.8**	**+0.5**
BELA	**Belgrano 2**	**21.73**	**185**	P	**P**	**21 21 15.9**	**+0.8**
NVL	**N'lazarevskaya**	**21.77**	**146**	*e*P	**P**	**21 21 15.5**	**+0.1**
NVL				*e*S	**S**	**21 25 17.0**	**+3.1**
NVL				pmax	pmax		
	comp=Z,42nm,1.0s						
GO09	**Cerro Castillo**	**27.07**	**261**	P	**P**	**21 22 05.8**	**-0.5**
PLTB	**Pedras Altas**	**31.00**	**311**	*e*P	**P**	**21 22 41.9**	**+0.6**
SYO	**Syowa Base**	**31.08**	**140⇑**	*e*X	**P**	**21 22 43.0**	**+1.4**
SYO	**Syowa Base**	**31.08**	**140⇑**	*e*sP	pP	21 22 56.6	+5.9
PLCA	**Paso Flores**	**32.40**	**280**	P	**P**	**21 22 52.0**	**-1.6**
	comp=Z,3.0nm,1.0s,baz=136,slow=7.9,SNR=4.8						
PLCA				PcP	**PcP**	**21 25 40.0**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=182,slow=3.4,SNR=4.5						
PLCA				ScP	**ScP**	**21 29 17.9**	**-3.1**
	comp=Z,1.5nm,0.7s,baz=100,slow=4.3,SNR=6.5						
PLCA	**Paso Flores**	**32.40**	**280**	P	**P**	**21 22 52.4**	**-1.2**
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PLCA	**Paso Flores**	**32.40**	**280**	P	**P**	**21 22 52.4**	**-1.2**
QSPA	**South Pole Qui**	**33.83**	**180**	P	**P**	**21 23 07.0**	**+1.1**
	comp=Z,43nm,0.6s,baz=205,slow=1.1,SNR=82						
QSPA				PcP	**PcP**	**21 25 44.2**	**+0.2**
	comp=Z,11nm,0.9s,baz=255,slow=3.1,SNR=2.6						
QSPA				ScP	**ScP**	**21 29 23.7**	**-2.0**
	comp=Z,14nm,0.9s,baz=175,slow=3.8,SNR=8.4						
QSPA				LR	LR	21 36 17.9	
	comp=Z,646nm,20.6s,baz=200,slow=35						
QSPA	**South Pole Qui**	**33.83**	**180**	P	**P**	**21 23 07.9**	**+2.0**
ITAB	**Concordia**	**34.43**	**317**	*e*P	**P**	**21 23 12.5**	**+1.2**
RFA	**San Rafael**	**35.65**	**289**	*i* P	**P**	**21 23 21.4**	**-0.5**
SPB	**Sao Paulo**	**36.17**	**326**	*e*P	**P**	**21 23 28.2**	**+2.0**
TCA	**Tanti**	**36.40**	**297**	*i* P	**P**	**21 23 27.3**	**-1.0**
VAO	**Valinhos**	**36.58**	**327**	*e*P	**P**	**21 23 31.0**	**+1.1**
PTGB	**Pitanga**	**36.69**	**319**	*e*P	**P**	**21 23 31.4**	**+0.7**
BO02	**Sierra Bellavi**	**36.86**	**287**	P	**P**	**21 23 31.3**	**-0.8**
FRTB	**Fartura**	**37.08**	**323**	*e*P	**P**	**21 23 35.2**	**+1.1**
CPUP	**Villa Florida**	**37.31**	**311**	P	**P**	**21 23 34.7**	**-1.2**
	comp=Z,11nm,0.9s,baz=149,slow=8.2,SNR=17						
CPUP				PcP	**PcP**	**21 25 54.6**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=168,slow=3.5,SNR=4.8						
CPUP				ScP	**ScP**	**21 29 36.5**	**-2.2**
	comp=Z,4.6nm,1.1s,baz=164,slow=5.7,SNR=3.2						
CPUP				LR	LR	21 38 15.0	
	comp=Z,261nm,20.5s,baz=150,slow=35						
CPUP	**Villa Florida**	**37.31**	**311**	P	**P**	**21 23 35.9**	**0.0**
CPUP				pmax	pmax		
	comp=Z,11nm,0.9s						
CPUP	**Villa Florida**	**37.31**	**311**	P	**P**	**21 23 35.9**	**0.0**
ASAL	**Salagasta**	**37.54**	**291**	*i* P	**P**	**21 23 37.9**	**-0.1**
RTCV	**Cerro Valdivia**	**37.97**	**292**	*i* P	**P**	**21 23 40.3**	**-1.2**
PEL	**Peldehue**	**38.08**	**289**	P	**P**	**21 23 42.3**	**-0.2**
PEL				pmax	pmax		
	comp=Z,17nm,0.6s						
PEL	**Peldehue**	**38.08**	**289**	P	**P**	**21 23 42.3**	**-0.2**
PEL				IAmb	IAmb	21 23 53.0	
	comp=Z,17nm,0.6s						
AUSP	**Uspallata**	**38.12**	**291**	*i* P	**P**	**21 23 42.8**	**-0.3**
APLL	**PUNTA DE LOS L**	**38.13**	**296**	*i* P	**P**	**21 23 41.3**	**-1.6**
MT02	**Curacav**	**38.23**	**288**	P	**P**	**21 23 42.5**	**-1.1**
MT02				IAmb	IAmb	21 23 58.5	
	comp=Z,22nm,1.1s						
ZON	**Zonda**	**38.29**	**293**	P	**P**	**21 23 43.0**	**-1.3**
ZON				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZON	**Zonda**	**38.29**	**293**	P	**P**	**21 23 43.0**	**-1.3**
ZON	**Zonda**	**38.29**	**293**	*i* P	**P**	**21 23 42.3**	**-2.0**
VA03	**San Esteban**	**38.30**	**289**	P	**P**	**21 23 44.2**	**-0.2**
VA03				IAmb	IAmb	21 24 03.3	
	comp=Z,26nm,1.2s						
RTLL	**Cerro Villicun**	**38.36**	**293**	*i* P	**P**	**21 23 42.3**	**-2.5**
AVFE	**Valle Fertil**	**38.38**	**295**	*i* P	**P**	**21 23 43.8**	**-1.2**
ROC1	**El Roble**	**38.38**	**289**	P	**P**	**21 23 44.1**	**-1.1**
ROC1	**El Roble**	**38.38**	**289**	*i* P	**P**	**21 23 44.2**	**-1.0**
RTLS	**Leoncito**	**38.41**	**292**	*i* P	**P**	**21 23 44.9**	**-0.7**
TRCB	**Terra Rica**	**38.65**	**320**	*e*P	**P**	**21 23 48.0**	**+0.7**
BB19B	**Bebedouro**	**38.88**	**326**	*e*P	**P**	**21 23 50.4**	**+1.1**
BSFB	**Barra de Sao F**	**39.03**	**338**	*e*P	**P**	**21 23 51.5**	**+1.0**
ACLC	**CERRO LA CRUZ**	**39.13**	**296**	*i* P	**P**	**21 23 50.4**	**-1.1**
SJMB	**Sao Joao De Ma**	**39.22**	**338**	*e*P	**P**	**21 23 52.8**	**+0.7**
ACCO	**Cerro Coronel**	**39.25**	**293**	*i* P	**P**	**21 23 53.2**	**+0.5**
PCMB	**Pacaembu**	**39.26**	**322**	*e*P	**P**	**21 23 53.1**	**+0.7**
CYA	**Choya**	**39.37**	**299**	*i* P	**P**	**21 23 51.2**	**-2.2**
ACDV	**Cuesta del Vie**	**39.62**	**293**	*i* P	**P**	**21 23 53.7**	**-1.8**
MAW	**Mawson**	**39.65**	**143**	P	**P**	**21 23 56.7**	**+1.5**
	comp=Z,11nm,0.4s,baz=307,slow=6.6,SNR=4.9						
MAW				LR	LR	21 38 12.0	
	comp=Z,392nm,21.0s,baz=242,slow=33						
CO02	**Combarbal**	**39.76**	**290**	P	**P**	**21 23 56.2**	**-0.5**
CO02				IAmb	IAmb	21 24 09.7	
	comp=Z,54nm,1.5s						
NAN01	**Guarapari, ES**	**39.84**	**340**	*e*P	**P**	**21 23 57.8**	**+0.5**
CO03	**El Pedregal**	**39.89**	**291**	P	**P**	**21 23 57.4**	**-0.3**
CO01	**Juntas del Tor**	**40.27**	**292**	P	**P**	**21 24 01.3**	**+0.3**
SUR	**Sutherland**	**40.41**	**74**	P	**P**	**21 24 02.2**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=190,slow=10.0,SNR=3.3						
SUR				LR	LR	21 36 41.7	
	comp=Z,909nm,21.2s,baz=242,slow=30						
SUR	**Sutherland**	**40.41**	**74**	P	**P**	**21 24 02.7**	**+0.5**
GO04	**Tololo Observa**	**40.48**	**292**	P	**P**	**21 24 02.1**	**-0.7**
GO04				IAmb	IAmb	21 24 07.7	
	comp=Z,17nm,0.5s						
GO04	**Tololo Observa**	**40.48**	**292**	*i* P	**P**	**21 24 01.4**	**-1.4**
ITRB	**Iturama**	**40.73**	**324**	*e*P	**P**	**21 24 05.8**	**+1.2**
AC05	**El Transito**	**41.28**	**293**	P	**P**	**21 24 09.1**	**-0.2**
AC05				IAmb	IAmb	21 24 12.0	
	comp=Z,25nm,0.8s						
LCO	**Las Campanas**	**41.36**	**293**	P	**P**	**21 24 09.7**	**-0.3**
LCO				pmax	pmax		
	comp=Z,19nm,1.1s						
LCO	**Las Campanas**	**41.36**	**293**	P	**P**	**21 24 09.7**	**-0.3**
IPMB	**Ipameri, GO**	**41.69**	**328**	*e*P	**P**	**21 24 13.6**	**+1.0**
AC04	**Llanos de Chal**	**42.20**	**293**	P	**P**	**21 24 17.0**	**+0.4**
AC04				IAmb	IAmb	21 24 19.2	
	comp=Z,32nm,0.7s						
GO03	**Copiap**	**42.28**	**294**	P	**P**	**21 24 17.3**	**0.0**
AC02	**Maricunga**	**42.34**	**296**	P	**P**	**21 24 18.3**	**-0.1**
AC02				IAmb	IAmb	21 24 20.4	
	comp=Z,35nm,0.9s						
SHEL	**Horse Pasture**	**43.39**	**30**	P	**P**	**21 24 27.6**	**+1.3**
SHEL				pmax	pmax		
	comp=Z,95nm,0.9s						
SHEL	**Horse Pasture**	**43.39**	**30**	P	**P**	**21 24 27.6**	**+1.3**
JANB	**Januaria**	**43.45**	**335**	*e*P	**P**	**21 24 27.6**	**+0.7**
AC01	**Pan de Azucar**	**43.65**	**295**	P	**P**	**21 24 27.9**	**-0.5**
AC01				IAmb	IAmb	21 24 31.3	
	comp=Z,28nm,1.1s						
BDFB	**Brasilia**	**43.85**	**329**	P	**P**	**21 24 30.6**	**+0.4**
	comp=Z,13nm,0.9s,baz=150,slow=6.1,SNR=12						
BDFB				LR	LR	21 39 45.3	
	comp=Z,293nm,21.8s,baz=130,slow=32						
BDFB	**Brasilia**	**43.85**	**329**	P	**P**	**21 24 31.7**	**+1.5**
BDFB				pmax	pmax		
	comp=Z,20nm,1.1s						
BDFB	**Brasilia**	**43.85**	**329**	P	**P**	**21 24 31.6**	**+1.5**
GO02	**Mina Guanaco**	**43.96**	**297**	P	**P**	**21 24 30.8**	**-0.4**
GO02				IAmb	IAmb	21 24 33.2	
	comp=Z,74nm,1.4s						
PP1B	**Ponte de Pedra**	**44.23**	**320**	*e*P	**P**	**21 24 32.7**	**-0.4**
ARAG	**Araguaiana, MT**	**44.94**	**324**	*e*P	**P**	**21 24 39.5**	**+0.8**
PB15	**IPOC Station P**	**45.54**	**299**	IAmb	IAmb	21 24 50.8	
	comp=Z,22nm,0.5s						
SBA	**Scott Base**	**45.73**	**184**	P	**P**	**21 24 45.9**	**+1.6**
SBA				pmax	pmax		
	comp=Z,27nm,1.3s						
SBA	**Scott Base**	**45.73**	**184**	P	**P**	**21 24 45.9**	**+1.6**
SBA				IAmb	IAmb	21 24 50.8	
	comp=Z,27nm,1.2s						
BOSA	**Boshof**	**45.74**	**75**	P	**P**	**21 24 44.1**	**-1.0**
	comp=Z,5.5nm,0.8s,baz=219,slow=7.9,SNR=9.9						
BOSA				PcP	**PcP**	**21 26 22.2**	**-0.2**
	comp=Z,10nm,1.0s,baz=207,slow=5.6,SNR=5.1						
BOSA				LR	LR	21 39 57.5	
	comp=Z,806nm,20.8s,baz=218,slow=31						
LVC	**Limon Verde**	**45.78**	**300**	P	**P**	**21 24 46.1**	**+0.3**
LVC				pmax	pmax		
	comp=Z,32nm,0.5s						
LVC	**Limon Verde**	**45.78**	**300**	P	**P**	**21 24 46.1**	**+0.3**
LVC	**Limon Verde**	**45.78**	**300**	*e*P	**P**	**21 24 45.6**	**-0.1**
PB10	**IPOC Station P**	**45.82**	**297**	P	**P**	**21 24 45.7**	**0.0**
PB10				IAmb	IAmb	21 24 48.0	
	comp=Z,24nm,1.2s						
PB06	**IPOC Station P**	**46.02**	**299**	IAmb	IAmb	21 24 49.2	
	comp=Z,30nm,1.2s						
SDBA	**SAO DESIDERIO**	**46.14**	**335**	*e*P	**P**	**21 24 48.7**	**+0.4**
VNDA	**Vanda**	**46.22**	**183**	P	**P**	**21 24 49.6**	**+1.4**
	comp=Z,7.0nm,0.6s,baz=186,slow=7.3,SNR=27						
VNDA				ScP	**ScP**	**21 30 11.8**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=212,slow=5.8,SNR=3.4						
VNDA				LR	LR	21 43 02.9	
	comp=Z,170nm,21.6s,baz=176,slow=34						
VNDA	**Vanda**	**46.22**	**183**	P	**P**	**21 24 49.8**	**+1.7**
VNDA				pmax	pmax		
	comp=Z,17nm,0.8s						
VNDA	**Vanda**	**46.22**	**183**	P	**P**	**21 24 49.8**	**+1.7**
VNDA				IAmb	IAmb	21 24 59.0	
	comp=Z,17nm,0.8s						
PB04	**IPOC Station P**	**46.61**	**299**	IAmb	IAmb	21 24 59.2	
	comp=Z,34nm,0.9s						
PB09	**IPOC Station P**	**46.63**	**300**	IAmb	IAmb	21 25 00.0	
	comp=Z,36nm,1.0s						
PB07	**IPOC Station P**	**47.00**	**299**	IAmb	IAmb	21 24 57.6	
	comp=Z,29nm,0.9s						
PEXB	**Peixe**	**47.30**	**330**	*e*P	**P**	**21 24 58.6**	**+1.2**
CRZF	**Crozet Islands**	**47.36**	**113**	P	**P**	**21 24 59.0**	**+1.6**
PTLB	**Pontes e Lacer**	**47.80**	**316**	*e*P	**P**	**21 25 01.1**	**0.0**
PATCX	**Punta Patache**	**47.90**	**300**	IAmb	IAmb	21 25 04.0	
	comp=Z,23nm,0.9s						
PB08	**IPOC Station P**	**48.00**	**301**	P	**P**	**21 25 03.4**	**+0.2**
PB08				IAmb	IAmb	21 25 06.3	
	comp=Z,38nm,1.3s						
NBRF	**Rio Formoso -**	**48.09**	**349**	*e*P	**P**	**21 25 02.8**	**-0.6**
TA01	**Diego Aracena**	**48.13**	**300**	P	**P**	**21 25 03.6**	**-0.1**
TA01				IAmb	IAmb	21 25 05.6	
	comp=Z,21nm,1.0s						
H10S2	**ASCENSION HYDR**	**48.26**	**16**	T	T	22 17 46.9	
	baz=31,slow=74,SNR=73						
H10S3	**ASCENSION HYDR**	**48.26**	**16**	T	T	22 17 42.2	
	baz=189,slow=74,SNR=118						
SNDB	**Serra Nova Dou**	**48.29**	**327**	*e*P	**P**	**21 25 06.0**	**+1.0**
LBTB	**Lobatse**	**48.80**	**72**	P	**P**	**21 25 08.5**	**-0.5**
	comp=Z,12nm,0.9s,baz=213,slow=9.8,SNR=15						
LBTB	**Lobatse**	**48.80**	**72**	P	**P**	**21 25 08.6**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	**Lobatse**	**48.80**	**72**	P	**P**	**21 25 08.6**	**-0.3**
LBTB				IAmb	IAmb	21 25 09.2	
	comp=Z,12nm,0.8s						
PSGCX	**Pisagua**	**48.93**	**301**	IAmb	IAmb	21 25 25.3	
	comp=Z,10nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.38**	**16**	T	T	22 19 13.1	
	baz=188,slow=75,SNR=76						
H10N3	**ASCENSION HYDR**	**49.38**	**16**	T	T	22 19 06.0	
	baz=188,slow=75,SNR=123						
H10N2	**ASCENSION HYDR**	**49.40**	**16**	T	T	22 19 12.5	
	baz=188,slow=75,SNR=107						
TSUM	**Tsumeb**	**49.57**	**60**	P	**P**	**21 25 14.2**	**-0.7**
	comp=Z,12nm,0.9s,baz=207,slow=6.2,SNR=15						
TSUM	**Tsumeb**	**49.57**	**60**	P	**P**	**21 25 15.0**	**+0.1**
TSUM				IAmb	IAmb	21 25 16.2	
	comp=Z,16nm,1.1s						
PB16	**IPOC Station P**	**49.73**	**302**	IAmb	IAmb	21 25 22.2	
	comp=Z,11nm,0.5s						
SMTB	**Santa Maria do**	**50.22**	**333**	*e*P	**P**	**21 25 20.8**	**+1.1**
VILB	**Vilhena**	**50.48**	**316**	*e*P	**P**	**21 25 21.7**	**-0.1**
CLDB	**Colider**	**50.79**	**322**	*e*P	**P**	**21 25 23.7**	**-0.3**
NBPA	**Parau_RN**	**51.22**	**347**	*e*P	**P**	**21 25 28.0**	**+0.8**
NBPS	**Pedro II - PI**	**53.22**	**341**	*e*P	**P**	**21 25 41.8**	**-0.4**
PRPB	**Parauapebas**	**53.38**	**331**	*e*P	**P**	**21 25 44.6**	**+1.3**
CASY	**Casey**	**53.44**	**160**	P	**P**	**21 25 44.1**	**+1.0**
CASY				IAmb	IAmb	21 25 46.2	
	comp=Z,18nm,0.9s						
NPGB	**Novo Progresso**	**54.22**	**324**	*e*P	**P**	**21 25 49.5**	**+0.1**
SAML	**Samuel**	**55.30**	**314**	P	**P**	**21 25 56.8**	**-0.4**
SAML				pmax	pmax		
	comp=Z,32nm,1.1s						
SAML	**Samuel**	**55.30**	**314**	P	**P**	**21 25 56.8**	**-0.4**
SAML				IAmb	IAmb	21 25 58.0	
	comp=Z,32nm,1.1s						
SAML	**Samuel**	**55.30**	**314**	*e*P	**P**	**21 25 56.9**	**-0.4**
ETMB	**Extrema**	**55.76**	**311**	*e*P	**P**	**21 26 00.2**	**-0.3**
TMAB	**Tom-Au,PA,Br**	**56.59**	**334**	*e*P	**P**	**21 26 08.8**	**+2.3**
ITTB	**Itaituba**	**56.85**	**325**	*e*P	**P**	**21 26 08.6**	**+0.3**
LSZ	**Lusaka**	**58.19**	**68**	P	**P**	**21 26 17.8**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
LSZ	**Lusaka**	**58.19**	**68**	P	**P**	**21 26 17.8**	**-0.2**
LSZ				IAmb	IAmb	21 26 18.4	
	comp=Z,12nm,0.9s						
MALB	**Monte Alegre**	**58.77**	**327**	*e*P	**P**	**21 26 22.4**	**+0.6**
MCPB	**Macapa, AP**	**59.55**	**330**	*e*P	**P**	**21 26 28.7**	**+1.5**
PTGA	**Pitinga**	**61.67**	**321**	P	**P**	**21 26 41.0**	**-0.6**
RPN	**Rapa Nui**	**63.92**	**260**	LR	LR	21 50 29.3	
	comp=Z,111nm,20.8s,baz=130,slow=32						
LIC	**Lamto**	**64.90**	**24**	*e*P	**P**	**21 27 02.8**	**-0.1**
	comp=Z,56nm,0.8s						
KIC	**Kosan Boka**	**65.09**	**24**	*e*P	**P**	**21 27 04.0**	**-0.2**
	comp=Z,33nm,0.8s						
TIC	**Toumodi**	**65.31**	**24**	*e*P	**P**	**21 27 05.4**	**-0.2**
DBIC	**Dimbokro**	**65.37**	**24**	P	**P**	**21 27 05.8**	**-0.2**
	comp=Z,17nm,0.9s,baz=168,slow=8.2,SNR=12						
DBIC				LR	LR	21 48 39.3	
	comp=Z,286nm,21.8s,baz=164,slow=30						
DBIC	**Dimbokro**	**65.37**	**24**	P	**P**	**21 27 06.0**	**0.0**
DBIC				pmax	pmax		
	comp=Z,25nm,1.1s						
DBIC	**Dimbokro**	**65.37**	**24**	P	**P**	**21 27 06.0**	**0.0**
DBIC				IAmb	IAmb	21 27 06.8	
	comp=Z,25nm,1.1s						
OTAV	**Otavalo**	**70.14**	**303**	P	**P**	**21 27 37.7**	**+1.0**
OTAV				pmax	pmax		
	comp=Z,36nm,1.2s						
OTAV	**Otavalo**	**70.14**	**303**	P	**P**	**21 27 37.7**	**+1.0**
OTAV				IAmb	IAmb	21 27 40.0	
	comp=Z,36nm,1.2s						
OTAV	**Otavalo**	**70.14**	**303**	*e*P	P	21 27 28.7	-8.0
OTAV	**Otavalo**	**70.14**	**303**	*e*P	**P**	**21 27 37.5**	**+0.9**
GARC	**Garzon, Huila**	**70.52**	**307**	*e*P	P	21 27 30.8	-7.9
PCON	**Cinco Dias**	**71.05**	**306**	*e*P	**P**	**21 27 39.4**	**-3.0**
MARP	**Paez Belalcaza**	**71.31**	**307**	*e*P	**P**	**21 27 39.4**	**-4.2**
CHIC	**Chingaza**	**71.94**	**310**	*e*P	**P**	**21 27 43.6**	**-3.9**
MBAR	**Mbarara**	**72.02**	**62⇓**	*e*P	**P**	**21 27 50.3**	**+2.6**
MBAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ROSC	**El Rosal**	**72.38**	**309**	P	**P**	**21 27 50.4**	**+0.3**
	comp=Z,11nm,0.4s,baz=143,slow=14,SNR=4.2						
YOTC	**Yotoco, Valle**	**72.50**	**307**	*e*P	**P**	**21 27 46.8**	**-3.7**
TOLC	**Tolima**	**72.58**	**308**	*e*P	P	21 27 45.8	-5.5
RUSC	**La Rusia**	**72.80**	**311**	*e*P	P	21 27 47.9	-4.8
RREF	**El Recreo**	**72.88**	**308**	*e*P	**P**	**21 27 50.0**	**-3.3**
SPBC	**San Pablo de B**	**73.00**	**310**	*e*P	P	21 27 47.9	-5.5
KOWA	**Kowa**	**73.13**	**23**	P	**P**	**21 27 54.3**	**+0.3**
KOWA				IAmb	IAmb	21 27 55.5	
	comp=Z,25nm,1.2s						
GUY2C	**Guyana, Caldas**	**73.17**	**308**	*e*P	**P**	**21 27 52.1**	**-2.8**
TORD	**Torodi Ar. Bea**	**73.22**	**29**	P	**P**	**21 27 54.5**	**0.0**
	comp=Z,21nm,0.6s,baz=200,slow=6.4,SNR=68						
TORD				LR	LR	21 53 46.9	
	comp=Z,125nm,20.8s,baz=205,slow=31						
TORD	**Torodi Ar. Bea**	**73.22**	**29**	P	**P**	**21 27 54.5**	**0.0**
NORC	**Norcasia**	**73.26**	**309**	*e*P	**P**	**21 27 52.1**	**-2.8**
NORC				*e*P	**P**	**21 27 52.1**	**-2.8**
PAMC	**Pamplona, Colo**	**73.94**	**312**	*e*P	**P**	**21 27 56.4**	**-3.0**
PTBC	**PUERTO BERRIO,**	**73.96**	**310**	*e*P	P	21 27 52.1	-6.8
CBOC	**Ciudad Bolivar**	**74.03**	**308**	*e*P	**P**	**21 27 56.4**	**-3.2**
GRGR	**Grenville**	**74.27**	**324**	P	**P**	**21 28 01.1**	**+0.4**
SDV	**Santo Domingo**	**74.51**	**315**	P	**P**	**21 28 02.2**	**-0.1**
SDV				IAmb	IAmb	21 28 03.3	
	comp=Z,32nm,1.1s						
SDV	**Santo Domingo**	**74.51**	**315**	*e*P	**P**	**21 28 00.5**	**-1.9**
SDV	**Santo Domingo**	**74.51**	**315**	*e*P	**P**	**21 28 02.3**	**0.0**
KMBO	**Kilima Mbogo**	**74.86**	**68**	P	**P**	**21 28 06.1**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=185,slow=11,SNR=2.8						
ZARC	**Zaragoza, Cauc**	**74.99**	**310**	*e*P	P	21 27 58.8	-6.2
UREC	**San Jos de Ur**	**75.51**	**309**	*e*P	**P**	**21 28 04.9**	**-3.0**
SMLC	**San Martn de**	**75.83**	**311**	*e*P	**P**	**21 28 06.4**	**-3.3**
WHZ	**Wether Hill Ro**	**77.33**	**190**	P	**P**	**21 28 18.7**	**+0.8**
DCZ	**Deep Cove**	**77.83**	**190**	P	**P**	**21 28 20.9**	**+0.2**
DCZ				IAmb	IAmb	21 28 27.8	
	comp=Z,28nm,1.0s						
MLZ	**Mavora Lakes**	**77.83**	**191**	P	**P**	**21 28 21.2**	**+0.4**
MQZ	**McQueen's Vall**	**78.93**	**194**	P	**P**	**21 28 27.6**	**+0.8**
MQZ				IAmb	IAmb	21 28 31.0	
	comp=Z,40nm,1.2s						
RPZ	**Rata Peaks**	**79.13**	**193**	P	**P**	**21 28 26.8**	**-1.2**
	comp=Z,23nm,1.0s,baz=198,slow=5.2,SNR=8.2						
RPZ	**Rata Peaks**	**79.13**	**193**	P	**P**	**21 28 28.5**	**+0.6**
RPZ				IAmb	IAmb	21 28 31.2	
	comp=Z,35nm,1.1s						
FOZ	**Fox Glacier**	**79.46**	**192**	P	**P**	**21 28 30.2**	**+0.5**
LTZ	**Lake Taylor**	**79.89**	**194**	P	**P**	**21 28 32.1**	**0.0**
LTZ				IAmb	IAmb	21 28 34.4	
	comp=Z,30nm,1.1s						
KHZ	**Kahutara**	**80.08**	**195**	P	**P**	**21 28 33.2**	**+0.2**
KHZ				IAmb	IAmb	21 28 40.3	
	comp=Z,23nm,1.2s						

CMWZ	Cape Campbell	80.63	196	P	P	21 28 32.8	-3.3
BSWZ	Blackbirch Sta	80.71	195	P	P	21 28 37.6	+1.1
MSWZ	Moikau Station	80.80	196	P	P	21 28 37.1	+0.1
THZ	Tophouse	80.81	195	P	P	21 28 37.4	+0.4
THZ				IAmb	IAmb	21 28 43.1	
	comp=Z,25nm,1.0s						
THZ	Tophouse	80.81	195	P	P	21 28 38.6	+1.6
BHW	Baring Head	80.86	196	P	P	21 28 36.9	-0.4
TAU	Tasmania Unive	80.91	175	P	P	21 28 37.8	+0.3
TAU				pmax	pmax		
	comp=Z,79nm,1.2s						
TAU	Tasmania Unive	80.91	175	P	P	21 28 37.8	+0.3
TUWZ	Tuamarina	80.98	195	P	P	21 28 38.9	+1.0
SNZO	South Karori	80.98	196	P	P	21 28 37.0	-0.9
WEL	Wellington	81.00	196	P	P	21 28 28.7	-9.4
MTP	Monte Pirata	81.13	323	P	P	21 28 38.3	-0.5
CUPR	Culebra, Puert	81.23	323	P	P	21 28 38.9	-0.5
NNZ	Nelson	81.27	195	P	P	21 28 39.9	+0.4
NNZ				IAmb	IAmb	21 28 42.6	
	comp=Z,21nm,0.9s						
NNZ	Nelson	81.27	195	P	P	21 28 41.0	+1.5
BFZ	Birch Farm	81.35	197	P	P	21 28 40.1	+0.1
BFZ				IAmb	IAmb	21 28 42.4	
	comp=Z,38nm,1.2s						
BFZ	Birch Farm	81.35	197	P	P	21 28 41.2	+1.3
CBYP	Canovanas	81.39	323	P	P	21 28 40.0	-0.3
CBYP				IAmb	IAmb	21 28 40.7	
	comp=Z,20nm,1.2s						
MLPR	Magueyes Islan	81.52	321	P	P	21 28 40.2	-0.6
QRZ	Quartz Range	81.78	195	P	P	21 28 41.2	-1.0
QRZ				IAmb	IAmb	21 28 45.6	
	comp=Z,23nm,1.2s						
QRZ	Quartz Range	81.78	195	P	P	21 28 41.5	-0.7
JTS	Las Juntas de	82.00	302*c*	*i*P	P	21 28 43.8	+0.2
JTS				pmax	pmax		
	comp=Z,41nm,1.2s						
WNVZ	Wahianoa	82.78	197	P	P	21 28 49.6	+2.0
BKZ	Black Stump Fm	82.79	198	P	P	21 28 49.0	+1.4
NGZ	Ngauruhoe	82.93	197	P	P	21 28 49.9	+1.5
OTVZ	Oturere	82.93	197	P	P	21 28 48.9	+0.4
ETVZ	East Tongariro	82.95	197	P	P	21 28 49.2	+0.8
TMVZ	Te Maari	82.97	197	P	P	21 28 49.2	+0.6
URZ	Urewera	83.56	199	P	P	21 28 50.8	-0.7
	comp=Z,9.6nm,1.0s,baz=124,slow=5.0,SNR=6.2						
HIZ	Hauiti	83.70	197	P	P	21 28 51.7	-0.5
HIZ				IAmb	IAmb	21 28 60.0	
	comp=Z,22nm,1.0s						
HIZ	Hauiti	83.70	197	P	P	21 28 51.6	-0.5
SDDR	Presa de Saban	83.98	318	IAmb	IAmb	21 28 56.7	
	comp=Z,18nm,1.1s						
MXZ	Matakaoa Point	84.02	200	P	P	21 28 53.9	+0.1
CBCY	The Bluff, Cay	88.02	311	P	P	21 29 13.9	+0.3
CAN	Canberra	88.54	176	P	P	21 29 16.8	+0.6
CAN				pmax	pmax		
	comp=Z,45nm,1.4s						
CAN	Canberra	88.54	176	P	P	21 29 16.8	+0.6
MORW	Morawa	89.12	148	P	P	21 29 18.6	-0.4
BBOO	Buckleboo	89.90	165	P	P	21 29 21.2	-1.3
FORT	Forrest	90.50	158	P	P	21 29 28.4	+3.0
STKA	Stephens Creek	91.48	170	P	P	21 29 30.1	+0.2
	comp=Z,2.6nm,0.5s,baz=151,slow=5.3,SNR=6.3						
STKA				PP	PP	21 33 09.0	+2.1
	comp=Z,0.9nm,0.4s,baz=192,slow=9.3,SNR=3.0						
STKA				LR	LR	22 07 08.2	
	comp=Z,195nm,21.5s,baz=202,slow=33						
STKA	Stephens Creek	91.48	170	P	P	21 29 32.2	+2.3
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	91.48	170	P	P	21 29 32.2	+2.3
TEIG	Tepich	92.19	304	P	P	21 29 33.2	+0.2
PPT	Papeete	92.25	233	LR	LR	22 03 46.5	
	comp=Z,89nm,19.4s,baz=236,slow=31						
BBSR	BB Station	94.19	328	P	P	21 29 41.7	-0.2
ESDC	Sonseca Array	97.63	17	P	Pdif	21 29 58.9	+1.3
	comp=Z,0.7nm,0.6s,baz=189,slow=5.0,SNR=6.6						
ESDC				LR	LR	22 09 38.4	
	comp=Z,66nm,21.0s,baz=145,slow=33						
ASAR	Alice Springs	98.53	162	P	P	21 30 01.8	-0.5
	comp=Z,3.9nm,1.0s,baz=191,slow=4.0,SNR=15						
ASAR				PP	PP	21 34 03.9	+1.9
	comp=Z,2.2nm,1.0s,baz=187,slow=6.1,SNR=4.2						
ASAR				PKKP	PKKPdf	21 46 30.2	-0.3
	comp=Z,0.5nm,0.5s,baz=25,slow=2.0,SNR=5.2						
ASAR				LR	LR	22 11 07.7	
	comp=Z,78nm,20.7s,baz=172,slow=33						
ASAR	Alice Springs	98.53	162		P	21 30 01.5	-0.8
WRA	Warramunga Arr	102.25	162	P	Pdif	21 30 17.4	-1.4
	comp=Z,1.3nm,0.8s,baz=198,slow=4.4,SNR=6.3						
WRA				PP	PKiKP	21 34 38.6	-2.0
	comp=Z,2.3nm,1.1s,baz=191,slow=6.0,SNR=5.0						
WRA				PKKP	PKKPbc	21 46 19.8	+1.4
	comp=Z,0.3nm,0.4s,baz=359,slow=2.8,SNR=9.8						
GERES	GERESS Array B	110.13	27	PP	PP	21 35 32.3	+3.0
	comp=Z,0.3nm,0.6s,baz=173,slow=8.6,SNR=3.6						
ANMO	Albuquerque	113.19	298	PKKPab	PKKPab	21 45 48.1	-3.6
	comp=Z,2.0nm,0.8s,baz=297,slow=4.5,SNR=4.4						
SDCO	Great Sand Dun	114.97	301	P	PKiKP	21 35 04.0	-0.1
	baz=143						
KIV	Kislovodsk	115.66	49	*e*PKIKP	PKiKP	21 35 08.6	+3.7
AKASG	Malin Array Be	116.30	36	PKP	PKPdf	21 35 04.3	-1.4
	comp=Z,0.1nm,0.3s,baz=226,slow=2.6,SNR=2.0						
ISCO	Idaho Springs	116.66	302	P	PKPdf	21 35 06.8	-0.5
	baz=142						
MSU	Marysvale	118.82	297	PKIKP	PKiKP	21 35 12.2	+0.8
MSU	Marysvale	118.82	297		PKiKP	21 35 12.2	+0.8
EDW2	Edwards Air Fo	118.98	290	P	PKiKP	21 35 11.7	+0.1
	baz=141						
RSSD	Black Hills	119.33	306	P	PKPdf	21 35 11.6	-0.6
	baz=142						
TPNV	Topopah Spring	119.67	293	P	PKiKP	21 35 13.5	+0.4
	baz=140						
ISA	Isabella, Lake	119.83	290	P	PKiKP	21 35 13.5	+0.2
	baz=140						
PKM	Mcpherson Peak	119.94	289	P	PKiKP	21 35 13.8	+0.1
	baz=140						
CWC	Cottonwood Cre	120.22	291	P	PKiKP	21 35 14.9	+0.7
	baz=140						
R11A	Troy Canyon, C	120.41	294	P	PKPdf	21 35 14.2	-0.1
	baz=140						
DUG	Dugway, Tooele	120.43	298	P	PKPdf	21 35 14.2	-0.1
	baz=140						
ULM	Lac du Bonnet	120.75	316	PKP	PKPdf	21 35 12.6	-1.7
	comp=Z,1.9nm,0.5s,baz=213,slow=1.9,SNR=4.2						
ULM				PP	PP	21 36 42.2	-1.5
	comp=Z,3.7nm,0.9s,baz=112,slow=5.4,SNR=3.9						
PDAR	Pinedale Array	120.83	302	PKP	PKPdf	21 35 13.9	-1.2
	comp=Z,0.6nm,0.5s,baz=139,slow=4.1,SNR=6.8						
PDAR				PKKPab	PKKPab	21 45 18.3	0.0
	comp=Z,0.5nm,0.8s,baz=302,slow=1.4,SNR=4.7						
NVAR	Mina Array Bea	121.85	292	PKP	PKiKP	21 35 17.6	+0.2
	comp=Z,0.4nm,0.4s,baz=154,slow=2.1,SNR=5.4						
NVAR	Mina Array Bea	121.85	292	PKPdf	PKiKP	21 35 17.9	+0.5
VSU	Vasula	122.20	30⇓	*e*PKIKP	PKiKP	21 35 18.8	+1.8
LAO	LASA Array	122.29	307	P	PKiKP	21 35 17.9	+0.1
	baz=140						
OBN	Obninsk	122.43	37	*e*PKIKP	PKPdf	21 35 16.4	-1.0
OBN				*e*		21 36 56.8	
OBN				*e*PPP	PPP	21 39 33.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RLMT	Red Lodge	122.48	304	P	PKPdf	21 35 18.0	-0.2
	baz=139						
NIL	Nilore	122.53	77	PKIKP	PKPdf	21 35 18.3	-0.1
NIL	Nilore	122.53	77	PKPdf	PKPdf	21 35 18.3	-0.1
HLID	Hailey	123.75	299	P	PKiKP	21 35 21.1	+0.2
	baz=138						
BOZ	Bozeman (W)	123.94	303	P	PKiKP	21 35 21.5	+0.3
	baz=138						
SUKH	Sukhothai	124.16	111	P	PKiKP	21 35 23.4	+1.1
BELG	Belogornoye	124.36	46⇑	*i*PKIKP	PKPdf	21 35 21.1	-0.1
FINES	FINESS Array B	124.55	28	PKP	PKPdf	21 35 20.6	-0.7
	comp=Z,1.4nm,0.4s,baz=163,slow=1.5,SNR=18						
CM13	Chiang Mai Arr	124.57	110	P	PKiKP	21 35 23.4	+0.3
CM05	Chiang Mai Arr	124.57	110	P	PKiKP	21 35 23.0	-0.1
CM04	Chiang Mai Arr	124.59	110	P	PKiKP	21 35 23.9	+0.8
CM01	Chiang Mai Arr	124.60	110	P	PKiKP	21 35 24.0	+0.9
CM02	Chiang Mai Arr	124.60	110	P	PKiKP	21 35 23.8	+0.7
CM15	Chiang Mai Arr	124.61	110	P	PKiKP	21 35 23.9	+0.7
CM31	Chiang Mai Arr	124.62	110	P	PKiKP	21 35 24.0	+0.9
CMAR	Chiang Mai Arr	124.62	110	PKP	PKPdf	21 35 22.7	-0.1
	comp=Z,5.8nm,0.9s,baz=234,slow=3.7,SNR=28						
CMAR	Chiang Mai Arr	124.62	110		PKPdf	21 35 22.3	-0.5
CM09	Chiang Mai Arr	124.63	110	P	PKiKP	21 35 24.1	+0.9
CM36	Chiang Mai Arr	124.75	110	P	PKPdf	21 35 23.0	-0.1
UTTA	Uttaradit	124.86	112	P	PKiKP	21 35 24.5	+0.9
EGMT	Eagleton	124.88	306	P	PKiKP	21 35 22.8	0.0
	baz=138						
CM35	Chiang Mai Arr	124.91	110	P	PKiKP	21 35 24.2	+0.5
CMMT	Chiang Mai	124.92	110	P	PKPdf	21 35 23.1	-0.3
CM33	Chiang Mai Arr	124.92	110	P	PKPdf	21 35 23.0	-0.4
O03E	Paynes Creek	125.05	292	P	PKPdf	21 35 23.1	0.0
	baz=138						
CM34	Chiang Mai Arr	125.05	110	P	PKiKP	21 35 24.0	0.0
O02D	Mt. Diablo Mer	125.47	291	P	PKiKP	21 35 24.9	+0.6
	baz=137						
PAYA	Payao	125.85	110	P	PKiKP	21 35 26.5	+0.9
MSO	Missoula	125.93	302	P	PKiKP	21 35 25.0	0.0
	baz=137						
N02D	Trinity Center	126.01	291	P	PKiKP	21 35 25.6	+0.3
	baz=137,SNR=6.1						
M04C	Macdoel	126.16	293	P	PKiKP	21 35 25.7	+0.1
	baz=137						
M02C	Callahan	126.39	292	P	PKiKP	21 35 26.2	+0.1
	baz=137						
L04D	Klamath Falls	126.71	293	P	PKPdf	21 35 25.7	-0.6
	baz=136						
JTMT	Jette	126.76	303		PKiKP	21 35 27.8	+1.2
J05D	Fort Rock, OR	126.94	294	P	PKiKP	21 35 27.2	0.0
	baz=136						
ABKAR	Akbulak array	127.30	55	PKPdf	PKPdf	21 35 26.8	-0.2
L02E	Cave Junction	127.33	292	P	PKiKP	21 35 27.6	-0.2
	baz=136						
J04D	Umpqua Nationa	127.35	294	P	PKiKP	21 35 28.1	0.0
	baz=136						
K02D	Willamette Mer	127.75	292	P	PKiKP	21 35 29.0	+0.2
	baz=136						
I04A	Tendick Farm,	127.90	294	P	PKiKP	21 35 28.8	-0.1
	baz=136						
KLMR	Klimovskoe	127.94	35	*e*PKIKP	PKPdf	21 35 26.7	-1.0
KLMR				pmax	pmax		
	comp=Z,25nm,1.5s						
KLMR	Klimovskoe	127.94	35	*e*PKPdf	PKPdf	21 35 26.8	-1.0
KLMR				AMP		21 35 31.1	
	comp=Z,25nm,1.5s						
KKAR	Karatay Array	128.05	67	PKIKP	PKPdf	21 35 28.1	-0.6
KKAR	Karatay Array	128.05	67	PKPdf	PKPdf	21 35 28.1	-0.6
KSH	Kashi	128.34	74	PKP	PKiKP	21 35 29.8	-0.3
KSH				PP	PP	21 37 39.1	+4.1
KSH				SS	SS	21 54 45.8	-2.3
KSH				AMB	AMB		
	comp=Z,360nm,4.1s						
KSH				LR	LR		
	comp=Z,280nm,5.7s						
KIRV	Kirov	129.63	41⇓	*e*PKIKP	PKPdf	21 35 31.1	+0.1
AAK	Ala-Archa	129.78	70	PKP	PKPdf	21 35 32.3	+0.1
	comp=Z,5.2nm,0.9s,baz=188,slow=4.5,SNR=16						
AAK	Ala-Archa	129.78	70	PKIKP	PKiKP	21 35 32.5	-0.4
AAK	Ala-Archa	129.78	70	PKPdf	PKiKP	21 35 32.5	-0.4
TMCR	Tamitsa	130.01	31	*e*PKIKP	PKPdf	21 35 31.2	-0.4
TMCR				pmax	pmax		
	comp=Z,25nm,1.1s						
D03D	Eldon	130.85	297	P	PKiKP	21 35 34.8	+0.2
	baz=133						
ARCES	ARCESS Array B	131.16	22	PKP	PKPdf	21 35 33.1	-0.6
	comp=Z,28nm,1.4s,baz=187,slow=0.7,SNR=11						
ARU	Arti	131.69	48	*i* PKIKP	PKPdf	21 35 35.2	+0.1
KMI	Kunming	132.09	109	PKP	PKPdf	21 35 36.3	-0.9
KMI				LR	LR		
	comp=Z,160nm,5.4s						
KMI				LR	LR		
	comp=Z,61nm,3.8s						
KMI				LR	LR		
	comp=Z,97nm,7.3s						
BRVK	Borovoye	134.67	57⇓	*i*PKIKP	PKPdf	21 35 40.9	+0.1
BRVK	Borovoye	134.67	57	PKPdf	PKiKP	21 35 42.4	+0.1
YKA	Yellowknife Ar	136.67	317	PKhKP	PKPpre	21 35 32.6	
	comp=Z,0.7nm,0.7s,baz=114,slow=3.8,SNR=4.8						
YKA				PKP	PKPdf	21 35 43.6	-0.6
	comp=Z,2.2nm,0.5s,baz=115,slow=3.2,SNR=22						
YKA				PP	PP	21 38 26.3	-1.5
	comp=Z,1.9nm,1.0s,baz=118,slow=8.0,SNR=6.8						
YKA				SKPbc	SKPbc	21 39 10.4	-3.3
	comp=Z,1.2nm,0.7s,baz=123,slow=3.1,SNR=7.6						
MK31	Makanchi Array	136.69	71⇑	*e*PKIKP	PKPdf	21 35 44.3	-0.5
MK31	Makanchi Array	136.69	71	PKPdf	PKiKP	21 35 46.0	-0.6
MKAR	Makanchi Array	136.69	71	PKhKP	PKPpre	21 35 33.0	
	comp=Z,0.5nm,0.7s,baz=211,slow=4.0,SNR=4.9						
MKAR				PKP	PKPdf	21 35 44.5	-0.4
	comp=Z,1.4nm,0.9s,baz=247,slow=2.7,SNR=6.7						
MKAR				PP	PP	21 38 29.6	+1.3
	comp=Z,0.3nm,0.8s,baz=218,slow=6.2,SNR=1.7						
MKAR				SKPbc	SKPbc	21 39 12.7	-1.7
	comp=Z,0.5nm,0.8s,baz=180,slow=1.4,SNR=2.6						
MKAR	Makanchi Array	136.69	71	PKPdf	PKiKP	21 35 46.0	-0.6
SPITS	Spitsbergen Ar	136.86	12	PKhKP	PKPpre	21 35 37.5	
	comp=Z,8.1nm,0.9s,baz=211,slow=8.1,SNR=1.6						
KURBB	Kurchatov Arra	137.16	65	PKhKP	PKPpre	21 35 36.3	
	comp=Z,0.8nm,0.9s,baz=260,slow=2.1,SNR=7.2						
KURBB				PKP	PKPdf	21 35 44.5	-1.0
	comp=Z,1.7nm,0.8s,baz=232,slow=2.5,SNR=12						
CD2	Chengdu	137.23	105	PKP	PKPdf	21 35 47.0	+0.6
KURK	Kurchatov	137.26	65⇓	*e*PKIKP	PKiKP	21 35 47.0	-0.5
WMQ	Urumqi	137.65	78	*e*PKP	PKiKP	21 35 47.9	-0.8
WMQ				LR	LR		
	comp=Z,340nm,28.9s						
WMQ				LR	LR		
	comp=Z,310nm,29.2s						
RES	Resolute Bay	138.33	338	PKP	PKPdf	21 35 46.4	-0.5
	comp=Z,11nm,1.1s,baz=200,slow=1.2,SNR=12						
DGZ	Jazzator, Alta	141.18	71⇑	*i*PKIKP	PKiKP	21 35 54.9	-0.9
LZH	Lanzhou	141.21	100	*e*PKP	PKiKP	21 35 55.3	-1.1
GTA	Gaotai	141.37	93	*e*PKP	PKPdf	21 35 50.4	-3.4
ZAA0	Zalesovo Array	142.23	64		PKiKP	21 35 57.2	-0.4
ZALV	Zalesovo Beam	142.23	64	PKhKP	PKPdf	21 35 48.7	-5.9
	comp=Z,1.3nm,0.6s,baz=260,slow=4.6,SNR=5.7						
XAN	Xi'an	142.41	107	PKP	PKPdf	21 35 51.6	-4.1
NJ2	Nanjing	145.86	121	*e*PKPbc	PKPab	21 36 02.6	-0.2
INK	Inuvik	146.31	320	PKPbc	PKPdf	21 36 01.1	-0.1
	comp=Z,36nm,1.0s,baz=88,slow=4.3,SNR=38						
INK	Inuvik	146.31	320	PKP2	PKPbc	21 36 02.4	-0.2
INK	Inuvik	146.31	320	PKPdf	PKPbc	21 36 02.4	-0.2
TIY	Taiyuan	147.05	107	*e*PKPbc	PKPab	21 36 06.8	-0.6
TIY				PKPab	PKiKP	21 36 09.1	+0.9
BTO	Baotou	147.82	101	*e*PKPbc	PKPbc	21 36 07.4	-0.4
BCAR	Beaver Creek A	147.99	309		PKPbc	21 36 07.5	0.0
TIA	Tai'an	148.34	114	PKPbc	PKPbc	21 36 09.3	+0.1
K27K	Chicken	148.41	311		PKPbc	21 36 08.8	+0.3
N25K	Chitina, Valde	148.76	306	P	PKPbc	21 36 09.9	+0.3
	baz=109						
Q23K	Middleton Isla	148.83	301	P	PKiKP	21 36 10.7	-0.2
	baz=111						
HHC	Hu-ho-hao-te	148.84	102	*e*PKPbc	PKPbc	21 36 10.4	-0.1
EYAK	Cordova Ski Ar	148.94	303		PKiKP	21 36 11.2	0.0
SCRK	Sand Creek	149.20	310	P	PKPbc	21 36 10.5	-0.2
	baz=106						
MOY	Mondy	149.49	76	*e*PKP2	PKPbc	21 36 11.4	-0.3
RIDG	Independent Ri	149.50	309		PKiKP	21 36 12.2	-0.2
PAX	Paxson	149.56	308	PKP2	PKPbc	21 36 11.6	+0.1
PAX	Paxson	149.56	308		PKPbc	21 36 11.6	+0.1
M24K	Tolsona, Glenn	149.63	306	P	PKPbc	21 36 12.0	+0.3
	baz=107,SNR=9.7						
ZAK	Zakamensk	150.08	80	*e*PKIKP	PKPbc	21 36 12.4	-0.8
ZAK				pmax	pmax		
	comp=Z,19nm,1.2s						
BMAR	Burnt Mountain	150.19	317		PKPbc	21 36 10.9	-1.9
SONM	Songino Array	150.41	87	PKP	PKPdf	21 36 08.0	-0.8
	comp=Z,1.0nm,0.9s,baz=241,slow=0.6,SNR=4.9						
SONM				PKPbc	PKPbc	21 36 13.8	-0.3
	comp=Z,28nm,1.1s,baz=221,slow=2.2,SNR=57						
SONM	Songino Array	150.41	87		PKPbc	21 36 13.9	-0.2
SML	Sawmill	150.52	305	PKPab	PKPab	21 36 20.6	-0.1
SEW	Seward	150.53	301	PKPbc	PKPbc	21 36 13.9	+0.1
HDA	Harding Lake	150.56	310	P	PKPbc	21 36 13.3	-0.5
	baz=103,SNR=12						
IL31		150.62	311		PKPbc	21 36 13.8	0.0
ILAR	Eielson Array	150.62	311	PKP	PKPdf	21 36 05.0	-3.5
	comp=Z,1.4nm,1.0s,baz=169,slow=0.5,SNR=8.7						
ILAR				PKPbc	PKPbc	21 36 13.4	-0.5
	comp=Z,26nm,1.0s,baz=115,slow=1.1,SNR=79						
ILAR	Eielson Array	150.62	311		PKPbc	21 36 13.9	0.0
ULN	Ulaanbaatar	150.79	87⇓	*e*PKIKP	PKPbc	21 36 14.8	-0.3
POKR	Poker Plat Res	150.91	312	P	PKPbc	21 36 14.5	-0.1
	baz=101						
POKR	Poker Plat Res	150.91	312		PKPab	21 36 22.7	+0.5
TLY	Talaya	150.93	78	PKPbc	PKPbc	21 36 14.8	-0.3
	comp=Z,7.5nm,0.9s,baz=239,slow=4.7,SNR=11						
TLY	Talaya	150.93	78	*e*PKIKP	PKPbc	21 36 15.1	0.0
TLY				pmax	pmax		
	comp=Z,36nm,1.1s						
RC01	Rabbit Creek A	150.96	303	P	PKPbc	21 36 14.7	-0.1
	baz=107,SNR=5.8						
CCB	Clear Creek Bu	150.97	311	PKPab	PKPab	21 36 22.0	-0.5
COLA	College	151.04	311	*de*PKIKP	PKPbc	21 36 14.6	-0.2
TCOL	CIGO, UAF Yank	151.04	311	P	PKPbc	21 36 14.5	-0.4
	baz=101						
TCOL	CIGO, UAF Yank	151.04	311	PKPab	PKPab	21 36 21.4	-1.3
WRH	Wood River Hil	151.06	310		PKPbc	21 36 14.9	0.0
WRH				PKPab	PKPab	21 36 22.5	-0.3
MDM	Murphy Dome	151.21	311		PKPbc	21 36 14.4	-0.9
MDM				PKPab	PKPab	21 36 23.7	+0.2
MCK	McKinley	151.27	309	P	PKPbc	21 36 15.0	-0.5
	baz=102,SNR=15						
KDAK	Kodiak Island	151.28	296	PKPbc	PKPbc	21 36 15.5	-0.2
	comp=Z,12nm,0.4s,baz=119,slow=3.3,SNR=30						
KDAK	Kodiak Island	151.28	296	PKIKP	PKiKP	21 36 16.8	+0.7
KDAK	Kodiak Island	151.28	296		PKiKP	21 36 16.8	+0.7
HOM	Homer	151.44	300	P	PKPbc	21 36 15.9	0.0
	baz=108						
NEA2	Nenana	151.50	310	P	PKPbc	21 36 15.6	-0.4
	baz=101,SNR=14						
CUT	Chulitna	151.56	306	P	PKiKP	21 36 16.4	-0.1
	baz=104						
BWN	Browne	151.59	309	PKPab	PKPab	21 36 23.6	-1.4
I23K	Minto, Yukon-K	151.72	311	P	PKPbc	21 36 16.1	-0.3
	baz=100,SNR=5.6						
I23K	Minto, Yukon-K	151.72	311	PKPab	PKPab	21 36 22.5	-3.0
BPAW	Bear Paw Mtn.	152.23	309		PKPbc	21 36 17.6	-0.1
COLD	Coldfoot	152.32	316	P	PKiKP	21 36 18.0	0.0
	baz=95,SNR=8.8						
COLD	Coldfoot	152.32	316		PKiKP	21 36 18.5	+0.4
KSRS	Korea Array	154.50	127	PKPbc	PKiKP	21 36 23.5	+0.1
	comp=Z,3.2nm,1.1s,baz=212,slow=4.1,SNR=6.5						
KSRS				PKPab	PKPab	21 36 38.3	+0.3
	comp=Z,3.3nm,0.8s,baz=204,slow=4.5,SNR=6.9						
MJAR	Matsushiro Arr	157.62	146	PKPab	PKPab	21 36 51.5	0.0
	comp=Z,4.6nm,0.9s,baz=198,slow=5.2,SNR=8.2						
BOD	Bodaibo	158.76	70	*e*PKP2	PKPab	21 36 55.4	-0.5
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	Ussuriysk Ar.	161.74	123	PKPab	PKPab	21 37 08.5	-0.7
	comp=Z,3.3nm,0.7s,baz=223,slow=4.3,SNR=6.7						
USRK				pPKPab	sPKPab	21 37 23.5	+0.7
	comp=Z,2.4nm,0.6s,baz=212,slow=5.7,SNR=3.2						
KLR	Kul'dur	165.10	110	PKPab	PKPab	21 37 22.7	-1.2
	comp=Z,4.2nm,0.7s,baz=248,slow=4.0,SNR=12						
KLR				pPKPab	sPKPab	21 37 38.3	+0.8
	comp=Z,2.2nm,0.6s,baz=231,slow=6.4,SNR=3.7						
BILL	Bilibino	166.94	338	*e*PKIKP	PKPdf	21 36 28.5	+1.0
BILL				*e*		21 41 19.7	
BILL				*e*PPP	PPP	21 45 14.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SEY	Seymchan	173.44	4	PKP	PKPdf	21 36 28.6	-2.6
	comp=Z,3.6nm,1.0s,baz=21,slow=0.6,SNR=7.7						
SEY				pPKP	sPKPdf	21 36 44.7	-0.4
	comp=Z,1.3nm,0.7s,baz=66,slow=3.8,SNR=3.4						

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*JMA **23** 21:23:44.0±0.3, 43°.47N×147°.09E, h33^{km}, M3.0*

*IDC **23** 21:23:48.0±8.4, 43°.17N×147°.14E, h89^{km}±39^{km}, mb3.2/5, mb1 3.3/7, mb1mx3.0/68, mbtmp3.6/7, Error ellipse: s-maj=114.7km s-min=26.6km az=167.0*

ISC 23 21:23:43.6±1.4**, 43°.3N**±0°.1×**146°.92E**±0°.08**, h24**^{km}**, n20,** σ**1^{s}58**/18**, mb3.3**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.86	276	P	Pn	21 24 01.9	+1.7
NEM2				*e*S	Sn	21 24 14.9	+2.9
JRA	Rausu	1.46	297	P	Pb	21 24 09.3	-0.7
JNK	Nakash	1.63	281	P	Pb	21 24 12.7	-0.2
JNK				*e*S	Sb	21 24 33.0	-0.1
JAK	Akkeshi	1.65	261	P	Pb	21 24 14.0	+0.7
JTKR	Abashiri--Toko	2.29	288	P	Pb	21 24 22.5	-1.7
JAR	Ashorobuto	2.30	271	P	Pb	21 24 23.7	-0.6
JCH	Churui	2.70	257	P	Pb	21 24 29.7	-1.4
JCH				*e*S	Sb	21 25 03.4	-0.3
ASAJ	Asahikawa	3.24	286	P	Pb	21 24 39.5	-0.8
	0.8nm,0.3s,baz=105,slow=12,SNR=2.3						
ASAJ				S	Sb	21 25 19.4	0.0
	0.7nm,0.3s,baz=316,slow=20,SNR=1.8						
PETK	Petropavlovsk-	12.16	32	P	Pn	21 26 38.0	+2.8
	0.1nm,0.3s,baz=198,slow=14,SNR=2.4						
SONM	Songino Array	28.50	293	P	P	21 29 35.8	-1.1
	0.3nm,0.5s,baz=96,slow=9.1,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.86	138	T	T	22 00 17.9	
	baz=330,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	28.88	138	T	T	22 00 21.2	
	baz=330,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	28.88	138	T	T	22 00 27.2	
	baz=330,slow=75,SNR=9.4						
H11S1	WAKE ISLAND Hy	29.82	140	T	T	22 01 32.8	
	baz=331,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.82	140	T	T	22 01 34.7	
	baz=331,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	29.84	140	T	T	22 01 34.6	
	baz=331,slow=76,SNR=10.0						
MKAR	Makanchi Array	44.65	298	P	P	21 31 54.0	-0.2
	0.2nm,0.6s,baz=75,slow=8.8,SNR=2.7						
KURBB	Kurchatov Arra	45.73	304	P	P	21 32 01.3	-1.3
	0.1nm,0.5s,baz=75,slow=8.3,SNR=1.5						
FINES	FINESS Array B	65.21	333	P	P	21 34 20.6	-1.8
	1.2nm,0.6s,baz=46,slow=8.0,SNR=13						
NOA	NORSAR Array B	69.97	339	P	P	21 34 50.4	-2.2
	0.9nm,0.8s,baz=30,slow=5.8,SNR=1.9						

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*NOU **23** 21:26:28.2, 56°.89N×156°.91W, h13^{km}, MLv4.2, Alaska Peninsula*

*IDC **23** 21:26:30.5±2.6, 57°.05N×157°.08W, h79^{km}±22^{km}, mb3.6/20, mb1 3.8/23, mb1mx3.6/58, mbtmp3.9/23, MS3.4/2, Ms1 3.4/2, ms1mx2.8/45, Error ellipse: s-maj=25.6km s-min=13.7km az=7.0*

*NEIC **23** 21:26:30.3±1.1, 56°.79N±0°.04×156°.75W±0°.07, h97^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=5.2km az=55.0*

*AEIC **23** 21:26:31±2.2, 56°.79N±0°.04×156°.72W±0°.08, h87^{km}±6^{km}, ML3.7, mb3.9/5(NEIC), ML3.9/20(NEIC), Error ellipse: s-maj=6.4km s-min=5.7km az=114.0*

ISC 23 21:26:31.3±0.5**, 56°.89N**±0°.05×**156°.73W**±0°.04**, h100**^{km}**, n195,** σ**1^{s}39**/198**, mb3.8**/23**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLK4	Peulik 4	0.78	15		Pn	21 26 50.0	+0.5
PLBL	Peulik Blue Cr	0.82	357		Pn	21 26 49.7	-0.1
PLK3	Peulik 3	0.84	17		Pn	21 26 50.4	+0.3
PLK3					Sn	21 27 04.6	+0.4
PLK1	Peulik 1	0.92	4		Pn	21 26 50.9	0.0
CHGN	Chignik	1.10	238		Sn	21 27 04.9	-4.0
CHGN	Chignik	1.10	238	Pn	Pn	21 26 50.6	-2.2
CHGN	Chignik	1.10	238	IAML		21 27 05.4	
	comp=E,3µm,0.1s						
CHGN				IAML		21 27 06.2	
	comp=N,3µm,0.2s						
PLK5	Peulik 5	1.12	356		Pn	21 26 53.2	+0.3
PLWL	Peulik Whale M	1.18	10		Pn	21 26 53.7	0.0
CHIR	Chirikof Islan	1.23	149		Pn	21 26 52.1	-2.2
CHIR	Chirikof Islan	1.23	149		Sn	21 27 08.3	-3.4
CHIR				IAML		21 27 08.9	
	comp=E,2µm,0.4s						
CHIR				IAML		21 27 09.1	
	comp=N,1µm,0.8s						
SII	Sitkinak Islan	1.44	102		Pn	21 26 55.8	-1.1
SII					Sn	21 27 14.1	-2.1
SII	Sitkinak Islan	1.44	102	IAML		21 27 23.7	
	comp=N,2µm,0.5s						
ANCK	Angle Creek	1.48	26		Pn	21 26 57.7	+0.4
KABR	Katmai Barrier	1.57	37		Pn	21 26 58.6	+0.1
KABU	Katmai Buttres	1.59	29		Pn	21 26 59.2	+0.5
KCE	Katmai Mt Cerb	1.60	31		Pn	21 26 59.5	+0.7
KBM	Katmai Bkd Mtn	1.62	30		Pn	21 26 59.6	+0.6
KELA	Mount Kelaz	1.65	18		Pn	21 26 59.4	0.0
KCG	Knife Ck. Glac	1.67	31		Pn	21 27 00.1	+0.4
KVTA	Katmai Vly 10	1.69	27		Pn	21 27 00.3	+0.4
OHAK	Old Harbor	1.91	78		Pn	21 27 01.9	-0.7
OHAK					Sn	21 27 24.3	-2.3
OHAK	Old Harbor	1.91	78	IAML		21 27 24.8	
	comp=N,991nm,0.3s						
OHAK				IAML		21 27 25.7	
	comp=E,996nm,0.4s						
KAHC	Katmai Hardscr	1.99	27		Pn	21 27 04.2	+0.4
KDAK	Kodiak Island	2.42	66	P	Pn	21 27 08.8	-0.4
	comp=E,66nm,0.3s,baz=257,slow=6.5,SNR=1603						

KDAK				S	Sn	21 27 36.6	-1.9
	comp=E,88nm,0.3s,baz=74,slow=22,SNR=56						
KDAK	Kodiak Island	2.42	66		Pn	21 27 08.9	-0.4
KDAK				IAML		21 27 37.6	
	comp=E,555nm,0.2s						
KDAK	Kodiak Island	2.42	66	Sn	Sn	21 27 36.7	-1.7
SDPT	Sand Point	2.60	235		Pn	21 27 09.8	-1.9
SDPT					Sn	21 27 39.5	-3.2
SDPT	Sand Point	2.60	235	IAML		21 27 40.4	
	comp=E,481nm,0.8s						
SDPT				IAML		21 27 40.8	
	comp=N,328nm,0.5s						
CNBA	Chernabura Isl	2.62	219		Pn	21 27 09.5	-2.5
AUW	Augustine West	3.03	33		Pn	21 27 18.6	+1.3
AUCH	Augustine Cone	3.03	34		Pn	21 27 18.8	+1.3
AUH	Augustine H	3.04	34		Pn	21 27 18.8	+1.3
AUL	Augustine Lava	3.05	34		Pn	21 27 18.9	+1.2
PS4A	Pavlof South-4	3.26	244		Pn	21 27 19.3	-1.1
HAG	Hague Volcano	3.30	244		Pn	21 27 19.8	-1.2
OPT	Oil Point	3.33	32		Pn	21 27 22.5	+1.0
DT1	Dutton Round H	3.59	243		Pn	21 27 23.3	-1.6
ILS	Iliamna Low So	3.63	31		Pn	21 27 26.6	+1.1
IVE	Iliamna Volcan	3.70	30		Pn	21 27 27.4	+1.0
BALA	Baldy Mountain	3.80	246		Pn	21 27 27.3	-0.3
HOM	Homer	3.87	42		Pn	21 27 28.4	-0.2
CNPM	China Poot	3.93	45		Pn	21 27 29.8	+0.3
CNPM	China Poot	3.93	45	Sn	Sn	21 28 12.4	-2.2
CNPM				IAML		21 28 15.2	
	comp=N,119nm,0.6s						
CNPM				IAML		21 28 15.4	
	comp=E,116nm,0.2s						
RED	Redoubt Volcan	4.10	29		Pn	21 27 32.9	+1.0
RSO	Redoubt South	4.14	28		Pn	21 27 33.6	+1.1
NCT	North Crescent	4.18	27		Pn	21 27 33.7	+0.7
BRLK	Bradley Lake	4.22	44		Pn	21 27 33.0	-0.4
BRLK	Bradley Lake	4.22	44	Sn	Sn	21 28 19.0	-2.6
BRSE	Bradley Lake S	4.26	45		Pn	21 27 33.8	-0.2
SVW2	Sparrevohn	4.26	8		Pn	21 27 34.5	+0.5
FALS	False Pass	4.28	244	Pn	Pn	21 27 32.9	-1.3
RDT	Redoubt	4.33	30		Pn	21 27 35.8	+0.9
BRPK	Brown Peak	4.55	243		Pn	21 27 36.4	-1.5
CAPN	Captain Cook N	4.85	34		Pn	21 27 43.6	+1.7
SPCR	Spurr Chakacha	4.92	26		Pn	21 27 43.9	+1.0
SPBG	Spurr Blockage	4.93	25		Pn	21 27 43.6	+0.6
SPCN	Chakachatna No	4.94	26		Pn	21 27 44.5	+1.3
SLKM	Skilak Lake	4.97	40		Pn	21 27 43.3	-0.2
SPCP	Crater Peak Br	4.99	26		Pn	21 27 45.1	+1.3
SEW	Seward	5.00	47		Pn	21 27 43.0	-0.9
SPCG	Spurr Capps Gl	5.04	27		Pn	21 27 45.5	+1.0
STLK	Strandline Lak	5.27	27		Pn	21 27 48.4	+0.8
SUA	Susitna One	5.53	31		Pn	21 27 51.7	+0.6
SUA	Susitna One	5.53	31	Sn	Sn	21 28 51.5	-1.9
RC01	Rabbit Creek A	5.55	38		Pn	21 27 51.4	0.0
SKT	Skwentna	5.75	25		Pn	21 27 54.8	+0.7
AKUT	Akutan	5.83	246	Pn	Pn	21 27 53.9	-1.3
PWL	Port Wells	5.90	44		Pn	21 27 55.5	-0.6
Q23K	Middleton Isla	6.06	61	Pn	Pn	21 27 57.1	-1.1
TTA	Tatalina	6.07	3		Pn	21 27 59.3	+0.8
PMR	Palmer	6.12	36		Pn	21 27 54.8	-4.3
KNK	Knik Glacier	6.22	40		Pn	21 27 59.9	-0.6
GHO	Glory Hole Cre	6.32	36		Pn	21 28 00.9	-1.0
UNV	Unalaska Valle	6.35	245		Pn	21 28 00.1	-2.1
HIN	Hinchinbrook I	6.39	52		Pn	21 28 02.6	-0.2
GLI	Glacier Island	6.40	47		Pn	21 28 01.8	-1.0
PPLA	Purkeypile	6.45	19		Pn	21 28 05.8	+2.2
MSW	Makushin Switc	6.45	247		Pn	21 28 02.2	-1.4
SML	Sawmill	6.54	38		Pn	21 28 04.1	-0.7
MGOD	Makushin Gods	6.56	246		Pn	21 28 03.7	-1.4
FID	Port Fidalgo	6.58	50		Pn	21 28 03.6	-1.7
MAPS	Pakushin South	6.59	246		Pn	21 28 04.1	-1.4
EYAK	Cordova Ski Ar	6.79	53		Pn	21 28 07.9	-0.3
SCM	Sheep Creek Mo	6.90	40		Pn	21 28 09.5	-0.3
DIV	Divide	7.08	49		Pn	21 28 11.5	-0.6
WAT7	Susitna Watana	7.16	30		Pn	21 28 12.2	-1.1
KLU	Klutina	7.22	46		Pn	21 28 13.6	-0.5
WAT1	Susitna Watana	7.24	31		Pn	21 28 13.0	-1.3
KTH	Kantishna Hill	7.28	21		Pn	21 28 15.5	+0.6
WAT6	Susitna Watana	7.29	35		Pn	21 28 13.8	-1.4
TRF	Thorofare Moun	7.32	23		Pn	21 28 15.7	+0.1
WAT2	Susitna Watana	7.34	30		Pn	21 28 14.5	-1.2
BMRM	Bremner River	7.49	52		Pn	21 28 16.8	-0.9
M24K	Tolsona, Glenn	7.50	41		Pn	21 28 17.6	-0.2
SUCK	Suckling Hills	7.50	59	Pn	Pn	21 28 17.9	0.0
RND	Reindeer	7.62	28		Pn	21 28 18.6	-1.0
BERG	Berg Lake	7.65	57		Pn	21 28 19.6	-0.3
BPAW	Bear Paw Mtn.	7.77	19		Pn	21 28 21.1	-0.4
DHY	Denali Highway	7.77	33		Pn	21 28 20.6	-1.0
N25K	Chitina, Valde	7.81	48		Pn	21 28 22.2	+0.1
MCK	McKinley	7.88	26		Pn	21 28 22.2	-0.8
KHIT	Khitrov Hills	7.88	58		Pn	21 28 22.8	-0.3
CRQM	Cirque	8.05	56		Pn	21 28 25.3	-0.1
GLB	Gilahina Butte	8.05	50		Pn	21 28 24.5	-0.8
VRDI	Verde Repeater	8.11	52		Pn	21 28 25.9	-0.3
BWN	Browne	8.13	23		Pn	21 28 25.4	-1.0
TGL	Tana Glacier	8.19	56		Pn	21 28 27.2	0.0
PAX	Paxson	8.31	38		Pn	21 28 28.3	-0.6
ISLE	Juniper Island	8.36	58		Pn	21 28 29.5	-0.1
MCARA	McCarthy VSAT	8.36	52		Pn	21 28 29.2	-0.3
MESA	MESA	8.40	61	Pn	Pn	21 28 30.8	+0.5
KIAG	Kiagna River	8.46	55		Pn	21 28 30.6	-0.5
BALM	Baldy	8.51	55		Pn	21 28 31.6	0.0
BALM					Sn	21 30 01.2	-4.7
PTPK	Patty Peak	8.52	54		Pn	21 28 31.6	-0.3
YAH	Yahtse	8.56	60		Pn	21 28 32.4	0.0
NEA2	Nenana	8.59	23		Pn	21 28 30.7	-1.9
GRNC	Granite Creek	8.67	57		Pn	21 28 34.0	0.0
WRH	Wood River Hil	8.70	25		Pn	21 28 32.1	-2.0
ANM	Nome	8.78	335	Pn	Pn	21 28 35.9	+0.7
BARN	Barnard Glacie	8.83	55		Pn	21 28 35.5	-0.6
BARN	Barnard Glacie	8.83	55		Sn	21 30 10.6	-3.2
TABL	Table Mountain	8.87	60		Pn	21 28 36.8	+0.2
MENT	Mentasta	8.91	42		Pn	21 28 37.5	+0.6
CCB	Clear Creek Bu	8.92	26		Pn	21 28 34.9	-2.1
HDA	Harding Lake	8.93	28		Pn	21 28 35.7	-1.6
CTGM	Chitina Glacie	8.95	56		Pn	21 28 38.0	+0.4
I23K	Minto, Yukon-K	9.02	20		Pn	21 28 37.0	-1.4
RIDG	Independent Ri	9.04	36		Pn	21 28 38.5	-0.3
LOGN	Logan Glacier	9.05	58		Pn	21 28 39.2	+0.2
PS08	TAPS Pump Stn8	9.07	28		Pn	21 28 37.5	-1.6
MDM	Murphy Dome	9.09	23		Pn	21 28 37.6	-1.8
COLA	College	9.10	25		Pn	21 28 38.1	-1.3
PCA	Pinnacle	9.20	63		Pn	21 28 41.5	+0.5
DOT	Dot Lake	9.24	38	Pn	Pn	21 28 42.0	+0.6
IM03		9.24	8		Pn	21 28 41.6	+0.3
IL31		9.24	27		Pn	21 28 39.7	-1.7
ILAR	Eielson Array	9.24	27	P	Pn	21 28 39.2	-2.2
	comp=E,2.5nm,0.3s,baz=217,slow=14,SNR=101						
ILAR				S	Sn	21 30 17.0	-6.4
	comp=E,1.3nm,0.3s,baz=214,slow=24,SNR=11						
ILAR	Eielson Array	9.24	27		Pn	21 28 39.6	-1.9
POKR	Poker Plat Res	9.40	25		Pn	21 28 42.2	-1.4
YUK2	White River	9.48	52		Pn	21 28 45.4	+0.7
BCPM	Bancas Point	9.48	64	Pn	Pn	21 28 44.5	-0.1
SCRK	Sand Creek	9.48	36		Pn	21 28 43.0	-1.9
PNL	Peninsula	9.54	66		Pn	21 28 45.0	-0.7
YUK3	Moose Creek	9.64	53		Pn	21 28 47.2	+0.1
BC03		9.70	44		Pn	21 28 48.1	+0.4
BCAR	Beaver Creek A	9.70	44		Pn	21 28 47.3	-0.5
K27K	Chicken	10.16	39		Pn	21 28 53.2	-0.7
PRP	Porcupine Dome	10.19	27		Pn	21 28 52.5	-1.9
HYT	Haines Junctio	10.70	60	Pn	Pn	21 29 01.5	+0.2
COLD	Coldfoot	10.81	14	Pn	Pn	21 29 03.8	+1.0
EGAK	Eagle	10.94	37		Pn	21 29 03.6	-0.8
DAWY	Dawson	11.15	43		Pn	21 29 07.5	+0.2
BM03	Burnt Mountain	11.96	23		Pn	21 29 14.6	-3.6
DLBC	Dease Lake	14.34	73	P	P	21 29 53.5	0.0
	comp=E,0.4nm,0.3s,baz=248,slow=11,SNR=1.8						
DLBC	Dease Lake	14.34	73	P	Pn	21 29 50.6	+1.2
INK	Inuvik	15.52	33	P	P	21 30 05.8	-0.6
	comp=E,0.5nm,0.3s,baz=216,slow=10,SNR=5.1						
INK	Inuvik	15.52	33		Pn	21 30 05.0	+0.9
C36M	Paulatuk	19.01	36	P	P	21 30 45.9	+1.1
C36M				IAmb	IAmb	21 30 46.2	
	comp=Z,4.4nm,0.8s						
YKA	Yellowknife Ar	21.67	58	P	P	21 31 16.0	+2.6
	comp=Z,0.7nm,0.6s,baz=272,slow=10,SNR=8.9						
YKA				PcP	PcP	21 35 10.8	+0.4
	comp=Z,0.2nm,0.4s,baz=293,slow=0.8,SNR=3.6						
SEY	Seymchan	25.61	305	P	P	21 31 49.9	-1.0
	comp=Z,0.6nm,0.3s,baz=102,slow=10,SNR=5.5						
PEA0B	Petropavlovsk-	26.03	281	P	P	21 31 55.3	+0.5
PETK	Petropavlovsk-	26.03	281	P	P	21 31 53.9	-0.9
	comp=Z,2.1nm,0.5s,baz=75,slow=11,SNR=14						
PETK	Petropavlovsk-	26.03	281	P	P	21 31 55.1	+0.4
KRMB	Red Mountain	26.05	112	P	P	21 31 54.3	-0.9
KRMB				IAmb	IAmb	21 31 58.5	
	comp=Z,3.3nm,0.9s						
MA2	Magadan	27.18	298	LR	LR	21 42 27.6	
	comp=Z,60nm,20.6s,baz=279,slow=36						
NVAR	Mina Array Bea	31.23	110	P	P	21 32 45.4	+4.1
	comp=Z,0.1nm,0.3s,baz=320,slow=9.7,SNR=1.6						
PDAR	Pinedale Array	32.83	95	P	P	21 32 57.3	+2.0
	comp=Z,0.1nm,0.4s,baz=341,slow=5.2,SNR=2.4						
PDAR				pP	pP	21 33 19.0	+1.3
	comp=Z,0.4nm,0.6s,baz=305,slow=4.6,SNR=3.3						
ANMO	Albuquerque	40.11	101	P	P	21 34 00.5	+3.3
	comp=Z,0.7nm,0.4s,baz=330,slow=7.1,SNR=2.4						
KLR	Kul'dur	41.81	291	P	P	21 34 09.8	-0.9
	comp=Z,1.9nm,0.6s,baz=75,slow=8.1,SNR=7.7						
SPITS	Spitsbergen Ar	45.12	2	P	P	21 34 37.2	+0.3
	comp=Z,9.0nm,1.0s,baz=46,slow=6.2,SNR=1.9						
TXAR	Lajitas Array	45.94	104	pP	pP	21 35 07.9	+0.4
	comp=Z,0.7nm,0.8s,baz=316,slow=5.0,SNR=3.2						
KSRS	Korea Array	51.92	282	P	P	21 35 29.8	+0.3
	comp=Z,1.1nm,0.6s,baz=39,slow=6.7,SNR=3.6						
SONM	Songino Array	55.01	305	P	P	21 35 52.4	+0.3
	comp=Z,1.9nm,0.5s,baz=38,slow=6.1,SNR=14						
FINES	FINESS Array B	61.99	358	P	P	21 36 40.3	+0.1
	comp=Z,1.8nm,0.8s,baz=19,slow=8.8,SNR=1.4						
NOA	NORSAR Array B	62.03	7	P	P	21 36 40.8	+0.3
	comp=Z,0.6nm,0.6s,baz=349,slow=4.1,SNR=3.5						
KURBB	Kurchatov Arra	63.56	324	P	P	21 36 50.5	-0.3
	comp=Z,0.4nm,0.4s,baz=28,slow=6.4,SNR=6.2						
MKAR	Makanchi Array	65.59	320	P	P	21 37 03.1	-1.0
	comp=Z,0.3nm,0.5s,baz=29,slow=4.4,SNR=4.8						
AB05	Akbulak array	69.92	335	P	P	21 37 30.7	-0.4
AB06	Akbulak array	69.92	335	P	P	21 37 30.8	-0.4
AB02	Akbulak array	69.93	335	P	P	21 37 30.2	-0.9
AB01	Akbulak array	69.94	335	P	P	21 37 30.8	-0.4
AB04	Akbulak array	69.94	335	P	P	21 37 31.0	-0.2
AB31	Akbulak array	69.94	335	P	P	21 37 31.1	-0.1
AB31				IAmb	IAmb	21 37 31.8	
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	69.94	335	P	P	21 37 31.2	-0.1
AB09	Akbulak array	69.94	335	P	P	21 37 30.8	-0.4
AB03	Akbulak array	69.94	335	P	P	21 37 31.1	-0.2
AB07	Akbulak array	69.95	335	P	P	21 37 30.8	-0.5
AB08	Akbulak array	69.96	335	P	P	21 37 31.1	-0.2
AKASG	Malin Array Be	72.66	356	P	P	21 37 47.3	-0.3
	comp=Z,0.7nm,0.4s,baz=7.1,slow=5.8,SNR=4.1						
GERES	GERESS Array B	74.33	7	P	P	21 37 58.5	+0.9
	comp=Z,0.2nm,0.4s,baz=45,slow=2.5,SNR=3.7						
GEYT	Alibeck	81.06	333	P	P	21 38 36.4	+1.4
	comp=Z,1.6nm,0.6s,baz=19,slow=11,SNR=3.9						
ESDC	Sonseca Array	81.09	21	P	P	21 38 36.4	+1.2
	comp=Z,0.8nm,0.7s,baz=342,slow=5.1,SNR=7.8						
CMAR	Chiang Mai Arr	82.29	292	P	P	21 38 41.6	-0.1
	comp=Z,1.6nm,0.6s,baz=14,slow=5.4,SNR=12						
BRTR	Keskin Array B	83.36	352	P	P	21 38 47.2	+0.1
	comp=Z,0.6nm,0.7s,baz=29,slow=3.7,SNR=3.2						
BRTR				LR	LR	22 20 56.1	
	comp=Z,33nm,20.3s,baz=199,slow=39						

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*NEIC **23** 21:39:42.0±1.4, 21°.7S±0°.1×178°.1W±0°.1, h567^{km}±17^{km}, mb4.3/32, Error ellipse: s-maj=21.9km s-min=12.9km az=52.0*

*IDC **23** 21:39:47.6±13.0, 22°.20S×178°.51W, h596^{km}±87^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.1/28, mbtmp4.4/5, Error ellipse: s-maj=202.8km s-min=50.1km az=54.0*

ISC 23 21:39:41.6±0.8**, 21°.7S**±0°.1×**178°.2W**±0°.1**, h550**^{km}**, n47, σ0^{s}.77**/43**, mb4.2**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	7.49	178	P	P	21 41 34.5	+0.4
NIUE	Niue	8.16	73	P	P	21 41 41.7	+0.8
AFI	Afiamalu	9.87	39	P	P	21 41 57.7	-0.7
FUNA	Funafuti	13.38	349		P	21 42 34.7	+0.3
DZM	Mont Dzumac	14.30	266	P	P	21 42 46.7	+2.7
	0.3nm,0.3s,baz=107,slow=19,SNR=6.4						
URZ	Urewera	16.97	193	P	P	21 43 09.0	-0.7
	0.7nm,0.3s,baz=14,slow=14,SNR=8.4						
URZ	Urewera	16.97	193	IAmb	IAmb	21 43 27.4	
	comp=Z,12nm,1.2s						
BKZ	Black Stump Fm	17.97	194	P	P	21 43 18.2	-0.9
BFZ	Birch Farm	19.48	193	P	P	21 43 32.2	-0.5
MSWZ	Moikau Station	20.40	194	P	P	21 43 41.3	+0.2
BHW	Baring Head	20.48	195	P	P	21 43 41.8	0.0
PLWZ	Palliser	20.54	194	P	P	21 43 42.6	+0.2
QRZ	Quartz Range	20.61	200	P	P	21 43 44.2	+1.2
QRZ				IAmb	IAmb	21 43 45.6	
	comp=Z,8.6nm,0.8s						
NNZ	Nelson	20.70	198	P	P	21 43 43.3	-0.5
TUWZ	Tuamarina	20.74	197	P	P	21 43 44.1	+0.1
THZ	Tophouse	21.34	199	P	P	21 43 49.6	0.0
THZ				IAmb	IAmb	21 43 53.7	
	comp=Z,13nm,1.2s						
KHZ	Kahutara	21.77	197	P	P	21 43 53.2	-0.1
LTZ	Lake Taylor	22.46	199	P	P	21 43 59.0	-0.6
LTZ				IAmb	IAmb	21 44 09.3	
	comp=Z,8.0nm,1.1s						
OXZ	Oxford	23.03	199	P	P	21 44 04.8	+0.1
OXZ				IAmb	IAmb	21 44 05.2	
	comp=Z,4.8nm,0.9s						
RPZ	Rata Peaks	23.68	200	P	P	21 44 10.4	0.0
RPZ				IAmb	IAmb	21 44 20.8	
	comp=Z,13nm,1.2s						
FOZ	Fox Glacier	23.93	202	P	P	21 44 12.0	-0.6
FOZ				IAmb	IAmb	21 44 21.3	
	comp=Z,11nm,1.2s						
MLZ	Mavora Lakes	26.12	202	P	P	21 44 32.1	+0.1
MLZ				IAmb	IAmb	21 44 50.4	
	comp=Z,10.0nm,1.1s						
DCZ	Deep Cove	26.56	204	P	P	21 44 35.4	-0.4
DCZ				IAmb	IAmb	21 44 39.0	
	comp=Z,12nm,1.1s						
WHZ	Wether Hill Ro	26.64	202	P	P	21 44 37.5	+1.0
EIDS	Eidsvold	28.40	257	P	P	21 44 51.5	-0.7
EIDS				IAmb	IAmb	21 44 53.2	
	comp=Z,7.0nm,1.1s						
ARMA	Armidale	28.41	246	P	P	21 44 51.4	-1.0
CAN	Canberra	31.71	238	P	P	21 45 19.9	-0.8
CTAO	Charters Tower	33.24	266	P	P	21 45 34.4	+0.5
TOO	Toolangi	35.06	235	P	P	21 45 48.0	-0.9
TOO				IAmb	IAmb	21 46 02.1	
	comp=Z,5.7nm,1.1s						
STKA	Stephens Creek	37.13	246	P	P	21 46 05.1	-0.9
	comp=Z,4.2nm,0.6s,baz=84,slow=10,SNR=12						
STKA	Stephens Creek	37.13	246	IAmb	IAmb	21 46 06.2	
	comp=Z,1.1nm,0.8s						
COEN	Coen	37.53	275	P	P	21 46 08.4	-1.1
COEN				IAmb	IAmb	21 46 16.2	
	comp=Z,5.4nm,1.1s						
BBOO	Buckleboo	41.88	245	P	P	21 46 43.0	-1.1
BBOO				IAmb	IAmb	21 46 48.9	
	comp=Z,9.9nm,1.1s						
AS31	Alice Springs	44.10	258	P	P	21 47 01.9	+0.3
ASAR	Alice Springs	44.11	258	P	P	21 47 01.5	-0.2
	comp=Z,5.8nm,0.7s,baz=93,slow=7.8,SNR=51						
WR0	Warramunga Arr	44.11	263	P	P	21 47 01.4	-0.3
WC3	Warramunga Arr	44.26	263	P	P	21 47 02.9	0.0
WC3				IAmb	IAmb	21 47 03.8	
	comp=Z,7.3nm,0.8s						
WB0	Warramunga Arr	44.28	264	P	P	21 47 03.2	+0.1
WB0				IAmb	IAmb	21 47 03.8	
	comp=Z,5.4nm,0.8s						
WB2	Warramunga Arr	44.29	263	P	P	21 47 02.8	-0.3
WB2				IAmb	IAmb	21 47 04.0	
	comp=Z,5.7nm,0.8s						
WRA	Warramunga Arr	44.30	263	P	P	21 47 02.9	-0.3
	comp=Z,4.3nm,0.8s,baz=98,slow=8.3,SNR=21						
WRA	Warramunga Arr	44.30	263	P	P	21 47 02.7	-0.4
FORT	Forrest	48.68	248	P	P	21 47 35.3	-0.8
MTN	Manton Dam	49.04	272	P	P	21 47 39.5	+0.5
FITZ	Fitzroy Crossi	52.73	263	P	P	21 48 06.9	+1.1
MORW	Morawa	59.23	248	P	P	21 48 49.8	-0.8
MORW				IAmb	IAmb	21 48 52.1	
	comp=Z,11nm,1.1s						
PBKT	Sadao Pong	87.87	289		pP	21 53 30.9	-1.3
PETF	Flores	94.58	74		pP	21 54 02.7	-1.8

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*IDC **23** 21:55:46.0±8.5, 13°.55N×145°.14E, h94^{km}±78^{km}, mb3.6/18, mb1 3.8/18, mb1mx3.7/48, mbtmp4.0/18, MS3.6/1, Ms1 3.6/1, ms1mx2.7/34, Error ellipse: s-maj=23.2km s-min=15.2km az=83.0*

*NOU **23** 21:56:12.1, 15°.27N×145°.74E, h21^{km}, MLv3.5, Mariana Islands*

ISC 23 21:55:46.5±0.6**, 13°.50N**±0°.09×**145°.1E**±0°.2**, h100**^{km}**, n30, σ0^{s}.98**/25**, mb3.9**/19**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	2.89	12	P	Pn	21 56 32.0	+1.2
SARN	Sarigan	3.25	12	P	Pn	21 56 36.5	+0.8
H11S3	WAKE ISLAND Hy	21.35	74	T	T	22 23 13.2	
	baz=262						
H11S1	WAKE ISLAND Hy	21.36	74	T	T	22 22 41.5	
	baz=262,slow=74						
H11S2	WAKE ISLAND Hy	21.36	74	T	T	22 22 38.9	
	baz=262,slow=74						
H11N1	WAKE ISLAND Hy	21.78	71	T	T	22 23 50.1	
	baz=257,slow=75,SNR=8.6						
H11N2	WAKE ISLAND Hy	21.79	71	T	T	22 23 49.5	
	baz=257,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	21.80	71	T	T	22 23 54.6	
	baz=257,slow=75,SNR=9.9						
TGY	Tagaytay City	23.45	274	LR	LR	22 09 03.1	
	comp=Z,146nm,20.7s,baz=124,slow=34						
MJAR	Matsushiro Arr	23.76	346	P	P	22 00 49.5	-0.2
	1.1nm,0.8s,baz=172,slow=9.7,SNR=1.8						
KSRS	Korea Array	28.34	330	pP	pP	22 01 52.1	-0.4
	1.8nm,0.8s,baz=146,slow=9.5,SNR=3.8						
WRA	Warramunga Arr	34.87	198	P	P	22 02 28.8	+0.4
	2.2nm,0.6s,baz=22,slow=9.6,SNR=25						
WRA				PcP	PcP	22 05 00.8	+1.4
	0.9nm,0.8s,baz=14,slow=3.8,SNR=3.0						
ASAR	Alice Springs	38.52	197	P	P	22 02 59.4	0.0
	0.7nm,0.5s,baz=23,slow=7.6,SNR=7.8						
ASAR				pP	pP	22 03 20.3	-0.7
	0.5nm,0.8s,baz=22,slow=10,SNR=2.3						
DZM	Mont Dzumac	41.09	149	P	P	22 03 22.0	+1.2
	6.2nm,0.9s,baz=331,slow=19,SNR=4.6						
CMAR	Chiang Mai Arr	44.54	283	P	P	22 03 49.4	+0.7
	0.8nm,0.4s,baz=84,slow=8.3,SNR=1.7						
STKA	Stephens Creek	45.24	184	P	P	22 03 53.5	-0.4
	1.0nm,0.5s,baz=333,slow=10,SNR=3.4						
SONM	Songino Array	46.92	325	P	P	22 04 08.4	+1.2
	0.3nm,0.5s,baz=118,slow=8.3,SNR=2.9						
MKAR	Makanchi Array	61.70	316	P	P	22 05 54.6	+0.4
	0.4nm,0.5s,baz=87,slow=8.7,SNR=7.9						
MKAR				pP	pP	22 06 17.1	-1.4
	1.1nm,0.9s,baz=86,slow=7.5,SNR=4.9						
ZALV	Zalesovo Beam	61.82	324	P	P	22 05 55.5	+0.7
	0.2nm,0.4s,baz=94,slow=7.4,SNR=1.5						
KDAK	Kodiak Island	64.03	32	P	P	22 06 09.2	-0.1
	11nm,1.1s,baz=333,slow=4.5,SNR=6.2						
ILAR	Eielson Array	68.56	25	P	P	22 06 36.4	-1.8
	0.7nm,0.5s,baz=249,slow=5.8,SNR=5.4						
INK	Inuvik	74.37	22	P	P	22 07 12.2	-0.7
	0.9nm,0.7s,baz=248,slow=3.8,SNR=3.3						
YBH	Yreka Blue Hor	82.77	49	P	P	22 08 00.7	+0.9
	2.0nm,0.7s,baz=272,slow=4.5,SNR=5.6						
YKA	Yellowknife Ar	82.84	27	P	P	22 07 59.2	-0.4
	0.2nm,0.5s,baz=288,slow=4.1,SNR=2.9						
NEW	Newport	85.16	42	P	P	22 08 11.7	0.0
	2.1nm,0.7s,baz=270,slow=8.1,SNR=4.0						
NVAR	Mina Array Bea	86.81	51	P	P	22 08 20.1	-0.2
	0.5nm,0.4s,baz=263,slow=5.4,SNR=4.3						
ELK	Elko	88.48	49	P	P	22 08 28.8	+0.6
	1.7nm,0.7s,baz=264,slow=9.2,SNR=4.4						
FINES	FINESS Array B	91.33	335	P	P	22 08 39.2	-1.6
	1.5nm,0.8s,baz=71,slow=6.0,SNR=5.2						
TORD	Torodi Ar. Bea	135.09	305	PKP	PKPdf	22 14 54.7	-0.5
	0.4nm,0.9s,baz=14,slow=1.9,SNR=2.5						
DBIC	Dimbokro	144.05	302	PKP	PKPdf	22 15 10.0	-1.4
	2.6nm,0.6s,baz=35,slow=5.2,SNR=5.3						

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*IDC **23** 22:12:19.5±1.6, 43°.68N×105°.50W, h0^{km}, mb3.5/1, mb1 3.4/5, mb1mx3.3/37, mbtmp3.2/5, ML2.6/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/31, Error ellipse: s-maj=44.7km s-min=10.0km az=149.0*

*NEIC **23** 22:12:20.4±1.6, 43°.56N±0°.05×105°.20W±0°.07, h0^{km}±2^{km}, ML3.4/72, Error ellipse: s-maj=9.6km s-min=6.5km az=316.0*

ISC 23 22:12:19.0±0.9**, 43°.59N**±0°.06×**105°.18W**±0°.06**, h0**^{km}**, n92, σ1^{s}.31**/89**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	57		Pg	22 12 37.0	-0.8
RSSD					Sn	22 12 53.2	-1.8
K22A	Casper	1.36	227	Pg	Pg	22 12 43.0	-1.9
K22A				IAML		22 13 05.8	
	comp=N,502nm,0.3s						
PHWY	Pilot Hill	2.29	185	Pn	Pn	22 12 58.5	+0.2
PHWY				IAML		22 13 36.9	
	comp=N,161nm,0.5s						
RWWY	Rawlins	2.42	219		Pn	22 13 00.8	+0.8
RWWY				IAML		22 13 41.0	
	comp=N,247nm,0.5s						
N23A	Red Feather La	2.75	192	Pn	Pn	22 13 05.1	+0.5
N23A				IAML		22 13 47.7	
	comp=N,170nm,0.5s						
N23A				IAML		22 13 54.0	
	comp=E,150nm,0.5s						
LAO	LASA Array	3.19	347		Pn	22 13 10.9	+0.5
PD31	Pinedale Array	3.30	257		Pn	22 13 11.8	-0.4
PDAR	Pinedale Array	3.30	257	Pn	Pn	22 13 11.8	-0.4
	comp=E,3.5nm,0.3s,baz=78,slow=16,SNR=51						
PDAR				Lg	Lg	22 13 57.0	
	comp=E,14nm,0.3s,baz=72,slow=35,SNR=2.8						
PDAR	Pinedale Array	3.30	257		Pn	22 13 12.7	+0.5
BW06	Boulder Array	3.31	257		Pn	22 13 11.9	-0.3
BW06				IAML		22 14 08.3	
	comp=E,61nm,0.6s						
RLMT	Red Lodge	3.31	299	Pn	Pn	22 13 12.1	-0.1
RLMT				IAML		22 14 11.1	
	comp=E,66nm,0.5s						
RLMT				IAML		22 14 11.9	
	comp=E,76nm,0.5s						
OGNE	Ogallala	3.53	137		Pn	22 13 16.8	+1.7
YNE	Yellowstone No	3.74	294		Pn	22 13 18.1	-0.1
YMP	Mirror Lake Pl	3.76	290		Pn	22 13 19.2	+0.7
ISCO	Idaho Springs	3.80	185	IAML		22 14 26.4	
	comp=E,48nm,0.7s						
GCMT	Greycliff	3.88	306	Pn	Pn	22 13 21.0	+1.0
LKWY	Lake	3.88	286		Pn	22 13 21.4	+1.3
LKWY				IAML		22 14 27.8	
	comp=E,51nm,0.6s						
LOHW	Long Hollow	3.94	272		Pn	22 13 22.6	+1.7
H17A	Grant Village	3.98	284		Pn	22 13 23.0	+1.6
H17A				IAML		22 14 27.6	
	comp=N,47nm,0.9s						
FLWY	Flagg Ranch	4.02	279		Pn	22 13 23.8	+1.8
FLWY				IAML		22 14 38.7	
	comp=N,62nm,0.8s						
FLWY				IAML		22 15 58.1	
	comp=N,40nm,4.2s						
MOOW	Moose Ponds	4.04	274		Pn	22 13 23.3	+1.1
SNOW	Snow King Moun	4.05	270		Pn	22 13 24.1	+1.6
SNOW				IAML		22 14 42.1	
	comp=N,64nm,0.9s						
SNOW				IAML		22 15 38.4	
	comp=N,52nm,3.7s						
YNR	Norris Junctio	4.11	288		Pn	22 13 24.1	+0.8
YPP	Pitchstone Pla	4.12	281		Pn	22 13 24.0	+0.6
REDW	Red Top Meadow	4.13	269		Pn	22 13 26.0	+2.5
REDW				IAML		22 14 41.0	
	comp=N,66nm,0.8s						
O20A	White River Ci	4.14	215		Pn	22 13 25.0	+1.4
O20A				IAML		22 15 17.0	
	comp=N,52nm,3.6s						
IMW	Indian Meadow	4.18	276		Pn	22 13 25.6	+1.4
IMW				IAML		22 14 40.9	
	comp=N,41nm,0.6s						
IMW				IAML		22 14 50.9	
	comp=N,58nm,0.6s						
YMR	Madison River	4.30	287		Pn	22 13 27.5	+1.7
E28A	Huff	4.36	45		Pn	22 13 29.2	+2.7
AHID	Auburn Hatcher	4.41	261		Pn	22 13 28.5	+1.2
AHID				IAML		22 14 44.1	
	comp=N,44nm,1.0s						
AHID				IAML		22 14 52.3	
	comp=E,41nm,1.0s						
RDMU	Red Mountain	4.44	229		Pn	22 13 29.4	+1.6
YHB	Horse Butte	4.48	287		Pn	22 13 29.9	+1.6
YHL	Hebgen Lake	4.50	288		Pn	22 13 30.2	+1.6

ECR	Eagle Creek	4.55	265		Pn	22 13 30.9	+1.7
SMCO	Snowmass	4.61	198	Pn	Pn	22 13 30.2	-0.1
SMCO				IAML		22 14 56.8	
	comp=E,34nm,0.8s						
SMCO				IAML		22 16 20.2	
	comp=E,23nm,3.8s						
Q24A	Divide	4.62	180		Pn	22 13 29.8	-0.5
Q24A				IAML		22 14 47.0	
	comp=E,31nm,0.8s						
Q24A				IAML		22 16 00.2	
	comp=N,24nm,3.7s						
QLMT	Earthquake Lak	4.66	288		Pn	22 13 32.9	+2.1
DGMT	Dagmar	4.93	8	Pn	Pn	22 13 36.0	+1.7
KSCO	Kaye Shedlock'	4.96	156	Pn	Pn	22 13 35.2	+0.4
BOZ	Bozeman (W)	5.02	296		Pn	22 13 35.6	-0.1
BOZ				IAML		22 16 29.4	
	comp=N,21nm,4.6s						
HWUT	Hardware Ranch	5.11	249		Pn	22 13 37.6	+0.7
HWUT				IAML		22 15 05.3	
	comp=N,24nm,0.7s						
HWUT				IAML		22 15 10.2	
	comp=N,24nm,0.7s						
EGMT	Eagleton	5.47	326		Pn	22 13 42.0	+0.2
JLU	Jordanelle	5.54	240		Pn	22 13 44.1	+1.3
DLMT	Dillon	5.59	291		Pn	22 13 44.8	+1.2
LRM	Limekiln Ridge	5.64	296	Pn	Pn	22 13 42.8	-1.5
MCMT	McKenzie Canyo	5.65	285		Pn	22 13 46.6	+2.2
CTU	Camp Tracy	5.67	242		Pn	22 13 45.1	+0.4
PV22	Blue Mesa, Par	5.74	210		Pn	22 13 47.0	+1.4
PV07	Paradox Valley	5.77	208	Pn	Pn	22 13 46.9	+0.8
MDND	Maddock	5.78	41	Pn	Pn	22 13 49.2	+3.3
PV15	Paradox Valley	5.80	207	Pn	Pn	22 13 48.2	+1.7
SPUT	South Promonto	5.84	250		Pn	22 13 47.3	+0.3
SDCO	Great Sand Dun	5.84	182	Pn	Pn	22 13 48.4	+1.3
HVU	Hansel Valley	5.88	255		Pn	22 13 47.8	+0.3
PV23	Carpenter Ridg	5.89	211		Pn	22 13 49.5	+1.8
PV04	Paradox Valley	5.90	210		Pn	22 13 49.6	+1.7
PV12	Saucer Basin,	5.94	209		Pn	22 13 49.4	+1.1
PV14	Lion Creek, Pa	5.96	210		Pn	22 13 49.6	+0.8
PV10	Paradox Valley	5.97	211	Pn	Pn	22 13 50.7	+1.9
PV20	West Nyswonger	5.97	210		Pn	22 13 49.8	+1.0
PV11	David Mesa, Pa	5.98	209		Pn	22 13 50.1	+1.3
BCYI	Bear Canyon	5.98	280		Pn	22 13 50.4	+1.5
PV19	Morning Glory	6.01	210		Pn	22 13 51.0	+1.7
PV03	Paradox Valley	6.01	209		Pn	22 13 50.1	+0.9
PV02	Paradox Valley	6.01	208		Pn	22 13 50.8	+1.4
PV17	East Wray Mesa	6.02	210		Pn	22 13 50.4	+0.9
PV18	Skein Mesa, Pa	6.04	209	Pn	Pn	22 13 50.5	+0.9
PV13	Radium Mtn., P	6.08	208		Pn	22 13 51.5	+1.1
ECSD	EROS Data Cent	6.22	86	Pn	Pn	22 13 51.0	-0.9
TMUT	Trail Mountain	6.24	229		Pn	22 13 53.6	+1.1
PV05	Paradox Valley	6.25	210		Pn	22 13 51.4	-1.3
CBKS	Cedar Bluff	6.29	137	Pn	Pn	22 13 55.1	+2.1
NLU	North Lily Min	6.30	237		Pn	22 13 53.0	-0.3
BGU	Big Grassy Mou	6.40	248	Pn	Pn	22 13 55.4	+0.7
T25A	Trinidad	6.47	175		Pn	22 13 56.9	+1.2
DUG	Dugway, Tooele	6.63	242	Pn	Pn	22 13 58.1	+0.4
HLID	Hailey	6.71	273		Pn	22 14 00.2	+1.3
MSO	Missoula	6.98	301	Pn	Pn	22 14 02.2	-0.4
MSU	Marysvale	7.32	229	Pn	Pn	22 14 08.4	+1.0
MVU	Marysvale	7.35	229		Pn	22 14 09.0	+1.3
JTMT	Jette	7.61	306	Pn	Pn	22 14 12.5	+1.3
MTPU	Mount Pierson	7.67	226	Pn	Pn	22 14 13.1	+0.8
MFID	Camas Ranch	7.74	272	Pn	Pn	22 14 14.1	+1.1
ELK	Elko	7.99	253	Pn	Pn	22 14 18.5	+2.0
	comp=N,0.2nm,0.3s,baz=87,slow=18,SNR=2.4						
PKCU	Pink Cliffs	8.19	224	Pn	Pn	22 14 19.8	+0.4
PSUT	Pine Spring	8.27	235	Pn	Pn	22 14 20.6	+0.3
I10CA	LAC DU BONNET	9.11	40	*i*		23 13 10.0	
	baz=223,slow=331,SNR=3.3						
ULM	Lac du Bonnet	9.21	40	Pn	Pn	22 14 32.3	-0.7
	comp=N,0.4nm,0.3s,baz=236,slow=13,SNR=1.9						
ULM				Lg	Lg	22 17 07.2	
	comp=N,0.3nm,0.3s,baz=150,slow=21,SNR=4.2						
I56US	NEWPORT INFRAS	9.54	303	*i*		23 13 48.4	
	baz=116,slow=319,SNR=1.5						
NVAR	Mina Array Bea	11.17	247	Pn	Pn	22 15 01.0	+1.0
	comp=N,0.2nm,0.3s,baz=59,slow=15,SNR=1.9						
SFJD	Kangerlussuaq	37.12	32	LR	LR	22 33 31.8	
	comp=N,132nm,20.9s,baz=212,slow=34						
MKAR	Makanchi Array	89.76	355	P	P	22 25 19.6	+0.5
	comp=N,0.2nm,0.5s,baz=1.9,slow=4.3,SNR=6.3						

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*VAO **23** 22:24:53.9±1.1, 15.°38S×73.°49W, h10^{km}, mb4.5*

*NEIC **23** 22:24:57.8±2.4, 15.°32S±0.°07×73.°7W±0.°1, h83^{km}±10^{km}, mb4.4/4, Error ellipse: s-maj=19.7km s-min=3.1km az=60.0*

*IDC **23** 22:24:59.2±0.8, 15.°32S×73.°83W, h96^{km}±6^{km}, mb3.9/8, mb1 4.0/12, mb1mx3.8/39, mbtmp4.3/12, Error ellipse: s-maj=26.6km s-min=15.4km az=42.0*

ISC 23 22:24:58.5±0.5, 15.°40S±0.°07×73.°86W±0.°08, h100^{km}, n73, σ1.^{s}28/76, mb4.2/9, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.46	319	P	Pn	22 26 04.0	0.0
	34nm,0.3s,baz=143,slow=15,SNR=30						
NNA				S	Sn	22 26 52.3	-2.6
	33nm,0.3s,baz=180,slow=16,SNR=6.4						
NNA	Nana	4.46	319		Pn	22 26 04.3	+0.3
AP01	Chacalluta	4.48	132	Pn	Pn	22 26 04.8	+0.6
PB16	IPOC Station P	5.09	126		Pn	22 26 13.7	+0.8
PSGCX	Pisagua	5.49	140		Pn	22 26 17.0	-0.9
MNMC	Minye Minye	5.51	133		Pn	22 26 18.2	-0.2
TA01	Diego Aracena	6.22	146		Pn	22 26 27.2	-0.5
PATCX	Punta Patache	6.44	147		Pn	22 26 30.2	-0.6
PB08	IPOC Station P	6.51	137		Pn	22 26 32.1	+0.1
PB07	IPOC Station P	7.33	150		Pn	22 26 42.3	-0.8
CZSB	Cruzeiro do Su	7.71	9	*e*P	Pn	22 26 45.9	-2.2
PB09	IPOC Station P	7.72	146		Pn	22 26 48.6	+0.3
PB04	IPOC Station P	7.74	154		Pn	22 26 47.8	-0.8
PB06	IPOC Station P	8.32	151	Pn	Pn	22 26 55.9	-0.6
PB06					Sn	22 28 27.9	-1.0
LVC	Limon Verde	8.56	148	P	Pn	22 27 00.3	+0.3
	11nm,0.3s,baz=334,slow=7.8,SNR=120						
LVC				S	Sn	22 28 30.4	-4.6
	9.7nm,0.3s,baz=38,slow=22,SNR=15						
LVC	Limon Verde	8.56	148		Pn	22 27 00.6	+0.6
PB10	IPOC Station P	8.65	159	Pn	Pn	22 27 00.2	-0.6
PB15	IPOC Station P	8.80	153	Pn	Pn	22 27 02.1	-1.0
ATAH	Atahualpa	9.34	331	P	Pn	22 27 13.4	+2.7
	1.8nm,0.3s,baz=135,slow=6.4,SNR=7.4						
ATAH				S	Sn	22 28 51.8	-2.3
	0.7nm,0.3s,baz=135,slow=17,SNR=1.4						
PB14	IPOC Station P	9.73	161	Pn	Pn	22 27 14.7	-1.2
GO02	Mina Guanaco	10.50	158		Pn	22 27 26.7	+0.3
AC01	Pan de Azucar	11.12	165	Pn	Pn	22 27 32.9	-1.5
SAML	Samuel	12.25	60	Pn	Pn	22 27 45.8	-3.8
SIV	San Ignacio	12.33	94	P	Pn	22 27 47.9	-2.8
	0.6nm,0.3s,baz=285,slow=9.1,SNR=8.9						
LCO	Las Campanas	13.86	168	Pn	Pn	22 28 12.3	+1.5
MACA	Manacapuru-AM	17.79	48	*e*P	P	22 28 59.5	+0.3
H03N1	Juan Fernandez	18.53	193	T	T	22 47 48.8	
	baz=16,slow=74,SNR=802						
H03N2	Juan Fernandez	18.54	193	T	T	22 47 49.7	
	baz=16,slow=74,SNR=1044						
H03N3	Juan Fernandez	18.55	193	T	T	22 47 47.9	
	baz=16,slow=74,SNR=846						
CPUP	Villa Florida	18.87	128	P	Pn	22 29 12.6	-0.1
	0.3nm,0.3s,baz=305,slow=11,SNR=4.3						
CPUP	Villa Florida	18.87	128	*e*P	Pn	22 29 12.5	-0.1
NPGB	Novo Progresso	19.95	67	*e*P	P	22 29 22.8	0.0
PTGA	Pitinga	20.02	45	P	P	22 29 23.2	-0.4
	3.1nm,0.3s,baz=217,slow=15,SNR=30						
ITTB	Itaituba	20.93	60	*e*P	P	22 29 33.4	-0.1
ARAG	Araguaiana, MT	21.25	94	*e*P	P	22 29 36.7	0.0
ITQB	Itaqui	21.29	135	*e*P	P	22 29 39.2	+2.1
TRCB	Terra Rica	21.35	113	*e*P	P	22 29 38.9	+1.0
SNDB	Serra Nova Dou	22.19	84	*e*P	P	22 29 45.7	-1.0
PCMB	Pacaembu	22.29	109	*e*P	P	22 29 49.5	+1.8
PTGB	Pitanga	22.45	118	*e*P	P	22 29 51.0	+1.5
ITRB	Iturama	22.81	104	*e*P	P	22 29 55.0	+1.9
ITAB	Concordia	23.38	124	*e*P	P	22 29 59.1	+0.7
MALB	Monte Alegre	23.56	57	*e*P	P	22 30 00.8	+0.6
CPSB	Cacapava Do Su	23.96	132	*e*P	P	22 30 05.4	+1.8
FRTB	Fartura	24.22	113	*e*P	P	22 30 07.1	+1.0
SDV	Santo Domingo	24.34	8	P	P	22 30 07.8	+0.4
	1.4nm,0.4s,baz=259,slow=5.8,SNR=4.9						
BB19B	Bebedouro	24.70	107	*e*P	P	22 30 12.1	+1.6
IPMB	Ipameri, GO	24.70	100	*e*P	P	22 30 11.4	+0.8
BDFB	Brasilia	24.90	94	P	P	22 30 13.4	+0.9
	0.8nm,0.3s,baz=290,slow=9.6,SNR=3.7						
PEXB	Peixe	25.04	86	*e*P	P	22 30 14.0	+0.4
PRPB	Parauapebas	25.32	71	*e*P	P	22 30 17.9	+1.8
JANB	Januaria	28.51	93	*e*P	P	22 30 45.4	+0.6
BSFB	Barra de Sao F	31.71	101	*e*P	P	22 31 14.1	+1.1
RIB01	Linhares ES	32.15	102	*e*P	P	22 31 18.2	+1.3
NAN01	Guarapari, ES	32.39	99	*e*P	P	22 31 20.9	+1.9
TXAR	Lajitas Array	52.98	327	P	P	22 34 05.8	+0.7
	1.1nm,0.4s,baz=149,slow=9.2,SNR=8.3						
TXAR				pP	pP	22 34 28.9	-1.4
	0.2nm,0.4s,baz=143,slow=7.9,SNR=1.7						
TXAR	Lajitas Array	52.98	327	P	P	22 34 05.6	+0.5
ULM	Lac du Bonnet	68.18	345	P	P	22 35 48.0	+0.1
	2.6nm,0.7s,baz=178,slow=3.7,SNR=4.6						
ULM	Lac du Bonnet	68.18	345	IAmb	IAmb	22 35 48.8	
	comp=Z,3.7nm,0.8s						
DBIC	Dimbokro	71.77	78	P	P	22 36 10.8	+0.2
	comp=Z,1.4nm,0.5s,baz=210,slow=7.1,SNR=3.9						
DBIC	Dimbokro	71.77	78	P	P	22 36 10.3	-0.4
DBIC				IAmb	IAmb	22 36 25.2	
	comp=Z,4.7nm,1.1s						
TOA0	Torodi Ar. Sit	79.94	73	P	P	22 36 57.8	+0.7
TOA0				IAmb	IAmb	22 36 58.6	
	comp=Z,5.1nm,0.8s						
TORD	Torodi Ar. Bea	79.94	73	P	P	22 36 57.8	+0.7
	comp=Z,4.4nm,0.7s,baz=261,slow=5.3,SNR=17						
TORD	Torodi Ar. Bea	79.94	73	P	P	22 36 57.9	+0.7
YKA	Yellowknife Ar	83.94	342	P	P	22 37 17.4	+0.4
	comp=Z,1.0nm,0.8s,baz=134,slow=5.7,SNR=16						
YKA				pP	pP	22 37 42.5	-1.3
	comp=Z,1.0nm,0.8s,baz=134,slow=5.9,SNR=8.2						
ESDC	Sonseca Array	84.95	47	P	P	22 37 24.1	+1.3
	comp=Z,2.3nm,0.9s,baz=257,slow=5.2,SNR=11						
ESDC				pP	pP	22 37 50.0	0.0
	comp=Z,0.5nm,0.6s,baz=266,slow=5.5,SNR=2.4						
RSO	Redoubt South	97.89	331	P	Pdif	22 38 27.1	+4.2
ASAR	Alice Springs	132.62	215	PKP	PKiKP	22 44 03.6	0.0
	comp=Z,0.3nm,0.5s,baz=134,slow=2.7,SNR=4.6						
ASAR				pPKP	pPKPdf	22 44 29.6	-1.4
	comp=Z,0.8nm,0.8s,baz=127,slow=2.0,SNR=4.7						
WRA	Warramunga Arr	135.25	219	PKP	PKiKP	22 44 08.4	-0.5
	comp=Z,1.2nm,1.0s,baz=132,slow=2.1,SNR=7.7						
WRA				pPKP	pPKPdf	22 44 34.9	-1.1
	comp=Z,1.1nm,0.8s,baz=139,slow=1.8,SNR=4.3						
ZALV	Zalesovo Beam	138.08	19	PKP	PKPdf	22 44 12.0	+0.5
	comp=Z,1.2nm,0.8s,baz=318,slow=1.9,SNR=5.0						
MKAR	Makanchi Array	142.93	27	PKP	PKPdf	22 44 19.3	-1.3
	comp=Z,0.3nm,0.7s,baz=315,slow=3.6,SNR=3.5						
SONM	Songino Array	147.66	360	PKPbc	PKiKP	22 44 32.4	-1.2
	comp=Z,1.3nm,0.8s,baz=347,slow=1.6,SNR=7.0						
KSRS	Korea Array	150.76	323	PKPbc	PKiKP	22 44 41.0	+0.9
	comp=Z,1.7nm,0.9s,baz=329,slow=1.4,SNR=5.1						

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*IDC **23** 22:32:29.2±7.8, 38.°76N×143.°64E, h0^{km}, mb3.5/3, mb1 3.4/5, mb1mx3.3/34, mbtmp3.4/5, ML1.9/2, Error ellipse: s-maj=128.9km s-min=57.0km az=112.0*

*JMA **23** 22:32:39.9±0.1, 38.°81N×142.°41E, h34^{km}±3^{km}, M3.1*

ISC 23 22:32:41.2±2.8, 38.°83N±0.°08×142.°3E±0.°1, h30^{km}±17^{km}, n17, σ1.^{s}48/19, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.56	297	P	Pn	22 32 52.5	-0.6
OFUJ				S	Sn	22 33 01.1	-0.2
JKMT	Kesennumamotoy	0.65	269	P	Pn	22 32 53.7	-0.7
JKMT				S	Sn	22 33 03.1	-0.5
JIO	Ouri	0.84	244	P	Pn	22 32 55.9	-1.0
JIO				S	Sn	22 33 07.1	-1.2
JMK	Ichinoseki	0.86	278	P	Pn	22 32 56.9	-0.3
JMK				*e*S	Sn	22 33 08.0	-0.7
JOM	Ohasama	1.02	309	P	Pn	22 32 59.4	0.0
JOM				*e*S	Sn	22 33 13.3	+0.6
JTH	Tanohata	1.16	343	P	Pn	22 33 00.4	-1.0
JOU	Okura	1.37	251	P	Pn	22 33 04.5	+0.2
JRG	Rokugo	1.42	294	P	Pb	22 33 06.6	-0.4
JANG	Nango	1.66	339	P	Pn	22 33 08.0	-0.3
MJAR	Matsushiro Arr	3.97	236	Pn	Pn	22 33 43.2	+3.1
	0.1nm,0.3s,baz=55,slow=12,SNR=1.6						
USRK	Ussuriysk Ar.	9.41	308	Pn	Pn	22 34 58.8	+4.1
	baz=130,slow=13,SNR=1.6						
SONM	Songino Array	27.42	301	P	P	22 38 24.3	0.0
	0.2nm,0.4s,baz=108,slow=7.7,SNR=1.7						
H11N2	WAKE ISLAND Hy	28.53	125	T	T	23 08 28.8	
	baz=319						
H11N1	WAKE ISLAND Hy	28.54	125	T	T	23 08 25.9	
	baz=319						
H11N3	WAKE ISLAND Hy	28.55	125	T	T	23 08 32.6	
	baz=319						
ZALV	Zalesovo Beam	41.25	311	P	P	22 40 22.9	-0.4
	0.6nm,0.6s,baz=101,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	43.79	301	P	P	22 40 43.8	-0.3
	0.3nm,0.6s,baz=88,slow=7.7,SNR=5.5						

IDC 23 22:53:10.0±2.0, 12.°68N×143.°06E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.4/45, mbtmp3.7/3, Error ellipse: s-maj=267.9km s-min=28.2km az=109.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.54	195	P	P	22 59 51.5	-0.2
	1.0nm,0.6s,baz=17,slow=9.4,SNR=9.0						
ASAR	Alice Springs	37.22	194	P	P	23 00 23.4	0.0
	0.5nm,0.4s,baz=24,slow=11,SNR=10						
ILAR	Eielson Array	70.13	25	P	P	23 04 24.1	0.0
	0.3nm,0.6s,baz=247,slow=6.1,SNR=4.2						

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*IDC **23** 23:00:06.4±2.7, 31.°42S×71.°49W, h0^{km}, mb3.5/1, mb1 3.6/2, mb1mx3.4/29, mbtmp3.4/2, ML3.1/1, Error ellipse: s-maj=134.5km s-min=45.2km az=95.0*

*GUC **23** 23:00:10.7±0.7, 31.°38S×71.°68W, h32^{km}±2^{km}, ML3.8*

ISC 23 23:00:10.6±1.0, 31.°36S±0.°03×71.°64W±0.°09, h22^{km}±6^{km}, n26, σ1.^{s}44/37, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	Combarbal	0.57	74	*e*P	Pn	23 00 22.6	-0.9
CO02				*i* S	Sn	23 00 31.1	-1.1
CO02				IAML		23 00 34.6	
	comp=N,7µm,0.2s						
CO03	El Pedregal	0.96	58	*e*P	Pb	23 00 28.7	0.0
CO03				*i* S	Sb	23 00 42.0	+1.0
GO04	Tololo Observa	1.39	32	*e*P	Pn	23 00 35.3	+0.4
GO04				*i* S	Sb	23 00 54.5	+1.2
VA03	San Esteban	1.68	147	*e*P	Pn	23 00 39.8	+1.0
VA03				*i* S	Sb	23 01 01.3	-0.2
VA03				IAML		23 01 03.1	
	comp=E,3µm,0.1s						
ROCH	El Roble	1.69	162	*e*P	Pn	23 00 39.5	+0.4
ROCH				*i* S	Sb	23 01 02.1	0.0
ROCH				IAML		23 01 05.0	
	comp=N,2µm,0.4s						
CO01	Juntas del Tor	1.91	44	*e*P	Pb	23 00 44.0	-0.9
CO01				*e*S	Sb	23 01 08.9	+0.4
CO01				IAML		23 01 11.3	
	comp=E,507nm,0.3s						
MT02	Curacav	1.94	168	*i* S	Sn	23 01 08.0	+1.9
PEL	Peldehue	1.95	156	*e*P	Pn	23 00 43.4	+0.8
PEL				*i* S	Sn	23 01 08.2	+1.8
MT05	Renca	2.16	160	*e*P	Pn	23 00 46.4	+1.0
MT05				*i* S	Sn	23 01 13.8	+2.2
VA05	Santo Domingo	2.29	180	*e*P	Pn	23 00 47.0	-0.1
VA05				*i* S	Sn	23 01 14.7	+0.1
MT03	Universidad Ad	2.33	156	*e*P	Pn	23 00 48.8	+1.1
MT03				*i* S	Sn	23 01 18.0	+2.2
MT09	Talagante	2.47	167	*e*P	Pn	23 00 50.5	+0.8
MT09				*e*S	Sn	23 01 20.0	+0.7
MT09				IAML		23 01 29.1	
	comp=N,575nm,0.3s						
LMEL	Las Melosas	2.76	154	*e*P	Pn	23 00 55.1	+1.4
LMEL				*i* S	Sn	23 01 28.9	+2.5
AC05	El Transito	2.78	25	*e*P	Pn	23 00 56.2	+2.3
AC05				*e*S	Sb	23 01 30.0	-3.3
AC05				IAML		23 01 42.1	
	comp=E,233nm,0.7s						
AC04	Llanos de Chal	3.18	9⇑	*e*P	Pn	23 01 00.6	+1.2
AC04				*e*S	Sn	23 01 38.5	+1.9
AC04				IAML		23 01 57.5	
	comp=E,138nm,0.7s						
BO02	Sierra Bellavi	3.50	168⇑	*e*P	Pn	23 01 04.6	+0.8
BO02				*e*S	Sn	23 01 45.2	+0.6
BO02				IAML		23 01 55.5	
	comp=N,315nm,0.4s						
GO03	Copiap	3.95	18⇑	*e*P	Pn	23 01 10.8	+0.9
GO03				*e*S	Sn	23 01 57.0	+1.4
GO03				IAML		23 02 13.8	
	comp=N,138nm,0.5s						
H03N1	Juan Fernandez	6.49	249	T	T	23 08 20.8	
	baz=78,slow=72,SNR=3205						
H03N3	Juan Fernandez	6.51	249	T	T	23 08 20.8	
	baz=78,slow=72,SNR=2816						
H03N2	Juan Fernandez	6.51	250	T	T	23 08 21.1	
	baz=78,slow=72,SNR=2586						
PLCA	Paso Flores	9.39	175	Pn	Pn	23 02 22.5	-2.2
	comp=N,0.0nm,0.3s,baz=350,slow=12,SNR=1.8						
TORD	Torodi Ar. Bea	82.99	70	P	P	23 12 33.2	-1.3
	comp=N,0.2nm,0.5s,baz=250,slow=4.7,SNR=1.3						
H11S2	WAKE ISLAND Hy	126.11	271	T	T	01 37 57.0	
	baz=116,slow=75,SNR=9.9						
H11S1	WAKE ISLAND Hy	126.12	271	T	T	01 38 02.1	
	baz=116,slow=75,SNR=10.0						
H11S3	WAKE ISLAND Hy	126.13	271	T	T	01 38 01.9	
	baz=116,slow=75,SNR=9.2						
ZALV	Zalesovo Beam	151.80	30	PKPbc	PKPbc	23 20 01.8	-1.3
	comp=N,1.0nm,0.5s,baz=296,slow=3.9,SNR=5.3						
ZALV				PKPab	PKPab	23 20 11.9	-0.1
	comp=N,0.3nm,0.4s,baz=343,slow=4.5,SNR=4.1						

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*NEIC **23** 23:36:18.9±0.5, 20.°67S±0.°07×176.°2W±0.°2, h496^{km}±14^{km}, mb4.2/15, Error ellipse: s-maj=29.2km s-min=9.5km az=91.0*

*IDC **23** 23:36:44.7±36.0, 19.°12S×178.°65W, h650^{km}±342^{km}, mb3.2/3, mb1 3.4/3, mb1mx2.8/34, mbtmp4.3/3, Error ellipse: s-maj=344.5km s-min=171.7km az=109.0*

ISC 23 23:36:19.1±0.9, 20.°6S±0.°1×176.°2W±0.°1, h500^{km}, n24, σ0.^{s}65/24, mb4.1/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	6.11	76	P	P	23 37 56.3	-0.3
AFI	Afiamalu	7.92	33	P	P	23 38 14.2	-0.7
FUNA	Funafuti	12.83	339	P	P	23 39 06.9	+0.3
KHZ	Kahutara	23.37	199	P	P	23 40 47.9	-0.1
LTZ	Lake Taylor	24.11	201	P	P	23 40 54.2	-0.4
LTZ				IAmb	IAmb	23 40 54.9	
	comp=Z,8.0nm,1.0s						
CTA	Charters Tower	35.14	264	P	P	23 42 30.4	-0.1
	comp=Z,3.8nm,0.6s,baz=87,slow=9.9,SNR=6.6						
CTA	Charters Tower	35.14	264	P	P	23 42 30.4	-0.1
CTAO	Charters Tower	35.14	264	P	P	23 42 30.1	-0.3
CTAO				IAmb	IAmb	23 42 30.5	
	comp=Z,7.0nm,1.0s						
COEN	Coen	39.26	273	P	P	23 43 03.7	-0.7
BBOO	Buckleboo	43.99	244	P	P	23 43 41.1	-0.5
BBOO				IAmb	IAmb	23 43 55.2	
	comp=Z,9.1nm,1.1s						
WR0	Warramunga Arr	46.05	262	P	P	23 43 57.7	0.0
AS31	Alice Springs	46.12	257	P	P	23 43 59.6	+1.4
ASAR	Alice Springs	46.12	257	P	P	23 43 59.2	+1.0
	comp=Z,2.2nm,0.7s,baz=93,slow=7.9,SNR=19						
ASAR	Alice Springs	46.12	257	P	P	23 43 59.2	+1.0
WC3	Warramunga Arr	46.21	262	P	P	23 43 58.8	-0.1
WC3				IAmb	IAmb	23 44 11.1	
	comp=Z,5.8nm,1.1s						
WB0	Warramunga Arr	46.22	262	P	P	23 43 59.0	0.0
WB0				IAmb	IAmb	23 43 59.4	
	comp=Z,3.5nm,0.4s						
WB2	Warramunga Arr	46.23	262	P	P	23 43 59.1	0.0
WB2				IAmb	IAmb	23 44 12.0	
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	46.24	262	P	P	23 43 59.0	-0.2
	comp=Z,1.5nm,0.3s,baz=96,slow=7.6,SNR=77						
WRA	Warramunga Arr	46.24	262	P	P	23 43 59.0	-0.2
MYLDM	Lahad Datu	68.99	284	P	P	23 46 34.5	0.0
ADK	Adak	72.21	360	P	P	23 46 52.8	+0.2
YHNB	Yeheng	75.57	304	P	P	23 47 12.0	-0.5
YHNB				IAmb	IAmb	23 47 19.4	
	comp=Z,7.5nm,1.1s						
PEA0B	Petropavlovsk-	76.84	344	P	P	23 47 19.1	+0.3
PEA0B				IAmb	IAmb	23 47 19.9	
	comp=Z,14nm,1.0s						
AKASG	Malin Array Be	143.93	332	PKP	PKiKP	23 55 02.4	+1.7
	comp=Z,0.4nm,0.4s,baz=32,slow=3.6,SNR=1.8						

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*KRSC **24** 00:16:53.7±1.3, 52.°66N×160.°48E, h41^{km}±14^{km}, ML4.3*

*MOS **24** 00:16:55.3±0.8, 52.°65N×160.°39E, h52^{km}, mb4.1/1, Error ellipse: s-maj=8.0km s-min=4.8km az=97.4*

*IDC **24** 00:17:00.1±1.8, 52.°76N×160.°12E, h77^{km}±15^{km}, mb3.4/18, mb1 3.6/19, mb1mx3.6/40, mbtmp3.7/19, Error ellipse: s-maj=19.1km s-min=14.0km az=157.0*

ISC 24 00:16:54.8±1.4, 52.°65N±0.°04×160.°37E±0.°05, h32^{km}±9^{km}, n104, σ1.^{s}49/140, mb3.8/18, 2C-4D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.49	335	PN	Pn	00 17 05.8	+0.2
SPN				S	Sn	00 17 12.0	-1.1
SPN	Mys Shipunski	0.49	335	*e*P	Pn	00 17 05.8	+0.2
SPN				*e*S	Sn	00 17 12.0	-1.1
NLC	Nalytchevo	0.81	310	PN	Pb	00 17 10.3	-0.1
NLC				S	Sn	00 17 21.4	+0.6
NLC	Nalytchevo	0.81	310	*e*P	Pb	00 17 10.3	-0.1
NLC				*e*S	Sn	00 17 21.4	+0.6
DALK	Dalny	1.05	292	PN	Pb	00 17 14.2	-0.2
DALK				S	Sb	00 17 27.5	-0.3
DALK	Dalny	1.05	292	*e*P	Pb	00 17 14.2	-0.2
DALK				*e*S	Sb	00 17 27.5	-0.3
UGLR	Uglovaya	1.09	301	PN	Pb	00 17 15.1	0.0
UGLR				S	Sb	00 17 30.4	+1.3
UGLR	Uglovaya	1.09	301	*i* P	Pb	00 17 15.1	0.0
UGLR				*e*S	Sb	00 17 30.4	+1.3
SDLR	Sedlovina	1.09	305	PN	Pb	00 17 14.9	-0.4
SDLR				S	Sb	00 17 29.6	+0.3
SDLR	Sedlovina	1.09	305	*i* P	Pb	00 17 14.9	-0.4
SDLR				*e*S	Sb	00 17 29.6	+0.3
PET	Petropavlovsk	1.10	290	PN	Pb	00 17 15.0	-0.3
PET				S	Sb	00 17 28.8	-0.6
PET	Petropavlovsk	1.10	290	*e*P	Pb	00 17 15.0	-0.3
PET				*e*S	Sb	00 17 28.8	-0.6
SMAR	Somma	1.13	303	PN	Pb	00 17 15.3	-0.6
SMAR	Somma	1.13	303	*i* P	Pb	00 17 15.3	-0.6
RUS	Russkaya	1.16	260	PN	Pn	00 17 15.8	+1.1
RUS				S	Sb	00 17 31.0	+0.2
RUS	Russkaya	1.16	260	*i* P	Pn	00 17 15.8	+1.1
RUS				*e*S	Sb	00 17 31.0	+0.2
AVH	Avacha	1.16	302	PN	Pb	00 17 16.2	-0.2
AVH				S	Sb	00 17 31.6	+0.5
AVH	Avacha	1.16	302	*e*P	Pb	00 17 16.2	-0.2
AVH				*e*S	Sb	00 17 31.6	+0.5
KRER	Koryakskii	1.18	304	PN	Pb	00 17 16.4	-0.3
KRER				S	Sb	00 17 30.7	-1.0
KRER	Koryakskii	1.18	304	*e*P	Pb	00 17 16.4	-0.3
KRER				*e*S	Sb	00 17 30.7	-1.0
KOK	Koryaka	1.23	302	PN	Pb	00 17 17.0	-0.5
KOK				S	Sb	00 17 31.0	-2.0
KOK	Koryaka	1.23	302	*e*P	Pb	00 17 17.0	-0.5
KOK				*e*S	Sb	00 17 31.0	-2.0
KRX	Arik	1.26	305	PN	Pb	00 17 17.4	-0.6
KRX				S	Sb	00 17 32.7	-1.2
KRX	Arik	1.26	305	*i* P	Pb	00 17 17.4	-0.6
KRX				*e*S	Sb	00 17 32.7	-1.2
MTVR	Mutnovka	1.34	264	PN	Pn	00 17 18.7	+1.2
MTVR				S	Sb	00 17 36.8	+0.4
MTVR	Mutnovka	1.34	264	*e*P	Pn	00 17 18.7	+1.2
MTVR				*e*S	Sb	00 17 36.8	+0.4
KRMR	Karymshinskiy	1.37	278	PN	Pb	00 17 20.0	+0.2
KRMR				S	Sb	00 17 37.3	+0.3
KRMR	Karymshinskiy	1.37	278	*e*P	Pb	00 17 20.0	+0.2
KRMR				*e*S	Sb	00 17 37.3	+0.3
GRL	Gorelyy	1.40	267	PN	Pb	00 17 20.1	-0.4
GRL				S	Sb	00 17 37.5	-0.5
GRL	Gorelyy	1.40	267	*i* P	Pb	00 17 20.1	-0.4
GRL				*e*S	Sb	00 17 37.5	-0.5
KII	Karymskiy	1.49	339	PN	Pb	00 17 21.1	-0.8
KII				S	Sb	00 17 39.7	-0.8
KII	Karymskiy	1.49	339	*e*P	Pb	00 17 21.1	-0.8
KII				*e*S	Sb	00 17 39.7	-0.8
KDTR	Khodutka, Kamc	1.64	240	PN	Pn	00 17 22.4	+1.0

KDTR				S	Sn	00 17 42.0	+0.6
KDTR	Khodutka, Kamc	1.64	240	*e*P	Pn	00 17 22.4	+1.0
KDTR				*e*S	Sn	00 17 42.0	+0.6
PEA0B	Petropavlovsk-	1.68	287	*de*PN	Pb	00 17 23.9	-1.2
PETK	Petropavlovsk-	1.68	287	P	Pb	00 17 24.1	-1.0
	72nm,0.3s,baz=98,slow=19,SNR=912						
PETK				S	Sb	00 17 44.6	-1.2
	159nm,0.3s,baz=96,slow=14,SNR=13						
GNL	Ganaly	1.80	307	PN	Pb	00 17 26.1	-1.0
GNL				S	Sb	00 17 49.4	+0.2
GNL	Ganaly	1.80	307	*e*P	Pb	00 17 26.1	-1.0
GNL				*e*S	Sb	00 17 49.4	+0.2
KZV	Kizimen	2.46	359	PN	Pn	00 17 34.9	+2.0
KZV				S	Sn	00 18 03.5	+1.5
KZV	Kizimen	2.46	359	*e*P	Pn	00 17 34.9	+2.0
KZV				*e*S	Sn	00 18 03.5	+1.5
PAU	Pauzhetka	2.50	243	PN	Pn	00 17 36.8	+3.6
PAU	Pauzhetka	2.50	243	P	Pn	00 17 36.8	+3.6
TUMD	Tumrok D	2.56	0	*e*P	Pn	00 17 35.5	+1.5
TUMD				*e*S	Sn	00 18 03.6	-0.4
TUMR	Tumrok	2.64	357	PN	Pn	00 17 35.5	+0.3
TUMR				S	Sn	00 18 03.6	-2.6
TUMR	Tumrok	2.64	357	*e*P	Pn	00 17 37.7	+2.5
KMNR	Kamenistaya	3.11	359	PN	Pn	00 17 44.9	+3.2
KMNR	Kamenistaya	3.11	359	*e*P	Pn	00 17 44.9	+3.2
SKR	Severo-Kuril's	3.30	235	*e*PN	Pn	00 17 45.0	+0.8
SKR				*e*S	Sn	00 18 20.9	-1.4
SKR				pmax	pmax		
	comp=Z,38nm,0.5s						
SKR				smax	smax		
	comp=N,96nm,0.4s						
SKR				smax	smax		
	comp=E,145nm,0.5s						
ESO	Esso	3.42	344	PN	Pn	00 17 48.7	+2.8
ESO	Esso	3.42	344	*e*P	Pn	00 17 48.7	+2.8
KOZ	Kozyrevsk	3.42	355	PN	Pn	00 17 48.4	+2.5
KOZ	Kozyrevsk	3.42	355	*e*P	Pn	00 17 48.4	+2.5
KLY	Klyuchi	3.67	2	PN	Pn	00 17 52.5	+3.2
KLY	Klyuchi	3.67	2	*e*P	Pn	00 17 52.5	+3.2
SRDR	Sredinnyy	3.69	354	PN	Pn	00 17 52.1	+2.5
SRDR	Sredinnyy	3.69	354	*e*P	Pn	00 17 52.1	+2.5
KBTR	Krutoberegovo	3.84	21	PN	Pn	00 17 52.6	+1.0
KBTR	Krutoberegovo	3.84	21	*e*P	Pn	00 17 52.6	+1.0
KBG	Krutoberegovo	3.86	20	PN	Pn	00 17 52.8	+1.0
KBG	Krutoberegovo	3.86	20	*e*P	Pn	00 17 52.8	+1.0
BDR	Baidarnaya	3.95	7	PN	Pn	00 17 56.5	+3.2
BDR	Baidarnaya	3.95	7	*e*P	Pn	00 17 56.5	+3.2
SMKR	Semkarok	3.99	9	PN	Pn	00 17 56.4	+2.7
SMKR	Semkarok	3.99	9	*e*P	Pn	00 17 56.4	+2.7
SRKR	Sorokina	4.04	6	PN	Pn	00 17 57.5	+3.1
SRKR	Sorokina	4.04	6	*e*P	Pn	00 17 57.5	+3.1
BKI	Bering	4.18	50	PN	Pn	00 17 56.4	+0.1
BKI	Bering	4.18	50	*e*P	Pn	00 17 56.4	+0.1
BILL	Bilibino	15.70	8	⇑*e*P	P	00 20 38.6	+1.6
BILL				*e*S	Sn	00 23 28.4	+2.5
BILL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BILL				MLR	MLR		
	comp=Z,61nm,16.0s						
KLR	Kul'dur	18.30	271	P	Pn	00 21 05.9	-0.1
	comp=Z,0.1nm,0.3s,baz=67,slow=6.9,SNR=5.3						
KLR	Kul'dur	18.30	271	⇓*e*P	P	00 21 06.4	+0.5
KLR				pmax	pmax		
	comp=Z,9.0nm,2.3s						
USRK	Ussuriysk Ar.	20.54	257	P	P	00 21 29.6	-0.7
	comp=Z,1.4nm,0.7s,baz=52,slow=14,SNR=2.4						
MAJO	Matsushiro	22.41	233	⇓*e*P	P	00 21 51.3	+0.8
MJAR	Matsushiro Arr	22.41	233	P	P	00 21 51.2	+0.6
	comp=Z,1.9nm,0.6s,baz=22,slow=12,SNR=7.6						
JCJ	Chichijima	28.93	215	P	P	00 22 47.9	-2.9
	comp=Z,110nm,0.6s,baz=329,slow=19,SNR=2.2						
ILAR	Eielson Array	29.01	45	P	P	00 22 51.5	+0.2
	comp=Z,0.5nm,1.0s,baz=262,slow=7.5,SNR=2.4						
H11N2	WAKE ISLAND Hy	33.25	169	T	T	00 59 09.2	
	baz=353,slow=76,SNR=106						
H11N3	WAKE ISLAND Hy	33.26	169	T	T	00 59 10.3	
	baz=353,slow=76,SNR=72						
H11N1	WAKE ISLAND Hy	33.27	169	T	T	00 59 10.4	
	baz=353,slow=76,SNR=106						
SONM	Songino Array	34.17	284	P	P	00 23 36.1	-0.8
	comp=Z,0.3nm,0.4s,baz=71,slow=6.5,SNR=2.6						
SONM				PcP	PcP	00 26 13.4	+0.2
	comp=Z,0.4nm,0.6s,baz=62,slow=1.8,SNR=3.2						
H11S1	WAKE ISLAND Hy	34.43	169	T	T	01 00 37.7	
	baz=351,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	34.45	169	T	T	01 00 38.3	
	baz=351,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	34.45	169	T	T	01 00 32.6	
	baz=351,slow=76,SNR=6.6						
ZALV	Zalesovo Beam	43.16	303	P	P	00 24 51.5	-0.5
	comp=Z,0.3nm,0.3s,baz=74,slow=6.6,SNR=2.5						
YKA	Yellowknife Ar	43.38	42	P	P	00 24 53.5	-0.1
	comp=Z,0.2nm,0.7s,baz=303,slow=7.0,SNR=5.7						
DGZ	Jazzator, Alta	44.01	297	*e*P	P	00 24 58.6	-0.6
KURK	Kurchatov	48.11	302	⇓*e*P	P	00 25 28.7	-2.5
MK31	Makanchi Array	48.50	296	⇑*e*P	P	00 25 31.4	-2.9
MKAR	Makanchi Array	48.50	296	P	P	00 25 31.6	-2.7
	comp=Z,0.5nm,0.5s,baz=54,slow=6.6,SNR=6.0						
ARCES	ARCESS Array B	53.76	342	P	P	00 26 11.7	-1.7
	comp=Z,2.3nm,0.8s,baz=45,slow=9.0,SNR=1.8						
NVAR	Mina Array Bea	55.73	70	P	P	00 26 30.1	+1.7
	comp=Z,0.8nm,0.7s,baz=310,slow=9.1,SNR=3.9						
PDAR	Pinedale Array	57.59	61	P	P	00 26 42.9	+1.3
	comp=Z,0.5nm,0.6s,baz=294,slow=3.8,SNR=7.0						
FINES	FINESS Array B	60.59	337	P	P	00 27 01.6	-0.1
	comp=Z,1.0nm,0.3s,baz=39,slow=7.8,SNR=17						
FINES	FINESS Array B	60.59	337	*e*P	P	00 27 01.1	-0.6
NOA	NORSAR Array B	64.01	344	P	P	00 27 24.0	-0.6
	comp=Z,0.5nm,0.6s,baz=14,slow=5.5,SNR=2.1						
AKASG	Malin Array Be	69.08	329	P	P	00 27 55.2	-1.9
	comp=Z,0.9nm,0.4s,baz=32,slow=6.7,SNR=5.3						
AKASG	Malin Array Be	69.08	329	*e*P	P	00 27 56.0	-1.1
TXAR	Lajitas Array	70.66	67	P	P	00 28 08.3	+1.0
	comp=Z,0.7nm,0.5s,baz=295,slow=4.8,SNR=16						
GERES	GERESS Array B	74.98	338	P	P	00 28 32.8	+0.2
	comp=Z,0.1nm,0.3s,baz=36,slow=8.5,SNR=1.7						
WRA	Warramunga Arr	75.75	205	P	P	00 28 37.1	-0.1
	comp=Z,0.9nm,0.8s,baz=11,slow=5.9,SNR=3.7						
BRTR	Keskin Array B	77.07	321	P	P	00 28 44.6	-0.1
	comp=Z,0.7nm,0.6s,baz=46,slow=3.3,SNR=4.0						
BRTR	Keskin Array B	77.07	321	*e*P	P	00 28 47.2	+2.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	79.43	205	P	P	00 28 58.4	+0.7
	comp=Z,0.7nm,0.6s,baz=12,slow=5.4,SNR=8.3						
STKA	Stephens Creek	85.76	196	*e*P	P	00 29 31.3	+1.0

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*NNC **24** 00:19:37.4±3.2, 42°.29N×84°.35E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=26.3km s-min=16.0km az=155.0*

*SOME **24** 00:19:40.9, 42°.48N×84°.13E, h0^{km}*

ISC 24 00:19:38.7±2.3**, 42°.44N**±0°.10×**84°.22E**±0°.08**, h10**^{km}**, n33,** σ**1^{s}.37**/49**, 6C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.01	291	*e*P	Pg	00 20 36.4	-0.1
	5.4nm,0.2s						
KTMS				*e*S	Sg	00 21 16.5	+1.1
	30nm,0.6s						
KTMS	Ketmen	3.01	291	Pg	Pg	00 20 36.3	-0.1
	5.4nm,0.2s						
KTMS				Lg	Lg	00 21 16.5	
	30nm,0.6s						
SHLS	Shalkode	3.58	283	*e*P	Pb	00 20 42.0	0.0
	7.1nm,0.4s						
SHLS				*e*S	Sb	00 21 25.8	+0.3
	50nm,0.5s						
SHLS	Shalkode	3.58	283	Pg	Pb	00 20 42.0	0.0
	7.1nm,0.4s						
SHLS				Lg	Lg	00 21 25.8	
	50nm,0.5s						
PDGK	Podgornoye	3.59	286	Pg	Pg	00 20 46.9	-0.6
	1.0nm,0.3s						
PDGK				Lg	Lg	00 21 34.2	
	9.0nm,0.4s						
PDGK	Podgornoye	3.59	286	⇑Pn	Pn	00 20 29.2	-5.3
	0.6nm,0.6s						
PDGK				⇓Pg	Pb	00 20 44.8	+2.4
	1.3nm,0.3s						
PDGK				⇑Lg	Lg	00 21 32.3	
	17nm,0.7s						
DJR	Jarkent	3.74	302	*e*P	Pg	00 20 49.5	-0.9
	2.9nm,0.3s						
DJR				*e*S	Sg	00 21 38.6	-0.3
	12nm,0.4s						
DJR	Jarkent	3.74	302	Pg	Pg	00 20 49.5	-0.9
	2.9nm,0.3s						
DJR				Lg	Lg	00 21 38.6	
	12nm,0.4s						
UZB	Uzynbulak	3.89	282	*e*P	Pg	00 20 52.9	-0.3
	1.1nm,0.2s						
UZB				*e*S	Sg	00 21 44.3	+0.7
	8.7nm,0.4s						
UZB	Uzynbulak	3.89	282	Pg	Pg	00 20 52.9	-0.3
	1.1nm,0.2s						
UZB				Lg	Lg	00 21 44.3	
	8.7nm,0.4s						
KPKS	Kokpek	4.19	286	*e*P	Pg	00 20 58.7	-0.2
	5.1nm,0.4s						
KPKS				*e*S	Sg	00 21 55.0	+1.8
	28nm,0.3s						
ZHN	Zhinishke	4.32	282	*e*P	Pg	00 20 59.0	-2.4
	74nm,0.6s						
ZHN				*e*S	Sg	00 21 54.8	-2.6
	9.3nm,0.5s						
ZHN	Zhinishke	4.32	282	Pg	Pg	00 20 59.0	-2.4
	74nm,0.6s						
ZHN				Lg	Lg	00 21 54.8	
	9.3nm,0.5s						
SATY	Saty	4.33	280	*e*P	Pg	00 21 00.7	-0.9
	3.2nm,0.7s						
SATY				*e*S	Sg	00 21 57.8	+0.2
	16nm,0.3s						
SATY	Saty	4.33	280	Pg	Pg	00 21 00.7	-0.9
	3.2nm,0.7s						
SATY				Lg	Lg	00 21 57.8	
	16nm,0.3s						
KAPS	Kapalarasan	4.52	311	*e*P	Pg	00 21 04.1	-1.2
	0.7nm,0.4s						
KAPS				*e*S	Sg	00 22 03.7	-0.1
	5.0nm,0.5s						
KAPS	Kapalarasan	4.52	311	Pg	Pg	00 21 04.1	-1.2
	0.7nm,0.4s						
KAPS				Lg	Lg	00 22 03.7	
	5.0nm,0.5s						
MNBS	Baschi	4.55	293	*e*P	Pg	00 21 04.8	-1.1
	2.2nm,0.3s						
MNBS				*e*S	Sg	00 22 05.1	+0.2
	11nm,0.4s						
MNBS	Baschi	4.55	293	Pg	Pg	00 21 04.8	-1.1
	2.2nm,0.3s						
MNBS				Lg	Lg	00 22 05.1	
	11nm,0.4s						
KURS	Kuram	4.56	285	*e*P	Pg	00 21 03.4	-2.6
	1.4nm,0.4s						
KURS				*e*S	Sg	00 22 02.9	-2.3
	3.7nm,0.7s						
KURS	Kuram	4.56	285	Pg	Pg	00 21 03.4	-2.6
	1.4nm,0.4s						
KURS				Lg	Lg	00 22 02.9	
	3.7nm,0.7s						
MK31	Makanchi Array	4.56	343	⇑Pn	Pn	00 20 48.5	+0.7
	0.1nm,0.3s,baz=24,slow=3.6,SNR=4.4						
MK31				⇓Pg	Pg	00 21 03.0	-3.1
	0.8nm,0.5s,baz=157,slow=15,SNR=6.5						
MK31				⇑Lg	Lg	00 22 07.3	
	11nm,0.8s,baz=151,slow=29,SNR=12						
MAKZ	Makanchi	4.65	341	⇑Pg	Pg	00 21 05.6	-2.1
	1.7nm,0.9s						
MAKZ				⇑Lg	Lg	00 22 11.2	
	2.6nm,0.5s						
TDK	Taldyqorghan	4.93	303	*e*P	Pg	00 21 12.6	-0.6
	12nm,0.4s						
TDK				*e*S	Sg	00 22 18.1	+1.1
	12nm,0.5s						
TDK	Taldyqorghan	4.93	303	Pg	Pg	00 21 12.5	-0.6
	12nm,0.4s						
TDK				Lg	Lg	00 22 18.1	
	12nm,0.5s						
ZSN	Zaisan	5.03	5	*e*P	Pg	00 21 14.3	-0.7
	1.9nm,0.3s						
ZSN				*e*S	Sg	00 22 20.9	+0.8
	15nm,0.9s						
ZSN	Zaisan	5.03	5	Pg	Pg	00 21 14.3	-0.7
	1.9nm,0.3s						
ZSN				Lg	Lg	00 22 20.9	
	15nm,0.9s						
TNSS	Tian-Shan	5.39	279	*e*P	Pg	00 21 20.6	-1.4
	3.2nm,1.1s						
TNSS				*e*S	Sg	00 22 31.7	-0.1
	2.6nm,0.7s						
TNSS	Tian-Shan	5.39	279	Pg	Pg	00 21 20.6	-1.4
	3.2nm,1.1s						
TNSS				Lg	Lg	00 22 31.7	
	2.6nm,0.7s						
CHKK	Chushkaly	5.48	287	*e*P	Pg	00 21 22.4	-1.1
	0.4nm,0.1s						
CHKK				*e*S	Sg	00 22 34.8	+0.3
	3.3nm,0.4s						
CHKK	Chushkaly	5.48	287	Pg	Pg	00 21 22.4	-1.1
	0.4nm,0.1s						
CHKK				Lg	Lg	00 22 34.8	
	3.3nm,0.4s						
KUU	Kurty	5.94	287	*e*P	Pg	00 21 31.1	-1.4
	1.0nm,0.4s						
KUU				*e*S	Sg	00 22 50.1	+0.7
	5.3nm,0.6s						
KUU	Kurty	5.94	287	Pg	Pg	00 21 31.1	-1.4
	1.0nm,0.4s						
KUU				Lg	Lg	00 22 50.1	
	5.3nm,0.6s						

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*NEIC **24** 00:38:40.3±1.1, 23°.5S±0°.1×179°.9E±0°.1, h569^{km}±5^{km}, mb4.1/15, Error ellipse: s-maj=22.5km s-min=18.5km az=145.0*

*IDC **24** 00:38:41.1±2.8, 23°.52S×179°.90E, h573^{km}±31^{km}, mb3.1/8, mb1 3.4/9, mb1mx3.1/37, mbtmp4.1/9, Error ellipse: s-maj=28.1km s-min=16.6km az=169.0*

ISC 24 00:38:38.9±0.5**, 23°.5S**±0°.1×**179°.93E**±0°.09**, h550**^{km}**, n34,** σ**0^{s}.95**/36**, mb3.8**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	10.42	67	P	P	00 41 02.7	+1.4
DZM	Mont Dzumac	12.53	274	P	P	00 41 23.9	+0.8
	0.4nm,0.3s,baz=131,slow=22,SNR=7.1						
URZ	Urewera	14.91	189	P	P	00 41 42.6	-4.7
	0.4nm,0.3s,baz=349,slow=20,SNR=2.2						
QRZ	Quartz Range	18.36	198	P	P	00 42 19.6	-0.3
QRZ				IAmb	IAmb	00 42 27.3	
	comp=Z,11nm,1.2s						
KHZ	Kahutara	19.60	194	P	P	00 42 33.9	+2.8
MLZ	Mavora Lakes	23.84	201	P	P	00 43 09.7	+0.4
MLZ				IAmb	IAmb	00 43 25.7	
	comp=Z,10nm,1.1s						
EIDS	Eidsvold	26.32	260	P	P	00 43 31.9	+0.5
EIDS				IAmb	IAmb	00 43 49.0	
	comp=Z,4.9nm,1.1s						
CTA	Charters Tower	31.42	270	P	P	00 44 16.8	+1.1
	comp=Z,5.1nm,0.4s,baz=94,slow=11,SNR=19						
CTAO	Charters Tower	31.42	270	P	P	00 44 16.8	+1.1
CTAO				IAmb	IAmb	00 44 27.1	
	comp=Z,7.6nm,1.1s						
TOO	Toolangi	32.62	236	P	P	00 44 26.4	+0.7
TOO				IAmb	IAmb	00 44 29.9	
	comp=Z,5.4nm,1.1s						
AS31	Alice Springs	42.04	260	P	P	00 45 43.0	+0.1
ASAR	Alice Springs	42.04	260	P	P	00 45 43.1	+0.2
	comp=Z,0.9nm,0.5s,baz=102,slow=7.2,SNR=9.4						
ASAR				S	S	00 51 22.4	-0.4
	comp=Z,0.3nm,0.7s,baz=97,slow=14,SNR=2.4						
WR0	Warramunga Arr	42.19	266	P	P	00 45 43.6	-0.5
WB2	Warramunga Arr	42.36	266	P	P	00 45 45.1	-0.4
WB2				IAmb	IAmb	00 45 58.7	
	comp=Z,4.5nm,1.1s						
WB0	Warramunga Arr	42.37	266	P	P	00 45 45.3	-0.2
WRA	Warramunga Arr	42.38	266	P	P	00 45 45.3	-0.3
	comp=Z,0.9nm,0.3s,baz=90,slow=5.9,SNR=64						
WRA				PcP	PcP	00 47 25.0	-1.2
	comp=Z,0.3nm,0.8s,baz=102,slow=3.2,SNR=1.4						
WRA	Warramunga Arr	42.38	266	P	P	00 45 45.4	-0.1
FITZ	Fitzroy Crossi	50.80	265	P	P	00 46 50.1	+0.9
	comp=Z,1.7nm,0.8s,baz=97,slow=8.1,SNR=0.9						
QSPA	South Pole Qui	66.58	180	P	P	00 48 34.9	+0.3
	comp=Z,1.4nm,0.6s,baz=19,slow=1.4,SNR=6.8						
BELA	Belgrano 2	76.84	173	P	P	00 49 33.3	-0.6
NVAR	Mina Array Bea	84.51	44	P	P	00 50 15.4	+1.0
	comp=Z,0.2nm,0.3s,baz=233,slow=4.3,SNR=1.8						
SNAA	Sanae	85.07	179	P	P	00 50 15.1	-1.4
SUA	Susitna One	87.90	14	P	P	00 50 29.7	-0.2
SUA				IAmb	IAmb	00 50 48.6	
	comp=Z,3.0nm,1.2s						
EYAK	Cordova Ski Ar	88.28	16	P	P	00 50 31.1	-0.4
KNK	Knik Glacier	88.37	15	P	P	00 50 31.9	-0.1
TXAR	Lajitas Array	90.27	58	P	P	00 50 42.3	+0.6
	comp=Z,0.7nm,0.8s,baz=231,slow=6.0,SNR=6.7						
PDAR	Pinedale Array	92.44	44	P	P	00 50 51.4	-0.2
	comp=Z,0.1nm,0.3s,baz=228,slow=5.0,SNR=3.4						
MKAR	Makanchi Array	111.84	313	PKiKP	PKiKP	00 56 10.2	-1.3
	comp=Z,0.3nm,0.6s,baz=84,slow=2.7,SNR=6.3						
ARCES	ARCESS Array B	131.48	348	PKP	PKPdf	00 56 46.1	-2.3
	comp=Z,6.4nm,0.9s,baz=2.9,slow=3.6,SNR=5.3						
FINES	FINESS Array B	138.05	342	PKP	PKPdf	00 57 01.0	+0.2
	comp=Z,3.3nm,1.0s,baz=353,slow=3.4,SNR=3.7						
AKASG	Malin Array Be	144.60	328	PKP	PKPdf	00 57 12.0	-0.8
	comp=Z,2.5nm,0.5s,baz=42,slow=3.9,SNR=4.8						
BRTR	Keskin Array B	147.29	308	PKPbc	PKPbc	00 57 20.9	-0.4
	comp=Z,0.6nm,0.6s,baz=148,slow=5.5,SNR=4.9						
CLL	Collm	150.46	343	*i* PKPbc	PKPbc	00 57 28.1	-0.2
CLL				*e*PKPab	PKPab	00 57 37.0	-0.4
TORD	Torodi Ar. Bea	169.57	190	PKPab	PKPab	00 59 00.7	-0.7
	comp=Z,0.3nm,0.4s,baz=151,slow=3.3,SNR=1.2						

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*MOS **24** 00:38:52.8±0.0, 42°.95N×45°.61E, h12^{km}, MPVA3.5*

*NORS **24** 00:38:52.8±0.0, 42°.89N×45°.63E, h19^{km}, MPVA3.5*

*DRS **24** 00:38:53.7±0.0, 43°.03N×45°.53E, h14^{km}, ML2.7/10*

ISC 24 00:38:55.1±0.9**, 43°.00N**±0°.03×**45°.62E**±0°.02**, h14**^{km}±8^{km}**, n39,** σ**0^{s}.99**/74**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	Groznyy	0.24	32	*i* Pg	Pg	00 39 00.2	-0.2
GROC				*e*Sg	Sb	00 39 05.9	+0.6
DVE	Vedeno	0.37	96	*e*Pg	Pg	00 39 01.8	-0.9
DVE				*e*Sg	Sb	00 39 08.9	-0.3
BTLR	Botlikh	0.56	127	*i* Pg	Pg	00 39 05.5	-0.6
	37nm,0.1s						
BTLR				*e*Sg	Sg	00 39 13.8	+0.4
	163nm,0.7s						
KMGR	Komgaron	0.56	276	*e*Pg	Pg	00 39 05.4	-0.7
KMGR				*e*Sg	Sb	00 39 14.6	+0.2
VLKR	Vladikavkaz	0.69	274	*e*Pg	Pb	00 39 08.8	-0.1
VLKR				*e*Sg	Sb	00 39 18.6	+0.2
DLMR	Dylym	0.74	84	*e*Pg	Pb	00 39 07.2	-2.6
	76nm,0.2s						
DLMR				*e*Sg	Sg	00 39 20.0	+0.7
	397nm,0.3s						
BTKR	Batakoyurt	0.87	296	*e*Pg	Pg	00 39 12.2	+0.2
BTKR				*e*Sg	Sn	00 39 25.4	0.0
DBC	Dubki	0.89	88	*e*Pg	Pb	00 39 11.7	-0.6
	29nm,0.3s						
DBC				*e*Sg	Sg	00 39 24.6	+0.6
	82nm,0.4s						
XNZR	Khunzakh	0.92	119	*e*Pg	Pb	00 39 12.0	-0.9
XNZR				*e*Sg	Sg	00 39 25.2	+0.2
KRNR	Karanay	0.96	100	*e*Pg	Pb	00 39 13.0	-0.5
	20nm,0.3s						
KRNR				*i* Sg	Sg	00 39 27.0	+0.7
	115nm,0.2s						
TRKR	Terskaya	0.97	319	*e*Pg	Pn	00 39 14.3	0.0
TRKR				*e*Sg	Sn	00 39 29.2	+1.3
LACR	Lac	0.99	260	*e*Pg	Pb	00 39 12.1	-1.9
LACR				*e*Sg	Sb	00 39 25.9	-1.0
ARNR	Ardon	0.99	281	*e*Pg	Pb	00 39 13.8	-0.3
ARNR				*e*Sg	Sn	00 39 28.0	-0.5
ARKR	Arakani	1.09	111	*e*Pg	Pb	00 39 15.2	-0.4
	20nm,0.2s						
ARKR				*e*Sg	Sg	00 39 31.8	+1.6
	140nm,0.5s						
BUJR	Buynaksk	1.11	99	*e*Pg	Pg	00 39 16.4	-0.1
BUJR				*e*Sg	Sg	00 39 33.1	+2.3
KORR	Kora	1.14	275	*e*Pg	Pb	00 39 16.5	-0.1
KORR				*e*Sg	Sg	00 39 33.2	+1.2
GNBR	Gunib	1.16	121	*e*Pg	Pn	00 39 16.7	-0.2
	63nm,0.4s						
GNBR				*e*Sg	Sg	00 39 33.8	+1.1
	163nm,0.3s						
STDR	Stavd-Durt	1.20	289	*e*Pg	Pg	00 39 17.9	-0.2
STDR				*e*Sg	Sg	00 39 36.3	+2.6
PRTR	Priterechnaya	1.23	308	*e*Pg	Pb	00 39 18.3	+0.2
PRTR				*e*Sg	Sg	00 39 34.4	-0.5
LGD	Lagodekhi	1.25	158	P	Pn	00 39 17.7	-0.4
LGD				S	Sb	00 39 33.8	-0.6
LGD	Lagodekhi	1.25	158	*e*Pg	Pn	00 39 17.8	-0.4
LGD				*e*Sg	Sb	00 39 34.1	-0.3
ZEI	Tsey	1.28	261	*e*Pg	Pn	00 39 17.1	-1.6
ZEI				*e*Sg	Sb	00 39 34.9	-0.6
LSNR	Lesken	1.34	283	*e*Pg	Pb	00 39 19.6	-0.5
LSNR				*e*Sg	Sg	00 39 39.3	+0.9
MAK	Makhachkala	1.38	91	*e*Pg	Pn	00 39 19.2	-0.7
MAK				*e*Sg	Sg	00 39 40.1	+0.4
BTNK	Botanikuri	1.45	205	P	Pb	00 39 22.2	+0.4
DIGR	Digorskoe uzhe	1.50	267	*e*Pg	Pn	00 39 21.3	-0.5
DIGR				*e*Sg	Sb	00 39 41.1	-0.6
NCK	Nalchik	1.56	289	*e*Pg	Pn	00 39 22.6	+0.3
NCK				*e*Sg	Sb	00 39 43.7	+0.3
DDFL	Dedoflistskaro	1.59	166	P	Pg	00 39 26.9	+1.2
SGKR	Sergokala	1.59	109	*i* Pg	Pb	00 39 25.0	+0.7
	16nm,0.3s						
SGKR				*e*Sg	Sg	00 39 48.5	+2.0
	136nm,0.6s						
URKR	Urkarakh	1.70	119	*e*Pg	Pb	00 39 25.9	-0.3
	15nm,0.5s						
URKR				*e*Sg	Sb	00 39 47.2	-0.4
	56nm,0.8s						
BRNG	Burnasheti	1.91	225	P	Pb	00 39 28.9	-0.9
BRNG				S	Sg	00 39 55.2	-1.4
DMNI	Dmanisi	1.98	213	P	Pb	00 39 29.4	-1.4
DMNI				S	Sb	00 39 55.6	+0.1
BKRG	Bakuriani	1.99	232	P	Pn	00 39 29.3	+0.9
BKRG				S	Sb	00 39 57.0	+1.3
KBZ	Khabaz	2.12	291	*e*Pg	Pn	00 39 30.9	+1.0
KBZ				*e*Sg	Sb	00 39 57.8	-1.5
PYA1	Pyatigorsk	2.12	301	*e*Pg	Pn	00 39 29.1	-1.0
NEY	Neytrino	2.14	278	*e*Pg	Pn	00 39 30.8	+0.4
NEY				*e*Sg	Sn	00 39 57.6	+0.7
AKT	Akhty	2.18	133	*e*Pg	Pb	00 39 33.6	-0.8
AKT				*e*Sg	Sn	00 39 58.5	+0.6
BEYR	Belyy Ugol+	2.28	297	*e*Pn	Pn	00 39 31.1	-1.1
ABS	Abastumani	2.42	240	P	Pb	00 39 36.8	-1.7
ABS				S	Sb	00 40 09.8	+1.6

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*GCG **24** 00:50:17.6±0.3, 13°.69N×91°.72W, h0^{km}±999^{km}, MD4.0*

*IDC **24** 00:50:17.2±1.8, 14°.27N×91°.27W, h0^{km}, mb3.7/6, mb1 4.0/9, mb1mx3.8/32, mbtmp3.7/9, ML3.7/3, MS3.4/5, Ms1 3.4/5, ms1mx3.0/33, Error ellipse: s-maj=56.2km s-min=27.2km az=40.0*

*SNET **24** 00:50:18.9±1.2, 13°.79N×91°.61W, h14^{km}±30^{km}, ML3.4*

*UCR **24** 00:50:19.1±1.2, 13°.81N×91°.59W, h11^{km}±13^{km}, ML3.3, mb4.2(NEIC)*

*NEIC **24** 00:50:20.2±2.0, 13°.74N±0°.09×91°.72W±0°.07, h37^{km}±13^{km}, mb4.2/15, Error ellipse: s-maj=16.4km s-min=4.9km az=215.0*

ISC 24 00:50:18.3±1.0**, 13°.72N**±0°.10×**91°.78W**±0°.07**, h20**^{km}±5^{km}**, n66,** σ**1^{s}.28**/77**, mb4.0**/14**, MS3.2**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.81	6	*e*P	Pb	00 50 33.0	-0.7
RTAL				*e*S	Sb	00 50 42.3	-1.9
RTAL				IAML		00 50 46.3	
	comp=Z,891nm,0.3s						
RTAL	Retalhuleu	0.81	6	Pn	Pg	00 50 34.4	+0.2
FUG	Fuego 3	1.17	51	*e*P	Pn	00 50 39.8	0.0
PCG	Pacaya	1.32	59	*e*P	Pb	00 50 42.5	-0.2
HUEH	Huehuetenango	1.61	10	Pn	Pn	00 50 43.3	-2.7
NBG	Las Nubes	1.64	58	*e*P	Pb	00 50 47.9	-0.3
NBG				*e*S	Sg	00 51 10.1	-1.4
RTR	El Retiro	2.08	85	*e*P	Pn	00 50 51.5	-0.9
RTR				*e*S	Sn	00 51 16.6	-1.2
RTR	El Retiro	2.08	85	*e*P	Pn	00 50 51.5	-0.9
RTR				*e*S	Sn	00 51 16.6	-1.2
CEVE	Cerro Verde	2.10	87	*e*P	Pn	00 50 51.2	-1.5
CEVE				*e*S	Sn	00 51 17.7	-0.7
CEVE				IAML		00 51 31.7	
	comp=Z,1µm,0.4s						
CEVE	Cerro Verde	2.10	87	*e*P	Pn	00 50 51.2	-1.5
CEVE				*e*S	Sn	00 51 17.7	-0.7
CEVE				IAML		00 51 31.7	

	comp=Z,1μm,0.4s						
SNJE	San Jose	2.12	86	eP	Pn	00 50 51.9	-1.0
SNJE	San Jose	2.12	86	eP	Pn	00 50 51.9	-1.0
BOQS	Boqueron	2.43	89	eP	Pn	00 50 56.3	-0.9
BOQS	Boqueron	2.43	89	eP	Pn	00 50 56.3	-0.9
MRL	Marmol	2.44	56	eP	Pn	00 50 59.1	+1.7
MTO3	Montecristo	2.45	74	eP	Pn	00 50 57.1	-0.3
MTO3				eS	Sn	00 51 26.7	-0.2
MTO3				IAML		00 51 33.3	
	comp=Z,81nm,0.4s						
MTO3	Montecristo	2.45	74	eP	Pn	00 50 57.1	-0.3
MTO3				eS	Sn	00 51 26.7	-0.2
MTO3				IAML		00 51 33.3	
	comp=Z,81nm,0.4s						
MTO3	Montecristo	2.45	74	Pn	Pn	00 50 56.7	-0.7
SNET	Serv Nac Est T	2.48	90	Pn	Pn	00 50 57.8	0.0
ESQI	Esquipulas	2.51	70	eP	Pn	00 50 57.8	-0.4
ESQI	Esquipulas	2.51	70	Pn	Pn	00 50 57.8	-0.4
CCIG	Comitan	2.57	352	Pn	Pb	00 51 02.3	-1.7
LFRS	El Faro	2.65	92	eP	Pn	00 50 59.4	-0.7
LFRS				eS	Sn	00 51 30.2	-1.4
LFRS	El Faro	2.65	92	eP	Pn	00 50 59.4	-0.7
LFRS				eS	Sn	00 51 30.2	-1.4
COEG	Centro de Oper	2.82	92	eP	Pn	00 51 01.3	-1.2
COEG				eS	Sn	00 51 34.0	-2.0
COEG	Centro de Oper	2.82	92	eP	Pn	00 51 01.3	-1.2
COEG				eS	Sn	00 51 34.0	-2.0
TECA	Tecapa	3.20	94	eP	Pn	00 51 06.9	-0.8
TECA	Tecapa	3.20	94	eP	Pn	00 51 06.9	-0.8
PETF	Flores	3.68	30	Pn	Pn	00 51 15.2	+1.1
LCND	La Caada	3.81	96	eP	Pn	00 51 15.1	-0.8
LCND	La Caada	3.81	96	eP	Pn	00 51 15.1	-0.8
TGUH	Tegucigalpa,Un	4.39	85		Pn	00 51 22.9	-1.2
CMIG	Matias Romero	4.49	319	Pn	Pn	00 51 25.7	+0.3
	comp=Z,3.8nm,0.3s,baz=122,slow=9.2,SNR=23						
CMIG				Sn	Sn	00 52 16.2	-0.9
	comp=Z,12nm,0.3s,baz=79,slow=16,SNR=5.7						
CMIG				LR	LR	00 53 23.8	
	comp=Z,115nm,21.5s,baz=148,slow=42						
CRIN	San Cristobal	4.72	102	Pn	Pn	00 51 30.1	+1.6
TEIG	Tepich	7.29	27	Pn	Pn	00 52 04.5	+0.7
ESPN	Las Esperanzas	7.45	101	Pn	Pn	00 52 05.2	-0.8
JTS	Las Juntas de	7.50	116	Pn	Pn	00 52 06.8	0.0
	comp=Z,0.4nm,0.3s,baz=15,slow=22,SNR=1.0						
TXAR	Lajitas Array	19.05	327	P	Pn	00 54 41.0	+0.6
	comp=Z,0.1nm,0.3s,baz=158,slow=13,SNR=14						
TXAR	Lajitas Array	19.05	327	P	Pn	00 54 42.4	+2.1
TX31	Lajitas Ar. Si	19.05	327	P	Pn	00 54 42.4	+2.1
TX31				IAmb	IAmb	00 55 10.5	
	comp=Z,34nm,1.9s						
TX32	Lajitas Array	19.05	327	P	Pn	00 54 40.0	-0.3
H06E1	SOCORRO T-PHAS	19.05	288	T	T	01 14 07.6	
	SNR=6.9						
ROSC	El Rosal	19.35	115	LR	LR	01 03 19.3	
	comp=Z,98nm,18.1s,baz=60,slow=41						
MNTX	Cornudas Mount	21.82	327	P	P	00 55 11.4	+2.0
WMOK	Wichita Mounta	21.86	344	P	P	00 55 10.1	+0.2
WMOK				IAmb	IAmb	00 55 14.0	
	comp=Z,8.0nm,1.4s						
FCAR	Ozark Folk Cen	22.08	359	P	P	00 55 12.2	0.0
FCAR				IAmb	IAmb	00 55 24.5	
	comp=Z,12nm,1.5s						
AMTX	Amarillo	22.89	339	P	P	00 55 20.7	-0.3
AMTX				IAmb	IAmb	00 55 49.9	
	comp=Z,11nm,1.2s						
TKL	Tuckaleechee C	23.01	17	P	P	00 55 17.3	-4.7
	comp=Z,3.8nm,0.7s,baz=101,slow=6.3,SNR=1.7						
TKL				LR	LR	01 05 07.2	
	comp=Z,72nm,19.5s,baz=212,slow=40						
TKL	Tuckaleechee C	23.01	17	P	P	00 55 20.9	-1.2
T42A	Van Buren	23.22	1	P	P	00 55 23.6	-0.6
T42A				IAmb	IAmb	00 55 45.3	
	comp=Z,13nm,1.6s						
V53A	Saluda	23.30	19	P	P	00 55 24.6	-0.5
TZTN	Tazewell	23.90	17	P	P	00 55 29.8	-1.1
S39A	Bolivar	23.91	357	P	P	00 55 30.8	-0.2
S39A				IAmb	IAmb	00 55 32.4	
	comp=Z,3.0nm,0.7s						
S44A	Carbondale	23.98	5	P	P	00 55 30.4	-1.2
S44A				IAmb	IAmb	00 55 32.6	
	comp=Z,35nm,1.8s						
CCM	Cathedral Cave	24.25	1	P	P	00 55 32.5	-1.5
CCM				IAmb	IAmb	00 55 53.9	
	comp=Z,28nm,1.9s						
ANMO	Albuquerque	24.95	330	P	P	00 55 40.0	-0.7
	comp=Z,0.8nm,0.5s,baz=132,slow=11,SNR=4.0						
ANMO	Albuquerque	24.95	330	P	P	00 55 41.2	+0.5
SJG	San Juan	25.02	77	LR	LR	01 05 40.1	
	comp=Z,79nm,18.9s,baz=259,slow=38						
PDAR	Pinedale Array	32.76	335	P	P	00 56 49.2	-1.1
	comp=Z,0.2nm,0.6s,baz=130,slow=6.4,SNR=2.1						
NVAR	Mina Array Bea	34.02	321	P	P	00 57 03.9	+2.6
	comp=Z,0.2nm,0.3s,baz=176,slow=22,SNR=3.6						
NVAR				PcP	PcP	00 59 41.3	+2.2
	comp=Z,0.8nm,0.8s,baz=145,slow=3.3,SNR=2.0						
NVAR	Mina Array Bea	34.02	321	P	P	00 57 02.0	+0.7
F10A	Beach Ranch, E	38.66	331	P	P	00 57 41.1	+0.4
F10A				IAmb	IAmb	00 57 45.3	
	comp=Z,4.9nm,0.9s						
YKA	Yellowknife Ar	51.35	347	P	P	00 59 19.9	-1.3
	comp=Z,0.5nm,0.6s,baz=146,slow=7.8,SNR=11						
YKA				PcP	PcP	01 00 34.8	-1.0
	comp=Z,0.3nm,0.8s,baz=140,slow=3.8,SNR=5.6						
ILAR	Eielson Array	63.18	337	P	P	01 00 44.1	-0.6
	comp=Z,0.7nm,0.7s,baz=100,slow=4.1,SNR=7.8						
ARCES	ARCESS Array B	86.34	18	LR	LR	01 41 31.5	
	comp=Z,82nm,18.3s,baz=290,slow=36						
CMAR	Chiang Mai Arr	146.32	341	PKPbc	PKPbc	01 09 58.9	+0.2
	comp=Z,1.4nm,0.3s,baz=343,slow=4.0,SNR=4.9						

IDC 24 00:53:30.1±5.5**, 21°.30S**×**148°.45E, h0km, mb1 3.2**/3**, mb1mx3.1**/25**, mbtmp2.9**/3**, ML2.6**/3**, Error ellipse: s-maj=46.6km s-min=35.6km az=48.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	2.38	300	Pn	Pn	00 54 11.8	+1.3
	0.9nm,0.3s,baz=119,slow=18,SNR=20						
CTA				Lg	Lg	00 54 45.6	
	5.5nm,0.3s,baz=38,slow=18,SNR=10						
WRA	Warramunga Arr	13.28	273	Pn	Pn	00 56 39.0	-1.1
	0.0nm,0.3s,baz=93,slow=14,SNR=1.6						
WRA				Lg	Lg	01 00 34.8	
	0.0nm,0.3s,baz=101,slow=27,SNR=3.6						
I07AU	WARRAMUNGA INF	13.29	273	i		02 13 20.0	
	baz=100,slow=305,SNR=1.7						
ASAR	Alice Springs	13.65	257	Pn	Pn	00 56 43.0	-2.2
	0.1nm,0.3s,baz=80,slow=13,SNR=4.2						
ASAR				Lg	Lg	01 00 44.5	
	0.1nm,0.3s,baz=75,slow=27,SNR=4.2						

NSSP ***24*** *01:17:35.6, 38°.03N×47°.08E, h10km, Ms4.4*

IDC ***24*** *01:17:40.5±0.6, 38°.00N×47°.07E, h0km, mb4.1/23, mb1 4.1/34, mb1mx4.1/52, mbtmp4.1/34, ML3.3/11, MS3.4/17, Ms1 3.4/17, ms1mx3.2/47, Error ellipse: s-maj=12.0km s-min=9.1km az=14.0*

AZER ***24*** *01:17:41.1±0.3, 38°.07N×47°.10E, h10km, ml4.6/33, Error ellipse: s-maj=4.9km s-min=2.7km az=9.0*

THR ***24*** *01:17:42.6±0.4, 38°.08N×47°.07E, h14km±5km, ML4.5*

TEH ***24*** *01:17:42.2, 38°.06N×47°.04E, h7km, ML4.4*

NEIC ***24*** *01:17:42.6±1.8, 38°.07N±0°.04×47°.11E±0°.06, h10km±1km, Error ellipse: s-maj=8.2km s-min=6.5km az=124.0*

MOS ***24*** *01:17:43.2±1.7, 38°.12N×47°.29E, h16km, mb4.6/31, Error ellipse: s-maj=5.0km s-min=3.9km az=101.1*

NNC ***24*** *01:17:48.2±5.7, 38°.67N×47°.57E, h0km, mb4.4, Error ellipse: s-maj=63.3km s-min=36.3km az=49.0*

ISC 24 01:17:42.5±0.8**, 38°.07N**±0°.02×**47°.04E**±0°.02**, h6**km±5km**, n392, σ2^{s}22**/430**, mb4.4**/65**, MS3.4**/11**, 16C-11D, Northwestern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHRS	Heris	0.25	360	ePg	Pg	01 17 47.5	0.0
IHRS				eSg	Sg	01 17 51.5	+0.7
ISRB	Sarab	0.55	116	ePg	Pg	01 17 53.2	0.0
TABZ	Tabriz	0.57	269	ePg	Pg	01 17 53.9	+0.4
ITBZ	Tabriz	0.72	283	ePg	Pg	01 17 55.3	-1.2
IHSH	Hashtrud	0.78	167	ePg	Pn	01 17 57.0	+3.2
GRMI	Germi	0.99	42	ePg	Pg	01 18 00.9	-0.8
GRMI				IAML		01 18 15.9	
	comp=N,10μm,0.1s						
GRMI				IAML		01 18 15.9	
	comp=E,7μm,0.1s						
GRMI	Germi	0.99	42	Pg	Pg	01 18 00.9	-0.8
GRMI	Germi	0.99	42	ePg	Pg	01 18 00.9	-0.8
LRK	Lerik	1.17	60	P	Pb	01 18 04.8	-0.6
	SNR=4119						
LRK				S	Sn	01 18 21.5	-0.5
LRK	Lerik	1.17	60	ePg	Pb	01 18 04.7	-0.6
ORD	Ordubad	1.19	316	P	Pn	01 18 03.8	-2.0
	SNR=804						
ORD				S	Sb	01 18 21.0	-0.3
IMRD	Marand	1.23	302	ePg	Pn	01 18 05.3	-1.3
YRD	Yardimli	1.26	48	P	Pn	01 18 06.1	-0.9
	SNR=2954						
YRD				S	Sn	01 18 24.2	-0.2
YRD	Yardimli	1.26	48	ePn	Pn	01 18 06.0	-0.9
QRD	Qoradiz	1.41	9	P	Pn	01 18 08.4	-0.3
	SNR=461						
QRD				S	Sg	01 18 30.9	+3.1
ASTR	Astara	1.46	70	P	Pn	01 18 09.7	+0.2
	SNR=433						
ASTR				S	Sg	01 18 31.4	+2.0
ASTR	Astara	1.46	70	ePn	Pn	01 18 09.6	+0.2
LKRN	Lenkeran, Azer	1.51	64	PG	Pn	01 18 10.6	+0.5
LKRN	Lenkeran, Azer	1.51	64	P	Pn	01 18 10.6	+0.5
	SNR=78						
LKRN				S	Sg	01 18 32.0	+1.0
LKRN	Lenkeran, Azer	1.51	64	ePn	Pn	01 18 10.6	+0.5
GRS	Goris	1.53	339	⇑iP	Pn	01 18 03.0	-7.6
GRS				⇓iS	Sn	01 18 23.0	-8.0
GLBA	Clilabad	1.58	42	P	Pb	01 18 12.1	0.0
	SNR=1275						
GLBA				S	Sg	01 18 35.1	+1.9
GLBA	Clilabad	1.58	42	ePn	Pb	01 18 12.1	0.0
NAX	Nakhchivan	1.64	313	P	Pn	01 18 12.3	+0.2
	SNR=181						
NAX				S	Sb	01 18 34.5	+0.3
MAHB	Mahabad	1.68	220		Pn	01 18 12.7	+0.1
MAHB	Mahabad	1.68	220	ePg	Pn	01 18 12.8	+0.1
MAHB				e		01 18 16.6	
	comp=Z,99nm,0.3s						
BLQ	Beylaqan	1.70	14	P	Pn	01 18 13.5	+0.8
	SNR=1063						
BLQ				S	Sb	01 18 37.1	+1.3
BLQ	Beylaqan	1.70	14	ePn	Pn	01 18 13.5	+0.8
ZNJK	Zanjan	1.91	136	ePn	Pn	01 18 16.7	+0.7
ZNJK				eSg	Sb	01 18 43.0	+0.7
ZNJK	Zanjan	1.91	136	ePn	Pn	01 18 16.7	+0.7
AGDM	Agdam	2.04	1	P	Pn	01 18 19.0	+1.5
	SNR=883						
AGDM				S	Sb	01 18 46.8	+1.2
SAAT	Saatly	2.09	31	P	Pn	01 18 19.4	+1.3
	SNR=93						
SAAT				S	Sb	01 18 46.8	-0.2
SAAT	Saatly	2.09	31	ePn	Pn	01 18 19.4	+1.3
BRDA	Brd	2.19	3	P	Pb	01 18 21.9	-0.7
	SNR=608						
BRDA				S	Sg	01 18 52.7	-0.4
BRDA	Brd	2.19	3	ePn	Pb	01 18 21.9	-0.7
MAKU	Maku	2.25	306	ePn	Pn	01 18 21.6	+1.1
MAKU	Maku	2.25	306	Pn	Pn	01 18 21.6	+1.1
MAKU	Maku	2.25	306	ePn	Pn	01 18 21.6	+1.1
ZRD	Zardab	2.26	13	P	Pn	01 18 22.7	+2.1
	SNR=285						
ZRD				S	Sb	01 18 52.8	+0.7
ZRD	Zardab	2.26	13	ePn	Pn	01 18 22.6	+2.1
HYR	Heyderabad	2.37	315	P	Pn	01 18 23.4	+1.2
	SNR=365						
HYR				S	Sb	01 18 56.4	+1.0
ALIB	Äli-Bayra	2.43	38	P	Pb	01 18 25.3	-1.4
	SNR=39						
ALIB				S	Sb	01 18 58.2	+1.4
ALIB	Äli-Bayra	2.43	38	ePn	Pb	01 18 25.2	-1.4
KDMR	Kurdemir	2.47	21	P	Pn	01 18 24.7	+1.4
	SNR=64						
KDMR				S	Sb	01 18 59.4	+1.4
KDMR	Kurdemir	2.47	21	Pn	Pn	01 18 24.7	+1.4
KDMR	Kurdemir	2.47	21	ePn	Pn	01 18 24.7	+1.4
GANJ	Ganja	2.63	348	PN	Pn	01 18 26.6	+1.0
GANJ	Ganja	2.63	348	P	Pn	01 18 26.7	+1.0
	SNR=347						
GANJ				S	Sb	01 19 01.3	-1.5
GANJ	Ganja	2.63	348	ePn	Pn	01 18 26.6	+1.0
CLDR	Caldiran	2.67	295	ePn	Pb	01 18 30.3	-0.7
NRKZ	NAREK	2.68	317	⇑iP	Pn	01 18 28.0	+1.7
NRKZ				⇑iS	Sb	01 19 06.5	+2.5
MNGR	Mingechevir, A	2.70	1	PN	Pn	01 18 28.9	+2.4
MNGR	Mingechevir, A	2.70	1	P	Pn	01 18 29.0	+2.4
	SNR=102						
MNGR	Mingechevir, A	2.70	1	ePn	Pn	01 18 28.9	+2.4
GNI	Garni	2.74	320	Pn	Pn	01 18 29.2	+1.9
	comp=Z,61nm,0.3s,baz=116,slow=1.1,SNR=241						
GNI				Lg	Lg	01 19 08.9	
	comp=Z,58nm,0.3s,baz=103,slow=19,SNR=8.9						
GNI				LR	LR	01 19 42.5	
	comp=Z,1μm,18.6s,baz=118,slow=43						
GNI	Garni	2.74	320	i P	Pn	01 18 29.7	+2.5
GNI				i S	Sg	01 19 09.8	-0.9
GNI	Garni	2.74	320	PN	Pb	01 18 30.9	-1.2
GNI	Garni	2.74	320	Pn	Pb	01 18 30.9	-1.2
GNI	Garni	2.74	320	ePn	Pn	01 18 29.8	+2.5
GDB	GEDABAY	2.83	340	P	Pn	01 18 29.5	+1.0
	SNR=386						
IML	Ismayilli	2.86	18	P	Pn	01 18 30.1	+1.2
	SNR=65						
IML	Ismayilli	2.86	18	ePn	Pn	01 18 30.0	+1.2
GBS	Qobustan	2.87	30	P	Pb	01 18 32.2	-2.1
	SNR=173						
GBS				S	Sn	01 19 05.0	+1.1
GBS	Qobustan	2.87	30	ePn	Pb	01 18 32.1	-2.1
KAPZ	Kaputan	2.89	322	i P	Pn	01 18 31.3	+1.9
KAPZ				i S	Sb	01 19 12.9	+2.5
QBL	Gabala	2.94	12	P	Pn	01 18 31.0	+1.1
	SNR=114						
PQL	Pirkuli	2.97	23	P	Pn	01 18 32.1	+1.6
	SNR=164						
PQL	Pirkuli	2.97	23	ePn	Pn	01 18 32.0	+1.6
HSRG	Sareghieh	2.99	160	ePn	Pn	01 18 32.2	+1.4
HSRG				e		01 19 20.3	
	comp=Z,99nm,0.6s						
IGZV	Ghazvin	3.04	123	ePn	Pn	01 18 32.1	+0.7
METS	Metsamor	3.10	313	i P	Pn	01 18 35.9	+3.7
METS				i S	Sg	01 19 21.2	-1.0
QABG	Abgarm-Qazvin	3.11	138	Pn	Pn	01 18 31.8	-0.7
QABG	Abgarm-Qazvin	3.11	138	ePn	Pn	01 18 31.8	-0.7
QABG				e		01 19 28.3	
	comp=Z,99nm,0.7s						
GOBA	Gobu	3.13	41	S	Sn	01 19 13.5	+3.4
SEKA	Sheki	3.14	2	PN	Pn	01 18 33.5	+0.9
SEKA	Sheki	3.14	2	P	Pn	01 18 33.5	+0.9
	SNR=232						
ILIN	Lien	3.15	181	ePn	Pn	01 18 34.1	+1.2
ILIN				e		01 19 26.9	
	comp=Z,99nm,0.9s						
GEVA	Gevas	3.15	276	Pn	Pn	01 18 33.2	+0.4
ATGJ	Altiaghaj	3.15	27	P	Pn	01 18 35.5	+2.6
	SNR=54						
XNQ	Khinaliq	3.21	15	P	Pn	01 18 34.0	+0.3
	SNR=44						
VNNZ	Vanand	3.23	310	i P	Pb	01 18 38.4	-1.9
VNNZ				i S	Sg	01 19 24.9	-1.2
QZX	Qazax, Azerbai	3.25	337	P	Pn	01 18 35.3	+1.2
	SNR=190						
QALM	Alamut, Qazvin	3.31	119	Pn	Pn	01 18 35.9	+0.8
QALM	Alamut, Qazvin	3.31	119	ePn	Pn	01 18 36.0	+0.8
SIZA	Siyzn	3.33	25	P	Pn	01 18 36.8	+1.6
	SNR=51						
IALM	Almabolaq	3.33	164	ePn	Pn	01 18 36.5	+1.1
NDR	Nardaran	3.39	41	S	Sn	01 19 18.3	+1.8
IDHR	Dehrash	3.40	189	ePn	Pn	01 18 38.5	+2.1
IDHR				e		01 18 49.4	
	comp=Z,99nm,0.6s						
DDFL	Dedoflistskaro	3.45	348	P	Pb	01 18 43.3	-0.8
DDFL				S	Sg	01 19 33.4	+0.2
DDFL	Dedoflistskaro	3.45	348	PN	Pn	01 18 40.7	+3.8
QUBA	Quba, Azerbaij	3.47	18	P	Pn	01 18 39.6	+2.5
	SNR=26						
IRAZ	Razeghan	3.53	138	ePn	Pn	01 18 38.9	+0.8
QSAR	Qusar	3.57	15	P	Pn	01 18 40.6	+2.1
	SNR=14						
ZKTA	Zakatala	3.58	355	PN	Pn	01 18 40.3	+1.7
ZKTA	Zakatala	3.58	355	P	Pn	01 18 40.3	+1.7
	SNR=112						
IBZA	Bozab	3.65	169	ePn	Pn	01 18 43.2	+3.3
IBZA				e		01 19 39.5	
	comp=Z,99nm,0.7s						
KER	Kermanshah	3.68	179	PN	Pn	01 18 42.7	+2.6
KER	Kermanshah	3.68	179	ePn	Pn	01 18 42.4	+2.3
THKV	Tehran--Karaj	3.75	124	IAML		01 19 47.0	
	comp=N,1μm,0.5s						
IGHG	Ghaleghazi	3.75	186	ePn	Pn	01 18 42.1	+0.9
IGHG				e		01 19 07.4	
	comp=Z,99nm,0.8s						
IMHD	Mahdasht	3.76	128	ePn	Pn	01 18 41.8	+0.6
IMHD				e		01 19 43.3	
	comp=Z,99nm,0.7s						
KCHF	Cheshme Sefid,	3.79	180	Pn	Pn	01 18 44.3	+2.6
KCHF	Cheshme Sefid,	3.79	180	ePn	Pn	01 18 44.3	+2.6
KCHF				e		01 19 00.4	
	comp=Z,99nm,0.7s						
LGD	Lagodekhi	3.81	351	P	Pn	01 18 45.8	+4.0
CHTH	Charan	3.92	122	ePn	Pn	01 18 44.6	+1.1
CHTH	Charan	3.92	122	ePn	Pn	01 18 44.6	+1.1
DMNI	Dmanisi	3.93	327	P	Pb	01 18 51.2	-1.1
DMNI				S	Sb	01 19 45.5	+5.3
BTNK	Botanikuri	4.00	335	P	Pb	01 18 52.6	-0.9
BTNK				S	Sb	01 19 45.4	+3.2
SEAG	Tbilisi Sea	4.07	336	P	Pb	01 18 54.7	0.0
SEAG				S	Sb	01 19 49.9	+5.7
ASAO	Ashtian	4.26	145	ePn	Pn	01 18 49.6	+1.4
ASAO	Ashtian	4.26	145	Pn	Pn	01 18 49.6	+1.4
ASAO	Ashtian	4.26	145	ePn	Pn	01 18 49.6	+1.4
IHSB	Hasanabad	4.29	126	ePn	Pn	01 18 48.9	+0.3
BRNG	Burnasheti	4.33	326	P	Pb	01 18 59.5	+0.3
BRNG				S	Sb	01 19 57.5	+5.8
IDOB	Doab	4.37	168	ePn	Pn	01 18 52.2	+2.5
IQOM	Qom	4.57	134	ePn	Pn	01 18 52.9	+0.4
BKRG	Bakuriani	4.57	325	P	Pb	01 19 04.3	+1.0
BKRG				S	Sg	01 20 06.4	-3.0
IKFM	Kafar-mosalman	4.58	172	ePn	Pn	01 18 53.7	+1.3
IKFM				e		01 20 22.1	
	comp=Z,99nm,1.0s						
IPRN	Peran	4.61	112	ePn	Pn	01 18 54.2	+1.3
DAMV	Damavand	4.64	120	IAML		01 20 13.1	
	comp=E,266nm,0.5s						
IKMR	Kamar-syah	4.67	166	ePn	Pn	01 18 56.9	+3.3
IKMR				e		01 19 19.0	
	comp=Z,99nm,0.7s						
IDMV	Damavand	4.71	120	ePn	Pn	01 18 56.6	+2.1
IVRN	Varamin	4.86	128	ePn	Pn	01 18 57.5	+1.2
IVRN				e		01 20 31.0	
	comp=Z,99nm,0.9s						
MAK	Makhachkala	4.90	4	ePN	Pn	01 18 56.2	-0.5
MAK				eS	Sn	01 19 55.2	+1.5
MAK				pmax	pmax		
	comp=Z,217nm,1.4s						
MAK				MLR	MLR		
	comp=Z,747nm,12.0s						
ABS	Abastumani	4.91	320	P	Pb	01 19 12.1	+3.1
ABS				S	Sg	01 20 17.7	-2.5
MARD	Mardin	5.03	263	Pn	Pn	01 18 58.7	+0.1
BINT	Bingol	5.21	281	PN	Pn	01 19 05.8	+4.7
GROC	Groznyy	5.21	350	ePN	Pn	01 19 01.6	+0.5
GROC				e		01 19 17.0	
GROC				e		01 20 00.8	
GROC				e		01 20 35.2	
GROC				pmax	pmax		
	comp=Z,58nm,0.8s						
GROC				smax	smax		
	comp=E,50nm,0.7s						
GROC				smax	smax		
	comp=E,141nm,1.1s						
GROC				smax	smax		
	comp=E,63nm,1.0s						
GROC				smax	smax		
	comp=N,57nm,0.8s						
GROC				MLR	MLR		
	comp=Z,145nm,8.0s						
TKB	Tkibuli	5.28	325	P	Pb	01 19 16.0	+0.7
TKB				S	Sg	01 20 27.3	-4.8
ZEI	Tsey	5.29	334	ePN	Pn	01 19 06.8	+4.5
ZEI				pmax	pmax		
	comp=Z,44nm,0.7s						
KOPT	Kop Dagi	5.45	293		Pn	01 19 04.7	0.0
ISHM	Shahmirzad	5.49	112	ePn	Pn	01 19 07.7	+2.5
QAM	Ghamsar	5.59	139	ePn	Pn	01 19 08.3	+1.9
IGLO	Ghaloghah	5.63	104	ePn	Pn	01 19 07.1	0.0
CHVG	Ch'k'valeri	5.99	322	P	Pg	01 19 34.1	-3.2
CHVG				S	Sg	01 20 52.8	-2.0
IKLH	Kolahrood	6.01	141	ePn	Pn	01 19 14.9	+2.7
IANJ	Anjilo	6.10	113	ePn	Pn	01 19 16.2	+2.8
IPIR	Pirpir	6.22	149	ePn	Pn	01 19 17.7	+2.4
KBZ	Khabaz	6.47	332	Pn	Pn	01 19 21.2	+3.0
	comp=Z,0.1nm,0.3s,baz=126,slow=9.8,SNR=6.0						
KBZ				Pg	Pb	01 19 37.1	+1.7
	comp=Z,0.4nm,0.3s,baz=162,slow=11,SNR=14						
KBZ				Lg	Lg	01 21 04.0	
	comp=Z,0.3nm,0.3s,baz=198,slow=13,SNR=1.7						
AMIS	Naft Sefid	6.65	163	ePn	Pn	01 19 23.5	+2.6
IMND	Minoodasht	6.68	94	ePn	Pn	01 19 20.7	-0.6
IZEF	Zefreh	6.72	139	ePn	Pn	01 19 23.7	+1.6
KVAR	Kislovodsk Arr	6.74	332	Pn	Pn	01 19 24.7	+2.6
	baz=163,slow=19,SNR=1.9						
KIV	Kislovodsk	6.74	332	eP	Pn	01 19 26.9	+4.8
KIV				pmax	pmax		
	comp=Z,39nm,1.0s						
KIV				MLR	MLR		
	comp=Z,267nm,9.0s						
KIV	Kislovodsk	6.74	332	Pn	Pn	01 19 20.4	-1.7
MALT	Malatya	6.79	275	P	Pn	01 19 29.3	+6.4
ANAR	Anarak	7.30	130	ePn	Pn	01 19 31.9	+2.0
GOF	Gofitskoye	7.60	338	⇑eP	Pb	01 19 48.1	-6.6
IRAM	Ramesheh	7.63	143	ePn	Pn	01 19 36.2	+1.7
SOC	Sochi	7.82	317	eP	Pn	01 19 36.3	-0.6
SOC				e		01 21 05.5	
SOC				MLR	MLR		
	comp=Z,605nm,13.0s						
GAZ	Gaziantep	7.85	266	Pn	Pn	01 19 37.6	+0.1
KLNJ	Kolanjah	7.98	151	ePn	Pn	01 19 41.2	+1.8
ISAD	Sadrabad	8.21	136	ePn	Pn	01 19 44.8	+2.3
ICHK	Chekchek	8.37	132	ePn	Pn	01 19 46.3	+1.6
TOKA	Tokat	8.51	289		Pn	01 19 46.2	-0.1
SBZV	Sabzevar	8.60	98	ePn	Pn	01 19 48.5	+0.8
GEYT	Alibeck	8.74	88	Pn	Pn	01 19 49.0	-0.6
	comp=Z,1.9nm,0.3s,baz=273,slow=12,SNR=48						
GEYT				Sn	Sn	01 21 24.1	-4.5
	baz=267,slow=23,SNR=1.3						
GEYT				LR	LR	01 24 36.6	
	comp=Z,142nm,20.0s,baz=270,slow=48						
GEYT	Alibeck	8.74	88	Pn	Pn	01 19 48.4	-1.2
GYA0	ALIBECK ARRAY	8.74	88	P	Pn	01 19 48.8	-0.8
GYA0				SN	Sn	01 21 27.9	-0.6
GYA0B	ALIBECK ARRAY	8.74	88	⇑Pn	Pn	01 19 48.8	-0.8
GYA0B				⇓Sn	Sn	01 21 28.0	-0.6
GYA0B	ALIBECK ARRAY	8.74	88	Pn	Pn	01 19 48.4	-1.2
ASHT	Ashkhabad	8.96	87	P	Pn	01 19 51.2	-1.2
ASHT	Ashkhabad	8.96	87	Pn	Pn	01 19 51.2	-1.2
TKDS	Koohdasht(Taba	9.31	115	ePn	Pn	01 20 00.2	+2.7
TPRV	Parvadeh(Tabas	9.33	120	ePn	Pn	01 20 00.0	+2.3
IAKL	Akhelmad	9.44	95	ePn	Pn	01 19 59.7	+0.3
IBAF	Bafgh	9.53	130	ePn	Pn	01 20 01.4	+0.9
IKRD	Kardeh	10.01	94	ePn	Pn	01 20 07.8	+12
BR131	Keskin Array S	10.58	283	⇑iP	Pn	01 20 23.2	+8.4
BR131	Keskin Array S	10.58	283	Pn	Pn	01 20 13.9	-1.0
BRTR	Keskin Array B	10.58	283	Pn	Pn	01 20 18.7	+3.9
	comp=Z,0.1nm,0.3s,baz=99,slow=14,SNR=13						
BRTR	Keskin Array B	10.58	283	i P	Pn	01 20 22.6	+7.8
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	10.58	283	Pn	Pn	01 20 13.8	-1.0
MMAI	Mount Meron Ar	10.74	245	Pn	Pn	01 20 16.3	-0.7
	comp=Z,0.3nm,0.3s,baz=62,slow=15,SNR=1.8						
MMAI				LR	LR	01 24 44.0	
	comp=Z,107nm,18.4s,baz=20,slow=40						
ITEG	Tejag	10.85	115	ePn	Pn	01 20 20.4	+1.8
KHGB	Koh Gabri	10.94	132	ePn	Pn	01 20 21.4	+1.5
CHMN	Cheshme madani	11.95	130	ePn	Pn	01 20 36.2	+2.4
NHDN	Nehbandan	12.60	118	ePn	Pn	01 20 44.7	+2.3
HRA	Herat	12.81	102		Pn	01 20 45.4	0.0
EIL	Elat	13.07	234	Pn	Pn	01 20 48.7	-0.2
	comp=Z,0.1nm,0.3s,baz=41,slow=18,SNR=1.4						
EIL				Lg	Lg	01 24 35.8	
	comp=Z,0.1nm,0.3s,baz=324,slow=19,SNR=2.9						
EIL				LR	LR	01 26 43.6	
	comp=Z,233nm,18.7s,baz=46,slow=42						
VRH	Novokhopyorsk	13.66	346	eP	Pn	01 20 58.9	+2.2
VRH				pmax	pmax		

	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	**14.28**	**340**	*e*P	**Pn**	**01 21 07.7**	**+2.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BELG	**Belogornoye**	**14.33**	**1**	Pn	**Pn**	**01 21 02.9**	**-3.0**
	comp=Z,1.2nm,0.3s,baz=114,slow=20,SNR=17						
BELG				LR	LR	01 28 29.1	
	comp=Z,173nm,18.2s,baz=329,slow=45						
BELG	**Belogornoye**	**14.33**	**1**	⇓*e*P	**Pn**	**01 21 03.3**	**-2.6**
AB31	**Akbulak array**	**14.54**	**36**	P	**Pn**	**01 21 05.5**	**-3.3**
	comp=Z,3.0nm,0.5s,baz=211,slow=13,SNR=55						
AB31				⇓S	Sn	01 23 40.9	-9.4
	comp=Z,6.9nm,0.8s,baz=205,slow=26,SNR=7.7						
AB31	**Akbulak array**	**14.54**	**36**	P	**Pn**	**01 21 05.5**	**-3.3**
AB31				S	Sn	01 23 40.9	-9.4
ABKAR	**Akbulak array**	**14.54**	**36**	Pn	**Pn**	**01 21 06.1**	**-2.7**
RAYN	**Ar Rayn**	**14.56**	**186**	P	**Pn**	**01 21 05.8**	**-3.4**
RAYN	**Ar Rayn**	**14.56**	**186**	Pn	**Pn**	**01 21 05.8**	**-3.4**
AKTO	**Aktyubinsk**	**14.63**	**29**	Pn	**Pn**	**01 21 06.6**	**-3.4**
	comp=Z,0.8nm,0.3s,baz=219,slow=12,SNR=23						
AKTO				Sn	Sn	01 23 41.8	-11
	comp=Z,0.6nm,0.3s,baz=293,slow=20,SNR=4.4						
AKTO	**Aktyubinsk**	**14.63**	**29**	⇑P	**Pn**	**01 21 06.7**	**-3.4**
	comp=Z,11nm,0.8s						
AKTO				⇓S	Sn	01 23 39.8	-13
	comp=Z,16nm,0.9s						
AKTO	**Aktyubinsk**	**14.63**	**29**	P	**Pn**	**01 21 06.7**	**-3.3**
UOSS	**Minazif**	**15.23**	**147**		**Pn**	**01 21 17.1**	**-1.1**
UOSS				IAmb	IAmb	01 21 28.2	
	comp=Z,18nm,0.9s						
LPSR	**Galich'ya Gora**	**15.60**	**341**	*e*P	**Pn**	**01 21 21.3**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIS	**Kishinev**	**16.10**	**309**	*e*	**Pn**	**01 21 28.0**	**-1.4**
KIS				LQM		01 27 47.0	
	comp=Z,400nm,17.0s						
MLR	**Muntele Rosu**	**17.37**	**302**	LR	LR	01 31 07.5	
	comp=Z,148nm,18.2s,baz=124,slow=46						
TAS	**Tashkent**	**17.42**	**72**	P	**Pn**	**01 21 44.7**	**-1.5**
TAS				pmax	pmax		
	comp=Z,37nm,0.9s						
TAS	**Tashkent**	**17.42**	**72**	Pn	**Pn**	**01 21 44.7**	**-1.5**
WSAR	**Wadi Sarin**	**17.80**	**143**	P	**Pn**	**01 21 48.5**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=275,slow=13,SNR=3.5						
WSAR				LR	LR	01 30 09.5	
	comp=Z,98nm,21.5s,baz=334,slow=42						
AKASG	**Malin Array Be**	**17.88**	**321**	P	**Pn**	**01 21 50.5**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=125,slow=12,SNR=8.6						
IUG	**Iuzhnay**	**18.04**	**70**	*e*P	**Pn**	**01 21 53.5**	**-0.5**
	baz=70						
IUG	**Iuzhnay**	**18.04**	**70**	*e*P	**Pn**	**01 21 53.4**	**-0.5**
KBL	**Kabul**	**18.07**	**95**	P	**Pn**	**01 21 53.5**	**-1.0**
KBL				pmax	pmax		
	comp=Z,17nm,1.0s						
KBL	**Kabul**	**18.07**	**95**		**Pn**	**01 21 53.5**	**-1.0**
OBN	**Obninsk**	**18.47**	**341**	LR	LR	01 30 12.2	
	comp=Z,42nm,18.9s,baz=160,slow=40						
KK31	**Karatay Array**	**18.50**	**67**	⇑P	**P**	**01 21 57.8**	**-1.6**
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	**18.50**	**67**	P	**P**	**01 21 58.1**	**-1.3**
KK31				pmax	pmax		
	comp=Z,12nm,1.0s						
KK31	**Karatay Array**	**18.50**	**67**		**P**	**01 21 58.1**	**-1.3**
KKAR	**Karatay Array**	**18.50**	**67**	P	**P**	**01 21 57.8**	**-1.6**
KKAR	**Karatay Array**	**18.50**	**67**		**P**	**01 21 57.8**	**-1.6**
BURAR	**Bucovina Array**	**18.58**	**308**	P	**Pn**	**01 22 04.3**	**+3.8**
BURAR	**Bucovina Array**	**18.58**	**308**	P	**P**	**01 21 59.8**	**-0.5**
BUR08	**Bucovina Ar. S**	**18.60**	**308**	P	**Pn**	**01 22 01.3**	**+0.5**
DZA	**Taraz**	**19.07**	**68**	*e*P	**P**	**01 22 05.2**	**-0.5**
	baz=68						
DZA	**Taraz**	**19.07**	**68**	*e*P	**P**	**01 22 05.2**	**-0.5**
LIT	**Litokhoron**	**19.16**	**284**	P	**P**	**01 22 05.2**	**-1.4**
LIT				pmax	pmax		
	comp=Z,26nm,1.2s						
LIT	**Litokhoron**	**19.16**	**284**	P	**P**	**01 22 05.2**	**-1.4**
LIT				IAmb	IAmb	01 22 34.2	
	comp=Z,26nm,1.2s						
AGG	**Agios Georgios**	**19.34**	**281**	P	**Pn**	**01 22 12.0**	**+2.3**
AGG	**Agios Georgios**	**19.34**	**281**	P	**P**	**01 22 08.2**	**-0.5**
DRGR		**19.90**	**304**	P	**Pn**	**01 22 19.8**	**+3.4**
ARU	**Arti**	**19.91**	**19**	P	**P**	**01 22 14.1**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=201,slow=5.4,SNR=22						
ARU				LR	LR	01 32 06.3	
	comp=Z,77nm,18.8s,baz=188,slow=43						
ARU	**Arti**	**19.91**	**19**	*c i*P	**P**	**01 22 13.8**	**-0.9**
ARU				S	**S**	**01 25 57.5**	**-1.5**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARU	**Arti**	**19.91**	**19**	P	**P**	**01 22 14.2**	**-0.5**
FNA	**Florina**	**19.99**	**286**	P	**P**	**01 22 15.3**	**-0.5**
FNA				pmax	pmax		
	comp=Z,16nm,0.8s						
FNA	**Florina**	**19.99**	**286**	P	**P**	**01 22 15.3**	**-0.5**
FNA				IAmb	IAmb	01 22 23.8	
	comp=Z,16nm,0.8s						
LVV	**L'vov**	**20.22**	**313**	*e*P	Pn	01 22 21.2	+1.2
KIRV	**Kirov**	**20.59**	**4**	P	**P**	**01 22 22.7**	**+0.7**
	comp=Z,12nm,0.6s,baz=225,slow=3.1,SNR=8.7						
KIRV				LR	LR	01 32 23.0	
	comp=Z,163nm,18.2s,baz=195,slow=43						
KIRV	**Kirov**	**20.59**	**4**	⇑*e*P	**P**	**01 22 21.8**	**-0.2**
UZH	**Uzhgorod**	**20.78**	**308**	*d i*P	Pn	01 22 28.2	+1.7
UZH				*e*		01 22 30.6	
SVE	**Sverdlovsk**	**20.82**	**21**	*e*P	Pn	01 22 26.9	-0.1
SVE				*e*S	**S**	**01 26 06.5**	**-11**
SVE				pmax	pmax		
	comp=Z,65nm,1.5s						
KOLS	**Kolonicke sedl**	**20.90**	**309**	*e*P	Pn	01 22 29.5	+1.5
KOLS				pmax	pmax		
	comp=Z,12nm,1.1s						
KOLS	**Kolonicke sedl**	**20.90**	**309**	*e*P	Pn	01 22 29.5	+1.5
KWP	**Kalwaria Pacla**	**20.91**	**311**	*e*P	Pn	01 22 28.6	+0.4
KWP	**Kalwaria Pacla**	**20.91**	**311**	P	**P**	**01 22 26.4**	**+0.7**
KWP				pmax	pmax		
	comp=Z,59nm,1.1s						
KWP	**Kalwaria Pacla**	**20.91**	**311**	P	**P**	**01 22 26.4**	**+0.7**
MNK	**Minsk**	**20.99**	**328**	*i* P	**P**	**01 22 27.8**	**+1.3**
	comp=E,2.0nm,1.1s						
MNK				*i* P	**P**	**01 22 27.8**	**+1.3**
	comp=N,7.0nm,0.6s						
MNK				*i* P	**P**	**01 22 27.8**	**+1.3**
	comp=Z,20nm,0.8s						
MNK				*i* PP	**PnPn**	**01 22 46.5**	**+1.5**
MNK				*i* PPP	PPP	01 22 54.4	
MNK				*i* S	**S**	**01 26 23.5**	**+3.0**
MNK				*i* SS	**SnSn**	**01 26 45.1**	**+4.1**
MNK				*i* SSS	SSS	01 26 58.3	
MNK				*i* LQ	LQ	01 28 51.6	
MNK				*i* LR	LR	01 30 27.6	
MNK				*i* LRM	MLR	01 31 38.5	
	comp=N,215nm,19.9s						
MNK				*i* LRM	MLR	01 31 39.4	
	comp=E,8.0nm,19.0s						
MNK				*i* LRM	MLR	01 31 46.1	
	comp=Z,132nm,16.3s						
MNK				*i* ScS	ScS	01 34 18.6	+25
DIVS	**Divibare**	**21.21**	**295**	P	**P**	**01 22 29.4**	**+0.4**
DIVS				IAmb	IAmb	01 22 36.9	
	comp=Z,18nm,1.2s						
BTLS	**Baital**	**21.31**	**62**	*e*P	**P**	**01 22 28.7**	**-1.3**
	baz=62						
BTLS	**Baital**	**21.31**	**62**	*e*P	**P**	**01 22 28.6**	**-1.4**
AAK	**Ala-Archa**	**21.37**	**69**	P	**P**	**01 22 31.0**	**+0.2**
	comp=Z,9.0nm,1.1s,baz=258,slow=9.2,SNR=10.0						
AAK				LR	LR	01 32 58.0	
	comp=Z,136nm,19.2s,baz=286,slow=43						
AAK	**Ala-Archa**	**21.37**	**69**	⇓P	**P**	**01 22 30.5**	**-0.3**
	comp=Z,18nm,1.2s						
AAK	**Ala-Archa**	**21.37**	**69**	⇑*e*P	**P**	**01 22 31.2**	**+0.4**
AAK				pmax	pmax		
	comp=Z,77nm,1.7s						
AAK	**Ala-Archa**	**21.37**	**69**	P	**P**	**01 22 30.3**	**-0.5**
AAK				IAmb	IAmb	01 22 36.4	
	comp=Z,26nm,1.4s						
CRVS	**Cervenica-Dubn**	**21.39**	**309**	*e*P	**P**	**01 22 36.3**	**+5.5**
CRVS				pmax	pmax		
	comp=Z,40nm,1.2s						
CRVS	**Cervenica-Dubn**	**21.39**	**309**	*e*P	**P**	**01 22 36.3**	**+5.5**
NIL	**Nilore**	**21.67**	**94**	P	**P**	**01 22 34.2**	**+0.2**
NIL				pmax	pmax		
	comp=Z,59nm,1.1s						
NIL	**Nilore**	**21.67**	**94**	P	**P**	**01 22 34.2**	**+0.2**
NACGM	**Naroch**	**21.73**	**327**	*i* P	**P**	**01 22 33.5**	**-0.9**
NACGM				*i* P	**P**	**01 22 33.5**	**-0.9**
NACGM				*i* P	**P**	**01 22 33.5**	**-0.9**
NACGM				*i* PP	**PnPn**	**01 22 50.7**	**-4.5**
NACGM				*i* PPP	PPP	01 23 18.6	
NACGM				*i* S	Sn	01 26 43.0	-1.0
NACGM				*i* SS	**SnSn**	**01 27 10.5**	**+11**
NACGM				*i* SSS	SSS	01 27 30.2	
NACGM				*i* LQ	LQ	01 29 35.2	
NACGM				*i* LR	LR	01 31 00.1	
BRZS	**Berezniki**	**21.82**	**49**	*e*P	**P**	**01 22 34.1**	**-1.4**
	baz=49						
BRZS	**Berezniki**	**21.82**	**49**	*e*P	**P**	**01 22 34.1**	**-1.4**
BRVK	**Borovoye**	**21.98**	**40**	⇑P	**P**	**01 22 36.7**	**-0.4**
	comp=Z,15nm,1.0s						
BRVK	**Borovoye**	**21.98**	**40**	*d i*P	**P**	**01 22 37.5**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s						
BRVK	**Borovoye**	**21.98**	**40**	P	**P**	**01 22 36.4**	**-0.7**
BRVK				IAmb	IAmb	01 22 40.5	
	comp=Z,12nm,0.8s						
BVAR	**Borovoye Array**	**22.02**	**40**	P	**P**	**01 22 36.1**	**-1.3**
	comp=Z,4.7nm,0.8s,baz=234,slow=8.9,SNR=19						
BVAR				S	**S**	**01 26 37.0**	**-3.6**
	comp=Z,1.3nm,0.8s,baz=227,slow=25,SNR=2.9						
IDID	**Didziasalis**	**22.03**	**328**	*e*P	**P**	**01 22 39.9**	**+2.3**
PSZ	**Piszkesteto**	**22.06**	**305**	P	**P**	**01 22 37.9**	**-0.2**
PSZ				pmax	pmax		
	comp=Z,12nm,0.9s						
PSZ	**Piszkesteto**	**22.06**	**305**	P	**P**	**01 22 37.9**	**-0.2**
PSZ				IAmb	IAmb	01 23 02.4	
	comp=Z,12nm,0.9s						
IIGN	**Ignalina**	**22.27**	**328**	*e*P	**P**	**01 22 42.9**	**+2.7**
NIE	**Niedzica**	**22.28**	**309**	*e*P	**P**	**01 22 44.0**	**+3.6**
ISAL	**Salakas**	**22.46**	**328**	*e*P	**P**	**01 22 44.8**	**+2.6**
MORH	**Mrgy, Hungar**	**22.49**	**300**	*e*P	**P**	**01 22 46.7**	**+4.1**
BUD	**Budapest**	**22.51**	**304**	*e*P	P	01 22 54.6	+12
KSH	**Kashi**	**22.56**	**77**	P	**P**	**01 22 40.3**	**-3.3**
KSH				sP	pP	01 22 46.6	+1.0
KSH				S	S	01 26 37.3	-14
KSH				pmax	pmax		
	comp=Z,18nm,0.7s						
KSH				pmax	pmax		
	comp=Z,430nm,5.0s						
KSH				LR	LR		
	comp=N,370nm,5.3s						
KSH				LR	LR		
	comp=E,450nm,5.1s						
KSH				LR	LR		
	comp=Z,400nm,5.4s						
KUU	**Kurty**	**22.80**	**66**	*e*P	**P**	**01 22 45.0**	**-1.0**
	comp=Z,9.1nm,1.0s,baz=66						
KUU	**Kurty**	**22.80**	**66**	*e*P	**P**	**01 22 44.9**	**-1.0**
KUU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SUW	**Suwalki**	**22.82**	**322**	*e*P	**P**	**01 22 49.2**	**+3.2**
SUW	**Suwalki**	**22.82**	**322**	*e*P	**P**	**01 22 46.5**	**+0.4**
SUW	**Suwalki**	**22.82**	**322**	P	**P**	**01 22 46.7**	**+0.6**
SUW				pmax	pmax		
	comp=Z,80nm,1.0s						
SUW	**Suwalki**	**22.82**	**322**	P	**P**	**01 22 46.7**	**+0.6**
OJC	**Ojcow**	**22.87**	**311**	*e*P	**P**	**01 22 46.7**	**0.0**
OJC	**Ojcow**	**22.87**	**311**	P	**P**	**01 22 46.4**	**-0.3**
OJC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OJC	**Ojcow**	**22.87**	**311**	P	**P**	**01 22 46.4**	**-0.3**
OJC				IAmb	IAmb	01 23 00.5	
	comp=Z,9.9nm,1.1s						
VYHS	**Vyhne**	**22.90**	**306**	*e*P	**P**	**01 22 50.9**	**+3.9**
VYHS	**Vyhne**	**22.90**	**306**	*e*P	**P**	**01 22 50.9**	**+3.9**
CSKK	**Cskako**	**22.99**	**303**	*e*P	**P**	**01 22 52.0**	**+4.1**
CHKK	**Chushkaly**	**23.26**	**66**	*e*P	**P**	**01 22 51.1**	**+0.3**
	baz=66						
CHKK	**Chushkaly**	**23.26**	**66**	*e*P	**P**	**01 22 51.0**	**+0.3**
MDOK	**Medeo**	**23.27**	**68**	*e*P	**P**	**01 22 49.8**	**-1.2**
	baz=68						
MDOK	**Medeo**	**23.27**	**68**	*e*P	**P**	**01 22 49.8**	**-1.2**
KLMR	**Klimovskoe**	**23.29**	**351**	*e*P	**P**	**01 22 48.5**	**-2.3**
KLMR				pmax	pmax		
	comp=Z,35nm,1.3s						
KLMR	**Klimovskoe**	**23.29**	**351**	*e*P	**P**	**01 22 48.5**	**-2.3**
KLMR				AMP		01 23 05.2	
	comp=Z,35nm,1.3s						
PABE	**Paberze**	**23.35**	**326**	*e*P	**P**	**01 22 53.3**	**+1.8**
MPLH	**Magyarpolny**	**23.42**	**302**	*e*P	**P**	**01 22 56.5**	**+4.2**
TIP	**Timpagrande**	**23.64**	**282**	P	**P**	**01 22 54.3**	**-0.3**
JAVC	**Velka Javorina**	**23.75**	**306**	*e*P	**P**	**01 23 00.4**	**+4.8**
MORC	**Moravsky Berou**	**24.09**	**309**	*e*P	**P**	**01 23 02.9**	**+4.0**
MORC	**Moravsky Berou**	**24.09**	**309**	P	**P**	**01 22 58.5**	**-0.3**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MORC	**Moravsky Berou**	**24.09**	**309**	P	**P**	**01 22 58.5**	**-0.3**
VSU	**Vasula**	**24.29**	**334**	*e*P	**P**	**01 23 02.5**	**+2.0**
TDK	**Taldyqorghan**	**24.37**	**63**	*e*P	**P**	**01 23 00.7**	**-0.8**
	comp=Z,6.6nm,0.7s,baz=64						
TDK	**Taldyqorghan**	**24.37**	**63**	*e*P	**P**	**01 23 00.6**	**-0.8**
TDK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KPKS	**Kokpek**	**24.47**	**67**	*e*P	**P**	**01 23 02.5**	**0.0**
	baz=67						
KPKS	**Kokpek**	**24.47**	**67**	*e*P	**P**	**01 23 02.4**	**0.0**
VRAC	**Vranov**	**24.55**	**307**	*e*P	**P**	**01 23 06.3**	**+3.3**
KRUC	**Moravsky**	**24.61**	**306**	*e*P	**P**	**01 23 07.6**	**+4.1**
KRLC	**Kraliky**	**24.65**	**309**	*e*P	**P**	**01 23 07.2**	**+3.2**
KRLC	**Kraliky**	**24.65**	**309**	*e*P	**P**	**01 23 07.2**	**+3.2**
CONA	**Conrad Observa**	**24.69**	**304**	*e*P	**P**	**01 23 07.7**	**+3.4**
	comp=Z,7.8nm,1.3s						
ARSA	**Arzberg**	**24.79**	**302**	*e*P	**P**	**01 23 08.9**	**+3.8**
	comp=Z,13nm,1.1s						
DPC	**Dobruska-Polom**	**25.02**	**309**	*e*P	**P**	**01 23 10.3**	**+3.1**
DPC	**Dobruska-Polom**	**25.02**	**309**	*e*P	**P**	**01 23 10.3**	**+3.1**
SOKA	**Soboth**	**25.02**	**300**	*e*P	**P**	**01 23 10.3**	**+2.9**
	comp=Z,13nm,1.0s						
SHLS	**Shalkode**	**25.03**	**68**	*e*P	**P**	**01 23 09.5**	**+2.0**
	baz=68						
SHLS	**Shalkode**	**25.03**	**68**	*e*P	**P**	**01 23 09.5**	**+2.0**
OSTC	**Ostas**	**25.15**	**310**	*e*P	**P**	**01 23 12.1**	**+3.7**
KSP	**Ksiaz**	**25.19**	**310**	*e*P	**P**	**01 23 13.5**	**+4.8**
CHVC	**Chvalec**	**25.25**	**310**	*e*P	**P**	**01 23 09.1**	**-0.2**
CHVC				*e*x	x	01 23 12.7	
KURBB	**Kurchatov Arra**	**25.57**	**50**	P	**P**	**01 23 12.7**	**+0.6**
	comp=Z,3.8nm,0.7s,baz=259,slow=9.3,SNR=22						
KURK	**Kurchatov**	**25.65**	**50**	*ce*P	**P**	**01 23 13.0**	**+0.1**
KURK				pmax	pmax		
	comp=Z,13nm,1.3s						
KURK	**Kurchatov**	**25.65**	**50**	P	**P**	**01 23 13.0**	**+0.1**
MOA	**Molln**	**25.73**	**303**	*i* P	**P**	**01 23 16.9**	**+3.2**
	comp=Z,19nm,1.6s						
GEC2	**GERESS Array S**	**26.29**	**305**	P	**P**	**01 23 18.3**	**-0.6**
GERES	**GERESS Array B**	**26.29**	**305**	P	**P**	**01 23 17.7**	**-1.1**
	comp=Z,3.4nm,0.7s,baz=107,slow=7.8,SNR=21						
GERES				LR	LR	01 36 41.3	
	comp=Z,49nm,19.5s,baz=22,slow=43						
GERES	**GERESS Array B**	**26.29**	**305**	P	**P**	**01 23 17.5**	**-1.3**
KHC	**Kasperske Hory**	**26.43**	**306**	⇑*e*P	**P**	**01 23 23.7**	**+3.7**
KHC				pmax	pmax		
	comp=Z,22nm,1.7s						
KHC	**Kasperske Hory**	**26.43**	**306**	*e*P	**P**	**01 23 19.3**	**-0.7**
KHC				*e*pP	**pP**	**01 23 23.4**	**+1.1**
KHC	**Kasperske Hory**	**26.43**	**306**	P	**P**	**01 23 19.0**	**-1.1**
KHC				IAmb	IAmb	01 23 24.5	
	comp=Z,6.7nm,1.1s						
TMCR	**Tamitsa**	**26.68**	**351**	*e*P	**P**	**01 23 23.3**	**+1.3**
TMCR				pmax	pmax		
	comp=Z,18nm,1.1s						
ABTA	**Abfaltersbach**	**26.75**	**300**	*e*P	**P**	**01 23 26.2**	**+3.2**
	comp=Z,9.0nm,1.0s						
FINES	**FINESS Array B**	**26.79**	**338**	P	**P**	**01 23 21.9**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=159,slow=12,SNR=1.3						
FINES	**FINESS Array B**	**26.79**	**338**	*i* P	**P**	**01 23 29.0**	**+5.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAKZ	**Makanchi**	**27.04**	**60**	P	**P**	**01 23 24.4**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAKZ	**Makanchi**	**27.04**	**60**	P	**P**	**01 23 24.4**	**-1.1**
MAKZ				IAmb	IAmb	01 23 43.0	
	comp=Z,8.6nm,1.0s						
MKAR	**Makanchi Array**	**27.25**	**60**	P	**P**	**01 23 24.7**	**-2.7**
	comp=Z,0.8nm,0.4s,baz=270,slow=8.1,SNR=3.1						
MKAR				LR	LR	01 36 35.1	
	comp=Z,71nm,18.6s,baz=261,slow=42						
MKAR	**Makanchi Array**	**27.25**	**60**	P	**P**	**01 23 27.8**	**+0.4**
CLL	**Collm**	**27.31**	**310**	*e*(P)	**P**	**01 23 32.0**	**+4.1**
	comp=Z,23nm,1.6s						
CLL	**Collm**	**27.31**	**310**	*e*P	**P**	**01 23 32.0**	**+4.1**
CLL				pmax	pmax		
	comp=Z,23nm,1.6s						
CLL	**Collm**	**27.31**	**310**	P	**P**	**01 23 26.9**	**-1.0**
WATA	**Walderalm**	**27.46**	**301**	*e*P	**P**	**01 23 32.0**	**+2.5**
	comp=Z,8.4nm,0.9s						
SQTA	**Sankt Quirin**	**27.69**	**301**	*e*P	**P**	**01 23 34.1**	**+2.6**
	comp=Z,16nm,1.5s						
MOTA	**Moosalm**	**27.78**	**301**	*e*P	**P**	**01 23 34.5**	**+2.2**
	comp=Z,13nm,1.1s						
FETA	**Feichten**	**28.00**	**300**	*e*P	**P**	**01 23 36.4**	**+2.1**
	comp=Z,14nm,1.2s						
RETA	**Reutte**	**28.02**	**301**	*e*P	**P**	**01 23 36.7**	**+2.3**
	comp=Z,4.0nm,0.7s						
DAVOX	**Davos/Dischmat**	**28.56**	**300**	P	**P**	**01 23 37.7**	**-1.6**
	comp=Z,6.1nm,0.7s,baz=128,slow=12,SNR=4.2						
DAVOX				LR	LR	01 37 35.1	
	comp=Z,74nm,19.4s,baz=68,slow=42						
DAVA	**Damuels**	**28.60**	**301**	*e*P	**P**	**01 23 42.3**	**+2.6**
	comp=Z,22nm,1.3s						
ZSN	**Zaisan**	**29.06**	**59**	*e*P	**P**	**01 23 43.5**	**-0.2**
	baz=59						
ZSN	**Zaisan**	**29.06**	**59**	*e*P	**P**	**01 23 43.4**	**-0.2**
ZAA0	**Zalesovo Array**	**30.23**	**46**	P	**P**	**01 23 53.3**	**-0.5**
ZAA0				IAmb	IAmb	01 23 54.4	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**30.23**	**46**	P	**P**	**01 23 52.7**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=279,slow=12,SNR=3.8						
ZALV				LR	LR	01 37 35.4	
	comp=Z,46nm,18.5s,baz=238,slow=40						
ZALV	**Zalesovo Beam**	**30.23**	**46**	*i* P	**P**	**01 23 54.0**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**30.23**	**46**	P	**P**	**01 23 53.4**	**-0.3**
HFS	**Hagfors**	**30.50**	**327**	P	**P**	**01 23 54.6**	**-1.6**
	comp=Z,3.2nm,0.7s,baz=119,slow=12,SNR=2.1						
DGZ	**Jazzator, Alta**	**30.98**	**55**	⇓*i*P	**P**	**01 24 01.3**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WMQ	**Urumqi**	**31.01**	**66**	*e*P	**P**	**01 24 03.1**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.3s						
WMQ				LR	LR		
	comp=N,210nm,29.0s						
WMQ				LR	LR		
	comp=E,450nm,29.0s						
WMQ				LR	LR		
	comp=Z,23nm,29.3s						
NOA	**NORSAR Array B**	**32.02**	**327**	P	**P**	**01 24 09.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=118,slow=8.0,SNR=4.8						
NOA				LR	LR	01 37 55.9	
	comp=Z,119nm,19.4s,baz=130,slow=38						
ARCES	**ARCESS Array B**	**33.59**	**347**	P	**P**	**01 24 23.5**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=141,slow=7.8,SNR=9.3						
ARCES	**ARCESS Array B**	**33.59**	**347**	IAmb	IAmb	01 24 28.6	
	comp=Z,18nm,1.3s						
EKA	**Eskdalemuir Ar**	**37.57**	**314**	P	**P**	**01 24 55.9**	**-1.6**
	comp=Z,3.8nm,0.9s,baz=112,slow=7.6,SNR=4.6						
TAM	**Tamanrasset**	**38.57**	**259**	P	**P**	**01 25 05.5**	**-1.0**
TAM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TAM	**Tamanrasset**	**38.57**	**259**	P	**P**	**01 25 05.5**	**-1.0**
ESDC	**Sonseca Array**	**39.31**	**289**	P	**P**	**01 25 11.9**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=68,slow=8.5,SNR=6.2						
ESDC	**Sonseca Array**	**39.31**	**289**	P	**P**	**01 25 11.8**	**-0.6**
MBAR	**Mbarara**	**41.32**	**205**	P	**P**	**01 25 30.0**	**+0.7**
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MBAR	**Mbarara**	**41.32**	**205**	P	**P**	**01 25 30.0**	**+0.7**
SONM	**Songino Array**	**43.55**	**57**	P	**P**	**01 25 46.5**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=289,slow=4.4,SNR=2.2						
SONM				PcP	**PcP**	**01 27 33.5**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=318,slow=1.9,SNR=2.7						
ULN	**Ulaanbaatar**	**43.98**	**57**	⇓*e*P	**P**	**01 25 50.8**	**+0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	**Ulaanbaatar**	**43.98**	**57**	P	**P**	**01 25 49.7**	**-1.0**
ULN				IAmb	IAmb	01 25 51.9	
	comp=Z,5.6nm,1.1s						
LZH	**Lanzhou**	**44.75**	**74**	*e*P	**P**	**01 25 55.5**	**-1.6**
LZH				pP	pP	01 26 00.3	+0.9
LZH				sP	sP	01 26 01.9	+1.6
LZH				PP	**PP**	**01 27 48.6**	**+7.3**
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
LZH				pmax	pmax		
	comp=Z,57nm,4.9s						
BOD	**Bodaibo**	**46.84**	**42**	*e*P	**P**	**01 26 12.0**	**-1.0**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**47.23**	**251**	P	**P**	**01 26 16.5**	**0.0**
	comp=Z,2.2nm,1.1s,baz=69,slow=7.9,SNR=4.7						
TORD				PcP	**PcP**	**01 27 45.8**	**-2.1**
	comp=Z,1.3nm,0.8s,baz=41,slow=3.8,SNR=3.7						
CHTO	**Chiang Mai**	**48.84**	**98**	P	**P**	**01 26 29.1**	**0.0**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**48.84**	**98**	P	**P**	**01 26 29.1**	**0.0**
CHTO				IAmb	IAmb	01 26 35.7	
	comp=Z,3.1nm,0.7s						
HHC	**Hu-ho-hao-te**	**48.88**	**65**	*e*P	**P**	**01 26 29.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
CMAR	**Chiang Mai Arr**	**49.04**	**98**	P	**P**	**01 26 29.8**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=298,slow=8.0,SNR=1.7						
CMAR				LR	LR	01 50 28.2	
	comp=Z,46nm,18.8s,baz=186,slow=40						
CMAR	**Chiang Mai Arr**	**49.04**	**98**	P	**P**	**01 26 30.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**49.04**	**98**	P	**P**	**01 26 30.5**	**-0.1**
TIXI	**Tiksi**	**51.83**	**24**	P	**P**	**01 26 51.2**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TIXI	**Tiksi**	**51.83**	**24**	P	**P**	**01 26 51.2**	**+0.3**
SUMG	**Summit**	**52.83**	**338**	*i* P	**P**	**01 27 03.0**	**+4.1**
SUMG				pmax	pmax		
	comp=Z,26nm,1.1s						
SUMG	**Summit**	**52.83**	**338**	P	**P**	**01 26 59.2**	**+0.3**
SUMG	**Summit**	**52.83**	**338**	*i* P	**P**	**01 27 03.0**	**+4.1**
	comp=Z,26nm,1.1s						
SUMG	**Summit**	**52.83**	**338**	*i* P	**P**	**01 27 03.0**	**+4.1**
SUMG				IAmb	IAmb	01 27 04.5	
	comp=Z,26nm,1.1s						
ICESG	**Greenland Ices**	**53.88**	**334**	*i* P	**P**	**01 27 10.2**	**+3.6**
ICESG				IAmb	IAmb	01 27 11.7	
	comp=Z,11nm,1.0s						
KLR	**Kul'dur**	**59.24**	**49**	P	**P**	**01 27 43.8**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=240,slow=2.8,SNR=3.7						
KLR	**Kul'dur**	**59.24**	**49**	⇓*i*P	**P**	**01 27 44.0**	**-0.6**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
EUNU	**Eureka**	**59.32**	**352**	P	**P**	**01 27 44.8**	**+0.1**
KSRS	**Korea Array**	**61.88**	**63**	P	**P**	**01 28 01.6**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=292,slow=6.4,SNR=2.8						
BILL	**Bilibino**	**64.91**	**21**	⇑*e*P	**P**	**01 28 22.2**	**-0.2**
BILL				*e*		01 28 54.3	
BILL				*e*		01 30 50.2	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,71nm,15.0s						
BILL	**Bilibino**	**64.91**	**21**	P	**P**	**01 28 21.7**	**-0.7**
LBTB	**Lobatse**	**65.90**	**201**	P	**P**	**01 28 28.8**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,11nm,1.0s						
LBTB	**Lobatse**	**65.90**	**201**	P	**P**	**01 28 28.8**	**-0.5**
BOSA	**Boshof**	**69.40**	**200**	P	**P**	**01 28 48.2**	**-3.2**
	comp=Z,4.3nm,0.8s,baz=29,slow=3.6,SNR=7.5						
BOSA	**Boshof**	**69.40**	**200**	P	**P**	**01 28 51.1**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOSA	**Boshof**	**69.40**	**200**	P	**P**	**01 28 51.1**	**-0.3**
IMAR	**Indian Mountai**	**75.03**	**9**	P	**P**	**01 29 24.6**	**0.0**
IL31		**76.91**	**6**	P	**P**	**01 29 35.9**	**+0.6**
ILAR	**Eielson Array**	**76.91**	**6**	P	**P**	**01 29 34.6**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=337,slow=6.3,SNR=6.2						
YKA	**Yellowknife Ar**	**78.69**	**351**	P	**P**	**01 29 43.6**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=18,slow=5.5,SNR=3.1						
YKA	**Yellowknife Ar**	**78.69**	**351**	*ce*P	**P**	**01 29 49.5**	**+4.2**
ULM	**Lac du Bonnet**	**86.18**	**337**	P	**P**	**01 30 24.7**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=45,slow=4.3,SNR=3.1						
VNA1	**Neumayer--Stat**	**115.42**	**198**	PKPdf	**PKiKP**	**01 36 29.5**	**+5.4**
VNA3	**Neumayer Olymp**	**116.16**	**198**	PKPdf	**PKiKP**	**01 36 28.2**	**+2.6**

*ASRS **24** 01:20:38.7±0.3,50°N±1°×8°8E±°,h10^{km},MLh3.2/13, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **24** 01:20:41.4±1.7,50°.22N×87°.55E,h0^{km},mb3.1,mpv2.7, Error ellipse: s-maj=15.9km s-min=6.2km az=102.0*
ISC 24 01:20:39.9±1.1,**50°.21N**±0°.03×**87°.78E**±0°.02,**h3**^{km}±10^{km}, **n23,**σ**1^s.69**/48,**13C-5D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHBI	Chibit, Altay	0.20	300	Pg	Pg	01 20 45.0	+1.1
CHBI				Sg	Sg	01 20 47.8	+1.2
CUR	Chagan-Uzun	0.38	107	Pg	Pb	01 20 47.8	-1.7
CUR				Sg	Sg	01 20 53.6	+1.3
ULGR	Ulagan, Altay	0.43	16	Pg	Pn	01 20 49.8	-3.3
ULGR				Sg	Sb	01 20 56.3	-0.9
DGZ	Jazzator, Alta	0.56	204	Pg	Pg	01 20 48.9	-1.7
DGZ				Sg	Sg	01 20 54.7	-3.0
ARTR	Artybash	1.62	349	Pg	Pg	01 21 11.1	+0.1
ARTR				Sg	Sg	01 21 32.8	+0.9
TEL	Teeli	1.74	61	Pg	Pg	01 21 13.4	+0.2
TEL				Sg	Sg	01 21 37.7	+1.9
UKR	Ust'-Kan	2.05	292	Pg	Pg	01 21 17.6	-1.5
UKR				Sg	Sg	01 21 44.9	-0.8
GALT	Gorno-Altaysk,	2.10	327	Pg	Pg	01 21 18.6	-1.5
GALT				Sg	Sg	01 21 49.1	+1.9
TASR	Tashtagol	2.55	1	Pg	Pg	01 21 27.3	-1.5
TASR				Sg	Sg	01 22 01.4	-0.5
ELT	Eltsovka	3.20	343	Pg	Pg	01 21 38.2	-3.0
ELT				Sg	Sg	01 22 21.6	-1.1
DJO	Djoy, Khakassi	3.35	39	Pg	Pg	01 21 44.2	+0.1
DJO				Sg	Sg	01 22 29.1	+1.6
VEH	Verkhnyaya Baz	3.43	26	Pg	Pg	01 21 45.5	-0.1
VEH				Sg	Sg	01 22 30.6	+0.6
DJOS	Djoyskaya Sosn	3.44	40	Sg	Sg	01 22 33.1	+2.9
CERR	Cheremushki	3.49	39	Pg	Pg	01 21 46.8	+0.1
CERR				Sg	Sg	01 22 33.4	+1.6
LUZB	Luzhba, Kemero	3.52	11	Pg	Pg	01 21 44.4	-2.9
LUZB				Sg	Sg	01 22 33.0	-0.1
BLRR	Bol'shaya Rech	4.05	44	Pg	Pg	01 21 56.2	-1.2
BLRR				Sg	Sg	01 22 52.2	+2.3
ZAA0	Zalesovo Array	4.17	335	⇑Pn	Pn	01 21 44.6	+0.3
	0.1nm,0.3s						
ZAA0				⇓Pg	Pb	01 21 54.4	+0.6
	0.4nm,0.7s						
ZAA0				⇑Sn	Sn	01 22 34.9	+1.5
	0.2nm,0.3s						
ZAA0				⇑Lg	Lg	01 22 53.8	
	0.4nm,0.5s						
ARDR	Aradan	4.26	54	Pg	Pg	01 21 59.1	-2.3
ARDR				Sg	Sg	01 22 59.5	+2.9
SALR	Pechorkino, Sa	4.40	344	Pg	Pg	01 22 01.4	-2.7
SALR				Sg	Sg	01 23 02.5	+1.4
MK31	Makanchi Array	5.00	229	⇑Pn	Pn	01 21 57.4	+1.6
	0.5nm,0.3s,baz=56,slow=13,SNR=86						
MK31				⇑Pg	Pb	01 22 10.0	+2.0
	0.5nm,0.5s,baz=55,slow=13,SNR=6.3						
MK31				⇑Sn	Sn	01 22 55.5	+1.4
	0.7nm,0.5s,baz=61,slow=25,SNR=5.2						
MK31				⇓Lg	Lg	01 23 16.5	
	0.6nm,0.3s,baz=52,slow=32,SNR=4.5						
MAKZ	Makanchi	5.14	231	⇓Pn	Pn	01 21 59.2	+1.4
	0.7nm,0.3s						
MAKZ				⇑Pg	Pb	01 22 12.0	+1.6
	0.6nm,0.4s						
MAKZ				⇓Sn	Sn	01 22 57.1	-0.6
	0.7nm,0.4s						
MAKZ				⇑Lg	Lg	01 23 18.5	
	1.7nm,0.7s						
KURK	Kurchatov	5.87	278	⇑Pn	Pn	01 22 08.2	+0.4
	2.0nm,1.1s						
KURK				⇑Sn	Sn	01 23 14.7	-0.8
	0.8nm,0.5s						
KURK				⇑Lg	Lg	01 23 41.8	
	9.0nm,0.8s						
KURBB	Kurchatov Arra	5.93	278	⇓Pn	Pn	01 22 09.2	+0.7
	1.2nm,0.6s						
KURBB				⇑Sn	Sn	01 23 16.7	-0.2
	6.4nm,0.8s						
KURBB				⇑Lg	Lg	01 23 43.6	
	15nm,0.7s						

PRU 24 01:26:27.6±0.0,**51°.48N**×**16°.26E,h0**^{km}**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.64	178	*e*Pg	Pg	01 26 39.7	-0.1
KSP				*e*Sg	Sg	01 26 48.0	-0.1
CHVC	Chvalec	0.90	188	*e*PG	Pg	01 26 44.3	-0.6
CHVC				*e*SG	Sg	01 26 56.9	+0.4
UPC	Upice	0.99	189	*e*PG	Pg	01 26 46.9	+0.4
UPC				*e*SG	Sg	01 26 59.3	+0.1
DPC	Dobruska-Polom	1.13	178	*e*PG	Pg	01 26 48.5	-0.8
DPC				*e*SG	Sg	01 27 03.1	-0.8
DPC	Dobruska-Polom	1.13	178	*e*	Pg	01 26 48.5	-0.8
PVCC	Panska Ves	1.43	229	*e*PG	Pn	01 26 53.9	-0.9
PVCC				*e*SG	Sg	01 27 13.4	-0.1
	comp=Z,6.8nm,0.4s						
KRLC	Kraliky	1.45	167	*e*PG	Pn	01 26 54.3	-0.7
KRLC				*e*SG	Sg	01 27 13.4	-0.6
	comp=Z,3.3nm,0.3s						
BRG	Berggiesshubel	1.58	248	Sg	Sn	01 27 17.1	-0.9
BRG				Amp		01 27 19.1	
	comp=Z,8.6nm,0.3s						
BRG	Berggiesshubel	1.58	248	Sg	Sn	01 27 17.1	-0.9
BRG				Amp		01 27 19.1	
	comp=Z,8.6nm,0.3s						

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*IDC **24** 01:59:44.5±2.5,28°.21N×53°.12E,h0^{km},mb3.6/10, mb1 3.7/12,mb1mx3.5/45,mbtmp3.6/12,ML3.3/2,Error ellipse: s-maj=51.8km s-min=21.5km az=158.0*
*TEH **24** 01:59:46.8,28°.48N×52°.95E,h5^{km},ML3.7*
*THR **24** 01:59:49.4±0.3,28°.56N×52°.96E,h18^{km}±13^{km},ML3.5*
*OMAN **24** 01:59:54.6±1.4,27°.92N×53°.02E,h2^{km},mb5.1/7,ml3.5/10, Error ellipse: s-maj=14.6km s-min=11.3km az=95.0*
ISC 24 01:59:48.1±0.6,**28°.42N**±0°.05×**52°.91E**±0°.05,**h10**^{km}**,n89,** σ**1^s.64**/105,**mb3.5**/10,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	Qir	0.13	66	*e*Pg	Pg	01 59 48.9	-2.3
QIR1				*e*		01 59 49.6	
	comp=Z,99nm,0.1s						
JHRM	Jahrom	0.59	82	*e*Pg	Pg	01 59 57.8	-1.8
JHRM				*e*		02 00 12.0	
	comp=Z,99nm,0.4s						
LMD1	Lamerd	1.10	168	*e*Pg	Pn	02 00 10.8	+1.1
LMD1				*e*		02 00 43.3	
	comp=Z,99nm,0.6s						
SHI	Shiraz	1.26	344	*e*Pg	Pb	02 00 13.3	+1.2
SHI				*e*		02 00 42.4	
	comp=Z,99nm,0.8s						
LAR1	LAR	1.50	120	*e*Pg	Pg	02 00 17.7	+0.9
LAR1				*e*		02 00 47.4	
	comp=Z,99nm,0.6s						
KAZ1	Kazerun	1.64	317	*e*Pg	Pb	02 00 19.7	+1.3
KLNJ	Kolanjah	2.82	336	*e*Pn	Pn	02 00 34.6	+1.0
BNDS	Bandar-Abbas	3.06	109	*e*P	Pn	02 00 39.3	+2.6
BNDS	Bandar-Abbas	3.06	109	*e*Pn	Pn	02 00 39.3	+2.6
GENO	Geno	3.06	109	*e*Pn	Pn	02 00 38.1	+1.4
GENO				*e*		02 02 05.9	
	comp=Z,99nm,0.9s						
ABEH	Behbahan	3.17	314	*e*Pn	Pn	02 00 39.1	+1.0
IMEH	Mehriz	3.31	26	*e*Pn	Pn	02 00 41.8	+1.7
IRAM	Ramesheh	3.41	352	*e*Pn	Pn	02 00 43.7	+2.2
JRN	Qarnain Island	3.47	181	P	Pn	02 00 44.7	+2.5
ISAD	Sadrabad	3.54	11	*e*Pn	Pn	02 00 45.9	+2.4
NGRK	Negar Kerman	3.56	69	*e*Pn	Pn	02 00 45.1	+1.4
NGRK				*e*		02 01 44.4	
	comp=Z,99nm,0.8s						
KHGB	Koh Gabri	3.67	57	*e*Pn	Pn	02 00 46.3	+1.2
KRBR	Kerman	3.71	64	*e*P	Pn	02 00 46.9	+1.2
KRBR				*e*Sg	Sb	02 01 42.0	+3.0
KRBR				IAML		02 01 53.4	
	comp=E,77nm,0.6s						
KRBR	Kerman	3.71	64	*e*Pn	Pn	02 00 46.9	+1.2
TVBK	TV Kerman	3.71	64	*e*Pn	Pn	02 00 46.9	+1.1
TVBK				*e*		02 01 53.2	
	comp=Z,99nm,0.6s						
SHME	Shamm	3.72	129	P	Pn	02 00 48.3	+2.6
SHME				S	Sn	02 01 31.5	+2.0
IBAF	Bafgh	3.91	35	*e*Pn	Pn	02 00 49.7	+1.4
BANOM	Banah	3.91	129	*e*Pn	Pn	02 00 51.0	+2.7
BANOM	Banah	3.91	129	P	Pn	02 00 50.4	+2.0
BANOM				S	Sn	02 01 36.3	+2.0
ICHK	Chekchek	4.02	18	*e*Pn	Pn	02 00 51.8	+1.8
IGAR	Gharneh	4.04	349	*e*Pn	Pn	02 00 51.5	+1.3
MSFE	Esma-Masafi	4.21	136	*e*Pn	Pn	02 00 55.0	+2.6
NAZ	Nazwa, Dubai	4.21	144	*e*Pn	Pn	02 00 55.0	+2.6
CHMN	Cheshme madani	4.29	69	*e*Pn	Pn	02 00 55.2	+1.4
MDH	Madha	4.34	135	*e*Pn	Pn	02 00 55.7	+1.5
MDH	Madha	4.34	135	P	Pn	02 00 55.4	+1.2
ASUD	Al Ashush, Dub	4.36	150	P	Pn	02 00 56.1	+1.7
ASUD				S	Sn	02 01 47.0	+1.8
FAQ	Al Faqa, Dubai	4.38	146	*e*Pn	Pn	02 00 57.3	+2.6
FAQ	Al Faqa, Dubai	4.38	146	P	Pn	02 00 57.5	+2.8
FAQ				S	Sn	02 01 46.4	+0.6
SLWR	Sila	4.47	194	P	Pn	02 00 57.7	+1.7
IZEF	Zefreh	4.49	354	*e*Pn	Pn	02 00 57.5	+1.1
AMIS	Naft Sefid	4.51	317	*e*Pn	Pn	02 00 57.5	+1.0
UOSS	Minazif	4.55	139	P	Pn	02 00 58.2	+1.1
UOSS				S	Sn	02 01 48.4	-1.6
IPIR	Pirpir	4.59	338	*e*Pn	Pn	02 00 58.9	+1.0
HATD	Hatta, Dubai	4.60	140	*e*Pn	Pn	02 01 00.1	+2.4
HATD	Hatta, Dubai	4.60	140	P	Pn	02 00 59.5	+1.8
HATD				S	Sn	02 01 50.4	-0.9
ASHO	Ashiyiah	4.67	142	*e*Pn	Pn	02 01 01.2	+2.5
ASHO	Ashiyiah	4.67	142	P	Pn	02 00 60.0	+1.2
	SNR=18						
ASHO				S	Sn	02 01 52.4	-0.6
ANAR	Anarak	4.80	8	*e*Pn	Pn	02 01 01.9	+1.3
IKLH	Kolahrood	5.01	347	*e*Pn	Pn	02 01 04.7	+1.1
ALNE	Al Ain	5.04	149	*e*Pn	Pn	02 01 06.6	+2.8
ALNE	Al Ain	5.04	149	P	Pn	02 01 04.6	+0.8
ALNE				S	Sn	02 02 01.6	-0.6
SOHO	SOHO	5.37	142	*e*Pn	Pn	02 01 10.6	+2.3
SOHO	SOHO	5.37	142	P	Pn	02 01 09.3	+1.0
SOHO				S	Sn	02 02 08.7	-1.5
QAM	Ghamsar	5.47	347	*e*Pn	Pn	02 01 11.4	+1.6
TPRV	Parvadeh(Tabas	5.62	34	*e*Pn	Pn	02 01 13.3	+1.4
ARQ	Araqi	6.02	147	P	Pn	02 01 18.0	+0.7
	SNR=33						
ARQ				S	Sn	02 02 25.4	-0.9
HOQ	Hoqain	6.24	140	P	Pn	02 01 22.0	+1.7
	SNR=15						
HOQ				S	Sn	02 02 29.8	-1.8
TKDS	Koohdasht(Taba	6.31	34	*e*Pn	Pn	02 01 21.8	+0.5
IKMR	Kamar-syah	6.40	324	*e*Pn	Pn	02 01 22.7	+0.3
ASAO	Ashtian	6.58	339	*e*P	Pn	02 01 26.4	+1.2
ASAO	Ashtian	6.58	339	*e*Pn	Pn	02 01 26.4	+1.2
IQOM	Qom	6.59	347	*e*Pn	Pn	02 01 25.9	+0.6
IVRN	Varamin	6.63	352	*e*Pn	Pn	02 01 26.4	+0.7
IDOB	Doab	6.71	324	*e*Pn	Pn	02 01 27.1	+0.1
BSY	Bisya	6.85	145	P	Pn	02 01 29.6	+0.9
NHDN	Nehbandan	6.87	63	*e*Pn	Pn	02 01 30.4	+1.4
SMDO	Samad	7.07	138	P	Pn	02 01 33.0	+1.2
	SNR=15						
SMDO				S	Sn	02 02 50.7	-1.6
IANJ	Anjilo	7.07	7	*e*Pn	Pn	02 01 33.5	+1.6
IRAZ	Razeghan	7.41	341	*e*Pn	Pn	02 01 37.0	+0.5
QABG	Abgarm-Qazvin	7.79	340	*e*Pn	Pn	02 01 42.9	+1.1
HSRG	Sareghieh	7.86	331	*e*Pn	Pn	02 01 44.1	+1.4
WBK	Wadi Bani Khal	7.96	135	P	Pn	02 01 43.7	-0.3
WBK				S	Sn	02 03 14.4	+0.2
IGHG	Ghaleghazi	8.00	319	*e*Pn	Pn	02 01 45.9	+1.2
QALM	Alamut, Qazvin	8.21	347	*e*Pn	Pn	02 01 48.4	+0.8
IDHR	Dehrash	8.37	320	*e*Pn	Pn	02 01 51.1	+1.4
JLN	Jalan Bani Buh	8.58	135	P	Pn	02 01 51.6	-0.8
JLN				S	Sn	02 03 26.0	-3.3
MHTO	MHTO	8.71	147	P	Pn	02 01 54.6	+0.3
MHTO				S	Sn	02 03 28.4	-4.2
SBZV	Sabzevar	8.88	25	*e*Pn	Pn	02 01 58.4	+1.7
DQM	DQM	9.45	152	P	Pn	02 02 05.4	+1.1
DOK	Doka	9.82	173	P	Pn	02 02 09.6	+0.1
GEYT	Alibeck	10.43	23	Pn	Pn	02 02 16.1	-1.7
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=1.7						
BRTR	Keskin Array B	19.50	310	P	Pn	02 04 17.4	+0.6
	comp=Z,0.1nm,0.3s,baz=129,slow=12,SNR=4.3						
AKTO	Aktyubinsk	22.32	9	P	P	02 04 46.7	+0.9
	comp=Z,1.4nm,0.6s,baz=179,slow=15,SNR=6.2						
BVAR	Borovoye Array	27.77	23	P	P	02 05 36.1	-0.8
	comp=Z,0.3nm,0.5s,baz=196,slow=10.0,SNR=1.9						
MKAR	Makanchi Array	29.38	43	P	P	02 05 49.3	-2.1
	comp=Z,0.3nm,0.5s,baz=235,slow=9.4,SNR=5.2						
KURBB	Kurchatov Arra	29.43	34	P	P	02 05 48.4	-3.4
	comp=Z,0.2nm,0.6s,baz=234,slow=8.6,SNR=1.9						
ZALV	Zalesovo Beam	34.52	33	P	P	02 06 36.4	0.0
	comp=Z,1.6nm,0.6s,baz=236,slow=9.3,SNR=7.1						
GERES	GERESS Array B	36.26	315	P	P	02 06 51.3	-0.2
	comp=Z,0.2nm,0.5s,baz=99,slow=8.2,SNR=4.5						
KHC	Kasperske Hory	36.44	315	*e*P	P	02 06 53.6	+0.6
FINES	FINESS Array B	37.54	339	P	P	02 07 02.1	0.0
	comp=Z,2.6nm,0.9s,baz=143,slow=10,SNR=10						
ARCES	ARCESS Array B	44.09	347	P	P	02 07 54.7	-1.3
	comp=Z,1.5nm,0.8s,baz=149,slow=11,SNR=1.4						
ESDC	Sonseca Array	47.73	299	P	P	02 08 24.9	-0.4
	comp=Z,0.3nm,0.8s,baz=72,slow=8.2,SNR=1.4						
TORD	Torodi Ar. Bea	49.88	263	P	P	02 08 41.4	-0.6
	comp=Z,1.5nm,0.8s,baz=58,slow=7.7,SNR=3.3						

UPA 24 02:01:42.8±1.0,**10°.06N**×**84°.07W,h22**^{km}±11^{km}**,MW4.1, 1D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HDC	Heredia	0.07	221	⇓*i*P	Pb	02 01 52.8	+5.8
HDC				*e*S	Sb	02 02 00.2	+10
DRK0	Durika	1.13	134	*e*P	Pn	02 02 02.7	-0.7
DRK0				*e*S	Sb	02 02 17.6	-0.5
PTJ1	Puerto Jimnez	1.69	153	*e*P	Pn	02 02 10.3	-0.7
PTJ1				*e*S	Sn	02 02 31.8	-0.1
PIRO	Carate, Puerto	1.79	156	*e*P	Pn	02 02 11.1	-1.4
PIRO				*e*S	Sn	02 02 33.6	-1.0
BRU2	Volcan	1.85	133	*e*P	Pn	02 02 12.8	-0.5
BRU2				*e*S	Sn	02 02 35.9	-0.2
BCO2	Palmira	2.02	131	*e*P	Pn	02 02 15.6	-0.1
BCO2				*e*S	Sn	02 02 40.4	+0.1

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*IDC **24** 02:02:05.0±4.0,2°.95N×83°.58W,h0^{km},mb3.6/5,mb1 4.0/6, mb1mx3.7/32,mbtmp3.7/6,ML4.5/2,MS3.8/21,Ms1 3.8/21, ms1mx3.7/29,Error ellipse: s-maj=96.6km s-min=74.7km az=66.0*
*NEIC **24** 02:02:12.1±2.5,3°.7N±0°.1×83°.50W±0°.05,h25^{km}±6^{km}, mb4.3/9,Error ellipse: s-maj=15.8km s-min=5.4km az=195.0*
*GCMT **24** 02:02:14.1±0.3,3°.06N±0°.02×84°.28W±0°.02,h17^{km}±1^{km}, MW4.8/100,Moment Tensor Solution. s13,c13; s100,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.07; $M_{\theta\theta}$0.71±.07; $M_{\phi\phi}$-0.40±.07; $M_{r\theta}$0.17±.19; $M_{\theta\phi}$1.72±.07; $M_{\phi r}$0.20±.18; Best double couple: $M_0$1.82400×10^{16} NP1:ϕ_s99.00000°,δ84.00000°, λ3.00000°. NP2:ϕ_s9.00000°,δ87.00000°,λ174.00000°. Principal axes: T 1.9890, Plg6.0000°, Azm324.0000°; N -0.3280, Plg83.0000°, Azm165.0000°; P -1.6600, Plg2.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 02:02:06.4±0.9,**3°.30N**±0°.09×**83°.16W**±0°.08,**h10**^{km}**,n58,** σ**2^s.13**/35,**mb4.1**/8,**MS3.9**/17,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTAV	Otavalo	5.60	123	Pn	Pb	02 03 42.9	-1.7
OTAV	Otavalo	5.60	123	*e*P	Pb	02 03 43.6	-1.0
GCUF	Volcan Galeras	6.16	109	*e*P	Pb	02 03 52.2	-1.9
GCUF				*e*P	Pg	02 03 55.1	-9.4
PCON	Cinco Dias	6.82	98	*e*P	Pb	02 04 07.2	+1.8
JTS	Las Juntas de	7.17	346	Pn	Pn	02 03 54.9	+3.6
	39nm,0.3s,baz=243,slow=5.8,SNR=14						
JTS				Sn	Sn	02 05 10.6	-2.3
	baz=211,slow=19,SNR=4.2						
JTS	Las Juntas de	7.17	346		Pn	02 03 54.2	+2.9
CBOC	Ciudad Bolivar	7.56	70	*e*P	Pb	02 04 16.8	-1.0
ANIL	Santa Ana	7.83	81	*e*P	Pb	02 04 16.2	-6.2
DBBC	Dabeiba	7.84	62	*e*P	Pb	02 04 21.3	-1.2
ORTC	Ortega, Tolima	7.92	85	*e*P	Pb	02 04 22.5	-1.3
TOLC	Tolima	7.92	80	*e*P	Pb	02 04 23.4	-0.7
RREF	El Recreo	7.95	78	*e*P	Pb	02 04 23.4	-1.3
GUY2C	Guyana, Caldas	8.00	76	*e*P	Pb	02 04 23.6	-1.8
ACON	Acoyapa	8.84	347	Pn	Pn	02 04 12.6	-1.7
ESPN	Las Esperanzas	8.91	353	Pn	Pn	02 04 15.0	-0.2
ROSC	El Rosal	8.95	80	Pn	Pn	02 04 23.6	+7.5
PTBC	PUERTO BERRIO,	9.24	69	*e*P	Pn	02 04 40.9	+21
MACC	Macarena, Meta	9.37	97	*e*P	Pn	02 04 38.1	+17
ATAH	Atahualpa	11.41	155	LR	LR	02 09 21.4	
	comp=Z,791nm,18.9s,baz=335,slow=39						
TGUH	Tegucigalpa,Un	11.43	339		Pn	02 04 47.6	-2.3
MTO3	Montecristo	12.61	331	Pn	Pn	02 05 03.2	-3.0
ESQI	Esquipulas	12.74	332	Pn	Pn	02 05 04.5	-3.3
SDV	Santo Domingo	13.63	65	LR	LR	02 11 01.1	
	comp=Z,419nm,20.2s,baz=250,slow=38						
SDV	Santo Domingo	13.63	65	Pn	P	02 05 25.4	-3.7
HUEH	Huehuetenango	14.50	326	Pn	Pn	02 05 29.8	-2.1
CCIG	Comitan	15.63	326	Pn	Pn	02 05 43.2	-3.9
NNA	Nana	16.44	158	LR	LR	02 12 01.7	
	comp=Z,172nm,19.7s,baz=314,slow=37						
CMIG	Matias Romero	17.90	321	P	P	02 06 16.5	+0.2
	0.3nm,0.3s,baz=128,slow=17,SNR=2.8						
CMIG				LR	LR	02 11 36.7	
	comp=Z,417nm,21.5s,baz=142,slow=32						
SJG	San Juan	22.23	47	P	P	02 07 08.2	+4.9
PTGA	Pitinga	23.52	99	LR	LR	02 17 01.9	
	comp=Z,374nm,19.2s,baz=276,slow=38						
MOIG	Morelia	23.98	314	P	P	02 07 20.8	-0.7
LVC	Limon Verde	29.27	152	P	P	02 08 15.1	+5.7
LVC				IAmb	IAmb	02 08 33.0	
	comp=Z,3.9nm,0.8s						
TKL	Tuckaleechee C	32.20	359	LR	LR	02 22 10.9	
	comp=Z,165nm,18.2s,baz=188,slow=37						
TXAR	Lajitas Array	32.39	325	LR	LR	02 20 58.3	
	comp=Z,102nm,21.3s,baz=0.0,slow=35						
H03N2	Juan Fernandez	36.76	174	T	T	02 48 12.9	
	baz=351,slow=76,SNR=16						
H03N1	Juan Fernandez	36.77	174	T	T	02 48 18.0	
	baz=351,slow=76,SNR=19						
H03N3	Juan Fernandez	36.78	174	T	T	02 48 21.3	
	baz=351,slow=76,SNR=16						
CPUP	Villa Florida	38.63	141	LR	LR	02 27 14.2	
	comp=Z,188nm,21.5s,baz=334,slow=39						
BDFB	Brasilia	39.54	119	LR	LR	02 26 42.1	
	comp=Z,181nm,18.3s,baz=284,slow=37						
SDCO	Great Sand Dun	39.92	332	P	P	02 09 41.3	+0.1
SADO	Sadowa	41.45	4	LR	LR	02 27 06.7	
	comp=Z,126nm,19.2s,baz=197,slow=36						
U15A	North Rim	42.51	324	P	P	02 10 02.9	+0.4
U15A				IAmb	IAmb	02 10 13.0	
	comp=Z,10nm,1.5s						
PFO	Pinyon Flats O	43.29	318	LR	LR	02 26 27.5	
	comp=Z,128nm,18.8s,baz=136,slow=34						
CCUT	Cedar City	43.91	325	P	P	02 10 14.3	+0.7
PLCA	Paso Flores	45.32	167	LR	LR	02 26 34.7	
	comp=Z,78nm,19.9s,baz=336,slow=33						
PDAR	Pinedale Array	45.80	333	P	P	02 10 28.7	0.0
	comp=Z,0.4nm,0.9s,baz=123,slow=6.6,SNR=3.0						
PDAR				LR	LR	02 30 28.1	
	comp=Z,238nm,19.2s,baz=160,slow=37						
HWUT	Hardware Ranch	45.86	330	P	P	02 10 29.1	0.0
HWUT				IAmb	IAmb	02 10 37.6	
	comp=Z,4.2nm,0.9s						
ELK	Elko	47.16	327	LR	LR	02 30 27.7	
	comp=Z,175nm,18.2s,baz=150,slow=36						
NVAR	Mina Array Bea	47.42	322	P	P	02 10 41.5	0.0
	comp=Z,0.8nm,0.7s,baz=134,slow=7.1,SNR=7.3						
NVAR	Mina Array Bea	47.42	322	P	P	02 10 41.2	-0.2
LKWY	Lake	47.59	334	P	P	02 10 41.6	-1.1
ULM	Lac du Bonnet	48.00	349	P	P	02 10 47.9	+2.4
	comp=Z,2.1nm,0.8s,baz=147,slow=7.6,SNR=3.7						
ULM				LR	LR	02 31 12.0	
	comp=Z,55nm,18.1s,baz=134,slow=36						
YBH	Yreka Blue Hor	52.11	323	LR	LR	02 31 52.4	
	comp=Z,220nm,18.9s,baz=174,slow=34						
BBB	Bella Bella	61.31	330	LR	LR	02 38 43.1	
	comp=Z,40nm,20.2s,baz=181,slow=36						
YKA	Yellowknife Ar	63.50	344	P	P	02 12 38.0	+1.5
	comp=Z,0.1nm,0.5s,baz=138,slow=6.9,SNR=7.3						
YKA				LR	LR	02 43 43.0	
	comp=Z,84nm,18.4s,baz=0.0,slow=39						
ILAR	Eielson Array	76.05	337	P	P	02 13 55.5	+1.8
	comp=Z,0.5nm,1.1s,baz=101,slow=3.2,SNR=2.7						
ILAR				LR	LR	02 49 13.8	
	comp=Z,104nm,20.7s,baz=140,slow=37						
NOA	NORSAR Array B	89.26	29	LR	LR	02 54 37.4	
	comp=Z,13nm,18.2s,baz=285,slow=35						
ARCES	ARCESS Array B	93.37	19	LR	LR	02 56 50.1	
	comp=Z,32nm,18.9s,baz=265,slow=35						

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*TUL **24** 02:23:24.4±1.1,36°.37N±0°.02×98°.06W±0°.05,h7^{km}±6^{km}, mb_Lg3.6/111(NEIC),Error ellipse: s-maj=5.9km s-min=1.9km az=77.0*
*ANF **24** 02:23:24.8±0.3,36°.32N×98°.02W,h5^{km},ML4.5/18,Error ellipse: s-maj=3.3km s-min=2.8km az=18.0*
*NEIC **24** 02:23:24.4±0.9,36°.36N±0°.01×98°.028W±0°.006,h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.3km az=323.0*
*IDC **24** 02:23:26.7±1.7,36°.41N×98°.46W,h0^{km},mb3.3/1, mb1 3.7/4,mb1mx3.4/44,mbtmp3.4/4,ML4.2/2,Error ellipse: s-maj=28.2km s-min=12.1km az=106.0*
ISC 24 02:23:24.7±1.1,**36°.37N**±0°.02×**98°.03W**±0°.02,**h5**^{km}±8^{km}**,** **n149,**σ**1^s.44**/162,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.14	15		Pg	02 23 27.9	+0.2
KAN14	Manchester OK	0.59	5		Pg	02 23 35.9	-0.3
KAN14				Sg	Sg	02 23 44.1	+0.2
OK029	Liberty Lake	0.73	140		Pg	02 23 38.5	-0.3
OK029				Sg	Sg	02 23 48.7	+0.4
KAN10	Anthony SW Sta	0.76	356		Pg	02 23 38.9	-0.4
KAN10				Sg	Sg	02 23 48.7	-0.4
KAN13	South Haven SW	0.78	34		Pg	02 23 39.6	-0.1
KAN13				Sg	Sg	02 23 49.9	-0.1
U32A	Winter Ranch,	0.78	271		Pg	02 23 38.8	-1.0
U32A				Sg	Sg	02 23 50.2	+0.2
U32A	Winter Ranch,	0.78	271	P		02 23 38.9	
	baz=91						
U32A				S		02 23 50.1	
	baz=91						
BCOK	Bluff Creek, N	0.79	154		Pg	02 23 39.6	-0.2
KAN01	Argonia South	0.82	15		Pg	02 23 39.9	-0.5
KAN01				Sg	Sg	02 23 50.9	-0.1
KAN08	Anthony NE Sta	0.86	3		Pg	02 23 40.5	-0.7
OK009	Oakdale Elemen	0.93	148		Pg	02 23 42.0	-0.5
KAN12	Harper NE Stat	0.93	2		Pg	02 23 42.0	-0.6
OK025	Westminster Rd	0.96	144		Pg	02 23 42.7	-0.5
KS21	Milan North St	0.96	18		Pg	02 23 42.8	-0.5
OK031	S. Brethren Rd	1.05	113		Pg	02 23 44.6	-0.3
OKCFA	Oklahoma City	1.06	153	Pg	Pg	02 23 44.1	-0.9
OKCSW	OKLAHOMA CITY	1.07	153		Pg	02 23 44.5	-0.8
QUOK	Quay	1.09	100	Pg	Pg	02 23 45.2	-0.3
OK030	Cody Creek RV	1.10	113		Pg	02 23 45.0	-0.8
FNO	Franklin	1.22	155		Pg	02 23 47.1	-1.0
T35A	Sooner Cattle	1.34	65		Pn	02 23 49.7	-0.5
T35B	Sooner Cattle	1.34	65	P		02 23 49.7	
	baz=247,SNR=1000						
T35B				S		02 24 07.6	
	baz=247						
W35A	Tecumseh	1.53	142		Pn	02 23 52.2	-0.6
WMOK	Wichita Mounta	1.74	201	P	Pn	02 23 54.9	-0.7
	baz=20,SNR=606						
WMOK				S	Sn	02 24 18.6	+0.4
	baz=20						
WMOK	Wichita Mounta	1.74	201		Pn	02 23 55.1	-0.5
WMOK	Wichita Mounta	1.74	201	P		02 23 54.9	
	baz=20,SNR=1000						
WMOK				S		02 24 18.6	
	baz=20						
TUL1	Leonard	1.87	103	P	Pn	02 23 57.4	0.0
	baz=285,SNR=58						
TUL1				S	Sb	02 24 23.0	-0.1
	baz=285						
TUL1	Leonard	1.87	103	P		02 23 57.4	
	baz=285,SNR=99						
TUL1				S		02 24 22.9	
	baz=285						
R32A	Long Quarter,	2.12	345		Pn	02 24 01.8	+0.8
R32A				IAmb_Lg		02 24 36.6	
	comp=Z,323nm,0.7s						
R32A	Long Quarter,	2.12	345	P		02 24 01.4	
	baz=166,SNR=224						
R32A				S		02 24 30.9	
	baz=166						
CBKS	Cedar Bluff	2.79	331	Pn	Pn	02 24 10.9	+0.6

	baz=151,SNR=24						
CBKS				Pb	Pb	02 24 16.5	+1.3
	baz=151						
CBKS				S	Sn	02 24 47.0	+2.6
	baz=151						
CBKS	Cedar Bluff	2.79	331	Pn	Pn	02 24 10.6	+0.4
CBKS	Cedar Bluff	2.79	331	P		02 24 10.6	
	baz=151,SNR=62						
X37A	Clayton	2.80	128		Pn	02 24 10.2	-0.1
X37A				IAmb_Lg		02 24 58.6	
	comp=Z,286nm,0.9s						
X37A	Clayton	2.80	128	P		02 24 10.3	
	baz=310						
U38A	Gravette	2.94	87		Pn	02 24 12.1	-0.1
U38A	Gravette	2.94	87	P		02 24 12.5	
	baz=270,SNR=70						
KSU1	Kansas State U	2.95	22	P	Pn	02 24 12.5	+0.1
	baz=203,SNR=46						
KSU1	Kansas State U	2.95	22	Pn	Pn	02 24 12.3	-0.1
KSU1				IAmb_Lg		02 25 02.9	
	comp=Z,178nm,0.7s						
KSU1	Kansas State U	2.95	22	P		02 24 12.5	
	baz=203,SNR=22						
Z35A	Perchaven, San	3.09	168		Pn	02 24 13.8	-0.5
Z35A	Perchaven, San	3.09	168	P		02 24 14.4	
	baz=348,SNR=202						
HHAR	Hobbs	3.30	90		Pn	02 24 17.2	0.0
AMTX	Amarillo	3.32	245	Pn	Pn	02 24 17.9	+0.4
	baz=62						
AMTX				Pb	Pb	02 24 24.1	-0.2
	baz=62						
AMTX				Sb	Sb	02 25 05.6	+0.6
	baz=62						
AMTX	Amarillo	3.32	245	Pn	Pn	02 24 17.8	+0.3
AMTX				IAmb_Lg		02 25 08.1	
	comp=Z,91nm,0.7s						
AMTX	Amarillo	3.32	245	P		02 24 17.9	
	baz=62,SNR=36						
W39A	Magazine	3.64	107	Pn	Pn	02 24 22.0	+0.2
	baz=290,SNR=21						
W39A				Pb	Pb	02 24 29.2	-0.5
	baz=290						
W39A	Magazine	3.64	107	Pn	Pn	02 24 22.5	+0.6
W39A				IAmb_Lg		02 25 22.4	
	comp=Z,131nm,0.8s						
ABTX	Abilene, Hawle	3.96	200	P	Pn	02 24 25.6	-0.7
	baz=19,SNR=7.7						
ABTX	Abilene, Hawle	3.96	200	P		02 24 25.6	
	baz=19,SNR=20						
Z38A	Mt. Pleasant	3.98	140		Pn	02 24 26.0	-0.5
Z38A				IAmb_Lg		02 25 34.0	
	comp=Z,114nm,0.7s						
Z38A	Mt. Pleasant	3.98	140	P		02 24 26.3	
	baz=322,SNR=7.1						
S39A	Bolivar	3.99	69		Pn	02 24 26.1	-0.5
S39A	Bolivar	3.99	69	P		02 24 26.5	
	baz=252,SNR=61						
MIAR	Mount Ida	4.06	115	P	Pn	02 24 27.8	+0.2
	baz=298,SNR=5.5						
MIAR				S	Sn	02 25 16.4	+0.7
	baz=298						
MIAR	Mount Ida	4.06	115	Pn	Pn	02 24 27.5	-0.1
MIAR				IAmb_Lg		02 25 40.8	
	comp=Z,114nm,0.8s						
MIAR	Mount Ida	4.06	115	P		02 24 27.2	
	baz=298,SNR=40						
U40A	Yellville	4.18	89	P	Pn	02 24 28.9	-0.3
	baz=272,SNR=12						
U40A	Yellville	4.18	89	Pn	Pn	02 24 28.5	-0.7
U40A				IAmb_Lg		02 25 35.6	
	comp=Z,97nm,0.8s						
U40A	Yellville	4.18	89	P		02 24 28.4	
	baz=272,SNR=26						
U40A				P		02 24 28.4	
	baz=272,SNR=26						
WHTX	Lake Whitney,	4.39	174	P	Pn	02 24 31.8	-0.3
	baz=354,SNR=8.5						
WHTX	Lake Whitney,	4.39	174	P		02 24 32.0	
	baz=354,SNR=54						
N33A	J Bar K, Exete	4.39	6	Pn	Pn	02 24 31.4	-0.7
KSCO	Kaye Shedlock’	4.50	307	Sn	Sn	02 25 26.5	-0.1
	baz=125						
KSCO				Sb	Sb	02 25 43.5	+4.5
	baz=125						
KSCO	Kaye Shedlock’	4.50	307	S		02 25 26.4	
	baz=125						
MSTX	Muleshoe	4.56	240	P	Pn	02 24 34.7	+0.1
	baz=57						
MSTX				Sb	Sb	02 25 45.3	+4.6
	baz=57						
X40A	Basin Creek Fa	4.64	112	P	Pn	02 24 36.5	+1.0
	baz=295,SNR=17						
X40A	Basin Creek Fa	4.64	112		Pn	02 24 35.8	+0.3
X40A				IAmb_Lg		02 25 52.6	
	comp=Z,75nm,0.7s						
X40A	Basin Creek Fa	4.64	112	P		02 24 36.6	
	baz=295,SNR=8.7						
X40A				P		02 24 36.6	
	baz=295,SNR=8.7						
MGMO	Mountain Grove	4.69	79		Pn	02 24 35.5	-0.7
MGMO				IAmb_Lg		02 25 52.6	
	comp=Z,70nm,0.7s						
237A	Washetta, Mont	4.73	156		Pn	02 24 36.1	-0.7
237A	Washetta, Mont	4.73	156	P		02 24 36.0	
	baz=338,SNR=17						
WHAR	Wooly Hollow	4.79	101	Pn	Pn	02 24 36.4	-1.2
WHAR				IAmb_Lg		02 26 09.5	
	comp=Z,69nm,0.8s						
FCAR	Ozark Folk Cen	4.80	94	Pn	Pn	02 24 37.2	-0.6
FCAR				IAmb_Lg		02 25 57.8	
	comp=Z,60nm,0.9s						
P38A	Dawn	4.82	46		Pn	02 24 37.6	-0.4
P38A				IAmb_Lg		02 26 00.0	
	comp=Z,120nm,0.7s						
P38A	Dawn	4.82	46	P		02 24 37.5	
	baz=229,SNR=19						
WLAR	White Oak Lake	4.84	122	Pn	Pn	02 24 37.7	-0.6
WLAR				IAmb_Lg		02 26 09.3	
	comp=Z,87nm,0.7s						
W41B	Gary Mavity, V	4.85	103	P	Pn	02 24 38.8	+0.4
	baz=286						
W41B				S	Sn	02 25 33.6	-1.4
	baz=286						
W41B				Sb	Sb	02 25 54.2	+5.4
	baz=286						
W41B	Gary Mavity, V	4.85	103	P		02 24 38.0	
	baz=286,SNR=12						
W41B				S		02 25 33.7	
	baz=286						
N35A	Tabor	4.86	22		Pn	02 24 37.6	-1.0
R40A	Maddies Statio	4.98	66		Pn	02 24 39.2	-1.0
R40A				IAmb_Lg		02 26 08.2	
	comp=Z,82nm,0.8s						
R40A	Maddies Statio	4.98	66	P		02 24 39.7	
	baz=249,SNR=39						
BGNE	Belgrade	5.04	359	P	Pn	02 24 40.3	-0.7
	baz=179,SNR=8.5						
BGNE				Sb	Sg	02 26 00.7	-5.8
	baz=179						
BGNE	Belgrade	5.04	359	P		02 24 40.2	
	baz=179,SNR=33						
T25A	Trinidad	5.18	280	P	Pn	02 24 43.0	-0.2
	baz=97,SNR=9.3						
T25A				Sb	Sb	02 26 04.0	+5.3
	baz=97						
Z41A	Richland Creek	5.30	124	S	Sn	02 25 43.8	-2.2
	baz=307						
NATX	Nacogdoches	5.38	148	S	Sn	02 25 46.3	-1.7
	baz=330						
OGNE	Ogallala	5.54	327	P	Pn	02 24 49.3	+1.3
	baz=145,SNR=6.5						
OGNE				S	Sn	02 25 52.4	+0.2
	baz=145						
OGNE	Ogallala	5.54	327	Pn	Pn	02 24 47.8	-0.3
OGNE				IAmb_Lg		02 26 33.4	
	comp=Z,78nm,0.7s						
LCAR	Lake Charles	5.57	91	Pn	Pn	02 24 48.2	-0.1
435B	Jarrell	5.58	176	P	Pn	02 24 47.9	-0.5
	baz=356						
435B	Jarrell	5.58	176	Pn	Pn	02 24 47.5	-1.0
435B				IAmb_Lg		02 26 32.6	
	comp=Z,85nm,1.0s						
435B	Jarrell	5.58	176	P		02 24 47.8	
	baz=356						
T42A	Van Buren	5.61	81		Pn	02 24 49.0	+0.1
T42A				IAmb_Lg		02 26 33.3	
	comp=Z,48nm,0.7s						
T42A	Van Buren	5.61	81	P		02 24 48.8	
	baz=265,SNR=24						
CCM	Cathedral Cave	5.67	71	P	Pn	02 24 49.5	-0.2
	baz=255						
CCM				S	Sn	02 25 54.6	-0.7
	baz=255						
CCM	Cathedral Cave	5.67	71	Pn	Pn	02 24 49.3	-0.4
CCM				IAmb_Lg		02 26 27.5	
	comp=Z,115nm,0.8s						
CCM	Cathedral Cave	5.67	71	P		02 24 49.1	
	baz=255						
CCAR	Cane Creek	5.68	114	Pn	Pn	02 24 48.8	-1.1
CCAR				IAmb_Lg		02 26 37.9	
	comp=Z,82nm,0.9s						
P40A	Paris	5.69	54		Pn	02 24 49.5	-0.4
L34A	Svendsen Farm,	5.74	12	Pn	Pn	02 24 50.5	-0.2
N38A	Joes South For	5.80	39		Pn	02 24 50.7	-0.8
N38A	Joes South For	5.80	39	P		02 24 51.0	
	baz=222,SNR=9.5						
HBAR	Harrisburg	6.03	96	Pn	Pn	02 24 54.9	+0.2
HBAR				IAmb_Lg		02 26 42.4	
	comp=Z,141nm,0.8s						
JCT	Junction City	6.05	195	P	Pn	02 24 54.7	-0.3
	baz=13						
JCT	Junction City	6.05	195	Pn	Pn	02 24 54.0	-1.0
JCT				IAmb_Lg		02 26 45.9	
	comp=Z,96nm,0.8s						
PBMO	Poplar Bluff	6.13	84	Pn	Pn	02 24 55.6	-0.4
PBMO				IAmb_Lg		02 26 42.4	
	comp=Z,80nm,0.8s						
SDCO	Great Sand Dun	6.13	285	P	Pn	02 24 57.2	+0.9
	baz=101,SNR=6.8						
SDCO	Great Sand Dun	6.13	285	Pn	Pn	02 24 56.4	+0.1
SDCO	Great Sand Dun	6.13	285	P		02 24 57.2	
	baz=101,SNR=13						
Q24A	Divide	6.21	297	P	Pn	02 24 57.6	+0.2
	baz=113						
Q24A				S	Sn	02 26 07.1	-2.0
	baz=113						
K31A	O'Neill	6.27	355	Pn	Pn	02 24 57.4	-0.7
K31A				IAmb_Lg		02 26 56.2	
	comp=Z,96nm,0.7s						
K31A	O'Neill	6.27	355	P		02 24 57.8	
	baz=175,SNR=9.2						
FVM	French Village	6.28	73	Pn	Pn	02 24 57.8	-0.3
FVM				IAmb_Lg		02 26 46.6	
	comp=Z,68nm,0.7s						
FVM	French Village	6.28	73	P		02 24 57.5	
	baz=258						
LPAR	Lepanto	6.31	95		Lg	02 26 42.9	
LPAR				IAmb_Lg		02 27 03.3	
	comp=Z,91nm,0.8s						
143A	Socs Landing,	6.58	122	Pn	Pn	02 25 02.1	0.0
143A				IAmb_Lg		02 27 04.3	
	comp=Z,60nm,0.8s						
SLM	Saint Louis	6.60	68	Pn	Pn	02 25 01.7	-0.7
SLM				IAmb_Lg		02 26 58.5	
	comp=Z,79nm,0.7s						
HKT	Hockley	6.66	163	P		02 25 02.6	
	baz=344						
SCIA	State Center	6.68	33	Pn	Pn	02 25 03.7	+0.1
SCIA				IAmb_Lg		02 27 02.1	
	comp=Z,125nm,0.7s						
GDL2	Guadalupe Moun	6.69	233	Pn	Pn	02 25 03.8	0.0
PENMO	Penman	6.78	87	IAmb_Lg		02 27 10.5	
	comp=Z,103nm,0.8s						
ISCO	Idaho Springs	6.89	302	P	Pn	02 25 06.8	0.0
	baz=118						
ISCO				Sb	Sg	02 26 57.4	-8.7
	baz=118						
ISCO	Idaho Springs	6.89	302		Pn	02 25 06.4	-0.4
ISCO				IAmb_Lg		02 27 07.6	
	comp=Z,40nm,0.9s						
HENM	Henderson Moun	6.90	85	Pn	Pn	02 25 06.8	+0.2
ANMO	Albuquerque	7.00	261	Pg	Pb	02 25 29.8	+2.7
	comp=Z,1.4nm,0.3s,baz=81,slow=13,SNR=19						
ANMO				Lg	Lg	02 26 57.7	
	comp=Z,0.6nm,0.3s,baz=338,slow=19,SNR=2.3						
ANMO	Albuquerque	7.00	261	Sb	Sb	02 27 00.1	+9.0
	baz=76						
ANMO	Albuquerque	7.00	261	Pn	Pn	02 25 07.8	-0.5
ANMO	Albuquerque	7.00	261	IAmb_Lg		02 27 21.2	
	comp=Z,14nm,0.7s						
ANMO				IAmb_Lg		02 27 21.2	
	comp=Z,14nm,0.7s						
HALT	Halls	7.05	91	IAmb_Lg		02 27 11.7	
	comp=Z,106nm,0.8s						
HICK	Hickman	7.10	86	Pn	Pn	02 25 09.5	+0.2
N41A	Harden Midland	7.10	50	Pn	Pn	02 25 08.9	-0.4
S44A	Carbondale	7.14	77		Pn	02 25 09.5	-0.4
S44A				IAmb_Lg		02 27 16.4	
	comp=Z,98nm,0.7s						
S44A	Carbondale	7.14	77	P		02 25 09.5	
	baz=262,SNR=19						
SIUC	Southern Illin	7.18	77		Pn	02 25 09.4	-0.9
SIUC				IAmb_Lg		02 27 25.9	
	comp=Z,65nm,0.8s						
OXF	Oxford	7.28	102	Pn	Pn	02 25 11.5	-0.3
OXF				IAmb_Lg		02 27 19.5	
	comp=Z,39nm,0.8s						
W45A	Hickory Valley	7.29	97	Pn	Pn	02 25 12.1	+0.2
W45A				IAmb_Lg		02 27 26.3	
	comp=Z,58nm,0.9s						
BNM	Barren Site	7.37	255	Pn	Pn	02 25 12.8	-0.5
Y45A	Yeager Farm, C	7.39	107	IAmb_Lg		02 27 32.2	
	comp=Z,41nm,0.8s						
ECSD	EROS Data Cent	7.44	8	P	Pn	02 25 13.4	-0.6
	baz=189						
ECSD				S	Sn	02 26 34.4	-4.3
	baz=189						
ECSD	EROS Data Cent	7.44	8	Pn	Pn	02 25 13.2	-0.7
ECSD	EROS Data Cent	7.44	8	P		02 25 13.0	
	baz=189,SNR=6.7						
P43A	Skaggs, Pawnee	7.47	61	Pn	Pn	02 25 13.6	-0.8
P43A					LR	02 27 18.5	
P43A	Skaggs, Pawnee	7.47	61	P		02 25 13.9	
	baz=247,SNR=6.1						
Q44A	Meyer Farm, Va	7.59	68	Pn	Pn	02 25 15.2	-0.8
PHWY	Pilot Hill	7.61	313	Pn	Pn	02 25 16.1	-0.5
Y22D	IRIS PASSCAL I	7.63	255	IAmb_Lg		02 27 39.9	
	comp=Z,69nm,0.8s						
LENM	Lemitar	7.64	256	Pn	Pn	02 25 17.1	+0.2
MNTX	Cornudas Mount	7.67	235	P	Pn	02 25 16.7	-0.6
	baz=50						
MNTX	Cornudas Mount	7.67	235	Pn	Pn	02 25 17.2	0.0
MNTX				IAmb_Lg		02 27 39.9	
	comp=Z,44nm,1.0s						
L40A	Anamosa	7.76	41	Pn	Pn	02 25 17.0	-1.4
L40A				IAmb_Lg		02 27 35.3	
	comp=Z,84nm,0.8s						
HDIL	Hopedale	8.03	56	P	Pn	02 25 22.0	0.0
	baz=241						
HDIL	Hopedale	8.03	56		Pn	02 25 21.4	-0.7
833A	Chaparral WMA,	8.10	189	P	Pn	02 25 23.7	+0.6
	baz=7.6						
PLAL	Pickwick Lake	8.22	97	Pn	Pn	02 25 24.2	-0.4
PLAL					LR	02 27 44.2	
PLAL				IAmb_Lg		02 27 56.6	
	comp=Z,29nm,0.9s						
WVT	Waverly	8.24	89	P	Pn	02 25 24.3	-0.7
	baz=275						
WVT	Waverly	8.24	89	Pn	Pn	02 25 24.2	-0.9
WVT					LR	02 27 45.0	
O44A	Mansfield	8.42	60	Pn	Pn	02 25 27.8	+0.4
O44A				IAmb_Lg		02 28 06.3	
	comp=Z,85nm,0.7s						
I37A	Lemond, Waseca	8.42	23	IAmb_Lg		02 28 15.5	
	comp=Z,46nm,0.9s						
MVCO	Mesa Verde	8.44	279	Pn	Pn	02 25 27.3	-0.6
TX31	Lajitas Ar. Si	8.46	216		Pn	02 25 26.7	-1.5
TX32	Lajitas Array	8.46	216		Pn	02 25 26.7	-1.4
TXAR	Lajitas Array	8.46	216	Pn	Pn	02 25 26.6	-1.5
	comp=Z,0.6nm,0.3s,baz=44,slow=11,SNR=41						
TXAR				Pg	Pb	02 25 54.1	+2.3
	comp=Z,1.0nm,0.3s,baz=35,slow=13,SNR=7.1						
TXAR				Lg	Lg	02 27 47.0	
	comp=Z,2.3nm,0.3s,baz=36,slow=30,SNR=7.6						
TXAR	Lajitas Array	8.46	216	Pn	Pn	02 25 26.2	-1.9
L42A	Oliver, Polo	8.59	47	Pn	Pn	02 25 29.0	-0.8
L42A					LR	02 27 56.6	
JFWS	Jewell Farm	8.87	40	P	Pn	02 25 32.6	-1.0
	baz=225						
JFWS	Jewell Farm	8.87	40	Pn	Pn	02 25 32.2	-1.4
JFWS					LR	02 28 02.5	
JFWS				IAmb_Lg		02 28 08.4	
	comp=Z,69nm,0.7s						
RWWY	Rawlins	8.90	309	IAmb_Lg		02 28 27.5	
	comp=Z,45nm,1.3s						
RSSD	Black Hills	9.00	331	P	Pn	02 25 37.2	+1.5
	baz=148						
RSSD	Black Hills	9.00	331	Pn	Pn	02 25 36.2	+0.5
V48A	Smith Brothers	9.10	91	IAmb_Lg		02 28 19.6	
	comp=Z,28nm,1.0s						
P46A	Rosedale	9.14	66	Pn	Pn	02 25 37.4	+0.1
P46A				IAmb_Lg		02 28 25.3	
	comp=Z,73nm,0.8s						
I40A	Norwalk	9.41	35	Pn	Pn	02 25 40.6	-0.5
SFIN	Lafayette	9.47	62	P	Pn	02 25 41.2	-0.6
	baz=248						
SFIN	Lafayette	9.47	62	P		02 25 40.8	
	baz=248,SNR=6.5						
BLO	Bloomington	9.53	69		Pn	02 25 42.5	-0.2
BLO				IAmb_Lg		02 28 28.0	
	comp=Z,67nm,0.7s						
WCI	Wyandotte Cave	9.54	75	P	Pn	02 25 42.8	+0.1
	baz=262						
WCI	Wyandotte Cave	9.54	75	Pn	Pn	02 25 42.5	-0.2
WCI				IAmb_Lg		02 28 29.7	
	comp=Z,33nm,0.7s						
HQIL	Hanson Quary C	9.59	52	IAmb_Lg		02 28 40.8	
	comp=Z,58nm,0.9s						
Y49A	Blount Mountai	9.84	101	IAmb_Lg		02 28 56.2	
	comp=Z,28nm,1.2s						
U49A	Red Boiling Sp	9.87	86	IAmb_Lg		02 28 39.7	
	comp=Z,35nm,1.2s						
F36A	Milaca	10.07	18	Pn	Pn	02 25 50.0	-0.2
PDAR	Pinedale Array	10.95	309	Pn	Pn	02 26 02.1	-0.2
	comp=Z,0.2nm,0.3s,baz=127,slow=15,SNR=8.1						
PDAR				Lg	Lg	02 29 05.2	
	comp=Z,0.3nm,0.3s,baz=102,slow=13,SNR=3.0						
ULM	Lac du Bonnet	13.96	6	Pn	Pn	02 26 40.1	-3.1
	comp=Z,0.2nm,0.3s,baz=186,slow=14,SNR=3.5						
ULM				Sn	Sn	02 29 01.9	-17
	comp=Z,0.1nm,0.3s,baz=207,slow=16,SNR=2.4						
ULM				Lg	Lg	02 30 40.6	
	comp=Z,0.4nm,0.3s,baz=93,slow=21,SNR=2.9						
ILAR	Eielson Array	40.45	330	P	P	02 31 04.9	+1.0
	comp=Z,0.2nm,0.5s,baz=112,slow=8.0,SNR=3.3						

NOU 24 03:00:43.5, 15°.64S×166°.86E, h0^{km}, MLv4.4, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.38	60	P	Pg	03 00 50.9	+0.1
DVP	Devils Point	2.43	149	P	Pn	03 01 24.4	-0.1
YATNC	Mamie plateau,	6.38	180	P	Pn	03 02 18.1	-0.8
DZM	Mont Dzumac	6.41	183	P	Pn	03 02 19.1	-0.2
OUENC	Ouen Island, N	6.74	180	P	Pn	03 02 24.4	+0.6
	21nm,2.6s						

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*IDC **24** 03:09:50.7±1.1, 55°.44S×25°.46W, h0^{km}, mb4.2/4, mb1 4.2/5, mb1mx3.8/30, mbtmp4.1/5, ML3.6/1, Error ellipse: s-maj=44.1km s-min=23.0km az=102.0*

*NEIC **24** 03:09:57.5±1.2, 55°.5S±0°.1×25°.7W±0°.2, h52^{km}±5^{km}, mb4.4/7, Error ellipse: s-maj=17.9km s-min=16.0km az=104.0*

ISC 24 03:09:55.5±0.7**, 55°.5S**±0°.1×**25°.5W**±0°.1**, h35^{km}, n19, σ0^{s}.42**/17**, mb4.2**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HOPE	Hope Point	6.45	276	Pn	Pn	03 11 27.7	-0.1
VNA1	Neumayer--Stat	16.98	160	P	P	03 13 51.2	-0.3
VNA3	Neumayer Olymp	17.22	163	P	P	03 13 53.6	-0.6
VNA2	Neumayer--Watz	17.37	160	P	P	03 13 55.9	0.0
	baz=327,slow=16						
VNA2				S	Sn	03 16 53.5	-13
SNAA	Sanae	18.89	158	P	Pn	03 14 13.8	+0.3
SNAA	Sanae	18.89	158	P	Pn	03 14 13.7	+0.3
	0.2nm,0.3s,baz=305,slow=12,SNR=12						
SNAA	Sanae	18.89	158	P	Pn	03 14 13.7	+0.3
SNAA				IAmb	IAmb	03 14 20.1	
	comp=Z,15nm,1.5s						
BELA	Belgrano 2	22.71	185	P	P	03 14 53.0	-0.7
QSPA	South Pole Qui	34.76	180	P	P	03 16 42.3	+0.1
	comp=Z,4.5nm,0.6s,baz=205,slow=2.3,SNR=42						
QSPA	South Pole Qui	34.76	180	IAmb	IAmb	03 16 47.1	
	comp=Z,4.3nm,0.7s						
ZON	Zonda	38.51	290	P	P	03 17 14.1	-0.2
BOSA	Boshof	44.91	75	P	P	03 18 06.3	-0.5
	comp=Z,1.6nm,0.8s,baz=222,slow=12,SNR=3.2						
BOSA	Boshof	44.91	75	IAmb	IAmb	03 18 55.4	
	comp=Z,13nm,1.4s						
VNDA	Vanda	47.17	182	P	P	03 18 24.4	+0.5
	comp=Z,1.9nm,0.7s,baz=195,slow=9.1,SNR=6.2						
TORD	Torodi Ar. Bea	72.11	28	P	P	03 21 16.4	+0.2
	comp=Z,1.7nm,0.6s,baz=198,slow=6.7,SNR=5.7						
YKA	Yellowknife Ar	136.39	318	PKP	PKPdf	03 29 12.2	+0.3
	comp=Z,0.1nm,0.6s,baz=117,slow=3.1,SNR=4.1						
SONM	Songino Array	149.74	84	PKPbc	PKiKP	03 29 41.7	0.0
	comp=Z,0.5nm,0.7s,baz=221,slow=3.6,SNR=3.8						
ILAR	Eielson Array	150.44	312	PKPbc	PKPbc	03 29 42.2	+0.5
	comp=Z,1.9nm,1.1s,baz=112,slow=2.0,SNR=9.2						
ILAR	Eielson Array	150.44	312		PKiKP	03 29 42.4	0.0

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*IDC **24** 03:28:57.9±0.5, 9°.61N×126°.23E, h0^{km}, mb4.3/20, mb1 4.4/20, mb1mx4.3/35, mbtmp4.2/20, MS3.2/4, Ms1 3.3/4, ms1mx2.9/33, Error ellipse: s-maj=23.9km s-min=12.8km az=79.0*

*MAN **24** 03:29:04.5, 9°.65N×126°.20E, h22^{km}, mb5.0, ML3.9, MS4.0*

MAN INTENSITY III - SOCORRO.

*NEIC **24** 03:29:05.0±1.1, 9°.58N±0°.09×126°.2E±0°.1, h54^{km}±7^{km}, mb4.6/26, Error ellipse: s-maj=17.3km s-min=13.5km az=93.0*

ISC 24 03:28:59.6±0.4**, 9°.63N**±0°.04×**126°.25E**±0°.06**, h10^{km}, n79, σ1^{s}.02**/76**, mb4.4**/33**, MS3.1**/4**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	1.93	233	⇓*i*P	Pg	03 29 36.2	-0.4
CGP				*i* S	Sg	03 30 02.9	+1.2
LLP	Lapu-Lapu	2.35	287	⇓*e*P	Pg	03 29 44.0	-0.7
LLP				*e*S	Sg	03 30 16.5	+1.3
KCP	Kidapawan	2.85	204	⇑*e*P	Pb	03 29 50.4	-0.2
KCP				*i* S	Sb	03 30 24.6	-0.9
JAP	San Jose, Anti	4.38	285	⇑*e*P	Pb	03 30 14.7	-2.0
LQP	Lukban	6.41	314	⇑*e*P	Pn	03 30 41.1	+6.8
MYLDM	Lahad Datu	8.87	241	Pn	Pn	03 31 09.7	+1.8
LUWI	Luwuk	11.15	198	Pn	Pn	03 31 40.9	+1.7
TWG	Pinlang	14.02	340	Pn	Pn	03 32 21.5	+3.1
SLVN	Son La	24.44	301	P	P	03 34 19.0	+0.2
FITZ	Fitzroy Crossi	27.56	181	P	P	03 34 47.2	+0.4
	2.8nm,0.5s,baz=8.9,slow=7.2,SNR=12						
KSAR	Wonju Array Be	27.73	3	P	P	03 34 50.2	+1.9
KSRS	Korea Array	27.74	3	P	P	03 34 48.5	+0.1
	1.0nm,0.5s,baz=182,slow=9.8,SNR=4.5						
KSRS				LR	LR	03 46 27.5	
	comp=Z,22nm,19.9s,baz=156,slow=38						
CMAR	Chiang Mai Arr	27.87	291	P	P	03 34 50.8	+1.0
	1.9nm,0.4s,baz=100,slow=7.3,SNR=6.9						
CMAR				LR	LR	03 46 30.1	
	comp=Z,55nm,18.4s,baz=158,slow=38						
CHTO	Chiang Mai	27.96	292	P	P	03 34 50.4	-0.2
PSI	Prapat	27.98	258	P	P	03 34 52.5	+1.5
	6.0nm,0.5s,baz=2.2,slow=0.6,SNR=6.2						
RPSI	Rantau Prapat	28.01	258	P	P	03 34 52.5	+1.4
MJAR	Matsushiro Arr	28.90	20	LR	LR	03 47 02.2	
	comp=Z,31nm,18.2s,baz=200,slow=38						
WRA	Warramunga Arr	30.45	165	P	P	03 35 11.5	-1.1
	0.3nm,0.4s,baz=349,slow=9.3,SNR=6.3						
BJT	Baijiatuau	31.57	345	P	P	03 35 22.4	+0.2
BJT				IAmb	IAmb	03 35 26.0	
	comp=Z,5.5nm,0.6s						
ASAR	Alice Springs	33.93	167	P	P	03 35 42.5	-0.7
	comp=Z,0.4nm,0.3s,baz=351,slow=7.1,SNR=11						
USA0B	Ussuriysk Arra	34.80	7	P	P	03 35 51.2	+0.8
USA0B				IAmb	IAmb	03 35 53.3	
	comp=Z,4.8nm,0.7s						
USRK	Ussuriysk Ar.	34.80	7	P	P	03 35 52.2	+1.8
	comp=Z,3.4nm,0.6s,baz=182,slow=7.6,SNR=14						
H11S3	WAKE ISLAND Hy	40.12	73	T	T	04 19 36.1	
	baz=262,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	40.14	73	T	T	04 19 37.0	
	baz=262,slow=75,SNR=24						
H11S2	WAKE ISLAND Hy	40.14	73	T	T	04 19 38.5	
	baz=262,slow=75,SNR=20						

H11N1	WAKE ISLAND Hy	40.48	71	T	T	04 19 59.8	
	baz=266,slow=74,SNR=30						
H11N2	WAKE ISLAND Hy	40.48	71	T	T	04 20 02.6	
	baz=266,slow=74,SNR=25						
H11N3	WAKE ISLAND Hy	40.49	71	T	T	04 20 01.5	
	baz=266,slow=74,SNR=22						
ULN	Ulaanbaatar	41.41	340	P	P	03 36 47.2	+0.9
SONM	Songino Array	41.61	340	P	P	03 36 48.3	+0.4
	comp=Z,0.6nm,0.6s,baz=170,slow=7.4,SNR=4.5						
SONM				PcP	PcP	03 38 44.9	-0.1
	comp=Z,0.9nm,0.7s,baz=151,slow=3.1,SNR=5.0						
SONM	Songino Array	41.61	340	P	P	03 36 48.4	+0.4
STKA	Stephens Creek	43.81	161	P	P	03 37 05.6	-0.2
	comp=Z,1.2nm,0.3s,baz=333,slow=8.3,SNR=3.6						
PETK	Petropavlovsk-	50.23	24	P	P	03 37 57.6	+1.9
	comp=Z,1.6nm,0.4s,baz=216,slow=7.1,SNR=1.8						
PETK	Petropavlovsk-	50.23	24	P	P	03 37 55.5	-0.2
MK31	Makanchi Array	52.52	323	P	P	03 38 13.2	+0.1
MK31				IAmb	IAmb	03 38 14.4	
	comp=Z,3.4nm,0.6s						
MKAR	Makanchi Array	52.52	323	P	P	03 38 13.2	+0.1
	comp=Z,4.2nm,0.5s,baz=121,slow=8.1,SNR=82						
MKAR				PcP	PcP	03 39 23.4	-0.1
	comp=Z,1.3nm,0.6s,baz=116,slow=4.9,SNR=4.2						
MKAR	Makanchi Array	52.52	323	P	P	03 38 12.8	-0.3
SHLS	Shalkode	52.60	318	*e*P	P	03 38 11.9	-1.9
	baz=318						
MAKZ	Makanchi	52.72	323	P	P	03 38 14.6	+0.1
MAKZ				IAmb	IAmb	03 38 15.2	
	comp=Z,3.3nm,0.5s						
KPKS	Kokpek	53.25	318	*e*P	P	03 38 18.0	-0.6
	baz=318						
NIL	Nilore	54.08	305	P	P	03 38 24.8	+0.1
TNSS	Tian-Shan	54.24	317	*e*P	P	03 38 26.6	+0.4
	baz=317						
KUU	Kurty	54.98	318	*e*P	P	03 38 31.7	+0.6
	comp=Z,2.6nm,0.7s,baz=318						
ZAA0	Zalesovo Array	55.17	332	P	P	03 38 31.8	-0.5
ZAA0				IAmb	IAmb	03 38 33.6	
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	55.17	332	P	P	03 38 31.0	-1.3
	comp=Z,2.5nm,0.6s,baz=120,slow=6.7,SNR=12						
ZALV				PcP	PcP	03 39 32.0	-1.3
	comp=Z,0.8nm,0.5s,baz=143,slow=5.0,SNR=3.0						
ZALV	Zalesovo Beam	55.17	332	P	P	03 38 31.4	-0.9
KURK	Kurchatov	56.58	326	P	P	03 38 42.6	+0.1
KURK				IAmb	IAmb	03 38 44.8	
	comp=Z,3.8nm,0.7s						
BTLS	Baital	56.93	318	*e*P	P	03 38 45.0	-0.1
	baz=318						
KBL	Kabul	57.68	305	P	P	03 38 50.7	-0.1
KK31	Karatay Array	58.69	315	P	P	03 38 57.1	-0.4
KK31				IAmb	IAmb	03 38 58.1	
	comp=Z,4.2nm,0.6s						
KKAR	Karatay Array	58.69	315	P	P	03 38 56.7	-0.8
IUG	Iuzhnay	58.74	314	*e*P	P	03 38 57.8	-0.2
	comp=Z,2.0nm,0.6s,baz=314						
BRZS	Berezniki	59.67	323	*e*P	P	03 39 03.4	-0.8
	baz=323						
TIXI	Tiksi	61.99	1	P	P	03 39 20.0	+0.6
BRVK	Borovoye	62.25	326	P	P	03 39 21.4	-0.2
BRVK				IAmb	IAmb	03 39 22.2	
	comp=Z,3.2nm,0.7s						
ADK	Adak	62.44	36	P	P	03 39 22.8	0.0
BILL	Bilibino	64.02	16	P	P	03 39 34.0	+0.9
BILL				IAmb	IAmb	03 39 35.3	
	comp=Z,3.2nm,0.5s						
GEYT	Alibeck	66.91	307	P	P	03 39 51.9	-0.5
ABKAR	Akbulak array	67.35	319	P	P	03 39 54.3	-0.6
ARU	Arti	69.75	327	P	P	03 40 08.5	-1.2
RAYN	Ar Rayn	77.79	292	P	P	03 40 57.3	-0.4
RAYN				IAmb	IAmb	03 40 58.2	
	comp=Z,4.0nm,0.7s						
IL31		80.02	26	P	P	03 41 09.0	0.0
IL31				IAmb	IAmb	03 41 30.9	
	comp=Z,17nm,1.8s						
ILAR	Eielson Array	80.02	26	P	P	03 41 08.4	-0.6
	comp=Z,0.5nm,0.5s,baz=233,slow=4.9,SNR=12						
KLMR	Klimovskoe	80.07	330	*e*P	P	03 41 07.6	-1.8
KLMR				AMP		03 41 09.3	
	comp=Z,7.0nm,0.7s						
BMAR	Burnt Mountain	80.86	23	P	P	03 41 12.9	-0.7
ARCES	ARCESS Array B	84.78	340	P	P	03 41 33.8	-0.1
	comp=Z,6.0nm,0.6s,baz=82,slow=6.6,SNR=32						
ARCES	ARCESS Array B	84.78	340	P	P	03 41 34.1	+0.2
MMAI	Mount Meron Ar	85.53	303	LR	LR	04 26 44.4	
	comp=Z,27nm,18.4s,baz=220,slow=40						
BR131	Keskin Array S	85.92	309	P	P	03 41 38.9	-1.5
BRTR	Keskin Array B	85.92	309	P	P	03 41 39.4	-1.0
	comp=Z,0.9nm,0.8s,baz=126,slow=5.5,SNR=5.8						
FINES	FINESS Array B	86.44	332	P	P	03 41 41.9	-0.4
	comp=Z,4.4nm,0.4s,baz=74,slow=4.6,SNR=65						
FINES	FINESS Array B	86.44	332	P	P	03 41 41.2	-1.0
AKASG	Malin Array Be	87.05	321	P	P	03 41 43.6	-1.8
	comp=Z,0.6nm,0.4s,baz=69,slow=5.3,SNR=4.7						
VNDA	Vanda	89.30	173	P	P	03 41 55.6	+0.1
	comp=Z,1.7nm,1.0s,baz=0.5,slow=1.7,SNR=2.7						
NOA	NORSAR Array B	93.32	334	P	P	03 42 13.6	-1.1
	comp=Z,0.9nm,0.6s,baz=65,slow=4.6,SNR=4.8						
YKA	Yellowknife Ar	94.34	24	P	P	03 42 19.7	+0.4
	comp=Z,1.2nm,0.7s,baz=303,slow=4.0,SNR=31						
TXAR	Lajitas Array	118.25	49	PKP	PKiKP	03 47 48.3	+0.3
	comp=Z,0.1nm,0.5s,baz=318,slow=2.4,SNR=1.9						
PLCA	Paso Flores	145.63	157	PKPbc	PKPab	03 48 39.2	0.0
	comp=Z,1.5nm,0.7s,baz=253,slow=2.7,SNR=5.4						
SJG	San Juan	149.84	24	PKPbc	PKPbc	03 48 48.7	-2.2

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*IDC **24** 03:41:00.1±3.5, 8°.84N×125°.19E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/32, mbtmp3.4/3, Error ellipse: s-maj=334.6km s-min=25.3km az=65.0*

*MAN **24** 03:41:04.6, 9°.43N×126°.34E, h33^{km}, mb4.5, ML3.4, MS3.2*

ISC 24 03:40:59.6±1.5**, 9°.47N**±0°.08×**126°.3E**±0°.1**, h10**^{km}**, n6, σ0^{s}.78**/8**, mb3.4**/3**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	Cagayan de Oro	1.90	238	⇓*i*P	Pg	03 41 35.9	-0.2
CGP				*i* S	Sb	03 41 57.8	-0.5
LLP	Lapu-Lapu	2.48	290	⇓*e*P	Pg	03 41 46.6	-0.5
LLP				*e*S	Sb	03 42 14.8	0.0
KCP	Kidapawan	2.73	207	⇑*e*P	Pb	03 41 49.5	+0.9
WRA	Warramunga Arr	30.27	165	P	P	03 47 10.4	-0.6
	0.3nm,0.8s,baz=342,slow=8.0,SNR=2.5						
ASAR	Alice Springs	33.75	167	P	P	03 47 40.7	-0.9
	0.2nm,0.4s,baz=347,slow=7.6,SNR=2.6						
MKAR	Makanchi Array	52.70	323	P	P	03 50 15.2	+0.7
	0.5nm,0.5s,baz=126,slow=8.5,SNR=10						

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*IDC **24** 03:42:01.0±1.4, 17°.25S×175°.15W, h246^{km}±18^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.5/26, mbtmp4.4/9, Error ellipse: s-maj=26.9km s-min=14.2km az=127.0*

*NEIC **24** 03:42:02.4±2.3, 17°.31S±0°.10×174°.9W±0°.1, h279^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=15.5km s-min=13.8km az=96.0*

*NOU **24** 03:43:54.5, 14°.26S×172°.38W, h15^{km}, MLv3.3, Samoa Islands*

ISC 24 03:42:00.7±0.6**, 17°.26S**±0°.09×**175°.09W**±0°.08**, h250**^{km}**, n31, σ1^{s}.13**/31**, mb4.1**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.61	44	P	Pn	03 43 14.2	+2.3
	14nm,0.3s,baz=190,slow=2.4,SNR=17						
AFI				S	S	03 44 08.5	0.0
	82nm,0.3s,baz=105,slow=21,SNR=16						
AFI	Afiamalu	4.61	44	Pn	Pn	03 43 14.4	+2.5
AFI				S	S	03 44 08.7	+0.1
AFI	Afiamalu	4.61	44	P	S	03 44 08.9	+0.3
NIUE	Niue	5.23	111	Pn	Pn	03 43 19.7	+0.5
FUNA	Funafuti	10.31	327	Pn	P	03 44 27.7	-0.9
DZM	Mont Dzumac	18.04	252	P	P	03 45 53.9	+0.1
	0.6nm,0.3s,baz=135,slow=19,SNR=12						
DZM	Mont Dzumac	18.04	252	P	Pn	03 45 57.2	+0.4
DZM				IAmb	IAmb	03 46 02.0	
	comp=Z,15nm,1.2s						
URZ	Urewera	22.01	197	P	P	03 46 35.4	+0.8
	comp=Z,3.7nm,0.3s,baz=266,slow=4.1,SNR=7.1						
URZ	Urewera	22.01	197	IAmb	IAmb	03 46 40.4	
	comp=Z,16nm,1.1s						
PMG	Port Moresby	37.50	277	P	P	03 48 52.6	+1.6
STKA	Stephens Creek	41.72	241	P	P	03 49 26.2	+0.7
	comp=Z,1.3nm,0.3s,baz=117,slow=3.7,SNR=4.9						
WB0	Warramunga Arr	47.83	259	P	P	03 50 13.3	-0.5
WB2	Warramunga Arr	47.85	259	P	P	03 50 13.8	-0.2
WRA	Warramunga Arr	47.87	259	P	P	03 50 13.7	-0.3
	comp=Z,5.4nm,0.5s,baz=96,slow=7.0,SNR=147						
WRA	Warramunga Arr	47.87	259	P	P	03 50 13.8	-0.3
AS31	Alice Springs	48.01	253	P	P	03 50 14.8	-0.4
AS31				IAmb	IAmb	03 50 16.3	
	comp=Z,8.3nm,0.5s						
ASAR	Alice Springs	48.01	253	P	P	03 50 15.3	+0.1
	comp=Z,22nm,0.6s,baz=87,slow=9.2,SNR=320						
ASAR	Alice Springs	48.01	253	P	P	03 50 14.8	-0.4
VNDA	Vanda	61.38	186	P	P	03 51 50.4	+0.5
	comp=Z,1.0nm,0.8s,baz=29,slow=8.0,SNR=3.6						
VNDA	Vanda	61.38	186	IAmb	IAmb	03 52 12.3	
	comp=Z,18nm,1.9s						
TOLI2	Tolitoli	65.72	279	P	P	03 52 19.5	+0.2
TOLI2				IAmb	IAmb	03 52 21.3	
	comp=Z,5.6nm,0.8s						
PETK	Petropavlovsk-	73.92	343	P	P	03 53 09.5	+1.2
	comp=Z,2.4nm,0.9s,baz=119,slow=8.6,SNR=6.0						
PETK	Petropavlovsk-	73.92	343	P	P	03 53 06.8	-1.4
MDPB	Devils Postpil	75.83	43	P	P	03 53 18.0	-1.9
KSAR	Wonju Array Be	76.39	317	P	P	03 53 21.5	-1.2
YAH	Yahtse	81.90	16	P	P	03 53 50.8	-1.4
BCPM	Bancas Point	82.13	17	P	P	03 53 53.0	-0.1
IL31		84.58	12	P	P	03 54 03.8	-1.6
ILAR	Eielson Array	84.58	12	P	P	03 54 06.0	+0.6
	comp=Z,0.5nm,0.5s,baz=219,slow=5.8,SNR=9.1						
ILAR	Eielson Array	84.58	12	P	P	03 54 03.3	-2.2
BRTR	Keskin Array B	146.51	318	PKPbc	PKPbc	04 01 12.6	-0.4
	comp=Z,1.1nm,0.9s,baz=152,slow=5.5,SNR=4.2						

NOU 24 03:42:54.1, 14°.73S×172°.62W, h55^{km}, MLv3.6, Samoa Islands, Samoa Islands

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*NORS **24** 03:57:48.6±0.0, 42°.91N×46°.32E, h11^{km}, MPVA3.7*

*MOS **24** 03:57:49.4±0.0, 42°.94N×46°.32E, h11^{km}, MPVA3.7*

*DRS **24** 03:57:50.0±0.0, 42°.93N×46°.26E, h12^{km}, ML2.9/10*

ISC 24 03:57:50.0±1.0**, 42°.97N**±0°.03×**46°.31E**±0°.02**, h13**^{km}±8^{km}**, n37, σ1^{s}.32**/65**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVE	Vedeno	0.14	264	*i* Pg	Pb	03 57 53.5	-1.1
DVE				*e*Sg	Sg	03 57 56.3	+0.2
DLMR	Dylym	0.25	67	*e*Pg	Pb	03 57 55.7	-0.8
	323nm,0.2s						
DLMR				*e*Sg	Sb	03 58 00.2	-0.6
	3µm,0.4s						
BTLR	Botlikh	0.31	192	*i* Pg	Pb	03 57 56.6	-0.9
	328nm,0.5s						
BTLR				*e*Sg	Sb	03 58 01.6	-1.1
	2µm,0.4s						
DBC	Dubki	0.38	82	*e*Pg	Pb	03 57 57.9	-0.9
	45nm,0.1s						
DBC				*e*Sg	Sb	03 58 03.9	-0.7
	235nm,0.3s						
GROC	Groznyy	0.44	302	*e*Pg	Pb	03 57 59.8	0.0
GROC				*e*Sg	Sb	03 58 07.4	+1.1
KRNR	Karanay	0.46	108	*e*Pg	Pb	03 57 59.3	-0.8
	29nm,0.3s						
KRNR				*e*Sg	Sb	03 58 06.5	-0.3
	402nm,0.2s						
XNZR	Khunzakh	0.52	146	*e*Pg	Pb	03 58 01.1	0.0
XNZR				*e*Sg	Sb	03 58 08.7	+0.1
BUJR	Buynaksk	0.60	104	*e*Pg	Pn	03 58 03.5	-0.9
	83nm,0.3s						
BUJR				*i* Sg	Sn	03 58 12.9	-1.1
	686nm,0.5s						
ARKR	Arakani	0.62	126	*e*Pg	Pb	03 58 02.7	-0.1
	82nm,0.2s						
ARKR				*e*Sg	Sb	03 58 11.6	+0.1
	199nm,0.4s						
GNBR	Gunib	0.75	140	*e*Pg	Pn	03 58 05.3	-1.2
	69nm,0.4s						
GNBR				*e*Sg	Sn	03 58 16.7	-1.1
	304nm,0.2s						
MAK	Makhachkala	0.87	90	*e*Pg	Pn	03 58 07.0	-1.0
MAK				*e*Sg	Sn	03 58 21.8	+1.1
SGKR	Sergokala	1.11	117	*e*Pg	Pn	03 58 12.5	+1.1
	32nm,0.3s						
SGKR				*e*Sg	Sn	03 58 29.0	+2.3
	174nm,0.8s						
LGD	Lagodekhi	1.14	183	P	Pn	03 58 11.7	0.0
LGD	Lagodekhi	1.14	183	*e*Pg	Pn	03 58 11.7	0.0
LGD				*e*Sg	Sn	03 58 26.9	-0.3
URKR	Urkarakh	1.26	129	*e*Pg	Pg	03 58 15.3	+0.9
	39nm,0.5s						
URKR				*e*Sg	Sn	03 58 33.6	+3.1
	154nm,0.8s						
BTKR	Batakoyurt	1.36	288	*e*Pg	Pg	03 58 17.1	+0.9
BTKR				*e*Sg	Sg	03 58 37.1	+3.4
LACR	Lac	1.49	265	*e*Pg	Pb	03 58 16.8	-0.9
LACR				*e*Sg	Sg	03 58 37.9	-0.1
ARNR	Ardon	1.50	279	*e*Pg	Pg	03 58 18.0	-0.9
DDFL	Dedoflistskaro	1.53	186	P	Pg	03 58 21.4	+1.9
KORR	Kora	1.65	275	*e*Pg	Pg	03 58 20.7	-1.0
KORR				*e*Sg	Sg	03 58 42.1	-1.0
PRTR	Priterechnaya	1.68	298	*e*Pg	Pg	03 58 21.9	-0.3
PRTR				*e*Sg	Sg	03 58 44.6	+0.7
STDR	Stavd-Durt	1.69	284	*e*Pg	Pg	03 58 22.1	-0.4
STDR				*e*Sg	Sg	03 58 47.0	+2.5
BTNK	Botanikuri	1.71	222	P	Pg	03 58 22.6	-0.2
ZEI	Tsey	1.78	265	*e*Pg	Pb	03 58 22.1	-0.6
ZEI				*e*Sg	Sb	03 58 45.4	+0.3
AKT	Akhty	1.82	144	*e*Pg	Pg	03 58 24.2	-0.8
	25nm,0.4s						
AKT				*e*Sg	Sg	03 58 50.0	+1.3
	113nm,0.4s						
LSNR	Lesken	1.85	280	*e*Pg	Pg	03 58 24.9	-0.6
LSNR				*e*Sg	Sg	03 58 50.3	+0.9
DIGR	Digorskoe uzhe	2.01	269	*e*Pg	Pb	03 58 26.2	-0.3
DIGR				*e*Sg	Sb	03 58 51.4	-0.2
DMNI	Dmanisi	2.28	225	P	Pb	03 58 30.2	-0.9
DMNI				S	Sg	03 59 01.4	-1.8
BRNG	Burnasheti	2.28	235	P	Pg	03 58 31.6	-2.2
BRNG				S	Sg	03 59 02.9	-0.6
PYA1	Pyatigorsk	2.58	296	*e*Pn	Pn	03 58 32.7	+1.1
KBZ	Khabaz	2.60	288	*e*Pn	Pn	03 58 32.6	+0.7
NEY	Neytrino	2.65	277	*e*Pn	Pb	03 58 35.1	-2.3
NEY				*e*Sn	Sn	03 59 06.8	+2.1
BEYR	Belyy Ugol+	2.75	293	*e*Pn	Pn	03 58 35.5	+1.6
KIV	Kislovodsk	2.82	292	*e*Pn	Pn	03 58 36.4	+1.5
ABS	Abastumani	2.87	246	P	Pb	03 58 41.3	+0.2
ABS				S	Sb	03 59 18.0	+1.9
ALER	Alexandrovskoy	3.04	307	*e*Sn	Sn	03 59 15.1	+0.9
GOF	Gofitskoye	3.15	313	*e*Pn	Pn	03 58 36.1	-3.2
GOF				*e*Sn	Sn	03 59 15.1	-1.7

IDC 24 04:12:48.9±11.0**, 7°.50S**×**129°.08E, h381**^{km}±145^{km}**, mb2.6**/1**, mb1 2.6**/4**, mb1mx2.5**/34**, mbtmp3.4**/4**, Error ellipse: s-maj=78.8km s-min=55.8km az=16.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.05	197	P	P	04 15 18.4	-0.3
	0.1nm,0.3s,baz=25,slow=17,SNR=5.2						
FITZ				S	S	04 17 22.7	+0.6
	0.1nm,0.3s,baz=238,slow=19,SNR=2.3						
WRA	Warramunga Arr	13.38	158	P	P	04 15 42.9	-1.6
	0.1nm,0.3s,baz=336,slow=13,SNR=7.5						
WRA				S	S	04 18 04.6	-5.2
	0.1nm,0.3s,baz=331,slow=23,SNR=4.2						
ASAR	Alice Springs	16.73	164	P	P	04 16 21.9	+1.1
	0.1nm,0.3s,baz=342,slow=9.4,SNR=6.2						
MKAR	Makanchi Array	68.15	327	P	P	04 23 09.2	0.0
	0.1nm,0.5s,baz=122,slow=7.3,SNR=3.1						

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*IDC **24** 04:58:04.0±2.4, 13°.92S×75°.23W, h44^{km}±22^{km}, mb3.4/3, mb1 3.7/6, mb1mx3.4/43, mbtmp3.7/6, ML3.6/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/18, Error ellipse: s-maj=62.3km s-min=17.4km az=50.0*

ISC 24 04:58:02.8±1.0**, 14°.0S**±0°.2×**75°.3W**±0°.3**, h35**^{km}**, n10, σ1^{s}.06**/10**, mb3.6**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.54	322	P	Pn	04 58 42.0	+0.4
	25nm,0.3s,baz=142,slow=12,SNR=32						
NNA				S	Sn	04 59 11.4	+0.1
	160nm,0.3s,baz=198,slow=17,SNR=12						
NNA				LR	LR	04 59 40.7	
	comp=Z,74nm,18.0s,baz=126,slow=39						
ATAH	Atahualpa	7.50	335	P	Pn	04 59 51.7	+1.6
	0.5nm,0.3s,baz=332,slow=16,SNR=4.0						
ATAH				S	Sn	05 01 13.6	-0.6
	0.4nm,0.3s,baz=30,slow=18,SNR=1.9						
LVC	Limon Verde	10.46	146	P	Pn	05 00 31.9	+1.3
	0.6nm,0.3s,baz=330,slow=11,SNR=5.6						
LVC				S	Sn	05 02 25.6	-1.1
	0.7nm,0.3s,baz=97,slow=17,SNR=4.9						
H03N1	Juan Fernandez	19.62	189	T	T	05 21 42.2	
	baz=13,slow=74,SNR=100						
H03N2	Juan Fernandez	19.62	189	T	T	05 21 41.9	
	baz=13,slow=74,SNR=142						
H03N3	Juan Fernandez	19.64	189	T	T	05 21 41.0	
	baz=13,slow=74,SNR=118						
TXAR	Lajitas Array	51.09	328	P	P	05 07 01.1	-1.1
	0.4nm,0.6s,baz=147,slow=9.3,SNR=5.0						
TORD	Torodi Ar. Bea	80.85	74	P	P	05 10 13.4	-0.3
	1.1nm,0.8s,baz=267,slow=5.0,SNR=2.7						
YKA	Yellowknife Ar	82.22	343	P	P	05 10 19.2	-0.7
	0.3nm,0.7s,baz=139,slow=6.4,SNR=9.0						
SONM	Songino Array	146.25	358	PKPbc	PKPbc	05 17 40.1	+0.3
	0.5nm,0.5s,baz=20,slow=4.6,SNR=4.9						

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*IDC **24** 04:59:28.4±6.4, 36°.59N×69°.76E, h0^{km}, mb3.9/2, mb1 3.6/6, mb1mx3.2/54, mbtmp3.5/6, ML3.2/4, Error ellipse: s-maj=100.1km s-min=28.0km az=164.0*

*NNC **24** 04:59:32.9±4.6, 36°.88N×69°.45E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=38.7km s-min=31.8km az=153.0*

ISC 24 04:59:29.9±2.3**, 36°.6N**±0°.2×**69°.6E**±0°.1**, h10**^{km}**, n16, σ2^{s}.02**/19**, 4C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.40	29	P	Pn	05 01 06.3	+1.8
	SNR=40						
KK31	Karatay Array	6.56	6	⇓Pn	Pn	05 01 08.8	+2.3
	4.1nm,0.5s,baz=202,slow=15,SNR=80						
KK31				⇑Sn	Sn	05 02 22.1	+0.9
	4.3nm,0.6s						
KK31				⇓Lg	Lg	05 02 49.9	
	4.4nm,0.4s,baz=183,slow=28,SNR=5.9						
UCH	Uchtor	6.81	33	P	Pn	05 01 12.6	+2.3
	SNR=6.7						
EKS2	Erkin-Say	6.88	27	P	Pn	05 01 13.2	+2.2
	SNR=8.2						
AAK	Ala-Archa	7.14	31	P	Pn	05 01 16.9	+2.3
	SNR=7.5						
AAK	Ala-Archa	7.14	31	⇑Pn	Pn	05 01 15.6	+1.0
	1.0nm,0.3s						
AAK				⇓Sn	Sn	05 02 35.0	-0.8
	7.1nm,0.7s						
AAK				⇓Lg	Lg	05 03 12.4	
	12nm,0.8s						
USP	Ospenovka	7.67	28	P	Pn	05 01 22.8	+1.0
	SNR=12						
TKM2	Tokmak 2	7.85	34	⇓Pn	Pn	05 01 25.4	+1.2
	3.6nm,0.8s						
TKM2				⇑Lg	Lg	05 03 37.1	
	1.9nm,0.6s						
GEYT	Alibeck	9.24	282	Pn	Pn	05 01 45.2	+1.9
	0.7nm,0.3s,baz=226,slow=7.8,SNR=3.4						
GEYT				Sn	Sn	05 03 25.1	-2.3
	0.7nm,0.3s,baz=84,slow=39,SNR=4.5						
MKAR	Makanchi Array	13.92	39	Pn	Pn	05 02 45.2	-2.0
	0.1nm,0.3s,baz=228,slow=15,SNR=3.1						
AB31	Akbulak array	14.49	334	P	Pn	05 02 54.3	-0.6
	0.5nm,0.3s,baz=162,slow=13,SNR=54						
AB31				⇑S	Sn	05 05 28.3	-7.3
	0.3nm,0.3s,baz=154,slow=24,SNR=4.0						
KURBB	Kurchatov Arra	15.45	22	Pn	Pn	05 03 04.3	-3.4
	0.0nm,0.3s,baz=212,slow=13,SNR=1.9						
AKTO	Aktyubinsk	16.17	333	Pn	Pn	05 03 14.2	-2.9
	0.3nm,0.3s,baz=146,slow=11,SNR=6.0						
AKTO	Aktyubinsk	16.17	333	⇓P	Pn	05 03 16.2	-0.9
	4.4nm,0.8s						
ZALV	Zalesovo Beam	20.34	27	P	P	05 04 04.7	-1.5
	0.8nm,0.3s,baz=213,slow=12,SNR=7.6						
ARCES	ARCESS Array B	40.65	338	P	P	05 07 10.2	+0.4
	4.8nm,1.0s,baz=131,slow=6.1,SNR=2.7						

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*IDC **24** 05:01:32.1±2.7, 48°.24N×33°.57E, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.3/43, mbtmp3.7/5, ML2.8/3, MS3.3/2, Ms1 3.3/2, ms1mx2.4/48, Error ellipse: s-maj=47.0km s-min=17.2km az=20.0*

ISC 24 05:01:35.1±1.1**, 48°.73N**±0°.06×**33°.14E**±0°.08**, h10**^{km}**, n15, σ3^{s}.02**/17**, mb3.7**/3**, 7C-3D, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	Malin Array Be	3.22	309	Pn	Pb	05 02 32.0	-0.2
	0.8nm,0.3s,baz=120,slow=13,SNR=4.3						
AKASG				Pg	Pg	05 02 37.6	+0.9
	1.1nm,0.3s,baz=126,slow=17,SNR=5.6						
AKASG				Lg	Lg	05 03 29.2	
	14nm,0.3s,baz=129,slow=30,SNR=28						
TESR	Tescani	4.92	246	⇑S	Sb	05 03 56.5	-4.0
BIZ	Bicaz	5.07	252	⇑S	Sb	05 04 08.6	+3.9
VRI	Vrincioaia	5.22	239	⇑P	Pg	05 03 16.8	+1.8
VRI				⇑S	Sb	05 04 06.5	-2.6
PLOR	Plostina	5.27	239	⇓P	Pb	05 03 09.2	+1.9
PLOR				⇑S	Sb	05 04 09.6	-1.1
BURAR	Bucovina Array	5.42	261	⇑S	Sg	05 04 25.9	-3.0
VOIR		6.43	242	⇑P	Pn	05 03 05.6	-4.3
VOIR				⇓S	Sn	05 04 29.1	+5.8
SGRR	Singureni	6.69	230	⇓P	Pg	05 03 43.6	+0.4
FINES	FINESS Array B	13.35	345	Pn	Pn	05 04 44.4	0.0
	0.1nm,0.3s,baz=153,slow=16,SNR=5.2						
DAVOX	Davos/Dischmat	15.76	272	LR	LR	05 11 42.3	
	comp=Z,112nm,19.2s,baz=77,slow=38						
HFS	Hagfors	16.00	323	Pn	Pn	05 05 17.8	-2.2
	0.1nm,0.3s,baz=148,slow=14,SNR=3.7						
ARCES	ARCESS Array B	21.20	353	P	P	05 06 23.4	+2.9
	2.9nm,0.6s,baz=179,slow=10,SNR=20						
ZALV	Zalesovo Beam	32.10	61	P	P	05 08 00.1	-1.9
	0.6nm,0.6s,baz=266,slow=8.9,SNR=3.2						
MKAR	Makanchi Array	32.64	74	LR	LR	05 24 03.1	
	comp=Z,47nm,18.1s,baz=23,slow=42						
YKA	Yellowknife Ar	66.19	344	P	P	05 12 24.2	+1.9
	0.1nm,0.8s,baz=31,slow=6.4,SNR=3.6						

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*SFS **24** 05:13:15.0, 40°.16N×1°.68E, ML1.6, LAGUNA DEL MARQUESADO (CUENCA)*

MDD 24 05:13:15.3±0.4**, 40°.18N**×**1°.64W, h8**^{km}±6^{km}**, mbLg1.8**/11**, 1C-1D, Error ellipse: s-maj=3.9km s-min=3.7km az=26.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETOR	Torete	0.71	334	Pg	Pg	05 13 27.8	-1.3
	11nm,0.1s,SNR=52						
ETOR				Lg	Lg	05 13 38.8	
	65nm,0.3s,SNR=7.0						
ECHE	Chera	0.78	139	Pg	Pg	05 13 29.0	-1.3
	2.7nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	05 13 40.2	
	11nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	0.91	78	Pg	Pg	05 13 32.4	-0.5
	0.2nm,0.1s,SNR=12						
EMOS				Lg	Lg	05 13 44.0	
	18nm,0.3s,SNR=12						
UCM	Universidad Co	1.23	276	Pg	Pn	05 13 39.0	0.0
UCM				Lg	Lg	05 13 55.0	
UCM	Universidad Co	1.23	276	⇓*i*P	Pn	05 13 39.0	0.0
UCM				*e*S	Sb	05 13 55.0	0.0
ETOB	Tobarra	1.54	177	⇑Pg	Pn	05 13 43.3	+0.2
	0.8nm,0.2s,SNR=18						
ETOB				Lg	Lg	05 14 01.9	
	2.3nm,0.3s,SNR=5.0						
ERTA	Horta de San J	1.69	62	Pn	Pn	05 13 44.1	-1.1
	0.2nm,0.1s,SNR=7.9						
ERTA				Pg	Pb	05 13 47.0	+0.3
	3.8nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	05 14 09.1	
	2.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	1.86	255	Pn	Pn	05 13 46.0	-1.5
	0.3nm,0.2s,baz=74,slow=18,SNR=7.9						
ESDC				Pg	Pb	05 13 49.3	-0.3

	0.2nm,0.2s,baz=75,slow=18,SNR=9.6						
ESDC				Lg	Lg	05 14 12.5	
	6.2nm,0.3s,baz=78,slow=29,SNR=12						
GUD	**Guadarrama**	**1.98**	**284**	Pg	Pb	05 13 51.6	0.0
	0.4nm,0.1s,SNR=7.9						
GUD				Lg	Lg	05 14 17.0	
	1.7nm,0.2s,SNR=7.0						
SESP	**Santiago Espad**	**2.17**	**199**	Pn	Pn	05 13 50.8	-1.2
	0.2nm,0.1s,SNR=7.9						
SESP				Pg	Pg	05 13 56.2	-0.8
	0.6nm,0.1s,SNR=7.9						
SESP				Sn	Sn	05 14 17.9	-1.3
	0.9nm,0.3s,SNR=7.9						
SESP				Lg	Lg	05 14 23.4	
	1.6nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**2.18**	**254**	Pg	Pn	05 13 50.6	-1.4
	SNR=7.9						
PAB				Sn	Sn	05 14 15.2	-4.0
	0.5nm,0.1s,SNR=7.9						
PAB				Lg	Lg	05 14 21.7	
	1.8nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.62**	**206**	Pn	Pn	05 13 57.7	-0.4
	0.2nm,0.1s,SNR=7.9						
EQES				Pg	Pb	05 14 03.7	+1.0
	3.7nm,0.4s,SNR=7.9						
EQES				Lg	Lg	05 14 37.8	
	1.1nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**2.72**	**5**	Pg	Pb	05 14 05.0	+0.7
	SNR=7.9						
GORA	**Gorafe**	**2.91**	**203**	Lg	Lg	05 14 48.3	
	6.3nm,0.3s,SNR=7.9						
ATE	**Arette**	**2.99**	**13**	Lg	Lg	05 14 50.2	
	0.8nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**3.04**	**230**	Pn	Pn	05 14 02.1	-1.7
	0.7nm,0.2s,SNR=7.9						
EADA				Pg	Pg	05 14 12.0	-1.6
	0.7nm,0.2s,SNR=7.9						
EADA				Sn	Sn	05 14 37.5	-2.9
	SNR=7.9						
EADA				Lg	Lg	05 14 51.0	
	0.3nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**3.29**	**206**	Lg	Lg	05 14 59.9	
	1.1nm,0.4s,SNR=4.0						

IDC 24 05:14:57.9±4.3**,30°.49S**×**138°.15E,h0^{km},mb1 3.0**/3**,mb1mx3.0**/29**,mbtmp2.8**/3**,ML2.3**/3**,Error ellipse: s-maj=99.3km s-min=16.9km az=40.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.26**	**116**	Pn	Pn	05 15 50.1	-0.1
	0.1nm,0.3s,baz=292,slow=11,SNR=2.9						
STKA				Pg	Pb	05 15 57.1	+0.6
	0.5nm,0.3s,baz=296,slow=16,SNR=5.3						
STKA				Sn	Sn	05 16 27.1	-2.6
	0.6nm,0.3s,baz=300,slow=14,SNR=4.6						
STKA				Lg	Lg	05 16 41.6	
	1.6nm,0.3s,baz=31,slow=19,SNR=9.2						
ASAR	**Alice Springs**	**7.78**	**330**	Pn	Pn	05 16 53.0	+0.6
	0.0nm,0.3s,baz=154,slow=12,SNR=7.4						
ASAR				Sn	Sn	05 18 22.5	+1.2
	0.1nm,0.3s,baz=154,slow=22,SNR=5.3						
WRA	**Warramunga Arr**	**11.05**	**341**	Pn	Pn	05 17 36.8	-0.6
	0.1nm,0.3s,baz=159,slow=14,SNR=3.5						

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*JMA **24** 05:15:51.8±0.4, 44°.13N×148°.12E, h87^{km}, M3.6*
*SKHL **24** 05:15:51.3±0.4, 44°.14N×148°.32E, h40^{km}±7^{km}, mb4.6/3*
*IDC **24** 05:16:02.5±3.9, 44°.80N×147°.84E, h194^{km}±60^{km}, mb3.2/4, mb1 3.2/5, mb1mx2.9/37, mbtmp3.6/5, MS3.7/1, Ms1 3.7/1, ms1mx2.6/19, Error ellipse: s-maj=206.7km s-min=25.7km az=169.0*
ISC 24 05:15:48.9±2.0**,44°.3N**±0°.1×**148°.3E**±0°.2**,h95^{km}**±12^{km}**,n24,**σ**1^{s}.10**/25**,mb3.6**/4**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.03**	**343**	*e*P	**Pn**	**05 16 09.7**	**+0.5**
KUR				AMB	AMB	05 16 10.0	
	210nm,0.4s						
KUR				*e*S	**Sn**	**05 16 23.8**	**-0.7**
KUR				A	A	05 16 24.0	
	840nm,0.3s						
KUR				A	A	05 16 24.0	
	1µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.77**	**264**	*e*P	**Pn**	**05 16 19.4**	**+1.1**
YUK				AMB	AMB	05 16 20.3	
	190nm,0.3s						
YUK				*e*S	**Sn**	**05 16 40.2**	**-0.4**
YUK				A	A	05 16 42.2	
	420nm,0.4s						
YUK				A	A	05 16 42.2	
	680nm,0.4s						
GRPR	**Tuman**	**1.84**	**263**	*e*P	**Pn**	**05 16 19.9**	**+0.7**
GRPR				AMB	AMB	05 16 21.0	
	195nm,0.3s						
GRPR				*e*S	**Sn**	**05 16 42.0**	**-0.2**
GRPR				A	A	05 16 44.0	
	305nm,0.2s						
GRPR				A	A	05 16 44.0	
	172nm,0.2s						
NEM2	**Nemuro 2**	**2.05**	**245**	P	**Pn**	**05 16 22.8**	**+0.9**
NEM2				*e*S	**Sn**	**05 16 46.2**	**-1.0**
NMR	**Nemuro--Hokkai**	**2.06**	**246**	*i* P	**Pn**	**05 16 22.0**	**0.0**
NMR				*i* S	**Sn**	**05 16 46.0**	**-1.3**
JKHN	**Kushirohamanak**	**2.56**	**244**	P	**Pn**	**05 16 29.8**	**+1.2**
JNK	**Nakash**	**2.67**	**257**	P	**Pn**	**05 16 31.8**	**+1.7**
JNK				*e*S	**Sn**	**05 17 01.8**	**0.0**
JAK	**Akkeshi**	**2.90**	**246**	P	**Pn**	**05 16 34.0**	**+0.8**
JAK				*e*S	**Sn**	**05 17 05.7**	**-1.6**
JTKR	**Abashiri--Toko**	**3.18**	**266**	P	**Pn**	**05 16 38.1**	**+1.2**
JAR	**Ashorobuto**	**3.42**	**255**	P	**Pn**	**05 16 41.8**	**+1.7**
JAR				*e*S	**Sn**	**05 17 20.6**	**+0.9**
JCH	**Churui**	**3.95**	**247**	P	**Pn**	**05 16 48.2**	**+0.9**
JCH				*e*S	**Sn**	**05 17 31.4**	**-1.2**
ASAJ	**Asahikawa**	**4.11**	**270**	P	Pn	05 17 01.7	+12
	0.8nm,0.3s,baz=90,slow=17,SNR=2.8						
JNBK	**Urakawa-nobuka**	**4.51**	**246**	P	**Pn**	**05 16 55.4**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**28.95**	**142**	T	T	05 52 41.7	
	baz=332,slow=76,SNR=9.8						
H11N1	**WAKE ISLAND Hy**	**28.97**	**142**	T	T	05 52 42.8	
	baz=332,slow=76,SNR=9.1						
H11N3	**WAKE ISLAND Hy**	**28.97**	**142**	T	T	05 52 45.5	
	baz=332,slow=76,SNR=14						
SONM	**Songino Array**	**29.05**	**292**	P	**P**	**05 21 39.8**	**-0.3**
	0.2nm,0.3s,baz=89,slow=8.4,SNR=3.2						
H11S1	**WAKE ISLAND Hy**	**29.95**	**143**	T	T	05 53 56.6	
	baz=333,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**29.95**	**143**	T	T	05 53 58.7	
	baz=333,slow=76,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**29.96**	**143**	T	T	05 53 59.3	
	baz=333,slow=76,SNR=8.4						
TGY	**Tagaytay City**	**38.04**	**226**	LR	LR	05 39 12.8	
	comp=Z,94nm,19.4s,baz=144,slow=36						
MKAR	**Makanchi Array**	**45.09**	**298**	P	**P**	**05 23 55.0**	**-0.3**
	1.1nm,0.6s,baz=79,slow=8.5,SNR=11						
YKA	**Yellowknife Ar**	**54.92**	**34**	P	**P**	**05 25 10.8**	**+1.4**
	0.2nm,0.7s,baz=302,slow=6.8,SNR=4.1						
FINES	**FINESS Array B**	**64.81**	**333**	P	**P**	**05 26 15.6**	**-1.4**
	1.4nm,0.6s,baz=51,slow=7.5,SNR=12						

IDC 24 05:31:49.6±4.6**,3°.72N**×**90°.67E,h0^{km},mb3.4**/4**,mb1 3.5**/4**,mb1mx3.3**/40**,mbtmp3.4**/4**,MS2.9**/2**,Ms1 2.9**/2**,ms1mx2.7**/18**,Error ellipse: s-maj=162.9km s-min=29.3km az=60.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.29**	**96**	LR	LR	05 36 37.2	
	comp=Z,62nm,19.6s,baz=271,slow=35						
H08S3	**Diego Garcia H**	**21.36**	**238**	T	T	05 59 47.9	
	baz=58,slow=74,SNR=3.4						
H08S2	**Diego Garcia H**	**21.36**	**238**	T	T	05 59 51.4	
	baz=58,slow=74,SNR=3.3						
H08S1	**Diego Carcia H**	**21.38**	**238**	T	T	05 59 47.6	
	baz=58						
MKAR	**Makanchi Array**	**43.52**	**352**	P	P	05 39 53.9	-1.0
	0.2nm,0.7s,baz=168,slow=7.4,SNR=3.1						
SONM	**Songino Array**	**45.99**	**15**	P	P	05 40 14.8	+0.1
	0.2nm,0.6s,baz=188,slow=8.4,SNR=2.4						
KSRS	**Korea Array**	**47.84**	**41**	LR	LR	06 02 25.1	
	comp=Z,18nm,19.3s,baz=95,slow=38						
WRA	**Warramunga Arr**	**48.92**	**120**	P	P	05 40 37.7	-0.2
	0.3nm,0.6s,baz=298,slow=9.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**50.30**	**356**	P	P	05 40 48.6	+0.8
	0.5nm,0.5s,baz=162,slow=6.8,SNR=3.8						

IDC 24 05:51:00.6±2.5**,6°.88S**×**128°.30E,h0^{km},mb3.3**/1**,mb1 3.7**/3**,mb1mx3.4**/23**,mbtmp3.5**/3**,ML3.9**/2**,Error ellipse: s-maj=273.5km s-min=30.9km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.25**	**156**	Pn	Pn	05 54 22.6	-1.1
	0.6nm,0.3s,baz=330,slow=14,SNR=31						
WRA				Sn	Sn	05 56 49.4	-13
	0.4nm,0.3s,baz=337,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**17.54**	**163**	P	P	05 55 07.7	-0.2
	0.3nm,0.3s,baz=348,slow=14,SNR=12						
ASAR				S	Sn	05 58 12.2	-11
	0.1nm,0.3s,baz=336,slow=17,SNR=3.4						
MKAR	**Makanchi Array**	**67.21**	**328**	P	P	06 01 56.7	0.0
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.5						

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*SKO **24** 05:56:39.9, 41°.39N×19°.49E, h10^{km}*
*TIR **24** 05:56:39.8, 41°.54N×19°.70E, h4^{km}±15^{km}, Md2.9, Ml2.5*
*PDG **24** 05:56:40.7±0.1, 41°.53N×19°.74E, h6^{km}, ML2.6/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*BEO **24** 05:56:41.1±0.4, 41°.53N×19°.71E, h4^{km}±2^{km}, ML2.3/11*
*RHSSO **24** 05:56:41.7±0.8, 41°.49N×19°.59E, h10^{km}±2^{km}, ML2.6/8*
ISC 24 05:56:40.5±0.9**,41°.50N**±0°.03×**19°.64E**±0°.02**,h9^{km}**±8^{km}**,n63,**σ**1^{s}.05**/109**,17C-8D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**131**	⇓P	**Pg**	**05 56 44.8**	**-0.3**
TIR				⇓S	**Sg**	**05 56 49.5**	**+1.3**
TIR	**Tirane**	**0.23**	**131**	*e*Pg	**Pg**	**05 56 45.1**	**0.0**
TIR				*e*Sg	**Sg**	**05 56 48.9**	**+0.6**
TIR	**Tirane**	**0.23**	**131**	P	**Pg**	**05 56 45.2**	**0.0**
	baz=146						
TIR				S	**Sg**	**05 56 48.6**	**+0.4**
	baz=146						
TIR				AMP			
	comp=N,3.7nm,0.1s,baz=146						
TIR	**Tirane**	**0.23**	**131**	⇑*i*Pg	**Pg**	**05 56 45.3**	**+0.1**
ULC	**Ulcinj**	**0.55**	**328**	*i* Pg	**Pg**	**05 56 50.9**	**-0.3**
ULC	**Ulcinj**	**0.55**	**328**	*e*Pg	**Pg**	**05 56 50.8**	**-0.3**
ULC				*i* Sg	**Sb**	**05 57 00.6**	**+0.3**
PUK	**Puka**	**0.58**	**19**	P	**Pg**	**05 56 50.8**	**-0.9**
	baz=15						
PUK				S	**Sg**	**05 56 59.0**	**-0.3**
	baz=15						
PUK				AMP			
	comp=N,1.4nm,0.5s,baz=15						
PHP	**Peshkopia**	**0.63**	**73**	P	**Pg**	**05 56 51.5**	**-1.2**
	baz=75						
PHP				S	**Sb**	**05 57 00.6**	**-2.1**
	baz=75						
PHP				AMP			
	comp=N,1.2nm,0.3s,baz=75						
DRME	**Dracevica, Mon**	**0.77**	**334**	*e*Pg	**Pg**	**05 56 55.0**	**-0.3**
DRME				*e*Sg	**Sb**	**05 57 07.3**	**+0.8**
DRME	**Dracevica, Mon**	**0.77**	**334**	⇑*i*Pg	**Pg**	**05 56 55.2**	**-0.1**
DRME				*i* Sg	**Sb**	**05 57 07.6**	**+1.1**
BCI	**Bajram Curri**	**0.92**	**20**	P	**Pg**	**05 56 57.2**	**-1.1**
	baz=18						
BCI				S	**Sb**	**05 57 10.1**	**-1.0**
	baz=18						
OHR	**Ohrid**	**0.96**	**113**	*i* Pg	**Pg**	**05 56 58.3**	**-0.6**
OHR				*i* Sg	**Sb**	**05 57 12.5**	**+0.4**
PDG	**Podgorica**	**0.97**	**343**	⇓P	**Pb**	**05 56 59.9**	**+0.4**
PDG				⇑S	**Sn**	**05 57 14.6**	**+0.4**
PDG	**Podgorica**	**0.97**	**343**	*e*Pg	**Pg**	**05 56 58.6**	**-0.6**
PDG				*e*Sg	**Sg**	**05 57 12.1**	**+0.2**
PDG	**Podgorica**	**0.97**	**343**	*e*Pg	**Pg**	**05 56 58.6**	**-0.6**
PDG				*e*Sg	**Sb**	**05 57 12.4**	**-0.1**
TTG	**Podgorica**	**0.97**	**343**	⇓*i*Pg	**Pg**	**05 56 58.8**	**-0.4**
TTG				*i* Sg	**Sn**	**05 57 14.2**	**0.0**
BUM	**Brajici-Budva**	**0.97**	**326**	⇑*i*Pg	**Pg**	**05 56 59.2**	**-0.1**
BUM				*i* Sg	**Sn**	**05 57 15.0**	**+0.6**
PVY	**Plav**	**1.12**	**12**	*e*Pg	**Pg**	**05 57 00.6**	**-1.4**
PVY				*i* Sg	**Sn**	**05 57 17.7**	**-0.4**
CEME	**Cevo**	**1.18**	**333**	⇑*i*Pg	**Pg**	**05 57 02.6**	**-0.5**
CEME				*i* Sg	**Sn**	**05 57 21.3**	**+1.9**
HCY	**Herceg Novi**	**1.27**	**318**	*e*Pg	**Pn**	**05 57 04.8**	**+0.3**
HCY				*e*Sg	**Sg**	**05 57 21.4**	**-0.1**
HCY	**Herceg Novi**	**1.27**	**318**	⇓*i*Pg	**Pn**	**05 57 04.7**	**+0.3**
HCY				*i* Sg	**Sn**	**05 57 25.2**	**+3.5**
NKME	**Niksic**	**1.36**	**338**	⇑*i*Pg	**Pn**	**05 57 05.8**	**0.0**
NKME				*i* Sg	**Sn**	**05 57 27.2**	**+3.2**
BEY	**Berane**	**1.39**	**8**	*e*Pn	**Pn**	**05 57 05.4**	**-0.6**
IVA	**Berane**	**1.39**	**8**	⇓*i*Pg	**Pn**	**05 57 05.5**	**-0.6**
IVA				*i* Sg	**Sn**	**05 57 26.6**	**+2.0**
SKO	**Skopje**	**1.43**	**70**	*e*Pn	**Pn**	**05 57 05.7**	**-0.9**
SKO				*e*Sg	**Sb**	**05 57 24.6**	**-1.0**
FNA	**Florina**	**1.50**	**118**	*e*Pn	**Pn**	**05 57 08.0**	**+0.4**
TREB	**Trebinje**	**1.55**	**322**	*e*Pg	**Pn**	**05 57 09.1**	**+0.8**
TREB				*e*Sg	**Sg**	**05 57 30.3**	**0.0**
DBRK	**Dubrovnik**	**1.61**	**317**	*e*Pn	**Pn**	**05 57 08.8**	**-0.3**
DBRK				Sn	**Sn**	**05 57 30.1**	**+0.1**
BRY	**Bratogost**	**1.62**	**330**	*e*Pn	**Pn**	**05 57 10.4**	**+1.0**
BRY				*e*Sn	**Sn**	**05 57 31.1**	**+0.6**
BRY	**Bratogost**	**1.62**	**330**	⇑*i*Pn	**Pb**	**05 57 10.6**	**-0.1**
BRY				*i* Sn	**Sg**	**05 57 35.0**	**+2.3**
GJIK	**Gjilan**	**1.65**	**54**	*e*Pn	**Pb**	**05 57 10.2**	**-0.9**
SJES	**Sjenica**	**1.78**	**8**	*e*Pn	**Pn**	**05 57 12.3**	**+0.8**
SJES				*e*Sg	**Sg**	**05 57 36.7**	**-1.0**
SJES	**Sjenica**	**1.78**	**8**	⇓*i*Pn	**Pb**	**05 57 13.1**	**-0.2**
SJES				*e*Sn	**Sb**	**05 57 35.3**	**-0.5**
UPM	**Unac-Piva**	**1.79**	**343**	*e*Pn	**Pn**	**05 57 12.7**	**+1.0**
UPM	**Unac-Piva**	**1.79**	**343**	⇑*i*Pn	**Pb**	**05 57 13.1**	**-0.4**
UPM				*i* Sn	**Sg**	**05 57 38.5**	**+0.5**
PLE	**Pljevlja**	**1.84**	**354**	⇓*i*Pn	**Pb**	**05 57 13.6**	**-0.8**
PLE				*i* Sn	**Sg**	**05 57 39.4**	**-0.2**
STON	**Ston**	**1.99**	**314**	*e*Pn	**Pn**	**05 57 13.2**	**-1.1**
STON				Sn	**Sn**	**05 57 38.3**	**-0.9**
STON	**Ston**	**1.99**	**314**	*e*Pn	**Pn**	**05 57 15.2**	**+0.9**
STON				*e*Sn	**Sn**	**05 57 39.6**	**+0.3**
PRVS	**Prvonek**	**2.08**	**60**	*e*Pn	**Pn**	**05 57 15.6**	**0.0**
IVAS	**Ivanjica**	**2.11**	**10**	*e*Pn	**Pn**	**05 57 16.5**	**+0.5**
IVAS				*e*Sg	**Sg**	**05 57 46.7**	**-1.6**
RUDO	**Rudo**	**2.13**	**355**	*e*Pn	**Pn**	**05 57 17.4**	**+1.2**
RUDO				*e*Sn	**Sb**	**05 57 44.4**	**-1.3**
VAY	**Valandovo**	**2.21**	**94**	*e*Pn	**Pn**	**05 57 17.4**	**0.0**
VAY				*e*Sn	**Sn**	**05 57 45.8**	**+1.0**
BBLS	**Lazići**	**2.37**	**356**	*e*Pn	**Pn**	**05 57 20.8**	**+1.2**
BBLS	**Lazići**	**2.37**	**356**	*e*Pn	**Pn**	**05 57 21.4**	**+1.8**
BBLS				*e*Sn	**Sn**	**05 57 50.2**	**+1.3**
GRUS	**Gruza**	**2.52**	**18**	*e*Pn	**Pn**	**05 57 22.0**	**+0.4**
DIVS	**Divibare**	**2.61**	**6**	*e*Pn	**Pn**	**05 57 23.5**	**+0.6**
DIVS	**Divibare**	**2.61**	**6**	*e*Pn	**Pn**	**05 57 23.5**	**+0.6**
DIVS				*e*Sn	**Sn**	**05 57 55.9**	**+1.1**
HAPS	**Han Pijesak,BI**	**2.63**	**349**	*e*Pn	**Pn**	**05 57 23.5**	**+0.2**
HAPS	**Han Pijesak,BI**	**2.63**	**349**	*e*Pn	**Pn**	**05 57 23.5**	**+0.2**
HAPS				*e*Sn	**Sn**	**05 57 56.1**	**+0.7**
MAKA	**Makarska**	**2.64**	**314**	*e*Pn	**Pn**	**05 57 22.9**	**-0.3**
MAKA				Sn	**Sn**	**05 57 55.1**	**-0.2**
RICI	**Ricice**	**2.72**	**318**	*e*Pn	**Pn**	**05 57 24.8**	**+0.4**
RICI				Sn	**Sn**	**05 57 58.1**	**+0.7**
TRUS	**Trudelj**	**2.78**	**11**	*e*Pn	**Pn**	**05 57 26.2**	**+1.0**
ZAPS	**Zavoj**	**2.84**	**50**	*e*Pn	**Pn**	**05 57 27.7**	**+1.6**
ZAPS				*e*Sn	**Sn**	**05 58 00.3**	**-0.1**
HVAR	**Hvar**	**2.90**	**306**	*e*Pn	**Pn**	**05 57 26.6**	**-0.2**
HVAR				Sn	**Sn**	**05 58 00.7**	**-1.0**
VTS	**Vitosha**	**2.90**	**66**	⇑P	**Pn**	**05 57 27.0**	**0.0**
VTS				⇑S	**Sn**	**05 58 04.3**	**+2.2**
TIP	**Timpagrande**	**3.20**	**224**	⇑P	**Pn**	**05 57 29.4**	**-1.5**
MDVR	**Moldovita**	**3.62**	**24**	⇑P	**Pn**	**05 57 37.3**	**+0.6**
ZIRJ	**Zirje**	**3.65**	**307**	Sn	**Sn**	**05 58 19.4**	**-0.9**
MORI	**Morici**	**3.74**	**311**	*e*Pn	**Pn**	**05 57 38.8**	**+0.4**
MORI				Sn	**Sn**	**05 58 22.3**	**-0.2**
HERR	**Herculane**	**3.94**	**30**	⇑P	**Pn**	**05 57 42.4**	**+1.3**
BZS	**Buzias**	**4.36**	**19**	⇑P	**Pn**	**05 57 47.2**	**+0.3**
BZS				⇑S	**Sn**	**05 58 39.6**	**+1.9**
GZR	**Gura Zlata**	**4.51**	**29**	⇑P	**Pn**	**05 57 50.7**	**+1.7**
GZR				⇑S	**Sn**	**05 58 44.9**	**+3.2**
NVLJ	**Novalja**	**4.65**	**313**	Sn	**Sn**	**05 58 43.4**	**-1.4**

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*IDC **24** 06:04:06.3±1.1, 55°.41S×28°.01W, h0^{km}, mb3.9/2, mb1 4.1/2, mb1mx3.6/28, mbtmp3.9/2, Error ellipse: s-maj=82.4km s-min=34.0km az=103.0*
*NEIC **24** 06:04:11.8±1.0, 55°.5S±0°.1×28°.0W±0°.2, h33^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=24.3km s-min=16.5km az=221.0*
ISC 24 06:04:10.5±0.7**,55°.5S**±0°.1×**28°.0W**±0°.1**,h26^{km},n24,**σ**0^{s}.58**/24**,mb4.4**/7**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.04**	**280**	Pn	**Pn**	**06 05 23.1**	**-1.1**
VNA3	**Neumayer Olymp**	**17.69**	**160**	P	**P**	**06 08 15.0**	**-0.3**
VNA2	**Neumayer--Watz**	**17.90**	**158**	P	**P**	**06 08 17.7**	**0.0**
	baz=315,slow=13						
SNAA	**Sanae**	**19.46**	**156**	P	**P**	**06 08 34.4**	**-0.4**
SNAA	**Sanae**	**19.46**	**156**	P	**P**	**06 08 34.5**	**-0.3**
BELA	**Belgrano 2**	**22.62**	**184**	P	**P**	**06 09 09.7**	**+1.0**
QSPA	**South Pole Qui**	**34.78**	**180**	P	**P**	**06 10 58.1**	**-0.4**
CO01	**Juntas del Tor**	**39.16**	**293**	P	**P**	**06 11 37.2**	**+1.0**
CO01				IAmb	IAmb	06 11 44.4	
	comp=Z,7.7nm,1.4s						
AC05	**El Transito**	**40.17**	**294**	P	**P**	**06 11 44.9**	**+0.5**
AC05				IAmb	IAmb	06 11 53.5	
	comp=Z,13nm,1.5s						
PB08	**IPOC Station P**	**46.82**	**302**	P	**P**	**06 12 39.4**	**+1.0**
PB08				IAmb	IAmb	06 12 47.1	
	comp=Z,7.5nm,1.5s						
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**06 12 40.0**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=191,slow=7.2,SNR=6.0						
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**06 12 39.9**	**+0.3**
MNMC	**Minye Minye**	**47.90**	**302**	P	**P**	**06 12 47.3**	**+0.7**
MNMC				IAmb	IAmb	06 12 50.0	
	comp=Z,3.8nm,0.7s						
TOA0	**Torodi Ar. Sit**	**72.79**	**30**	P	**P**	**06 15 37.0**	**+0.5**
TOA0				IAmb	IAmb	06 15 44.5	
	comp=Z,5.1nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.79**	**30**	P	**P**	**06 15 36.3**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=201,slow=5.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**72.79**	**30**	P	**P**	**06 15 36.4**	**0.0**
FINES	**FINESS Array B**	**124.09**	**28**	PKP	**PKPdf**	**06 23 04.2**	**-0.7**
	comp=Z,2.7nm,1.0s,baz=267,slow=7.0,SNR=4.5						
YKA	**Yellowknife Ar**	**135.43**	**319**	PKP	**PKPdf**	**06 23 25.8**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=125,slow=2.8,SNR=3.6						
INK	**Inuvik**	**145.06**	**321**		**PKPdf**	**06 23 43.6**	**-0.1**
DAWY	**Dawson**	**146.06**	**313**	PKPdf	**PKPbc**	**06 23 46.1**	**-0.5**
PRP	**Porcupine Dome**	**148.97**	**314**	PKPbc	**PKPbc**	**06 23 54.5**	**-0.1**
ILAR	**Eielson Array**	**149.38**	**313**	PKPbc	**PKPbc**	**06 23 55.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=120,slow=3.2,SNR=22						
ILAR	**Eielson Array**	**149.38**	**313**		**PKPbc**	**06 23 55.4**	**0.0**
SONM	**Songino Array**	**151.16**	**86**	PKPbc	**PKPbc**	**06 24 00.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=203,slow=3.3,SNR=4.1						

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*NNC **24** 07:10:10.0±0.5, 50°.10N×79°.02E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=11.7km s-min=2.3km az=61.0, Suspected Mining explosion.*
*IDC **24** 07:10:10.6±1.0, 50°.05N×78°.71E, h0^{km}, mb1 2.7/2, mb1mx2.7/44, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=11.9km s-min=6.5km az=65.0*
ISC 24 07:10:09.2±2.1**,50°.02N**±0°.07×**78°.5E**±0°.2**,h0^{km},n16,**σ**1^{s}.07**/28**,15C-11D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.56**	**3**	⇑P	**Pb**	**07 10 21.1**	**-0.8**
KUR07				⇓S	**Sb**	**07 10 30.0**	**-0.5**
KUR06	**Kurchatov Arra**	**0.58**	**3**	⇓P	**Pb**	**07 10 21.6**	**-0.7**
KUR06				⇑S	**Sb**	**07 10 29.9**	**-1.1**
KUR14	**Kurchatov Arra**	**0.60**	**7**	⇑P	**Pg**	**07 10 21.4**	**+0.8**
KUR14				⇑S	**Sb**	**07 10 30.2**	**-1.4**
KUR15	**Kurchatov Arra**	**0.60**	**5**	⇑P	**Pg**	**07 10 21.6**	**+0.9**
KUR15				⇓S	**Sb**	**07 10 30.8**	**-0.8**
KURBB	**Kurchatov Arra**	**0.60**	**3**	Pg	**Pb**	**07 10 21.9**	**-0.7**
	1.3nm,0.3s,baz=166,slow=19,SNR=19						
KURBB				Lg	Lg	07 10 30.1	
	1.6nm,0.3s,baz=169,slow=34,SNR=17						
KURBB	**Kurchatov Arra**	**0.60**	**3**	⇓P	**Pg**	**07 10 21.7**	**+0.9**
	11nm,0.4s						
KURBB				⇑S	**Sb**	**07 10 31.0**	**-0.7**
	91nm,0.6s						
KUR16	**Kurchatov Arra**	**0.60**	**1**	⇓P	**Pb**	**07 10 22.0**	**-0.6**
KUR16				⇓S	**Sb**	**07 10 30.8**	**-0.9**
KUR17	**Kurchatov Arra**	**0.61**	**360**	⇓P	**Pb**	**07 10 22.3**	**-0.4**
KUR17				⇑S	**Sb**	**07 10 31.3**	**-0.6**
KUR05	**Kurchatov Arra**	**0.62**	**4**	⇑P	**Pb**	**07 10 22.1**	**-0.9**
KUR05				⇓S	**Sb**	**07 10 30.6**	**-1.6**
KUR04	**Kurchatov Arra**	**0.64**	**4**	⇑P	**Pg**	**07 10 22.3**	**+0.8**
KUR04				⇑S	**Sb**	**07 10 31.2**	**-1.6**
KURK	**Kurchatov**	**0.70**	**8**	⇑P	**Pg**	**07 10 23.2**	**+0.5**
	4.3nm,0.4s						
KURK				⇓S	**Sb**	**07 10 32.4**	**-2.0**
	7.1nm,0.5s						
MAKZ	**Makanchi**	**3.97**	**143**	⇑Pn	**Pn**	**07 11 12.4**	**+1.0**
	0.5nm,0.8s						
MAKZ				⇓Pg	**Pb**	**07 11 19.0**	**-1.1**
	1.1nm,0.6s						
MAKZ				⇑Lg	Lg	07 12 09.7	
	2.9nm,0.5s						
MK31	**Makanchi Array**	**4.11**	**140**	⇓Pn	**Pn**	**07 11 13.8**	**+0.5**
	0.4nm,0.1s,baz=93,slow=36,SNR=18						
MK31				⇑Pg	**Pb**	**07 11 22.5**	**0.0**
	0.7nm,0.6s,baz=325,slow=15,SNR=8.3						
MK31				⇑Lg	Lg	07 12 12.7	
	1.2nm,0.3s,baz=332,slow=25,SNR=9.1						
MKAR	**Makanchi Array**	**4.11**	**140**	Pn	**Pn**	**07 11 14.1**	**+0.8**
	0.2nm,0.3s,baz=326,slow=10,SNR=23						
MKAR				Pg	**Pb**	**07 11 21.0**	**-1.5**
	0.3nm,0.3s,baz=327,slow=17,SNR=9.9						
MKAR				Lg	Lg	07 12 16.4	
	0.9nm,0.3s,baz=331,slow=26,SNR=15						
I46RU	**ZALESOVO INFRA**	**5.55**	**42**	*i*		07 42 04.5	
	baz=226,slow=352,SNR=7.6						
ZALV	**Zalesovo Beam**	**5.55**	**42**	Pn	**Pn**	**07 11 34.6**	**+1.6**
	0.4nm,0.3s,baz=231,slow=15,SNR=6.7						

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*IDC **24** 07:15:24.1±0.8, 23°.04N×120°.09E, h0^{km}, mb3.8/9, mb1 4.0/10, mb1mx3.8/51, mbtmp3.8/10, ML3.4/1, MS3.3/3, Ms1 3.4/3, ms1mx3.0/38, Error ellipse: s-maj=34.5km s-min=18.5km az=70.0*
*NIED **24** 07:15:25.8, 23°.26N×120°.34E, h0^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.38; $M_{\theta\theta}$1.31; $M_{\phi\phi}$0.07; $M_{r\theta}$6.42; $M_{\theta\phi}$-0.61; $M_{\phi r}$2.46; Fault plane solution: $M_0$7.01000×10^{15} NP1: ϕ_s251.00000°, δ85.00000°, λ-97.00000°. NP2: ϕ_s128.00000°, δ8.00000°, λ-32.00000°.*
*JMA **24** 07:15:25.7±0.2, 23°.26N×120°.34E, h0^{km}, M4.5*
*TAP **24** 07:15:26.4, 23°.21N×120°.40E, h11^{km}, ML4.6, B*
*NEIC **24** 07:15:27.4±1.6, 23°.21N±0°.03×120°.46E±0°.05, h22^{km}±6^{km}, Error ellipse: s-maj=7.2km s-min=4.3km az=76.0*
*ASIES **24** 07:15:27.2, 23°.21N×120°.40E, h16^{km}, MW4.1*
*BJI **24** 07:15:28.1±0.0, 23°.27N×120°.33E, h13^{km}, mB4.5/11, mb4.1/14, ML4.3/6, Ms4.2/12, Ms7 3.9/11*
ISC 24 07:15:27.4±0.7**,23°.21N**±0°.01×**120°.38E**±0°.01**,h14^{km}**±4^{km}**,n177,**σ**0^{s}.99**/289**,mb4.0**/10**,MS3.3**/4**,15C-27D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNST	**Tainan City**	**0.11**	**86**	⇓*i*P	**Pg**	**07 15 29.8**	**-0.8**
	baz=82						
SNST				*i* S	**Sg**	**07 15 32.2**	**-0.6**
	baz=82						
TWK	**Hsinying**	**0.11**	**61**	⇑*i*P	**Pg**	**07 15 30.1**	**-0.6**
	baz=61						
TWK				*i* S	**Sg**	**07 15 33.1**	**+0.2**
	baz=61						
CHN3	**Shinhua**	**0.14**	**187**	⇑*i*P	**Pg**	**07 15 30.8**	**-0.1**
	baz=192						
CHN3				S	**Sb**	**07 15 34.5**	**-0.1**
	baz=192						
CHN1	**Nanshi**	**0.14**	**101**	⇓*i*P	**Pg**	**07 15 30.2**	**-0.8**
	baz=101						
CHN1				S	**Sg**	**07 15 33.6**	**+0.2**
	baz=101						
ICHU	**Yijhu**	**0.18**	**327**	⇓*i*P	**Pg**	**07 15 31.4**	**-0.1**
	baz=326						
ICHU				S	**Sb**	**07 15 36.0**	**+0.2**
	baz=326						
SCLT	**Jiali**	**0.18**	**258**	⇓*i*P	**Pg**	**07 15 31.4**	**-0.1**
	baz=259						
SCLT				*i* S	**Sb**	**07 15 36.1**	**+0.3**
	baz=259						

CHN8	Yiju baz=312	0.21	310	⇓iP	Pg	07 15 31.9	-0.2
CHN8	baz=312			S	Sb	07 15 36.8	+0.1
WTP	Ta-pu baz=80	0.22	81	⇓iP	Pg	07 15 31.9	-0.3
WTP	baz=80			iS	Sb	07 15 36.6	-0.4
TAI1	Yung-k'ang baz=221	0.22	220	⇑iP	Pb	07 15 32.8	-0.4
TAI1	baz=221			eS	Sb	07 15 38.3	+1.2
SGST	Jiashian baz=119	0.23	125	⇓iP	Pg	07 15 31.2	-1.1
SGST	baz=119			eS	Sg	07 15 36.2	+0.5
CHN4	Tsaushan baz=52	0.24	54	⇑eP	Pg	07 15 32.3	-0.2
CHN4	baz=52			eS	Sb	07 15 37.1	-0.5
TPUB	Ta-pu baz=67	0.24	69	⇓iP	Pg	07 15 32.2	-0.4
TPUB	baz=67			S	Sb	07 15 36.8	-1.0
TPUB	Ta-pu	0.24	69		Pg	07 15 32.3	-0.4
TPUB				Sg	Sg	07 15 36.1	-0.1
WLGB	Puzi baz=343	0.28	344	P	Pg	07 15 32.2	-1.0
WLGB	baz=343			eS	Sb	07 15 38.0	-0.7
CHY	Chiayi baz=7.0	0.29	8	⇑iP	Pg	07 15 33.6	+0.2
CHY	baz=7.0			eS	Sb	07 15 39.1	+0.1
SLGT	Liugui baz=120	0.33	132	P	Pg	07 15 34.2	+0.1
SLGT	baz=120			eS	Sb	07 15 40.9	+0.7
CHN2	Minshiung baz=13	0.33	15	⇑iP	Pg	07 15 34.4	+0.3
CHN2	baz=13			S	Sb	07 15 40.9	+0.7
SCST	Cishan baz=164	0.34	162	eP	Pb	07 15 35.5	+0.2
STYT	Tauyuan baz=98	0.35	98	⇓iP	Pg	07 15 34.3	-0.2
STYT	baz=98			eS	Sb	07 15 40.4	-0.4
TWM1	Shoushan baz=174	0.39	174	P	Pb	07 15 36.6	+0.6
WSF	Szhu baz=342	0.45	341	P	Pg	07 15 36.1	-0.2
WSF	baz=342			eS	Sb	07 15 44.2	+0.5
SNJT	Kaohsiung City baz=185	0.46	185	⇑iP	Pb	07 15 37.3	0.0
SNJT	baz=185			eS	Sn	07 15 46.2	-1.3
CHN5	Tsauling baz=33	0.47	35	⇑iP	Pg	07 15 36.5	-0.3
CHN5	baz=33			eS	Sb	07 15 44.5	+0.1
WTK	Tuku baz=359	0.47	1	P	Pg	07 15 36.8	0.0
WTK	baz=359			eS	Sb	07 15 44.5	+0.1
ALS	Alishan baz=51	0.49	53	⇓iP	Pg	07 15 36.9	-0.3
ALS	baz=51			S	Sb	07 15 45.1	0.0
WDLH	Douliu baz=15	0.50	17	P	Pg	07 15 37.3	+0.1
WDLH	baz=15			eS	Sb	07 15 45.8	+0.7
WGK	Gukeng baz=18	0.50	19	P	Pb	07 15 37.5	-0.5
WGK	baz=18			eS	Sb	07 15 46.4	+1.2
SSD	Sandimen baz=140	0.52	154	P	Pb	07 15 37.9	-0.4
SSD	baz=140			eS	Sb	07 15 46.1	+0.5
TSPT	Pingtung City baz=168	0.54	169	eP	Pn	07 15 40.0	-0.7
TSMG	Majia baz=144	0.56	154	P	Pg	07 15 38.3	-0.1
TSMG	baz=144			eS	Sb	07 15 46.7	-0.1
ELDTW	Lidau baz=91	0.58	92	⇓iP	Pg	07 15 38.5	-0.4
ELDTW	baz=91			eS	Sb	07 15 47.1	-0.5
YUS	Yu-Shan baz=61	0.59	62	P	Pg	07 15 38.9	-0.2
YUS	baz=61			eS	Sb	07 15 47.7	-0.6
WMLT	Mailiao baz=346	0.61	346	eP	Pg	07 15 38.9	-0.4
WMLT	baz=346			eS	Sb	07 15 48.6	+0.4
MASBT	Mashibuluo baz=141	0.64	159	P	Pg	07 15 39.8	-0.1
MASBT	baz=141			eS	Sb	07 15 50.2	+1.1
KAU	Kaohsiung baz=201	0.65	186	eP	Pb	07 15 40.9	+0.5
WHYT	Xinyi Township baz=40	0.65	42	P	Pg	07 15 40.0	0.0
WHYT	baz=40			eS	Sb	07 15 50.0	+0.6
WDGT	Dungji baz=275	0.67	274	⇓iP	Pg	07 15 39.6	-0.8
WDGT	baz=275			eS	Sg	07 15 49.3	+0.1
RLNB	Erlin baz=347	0.68	358	⇑eP	Pg	07 15 40.4	-0.1
RLNB	baz=347			eS	Sn	07 15 51.5	-1.4
WJS	Zhushan baz=26	0.69	28	⇑P	Pg	07 15 40.4	-0.3
WJS	baz=26			eS	Sb	07 15 50.9	+0.4
WNT	Mingjian baz=22	0.72	23	P	Pg	07 15 41.2	-0.2
WNT	baz=22			eS	Sb	07 15 52.3	+0.8
WNT1	Nantou City baz=20	0.74	21	P	Pg	07 15 41.7	-0.1
WNT1	baz=20			eS	Sg	07 15 51.5	-0.1
SSPT	Xinbi baz=151	0.74	167	⇑P	Pb	07 15 42.6	+0.5
SSPT	baz=151			eS	Sn	07 15 53.5	-1.1
TWG	Pinlang baz=107	0.74	121	⇓P	Pg	07 15 41.8	-0.1
TWG	baz=107			eS	Sb	07 15 53.0	+0.8
TWG	Pinlang	0.74	121		Pg	07 15 41.7	-0.1
TWG				Sg	Sb	07 15 52.0	-0.2
LONT	Longtian baz=113	0.75	114	⇓iP	Pg	07 15 41.7	-0.3
LONT	baz=113			eS	Sb	07 15 53.3	+0.9
TWGBT	Beinan baz=107	0.75	121	⇓P	Pg	07 15 41.8	-0.2
TWGBT	baz=107			eS	Sb	07 15 52.9	+0.4
SSLB	Suanglung baz=41	0.78	42	P	Pg	07 15 41.9	-0.6
SSLB	baz=41			eS	Sb	07 15 53.2	+0.1
SSLB	Suanglung	0.78	42		Pg	07 15 42.0	-0.6
SSLB				Sg	Sb	07 15 52.9	-0.3
PHUB	P'eng-hu baz=294	0.80	292	⇓P	Pg	07 15 41.6	-1.4
PHUB	baz=294			eS	Sg	07 15 52.8	-0.7
ECL	Taimali baz=148	0.81	139	⇓P	Pg	07 15 42.8	-0.3
ECL	baz=148			eS	Sn	07 15 55.1	-1.1
TYC	Yuchr baz=31	0.81	32	⇑P	Pg	07 15 42.8	-0.4
TYC	baz=31			eS	Sn	07 15 55.3	-1.1
SMLT	Sun Moon Lake baz=34	0.82	35	iP	Pg	07 15 42.9	-0.4
SMLT	baz=34			S	Sb	07 15 55.1	+0.6
PNG	Penghu baz=297	0.84	295	⇓P	Pg	07 15 42.3	-1.3
PNG	baz=297			eS	Sg	07 15 54.2	-0.4
FULB	Fuli baz=80	0.84	91	⇓iP	Pb	07 15 43.6	-0.2
FULB	baz=80			eS	Sn	07 15 56.9	-0.1
TTN	Taitung baz=111	0.84	123	eP	Pn	07 15 44.2	-0.6
TTN	baz=111			eS	Sn	07 15 58.6	+1.7
TWF1	Yuli baz=79	0.85	80	⇓iP	Pg	07 15 43.2	-0.7
TWF1	baz=79			eS	Sb	07 15 55.7	+0.4
WLCH	Liuqiu baz=203	0.86	180	⇑P	Pn	07 15 44.9	-0.1
WLCH	baz=203			eS	Sn	07 15 58.2	+0.8
YULB	Yu-li baz=86	0.86	78	⇓P	Pg	07 15 43.1	-1.0
YULB	baz=86			eS	Sg	07 15 54.1	-1.2
YULB	Yu-li	0.86	78		Pg	07 15 43.2	-0.9
TWP	Hsiaoliuchiu baz=203	0.86	181	eP	Pn	07 15 44.6	-0.5
TWP	baz=203			eS	Sn	07 15 58.3	+0.8
VCHM	Qimei baz=272	0.88	270	⇓eP	Pg	07 15 43.0	-1.4
VCHM	baz=272			eS	Sg	07 15 55.5	-0.4
WWF	Wufeng baz=18	0.88	19	P	Pg	07 15 43.9	-0.5
WWF	baz=18			eS	Sb	07 15 56.7	+0.7
WCHH	Zhanghua baz=22	0.88	11	P	Pg	07 15 43.8	-0.6
WCHH	baz=22			eS	Sb	07 15 56.8	+0.7
EDH	Donghe baz=98	0.88	105	⇓P	Pg	07 15 44.1	-0.3
EDH	baz=98			eS	Sn	07 15 57.8	-0.2
CHKT	Chengkung baz=96	0.91	97	⇓P	Pb	07 15 45.0	0.0
CHKT	baz=96			eS	Sn	07 15 59.5	+0.8
EHY	Hungye baz=78	0.91	71	⇓P	Pg	07 15 44.3	-0.7
EHY	baz=78			eS	Sb	07 15 57.1	+0.1
EAST	Anshuo baz=143	0.93	152	P	Pb	07 15 45.3	-0.1
EAST	baz=143			eS	Sn	07 15 59.0	-0.3
WPL	Puli Township baz=32	0.95	33	eP	Pb	07 15 44.9	-0.9
WPL	baz=32			eS	Sg	07 15 58.2	-0.1
DPDB	Guoxing baz=30	0.96	31	P	Pb	07 15 45.0	-0.8
DPDB	baz=30			eS	Sb	07 15 59.0	+0.6
TCU	Taichung baz=15	0.97	16	P	Pb	07 15 45.4	-0.6
TCU	baz=15			eS	Sn	07 15 59.5	-0.7
TAW	Tawu baz=142	0.97	151	eP	Pb	07 15 45.8	-0.2
TAW	baz=142			eS	Sn	07 15 59.7	-0.6
HGSD	Ruisui baz=79	1.00	74	⇓P	Pb	07 15 46.3	-0.1
HGSD	baz=79			eS	Sn	07 16 01.8	+0.9
EGFH	Guangfu baz=54	1.06	64	eP	Pb	07 15 47.1	-0.4
EGFH	baz=54			eS	Sg	07 16 01.8	0.0
SLIU	Shizi baz=158	1.06	159	⇑P	Pb	07 15 47.1	-0.4
SLIU	baz=158			eS	Sn	07 16 02.8	+0.3
CHGB	Renai baz=39	1.11	41	eP	Pb	07 15 47.5	-1.1
CHGB	baz=39			eS	Sn	07 16 04.0	0.0
ESL	Shilin baz=56	1.14	58	eP	Pb	07 15 48.0	-0.8
ESL	baz=56			eS	Sg	07 16 03.8	-0.4
LDUT	Ludao baz=106	1.14	118	⇓P	Pb	07 15 48.0	-0.8
LDUT	baz=106			eS	Sn	07 16 05.9	+1.6
WDJ	Dajia District baz=10.0	1.16	12	eP	Pb	07 15 48.7	-0.5
WDJ	baz=10.0			eS	Sn	07 16 05.3	+0.6
WHP	Taichung City baz=24	1.18	26	P	Pn	07 15 48.7	-0.9
WHP	baz=24			eS	Sn	07 16 06.0	+0.5
TWQ1	Liyutan baz=16	1.19	17	P	Pn	07 15 49.1	-0.5
TWQ1	baz=16			eS	Sg	07 16 06.3	+0.6
WHF	Hehuan Shan baz=39	1.23	41	eP	Pn	07 15 49.9	-0.7
WHF	baz=39			eS	Sg	07 16 07.1	-0.2
HEN	Hengchun baz=151	1.25	165	eP	Pn	07 15 49.7	-0.7
HEN	baz=151			eS	Sn	07 16 07.2	+0.2
NSY	Sanyi baz=15	1.25	16	eP	Pn	07 15 50.3	-0.1
NSY	baz=15			eS	Sb	07 16 06.4	-0.3
TDCB	Techi baz=32	1.26	34	eP	Pn	07 15 49.9	-0.8
TDCB	baz=32			eS	Sb	07 16 05.7	-1.4
TWT	Tachien baz=33	1.27	35	eP	Pn	07 15 50.4	-0.4
TWT	baz=33			eS	Sn	07 16 07.6	-0.2
FUSS	Fushou baz=35	1.30	37	eP	Pn	07 15 50.6	-0.7
FUSS	baz=35			eS	Sn	07 16 08.7	+0.1
TWK1	Hengchun baz=160	1.32	163	eP	Pn	07 15 50.9	-0.5
TWKBT	Hengchun baz=160	1.33	162	eP	Pn	07 15 50.8	-0.7
HWA	Hwalien baz=54	1.36	56	eP	Pb	07 15 52.6	0.0
HWA	baz=54			eS	Sg	07 16 11.1	-0.1
NMLH	Miaoli baz=14	1.37	16	eP	Pn	07 15 52.2	0.0
NMLH	baz=14			eS	Sg	07 16 11.2	-0.4
TSEB	Hengchuen, Pin baz=159	1.39	160	eP	Pn	07 15 51.8	-0.6
TWD	Chiawan baz=60	1.41	52	eP	Pn	07 15 52.8	+0.2
TWD	baz=60			eS	Sg	07 16 12.1	-0.8
ETLH	Xiulin Townshi baz=43	1.41	45	eP	Pn	07 15 52.4	-0.4
ETLH	baz=43			eS	Sg	07 16 12.2	-0.8
NACB	Ninganchiao baz=47	1.47	49	eP	Pn	07 15 53.3	-0.1
NACB	baz=47			eS	Sb	07 16 13.4	+0.4
NACB	Ninganchiao	1.47	49		Pn	07 15 53.4	-0.1
NNSB	Datong baz=35	1.52	37	eP	Pn	07 15 54.2	0.0
NNSB	baz=35			eS	Sb	07 16 14.4	-0.2
NNSH	Datong baz=24	1.52	37	eP	Pn	07 15 54.2	-0.1
NNSH	baz=24			eS	Sb	07 16 14.8	+0.1
NSTT	Nanjuang baz=20	1.52	22	eP	Pn	07 15 53.5	-0.7
NSTT	baz=20			eS	Sb	07 16 14.2	-0.4
NNS	Nan Shan baz=35	1.52	36	eP	Pn	07 15 54.4	+0.1
NNS	baz=35			eS	Sb	07 16 15.1	+0.4
LIOB	Emei baz=20	1.54	22	eP	Pn	07 15 53.8	-0.6
LIOB	baz=20			eS	Sb	07 16 15.1	0.0
LAY	Lan-yu baz=123	1.59	137	eP	Pn	07 15 54.7	-0.5
SBCB	Hsinchu baz=20	1.67	19	eP	Pn	07 15 54.9	-1.3
NSK	Sanguang baz=29	1.71	31	eP	Pn	07 15 56.3	-0.6
NSK	baz=29			eS	Sb	07 16 20.1	+0.1
YHNB	Yeheng baz=30	1.71	32	eP	Pn	07 15 57.0	+0.1
YHNB	baz=30			eS	Sb	07 16 19.8	-0.3
YHNB	Yeheng	1.71	32		Pn	07 15 57.0	+0.1
NDT	Datong Townshi baz=25	1.73	37	eP	Pn	07 15 56.8	-0.3
NDT	baz=25			eS	Sb	07 16 21.0	+0.5
ENA	Nanau baz=64	1.74	46	eP	Pn	07 15 57.7	+0.6
ENTT	Nioudou baz=26	1.79	37	eP	Pb	07 15 59.1	-0.9
ENTT	baz=26			eS	Sg	07 16 24.6	-0.4
ENAH	Nanao baz=44	1.80	46	eP	Pn	07 15 58.6	+0.7
ENAH	baz=44			eS	Sg	07 16 24.3	-1.0
NWLT	Wulai baz=15	1.86	33	eP	Pn	07 15 59.0	+0.1
NCUH	Zhongli baz=23	1.90	23	eP	Pn	07 15 59.8	+0.5
TWE	Neicheng baz=36	1.91	38	eP	Pb	07 16 00.7	-1.2
TWE	baz=36			eS	Sb	07 16 27.0	+1.3
TWC	Suao baz=41	1.93	44	eP	Pb	07 16 01.5	-0.9
TWC	baz=41			eS	Sb	07 16 27.3	+0.9
VWUC	VWUC baz=336	1.97	334	eP	Pn	07 15 58.7	-1.6
TATO	Taipei baz=15	2.03	30	eP	Pb	07 16 03.5	-0.5
TATO	Taipei	2.03	30		Pb	07 16 03.7	-0.3
NHDH	Xindian Distri baz=16	2.03	31	eP	Pn	07 16 02.1	+0.9
TWA	Mucha baz=30	2.08	32	eP	Pn	07 16 01.7	-0.1
TWA	baz=30			eS	Sb	07 16 31.8	+1.3
NTC	Toucheng baz=24	2.10	39	eP	Pn	07 16 03.1	+0.9
TWS1	Kuangyinshan baz=28	2.10	26	eP	Pn	07 16 02.3	+0.1
KNM	Kinmen baz=303	2.15	304	eP	Pn	07 16 03.2	+0.4
PTMZ	Houxiangcun baz=330	2.15	328	eP	Pn	07 16 01.5	-1.4
EGS	baz=41	2.16	41	eP	Pb	07 16 05.1	-1.1
TIPB	Shuangxi baz=20	2.19	37	eP	Pn	07 16 03.9	+0.4
TIPB	baz=20			eS	Sb	07 16 35.2	+1.3
YM04	YM04 baz=13	2.20	28	eP	Pn	07 16 03.7	+0.1
KNMB	Chin-men Tao baz=306	2.21	305	eP	Pn	07 16 01.7	-1.9
KNMB	Chin-men Tao	2.21	305		Pn	07 16 02.4	-1.2
YM01	YM01 baz=13	2.21	29	eP	Pn	07 16 02.6	-1.1
YM10	YM10 baz=14	2.21	29	eP	Pn	07 16 02.7	-1.1
WFSB	Wu-fen Shan baz=16	2.25	34	eP	Pb	07 16 07.0	-0.8
WFSB	baz=16			eS	Sb	07 16 37.5	+1.9
TWB1	Santiao Chiao baz=24	2.31	39	eP	Pn	07 16 05.8	+0.7
PTTC	Pingtan baz=348	2.34	346	eP	Pn	07 16 04.6	-0.9
QZH	Quanzhou	2.38	317	ePn	Pn	07 16 05.3	-0.6
QZH				Sn	Sn	07 16 31.6	-3.3
QZH	comp=N,720nm,0.7s			smax	smax		
QZH	comp=E,880nm,1.0s			smax	smax		
JYNG	Yonagunijimaku	2.65	62	P	Pn	07 16 11.7	+2.0
JYNG				S	Sb	07 16 44.7	-2.4
YOJ	Yonaguni jima	2.71	62	P	Pn	07 16 11.2	+0.7
YOJ				S	Sn	07 16 44.6	+1.5
YOJ	Yonaguni jima baz=62	2.71	62	eP	Pn	07 16 11.5	+0.9
YOJ	Yonaguni jima	2.71	62		Pn	07 16 10.8	+0.2
AXDP	Jialang baz=312	2.77	308	eP	Pn	07 16 10.2	-1.1
AXDP	baz=312			eS	Sb	07 16 51.6	+1.0
PCYT	Pengchaiyu baz=21	2.86	32	eP	Pb	07 16 16.3	-1.8
MATB	Ma-tsu baz=354	2.95	352	eP	Pn	07 16 12.6	-1.2
MSUT	Lienchiang baz=354	2.97	352	eP	Pn	07 16 13.3	-0.8
MHZQ	Yeshan baz=340	3.13	337	eP	Pn	07 16 15.7	-0.6
HATJ	Hateruma jima	3.25	74	P	Pn	07 16 18.5	+0.5
HATJ				S	Sn	07 16 57.7	+1.2
IRIF	Iriomote-Funau	3.26	69	P	Pn	07 16 19.2	+1.1
IRIF				S	Sn	07 16 59.0	+2.2
LYJJ	Jianjiangzhen baz=353	3.37	350	eP	Pn	07 16 18.5	-1.1
JKRS	Kuro-shima	3.48	72	P	Pn	07 16 22.0	+0.9
JKRS				S	Sn	07 17 03.9	+1.8
JIJ	Ishigaki jima	3.63	71	P	Pn	07 16 23.3	+0.1
JIJ				S	Sn	07 17 05.3	-0.6
XPSS	Dashiqiu	3.71	357	eP	Pn	07 16 22.6	-1.6
JISG	Ishigakijimahi	3.85	68	P	Pn	07 16 26.5	+0.3
JISG				S	Sn	07 17 11.0	-0.2
JTJ	Tarama	4.20	69	P	Pn	07 16 32.3	+1.3
JTJ				S	Sn	07 17 21.3	+1.4
NJ2	Nanjing	8.91	352	⇑P	Pn	07 17 37.1	+1.4
NJ2				S	Sn	07 19 20.4	+4.5
NJ2	comp=Z,16nm,0.6s			pmax	pmax		
NJ2	comp=N,150nm,0.8s			smax	smax		
NJ2	comp=E,110nm,0.8s			smax	smax		
NJ2	comp=N,440nm,5.7s			LR	LR		
NJ2	comp=E,700nm,7.5s			LR	LR		
NJ2	comp=Z,570nm,7.9s			LR	LR		
WHN	Wuhan	9.07	325	P	Pn	07 17 38.8	+0.9
WHN				S	Sn	07 19 23.6	+3.7
WHN	comp=Z,1μm,8.3s			LR	LR		
QIZ	Qiongzhong	10.68	249	P	Pn	07 18 02.4	+2.4
QIZ				S	Sn	07 20 02.4	+2.9
QIZ	comp=N,560nm,19.6s			LR	LR		
QIZ	comp=E,340nm,10.8s			LR	LR		
QIZ	comp=Z,310nm,11.3s			LR	LR		
GYA	Guiyang	12.87	287	eP	P	07 18 45.5	+4.6
GYA	comp=N,490nm,7.3s			LR	LR		
GYA	comp=E,690nm,6.7s			LR	LR		
GYA				LR	LR		

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            comp=Z,600nm,8.8s
KSRS  Korea Array        15.61  23   Pn     P       07 19 10.2  -0.9
            comp=Z,0.1nm,0.3s,baz=200,slow=11,SNR=4.7
LZH   Lanzhou            19.23 316  eP      Pn      07 19 55.9  +3.5
LZH                                  pP     sP      07 19 59.1  +2.0
LZH                                  sP     pP      07 20 01.1  +5.8
LZH                                  pmax   pmax
            comp=Z,14nm,1.1s
LZH                                  pmax   pmax
            comp=Z,58nm,5.4s
LZH                                  LR     LR
            comp=Z,320nm,13.0s
LZH                                  LR     LR
            comp=Z,270nm,11.4s
LZH                                  LR     LR
            comp=Z,240nm,11.9s
MJAR  Matsushiro Arr     20.34  45   P      Pn      07 20 05.6  +0.3
            comp=Z,0.9nm,0.3s,baz=243,slow=6.7,SNR=3.0
MJAR                                 LR     LR      07 29 17.8
            comp=Z,55nm,19.9s,baz=40,slow=40
CMAR  Chiang Mai Arr     20.58 261   LR     LR      07 28 58.6
            comp=Z,111nm,18.8s,baz=124,slow=40
JMM   Marumori           22.79  45   P      P       07 20 27.6  -2.0
JMM                                  IAmb   IAmb    07 20 35.7
            comp=Z,26nm,1.1s
GTA   Gaotai             23.78 318  eP      P       07 20 40.9  +1.2
GTA                                  pP     sP      07 20 45.3  -0.4
GTA                                  sP     pP      07 20 48.3  +4.4
GTA                                  pmax   pmax
            comp=Z,100nm,5.1s
GTA                                  LR     LR
            comp=Z,210nm,17.0s
GTA                                  LR     LR
            comp=Z,150nm,17.9s
SONM  Songino Array      26.99 339   P      P       07 21 08.6  -0.3
            comp=Z,0.8nm,0.9s,baz=159,slow=12,SNR=3.8
SONM                                 LR     LR      07 33 49.8
            comp=Z,80nm,18.9s,baz=96,slow=41
SONM  Songino Array      26.99 339   P      P       07 21 08.8  -0.1
WMQ   Urumqi             33.81 315  eP      P       07 22 10.6  +1.4
MK31  Makanchi Array     38.53 317   P      P       07 22 48.8  -0.7
MKAR  Makanchi Array     38.53 317   P      P       07 22 49.7  +0.2
            comp=Z,1.1nm,1.0s,baz=116,slow=11,SNR=5.5
MKAR  Makanchi Array     38.53 317   P      P       07 22 48.1  -1.4
ZALV  Zalesovo Beam      40.67 328   P      P       07 23 07.7  +0.6
WRA   Warramunga Arr     45.00 161   P      P       07 23 40.4  -2.2
            comp=Z,3.0nm,0.8s,baz=344,slow=8.8,SNR=12
WRA   Warramunga Arr     45.00 161   P      P       07 23 40.6  -2.0
WR0   Warramunga Arr     45.08 161   P      P       07 23 41.5  -1.7
WR0                                  IAmb   IAmb    07 23 57.9
            comp=Z,11nm,1.4s
ASAR  Alice Springs      48.41 163   P      P       07 24 08.4  -0.9
            comp=Z,1.6nm,1.0s,baz=355,slow=15,SNR=11
ASAR  Alice Springs      48.41 163   P      P       07 24 08.0  -1.3
ABKAR Akbulak array      53.60 315   P      P       07 24 48.1   0.0
FINES FINESS Array B     71.91 330   P      P       07 26 49.7  -0.2
            comp=Z,2.0nm,0.8s,baz=66,slow=6.5,SNR=5.5
AKASG Malin Array Be     73.10 318   P      P       07 26 54.6  -2.7
            comp=Z,0.2nm,0.3s,baz=59,slow=5.9,SNR=2.3
GERES GERESS Array B     83.12 320   P      P       07 27 50.8  -2.2
            comp=Z,0.8nm,0.8s,baz=110,slow=3.1,SNR=4.8
YKA   Yellowknife Ar     84.14  22   P      P       07 27 57.5  -0.3
            comp=Z,0.6nm,0.7s,baz=320,slow=4.2,SNR=7.3
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*IDC **24** 07:22:27.6±0.8, 60°.08S×27°.16W, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.1/19, mbtmp4.2/6, ML4.7/1, Error ellipse: s-maj=44.8km s-min=21.1km az=85.0*

*NEIC **24** 07:22:31.5±1.1, 60°.17S±0°.08×27°.3W±0°.3, h21km±6km, mb4.5/13, Error ellipse: s-maj=26.7km s-min=3.1km az=63.0*

ISC 24 07:22:29.1±0.6**, 60°.1S**±0°.1×**27°.1W**±0°.1**, h10**km**, n32, σ1s.01**/32**, mb4.4**/11**, South Sandwich Islands region**

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Code  Station Name         Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC        h  m  s    ISC
HOPE  Hope Point          7.77 315   Pn     Pn      07 24 21.2  -0.9
VNA1  Neumayer--Stat     13.06 152   P      Pn      07 25 34.4  +0.1
VNA3  Neumayer Olymp     13.18 155   P      Pn      07 25 34.8  -1.3
VNA3                                 S      Sn      07 27 46.9   -15
VNA2  Neumayer--Watz     13.46 152   P      Pn      07 25 39.0  -0.9
            baz=305,slow=16
VNA2                                 S      Sn      07 27 57.4   -12
SNAA  Sanae              15.06 150   P      Pn      07 26 00.9  -0.9
SNAA                                 S      Sn      07 28 34.7   -14
SNAA  Sanae              15.06 150   Pn     Pn      07 26 01.3  -0.4
            3.1nm,0.3s,baz=357,slow=4.9,SNR=92
SNAA                                 Sn     Sn      07 28 34.5   -14
            0.4nm,0.3s,baz=196,slow=18,SNR=5.8
SNAA  Sanae              15.06 150          Pn      07 26 01.4  -0.3
SNAA                                 IAmb   IAmb    07 26 04.8
            comp=Z,8.2nm,0.5s
BELA  Belgrano 2         18.00 185   P      P       07 26 40.2  +0.7
QSPA  South Pole Qui     30.11 180   P      P       07 28 39.6  +1.0
            comp=Z,4.8nm,0.5s,baz=210,slow=1.8,SNR=46
QSPA  South Pole Qui     30.11 180   P      P       07 28 38.7  +0.1
MT02  Curacav            39.30 293   P      P       07 29 58.4  +0.5
MT02                                 IAmb   IAmb    07 30 20.4
            comp=Z,18nm,1.3s
VA03  San Esteban        39.44 294   P      P       07 30 00.0  +0.8
VA03                                 IAmb   IAmb    07 30 04.2
            comp=Z,10nm,1.1s
CPUP  Villa Florida      39.65 315   P      P       07 30 01.1  +0.2
            comp=Z,1.1nm,0.6s,baz=157,slow=9.6,SNR=3.8
CO03  El Pedregal        41.12 296   P      P       07 30 14.0  +0.8
VNDA  Vanda              42.49 183   P      P       07 30 25.1  +1.3
            comp=Z,1.9nm,0.7s,baz=171,slow=4.8,SNR=12
VNDA  Vanda              42.49 183   P      P       07 30 23.7   0.0
AC05  El Transito        42.65 298   P      P       07 30 26.0  +0.3
AC05                                 IAmb   IAmb    07 30 32.8
            comp=Z,6.6nm,0.8s
PSGCX Pisagua            50.69 304   P      P       07 31 29.0  +0.2
PSGCX                                IAmb   IAmb    07 31 43.0
            comp=Z,7.6nm,1.2s
MNMC  Minye Minye        50.89 305   P      P       07 31 30.8  +0.3
MNMC                                 IAmb   IAmb    07 31 32.2
            comp=Z,5.6nm,0.7s
DBIC  Dimbokro           68.87  24   P      P       07 33 33.8  +0.1
TOA0  Torodi Ar. Sit     76.60  29   P      P       07 34 21.1  +1.5
TOA0                                 IAmb   IAmb    07 34 34.7
            comp=Z,5.1nm,1.1s
TORD  Torodi Ar. Bea     76.60  29   P      P       07 34 21.0  +1.5
            comp=Z,1.7nm,0.6s,baz=198,slow=6.2,SNR=14
TORD  Torodi Ar. Bea     76.60  29   P      P       07 34 21.1  +1.5
ASAR  Alice Springs      95.07 163   P      P       07 35 51.6  -0.6
            comp=Z,0.5nm,1.0s,baz=189,slow=4.6,SNR=5.3
FINES FINESS Array B    127.95  29   PKP    PKPdf   07 41 32.4  -1.1
            comp=Z,1.1nm,0.6s,baz=258,slow=3.7,SNR=5.4
ARCES ARCESS Array B    134.70  23   PKP    PKPdf   07 41 43.9  -2.1
            comp=Z,2.8nm,0.9s,baz=217,slow=2.8,SNR=4.1
YKA   Yellowknife Ar    139.18 315   PKP    PKPdf   07 41 52.1  -2.4
            comp=Z,0.2nm,0.5s,baz=127,slow=3.0,SNR=8.5
ZALV  Zalesovo Beam     143.96  69   PKP    PKPab   07 42 01.3  +0.6
            comp=Z,1.0nm,0.4s,baz=230,slow=3.4,SNR=6.9
EGAK  Eagle             150.43 308   PKPbc  PKPbc   07 42 19.3  +0.2
SONM  Songino Array     150.66  94   PKPbc  PKPbc   07 42 20.5  +0.1
            comp=Z,1.0nm,0.7s,baz=209,slow=2.9,SNR=7.7
SONM  Songino Array     150.66  94          PKPbc   07 42 20.9  +0.5
ILAR  Eielson Array     152.73 306   PKPbc  PKPbc   07 42 23.3  -1.1
            comp=Z,0.5nm,0.6s,baz=152,slow=3.2,SNR=6.0
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MAN 24 07:22:59.1, 18°.20N×121°.02E, h82km, mb4.0, ML2.8, MS2.4, 1D, Luzon

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Code  Station Name         Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC        h  m  s    ISC
CVP   Callao Caves        0.91 123⇓ eP      Pn      07 23 19.8  +2.6
CVP                                 i S     Sn      07 23 34.6  +3.9
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*BGR **24** 07:25:39.1±0.0, 65°.14N×20°.28W, h10km, mb4.9*

*NEIC **24** 07:25:46.8±2.1, 64°.65N±0°.09×17°.6W±0°.1, h1km±4km, Error ellipse: s-maj=12.7km s-min=8.1km az=188.0*

*MOS **24** 07:25:47.6±1.4, 64°.63N×17°.79W, h10km, mb4.7/57, MS4.0/8, Error ellipse: s-maj=9.0km s-min=6.2km az=108.1*

*IDC **24** 07:25:48.7±0.5, 64°.59N×17°.69W, h0km, mb4.1/21, mb1 4.3/25, mb1mx4.1/38, mbtmp4.1/25, ML2.8/3, MS4.0/28, Ms1 4.0/28, ms1mx3.9/41, Error ellipse: s-maj=16.9km s-min=9.5km az=21.0*

*REY **24** 07:25:48.0, 64°.67N×17°.48W, h7km*

*GCMT **24** 07:25:51.0±0.3, 64°.51N±0°.03×17°.30W±0°.08, h14km±1km, MW4.8/92, Moment Tensor Solution. s13,c14; s92,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.99±.16; $M_{\theta\theta}$1.21±.11; $M_{\phi\phi}$0.78±.09; $M_{r\theta}$-0.35±.25; $M_{\theta\phi}$0.16±.05; $M_{\phi r}$-1.33±.25; Best double couple: $M_0$2.05000×10^{16} NP1:ϕ_s241.00000°,δ28.00000°,λ-66.00000°. NP2: ϕ_s34.00000°,δ65.00000°,λ-102.00000°. Principal axes: T 1.5570, Plg19.0000°, Azm133.0000°; N 0.9900, Plg11.0000°, Azm39.0000°; P -2.5430, Plg68.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 07:25:49.3±0.3**, 64°.68N**±0°.02×**17°.60W**±0°.02**, h10**km**, n330, σ2s.04**/330**, mb4.6**/105**, MS4.0**/37**, 18C, Iceland**

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Code  Station Name         Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC        h  m  s    ISC
IDYN  Dyngjuhals          0.15  42   P      Pg      07 25 50.9  -1.8
            baz=22
IHAM  Hamarinn            0.22 206   P      Pg      07 25 52.6  -1.3
            baz=218
IHAM                                 S      Sg      07 25 56.1  -0.9
            baz=218
IDJK  Dyngjujokull        0.24 138   P      Pg      07 25 52.1  -2.1
            baz=147
IURH  Urdarhals           0.24  54   P      Pg      07 25 52.2  -2.0
            baz=43
IGRF  Grimsfjall          0.31 152   P      Pg      07 25 53.4  -2.2
            baz=160
ISKR  Skrokkalda          0.36 251   P      Pg      07 25 55.4  -1.0
            baz=255
IHUS  Husbondi            0.39 184   P      Pg      07 25 55.3  -1.6
            baz=191
IKVE  Kverkfjoll          0.40  90   P      Pg      07 25 54.6  -2.6
            baz=88
IVOT  Vottur              0.45 156   P      Pg      07 25 56.0  -2.1
            baz=162
IJOK  Jokulheimar         0.45 217   P      Pg      07 25 56.5  -1.7
            baz=222
THOR  Thorvaldshraun      0.47  57   P      Pg      07 25 56.1  -2.4
            baz=52
IKRE  Kreppuhraun         0.53  78   P      Pg      07 25 56.6  -3.1
            baz=76
IKRE                                 S      Sg      07 26 03.5  -3.2
            baz=76
IASK  Askja               0.55  47   P      Pg      07 25 57.4  -2.7
            baz=42
IMKO  Mokollar            0.62  60   P      Pg      07 25 58.4  -2.8
            baz=57
IIEY  Innrieyrar          0.63 201   P      Pg      07 25 59.2  -2.3
            baz=206
IIEY                                 S      Sb      07 26 08.2  -3.0
            baz=206
ISVA  Svartarkot          0.68  12   P      Pg      07 26 00.1  -2.3
            baz=8.1
ISVA                                 S      Sg      07 26 09.7  -1.6
            baz=8.1
IKSK  Karasker            0.71 136   P      Pg      07 25 59.5  -3.6
            baz=139
IKAL  Kalfafell           0.73 183   P      Pg      07 26 00.9  -2.5
            baz=187
IVSH  V-Sauoahnukur       0.81  80   P      Pg      07 26 01.2  -3.7
            baz=79
IHVE  Hveravellir         0.86 284   P      Pg      07 26 03.6  -2.3
            baz=284
IFAG  Fagurholsmyri       0.91 152   P      Pg      07 26 03.1  -3.6
            baz=155
IADA  Aoalbol             0.93  68   P      Pg      07 26 03.2  -3.9
            baz=66
IMEL  Melhnausar          0.98  24   P      Pg      07 26 04.8  -3.3
            baz=21
IREN  Reynihlio           1.02  16   P      Pb      07 26 05.5  -3.4
            baz=14
ISNB  Snabyli             1.05 206   P      Pg      07 26 06.3  -3.1
            baz=209
IKVO  Krokottuvotn        1.08  16   P      Pb      07 26 06.5  -3.6
            baz=13
IGRS  Grimsstaoir         1.15  32   P      Pn      07 26 07.5  -3.9
            baz=30
IRJU  Rjupnafell          1.17 204   P      Pg      07 26 08.4  -3.2
            baz=207
IMJO  Mjoaskard           1.17 231   P      Pg      07 26 09.2  -2.7
            baz=233
IGYG  Gygjarholskot       1.20 252   P      Pg      07 26 09.2  -3.1
            baz=253
ISKI  Skildingahlsh       1.22  11   P      Pn      07 26 08.9  -3.5
            baz=8.8
IGHA  Grjothals           1.23  18   P      Pn      07 26 09.0  -3.6
            baz=16
IGRA  Granastaoir         1.25   0   P      Pn      07 26 09.4  -3.3
            baz=358
IGRA                                 S      Sb      07 26 26.1  -2.8
            baz=358
IHAU  Haukadalur          1.25 236   P      Pb      07 26 10.0  -3.0
            baz=238
IHLA  Hella               1.31 346   P      Pn      07 26 10.9  -2.8
            baz=344
IDIM  Dimmadalss          1.32  12   P      Pn      07 26 10.3  -3.4
            baz=9.9
ISAU  Saurbar             1.41 242   P      Pn      07 26 12.3  -2.7
            baz=243
IHED  Heoinshofoi         1.41   5   P      Pn      07 26 11.9  -3.2
            baz=2.9
IBRE  Brettingsstaoi      1.46 355   P      Pn      07 26 12.9  -2.8
            baz=353
IGIL  Gilhagi             1.50  20   P      Pn      07 26 13.0  -3.2
            baz=18
ISIG  Siglufjorour        1.56 340   P      Pn      07 26 14.7  -2.4
            baz=338
IASM  Asmuli              1.57 239   P      Pn      07 26 15.2  -1.9
            baz=240
BORG  Borgarnes           1.60 274   Pn     Pn      07 26 15.9  -1.8
            153nm,0.3s,baz=89,slow=6.5,SNR=153
BORG                                 Sn     Sg      07 26 41.6  +0.9
            89nm,0.3s,baz=312,slow=17,SNR=15
BORG  Borgarnes           1.60 274   P      Pn      07 26 15.8  -1.8
BORG                                                07 26 38.1
BORG  Borgarnes           1.60 274   Pn     Pn      07 26 15.8  -1.8
BORG                                 Sn     Sg      07 26 38.1  -2.6
IKRO  Krokur              1.64 251   P      Pn      07 26 16.0  -2.1
            baz=252
ISOL  Solvholt            1.64 244   P      Pn      07 26 16.2  -1.9
            baz=245
IHEI  Heioarbar           1.65 255   P      Pn      07 26 16.4  -1.8
            baz=256
IBJA  Bjarnastaoir        1.77 247   P      Pn      07 26 18.3  -1.6
            baz=248
IHRN  Hraun               1.78 325   P      Pn      07 26 18.0  -2.1
            baz=324
ILEI  Leirhofn            1.80  14   P      Pn      07 26 17.8  -2.5
            baz=13
IGRI  Grimsey             1.88 355   P      Pn      07 26 18.9  -2.5
            baz=354
SCO   Scoresbysund        6.06 346  e       Pn      07 27 14.9  -3.9
            baz=158,slow=10
SCO                                 i P     Pn      07 27 18.0  -0.8
SCO                                 i S     Sn      07 28 31.9  +3.7
SCO                                  IAML           07 28 39.9
            comp=Z,4.4nm,0.5s
SUMG  Summit             10.91 325   P      Pn      07 28 26.0  +0.4
SUMG  Summit             10.91 325   Pn     Pn      07 28 25.9  +0.4
EKA   Eskdalemuir Ar     11.80 136   Pn     Pn      07 28 37.2  -0.2
            baz=322,slow=13,SNR=28
ESK   Eskdalemuir        11.80 136   P      Pn      07 28 34.7  -2.7
ESK   Eskdalemuir        11.80 136   Pn     Pn      07 28 34.7  -2.7
NRS   Narsarsuaq         13.09 267   P      Pn      07 28 53.6  -1.4
NRS   Narsarsuaq         13.09 267   Pn     Pn      07 28 53.6  -1.4
NC204 NORSAR Array S     13.27  92   Pn     Pn      07 28 56.5  -1.1
NOA   NORSAR Array B     13.58  92   Pn     Pn      07 29 03.2  +1.5
            comp=Z,0.0nm,0.3s,baz=296,slow=14,SNR=3.0
NOA                                  LR     LR      07 34 37.6
            comp=Z,289nm,18.2s,baz=300,slow=39
KONO  Kongsberg          13.60  99  i P     Pn      07 29 00.8  -1.1
KONO                                 pmax   pmax
            comp=Z,18nm,1.0s
SFJD  Kangerlussuaq      13.62 295   LR     LR      07 33 59.1
            comp=Z,2μm,18.2s,baz=90,slow=36
HFS   Hagfors            15.09  93   LR     LR      07 34 46.9
            comp=Z,373nm,19.5s,baz=295,slow=36
SPITS Spitsbergen Ar     16.87  23   LR     LR      07 34 17.0
            comp=Z,291nm,21.2s,baz=310,slow=30
ARCES ARCESS Array B     17.15  55   P      P       07 29 52.3  +2.0
            baz=267,slow=8.5,SNR=4.2
UCC   Uccle              18.04 130   P      Pn      07 29 58.8  -1.0
UCC                                  pmax   pmax
            comp=Z,26nm,1.3s
UCC   Uccle              18.04 130   P      Pn      07 29 58.8  -1.0
FLN   La Foliniere       18.40 142  eP      Pn      07 30 07.3  +3.1
CLZ   Clausthal          19.32 118   P      Pn      07 30 16.2  +0.8
CLZ                                  pmax   pmax
            comp=Z,14nm,0.8s
FINES FINESS Array B     19.75  79   P      P       07 30 20.2  +1.4
            comp=Z,0.1nm,0.3s,baz=297,slow=9.8,SNR=5.3
FINES                                LR     LR      07 37 18.6
            comp=Z,126nm,20.8s,baz=292,slow=35
FINES FINESS Array B     19.75  79   P      P       07 30 15.8  -3.0
TULEG Thule              19.82 327   P      P       07 30 18.5  -1.0
APA   Apatity            20.36  59⇑ iP      P       07 30 25.5   0.0
APA                                  pmax   pmax
            comp=Z,12nm,1.0s
APA                                  MLR    MLR
            comp=Z,500nm,12.0s
LVZ   Lovozero           20.72  58  i P     Pn      07 30 32.1  +0.3
LVZ                                  pmax   pmax
            comp=Z,23nm,1.2s
MOX   Moxa               20.75 119   P      P       07 30 31.7  +1.9
MOX                                  pmax   pmax
            comp=Z,19nm,1.8s
CLL   Collm              20.75 116  i P     P       07 30 30.6  +0.8
            comp=Z,116nm,2.0s
CLL                                  Lm     MLR     07 39 00.0
            comp=N,500nm,18.3s
CLL                                  Lm     MLR     07 39 00.0
            comp=E,300nm,19.1s
CLL   Collm              20.75 116  i P     P       07 30 30.6  +0.8
CLL                                  pmax   pmax
            comp=Z,116nm,2.0s
CLL   Collm              20.75 116   P      P       07 30 29.3  -0.5
CLL                                  IAmb   IAmb    07 30 32.8
            comp=Z,43nm,1.4s
ECH   Echery             21.20 129   P      P       07 30 33.1  -1.6
ECH                                  pmax   pmax
            comp=Z,24nm,1.3s
ECH   Echery             21.20 129   P      P       07 30 33.1  -1.6
GRA1  Grafenberg Arr     21.38 121   P      P       07 30 32.5  -4.1
GRA1                                 IAmb   IAmb    07 30 51.7
            comp=Z,45nm,1.3s
GRF   Grafenberg Arr     21.38 121   P      P       07 30 32.5  -4.1
GRF                                  pmax   pmax
            comp=Z,45nm,1.3s
GRF   Grafenberg Arr     21.38 121  eP      P       07 30 39.1  +2.5
            comp=Z,55nm,1.5s,baz=324,slow=10
NKC   Novy Kostel        21.39 118  eP      P       07 30 37.3  +0.5
NKC   Novy Kostel        21.39 118  eP      P       07 30 37.3  +0.5
STU   Stuttgart          21.41 125   P      P       07 30 33.7  -3.3
STU                                  pmax   pmax
            comp=Z,82nm,1.5s
STU   Stuttgart          21.41 125   P      P       07 30 33.7  -3.3
BRG   Berggiesshubel     21.46 115  eP      P       07 30 38.2  +0.8
BRG                                  Amp            07 30 43.8
            comp=Z,63nm,1.6s
BRG                                  Amp            07 39 49.0
            comp=N,0.6nm,19.4s
BRG                                  Amp            07 40 11.0
            comp=Z,1.0nm,19.3s
BRG                                  Amp            07 40 24.0
            comp=E,0.4nm,19.4s
BRG   Berggiesshubel     21.46 115  eP      P       07 30 38.2  +0.8
BRG                                  pmax   pmax
            comp=Z,63nm,1.6s
BRG                                  MLR    MLR
            comp=N,640nm,19.4s
BRG                                  MLR    MLR
            comp=Z,973nm,19.3s
BRG                                  MLR    MLR
            comp=E,353nm,19.4s
BRG   Berggiesshubel     21.46 115  eP      P       07 30 38.2  +0.8
BRG                                  Amp            07 30 43.8
            comp=Z,63nm,1.6s
BRG                                  Amp            07 39 49.0
            comp=N,0.6nm,19.4s
BRG                                  Amp            07 40 11.0
            comp=Z,1.0nm,19.3s
BRG                                  Amp            07 40 24.0
            comp=E,0.4nm,19.4s
BFO   Black Forest       21.49 127   P      P       07 30 36.7  -1.2
BFO                                  pmax   pmax
            comp=Z,48nm,1.4s
BFO   Black Forest       21.49 127   P      P       07 30 36.7  -1.2
BFO                                  IAmb   IAmb    07 30 44.9
            comp=Z,48nm,1.4s
VSU   Vasula             21.61  86  eP      P       07 30 39.7  +0.7
VSU   Vasula             21.61  86  i P     P       07 30 41.0  +2.0
VSU                                  pmax   pmax
            comp=Z,28nm,0.8s
FRB   Frobisher Bay      21.70 291   P      P       07 30 40.5  +0.6
            comp=Z,3.7nm,0.9s,baz=63,slow=11,SNR=6.7
FRB                                  LR     LR      07 38 20.3
            comp=Z,529nm,20.3s,baz=54,slow=35
VALR  Valaam             21.81  76  i P     P       07 30 44.8  +3.7
VALR                                 pmax   pmax
            comp=Z,25nm,1.0s
PVCC  Panska Ves         21.98 115   AMS    AMS     07 40 10.0
            comp=Z,700nm,21.6s
PABE  Paberze            22.25  95  eP      P       07 30 48.4  +2.4
PRA   Prague             22.29 116   AMS    AMS     07 40 20.0
            comp=Z,400nm,20.9s
PRU   Pruhonice          22.39 116  eP      P       07 30 47.9  +0.4
PRU                                  MLR    MLR
            comp=Z,900nm,19.4s
PRU   Pruhonice          22.39 116  eP      P       07 30 47.9  +0.4
PRU                                  AMS    AMS     07 40 40.0
            comp=Z,900nm,19.4s
PUL   Pulkovo            22.40  80  i P     P       07 30 48.8  +1.3
PUL                                  pmax   pmax
            comp=Z,36nm,0.8s
KSP   Ksiaz              22.41 112  eP      P       07 30 48.8  +1.1
CHVC  Chvalec            22.51 113  eP      P       07 30 51.2  +2.4
UPC   Upice              22.56 113  eP      P       07 30 51.3  +2.0
UPC                                  MLR    MLR
            comp=Z,600nm,17.9s
UPC   Upice              22.56 113  eP      P       07 30 51.3  +2.0
UPC                                  AMS    AMS     07 40 00.0
            comp=Z,600nm,17.9s
OSTC  Ostas              22.60 113  eP      P       07 30 51.7  +2.0
OSTC                                 AMS    AMS     07 40 00.0
            comp=Z,600nm,18.0s
CAF   Calviac            22.62 142  eP      P       07 30 49.5  -0.5
CAF                                  pmax   pmax
            comp=Z,33nm,1.4s
KHC   Kasperske Hory     22.72 118ceP       P       07 30 52.8  +1.8
KHC                                  pmax   pmax
            comp=Z,37nm,1.7s
KHC   Kasperske Hory     22.72 118  eP      P       07 30 51.8  +0.8
KHC                                  AMS    AMS     07 40 20.0
            comp=Z,800nm,21.6s
KHC   Kasperske Hory     22.72 118   P      P       07 30 48.1  -2.9
KHC                                  IAmb   IAmb    07 31 02.3
            comp=Z,20nm,1.3s
DPC   Dobruska-Polom     22.81 113  eP      P       07 30 53.5  +1.6
DPC                                  MLR    MLR
            comp=Z,700nm,19.0s
DPC   Dobruska-Polom     22.81 113  eP      P       07 30 53.5  +1.6
DPC                                  AMS    AMS     07 40 30.0
            comp=Z,700nm,19.0s
DAVA  Damuels            22.92 126   P      P       07 30 56.5  +3.1
            comp=Z,26nm,1.4s
SUW   Suwalki            22.93  98  eP      P       07 30 53.9  +0.8
GEC2  GERESS Array S     23.00 119   P      P       07 30 49.6  -4.4
GEC2                                 IAmb   IAmb    07 30 57.7
            comp=Z,22nm,1.4s
GERES GERESS Array B     23.00 119   P      P       07 30 53.9  -0.1
            comp=Z,3.0nm,0.9s,baz=332,slow=7.6,SNR=14
GERES                                LR     LR      07 40 51.0
            comp=Z,631nm,19.6s,baz=328,slow=39
GERES GERESS Array B     23.00 119   P      P       07 30 51.8  -2.2
RETA  Reutte             23.06 125   P      P       07 30 55.0  +0.3
            comp=Z,26nm,1.8s
ISAL  Salakas            23.14  92  eP      P       07 30 57.2  +2.0
KRLC  Kraliky            23.20 113  eP      P       07 30 57.2  +1.1
KRLC  Kraliky            23.20 113  eP      P       07 30 57.2  +1.1
MOTA  Moosalm            23.30 124  eP      P       07 30 60.0  +2.8
            comp=Z,27nm,1.9s
IIGN  Ignalina           23.32  93  eP      P       07 30 59.1  +2.0
DAVOX Davos/Dischmat     23.36 127   P      P       07 30 58.7  +0.9
            comp=Z,3.6nm,0.7s,baz=323,slow=16,SNR=5.7
DAVOX                                LR     LR      07 41 07.9
            comp=Z,610nm,18.3s,baz=318,slow=39
PGAV  Gavieira, Arco     23.38 162  eLR     LR      07 37 17.4
            comp=Z,406nm,20.0s
TMCR  Tamitsa            23.38  66  eP      P       07 30 57.9  +0.3
SQTA  Sankt Quirin       23.45 124  eP      P       07 31 01.3  +2.7
            comp=Z,40nm,1.5s
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FETA	**Feichten**	**23.45**	**125**	P	**P**	**07 31 00.8**	**+2.1**
	comp=Z,15nm,1.6s						
WATA	**Walderalm**	**23.48**	**124**	*e*P	**P**	**07 31 01.6**	**+2.7**
	comp=Z,26nm,1.8s						
IDID	**Didziasalis**	**23.57**	**92**	*e*P	**P**	**07 31 01.7**	**+2.2**
VRAC	**Vranov**	**23.74**	**114**	P	**P**	**07 31 02.6**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=319,slow=11,SNR=5.1						
VRAC				LR	LR	07 41 34.5	
	comp=Z,647nm,18.2s,baz=326,slow=40						
VRAC	**Vranov**	**23.74**	**114**	*e*P	**P**	**07 31 02.4**	**+1.1**
MORC	**Moravsky Berou**	**23.74**	**112**	*e*P	**P**	**07 31 02.1**	**+0.7**
MORC	**Moravsky Berou**	**23.74**	**112**	P	**P**	**07 30 59.1**	**-2.3**
MORC				pmax	pmax		
	comp=Z,13nm,1.3s						
MORC	**Moravsky Berou**	**23.74**	**112**	P	**P**	**07 30 59.1**	**-2.3**
KRUC	**Moravsky**	**23.86**	**115**	*e*P	**P**	**07 31 03.3**	**+0.8**
NACGM	**Naroch**	**23.86**	**93**	*i* P	P	07 30 55.9	-6.5
NACGM				*i* P	P	07 30 55.9	-6.5
NACGM				*i* P	P	07 30 55.9	-6.5
NACGM				*i* PP	**PnPn**	**07 31 25.2**	**-4.9**
NACGM				*i* S	**S**	**07 35 15.9**	**-2.2**
NACGM				*i* SS	**SnSn**	**07 36 07.3**	**+11**
NACGM				*i* SSS	SSS	07 36 24.9	
NACGM				*i* LQ	LQ	07 38 30.4	
NACGM				*i* LR	LR	07 39 49.2	
MOA	**Molln**	**24.04**	**119**	*e*P	**P**	**07 31 06.4**	**+2.2**
	comp=Z,15nm,1.8s						
OJC	**Ojcow**	**24.31**	**109**	*e*P	**P**	**07 31 07.0**	**+0.3**
OJC	**Ojcow**	**24.31**	**109**	P	**P**	**07 31 04.5**	**-2.1**
OJC				pmax	pmax		
	comp=Z,15nm,1.4s						
OJC	**Ojcow**	**24.31**	**109**	P	**P**	**07 31 04.5**	**-2.1**
OJC				IAmb	IAmb	07 31 08.3	
	comp=Z,15nm,1.4s						
ABTA	**Abfaltersbach**	**24.32**	**123**	*e*P	**P**	**07 31 10.3**	**+3.5**
	comp=Z,17nm,2.0s						
MVO	**Moncorvo**	**24.33**	**160**	*e*P	**P**	**07 31 10.4**	**+3.4**
	comp=Z,49nm,1.8s						
KBA	**Koelnbreinsper**	**24.34**	**121**	*e*P	**P**	**07 31 10.3**	**+3.2**
	comp=Z,29nm,1.8s						
CONA	**Conrad Observa**	**24.57**	**117**	P	**P**	**07 31 11.1**	**+1.9**
	comp=Z,9.8nm,0.8s						
MNK	**Minsk**	**24.61**	**93**	*i* P	**P**	**07 31 09.1**	**-0.2**
	comp=E,2.0nm,1.8s						
MNK				*i* P	**P**	**07 31 09.1**	**-0.2**
	comp=N,14nm,0.9s						
MNK				*i* P	**P**	**07 31 09.1**	**-0.2**
	comp=Z,15nm,0.9s						
MNK				*i* PP	**PnPn**	**07 31 40.7**	**+0.4**
MNK				*i* PPP	PPP	07 31 48.7	
MNK				*i* PcP	**PcP**	**07 34 45.9**	**-0.5**
MNK				*i* S	**S**	**07 35 31.5**	**+1.5**
MNK				*i* SS	**SnSn**	**07 36 18.9**	**+4.1**
MNK				*i* SSS	SSS	07 36 32.6	
MNK				*i* LQ	LQ	07 38 52.1	
MNK				*i* LR	LR	07 40 44.8	
MNK				*i* LRM	MLR	07 42 26.5	
	comp=E,25nm,15.1s						
MNK				*i* LRM	MLR	07 42 34.6	
	comp=Z,197nm,14.2s						
MNK				*i* LRM	MLR	07 42 38.5	
	comp=N,270nm,15.4s						
CTI	**Castel Tesino**	**24.61**	**125**	P	**P**	**07 31 08.8**	**-0.7**
CTI				pmax	pmax		
	comp=Z,29nm,1.4s						
CTI	**Castel Tesino**	**24.61**	**125**	P	**P**	**07 31 08.8**	**-0.7**
CTI				IAmb	IAmb	07 31 24.2	
	comp=Z,29nm,1.4s						
PVIS	**Viseu**	**24.66**	**162**	*e*P	**P**	**07 31 13.0**	**+3.1**
	comp=Z,41nm,1.8s						
SMOL	**Smolenice**	**24.71**	**114**	*e*P	**P**	**07 31 11.9**	**+1.6**
SMOL	**Smolenice**	**24.71**	**114**	*e*P	**P**	**07 31 11.9**	**+1.6**
MODS	**Modra-Piesok**	**24.76**	**114**	*e*P	**P**	**07 31 11.9**	**+1.1**
MODS				pmax	pmax		
	comp=Z,41nm,2.0s						
MODS	**Modra-Piesok**	**24.76**	**114**	*e*P	**P**	**07 31 11.9**	**+1.1**
MYKA	**Terra Mystica**	**24.83**	**122**	*e*P	**P**	**07 31 12.1**	**+0.7**
	comp=Z,15nm,1.6s						
LANS	**Liptovska Anna**	**25.01**	**111**	*e*P	**P**	**07 31 14.8**	**+1.8**
LANS	**Liptovska Anna**	**25.01**	**111**	*e*P	**P**	**07 31 14.8**	**+1.8**
MTE	**Manteigas**	**25.01**	**162**	*e*P	**P**	**07 31 15.3**	**+2.2**
	comp=Z,57nm,1.7s						
MTE				*e*LR	LR	07 38 06.2	
	comp=Z,471nm,18.0s						
NIE	**Niedzica**	**25.14**	**109**	*e*P	**P**	**07 31 15.8**	**+1.6**
VYHS	**Vyhne**	**25.28**	**112**	*e*P	**P**	**07 31 15.9**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,26nm,1.6s						
VYHS	**Vyhne**	**25.28**	**112**	*e*P	**P**	**07 31 15.9**	**+0.5**
SOKA	**Soboth**	**25.30**	**120**	P	**P**	**07 31 14.3**	**-1.4**
	comp=Z,18nm,2.0s						
KLMR	**Klimovskoe**	**25.64**	**72**	*e*P	**P**	**07 31 17.9**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,45nm,1.4s						
KLMR	**Klimovskoe**	**25.64**	**72**	*e*P	**P**	**07 31 18.0**	**-0.6**
KLMR				AMP		07 31 22.5	
	comp=Z,45nm,1.4s						
KWP	**Kalwaria Pacla**	**25.96**	**106**	*e*P	**P**	**07 31 22.4**	**+0.8**
PMRV	**Marv??o**	**25.99**	**162**	*e*P	**P**	**07 31 24.4**	**+2.5**
	comp=Z,39nm,1.6s						
PMRV				*e*LR	LR	07 38 46.2	
	comp=Z,431nm,18.0s						
CRVS	**Cervenica-Dubn**	**26.01**	**109**	*e*P	**P**	**07 31 26.7**	**+4.6**
CRVS	**Cervenica-Dubn**	**26.01**	**109**	*e*P	**P**	**07 31 26.7**	**+4.6**
PSZ	**Piszkesteto**	**26.16**	**112**	*e*P	**P**	**07 31 26.5**	**+3.0**
PSZ	**Piszkesteto**	**26.16**	**112**	P	**P**	**07 31 21.6**	**-2.0**
PSZ				pmax	pmax		
	comp=Z,34nm,1.4s						
PSZ	**Piszkesteto**	**26.16**	**112**	P	**P**	**07 31 21.6**	**-2.0**
ESDC	**Sonseca Array**	**26.28**	**156**	P	**P**	**07 31 25.5**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=349,slow=9.2,SNR=18						
ESDC				LR	LR	07 41 43.4	
	comp=Z,353nm,18.0s,baz=345,slow=36						
ESDC	**Sonseca Array**	**26.28**	**156**	P	**P**	**07 31 24.1**	**-0.5**
KOLS	**Kolonicke sedl**	**26.32**	**108**	*e*P	**P**	**07 31 26.2**	**+1.3**
KOLS				pmax	pmax		
	comp=Z,25nm,1.4s						
KOLS	**Kolonicke sedl**	**26.32**	**108**	*e*P	**P**	**07 31 26.2**	**+1.3**
LVV	**L'vov**	**26.36**	**104**	*e*P	**P**	**07 31 26.5**	**+1.3**
RES	**Resolute Bay**	**26.43**	**324**	P	**P**	**07 31 28.0**	**+2.4**
	comp=Z,2.1nm,1.0s,baz=64,slow=5.3,SNR=3.5						
RES				LR	LR	07 42 16.3	
	comp=Z,429nm,19.2s,baz=98,slow=37						
RES	**Resolute Bay**	**26.43**	**324**	P	**P**	**07 31 24.0**	**-1.6**
RES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RES	**Resolute Bay**	**26.43**	**324**	P	**P**	**07 31 24.0**	**-1.6**
UZH	**Uzhgorod**	**26.57**	**108**	*ce*P	**P**	**07 31 31.2**	**+4.2**
MORH	**Mrgy, Hungar**	**27.06**	**116**	*e*P	**P**	**07 31 33.2**	**+1.6**
AKASG	**Malin Array Be**	**27.89**	**97**	P	**P**	**07 31 40.1**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=321,slow=9.8,SNR=7.8						
AKASG				LR	LR	07 42 23.1	
	comp=Z,228nm,19.0s,baz=315,slow=36						
AKASG	**Malin Array Be**	**27.89**	**97**	P	**P**	**07 31 36.8**	**-2.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AKASG	**Malin Array Be**	**27.89**	**97**	P	**P**	**07 31 36.8**	**-2.1**
OBN	**Obninsk**	**27.93**	**84**	LR	LR	07 41 51.5	
	comp=Z,40nm,19.8s,baz=354,slow=34						
OBN	**Obninsk**	**27.93**	**84**	⇑*e*P	**P**	**07 31 40.1**	**+0.9**
OBN				*e*		07 32 31.7	
OBN				pmax	pmax		
	comp=Z,48nm,1.7s						
OBN				MLR	MLR		
	comp=Z,76nm,14.0s						
PVAQ	**Vaqueiros**	**27.94**	**163**	*e*LR	LR	07 39 53.4	
	comp=Z,352nm,22.0s						
BURAR	**Bucovina Array**	**28.57**	**106**	P	**P**	**07 31 44.0**	**-1.2**
LPSR	**Galich'ya Gora**	**30.67**	**86**	*e*P	**P**	**07 32 03.9**	**+0.3**
LPSR				pmax	pmax		
	comp=Z,20nm,1.6s						
KIRV	**Kirov**	**31.02**	**69**	*ce*P	**P**	**07 32 07.8**	**+1.3**
VSR	**Storozhevoye**	**31.77**	**87**	*e*P	**P**	**07 32 13.6**	**+0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VRH	**Novokhopyorsk**	**32.88**	**85**	*e*P	**P**	**07 32 23.5**	**+0.5**
VRH				pmax	pmax		
	comp=Z,30nm,1.8s						
KEST	**Kesra**	**33.20**	**138**	LR	LR	07 45 36.0	
	comp=Z,312nm,19.3s,baz=294,slow=36						
BELG	**Belogornoye**	**34.53**	**79**	*i* P	**P**	**07 32 37.2**	**-0.1**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ANN	**Anapa**	**35.96**	**96**	*e*P	**P**	**07 32 52.0**	**+2.4**
ANN				pmax	pmax		
	comp=Z,84nm,1.5s						
ARU	**Arti**	**36.12**	**66**	*c i*P	**P**	**07 32 51.6**	**+0.7**
ARU						07 34 12.6	
ARU				S	**S**	**07 38 33.1**	**+3.1**
ARU				pmax	pmax		
	comp=Z,15nm,2.0s						
ARU	**Arti**	**36.12**	**66**	P	**P**	**07 32 48.8**	**-2.1**
ARU				IAmb	IAmb	07 33 08.8	
	comp=Z,14nm,1.4s						
C36M	**Paulatuk**	**36.79**	**325**	P	**P**	**07 32 55.8**	**-0.7**
C36M				IAmb	IAmb	07 32 59.6	
	comp=Z,11nm,1.4s						
SOC	**Sochi**	**37.91**	**95**	*e*P	**P**	**07 33 07.5**	**+1.2**
SOC				*e*		07 34 33.7	
SOC				*e*PPP	PPP	07 34 56.9	
SOC				*e*S	**S**	**07 39 01.1**	**+3.6**
SOC				*e*SS	**SnSn**	**07 41 39.5**	**+1.1**
SOC				*e*SSS	SSS	07 42 03.5	
SOC				MLR	MLR		
	comp=Z,87nm,10.0s						
BR131	**Keskin Array S**	**38.52**	**105**	P	**P**	**07 33 09.8**	**-1.9**
BR131				pmax	pmax		
	comp=Z,13nm,1.1s						
BR131	**Keskin Array S**	**38.52**	**105**	P	**P**	**07 33 09.8**	**-1.9**
BR131				IAmb	IAmb	07 33 19.7	
	comp=Z,13nm,1.1s						
BRTR	**Keskin Array B**	**38.52**	**105**	P	**P**	**07 33 13.2**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=331,slow=5.6,SNR=7.3						
BRTR				LR	LR	07 50 52.0	
	comp=Z,36nm,18.2s,baz=312,slow=39						
BRTR	**Keskin Array B**	**38.52**	**105**	*ce*P	**P**	**07 33 15.1**	**+3.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**38.52**	**105**	P	**P**	**07 33 09.2**	**-2.5**
KIV	**Kislovodsk**	**38.89**	**92**	*e*P	**P**	**07 33 14.2**	**-0.4**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KIV				MLR	MLR		
	comp=Z,322nm,16.0s						
KIV	**Kislovodsk**	**38.89**	**92**	P	**P**	**07 33 12.6**	**-2.0**
KBZ	**Khabaz**	**39.16**	**92**	P	**P**	**07 33 19.6**	**+2.9**
	comp=Z,4.5nm,0.8s,baz=310,slow=15,SNR=6.2						
KBZ				LR	LR	07 49 24.1	
	comp=Z,250nm,21.4s,baz=332,slow=36						
KBZ	**Khabaz**	**39.16**	**92**	*ce*P	**P**	**07 33 18.8**	**+2.1**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YKA	**Yellowknife Ar**	**39.17**	**313**	P	**P**	**07 33 17.4**	**+0.8**
	comp=Z,2.7nm,1.0s,baz=45,slow=8.9,SNR=22						
YKA				PcP	**PcP**	**07 35 24.6**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=43,slow=3.7,SNR=8.4						
YKA				LR	LR	07 48 35.2	
	comp=Z,259nm,19.1s,baz=0.0,slow=35						
YKA	**Yellowknife Ar**	**39.17**	**313**	*ce*P	**P**	**07 33 18.7**	**+2.0**
YKA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FFC	**Flin Flon**	**40.55**	**297**	P	**P**	**07 33 27.1**	**-1.1**
FFC				pmax	pmax		
	comp=Z,13nm,1.4s						
FFC	**Flin Flon**	**40.55**	**297**	P	**P**	**07 33 27.1**	**-1.1**
A21K	**Barrow**	**41.40**	**341**	P	**P**	**07 33 34.1**	**-0.9**
ULM	**Lac du Bonnet**	**41.56**	**289**	LR	LR	07 48 59.6	
	comp=Z,175nm,18.6s,baz=58,slow=34						
ABKAR	**Akbulak array**	**42.03**	**73**	P	**P**	**07 33 38.5**	**-1.9**
TIXI	**Tiksi**	**42.03**	**15**	P	**P**	**07 33 39.0**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,29nm,1.4s						
TIXI	**Tiksi**	**42.03**	**15**	P	**P**	**07 33 39.0**	**-1.1**
TIXI				IAmb	IAmb	07 33 44.3	
	comp=Z,29nm,1.4s						
BMAR	**Burnt Mountain**	**42.86**	**333**	P	**P**	**07 33 46.8**	**-0.3**
GNI	**Garni**	**42.88**	**94**	*ce*P	**P**	**07 33 50.3**	**+2.7**
GNI				pmax	pmax		
	comp=Z,31nm,1.7s						
BRVK	**Borovoye**	**43.16**	**62**	*ce*P	**P**	**07 33 51.4**	**+1.8**
BRVK				pmax	pmax		
	comp=Z,14nm,1.7s						
BRVK	**Borovoye**	**43.16**	**62**	P	**P**	**07 33 47.8**	**-1.8**
MARD	**Mardin**	**43.56**	**100**	P	**P**	**07 33 51.6**	**-1.5**
MARD				IAmb	IAmb	07 33 57.5	
	comp=Z,27nm,1.5s						
TAM	**Tamanrasset**	**44.54**	**149**	P	**P**	**07 34 00.5**	**-0.7**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TAM	**Tamanrasset**	**44.54**	**149**	P	**P**	**07 34 00.5**	**-0.7**
TAM				IAmb	IAmb	07 34 06.8	
	comp=Z,8.6nm,1.3s						
PRP	**Porcupine Dome**	**44.72**	**332**	P	**P**	**07 34 01.9**	**-0.2**
IL31		**45.65**	**332**	P	**P**	**07 34 09.1**	**-0.2**
ILAR	**Eielson Array**	**45.65**	**332**	P	**P**	**07 34 11.3**	**+2.0**
	comp=Z,6.1nm,1.2s,baz=23,slow=5.7,SNR=18						
ILAR				PcP	**PcP**	**07 35 48.5**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=357,slow=4.0,SNR=8.3						
ILAR	**Eielson Array**	**45.65**	**332**	P	**P**	**07 34 09.8**	**+0.4**
MDM	**Murphy Dome**	**45.75**	**333**	P	**P**	**07 34 11.2**	**+1.1**
IMAR	**Indian Mountai**	**45.83**	**337**	P	**P**	**07 34 11.8**	**+1.1**
BCAR	**Beaver Creek A**	**46.07**	**328**	P	**P**	**07 34 12.0**	**-0.8**
L40A	**Anamosa**	**46.14**	**278**	P	**P**	**07 34 13.6**	**+0.2**
BRZS	**Berezniki**	**46.52**	**63**	*e*P	**P**	**07 34 16.9**	**+0.5**
	comp=Z,5.5nm,1.8s,baz=63						
BRZS	**Berezniki**	**46.52**	**63**	*e*P	**P**	**07 34 16.8**	**+0.5**
BRZS				pmax	pmax		
	comp=Z,5.0nm,1.8s						
BILL	**Bilibino**	**47.54**	**358**	⇑*e*P	**P**	**07 34 26.3**	**+2.2**
BILL				*e*		07 35 50.2	
BILL				*e*		07 36 19.1	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,81nm,17.0s						
ZAA0	**Zalesovo Array**	**47.66**	**51**	P	**P**	**07 34 23.1**	**-2.1**
ZAA0				IAmb	IAmb	07 34 28.6	
	comp=Z,10nm,1.5s						
ZALV	**Zalesovo Beam**	**47.66**	**51**	P	**P**	**07 34 26.6**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=325,slow=9.5,SNR=7.6						
ZALV	**Zalesovo Beam**	**47.66**	**51**	*i* P	**P**	**07 34 27.5**	**+2.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**48.14**	**58**	*ce*P	**P**	**07 34 30.4**	**+1.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**48.14**	**58**	P	**P**	**07 34 27.5**	**-1.4**
KURK				IAmb	IAmb	07 34 31.1	
	comp=Z,9.4nm,1.1s						
ANM	**Nome**	**48.91**	**342**	P	**P**	**07 34 33.6**	**-1.1**
ANM				pmax	pmax		
	comp=Z,13nm,1.2s						
ANM	**Nome**	**48.91**	**342**	P	**P**	**07 34 33.6**	**-1.1**
ANM				IAmb	IAmb	07 34 39.1	
	comp=Z,12nm,1.2s						
SEM	**Semipalatinsk**	**48.99**	**57**	*e*P	**P**	**07 34 36.1**	**+0.3**
	comp=Z,3.4nm,1.5s,baz=57						
SEM	**Semipalatinsk**	**48.99**	**57**	*e*P	**P**	**07 34 36.0**	**+0.3**
SEM				pmax	pmax		
	comp=Z,3.0nm,1.5s						
RSSD	**Black Hills**	**49.79**	**290**	P	**P**	**07 34 40.7**	**-1.3**
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.3s						
RSSD	**Black Hills**	**49.79**	**290**	P	**P**	**07 34 40.7**	**-1.3**
GEYT	**Alibeck**	**50.47**	**84**	LR	LR	07 57 51.0	
	comp=Z,61nm,18.2s,baz=265,slow=38						
HRY	**Holter Researc**	**50.71**	**298**	P	**P**	**07 34 48.8**	**0.0**
BTLS	**Baital**	**51.10**	**66**	*e*P	**P**	**07 34 52.7**	**+1.1**
	baz=65						
BTLS	**Baital**	**51.10**	**66**	*e*P	**P**	**07 34 52.7**	**+1.1**
KK31	**Karatay Array**	**51.31**	**70**	P	**P**	**07 34 51.1**	**-2.2**
KK31				pmax	pmax		
	comp=Z,20nm,1.5s						
KK31	**Karatay Array**	**51.31**	**70**	P	**P**	**07 34 51.0**	**-2.2**
KKAR	**Karatay Array**	**51.31**	**70**	P	**P**	**07 34 50.6**	**-2.6**
KKAR				pmax	pmax		
	comp=Z,20nm,1.5s						
KKAR	**Karatay Array**	**51.31**	**70**	P	**P**	**07 34 52.6**	**-0.6**
KKAR	**Karatay Array**	**51.31**	**70**	P	**P**	**07 34 50.6**	**-2.6**
KKAR				IAmb	IAmb	07 34 57.3	
	comp=Z,20nm,1.4s						
BOZ	**Bozeman (W)**	**51.56**	**297**	P	**P**	**07 34 54.0**	**-1.2**
BOZ				pmax	pmax		
	comp=Z,15nm,1.3s						
BOZ	**Bozeman (W)**	**51.56**	**297**	P	**P**	**07 34 54.0**	**-1.2**
BOZ				IAmb	IAmb	07 34 58.6	
	comp=Z,15nm,1.3s						
DZA	**Taraz**	**51.82**	**69**	*e*P	**P**	**07 34 58.8**	**+1.7**
	baz=69						
DZA	**Taraz**	**51.82**	**69**	*e*P	**P**	**07 34 58.7**	**+1.7**
IUG	**Iuzhnay**	**51.92**	**71**	*e*P	**P**	**07 34 59.5**	**+1.5**
	comp=Z,7.6nm,1.8s,baz=70						
IUG	**Iuzhnay**	**51.92**	**71**	*e*P	**P**	**07 34 59.4**	**+1.5**
IUG				pmax	pmax		
	comp=Z,8.0nm,1.8s						
DGZ	**Jazzator, Alta**	**52.11**	**53**	*i* P	**P**	**07 35 00.7**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SEY	**Seymchan**	**52.48**	**6**	*i* P	**P**	**07 35 04.1**	**+2.5**
MK31	**Makanchi Array**	**52.76**	**58**	P	**P**	**07 35 03.3**	**-0.7**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.5s						
MK31	**Makanchi Array**	**52.76**	**58**	P	**P**	**07 35 03.3**	**-0.7**
MK31				IAmb	IAmb	07 35 07.1	
	comp=Z,8.0nm,1.4s						
MKAR	**Makanchi Array**	**52.76**	**58**	P	**P**	**07 35 04.7**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=329,slow=6.2,SNR=11						
MKAR	**Makanchi Array**	**52.76**	**58**	P	**P**	**07 35 03.7**	**-0.3**
LOHW	**Long Hollow**	**52.83**	**294**	P	**P**	**07 35 03.8**	**-1.0**
LOHW				IAmb	IAmb	07 35 08.1	
	comp=Z,7.6nm,1.4s						
KUU	**Kurty**	**52.96**	**65**	*e*P	**P**	**07 35 06.5**	**+1.0**
	comp=Z,8.1nm,1.5s,baz=64						
KUU	**Kurty**	**52.96**	**65**	*e*P	**P**	**07 35 06.4**	**+1.0**
KUU				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ZSN	**Zaisan**	**53.13**	**56**	*e*P	**P**	**07 35 07.6**	**+0.9**
	baz=56						
ZSN	**Zaisan**	**53.13**	**56**	*e*P	**P**	**07 35 07.6**	**+0.9**
BW06	**Boulder Array**	**53.13**	**293**	P	**P**	**07 35 06.5**	**-0.5**
BW06				IAmb	IAmb	07 35 09.3	
	comp=Z,8.8nm,1.1s						
PD31	**Pinedale Array**	**53.13**	**293**	P	**P**	**07 35 06.2**	**-0.9**
PD31				IAmb	IAmb	07 35 09.3	
	comp=Z,8.1nm,1.1s						
PDAR	**Pinedale Array**	**53.13**	**293**	P	**P**	**07 35 07.6**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=56,slow=5.9,SNR=24						
PDAR				LR	LR	07 57 44.6	
	comp=Z,224nm,19.2s,baz=34,slow=36						
PDAR	**Pinedale Array**	**53.13**	**293**	P	**P**	**07 35 06.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**53.17**	**156**	P	**P**	**07 35 06.8**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=342,slow=7.7,SNR=8.6						
TORD				LR	LR	07 59 27.6	
	comp=Z,88nm,19.2s,baz=15,slow=38						
CHKK	**Chushkaly**	**53.24**	**64**	*e*P	**P**	**07 35 08.4**	**+0.8**
	baz=64						
CHKK	**Chushkaly**	**53.24**	**64**	*e*P	**P**	**07 35 08.4**	**+0.8**
AAK	**Ala-Archa**	**53.30**	**67**	*ce*P	**P**	**07 35 10.8**	**+2.7**
AAK				pmax	pmax		
	comp=Z,31nm,1.3s						
MDOK	**Medeo**	**53.85**	**65**	*e*P	**P**	**07 35 13.2**	**+1.0**
	baz=64						
MDOK	**Medeo**	**53.85**	**65**	*e*P	**P**	**07 35 13.2**	**+1.0**
KPKS	**Kokpek**	**54.23**	**63**	*e*P	**P**	**07 35 16.2**	**+1.3**
	comp=Z,7.6nm,2.1s,baz=63						
KPKS	**Kokpek**	**54.23**	**63**	*e*P	**P**	**07 35 16.2**	**+1.3**
KPKS				pmax	pmax		
	comp=Z,8.0nm,2.1s						
MOY	**Mondy**	**54.68**	**42**	*e*P	**P**	**07 35 20.9**	**+2.8**
MOY				pmax	pmax		
	comp=Z,40nm,1.5s						
SHLS	**Shalkode**	**54.79**	**63**	*e*P	**P**	**07 35 22.0**	**+3.0**
	comp=Z,5.8nm,1.3s,baz=62						
SHLS	**Shalkode**	**54.79**	**63**	*e*P	**P**	**07 35 22.0**	**+3.0**
SHLS				pmax	pmax		
	comp=Z,6.0nm,1.3s						
HWUT	**Hardware Ranch**	**54.91**	**294**	P	**P**	**07 35 19.8**	**-0.1**
HWUT				IAmb	IAmb	07 35 23.7	
	comp=Z,6.1nm,1.0s						
RDMU	**Red Mountain**	**54.99**	**292**	P	**P**	**07 35 19.5**	**-1.1**
HVU	**Hansel Valley**	**55.23**	**295**	P	**P**	**07 35 23.1**	**+0.8**
HVU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
HVU	**Hansel Valley**	**55.23**	**295**	P	**P**	**07 35 23.1**	**+0.8**
TCUT	**Toone Canyon**	**55.26**	**293**	P	**P**	**07 35 22.6**	**0.0**
SPUT	**South Promonto**	**55.51**	**294**	P	**P**	**07 35 21.8**	**-2.4**
MPU	**Maple Canyon**	**56.29**	**293**	P	**P**	**07 35 29.3**	**-0.6**
ZAK	**Zakamensk**	**56.48**	**41**	*e*P	P	07 35 22.1	-8.9
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KSH	**Kashi**	**56.53**	**68**	P	**P**	**07 35 34.9**	**+3.3**
KSH				sP	sP	07 35 40.9	+4.4
KSH				pmax	pmax		
	comp=Z,24nm,1.0s						
KSH				pmax	pmax		
	comp=Z,310nm,4.6s						
SRU	**San Rafael Swe**	**56.62**	**291**	P	**P**	**07 35 30.7**	**-1.6**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRU	**San Rafael Swe**	**56.62**	**291**	P	**P**	**07 35 30.7**	**-1.6**
PV01	**Paradox Valley**	**56.67**	**289**	P	**P**	**07 35 32.0**	**-0.7**
PV01				IAmb	IAmb	07 35 35.7	
	comp=Z,12nm,1.2s						
WMQ	**Urumqi**	**57.26**	**56**	*e*P	**P**	**07 35 40.3**	**+3.7**
MSU	**Marysvale**	**57.80**	**292**	P	**P**	**07 35 40.4**	**-0.2**
MSU	**Marysvale**	**57.80**	**292**	P	**P**	**07 35 40.4**	**-0.2**
ANMO	**Albuquerque**	**58.54**	**286**	*ce*P	**P**	**07 35 45.5**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
DBIC	**Dimbokro**	**58.61**	**165**	P	**P**	**07 35 45.9**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=22,slow=1.7,SNR=3.4						
DBIC				LR	LR	08 01 33.1	
	comp=Z,144nm,18.4s,baz=5.0,slow=37						
TIC	**Toumodi**	**58.62**	**165**	*e*P	**P**	**07 35 46.5**	**+0.2**
KIC	**Kosan Boka**	**58.93**	**165**	*e*P	**P**	**07 35 48.7**	**+0.2**
	comp=Z,5.4nm,0.5s						
LIC	**Lamto**	**59.03**	**165**	*e*P	**P**	**07 35 49.4**	**+0.2**
	comp=Z,19nm,0.7s						
SONM	**Songino Array**	**59.66**	**40**	P	**P**	**07 35 53.6**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=320,slow=7.7,SNR=7.9						
SONM				LR	LR	08 04 02.1	
	comp=Z,127nm,18.8s,baz=338,slow=38						
SONM	**Songino Array**	**59.66**	**40**	P	**P**	**07 35 52.5**	**-0.8**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SONM	**Songino Array**	**59.66**	**40**	P	**P**	**07 35 52.5**	**-0.8**
ULN	**Ulaanbaatar**	**59.81**	**40**	*ce*P	**P**	**07 35 57.1**	**+2.7**
ULN				pmax	pmax		
	comp=Z,12nm,2.5s						
WUAZ	**Wupatki**	**60.06**	**290**	P	**P**	**07 35 57.1**	**+0.8**
NVAR	**Mina Array Bea**	**60.26**	**297**	P	**P**	**07 35 59.6**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=52,slow=4.2,SNR=5.0						
NVAR				LR	LR	08 01 37.5	
	comp=Z,522nm,19.1s,baz=10,slow=36						
NVAR	**Mina Array Bea**	**60.26**	**297**	P	**P**	**07 35 56.6**	**-1.1**
NIL	**Nilore**	**60.49**	**73**	P	**P**	**07 35 58.1**	**-1.0**
NIL				pmax	pmax		
	comp=Z,22nm,1.4s						
NIL	**Nilore**	**60.49**	**73**	P	**P**	**07 35 58.1**	**-1.0**
TXAR	**Lajitas Array**	**62.24**	**280**	P	**P**	**07 36 12.6**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=53,slow=3.0,SNR=8.5						
TXAR				LR	LR	08 02 34.0	
	comp=Z,260nm,19.6s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**62.24**	**280**	P	**P**	**07 36 09.3**	**-1.8**
GTA	**Gaotai**	**65.33**	**49**	⇑P	**P**	**07 36 33.3**	**+2.0**
GTA				pP	sP	07 36 37.9	+1.6
GTA				sP	pP	07 36 40.6	+5.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.9s						
HHC	**Hu-ho-hao-te**	**67.53**	**40**	*e*P	**P**	**07 36 47.9**	**+2.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
LZH	**Lanzhou**	**69.65**	**47**	*e*P	**P**	**07 36 59.3**	**+0.5**
LZH				pP	pP	07 37 02.5	+0.1
LZH				sP	sP	07 37 04.9	+1.1
LZH				PP	**PP**	**07 39 27.9**	**-4.3**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,53nm,4.9s						
ROSC	**El Rosal**	**71.89**	**241**	P	**P**	**07 37 14.3**	**+1.5**
	comp=Z,7.3nm,0.7s,baz=129,slow=6.2,SNR=5.0						
XAN	**Xi'an**	**73.11**	**44**	P	**P**	**07 37 23.3**	**+3.8**
XAN				pP	PcP	07 37 32.9	-3.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.8s						
KSRS	**Korea Array**	**74.66**	**28**	LR	LR	08 13 23.2	
	comp=Z,45nm,18.5s,baz=320,slow=38						
NJ2	**Nanjing**	**77.75**	**37**	*e*P	**P**	**07 37 47.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P	**P**	**07 38 21.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=316,slow=6.3,SNR=6.3						

CMAR				LR	LR	08 16 32.7	
	comp=Z,38nm,18.9s,baz=228,slow=36						
CMAR	Chiang Mai Arr	84.16	59	ceP	P	07 38 22.5	+2.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	98.80	143	LR	LR	08 26 50.2	
	comp=Z,126nm,18.5s,baz=344,slow=37						

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*IDC **24** 07:45:04.4±1.1, 51°.23S×138°.82E, h0^{km}, mb4.1/6, mb1 4.2/7, mb1mx4.0/27, mbtmp4.1/7, ML4.0/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/26, Error ellipse: s-maj=84.5km s-min=15.9km az=85.0*

*NEIC **24** 07:45:06.0±1.3, 51°.26S±0°.08×139°.0E±0°.2, h10^{km}±1^{km}, mb4.2/13, Error ellipse: s-maj=25.8km s-min=13.7km az=280.0*

ISC 24 07:45:05.9±0.7**, 51°.26S**±0°.09×**139°.0E**±0°.1**, h10**^{km}**, n35, σ0**^{s}.**58**/24**, mb4.2**/8**, MS3.5**/4**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAU	Tasmania Unive	10.09	37	Pn	Pn	07 47 31.2	+0.4
TOO	Toolangi	14.44	21		Pn	07 48 30.9	+0.5
STKA	Stephens Creek	19.46	7	P	P	07 49 32.7	0.0
	0.3nm,0.3s,baz=168,slow=9.7,SNR=6.1						
STKA				LR	LR	07 55 19.7	
	comp=Z,147nm,20.9s,baz=206,slow=32						
STKA	Stephens Creek	19.46	7	P	P	07 49 32.9	+0.2
MLZ	Mavora Lakes	20.16	84	P	P	07 49 39.5	-0.8
MLZ				IAmb	IAmb	07 49 45.6	
	comp=Z,12nm,0.9s						
H01W1	Cape Leeuwin H	24.26	303	T	T	08 15 45.9	
	baz=139,slow=75,SNR=87						
H01W2	Cape Leeuwin H	24.26	303	T	T	08 15 47.6	
	baz=139,slow=75,SNR=114						
H01W3	Cape Leeuwin H	24.27	303	T	T	08 15 47.6	
	baz=139,slow=75,SNR=71						
THZ	Tophouse	25.00	81	P	P	07 50 31.1	+1.4
QRZ	Quartz Range	25.30	79	P	P	07 50 31.7	-0.7
VNDA	Vanda	27.72	170	P	P	07 50 53.9	0.0
	comp=Z,1.2nm,1.0s,baz=337,slow=6.3,SNR=4.3						
VNDA				LR	LR	08 01 18.2	
	comp=Z,133nm,18.3s,baz=270,slow=35						
VNDA	Vanda	27.72	170	P	P	07 50 53.8	-0.1
VNDA				IAmb	IAmb	07 51 07.1	
	comp=Z,3.0nm,1.1s						
ASAR	Alice Springs	27.83	350	P	P	07 50 54.5	-0.9
	comp=Z,1.1nm,0.7s,baz=173,slow=8.7,SNR=15						
ASAR	Alice Springs	27.83	350	P	P	07 50 55.6	+0.2
AS31	Alice Springs	27.83	350	P	P	07 50 54.9	-0.5
AS31				IAmb	IAmb	07 50 57.4	
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	31.47	352	P	P	07 51 27.1	-0.5
	comp=Z,2.4nm,0.7s,baz=177,slow=8.0,SNR=20						
WRA				LR	LR	08 03 24.5	
	comp=Z,44nm,19.3s,baz=200,slow=35						
WRA	Warramunga Arr	31.47	352	P	P	07 51 27.4	-0.2
WB0	Warramunga Arr	31.64	352	P	P	07 51 28.6	-0.6
WB0				IAmb	IAmb	07 51 55.8	
	comp=Z,10nm,1.2s						
FITZ	Fitzroy Crossi	34.75	337	P	P	07 51 55.5	-0.8
	comp=Z,4.6nm,1.0s,baz=164,slow=7.4,SNR=6.4						
FITZ	Fitzroy Crossi	34.75	337	P	P	07 51 56.0	-0.3
FITZ				IAmb	IAmb	07 52 24.8	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	38.85	180	P	P	07 52 31.3	+0.3
	comp=Z,3.2nm,0.7s,baz=327,slow=1.3,SNR=19						
QSPA	South Pole Qui	38.85	180	P	P	07 52 31.3	+0.3
QSPA				IAmb	IAmb	07 52 31.6	
	comp=Z,3.5nm,0.8s						
BATI	Baumata	42.82	337	LR	LR	08 09 03.0	
	comp=Z,131nm,21.2s,baz=187,slow=34						
KAPI	Kappang	48.81	334	LR	LR	08 14 30.2	
	comp=Z,33nm,18.2s,baz=211,slow=36						
SNAA	Sanae	54.43	194	P	P	07 54 32.6	-0.1
	comp=Z,1.9nm,1.0s,baz=163,slow=5.5,SNR=3.7						
SNAA	Sanae	54.43	194	P	P	07 54 32.9	+0.2
SNAA				IAmb	IAmb	07 54 36.5	
	comp=Z,4.2nm,1.2s						
PPTF	Pamatai, Papee	64.88	87	P	P	07 55 44.8	-0.6
H08S2	Diego Garcia H	69.44	284	T	T	09 12 09.2	
	baz=142,slow=75,SNR=4.7						
H08S1	Diego Carcia H	69.45	284	T	T	09 12 03.6	
	baz=142						
H08S3	Diego Garcia H	69.46	284	T	T	09 12 04.1	
	baz=142,slow=75,SNR=15						
TPUB	Ta-pu	75.98	343	P	P	07 56 53.6	+0.7
H03S1	Juan Fernandez	88.93	149	T	T	09 37 15.5	
	baz=201,slow=74,SNR=10						
H03S2	Juan Fernandez	88.93	149	T	T	09 37 13.3	
	baz=201,slow=74,SNR=11						
H03S3	Juan Fernandez	88.95	149	T	T	09 37 11.4	
	baz=201,slow=74,SNR=13						
GERES	GERESS Array B	145.47	288	PKPbc	PKPab	08 04 43.5	-0.2
	comp=Z,0.3nm,0.3s,baz=146,slow=1.9,SNR=3.7						

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*PDG **24** 07:55:44.4±1.3, 45°.61N×26°.43E, h9^{km}±2^{km}, ML4.2/10, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*

*MOS **24** 07:55:46.1±0.9, 45°.73N×26°.57E, h87^{km}, mb4.2/15, Error ellipse: s-maj=5.4km s-min=3.9km az=105.8*

*SIGU **24** 07:55:46.3, 45°.75N×26°.58E, h100^{km}*

*IDC **24** 07:55:47.2±0.3, 45°.69N×26°.36E, h84^{km}±3^{km}, mb3.8/20, mb1 3.9/27, mb1mx3.8/45, mbtmp4.1/27, MS3.1/11, Ms1 3.1/11, ms1mx2.9/56, Error ellipse: s-maj=12.5km s-min=7.4km az=147.0*

*MED_RC **24** 07:55:47.0±0.4, 45°.67N×26°.62E, h84^{km}±9^{km}, MW4.3/22, Moment Tensor Solution.Mantle waves: s22,c27; Duration: 1^{s}.0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.05±.35; M$_{\theta\theta}$-2.28±.48; M$_{\phi\phi}$0.23±.41; M$_{r\theta}$-1.47±.25; M$_{\theta\phi}$-1.82±.47; M$_{\phi r}$1.89±.18; Best double couple: M$_{0}$3.65000×10^{15} NP1:φ$_{s}$31.00000°, δ52.00000°, λ37.00000°. NP2:φ$_{s}$276.00000°, δ62.00000°, λ136.00000°. Principal axes: T 4.0300, Plg50.0000°, Azm238.0000°; N -0.7500, Plg39.0000°, Azm70.0000°; P -3.2800, Plg6.0000°, Azm335.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*BUC **24** 07:55:47.3±0.2, 45°.71N×26°.57E, h88^{km}±2^{km}, ml4.7/69 Error ellipse: s-maj=1.7km s-min=1.4km az=12.0*

*NEIC **24** 07:55:47.6±2.0, 45°.71N±0°.02×26°.56E±0°.04, h88^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=2.0km az=118.0*

*SOF **24** 07:55:48.9, 45°.54N×26°.45E, h100^{km}, MD4.8*

*BEO **24** 07:55:50.2±0.8, 45°.61N×26°.31E, h49^{km}±3^{km}, ML4.3/18*

*THE **24** 07:55:51.1, 45°.19N×26°.44E, h167^{km}±9^{km}, ML4.4/12, Error ellipse: s-maj=9.8km s-min=1.5km az=174.0*

*PRU **24** 07:56:09.7±0.0, 47°.01N×24°.67E, h0^{km}, M4.7*

ISC 24 07:55:47.0±0.4**, 45°.74N**±0°.02×**26°.54E**±0°.02**, h89**^{km}±3^{km}**, h89**^{km}**:pP-P, n619, σ1**^{s}.**81**/838**, mb4.3**/46**, 142C-143D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.13	35	⇑P	Pn	07 55 59.9	+0.2
PLOR				⇑S	Sn	07 56 10.6	+1.4
PLOR	Plostina	0.13	35	⇑P	Pn	07 55 59.9	+0.2
PLOR				⇑S	Sn	07 56 10.6	+1.4
PLOR	Plostina	0.13	35	P	Pn	07 55 59.9	+0.2
VRI	Vrincioaia	0.18	47	⇑P	Pn	07 56 00.2	+0.4
VRI				⇓S	Sn	07 56 10.0	+0.6
VRI	Vrincioaia	0.18	47	⇑P	Pn	07 56 00.2	+0.4
VRI				⇓S	Sn	07 56 10.0	+0.6
VRI	Vrincioaia	0.18	47	P	Pn	07 56 00.2	+0.4
VRI						07 56 10.0	
VRI	Vrincioaia	0.18	47		Pn	07 56 00.2	+0.4
VRI					Sn	07 56 10.0	+0.6
BISRR	Bisoca	0.23	149	⇑P	Pn	07 56 00.9	+0.8
BISRR				⇑S	Sn	07 56 11.1	+1.3
BISRR	Bisoca	0.23	149	⇑P	Pn	07 56 00.9	+0.8
BISRR				⇑S	Sn	07 56 11.1	+1.3
NEHR	Nehoiu	0.36	209	⇓P	Pn	07 56 01.7	+1.1
NEHR				⇑S	Sn	07 56 11.6	+0.7
NEHR	Nehoiu	0.36	209	⇓P	Pn	07 56 01.7	+1.1
NEHR				⇑S	Sn	07 56 11.6	+0.7
ODBI	Odobesti	0.36	87	⇓P	Pn	07 56 01.9	+1.3
ODBI	Odobesti	0.36	87	⇓P	Pn	07 56 01.9	+1.3
GRER		0.47	140	⇑P	Pn	07 56 03.1	+1.7
GRER		0.47	140	⇑P	Pn	07 56 03.1	+1.7
PETR	Petresti	0.48	92	⇑P	Pn	07 56 02.4	+1.0
PETR				⇑S	Sn	07 56 13.5	+1.3
PETR	Petresti	0.48	92	⇑P	Pn	07 56 02.4	+1.0
PETR				⇑S	Sn	07 56 13.5	+1.3
PETR	Petresti	0.48	92		Pn	07 56 02.4	+1.0
PETR					Sn	07 56 13.5	+1.3
MLR	Muntele Rosu	0.49	239	⇑P	Pn	07 56 02.4	+0.8
MLR				⇑S	Sn	07 56 12.9	+0.3
MLR	Muntele Rosu	0.49	239	LR	LR	07 56 00.9	
	comp=Z,67nm,20.4s,baz=101,slow=39						
MLR				P	Pn	07 56 02.3	+0.6
	919nm,0.3s,baz=347,slow=8.9,SNR=5489						
MLR				S	Sn	07 56 12.2	-0.4
	7µm,0.3s,baz=218,slow=19,SNR=83						
MLR	Muntele Rosu	0.49	239	ePg	Pn	07 56 01.6	-0.1
MLR				eSg	Sn	07 56 08.9	-3.7
MLR	Muntele Rosu	0.49	239	Pn	Pn	07 56 02.4	+0.8
MLR				Sn	Sn	07 56 13.3	+0.7
ISR	Istrita	0.62	180	⇓P	Pn	07 56 03.8	+1.0
ISR				⇑S	Sn	07 56 14.8	+0.3
ISR	Istrita	0.62	180	⇓P	Pn	07 56 03.8	+1.0
ISR				⇑S	Sn	07 56 14.8	+0.3
OZUR		0.63	304	⇓P	Pn	07 56 03.0	+0.2
OZUR				⇑S	Sn	07 56 13.9	-0.8
OZUR		0.63	304	⇓P	Pn	07 56 03.0	+0.2
OZUR				⇑S	Sn	07 56 13.9	-0.8
GHRR		0.68	62	⇑P	Pn	07 56 04.0	+0.8
GHRR				⇓S	Sn	07 56 16.2	+0.9
GHRR		0.68	62	⇑P	Pn	07 56 04.0	+0.8
GHRR				⇓S	Sn	07 56 16.2	+0.9
TESR	Tescani	0.77	6	⇑P	Pn	07 56 04.6	+0.5
TESR				⇑S	Sn	07 56 16.7	-0.2
TESR	Tescani	0.77	6	⇑P	Pn	07 56 04.6	+0.5
TESR				⇑S	Sn	07 56 16.7	-0.2
TESR	Tescani	0.77	6		Pn	07 56 04.6	+0.5
TESR					Sn	07 56 16.8	-0.2
TUDR		0.81	100	⇑P	Pn	07 56 04.5	+0.1
TUDR				⇓S	Sn	07 56 17.3	-0.2
TUDR		0.81	100	⇑P	Pn	07 56 04.5	+0.1
TUDR				⇓S	Sn	07 56 17.3	-0.2
TUDR		0.81	100		Pn	07 56 04.5	+0.1
TUDR					Sn	07 56 17.3	-0.2
DOPR	Dopca	0.84	286	⇓P	Pn	07 56 05.4	+0.6
DOPR				⇑S	Sn	07 56 18.1	0.0
DOPR	Dopca	0.84	286	⇓P	Pn	07 56 05.4	+0.6
DOPR				⇑S	Sn	07 56 18.1	0.0
PGOR	Pogoanele	0.89	159	⇓P	Pn	07 56 06.1	+0.7
PGOR				⇑S	Sn	07 56 20.6	+1.5
PGOR	Pogoanele	0.89	159	⇓P	Pn	07 56 06.1	+0.7
PGOR				⇑S	Sn	07 56 20.6	+1.5
PLAR	PLOIESTI	0.90	204	⇓P	Pn	07 56 06.9	+1.4
PLAR				⇑S	Sn	07 56 19.2	-0.2
PLAR	PLOIESTI	0.90	204	⇓P	Pn	07 56 06.9	+1.4
PLAR				⇑S	Sn	07 56 19.2	-0.2
BIR	Birlad	0.92	55	⇑P	Pn	07 56 06.4	+0.7
BIR				⇑S	Sn	07 56 20.0	+0.3
BIR	Birlad	0.92	55	⇑P	Pn	07 56 06.4	+0.7
BIR				⇑S	Sn	07 56 20.0	+0.3
BIR	Birlad	0.92	55		Pn	07 56 06.4	+0.7
BIR					Sn	07 56 20.0	+0.3
VARL	Varlezi	0.93	80	⇑P	Pn	07 56 06.5	+0.8
VARL				⇑S	Sn	07 56 20.9	+1.0
VARL	Varlezi	0.93	80	⇑P	Pn	07 56 06.5	+0.8
VARL				⇑S	Sn	07 56 20.9	+1.0
VARL	Varlezi	0.93	80		Pn	07 56 06.5	+0.8
VARL					Sn	07 56 20.9	+1.0
SCHL	Schela	0.94	105	⇑P	Pn	07 56 05.8	0.0
SCHL				⇑S	Sn	07 56 18.9	-1.1
SCHL	Schela	0.94	105	⇑P	Pn	07 56 05.8	0.0
SCHL				⇑S	Sn	07 56 18.9	-1.1
SCHL	Schela	0.94	105		Pn	07 56 05.8	0.0
SCHL					Sn	07 56 18.9	-1.1
SULR		1.08	191	⇓P	Pn	07 56 08.7	+1.1
SULR				⇓S	Sn	07 56 22.3	-0.6
SULR		1.08	191	⇓P	Pn	07 56 08.7	+1.1
SULR				⇓S	Sn	07 56 22.3	-0.6
VOIR		1.09	254	⇑P	Pn	07 56 08.2	+0.4
VOIR				⇑S	Sn	07 56 23.1	-0.2
VOIR		1.09	254	⇑P	Pn	07 56 08.2	+0.4
VOIR				⇑S	Sn	07 56 23.1	-0.2
VOIR		1.09	254	P	Pn	07 56 08.1	+0.4
VOIR				S	Sn	07 56 23.0	-0.2
VOIR		1.09	254		Pn	07 56 08.2	+0.4
VOIR					Sn	07 56 23.1	-0.2
GISR	Galati	1.10	105	⇑P	Pn	07 56 08.2	+0.5
GISR				⇓S	Sn	07 56 23.1	-0.3
GISR	Galati	1.10	105	⇑P	Pn	07 56 08.2	+0.5
GISR				⇓S	Sn	07 56 23.1	-0.3
MTUR	Matau	1.16	244	⇓P	Pn	07 56 10.2	+1.7
MTUR	Matau	1.16	244	⇓P	Pn	07 56 10.2	+1.7
JOSR	Joseni	1.20	324	⇓P	Pn	07 56 09.2	+0.3
JOSR	Joseni	1.20	324	⇓P	Pn	07 56 09.2	+0.3
JOSR	Joseni	1.20	324		Pn	07 56 09.2	+0.3
GIUM	Giurgiulesti	1.20	102	⇓P	Pn	07 56 09.9	+1.0
GIUM				⇑S	Sn	07 56 25.8	+0.4
GIUM	Giurgiulesti	1.20	102	⇓P	Pn	07 56 09.9	+1.0
GIUM				⇑S	Sn	07 56 25.8	+0.4
BIZ	Bicaz	1.23	346	⇓P	Pn	07 56 10.7	+1.3
BIZ				⇓S	Sn	07 56 27.7	+1.5
BIZ	Bicaz	1.23	346	⇓P	Pn	07 56 10.7	+1.3
BIZ				⇓S	Sn	07 56 27.7	+1.5
BIZ	Bicaz	1.23	346		Pn	07 56 10.7	+1.3
BIZ					Sn	07 56 27.7	+1.5
VASR	Vaslui	1.25	44	⇑P	Pn	07 56 10.2	+0.7
VASR				⇑S	Sn	07 56 26.4	-0.1
VASR	Vaslui	1.25	44	⇑P	Pn	07 56 10.2	+0.7
VASR				⇑S	Sn	07 56 26.4	-0.1
VASR	Vaslui	1.25	44		Pn	07 56 10.2	+0.7
VASR					Sn	07 56 26.4	-0.1
CFR	Carcaliu	1.26	116	⇑P	Pn	07 56 09.5	-0.1
CFR				⇑S	Sn	07 56 25.1	-1.6
CFR	Carcaliu	1.26	116	⇑P	Pn	07 56 09.5	-0.1
CFR				⇑S	Sn	07 56 25.1	-1.6
CFR	Carcaliu	1.26	116	P	Pn	07 56 09.5	-0.1
CFR						07 56 25.1	
CFR	Carcaliu	1.26	116		Pn	07 56 09.5	-0.1
CFR					Sn	07 56 25.1	-1.6
AMRR	Amara	1.26	153	⇓P	Pn	07 56 10.4	+0.7
AMRR				⇑S	Sn	07 56 27.4	+0.6
AMRR	Amara	1.26	153	⇓P	Pn	07 56 10.4	+0.7
AMRR				⇑S	Sn	07 56 27.4	+0.6
LEHL	Lehliu	1.28	171	⇑P	Pn	07 56 10.6	+0.6
LEHL				⇓S	Sn	07 56 28.0	+0.7
LEHL	Lehliu	1.28	171	⇑P	Pn	07 56 10.6	+0.6
LEHL				⇓S	Sn	07 56 28.0	+0.7
INCR	INCERC-Sediu C	1.33	192	⇓P	Pn	07 56 11.2	+0.7
INCR				⇓S	Sn	07 56 28.7	+0.4
INCR	INCERC-Sediu C	1.33	192	⇓P	Pn	07 56 11.2	+0.7
INCR				⇓S	Sn	07 56 28.7	+0.4
ARR	Arges	1.39	255	⇑P	Pn	07 56 12.3	+1.0
ARR				⇑S	Sn	07 56 29.9	+0.1
ARR	Arges	1.39	255	⇑P	Pn	07 56 12.3	+1.0
ARR				⇑S	Sn	07 56 29.9	+0.1
STFAR	Stefanesti-Arg	1.42	232	⇑P	Pn	07 56 13.0	+1.3
STFAR				⇑S	Sn	07 56 32.0	+1.7
STFAR	Stefanesti-Arg	1.42	232	⇑P	Pn	07 56 13.0	+1.3
STFAR				⇑S	Sn	07 56 32.0	+1.7
HARR	Harsova	1.44	136	⇓P	Pn	07 56 12.2	+0.3
HARR	Harsova	1.44	136	⇓P	Pn	07 56 12.2	+0.3
HARR	Harsova	1.44	136	P	Pn	07 56 12.2	+0.3
HARR	Harsova	1.44	136		Pn	07 56 12.2	+0.3
BUC1	Bucharest	1.44	195	⇓P	Pn	07 56 12.5	+0.6
BUC1				⇓S	Sn	07 56 31.0	+0.2
BUC1	Bucharest	1.44	195	⇓P	Pn	07 56 12.5	+0.6
BUC1				⇓S	Sn	07 56 31.0	+0.2
BUC1	Bucharest	1.44	195	P	Pn	07 56 12.5	+0.6
BUC1						07 56 31.0	
BUC1	Bucharest	1.44	195		Pn	07 56 12.5	+0.6
BUC1					Sn	07 56 31.0	+0.2
MDB	Medias	1.56	286	⇓P	Pn	07 56 14.7	+1.3
MDB				⇓S	Sn	07 56 35.7	+2.3
MDB	Medias	1.56	286	⇓P	Pn	07 56 14.7	+1.3
MDB				⇓S	Sn	07 56 35.7	+2.3
SGRR	Singureni	1.57	195	⇓P	Pn	07 56 14.0	+0.5
SGRR				⇑S	Sn	07 56 33.4	-0.2
SGRR	Singureni	1.57	195	⇓P	Pn	07 56 14.0	+0.5
SGRR				⇑S	Sn	07 56 33.4	-0.2
SGRR	Singureni	1.57	195		Pn	07 56 14.0	+0.5
SGRR					Sn	07 56 33.4	-0.2
TPGR	Topolog	1.59	123	⇑S	Sn	07 56 32.9	-1.3
TPGR	Topolog	1.59	123	⇑S	Sn	07 56 32.9	-1.3
TLBR	Topalu	1.60	138	⇓P	Pn	07 56 14.3	+0.3
TLBR				⇓S	Sn	07 56 33.1	-1.3
TLBR	Topalu	1.60	138	⇓P	Pn	07 56 14.3	+0.3
TLBR				⇓S	Sn	07 56 33.1	-1.3
TLBR	Topalu	1.60	138		Pn	07 56 14.3	+0.3
TLBR					Sn	07 56 33.1	-1.3
IAS	Iasi	1.61	26	⇓P	Pn	07 56 14.6	+0.5
IAS				⇑S	Sn	07 56 33.7	-0.9
IAS	Iasi	1.61	26	⇓P	Pn	07 56 14.6	+0.5
IAS				⇑S	Sn	07 56 33.7	-0.9
PRAR	RASCA	1.63	353	⇓P	Pn	07 56 15.5	+1.1
PRAR	RASCA	1.63	353	⇓P	Pn	07 56 15.5	+1.1
HUMR	Humele	1.64	223	⇓P	Pn	07 56 14.9	+0.5
HUMR	Humele	1.64	223	⇓P	Pn	07 56 14.9	+0.5
HUMR	Humele	1.64	223		Pn	07 56 14.9	+0.5
TLCR		1.69	108	⇓P	Pn	07 56 15.7	+0.6
TLCR		1.69	108	⇓P	Pn	07 56 15.7	+0.6
TLCR		1.69	108	P	Pn	07 56 15.7	+0.6
TLCR		1.69	108		Pn	07 56 15.7	+0.6
CVDA	Cernavoda	1.76	142	⇓P	Pn	07 56 16.5	+0.5
CVDA				⇓S	Sn	07 56 37.0	-1.1
CVDA	Cernavoda	1.76	142	⇓P	Pn	07 56 16.5	+0.5
CVDA				⇓S	Sn	07 56 37.0	-1.1
CVDA	Cernavoda	1.76	142		Pn	07 56 16.5	+0.5
CVDA					Sn	07 56 37.0	-1.1
TIRR	Tirgusor	1.85	133	⇓P	Pn	07 56 17.4	+0.3
TIRR				⇑S	Sn	07 56 38.4	-1.6
TIRR	Tirgusor	1.85	133	⇓P	Pn	07 56 17.4	+0.3
TIRR				⇑S	Sn	07 56 38.4	-1.6
TIRR	Tirgusor	1.85	133	P	Pn	07 56 17.3	+0.3
TIRR						07 56 38.6	
TIRR	Tirgusor	1.85	133	Pn	Pn	07 56 17.3	+0.2
TIRR				Sn	Sn	07 56 38.6	-1.4
ICOR	Ion Corvin	1.86	151	⇓P	Pn	07 56 17.9	+0.7
ICOR				⇑S	Sn	07 56 39.7	-0.5
ICOR	Ion Corvin	1.86	151	⇓P	Pn	07 56 17.9	+0.7
ICOR				⇑S	Sn	07 56 39.7	-0.5
ICOR	Ion Corvin	1.86	151		Pn	07 56 17.9	+0.7
ICOR					Sn	07 56 39.7	-0.5
COPA	Copaceanca	1.86	211	⇓P	Pn	07 56 17.6	+0.3
COPA				⇓S	Sn	07 56 39.9	-0.5
COPA	Copaceanca	1.86	211	⇓P	Pn	07 56 17.6	+0.3
COPA				⇓S	Sn	07 56 39.9	-0.5
JURR	Jurilovca	1.92	120	⇑P	Pn	07 56 18.9	+0.9
JURR	Jurilovca	1.92	120	⇑P	Pn	07 56 18.9	+0.9
MILM	Milestii Mici	1.96	52	⇑P	Pn	07 56 19.0	+0.4
MILM	Milestii Mici	1.96	52	⇑P	Pn	07 56 19.0	+0.4
LOT	Lotru	1.97	262	⇑P	Pn	07 56 19.2	+0.4
LOT				⇓S	Sn	07 56 43.0	0.0
LOT	Lotru	1.97	262	⇑P	Pn	07 56 19.2	+0.4
LOT				⇓S	Sn	07 56 43.0	0.0
KIS	Kishinev	2.02	51	⇓P	Pn	07 56 19.9	+0.6
KIS				⇓S	Sn	07 56 42.8	-1.1
KIS	Kishinev	2.02	51	⇑iP	Pn	07 56 19.9	+0.6
	900nm,0.1s						
KIS				eS	Sn	07 56 42.6	-1.4
	4µm,0.2s						
KIS				dur		20 00 44.4	
KIS	Kishinev	2.02	51	⇓P	Pn	07 56 19.9	+0.6
KIS				⇓S	Sn	07 56 42.8	-1.1
KIS	Kishinev	2.02	51	c iP	Pn	07 56 19.9	+0.6
KIS				eS	Sn	07 56 43.0	-1.0
KIS				pmax	pmax		
	comp=Z,900nm,0.1s						
KIS				smax	smax		
	comp=N,4µm,0.2s						
KIS				smax	smax		
	comp=E,4µm,0.1s						
KIS	Kishinev	2.02	51	P	Pn	07 56 19.9	+0.6
KIS				Pm		07 56 20.4	
KIS				S	Sn	07 56 42.6	-1.4
KIS				Sm		07 56 42.7	
KIS				m		07 56 44.0	
ARCR	ARCALIA	2.02	312	⇓P	Pn	07 56 19.8	+0.4
ARCR	ARCALIA	2.02	312	⇓P	Pn	07 56 19.8	+0.4
MFTR	Murfatlar	2.06	139	⇓P	Pn	07 56 20.1	+0.3
MFTR				⇓S	Sn	07 56 43.4	-1.6
MFTR	Murfatlar	2.06	139	⇓P	Pn	07 56 20.1	+0.3
MFTR				⇓S	Sn	07 56 43.4	-1.6
BURAR	Bucovina Array	2.08	335	⇓P	Pn	07 56 22.1	+1.8
BURAR	Bucovina Array	2.08	335	⇓P	Pn	07 56 22.1	+1.8
BURAR	Bucovina Array	2.08	335	P	Pn	07 56 21.5	+1.2
BURAR	Bucovina Array	2.08	335	Pn	Pn	07 56 21.5	+1.2
BUR08	Bucovina Ar. S	2.11	335	Pn	Pn	07 56 22.1	+1.4
RAZG	Razgrad	2.18	181	⇓P	Pn	07 56 21.5	0.0
RAZG				⇓S	Sn	07 56 47.4	-0.4
RAZG	Razgrad	2.18	181	⇓P	Pn	07 56 21.5	0.0
RAZG				⇓S	Sn	07 56 47.4	-0.4
TSCT	Constanta Port	2.18	136	⇑P	Pn	07 56 21.8	+0.3
TSCT				⇓S	Sn	07 56 46.4	-1.5
TSCT	Constanta Port	2.18	136	⇑P	Pn	07 56 21.8	+0.3
TSCT				⇓S	Sn	07 56 46.4	-1.5
TSCT	Constanta Port	2.18	136		Pn	07 56 21.8	+0.3
TSCT					Sn	07 56 46.4	-1.5
EFOR	EFORIE	2.23	137	⇑P	Pn	07 56 22.6	+0.4
EFOR				⇓S	Sn	07 56 47.8	-1.2
EFOR	EFORIE	2.23	137	⇑P	Pn	07 56 22.6	+0.4
EFOR				⇓S	Sn	07 56 47.8	-1.2
ZIMR		2.25	202	⇓P	Pn	07 56 22.5	+0.2
ZIMR				⇑S	Sn	07 56 48.2	-1.2
ZIMR		2.25	202	⇓P	Pn	07 56 22.5	+0.2
ZIMR				⇑S	Sn	07 56 48.2	-1.2
ZIMR		2.25	202	P	Pn	07 56 22.5	+0.2
ZIMR						07 56 48.2	
ZIMR		2.25	202		Pn	07 56 22.5	+0.2
ZIMR					Sn	07 56 48.2	-1.2
CJR	Cluj-Napoca	2.26	296	⇓P	Pn	07 56 23.3	+0.7
CJR				⇑S	Sn	07 56 52.6	+2.7
CJR	Cluj-Napoca	2.26	296	⇓P	Pn	07 56 23.3	+0.7
CJR				⇑S	Sn	07 56 52.6	+2.7
VLAD	Vladila	2.31	222	⇓P	Pn	07 56 23.1	-0.2
VLAD	Vladila	2.31	222	⇓P	Pn	07 56 23.1	-0.2
VLAD	Vladila	2.31	222		Pn	07 56 23.1	-0.2
TSSL	Sulina	2.32	103	⇓P	Pn	07 56 24.3	+1.0
TSSL				⇑S	Sn	07 56 51.4	+0.3
TSSL	Sulina	2.32	103	⇓P	Pn	07 56 24.3	+1.0
TSSL				⇑S	Sn	07 56 51.4	+0.3
PSN	Preselentsi	2.37	150	i P	Pn	07 56 24.8	+0.8
MANR	Mangalia	2.42	142	⇑P	Pn	07 56 24.9	+0.3
MANR	Mangalia	2.42	142	⇑P	Pn	07 56 24.9	+0.3
TSMN	Mangalia Port-	2.43	142	⇑P	Pn	07 56 23.6	-1.2
TSMN	Mangalia Port-	2.43	142	⇑P	Pn	07 56 23.6	-1.2
SZH	Strazhica	2.51	190	i P	Pn	07 56 25.9	0.0
DEV	Deva	2.55	274	⇑P	Pn	07 56 27.8	+1.5
DEV				⇓S	Sn	07 56 58.1	+1.6
DEV	Deva	2.55	274	⇑P	Pn	07 56 27.8	+1.5
DEV				⇓S	Sn	07 56 58.1	+1.6
DEV	Deva	2.55	274		Pn	07 56 27.9	+1.5
DEV					Sn	07 56 58.1	+1.6
CHRU	Chernivtsi	2.59	351	ePn	Pn	07 56 21.3	-5.6
CHRU				eSn	Sn	07 56 50.6	-7.0
SRE	Strehaia	2.59	247	⇑P	Pn	07 56 27.6	+0.6
SRE				⇑S	Sn	07 56 57.3	-0.4
SRE	Strehaia	2.59	247	⇑P	Pn	07 56 27.6	+0.6
SRE				⇑S	Sn	07 56 57.3	-0.4
PRD	Provadia	2.62	166	i P	Pn	07 56 28.4	+1.1
GZR	Gura Zlata	2.67	264	⇓P	Pn	07 56 28.8	+0.8
GZR				⇑S	Sn	07 57 00.5	+1.0
GZR	Gura Zlata	2.67	264	⇓P	Pn	07 56 28.8	+0.8
GZR				⇑S	Sn	07 57 00.5	+1.0
GZR	Gura Zlata	2.67	264	ePn	Pn	07 56 28.6	+0.6
PVL	Pavlikeni	2.67	199	i P	Pn	07 56 29.5	+1.5
KALB	Balgarevo	2.69	149	⇑P	Pn	07 56 29.2	+0.9
KALB				⇓S	Sn	07 57 00.1	0.0
KALB	Balgarevo	2.69	149	⇑P	Pn	07 56 29.2	+0.9
KALB				⇓S	Sn	07 57 00.1	0.0
SORM	Soroca	2.70	27	⇓P	Pn	07 56 28.2	-0.1
SORM	Soroca	2.70	27	⇓P	Pn	07 56 28.2	-0.1
ROIA	ROIAK	2.72	167	i P	Pn	07 56 29.4	+0.8
PLVB	Pleven	2.73	211	⇓P	Pn	07 56 28.8	0.0
PLVB	Pleven	2.73	211	⇓P	Pn	07 56 28.8	0.0
KSV	Kosov	2.76	339	ePn	Pn	07 56 30.3	+1.0
KSV				Pm		07 56 32.0	
KSV				eSn	Sn	07 57 02.8	+1.0
KSV				Sm		07 57 11.1	
RAKU	Rahkiv	2.81	325	ePn	Pn	07 56 30.8	+1.0
RAKU				Pm		07 56 31.7	
RAKU				eSn	Sn	07 57 04.4	+1.6
RAKU				Sm		07 57 35.7	
KMPD	K-Podol'skiy	2.82	359	ePn	Pn	07 56 28.9	-1.1

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KMPD                               eSn     Sn       07 56 59.7 -3.4
NSLU  Nyzhne Selyshc   2.84 331   ePn     Pn       07 56 36.6 +6.3
BAIL  Bailesti         2.85 234   ⇓P      Pn       07 56 30.1 -0.3
BAIL                              ⇑S      Sn       07 57 03.3 -0.6
BAIL  Bailesti         2.85 234   ⇓P      Pn       07 56 30.1 -0.3
BAIL                              ⇑S      Sn       07 57 03.3 -0.6
DRGR                   2.86 293   ⇓P      Pn       07 56 31.0 +0.4
DRGR                   2.86 293   ⇓P      Pn       07 56 31.0 +0.4
DRGR                   2.86 293   ePn     Pn       07 56 31.1 +0.6
DRGR                              eSn     Sn       07 57 02.9 -1.2
NDNU  Novodnistrovsk   2.91  11   ePn     Pn       07 56 31.1 -0.1
NDNU                               Pm              07 56 31.8
NDNU                              eSn     Sn       07 57 02.6 -2.6
NDNU                               Sm              07 57 03.5
RMGR  Halanga-Turnu    2.93 250   ⇓P      Pn       07 56 31.9 +0.5
RMGR  Halanga-Turnu    2.93 250   ⇓P      Pn       07 56 31.9 +0.5
PUNG  Punghina         2.95 241   ⇑P      Pn       07 56 31.2 -0.5
PUNG  Punghina         2.95 241   ⇑P      Pn       07 56 31.2 -0.5
PUNG  Punghina         2.95 241   ePn     Pn       07 56 31.1 -0.6
PUNG                              eSn     Sn       07 57 02.8 -3.4
HERR  Herculane        3.04 255   ⇑P      Pn       07 56 33.1 +0.2
HERR  Herculane        3.04 255   ⇑P      Pn       07 56 33.1 +0.2
HERR  Herculane        3.04 255           Pn       07 56 33.1 +0.2
DJES  Djerdap          3.04 251   ePn     Pn       07 56 32.2 -0.8
DJES                              eSn     Sn       07 57 03.5 -4.9
JMB   Yambol           3.27 179   i P     Pn       07 56 36.1 -0.1
STNU  Starunia         3.28 336   ePn     Pn       07 56 37.5 +1.3
KORU  Korolevo         3.36 317   ePn     Pn       07 56 37.9 +0.7
TRSU  Trosnyk          3.40 315   ePn     Pn       07 56 38.5 +0.7
SIRR  Siria            3.44 281   ⇓P      Pn       07 56 39.7 +1.3
SIRR  Siria            3.44 281   ⇓P      Pn       07 56 39.7 +1.3
SIRR  Siria            3.44 281   ePn     Pn       07 56 39.3 +0.9
BZS   Buzias           3.45 270   ⇑P      Pn       07 56 39.0 +0.5
BZS                               ⇓S      Sn       07 57 19.0 +0.6
BZS   Buzias           3.45 270   ⇑P      Pn       07 56 39.0 +0.5
BZS                               ⇓S      Sn       07 57 19.0 +0.6
BZS   Buzias           3.45 270   ePn     Pn       07 56 38.8 +0.3
MEZ   Mezhgor'ye       3.46 324   ePn     Pn       07 56 40.1 +1.5
BLKB  Belogradchik     3.48 234   eSn     Sn       07 57 13.3 -5.8
BRIU  Brid             3.54 318   ePn     Pn       07 56 40.5 +0.8
MDVR  Moldovita        3.54 256   ⇑P      Pn       07 56 40.0 +0.3
MDVR  Moldovita        3.54 256   ⇑P      Pn       07 56 40.0 +0.3
MDVR  Moldovita        3.54 256   ePn     Pn       07 56 39.8  0.0
LTVH  Ltavrtes, Hu     3.60 299⇓  ePN     Pn       07 56 41.6 +1.1
PGB   Panagyurishte    3.62 209   i P     Pn       07 56 41.8 +0.9
ZAGS  Zajecar          3.62 239   ePn     Pn       07 56 39.2 -1.6
ZAGS                              eSn     Sn       07 57 17.5 -5.0
BERU  Beregovo         3.65 314   ePn     Pn       07 56 41.6 +0.5
KUBS  Kucevo           3.69 251   ePn     Pn       07 56 40.4 -1.4
KUBS                              eSn     Sn       07 57 19.3 -5.0
ZAPS  Zavoj            3.73 230   ePn     Pn       07 56 42.2 -0.1
ZAPS                              eSn     Sn       07 57 20.0 -5.2
DIM   Dimitrovgrad     3.76 192   i P     Pn       07 56 42.6 -0.1
MUKU  Mukachevo        3.78 317   ePn     Pn       07 56 43.7 +0.8
MORS  Morshin          3.84 333   ePn     Pn       07 56 44.9 +1.2
PLD   Plovdiv          3.87 201   i P     Pn       07 56 43.4 -0.8
EDRB  Edirne           3.90 178    P      Pn       07 56 44.9 +0.3
EDRB                               S      Sn       07 57 26.6 -2.6
VTS   Vitosha          3.92 218   ⇓P      Pn       07 56 45.3 +0.2
VTS   Vitosha          3.92 218   ⇓P      Pn       07 56 45.3 +0.2
VTS   Vitosha          3.92 218   i P     Pn       07 56 45.6 +0.5
HOLU  Holmets          3.98 316   ePn     Pn       07 56 46.1 +0.5
SVIS  Svilajnac        4.05 251   ePn     Pn       07 56 46.8 +0.1
UZH   Uzhgorod         4.09 316d  iP      Pn       07 56 47.7 +0.6
UZH                               eS      Sn       07 57 34.2 +0.4
UZH                                pmax   pmax
      comp=Z,10.0nm,0.8s
UZH                                MLR    MLR
      comp=N,50nm,1.0s
UZH                                MLR    MLR
      comp=E,40nm,1.0s
UZH                                MLR    MLR
      comp=Z,10.0nm,1.0s
UZH   Uzhgorod         4.09 316   ePn     Pn       07 56 48.0 +0.9
AMBH  Ambrzfalva       4.09 281⇑  ePN     Pn       07 56 49.0 +1.9
SHIU  Shidnytsya       4.09 329   ePn     Pn       07 56 48.8 +1.6
RZN   Rozhen           4.26 199   i P     Pn       07 56 50.1 +0.4
KOLS  Kolonicke sedl   4.31 319   eP      Pn       07 56 51.3 +1.1
KOLS  Kolonicke sedl   4.31 319   eP      Pn       07 56 51.3 +1.1
LVV   L'vov            4.42 338   eP      Pn       07 56 52.9 +1.4
LVV                               eS      Sn       07 57 42.9 +1.2
LVV                                pmax   pmax
      comp=Z,1µm,1.0s
LVV                                smax   smax
      comp=E,1µm,0.8s
LVV                                smax   smax
      comp=N,790nm,0.7s
LVV                                MLR    MLR
      comp=Z,500nm,4.0s
LVV                                MLR    MLR
      comp=N,600nm,3.5s
LVV   L'vov            4.42 338   ePn     Pn       07 56 53.3 +1.8
LVV                               eSn     Sn       07 57 43.1 +1.4
LVV                                Sm              07 57 45.5
GRUS  Gruza            4.54 248   ePn     Pn       07 56 52.9 -0.4
GRUS                              eSn     Sn       07 57 38.4 -6.4
TRUS  Trudelj          4.61 253   ePn     Pn       07 56 54.0 -0.2
TRUS                              eSn     Sn       07 57 42.6 -3.9
KKB   Krupnik          4.61 214   i P     Pn       07 56 54.9 +0.6
RDO   Rodhopi          4.65 189    P      Pn       07 56 54.8  0.0
RDO                                S      Sn       07 57 44.6 -2.9
      comp=N,1µm,0.6s
KWP   Kalwaria Pacla   4.67 328   i P     Pn       07 56 57.3 +2.3
KWP   Kalwaria Pacla   4.67 328    P      Pn       07 56 57.1 +2.1
KWP   Kalwaria Pacla   4.67 328           Pn       07 56 57.1 +2.1
CRVS  Cervenica-Dubn   4.68 314   eP      Pn       07 56 56.1 +0.9
CRVS  Cervenica-Dubn   4.68 314   eP      Pn       07 56 56.1 +0.9
NVR   Nevrokopi        4.80 205    P      Pn       07 56 56.9  0.0
NVR                                S      Sn       07 57 48.2 -3.1
      comp=N,945nm,0.5s
ALN   Alexandroupoli   4.86 184    P      Pn       07 56 57.5 -0.1
ALN                                S      Sn       07 57 49.6 -2.9
      comp=N,388nm,0.7s
ALN   Alexandroupoli   4.86 184    P      Pn       07 56 57.9 +0.3
ALN   Alexandroupoli   4.86 184    Pn     Pn       07 56 57.9 +0.3
DIVS  Divibare         4.93 253   ePn     Pn       07 56 58.4 -0.3
DIVS                              eSn     Sn       07 57 48.0 -6.5
DIVS  Divibare         4.93 253   ePn     Pn       07 56 58.6 -0.1
DIVS  Divibare         4.93 253           Pn       07 56 59.0 +0.3
KECS  Kecovo           4.96 306   eP      Pn       07 57 00.8 +1.9
KECS  Kecovo           4.96 306   eP      Pn       07 57 00.8 +1.9
KAVA  Kavala           4.97 198    P      Pn       07 56 58.8 -0.3
KAVA                               S      Sn       07 57 51.9 -3.4
      comp=N,778nm,0.7s
ENEZ  Enez             5.01 183    P      Pn       07 56 59.7  0.0
ENEZ                               S      Sn       07 57 52.5 -3.8
ISK   Istanbul-Kandi   5.02 158    P      Pn       07 56 59.5 -0.3
IVAS  Ivanjica         5.04 247   ePn     Pn       07 56 59.0 -1.2
IVAS                              eSn     Sn       07 57 51.4 -5.8
PSZ   Piszkesteto      5.05 298⇑  ePN     Pn       07 57 00.9 +0.6
PSZ   Piszkesteto      5.05 298    P      Pn       07 57 00.7 +0.4
PSZ   Piszkesteto      5.05 298    Pn     Pn       07 57 00.7 +0.4
SRS   Serrai           5.10 206    P      Pn       07 57 00.9  0.0
SRS                                S      Sn       07 57 55.7 -2.7
      comp=N,798nm,0.6s
TEKS  Tekeris          5.10 259   ePn     Pn       07 57 01.2 +0.3
TEKS                              eSn     Sn       07 57 53.3 -5.2
TEKS  Tekeris          5.10 259   ePn     Pn       07 57 01.2 +0.3
SEV   Sevastopol'      5.18 101   eP      Pn       07 57 01.7 -0.3
SEV                               eS      Sn       07 57 57.1 -3.3
SEV   Sevastopol'      5.18 101    P      Pn       07 57 01.7 -0.3
SEV                                Pm              07 57 07.0
SEV                                S      Sn       07 57 57.1 -3.3
SEV                                Sm              07 58 00.2
AKASG Malin Array Be   5.28  19    P      Pn       07 57 02.8 -0.4
      comp=N,65nm,0.3s,baz=207,slow=12,SNR=166
AKASG                              S      Sn       07 57 58.2 -4.4
      comp=N,247nm,0.3s,baz=202,slow=22,SNR=16
AKASG Malin Array Be   5.28  19           Pn       07 57 01.2 -2.0
AKBB  Malin Array Si   5.28  19   i P     Pn       07 57 02.7 -0.5
AKBB  Malin Array Si   5.28  19           Pn       07 57 02.6 -0.6
VAY   Valandovo        5.28 215   i Pn    Pn       07 57 04.0 +0.7
KNT   Kendrikon        5.29 211    P      Pn       07 57 03.8 +0.3
KNT                                S      Sn       07 57 59.7 -3.4
      comp=N,612nm,0.5s
SJES  Sjenica          5.31 244   ePn     Pn       07 57 03.9  0.0
SJES  Sjenica          5.31 244   ePn     Pn       07 57 03.6 -0.3
SMTH  Samothraki Isl   5.32 188    P      Pn       07 57 03.2 -0.7
SIM   Simferopol'      5.40  96   eP      Pn       07 57 04.3 -0.6
SIM                               eS      Sn       07 58 01.0 -4.7
SIM                                pmax   pmax
      comp=Z,73nm,0.6s
SIM                                smax   smax
      comp=N,340nm,0.3s
SIM                                smax   smax
      comp=E,236nm,0.3s
SIM   Simferopol'      5.40  96    P      Pn       07 57 04.3 -0.6
SIM                                Pm              07 57 05.8
SIM                                S      Sn       07 58 01.6 -4.1
SIM                                Sm              07 58 05.2
BBLS  Lazi&#263;i      5.41 252   ePn     Pn       07 57 05.3 +0.1
BBLS                              eSn     Sn       07 58 01.2 -5.0
BBLS  Lazi&#263;i      5.41 252   ePn     Pn       07 57 05.3 +0.1
SOH   Sokhos           5.44 206    P      Pn       07 57 05.8 +0.2
SOH                                S      Sn       07 58 03.8 -3.0
      comp=E,735nm,0.5s
MORH  Mrgy, Hungar     5.53 278⇓  ePN     Pn       07 57 07.8 +1.1
MORH  Mrgy, Hungar     5.53 278   ePn     Pn       07 57 07.4 +0.8
YAL   Yalta            5.53 100   eP      Pn       07 57 05.9 -0.8
YAL                               eS      Sn       07 58 04.7 -4.2
YAL   Yalta            5.53 100    P      Pn       07 57 05.9 -0.8
YAL                                S      Sn       07 58 04.7 -4.2
RUDO  Rudo             5.54 250   ePn     Pn       07 57 05.6 -1.2
IVA   Berane           5.57 241⇑  iPn     Pn       07 57 07.6 +0.3
IVA                               i Sn    Sn       07 58 06.9 -3.1
GADA  Gvkgeada         5.57 185    P      Pn       07 57 07.0 -0.3
NIE   Niedzica         5.60 313   eP      Pn       07 57 09.2 +1.5
HAPS  Han Pijesak,Bl   5.64 256   ePn     Pn       07 57 06.8 -1.5
PLE   Pljevlja         5.65 247⇓  iPn     Pn       07 57 08.8 +0.3
PLE                               i Sn    Sn       07 58 09.0 -3.1
GRG   Griva            5.66 214    P      Pn       07 57 08.7 +0.2
ALU   Alushta          5.66  98   eP      Pn       07 57 08.5 +0.1
ALU                               eS      Sn       07 58 10.8 -1.1
ALU   Alushta          5.66  98    P      Pn       07 57 08.5 +0.1
ALU                                Pm              07 57 16.0
ALU                                S      Sn       07 58 10.8 -1.1
ALU                                Sm              07 58 12.9
PVY   Plav             5.68 239⇓  iPn     Pn       07 57 09.1 +0.1
PVY                               i Sn    Sn       07 58 09.7 -3.2
OUR   Ouranopolis      5.72 200    P      Pn       07 57 09.3  0.0
HORT  Hortiatis        5.72 207    P      Pn       07 57 09.5  0.0
HORT                               S      Sn       07 58 10.4 -3.4
      comp=E,192nm,0.9s
PLG   Polygyros        5.83 204    P      Pn       07 57 11.0 +0.2
LANS  Liptovska Anna   5.88 308   eP      Pn       07 57 13.6 +2.0
LANS  Liptovska Anna   5.88 308   eP      Pn       07 57 13.5 +2.0
EZN   Ezine            5.92 182    P      Pn       07 57 11.8 -0.2
LIA   Limnos Island    5.93 190    P      Pn       07 57 11.5 -0.6
VYHS  Vyhne            5.93 300   eP      Pn       07 57 13.2 +1.0
VYHS  Vyhne            5.93 300   eP      Pn       07 57 13.2 +1.0
SRO   Srobarova        6.02 293   eP      Pn       07 57 15.6 +2.3
SRO   Srobarova        6.02 293   eP      Pn       07 57 15.6 +2.3
SUDU  Sudak            6.03  95    P      Pn       07 57 13.2 -0.3
SUDU                               Pm              07 57 24.5
SUDU                               S      Sn       07 58 18.1 -2.9
SUDU                               Sm              07 58 21.7
NKY   Niksic           6.16 244⇓  iPn     Pn       07 57 15.6 +0.2
NKY                               i Sn    Sn       07 58 21.1 -3.3
PAIG  Paliouri         6.18 201    P      Pn       07 57 15.4 -0.2
PDG   Podgorica        6.20 240   ePn     Pn       07 57 16.6 +0.7
PDG   Podgorica        6.20 240    Pn     Pn       07 57 16.8 +0.9
TTG   Podgorica        6.20 240⇑  iPn     Pn       07 57 16.2 +0.3
TTG                               i Sn    Sn       07 58 22.1 -3.2
FNA   Florina          6.23 219    P      Pn       07 57 16.6 +0.3
FNA                                S      Sn       07 58 23.8 -2.2
      comp=E,255nm,0.6s
FNA   Florina          6.23 219    P      Pn       07 57 16.3  0.0
FNA   Florina          6.23 219           Pn       07 57 16.3  0.0
MDUB  Mudurnu          6.27 145           Pn       07 57 16.1 -0.8
FEO   Feodosiya        6.28  93   eP      Pn       07 57 17.0 +0.2
FEO                               eS      Sn       07 58 24.3 -2.7
FEO   Feodosiya        6.28  93    P      Pn       07 57 17.0 +0.2
FEO                                Pm              07 57 17.4
FEO                                S      Sn       07 58 24.3 -2.7
FEO                                Sm              07 58 28.8
CEME  Cevo             6.35 242⇓  iPn     Pn       07 57 18.1 +0.2
CEME                              i Sn    Sn       07 58 25.5 -3.4
OJC   Ojcow            6.37 317   eP      Pn       07 57 18.5 +0.5
OJC   Ojcow            6.37 317    P      Pn       07 57 19.6 +1.5
OJC   Ojcow            6.37 317    Pn     Pn       07 57 19.6 +1.5
LIT   Litokhoron       6.37 209    P      Pn       07 57 18.6 +0.4
LIT                                S      Sn       07 58 26.5 -3.1
      comp=E,120nm,0.4s
LIT   Litokhoron       6.37 209    P      Pn       07 57 18.7 +0.4
LIT   Litokhoron       6.37 209           Pn       07 57 18.7 +0.4
MPLH  Magyarpolny      6.38 286⇓  ePN     Pn       07 57 21.6 +3.3
DRME  Dracevica, Mon   6.39 239   ePn     Pn       07 57 19.7 +1.3
DRME  Dracevica, Mon   6.39 239⇓  iPn     Pn       07 57 18.7 +0.3
DRME                              i Sn    Sn       07 58 26.5 -3.4
BRY   Bratogost        6.40 247   ePn     Pn       07 57 19.2 +0.4
BRY   Bratogost        6.40 247⇑  iPn     Pn       07 57 18.9 +0.1
BRY                               i Sn    Sn       07 58 26.8 -3.6
ULC   Ulcinj           6.49 237   ePn     Pn       07 57 20.0 +0.2
ULC                               i Sn    Sn       07 58 28.8 -3.5
PRK   Paraskevi        6.50 182    P      Pn       07 57 20.5 +0.6
BUM   Brajici-Budva    6.50 241⇑  iPn     Pn       07 57 20.2 +0.2
BUM                               i Sn    Sn       07 58 29.1 -3.5
TIR   Tirane           6.54 230    P      Pn       07 57 22.4 +1.9
TIR   Tirane           6.54 230    Pn     Pn       07 57 22.4 +1.9
SIGR  SIGRI            6.55 185    P      Pn       07 57 20.1 -0.5
BZK   Bozkurt          6.59 122   ⇑P      Pn       07 57 19.8 -1.4
BZK   Bozkurt          6.59 122   ⇑P      Pn       07 57 19.8 -1.4
TREB  Trebinje         6.62 246   ePn     Pn       07 57 24.1 +2.6
HCY   Herceg Novi      6.66 243   ePn     Pn       07 57 23.7 +1.5
HCY   Herceg Novi      6.66 243⇓  iPn     Pn       07 57 22.4 +0.2
HCY                               i Sn    Sn       07 58 33.0 -3.6
NEST  Nestorio         6.67 219    P      Pn       07 57 22.5 +0.1
BLY   Banja Luka       6.68 265   ePn     Pn       07 57 23.4 +1.0
DBRK  Dubrovnik        6.77 246   ePn     Pn       07 57 24.6 +0.9
DBRK                               Sn     Sn       07 58 36.2 -2.9
JAVC  Velka Javorina   6.79 301   ePN     Pn       07 57 25.8 +1.9
MGRS  Mrkonjic Grad    6.83 262   ePn     Pn       07 57 27.3 +2.9
XOR   Xorichti         6.83 202    P      Pn       07 57 25.0 +0.4
XOR                                S      Sn       07 58 36.8 -4.0
      comp=E,1µm,0.5s
NEO   Neokhori         6.88 202    P      Pn       07 57 25.4 +0.2
NEO                                S      Sn       07 58 37.6 -4.4
      comp=E,900nm,0.7s
KPRO  Kipourio         6.92 215    P      Pn       07 57 27.4 +1.6
STON  Ston             6.96 249   ePn     Pn       07 57 28.5 +2.3
STON                               Sn     Sn       07 58 41.2 -2.5
STON  Ston             6.96 249   ePn     Pn       07 57 26.7 +0.5
ILGA  Ilgaz            7.02 129    Pn     Pn       07 57 26.4 -0.9
RICI  Ricice           7.08 255   ePn     Pn       07 57 29.9 +2.1
RICI                               Sn     Sn       07 58 46.3 -0.5
BEL   Belsk            7.18 330   eP      Pn       07 57 30.2 +1.1
KOGS  Kog              7.19 279   i P     Pn       07 57 32.4 +3.0
MORC  Moravsky Berou   7.28 307   ePN     Pn       07 57 31.6 +1.0
MORC  Moravsky Berou   7.28 307    P      Pn       07 57 30.3 -0.3
MORC  Moravsky Berou   7.28 307    Pn     Pn       07 57 30.3 -0.3
PTJ   Puntijarka       7.39 275   ePn     Pn       07 57 34.1 +1.9
MANT  Manisa           7.40 168           Pn       07 57 32.0 -0.5
AGG   Agios Georgios   7.40 206    P      Pn       07 57 32.5 +0.2
AGG   Agios Georgios   7.40 206    P      Pn       07 57 32.5 +0.2
AGG   Agios Georgios   7.40 206           Pn       07 57 32.5 +0.2
LKR   Lokris           7.56 202    P      Pn       07 57 34.7 +0.3
VRAC  Vranov           7.62 301    P      Pn       07 57 34.1 -1.0
      comp=E,0.4nm,0.3s,baz=303,slow=4.2,SNR=3.0
VRAC                               LR     LR       08 00 38.4
      comp=E,130nm,21.1s,baz=170,slow=39
VRAC  Vranov           7.62 301   ePN     Pn       07 57 37.2 +2.0
GOLS  Golise           7.62 276   i P     Pn       07 57 36.8 +1.5
KRUC  Moravsky         7.64 299   ePN     Pn       07 57 36.8 +1.3
CONA  Conrad Observa   7.64 290   i Pn    Pn       07 57 36.9 +1.4
      comp=E,1.3nm,0.3s
HVAR  Hvar             7.66 254   ePn     Pn       07 57 38.4 +2.6
HVAR                               Sn     Sn       07 58 59.6 -1.3
ANN   Anapa            7.74  93   eP      Pn       07 57 36.6 -0.2
ANN                               eS      Sn       07 58 58.5 -4.3
ANN                                pmax   pmax
      comp=Z,98nm,0.9s
CRES  Cresnjev         7.75 275   i P     Pn       07 57 38.3 +1.3
CRES  Cresnjev         7.75 275   ePn     Pn       07 57 38.0 +1.0
ARSA  Arzberg          7.75 285   ePn     Pn       07 57 38.9 +1.9
      comp=Z,2.0nm,0.4s
OZLJ  Ozalj            7.76 273   ePn     Pn       07 57 39.6 +2.6
LEGS  Legarje          7.84 276   i P     Pn       07 57 39.7 +1.5
KRLC  Kraliky          7.86 307   eP      Pn       07 57 38.2 -0.2
KRLC  Kraliky          7.86 307   eP      Pn       07 57 38.2 -0.2
KRLC                              ex      x        07 57 44.4
BOJS  Bojanci          7.92 272   i P     Pn       07 57 42.0 +2.7
MORI  Morici           7.93 260   ePn     Pn       07 57 42.1 +2.8
MORI                               Sn     Sn       07 59 06.2 -1.2
BR131 Keskin Array S   7.96 137    P      Pn       07 57 39.3 -0.7
BR131 Keskin Array S   7.96 137           Pn       07 57 39.3 -0.7
BRTR  Keskin Array B   7.96 137    P      Pn       07 57 39.4 -0.7
      comp=Z,2.0nm,0.3s,baz=324,slow=12,SNR=52
BRTR                               S      Sn       07 59 02.6 -6.0
      comp=Z,2.6nm,0.3s,baz=48,slow=32,SNR=6.3
SOKA  Soboth           8.04 281   i Pn    Pn       07 57 42.4 +1.5
      comp=Z,2.6nm,0.3s
LOUT  Loutraki         8.19 200    P      Pn       07 57 43.6 +0.6
DPC   Dobruska-Polom   8.25 308   eP      Pn       07 57 45.5 +1.7
DPC   Dobruska-Polom   8.25 308   eP      Pn       07 57 45.5 +1.7
DPC                               ex      x        07 57 50.3
OBKA  Obir             8.37 280   ePn     Pn       07 57 46.9 +1.4
      comp=Z,2.9nm,0.6s
OSTC  Ostas            8.41 309   eP      Pn       07 57 48.4 +2.4
ISP   Isparta          8.45 158    P      Pn       07 57 47.0 +0.3
ISP   Isparta          8.45 158           Pn       07 57 47.0 +0.3
CEY   Cerknica         8.47 274   ePn     Pn       07 57 48.5 +1.6
CHVC  Chvalec          8.52 308   eP      Pn       07 57 48.4 +1.0
KSP   Ksiaz            8.52 310   eP      Pn       07 57 48.3 +0.8
SUW   Suwalki          8.56 347   eP      Pn       07 57 46.2 -1.7
SUW                               eS      Sn       07 59 16.6 -6.0
SUW   Suwalki          8.56 347   eP      Pn       07 57 46.0 -1.9
SUW   Suwalki          8.56 347    P      Pn       07 57 47.4 -0.5
SUW   Suwalki          8.56 347           Pn       07 57 47.4 -0.5
MOA   Molln            8.68 288   i Pn    Pn       07 57 53.1 +3.4
      comp=Z,1.2nm,0.4s
APE   Apeiranthos      8.70 185   i P     Pn       07 57 49.8 -0.2
APE                                pmax   pmax
      comp=Z,15nm,0.4s
MNK   Minsk            8.81   5   i P     Pn       07 57 52.3 +0.9
      comp=E,2.0nm,0.7s
MNK                               i P     Pn       07 57 52.3 +0.9
      comp=N,18nm,0.7s
MNK                               i P     Pn       07 57 52.3 +0.9
      comp=Z,32nm,1.1s
MNK                               i S     Sn       07 59 31.1 +2.3
MNK                               i LQ    LQ       08 00 28.9
MNK                               i LR    LR       08 00 54.5
MNK                               i LRM   MLR      08 01 14.5
      comp=Z,82nm,11.9s
MNK                               i LRM   MLR      08 01 20.4
      comp=E,5.0nm,9.9s
MNK                               i LRM   MLR      08 01 21.9
      comp=N,73nm,9.6s
MNK   Minsk            8.81   5   eP      Pn       07 57 48.0 -3.3
MNK                               eS      Sn       07 59 24.0 -4.8
MYKA  Terra Mystica    8.99 280   ePn     Pn       07 57 56.0 +2.0
      comp=N,4.0nm,0.6s
TOKA  Tokat            9.07 123    Pn     Pn       07 57 55.0  0.0
NACGM Naroch           9.17   1   i P     Pn       07 57 54.0 -2.3
NACGM                             i P     Pn       07 57 54.0 -2.3
NACGM                             i P     Pn       07 57 54.0 -2.3
NACGM                             i S     Sn       07 59 26.7  -11
NACGM                             i SS             07 59 50.9
NACGM                             i LQ    LQ       08 00 23.8
NACGM                             i LR    LR       08 00 53.1
KBA   Koelnbreinsper   9.22 283   i Pn    Pn       07 57 59.5 +2.5
      comp=N,7.0nm,0.8s
GERES GERESS Array B   9.26 294    P      Pn       07 57 56.4 -1.2
      comp=N,0.1nm,0.3s,baz=106,slow=14,SNR=3.7
GERES GERESS Array B   9.26 294    P      Pn       07 57 58.7 +1.1
GERES GERESS Array B   9.26 294    Pn     Pn       07 57 58.7 +1.1
ELL   Elmali           9.34 163    P      Pn       07 58 00.8 +2.1
ELL   Elmali           9.34 163    Pn     Pn       07 58 00.8 +2.1
KHC   Kasperske Hory   9.41 296   eP      Pn       07 58 02.2 +2.6
KHC   Kasperske Hory   9.41 296   eP      Pn       07 58 02.2 +2.6
KHC                               ex      x        07 58 10.7
KHC                               ex      x        07 58 33.5
KHC   Kasperske Hory   9.41 296    Pn     Pn       07 58 02.1 +2.5
ZOU   Zoufplan         9.46 280    Pn     Pn       07 58 02.3 +1.9
IDID  Didziasalis      9.59   1   eP      Pn       07 58 00.1 -1.8
IDID                               IAML            07 58 02.4
      comp=Z,19nm,0.7s
IIGN  Ignalina         9.62 359   eP      Pn       07 58 00.7 -1.7
IIGN                               IAML            07 58 02.4
      comp=Z,64nm,0.4s
SOC   Sochi            9.64  98   eP      Pn       07 58 01.8 -0.8
SOC                               e                07 59 49.0
SOC                                MLR    MLR
      comp=Z,53nm,13.0s
GKP   Gorka Klasztor   9.66 325   eP      Pn       07 58 01.9 -1.0
TIP   Timpagrande      9.76 231    Pn     Pn       07 58 05.0 +0.6
ABTA  Abfaltersbach    9.77 281   ePn     Pn       07 58 06.4 +1.8
      comp=Z,0.7nm,0.4s
AKAS  Kas              9.78 165    Pn     Pn       07 58 06.0 +1.2
BRG   Berggiesshubel   9.83 306   eP      Pn       07 58 17.9  +13
BRG                                Amp             07 58 20.5
      comp=Z,2.1nm,0.5s
BRG                               ex      x        07 59 04.2
BRG                                Amp             07 59 46.7
      comp=Z,3.8nm,0.9s
BRG   Berggiesshubel   9.83 306   eP      Pn       07 58 17.9  +13
BRG                                Amp             07 58 20.5
      comp=Z,2.1nm,0.5s
BRG                               ex      x        07 59 04.2
BRG                                Amp             07 59 46.7
      comp=Z,3.8nm,0.9s
ISAL  Salakas          9.85 359   eP      Pn       07 58 03.5 -1.8
ISAL                               IAML            07 58 04.4
      comp=Z,39nm,0.5s
PABE  Paberze          9.91 351   eP      Pn       07 58 04.5 -1.7
PABE                              eS      Sn       07 59 49.1 -6.3
VORD  Divnogorie       9.96  54   eP      Pn       07 58 06.0 -1.0
VORD                              eS      Sn       07 59 52.2 -4.7
VORD                               pmax   pmax
      comp=Z,20nm,0.4s
VORD                               smax   smax
      comp=E,30nm,3.3s
VSR   Storozhevoye    10.01  52   eP      Pn       07 58 07.3 -0.3
VSR                               eS      Sn       07 59 51.0 -7.0
VSR                                pmax   pmax
      comp=Z,10.0nm,0.4s
VSR                                smax   smax
      comp=N,3µm,2.1s
NRCA  Norcia          10.06 258           Pn       07 58 10.1 +1.6
KARP  Karpathos       10.20 177    Pn     Pn       07 58 11.3 +0.9
CTI   Castel Tesino   10.39 277    P      Pn       07 58 15.2 +2.2
CTI   Castel Tesino   10.39 277           Pn       07 58 15.2 +2.2
TEOL  Teolo           10.44 273           Pn       07 58 13.8 +0.2
IDI   Anoyia          10.52 187    P      Pn       07 58 15.4 +0.6
      comp=N,0.9nm,0.3s,baz=343,slow=12,SNR=5.4
IDI                                LR     LR       08 02 13.3
      comp=N,94nm,21.6s,baz=338,slow=37
IDI   Anoyia          10.52 187    Pn     Pn       07 58 15.3 +0.5
CLL   Collm           10.56 307   eP      Pn       07 58 13.0 -2.2
CLL                               e(sP)            07 58 36.0
CLL   Collm           10.56 307   eP      Pn       07 58 13.0 -2.2
LPSR  Galich'ya Gora  10.62  45   eP      Pn       07 58 13.5 -2.4
LPSR                               pmax   pmax
      comp=Z,10.0nm,0.5s
PBUR  Paburge         10.70 346   eP      Pn       07 58 15.4 -1.5
PBUR                              eS      Sn       08 00 06.9 -7.7
MOTA  Moosalm         10.76 284   ePn     Pn       07 58 19.0 +1.0
      comp=Z,2.4nm,0.6s
FETA  Feichten        11.00 282   ePn     Pn       07 58 23.5 +2.2
      comp=Z,8.2nm,1.1s
OBN   Obninsk         11.34  31    P      Pn       07 58 22.4 -3.3
      comp=Z,8.9nm,0.3s,baz=22,slow=1.3,SNR=10
OBN                                S      Sn       08 00 18.4  -12
      comp=Z,7.7nm,0.3s,baz=330,slow=23,SNR=18
OBN                                LR     LR       08 03 15.8
      comp=Z,25nm,18.9s,baz=172,slow=39
OBN   Obninsk         11.34  31c  iP      Pn       07 58 22.4 -3.3
OBN                                pmax   pmax
      comp=Z,31nm,0.4s
OBN                                MLR    MLR
      comp=Z,68nm,14.0s
OBN   Obninsk         11.34  31           Pn       07 58 22.7 -3.0
VRH   Novokhopyorsk   11.46  56   eP      Pn       07 58 24.4 -2.9
VRH                               eS      Sn       08 00 24.8 -8.3
VRH                                pmax   pmax
      comp=Z,30nm,0.5s
VRH                                smax   smax
      comp=N,1µm,1.9s
KIV   Kislovodsk      11.60  93   eP      Pn       07 58 28.1 -1.4
KIV                               eS      Sn       08 00 36.2 -0.8
KIV                                pmax   pmax
      comp=Z,27nm,0.9s
KVAR  Kislovodsk Arr  11.61  93    S      Sn       08 00 27.1  -10
      baz=270,slow=20,SNR=4.1
GOF   Gofitskoye      11.63  87⇑  eP      Pn       07 58 31.7 +2.0
GOF                               eS      Sn       08 00 31.6 -5.8
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GOF				pmax	pmax		
	comp=Z,69nm,0.6s						
GOF				smax	smax		
	comp=N,210nm,0.7s						
GOF				smax	smax		
	comp=E,255nm,0.8s						
GAZ	**Gaziantep**	**11.71**	**133**		**Pn**	**07 58 29.8**	**-1.1**
KBZ	**Khabaz**	**11.81**	**94**	P	**Pn**	**07 58 30.4**	**-1.7**
	comp=E,0.4nm,0.3s,baz=297,slow=11,SNR=3.4						
KBZ				S	**Sn**	**08 00 33.4**	**-8.5**
	comp=E,0.9nm,0.3s,baz=327,slow=18,SNR=1.4						
BSD	**Bornholm Skovb**	**11.94**	**326**	*e*P	**Pn**	**07 58 32.2**	**-1.5**
BSD	**Bornholm Skovb**	**11.94**	**326**	*i* P	**Pn**	**07 58 31.3**	**-2.5**
BSD	**Bornholm Skovb**	**11.94**	**326**	*i* P	**Pn**	**07 58 31.3**	**-2.5**
BSD	**Bornholm Skovb**	**11.94**	**326**	*i* P	**Pn**	**07 58 31.3**	**-2.5**
SLIT	**Slitere, Latvi**	**12.19**	**349**	*e*P	**Pn**	**07 58 33.4**	**-3.7**
MOS	**Moscow**	**12.21**	**31**	*e*P	**Pn**	**07 58 35.0**	**-2.4**
RGN	**Rugen**	**12.21**	**321**	Pn	**Pn**	**07 58 37.4**	**0.0**
BFO	**Black Forest**	**12.69**	**288**	*i* P	**Pn**	**07 58 41.6**	**-2.4**
VSU	**Vasula**	**12.74**	**0**	*e*P	**Pn**	**07 58 40.5**	**-3.9**
VSU				*e*S	Sn	08 00 51.6	-13
VSU	**Vasula**	**12.74**	**0**	*i* P	**Pn**	**07 58 41.5**	**-3.0**
MTSE	**Matsula**	**13.10**	**354**	*e*P	**Pn**	**07 58 45.5**	**-3.7**
SENIN	**Lac Senin/Sane**	**13.38**	**280**	P	**P**	**07 59 01.2**	**+1.6**
BNI	**Bardonecchia**	**13.97**	**274**	P	**P**	**07 59 07.2**	**+1.1**
BNI	**Bardonecchia**	**13.97**	**274**	P	**P**	**07 59 07.2**	**+1.1**
MMAI	**Mount Meron Ar**	**14.43**	**149**	P	**Pn**	**07 59 06.8**	**0.0**
	comp=E,0.6nm,0.3s,baz=354,slow=12,SNR=2.4						
MMAI				LR	LR	08 05 14.2	
	comp=E,69nm,21.4s,baz=330,slow=39						
AAL	**Aland**	**14.98**	**347**	*e*P	**Pn**	**07 59 10.1**	**-3.5**
UPP	**Uppsala**	**15.11**	**343**	*e*P	**Pn**	**07 59 13.6**	**-1.7**
BELG	**Belogornoye**	**15.31**	**57**	*i* P	**Pn**	**07 59 15.0**	**-2.8**
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SSB	**Saint Sauveur**	**15.43**	**276**	P	**P**	**07 59 23.2**	**+1.1**
SSB				pmax	pmax		
	comp=Z,13nm,1.1s						
SSB	**Saint Sauveur**	**15.43**	**276**	P	**P**	**07 59 23.2**	**+1.1**
FINES	**FINESS Array B**	**15.73**	**359**	P	**Pn**	**07 59 17.7**	**-5.4**
	comp=Z,2.0nm,0.3s,baz=169,slow=12,SNR=38						
FINES				S	Sn	08 02 01.2	-16
	comp=Z,0.8nm,0.3s,baz=195,slow=16,SNR=3.1						
FINES				LR	LR	08 06 14.3	
	comp=Z,67nm,19.4s,baz=228,slow=40						
FINES	**FINESS Array B**	**15.73**	**359**	P	**Pn**	**07 59 18.0**	**-5.1**
FINES	**FINESS Array B**	**15.73**	**359**	Pn	**Pn**	**07 59 18.0**	**-5.1**
FIA1	**FINESS Array S**	**15.73**	**359**		**Pn**	**07 59 18.0**	**-5.1**
FIA1				IAmb	IAmb	07 59 26.0	
	comp=Z,17nm,0.8s						
HFS	**Hagfors**	**16.31**	**337**	P	**Pn**	**07 59 27.4**	**-2.9**
	comp=Z,3.0nm,0.3s,baz=142,slow=13,SNR=40						
HFS				S	**Sn**	**08 02 23.7**	**-7.0**
	comp=Z,1.2nm,0.3s,baz=141,slow=26,SNR=3.9						
HFS				LR	LR	08 05 56.0	
	comp=Z,86nm,21.5s,baz=288,slow=37						
KEST	**Kesra**	**16.39**	**238**	P	**Pn**	**07 59 29.2**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=11,SNR=2.6						
HOMB	**Homborsund**	**16.68**	**325**	*e*P	**P**	**07 59 36.9**	**+1.1**
KLMR	**Klimovskoe**	**16.95**	**22**	*e*P	**Pn**	**07 59 32.8**	**-5.4**
KLMR				*e*		08 02 33.2	
KLMR				pmax	pmax		
	comp=Z,34nm,0.9s						
KLMR	**Klimovskoe**	**16.95**	**22**	*e*Pn	**Pn**	**07 59 32.8**	**-5.4**
KLMR				AMP		07 59 34.5	
	comp=Z,34nm,0.9s						
KLMR				*e*Sn	Sn	08 02 33.3	-13
KLMR				*e*Sn	Sn	08 02 33.3	-13
SUF	**Sumiainen**	**17.01**	**359**	P	**Pn**	**07 59 36.3**	**-2.6**
OSL	**Oslo**	**17.06**	**332**	*e*P	**Pn**	**07 59 38.2**	**-1.2**
KONO	**Kongsberg**	**17.22**	**330**	*i* P	**Pn**	**07 59 41.5**	**-0.1**
KONO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KONO	**Kongsberg**	**17.22**	**330**	P	**Pn**	**07 59 39.3**	**-2.2**
KONO	**Kongsberg**	**17.22**	**330**	*e*P	**Pn**	**07 59 41.4**	**-0.1**
SNART	**Snartemo**	**17.25**	**324**	*e*P	**P**	**07 59 44.0**	**+2.0**
SNART	**Snartemo**	**17.25**	**324**	*i* P	**P**	**07 59 45.0**	**+3.0**
NC602	**NORSAR Array S**	**17.43**	**335**	*e*P	**P**	**07 59 41.5**	**-2.5**
NAO01	**NORSAR Array S**	**17.71**	**334**	P	**P**	**07 59 46.4**	**-0.7**
NAO01				IAmb	IAmb	07 59 52.9	
	comp=Z,52nm,0.8s						
NB2	**NORSAR Subarra**	**17.77**	**335**	P	**P**	**07 59 45.0**	**-2.8**
	comp=Z,7.7nm,0.6s,baz=143,slow=11						
NB2	**NORSAR Subarra**	**17.77**	**335**	P	**P**	**07 59 45.0**	**-2.8**
	baz=143,slow=11						
NOA	**NORSAR Array B**	**17.77**	**335**	P	**P**	**07 59 44.1**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=261,slow=5.3,SNR=34						
NOA				LR	LR	08 07 45.8	
	comp=Z,39nm,18.6s,baz=135,slow=40						
BLS5	**Blasjo**	**18.24**	**326**	*e*P	**P**	**07 59 53.3**	**+0.3**
SKAR	**Skarslia**	**18.42**	**331**	*e*P	**Pn**	**07 59 56.0**	**-0.1**
MFF	**Saint Martin d**	**18.48**	**282**	*e*P	**Pn**	**07 59 56.4**	**-0.4**
ODD1	**Odda**	**18.49**	**327**	*e*P	**Pn**	**07 59 57.2**	**+0.3**
KIRV	**Kirov**	**18.91**	**39**	P	**P**	**07 59 58.8**	**-1.4**
	comp=Z,8.5nm,0.3s,baz=303,slow=1.5,SNR=4.9						
KIRV				LR	LR	08 07 31.5	
	comp=Z,85nm,21.4s,baz=295,slow=37						
KIRV	**Kirov**	**18.91**	**39**	*i* P	**Pn**	**08 00 01.0**	**-0.7**
DOMB	**Dombas**	**19.19**	**335**	*e*P	**Pn**	**08 00 04.9**	**-0.3**
BER	**Bergen**	**19.29**	**327**	*e*P	**Pn**	**08 00 05.3**	**-0.9**
ASK	**Askoy**	**19.41**	**327**	*e*P	**P**	**08 00 06.0**	**+0.3**
HYA	**Hoyanger**	**19.50**	**330**	*e*P	**Pn**	**08 00 08.5**	**-0.2**
TMCR	**Tamitsa**	**19.55**	**15**	*e*P	**P**	**08 00 07.8**	**+0.7**
TMCR				pmax	pmax		
	comp=Z,23nm,0.4s						
TBLU	**Trondheim**	**19.82**	**338**	*e*P	**Pn**	**08 00 12.4**	**0.0**
AKN	**Aaknes**	**19.94**	**333**	*e*P	**Pn**	**08 00 13.5**	**-0.5**
SUE	**Sulen**	**19.94**	**328**	*e*P	**Pn**	**08 00 12.8**	**-1.1**
MOL	**Molde**	**20.06**	**334**	*e*P	Pn	08 00 15.8	+0.6
NSS	**Namsos**	**20.49**	**342**	*e*P	**P**	**08 00 18.4**	**+1.2**
EKA	**Eskdalemuir Ar**	**21.02**	**308**	P	**P**	**08 00 23.4**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=97,slow=9.3,SNR=5.3						
AKTO	**Aktyubinsk**	**21.45**	**66**	P	**P**	**08 00 29.0**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=282,slow=8.1,SNR=9.9						
AKTO				pP	**pP**	**08 00 45.9**	**+0.5**
	comp=Z,8.3nm,0.7s,baz=269,slow=8.9,SNR=9.4						
AKTO				LR	LR	08 10 43.4	
	comp=Z,28nm,20.4s,baz=324,slow=42						
AKTO	**Aktyubinsk**	**21.45**	**66**	P	**P**	**08 00 29.0**	**+1.2**
MOR8	**Moi Rana**	**21.49**	**347**	*e*P	**P**	**08 00 29.9**	**+1.9**
STOK	**Stokkvaagen**	**21.88**	**345**	*e*P	**P**	**08 00 34.1**	**+2.0**
KONS	**Konsvik**	**22.01**	**346**	*e*P	**P**	**08 00 35.8**	**+2.3**
APA	**Apatity**	**22.18**	**7⇓**	*i*P	**P**	**08 00 37.5**	**+2.2**
APA				pmax	pmax		
	comp=Z,51nm,0.8s						
APA				MLR	MLR		
	comp=Z,600nm,12.0s						
FAUS	**Fauske**	**22.49**	**349**	*e*P	**P**	**08 00 40.7**	**+2.1**
ARU	**Arti**	**22.57**	**50**	P	**P**	**08 00 39.7**	**+0.1**
	comp=Z,3.8nm,0.5s,baz=237,slow=11,SNR=11						
ARU	**Arti**	**22.57**	**50***c*	*i*P	**P**	**08 00 39.6**	**0.0**
ARU				*PP	**pP**	**08 00 57.1**	**-0.3**
ARU						08 01 08.2	
ARU				S	**S**	**08 04 41.9**	**+1.6**
ARU				SS	**SnSn**	**08 05 22.1**	**+3.9**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU	**Arti**	**22.57**	**50**	P	**P**	**08 00 39.7**	**+0.1**
ARU				IAmb	IAmb	08 01 01.5	
	comp=Z,20nm,0.6s						
LVZ	**Lovozero**	**22.61**	**8**	*i* P	**P**	**08 00 41.0**	**+1.1**
LVZ				pmax	pmax		
	comp=Z,42nm,0.8s						
LVZ	**Lovozero**	**22.61**	**8**	P	**P**	**08 00 44.7**	**+4.7**
ABKAR	**Akbulak array**	**22.73**	**69**	P	**P**	**08 00 43.3**	**+2.0**
ABKAR				pP	**pP**	**08 00 58.9**	**-0.4**
STEI	**Steigen**	**23.01**	**349**	*e*P	**P**	**08 00 45.0**	**+1.2**
ESBB	**Sonseca Array**	**23.13**	**266**	P	**P**	**08 00 45.3**	**-0.1**
ESDC	**Sonseca Array**	**23.13**	**266**	P	**P**	**08 00 44.8**	**-0.7**
	comp=Z,6.9nm,0.9s,baz=62,slow=9.6,SNR=30						
ESDC	**Sonseca Array**	**23.13**	**266**	P	**P**	**08 00 45.0**	**-0.4**
KTK1	**Kautokeino**	**23.39**	**357**	*e*P	**P**	**08 00 48.4**	**+0.9**
LOF	**Lofoten**	**23.43**	**348**	*e*P	**P**	**08 00 49.9**	**+2.1**
PAB	**San Pablo**	**23.46**	**266**	P	**P**	**08 00 48.0**	**-0.5**
PAB				pmax	pmax		
	comp=Z,15nm,1.3s						
PAB	**San Pablo**	**23.46**	**266**	P	**P**	**08 00 48.0**	**-0.5**
PAB				IAmb	IAmb	08 00 49.7	
	comp=Z,15nm,1.2s						
SVE	**Sverdlovsk**	**23.78**	**50**	*e*P	P	08 00 59.0	+7.9
SVE				pmax	pmax		
	comp=Z,27nm,1.1s						
ARA0	**ARCESS Array S**	**23.86**	**359**	*e*P	**P**	**08 00 53.0**	**+1.3**
ARCES	**ARCESS Array B**	**23.86**	**359**	P	**P**	**08 00 53.0**	**+1.3**
	comp=Z,5.2nm,0.5s,baz=179,slow=10,SNR=59						
ARCES				LR	LR	08 11 21.7	
	comp=Z,74nm,18.1s,baz=215,slow=39						
ARCES	**ARCESS Array B**	**23.86**	**359**	P	**P**	**08 00 52.7**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,12nm,1.1s						
ARCES	**ARCESS Array B**	**23.86**	**359**	P	**P**	**08 00 52.7**	**+1.0**
KEV	**Kevo**	**24.08**	**0**	P	**P**	**08 00 55.5**	**+1.9**
KEV				pmax	pmax		
	comp=Z,54nm,1.3s						
KEV	**Kevo**	**24.08**	**0**	P	**P**	**08 00 55.5**	**+1.9**
KEV				IAmb	IAmb	08 01 22.8	
	comp=Z,54nm,1.3s						
TRO	**Tromso**	**24.26**	**354**	*e*P	**P**	**08 00 57.0**	**+1.8**
GEYT	**Alibeck**	**24.67**	**97**	P	**P**	**08 01 01.1**	**+1.8**
	comp=Z,1.7nm,0.5s,baz=241,slow=15,SNR=3.2						
MDT	**Midelt**	**27.16**	**253**	P	**P**	**08 01 22.0**	**0.0**
	comp=Z,3.0nm,0.7s,baz=346,slow=14,SNR=2.9						
MDT				LR	LR	08 12 12.9	
	comp=Z,71nm,18.4s,baz=126,slow=36						
BRVK	**Borovoye**	**29.01**	**59**	P	**P**	**08 01 40.3**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	**Borovoye**	**29.01**	**59**	P	**P**	**08 01 40.3**	**+2.2**
BVAR	**Borovoye Array**	**29.08**	**59**	pP	pP	08 02 00.3	+1.3
	comp=Z,0.8nm,0.5s,baz=276,slow=8.4,SNR=6.8						
KKAR	**Karatay Array**	**31.22**	**79**	P	**P**	**08 01 58.5**	**+0.8**
KKAR				*PP	**pP**	**08 02 19.5**	**+1.4**
KKAR	**Karatay Array**	**31.22**	**79**	P	**P**	**08 01 58.5**	**+0.8**
KKAR					**pP**	**08 02 19.5**	**+1.4**
AAK	**Ala-Archa**	**34.12**	**78**	*i* P	**P**	**08 02 25.0**	**+1.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZAA0	**Zalesovo Array**	**37.49**	**56**	P	**P**	**08 02 52.2**	**+0.5**
ZAA0					**pP**	**08 03 11.2**	**-1.3**
ZAA0				IAmb	IAmb	08 03 14.5	
	comp=Z,8.0nm,0.8s						
ZALV	**Zalesovo Beam**	**37.49**	**56**	P	**P**	**08 02 54.0**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=297,slow=9.8,SNR=3.7						
ZALV				pP	**pP**	**08 03 14.1**	**+1.7**
	comp=Z,5.7nm,0.6s,baz=283,slow=8.2,SNR=17						
ZALV	**Zalesovo Beam**	**37.49**	**56**	P	**P**	**08 02 53.6**	**+2.0**
ZALV					**pP**	**08 03 10.5**	**-1.9**
MK31	**Makanchi Array**	**37.86**	**68**	P	**P**	**08 02 57.3**	**+2.3**
MK31				*PP	**pP**	**08 03 15.2**	**-0.6**
MK31	**Makanchi Array**	**37.86**	**68**	P	**P**	**08 02 57.2**	**+2.3**
MK31					**pP**	**08 03 15.2**	**-0.6**
MKAR	**Makanchi Array**	**37.86**	**68**	P	**P**	**08 02 57.4**	**+2.4**
	comp=Z,0.7nm,0.4s,baz=270,slow=8.4,SNR=19						
MKAR				pP	**pP**	**08 03 16.6**	**+0.9**
	comp=Z,1.9nm,0.5s,baz=271,slow=8.4,SNR=16						
MKAR	**Makanchi Array**	**37.86**	**68**	P	**P**	**08 02 57.0**	**+2.0**
MKAR					**pP**	**08 03 14.8**	**-1.0**
TOA0	**Torodi Ar. Sit**	**38.71**	**221**	P	**P**	**08 03 03.3**	**+1.0**
TORD	**Torodi Ar. Bea**	**38.71**	**221**	P	**P**	**08 03 02.9**	**+0.7**
	comp=Z,6.7nm,0.3s,baz=31,slow=8.9,SNR=71						
TORD	**Torodi Ar. Bea**	**38.71**	**221**	P	**P**	**08 03 02.8**	**+0.5**
DGZ	**Jazzator, Alta**	**40.17**	**62**	*i* P	**P**	**08 03 16.4**	**+2.1**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.6s						
KOWA	**Kowa**	**40.39**	**229**	P	**P**	**08 03 16.7**	**+0.4**
KOWA				IAmb	IAmb	08 03 17.1	
	comp=Z,6.1nm,0.5s						
KOWA				pP	**pP**	**08 03 36.1**	**-1.4**
WMQ	**Urumqi**	**42.52**	**70**	*e*P	**P**	**08 03 35.3**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,75nm,3.8s						
WMQ				LR	LR		
	comp=N,480nm,29.2s						
WMQ				LR	LR		
	comp=E,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,77nm,29.1s						
MBAR	**Mbarara**	**46.30**	**174**	*i* P	**P**	**08 04 04.4**	**+0.5**
DBIC	**Dimbokro**	**47.46**	**225**	P	**P**	**08 04 11.5**	**-1.2**
	comp=Z,7.0nm,0.3s,baz=15,slow=8.4,SNR=87						
DBIC	**Dimbokro**	**47.46**	**225**	P	**P**	**08 04 12.6**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**47.46**	**225**	P	**P**	**08 04 12.6**	**-0.1**
DBIC				IAmb	IAmb	08 04 13.4	
	comp=Z,6.2nm,0.8s						
EUNU	**Eureka**	**49.04**	**348**	P	**P**	**08 04 26.7**	**+2.4**
SONM	**Songino Array**	**52.37**	**57**	P	**P**	**08 04 52.0**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=303,slow=11,SNR=3.7						
SONM				pP	**pP**	**08 05 13.1**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=315,slow=9.4,SNR=5.5						
DRLN	**Deer Lake**	**54.06**	**306**	P	**P**	**08 05 02.7**	**+0.7**
DRLN				IAmb	IAmb	08 05 31.5	
	comp=Z,9.5nm,0.9s						
LZH	**Lanzhou**	**57.09**	**70**	*e*P	**P**	**08 05 20.3**	**-3.8**
LZH				pP	pP	08 05 45.8	-0.5
LZH				sP	sP	08 06 01.6	+5.4
LZH				PP	**PP**	**08 07 26.9**	**-4.6**
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,60nm,5.4s						
GBN	**Guysborough**	**58.44**	**304**	P	**P**	**08 05 32.4**	**-0.7**
HHC	**Hu-ho-hao-te**	**59.26**	**62**	*e*P	**P**	**08 05 40.3**	**+1.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,68nm,6.6s						
BATG	**Bathurst New B**	**59.92**	**308**	P	**P**	**08 05 45.0**	**+1.7**
E63A	**Oxbow**	**61.73**	**309**	P	**P**	**08 05 56.5**	**+0.8**
BILL	**Bilibino**	**62.58**	**16⇑**	*e*P	**P**	**08 06 01.8**	**+0.8**
BILL				*e*		08 06 45.7	
BILL				*e*		08 08 16.4	
BILL				*e*S	S	08 14 47.3	+26
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,47nm,14.0s						
SEY	**Seymchan**	**63.44**	**24**	*i* P	**P**	**08 06 09.0**	**+2.3**
CMAR	**Chiang Mai Arr**	**64.81**	**89**	pP	pP	08 06 41.1	+2.1
	comp=Z,2.2nm,0.6s,baz=304,slow=7.7,SNR=1.5						
FCC	**Fort Churchill**	**64.95**	**330**	P	**P**	**08 06 17.9**	**+1.3**
FCC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FCC	**Fort Churchill**	**64.95**	**330**	P	**P**	**08 06 17.9**	**+1.3**
KLR	**Kul'dur**	**65.25**	**44**	*i* P	**P**	**08 06 19.7**	**+0.9**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	**Inuvik**	**65.30**	**352**	P	**P**	**08 06 19.4**	**+0.7**
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	**Inuvik**	**65.30**	**352**	P	**P**	**08 06 19.4**	**+0.7**
BMAR	**Burnt Mountain**	**66.96**	**356**	P	**P**	**08 06 30.6**	**+1.2**
YKA	**Yellowknife Ar**	**67.72**	**342**	P	**P**	**08 06 35.2**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=34,slow=6.3,SNR=31						
YKA				pP	**pP**	**08 06 57.5**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=33,slow=6.4,SNR=7.4						
IMAR	**Indian Mountai**	**68.61**	**0**	P	**P**	**08 06 41.6**	**+1.8**
POKR	**Poker Plat Res**	**69.38**	**357**	P	**P**	**08 06 47.3**	**+2.7**
POKR				IAmb	IAmb	08 06 48.5	
	comp=Z,6.8nm,0.8s						
EGAK	**Eagle**	**69.40**	**354**	P	**P**	**08 06 46.8**	**+2.2**
EGAK				IAmb	IAmb	08 06 48.5	
	comp=Z,4.7nm,1.0s						
MDM	**Murphy Dome**	**69.56**	**358**	P	**P**	**08 06 46.8**	**+1.0**
MDM				IAmb	IAmb	08 06 49.4	
	comp=Z,7.8nm,1.2s						
ILAR	**Eielson Array**	**69.71**	**357**	P	**P**	**08 06 48.2**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=353,slow=3.4,SNR=7.4						
IL18	**Eielson Array**	**69.72**	**357**	P	**P**	**08 06 48.4**	**+1.7**
CCB	**Clear Creek Bu**	**69.86**	**357**	P	**P**	**08 06 49.3**	**+1.8**
DAWY	**Dawson**	**69.97**	**353**	P	**P**	**08 06 50.3**	**+2.0**
DAWY				IAmb	IAmb	08 06 51.1	
	comp=Z,7.4nm,1.0s						
E46A	**Sault Ste Mari**	**69.97**	**316**	P	**P**	**08 06 49.4**	**+0.8**
LBTB	**Lobatse**	**70.42**	**181**	P	**P**	**08 06 52.9**	**+1.4**
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LBTB	**Lobatse**	**70.42**	**181**	P	**P**	**08 06 52.9**	**+1.4**
LBTB				IAmb	IAmb	08 06 53.3	
	comp=Z,4.9nm,0.6s						
BPAW	**Bear Paw Mtn.**	**70.48**	**359**	P	**P**	**08 06 53.3**	**+1.9**
BPAW				IAmb	IAmb	08 06 53.8	
	comp=Z,4.8nm,1.1s						
M54A	**Oil Creek Stat**	**71.06**	**310**	P	**P**	**08 06 56.4**	**+1.1**
BCAR	**Beaver Creek A**	**71.14**	**354**	P	**P**	**08 06 55.2**	**-0.3**
KSRS	**Korea Array**	**71.20**	**56**	P	**P**	**08 06 57.2**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=319,slow=5.2,SNR=3.2						
ULM	**Lac du Bonnet**	**72.16**	**325**	P	**P**	**08 07 01.4**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=52,slow=3.7,SNR=4.8						
BOSA	**Boshof**	**74.01**	**181**	P	**P**	**08 07 13.5**	**+0.7**
	comp=Z,2.1nm,0.4s,baz=12,slow=5.7,SNR=9.2						
BOSA	**Boshof**	**74.01**	**181**	P	**P**	**08 07 13.7**	**+0.9**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOSA	**Boshof**	**74.01**	**181**	P	**P**	**08 07 13.7**	**+0.9**
BOSA				IAmb	IAmb	08 07 13.8	
	comp=Z,4.7nm,0.8s						
BBB	**Bella Bella**	**80.05**	**344**	LR	LR	08 44 52.7	
	comp=Z,142nm,18.8s,baz=196,slow=37						
PDAR	**Pinedale Array**	**83.60**	**329**	P	**P**	**08 08 06.0**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=90,slow=5.9,SNR=5.4						
BMO	**Blue Mountains**	**84.28**	**335**	P	**P**	**08 08 09.1**	**+0.3**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BMO	**Blue Mountains**	**84.28**	**335**	P	**P**	**08 08 09.1**	**+0.3**
BMO				IAmb	IAmb	08 08 10.7	
	comp=Z,2.6nm,0.8s						
JCJ	**Chichijima**	**86.95**	**54**	LR	LR	08 50 36.1	
	comp=Z,172nm,21.8s,baz=358,slow=38						
BDFB	**Brasilia**	**90.66**	**248**	P	**P**	**08 08 41.3**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=113,slow=7.4,SNR=3.4						
TXAR	**Lajitas Array**	**92.68**	**318**	P	**P**	**08 08 48.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=62,slow=3.4,SNR=4.4						
PLCA	**Paso Flores**	**121.99**	**243**	PKP	**PKiKP**	**08 14 30.8**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=24,slow=3.2,SNR=8.3						
QSPA	**South Pole Qui**	**135.59**	**180**	PKhKP	PKPpre	08 14 52.0	
	comp=Z,1.1nm,0.5s,baz=256,slow=5.5,SNR=5.4						
QSPA				PKP	**PKPdf**	**08 14 56.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=312,slow=2.0,SNR=18						
VNDA	**Vanda**	**143.62**	**165**	PKP	**PKPdf**	**08 15 09.3**	**-0.5**
	comp=Z,1.0nm,1.0s,baz=166,slow=3.3,SNR=3.7						

IDC ***24*** *08:07:27.4±2.2, 10°70S×113°80E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/30, mbtmp3.7/5, ML3.4/1, MS3.9/2, Ms1 3.9/2, ms1mx2.9/36, Error ellipse: s-maj=115.3km s-min=21.2km az=46.0*

DJA ***24*** *08:07:32.6±2.4, 11°S±14°×11°4E±°, h21^{km}±33^{km}, M4.1/7, MLv4.1/7*

ISC 24 08:07:32.2±1.1**, 10°89S**±0°10×**113°80E**±0°09**, h35^{km}, n17,** σ$1^{s}09$/13**, mb3.7**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.43**	**8**	P	**Pn**	**08 08 07.8**	**-1.6**
JAGI				S	**Sn**	**08 08 37.8**	**-0.1**
ABJI	**Asem Bagus**	**3.10**	**8**	P	**Pn**	**08 08 19.6**	**+1.0**
SRBI	**Singaraja**	**3.12**	**27**	P	**Pn**	**08 08 19.7**	**+0.9**
TWSI	**Taliwang, Sumb**	**3.71**	**55**	P	**Pn**	**08 08 27.8**	**+0.7**
UGM	**Wanagama**	**4.38**	**312**	P	**Pn**	**08 08 36.8**	**+0.5**
PLAI	**Plampang**	**4.42**	**63**	P	**Pn**	**08 08 37.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**13.52**	**123**	Pn	**Pn**	**08 10 40.0**	**-1.6**
	0.1nm,0.3s,baz=299,slow=10,SNR=1.5						
FITZ				Sn	Sn	08 12 58.4	-12
	0.2nm,0.3s,baz=216,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**21.73**	**117**	P	**P**	**08 12 21.9**	**+1.2**
	2.9nm,0.6s,baz=291,slow=12,SNR=17						
ASAR	**Alice Springs**	**22.98**	**126**	P	**P**	**08 12 35.0**	**+1.1**
	1.2nm,0.7s,baz=303,slow=9.7,SNR=18						
TGY	**Tagaytay City**	**25.82**	**16**	LR	LR	08 24 31.9	
	comp=Z,229nm,20.7s,baz=94,slow=40						
H08S2	**Diego Garcia H**	**40.87**	**271**	T	T	08 58 31.0	
	baz=98,slow=74,SNR=4.2						
H08S3	**Diego Garcia H**	**40.88**	**271**	T	T	08 58 27.1	
	baz=98,slow=74,SNR=8.6						
H08S1	**Diego Carcia H**	**40.89**	**271**	T	T	08 58 28.8	
	baz=98						
DZM	**Mont Dzumac**	**51.47**	**110**	LR	LR	08 40 27.9	
	comp=Z,118nm,19.6s,baz=66,slow=38						
MKAR	**Makanchi Array**	**63.96**	**336**	P	**P**	**08 18 01.7**	**-0.1**
	0.1nm,0.3s,baz=152,slow=7.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**69.11**	**342**	P	**P**	**08 18 33.6**	**-0.9**
	0.7nm,0.5s,baz=155,slow=5.1,SNR=4.8						
YKA	**Yellowknife Ar**	**117.97**	**23**	PKP	**PKPdf**	**08 26 15.7**	**+0.9**
	0.2nm,0.6s,baz=333,slow=1.6,SNR=4.1						

HVO ***24*** *08:30:22±0.5, 19°33N±0°02×155°12W±0°02, h8^{km}±2^{km}, ML3.9/35, ML3.9/44(NEIC), Error ellipse: s-maj=4.2km s-min=1.9km az=140.0*

NEIC ***24*** *08:30:22.4±0.6, 19°34N±0°02×155°13W±0°02, h9^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=1.6km az=150.0*

IDC ***24*** *08:30:27.8±31.0, 20°20N×154°76W, h0^{km}, mb3.4/3, mb1 3.8/3, mb1mx3.4/55, mbtmp3.4/3, Error ellipse: s-maj=655.6km s-min=59.6km az=39.0*

ISC 24 08:30:22.6±1.0**, 19°37N**±0°06×**155°14W**±0°04**, h9^{km}**±4^{km}**, n32,** σ**$0^{s}50$**/36**, mb3.6**/3**, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
STCH	**Steam Cracks**	**0.02**	**44**		**Pg**	**08 30 24.1**	**-0.4**
STCH				Sg	**Sg**	**08 30 25.4**	**-0.3**
NPOC	**North of Pu‘u**	**0.04**	**51**		**Pg**	**08 30 24.5**	**-0.1**
NPOC				Sg	**Sg**	**08 30 25.9**	**-0.1**
JCUZ	**Jacuzzi**	**0.04**	**68**		**Pg**	**08 30 24.2**	**-0.4**
JCUZ				IAML		08 30 25.9	
	comp=E,86μm,0.4s						
JCUZ				IAML		08 30 26.0	
	comp=N,95μm,0.5s						
PUH	**Pauahi**	**0.07**	**274**		**Pg**	**08 30 24.9**	**0.0**
PUH				Sg	**Sg**	**08 30 26.8**	**+0.2**
PUH				IAML		08 30 27.0	
	comp=E,36μm,0.6s						
PUH				IAML		08 30 27.4	
	comp=N,70μm,0.7s						
BYL	**Byron's Ledge**	**0.12**	**291**		**Pg**	**08 30 25.7**	**+0.2**
BYL				IAML		08 30 28.7	
	comp=E,31μm,0.7s						
BYL				IAML		08 30 28.8	
	comp=N,30μm,0.8s						
KKO	**Keanakako`i**	**0.12**	**284**		**Pg**	**08 30 25.7**	**+0.1**
KKO				IAML		08 30 28.6	
	comp=E,31μm,0.9s						
KKO				IAML		08 30 30.0	
	comp=N,33μm,0.7s						
HATHI	**Halema‘uma‘u T**	**0.12**	**296**		**Pg**	**08 30 25.9**	**+0.2**
HATHI				IAML		08 30 30.4	
	comp=E,29μm,0.9s						
RIM	**Rim**	**0.13**	**282**		**Pg**	**08 30 25.8**	**+0.1**
RIM				IAML		08 30 29.0	
	comp=N,40μm,0.9s						
SBLHI	**Steaming Bluff**	**0.13**	**296**		**Pg**	**08 30 25.8**	**+0.1**
SBLHI				IAML		08 30 28.9	
	comp=E,23μm,0.9s						
NPH	**North Pit**	**0.14**	**288**		**Pg**	**08 30 25.9**	**+0.1**
UWB	**Uwekahuna B**	**0.14**	**294**		**Pg**	**08 30 25.9**	**0.0**
OBL	**Observatory Le**	**0.14**	**290**		**Pg**	**08 30 26.0**	**+0.1**
OBL				IAML		08 30 32.6	
	comp=E,37μm,0.6s						
SDHHI	**Sand Hill**	**0.14**	**278**		**Pg**	**08 30 26.0**	**0.0**
SDHHI				Sg	**Sg**	**08 30 28.3**	**0.0**
SDHHI				IAML		08 30 31.6	
	comp=E,33μm,0.6s						
SDHHI				IAML		08 30 32.4	
	comp=N,27μm,0.7s						
UWE	**Uwekahuna**	**0.15**	**290**		**Pg**	**08 30 26.1**	**+0.1**
UWE				IAML		08 30 31.9	
	comp=N,30μm,0.7s						
WRMHI	**West Rim**	**0.15**	**284**		**Pg**	**08 30 26.2**	**+0.1**
WRMHI				IAML		08 30 32.2	
	comp=E,26μm,0.8s						
RSD	**Rainshed**	**0.16**	**306**		**Pg**	**08 30 26.5**	**+0.3**
HLP	**Hilina Pali**	**0.17**	**245**		**Pg**	**08 30 26.4**	**0.0**
HLP				Sg	**Sg**	**08 30 29.0**	**+0.1**
HLP				IAML		08 30 29.8	
	comp=E,22μm,0.2s						
HLP				IAML		08 30 29.9	
	comp=N,20μm,0.7s						
MLH	**Mauna Loa**	**0.26**	**298**		**Pg**	**08 30 28.4**	**+0.3**
MLH				IAML		08 30 34.4	
	comp=N,14μm,0.4s						
MLH				IAML		08 30 36.4	
	comp=E,13μm,0.3s						
AIN	**Ainahou**	**0.30**	**271**		**Pg**	**08 30 28.9**	**+0.2**
HMH	**Humu‘ula Sheep**	**0.40**	**306**		**Pg**	**08 30 30.9**	**+0.3**
MLOA	**Mauna Loa Obse**	**0.44**	**292**		**Pg**	**08 30 31.3**	**-0.1**
MWH	**Moku‘aweowe**	**0.45**	**285**		**Pg**	**08 30 31.4**	**-0.1**
KHU	**Kahuku**	**0.46**	**255**		**Pg**	**08 30 31.2**	**-0.5**
POHA	**Pohakuloa**	**0.53**	**316**		**Pg**	**08 30 32.9**	**-0.2**
POHA	**Pohakuloa**	**0.53**	**316**	IAML		08 30 42.1	

	comp=E,7μm,0.7s						
POHA					IAML	08 30 45.5	
	comp=E,5μm,0.3s						
HUH	Hualalai	0.73	296		Pg	08 30 35.7	-1.0
KHLU	Kahalu`u	0.74	288		Pg	08 30 35.5	-1.5
KKH	Kailua Kona	0.88	289		Pg	08 30 38.7	-0.8
HLK	Haleakala	1.73	323		Pn	08 30 52.6	-0.5
ILAR	Eielson Array	45.71	5	P	P	08 38 43.3	-0.4
	comp=E,0.6nm,0.9s,baz=196,slow=7.8,SNR=4.3						
TXAR	Lajitas Array	47.61	68	P	P	08 39 00.8	+1.5
	comp=E,0.3nm,0.6s,baz=258,slow=9.0,SNR=5.5						
YKA	Yellowknife Ar	51.31	23	P	P	08 39 26.8	0.0
	comp=E,0.2nm,0.6s,baz=228,slow=7.2,SNR=9.9						

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*IDC **24** 08:36:42.7±1.3, 25°.03N×140°.97E, h161^{km}±11^{km}, mb3.5/16, mb1 3.7/20, mb1mx3.5/45, mbtmp4.0/20, Error ellipse: s-maj=17.8km s-min=11.1km az=91.0*

*NEIC **24** 08:36:43.9±2.3, 25°.06N±0°.09×141°.1E±0°.2, h174^{km}±6^{km}, mb4.3/8, Error ellipse: s-maj=27.7km s-min=13.4km az=86.0*

*JMA **24** 08:36:45.9±0.2, 25°.28N×140°.64E, h133^{km}, M4.7*

ISC 24 08:36:41.9±0.5, **25°.02N**±0°.06×**140°.9E**±0°.1, **h150**^{km}, **n47**, σ**1^{s}34**/55, **mb3.8**/19, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.00	36	P	Pn	08 37 19.3	+2.2
JHH2				S	Sn	08 37 45.0	+0.8
CBIJ	Chichi jima	2.39	30	P	Pn	08 37 24.0	+2.3
CBIJ				S	Sn	08 37 52.8	+0.3
JCJ	Chichijima	2.39	30	P	Pn	08 37 24.3	+2.6
	141nm,0.3s,baz=228,slow=4.1,SNR=32						
JCJ				S	Sn	08 37 52.3	-0.1
	75nm,0.3s,baz=305,slow=22,SNR=4.2						
JCJ	Chichijima	2.39	30		Pn	08 37 24.4	+2.7
JCJ				Sn	Sn	08 37 53.0	+0.6
JHJ2	Mitsune	8.12	354	Pn	Pn	08 38 37.8	+1.0
JHJ	Hachijo jima 2	8.13	354	P	Pn	08 38 38.6	+1.7
	11nm,0.3s,baz=270,slow=20,SNR=5.7						
JHJ				S	Sn	08 40 06.5	-1.0
	9.9nm,0.3s,baz=66,slow=20,SNR=2.0						
BSO3	Boso 3	9.76	358	P	Pn	08 38 57.7	-0.7
BSO4	Boso 4	9.95	358	P	Pn	08 39 01.5	+0.4
BSO4				*e*S	Sn	08 40 47.1	-4.1
JHU	Hanno	10.88	353	P	Pn	08 39 13.1	-0.4
JGF	Kuroka	10.97	345	Pn	Pn	08 39 17.4	+2.7
JAG	Ashikaga	11.43	354	P	Pn	08 39 19.0	-1.7
JHO	Hitachi	11.56	359	P	Pn	08 39 20.7	-1.7
MJAR	Matsushiro Arr	11.71	349	P	Pn	08 39 24.0	-0.3
	0.2nm,0.3s,baz=159,slow=9.9,SNR=12						
MAJO	Matsushiro	11.71	349	Pn	Pn	08 39 24.7	+0.3
JMM	Marumori	12.81	360		Pn	08 39 37.6	-1.0
KSRS	Korea Array	16.59	321	P	Pn	08 40 28.8	+3.0
	0.4nm,0.3s,baz=135,slow=12,SNR=18						
ASAJ	Asahikawa	19.11	4	P	Pn	08 40 54.5	-1.0
	0.6nm,0.3s,baz=174,slow=8.5,SNR=5.3						
USRK	Ussuriysk Ar.	20.45	342	P	P	08 41 08.0	+0.4
	2.1nm,0.6s,baz=141,slow=8.2,SNR=6.2						
USRK	Ussuriysk Ar.	20.45	342	P	P	08 41 07.0	-0.6
KLR	Kul'dur	25.20	346	P	P	08 41 53.2	-0.2
	1.5nm,0.4s,baz=189,slow=4.9,SNR=12						
COEN	Coen	38.80	176	P	P	08 43 53.0	+0.7
COEN				IAmb	IAmb	08 44 07.7	
	comp=Z,14nm,1.4s						
WB0	Warramunga Arr	44.96	189	P	P	08 44 42.1	0.0
WB0				IAmb	IAmb	08 44 43.0	
	comp=Z,5.1nm,0.4s						
WB2	Warramunga Arr	45.13	189	P	P	08 44 43.8	+0.2
WRA	Warramunga Arr	45.14	189	P	P	08 44 43.5	-0.1
	comp=Z,6.3nm,0.5s,baz=9.9,slow=8.8,SNR=78						
WRA				PcP	PcP	08 46 20.3	-1.2
	comp=Z,0.5nm,0.5s,baz=1.7,slow=3.8,SNR=3.7						
FITZ	Fitzroy Crossi	45.34	201	P	P	08 44 45.4	+0.2
FITZ				IAmb	IAmb	08 44 46.1	
	comp=Z,8.6nm,1.1s						
AS31	Alice Springs	48.86	188	P	P	08 45 11.9	-0.5
ASAR	Alice Springs	48.86	188	P	P	08 45 11.8	-0.6
	comp=Z,0.5nm,0.5s,baz=23,slow=11,SNR=9.8						
ASAR				PcP	PcP	08 46 34.6	-0.1
	comp=Z,0.5nm,0.6s,baz=13,slow=3.1,SNR=5.0						
ASAR	Alice Springs	48.86	188	P	P	08 45 11.7	-0.8
ZALV	Zalesovo Beam	50.29	320	P	P	08 45 22.9	0.0
	comp=Z,0.5nm,0.4s,baz=92,slow=8.4,SNR=2.3						
MKAR	Makanchi Array	50.90	311	P	P	08 45 28.6	+1.0
	comp=Z,0.5nm,0.6s,baz=90,slow=9.0,SNR=7.1						
MKAR	Makanchi Array	50.90	311	P	P	08 45 29.3	+1.7
EIDS	Eidsvold	51.06	168	P	P	08 45 28.5	-0.5
EIDS				IAmb	IAmb	08 45 41.8	
	comp=Z,6.2nm,1.2s						
MAKZ	Makanchi	51.11	311	P	P	08 45 29.8	+0.6
STKA	Stephens Creek	56.58	179	P	P	08 46 08.4	-0.5
	comp=Z,1.9nm,0.5s,baz=350,slow=7.9,SNR=6.9						
KKAR	Karatay Array	59.34	307	P	P	08 46 30.0	+1.8
ILAR	Eielson Array	60.10	28	P	P	08 46 31.9	-1.1
	comp=Z,0.3nm,0.7s,baz=289,slow=8.0,SNR=4.3						
TOO	Toolangi	62.41	176	P	P	08 46 49.1	+0.2
ABKAR	Akbulak array	65.69	315	P	P	08 47 10.4	+0.2
YKA	Yellowknife Ar	74.53	28	P	P	08 48 03.0	-0.8
	comp=Z,0.4nm,0.8s,baz=295,slow=5.0,SNR=9.8						
ARCES	ARCESS Array B	75.10	341	P	P	08 48 06.0	-0.9
	comp=Z,1.4nm,0.7s,baz=69,slow=6.6,SNR=5.8						
YBH	Yreka Blue Hor	78.30	49	P	P	08 48 25.8	+0.2
	comp=Z,0.9nm,0.7s,baz=323,slow=5.1,SNR=3.4						
NEW	Newport	79.25	42	P	P	08 48 30.5	-0.1
	comp=Z,1.4nm,0.5s,baz=316,slow=4.3,SNR=4.3						
FINES	FINESS Array B	79.27	334	P	P	08 48 29.5	-0.8
	comp=Z,1.0nm,0.4s,baz=61,slow=4.2,SNR=14						
NVAR	Mina Array Bea	82.75	51	P	P	08 48 47.5	-2.0
	comp=Z,1.0nm,0.7s,baz=296,slow=5.6,SNR=10.0						
ELK	Elko	83.82	48	P	P	08 48 54.7	-0.3
	comp=Z,0.6nm,0.6s,baz=166,slow=2.8,SNR=4.9						
PDAR	Pinedale Array	86.53	44	P	P	08 49 07.2	-1.2
	comp=Z,0.3nm,0.6s,baz=87,slow=0.3,SNR=4.9						
PLCA	Paso Flores	149.53	129	PKPbc	PKPbc	08 56 13.0	-0.7
	comp=Z,1.0nm,0.8s,baz=218,slow=4.8,SNR=5.7						

IDC 24 09:06:31.7±4.8, **5°.45S**×**131°.99E**, **h0**^{km}, **mb3.3**/1, **mb1 3.4**/3, **mb1mx3.1**/30, **mbtmp3.2**/3, **ML3.0**/2, **Error ellipse: s-maj=320.8km s-min=33.2km az=74.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.59	171	Pn	Pn	09 10 00.5	+0.9
	0.1nm,0.3s,baz=352,slow=13,SNR=3.4						
WRA				Sn	Sn	09 12 28.1	-14
	0.2nm,0.3s,baz=344,slow=27,SNR=6.4						
ASAR	Alice Springs	18.21	174	P	Pn	09 10 45.5	-0.6
	0.1nm,0.3s,baz=350,slow=12,SNR=4.4						
MKAR	Makanchi Array	68.04	326	P	P	09 17 33.1	0.0
	0.1nm,0.3s,baz=144,slow=5.2,SNR=3.6						

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*IDC **24** 09:19:51.5±1.7, 9°.10S×158°.11E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/40, mbtmp3.8/4, MS3.7/2, Ms1 3.7/2, ms1mx2.9/37, Error ellipse: s-maj=56.8km s-min=22.5km az=162.0*

ISC 24 09:19:52.5±1.1, **9°.0S**±0°.2×**158°.07E**±0°.08, **h10**^{km}, **n8**, σ**0^{s}78**/7, **mb3.8**/5, **MS3.8**/3, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.90	103	Pn	Pn	09 20 24.2	-0.8
	29nm,0.3s,baz=214,slow=11,SNR=24						
HNR				LR	LR	09 20 40.0	
	comp=Z,64nm,19.1s,baz=246,slow=26						
HNR				Sn	Sg	09 20 54.1	+0.4
	389nm,0.3s,baz=247,slow=23,SNR=16						
WRA	Warramunga Arr	25.39	242	P	P	09 25 21.1	+0.8
	1.0nm,0.6s,baz=68,slow=9.6,SNR=5.2						
ASAR	Alice Springs	27.33	235	P	P	09 25 37.5	-0.3
	0.2nm,0.7s,baz=69,slow=9.9,SNR=2.6						
STKA	Stephens Creek	27.43	212	P	P	09 25 38.6	0.0
	2.5nm,0.7s,baz=24,slow=12,SNR=1.7						
DAV	Davao City (W)	36.10	295	LR	LR	09 40 25.5	
	comp=Z,94nm,20.4s,baz=349,slow=34						
JHJ	Hachijo jima 2	45.37	338	LR	LR	09 45 10.1	
	comp=Z,118nm,20.7s,baz=108,slow=33						
LZH	Lanzhou	67.88	315	*e*P	P	09 30 51.1	-0.5
LZH				pP	sP	09 31 01.3	+5.6
LZH				sP	pP	09 31 04.5	+10
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,51nm,4.9s						
LZH				LR	LR		
	comp=N,310nm,14.1s						
LZH				LR	LR		
	comp=E,230nm,15.7s						
LZH				LR	LR		
	comp=Z,180nm,15.7s						
NVAR	Mina Array Bea	90.58	51	P	P	09 32 56.4	+0.8
	comp=Z,0.4nm,0.8s,baz=251,slow=5.6,SNR=4.2						

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*NEIC **24** 09:24:09.9±1.7, 33°.23N±0°.06×140°.94E±0°.06, h23^{km}±4^{km}, mb4.7/54, Error ellipse: s-maj=8.8km s-min=7.3km az=152.0*

*MOS **24** 09:24:09.7±1.2, 33°.27N×140°.88E, h37^{km}, mb4.7/34, Error ellipse: s-maj=10.2km s-min=5.1km az=112.8*

*NIED **24** 09:24:11.1, 33°.33N×140°.98E, h56^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.74; M$_{\theta\theta}$1.33; M$_{\phi\phi}$-4.06; M$_{r\theta}$-1.95; M$_{\theta\phi}$1.00; M$_{\phi r}$-3.37; Fault plane solution: M$_{0}$5.39000×10^{15} NP1: φ$_{s}$200.00000°, δ72.00000°, λ119.00000°. NP2: φ$_{s}$319.00000°, δ33.00000°, λ34.00000°.*

*JMA **24** 09:24:11.0±0.1, 33°.33N×140°.98E, h56^{km}±5^{km}, M4.6*

JMA Felt I J1.

*IDC **24** 09:24:13.8±1.2, 33°.23N×140°.78E, h55^{km}±9^{km}, mb3.9/25, mb1 4.1/29, mb1mx4.0/48, mbtmp4.2/29, MS3.6/21, Ms1 3.6/21, ms1mx3.4/48, Error ellipse: s-maj=14.1km s-min=9.8km az=89.0*

ISC 24 09:24:11.8±0.8, **33°.28N**±0°.04×**140°.94E**±0°.05, **h40**^{km}±6^{km}, **n232**, σ**1^{s}14**/228, **mb4.5**/76, **MS3.8**/18, **7C-9D**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.95	260	⇓P	Pn	09 24 29.3	+0.5
JHJ2				S	Sn	09 24 42.4	+1.2
JHJ2	Mitsune	0.95	260	Pn	Pn	09 24 29.2	+0.4
JHCJ	Hachijojimakas	0.98	258	⇓P	Pn	09 24 29.4	+0.3
JHJ	Hachijo jima 2	0.98	261	P	Pn	09 24 29.4	+0.2
	3μm,0.3s,baz=115,slow=3.0,SNR=397						
JHJ				S	Sn	09 24 41.6	-0.2
	6μm,0.3s,baz=75,slow=20,SNR=18						
JHJ				LR	LR	09 24 58.0	
	comp=Z,2μm,19.6s,baz=278,slow=54						
JMKN	Mikurajimanish	1.28	299	⇓P	Pn	09 24 33.3	+0.1
JMKN				*e*S	Sn	09 24 48.6	-0.6
JAOM	Aogashimamukai	1.28	231	⇓P	Pn	09 24 33.7	+0.4
JAOM				S	Sn	09 24 49.4	+0.2
BSO1	Boso 1	1.37	1	⇑P	Pn	09 24 33.6	-0.4
BSO3	Boso 3	1.56	347	P	Pn	09 24 36.5	-0.3
BSO3				S	Sn	09 24 55.3	-0.4
JIM2	Oshima 3	1.90	319	⇓P	Pn	09 24 41.5	-0.3
JIM2				*e*S	Sn	09 25 03.3	-1.3
JIZS	Izushimoda	2.23	311	⇓P	Pn	09 24 46.9	+0.6
JIZS				*e*S	Sn	09 25 13.2	+0.6
JOD2	Odawara 2	2.50	323	P	Pn	09 24 50.1	+0.1
JOD2				S	Sn	09 25 17.5	-1.8
JFNN	Fujinakano	2.67	316	S	Sn	09 25 23.2	-0.2
JSG	Sagara	2.67	302		Pn	09 24 53.5	+1.1
TK02	Tokai 2	2.74	285	⇓P	Pn	09 24 54.5	+1.5
TK04	Tokai 4	2.78	294	P	Pn	09 24 55.2	+1.5
TK04				S	Sn	09 25 27.1	+1.2
SHZ3	Shizuoka 3	2.88	309	P	Pn	09 24 56.9	+1.6
JYN	Shimob	2.97	319	P	Pn	09 24 57.8	+1.3
JYN				*e*S	Sn	09 25 31.5	+0.6
JYT	Yasato	3.00	348	Pn	Pn	09 24 58.4	+1.5
JRY	Ryogami san	3.20	329	P	Pn	09 25 00.1	+0.4
JGF	Kuroka	3.76	309	Pn	Pn	09 25 09.4	+2.1
INU	Inuyama	3.84	304		Pn	09 25 10.4	+1.9
MJAR	Matsushiro Arr	3.95	326	P	Pn	09 25 11.6	+1.7
	2.9nm,0.3s,baz=55,slow=30,SNR=205						
MJAR				S	Sn	09 25 56.1	+1.0
	3.5nm,0.3s,baz=304,slow=44,SNR=3.2						
MJAR				LR	LR	09 26 52.5	
	comp=Z,543nm,21.1s,baz=135,slow=41						
MJAR	Matsushiro Arr	3.95	326		Pn	09 25 11.0	+1.0
MAJO	Matsushiro	3.95	326	P	Pn	09 25 12.0	+2.0
MAJO	Matsushiro	3.95	326	Pn	Pn	09 25 12.0	+2.0
MAT	Matsushiro	3.95	326	P	Pn	09 25 11.5	+1.5
MAT				S	Sn	09 25 54.0	-1.1
JMM	Marumori	4.58	359		Pn	09 25 18.3	-0.2
JWT	Wachi	5.00	295		Pn	09 25 25.3	+0.9
JSD	Sado	5.22	336	Pn	Pn	09 25 27.8	+0.5
JMN	Monobe	5.91	276	Pn	Pn	09 25 39.0	+2.0
JCJ	Chichijima	6.26	170	P	Pn	09 25 40.3	-1.3
	34nm,0.3s,baz=101,slow=24,SNR=7.3						
JCJ				S	Sn	09 26 48.3	-3.6
	21nm,0.3s,baz=294,slow=20,SNR=1.8						
JCJ	Chichijima	6.26	170		Pn	09 25 41.9	+0.2
JHS	Saijyo	6.71	287	Pn	Pn	09 25 50.1	+2.3
JTM	Tenmabayashi	7.49	1	Pn	Pn	09 25 58.4	-0.2
JNU	Nakatsue	8.43	272	P	Pn	09 26 12.8	+1.3
	1.0nm,0.3s,baz=112,slow=6.9,SNR=7.8						
JNU	Nakatsue	8.43	272		Pn	09 26 11.0	-0.5
ERM	Erimo	8.89	11	P	Pn	09 26 16.6	-1.2
ERM	Erimo	8.89	11	Pn	Pn	09 26 16.6	-1.2
JEW	Eniwo	9.55	2	Pn	Pn	09 26 25.7	-1.1
JTU	Tsushima	9.67	281	Pn	Pn	09 26 27.7	-0.8
ASAJ	Asahikawa	10.90	6	P	Pn	09 26 43.3	-1.9
	1.6nm,0.3s,baz=221,slow=11,SNR=14						
ASAJ				LR	LR	09 30 56.1	
	comp=Z,167nm,21.9s,baz=180,slow=37						
ASAJ	Asahikawa	10.90	6	P	Pn	09 26 44.2	-0.9
JKA	Kamikawa-asahi	10.90	6		Pn	09 26 44.2	-1.0
KSRS	Korea Array	11.41	295	P	Pn	09 26 57.7	+5.5
	0.3nm,0.3s,baz=112,slow=14,SNR=46						
KSRS				LR	LR	09 31 25.3	
	comp=Z,252nm,18.2s,baz=107,slow=38						
KSAR	Wonju Array Be	11.44	295	P	Pn	09 26 52.3	-0.3
KSAR	Wonju Array Be	11.44	295		Pn	09 26 52.3	-0.3
KS19	Wonju Array Si	11.47	295	Pn	Pn	09 26 51.9	-1.1
JOW	Kunigami	12.71	243	P	Pn	09 27 09.0	-1.0
	0.3nm,0.3s,baz=118,slow=18,SNR=2.8						
JOW				LR	LR	09 31 36.9	
	comp=Z,151nm,21.1s,baz=67,slow=35						
USRK	Ussuriysk Ar.	12.94	330	P	Pn	09 27 15.2	+2.2
	baz=114,slow=14,SNR=3.7						
USRK				LR	LR	09 32 07.8	
	comp=Z,107nm,18.1s,baz=143,slow=37						
USRK	Ussuriysk Ar.	12.94	330		Pn	09 27 10.5	-2.5
YSS	Yuzh-Sakhalins	13.73	5	*e*P	Pn	09 27 21.6	-2.2
KLR	Kul'dur	17.34	339	P	Pn	09 28 08.5	-2.2
	0.3nm,0.3s,baz=263,slow=5.8,SNR=5.9						
KLR				LR	LR	09 35 00.9	
	comp=Z,144nm,18.8s,baz=124,slow=37						
KLR	Kul'dur	17.34	339	*i* P	P	09 28 11.1	-0.6
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NJ2	Nanjing	18.63	272	*e*P	Pn	09 28 28.9	+2.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI	Beijing	20.94	296	P	Pn	09 28 53.8	-0.1
HIA	Hailar	22.44	322	P	P	09 29 05.0	-2.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HIA	Hailar	22.44	322	P	P	09 29 05.0	-2.2
ZEA	Zeya	22.65	339	*e*P	P	09 29 09.4	0.0
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
WHN	Wuhan	22.71	270	P	P	09 29 09.3	-0.9
PETK	Petropavlovsk-	23.17	26	LR	LR	09 39 52.4	
	comp=Z,69nm,19.3s,baz=144,slow=40						
HHC	Hu-ho-hao-te	24.55	296	*e*P	P	09 29 29.3	+1.4
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,160nm,13.3s						
HHC				LR	LR		
	comp=Z,180nm,10.1s						
HHC				LR	LR		
	comp=Z,220nm,15.2s						
H11N2	WAKE ISLAND Hy	26.78	114	T	T	09 58 45.8	
	baz=306,slow=75,SNR=130						
H11N1	WAKE ISLAND Hy	26.78	114	T	T	09 58 50.2	
	baz=306,slow=75,SNR=138						
H11N3	WAKE ISLAND Hy	26.79	114	T	T	09 58 51.0	
	baz=306,slow=75,SNR=137						
WAKE	Wake Island	26.85	115	P	P	09 29 47.9	-0.8
ENH	Enshi	26.85	272	P	P	09 29 47.3	-1.5
MA2	Magadan	27.10	11	P	P	09 29 52.0	+1.4
	comp=Z,1.9nm,0.5s,baz=169,slow=16,SNR=2.4						
MA2	Magadan	27.10	11	*i* P	P	09 29 50.8	+0.2
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MA2	Magadan	27.10	11	IAmb	IAmb	09 30 15.8	
	comp=Z,10nm,1.1s						
H11S3	WAKE ISLAND Hy	27.35	116	T	T	09 59 16.4	
	baz=307,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	27.35	116	T	T	09 59 28.9	
	baz=307,slow=76,SNR=3.7						
H11S2	WAKE ISLAND Hy	27.37	116	T	T	09 59 28.4	
	baz=307,slow=76,SNR=3.2						
ULN	Ulaanbaatar	29.30	310	*ce*P	P	09 30 11.3	+0.7
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	Ulaanbaatar	29.30	310	P	P	09 30 10.8	+0.2
ULN				IAmb	IAmb	09 30 15.6	
	comp=Z,6.7nm,0.8s						
YAK	Yakutsk	29.66	349	P	P	09 30 12.8	-0.5
YAK				pmax	pmax		
	comp=Z,16nm,0.6s						
YAK	Yakutsk	29.66	349	P	P	09 30 12.8	-0.5
YAK				IAmb	IAmb	09 30 24.5	
	comp=Z,16nm,0.6s						
SONM	Songino Array	29.72	310	P	P	09 30 14.6	+0.4
	comp=Z,3.5nm,0.9s,baz=116,slow=8.2,SNR=20						
SONM				LR	LR	09 42 31.5	
	comp=Z,170nm,19.1s,baz=124,slow=37						
SONM	Songino Array	29.72	310	P	P	09 30 14.2	0.0
SONM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	29.72	310	P	P	09 30 14.2	0.0
SEY	Seymchan	30.54	10	P	P	09 30 22.8	+1.7
	comp=Z,0.4nm,0.2s,baz=207,slow=8.4,SNR=3.7						
SEY	Seymchan	30.54	10	*i* P	P	09 30 19.6	-1.5
CD2	Chengdu	31.48	276	P	P	09 30 29.4	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,250nm,16.9s						
CD2				LR	LR		
	comp=Z,300nm,15.1s						
CD2				LR	LR		
	comp=Z,390nm,16.5s						
ZAK	Zakamensk	32.42	313	*e*P	P	09 30 35.6	-2.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	Talaya	32.62	316	P	P	09 30 39.8	+0.2
	comp=Z,2.3nm,0.5s,baz=138,slow=5.8,SNR=5.4						
TLY	Talaya	32.62	316	*e*P	P	09 30 40.5	+0.9
TLY				pmax	pmax		
	comp=Z,16nm,0.9s						
TLY				MLR	MLR		
	comp=Z,74nm,6.0s						
TLY	Talaya	32.62	316	P	P	09 30 40.3	+0.8
TLY				IAmb	IAmb	09 30 46.0	
	comp=Z,6.1nm,1.0s						
GTA	Gaotai	33.47	292	*e*P	P	09 30 48.4	+1.1
GTA				pP	pP	09 30 57.9	0.0
GTA				sP	sP	09 31 02.3	-0.2
GTA				pmax	pmax		
	comp=Z,120nm,4.9s						
GTA				LR	LR		
	comp=Z,130nm,17.3s						
GTA				LR	LR		
	comp=Z,110nm,15.4s						
GTA				LR	LR		
	comp=Z,120nm,14.9s						
KMI	Kunming	34.17	266	⇑P	P	09 30 55.8	+2.2
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
BILL	Bilibino	37.73	15	⇑*e*P	P	09 31 23.0	-0.3
BILL				*e*		09 32 49.9	
BILL				*e*S	S	09 37 17.7	+7.0
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TIXI	Tiksi	38.97	354	P	P	09 31 34.3	+0.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	38.97	354	P	P	09 31 34.3	+0.7
CMAR	Chiang Mai Arr	40.29	259	P	P	09 31 44.0	-1.3
	comp=Z,0.7nm,0.4s,baz=59,slow=11,SNR=3.2						
CMAR				LR	LR	09 48 39.3	
	comp=Z,43nm,19.5s,baz=170,slow=36						
WMQ	Urumqi	42.30	300	*e*P	P	09 32 05.0	+3.4
WMQ				pP	pwP	09 32 15.1	+2.6
WMQ				PP	PcP	09 33 45.9	-8.8
WMQ				S	S	09 38 19.3	-0.3
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.7s						
WMQ				LR	LR		
	comp=Z,300nm,8.3s						
WMQ				LR	LR		
	comp=Z,430nm,9.7s						
DGZ	Jazzator, Alta	42.37	309	*i* P	P	09 32 02.3	+0.1
DGZ				pmax	pmax		
	comp=Z,12nm,1.0s						
ZSN	Zaisan	44.07	306	*e*P	P	09 32 15.6	-0.2
	baz=306						
ZSN	Zaisan	44.07	306	*e*P	P	09 32 15.6	-0.2
ZAA0	Zalesovo Array	44.23	315	P	P	09 32 16.7	-0.2
ZALV	Zalesovo Beam	44.23	315	P	P	09 32 16.8	-0.1
	comp=Z,3.0nm,0.6s,baz=102,slow=6.8,SNR=15						
ZALV				PcP	PcP	09 34 00.7	-0.2
	comp=Z,1.2nm,0.4s,baz=111,slow=3.5,SNR=6.7						
ZALV				LR	LR	09 50 51.4	
	comp=Z,51nm,19.7s,baz=76,slow=36						
ZALV	Zalesovo Beam	44.23	315	*i* P	P	09 32 20.2	+3.3
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	44.23	315	P	P	09 32 17.0	+0.1
MK31	Makanchi Array	45.87	305	P	P	09 32 29.5	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	Makanchi Array	45.87	305	P	P	09 32 29.5	-0.6
MKAR	Makanchi Array	45.87	305	P	P	09 32 29.9	-0.2
	comp=Z,1.6nm,0.5s,baz=85,slow=10,SNR=26						
MKAR				ScP	ScP	09 37 54.5	-2.2
	comp=Z,0.6nm,0.7s,baz=83,slow=4.2,SNR=4.8						
MKAR				LR	LR	09 52 03.8	
	comp=Z,89nm,21.9s,baz=80,slow=36						
MKAR	Makanchi Array	45.87	305	*ce*P	P	09 32 29.8	-0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	45.87	305	P	P	09 32 29.6	-0.6
MAKZ	Makanchi	46.08	305	P	P	09 32 31.4	-0.4
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	46.08	305	P	P	09 32 31.4	-0.4
KURK	Kurchatov	48.01	311	P	P	09 32 48.1	+1.4
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	Kurchatov	48.01	311	P	P	09 32 48.1	+1.4
KURK				IAmb	IAmb	09 32 51.5	
	comp=Z,14nm,0.8s						
KURBB	Kurchatov Arra	48.07	311	P	P	09 32 46.6	-0.6
	comp=Z,6.2nm,0.5s,baz=90,slow=7.4,SNR=33						
KPKS	Kokpek	48.83	301	*e*P	P	09 32 52.3	-1.0
	comp=Z,2.1nm,0.8s,baz=301						
KPKS	Kokpek	48.83	301	*e*P	P	09 32 52.2	-1.0
KPKS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHKK	Chushkaly	49.97	302	*e*P	P	09 33 01.0	-0.9
	baz=302						
CHKK	Chushkaly	49.97	302	*e*P	P	09 33 00.9	-0.9
MDOK	Medeo	50.06	301	*e*P	P	09 33 02.3	-0.4
	baz=301						
MDOK	Medeo	50.06	301	*e*P	P	09 33 02.3	-0.4
AAA	Alma-Ata	50.14	301	*e*P	P	09 33 04.9	+1.6
	baz=301						
AAA	Alma-Ata	50.14	301	*e*P	P	09 33 04.8	+1.6
TNSS	Tian-Shan	50.15	301	*e*P	P	09 33 03.5	-0.3
	baz=301						
TNSS	Tian-Shan	50.15	301	*e*P	P	09 33 03.5	-0.3
KDAK	Kodiak Island	50.19	40	P	P	09 33 03.7	+0.4
	comp=Z,5.9nm,0.9s,baz=37,slow=5.1,SNR=3.6						
KUU	Kurty	50.42	302	*e*P	P	09 33 04.1	-1.3

	comp=Z,3.3nm,0.6s,baz=302						
KUU	Kurty	50.42	302	eP	P	09 33 04.0	-1.3
KUU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH	Kashi	51.66	297	P	P	09 33 18.0	+3.2
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BTLS	Baital	51.81	304	eP	P	09 33 14.8	-0.9
	baz=304						
BTLS	Baital	51.81	304	eP	P	09 33 14.8	-0.9
AAK	Ala-Archa	52.00	301	i P	P	09 33 16.6	-0.8
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AAK	Ala-Archa	52.00	301	P	P	09 33 16.9	-0.5
ILAR	Eielson Array	52.89	31	P	P	09 33 23.8	+0.4
	comp=Z,0.4nm,0.7s,baz=276,slow=5.6,SNR=3.4						
BRVK	Borovoye	52.92	314	P	P	09 33 24.8	+1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	52.92	314	P	P	09 33 24.8	+1.0
WB0	Warramunga Arr	53.12	188	P	P	09 33 24.9	-0.6
FITZ	Fitzroy Crossi	53.14	198	P	P	09 33 26.1	+0.5
FITZ				IAmb	IAmb	09 33 26.8	
	comp=Z,5.3nm,0.8s						
WRAB	Tennant Creek	53.29	188	ceP	P	09 33 26.4	-0.4
WRAB				pmax	pmax		
	comp=Z,20nm,0.6s						
WRAB	Tennant Creek	53.29	188	P	P	09 33 26.4	-0.4
WR0	Warramunga Arr	53.29	188	P	P	09 33 26.3	-0.5
WB2	Warramunga Arr	53.30	188	P	P	09 33 26.3	-0.5
WRA	Warramunga Arr	53.30	188	P	P	09 33 26.2	-0.7
	comp=Z,29nm,0.6s,baz=5.3,slow=7.7,SNR=204						
WRA	Warramunga Arr	53.30	188	P	P	09 33 25.8	-1.0
CTAO	Charters Tower	53.31	174	P	P	09 33 23.6	-3.4
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CTAO	Charters Tower	53.31	174	P	P	09 33 23.6	-3.4
CTAO				IAmb	IAmb	09 33 47.1	
	comp=Z,8.7nm,1.1s						
KK31	Karatay Array	54.73	302	P	P	09 33 37.3	+0.1
KK31				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KK31	Karatay Array	54.73	302	P	P	09 33 37.3	+0.1
KK31				IAmb	IAmb	09 33 43.2	
	comp=Z,6.8nm,0.9s						
KKAR	Karatay Array	54.73	302	P	P	09 33 37.1	-0.1
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KKAR	Karatay Array	54.73	302	P	P	09 33 37.1	-0.1
KKAR	Karatay Array	54.73	302	P	P	09 33 37.3	+0.1
KKAR				IAmb	IAmb	09 33 43.2	
	comp=Z,6.8nm,0.9s						
IUG	Iuzhnay	55.33	301	eP	P	09 33 41.3	-0.4
	comp=Z,2.5nm,1.0s,baz=301						
IUG	Iuzhnay	55.33	301	eP	P	09 33 41.2	-0.4
IUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AS31	Alice Springs	57.02	188	P	P	09 33 53.6	-0.1
AS31				IAmb	IAmb	09 33 56.5	
	comp=Z,6.9nm,0.6s						
ASAR	Alice Springs	57.03	188	P	P	09 33 53.3	-0.4
	comp=Z,8.7nm,0.4s,baz=4.0,slow=6.7,SNR=210						
ASAR	Alice Springs	57.03	188	P	P	09 33 53.4	-0.3
INK	Inuvik	57.91	26	P	P	09 34 00.1	+0.8
	comp=Z,0.5nm,0.5s,baz=288,slow=3.6,SNR=2.4						
INK	Inuvik	57.91	26	P	P	09 34 00.4	+1.0
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	Inuvik	57.91	26	P	P	09 34 00.4	+1.0
PSA00	Pilbara Seismi	58.14	203	P	P	09 34 01.1	-0.4
ARU	Arti	58.94	320	LR	LR	10 00 18.1	
	comp=Z,88nm,18.2s,baz=68,slow=37						
ARU	Arti	58.94	320	d iP	P	09 34 05.1	-1.7
ARU						09 34 50.8	
ARU				S	S	09 42 11.0	+1.1
ARU				SS	SS	09 45 59.4	-4.0
ARU				pmax	pmax		
	comp=Z,15nm,2.0s						
ARU	Arti	58.94	320	P	P	09 34 06.4	-0.4
ARU				IAmb	IAmb	09 34 24.1	
	comp=Z,7.9nm,0.9s						
EIDS	Eidsvold	59.12	169	P	P	09 34 09.2	+0.9
EIDS				IAmb	IAmb	09 34 09.9	
	comp=Z,16nm,1.1s						
ABKAR	Akbulak array	60.10	312	P	P	09 34 14.4	-0.5
ABKAR	Akbulak array	60.10	312	P	P	09 34 14.5	-0.3
ABKAR				IAmb	IAmb	09 34 29.6	
	comp=Z,10nm,1.2s						
DZM	Mont Dzumac	60.18	153	P	P	09 34 17.5	+1.7
	comp=Z,3.8nm,1.0s,baz=135,slow=19,SNR=3.4						
AKTO	Aktyubinsk	60.93	313	LR	LR	09 59 46.8	
	comp=Z,42nm,20.7s,baz=56,slow=35						
C36M	Paulatuk	61.00	24	P	P	09 34 21.9	+1.2
C36M				IAmb	IAmb	09 34 36.4	
	comp=Z,4.4nm,0.8s						
PALK	Pallekele	61.23	259	LR	LR	10 01 40.6	
	comp=Z,44nm,18.8s,baz=269,slow=37						
KIRV	Kirov	63.02	324	LR	LR	10 02 32.4	
	comp=Z,120nm,18.2s,baz=56,slow=36						
KIRV	Kirov	63.02	324	i P	P	09 34 34.0	-0.4
STKA	Stephens Creek	64.81	179	P	P	09 34 46.6	+0.3
	comp=Z,5.8nm,0.8s,baz=336,slow=8.4,SNR=7.5						
STKA	Stephens Creek	64.81	179	IAmb	IAmb	09 34 48.5	
	comp=Z,1.4nm,0.8s						
FORT	Forrest	64.87	192	P	P	09 34 47.1	+0.3
BBOO	Buckleboo	65.90	184	P	P	09 34 53.4	0.0
BELG	Belogornoye	66.30	318	LR	LR	10 07 38.3	
	comp=Z,52nm,18.1s,baz=147,slow=39						
BELG	Belogornoye	66.30	318	i P	P	09 34 56.6	+0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	Yellowknife Ar	67.25	29	P	P	09 35 02.1	+0.3
	comp=Z,0.4nm,0.7s,baz=302,slow=5.6,SNR=8.4						
YKA	Yellowknife Ar	67.25	29	i P	P	09 35 03.2	+1.4
ARCES	ARCESS Array B	67.37	340	P	P	09 35 02.2	-0.3
	comp=Z,2.4nm,0.9s,baz=51,slow=7.1,SNR=1.1						
ARCES				LR	LR	10 07 34.9	
	comp=Z,89nm,18.9s,baz=180,slow=39						
NWAO	Narrogin (SRO)	69.54	201	P	P	09 35 16.5	+0.2
NWAO				pmax	pmax		
	comp=Z,24nm,0.7s						
NWAO	Narrogin (SRO)	69.54	201	P	P	09 35 16.6	+0.2
NWAO	Narrogin (SRO)	69.54	201	P	P	09 35 16.5	+0.2
NWAO				IAmb	IAmb	09 35 17.1	
	comp=Z,19nm,0.8s						
VRH	Novokhopyorsk	70.11	319	eP	P	09 35 18.8	-1.0
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OBN	Obninsk	70.88	324	⇓eP	P	09 35 22.9	-1.5
OBN				i		09 38 07.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	71.51	320	eP	P	09 35 28.4	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FIA1	FINESS Array S	71.95	333	P	P	09 35 30.4	-0.3
FIA1				IAmb	IAmb	09 35 45.5	
	comp=Z,15nm,1.1s						
FINES	FINESS Array B	71.95	333	P	P	09 35 31.1	+0.3
	comp=Z,2.0nm,0.6s,baz=153,slow=5.5,SNR=12						
FINES	FINESS Array B	71.95	333	i P	P	09 35 30.7	-0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	71.95	333	P	P	09 35 31.3	+0.5
KBZ	Khabaz	73.06	311	P	P	09 35 38.0	+0.2
	comp=Z,2.5nm,0.8s,baz=191,slow=5.2,SNR=3.5						
KBZ	Khabaz	73.06	311	ceP	P	09 35 38.3	+0.6
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV	Kislovodsk	73.08	312	eP	P	09 35 38.1	+0.1
KIV				pmax	pmax		
	comp=Z,20nm,1.1s						
PINE	Pine Mountain	73.08	49	P	P	09 35 40.3	+2.2
PINE				IAmb	IAmb	09 35 42.0	
	comp=Z,16nm,1.3s						
GNI	Garni	73.65	307	LR	LR	10 09 54.6	
	comp=Z,60nm,18.6s,baz=40,slow=37						
GNI	Garni	73.65	307	i P	P	09 35 41.9	+0.4
GNI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMO	Blue Mountains	74.78	46	P	P	09 35 49.9	+2.0
BMO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BMO	Blue Mountains	74.78	46	P	P	09 35 49.9	+1.9
BMO				IAmb	IAmb	09 35 50.3	
	comp=Z,9.2nm,1.4s						
WVOR	Wild Horse Val	75.23	49	P	P	09 35 51.7	+1.1
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WVOR	Wild Horse Val	75.23	49	P	P	09 35 51.7	+1.1
BEKR	Beckworth	75.45	52	P	P	09 35 53.0	+1.0
BEKR				IAmb	IAmb	09 35 54.4	
	comp=Z,5.8nm,1.3s						
NACGM	Naroch	75.65	327	i P	P	09 35 53.0	+0.4
NACGM				i P	P	09 35 53.0	+0.4
NACGM				i P	P	09 35 53.0	+0.4
NACGM				i PcP	pwP	09 36 06.7	-0.1
NACGM				i PP	PP	09 38 40.8	-1.1
NACGM				i PPP	PPP	09 40 24.2	
NACGM				i S	S	09 45 28.8	-1.8
NACGM				i SS	SS	09 50 35.6	+14
NACGM				i SSS	SSS	09 53 26.4	
NACGM				i LQ	LQ	10 04 10.0	
NACGM				i LR	LR	10 08 39.0	
AKASG	Malin Array Be	77.03	323	P	P	09 36 00.4	0.0
	comp=Z,3.9nm,0.6s,baz=49,slow=6.3,SNR=12						
NC204	NORSAR Array S	77.46	338	P	P	09 36 03.1	+0.4
NB2	NORSAR Subarra	77.49	337	P	P	09 36 03.8	+0.9
	comp=Z,7.1nm,1.1s,baz=41,slow=5.6						
NOA	NORSAR Array B	77.49	337	P	P	09 36 03.5	+0.6
	comp=Z,2.6nm,0.9s,baz=40,slow=5.4,SNR=4.3						
NOA				LR	LR	10 13 12.5	
	comp=Z,34nm,18.2s,baz=270,slow=38						
FCC	Fort Churchill	77.53	26	P	P	09 36 03.1	0.0
FCC				pmax	pmax		
	comp=Z,8.0nm,1.5s						
FCC	Fort Churchill	77.53	26	P	P	09 36 03.1	0.0
FCC				IAmb	IAmb	09 36 03.3	
	comp=Z,8.4nm,1.5s						
NVAR	Mina Array Bea	77.57	52	P	P	09 36 05.7	+1.6
	comp=Z,1.1nm,0.7s,baz=286,slow=5.8,SNR=8.5						
NVAR	Mina Array Bea	77.57	52	P	P	09 36 05.3	+1.2
ELK	Elko	78.28	49	P	P	09 36 09.8	+1.8
ELK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ELK	Elko	78.28	49	P	P	09 36 09.8	+1.8
ELK				IAmb	IAmb	09 36 10.7	
	comp=Z,7.3nm,1.5s						
QRZ	Quartz Range	79.29	156	P	P	09 36 13.7	+0.8
PDAR	Pinedale Array	80.59	45	P	P	09 36 21.4	+0.9
	comp=Z,0.3nm,0.5s,baz=131,slow=4.1,SNR=3.7						
BUR08	Bucovina Ar. S	81.00	322	P	P	09 36 23.7	+1.3
BUR08				IAmb	IAmb	09 36 36.0	
	comp=Z,8.2nm,1.3s						
BRTR	Keskin Array B	81.05	312	P	P	09 36 23.8	+0.9
	comp=Z,0.7nm,0.4s,baz=127,slow=3.3,SNR=4.6						
BRTR				LR	LR	10 15 46.6	
	comp=Z,24nm,20.2s,baz=4.5,slow=38						
BORG	Borgarnes	81.31	352	i P	P	09 36 21.7	-1.8
MVU	Marysvale	81.48	49	P	P	09 36 26.9	+1.6
KOLS	Kolonicke sedl	81.63	324	eP	P	09 36 28.1	+2.5
KOLS				pmax	pmax		
	comp=Z,73nm,2.7s						
KOLS	Kolonicke sedl	81.63	324	eP	P	09 36 28.1	+2.5
LCMT	Little Creek M	81.69	51	P	P	09 36 27.9	+1.6
RAYN	Ar Rayn	81.72	293	P	P	09 36 26.7	+0.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAYN	Ar Rayn	81.72	293	P	P	09 36 26.7	+0.1
RAYN				IAmb	IAmb	09 36 42.4	
	comp=Z,3.7nm,0.8s						
SRU	San Rafael Swe	82.19	48	P	P	09 36 29.8	+0.8
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SRU	San Rafael Swe	82.19	48	P	P	09 36 29.8	+0.8
PV14	Lion Creek, Pa	83.57	48	P	P	09 36 37.0	+0.8
PV14				IAmb	IAmb	09 36 38.3	
	comp=Z,17nm,1.4s						
VYHS	Vyhne	83.59	325	eP	P	09 36 38.5	+2.7
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VYHS	Vyhne	83.59	325	eP	P	09 36 38.5	+2.7
CLL	Collm	84.15	330	i P	P	09 36 40.5	+1.9
CLL	Collm	84.15	330	i P	P	09 36 40.5	+1.9
GERES	GERESS Array B	85.69	328	P	P	09 36 46.6	+0.1
	comp=Z,0.5nm,0.5s,baz=32,slow=7.8,SNR=6.0						
GERES				LR	LR	10 17 04.7	
	comp=Z,104nm,18.4s,baz=312,slow=37						
TX31	Lajitas Ar. Si	92.72	52	P	P	09 37 20.6	+0.4
TX31				IAmb	IAmb	09 37 22.7	
	comp=Z,15nm,1.2s						
TX32	Lajitas Array	92.72	52	P	P	09 37 20.7	+0.6
TX32				IAmb	IAmb	09 37 22.7	
	comp=Z,5.1nm,1.2s						
TXAR	Lajitas Array	92.72	52	P	P	09 37 21.1	+0.9
	comp=Z,2.0nm,1.0s,baz=286,slow=3.4,SNR=12						
TORD	Torodi Ar. Bea	119.65	313	PKP	PKiKP	09 42 57.0	-1.2
	comp=Z,0.4nm,0.5s,baz=33,slow=0.9,SNR=4.5						
TORD	Torodi Ar. Bea	119.65	313		PKiKP	09 42 58.3	+0.2

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*UCR **24** 09:49:09.1±2.9, 10°.39N×86°.48W, h16^{km}±15^{km}, MW4.0*

*IDC **24** 09:49:16.8±25.0, 11°.93N×85°.39W, h0^{km}, mb3.1/3, mb1 3.6/3, mb1mx3.4/30, mbtmp3.1/3, Error ellipse: s-maj=505.7km s-min=114.5km az=174.0*

ISC 24 09:49:11.9±1.2, **10°.45N**±0°.09×**86°.23W**±0°.08, **h10**^{km}, **n24**, σ**0^{s}.96**/25, **mb3.1**/3, **3C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	0.67	67	eP	Pn	09 49 27.7	+0.2
GUAI	GUAI	0.73	104	i P	Pb	09 49 26.6	-0.1
ORTG	Ortega, Santa	0.76	97	eP	Pb	09 49 27.5	+0.2
DUNO	Dulce Nombre,	0.81	117	eP	Pg	09 49 27.1	-0.4
GBS3	Finca Las Img	0.82	66	⇑iP	Pn	09 49 29.4	-0.3
LAPC	Finca la Perla	0.84	68	⇑iP	Pb	09 49 28.3	-0.3
PLVR	Palo Verde	0.87	97	eP	Pg	09 49 28.1	-0.6
BUEV	Buena Vista	0.88	67	i P	Pn	09 49 30.2	-0.2
BUEV				i S	Sn	09 49 46.2	+2.9
GB1A	Borinquen Arri	0.89	66	i P	Pn	09 49 30.4	-0.2
GPS2	Hotel Rincn d	0.91	71	eP	Pn	09 49 30.7	-0.1
BUAI	Buenos Aires	0.97	64	i P	Pn	09 49 30.9	-0.8
LIM1	Limonal	0.99	76	i P	Pn	09 49 31.6	-0.3
COLC	Colonia	1.03	78	i P	Pn	09 49 32.2	-0.2
HORNC	Hornillas	1.06	76	⇑iP	Pn	09 49 32.6	-0.4
CUI	Cuipilapa	1.06	79	eP	Pb	09 49 31.9	-0.5
ACAL	Aguas Claras	1.18	81	i P	Pn	09 49 34.7	+0.1
PTEN	Parque Tenorio	1.25	78	i P	Pn	09 49 35.6	+0.1
CASO	Castillo	1.47	91	i P	Pb	09 49 38.6	-0.8
ARE1	Arenal 1	1.48	90	eP	Pg	09 49 39.4	-1.0
CEDE	Laguna Cedeo	1.50	89	eP	Pn	09 49 39.0	0.0
JACO	JACO, Garabito	1.73	117	eP	Pn	09 49 42.1	0.0
TXAR	Lajitas Array	24.87	322	P	P	09 54 35.4	+0.4
	0.5nm,0.7s,baz=141,slow=10,SNR=4.7						
NVAR	Mina Array Bea	39.99	320	P	P	09 56 49.1	+1.9
	0.2nm,0.6s,baz=121,slow=9.6,SNR=2.2						
YKA	Yellowknife Ar	55.84	345	P	P	09 58 47.2	-2.1
	0.2nm,0.9s,baz=136,slow=7.3,SNR=4.1						

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*IDC **24** 09:54:13.2±6.0, 37°.58N×71°.82E, h165^{km}±38^{km}, mb3.1/2, mb1 3.1/5, mb1mx2.7/48, mbtmp3.5/5, Error ellipse: s-maj=99.3km s-min=30.1km az=139.0*

ISC 24 09:54:10.8±1.6, **37°.4N**±0°.1×**72°.0E**±0°.2, **h150**^{km}, **n8**, σ**1^{s}.76**/11, **2C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	5.61	19	P	Pn	09 55 34.8	+2.5
	2.3nm,0.3s,baz=186,slow=5.8,SNR=24						
AAK				S	Sn	09 56 35.4	-0.7
	0.6nm,0.3s,baz=334,slow=23,SNR=14						
AAK	Ala-Archa	5.61	19	⇑Pn	Pn	09 55 34.6	+2.3
	3.8nm,0.5s						
AAK				⇑Sn	Sn	09 56 34.9	-1.1
	9.8nm,0.7s						
KK31	Karatay Array	5.86	349	Pn	Pn	09 55 38.3	+2.6
	0.9nm,0.3s,baz=157,slow=10,SNR=56						
KK31				Sn	Sn	09 56 40.1	-1.9
	5.4nm,0.3s,baz=162,slow=23,SNR=26						
MKAR	Makanchi Array	12.11	36	P	Pn	09 56 57.5	-0.9
	0.0nm,0.3s,baz=220,slow=12,SNR=2.7						
KURBB	Kurchatov Arra	14.06	17	P	P	09 57 26.4	+0.1
	0.0nm,0.3s,baz=206,slow=10,SNR=9.3						
ZALV	Zalesovo Beam	18.80	24	P	P	09 58 18.5	0.0
	0.4nm,0.3s,baz=217,slow=11,SNR=11						
TORD	Torodi Ar. Bea	66.57	269	P	P	10 04 44.5	-0.5
	0.6nm,1.0s,baz=40,slow=6.4,SNR=2.8						
YKA	Yellowknife Ar	80.35	3	P	P	10 06 04.7	-0.2
	0.2nm,0.5s,baz=359,slow=5.3,SNR=14						

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*INET **24** 09:56:03.9, 9°.89N×86°.62W, h20^{km}, ML3.1, MW3.5*

*UCR **24** 09:56:05.9±3.1, 10°.32N×86°.53W, h15^{km}±15^{km}, MW4.2*

*IDC **24** 09:56:10.5±6.0, 10°.61N×86°.07W, h0^{km}, mb3.3/3, mb1 3.7/3, mb1mx3.5/28, mbtmp3.3/3, Error ellipse: s-maj=212.0km s-min=16.7km az=27.0*

ISC 24 09:56:08.8±1.5, **10°.20N**±0°.08×**86°.20W**±0°.09, **h10**^{km}, **n26**, σ**0^{s}.94**/28, **mb3.2**/3, **6C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUAI	GUAI	0.68	84	⇑iP	Pn	09 56 24.3	-0.2
DUNO	Dulce Nombre,	0.70	100	eP	Pn	09 56 24.8	0.0
ORTG	Ortega, Santa	0.74	78	eP	Pn	09 56 25.2	-0.3
ORTG				eS	Sn	09 56 36.9	0.0
HZTE	Horizontes, Gu	0.78	49	eP	Pn	09 56 25.4	-0.5
PLVR	Palo Verde	0.85	80	eP	Pn	09 56 25.8	-1.1
GBS3	Finca Las Img	0.93	52	⇑iP	Pn	09 56 27.0	-1.0
LAPC	Finca la Perla	0.94	53	⇑iP	Pg	09 56 26.1	-0.8
BUEV	Buena Vista	0.98	53	i P	Pn	09 56 27.7	-1.0
BUEV				i S	Sn	09 56 44.7	+2.0
GPS2	Hotel Rincn d	1.00	57	i P	Pn	09 56 28.4	-0.5
GB1A	Borinquen Arri	1.00	52	i P	Pn	09 56 28.0	-0.9
GB1A				i S	Sn	09 56 45.3	+2.2
GPS1	Guardaparques	1.01	56	⇑iP	Pb	09 56 27.6	-0.8
LIM1	Limonal	1.05	62	⇑iP	Pg	09 56 29.2	+0.1
COLC	Colonia	1.08	65	i P	Pg	09 56 29.8	+0.2
BUAI	Buenos Aires	1.08	52	i P	Pn	09 56 28.2	-1.9
CUI	Cuipilapa	1.11	66	eP	Pn	09 56 29.6	-0.9
HORNC	Hornillas	1.12	63	⇑iP	Pg	09 56 30.3	-0.2
JTS	Las Juntas de	1.23	86	Pg	Pg	09 56 32.5	+0.1
	7.3nm,0.3s,baz=156,slow=19,SNR=38						
PTEN	Parque Tenorio	1.29	67	i P	Pg	09 56 33.5	-0.2
LAFE	Finca La Fe, P	1.33	107	eP	Pb	09 56 33.4	-0.4
CASO	Castillo	1.46	81	i P	Pg	09 56 36.4	-0.4
ARE1	Arenal 1	1.48	80	eP	Pg	09 56 37.1	0.0
CEDE	Laguna Cedeo	1.50	79	eP	Pb	09 56 36.6	-0.1
JACO	JACO, Garabito	1.61	109	eP	Pb	09 56 37.5	-1.1
TXAR	Lajitas Array	25.09	322	P	P	10 01 33.5	-0.3
	0.5nm,0.7s,baz=132,slow=10,SNR=6.4						
NVAR	Mina Array Bea	40.20	320	P	P	10 03 47.7	+1.9
	0.4nm,0.7s,baz=131,slow=8.0,SNR=4.2						
YKA	Yellowknife Ar	56.09	345	P	P	10 05 49.2	+1.2
	0.2nm,0.8s,baz=140,slow=7.2,SNR=5.6						

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*UCR **24** 10:16:20.9±1.1, 13°.05N×89°.03W, h33^{km}±2^{km}, ML3.6*

*SNET **24** 10:16:20.9±1.0, 13°.05N×89°.03W, h37^{km}±30^{km}, ML3.6*

*INET **24** 10:16:20.7, 13°.02N×88°.99W, h20^{km}, ML3.1, MW3.0*

ISC 24 10:16:20.0±1.9, **13°.0N**±0°.1×**89°.04W**±0°.04, **h32**^{km}±15^{km}, **n46**, σ**0^{s}.38**/70, **1C-4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.58	332	eP	Pb	10 16 32.2	+0.3
LALI				eS	Sb	10 16 39.9	0.0
LALI				IAML		10 16 41.6	
	comp=Z,970nm,0.3s						
LALI	Alcalda de L	0.58	332	eP	Pb	10 16 32.2	+0.3
LALI				eS	Sb	10 16 39.9	0.0
LALI				IAML		10 16 41.6	
	comp=Z,970nm,0.3s						
COEG	Centro de Oper	0.66	14	⇓eP	Pb	10 16 33.0	-0.2
COEG				eS	Sb	10 16 42.6	+0.4
COEG				IAML		10 16 47.4	
	comp=Z,5µm,0.4s						
COEG	Centro de Oper	0.66	14	⇓eP	Pb	10 16 33.0	-0.2
COEG				eS	Sb	10 16 42.6	+0.4
COEG				IAML		10 16 47.4	
	comp=Z,5µm,0.4s						
COEB	Comit de Eme	0.72	44	eP	Pb	10 16 34.1	-0.1
COEB				IAML		10 16 49.4	
	comp=Z,4µm,0.3s						
COEB	Comit de Eme	0.72	44	eP	Pb	10 16 34.1	-0.1
COEB				IAML		10 16 49.4	
	comp=Z,4µm,0.3s						
SNET	Serv Nac Est T	0.73	345	eP	Pb	10 16 34.2	-0.3
SNET				IAML		10 16 45.5	
	comp=Z,2µm,0.2s						
SNET	Serv Nac Est T	0.73	345	eP	Pb	10 16 34.2	-0.3
SNET				IAML		10 16 45.5	
	comp=Z,2µm,0.2s						
TECA	Tecapa	0.74	45	eP	Pb	10 16 34.5	-0.1
TECA	Tecapa	0.74	45	eP	Pb	10 16 34.5	-0.1
PAVA	Las Pavas	0.74	8	⇓eP	Pb	10 16 34.5	-0.1
PAVA				eS	Sb	10 16 44.2	-0.3
PAVA				IAML		10 16 50.9	
	comp=Z,2µm,0.5s						
PAVA	Las Pavas	0.74	8	⇓eP	Pb	10 16 34.5	-0.1
PAVA				eS	Sb	10 16 44.2	-0.3
PAVA				IAML		10 16 50.9	
	comp=Z,2µm,0.5s						
OPAM	Oficina de Pla	0.75	348	eP	Pb	10 16 34.2	-0.5
OPAM				eS	Sb	10 16 44.3	-0.4
OPAM				IAML		10 16 46.9	
	comp=Z,2µm,0.5s						
OPAM	Oficina de Pla	0.75	348	eP	Pb	10 16 34.2	-0.5
OPAM				eS	Sb	10 16 44.3	-0.4
OPAM				IAML		10 16 46.9	
	comp=Z,2µm,0.5s						
LBRS	Las Brisas	0.76	360	eP	Pb	10 16 34.8	-0.1
LBRS				eS	Sb	10 16 44.4	-0.6
LBRS	Las Brisas	0.76	360	eP	Pb	10 16 34.8	-0.1
LBRS				eS	Sb	10 16 44.4	-0.6
LFU	La Fuente	0.77	355	eP	Pb	10 16 34.9	-0.2
LFU				eS	Sb	10 16 46.0	+0.6
LFU	La Fuente	0.77	355	eP	Pb	10 16 34.9	-0.2
LFU				eS	Sb	10 16 46.0	+0.6
JAYA	Jayaque - finc	0.79	330	eP	Pb	10 16 34.9	-0.4
JAYA				eS	Sb	10 16 45.1	-0.7
JAYA				IAML		10 16 46.8	
	comp=Z,5µm,0.3s						
JAYA	Jayaque - finc	0.79	330	eP	Pb	10 16 34.9	-0.4
JAYA				eS	Sb	10 16 45.1	-0.7
JAYA				IAML		10 16 46.8	
	comp=Z,5µm,0.3s						
BOQS	Boqueron	0.79	343	eP	Pb	10 16 35.2	-0.3
BOQS				eS	Sb	10 16 46.1	+0.1
BOQS	Boqueron	0.79	343	eP	Pb	10 16 35.2	-0.3
BOQS				eS	Sb	10 16 46.1	+0.1
PQSS	Presa 15 de Se	0.80	36	⇑eP	Pb	10 16 35.3	-0.2
PQSS				IAML		10 16 48.2	
	comp=Z,5µm,0.3s						
LCY	Lacayo	0.85	58	eP	Pb	10 16 36.0	-0.4
LCY				eS	Sb	10 16 48.4	+0.7
LCY	Lacayo	0.85	58	eP	Pb	10 16 36.0	-0.4
LCY				eS	Sb	10 16 48.4	+0.7
PACA	Pacayal	0.85	55	eP	Pb	10 16 36.4	-0.1
PACA				IAML		10 16 49.3	
	comp=Z,2µm,0.3s						
PACA	Pacayal	0.85	55	eP	Pb	10 16 36.4	-0.1
PACA				IAML		10 16 49.3	
	comp=Z,2µm,0.3s						
VSM	San Miguel	0.87	59	eP	Pb	10 16 36.6	-0.2
VSM	San Miguel	0.87	59	eP	Pb	10 16 36.6	-0.2
SBLS	San Blas	1.03	327	eP	Pn	10 16 39.0	+0.6
SBLS				eS	Sb	10 16 52.5	-0.3
SBLS	San Blas	1.03	327	eP	Pn	10 16 39.0	+0.6
SBLS				eS	Sb	10 16 52.5	-0.3
SNJE	San Jose	1.05	328	eP	Pn	10 16 38.7	+0.1
SNJE				eS	Sb	10 16 52.9	-0.3
SNJE	San Jose	1.05	328	eP	Pn	10 16 38.7	+0.1
SNJE				eS	Sb	10 16 52.9	-0.3
RTR	El Retiro	1.09	327	eP	Pn	10 16 39.8	+0.6
RTR				eS	Sb	10 16 54.5	+0.1
RTR	El Retiro	1.09	327	eP	Pn	10 16 39.8	+0.6
RTR				eS	Sb	10 16 54.5	+0.1
FAGO	Alcalda de S	1.16	52	eP	Pn	10 16 39.7	-0.2
FAGO	Alcalda de S	1.16	52	eP	Pn	10 16 39.7	-0.2
LCND	La Caada	1.17	73	eP	Pn	10 16 40.1	+0.1
LCND				IAML		10 17 01.8	
	comp=Z,2µm,0.3s						
LCND	La Caada	1.17	73	eP	Pn	10 16 40.1	+0.1
LCND				IAML		10 17 01.8	
	comp=Z,2µm,0.3s						
CNCH	Conchagua	1.21	75	eP	Pn	10 16 40.7	-0.1
CNCH	Conchagua	1.21	75	eP	Pn	10 16 40.7	-0.1
MTO3	Montecristo	1.45	348	eP	Pn	10 16 44.1	0.0
MTO3	Montecristo	1.45	348	eP	Pn	10 16 44.1	0.0
ESQI	Esquipulas	1.60	350	eP	Pn	10 16 46.6	+0.5

MRL	Marmol	2.19	343	*e*P	Pn	10 16 54.9	+0.6
MRL	Marmol	2.19	343	*e*P	Pn	10 16 54.9	+0.6

IDC 24 10:17:47.8±2.2, 6°.74S×129°.21E, h0^{km}, mb3.4/1, mb1 3.8/3, mb1mx3.3/33, mbtmp3.5/3, ML3.8/2, Error ellipse: s-maj=107.1km s-min=33.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.04	160	Pn	Pn	10 21 08.4	+0.2
	0.5nm,0.3s,baz=340,slow=13,SNR=14						
WRA				Sn	Sn	10 23 31.9	-13
	0.7nm,0.3s,baz=329,slow=26,SNR=6.9						
ASAR	Alice Springs	17.43	165	P	Pn	10 21 52.1	-0.5
	0.2nm,0.3s,baz=335,slow=11,SNR=15						
ASAR				S	Sn	10 24 49.0	-18
	0.1nm,0.3s,baz=348,slow=27,SNR=2.3						
MKAR	Makanchi Array	67.58	327	P	P	10 28 46.4	+0.1
	0.2nm,0.5s,baz=118,slow=6.9,SNR=2.3						

IDC **24** *10:20:24.7±1.8, 23°.86S×66°.76W, h191^{km}±15^{km}, mb3.1/4, mb1 3.4/8, mb1mx3.2/28, mbtmp3.7/8, Error ellipse: s-maj=29.0km s-min=20.3km az=175.0*
NEIC **24** *10:20:25.3±1.6, 24°.00S±0°.08×67°.3W±0°.2, h251^{km}±15^{km}, Error ellipse: s-maj=23.7km s-min=10.8km az=102.0*
GUC **24** *10:20:26.3±0.6, 23°.96S×67°.17W, h226^{km}±9^{km}, ML4.3*
ISC 24 10:20:25.1±0.9, 23°.98S±0°.05×67°.0W±0°.1, h216^{km}±11^{km}, n46, $\sigma 1^{s}09$/58, mb3.4/4, 6C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.21	308	P	Pn	10 21 08.0	+0.7
	52nm,0.3s,baz=110,slow=7.7,SNR=515						
LVC				S	S	10 21 39.0	-1.0
	35nm,0.3s,baz=258,slow=22,SNR=23						
LVC	Limon Verde	2.21	308	⇓*i*P	Pn	10 21 08.0	+0.7
LVC				*i* S	S	10 21 39.1	-0.8
LVC	Limon Verde	2.21	308		Pn	10 21 08.2	+0.8
LVC				S	S	10 21 40.4	+0.5
PB15	IPOC Station P	2.38	288		Pn	10 21 09.9	+1.0
PB15				S	S	10 21 43.1	+0.3
GO02	Mina Guanaco	2.62	243	⇑*i*P	Pn	10 21 12.6	+1.0
GO02				*i* S	S	10 21 48.3	+0.7
GO02	Mina Guanaco	2.62	243		Pn	10 21 12.6	+1.0
PB06	IPOC Station P	2.67	298		Pn	10 21 12.8	+0.8
PB09	IPOC Station P	2.99	316	⇑*i*P	Pn	10 21 16.6	+1.0
PB09				*i* S	S	10 21 55.0	+0.1
PB09				IAML		10 21 58.2	
	comp=E,577nm,0.9s						
PB09	IPOC Station P	2.99	316		Pn	10 21 16.7	+1.1
PB05	IPOC Station P	3.13	290	⇑*i*P	Pn	10 21 17.5	+0.3
PB05				*i* S	S	10 21 56.3	-1.5
PB05				IAML		10 22 00.3	
	comp=E,293nm,0.3s						
PB14	IPOC Station P	3.15	258	*e*P	Pn	10 21 18.5	+0.8
PB14				*i* S	S	10 21 57.8	-0.7
PB14	IPOC Station P	3.15	258		Pn	10 21 18.3	+0.6
PB10	IPOC Station P	3.27	277	⇑*i*P	Pn	10 21 19.7	+0.9
PB10				*i* S	S	10 21 59.4	-1.1
PB10	IPOC Station P	3.27	277		Pn	10 21 19.6	+0.9
PB04	IPOC Station P	3.31	299	⇑*i*P	Pn	10 21 20.0	+0.6
PB04				*i* S	S	10 22 00.6	-1.1
PB04	IPOC Station P	3.31	299		Pn	10 21 20.0	+0.6
AC02	Maricunga	3.42	213	⇓*i*P	Pn	10 21 21.9	+1.0
AC02				*i* S	S	10 22 05.3	+0.7
AC02	Maricunga	3.42	213		Pn	10 21 22.0	+1.0
PB07	IPOC Station P	3.47	310	⇑*i*P	Pn	10 21 21.6	+0.4
PB07				*i* S	S	10 22 03.7	-1.3
PB07	IPOC Station P	3.47	310		Pn	10 21 21.1	-0.1
AC01	Pan de Azucar	3.90	236	*e*P	Pn	10 21 26.0	-0.2
AC01				*i* S	S	10 22 12.6	-1.4
AC01	Pan de Azucar	3.90	236	Pn	Pn	10 21 26.0	-0.2
PATCX	Punta Patache	4.28	317	Pn	Pn	10 21 30.3	-0.7
PB08	IPOC Station P	4.30	332		Pn	10 21 33.0	+1.4
TA01	Diego Aracena	4.48	319		Pn	10 21 33.2	-0.2
GO03	Copiap	4.62	218		Pn	10 21 34.7	-0.5
PSGCX	Pisagua	5.23	326	Pn	Pn	10 21 41.4	-1.5
MNMC	Minye Minye	5.39	333		Pn	10 21 45.6	+0.5
AC04	Llanos de Chal	5.57	220	Pn	Pn	10 21 45.7	-1.3
AC05	El Transito	5.65	210	Pn	Pn	10 21 47.8	-0.4
LCO	Las Campanas	6.00	213	Pn	Pn	10 21 51.8	-1.0
GO04	Tololo Observa	7.03	208		Pn	10 22 04.5	-1.4
CO03	El Pedregal	7.57	205		Pn	10 22 11.2	-1.6
CO02	Combarbal	8.02	205	Pn	Pn	10 22 16.9	-1.7
VA03	San Esteban	9.29	199	Pn	Pn	10 22 34.9	-0.1
SIV	San Ignacio	9.71	36	P	Pn	10 22 37.7	-2.8
	comp=E,1.7nm,0.3s,baz=235,slow=12,SNR=32						
MT02	Curacav	9.93	200	Pn	Pn	10 22 40.5	-2.6
SAML	Samuel	15.39	14	P	P	10 23 51.1	-0.2
SAML				IAmb	IAmb	10 23 52.3	
	comp=Z,4.5nm,0.7s						
PLCA	Paso Flores	16.97	189	P	Pn	10 24 11.7	+1.6
	comp=Z,0.1nm,0.3s,baz=4.5,slow=12,SNR=2.3						
BDFB	Brasilia	19.70	69	P	P	10 24 36.6	-1.7
	comp=Z,0.5nm,0.3s,baz=236,slow=12,SNR=6.9						
BDFB	Brasilia	19.70	69	P	P	10 24 38.9	+0.6
BDFB				IAmb	IAmb	10 24 39.3	
	comp=Z,6.2nm,0.7s						
PTGA	Pitinga	24.10	17	P	P	10 25 21.7	+0.5
	comp=Z,0.8nm,0.3s,baz=195,slow=14,SNR=1.1						
TXAR	Lajitas Array	63.65	324	P	P	10 30 36.9	+3.4
	comp=Z,0.1nm,0.5s,baz=148,slow=7.3,SNR=2.3						
TORD	Torodi Ar. Bea	76.58	69	P	P	10 31 52.6	+0.5
	comp=Z,0.6nm,0.5s,baz=256,slow=6.0,SNR=5.1						
YKA	Yellowknife Ar	94.10	340	P	P	10 33 20.0	+1.7
	comp=Z,0.1nm,0.5s,baz=129,slow=5.3,SNR=6.9						
MKAR	Makanchi Array	146.52	39	PKPbc	PKPab	10 39 41.8	-0.5
	comp=Z,0.4nm,0.6s,baz=295,slow=3.5,SNR=5.3						

IDC **24** *10:20:26.5±2.6, 34°.83N×135°.55E, h0^{km}, mb3.3/1, mb1 3.3/5, mb1mx3.2/39, mbtmp3.3/5, ML2.9/4, Error ellipse: s-maj=51.6km s-min=16.9km az=155.0*
JMA **24** *10:20:27.7, 35°.02N×135°.53E, h15^{km}, M3.7 Broadband fault plane solution: P waves. NP1:ϕ_s327.00000°, δ36.00000°, λ42.00000°. NP2:ϕ_s202.00000°, δ67.00000°, λ118.00000°. Principal axes: T Plg58.0000°, Azm151.0000°; N Plg26.0000°, Azm10.0000°; P Plg17.0000°, Azm271.0000°;*
JMA Felt II J1.
NIED **24** *10:20:27.7, 35°.02N×135°.53E, h15^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.43; $M_{\theta\theta}$0.70; $M_{\phi\phi}$-2.13; $M_{r\theta}$-0.81; $M_{\theta\phi}$0.61; $M_{\phi r}$-1.34; Fault plane solution: $M_0$2.52000×10^{14} NP1: ϕ_s197.00000°, δ68.00000°, λ123.00000°. NP2: ϕ_s317.00000°, δ38.00000°, λ36.00000°.*
ISC 24 10:20:27.3±1.2, 34°.95N±0°.03×135°.47E±0°.03, h4^{km}±10^{km}, n15, $\sigma 1^{s}08$/22, 5C-3D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.33	350	⇑P	Pg	10 20 33.7	-0.1
JWT				S	Sg	10 20 37.6	-0.5
JHE	Heguri	0.35	150	⇑P	Pb	10 20 35.4	-0.7
JKS	Kasai	0.52	273	⇓P	Pb	10 20 38.5	-0.5
JAWN	Awajishima-nag	0.66	225	S	Sn	10 20 51.9	-2.5
JKY	Yasaka	0.74	336	⇑P	Pg	10 20 41.1	-0.4
JKY				S	Sg	10 20 50.3	-0.8
JWY	Kouya	0.74	172	⇑P	Pb	10 20 42.7	-0.1
TSUJ	Tsu 2	0.81	107	⇓P	Pg	10 20 42.4	-0.5
TSUJ				S	Sg	10 20 53.1	-0.4
JKSM	Kasumi	0.92	314	⇓P	Pg	10 20 44.6	-0.3
JKN2	Miekihoku	0.97	137	⇑P	Pg	10 20 46.1	+0.2
JKN2				S	Sg	10 20 59.2	+0.7
MAT	Matsushiro	2.73	54	P	Pn	10 21 11.1	-0.9
MAT				*e*S	Sn	10 21 44.0	-1.5
MJAR	Matsushiro Arr	2.73	54	Pn	Pn	10 21 11.4	-0.6
	0.4nm,0.3s,baz=241,slow=14,SNR=23						
MJAR				Pg	Pb	10 21 17.2	+0.5
	3.3nm,0.3s,baz=234,slow=17,SNR=34						
JNU	Nakatsue	4.23	246	Pn	Pn	10 21 33.3	+0.7
	2.1nm,0.3s,baz=38,slow=4.2,SNR=19						
JNU				Lg	Lg	10 22 39.9	
	baz=206,slow=6.7,SNR=1.9						
KSRS	Korea Array	6.59	294	Pn	Pn	10 22 05.4	+0.4
	0.3nm,0.3s,baz=108,slow=14,SNR=3.4						
KSRS				Sn	Sn	10 23 19.1	-1.5
	0.1nm,0.3s,baz=95,slow=15,SNR=2.2						
KLR	Kul'dur	14.53	350	Pn	Pn	10 23 55.6	+2.0
	0.0nm,0.3s,baz=142,slow=4.7,SNR=2.7						
SONM	Songino Array	25.16	310	P	P	10 25 55.0	+1.3
	0.6nm,0.9s,baz=129,slow=11,SNR=4.3						

JMA 24 10:35:48.3±0.4, 24°.68N×122°.85E, h1^{km}, M1.4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.24	159	P	Pg	10 35 53.7	+0.7
JYNG				S	Sg	10 35 57.5	+1.4
YOJ	Yonaguni jima	0.26	146	P	Pg	10 35 53.7	+0.4
YOJ				*e*S	Sg	10 35 57.2	+0.5
IRIF	Iriomote-Funau	0.87	113	P	Pb	10 36 06.3	+0.1

TAP 24 10:36:43.5, 23°.74N×121°.46E, h6^{km}, ML1.6, 1C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	Guangfu	0.07	204	⇑*i*P	Pg	10 36 45.5	+0.2
	baz=208						
EGFH				*e*S	Sg	10 36 47.3	+0.9
	baz=208						
ESL	Shilin	0.08	342	⇓*i*P	Pg	10 36 45.6	+0.2
	baz=345						
ESL				S	Sg	10 36 47.0	+0.3
	baz=345						
HGSD	Ruisui	0.25	188	P	Pg	10 36 49.0	+0.7
	baz=196						
HGSD				*e*S	Sg	10 36 55.0	+3.4
	baz=196						
EHY	Hungye	0.26	209	*e*P	Pg	10 36 48.5	-0.2
	baz=216						
EHY				*e*S	Sg	10 36 52.3	+0.2
	baz=216						
YULB	Yu-li	0.37	204	P	Pg	10 36 50.8	+0.1
	baz=213						
YULB				S	Sg	10 36 56.2	+0.5
	baz=213						
CHGB	Renai	0.41	321	P	Pg	10 36 52.1	+0.5
	baz=329						
CHGB				*e*S	Sg	10 36 58.1	+1.0
	baz=329						
NACB	Ninganchiao	0.45	16	*e*P	Pg	10 36 53.1	+0.8
	baz=15						
SSLB	Suanglung	0.47	276	P	Pg	10 36 53.2	+0.7
	baz=276						
SSLB				S	Sg	10 36 59.5	+0.9
	baz=276						
ETLH	Xiulin Townshi	0.47	2	P	Pg	10 36 52.3	-0.3
	baz=359						
ETLH				*e*S	Sg	10 36 59.2	+0.5
	baz=359						
FUSS	Fushou	0.55	339	P	Pg	10 36 54.5	+0.5
	baz=337						
FUSS				*e*S	Sg	10 37 02.4	+1.2
	baz=337						
FULB	Fuli	0.56	196	*e*P	Pb	10 36 56.4	+0.6
	baz=208						
ALS	Alishan	0.64	250	P	Pb	10 36 57.5	+0.2
	baz=250						
ALS				S	Sb	10 37 05.8	-0.8
	baz=250						
ELDTW	Lidau	0.68	217	*e*P	Pb	10 36 57.5	-0.4
	baz=215						
NNSB	Datong	0.69	354	P	Pg	10 36 56.8	-0.1
	baz=352						
NNSB				*e*S	Sg	10 37 05.7	-0.2
	baz=352						
NNS	Nan Shan	0.70	354	*e*P	Pg	10 36 57.4	+0.3
	baz=352						
NNS				*e*S	Sg	10 37 07.0	+0.7
	baz=352						
TPUB	Ta-pu	0.88	240	*e*S	Sb	10 37 13.3	+0.1
	baz=250						
CHN4	Tsaushan	0.88	244	*e*P	Pn	10 37 01.9	-0.6
	baz=245						
YHNB	Yeheng	0.93	355	P	Pg	10 37 01.6	+0.2
	baz=344						
NSK	Sanguang	0.94	354	*e*S	Sg	10 37 14.4	+0.6
	baz=352						

GUC **24** *11:10:53.6±0.8, 20°.18S×69°.13W, h92^{km}±3^{km}, ML3.5*
IDC **24** *11:11:05.2±28.0, 19°.29S×68°.35W, h187^{km}±169^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.1/24, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=413.1km s-min=56.8km az=23.0*
ISC 24 11:10:52.1±0.9, 20°.16S±0°.04×69°.17W±0°.07, h100^{km}±7^{km}, n19, $\sigma 0^{s}97$/33, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.02	38	⇓*i*P	Pn	11 11 06.8	+0.4
PB08				*e*S	Sn	11 11 17.3	+0.2
PB08				IAML		11 11 18.6	
	comp=E,4μm,0.3s						
HMBC	Humberstone	0.69	260	⇑*i*P	Pn	11 11 09.6	0.0
HMBC				*e*S	Sn	11 11 22.5	-0.2
TA02	Huaiquique	0.92	263	⇑*i*P	Pn	11 11 11.9	+0.3
TA02				*e*S	Sn	11 11 26.7	+0.5
TA01	Diego Aracena	1.04	247	⇑*i*P	Pn	11 11 12.6	-0.3
TA01				*i* S	Sn	11 11 28.4	-0.2
TA01				IAML		11 11 30.3	
	comp=E,868nm,0.5s						
PSGC	Pisagua	1.06	301	*i* P	Pn	11 11 13.5	+0.2
PSGC				*e*S	Sn	11 11 29.7	+0.5
PSGC				IAML		11 11 32.2	
	comp=E,922nm,0.4s						
MNMC	Minye Minye	1.10	338	*i* P	Pn	11 11 15.0	+1.1
MNMC				*e*S	Sn	11 11 31.8	+1.5
MNMC				IAML		11 11 34.3	
	comp=E,3μm,0.3s						
PATCX	Punta Patache	1.14	234	⇑*i*P	Pn	11 11 14.2	+0.1
PATCX				*e*S	Sn	11 11 30.7	-0.1
PATCX				IAML		11 11 36.2	
	comp=N,1μm,0.2s						
PB09	IPOC Station P	1.64	183	⇓*i*P	Pn	11 11 21.2	+1.0
PB09				*e*S	Sn	11 11 42.4	+0.9
PB09				IAML		11 11 48.4	
	comp=N,360nm,0.5s						
PB07	IPOC Station P	1.70	203	*i* P	Pn	11 11 21.5	+0.5
PB07				*e*S	Sn	11 11 42.9	-0.1
PB07				IAML		11 11 48.9	
	comp=E,777nm,0.3s						
PB16	IPOC Station P	1.84	350	*e*P	Pn	11 11 25.8	+2.6
PB03	IPOC Station P	1.96	196	*i* P	Pn	11 11 25.0	+0.7
PB03				*e*S	Sn	11 11 49.5	+0.6
AP01	Chacalluta	2.09	328	⇑*e*P	Pn	11 11 25.5	-0.4
AP01				*i* S	Sn	11 11 53.1	+1.5
AP01				IAML		11 12 02.4	
	comp=E,885nm,0.5s						
PB04	IPOC Station P	2.35	203	*e*P	Pn	11 11 30.5	+1.1
PB04				*e*S	Sn	11 11 58.4	+0.4
LVC	Limon Verde	2.45	174	*e*P	Pn	11 11 32.0	+1.0
LVC				*e*S	Sn	11 12 01.3	+0.7
PB05	IPOC Station P	2.85	200	⇑*e*P	Pn	11 11 36.7	+0.7
PB05				*i* S	Sn	11 12 10.4	+0.6
PB05				IAML		11 12 19.8	
	comp=N,233nm,0.7s						
SIV	San Ignacio	8.74	63	P	Pn	11 12 54.2	-1.5
	comp=N,1.1nm,0.3s,baz=263,slow=12,SNR=18						
TORD	Torodi Ar. Bea	77.14	71	P	P	11 22 33.2	-2.1
	comp=N,0.3nm,0.4s,baz=251,slow=4.4,SNR=2.2						
YKA	Yellowknife Ar	89.84	341	P	P	11 23 39.7	+0.5
	comp=N,0.5nm,0.8s,baz=125,slow=5.2,SNR=16						
MKAR	Makanchi Array	144.68	35	PKP	PKPab	11 30 15.5	-0.5
	comp=N,0.2nm,0.4s,baz=305,slow=2.5,SNR=5.2						

JMA **24** *11:38:51.5±0.1, 24°.65N×122°.72E, h24^{km}±1^{km}, M3.4*
TAP **24** *11:38:51.3, 24°.68N×122°.72E, h21^{km}, ML3.6, C*
ISC 24 11:38:51.5±1.1, 24°.67N±0°.03×122°.72E±0°.02, h21^{km}±3^{km}, n72, $\sigma 0^{s}80$/131, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.30	136	P	Pb	11 38 58.1	-0.1
JYNG				S	Sb	11 39 02.8	-0.1
YOJ	Yonaguni jima	0.34	128	P	Pb	11 38 58.7	0.0
YOJ				S	Sb	11 39 03.7	0.0
YOJ	Yonaguni jima	0.34	128	*i* P	Pb	11 38 58.8	0.0
	baz=125						
YOJ				S	Sb	11 39 03.9	+0.1
	baz=125						
TWB1	Santiao Chiao	0.74	297	*i* P	Pb	11 39 05.5	-0.1
	baz=296						
TWB1				S	Sb	11 39 15.2	-0.2
	baz=296						
TWC	Suao	0.79	266	*i* P	Pb	11 39 06.0	-0.5
	baz=253						
TWC				S	Sb	11 39 16.4	-0.4
	baz=253						
NTC	Toucheng	0.83	283	P	Pb	11 39 07.3	+0.2
	baz=282						
NTC				*e*S	Sn	11 39 18.7	-0.7
	baz=282						
ENAH	Nanao	0.85	255	P	Pb	11 39 07.4	-0.2
	baz=255						
ENAH				*e*S	Sb	11 39 19.1	+0.5
	baz=255						
TIPB	Shuangxi	0.86	290	P	Pb	11 39 07.1	-0.7
	baz=304						
TIPB				*e*S	Sb	11 39 18.3	-0.7
	baz=304						
ILA	Ilan	0.89	276	P	Pb	11 39 08.1	-0.1
	baz=276						
ILA				*e*S	Sn	11 39 20.7	-0.1
	baz=276						
ENA	Nanau	0.92	255	P	Pb	11 39 08.4	-0.4
	baz=254						
ENA				*e*S	Sb	11 39 20.1	-0.5
	baz=254						
NWF	Wu-fen Shan	0.94	295	*e*P	Pb	11 39 08.8	-0.3
	baz=294						
NWF				*e*S	Sb	11 39 20.7	-0.4
	baz=294						
WFSB	Wu-fen Shan	0.94	295	*e*P	Pb	11 39 09.0	0.0
	baz=294						
WFSB				*e*S	Sn	11 39 21.8	-0.4
	baz=294						
TNOU	National Taiwa	0.98	299	*e*P	Pb	11 39 09.2	-0.5
	baz=298						
TNOU				*e*S	Sb	11 39 21.7	-0.5
	baz=298						
IRIF	Iriomote-Funau	0.98	110	P	Pb	11 39 09.2	-0.6
IRIF				S	Sb	11 39 22.4	+0.1
ENTT	Nioudou	1.05	268	*e*P	Pb	11 39 11.1	+0.2
	baz=257						
ENTT				*e*S	Sb	11 39 24.1	-0.1
	baz=257						
TWA	Mucha	1.07	287	*e*P	Pn	11 39 11.3	0.0
	baz=286						
NDT	Datong Townshi	1.10	267	P	Pb	11 39 11.8	+0.1
	baz=266						
NDT				*e*S	Sb	11 39 25.9	+0.2
	baz=266						
NWLT	Wulai	1.11	276	P	Pb	11 39 12.1	+0.2
	baz=276						
NWLT				*e*S	Sb	11 39 26.2	+0.2
	baz=276						
NHDH	Xindian Distri	1.12	285	*e*P	Pn	11 39 11.9	0.0
	baz=285						
NHDH				*e*S	Sb	11 39 26.3	0.0
	baz=285						
NACB	Ninganchiao	1.14	244	P	Pn	11 39 11.7	-0.5
	baz=244						
NACB				*e*S	Sb	11 39 26.6	-0.2
	baz=244						
YM01	YM01	1.14	295	*e*P	Pn	11 39 11.0	-1.2
	baz=294						
YM08	YM08	1.14	297	*e*P	Pn	11 39 11.9	-0.3
	baz=296						
YM11	YM11	1.15	296	*e*P	Pb	11 39 12.6	0.0
	baz=295						
YM05	YM05	1.15	295	*e*P	Pb	11 39 13.1	+0.3
	baz=295						
YM05				*e*S	Sb	11 39 27.6	+0.2
	baz=295						
YM10	YM10	1.15	295	*e*P	Pn	11 39 12.3	-0.2
	baz=294						
TATO	Taipei	1.16	285	*e*P	Pn	11 39 12.3	-0.1
	baz=285						
TATO				*e*S	Sb	11 39 27.4	+0.1
	baz=285						
HATJ	Hateruma jima	1.17	121	P	Pn	11 39 12.3	-0.2
HATJ				S	Sn	11 39 27.4	-0.4
YM04	YM04	1.17	294	*e*P	Pn	11 39 12.4	-0.2
	baz=293						
TWY	Chenhua	1.18	301	*e*P	Pn	11 39 12.3	-0.4
	baz=300						
TWY				*e*S	Sn	11 39 27.6	-0.5
	baz=300						
TWD	Chiawan	1.18	240	*e*P	Pn	11 39 12.5	-0.2
	baz=249						
TWD				*e*S	Sb	11 39 28.9	+0.9
	baz=249						
YM03	YM03	1.18	296	*e*P	Pb	11 39 13.3	+0.1
	baz=295						
ANP	Anpu	1.20	296	*e*P	Pn	11 39 13.2	+0.1
	baz=295						
ETLH	Xiulin Townshi	1.22	248	P	Pb	11 39 13.7	-0.1
	baz=256						
ETLH				*e*S	Sb	11 39 29.2	0.0
	baz=256						
YHNB	Yeheng	1.22	270	P	Pn	11 39 13.1	-0.2
	baz=270						
YHNB				*e*S	Sn	11 39 28.5	-0.8
	baz=270						
NSK	Sanguang	1.23	270	*i* P	Pn	11 39 13.7	+0.1
	baz=270						
NSK				*e*S	Sn	11 39 28.8	-0.9
	baz=270						
NNSB	Datong	1.24	259	*i* P	Pb	11 39 13.9	-0.3
	baz=259						
NNSB				*e*S	Sn	11 39 29.3	-0.5
	baz=259						
NNSH	Datong	1.24	259	P	Pb	11 39 14.0	-0.3
	baz=259						
NNSH				*e*S	Sn	11 39 29.3	-0.5
	baz=259						
NNS	Nan Shan	1.24	260	*i* P	Pn	11 39 13.9	+0.1
	baz=259						
NNS				*e*S	Sn	11 39 29.6	-0.3
	baz=259						
JKRS	Kuro-shima	1.26	110	P	Pn	11 39 13.7	-0.1
JKRS				S	Sb	11 39 30.2	0.0
JIJ	Ishigaki jima	1.34	103	P	Pn	11 39 14.2	-0.7
JIJ				S	Sn	11 39 31.0	-1.0
FUSS	Fushou	1.41	253	*e*P	Pb	11 39 17.7	+0.5
	baz=261						
FUSS				*e*S	Sb	11 39 35.8	+1.1
	baz=261						
WHF	Hehuan Shan	1.42	249	P	Pb	11 39 17.4	-0.2
	baz=249						
WHF				*e*S	Sb	11 39 36.0	+0.6
	baz=249						
ESL	Shilin	1.45	234	*e*P	Pn	11 39 15.8	-0.6
	baz=235						
ESL				*e*S	Sn	11 39 35.1	+0.3
	baz=235						
JISG	Ishigakijimahi	1.45	93	P	Pn	11 39 15.8	-0.7
TWT	Tachien	1.46	254	*e*P	Pb	11 39 19.0	+0.9
	baz=254						
TWT				*e*S	Sb	11 39 37.8	+1.5
	baz=254						
TDCB	Techi	1.48	254	*e*P	Pb	11 39 18.0	-0.4
	baz=240						
TDCB				*e*S	Sb	11 39 37.1	+0.3
	baz=240						
CHGB	Renai	1.53	247	*e*P	Pb	11 39 19.1	-0.3
	baz=248						
CHGB				*e*S	Sb	11 39 38.8	+0.4
	baz=248						
LIOB	Emei	1.55	269	*e*P	Pb	11 39 18.8	-0.7
	baz=270						
LIOB				*e*S	Sb	11 39 38.3	-0.3
	baz=270						
NSTT	Nanjuang	1.56	269	*e*P	Pb	11 39 18.8	-0.8
	baz=269						
NSTT				*e*S	Sb	11 39 39.0	0.0
	baz=269						
WHP	Taichung City	1.66	257	*e*P	Pb	11 39 21.9	+0.5
	baz=263						
WHP				*e*S	Sb	11 39 43.2	+1.3
	baz=263						
HGSD	Ruisui	1.67	225	*e*P	Pn	11 39 18.5	-0.9
	baz=211						
HGSD				*e*S	Sb	11 39 42.7	+0.7

	baz=211						
NMLH	Miaoli	1.76	266	*e*P	Pb	11 39 22.0	-1.0
	baz=284						
NMLH				*e*S	Sb	11 39 44.0	-0.7
	baz=284						
NSY	Sanyi	1.80	262	*e*P	Pb	11 39 24.0	+0.3
	baz=281						
NSY				*e*S	Sb	11 39 46.3	+0.4
	baz=281						
TWQ1	Liyutan	1.80	260	*e*P	Pb	11 39 23.4	-0.3
	baz=261						
TWQ1				*e*S	Sb	11 39 47.5	+1.6
	baz=261						
JTJ	Tarama	1.81	91	P	Pn	11 39 22.1	+0.7
JTJ				*e*S	Sn	11 39 44.0	+0.4
YULB	Yu-li	1.82	226	*e*P	Pn	11 39 20.7	-0.9
	baz=244						
YULB				*e*S	Sn	11 39 43.4	-0.6
	baz=244						
SMLT	Sun Moon Lake	1.83	245	*e*P	Pn	11 39 22.8	+1.0
	baz=232						
SMLT				*e*S	Sb	11 39 46.9	0.0
	baz=232						
SSLB	Suanglung	1.83	242	*e*P	Pn	11 39 22.3	+0.6
	baz=242						
SSLB				*e*S	Sn	11 39 43.9	-0.5
	baz=242						
TWF1	Yuli	1.85	225	*e*P	Pn	11 39 22.1	+0.2
	baz=212						
TWF1				*e*S	Sb	11 39 45.9	-1.3
	baz=212						
FULB	Fuli	1.96	222	*e*P	Pn	11 39 23.2	-0.3
	baz=208						
FULB				*e*S	Sb	11 39 49.0	-1.5
	baz=208						
ALS	Alishan	2.09	237	*e*P	Pn	11 39 26.8	+1.2
	baz=237						
ALS				*e*S	Sn	11 39 51.6	+0.5
	baz=237						
EDH	Donghe	2.13	218	*e*P	Pn	11 39 24.5	-1.3
	baz=218						
EDH				*e*S	Sn	11 39 49.9	-1.7
	baz=218						
ELDTW	Lidau	2.14	227	*e*P	Pn	11 39 26.3	+0.2
	baz=227						
CHN5	Tsauling	2.15	241	*e*P	Pn	11 39 27.6	+1.5
	baz=241						
CHN5				*e*S	Sb	11 39 54.8	-1.2
	baz=241						
JIRB	Irabujima	2.24	86	P	Pn	11 39 28.4	+1.1
STYT	Tauyuan	2.34	230	*e*P	Pn	11 39 29.5	+0.8
	baz=231						
STYT				*e*S	Sn	11 39 58.6	+1.7
	baz=231						
JMJ2	Miyako jima3	2.38	88	P	Pn	11 39 30.8	+1.6
WTP	Ta-pu	2.39	234	*e*P	Pn	11 39 31.1	+1.6
	baz=235						
WTP				*e*S	Sb	11 40 00.5	-2.4
	baz=235						
JOGS	Gusukube	2.45	87	P	Pn	11 39 31.4	+1.2
TWK	Hsinying	2.47	236	*e*P	Pn	11 39 31.6	+1.1
	baz=237						
TWK				*e*S	Sn	11 40 02.2	+2.0
	baz=237						
CHN1	Nanshi	2.49	234	*e*P	Pn	11 39 32.6	+1.8
	baz=234						
CHN1				*e*S	Sn	11 40 02.4	+1.9
	baz=234						
SSD	Sandimen	2.71	225	*e*P	Pn	11 39 35.2	+1.4
	baz=218						
SSD				*e*S	Sb	11 40 09.5	-2.5
	baz=218						

*NOU **24** 11:54:50.4, 5°.49S×146°.29E, h65km, mb4.6, Eastern New Guinea Reg., P.N.G.*
*DJA **24** 11:54:50.8±0.4, 6°S±3°×14°6E±°, h51km±8km, M4.5/13, mB4.8/4, mb4.6/13, MLv4.6/3, Mw(mB)4.1/4*
*NEIC **24** 11:54:50.9±1.6, 5°.67S±0°.02×146°.42E±0°.09, h64km±6km, mb4.6/41, Error ellipse: s-maj=13.0km s-min=2.4km az=87.0*
*IDC **24** 11:54:51.2±2.2, 5°.71S×146°.41E, h67km±21km, mb4.1/21, mb1 4.2/24, mb1mx4.1/37, mbtmp4.4/24, MS3.5/5, Ms1 3.5/5, ms1mx3.2/22, Error ellipse: s-maj=17.9km s-min=11.3km az=70.0*
ISC 24 11:54:50.7±0.4, **5°.70S**±0°.05×**146°.41E**±0°.07, **h64**km, **n104**, σ**1ˢ.05**/101, **mb4.5**/39, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.75	169	P	Pn	11 55 46.9	+0.7
	42nm,0.3s,baz=26,slow=6.0,SNR=85						
PMG				S	Sn	11 56 30.1	+0.8
	51nm,0.3s,baz=249,slow=16,SNR=8.8						
PMG				LR	LR	11 57 44.0	
	comp=Z,600nm,21.6s,baz=21,slow=46						
PMG	Port Moresby	3.75	169	Pn	Pn	11 55 47.2	+0.9
PMG	Port Moresby	3.75	169	P	Pn	11 55 47.1	+0.9
MANU	Manus Island	3.76	15		Pn	11 55 46.0	-0.3
RABL	Rabaul	5.92	76		Pn	11 56 15.0	-0.9
RABL	Rabaul	5.92	76	P	Pn	11 56 16.3	+0.3
COEN	Coen	8.80	201		Pn	11 56 56.5	+1.2
HNR	Honiara	13.92	106	P	P	11 58 09.6	-1.6
	10nm,0.3s,baz=238,slow=4.8,SNR=3.0						
CTA	Charters Tower	14.30	181	P	P	11 58 12.7	-2.7
	1.6nm,0.3s,baz=0.3,slow=14,SNR=24						
CTAO	Charters Tower	14.30	181		P	11 58 13.3	-2.1
SIJI	Sorong	15.86	287	P	P	11 58 30.8	-2.0
	3.9nm,0.3s,baz=64,slow=10,SNR=10						
SWI	Sorong	15.87	287	P	Pn	11 58 29.4	-0.9
	82nm,0.9s						
MTN	Manton Dam	16.66	244	Pn	Pn	11 58 40.1	-0.1
MTN				IAmb	IAmb	11 58 49.0	
	comp=Z,43nm,1.3s						
WB0	Warramunga Arr	18.23	219	P	Pn	11 58 59.8	+0.4
WR0	Warramunga Arr	18.28	218	P	Pn	11 58 60.0	-0.1
WRAB	Tennant Creek	18.38	219	P	Pn	11 59 00.4	-0.8
WC3	Warramunga Arr	18.38	218	P	Pn	11 59 00.4	-0.9
WB2	Warramunga Arr	18.38	219	P	Pn	11 59 00.4	-0.9
WB2				IAmb	IAmb	11 59 29.5	
	comp=Z,34nm,1.5s						
WRA	Warramunga Arr	18.39	219	P	P	11 59 00.0	-0.7
	comp=Z,1.3nm,0.3s,baz=41,slow=12,SNR=41						
WRA				PcP	PcP	12 03 30.4	+0.7
	comp=Z,0.1nm,0.3s,baz=24,slow=1.8,SNR=5.4						
WRA				LR	LR	12 06 43.4	
	comp=Z,120nm,20.7s,baz=70,slow=39						
WRA	Warramunga Arr	18.39	219	P	Pn	11 59 00.7	-0.8
EIDS	Eidsvold	20.06	168	P	Pn	11 59 20.3	-0.9
SANI	Sanana	20.70	279	P	Pn	11 59 26.5	-2.3
	comp=Z,26nm,0.5s						
AS31	Alice Springs	21.54	213	P	P	11 59 35.7	+0.8
ASAR	Alice Springs	21.54	213	P	P	11 59 35.5	+0.6
	comp=Z,5.3nm,0.7s,baz=48,slow=7.9,SNR=63						
ASAR				PcP	PcP	12 03 36.0	+0.6
	comp=Z,1.2nm,0.7s,baz=100,slow=1.3,SNR=5.0						
ASAR				LR	LR	12 08 55.5	
	comp=Z,220nm,19.7s,baz=40,slow=39						
ASAR	Alice Springs	21.54	213	P	P	11 59 35.9	+1.0
SANVU	Saraoutou	22.59	117	P	P	11 59 45.7	-0.6
SANVU				IAmb	IAmb	11 59 47.2	
	comp=Z,22nm,0.7s						
BATI	Baumata	22.96	257	P	P	11 59 49.8	-0.3
	comp=Z,37nm,0.7s,baz=86,slow=7.2,SNR=5.0						
FITZ	Fitzroy Crossi	23.73	237	P	P	11 59 56.6	-0.6
	comp=Z,13nm,0.7s,baz=52,slow=8.9,SNR=31						
FITZ				LR	LR	12 10 05.5	
	comp=Z,95nm,20.1s,baz=90,slow=38						
FITZ	Fitzroy Crossi	23.73	237	P	P	11 59 57.2	-0.1
FITZ				IAmb	IAmb	11 59 58.4	
	comp=Z,17nm,0.8s						
LUWI	Luwuk	24.04	280	P	P	12 00 01.9	+1.8
LUWI	Luwuk	24.04	280	P	P	12 00 02.0	+1.8
	comp=Z,94nm,0.8s						
ARMA	Armidale	25.07	169	P	P	12 00 10.5	+1.0
ARMA				IAmb	IAmb	12 00 30.6	
	comp=Z,18nm,1.4s						
APSI	Ampana	25.17	280	P	P	12 00 05.3	-5.1
DZM	Mont Dzumac	25.30	132	P	P	12 00 11.4	-0.2
	comp=Z,8.9nm,0.9s,baz=166,slow=24,SNR=6.6						
DZM	Mont Dzumac	25.30	132	P	P	12 00 12.2	+0.6
DZM				IAmb	IAmb	12 00 13.3	
	comp=Z,11nm,0.9s						
STKA	Stephens Creek	26.43	189	P	P	12 00 21.6	0.0
	comp=Z,1.9nm,0.5s,baz=0.0,slow=8.7,SNR=7.7						
STKA	Stephens Creek	26.43	189	P	P	12 00 22.4	+0.7
TOLI2	Tolitoli	26.48	284	P	P	12 00 21.9	-0.4
TOLI2				IAmb	IAmb	12 00 28.5	
	comp=Z,5.6nm,0.7s						
BBOO	Buckleboo	28.65	198	P	P	12 00 41.4	0.0
CAN	Canberra	29.57	176	P	P	12 00 50.1	+0.4
CAN				IAmb	IAmb	12 01 11.0	
	comp=Z,31nm,1.4s						
PSA00	Pilbara Seismi	30.17	236	P	P	12 00 55.1	0.0
PSA00				IAmb	IAmb	12 01 22.0	
	comp=Z,15nm,1.2s						
FORT	Forrest	30.33	212	P	P	12 00 56.3	-0.1
MORW	Morawa	36.94	227	P	P	12 01 54.1	+0.3
JMN	Monobe	40.97	344	P	P	12 02 27.4	-0.1
JWT	Wachi	42.06	347	P	P	12 02 36.7	+0.4
JHS	Saijyo	42.38	344	P	P	12 02 39.7	+0.8
URZ	Urewera	42.74	144	P	P	12 02 41.9	+0.1
	comp=Z,2.2nm,0.4s,baz=297,slow=4.5,SNR=5.1						
TUWZ	Tuamarina	43.23	150	P	P	12 02 46.3	+0.6
NJ2	Nanjing	45.81	327	*e*P	P	12 03 07.1	+0.7
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSRS	Korea Array	46.27	340	P	P	12 03 10.8	+0.9
	comp=Z,3.3nm,0.8s,baz=158,slow=9.6,SNR=15						
KSRS				LR	LR	12 20 58.8	
	comp=Z,53nm,19.2s,baz=136,slow=34						
JKA	Kamikawa-asahi	49.71	356	P	P	12 03 36.5	+0.2
ASAJ	Asahikawa	49.71	356	P	P	12 03 36.5	+0.2
	comp=Z,4.5nm,0.8s,baz=270,slow=6.1,SNR=1.4						
USA0B	Ussuriysk Arra	51.35	347	P	P	12 03 50.0	+1.3
USA0B				IAmb	IAmb	12 03 50.2	
	comp=Z,5.6nm,0.7s						
USRK	Ussuriysk Ar.	51.35	347	P	P	12 03 48.9	+0.2
	comp=Z,4.2nm,0.7s,baz=175,slow=6.3,SNR=13						
CMAR	Chiang Mai Arr	52.59	298	P	P	12 03 59.2	+0.8
	comp=Z,2.7nm,0.7s,baz=119,slow=6.3,SNR=5.0						
XAN	Xi'an	53.08	321	P	P	12 04 01.8	-0.1
XAN				pP	pP	12 04 14.3	-4.0
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	Hu-ho-hao-te	56.27	329	*e*P	P	12 04 26.1	+1.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
LZH	Lanzhou	57.60	320	*e*P	P	12 04 36.8	+2.3
LZH				pP	pP	12 04 49.6	-1.5
LZH				sP	sP	12 05 00.9	+2.7
LZH				PP	PP	12 06 34.3	-8.7
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,67nm,5.4s						
PETK	Petropavlovsk-	59.36	8	P	P	12 04 47.3	+1.1
	comp=Z,4.8nm,0.9s,baz=175,slow=7.0,SNR=5.9						
GTA	Gaotai	62.14	320	*e*P	P	12 05 06.4	+0.9
GTA				pP	pP	12 05 20.3	-2.0
GTA				sP	sP	12 05 28.3	-1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	Songino Array	63.86	331	P	P	12 05 17.3	+0.6
	comp=Z,2.0nm,1.0s,baz=146,slow=5.7,SNR=11						
SONM	Songino Array	63.86	331	P	P	12 05 17.4	+0.6
WMQ	Urumqi	72.19	319	*e*P	P	12 06 10.8	+1.8
VNDA	Vanda	72.24	177	P	P	12 06 09.8	+1.1
	comp=Z,3.9nm,0.7s,baz=334,slow=6.8,SNR=17						
VNDA	Vanda	72.24	177	P	P	12 06 10.0	+1.3
VNDA				IAmb	IAmb	12 06 10.4	
	comp=Z,4.8nm,0.8s						
MK31	Makanchi Array	76.90	321	P	P	12 06 35.9	-0.3
MKAR	Makanchi Array	76.90	321	P	P	12 06 35.8	-0.4
	comp=Z,0.5nm,0.5s,baz=99,slow=9.4,SNR=11						
MKAR	Makanchi Array	76.90	321	P	P	12 06 36.0	-0.2
MAKZ	Makanchi	77.10	321	P	P	12 06 37.4	+0.1
ZALV	Zalesovo Beam	78.45	328	P	P	12 06 43.0	-1.6
	comp=Z,1.2nm,0.5s,baz=106,slow=6.9,SNR=5.1						
ZALV	Zalesovo Beam	78.45	328	P	P	12 06 43.7	-1.0
KURK	Kurchatov	80.62	323	P	P	12 06 56.2	-0.3
KURK	Kurchatov	80.62	323	IAmb	IAmb	12 06 57.2	
	comp=Z,1.7nm,1.1s						
KURBB	Kurchatov Arra	80.64	323	P	P	12 06 56.2	-0.4
	comp=Z,0.4nm,0.4s,baz=118,slow=4.3,SNR=2.2						
AAK	Ala-Archa	80.72	315	P	P	12 06 57.9	+0.4
	comp=Z,1.2nm,0.8s,baz=128,slow=12,SNR=2.5						
AAK	Ala-Archa	80.72	315	IAmb	IAmb	12 07 26.4	
	comp=Z,5.0nm,1.4s						
MAW	Mawson	82.30	203	P	P	12 07 05.4	+0.3
	comp=Z,16nm,1.1s,baz=96,slow=9.2,SNR=2.6						
MAW	Mawson	82.30	203	P	P	12 07 06.2	+1.1
MAW				IAmb	IAmb	12 07 14.7	
	comp=Z,9.5nm,1.4s						
SUA	Susitna One	82.44	26	P	P	12 07 06.1	+0.1
SUA				IAmb	IAmb	12 07 20.1	
	comp=Z,17nm,1.4s						
IMAR	Indian Mountai	83.42	21	P	P	12 07 11.7	+0.8
KKAR	Karatay Array	83.66	314	P	P	12 07 12.0	-0.7
QSPA	South Pole Qui	84.26	180	P	P	12 07 15.7	+0.2
QSPA				IAmb	IAmb	12 07 16.3	
	comp=Z,5.7nm,0.7s						
DHY	Denali Highway	84.56	25	P	P	12 07 17.8	+0.9
DHY				IAmb	IAmb	12 07 21.9	
	comp=Z,3.4nm,0.8s						
CCB	Clear Creek Bu	85.03	23	P	P	12 07 18.8	-0.2
CCB				IAmb	IAmb	12 07 19.5	
	comp=Z,9.1nm,1.2s						
HDA	Harding Lake	85.27	24	P	P	12 07 19.8	-0.5
HDA				IAmb	IAmb	12 07 21.9	
	comp=Z,2.4nm,0.7s						
IL31		85.44	23	P	P	12 07 20.5	-0.6
IL31				IAmb	IAmb	12 07 21.1	
	comp=Z,5.2nm,0.7s						
ILAR	Eielson Array	85.44	23	P	P	12 07 20.1	-1.0
	comp=Z,5.1nm,0.7s,baz=253,slow=4.9,SNR=83						
BCAR	Beaver Creek A	86.92	26	P	P	12 07 28.4	-0.2
BMAR	Burnt Mountain	87.33	21	P	P	12 07 29.7	-0.7
EGAK	Eagle	87.73	24	P	P	12 07 33.5	+1.2
EGAK				IAmb	IAmb	12 07 34.5	
	comp=Z,8.9nm,1.4s						
DAWY	Dawson	88.25	25	P	P	12 07 36.5	+1.7
DAWY				IAmb	IAmb	12 07 37.0	
	comp=Z,3.8nm,0.8s						
NVAR	Mina Array Bea	97.65	52	P	Pdif	12 08 18.8	-0.2
	comp=Z,0.5nm,0.8s,baz=252,slow=7.5,SNR=3.8						
YKA	Yellowknife Ar	99.18	28	P	Pdif	12 08 24.9	-0.1
	comp=Z,0.3nm,0.6s,baz=273,slow=4.4,SNR=6.7						
PLCA	Paso Flores	122.69	147	PKP	PKiKP	12 13 38.9	-1.1
	comp=Z,0.6nm,0.5s,baz=304,slow=2.0,SNR=7.0						
PLCA	Paso Flores	122.69	147		PKiKP	12 13 39.5	-0.5
CPUP	Villa Florida	140.71	145	PKP	PKPdf	12 14 14.0	0.0
	comp=Z,1.4nm,0.6s,baz=246,slow=4.7,SNR=3.4						
CPUP	Villa Florida	140.71	145		PKPdf	12 14 13.0	-1.0
TORD	Torodi Ar. Bea	144.45	285	PKP	PKPbc	12 14 18.8	-0.8
	comp=Z,3.6nm,0.8s,baz=69,slow=3.6,SNR=11						
TORD	Torodi Ar. Bea	144.45	285		PKPdf	12 14 19.7	-1.2
KIC	Kosan Boka	151.31	273	*e*PKP2	PKiKP	12 14 38.5	-0.3
	comp=Z,8.4nm,0.8s						
DBIC	Dimbokro	151.42	273	PKPbc	PKiKP	12 14 39.2	+0.2
	comp=Z,2.8nm,0.5s,baz=43,slow=1.0,SNR=7.0						
TIC	Toumodi	151.59	273	*e*PKP2	PKiKP	12 14 39.9	+0.5
LIC	Lamto	151.59	273	*e*PKP2	PKiKP	12 14 39.5	+0.2
	comp=Z,14nm,0.8s						
BDFB	Brasilia	154.43	146	PKPbc	PKPbc	12 14 43.8	-1.4
	comp=Z,2.6nm,0.5s,baz=198,slow=6.9,SNR=4.9						

*TAP **24** 11:55:55.9, 23°.55N×121°.58E, h35km, ML3.1, C*
*JMA **24** 11:55:56.7±0.1, 23°.54N×121°.52E, h25km±2km, M2.6*
ISC 24 11:55:56.5±0.9, **23°.54N**±0°.02×**121°.58E**±0°.02, **h32**km±5km, **n86**, σ**0ˢ.90**/165, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	Ruisui	0.15	252	*e*P	Pn	11 56 02.6	+0.1
	baz=249						
HGSD				*e*S	Sb	11 56 09.6	+3.0
	baz=249						
EGFH	Guangfu	0.19	313	*e*P	Pn	11 56 02.7	-0.4
	baz=298						
EGFH				*e*S	Sb	11 56 07.6	+0.3
	baz=298						
EHY	Hungye	0.24	262	*i* P	Pb	11 56 02.8	-0.6
	baz=271						
EHY				S	Sb	11 56 08.1	0.0
	baz=271						
YULB	Yu-li	0.30	241	P	Pb	11 56 03.7	-0.4
	baz=249						
YULB				*e*S	Sn	11 56 09.0	-0.9
	baz=249						
ESL	Shilin	0.30	334	P	Pb	11 56 03.6	-0.7
	baz=327						
ESL				S	Sb	11 56 09.0	-0.5
	baz=327						
EYUL	Yuli	0.31	232	*e*P	Pn	11 56 04.1	-0.6
	baz=240						
EYUL				*e*S	Sn	11 56 10.2	+0.1
	baz=240						
TWF1	Yuli	0.32	234	P	Pb	11 56 04.0	-0.4
	baz=242						
TWF1				S	Sn	11 56 10.8	+0.3
	baz=242						
FULB	Fuli	0.43	218	*e*P	Pn	11 56 06.1	-0.3
	baz=228						
FULB				S	Sn	11 56 13.9	+0.7
	baz=228						
HWA	Hwalien	0.44	3	*e*P	Pb	11 56 05.4	-0.7
	baz=13						
HWA				*e*S	Sn	11 56 14.1	+0.8
	baz=13						
CHKT	Chengkung	0.48	204	*e*P	Pn	11 56 07.2	+0.1
	baz=193						
CHKT				*e*S	Sn	11 56 15.4	+1.0
	baz=193						
TWD	Chiawan	0.54	2	*e*P	Pb	11 56 07.4	-0.3
	baz=352						
TWD				S	Sn	11 56 16.3	+0.5
	baz=352						
YUS	Yu-Shan	0.58	265	P	Pb	11 56 08.2	-0.4
	baz=271						
YUS				*e*S	Sb	11 56 16.1	-0.8
	baz=271						
EDH	Donghe	0.62	204	P	Pn	11 56 09.0	0.0
	baz=193						
EDH				S	Sn	11 56 19.0	+1.2
	baz=193						
ELDTW	Lidau	0.62	236	P	Pb	11 56 07.9	-1.2
	baz=233						
ELDTW				S	Sb	11 56 17.1	-0.7
	baz=233						
SSLB	Suanglung	0.62	293	P	Pb	11 56 08.2	-0.9
	baz=293						
SSLB				S	Sb	11 56 16.4	-1.3
	baz=293						
NACB	Ninganchiao	0.63	1	*e*P	Pb	11 56 08.2	-1.0
	baz=352						
NACB				*e*S	Sb	11 56 16.4	-1.4
	baz=352						
CHGB	Renai	0.64	324	*e*P	Pb	11 56 08.8	-0.6
	baz=334						
CHGB				*e*S	Sb	11 56 16.6	-1.6
	baz=334						
WHF	Hehuan Shan	0.67	334	P	Pb	11 56 08.7	-1.4
	baz=336						
WHF				S	Sb	11 56 17.7	-1.6
	baz=336						
ETLH	Xiulin Townshi	0.67	352	*e*P	Pb	11 56 08.7	-1.2
	baz=354						
ETLH				S	Sb	11 56 18.4	-0.6
	baz=354						
WHYT	Xinyi Township	0.69	283	P	Pn	11 56 09.8	-0.1
	baz=280						
WHYT				S	Sb	11 56 18.6	-0.7
	baz=280						
SMLT	Sun Moon Lake	0.71	299	P	Pn	11 56 10.0	-0.4
	baz=301						
SMLT				*e*S	Sn	11 56 20.8	+0.5
	baz=301						
ALS	Alishan	0.71	268	*i* P	Pn	11 56 10.4	-0.2
	baz=272						
ALS				S	Sn	11 56 20.3	-0.3
	baz=272						
LONT	Longtian	0.75	213	*e*P	Pb	11 56 09.6	-1.6
	baz=211						
LONT				*e*S	Sb	11 56 19.4	-1.8
	baz=211						
FUSS	Fushou	0.77	336	P	Pb	11 56 11.0	-0.6
	baz=338						
FUSS				S	Sb	11 56 20.9	-1.0
	baz=338						
DPDB	Guoxing	0.78	310	*e*P	Pb	11 56 10.9	-0.7
	baz=316						
DPDB				*e*S	Sb	11 56 20.6	-1.3
	baz=316						
TWT	Tachien	0.80	333	P	Pn	11 56 11.5	-0.2
	baz=333						
TWT				S	Sb	11 56 21.5	-1.2
	baz=333						
TDCB	Techi	0.81	332	P	Pn	11 56 11.5	-0.3
	baz=333						
TDCB				S	Sb	11 56 21.2	-1.7
	baz=333						
CHN5	Tsauling	0.83	274	*i* P	Pb	11 56 12.4	-0.1
	baz=273						
CHN5				*i* S	Sn	11 56 24.4	+1.3
	baz=273						
WJS	Zhushan	0.83	290	*e*P	Pb	11 56 12.7	+0.2
	baz=289						
WJS				*e*S	Sn	11 56 24.1	+1.1
	baz=289						
STYT	Tauyuan	0.84	244	P	Pb	11 56 12.2	-0.5
	baz=237						
STYT				S	Sn	11 56 23.4	0.0
	baz=237						
TWGBT	Beinan	0.85	213	*e*P	Pn	11 56 10.6	-1.6
	baz=210						
TWGBT				*e*S	Sb	11 56 22.0	-2.0
	baz=210						
TWG	Pinlang	0.85	213	*e*P	Pn	11 56 11.2	-1.1
	baz=210						
TWG				*e*S	Sb	11 56 22.5	-1.6
	baz=210						
LDUT	Ludao	0.87	187	*e*P	Pn	11 56 12.0	-0.4
	baz=176						
LDUT				*e*S	Sb	11 56 22.9	-1.5
	baz=176						
WNT	Mingjian	0.89	292	P	Pb	11 56 14.8	+1.3
	baz=292						
WNT				S	Sn	11 56 25.4	+0.9
	baz=292						
ENA	Nanau	0.90	9	*e*P	Pn	11 56 12.4	-0.5
	baz=360						
ENA				*e*S	Sn	11 56 24.4	-0.3
	baz=360						
NNSB	Datong	0.90	349	P	Pn	11 56 13.1	0.0
	baz=1.0						
NNSB				S	Sn	11 56 23.9	-1.2
	baz=1.0						
NNSH	Datong	0.90	349	*e*P	Pn	11 56 12.8	-0.3
	baz=359						
NNSH				*e*S	Sn	11 56 23.9	-1.2
	baz=359						
WNT1	Nantou City	0.90	294	*e*P	Pb	11 56 14.6	+1.0
	baz=293						
WNT1				*e*S	Sb	11 56 27.0	+1.6
	baz=293						
TPUB	Ta-pu	0.91	255	*e*P	Pb	11 56 13.5	-0.2
	baz=253						
TPUB				*e*S	Sb	11 56 25.7	+0.2
	baz=253						
NNS	Nan Shan	0.92	348	P	Pb	11 56 13.8	-0.2
	baz=1.0						
NNS				S	Sn	11 56 24.5	-0.9
	baz=1.0						
WTP	Ta-pu	0.94	252	P	Pb	11 56 14.0	-0.3
	baz=249						
WTP				S	Sb	11 56 26.8	+0.4
	baz=249						
WHP	Taichung City	0.94	322	*e*P	Pb	11 56 14.4	+0.1
	baz=326						
WHP				*e*S	Sb	11 56 27.1	+0.6
	baz=326						
WGK	Gukeng	0.94	279	P	Pb	11 56 14.3	-0.1
	baz=278						
WGK				S	Sb	11 56 27.0	+0.4
	baz=278						
WWF	Wufeng	0.95	302	*e*P	Pb	11 56 14.7	+0.3
	baz=302						
WWF				*e*S	Sb	11 56 27.7	+1.0
	baz=302						
WDLH	Douliu	0.97	279	P	Pn	11 56 13.8	0.0
	baz=278						
WDLH				S	Sb	11 56 28.2	+0.9
	baz=278						
CHN2	Minshiung	1.01	270	*e*S	Sb	11 56 30.1	+1.5
	baz=268						

SLGT	**Liugui**	**1.02**	**238**	P	**Pb**	**11 56 15.2**	**-0.4**
	baz=231						
SLGT				S	**Sb**	**11 56 29.0**	**+0.4**
	baz=231						
SGST	**Jiashian**	**1.02**	**244**	P	**Pn**	**11 56 14.7**	**+0.1**
	baz=248						
SGST				S	**Sb**	**11 56 29.5**	**+0.6**
	baz=248						
TCU	**Taichung**	**1.03**	**306**	*e*P	**Pb**	**11 56 17.0**	**+1.3**
	baz=307						
TCU				*e*S	**Sb**	**11 56 31.0**	**+2.1**
	baz=307						
CHN1	**Nanshi**	**1.03**	**250**	*e*P	**Pb**	**11 56 16.2**	**+0.4**
	baz=258						
CHN1				*i* S	**Sb**	**11 56 30.3**	**+1.3**
	baz=258						
TWK	**Hsinying**	**1.04**	**255**	P	**Pb**	**11 56 15.9**	**-0.1**
	baz=252						
TWK				S	**Sb**	**11 56 30.2**	**+0.9**
	baz=252						
SNST	**Tainan City**	**1.04**	**252**	*e*P	**Pb**	**11 56 16.1**	**+0.1**
	baz=250						
SNST				*e*S	**Sb**	**11 56 29.9**	**+0.5**
	baz=250						
NDT	**Datong Townshi**	**1.06**	**357**	*e*P	**Pn**	**11 56 14.6**	**-0.5**
	baz=360						
NDT				*e*S	**Sn**	**11 56 28.1**	**-0.7**
	baz=360						
CHY	**Chiayi**	**1.06**	**268**	*e*P	**Pn**	**11 56 15.2**	**+0.1**
	baz=266						
CHY				*e*S	**Sb**	**11 56 30.4**	**+0.5**
	baz=266						
WCHH	**Zhanghua**	**1.08**	**300**	*e*P	**Pb**	**11 56 16.3**	**-0.3**
	baz=299						
WCHH				*e*S	**Sb**	**11 56 31.3**	**+0.9**
	baz=299						
ECL	**Taimali**	**1.10**	**212**	*e*P	**Pn**	**11 56 15.8**	**+0.2**
	baz=209						
ECL				S	**Sn**	**11 56 27.5**	**-2.2**
	baz=209						
WTK	**Tuku**	**1.10**	**278**	P	**Pb**	**11 56 16.7**	**-0.3**
	baz=276						
WTK				S	**Sb**	**11 56 31.6**	**+0.5**
	baz=276						
YHNB	**Yeheng**	**1.14**	**351**	*e*P	**Pb**	**11 56 17.3**	**-0.4**
	baz=4.0						
YHNB				*e*S	**Sn**	**11 56 29.9**	**-1.0**
	baz=4.0						
NSK	**Sanguang**	**1.15**	**350**	*e*P	**Pb**	**11 56 17.5**	**-0.3**
	baz=3.0						
NSK				*e*S	**Sn**	**11 56 31.0**	**-0.1**
	baz=3.0						
NSY	**Sanyi**	**1.15**	**320**	P	**Pb**	**11 56 18.5**	**+0.6**
	baz=335						
NSY				S	**Sb**	**11 56 34.1**	**+1.6**
	baz=335						
SSD	**Sandimen**	**1.18**	**228**	*e*P	**Pb**	**11 56 18.5**	**+0.2**
	baz=222						
SSD				*e*S	**Sb**	**11 56 32.2**	**-0.9**
	baz=222						
WDJ	**Dajia District**	**1.18**	**313**	*e*P	**Pb**	**11 56 17.7**	**-0.5**
	baz=314						
WDJ				*e*S	**Sb**	**11 56 34.0**	**+0.7**
	baz=314						
SCST	**Cishan**	**1.19**	**237**	*e*P	**Pn**	**11 56 17.0**	**+0.1**
	baz=234						
SCST				S	**Sb**	**11 56 34.5**	**+0.9**
	baz=234						
TSMG	**Majia**	**1.20**	**226**	*e*P	**Pb**	**11 56 18.1**	**-0.5**
	baz=222						
TSMG				*e*S	**Sb**	**11 56 34.1**	**+0.3**
	baz=222						
ICHU	**Yijhu**	**1.21**	**262**	*e*P	**Pb**	**11 56 18.2**	**-0.6**
	baz=259						
ICHU				*e*S	**Sb**	**11 56 35.0**	**+1.0**
	baz=259						
CHN3	**Shinhua**	**1.21**	**248**	*e*P	**Pb**	**11 56 19.1**	**+0.4**
	baz=246						
NSTT	**Nanjuang**	**1.21**	**334**	*e*P	**Pb**	**11 56 18.7**	**-0.1**
	baz=337						
NSTT				S	**Sb**	**11 56 33.1**	**-1.0**
	baz=337						
NMLH	**Miaoli**	**1.23**	**324**	*e*P	**Pb**	**11 56 19.0**	**-0.1**
	baz=326						
NMLH				*e*S	**Sb**	**11 56 35.0**	**+0.4**
	baz=326						
NWLT	**Wulai**	**1.23**	**357**	*e*S	**Sn**	**11 56 32.4**	**-0.7**
WSF	**Szhu**	**1.25**	**275**	*e*P	**Pb**	**11 56 19.0**	**-0.5**
	baz=273						
WSF				S	**Sb**	**11 56 34.7**	**-0.5**
	baz=273						
MASBT	**Mashibuluo**	**1.27**	**224**	*e*P	**Pb**	**11 56 20.0**	**+0.2**
	baz=220						
MASBT				*e*S	**Sb**	**11 56 36.5**	**+0.7**
	baz=220						
CHN8	**Yiju**	**1.27**	**262**	*e*P	**Pb**	**11 56 19.0**	**-0.8**
	baz=259						
CHN8				*e*S	**Sb**	**11 56 36.0**	**+0.1**
	baz=259						
TWM1	**Shoushan**	**1.28**	**236**	*e*P	**Pb**	**11 56 20.1**	**+0.1**
	baz=234						
EAST	**Anshuo**	**1.33**	**211**	*e*P	**Pn**	**11 56 17.7**	**-1.1**
	baz=201						
SSPT	**Xinbi**	**1.41**	**222**	*e*P	**Pb**	**11 56 21.5**	**-0.6**
	baz=220						
SLIU	**Shizi**	**1.50**	**209**	*e*P	**Pn**	**11 56 21.4**	**+0.2**
	baz=198						
SLIU				*e*S	**Sn**	**11 56 39.9**	**+0.3**
	baz=198						
JYNG	**Yonagunijimaku**	**1.54**	**54**	P	**Pn**	**11 56 23.0**	**+1.3**
JYNG				*e*S	**Sb**	**11 56 42.7**	**-0.9**
YOJ	**Yonaguni jima**	**1.60**	**55**	P	**Pb**	**11 56 24.3**	**-1.1**
YOJ				*e*S	**Sn**	**11 56 42.4**	**+0.4**
PHUB	**P'eng-hu**	**1.84**	**270**	*e*P	**Pn**	**11 56 25.6**	**-0.2**
	baz=267						
PHUB				*e*S	**Sn**	**11 56 48.0**	**-0.1**
	baz=267						
PNG	**Penghu**	**1.86**	**271**	*e*P	**Pn**	**11 56 26.2**	**+0.2**
	baz=270						
HATJ	**Hateruma jima**	**2.10**	**75**	P	**Pn**	**11 56 30.4**	**+1.0**
HATJ				S	**Sn**	**11 56 55.2**	**+0.8**
IRIF	**Iriomote-Funau**	**2.12**	**68**	P	**Pn**	**11 56 31.1**	**+1.5**
IRIF				*e*S	**Sn**	**11 56 57.0**	**+2.1**
JKRS	**Kuro-shima**	**2.33**	**72**	P	**Pn**	**11 56 34.4**	**+1.9**
JKRS				*e*S	**Sn**	**11 57 01.5**	**+1.5**
JIJ	**Ishigaki jima**	**2.48**	**70**	P	**Pn**	**11 56 35.7**	**+1.1**
JIJ				*e*S	**Sn**	**11 57 04.4**	**+0.5**
JISG	**Ishigakijimahi**	**2.71**	**67**	P	**Pn**	**11 56 38.5**	**+0.8**
JISG				*e*S	**Sn**	**11 57 09.6**	**+0.3**
JTJ	**Tarama**	**3.06**	**68**	P	**Pn**	**11 56 43.7**	**+1.2**
JTJ				*e*S	**Sn**	**11 57 18.7**	**+0.7**

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*ISK **24** 11:56:49.6, 34.°85N×26.°98E, h5^{km}, ML3.5/13*

*NIC **24** 11:56:50.5±0.0, 34.°85N×27.°01E, h10^{km}±4^{km}, Ml3.7/2*

*DDA **24** 11:56:51.9, 34.°96N×27.°04E, h5^{km}±3^{km}, ML3.3*

*IDC **24** 11:56:52.4±1.3, 35.°69N×26.°85E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/37, mbtmp3.6/8, ML3.6/1, MS2.1/1, Ms1 2.1/1, ms1mx1.8/36, Error ellipse: s-maj=43.0km s-min=17.5km az=159.0*

*ATH **24** 11:56:52.0, 34.°94N×26.°93E, h12^{km}±2^{km}, ML3.2/7, Error ellipse: s-maj=4.8km s-min=1.4km az=338.0*

*THE **24** 11:56:53.1, 35.°00N×26.°88E, h0^{km}±3^{km}, ML3.1/4, Error ellipse: s-maj=8.9km s-min=1.4km az=150.0*

ISC 24 11:56:50.1±1.3**, 34.°89N**±0.°04×**27.°01E**±0.°02**, h12**^{km}±9^{km}**, n74, σ1^{s}29**/89**, mb3.6**/7**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.67**	**11**	P	**Pb**	**11 57 04.1**	**+0.4**
KARP				S	**Sb**	**11 57 12.6**	**-0.3**
KARP				AML	AML	11 57 22.9	
	comp=N,8027µm,0.6s						
KARP				AML	AML	11 57 24.5	
	comp=E,6866µm,0.6s						
KARP	**Karpathos**	**0.67**	**11**	P	**Pb**	**11 57 04.0**	**+0.4**
KARP				S	**Sn**	**11 57 14.9**	**-0.9**
	comp=E,4µm,0.6s						
KARP	**Karpathos**	**0.67**	**11**	PG	**Pb**	**11 57 04.1**	**+0.4**
KARP				SG	**Sn**	**11 57 15.4**	**-0.4**
KARP	**Karpathos**	**0.67**	**11**	P	**Pb**	**11 57 04.0**	**+0.4**
KARP				S	**Sn**	**11 57 15.1**	**-0.7**
KARP				AML	AML	11 57 22.5	
	comp=E,8.1nm,0.6s						
KARP				AML	AML	11 57 22.5	
	comp=E,8.1nm,0.6s						
KARP				AML	AML	11 57 24.0	
	comp=E,7.0nm,0.9s						
KARP				AML	AML	11 57 24.0	
	comp=E,7.0nm,0.9s						
ZKR	**Zakros**	**0.69**	**289**	P	**Pb**	**11 57 03.6**	**-0.4**
ZKR				S	**Sg**	**11 57 12.4**	**-0.1**
ZKR				AML	AML	11 57 15.0	
	comp=N,4347µm,0.5s						
ZKR				AML	AML	11 57 15.7	
	comp=E,6836µm,0.4s						
ZKR	**Zakros**	**0.69**	**289**	P	**Pg**	**11 57 03.5**	**+0.1**
ZKR				S	**Sb**	**11 57 13.7**	**+0.3**
	comp=E,3µm,0.5s						
ZKR	**Zakros**	**0.69**	**289**	PG	**Pb**	**11 57 03.8**	**-0.2**
ZKR				SG	**Sb**	**11 57 14.2**	**+0.8**
NPS	**Neapolis**	**1.20**	**288**	P	**Pn**	**11 57 13.0**	**+0.3**
NPS				S	**Sb**	**11 57 28.6**	**+0.3**
NPS				AML	AML	11 57 36.4	
	comp=N,1564µm,0.8s						
NPS				AML	AML	11 57 38.8	
	comp=E,2634µm,0.4s						
NPS	**Neapolis**	**1.20**	**288**	P	**Pn**	**11 57 13.1**	**+0.3**
NPS				S	**Sn**	**11 57 29.7**	**+0.7**
	comp=E,1µm,0.6s						
LAST	**Lasithi**	**1.28**	**283**	P	**Pg**	**11 57 14.7**	**-0.1**
LAST				AML	AML	11 57 39.1	
	comp=N,1308µm,0.6s						
LAST				AML	AML	11 57 39.7	
	comp=E,1149µm,0.8s						
LAST	**Lasithi**	**1.28**	**283**	P	**Pg**	**11 57 14.7**	**-0.1**
LAST				S	**Sn**	**11 57 31.5**	**+0.4**
	comp=E,630nm,1.0s						
ARG	**Arkhangelos**	**1.61**	**34**	P	**Pg**	**11 57 21.7**	**+0.8**
ARG				AML	AML	11 57 49.8	
	comp=E,1190µm,0.7s						
ARG				AML	AML	11 57 50.9	
	comp=N,1211µm,0.8s						
ARG	**Arkhangelos**	**1.61**	**34**	P	**Pg**	**11 57 21.7**	**+0.8**
ARG	**Arkhangelos**	**1.61**	**34**	PN	**Pg**	**11 57 21.1**	**+0.2**
ARG				SN	**Sg**	**11 57 44.1**	**+2.3**
IDI	**Anoyia**	**1.78**	**283**	Pn	**Pb**	**11 57 23.3**	**+0.6**
	baz=91,slow=18						
IDI				Sn	**Sg**	**11 57 48.1**	**+0.7**
	comp=N,15nm,0.3s,baz=198,slow=24,SNR=2.2						
IDI	**Anoyia**	**1.78**	**283**	P	**Pb**	**11 57 23.0**	**+0.3**
IDI				AML	AML	11 57 59.9	
	comp=N,536µm,0.5s						
IDI				AML	AML	11 58 05.3	
	comp=E,496µm,0.7s						
IDI	**Anoyia**	**1.78**	**283**	P	**Pb**	**11 57 22.9**	**+0.2**
IDI	**Anoyia**	**1.78**	**283**	PN	**Pb**	**11 57 22.6**	**-0.1**
SIVA	**Sivas**	**1.81**	**275**	P	**Pb**	**11 57 22.8**	**-0.3**
SIVA				AML	AML	11 57 59.9	
	comp=E,1676µm,0.6s						
SIVA				AML	AML	11 58 02.4	
	comp=N,1196µm,0.8s						
KOSK	**Kos Island**	**1.86**	**359**	PN	**Pg**	**11 57 24.7**	**-1.0**
SANT	**Santorini**	**1.94**	**320**	P	**Pb**	**11 57 25.7**	**+0.3**
SANT	**Santorini**	**1.94**	**320**	PN	**Pb**	**11 57 25.5**	**+0.1**
SANT	**Santorini**	**1.94**	**320**	*i* P	**Pb**	**11 57 25.7**	**+0.3**
SANT				*i* S	**Sg**	**11 57 50.6**	**-1.9**
THR8	**Santorini-Mono**	**1.96**	**321**	P	**Pb**	**11 57 25.5**	**-0.2**
THR8	**Santorini-Mono**	**1.96**	**321**	P	**Pb**	**11 57 25.2**	**-0.5**
THR3	**Thira Island,**	**2.00**	**320**	P	**Pb**	**11 57 25.6**	**-0.9**
THR3	**Thira Island,**	**2.00**	**320**	P	**Pb**	**11 57 25.5**	**-0.9**
CMBO	**Columbo, Santo**	**2.05**	**321**	P	**Pb**	**11 57 25.9**	**-1.3**
MRSB	**Marmaris-Mugla**	**2.06**	**28**	PN	**Pb**	**11 57 27.8**	**+0.3**
TURN	**Turunc**	**2.13**	**28**	PN	**Pb**	**11 57 28.2**	**-0.4**
TURN	**Turunc**	**2.13**	**28**	*i* P	**Pb**	**11 57 28.7**	**+0.1**
TURN				*i* S	**Sb**	**11 57 53.0**	**-2.0**
BODT	**Bodrum**	**2.18**	**6**	PN	**Pb**	**11 57 28.8**	**-0.7**
BDRM	**Kayabasi**	**2.20**	**9**	*i* P	**Pn**	**11 57 27.6**	**+1.1**
DALY	**Dalyan (Mula)**	**2.34**	**34**	PN	**Pb**	**11 57 31.3**	**-0.9**
DALY	**Dalyan (Mula)**	**2.34**	**34**	*i* P	**Pn**	**11 57 29.4**	**+1.1**
VAM	**Vamos**	**2.36**	**283**	P	**Pb**	**11 57 31.9**	**-0.6**
FETY	**Fethiye**	**2.42**	**44**	PN	**Pn**	**11 57 31.1**	**+1.5**
YER	**Yerkesik**	**2.47**	**24**	PN	**Pb**	**11 57 32.9**	**-1.5**
APE	**Apeiranthos**	**2.48**	**332**	PN	**Pn**	**11 57 31.9**	**+1.5**
APE	**Apeiranthos**	**2.48**	**332**	*i* P	**Pn**	**11 57 31.5**	**+1.1**
APE	**Apeiranthos**	**2.48**	**332**	P	**Pn**	**11 57 31.6**	**+1.2**
AKAS	**Kas**	**2.50**	**57**	PN	**Pn**	**11 57 32.9**	**+2.1**
AKAS	**Kas**	**2.50**	**57**	*i* P	**Pn**	**11 57 32.0**	**+1.3**
AKAS				*i* S	**Sb**	**11 58 04.4**	**-1.5**
IMMV	**Iera Moni Meta**	**2.54**	**284**	P	**Pb**	**11 57 34.5**	**-1.1**
IMMV	**Iera Moni Meta**	**2.54**	**284**	PN	**Pb**	**11 57 33.8**	**-1.9**
MULA	**Mugla, Merkez-**	**2.59**	**24**	*i* P	**Pb**	**11 57 36.0**	**-0.5**
CAEL	**Denizli, Camel**	**2.91**	**39**	*i* P	**Pn**	**11 57 38.6**	**+2.3**
TAVA	**DENIZLI_Tavas**	**3.00**	**30**	*i* P	**Pn**	**11 57 39.8**	**+2.3**
TAVA				*i* S	**Sb**	**11 58 21.8**	**+1.7**
ELL	**Elmali**	**3.00**	**51**	PN	**Pb**	**11 57 40.8**	**-2.7**
GOLH	**Golhisar**	**3.12**	**41**	*i* P	**Pn**	**11 57 41.4**	**+2.1**
KORT	**Korkueli**	**3.43**	**51**	PN	**Pn**	**11 57 46.7**	**+3.2**
KORT	**Korkueli**	**3.43**	**51**	*i* P	**Pn**	**11 57 45.5**	**+2.0**
KORT				*i* S	**Sb**	**11 58 28.9**	**-3.7**
KORT				IAML		11 58 50.0	
	comp=N,68nm,2.4s						
URLA	**Izmir**	**3.48**	**355**	*i* P	**Pn**	**11 57 44.8**	**+0.7**
OSC1	**CSNet OBS 1**	**3.80**	**110**	P	**Pn**	**11 57 49.3**	**+0.9**
KHAL	**Karahalli**	**4.01**	**29**	*i* P	**Pn**	**11 57 51.7**	**+0.3**
USAK	**Uak-Merkez**	**4.14**	**22**	*i* P	**Pn**	**11 57 54.7**	**+1.5**
KEPZ	**Antalya-Kepez**	**4.24**	**60**	*i* P	**Pn**	**11 57 57.2**	**+2.7**
KEPZ				*i* S	**Sn**	**11 58 43.4**	**-0.4**
KEPZ				IAML		11 58 49.0	
	comp=E,54nm,2.2s						
AKMS	**Akamas**	**4.38**	**87**	P	**Pn**	**11 57 57.3**	**+0.9**
ALFC	**Alefka**	**4.60**	**85**	P	**Pn**	**11 58 00.4**	**+1.0**
ALFC				AML	AML	11 58 56.7	
	comp=E,0.6nm,0.8s						
ALFC				AML	AML	11 59 04.0	
	comp=E,0.4nm,0.7s						
OSC2	**CSNet OBS 4**	**4.73**	**111**	P	**Pn**	**11 58 02.6**	**+1.4**
SZAC	**Souni**	**4.83**	**90**	P	**Pn**	**11 58 03.1**	**+0.5**
ASGA	**Asgata**	**5.13**	**89**	P	**Pn**	**11 58 08.0**	**+1.3**
AGG	**Agios Georgios**	**5.57**	**319**	*i* P	Pn	11 58 18.1	+5.3
BRTR	**Keskin Array B**	**7.15**	**46**	Pn	Pn	11 58 28.5	-6.2
	comp=E,0.1nm,0.3s,baz=222,slow=19,SNR=1.7						
BRTR				LR	LR	12 01 16.1	
	comp=E,16nm,18.4s,baz=248,slow=39						
MMAI	**Mount Meron Ar**	**7.22**	**103**	Pn	**Pn**	**11 58 36.7**	**+1.2**
	baz=306,slow=12,SNR=1.7						
EIL	**Elat**	**8.50**	**126**	Pn	**Pn**	**11 58 54.5**	**+1.5**
	comp=E,0.2nm,0.3s,baz=22,slow=15,SNR=2.1						
GERES	**GERESS Array B**	**17.07**	**329**	Pn	**Pn**	**12 00 45.2**	**-3.3**
	comp=E,0.1nm,0.3s,baz=138,slow=10,SNR=1.5						
ESDC	**Sonseca Array**	**25.03**	**290**	P	**P**	**12 02 13.5**	**-0.6**
	comp=E,0.4nm,0.5s,baz=78,slow=9.8,SNR=2.0						
TORD	**Torodi Ar. Bea**	**31.51**	**233**	P	P	12 03 19.7	+7.7
	comp=E,0.8nm,0.8s,baz=37,slow=9.4,SNR=2.2						
KURBB	**Kurchatov Arra**	**40.11**	**51**	P	**P**	**12 04 26.3**	**+0.9**
	comp=E,1.6nm,0.2s,baz=278,slow=8.7,SNR=8.5						
MKAR	**Makanchi Array**	**42.66**	**56**	P	**P**	**12 04 48.0**	**+1.5**
	comp=E,0.9nm,0.8s,baz=286,slow=5.3,SNR=10						
ZALV	**Zalesovo Beam**	**44.10**	**46**	P	**P**	**12 04 58.6**	**+0.7**
	comp=E,1.0nm,0.5s,baz=264,slow=8.6,SNR=5.6						
SONM	**Songino Array**	**58.48**	**51**	P	**P**	**12 06 46.8**	**+0.8**
	comp=E,0.3nm,0.7s,baz=284,slow=5.8,SNR=1.9						
YKA	**Yellowknife Ar**	**78.16**	**343**	P	**P**	**12 08 48.5**	**-0.4**
	comp=E,0.1nm,0.6s,baz=34,slow=5.4,SNR=3.0						

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*IDC **24** 12:13:13.0±0.9, 24.°64N×124.°92E, h0^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.7/32, mbtmp3.6/7, Error ellipse: s-maj=43.0km s-min=19.8km az=72.0*

*JMA **24** 12:13:18.3±0.1, 24.°83N×125.°39E, h50^{km}±1^{km}, M3.3*

ISC 24 12:13:19.4±0.8**, 24.°87N**±0.°09×**125.°38E**±0.°07**, h41**^{km}±6^{km}**, n17, σ1^{s}38**/27**, mb3.5**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.11**	**165**	P	**Pn**	**12 13 25.9**	**-0.3**
JOGS				S	**Sn**	**12 13 31.5**	**+0.6**
JIKM	**Ikemajima**	**0.13**	**297**	P	**Pn**	**12 13 26.3**	**0.0**
JIKM				S	**Sn**	**12 13 32.2**	**+1.1**
JMJ2	**Miyako jima3**	**0.13**	**200**	P	**Pn**	**12 13 26.0**	**-0.3**
JMJ2				*e*S	**Sn**	**12 13 31.6**	**+0.5**
JIRB	**Irabujima**	**0.19**	**259**	P	**Pn**	**12 13 26.3**	**-0.4**
JIRB				S	**Sn**	**12 13 32.2**	**+0.4**
JTJ	**Tarama**	**0.65**	**250**	P	**Pn**	**12 13 31.6**	**-0.6**
JTJ				S	**Sn**	**12 13 41.2**	**-0.2**
JISG	**Ishigakijimahi**	**1.01**	**254**	P	**Pn**	**12 13 36.1**	**-0.9**
JISG				S	**Sn**	**12 13 50.5**	**+0.5**
JIJ	**Ishigaki jima**	**1.23**	**246**	P	**Pn**	**12 13 39.6**	**-0.5**
JIJ				*e*S	**Sn**	**12 13 55.4**	**-0.1**
JKRS	**Kuro-shima**	**1.39**	**244**	P	**Pn**	**12 13 42.2**	**-0.1**
JKRS				*e*S	**Sn**	**12 14 00.7**	**+1.2**
IRIF	**Iriomote-Funau**	**1.59**	**251**	P	**Pn**	**12 13 44.8**	**-0.2**
IRIF				*e*S	**Sn**	**12 14 05.4**	**+1.1**
HATJ	**Hateruma jima**	**1.64**	**241**	P	**Pn**	**12 13 47.7**	**+1.9**
HATJ				*e*S	**Sn**	**12 14 08.7**	**+3.0**
SONM	**Songino Array**	**27.41**	**332**	P	**P**	**12 19 01.3**	**+0.1**
	0.3nm,0.5s,baz=151,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**40.57**	**314**	P	**P**	**12 20 53.4**	**-1.4**
	0.6nm,0.5s,baz=99,slow=9.6,SNR=10						
ZALV	**Zalesovo Beam**	**41.82**	**325**	P	**P**	**12 21 02.3**	**-2.7**
	0.6nm,0.4s,baz=116,slow=9.8,SNR=1.3						
WRA	**Warramunga Arr**	**45.38**	**168**	P	**P**	**12 21 31.9**	**-2.2**
	4.2nm,0.7s,baz=348,slow=8.7,SNR=38						
ASAR	**Alice Springs**	**48.95**	**170**	P	**P**	**12 22 00.7**	**-1.1**
	0.3nm,0.6s,baz=1.2,slow=7.4,SNR=4.9						
ILAR	**Eielson Array**	**66.85**	**28**	P	**P**	**12 24 09.3**	**+2.6**
	0.2nm,0.6s,baz=298,slow=9.7,SNR=7.0						
YKA	**Yellowknife Ar**	**80.83**	**24**	P	**P**	**12 25 30.0**	**+1.4**
	0.2nm,0.7s,baz=309,slow=4.4,SNR=4.8						

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*NOU **24** 12:23:00.0, 24.°39S×179.°12W, h517^{km}, mb4.0, South of Fiji Islands*

*NEIC **24** 12:23:05.8±1.6, 24.°7S±0.°1×180.°0W±0.°1, h506^{km}±8^{km}, mb4.4/18, Error ellipse: s-maj=23.1km s-min=10.8km az=126.0*

*IDC **24** 12:23:05.3±4.5, 24.°70S×179.°95W, h501^{km}±49^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.2/29, mbtmp4.3/7, Error ellipse: s-maj=40.7km s-min=22.4km az=36.0*

ISC 24 12:23:05.6±0.9**, 24.°8S**±0.°1×**180.°0W**±0.°1**, h500**^{km}**, n28, σ1^{s}03**/27**, mb4.3**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YATNC	**Mamie plateau,**	**12.38**	**280**	P	**P**	**12 25 49.9**	**+1.6**
DZM	**Mont Dzumac**	**12.77**	**279**	P	**P**	**12 25 53.8**	**+1.2**
	0.6nm,0.3s,baz=97,slow=18,SNR=11						
DZM	**Mont Dzumac**	**12.77**	**279**	P	**P**	**12 25 53.7**	**+1.2**
URZ	**Urewera**	**13.68**	**190**	P	**P**	**12 26 00.4**	**-1.3**
	1.1nm,0.3s,baz=0.0,slow=9.1,SNR=10						
EIDS	**Eidsvold**	**26.22**	**263**	P	**P**	**12 28 00.8**	**+0.8**
EIDS				IAmb	IAmb	12 28 27.1	
	comp=Z,19nm,1.5s						
CTA	**Charters Tower**	**31.53**	**272**	P	**P**	**12 28 46.6**	**+0.3**
	comp=Z,12nm,0.5s,baz=94,slow=11,SNR=24						
CTAO	**Charters Tower**	**31.53**	**272**	P	**P**	**12 28 46.6**	**+0.3**
TOO	**Toolangi**	**32.02**	**238**	P	**P**	**12 28 49.3**	**-1.1**
TOO				IAmb	IAmb	12 29 11.1	
	comp=Z,13nm,1.4s						
BBOO	**Buckleboo**	**39.15**	**248**	P	**P**	**12 29 49.1**	**-0.7**
AS31	**Alice Springs**	**41.94**	**262**	P	**P**	**12 30 11.9**	**-0.3**
ASAR	**Alice Springs**	**41.94**	**262**	P	**P**	**12 30 11.8**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=97,slow=8.2,SNR=29						
WB2	**Warramunga Arr**	**42.39**	**267**	P	**P**	**12 30 15.0**	**-0.7**
WB2				IAmb	IAmb	12 30 15.4	
	comp=Z,6.1nm,0.5s						
WRAB	**Tennant Creek**	**42.39**	**267**	P	**P**	**12 30 15.0**	**-0.8**
WRAB				IAmb	IAmb	12 30 22.2	
	comp=Z,21nm,1.5s						
WB0	**Warramunga Arr**	**42.39**	**267**	P	**P**	**12 30 14.8**	**-1.0**
WB0				IAmb	IAmb	12 30 15.4	
	comp=Z,7.5nm,0.6s						
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**12 30 14.7**	**-1.1**
	comp=Z,4.5nm,0.5s,baz=99,slow=7.4,SNR=40						
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**12 30 14.7**	**-1.1**
FORT	**Forrest**	**46.05**	**250**	P	**P**	**12 30 43.2**	**-0.8**
MTN	**Manton Dam**	**47.57**	**275**	P	**P**	**12 30 54.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**50.81**	**266**	P	**P**	**12 31 19.4**	**-0.3**
FITZ				IAmb	IAmb	12 31 47.5	
	comp=Z,16nm,1.5s						
MORW	**Morawa**	**56.62**	**250**	P	**P**	**12 31 59.9**	**-0.9**
MORW				IAmb	IAmb	12 32 13.4	
	comp=Z,34nm,1.5s						
CASY	**Casey**	**59.35**	**206**	P	**P**	**12 32 20.5**	**+1.8**
QSPA	**South Pole Qui**	**65.32**	**180**	P	**P**	**12 32 57.9**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=18,slow=3.2,SNR=9.7						
QSPA	**South Pole Qui**	**65.32**	**180**	P	**P**	**12 32 58.3**	**+0.7**
BELA	**Belgrano 2**	**75.57**	**173**	P	**P**	**12 33 57.5**	**-0.5**
SNAA	**Sanae**	**83.80**	**179**	P	**P**	**12 34 43.5**	**+2.0**
PINE	**Pine Mountain**	**87.04**	**38**	P	**P**	**12 34 57.3**	**-0.4**
PINE				IAmb	IAmb	12 35 02.5	
	comp=Z,7.5nm,1.4s						
D08A	**Wollman Farm,**	**90.17**	**37**		pP	12 37 02.8	-0.4
TXAR	**Lajitas Array**	**90.85**	**58**	P	**P**	**12 35 15.1**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=218,slow=5.7,SNR=2.5						

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*IDC **24** 12:29:47.2±5.4, 18.°02S×178.°34W, h592^{km}±70^{km}, mb3.1/10, mb1 3.3/11, mb1mx3.1/29, mbtmp4.0/11, Error ellipse: s-maj=35.8km s-min=24.9km az=180.0*

*NEIC **24** 12:29:50.8±1.2, 17.°9S±0.°2×178.°5W±0.°1, h634^{km}±12^{km}, mb4.2/19, Error ellipse: s-maj=23.8km s-min=16.4km az=201.0*

ISC 24 12:29:48.1±0.7**, 17.°9S**±0.°1×**178.°4W**±0.°1**, h600**^{km}**, n35, σ0^{s}80**/36**, mb4.2**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.83**	**251**	P	**P**	**12 32 54.7**	**-0.1**
	0.3nm,0.3s,baz=118,slow=22,SNR=6.2						
DZM	**Mont Dzumac**	**14.83**	**251**	P	**P**	**12 32 55.0**	**+0.2**
URZ	**Urewera**	**20.62**	**190**	P	**P**	**12 33 45.2**	**-2.0**
	5.3nm,0.9s,baz=348,slow=16,SNR=2.0						
THZ	**Tophouse**	**24.88**	**196**	P	**P**	**12 34 25.2**	**+0.1**
THZ				IAmb	IAmb	12 34 29.7	
	comp=Z,7.8nm,1.0s						
EIDS	**Eidsvold**	**29.27**	**250**	P	**P**	**12 35 04.3**	**+0.7**
EIDS				IAmb	IAmb	12 35 33.3	
	comp=Z,12nm,1.2s						
ARMA	**Armidale**	**29.94**	**240**	P	**P**	**12 35 10.5**	**+1.1**
CTA	**Charters Tower**	**33.45**	**261**	P	**P**	**12 35 38.5**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=97,slow=9.9,SNR=6.5						
CTAO	**Charters Tower**	**33.45**	**261**	P	**P**	**12 35 39.9**	**+0.6**
CTAO				IAmb	IAmb	12 36 04.5	
	comp=Z,14nm,1.4s						
CAN	**Canberra**	**33.70**	**233**	P	**P**	**12 35 41.7**	**+0.6**
CAN				IAmb	IAmb	12 36 06.7	
	comp=Z,9.6nm,1.0s						
COEN	**Coen**	**37.12**	**270**	P	**P**	**12 36 10.7**	**+1.1**
TOO	**Toolangi**	**37.16**	**231**	P	**P**	**12 36 10.8**	**+1.2**
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**12 36 21.8**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=93,slow=12,SNR=7.0						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**12 36 22.4**	**+0.8**
BBOO	**Buckleboo**	**43.40**	**241**	P	**P**	**12 36 59.3**	**+0.1**
WB0	**Warramunga Arr**	**44.61**	**260**	P	**P**	**12 37 08.8**	**+0.1**
WB2	**Warramunga Arr**	**44.63**	**260**	P	**P**	**12 37 08.7**	**-0.2**
WB2				IAmb	IAmb	12 37 09.0	
	comp=Z,5.3nm,0.8s						
WRAB	**Tennant Creek**	**44.63**	**260**	P	**P**	**12 37 08.1**	**-0.8**
WRAB				IAmb	IAmb	12 37 22.1	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**44.64**	**260**	P	**P**	**12 37 08.8**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=95,slow=7.5,SNR=37						
WRA	**Warramunga Arr**	**44.64**	**260**	P	**P**	**12 37 08.5**	**-0.5**
AS31	**Alice Springs**	**44.80**	**254**	P	**P**	**12 37 10.3**	**+0.2**
AS31				IAmb	IAmb	12 37 10.9	
	comp=Z,4.1nm,0.9s						
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**	**12 37 10.3**	**+0.2**
	comp=Z,12nm,0.5s,baz=86,slow=8.9,SNR=154						
ASAR				PcP	**PcP**	**12 38 37.8**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=79,slow=4.8,SNR=2.2						
ASAR	**Alice Springs**	**44.80**	**254**	P	**P**	**12 37 09.9**	**-0.2**
MTN	**Manton Dam**	**48.81**	**268**	P	**P**	**12 37 40.1**	**-0.2**
FORT	**Forrest**	**50.01**	**245**	P	**P**	**12 37 48.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.04**	**261**	P	**P**	**12 38 10.7**	**-0.1**
FITZ				IAmb	IAmb	12 38 21.5	
	comp=Z,13nm,1.4s						
PSA00	**Pilbara Seismi**	**57.91**	**255**	P	**P**	**12 38 43.9**	**-0.6**
PSA00				IAmb	IAmb	12 38 59.5	
	comp=Z,33nm,1.4s						
MJAR	**Matsushiro Arr**	**67.94**	**323**	P	**P**	**12 39 48.2**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=150,slow=5.0,SNR=2.2						
QSPA	**South Pole Qui**	**72.11**	**180**	P	**P**	**12 40 13.4**	**+0.7**
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**12 41 24.6**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=215,slow=4.9,SNR=5.8						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**12 41 27.4**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=226,slow=5.2,SNR=7.8						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**12 41 28.5**	**+2.1**
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**12 41 32.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=188,slow=1.8,SNR=2.9						
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**12 41 33.1**	**+0.4**

YKA	Yellowknife Ar	94.36	25	P	P	12 42 03.6	-0.6
	comp=Z,0.1nm,0.5s,baz=230,slow=3.7,SNR=1.6						
CBYP	Canovanas	116.24	78		PKPdf	12 47 23.8	-1.3

TAP 24 12:35:32.9, 22°.74N×120°.87E, h8^{km}, ML2.4, 8C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECL	Taimali	0.16	152	*i* P	Pg	12 35 36.9	+0.6
	baz=150						
ECL				*i* S	Sg	12 35 39.0	+0.6
	baz=150						
TWG	Pinlang	0.20	66	⇑*i*P	Pg	12 35 37.8	+0.8
	baz=67						
TWG				S	Sg	12 35 40.6	+0.8
	baz=67						
TWG	Pinlang	0.20	66		Pg	12 35 37.3	+0.3
TWGBT	Beinan	0.21	68	⇑P	Pg	12 35 37.7	+0.6
	baz=67						
TWGBT				S	Sg	12 35 40.8	+0.8
	baz=67						
TSMG	Majia	0.21	261	P	Pg	12 35 37.7	+0.5
	baz=262						
TSMG				S	Sg	12 35 40.4	+0.4
	baz=262						
SSD	Sandimen	0.22	272	⇑*i*P	Pg	12 35 37.7	+0.4
	baz=272						
SSD				*i* S	Sg	12 35 40.4	+0.1
	baz=272						
MASBT	Mashibuluo	0.25	240	⇑P	Pg	12 35 38.4	+0.5
	baz=235						
MASBT				S	Sg	12 35 41.7	+0.3
	baz=235						
TTN	Taitung	0.25	86	*i* P	Pb	12 35 39.6	-0.2
	baz=87						
TTN				*i* S	Sb	12 35 44.1	-0.2
	baz=87						
LONT	Longtian	0.29	55	⇑P	Pg	12 35 39.3	+0.7
	baz=55						
LONT				S	Sg	12 35 43.5	+0.9
	baz=55						
SLGT	Liugui	0.33	321	⇓*i*P	Pg	12 35 39.9	+0.5
	baz=325						
SLGT				*i* S	Sg	12 35 43.9	+0.2
	baz=325						
SGLT	Jiouru	0.35	268	*i* P	Pb	12 35 41.3	-0.1
	baz=268						
SGLT				S	Sb	12 35 46.9	-0.2
	baz=268						
TSPT	Pingtung City	0.35	260	P	Pb	12 35 40.9	-0.6
	baz=260						
TSPT				S	Sb	12 35 47.6	+0.4
	baz=260						
EAST	Anshuo	0.35	184	⇑*i*P	Pg	12 35 40.4	+0.5
	baz=170						
EAST				*i* S	Sg	12 35 45.1	+0.6
	baz=170						
SSPT	Xinbi	0.38	228	*i* P	Pb	12 35 41.4	-0.5
	baz=216						
SSPT				*e*S	Sg	12 35 46.0	+0.8
	baz=216						
SCST	Cishan	0.38	293	P	Pb	12 35 41.7	-0.2
	baz=293						
SCST				S	Sb	12 35 47.8	-0.1
	baz=293						
TWM1	Shoushan	0.42	282	⇑*i*P	Pb	12 35 43.1	+0.4
	baz=289						
TWM1				S	Sb	12 35 50.0	+0.8
	baz=289						
SGST	Jiashian	0.43	322	⇑*i*P	Pg	12 35 41.5	+0.1
	baz=327						
SGST				S	Sb	12 35 48.6	-0.9
	baz=327						
STYT	Tauyuan	0.44	346	*i* P	Pg	12 35 42.0	+0.6
	baz=354						
STYT				*i* S	Sg	12 35 47.9	+0.7
	baz=354						
EDH	Donghe	0.46	60	P	Pb	12 35 42.9	-0.4
	baz=60						
EDH				S	Sb	12 35 50.5	+0.2
	baz=60						
ELDTW	Lidau	0.47	17	*i* P	Pg	12 35 42.4	+0.3
	baz=27						
ELDTW				S	Sg	12 35 48.9	+0.7
	baz=27						
SLIU	Shizi	0.52	187	*e*P	Pg	12 35 43.5	+0.5
	baz=178						
SLIU				*e*S	Sg	12 35 50.5	+0.6
	baz=178						
CHN1	Nanshi	0.55	325	P	Pb	12 35 45.2	+0.4
	baz=328						
CHN1				*e*S	Sb	12 35 53.0	+0.2
	baz=328						
LDUT	Ludao	0.56	97	*e*P	Pb	12 35 44.4	-0.5
	baz=97						
LDUT				S	Sb	12 35 53.3	+0.3
	baz=97						
WTP	Ta-pu	0.56	335	*i* P	Pb	12 35 44.9	-0.1
	baz=336						
WTP				S	Sb	12 35 54.0	+0.8
	baz=336						
CHKT	Chengkung	0.58	52	P	Pb	12 35 44.9	-0.4
	baz=70						
CHKT				S	Sb	12 35 53.9	+0.2
	baz=70						
SNST	Tainan City	0.59	324	P	Pn	12 35 47.0	-0.6
	baz=325						
WLCH	Liuqiu	0.60	230	*e*P	Pb	12 35 46.0	+0.4
	baz=221						
FULB	Fuli	0.60	40	*i* P	Pb	12 35 45.4	-0.3
	baz=30						
FULB				S	Sb	12 35 54.6	+0.2
	baz=30						
TPUB	Ta-pu	0.60	338	*e*P	Pb	12 35 46.0	+0.3
	baz=339						
TPUB				*e*S	Sb	12 35 55.0	+0.5
	baz=339						
TWP	Hsiaoliuchiu	0.61	230	P	Pb	12 35 46.1	+0.3
	baz=222						
TWP				*e*S	Sb	12 35 54.8	+0.2
	baz=222						
TWK	Hsinying	0.63	326	*i* P	Pb	12 35 47.0	+0.8
	baz=330						
TWK				S	Sb	12 35 56.9	+1.5
	baz=330						
TWF1	Yuli	0.73	33	*i* P	Pg	12 35 46.9	0.0
	baz=33						
TWF1				S	Sg	12 35 56.4	0.0
	baz=33						
EYUL	Yuli	0.73	34	*e*P	Pg	12 35 47.0	0.0
	baz=28						
EYUL				*e*S	Sg	12 35 56.2	-0.4
	baz=28						
YUS	Yu-Shan	0.75	6	P	Pb	12 35 48.4	-0.1
	baz=6.0						
YUS				S	Sb	12 35 58.3	-0.9
	baz=6.0						
YULB	Yu-li	0.76	31	P	Pg	12 35 47.0	-0.5
	baz=31						
YULB				S	Sg	12 35 56.7	-0.7
	baz=31						
ALS	Alishan	0.77	355	*i* P	Pb	12 35 48.8	0.0
	baz=2.0						
ALS				S	Sb	12 36 00.6	+1.1
	baz=2.0						
TWK1	Hengchun	0.79	184	*e*P	Pb	12 35 49.3	+0.4
	baz=172						
ICHU	Yijhu	0.83	319	*e*S	Sn	12 36 04.8	+1.6
	baz=320						
CHN8	Yiju	0.86	315	S	Sn	12 36 06.2	+2.2
	baz=317						
CHY	Chiayi	0.86	331	*e*S	Sn	12 36 05.7	+1.6
	baz=333						
EHY	Hungye	0.87	28	*i* P	Pg	12 35 49.5	-0.1
	baz=29						
EHY				S	Sb	12 36 01.7	-0.4
	baz=29						
CHN5	Tsauling	0.87	348	P	Pb	12 35 50.7	+0.3
	baz=1.0						
CHN5				S	Sn	12 36 04.5	-0.1
	baz=1.0						
HGSD	Ruisui	0.91	34	P	Pb	12 35 50.9	0.0
	baz=27						
HGSD				*e*S	Sb	12 36 03.9	+0.8
	baz=27						
WDLH	Douliu	0.99	342	*e*P	Pn	12 35 54.4	+1.3
	baz=357						
WDLH				*e*S	Sn	12 36 10.1	+2.7
	baz=357						
WTK	Tuku	1.04	335	*e*P	Pn	12 35 54.8	+0.9
	baz=337						
WTK				*e*S	Sn	12 36 09.8	+1.1
	baz=337						
SSLB	Suanglung	1.05	4	*e*P	Pg	12 35 53.0	0.0
	baz=4.0						
SSLB				*e*S	Sb	12 36 07.1	-0.1
	baz=4.0						
WJS	Zhushan	1.09	353	*e*P	Pn	12 35 55.5	+1.0
	baz=7.0						
WJS				*e*S	Sn	12 36 12.2	+2.5
	baz=7.0						
SMLT	Sun Moon Lake	1.14	1	P	Pn	12 35 55.3	0.0
	baz=9.0						
SMLT				S	Sn	12 36 11.9	+0.7
	baz=9.0						
WNT	Mingjian	1.15	351	P	Pn	12 35 56.9	+1.6
	baz=354						
WNT				*e*S	Sn	12 36 14.3	+3.1
	baz=354						
TYC	Yuchr	1.16	359	*e*P	Pb	12 35 55.3	+0.1
	baz=1.0						
TYC				S	Sn	12 36 14.2	+2.6
	baz=1.0						
ESL	Shilin	1.19	26	P	Pb	12 35 55.3	-0.4
	baz=32						
ESL				*e*S	Sg	12 36 10.3	-0.9
	baz=32						
CHGB	Renai	1.34	12	*e*P	Pg	12 35 58.7	-0.1
	baz=22						
CHGB				*e*S	Sn	12 36 18.0	+1.6
	baz=22						
PHUB	P'eng-hu	1.42	303	*e*P	Pn	12 35 58.0	-1.1
	baz=304						
WHF	Hehuan Shan	1.45	14	*e*P	Pb	12 36 00.4	+0.1
	baz=28						
WHP	Taichung City	1.53	3	*e*P	Pg	12 36 03.1	+0.7
	baz=14						
WHP				*e*S	Sg	12 36 25.1	+2.8
	baz=14						
FUSS	Fushou	1.54	13	*e*P	Pg	12 36 02.2	-0.3
	baz=24						
FUSS				*e*S	Sg	12 36 24.0	+1.5
	baz=24						
ETLH	Xiulin Townshi	1.57	21	*e*P	Pb	12 36 02.0	-0.2
	baz=23						
ETLH				*e*S	Sg	12 36 23.7	+0.4
	baz=23						
NACB	Ninganchiao	1.58	25	*e*P	Pn	12 36 01.3	+0.1
	baz=41						
NNSB	Datong	1.75	15	*e*P	Pb	12 36 05.7	+0.4
	baz=30						
NNSB				*e*S	Sg	12 36 29.3	+0.2
	baz=30						
NNSH	Datong	1.75	15	*e*P	Pg	12 36 05.9	-0.5
	baz=30						
NNSH				*e*S	Sg	12 36 29.1	0.0
	baz=30						
NNS	Nan Shan	1.75	15	*e*P	Pg	12 36 06.2	-0.3
	baz=30						
YHNB	Yeheng	1.98	13	*e*P	Pb	12 36 09.4	+0.2
	baz=17						
NSK	Sanguang	1.98	13	*e*P	Pb	12 36 09.9	+0.7
	baz=17						
NWLT	Wulai	2.11	16	*e*P	Pb	12 36 11.7	+0.2
	baz=1.0						

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*ATH **24** 13:03:56.6, 34°.83N×24°.55E, h20^{km}±5^{km}, ML2.7/6, Error ellipse: s-maj=5.0km s-min=1.2km az=24.0*
*THE **24** 13:03:56.8, 34°.85N×24°.56E, h20^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=3.3km s-min=0.7km az=144.0*

ISC 24 13:03:54.9±1.5, 34°.78N±0°.07×24°.51E±0°.04, h19^{km}±2^{km}, n17, σ0^s.54/28, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.34	47	P	Pb	13 04 02.8	+0.2
SIVA				S	Sb	13 04 07.6	+0.1
SIVA				AML	AML	13 04 13.0	
	comp=E,10777μm,0.5s						
SIVA				AML	AML	13 04 17.0	
	comp=N,6941μm,0.5s						
SIVA	Sivas	0.34	47	P	Pb	13 04 02.7	+0.2
SIVA				S	Sb	13 04 07.7	+0.1
	comp=N,4μm,0.4s						
GVDS	Gavdos	0.35	280	P	Pn	13 04 04.7	-0.2
GVDS				S	Sn	13 04 11.4	0.0
	comp=N,2μm,0.1s						
GVD	Gavdhos	0.35	280	P	Pn	13 04 04.4	-0.6
GVD				S	Sn	13 04 10.5	-0.9
GVD				AML	AML	13 04 19.6	
	comp=N,7087μm,0.3s						
GVD				AML	AML	13 04 20.7	
	comp=E,6023μm,0.2s						
GVD	Gavdhos	0.35	280	P	Pn	13 04 05.1	+0.1
GVD				S	Sn	13 04 11.4	0.0
	comp=E,3μm,0.3s						
TMBK	Timbaki Herakl	0.36	36	P	Pb	13 04 03.5	+0.7
TMBK				S	Sb	13 04 08.1	0.0
	comp=E,1μm,0.5s						
PRNS	Prines Rethymn	0.58	360	P	Pg	13 04 06.3	-0.3
PRNS				S	Sg	13 04 15.0	+0.6
IDI	Anoyia	0.60	32	P	Pg	13 04 06.8	0.0
IDI				AML	AML	13 04 20.6	
	comp=N,715μm,0.3s						
IDI				AML	AML	13 04 26.8	
	comp=E,922μm,0.4s						
IDI	Anoyia	0.60	32	P	Pg	13 04 06.9	0.0
IDI				S	Sb	13 04 14.3	-0.4
	comp=E,390nm,0.4s						
VAM	Vamos	0.67	338	P	Pn	13 04 09.2	-0.2
VAM				S	Sg	13 04 17.7	+0.4
VAM				AML	AML	13 04 26.7	
	comp=E,1626μm,0.4s						
VAM				AML	AML	13 04 32.6	
	comp=N,1241μm,0.4s						
VAM	Vamos	0.67	338	P	Pn	13 04 09.3	-0.2
VAM				S	Sn	13 04 18.0	-1.5
	comp=N,755nm,0.4s						
IMMV	Iera Moni Meta	0.80	328	P	Pn	13 04 11.4	+0.2
IMMV				AML	AML	13 04 37.3	
	comp=E,1032μm,0.6s						
IMMV				AML	AML	13 04 37.3	
	comp=N,1174μm,0.5s						
IMMV	Iera Moni Meta	0.80	328	P	Pn	13 04 11.6	+0.4
LAST	Lasithi	0.88	64	P	Pb	13 04 11.9	+0.2
LAST				S	Sg	13 04 23.8	-0.1
LAST				AML	AML	13 04 30.8	
	comp=E,379μm,0.4s						
LAST				AML	AML	13 04 34.7	
	comp=N,422μm,0.6s						
NPS	Neapolis	1.03	62	P	Pb	13 04 13.5	-0.6
ZKR	Zakros	1.44	76	P	Pb	13 04 22.3	+1.1
VLI	Veliai	2.32	327	P	Pb	13 04 36.6	+0.6

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*DJA **24** 13:06:05.3±1.3, 2°S±13°×14°0E±°, h10^{km}, M3.6/4, MLv3.6/4*
*IDC **24** 13:06:06.1±5.0, 2°.32S×139°.95E, h0^{km}, mb3.1/2, mb1 3.4/3, mb1mx3.2/18, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=190.4km s-min=32.6km az=87.0*

ISC 24 13:06:07.0±1.0, 2°.2S±0°.1×139°.83E±0°.05, h10^{km}, n7, σ1^s.43/9, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.48	136	P	Pn	13 06 19.4	-0.6
JAY	Jayapura	0.91	107	P	Pg	13 06 25.0	+0.4
JAY				S	Sn	13 06 39.3	+0.1
SMPI	Sarmi	1.15	283	P	Pb	13 06 27.0	-1.9
SMPI				S	Sb	13 06 44.9	+1.0
WAMI	Wamena	1.98	214	P	Pg	13 06 45.7	+0.8
WRA	Warramunga Arr	18.39	197	P	Pn	13 10 20.6	-1.7
	0.1nm,0.3s,baz=19,slow=13,SNR=1.7						
ASAR	Alice Springs	22.06	195	P	P	13 11 03.5	+1.3
	1.1nm,0.8s,baz=25,slow=10,SNR=6.3						
MKAR	Makanchi Array	70.11	322	P	P	13 17 20.9	+1.3
	0.1nm,0.6s,baz=98,slow=10,SNR=2.0						

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*BJI **24** 13:28:26.6±0.0, 37°.88N×142°.79E, h10^{km}, mB4.9/33, mb4.5/51, Ms4.2/18, Ms7 4.0/18*
*JMA **24** 13:28:29.8±0.1, 37°.98N×142°.68E, h28^{km}±2^{km}, M4.5*
JMA Felt I J1.
*IDC **24** 13:28:29.1±0.7, 37°.96N×142°.62E, h0^{km}, mb4.1/22, mb1 4.2/28, mb1mx4.1/51, mbtmp4.1/28, ML3.5/6, MS3.5/13, Ms1 3.5/13, ms1mx3.3/41, Error ellipse: s-maj=17.3km s-min=12.9km az=126.0*
*NEIC **24** 13:28:29.9±2.6, 37°.89N±0°.07×142°.8E±0°.1, h17^{km}±5^{km}, mb4.5/19, Error ellipse: s-maj=14.6km s-min=8.5km az=116.0*
*NIED **24** 13:28:29.9, 37°.98N×142°.68E, h28^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.65; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-0.78; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.27; $M_{\phi r}$1.48; Fault plane solution: $M_0$1.76000×10^{15} NP1:ϕ_s21.00000°, δ77.00000°, λ93.00000°. NP2:ϕ_s185.00000°, δ13.00000°, λ75.00000°.*
*MOS **24** 13:28:30.6±1.2, 38°.01N×142°.69E, h25^{km}, mb4.6/19 Error ellipse: s-maj=9.8km s-min=5.8km az=97.7*

ISC 24 13:28:32.0±0.8, 37°.94N±0°.04×142°.70E±0°.05, h24^{km}±5^{km}, n144, σ1^s.82/156, mb4.4/51, MS3.7/12, 13C-3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.04	291	P	Pn	13 28 48.1	-2.9
JIKH				S	Sb	13 29 01.4	-3.1
JIO	Ouri	1.18	296	P	Pn	13 28 50.2	-2.7
JIO				S	Sn	13 29 05.0	-3.2
JKMT	Kesennumamotoy	1.30	312	P	Pn	13 28 52.0	-2.5
JKMT				*e*S	Sn	13 29 07.5	-3.6
OFUJ	Ofunato	1.40	325	P	Pn	13 28 53.4	-2.5
OFUJ				*e*S	Sn	13 29 10.7	-2.9
JMM	Marumori	1.51	268	P	Pn	13 28 55.2	-2.3
JMM				*e*S	Sn	13 29 13.0	-3.4
JMM	Marumori	1.51	268		Pn	13 28 55.3	-2.1
JMK	Ichinoseki	1.54	311	P	Pn	13 28 55.6	-2.3
JFK	Kawauchi	1.56	249	P	Pn	13 28 56.0	-2.2
JFK				*e*S	Sn	13 29 15.1	-2.5
JOU	Okura	1.66	285	P	Pn	13 28 57.8	-1.8
JOU				*e*S	Sn	13 29 18.7	-1.4
JOM	Ohasama	1.89	325	P	Pn	13 29 01.1	-1.5
JOM				*e*S	Sn	13 29 24.0	-1.6
JFT	Otama	1.92	258	P	Pn	13 29 02.1	-1.0
JFT				*e*S	Sn	13 29 25.2	-1.3
JYK	Kaneyama	2.08	299	P	Pn	13 29 03.7	-1.6
JYS	Shirataka	2.10	278	P	Pn	13 29 04.2	-1.4
JRG	Rokugo	2.17	313	P	Pn	13 29 06.1	-0.5
JANG	Nango	2.60	340	P	Pn	13 29 11.4	-1.1
JYT	Yasato	2.63	230	Pn	Pn	13 29 12.1	-0.9
JNS	Sasagawa	2.68	268	P	Pn	13 29 12.7	-0.8
JAW	Awa shima	2.77	282	P	Pn	13 29 15.6	+0.9
JTM	Tenmabayashi	3.11	337	Pn	Pn	13 29 21.1	+1.6
MJAR	Matsushiro Arr	3.84	250	Pn	Pn	13 29 30.3	+0.7
	1.4nm,0.3s,baz=325,slow=16,SNR=64						
MJAR				LR	LR	13 31 10.2	
	comp=Z,774nm,18.5s,baz=65,slow=43						
MJAR	Matsushiro Arr	3.84	250	P	Pn	13 29 30.4	+0.8
MAJO	Matsushiro	3.85	250	*i* P	Pn	13 29 30.6	+1.0
MAJO	Matsushiro	3.85	250	Pn	Pn	13 29 30.3	+0.7
MAT	Matsushiro	3.85	250	P	Pn	13 29 29.9	+0.3
MAT				*e*S	Sn	13 30 14.4	+0.3
ERM	Erimo	4.08	5	P	Pn	13 29 33.9	+1.0
ERM	Erimo	4.08	5	Pn	Pn	13 29 33.9	+1.0
JGF	Kuroka	4.88	243	Pn	Pn	13 29 46.1	+2.2
JSG	Sagara	4.89	230	Pn	Pn	13 29 46.6	+2.6
JEW	Eniwo	4.99	349	Pn	Pn	13 29 48.3	+3.0
INU	Inuyama	5.25	242		Pn	13 29 50.4	+1.5
JHJ2	Mitsune	5.36	207	Pn	Pn	13 29 50.8	+0.3
JHJ	Hachijo jima 2	5.37	207	Pn	Pn	13 29 48.5	-2.0
	43nm,0.3s,baz=92,slow=22,SNR=11						
JHJ				Sn	Sn	13 30 46.7	-4.8
	85nm,0.3s,baz=245,slow=21,SNR=8.3						
NMR	Nemuro--Hokkai	5.89	22	*e*P	Pn	13 29 55.1	-2.6
NMR				*e*S	Sn	13 30 58.6	-5.8
ASAJ	Asahikawa	6.17	359	Pn	Pn	13 30 00.6	-0.9
	1.2nm,0.3s,baz=228,slow=10,SNR=15						
ASAJ				LR	LR	13 31 52.6	
	comp=Z,123nm,18.1s,baz=191,slow=33						
JWT	Wachi	6.44	248	Pn	Pn	13 30 07.2	+2.0
GRPR	Tuman	6.48	20	*e*P	Pn	13 30 02.9	-2.8
GRPR				S	Sn	13 31 12.2	-6.6
GRPR				pmax	pmax		
	comp=Z,52nm,0.3s						
GRPR				pmax	pmax		
	comp=N,21nm,0.1s						
GRPR				pmax	pmax		
	comp=E,24nm,0.2s						
JMN	Monobe	8.30	242	Pn	Pn	13 30 32.0	+1.1
YSS	Yuzh-Sakhalins	9.01	0	*e*P	Pn	13 30 40.5	+0.1
USRK	Ussuriysk Ar.	10.22	311	Pn	Pn	13 30 59.6	+2.6
	baz=116,slow=13,SNR=14						
USRK				LR	LR	13 34 36.9	
	comp=E,324nm,19.1s,baz=110,slow=36						
JNU	Nakatsue	10.76	247	Pn	Pn	13 31 05.7	+1.1
	comp=E,0.4nm,0.3s,baz=104,slow=7.5,SNR=6.4						
JNU				LR	LR	13 35 31.5	
	comp=E,250nm,19.6s,baz=60,slow=39						
JNU	Nakatsue	10.76	247		Pn	13 31 06.0	+1.4
KSRS	Korea Array	11.72	272	Pn	Pn	13 31 20.9	+3.3
	comp=E,0.2nm,0.3s,baz=88,slow=14,SNR=20						
KSRS				LR	LR	13 35 24.6	
	comp=E,175nm,19.3s,baz=75,slow=36						
KLR	Kul'dur	13.78	328	Pn	Pn	13 31 44.4	-1.2
	comp=E,0.2nm,0.3s,baz=127,slow=13,SNR=11						
KLR				LR	LR	13 37 01.9	
	comp=E,286nm,18.4s,baz=146,slow=37						
PETK	Petropavlovsk-	18.39	30	P	Pn	13 32 46.3	+1.1
	comp=E,0.1nm,0.3s,baz=272,slow=12,SNR=4.1						
ZEA	Zeya	19.05	331	*e*P	P	13 32 51.7	-0.5
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2	Nanjing	20.37	260	*e*P	P	13 33 06.3	-0.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MA2	Magadan	22.26	11	LR	LR	13 42 46.3	
	comp=Z,50nm,18.4s,baz=206,slow=38						
MA2	Magadan	22.26	11	*ce*P	P	13 33 28.6	+1.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MA2	Magadan	22.26	11	P	P	13 33 28.3	+1.3
HHC	Hu-ho-hao-te	24.17	287	*e*P	P	13 33 46.3	-0.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
HHC				LR	LR		
	comp=Z,170nm,11.4s						
HHC				LR	LR		
	comp=Z,330nm,14.6s						
HHC				LR	LR		
	comp=Z,430nm,15.3s						
WHN	Wuhan	24.51	261	⇓P	P	13 33 47.3	-2.1
YAK	Yakutsk	25.43	346	P	P	13 33 58.0	+0.6
	comp=Z,6.5nm,0.6s,baz=26,slow=3.0,SNR=8.3						
YAK	Yakutsk	25.43	346	*e*P	P	13 33 57.1	-0.3
YAK				*e**PP	pP	13 34 01.7	-2.5
YAK				*e*		13 34 37.5	
YAK				*e*		13 37 25.6	
YAK				*e*S	S	13 38 26.6	+4.0
YAK				*e**SS	sS	13 38 37.9	+4.1
YAK				*e*SS	SnSn	13 39 21.5	+5.9
YAK				*e*		13 44 54.0	
YAK				pmax	pmax		
	comp=Z,22nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,126nm,4.3s						
YAK				pmax	pmax		
	comp=N,97nm,4.2s						
YAK				pmax	pmax		
	comp=E,63nm,5.1s						
YAK				smax	smax		
	comp=E,158nm,4.3s						
YAK				smax	smax		
	comp=N,82nm,3.3s						
SEY	Seymchan	25.71	10	P	P	13 34 02.2	+2.3
	comp=N,5.1nm,0.9s,baz=201,slow=7.5,SNR=17						
SEY	Seymchan	25.71	10	*i* P	P	13 34 00.8	+0.8

BOD	**Bodaibo**	**27.33**	**326**	*e*P	**P**	**13 34 14.1**	**-0.6**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN	**Xi'an**	**27.52**	**272**	P	**P**	**13 34 16.4**	**-0.3**
XAN				pP	pP	13 34 22.3	-1.2
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ULN	**Ulaanbaatar**	**27.71**	**302**	*ce*P	**P**	**13 34 19.0**	**+0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ULN	**Ulaanbaatar**	**27.71**	**302**	P	**P**	**13 34 17.8**	**-0.7**
ULN				IAmb	IAmb	13 34 20.3	
	comp=Z,7.1nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**27.77**	**124**	T	T	14 03 27.0	
	baz=316,slow=75,SNR=328						
H11N1	**WAKE ISLAND Hy**	**27.78**	**124**	T	T	14 03 32.9	
	baz=316,slow=75,SNR=153						
H11N3	**WAKE ISLAND Hy**	**27.79**	**124**	T	T	14 03 33.0	
	baz=316,slow=75,SNR=222						
SONM	**Songino Array**	**28.15**	**302**	P	**P**	**13 34 22.6**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=117,slow=8.4,SNR=29						
SONM				LR	LR	13 45 33.4	
	comp=Z,78nm,19.3s,baz=22,slow=36						
SONM	**Songino Array**	**28.15**	**302**	P	**P**	**13 34 22.7**	**+0.4**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**28.15**	**302**	P	**P**	**13 34 22.7**	**+0.4**
ENH	**Enshi**	**28.43**	**264**	P	**P**	**13 34 24.7**	**-0.1**
H11S1	**WAKE ISLAND Hy**	**28.53**	**126**	T	T	14 04 26.1	
	baz=318,slow=76,SNR=68						
H11S3	**WAKE ISLAND Hy**	**28.53**	**126**	T	T	14 04 27.2	
	baz=318,slow=76,SNR=90						
H11S2	**WAKE ISLAND Hy**	**28.55**	**126**	T	T	14 04 29.4	
	baz=318,slow=76,SNR=58						
TLY	**Talaya**	**30.53**	**309**	P	**P**	**13 34 43.4**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=231,slow=3.3,SNR=4.3						
TLY				LR	LR	13 47 33.3	
	comp=Z,151nm,19.3s,baz=100,slow=38						
TLY	**Talaya**	**30.53**	**309**	*e*P	**P**	**13 34 43.7**	**+0.5**
TLY				pmax	pmax		
	comp=Z,18nm,1.3s						
TLY				MLR	MLR		
	comp=Z,660nm,14.0s						
ZAK	**Zakamensk**	**30.53**	**307**	*e*P	**P**	**13 34 43.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	**Lanzhou**	**30.93**	**279**	*e*P	**P**	**13 34 47.4**	**+0.3**
LZH				pP	pP	13 34 52.8	-1.2
LZH				sP	sP	13 34 56.8	0.0
LZH				PP	**PnPn**	**13 35 44.5**	**-3.5**
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,59nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,13.0s						
LZH				LR	LR		
	comp=Z,240nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,14.1s						
MOY	**Mondy**	**32.15**	**309**	*e*P	**P**	**13 34 58.0**	**+0.4**
BILL	**Bilibino**	**32.87**	**16**	⇑*e*P	**P**	**13 35 03.9**	**+0.3**
BILL				*e*		13 36 17.1	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA	**Gaotai**	**33.28**	**286**	⇓P	**P**	**13 35 08.4**	**+0.7**
GTA				pP	sP	13 35 15.6	-1.8
GTA				sP	pP	13 35 19.8	+5.2
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,55nm,4.2s						
GTA				LR	LR		
	comp=Z,150nm,15.4s						
GTA				LR	LR		
	comp=Z,210nm,16.6s						
GTA				LR	LR		
	comp=Z,220nm,17.7s						
QIZ	**Qiongzhong**	**34.23**	**246**	P	P	13 35 05.1	-11
QIZ				S	S	13 40 31.8	-10
QIZ				LR	LR		
	comp=N,170nm,13.2s						
QIZ				LR	LR		
	comp=E,140nm,11.3s						
QIZ				LR	LR		
	comp=Z,130nm,20.1s						
KMI	**Kunming**	**36.11**	**261**	⇓P	**P**	**13 35 32.4**	**+0.1**
KMI				pP	pP	13 35 38.3	-1.0
KMI				sP	sP	13 35 40.8	-1.3
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
ANM	**Nome**	**40.29**	**32**	P	**P**	**13 36 05.7**	**-1.1**
ANM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANM	**Nome**	**40.29**	**32**	P	**P**	**13 36 05.7**	**-1.1**
DGZ	**Jazzator, Alta**	**40.70**	**305**	*i* P	**P**	**13 36 11.5**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,20nm,0.8s						
WMQ	**Urumqi**	**41.35**	**296**	*e*P	**P**	**13 36 16.8**	**+0.9**
WMQ				sP	sP	13 36 26.0	+0.3
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,83nm,3.8s						
WMQ				LR	LR		
	comp=Z,200nm,9.9s						
WMQ				LR	LR		
	comp=Z,280nm,6.7s						
WMQ				LR	LR		
	comp=Z,78nm,17.5s						
ZAA0	**Zalesovo Array**	**42.07**	**312**	P	**P**	**13 36 20.3**	**-1.3**
ZAA0				IAmb	IAmb	13 36 22.3	
	comp=Z,7.4nm,0.8s						
ZALV	**Zalesovo Beam**	**42.07**	**312**	P	**P**	**13 36 21.8**	**+0.2**
	comp=Z,7.5nm,0.7s,baz=89,slow=7.4,SNR=33						
ZALV				PcP	**PcP**	**13 38 15.0**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=96,slow=4.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.07**	**312**	P	**P**	**13 36 21.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**42.72**	**255**	P	**P**	**13 36 27.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=44,slow=6.1,SNR=12						
CMAR				LR	LR	13 54 44.9	
	comp=Z,43nm,18.6s,baz=268,slow=37						
CMAR	**Chiang Mai Arr**	**42.72**	**255**	*ce*P	**P**	**13 36 27.8**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**44.51**	**302**	P	**P**	**13 36 40.8**	**-0.6**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**44.51**	**302**	P	**P**	**13 36 40.8**	**-0.6**
MK31				IAmb	IAmb	13 36 43.8	
	comp=Z,4.2nm,0.8s						
MKAR	**Makanchi Array**	**44.51**	**302**	P	**P**	**13 36 41.4**	**0.0**
	comp=Z,4.5nm,0.7s,baz=88,slow=8.8,SNR=44						
MKAR	**Makanchi Array**	**44.51**	**302**	P	**P**	**13 36 40.9**	**-0.5**
MAKZ	**Makanchi**	**44.72**	**302**	P	**P**	**13 36 42.6**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	**Makanchi**	**44.72**	**302**	P	**P**	**13 36 42.6**	**-0.5**
MAKZ				IAmb	IAmb	13 36 45.1	
	comp=Z,3.7nm,0.7s						
RSO	**Redoubt South**	**45.56**	**39**	P	**P**	**13 36 48.0**	**-1.7**
KDAK	**Kodiak Island**	**45.74**	**43**	P	**P**	**13 36 51.5**	**+0.6**
	comp=Z,10nm,0.8s,baz=222,slow=4.1,SNR=2.5						
KURK	**Kurchatov**	**46.18**	**308**	*ce*P	**P**	**13 36 54.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,16nm,0.7s						
KURK	**Kurchatov**	**46.18**	**308**	P	**P**	**13 36 54.0**	**-0.6**
BRLK	**Bradley Lake**	**46.51**	**40**	P	**P**	**13 36 55.7**	**-1.4**
BRLK				IAmb	IAmb	13 37 03.0	
	comp=Z,5.1nm,1.1s						
ILAR	**Eielson Array**	**48.18**	**33**	P	**P**	**13 37 10.6**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=274,slow=6.8,SNR=7.9						
BRVK	**Borovoye**	**50.78**	**312**	*ce*P	**P**	**13 37 30.3**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s						
BRVK	**Borovoye**	**50.78**	**312**	P	**P**	**13 37 28.6**	**-1.3**
BRVK				IAmb	IAmb	13 37 38.6	
	comp=Z,5.3nm,1.0s						
AAK	**Ala-Archa**	**50.96**	**298**	*ce*P	**P**	**13 37 32.6**	**+0.9**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AAK	**Ala-Archa**	**50.96**	**298**	P	**P**	**13 37 31.6**	**0.0**
KSH	**Kashi**	**50.97**	**294**	P	**P**	**13 37 35.4**	**+3.6**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,420nm,6.5s						
INK	**Inuvik**	**53.11**	**28**	P	**P**	**13 37 48.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=312,slow=6.8,SNR=4.3						
INK	**Inuvik**	**53.11**	**28**	P	**P**	**13 37 48.7**	**+1.7**
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	**Inuvik**	**53.11**	**28**	P	**P**	**13 37 48.7**	**+1.7**
KKAR	**Karatay Array**	**53.56**	**300**	P	**P**	**13 37 48.9**	**-1.9**
KKAR	**Karatay Array**	**53.56**	**300**	P	**P**	**13 37 48.9**	**-1.9**
SVE	**Sverdlovsk**	**55.15**	**318**	*e*P	**P**	**13 38 02.9**	**+0.8**
SVE				pmax	pmax		
	comp=Z,15nm,0.8s						
NIL	**Nilore**	**55.30**	**288**	P	**P**	**13 38 03.0**	**-0.6**
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
NIL	**Nilore**	**55.30**	**288**	P	**P**	**13 38 03.0**	**-0.6**
ARU	**Arti**	**56.36**	**318**	*c i*P	**P**	**13 38 10.7**	**-0.1**
ARU						13 40 13.4	
ARU				S	**S**	**13 46 01.5**	**+1.9**
ARU				SS	**SS**	**13 49 43.9**	**-2.1**
ARU				pmax	pmax		
	comp=Z,19nm,2.7s						
ARU	**Arti**	**56.36**	**318**	P	**P**	**13 38 09.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**58.00**	**199**	P	**P**	**13 38 19.1**	**-3.6**
FITZ				IAmb	IAmb	13 38 22.8	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**58.11**	**189**	P	**P**	**13 38 24.1**	**+0.7**
WB2				IAmb	IAmb	13 38 32.5	
	comp=Z,6.8nm,0.7s						
WRA	**Warramunga Arr**	**58.11**	**189**	P	**P**	**13 38 24.1**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=7.9,slow=7.2,SNR=10.0						
WRA	**Warramunga Arr**	**58.11**	**189**	*ce*P	**P**	**13 38 22.3**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**58.11**	**189**	P	**P**	**13 38 23.3**	**-0.1**
AB06	**Akbulak array**	**58.12**	**310**	P	**P**	**13 38 22.9**	**-0.4**
ABKAR	**Akbulak array**	**58.14**	**310**	P	**P**	**13 38 22.9**	**-0.6**
ABKAR				IAmb	IAmb	13 38 31.9	
	comp=Z,3.6nm,0.8s						
ABKAR	**Akbulak array**	**58.14**	**310**	P	**P**	**13 38 22.6**	**-0.9**
KIRV	**Kirov**	**60.14**	**323**	*i* P	**P**	**13 38 37.9**	**+0.8**
ASAR	**Alice Springs**	**61.84**	**189**	P	**P**	**13 38 50.4**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=357,slow=3.6,SNR=8.2						
ASAR	**Alice Springs**	**61.84**	**189**	P	**P**	**13 38 48.4**	**-0.6**
YKA	**Yellowknife Ar**	**62.51**	**31**	P	**P**	**13 38 54.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=305,slow=6.3,SNR=7.8						
YKA	**Yellowknife Ar**	**62.51**	**31**	*ce*P	**P**	**13 38 54.0**	**+0.9**
ARCES	**ARCESS Array B**	**63.51**	**340**	P	**P**	**13 39 01.9**	**+2.3**
	comp=Z,3.9nm,1.0s,baz=41,slow=6.0,SNR=1.5						
GEYT	**Alibeck**	**64.29**	**299**	P	**P**	**13 39 05.5**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=28,slow=10,SNR=4.5						
OBN	**Obninsk**	**67.98**	**323**	⇑*e*P	**P**	**13 39 29.5**	**+0.9**
OBN				*e*		13 39 56.3	
OBN				*e*		13 42 01.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FINES	**FINESS Array B**	**68.49**	**333**	P	**P**	**13 39 32.2**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=63,slow=9.4,SNR=9.1						
FINES	**FINESS Array B**	**68.49**	**333**	*ce*P	**P**	**13 39 31.7**	**0.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	**Stephens Creek**	**69.47**	**181**	LR	LR	14 10 11.8	
	comp=Z,25nm,21.9s,baz=32,slow=36						
KIV	**Kislovodsk**	**71.08**	**311**	*e*P	**P**	**13 39 48.6**	**+0.4**
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KBZ	**Khabaz**	**71.08**	**311**	P	**P**	**13 39 48.7**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=15,slow=3.5,SNR=3.9						
KBZ	**Khabaz**	**71.08**	**311**	*i* P	**P**	**13 39 48.3**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	**Mina Array Bea**	**73.63**	**54**	P	**P**	**13 40 05.9**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=277,slow=7.2,SNR=1.9						
NOA	**NORSAR Array B**	**73.74**	**338**	P	**P**	**13 40 03.8**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=38,slow=5.9,SNR=4.0						
AKASG	**Malin Array Be**	**74.20**	**323**	P	**P**	**13 40 06.2**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=48,slow=5.9,SNR=7.8						
AKASG				LR	LR	14 17 33.9	
	comp=Z,43nm,19.6s,baz=300,slow=40						
AKASG	**Malin Array Be**	**74.20**	**323**	*ce*P	**P**	**13 40 06.6**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PDAR	**Pinedale Array**	**76.30**	**46**	P	**P**	**13 40 19.7**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=258,slow=2.8,SNR=4.5						
CLL	**Collm**	**80.81**	**331**	*e*P	**P**	**13 40 44.0**	**+0.6**
CLL				*e*sP	**pP**	**13 40 51.0**	**+0.1**
GERES	**GERESS Array B**	**82.47**	**329**	P	**P**	**13 40 52.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=357,slow=4.9,SNR=3.6						
ESDC	**Sonseca Array**	**96.92**	**335**	LR	LR	14 29 36.1	
	comp=Z,72nm,19.6s,baz=345,slow=38						

IDC 24 13:40:43.1±2.4, 55°.89S×128°.90W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.8/28, mbtmp3.6/3, Error ellipse: s-maj=89.0km s-min=45.3km az=103.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	**31.80**	**203**	P	P	13 47 08.6	-0.1
	0.5nm,0.4s,baz=85,slow=5.3,SNR=12						
H03S2	**Juan Fernandez**	**40.58**	**78**	T	T	14 32 41.8	
	baz=222,slow=74,SNR=31						
H03S1	**Juan Fernandez**	**40.59**	**78**	T	T	14 32 45.0	
	baz=222,slow=74,SNR=33						
H03S3	**Juan Fernandez**	**40.60**	**78**	T	T	14 32 42.2	
	baz=222,slow=74,SNR=33						
H03N3	**Juan Fernandez**	**40.87**	**78**	T	T	14 32 58.9	
	baz=224,slow=72,SNR=75						
H03N2	**Juan Fernandez**	**40.87**	**78**	T	T	14 32 58.8	
	baz=224,slow=72,SNR=85						
H03N1	**Juan Fernandez**	**40.88**	**78**	T	T	14 32 56.1	
	baz=224,slow=72,SNR=68						
ASAR	**Alice Springs**	**74.63**	**251**	P	P	13 52 24.9	+0.7
	0.5nm,0.9s,baz=146,slow=6.7,SNR=8.4						
H01W1	**Cape Leeuwin H**	**74.89**	**229**	T	T	15 15 25.3	
	baz=146,slow=76,SNR=9.3						
H01W2	**Cape Leeuwin H**	**74.89**	**229**	T	T	15 15 24.2	
	baz=146,slow=76,SNR=12						
H01W3	**Cape Leeuwin H**	**74.91**	**229**	T	T	15 15 24.8	
	baz=146,slow=76,SNR=9.9						
WRA	**Warramunga Arr**	**77.42**	**253**	P	P	13 52 39.8	-0.4
	0.5nm,0.8s,baz=140,slow=5.3,SNR=1.8						
ILAR	**Eielson Array**	**121.12**	**351**	PKP	PKiKP	13 59 36.6	+0.3
	0.3nm,0.6s,baz=215,slow=2.3,SNR=4.1						
SONM	**Songino Array**	**145.76**	**280**	PKPbc	PKPdf	14 00 21.0	-1.8
	0.2nm,0.3s,baz=54,slow=2.5,SNR=4.1						
MKAR	**Makanchi Array**	**158.66**	**258**	PKPab	PKPab	14 01 16.9	-0.3
	0.3nm,0.7s,baz=121,slow=3.9,SNR=3.7						

JMA 24 13:43:03.6, 35°.02N×135°.53E, h14km, M3.0, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.28**	**338**	P	Pg	13 43 09.6	0.0
JWT				S	Sg	13 43 13.5	-0.1
JHE	**Heguri**	**0.39**	**161**	P	Pg	13 43 11.3	-0.1
JHE				S	Sg	13 43 16.7	0.0
JKS	**Kasai**	**0.56**	**266**	P	Pg	13 43 14.4	-0.3
JKS				S	Sg	13 43 21.9	-0.3
JKY	**Yasaka**	**0.70**	**330**	P	Pg	13 43 16.9	-0.4
JKY				S	Sg	13 43 26.2	-0.3
JAWN	**Awajishima-nag**	**0.74**	**224**	P	Pg	13 43 17.6	-0.4
JAWN				S	Sg	13 43 27.6	-0.2
TSUJ	**Tsu 2**	**0.79**	**113**	P	Pg	13 43 18.4	-0.6
TSUJ				S	Sg	13 43 28.9	-0.5
JWY	**Kouya**	**0.80**	**176**	P	Pg	13 43 18.5	-0.7
JWY				S	Sg	13 43 29.4	-0.3
JKSM	**Kasumi**	**0.91**	**309**	P	Pb	13 43 20.5	-0.6
JKSM				S	Sb	13 43 32.5	-0.5
JKN2	**Miekihoku**	**0.99**	**142**	P	Pb	13 43 22.0	-0.5
JKN2				S	Sb	13 43 34.9	-0.6
MAT	**Matsushiro**	**2.65**	**54**	P	Pn	13 43 47.2	+1.2
MAT				*e*S	Sn	13 44 19.5	+1.5

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*JMA **24** 13:50:29.3±0.2, 24°.68N×121°.97E, h74km±3km, M3.6*
*TAP **24** 13:50:30.6, 24°.66N×121°.99E, h61km, ML3.9, B*
*IDC **24** 13:50:32.5±5.0, 24°.89N×122°.12E, h103km±48km, mb2.9/4, mb1 3.1/5, mb1mx2.9/40, mbtmp3.3/5, Error ellipse: s-maj=36.9km s-min=24.3km az=68.0*
ISC 24 13:50:29.7±0.8, **24°.68N**±0°.02×**122°.01E**±0°.02, **h63**km±4km, **n143**, σ1^s.**63**/259, **mb3.2**/4, **26C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.16**	**243**	⇑*i*P	**Pn**	**13 50 40.2**	**+0.9**
	baz=246						
TWC				*e*S	**Sn**	**13 50 47.0**	**+0.8**
	baz=246						
NTC	**Toucheng**	**0.24**	**317**	*e*P	**Pn**	**13 50 40.8**	**+1.1**
	baz=332						
NTC				S	**Sn**	**13 50 47.4**	**+0.5**
	baz=332						
ILA	**Ilan**	**0.25**	**289**	*e*P	**Pn**	**13 50 41.1**	**+1.3**
	baz=302						
ILA				*e*S	**Sn**	**13 50 48.8**	**+1.7**
	baz=302						
ENAH	**Nanao**	**0.29**	**218**	⇑*i*P	**Pn**	**13 50 41.3**	**+1.2**
	baz=219						
ENAH				*e*S	**Sn**	**13 50 49.1**	**+1.5**
	baz=219						
TWE	**Neicheng**	**0.31**	**277**	⇑*i*P	**Pn**	**13 50 41.5**	**+1.3**
	baz=290						
TWE				*e*S	**Sn**	**13 50 47.4**	**-0.4**
	baz=290						
TWB1	**Santiao Chiao**	**0.33**	**357**	⇑*i*P	**Pn**	**13 50 41.2**	**+0.9**
	baz=1.0						
TWB1				S	**Sn**	**13 50 48.5**	**+0.5**
	baz=1.0						
TIPB	**Shuangxi**	**0.33**	**330**	⇑*i*P	**Pn**	**13 50 41.4**	**+1.0**
	baz=335						
TIPB				*i* S	**Sn**	**13 50 48.7**	**+0.4**
	baz=335						
ENA	**Nanau**	**0.35**	**224**	⇑*i*P	**Pn**	**13 50 41.6**	**+1.1**
	baz=223						
ENA				S	**Sn**	**13 50 49.6**	**+1.2**
	baz=223						
ENTT	**Nioudou**	**0.40**	**264**	⇑*i*P	**Pn**	**13 50 42.5**	**+1.5**
	baz=270						
ENTT				*e*S	**Sn**	**13 50 50.9**	**+1.6**
	baz=270						
NWF	**Wu-fen Shan**	**0.44**	**332**	P	**Pn**	**13 50 42.4**	**+1.0**
	baz=335						
NWF				S	**Sn**	**13 50 50.8**	**+0.8**
	baz=335						
WFSB	**Wu-fen Shan**	**0.44**	**332**	⇑*i*P	**Pn**	**13 50 42.5**	**+1.2**
	baz=336						
WFSB				S	**Sn**	**13 50 50.7**	**+1.0**
	baz=336						
NDT	**Datong Townshi**	**0.46**	**260**	*i* P	**Pn**	**13 50 43.0**	**+1.5**
	baz=266						
NDT				S	**Sn**	**13 50 52.2**	**+2.1**
	baz=266						
NWLT	**Wulai**	**0.47**	**282**	⇑*i*P	**Pn**	**13 50 42.9**	**+1.3**
	baz=295						
NWLT				*e*S	**Sn**	**13 50 51.7**	**+1.3**
	baz=295						
TWA	**Mucha**	**0.49**	**308**	⇑*i*P	**Pn**	**13 50 42.9**	**+1.1**
	baz=319						
TWA				S	**Sn**	**13 50 51.5**	**+0.8**
	baz=319						
TNOU	**National Taiwa**	**0.51**	**335**	⇑*i*P	**Pn**	**13 50 42.9**	**+0.9**
	baz=338						
TNOU				*e*S	**Sn**	**13 50 51.6**	**+0.5**
	baz=338						
NHDH	**Xindian Distri**	**0.52**	**303**	⇑*i*P	**Pn**	**13 50 43.2**	**+1.1**
	baz=313						
NHDH				*e*S	**Sn**	**13 50 51.7**	**+0.5**
	baz=313						
TATO	**Taipei**	**0.56**	**302**	⇑*i*P	**Pn**	**13 50 43.4**	**+0.9**
	baz=312						
TATO				*e*S	**Sn**	**13 50 52.2**	**+0.3**
	baz=312						
YHNB	**Yeheng**	**0.57**	**269**	⇑*i*P	**Pn**	**13 50 44.1**	**+1.3**
	baz=271						
YHNB				S	**Sn**	**13 50 53.4**	**+1.0**
	baz=271						
TAP	**Taipei**	**0.58**	**308**	P	**Pn**	**13 50 43.8**	**+1.0**
	baz=320						
TAP				*e*S	**Sn**	**13 50 53.1**	**+0.9**
	baz=320						
NSK	**Sanguang**	**0.59**	**270**	⇑*i*P	**Pn**	**13 50 44.1**	**+1.2**
	baz=271						
NSK				S	**Sn**	**13 50 53.6**	**+0.9**
	baz=271						
BACT	**New Taipei Cit**	**0.60**	**301**	*e*P	**Pn**	**13 50 43.7**	**+0.8**
	baz=311						
BACT				*e*S	**Sn**	**13 50 53.9**	**+1.2**
	baz=311						
YM01	**YM01**	**0.61**	**319**	P	**Pn**	**13 50 43.0**	**-0.1**
	baz=322						
YM01				*e*S	**Sn**	**13 50 52.4**	**-0.6**
	baz=322						
YM10	**YM10**	**0.62**	**319**	⇑*i*P	**Pn**	**13 50 44.1**	**+0.8**
	baz=322						
YM10				S	**Sn**	**13 50 53.7**	**+0.4**
	baz=322						
YM11	**YM11**	**0.62**	**321**	P	**Pn**	**13 50 44.2**	**+0.9**
	baz=324						
YM11				*e*S	**Sn**	**13 50 54.2**	**+0.9**
	baz=324						
NNSB	**Datong**	**0.62**	**246**	⇑*i*P	**Pn**	**13 50 44.5**	**+1.2**
	baz=240						
NNSB				*e*S	**Sn**	**13 50 54.7**	**+1.3**
	baz=240						
NNSH	**Datong**	**0.62**	**246**	⇑*i*P	**Pn**	**13 50 44.6**	**+1.3**
	baz=241						
NNSH				*e*S	**Sn**	**13 50 54.3**	**+0.9**
	baz=241						
YM05	**YM05**	**0.63**	**320**	⇑*i*P	**Pn**	**13 50 44.2**	**+0.9**
	baz=323						
YM05				S	**Sn**	**13 50 53.6**	**+0.2**
	baz=323						
NNS	**Nan Shan**	**0.63**	**247**	⇑*i*P	**Pn**	**13 50 44.7**	**+1.3**
	baz=241						
NNS				*e*S	**Sn**	**13 50 54.2**	**+0.8**
	baz=241						
NACB	**Ninganchiao**	**0.63**	**217**	⇑*i*P	**Pn**	**13 50 43.6**	**+0.3**
	baz=216						
NACB				*e*S	**Sn**	**13 50 54.0**	**+0.6**
	baz=216						
YM08	**YM08**	**0.63**	**323**	⇑*i*P	**Pn**	**13 50 44.0**	**+0.7**
	baz=326						
YM08				S	**Sn**	**13 50 53.2**	**-0.2**
	baz=326						
YM04	**YM04**	**0.64**	**318**	⇑*i*P	**Pn**	**13 50 44.3**	**+0.9**
	baz=321						
YM04				*e*S	**Sn**	**13 50 53.7**	**+0.2**
	baz=321						
YM03	**YM03**	**0.65**	**319**	*e*P	**Pn**	**13 50 44.6**	**+0.9**
	baz=322						
YM03				*e*S	**Sn**	**13 50 54.2**	**+0.3**
	baz=322						
ETLH	**Xiulin Townshi**	**0.67**	**225**	P	**Pn**	**13 50 44.5**	**+0.6**
	baz=234						
ETLH				*e*S	**Sn**	**13 50 55.5**	**+1.2**
	baz=234						
TWS1	**Kuangyinshan**	**0.68**	**308**	⇑*i*P	**Pn**	**13 50 45.2**	**+1.3**
	baz=316						
TWS1				S	**Sn**	**13 50 55.7**	**+1.4**
	baz=316						
NTST	**Danshui**	**0.70**	**314**	⇑*i*P	**Pn**	**13 50 45.3**	**+1.2**
	baz=322						
NTST				*e*S	**Sn**	**13 50 55.8**	**+1.2**
	baz=322						
TWY	**Chenhua**	**0.70**	**328**	*e*P	**Pn**	**13 50 45.4**	**+1.3**
	baz=331						
TWY				*e*S	**Sn**	**13 50 56.1**	**+1.4**
	baz=331						
TWD	**Chiawan**	**0.71**	**212**	P	**Pn**	**13 50 44.8**	**+0.6**
	baz=224						
TWD				*e*S	**Sn**	**13 50 55.4**	**+0.5**
	baz=224						
NTY	**Taoyuan**	**0.72**	**296**	*e*P	**Pn**	**13 50 45.8**	**+1.5**
	baz=303						
NTY				*e*S	**Sn**	**13 50 57.5**	**+2.4**
	baz=303						
HWA	**Hwalien**	**0.79**	**208**	*e*P	**Pn**	**13 50 46.2**	**+0.9**
	baz=195						
HWA				*e*S	**Sn**	**13 50 58.6**	**+2.0**
	baz=195						
NCU	**National Centr**	**0.80**	**291**	*e*P	**Pn**	**13 50 46.7**	**+1.4**
	baz=294						
NCU				S	**Sn**	**13 50 58.9**	**+2.1**
	baz=294						
NCUH	**Zhongli**	**0.80**	**291**	P	**Pn**	**13 50 46.7**	**+1.4**
	baz=293						
NCUH				S	**Sn**	**13 50 59.0**	**+2.2**
	baz=293						
FUSS	**Fushou**	**0.82**	**238**	P	**Pn**	**13 50 47.0**	**+1.2**

	baz=233						
FUSS				S	Sn	13 50 59.1	+1.4
	baz=233						
WHF	**Hehuan Shan**	0.86	232	P	Pn	13 50 47.5	+1.0
	baz=226						
WHF				eS	Sn	13 50 59.8	+0.9
	baz=226						
TWT	**Tachien**	0.87	241	P	Pn	13 50 48.0	+1.6
	baz=233						
TWT				S	Sn	13 51 00.2	+1.6
	baz=233						
JYNG	**Yonagunijimaku**	0.88	105	P	Pn	13 50 47.4	+1.1
JYNG				eS	Sn	13 51 00.0	+1.3
TDCB	**Techi**	0.88	241	P	Pn	13 50 48.0	+1.4
	baz=233						
TDCB				eS	Sn	13 50 59.8	+0.9
	baz=233						
LIOB	**Emei**	0.90	268	P	Pn	13 50 48.0	+1.4
	baz=269						
LIOB				eS	Sn	13 51 01.0	+1.8
	baz=269						
HSN1	**Hsinchu**	0.91	276	P	Pn	13 50 48.1	+1.5
	baz=287						
HSN1				eS	Sn	13 51 01.1	+1.9
	baz=287						
NSTT	**Nanjuang**	0.92	267	P	Pn	13 50 48.0	+1.3
	baz=268						
NSTT				S	Sn	13 51 00.5	+1.0
	baz=268						
SBCB	**Hsinchu**	0.94	277	eP	Pn	13 50 48.4	+1.3
	baz=287						
SBCB				eS	Sn	13 51 01.1	+1.2
	baz=287						
YOJ	**Yonaguni jima**	0.94	103	P	Pn	13 50 48.0	+1.0
YOJ				eS	Sn	13 51 01.0	+1.1
YOJ	**Yonaguni jima**	0.94	103	P	Pn	13 50 47.8	+0.8
	baz=102						
YOJ				eS	Sn	13 51 00.5	+0.6
	baz=102						
PCYT	**Pengchaiyu**	0.94	3	eP	Pn	13 50 47.9	+0.7
	baz=5.0						
PCYT				eS	Sn	13 51 01.8	+1.8
	baz=5.0						
HSN	**Hsinchu**	0.95	277	eP	Pn	13 50 48.2	+1.0
	baz=290						
HSN				S	Sn	13 51 01.0	+0.8
	baz=290						
CHGB	**Renai**	0.98	231	⇑iP	Pn	13 50 49.0	+1.1
	baz=230						
CHGB				eS	Sn	13 51 02.7	+1.5
	baz=230						
ESL	**Shilin**	1.01	211	P	Pn	13 50 47.6	-0.4
	baz=219						
ESL				eS	Sn	13 51 01.2	-0.3
	baz=219						
WHP	**Taichung City**	1.05	248	P	Pn	13 50 50.6	+2.1
	baz=247						
WHP				eS	Sn	13 51 04.5	+2.0
	baz=247						
NMLH	**Miaoli**	1.12	263	eP	Pn	13 50 51.0	+1.6
	baz=273						
NMLH				S	Sn	13 51 05.6	+1.5
	baz=273						
EGFH	**Guangfu**	1.14	208	eP	Pn	13 50 49.6	-0.1
	baz=216						
EGFH				eS	Sn	13 51 03.3	-1.3
	baz=216						
NSY	**Sanyi**	1.17	257	P	Pn	13 50 51.8	+1.8
	baz=257						
NSY				eS	Sn	13 51 07.2	+2.0
	baz=257						
WPL	**Puli Township**	1.17	235	P	Pn	13 50 51.7	+1.6
	baz=227						
WPL				eS	Sn	13 51 06.7	+1.5
	baz=227						
TWQ1	**Liyutan**	1.17	254	P	Pn	13 50 51.7	+1.6
	baz=253						
TWQ1				eS	Sn	13 51 07.4	+2.0
	baz=253						
DPDB	**Guoxing**	1.18	237	P	Pn	13 50 52.1	+1.9
	baz=228						
DPDB				eS	Sn	13 51 07.8	+2.2
	baz=228						
WDJ	**Dajia District**	1.29	255	P	Pn	13 50 53.2	+1.5
	baz=255						
WDJ				eS	Sn	13 51 10.1	+2.0
	baz=255						
HGSD	**Ruisui**	1.30	204	P	Pn	13 50 52.1	+0.3
	baz=203						
HGSD				eS	Sn	13 51 10.1	+1.8
	baz=203						
TYC	**Yuchr**	1.30	234	P	Pn	13 50 53.8	+2.0
	baz=225						
TYC				eS	Sn	13 51 11.4	+3.0
	baz=225						
SSLB	**Suanglung**	1.31	227	P	Pn	13 50 53.1	+1.2
	baz=218						
SSLB				eS	Sn	13 51 11.2	+2.6
	baz=218						
TCU	**Taichung**	1.33	247	eP	Pn	13 50 53.9	+1.8
	baz=245						
TCU				eS	Sn	13 51 10.2	+1.3
	baz=245						
EHY	**Hungye**	1.33	208	P	Pn	13 50 51.8	-0.4
	baz=206						
EHY				eS	Sn	13 51 07.7	-1.3
	baz=206						
WWF	**Wufeng**	1.35	242	eP	Pn	13 50 54.0	+1.5
	baz=253						
WWF				S	Sn	13 51 12.3	+2.8
	baz=253						
WNT1	**Nantou City**	1.44	238	eP	Pn	13 50 54.5	+1.0
	baz=249						
WNT1				eS	Sn	13 51 14.1	+2.5
	baz=249						
YULB	**Yu-li**	1.44	207	P	Pn	13 50 53.1	-0.6
	baz=206						
YULB				eS	Sn	13 51 12.3	+0.6
	baz=206						
WHYT	**Xinyi Township**	1.44	227	P	Pn	13 50 56.0	+2.3
	baz=217						
WHYT				eS	Sn	13 51 15.6	+3.8
	baz=217						
WJS	**Zhushan**	1.45	234	eP	Pn	13 50 56.0	+2.2
	baz=246						
WJS				eS	Sn	13 51 14.8	+3.0
	baz=246						
WNT	**Mingjian**	1.45	237	eP	Pn	13 50 55.6	+1.9
	baz=248						
WNT				eS	Sn	13 51 14.3	+2.4
	baz=248						
WCHH	**Zhanghua**	1.45	246	eP	Pn	13 50 55.2	+1.4
	baz=244						
WCHH				eS	Sn	13 51 13.9	+2.0
	baz=244						
EYUL	**Yuli**	1.47	206	P	Pn	13 50 55.4	+1.3
	baz=204						
EYUL				eS	Sn	13 51 13.3	+0.9
	baz=204						
TWF1	**Yuli**	1.48	206	P	Pn	13 50 53.2	-0.9
	baz=204						
TWF1				eS	Sn	13 51 11.2	-1.3
	baz=204						
ALS	**Alishan**	1.60	224	P	Pn	13 50 58.0	+1.9
	baz=212						
ALS				eS	Sn	13 51 18.5	+2.5
	baz=212						
IRIF	**Iriomote-Funau**	1.61	102	P	Pn	13 50 56.7	+0.9
IRIF				S	Sn	13 51 16.4	+0.8
FULB	**Fuli**	1.61	204	eP	Pn	13 50 56.4	+0.4
	baz=210						
FULB				eS	Sn	13 51 18.0	+2.1
	baz=210						
CHN5	**Tsauling**	1.63	229	eP	Pn	13 50 58.4	+2.1
	baz=238						
CHN5				eS	Sn	13 51 19.2	+3.0
	baz=238						
WGK	**Gukeng**	1.65	233	eP	Pn	13 50 58.5	+2.0
	baz=244						
WGK				eS	Sn	13 51 19.1	+2.4
	baz=244						
WDLH	**Douliu**	1.67	234	P	Pn	13 50 58.3	+1.6
	baz=244						
WDLH				eS	Sn	13 51 20.0	+2.9
	baz=244						
CHKT	**Chengkung**	1.68	201	P	Pn	13 50 56.4	-0.5
	baz=191						
RLNB	**Erlin**	1.70	243	eP	Pn	13 50 58.5	+1.4
	baz=241						
ELDTW	**Lidau**	1.74	212	P	Pn	13 50 57.8	0.0
	baz=201						
ELDTW				eS	Sn	13 51 18.2	-0.8
	baz=201						
HATJ	**Hateruma jima**	1.75	110	P	Pn	13 50 59.1	+1.3
HATJ				eS	Sn	13 51 21.0	+1.8
WTK	**Tuku**	1.78	237	eP	Pn	13 50 59.6	+1.4
	baz=234						
WTK				eS	Sn	13 51 21.7	+1.8
	baz=234						
CHN2	**Minshiung**	1.81	231	eP	Pn	13 51 00.7	+2.1
	baz=241						
CHN2				eS	Sn	13 51 22.8	+2.3
	baz=241						
EDH	**Donghe**	1.82	201	eP	Pn	13 50 58.3	-0.4
	baz=200						
TPUB	**Ta-pu**	1.87	223	P	Pn	13 51 01.4	+2.0
	baz=232						
TPUB				eS	Sn	13 51 24.9	+3.0
	baz=232						
CHY	**Chiayi**	1.87	231	P	Pn	13 51 01.0	+1.6
	baz=240						
CHY				eS	Sn	13 51 23.4	+1.5
	baz=240						
JKRS	**Kuro-shima**	1.88	103	P	Pn	13 51 00.8	+1.3
JKRS				eS	Sn	13 51 23.9	+1.7
STYT	**Tauyuan**	1.90	217	eP	Pn	13 51 01.7	+1.8
	baz=205						
STYT				eS	Sn	13 51 24.6	+1.8
	baz=205						
WTP	**Ta-pu**	1.92	222	eP	Pn	13 51 02.0	+2.0
	baz=232						
WTP				eS	Sn	13 51 24.5	+1.3
	baz=232						
WSF	**Szhu**	1.93	238	eP	Pn	13 51 00.9	+0.7
	baz=235						
WSF				eS	Sn	13 51 24.8	+1.3
	baz=235						
LONT	**Longtian**	1.94	205	eP	Pn	13 51 00.3	-0.2
	baz=194						
LONT				eS	Sn	13 51 24.1	+0.3
	baz=194						
JIJ	**Ishigaki jima**	1.97	99	P	Pn	13 51 01.5	+0.7
JIJ				S	Sn	13 51 24.8	+0.4
TWK	**Hsinying**	1.98	225	P	Pn	13 51 03.1	+2.2
	baz=235						
TWK				eS	Sn	13 51 28.6	+3.9
	baz=235						
SNST	**Tainan City**	2.01	224	eP	Pn	13 51 04.2	+2.9
	baz=234						
SNST				eS	Sn	13 51 28.5	+3.1
	baz=234						
CHN1	**Nanshi**	2.01	223	eP	Pn	13 51 04.6	+3.2
	baz=232						
CHN1				eS	Sn	13 51 28.2	+2.6
	baz=232						
TWG	**Pinlang**	2.04	205	eP	Pn	13 51 01.2	-0.6
	baz=194						
TWG				eS	Sn	13 51 23.5	-2.7
	baz=194						
TWGBT	**Beinan**	2.04	205	eP	Pn	13 51 00.9	-0.8
	baz=194						
TWGBT				eS	Sn	13 51 25.6	-0.6
	baz=194						
ICHU	**Yijhu**	2.06	231	eP	Pn	13 51 03.6	+1.7
	baz=227						
ICHU				eS	Sn	13 51 28.9	+2.3
	baz=227						
SGST	**Jiashian**	2.06	220	P	Pn	13 51 03.2	+1.2
	baz=228						
SGST				eS	Sn	13 51 29.0	+2.4
	baz=228						
LDUT	**Ludao**	2.06	194	P	Pn	13 51 00.9	-1.1
	baz=186						
LDUT				S	Sn	13 51 23.4	-3.2
	baz=186						
SLGT	**Liugui**	2.09	217	eP	Pn	13 51 05.2	+2.7
	baz=206						
SLGT				eS	Sn	13 51 31.5	+4.0
	baz=206						
JISG	**Ishigakijimahi**	2.10	92	P	Pn	13 51 03.6	+1.1
JISG				eS	Sn	13 51 29.0	+1.5
CHN8	**Yiju**	2.11	231	eP	Pn	13 51 04.4	+1.7
	baz=227						
CHN8				eS	Sn	13 51 29.9	+1.9
	baz=227						
PTTC	**Pingtan**	2.19	292	eP	Pn	13 51 04.2	+0.5
	baz=294						
SCST	**Cishan**	2.26	218	eP	Pn	13 51 05.9	+1.1
	baz=217						
ECL	**Taimali**	2.29	205	eP	Pn	13 51 04.5	-0.7
	baz=197						
SSD	**Sandimen**	2.30	213	eP	Pn	13 51 07.3	+2.0
	baz=202						
SSD				eS	Sn	13 51 34.8	+2.3
	baz=202						
TSMG	**Majia**	2.33	213	eP	Pn	13 51 07.6	+1.9
	baz=202						
TSMG				eS	Sn	13 51 35.2	+2.0
	baz=202						
VWUC	**VWUC**	2.34	278	⇓iP	Pn	13 51 06.3	+0.5
	baz=279						
MATB	**Ma-tsu**	2.37	309	eP	Pn	13 51 06.8	+0.6
	baz=311						
MSUT	**Lienchiang**	2.40	309	eP	Pn	13 51 07.2	+0.6
	baz=312						
MASBT	**Mashibuluo**	2.42	212	eP	Pn	13 51 07.9	+1.1
	baz=208						
MASBT				eS	Sn	13 51 37.9	+2.6
	baz=208						
JTJ	**Tarama**	2.45	90	P	Pn	13 51 09.4	+2.1
JTJ				eS	Sn	13 51 38.9	+2.8
PNG	**Penghu**	2.50	244	eP	Pn	13 51 08.0	0.0
	baz=241						
PHUB	**P'eng-hu**	2.51	243	eP	Pn	13 51 08.0	-0.1
	baz=240						
EAST	**Anshuo**	2.52	205	eP	Pn	13 51 10.1	+1.8
	baz=197						
SSPT	**Xinbi**	2.56	211	eP	Pn	13 51 10.3	+1.5
	baz=210						
WDGT	**Dungji**	2.57	237	eP	Pn	13 51 08.9	-0.1
	baz=234						
PTMZ	**Houxiangcun**	2.65	278	eP	Pn	13 51 10.4	+0.4
	baz=280						
LAY	**Lan-yu**	2.67	189	eP	Pn	13 51 09.6	-0.6
	baz=181						
LYJJ	**Jianjiangzhen**	2.75	313	eP	Pn	13 51 11.7	+0.3
	baz=316						
XPSS	**Dashiqiu**	2.77	324	eP	Pn	13 51 11.8	+0.1
	baz=328						
VCHM	**Qimei**	2.78	239	eP	Pn	13 51 11.8	+0.1
	baz=235						
JIRB	**Irabujima**	2.88	86	P	Pn	13 51 15.6	+2.4
JIRB				eS	Sn	13 51 49.3	+2.6
JIKM	**Ikemajima**	2.95	85	P	Pn	13 51 17.7	+3.6
JIKM				eS	Sn	13 51 51.5	+3.1
JMJ2	**Miyako jima3**	3.02	88	P	Pn	13 51 18.1	+3.0
JMJ2				eS	Sn	13 51 53.3	+3.2
MHZQ	**Yeshan**	3.04	298	eP	Pn	13 51 15.5	+0.2
	baz=301						
JOGS	**Gusukube**	3.09	88	P	Pn	13 51 18.9	+2.9
JOGS				eS	Sn	13 51 55.4	+3.6
KNM	**Kinmen**	3.27	266	eP	Pn	13 51 20.3	+1.8
	baz=263						
KNMB	**Chin-men Tao**	3.30	267	eP	Pn	13 51 19.1	+0.2
	baz=264						
AXDP	**Jialang**	3.68	274	eP	Pn	13 51 24.6	+0.6
	baz=274						
JOW	**Kunigami**	6.04	68	P	Pn	13 51 57.5	+1.1
	0.7nm,0.3s,baz=127,slow=29,SNR=7.7						
JOW				S	Sn	13 53 03.5	-0.8
	0.1nm,0.3s,baz=193,slow=24,SNR=1.4						
MKAR	**Makanchi Array**	38.51	315	P	P	13 57 44.0	-1.8
	0.1nm,0.4s,baz=95,slow=9.7,SNR=5.9						
WRA	**Warramunga Arr**	45.95	164	P	P	13 58 45.8	-0.7
	0.3nm,0.5s,baz=346,slow=8.7,SNR=2.5						
ASAR	**Alice Springs**	49.43	166	P	P	13 59 14.1	+0.8
	0.4nm,0.9s,baz=348,slow=7.3,SNR=1.9						
YKA	**Yellowknife Ar**	82.22	23	P	P	14 02 40.9	-2.7
	0.1nm,0.6s,baz=317,slow=4.5,SNR=5.0						

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*IDC **24** 14:38:23.7±2.3, 10°.27S×124°.13E, h0km, mb3.1/1, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=202.1km s-min=34.1km az=54.0*

*DJA **24** 14:38:29.6±1.7, 10°S±7°×12°5E±1°0, h11km±8km, M3.2/4, MLv3.2/4*

ISC 24 14:38:24.1±1.4, 9°.9S±0°.2×125°.31E±0°.10, h10km, n7, σ2ˢ.22/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	1.04	277	P	Pn	14 38 45.9	+1.1
SOEI				S	Sg	14 38 56.2	-1.4
BATI	**Baumata**	1.66	258	P	Pb	14 38 54.6	-0.1
EDFI	**Ende, Flores**	3.75	287	P	Pn	14 39 23.7	+1.6
WBSI	**Waikabubak, Su**	5.84	272	P	Pn	14 39 52.2	+1.3
WRA	**Warramunga Arr**	13.27	140	Pn	P	14 41 39.4	-3.2
	0.4nm,0.3s,baz=311,slow=14,SNR=12						
WRA				Sn	Sn	14 44 03.7	+3.2
	0.2nm,0.3s,baz=316,slow=24,SNR=2.0						
ASAR	**Alice Springs**	15.98	150	Pn	P	14 42 14.6	+1.8
	0.2nm,0.3s,baz=320,slow=11,SNR=20						
ASAR				Sn	Sn	14 45 04.8	-1.8
	0.0nm,0.3s,baz=17,slow=9.7,SNR=1.4						
MKAR	**Makanchi Array**	68.21	330	P	P	14 49 24.6	-0.3
	0.1nm,0.6s,baz=129,slow=6.3,SNR=1.8						

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*TRN **24** 14:42:03.7, 10°.99N×62°.38W, h115km, MD2.6*

*FUNV **24** 14:42:05.8, 10°.88N×62°.30W, h26km, MW3.3*

ISC 24 14:42:02.9±1.5, 10°.94N±0°.05×62°.39W±0°.05, h114km±13km, n12, σ1ˢ.45/21, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	**Carupano**	0.87	253	⇓iP	Pn	14 42 23.8	+0.7
CRUV				eS	Sn	14 42 36.2	-2.2
TRN	**Trinidad (W)**	1.01	107	eP	Pn	14 42 26.1	+1.6
TRN				eS	Sn	14 42 41.0	+0.3
GRGR	**Grenville**	1.39	31	eP	Pn	14 42 29.0	+0.4
GRGR				eS	Sn	14 42 47.8	-0.3
GRGR	**Grenville**	1.39	31	⇑iP	Pn	14 42 28.9	+0.4
GRGR				eS	Sn	14 42 47.1	-1.0
TOSP	**Speyside**	1.85	79	eP	Pn	14 42 35.0	+0.8
TOSP				eS	Sn	14 42 57.9	-0.1
ORIV	**Oritupano**	2.11	209	eP	Pn	14 42 38.1	+0.6
ORIV				eS	Sn	14 43 03.3	-0.7
PCRV	**Puerto La Cruz**	2.34	251	eP	Pn	14 42 42.1	+1.7
SVOC	**Richmond Hill,**	2.48	27	eP	Pn	14 42 41.8	-0.4
SVB	**Belmont**	2.57	25	eP	Pn	14 42 43.9	+0.5
RIOV	**Rio Grande**	2.91	169	eP	Pn	14 42 49.1	+1.3
RIOV				eS	Sn	14 43 20.7	-1.7
LUEV	**Luepa**	5.15	170	eP	Pn	14 43 18.9	+1.0
LUEV				eS	Sn	14 44 12.9	-3.4
BAUV	**El Baul**	5.91	251	eP	Pn	14 43 29.9	+1.8
BAUV				eS	Sn	14 44 33.6	-1.0

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*NOU **24** 15:22:39.7, 40°.11S×177°.07E, h56km, MLv3.2, Off E. Coast of N. Island, N.Z.*

WEL 24 15:22:41.1, 40°.0S±0°.8×17°7E±°, h22km±1km, M3.2/24, ML3.6/24, MLv3.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=79.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PXZ	**Pawanui**	0.05	151	P	Pb	15 22 45.4	+0.4
PXZ				S	Sb	15 22 48.9	+1.3
KAHZ	**Kahuranaki**	0.20	10	P	Pb	15 22 46.6	-0.2
KAHZ				S	Sb	15 22 51.2	+0.5
WPHZ	**Waipukurau**	0.31	256	P	Pb	15 22 48.6	+0.6
WPHZ				S	Sn	15 22 54.7	-1.5
PRHZ	**Porangahau**	0.32	209	P	Pn	15 22 49.4	-1.0
PRHZ				S	Sn	15 22 56.3	-0.1
CKHZ	**Cape Kidnapper**	0.38	30	P	Pb	15 22 50.1	+1.0
CKHZ				S	Sn	15 22 57.4	-0.5
PNHZ	**Pukenui**	0.49	279	P	Pb	15 22 51.2	+0.1
KRHZ	**Kereru**	0.50	314	P	Pb	15 22 51.0	-0.1
KRHZ				S	Sb	15 22 58.7	+0.7
ANWZ	**Angora Road**	0.54	210	P	Pn	15 22 52.9	-0.7
ANWZ				S	Sn	15 23 02.9	+0.9
MCHZ	**McNeill Hill**	0.56	349	P	Pb	15 22 52.7	+0.5
DVHZ	**Dannevirke**	0.60	239	P	Pb	15 22 53.6	+0.7
DVHZ				S	Sn	15 23 03.6	+0.3
KWHZ	**Kaweka Forest**	0.65	331	P	Pb	15 22 53.8	0.0
KWHZ				S	Sn	15 23 03.9	-0.7
TSZ	**Takapari Road**	0.67	264	P	Pb	15 22 54.4	+0.2
TSZ				S	Sb	15 23 04.1	+1.0
ARHZ	**Aropaoanui**	0.74	10	P	Pb	15 22 55.6	+0.3
BHHZ	**Black Hill Sta**	0.78	310	P	Pb	15 22 55.7	-0.2
BHHZ				S	Sb	15 23 06.3	+0.2
BFZ	**Birch Farm**	0.82	213	P	Pb	15 22 56.5	-0.2
BKZ	**Black Stump Fm**	0.86	342	P	Pb	15 22 57.4	0.0
BKZ				S	Sn	15 23 09.9	-0.1
PRWZ	**Pori Road**	0.87	229	P	Pn	15 22 57.8	-0.2
PRWZ				S	Sn	15 23 11.0	+1.0
NMHZ	**Naumai**	0.89	359	P	Pb	15 22 58.1	+0.2
NMHZ				S	Sn	15 23 12.6	+1.9
POWZ	**Post Office Ro**	0.91	243	P	Pb	15 22 58.2	0.0
POWZ				S	Sn	15 23 12.4	+1.4
WHHZ	**Waihua**	0.96	19	P	Pn	15 23 00.0	+0.7
MOVZ	**Moawhango**	1.02	305	P	Pb	15 22 59.9	-0.1
MOVZ				S	Sn	15 23 14.0	+0.3
CPWZ	**Castlepoint**	1.04	207	P	Pb	15 23 00.4	0.0
TIWZ	**Tintock**	1.07	222	P	Pn	15 23 00.1	-0.7
TIWZ				S	Sn	15 23 14.9	-0.1
RAHZ	**Arahi**	1.09	10	P	Pn	15 23 00.6	-0.5
RAHZ				S	Sn	15 23 15.7	+0.2
MTHZ	**Maungataniwha**	1.14	0	P	Pn	15 23 01.1	-0.6
MTHZ				S	Sn	15 23 17.9	+1.2
WNVZ	**Wahianoa**	1.16	304	P	Pb	15 23 02.6	0.0
WNVZ				S	Sn	15 23 18.3	+0.8
TUVZ	**Tukino**	1.16	308	P	Pb	15 23 02.7	+0.2
TUVZ				S	Sn	15 23 19.4	+2.0
KNZ	**Kokohu**	1.17	34	P	Pn	15 23 00.5	-1.5
MRZ	**Mangatainoka R**	1.17	235	P	Pn	15 23 01.4	-0.8
MRZ				S	Sn	15 23 17.5	+0.1
MHGZ	**Mahia Peninsul**	1.18	45	P	Pn	15 23 00.9	-1.4
OHWZ	**Ohakea**	1.18	259	P	Pb	15 23 03.0	+0.2
WHVZ	**Whangaehu Hut**	1.19	306	P	Pb	15 23 03.2	0.0
MRHZ	**Matea Rd**	1.20	344	P	Pn	15 23 02.6	0.0
DRZ	**Dome Shelter**	1.21	306	P	Pb	15 23 03.9	+0.4
MTVZ	**Mangateitei**	1.21	299	P	Pb	15 23 03.4	0.0
ETVZ	**East Tongariro**	1.22	314	P	Pb	15 23 03.4	0.0
OTVZ	**Oturere**	1.22	312	P	Pn	15 23 03.3	+0.3
FWVZ	**Far West T-bar**	1.23	306	P	Pb	15 23 03.6	-0.2
TMVZ	**Te Maari**	1.23	315	P	Pn	15 23 03.3	+0.2
HATZ	**Hinemaiaia**	1.24	332	P	Pn	15 23 03.1	0.0
NGZ	**Ngauruhoe**	1.25	310	P	Pb	15 23 04.1	0.0
RITZ	**Rihia Road**	1.26	323	P	Pb	15 23 04.4	+0.2
SNGZ	**Shannon Statio**	1.27	18	P	Pn	15 23 03.4	-0.1
KRVZ	**Karewarewa**	1.28	314	P	Pb	15 23 04.5	-0.1
WTVZ	**West Tongariro**	1.30	312	P	Pb	15 23 04.8	0.0
TMWZ	**Te Maipa**	1.33	212	P	Pn	15 23 03.1	-1.2
PRGZ	**Paritu Road**	1.34	38	P	Pn	15 23 02.9	-1.6
KATZ	**Kakaramea**	1.34	319	P	Pb	15 23 05.5	-0.1
PKVZ	**Pokaka**	1.34	301	P	Pn	15 23 05.0	+0.4
HOWZ	**Holdsworth Sta**	1.35	228	P	Pn	15 23 03.4	-1.3
RTZ	**Ruatahuna**	1.38	5	P	Pn	15 23 04.5	-0.6
RATZ	**Rangitukua**	1.39	323	P	Pb	15 23 07.2	+0.8
TWVZ	**Taurewa**	1.42	310	P	Pb	15 23 06.9	0.0
WAZ	**Wanganui**	1.44	279	P	Pb	15 23 06.8	-0.5
RIGZ	**Rimuhau**	1.47	30	P	Pn	15 23 04.9	-1.5
ALRZ	**Allen Road**	1.48	345	P	Pn	15 23 06.5	+0.1
WHTZ	**Whakaora**	1.49	333	P	Pb	15 23 08.4	+0.3
MUGZ	**Murupara**	1.51	358	P	Pn	15 23 06.4	-0.5
OGWZ	**Otaki Gorge**	1.52	236	P	Pn	15 23 05.9	-0.9
PRRZ	**Plateau Road**	1.53	347	P	Pn	15 23 06.8	-0.2
WATZ	**Wairara**	1.54	326	P	Pb	15 23 10.0	+1.1
MTW	**Mount Morrison**	1.55	221	P	Pn	15 23 05.5	-1.8
WPRZ	**Whakapapatarin**	1.56	340	P	Pn	15 23 07.9	+0.4
RAGZ	**Rawiri**	1.56	17	P	Pn	15 23 06.3	-1.2
HRRZ	**Handcock Road**	1.65	345	P	Pn	15 23 09.1	+0.2
TRWZ	**Traveller**	1.65	211	P	Pn	15 23 06.9	-1.9
RRRZ	**Republican Roa**	1.67	351	P	Pn	15 23 08.8	-0.2
KUTZ	**Kaahu Road**	1.69	332	P	Pn	15 23 09.4	+0.1
KIW	**Kapiti Island**	1.71	239	P	Pn	15 23 08.8	-0.7
GRRZ	**Galatos Road**	1.73	341	P	Pb	15 23 14.3	+2.0
TKGZ	**Te Karaka**	1.74	27	P	Pn	15 23 08.3	-1.6
MWZ	**Matawai**	1.74	18	P	Pn	15 23 08.4	-1.6
URZ	**Urewera**	1.74	7	P	Pn	15 23 08.8	-1.2
CAW	**Cannon Point**	1.75	230	P	Pn	15 23 08.5	-1.6
PAWZ	**Paruwai Farm**	1.75	217	P	Pn	15 23 08.4	-1.9
TARZ	**Mount Tarawera**	1.77	352	P	Pn	15 23 10.4	-0.1

HLRZ	Highlands Stat	1.78	348	P	Pb	15 23 16.1	+3.2
VRZ	Vera Road	1.82	298	P	Pn	15 23 11.5	+0.4
MSWZ	Moikau Station	1.86	220	P	Pn	15 23 09.4	-2.3
OMRZ	Omania	1.92	349	P	Pn	15 23 11.9	-0.5
TLZ	Tolley Road	1.94	328	P	Pn	15 23 13.8	+1.0
LREZ	Lake Rotokare	1.95	285	P	Pb	15 23 15.8	0.0
PLWZ	Palliser	1.98	217	P	Pn	15 23 10.9	-2.5
MARZ	Manawahe	2.01	356	P	Pn	15 23 14.2	+0.5
TWGZ	Tauwhareparae	2.02	27	P	Pn	15 23 12.3	-1.6
WEL	Wellington	2.04	230	P	Pn	15 23 12.3	-1.7
BHW	Baring Head	2.06	226	P	Pn	15 23 12.1	-2.3
RUGZ	Raukumara Rang	2.13	18	P	Pn	15 23 14.1	-1.3
HIZ	Hauiti	2.13	313	P	Pn	15 23 16.0	+0.6
MHEZ	Mangahewa	2.15	294	P	Pb	15 23 20.9	+1.7
PREZ	Palmer Road	2.16	287	P	Pb	15 23 18.6	-1.0
DREZ	Durham Road	2.19	291	P	Pb	15 23 20.3	+0.4
NEZ	North Egmont	2.23	288	P	Pb	15 23 19.3	-1.5
KMRZ	Kaimai	2.25	342	P	Pb	15 23 23.7	+2.7
KHEZ	Kahui Hut	2.29	287	P	Pb	15 23 22.4	+0.7
TCW	Tory Channel	2.30	237	P	Pn	15 23 16.1	-1.6
PKGZ	Pakihiroa	2.31	25	P	Pn	15 23 16.0	-1.9
PKE	Pukeiti	2.34	289	P	Pb	15 23 20.8	-1.8
HAZ	Te Kaha	2.35	19	P	Pn	15 23 17.1	-1.3
NMEZ	Namu Road	2.35	283	P	Pb	15 23 22.5	-0.3
DUWZ	D'Urville Isla	2.37	249	P	Pn	15 23 17.8	-0.8
NBEZ	Newall Road No	2.40	287	P	Pb	15 23 24.2	+0.6
TOZ	Tahuroa Road	2.48	335	P	Pn	15 23 19.7	-0.5
WMGZ	Waiomatatini S	2.49	30	P	Pn	15 23 18.6	-1.8
TUWZ	Tuamarina	2.63	236	P	Pn	15 23 20.0	-2.1
BSWZ	Blackbirch Sta	2.83	232	P	Pn	15 23 22.4	-2.5
NNZ	Nelson	2.90	244	P	Pn	15 23 24.5	-1.4
QRZ	Quartz Range	3.39	254	P	Pn	15 23 31.4	-1.3
THZ	Tophouse	3.46	238	P	Pn	15 23 31.3	-2.4
MBAZ	Motutapu North	3.56	334	P	Pn	15 23 35.4	+0.4
LTZ	Lake Taylor	4.42	229	P	Pn	15 23 43.7	-3.2
OKCZ	Okains Bay	4.67	216	P	Pn	15 23 46.6	-3.7
MQZ	McQueen's Vall	4.85	219	P	Pn	15 23 49.5	-3.2
AKCZ	Akaroa Harbour	4.86	216	P	Pn	15 23 49.9	-3.0
TMZ	Timaru	6.16	223	P	Pn	15 24 07.6	-3.2

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*IDC **24** 15:28:01.9±2.0, 7.°74S×127.°61E, h177^{km}±26^{km}, mb2.8/1, mb1 3.4/6, mb1mx3.1/30, mbtmp3.8/6, Error ellipse: s-maj=24.7km s-min=21.2km az=120.0*

ISC 24 15:28:02.1±1.0, **7.°95S**±0.°08×**127.°73E**±0.°10, **h200**^{km}**, n6, σ2.^{s}84**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	4.59	241	P	Pn	15 29 11.8	+0.4
	9.5nm,0.3s,baz=154,slow=2.4,SNR=8.8						
BATI				S	Sn	15 30 04.8	-1.1
	9.7nm,0.3s,baz=355,slow=22,SNR=10.0						
SIJI	Sorong	7.87	27	P	Pn	15 29 51.7	-2.0
	0.7nm,0.3s,baz=312,slow=23,SNR=1.3						
FITZ	Fitzroy Crossi	10.29	191	P	Pn	15 30 26.3	+1.3
	0.6nm,0.3s,baz=12,slow=10,SNR=16						
FITZ				S	Sn	15 32 15.9	-4.0
	0.5nm,0.3s,baz=167,slow=10,SNR=1.9						
WRA	Warramunga Arr	13.53	152	P	P	15 31 09.1	+0.3
	0.2nm,0.3s,baz=322,slow=14,SNR=8.5						
WRA				S	Sn	15 33 35.5	-2.0
	0.6nm,0.3s,baz=324,slow=25,SNR=6.9						
ASAR	Alice Springs	16.71	160	P	Pn	15 31 49.8	+4.8
	0.5nm,0.3s,baz=342,slow=12,SNR=45						
ASAR				S	Sn	15 34 50.8	-2.4
	0.2nm,0.3s,baz=319,slow=21,SNR=4.9						
MKAR	Makanchi Array	67.81	328	P	P	15 38 39.2	+0.6
	0.2nm,0.7s,baz=111,slow=8.0,SNR=2.6						

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*IDC **24** 15:36:46.3±0.9, 36.°96N×98.°49W, h0^{km}, mb3.3/2, mb1 3.8/6, mb1mx3.5/54, mbtmp3.4/6, ML3.9/4, Error ellipse: s-maj=13.3km s-min=12.1km az=176.0*

*TUL **24** 15:36:46.5±1.0, 36.°81N±0.°03×98.°36W±0.°04, h5^{km}±7^{km}, ML3.6, mb_Lg3.7/114(NEIC), Mwr3.4/10(SLM), Error ellipse: s-maj=4.7km s-min=4.2km az=207.0*

*NEIC **24** 15:36:46.5, 36.°80N×98.°34W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.30; $M_{\theta\theta}$1.19; $M_{\phi\phi}$-1.50; $M_{r\theta}$0.64; $M_{\theta\phi}$-0.08; $M_{\phi r}$0.21; Fault plane solution: $M_0$1.53000×10^{14} NP1:ϕ_s140.00000°, δ65.00000°, λ15.00000°. NP2:ϕ_s44.00000°, δ76.00000°, λ154.00000°. Principal axes: T 1.5300, Plg28.0000°, Azm360.0000°; N 0.0010, Plg61.0000°, Azm198.0000°; P -1.5310, Plg8.0000°, Azm94.0000°;*

*NEIC **24** 15:36:47.2±1.0, 36.°81N±0.°04×98.°33W±0.°05, h5^{km}±2^{km} Error ellipse: s-maj=6.6km s-min=6.2km az=21.0*

*ANF **24** 15:36:47.4±0.3, 36.°81N×98.°31W, h5^{km}, ML4.5/16, Error ellipse: s-maj=3.0km s-min=2.4km az=25.0*

ISC 24 15:36:46.8±0.6, **36.°80N**±0.°02×**98.°31W**±0.°02, **h10**^{km}**, n122, σ2.^{s}36**/100**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.32	60		Pg	15 36 53.7	+0.5
KAN14				Sg	Sg	15 36 58.9	+1.3
KAN10	Anthony SW Sta	0.37	28		Pg	15 36 54.3	+0.2
CROK	Carrier	0.39	137		Pg	15 36 55.1	+0.6
CROK				Sg	Sg	15 37 01.2	+1.4
KAN08	Anthony NE Sta	0.51	33		Pg	15 36 57.0	+0.3
KAN12	Harper NE Stat	0.56	27		Pg	15 36 57.9	+0.2
KAN01	Argonia South	0.57	51		Pg	15 36 58.3	+0.4
U32A	Winter Ranch,	0.69	233		Pg	15 36 59.8	-0.3
U32A	Winter Ranch,	0.69	233	P		15 36 59.4	
	baz=52						
U32A				S		15 37 09.0	
	baz=52						
KAN13	South Haven SW	0.70	72		Pg	15 37 00.7	+0.3
OK029	Liberty Lake	1.22	145		Pn	15 37 09.4	-0.4
OK029				Sg	Sb	15 37 26.6	+1.0
BCOK	Bluff Creek, N	1.27	153		Pn	15 37 10.5	-0.1
QUOK	Quay	1.44	115	Pn	Pn	15 37 13.8	+0.9
OK025	Westminster Rd	1.45	147		Pn	15 37 13.5	+0.5
T35A	Sooner Cattle	1.45	85		Pn	15 37 13.5	+0.4
T35B	Sooner Cattle	1.45	85	P		15 37 14.0	
	baz=266,SNR=233						
T35B				S		15 37 34.1	
	baz=266						
OK030	Cody Creek RV	1.51	125		Pn	15 37 14.8	+0.9
OKCFA	Oklahoma City	1.54	153		Pn	15 37 15.1	+0.7
OKCSW	OKLAHOMA CITY	1.56	153		Pn	15 37 15.5	+0.9
R32A	Long Quarter,	1.65	349		Pn	15 37 16.8	+0.9
R32A	Long Quarter,	1.65	349	P		15 37 16.8	
	baz=170,SNR=101						
R32A				S		15 37 38.7	
	baz=170						
FNO	Franklin	1.71	154		Pn	15 37 17.9	+1.3
W35A	Tecumseh	2.01	144		Pn	15 37 22.4	+1.5
WMOK	Wichita Mounta	2.09	191	P	Pn	15 37 22.6	+0.7
	baz=9.7,SNR=62						
WMOK				S	Sb	15 37 51.8	+1.1
	baz=9.7						
WMOK	Wichita Mounta	2.09	191		Pn	15 37 23.0	+1.1
WMOK	Wichita Mounta	2.09	191	P		15 37 22.6	
	baz=9.7,SNR=129						
TUL1	Leonard	2.22	113	P	Pn	15 37 25.1	+1.5
	baz=294,SNR=88						
TUL1				Sb	Sb	15 37 56.7	+2.1
	baz=294						
TUL1	Leonard	2.22	113	P		15 37 25.2	
	baz=294,SNR=53						
TUL1				S		15 37 56.4	
	baz=294						
X34A	Smith Ranch, M	2.23	170	IAmb_Lg		15 37 59.8	
	comp=Z,278nm,0.9s						
CBKS	Cedar Bluff	2.31	331	P	Pn	15 37 25.8	+0.9
	baz=151						
CBKS				S	Sb	15 37 56.3	-0.8
	baz=151						
CBKS	Cedar Bluff	2.31	331	Pn	Pn	15 37 25.8	+0.9
CBKS	Cedar Bluff	2.31	331	P		15 37 25.8	
	baz=151,SNR=24						
CBKS				S		15 37 55.1	
	baz=151						
KSU1	Kansas State U	2.67	30	P	Pn	15 37 31.3	+1.5
	baz=211						
KSU1				Sb	Sb	15 38 10.5	+3.1
	baz=211						
KSU1	Kansas State U	2.67	30	Pn	Pn	15 37 31.0	+1.2
KSU1	Kansas State U	2.67	30	P		15 37 31.4	
	baz=211,SNR=15						
U38A	Gravette	3.18	95		Pn	15 37 38.7	+1.8
U38A				IAmb_Lg		15 38 33.6	
	comp=Z,279nm,0.9s						
U38A	Gravette	3.18	95	P		15 37 38.4	
	baz=278,SNR=27						
X37A	Clayton	3.25	132	Pn	Pn	15 37 39.4	+1.5
X37A				IAmb_Lg		15 38 37.5	
	comp=Z,184nm,0.8s						
X37A	Clayton	3.25	132	P		15 37 39.3	
	baz=313						
AMTX	Amarillo	3.33	236	Pn	Pn	15 37 40.7	+1.6
	baz=54						
AMTX				Pb	Pb	15 37 47.0	+0.9
	baz=54						
AMTX				Sb	Sb	15 38 29.5	+2.7
	baz=54						
AMTX	Amarillo	3.33	236	Pn	Pn	15 37 40.8	+1.6
AMTX				IAmb_Lg		15 38 33.0	
	comp=Z,124nm,0.9s						
HHAR	Hobbs	3.56	97	IAmb_Lg		15 38 42.8	
	comp=Z,186nm,0.8s						
HHAR	Hobbs	3.56	97	P		15 37 43.8	
	baz=280						
Z35A	Perchaven, San	3.56	166		Pn	15 37 44.1	+2.0
Z35A	Perchaven, San	3.56	166	P		15 37 44.2	
	baz=346,SNR=11						
N33B	J Bar K, Exete	3.99	9	P		15 37 48.1	
	baz=190,SNR=7.7						
N33A	J Bar K, Exete	3.99	9	Pn	Pn	15 37 48.0	0.0
N33A				IAmb_Lg		15 39 00.1	
	comp=Z,132nm,0.8s						
W39A	Magazine	4.00	112	Pn	Pn	15 37 49.4	+1.2
	baz=295						
W39A				Pb	Pb	15 37 58.9	+1.5
	baz=295						
W39A				Sb	Sg	15 38 53.3	-2.1
	baz=295						
W39A	Magazine	4.00	112	IAmb_Lg		15 39 05.5	
	comp=Z,227nm,0.9s						
W39A	Magazine	4.00	112	P		15 37 49.7	
	baz=295,SNR=12						
KSCO	Kaye Shedlock'	4.07	304	Pn	Pn	15 37 50.0	+0.9
	baz=122						
KSCO				Pb	Pb	15 38 00.2	+1.6
	baz=122						
KSCO				Sb	Sb	15 38 52.2	+4.4
	baz=122						
S39A	Bolivar	4.08	76		Pn	15 37 50.8	+1.5
S39A	Bolivar	4.08	76	P		15 37 50.5	
	baz=259,SNR=22						
ABTX	Abilene, Hawle	4.30	195	Pn	Pn	15 37 52.8	+0.5
	baz=14						
ABTX				Pb	Pb	15 38 02.5	0.0
	baz=14,SNR=10						
ABTX	Abilene, Hawle	4.30	195	P		15 37 52.8	
	baz=14						
U40A	Yellville	4.42	94	P	Pn	15 37 55.1	+1.2
	baz=277,SNR=14						
U40A				S	Sn	15 38 46.2	+0.8
	baz=277						
U40A	Yellville	4.42	94	Pn	Pn	15 37 55.0	+1.2
U40A				IAmb_Lg		15 39 05.0	
	comp=Z,131nm,1.0s						
U40A	Yellville	4.42	94	P		15 37 55.0	
	baz=277,SNR=17						
U40A				P		15 37 55.0	
	baz=277,SNR=17						
Z38A	Mt. Pleasant	4.46	141	IAmb_Lg		15 39 10.7	
	comp=Z,156nm,0.8s						
Z38A	Mt. Pleasant	4.46	141	P		15 37 55.7	
	baz=323						
MIAR	Mount Ida	4.46	119	P	Pn	15 37 56.3	+1.8
	baz=302						
MIAR				S	Sn	15 38 48.6	+2.2
	baz=302						
MIAR	Mount Ida	4.46	119	Pn	Pn	15 37 56.2	+1.7
MIAR				IAmb_Lg		15 39 11.4	
	comp=Z,135nm,0.9s						
MIAR	Mount Ida	4.46	119	P		15 37 55.8	
	baz=302,SNR=23						
MSTX	Muleshoe	4.61	234	Pb	Pb	15 38 07.9	+0.2
	baz=51,SNR=11						
MSTX				Sb	Sb	15 39 08.9	+5.6
	baz=51						
BGNE	Belgrade	4.61	2	P	Pn	15 37 57.2	+0.7
	baz=182						
BGNE				Sb	Sg	15 39 09.9	-4.8
	baz=182						
BGNE	Belgrade	4.61	2	P		15 37 57.2	
	baz=182,SNR=9.9						
P38A	Dawn	4.71	52		Pn	15 37 59.3	+1.4
P38A				IAmb_Lg		15 39 20.9	
	comp=Z,111nm,0.7s						
P38A	Dawn	4.71	52	P		15 37 59.2	
	baz=235,SNR=13						
WHTX	Lake Whitney,	4.84	171	P	Pn	15 38 01.0	+1.2
	baz=352						
WHTX				Sb	Sg	15 39 17.7	-4.7
	baz=352						
WHTX	Lake Whitney,	4.84	171	P		15 38 00.6	
	baz=352,SNR=7.7						
MGMO	Mountain Grove	4.85	84		Pn	15 38 01.5	+1.6
MGMO				IAmb_Lg		15 39 32.4	
	comp=Z,124nm,0.7s						
T25A	Trinidad	4.89	276	Sb	Sb	15 39 16.7	+5.0
	baz=92						
X40A	Basin Creek Fa	5.02	116	P	Pn	15 38 04.2	+2.0
	baz=299,SNR=8.6						
X40A				S	Sn	15 39 03.7	+3.4
	baz=299						
X40A	Basin Creek Fa	5.02	116		Pn	15 38 04.0	+1.9
X40A				IAmb_Lg		15 39 31.7	
	comp=Z,96nm,0.9s						
X40A	Basin Creek Fa	5.02	116	P		15 38 03.9	
	baz=299,SNR=13						
X40A				P		15 38 03.9	
	baz=299,SNR=13						
R40A	Maddies Statio	5.03	71		Pn	15 38 03.4	+1.1
R40A				IAmb_Lg		15 39 30.6	
	comp=Z,103nm,0.8s						
R40A	Maddies Statio	5.03	71	P		15 38 03.7	
	baz=255,SNR=15						
FCAR	Ozark Folk Cen	5.08	98	IAmb_Lg		15 39 28.8	
	comp=Z,78nm,0.8s						
WHAR	Wooly Hollow	5.11	105	IAmb_Lg		15 39 30.9	
	comp=Z,97nm,0.7s						
W41B	Gary Mavity, V	5.18	106	P	Pn	15 38 05.8	+1.5
	baz=290						
W41B	Gary Mavity, V	5.18	106	P		15 38 05.3	
	baz=290,SNR=13						
237A	Washetta, Mont	5.21	156		Pn	15 38 05.1	+0.3
237A				IAmb_Lg		15 39 43.8	
	comp=Z,94nm,0.9s						
237A	Washetta, Mont	5.21	156	P		15 38 05.1	
	baz=337,SNR=8.8						
237A				S		15 39 07.2	
	baz=337						
WLAR	White Oak Lake	5.27	125	IAmb_Lg		15 39 49.4	
	comp=Z,94nm,1.0s						
L34A	Svendsen Farm,	5.38	16	IAmb_Lg		15 39 37.7	
	comp=Z,143nm,0.8s						
N38A	Joes South For	5.63	43		Pn	15 38 10.9	+0.4
N38A				IAmb_Lg		15 39 54.3	
	comp=Z,167nm,0.8s						
N38A	Joes South For	5.63	43	P		15 38 11.1	
	baz=226,SNR=9.1						
Z41A	Richland Creek	5.74	126	S	Sn	15 39 17.4	-0.5
	baz=310						
Z41A	Richland Creek	5.74	126	S		15 39 19.4	
	baz=310						
Z41A				S		15 39 19.4	
	baz=310						
CCM	Cathedral Cave	5.76	75	IAmb_Lg		15 39 54.6	
	comp=Z,127nm,0.7s						
T42A	Van Buren	5.79	86	IAmb_Lg		15 39 53.2	
	comp=Z,82nm,0.8s						
SDCO	Great Sand Dun	5.81	282	Sb	Sb	15 39 46.5	+8.4
	baz=97						
LCAR	Lake Charles	5.82	95		Pn	15 38 14.4	+1.3
LCAR				IAmb_Lg		15 39 54.9	
	comp=Z,104nm,1.2s						
Q24A	Divide	5.82	294	Sb	Sb	15 39 45.6	+7.1
	baz=110						
K31A	O'Neill	5.83	357	P		15 38 14.2	
	baz=177						
NATX	Nacogdoches	5.86	148	IAmb_Lg		15 40 05.3	
	comp=Z,51nm,0.9s						
435B	Jarrell	6.03	174	Sb	Sg	15 39 53.7	-6.6
	baz=354						
435B	Jarrell	6.03	174	IAmb_Lg		15 40 09.5	
	comp=Z,105nm,1.0s						
CCAR	Cane Creek	6.07	116	IAmb_Lg		15 40 16.2	
	comp=Z,86nm,0.8s						
HBAR	Harrisburg	6.32	99	IAmb_Lg		15 40 18.6	
	comp=Z,106nm,0.7s						
PBMO	Poplar Bluff	6.33	88	IAmb_Lg		15 40 17.9	
	comp=Z,143nm,0.8s						
JCT	Junction City	6.42	192	IAmb_Lg		15 40 13.5	
	comp=Z,139nm,1.1s						
SCIA	State Center	6.45	36	Sb	Sg	15 40 11.1	-2.8
	baz=219						
SCIA	State Center	6.45	36	IAmb_Lg		15 40 16.4	
	comp=Z,124nm,0.8s						
X43A	Marvell	6.46	108	Sb	Sg	15 40 08.6	-5.6
	baz=293						
ISCO	Idaho Springs	6.48	300	P	Pn	15 38 24.5	+2.1
	baz=116,SNR=6.1						
ISCO				Sb	Sg	15 40 07.2	-7.4
	baz=116						
LPAR	Lepanto	6.59	98	IAmb_Lg		15 40 35.0	
	comp=Z,104nm,0.8s						
GNAR	Gosnell	6.74	95	IAmb_Lg		15 40 24.1	
	comp=Z,143nm,0.9s						
ANMO	Albuquerque	6.86	257	Pn	Pn	15 38 28.0	+0.3
	comp=Z,0.3nm,0.3s,baz=79,slow=12,SNR=3.2						
ANMO				Pg	Pb	15 38 47.5	+1.2
	comp=Z,0.4nm,0.3s,baz=48,slow=20,SNR=6.9						
ANMO				Lg	Lg	15 40 18.4	
	comp=Z,1.5nm,0.3s,baz=352,slow=20,SNR=3.0						
ANMO	Albuquerque	6.86	257	Sb	Sb	15 40 18.5	+10
	baz=72						
ANMO	Albuquerque	6.86	257	IAmb_Lg		15 40 29.5	
	comp=Z,26nm,0.8s						
ANMO				IAmb_Lg		15 40 29.5	
	comp=Z,27nm,0.8s						
PARMO	Parma	6.88	89	IAmb_Lg		15 40 25.3	
	comp=Z,134nm,0.8s						
PENMO	Penman	6.99	90	IAmb_Lg		15 40 32.4	
	comp=Z,100nm,0.7s						
143A	Socs Landing,	7.00	124	IAmb_Lg		15 40 36.8	
	comp=Z,62nm,0.9s						
ECSD	EROS Data Cent	7.05	10	P	Pn	15 38 29.6	-0.4
	baz=191						
ECSD				S	Sn	15 39 48.9	-1.3
	baz=191						
ECSD	EROS Data Cent	7.05	10	P		15 38 29.7	
	baz=191,SNR=9.5						
PHWY	Pilot Hill	7.15	311	IAmb_Lg		15 40 33.7	
	comp=Z,64nm,0.8s						
S44A	Carbondale	7.28	80	IAmb_Lg		15 40 39.5	
	comp=Z,112nm,0.8s						
SIUC	Southern Illin	7.31	80	IAmb_Lg		15 40 43.2	
	comp=Z,100nm,0.8s						
Y22D	IRIS PASSCAL I	7.53	251	IAmb_Lg		15 40 57.9	
	comp=Z,97nm,0.9s						
W45A	Hickory Valley	7.58	100	IAmb_Lg		15 40 47.9	
	comp=Z,74nm,0.9s						
OXF	Oxford	7.60	105	P	Pn	15 38 38.5	+1.0
	baz=290,SNR=7.6						
OXF	Oxford	7.60	105	IAmb_Lg		15 40 54.2	
	comp=Z,62nm,0.9s						
Y45A	Yeager Farm, C	7.74	110	IAmb_Lg		15 41 03.3	
	comp=Z,53nm,0.9s						
MNTX	Cornudas Mount	7.75	231	IAmb_Lg		15 41 01.8	
	comp=Z,63nm,1.0s						
HDIL	Hopedale	7.99	59	P	Pn	15 38 45.1	+2.2
	baz=245						
I37A	Lemond, Waseca	8.12	26	IAmb_Lg		15 41 22.7	
	comp=Z,103nm,1.3s						
WVT	Waverly	8.47	91	IAmb_Lg		15 41 25.6	
	comp=Z,22nm,0.7s						
PLAL	Pickwick Lake	8.50	99	IAmb_Lg		15 41 21.9	
	comp=Z,44nm,1.2s						
RSSD	Black Hills	8.52	331	P	Pn	15 38 51.5	+1.2
	baz=148						
RSSD	Black Hills	8.52	331	IAmb_Lg		15 41 24.2	
	comp=Z,52nm,0.9s						
PV11	David Mesa, Pa	8.52	283	IAmb_Lg		15 41 34.0	
	comp=Z,33nm,1.0s						
USIN	University of	8.56	79	IAmb_Lg		15 41 19.2	
	comp=Z,91nm,1.0s						
TX31	Lajitas Ar. Si	8.69	213		Pn	15 38 53.3	+0.7
TX32	Lajitas Array	8.69	213		Pn	15 38 53.5	+0.9
TXAR	Lajitas Array	8.69	213	Pn	Pn	15 38 53.0	+0.4
	comp=Z,0.5nm,0.3s,baz=37,slow=11,SNR=26						
TXAR				Lg	Lg	15 41 15.1	
	comp=Z,0.8nm,0.3s,baz=28,slow=28,SNR=5.1						
TXAR	Lajitas Array	8.69	213		Pn	15 38 53.2	+0.5
JFWS	Jewell Farm	8.70	43	P	Pn	15 38 53.0	+0.3
	baz=228						
JFWS				S	Sn	15 40 27.0	-3.9
	baz=228						
JFWS	Jewell Farm	8.70	43	IAmb_Lg		15 41 26.5	
	comp=Z,78nm,0.7s						
F33A	5 Mile Ranch,	9.16	9	Pn	Pn	15 38 57.6	-1.4
I40A	Norwalk	9.20	37	IAmb_Lg		15 41 48.3	
	comp=Z,62nm,1.0s						
M44A	Midewin, Midew	9.21	57	IAmb_Lg		15 41 48.2	
	comp=Z,77nm,0.8s						
HQIL	Hanson Quary C	9.52	55	IAmb_Lg		15 42 00.4	
	comp=Z,78nm,1.0s						
WCI	Wyandotte Cave	9.66	78	IAmb_Lg		15 42 05.1	
	comp=Z,57nm,0.8s						
E28A	Huff	9.93	350	IAmb_Lg		15 42 07.2	
	comp=Z,50nm,0.9s						
G40A	Rib Lake	10.44	33	Pn	Pn	15 39 16.4	-0.2
PDAR	Pinedale Array	10.50	308	Pn	Pn	15 39 15.7	-1.9
	comp=Z,0.2nm,0.3s,baz=122,slow=14,SNR=7.1						
PDAR				Lg	Lg	15 42 07.8	
	comp=Z,1.0nm,0.3s,baz=105,slow=31,SNR=2.7						
TKL	Tuckaleechee C	11.80	91	Pn	Pn	15 39 36.1	+0.9
	comp=Z,1.1nm,0.3s,baz=214,slow=8.8,SNR=10						
TKL				Lg	Lg	15 42 55.8	
	comp=Z,1.3nm,0.3s,baz=150,slow=8.5,SNR=4.1						
ULM	Lac du Bonnet	13.56	7	Sn	Sn	15 42 16.1	-14
	comp=Z,0.2nm,0.3s,baz=102,slow=20,SNR=1.3						
ULM				Lg	Lg	15 43 43.2	
	comp=Z,0.6nm,0.3s,baz=118,slow=12,SNR=3.2						
SADO	Sadowa	16.54	55	Lg	Lg	15 45 20.4	
	comp=Z,0.4nm,0.3s,baz=159,slow=20,SNR=2.4						
YKA	Yellowknife Ar	27.63	344	P	P	15 42 34.5	+0.3
	comp=Z,0.4nm,0.7s,baz=143,slow=9.5,SNR=9.3						
ILAR	Eielson Array	39.96	330	P	P	15 44 22.0	+0.9
	comp=Z,0.3nm,0.7s,baz=95,slow=6.4,SNR=3.0						

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*JMA **24** 15:45:38.6, 24.°23N×121.°74E, h28^{km}±1^{km}, M2.7*

*TAP **24** 15:45:38.9, 24.°30N×121.°79E, h23^{km}, ML3.5, B*

ISC 24 15:45:38.3±0.9, **24.°28N**±0.°01×**121.°87E**±0.°02, **h20**^{km}±1^{km}**, n129, σ0.^{s}95**/234**, 1C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	Nanao	0.18	342	⇓*i*P	Pb	15 45 43.9	-0.1
	baz=5.0						
ENAH				*i* S	Sb	15 45 47.5	-0.4
	baz=5.0						
ENA	Nanau	0.19	322	⇓*i*P	Pb	15 45 43.6	-0.3
	baz=344						
ENA				*i* S	Sb	15 45 47.1	-0.7
	baz=344						
NACB	Ninganchiao	0.27	247	⇓*i*P	Pb	15 45 44.2	-0.4
	baz=234						
NACB				*i* S	Sb	15 45 48.7	-0.3
	baz=234						
TWD	Chiawan	0.32	232	*i* P	Pb	15 45 45.4	+0.1
	baz=222						
TWD				*i* S	Sb	15 45 50.5	+0.6
	baz=222						
TWC	Suao	0.33	357	⇓*i*P	Pb	15 45 46.1	+0.7
	baz=17						
TWC				*e*S	Sb	15 45 51.2	+0.9
	baz=17						
ETLH	Xiulin Townshi	0.36	259	P	Pb	15 45 45.7	-0.3
	baz=251						
ETLH				S	Sb	15 45 50.8	-0.4
	baz=251						
HWA	Hwalien	0.39	219	*e*P	Pn	15 45 47.4	-1.2
	baz=213						
HWA				*e*S	Sn	15 45 54.4	-1.1
	baz=213						
ENTT	Nioudou	0.45	323	P	Pb	15 45 47.4	-0.1
	baz=329						
ENTT				*e*S	Sb	15 45 53.7	-0.1
	baz=329						
NDT	Datong Townshi	0.46	315	P	Pb	15 45 47.4	-0.2

	baz=319						
NDT	baz=319			eS	Sb	15 45 53.6	-0.3
NNSB	Datong baz=288	0.47	289	⇓iP	Pb	15 45 47.5	-0.4
NNSB	baz=288			iS	Sb	15 45 53.3	-1.1
NNSH	Datong baz=288	0.47	289	⇓iP	Pb	15 45 47.6	-0.3
NNSH	baz=288			iS	Sb	15 45 53.2	-1.2
NNS	Nan Shan baz=289	0.48	290	⇓iP	Pb	15 45 47.7	-0.4
NNS	baz=289			S	Sb	15 45 53.8	-1.0
ILA	Ilan baz=356	0.50	347	eP	Pb	15 45 48.9	+0.6
ILA	baz=356			eS	Sn	15 45 56.8	-1.4
WHF	Hehuan Shan baz=251	0.57	257	eP	Pb	15 45 49.4	-0.5
WHF	baz=251			eS	Sb	15 45 57.1	-0.6
FUSS	Fushou baz=263	0.57	267	eP	Pb	15 45 49.6	-0.2
FUSS	baz=263			eS	Sb	15 45 56.7	-1.0
NTC	Toucheng baz=3.0	0.57	356	eP	Pn	15 45 50.3	-1.0
NTC	baz=3.0			eS	Sb	15 45 58.1	+0.6
YHNB	Yeheng baz=313	0.59	311	⇓iP	Pb	15 45 49.7	-0.4
YHNB	baz=313			S	Sb	15 45 57.0	-1.2
NWLT	Wulai baz=330	0.60	326	⇓P	Pb	15 45 49.9	-0.2
NWLT	baz=330			eS	Sb	15 45 57.8	-0.5
ESL	Shilin baz=218	0.61	221	eP	Pb	15 45 50.1	-0.3
ESL	baz=218			eS	Sb	15 45 58.4	-0.2
NSK	Sanguang baz=313	0.61	310	⇓iP	Pb	15 45 49.9	-0.5
NSK	baz=313			S	Sb	15 45 57.6	-1.1
TWT	Tachien baz=259	0.63	268	P	Pb	15 45 50.9	0.0
TWT	baz=259			eS	Sb	15 45 58.6	-0.8
TDCB	Techi baz=260	0.65	268	⇑iP	Pb	15 45 50.9	-0.2
TDCB	baz=260			eS	Sb	15 45 58.5	-1.3
CHGB	Renai baz=246	0.67	251	iP	Pb	15 45 51.3	-0.2
CHGB	baz=246			eS	Sb	15 46 00.1	-0.4
TIPB	Shuangxi baz=2.0	0.69	357	eP	Pn	15 45 52.3	-0.6
TIPB	baz=2.0			eS	Sn	15 46 02.5	-0.6
EGFH	Guangfu baz=219	0.73	214	eP	Pb	15 45 52.4	+0.1
EGFH	baz=219			eS	Sb	15 46 02.2	+0.4
TWB1	Santiao Chiao baz=8.0	0.73	8	eP	Pn	15 45 53.2	-0.2
TWA	Mucha baz=344	0.74	340	eP	Pn	15 45 52.9	-0.7
TWA	baz=344			eS	Sb	15 46 02.9	+0.5
NHDH	Xindian Distri baz=339	0.75	335	iP	Pn	15 45 52.9	-0.8
NHDH	baz=339			iS	Sb	15 46 02.7	+0.3
TATO	Taipei baz=343	0.78	333	P	Pn	15 45 53.4	-0.7
TATO	baz=343			eS	Sb	15 46 02.8	-0.4
NWF	Wu-fen Shan baz=351	0.79	354	eP	Pn	15 45 54.4	0.0
NWF	baz=351			eS	Sn	15 46 05.4	-0.2
WFSB	Wu-fen Shan baz=353	0.79	354	P	Pn	15 45 54.3	0.0
WFSB	baz=353			eS	Sn	15 46 05.4	-0.1
TAP1	Taipei baz=340	0.82	337	P	Pn	15 45 54.1	-0.6
TAP1	baz=340			eS	Sn	15 46 05.6	-0.6
TAP	Taipei baz=340	0.83	336	eP	Pn	15 45 54.4	-0.3
TAP	baz=340			eS	Sn	15 46 05.8	-0.5
WHP	Taichung City baz=267	0.84	270	P	Pb	15 45 54.3	0.0
WHP	baz=267			eS	Sb	15 46 04.9	-0.3
LIOB	Emei baz=288	0.86	295	P	Pn	15 45 54.9	-0.3
LIOB	baz=288			eS	Sb	15 46 05.9	+0.3
NSTT	Nanjuang baz=294	0.87	294	P	Pb	15 45 54.5	-0.1
NSTT	baz=294			eS	Sb	15 46 04.9	-0.9
TNOU	National Taiwa baz=358	0.87	354	P	Pn	15 45 55.2	-0.2
TNOU	baz=358			eS	Sn	15 46 07.3	-0.1
WPL	Puli Township baz=241	0.88	253	eP	Pb	15 45 54.2	-0.5
WPL	baz=241			eS	Sb	15 46 05.6	-0.4
HGSD	Ruisui baz=193	0.88	208	P	Pn	15 45 55.4	-0.2
HGSD	baz=193			eS	Sn	15 46 07.5	-0.2
NTY	Taoyuan baz=331	0.89	324	eP	Pn	15 45 55.6	0.0
NTY	baz=331			eS	Sn	15 46 07.7	-0.1
DPDB	Guoxing baz=245	0.90	254	P	Pb	15 45 55.2	0.0
DPDB	baz=245			eS	Sb	15 46 07.0	+0.4
YM01	YM01 baz=331	0.91	343	P	Pb	15 45 55.2	-0.2
YM01	baz=331			eS	Sb	15 46 07.1	+0.1
TWS1	Kuangyinshan baz=336	0.92	333	P	Pn	15 45 56.6	+0.6
TWS1	baz=336			S	Sn	15 46 09.1	+0.5
YM10	YM10 baz=331	0.92	342	P	Pn	15 45 56.4	+0.3
YM10	baz=331			eS	Sn	15 46 08.8	+0.1
EHY	Hungye baz=207	0.92	213	eP	Pb	15 45 54.3	-1.2
HSN1	Hsinchu baz=303	0.92	303	eP	Pb	15 45 55.2	-0.4
YM04	YM04 baz=331	0.92	341	P	Pn	15 45 56.2	+0.1
YM04	baz=331			eS	Sn	15 46 08.8	0.0
YM11	YM11 baz=332	0.92	343	P	Pn	15 45 56.9	+0.8
YM11	baz=332			eS	Sn	15 46 08.2	-0.6
YM05	YM05 baz=331	0.92	343	P	Pn	15 45 56.2	0.0
YM05	baz=331			eS	Sn	15 46 08.6	-0.2
NCU	National Centr baz=319	0.93	318	eP	Pn	15 45 56.7	+0.5
NCU	baz=319			S	Sn	15 46 09.7	+0.8
NCUH	Zhongli baz=319	0.93	318	P	Pn	15 45 56.6	+0.5
NCUH	baz=319			eS	Sn	15 46 09.7	+0.9
YM08	YM08 baz=334	0.94	344	eP	Pn	15 45 56.5	+0.1
YM03	YM03 baz=332	0.94	342	eP	Pn	15 45 56.5	0.0
YM03	baz=332			eS	Sb	15 46 08.3	+0.2
SBCB	Hsinchu baz=297	0.95	303	P	Pn	15 45 56.9	+0.4
SBCB	baz=297			eS	Sn	15 46 10.6	+1.1
ANP	Anpu baz=331	0.96	341	eP	Pn	15 45 56.9	+0.3
ANP	baz=331			eS	Sn	15 46 09.8	0.0
NTST	Danshui baz=339	0.96	337	eP	Pn	15 45 57.0	+0.4
NTST	baz=339			S	Sn	15 46 10.6	+0.9
SSLB	Suanglung baz=235	0.97	240	P	Pb	15 45 55.9	-0.5
SSLB	baz=235			eS	Sb	15 46 09.3	+0.5
SMLT	Sun Moon Lake baz=235	0.97	246	P	Pb	15 45 56.3	-0.2
SMLT	baz=235			eS	Sb	15 46 09.0	+0.1
HSN	Hsinchu baz=305	0.97	303	eP	Pn	15 45 56.9	+0.2
HSN	baz=305			eS	Sn	15 46 10.5	+0.6
JYNG	Yonagunijimaku	1.00	80	P	Pn	15 45 58.6	+1.5
JYNG				eS	Sn	15 46 12.8	+2.3
TYC	Yuchr baz=239	1.00	248	P	Pb	15 45 56.4	-0.5
TYC	baz=239			eS	Sb	15 46 09.3	-0.2
TWQ1	Liyutan baz=272	1.00	274	eP	Pn	15 45 57.8	+0.6
TWQ1	baz=272			eS	Sn	15 46 11.1	+0.4
NMLH	Miaoli baz=284	1.02	285	eP	Pn	15 45 57.8	+0.4
NMLH	baz=284			eS	Sn	15 46 11.3	+0.2
NSY	Sanyi baz=269	1.02	278	eP	Pn	15 45 57.6	+0.2
NSY	baz=269			eS	Sn	15 46 12.6	+1.5
TWY	Chenhua baz=336	1.02	346	eP	Pn	15 45 58.0	+0.6
TWY	baz=336			eS	Sn	15 46 12.4	+1.2
YULB	Yu-li baz=206	1.03	211	eP	Pb	15 45 56.9	-0.5
YULB	baz=206			eS	Sb	15 46 09.7	-0.7
EYUL	Yuli baz=216	1.05	209	eP	Pn	15 45 57.6	-0.3
YOJ	Yonaguni jima	1.06	80	P	Pn	15 45 59.4	+1.5
YOJ				eS	Sn	15 46 15.3	+3.3
YOJ	Yonaguni jima baz=73	1.06	80	eP	Pn	15 45 59.3	+1.4
YOJ	baz=73			eS	Sn	15 46 16.1	+4.1
TWF1	Yuli baz=218	1.06	210	eP	Pn	15 45 57.0	-1.0
TWF1	baz=218			eS	Sb	15 46 11.2	-0.2
WWF	Wufeng baz=255	1.09	258	eP	Pb	15 45 59.9	+1.3
WWF	baz=255			eS	Sn	15 46 15.9	+2.9
WHYT	Xinyi Township baz=234	1.10	238	eP	Pb	15 45 58.8	+0.3
WHYT	baz=234			eS	Sn	15 46 14.1	+1.1
TCU	Taichung baz=260	1.10	263	eP	Pb	15 45 59.0	+0.4
TCU	baz=260			eS	Sn	15 46 15.1	+2.0
WDJ	Dajia District baz=271	1.12	274	eP	Pb	15 45 59.6	+0.7
WDJ	baz=271			eS	Sn	15 46 14.8	+1.2
WJS	Zhushan baz=240	1.14	247	P	Pb	15 45 59.9	+0.6
WJS	baz=240			eS	Sn	15 46 15.3	+1.3
YUS	Yu-Shan baz=212	1.15	227	eP	Pn	15 45 59.4	-0.3
YUS	baz=212			eS	Sb	15 46 14.4	0.0
WNT	Mingjian baz=246	1.16	250	eP	Pb	15 46 00.1	+0.6
WNT	baz=246			eS	Sn	15 46 17.1	+2.6
FULB	Fuli baz=216	1.20	206	eP	Pb	15 46 00.3	0.0
FULB	baz=216			eS	Sn	15 46 17.4	+1.8
WCHH	Zhanghua baz=269	1.21	261	eP	Pb	15 46 00.8	+0.2
WCHH	baz=269			eS	Sb	15 46 18.6	+2.8
ALS	Alishan baz=216	1.24	232	eP	Pb	15 46 01.0	-0.2
ALS	baz=216			eS	Sb	15 46 17.8	+1.0
CHKT	Chengkung baz=183	1.26	202	eP	Pb	15 46 01.6	+0.2
CHN5	Tsauling baz=234	1.28	238	eP	Pb	15 46 02.0	+0.2
CHN5	baz=234			eS	Sb	15 46 19.3	+1.4
WGK	Gukeng baz=240	1.33	244	eP	Pb	15 46 02.9	+0.3
ELDTW	Lidau baz=211	1.34	216	eP	Pn	15 46 01.8	0.0
ELDTW	baz=211			eS	Sn	15 46 18.7	-0.4
WDLH	Douliu baz=241	1.35	245	iP	Pb	15 46 03.4	+0.5
WDLH	baz=241			eS	Sb	15 46 22.0	+2.2
EDH	Donghe baz=185	1.40	202	eP	Pn	15 46 02.0	-0.6
EDH	baz=185			eS	Sn	15 46 19.1	-1.3
RLNB	Erlin baz=252	1.43	255	eP	Pb	15 46 04.1	-0.2
CHN2	Minshiung baz=236	1.48	240	eP	Pb	15 46 06.2	+1.2
CHN2	baz=236			eS	Sb	15 46 24.6	+1.2
WTK	Tuku baz=244	1.48	247	P	Pb	15 46 04.8	-0.2
WTK	baz=244			eS	Sb	15 46 25.2	+1.8
CHN4	Tsaushan baz=217	1.49	232	eP	Pb	15 46 05.1	-0.1
CHN4	baz=217			eS	Sb	15 46 25.2	+1.5
TPUB	Ta-pu baz=226	1.50	230	P	Pb	15 46 05.5	+0.1
TPUB	baz=226			eS	Sb	15 46 26.3	+2.4
STYT	Tauyuan baz=218	1.51	223	eP	Pb	15 46 05.0	-0.6
STYT	baz=218			eS	Sb	15 46 24.6	+0.3
LONT	Longtian baz=203	1.52	207	eP	Pn	15 46 03.8	-0.6
LONT	baz=203			eS	Sb	15 46 24.3	-0.5
CHY	Chiayi baz=236	1.54	240	eP	Pb	15 46 05.7	-0.3
CHY	baz=236			eS	Sb	15 46 26.6	+1.6
WTP	Ta-pu baz=224	1.54	228	P	Pb	15 46 06.1	-0.1
WTP	baz=224			eS	Sb	15 46 25.2	-0.1
TWK	Hsinying baz=227	1.62	232	P	Pb	15 46 07.1	-0.4
TWK	baz=227			eS	Sb	15 46 29.2	+1.8
TWG	Pinlang baz=203	1.62	207	eP	Pn	15 46 04.9	-0.9
TWG	baz=203			eS	Sn	15 46 25.1	-1.0
TWGBT	Beinan baz=203	1.62	207	eP	Pn	15 46 04.3	-1.5
TWGBT	baz=203			eS	Sn	15 46 25.3	-0.8
WSF	Szhu baz=244	1.64	247	eS	Sb	15 46 29.4	+1.5
LDUT	Ludao baz=181	1.64	193	P	Pn	15 46 04.8	-1.1
LDUT	baz=181			eS	Sn	15 46 25.4	-1.0
SNST	Tainan City baz=226	1.64	230	eP	Pb	15 46 08.0	+0.2
SNST	baz=226			eS	Sb	15 46 29.1	+1.1
CHN1	Nanshi baz=225	1.64	229	eP	Pb	15 46 07.9	0.0
CHN1	baz=225			eS	Sb	15 46 29.2	+1.1
WLGB	Puzi baz=238	1.64	241	eP	Pn	15 46 06.8	+0.8
SGST	Jiashian baz=221	1.68	225	eP	Pn	15 46 07.2	+0.8
SGST	baz=221			eS	Sb	15 46 29.2	+0.1
IRIF	Iriomote-Funau	1.70	88	P	Pb	15 46 08.0	-0.8
SLGT	Liugui baz=217	1.70	221	eP	Pb	15 46 08.8	-0.1
SLGT	baz=217			eS	Sb	15 46 29.7	-0.1
ICHU	Yijhu baz=220	1.72	238	eP	Pb	15 46 08.4	-0.8
ICHU	baz=220			eS	Sb	15 46 32.7	+2.3
CHN8	Yiju baz=221	1.78	239	eP	Pb	15 46 09.4	-0.8
CHN8	baz=221			eS	Sb	15 46 33.2	+1.1
HATJ	Hateruma jima	1.78	97	P	Pb	15 46 09.9	-0.3
HATJ				eS	Sb	15 46 32.3	+0.2
ECL	Taimali baz=191	1.87	207	eP	Pn	15 46 10.0	+0.9
SCST	Cishan baz=219	1.88	223	eP	Pb	15 46 11.4	-0.4
SCST	baz=219			eS	Sb	15 46 35.7	+0.9
SSD	Sandimen baz=223	1.90	217	eP	Pb	15 46 11.2	-1.1
SSD	baz=223			eS	Sb	15 46 35.2	-0.4
TSMG	Majia baz=222	1.93	216	eP	Pb	15 46 11.9	-0.8
TSMG	baz=222			eS	Sb	15 46 37.4	+1.0
JKRS	Kuro-shima	1.95	91	P	Pb	15 46 12.3	-0.8
JKRS				eS	Sb	15 46 37.9	+0.8
TWM1	Shoushan baz=219	1.96	223	eP	Pn	15 46 11.4	+1.0
MASBT	Mashibuluo baz=210	2.01	215	eP	Pn	15 46 11.8	+0.8
MASBT	baz=210			eS	Sb	15 46 37.9	-0.8
JIJ	Ishigaki jima	2.08	87	P	Pb	15 46 13.6	-1.6
JIJ				eS	Sb	15 46 39.9	-0.7
EAST	Anshuo baz=193	2.11	207	eP	Pb	15 46 14.4	-1.4
PNG	Penghu baz=249	2.23	252	eP	Pn	15 46 13.0	-1.1
PHUB	P'eng-hu baz=248	2.24	251	eP	Pn	15 46 13.5	-0.7
JISG	Ishigakijimahi	2.25	82	P	Pb	15 46 15.5	-2.6
JISG				eS	Sb	15 46 44.1	-1.4
LAY	Lan-yu baz=184	2.25	188	eP	Pn	15 46 14.0	-0.3
PTTC	Pingtan baz=301	2.26	303	eP	Pn	15 46 13.6	-0.9
WDGT	Dungji baz=241	2.26	244	eP	Pn	15 46 14.9	+0.4
SLIU	Shizi baz=193	2.28	206	eP	Pb	15 46 16.9	-1.8
VWUC	VWUC baz=286	2.31	288	eP	Pn	15 46 14.4	-0.8
MATB	Ma-tsu baz=314	2.55	317	eP	Pn	15 46 17.8	-0.7
PTMZ	Houxiangcun baz=285	2.61	287	eP	Pn	15 46 17.7	-1.6
KNMB	Chin-men Tao baz=272	3.18	274	eP	Pn	15 46 25.9	-1.2

IDC 24 15:48:26.0±1.3,**2°.78S**×**126°.84E,h0^{km},mb3.4**/3,**mb1 3.6**/5,**mb1mx3.2**/38,**mbtmp3.4**/5,**ML3.4**/2,**Error ellipse: s-maj=46.9km s-min=24.1km az=64.0,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong 1.8nm,0.3s,baz=267,slow=18,SNR=2.6	4.81	67	Pn	Pn	15 49 40.5	+0.7
SIJI	1.0nm,0.3s,baz=154,slow=23,SNR=1.6			Sn	Sn	15 50 32.1	-4.3
WRA	Warramunga Arr 0.1nm,0.3s,baz=339,slow=11,SNR=2.4	18.57	157	P	P	15 52 44.3	-0.4
ASAR	Alice Springs 0.8nm,0.8s,baz=345,slow=12,SNR=12	21.86	162	P	P	15 53 20.2	-0.3
MKAR	Makanchi Array 0.4nm,0.8s,baz=124,slow=7.7,SNR=4.2	62.99	327	P	P	15 58 54.2	-0.6
KURBB	Kurchatov Arra 0.4nm,0.8s,baz=133,slow=5.9,SNR=4.7	67.29	329	P	P	15 59 23.1	+0.6

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*IDC **24** 16:09:57.5±1.9,15°.42S×173°.30W,h0^{km},mb3.8/7,mb1 4.2/8,mb1mx3.8/48,mbtmp3.8/8,ML4.2/1,MS3.8/14,Ms1 3.8/14,ms1mx3.7/32,Error ellipse: s-maj=112.6km s-min=19.8km az=149.0*

*NEIC **24** 16:10:01.6±1.7,14°.7S±0°.1×173°.6W±0°.1,h33^{km}±6^{km},mb4.6/6,Error ellipse: s-maj=22.4km s-min=13.9km az=146.0*

*NOU **24** 16:10:03.3,14°.61S×173°.47W,h20^{km},MLv4.2,Samoa Islands Region*

ISC 24 16:10:03.3±0.8,**14°.8S**±0°.1×**173°.5W**±0°.1,**h35^{km},n41,**σ**1^{s}.91**/20,**mb4.0**/11,**MS3.8**/14,**Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu 71nm,0.3s,baz=196,slow=2.2,SNR=48	1.92	64	Pn	Pn	16 10 32.3	-1.2
AFI	134nm,0.3s,baz=172,slow=9.1,SNR=7.3			Sn	Sn	16 10 53.8	-2.7
AFI	comp=Z,2μm,20.6s,baz=254,slow=41			LR	LR	16 11 24.4	
AFI	Afiamalu	1.92	64	P	Pn	16 10 33.1	-0.4
NIUE	Niue	5.50	142		Pn	16 11 22.9	+0.1
DZM	Mont Dzumac comp=Z,379nm,27.6s	20.31	246	eLR	LR	16 19 35.0	
DZM	Mont Dzumac comp=Z,234nm,18.2s,baz=72,slow=33	20.31	246	LR	LR	16 21 04.7	
PAE	Paea 2.4nm,0.2s	23.18	100	eT	T	16 38 53.5	
TVO	Taravao 1.2nm,0.3s	23.50	101	eT	T	16 39 16.5	
TBI	Tubuai comp=Z,216nm,29.0s	24.28	114	eLR	LR	16 21 13.5	
TBI	Tubuai 12nm,0.4s	24.28	114	eT	T	16 40 27.0	
URZ	Urewera comp=Z,312nm,18.8s,baz=30,slow=34	24.81	198	LR	LR	16 23 54.5	
HNR	Honiara comp=Z,102nm,20.6s,baz=108,slow=32	26.45	279	LR	LR	16 24 07.8	
H11S2	WAKE ISLAND Hy baz=149,slow=76,SNR=23	38.36	329	T	T	16 57 53.3	
H11S3	WAKE ISLAND Hy baz=149,slow=76,SNR=12	38.37	329	T	T	16 57 53.7	
H11S1	WAKE ISLAND Hy baz=149,slow=76,SNR=14	38.38	329	T	T	16 57 54.1	
H11N3	WAKE ISLAND Hy baz=150,slow=76,SNR=13	39.30	330	T	T	16 59 15.8	
H11N1	WAKE ISLAND Hy baz=150,slow=76,SNR=11	39.31	330	T	T	16 59 14.4	
H11N2	WAKE ISLAND Hy baz=150,slow=76,SNR=10	39.32	330	T	T	16 59 17.2	
STKA	Stephens Creek comp=Z,72nm,21.8s,baz=25,slow=33	44.23	239	LR	LR	16 34 25.3	
WR0	Warramunga Arr	49.66	256	P	P	16 18 48.6	-3.4
WR0	comp=Z,4.1nm,1.1s			IAmb	IAmb	16 19 04.6	
WB0	Warramunga Arr	49.81	256	P	P	16 18 51.9	-1.2
WB0	comp=Z,8.9nm,1.2s			IAmb	IAmb	16 19 09.4	

WB2	**Warramunga Arr**	**49.84**	**256**	P	**P**	**16 18 52.0**	**-1.3**
WB2				IAmb	IAmb	16 19 06.0	
	comp=Z,6.6nm,1.1s						
WRAB	**Tennant Creek**	**49.84**	**256**	P	**P**	**16 18 52.4**	**-1.0**
WRAB				IAmb	IAmb	16 19 00.2	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**49.85**	**256**	P	**P**	**16 18 52.5**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=90,slow=7.3,SNR=10						
AS31	**Alice Springs**	**50.17**	**251**	P	**P**	**16 18 55.0**	**-0.9**
ASAR	**Alice Springs**	**50.17**	**251**	P	**P**	**16 18 55.0**	**-0.8**
	comp=Z,6.1nm,0.6s,baz=87,slow=7.7,SNR=137						
ASAR				LR	LR	16 38 58.5	
	comp=Z,72nm,18.2s,baz=103,slow=35						
ASAR	**Alice Springs**	**50.17**	**251**	P	**P**	**16 18 54.0**	**-1.8**
FITZ	**Fitzroy Crossi**	**58.20**	**258**	P	**P**	**16 19 50.5**	**-3.9**
MJAR	**Matsushiro Arr**	**68.38**	**320**	LR	LR	16 44 49.3	
	comp=Z,76nm,21.7s,baz=95,slow=30						
NVAR	**Mina Array Bea**	**73.96**	**42**	P	**P**	**16 21 37.3**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=229,slow=9.5,SNR=3.5						
NVAR				LR	LR	16 48 32.7	
	comp=Z,78nm,18.9s,baz=232,slow=31						
KSRS	**Korea Array**	**75.62**	**316**	LR	LR	16 48 12.3	
	comp=Z,53nm,20.4s,baz=112,slow=30						
USRK	**Ussuriysk Ar.**	**76.80**	**323**	LR	LR	16 47 52.4	
	comp=Z,84nm,21.3s,baz=136,slow=29						
TXAR	**Lajitas Array**	**80.38**	**56**	P	**P**	**16 22 12.4**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=225,slow=3.7,SNR=5.0						
ILAR	**Eielson Array**	**81.86**	**11**	P	**P**	**16 22 21.0**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=218,slow=5.8,SNR=4.3						
PDAR	**Pinedale Array**	**81.90**	**42**	P	**P**	**16 22 20.6**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=186,slow=1.8,SNR=2.3						
MAW	**Mawson**	**88.33**	**199**	LR	LR	16 59 29.6	
	comp=Z,210nm,18.9s,baz=246,slow=34						
YKA	**Yellowknife Ar**	**89.58**	**23**	P	**P**	**16 22 58.3**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=239,slow=3.5,SNR=4.5						
PLCA	**Paso Flores**	**90.03**	**132**	LR	LR	16 56 08.9	
	comp=Z,44nm,18.4s,baz=174,slow=31						
CMAR	**Chiang Mai Arr**	**92.29**	**288**	LR	LR	16 59 54.4	
	comp=Z,21nm,21.6s,baz=70,slow=32						
SONM	**Songino Array**	**94.29**	**318**	LR	LR	16 58 45.2	
	comp=Z,50nm,21.8s,baz=134,slow=31						
GERES	**GERESS Array B**	**145.51**	**352**	PKPbc	**PKiKP**	**16 29 40.8**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=25,slow=3.2,SNR=3.7						
BRTR	**Keskin Array B**	**145.59**	**321**	PKPbc	**PKiKP**	**16 29 41.5**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=43,slow=3.9,SNR=6.4						

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*BJI **24** 16:11:40.7±0.0, 25°.12N×95°.15E, h117^{km}, mB4.8/32, mb4.7/46*

*NDI **24** 16:11:41.6±4.0, 25°.09N×95°.00E, h125^{km}±12^{km}, mb3.4, ML4.9, mb4.7(NEIC)*

*IDC **24** 16:11:41.1±0.4, 25°.02N×95°.30E, h106^{km}±3^{km}, mb4.2/40, mb1 4.3/41, mb1mx4.2/58, mbtmp4.5/41, MS3.5/9, Ms1 3.6/9, ms1mx3.3/47, Error ellipse: s-maj=9.1km s-min=7.2km az=65.0*

*NEIC **24** 16:11:42.7±2.1, 25°.02N±0°.07×95°.19E±0°.07, h120^{km}±5^{km}, mb4.7/59, Error ellipse: s-maj=10.5km s-min=9.3km az=151.0*

*GCMT **24** 16:11:42.7±0.4, 25°.01N±0°.03×95°.21E±0°.03, h114^{km}±5^{km}, MW4.8/67, Moment Tensor Solution. s6,c6; s67,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.07±.08; $M_{\theta\theta}$-1.77±.08; $M_{\phi\phi}$0.70±.09; $M_{r\theta}$0.06±.07; $M_{\theta\phi}$0.71±.09; $M_{\phi r}$-0.69±.06; Best double couple: $M_0$1.80900×10^{16} NP1:ϕ_s251.00000°, δ54.00000°, λ36.00000°. NP2: ϕ_s138.00000°, δ61.00000°, λ138.00000°. Principal axes: T 1.6420, Plg49.0000°, Azm101.0000°; N 0.3370, Plg40.0000°, Azm290.0000°; P -1.9760, Plg5.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **24** 16:11:44.2±1.0, 24°.94N×95°.28E, h151^{km}, mb4.5/28 Error ellipse: s-maj=8.7km s-min=4.5km az=118.4*

*BGR **24** 16:11:50.2±0.0, 24°.28N×96°.72E, h33^{km}, mb5.6*

ISC 24 16:11:41.4±0.3**, 25°.00N**±0°.03×**95°.07E**±0°.03**, h110**^{km}±2^{km}**, h110**^{km}**:pP-P, n347,** σ1§**82**/437**, mb4.5**/103**, 18C-9D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOHI	**KOHIMA**	**1.12**	**310**	*e*P	**Pn**	**16 12 02.9**	**-1.1**
KOHI				*e*S	**Sn**	**16 12 19.0**	**-2.1**
KOHI				IAML		16 12 19.7	
	comp=N,11µm,0.7s						
KOHI				IAML		16 12 20.0	
	comp=E,10µm,0.7s						
MOKO	**MOKOCHONG**	**1.40**	**339**	*e*P	**Pn**	**16 12 06.5**	**-0.7**
MOKO				*e*S	**Sn**	**16 12 25.0**	**-1.8**
MOKO				IAML		16 12 26.0	
	comp=N,13µm,0.5s						
MOKO				IAML		16 12 26.0	
	comp=E,29µm,0.6s						
JORH	**JORHAT**	**1.88**	**337**	*e*P	**Pn**	**16 12 14.2**	**+1.3**
JORH				*e*S	**Sn**	**16 12 34.8**	**-2.1**
JORH				IAML		16 12 43.8	
	comp=E,38µm,0.6s						
JORH				IAML		16 12 44.6	
	comp=N,14µm,0.4s						
SILR	**SILCHAR**	**2.07**	**264**	*e*P	**Pn**	**16 12 15.7**	**+0.5**
SILR				*e*S	**Sn**	**16 12 41.6**	**+0.6**
SILR				IAML		16 12 43.4	
	comp=N,14µm,0.5s						
SILR				IAML		16 12 44.0	
	comp=E,18µm,0.7s						
LKP	**Lekhapani**	**2.42**	**17**	*e*P	**Pn**	**16 12 19.2**	**-0.6**
LKP				IVmB_BB		16 12 20.1	
	comp=Z,40µm,0.2s						
DIBR	**DIBRUGARH**	**2.46**	**357**	*e*P	**Pn**	**16 12 19.3**	**-1.0**
DIBR				*e*S	**Sn**	**16 12 47.5**	**-2.7**
DIBR				IAML		16 13 00.1	
	comp=E,20µm,0.4s						
DIBR				IAML		16 13 00.2	
	comp=N,33µm,0.4s						
TEZP	**TEZPUR**	**2.60**	**309**	⇑*i*P	**Pn**	**16 12 20.7**	**-1.5**
TEZP				*e*S	**Sn**	**16 12 49.2**	**-4.2**
TEZP				IAML		16 12 50.5	
	comp=N,8µm,0.3s						
TEZP				IAML		16 12 50.9	
	comp=E,7µm,0.2s						
ZIRO	**ZIRO**	**2.74**	**337**	*e*P	**Pn**	**16 12 22.7**	**-1.5**
ZIRO				*e*S	**Sn**	**16 12 52.8**	**-4.2**
ZIRO				IAML		16 12 54.8	
	comp=N,31µm,0.5s						
ZIRO				IAML		16 12 54.8	
	comp=E,24µm,0.6s						
SHL	**Shillong**	**2.94**	**282**	*e*P	**Pn**	**16 12 25.2**	**-1.5**
SHL				*e*S	**Sn**	**16 12 57.9**	**-3.7**
SAIH	**SAIHA**	**3.14**	**218**	*e*P	**Pn**	**16 12 29.3**	**-0.1**
SAIH				*e*S	**Sn**	**16 13 05.8**	**-0.7**
SAIH				IAML		16 13 07.8	
	comp=N,4µm,0.6s						
SAIH				IAML		16 13 08.6	
	comp=E,5µm,0.5s						
GUWA	**GUWAHATI**	**3.27**	**292**	*e*P	**Pn**	**16 12 29.7**	**-1.3**
GUWA				*e*S	**Sn**	**16 13 04.7**	**-4.6**
AGT	**Agartala**	**3.65**	**253**	*e*P	**Pn**	**16 12 35.6**	**-0.5**
AGT				*e*S	**Sn**	**16 13 16.3**	**-2.1**
AGT				IAML		16 13 19.4	
	comp=E,3µm,0.4s						
AGT				IAML		16 13 19.6	
	comp=N,2µm,0.6s						
BELO	**BELONIA**	**3.74**	**243**	*e*P	**Pn**	**16 12 35.6**	**-1.7**
BELO				*e*S	**Sn**	**16 13 20.0**	**-0.5**
LSA	**Lhasa**	**5.83**	**324**	P	**Pn**	**16 13 07.1**	**+1.2**
LSA				S	Sn	16 14 01.8	-10
LSA				LR	LR		
	comp=N,2µm,5.7s						
LSA				LR	LR		
	comp=N,3µm,7.1s						
LSA	**Lhasa**	**5.83**	**324**	P	**Pn**	**16 13 06.6**	**+0.7**
LSA	**Lhasa**	**5.83**	**324**	Pn	**Pn**	**16 13 06.6**	**+0.7**
GTK	**Tadong**	**6.25**	**293**	*e*P	**Pn**	**16 13 10.7**	**-0.6**
GTK				*e*S	**Sn**	**16 14 17.5**	**-3.9**
GTK				IAML		16 14 18.8	
	comp=N,264nm,0.6s						
KMI	**Kunming**	**6.96**	**87**	⇑P	**Pn**	**16 13 23.5**	**+2.5**
KMI				S	**Sn**	**16 14 40.6**	**+1.8**
KMI				smax	smax		
	comp=N,52nm,1.3s						
KMI				smax	smax		
	comp=N,27nm,1.5s						
KMI				LR	LR		
	comp=N,280nm,9.3s						
KMI	**Kunming**	**6.96**	**87**	P	**Pn**	**16 13 23.0**	**+2.0**
KMI	**Kunming**	**6.96**	**87**		**Pn**	**16 13 23.0**	**+2.0**
TAPN	**Taplejung**	**7.01**	**291**	*e*Pn	**Pn**	**16 13 20.7**	**-1.0**
TAPN				*e*Sn	**Sn**	**16 14 36.6**	**-3.5**
	comp=N,2µm,1.0s						
TAPN	**Taplejung**	**7.01**	**291**	*e*Pn	**Pn**	**16 13 20.7**	**-1.0**
TAPN				*e*Sn	**Sn**	**16 14 36.4**	**-3.7**
	comp=N,2µm,1.1s						
CM33	**Chiang Mai Arr**	**7.13**	**149**	P	**Pn**	**16 13 22.0**	**-1.2**
CHTO	**Chiang Mai**	**7.13**	**149**	P	**Pn**	**16 13 23.0**	**-0.2**
CHTO	**Chiang Mai**	**7.13**	**149**	Pn	**Pn**	**16 13 22.9**	**-0.2**
CMMT	**Chiang Mai**	**7.14**	**149**	P	**Pn**	**16 13 23.4**	**+0.1**
ODAN	**Odare**	**7.15**	**287**	*e*Pn	**Pn**	**16 13 22.9**	**-0.7**
ODAN				*e*Sn	**Sn**	**16 14 39.8**	**-3.7**
	comp=N,1µm,0.5s						
ODAN	**Odare**	**7.15**	**287**	*e*Pn	**Pn**	**16 13 22.8**	**-0.8**
ODAN				*e*Sn	**Sn**	**16 14 38.9**	**-4.6**
	comp=N,1µm,0.5s						
PAYA	**Payao**	**7.16**	**141**	P	**Pn**	**16 13 25.3**	**+1.7**
	comp=N,6.1nmcomp=N,16µmcomp=N,2µm,0.7s						
CM34	**Chiang Mai Arr**	**7.20**	**147**	P	**Pn**	**16 13 24.0**	**-0.1**
CM32	**Chiang Mai Arr**	**7.23**	**150**	P	**Pn**	**16 13 24.0**	**-0.5**
MHMT	**Maesarieng**	**7.30**	**158**	P	**Pn**	**16 13 25.1**	**-0.3**
CM35	**Chiang Mai Arr**	**7.35**	**148**	P	**Pn**	**16 13 26.4**	**+0.3**
CM15	**Chiang Mai Arr**	**7.44**	**150**	P	**Pn**	**16 13 28.8**	**+1.4**
CM31	**Chiang Mai Arr**	**7.44**	**150**	P	**Pn**	**16 13 29.0**	**+1.6**
CM31	**Chiang Mai Arr**	**7.44**	**150**		**Pn**	**16 13 28.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**7.44**	**150**	P	**Pn**	**16 13 27.8**	**+0.4**
	comp=N,21nm,0.3s,baz=326,slow=13,SNR=387						
CMAR				LR	LR	16 16 53.4	
	comp=N,101nm,19.1s,baz=343,slow=42						
CM13	**Chiang Mai Arr**	**7.46**	**151**	P	**Pn**	**16 13 28.9**	**+1.3**
CM36	**Chiang Mai Arr**	**7.46**	**149**	P	**Pn**	**16 13 27.0**	**-0.6**
CM02	**Chiang Mai Arr**	**7.46**	**150**	P	**Pn**	**16 13 28.1**	**+0.4**
	comp=N,0.6nmcomp=N,2µmcomp=N,187nm,0.8s						
CM09	**Chiang Mai Arr**	**7.48**	**150**	P	**Pn**	**16 13 28.4**	**+0.5**
	comp=N,0.8nmcomp=N,2µmcomp=N,223nm,0.6s						
CM01	**Chiang Mai Arr**	**7.48**	**150**	P	**Pn**	**16 13 28.6**	**+0.6**
	comp=N,0.7nmcomp=N,2µmcomp=N,200nm,0.6s						
CM05	**Chiang Mai Arr**	**7.49**	**150**	P	**Pn**	**16 13 28.5**	**+0.4**
	comp=N,0.6nmcomp=N,2µmcomp=N,184nm,0.6s						
CM04	**Chiang Mai Arr**	**7.51**	**150**	P	**Pn**	**16 13 28.9**	**+0.5**
	comp=N,0.6nmcomp=N,1µmcomp=N,181nm,0.7s						
LAMP	**Lampang**	**7.72**	**146**	P	**Pn**	**16 13 32.3**	**+1.2**
	comp=N,0.8nmcomp=N,2µmcomp=N,116nm,0.7s						
RAMN	**Ramite**	**7.86**	**286**	*e*Pn	**Pn**	**16 13 32.2**	**-1.1**
RAMN	**Ramite**	**7.86**	**286**	*e*Pn	**Pn**	**16 13 32.2**	**-1.1**
RAMN				*e*Sn	**Sn**	**16 14 58.4**	**-2.3**
	comp=N,548nm,0.6s						
BOK	**Bokaro**	**8.45**	**264**	*e*P	**Pn**	**16 13 39.9**	**-1.2**
BOK				*e*S	**Sn**	**16 15 06.6**	**-8.2**
BOK				IAML		16 15 11.8	
	comp=N,274nm,0.6s						
SUKH	**Sukhothai**	**8.61**	**149**	P	**Pn**	**16 13 44.3**	**+1.1**
	comp=N,4µmcomp=N,402nm,0.7s						
GUN	**Gumba**	**8.73**	**291**	*e*Pn	**Pn**	**16 13 43.8**	**-1.3**
GUN				*e*Sn	**Sn**	**16 15 18.5**	**-3.4**
	comp=N,257nm,0.4s						
GUN	**Gumba**	**8.73**	**291**	*e*Pn	**Pn**	**16 13 43.8**	**-1.3**
GUN				*e*Sn	**Sn**	**16 15 15.9**	**-6.0**
	comp=N,352nm,0.7s						
UTTA	**Uttaradit**	**8.85**	**144**	P	**Pn**	**16 13 47.4**	**+1.0**
	comp=N,2µmcomp=N,210nm,0.5s						
SLVN	**Son La**	**8.91**	**112**	Pn	**Pn**	**16 13 48.2**	**+0.8**
PKI	**Pulchoki**	**9.04**	**289**	*e*Pn	**Pn**	**16 13 47.4**	**-1.9**
PKI	**Pulchoki**	**9.04**	**289**	*e*Pn	**Pn**	**16 13 47.3**	**-2.0**
PKI				*e*Sn	**Sn**	**16 15 23.7**	**-5.7**
	comp=N,303nm,0.8s						
PKIN	**Phulchoki**	**9.05**	**289**	*e*Pn	**Pn**	**16 13 47.4**	**-1.9**
PKIN	**Phulchoki**	**9.05**	**289**	*e*Pn	**Pn**	**16 13 47.5**	**-1.9**
PKIN				*e*Sn	**Sn**	**16 15 25.3**	**-4.3**
	comp=N,224nm,0.5s						
KKN	**Kakani**	**9.20**	**290**	*e*Pn	**Pn**	**16 13 49.7**	**-1.7**
KKN	**Kakani**	**9.20**	**290**	*e*Pn	**Pn**	**16 13 49.6**	**-1.8**
KKN				*e*Sn	**Sn**	**16 15 28.7**	**-4.6**
	comp=N,585nm,1.0s						
PHIT	**Phitsanulok**	**9.24**	**146**	P	**Pn**	**16 13 54.0**	**+2.3**
	comp=N,3µmcomp=N,290nm,0.9s						
DMN	**Daman**	**9.30**	**288**	*e*Pn	**Pn**	**16 13 50.7**	**-2.2**
DMN				*e*Sn	**Sn**	**16 15 31.3**	**-4.6**
	comp=N,377nm,0.7s						
DMN	**Daman**	**9.30**	**288**	*e*Pn	**Pn**	**16 13 50.6**	**-2.3**
DMN				*e*Sn	**Sn**	**16 15 32.5**	**-3.4**
	comp=N,147nm,0.6s						
CD2	**Chengdu**	**9.68**	**51**	P	**Pn**	**16 13 58.4**	**+0.7**
CD2				S	**Sn**	**16 15 48.3**	**+3.7**
CD2				pmax	pmax		
	comp=N,30nm,0.5s						
CD2				pmax	pmax		
	comp=N,160nm,5.2s						
CD2				LR	LR		
	comp=N,560nm,10.8s						
CD2				LR	LR		
	comp=N,670nm,14.1s						
CD2				LR	LR		
	comp=N,520nm,8.1s						
GYA	**Guiyang**	**10.56**	**80**	⇑P	**Pn**	**16 14 10.0**	**+0.3**
GYA				sP		16 14 44.0	
GYA				S	**Sn**	**16 16 07.8**	**+1.7**
GYA				pmax	pmax		
	comp=N,25nm,1.0s						
DANN	**Dangsing**	**10.64**	**291**	*e*Pn	**Pn**	**16 14 07.5**	**-3.6**
DANN				*e*Sn	**Sn**	**16 16 01.7**	**-6.7**
	comp=N,292nm,0.6s						
DANN	**Dangsing**	**10.64**	**291**	*e*Pn	**Pn**	**16 14 07.4**	**-3.6**
DANN				*e*Sn	**Sn**	**16 16 02.2**	**-6.2**
	comp=N,232nm,0.7s						
CHAI	**Chaiyaphum**	**11.13**	**143**	P	**Pn**	**16 14 19.0**	**+1.6**
	comp=N,35nm,0.7s						
DGPR	**DIGLIPUR**	**11.93**	**190**	*e*P	**Pn**	**16 14 26.6**	**-1.5**
SRAK	**Srakaew**	**12.75**	**148**	P	**P**	**16 14 44.3**	**-1.3**
PHET	**Kaeng Krachan**	**12.78**	**159**	P	**P**	**16 14 42.9**	**-3.0**
	comp=N,374nmcomp=N,41nm,0.7s						
PATY	**Pattaya**	**13.20**	**154**	P	**P**	**16 14 53.0**	**+2.4**
LZH	**Lanzhou**	**13.38**	**32**	*e*P	**Pn**	**16 14 44.8**	**-2.3**
LZH				pmax	pmax		
	comp=N,26nm,1.1s						
LZH				pmax	pmax		
	comp=N,110nm,5.4s						
UBPT	**Khong Chiam**	**13.74**	**133**	P	**Pn**	**16 14 52.1**	**+0.4**
	comp=N,7µmcomp=N,21nm,1.4s						
ENH	**Enshi**	**13.82**	**64**	Pn	**Pn**	**16 14 50.8**	**-1.9**
GTA	**Gaotai**	**14.91**	**14**	P	**Pn**	**16 15 03.8**	**-2.9**
GTA				sP	P	16 15 36.6	+27
GTA				pmax	pmax		
	comp=N,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=N,47nm,3.9s						
GTA				LR	LR		
	comp=N,120nm,13.0s						
GTA				LR	LR		
	comp=N,310nm,11.0s						
GTA				LR	LR		
	comp=N,180nm,9.1s						
QIZ	**Qiongzhong**	**14.93**	**111**	P	**P**	**16 15 10.8**	**+1.0**
QIZ				sP	Pn	16 15 40.3	+33
QIZ				S	**Sn**	**16 17 50.3**	**-1.7**
QIZ				pmax	pmax		
	comp=N,86nm,1.0s						
XAN	**Xi'an**	**15.04**	**50**	P	**Pn**	**16 15 06.1**	**-2.1**
XAN				sP	sP	16 15 40.8	-4.2
XAN				S	**Sn**	**16 17 56.8**	**+2.4**
XAN				pmax	pmax		
	comp=N,18nm,1.1s						
XAN				LR	LR		
	comp=N,230nm,10.9s						
XAN				LR	LR		
	comp=N,190nm,16.3s						
XAN				LR	LR		
	comp=N,280nm,19.5s						
NGP	**Nagpur**	**15.23**	**259**	*e*P	**Pn**	**16 15 10.5**	**-0.2**
NGP				IAML		16 17 52.6	
	comp=N,63nm,0.8s						
DDI	**Dehra Dun**	**15.97**	**293**	*e*P	**Pn**	**16 15 18.5**	**-1.4**
DDI				IAML		16 18 08.6	
	comp=N,176nm,0.9s						
BHPL	**Bhopal**	**16.20**	**267**	*e*P	**Pn**	**16 15 20.9**	**-1.9**
BHPL				IAML		16 18 14.1	
	comp=N,78nm,1.0s						
NDI	**New Delhi**	**16.35**	**287**	*e*P	**P**	**16 15 26.0**	**+0.6**
SMLA	**Simla**	**16.93**	**295**	*e*P	**Pn**	**16 15 30.3**	**-1.3**
SMLA				IAML		16 18 34.9	
	comp=E,94nm,0.9s						
SMLA				IAML		16 18 36.3	
	comp=N,86nm,1.0s						
HYB	**Hyderabad**	**17.14**	**247**	*i* P	**Pn**	**16 15 35.0**	**+0.7**
HYB				*e*		16 18 32.0	
HYB				*e*S	**Sn**	**16 18 44.0**	**-1.1**
TRTT	**Trang**	**17.63**	**165**	P	**Pn**	**16 15 43.7**	**+3.4**
WHN	**Wuhan**	**17.93**	**68**	⇑P	**Pn**	**16 15 45.8**	**+2.1**
WHN				sP	**sP**	**16 16 14.6**	**-2.4**
WHN				S	**Sn**	**16 19 03.5**	**-0.5**
WHN				LR	LR		
	comp=N,540nm,18.2s						
DHRM	**DHARAMSHALA**	**17.97**	**298**	*e*P	**P**	**16 15 42.3**	**-1.2**
DHRM				IAML		16 18 56.8	
	comp=E,58nm,0.8s						
DHRM				IAML		16 18 57.5	
	comp=N,65nm,1.2s						
WMQ	**Urumqi**	**19.72**	**344**	*e*P	**Pn**	**16 16 05.3**	**+0.5**
WMQ				pP	pP	16 16 22.8	-0.3
WMQ				sP	sP	16 16 34.8	-2.4
WMQ				S	**S**	**16 19 40.8**	**+2.2**
WMQ				pmax	pmax		
	comp=N,43nm,1.1s						
WMQ				pmax	pmax		
	comp=N,200nm,6.3s						
WMQ	**Urumqi**	**19.72**	**344**	P	**P**	**16 15 58.8**	**-3.5**
WMQ				pmax	pmax		
	comp=Z,26nm,0.8s						
WMQ	**Urumqi**	**19.72**	**344**	P	**P**	**16 15 58.8**	**-3.5**
WMQ				IAmb	IAmb	16 16 07.5	
	comp=Z,26nm,0.8s						
BTO	**Baotou**	**19.96**	**35**	*e*P	**P**	**16 16 03.9**	**-1.1**
KULM	**Kulim**	**20.32**	**164**	P	**P**	**16 16 09.2**	**+0.3**
POO	**Poona**	**20.72**	**256**	*e*P	**P**	**16 16 14.0**	**+0.7**
	comp=Z,20nm,1.2s						
POO				*i* S	**S**	**16 19 53.0**	**-5.7**
NIL	**Nilore**	**20.85**	**299**	P	Pn	16 16 17.1	-1.0
NIL				pmax	pmax		
	comp=Z,33nm,0.8s						
NIL	**Nilore**	**20.85**	**299**	P	Pn	16 16 17.1	-0.9
NIL				IAmb	IAmb	16 16 29.2	
	comp=Z,33nm,0.8s						
HHC	**Hu-ho-hao-te**	**20.96**	**37**	*e*P	**P**	**16 16 15.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
IPM	**Ipoh**	**21.19**	**163**	P	**P**	**16 16 18.6**	**+0.3**
KSH	**Kashi**	**21.62**	**317**	P	**P**	**16 16 25.3**	**+2.5**
KSH				pmax	pmax		
	comp=Z,16nm,0.9s						
KSH				pmax	pmax		
	comp=Z,330nm,5.0s						
TSI	**Tuntungan**	**21.64**	**170**	P	**P**	**16 16 26.2**	**+3.1**
	comp=Z,206nm,1.2s						
THW	**Thamme Wali**	**21.82**	**296**	P	**P**	**16 16 26.2**	**+1.3**
CEP	**Cherat**	**21.97**	**299**	P	**P**	**16 16 26.2**	**-0.4**
NJ2	**Nanjing**	**22.02**	**66**	*e*P	**P**	**16 16 26.0**	**-1.0**
NJ2				pP	**pP**	**16 16 46.4**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,26nm,0.7s						
SHLS	**Shalkode**	**22.18**	**329**	*e*P	**P**	**16 16 29.2**	**+0.4**
	baz=330						
SHLS	**Shalkode**	**22.18**	**329**	*e*P	**P**	**16 16 29.1**	**+0.4**
PALK	**Pallekele**	**22.35**	**220**	P	**P**	**16 16 32.8**	**+2.2**
	comp=Z,13nm,1.0s,baz=120,slow=14,SNR=2.9						
PALK				S	**S**	**16 20 32.3**	**+3.4**
	comp=Z,9.2nm,0.6s,baz=95,slow=11,SNR=4.6						
PALK				LR	LR	16 25 24.4	
	comp=Z,94nm,21.6s,baz=126,slow=37						
PSI	**Prapat**	**22.38**	**170**	P	**P**	**16 16 32.5**	**+1.5**
	comp=Z,6.3nm,0.6s,baz=359,slow=7.1,SNR=7.8						
PSI				ScP	**ScP**	**16 23 49.4**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=356,slow=1.9,SNR=4.6						
PSI				LR	LR	16 26 24.6	
	comp=Z,49nm,21.8s,baz=91,slow=39						
SATY	**Saty**	**22.62**	**327**	*e*P	**P**	**16 16 36.0**	**+2.8**
	baz=327						
SATY				*e*S	**S**	**16 20 36.6**	**+3.6**
	baz=327						
SATY	**Saty**	**22.62**	**327**	*e*P	**P**	**16 16 36.0**	**+2.8**
SATY				*e*S	**S**	**16 20 36.6**	**+3.6**
KPKS	**Kokpek**	**22.79**	**328**	*e*P	**P**	**16 16 37.6**	**+2.7**
	baz=328						
KPKS				*e*S	**S**	**16 20 39.3**	**+3.7**
	baz=328						
KPKS	**Kokpek**	**22.79**	**328**	*e*P	**P**	**16 16 37.5**	**+2.7**
KPKS				*e*S	**S**	**16 20 39.2**	**+3.7**
TNSS	**Tian-Shan**	**23.35**	**325**	*e*P	**P**	**16 16 42.4**	**+1.9**
	baz=325						
TNSS	**Tian-Shan**	**23.35**	**325**	*e*P	**P**	**16 16 42.4**	**+1.9**
TPUB	**Ta-pu**	**23.38**	**89**	P	**P**	**16 16 39.2**	**-1.3**
MDOK	**Medeo**	**23.38**	**325**	*e*P	**P**	**16 16 42.1**	**+1.5**
	baz=326						
MDOK	**Medeo**	**23.38**	**325**	*e*P	**P**	**16 16 42.0**	**+1.5**
SSLB	**Suanglung**	**23.60**	**87**	P	**P**	**16 16 39.4**	**-3.1**
SSLB				IAmb	IAmb	16 16 44.5	
	comp=Z,22nm,0.8s						
GSI	**Gunungsitoli**	**23.68**	**174**	P	**P**	**16 16 43.2**	**-0.1**
	comp=Z,86nm,1.1s						
MTBS	**Maitube**	**23.68**	**324**	*e*P	**P**	**16 16 45.5**	**+2.4**
	baz=325						
MTBS	**Maitube**	**23.68**	**324**	*e*P	**P**	**16 16 45.5**	**+2.4**
ZSN	**Zaisan**	**23.82**	**343**	*e*P	**P**	**16 16 47.3**	**+3.0**
	baz=343						
ZSN	**Zaisan**	**23.82**	**343**	*e*P	**P**	**16 16 47.2**	**+3.0**
TWG	**Pinlang**	**23.86**	**90**	P	**P**	**16 16 43.0**	**-1.9**
TWG				IAmb	IAmb	16 16 48.4	
	comp=Z,39nm,0.7s						
CHKK	**Chushkaly**	**23.91**	**326**	*e*P	**P**	**16 16 47.4**	**+2.3**
	baz=327						
CHKK	**Chushkaly**	**23.91**	**326**	*e*P	**P**	**16 16 47.3**	**+2.3**
YULB	**Yu-li**	**23.97**	**88**	P	**P**	**16 16 46.8**	**+1.0**
YULB				IAmb	IAmb	16 16 49.1	
	comp=Z,33nm,0.8s						
MK31	**Makanchi Array**	**24.02**	**338**	P	**P**	**16 16 47.5**	**+1.4**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MK31	**Makanchi Array**	**24.02**	**338**	P	**P**	**16 16 47.5**	**+1.4**
MKAR	**Makanchi Array**	**24.02**	**338**	P	**P**	**16 16 48.3**	**+2.3**
	comp=Z,11nm,0.5s,baz=149,slow=9.1,SNR=312						
MKAR				PcP	**PcP**	**16 20 25.7**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=110,slow=5.6,SNR=4.1						
MKAR				S	**S**	**16 20 58.4**	**+3.2**
	comp=Z,3.9nm,1.0s,baz=152,slow=12,SNR=4.6						
MKAR				ScP	**ScP**	**16 23 54.0**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=120,slow=5.0,SNR=12						
MKAR	**Makanchi Array**	**24.02**	**338**	P	**P**	**16 16 47.8**	**+1.7**
TDK	**Taldyqorghan**	**24.09**	**330**	*e*P	**P**	**16 16 49.0**	**+2.4**
	baz=330						
TDK	**Taldyqorghan**	**24.09**	**330**	*e*P	**P**	**16 16 49.0**	**+2.4**
NACB	**Ninganchiao**	**24.13**	**86**	P	**P**	**16 16 48.6**	**+1.4**
MAKZ	**Makanchi**	**24.14**	**338**	P	**P**	**16 16 49.2**	**+2.1**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAKZ	**Makanchi**	**24.14**	**338**	P	**P**	**16 16 49.2**	**+2.1**
KUU	**Kurty**	**24.26**	**326**	*e*P	**P**	**16 16 49.9**	**+1.6**
	baz=326						
KUU				*e*S	**S**	**16 21 01.8**	**+2.6**
	baz=326						
KUU	**Kurty**	**24.26**	**326**	*e*P	**P**	**16 16 49.8**	**+1.6**
KUU				*e*S	**S**	**16 21 01.7**	**+2.6**
AAK	**Ala-Archa**	**24.42**	**321**	P	**P**	**16 16 52.7**	**+2.9**
	comp=Z,3.9nm,0.7s,baz=133,slow=6.6,SNR=13						
AAK				PcP	**PcP**	**16 20 27.9**	**+1.8**
	comp=Z,3.2nm,0.6s,baz=141,slow=5.0,SNR=2.0						
AAK				ScP	**ScP**	**16 23 56.4**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=273,slow=8.5,SNR=4.8						
AAK	**Ala-Archa**	**24.42**	**321**	*ce*P	**P**	**16 16 52.1**	**+2.2**
AAK				pmax	pmax		
	comp=Z,16nm,1.0s						
AAK	**Ala-Archa**	**24.42**	**321**	P	**P**	**16 16 51.9**	**+2.0**
KBL	**Kabul**	**24.45**	**299**	P	**P**	**16 16 52.1**	**+1.8**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KBL	**Kabul**	**24.45**	**299**	P	**P**	**16 16 52.1**	**+1.8**
SONM	**Songino Array**	**24.49**	**19**	P	**P**	**16 16 50.9**	**+0.5**
	comp=Z,5.3nm,0.7s,baz=196,slow=9.6,SNR=40						
SONM				ScP	**ScP**	**16 23 54.0**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=188,slow=2.4,SNR=6.9						
SONM	**Songino Array**	**24.49**	**19**	P	**P**	**16 16 51.0**	**+0.5**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONM	**Songino Array**	**24.49**	**19**	P	**P**	**16 16 51.0**	**+0.5**
ULN	**Ulaanbaatar**	**24.71**	**20**	P	**P**	**16 16 53.6**	**+1.1**
ULN				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	**Ulaanbaatar**	**24.71**	**20**	P	**P**	**16 16 53.6**	**+1.1**

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ZAK   Zakamensk          26.12  12 eP     P       16 17 06.1 +0.9
ZAK                                pmax   pmax
      comp=Z,15nm,1.1s
IUG   Iuzhnay            26.82 316 eP     P       16 17 14.1 +2.5
      baz=316
IUG   Iuzhnay            26.82 316 eP     P       16 17 14.0 +2.5
MOY   Mondy              27.01   8 eP     P       16 17 16.3 +3.2
KKAR  Karatay Array      27.04 318  P     P       16 17 12.9 -0.5
KKAR                                              16 20 33.3
KKAR  Karatay Array      27.04 318  P     P       16 17 12.9 -0.5
KKAR                                PcP   PcP     16 20 33.3 +1.4
KURBB Kurchatov Arra     28.59 338  P     P       16 17 28.7 +1.7
      comp=Z,4.0nm,0.5s,baz=146,slow=8.9,SNR=45
KURBB                               pP    pP      16 17 52.9 +1.4
      comp=Z,5.3nm,0.7s,baz=148,slow=10.0,SNR=5.9
KURBB                               PcP   PcP     16 20 36.1 +0.6
      comp=Z,12nm,0.7s,baz=151,slow=2.3,SNR=25
KURBB                               S     S       16 22 08.9 +1.7
      comp=Z,1.3nm,1.0s,baz=146,slow=17,SNR=3.6
KURBB                               ScP   ScP     16 24 07.1 +0.3
      comp=Z,5.7nm,0.8s,baz=154,slow=2.7,SNR=32
KURK  Kurchatov          28.64 338  P     P       16 17 28.7 +1.3
KURK                                              16 20 36.1
KURK                                S     S       16 22 08.9 +1.0
KURK  Kurchatov          28.64 338  P     P       16 17 28.9 +1.4
KURK                                IAmb  IAmb    16 17 30.3
      comp=Z,7.6nm,0.6s
JOW   Kunigami           29.88  79  P     P       16 17 37.4 -1.3
      comp=Z,12nm,0.7s,baz=123,slow=20,SNR=10
ZAA0  Zalesovo Array     29.91 348  P     P       16 17 39.9 +1.3
ZALV  Zalesovo Beam      29.91 348  P     P       16 17 40.0 +1.3
      comp=Z,2.0nm,0.4s,baz=169,slow=8.8,SNR=17
ZALV                                PcP   PcP     16 20 38.2 -0.6
      comp=Z,1.6nm,0.6s,baz=194,slow=3.7,SNR=3.0
ZALV                                ScP   ScP     16 24 10.7 -0.2
      comp=Z,0.5nm,0.5s,baz=156,slow=4.3,SNR=2.8
ZALV                                LR    LR      16 31 11.7
      comp=Z,111nm,18.8s,baz=103,slow=39
ZALV  Zalesovo Beam      29.91 348  P     P       16 17 38.8 +0.1
BRZS  Berezniki          30.39 331 eP     P       16 17 45.0 +2.0
      baz=331
BRZS  Berezniki          30.39 331 eP     P       16 17 45.0 +2.0
KSRS  Korea Array        30.56  58  P     P       16 17 45.5 +0.8
      comp=Z,0.6nm,0.7s,baz=260,slow=10,SNR=5.8
KSRS                                LR    LR      16 31 41.2
      comp=Z,76nm,18.1s,baz=211,slow=40
JNU   Nakatsue           32.21  67  P     P       16 17 57.8 -1.5
      comp=Z,5.4nm,0.8s,baz=303,slow=4.5,SNR=4.7
BVAR  Borovoye Array     33.59 333  P     P       16 18 12.2 +1.3
      comp=Z,1.2nm,0.4s,baz=108,slow=14,SNR=14
BVAR                                PcP   PcP     16 20 49.4 +0.5
      comp=Z,7.0nm,0.6s,baz=142,slow=2.2,SNR=22
BRVK  Borovoye           33.66 333ceP     P       16 18 13.6 +2.1
BRVK                                pmax  pmax
      comp=Z,6.0nm,1.0s
BRVK  Borovoye           33.66 333  P     P       16 18 11.3 -0.2
BRVK                                PcP   PcP     16 20 50.0 +1.0
GEYT  Alibeck            33.83 301  P     P       16 18 14.6 +1.3
      comp=Z,1.7nm,0.8s,baz=120,slow=8.7,SNR=2.2
GEYT                                pP    pP      16 18 39.1 +1.0
      comp=Z,4.9nm,0.9s,baz=119,slow=12,SNR=5.0
GEYT                                PcP   PcP     16 20 49.2 -0.7
      comp=Z,2.1nm,0.5s,baz=88,slow=6.6,SNR=3.0
GEYT                                ScP   ScP     16 24 25.3 +0.6
      comp=Z,1.2nm,0.5s,baz=113,slow=3.4,SNR=4.1
GEYT  Alibeck            33.83 301  IAmb  IAmb    16 18 23.6
      comp=Z,3.2nm,0.7s
BOD   Bodaibo            35.48  17 eP     P       16 18 27.8 +0.7
BOD                                 pmax  pmax
      comp=Z,8.0nm,1.2s
USRK  Ussuriysk Ar.      35.54  48  P     P       16 18 25.8 -2.0
      comp=Z,1.1nm,0.5s,baz=240,slow=9.1,SNR=6.0
ABKAR Akbulak array      36.51 321  P     P       16 18 37.7 +1.6
ABKAR Akbulak array      36.51 321  P     P       16 18 37.6 +1.5
KLR   Kul'dur            37.40  40  P     P       16 18 41.5 -2.1
      comp=Z,0.3nm,0.4s,baz=55,slow=4.4,SNR=1.7
AKTO  Aktyubinsk         38.16 321  P     P       16 18 51.0 +1.0
      comp=Z,1.9nm,0.4s,baz=138,slow=6.9,SNR=9.1
AKTO                                pP    pP      16 19 14.2 -1.0
      comp=Z,4.3nm,0.7s,baz=130,slow=10,SNR=4.4
AKTO                                PcP   PcP     16 21 02.9 +0.4
      comp=Z,4.7nm,0.9s,baz=117,slow=5.1,SNR=5.1
MAJO  Matsushiro         38.52  62 i P    P       16 18 52.8 -0.4
MAJO                                pmax  pmax
      comp=Z,5.0nm,0.5s
MAT   Matsushiro         38.52  62  P     P       16 18 50.9 -2.3
MAT                                eS     S       16 24 39.6 -1.3
MJAR  Matsushiro Arr     38.52  62  P     P       16 18 50.8 -2.5
      comp=Z,4.5nm,0.7s,baz=271,slow=8.8,SNR=14
MJAR                                PcP   PcP     16 21 02.9 -1.0
      comp=Z,1.8nm,0.8s,baz=177,slow=1.2,SNR=5.0
MJAR  Matsushiro Arr     38.52  62  P     P       16 18 53.8 +0.6
MJAR                                              16 21 02.4
MJAR                                pmax  pmax
      comp=Z,3.0nm,1.0s
MJAR  Matsushiro Arr     38.52  62  P     P       16 18 53.8 +0.6
MJAR                                      PcP     16 21 02.4 -1.5
SVE   Sverdlovsk         40.31 331 eP     P       16 19 10.2 +2.4
SVE                                 pmax  pmax
      comp=Z,18nm,0.7s
ARU   Arti               41.00 330  P     P       16 19 14.5 +1.0
      comp=Z,1.7nm,0.5s,baz=125,slow=2.7,SNR=11
ARU                                 PcP   PcP     16 21 11.6 +0.2
      comp=Z,2.5nm,0.7s,baz=148,slow=4.3,SNR=4.7
ARU   Arti               41.00 330c iP    P       16 19 14.9 +1.5
ARU                                               16 21 10.6
ARU                                 S     S       16 25 19.8 +2.4
ARU                                 SS    SS      16 28 26.2 +2.8
ARU                                               16 29 07.3
ARU                                 pmax  pmax
      comp=Z,4.0nm,0.6s
ARU   Arti               41.00 330  P     P       16 19 13.3 -0.1
ARU                                 IAmb  IAmb    16 19 27.6
      comp=Z,21nm,1.5s
ASAJ  Asahikawa          42.88  51  P     P       16 19 26.4 -2.5
      comp=Z,5.6nm,0.8s,baz=122,slow=27,SNR=1.2
GNI   Garni              44.44 303ceP     P       16 19 44.5 +2.8
GNI                                 pmax  pmax
      comp=Z,8.0nm,1.3s
SOEI  Soe                44.77 137  P     P       16 19 43.3 -1.1
RAYN  Ar Rayn            45.01 279  P     P       16 19 47.2 +0.9
RAYN                                pmax  pmax
      comp=Z,3.0nm,0.6s
RAYN  Ar Rayn            45.01 279  P     P       16 19 47.2 +0.9
ZEI   Tsey               45.30 306 eP     P       16 19 49.4 +0.9
ZEI                                 pmax  pmax
      comp=Z,18nm,1.3s
FAKI  Fak Fak            45.52 122  P     P       16 19 48.0 -2.3
KBZ   Khabaz             46.13 307  P     P       16 19 55.0 +0.2
      comp=Z,1.4nm,0.4s,baz=263,slow=6.8,SNR=10.0
KIV   Kislovodsk         46.31 308 eP     P       16 19 56.7 +0.4
KIV                                 pmax  pmax
      comp=Z,35nm,1.0s
KIRV  Kirov              46.35 329ceP     P       16 19 58.4 +2.2
ANN   Anapa              50.13 308 eP     P       16 20 17.9 -7.6
ANN                                 pmax  pmax
      comp=Z,124nm,1.8s
TIXI  Tiksi              50.39  13  P     P       16 20 27.1 +0.1
TIXI                                pmax  pmax
      comp=Z,11nm,0.7s
TIXI  Tiksi              50.39  13  P     P       16 20 27.1 +0.1
TIXI                                IAmb  IAmb    16 20 27.7
      comp=Z,11nm,0.7s
KLMR  Klimovskoe         51.84 329 eP     P       16 20 37.6 -0.5
KLMR                               e              16 21 48.7
KLMR                                pmax  pmax
      comp=Z,22nm,1.4s
KLMR  Klimovskoe         51.84 329 eP     P       16 20 37.6 -0.5
KLMR                                AMP           16 20 47.2
      comp=Z,22nm,1.4s
KLMR                               epP    pP      16 21 07.0 +2.5
KLMR                               ePcP   PcP     16 21 48.7 -0.8
OBN   Obninsk            51.94 322⇑eP     P       16 20 39.7 +0.8
OBN                                e              16 22 35.5
OBN                                eS     S       16 27 42.4  -11
OBN                                 pmax  pmax
      comp=Z,4.0nm,1.0s
BR131 Keskin Array S     52.97 302  P     P       16 20 47.7 +0.8
BR131                               pmax  pmax
      comp=Z,6.0nm,0.6s
BR131 Keskin Array S     52.97 302  P     P       16 20 47.7 +0.8
BR131                               IAmb  IAmb    16 20 50.1
      comp=Z,5.7nm,0.6s
BRTR  Keskin Array B     52.97 302  P     P       16 20 48.0 +1.1
      comp=Z,2.2nm,0.5s,baz=127,slow=7.5,SNR=23
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BRTR                                pP    pP      16 21 12.8 -0.8
      comp=Z,4.5nm,1.0s,baz=116,slow=8.4,SNR=4.3
BRTR  Keskin Array B     52.97 302        P       16 20 46.7 -0.2
SEY   Seymchan           53.28  29  P     P       16 20 47.5 -1.1
      comp=Z,0.7nm,0.5s,baz=280,slow=6.1,SNR=7.9
SEY                                 PcP   PcP     16 21 53.9 -1.0
      comp=Z,1.7nm,0.6s,baz=208,slow=8.9,SNR=4.9
AKASG Malin Array Be     55.91 316  P     P       16 21 08.0 +0.2
      comp=Z,3.4nm,0.7s,baz=84,slow=6.8,SNR=16
AKASG                               LR    LR      16 49 10.4
      comp=Z,43nm,19.3s,baz=305,slow=40
AKASG Malin Array Be     55.91 316  P     P       16 21 08.0 +0.2
AKASG Malin Array Be     55.91 316  P     P       16 21 08.0 +0.2
AKBB  Malin Array Si     55.91 316  P     P       16 21 06.2 -1.6
AKBB                                pmax  pmax
      comp=Z,8.0nm,0.7s
AKBB  Malin Array Si     55.91 316  P     P       16 21 06.2 -1.6
AKBB                                IAmb  IAmb    16 21 08.8
      comp=Z,7.8nm,0.7s
ELL   Elmali             56.18 299  P     P       16 21 10.3 +0.1
ELL                                 pmax  pmax
      comp=Z,110nm,0.9s
ELL   Elmali             56.18 299  P     P       16 21 10.3 +0.1
MNK   Minsk              56.86 320 i P    P       16 21 14.0 -0.5
      comp=E,1.0nm,0.6s
MNK                                i P    P       16 21 14.0 -0.5
      comp=N,21nm,0.9s
MNK                                i P    P       16 21 14.0 -0.5
      comp=Z,11nm,1.8s
MNK                                i pP   pP      16 21 42.6 +1.0
MNK                                i PcP  PcP     16 22 07.7 -1.2
MNK                                i PP   PP      16 23 21.9 +0.1
MNK                                i PPP  PPP     16 24 39.7
MNK                                i S    S       16 28 57.9 -1.6
MNK                                i sS   sS      16 29 49.5 +3.2
MNK                                i ScS  ScS     16 30 51.3 -1.7
MNK                                i SS   SS      16 32 51.1 +2.3
MNK                                i SSS  SSS     16 35 22.8
MNK                                i LRM  MLR     16 48 36.8
      comp=E,10.0nm,13.7s
MNK                                i LRM  MLR     16 48 37.8
      comp=Z,54nm,10.5s
MNK                                i LRM  MLR     16 48 40.0
      comp=N,89nm,17.5s
MANU  Manus Island       57.34 110  P     P       16 21 17.6 -0.9
IDID  Didziasalis        57.56 321 eP     P       16 21 20.7 +1.3
VRI   Vrincioaia         57.67 310 ⇓P     P       16 21 22.4 +2.0
VRI   Vrincioaia         57.67 310 ⇓P     P       16 21 22.4 +2.0
PLOR  Plostina           57.73 310 ⇓P     P       16 21 23.0 +2.2
PLOR  Plostina           57.73 310 ⇓P     P       16 21 23.0 +2.2
VSU   Vasula             57.74 325 eP     P       16 21 20.7 +0.1
IIGN  Ignalina           57.85 321 eP     P       16 21 22.3 +0.9
BIZ   Bicaz              58.04 311 ⇑P     P       16 21 24.0 +1.1
MLR   Muntele Rosu       58.25 309 ⇑P     P       16 21 27.0 +2.4
MLR   Muntele Rosu       58.25 309  P     P       16 21 25.8 +1.2
MLR                                 pmax  pmax
      comp=Z,9.0nm,0.7s
MLR   Muntele Rosu       58.25 309  P     P       16 21 25.8 +1.2
MLR                                 IAmb  IAmb    16 21 27.2
      comp=Z,9.1nm,0.7s
FINES FINESS Array B     58.34 328  P     P       16 21 25.7 +1.0
      comp=Z,3.7nm,0.6s,baz=106,slow=6.9,SNR=15
FINES                               pP    pP      16 21 49.4 -2.5
      comp=Z,2.9nm,0.5s,baz=100,slow=8.1,SNR=3.3
FINES                               LR    LR      16 50 56.4
      comp=Z,86nm,18.4s,baz=243,slow=40
FINES FINESS Array B     58.34 328  P     P       16 21 25.4 +0.7
BURAR Bucovina Array     58.60 312  P     P       16 21 27.7 +0.7
WB0   Warramunga Arr     58.69 136  P     P       16 21 27.3 -0.4
WRA   Warramunga Arr     58.78 136  P     P       16 21 28.0 -0.4
      comp=Z,11nm,0.7s,baz=324,slow=7.4,SNR=49
WRA                                 PKP2bc        16 51 14.8
      comp=Z,0.8nm,0.6s,baz=143,slow=2.3,SNR=6.5
WRA   Warramunga Arr     58.78 136 i P    P       16 21 28.0 -0.4
WRA                                 pmax  pmax
      comp=Z,12nm,0.7s
WRA   Warramunga Arr     58.78 136  P     P       16 21 27.7 -0.7
WRAB  Tennant Creek      58.78 136ceP     P       16 21 28.7 +0.3
WRAB                                pmax  pmax
      comp=Z,13nm,0.7s
WRAB  Tennant Creek      58.78 136  P     P       16 21 28.1 -0.3
WB2   Warramunga Arr     58.79 136  P     P       16 21 28.1 -0.3
VOIR                     58.88 309 ⇑P     P       16 21 30.0 +1.1
VOIR                     58.88 309 ⇑P     P       16 21 30.0 +1.1
WR0   Warramunga Arr     58.92 136  IAmb  IAmb    16 21 32.0
      comp=Z,9.6nm,0.8s
PABE  Paberze            59.14 321 eP     P       16 21 31.4 +1.0
ARR   Arges              59.18 309 ⇓P     P       16 21 32.1 +1.1
ARCES ARCESS Array B     59.67 338  P     P       16 21 34.9 +1.1
      comp=Z,2.0nm,0.6s,baz=119,slow=5.8,SNR=8.5
ARCES                               PcP   PcP     16 22 20.5 +0.7
      comp=Z,6.7nm,0.8s,baz=92,slow=3.6,SNR=5.2
ARCES                               LR    LR      16 52 41.9
      comp=Z,81nm,19.1s,baz=275,slow=41
BILL  Bilibino           60.04  24⇑eP     P       16 21 35.5 -0.9
BILL                                pmax  pmax
      comp=Z,2.0nm,0.6s
BILL  Bilibino           60.04  24  P     P       16 21 35.9 -0.4
BILL                                IAmb  IAmb    16 21 40.2
      comp=Z,9.7nm,1.5s
DRGR                     60.37 311 ⇑P     P       16 21 40.3 +1.2
DRGR                     60.37 311 ⇑P     P       16 21 40.3 +1.2
VTS   Vitosha            60.50 306 ⇓P     P       16 21 41.6 +1.5
VTS   Vitosha            60.50 306 ⇓P     P       16 21 41.6 +1.5
PMG   Port Moresby       61.20 117  P     P       16 21 44.5 -0.5
PMG                                 pmax  pmax
      comp=Z,28nm,0.7s
PMG   Port Moresby       61.20 117  P     P       16 21 44.5 -0.5
AS31  Alice Springs      61.30 139  P     P       16 21 45.1 -0.4
ASAR  Alice Springs      61.30 139  P     P       16 21 45.4 -0.2
      comp=Z,6.7nm,0.8s,baz=323,slow=6.7,SNR=50
ASAR                                pP    pP      16 22 11.3 -1.2
      comp=Z,4.4nm,0.8s,baz=323,slow=7.0,SNR=4.9
ASAR                                PKP2bc        16 51 06.0
      comp=Z,2.4nm,0.9s,baz=124,slow=2.7,SNR=7.1
UPP   Uppsala            62.45 326 eP     P       16 21 53.2 +0.4
MORC  Moravsky Berou     63.44 315 ⇓P     P       16 22 01.0 +1.4
MORC  Moravsky Berou     63.44 315 eP     P       16 22 00.5 +0.9
MORC                               e              16 22 27.0
MORC  Moravsky Berou     63.44 315 ⇓P     P       16 22 01.0 +1.4
JAVC  Velka Javorina     63.49 314 eP     P       16 22 01.6 +1.7
JAVC                               e              16 22 26.9
KRLC  Kraliky            63.88 315 eP     P       16 22 03.7 +1.2
KRLC  Kraliky            63.88 315 eP     P       16 22 03.7 +1.2
VRAC  Vranov             64.12 315 eP     P       16 22 05.0 +1.0
VRAC                               e              16 22 30.0
DPC   Dobruska-Polom     64.14 316 eP     P       16 22 05.6 +1.5
DPC   Dobruska-Polom     64.14 316 eP     P       16 22 05.6 +1.5
OSTC  Ostas              64.17 316 eP     P       16 22 05.8 +1.5
CHVC  Chvalec            64.27 316 eP     P       16 22 06.8 +1.8
KRUC  Moravsky           64.29 314 eP     P       16 22 05.8 +0.7
KRUC                               e              16 22 31.6
CONA  Conrad Observa     64.83 313 i P    P       16 22 09.5 +0.8
      comp=Z,1.1nm,0.4s
ARSA  Arzberg            65.17 312 eP     P       16 22 11.1 +0.2
      comp=Z,2.0nm,0.6s
NB2   NORSAR Subarra     65.51 328  P     P       16 22 13.5 +0.6
      comp=Z,3.1nm,0.6s,baz=83,slow=6.5
NOA   NORSAR Array B     65.51 328  P     P       16 22 13.4 +0.6
      comp=Z,4.6nm,0.7s,baz=83,slow=6.3,SNR=18
NOA                                 pP    pP      16 22 39.6 -1.0
      comp=Z,3.7nm,0.7s,baz=82,slow=6.5,SNR=5.4
BRG   Berggiesshubel     65.55 317 eP     P       16 22 14.3 +1.1
BRG                                 Amp           16 22 15.0
      comp=Z,6.5nm,1.0s
BRG   Berggiesshubel     65.55 317 eP     P       16 22 14.3 +1.1
BRG                                 pmax  pmax
      comp=Z,7.0nm,1.0s
BRG   Berggiesshubel     65.55 317 eP     P       16 22 14.3 +1.1
BRG                                 Amp           16 22 15.0
      comp=Z,6.5nm,1.0s
SOKA  Soboth             65.61 312 i P    P       16 22 14.5 +0.7
      comp=Z,1.5nm,0.5s
NC204 NORSAR Array S     65.70 328  P     P       16 22 14.8 +0.7
NC204                               IAmb  IAmb    16 22 33.7
      comp=Z,11nm,0.7s
MOA   Molln              65.90 313 i P    P       16 22 15.3 -0.3
      comp=Z,2.7nm,0.6s
CLL   Collm              66.06 317 eP     P       16 22 17.0 +0.6
CLL                                epP    PcP     16 22 47.0 +0.9
CLL                                esP    sP      16 23 01.0 +4.7
CLL   Collm              66.06 317 eP     P       16 22 17.0 +0.6
CLL                                e*PP   PcP     16 22 47.0 +0.9
GEC2  GERESS Array S     66.07 314  P     P       16 22 16.5 -0.2
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GEC2                                IAmb  IAmb    16 22 18.9
      comp=Z,9.0nm,1.2s
GERES GERESS Array B     66.07 314  P     P       16 22 17.9 +1.1
      comp=Z,3.2nm,0.6s,baz=66,slow=6.2,SNR=27
GERES GERESS Array B     66.07 314  P     P       16 22 17.4 +0.7
KHC   Kasperske Hory     66.10 315 eP     P       16 22 14.7 -2.1
KHC                                e              16 22 43.7
KHC   Kasperske Hory     66.10 315 eP     P       16 22 14.7 -2.1
KHC                                epP    pP      16 22 43.7 -0.8
CTAO  Charters Tower     66.98 127  P     P       16 22 22.5 -0.2
CTAO                                pmax  pmax
      comp=Z,15nm,0.8s
CTAO  Charters Tower     66.98 127  P     P       16 22 22.5 -0.2
CTAO                                IAmb  IAmb    16 22 23.3
      comp=Z,15nm,0.8s
ABTA  Abfaltersbach      67.29 312 eP     P       16 22 24.1 -0.4
      comp=Z,1.9nm,0.7s
GRF   Grafenberg Arr     67.49 316 eP     pP      16 22 52.3 -1.2
      comp=Z,99nm,2.3s,baz=84,slow=5.6
SQTA  Sankt Quirin       68.05 313 i P    P       16 22 29.2 -0.1
      comp=Z,3.7nm,0.5s
MOTA  Moosalm            68.09 313 i P    P       16 22 29.5 -0.1
      comp=Z,1.0nm,0.3s
RETA  Reutte             68.29 313 i P    P       16 22 31.0 +0.3
      comp=Z,3.6nm,0.5s
FETA  Feichten           68.42 313 i P    P       16 22 31.7  0.0
      comp=Z,0.9nm,0.4s
DAVA  Damuels            68.92 313 i P    P       16 22 35.0 +0.2
      comp=Z,0.6nm,0.2s
LPL   La Plagne          71.49 312 eP     P       16 22 51.1 +0.6
LPL                                 pmax  pmax
      comp=Z,6.0nm,0.6s
STKA  Stephens Creek     71.93 139  P     P       16 22 52.6 -0.3
      comp=Z,2.5nm,0.4s,baz=332,slow=6.3,SNR=5.8
A21K  Barrow             72.18  19  P     P       16 22 52.6 -1.2
A21K                                IAmb  IAmb    16 22 55.8
      comp=Z,14nm,0.9s
EIDS  Eidsvold           73.76 129  IAmb  IAmb    16 23 05.0
      comp=Z,22nm,1.1s
CAF   Calviac            74.81 313 eP     P       16 23 10.5 +0.7
CAF                                 pmax  pmax
      comp=Z,71nm,2.0s
LFF   La Frestale        75.68 313 eP     P       16 23 15.6 +0.8
LFF                                 pmax  pmax
      comp=Z,17nm,1.2s
LSZ   Lusaka             76.48 246  P     P       16 23 20.3 +0.4
LSZ                                 pmax  pmax
      comp=Z,29nm,0.5s
LSZ   Lusaka             76.48 246  P     P       16 23 20.3 +0.4
BPAW  Bear Paw Mtn.      77.53  24  P     P       16 23 23.7 -1.2
BPAW                                IAmb  IAmb    16 23 26.9
      comp=Z,8.0nm,1.0s
SUMG  Summit             77.73 347 i P    P       16 23 26.7 +0.4
SUMG                                pmax  pmax
      comp=Z,36nm,0.8s
SUMG  Summit             77.73 347  P     P       16 23 26.4 +0.1
SUMG                                IAmb  IAmb    16 23 28.3
      comp=Z,40nm,1.5s
SUMG  Summit             77.73 347 i P    P       16 23 26.7 +0.4
      comp=Z,36nm,0.8s
SUMG  Summit             77.73 347 i P    P       16 23 26.8 +0.4
SUMG                                IAmb  IAmb    16 23 27.8
      comp=Z,36nm,0.8s
BMAR  Burnt Mountain     77.83  20  P     P       16 23 25.7 -0.8
MDM   Murphy Dome        78.06  23  P     P       16 23 27.5 -0.3
MDM                                 IAmb  IAmb    16 23 29.2
      comp=Z,8.1nm,0.9s
TULEG Thule              78.21 356  P     P       16 23 28.4 +0.1
TULEG Thule              78.21 356 i P    P       16 23 28.6 +0.3
TULEG                               IAmb  IAmb    16 23 29.4
      comp=Z,38nm,0.7s
POKR  Poker Plat Res     78.25  23  IAmb  IAmb    16 23 29.9
      comp=Z,7.1nm,0.8s
ILAR  Eielson Array      78.64  23  P     P       16 23 29.8 -1.2
      comp=Z,1.3nm,0.7s,baz=297,slow=4.4,SNR=20
ILAR                                PP    PP      16 26 30.8 +1.0
      comp=Z,0.5nm,0.7s,baz=295,slow=4.9,SNR=5.2
ILAR  Eielson Array      78.64  23  P     P       16 23 29.2 -1.7
PRP   Porcupine Dome     78.67  22  P     P       16 23 31.3  0.0
MATP  Matopo             78.89 241  P     P       16 23 34.2 +1.0
      comp=Z,23nm,0.7s,baz=58,slow=5.3,SNR=52
KDAK  Kodiak Island      80.21  30  P     P       16 23 38.5 -1.0
      comp=Z,3.5nm,0.5s,baz=174,slow=9.3,SNR=1.2
INK   Inuvik             80.38  16  P     P       16 23 39.5 -0.8
      comp=Z,6.1nm,1.0s,baz=324,slow=6.9,SNR=13
UPNV  Upernavik          80.53 352 i P    P       16 23 41.6 +0.5
UPNV                                IAmb  IAmb    16 23 42.3
      comp=Z,29nm,0.7s
ICESG Greenland Ices     80.61 345 i P    P       16 23 42.9 +0.9
ICESG                               IAmb  IAmb    16 23 43.6
      comp=Z,36nm,1.0s
ESDC  Sonseca Array      80.94 309  P     P       16 23 44.9 +0.9
      comp=Z,2.0nm,0.7s,baz=46,slow=5.0,SNR=10
ESDC                                pP    pP      16 24 11.9 -0.9
      comp=Z,1.5nm,0.8s,baz=52,slow=6.9,SNR=4.6
ESDC  Sonseca Array      80.94 309  P     P       16 23 42.6 -1.3
BCAR  Beaver Creek A     81.47  23  P     P       16 23 46.2 -0.1
C36M  Paulatuk           81.76  13  IAmb  IAmb    16 23 48.2
      comp=Z,15nm,0.9s
ILULI Ilulissat          82.90 348 i P    P       16 23 54.1 +0.6
ILULI                               pmax  pmax
      comp=Z,25nm,0.9s
ILULI Ilulissat          82.90 348 i P    P       16 23 54.1 +0.6
      comp=Z,24nm,0.9s
ILULI Ilulissat          82.90 348 i P    P       16 23 54.2 +0.6
ILULI                               IAmb  IAmb    16 23 54.6
      comp=Z,24nm,0.9s
LBTB  Lobatse            83.57 239  P     P       16 23 58.8 +0.9
      comp=Z,4.8nm,0.5s,baz=79,slow=4.9,SNR=10
LBTB                                pP    pP      16 24 26.6 +0.3
      comp=Z,13nm,0.7s,baz=87,slow=4.8,SNR=8.8
LBTB  Lobatse            83.57 239  P     P       16 23 58.7 +0.9
LBTB                                pmax  pmax
      comp=Z,7.0nm,0.7s
LBTB  Lobatse            83.57 239  P     P       16 23 58.7 +0.9
LBTB                                IAmb  IAmb    16 23 59.2
      comp=Z,6.5nm,0.7s
DZM   Mont Dzumac        83.58 118  P     P       16 23 58.4 +0.4
      comp=Z,3.9nm,0.9s,baz=216,slow=19,SNR=2.7
SFJD  Kangerlussuaq      84.72 347  P     P       16 24 03.1 +0.3
      comp=Z,15nm,0.7s,baz=37,slow=7.5,SNR=7.8
SFJD  Kangerlussuaq      84.72 347 i P    P       16 24 03.1 +0.3
SFJD  Kangerlussuaq      84.72 347 i P    P       16 24 03.1 +0.3
BOSA  Boshof             85.69 236  P     P       16 24 09.2 +0.8
      comp=Z,6.0nm,0.7s,baz=69,slow=3.4,SNR=14
BOSA  Boshof             85.69 236  P     P       16 24 08.8 +0.3
BOSA                                pmax  pmax
      comp=Z,7.0nm,0.8s
BOSA  Boshof             85.69 236  P     P       16 24 08.8 +0.3
BOSA                                IAmb  IAmb    16 24 09.8
      comp=Z,7.3nm,0.8s
TORD  Torodi Ar. Bea     87.53 283  P     P       16 24 18.8 +1.1
      comp=Z,3.1nm,0.6s,baz=54,slow=4.2,SNR=14
TORD                                pP    pP      16 24 47.3 +0.8
      comp=Z,2.3nm,0.7s,baz=42,slow=3.7,SNR=3.5
TORD  Torodi Ar. Bea     87.53 283  P     P       16 24 18.5 +0.9
DLBC  Dease Lake         88.82  22  LR    LR      17 07 05.9
      comp=Z,120nm,18.7s,baz=171,slow=38
YKA   Yellowknife Ar     89.64  13  P     P       16 24 25.8 -0.8
      comp=Z,1.8nm,1.0s,baz=333,slow=4.5,SNR=16
YKA                                 PP    PP      16 27 55.0 -4.1
      comp=Z,0.5nm,0.8s,baz=336,slow=7.6,SNR=3.6
YKA                                 PKKPbc PKKPbc 16 41 58.3 -2.8
      comp=Z,0.5nm,0.6s,baz=138,slow=2.9,SNR=12
YKA   Yellowknife Ar     89.64  13 i P    P       16 24 25.7 -0.9
YKA                                 pmax  pmax
      comp=Z,2.0nm,1.0s
FRB   Frobisher Bay      90.61 353  P     P       16 24 31.1  0.0
      comp=Z,6.4nm,0.7s,baz=2.7,slow=6.3,SNR=14
MAW   Mawson             95.39 192  P     P       16 24 52.0 -0.7
      comp=Z,5.6nm,0.3s,baz=300,slow=21,SNR=25
MAW   Mawson             95.39 192  P     P       16 24 52.0 -0.7
DBIC  Dimbokro           96.13 280  P     P       16 24 57.6 +0.1
      comp=Z,2.8nm,0.6s,baz=43,slow=4.2,SNR=5.0
BDFB  Brasilia          144.24 278  PKP   PKPbc   16 31 04.6 +0.7
      comp=Z,10nm,0.7s,baz=135,slow=5.5,SNR=14
BDFB                                pPKP  pPKPdf  16 31 33.1 -2.2
      comp=Z,15nm,0.9s,baz=207,slow=21,SNR=7.1
BDFB  Brasilia          144.24 278  PKPdf PKPdf   16 31 05.1 -0.3
ROSC  El Rosal          148.59 339  PKPbc PKiKP   16 31 18.6 +0.2
      comp=Z,66nm,0.6s,baz=275,slow=1.0,SNR=20
ROSC  El Rosal          148.59 339  PKP2  PKiKP   16 31 18.9 +0.5
ROSC  El Rosal          148.59 339        PKiKP   16 31 18.9 +0.5
CPUP  Villa Florida     155.10 261  PKP   PKPdf   16 31 22.2 +0.2
      comp=Z,1.8nm,0.9s,baz=41,slow=7.6,SNR=4.2
CPUP                                PKPbc PKPbc   16 31 30.7
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.5nm,0.7s,baz=69,slow=2.8,SNR=8.4						
PLCA	**Paso Flores**	**160.24**	**214**	PKPab	**PKPab**	**16 32 08.3**	**-0.7**
	comp=Z,4.6nm,0.8s,baz=135,slow=2.8,SNR=12						

IDC 24 16:12:15.2±13.0**,24°.68S**×**179°.91W,h229**^{km}±139^{km}**,mb3.5**/4**,mb1 3.8**/5**,mb1mx3.3**/36**,mbtmp4.1**/5**,Error ellipse: s-maj=74.8km s-min=27.6km az=2.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.77**	**190**	P	Pn	16 15 21.4	+0.2
	0.5nm,0.3s,baz=2.2,slow=13,SNR=1.5						
URZ				S	S	16 17 52.7	-0.7
	0.2nm,0.3s,baz=94,slow=23,SNR=2.0						
ASAR	**Alice Springs**	**41.99**	**261**	P	P	16 19 44.4	+0.1
	2.6nm,0.9s,baz=93,slow=7.4,SNR=6.8						
WRA	**Warramunga Arr**	**42.44**	**267**	P	P	16 19 47.7	-0.2
	1.6nm,0.3s,baz=102,slow=8.1,SNR=35						
NVAR	**Mina Array Bea**	**85.26**	**44**	P	P	16 24 26.3	-0.1
	0.3nm,0.7s,baz=225,slow=8.9,SNR=2.9						
TXAR	**Lajitas Array**	**90.78**	**58**	P	P	16 24 52.9	+0.1
	0.3nm,0.3s,baz=216,slow=5.6,SNR=2.5						

IDC ***24*** *16:38:50.9±1.0,64°.64N×17°.60W,h0^{km},mb3.3/7, mb1 3.6/8,mb1mx3.4/37,mbtmp3.4/8,ML4.0/1,MS3.5/3, Ms1 3.5/3,ms1mx3.0/29,Error ellipse: s-maj=28.1km s-min=11.9km az=12.0*

REY ***24*** *16:38:50.7,64°.67N×17°.46W,h9^{km}*

ISC 24 16:38:50.6±1.0**,64°.68N**±0°.02×**17°.48W**±0°.03**,h5**^{km}±7^{km}**, n56,**σ**1ˢ41**/65**,mb3.3**/7**,Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**24**	P	**Pg**	**16 38 53.7**	**+0.5**
	baz=19						
IDYN				S	**Sg**	**16 38 56.4**	**+1.5**
	baz=19						
IURH	**Urdarhals**	**0.20**	**46**	P	**Pg**	**16 38 54.9**	**+0.3**
	baz=42						
IURH				S	**Sg**	**16 38 58.8**	**+1.5**
	baz=42						
IDJK	**Dyngjujokull**	**0.21**	**149**	P	**Pg**	**16 38 54.8**	**+0.1**
	baz=150						
IHAM	**Hamarinn**	**0.25**	**216**	P	**Pg**	**16 38 55.6**	**+0.1**
	baz=219						
IHAM				S	**Sg**	**16 39 00.5**	**+1.6**
	baz=219						
IGRF	**Grimsfjall**	**0.29**	**161**	P	**Pg**	**16 38 56.2**	**-0.1**
	baz=162						
IKVE	**Kverkfjoll**	**0.34**	**90**	P	**Pg**	**16 38 57.4**	**0.0**
	baz=89						
ISKR	**Skrokkalda**	**0.41**	**253**	P	**Pg**	**16 38 58.4**	**-0.2**
	baz=255						
THOR	**Thorvaldshraun**	**0.43**	**53**	P	**Pg**	**16 38 58.7**	**-0.2**
	baz=52						
THOR				S	**Sg**	**16 39 05.1**	**+0.6**
	baz=52						
IVOT	**Vottur**	**0.43**	**162**	P	**Pg**	**16 38 58.7**	**-0.3**
	baz=163						
IKRE	**Kreppuhraun**	**0.48**	**77**	P	**Pg**	**16 38 59.4**	**-0.6**
	baz=76						
IKRE				S	**Sg**	**16 39 06.4**	**+0.2**
	baz=76						
IJOK	**Jokulheimar**	**0.49**	**222**	P	**Pg**	**16 38 59.6**	**-0.4**
	baz=223						
IASK	**Askja**	**0.52**	**43**	P	**Pg**	**16 39 00.1**	**-0.4**
	baz=42						
IMKO	**Mokollar**	**0.57**	**58**	P	**Pg**	**16 39 01.1**	**-0.5**
	baz=57						
IMKO				S	**Sg**	**16 39 09.7**	**+0.7**
	baz=57						
IIEY	**Innrieyrar**	**0.65**	**206**	P	**Pg**	**16 39 02.4**	**-0.7**
	baz=207						
IIEY				S	**Sg**	**16 39 10.8**	**-0.7**
	baz=207						
ISVA	**Svartarkot**	**0.67**	**8**	P	**Pg**	**16 39 02.9**	**-0.5**
	baz=7.5						
ISVA				S	**Sg**	**16 39 12.5**	**+0.4**
	baz=7.5						
IKSK	**Karasker**	**0.68**	**140**	P	**Pg**	**16 39 02.2**	**-1.5**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**187**	P	**Pg**	**16 39 04.0**	**-0.9**
	baz=188						
IKAL				S	**Sg**	**16 39 13.8**	**-0.6**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.76**	**80**	P	**Pg**	**16 39 04.0**	**-1.3**
	baz=79						
IVSH				S	**Sg**	**16 39 14.2**	**-0.9**
	baz=79						
IADA	**Aoalbol**	**0.88**	**67**	P	**Pg**	**16 39 06.0**	**-1.5**
	baz=66						
IFAG	**Fagurholsmyri**	**0.89**	**156**	P	**Pg**	**16 39 06.1**	**-1.5**
	baz=156						
IHVE	**Hveravellir**	**0.91**	**283**	P	**Pg**	**16 39 06.7**	**-1.4**
	baz=283						
IMEL	**Melhnausar**	**0.96**	**21**	P	**Pg**	**16 39 07.6**	**-1.4**
	baz=20						
IREN	**Reynihlio**	**1.00**	**14**	P	**Pg**	**16 39 08.4**	**-1.4**
	baz=13						
IKVO	**Krokottuvotn**	**1.07**	**13**	P	**Pg**	**16 39 09.4**	**-1.6**
	baz=13						
ISNB	**Snabyli**	**1.07**	**208**	P	**Pg**	**16 39 09.6**	**-1.6**
	baz=209						
IGRS	**Grimsstaoir**	**1.12**	**30**	P	**Pb**	**16 39 10.3**	**-2.2**
	baz=30						
IFED	**Fedgar**	**1.17**	**237**	P	**Pb**	**16 39 11.7**	**-1.5**
	baz=237						
IRJU	**Rjupnafell**	**1.19**	**207**	P	**Pb**	**16 39 11.7**	**-1.9**
	baz=207						
ISKI	**Skildingahlsh**	**1.21**	**9**	P	**Pn**	**16 39 11.8**	**-2.4**
	baz=8.5						
IGHA	**Grjothals**	**1.22**	**16**	P	**Pn**	**16 39 11.7**	**-2.6**
	baz=16						
IGRA	**Granastaoir**	**1.24**	**358**	P	**Pn**	**16 39 12.1**	**-2.5**
	baz=358						
IDIM	**Dimmadalss**	**1.31**	**10**	P	**Pn**	**16 39 13.3**	**-2.2**
	baz=9.5						
IHLA	**Hella**	**1.32**	**344**	P	**Pn**	**16 39 13.7**	**-2.0**
	baz=344						
IHED	**Heoinshofoi**	**1.41**	**3**	P	**Pn**	**16 39 14.9**	**-2.0**
	baz=2.5						
IESK	**Eystri-Skogar**	**1.45**	**218**	P	**Pn**	**16 39 15.8**	**-1.6**
	baz=218						
ISAU	**Saurbar**	**1.45**	**243**	P	**Pn**	**16 39 15.5**	**-2.0**
	baz=243						
IBRE	**Brettingsstaoi**	**1.46**	**353**	P	**Pn**	**16 39 15.7**	**-1.9**
	baz=353						
IGIL	**Gilhagi**	**1.48**	**18**	P	**Pn**	**16 39 15.7**	**-2.2**
	baz=18						
ISIG	**Siglufjorour**	**1.58**	**338**	P	**Pn**	**16 39 17.6**	**-1.5**
	baz=338						
IASM	**Asmuli**	**1.61**	**240**	P	**Pn**	**16 39 18.9**	**-0.8**
	baz=240						
BORG	**Borgarnes**	**1.65**	**274**	Pg	**Pn**	**16 39 18.9**	**-1.3**
	5.7nm,0.3s,baz=110,slow=5.8,SNR=30						
BORG				Lg	Lg	16 39 42.4	
	13nm,0.3s,baz=37,slow=20,SNR=12						
IKRO	**Krokur**	**1.69**	**251**	P	**Pn**	**16 39 19.4**	**-1.3**
	baz=252						
ISOL	**Solvholt**	**1.69**	**245**	P	**Pn**	**16 39 19.7**	**-1.0**
	baz=245						
ILEI	**Leirhofn**	**1.78**	**13**	P	**Pn**	**16 39 20.7**	**-1.3**
	baz=13						
IGRI	**Grimsey**	**1.88**	**354**	P	**Pn**	**16 39 21.5**	**-1.9**
	baz=353						
SCO	**Scoresbysund**	**6.07**	**346**	*e*	**Pn**	**16 40 18.2**	**-2.7**
	baz=168,slow=7.9						
SCO				*e*P	**Pn**	**16 40 21.4**	**+0.5**
SCO				*e*S	Pn	16 40 27.3	+6.5
SCO				IAML		16 40 27.8	
	comp=Z,5.5nm,0.4s						
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**16 41 39.0**	**+0.2**
	baz=322,slow=13,SNR=5.5						
SPITS	**Spitsbergen Ar**	**16.85**	**23**	LR	LR	16 47 49.8	
	comp=Z,91nm,19.9s,baz=175,slow=32						
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**16 43 56.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=336,slow=8.6,SNR=1.9						
ESDC	**Sonseca Array**	**26.26**	**156**	P	**P**	**16 44 28.1**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=346,slow=12,SNR=2.9						
YKA	**Yellowknife Ar**	**39.21**	**313**	P	**P**	**16 46 20.3**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=48,slow=9.2,SNR=2.6						
ZALV	**Zalesovo Beam**	**47.62**	**51**	P	**P**	**16 47 28.6**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=312,slow=9.4,SNR=2.0						
ZALV				LR	LR	17 07 31.4	
	comp=Z,44nm,19.3s,baz=62,slow=36						
BBB	**Bella Bella**	**51.82**	**313**	LR	LR	17 09 21.9	
	comp=Z,116nm,20.8s,baz=298,slow=35						
MKAR	**Makanchi Array**	**52.71**	**58**	P	**P**	**16 48 06.9**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=328,slow=5.1,SNR=1.9						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**16 48 09.9**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=340,slow=5.5,SNR=2.6						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**16 48 10.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=69,slow=5.9,SNR=3.5						

IDC 24 16:50:01.5±13.0**,5°.87S**×**155°.14E,h106**^{km}±82^{km}**,mb3.0**/5**, mb1 3.2**/6**,mb1mx3.1**/27**,mbtmp3.4**/6**,ML1.6**/1**,Error ellipse: s-maj=150.0km s-min=35.0km az=99.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.66**	**246**	P	Pn	16 52 04.3	+0.4
	0.4nm,0.3s,baz=329,slow=14,SNR=2.6						
PMG				S	Sn	16 53 33.3	-6.6
	0.5nm,0.3s,baz=109,slow=4.4,SNR=2.0						
WRA	**Warramunga Arr**	**24.59**	**233**	P	P	16 55 11.4	-0.6
	0.9nm,0.6s,baz=55,slow=9.8,SNR=9.4						
ASAR	**Alice Springs**	**27.04**	**227**	P	P	16 55 33.9	-0.2
	0.2nm,0.6s,baz=55,slow=9.5,SNR=5.5						
CMAR	**Chiang Mai Arr**	**60.44**	**295**	P	P	17 00 02.4	+1.9
	0.2nm,0.7s,baz=116,slow=6.1,SNR=1.7						
SONM	**Songino Array**	**68.47**	**327**	P	P	17 00 52.2	-0.2
	0.2nm,0.4s,baz=111,slow=6.3,SNR=2.1						
MKAR	**Makanchi Array**	**82.66**	**319**	P	P	17 02 12.2	-1.1
	0.2nm,0.8s,baz=90,slow=5.8,SNR=2.1						

IDC ***24*** *16:56:13.0±0.6,54°.17N×35°.12W,h0^{km},mb4.1/19, mb1 4.2/22,mb1mx4.1/45,mbtmp4.1/22,ML3.8/3,MS3.8/26, Ms1 3.8/26,ms1mx3.6/53,Error ellipse: s-maj=18.3km s-min=12.4km az=3.0*

NEIC ***24*** *16:56:13.9±2.6,54°.18N±0°.08×35°.1W±0°.2,h10^{km}±1^{km}, mb4.6/18,Error ellipse: s-maj=19.0km s-min=9.3km az=232.0*

ISC 24 16:56:14.4±0.5**,54°.21N**±0°.09×**35°.16W**±0°.06**,h10**^{km}**,n63,** σ**0ˢ90**/54**,mb4.4**/27**,MS3.9**/24**,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**12.65**	**28**	Pn	**Pn**	**16 59 12.6**	**-1.5**
	0.8nm,0.3s,baz=288,slow=20,SNR=2.2						
BORG				LR	LR	17 02 34.9	
	comp=Z,265nm,18.3s,baz=218,slow=30						
DRLN	**Deer Lake**	**14.68**	**259**	Pn	**Pn**	**16 59 41.2**	**-0.8**
SFJD	**Kangerlussuaq**	**14.83**	**336**	LR	LR	17 04 24.2	
	comp=Z,186nm,20.5s,baz=166,slow=33						
ILULI	**Ilulissat**	**16.74**	**340**	P	**Pn**	**17 00 08.6**	**-0.1**
EKA	**Eskdalemuir Ar**	**18.41**	**73**	P	**Pn**	**17 00 30.9**	**+1.4**
	baz=278,slow=11,SNR=9.4						
SUMG	**Summit**	**18.49**	**357**	*i* P	**P**	**17 00 30.0**	**-0.6**
SUMG	**Summit**	**18.49**	**357**	*i* P	**P**	**17 00 30.0**	**-0.6**
FRB	**Frobisher Bay**	**19.44**	**313**	P	**Pn**	**17 00 42.0**	**+0.2**
	0.1nm,0.3s,baz=110,slow=9.8,SNR=5.0						
BATG	**Bathurst New B**	**20.63**	**263**	P	**P**	**17 00 53.0**	**-0.8**
BATG				IAmb	IAmb	17 00 54.7	
	comp=Z,26nm,1.1s						
D62A	**Allapoint, All**	**22.48**	**265**	P	**P**	**17 01 13.1**	**-0.5**
NOA	**NORSAR Array B**	**25.28**	**56**	P	**P**	**17 01 40.9**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=276,slow=9.7,SNR=3.3						
NOA				LR	LR	17 09 53.2	
	comp=Z,135nm,19.2s,baz=270,slow=32						
ESDC	**Sonseca Array**	**25.52**	**112**	P	**P**	**17 01 43.6**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=314,slow=9.2,SNR=19						
ESDC				LR	LR	17 09 23.2	
	comp=Z,300nm,18.2s,baz=330,slow=31						
HFS	**Hagfors**	**26.61**	**57**	LR	LR	17 09 53.0	
	comp=Z,222nm,19.8s,baz=286,slow=31						
CLL	**Collm**	**28.84**	**76**	*e*P	**P**	**17 02 13.0**	**+0.4**
DAVOX	**Davos/Dischmat**	**29.17**	**86**	LR	LR	17 12 57.0	
	comp=Z,278nm,19.7s,baz=268,slow=34						
SADO	**Sadowa**	**29.65**	**270**	P	**P**	**17 02 20.1**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=97,slow=21,SNR=2.0						
SADO				LR	LR	17 13 18.9	
	comp=Z,314nm,18.5s,baz=104,slow=35						
SPITS	**Spitsbergen Ar**	**29.86**	**19**	LR	LR	17 10 23.4	
	comp=Z,71nm,20.1s,baz=215,slow=28						
GERES	**GERESS Array B**	**30.36**	**80**	P	**P**	**17 02 26.0**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=317,slow=7.6,SNR=4.8						
GERES				LR	LR	17 12 53.3	
	comp=Z,205nm,18.1s,baz=298,slow=33						
ARCES	**ARCESS Array B**	**30.81**	**37**	P	**P**	**17 02 29.7**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=260,slow=7.9,SNR=19						
ARCES				LR	LR	17 12 15.7	
	comp=Z,123nm,18.1s,baz=310,slow=31						
ARCES	**ARCESS Array B**	**30.81**	**37**	P	P	17 02 22.3	-7.6
FINES	**FINESS Array B**	**32.26**	**52**	P	**P**	**17 02 41.8**	**-0.9**
	comp=Z,6.8nm,1.1s,baz=248,slow=10,SNR=2.5						
FINES				LR	LR	17 13 48.2	
	comp=Z,148nm,20.6s,baz=262,slow=33						
ULM	**Lac du Bonnet**	**36.40**	**289**	LR	LR	17 16 51.1	
	comp=Z,221nm,18.4s,baz=87,slow=34						
BURAR	**Bucovina Array**	**37.59**	**75**	P	**P**	**17 03 28.1**	**-0.9**
AKASG	**Malin Array Be**	**38.18**	**68**	P	**P**	**17 03 33.2**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=302,slow=8.4,SNR=7.2						
AKASG				LR	LR	17 17 47.4	
	comp=Z,91nm,18.3s,baz=295,slow=34						
YKA	**Yellowknife Ar**	**39.94**	**315**	P	**P**	**17 03 48.9**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=64,slow=9.4,SNR=12						
YKA				PcP	**PcP**	**17 05 52.7**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=66,slow=4.1,SNR=19						
YKA				LR	LR	17 18 11.3	
	comp=Z,142nm,18.6s,baz=0.0,slow=33						
INK	**Inuvik**	**43.99**	**328**	PcP	**PcP**	**17 06 06.5**	**-0.2**
	comp=Z,2.1nm,1.1s,baz=49,slow=3.1,SNR=6.5						
INK				LR	LR	17 21 46.9	
	comp=Z,137nm,20.1s,baz=32,slow=35						
BR131	**Keskin Array S**	**47.23**	**78**	P	**P**	**17 04 49.1**	**+1.6**
BRTR	**Keskin Array B**	**47.23**	**78**	P	**P**	**17 04 48.6**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=321,slow=5.2,SNR=10						
BRTR	**Keskin Array B**	**47.23**	**78**	P	**P**	**17 04 49.1**	**+1.6**
PDAR	**Pinedale Array**	**48.41**	**288**	P	**P**	**17 04 56.2**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=52,slow=8.1,SNR=8.7						
PDAR				LR	LR	17 24 19.1	
	comp=Z,133nm,18.5s,baz=41,slow=35						
AMTX	**Amarillo**	**49.22**	**275**	P	**P**	**17 05 05.6**	**+2.7**
ARU	**Arti**	**49.32**	**47**	P	**P**	**17 05 02.8**	**-0.5**
ARU				IAmb	IAmb	17 05 06.8	
	comp=Z,11nm,1.3s						
TOA0	**Torodi Ar. Sit**	**50.15**	**130**	P	**P**	**17 05 09.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**50.15**	**130**	P	**P**	**17 05 08.7**	**-1.3**
	comp=Z,2.6nm,0.8s,baz=328,slow=9.2,SNR=6.9						
TORD				LR	LR	17 22 43.0	
	comp=Z,61nm,21.5s,baz=305,slow=32						
TORD	**Torodi Ar. Bea**	**50.15**	**130**	P	**P**	**17 05 08.3**	**-1.7**
HWUT	**Hardware Ranch**	**50.29**	**289**	P	**P**	**17 05 10.1**	**-1.0**
ILAR	**Eielson Array**	**50.36**	**329**	P	**P**	**17 05 11.8**	**+0.8**
	comp=Z,1.3nm,1.1s,baz=49,slow=6.2,SNR=9.0						
ILAR				PcP	**PcP**	**17 06 29.1**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=22,slow=3.3,SNR=9.7						
PV11	**David Mesa, Pa**	**51.02**	**284**	P	**P**	**17 05 16.2**	**-0.3**
PV11				IAmb	IAmb	17 05 21.5	
	comp=Z,5.5nm,0.6s						
IMAR	**Indian Mountai**	**51.44**	**333**	P	**P**	**17 05 19.7**	**+0.6**
AKTO	**Aktyubinsk**	**53.03**	**53**	LR	LR	17 26 31.4	
	comp=Z,112nm,19.6s,baz=318,slow=34						
DBIC	**Dimbokro**	**53.34**	**141**	P	**P**	**17 05 32.7**	**-1.0**
	comp=Z,3.1nm,0.6s,baz=332,slow=9.0,SNR=7.1						
DBIC				LR	LR	17 25 54.1	
	comp=Z,150nm,18.4s,baz=330,slow=33						
TIXI	**Tiksi**	**53.93**	**6**	P	**P**	**17 05 38.6**	**+1.2**
TIXI				IAmb	IAmb	17 05 39.7	
	comp=Z,9.9nm,0.9s						
TXAR	**Lajitas Array**	**54.38**	**272**	P	**P**	**17 05 41.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=66,slow=11,SNR=1.8						
TXAR				LR	LR	17 28 22.7	
	comp=Z,158nm,18.4s,baz=0.0,slow=36						
NVAR	**Mina Array Bea**	**56.22**	**290**	LR	LR	17 28 47.2	
	comp=Z,207nm,18.5s,baz=22,slow=35						
YBH	**Yreka Blue Hor**	**56.26**	**296**	LR	LR	17 28 12.5	
	comp=Z,174nm,19.6s,baz=38,slow=34						
KDAK	**Kodiak Island**	**57.42**	**326**	LR	LR	17 29 00.1	
	comp=Z,58nm,19.3s,baz=96,slow=34						
ROSC	**El Rosal**	**58.56**	**228**	P	**P**	**17 06 12.8**	**+1.1**
	comp=Z,16nm,0.6s,baz=126,slow=13,SNR=4.8						
ZAA0	**Zalesovo Array**	**61.36**	**36**	P	**P**	**17 06 30.4**	**+0.5**
ZALV	**Zalesovo Beam**	**61.36**	**36**	P	**P**	**17 06 30.5**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=317,slow=7.7,SNR=8.3						
ZALV				PcP	**PcP**	**17 07 12.8**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=316,slow=4.1,SNR=3.6						
KURK	**Kurchatov**	**61.69**	**41**	P	**P**	**17 06 31.8**	**-0.5**
KURK				IAmb	IAmb	17 06 33.3	
	comp=Z,3.5nm,0.8s						
GEYT	**Alibeck**	**62.04**	**63**	P	**P**	**17 06 35.5**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=278,slow=12,SNR=3.3						
GEYT				LR	LR	17 34 03.2	
	comp=Z,78nm,19.5s,baz=20,slow=37						
YAK	**Yakutsk**	**63.48**	**8**	P	**P**	**17 06 42.6**	**-1.4**
KKAR	**Karatay Array**	**64.22**	**52**	P	**P**	**17 06 48.7**	**-0.5**
KKAR	**Karatay Array**	**64.22**	**52**	P	**P**	**17 06 49.8**	**+0.5**
KKAR				IAmb	IAmb	17 06 50.4	
	comp=Z,5.8nm,1.4s						
MK31	**Makanchi Array**	**66.29**	**42**	P	**P**	**17 07 02.9**	**+0.3**
MK31				IAmb	IAmb	17 07 03.5	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**66.29**	**42**	P	**P**	**17 07 02.7**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=334,slow=6.1,SNR=29						
SONM	**Songino Array**	**73.25**	**26**	P	**P**	**17 07 46.2**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=337,slow=7.5,SNR=11						
ULN	**Ulaanbaatar**	**73.39**	**26**	P	**P**	**17 07 47.4**	**+1.0**
ULN				IAmb	IAmb	17 07 48.3	
	comp=Z,5.4nm,1.1s						
KSRS	**Korea Array**	**87.54**	**13**	LR	LR	17 50 22.8	
	comp=Z,43nm,18.8s,baz=110,slow=37						
BOSA	**Boshof**	**97.50**	**130**	LR	LR	17 53 03.0	
	comp=Z,34nm,18.6s,baz=181,slow=35						
CMAR	**Chiang Mai Arr**	**97.66**	**43**	P	**P**	**17 09 49.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=319,slow=6.5,SNR=9.2						
WRA	**Warramunga Arr**	**144.86**	**17**	PKP	**PKPab**	**17 15 50.2**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=343,slow=3.2,SNR=5.2						
ASAR	**Alice Springs**	**148.41**	**19**	PKPbc	**PKPbc**	**17 16 00.3**	**-0.6**
	comp=Z,7.9nm,0.7s,baz=350,slow=2.4,SNR=123						

BJI ***24*** *17:19:13.6±0.0,35°.93N×70°.18E,h84^{km},mB4.8/7, mb4.4/7*

IDC ***24*** *17:19:16.1±3.4,35°.85N×70°.38E,h87^{km}±29^{km},mb3.4/11, mb1 3.5/16,mb1mx3.3/52,mbtmp3.8/16,MS3.7/1, Ms1 3.7/1,ms1mx2.5/50,Error ellipse: s-maj=26.6km s-min=19.4km az=9.0*

NEIC ***24*** *17:19:18.6±2.0,36°.15N±0°.05×70°.24E±0°.09,h88^{km}±6^{km}, mb4.0/10,Error ellipse: s-maj=11.0km s-min=7.2km az=91.0*

NNC ***24*** *17:19:22.1±7.5,36°.45N×70°.13E,h103^{km}±69^{km},mb3.5, mpv4.0,Error ellipse: s-maj=59.2km s-min=44.5km az=169.0*

ISC 24 17:19:19.0±0.6**,36°.21N**±0°.05×**70°.23E**±0°.06**,h100**^{km}**,n65,** σ**1ˢ59**/65**,mb3.6**/14**,6C-4D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.93**	**211**		**Pn**	**17 19 50.8**	**-0.1**
KBL				Sn	**Sn**	**17 20 15.5**	**+0.4**
NIL	**Nilore**	**3.56**	**135**	Pn	**Pn**	**17 20 10.3**	**-2.0**
KSH	**Kashi**	**5.62**	**52**	P	Pn	17 20 35.9	-4.3
KSH				S	Sn	17 21 33.3	-10
KSH				smax	smax		
	comp=N,130nm,0.6s						
KSH				smax	smax		
	comp=E,70nm,0.3s						
THN	**Thein Dam**	**5.89**	**128**	*e*P	Pn	17 20 35.5	-8.4
THN				*e*S	Sn	17 21 43.0	-7.1
DHRM	**DHARAMSHALA**	**6.39**	**126**	*e*P	Pn	17 20 46.2	-4.6
DHRM				*e*S	Sn	17 21 52.8	-10
DHRM				IAML		17 21 55.5	
	comp=E,211nm,0.3s						
DHRM				IAML		17 21 56.3	
	comp=N,185nm,0.2s						
AML	**Almayashu**	**6.50**	**23**	P	**Pn**	**17 20 53.0**	**+0.6**
	SNR=33						
UCH	**Uchtor**	**6.87**	**28**	P	**Pn**	**17 20 58.0**	**+0.5**
	SNR=16						
KK31	**Karatay Array**	**6.89**	**2**	P	**Pn**	**17 20 57.8**	**+0.4**
	comp=N,5.1nm,0.4s,baz=189,slow=13,SNR=73						
KK31				⇑S	**Sn**	**17 22 14.2**	**0.0**
	comp=N,3.2nm,0.3s,baz=190,slow=23,SNR=5.0						
KK31	**Karatay Array**	**6.89**	**2**	Pn	**Pn**	**17 20 57.8**	**+0.4**
KKAR	**Karatay Array**	**6.89**	**2**	Pn	**Pn**	**17 20 57.7**	**+0.4**
KKAR	**Karatay Array**	**6.89**	**2**		**Pn**	**17 20 58.0**	**+0.7**
EKS2	**Erkin-Say**	**7.00**	**22**	P	**Pn**	**17 20 60.0**	**+0.9**
	SNR=6.1						
AAK	**Ala-Archa**	**7.22**	**26**	P	**Pn**	**17 21 02.6**	**+0.7**
	comp=N,2.7nm,0.3s,baz=194,slow=5.8,SNR=28						
AAK				S	**Sn**	**17 22 21.2**	**-1.2**
	comp=N,2.1nm,0.3s,baz=345,slow=22,SNR=12						
AAK	**Ala-Archa**	**7.22**	**26**	P	**Pn**	**17 21 02.6**	**+0.7**
	SNR=13						
AAK	**Ala-Archa**	**7.22**	**26**	P	**Pn**	**17 21 02.3**	**+0.3**
	comp=N,5.8nm,0.6s						
AAK				⇑S	**Sn**	**17 22 21.4**	**-1.0**
	comp=N,18nm,0.7s						
AAK	**Ala-Archa**	**7.22**	**26**	Pn	**Pn**	**17 21 02.3**	**+0.3**
CHMS	**Chumysh**	**7.62**	**26**	P	**Pn**	**17 21 07.5**	**+0.2**
	SNR=13						
SMLA	**Simla**	**7.68**	**129**	*e*P	Pn	17 21 03.9	-4.3
SMLA				*e*S	Sn	17 22 23.6	-10
SMLA				IAML		17 22 27.1	
	comp=N,46nm,0.3s						
SMLA				IAML		17 22 27.4	
	comp=E,62nm,0.3s						
USP	**Ospenovka**	**7.78**	**24**	P	**Pn**	**17 21 10.1**	**+0.7**
	SNR=12						
TKM2	**Tokmak 2**	**7.88**	**30**	P	**Pn**	**17 21 11.4**	**+0.4**
	SNR=9.2						
TKM2	**Tokmak 2**	**7.88**	**30**	⇓P	**Pn**	**17 21 11.0**	**0.0**
	comp=E,5.4nm,0.6s						
TKM2				⇑S	**Sn**	**17 22 35.0**	**-3.6**
	comp=E,6.0nm,0.8s						
GEYT	**Alibeck**	**9.84**	**284**	P	**Pn**	**17 21 37.5**	**0.0**
	comp=E,3.7nm,0.3s,baz=107,slow=11,SNR=37						
GEYT				S	**Sn**	**17 23 23.5**	**-2.5**
	comp=E,1.4nm,0.3s,baz=202,slow=11,SNR=3.4						
GEYT	**Alibeck**	**9.84**	**284**		**Pn**	**17 21 37.2**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**9.84**	**284**	Pn	**Pn**	**17 21 36.9**	**-0.6**
MAKZ	**Makanchi**	**13.75**	**36**	⇓P	**Pn**	**17 22 31.8**	**+2.2**
	comp=E,1.1nm,0.5s						
MAKZ	**Makanchi**	**13.75**	**36**	Pn	**Pn**	**17 22 30.2**	**+0.6**
MK31	**Makanchi Array**	**13.89**	**37**	⇓P	**Pn**	**17 22 32.8**	**+1.3**
	comp=E,1.5nm,0.8s,baz=217,slow=11,SNR=21						
MK31	**Makanchi Array**	**13.89**	**37**		**Pn**	**17 22 32.5**	**+1.1**
MKAR	**Makanchi Array**	**13.89**	**37**	P	**Pn**	**17 22 31.5**	**+0.1**
	comp=E,0.1nm,0.3s,baz=215,slow=9.8,SNR=4.3						
MKAR	**Makanchi Array**	**13.89**	**37**	Pn	**Pn**	**17 22 32.1**	**+0.7**
BHPL	**Bhopal**	**14.35**	**152**	*e*P	Pn	17 22 29.6	-7.9
BHPL				*e*x	x	17 24 56.2	
AB31	**Akbulak array**	**15.05**	**333**	P	**Pn**	**17 22 46.5**	**+0.3**
	comp=E,8.4nm,0.5s,baz=156,slow=12,SNR=133						
ABKAR	**Akbulak array**	**15.05**	**333**	Pn	**Pn**	**17 22 46.3**	**+0.1**
ABKAR	**Akbulak array**	**15.05**	**333**	Pn	**Pn**	**17 22 46.1**	**-0.1**
ABKAR				IAmb	IAmb	17 22 47.3	
	comp=Z,14nm,0.7s						
WMQ	**Urumqi**	**15.37**	**55**	*e*P	**Pn**	**17 22 52.3**	**+1.9**
KURBB	**Kurchatov Arra**	**15.60**	**20**	P	**Pn**	**17 22 49.6**	**-3.5**
	comp=Z,0.0nm,0.3s,baz=213,slow=12,SNR=3.1						
KURBB	**Kurchatov Arra**	**15.60**	**20**	⇑P	**P**	**17 22 56.2**	**+1.0**
	comp=Z,2.2nm,0.7s						
KURK	**Kurchatov**	**15.71**	**20**	P	**P**	**17 22 57.1**	**+0.7**
KURK				IAmb	IAmb	17 23 41.0	
	comp=Z,5.5nm,1.4s						
AKTO	**Aktyubinsk**	**16.73**	**332**	P	**P**	**17 23 09.5**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=139,slow=14,SNR=8.9						
AKTO				S	**Sn**	**17 26 08.7**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=59,slow=22,SNR=1.3						
AKTO	**Aktyubinsk**	**16.73**	**332**	⇓P	**P**	**17 23 09.7**	**+1.9**
	comp=Z,7.5nm,0.8s						
BVAR	**Borovoye Array**	**16.82**	**0**	P	**P**	**17 23 10.2**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.8,SNR=4.6						
BRVK	**Borovoye**	**16.85**	**0**	⇑P	**Pn**	**17 23 08.2**	**-0.3**
	comp=Z,0.5nm,0.4s						
BRVK	**Borovoye**	**16.85**	**0**		**Pn**	**17 23 09.1**	**+0.6**
LSA	**Lhasa**	**18.70**	**104**		**P**	**17 23 31.1**	**+1.0**
LSA				IAmb	IAmb	17 23 32.1	
	comp=Z,2.3nm,0.6s						
ZAA0	**Zalesovo Array**	**20.44**	**25**	⇑P	**P**	**17 23 48.2**	**0.0**
	comp=Z,0.8nm,0.6s						
ZAA0	**Zalesovo Array**	**20.44**	**25**	P	**P**	**17 23 49.1**	**+0.9**
ZAA0				IAmb	IAmb	17 23 51.2	
	comp=Z,5.5nm,0.6s						
ZALV	**Zalesovo Beam**	**20.44**	**25**	P	**P**	**17 23 49.1**	**+0.9**
	comp=Z,7.3nm,0.5s,baz=219,slow=10,SNR=42						
ARU	**Arti**	**21.71**	**342**	P	**P**	**17 24 04.8**	**+3.0**
	comp=Z,0.5nm,0.4s,baz=130,slow=20,SNR=2.8						
GTA	**Gaotai**	**23.54**	**73**	*e*P	P	17 24 14.1	-6.3
GTA				pP	pP	17 24 37.8	-4.4
GTA				sP	sP	17 24 49.5	-5.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,5.6s						
LZH	Lanzhou	27.07	80	*e*P	P	17 24 48.8	-3.5
LZH				pP	pP	17 25 07.9	-7.8
LZH				sP	sP	17 25 26.4	-1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
SONM	Songino Array	29.01	55	P	P	17 25 09.2	-0.2
	comp=Z,0.3nm,0.9s,baz=270,slow=10,SNR=1.8						
HHC	Hu-ho-hao-te	32.45	69	*e*P	P	17 25 41.5	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,92nm,7.6s						
FINES	FINESS Array B	37.38	327	P	P	17 26 23.0	+1.2
	comp=Z,2.6nm,0.9s,baz=127,slow=8.9,SNR=3.4						
ARCES	ARCESS Array B	41.18	338	P	P	17 26 55.1	+1.8
	comp=Z,1.4nm,0.8s,baz=116,slow=10,SNR=4.0						
HFS	Hagfors	42.91	322	P	P	17 27 08.6	+1.2
	comp=Z,4.6nm,0.9s,baz=90,slow=10,SNR=4.6						
GSI	Gunungsitoli	42.99	138	P	P	17 27 11.0	+2.5
GSI				IAmb	IAmb	17 28 44.7	
	comp=Z,26nm,1.1s						
NC303	NORSAR Array S	44.19	324	P	P	17 27 19.2	+1.5
NB201	NORSAR Array S	44.20	323	P	P	17 27 21.0	+3.2
NOA	NORSAR Array B	44.24	323	P	P	17 27 18.8	+0.7
	comp=Z,0.7nm,0.8s,baz=101,slow=8.1,SNR=1.8						
NBO00	NORSAR Array S	44.45	323	P	P	17 27 22.0	+2.2
LEM	Lembang	55.34	133	LR	LR	17 55 38.0	
	comp=Z,62nm,18.6s,baz=246,slow=40						
TORD	Torodi Ar. Bea	65.09	268	P	P	17 29 48.7	-0.6
	comp=Z,0.3nm,0.4s,baz=43,slow=6.4,SNR=1.5						
YKA	Yellowknife Ar	81.56	2	P	P	17 31 25.4	+0.2
	comp=Z,0.1nm,0.4s,baz=358,slow=5.4,SNR=6.2						
WRA	Warramunga Arr	82.36	121	P	P	17 31 27.0	-3.0
	comp=Z,0.2nm,0.4s,baz=304,slow=7.4,SNR=2.1						
ASAR	Alice Springs	84.60	124	P	P	17 31 38.7	-2.8
	comp=Z,0.4nm,1.0s,baz=312,slow=4.4,SNR=5.0						

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*NOU **24** 17:40:21.6, 34°.80S×179°.79E, h362^{km}, mb4.0, South of Kermadec Islands*

WEL 24 17:40:18.0±0.6, **34°S**±7°×**17°9E**±1°4, **h335**^{km}±8^{km}, **M3.6**/42, **mB4.3**/20, **ML4.2**/13, **MLv4.4**/42, **Mw(mB)3.4**/20, **Error ellipse: s-maj=0.0km s-min=0.0km az=114.4, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.44	194	P	Pn	17 41 20.4	0.0
MXZ				S	S	17 42 09.1	-1.4
WMGZ	Waiomatatini S	3.67	192	P	Pn	17 41 24.5	+1.9
HAZ	Te Kaha	3.75	199	P	Pn	17 41 21.5	-2.0
HAZ				S	S	17 42 15.5	-0.6
GRZ	Great Barrier	3.77	236	P	Pn	17 41 21.0	-2.7
PKGZ	Pakihiroa	3.81	195	P	Pn	17 41 24.1	0.0
PUZ	Puketiti	3.95	193	P	Pn	17 41 26.3	+0.8
PUZ				S	S	17 42 20.7	+0.9
CNGZ	Carnagh Statio	4.36	192	P	Pn	17 41 32.0	+2.2
MWZ	Matawai	4.36	199	P	Pn	17 41 28.7	-1.2
MWZ				S	S	17 42 28.0	+0.1
URZ	Urewera	4.42	203	P	Pn	17 41 28.5	-2.0
URZ				S	S	17 42 30.0	+1.1
MUGZ	Murupara	4.73	205	P	Pn	17 41 32.7	-1.2
MUGZ				S	S	17 42 35.9	+0.8
RTZ	Ruatahuna	4.79	203	P	Pn	17 41 32.5	-2.1
MTHZ	Maungataniwha	5.05	203	P	Pn	17 41 36.2	-1.2
MTHZ				S	S	17 42 42.7	+1.2
MRHZ	Matea Rd	5.18	206	P	Pn	17 41 39.3	+0.4
MRHZ				S	S	17 42 43.8	-0.4
NMHZ	Naumai	5.28	202	P	Pn	17 41 40.7	+0.6
NMHZ				S	S	17 42 48.1	+1.7
ARHZ	Aropaoanui	5.38	200	P	Pn	17 41 42.0	+0.9
ARHZ				S	S	17 42 49.1	+0.9
BKZ	Black Stump Fm	5.45	204	P	Pn	17 41 42.4	+0.5
BKZ				S	S	17 42 50.7	+0.9
HIZ	Hauiti	5.61	219	P	Pn	17 41 47.0	+3.2
MCHZ	McNeill Hill	5.63	201	P	Pn	17 41 44.9	+0.9
MCHZ				S	S	17 42 56.0	+2.5
KWHZ	Kaweka Forest	5.70	203	P	Pn	17 41 45.7	+0.8
KWHZ				S	S	17 42 57.3	+2.2
WTVZ	West Tongariro	5.75	211	P	Pn	17 41 46.6	+1.2
OTVZ	Oturere	5.75	210	P	Pn	17 41 45.9	+0.4
OTVZ				S	S	17 42 58.8	+2.5
TWVZ	Taurewa	5.77	212	P	Pn	17 41 47.1	+1.4
NGZ	Ngauruhoe	5.79	210	P	Pn	17 41 47.3	+1.3
TUVZ	Tukino	5.85	209	P	Pn	17 41 47.6	+0.9
FWVZ	Far West T-bar	5.88	210	P	Pn	17 41 47.7	+0.7
BHHZ	Black Hill Sta	5.88	206	P	Pn	17 41 47.4	+0.5
BHHZ				S	S	17 42 59.0	+0.1
KAHZ	Kahuranaki	5.91	199	P	Pn	17 41 46.2	-1.0
KRHZ	Kereru	5.92	203	P	Pn	17 41 46.8	-0.5
KRHZ				S	S	17 43 01.7	+2.2
WNVZ	Wahianoa	5.92	209	P	Pn	17 41 48.1	+0.6
MOVZ	Moawhango	5.93	208	P	Pn	17 41 47.7	+0.2
MOVZ				S	S	17 42 59.0	-0.8
PKVZ	Pokaka	5.99	211	P	Pn	17 41 49.3	+1.1
PRHZ	Porangahau	6.41	199	P	Pn	17 41 51.5	-1.5
PRHZ				S	S	17 43 11.2	+1.1
TSZ	Takapari Road	6.43	204	P	Pn	17 41 53.3	+0.1
TSZ				S	S	17 43 07.3	-3.1
WAZ	Wanganui	6.54	211	P	Pn	17 41 55.3	+0.8
WAZ				S	S	17 43 15.0	+2.3
DVHZ	Dannevirke	6.58	202	P	Pn	17 41 55.0	0.0
DVHZ				S	S	17 43 14.0	+0.4
ANWZ	Angora Road	6.64	199	P	Pn	17 41 56.8	+1.2
ANWZ				S	S	17 43 17.2	+2.4
POWZ	Post Office Ro	6.79	204	P	Pn	17 41 57.8	+0.4
POWZ				S	S	17 43 18.6	+0.5
PRWZ	Pori Road	6.87	202	P	Pn	17 41 59.2	+0.7
PRWZ				S	S	17 43 19.5	-0.4
BFZ	Birch Farm	6.91	200	P	Pn	17 41 59.3	+0.4
BFZ				S	S	17 43 20.1	-0.6
MRZ	Mangatainoka R	7.09	204	P	Pn	17 42 00.2	-0.9
MRZ				S	S	17 43 23.4	-1.4
TIWZ	Tintock	7.10	202	P	Pn	17 42 01.7	+0.5
TIWZ				S	S	17 43 26.2	+1.3
CPWZ	Castlepoint	7.13	200	P	Pn	17 42 03.0	+1.5
CPWZ				S	S	17 43 28.8	+3.3
HOWZ	Holdsworth Sta	7.33	203	P	Pn	17 42 02.9	-1.0
HOWZ				S	S	17 43 28.1	-1.8
OGWZ	Otaki Gorge	7.38	205	P	Pn	17 42 03.0	-1.3
OGWZ				S	S	17 43 30.8	0.0
TMWZ	Te Maipa	7.40	201	P	Pn	17 42 04.8	+0.1
TMWZ				S	S	17 43 31.3	-0.1
KIW	Kapiti Island	7.51	207	P	Pn	17 42 05.6	-0.4
KIW				S	S	17 43 33.0	-0.8
MTW	Mount Morrison	7.57	203	P	Pn	17 42 06.6	-0.1
MTW				S	S	17 43 34.8	-0.2
CAW	Cannon Point	7.67	205	P	Pn	17 42 06.7	-1.2
CAW				S	S	17 43 37.8	+0.6
TRWZ	Traveller	7.73	201	P	Pn	17 42 08.9	+0.2
PAWZ	Paruwai Farm	7.79	202	P	Pn	17 42 09.1	-0.3
MSWZ	Moikau Station	7.88	203	P	Pn	17 42 10.1	-0.3
WEL	Wellington	7.93	206	P	Pn	17 42 10.4	-0.6
BHW	Baring Head	8.00	205	P	Pn	17 42 10.5	-1.3
PLWZ	Palliser	8.02	203	P	Pn	17 42 11.7	-0.4
NNZ	Nelson	8.43	212	P	Pn	17 42 16.3	-0.7
THZ	Tophouse	9.08	212	P	Pn	17 42 24.9	0.0

NOU 24 17:43:25.1, 15°.47S×168°.24E, h1^{km}, MLv4.4, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.00	271	P	Pg	17 43 44.2	-0.1
DVP	Devils Point	2.24	181	P	Pn	17 44 03.2	-0.2
KOUNC	Koumac, New Ca	6.30	216	P	Pn	17 44 58.9	-0.3
YATNC	Mamie plateau,	6.68	191	P	Pn	17 45 03.0	-1.4
DZM	Mont Dzumac	6.78	194	P	Pn	17 45 05.5	-0.4
NOUC	Port Laguerre	6.85	195	P	Pn	17 45 06.9	+0.2
OUENC	Ouen Island, N	7.04	191	P	Pn	17 45 09.7	+0.4

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*IDC **24** 17:44:52.5±5.7, 7°.45S×127°.83E, h111^{km}±54^{km}, mb3.5/5, mb1 3.8/9, mb1mx3.5/28, mbtmp4.0/9, Error ellipse: s-maj=70.9km s-min=18.9km az=59.0*

*NEIC **24** 17:44:57.2±1.6, 7°.6S±0°.1×127°.53E±0°.06, h160^{km}±9^{km}, mb4.1/6, Error ellipse: s-maj=15.9km s-min=7.6km az=159.0*

ISC 24 17:44:56.5±0.7, **7°.85S**±0°.07×**127°.66E**±0°.07, **h150**^{km}, **n29**, σ**2ˢ43**/32, **mb3.8**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.61	92	Pn	Pn	17 45 54.3	+2.5
SOEI	Soe	3.85	240		Pn	17 45 56.3	+1.3
BATI	Baumata	4.59	239	P	Pn	17 46 05.9	+1.3
	20nm,0.3s,baz=135,slow=1.8,SNR=22						
BATI				S	Sn	17 46 58.3	+0.8
	28nm,0.3s,baz=84,slow=22,SNR=16						
MTN	Manton Dam	6.03	146		Pn	17 46 26.0	+2.3
FAKI	Fak Fak	6.70	43	Pn	Pn	17 46 31.5	-1.2
FITZ	Fitzroy Crossi	10.37	191	P	Pn	17 47 21.9	+0.4
	0.3nm,0.3s,baz=9.9,slow=12,SNR=20						
FITZ				S	Sn	17 49 12.9	-3.5
	0.9nm,0.3s,baz=111,slow=16,SNR=4.2						
FITZ	Fitzroy Crossi	10.37	191		Pn	17 47 21.6	+0.1
JAGI	Jajag, Banyuwa	13.38	266	P	P	17 48 03.0	-1.9
WB0	Warramunga Arr	13.53	152		Pn	17 48 02.3	-0.2
WRAB	Tennant Creek	13.65	152		Pn	17 48 04.0	-0.2
WRA	Warramunga Arr	13.65	152	P	Pn	17 48 03.7	-0.5
	1.6nm,0.3s,baz=329,slow=15,SNR=42						
WRA				S	Sn	17 50 29.9	-5.5
	2.0nm,0.3s,baz=339,slow=19,SNR=14						
WRA	Warramunga Arr	13.65	152		Pn	17 48 02.9	-1.2
WB2	Warramunga Arr	13.66	152		Pn	17 48 03.8	-0.4
WR0	Warramunga Arr	13.76	152		Pn	17 48 05.2	-0.3
COEN	Coen	16.40	113	P	P	17 48 41.3	+2.9
COEN				IAmb	IAmb	17 48 47.9	
	comp=Z,22nm,1.6s						
AS31	Alice Springs	16.83	160	P	Pn	17 48 47.9	+4.4
AS31				IAmb	IAmb	17 48 51.2	
	comp=Z,2.3nm,0.3s						
ASAR	Alice Springs	16.83	160	P	Pn	17 48 46.4	+2.9
	comp=Z,1.0nm,0.3s,baz=340,slow=11,SNR=58						
ASAR				S	S	17 51 46.9	-3.7
	comp=Z,0.6nm,0.3s,baz=321,slow=16,SNR=8.2						
ASAR	Alice Springs	16.83	160	P	Pn	17 48 47.8	+4.4
STKA	Stephens Creek	27.20	153	P	P	17 50 29.2	+2.8
	comp=Z,1.6nm,0.4s,baz=333,slow=8.3,SNR=4.6						
STKA	Stephens Creek	27.20	153	IAmb	IAmb	17 50 31.3	
	comp=Z,3.6nm,1.5s						
SONM	Songino Array	58.55	343	P	P	17 54 36.2	-1.2
	comp=Z,0.2nm,0.6s,baz=171,slow=10,SNR=1.7						
MK31	Makanchi Array	67.69	328	P	P	17 55 36.0	-1.6
MKAR	Makanchi Array	67.69	328	P	P	17 55 36.2	-1.4
	comp=Z,0.5nm,0.4s,baz=125,slow=7.6,SNR=16						
MKAR	Makanchi Array	67.69	328	P	P	17 55 35.4	-2.2
ZALV	Zalesovo Beam	71.34	335	P	P	17 55 57.6	-2.1
	comp=Z,0.9nm,0.5s,baz=122,slow=3.9,SNR=5.2						
ZALV	Zalesovo Beam	71.34	335	P	P	17 55 58.0	-1.8
VNDA	Vanda	71.90	173	P	P	17 56 05.2	+2.3
	comp=Z,0.7nm,0.6s,baz=322,slow=6.3,SNR=1.7						
VNDA	Vanda	71.90	173	P	P	17 56 04.9	+2.1
VNDA				IAmb	IAmb	17 56 17.9	
	comp=Z,6.8nm,1.4s						
QSPA	South Pole Qui	82.13	180	P	P	17 57 00.7	+0.4

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*IDC **24** 18:16:01.9±1.1, 1°.46N×127°.18E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/45, mbtmp3.5/5, Error ellipse: s-maj=70.1km s-min=19.9km az=75.0*

*DJA **24** 18:16:10.9±0.6, 1°N±3°×12°7E±°, h53^{km}±16^{km}, M3.4/7, MLv3.4/7*

ISC 24 18:16:07.1±1.1, **1°.5N**±0°.1×**127°.4E**±0°.3, **h35**^{km}, **n7**, σ**0ˢ74**/6, **mb3.6**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.73	182	P	Pn	18 16 26.4	+5.4
SANI	Sanana	3.80	202	P	Pn	18 17 03.5	+0.2
WRA	Warramunga Arr	22.38	163	P	P	18 21 02.4	-0.2
	0.9nm,0.6s,baz=340,slow=11,SNR=9.2						
ASAR	Alice Springs	25.81	166	P	P	18 21 35.1	-0.2
	0.8nm,0.9s,baz=339,slow=9.9,SNR=14						
MJAR	Matsushiro Arr	36.27	15	P	P	18 23 07.3	+0.1
	0.4nm,0.5s,baz=190,slow=9.3,SNR=1.5						
SONM	Songino Array	49.60	342	P	P	18 24 56.0	+0.8
	0.4nm,0.6s,baz=142,slow=7.3,SNR=2.6						
MKAR	Makanchi Array	59.75	326	P	P	18 26 07.7	-0.9
	0.4nm,0.5s,baz=122,slow=8.3,SNR=9.6						

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*IDC **24** 18:29:46.1±8.9, 31°.49S×180°.00W, h289^{km}±97^{km}, mb2.9/3, mb1 3.2/4, mb1mx3.0/26, mbtmp3.7/4, Error ellipse: s-maj=96.5km s-min=39.8km az=179.0*

*WEL **24** 18:29:54.1±0.9, 32°S±7°×17°9E±1°6, h243^{km}±21^{km}, M4.0/17, mB4.5/9, MLv4.6/17, Mw(mB)3.6/9, Error ellipse: s-maj=0.0km s-min=0.0km az=109.2*

ISC 24 18:29:50.5±0.9, **31°.54S**±0°.08×**179°.4E**±0°.1, **h300**^{km}, **n63**, σ**1ˢ62**/66, **mb3.0**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.27	47	P	Pn	18 30 49.6	+0.6
GLKZ				S	S	18 31 33.9	-1.9
OUZ	Omahuta	6.05	231	P	Pn	18 31 19.3	-1.0
MXZ	Matakaoa Point	6.07	188	P	Pn	18 31 23.1	+2.7
MXZ				S	S	18 32 31.6	-1.4
WIAZ	Waiheke Island	6.29	213	P	Pn	18 31 30.2	+7.0
WMGZ	Waiomatatini S	6.31	187	P	Pn	18 31 24.6	+1.3
WMGZ				S	S	18 32 34.9	-3.4
HAZ	Te Kaha	6.33	191	P	Pn	18 31 25.1	+1.5
HAZ				S	S	18 32 38.5	-0.3
PKGZ	Pakihiroa	6.42	189	P	Pn	18 31 24.7	0.0
RUGZ	Raukumara Rang	6.55	192	P	Pn	18 31 27.6	+1.2
TWGZ	Tauwhareparae	6.71	189	P	Pn	18 31 31.6	+3.3
MWZ	Matawai	6.94	192	P	Pn	18 31 33.0	+2.0
URZ	Urewera	6.95	195	P	Pn	18 31 29.4	-1.6
	1.7nm,0.3s,baz=11,slow=10,SNR=29						
URZ				S	S	18 32 52.1	-0.2
	2.3nm,0.3s,baz=74,slow=23,SNR=21						
URZ	Urewera	6.95	195	P	Pn	18 31 31.3	+0.3
TKGZ	Te Karaka	6.99	190	P	Pn	18 31 33.7	+2.1
MUGZ	Murupara	7.23	196	P	Pn	18 31 36.9	+2.3
RIGZ	Rimuhau	7.26	190	P	Pn	18 31 36.2	+1.2
RTZ	Ruatahuna	7.32	195	P	Pn	18 31 36.0	+0.3
SNGZ	Shannon Statio	7.41	192	P	Pn	18 31 38.5	+1.8
MTHZ	Maungataniwha	7.58	195	P	Pn	18 31 40.6	+1.9
RAHZ	Arahi	7.58	194	P	Pn	18 31 40.2	+1.4
MRHZ	Matea Rd	7.66	197	P	Pn	18 31 41.1	+1.3
MHGZ	Mahia Peninsul	7.68	188	P	Pn	18 31 41.1	+1.0
NMHZ	Naumai	7.82	195	P	Pn	18 31 42.4	+0.6
HIZ	Hauiti	7.87	207	P	Pn	18 31 48.4	+6.1
ARHZ	Aropaoanui	7.94	193	P	Pn	18 31 45.0	+1.9
BKZ	Black Stump Fm	7.96	196	P	Pn	18 31 43.3	-0.1
TMVZ	Te Maari	8.12	201	P	Pn	18 31 48.3	+2.8
TWVZ	Taurewa	8.16	202	P	Pn	18 31 49.0	+3.0
MCHZ	McNeill Hill	8.17	195	P	Pn	18 31 47.1	+1.0
OTVZ	Oturere	8.18	201	P	Pn	18 31 47.0	+0.7
KWHZ	Kaweka Forest	8.22	196	P	Pn	18 31 46.9	+0.2
TUVZ	Tukino	8.28	200	P	Pn	18 31 44.6	-2.8
FWVZ	Far West T-bar	8.29	201	P	Pn	18 31 50.1	+2.4
BHHZ	Black Hill Sta	8.37	198	P	Pn	18 31 48.6	+0.2
PKVZ	Pokaka	8.39	202	P	Pn	18 31 50.0	+1.3
KRHZ	Kereru	8.44	196	P	Pn	18 31 48.6	-0.7
KAHZ	Kahuranaki	8.47	193	P	Pn	18 31 49.1	-0.7
PXZ	Pawanui	8.71	193	P	Pn	18 31 52.0	-0.6
PNHZ	Pukenui	8.73	196	P	Pn	18 31 53.0	+0.1
PKE	Pukeiti	8.80	208	P	P	18 31 57.8	-0.9
WPHZ	Waipukurau	8.82	195	P	P	18 32 00.3	+1.4
TSZ	Takapari Road	8.93	197	P	Pn	18 31 55.4	+0.1
PRHZ	Porangahau	8.98	193	P	Pn	18 31 55.6	-0.3
ANWZ	Angora Road	9.20	194	P	Pn	18 31 58.2	-0.4
BFZ	Birch Farm	9.46	195	P	Pn	18 31 59.3	-2.5
MRZ	Mangatainoka R	9.60	197	P	Pn	18 32 01.7	-1.8
TIWZ	Tintock	9.63	196	P	Pn	18 32 03.5	-0.5
HOWZ	Holdsworth Sta	9.83	197	P	Pn	18 32 04.7	-1.8
OGWZ	Otaki Gorge	9.85	199	P	Pn	18 32 04.2	-2.4
TMWZ	Te Maipa	9.94	195	P	Pn	18 32 06.9	-0.9
KIW	Kapiti Island	9.96	200	P	Pn	18 32 07.2	-0.8
MTW	Mount Morrison	10.08	197	P	Pn	18 32 08.0	-1.4
CAW	Cannon Point	10.15	199	P	Pn	18 32 08.1	-2.2
DUWZ	D'Urville Isla	10.22	204	P	Pn	18 32 10.2	-1.1
MSWZ	Moikau Station	10.39	197	P	Pn	18 32 12.1	-1.1
TCW	Tory Channel	10.48	202	P	Pn	18 32 12.9	-1.3
PLWZ	Palliser	10.53	197	P	Pn	18 32 13.9	-1.1
QRZ	Quartz Range	10.77	209	P	Pn	18 32 18.0	+0.1
TUWZ	Tuamarina	10.78	202	P	Pn	18 32 16.0	-2.0
NNZ	Nelson	10.78	205	P	Pn	18 32 16.6	-1.4
STKA	Stephens Creek	32.02	259	P	P	18 35 52.1	+2.5
	4.1nm,1.1s,baz=119,slow=8.1,SNR=2.0						
ASAR	Alice Springs	40.80	269	P	P	18 37 03.9	+0.4
	0.2nm,0.7s,baz=110,slow=7.3,SNR=5.7						
WRA	Warramunga Arr	41.90	275	P	P	18 37 12.9	+0.6
	0.3nm,0.3s,baz=112,slow=8.0,SNR=1.4						
FINES	FINESS Array B	145.39	338	PKPbc	PKPdf	18 48 49.0	-2.9
	2.6nm,0.7s,baz=41,slow=4.5,SNR=14						

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*IDC **24** 18:31:21.3±3.2, 39°.18N×75°.68E, h0^{km}, mb3.6/4, mb1 3.5/7, mb1mx3.2/57, mbtmp3.5/7, ML2.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/47, Error ellipse: s-maj=57.7km s-min=24.9km az=134.0*

*KRNET **24** 18:31:23.2±0.1, 39°.30N×75°.62E, mb3.8*

*NNC **24** 18:31:23.8±2.4, 39°.55N×75°.63E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=18.0km s-min=12.4km az=158.0*

*SOME **24** 18:31:25.7, 39°.73N×75°.43E, h0^{km}*

ISC 24 18:31:25.8±1.5, **39°.68N**±0°.05×**75°.55E**±0°.03, **h10**^{km}±10^{km}, **n75**, σ**1ˢ85**/105, **mb3.8**/3, **28C-19D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.37	117	Pg	Pn	18 31 36.4	-1.0
KSH				Sg	Sn	18 31 43.9	+5.9
KSH				smax	smax		
	comp=N,6μm,0.5s						
KSH				smax	smax		
	comp=E,2μm,0.4s						
SFK	Sufi-Kurgan	1.61	283	⇑*i*P	Pg	18 31 57.0	+0.3
	baz=94						
SFK				⇑*i*S	Sg	18 32 20.9	+3.3
	baz=94						
OHH	Osh	2.28	293	⇑*i*P	Pb	18 32 06.9	-0.3
	baz=0.0						
OHH				⇑*i*S	Sg	18 32 39.6	+0.5
	baz=0.0						
ARLS	Aral	2.37	337	⇑*i*P	Pg	18 32 10.7	-0.5
	baz=39						
ARLS				⇑*i*S	Sg	18 32 45.3	+3.4
	baz=39						
ARSB	Arslanbob	2.55	311	⇓*i*P	Pb	18 32 12.5	+0.6
	baz=16						
ARSB				⇓*i*S	Sg	18 32 48.2	+0.3
	baz=16						
ULHL	Ulahol	2.62	11	⇑*i*P	Pg	18 32 14.2	-1.7
	baz=9.0						
ULHL				⇑*i*S	Sg	18 32 51.5	+1.6
	baz=9.0						
ULHL	Ulahol	2.62	11	P	Pg	18 32 14.2	-1.7
	SNR=17						
UCH	Uchtor	2.66	343	⇓*i*P	Pg	18 32 14.9	-2.0
	baz=44						
UCH				⇓*i*S	Sg	18 32 52.8	+1.4
	baz=44						
UCH	Uchtor	2.66	343	P	Pb	18 32 14.0	+0.1
	SNR=98						
KDJ	Kajisay	2.74	26	⇓*e*P	Pb	18 32 15.6	+0.5
	baz=22						
KDJ				⇓*i*S	Sg	18 32 53.5	-0.4
	baz=22						
BOOM	Boomskoye usch	2.82	6	⇑*i*P	Pb	18 32 17.4	+1.0
	baz=4.0						
BOOM				⇑*i*S	Sg	18 32 56.9	+0.4
	baz=4.0						
AML	Almayashu	2.82	331	⇑*i*P	Pb	18 32 16.9	+0.3
	baz=33						
AML				⇑*i*S	Sg	18 32 56.2	-0.3
	baz=33						
AML	Almayashu	2.82	331	P	Pb	18 32 15.6	-1.0
	SNR=11						
DRK	Karamyk	2.90	267	⇑*i*P	Pn	18 32 14.2	+1.8
	baz=75						
DRK				⇑*i*S	Sb	18 32 51.5	-2.1
	baz=75						
KBK	Karagaybulak	3.01	352	⇑*e*P	Pb	18 32 19.7	+0.1
	baz=52						
KBK				⇑*i*S	Sg	18 33 01.4	-1.0
	baz=52						
KBK	Karagaybulak	3.01	352	P	Pb	18 32 19.2	-0.4
	SNR=66						
AAK	Ala-Archa	3.06	345	⇓*e*P	Pb	18 32 19.8	-0.7
	baz=46						
AAK				⇓*i*S	Sg	18 33 02.3	-1.8
	baz=46						
AAK	Ala-Archa	3.06	345	P	Pb	18 32 19.9	-0.6
	SNR=79						
AAK	Ala-Archa	3.06	345	⇓Pn	Pb	18 32 19.1	-1.4
	comp=E,44nm,0.5s						
AAK				⇓Lg	Lg	18 33 02.8	
	comp=E,54nm,1.0s						
TKM2	Tokmak 2	3.24	1	⇑*i*P	Pb	18 32 22.5	-1.1
	baz=60						
TKM2				⇑*i*S	Sg	18 33 06.5	-3.3
	baz=60						
TKM2	Tokmak 2	3.24	1	P	Pb	18 32 22.5	-1.1
	SNR=23						
TKM2	Tokmak 2	3.24	1	⇑Pg	Pg	18 32 27.5	-0.4
	comp=E,19nm,0.4s						
TKM2				⇓Lg	Lg	18 33 11.8	
	comp=E,113nm,0.7s						
EKS2	Erkin-Say	3.26	336	⇓*i*P	Pb	18 32 22.9	-1.1
	baz=38						
EKS2				⇓*i*S	Sg	18 33 06.9	-3.8
	baz=38						
CHMS	Chumysh	3.37	350	⇑*i*P	Pb	18 32 24.0	-1.7
	baz=50						
CHMS				⇑*i*S	Sg	18 33 09.4	-4.6
	baz=50						
CHMS	Chumysh	3.37	350	P	Pb	18 32 24.0	-1.7
	SNR=27						
KST	Kastek	3.37	5	*e*P	Pg	18 32 30.1	-0.4
	comp=E,20nm,0.3s						
KST				*e*S	Sg	18 33 16.1	+1.9
	comp=E,140nm,0.8s						
KST	Kastek	3.37	5	Pg	Pb	18 32 24.7	-1.1
	comp=E,20nm,0.8s						
KST				Lg	Lg	18 33 16.4	
	comp=E,140nm,0.8s						
ANVS	Anan'yevo	3.49	27	⇑*i*P	Pb	18 32 25.5	-2.3
	baz=23						
ANVS				⇑*i*S	Sb	18 33 11.4	+1.1
	baz=23						
MTBS	Maitube	3.51	11	*e*P	Pg	18 32 32.1	-1.0
	comp=E,14nm,0.4s						
MTBS				*e*S	Sg	18 33 19.5	+1.0
	comp=E,54nm,0.3s						
MTBS	Maitube	3.51	11	Pg	Pb	18 32 27.2	-0.9
	comp=E,16nm,0.1s						
MTBS				Lg	Lg	18 33 19.8	
	comp=E,54nm,0.3s						
TNSS	Tian-Shan	3.51	17	*e*P	Pg	18 32 32.0	-1.2
	comp=E,20nm,0.5s						
TNSS				*e*S	Sg	18 33 19.4	+0.7
	comp=E,27nm,0.8s						
TNSS	Tian-Shan	3.51	17	Pg	Pb	18 32 26.5	-1.9
	comp=E,11nm,0.6s						
TNSS				Lg	Lg	18 33 19.8	
	comp=E,27nm,0.8s						
MRKS	Merke	3.53	331	*e*P	Pg	18 32 30.7	-2.7
	comp=E,11nm,0.5s						
MRKS				*e*S	Sg	18 33 17.2	-1.9
	comp=E,13nm,0.6s						
MRKS	Merke	3.53	331	Pg	Pb	18 32 26.6	-1.8
	comp=E,11nm,0.5s						
MRKS				Lg	Lg	18 33 18.3	
	comp=E,13nm,0.6s						
MDOK	Medeo	3.66	17	*e*P	Pg	18 32 33.7	-2.2
	comp=E,5.9nm,0.6s						
MDOK				*e*S	Sg	18 33 22.4	-0.9
	comp=E,49nm,0.8s						
MDOK	Medeo	3.66	17	⇓Pg	Pg	18 32 34.4	-1.5
	comp=E,28nm,0.6s						
MDOK				⇓Lg	Lg	18 33 23.9	
	comp=E,55nm,0.7s						
MDOK	Medeo	3.66	17	Pg	Pb	18 32 30.5	-0.2
	comp=E,20nm,0.5s						
MDOK				Lg	Lg	18 33 24.9	
	comp=E,49nm,0.8s						
USP	Ospenovka	3.67	348	⇑*i*P	Pb	18 32 28.2	-2.6
	baz=48						
USP				⇑*i*S	Sb	18 33 16.9	+1.5
	baz=48						
USP	Ospenovka	3.67	348	P	Pb	18 32 27.8	-3.0

	SNR=19						
KNDC	**Almaty**	**3.69**	**16**	⇑Pg	**Pg**	**18 32 37.7**	**+1.2**
	comp=E,50nm,0.6s						
KNDC				⇓Lg	Lg	18 33 26.4	
	comp=E,129nm,0.6s						
KOTS	**Kotyrbulak**	**3.74**	**18**	*e*P	**Pg**	**18 32 36.6**	**-0.9**
	comp=E,30nm,0.5s						
KOTS				*e*S	**Sg**	**18 33 27.0**	**+1.1**
	comp=E,102nm,0.6s						
KOTS	**Kotyrbulak**	**3.74**	**18**	Pg	**Pb**	**18 32 32.3**	**+0.2**
	comp=E,24nm,0.5s						
KOTS				Lg	Lg	18 33 27.8	
	comp=E,102nm,0.6s						
SGDS	**Sogindy**	**3.83**	**350**	Pg	**Pb**	**18 32 35.0**	**+1.5**
	comp=E,12nm,0.6s						
SGDS				Lg	Lg	18 33 31.5	
	comp=E,27nm,0.6s						
SATY	**Saty**	**4.00**	**32**	*e*P	**Pg**	**18 32 40.7**	**-1.8**
	comp=E,10nm,0.6s						
SATY				*e*S	**Sg**	**18 33 34.3**	**0.0**
	comp=E,29nm,0.6s						
SATY	**Saty**	**4.00**	**32**	Pg	**Pb**	**18 32 36.7**	**+0.1**
	comp=E,10nm,0.6s						
SATY				Lg	Lg	18 33 35.8	
	comp=E,43nm,0.7s						
ZHN	**Zhinishke**	**4.10**	**31**	*e*P	**Pg**	**18 32 42.9**	**-1.5**
	comp=E,3.4nm,0.7s						
ZHN				*e*S	**Sg**	**18 33 37.8**	**+0.2**
	comp=E,7.6nm,0.3s						
ZHN	**Zhinishke**	**4.10**	**31**	Pg	**Pb**	**18 32 38.8**	**+0.5**
	comp=E,80nm,0.6s						
ZHN				Lg	Lg	18 33 38.8	
	comp=E,7.6nm,0.3s						
KUU	**Kurty**	**4.25**	**8**	*e*P	**Pg**	**18 32 45.0**	**-2.3**
	comp=E,15nm,0.9s						
KUU				*e*S	**Sg**	**18 33 41.9**	**-0.4**
	comp=E,30nm,0.7s						
KUU	**Kurty**	**4.25**	**8**	Pg	**Pb**	**18 32 41.2**	**+0.5**
	comp=E,21nm,0.8s						
KUU				Lg	Lg	18 33 42.5	
	comp=E,30nm,0.7s						
KURS	**Kuram**	**4.28**	**26**	*e*P	**Pg**	**18 32 45.7**	**-2.2**
	comp=E,5.9nm,0.5s						
KURS				*e*S	**Sg**	**18 33 42.5**	**-0.8**
	comp=E,24nm,1.1s						
KURS	**Kuram**	**4.28**	**26**	Pg	**Pb**	**18 32 41.9**	**+0.6**
	comp=E,14nm,0.9s						
KURS				Lg	Lg	18 33 44.1	
	comp=E,24nm,1.1s						
CHKK	**Chushkaly**	**4.31**	**14**	*e*P	**Pg**	**18 32 46.7**	**-1.6**
	comp=E,10.0nm,0.5s						
CHKK				*e*S	**Sg**	**18 33 44.6**	**+0.6**
	comp=E,45nm,0.6s						
CHKK	**Chushkaly**	**4.31**	**14**	Pg	**Pb**	**18 32 42.1**	**+0.4**
	comp=E,1.8nm,0.1s						
CHKK				Lg	Lg	18 33 44.9	
	comp=E,45nm,0.6s						
UZB	**Uzynbulak**	**4.34**	**36**	*e*P	**Pg**	**18 32 46.7**	**-2.2**
	comp=E,10nm,0.8s						
UZB				*e*S	**Sg**	**18 33 44.2**	**-0.9**
	comp=E,28nm,1.0s						
UZB	**Uzynbulak**	**4.34**	**36**	Pg	**Pb**	**18 32 42.5**	**+0.3**
	comp=E,10nm,0.8s						
UZB				Lg	Lg	18 33 45.6	
	comp=E,28nm,1.0s						
SHLS	**Shalkode**	**4.55**	**39**	*e*P	**Pg**	**18 32 55.0**	**+2.0**
	comp=E,18nm,0.9s						
SHLS				*e*S	**Sg**	**18 33 58.3**	**+6.3**
	comp=E,51nm,0.8s						
SHLS	**Shalkode**	**4.55**	**39**	Pg	**Pg**	**18 32 51.5**	**-1.4**
	comp=E,18nm,0.9s						
SHLS				Lg	Lg	18 34 00.8	
	comp=E,51nm,0.8s						
PDGK	**Podgornoye**	**4.69**	**38**	Pg	**Pb**	**18 32 49.0**	**+0.6**
	comp=E,6.6nm,1.3s						
PDGK				Lg	Lg	18 33 56.3	
	comp=E,15nm,0.8s						
PDGK	**Podgornoye**	**4.69**	**38**	⇑Pg	**Pg**	**18 32 53.5**	**-2.2**
	comp=E,14nm,0.8s						
PDGK				⇓Lg	Lg	18 33 56.5	
	comp=E,37nm,0.8s						
MNBS	**Baschi**	**4.88**	**25**	*e*P	**Pg**	**18 32 57.5**	**-1.9**
	comp=E,14nm,0.6s						
MNBS				*e*S	**Sg**	**18 34 02.8**	**+0.3**
	comp=E,20nm,0.5s						
MNBS	**Baschi**	**4.88**	**25**	Pg	**Pb**	**18 32 52.9**	**+1.4**
	comp=E,14nm,0.6s						
MNBS				Lg	Lg	18 34 02.8	
	comp=E,20nm,0.5s						
KK31	**Karatay Array**	**5.10**	**314**	Pn	**Pn**	**18 32 44.5**	**+2.1**
	comp=E,0.4nm,0.3s,baz=128,slow=12,SNR=22						
KK31				⇓Pg	**Pg**	**18 33 03.3**	**-0.2**
	comp=E,3.2nm,0.8s,baz=132,slow=17,SNR=8.8						
KK31				⇓Lg	Lg	18 34 09.6	
	comp=E,3.4nm,0.5s,baz=130,slow=28,SNR=2.8						
KTMS	**Ketmen**	**5.21**	**42**	*e*P	**Pg**	**18 33 02.6**	**-2.9**
	comp=E,2.1nm,0.3s						
KTMS				*e*S	**Sg**	**18 34 11.1**	**-1.9**
	comp=E,15nm,0.8s						
KTMS	**Ketmen**	**5.21**	**42**	Pg	Pg	18 33 01.6	-4.0
	comp=E,2.1nm,0.3s						
KTMS				Lg	Lg	18 34 18.2	
	comp=E,17nm,0.6s						
DJR	**Jarkent**	**5.62**	**33**	Pg	**Pb**	**18 33 04.6**	**+0.6**
	comp=E,5.9nm,0.5s						
DJR				Lg	Lg	18 34 23.5	
	comp=E,8.7nm,0.5s						
KAPS	**Kapalarasan**	**6.27**	**25**	Pg	**Pb**	**18 33 17.4**	**+2.3**
	comp=E,2.5nm,1.0s						
KAPS				Lg	Lg	18 34 46.0	
	comp=E,8.6nm,0.6s						
MK31	**Makanchi Array**	**8.64**	**32**	⇑Lg	Lg	18 36 01.9	
	comp=E,1.8nm,0.8s						
MKAR	**Makanchi Array**	**8.64**	**32**	Pn	**Pn**	**18 33 34.3**	**+3.4**
	comp=E,0.1nm,0.3s,baz=213,slow=13,SNR=6.4						
MKAR				Lg	Lg	18 36 04.6	
	comp=E,0.2nm,0.3s,baz=218,slow=30,SNR=2.7						
WMQ	**Urumqi**	**9.97**	**62**	*e*P	Pn	18 33 55.8	+6.6
WMQ				smax	smax		
	comp=N,7.0nm,0.9s						
WMQ				smax	smax		
	comp=E,9.0nm,0.9s						
BVAR	**Borovoye Array**	**13.81**	**347**	Pn	**Pn**	**18 34 43.8**	**+2.2**
	comp=E,0.1nm,0.3s,baz=144,slow=11,SNR=2.2						
ZALV	**Zalesovo Beam**	**15.60**	**21**	Pn	**P**	**18 35 06.9**	**-3.0**
	comp=E,0.1nm,0.3s,baz=212,slow=6.8,SNR=3.9						
ZALV				LR	LR	18 41 35.4	
	comp=E,77nm,20.5s,baz=7.0,slow=38						
ARU	**Arti**	**20.15**	**332**	P	Pn	18 36 02.4	+0.6
	comp=E,0.5nm,0.6s,baz=124,slow=8.4,SNR=4.0						
FINES	**FINESS Array B**	**36.99**	**323**	P	**P**	**18 38 35.2**	**0.0**
	comp=E,1.8nm,0.9s,baz=124,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**39.68**	**335**	P	**P**	**18 38 58.0**	**+0.3**
	comp=E,2.3nm,0.9s,baz=111,slow=10.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**69.34**	**270**	P	**P**	**18 42 31.7**	**-2.2**
	comp=E,0.3nm,0.5s,baz=48,slow=6.2,SNR=1.3						

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*AUST **24** 18:44:08.7±0.4, 23°.75S×143°.34E, h10^{km}, Error ellipse: s-maj=6.9km s-min=4.0km az=107.0*

*IDC **24** 18:44:08.1±1.7, 23°.71S×143°.18E, h0^{km}, mb3.7/1, mb1 3.9/6, mb1mx3.6/28, mbtmp3.8/6, ML3.7/5, Error ellipse: s-maj=23.2km s-min=17.2km az=142.0*

ISC 24 18:44:07.4±0.7**, 23°.85S**±0°.05×**143°.24E**±0°.06**, h10**^{km}**, n17, σ2^{s}.40**/29**, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QLP	**Quilpie**	**2.86**	**162**	P	**Pn**	**18 44 55.4**	**+2.2**
	baz=2.9,SNR=20						
QLP				S	**Sb**	**18 45 32.7**	**-1.1**
	baz=2.9						
INKA	**Innaminka**	**4.48**	**210**	P	**Pn**	**18 45 18.3**	**+2.9**
	baz=4.6,SNR=6.2						
INKA				S	**Sn**	**18 46 09.2**	**+1.5**
	baz=4.6						
CTA	**Charters Tower**	**4.67**	**37**	P	**Pn**	**18 45 19.4**	**+1.3**
	baz=4.5						
CTA				S	**Sn**	**18 46 10.4**	**-2.0**
	baz=4.5						
CTA	**Charters Tower**	**4.67**	**37**	Pn	**Pn**	**18 45 19.3**	**+1.2**
	1.5nm,0.3s,baz=208,slow=13,SNR=26						
CTA				Sn	**Sn**	**18 46 10.9**	**-1.5**
	3.5nm,0.3s,baz=193,slow=14,SNR=4.2						
CTA				Lg	Lg	18 46 34.2	
	6.3nm,0.3s,baz=286,slow=12,SNR=7.1						
QIS	**Mount Isa**	**4.70**	**313**	P	**Pn**	**18 45 20.9**	**+2.4**
	baz=4.7,SNR=14						
QIS				S	**Sn**	**18 46 13.4**	**+0.3**
	baz=4.7						
RMQ	**Roma**	**5.64**	**119**	P	**Pn**	**18 45 33.1**	**+1.7**
	baz=5.6,SNR=9.5						
RMQ				S	**Sn**	**18 46 35.6**	**-0.8**
	baz=5.6						
MTSU	**Mount Surprise**	**5.78**	**10**	P	**Pn**	**18 45 34.1**	**+0.9**
	baz=5.7,SNR=5.8						
MTSU				S	**Sn**	**18 46 37.3**	**-2.3**
	baz=5.7						
EIDS	**Eidsvold**	**7.29**	**104**	P	**Pn**	**18 45 54.6**	**+0.6**
	baz=7.2						
LCRK	**Leigh Creek**	**7.95**	**213**	P	**Pn**	**18 46 05.3**	**+2.3**
	baz=8.1						
CMSA	**Cobar Meteorol**	**7.96**	**165**	P	**Pn**	**18 46 04.7**	**+1.5**
	baz=8.1						
CMSA				S	**Sn**	**18 47 30.2**	**-3.1**
	baz=8.1						
STKA	**Stephens Creek**	**8.13**	**190**	P	**Pn**	**18 46 08.0**	**+2.5**
	baz=8.3,SNR=26						
STKA				S	**Sn**	**18 47 33.4**	**-4.1**
	baz=8.3						
STKA	**Stephens Creek**	**8.13**	**190**	Pn	**Pn**	**18 46 08.0**	**+2.5**
	2.1nm,0.3s,baz=3.1,slow=11,SNR=22						
STKA				Sn	**Sn**	**18 47 34.6**	**-2.9**
	1.1nm,0.3s,baz=104,slow=7.7,SNR=3.3						
STKA				Lg	Lg	18 48 31.2	
	0.3nm,0.3s,baz=65,slow=16,SNR=1.2						
ASAR	**Alice Springs**	**8.56**	**269**	Pn	**Pn**	**18 46 14.3**	**+2.8**
	0.7nm,0.3s,baz=94,slow=13,SNR=32						
ASAR				Sn	**Sn**	**18 47 46.6**	**-1.6**
	0.6nm,0.3s,baz=91,slow=23,SNR=6.6						
ASAR				Lg	Lg	18 48 40.0	
	0.7nm,0.3s,baz=86,slow=29,SNR=7.4						
WRA	**Warramunga Arr**	**9.14**	**293**	Pn	**Pn**	**18 46 20.1**	**+0.6**
	0.6nm,0.3s,baz=116,slow=13,SNR=15						
WRA				Sn	**Sn**	**18 47 56.5**	**-5.9**
	1.8nm,0.3s,baz=117,slow=23,SNR=11						
WRA				Lg	Lg	18 48 53.0	
	1.3nm,0.3s,baz=119,slow=28,SNR=8.2						
COEN	**Coen**	**9.84**	**360**	P	**Pn**	**18 46 30.7**	**+1.6**
	baz=9.8						
FITZ	**Fitzroy Crossi**	**17.40**	**286**	P	**Pn**	**18 48 09.3**	**-1.1**
	0.1nm,0.3s,baz=114,slow=14,SNR=2.2						
FITZ				Lg	Lg	18 53 17.5	
	0.1nm,0.3s,baz=202,slow=22,SNR=2.5						
MKAR	**Makanchi Array**	**89.24**	**323**	P	**P**	**18 57 05.2**	**+1.7**
	0.4nm,0.7s,baz=130,slow=5.2,SNR=3.7						

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*NOU **24** 18:56:48.2, 35°.89S×179°.21E, h299^{km}, MLv4.2, Off E. Coast of N. Island, N.Z.*

WEL 24 18:56:58.4±0.9**, 36°S**±9°×**17°8E**±°**, h209**^{km}±10^{km}**, M3.5**/26**, MLv3.5**/26**, Error ellipse: s-maj=0.0km s-min=0.0km az=156.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.67**	**174**	P	Pn	18 57 35.1	+0.8
MXZ				S	S	18 58 02.3	+0.1
HAZ	**Te Kaha**	**1.87**	**187**	P	Pn	18 57 36.3	+0.2
HAZ				S	S	18 58 05.6	+0.1
WMGZ	**Waiomatatini S**	**1.94**	**172**	P	Pn	18 57 37.5	+0.7
WMGZ				S	S	18 58 07.4	+0.9
PKGZ	**Pakihiroa**	**1.99**	**180**	P	Pn	18 57 37.9	+0.5
PKGZ				S	S	18 58 07.9	+0.3
KUZ	**Kuaotunu**	**2.09**	**245**	P	Pn	18 57 37.6	-0.8
RUGZ	**Raukumara Rang**	**2.09**	**189**	P	Pn	18 57 38.1	-0.4
PUZ	**Puketiti**	**2.17**	**176**	P	Pn	18 57 39.3	0.0
PUZ				S	S	18 58 11.2	+0.2
TWGZ	**Tauwhareparae**	**2.28**	**182**	P	Pn	18 57 41.5	+1.1
TWGZ				S	S	18 58 13.7	+0.7
MWZ	**Matawai**	**2.47**	**190**	P	Pn	18 57 42.7	+0.2
MWZ				S	S	18 58 17.9	+1.3
URZ	**Urewera**	**2.48**	**198**	P	Pn	18 57 42.6	+0.1
URZ				S	S	18 58 17.8	+1.0
TKGZ	**Te Karaka**	**2.54**	**184**	P	Pn	18 57 43.5	+0.3
TKGZ				S	S	18 58 17.8	-0.1
WIAZ	**Waiheke Island**	**2.55**	**249**	P	Pn	18 57 43.0	-0.3
CNGZ	**Carnagh Statio**	**2.58**	**178**	P	Pn	18 57 44.2	+0.6
RAGZ	**Rawiri**	**2.65**	**192**	P	Pn	18 57 45.1	+0.6
RAGZ				S	S	18 58 22.1	+1.9
TOZ	**Tahuroa Road**	**2.77**	**228**	P	Pn	18 57 46.1	+0.4
MUGZ	**Murupara**	**2.78**	**202**	P	Pn	18 57 46.0	+0.1
MUGZ				S	S	18 58 23.3	+0.6
RIGZ	**Rimuhau**	**2.82**	**185**	P	Pn	18 57 46.2	-0.1
RIGZ				S	S	18 58 24.3	+0.8
RTZ	**Ruatahuna**	**2.85**	**198**	P	Pn	18 57 45.7	-1.1
RTZ				S	S	18 58 24.7	+0.3
SNGZ	**Shannon Statio**	**2.94**	**191**	P	Pn	18 57 47.0	-0.7
SNGZ				S	S	18 58 28.0	+1.9
MTHZ	**Maungataniwha**	**3.11**	**198**	P	Pn	18 57 49.2	-0.5
RAHZ	**Arahi**	**3.12**	**195**	P	Pn	18 57 49.7	-0.1
KNZ	**Kokohu**	**3.14**	**186**	P	Pn	18 57 49.4	-0.6
MRHZ	**Matea Rd**	**3.22**	**204**	P	Pn	18 57 50.5	-0.5
WHHZ	**Waihua**	**3.25**	**192**	P	Pn	18 57 51.2	-0.1
NMHZ	**Naumai**	**3.35**	**197**	P	Pn	18 57 52.7	+0.1
ARHZ	**Aropaoanui**	**3.47**	**194**	P	Pn	18 57 53.5	-0.4
BKZ	**Black Stump Fm**	**3.50**	**201**	P	Pn	18 57 53.3	-1.0
HIZ	**Hauiti**	**3.67**	**224**	P	Pn	18 57 58.6	+2.3
MCHZ	**McNeill Hill**	**3.71**	**197**	P	Pn	18 57 56.3	-0.5
TMVZ	**Te Maari**	**3.73**	**210**	P	Pn	18 57 57.4	+0.2
KWHZ	**Kaweka Forest**	**3.76**	**200**	P	Pn	18 57 56.4	-1.1
OTVZ	**Oturere**	**3.79**	**210**	P	Pn	18 57 57.7	-0.2
TWVZ	**Taurewa**	**3.81**	**213**	P	Pn	18 57 58.1	0.0
NGZ	**Ngauruhoe**	**3.82**	**210**	P	Pn	18 57 58.7	+0.4
FWVZ	**Far West T-bar**	**3.91**	**210**	P	Pn	18 57 59.1	-0.4
BHHZ	**Black Hill Sta**	**3.93**	**204**	P	Pn	18 57 58.2	-1.4
KRHZ	**Kereru**	**3.98**	**199**	P	Pn	18 57 58.5	-1.7
KAHZ	**Kahuranaki**	**4.01**	**193**	P	Pn	18 57 59.6	-1.0
PXZ	**Pawanui**	**4.24**	**193**	P	Pn	18 58 01.5	-1.8
PNHZ	**Pukenui**	**4.28**	**200**	P	Pn	18 58 02.1	-1.8
TSZ	**Takapari Road**	**4.48**	**201**	P	Pn	18 58 04.4	-2.0
POWZ	**Post Office Ro**	**4.85**	**201**	P	Pn	18 58 08.7	-2.2
PRWZ	**Pori Road**	**4.94**	**199**	P	Pn	18 58 09.9	-2.2
BFZ	**Birch Farm**	**4.99**	**196**	P	Pn	18 58 10.2	-2.6
MRZ	**Mangatainoka R**	**5.15**	**202**	P	Pn	18 58 11.8	-2.9
TIWZ	**Tintock**	**5.17**	**199**	P	Pn	18 58 12.5	-2.6
HOWZ	**Holdsworth Sta**	**5.39**	**201**	P	Pn	18 58 14.5	-3.3
OGWZ	**Otaki Gorge**	**5.42**	**204**	P	Pn	18 58 15.1	-3.1
TMWZ	**Te Maipa**	**5.48**	**198**	P	Pn	18 58 16.1	-3.0
KIW	**Kapiti Island**	**5.55**	**206**	P	Pn	18 58 16.6	-3.3
MTW	**Mount Morrison**	**5.63**	**200**	P	Pn	18 58 17.3	-3.6
CAW	**Cannon Point**	**5.72**	**204**	P	Pn	18 58 18.3	-3.7
TRWZ	**Traveller**	**5.80**	**198**	P	Pn	18 58 19.9	-3.2
PAWZ	**Paruwai Farm**	**5.86**	**200**	P	Pn	18 58 20.3	-3.6
DUWZ	**D'Urville Isla**	**5.89**	**213**	P	Pn	18 58 20.9	-3.4
MSWZ	**Moikau Station**	**5.94**	**201**	P	Pn	18 58 21.0	-3.9
WEL	**Wellington**	**5.97**	**205**	P	Pn	18 58 20.7	-4.6
BHW	**Baring Head**	**6.05**	**204**	P	Pn	18 58 22.2	-4.1
PLWZ	**Palliser**	**6.08**	**200**	P	Pn	18 58 22.7	-4.0
TCW	**Tory Channel**	**6.09**	**208**	P	Pn	18 58 23.3	-3.5
TUWZ	**Tuamarina**	**6.41**	**209**	P	Pn	18 58 26.8	-4.1
QRZ	**Quartz Range**	**6.58**	**220**	P	Pn	18 58 30.2	-3.0
THZ	**Tophouse**	**7.12**	**213**	P	Pn	18 58 37.2	-3.0
KHZ	**Kahutara**	**7.41**	**207**	P	Pn	18 58 39.5	-4.2
GVZ	**Greta Valley S**	**8.07**	**207**	P	Pn	18 58 48.2	-4.2
LTZ	**Lake Taylor**	**8.22**	**211**	P	Pn	18 58 49.5	-4.9
INZ	**Inchbonnie**	**8.54**	**215**	P	Pn	18 58 54.2	-4.3

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*IDC **24** 18:58:11.8±1.5, 60°.55N×151°.32W, h61^{km}±23^{km}, mb3.7/4, mb1 3.9/8, mb1mx3.4/51, mbtmp4.0/8, ML3.7/4, MS3.5/1, Ms1 3.6/1, ms1mx2.6/45, Error ellipse: s-maj=27.0km s-min=9.7km az=120.0*

*AEIC **24** 18:58:14.0±1.4, 60°.57N±0°.03×151°.60W±0°.06, h70^{km}±5^{km}, ML3.5/110, ML3.7/98(NEIC), Error ellipse: s-maj=4.5km s-min=3.9km az=84.0*

*ANF **24** 18:58:13.6±0.3, 60°.49N×151°.34W, h81^{km}±3^{km}, ML3.8/13, Error ellipse: s-maj=4.4km s-min=2.4km az=113.0*

*NEIC **24** 18:58:13.1±1.2, 60°.54N±0°.03×151°.58W±0°.04, h70^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=1.5km az=210.0*

ISC 24 18:58:13.4±0.7**, 60°.55N**±0°.03×**151°.54W**±0°.03**, h75**^{km}±6^{km}**, n149, σ0^{s}.93**/173**, mb4.0**/4**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPN	**Captain Cook N**	**0.29**	**40**	P	**Pn**	**18 58 25.7**	**+0.7**
	baz=228,SNR=15						
CAPN				S	**Sn**	**18 58 35.9**	**+2.4**
	baz=228						
CAPN	**Captain Cook N**	**0.29**	**40**		**Pn**	**18 58 25.8**	**+0.7**
REF	**Redoubt East F**	**0.58**	**265**		**Pn**	**18 58 26.4**	**-1.2**
REF					**Sn**	**18 58 36.8**	**-1.2**
RSO	**Redoubt South**	**0.60**	**263**		**Pn**	**18 58 26.8**	**-1.1**
RED	**Redoubt Volcan**	**0.62**	**259**		**Pn**	**18 58 26.7**	**-1.2**
RED					**Sn**	**18 58 37.5**	**-1.1**
SLKM	**Skilak Lake**	**0.66**	**93**		**Pn**	**18 58 27.5**	**-0.7**
NCT	**North Crescent**	**0.69**	**272**		**Pn**	**18 58 27.6**	**-1.0**
NCT					**Sn**	**18 58 39.0**	**-0.8**
SPCR	**Spurr Chakacha**	**0.73**	**334**		**Pn**	**18 58 28.1**	**-1.0**
SPCR					**Sn**	**18 58 39.7**	**-1.0**
SPCN	**Chakachatna No**	**0.75**	**336**		**Pn**	**18 58 28.5**	**-0.7**
SPCP	**Crater Peak Br**	**0.78**	**338**		**Pn**	**18 58 29.0**	**-0.7**
SPCG	**Spurr Capps Gl**	**0.79**	**343**		**Pn**	**18 58 29.1**	**-0.6**
SPBG	**Spurr Blockage**	**0.82**	**331**		**Pn**	**18 58 28.4**	**-1.7**
SPBG					**Sn**	**18 58 40.8**	**-1.8**
BRLK	**Bradley Lake**	**0.85**	**157**		**Pn**	**18 58 30.2**	**-0.2**
BRLK				Sn	**Sn**	**18 58 43.0**	**0.0**
BRLK				IAML		18 58 44.8	
	comp=N,2μm,0.5s						
BRLK				IAML		18 58 45.6	
	comp=E,1μm,0.2s						
FIS	**Fire Island**	**0.88**	**47**		**Pn**	**18 58 31.5**	**+0.9**
HOM	**Homer**	**0.89**	**183**	P	**Pn**	**18 58 30.8**	**0.0**
	baz=1.7,SNR=7.7						
HOM				S	**Sn**	**18 58 44.5**	**+0.8**
	baz=1.7						
HOM	**Homer**	**0.89**	**183**		**Pn**	**18 58 30.8**	**0.0**
HOM					**Sn**	**18 58 44.7**	**+1.0**
BRSE	**Bradley Lake S**	**0.90**	**153**		**Pn**	**18 58 30.7**	**-0.2**
BRSE					**Sn**	**18 58 44.5**	**+0.6**
IVE	**Iliamna Volcan**	**0.91**	**235**		**Pn**	**18 58 30.2**	**-0.9**
IVE					**Sn**	**18 58 43.5**	**-0.8**
ILS	**Iliamna Low So**	**0.96**	**233**		**Pn**	**18 58 31.2**	**-0.6**
STLK	**Strandline Lak**	**0.97**	**352**		**Pn**	**18 58 31.3**	**-0.5**
SUA	**Susitna One**	**1.00**	**22**	Pn	**Pn**	**18 58 32.2**	**-0.1**
SUA				Sn	**Sn**	**18 58 46.4**	**+0.1**
CNPM	**China Poot**	**1.03**	**171**		**Pn**	**18 58 32.3**	**-0.3**
CNPM				Sn	**Sn**	**18 58 46.7**	**-0.2**
RC01	**Rabbit Creek A**	**1.04**	**58**	P	**Pn**	**18 58 32.3**	**-0.3**
	baz=241,SNR=53						
RC01				S	**Sn**	**18 58 46.7**	**-0.3**
	baz=241						
RC01	**Rabbit Creek A**	**1.04**	**58**		**Pn**	**18 58 32.3**	**-0.3**
SEW	**Seward**	**1.13**	**112**		**Pn**	**18 58 32.9**	**-0.7**
OPT	**Oil Point**	**1.23**	**224**		**Pn**	**18 58 35.1**	**0.0**
SKT	**Skwentna**	**1.44**	**0**		**Pn**	**18 58 37.5**	**-0.2**
SKT				Sn	**Sn**	**18 58 56.7**	**+0.6**
SKT				IAML		18 58 57.3	
	comp=N,1μm,0.4s						
AU22	**Augustine Moun**	**1.49**	**219**		**Pn**	**18 58 38.4**	**+0.1**
AU2	**Augustine Isla**	**1.50**	**219**		**Pn**	**18 58 38.5**	**+0.1**
AUL	**Augustine Lava**	**1.51**	**220**		**Pn**	**18 58 38.6**	**0.0**
AUP	**Augustine Pinn**	**1.52**	**219**		**Pn**	**18 58 39.0**	**+0.2**
AUCH	**Augustine Cone**	**1.52**	**220**		**Pn**	**18 58 39.0**	**+0.1**
PMR	**Palmer**	**1.57**	**47**		**Pn**	**18 58 39.0**	**-0.4**
PMR				Sn	**Sn**	**18 58 59.1**	**0.0**
PMR				IAML		18 59 02.5	
	comp=N,668nm,0.4s						
PMR				IAML		18 59 02.9	
	comp=E,746nm,0.5s						
PWL	**Port Wells**	**1.61**	**77**		**Pn**	**18 58 39.5**	**-0.4**
KNK	**Knik Glacier**	**1.74**	**59**		**Pn**	**18 58 41.4**	**-0.2**
KNK				IAML		18 59 08.7	
	comp=E,1μm,0.6s						
GHO	**Glory Hole Cre**	**1.77**	**45**		**Pn**	**18 58 41.7**	**-0.4**
CUT	**Chulitna**	**1.96**	**18**	P	**Pn**	**18 58 45.0**	**+0.4**
	baz=200,SNR=7.3						
CUT				S	**Sn**	**18 59 10.8**	**+2.4**
	baz=200						
CUT	**Chulitna**	**1.96**	**18**		**Pn**	**18 58 45.0**	**+0.4**
SML	**Sawmill**	**2.01**	**49**		**Pn**	**18 58 44.9**	**-0.4**
SML				IAML		18 59 16.0	
	comp=N,813nm,0.8s						
SML				IAML		18 59 18.6	
	comp=E,794nm,0.7s						
SVW2	**Sparrevohn**	**2.06**	**287**		**Pn**	**18 58 44.2**	**-1.7**
PPLA	**Purkeypile**	**2.38**	**353**	Pn	**Pn**	**18 58 50.6**	**+0.3**
SCM	**Sheep Creek Mo**	**2.42**	**56**		**Pn**	**18 58 50.4**	**-0.3**
SCM				IAML		18 59 29.0	
	comp=E,639nm,0.9s						
SCM				IAML		18 59 31.1	
	comp=N,419nm,0.7s						
HIN	**Hinchinbrook I**	**2.50**	**91**	Pn	**Pn**	**18 58 50.5**	**-1.4**
HIN				IAML		18 59 22.9	
	comp=N,260nm,0.4s						
HIN				IAML		18 59 40.2	
	comp=E,254nm,0.6s						
HUR	**Hurricane**	**2.60**	**20**		**Pn**	**18 58 54.1**	**+0.8**
WAT7	**Susitna Watana**	**2.63**	**28**		**Pn**	**18 58 54.0**	**+0.3**
WAT1	**Susitna Watana**	**2.70**	**31**		**Pn**	**18 58 55.0**	**+0.5**
WAT6	**Susitna Watana**	**2.73**	**40**		**Pn**	**18 58 54.9**	**-0.3**
WAT2	**Susitna Watana**	**2.80**	**29**		**Pn**	**18 58 56.1**	**+0.1**
KDAK	**Kodiak Island**	**2.82**	**191**	P	**Pn**	**18 58 55.3**	**-0.8**
	comp=E,15nm,0.3s,baz=64,slow=6.1,SNR=191						
KDAK				S	**Sn**	**18 59 28.3**	**-0.7**
	comp=E,11nm,0.3s,baz=74,slow=21,SNR=1.8						
Q23K	**Middleton Isla**	**2.84**	**111**	Pn	**Pn**	**18 58 54.9**	**-1.5**
Q23K				IAML		19 00 01.4	
	comp=N,337nm,2.4s						
Q23K				IAML		19 00 45.4	
	comp=E,360nm,3.2s						
MID	**Middleton Isla**	**2.84**	**111**	Pn	**Pn**	**18 58 54.9**	**-1.6**
EYAK	**Cordova Ski Ar**	**2.86**	**87**	Pn	**Pn**	**18 58 55.1**	**-1.6**
DIV	**Divide**	**2.89**	**76**		**Pn**	**18 58 56.1**	**-1.0**
KVTA	**Katmai Vly 10**	**2.89**	**223**		**Pn**	**18 58 57.4**	**+0.2**
KLU	**Klutina**	**2.90**	**68**		**Pn**	**18 58 56.6**	**-0.6**
KLU				IAML		18 59 31.2	
	comp=E,381nm,0.2s						
KLU				IAML		18 59 44.5	
	comp=N,297nm,0.4s						
TRF	**Thorofare Moun**	**2.98**	**11**		**Pn**	**18 58 58.4**	**0.0**
TRF				IAML		18 59 40.1	
	comp=N,269nm,0.4s						
TRF				IAML		18 59 40.6	
	comp=E,247nm,0.5s						
KELA	**Mount Kelaz**	**3.01**	**227**		**Pn**	**18 58 58.7**	**0.0**
M24K	**Tolsona, Glenn**	**3.02**	**56**	P	**Pn**	**18 58 59.1**	**+0.1**
	baz=242,SNR=22						
M24K				S	**Sn**	**18 59 34.7**	**+0.6**
	baz=242						
M24K	**Tolsona, Glenn**	**3.02**	**56**		**Pn**	**18 58 59.2**	**+0.1**
KTH	**Kantishna Hill**	**3.03**	**5**		**Pn**	**18 58 59.4**	**+0.3**
KTH				IAML		18 59 41.7	
	comp=N,210nm,0.6s						
KTH				IAML		18 59 42.9	
	comp=E,199nm,0.7s						
ANCK	**Angle Creek**	**3.10**	**222**		**Pn**	**18 59 00.2**	**+0.1**
RND	**Reindeer**	**3.14**	**23**		**Pn**	**18 59 00.7**	**+0.1**
TT01	**Tatalina**	**3.19**	**320**		**Pn**	**18 59 00.7**	**-0.4**
TTA	**Tatalina**	**3.20**	**320**	Pn	**Pn**	**18 59 00.8**	**-0.5**
DHY	**Denali Highway**	**3.22**	**36**		**Pn**	**18 59 02.0**	**+0.3**
PS11	**TAPS Pump St11**	**3.31**	**60**		**Pn**	**18 59 02.8**	**+0.1**
GOAT	**Goat Mountain**	**3.37**	**86**		**Pn**	**18 59 02.1**	**-1.5**
CHUM	**Lake Minchumin**	**3.37**	**354**		**Pn**	**18 59 03.9**	**+0.3**
RAGM	**Ragged Mountai**	**3.41**	**90**	Pn	**Pn**	**18 59 03.4**	**-0.7**
MCK	**McKinley**	**3.42**	**20**	P	**Pn**	**18 59 05.2**	**+0.8**
	baz=203,SNR=27						
MCK	**McKinley**	**3.42**	**20**		**Pn**	**18 59 04.7**	**+0.3**
BMRM	**Bremner River**	**3.43**	**80**		**Pn**	**18 59 03.0**	**-1.5**
OHAK	**Old Harbor**	**3.45**	**196**	Pn	**Pn**	**18 59 03.2**	**-1.5**
OHAK				IAML		18 59 59.8	
	comp=N,131nm,0.7s						
N25K	**Chitina, Valde**	**3.54**	**69**	P	**Pn**	**18 59 05.3**	**-0.6**
	baz=256,SNR=8.5						
N25K				S	**Sn**	**18 59 45.5**	**-1.2**
	baz=256						
N25K	**Chitina, Valde**	**3.54**	**69**	Pn	**Pn**	**18 59 05.4**	**-0.5**
N25K				IAML		19 00 02.4	
	comp=N,98nm,0.4s						
N25K				IAML		19 00 03.5	
	comp=E,120nm,0.5s						
BPAW	**Bear Paw Mtn.**	**3.58**	**4**	Pn	**Pn**	**18 59 06.1**	**-0.4**
BPAW				IAML		18 59 52.1	
	comp=E,90nm,0.4s						
HMT	**Hamilton**	**3.62**	**90**	Pn	**Pn**	**18 59 07.8**	**+0.8**
HMT				IAML		18 59 48.4	
	comp=N,205nm,0.3s						
BWN	**Browne**	**3.77**	**14**		**Pn**	**18 59 09.4**	**+0.5**
BWN				IAML		19 00 02.2	
	comp=N,140nm,0.9s						
BWN				IAML		19 00 26.1	
	comp=E,115nm,1.2s						
PAX	**Paxson**	**3.77**	**47**		**Pn**	**18 59 09.7**	**+0.5**
GLB	**Gilahina Butte**	**3.87**	**73**		**Pn**	**18 59 09.7**	**-0.8**

GLB				IAML		19 00 09.2	
	comp=N,116nm,0.7s						
GLB				IAML		19 00 13.1	
	comp=E,82nm,0.6s						
SUCK	Suckling Hills	3.89	94	Pn	Pn	18 59 11.2	+0.4
SUCK				IAML		19 00 08.2	
	comp=E,142nm,2.5s						
SUCK				IAML		19 01 37.4	
	comp=N,172nm,2.1s						
VRDI	Verde Repeater	4.01	77		Pn	18 59 11.2	-1.4
VRDI				IAML		19 00 23.3	
	comp=N,78nm,1.2s						
KHIT	Khitrov Hills	4.10	88		Pn	18 59 12.4	-1.3
CRQM	Cirque	4.14	83	Pn	Pn	18 59 14.2	-0.1
CRQM				IAML		19 00 24.0	
	comp=E,101nm,1.0s						
CRQM				IAML		19 00 24.9	
	comp=N,135nm,1.2s						
NEA2	Nenana	4.22	15	P	Pn	18 59 15.6	+0.4
	baz=197,SNR=28						
NEA2	Nenana	4.22	15		Pn	18 59 15.0	-0.2
SII	Sitkinak Islan	4.23	200	Pn	Pn	18 59 14.6	-0.8
MCARA	McCarthy VSAT	4.24	75		Pn	18 59 14.7	-0.8
MCARA				IAML		19 00 40.8	
	comp=N,121nm,1.1s						
WRH	Wood River Hil	4.25	21		Pn	18 59 15.3	-0.3
TGL	Tana Glacier	4.29	83		Pn	18 59 16.0	-0.3
TGL				IAML		19 00 27.0	
	comp=E,57nm,0.6s						
TGL				IAML		19 00 33.1	
	comp=N,85nm,1.4s						
HDA	Harding Lake	4.42	27	P	Pn	18 59 18.5	+0.6
	baz=211,SNR=28						
HDA				S	Sn	19 00 09.2	+1.1
	baz=211						
HDA				S	Sn	19 00 09.2	+1.1
	baz=211						
HDA	Harding Lake	4.42	27		Pn	18 59 18.2	+0.2
HDA				IAML		19 00 20.5	
	comp=E,65nm,0.3s						
HDA				IAML		19 00 22.0	
	comp=N,71nm,0.4s						
MENT	Mentasta	4.43	54		Pn	18 59 17.3	-0.7
MENT				IAML		19 00 31.2	
	comp=N,146nm,1.0s						
CCB	Clear Creek Bu	4.46	21		Pn	18 59 18.1	-0.4
PTPK	Patty Peak	4.49	78		Pn	18 59 18.5	-0.5
RIDG	Independent Ri	4.49	42	Pn	Pn	18 59 19.6	+0.7
RIDG				IAML		19 00 30.8	
	comp=N,130nm,0.8s						
KIAG	Kiagna River	4.53	81		Pn	18 59 19.5	0.0
BALM	Baldy	4.53	80	Pn	Pn	18 59 18.4	-1.1
BALM				IAML		19 00 35.7	
	comp=N,60nm,0.7s						
ISLE	Juniper Island	4.54	85	Pn	Pn	18 59 18.5	-1.2
ISLE				IAML		19 00 41.6	
	comp=E,63nm,0.8s						
ISLE				IAML		19 00 51.1	
	comp=N,93nm,1.3s						
PS08	TAPS Pump Stn8	4.57	27		Pn	18 59 19.9	+0.1
TCOL	CIGO, UAF Yank	4.66	20	P	Pn	18 59 21.7	+0.5
	baz=203,SNR=8.2						
TCOL	CIGO, UAF Yank	4.66	20		Pn	18 59 21.4	+0.3
COLA	College	4.67	20		Pn	18 59 21.3	+0.2
MDM	Murphy Dome	4.68	18	Pn	Pn	18 59 21.3	-0.2
DOT	Dot Lake	4.70	45	Pn	Pn	18 59 21.7	+0.1
I23K	Minto, Yukon-K	4.73	11	P	Pn	18 59 22.5	+0.4
	baz=194,SNR=28						
I23K	Minto, Yukon-K	4.73	11		Pn	18 59 22.4	+0.3
IL31		4.75	25		Pn	18 59 22.2	-0.1
ILAR	Eielson Array	4.75	25	P	Pn	18 59 21.6	-0.8
	comp=N,4.4nm,0.3s,baz=210,slow=13,SNR=142						
ILAR				S	Sn	19 00 13.2	-3.0
	comp=N,2.5nm,0.3s,baz=197,slow=23,SNR=5.0						
ILAR	Eielson Array	4.75	25	Pn	Pn	18 59 21.9	-0.5
ILAR					Sn	19 00 15.8	-0.4
YAH	Yahtse	4.86	88	Pn	Pn	18 59 24.0	0.0
YAH				IAML		19 00 51.2	
	comp=N,78nm,3.6s						
YAH				IAML		19 01 01.7	
	comp=E,51nm,2.1s						
BARN	Barnard Glacie	4.87	80	Pn	Pn	18 59 23.5	-0.7
BARN				IAML		19 00 46.6	
	comp=E,38nm,0.6s						
BARN				IAML		19 00 53.4	
	comp=N,38nm,1.2s						
SCRK	Sand Creek	4.93	42	P	Pn	18 59 24.7	-0.3
	baz=230,SNR=22						
SCRK	Sand Creek	4.93	42		Pn	18 59 24.7	-0.3
POKR	Poker Plat Res	4.96	21	P	Pn	18 59 25.7	+0.4
	baz=204,SNR=17						
POKR	Poker Plat Res	4.96	21		Pn	18 59 25.4	+0.2
CTGM	Chitina Glacie	5.03	81	Pn	Pn	18 59 25.6	-0.7
TABL	Table Mountain	5.14	87	Pn	Pn	18 59 26.9	-1.0
TABL				IAML		19 00 58.6	
	comp=E,57nm,2.3s						
TABL				IAML		19 02 01.9	
	comp=N,41nm,3.6s						
LOGN	Logan Glacier	5.19	82		Pn	18 59 27.8	-0.8
CHIR	Chirikof Islan	5.21	206	Pn	Pn	18 59 25.6	-3.0
BCAR	Beaver Creek A	5.27	57		Pn	18 59 28.8	-0.7
YUK2	White River	5.33	72		Pn	18 59 30.1	-0.3
BVCY	Beaver Creek	5.45	65		Pn	18 59 32.1	+0.1
IMAR	Indian Mountai	5.55	351		Pn	18 59 32.9	-0.4
CHGN	Chignik	5.58	223	Pn	Pn	18 59 33.4	-0.3
PCA	Pinnacle	5.63	90	Pn	Pn	18 59 35.0	+0.5
PRP	Porcupine Dome	5.69	26	Pn	Pn	18 59 35.7	+0.4
EGAK	Eagle	6.39	44		Pn	18 59 44.8	0.0
FYU	Fort Yukon	6.67	22	Pn	Pn	18 59 48.6	+0.1
DAWY	Dawson	6.67	53	Pn	Pn	18 59 48.5	-0.1
COLD	Coldfoot	6.74	4	P	Pn	18 59 50.1	+0.7
	baz=186,SNR=11						
COLD	Coldfoot	6.74	4	Pn	Pn	18 59 50.1	+0.7
HYT	Haines Junctio	6.90	82	Pn	Pn	18 59 50.7	-1.1
SDPT	Sand Point	7.05	226	Pn	Pn	18 59 56.3	+2.5
CNBA	Chernabura Isl	7.18	220	Pn	Pn	18 59 57.0	+1.5
ANM	Nome	7.55	308		Pn	19 00 00.9	+0.4
BMAR	Burnt Mountain	7.55	21		Pn	19 00 00.1	-0.5
WHY	Whitehorse	8.20	82	Pn	Pn	19 00 08.0	-1.6
BESE	Bessie Mountai	8.70	96	Pn	Pn	19 00 16.5	+0.2
EPYK	Eagle Plains	8.82	42		Pn	19 00 17.4	-0.5
UNV	Unalaska Valle	10.52	237	Pn	Pn	19 00 41.6	+0.5
INK	Inuvik	10.96	37	P	Pn	19 00 45.7	-1.3
	comp=N,0.5nm,0.3s,baz=241,slow=11,SNR=12						
INK	Inuvik	10.96	37	Pn	Pn	19 00 46.9	-0.1
YKA	Yellowknife Ar	17.57	68	P	Pn	19 02 12.4	-0.5
	comp=N,0.2nm,0.3s,baz=278,slow=11,SNR=23						
YKA				S	Sn	19 05 22.6	-5.2
	comp=N,0.2nm,0.3s,baz=260,slow=26,SNR=8.0						
PETK	Petropavlovsk-	28.11	278	P	P	19 03 58.0	+0.2
	comp=N,11nm,1.1s,baz=73,slow=14,SNR=6.6						
NVAR	Mina Array Bea	30.37	122	LR	LR	19 15 27.7	
	comp=N,90nm,18.5s,baz=230,slow=34						
KSRS	Korea Array	53.77	283	P	P	19 07 28.1	+0.4
	comp=N,0.9nm,0.7s,baz=32,slow=7.1,SNR=5.2						
SONM	Songino Array	55.05	307	P	P	19 07 37.1	0.0
	comp=N,1.2nm,0.7s,baz=32,slow=7.7,SNR=8.9						
AKASG	Malin Array Be	69.11	359	P	P	19 09 12.1	+1.1
	comp=N,0.3nm,0.3s,baz=3.8,slow=5.6,SNR=2.2						

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*NNC **24** 19:04:37.5±3.3, 44°.04N×85°.82E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=27.6km s-min=12.9km az=128.0*

*SOME **24** 19:04:50.4, 44°.48N×85°.33E, h20^{km}*

ISC 24 19:04:50.6±2.0, **44°.52N**±0°.07×**85°.06E**±0°.10, **h10**^{km}, **n22, σ1ˢ.93**/30, **7C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	2.94	357	*e*P	Pg	19 05 47.6	+0.7
	12nm,0.4s						
ZSN				*e*S	Sg	19 06 27.4	+2.4
	18nm,0.7s						
ZSN	Zaisan	2.94	357	Pg	Pg	19 05 46.5	-0.4
	9.7nm,0.4s						
ZSN				Lg	Lg	19 06 34.8	
	30nm,0.7s						
MK31	Makanchi Array	3.00	320	Pn	Pn	19 05 34.8	-3.4
	0.5nm,0.3s,baz=139,slow=15,SNR=141						
MK31				⇓Pg	Pb	19 05 45.9	+1.9
	1.5nm,0.3s,baz=129,slow=16,SNR=8.8						
MK31				Lg	Lg	19 06 34.1	
	16nm,0.6s,baz=135,slow=28,SNR=15						
MAKZ	Makanchi	3.15	318	⇑Pn	Pn	19 05 37.0	-3.3
	1.3nm,0.3s						
MAKZ				⇓Pg	Pb	19 05 47.5	+0.8
	1.3nm,0.4s						
MAKZ				⇑Lg	Lg	19 06 39.3	
	16nm,0.8s						
KTMS	Ketmen	3.56	254	*e*P	Pg	19 05 58.3	-0.6
	6.3nm,0.2s						
KTMS				*e*S	Sg	19 06 45.6	+0.6
	9.0nm,0.7s						
KTMS	Ketmen	3.56	254	Pg	Pb	19 05 53.6	-0.2
	3.5nm,0.2s						
KTMS				Lg	Lg	19 06 46.6	
	12nm,0.4s						
DJR	Jarkent	3.78	269	*e*P	Pg	19 06 03.6	+0.6
	2.7nm,0.3s						
DJR				*e*S	Sg	19 06 55.0	+3.0
	7.4nm,0.6s						
DJR	Jarkent	3.78	269	Pg	Pb	19 05 58.4	+0.9
	1.2nm,0.2s						
DJR				Lg	Lg	19 06 54.6	
	7.4nm,0.6s						
KAPS	Kapalarasan	4.13	283	*e*P	Pg	19 06 09.6	0.0
	1.6nm,0.2s						
KAPS				*e*S	Sg	19 07 05.5	+2.5
	8.8nm,0.5s						
KAPS	Kapalarasan	4.13	283	Pg	Pg	19 06 08.3	-1.4
	1.6nm,0.4s						
KAPS				Lg	Lg	19 07 11.7	
	8.8nm,0.5s						
PDGK	Podgornoye	4.20	256	Pg	Pb	19 06 04.3	-0.3
	0.9nm,0.3s						
PDGK				Lg	Lg	19 07 04.3	
	3.2nm,0.7s						
PDGK	Podgornoye	4.20	256	⇑Pn	Pn	19 05 47.1	-7.7
	1.4nm,0.8s						
PDGK				⇑Sn	Sn	19 06 41.3	-2.6
	2.2nm,0.6s						
PDGK				⇑Lg	Lg	19 07 01.3	
	3.8nm,0.4s						
SHLS	Shalkode	4.27	253	*e*P	Pb	19 06 04.3	-1.6
	5.4nm,0.4s						
SHLS				*e*S	Sb	19 06 55.7	-1.8
	14nm,0.6s						
SHLS	Shalkode	4.27	253	Pg	Pn	19 05 59.4	+3.6
	6.6nm,0.3s						
SHLS				Lg	Lg	19 06 55.7	
	14nm,0.6s						
UZB	Uzynbulak	4.58	255	*e*P	Pg	19 06 17.1	-1.2
	1.4nm,0.5s						
UZB				*e*S	Sg	19 07 18.1	+0.5
	5.3nm,0.7s						
UZB	Uzynbulak	4.58	255	Pg	Pb	19 06 12.4	+1.3
	0.4nm,0.2s						
UZB				Lg	Lg	19 07 18.4	
	5.1nm,0.8s						
KPKS	Kokpek	4.72	259	*e*P	Pg	19 06 20.2	-0.8
	2.3nm,0.3s						
KPKS				*e*S	Sg	19 07 24.7	+2.5
	12nm,0.5s						
MNBS	Baschi	4.80	267	*e*P	Pg	19 06 21.6	-1.0
	2.2nm,0.4s						
MNBS				*e*S	Sg	19 07 25.8	+1.0
	8.5nm,0.6s						
MNBS	Baschi	4.80	267	Pg	Pb	19 06 16.8	+1.9
	1.7nm,0.1s						
MNBS				Lg	Lg	19 07 25.8	
	8.5nm,0.6s						
SATY	Saty	5.04	256	Pg	Pb	19 06 21.5	+2.7
	2.2nm,0.6s						
SATY				Lg	Lg	19 07 33.7	
	5.8nm,0.4s						
KURBB	Kurchatov Arra	7.54	326	⇓Pn	Pn	19 06 34.8	-5.7
	1.1nm,0.3s						
KURBB				⇓Lg	Lg	19 08 58.8	
	12nm,0.7s						
KURK	Kurchatov	7.58	327	⇑Pn	Pn	19 06 34.8	-6.2
	0.5nm,0.3s						
KURK				⇑Lg	Lg	19 08 57.6	
	3.0nm,0.6s						

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*SOME **24** 19:12:22.0, 41°.08N×72°.38E, h5^{km}*

*KRNET **24** 19:12:23.2±0.1, 41°.00N×72°.42E, h17^{km}, mb3.1*

*ISU **24** 19:12:24, 41°.00N×72°.60E, h5^{km}, Hypocentre not reviewed by the ISC*

*NNC **24** 19:12:24.4±1.7, 41°.08N×72°.46E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=15.3km s-min=6.5km az=176.0*

ISC 24 19:12:22.6±1.0, **41°.02N**±0°.02×**72°.41E**±0°.02, **h16**^{km}±12^{km}, **n51, σ1ˢ.84**/80, **21C-14D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.53	55	⇑*i*P	Pg	19 12 33.3	+0.1
	baz=53						
ARSB				⇑*i*S	Sg	19 12 41.3	+1.0
	baz=53						
ARSB	Arslanbob	0.53	55	*e*P		19 12 33.0	
ARSB				*e*S		19 12 38.0	
FRG	Fergana	0.56	239	*e*P		19 12 41.0	
FRG				*e*S		19 12 53.0	
OHH	Osh	0.57	150	⇑*i*P	Pg	19 12 33.4	-0.6
	baz=49						
OHH				⇑*i*S	Sg	19 12 41.3	-0.4
	baz=49						
OHH	Osh	0.57	150	*e*P		19 12 33.0	
OHH				*e*S		19 12 41.0	
TRKS	Terek-Say	1.08	298	⇓*i*P	Pb	19 12 43.2	+0.1
	baz=97						
TRKS				⇓*i*S	Sb	19 12 57.5	+0.4
	baz=97						
SFK	Sufi-Kurgan	1.31	140	⇑*i*P	Pb	19 12 47.4	+0.5
	baz=39						
SFK				⇑*i*S	Sg	19 13 04.6	-0.3
	baz=39						
SFK	Sufi-Kurgan	1.31	140	*e*P		19 12 49.0	
SFK				*e*S		19 13 04.0	
MNAS	Manas	1.47	3	⇑*i*P	Pb	19 12 50.8	+1.2
	baz=3.0						
MNAS				⇑*i*S	Sg	19 13 10.9	+0.9
	baz=3.0						
AML	Almayashu	1.47	41	⇑*i*P	Pb	19 12 50.7	+0.9
	baz=40						
AML				⇑*i*S	Sb	19 13 10.2	+1.9
	baz=40						
AML	Almayashu	1.47	41	P	Pb	19 12 50.6	+0.9
	SNR=119						
BTK	Batken	1.55	232	⇓*i*P	Pb	19 12 51.4	+0.4
	baz=33						
BTK				⇓*i*S	Sg	19 13 12.2	-0.5
	baz=33						
DRK	Karamyk	1.61	197	⇓*i*P	Pb	19 12 52.4	+0.3
	baz=97						
DRK				⇓*i*S	Sg	19 13 13.9	-0.7
	baz=97						
ARLS	Aral	1.66	59	⇑*i*P	Pb	19 12 54.4	+1.4
	baz=59						
ARLS				⇑*i*S	Sg	19 13 16.9	+0.6
	baz=59						
MRKS	Merke	1.83	19	*e*P	Pb	19 12 57.1	+1.3
	32nm,0.4s						
MRKS				*e*S	Sg	19 13 22.1	+0.6
	131nm,0.3s						
MRKS	Merke	1.83	19	Pg	Pb	19 12 57.2	+1.5
	32nm,0.4s						
MRKS				Lg	Lg	19 13 24.0	
	131nm,0.3s						
EKS2	Erkin-Say	1.93	31	⇑*i*P	Pb	19 12 58.3	+0.8
	baz=31						
EKS2				⇑*i*S	Sb	19 13 23.0	+1.6
	baz=31						
EKS2	Erkin-Say	1.93	31	P	Pb	19 12 59.2	+1.7
	SNR=8.6						
UCH	Uchtor	1.98	52	⇓*i*P	Pb	19 12 59.6	+1.0
	baz=51						
UCH				⇓*i*S	Sg	19 13 26.4	-0.2
	baz=51						
UCH	Uchtor	1.98	52	P	Pb	19 12 59.8	+1.2
	SNR=126						
DZA	Taraz	2.04	337	*e*P	Pb	19 13 00.3	+1.1
	69nm,0.2s						
DZA				*e*S	Sg	19 13 27.5	-0.6
	342nm,0.3s						
DZA	Taraz	2.04	337	Pg	Pb	19 12 59.8	+0.6
	69nm,0.2s						
DZA				Lg	Lg	19 13 28.1	
	342nm,0.3s						
AAK	Ala-Archa	2.24	43	⇑*i*P	Pb	19 13 03.2	+0.4
	baz=43						
AAK				⇑*i*S	Sb	19 13 31.4	+1.0
	baz=43						
AAK	Ala-Archa	2.24	43	P	Pb	19 13 03.4	+0.6
	SNR=25						
AAK	Ala-Archa	2.24	43	⇓Pg	Pb	19 13 03.1	+0.2
	9.5nm,0.5s						
AAK				⇑Lg	Lg	19 13 35.0	
	33nm,0.6s						
CHM	Chimkent	2.47	303	*e*P	Pb	19 13 08.3	+1.6
	46nm,0.3s						
CHM				*e*S	Sg	19 13 42.0	-0.1
	228nm,0.5s						
KBK	Karagaybulak	2.50	48	*i* P	Pb	19 13 07.0	-0.3
	baz=48						
KBK				*i* S	Sb	19 13 38.2	+0.3
	baz=48						
KBK	Karagaybulak	2.50	48	P	Pb	19 13 07.5	+0.2
	SNR=18						
KK31	Karatay Array	2.52	326	Pn	Pb	19 13 06.0	-1.4
	2.8nm,0.4s,baz=141,slow=14,SNR=65						
KK31				⇓Lg	Lg	19 13 40.6	
	16nm,0.3s,baz=138,slow=27,SNR=14						
CHMS	Chumysh	2.63	41	⇑*i*P	Pb	19 13 08.1	-1.4
	baz=40						
CHMS				⇑*i*S	Sb	19 13 40.5	-1.1
	baz=40						
CHMS	Chumysh	2.63	41	P	Pb	19 13 08.8	-0.7
	SNR=7.1						
USP	Ospenovka	2.73	34	⇓*i*P	Pb	19 13 09.3	-1.8
	baz=34						
USP				⇓*i*S	Sb	19 13 42.4	-1.9
	baz=34						
USP	Ospenovka	2.73	34	P	Pb	19 13 09.7	-1.3
	SNR=9.6						
BRLS	Borolday	2.78	317	*e*P	Pb	19 13 12.2	+0.3
	32nm,0.4s						
BRLS				*e*S	Sb	19 13 48.5	+2.9
	41nm,0.5s						
BRLS	Borolday	2.78	317	Pg	Pb	19 13 12.2	+0.3
	32nm,0.4s						
BRLS				Lg	Lg	19 13 48.5	
	41nm,0.5s						
SGDS	Sogindy	2.93	33	Pg	Pb	19 13 16.4	+1.8
	6.8nm,0.7s						
SGDS				Lg	Lg	19 13 55.6	
	19nm,0.4s						
TKM2	Tokmak 2	3.04	50	⇑*i*P	Pb	19 13 14.3	-2.1
	baz=50						
TKM2				⇑*i*S	Sb	19 13 51.3	-2.1
	baz=50						
TKM2	Tokmak 2	3.04	50	P	Pb	19 13 14.3	-2.1
	SNR=5.5						
TKM2	Tokmak 2	3.04	50	⇓Pn	Pb	19 13 14.1	-2.3
	4.7nm,0.4s						
TKM2				⇓Lg	Lg	19 13 57.1	
	16nm,0.8s						
ULHL	Ulahol	3.12	66	P	Pb	19 13 20.4	+2.6
	SNR=5.6						
KST	Kastek	3.33	51	*e*P	Pb	19 13 23.0	+1.6
	4.1nm,0.4s						
KST				*e*S	Sg	19 14 07.4	-2.1
	25nm,0.8s						
KST	Kastek	3.33	51	Pg	Pb	19 13 23.0	+1.6
	4.1nm,0.4s						
KST				Lg	Lg	19 14 07.4	
	25nm,0.8s						
DGS	Degeres	3.34	47	*e*P	Pb	19 13 24.7	+3.1
	7.0nm,0.7s						
DGS				*e*S	Sg	19 14 09.7	-0.3
	15nm,0.5s						
DGS	Degeres	3.34	47	Pg	Pb	19 13 24.7	+3.1
	7.0nm,0.7s						
DGS				Lg	Lg	19 14 09.7	
	15nm,0.5s						
MTBS	Maitube	3.66	54	*e*P	Pb	19 13 29.5	+2.6
	1.4nm,0.5s						
MTBS				*e*S	Sg	19 14 17.8	-2.2
	13nm,0.3s						
TNSS	Tian-Shan	3.93	58	*e*P	Pb	19 13 34.3	+2.5
	4.9nm,1.2s						
TNSS				*e*S	Sg	19 14 26.5	-2.4
	7.5nm,0.8s						
TNSS	Tian-Shan	3.93	58	Pg	Pb	19 13 34.3	+2.5
	4.9nm,1.2s						
TNSS				Lg	Lg	19 14 26.5	
	7.5nm,0.8s						
MDOK	Medeo	4.06	57	*e*P	Pg	19 13 39.0	-1.4
	13nm,1.1s						
MDOK				*e*S	Sg	19 14 34.4	+1.5
	9.3nm,1.6s						
MDOK	Medeo	4.06	57	Pg	Pg	19 13 38.9	-1.4
	13nm,1.1s						
MDOK				Lg	Lg	19 14 34.4	
	9.3nm,1.6s						
KUU	Kurty	4.08	44	*e*P	Pb	19 13 36.5	+2.4
	2.4nm,0.8s						
KUU				*e*S	Sg	19 14 30.5	-3.2
	9.3nm,0.6s						
KUU	Kurty	4.08	44	Pg	Pb	19 13 36.5	+2.4
	2.4nm,0.8s						
KUU				Lg	Lg	19 14 30.5	
	9.3nm,0.6s						
BTLS	Baital	4.19	16	*e*P	Pb	19 13 38.6	+2.6
	0.9nm,0.3s						
BTLS				*e*S	Sg	19 14 33.4	-3.8
	7.5nm,1.0s						
CHKK	Chushkaly	4.41	49	*e*P	Pb	19 13 42.6	+2.8
	1.0nm,0.2s						
CHKK				*e*S	Sg	19 14 40.2	-4.1
	6.8nm,0.6s						
SATY	Saty	4.91	64	*e*P	Pb	19 13 52.0	+3.8
	5.2nm,1.8s						
SATY				*e*S	Sg	19 14 56.8	-3.3
	10nm,1.1s						
SATY	Saty	4.91	64	Pg	Pb	19 13 52.0	+3.8
	5.2nm,1.8s						
SATY				Lg	Lg	19 14 56.8	
	10nm,1.1s						

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*DJA **24** 19:16:29.9±0.3, 9°S±4°×11°3E±°, h10^{km}, M4.6/14, mb4.7/9, mB5.5/1, MLv4.5/14, Mw(mB)5.0/1*

*NEIC **24** 19:16:32.7±2.1, 9°.18S±0°.07×113°.10E±0°.06, h59^{km}±10^{km}, mb4.0/9, Error ellipse: s-maj=11.8km s-min=5.6km az=148.0*

*IDC **24** 19:16:35.0±2.0, 9°.08S×113°.13E, h73^{km}±21^{km}, mb3.5/9, mb1 3.8/12, mb1mx3.6/32, mbtmp4.0/12, MS3.0/4, Ms1 3.1/4, ms1mx2.9/23, Error ellipse: s-maj=28.7km s-min=12.4km az=35.0*

ISC 24 19:16:32.1±0.9, **9°.30S**±0°.06×**113°.11E**±0°.05, **h54**^{km}±11^{km}, **n58, σ1ˢ.72**/64, **mb4.0**/11, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.32	51	Pn	Pn	19 16 53.7	-0.6
JAGI				Sn	Sn	19 17 10.1	-0.9
JAGI	Jajag, Banyuwa	1.32	51	P	Pn	19 16 53.9	-0.4
JAGI				S	Sn	19 17 09.2	-1.8
PWJI	Pagerwojo	1.81	315	P	Pn	19 16 59.6	-1.3
ABJI	Asem Bagus	1.87	37	P	Pn	19 17 03.0	+1.3
ABJI				S	Sn	19 17 26.0	+1.8
DNP	Denpasar	2.17	74	P	Pn	19 17 07.2	+1.4
DNP				S	Sn	19 17 34.3	+2.7
KMMI	Kalianget	2.40	21	P	Pn	19 17 09.5	+0.6
SRBI	Singaraja	2.41	60	P	Pn	19 17 10.0	+0.9
SRBI				S	Sn	19 17 38.4	+0.9
TBJI	Tambak Boyo	2.77	333	P	Pn	19 17 14.5	+0.5
UGM	Wanagama	2.90	298	Pn	Pn	19 17 15.4	-0.5
UGM	Wanagama	2.90	298	P	Pn	19 17 15.4	-0.5
SMRI	Semarang	3.46	310		Pn	19 17 23.8	+0.3
SMRI	Semarang	3.46	310	P	Pn	19 17 23.9	+0.3
TWSI	Taliwang, Sumb	3.77	82	P	Pn	19 17 29.3	+1.5
TWSI				S	Sn	19 18 09.8	-1.2
PLAI	Plampang	4.64	85	P	Pn	19 17 41.2	+1.5
CISI	Cisompet, Garu	5.51	288		Pn	19 17 50.5	-1.3
CISI	Cisompet, Garu	5.51	288	P	Pn	19 17 50.2	-1.6
	0.9nm4μm162nm,0.6s						
LEM	Lembang	5.96	294	P	Pn	19 18 00.8	+2.7
	2.4nm,0.3s,baz=122,slow=18,SNR=9.4						
LEM				S	Sn	19 19 06.4	+1.2
	1.1nm,0.3s,baz=311,slow=20,SNR=2.3						
LEM				LR	LR	19 20 06.3	
	comp=Z,55nm,20.5s,baz=234,slow=36						
WBSI	Waikabubak, Su	6.21	94	P	Pn	19 18 01.8	+0.5
XMIS	Christmas Isla	7.44	260		Pn	19 18 17.0	-1.1
KAPI	Kappang	7.85	58	P	Pn	19 18 24.7	+0.9

	1.4nm,0.3s,baz=220,slow=8.0,SNR=7.0						
KAPI				S	Sn	19 19 47.9	-3.4
	1.0nm,0.3s,baz=270,slow=20,SNR=1.7						
KAPI				LR	LR	19 21 40.4	
	comp=Z,76nm,19.2s,baz=300,slow=40						
KAPI	Kappang	7.85	58		Pn	19 18 24.0	+0.3
BSSI	Bau Bau, Buton	7.96	67	P	Pn	19 18 26.4	+1.1
	0.2nm41nm,1.4s						
SPSI	Sidrap Palu	8.48	52	P	Pn	19 18 33.6	+1.2
	6.1nm,0.9s						
BNSI	Bone	8.49	55	P	Pn	19 18 35.7	+3.2
	22nm,1.2s						
EDFI	Ende, Flores	8.50	87	P	Pn	19 18 34.1	+1.4
	9.5nm,1.1s						
KASI	Kota Agung	9.33	293	P	Pn	19 18 44.3	+0.3
	31nm,0.6s						
BATI	Baumata	10.45	96	P	Pn	19 19 01.8	+2.5
	2.3nm,0.3s,baz=275,slow=11,SNR=3.4						
BATI				S	Sn	19 20 49.9	-5.1
	1.7nm,0.3s,baz=90,slow=19,SNR=1.5						
BATI				LR	LR	19 23 24.6	
	comp=Z,74nm,20.0s,baz=285,slow=39						
SOEI	Soe	11.02	93	Pn	Pn	19 19 08.9	+1.7
MNAI	Manna	11.21	295	Pn	Pn	19 19 09.5	-0.3
MNAI	Manna	11.21	295	P	Pn	19 19 10.0	+0.2
	187nm,0.9s						
GIRL	Giralia	13.31	175	Pn	Pn	19 19 38.7	+0.3
FITZ	Fitzroy Crossi	14.98	127	P	Pn	19 20 01.0	+0.3
	0.3nm,0.3s,baz=316,slow=7.1,SNR=11						
FITZ				S	Sn	19 22 40.1	-5.5
	0.2nm,0.3s,baz=86,slow=15,SNR=1.9						
FITZ	Fitzroy Crossi	14.98	127	Pn	Pn	19 20 00.8	+0.1
FITZ				IAmb	IAmb	19 20 08.9	
	comp=Z,9.4nm,1.1s						
MTN	Manton Dam	18.04	103		Pn	19 20 40.3	+1.2
FAKI	Fak Fak	20.05	73	P	P	19 21 00.1	-1.0
WB0	Warramunga Arr	23.05	119	P	P	19 21 34.0	+0.9
WB0				IAmb	IAmb	19 21 36.7	
	comp=Z,4.8nm,0.8s						
WRA	Warramunga Arr	23.08	120	P	P	19 21 34.8	+1.4
	comp=Z,4.3nm,0.9s,baz=295,slow=11,SNR=16						
WRA	Warramunga Arr	23.08	120	P	P	19 21 34.5	+1.1
AS31	Alice Springs	24.48	128	P	P	19 21 48.6	+2.1
ASAR	Alice Springs	24.48	128	P	P	19 21 48.5	+2.1
	comp=Z,3.1nm,0.6s,baz=301,slow=8.9,SNR=90						
ASAR	Alice Springs	24.48	128	P	P	19 21 47.7	+1.3
CMAR	Chiang Mai Arr	30.92	333	P	P	19 22 44.5	+0.5
	comp=Z,0.2nm,0.4s,baz=182,slow=8.0,SNR=4.4						
STKA	Stephens Creek	34.67	134	P	P	19 23 19.7	+3.0
	comp=Z,2.4nm,0.8s,baz=312,slow=8.6,SNR=4.1						
STKA	Stephens Creek	34.67	134	P	P	19 23 19.0	+2.3
STKA				IAmb	IAmb	19 23 34.1	
	comp=Z,2.5nm,1.4s						
H08S2	Diego Garcia H	40.19	269	T	T	20 06 46.7	
	baz=95,slow=76,SNR=7.6						
H08S3	Diego Garcia H	40.20	269	T	T	20 06 48.3	
	baz=95,slow=76,SNR=7.8						
H08S1	Diego Carcia H	40.21	269	T	T	20 06 49.3	
	baz=95,slow=76,SNR=3.5						
USRK	Ussuriysk Ar.	55.94	16	P	P	19 26 04.0	-0.7
	comp=Z,1.0nm,0.6s,baz=211,slow=5.0,SNR=4.4						
SONM	Songino Array	57.20	355	P	P	19 26 13.2	-0.5
	comp=Z,0.4nm,0.5s,baz=178,slow=9.9,SNR=4.7						
MK31	Makanchi Array	62.24	337	P	P	19 26 47.5	-0.9
MK31				IAmb	IAmb	19 26 49.3	
	comp=Z,1.5nm,1.4s						
MKAR	Makanchi Array	62.24	337	P	P	19 26 47.4	-0.9
	comp=Z,0.4nm,0.5s,baz=155,slow=7.5,SNR=9.1						
MKAR	Makanchi Array	62.24	337	P	P	19 26 47.2	-1.2
ZALV	Zalesovo Beam	67.41	342	P	P	19 27 20.5	-1.3
	comp=Z,0.7nm,0.4s,baz=132,slow=6.6,SNR=5.2						
ZALV	Zalesovo Beam	67.41	342	P	P	19 27 19.9	-1.8
ABKAR	Akbulak array	74.55	327	P	P	19 28 04.7	-0.5
ABKAR	Akbulak array	74.55	327	P	P	19 28 04.9	-0.3
ABKAR				IAmb	IAmb	19 28 20.8	
	comp=Z,1.5nm,0.9s						
BOSA	Boshof	83.74	242	LR	LR	20 02 16.1	
	comp=Z,44nm,18.1s,baz=178,slow=33						
BRTR	Keskin Array B	87.88	311	P	P	19 29 16.4	+0.1
	comp=Z,1.1nm,1.0s,baz=130,slow=5.4,SNR=4.0						

*IDC **24** 19:38:02.8±1.9, 5°.97S×129°.98E, h175^{km}±24^{km}, mb2.7/1, mb1 3.4/6, mb1mx3.0/31, mbtmp3.9/6, Error ellipse: s-maj=28.9km s-min=17.5km az=107.0*
*DJA **24** 19:38:04.7±0.6, 6°S±4°×13°0E±°, h117^{km}±41^{km}, M4.3/7, mB5.1/3, mb3.9/7, MLv4.4/7, Mw(mB)4.5/3*
*NOU **24** 19:38:15.0, 6°.99S×129°.89E, h211^{km}, mb3.5, Banda Sea*
ISC 24 19:38:00.9±0.8, **6°.11S**±0°.05×**130°.19E**±0°.09, **h150^{km}, n12,** σ**2^{s}.56**/19, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.78	33	P	Pn	19 39 01.2	+2.9
FAKI				S	Sn	19 39 44.4	+1.6
SIJI	Sorong	5.32	12	P	Pn	19 39 19.4	+0.8
	9.4nm,0.3s,baz=202,slow=23,SNR=107						
SIJI				S	Sn	19 40 15.7	-3.6
	9.7nm,0.3s,baz=246,slow=23,SNR=22						
SWI	Sorong	5.32	12	P	Pn	19 39 19.4	+0.8
SWI				S	Sn	19 40 15.6	-3.7
SANI	Sanana	5.82	314	P	Pn	19 39 26.2	+1.0
	0.1nm6.2nm,1.0s						
SOEI	Soe	6.89	238	P	Pn	19 39 42.5	+2.8
	0.2nm18nm,1.1s						
BATI	Baumata	7.64	237	P	Pn	19 39 51.1	+1.6
	6.8nm,0.3s,baz=52,slow=17,SNR=11						
BATI				S	Sn	19 41 15.5	+0.7
	4.8nm,0.3s,baz=41,slow=20,SNR=2.7						
BATI	Baumata	7.64	237	P	Pn	19 39 50.8	+1.3
	0.1nm21nm,0.5s						
EDFI	Ende, Flores	8.83	252	P	Pn	19 40 08.2	+2.7
FITZ	Fitzroy Crossi	12.71	200	P	Pn	19 40 57.2	+0.7
	0.9nm,0.3s,baz=24,slow=10.0,SNR=26						
FITZ				S	Sn	19 43 11.8	-5.4
	0.7nm,0.3s,baz=148,slow=22,SNR=6.2						
WRA	Warramunga Arr	14.33	164	P	P	19 41 19.7	0.0
	0.2nm,0.3s,baz=342,slow=13,SNR=9.6						
WRA				S	Sn	19 43 53.8	-2.2
	0.4nm,0.3s,baz=339,slow=21,SNR=6.4						
ASAR	Alice Springs	17.82	169	P	Pn	19 42 00.8	+1.2
	0.3nm,0.3s,baz=346,slow=8.9,SNR=44						
ASAR				S	S	19 45 13.4	-2.1
	0.1nm,0.3s,baz=352,slow=21,SNR=6.1						
MKAR	Makanchi Array	67.59	327	P	P	19 48 39.1	-2.2
	0.1nm,0.4s,baz=121,slow=6.2,SNR=4.8						

*IDC **24** 19:39:27.5±1.7, 10°.03S×117°.70E, h0^{km}, mb3.6/5, mb1 3.8/9, mb1mx3.6/34, mbtmp3.7/9, ML3.6/4, Error ellipse: s-maj=48.5km s-min=20.0km az=54.0*
*DJA **24** 19:39:34.0±0.8, 10°S±10°×11°8E±°, h10^{km}, M3.5/5, MLv3.5/5*
ISC 24 19:39:30.5±1.0, **9°.93S**±0°.09×**118°.07E**±0°.07, **h10^{km}, n13,** σ**1^{s}.54**/15, **mb3.9**/4, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.13	345	P	Pn	19 39 54.1	+1.7
WBSI	Waikabubak, Su	1.33	78	P	Pg	19 39 55.8	-0.4
TWSI	Taliwang, Sumb	1.67	315	P	Pg	19 40 03.0	+0.5
WSI	Waingapu	2.21	83	P	Pb	19 40 09.7	-0.9
KAPI	Kappang	5.16	19	Pn	Pn	19 40 51.2	+3.4
	3.0nm,0.3s,baz=191,slow=5.9,SNR=10						
KAPI				Sn	Sn	19 41 46.8	-0.7
	8.5nm,0.3s,baz=178,slow=23,SNR=12						
BATI	Baumata	5.52	93	Pn	Pn	19 40 55.0	+2.2
	1.9nm,0.3s,baz=255,slow=20,SNR=1.3						
BATI				Sn	Sn	19 41 56.6	+0.3
	4.1nm,0.3s,baz=254,slow=14,SNR=1.9						
FITZ	Fitzroy Crossi	10.95	139	Pn	Pn	19 42 07.8	+0.4
	0.3nm,0.3s,baz=325,slow=12,SNR=1.6						
WRA	Warramunga Arr	18.59	124	P	Pn	19 43 49.1	+0.9
	0.1nm,0.3s,baz=293,slow=8.9,SNR=1.9						
ASAR	Alice Springs	20.38	134	P	P	19 44 08.8	+1.2
	1.1nm,0.8s,baz=312,slow=10.0,SNR=7.0						
KSRS	Korea Array	48.03	11	P	P	19 48 09.4	-0.5
	0.7nm,0.6s,baz=189,slow=10,SNR=4.2						
USRK	Ussuriysk Ar.	55.33	12	P	P	19 49 03.4	-1.0
	1.2nm,0.5s,baz=186,slow=7.9,SNR=9.8						
SONM	Songino Array	58.44	351	P	P	19 49 25.2	-1.3
	0.5nm,0.5s,baz=167,slow=7.0,SNR=5.1						
MKAR	Makanchi Array	64.87	334	P	P	19 50 08.3	-1.6
	0.3nm,0.4s,baz=140,slow=6.0,SNR=11						

IDC 24 19:47:43.9±3.0, **5°.44S**×**104°.96W, h0^{km}, mb3.8**/4, **mb1 4.2**/4, **mb1mx3.8**/28, **mbtmp3.8**/4, **MS3.8**/15, **Ms1 3.8**/15, **ms1mx3.7**/20, **Error ellipse: s-maj=237.6km s-min=32.0km az=67.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	24.50	24	LR	LR	20 00 08.5	
	comp=Z,154nm,21.3s,baz=196,slow=30						
JTS	Las Juntas de	25.33	52	LR	LR	20 00 13.9	
	comp=Z,324nm,19.9s,baz=344,slow=30						
ATAH	Atahualpa	26.46	95	LR	LR	20 01 23.1	
	comp=Z,152nm,19.4s,baz=281,slow=31						
NNA	Nana	28.53	105	LR	LR	20 01 58.7	
	comp=Z,183nm,20.2s,baz=270,slow=30						
LPIG	La Paz	29.82	350	LR	LR	20 02 14.8	
	comp=Z,181nm,21.2s,baz=192,slow=29						
ROSC	El Rosal	32.26	72	LR	LR	20 03 28.6	
	comp=Z,84nm,18.9s,baz=168,slow=29						
TXAR	Lajitas Array	34.60	2	LR	LR	20 06 07.9	
	comp=Z,85nm,18.3s,baz=0.0,slow=32						
H03N2	Juan Fernandez	36.90	142	T	T	20 34 38.3	
	baz=317,slow=77,SNR=134						
H03N1	Juan Fernandez	36.92	142	T	T	20 34 40.4	
	baz=317,slow=77,SNR=168						
H03N3	Juan Fernandez	36.92	142	T	T	20 34 39.0	
	baz=317,slow=77,SNR=216						
PPT	Papeete	45.23	251	LR	LR	20 09 01.1	
	comp=Z,252nm,18.4s,baz=232,slow=28						
NVAR	Mina Array Bea	45.37	345	LR	LR	20 10 34.4	
	comp=Z,108nm,20.8s,baz=154,slow=30						
PLCA	Paso Flores	46.74	144	P	P	19 56 15.0	0.0
	1.7nm,1.0s,baz=326,slow=7.3,SNR=2.2						
PLCA				LR	LR	20 11 49.1	
	comp=Z,167nm,18.0s,baz=340,slow=31						
PDAR	Pinedale Array	48.16	355	P	P	19 56 26.6	+0.5
	0.7nm,0.9s,baz=153,slow=6.9,SNR=4.4						
PDAR				LR	LR	20 13 10.2	
	comp=Z,43nm,18.0s,baz=164,slow=32						
CPUP	Villa Florida	49.94	120	LR	LR	20 14 44.3	
	comp=Z,89nm,18.0s,baz=252,slow=32						
ULM	Lac du Bonnet	56.02	7	LR	LR	20 19 45.8	
	comp=Z,86nm,20.4s,baz=194,slow=34						
BDFB	Brasilia	56.75	105	LR	LR	20 19 50.3	
	comp=Z,127nm,18.7s,baz=29,slow=34						
YKA	Yellowknife Ar	68.14	355	P	P	19 58 45.0	-0.5
	1.1nm,0.9s,baz=161,slow=5.9,SNR=3.8						
ILAR	Eielson Array	76.56	343	P	P	19 59 35.9	0.0
	1.1nm,0.9s,baz=163,slow=5.0,SNR=6.1						
H11N3	WAKE ISLAND Hy	90.05	290	T	T	21 40 22.5	
	baz=96,slow=74,SNR=43						
H11N2	WAKE ISLAND Hy	90.07	290	T	T	21 40 20.8	
	baz=96,slow=74,SNR=46						
H11N1	WAKE ISLAND Hy	90.07	290	T	T	21 40 24.1	
	baz=96,slow=74,SNR=39						
H11S2	WAKE ISLAND Hy	90.12	288	T	T	21 40 30.9	
	baz=94,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	90.13	288	T	T	21 40 33.7	
	baz=94,slow=74,SNR=31						
H11S3	WAKE ISLAND Hy	90.14	288	T	T	21 40 31.4	
	baz=94,slow=74,SNR=20						
PETK	Petropavlovsk-	98.73	323	LR	LR	20 39 00.1	
	comp=Z,65nm,18.2s,baz=107,slow=31						

*IDC **24** 19:55:47.0±0.9, 0°.06N×98°.02E, h0^{km}, mb3.8/10, mb1 3.9/12, mb1mx3.7/38, mbtmp3.8/12, ML3.9/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/32, Error ellipse: s-maj=28.0km s-min=17.2km az=65.0*
*NEIC **24** 19:55:51.5±1.3, 0°.14N±0°.09×97°.96E±0°.10, h29^{km}±6^{km}, mb4.1/17, Error ellipse: s-maj=17.1km s-min=8.4km az=52.0*
*DJA **24** 19:55:52.2±0.7, 0°N±5°×9°8E±°, h10^{km}, M4.3/9, mb4.5/3, mB5.1/1, MLv4.2/9, Mw(mB)4.5/1*
ISC 24 19:55:53.0±0.6, **0°.31N**±0°.06×**98°.02E**±0°.07, **h35^{km}, n61,** σ**1^{s}.52**/55, **mb4.0**/16, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.09	336	Pn	Pn	19 56 12.4	+0.6
GSI	Gunungsitoli	1.09	336	P	Pn	19 56 12.2	+0.4
MNSI	Mandailing Nat	1.63	73	P	Pn	19 56 18.1	-1.2
RPSI	Rantau Prapat	2.54	21		Pn	19 56 33.2	+1.4
PSI	Prapat	2.64	20	Pn	Pn	19 56 33.2	-0.1
	7.4nm,0.3s,baz=360,slow=4.4,SNR=19						
PSI				Sn	Sn	19 56 59.1	-5.0
	9.4nm,0.3s,baz=180,slow=12,SNR=7.3						
PDSI	Padang	2.72	116	P	Pn	19 56 35.3	+1.0
BKNI	Bangkinang	3.02	90	Pn	Pn	19 56 39.8	+1.4
BKNI	Bangkinang	3.02	90	P	Pn	19 56 41.3	+2.9
TPTI		3.05	344	P	Pn	19 56 39.2	+0.4
TSI	Tuntungan	3.22	10	P	Pn	19 56 43.3	+2.2
SDSI	Sungai Dareh	3.62	110	P	Pn	19 56 48.8	+2.1
RGRI	Rengat	4.36	99	P	Pn	19 57 00.2	+3.4
LHMI	Lhok Sumawe	5.01	348	Pn	Pn	19 57 06.8	+1.1
IPM	Ipoh	5.12	36	Pn	Pn	19 57 09.2	+1.9
KULM	Kulim	5.61	28		Pn	19 57 14.8	+0.9
KSI	Kapahiang	6.03	131	P	Pn	19 57 19.9	+0.1
MNAI	Manna	6.77	133	Pn	Pn	19 57 28.2	-1.7
UBPT	Khong Chiam	16.60	26	Pn	Pn	19 59 44.2	+1.0
UBPT				IAmb	IAmb	19 59 49.2	
	comp=Z,14nm,1.4s						
CM31	Chiang Mai Arr	18.06	3		Pn	20 00 02.2	+0.9
CMAR	Chiang Mai Arr	18.06	3	P	Pn	20 00 02.2	+0.8
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=20						
CMAR	Chiang Mai Arr	18.06	3	P	Pn	20 00 01.6	+0.2
CHTO	Chiang Mai	18.42	3	P	P	20 00 05.2	-0.2
PALK	Pallekele	18.61	292	LR	LR	20 07 17.0	
	comp=Z,36nm,20.7s,baz=210,slow=37						
KKM	Kota Kinabalu	19.03	72	P	P	20 00 13.2	+0.8
H08S2	Diego Garcia H	26.65	252	T	T	20 28 48.0	
	baz=74,slow=76,SNR=609						
H08S3	Diego Garcia H	26.66	252	T	T	20 28 51.7	
	baz=74,slow=76,SNR=1594						
H08S1	Diego Carcia H	26.67	252	T	T	20 28 46.5	
	baz=74,slow=76,SNR=325						
H01W3	Cape Leeuwin H	38.11	158	T	T	20 43 14.8	
	baz=334						
H01W2	Cape Leeuwin H	38.13	158	T	T	20 43 15.3	
	baz=334						
H01W1	Cape Leeuwin H	38.13	158	T	T	20 43 11.6	
	baz=334						
WB0	Warramunga Arr	40.84	121	P	P	20 03 28.5	-3.3
WB0				IAmb	IAmb	20 03 43.2	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	40.87	122	P	P	20 03 29.0	-3.0
	comp=Z,1.8nm,0.9s,baz=306,slow=8.9,SNR=28						
ASAR	Alice Springs	42.20	127	P	P	20 03 40.7	-2.2
	comp=Z,0.3nm,0.7s,baz=298,slow=7.8,SNR=1.7						
ASAR	Alice Springs	42.20	127	P	P	20 03 41.2	-1.7
AS31	Alice Springs	42.21	127	P	P	20 03 42.4	-0.5
KSRS	Korea Array	46.13	33	P	P	20 04 14.3	+0.3
	comp=Z,0.5nm,0.6s,baz=223,slow=8.9,SNR=3.4						
KSRS				LR	LR	20 24 36.9	
	comp=Z,49nm,18.1s,baz=114,slow=37						
SONM	Songino Array	47.90	8	P	P	20 04 29.5	+1.6
	comp=Z,0.7nm,0.6s,baz=223,slow=6.2,SNR=4.1						
SONM	Songino Array	47.90	8	P	P	20 04 28.9	+1.0
MK31	Makanchi Array	48.30	346	P	P	20 04 31.5	+0.5
MK31				IAmb	IAmb	20 04 42.1	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	48.30	346	P	P	20 04 31.9	+1.0
	comp=Z,1.4nm,0.5s,baz=158,slow=8.5,SNR=29						
MKAR	Makanchi Array	48.30	346		P	20 04 31.6	+0.6
MAKZ	Makanchi	48.40	345	P	P	20 04 32.6	+0.9
MAKZ				IAmb	IAmb	20 04 40.5	
	comp=Z,1.3nm,0.6s						
KKAR	Karatay Array	49.22	333	P	P	20 04 37.9	-0.1
STKA	Stephens Creek	52.15	132	P	P	20 04 59.2	-1.1
	comp=Z,0.8nm,0.5s,baz=313,slow=8.6,SNR=5.7						
STKA	Stephens Creek	52.15	132	P	P	20 04 58.5	-1.8
KURK	Kurchatov	52.87	345	P	P	20 05 05.0	-0.2
KURK				IAmb	IAmb	20 05 14.7	
	comp=Z,4.0nm,1.4s						
USRK	Ussuriysk Ar.	53.12	30	P	P	20 05 08.2	+1.0
	comp=Z,0.7nm,0.7s,baz=216,slow=5.1,SNR=2.0						
USRK	Ussuriysk Ar.	53.12	30	P	P	20 05 08.7	+1.5
ZAA0	Zalesovo Array	54.57	350	P	P	20 05 18.2	+0.6
ZALV	Zalesovo Beam	54.57	350	P	P	20 05 18.4	+0.8
	comp=Z,1.3nm,0.5s,baz=173,slow=7.4,SNR=9.6						
ZALV	Zalesovo Beam	54.57	350	P	P	20 05 17.7	+0.1
BRVK	Borovoye	57.42	341	P	P	20 05 38.9	+0.8
BRVK				IAmb	IAmb	20 05 49.6	
	comp=Z,1.4nm,0.9s						
ABKAR	Akbulak array	58.69	332	P	P	20 05 46.9	-0.1
ABKAR	Akbulak array	58.69	332	P	P	20 05 47.0	0.0
ABKAR				IAmb	IAmb	20 05 57.8	
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	70.32	312	P	P	20 07 03.2	-0.2
	comp=Z,1.0nm,0.8s,baz=163,slow=2.1,SNR=5.6						
BRTR	Keskin Array B	70.32	312	P	P	20 07 02.7	-0.8
PEA0B	Petropavlovsk-	72.03	33	P	P	20 07 14.6	+1.2
PETK	Petropavlovsk-	72.03	33	P	P	20 07 14.4	+1.1
BOSA	Boshof	75.05	240	P	P	20 07 30.9	-0.8
	comp=Z,1.5nm,0.8s,baz=34,slow=3.6,SNR=3.6						
BURAR	Bucovina Array	78.23	319	P	P	20 07 49.6	+0.2
BUR08	Bucovina Ar. S	78.25	319	P	P	20 07 50.0	+0.6

NOU 24 20:03:05.8, 20°.73S×**169°.77E, h15^{km}, MLv4.0, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.79	245	P	Pn	20 03 36.1	0.0
PINNC	Pines Island,	2.86	229	P	Pn	20 03 51.1	+0.2
YATNC	Mamie plateau,	2.99	243	P	Pn	20 03 52.0	-0.7
OUENC	Ouen Island, N	3.20	238	P	Pn	20 03 55.8	+0.2
DVP	Devils Point	3.34	333	P	Pn	20 03 57.1	-0.4
DZM	Mont Dzumac	3.37	246	P	Pn	20 03 57.9	-0.2
NOUC	Port Laguerre	3.51	246	P	Pn	20 03 59.8	0.0
KOUNC	Koumac, New Ca	5.14	271	P	Pn	20 04 22.5	+0.2
SANVU	Saraoutou	5.79	335	P	Pn	20 04 31.7	+0.4

IDC 24 20:04:29.5±3.5, **36°.60N**×**77°.19E, h0^{km}, mb3.8**/2, **mb1 3.6**/4, **mb1mx3.3**/32, **mbtmp3.5**/4, **ML3.0**/2, **Error ellipse: s-maj=51.3km s-min=37.7km az=3.0, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.38	342	Pn	Pn	20 06 10.2	+5.3
	0.3nm,0.3s,baz=162,slow=11,SNR=5.7						
MKAR	Makanchi Array	10.87	19	Pn	Pn	20 07 07.8	+1.4
	0.1nm,0.3s,baz=203,slow=14,SNR=5.9						
MKAR				Sn	Sn	20 09 08.0	-0.7
	0.1nm,0.3s,baz=196,slow=21,SNR=4.4						
SONM	Songino Array	24.22	53	P	P	20 09 48.3	+0.3
	0.7nm,0.7s,baz=250,slow=11,SNR=6.7						
FINES	FINESS Array B	40.24	325	P	P	20 12 07.2	-0.5
	5.2nm,1.1s,baz=118,slow=11,SNR=4.3						

*IDC **24** 20:37:36.7±2.9, 10°.06N×126°.29E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.2/53, mbtmp3.4/5, Error ellipse: s-maj=266.7km s-min=22.8km az=65.0*
*MAN **24** 20:37:42.5, 10°.03N×126°.12E, h9^{km}, mb4.5, ML3.3, MS3.1*
ISC 24 20:37:38.9±1.6, **10°.07N**±0°.04×**126°.28E**±0°.07, **h16^{km}**±10^{km}, **n15,** σ**1^{s}.68**/23, **mb3.5**/5, **1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.32	207	*e*P	Pn	20 37 48.5	-0.4
GLSP				*e*S	Sn	20 37 53.7	-1.6
BUTP	Butuan	1.27	211	*e*P	Pg	20 38 02.3	-1.2
BUTP				*e*S	Sg	20 38 24.9	+4.8
MSLP	Maasin	1.40	273	*e*P	Pg	20 38 04.9	-0.9
MSLP				*e*S	Sg	20 38 23.0	-1.0
BESP	Borongan	1.73	332	*e*P	Pg	20 38 11.7	-0.4
BESP				*e*S	Sg	20 38 34.7	+0.1
CGP	Cagayan de Oro	2.24	224⇓	*e*P	Pb	20 38 18.6	-0.4
CGP				*e*S	Sb	20 38 44.9	-1.6
LLP	Lapu-Lapu	2.29	276⇓	*e*P	Pb	20 38 19.1	-0.7
LLP				*e*S	Sb	20 38 47.1	-0.7
BUKP	Musuan	2.49	209	*e*P	Pb	20 38 22.5	-0.7
BUKP				*e*S	Sb	20 38 53.9	+0.2
KCP	Kidapawan	3.26	201⇑	*e*P	Pb	20 38 34.0	-2.4
CNOP	Candoni, Negro	3.59	266	*e*P	Pn	20 38 36.4	+2.5
CNOP				*e*S	Sn	20 39 05.0	-11
PAGZ	Pagadian	3.61	233	*e*P	Pn	20 38 36.9	+2.6
PAGZ				*e*S	Sn	20 39 16.0	-0.6
WRA	Warramunga Arr	30.86	165	P	P	20 43 54.2	-0.5
	0.3nm,0.7s,baz=345,slow=9.3,SNR=1.2						
ASAR	Alice Springs	34.35	168	P	P	20 44 25.2	0.0
	0.3nm,0.5s,baz=350,slow=7.0,SNR=7.6						
STKA	Stephens Creek	44.21	161	P	P	20 45 48.1	+0.7
	1.6nm,0.8s,baz=320,slow=7.9,SNR=3.6						
MKAR	Makanchi Array	52.19	323	P	P	20 46 49.7	+0.8
	0.2nm,0.5s,baz=125,slow=7.6,SNR=2.6						
KURBB	Kurchatov Arra	56.24	325	P	P	20 47 18.3	0.0
	0.2nm,0.4s,baz=128,slow=6.8,SNR=2.6						

*TUL **24** 20:38:45.4±1.2, 36°.82N±0°.03×97°.70W±0°.06, h5^{km}±7^{km}, ML3.4, mb_Lg3.1/55(NEIC), Error ellipse: s-maj=7.3km s-min=2.6km az=63.0*
*ANF **24** 20:38:45.3±0.3, 36°.81N×97°.75W, h0^{km}, ML3.9/7, Error ellipse: s-maj=6.4km s-min=3.5km az=45.0*
*NEIC **24** 20:38:45.7±0.9, 36°.80N±0°.03×97°.70W±0°.06, h5^{km}±2^{km}, Error ellipse: s-maj=8.4km s-min=3.1km az=61.0*
ISC 24 20:38:45.9±0.9, **36°.80N**±0°.03×**97°.70W**±0°.03, **h10^{km}, n67,** σ**0^{s}.75**/52, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.26	307		Pg	20 38 50.8	-0.5
KAN13	South Haven SW	0.28	40		Pg	20 38 51.1	-0.4
KAN01	Argonia South	0.36	352		Pg	20 38 52.4	-0.6
CROK	Carrier	0.37	218		Pg	20 38 53.2	-0.1
KAN10	Anthony SW Sta	0.45	316		Pg	20 38 54.3	-0.6
KAN08	Anthony NE Sta	0.48	333		Pg	20 38 55.0	-0.3
T35A	Sooner Cattle	0.96	83	Pg	Pg	20 39 03.6	-0.8
T35B	Sooner Cattle	0.96	83	P		20 39 03.6	
	baz=265						
T35B				S		20 39 16.5	
	baz=265						
QUOK	Quay	1.02	128		Pg	20 39 04.8	-0.6
OK029	Liberty Lake	1.02	169		Pg	20 39 05.1	-0.5
OK029				Sg	Sg	20 39 19.0	+0.2
OK031	S. Brethren Rd	1.09	140		Pb	20 39 06.4	-0.5
U32A	Winter Ranch,	1.13	249		Pb	20 39 06.7	-0.9
U32A	Winter Ranch,	1.13	249	P		20 39 06.7	
	baz=67						
U32A				S		20 39 22.2	
	baz=67						
OK030	Cody Creek RV	1.14	139		Pb	20 39 07.3	-0.5
BCOK	Bluff Creek, N	1.14	176	Pg	Pb	20 39 07.3	-0.5
OK025	Westminster Rd	1.25	166		Pn	20 39 09.2	-0.3
OKCFA	Oklahoma City	1.40	172		Pn	20 39 11.7	+0.2
OKCSW	OKLAHOMA CITY	1.41	171		Pn	20 39 12.0	+0.3
FNO	Franklin	1.56	171		Pn	20 39 14.3	+0.5
W35A	Tecumseh	1.77	158		Pn	20 39 17.4	+0.7
TUL1	Leonard	1.78	119	P	Pn	20 39 17.5	+0.8
	baz=301						
TUL1				S	Sb	20 39 41.7	+0.7
	baz=301						
TUL1	Leonard	1.78	119		Pn	20 39 17.3	+0.6
TUL1	Leonard	1.78	119	P		20 39 17.5	
	baz=301,SNR=109						
TUL1				S		20 39 41.3	
	baz=301						
R32A	Long Quarter,	1.81	334		Pb	20 39 18.4	-0.8
R32A	Long Quarter,	1.81	334	P		20 39 18.3	
	baz=153,SNR=43						
R32A				S		20 39 41.8	
	baz=153						
WMOK	Wichita Mounta	2.24	203	P	Pn	20 39 23.7	+0.6
	baz=22						
WMOK	Wichita Mounta	2.24	203	Pn	Pn	20 39 23.7	+0.6
WMOK	Wichita Mounta	2.24	203	P		20 39 23.6	
	baz=22,SNR=136						
KSU1	Kansas State U	2.45	20		Pn	20 39 26.6	+0.6
KSU1	Kansas State U	2.45	20	P		20 39 26.6	
	baz=201						
CBKS	Cedar Bluff	2.58	322	P	Pn	20 39 28.4	+0.6
	baz=140						
CBKS				Sb	Sb	20 40 04.8	+0.7
	baz=140						
CBKS	Cedar Bluff	2.58	322		Pn	20 39 28.3	+0.5
CBKS	Cedar Bluff	2.58	322	P		20 39 28.3	
	baz=140						
CBKS				S		20 40 04.7	
	baz=140						
U38A	Gravette	2.69	97		Pn	20 39 30.4	+1.1
X37A	Clayton	2.91	139		Pn	20 39 32.5	+0.2
X37A				IAmb_Lg		20 40 22.3	

	comp=Z,65nm,0.7s						
X37A	Clayton	2.91	139	S		20 40 16.1	
	baz=320						
HHAR	Hobbs	3.07	99	Pn	Pn	20 39 35.6	+1.1
HHAR				IAmb_Lg		20 40 29.6	
	comp=Z,66nm,0.8s						
Z35A	Perchaven, San	3.48	174		Pn	20 39 41.0	+0.9
Z35A				IAmb_Lg		20 40 44.7	
	comp=Z,32nm,1.0s						
W39A	Magazine	3.56	116	IAmb_Lg		20 40 42.5	
	comp=Z,34nm,0.8s						
W39A	Magazine	3.56	116	S		20 40 24.7	
	baz=298						
S39A	Bolivar	3.60	74		Pn	20 39 42.5	+0.6
S39A				IAmb_Lg		20 40 48.5	
	comp=Z,50nm,1.0s						
S39A	Bolivar	3.60	74	P		20 39 43.2	
	baz=257,SNR=9.4						
S39A				S		20 40 26.1	
	baz=257						
AMTX	Amarillo	3.76	241		Pn	20 39 45.7	+1.7
AMTX	Amarillo	3.76	241	S		20 40 29.7	
	baz=58						
U40A	Yellville	3.93	95	P	Pn	20 39 48.3	+2.0
	baz=278						
U40A	Yellville	3.93	95		Pn	20 39 47.2	+0.9
U40A	Yellville	3.93	95	P		20 39 46.9	
	baz=278,SNR=25						
U40A				P		20 39 46.9	
	baz=278,SNR=25						
N33A	J Bar K, Exete	3.94	3	IAmb_Lg		20 40 58.0	
	comp=Z,29nm,0.9s						
MIAR	Mount Ida	4.04	123		Pn	20 39 49.3	+1.4
MIAR				IAmb_Lg		20 40 57.2	
	comp=Z,63nm,0.8s						
MIAR	Mount Ida	4.04	123	P		20 39 49.3	
	baz=305						
P38A	Dawn	4.33	48		Pn	20 39 52.6	+0.8
MGMO	Mountain Grove	4.36	84		Pn	20 39 52.7	+0.4
MGMO				IAmb_Lg		20 41 04.6	
	comp=Z,68nm,0.9s						
ABTX	Abilene, Hawle	4.46	202	P	Pn	20 39 54.7	+1.0
	baz=20						
KSCO	Kaye Shedlock’	4.48	301	P	Pn	20 39 54.5	+0.5
	baz=118						
KSCO	Kaye Shedlock’	4.48	301	Pn	Pn	20 39 54.3	+0.3
KSCO				IAmb_Lg		20 41 18.9	
	comp=Z,50nm,1.1s						
KSCO	Kaye Shedlock’	4.48	301	P		20 39 54.6	
	baz=118,SNR=7.5						
R40A	Maddies Statio	4.57	69	Pn	Pn	20 39 55.2	+0.2
R40A	Maddies Statio	4.57	69	P		20 39 55.3	
	baz=253,SNR=9.9						
X40A	Basin Creek Fa	4.58	119		Pn	20 39 56.1	+0.8
BGNE	Belgrade	4.62	356	P		20 39 56.2	
	baz=176,SNR=5.6						
WHAR	Wooly Hollow	4.64	107		Pn	20 39 56.2	+0.2
WHAR				IAmb_Lg		20 41 14.8	
	comp=Z,26nm,0.8s						
WHTX	Lake Whitney,	4.80	178	P	Pn	20 39 58.6	+0.3
	baz=358						
WHTX	Lake Whitney,	4.80	178		Pn	20 39 58.4	+0.1
WHTX	Lake Whitney,	4.80	178	P		20 39 58.6	
	baz=358,SNR=8.1						
WLAR	White Oak Lake	4.87	128	IAmb_Lg		20 41 25.5	
	comp=Z,32nm,0.9s						
MSTX	Muleshoe	5.01	237	IAmb_Lg		20 41 36.9	
	comp=Z,24nm,0.8s						
P40A	Paris	5.22	57	IAmb_Lg		20 41 33.3	
	comp=Z,50nm,1.1s						
CCM	Cathedral Cave	5.29	74	IAmb_Lg		20 41 40.6	
	comp=Z,30nm,0.8s						
OGNE	Ogallala	5.34	322	IAmb_Lg		20 41 46.2	
	comp=Z,37nm,0.8s						
NATX	Nacogdoches	5.62	153	IAmb_Lg		20 41 58.6	
	comp=Z,32nm,0.9s						
HBAR	Harrisburg	5.83	100	IAmb_Lg		20 41 56.1	
	comp=Z,37nm,0.8s						
K31A	O'Neill	5.87	352		Pn	20 40 13.4	+0.4
435B	Jarrell	6.00	179	IAmb_Lg		20 42 03.4	
	comp=Z,29nm,0.9s						
SCIA	State Center	6.17	33	IAmb_Lg		20 42 11.8	
	comp=Z,35nm,0.7s						
SLM	Saint Louis	6.19	71	IAmb_Lg		20 42 02.7	
	comp=Z,33nm,0.7s						
GNAR	Gosnell	6.25	95	IAmb_Lg		20 42 02.3	
	comp=Z,35nm,0.8s						
JCT	Junction City	6.54	196		Pn	20 40 21.6	-0.7
JCT				IAmb_Lg		20 42 17.3	
	comp=Z,18nm,1.0s						
S44A	Carbondale	6.79	80	IAmb_Lg		20 42 27.0	
	comp=Z,33nm,0.7s						
HALT	Halls	6.80	95	IAmb_Lg		20 42 31.9	
	comp=Z,37nm,0.8s						
ISCO	Idaho Springs	6.91	298		Pn	20 40 27.5	0.0
ISCO				IAmb_Lg		20 42 25.4	
	comp=Z,17nm,1.0s						
ECSD	EROS Data Cent	6.97	6	Pn	Pn	20 40 27.2	-1.0
T45A	Paducah	7.26	86	IAmb_Lg		20 42 41.1	
	comp=Z,34nm,0.7s						
K22A	Casper	8.96	313	IAmb_Lg		20 43 38.6	
	comp=Z,12nm,0.8s						
BLO	Bloomington	9.14	72	IAmb_Lg		20 43 48.3	
	comp=Z,24nm,0.8s						

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*IGQ **24** 20:39:31±0.3, 1°N±2°×7°8W±°, h4^{km}*
*RSNC **24** 20:39:32.4±3.9, 0°.74N×77°.92W, h0^{km}±9^{km}, ML3.6, Mw4.6*
*IDC **24** 20:39:35.0±0.6, 0°.93N×77°.95W, h0^{km}, mb4.1/18, mb1 4.4/22, mb1mx4.2/45, mbtmp4.2/22, ML4.3/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/35, Error ellipse: s-maj=21.3km s-min=12.9km az=58.0*
*NEIC **24** 20:39:35.2±2.0, 0°.76N±0°.08×77°.96W±0°.10, h21^{km}±6^{km}, Error ellipse: s-maj=16.1km s-min=8.3km az=126.0*
*VAO **24** 20:39:41.8±0.9, 0°.61N×77°.22W, h10^{km}, mb4.4*
ISC 24 20:39:34.1±0.4**, 0°.71N**±0°.02×**78°.04W**±0°.02**, h10^{km}, n184,** σ**1^{s}.79**/190**, mb4.4**/28**, MS3.8**/10**, 2C-1D,**
Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBC	Cumbal	0.31	43	eP	Pg	20 39 36.4	-4.2
CMBC				eS	Sg	20 39 40.5	-4.3
ATUL	Tulcn	0.32	79	P	Pg	20 39 36.0	-4.6
YAHU	Yahuarcocha	0.34	186	P	Pg	20 39 40.0	-1.1
URCU	Urcuqui	0.35	219	P	Pg	20 39 40.0	-1.3
AIB1	Ecuador-Imbabu	0.37	194	P	Pb	20 39 42.0	-1.0
AAT1	Ecuador-Atunta	0.42	205	P	Pb	20 39 43.0	-0.8
IMBA	Imbabura, San	0.46	201	P	Pb	20 39 43.0	-1.6
ACOT	Cotacachi (Cas	0.48	210	P	Pb	20 39 44.0	-0.8
COTA	Cotacachi	0.48	219	P	Pg	20 39 43.0	-0.7
CUIC	Cuicocha-Domo	0.52	219	P	Pg	20 39 43.0	-1.4
CUIC				S	Sb	20 39 53.0	-0.4
CUSW	Cuicocha Oeste	0.53	217	P	Pb	20 39 44.0	-1.7
CUSE	Cuicocha Este	0.54	222	P	Pg	20 39 44.0	-0.8
OTAV	Otavalo	0.63	221		Pg	20 39 45.6	-0.8
OTAV				Sg	Sn	20 39 57.5	-2.3
OTAV	Otavalo	0.63	221	eP	Pg	20 39 45.6	-0.8
OTAV				eS	Sn	20 39 56.6	-3.2
OTAV				i		20 39 59.6	
	comp=Z,3μm,0.6s						
OTAV	Otavalo	0.63	221	P	Pg	20 39 45.0	-1.4
CAYA	Cayambe	0.64	176	P	Pg	20 39 46.0	-0.6
ANGU	Angureal	0.66	178	P	Pg	20 39 46.0	-1.1
PULU	Pululahua	0.83	214	P	Pg	20 39 49.0	-1.2
CPAS1	Pasto	0.86	56	eP	Pg	20 39 47.7	-3.0
CPAS1	Pasto	0.86	56	eS	Sg	20 39 58.7	-3.3
CCUFI	Cufio, Nario	0.86	53	eP	Pg	20 39 47.1	-3.6
GCUF	Volcan Galeras	0.86	53	⇓eP	Pg	20 39 46.4	-4.4
CONE	Cono NE Rev Vo	0.87	153	P	Pg	20 39 48.0	-3.0
PAC1	Pacto, Paraso	0.88	240	P	Pg	20 39 50.0	-1.1
LAV4	Lava4-Reventad	0.90	153	P	Pg	20 39 49.0	-2.4
CPAS2	Pasto	0.93	57	eP	Pg	20 39 49.0	-3.2
CPAS2	Pasto	0.93	57	eS	Sg	20 39 59.9	-4.5
YANA	Yana	0.98	213	P	Pg	20 39 51.0	-2.1
PINO	Pino	1.04	214	P	Pg	20 39 53.0	-1.2
GGP	Refugio Guagua	1.04	212	P	Pg	20 39 52.0	-2.3
GGPC	Guagua Pichinc	1.05	212	P	Pg	20 39 53.0	-1.4
TERV	Terraza Guagua	1.05	213	P	Pg	20 39 53.0	-1.4
APS4	Papallacta	1.08	184	P	Pg	20 39 54.0	-0.9
GGPT	Toaza - Volcan	1.10	212	P	Pg	20 39 54.0	-1.3
APR2	Miler	1.13	236	P	Pn	20 39 55.0	-1.1
ANTI	Antisana	1.16	186	P	Pg	20 39 55.0	-1.5
ANTS	Antisana-Sarah	1.21	186	P	Pg	20 39 56.0	-1.4
ANTG	Antisana-Guama	1.23	190	P	Pg	20 39 56.0	-1.8
ANTM	Antisana-La Mi	1.25	189	P	Pb	20 39 57.0	-1.2
TUMC	Tumaco	1.30	328	eP	Pn	20 39 56.5	-1.9
TUMC				eS	Sg	20 40 16.8	+0.7
TUMC				i		20 40 41.9	
	comp=Z,2μm,0.6s						
BV15	Puerto Quito-O	1.31	245	P	Pn	20 39 57.0	-1.5
PITA	Cotopaxi Volc	1.32	198	P	Pn	20 39 58.0	-1.1
VC1	Cotopaxi 1	1.39	195	P	Pg	20 40 00.0	-1.0
BREF	Cotopaxi Volca	1.43	196	P	Pg	20 40 02.0	+0.3
TAMB	Tambo	1.44	193	P	Pg	20 40 01.0	-0.8
BNAS	Cotopaxi Volca	1.44	198	P	Pg	20 40 01.0	-0.9
ASDO	Santo Domingo	1.46	228	P	Pg	20 40 01.0	-1.1
CAMI	Rancho Maria	1.46	199	P	Pg	20 40 01.0	-1.2
BMOR	Cotopaxi Volca	1.49	196	P	Pn	20 40 01.0	-0.5
ILLI	Illinizas Sur	1.58	206	P	Pg	20 40 03.0	-1.5
ARDO	Archidona, Ten	1.71	172	P	Pn	20 40 04.0	-0.1
PIAT	Ana Tenorio	1.71	188	P	Pb	20 40 05.0	-0.9
PIS1	Pisayambo	1.79	191	P	Pg	20 40 08.0	-0.6
MAG1	Magdalena	1.91	246	P	Pb	20 40 07.0	-2.0
SAGO	Sagoatoa	1.96	199	P	Pg	20 40 10.0	-1.7
SOTA	Rioblanco	2.01	45	eS	Sb	20 40 38.3	+2.0
FLFR	Flavio Alfaro	2.10	240	P	Pb	20 40 10.0	-2.3
BRUN	Tungurahua Vol	2.15	190	P	Pg	20 40 14.0	-1.4
APUY	Puyo	2.16	179	P	Pb	20 40 13.0	-0.4
POND	Pondoa	2.16	191	P	Pb	20 40 13.0	-0.6
JUI6	Juive	2.17	192	P	Pb	20 40 13.0	-0.6
BULB	Ulba Tungurahu	2.17	190	P	Pb	20 40 13.0	-0.7
RETU	Refugio	2.19	191	P	Pg	20 40 15.0	-1.1
PUYO	Puyo, Santa Ro	2.19	180	P	Pb	20 40 14.0	+0.1
BBIL	Ulba Tungurahu	2.19	192	P	Pb	20 40 14.0	-0.1
ARRY	Arrayan	2.24	191	P	Pb	20 40 15.0	0.0
BMAS	Trigal station	2.24	191	P	Pb	20 40 15.0	0.0
IGUA	Igualata	2.27	195	P	Pg	20 40 16.0	-1.7
PCON	Cinco Dias	2.29	46	eP	Pn	20 40 04.5	-8.1
CAB1	Cabo Pasado-Ma	2.63	246	P	Pb	20 40 19.0	-2.4
CABP	Cabo Pasado	2.63	246	P	Pb	20 40 19.0	-2.4
GARC	Garzon, Huila	2.93	60	eP	Pn	20 40 24.0	+2.9
GARC				eS	Sb	20 41 03.4	+0.6
GARC				i		20 41 08.3	
	comp=Z,368nm,0.3s						
MARP	Paez Belalcaza	2.97	44	⇑eP	Pn	20 40 23.9	+2.3
MARP				eS	Sb	20 41 05.3	+1.5
BETC	Betania	3.25	53	eP	Pn	20 40 28.9	+3.7
BETC				eS	Sb	20 41 11.0	-0.6
PTLC	Puerto Leguiza	3.28	99	eP	Pn	20 40 27.3	+1.6
PTLC				eS	Sb	20 41 12.4	-0.1
PTLC				i		20 41 16.2	
	comp=Z,294nm,0.5s						
MILO	Milagro-Astudi	3.34	207	P	Pb	20 40 30.0	-3.4
MALC	Bahia Malaga	3.35	12	eP	Pn	20 40 25.9	-0.7
MALC				eS	Sn	20 41 05.7	-0.8
MALC				i		20 41 18.2	
	comp=Z,112nm,0.7s						
COHC	Cochancay	3.38	201	P	Pb	20 40 33.0	-1.2
PPLP	Puerto Lpez	3.54	231	P	Pn	20 40 30.0	+0.8
YOTC	Yotoco, Valle	3.66	27	eP	Pn	20 40 30.2	-0.8
YOTC				eS	Sn	20 41 15.8	+1.5
YOTC				i		20 41 27.1	
	comp=Z,66nm,0.5s						
BOSC	San Juan Bosco	3.87	187	P	Pb	20 40 40.0	-2.5
MORR	Playas El Morr	4.05	215	P	Pb	20 40 41.0	-4.6
SALI	Salinas	4.13	226	P	Pb	20 40 41.0	-5.9
ORTC	Ortega, Tolima	4.22	41	eP	Pn	20 40 40.9	+2.3
ORTC				eS	Sg	20 41 47.6	-2.3
ORTC				i		20 42 10.9	
	comp=Z,54nm,0.7s						
ISPG	Isla Puna-Puer	4.23	210	P	Pb	20 40 44.0	-4.8
MACC	Macarena, Meta	4.42	71	eP	Pb	20 40 50.9	-1.1
MACC				eS	Sb	20 41 44.2	-1.2
MACC				i		20 42 15.6	
	comp=Z,113nm,0.5s						
PLMC	San Jos del P	4.52	23	eP	Pn	20 40 41.9	-0.8
PLMC				eS	Sn	20 41 34.9	-0.5
ANIL	Santa Ana	4.58	35	eP	Pn	20 40 46.2	+2.3
ARNL	Arenillas	4.69	206	P	Pn	20 40 48.0	+2.9
RREF	El Recreo	4.95	33	eP	Pn	20 40 51.6	+2.5
RREF				eS	Sb	20 42 01.8	+0.5
GUY2C	Guyana, Caldas	5.21	31	eP	Pn	20 40 53.2	+0.5
GUY2C				eS	Sb	20 42 07.8	-0.9
MCRA	Macar, Loja	5.40	201	P	Pn	20 40 57.0	+2.2
CBOC	Ciudad Bolivar	5.50	21	eP	Pn	20 40 56.3	0.0
CBOC				i		20 42 13.1	
	comp=Z,90nm,0.9s						
ROSC	El Rosal	5.53	42	Pn	Pn	20 40 59.9	+3.0
	comp=Z,12nm,0.3s,baz=233,slow=14,SNR=25						
ROSC	El Rosal	5.53	42	Pn	Pn	20 40 55.9	-1.0
ROSC	El Rosal	5.53	42	eP	Pn	20 41 00.5	+3.6
NORC	Norcasia	5.76	33	⇑eP	Pn	20 41 02.1	+2.3
NORC				eS	Sb	20 42 27.2	+3.1
CHIC	Chingaza	5.80	48	eP	Pn	20 41 04.0	+3.4
CHIC				i		20 43 31.7	
	comp=Z,20nm,0.7s						
HELC	Santa Helena	5.99	25	eP	Pn	20 41 05.1	+1.8
HELC				i		20 42 30.2	
	comp=Z,9.8nm,0.6s						
HELC				eS	Sg	20 42 48.3	+1.7
SPBC	San Pablo de B	6.30	39	eP	Pn	20 41 09.5	+2.2
SPBC				eS	Sg	20 42 56.9	+0.3
SPBC				i		20 43 19.3	
	comp=Z,12nm,0.2s						
DBBC	Dabeiba	6.52	16	eP	Pn	20 41 11.3	+1.0
PTBC	PUERTO BERRIO,	6.80	32	eP	Pn	20 41 14.4	+0.3
PTGC	Puerto Gaitan,	6.84	59	eP	Pb	20 41 33.5	+0.4
RUSC	La Rusia	7.13	44	eP	Pn	20 41 22.1	+3.0
UREC	San Jos de Ur	7.42	20	eP	Pn	20 41 25.3	+2.7
ZARC	Zaragoza, Cauc	7.44	25	eP	Pn	20 41 25.2	+2.3
ATAH	Atahualpa	7.80	183	Pn	Pn	20 41 33.6	+5.4
	comp=Z,5.7nm,0.3s,baz=16,slow=12,SNR=20						
ATAH				LR	LR	20 44 46.6	
	comp=Z,859nm,18.0s,baz=318,slow=39						
PAMC	Pamplona, Colo	8.46	39	eP	Pn	20 41 40.7	+3.4
CZSB	Cruzeiro do Su	9.93	148	eP	Pn	20 41 56.8	-0.3
SDV	Santo Domingo	10.97	42	Pn	Pn	20 42 11.7	+0.3
	comp=Z,0.3nm,0.3s,baz=228,slow=14,SNR=14						
SDV				LR	LR	20 46 27.5	
	comp=Z,788nm,20.1s,baz=236,slow=38						
SDV	Santo Domingo	10.97	42	Pn	Pn	20 42 09.2	-2.2
SDV	Santo Domingo	10.97	42	eP	Pn	20 42 12.0	+0.6
JTS	Las Juntas de	11.74	324	LR	LR	20 46 15.9	
	comp=Z,218nm,20.9s,baz=307,slow=34						
NNA	Nana	12.67	175	Pn	Pn	20 42 40.1	+5.5
	comp=Z,1.7nm,0.3s,baz=357,slow=10,SNR=9.8						
NNA				LR	LR	20 47 54.0	
	comp=Z,1μm,20.7s,baz=341,slow=39						
NNA	Nana	12.67	175	Pn	Pn	20 42 35.8	+1.1
ETMB	Extrema	15.74	132	eP	Pn	20 43 14.6	-1.6
SAML	Samuel	17.64	123		Pn	20 43 39.0	-1.1
SAML	Samuel	17.64	123	eP	Pn	20 43 38.5	-1.6
PTGA	Pitinga	18.12	94	P	P	20 43 48.0	+1.4
	baz=281,slow=14,SNR=6.3						
PTGA				Lg	Lg	20 48 56.2	
	baz=343,slow=21,SNR=6.5						
PTGA	Pitinga	18.12	94	P	Pn	20 43 46.4	+0.2
PB16	IPOC Station P	20.70	157		P	20 44 13.8	-1.5
PB16				IAmb	IAmb	20 44 25.2	
	comp=Z,29nm,1.0s						
SJG	San Juan	20.86	33	P	P	20 44 17.7	+1.3
	comp=Z,6.5nm,0.4s,baz=231,slow=14,SNR=8.7						
SJG				LR	LR	20 52 41.3	
	comp=Z,233nm,21.2s,baz=191,slow=38						
HUMP	Col San Antoni	21.06	34	P	P	20 44 16.1	-2.4
HUMP				IAmb	IAmb	20 44 27.3	
	comp=Z,25nm,0.8s						
MNMC	Minye Minye	21.39	158	P	P	20 44 21.9	-0.5
CUPR	Culebra, Puert	21.51	35	P	P	20 44 21.7	-1.6
PSGCX	Pisagua	21.62	159	P	P	20 44 24.1	-0.6
FDF	Fort de France	21.74	49	P	P	20 44 25.9	0.0
VILB	Vilhena	22.30	128	eP	P	20 44 31.7	-0.3
PB08	IPOC Station P	22.48	158	P	P	20 44 32.9	-1.3
PB08				IAmb	IAmb	20 44 49.9	
	comp=Z,28nm,1.0s						
TA01	Diego Aracena	22.50	160	P	P	20 44 34.4	+0.3
TA01				IAmb	IAmb	20 44 48.6	
	comp=Z,24nm,0.9s						
PATCX	Punta Patache	22.75	161	P	P	20 44 36.7	0.0
ITTB	Itaituba	22.85	103	eP	P	20 44 37.1	-0.7
CMIG	Matias Romero	23.24	315	P	P	20 44 43.7	+1.9
	comp=Z,3.2nm,0.8s,baz=122,slow=11,SNR=1.6						
SIV	San Ignacio	23.58	135	P	P	20 44 47.7	+2.5
	comp=Z,11nm,0.8s,baz=325,slow=10,SNR=41						
SIV				Lg	Lg	20 52 00.1	
	comp=Z,7.5nm,1.1s,baz=108,slow=20,SNR=3.2						
NPGB	Novo Progresso	23.90	109	eP	P	20 44 48.1	-0.3
MALB	Monte Alegre	23.90	96	eP	P	20 44 48.7	+0.4
PTLB	Pontes e Lacer	24.63	131	eP	P	20 44 57.4	+2.3
PB06	IPOC Station P	24.69	161	P	P	20 44 55.2	-0.5
PB06				IAmb	IAmb	20 45 12.9	
	comp=Z,17nm,1.0s						
LVC	Limon Verde	24.83	160	P	P	20 45 00.7	+3.6
	comp=Z,1.8nm,0.6s,baz=327,slow=9.4,SNR=5.1						
LVC				LR	LR	20 55 59.6	
	comp=Z,341nm,19.0s,baz=326,slow=39						
LVC	Limon Verde	24.83	160	P	P	20 44 57.0	-0.1
LVC				IAmb	IAmb	20 45 23.9	
	comp=Z,23nm,1.3s						
LVC	Limon Verde	24.83	160	eP	P	20 45 01.6	+4.4
MDP	Montagnes des	25.73	80	LR	LR	20 55 18.5	
	comp=Z,497nm,18.2s,baz=280,slow=37						
MCPB	Macapa, AP	26.00	92	eP	P	20 45 08.0	+0.5
TXAR	Lajitas Array	37.51	322	P	P	20 46 50.8	+2.2
	comp=Z,1.2nm,0.8s,baz=133,slow=8.7,SNR=4.2						
TXAR	Lajitas Array	37.51	322	P	P	20 46 47.5	-1.1
LC01	Cunco	39.82	172	P	P	20 47 06.4	-1.3
PLCA	Paso Flores	41.81	171	P	P	20 47 29.2	+5.1
	comp=Z,5.4nm,0.9s,baz=326,slow=8.6,SNR=4.5						
PLCA				LR	LR	21 02 53.7	
	comp=Z,54nm,20.6s,baz=350,slow=33						
PLCA	Paso Flores	41.81	171	P	P	20 47 23.7	-0.4
PLCA	Paso Flores	41.81	171	eP	P	20 47 29.8	+5.7
121A	Cookes Peak, D	42.27	321	P	P	20 47 27.3	-0.9
121A				IAmb	IAmb	20 47 33.8	
	comp=Z,9.2nm,0.8s						
319A	Douglas	42.47	319	P	P	20 47 27.3	-2.5
319A				IAmb	IAmb	20 47 35.0	
	comp=Z,7.1nm,0.9s						
SADO	Sadowa	43.88	359	LR	LR	21 08 10.9	
	comp=Z,54nm,18.4s,baz=157,slow=39						
TUC	Tucson	44.05	319	P	P	20 47 42.2	-0.3
SDCO	Great Sand Dun	44.70	329	P	P	20 47 48.0	+0.2
SDCO				IAmb	IAmb	20 47 50.9	
	comp=Z,4.1nm,0.8s						
214A	Organ Pipe Nat	45.20	317	P	P	20 47 51.6	0.0
214A				IAmb	IAmb	20 47 58.0	
	comp=Z,8.1nm,1.0s						
W18A	Petrified Fore	45.21	323	P	P	20 47 51.4	-0.5
W18A				IAmb	IAmb	20 48 00.1	
	comp=Z,10nm,0.9s						
PFO	Pinyon Flats O	48.66	316	LR	LR	21 08 46.9	
	comp=Z,104nm,18.2s,baz=153,slow=36						
RSSD	Black Hills	49.02	335	P	P	20 48 20.9	-0.6
PDAR	Pinedale Array	50.50	330	P	P	20 48 33.9	+1.1
	comp=Z,0.4nm,0.8s,baz=135,slow=9.0,SNR=3.0						
PDAR				LR	LR	21 11 29.3	
	comp=Z,54nm,20.2s,baz=100,slow=38						
ULM	Lac du Bonnet	51.65	345	P	P	20 48 40.1	-0.8
	comp=Z,3.2nm,0.7s,baz=153,slow=7.1,SNR=5.1						
ULM				LR	LR	21 11 51.4	
	comp=Z,84nm,19.2s,baz=124,slow=38						
ELK	Elko	52.18	324	P	P	20 48 47.1	+1.6
	comp=Z,0.9nm,0.8s,baz=135,slow=7.5,SNR=5.0						
NVAR	Mina Array Bea	52.64	320	P	P	20 48 51.1	+2.3
	comp=Z,3.0nm,0.9s,baz=131,slow=6.0,SNR=14						
NVAR				PcP	PcP	20 50 01.2	+2.3
	comp=Z,1.4nm,0.8s,baz=132,slow=5.1,SNR=4.1						
NVAR	Mina Array Bea	52.64	320	P	P	20 48 48.0	-0.8
LHV	Little Huntoon	52.66	320	P	P	20 48 48.7	0.0
WVOR	Wild Horse Val	55.23	324	P	P	20 49 07.7	+0.1
WVOR				IAmb	IAmb	20 49 11.7	
	comp=Z,4.5nm,1.1s						
YBH	Yreka Blue Hor	57.29	321	P	P	20 49 23.4	+1.0
	comp=Z,1.5nm,0.8s,baz=120,slow=8.1,SNR=4.5						
YKA	Yellowknife Ar	67.43	343	P	P	20 50 30.4	+0.7
	comp=Z,2.6nm,0.9s,baz=132,slow=7.0,SNR=24						
DBIC	Dimbokro	73.21	83	P	P	20 51 08.0	+1.9
	comp=Z,7.9nm,1.1s,baz=205,slow=7.2,SNR=3.4						
DBIC				LR	LR	21 20 35.4	
	comp=Z,84nm,19.1s,baz=236,slow=34						
DBIC	Dimbokro	73.21	83	P	P	20 51 03.3	-2.7
KOWA	Kowa	74.35	75	P	P	20 51 14.4	+1.7
	comp=Z,3.0nm,0.8s,baz=279,slow=4.2,SNR=5.8						
INK	Inuvik	77.17	342	P	P	20 51 29.3	+1.6
	comp=Z,3.7nm,1.0s,baz=111,slow=7.5,SNR=6.1						
INK	Inuvik	77.17	342	P	P	20 51 27.3	-0.4
INK				IAmb	IAmb	20 51 31.9	
	comp=Z,4.9nm,1.1s						
ESDC	Sonseca Array	77.31	50	P	P	20 51 30.4	+1.1
	comp=Z,0.7nm,0.9s,baz=267,slow=6.4,SNR=4.2						
BCAR	Beaver Creek A	77.74	335	P	P	20 51 31.5	+0.3
TORD	Torodi Ar. Bea	79.84	77	LR	LR	21 24 50.3	
	comp=Z,61nm,21.4s,baz=325,slow=34						
ILAR	Eielson Array	80.46	336	P	P	20 51 47.9	+1.9
	comp=Z,2.0nm,1.1s,baz=124,slow=4.2,SNR=8.3						
ILAR	Eielson Array	80.46	336	P	P	20 51 45.3	-0.7
BMAR	Burnt Mountain	80.50	339	P	P	20 51 44.5	-1.7
EKA	Eskdalemuir Ar	80.84	34	P	P	20 51 50.1	+1.9
	comp=Z,3.3nm,0.9s,baz=281,slow=5.7,SNR=3.5						
MDM	Murphy Dome	81.06	336	P	P	20 51 47.0	-2.3
MDM				IAmb	IAmb	20 52 00.8	
	comp=Z,8.3nm,1.3s						
BPAW	Bear Paw Mtn.	81.96	335	P	P	20 51 53.8	-0.2
ASAR	Alice Springs	141.53	231	PKP	PKiKP	20 59 09.1	-0.3
	comp=Z,0.8nm,0.9s,baz=111,slow=2.1,SNR=4.3						
WRA	Warramunga Arr	143.00	237	PKhKP	PKPdf	20 59 08.3	-1.0
	comp=Z,0.4nm,0.6s,baz=120,slow=2.4,SNR=2.4						
CMAR	Chiang Mai Arr	160.72	9	PKPab	PKPab	21 00 18.4	+1.4
	comp=Z,1.2nm,0.7s,baz=327,slow=5.6,SNR=6.9						

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*SOME **24** 20:41:23.7, 39°.00N×71°.27E, h0^{km}*
*KRNET **24** 20:41:27.8±0.1, 39°.02N×69°.83E, mb3.0*
*NNC **24** 20:41:28.7±4.9, 39°.00N×69°.61E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=43.4km s-min=23.5km az=1.0*
ISC 24 20:41:33.6±2.6**, 39°.2N**±0°.1×**70°.00E**±0°.09**, h10^{km}, n14,** σ**2^{s}.45**/28**, 10C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	1.06	36	⇓iP	Pg	20 41 52.4	-1.7
	baz=36						
BTK				⇓iS	Sn	20 42 10.5	+0.9
	baz=36						
DRK	Karamyk	1.42	78	⇑iP	Pn	20 41 58.0	-1.8
	baz=72						
DRK				⇑iS	Sg	20 42 20.2	+0.8
	baz=72						
TRKS	Terek-Say	2.48	20	⇓iP	Pn	20 42 14.0	-0.3
	baz=22						
TRKS				⇓iS	Sb	20 42 47.8	-1.3
	baz=22						
OHH	Osh	2.52	57	⇑eP	Pn	20 42 15.4	+0.7
	baz=56						
OHH				⇑iS	Sb	20 42 49.7	-0.3
	baz=56						
SFK	Sufi-Kurgan	2.82	72	⇓eP	Pn	20 42 18.9	-0.1
	baz=69						
SFK				⇓iS	Sn	20 42 56.4	+3.2
	baz=69						
IUG	Iuzhnay	2.94	0	eP	Pb	20 42 25.1	-1.1
	11nm,0.4s						
IUG				eS	Sg	20 43 08.7	+0.5
	208nm,0.3s						
ARSB	Arslanbob	3.11	46	⇑eP	Pn	20 42 23.5	+0.6
	baz=45						
ARSB				⇑iS	Sb	20 43 04.3	-2.9
	baz=45						
CHM	Chimkent	3.13	355	eP	Pb	20 42 28.8	-0.6
	3.4nm,0.5s						
CHM				eS	Sg	20 43 15.2	+1.1
	83nm,0.4s						
DZA	Taraz	3.82	15	eP	Pn	20 42 34.1	+1.6
	68nm,0.3s						
DZA				eS	Sb	20 43 24.5	-3.0
	86nm,0.3s						
KK31	Karatay Array	3.92	5	Pn	Pn	20 42 34.0	+0.1
	1.9nm,0.4s,baz=189,slow=13,SNR=61						
KK31				⇓Pg	Pb	20 42 44.4	+1.6
	1.5nm,0.2s,baz=193,slow=17,SNR=4.9						
KK31				Lg	Lg	20 43 36.9	
	31nm,0.6s,baz=188,slow=27,SNR=17						
ARLS	Aral	4.23	50	⇓iP	Pn	20 42 39.4	+1.1
	baz=49						
ARLS				⇓iS	Sn	20 43 31.5	+3.7
	baz=49						
MRKS	Merke	4.30	34	eP	Pn	20 42 41.4	+2.2
	4.8nm,0.3s						
MRKS				eS	Sb	20 43 37.2	-4.1
	7.5nm,0.5s						

AAK	Ala-Archa	4.83	43	⇑Pn	Pn	20 42 47.8	+1.3
	1.5nm,0.3s						
AAK				⇑Sn	Sb	20 43 51.3	-5.4
	7.9nm,0.6s						
TKM2	Tokmak 2	5.63	47	⇑Pn	Pn	20 42 57.0	-0.6
	1.8nm,0.7s						
TKM2				⇑Sn	Sn	20 44 08.3	+6.0
	11nm,0.7s						

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*IDC **24** 21:10:27.2±1.4, 9°.64N×122°.79E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/32, mbtmp3.5/4, Error ellipse: s-maj=158.9km s-min=21.8km az=67.0*

*MAN **24** 21:10:30.7, 9°.74N×122°.43E, h18km, mb4.6, ML3.5, MS3.4*

ISC 24 21:10:29.9±1.4, **9°.66N**±0°.04×**122°.40E**±0°.04, **h17**km±10km, **n15**, σ**1ˢ27**/25, **mb3.5**/4, **4C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	0.29	54	eP	Pb	21 10 36.9	+0.2
CNOP				eS	Sb	21 10 41.6	+0.2
GUIM	Jordan	0.98	11	eP	Pb	21 10 47.0	-1.6
GUIM				eS	Sb	21 10 59.5	-1.7
JAP	San Jose, Anti	1.17	338	⇑eP	Pg	21 10 53.2	+0.5
JAP				eS	Sg	21 11 07.3	-0.7
LLP	Lapu-Lapu	1.68	67	⇑eP	Pn	21 10 58.8	+0.2
LLP				eS	Sn	21 11 18.7	-1.0
CUYO	Cuyo Island	1.81	311	eP	Pn	21 11 01.2	+0.8
CUYO				eS	Sn	21 11 23.1	+0.2
PAGZ	Pagadian	2.04	152	eP	Pn	21 11 04.2	+0.6
PAGZ				eS	Sb	21 11 32.4	+0.6
MSLP	Maasin	2.47	79	eP	Pn	21 11 10.3	+0.8
MSLP				eS	Sn	21 11 40.8	+1.5
CGP	Cagayan de Oro	2.56	118	⇑eP	Pn	21 11 12.2	+1.5
CGP				eS	Sn	21 11 39.4	-2.2
BUSP	Coron	3.18	317	eP	Pn	21 11 19.9	+0.7
BUSP				eS	Sn	21 11 55.1	-1.7
KCP	Kidapawan	3.74	134	⇑eP	Pg	21 11 41.7	0.0
BOAC	Boac	3.82	352	eP	Pn	21 11 29.7	+1.7
BOAC				eS	Sn	21 12 12.8	+0.1
WRA	Warramunga Arr	31.68	158	P	P	21 16 50.6	-2.2
	0.4nm,0.9s,baz=338,slow=9.6,SNR=2.6						
ASAR	Alice Springs	34.98	161	P	P	21 17 20.6	-0.9
	0.5nm,0.4s,baz=342,slow=7.1,SNR=13						
SONM	Songino Array	40.38	343	P	P	21 18 08.1	+0.9
	0.5nm,0.9s,baz=164,slow=5.8,SNR=3.6						
MKAR	Makanchi Array	50.27	325	P	P	21 19 27.1	+1.5
	0.8nm,0.7s,baz=136,slow=8.3,SNR=11						

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*IDC **24** 21:10:59.0±3.4, 13°.99N×91°.46W, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.8/31, mbtmp3.6/8, ML3.0/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/32, Error ellipse: s-maj=123.5km s-min=25.2km az=34.0*

*NEIC **24** 21:11:03.8±3.0, 13°.74N±0°.09×91°.76W±0°.10, h35km±2km, mb4.2/15, Error ellipse: s-maj=19.3km s-min=9.8km az=230.0*

*GCG **24** 21:11:08.5±0.4, 14°.21N×91°.71W, h18km±5km, MD4.0*

ISC 24 21:11:02.8±1.0, **13°.6N**±0°.1×**91°.91W**±0°.06, **h37**km, **n44**, σ**1ˢ36**/42, **mb4.1**/15, **MS3.2**/3, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.93	13	Pn	Pn	21 11 18.7	-0.7
FUG	Fuego 3	1.33	51	eP	Pn	21 11 24.8	-0.1
PCG	Pacaya	1.48	58	eP	Pn	21 11 28.5	+1.4
HUEH	Huehuetenango	1.74	13	Pn	Pn	21 11 29.9	-0.8
NBG	Las Nubes	1.80	57	eP	Pn	21 11 33.6	+2.2
NBG				eS	Sn	21 11 52.8	-0.4
MTO3	Montecristo	2.59	72	Pn	Pn	21 11 41.0	-1.3
SNET	Serv Nac Est T	2.60	88	Pn	Pn	21 11 42.7	+0.3
MRL	Marmol	2.60	56	eP	Pn	21 11 43.9	+1.4
ESQI	Esquipulas	2.66	69	Pn	Pn	21 11 42.4	-0.8
CCIG	Comitan	2.67	355		Pn	21 11 44.4	+1.0
PETF	Flores	3.83	31	Pn	Pn	21 11 59.6	+0.4
CMIG	Matias Romero	4.50	321	Pn	Pn	21 12 07.0	-1.4
	0.7nm,0.3s,baz=149,slow=14,SNR=13						
CMIG				Sn	Sn	21 13 01.5	+2.0
	2.0nm,0.3s,baz=79,slow=12,SNR=3.7						
TGUH	Tegucigalpa,Un	4.52	84	Pn	Pn	21 12 10.0	+1.2
TEIG	Tepich	7.44	27	Pn	Pn	21 12 49.1	+0.3
H06E1	SOCORRO T-PHAS	18.97	288	T	T	21 34 48.5	
	SNR=31						
TXAR	Lajitas Array	19.07	327	P	Pn	21 15 22.7	-0.5
	baz=147,slow=10,SNR=3.8						
TXAR	Lajitas Array	19.07	327	P	Pn	21 15 23.1	-0.2
GOGA	Godfrey	21.16	20	P	P	21 15 43.6	-1.1
GOGA				IAmb	IAmb	21 16 02.8	
	comp=Z,26nm,1.4s						
SDV	Santo Domingo	21.38	100	P	P	21 15 44.9	-2.6
	comp=Z,1.8nm,0.4s,baz=324,slow=8.0,SNR=2.3						
Y52A	Lilburn	21.39	18	P	P	21 15 47.5	+0.3
PLAL	Pickwick Lake	21.56	9	P	P	21 15 48.6	-0.4
PLAL				IAmb	IAmb	21 16 05.3	
	comp=Z,11nm,1.2s						
MNTX	Cornudas Mount	21.84	328	P	P	21 15 53.9	+1.8
WMOK	Wichita Mounta	21.94	345	P	P	21 15 51.0	-2.1
WMOK				IAmb	IAmb	21 16 05.8	
	comp=Z,8.9nm,1.4s						
SWET	Sewanee	22.18	13	P	P	21 15 53.8	-1.9
SWET				IAmb	IAmb	21 16 11.0	
	comp=Z,7.7nm,1.0s						
MSTX	Muleshoe	22.54	336	P	P	21 15 59.4	-0.4
MSTX				IAmb	IAmb	21 16 06.8	
	comp=Z,11nm,1.2s						
WVT	Waverly	22.72	9	P	P	21 15 59.5	-2.0
WVT				IAmb	IAmb	21 16 11.1	
	comp=Z,5.4nm,1.4s						
CPCT	Cooper Cave	22.74	16	P	P	21 16 00.8	-0.9
CPCT				IAmb	IAmb	21 16 06.4	
	comp=Z,13nm,1.3s						
AMTX	Amarillo	22.95	339	P	P	21 16 03.3	-0.7
AMTX				IAmb	IAmb	21 16 06.4	
	comp=Z,9.1nm,0.5s						
TKL	Tuckaleechee C	23.14	17	LR	LR	21 25 09.0	
	comp=Z,72nm,18.9s,baz=194,slow=38						
TKL	Tuckaleechee C	23.14	17	P	P	21 16 04.6	-1.2
U49A	Red Boiling Sp	23.46	12	P	P	21 16 07.1	-1.8
121A	Cookes Peak, D	23.78	325	P	P	21 16 13.3	+1.1
121A				IAmb	IAmb	21 16 26.0	
	comp=Z,7.1nm,0.9s						
BNM	Barren Site	24.42	329	P	P	21 16 18.7	+0.4
ANMO	Albuquerque	24.98	331	P	P	21 16 25.7	+2.4
	comp=Z,0.9nm,0.6s,baz=165,slow=12,SNR=3.9						
ANMO	Albuquerque	24.98	331	P	P	21 16 25.4	+2.1
SJG	San Juan	25.16	76	LR	LR	21 27 15.2	
	comp=Z,74nm,19.1s,baz=270,slow=40						
PDAR	Pinedale Array	32.81	336	P	P	21 17 33.3	+0.4
	comp=Z,0.3nm,0.7s,baz=106,slow=9.5,SNR=2.8						
SADO	Sadowa	32.91	17	LR	LR	21 31 46.9	
	comp=Z,54nm,18.9s,baz=284,slow=38						
NVAR	Mina Array Bea	34.03	321	P	P	21 17 45.6	+2.0
	comp=Z,0.8nm,0.8s,baz=129,slow=9.5,SNR=5.2						
F10A	Beach Ranch, E	38.69	332	P	P	21 18 25.0	+1.9
YKA	Yellowknife Ar	51.42	347	P	P	21 20 02.8	-1.1
	comp=Z,1.3nm,0.6s,baz=143,slow=8.2,SNR=34						
ILAR	Eielson Array	63.23	337	P	P	21 21 27.6	+0.5
	comp=Z,0.5nm,0.7s,baz=176,slow=4.7,SNR=7.5						
CMAR	Chiang Mai Arr	146.39	341	PKPbc	PKPbc	21 30 40.9	+0.2
	comp=Z,0.8nm,0.4s,baz=338,slow=3.6,SNR=6.1						
CMAR	Chiang Mai Arr	146.39	341		PKPdf	21 30 40.0	+0.6

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*ISK **24** 21:25:32.9, 38°.88N×26°.22E, h12km, ML2.9/26*

*ATH **24** 21:25:32.7, 38°.95N×26°.26E, h44km±3km, ML2.7/3, Error ellipse: s-maj=3.6km s-min=1.5km az=47.0*

*DDA **24** 21:25:35.3, 38°.92N×26°.25E, h10km±1km, ML2.9*

*THE **24** 21:25:35.1, 38°.92N×26°.20E, h15km±1km, ML2.6/4, Error ellipse: s-maj=1.5km s-min=0.7km az=72.0*

ISC 24 21:25:33.2±1.1, **38°.90N**±0°.02×**26°.23E**±0°.02, **h6**km±10km, **n60**, σ**0ˢ60**/89, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.34	5	P	Pb	21 25 41.8	+0.1
PRK				S	Sb	21 25 47.4	-0.1
PRK				AML	AML	21 25 47.7	
	comp=N,1978µm,0.2s						
PRK				AML	AML	21 25 48.7	
	comp=E,2097µm,0.2s						
PRK	Paraskevi	0.34	5	P	Pb	21 25 41.9	+0.2
PRK				S	Sb	21 25 47.4	-0.1
	comp=E,1µm,0.2s						
SIGR	SIGRI	0.42	317	P	Pb	21 25 42.7	-0.3
SIGR				AML	AML	21 25 49.9	
	comp=E,1597µm,0.5s						
SIGR				AML	AML	21 25 51.0	
	comp=N,1697µm,0.6s						
SIGR	SIGRI	0.42	317	P	Pb	21 25 42.8	-0.3
SIGR				S	Sb	21 25 48.9	-0.9
	comp=N,832nm,0.4s						
SIGR	SIGRI	0.42	317	PG	Pb	21 25 42.8	-0.3
SIGR				SG	Sg	21 25 48.7	+1.7
AYVA	Ayvalik	0.54	41	i P	Pb	21 25 44.2	-0.8
AYVA				i S	Sg	21 25 50.5	-0.2
DKL	Dikili	0.55	72	PG	Pb	21 25 44.6	-0.7
DKL				SG	Sb	21 25 52.9	-0.5
CESE	eme	0.57	175	PG	Pg	21 25 44.5	+0.3
KOCA	Canakkale, Ayv	0.60	353	i P	Pg	21 25 44.3	-0.5
KOCA				i S	Sb	21 25 56.1	+1.2
URLA	Izmir	0.61	152	PG	Pg	21 25 44.5	-0.5
URLA				SG	Sg	21 25 53.9	+1.0
URLA	Izmir	0.61	152	i P	Pg	21 25 44.5	-0.5
URLA				i S	Sg	21 25 53.1	+0.2
PSRA	Psara	0.63	236	P	Pb	21 25 46.5	-0.2
PSRA				S	Sb	21 25 56.8	+1.1
ZEDA	zmir-Bergama	0.66	84	i P	Pb	21 25 47.9	+0.7
ZEDA				i S	Sb	21 25 56.2	-0.4
ZEYE	Izmir, Urla-Ze	0.70	162	i P	Pg	21 25 47.0	+0.4
ZEYE				i S	Sb	21 25 58.3	+0.7
ZEYE				IAML		21 25 59.0	
	comp=N,722nm,0.3s						
ZEYE				IAML		21 25 59.0	
	comp=E,2µm,0.4s						
BAYC	CANAKKALE_Bayr	0.87	16	i P	Pb	21 25 51.1	+0.3
BAYC				i S	Sb	21 26 01.9	-0.8
BAYC				IAML		21 26 04.0	
	comp=E,396nm,0.3s						
BUHA	Balikesir, Bur	0.89	48	i P	Pb	21 25 51.4	+0.4
BUHA				i S	Sb	21 26 03.3	+0.1
EZN	Ezine	0.92	5	P	Pb	21 25 51.4	-0.2
EZN				S	Sb	21 26 04.6	+0.4
	comp=E,495nm,0.5s						
EZN	Ezine	0.92	5	PG	Pb	21 25 51.7	+0.1
EZN				SG	Sb	21 26 05.1	+0.9
BOZC	Bozcaada	0.95	352	PG	Pb	21 25 52.1	+0.1
BOZC	Bozcaada	0.95	352	i P	Pg	21 25 51.5	+0.2
BOZC				i P	Pb	21 25 52.5	+0.5
BOZC				i S	Sb	21 26 05.0	+0.2
BOZC				i S	Sg	21 26 05.2	+1.5
BOZC				IAML		21 26 06.0	
	comp=N,436nm,0.3s						
BOZC				IAML		21 26 06.0	
	comp=N,466nm,0.3s						
BOZC				IAML		21 26 06.0	
	comp=E,257nm,0.3s						
DGB	zmir	0.99	149	i P	Pn	21 25 53.7	+0.1
DGB				i S	Sb	21 26 06.4	+0.4
ECEA	Canakkale, Ece	1.14	358	i P	Pn	21 25 56.3	+0.6
AKHS	Akhisar	1.24	91	i P	Pn	21 25 58.4	+1.3
AKHS				i S	Sb	21 26 12.6	-0.5
STEP	BALIKESIR_Sava	1.25	67	i P	Pb	21 25 56.9	-0.3
STEP				i S	Sb	21 26 13.4	-0.2
STEP				IAML		21 26 16.0	
	comp=N,185nm,0.5s						
LIA	Limnos Island	1.28	321	P	Pg	21 25 56.8	-1.0
LIA	Limnos Island	1.28	321	P	Pg	21 25 57.7	-0.1
LIA				S	Sg	21 26 14.1	-0.3
SMG	Samos	1.28	158	P	Pg	21 25 56.7	-1.1
SMG				S	Sg	21 26 14.2	-0.3
SMG				AML	AML	21 26 17.7	
	comp=E,1036µm,0.3s						
SMG				AML	AML	21 26 18.6	
	comp=N,677µm,0.4s						
SMG	Samos	1.28	158	P	Pn	21 25 58.2	+0.5
SMG				S	Sn	21 26 15.4	+0.2
	comp=N,435nm,0.3s						
GOKA	anakkale-Gk	1.31	349	i P	Pg	21 25 58.2	-0.1
GOKA				i S	Sg	21 26 14.6	-0.7
GOKA				IAML		21 26 19.0	
	comp=E,153nm,0.2s						
GADA	Gvkgeada	1.31	349	P	Pg	21 25 57.9	-0.4
GADA				S	Sg	21 26 15.2	-0.1
GADA	Gvkgeada	1.31	349	PN	Pg	21 25 57.6	-0.7
BALY	Balya	1.36	52	i P	Pg	21 25 58.4	-0.9
BALY				i S	Sg	21 26 16.4	-0.6
BALY				IAML		21 26 21.0	
	comp=N,120nm,0.5s						
GCAM	G?zelcaml?	1.44	146	PN	Pn	21 25 59.7	0.0
GCAM	G?zelcaml?	1.44	146	i P	Pg	21 26 00.2	-0.5
GCAM				i S	Sn	21 26 19.3	+0.4
GCAM				IAML		21 26 23.0	
	comp=N,130nm,0.5s						
BALB	Balikesir	1.48	60	PN	Pn	21 26 00.4	+0.1
GELI	Tayfur-Gelibol	1.50	7	PN	Pn	21 26 00.4	-0.3
LPK	Lapseki	1.52	15	PN	Pn	21 26 00.9	-0.1
SMTH	Samothraki Isl	1.66	341	P	Pn	21 26 02.2	-0.6
KRBG	Karabiga-Canak	1.70	29	PN	Pn	21 26 03.5	+0.1
ERIK	Erikli-Kesan	1.78	7	PN	Pn	21 26 04.7	+0.2
ENEZ	Enez	1.83	358	PN	Pn	21 26 05.3	+0.1
DURS	Dursunbey	1.88	67	i P	Pb	21 26 07.8	-0.1
APE	Apeiranthos	1.91	197	PN	Pn	21 26 05.5	-0.9
EDC	Edincik	1.92	41	PN	Pn	21 26 06.5	+0.1
RKY	Sarkoy-Tekirda	1.93	22	PN	Pn	21 26 06.1	-0.4
KULA	Kula-Manisa	1.94	101	PN	Pn	21 26 06.7	-0.1
DEMI	Demirci	1.94	85	i P	Pg	21 26 11.4	+1.0
ALN	Alexandroupoli	2.00	356	P	Pn	21 26 07.1	-0.3
ALN	Alexandroupoli	2.00	356	PN	Pn	21 26 07.5	0.0
MRMT	Marmara Adasi	2.00	31	PN	Pn	21 26 07.3	-0.2
MLSB	Milas	2.02	142	PN	Pn	21 26 06.5	-1.3
BODT	Bodrum	2.03	155	PN	Pn	21 26 06.9	-1.0
MAR4	Marsite Statio	2.06	23	PN	Pn	21 26 08.5	+0.1
THAS	Thassos island	2.06	326	P	Pn	21 26 08.1	-0.2
KCTX	Karacabey (Bur	2.13	50	PN	Pn	21 26 09.5	+0.1
SIMA	Simav-Kutahya	2.15	84	PN	Pn	21 26 10.1	+0.4
OUR	Ouranopolis	2.25	310	P	Pn	21 26 11.2	+0.3
TKR	Tekirdag	2.31	25	PN	Pn	21 26 12.4	+0.6
MDNY	Mudanya-Bursa	2.52	54	PN	Pn	21 26 14.8	+0.2
TVSB	Tavsanli	2.57	77	PN	Pn	21 26 15.9	+0.5

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*IDC **24** 21:28:09.9±2.0, 16°.60N×86°.08W, h0km, mb3.9/9, mb1 4.2/12, mb1mx4.0/31, mbtmp4.0/12, ML3.5/3, MS3.3/2, Ms1 3.3/2, ms1mx3.0/25, Error ellipse: s-maj=52.3km s-min=22.1km az=15.0*

*NEIC **24** 21:28:12.1±1.6, 16°.71N±0°.06×86°.12W±0°.06, h10km±1km, mb4.2/23, Error ellipse: s-maj=11.1km s-min=9.6km az=50.0*

*INET **24** 21:28:18.7, 12°.68N×87°.01W, h4km, MW2.2*

ISC 24 21:28:11.8±0.7, **16°.68N**±0°.07×**86°.14W**±0°.07, **h10**km, **n55**, σ**1ˢ33**/52, **mb4.0**/8, **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.83	203		Pn	21 28 57.8	+0.6
PETF	Flores	3.58	274	Pn	Pn	21 29 06.8	-0.5
ESQI	Esquipulas	3.74	236	Pn	Pn	21 29 10.3	+0.6
TEIG	Tepich	4.07	330		Pn	21 29 13.8	-0.3
ACON	Acoyapa	4.78	169	Pn	Pn	21 29 24.1	+0.2
HUEH	Huehuetenango	5.33	256	Pn	Pn	21 29 31.2	-0.5
FSCY	Frank Sound, G	5.39	60	Pn	Pn	21 29 32.3	0.0
CCIG	Comitan	5.77	267	Pn	Pn	21 29 38.1	+0.5
JTS	Las Juntas de	6.46	170	Pn	Pn	21 29 47.9	+1.0
	0.8nm,0.3s,baz=31,slow=17,SNR=2.2						
JTS				Lg	Lg	21 31 28.0	
	2.0nm,0.3s,baz=258,slow=17,SNR=3.9						
JTS	Las Juntas de	6.46	170		Pn	21 29 48.0	+1.0
LCCY	Blossom Villag	6.48	62	Pn	Pn	21 29 47.3	+0.1
CBCY	The Bluff, Cay	6.78	62	Pn	Pn	21 29 51.0	-0.4
MTDJ	Mount Denham	8.35	78	Pn	Pn	21 30 13.1	0.0
CMIG	Matias Romero	8.38	274	Pn	Pn	21 30 12.1	-1.3
	0.8nm,0.3s,baz=88,slow=11,SNR=6.8						
CMIG				Sn	Sn	21 31 39.9	-8.3
	0.3nm,0.3s,baz=331,slow=18,SNR=1.2						
CMIG				LR	LR	21 33 53.9	
	comp=Z,236nm,18.6s,baz=105,slow=41						
061Z	Ochoppi	10.36	27	Pn	Pn	21 30 40.2	-0.3
553A	Crawfordville	13.54	6	Pn	Pn	21 31 23.1	-0.9
451A	Vernon	13.88	1	Pn	Pn	21 31 28.6	+0.1
352A	Blakely	14.77	4	Pn	Pn	21 31 41.3	+0.5
250A	Grady	15.23	360	Pn	Pn	21 31 45.8	-1.2
255A	Hazlehurst	15.54	12	Pn	Pn	21 31 51.5	+0.5
HKT	Hockley	15.92	328	Pn	Pn	21 31 57.3	+1.4
152A	Waverly Hall	15.97	4	Pn	Pn	21 31 56.4	-0.2
152A				IAmb	IAmb	21 32 10.0	
	comp=Z,36nm,1.4s						
146A	Union	16.11	351	Pn	Pn	21 31 57.8	-0.5
146A				IAmb	IAmb	21 32 09.0	
	comp=Z,18nm,0.7s						
LRAL	Lakeview Retre	16.30	357	Pn	Pn	21 32 00.7	-0.2
ROSC	El Rosal	16.52	134	LR	LR	21 38 00.5	
	comp=Z,73nm,21.4s,baz=285,slow=36						
Z51A	Franklin	16.59	3	P	Pn	21 32 05.6	+1.1
GOGA	Godfrey	16.83	8	Pn	Pn	21 32 08.0	+0.4
SDV	Santo Domingo	16.98	115	Pn	Pn	21 32 08.8	-1.0
	comp=Z,0.3nm,0.3s,baz=237,slow=20,SNR=1.7						
SDV	Santo Domingo	16.98	115	Pn	Pn	21 32 10.5	+0.7
Y49A	Blount Mountai	17.11	359		P	21 32 12.6	-0.2
Y49A				IAmb	IAmb	21 32 22.9	
	comp=Z,24nm,1.2s						
NHSC	New Hope	17.22	17		P	21 32 13.4	-0.6
435B	Jarrell	17.50	325	P	P	21 32 17.8	+0.6
435B				IAmb	IAmb	21 32 19.8	
	comp=Z,23nm,0.8s						
PLAL	Pickwick Lake	18.31	355		P	21 32 26.8	+0.8
WHTX	Lake Whitney,	18.38	328		P	21 32 29.8	+3.0
WHTX				IAmb	IAmb	21 32 33.6	
	comp=Z,19nm,0.6s						
BG3	Lake Jocassee	18.46	8		Pn	21 32 29.6	+1.7
BG3				IAmb	IAmb	21 32 44.6	
	comp=Z,18nm,1.3s						
JCT	Junction City	18.56	320	P	Pn	21 32 30.9	+1.7
JCT				IAmb	IAmb	21 32 44.2	
	comp=Z,14nm,1.0s						
TKL	Tuckaleechee C	19.02	6	P	Pn	21 32 34.5	0.0
	comp=Z,0.5nm,0.3s,baz=170,slow=14,SNR=3.2						
TKL	Tuckaleechee C	19.02	6	P	Pn	21 32 35.3	+0.8
TKL				IAmb	IAmb	21 32 36.8	
	comp=Z,38nm,1.4s						
V53A	Saluda	19.14	8	P	Pn	21 32 36.1	0.0
V53A				IAmb	IAmb	21 32 43.2	
	comp=Z,15nm,1.1s						
V52A	Sevierville	19.22	6	P	P	21 32 35.7	-0.3
ABTX	Abilene, Hawle	20.03	325		Pn	21 32 46.9	+0.1
TXAR	Lajitas Array	20.43	311	P	Pn	21 32 51.1	-0.5
	comp=Z,4.7nm,0.7s,baz=129,slow=11,SNR=36						
TXAR	Lajitas Array	20.43	311	P	P	21 32 50.7	+1.3
TX32	Lajitas Array	20.43	311	P	P	21 32 50.6	+1.2
TX32				IAmb	IAmb	21 32 51.9	
	comp=Z,7.0nm,0.8s						
ANMO	Albuquerque	25.71	319	P	P	21 33 43.9	+1.4
	comp=Z,3.4nm,0.8s,baz=133,slow=11,SNR=10						
ANMO	Albuquerque	25.71	319	P	P	21 33 43.3	+0.8
ANMO				IAmb	IAmb	21 33 44.5	
	comp=Z,3.4nm,0.8s						
PSUT	Pine Spring	32.60	317	P	P	21 34 45.0	+1.2
PDAR	Pinedale Array	32.79	327	P	P	21 34 45.2	-0.2
	comp=Z,0.3nm,0.5s,baz=118,slow=10,SNR=3.8						
NVAR	Mina Array Bea	35.53	314	P	P	21 35 10.8	+1.4
	comp=Z,2.4nm,0.9s,baz=124,slow=8.7,SNR=9.6						
YKA	Yellowknife Ar	49.92	343	P	P	21 37 05.2	-0.2
	comp=Z,0.4nm,0.5s,baz=135,slow=8.4,SNR=20						
ILAR	Eielson Array	62.71	335	P	P	21 38 36.1	-0.5
	comp=Z,0.9nm,0.8s,baz=112,slow=5.0,SNR=13						
ESDC	Sonseca Array	73.61	53	P	P	21 39 46.0	+0.3
	comp=Z,0.4nm,0.7s,baz=283,slow=6.3,SNR=5.7						
ARCES	ARCESS Array B	81.80	19	P	P	21 40 30.3	-0.3
	comp=Z,2.9nm,1.0s,baz=320,slow=3.6,SNR=5.3						
FINES	FINESS Array B	85.64	26	P	P	21 40 50.4	0.0
	comp=Z,3.4nm,0.9s,baz=250,slow=1.9,SNR=13						
ASAR	Alice Springs	141.87	253	PKhKP	PKPdf	21 47 37.9	-6.8
	comp=Z,0.6nm,1.1s,baz=110,slow=3.6,SNR=4.2						

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*NEIC **24** 21:33:59.6±1.2, 21°.53N±0°.09×143°.2E±0°.2, h293km±8km, mb3.9/15, Error ellipse: s-maj=24.2km s-min=11.9km az=73.0*

*IDC **24** 21:34:00.0±1.9, 21°.61N×143°.21E, h297km±18km, mb3.1/14, mb1 3.3/16, mb1mx3.2/38, mbtmp3.8/16, Error ellipse: s-maj=22.2km s-min=11.8km az=89.0*

ISC 24 21:33:59.9±0.7, **21°.57N**±0°.08×**143°.3E**±0°.1, **h300**km, **n39**, σ**0ˢ62**/41, **mb3.5**/19, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.59	350	P	Pn	21 35 24.6	+0.4
	12nm,0.3s,baz=292,slow=22,SNR=1.5						
JCJ				S	S	21 36 31.2	-1.0
	28nm,0.3s,baz=307,slow=23,SNR=8.2						
INU	Inuyama	14.79	340	P	P	21 37 14.3	-0.2
JGF	Kuroka	14.91	341		Pn	21 37 17.5	+0.3
MJAR	Matsushiro Arr	15.56	345	P	P	21 37 22.4	-0.6
	0.1nm,0.3s,baz=170,slow=12,SNR=12						
MJAR	Matsushiro Arr	15.56	345	P	P	21 37 22.4	-0.6
MAJO	Matsushiro	15.56	345	P	P	21 37 22.6	-0.4
MAJO				IAmb	IAmb	21 37 47.9	
	comp=Z,8.8nm,1.1s						
JMM	Marumori	16.38	353	P	Pn	21 37 34.0	-0.3
JSD	Sado	16.98	346	P	P	21 37 39.0	+0.6
KSRS	Korea Array	20.67	323	P	P	21 38 16.7	-0.8
	comp=Z,1.0nm,0.6s,baz=149,slow=8.6,SNR=5.9						
USRK	Ussuriysk Ar.	24.43	340	P	P	21 38 51.3	-0.5
	comp=Z,1.1nm,0.8s,baz=140,slow=43,SNR=3.1						
KLR	Kul'dur	29.09	344	P	P	21 39 33.0	-0.1
	comp=Z,2.5nm,0.5s,baz=132,slow=11,SNR=13						
MTN	Manton Dam	36.22	200	P	P	21 40 34.3	-0.7
MTN				IAmb	IAmb	21 40 49.5	
	comp=Z,13nm,1.1s						
SONM	Songino Array	39.50	321	P	P	21 41 03.7	+1.6
	comp=Z,0.1nm,0.4s,baz=123,slow=10,SNR=1.4						
CMAR	Chiang Mai Arr	41.68	274	P	P	21 41 20.3	+0.2
	comp=Z,0.6nm,0.4s,baz=291,slow=40,SNR=1.6						
WB0	Warramunga Arr	42.00	193	P	P	21 41 22.3	-0.2
WB0				IAmb	IAmb	21 41 24.7	
	comp=Z,4.4nm,1.0s						
WB2	Warramunga Arr	42.17	193	P	P	21 41 24.1	+0.2
WB2				IAmb	IAmb	21 41 33.8	
	comp=Z,3.1nm,1.0s						
WRA	Warramunga Arr	42.18	193	P	P	21 41 24.2	+0.3
	comp=Z,2.0nm,0.7s,baz=16,slow=9.0,SNR=18						
WRA	Warramunga Arr	42.18	193	P	P	21 41 23.7	-0.2
FITZ	Fitzroy Crossi	43.05	205	P	P	21 41 29.9	-0.9
FITZ				IAmb	IAmb	21 41 36.3	
	comp=Z,5.0nm,1.1s						
KULM	Kulim	44.33	255	P	P	21 41 41.0	-0.1
KULM				IAmb	IAmb	21 41 46.0	
	comp=Z,9.5nm,1.1s						
AS31	Alice Springs	45.88	192	P	P	21 41 53.3	+0.1
ASAR	Alice Springs	45.88	192	P	P	21 41 53.2	+0.1
	comp=Z,0.5nm,0.6s,baz=16,slow=12,SNR=12						
ASAR	Alice Springs	45.88	192	P	P	21 41 53.0	-0.2
GSI	Gunungsitoli	48.85	252	P	P	21 42 15.7	-0.3
ZALV	Zalesovo Beam	54.37	322	P	P	21 42 54.6	-1.4
	comp=Z,0.3nm,0.4s,baz=116,slow=5.6,SNR=2.0						
ZALV				PcP	PcP	21 43 55.2	-0.5
	comp=Z,0.6nm,0.4s,baz=140,slow=1.7,SNR=3.9						
MK31	Makanchi Array	54.85	313	P	P	21 43 00.1	+0.4
MKAR	Makanchi Array	54.85	313	P	P	21 42 59.8	0.0
	comp=Z,0.1nm,0.4s,baz=89,slow=14,SNR=4.1						
MKAR	Makanchi Array	54.85	313	P	P	21 42 59.5	-0.2
ILAR	Eielson Array	62.11	27	P	P	21 43 49.3	+0.2
	comp=Z,0.2nm,0.6s,baz=262,slow=6.3,SNR=2.4						
BRVK	Borovoye	62.89	320	P	P	21 43 54.9	+0.4
KKAR	Karatay Array	63.21	308	P	P	21 43 56.8	0.0
ABKAR	Akbulak array	69.71	316	P	P	21 44 37.5	-0.1
ABKAR				IAmb	IAmb	21 44 38.0	
	comp=Z,1.1nm,0.7s						
ABKAR	Akbulak array	69.71	316	P	P	21 44 37.3	-0.2
YKA	Yellowknife Ar	76.52	28	P	P	21 45 17.9	+1.0
	comp=Z,0.4nm,0.6s,baz=291,slow=4.9,SNR=8.6						
ARCES	ARCESS Array B	79.07	342	P	P	21 45 31.4	+0.6
	comp=Z,6.9nm,1.1s,baz=67,slow=8.0,SNR=5.5						
NVAR	Mina Array Bea	83.14	51	P	P	21 45 51.8	-1.2
	comp=Z,0.2nm,0.3s,baz=285,slow=11,SNR=2.0						
FINES	FINESS Array B	83.34	335	P	P	21 45 52.5	-0.7
	comp=Z,0.8nm,0.5s,baz=65,slow=4.6,SNR=7.8						
PLCA	Paso Flores	145.60	131	PKPbc	PKPab	21 53 05.0	+0.6
	comp=Z,1.7nm,0.6s,baz=220,slow=4.9,SNR=7.6						
PLCA	Paso Flores	145.60	131		PKPab	21 53 04.9	+0.5

IDC 24 21:48:16.9±7.7, **6°.13S**×**149°.83E**, **h64**km±60km, **mb3.3**/3, **mb1 3.6**/4, **mb1mx3.2**/29, **mbtmp3.7**/4, **ML2.0**/1, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.8**/22, **Error ellipse: s-maj=123.0km s-min=51.5km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.19	219	P	Pn	21 49 18.4	0.0

	6.5nm,0.3s,baz=25,slow=9.5,SNR=18						
PMG				S	Sn	21 50 06.5	+0.4
	9.3nm,0.3s,baz=53,slow=15,SNR=3.2						
SIJI	**Sorong**	**19.25**	**285**	LR	LR	22 01 56.5	
	comp=Z,104nm,19.2s,baz=90,slow=43						
WRA	**Warramunga Arr**	**20.37**	**226**	P	P	21 52 49.4	+0.8
	2.2nm,0.6s,baz=53,slow=11,SNR=25						
WRA				LR	LR	22 01 40.3	
	comp=Z,66nm,20.0s,baz=225,slow=39						
ASAR	**Alice Springs**	**23.21**	**220**	P	P	21 53 18.4	-0.2
	0.4nm,0.6s,baz=54,slow=8.8,SNR=6.7						
FITZ	**Fitzroy Crossi**	**26.43**	**241**	P	P	21 53 48.0	0.0
	3.4nm,1.1s,baz=49,slow=11,SNR=1.5						
TORD	**Torodi Ar. Bea**	**147.85**	**285**	PKPbc	PKPbc	22 07 55.1	-0.8
	0.7nm,0.6s,baz=61,slow=3.2,SNR=2.3						

IDC 24 21:56:33.0±1.3,**2.°34S**×**139.°02E,h0**^{km}**,mb3.3**/3, **mb1 3.6**/4,**mb1mx3.3**/33,**mbtmp3.3**/4,**ML3.3**/1,**Error ellipse: s-maj=27.3km s-min=23.7km az=8.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.69**	**96**	Pn	Pn	21 57 04.3	+0.5
	11nm,0.3s,baz=253,slow=14,SNR=33						
JAY				Sn	Sg	21 57 27.1	-0.2
	8.1nm,0.3s,baz=174,slow=21,SNR=5.6						
WRA	**Warramunga Arr**	**18.08**	**194**	P	Pn	22 00 46.0	+0.2
	0.1nm,0.3s,baz=18,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**21.77**	**193**	P	P	22 01 25.7	-0.8
	0.2nm,0.5s,baz=14,slow=10,SNR=6.5						
MKAR	**Makanchi Array**	**69.69**	**322**	P	P	22 07 45.1	+0.4
	0.4nm,0.6s,baz=101,slow=7.3,SNR=6.2						
ILAR	**Eielson Array**	**85.37**	**24**	P	P	22 09 11.4	-0.5
	0.3nm,0.9s,baz=271,slow=4.2,SNR=1.8						

IDC 24 22:05:17.4±9.7,**4.°98S**×**153.°35E,h106**^{km}±67^{km}**,mb3.1**/3, **mb1 3.4**/4,**mb1mx3.1**/36,**mbtmp3.6**/4,**ML2.0**/1,**Error ellipse: s-maj=100.9km s-min=42.7km az=106.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.55**	**234**	P	Pn	22 07 04.6	-0.3
	1.2nm,0.3s,baz=342,slow=5.6,SNR=4.6						
PMG				S	Sn	22 08 29.3	+0.3
	1.1nm,0.3s,baz=195,slow=17,SNR=3.5						
WRA	**Warramunga Arr**	**23.74**	**230**	P	P	22 10 19.6	-0.5
	0.6nm,0.5s,baz=55,slow=9.8,SNR=8.0						
ASAR	**Alice Springs**	**26.39**	**223**	P	P	22 10 45.0	+0.9
	0.5nm,0.5s,baz=56,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**80.82**	**319**	P	P	22 17 20.3	+0.8
	0.2nm,0.7s,baz=100,slow=6.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**150.88**	**288**	PKPbc	PKPbc	22 24 57.0	-1.7
	0.3nm,0.4s,baz=51,slow=1.4,SNR=2.1						

*IDC **24** 22:05:38.6±0.9,22.°79S×171.°74E,h0^{km},mb4.2/11, mb1 4.4/13,mb1mx4.3/24,mbtmp4.2/13,ML3.8/2,MS4.3/23, Ms1 4.3/23,ms1mx4.2/30,Error ellipse: s-maj=25.4km s-min=21.0km az=158.0*

*BJI **24** 22:05:42.0±0.0,22.°80S×171.°90E,h35^{km},mB5.2/17, mb4.6/29,Ms5.0/8,Ms7 4.6/10*

*NEIC **24** 22:05:44.0±1.6,22.°85S±0.°09×171.°7E±0.°1,h40^{km}±7^{km}, mb4.9/43,Error ellipse: s-maj=16.5km s-min=12.0km az=57.0*

*GCMT **24** 22:05:46.0±0.2,22.°93S±0.°01×171.°58E±0.°02,h17^{km}, MW5.2/118,Moment Tensor Solution. s85,c119; s118,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.44±.20; $M_{\theta\theta}$-6.60±.15; $M_{\phi\phi}$0.15±.13; $M_{r\theta}$2.72±.33; $M_{\theta\phi}$-1.09±.10; $M_{\phi r}$0.29±.38; Best double couple: $M_0$7.15000×10^{16} NP1:ϕ_s260.00000°,δ34.00000°, λ88.00000°. NP2:ϕ_s82.00000°,δ56.00000°,λ91.00000°. Principal axes: T 6.9850, Plg79.0000°, Azm357.0000°; N 0.3240, Plg1.0000°, Azm261.0000°; P -7.3140, Plg11.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:05:45.5±0.4,**22.°88S**±0.°07×**171.°69E**±0.°06,**h49**^{km}**,n178,** σ**1**^{s}**.57**/158,**mb4.8**/33,**MS4.3**/23,**12C-15D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.92**	**278**	*e*Pn	**Pn**	**22 06 54.4**	**-2.6**
	46nm,0.3s						
DZM				*e*Sn	**Sn**	**22 07 49.0**	**-3.6**
	42nm,0.3s						
DZM				*e*LR	LR	22 07 55.8	
	comp=Z,3μm,26.9s						
DZM	**Mont Dzumac**	**4.92**	**278**	Pn	**Pn**	**22 06 54.4**	**-2.6**
	5.7nm,0.3s,baz=112,slow=12,SNR=58						
DZM				Sn	**Sn**	**22 07 54.2**	**+1.7**
	14nm,0.3s,baz=101,slow=18,SNR=4.8						
DZM				LR	LR	22 08 47.8	
	comp=Z,2μm,18.9s,baz=90,slow=38						
DZM	**Mont Dzumac**	**4.92**	**278**	Pn	**Pn**	**22 06 54.7**	**-2.2**
SANVU	**Saraoutou**	**8.52**	**329**	Pn	**Pn**	**22 07 45.2**	**-1.1**
RAO	**Raoul Island**	**11.29**	**126**	LR	LR	22 11 48.6	
	comp=Z,1μm,19.7s,baz=354,slow=33						
URZ	**Urewera**	**16.02**	**164**	Pn	**Pn**	**22 09 25.8**	**-1.7**
	0.2nm,0.3s,baz=355,slow=4.1,SNR=8.1						
URZ				LR	LR	22 14 09.5	
	comp=Z,3μm,21.3s,baz=26,slow=32						
URZ	**Urewera**	**16.02**	**164**		**Pn**	**22 09 26.0**	**-1.5**
BKZ	**Black Stump Fm**	**16.75**	**167**		**Pn**	**22 09 35.6**	**-1.1**
HNR	**Honiara**	**17.47**	**318**	LR	LR	22 15 48.2	
	comp=Z,583nm,20.7s,baz=156,slow=35						
HNR	**Honiara**	**17.47**	**318**	Pn	**Pn**	**22 09 43.4**	**-2.4**
HNR				IAmb	IAmb	22 10 01.6	
	comp=Z,102nm,1.2s						
AFI	**Afiamalu**	**18.04**	**63**	LR	LR	22 15 35.9	
	comp=Z,822nm,18.0s,baz=236,slow=33						
SNZO	**South Karori**	**18.55**	**173**	P	**P**	**22 09 56.7**	**-1.4**
SNZO				IAmb	IAmb	22 10 23.8	
	comp=Z,87nm,1.4s						
TUWZ	**Tuamarina**	**18.59**	**175**	P	**P**	**22 09 57.4**	**-1.2**
THZ	**Tophouse**	**18.86**	**177**	P	**Pn**	**22 10 01.2**	**-1.3**
EIDS	**Eidsvold**	**18.97**	**258**	P	**P**	**22 10 03.4**	**+0.5**
ARMA	**Armidale**	**19.42**	**243**	P	**Pn**	**22 10 13.1**	**+3.7**
	baz=20,SNR=4.4						
ARMA	**Armidale**	**19.42**	**243**	P	**Pn**	**22 10 08.9**	**-0.5**
RPZ	**Rata Peaks**	**20.79**	**181**	P	**P**	**22 10 21.3**	**-1.2**
	comp=Z,32nm,1.1s,baz=28,slow=7.4,SNR=8.5						
RPZ				LR	LR	22 17 08.7	
	comp=Z,2μm,21.7s,baz=2.5,slow=33						
RPZ	**Rata Peaks**	**20.79**	**181**	P	**P**	**22 10 21.3**	**-1.2**
RPZ				IAmb	IAmb	22 10 26.2	
	comp=Z,103nm,1.4s						
RMQ	**Roma**	**21.14**	**256**	P	**P**	**22 10 29.9**	**+3.5**
	baz=21,SNR=14						
CNB	**Canberra Magne**	**23.05**	**233**	P	**P**	**22 10 51.2**	**+4.5**
	baz=23,SNR=5.5						
CAN	**Canberra**	**23.32**	**233**	P	**P**	**22 10 49.6**	**+0.3**
CAN				IAmb	IAmb	22 11 08.2	
	comp=Z,84nm,1.5s						
CTA	**Charters Tower**	**23.82**	**272**	P	**P**	**22 10 55.4**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=101,slow=15,SNR=4.0						
CTA				LR	LR	22 20 11.5	
	comp=Z,714nm,20.1s,baz=76,slow=37						
CTAO	**Charters Tower**	**23.82**	**272**	P	**P**	**22 10 53.7**	**-0.4**
CTAO				IAmb	IAmb	22 11 11.9	
	comp=Z,51nm,1.5s						
QLP	**Quilpie**	**25.19**	**256**	P	**P**	**22 11 06.8**	**+0.3**
	baz=25,SNR=3.1						
MTSU	**Mount Surprise**	**26.05**	**275**	P	**P**	**22 11 15.5**	**+1.1**
	baz=26,SNR=8.9						
RAR	**Rarotonga**	**26.49**	**92**	P	**P**	**22 11 23.3**	**+4.9**
	comp=Z,34nm,0.4s,baz=220,slow=14,SNR=3.6						
PMG	**Port Moresby**	**27.04**	**296**	LR	LR	22 21 06.1	
	comp=Z,889nm,18.6s,baz=135,slow=34						
STKA	**Stephens Creek**	**28.11**	**245**	P	**P**	**22 11 34.0**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=72,slow=7.8,SNR=5.2						
STKA				LR	LR	22 21 38.9	
	comp=Z,434nm,20.5s,baz=73,slow=34						
STKA	**Stephens Creek**	**28.11**	**245**	P	**P**	**22 11 33.1**	**+0.3**
COEN	**Coen**	**28.43**	**283**	P	**P**	**22 11 35.4**	**-0.4**
BBOO	**Buckleboo**	**32.89**	**245**	P	**P**	**22 12 16.3**	**+1.3**
AS31	**Alice Springs**	**34.65**	**261**	P	**P**	**22 12 31.0**	**+0.5**
ASAR	**Alice Springs**	**34.65**	**261**	P	**P**	**22 12 29.8**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=85,slow=8.6,SNR=18						
ASAR				LR	LR	22 28 01.3	
	comp=Z,268nm,18.7s,baz=98,slow=39						
ASAR	**Alice Springs**	**34.65**	**261**	P	**P**	**22 12 30.4**	**-0.1**
WB0	**Warramunga Arr**	**34.82**	**268**		**P**	**22 12 30.6**	**-1.3**
WB0				IAmb	IAmb	22 12 35.7	
	comp=Z,16nm,1.3s						
WRA	**Warramunga Arr**	**34.83**	**268**	P	**P**	**22 12 30.8**	**-1.3**
	comp=Z,1.3nm,0.4s,baz=98,slow=8.0,SNR=16						
WRA				LR	LR	22 25 11.3	
	comp=Z,199nm,21.8s,baz=90,slow=34						
WRA	**Warramunga Arr**	**34.83**	**268**	P	**P**	**22 12 30.4**	**-1.7**
TBI	**Tubuai**	**35.66**	**99**	*e*LR	LR	22 22 13.6	
	comp=Z,297nm,26.8s						
FITZ	**Fitzroy Crossi**	**43.26**	**268**	P	**P**	**22 13 42.7**	**+0.2**
	baz=43,SNR=4.4						
FITZ	**Fitzroy Crossi**	**43.26**	**268**	P	**P**	**22 13 42.1**	**-0.4**
FITZ				IAmb	IAmb	22 13 47.6	
	comp=Z,25nm,1.1s						
MEEK	**Meekatharra**	**48.06**	**254**	P	**P**	**22 14 23.3**	**+2.9**
	baz=48,SNR=3.6						
SANI	**Sanana**	**48.89**	**288**	P	P	22 14 39.3	+12
LUWI	**Luwuk**	**52.20**	**287**	P	**P**	**22 14 52.6**	**+0.8**
VNDA	**Vanda**	**54.90**	**183**	LR	LR	22 35 11.5	
	comp=Z,422nm,20.5s,baz=12,slow=32						
TOLI2	**Tolitoli**	**54.97**	**289**	P	**P**	**22 15 10.1**	**-2.0**
TOLI2				IAmb	IAmb	22 15 16.7	
	comp=Z,14nm,1.1s						
MJAR	**Matsushiro Arr**	**67.02**	**331**	LR	LR	22 45 48.8	
	comp=Z,125nm,19.2s,baz=125,slow=36						
QSPA	**South Pole Qui**	**67.19**	**180**	P	**P**	**22 16 34.3**	**-0.1**
KSRS	**Korea Array**	**72.78**	**325**	P	**P**	**22 17 07.7**	**-1.0**
	comp=Z,1.4nm,1.1s,baz=143,slow=5.0,SNR=4.3						
KSRS				LR	LR	22 46 31.7	
	comp=Z,123nm,21.0s,baz=133,slow=34						
QIZ	**Qiongzhong**	**73.36**	**299**	P	**P**	**22 17 13.5**	**+0.9**
QIZ				S	**SKiKP**	**22 26 47.3**	**+7.5**
QIZ				LR	LR		
	comp=Z,160nm,22.1s						
NJ2	**Nanjing**	**74.39**	**315**	*e*P	**P**	**22 17 19.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAW	**Mawson**	**75.93**	**202**	P	P	22 17 33.4	+6.7
	baz=76,SNR=36						
MAW	**Mawson**	**75.93**	**202**	LR	LR	22 46 09.9	
	comp=Z,103nm,19.6s,baz=76,slow=32						
USRK	**Ussuriysk Ar.**	**76.00**	**332**	P	**P**	**22 17 27.7**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=129,slow=5.4,SNR=2.6						
USRK				LR	LR	22 46 34.6	
	comp=Z,111nm,21.6s,baz=136,slow=32						
USRK	**Ussuriysk Ar.**	**76.00**	**332**	P	**P**	**22 17 26.8**	**-0.6**
PETK	**Petropavlovsk-**	**76.64**	**351**	LR	LR	22 45 19.2	
	comp=Z,451nm,19.6s,baz=154,slow=31						
BELA	**Belgrano 2**	**78.28**	**175**	P	**P**	**22 17 40.1**	**+0.3**
NONG	**Nongkai**	**78.36**	**295**	P	P	22 17 47.0	+5.9
ENH	**Enshi**	**79.73**	**309**	P	**P**	**22 17 47.3**	**-1.2**
ENH				IAmb	IAmb	22 18 02.7	
	comp=Z,15nm,1.1s						
UTHA	**Uthaitani**	**80.32**	**291**	P	P	22 17 58.7	+6.8
BJT	**Baijiatuau**	**81.18**	**320**	P	**P**	**22 17 55.6**	**-0.3**
BJI	**Beijing**	**81.19**	**320**	P	**P**	**22 17 56.0**	**+0.1**
BJI				pmax	pmax		
	comp=Z,5.0nm,2.2s						
LAMP	**Lampang**	**81.51**	**294**	P	P	22 18 04.0	+5.8
CM35	**Chiang Mai Arr**	**81.99**	**294**	P	**P**	**22 18 02.0**	**+1.3**
CM04	**Chiang Mai Arr**	**82.01**	**294**	P	P	22 18 07.0	+6.2
CM09	**Chiang Mai Arr**	**82.02**	**294**	P	P	22 18 08.6	+7.7
CM01	**Chiang Mai Arr**	**82.03**	**294**	P	P	22 18 08.1	+7.1
CM05	**Chiang Mai Arr**	**82.04**	**294**	P	P	22 18 07.5	+6.5
CM02	**Chiang Mai Arr**	**82.05**	**294**	P	P	22 18 08.2	+7.1
CM31	**Chiang Mai Arr**	**82.06**	**294**	P	P	22 18 08.0	+6.9
CM31	**Chiang Mai Arr**	**82.06**	**294**	P	**P**	**22 17 60.0**	**-1.2**
CM31				IAmb	IAmb	22 18 08.3	
	comp=Z,18nm,1.3s						
CMAR	**Chiang Mai Arr**	**82.06**	**294**	P	**P**	**22 18 02.4**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=137,slow=3.8,SNR=14						
CMAR				LR	LR	22 58 15.0	
	comp=Z,50nm,18.2s,baz=192,slow=38						
CMAR	**Chiang Mai Arr**	**82.06**	**294**	P	**P**	**22 18 00.9**	**-0.2**
CM34	**Chiang Mai Arr**	**82.07**	**294**	P	P	22 18 07.0	+5.9
CM15	**Chiang Mai Arr**	**82.08**	**294**	P	P	22 18 07.8	+6.7
CM13	**Chiang Mai Arr**	**82.08**	**294**	P	P	22 18 06.8	+5.7
KMI	**Kunming**	**82.12**	**301**	⇑P	**P**	**22 18 00.4**	**-1.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI	**Kunming**	**82.12**	**301**	P	**P**	**22 18 02.1**	**+0.6**
CHTO	**Chiang Mai**	**82.23**	**294**	P	**P**	**22 18 02.2**	**+0.3**
CHTO				IAmb	IAmb	22 18 08.1	
	comp=Z,24nm,1.4s						
XAN	**Xi'an**	**82.23**	**312**	P	**P**	**22 18 02.3**	**+0.6**
XAN				pP	pP	22 18 12.9	-1.7
XAN				S	**S**	**22 28 18.5**	**+4.9**
XAN				pmax	pmax		
	comp=Z,190nm,8.3s						
XAN				LR	LR		
	comp=Z,260nm,17.3s						
XAN				LR	LR		
	comp=Z,150nm,17.4s						
XAN				LR	LR		
	comp=Z,260nm,17.4s						
HHC	**Hu-ho-hao-te**	**84.45**	**319**	*e*P	**P**	**22 18 13.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.5s						
HHC				pmax	pmax		
	comp=Z,150nm,7.6s						
SNAA	**Sanae**	**85.63**	**182**	P	**P**	**22 18 17.8**	**-0.7**
SNAA				IAmb	IAmb	22 18 36.3	
	comp=Z,17nm,1.5s						
VNA3	**Neumayer Olymp**	**86.13**	**180**	P	**P**	**22 18 19.3**	**-1.6**
VNA2	**Neumayer--Watz**	**86.45**	**180**	P	**P**	**22 18 22.2**	**-0.3**
	baz=170,slow=4.6						
VNA1	**Neumayer--Stat**	**86.73**	**180**	P	**P**	**22 18 22.6**	**-1.2**
LZH	**Lanzhou**	**86.84**	**311**	*e*P	**P**	**22 18 26.3**	**+1.2**
LZH				pP	pP	22 18 35.4	-2.7
LZH				sP	sP	22 18 41.3	-1.7
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,56nm,4.9s						
LZH				LR	LR		
	comp=Z,150nm,16.3s						
LZH				LR	LR		
	comp=Z,170nm,16.2s						
LZH				LR	LR		
	comp=Z,240nm,18.7s						
ORV	**Oroville**	**87.96**	**45**	P	**P**	**22 18 30.0**	**-0.2**
ORV				IAmb	IAmb	22 18 47.2	
	comp=Z,13nm,1.4s						
ISA	**Isabella, Lake**	**88.03**	**50**	P	**P**	**22 18 31.3**	**+0.6**
ISA				IAmb	IAmb	22 18 37.2	
	comp=Z,12nm,1.2s						
WAKR	**Walker**	**88.79**	**47**	P	**P**	**22 18 33.9**	**-0.6**
BEKR	**Beckworth**	**88.88**	**46**	P	**P**	**22 18 33.9**	**-0.9**
BEKR				IAmb	IAmb	22 18 37.0	
	comp=Z,8.5nm,1.4s						
SLBS	**Sierra La Lagu**	**89.08**	**64**	P	**P**	**22 18 33.8**	**-2.2**
PAHR	**Pah Rah Range**	**89.44**	**46**	P	**P**	**22 18 36.8**	**-0.6**
PAHR				IAmb	IAmb	22 18 42.6	
	comp=Z,8.7nm,1.2s						
RYN	**Ryan**	**89.47**	**47**	P	**P**	**22 18 36.7**	**-0.8**
RYN				IAmb	IAmb	22 19 02.6	
	comp=Z,8.2nm,1.2s						
NVAR	**Mina Array Bea**	**89.52**	**48**	P	**P**	**22 18 38.5**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=226,slow=8.7,SNR=7.9						
NVAR				LR	LR	22 50 54.2	
	comp=Z,273nm,20.4s,baz=230,slow=30						
NVAR	**Mina Array Bea**	**89.52**	**48**	P	**P**	**22 18 36.9**	**-1.0**
NV11	**Mina Array Sit**	**89.62**	**48**	P	**P**	**22 18 38.5**	**+0.2**
NV11				IAmb	IAmb	22 18 43.4	
	comp=Z,7.9nm,1.2s						
TPH	**Tonopah**	**90.09**	**48**	P	**P**	**22 18 39.5**	**-1.0**
PINE	**Pine Mountain**	**90.55**	**42**	P	**P**	**22 18 42.6**	**+0.1**
SHPR	**Sheep Range**	**90.78**	**50**	P	**P**	**22 18 42.1**	**-1.6**
SHPR				IAmb	IAmb	22 19 00.0	
	comp=Z,7.9nm,1.4s						
ULN	**Ulaanbaatar**	**91.13**	**323**	P	**P**	**22 18 44.5**	**-0.6**
ULN				IAmb	IAmb	22 18 55.6	
	comp=Z,5.1nm,1.1s						
SONM	**Songino Array**	**91.48**	**322**	P	**P**	**22 18 45.7**	**-0.9**
	comp=Z,2.4nm,1.1s,baz=142,slow=5.0,SNR=9.9						
SONM				LR	LR	23 00 19.9	
	comp=Z,89nm,18.9s,baz=109,slow=36						
SONM	**Songino Array**	**91.48**	**322**	P	**P**	**22 18 46.3**	**-0.4**
X16A	**Lo Mia Camp, P**	**92.54**	**54**	P	**P**	**22 18 52.6**	**+0.6**
X16A				IAmb	IAmb	22 19 08.4	
	comp=Z,6.4nm,1.2s						
U15A	**North Rim**	**92.80**	**52**	P	**P**	**22 18 53.0**	**-0.3**
ILAR	**Eielson Array**	**93.03**	**16**	P	**P**	**22 18 51.3**	**-2.0**
	comp=Z,0.2nm,0.8s,baz=305,slow=12,SNR=4.0						
ILAR				LR	LR	22 57 19.8	
	comp=Z,255nm,18.3s,baz=230,slow=33						
PLCA	**Paso Flores**	**94.31**	**138**	LR	LR	22 51 30.7	
	comp=Z,109nm,21.2s,baz=202,slow=29						
PDAR	**Pinedale Array**	**97.42**	**47**	LR	LR	22 59 29.4	
	comp=Z,135nm,18.3s,baz=270,slow=33						
WMQ	**Urumqi**	**101.35**	**313**	*e*P	**Pdif**	**22 19 31.6**	**+0.2**
WMQ				pP	pPdif	22 19 42.8	-1.9
WMQ				sP	pwP	22 19 50.4	+0.8
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,560nm,29.0s						
WMQ				LR	LR		
	comp=Z,120nm,27.1s						
VASR	**Vaslui**	**142.52**	**318**	⇑P	**PKPdf**	**22 25 05.5**	**-7.4**
VRI	**Vrincioaia**	**143.53**	**318**	⇑P	**PKiKP**	**22 25 16.5**	**-1.6**
BURAR	**Bucovina Array**	**143.59**	**321**	⇓P	**PKiKP**	**22 25 18.8**	**+0.5**
NEHR	**Nehoiu**	**144.00**	**317**	⇓P	**PKPdf**	**22 25 14.7**	**-0.9**
MLR	**Muntele Rosu**	**144.19**	**317**	⇓P	**PKPdf**	**22 25 15.0**	**-1.1**
DOPR	**Dopca**	**144.31**	**318**	⇑P	**PKPdf**	**22 25 15.8**	**-0.3**
SULR		**144.36**	**316**	⇓P	PKiKP	22 25 28.3	+8.5
ARCR	**ARCALIA**	**144.37**	**321**	⇓P	**PKPdf**	**22 25 16.2**	**+0.1**
KOLS	**Kolonicke sedl**	**144.50**	**325**	*e*PKP	**PKPdf**	**22 25 17.5**	**+1.2**
BMR	**Baia Mare**	**144.55**	**322**	⇑P	**PKPdf**	**22 25 16.3**	**-0.2**
VOIR		**144.77**	**318**	⇓P	**PKPdf**	**22 25 16.6**	**-0.4**
CRVS	**Cervenica-Dubn**	**144.95**	**325**	*e*PKP	**PKPdf**	**22 25 18.0**	**+0.9**
OJC	**Ojcow**	**144.97**	**328**	*e*PKP	**PKPdf**	**22 25 16.8**	**-0.3**
CJR	**Cluj-Napoca**	**145.00**	**321**	⇑P	**PKPdf**	**22 25 17.9**	**+0.6**
ARR	**Arges**	**145.06**	**318**	⇓P	**PKPdf**	**22 25 18.4**	**+0.9**
NIE	**Niedzica**	**145.23**	**327**	*e*PKP	**PKPab**	**22 25 18.1**	**+0.6**
HUMR	**Humele**	**145.24**	**316**	⇓P	**PKPab**	**22 25 17.9**	**+0.3**
COPA	**Copaceanca**	**145.27**	**316**	⇓P	**PKPab**	**22 25 18.4**	**+0.7**
DRGR		**145.48**	**321**	⇑P	**PKPab**	**22 25 18.7**	**+0.2**
LOT	**Lotru**	**145.55**	**319**	⇓P	**PKPab**	**22 25 19.1**	**+0.2**
LTVH	**Ltavrtes, Hu**	**145.60**	**323**	*e*P	**PKPab**	**22 25 19.9**	**+1.0**
LANS	**Liptovska Anna**	**145.82**	**327**	*e*PKP	**PKPab**	**22 25 21.0**	**+1.3**
VLAD	**Vladila**	**145.85**	**316**	⇑P	**PKPab**	**22 25 20.6**	**+0.7**
KSP	**Ksiaz**	**146.16**	**332**	*e*PKP	**PKPbc**	**22 25 20.2**	**+0.1**
GZR	**Gura Zlata**	**146.18**	**319**	⇓P	**PKPab**	**22 25 20.9**	**-0.3**
MORC	**Moravsky Berou**	**146.34**	**329**	⇑P	**PKPab**	**22 25 21.9**	**+0.3**
MORC	**Moravsky Berou**	**146.34**	**329**	*e*PKP	**PKPbc**	**22 25 20.6**	**-0.2**
SIRR	**Siria**	**146.37**	**321**	⇑P	**PKPab**	**22 25 22.2**	**+0.4**
PSZ	**Piszkesteto**	**146.38**	**325**	*e*P	**PKPab**	**22 25 21.5**	**-0.4**
OSTC	**Ostas**	**146.40**	**331**	*e*PKP	**PKiKP**	**22 25 23.7**	**-0.2**
CHVC	**Chvalec**	**146.44**	**332**	*e*PKP	**PKPab**	**22 25 21.6**	**-0.4**
DPC	**Dobruska-Polom**	**146.50**	**331**	*e*PKP	**PKPab**	**22 25 22.1**	**-0.1**
VYHS	**Vyhne**	**146.56**	**327**	*e*PKP	**PKPab**	**22 25 21.9**	**-0.6**
HERR	**Herculane**	**146.66**	**319**	⇓P	**PKPbc**	**22 25 22.1**	**+0.3**
BZS	**Buzias**	**146.75**	**320**	⇓P	**PKPbc**	**22 25 22.0**	**0.0**
AMBH	**Ambrzfalva**	**146.86**	**322**	*e*P	**PKPbc**	**22 25 22.3**	**0.0**
JAVC	**Velka Javorina**	**146.91**	**328**	*e*PKP	**PKPbc**	**22 25 22.5**	**0.0**
VRAC	**Vranov**	**147.11**	**329**	*e*PKP	**PKPbc**	**22 25 23.4**	**+0.4**
BRG	**Berggiesshubel**	**147.13**	**334**	*e*PKP	**PKPbc**	**22 25 23.6**	**+0.7**
BRG				Amp		22 25 28.6	
	comp=Z,8.6nm,1.2s						
BRG	**Berggiesshubel**	**147.13**	**334**	*e*PKP	**PKPbc**	**22 25 23.6**	**+0.7**
BRG				Amp		22 25 28.6	
	comp=Z,8.6nm,1.2s						
MDVR	**Moldovita**	**147.14**	**319**	⇓P	**PKPbc**	**22 25 23.5**	**+0.3**
CLL	**Collm**	**147.16**	**335**	*e*PKPbc	**PKPbc**	**22 25 23.0**	**0.0**
CLL				*e*PKPab	**PKiKP**	**22 25 25.0**	**-0.4**
CLL				*e*pPKPbc	**pPKPdf**	**22 25 34.0**	**-0.2**
VTS	**Vitosha**	**147.24**	**314**	⇑P	**PKPab**	**22 25 24.5**	**-1.0**
KRUC	**Moravsky**	**147.38**	**329**	*e*PKP	**PKPbc**	**22 25 23.7**	**0.0**
PRU	**Pruhonice**	**147.54**	**332**	*e*PKP	**PKPbc**	**22 25 24.2**	**+0.1**
CSKK	**Cskako**	**147.59**	**325**	*e*P	**PKPdf**	**22 25 16.9**	**-4.7**
SANT	**Santorini**	**147.88**	**302**	⇓P	**PKPdf**	**22 25 22.3**	**-0.2**
EGYH	**Egyhazaskeszo**	**148.03**	**326**	*e*P	**PKPbc**	**22 25 24.7**	**-0.8**
MPLH	**Magyarpolny**	**148.09**	**326**	*e*P	**PKPbc**	**22 25 25.7**	**0.0**
MORH	**Mrgy, Hungar**	**148.10**	**323**	*e*P	**PKPbc**	**22 25 25.7**	**0.0**
VAY	**Valandovo**	**148.26**	**313**	*i* P	**PKPdf**	**22 25 23.9**	**+1.0**
CONA	**Conrad Observa**	**148.42**	**328**	*e*P	**PKiKP**	**22 25 27.9**	**-0.3**
	comp=Z,13nm,1.5s						
KHC	**Kasperske Hory**	**148.60**	**332**	*e*PKP	**PKPbc**	**22 25 25.7**	**-1.3**
IDI	**Anoyia**	**148.61**	**301**	⇑P	**PKiKP**	**22 25 29.6**	**+0.6**
SKO	**Skopje**	**148.72**	**315**	*i* P	**PKPab**	**22 25 31.9**	**+0.6**
GERES	**GERESS Array B**	**148.76**	**331**	PKPbc	**PKPbc**	**22 25 27.9**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=36,slow=2.4,SNR=9.9						
GERES	**GERESS Array B**	**148.76**	**331**		**PKPdf**	**22 25 24.2**	**+0.5**
BEHE	**Becsehely**	**148.94**	**325**	*e*P	**PKPdf**	**22 25 22.3**	**-1.6**
ARSA	**Arzberg**	**149.06**	**328**	*e*P	**PKPab**	**22 25 31.6**	**-0.9**
	comp=Z,7.9nm,1.6s						
MOA	**Molln**	**149.24**	**330**	*e*P	**PKPbc**	**22 25 28.2**	**-0.4**
	comp=Z,7.8nm,1.5s						
OHR	**Ohrid**	**149.55**	**314**	*i* P	**PKPab**	**22 25 33.8**	**-1.0**
SOKA	**Soboth**	**149.69**	**327**	*i* P	**PKPbc**	**22 25 29.0**	**-0.9**
	comp=Z,7.7nm,1.4s						
KBA	**Koelnbreinsper**	**150.23**	**329**	*i* P	**PKPbc**	**22 25 31.2**	**0.0**
	comp=Z,7.8nm,1.1s						
WATA	**Walderalm**	**150.84**	**332**	*e*P	**PKiKP**	**22 25 33.1**	**-0.2**
	comp=Z,3.1nm,0.7s						
ABTA	**Abfaltersbach**	**150.86**	**330**	*i* P	**PKPbc**	**22 25 30.6**	**-2.0**
	comp=Z,15nm,1.9s						
MOTA	**Moosalm**	**151.03**	**332**	*e*P	**PKPdf**	**22 25 29.6**	**+2.2**
	comp=Z,9.7nm,1.6s						
RETA	**Reutte**	**151.07**	**333**	*e*P	**PKiKP**	**22 25 33.6**	**-0.1**
	comp=Z,13nm,2.2s						
SQTA	**Sankt Quirin**	**151.09**	**332**	*i* P	**PKiKP**	**22 25 33.8**	**0.0**
	comp=Z,7.3nm,1.2s						
FETA	**Feichten**	**151.45**	**332**	*i* P	**PKiKP**	**22 25 35.0**	**+0.4**
	comp=Z,7.8nm,1.2s						
TORD	**Torodi Ar. Bea**	**166.43**	**226**	PKP	**PKPdf**	**22 25 47.6**	**+1.4**
	comp=Z,2.2nm,1.0s,baz=90,slow=1.5,SNR=5.7						

*NEIC **24** 22:27:04.3±1.7,14.°6S±0.°1×76.°0W±0.°1,h60^{km}±35^{km}, Error ellipse: s-maj=25.8km s-min=4.7km az=223.0*

ARE 24 22:27:05±2.4,**14.°52S**±0.°04×**75.°8W**±0.°2,**h42**^{km}±10^{km}, **ML4.3,Error ellipse: s-maj=22.4km s-min=2.3km az=77.0,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.72**	**338**	Pn	Pn	22 27 45.0	-1.3
NNA				Sn	Sn	22 28 19.7	+1.7
PB16	**IPOC Station P**	**7.11**	**123**	Pn	Pn	22 28 48.5	+1.4
PSGCX	**Pisagua**	**7.40**	**134**	Pn	Pn	22 28 51.1	+0.5
MNMC	**Minye Minye**	**7.49**	**129**	Pn	Pn	22 28 52.0	0.0
TA01	**Diego Aracena**	**8.04**	**139**	Pn	Pn	22 28 59.6	+0.3
PATCX	**Punta Patache**	**8.25**	**140**	Pn	Pn	22 29 03.6	+1.4
PB08	**IPOC Station P**	**8.44**	**132**	Pn	Pn	22 29 06.1	+0.9
PB07	**IPOC Station P**	**9.10**	**143**	Pn	Pn	22 29 16.1	+2.2
PB09	**IPOC Station P**	**9.54**	**140**	Pn	Pn	22 29 22.1	+2.1
PB14	**IPOC Station P**	**11.26**	**154**	Pn	Pn	22 29 42.9	-0.8
SAML	**Samuel**	**13.52**	**67**	Pn	Pn	22 30 16.1	+1.8

*SLM **24** 23:07:25.6±1.3,35.°810N±0.°010×90.°12W±0.°01,h4^{km}±5^{km}, Md2.9/10,mb_Lg3.0/56(NEIC),Error ellipse: s-maj=1.8km s-min=1.1km az=132.0*

NEIC 24 23:07:25.9±1.4,**35.°81N**±0.°01×**90.°12W**±0.°01,**h7**^{km}±4^{km}, **Error ellipse: s-maj=2.1km s-min=1.2km az=131.0, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAR	**Manila South**	**0.04**	**223**		Pg	23 07 28.0	+0.7
DLAR	**Dell**	**0.09**	**90**		Pg	23 07 27.8	-0.2
DLAR					Sg	23 07 30.3	+0.8
LVAR	**Leachville**	**0.13**	**321**		Pg	23 07 28.3	-0.5
LVAR					Sg	23 07 31.3	+0.6
GNAR	**Gosnell**	**0.17**	**28**		Pg	23 07 29.7	+0.2
GNAR				Sg	Sg	23 07 33.4	+1.5
LPAR	**Lepanto**	**0.26**	**216**		Pg	23 07 30.5	-0.5
LPAR				Sg	Sg	23 07 35.4	+1.0
CHNM	**Channel**	**0.28**	**33**		Pg	23 07 31.7	+0.3
V43A	**Jonesboro**	**0.35**	**266**		Pg	23 07 32.5	-0.2
V43A					Sg	23 07 38.2	+0.9
ARPT	**Arp**	**0.36**	**98**		Pg	23 07 32.8	-0.2
PEBM	**Pemiscott Bayo**	**0.37**	**34**		Pg	23 07 33.1	0.0
CWPT	**Cottonwood Poi**	**0.45**	**63**		Pg	23 07 34.6	+0.1
BRGM	**Braggadocio**	**0.45**	**28**		Pg	23 07 34.5	0.0
SFTN	**Shelby Forest**	**0.46**	**170**		Pg	23 07 34.4	-0.5
EDIT	**Edith**	**0.46**	**83**		Pg	23 07 34.5	-0.3
CVTN	**Covington**	**0.47**	**125**		Pg	23 07 34.6	-0.4
HBAR	**Harrisburg**	**0.51**	**240**		Pg	23 07 35.6	-0.2
TWAR	**Twist**	**0.57**	**219**		Pg	23 07 36.9	-0.1
TWAR					Sb	23 07 45.8	-0.9

LNXT	**Lenox**	0.58	60		Pg	23 07 37.2	0.0
LNXT	**Lenox**	0.58	60	P		23 07 37.2	
	baz=240						
WADM	**Wardell**	0.61	25		Pg	23 07 37.6	-0.1
HALT	**Halls**	0.64	81		Pg	23 07 37.6	-0.7
PVMO	**Portageville**	0.69	29	Pg	Pg	23 07 39.2	0.0
MET	**Memphis--Engin**	0.70	168	Pg	Pg	23 07 38.9	-0.6
PENMO	**Penman**	0.75	32		Pg	23 07 40.1	-0.3
GLAT	**Glass**	0.81	56		Pg	23 07 41.5	-0.1
LCAR	**Lake Charles**	0.88	287	Pg	Pg	23 07 41.9	-1.0
LCAR	**Lake Charles**	0.88	287	P		23 07 41.8	
	baz=107						
PARMO	**Parma**	0.90	19		Pg	23 07 42.8	-0.5
PBMO	**Poplar Bluff**	1.00	345		Pg	23 07 44.0	-1.1
PBMO	**Poplar Bluff**	1.00	345	P		23 07 44.1	
	baz=165						
W45A	**Hickory Valley**	1.00	130		Pg	23 07 44.5	-0.7
W45A	**Hickory Valley**	1.00	130	P		23 07 44.7	
	baz=311,SNR=22						
HICK	**Hickman**	1.02	44	Pg	Pg	23 07 45.1	-0.5
HENM	**Henderson Moun**	1.04	30	Pg	Pg	23 07 45.4	-0.6
OXF	**Oxford**	1.42	156		Pn	23 07 51.2	-1.0
OXF	**Oxford**	1.42	156	S		23 08 11.2	
	baz=336						
X43A	**Marvell**	1.43	206	P		23 07 52.3	
	baz=26,SNR=8.1						
X43A				S		23 08 12.6	
	baz=26						
T42A	**Van Buren**	1.45	327	Pn	Pn	23 07 52.0	-0.7
T42A	**Van Buren**	1.45	327	P		23 07 51.9	
	baz=147						
FCAR	**Ozark Folk Cen**	1.63	273		Pn	23 07 54.9	-0.2
T45B	**Paducah**	1.69	44	P		23 07 55.7	
	baz=225						
T45B				S		23 08 19.9	
	baz=225						
T45A	**Paducah**	1.69	44		Pn	23 07 55.7	-0.2
WHAR	**Wooly Hollow**	1.84	254		Pn	23 07 58.0	-0.1
W41B	**Gary Mavity, V**	1.85	251	P		23 07 57.8	
	baz=69,SNR=35						
W41B				S		23 08 23.1	
	baz=69						
PLAL	**Pickwick Lake**	1.86	116		Pn	23 07 58.0	-0.3
WVT	**Waverly**	1.88	80	Pn	Pn	23 07 57.9	-0.7
WVT	**Waverly**	1.88	80	P		23 07 58.1	
	baz=261,SNR=40						
Y45A	**Yeager Farm, C**	2.00	166	IAmb_Lg		23 08 29.3	
	comp=Z,43nm,1.1s						
S44A	**Carbondale**	2.00	20		Pn	23 08 00.9	+0.7
S44A				IAmb_Lg		23 08 31.1	
	comp=Z,56nm,0.7s						
S44A	**Carbondale**	2.00	20	P		23 08 00.9	
	baz=200,SNR=36						
S44A				S		23 08 27.9	
	baz=200						
SIUC	**Southern Illin**	2.03	21		Pn	23 08 01.2	+0.6
SIUC				IAmb_Lg		23 08 32.6	
	comp=Z,90nm,0.8s						
MGMO	**Mountain Grove**	2.19	308		Pn	23 08 04.2	+1.3
U40A	**Yellville**	2.28	285		Pn	23 08 05.0	+0.9
U40A	**Yellville**	2.28	285	P		23 08 04.2	
	baz=103,SNR=64						
U40A				P		23 08 04.2	
	baz=103,SNR=64						
U40A				S		23 08 35.4	
	baz=103						
U40A				S		23 08 35.4	
	baz=103						
CCAR	**Cane Creek**	2.33	216	Pn	Pn	23 08 04.8	+0.1
CCAR				IAmb_Lg		23 08 40.6	
	comp=Z,65nm,1.2s						
CCM	**Cathedral Cave**	2.42	338		Pn	23 08 06.6	+0.7
CCM	**Cathedral Cave**	2.42	338	P		23 08 06.5	
	baz=158,SNR=66						
X40A	**Basin Creek Fa**	2.59	240		Pn	23 08 09.1	+0.8
X40A	**Basin Creek Fa**	2.59	240	P		23 08 08.2	
	baz=58,SNR=17						
X40A				P		23 08 08.2	
	baz=58,SNR=17						
V48A	**Smith Brothers**	2.68	91	Pn	Pn	23 08 09.7	+0.2
V48A	**Smith Brothers**	2.68	91	P		23 08 09.9	
	baz=272						
SLM	**Saint Louis**	2.82	358	Pn	Pn	23 08 11.5	0.0
X48A	**Hartselle**	2.86	117		Pn	23 08 11.6	-0.4
X48A	**Hartselle**	2.86	117	P		23 08 12.5	
	baz=299,SNR=12						
R40A	**Maddies Statio**	3.02	326		Pn	23 08 14.9	+0.8
R40A				IAmb_Lg		23 09 01.6	
	comp=Z,34nm,1.0s						
R40A	**Maddies Statio**	3.02	326	P		23 08 14.8	
	baz=145,SNR=24						
W39A	**Magazine**	3.05	259		Pn	23 08 15.1	+0.4
W39A				IAmb_Lg		23 09 06.8	
	comp=Z,50nm,1.2s						
W39A	**Magazine**	3.05	259	P		23 08 15.1	
	baz=77						
CLTN	**Cedars of Leba**	3.08	84		Pn	23 08 14.9	-0.2
MIAR	**Mount Ida**	3.10	247		Pn	23 08 15.6	+0.3
MIAR	**Mount Ida**	3.10	247	P		23 08 15.6	
	baz=65,SNR=22						
Z47A	**Carrollton**	3.11	146	Pn	Pn	23 08 15.9	+0.6
HHAR	**Hobbs**	3.13	280	IAmb_Lg		23 09 11.6	
	comp=Z,40nm,0.7s						
S39A	**Bolivar**	3.19	307		Pn	23 08 17.4	+0.9
S39A	**Bolivar**	3.19	307	P		23 08 17.8	
	baz=125,SNR=12						
WLAR	**White Oak Lake**	3.25	230		Pn	23 08 17.6	+0.2
SWET	**Sewanee**	3.46	99		Pn	23 08 20.9	+0.5
SWET				IAmb_Lg		23 09 15.2	
	comp=Z,34nm,1.0s						
U38A	**Gravette**	3.51	282	IAmb_Lg		23 09 18.4	
	comp=Z,27nm,0.8s						
U38A	**Gravette**	3.51	282	P		23 08 21.1	
	baz=99,SNR=8.0						
U49A	**Red Boiling Sp**	3.58	77	P		23 08 22.0	
	baz=260						
Y49A	**Blount Mountai**	3.62	122	IAmb_Lg		23 09 26.1	
	comp=Z,38nm,1.2s						
Y49A	**Blount Mountai**	3.62	122	P		23 08 22.6	
	baz=304,SNR=31						
P43A	**Skaggs, Pawnee**	3.85	7	IAmb_Lg		23 09 31.9	
	comp=Z,41nm,1.0s						
WCI	**Wyandotte Cave**	3.90	51	IAmb_Lg		23 09 31.7	
	comp=Z,27nm,0.8s						
WCI	**Wyandotte Cave**	3.90	51	P		23 08 26.5	
	baz=233						
P40A	**Paris**	4.02	338	IAmb_Lg		23 09 32.8	
	comp=Z,39nm,0.8s						
BLO	**Bloomington**	4.41	39	IAmb_Lg		23 09 48.5	
	comp=Z,34nm,0.8s						
P46A	**Rosedale**	4.45	30	IAmb_Lg		23 09 54.5	
	comp=Z,47nm,0.8s						
X37A	**Clayton**	4.47	256	IAmb_Lg		23 09 50.4	
	comp=Z,20nm,0.8s						
P38A	**Dawn**	4.67	326	IAmb_Lg		23 09 56.0	
	comp=Z,28nm,0.8s						
P38A	**Dawn**	4.67	326	P		23 08 37.1	
	baz=144,SNR=22						
Z51A	**Franklin**	4.78	120	IAmb_Lg		23 09 57.3	
	comp=Z,35nm,0.8s						
N41A	**Harden Midland**	4.92	353	IAmb_Lg		23 10 13.6	
	comp=Z,24nm,0.9s						
OK030	**Cody Creek RV**	5.42	273	IAmb_Lg		23 10 29.9	
	comp=Z,34nm,0.8s						
OK031	**S. Brethren Rd**	5.46	273	IAmb_Lg		23 10 32.0	
	comp=Z,38nm,0.9s						
NATX	**Nacogdoches**	5.53	224	IAmb_Lg		23 10 23.9	
	comp=Z,16nm,1.2s						
FNO	**Franklin**	5.96	267	IAmb_Lg		23 10 43.5	
	comp=Z,34nm,0.9s						
KAN13	**South Haven SW**	6.06	284	IAmb_Lg		23 10 38.0	
	comp=Z,29nm,0.8s						
KS21	**Milan North St**	6.25	286	IAmb_Lg		23 10 54.0	
	comp=Z,28nm,0.9s						
KAN01	**Argonia South**	6.30	285	IAmb_Lg		23 10 47.5	
	comp=Z,24nm,0.7s						
R32A	**Long Quarter,**	7.34	293	IAmb_Lg		23 11 32.9	
	comp=Z,26nm,1.1s						

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*IDC **24** 23:31:17.6±1.8, 43.°46N×105.°54W, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.6/39, mbtmp3.6/9, ML3.4/4, Error ellipse: s-maj=46.3km s-min=7.6km az=151.0*

*NEIC **24** 23:31:21.5±1.1, 43.°79N±0.°05×105.°30W±0.°05, h0km±2km, ML3.3/58, Error ellipse: s-maj=9.5km s-min=4.0km az=331.0*

ISC 24 23:31:20.2±0.8**, 43.°80N**±0.°07×**105.°30W**±0.°07**, h0km, n58, σ1.s21**/55**, mb4.0**/5**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	0.97	70		Pb	23 31 40.0	-0.1
K22A	**Casper**	1.46	218	Pn	Pn	23 31 46.7	-1.2
K22A				IAML		23 32 09.4	
	comp=E,369nm,0.3s						
K22A				IAML		23 32 11.6	
	comp=N,554nm,0.6s						
PHWY	**Pilot Hill**	2.50	183		Pn	23 32 03.0	+0.6
PHWY				IAML		23 32 44.1	
	comp=N,116nm,0.8s						
RWWY	**Rawlins**	2.54	214	Pn	Pn	23 32 04.4	+1.5
RWWY				IAML		23 32 41.3	
	comp=N,216nm,1.0s						
LAO	**LASA Array**	2.96	348		Pn	23 32 09.5	+1.0
RLMT	**Red Lodge**	3.13	296		Pn	23 32 12.2	+1.2
RLMT				IAML		23 33 02.1	
	comp=N,63nm,0.5s						
RLMT				IAML		23 33 09.4	
	comp=N,91nm,0.6s						
BW06	**Boulder Array**	3.27	253		Pn	23 32 13.4	+0.4
BW06				IAML		23 33 03.7	
	comp=N,61nm,0.7s						
BW06				IAML		23 33 05.9	
	comp=N,54nm,0.5s						
PD31	**Pinedale Array**	3.27	253	Pn	Pn	23 32 13.7	+0.8
PDAR	**Pinedale Array**	3.27	253	Pn	Pn	23 32 08.9	-4.0
	comp=N,3.6nm,0.3s,baz=70,slow=18,SNR=57						
PDAR				Pg	Pb	23 32 14.2	-5.1
	comp=N,7.9nm,0.3s,baz=67,slow=16,SNR=83						
PDAR				Lg	Lg	23 32 54.5	
	comp=N,12nm,0.3s,baz=251,slow=18,SNR=1.8						
PDAR	**Pinedale Array**	3.27	253	Pn	Pn	23 32 13.8	+0.8
YNE	**Yellowstone No**	3.58	291		Pn	23 32 18.0	+0.8
YMP	**Mirror Lake Pl**	3.61	287		Pn	23 32 18.8	+1.1
GCMT	**Greycliff**	3.69	304		Pn	23 32 19.4	+0.8
OGNE	**Ogallala**	3.74	139		Pn	23 32 20.2	+0.9
LKWY	**Lake**	3.75	284		Pn	23 32 21.0	+1.5
LKWY				IAML		23 32 48.2	
	comp=N,32nm,0.6s						
LKWY				IAML		23 32 52.6	
	comp=N,71nm,0.6s						
H17A	**Grant Village**	3.84	281		Pn	23 32 22.6	+1.8
H17A				IAML		23 33 24.7	
	comp=N,48nm,0.6s						
LOHW	**Long Hollow**	3.85	269		Pn	23 32 22.2	+1.3
LOHW				IAML		23 33 20.5	
	comp=N,33nm,0.5s						
FLWY	**Flagg Ranch**	3.91	276		Pn	23 32 23.1	+1.5
FLWY				IAML		23 33 32.2	
	comp=N,57nm,1.5s						
FLWY				IAML		23 33 37.9	
	comp=N,38nm,1.5s						
MOOW	**Moose Ponds**	3.94	271		Pn	23 32 24.1	+2.0
YPP	**Pitchstone Pla**	4.00	279		Pn	23 32 24.3	+1.4
ISCO	**Idaho Springs**	4.00	183		Pn	23 32 24.2	+1.1
REDW	**Red Top Meadow**	4.05	266		Pn	23 32 25.2	+1.5
REDW				IAML		23 33 46.0	
	comp=N,47nm,1.5s						
O20A	**White River Ci**	4.27	212		Pn	23 32 27.9	+1.3
O20A				IAML		23 33 37.9	
	comp=E,54nm,0.6s						
E28A	**Huff**	4.28	48		Pn	23 32 28.7	+2.1
YHB	**Horse Butte**	4.34	285		Pn	23 32 28.5	+0.9
YHL	**Hebgen Lake**	4.35	286		Pn	23 32 28.6	+0.8
AHID	**Auburn Hatcher**	4.36	258		Pn	23 32 29.0	+1.2
AHID				IAML		23 33 41.8	
	comp=E,32nm,1.1s						
AHID				IAML		23 33 47.0	
	comp=N,49nm,0.8s						
DGMT	**Dagmar**	4.73	9		Pn	23 32 34.8	+2.0
SMCO	**Snowmass**	4.79	196	Pn	Pn	23 32 35.3	+1.4
SMCO				IAML		23 33 55.5	
	comp=N,25nm,1.1s						
SMCO				IAML		23 34 08.9	
	comp=N,22nm,1.7s						
HWUT	**Hardware Ranch**	5.11	247		Pn	23 32 39.3	+1.1
EGMT	**Eagleton**	5.24	325		Pn	23 32 40.7	+0.8
TCUT	**Toone Canyon**	5.25	241		Pn	23 32 40.8	+0.7
HRY	**Holter Researc**	5.45	305		Pn	23 32 44.1	+1.3
JLU	**Jordanelle**	5.57	237		Pn	23 32 45.5	+0.9
MDND	**Maddock**	5.68	43		Pn	23 32 45.9	+0.1
CTU	**Camp Tracy**	5.70	239		Pn	23 32 47.2	+0.9
BCYI	**Bear Canyon**	5.86	278	Pn	Pn	23 32 50.7	+2.2
PV22	**Blue Mesa, Par**	5.88	208		Pn	23 32 50.4	+1.6
PV23	**Carpenter Ridg**	6.03	209	Pn	Pn	23 32 51.5	+0.6
MPU	**Maple Canyon**	6.05	233		Pn	23 32 52.5	+1.4
SDCO	**Great Sand Dun**	6.05	181	Pn	Pn	23 32 52.4	+1.2
SRU	**San Rafael Swe**	6.11	222		Pn	23 32 52.1	+0.2
PV01	**Paradox Valley**	6.18	205		Pn	23 32 54.3	+1.5
ECSD	**EROS Data Cent**	6.29	88	Pn	Pn	23 32 55.4	+1.2
TMUT	**Trail Mountain**	6.31	227		Pn	23 32 56.0	+1.1
CBKS	**Cedar Bluff**	6.51	138	Pn	Pn	23 32 58.0	+0.7
ELK	**Elko**	7.97	251	Pn	Pn	23 33 18.4	+0.9
	comp=N,0.6nm,0.3s,baz=80,slow=10,SNR=7.0						
ANMO	**Albuquerque**	8.89	186	Pn	Pn	23 33 28.1	-1.9
	comp=N,0.1nm,0.3s,baz=296,slow=13,SNR=3.3						
I10CA	**LAC DU BONNET**	9.01	41	*i*		00 30 00.0	
	baz=220,slow=335,SNR=0.3						
ULM	**Lac du Bonnet**	9.11	42	Pn	Pn	23 33 32.6	-0.3
	comp=N,2.1nm,0.3s,baz=232,slow=11,SNR=25						
ULM				Pg		23 34 07.8	
	comp=N,1.5nm,0.3s,baz=222,slow=14,SNR=8.1						
ULM				Lg	Lg	23 36 08.9	
	comp=N,0.3nm,0.3s,baz=315,slow=20,SNR=3.6						
NEW	**Newport**	9.35	303	Lg	Lg	23 36 10.8	
	comp=N,0.1nm,0.3s,baz=252,slow=23,SNR=1.8						
NVAR	**Mina Array Bea**	11.17	246	Pn	Pn	23 33 59.2	-2.2
	comp=N,0.1nm,0.3s,baz=51,slow=12,SNR=1.8						
YKA	**Yellowknife Ar**	19.50	347	P	P	23 35 48.0	-0.6
	comp=N,0.1nm,0.3s,baz=160,slow=13,SNR=11						
ILAR	**Eielson Array**	31.21	327	P	P	23 37 40.5	-0.3
	comp=N,0.2nm,0.7s,baz=119,slow=8.4,SNR=2.0						
ARCES	**ARCESS Array B**	61.37	18	P	P	23 41 36.8	-0.5
	comp=N,3.7nm,1.0s,baz=328,slow=4.3,SNR=5.3						
ZALV	**Zalesovo Beam**	82.24	354	P	P	23 43 42.8	-0.1
	comp=N,0.6nm,0.6s,baz=20,slow=4.7,SNR=4.2						
SONM	**Songino Array**	84.57	339	P	P	23 43 55.5	+0.2
	comp=N,0.4nm,0.6s,baz=35,slow=5.4,SNR=4.2						
MKAR	**Makanchi Array**	89.54	355	P	P	23 44 19.3	0.0
	comp=N,0.6nm,0.6s,baz=13,slow=4.4,SNR=10.0						

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*GCG **25** 00:08:04.2±0.3, 14.°00N×91.°16W, h47km±11km, MD3.3*

SNET 25 00:07:59.0±1.2**, 13.°46N×90.°77W, h20km**±7km**, ML2.7, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	0.94	10	*e*S	Sb	00 08 29.1	+0.2
FUG	**Fuego 3**	0.98	356	*e*P	Pb	00 08 16.3	-1.1
NBG	**Las Nubes**	1.19	20	*e*P	Pb	00 08 22.5	+1.4
NBG				*e*S	Sn	00 08 36.8	+0.2
JAYA	**Jayaque - finc**	1.30	81	*e*P	Pn	00 08 21.5	-0.7
JAYA				*e*S	Sb	00 08 40.3	+1.0
JAYA				IAML		00 08 43.6	
	comp=Z,345nm,0.3s						
MTO3	**Montecristo**	1.66	56	*e*P	Pn	00 08 27.3	+0.1
MTO3				*e*S	Sb	00 08 50.0	+0.5
LFRS	**El Faro**	1.67	84	*e*P	Pn	00 08 28.0	+0.7
LFRS				*e*S	Sn	00 08 48.8	+0.6

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*NOU **25** 00:16:55.9, 35.°93S×179.°14E, h285km, MLv4.3, Off E. Coast of N. Island, N.Z.*

WEL 25 00:17:19.4±0.8**, 37°S**±7°×**17°8E**±°**, h165km**±7km**, M2.8**/20**, MLv2.8**/20**, Error ellipse: s-maj=0.0km s-min=0.0km az=120.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	0.90	169	P	Pn	00 17 44.7	-0.1
HAZ				S	Sn	00 18 04.3	-0.1
MXZ	**Matakaoa Point**	0.90	140	S	Sn	00 18 05.2	+0.7
PKGZ	**Pakihiroa**	1.09	158	P	Pn	00 17 46.5	+0.1
PKGZ				S	Sn	00 18 08.1	+0.8
RUGZ	**Raukumara Rang**	1.09	175	P	Pn	00 17 46.0	-0.5
RUGZ				S	Sn	00 18 06.3	-1.1
WMGZ	**Waiomatatini S**	1.16	145	S	Sn	00 18 09.4	+1.2
PUZ	**Puketiti**	1.31	156	P	Pn	00 17 48.8	+0.5
PUZ				S	Sn	00 18 10.7	0.0
TWGZ	**Tauwhareparae**	1.34	166	P	Pn	00 17 49.6	+0.9
TWGZ				S	Sn	00 18 12.4	+1.1
URZ	**Urewera**	1.43	195	P	Pn	00 17 49.6	+0.2
URZ				S	Sn	00 18 13.1	+0.5
MWZ	**Matawai**	1.46	181	P	Pn	00 17 50.0	+0.2
MWZ				S	Sn	00 18 13.6	+0.4
TKGZ	**Te Karaka**	1.58	172	P	Pn	00 17 51.3	+0.4
TKGZ				S	Sn	00 18 15.0	-0.3
RAGZ	**Rawiri**	1.62	184	P	Pn	00 17 52.0	+0.5
RAGZ				S	Sn	00 18 17.4	+1.1
CNGZ	**Carnagh Statio**	1.68	163	P	Pn	00 17 52.9	+0.9
RTZ	**Ruatahuna**	1.80	195	P	Pn	00 17 53.0	-0.3
RIGZ	**Rimuhau**	1.83	175	P	Pn	00 17 53.9	+0.2
RIGZ				S	Sn	00 18 20.3	0.0
SNGZ	**Shannon Statio**	1.91	185	P	Pn	00 17 54.6	+0.1
SNGZ				S	Sn	00 18 23.3	+1.5
MTHZ	**Maungataniwha**	2.06	196	P	Pn	00 17 55.8	-0.3
MTHZ				S	Sn	00 18 24.6	0.0
PRGZ	**Paritu Road**	2.06	173	P	Pn	00 17 54.9	-1.2
PRGZ				S	Sn	00 18 24.5	-0.2
RAHZ	**Arahi**	2.07	190	P	Pn	00 17 56.5	+0.2
RAHZ				S	Sn	00 18 25.7	+0.7
KNZ	**Kokohu**	2.15	178	P	Pn	00 17 56.9	-0.2
KNZ				S	Sn	00 18 25.7	-0.6
WHHZ	**Waihua**	2.21	187	P	Pn	00 17 58.0	+0.1
WHHZ				S	Sn	00 18 28.1	+0.3
MHGZ	**Mahia Peninsul**	2.29	173	P	Pn	00 17 58.7	0.0
NMHZ	**Naumai**	2.30	195	P	Pn	00 17 59.3	+0.3
NMHZ				S	Sn	00 18 31.1	+1.4
ARHZ	**Aropaoanui**	2.43	191	P	Pn	00 18 00.2	-0.2
ARHZ				S	Sn	00 18 32.6	+0.4
BKZ	**Black Stump Fm**	2.44	200	P	Pn	00 17 59.9	-0.7
BKZ				S	Sn	00 18 31.9	-0.7
MCHZ	**McNeill Hill**	2.66	195	P	Pn	00 18 02.8	-0.3
MCHZ				S	Sn	00 18 37.5	+0.4
KWHZ	**Kaweka Forest**	2.70	199	P	Pn	00 18 03.0	-0.8
HIZ	**Hauiti**	2.70	232	P	Pn	00 18 05.1	+1.4
OTVZ	**Oturere**	2.73	213	P	Pn	00 18 04.0	-0.3
MOVZ	**Moawhango**	2.91	209	P	Pn	00 18 05.1	-1.2
MOVZ				S	Sn	00 18 40.6	-2.1
KAHZ	**Kahuranaki**	2.96	190	P	Pn	00 18 06.1	-0.8
PXZ	**Pawanui**	3.20	190	P	Pn	00 18 08.4	-1.4
WPHZ	**Waipukurau**	3.31	195	P	Pn	00 18 09.8	-1.4
MHEZ	**Mangahewa**	3.38	228	P	Pn	00 18 13.8	+1.8
TSZ	**Takapari Road**	3.42	201	P	Pn	00 18 10.9	-1.7
PRHZ	**Porangahau**	3.46	192	P	Pn	00 18 11.6	-1.5
DVHZ	**Dannevirke**	3.59	197	P	Pn	00 18 12.7	-2.1
ANWZ	**Angora Road**	3.68	193	P	Pn	00 18 11.3	-4.6
POWZ	**Post Office Ro**	3.78	201	P	Pn	00 18 15.1	-2.1
PRWZ	**Pori Road**	3.88	198	P	Pn	00 18 16.6	-1.9
BFZ	**Birch Farm**	3.94	195	P	Pn	00 18 16.9	-2.3
BFZ				S	Sn	00 19 02.7	-3.3
MRZ	**Mangatainoka R**	4.09	202	P	Pn	00 18 18.4	-2.8
MRZ				S	Sn	00 19 05.3	-4.1
TIWZ	**Tintock**	4.11	198	P	Pn	00 18 19.2	-2.3
TIWZ				S	Sn	00 19 06.8	-3.2
HOWZ	**Holdsworth Sta**	4.32	201	P	Pn	00 18 21.2	-3.0
HOWZ				S	Sn	00 19 11.0	-3.9
OGWZ	**Otaki Gorge**	4.36	205	P	Pn	00 18 21.8	-2.9
OGWZ				S	Sn	00 19 11.3	-4.3
TMWZ	**Te Maipa**	4.42	197	P	Pn	00 18 22.7	-2.8
KIW	**Kapiti Island**	4.49	207	P	Pn	00 18 23.1	-3.2
KIW				S	Sn	00 19 14.2	-4.5
MTW	**Mount Morrison**	4.57	200	P	Pn	00 18 23.8	-3.6
MTW				S	Sn	00 19 16.7	-3.9
CAW	**Cannon Point**	4.65	204	P	Pn	00 18 24.9	-3.6
CAW				S	Sn	00 19 19.3	-3.3
TRWZ	**Traveller**	4.75	197	P	Pn	00 18 26.5	-3.2
PAWZ	**Paruwai Farm**	4.80	200	P	Pn	00 18 26.8	-3.6
MSWZ	**Moikau Station**	4.88	201	P	Pn	00 18 27.6	-3.9
BHW	**Baring Head**	4.99	204	P	Pn	00 18 28.8	-4.1
PLWZ	**Palliser**	5.02	200	P	Pn	00 18 29.3	-4.0
TCW	**Tory Channel**	5.03	210	P	Pn	00 18 29.7	-3.7
TUWZ	**Tuamarina**	5.35	211	P	Pn	00 18 33.7	-3.9
THZ	**Tophouse**	6.07	215	P	Pn	00 18 43.2	-4.0
KHZ	**Kahutara**	6.35	208	P	Pn	00 18 46.5	-4.3
TMZ	**Timaru**	9.01	212	P	Pn	00 19 20.9	-5.1

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*HEL **25** 00:25:41.2, 67.°87N×20.°08E, h0km, ML1.7, Explosion*

UPP 25 00:25:41.7±0.0**, 67.°82N×20.°20E, h0km, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.14	22	P	Pg	00 25 44.7	+0.3
KUA	**Kurravaara**	0.14	22	*i* P	Pg	00 25 44.7	+0.3
RATU	**Laukkuluspa**	0.23	270	P	Pg	00 25 46.3	+0.2
RATU	**Laukkuluspa**	0.23	270	*i* P	Pg	00 25 46.3	+0.2
KOVU	**Salmi**	0.40	358	P	Pg	00 25 49.5	+0.1
KOVU	**Salmi**	0.40	358	*i* P	Pg	00 25 49.5	+0.1
NIKU	**Nikkaluokta**	0.44	276	P	Pg	00 25 50.2	+0.1
NIKU	**Nikkaluokta**	0.44	276	*i* P	Pg	00 25 50.2	+0.1
LANU	**Lannavaara**	0.71	71	P	Pg	00 25 55.1	-0.2
LANU	**Lannavaara**	0.71	71	*e*P	Pg	00 25 54.9	-0.5
	baz=261						
LANU				*e*S	Sg	00 26 05.5	+1.0
DUNU	**Dundret**	0.72	168	P	Pg	00 25 55.3	-0.2
DUNU	**Dundret**	0.72	168	*i* P	Pg	00 25 55.3	-0.2
MASU	**Masugnsbyn**	0.78	117	P	Pg	00 25 56.5	-0.1
MASU	**Masugnsbyn**	0.78	117	*i* P	Pg	00 25 56.5	-0.1
SALU	**Saltoluokta**	0.79	236	P	Pg	00 25 56.5	-0.2
SALU	**Saltoluokta**	0.79	236	*i* P	Pg	00 25 56.5	-0.2
KIF	**Kilpisjarvi**	1.21	10	*e*P	Pg	00 26 04.1	-0.7
KIF	**Kilpisjarvi**	1.21	10	*e*PB	Pg	00 26 04.8	0.0
KIF				MSG		00 26 17.8	
	comp=Z,6.1nm,0.2s						
KIF				*e*SB	Sg	00 26 20.8	+0.4
PAJU	**Pajala**	1.38	124	P	Pg	00 26 07.0	-1.2
PAJU	**Pajala**	1.38	124	*e*P	Pg	00 26 06.8	-1.4
ERTU	**Ertsjaerv**	1.49	148	P	Pn	00 26 08.9	-0.8
ERTU	**Ertsjaerv**	1.49	148	*e*P	Pn	00 26 08.8	-0.9
ERTU				*e*SB	Sg	00 26 29.4	-0.1
TOF	**Tornio**	2.39	135	*e*PB	Pn	00 26 23.4	+1.4
TOF				MSG		00 26 53.8	
	comp=Z,3.0nm,0.2s						
TOF				*e*SB	Sb	00 26 55.0	-0.4
SGF	**Sodankyl**	2.45	96	*e*PG	Pb	00 26 25.6	-1.0
	baz=284						
SGF				*e*SG	Sb	00 26 57.9	+0.7
RNF	**Rovaniemi**	2.57	116	*e*PB	Pn	00 26 26.5	+1.9
RNF				*e*SB	Sb	00 26 59.9	-0.8
ARA0	**ARCESS Array S**	2.59	46	*e*P	Pn	00 26 24.9	+0.1
BURU	**Burvik**	3.29	171	*e*PB	Pb	00 26 39.4	-1.5
	baz=347						
OUL	**Oulu**	3.58	138	*e*PG	Pb	00 26 46.4	+0.7

UPP 25 00:25:43.9±0.1**, 67.°83N×20.°19E, h0km, ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.14	23	P	Pg	00 25 46.8	+0.2
KUA				S	Sg	00 25 48.9	+0.5
KUA	**Kurravaara**	0.14	23	*i* S	Pg	00 25 46.7	+0.1
KUA	**Kurravaara**	0.14	23	S	Pg	00 25 46.7	+0.1
RATU	**Laukkuluspa**	0.23	270	P	Pg	00 25 48.5	+0.3
KOVU	**Salmi**	0.40	358	P	Pg	00 25 51.6	+0.1
MASU	**Masugnsbyn**	0.79	117	P	Pg	00 25 58.7	-0.2
PAJU	**Pajala**	1.39	124	P	Pg	00 26 09.2	-1.2

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*NEIC **25** 00:30:09.7±1.1, 51.°79N±0.°07×178.°5E±0.°1, h110km±2km, Error ellipse: s-maj=11.6km s-min=7.4km az=216.0*

AEIC 25 00:30:10±0.7**, 51.°80N**±0.°09×**178.°5E**±0.°1**, h106km**±4km**, mb3.8**/11(NEIC)**, Error ellipse: s-maj=13.5km s-min=7.9km az=203.0, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSE	**Little Sitkin**	0.13	12		Pn	00 30 24.9	+0.2
LSSE					Sn	00 30 36.0	+0.2
LSSA	**Little Sitkin**	0.15	357		Pn	00 30 24.7	0.0
LSPA	**Little Sitkin**	0.16	11		Pn	00 30 24.9	+0.2
LSPA					Sn	00 30 36.1	+0.3
LSNW	**Little Sitkin**	0.17	358		Pn	00 30 25.1	+0.3
AMKA	**Amchitka**	0.65	131		Pn	00 30 27.7	+0.3
AMKA					Sn	00 30 40.7	+0.2
CESW	**Semis' Southwe**	0.65	81		Pn	00 30 27.3	-0.2
CEAP	**Semis' Anvil P**	0.68	73		Pn	00 30 27.9	+0.2

CERAA	**Semis' Rag'd T**	**0.73**	**81**		Pn	00 30 28.1	0.0
GAEA	**Gareloi East**	**1.69**	**90**		Pn	00 30 38.8	-0.1
TASE	**Tanaga Southea**	**2.13**	**88**		Pn	00 30 44.8	+0.3
TAFP	**Tanaga Falls P**	**2.17**	**86**		Pn	00 30 44.9	-0.1
TAFP					Sn	00 31 11.5	-0.2
KIMD	**Kanaga Island**	**2.63**	**89**		Pn	00 30 50.9	-0.1
SMY	**Shemya**	**2.87**	**291**		Pn	00 30 53.3	-0.8
ADK	**Adak**	**2.97**	**87**	Pn	Pn	00 30 55.4	-0.1
SPIA	**Saint Paul Isl**	**8.46**	**46**	Pn	Pn	00 32 10.9	+1.4
CNBA	**Chernabura Isl**	**13.42**	**68**	Pn	Pn	00 33 13.0	-2.9
OHAK	**Old Harbor**	**17.17**	**61**	P	P	00 34 00.9	-2.0
KDAK	**Kodiak Island**	**17.61**	**59**	P	P	00 34 07.3	-0.5
KDAK				IAmb	IAmb	00 34 10.4	
	comp=Z,12nm,1.1s						
CNPM	**China Poot**	**18.59**	**54**		P	00 34 19.0	+0.3
SUA	**Susitna One**	**19.29**	**48**		P	00 34 26.8	+0.5
SUA				IAmb	IAmb	00 34 43.8	
	comp=Z,4.4nm,1.0s						
IMAR	**Indian Mountai**	**19.92**	**34**	P	P	00 34 34.0	+1.0
SCM	**Sheep Creek Mo**	**20.96**	**48**	P	P	00 34 44.3	+0.1
SCM				IAmb	IAmb	00 34 49.6	
	comp=Z,8.6nm,1.1s						
DHY	**Denali Highway**	**21.25**	**45**	P	P	00 34 47.6	+0.1
DHY				IAmb	IAmb	00 34 50.0	
	comp=Z,3.3nm,1.0s						
MDM	**Murphy Dome**	**21.51**	**40**	P	P	00 34 50.7	+0.6
M24K	**Tolsona, Glenn**	**21.55**	**48**	P	P	00 34 51.3	+0.7
RIDG	**Independent Ri**	**22.53**	**44**	P	P	00 35 01.2	+0.5
BARN	**Barnard Glacie**	**23.53**	**51**	P	P	00 35 10.8	+0.4
BARN				IAmb	IAmb	00 35 16.0	
	comp=Z,6.8nm,1.1s						
CTGM	**Chitina Glacie**	**23.68**	**52**	P	P	00 35 12.1	+0.4
CTGM				IAmb	IAmb	00 35 19.5	
	comp=Z,4.6nm,1.0s						
EGAK	**Eagle**	**24.34**	**42**	P	P	00 35 17.4	-0.1
EGAK				IAmb	IAmb	00 35 18.8	
	comp=Z,3.1nm,1.1s						

BJI ***25*** *00:30:08.1±0.0, 7°.73S×128°.98E, h139$^{\text{km}}$, mB4.9/19, mb4.6/35*

IDC ***25*** *00:30:09.9±1.3, 7°.26S×129°.14E, h128$^{\text{km}}$±12$^{\text{km}}$, mb4.1/17, mb1 4.2/22, mb1mx4.1/35, mbtmp4.5/22, MS3.2/5, Ms1 3.2/5, ms1mx3.0/31, Error ellipse: s-maj=11.9km s-min=8.8km az=90.0*

NOU ***25*** *00:30:10.9, 7°.35S×129°.12E, h124$^{\text{km}}$, mb5.0, Banda Sea*

NEIC ***25*** *00:30:11.9±1.2, 7°.28S±0°.07×129°.09E±0°.07, h145$^{\text{km}}$±6$^{\text{km}}$, mb4.8/63, Error ellipse: s-maj=10.4km s-min=9.9km az=214.0*

DJA ***25*** *00:30:12.6±0.2, 7°S±2°×12°9E±°, h145$^{\text{km}}$±3$^{\text{km}}$, M5.0/60, mB5.5/35, mb5.1/60, MLv5.4/13, Mw(mB)4.9/35*

ISC 25 00:30:12.1±0.3**, 7°.35S**±0°.04×**129°.20E**±0°.04**, h150**$^{\text{km}}$**, n244,** σ**1**$^{\text{s}}$**.63**/253**, mb4.7**/79**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.17**	**107**		**Pn**	**00 30 50.1**	**+0.8**
SAUI	**Saumlaki**	**2.17**	**107**	P	**Pn**	**00 30 50.1**	**+0.8**
BNDI	**Bandanaira**	**2.89**	**14**	P	**Pn**	**00 30 59.5**	**+1.4**
MSAI	**Masohi**	**3.98**	**356**	P	**Pn**	**00 31 14.0**	**+1.8**
NLAI	**Namlea**	**4.59**	**333**	P	**Pn**	**00 31 22.3**	**+2.2**
FAKI	**Fak Fak**	**5.34**	**35**	Pn	**Pn**	**00 31 28.7**	**-1.5**
FAKI	**Fak Fak**	**5.34**	**35**	P	**Pn**	**00 31 28.6**	**-1.5**
	3.0nm12μm216nm,0.6s						
SOEI	**Soe**	**5.43**	**244**	Pn	**Pn**	**00 31 31.4**	**0.0**
SOEI	**Soe**	**5.43**	**244**	P	**Pn**	**00 31 31.4**	**0.0**
	12nm28μm3μm,0.7s						
MTN	**Manton Dam**	**5.78**	**161**	P	**Pn**	**00 31 35.6**	**-0.3**
	baz=5.8,SNR=240						
MTN				S	**Sn**	**00 32 36.2**	**-5.3**
	baz=5.8						
MTN	**Manton Dam**	**5.78**	**161**	Pn	**Pn**	**00 31 35.4**	**-0.5**
BATI	**Baumata**	**6.17**	**242**	P	**Pn**	**00 31 40.1**	**-1.0**
	753nm,0.3s,baz=125,slow=3.3,SNR=434						
BATI				S	**Sn**	**00 32 48.1**	**-2.6**
	183nm,0.3s,baz=264,slow=23,SNR=3.3						
BATI	**Baumata**	**6.17**	**242**	P	**Pn**	**00 31 40.8**	**-0.3**
	5.8nm18μm1μm,0.4s						
KDU	**Kakadu**	**6.21**	**149**	P	**Pn**	**00 31 40.9**	**-0.7**
	baz=6.3,SNR=718						
KDU				S	**Sn**	**00 32 46.6**	**-5.1**
	baz=6.3						
SIJI	**Sorong**	**6.76**	**18**	P	**Pn**	**00 31 47.0**	**-2.0**
	17nm,0.3s,baz=79,slow=6.3,SNR=84						
SIJI				S	**Sn**	**00 32 60.0**	**-4.9**
	25nm,0.3s,baz=258,slow=23,SNR=14						
SWI	**Sorong**	**6.76**	**18**	P	**Pn**	**00 31 47.6**	**-1.4**
	1.1nm3μm54nm,0.5s						
MMRI	**Maumere**	**7.01**	**259**	Pn	**Pn**	**00 31 52.0**	**-0.4**
MMRI	**Maumere**	**7.01**	**259**	P	**Pn**	**00 31 52.3**	**-0.1**
	2.4nm9μm707nm,0.6s						
EDFI	**Ende, Flores**	**7.57**	**259**	P	**Pn**	**00 31 59.5**	**-0.4**
	0.5nm1μm124nm,0.8s						
KNRA	**Kununurra**	**8.29**	**183**	P	**Pn**	**00 32 07.7**	**-1.7**
	baz=8.3,SNR=14						
KNRA				S	Sn	00 33 33.6	-8.1
	baz=8.3						
KNRA	**Kununurra**	**8.29**	**183**		**Pn**	**00 32 07.8**	**-1.6**
BSSI	**Bau Bau, Buton**	**8.73**	**277**	P	**Pn**	**00 32 16.2**	**+0.9**
	799nm90nm,1.0s						
LUWI	**Luwuk**	**8.96**	**314**	P	**Pn**	**00 32 21.0**	**+2.6**
	49nm,0.8s						
BASI	**Baing, Sumba**	**8.99**	**251**	P	**Pn**	**00 32 16.7**	**-2.0**
	7μm690nm,0.6s						
WSI	**Waingapu**	**9.10**	**255**	P	**Pn**	**00 32 17.8**	**-2.4**
	34μm2μm,0.5s						
BKSI	**Bulukumba**	**9.24**	**282**	P	**Pn**	**00 32 22.7**	**+0.6**
	2μm157nm,1.4s						
BNSI	**Bone**	**9.51**	**287**	P	**Pn**	**00 32 27.4**	**+1.8**
	1μm114nm,0.9s						
KAPI	**Kappang**	**9.68**	**283**	P	**Pn**	**00 32 25.5**	**-2.3**
	2.4nm,0.3s,baz=136,slow=7.4,SNR=17						
KAPI				LR	LR	00 36 09.4	
	comp=Z,83nm,18.3s,baz=91,slow=38						
KAPI	**Kappang**	**9.68**	**283**	Pn	**Pn**	**00 32 28.3**	**+0.4**
APSI	**Ampana**	**9.88**	**310**	P	**Pn**	**00 32 33.1**	**+2.5**
	396nm37nm,1.0s						
WBSI	**Waikabubak, Su**	**9.97**	**256**	P	**Pn**	**00 32 30.5**	**-1.3**
	10μm995nm,0.6s						
SPSI	**Sidrap Palu**	**9.97**	**289**	P	**Pn**	**00 32 32.7**	**+0.9**
	954nm56nm,0.8s						
TTSI	**Tana Toraja**	**10.27**	**294**	P	**Pn**	**00 32 38.8**	**+3.0**
	654nm56nm,0.9s						
MRSI	**Marisa**	**10.62**	**317**	P	**Pn**	**00 32 43.3**	**+2.9**
	2μm200nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.23**	**198**	P	**Pn**	**00 32 45.9**	**-2.6**
	6.3nm,0.3s,baz=24,slow=9.4,SNR=100						
FITZ				S	Sn	00 34 40.7	-12
	48nm,0.3s,baz=81,slow=17,SNR=12						
FITZ	**Fitzroy Crossi**	**11.23**	**198**		**Pn**	**00 32 45.6**	**-2.8**
PLAI	**Plampang**	**11.41**	**262**	P	**Pn**	**00 32 47.5**	**-3.2**
	6μm566nm,0.8s						
TOLI2	**Tolitoli**	**11.88**	**315**	Pn	**Pn**	**00 32 58.1**	**+1.2**
GENI	**Genyem**	**11.90**	**67**	P	**Pn**	**00 32 57.9**	**+0.7**
	120nm,0.7s						
MPSI	**Mapaga**	**12.02**	**309**	P	**Pn**	**00 33 00.9**	**+2.2**
	366nm26nm,1.1s						
TWSI	**Taliwang, Sumb**	**12.28**	**263**	P	**Pn**	**00 32 58.3**	**-3.7**
	1μm57nm,0.7s						
JAY	**Jayapura**	**12.42**	**68**	P	**Pn**	**00 33 03.7**	**-0.3**
	2.9nm,0.3s,baz=268,slow=8.4,SNR=10.0						
JAY				S	**Sn**	**00 35 20.3**	**-1.2**
	2.1nm,0.3s,baz=98,slow=21,SNR=2.3						
JAY	**Jayapura**	**12.42**	**68**	P	**Pn**	**00 33 05.9**	**+1.9**
	28nm,1.0s						
WB0	**Warramunga Arr**	**13.34**	**158**	Pn	**Pn**	**00 33 12.2**	**-3.5**
WRA	**Warramunga Arr**	**13.48**	**159**	P	**Pn**	**00 33 14.0**	**-3.5**
	10.0nm,0.3s,baz=333,slow=14,SNR=193						
WRA				S	Sn	00 35 34.3	-12
	29nm,0.3s,baz=332,slow=22,SNR=12						
WRA				LR	LR	00 38 48.9	
	comp=Z,102nm,18.4s,baz=325,slow=38						
KBKI	**Kotabaru**	**13.58**	**287**	P	**P**	**00 33 22.0**	**-0.7**
	2μm90nm,0.9s						
SRBI	**Singaraja**	**13.88**	**266**	P	**Pn**	**00 33 22.6**	**0.0**
	60nm,0.6s						
BBKI	**Banjar Baru**	**14.80**	**284**	P	**P**	**00 33 37.8**	**+1.5**
	3μm276nm,1.3s						
JAGI	**Jajag, Banyuwa**	**14.95**	**265**		**Pn**	**00 33 32.7**	**-3.3**
KMMI	**Kalianget**	**15.12**	**270**	P	**P**	**00 33 40.1**	**+0.4**
	100nm,0.6s						
COEN	**Coen**	**15.22**	**117**		**Pn**	**00 33 38.9**	**-0.5**
COEN				IAmb	IAmb	00 33 54.3	
	comp=Z,24nm,0.6s						
MTKI	**Muara Teweh, K**	**15.62**	**293**	P	**P**	**00 33 47.9**	**+2.6**
	comp=Z,7μmcomp=Z,155nm,0.9s						
QIS	**Mount Isa**	**16.55**	**144**	P	**P**	**00 33 54.8**	**-0.7**
	baz=17,SNR=40						
PSA00	**Pilbara Seismi**	**16.78**	**212**	P	**P**	**00 33 58.1**	**+0.1**
PSA00				IAmb	IAmb	00 34 01.1	
	comp=Z,52nm,0.7s						
PSA00	**Pilbara Seismi**	**16.78**	**212**	P	**P**	**00 33 57.9**	**-0.2**
PSA00				IAmb	IAmb	00 34 00.1	
	comp=Z,19nm,0.6s						
AS31	**Alice Springs**	**16.84**	**165**	P	**P**	**00 33 57.9**	**-0.9**
AS31				IAmb	IAmb	00 34 01.1	
	comp=Z,44nm,0.5s						
ASAR	**Alice Springs**	**16.84**	**165**	P	**P**	**00 33 57.8**	**-1.0**
	comp=Z,18nm,0.3s,baz=340,slow=9.5,SNR=430						
ASAR				S	S	00 36 53.6	-13
	comp=Z,3.4nm,0.3s,baz=338,slow=14,SNR=6.4						
ASAR	**Alice Springs**	**16.84**	**165**	P	**P**	**00 33 57.7**	**-1.1**
PWJI	**Pagerwojo**	**17.25**	**267**	P	**P**	**00 34 01.3**	**-2.0**
	comp=Z,103nm,0.6s						
PMG	**Port Moresby**	**17.89**	**98**	P	**P**	**00 34 10.6**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=270,slow=7.1,SNR=1.9						
PMG				S	**S**	**00 37 21.3**	**-6.8**
	comp=Z,1.4nm,0.3s,baz=17,slow=23,SNR=1.4						
PMG	**Port Moresby**	**17.89**	**98**	P	**Pn**	**00 34 12.7**	**+1.0**
PMG				IAmb	IAmb	00 34 31.5	
	comp=Z,36nm,0.8s						
PBKI	**Pangkalan Bun**	**18.06**	**284**	P	**Pn**	**00 34 14.4**	**+0.7**
	comp=Z,7μmcomp=Z,936nm,0.9s						
MTSU	**Mount Surprise**	**18.21**	**127**	P	**Pn**	**00 34 15.9**	**+0.3**
	baz=18,SNR=23						
UGM	**Wanagama**	**18.52**	**267**	P	**P**	**00 34 15.5**	**-1.7**
KKM	**Kota Kinabalu**	**18.57**	**315**	P	**P**	**00 34 17.9**	**+0.1**
KKM				IAmb	IAmb	00 34 27.6	
	comp=Z,71nm,1.0s						
MANU	**Manus Island**	**18.85**	**75**	P	**Pn**	**00 34 23.7**	**+0.7**
KSM	**Kuching**	**20.79**	**294**	P	**P**	**00 34 40.5**	**-1.2**
CTA	**Charters Tower**	**20.82**	**129**	P	**P**	**00 34 42.9**	**+0.9**
	comp=Z,31nm,0.8s,baz=308,slow=13,SNR=22						
CTA				S	**S**	**00 38 31.1**	**+4.9**
	comp=Z,5.0nm,0.6s,baz=51,slow=16,SNR=1.9						
CTAO	**Charters Tower**	**20.82**	**129**	P	**P**	**00 34 43.9**	**+1.8**
CTAO				IAmb	IAmb	00 34 46.9	
	comp=Z,36nm,0.8s						
GIRL	**Giralia**	**20.95**	**222**	P	**P**	**00 34 44.5**	**+1.2**
CISI	**Cisompet, Garu**	**21.20**	**268**	P	**P**	**00 34 43.2**	**-3.0**
MEEK	**Meekatharra**	**21.67**	**206**	P	**P**	**00 34 51.1**	**+0.1**
	baz=22,SNR=22						
FORT	**Forrest**	**23.34**	**182**	P	**P**	**00 35 07.7**	**+0.8**
	baz=23,SNR=7.0						
FORT	**Forrest**	**23.34**	**182**	P	**P**	**00 35 07.9**	**+1.0**
PPBI	**Pangkal Pinang**	**23.55**	**282**	P	**P**	**00 35 10.1**	**+1.0**
	comp=Z,10μmcomp=Z,18nm,0.6s						
QLP	**Quilpie**	**23.88**	**145**	P	**P**	**00 35 13.3**	**+1.3**
	baz=24,SNR=70						
KLSI		**24.48**	**275**	P	**P**	**00 35 19.5**	**+2.0**
	comp=Z,8.4nm,1.5s						
KMBL	**Kambalda**	**24.86**	**195**	P	**P**	**00 35 21.1**	**+0.3**
	baz=25,SNR=16						
MORW	**Morawa**	**24.91**	**208**	P	**P**	**00 35 23.7**	**+2.3**
	baz=25,SNR=4.5						
MORW	**Morawa**	**24.91**	**208**	P	**P**	**00 35 21.0**	**-0.3**
MORW				IAmb	IAmb	00 35 25.2	
	comp=Z,28nm,1.1s						
BLDU	**Ballidu**	**25.94**	**205**	P	**P**	**00 35 31.1**	**+0.5**
	baz=26,SNR=17						
BBOO	**Buckleboo**	**26.12**	**167**	P	**P**	**00 35 32.9**	**+0.7**
	baz=26,SNR=58						
BBOO	**Buckleboo**	**26.12**	**167**	P	**P**	**00 35 32.8**	**+0.5**
KLBR	**Kellerberrin**	**26.38**	**202**	P	**P**	**00 35 35.4**	**+0.9**
	baz=26,SNR=8.7						
RMQ	**Roma**	**26.61**	**138**	P	**P**	**00 35 38.2**	**+1.5**
	baz=27,SNR=24						
STKA	**Stephens Creek**	**27.00**	**156**	P	**P**	**00 35 41.1**	**+1.0**
	baz=27,SNR=31						
STKA	**Stephens Creek**	**27.00**	**156**	P	**P**	**00 35 40.6**	**+0.5**
	comp=Z,23nm,0.6s,baz=330,slow=8.5,SNR=48						
STKA				LR	LR	00 48 27.4	
	comp=Z,108nm,18.3s,baz=329,slow=40						
STKA	**Stephens Creek**	**27.00**	**156**	P	**P**	**00 35 41.0**	**+0.9**
STKA				IAmb	IAmb	00 35 42.1	
	comp=Z,13nm,1.2s						
MUN	**Mundaring**	**27.34**	**205**	P	**P**	**00 35 43.7**	**+0.7**
	baz=27,SNR=3.8						
HTT	**Hallett**	**27.47**	**162**	P	**P**	**00 35 45.3**	**+1.0**
	baz=28,SNR=9.1						
EIDS	**Eidsvold**	**27.52**	**133**	P	**P**	**00 35 45.7**	**+0.9**
NWAO	**Narrogin (SRO)**	**27.77**	**202**	P	**P**	**00 35 47.9**	**+0.9**
	baz=28,SNR=7.2						
NWAO	**Narrogin (SRO)**	**27.77**	**202**	P	**P**	**00 35 47.3**	**+0.4**
	comp=Z,4.9nm,0.4s,baz=43,slow=6.6,SNR=8.7						
NWAO	**Narrogin (SRO)**	**27.77**	**202**	P	**P**	**00 35 46.4**	**-0.5**
NWAO				IAmb	IAmb	00 35 48.4	
	comp=Z,26nm,1.1s						
NWAO	**Narrogin (SRO)**	**27.77**	**202**	P	**P**	**00 35 47.0**	**+0.1**
NWAO				IAmb	IAmb	00 35 55.3	
	comp=Z,21nm,1.2s						
SDSI	**Sungai Dareh**	**28.41**	**282**	P	**P**	**00 35 51.7**	**-1.1**
	comp=Z,13nm,1.0s						
CMSA	**Cobar Meteorol**	**28.57**	**150**	P	**P**	**00 35 55.6**	**+1.6**
	baz=29,SNR=56						
IPM	**Ipoh**	**30.47**	**292**	P	**P**	**00 36 10.3**	**-0.8**
IPM				IAmb	IAmb	00 36 12.8	
	comp=Z,14nm,0.8s						
HNR	**Honiara**	**30.48**	**96**	LR	LR	00 47 59.2	
	comp=Z,76nm,20.0s,baz=247,slow=35						
MNSI	**Mandailing Nat**	**30.63**	**284**	P	**P**	**00 36 12.4**	**-0.1**
	comp=Z,19nm,0.8s						
ARMA	**Armidale**	**31.13**	**140**	P	**P**	**00 36 18.7**	**+1.9**
	baz=31,SNR=16						
ARMA	**Armidale**	**31.13**	**140**	P	**P**	**00 36 18.9**	**+2.1**
ARMA				IAmb	IAmb	00 36 20.4	
	comp=Z,14nm,0.7s						
KULM	**Kulim**	**31.13**	**293**	P	**P**	**00 36 15.1**	**-1.7**
KULM				IAmb	IAmb	00 36 18.0	
	comp=Z,13nm,0.8s						
ARPS	**Mount Arapiles**	**31.47**	**160**	P	**P**	**00 36 21.4**	**+1.9**
	baz=32,SNR=58						
RPSI	**Rantau Prapat**	**31.82**	**287**	P	**P**	**00 36 21.5**	**-1.4**
RPSI				IAmb	IAmb	00 36 24.6	
	comp=Z,20nm,0.8s						
PSI	**Prapat**	**31.85**	**287**	P	**P**	**00 36 21.4**	**-1.9**
	comp=Z,19nm,0.9s,baz=179,slow=1.7,SNR=16						
YNG	**Young**	**32.14**	**149**	P	**P**	**00 36 27.5**	**+2.0**
	baz=32,SNR=12						
UBPT	**Khong Chiam**	**32.53**	**314**	P	**P**	**00 36 28.9**	**-0.1**
	comp=Z,812nmcomp=Z,8.4nm,0.8s						
UBPT	**Khong Chiam**	**32.53**	**314**	P	**P**	**00 36 28.3**	**-0.8**
UBPT				IAmb	IAmb	00 36 29.6	
	comp=Z,11nm,0.8s						
GSI	**Gunungsitoli**	**32.70**	**284**	P	**P**	**00 36 29.7**	**-0.9**
GSI				IAmb	IAmb	00 36 36.8	
	comp=Z,21nm,0.9s						
TRTT	**Trang**	**33.06**	**297**	P	**P**	**00 36 34.5**	**+0.7**
	comp=Z,636nmcomp=Z,23nm,1.1s						
CAN	**Canberra**	**33.25**	**150**	P	**P**	**00 36 37.6**	**+2.4**
TOO	**Toolangi**	**33.53**	**156**	P	**P**	**00 36 40.3**	**+2.8**
	baz=34,SNR=37						
TOO	**Toolangi**	**33.53**	**156**	P	**P**	**00 36 39.9**	**+2.3**
LHMI	**Lhok Sumawe**	**34.52**	**290**	P	**P**	**00 36 45.7**	**-0.7**
LHMI	**Lhok Sumawe**	**34.52**	**290**	P	**P**	**00 36 46.0**	**-0.4**
	comp=Z,89nm,0.8s						
CHAI	**Chaiyaphum**	**35.49**	**311**	P	**P**	**00 36 54.8**	**+0.2**
	comp=Z,26nm,0.7s						
PHET	**Kaeng Krachan**	**35.61**	**304**	P	**P**	**00 36 57.4**	**+1.8**
	comp=Z,686nmcomp=Z,28nm,0.8s						
NONG	**Nongkai**	**36.04**	**315**	P	**P**	**00 36 59.5**	**+0.2**
	comp=Z,16nm,1.0s						
LHI	**Lord Howe Isla**	**36.80**	**135**	P	**P**	**00 37 06.7**	**+1.1**
UTHA	**Uthaitani**	**37.24**	**308**	P	**P**	**00 37 10.0**	**+0.5**
	comp=Z,22nm,0.8s						
PHIT	**Phitsanulok**	**37.47**	**311**	P	**P**	**00 37 13.0**	**+1.6**
	comp=Z,54nm,0.7s						
UTTA	**Uttaradit**	**37.71**	**312**	P	**P**	**00 37 13.7**	**+0.4**
	comp=Z,250nmcomp=Z,34nm,0.8s						
SANVU	**Saraoutou**	**38.06**	**106**	P	**P**	**00 37 17.9**	**+1.5**
SANVU	**Saraoutou**	**38.06**	**106**	P	**P**	**00 37 18.3**	**+1.9**
SUKH	**Sukhothai**	**38.24**	**310**	P	**P**	**00 37 18.8**	**+1.0**
	comp=Z,27nm,0.8s						
NOUC	**Port Laguerre**	**38.63**	**116**	P	**P**	**00 37 22.3**	**+1.2**
DZM	**Mont Dzumac**	**38.75**	**116**	P	**P**	**00 37 23.6**	**+1.4**
DZM				IAmb	IAmb	00 37 25.6	
	comp=Z,13nm,0.6s						
DZM	**Mont Dzumac**	**38.75**	**116**	P	**P**	**00 37 23.8**	**+1.6**
LAMP	**Lampang**	**38.88**	**312**	P	**P**	**00 37 24.1**	**+0.9**
	comp=Z,35nm,0.8s						
YATNC	**Mamie plateau,**	**39.14**	**116**	P	**P**	**00 37 27.5**	**+2.1**
OUENC	**Ouen Island, N**	**39.20**	**117**	P	**P**	**00 37 27.7**	**+1.9**
CM04	**Chiang Mai Arr**	**39.29**	**311**	P	**P**	**00 37 27.2**	**+0.6**
	comp=Z,82nmcomp=Z,13nm,0.8s						
CM09	**Chiang Mai Arr**	**39.31**	**311**	P	**P**	**00 37 27.0**	**+0.2**
	comp=Z,11nm,0.8s						
CM05	**Chiang Mai Arr**	**39.32**	**311**	P	**P**	**00 37 27.4**	**+0.6**
	comp=Z,57nmcomp=Z,9.2nm,0.8s						
CM01	**Chiang Mai Arr**	**39.32**	**311**	P	**P**	**00 37 27.9**	**+1.1**
	comp=Z,11nm,0.8s						
CM35	**Chiang Mai Arr**	**39.33**	**312**	P	**P**	**00 37 27.0**	**+0.1**
CM02	**Chiang Mai Arr**	**39.34**	**311**	P	**P**	**00 37 27.9**	**+0.9**
	comp=Z,76nmcomp=Z,10nm,0.8s						
CM31	**Chiang Mai Arr**	**39.35**	**311**	P	**P**	**00 37 31.3**	**+4.2**
	comp=Z,321nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.35**	**311**	P	**P**	**00 37 26.1**	**-1.1**
	comp=Z,5.1nm,0.6s,baz=141,slow=7.1,SNR=27						
CMAR				ScP	**ScP**	**00 43 09.7**	**+2.3**
	comp=Z,0.6nm,0.3s,baz=166,slow=4.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**39.35**	**311**	P	**P**	**00 37 27.3**	**+0.2**
CM13	**Chiang Mai Arr**	**39.36**	**311**	P	**P**	**00 37 27.8**	**+0.6**
	comp=Z,69nmcomp=Z,8.8nm,0.8s						
CM15	**Chiang Mai Arr**	**39.36**	**311**	P	**P**	**00 37 28.1**	**+0.9**
	comp=Z,12nm,0.8s						
CM34	**Chiang Mai Arr**	**39.44**	**312**	P	**P**	**00 37 28.0**	**+0.1**
CMMT	**Chiang Mai**	**39.57**	**311**	P	**P**	**00 37 28.2**	**-0.8**
CHTO	**Chiang Mai**	**39.57**	**311**	P	**P**	**00 37 28.6**	**-0.4**
CHTO				IAmb	IAmb	00 37 30.3	
	comp=Z,14nm,0.7s						
NJ2	**Nanjing**	**40.40**	**346**	*e*P	**P**	**00 37 36.8**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
JMN	**Monobe**	**41.09**	**6**	P	**P**	**00 37 40.6**	**-0.6**
JMN				IAmb	IAmb	00 37 41.2	
	comp=Z,27nm,1.2s						
JWT	**Wachi**	**42.80**	**7**	P	**P**	**00 37 54.5**	**-0.5**
JWT				IAmb	IAmb	00 37 55.5	
	comp=Z,18nm,0.9s						
MJAR	**Matsushiro Arr**	**44.47**	**10**	P	**P**	**00 38 06.7**	**-1.6**
	comp=Z,3.3nm,0.7s,baz=194,slow=10.0,SNR=7.1						
KSRS	**Korea Array**	**44.58**	**359**	P	**P**	**00 38 09.3**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=173,slow=8.9,SNR=11						
KSRS				LR	LR	00 57 21.8	
	comp=Z,16nm,19.0s,baz=155,slow=37						
CD2	**Chengdu**	**45.18**	**329**	P	**P**	**00 38 13.1**	**-1.0**
CD2				pmax	pmax		
	comp=Z,40nm,0.4s						
XAN	**Xi'an**	**45.43**	**336**	P	**P**	**00 38 15.3**	**-0.7**
XAN				pP	pP	00 38 43.9	-4.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				LR	LR		
	comp=Z,190nm,16.3s						
XAN				LR	LR		
	comp=Z,220nm,15.2s						
XAN				LR	LR		
	comp=Z,220nm,18.4s						
BJI	**Beijing**	**48.66**	**347**	P	**P**	**00 38 45.5**	**+4.6**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	**49.34**	**333**	*e*P	**P**	**00 38 49.8**	**+3.4**
LZH				pP	pP	00 39 17.8	-1.3
LZH				sP	sP	00 39 34.5	-0.7
LZH				PP	**PP**	**00 40 39.6**	**-2.4**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,58nm,4.9s						
FOZ	**Fox Glacier**	**50.59**	**142**	P	**P**	**00 38 57.2**	**+1.7**
FOZ				IAmb	IAmb	00 38 58.1	
	comp=Z,19nm,0.8s						
HHC	**Hu-ho-hao-te**	**50.63**	**343**	*e*P	**P**	**00 38 57.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,8.5s						
WHZ	**Wether Hill Ro**	**50.86**	**146**	P	**P**	**00 38 59.1**	**+1.6**
LBZ	**Lake Benmore**	**51.29**	**143**	P	**P**	**00 39 02.4**	**+1.6**
USRK	**Ussuriysk Ar.**	**51.37**	**3**	P	**P**	**00 39 00.7**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=189,slow=8.6,SNR=4.2						
USRK	**Ussuriysk Ar.**	**51.37**	**3**	P	**P**	**00 39 01.1**	**-0.1**
RPZ	**Rata Peaks**	**51.45**	**142**	P	**P**	**00 39 04.0**	**+2.0**
LSA	**Lhasa**	**51.91**	**317**	P	**P**	**00 39 06.4**	**+0.3**
LSA	**Lhasa**	**51.91**	**317**	P	**P**	**00 39 06.2**	**+0.1**
LSA				IAmb	IAmb	00 39 07.7	
	comp=Z,18nm,0.6s						
TUWZ	**Tuamarina**	**52.16**	**138**	P	**P**	**00 39 08.0**	**+0.7**
WTVZ	**West Tongariro**	**52.26**	**135**	P	**P**	**00 39 11.4**	**+3.1**
OTVZ	**Oturere**	**52.33**	**135**	P	**P**	**00 39 11.1**	**+2.2**
KHZ	**Kahutara**	**52.36**	**139**	P	**P**	**00 39 10.2**	**+1.5**
KHZ				IAmb	IAmb	00 39 10.8	
	comp=Z,22nm,0.7s						
MOVZ	**Moawhango**	**52.50**	**135**	P	**P**	**00 39 11.6**	**+1.6**
ASAJ	**Asahikawa**	**52.64**	**12**	P	**P**	**00 39 10.1**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=261,slow=3.8,SNR=4.1						
BHHZ	**Black Hill Sta**	**52.75**	**135**	P	**P**	**00 39 13.2**	**+1.5**
ODAN	**Odare**	**52.89**	**312**	*e*P	**P**	**00 39 12.5**	**-0.7**
	comp=Z,21nm,0.5s						
BKZ	**Black Stump Fm**	**52.92**	**134**	P	**P**	**00 39 14.0**	**+1.0**
BKZ				IAmb	IAmb	00 39 15.4	
	comp=Z,12nm,1.0s						
BKZ	**Black Stump Fm**	**52.92**	**134**	P	**P**	**00 39 14.2**	**+1.2**
TAPN	**Taplejung**	**52.93**	**312**	*e*P	**P**	**00 39 12.9**	**-0.6**
	comp=Z,20nm,0.4s						
URZ	**Urewera**	**53.01**	**133**	P	**P**	**00 39 14.0**	**+0.4**
	comp=Z,3.4nm,0.5s,baz=284,slow=7.8,SNR=5.7						
KRHZ	**Kereru**	**53.03**	**135**	P	**P**	**00 39 15.1**	**+1.3**
MTHZ	**Maungataniwha**	**53.04**	**134**	P	**P**	**00 39 15.4**	**+1.5**
NMHZ	**Naumai**	**53.12**	**134**	P	**P**	**00 39 16.7**	**+2.2**
RAHZ	**Arahi**	**53.24**	**134**	P	**P**	**00 39 17.0**	**+1.6**
HAZ	**Te Kaha**	**53.30**	**132**	P	**P**	**00 39 17.2**	**+1.4**
TRWZ	**Traveller**	**53.31**	**137**	P	**P**	**00 39 16.7**	**+1.0**
MWZ	**Matawai**	**53.34**	**133**	P	**P**	**00 39 16.9**	**+0.9**
BFZ	**Birch Farm**	**53.38**	**136**	P	**P**	**00 39 16.9**	**+0.7**
RAMN	**Ramite**	**53.53**	**311**	*e*P	**P**	**00 39 17.6**	**-0.2**
	comp=Z,46nm,0.6s						
PUZ	**Puketiti**	**53.77**	**132**	P	**P**	**00 39 20.9**	**+1.7**
GTA	**Gaotai**	**53.90**	**332**	*e*P	**P**	**00 39 19.9**	**-0.3**
GTA				pP	pwP	00 39 56.8	-1.3
GTA				sP	sP	00 40 10.9	+1.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,25nm,6.5s						
GTA				LR	LR		
	comp=Z,130nm,16.8s						
GTA				LR	LR		
	comp=Z,150nm,20.6s						
GTA				LR	LR		
	comp=Z,120nm,18.2s						
GUN	**Gumba**	**54.59**	**312**	*e*P	**P**	**00 39 24.9**	**-0.7**
	comp=Z,23nm,0.4s						
PKI	**Pulchoki**	**54.75**	**311**	*e*P	**P**	**00 39 25.8**	**-1.0**
	comp=Z,14nm,0.5s						
PKIN	**Phulchoki**	**54.76**	**311**	*e*P	**P**	**00 39 25.7**	**-1.1**
	comp=Z,18nm,0.5s						
KKN	**Kakani**	**54.97**	**311**	*e*P	**P**	**00 39 27.6**	**-0.6**
	comp=Z,15nm,0.6s						
DMN	**Daman**	**55.00**	**311**	*e*P	**P**	**00 39 28.0**	**-0.5**
HYB	**Hyderabad**	**55.76**	**297**	*i* P	**P**	**00 39 33.0**	**-0.8**
KLR	**Kul'dur**	**56.38**	**2**	P	**P**	**00 39 37.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=224,slow=6.2,SNR=4.2						
DANN	**Dangsing**	**56.40**	**311**	*e*P	**P**	**00 39 37.7**	**-0.8**
	comp=Z,14nm,0.5s						
SONM	**Songino Array**	**58.52**	**342**	P	**P**	**00 39 52.3**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=153,slow=7.3,SNR=4.9						
SONM	**Songino Array**	**58.52**	**342**	P	**P**	**00 39 52.6**	**-0.2**
WMQ	**Urumqi**	**63.26**	**328**	*e*P	**P**	**00 40 26.1**	**+1.3**
WMQ				pP	PcP	00 41 01.4	+0.7
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.1s						
PEA0B	**Petropavlovsk-**	**64.90**	**19**	P	**P**	**00 40 35.6**	**+0.4**
PETK	**Petropavlovsk-**	**64.90**	**19**	P	**P**	**00 40 35.2**	**0.0**
	comp=Z,3.4nm,0.6s,baz=134,slow=1.6,SNR=8.4						
PETK	**Petropavlovsk-**	**64.90**	**19**	P	**P**	**00 40 35.9**	**+0.6**
NIL	**Nilore**	**66.84**	**311**	P	**P**	**00 40 47.6**	**-0.5**
NIL				IAmb	IAmb	00 40 48.4	
	comp=Z,13nm,0.6s						
SHLS	**Shalkode**	**67.51**	**323**	*e*P	**P**	**00 40 51.2**	**-1.1**
	comp=Z,3.9nm,1.0s,baz=323						
KSH	**Kashi**	**67.74**	**318**	P	**P**	**00 40 55.3**	**+1.5**
KSH				PP	**PP**	**00 43 30.8**	**+5.6**
KSH				S	**S**	**00 49 40.3**	**+0.6**

KSH				pmax	pmax		
	comp=Z,16nm,0.6s						
KSH				pmax	pmax		
	comp=Z,480nm,6.8s						
KSH				LR	LR		
	comp=Z,390nm,8.2s						
KSH				LR	LR		
	comp=Z,430nm,7.0s						
KSH				LR	LR		
	comp=Z,370nm,7.7s						
MK31	Makanchi Array	68.08	327	P	P	00 40 55.5	-0.1
MKAR	Makanchi Array	68.08	327	P	P	00 40 55.5	-0.2
	comp=Z,2.3nm,0.4s,baz=118,slow=7.5,SNR=41						
MKAR	Makanchi Array	68.08	327	P	P	00 40 55.4	-0.3
KPKS	Kokpek	68.15	323	*e*P	P	00 40 56.9	+0.6
	comp=Z,4.6nm,1.1s,baz=323						
MAKZ	Makanchi	68.26	327	P	P	00 40 56.6	-0.1
YAK	Yakutsk	69.17	0	P	P	00 41 01.8	-0.2
YAK				IAmb	IAmb	00 41 03.9	
	comp=Z,12nm,0.6s						
KUU	Kurty	69.81	322	*e*P	P	00 41 06.1	-0.2
	comp=Z,6.3nm,0.7s,baz=322						
AAK	Ala-Archa	70.30	320	P	P	00 41 09.7	+0.2
AAK				IAmb	IAmb	00 41 17.9	
	comp=Z,11nm,1.4s						
KBL	Kabul	70.38	311	P	P	00 41 09.8	-0.5
SEM	Semipalatinsk	71.39	329	*e*P	P	00 41 14.4	-1.6
	baz=329						
ZAA0	Zalesovo Array	71.55	334	P	P	00 41 15.7	-0.8
ZALV	Zalesovo Beam	71.55	334	P	P	00 41 15.7	-0.9
	comp=Z,2.2nm,0.4s,baz=134,slow=5.7,SNR=14						
BTLS	Baital	71.81	322	*e*P	P	00 41 18.4	0.0
	baz=322						
VNDA	Vanda	72.20	173	P	P	00 41 20.7	+0.5
	comp=Z,4.8nm,0.6s,baz=322,slow=7.0,SNR=20						
VNDA	Vanda	72.20	173	P	P	00 41 20.9	+0.8
KURK	Kurchatov	72.40	329	P	P	00 41 21.4	-0.4
IUG	Iuzhnay	72.96	318	*e*P	P	00 41 25.6	+0.2
	baz=318						
KK31	Karatay Array	73.08	319	P	P	00 41 25.7	-0.2
KKAR	Karatay Array	73.08	319	P	P	00 41 26.0	0.0
KKAR	Karatay Array	73.08	319	P	P	00 41 25.5	-0.5
SBA	Scott Base	73.10	172	P	P	00 41 27.1	+1.6
SBA				IAmb	IAmb	00 41 31.7	
	comp=Z,32nm,1.3s						
HRA	Herat	75.54	308	P	P	00 41 40.6	-0.1
UOSS	Minazif	77.88	297	P	P	00 41 53.2	-0.5
BRVK	Borovoye	78.01	328	P	P	00 41 53.5	-0.3
TIXI	Tiksi	78.83	360	P	P	00 41 57.9	0.0
ABKAR	Akbulak array	82.29	322	P	P	00 42 16.0	-0.8
ABKAR	Akbulak array	82.29	322	P	P	00 42 15.9	-0.9
ABKAR				IAmb	IAmb	00 42 18.5	
	comp=Z,3.9nm,0.9s						
QSPA	South Pole Qui	82.63	180	P	P	00 42 19.1	+0.6
QSPA				IAmb	IAmb	00 42 19.8	
	comp=Z,11nm,0.7s						
RAYN	Ar Rayn	87.16	294	P	P	00 42 41.5	-0.4
RAYN				IAmb	IAmb	00 42 42.5	
	comp=Z,5.7nm,0.8s						
ILAR	Eielson Array	94.00	25	P	P	00 43 11.3	-1.4
	comp=Z,0.4nm,0.7s,baz=236,slow=4.9,SNR=6.6						
BELA	Belgrano 2	94.43	183	P	P	00 43 14.9	+0.3
SNAA	Sanae	95.14	194	P	P	00 43 19.1	+1.1
VNA2	Neumayer--Watz	96.72	193	P	P	00 43 27.8	+2.7
	baz=132,slow=5.4						
ARCES	ARCESS Array B	101.63	340	P	Pdif	00 43 46.4	-0.6
	comp=Z,1.4nm,0.7s,baz=73,slow=4.2,SNR=7.9						
CLL	Collm	111.95	323	*e*(PKiKP)		00 48 33.0	
TORD	Torodi Ar. Bea	128.10	281	PKP	PKPdf	00 49 01.6	+0.1
	comp=Z,1.0nm,0.6s,baz=37,slow=2.4,SNR=4.2						
TORD	Torodi Ar. Bea	128.10	281		PKPdf	00 49 01.8	+0.3
PLCA	Paso Flores	128.82	161	PKP	PKiKP	00 49 03.5	+0.5
	comp=Z,1.5nm,0.7s,baz=265,slow=4.7,SNR=3.8						
PLCA	Paso Flores	128.82	161		PKiKP	00 49 03.2	+0.2
CPUP	Villa Florida	145.93	170	PKPbc	PKPab	00 49 35.9	+0.4
	comp=Z,8.4nm,0.8s,baz=181,slow=1.7,SNR=23						

ASRS 25 00:39:48.6±0.2**, 51°N**±2°×**98°.1E**±0°.9**, h5**^{km}**, MLh3.6**/8**,**
smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID
smi:org.gfz-potsdam.de/geofon/iasp91 confirmed,
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	Kungurtug, Tuv	0.77	211	Pg	Pb	00 40 04.4	-0.1
KNGR				Sg	Sg	00 40 14.4	+1.0
TDJR	Todzha	1.70	313	Pg	Pg	00 40 27.2	+6.1
TDJR				Sg	Sg	00 40 52.1	+8.9
MOY	Mondy	1.83	76	Pg	Pg	00 40 26.4	+2.7
MOY				Sg	Sg	00 40 51.5	+4.1
KZLR	Kyzyl	2.34	282	Pg	Pg	00 40 36.2	+2.7
KZLR				Sg	Sg	00 41 07.3	+3.4
ARDR	Aradan	3.20	296	Pg	Pg	00 40 51.1	+1.3
ARDR				Sg	Sg	00 41 36.9	+5.6
ZAK	Zakamensk	3.38	103	Pg	Pg	00 40 51.7	-1.6
ZAK				Sg	Sg	00 41 36.7	-0.4
TLY	Talaya	3.47	81	Sg	Sg	00 41 40.9	+1.0
BLRR	Bol’shaya Rech	3.94	299	Pg	Pg	00 41 05.5	+1.5
BLRR				Sg	Sg	00 41 57.5	+2.5
KTRR	Kuturchin	4.37	329	Pg	Pg	00 41 13.9	+1.6
KTRR				Sg	Sg	00 42 15.6	+6.7
DJOS	Djoyskaya Sosn	4.43	293	Pg	Pg	00 41 15.6	+2.1
DJOS				Sg	Sg	00 42 13.5	+2.5
CERR	Cheremushki	4.44	294	Pg	Pg	00 41 15.8	+2.1
CERR				Sg	Sg	00 42 12.8	+1.6
TBTR	Tabat	4.87	293	Pg	Pg	00 41 23.7	+1.9
TBTR				Sg	Sg	00 42 26.7	+1.9
TEL	Teeli	5.00	270	Pg	Pg	00 41 26.5	+2.1
TEL				Sg	Sg	00 42 32.6	+3.4
VEH	Verkhnyaya Baz	5.20	296	Pg	Pg	00 41 30.7	+2.6
VEH				Sg	Sg	00 42 37.7	+2.2
TRG	Tyrgan	5.29	70	Pg	Pg	00 41 31.4	+1.6
TRG				Sg	Sg	00 42 40.1	+1.9
SHRR	Shira	5.81	307	Sg	Sg	00 42 57.0	+2.0
CUR	Chagan-Uzun	6.33	263	Sg	Sg	00 43 16.2	+4.4
ULGR	Ulagan, Altay	6.47	268	Sg	Sg	00 43 21.8	+5.7
TASR	Tashtagol	6.51	287	Sg	Sg	00 43 20.8	+3.3

TIR ***25*** *00:46:57.0, 41°.72N×19°.63E, h46^{km}, Ml2.5*
PDG ***25*** *00:46:57.9±0.2, 41°.76N×19°.57E, h31^{km}, ML2.3/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO ***25*** *00:46:57.4±0.4, 41°.79N×19°.54E, h25^{km}±3^{km}, ML2.1/10*
SKO ***25*** *00:46:58.7, 41°.81N×19°.75E, h26^{km}*
RHSSO ***25*** *00:47:00.0±0.9, 41°.74N×19°.02E, h12^{km}±3^{km}, ML2.3/4*
ISC 25 00:46:55.8±1.1**, 41°.67N**±0°.03×**19°.44E**±0°.02**, h17**^{km}±9^{km}**,**
n60, σ1^{s}19/108**, 9C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.33	334	⇑ *i*Pg	Pn	00 47 06.5	+0.7
ULC	Ulcinj	0.33	334	⇑ *i*Pg	Pn	00 47 06.0	+0.2
ULC				*i* Sg	Sn	00 47 12.8	+0.7
TIR	Tirane	0.46	135	*e*Pg	Pn	00 47 07.5	0.0
TIR				*e*Sg	Sn	00 47 16.2	+0.9
TIR	Tirane	0.46	135	P	Pn	00 47 07.8	+0.2
	baz=154						
TIR				S	Sn	00 47 15.6	+0.3
	baz=154						
TIR				AMP			
	comp=N,1.2nm,0.4s,baz=154						
TIR	Tirane	0.46	135	⇓ *i*Pg	Pn	00 47 07.8	+0.2
PUK	Puka	0.50	42	P	Pb	00 47 07.1	+0.9
	baz=31						
PUK				S	Sb	00 47 14.5	+1.3
	baz=31						
PUK				AMP			
	comp=N,3.3nm,0.2s,baz=31						
DRME	Dracevica, Mon	0.55	340	⇑ *i*Pg	Pn	00 47 09.0	+0.1
DRME				*e*Sg	Sn	00 47 17.4	-0.2
DRME	Dracevica, Mon	0.55	340	*e*Pg	Pn	00 47 08.9	+0.1
DRME				*i* Sg	Sn	00 47 18.0	+0.4
BUM	Brajici-Budva	0.75	327	⇑ *i*Pg	Pn	00 47 12.5	+0.9
BUM				*i* Sg	Sn	00 47 24.3	+1.7
PHP	Peshkopia	0.75	89	P	Pg	00 47 10.8	+0.2
	baz=93						
PHP				S	Sg	00 47 20.4	-0.1
	baz=93						
PHP				AMP			
	comp=N,0.9nm,0.4s,baz=93						
PDG	Podgorica	0.77	350	*e*Pg	Pg	00 47 10.6	-0.3
PDG				*e*Sg	Sb	00 47 21.7	+0.8
PDG	Podgorica	0.77	350	⇑ *i*Pg	Pn	00 47 12.0	+0.2
PDG				*e*Sg	Sn	00 47 23.3	+0.3
PDG	Podgorica	0.77	350	⇓ *i*Pg	Pn	00 47 12.2	+0.3
PDG				*i* Sg	Sn	00 47 23.6	+0.6
TTG	Podgorica	0.77	350	⇑ *i*Pg	Pn	00 47 12.1	+0.2
TTG				*i* Sg	Sn	00 47 23.6	+0.6
BCI	Bajram Curri	0.84	34	P	Pg	00 47 11.9	-0.2
	baz=26						
BCI				S	Sg	00 47 23.4	+0.2
	baz=26						
BCI				AMP			
	comp=E,0.4nm,0.4s,baz=26						
CEME	Cevo	0.96	336	⇑ *i*Pg	Pn	00 47 15.5	+1.0
CEME				*i* Sg	Sn	00 47 29.8	+2.1
PVY	Plav	1.00	23	⇓ *i*Pg	Pb	00 47 14.9	+0.2
PVY				*i* Sg	Sb	00 47 28.6	+1.0
HCY	Herceg Novi	1.05	318	*e*Pg	Pb	00 47 15.1	-0.3
HCY	Herceg Novi	1.05	318	⇓ *i*Pg	Pn	00 47 17.1	+1.4
HCY				*i* Sg	Sn	00 47 33.0	+3.1
NKME	Niksic	1.15	342	⇓ *i*Pg	Pg	00 47 18.1	0.0
NKME				*i* Sg	Sn	00 47 34.0	+1.4
OHR	Ohrid	1.17	118	⇓ *i*Pg	Pb	00 47 18.1	+0.6
OHR				*i* Sg	Sb	00 47 33.4	+1.0
OHR				*e*Lg	Lg	00 47 35.0	
	comp=N,36nm,0.5s						
KOME	Kolasin	1.18	3	*e*Pg	Pn	00 47 17.9	+0.3
KOME				*i* Sg	Sb	00 47 33.9	+1.1
BEY	Berane	1.25	16	*i* Pg	Pn	00 47 19.4	+0.9
IVA	Berane	1.25	16	⇓ *i*Pg	Pn	00 47 18.6	+0.1
IVA				*e*Sg	Sb	00 47 35.1	+0.4
TREB	Trebinje	1.32	323	*e*Pg	Pb	00 47 20.0	-0.1
TREB				*e*Sg	Sn	00 47 37.4	+0.8
TREB	Trebinje	1.32	323	*e*Pg	Pn	00 47 19.8	+0.4
TREB				*e*Sg	Sb	00 47 34.7	-2.1
DBRK	Dubrovnik	1.38	316	*e*Pg	Pn	00 47 20.1	-0.2
DBRK				Sg	Sn	00 47 37.7	-0.5
BRY	Bratogost	1.40	332	*e*Pg	Pb	00 47 21.5	0.0
BRY				*e*Sg	Sn	00 47 38.7	-0.1
BRY	Bratogost	1.40	332	⇑ *i*Pg	Pb	00 47 21.7	+0.2
BRY				*i* Sg	Sg	00 47 40.7	-0.3
SKO	Skopje	1.52	78	*i* Pg	Pn	00 47 22.1	-0.2
SKO				*i* Sg	Sn	00 47 38.3	-3.4
SKO				*e*Lg	Lg	00 47 42.9	
	comp=E,1.8nm,0.3s						
UPM	Unac-Piva	1.58	346	*e*Pg	Pb	00 47 25.5	+0.8
UPM				*e*Sg	Sg	00 47 46.2	-0.6
UPM	Unac-Piva	1.58	346	⇑ *i*Pg	Pn	00 47 23.9	+0.7
UPM				*i* Sg	Sn	00 47 44.4	+1.1
SJES	Sjenica	1.64	14	*e*Pg	Pn	00 47 25.0	+1.1
SJES				*e*Sg	Sn	00 47 45.3	+0.7
PLE	Pljevlja	1.66	359	*e*Pn	Pn	00 47 24.6	+0.4
PLE				*i* Sn	Sn	00 47 45.6	+0.5
GJIK	Gjilan	1.68	61	⇓ *i*Pg	Pn	00 47 24.3	-0.1
FNA	Florina	1.71	121	P	Pn	00 47 25.5	+0.7
	baz=124						
FNA				S	Sn	00 47 47.0	+0.7
	baz=124						
FNA	Florina	1.71	121	*i* Pn	Pn	00 47 25.5	+0.7
LSK	Leskovik	1.76	150	P	Pb	00 47 27.5	-0.1
	baz=154						
STON	Ston	1.76	313	*e*Pn	Pb	00 47 26.8	-0.8
STON				*e*Sn	Sn	00 47 47.9	+0.4
STON	Ston	1.76	313	*e*Pn	Pn	00 47 25.2	-0.2
STON				Sn	Sn	00 47 45.8	-1.6
STON				Sg	Sg	00 47 50.7	-1.9
STON	Ston	1.76	313	*e*Pg	Pb	00 47 27.1	-0.5
STON				*e*Sg	Sn	00 47 47.2	-0.3
SRN	Sarande	1.84	166	P	Pb	00 47 29.1	+0.1
	baz=171						
RUDO	Rudo	1.94	359	*e*Pn	Pb	00 47 32.1	+1.3
RUDO				*e*Sn	Sb	00 47 56.4	+1.7
IVAS	Ivanjica	1.97	15	*e*Pn	Pn	00 47 27.8	-0.7
IVAS				*e*Sn	Sn	00 47 48.6	-4.3
PRVS	Prvonek	2.13	66	*e*Pn	Pn	00 47 30.9	+0.3
PRVS				*e*Sn	Sn	00 47 54.0	-2.7
GRG	Griva	2.34	107	*i* Pn	Pn	00 47 33.3	-0.3
VAY	Valandovo	2.38	97	*i* Pn	Pn	00 47 33.5	-0.4
GRUS	Gruza	2.41	23	*e*Pn	Pn	00 47 34.0	-0.4
MAKA	Makarska	2.41	313	*e*Pn	Pn	00 47 35.2	+0.8
MAKA				Sn	Sn	00 48 02.1	-1.4
HAPS	Han Pijesak,Bl	2.44	352	*e*Sn	Sn	00 48 02.3	-2.1
DIVS	Divibare	2.46	9	*e*Pn	Pn	00 47 35.8	+0.6
DIVS				*e*Sn	Sn	00 48 01.5	-3.3
RICI	Ricice	2.49	318	*e*Pn	Pn	00 47 36.1	+0.5
RICI				Sn	Sn	00 48 03.3	-2.3
KNT	Kendrikon	2.65	100	*i* Pn	Pn	00 47 37.3	-0.4
HVAR	Hvar	2.68	305	*e*Pn	Pn	00 47 38.8	+0.7
HVAR				Sn	Sn	00 48 09.9	-0.1
KIJV	Kijevo	3.23	317	*e*Pn	Pn	00 47 46.8	+1.2
KIJV				Sn	Sn	00 48 21.3	-2.4
ZIRJ	Zirje	3.43	307	*e*Pn	Pn	00 47 49.6	+1.2
ZIRJ				Sn	Sn	00 48 27.9	-0.7
MORI	Morici	3.51	310	*e*Pn	Pn	00 47 50.7	+1.1
MORI				Sn	Sn	00 48 29.4	-1.3
UDBI	Udbina	3.92	318	*e*Pn	Pn	00 47 55.7	+0.4
UDBI				Sn	Sn	00 48 38.4	-2.5
DUGI	Dugi Otok	3.97	307	*e*Pn	Pn	00 47 56.9	+1.1
DUGI				Sn	Sn	00 48 41.7	-0.2
NVLJ	Novalja	4.42	312	*e*Pn	Pn	00 48 02.5	+0.5
NVLJ				Sn	Sn	00 48 50.3	-2.7

ARE ***25*** *01:40:03±2.9, 10°.24S±0°.10×75°.3W±0°.1, h55^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=212.0*
NEIC ***25*** *01:40:09.6±1.4, 10°.31S±0°.07×75°.37W±0°.08, h34^{km}±3^{km}, mb4.7/111, ML4.5(ARE), Error ellipse: s-maj=12.0km s-min=9.6km az=75.0*
IDC ***25*** *01:40:10.0±1.8, 10°.34S×75°.37W, h41^{km}±19^{km}, mb4.2/12, mb1 4.4/19, mb1mx4.2/39, mbtmp4.4/19, ML3.7/6, MS3.8/5, Ms1 3.8/5, ms1mx3.4/20, Error ellipse: s-maj=14.1km s-min=13.3km az=137.0*
VAO ***25*** *01:40:16.4±0.8, 10°.11S×74°.89W, h66^{km}±6^{km}, mb4.7*
ISC 25 01:40:11.1±0.4**, 10°.40S**±0°.05×**75°.34W**±0°.06**, h50**^{km}**, n236,**
σ1^{s}39/220**, mb4.7**/54**, MS3.8**/5**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.16	223	P	Pn	01 40 42.1	-2.6
	104nm,0.3s,baz=33,slow=18,SNR=169						
NNA				S	Sn	01 41 10.8	+0.6
	161nm,0.3s,baz=238,slow=14,SNR=6.9						
NNA	Nana	2.16	223	Pn	Pn	01 40 42.6	-2.1
CZSB	Cruzeiro do Su	3.72	45	*e*P	Pn	01 41 05.1	-1.0
ATAH	Atahualpa	4.43	317	P	Pn	01 41 15.3	-0.9
	72nm,0.3s,baz=142,slow=3.4,SNR=255						
ATAH				S	Sn	01 42 13.2	+6.4
	18nm,0.3s,baz=80,slow=23,SNR=3.7						
ETMB	Extrema	9.01	87	*e*P	Pn	01 42 18.0	-0.7
PB16	IPOC Station P	9.70	145	Pn	Pn	01 42 29.8	+1.1
MNMC	Minye Minye	10.30	148		Pn	01 42 37.5	+0.9
PSGCX	Pisagua	10.44	152	Pn	Pn	01 42 38.6	+0.4
PTLC	Puerto Leguiza	10.52	3	*e*P	Pn	01 42 31.5	-7.8
OTAV	Otavalo	11.01	344	Pn	Pn	01 42 44.6	-1.9
OTAV	Otavalo	11.01	344	*e*P	Pn	01 42 45.6	-0.9
OTAV	Otavalo	11.01	344	*e*P	Pn	01 42 48.7	+2.2
PB08	IPOC Station P	11.37	149	Pn	Pn	01 42 51.2	-0.1
GCUF	Volcan Galeras	11.72	350	*e*P	Pn	01 42 53.1	-3.1
SAML	Samuel	12.07	84		Pn	01 42 58.2	-2.4
PB07	IPOC Station P	12.42	156	Pn	Pn	01 43 05.2	-0.2
GARC	Garzon, Huila	12.51	359	*e*P	Pn	01 43 03.2	-3.5
MACC	Macarena, Meta	12.55	7	*e*P	Pn	01 43 03.5	-3.6
PCON	Cinco Dias	12.69	355	*e*P	Pn	01 43 06.3	-3.2
PB04	IPOC Station P	12.87	158	Pn	Pn	01 43 10.0	-1.5
BETC	Betania	13.00	360	*e*P	Pn	01 43 11.0	-2.2
MARP	Paez Belalcaza	13.17	357	*e*P	Pn	01 43 13.2	-2.7
LVC	Limon Verde	13.61	154	P	Pn	01 43 21.4	-0.4
	0.2nm,0.3s,baz=278,slow=15,SNR=2.9						
LVC	Limon Verde	13.61	154		Pn	01 43 22.1	+0.2
LVC	Limon Verde	13.61	154	*e*P	P	01 43 27.9	-1.6
ORTC	Ortega, Tolima	14.22	0	*e*P	Pn	01 43 26.8	-3.0
YOTC	Yotoco, Valle	14.33	356	*e*P	Pn	01 43 30.8	-0.5
ANIL	Santa Ana	14.79	360	*e*P	P	01 43 44.2	+1.6
SIV	San Ignacio	14.96	113	P	Pn	01 43 37.5	-2.1
	1.2nm,0.3s,baz=318,slow=12,SNR=37						
CHIC	Chingaza	15.02	6	*e*P	Pn	01 43 38.6	-2.1
VILB	Vilhena	15.04	101	*e*P	Pn	01 43 38.9	-1.8
ROSC	El Rosal	15.18	4	P	Pn	01 43 41.6	-1.1
	1.0nm,0.3s,baz=118,slow=23,SNR=2.0						
ROSC	El Rosal	15.18	4	Pn	Pn	01 43 40.7	-2.1
ROSC	El Rosal	15.18	4	*e*P	Pn	01 43 43.8	+1.0
RREF	El Recreo	15.20	360	*e*P	P	01 43 49.8	+2.3
PLMC	San Jos del P	15.23	356	*e*P	Pn	01 43 41.6	-1.6
GUY2C	Guyana, Caldas	15.52	360	*e*P	Pn	01 43 46.5	-0.8
GO02	Mina Guanaco	15.66	160	Pn	Pn	01 43 48.7	-0.2
NORC	Norcasia	15.87	2	*e*P	Pn	01 43 50.3	-1.0
SPBC	San Pablo de B	16.00	5	*e*P	Pn	01 43 52.6	-0.5
CBOC	Ciudad Bolivar	16.17	358	*e*P	P	01 43 57.3	-0.5
MACA	Manacapuru-AM	16.23	65	*e*P	Pn	01 43 52.1	-3.7
RUSC	La Rusia	16.34	8	*e*P	Pn	01 43 56.8	-1.0
HELC	Santa Helena	16.48	359	*e*P	Pn	01 43 59.8	+0.3
PTBC	PUERTO BERRIO,	16.85	3	*e*P	Pn	01 44 04.2	+0.5
BARC	Barichara	17.02	7	*e*P	P	01 44 08.1	+0.9
TAMC	Tame, Arauca	17.10	12	*e*P	Pn	01 44 05.5	-1.3
DBBC	Dabeiba	17.33	357	*e*P	P	01 44 10.9	+0.4
AC02	Maricunga	17.37	161	Pn	Pn	01 44 09.9	-0.6
GO03	Copiap	17.77	165		Pn	01 44 15.4	+0.5
ZARC	Zaragoza, Cauc	17.78	2	*e*P	Pn	01 44 13.2	-2.0
PAMC	Pamplona, Colo	17.82	9	*e*P	P	01 44 16.8	+0.5
UREC	San Jos de Ur	18.04	359	*e*P	Pn	01 44 18.1	-0.2
PTGA	Pitinga	18.05	59	P	Pn	01 44 16.4	-2.1
	1.4nm,0.3s,baz=235,slow=13,SNR=15						
OCAC	Ocana	18.63	6	*e*P	P	01 44 24.1	-0.8
MOTC	Monteria, Cord	19.06	359	*e*P	P	01 44 29.4	0.0
SMLC	San Martn de	19.12	4	*e*P	P	01 44 29.0	-1.1
SDV	Santo Domingo	19.73	14	P	P	01 44 35.7	-1.2
	1.3nm,0.3s,baz=240,slow=10.0,SNR=10						
SDV	Santo Domingo	19.73	14	P	P	01 44 36.3	-0.6
SDV	Santo Domingo	19.73	14	*e*P	P	01 44 36.9	0.0
SDV	Santo Domingo	19.73	14	*e*P	P	01 44 36.5	-0.4
NPGB	Novo Progresso	20.03	82	*e*P	P	01 44 39.1	-1.0
ITTB	Itaituba	20.34	74	*e*P	P	01 44 41.9	-1.5
CO03	El Pedregal	20.79	169	P	P	01 44 49.3	+1.0
CO02	Combarbal	21.09	170	P	P	01 44 53.8	+2.3
CO02				IAmb	IAmb	01 45 06.0	
	comp=Z,29nm,1.1s						
PP1B	Ponte de Pedra	21.09	112	*e*P	P	01 44 53.3	+1.8
ZON	Zonda	21.93	165	P	P	01 45 02.9	+2.5
CPUP	Villa Florida	23.26	135	P	P	01 45 13.8	-0.5
	comp=Z,3.7nm,0.7s,baz=326,slow=10,SNR=13						
CPUP				LR	LR	01 56 53.1	
	comp=Z,158nm,18.9s,baz=336,slow=43						
CPUP	Villa Florida	23.26	135	P	P	01 45 14.9	+0.6
ARAG	Araguaiana, MT	23.51	105	*e*P	P	01 45 17.1	+0.2
SNDB	Serra Nova Dou	23.64	96	*e*P	P	01 45 18.6	+0.5
TRCB	Terra Rica	24.96	122	*e*P	P	01 45 32.7	+2.6
MCPB	Macapa, AP	25.21	68	*e*P	P	01 45 32.3	-0.1
PRPB	Parauapebas	25.60	83	*e*P	P	01 45 35.9	-0.1
PCMB	Pacaembu	25.65	119	*e*P	P	01 45 38.0	+1.6
ITRB	Iturama	25.80	114	*e*P	P	01 45 38.1	+0.3
PTGB	Pitanga	26.30	126	*e*P	P	01 45 42.7	+0.4
BDFB	Brasilia	27.11	104	P	P	01 45 49.8	0.0
	comp=Z,3.4nm,0.7s,baz=258,slow=9.2,SNR=3.0						
BDFB				LR	LR	01 57 41.1	
	comp=Z,239nm,18.6s,baz=287,slow=39						
IPMB	Ipameri, GO	27.33	109	*e*P	P	01 45 51.4	-0.3
ITAB	Concordia	27.54	131	*e*P	P	01 45 56.6	+3.3
BB19B	Bebedouro	27.86	116	*e*P	P	01 45 58.3	+2.0
SJG	San Juan	29.75	18	P	P	01 46 14.0	+1.1
	comp=Z,7.0nm,0.5s,baz=158,slow=5.4,SNR=1.6						
VAO	Valinhos	29.86	118	*e*P	P	01 46 15.3	+1.2
SDBA	SAO DESIDERIO	29.90	97	*e*P	P	01 46 15.2	+0.7
CBYP	Canovanas	29.99	18	P	P	01 46 12.6	-2.6
JANB	Januaria	30.60	102	*e*P	P	01 46 20.5	-0.3
GDU01	Guandu, BA	35.11	99	*e*P	P	01 47 00.6	+0.5
ZAIG	Zacatecas	42.41	321	P	P	01 48 00.3	-1.1
LRAL	Lakeview Retre	44.60	346	P	P	01 48 17.6	-0.9
	baz=164						
342A	Flagon Creek P	44.62	339	P	P	01 48 18.1	-0.6
833A	Chaparral WMA,	44.98	329	P	P	01 48 22.2	+0.5
	baz=146						
NATX	Nacogdoches	45.82	337	P	P	01 48 28.6	+0.4
	baz=153						
NATX	Nacogdoches	45.82	337	P	P	01 48 27.8	-0.5
WLAR	White Oak Lake	46.99	340	P	P	01 48 36.8	-0.5
WHTX	Lake Whitney,	47.17	334	P	P	01 48 38.9	+0.1
	baz=150						
WHTX	Lake Whitney,	47.17	334	P	P	01 48 37.8	-1.0
T57A	Hurt	47.29	356	P	P	01 48 39.2	-0.4
	baz=175						
MIAR	Mount Ida	47.93	340	P	P	01 48 43.8	-0.9
	baz=156						
MIAR	Mount Ida	47.93	340	P	P	01 48 43.5	-1.1
MIAR				IAmb	IAmb	01 48 45.1	
	comp=Z,8.1nm,0.9s						
S57A	Dark Hollow, R	48.03	356	P	P	01 48 45.3	0.0
	baz=175						
TX32	Lajitas Array	48.03	326	P	P	01 48 44.7	-0.9
TX32				IAmb	IAmb	01 48 45.6	
	comp=Z,4.5nm,0.7s						
TXAR	Lajitas Array	48.03	326	P	P	01 48 45.0	-0.7
	comp=Z,5.2nm,0.7s,baz=149,slow=8.9,SNR=53						
TXAR				LR	LR	02 07 11.4	
	comp=Z,89nm,18.6s,baz=0.0,slow=34						
TXAR	Lajitas Array	48.03	326	P	P	01 48 44.9	-0.8
TX31	Lajitas Ar. Si	48.03	326	P	P	01 48 45.1	-0.6
W41B	Gary Mavity, V	48.07	341	P	P	01 48 44.6	-1.1
	baz=158						
WHAR	Wooly Hollow	48.19	341	P	P	01 48 45.7	-0.9
WHAR				IAmb	IAmb	01 48 45.8	
	comp=Z,7.9nm,0.7s						
Z35A	Perchaven, San	48.24	335	P	P	01 48 47.3	+0.3
W39A	Magazine	48.59	340	P	P	01 48 49.3	-0.4
	baz=156						
X37A	Clayton	48.61	338	P	P	01 48 49.4	-0.6
X37A				IAmb	IAmb	01 48 52.5	
	comp=Z,16nm,1.2s						
ABTX	Abilene, Hawle	48.67	332	P	P	01 48 50.1	-0.4
	baz=148,SNR=8.7						
ABTX	Abilene, Hawle	48.67	332	P	P	01 48 50.0	-0.4
Q53A	Leroy	49.34	354	P	P	01 48 54.9	-0.6
	baz=172						
U40A	Yellville	49.35	341	P	P	01 48 54.4	-1.1
	baz=157						
U40A	Yellville	49.35	341	P	P	01 48 54.5	-1.0
U40A				IAmb	IAmb	01 48 54.7	
	comp=Z,8.2nm,0.8s						
T42A	Van Buren	49.45	343	P	P	01 48 53.9	-2.4
T42A				IAmb	IAmb	01 48 55.0	
	comp=Z,6.6nm,0.8s						
U38A	Gravette	49.92	340	IAmb	IAmb	01 48 59.7	
	comp=Z,7.6nm,0.7s						
TUL1	Leonard	49.94	338	P	P	01 48 59.4	-0.7
	baz=153						
TUL1	Leonard	49.94	338	P	P	01 48 59.6	-0.5
FNO	Franklin	49.98	336	P	P	01 48 59.8	-0.6
OK029	Liberty Lake	50.47	337	P	P	01 49 03.2	-0.9
S39A	Bolivar	50.72	342	P	P	01 49 04.7	-1.2
MNTX	Cornudas Mount	50.79	327	P	P	01 49 05.8	-0.8
	baz=141,SNR=6.9						
MNTX	Cornudas Mount	50.79	327	P	P	01 49 05.8	-0.8
MSTX	Muleshoe	51.25	331	P	P	01 49 08.9	-1.2
	baz=145						
MSTX	Muleshoe	51.25	331	P	P	01 49 09.3	-0.8
MSTX				IAmb	IAmb	01 49 10.8	
	comp=Z,5.7nm,0.8s						
SFIN	Lafayette	51.68	349	P	P	01 49 10.6	-2.5
	baz=165						
HDIL	Hopedale	52.32	347	P	P	01 49 15.9	-1.9
	baz=163						
121A	Cookes Peak, D	52.75	325	P	P	01 49 21.5	+0.1
	baz=139,SNR=6.4						
121A	Cookes Peak, D	52.75	325	P	P	01 49 21.8	+0.4
121A				IAmb	IAmb	01 49 22.4	
	comp=Z,10nm,0.9s						
319A	Douglas	52.76	323	P	P	01 49 21.4	0.0
319A				IAmb	IAmb	01 49 22.2	
	comp=Z,16nm,1.1s						
KSU1	Kansas State U	53.08	339	P	P	01 49 22.8	-0.7
KSU1				IAmb	IAmb	01 49 24.8	
	comp=Z,10.0nm,0.8s						
ANMO	Albuquerque	53.87	328	P	P	01 49 29.0	-0.5
	baz=141						
ANMO	Albuquerque	53.87	328	P	P	01 49 28.6	-1.0
ANMO				IAmb	IAmb	01 49 30.1	
	comp=Z,9.5nm,1.3s						
CBKS	Cedar Bluff	53.99	336	P	P	01 49 29.6	-0.6
	baz=150						
CBKS	Cedar Bluff	53.99	336	P	P	01 49 29.7	-0.5
TUC	Tucson	54.32	323	P	P	01 49 32.3	-0.5
	baz=136						
TUC	Tucson	54.32	323	P	P	01 49 31.6	-1.1
TUC				IAmb	IAmb	01 49 33.2	
	comp=Z,5.8nm,1.0s						
T25A	Trinidad	54.60	332	P	P	01 49 34.6	-0.3

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          baz=144,SNR=6.4
214A  Organ Pipe Nat    55.30 321  P      P       01 49 39.9 +0.1
          baz=133,SNR=5.6
214A  Organ Pipe Nat    55.30 321  P      P       01 49 40.0 +0.1
214A                               IAmb   IAmb    01 49 40.7
          comp=Z,12nm,1.1s
L34A  Svendsen Farm,    55.58 341  P      P       01 49 40.1  -1.5
SDCO  Great Sand Dun    55.60 331  P      P       01 49 41.7  -0.5
          baz=143,SNR=11
SDCO  Great Sand Dun    55.60 331  P      P       01 49 41.8  -0.4
SDCO                               IAmb   IAmb    01 49 42.7
          comp=Z,6.6nm,0.9s
W18A  Petrified Fore    55.75 326  P      P       01 49 43.3 +0.1
          baz=138
WUAZ  Wupatki           56.96 325  P      P       01 49 51.8 +0.1
          baz=136,SNR=8.1
WUAZ  Wupatki           56.96 325  P      P       01 49 52.0 +0.2
WUAZ                               IAmb   IAmb    01 49 53.2
          comp=Z,10nm,0.8s
ECSD  EROS Data Cent    57.25 342  P      P       01 49 52.0  -1.5
          baz=155,SNR=5.1
ECSD  EROS Data Cent    57.25 342  P      P       01 49 52.2  -1.3
ECSD                               IAmb   IAmb    01 49 52.7
          comp=Z,9.1nm,0.8s
SMCO  Snowmass          57.44 331  P      P       01 49 54.6  -0.8
SPMN  Marine on St.     57.57 345  P      P       01 49 54.3  -1.3
          baz=160
BC3   Big Chuckawall    58.09 321  P      P       01 49 59.9 +0.2
          baz=132
W13A  Hualapai Mount    58.11 323  P      P       01 50 00.4 +0.5
W13A                               IAmb   IAmb    01 50 01.1
          comp=Z,8.5nm,1.1s
U15A  North Rim         58.13 325  P      P       01 50 00.2   0.0
U15A                               IAmb   IAmb    01 50 01.1
          comp=Z,6.1nm,0.8s
IRM   Iron Mountain     58.23 321  P      P       01 50 00.7 +0.1
          baz=132,SNR=10
PFO   Pinyon Flats O    58.69 320  P      P       01 50 03.6  -0.4
          baz=131
O20A  White River Ci    58.80 331  P      P       01 50 04.2  -0.5
          baz=141
GMRC  Granite Mounta    58.97 322  P      P       01 50 05.8   0.0
          baz=132,SNR=6.0
CCUT  Cedar City        59.53 325  P      P       01 50 10.4 +0.7
MATQ  Matagami          59.94 358  P      P       01 50 11.0  -1.0
          baz=178
K22A  Casper            60.01 334  P      P       01 50 12.3  -0.6
          baz=144
GSC   Goldstone, Bar    60.01 321  P      P       01 50 13.0 +0.1
          baz=131
GSC   Goldstone, Bar    60.01 321  P      P       01 50 13.2 +0.2
ASCN  Ascension         60.18  93  P      P       01 50 14.3  -0.1
RSSD  Black Hills       60.20 337  P      P       01 50 14.2   0.0
          baz=147
EDW2  Edwards Air Fo    60.48 320  P      P       01 50 15.8  -0.3
          baz=130
TPNV  Topopah Spring    60.77 323  P      P       01 50 18.3 +0.1
          baz=132,SNR=7.9
TPNV  Topopah Spring    60.77 323  IAmb   IAmb    01 50 19.7
          comp=Z,5.0nm,0.8s
FURC  Furnace Creek,    60.82 322  P      P       01 50 18.6 +0.4
          baz=132
MPMC  Manual Prospec    60.93 322  P      P       01 50 18.8  -0.5
          baz=131,SNR=5.7
DUG   Dugway, Tooele    61.13 328  P      P       01 50 20.7 +0.2
          baz=137,SNR=11
AGMN  Agassiz Nation    61.20 345  P      P       01 50 19.6  -1.1
          baz=157,SNR=5.0
ISA   Isabella, Lake    61.28 321  P      P       01 50 21.8 +0.2
          baz=130
ISA   Isabella, Lake    61.28 321  P      P       01 50 21.3  -0.2
ISA                                IAmb   IAmb    01 50 22.3
          comp=Z,5.6nm,0.8s
R11A  Troy Canyon, C    61.34 325  P      P       01 50 22.2 +0.1
          baz=134,SNR=7.5
PD31  Pinedale Array    61.47 332  P      P       01 50 21.5  -1.4
PDAR  Pinedale Array    61.47 332  P      P       01 50 21.7  -1.2
          comp=Z,0.7nm,0.6s,baz=142,slow=7.5,SNR=8.2
PDAR                               LR     LR      02 16 55.7
          comp=Z,58nm,20.3s,baz=139,slow=36
CWC   Cottonwood Cre    61.54 322  P      P       01 50 23.3  -0.2
          baz=131
HWUT  Hardware Ranch    61.54 330  IAmb   IAmb    01 50 23.4
          comp=Z,8.3nm,0.9s
VES   Vestal, Richgr    61.78 320  P      P       01 50 24.9 +0.1
          baz=130
MDND  Maddock           61.87 342  P      P       01 50 25.2   0.0
          baz=153,SNR=6.2
TIN   Tinemaha, Big     62.03 322  P      P       01 50 26.8 +0.2
          baz=131
NVAR  Mina Array Bea    62.97 323  P      P       01 50 32.0  -1.0
          comp=Z,2.3nm,0.7s,baz=146,slow=7.4,SNR=24
NVAR  Mina Array Bea    62.97 323  P      P       01 50 32.7  -0.4
LHV   Little Huntoon    62.98 323  IAmb   IAmb    01 50 34.0
          comp=Z,6.4nm,0.7s
ULM   Lac du Bonnet     63.01 345  P      P       01 50 31.5  -1.2
          comp=Z,11nm,0.7s,baz=161,slow=6.5,SNR=22
FLWY  Flagg Ranch       63.01 332  IAmb   IAmb    01 50 33.8
          comp=Z,9.1nm,1.1s
WAKR  Walker            63.70 322  IAmb   IAmb    01 50 38.9
          comp=Z,4.8nm,0.8s
YHB   Horse Butte       63.75 332  P      P       01 50 38.2 +0.2
DGMT  Dagmar            63.93 339  P      P       01 50 38.8  -0.1
          baz=148
VCNR  Virginia City     64.33 323  IAmb   IAmb    01 50 43.1
          comp=Z,7.5nm,0.8s
HLID  Hailey            64.41 329  P      P       01 50 41.8  -0.5
          baz=137
PAHR  Pah Rah Range     64.44 324  IAmb   IAmb    01 50 43.7
          comp=Z,8.2nm,0.9s
BOZ   Bozeman (W)       64.60 333  P      P       01 50 43.0  -0.5
          baz=140
BOZ   Bozeman (W)       64.60 333  IAmb   IAmb    01 50 43.9
          comp=Z,5.3nm,1.1s
AFDM  Forest Hills D    64.90 322  P      P       01 50 45.0  -0.5
AFDM                               IAmb   IAmb    01 50 45.5
          comp=Z,6.0nm,1.0s
MFID  Camas Ranch       65.02 329  IAmb   IAmb    01 50 47.1
          comp=Z,9.4nm,0.8s
BEKR  Beckworth         65.12 323  IAmb   IAmb    01 50 48.0
          comp=Z,4.9nm,0.9s
ORV   Oroville          65.60 322  P      P       01 50 50.3 +0.3
EGMT  Eagleton          65.68 335  P      P       01 50 49.8  -0.5
          baz=142
MOD   Modoc Plateau     66.40 325  IAmb   IAmb    01 50 55.8
          comp=Z,5.8nm,0.8s
MSO   Missoula          66.58 332  P      P       01 50 56.3 +0.1
          baz=138
MSO   Missoula          66.58 332  IAmb   IAmb    01 50 57.1
          comp=Z,7.6nm,0.9s
M04C  Macdoel           67.21 324  P      P       01 51 00.1  -0.3
          baz=129
I07A  Izee              67.40 327  IAmb   IAmb    01 51 02.4
          comp=Z,5.2nm,0.8s
J05D  Fort Rock, OR     67.82 326  P      P       01 51 04.1  -0.2
          baz=130
PINE  Pine Mountain     67.99 326  IAmb   IAmb    01 51 08.1
          comp=Z,8.3nm,1.1s
MACI  Morro de la Ar    68.61  54  P      P       01 51 09.2  -0.3
DBIC  Dimbokro          72.20  80  P      P       01 51 31.9 +0.4
          comp=Z,3.6nm,0.8s,baz=215,slow=5.2,SNR=6.4
DBIC                               LR     LR      02 21 35.2
          comp=Z,102nm,18.1s,baz=212,slow=34
DBIC  Dimbokro          72.20  80  IAmb   IAmb    01 51 36.9
          comp=Z,19nm,1.5s
VNA3  Neumayer Olymp    72.49 162  P      P       01 51 35.4 +3.2
VNA1  Neumayer--Stat    72.73 161  P      P       01 51 38.5 +4.9
SNAA  Sanae             74.71 162  P      P       01 51 49.7 +4.5
KOWA  Kowa              74.90  72  P      P       01 51 48.1 +0.8
KOWA                               IAmb   IAmb    01 51 55.2
          comp=Z,7.9nm,1.2s
YKA   Yellowknife Ar    78.77 343  P      P       01 52 07.2  -0.9
          comp=Z,3.3nm,0.8s,baz=135,slow=6.7,SNR=60
TOA0  Torodi Ar. Sit    79.95  75  P      P       01 52 16.3 +0.7
TOA0                               IAmb   IAmb    01 52 20.6
          comp=Z,6.7nm,0.8s
TORD  Torodi Ar. Bea    79.95  75  P      P       01 52 16.1 +0.4
          comp=Z,6.4nm,0.8s,baz=271,slow=4.6,SNR=14
TORD  Torodi Ar. Bea    79.95  75  P      P       01 52 16.2 +0.6
ESDC  Sonseca Array     82.62  48  P      P       01 52 30.5 +1.2
          comp=Z,3.2nm,1.3s,baz=251,slow=7.9,SNR=4.9
TAM   Tamanrasset       85.70  66  P      P       01 52 47.0 +1.5
TAM                                IAmb   IAmb    01 52 52.1
          comp=Z,3.5nm,0.9s
SUMG  Summit            86.22  10 iP      P       01 52 47.4 +0.2
          comp=Z,10.0nm,0.7s
SUMG  Summit            86.22  10 iP      P       01 52 47.5 +0.2
SUMG                               IAmb   IAmb    01 52 48.6
          comp=Z,10.0nm,0.7s
DAWY  Dawson            88.39 337  IAmb   IAmb    01 52 57.9
          comp=Z,5.1nm,1.0s
EPYK  Eagle Plains      88.52 339  P      P       01 52 57.8  -0.2
          baz=120
BCAR  Beaver Creek A    88.89 335  P      P       01 52 59.7  -0.1
TSUM  Tsumeb            89.36 109  P      P       01 53 04.4 +1.3
TSUM                               IAmb   IAmb    01 53 09.0
          comp=Z,2.9nm,0.8s
ILAR  Eielson Array     91.64 336  P      P       01 53 11.0  -1.5
          comp=Z,1.1nm,0.8s,baz=148,slow=3.9,SNR=9.4
ILAR  Eielson Array     91.64 336  P      P       01 53 11.5  -1.0
NEA2  Nenana            92.46 336  P      P       01 53 15.7  -0.7
          baz=109
ZALV  Zalesovo Beam    133.76  16  PKP    PKPdf   01 59 22.6 +0.3
          comp=Z,0.5nm,0.3s,baz=224,slow=2.8,SNR=6.9
ASAR  Alice Springs    135.68 220  PKP    PKPdf   01 59 24.9  -2.0
          comp=Z,0.9nm,0.9s,baz=182,slow=3.0,SNR=6.2
WRA   Warramunga Arr   138.01 224  PKP    PKPdf   01 59 29.8  -1.5
          comp=Z,1.4nm,1.0s,baz=142,slow=1.7,SNR=5.1
MKAR  Makanchi Array   139.06  24  PKP    PKPdf   01 59 32.3  -0.2
          comp=Z,0.5nm,0.7s,baz=35,slow=4.4,SNR=3.7
KSH   Kashi            141.38  37  PKP    PKPdf   01 59 38.0 +1.0
KSH                                PP     PP      02 02 45.8 +6.4
KSH                                AMB    AMB
          comp=Z,400nm,6.4s
KSH                                LR     LR
          comp=Z,320nm,6.3s
SONM  Songino Array    142.66 358  PKP    PKPdf   01 59 35.9  -3.1
          comp=Z,0.7nm,0.7s,baz=355,slow=2.8,SNR=5.6
KSRS  Korea Array      145.88 326  PKPbc  PKPdf   01 59 45.2 +0.4
          comp=Z,7.8nm,0.9s,baz=42,slow=3.7,SNR=16
GTA   Gaotai           150.79   8 ePKPbc  PKPbc   01 59 58.8 +0.3
GTA                                pPKP   pPKPbc  02 00 13.5  -0.4
GTA                                sPKP           02 00 18.9
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*IDC **25** 01:42:13.3±1.6, 22°.54S×12°.85W, h0^{km}, mb4.1/3, mb1 4.1/3, mb1mx3.8/23, mbtmp4.1/3, MS3.6/4, Ms1 3.6/4, ms1mx3.3/22, Error ellipse: s-maj=62.8km s-min=35.0km az=147.0*

*NEIC **25** 01:42:14.5±2.8, 22°.7S±0°.1×12°.9W±0°.2, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=25.0km s-min=22.4km az=110.0*

ISC 25 01:42:14.6±0.8**, 22°.6S**±0°.2×**12°.9W**±0°.2**, h10**^{km}**, n17, σ1ˢ.12**/13**, mb4.3**/6**, MS3.5**/4**, Southern Mid-Atlantic Ridge**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC        h  m  s     ISC
BDFB  Brasilia          33.82 275  P      P       01 48 58.2 +0.8
          3.2nm,0.9s,baz=102,slow=9.3,SNR=2.7
BDFB  Brasilia          33.82 275  IAmb   IAmb    01 48 58.7
          comp=Z,10nm,1.4s
BOSA  Boshof            34.84 108  LR     LR      02 01 11.5
          comp=Z,95nm,18.4s,baz=184,slow=33
TOA0  Torodi Ar. Sit    38.27  23  P      P       01 49 34.6  -0.6
TOA0                               IAmb   IAmb    01 49 41.9
          comp=Z,9.6nm,1.4s
TORD  Torodi Ar. Bea    38.27  23  P      P       01 49 33.8  -1.5
          comp=Z,3.1nm,0.6s,baz=199,slow=8.6,SNR=14
TORD                               LR     LR      02 01 47.5
          comp=Z,52nm,21.4s,baz=105,slow=31
TORD  Torodi Ar. Bea    38.27  23  P      P       01 49 35.4 +0.2
ZON   Zonda             50.02 247  P      P       01 51 09.2  -0.3
ZON                                IAmb   IAmb    01 51 13.5
          comp=Z,6.2nm,1.2s
PLCA  Paso Flores       51.40 235  LR     LR      02 11 37.1
          comp=Z,48nm,19.5s,baz=84,slow=34
LVC   Limon Verde       51.43 258  P      P       01 51 20.5  -0.2
PB06  IPOC Station P    52.01 258  P      P       01 51 23.1  -1.6
BELA  Belgrano 2        56.33 185  P      P       01 51 55.7 +0.4
ATAH  Atahualpa         64.68 273  LR     LR      02 20 22.5
          comp=Z,128nm,18.6s,baz=93,slow=35
BRTR  Keskin Array B    75.67  35  P      P       01 54 02.3 +2.0
          comp=Z,1.2nm,0.9s,baz=224,slow=8.1,SNR=5.5
BR131 Keskin Array S    75.67  35  P      P       01 54 01.3 +1.1
UOSS  Minazif           82.00  59  P      P       01 54 34.6  -0.6
UOSS                               IAmb   IAmb    01 54 35.4
          comp=Z,4.2nm,0.9s
ASAR  Alice Springs    123.85 143  PKP    PKPdf   02 01 12.9  -0.7
          comp=Z,0.3nm,0.7s,baz=204,slow=2.0,SNR=2.1
MJAR  Matsushiro Arr   151.40  54  PKPbc  PKPbc   02 02 08.7  -0.3
          comp=Z,1.0nm,0.6s,baz=289,slow=1.6,SNR=2.7
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*BJI **25** 02:13:34.0±0.0, 3°.60S×137°.70E, h71^{km}, mB5.2/13, mb4.6/21, Ms4.5/3, Ms7 4.2/3*

*NEIC **25** 02:13:35.8±1.8, 3°.52S±0°.09×137°.67E±0°.07, h73^{km}±7^{km}, mb4.5/28, Error ellipse: s-maj=13.1km s-min=9.8km az=181.0*

*DJA **25** 02:13:37.8±0.2, 4°S±3°×13°8E±°, h52^{km}±7^{km}, M4.7/18, mB5.2/9, mb4.9/18, MLv4.9/9, Mw(mB)4.5/9*

*IDC **25** 02:13:37.1±1.6, 3°.52S×137°.75E, h82^{km}±17^{km}, mb4.0/13, mb1 4.2/20, mb1mx4.0/35, mbtmp4.4/20, MS3.0/3, Ms1 3.0/3, ms1mx2.8/22, Error ellipse: s-maj=15.6km s-min=11.7km az=127.0*

*NOU **25** 02:13:43.9, 4°.18S×137°.56E, h55^{km}, mb4.7, Irian Jaya, Indonesia*

ISC 25 02:13:36.6±0.4**, 3°.64S**±0°.05×**137°.73E**±0°.04**, h82**^{km}**, n99, σ2ˢ.00**/103**, mb4.5**/25**, Irian Jaya**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC        h  m  s     ISC
SRPI  Serui, Papua       2.30 320  P      Pn      02 14 11.5  -1.1
SRPI                               S      Sn      02 14 38.6  -1.5
GENI  Genyem             2.65  67  P      Pn      02 14 18.1 +0.8
GENI                               S      Sn      02 14 48.8 +0.3
BAKI  Biak               2.92 326  P      Pn      02 14 20.0  -0.9
JAY   Jayapura           3.18  70  P      Pn      02 14 24.3  -0.1
          8.9nm,0.3s,baz=249,slow=16,SNR=31
JAY                                S      Sn      02 15 00.5  -0.9
          20nm,0.3s,baz=74,slow=15,SNR=7.5
JAY   Jayapura           3.18  70  P      Pn      02 14 25.9 +1.5
FAKI  Fak Fak            5.51 277  Pn     Pn      02 14 56.5 +0.2
FAKI  Fak Fak            5.51 277  P      Pn      02 14 58.0 +1.8
          0.6nm1µm108nm,0.7s
SIJI  Sorong             7.01 293  P      Pn      02 15 16.6  -0.1
          29nm,0.3s,baz=58,slow=13,SNR=58
SIJI                               S      Sn      02 16 30.3  -4.8
          2.2nm,0.3s,baz=303,slow=23,SNR=1.2
SIJI                               LR     LR      02 18 43.4
          comp=Z,118nm,21.1s,baz=274,slow=44
SWI   Sorong             7.02 293  P      Pn      02 15 16.6  -0.2
          0.7nm2µm176nm,0.5s
SAUI  Saumlaki           7.71 236  Pn     Pn      02 15 26.5 +0.2
SAUI  Saumlaki           7.71 236  P      Pn      02 15 29.3 +3.0
          1.5nm496nm,0.8s
BNDI  Bandanaira         7.85 263  P      Pn      02 15 30.3 +2.2
          1.6nm14µm233nm,1.2s
MANU  Manus Island       9.76  81  Pn     Pn      02 15 52.8  -1.4
PMG   Port Moresby      10.98 122  P      Pn      02 16 13.0 +2.1
          3.6nm,0.3s,baz=314,slow=9.6,SNR=16
PMG                                S      Sn      02 18 10.6  -1.4
          0.7nm,0.3s,baz=172,slow=23,SNR=1.3
PMG   Port Moresby      10.98 122  Pn     Pn      02 16 13.2 +2.3
MTN   Manton Dam        11.23 215         Pn      02 16 14.8 +0.5
COEN  Coen              11.58 153         Pn      02 16 20.0 +1.0
KMSI  Cibinong          14.36 287  P      P       02 17 06.7 +6.0
RABL  Rabaul            14.41  93  Pn     Pn      02 16 57.2 +0.4
SOEI  Soe               14.68 245  Pn     Pn      02 16 59.8  -0.5
SOEI  Soe               14.68 245  P      Pn      02 16 59.6  -0.7
          78nm,0.8s
KNRA  Kununurra         14.87 216  Pn     Pn      02 17 01.8  -0.7
LUWI  Luwuk             15.16 279  Pn     Pn      02 17 04.3  -2.0
LUWI                               IAmb   IAmb    02 17 33.6
          comp=Z,54nm,1.1s
BATI  Baumata           15.40 244  P      Pn      02 17 10.2 +0.8
          comp=Z,17nm,0.3s,baz=125,slow=4.2,SNR=11
BATI                               S      Sn      02 19 56.8  -2.7
          comp=Z,5.8nm,0.3s,baz=266,slow=22,SNR=2.1
BATI  Baumata           15.40 244  P      Pn      02 17 09.5 +0.1
          comp=Z,73nm,0.8s
APSI  Ampana            16.29 279  P      P       02 17 37.5   +15
MRSI  Marisa            16.30 284  P      P       02 17 23.4 +1.2
          comp=Z,28nm,0.8s
WB0   Warramunga Arr    16.36 191  Pn     Pn      02 17 20.9  -0.5
WB0                                IAmb   IAmb    02 17 45.6
          comp=Z,24nm,0.8s
WR0   Warramunga Arr    16.52 191         Pn      02 17 23.4 +0.1
WR0                                IAmb   IAmb    02 18 02.5
          comp=Z,17nm,0.7s
WRAB  Tennant Creek     16.53 191         Pn      02 17 24.7 +1.2
WRAB                               IAmb   IAmb    02 17 47.2
          comp=Z,31nm,0.7s
WB2   Warramunga Arr    16.54 191  Pn     Pn      02 17 24.1 +0.5
WB2                                IAmb   IAmb    02 17 47.7
          comp=Z,40nm,1.1s
WRA   Warramunga Arr    16.54 191  P      Pn      02 17 23.8 +0.2
          comp=Z,1.3nm,0.3s,baz=17,slow=13,SNR=30
WRA                                S      Sn      02 20 17.4   -10
          comp=Z,2.6nm,0.3s,baz=12,slow=22,SNR=8.7
WRA                                LR     LR      02 25 11.3
          comp=Z,43nm,18.9s,baz=345,slow=42
WRA   Warramunga Arr    16.54 191         Pn      02 17 24.0 +0.3
TOLI2 Tolitoli          17.58 285         P       02 17 34.0  -2.3
TOLI2                              IAmb   IAmb    02 17 38.6
          comp=Z,29nm,0.8s
BNSI  Bone              17.59 267  P      Pn      02 17 41.0 +4.4
          comp=Z,1µmcomp=Z,38nm,0.9s
BKSI  Bulukumba         17.63 264  P      Pn      02 17 40.8 +3.8
          comp=Z,727nmcomp=Z,29nm,0.4s
TTSI  Tana Toraja       17.89 271  P      Pn      02 17 47.3 +7.1
MPSI  Mapaga            18.25 282  P      Pn      02 17 47.8 +3.3
          comp=Z,697nmcomp=Z,9.6nm,0.5s
CTA   Charters Tower    18.34 154  P      Pn      02 17 47.0 +1.3
          comp=Z,1.1nm,0.3s,baz=334,slow=12,SNR=18
CTAO  Charters Tower    18.34 154  P      Pn      02 17 46.8 +1.2
FITZ  Fitzroy Crossi    18.62 219  P      Pn      02 17 49.3 +0.4
          comp=Z,1.8nm,0.3s,baz=42,slow=12,SNR=22
FITZ                               S      S       02 21 07.0  -8.4
          comp=Z,2.2nm,0.3s,baz=189,slow=14,SNR=12
AS31  Alice Springs     20.25 190         P       02 18 07.2 +1.7
AS31                               IAmb   IAmb    02 18 30.7
          comp=Z,12nm,0.6s
ASAR  Alice Springs     20.25 190  P      Pn      02 18 08.2 +0.1
          comp=Z,26nm,0.8s,baz=19,slow=11,SNR=194
ASAR                               S      S       02 21 47.1  -1.2
          comp=Z,6.4nm,0.7s,baz=8.5,slow=26,SNR=8.7
ASAR  Alice Springs     20.25 190  P      Pn      02 18 07.8  -0.3
KBKI  Kotabaru          21.52 270  P      P       02 18 20.8 +1.6
SANVU Saraoutou         31.29 114  P      P       02 19 48.7  -0.5
BKNI  Bangkinang        36.87 275  P      P       02 20 36.2  -1.3
JYT   Yasato            39.72   3  P      P       02 20 59.3  -1.8
NJ2   Nanjing           39.77 335 eP      P       02 21 02.5 +1.0
NJ2                                pmax   pmax
          comp=Z,8.0nm,0.5s
MJAR  Matsushiro Arr    39.97   1  P      P       02 21 02.1  -1.1
          comp=Z,1.2nm,0.5s,baz=177,slow=9.4,SNR=4.2
KSRS  Korea Array       41.89 348  LR     LR      02 37 20.3
          comp=Z,24nm,21.9s,baz=38,slow=34
CMAR  Chiang Mai Arr    44.06 301  P      P       02 21 37.4 +0.6
          comp=Z,2.4nm,0.7s,baz=122,slow=6.3,SNR=14
CMAR  Chiang Mai Arr    44.06 301  P      P       02 21 36.8   0.0
CHTO  Chiang Mai        44.22 302  P      P       02 21 37.4  -0.6
CHTO                               IAmb   IAmb    02 21 38.8
          comp=Z,3.6nm,0.6s
JKA   Kamikawa-asahi    47.74   5  P      P       02 22 03.2  -2.0
ASAJ  Asahikawa         47.74   5  P      P       02 22 04.8  -0.5
          comp=Z,11nm,0.9s,baz=220,slow=5.0,SNR=6.8
USRK  Ussuriysk Ar.     47.90 354  P      P       02 22 06.8 +0.3
          comp=Z,2.7nm,0.7s,baz=174,slow=7.4,SNR=16
USRK  Ussuriysk Ar.     47.90 354  P      P       02 22 06.2  -0.3
HHC   Hu-ho-hao-te      50.32 334 eP      P       02 22 26.8 +1.6
HHC                                pmax   pmax
          comp=Z,8.0nm,0.8s
HHC                                pmax   pmax
          comp=Z,84nm,7.6s
YSS   Yuzh-Sakhalins    50.57   4  P      P       02 22 26.3  -0.5
LZH   Lanzhou           50.64 324 eP      P       02 22 28.0 +0.2
LZH                                pP     pP      02 22 41.1  -7.0
LZH                                sP     sP      02 22 50.8  -6.6
LZH                                PP     PP      02 24 29.4 +4.8
LZH                                pmax   pmax
          comp=Z,18nm,1.1s
LZH                                pmax   pmax
          comp=Z,69nm,5.4s
LZH                                LR     LR
          comp=Z,220nm,16.3s
LZH                                LR     LR
          comp=Z,290nm,17.9s
LZH                                LR     LR
          comp=Z,360nm,18.3s
GTA   Gaotai            55.24 325 eP      P       02 23 02.3 +0.8
GTA                                pP     pP      02 23 20.9  -1.2
GTA                                sP     sP      02 23 29.3  -2.0
GTA                                pmax   pmax
          comp=Z,2.0nm,0.9s
TAPN  Taplejung         57.21 306 eP      P       02 23 16.4 +0.4
          comp=Z,9.2nm,0.4s
ODAN  Odare             57.27 305 eP      P       02 23 16.7 +0.4
          comp=Z,11nm,0.5s
ULN   Ulaanbaatar       57.90 336  P      P       02 23 19.4  -0.9
RAMN  Ramite            57.95 305 eP      P       02 23 21.8 +0.7
          comp=Z,5.6nm,0.4s
SONM  Songino Array     58.14 336  P      P       02 23 22.3 +0.4
          comp=Z,1.5nm,0.6s,baz=157,slow=8.1,SNR=8.0
SONM  Songino Array     58.14 336  P      P       02 23 20.8  -1.2
GUN   Gumba             58.92 306 eP      P       02 23 28.5 +0.5
          comp=Z,13nm,0.6s
PETK  Petropavlovsk-    58.99  14  P      P       02 23 27.5   0.0
          comp=Z,4.4nm,0.7s,baz=117,slow=5.2,SNR=9.9
KOLN  Koldanda          60.72 305 eP      P       02 23 40.2   0.0
DANN  Dangsing          60.81 305 eP      P       02 23 41.1 +0.2
          comp=Z,7.2nm,0.5s
PYUN  Piuthan           61.35 305 eP      P       02 23 44.9 +0.5
          comp=Z,26nm,0.7s
MA2   Magadan           63.86   7  P      P       02 24 00.2   0.0
          comp=Z,5.4nm,0.7s,baz=200,slow=5.2,SNR=4.8
WMQ   Urumqi            65.13 322 eP      P       02 24 10.0 +1.0
SEY   Seymchan          67.31   7  P      P       02 24 22.6 +0.2
          comp=Z,0.7nm,0.3s,baz=129,slow=2.0,SNR=7.2
MK31  Makanchi Array    69.92 323  P      P       02 24 39.0  -0.1
MKAR  Makanchi Array    69.92 323  P      P       02 24 39.0  -0.1
          comp=Z,0.8nm,0.7s,baz=113,slow=8.1,SNR=9.6
MKAR  Makanchi Array    69.92 323  P      P       02 24 38.7  -0.4
KSH   Kashi             71.01 314  P      P       02 24 48.3 +2.3
KSH                                pmax   pmax
          comp=Z,7.0nm,1.2s
KSH                                pmax   pmax
          comp=Z,190nm,5.5s
ZALV  Zalesovo Beam     72.24 330  P      P       02 24 52.5  -0.4
VNDA  Vanda             74.95 175  P      P       02 25 09.6 +1.2
          comp=Z,1.7nm,0.7s,baz=346,slow=8.2,SNR=6.1
KKAR  Karatay Array     76.10 316  P      P       02 25 15.6  -0.1
BVAR  Borovoye Array    79.51 325  P      P       02 25 33.6  -0.7
          comp=Z,0.7nm,0.8s,baz=69,slow=9.4,SNR=5.9
BRVK  Borovoye          79.58 325  P      P       02 25 34.5  -0.2
CAST  Castle Rocks      84.50  25  P      P       02 25 59.1  -1.1
ABKAR Akbulak array     84.79 320  P      P       02 26 01.2  -0.8
RND   Reindeer          85.88  26  P      P       02 26 06.6  -0.6
COLD  Coldfoot          86.47  22  P      P       02 26 10.3 +0.4
COLD                               IAmb   IAmb    02 26 12.1
          comp=Z,4.9nm,1.0s
CCB   Clear Creek Bu    86.66  25  P      P       02 26 10.2  -0.7
ILAR  Eielson Array     87.08  25  P      P       02 26 12.1  -0.9
          comp=Z,2.6nm,0.9s,baz=264,slow=4.6,SNR=24
ILAR  Eielson Array     87.08  25  P      P       02 26 11.7  -1.2
SNAA  Sanae            100.61 192  Pdiff  Pdif    02 27 14.3  -0.8
ARCES ARCESS Array B   101.05 341  P      Pdif    02 27 16.2  -0.7
          comp=Z,1.4nm,0.7s,baz=63,slow=8.4,SNR=4.1
YKA   Yellowknife Ar   101.33  27  P      Pdif    02 27 17.9  -0.4
          comp=Z,0.1nm,0.7s,baz=287,slow=4.3,SNR=2.3
VNA2  Neumayer--Watz   102.10 191  Pdiff  Pdif    02 27 20.7  -1.0
VNA3  Neumayer Olymp   102.26 190  Pdiff  Pdif    02 27 14.8  -7.6
VNA1  Neumayer--Stat   102.50 191  Pdiff  Pdif    02 27 19.1  -4.3
MNMC  Minye Minye      144.86 131         PKPdf   02 33 06.4 +0.9
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*IDC **25** 02:39:21.8±4.2, 33°.57N×135°.58E, h0^{km}, mb3.2/2, mb1 3.1/4, mb1mx3.1/39, mbtmp3.1/4, ML2.5/2, Error ellipse: s-maj=67.1km s-min=20.8km az=150.0*

*JMA **25** 02:39:28.0, 33°.84N×135°.54E, h45^{km}±1^{km}, M3.1*

JMA Felt I J1.

ISC 25 02:39:28.5±1.2**, 33°.84N**±0°.07×**135°.54E**±0°.04**, h42**^{km}±7^{km}**, n14, σ0ˢ.61**/24**, Near south coast of western Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                   Op     ISC        h  m  s     ISC
JTNC  Tanabenakahech     0.06 113  P      Pn      02 39 35.1  -0.2
JTNC                               S      Sn      02 39 40.1 +0.1
JWM   Minabe             0.15 272  P      Pn      02 39 35.4  -0.3
JWM                                S      Sn      02 39 40.6  -0.1
JWY   Kouya              0.38   7  P      Pn      02 39 37.7  -0.2
JWY                                S      Sn      02 39 44.3  -0.2
JKN2  Miekihoku          0.72  57  P      Pn      02 39 42.0  -0.3
JKN2                               S      Sn      02 39 52.2  -0.1
JHE   Heguri             0.82   8  P      Pn      02 39 43.1  -0.5
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JHE				S	Sn	02 39 54.3	-0.2
JAWN	Awajishima-nag	0.83	321	P	Pn	02 39 43.4	-0.4
JAWN				S	Sn	02 39 54.8	-0.1
JAI	Aioi	0.91	267	P	Pn	02 39 44.0	-0.8
JAI				S	Sn	02 39 55.9	-0.8
JIE	Ise	1.11	60	P	Pn	02 39 47.1	-0.5
JIE				S	Sn	02 40 01.2	-0.5
TSUJ	Tsu 2	1.13	40	P	Pn	02 39 47.3	-0.5
TSUJ				S	Sn	02 40 00.8	-1.4
JKS	Kasai	1.27	333	P	Pn	02 39 49.4	-0.4
JKS				S	Sn	02 40 05.4	-0.3
MJAR	Matsushiro Arr	3.47	38	Pn	Pn	02 40 20.4	+0.4
	0.2nm,0.3s,baz=218,slow=15,SNR=17						
MJAR				Pg		02 40 27.7	
	0.2nm,0.3s,baz=213,slow=14,SNR=9.3						
MJAR				Lg	Lg	02 41 19.1	
	0.1nm,0.3s,baz=221,slow=24,SNR=5.3						
KSRS	Korea Array	7.17	302	Pn	Pn	02 41 10.9	+0.1
	0.2nm,0.3s,baz=116,slow=14,SNR=2.7						
SONM	Songino Array	25.92	311	P	P	02 44 58.2	+1.5
	0.2nm,0.5s,baz=109,slow=9.5,SNR=1.9						
MKAR	Makanchi Array	41.85	304	P	P	02 47 14.2	-0.1
	0.3nm,0.7s,baz=96,slow=9.1,SNR=3.7						

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*ISK **25** 02:51:45.6, 38°.81N×44°.47E, h5^{km}, ML2.9/17*
*DDA **25** 02:51:45.2, 38°.80N×44°.58E, h11^{km}±2^{km}, ML3.0*
*AZER **25** 02:51:45.4±1.1, 38°.72N×44°.55E, h2^{km}, ml3.2/17, Error ellipse: s-maj=6.9km s-min=3.2km az=43.0*
ISC 25 02:51:45.6±1.2**, 38°.81N**±0°.02×**44°.56E**±0°.02**, h1**^{km}±10^{km}**, n57, σ1^{s}.18**/89**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.47	252	iP	Pg	02 51 54.6	0.0
OZAP				iS	Sb	02 52 02.6	-1.6
OZAP				IAML		02 52 04.0	
	comp=E,883nm,0.5s						
CLDR	Caldiran	0.60	304	PG	Pg	02 51 56.0	-1.2
CLDR				SG	Sg	02 52 05.9	+0.9
CLDR	Caldiran	0.60	304	iP	Pg	02 51 56.0	-1.2
VMUR	Van-Muradiye	0.79	284	iS	Sn	02 52 15.5	-1.2
NAX	Nakhchivan	0.81	63	P	Pg	02 52 01.4	+0.2
	SNR=68						
NAX				S	Sb	02 52 14.7	+0.5
BASK	Baskale_VAN	0.87	210	iP	Pb	02 52 02.5	-1.1
BASK				iS	Sb	02 52 15.3	-0.5
HYR	Heyderabad	0.94	14	P	Pg	02 52 03.9	+0.3
HYR				S	Sn	02 52 18.5	-1.6
VANB	Van	0.94	257	PG	Pg	02 52 03.4	-0.2
VANB				SG	Sb	02 52 16.9	-0.9
SBZ	Shahbuz	0.97	52	P	Pg	02 52 04.0	-0.2
	SNR=70						
SBZ				S	Sn	02 52 19.4	-1.6
ERCV	ERCIS-VAN	0.98	283	PG	Pb	02 52 04.5	-0.9
DYDN	Diyadin	1.00	318	iP	Pg	02 52 05.0	+0.2
ORD	Ordubad	1.12	83	P	Pg	02 52 06.5	-0.6
	SNR=11						
ORD				S	Sb	02 52 23.0	0.0
TASB	TASBURUN-IGDIR	1.20	348	PN	Pn	02 52 09.7	+0.1
YOVA	Hakkari_Yksek	1.23	190	iP	Pg	02 52 08.8	-0.4
YOVA				iS	Sn	02 52 26.0	-1.6
GEVA	Gevas	1.28	248	iP	Pb	02 52 09.8	-0.7
GEVA				iS	Sn	02 52 28.1	-0.5
AKDM	Akdamar-Van	1.33	249	PN	Pg	02 52 10.7	-0.3
AKDM				SN	Sn	02 52 29.5	-0.3
GNI	Garni	1.35	6	PN	Pg	02 52 11.8	+0.4
GNI				SN	Sn	02 52 32.4	+2.0
HAKT	HAKKARI	1.42	209	iP	Pg	02 52 15.7	+3.0
HAKT				iS	Sn	02 52 33.3	+1.2
AGRB	Hanur-Agry	1.44	303	PN	Pn	02 52 12.5	-0.5
KOTA	Agri, Merkez-K	1.45	314	iP	Pg	02 52 14.2	+0.9
MLAZ	Malazgirt-MUS	1.60	283	PN	Pb	02 52 15.3	-0.8
CUKT	Cukurca	1.73	206	PN	Pb	02 52 17.8	-0.4
CUKT	Cukurca	1.73	206	iP	Pg	02 52 19.1	+0.4
CUKT				iS	Sg	02 52 42.4	+1.3
CUKT				IAML		02 52 49.0	
	comp=N,147nm,0.6s						
CUKT				IAML		02 52 50.0	
	comp=E,193nm,1.2s						
PERV	Siirt/Pervari-	1.81	242	iP	Pg	02 52 20.5	+0.3
PERV				iS	Sg	02 52 46.1	+2.5
PERV				IAML		02 52 51.0	
	comp=N,159nm,0.8s						
PERV				IAML		02 52 51.0	
	comp=E,200nm,1.1s						
BLIS	Bitlis-Merkez	1.96	259	iP	Pb	02 52 21.0	-1.1
BLIS				iS	Sg	02 52 47.9	-0.5
GURO	Guroymak-BITLI	2.00	263	PN	Pb	02 52 21.1	-1.7
EAK	Akyaka	2.02	339	iP	Pg	02 52 25.3	+1.1
SIRT	Sirnak	2.12	233	PN	Pb	02 52 22.9	-1.9
GDB	GEDABAY	2.12	25	P	Pb	02 52 23.4	-1.5
	SNR=10						
GDB				S	Sb	02 52 52.5	+0.7
SIRN	Sırnak	2.14	233	iP	Pg	02 52 26.1	-0.4
SIRN				iS	Sg	02 52 52.5	-1.8
SIRN				IAML		02 53 00.0	
	comp=E,120nm,0.8s						
SIRN				IAML		02 53 18.0	
	comp=N,110nm,0.9s						
KARS	Kars	2.15	328	PN	Pn	02 52 23.1	+0.4
SRTM	Siirt_Merkez	2.23	249	iP	Pb	02 52 26.4	-0.3
SRTM				iS	Sg	02 52 56.7	-0.4
SRTM				IAML		02 53 06.0	
	comp=E,94nm,0.7s						
SRTM				IAML		02 53 14.0	
	comp=N,117nm,0.8s						
QRD	Qoradiz	2.24	72	P	Pn	02 52 24.1	+0.3
	SNR=10						
QRD				S	Sn	02 52 52.7	+0.6
GANJ	Ganja	2.29	36	P	Pn	02 52 25.4	+0.9
	SNR=9.2						
GANJ				S	Sb	02 52 56.7	+0.3
QZX	Qazax, Azerbai	2.33	15	P	Pb	02 52 26.6	-1.9
QZX				S	Sb	02 52 57.4	-0.5
AGDM	Agdam	2.36	56	P	Pb	02 52 26.9	-2.0
	SNR=16						
AGDM				S	Sb	02 52 57.7	-0.9
MUSM	Mu-Merkez	2.39	269	iP	Pb	02 52 27.3	-2.1
SENK	Senkaya-Erzuru	2.45	316	PN	Pn	02 52 27.5	+0.7
BRDA	Brd	2.49	53	P	Pn	02 52 28.0	+0.7
BRDA				S	Sb	02 53 01.5	-0.8
DMNI	Dmanisi	2.54	354	P	Pg	02 52 35.2	+1.0
SVAN	Silvan-Diyarba	2.72	257	PN	Pn	02 52 30.9	+0.5
SVAN	Silvan-Diyarba	2.72	257	iP	Pb	02 52 34.4	-0.7
BTMN	Batman	2.74	252	iP	Pg	02 52 41.0	+2.8
BTMN				iS	Sg	02 53 13.4	-0.4
KARO	Karliova-Bingo	2.78	282	PN	Pn	02 52 32.2	+0.8
MIDY	Mardin/Midyat-	2.86	242	iP	Pn	02 52 33.7	+1.3
YRD	Yardimli	2.87	87	P	Pn	02 52 33.0	+0.3
	SNR=20						
YRD				S	Sn	02 53 09.0	+1.0
DDFL	Dedoflistskaro	2.89	24	P	Pg	02 52 40.8	-0.3
LRK	Lerik	2.96	92	P	Pn	02 52 34.0	+0.1
	SNR=7.1						
LRK				S	Sn	02 53 10.2	+0.1
GLBA	Clilabad	3.02	80	P	Pn	02 52 34.2	-0.3
GLBA				S	Sn	02 53 10.3	-0.9
BNGB	Bingl	3.04	275	PN	Pn	02 52 35.7	+0.9
BKRG	Bakuriani	3.06	345	P	Pg	02 52 46.2	+2.1
SEKA	Sheki	3.14	39	P	Pn	02 52 37.9	+1.6
SEKA				S	Sb	02 53 18.5	-2.6
YEDI	Yedisu-Bingol	3.19	283	PN	Pn	02 52 37.8	+0.8
ABS	Abastumani	3.24	336	P	Pb	02 52 44.8	+0.9
ZKTA	Zakatala	3.24	28	P	Pn	02 52 38.4	+0.8
ZKTA				S	Sn	02 53 18.7	+1.9
LKRN	Lenkeran, Azer	3.30	90	P	Pn	02 52 39.0	+0.7
LKRN				S	Sb	02 53 27.5	+2.0
ASTR	Astara	3.32	93	P	Pn	02 52 37.7	-0.9
ASTR				S	Sb	02 53 27.5	+1.4

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*IDC **25** 03:00:15.5±1.0, 24°.11S×69°.49W, h81^{km}±7^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.8/4, Error ellipse: s-maj=30.7km s-min=10.2km az=106.0*
*GUC **25** 03:00:15.4±0.8, 24°.07S×69°.58W, h87^{km}±5^{km}, ML3.6*
ISC 25 03:00:15.0±0.7**, 24°.06S**±0°.03×**69°.57W**±0°.06**, h83**^{km}±6^{km}**, n22, σ1^{s}.09**/33**, mb3.9**/4**, 8C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.95	233	⇑iP	Pn	03 00 34.6	+0.7
PB14				eS	Sn	03 00 49.1	+1.0
PB14				IAML		03 00 49.9	
	comp=N,1µm,0.3s						
PB10	IPOC Station P	1.05	301	⇑iP	Pn	03 00 35.4	+0.6
PB10				iS	Sn	03 00 50.3	+0.6
PB10				IAML		03 00 53.5	
	comp=N,2µm,0.4s						
GO02	Mina Guanaco	1.10	181	iP	Pn	03 00 36.4	+0.7
GO02				iS	Sn	03 00 51.9	+0.6
GO02				IAML		03 00 53.7	
	comp=N,4µm,0.1s						
PB05	IPOC Station P	1.33	334	⇑iP	Pn	03 00 38.9	+0.5
PB05				iS	Sn	03 00 56.3	+0.3
PB05				IAML		03 00 59.6	
	comp=E,675nm,0.5s						
LVC	Limon Verde	1.56	23	P	Pn	03 00 42.3	+0.8
	comp=E,29nm,0.3s,baz=208,slow=8.9,SNR=231						
LVC				S	Sn	03 01 02.4	+0.8
	comp=E,74nm,0.3s,baz=36,slow=21,SNR=16						
LVC	Limon Verde	1.56	23	⇑iP	Pn	03 00 42.4	+0.8
LVC				eS	Sn	03 01 02.9	+1.3
PB04	IPOC Station P	1.80	343	⇑iP	Pn	03 00 44.4	-0.1
PB04				IAML		03 01 33.1	
	comp=E,419nm,0.5s						
PB03	IPOC Station P	2.00	355	⇑iP	Pn	03 00 47.4	+0.2
PB09	IPOC Station P	2.27	8	⇓iP	Pn	03 00 51.9	+1.1
PB09				eS	Sn	03 01 18.4	+0.3
PB09				IAML		03 01 38.1	
	comp=E,211nm,0.7s						
AC01	Pan de Azucar	2.28	204	⇑iP	Pn	03 00 50.3	-0.4
AC01				eS	Sn	03 01 16.4	-1.7
AC01				IAML		03 01 24.5	
	comp=E,542nm,0.1s						
PB07	IPOC Station P	2.34	353	⇑eP	Pn	03 00 51.6	0.0
AC02	Maricunga	2.80	172	⇓iP	Pn	03 01 00.2	+2.1
AC02				IAML		03 01 42.1	
	comp=E,386nm,0.1s						
PATCX	Punta Patache	3.27	350	eP	Pn	03 01 02.9	-1.2
GO03	Copiap	3.57	190	eP	Pn	03 01 08.0	-0.2
GO03				eS	Sn	03 01 48.9	-0.5
SIV	San Ignacio	11.31	46	P	Pn	03 02 50.3	-3.4
	comp=E,0.7nm,0.3s,baz=243,slow=9.6,SNR=22						
PLCA	Paso Flores	16.65	183	pP	pP	03 04 28.9	+7.8
	comp=E,0.1nm,0.3s,baz=358,slow=10,SNR=3.7						
SNAA	Sanae	60.08	160	P	P	03 10 13.2	+0.1
	comp=E,1.0nm,0.6s,baz=274,slow=9.3,SNR=12						
TXAR	Lajitas Array	62.39	326	P	P	03 10 30.7	+1.4
	comp=E,0.4nm,1.0s,baz=121,slow=8.7,SNR=1.9						
TORD	Torodi Ar. Bea	78.79	70	P	P	03 12 09.3	+0.2
	comp=E,1.5nm,0.4s,baz=257,slow=5.0,SNR=11						
TORD				pP	pP	03 12 30.9	-0.9
	comp=E,0.9nm,0.6s,baz=258,slow=5.0,SNR=2.8						
YKA	Yellowknife Ar	93.39	341	P	P	03 13 20.8	+0.4
	comp=E,0.2nm,0.6s,baz=132,slow=5.1,SNR=6.0						
YKA				pP	pP	03 13 42.6	-0.6
	comp=E,0.2nm,0.6s,baz=133,slow=5.0,SNR=5.7						
YKA				sP	sP	03 13 53.2	+0.9
	comp=E,0.1nm,0.8s,baz=140,slow=4.7,SNR=2.5						
ZALV	Zalesovo Beam	144.51	26	PKP	PKPdf	03 19 41.8	+0.4
	comp=E,1.0nm,0.7s,baz=306,slow=3.7,SNR=6.2						
MKAR	Makanchi Array	148.03	38	PKPbc	PKPbc	03 19 51.5	+0.6
	comp=E,0.7nm,0.6s,baz=329,slow=3.6,SNR=7.7						

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*VAO **25** 03:10:03.2±0.5, 14°.15S×74°.21W, h10^{km}, mb4.5*
*ARE **25** 03:10:07±2.8, 14°.06S±0°.09×74°.6W±0°.1, h95^{km}±6^{km}, ML4.8, mb4.5/10(NEIC), Error ellipse: s-maj=18.0km s-min=11.0km az=58.0*
*NEIC **25** 03:10:07.5±2.1, 14°.14S±0°.10×74°.6W±0°.1, h94^{km}±9^{km}, Error ellipse: s-maj=19.6km s-min=11.2km az=56.0*
*IDC **25** 03:10:09.4±0.8, 14°.12S×74°.48W, h102^{km}±7^{km}, mb3.7/10, mb1 3.9/16, mb1mx3.8/31, mbtmp4.1/16, MS2.9/2, Ms1 2.9/2, ms1mx2.6/30, Error ellipse: s-maj=20.6km s-min=11.9km az=59.0*
ISC 25 03:10:08.6±0.5**, 14°.15S**±0°.06×**74°.43W**±0°.07**, h98**^{km}**, n109, σ1^{s}.83**/112**, mb4.1**/14**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.19	312	P	Pn	03 10 55.0	-1.8
	132nm,0.3s,baz=129,slow=11,SNR=158						
NNA				S	Sn	03 11 34.3	+0.2
	469nm,0.3s,baz=63,slow=23,SNR=18						
NNA				LR	LR	03 11 56.2	
	comp=Z,104nm,18.9s,baz=104,slow=34						
AP01	Chacalluta	5.74	137	Pn	Pn	03 11 31.1	-0.2
PB16	IPOC Station P	6.29	132	eP	Pn	03 11 40.1	+0.7
PB16	IPOC Station P	6.29	132	Pn	Pn	03 11 40.1	+0.7
CZSB	Cruzeiro do Su	6.60	15	eP	Pn	03 11 40.4	-2.7
MNMC	Minye Minye	6.78	138	Pn	Pn	03 11 46.2	+0.5
PSGCX	Pisagua	6.80	143	Pn	Pn	03 11 46.5	+0.6
TA01	Diego Aracena	7.56	148		Pn	03 11 55.7	-0.3
PATCX	Punta Patache	7.78	149	Pn	Pn	03 11 59.6	+0.4
PB08	IPOC Station P	7.80	140		Pn	03 11 59.9	+0.2
ATAH	Atahualpa	7.99	330	P	Pn	03 12 03.2	+0.9
	3.2nm,0.3s,baz=191,slow=4.6,SNR=23						
ATAH				S	Sn	03 13 37.0	+5.7
	4.8nm,0.3s,baz=76,slow=23,SNR=1.7						
PB07	IPOC Station P	8.68	151		Pn	03 12 12.5	+0.9
PB09	IPOC Station P	9.06	148		Pn	03 12 17.6	+1.0
PB04	IPOC Station P	9.09	154		Pn	03 12 17.7	+0.5
LVC	Limon Verde	9.91	149	P	Pn	03 12 28.8	+0.4
	2.3nm,0.3s,baz=344,slow=9.0,SNR=31						
LVC				S	Sn	03 14 16.9	-1.0
	1.7nm,0.3s,baz=86,slow=19,SNR=2.1						
LVC	Limon Verde	9.91	149	Pn	Pn	03 12 30.1	+1.7
LVC	Limon Verde	9.91	149	eP	Pn	03 12 25.4	-3.0
PB15	IPOC Station P	10.16	153		Pn	03 12 31.9	+0.3
PB14	IPOC Station P	11.09	161	Pn	Pn	03 12 43.4	-1.0
GO02	Mina Guanaco	11.86	158	Pn	Pn	03 12 54.0	-0.7
SAML	Samuel	12.17	66	Pn	Pn	03 12 57.1	-1.5
SAML	Samuel	12.17	66	eP	Pn	03 12 54.3	-4.4
AC01	Pan de Azucar	12.46	164	Pn	Pn	03 13 00.9	-1.6
SIV	San Ignacio	13.03	100	P	Pn	03 13 10.9	+0.9
	1.0nm,0.3s,baz=327,slow=13,SNR=21						
AC02	Maricunga	13.56	159	Pn	Pn	03 13 16.7	-0.6
VILB	Vilhena	13.89	87	eP	Pn	03 13 19.2	-2.0
GO03	Copiap	13.93	164	Pn	Pn	03 13 20.5	-1.3
PTLC	Puerto Leguiza	14.24	359	eP	Pn	03 13 20.7	-5.1
OTAV	Otavalo	14.84	344	eP	P	03 13 37.2	-0.1
OTAV	Otavalo	14.84	344	eP	Pn	03 13 35.0	+1.1
AC05	El Transito	15.11	166	Pn	Pn	03 13 36.7	-0.2
GCUF	Volcan Galeras	15.55	349	eP	Pn	03 13 43.5	+0.6
MACC	Macarena, Meta	16.20	2	eP	Pn	03 13 47.5	-3.1
GARC	Garzon, Huila	16.27	356	eP	P	03 13 54.5	+1.6
PCON	Cinco Dias	16.49	353	eP	Pn	03 13 54.0	-0.7
MARP	Paez Belalcaza	16.95	355	eP	Pn	03 13 57.8	-2.3
MACA	Manacapuru-AM	17.42	52	eP	P	03 14 03.9	-1.5
YOTC	Yotoco, Valle	18.12	354	eP	Pn	03 14 20.3	+6.3
CHIC	Chingaza	18.67	2	eP	Pn	03 14 22.9	+1.9
ROSC	El Rosal	18.87	0	P	Pn	03 14 22.7	-0.6
	1.5nm,0.3s,baz=73,slow=17,SNR=2.0						
ROSC				LR	LR	03 22 43.1	
	comp=Z,54nm,19.7s,baz=22,slow=40						
ROSC	El Rosal	18.87	0	P	P	03 14 21.2	-0.5
ROSC				IAmb	IAmb	03 14 31.8	
	comp=Z,10nm,0.7s						
RREF	El Recreo	18.95	357	eP	Pn	03 14 29.0	+4.5
ROC1	El Roble	19.00	171	P	P	03 14 21.0	-1.7
PLMC	San Jos del P	19.02	354	eP	Pn	03 14 26.7	+1.9
GUY2C	Guyana, Caldas	19.27	357	eP	Pn	03 14 27.9	-0.2
PTGA	Pitinga	19.56	48	P	P	03 14 29.6	+0.8
	comp=Z,1.6nm,0.3s,baz=230,slow=13,SNR=12						
NORC	Norcasia	19.59	359	eP	P	03 14 29.8	+0.6
SPBC	San Pablo de B	19.68	1	eP	P	03 14 29.3	-0.9
CBOC	Ciudad Bolivar	19.95	355	eP	P	03 14 33.2	0.0
RUSC	La Rusia	19.96	4	eP	P	03 14 34.9	+1.3
NPGB	Novo Progresso	20.02	71	eP	P	03 14 33.4	-0.4
CPUP	Villa Florida	20.07	130	P	Pn	03 14 35.9	-1.0
	comp=Z,9.7nm,0.9s,baz=304,slow=11,SNR=24						
CPUP	Villa Florida	20.07	130	P	Pn	03 14 35.7	-1.2
CPUP	Villa Florida	20.07	130	eP	P	03 14 35.4	+1.2
HELC	Santa Helena	20.24	357	eP	P	03 14 37.2	+0.7
PTBC	PUERTO BERRIO,	20.56	360	eP	P	03 14 39.0	-0.5
BARC	Barichara	20.65	4	eP	P	03 14 40.1	-0.7
ITTB	Itaituba	20.84	64	eP	P	03 14 42.7	+0.1
DBBC	Dabeiba	21.11	355	eP	P	03 14 46.0	+0.4
BRRC	Barranca, Sant	21.13	2	eP	P	03 14 48.5	+2.8
BRRC	Barranca, Sant	21.13	2	eS	P	03 14 48.7	+3.0
PAMC	Pamplona, Colo	21.42	5	eP	P	03 14 52.9	+3.6
ZARC	Zaragoza, Cauc	21.51	359	eP	P	03 14 49.6	-0.1
UREC	San Jos de Ur	21.79	357	eP	P	03 14 55.9	+3.1
ARAG	Araguaiana, MT	21.91	97	eP	P	03 14 56.0	+2.0
OCAC	Ocana	22.27	3	eP	P	03 15 00.1	+2.2
TRCB	Terra Rica	22.36	116	eP	P	03 14 59.5	+0.6
ITQB	Itaqui	22.56	136	eP	P	03 15 03.0	+2.3
SNDB	Serra Nova Dou	22.64	87	eP	P	03 15 02.0	+0.4
SMLC	San Martn de	22.81	1	eP	P	03 15 01.8	-1.5
MOTC	Monteria, Cord	22.82	357	eP	P	03 15 09.5	+6.1
SDV	Santo Domingo	23.20	10	P	P	03 15 06.5	-0.8
	comp=Z,3.1nm,0.5s,baz=184,slow=19,SNR=6.7						
SDV	Santo Domingo	23.20	10	P	P	03 15 05.8	-1.5
SDV	Santo Domingo	23.20	10	eP	P	03 15 06.7	-0.6
SDV	Santo Domingo	23.20	10	eP	P	03 15 08.8	+1.5
PCMB	Pacaembu	23.24	112	eP	P	03 15 08.9	+1.4
PTGB	Pitanga	23.53	120	eP	P	03 15 12.1	+1.9
ITRB	Iturama	23.67	107	eP	P	03 15 12.9	+1.5
ARGC	Ariguani, Magd	23.86	0	eP	P	03 15 12.7	-0.4
ITAB	Concordia	24.53	126	eP	P	03 15 21.5	+2.4
LC01	Cunco	24.75	175	P	P	03 15 20.5	-0.4
LC01				IAmb	IAmb	03 15 59.3	
	comp=Z,16nm,1.1s						
CPSB	Cacapava Do Su	25.20	133	eP	P	03 15 27.0	+1.8
IPMB	Ipameri, GO	25.47	102	eP	P	03 15 28.1	+0.3
BDFB	Brasilia	25.57	97	P	P	03 15 28.6	-0.1
	comp=Z,1.1nm,0.6s,baz=250,slow=14,SNR=3.7						
BB19B	Bebedouro	25.60	109	eP	P	03 15 32.2	+3.3
PLTB	Pedras Altas	25.90	136	eP	P	03 15 33.4	+1.9
JTS	Las Juntas de	26.43	336	P	P	03 15 32.7	-3.7
JTS				IAmb	IAmb	03 15 53.1	
	comp=Z,16nm,1.4s						
PLCA	Paso Flores	26.70	173	P	P	03 15 38.9	+0.2
	comp=Z,0.9nm,0.8s,baz=355,slow=14,SNR=4.7						
SMTB	Santa Maria do	26.81	82	eP	P	03 15 41.6	+1.8
ROSB	Rosrio	31.94	72	eP	P	03 16 26.7	+1.4
RIB01	Linhares ES	32.96	104	eP	P	03 16 35.0	+0.8
USHA	Ushuaia	40.86	175	P	P	03 17 41.5	+1.0
	comp=Z,61nm,0.6s,baz=259,slow=0.2,SNR=5.3						
WLAR	White Oak Lake	50.80	340	P	P	03 18 57.3	-1.7
WLAR				IAmb	IAmb	03 19 00.4	
	comp=Z,16nm,0.9s						
TX31	Lajitas Ar. Si	51.63	327	P	P	03 19 03.6	-1.8
TXAR	Lajitas Array	51.63	327	P	P	03 19 05.2	-0.3
	comp=Z,1.0nm,0.8s,baz=147,slow=8.2,SNR=13						
TXAR				pP	pP	03 19 30.4	-0.1
	comp=Z,0.6nm,0.8s,baz=157,slow=8.1,SNR=3.9						
TXAR	Lajitas Array	51.63	327	P	P	03 19 03.7	-1.8
S39A	Bolivar	54.54	342	P	P	03 19 24.6	-1.9
S39A				IAmb	IAmb	03 19 26.5	
	comp=Z,7.2nm,0.9s						
PDAR	Pinedale Array	65.18	332	P	P	03 20 40.1	+0.5
	comp=Z,0.1nm,0.6s,baz=161,slow=11,SNR=1.8						
PDAR				pP	pP	03 21 05.4	-0.2
	comp=Z,0.2nm,0.6s,baz=127,slow=10,SNR=3.0						
ULM	Lac du Bonnet	66.84	345	P	P	03 20 48.6	-1.1
	comp=Z,3.3nm,0.5s,baz=159,slow=5.7,SNR=9.4						
TORD	Torodi Ar. Bea	80.11	74	P	P	03 22 08.7	+0.3
	comp=Z,2.2nm,0.7s,baz=271,slow=4.9,SNR=6.9						
YKA	Yellowknife Ar	82.59	342	P	P	03 22 20.0	-0.4
	comp=Z,0.7nm,0.9s,baz=139,slow=6.5,SNR=16						
YKA				pP	pP	03 22 47.3	-0.1
	comp=Z,0.8nm,0.8s,baz=134,slow=6.3,SNR=6.6						
ESDC	Sonseca Array	84.50	47	P	P	03 22 32.6	+1.8
	comp=Z,2.4nm,0.9s,baz=256,slow=5.1,SNR=11						
ASAR	Alice Springs	133.31	217	PKP	PKPdf	03 29 14.2	+0.2
	comp=Z,0.4nm,0.7s,baz=129,slow=2.0,SNR=6.7						
WRA	Warramunga Arr	135.85	221	PKP	PKPdf	03 29 19.4	+0.6
	comp=Z,0.6nm,0.6s,baz=235,slow=1.5,SNR=5.7						
ZALV	Zalesovo Beam	137.07	18	PKP	PKPdf	03 29 20.8	+0.9
	comp=Z,3.2nm,0.8s,baz=303,slow=3.1,SNR=10						
MKAR	Makanchi Array	142.07	26	PKhKP	PKPpre	03 29 25.5	
	comp=Z,0.5nm,0.7s,baz=336,slow=2.7,SNR=3.7						
MKAR				PKP	PKPdf	03 29 30.3	+0.9
	comp=Z,0.5nm,0.7s,baz=356,slow=2.3,SNR=5.1						
SONM	Songino Array	146.41	359	PKPbc	PKPab	03 29 39.5	0.0
	comp=Z,3.9nm,0.8s,baz=326,slow=1.7,SNR=26						
SONM	Songino Array	146.41	359	PKPbc	PKPbc	03 29 38.6	+0.2
KSRS	Korea Array	149.44	323	PKPbc	PKiKP	03 29 47.3	-0.4
	comp=Z,1.0nm,0.6s,baz=346,slow=2.9,SNR=4.2						

IDC 25 03:10:53.0±4.8**, 5°.24S**×**137°.81E, h0**^{km}**, mb3.9**/1**, mb1 3.9**/3**, mb1mx3.5**/17**, mbtmp3.7**/3**, ML3.7**/2**, Error ellipse: s-maj=121.9km s-min=34.5km az=110.0, Near south coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.00	193	Pn	Pn	03 14 24.6	-1.8
	0.2nm,0.3s,baz=16,slow=12,SNR=8.1						
WRA				Sn	Sn	03 17 12.7	-0.7
	0.2nm,0.3s,baz=9.3,slow=22,SNR=4.7						
ASAR	Alice Springs	18.70	191	P	Pn	03 15 13.6	+0.2
	0.7nm,0.3s,baz=20,slow=10,SNR=60						
ASAR				S	Sn	03 18 44.6	+1.3
	0.1nm,0.3s,baz=15,slow=21,SNR=2.0						
STKA	Stephens Creek	26.73	173	P	P	03 16 34.4	0.0
	1.6nm,0.8s,baz=343,slow=11,SNR=1.9						

RSNC 25 03:12:51.8±0.8**, 8°.86N**×**77°.98W, h66**^{km}±8^{km}**, ML2.0, 1D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD2	Meteti	0.31	187	⇓eP	Pn	03 13 01.9	-0.7
UPD2				eS	Sn	03 13 10.5	0.0
UPD2				i		03 13 12.6	
	comp=Z,38nm,0.2s						
CAPC	Capurgana	0.66	110	eP	Pn	03 13 04.9	-1.1
CAPC				eS	Sn	03 13 16.2	-0.1
CAPC				i		03 13 18.4	
	comp=Z,73nm,0.2s						
BCIP	Isla Barro Col	1.86	280	eP	Pn	03 13 21.4	-0.1
BCIP				eS	Sn	03 13 43.6	-0.5
BCIP				i		03 13 45.0	
	comp=Z,8.7nm,0.3s						
MOTC	Monteria, Cord	2.29	92	eP	Pn	03 13 26.8	-0.4
MOTC				eS	Sn	03 13 51.6	-2.8
ZARC	Zaragoza, Cauc	3.37	114	eP	Pn	03 13 42.3	+0.2
ZARC				eS	Sn	03 14 20.3	-0.7
ZARC				i		03 14 21.3	
	comp=Z,5.8nm,0.5s						
BRRC	Barranca, Sant	4.57	112	eP	Pn	03 14 00.3	+1.9
ORTC	Ortega, Tolima	5.62	151	eP	Pn	03 14 16.3	+3.4

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*JMA **25** 03:27:31.9±0.5, 24°.93N×122°.50E, h37^{km}, M2.1*
*TAP **25** 03:27:32.1, 24°.88N×122°.42E, h20^{km}±1^{km}, ML2.6, D*
ISC 25 03:27:31.6±1.1**, 24°.89N**±0°.05×**122°.46E**±0°.03**, h24**^{km}±12^{km}**, n28, σ0^{s}.51**/51**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.44	285	iP	Pb	03 27 40.8	-0.1
	baz=287						
TWB1				S	Sb	03 27 46.6	-0.6
	baz=287						
EGS		0.48	265	P	Pb	03 27 41.5	-0.1
	baz=255						
EGS				S	Sb	03 27 47.4	-0.8
	baz=255						
TIPB	Shuangxi	0.58	278	P	Pb	03 27 43.6	+0.4
	baz=279						
TIPB				iS	Sb	03 27 51.3	+0.2
	baz=279						
JYNG	Yonagunijimaku	0.62	135	P	Pb	03 27 43.7	-0.2
JYNG				S	Sb	03 27 52.7	+0.5
TWC	Suao	0.62	243	eP	Pb	03 27 44.0	+0.1
	baz=249						
TWC				eS	Sb	03 27 51.7	-0.5
	baz=249						
NWF	Wu-fen Shan	0.64	286	iP	Pn	03 27 45.1	-0.2
	baz=288						
NWF				iS	Sb	03 27 52.7	-0.1
	baz=288						
WFSB	Wu-fen Shan	0.64	286	P	Pn	03 27 45.1	-0.1
	baz=288						
WFSB				S	Sb	03 27 52.7	-0.1
	baz=288						
YOJ	Yonaguni jima	0.66	130	P	Pb	03 27 44.9	+0.4
YOJ				eS	Sb	03 27 53.8	+0.5
YOJ	Yonaguni jima	0.66	130	P	Pb	03 27 45.1	+0.6
	baz=119						
YOJ				S	Sb	03 27 54.1	+0.9
	baz=119						
TNOU	National Taiwa	0.67	293	eP	Pn	03 27 45.6	-0.1
	baz=294						

TNOU				eS	Sb	03 27 54.2	+0.5
	baz=294						
ENAH	Nanao	0.74	233	eP	Pb	03 27 46.4	+0.6
	baz=232						
ENAH				eS	Sb	03 27 55.0	-0.4
	baz=232						
ENA	Nanau	0.80	235	eP	Pb	03 27 47.1	+0.2
	baz=233						
ENA				eS	Sb	03 27 57.0	-0.3
	baz=233						
TWA	Mucha	0.80	277	eP	Pn	03 27 48.1	+0.7
	baz=277						
TWA				eS	Sb	03 27 57.5	+0.2
	baz=277						
YM08	YM08	0.84	291	eP	Pb	03 27 48.4	+0.8
	baz=291						
YM08				eS	Sn	03 27 59.1	-0.5
	baz=291						
YM01	YM01	0.85	288	eP	Pb	03 27 48.1	+0.4
	baz=288						
YM01				eS	Sb	03 27 58.3	-0.4
	baz=288						
ENTT	Nioudou	0.85	253	eP	Pn	03 27 47.5	-0.6
	baz=240						
ENTT				eS	Sb	03 27 58.7	-0.1
	baz=240						
YM05	YM05	0.86	289	eP	Pb	03 27 48.3	+0.4
	baz=290						
TWY	Chenhua	0.87	296	eP	Pn	03 27 48.1	-0.2
	baz=297						
TWY				eS	Sb	03 27 59.6	+0.4
	baz=297						
NWLT	Wulai	0.88	263	eP	Pb	03 27 48.8	+0.6
	baz=262						
NWLT				eS	Sb	03 27 59.2	-0.4
	baz=262						
NDT	Datong Townshi	0.91	252	eP	Pb	03 27 49.1	+0.4
	baz=251						
NDT				eS	Sb	03 28 00.6	+0.2
	baz=251						
YHNB	Yeheng	1.01	258	eP	Pn	03 27 50.6	+0.2
	baz=243						
YHNB				eS	Sn	03 28 03.7	-0.1
	baz=243						
NSK	Sanguang	1.02	258	eS	Sb	03 28 04.8	+1.0
	baz=243						
NACB	Ninganchiao	1.06	228	eP	Pn	03 27 50.8	-0.2
	baz=236						
NACB				eS	Sn	03 28 04.6	-0.5
	baz=236						
NNSB	Datong	1.08	245	eP	Pb	03 27 51.9	+0.1
	baz=234						
NNSB				eS	Sn	03 28 05.7	0.0
	baz=234						
NNSH	Datong	1.08	245	eP	Pb	03 27 53.1	+1.3
	baz=244						
NNSH				eS	Sn	03 28 05.7	0.0
	baz=244						
NNS	Nan Shan	1.09	246	eS	Sn	03 28 05.6	-0.2
	baz=244						
IRIF	Iriomote-Funau	1.28	115	P	Pn	03 27 52.9	-1.1
WHF	Hehuan Shan	1.32	236	eP	Pb	03 27 56.7	+0.7
	baz=235						

*NEIC **25** 03:30:58.5±1.5, 60°.34N±0°.04×153°.23W±0°.06, h146^{km}±3^{km}, Error ellipse: s-maj=7.3km s-min=2.6km az=146.0*

*AEIC **25** 03:30:59±1.4, 60°.36N±0°.04×153°.2W±0°.1, h139^{km}±4^{km}, ML2.6, ML3.1/52(NEIC), Error ellipse: s-maj=9.4km s-min=5.3km az=102.0*

*IDC **25** 03:30:59.9±2.5, 60°.30N×152°.22W, h103^{km}±29^{km}, mb3.0/1, mb1 3.0/4, mb1mx2.8/36, mbtmp3.0/4, Error ellipse: s-maj=62.7km s-min=11.3km az=102.0*

ISC 25 03:30:58.6±1.1, **60°.35N**±0°.03×**153°.22W**±0°.05, **h146**^{km}±6^{km}, **n96**, σ**0^{s}.93**/101, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RED	Redoubt Volcan	0.23	72		Pn	03 31 18.2	-0.3
RED					Sn	03 31 32.8	-0.9
NCT	North Crescent	0.26	34		Pn	03 31 18.4	-0.2
NCT					Sn	03 31 33.0	-0.9
RSO	Redoubt South	0.26	63		Pn	03 31 18.6	-0.1
IVE	Iliamna Volcan	0.35	163		Pn	03 31 19.1	+0.2
IVE					Sn	03 31 33.9	-0.4
ILS	Iliamna Low So	0.40	169		Pn	03 31 19.3	+0.1
RDT	Redoubt	0.46	60		Pn	03 31 19.2	-0.1
CKL	Chakachamna La	0.95	27		Pn	03 31 23.0	+0.3
SPWE	Spurr West	0.98	19		Pn	03 31 23.3	+0.4
CKT	Bend	0.99	30		Pn	03 31 23.0	+0.1
AUW	Augustine West	0.99	188		Pn	03 31 23.2	+0.4
BGL	Barrier Glacie	1.00	23		Pn	03 31 23.6	+0.5
SPCN	Chakachatna No	1.02	30		Pn	03 31 23.5	+0.4
HOM	Homer	1.05	130		Pn	03 31 23.8	+0.5
HOM					Sn	03 31 42.5	+0.3
SPCP	Crater Peak Br	1.06	29		Pn	03 31 23.9	+0.3
CAPN	Captain Cook N	1.10	67		Pn	03 31 25.2	+1.4
SPCG	Spurr Capps Gl	1.11	31		Pn	03 31 24.2	+0.1
CNPM	China Poot	1.29	129		Pn	03 31 26.0	+0.3
CNPM					Sn	03 31 45.7	-0.7
CNPM	China Poot	1.29	129	IAML		03 31 46.8	
	comp=N,200nm,0.3s						
BRLK	Bradley Lake	1.31	116		Pn	03 31 25.8	0.0
BRLK					Sn	03 31 46.0	-0.7
BRLK	Bradley Lake	1.31	116	IAML		03 31 47.5	
	comp=N,154nm,0.1s						
STLK	Strandline Lak	1.34	30		Pn	03 31 26.4	+0.2
SVW2	Sparrevohn	1.38	304	Pn	Pn	03 31 25.5	-1.1
BRSE	Bradley Lake S	1.38	115		Pn	03 31 26.8	+0.2
BRSE					Sn	03 31 47.0	-0.9
SLKM	Skilak Lake	1.50	83		Pn	03 31 27.1	-0.6
SLKM					Sn	03 31 48.7	-1.4
SUA	Susitna One	1.65	46		Pn	03 31 29.6	+0.1
SUA					Sn	03 31 53.4	+0.2
FIS	Fire Island	1.68	60		Pn	03 31 30.6	+1.0
SKT	Skwentna	1.83	26		Pn	03 31 31.9	+0.4
SKT					Sn	03 31 57.0	+0.4
RC01	Rabbit Creek A	1.87	65		Pn	03 31 31.2	-0.7
RC01					Sn	03 31 56.6	-0.7
SEW	Seward	1.90	96		Pn	03 31 31.7	-0.5
KVTA	Katmai Vly 10	2.24	209		Pn	03 31 36.9	+0.6
KBM	Katmai Bkd Mtn	2.31	207		Pn	03 31 37.6	+0.4
PMR	Palmer	2.35	56		Sn	03 32 05.7	-1.9
PMR	Palmer	2.35	56	Pn	Pn	03 31 37.6	0.0
PWL	Port Wells	2.46	76		Pn	03 31 39.5	+0.5
PWL					Sn	03 32 08.4	-1.7
CUT	Chulitna	2.50	33		Sn	03 32 10.7	-0.3
GHO	Glory Hole Cre	2.53	54		Pn	03 31 38.8	-1.0
KNK	Knik Glacier	2.56	63		Pn	03 31 38.9	-1.3
KNK					Sn	03 32 10.4	-1.9
KNK	Knik Glacier	2.56	63	IAML		03 32 10.8	
	comp=N,44nm,0.4s						
KNK				IAML		03 32 11.2	
	comp=E,41nm,0.3s						
KDAK	Kodiak Island	2.59	172	P	Pn	03 31 39.5	-1.1
	comp=E,0.5nm,0.3s,baz=11,slow=5.2,SNR=1.2						
KDAK				S	Sn	03 32 10.3	-2.6
	comp=E,2.2nm,0.3s,baz=320,slow=22,SNR=29						
KDAK	Kodiak Island	2.59	172	IAML		03 32 39.1	
	comp=E,68nm,4.2s						
KDAK				IAML		03 33 37.2	
	comp=E,83nm,4.2s						
PPLA	Purkeypile	2.60	10	Pn	Pn	03 31 42.4	+1.5
SML	Sawmill	2.79	56		Pn	03 31 41.9	-1.2
SML	Sawmill	2.79	56	IAML		03 32 51.8	
	comp=E,34nm,3.6s						
SML				IAML		03 33 37.5	
	comp=N,40nm,3.8s						
TT01	Tatalina	2.90	334		Pn	03 31 43.5	-0.9
OHAK	Old Harbor	3.14	181		Pn	03 31 47.5	0.0
SCM	Sheep Creek Mo	3.23	60		Pn	03 31 47.9	-0.8
SCM	Sheep Creek Mo	3.23	60	IAML		03 32 25.0	
	comp=E,42nm,4.3s						
SCM				IAML		03 33 52.6	
	comp=N,42nm,4.7s						
WAT7	Susitna Watana	3.25	38		Pn	03 31 49.0	-0.1
HIN	Hinchinbrook I	3.34	86		Pn	03 31 49.9	-0.1
WAT1	Susitna Watana	3.34	40		Pn	03 31 50.0	-0.1
KTH	Kantishna Hill	3.39	18		Sn	03 32 31.6	+0.3
KTH				IAML		03 32 40.8	
	comp=E,20nm,4.6s						
KTH	Kantishna Hill	3.39	18		Pn	03 31 51.0	+0.1
TRF	Thorofare Moun	3.41	23		Sn	03 32 31.3	-0.4
TRF				IAML		03 33 06.5	
	comp=N,21nm,4.1s						
TRF				IAML		03 33 13.1	
	comp=E,27nm,4.0s						
TRF	Thorofare Moun	3.41	23		Pn	03 31 51.2	+0.1
WAT2	Susitna Watana	3.43	38		Pn	03 31 51.1	-0.2
WAT6	Susitna Watana	3.45	47		Pn	03 31 50.9	-0.7
RND	Reindeer	3.70	32		Pn	03 31 53.8	-1.0
RND	Reindeer	3.70	32	IAML		03 32 49.2	
	comp=N,19nm,4.5s						
DIV	Divide	3.74	75		Pn	03 31 54.0	-1.3
KLU	Klutina	3.74	69		Sn	03 32 38.7	-0.6
KLU				IAML		03 33 21.0	
	comp=E,22nm,4.4s						
KLU				IAML		03 34 12.1	
	comp=N,26nm,3.9s						
KLU	Klutina	3.74	69		Pn	03 31 54.5	-0.9
M24K	Tolsona, Glenn	3.83	60		Pn	03 31 56.1	-0.4
DHY	Denali Highway	3.90	43		Sn	03 32 41.8	-1.4
DHY				IAML		03 32 44.0	
	comp=N,22nm,4.2s						
DHY				IAML		03 33 54.1	
	comp=E,20nm,4.4s						
DHY	Denali Highway	3.90	43		Pn	03 31 57.0	-0.4
GOAT	Goat Mountain	4.21	83		Pn	03 32 01.5	0.0
BMRM	Bremner River	4.28	78		Pn	03 32 02.1	-0.3
N25K	Chitina, Valde	4.38	70		Pn	03 32 03.9	+0.1
N25K	Chitina, Valde	4.38	70	IAML		03 33 11.9	
	comp=E,20nm,3.7s						
N25K				IAML		03 33 59.4	
	comp=N,26nm,4.6s						
PAX	Paxson	4.53	51	Pn	Pn	03 32 05.8	+0.1
GLB	Gilahina Butte	4.72	73		Pn	03 32 08.5	+0.3
GLB	Gilahina Butte	4.72	73	IAML		03 33 09.4	
	comp=N,22nm,4.8s						
GLB				IAML		03 34 52.6	
	comp=E,20nm,4.3s						
WRH	Wood River Hil	4.78	28	Pn	Pn	03 32 09.5	+0.7
WRH				IAML		03 34 04.6	
	comp=E,21nm,4.7s						
WRH				IAML		03 35 13.6	
	comp=N,12nm,4.7s						
VRDI	Verde Repeater	4.87	75		Pn	03 32 10.3	0.0
CCB	Clear Creek Bu	4.99	28		Pn	03 32 11.8	+0.2
CCB	Clear Creek Bu	4.99	28	IAML		03 34 00.3	
	comp=E,12nm,4.2s						
CCB				IAML		03 34 15.4	
	comp=N,15nm,4.2s						
CRQM	Cirque	4.99	81		Pn	03 32 12.0	+0.1
MCARA	McCarthy VSAT	5.09	74	Pn	Pn	03 32 14.4	+1.3
IL31		5.32	31		Sn	03 33 15.1	-1.2
IL31		5.32	31		Pn	03 32 15.9	0.0
ILAR	Eielson Array	5.32	31	P	Pn	03 32 15.3	-0.7
	comp=N,0.1nm,0.3s,baz=216,slow=12,SNR=11						
ILAR				S	Sn	03 33 11.3	-5.1
	comp=N,0.3nm,0.3s,baz=194,slow=20,SNR=1.7						
PTPK	Patty Peak	5.34	76		Pn	03 32 17.1	+0.6
KIAG	Kiagna River	5.38	79		Pn	03 32 16.9	-0.1
BALM	Baldy	5.39	78	Pn	Pn	03 32 17.6	+0.5
DOT	Dot Lake	5.44	49	Pn	Pn	03 32 17.9	+0.3
IM03		5.66	358		Pn	03 32 20.9	+0.4
GRNC	Granite Creek	5.67	81		Pn	03 32 21.3	+0.3
YAH	Yahtse	5.70	85	Pn	Pn	03 32 21.2	-0.1
BARN	Barnard Glacie	5.72	78		Pn	03 32 22.2	+0.6
LOGN	Logan Glacier	6.04	80		Pn	03 32 26.6	+0.8
YUK2	White River	6.18	71		Pn	03 32 28.2	+0.6
PRP	Porcupine Dome	6.26	31	Pn	Pn	03 32 29.1	+0.4
YUK3	Moose Creek	6.36	71		Pn	03 32 30.8	+0.8
PCA	Pinnacle	6.46	87		Pn	03 32 32.2	+0.8
PNL	Peninsula	6.96	90		Pn	03 32 38.5	+0.4
YKA	Yellowknife Ar	18.41	67	P	P	03 35 03.4	+1.2
	comp=N,0.0nm,0.3s,baz=280,slow=9.3,SNR=7.2						
PDAR	Pinedale Array	31.58	104	P	P	03 37 08.3	+0.9
	comp=N,0.4nm,0.9s,baz=307,slow=11,SNR=2.3						
PDAR				pP	pP	03 37 28.1	-10
	comp=N,0.4nm,0.8s,baz=261,slow=6.8,SNR=4.8						

*IDC **25** 03:36:29.5±1.7, 2°.33N×127°.18E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/24, mbtmp3.8/3, Error ellipse: s-maj=141.4km s-min=23.4km az=66.0*

*DJA **25** 03:36:36.3±2.2, 2°N±5°×12°7E±°, h15^{km}±23^{km}, M3.9/8, mb4.1/2, MLv3.9/8*

ISC 25 03:36:31.3±1.4, **2°.3N**±0°.1×**127°.1E**±0°.2, **h10**^{km}, **n9**, σ**0^{s}.60**/9, **mb3.9**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.52	169	P	Pg	03 37 00.8	+0.4
SGSI	Sangihe	2.09	312	P	Pg	03 37 11.7	+0.3
KMSI	Cibinong	3.52	241	P	Pn	03 37 20.2	-5.9
GTOI	Gorontalo	4.37	248	P	Pn	03 37 37.8	0.0
SANI	Sanana	4.43	194	P	Pn	03 37 38.5	-0.1
MRSI	Marisa	5.43	251	P	Pn	03 37 52.2	-0.2
WRA	Warramunga Arr	23.20	162	P	P	03 41 37.4	-1.1
	1.6nm,0.4s,baz=343,slow=11,SNR=26						
ASAR	Alice Springs	26.62	166	P	P	03 42 10.6	+0.4
	0.3nm,0.3s,baz=348,slow=13,SNR=9.7						
ASAR				PcP	PcP	03 45 35.1	+0.6
	0.4nm,0.7s,baz=350,slow=2.5,SNR=5.9						
MKAR	Makanchi Array	58.94	326	P	P	03 46 30.6	-0.3
	0.4nm,0.4s,baz=119,slow=8.0,SNR=13						

*IDC **25** 03:55:45.0±2.1, 31°.24S×178°.76W, h85^{km}±22^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.7/33, mbtmp4.1/5, MS3.4/1, Ms1 3.3/1, ms1mx2.8/23, Error ellipse: s-maj=49.4km s-min=18.2km az=118.0*

ISC 25 03:55:43.6±1.1, **31°.10S**±0°.08×**179°.3W**±0°.2, **h35**^{km}, **n45**, σ**2^{s}.26**/58, **mb3.8**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.18	32	P	Pn	03 56 18.4	+1.1
	358nm,0.3s,baz=33,slow=23,SNR=5.2						
MXZ	Matakaoa Point	6.75	197	P	Pn	03 57 22.8	+2.7
MXZ				S	Sn	03 58 36.0	+0.2
WMGZ	Waiomatatini S	6.97	195	P	Pn	03 57 26.3	+3.1
WMGZ				S	Sn	03 58 40.8	-0.4
HAZ	Te Kaha	7.07	199	P	Pn	03 57 28.8	+4.2
HAZ				S	Sn	03 58 46.1	+2.4
PKGZ	Pakihiroa	7.12	197	P	Pn	03 57 28.0	+2.8
PKGZ				S	Sn	03 58 43.7	-1.2
PUZ	Puketiti	7.25	196	P	Pn	03 57 29.5	+2.5
PUZ				S	Sn	03 58 46.1	-2.0
RUGZ	Raukumara Rang	7.30	199	P	Pn	03 57 31.5	+3.8
RUGZ				S	Sn	03 58 48.2	-1.3
TWGZ	Tauwhareparae	7.42	197	P	Pn	03 57 32.5	+3.2
TWGZ				S	Sn	03 58 52.3	+0.1
CNGZ	Carnagh Statio	7.65	195	P	Pn	03 57 35.2	+2.7
CNGZ				S	Sn	03 58 53.0	-5.0
MWZ	Matawai	7.69	199	P	Pn	03 57 35.6	+2.6
MWZ				S	Sn	03 58 56.8	-2.0
TKGZ	Te Karaka	7.70	197	P	Pn	03 57 39.3	+6.1
TKGZ				S	Sn	03 58 58.2	-0.9
URZ	Urewera	7.74	202	P	Pn	03 57 36.6	+2.8
	2.5nm,0.3s,baz=274,slow=4.2,SNR=14						
URZ				S	Sn	03 59 01.3	+1.1
	2.2nm,0.3s,baz=6.4,slow=21,SNR=9.2						
URZ	Urewera	7.74	202	P	Pn	03 57 36.7	+3.0
URZ				S	Sn	03 59 00.9	+0.7
MUGZ	Murupara	8.05	203	P	Pn	03 57 43.6	+5.6
RTZ	Ruatahuna	8.11	201	P	Pn	03 57 40.9	+2.1
RAHZ	Arahi	8.35	200	P	Pn	03 57 43.6	+1.5
RAHZ				S	Sn	03 59 14.0	-1.2
ARHZ	Aropaoanui	8.70	200	P	Pn	03 57 48.3	+1.4
ARHZ				S	Sn	03 59 21.0	-2.7
BKZ	Black Stump Fm	8.77	202	P	Pn	03 57 49.6	+1.8
MCHZ	McNeill Hill	8.96	201	P	Pn	03 57 54.0	+3.6
MCHZ				S	Sn	03 59 29.4	-0.6
TMVZ	Te Maari	9.00	206	P	Pn	03 57 55.7	+4.7
OTVZ	Oturere	9.05	206	P	Pn	03 57 53.6	+1.7
BHHZ	Black Hill Sta	9.20	203	P	Pn	03 57 56.8	+3.0
KRHZ	Kereru	9.24	202	P	Pn	03 57 54.9	+0.6
PNHZ	Pukenui	9.54	202	P	Pn	03 58 01.5	+3.1
TSZ	Takapari Road	9.75	202	P	Pn	03 58 04.3	+3.0
KIW	Kapiti Island	10.82	204	P	Pn	03 58 14.0	-1.9
CAW	Cannon Point	10.99	203	P	Pn	03 58 16.1	-2.1
DUWZ	D'Urville Isla	11.14	208	P	Pn	03 58 21.2	+0.8
MSWZ	Moikau Station	11.21	202	P	Pn	03 58 21.4	+0.2
WEL	Wellington	11.25	204	P	Pn	03 58 21.9	+0.2
BHW	Baring Head	11.32	203	P	Pn	03 58 21.2	-1.6
PLWZ	Palliser	11.34	201	P	Pn	03 58 21.4	-1.7
TCW	Tory Channel	11.36	206	P	Pn	03 58 23.2	0.0
TUWZ	Tuamarina	11.67	206	P	Pn	03 58 26.5	-1.1
NNZ	Nelson	11.71	208	P	Pn	03 58 28.4	+0.3
QRZ	Quartz Range	11.76	212	P	Pn	03 58 30.4	+1.6
THZ	Tophouse	12.36	208	P	Pn	03 58 35.4	-1.7
KHZ	Kahutara	12.68	205	P	Pn	03 58 39.9	-1.4
DSZ	Denniston Nort	12.82	212	P	Pn	03 58 44.8	+1.4
LTZ	Lake Taylor	13.47	208	P	Pn	03 58 50.4	-1.8
STKA	Stephens Creek	33.28	258	P	P	04 02 18.8	+1.0
	0.9nm,0.6s,baz=90,slow=15,SNR=2.9						
STKA				LR	LR	04 15 55.9	
	comp=Z,62nm,18.3s,baz=210,slow=36						
ASAR	Alice Springs	42.01	268	P	P	04 03 31.2	-0.5
	0.6nm,0.4s,baz=110,slow=7.5,SNR=15						
WRA	Warramunga Arr	43.06	274	P	P	04 03 39.9	-0.4
	1.4nm,0.4s,baz=112,slow=8.0,SNR=28						
FINES	FINESS Array B	145.42	339	PKPbc	PKPdf	04 15 13.2	-3.9
	1.6nm,0.8s,baz=47,slow=2.1,SNR=9.3						
BRTR	Keskin Array B	151.97	297	PKPbc	PKPdf	04 15 29.9	+1.3
	0.2nm,0.4s,baz=156,slow=4.0,SNR=1.7						

*IDC **25** 04:02:21.5±30.0, 15°.14N×123°.46E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.4/43, mbtmp3.7/4, Error ellipse: s-maj=537.0km s-min=157.7km az=156.0*

*MAN **25** 04:03:57.6, 5°.58N×126°.49E, h32^{km}, mb4.6, ML3.5, MS3.3*

ISC 25 04:03:53.2±2.3, **5°.40N**±0°.09×**126°.6E**±0°.1, **h27**^{km}±18^{km}, **n9**, σ**1^{s}.90**/13, **mb3.4**/4, **1C**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.14	308	eP	Pb	04 04 15.0	+0.7
DDMP				eS	Sn	04 04 26.4	-1.8
MATI	Mati	1.57	347	eP	Pn	04 04 19.9	+0.5
MATI				eS	Sb	04 04 39.9	-1.3
KCP	Kidapawan	2.20	317⇑	eP	Pn	04 04 30.3	+2.2
KCP				iS	Sb	04 04 57.9	-1.4
SKMP	Bagumbayan, Su	2.34	298	eP	Pn	04 04 31.7	+1.7
SKMP				eS	Sb	04 05 01.7	-1.6
BUKP	Musuan	2.90	328	eP	Pn	04 04 39.9	+2.1
BUKP				eS	Sn	04 05 12.1	+0.3
FITZ	Fitzroy Crossi	23.37	182	P	P	04 09 00.4	+0.5
	1.5nm,0.7s,baz=4.5,slow=10,SNR=2.0						
WRA	Warramunga Arr	26.31	163	P	P	04 09 29.3	+2.4
	0.2nm,0.4s,baz=342,slow=10,SNR=6.3						
ASAR	Alice Springs	29.76	166	P	P	04 09 55.6	-2.0
	0.2nm,0.5s,baz=343,slow=7.2,SNR=7.1						
STKA	Stephens Creek	39.73	160	P	P	04 11 16.6	-7.0
	0.9nm,0.4s,baz=325,slow=12,SNR=3.1						

MAN 25 04:08:08.9, 9°.82N×124°.16E, h2^{km}, mb4.5, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.53	339⇑	eP	Pg	04 08 18.7	-0.3
LLP				eS	Sg	04 08 26.1	+0.2
MSLP	Maasin	0.76	66	eP	Pb	04 08 24.3	-0.5
CGP	Cagayan de Oro	1.46	159⇓	eP	Pn	04 08 26.6	-10
CGP				eS	Sn	04 08 58.6	+2.7
CNOP	Candoni, Negro	1.50	270	eP	Pn	04 08 36.3	-0.4
CNOP				eS	Sg	04 08 58.2	+1.3
GLSP	General Luna,	1.94	91	eP	Pn	04 08 43.1	+0.2
PAGZ	Pagadian	2.10	201	eP	Pn	04 08 45.3	+0.2
PAGZ				eS	Sn	04 09 08.3	-3.6
BUKP	Musuan	2.13	155	eP	Pn	04 08 46.2	+0.7
BUKP				eS	Sg	04 09 16.7	-0.6

IDC 25 04:09:04.4±1.6, **2°.28N**×**127°.87E**, **h0**^{km}, **mb3.3**/4, **mb1 3.7**/5, **mb1mx3.4**/37, **mbtmp3.5**/5, **ML4.6**/1, **Error ellipse: s-maj=69.3km s-min=23.7km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.62	133	Pn	Pn	04 10 14.9	-0.6
	31nm,0.3s,baz=334,slow=11,SNR=67						
SIJI				Sn	Sn	04 11 03.0	-6.9
	1.2nm,0.3s,baz=198,slow=23,SNR=1.8						
FITZ	Fitzroy Crossi	20.37	186	P	P	04 13 42.3	-0.5
	6.0nm,1.2s,baz=27,slow=14,SNR=3.9						
WRA	Warramunga Arr	22.98	164	P	P	04 14 11.3	+0.5
	0.4nm,0.5s,baz=343,slow=10.0,SNR=2.7						
ASAR	Alice Springs	26.45	168	P	P	04 14 43.0	-0.3
	0.2nm,0.6s,baz=351,slow=7.3,SNR=5.8						
MKAR	Makanchi Array	59.39	325	P	P	04 19 09.0	+0.3
	0.1nm,0.4s,baz=115,slow=8.2,SNR=5.9						

*NIED **25** 04:31:24.1, 38°.51N×144°.57E, h37^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.47; M$_{\theta\theta}$-0.05; M$_{\phi\phi}$1.52; M$_{r\theta}$0.61; M$_{\theta\phi}$0.33; M$_{\phi r}$1.91; Fault plane solution: M$_0$2.52000×10^{14} NP1: φ$_s$196.00000°, δ71.00000°, λ-87.00000°. NP2:φ$_s$6.00000°, δ19.00000°, λ-100.00000°.*

JMA 25 04:31:24.0±0.1, **38°.51N**×**144°.57E**, **h37**^{km}, **M3.6**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.34	285	P	Pn	04 32 01.4	+1.6
OFUJ				eS	Sn	04 32 29.0	+1.7
MIYJ	Miyakonagasawa	2.39	297	P	Pn	04 32 01.9	+1.3
MIYJ				eS	Sn	04 32 30.0	+1.4
JKMT	Kesennumamotoy	2.44	278	P	Pn	04 32 02.9	+1.6
JIKH	Ishinomakikobu	2.45	266	P	Pn	04 32 02.9	+1.6
JIKH				S	Sn	04 32 31.8	+1.8
JMK	Ichinoseki	2.66	281	P	Pn	04 32 06.3	+2.1
JMK				eS	Sn	04 32 37.4	+2.2
JOM	Ohasama	2.73	292	P	Pn	04 32 07.2	+2.0
JOM				S	Sn	04 32 39.2	+2.2
JYK	Kaneyama	3.32	278	P	Pn	04 32 16.1	+2.8
JYK				eS	Sn	04 32 55.0	+3.5
JFT	Otama	3.49	255	P	Pn	04 32 18.3	+2.6
JFT				eS	Sn	04 32 58.3	+2.6
JOT	Ohata	3.94	318	P	Pn	04 32 24.2	+2.3
JCH	Churui	4.20	348	P	Pn	04 32 25.5	+0.1
JCH				eS	Sn	04 33 11.2	-2.0
JKB	Kayabe	4.33	322	P	Pn	04 32 30.1	+3.0
BSO1	Boso 1	4.81	218	eS	Sn	04 33 28.7	+1.1
NEM2	Nemuro 2	4.93	10	P	Pn	04 32 32.9	-2.5
NEM2				eS	Sn	04 33 25.0	-6.2
JRY	Ryogami san	5.16	243	P	Pn	04 32 40.3	+1.6
JRY				eS	Sn	04 33 36.6	-0.4

KRSC 25 04:40:46.9±0.9, **51°.41N**×**158°.18E**, **h64**^{km}±10^{km}, **ML3.8**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	0.41	351	eP	Pn	04 41 00.0	+1.7
KDTR				eS	Sn	04 41 08.1	+1.6
PAU	Pauzhetka	0.86	275	eP	Pn	04 41 05.3	+2.0
PAU				eS	Sn	04 41 17.0	+1.7
RUS	Russkaya	1.05	11	eP	Pn	04 41 07.0	+1.3
RUS				eS	Sn	04 41 20.5	+0.8
MTVR	Mutnovka	1.08	0	eP	Pn	04 41 07.9	+1.6
MTVR				eS	Sn	04 41 21.8	+1.2
GRL	Gorelyy	1.15	357	iP	Pn	04 41 08.9	+1.7
GRL				eS	Sn	04 41 24.1	+1.9
KRMR	Karymshinskiy	1.43	359	eS	Sn	04 41 31.8	+3.2
SKR	Severo-Kuril's	1.49	242	eS	Sn	04 41 31.3	+1.3
PET	Petropavlovsk	1.65	10	iP	Pn	04 41 15.4	+1.8
PET				eS	Sn	04 41 35.1	+1.3
DALK	Dalny	1.67	12	eP	Pn	04 41 15.7	+1.8
DALK				eS	Sn	04 41 35.5	+1.2
UGLR	Uglovaya	1.85	12	eP	Pn	04 41 18.9	+2.4
AVH	Avacha	1.90	10	eP	Pn	04 41 19.8	+2.7
AVH				eS	Sn	04 41 43.4	+3.5
SMAR	Somma	1.90	11	eP	Pn	04 41 19.4	+2.1
KOK	Koryaka	1.91	8	eP	Pn	04 41 20.3	+3.0
KRER	Koryakskii	1.93	10	iP	Pn	04 41 20.2	+2.5
KRX	Arik	1.98	8	eP	Pn	04 41 21.0	+2.7
KRX				eS	Sn	04 41 44.2	+2.1
SPN	Mys Shipunski	2.04	33	eP	Pn	04 41 21.3	+2.4
SPN				eS	Sn	04 41 45.0	+1.7
GNL	Ganaly	2.30	357	eP	Pn	04 41 25.2	+2.6
KBTR	Krutoberegovo	5.54	28	P	Pn	04 42 10.2	+3.5

*IDC **25** 04:45:39.3±0.7, 0°.72N×29°.76W, h0^{km}, mb4.0/14, mb1 4.2/15, mb1mx4.0/49, mbtmp4.0/15, ML4.4/1, MS3.7/11, Ms1 3.7/11, ms1mx3.5/27, Error ellipse: s-maj=25.9km s-min=14.8km az=149.0*

*NEIC **25** 04:45:40.7±1.2, 0°.62N±0°.08×29°.67W±0°.10, h10^{km}±1^{km}, mb4.3/18, Error ellipse: s-maj=21.2km s-min=4.1km az=129.0*

ISC 25 04:45:40.8±0.5, **0°.68N**±0°.08×**29°.77W**±0°.07, **h10^{km}, n70, σ1^{s}29**/54, **mb4.1**/21, **MS3.7**/10, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	8.90	223	Pn	Pn	04 47 49.1	-0.6
	3.9nm,0.3s,baz=228,slow=23,SNR=39						
RCBR				Sn	Sn	04 49 24.2	-5.9
	0.9nm,0.3s,baz=152,slow=23,SNR=1.2						
RCBR				LR	LR	04 50 42.3	
	comp=Z,454nm,18.5s,baz=319,slow=34						
RCBR	Riachuelo	8.90	223		Pn	04 47 49.7	0.0
RCBR	Riachuelo	8.90	223	*e*P	Pn	04 47 49.5	-0.2
NBPA	Parau_RN	9.72	229	*e*P	Pn	04 48 00.2	-0.6
NBRF	Rio Formoso -	10.72	210	*e*P	Pn	04 48 14.7	+0.1
NBMO	Morrinhos-CE	11.00	249	*e*P	Pn	04 48 16.6	-1.9
ROSB	Rosrio	14.78	256	*e*P	Pn	04 49 09.5	-0.6
SACV	Santiago Islan	15.45	23	Pn	Pn	04 49 16.7	-2.4
GDU01	Guandu, BA	17.29	214	*e*P	P	04 49 44.0	0.0
H10N3	ASCENSION HYDR	17.42	119	T	T	05 07 49.5	
	baz=299,slow=75,SNR=1365						
H10N2	ASCENSION HYDR	17.43	119	T	T	05 07 50.0	
	baz=299,slow=75,SNR=1227						
H10N1	ASCENSION HYDR	17.44	119	T	T	05 07 51.1	
	baz=299,slow=75,SNR=1594						
H10S3	ASCENSION HYDR	17.83	123	T	T	05 08 21.1	
	baz=301,slow=74,SNR=860						
H10S2	ASCENSION HYDR	17.85	123	T	T	05 08 22.4	
	baz=279,slow=74,SNR=294						
TMAB	Tom-Au,PA,Br	18.57	261	*e*P	Pn	04 49 59.1	+0.7
MBO	M'Bour	18.61	42	P	P	04 49 56.2	-2.3
SMTB	Santa Maria do	20.12	242	*e*P	P	04 50 15.9	+0.7
NAN01	Guarapari, ES	21.04	208	*e*P	P	04 50 26.8	+1.7
PRPB	Parauapebas	21.14	251	*e*P	P	04 50 26.3	+0.2
JANB	Januaria	21.24	222	*e*P	P	04 50 27.8	+0.5
MDP	Montagnes des	23.25	281	LR	LR	04 59 05.6	
	comp=Z,37nm,19.0s,baz=119,slow=35						
BDFB	Brasilia	24.25	227	P	P	04 50 58.1	-0.3
	3.7nm,0.8s,baz=60,slow=8.0,SNR=7.9						
BDFB				LR	LR	04 59 32.7	
	comp=Z,158nm,20.1s,baz=105,slow=34						
BDFB	Brasilia	24.25	227	IAmb	IAmb	04 50 59.9	
	comp=Z,4.1nm,0.8s						
LIC	Lamto	25.30	77	*e*P	P	04 51 09.0	+1.2
	comp=Z,1.4nm,0.3s						
TIC	Toumodi	25.39	76	*e*P	P	04 51 11.4	+2.7
DBIC	Dimbokro	25.55	76	P	P	04 51 09.9	-0.3
	comp=Z,11nm,0.8s,baz=250,slow=12,SNR=8.2						
DBIC	Dimbokro	25.55	76	P	P	04 51 09.3	-0.9
KIC	Kosan Boka	25.60	77	*e*P	P	04 51 11.3	+0.7
	comp=Z,26nm,1.0s						
ITTB	Itaituba	26.42	259	*e*P	P	04 51 18.8	+0.7
NPGB	Novo Progresso	26.66	253	*e*P	P	04 51 21.2	+1.0
ARAG	Araguaiana, MT	27.19	232	*e*P	P	04 51 25.7	+0.8
SHEL	Horse Pasture	28.91	126	P	P	04 51 39.1	-1.3
KOWA	Kowa	28.93	60	P	P	04 51 40.9	+0.4
	comp=Z,1.6nm,0.8s,baz=214,slow=3.6,SNR=4.0						
KOWA				LR	LR	05 01 52.5	
	comp=Z,168nm,18.4s,baz=222,slow=34						
KOWA	Kowa	28.93	60	IAmb	IAmb	04 51 55.0	
	comp=Z,7.4nm,1.3s						
PCMB	Pacaembu	30.51	222	*e*P	P	04 51 55.2	+0.7
AQDB	Aquidauana	32.96	229	*e*P	P	04 52 17.2	+1.2
TORD	Torodi Ar. Bea	33.54	67	P	P	04 52 20.0	-1.2
	comp=Z,1.1nm,0.7s,baz=244,slow=9.0,SNR=4.2						
TORD				LR	LR	05 03 37.2	
	comp=Z,76nm,20.2s,baz=330,slow=32						
TORD	Torodi Ar. Bea	33.54	67	IAmb	IAmb	04 52 24.8	
	comp=Z,1.7nm,1.1s						
H05S1	Guadeloupe/Mar	33.62	295	T	T	05 27 33.2	
	SNR=20						
H05N1	Guadeloupe/Mar	34.53	298	T	T	05 28 34.3	
	SNR=5.7						
SAML	Samuel	34.63	253	P	P	04 52 31.4	+0.8
SAML				IAmb	IAmb	04 52 32.9	
	comp=Z,3.6nm,0.9s						
SAML	Samuel	34.63	253	*e*P	P	04 52 29.5	-1.1
CPUP	Villa Florida	37.78	223	P	P	04 52 57.8	+0.4
	comp=Z,2.0nm,0.8s,baz=44,slow=9.0,SNR=5.8						
CPUP				LR	LR	05 08 15.0	
	comp=Z,279nm,19.1s,baz=63,slow=36						
CPUP	Villa Florida	37.78	223	IAmb	IAmb	04 52 60.0	
	comp=Z,2.8nm,0.9s						
SDV	Santo Domingo	41.49	283	P	P	04 53 29.6	+0.9
	comp=Z,1.9nm,0.5s,baz=306,slow=14,SNR=3.7						
SDV	Santo Domingo	41.49	283	P	P	04 53 29.2	+0.5
SDV				IAmb	IAmb	04 53 44.9	
	comp=Z,5.9nm,0.9s						
SDV	Santo Domingo	41.49	283	*e*P	P	04 53 29.4	+0.6
PB16	IPOC Station P	43.39	242	P	P	04 53 44.6	0.0
PB16				IAmb	IAmb	04 53 48.0	
	comp=Z,4.2nm,1.2s						
CZSB	Cruzeiro do Su	43.62	258	*e*P	P	04 53 46.6	+0.7
PB15	IPOC Station P	45.31	236	P	P	04 53 59.3	-0.2
PB15				IAmb	IAmb	04 54 00.6	
	comp=Z,8.5nm,1.0s						
ESDC	Sonseca Array	45.39	28	P	P	04 53 59.8	+0.1
	comp=Z,1.1nm,0.8s,baz=225,slow=8.3,SNR=7.8						
GO02	Mina Guanaco	46.29	233	P	P	04 54 08.0	+0.6
KEST	Kesra	50.35	42	LR	LR	05 15 16.8	
	comp=Z,129nm,20.7s,baz=298,slow=35						
TSUM	Tsumeb	50.48	116	P	P	04 54 40.0	+0.4
TSUM				IAmb	IAmb	04 54 43.0	
	comp=Z,4.6nm,1.2s						
PLCA	Paso Flores	55.41	217	LR	LR	05 20 34.1	
	comp=Z,72nm,18.1s,baz=128,slow=38						
BIRD	Birdtown, Kers	58.07	311	P	P	04 55 36.1	+1.6
BOSA	Boshof	60.11	124	P	P	04 55 49.8	+0.8
	comp=Z,5.7nm,1.0s,baz=320,slow=3.9,SNR=6.1						
BOSA				LR	LR	05 18 00.9	
	comp=Z,50nm,18.4s,baz=204,slow=32						
GERES	GERESS Array B	60.78	31	P	P	04 55 52.6	-0.5
	comp=Z,0.8nm,0.8s,baz=223,slow=5.5,SNR=6.9						
PSZ	Piszkesteto	63.64	35	P	P	04 56 12.1	-0.2
MLR	Muntele Rosu	66.14	39	P	P	04 56 27.2	-1.5
	comp=Z,2.0nm,1.0s,baz=177,slow=18,SNR=3.2						
MLR	Muntele Rosu	66.14	39	IAmb	IAmb	04 56 41.1	
	comp=Z,5.5nm,1.2s						
NOA	NORSAR Array B	67.81	20	LR	LR	05 23 42.5	
	comp=Z,52nm,18.5s,baz=315,slow=34						
BRTR	Keskin Array B	69.35	47	P	P	04 56 49.4	+0.3
	comp=Z,0.6nm,0.9s,baz=260,slow=5.0,SNR=2.7						
AKASG	Malin Array Be	70.33	35	P	P	04 56 55.0	+0.3
	comp=Z,1.2nm,0.7s,baz=244,slow=6.9,SNR=3.0						
ULM	Lac du Bonnet	74.39	322	LR	LR	05 24 16.8	
	comp=Z,51nm,19.3s,baz=86,slow=31						
TXAR	Lajitas Array	75.65	300	P	P	04 57 27.4	+0.6
	comp=Z,0.6nm,1.0s,baz=112,slow=7.1,SNR=3.4						
TXAR	Lajitas Array	75.65	300	P	P	04 57 28.0	+1.2
PDAR	Pinedale Array	82.04	313	P	P	04 58 01.4	-0.5
	comp=Z,0.1nm,0.4s,baz=83,slow=2.8,SNR=2.7						
PDAR	Pinedale Array	82.04	313	P	P	04 58 02.3	+0.4
YKA	Yellowknife Ar	87.01	332	P	P	04 58 25.9	-0.3
	comp=Z,0.2nm,1.0s,baz=84,slow=5.9,SNR=1.5						

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*IDC **25** 05:40:59.5±1.2, 10°.73N×40°.88W, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.8/41, mbtmp3.9/10, ML4.2/1, MS3.3/6, Ms1 3.3/6, ms1mx3.1/28, Error ellipse: s-maj=39.1km s-min=21.3km az=14.0*

ISC 25 05:41:01.1±0.7, **10°.7N**±0°.2×**40°.9W**±0°.1, **h10^{km}, n22, σ0^{s}53**/14, **mb4.0**/9, **MS3.2**/5, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDP	Montagnes des	12.92	245	Pn	Pn	05 44 04.8	-0.2
	1.3nm,0.3s,baz=60,slow=12,SNR=24						
MDP				LR	LR	05 48 07.5	
	comp=Z,87nm,21.7s,baz=130,slow=33						
PTGA	Pitinga	22.14	240	LR	LR	05 53 31.2	
	comp=Z,85nm,21.9s,baz=62,slow=34						
SJG	San Juan	25.54	290	LR	LR	05 54 18.7	
	comp=Z,61nm,21.3s,baz=108,slow=31						
H10N3	ASCENSION HYDR	32.07	124	T	T	06 21 04.3	
	baz=304,slow=76,SNR=6.1						
H10N2	ASCENSION HYDR	32.08	124	T	T	06 21 04.3	
	baz=304,slow=76,SNR=7.1						
H10N1	ASCENSION HYDR	32.09	124	T	T	06 21 04.3	
	baz=304,slow=76,SNR=10						
ROSC	El Rosal	33.63	263	LR	LR	06 01 47.6	
	comp=Z,73nm,18.3s,baz=57,slow=37						
DBIC	Dimbokro	35.81	93	P	P	05 48 00.6	-0.5
	3.5nm,0.7s,baz=257,slow=9.9,SNR=4.7						
CPUP	Villa Florida	40.15	203	LR	LR	06 05 29.3	
	comp=Z,35nm,19.4s,baz=88,slow=37						
TORD	Torodi Ar. Bea	41.68	82	P	P	05 48 50.1	-0.2
	2.5nm,0.8s,baz=279,slow=8.0,SNR=7.2						
TXAR	Lajitas Array	61.16	298	P	P	05 51 16.6	+0.2
	0.2nm,0.7s,baz=104,slow=7.5,SNR=2.2						
TSUM	Tsumeb	64.82	117	P	P	05 51 41.0	+0.1
	1.3nm,0.5s,baz=315,slow=7.5,SNR=4.1						
PDAR	Pinedale Array	67.17	312	LR	LR	06 17 58.1	
	comp=Z,37nm,21.0s,baz=43,slow=33						
AKASG	Malin Array Be	69.19	40	P	P	05 52 08.2	+0.2
	0.4nm,0.3s,baz=258,slow=5.6,SNR=3.1						
FINES	FINESS Array B	69.70	28	P	P	05 52 11.2	+0.3
	1.6nm,0.6s,baz=257,slow=7.6,SNR=8.1						
BRTR	Keskin Array B	71.33	52	P	P	05 52 21.9	+0.3
	0.3nm,0.7s,baz=248,slow=2.3,SNR=2.1						
YKA	Yellowknife Ar	73.06	332	P	P	05 52 30.4	-0.8
	0.4nm,0.6s,baz=100,slow=6.5,SNR=16						
VNA1	Neumayer--Stat	84.16	170	P	P	05 53 33.3	+1.3
VNA3	Neumayer Olymp	84.43	170	P	P	05 53 33.6	+0.1
VNA2	Neumayer--Watz	84.55	170	P	P	05 53 33.9	-0.1
	baz=301,slow=6.8						
SNAA	Sanae	86.00	169	P	P	05 53 41.2	-0.2
ILAR	Eielson Array	87.09	336	P	P	05 53 47.2	+0.2
	1.1nm,1.0s,baz=63,slow=4.2,SNR=2.4						

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*UPA **25** 06:08:04.9±0.3, 8°.88N×84°.05W, h0^{km}±2^{km}, MW4.3*

*UCR **25** 06:08:05.8±2.0, 8°.81N×84°.11W, h10^{km}, MW4.0*

ISC 25 06:08:05.1±1.6, **8°.84N**±0°.05×**84°.10W**±0°.05, **h9^{km}**±11^{km}, **n27, σ0^{s}53**/40, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDDO	Dominical	0.48	30	*e*P	Pg	06 08 14.5	+0.1
EDDO				*e*S	Sb	06 08 22.1	-0.8
RIOS	Rincon, Osa	0.60	103	*e*P	Pg	06 08 17.2	+0.6
EDPN	Palmar Norte	0.65	79	*e*P	Pg	06 08 18.0	+0.3
EDPN				*e*S	Sb	06 08 27.8	-0.1
EDLM	Las Mercedes	0.67	49	*e*P	Pg	06 08 17.9	-0.2
EDLM				*e*S	Sb	06 08 29.3	+0.7
PEZE	Perez Zeledon,	0.69	38	*e*P	Pg	06 08 18.1	-0.4
CDM	Cerro de Muert	0.79	25	*e*P	Pg	06 08 20.5	+0.1
CDM				*e*S	Sg	06 08 30.9	+0.2
PTJ1	Puerto Jimnez	0.85	110	*e*P	Pb	06 08 21.9	-0.1
PTJ1				*e*S	Sn	06 08 35.1	-0.7
PIRO	Carate, Puerto	0.87	119	*e*P	Pg	06 08 21.9	+0.1
PIRO				*e*S	Sb	06 08 34.9	+0.7
LCR2	La Lucha 2	0.91	6	*e*P	Pg	06 08 22.4	-0.2
LCR2				*e*S	Sb	06 08 36.3	+0.8
DRK0	Durika	0.95	63	*i* P	Pg	06 08 23.2	-0.2
DRK0				*e*S	Sb	06 08 37.1	+0.5
DRK0	Durika	0.95	63	*e*P	Pg	06 08 22.7	-0.7
RIMA	Rio Macho	0.95	14	*e*P	Pg	06 08 23.1	-0.4
JACO	JACO, Garabito	0.99	326	*e*P	Pb	06 08 25.2	+0.8
POTG	Potrero Grande	1.00	77	*e*P	Pg	06 08 24.3	0.0
SJS	Escuela Geolog	1.10	3	*e*P	Pg	06 08 25.8	-0.5
EDSV	San Vito	1.12	91	*e*P	Pg	06 08 26.4	-0.2
EDSV				*e*S	Sn	06 08 43.1	+0.4
HDC	Heredia	1.16	360	*i* P	Pg	06 08 26.9	-0.4
HDC				*e*S	Sb	06 08 43.9	+1.2
HDC	Heredia	1.16	360	*e*P	Pg	06 08 27.0	-0.4
CCOL	Caracol de Cor	1.20	111	*e*P	Pg	06 08 27.1	-1.0
CVTR	Volcan Turrial	1.23	16	*e*P	Pg	06 08 28.4	-0.3
SRA1	San Ramn	1.30	343	*e*P	Pg	06 08 29.4	-0.6
BRU2	Volcan	1.40	92	*i* P	Pn	06 08 30.5	-0.5
BRU2				*e*S	Sn	06 08 50.0	+0.3
BRU2	Volcan	1.40	92	*e*P	Pn	06 08 30.4	-0.5
BCO2	Palmira	1.56	94	*i* P	Pn	06 08 32.8	-0.5
BCO2				*e*S	Sn	06 08 54.1	+0.4
DVD	David	1.68	104	*e*P	Pb	06 08 36.6	+0.3
DVD				*e*S	Sb	06 08 57.8	+0.3
ARE1	Arenal 1	1.73	339	*e*P	Pb	06 08 37.3	+0.3
COVE	Coope Vega, Sa	1.90	351	*e*P	Pb	06 08 39.5	-0.4

IDC 25 06:19:33.9±1.7, **3°.86S×152°.62E, h0^{km}, mb3.5**/4, **mb1 3.7**/4, **mb1mx3.4**/21, **mbtmp3.5**/4, **MS4.3**/1, **Ms1 4.3**/1, **ms1mx2.9**/21, **Error ellipse: s-maj=41.9km s-min=31.5km az=132.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	22.53	145	P	P	06 24 35.9	+0.2
	2.4nm,0.6s,baz=294,slow=11,SNR=6.0						
WRA	Warramunga Arr	23.94	227	P	P	06 24 50.4	+0.4
	1.0nm,0.5s,baz=53,slow=9.9,SNR=16						
ASAR	Alice Springs	26.73	221	P	P	06 25 15.0	-0.4
	0.1nm,0.7s,baz=50,slow=10.0,SNR=1.4						
RAO	Raoul Island	37.66	135	LR	LR	06 39 04.7	
	comp=Z,386nm,19.4s,baz=122,slow=31						
ILAR	Eielson Array	81.36	22	P	P	06 31 52.0	-0.2
	0.4nm,0.9s,baz=231,slow=5.7,SNR=3.0						

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*JMA **25** 06:37:09.8±0.3, 24°.84N×122°.00E, h92^{km}±3^{km}*

*TAP **25** 06:37:09.1, 24°.87N×121°.99E, h102^{km}, ML2.8, D*

ISC 25 06:37:09.4±1.6, **24°.85N**±0°.05×**122°.00E**±0°.04, **h101^{km}**±8^{km}, **n47, σ0^{s}54**/88, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.06	262	*e*P	Pn	06 37 23.3	-0.2
	baz=234						
EGS				*e*S	Sn	06 37 33.8	-0.1
	baz=234						
NTC	Toucheng	0.15	270	*e*P	Pn	06 37 23.0	-0.7
	baz=263						
NTC				*e*S	Sn	06 37 33.5	-0.7
	baz=263						
TWB1	Santiao Chiao	0.15	357	*e*P	Pn	06 37 23.6	-0.1
	baz=3.0						
TWB1				*e*S	Sn	06 37 33.8	-0.5
	baz=3.0						
TIPB	Shuangxi	0.20	307	*e*P	Pn	06 37 23.6	-0.3
	baz=303						
TIPB				*e*S	Sn	06 37 34.7	+0.2
	baz=303						
TWC	Suao	0.28	209	*e*P	Pn	06 37 24.8	+0.7
	baz=204						
TWC				*e*S	Sn	06 37 34.8	-0.2
	baz=204						
TWE	Neicheng	0.33	246	*e*P	Pn	06 37 24.1	-0.2
	baz=241						
TWE				*e*S	Sn	06 37 35.2	-0.2
	baz=241						
ENAH	Nanao	0.44	203	*e*P	Pn	06 37 25.1	+0.2
	baz=201						
ENAH				*e*S	Sn	06 37 36.9	+0.5
	baz=201						
NHDH	Xindian Distri	0.44	284	*e*P	Pn	06 37 24.6	-0.3
	baz=282						
NHDH				*e*S	Sn	06 37 36.9	+0.4
	baz=282						
ENTT	Nioudou	0.45	242	P	Pn	06 37 25.6	+0.6
	baz=238						
ENTT				S	Sn	06 37 37.4	+0.8
	baz=238						
NWLT	Wulai	0.46	260	P	Pn	06 37 25.4	+0.3
	baz=257						
NWLT				S	Sn	06 37 36.6	-0.2
	baz=257						
TAP	Taipei	0.48	293	*e*S	Sn	06 37 36.9	-0.1
	baz=290						
ENA	Nanau	0.48	209	*e*P	Pn	06 37 25.3	0.0
	baz=206						
ENA				S	Sn	06 37 37.5	+0.5
	baz=206						
YM01	YM01	0.48	307	*e*P	Pn	06 37 26.0	+0.7
	baz=305						
YM01				*e*S	Sn	06 37 37.3	+0.1
	baz=305						
YM05	YM05	0.50	308	*e*P	Pn	06 37 25.6	+0.2
	baz=307						
YM05				*e*S	Sn	06 37 37.1	-0.4
	baz=307						
NDT	Datong Townshi	0.51	240	*e*P	Pn	06 37 25.9	+0.5
	baz=238						
NDT				S	Sn	06 37 37.7	+0.3
	baz=238						
YM04	YM04	0.51	306	*e*S	Sn	06 37 37.7	+0.2
	baz=304						
TWS1	Kuangyinshan	0.58	295	*e*P	Pn	06 37 25.9	0.0
	baz=294						
TWS1				*e*S	Sn	06 37 38.4	+0.1
	baz=294						
YHNB	Yeheng	0.59	252	P	Pn	06 37 26.0	-0.2
	baz=250						
YHNB				*e*S	Sn	06 37 37.9	-0.8
	baz=250						
NSK	Sanguang	0.61	253	P	Pn	06 37 26.2	-0.1
	baz=250						
NSK				S	Sn	06 37 38.2	-0.6
	baz=250						
NNS	Nan Shan	0.70	234	P	Pn	06 37 27.4	+0.3
	baz=231						
NNS				*e*S	Sn	06 37 40.4	0.0
	baz=231						
NNSH	Datong	0.70	233	*e*S	Sn	06 37 40.8	+0.4
	baz=231						
PCYT	Pengchaiyu	0.78	5	*e*P	Pn	06 37 27.6	-0.1
	baz=6.0						
FUSS	Fushou	0.91	229	*e*P	Pn	06 37 29.7	+0.3
	baz=227						
FUSS				*e*S	Sn	06 37 44.5	+0.3
	baz=227						
LIOB	Emei	0.92	257	P	Pn	06 37 29.1	0.0
	baz=255						
LIOB				S	Sn	06 37 43.6	-0.3
	baz=255						
NSTT	Nanjuang	0.93	256	*e*P	Pn	06 37 29.1	-0.1
	baz=254						
NSTT				*e*S	Sn	06 37 43.6	-0.5
	baz=254						
TWT	Tachien	0.96	232	*e*P	Pn	06 37 30.4	+0.7
	baz=230						
TWT				*e*S	Sn	06 37 45.5	+0.6
	baz=230						
TDCB	Techi	0.97	232	*e*P	Pn	06 37 30.3	+0.5
	baz=230						
TDCB				*e*S	Sn	06 37 44.1	-1.0
	baz=230						
WHF	Hehuan Shan	0.97	224	*e*P	Pn	06 37 30.6	+0.5
	baz=221						
WHF				*e*S	Sn	06 37 44.9	-0.7
	baz=221						
CHGB	Renai	1.09	224	*e*P	Pn	06 37 31.2	0.0
	baz=222						
CHGB				*e*S	Sn	06 37 46.7	-0.8
	baz=222						
WHP	Taichung City	1.11	239	*e*P	Pn	06 37 31.7	+0.4
	baz=238						
WHP				*e*S	Sn	06 37 47.5	-0.4
	baz=238						
ESL	Shilin	1.16	207	*e*P	Pn	06 37 31.9	+0.1
	baz=205						
ESL				*e*S	Sn	06 37 47.6	-0.9
	baz=205						
SSLB	Suanglung	1.43	222	*e*P	Pn	06 37 35.4	+0.5
	baz=221						
SSLB				*e*S	Sn	06 37 54.4	+0.3
	baz=221						
HGSD	Ruisui	1.45	201	*e*P	Pn	06 37 36.2	+1.0
	baz=200						
HGSD				*e*S	Sn	06 37 54.8	+0.1
	baz=200						
EHY	Hungye	1.48	205	*e*P	Pn	06 37 35.9	+0.4
	baz=203						
EHY				*e*S	Sn	06 37 55.2	0.0
	baz=203						
YULB	Yu-li	1.59	204	*e*P	Pn	06 37 37.5	+0.6
	baz=203						
YULB				*e*S	Sn	06 37 56.0	-1.7
	baz=203						
YUS	Yu-Shan	1.66	215	*e*P	Pn	06 37 38.4	+0.2
	baz=214						
YUS				*e*S	Sn	06 38 00.8	+0.8
	baz=214						
IRIF	Iriomote-Funau	1.66	108	S	Sn	06 37 58.3	-1.0
ALS	Alishan	1.72	219	*e*P	Pn	06 37 38.8	0.0
	baz=218						
ALS				*e*S	Sn	06 38 00.9	-0.3
	baz=218						
CHN5	Tsauling	1.74	224	*e*P	Pn	06 37 39.3	+0.5
	baz=223						
CHN5				*e*S	Sn	06 38 01.2	0.0
	baz=223						
FULB	Fuli	1.77	201	*e*P	Pn	06 37 39.2	0.0
	baz=200						
FULB				*e*S	Sn	06 38 01.6	-0.2
	baz=200						
HATJ	Hateruma jima	1.83	115	P	Pn	06 37 40.2	+0.3
HATJ				*e*S	Sn	06 38 03.6	+0.5
ELDTW	Lidau	1.88	209	*e*P	Pn	06 37 40.6	-0.1
	baz=207						
ELDTW				*e*S	Sn	06 38 03.2	-1.3
	baz=207						
JKRS	Kuro-shima	1.93	108	S	Sn	06 38 05.5	+0.1
CHN4	Tsaushan	1.97	221	*e*P	Pn	06 37 41.9	+0.2
	baz=220						
CHN4				*e*S	Sn	06 38 05.7	-0.6
	baz=220						
EDH	Donghe	1.98	199	*e*P	Pn	06 37 42.5	+0.7
	baz=198						
EDH				*e*S	Sn	06 38 04.8	-1.6
	baz=198						
TPUB	Ta-pu	1.99	219	*e*P	Pn	06 37 42.1	+0.1
	baz=218						
TPUB				*e*S	Sn	06 38 06.4	-0.4
	baz=218						
VWUC	VWUC	2.32	274	*e*P	Pn	06 37 46.7	+0.6
	baz=272						
VWUC				*e*S	Sn	06 38 14.1	-0.2
	baz=272						

JMA 25 07:14:18.9±0.2, **37°.70N×144°.58E, h54^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	2.54	285	P	Pn	07 14 58.8	+1.2
JIKH				S	Sn	07 15 28.2	+1.0
JIO	Ouri	2.66	287	P	Pn	07 15 00.6	+1.3
JIO				*e*S	Sn	07 15 31.6	+1.3
OFUJ	Ofunato	2.67	302	P	Pn	07 15 00.7	+1.3
OFUJ				*e*S	Sn	07 15 32.0	+1.4
JKMT	Kesennumamotoy	2.69	295	P	Pn	07 15 01.0	+1.4
JKMT				S	Sn	07 15 32.5	+1.6
JMK	Ichinoseki	2.92	296	P	Pn	07 15 04.5	+1.6
JMK				*e*S	Sn	07 15 38.7	+1.9
JOM	Ohasama	3.13	306	P	Pn	07 15 07.5	+1.8
JOM				S	Sn	07 15 43.7	+1.9
JFT	Otama	3.38	268	P	Pn	07 15 10.9	+1.8
JFT				*e*S	Sn	07 15 50.1	+2.2
JYK	Kaneyama	3.54	291	P	Pn	07 15 13.6	+2.3
JANG	Nango	3.58	319	P	Pn	07 15 13.3	+1.4
JOT	Ohata	4.58	325	P	Pn	07 15 27.3	+1.7
JRY	Ryogami san	4.85	251	P	Pn	07 15 30.0	+0.6
JRY				*e*S	Sn	07 16 22.3	-2.0
JKB	Kayabe	5.00	328	P	Pn	07 15 33.0	+1.7
JCH	Churui	5.00	350	P	Pn	07 15 31.3	0.0
JCH				*e*S	Sn	07 16 25.9	-1.8
JOD2	Odawara 2	5.05	243	P	Pn	07 15 33.2	+1.1
NEM2	Nemuro 2	5.73	9	P	Pn	07 15 39.0	-2.3
NEM2				*e*S	Sn	07 16 39.9	-5.7
JOSM	Okushiri--Mats	5.88	320	P	Pn	07 15 45.7	+2.3
JTKR	Abashiri--Toko	6.29	356	P	Pn	07 15 48.6	-0.3
JTKR				S	Sn	07 16 56.3	-3.0
JHR	Hokuryu	6.41	341	P	Pn	07 15 53.6	+2.9

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*BJI **25** 07:18:59.3±0.0, 29°.34N×130°.80E, h35^{km}, mB4.7/30, mb4.5/41, Ms3.9/16, Ms7 3.7/16*

*MOS **25** 07:19:01.6±0.8, 29°.60N×130°.58E, h50^{km}, mb4.7/23, Error ellipse: s-maj=8.5km s-min=5.7km az=109.0*

*JMA **25** 07:19:02.8, 29°.59N×130°.59E, h63^{km}±1^{km}, M4.3*

JMA Felt I J1.

*NIED **25** 07:19:02.9, 29°.59N×130°.59E, h63^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.88; $M_{\theta\theta}$-2.76; $M_{\phi\phi}$-0.12; $M_{r\theta}$-0.77; $M_{\theta\phi}$2.94; $M_{\phi r}$5.14; Fault plane solution: $M_0$6.59000×10^{15} NP1:*

ϕs338.00000°,δ75.00000°,λ119.00000°. NP2: ϕs92.00000°,δ33.00000°,λ28.00000°.

NEIC ***25*** *07:19:02.6±1.6,29°.53N±0°.03×130°.56E±0°.08,h43km±7km, mb4.7/46 Error ellipse: s-maj=10.4km s-min=0.7km az=110.0*

IDC ***25*** *07:19:03.7±0.7,29°.64N×130°.56E,h52km±6km,mb4.0/27, mb1 4.1/34,mb1mx4.0/55,mbtmp4.3/34,MS3.5/14, Ms1 3.6/14,ms1mx3.4/52,Error ellipse: s-maj=14.0km s-min=9.4km az=99.0*

ISC 25 07:19:03.1±0.6**,29°.53N**±0°.03×**130°.64E**±0°.05**,h50**km±4km**, h50**km**:pP-P,n235,**σ1s.18/253**,mb4.6**/82**,MS3.5**/13**,12C-5D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**0.71**	**351**	P	**Pn**	**07 19 16.7**	**-0.4**
JYAK				S	**Sn**	**07 19 26.9**	**-0.3**
JNN	**Nakanoshima**	**0.73**	**295**	P	**Pn**	**07 19 16.9**	**-0.4**
JNN				S	**Sn**	**07 19 27.7**	**+0.1**
JMTN	**Minamitane**	**0.89**	**15**	P	**Pn**	**07 19 19.2**	**-0.3**
JMTN				S	**Sn**	**07 19 31.8**	**+0.4**
JKC	**Kuchinoerabu**	**1.00**	**338**	P	**Pn**	**07 19 20.7**	**-0.2**
JKC				*e*S	**Sn**	**07 19 33.2**	**-0.8**
JTN	**Tanegashima 3**	**1.16**	**15**	P	**Pn**	**07 19 22.7**	**-0.3**
JTN				*e*S	**Sn**	**07 19 37.0**	**-0.8**
JTAJ	**Takarajima**	**1.31**	**254**	P	**Pn**	**07 19 25.3**	**+0.3**
JZK	**Kikaishima**	**1.34**	**206**	P	**Pn**	**07 19 26.7**	**+1.2**
JAM	**Amami Oshima**	**1.44**	**219**	P	**Pn**	**07 19 27.3**	**+0.6**
JAM				*e*S	**Sn**	**07 19 45.2**	**+0.7**
JTSR	**Tashiro 2**	**1.65**	**9**	P	**Pn**	**07 19 29.4**	**-0.3**
JTSR				S	**Sn**	**07 19 49.4**	**-0.4**
JAMN	**Amaminishikomi**	**1.81**	**225**	P	**Pn**	**07 19 32.3**	**+0.4**
JAMN				S	**Sn**	**07 19 54.6**	**+0.9**
JSU	**Suzuyama**	**1.98**	**356**	P	**Pn**	**07 19 33.6**	**-0.6**
JSU	**Suzuyama**	**1.98**	**356**	Pn	**Pn**	**07 19 33.4**	**-0.8**
JSU				Sn	**Sn**	**07 19 56.2**	**-1.6**
JNAR	**Kushima--Naru**	**2.06**	**15**	P	**Pn**	**07 19 35.6**	**+0.2**
JTK	**Tokunoshima**	**2.28**	**221**	S	**Sn**	**07 20 05.6**	**+0.3**
JOKE	**Okinoerabujima**	**2.82**	**221**	P	**Pn**	**07 19 46.4**	**+0.6**
JYRO	**Yoronjima**	**3.15**	**218**	P	**Pn**	**07 19 50.5**	**+0.2**
JYRO				S	**Sn**	**07 20 25.4**	**-1.3**
JOW	**Kunigami**	**3.40**	**218**	P	**Pn**	**07 19 53.1**	**-0.6**
	65nm,0.3s,baz=92,slow=19,SNR=140						
JOW				S	**Sn**	**07 20 30.6**	**-2.2**
	356nm,0.3s,baz=210,slow=28,SNR=20						
JOW	**Kunigami**	**3.40**	**218**	P	**Pn**	**07 19 53.6**	**-0.1**
JNU	**Nakatsue**	**3.59**	**3**	P	**Pn**	**07 19 57.0**	**+0.7**
	50nm,0.3s,baz=271,slow=0.6,SNR=190						
JNU				S	**Sn**	**07 20 37.0**	**-0.4**
	12nm,0.3s,baz=170,slow=15,SNR=1.5						
JNU	**Nakatsue**	**3.59**	**3**	Pn	**Pn**	**07 19 56.3**	**0.0**
JKDJ	**Kitadaitoujima**	**3.62**	**171**	P	**Pn**	**07 19 56.4**	**-0.2**
JMZ	**Minamidaito 2**	**3.73**	**172**	Pn	**Pn**	**07 19 57.2**	**-1.1**
JNTH	**Nagotoyohara**	**3.79**	**218**	P	**Pn**	**07 19 59.3**	**+0.3**
JNTH				S	**Sn**	**07 20 40.8**	**-1.5**
JAGN	**Aguni-jima**	**4.19**	**226**	P	**Pn**	**07 20 04.9**	**+0.3**
JAGN				S	**Sn**	**07 20 50.7**	**-1.6**
JJT3	**Tamagusuku3**	**4.21**	**217**	P	**Pn**	**07 20 05.6**	**+0.7**
JKE	**Kume jima 2**	**4.67**	**228**	P	**Pn**	**07 20 10.9**	**-0.2**
JKE				S	**Sn**	**07 21 02.1**	**-1.9**
JMN	**Monobe**	**5.02**	**33**	Pn	**Pn**	**07 20 15.4**	**-0.5**
JTU	**Tsushima**	**5.09**	**348**	Pn	**Pn**	**07 20 16.9**	**+0.1**
JHS	**Saijyo**	**5.84**	**20**	Pn	**Pn**	**07 20 26.8**	**-0.4**
JWT	**Wachi**	**7.01**	**34**	Pn	**Pn**	**07 20 42.9**	**-0.2**
INU	**Inuyama**	**7.92**	**41**		**Pn**	**07 20 56.1**	**+0.5**
JSG	**Sagara**	**8.20**	**49**	Pn	**Pn**	**07 20 59.8**	**+0.3**
KSAR	**Wonju Array Be**	**8.22**	**344**	P	**Pn**	**07 20 59.3**	**-0.4**
KSAR	**Wonju Array Be**	**8.22**	**344**	Pn	**Pn**	**07 20 59.2**	**-0.4**
KSRS	**Korea Array**	**8.22**	**345**	P	**Pn**	**07 21 00.3**	**+0.6**
	0.9nm,0.3s,baz=159,slow=14,SNR=23						
KSRS				LR	LR	07 24 13.1	
	comp=Z,113nm,19.9s,baz=152,slow=38						
JGF	**Kuroka**	**8.29**	**41**	Pn	**Pn**	**07 21 01.2**	**+0.3**
JHJ	**Hachijo jima 2**	**8.60**	**63**	P	**Pn**	**07 21 06.0**	**+1.0**
	35nm,0.3s,baz=33,slow=12,SNR=6.9						
JHJ2	**Mitsune**	**8.63**	**63**	Pn	**Pn**	**07 21 07.0**	**+1.7**
MAJO	**Matsushiro**	**9.45**	**40**	*c i*P	**Pn**	**07 21 17.4**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	**9.45**	**40**	Pn	**Pn**	**07 21 17.2**	**+0.6**
MAT	**Matsushiro**	**9.45**	**40**	P	**Pn**	**07 21 16.2**	**-0.4**
MAT				*e*S	**Sn**	**07 22 57.6**	**-3.7**
MJAR	**Matsushiro Arr**	**9.45**	**40**	P	**Pn**	**07 21 17.6**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=243,slow=14,SNR=139						
MJAR	**Matsushiro Arr**	**9.45**	**40**		**Pn**	**07 21 17.4**	**+0.8**
YULB	**Yu-li**	**10.36**	**236**	Pn	**Pn**	**07 21 24.7**	**-4.4**
SSLB	**Suanglung**	**10.38**	**239**	Pn	**Pn**	**07 21 27.7**	**-1.6**
NJ2	**Nanjing**	**10.44**	**287**	*e*P	**Pn**	**07 21 32.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,22nm,0.6s						
NJ2				LR	LR		
	comp=Z,290nm,14.0s						
NJ2				LR	LR		
	comp=Z,420nm,15.9s						
NJ2				LR	LR		
	comp=Z,700nm,17.3s						
JYT	**Yasato**	**10.45**	**48**	Pn	**Pn**	**07 21 31.6**	**+1.4**
JCJ	**Chichijima**	**10.46**	**101**	LR	LR	07 25 01.5	
	comp=Z,145nm,21.4s,baz=312,slow=34						
JSD	**Sado**	**10.59**	**35**	Pn	**Pn**	**07 21 33.5**	**+1.4**
JMM	**Marumori**	**11.85**	**43**		**Pn**	**07 21 51.6**	**+2.1**
JTM	**Tenmabayashi**	**14.09**	**34**		**Pn**	**07 22 22.2**	**+2.2**
WHN	**Wuhan**	**14.15**	**278**	⇑P	**P**	**07 22 30.8**	**+3.8**
WHN				pmax	pmax		
	comp=Z,34nm,0.8s						
USA0B	**Ussuriysk Arra**	**14.68**	**4**	P	**P**	**07 22 34.1**	**+1.3**
USA0B	**Ussuriysk Arra**	**14.68**	**4**	P	**P**	**07 22 34.1**	**+1.3**
USRK	**Ussuriysk Ar.**	**14.68**	**4**	P	**P**	**07 22 31.9**	**-0.9**
	baz=180,slow=9.5,SNR=26						
USRK	**Ussuriysk Ar.**	**14.68**	**4**	P	**P**	**07 22 34.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**14.68**	**4**	P	**P**	**07 22 34.3**	**+1.4**
BJI	**Beijing**	**15.82**	**315**	P	**P**	**07 22 50.5**	**+5.0**
BJI				pmax	pmax		
	comp=Z,9µm,3.9s						
BJI				pmax	pmax		
	comp=Z,64nm,4.2s						
BJI				LR	LR		
	comp=N,140nm,17.1s						
BJI				LR	LR		
	comp=E,110nm,4.3s						
JEW	**Eniwo**	**15.87**	**30**		**Pn**	**07 22 43.0**	**-0.1**
JEW				IAmb	IAmb	07 22 44.3	
	comp=Z,62nm,1.1s						
ERM	**Erimo**	**16.05**	**36**	P	**Pn**	**07 22 45.6**	**+0.2**
ERM				pmax	pmax		
	comp=Z,79nm,1.5s						
ERM	**Erimo**	**16.05**	**36**	Pn	**Pn**	**07 22 45.5**	**+0.2**
ERM				IAmb	IAmb	07 22 46.6	
	comp=Z,78nm,1.5s						
TEY	**Ternei**	**16.18**	**15**	⇑*i*P	**P**	**07 22 49.6**	**+0.1**
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
ASAJ	**Asahikawa**	**17.40**	**30**	P	**Pn**	**07 23 00.0**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=195,slow=6.2,SNR=13						
ASAJ				LR	LR	07 30 43.6	
	comp=Z,165nm,19.6s,baz=227,slow=40						
ASAJ	**Asahikawa**	**17.40**	**30**	P	**Pn**	**07 23 01.0**	**-1.2**
ASAJ				pmax	pmax		
	comp=Z,12nm,0.9s						
JKA	**Kamikawa-asahi**	**17.40**	**30**		**Pn**	**07 23 01.0**	**-1.2**
ENH	**Enshi**	**18.35**	**278**	P	**Pn**	**07 23 16.2**	**+2.1**
XAN	**Xi'an**	**18.99**	**289**	P	**P**	**07 23 20.0**	**-0.6**
XAN				pP	pP	07 23 32.0	+0.1
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				pmax	pmax		
	comp=Z,170nm,3.7s						
XAN				LR	LR		
	comp=Z,230nm,15.2s						
XAN				LR	LR		
	comp=Z,300nm,18.4s						
XAN				LR	LR		
	comp=Z,270nm,15.2s						
HHC	**Hu-ho-hao-te**	**19.20**	**311**	*e*P	**Pn**	**07 23 25.5**	**+1.2**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,7.6s						
KLR	**Kul'dur**	**19.69**	**2**	P	**P**	**07 23 26.3**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=173,slow=7.3,SNR=24						
KLR				LR	LR	07 30 41.4	
	comp=Z,55nm,18.5s,baz=194,slow=36						
KLR	**Kul'dur**	**19.69**	**2**	⇑*e*P	**P**	**07 23 27.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	**19.79**	**25**	⇓*i*P	**Pn**	**07 23 30.6**	**-0.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS	**Yuzh-Sakhalins**	**19.79**	**25**		**P**	**07 23 29.9**	**+0.8**
YSS				IAmb	IAmb	07 23 32.8	
	comp=Z,50nm,1.2s						
GYA	**Guiyang**	**21.38**	**268**	⇑P	**P**	**07 23 48.0**	**+1.3**
GYA				pmax	pmax		
	comp=Z,29nm,0.6s						
QIZ	**Qiongzhong**	**21.61**	**246**	P	**P**	**07 23 49.0**	**0.0**
QIZ				S	**S**	**07 27 42.0**	**-3.9**
QIZ				pmax	pmax		
	comp=Z,12nm,1.3s						
QIZ				LR	LR		
	comp=Z,170nm,18.6s						
QIZ				LR	LR		
	comp=Z,180nm,17.7s						
QIZ				LR	LR		
	comp=Z,220nm,20.1s						
CD2	**Chengdu**	**23.25**	**280**	P	**P**	**07 24 06.3**	**0.0**
LZH	**Lanzhou**	**23.41**	**293**	⇓P	**P**	**07 24 08.5**	**+0.7**
LZH				pP	pP	07 24 19.5	-0.4
LZH				sP	sP	07 24 27.5	+1.5
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,68nm,5.0s						
LZH				LR	LR		
	comp=Z,270nm,13.6s						
LZH				LR	LR		
	comp=Z,240nm,15.7s						
LZH				LR	LR		
	comp=Z,230nm,17.3s						
ZEA	**Zeya**	**24.31**	**355**	*e*P	**P**	**07 24 15.8**	**0.0**
ZEA				*e*		07 24 27.0	
KMI	**Kunming**	**25.14**	**267**	*e*P	**P**	**07 24 24.3**	**+0.4**
KMI				pP	pP	07 24 35.0	-1.5
KMI				sP	sP	07 24 39.0	-3.5
KMI				pmax	pmax		
	comp=Z,49nm,0.7s						
KMI				pmax	pmax		
	comp=Z,120nm,4.3s						
KMI				LR	LR		
	comp=Z,180nm,5.0s						
KMI				LR	LR		
	comp=Z,200nm,5.4s						
KMI				LR	LR		
	comp=Z,72nm,6.4s						
KMI	**Kunming**	**25.14**	**267**	P	**P**	**07 24 25.2**	**+1.3**
KMI				pmax	pmax		
	comp=Z,36nm,0.7s						
KMI	**Kunming**	**25.14**	**267**	P	**P**	**07 24 25.2**	**+1.3**
ULN	**Ulaanbaatar**	**25.79**	**322**	⇑*e*P	**P**	**07 24 29.1**	**-0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	**Ulaanbaatar**	**25.79**	**322**	P	**P**	**07 24 28.8**	**-0.8**
SONM	**Songino Array**	**26.13**	**321**	P	**P**	**07 24 31.1**	**-1.5**
	comp=Z,5.6nm,0.8s,baz=138,slow=10,SNR=24						
SONM				LR	LR	07 36 13.2	
	comp=Z,130nm,19.0s,baz=186,slow=40						
SONM	**Songino Array**	**26.13**	**321**	P	**P**	**07 24 31.6**	**-1.0**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**26.13**	**321**	P	**P**	**07 24 31.6**	**-1.0**
GTA	**Gaotai**	**27.14**	**300**	*e*P	**P**	**07 24 42.0**	**+0.2**
GTA				pP	pP	07 24 54.0	-0.5
GTA				sP	sP	07 24 59.0	-1.5
GTA				PcP	**PcP**	**07 28 00.5**	**-0.9**
GTA				pmax	pmax		
	comp=Z,80nm,5.5s						
GTA				LR	LR		
	comp=Z,210nm,15.4s						
GTA				LR	LR		
	comp=Z,260nm,17.7s						
GTA				LR	LR		
	comp=Z,180nm,16.8s						
UBPT	**Khong Chiam**	**27.17**	**244**	P	**P**	**07 24 43.4**	**+1.4**
	comp=Z,8.0nm,0.9s						
UBPT	**Khong Chiam**	**27.17**	**244**	P	**P**	**07 24 42.7**	**+0.7**
UBPT				IAmb	IAmb	07 24 44.0	
	comp=Z,14nm,1.0s						
CHAI	**Chaiyaphum**	**29.61**	**249**	P	**P**	**07 25 04.5**	**+0.8**
	comp=Z,20nm,0.9s						
TLY	**Talaya**	**29.86**	**325**	LR	LR	07 36 36.1	
	comp=Z,78nm,19.7s,baz=126,slow=35						
UTTA	**Uttaradit**	**29.86**	**254**	P	**P**	**07 25 06.2**	**+0.2**
	comp=Z,14nm,0.8s						
PBKT	**Sadao Pong**	**30.09**	**251**	P	**P**	**07 25 05.6**	**-2.5**
SWI	**Sorong**	**30.23**	**179**	P	**P**	**07 25 05.4**	**-3.8**
	comp=Z,18nm,1.0s						
CM34	**Chiang Mai Arr**	**30.54**	**257**	P	**P**	**07 25 12.0**	**0.0**
SRAK	**Srakaew**	**30.60**	**246**	P	**P**	**07 25 09.5**	**-3.0**
	comp=Z,2µmcomp=Z,292nm,0.8s						
CM35	**Chiang Mai Arr**	**30.61**	**256**	P	**P**	**07 25 14.0**	**+1.4**
CM33	**Chiang Mai Arr**	**30.72**	**257**	P	**P**	**07 25 13.0**	**-0.6**
CMMT	**Chiang Mai**	**30.72**	**257**	P	**P**	**07 25 12.8**	**-0.8**
	comp=Z,237nmcomp=Z,4.6nm,0.8s						
CHTO	**Chiang Mai**	**30.73**	**257**	P	**P**	**07 25 13.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	**Chiang Mai**	**30.73**	**257**	P	**P**	**07 25 13.2**	**-0.5**
PETK	**Petropavlovsk-**	**30.78**	**32**	LR	LR	07 38 00.8	
	comp=Z,68nm,20.8s,baz=226,slow=37						
MPSI	**Mapaga**	**30.78**	**201**	P	**P**	**07 25 12.2**	**-1.9**
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.89**	**256**	P	**P**	**07 25 15.0**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=76,slow=5.2,SNR=5.1						
CMAR				PcP	**PcP**	**07 28 12.4**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=84,slow=0.6,SNR=6.7						
CMAR				LR	LR	07 38 09.3	
	comp=Z,113nm,19.4s,baz=154,slow=37						
YAK	**Yakutsk**	**32.51**	**359**	LR	LR	07 38 22.7	
	comp=Z,69nm,19.4s,baz=114,slow=36						
MA2	**Magadan**	**33.01**	**19**	P	**P**	**07 25 32.3**	**-0.9**
	comp=Z,4.1nm,0.6s,baz=185,slow=6.7,SNR=4.5						
MA2				LR	LR	07 39 08.7	
	comp=Z,60nm,19.2s,baz=218,slow=37						
MA2	**Magadan**	**33.01**	**19**	IAmb	IAmb	07 25 51.5	
	comp=Z,16nm,1.3s						
PHET	**Kaeng Krachan**	**33.15**	**247**	P	**P**	**07 25 37.0**	**+2.0**
LSA	**Lhasa**	**34.21**	**280**	P	**P**	**07 25 44.7**	**+0.1**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**34.21**	**280**	P	**P**	**07 25 44.7**	**+0.1**
LSA				IAmb	IAmb	07 25 48.8	
	comp=Z,6.7nm,0.6s						
SEY	**Seymchan**	**36.26**	**17**	P	**P**	**07 26 01.7**	**+0.5**
	comp=Z,4.0nm,0.8s						
SEY	**Seymchan**	**36.26**	**17**	⇑*e*P	**P**	**07 26 01.2**	**0.0**
WMQ	**Urumqi**	**36.85**	**305**	*e*P	**P**	**07 26 08.8**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,6.5s						
IPM	**Ipoh**	**37.49**	**234**	P	**P**	**07 26 13.1**	**+0.8**
IPM				IAmb	IAmb	07 26 14.3	
	comp=Z,16nm,0.8s						
TAPN	**Taplejung**	**37.65**	**277**	*e*P	**P**	**07 26 14.6**	**+0.7**
	comp=Z,25nm,0.7s						
ODAN	**Odare**	**38.05**	**277**	*e*P	**P**	**07 26 17.1**	**-0.1**
	comp=Z,38nm,0.4s						
DGZ	**Jazzator, Alta**	**38.24**	**314**	⇑*e*P	**P**	**07 26 17.8**	**-0.6**
DGZ				*i* *PP	**pP**	**07 26 29.9**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RAMN	**Ramite**	**38.71**	**277**	*e*P	**P**	**07 26 22.4**	**-0.3**
	comp=Z,25nm,0.5s						
GUN	**Gumba**	**39.10**	**279**	*e*P	**P**	**07 26 26.4**	**+0.3**
	comp=Z,225nm,0.7s						
PKI	**Pulchoki**	**39.59**	**279**	*e*P	**P**	**07 26 30.0**	**-0.2**
	comp=Z,93nm,0.6s						
PKIN	**Phulchoki**	**39.60**	**279**	*e*P	**P**	**07 26 29.9**	**-0.3**
	comp=Z,72nm,0.5s						
KKN	**Kakani**	**39.65**	**279**	*e*P	**P**	**07 26 30.9**	**+0.4**
	comp=Z,0.5nm,0.4s						
DMN	**Daman**	**39.84**	**279**	*e*P	**P**	**07 26 31.8**	**-0.4**
	comp=Z,39nm,0.4s						
GKN	**Gorkha**	**40.15**	**279**	*e*P	**P**	**07 26 34.4**	**-0.2**
	comp=Z,64nm,0.5s						
DANN	**Dangsing**	**40.82**	**280**	*e*P	**P**	**07 26 40.5**	**+0.2**
	comp=Z,165nm,0.7s						
ZAA0	**Zalesovo Array**	**41.01**	**320**	P	**P**	**07 26 40.8**	**-0.3**
ZALV	**Zalesovo Beam**	**41.01**	**320**	P	**P**	**07 26 40.4**	**-0.8**
	comp=Z,3.2nm,0.5s,baz=106,slow=8.1,SNR=18						
ZALV				PcP	**PcP**	**07 28 40.2**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=46,slow=4.3,SNR=5.9						
ZALV	**Zalesovo Beam**	**41.01**	**320**	P	**P**	**07 26 40.6**	**-0.6**
MK31	**Makanchi Array**	**41.04**	**309**	P	**P**	**07 26 41.1**	**-0.5**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	**41.04**	**309**	P	**P**	**07 26 41.1**	**-0.5**
MKAR	**Makanchi Array**	**41.04**	**309**	P	**P**	**07 26 41.4**	**-0.2**
	comp=Z,7.0nm,0.6s,baz=91,slow=10,SNR=117						
MKAR				PcP	**PcP**	**07 28 40.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=93,slow=2.4,SNR=6.8						
MKAR				ScP	**ScP**	**07 32 26.0**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=116,slow=4.2,SNR=4.4						
MKAR				LR	LR	07 43 32.6	
	comp=Z,67nm,18.4s,baz=342,slow=36						
MKAR	**Makanchi Array**	**41.04**	**309**	P	**P**	**07 26 40.8**	**-0.7**
KOLN	**Koldanda**	**41.10**	**279**	*e*P	**P**	**07 26 42.5**	**0.0**
	comp=Z,100nm,0.9s						
MAKZ	**Makanchi**	**41.25**	**309**	P	**P**	**07 26 43.2**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAKZ	**Makanchi**	**41.25**	**309**	P	**P**	**07 26 43.1**	**-0.1**
MAKZ				IAmb	IAmb	07 26 43.8	
	comp=Z,6.9nm,0.6s						
PYUN	**Piuthan**	**41.54**	**280**	*e*P	**P**	**07 26 46.3**	**+0.1**
	comp=Z,103nm,0.4s						
MTN	**Manton Dam**	**42.13**	**179**	P	**P**	**07 26 51.2**	**+0.5**
MTN				IAmb	IAmb	07 26 51.8	
	comp=Z,18nm,0.8s						
GSI	**Gunungsitoli**	**42.16**	**234**	P	**P**	**07 26 51.5**	**+0.5**
SEM	**Semipalatinsk**	**42.91**	**314**	*e*P	**P**	**07 26 56.0**	**-1.1**
	comp=Z,4.0nm,0.6s,baz=313						
SEM	**Semipalatinsk**	**42.91**	**314**	*e*P	**P**	**07 26 55.9**	**-1.1**
SEM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KPKS	**Kokpek**	**43.34**	**303**	*e*P	**P**	**07 26 60.0**	**-0.5**
	baz=303						
KPKS	**Kokpek**	**43.34**	**303**	*e*P	**P**	**07 26 59.9**	**-0.5**
BILL	**Bilibino**	**43.88**	**18**	⇓*e*P	**P**	**07 27 05.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,16nm,2.5s						
KURK	**Kurchatov**	**43.98**	**314**	P	**P**	**07 27 05.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**43.98**	**314**	P	**P**	**07 27 05.0**	**-0.4**
KURK				IAmb	IAmb	07 27 06.0	
	comp=Z,12nm,0.6s						
CHKK	**Chushkaly**	**44.58**	**304**	*e*P	**P**	**07 27 10.0**	**-0.3**
	baz=304						
CHKK	**Chushkaly**	**44.58**	**304**	*e*P	**P**	**07 27 10.0**	**-0.3**
KUU	**Kurty**	**45.05**	**304**	*e*P	**P**	**07 27 12.8**	**-1.3**
	comp=Z,3.3nm,0.8s,baz=304						
KUU	**Kurty**	**45.05**	**304**	*e*P	**P**	**07 27 12.7**	**-1.3**
KUU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	**Kashi**	**45.52**	**298**	P	**P**	**07 27 19.5**	**+1.6**
KSH				sP	sP	07 27 36.8	-0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,280nm,4.7s						
SGDS	**Sogindy**	**46.30**	**303**	*e*P	**P**	**07 27 22.6**	**-1.4**
	baz=303						
SGDS	**Sogindy**	**46.30**	**303**	*e*P	**P**	**07 27 22.5**	**-1.4**
BTLS	**Baital**	**46.68**	**306**	*e*P	**P**	**07 27 26.5**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=305						
BTLS	**Baital**	**46.68**	**306**	*e*P	**P**	**07 27 26.4**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**47.59**	**186**	P	**P**	**07 27 35.5**	**+1.4**
FITZ				IAmb	IAmb	07 27 56.7	
	comp=Z,12nm,1.3s						
BRZS	**Berezniki**	**47.70**	**312**	*e*P	**P**	**07 27 33.9**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=312						
BRZS	**Berezniki**	**47.70**	**312**	*e*P	**P**	**07 27 33.9**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NIL	**Nilore**	**48.52**	**290**	P	**P**	**07 27 41.2**	**-0.1**
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
NIL	**Nilore**	**48.52**	**290**	P	**P**	**07 27 41.2**	**-0.1**
WB0	**Warramunga Arr**	**49.15**	**175**	P	**P**	**07 27 46.8**	**+0.7**
WB0				IAmb	IAmb	07 28 05.6	
	comp=Z,5.6nm,1.0s						
WRA	**Warramunga Arr**	**49.31**	**175**	P	**P**	**07 27 47.8**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=354,slow=8.3,SNR=9.5						
WRA				pP	**pwP**	**07 28 03.9**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=354,slow=8.4,SNR=5.5						
WRA	**Warramunga Arr**	**49.31**	**175**	P	**P**	**07 27 47.9**	**+0.6**
WB2	**Warramunga Arr**	**49.32**	**175**	P	**P**	**07 27 48.6**	**+1.3**
WB2				IAmb	IAmb	07 28 04.6	
	comp=Z,8.9nm,1.2s						
KK31	**Karatay Array**	**49.32**	**303**	P	**P**	**07 27 47.7**	**+0.4**
KK31				pmax	pmax		
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	**49.32**	**303**	P	**P**	**07 27 47.7**	**+0.4**
KK31				IAmb	IAmb	07 27 48.8	
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	**49.32**	**303**	P	**P**	**07 27 46.3**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
KKAR	**Karatay Array**	**49.32**	**303**	P	**P**	**07 27 46.3**	**-1.0**
KKAR	**Karatay Array**	**49.32**	**303**	P	**P**	**07 27 47.6**	**+0.3**
KKAR				IAmb	IAmb	07 27 48.8	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**49.35**	**175**	P	**P**	**07 27 48.6**	**+1.0**
BRVK	**Borovoye**	**49.37**	**316**	*i* P	**P**	**07 27 46.4**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,17nm,0.5s						
BRVK	**Borovoye**	**49.37**	**316**	P	**P**	**07 27 47.5**	**0.0**
IUG	**Iuzhnay**	**49.76**	**302**	*e*P	**P**	**07 27 50.5**	**-0.3**
	baz=302						
IUG	**Iuzhnay**	**49.76**	**302**	*e*P	**P**	**07 27 50.5**	**-0.3**
KBL	**Kabul**	**51.75**	**292**	P	**P**	**07 28 05.3**	**-0.7**
KBL				pmax	pmax		
	comp=Z,11nm,1.4s						
KBL	**Kabul**	**51.75**	**292**	P	**P**	**07 28 05.2**	**-0.7**
KBL				IAmb	IAmb	07 28 08.0	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**52.98**	**176**	P	**P**	**07 28 16.5**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=10.0,slow=13,SNR=17						
SVE	**Sverdlovsk**	**55.01**	**321**	*e*P	**P**	**07 28 29.0**	**-0.2**
SVE				pmax	pmax		
	comp=Z,18nm,0.8s						
ABKAR	**Akbulak array**	**55.99**	**312**	P	**P**	**07 28 36.2**	**-0.3**
ABKAR				IAmb	IAmb	07 28 37.4	
	comp=Z,15nm,1.1s						
ARU	**Arti**	**56.17**	**320**	*c i*P	**P**	**07 28 36.9**	**-0.7**
ARU				*PP	**pP**	**07 28 49.2**	**-2.1**
ARU				S	**S**	**07 36 23.6**	**+0.5**
ARU				SS	**SS**	**07 40 05.7**	**-3.9**
ARU				pmax	pmax		
	comp=Z,18nm,0.7s						
ARU	**Arti**	**56.17**	**320**	P	**P**	**07 28 37.2**	**-0.4**
AKTO	**Aktyubinsk**	**57.08**	**313**	LR	LR	07 57 09.5	
	comp=Z,73nm,21.1s,baz=306,slow=40						
IMAR	**Indian Mountai**	**57.59**	**28**	P	**P**	**07 28 48.7**	**+1.3**
KDAK	**Kodiak Island**	**58.61**	**38**	P	**P**	**07 28 55.2**	**+0.5**
	comp=Z,6.3nm,0.8s,baz=266,slow=5.7,SNR=5.4						
GEYT	**Alibeck**	**59.52**	**299**	P	**P**	**07 29 01.5**	**0.0**
	comp=Z,2.4nm,0.5s,baz=70,slow=14,SNR=3.1						
MDM	**Murphy Dome**	**59.94**	**29**	P	**P**	**07 29 05.0**	**+1.2**
MDM				IAmb	IAmb	07 29 19.0	
	comp=Z,9.2nm,0.9s						
ILAR	**Eielson Array**	**60.53**	**29**	P	**P**	**07 29 06.8**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=273,slow=5.9,SNR=13						
ILAR				pP	**pP**	**07 29 20.8**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=283,slow=6.5,SNR=4.8						
KIRV	**Kirov**	**60.83**	**324**	⇓*e*P	**P**	**07 29 09.4**	**-0.5**
STKA	**Stephens Creek**	**61.95**	**169**	P	**P**	**07 29 18.6**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=21,slow=2.9,SNR=4.1						
BCAR	**Beaver Creek A**	**63.04**	**31**	P	**P**	**07 29 26.1**	**+1.2**
BELG	**Belogornoye**	**63.10**	**317**	⇑*e*P	**P**	**07 29 25.0**	**-0.3**
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**65.02**	**24**	P	**P**	**07 29 37.9**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=337,slow=7.2,SNR=12						
INK	**Inuvik**	**65.02**	**24**	IAmb	IAmb	07 29 38.9	
	comp=Z,1.2nm,0.7s						
ARCES	**ARCESS Array B**	**67.72**	**338**	P	**P**	**07 29 56.0**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=64,slow=5.6,SNR=4.5						
ARCES	**ARCESS Array B**	**67.72**	**338**	P	**P**	**07 29 56.0**	**+1.0**
KBZ	**Khabaz**	**68.73**	**309**	P	**P**	**07 30 02.5**	**+0.8**
	comp=Z,5.1nm,0.7s,baz=111,slow=3.1,SNR=9.2						
KBZ	**Khabaz**	**68.73**	**309**	⇓*e*P	**P**	**07 30 01.7**	**0.0**

KIV	Kislovodsk	68.80	309	eP	P	07 30 00.4	-1.8
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
FIA1	FINESS Array S	71.05	331	P	P	07 30 14.5	-1.1
FINES	FINESS Array B	71.05	331	P	P	07 30 14.3	-1.3
	comp=Z,1.1nm,0.5s,baz=55,slow=5.4,SNR=14						
FINES				pP	pP	07 30 29.3	-0.3
	comp=Z,1.2nm,0.6s,baz=58,slow=5.0,SNR=2.2						
ANN	Anapa	71.96	312	eP	P	07 30 08.8	-13
SOCY	Socotra	72.56	274	P	P	07 30 24.2	-1.4
AKASG	Malin Array Be	74.41	320	P	P	07 30 34.6	-1.0
	comp=Z,1.7nm,0.5s,baz=58,slow=6.3,SNR=8.6						
AKASG	Malin Array Be	74.41	320	P	P	07 30 35.0	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.2s						
AKASG	Malin Array Be	74.41	320	P	P	07 30 35.0	-0.7
YKA	Yellowknife Ar	74.64	26	P	P	07 30 36.8	-0.1
	comp=Z,0.8nm,0.8s,baz=306,slow=5.0,SNR=17						
YKA	Yellowknife Ar	74.64	26c	eP	P	07 30 37.7	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RAYN	Ar Rayn	74.78	289	P	P	07 30 38.4	-0.1
RAYN				pmax	pmax		
	comp=Z,16nm,1.0s						
RAYN	Ar Rayn	74.78	289	P	P	07 30 38.4	-0.1
RAYN				IAmb	IAmb	07 30 40.0	
	comp=Z,16nm,0.9s						
BR131	Keskin Array S	76.69	308	P	P	07 30 49.6	+0.4
BR131				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BR131	Keskin Array S	76.69	308	P	P	07 30 49.6	+0.4
BR131				IAmb	IAmb	07 30 50.6	
	comp=Z,7.6nm,0.7s						
BRTR	Keskin Array B	76.69	308	P	P	07 30 48.6	-0.5
	comp=Z,4.6nm,0.7s,baz=107,slow=5.1,SNR=25						
BRTR	Keskin Array B	76.69	308c	eP	P	07 30 49.7	+0.5
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR	Keskin Array B	76.69	308	P	P	07 30 48.8	-0.3
HFS	Hagfors	76.88	333	P	P	07 30 47.9	-1.8
	comp=Z,1.1nm,0.5s,baz=92,slow=3.6,SNR=7.8						
HFS				LR	LR	08 10 27.5	
	comp=Z,255nm,20.1s,baz=358,slow=40						
NB2	NORSAR Subarra	77.29	334	P	P	07 30 50.5	-1.5
	comp=Z,1.1nm,0.6s,baz=46,slow=5.9						
NOA	NORSAR Array B	77.29	334	P	P	07 30 50.2	-1.8
	comp=Z,1.4nm,0.6s,baz=48,slow=5.4,SNR=6.7						
LVV	L'vov	77.74	321	eP	P	07 30 53.2	-1.5
BURAR	Bucovina Array	78.21	318	P	P	07 30 57.0	-0.5
MMAI	Mount Meron Ar	78.51	301	P	P	07 31 00.1	+0.7
	comp=Z,2.6nm,0.5s,baz=76,slow=7.6,SNR=3.5						
MLR	Muntele Rosu	78.87	316	P	P	07 31 01.1	-0.1
	comp=Z,2.4nm,0.7s,baz=334,slow=2.7,SNR=4.9						
MLR	Muntele Rosu	78.87	316	IAmb	IAmb	07 31 04.7	
	comp=Z,9.2nm,1.4s						
KOLS	Kolonicke sedl	79.19	320	eP	P	07 31 04.0	+1.3
KOLS	Kolonicke sedl	79.19	320	eP	P	07 31 04.0	+1.3
VYHS	Vyhne	81.32	321	eP	P	07 31 16.7	+2.5
VYHS	Vyhne	81.32	321	eP	P	07 31 16.7	+2.5
CLL	Collm	82.64	326	eP	P	07 31 21.0	-0.1
CLL	Collm	82.64	326	eP	P	07 31 21.0	-0.1
GERES	GERESS Array B	83.84	324	P	P	07 31 27.4	0.0
	comp=Z,0.6nm,0.7s,baz=56,slow=5.5,SNR=5.1						
IDI	Anoyia	84.92	308	LR	LR	08 12 33.3	
	comp=Z,107nm,21.6s,baz=179,slow=38						
PAHR	Pah Rah Range	85.28	47	P	P	07 31 36.1	+1.2
PAHR				IAmb	IAmb	07 31 37.7	
	comp=Z,5.7nm,1.1s						
HLID	Hailey	86.01	41	P	P	07 31 40.3	+1.7
EKA	Eskdalemuir Ar	86.69	336	P	P	07 31 40.1	-1.3
	comp=Z,0.6nm,0.4s,baz=47,slow=4.8,SNR=6.4						
NVAR	Mina Array Bea	86.70	47	P	P	07 31 41.9	-0.2
	comp=Z,0.9nm,0.6s,baz=298,slow=5.6,SNR=9.6						
NVAR	Mina Array Bea	86.70	47	P	P	07 31 42.5	+0.4
PDAR	Pinedale Array	89.27	40	P	P	07 31 55.1	+0.8
	comp=Z,0.5nm,1.0s,baz=352,slow=3.0,SNR=3.9						
L34A	Svendsen Farm,	96.69	33		pP	07 32 41.3	-1.1

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*TEH **25** 07:25:22.0, 30°.59N×52°.90E, h8^{km}, ML3.5*
*THR **25** 07:25:25.7±0.3, 30°.67N×52°.98E, h18^{km}±2^{km}, ML3.3*
ISC 25 07:25:23.7±0.9**, 30°.59N**±0°.04×**52°.83E**±0°.04**, h10**^{km}**, n28, σ1^{s}24**/29**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	Shiraz	0.99	196	ePg	Pg	07 25 42.3	-0.4
SHI				eSg	Sg	07 25 55.5	-0.1
SHI				e		07 26 00.0	
	comp=Z,99nm,0.3s						
KLNJ	Kolanjah	1.14	292	ePg	Pn	07 25 46.3	+0.2
KLNJ				e		07 26 11.1	
	comp=Z,99nm,0.4s						
IRAM	Ramesheh	1.27	343	ePg	Pn	07 25 46.7	-1.1
IRAM				e		07 26 10.2	
	comp=Z,99nm,0.4s						
KAZ1	Kazerun	1.41	227	ePg	Pb	07 25 50.3	+0.1
KAZ1				e		07 26 23.6	
	comp=Z,99nm,0.4s						
ISAD	Sadrabad	1.51	29	ePg	Pn	07 25 49.5	-1.6
ISAD				e		07 26 14.5	
	comp=Z,99nm,0.8s						
IMEH	Mehriz	1.73	62	e	Pg	07 25 56.8	-0.1
	comp=Z,99nm,0.4s						
IGAR	Gharneh	1.93	340	ePn	Pb	07 25 58.1	-1.0
IGAR				e		07 26 36.3	
	comp=Z,99nm,0.4s						
ICHK	Chekchek	2.13	39	ePn	Pn	07 25 59.9	+0.3
ICHK				e		07 26 33.5	
	comp=Z,99nm,0.5s						
AHBU	AHRAM	2.18	218	ePn	Pg	07 26 05.0	-0.5
JHRM	Jahrom	2.18	162	ePn	Pn	07 25 59.9	-0.3
JHRM				e		07 26 43.6	
	comp=Z,99nm,0.4s						
NASN	Na'in	2.20	360	ePn	Pb	07 26 02.6	-1.2
NASN				AML	AML	07 26 42.9	
	comp=N,126nm,0.6s						
NASN	Na'in	2.20	360	ePn	Pb	07 26 02.6	-1.2
IZEF	Zefreh	2.33	350	ePn	Pb	07 26 04.5	-1.6
YZKH	Yazd	2.34	40	ePn	Pn	07 26 03.6	+1.2
YZKH				eSg	Sb	07 26 35.1	-0.1
YZKH				AML	AML	07 26 42.1	
	comp=E,151nm,0.6s						
YZKH	Yazd	2.34	40	ePn	Pn	07 26 03.6	+1.2
IPIR	Pirpir	2.66	322	e	Pg	07 26 22.3	+7.6
	comp=Z,99nm,0.4s						
ANAR	Anarak	2.70	16	ePn	Pn	07 26 09.4	+2.0
KHGB	Koh Gabri	3.16	93	e	Sg	07 27 06.4	+1.1
	comp=Z,99nm,0.9s						
AMIS	Naft Sefid	3.22	290	ePn	Pn	07 26 15.4	+1.0
KRSH	Karshahi	3.42	350	ePn	Pn	07 26 20.3	+3.1
TVBK	TV Kerman	3.46	99	ePn	Pn	07 26 18.5	+0.5
TVBK				e		07 26 26.0	
	comp=Z,99nm,0.4s						
KRBR	Kerman	3.46	99	ePn	Pn	07 26 19.3	+1.4
KRBR				AML	AML	07 27 22.7	
	comp=E,77nm,0.6s						
KRBR	Kerman	3.46	99	ePn	Pn	07 26 19.3	+1.4
NGRK	Negar Kerman	3.51	105	ePn	Pn	07 26 18.7	0.0
NGRK				e		07 27 22.9	
	comp=Z,99nm,0.9s						
TPRV	Parvadeh(Tabas	4.09	53	ePn	Pn	07 26 27.1	+0.7
IVRN	Varamin	4.49	348	ePn	Pn	07 26 34.2	+2.4
TNSJ	Nastanj	4.64	43	ePn	Pn	07 26 34.4	+0.4
TKDS	Koohdasht(Taba	4.73	49	ePn	Pn	07 26 35.6	+0.4

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*IDC **25** 07:28:47.9±2.4, 5°.83N×72°.55W, h162^{km}±10^{km}, mb2.6/1, mb1 3.0/3, mb1mx2.8/43, mbtmp3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/8, Error ellipse: s-maj=72.6km s-min=8.6km az=135.0*
*RSNC **25** 07:28:51.7±0.9, 6°.58N×73°.42W, h123^{km}±3^{km}, ML2.9, Mw3.3*
ISC 25 07:28:50.6±1.0**, 6°.61N**±0°.03×**73°.42W**±0°.03**, h130**^{km}±6^{km}**, n34, σ1^{s}58**/64**, 4C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	94	eP	Pn	07 29 08.7	0.0
BARC				eS	Sn	07 29 22.1	-0.4
BARC				i		07 29 23.4	
	comp=Z,614nm,0.3s						
BRRC	Barranca, Sant	0.58	329⇑	eP	Pn	07 29 10.1	0.0
BRRC				eS	Sn	07 29 24.7	-0.2
BRRC				i		07 29 29.6	
	comp=Z,147nm,0.1s						
RUSC	La Rusia	0.78	155⇓	eP	Pn	07 29 12.1	-0.1
RUSC				eS	Sn	07 29 28.2	-0.3
RUSC				i		07 29 29.1	
	comp=Z,226nm,0.3s						
PAMC	Pamplona, Colo	1.02	44⇑	eP	Pn	07 29 14.7	+0.6
PAMC				eS	Sn	07 29 32.6	+0.6
PAMC				i		07 29 36.6	
	comp=Z,108nm,0.5s						
PTBC	PUERTO BERRIO,	1.04	266⇑	iP	Pn	07 29 12.6	-1.2
PTBC				eS	Sn	07 29 30.8	-0.7
PTBC				i		07 29 32.6	
	comp=Z,269nm,0.1s						
SPBC	San Pablo de B	1.15	215⇑	eP	Pn	07 29 14.7	-0.4
SPBC				eS	Sn	07 29 32.4	-1.3
SPBC				i		07 29 38.6	
	comp=Z,342nm,0.3s						
OCAC	Ocana	1.62	3	eP	Pn	07 29 20.4	+0.2
OCAC				eS	Sn	07 29 43.9	+1.1
OCAC				i		07 29 51.6	
	comp=Z,114nm,0.3s						
TAMC	Tame, Arauca	1.62	96⇓	eP	Pn	07 29 20.6	+0.5
TAMC				eS	Sn	07 29 43.1	+0.5
TAMC				i		07 29 43.7	
	comp=Z,42nm,0.2s						
ZARC	Zaragoza, Cauc	1.68	302	eP	Pn	07 29 21.2	+0.5
ZARC				eS	Sn	07 29 44.2	+0.5
ZARC				i		07 29 49.4	
	comp=Z,138nm,0.3s						
NORC	Norcasia	1.78	234	eP	Pn	07 29 21.4	-0.6
NORC				eS	Sn	07 29 46.0	+0.1
NORC				i		07 29 49.9	
	comp=Z,104nm,0.2s						
ROSC	El Rosal	1.97	207	P	Pn	07 29 26.0	+1.3
	comp=Z,9.4nm,0.3s,baz=304,slow=20,SNR=43						
ROSC				S	Sn	07 29 52.6	+2.0
	comp=Z,25nm,0.3s,baz=93,slow=16,SNR=11						
ROSC	El Rosal	1.97	207	eP	Pn	07 29 25.9	+1.3
ROSC				eS	Sn	07 29 53.5	+2.9
ROSC				i		07 29 58.7	
	comp=Z,62nm,0.3s						
CHIC	Chingaza	1.99	189	eP	Pn	07 29 25.0	+0.1
CHIC				eS	Sn	07 29 51.3	+0.3
CHIC				i		07 30 00.2	
	comp=Z,37nm,0.6s						
HELC	Santa Helena	2.14	259	eP	Pn	07 29 26.8	+0.1
HELC				eS	Sn	07 29 54.1	-0.1
HELC				i		07 29 59.8	
	comp=Z,73nm,0.2s						
SMLC	San Martn de	2.27	343	eP	Pn	07 29 27.8	-0.2
SMLC				eS	Sn	07 29 57.9	+1.3
SMLC				i		07 30 02.5	
	comp=Z,176nm,0.3s						
GUY2C	Guyana, Caldas	2.38	235⇓	eP	Pn	07 29 30.6	+1.0
GUY2C				eS	Sn	07 30 03.7	+4.1
GUY2C				i		07 30 08.6	
	comp=Z,55nm,0.3s						
UREC	San Jos de Ur	2.39	299	eP	Pn	07 29 28.6	-0.8
UREC				eS	Sn	07 29 57.3	-1.9
UREC				i		07 29 59.5	
	comp=Z,97nm,0.3s						
RREF	El Recreo	2.56	229	eP	Pn	07 29 33.0	+0.8
RREF				eS	Sn	07 30 06.1	+2.0
RREF				i		07 30 12.5	
	comp=Z,68nm,0.8s						
CBOC	Ciudad Bolivar	2.69	254	eP	Pn	07 29 34.0	+0.7
CBOC				eS	Sn	07 30 06.0	-0.1
CBOC				i		07 30 16.1	
	comp=Z,20nm,0.5s						
PTGC	Puerto Gaitan,	2.71	152	eP	Pn	07 29 32.8	-0.7
PTGC				eS	Sn	07 30 05.6	-1.0
PTGC				i		07 30 07.3	
	comp=Z,32nm,0.3s						
DBBC	Dabeiba	2.80	279	eP	Pn	07 29 35.1	+0.4
DBBC				eS	Sn	07 30 06.0	-2.8
DBBC				i		07 30 10.9	
	comp=Z,119nm,0.3s						
ANIL	Santa Ana	2.89	223	eP	Pn	07 29 37.5	+1.5
ANIL				eS	Sn	07 30 13.8	+2.8
MOTC	Monteria, Cord	3.10	314	eP	Pn	07 29 37.7	-0.9
MOTC				eS	Sn	07 30 15.0	-0.5
MOTC				i		07 30 16.9	
	comp=Z,20nm,0.6s						
ORTC	Ortega, Tolima	3.24	214	eP	Pn	07 29 40.8	+0.4
ORTC				eS	Sn	07 30 19.7	+0.7
ORTC				i		07 30 28.7	
	comp=Z,27nm,0.3s						
PLMC	San Jos del P	3.32	239	eP	Pn	07 29 41.8	+0.4
PLMC				eS	Sn	07 30 21.6	+0.9
PLMC				i		07 30 25.9	
	comp=Z,18nm,0.3s						
ARGC	Ariguani, Magd	3.33	346	eP	Pn	07 29 43.2	+1.6
ARGC				eS	Sn	07 30 27.6	+6.6
ARGC				i		07 30 32.2	
	comp=Z,23nm,0.3s						
SDV	Santo Domingo	3.57	50	P	Pn	07 29 45.1	+0.3
	comp=Z,3.2nm,0.3s,baz=116,slow=5.1,SNR=17						
SDV				S	Sn	07 30 25.9	-0.8
	comp=Z,6.4nm,0.3s,baz=58,slow=16,SNR=39						
SDV	Santo Domingo	3.57	50	eP	Pn	07 29 45.4	+0.5
SDV				eS	Sn	07 30 25.9	-0.8
SDV				i		07 30 29.5	
	comp=Z,21nm,0.5s						
CAPC	Capurgana	4.39	298	eP	Pn	07 29 55.3	-0.2
CAPC				eS	Sn	07 30 42.3	-3.7
CAPC				i		07 30 45.7	
	comp=Z,14nm,0.2s						
MACC	Macarena, Meta	4.45	186	eP	Pn	07 29 55.2	-1.2
MACC				eS	Sn	07 30 45.5	-2.2
MACC				i		07 30 50.1	
	comp=Z,9.5nm,0.4s						
SMRC	Santa Marta, M	4.60	350	eP	Pn	07 29 59.0	+0.7
SMRC				eS	Sn	07 30 49.3	-1.6
MDP	Montagnes des	20.72	93	LR	LR	07 41 34.5	
	comp=Z,37nm,19.5s,baz=142,slow=39						
YKA	Yellowknife Ar	63.36	340	P	P	07 39 06.6	+0.9
	comp=Z,0.1nm,0.7s,baz=132,slow=7.0,SNR=5.6						
WRA	Warramunga Arr	149.98	241	PKPbc	PKPdf	07 48 19.5	-2.2
	comp=Z,0.2nm,0.4s,baz=125,slow=2.5,SNR=1.6						

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*TUL **25** 07:29:34.2±0.9, 36°.13N±0°.01×97°.28W±0°.01, h5^{km}±7^{km}, ML3.1, mb_Lg3.2/71(NEIC), Error ellipse: s-maj=2.0km s-min=1.2km az=136.0*
*NEIC **25** 07:29:34.2±0.9, 36°.141N±0°.007×97°.28W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.6km s-min=1.1km az=94.0*
*IDC **25** 07:29:39.2±2.3, 36°.63N×97°.86W, h0^{km}, mb2.9/1, mb1 3.4/4, mb1mx3.2/62, mbtmp3.1/4, ML3.1/3, Error ellipse: s-maj=42.8km s-min=14.7km az=106.0*
ISC 25 07:29:34.2±0.8**, 36°.13N**±0°.03×**97°.29W**±0°.03**, h10**^{km}**, n72, σ0^{s}64**/48**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.36	202		Pg	07 29 41.5	+0.2
OK031	S. Brethren Rd	0.40	116		Pg	07 29 42.3	+0.2
OK031				Sg	Sg	07 29 47.8	+0.4
OK030	Cody Creek RV	0.45	116		Pg	07 29 43.1	0.0
OK030				Sg	Sg	07 29 49.3	+0.3
QUOK	Quay	0.47	85		Pg	07 29 43.5	+0.2
QUOK				Sg	Sg	07 29 50.0	+0.4
BCOK	Bluff Creek, N	0.54	209	Pg	Pg	07 29 44.7	+0.1
OK025	Westminster Rd	0.55	184		Pg	07 29 45.0	+0.2
CROK	Carrier	0.68	304		Pg	07 29 47.2	0.0
OKCFA	Oklahoma City	0.72	191		Pg	07 29 48.1	0.0
OKCSW	OKLAHOMA CITY	0.73	190		Pg	07 29 48.2	-0.1
FNO	Franklin	0.87	186		Pg	07 29 50.7	-0.3
KAN13	South Haven SW	0.90	350		Pg	07 29 51.4	0.0
KAN13				IAmb_Lg		07 30 03.6	
	comp=Z,153nm,0.7s						
KAN14	Manchester OK	0.99	327	Pg	Pg	07 29 53.0	-0.2
T35A	Sooner Cattle	1.00	38		Pg	07 29 53.1	-0.3
T35B	Sooner Cattle	1.00	38	P		07 29 53.1	
	baz=219						
T35B				S		07 30 06.1	
	baz=219						
W35A	Tecumseh	1.03	161		Pg	07 29 53.0	-1.0
KAN01	Argonia South	1.09	340		Pg	07 29 54.9	-0.3
KAN10	Anthony SW Sta	1.19	327		Pb	07 29 56.5	-0.3
KAN08	Anthony NE Sta	1.23	334		Pn	07 29 57.3	-0.1
TUL1	Leonard	1.23	100		Pn	07 29 56.6	-0.8
TUL1	Leonard	1.23	100	P		07 29 56.6	
	baz=281						
TUL1				S		07 30 13.4	
	baz=281						
KAN12	Harper NE Stat	1.30	334		Pn	07 29 58.5	+0.1
U32A	Winter Ranch,	1.41	281		Pn	07 29 59.9	0.0
U32A	Winter Ranch,	1.41	281	P		07 30 00.2	
	baz=100						
U32A				S		07 30 19.7	
	baz=100						
WMOK	Wichita Mounta	1.85	222	Pn	Pn	07 30 07.2	+1.3
WMOK				IAmb_Lg		07 30 35.5	
	comp=Z,127nm,0.7s						
WMOK	Wichita Mounta	1.85	222	P		07 30 07.3	
	baz=41						
WMOK				S		07 30 32.4	
	baz=41						
X37A	Clayton	2.19	134	IAmb_Lg		07 30 44.4	
	comp=Z,70nm,0.7s						
X37A	Clayton	2.19	134	P		07 30 11.8	
	baz=315						
X37A				S		07 30 40.5	
	baz=315						
R32A	Long Quarter,	2.56	334	P		07 30 16.5	
	baz=153						
R32A				S		07 30 53.1	
	baz=153						
R32A	Long Quarter,	2.56	334		Pn	07 30 16.4	+0.7
R32A				IAmb_Lg		07 30 59.8	
	comp=Z,64nm,0.8s						
HHAR	Hobbs	2.71	86		Pn	07 30 18.1	+0.3
Z35A	Perchaven, San	2.79	179		Pn	07 30 19.8	+0.9
Z35A	Perchaven, San	2.79	179	P		07 30 20.0	
	baz=359						
W39A	Magazine	3.00	107		Pn	07 30 20.9	-0.9
W39A				IAmb_Lg		07 31 15.8	
	comp=Z,73nm,0.9s						
KSU1	Kansas State U	3.02	10		Pn	07 30 22.7	+0.7
KSU1				IAmb_Lg		07 31 14.7	
	comp=Z,82nm,0.7s						
KSU1	Kansas State U	3.02	10	P		07 30 23.1	
	baz=190						
CBKS	Cedar Bluff	3.31	325	Pn	Pn	07 30 26.4	+0.3
MIAR	Mount Ida	3.42	116		Pn	07 30 28.8	+1.3
MIAR				IAmb_Lg		07 31 28.5	
	comp=Z,43nm,0.9s						
MIAR	Mount Ida	3.42	116	P		07 30 28.6	
	baz=299						
Z38A	Mt. Pleasant	3.43	146	Pn	Pn	07 30 28.3	+0.6
Z38A				IAmb_Lg		07 31 31.0	
	comp=Z,98nm,0.8s						
Z38A	Mt. Pleasant	3.43	146	P		07 30 28.6	
	baz=327						
U40A	Yellville	3.59	85		Pn	07 30 30.8	+0.9
X40A	Basin Creek Fa	3.99	113		Pn	07 30 37.0	+1.6
X40A				IAmb_Lg		07 31 40.5	
	comp=Z,47nm,0.8s						
WHTX	Lake Whitney,	4.13	182	Pn	Pn	07 30 37.7	+0.4
WHTX	Lake Whitney,	4.13	182	P		07 30 37.9	
	baz=1.9						
WHAR	Wooly Hollow	4.15	100	IAmb_Lg		07 31 50.1	
	comp=Z,53nm,0.8s						
MGMO	Mountain Grove	4.16	74	IAmb_Lg		07 31 47.4	
	comp=Z,50nm,0.8s						
FCAR	Ozark Folk Cen	4.19	92	IAmb_Lg		07 31 56.8	
	comp=Z,32nm,1.0s						
WLAR	White Oak Lake	4.21	124	IAmb_Lg		07 31 47.3	
	comp=Z,38nm,0.7s						
237A	Washetta, Mont	4.29	163		Pn	07 30 40.4	+0.8
237A				IAmb_Lg		07 32 00.3	
	comp=Z,32nm,1.0s						
P38A	Dawn	4.58	39	IAmb_Lg		07 31 57.0	
	comp=Z,30nm,0.8s						
LCAR	Lake Charles	4.97	89	IAmb_Lg		07 32 15.1	
	comp=Z,28nm,0.7s						
T42A	Van Buren	5.07	78	IAmb_Lg		07 32 12.9	
	comp=Z,50nm,0.9s						
KSCO	Kaye Shedlock'	5.13	306	IAmb_Lg		07 32 26.1	
	comp=Z,36nm,1.0s						
CCM	Cathedral Cave	5.20	66	IAmb_Lg		07 32 17.1	
	comp=Z,38nm,1.0s						
BGNE	Belgrade	5.32	353	IAmb_Lg		07 32 32.9	
	comp=Z,58nm,0.8s						
P40A	Paris	5.36	49	IAmb_Lg		07 32 29.3	
	comp=Z,38nm,0.8s						
PBMO	Poplar Bluff	5.56	81	IAmb_Lg		07 32 32.2	
	comp=Z,29nm,0.9s						
L34A	Svendsen Farm,	5.87	7	IAmb_Lg		07 32 47.7	
	comp=Z,101nm,0.7s						
143A	Socs Landing,	5.94	123	IAmb_Lg		07 32 59.2	
	comp=Z,30nm,0.9s						
JCT	Junction City	6.01	201	IAmb_Lg		07 32 50.8	
	comp=Z,31nm,0.8s						
JCT	Junction City	6.01	201	P		07 31 03.8	
	baz=20						
SLM	Saint Louis	6.15	64	IAmb_Lg		07 32 53.6	
	comp=Z,31nm,0.7s						
HENM	Henderson Moun	6.33	82	IAmb_Lg		07 32 58.5	
	comp=Z,54nm,0.9s						
W45A	Hickory Valley	6.67	96	IAmb_Lg		07 33 07.7	
	comp=Z,29nm,0.8s						
P43A	Skaggs, Pawnee	7.07	58	IAmb_Lg		07 33 17.6	
	comp=Z,43nm,0.9s						
ISCO	Idaho Springs	7.53	302	Pn	Pn	07 31 25.2	+0.9
L40A	Anamosa	7.57	37	Pn	Pn	07 31 25.4	+0.8
L40A				IAmb_Lg		07 33 34.6	
	comp=Z,30nm,0.9s						
ECSD	EROS Data Cent	7.61	4	Pn	Pn	07 31 24.8	-0.4
HDIL	Hopedale	7.68	52	Pn	Pn	07 31 26.0	0.0
USIN	University of	7.91	74	IAmb_Lg		07 33 52.3	
	comp=Z,21nm,0.8s						
O44A	Mansfield	8.03	57	IAmb_Lg		07 33 49.4	
	comp=Z,32nm,0.7s						
Y22D	IRIS PASSCAL I	8.16	258	IAmb_Lg		07 34 06.9	
	comp=Z,19nm,0.8s						
L42A	Oliver, Polo	8.34	43	Pn	Pn	07 31 35.7	+0.7
L42A				IAmb_Lg		07 34 04.4	
	comp=Z,33nm,0.9s						
TXAR	Lajitas Array	8.65	220	Pn	Pn	07 31 45.6	+6.2
	comp=Z,0.1nm,0.3s,baz=36,slow=11,SNR=4.0						
TXAR				Pg	Pg	07 32 11.3	-8.4
	comp=Z,0.4nm,0.3s,baz=58,slow=14,SNR=6.7						
TXAR				Lg	Lg	07 34 09.4	
	comp=Z,0.5nm,0.3s,baz=29,slow=26,SNR=8.8						
JFWS	Jewell Farm	8.69	37	Pn	Pn	07 31 40.5	+0.7
JFWS				IAmb_Lg		07 34 07.6	
	comp=Z,26nm,0.8s						
P46A	Rosedale	8.70	63	IAmb_Lg		07 34 10.2	
	comp=Z,25nm,0.8s						
I40A	Norwalk	9.29	31	Pn	Pn	07 31 47.8	-0.3
RSSD	Black Hills	9.51	329	Pn	Pn	07 31 52.3	+1.0
P48A	Milroy	9.96	67	IAmb_Lg		07 34 57.5	
	comp=Z,22nm,1.0s						
I42A	Draeger Farm,	10.06	37	Pn	Pn	07 31 59.1	+0.4
G40A	Rib Lake	10.59	28	Pn	Pn	07 32 05.4	-0.5
PDAR	Pinedale Array	11.57	309	Pn	Pn	07 32 18.4	-1.1
	comp=Z,0.1nm,0.3s,baz=120,slow=15,SNR=4.8						
PDAR				Lg	Lg	07 35 32.2	
	comp=Z,0.1nm,0.3s,baz=107,slow=35,SNR=4.4						
ULM	Lac du Bonnet	14.15	4	Pn	Pn	07 32 50.1	-4.5
	comp=Z,0.2nm,0.3s,baz=188,slow=15,SNR=1.3						
YKA	Yellowknife Ar	28.51	343	P	P	07 35 29.0	-0.4
	comp=Z,0.1nm,0.6s,baz=138,slow=9.1,SNR=4.9						

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*SJA **25** 07:36:26.0±0.6, 21°.20S×68°.85W, h135^{km}±3^{km}, ML4.0, MW3.9*
*NEIC **25** 07:36:26.7±3.5, 21°.16S±0°.04×68°.78W±0°.09, h119^{km}±6^{km}, Error ellipse: s-maj=12.8km s-min=6.2km az=97.0*
*IDC **25** 07:36:26.6±1.3, 21°.16S×68°.51W, h111^{km}±11^{km}, mb4.0/6, mb1 4.0/8, mb1mx3.6/40, mbtmp4.3/8, MS2.7/2, Ms1 2.7/2, ms1mx2.6/20, Error ellipse: s-maj=31.1km s-min=12.7km az=123.0*
*GUC **25** 07:36:27.5±0.7, 21°.19S×68°.75W, h124^{km}±4^{km}, ML4.3*
*VAO **25** 07:36:27.5±0.5, 21°.06S×68°.64W, h118^{km}±6^{km}, mb4.4*
ISC 25 07:36:26.8±0.6**, 21°.18S**±0°.03×**68°.80W**±0°.04**, h127**^{km}±6^{km}**, n117, σ1^{s}33**/146**, mb4.3**/7**, 12C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.74	214⇑	iP	Pn	07 36 47.8	+0.5
PB09				iS	Sn	07 37 03.1	+0.3
PB09				IAML		07 37 07.4	
	comp=E,4μm,0.3s						
PB09	IPOC Station P	0.74	214		Pn	07 36 46.9	-0.4

PB09	IPOC Station P	0.74	214	eP	Pn	07 36 47.8	+0.5
PB09				eS	Sn	07 37 03.8	+0.9
PB09				IAML		07 37 04.2	
	comp=Z,4µm,0.5s						
PB08	IPOC Station P	1.08	342	⇑iP	Pn	07 36 51.1	+0.6
PB08				eS	Sn	07 37 09.1	+0.4
PB08	IPOC Station P	1.08	342		Pn	07 36 50.7	+0.1
PB08				Sn	Sn	07 37 08.9	+0.2
PB08	IPOC Station P	1.08	342	eP	Pn	07 36 51.2	+0.6
PB08				eS	Sn	07 37 09.7	+1.0
PB08				IAML		07 37 11.0	
	comp=Z,1µm,0.5s						
PB07	IPOC Station P	1.15	241	⇑iP	Pn	07 36 51.6	+0.5
PB07				i S	Sn	07 37 09.5	+0.1
PB07				IAML		07 37 12.3	
	comp=N,5µm,0.2s						
PB07	IPOC Station P	1.15	241		Pn	07 36 51.0	0.0
PB07				Sn	Sn	07 37 09.4	0.0
PB07	IPOC Station P	1.15	241	eS	Sn	07 37 09.9	+0.4
PB07				IAML		07 37 12.3	
	comp=Z,2µm,0.1s						
PB03	IPOC Station P	1.24	225	⇑iP	Pn	07 36 52.4	+0.4
PB03				i S	Sn	07 37 11.0	0.0
PB03				IAML		07 37 13.4	
	comp=E,3µm,0.2s						
PB03	IPOC Station P	1.24	225	eS	Sn	07 37 11.5	+0.4
PB03				IAML		07 37 16.6	
	comp=Z,2µm,0.2s						
PATCX	Punta Patache	1.31	285	⇑iP	Pn	07 36 53.4	+0.8
PATCX				eS	Sn	07 37 12.7	+0.4
PATCX				IAML		07 37 14.5	
	comp=E,10µm,0.2s						
PATCX	Punta Patache	1.31	285	Pn	Pn	07 36 53.1	+0.5
PATCX				Sn	Sn	07 37 12.9	+0.6
PATCX	Punta Patache	1.31	285	eP	Pn	07 36 53.5	+0.8
PATCX				eS	Sn	07 37 13.2	+0.9
HMBC	Humberstone	1.36	311	⇑iP	Pn	07 36 53.4	+0.2
HMBC				eS	Sn	07 37 13.0	-0.2
HMBC				IAML		07 37 14.5	
	comp=N,5µm,0.4s						
TA01	Diego Aracena	1.43	295	⇑iP	Pn	07 36 54.1	+0.4
TA01				i S	Sn	07 37 14.4	+0.1
TA01				IAML		07 37 15.4	
	comp=E,4µm,0.2s						
TA01	Diego Aracena	1.43	295		Pn	07 36 54.2	+0.4
LVC	Limon Verde	1.43	184	P	Pn	07 36 54.7	+0.5
	comp=E,99nm,0.3s,baz=44,slow=14,SNR=825						
LVC				S	Sn	07 37 14.1	-0.9
	comp=E,269nm,0.3s,baz=223,slow=16,SNR=70						
LVC	Limon Verde	1.43	184	⇓iP	Pn	07 36 54.8	+0.5
LVC				i S	Sn	07 37 15.3	+0.2
LVC	Limon Verde	1.43	184	Pn	Pn	07 36 54.9	+0.6
LVC	Limon Verde	1.43	184	eP	Pn	07 36 54.7	+0.5
LVC				eS	Sn	07 37 15.8	+0.8
LVC				IAML		07 37 16.9	
	comp=Z,662nm,1.2s						
LVC	Limon Verde	1.43	184	eP	Pn	07 36 54.8	+0.6
TA02	Huaiquique	1.54	306	i P	Pn	07 36 55.3	+0.2
TA02				eS	Sn	07 37 16.7	+0.1
TA02				IAML		07 37 19.7	
	comp=E,5µm,0.1s						
PB06	IPOC Station P	1.68	205		Pn	07 36 57.4	+0.6
PB04	IPOC Station P	1.70	227	⇑iP	Pn	07 36 57.6	+0.5
PB04				i S	Sn	07 37 20.5	+0.2
PB04				IAML		07 37 25.3	
	comp=N,3µm,0.1s						
PB04	IPOC Station P	1.70	227		Pn	07 36 57.6	+0.5
PB04	IPOC Station P	1.70	227	eP	Pn	07 36 57.6	+0.5
PB04				eS	Sn	07 37 20.5	+0.2
PB04				IAML		07 37 24.6	
	comp=Z,2µm,0.1s						
PSGC	Pisagua	2.00	322	⇑iP	Pn	07 37 00.2	-0.5
PSGC				i S	Sn	07 37 25.9	-0.7
PSGC				IAML		07 37 29.9	
	comp=N,1µm,0.4s						
PSGCX	Pisagua	2.00	322	Pn	Pn	07 37 00.4	-0.3
PSGCX	Pisagua	2.00	322	eP	Pn	07 37 00.3	-0.4
PB15	IPOC Station P	2.11	197		Pn	07 37 02.6	+0.4
PB05	IPOC Station P	2.11	218	⇑iP	Pn	07 37 02.2	+0.2
PB05				eS	Sn	07 37 28.7	-0.5
PB05				IAML		07 37 31.0	
	comp=E,1µm,0.4s						
PB05	IPOC Station P	2.11	218	eP	Pn	07 37 02.3	+0.2
PB05				eS	Sn	07 37 29.0	-0.1
PB05				IAML		07 37 32.4	
	comp=Z,629nm,0.2s						
MNMC	Minye Minye	2.17	340	i P	Pn	07 37 03.7	+0.7
MNMC				i S	Sn	07 37 31.6	+0.9
MNMC				IAML		07 37 34.0	
	comp=E,2µm,0.2s						
MNMC	Minye Minye	2.17	340		Pn	07 37 03.5	+0.5
MNMCX	Minye Minye	2.17	340	eP	Pn	07 37 03.4	+0.4
MNMCX				eP	Pn	07 37 03.8	+0.9
MNMCX				eP	Pn	07 37 03.9	+0.9
MNMCX				eS	Sn	07 37 31.7	+1.1
PB10	IPOC Station P	2.83	215	⇑iP	Pn	07 37 10.4	-0.7
PB10				eS	Sn	07 37 44.8	-0.5
PB10				IAML		07 37 46.0	
	comp=E,656nm,0.2s						
PB10	IPOC Station P	2.83	215	Pn	Pn	07 37 10.9	-0.2
PB10	IPOC Station P	2.83	215	eP	Pn	07 37 11.1	0.0
PB10				eS	Sn	07 37 44.3	-1.0
PB10				IAML		07 37 46.4	
	comp=Z,394nm,0.3s						
AP01	Chacalluta	3.15	332	eP	Pn	07 37 15.0	-0.2
AP01				i S	Sn	07 37 52.7	+0.1
AP01				IAML		07 38 00.6	
	comp=N,846nm,0.4s						
YJA	Yavi	3.21	109	eP	Pn	07 37 18.0	+1.5
YJA				eS	Sn	07 37 56.9	+2.1
HJA	Humahuaca	3.74	123	eP	Pn	07 37 24.9	+1.6
PB14	IPOC Station P	3.74	203	Pn	Pn	07 37 21.5	-1.7
PB14	IPOC Station P	3.74	203	eP	Pn	07 37 22.9	-0.3
PB14				eS	Sn	07 38 05.8	-1.2
PB14				IAML		07 38 07.7	
	comp=Z,436nm,0.3s						
GO02	Mina Guanaco	4.03	190	⇑iP	Pn	07 37 26.3	-0.8
GO02				eS	Sn	07 38 12.7	-1.3
GO02	Mina Guanaco	4.03	190	Pn	Pn	07 37 26.5	-0.6
AC01	Pan de Azucar	5.21	198	Pn	Pn	07 37 40.5	-2.1
FSA	Cafayete	5.55	153	eP	Pn	07 37 49.7	+2.4
FSA				eS	Sn	07 38 29.5	-21
AC02	Maricunga	5.64	183	Pn	Pn	07 37 48.3	-0.6
GO03	Copiap	6.52	191		Pn	07 37 57.6	-2.6
AC04	Llanos de Chal	7.29	196	Pn	Pn	07 38 06.3	-4.4
VCA	Vinchina	7.54	176	eP	Pn	07 38 14.2	0.0
VCA				IAML		07 39 40.0	
	comp=Z,10nm,0.3s						
AC05	El Transito	7.74	190	Pn	Pn	07 38 14.1	-2.7
LCO	Las Campanas	7.99	192	Pn	Pn	07 38 16.3	-3.9
CO01	Juntas del Tor	8.84	187	Pn	Pn	07 38 29.4	-2.3
SIV	San Ignacio	8.96	56	P	Pn	07 38 29.7	-3.6
	comp=Z,8.3nm,0.3s,baz=258,slow=9.9,SNR=225						
SIV				S	Sn	07 40 06.8	-5.8
	baz=358,slow=16,SNR=4.1						
SIV				LR	LR	07 42 26.4	
	comp=Z,57nm,18.2s,baz=232,slow=41						
GO04	Tololo Observa	9.14	191		Pn	07 38 31.3	-4.4
CO03	El Pedregal	9.77	190		Pn	07 38 39.6	-4.5
CO02	Combarbal	10.18	191	Pn	Pn	07 38 44.8	-4.8
ETMB	Extrema	11.57	13	eP	Pn	07 39 06.8	-1.3
VILB	Vilhena	11.60	46	eP	Pn	07 39 06.0	-2.5
NNA	Nana	11.95	319	LR	LR	07 43 39.0	
	comp=Z,27nm,19.1s,baz=248,slow=36						
MT02	Curacav	12.21	189	Pn	Pn	07 39 10.4	-6.1
AQDB	Aquidauana	12.27	89	eP	Pn	07 39 16.6	-0.8
SAML	Samuel	13.31	25		Pn	07 39 30.9	0.0
SAML	Samuel	13.31	25	eP	Pn	07 39 30.4	-0.5
ITQB	Itaqui	13.87	130	eP	Pn	07 39 38.0	+0.1
TRCB	Terra Rica	15.08	99	eP	P	07 39 55.7	0.0
BI02	San Fabin de	15.58	187	P	P	07 40 00.6	-0.5
BI02				IAmb	IAmb	07 40 01.8	
	comp=Z,8.8nm,0.7s						
PTGB	Pitanga	15.81	106	eP	P	07 40 03.6	-0.1
PCMB	Pacaembu	16.34	95	eP	Pn	07 40 09.2	+0.3
ITAB	Concordia	16.35	115	eP	P	07 40 09.8	+0.2
CPSB	Cacapava Do Su	16.59	127	eP	Pn	07 40 11.4	-0.5
ARAG	Araguaiana, MT	17.01	74	eP	P	07 40 16.2	-0.7
ITRB	Iturama	17.35	88	eP	P	07 40 20.5	-0.2
FRTB	Fartura	17.94	100	eP	P	07 40 26.8	-0.3
BB19B	Bebedouro	18.91	93	eP	P	07 40 36.8	-1.1
SNDB	Serra Nova Dou	19.10	64	eP	P	07 40 38.2	-1.6
NPGB	Novo Progresso	19.14	45	eP	P	07 40 38.4	-1.9
PLCA	Paso Flores	19.55	184	P	P	07 40 46.0	+1.4
	comp=Z,0.1nm,0.3s,baz=351,slow=11,SNR=7.8						
PLCA	Paso Flores	19.55	184	P	Pn	07 40 46.7	-0.4
PLCA	Paso Flores	19.55	184	eP	Pn	07 40 48.0	+0.8
MACA	Manacapuru-AM	19.57	25	eP	P	07 40 43.8	-1.2
IPMB	Ipameri, GO	19.66	84	eP	P	07 40 45.2	-0.7
SPB	Sao Paulo	19.90	101	eP	P	07 40 48.4	-0.1
VAO	Valinhos	20.31	99	eP	P	07 40 51.7	-1.3
BDFB	Brasilia	20.47	78	P	P	07 40 53.6	-1.1
	comp=Z,9.4nm,0.5s,baz=250,slow=10.0,SNR=23						
BDFB	Brasilia	20.47	78	P	P	07 40 53.7	-1.1
BDFB				IAmb	IAmb	07 40 57.6	
	comp=Z,12nm,0.5s						
ITTB	Itaituba	20.98	39	eP	P	07 40 58.4	-1.7
PTGA	Pitinga	22.08	24	P	P	07 41 10.6	-1.1
	comp=Z,8.9nm,0.3s,baz=206,slow=16,SNR=36						
PTGA	Pitinga	22.08	24	P	P	07 41 10.5	-1.2
PTGA				IAmb	IAmb	07 41 16.1	
	comp=Z,9.4nm,0.6s						
BSCB	Bom Sucesso	22.42	94	eP	P	07 41 14.0	-1.2
PRPB	Parauapebas	23.68	54	eP	P	07 41 26.4	-0.6
SMTB	Santa Maria do	23.83	62	eP	P	07 41 28.3	-0.1
MALB	Monte Alegre	23.87	38	eP	P	07 41 29.1	+0.4
JANB	Januaria	24.04	79	eP	P	07 41 29.1	-1.3
SDBA	SAO DESIDERIO	24.46	73	eP	P	07 41 33.9	-0.2
SJMB	Sao Joao De Ma	26.07	89	eP	P	07 41 48.6	0.0
BSFB	Barra de Sao F	26.36	90	eP	P	07 41 51.3	+0.1
MCPB	Macapa, AP	26.37	40	eP	P	07 41 52.6	+1.2
GDU01	Guandu, BA	28.82	80	eP	P	07 42 12.7	-0.5
NBPS	Pedro II - PI	31.37	62	eP	P	07 42 36.1	+0.3
RCBR	Riachuelo	35.33	69	P	P	07 43 10.3	+0.2
SJG	San Juan	39.13	4	P	P	07 43 40.8	-1.3
SJG				IAmb	IAmb	07 44 09.7	
	comp=Z,14nm,1.2s						
CBYP	Canovanas	39.31	4	P	P	07 43 42.7	-0.9
SNAA	Sanae	62.55	161	P	P	07 46 37.6	+0.8
	comp=Z,0.6nm,0.9s,baz=232,slow=5.8,SNR=5.5						
SNAA	Sanae	62.55	161	P	P	07 46 38.8	+2.0
DBIC	Dimbokro	68.55	73	P	P	07 47 16.2	+0.1
	comp=Z,5.0nm,0.8s,baz=245,slow=5.7,SNR=4.1						
QSPA	South Pole Qui	69.01	180	P	P	07 47 21.3	+2.9
QSPA				IAmb	IAmb	07 47 21.9	
	comp=Z,6.2nm,1.3s						
TORD	Torodi Ar. Bea	77.15	70	P	P	07 48 06.6	-0.4
	comp=Z,1.7nm,0.5s,baz=254,slow=5.2,SNR=10						
TORD	Torodi Ar. Bea	77.15	70	IAmb	IAmb	07 48 13.6	
	comp=Z,1.9nm,0.6s						
YKA	Yellowknife Ar	90.92	341	P	P	07 49 17.4	+1.7
	comp=Z,0.1nm,0.3s,baz=125,slow=5.4,SNR=7.6						
YKA				pP	pP	07 49 39.6	-10
	comp=Z,0.7nm,0.7s,baz=120,slow=5.3,SNR=9.3						
ASAR	Alice Springs	130.24	208	PKP	PKiKP	07 55 23.6	0.0
	comp=Z,0.1nm,0.3s,baz=337,slow=38,SNR=2.5						
WRA	Warramunga Arr	133.28	211	PKP	PKiKP	07 55 30.6	+0.9
	comp=Z,0.4nm,0.7s,baz=148,slow=1.6,SNR=4.7						
ZALV	Zalesovo Beam	141.62	25	PKP	PKiKP	07 55 44.6	-1.0
	comp=Z,0.3nm,0.5s,baz=277,slow=1.2,SNR=2.1						
MKAR	Makanchi Array	145.31	36	PKPbc	PKPab	07 55 51.4	+1.5
	comp=Z,0.8nm,0.7s,baz=316,slow=3.8,SNR=10						
MKAR	Makanchi Array	145.31	36		PKPab	07 55 51.5	+1.7

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*ISK **25** 07:56:20.8, 34°.12N×26°.32E, h5^{km}, ML3.8/21*
*NEIC **25** 07:56:24.7±1.5, 34°.13N±0°.08×26°.20E±0°.06, h31^{km}±7^{km}, mb4.1/13, ML3.9(THE), Error ellipse: s-maj=11.8km s-min=7.6km az=186.0*
*THE **25** 07:56:24.3, 34°.27N×26°.17E, h0^{km}±2^{km}, ML3.3/4, Error ellipse: s-maj=5.6km s-min=1.4km az=166.0*
*IDC **25** 07:56:25.3±3.5, 34°.28N×26°.20E, h33^{km}±28^{km}, mb3.9/13, mb1 3.9/20, mb1mx3.8/42, mbtmp4.0/20, ML3.8/7, MS2.7/1, Ms1 2.7/1, ms1mx2.3/57, Error ellipse: s-maj=18.3km s-min=12.4km az=2.0*
*ATH **25** 07:56:26.4, 34°.39N×26°.14E, h30^{km}±31^{km}, ML3.3/4, Error ellipse: s-maj=31.6km s-min=2.8km az=0.0*
*NIC **25** 07:56:27.4±0.0, 34°.17N×26°.62E, h15^{km}±31^{km}, Ml4.1/3*
*HLW **25** 07:56:30.7, 34°.02N×26°.96E, h32^{km}±18^{km}, Ml3.9*
*DDA **25** 07:56:41.0, 35°.12N×27°.01E, h83^{km}±68^{km}, ML3.6*
ISC 25 07:56:25.6±0.8**, 34°.19N**±0°.05×**26°.26E**±0°.04**, h36**^{km}±2^{km}**, n139, σ1^{s}.55**/152**, mb4.0**/14**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.93	358	P	Pn	07 56 40.0	-2.1
ZKR				AML	AML	07 56 56.0	
	comp=E,6856µm,0.5s						
ZKR				AML	AML	07 56 57.1	
	comp=N,2148µm,0.4s						
ZKR	Zakros	0.93	358	P	Pn	07 56 40.0	-2.1
ZKR				S	Sn	07 56 54.3	+0.1
	comp=N,3µm,0.7s						
ZKR	Zakros	0.93	358	PG	Pn	07 56 40.3	-1.8
ZKR				SG	Sn	07 56 54.6	+0.4
STIA	Sitia Lasithi	1.02	352	P	Pn	07 56 41.7	-1.7
STIA				S	Sn	07 56 57.4	+0.9
LAST	Lasithi	1.16	327	P	Pn	07 56 43.7	-1.7
LAST				AML	AML	07 57 07.2	
	comp=E,3548µm,1.1s						
LAST				AML	AML	07 57 11.8	
	comp=N,2189µm,0.5s						
LAST	Lasithi	1.16	327	P	Pn	07 56 43.7	-1.7
LAST				S	Sn	07 57 00.7	+0.6
	comp=N,2µm,1.1s						
NPS	Neapolis	1.20	334	P	Pn	07 56 44.4	-1.3
NPS				AML	AML	07 57 14.5	
	comp=E,2113µm,0.7s						
NPS				AML	AML	07 57 16.9	
	comp=N,2208µm,0.6s						
NPS	Neapolis	1.20	334	P	Pn	07 56 44.5	-1.3
NPS				S	Sn	07 57 02.0	+1.2
	comp=N,1µm,0.5s						
SIVA	Sivas	1.45	305	P	Pn	07 56 49.4	+0.1
SIVA				AML	AML	07 57 26.0	
	comp=E,4042µm,0.7s						
SIVA				AML	AML	07 57 27.5	
	comp=N,3187µm,0.7s						
SIVA	Sivas	1.45	305	P	Pn	07 56 48.8	-0.5
HRKL	Herakleio	1.47	320	PN	Pn	07 56 49.9	+0.4
KARP	Karpathos	1.55	29	P	Pn	07 56 52.2	+1.5
KARP	Karpathos	1.55	29	P	Pn	07 56 52.4	+1.7
KARP				S	Sn	07 57 12.7	+3.2
	comp=N,988nm,0.7s						
KARP	Karpathos	1.55	29	PN	Pn	07 56 50.5	-0.2
KARP	Karpathos	1.55	29	Pn	Pn	07 56 52.6	+1.9
KARP	Karpathos	1.55	29	P	Pn	07 56 52.2	+1.5
KARP				AML	AML	07 57 15.8	
	comp=N,2.1nm,0.8s						
KARP				AML	AML	07 57 22.6	
	comp=N,1.9nm,0.6s						
IDI	Anoyia	1.57	315	Pn	Pn	07 56 51.1	+0.2
	comp=N,11nm,0.3s,baz=141,slow=16,SNR=46						
IDI				Sn	Sn	07 57 08.0	-2.1
	comp=N,20nm,0.3s,baz=350,slow=20,SNR=14						
IDI				LR	LR	07 57 46.5	
	comp=N,240nm,18.9s,baz=227,slow=55						
IDI	Anoyia	1.57	315	P	Pn	07 56 51.2	+0.2
IDI	Anoyia	1.57	315	P	Pn	07 56 51.2	+0.2
IDI	Anoyia	1.57	315	PN	Pn	07 56 51.6	+0.6
IDI	Anoyia	1.57	315		Pn	07 56 51.8	+0.8
GVD	Gavdhos	1.90	291	P	Pn	07 56 56.5	+1.0
GVD	Gavdhos	1.90	291	P	Pn	07 56 55.6	+0.1
VAM	Vamos	2.08	306	P	Pn	07 56 58.0	0.0
ANAF	Anafi Island	2.20	350	P	Pn	07 57 00.1	+0.5
IMMV	Iera Moni Meta	2.26	305	P	Pn	07 57 01.1	+0.7
IMMV	Iera Moni Meta	2.26	305	PN	Pn	07 57 00.9	+0.5
SANT	Santorini	2.27	344	PN	Pn	07 57 00.6	0.0
SANT	Santorini	2.27	344	Pn	Pn	07 57 00.0	-0.6
ARG	Arkhangelos	2.54	37	PN	Pn	07 57 04.2	0.0
ARG	Arkhangelos	2.54	37	P	Pn	07 57 06.1	+1.8
APE	Apeiranthos	2.94	349	PN	Pn	07 57 10.5	+0.8
BODT	Bodrum	3.00	16	PN	Pn	07 57 10.9	+0.4
BDRM	Kayabasi	3.03	18	i P	Pn	07 57 11.2	+0.2
BDRM				i S	Sn	07 57 34.7	-11
TURN	Turunc	3.05	32	PN	Pn	07 57 12.3	+1.0
TURN	Turunc	3.05	32	i P	Pn	07 57 12.6	+1.4
TURN				i S	Sn	07 57 37.6	-8.9
DALY	Dalyan (Mula)	3.27	36	PN	Pn	07 57 14.9	+0.6
DALY	Dalyan (Mula)	3.27	36	i P	Pn	07 57 15.5	+1.2
DALY				i S	Sn	07 57 44.8	-7.2
MLSB	Milas	3.34	21	PN	Pn	07 57 16.2	+0.9
FETY	Fethiye	3.36	43	PN	Pn	07 57 15.5	-0.1
FETY	Fethiye	3.36	43	i P	Pn	07 57 14.2	-1.4
FETY				i S	Sn	07 57 42.2	-12
YER	Yerkesik	3.37	29	PN	Pn	07 57 16.3	+0.5
AKAS	Kas	3.42	52	PN	Pn	07 57 16.3	-0.2
AKAS	Kas	3.42	52	i P	Pn	07 57 16.0	-0.4
AKAS				i S	Sn	07 57 46.5	-9.3
AKAS	Kas	3.42	52	Pn	Pn	07 57 15.6	-0.9
MULA	Mugla, Merkez-	3.49	28	i P	Pn	07 57 20.2	+2.8
MULA				i S	Sn	07 57 47.2	-10
CAEL	Denizli, Camel	3.85	40	i P	Pn	07 57 24.0	+1.6
CAEL				i S	Sn	07 57 54.5	-12
CAEL				IAML		07 58 14.0	
	comp=E,226nm,0.7s						
CAEL				IAML		07 58 18.0	
	comp=N,199nm,0.7s						
TAVA	DENIZLI_Tavas	3.92	33	i P	Pn	07 57 24.1	+0.7
TAVA				i S	Sn	07 57 57.4	-11
ELL	Elmali	3.93	48	PN	Pn	07 57 23.7	+0.3
ELL	Elmali	3.93	48	Pn	Pn	07 57 25.2	+1.8
ELL	Elmali	3.93	48	P	Pn	07 57 24.8	+1.4
GOLH	Golhisar	4.06	41	i P	Pn	07 57 26.3	+1.0
GOLH				i S	Sn	07 57 59.6	-12
OSC1	CSNet OBS 1	4.24	98	P	Pn	07 57 27.0	-0.5
OSC1				S	Sn	07 58 14.3	-1.4
KORT	Korkueli	4.36	49	PN	Pn	07 57 30.2	+0.8
KORT	Korkueli	4.36	49	i P	Pn	07 57 31.5	+2.1
KORT				i S	Sn	07 58 04.6	-14
ITM	Ithomi	4.62	312	Pn	Pn	07 57 32.4	-0.4
BRDR	BURDUR-Merkez	4.67	40	i P	Pn	07 57 34.9	+1.3
BRDR				i S	Sn	07 58 06.8	-20
BUCA	Burdur, Bucak-	4.70	47	i P	Pn	07 57 37.3	+3.3
BUCA				i S	Sn	07 58 19.3	-7.9
KULA	Kula-Manisa	4.74	24	PN	Pn	07 57 35.9	+1.4
BCK	Bucak	4.80	46	PN	Pn	07 57 36.5	+1.1
KHAL	Karahalli	4.93	31	i P	Pn	07 57 36.6	-0.5
KHAL				i S	Sn	07 58 16.3	-17
SWA2		4.98	188	P	Pn	07 57 37.4	-0.4
	baz=196						
SWA2				AMP		07 58 00.0	
	baz=196						
AKMS	Akamas	5.08	79	P	Pn	07 57 39.0	-0.2
AKMS				AML	AML	07 58 34.5	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	07 58 35.5	
	comp=N,0.7nm,0.4s						
KZIL	AFYON_Kizioren	5.13	37	i P	Pn	07 57 41.3	+1.2
KZIL				i S	Sn	07 58 20.1	-18
OSC2	CSNet OBS 4	5.14	101	P	Pn	07 57 41.4	+1.5
BAGO	Egridir - ISPA	5.28	43	i P	Pn	07 57 42.1	+0.1
BAGO				i S	Sn	07 58 22.7	-19
GAZI	Gazipasa	5.37	66	PN	Pn	07 57 43.5	+0.4
GAZI	Gazipasa	5.37	66	i P	Pn	07 57 42.4	-0.7
GAZI				i S	Sn	07 58 21.1	-23
SZAC	Souni	5.50	82	P	Pn	07 57 45.5	+0.4
SZAC				AML	AML	07 58 48.5	
	comp=N,0.4nm,0.4s						
SZAC				AML	AML	07 58 49.6	
	comp=N,0.5nm,0.4s						
SEDI	Konya, Seydise	5.53	52	i P	Pn	07 57 47.7	+2.3
SEDI				i S	Sn	07 58 33.2	-15
SEDI				IAML		07 58 55.0	
	comp=N,80nm,0.8s						
SHUT	Suhut-Afyon	5.57	37	PN	Pn	07 57 47.4	+1.4
YVAC	Isparta, Yalva	5.73	43	i P	Pn	07 57 51.4	+3.2
YVAC				i S	Sn	07 58 33.2	-20
AGG	Agios Georgios	5.77	328	Pn	Pn	07 57 48.4	-0.2
ASGA	Asgata	5.81	82	P	Pn	07 57 48.9	-0.2
CSS	Mathiatis	5.89	80	Pn	Pn	07 57 49.5	-0.8
CSS	Mathiatis	5.89	80	P	Pn	07 57 50.3	-0.1
TEKE	Tekeli-Mersin	5.95	69	PN	Pn	07 57 51.6	+0.5
BERE	Bereket-Mersin	6.09	67	PN	Pn	07 57 53.6	+0.4
RYAN	Fayoum	6.14	145	P	Pn	07 57 53.0	-0.7
	baz=149						
RYAN				S	Sn	07 59 01.4	-1.3
	baz=149						
MVOU	Mavrovouni	6.14	80	P	Pn	07 57 54.3	+0.5
LADK	Ladik-KONYA	6.36	49	PN	Pn	07 57 58.0	+1.2
CIFT	Cifteler, Eski	6.45	35	PN	Pn	07 57 59.9	+1.9
GLL	Jalalah	6.53	133	P	Pn	07 57 58.1	-1.1
	baz=136						
LIT	Litokhoron	6.62	334	Pn	Pn	07 58 00.6	+0.3
NBNS	Bani Suef	7.02	141	P	Pn	07 58 05.9	0.0
	baz=144						
HFRF	Wahat Farafira	7.24	165	P	Pn	07 58 08.2	-0.6
	baz=169						
HFRF				AMP		07 59 00.0	
	baz=169						
HFRF				S	Sn	07 59 23.6	-6.2
	baz=169						
FNA	Florina	7.64	331	Pn	Pn	07 58 15.6	+1.2
ANTO	Ankara	7.71	41	Pn	Pn	07 58 15.8	+0.5
MMAI	Mount Meron Ar	7.72	96	Pn	Pn	07 58 14.5	-1.0
	comp=N,4.1nm,0.3s,baz=274,slow=14,SNR=5.9						
MMAI				Sn	Sn	07 59 42.4	+0.6
	comp=N,5.7nm,0.3s,baz=305,slow=32,SNR=5.1						
MMAI				LR	LR	08 03 20.8	
	comp=N,48nm,19.6s,baz=170,slow=53						
BR131	Keskin Array S	8.09	45	Pn	Pn	07 58 22.1	+1.5
BRTR	Keskin Array B	8.09	45	Pn	Pn	07 58 20.8	+0.2
	comp=N,0.2nm,0.3s,baz=220,slow=16,SNR=5.2						
BRTR				Sn	Sn	07 59 48.3	-2.6
	comp=N,0.1nm,0.3s,baz=212,slow=27,SNR=6.1						
BRTR	Keskin Array B	8.09	45		Pn	07 58 21.5	+0.9
GRB	Gharib	8.13	135	P	Pn	07 58 20.2	-0.8
	baz=137						
SCTE	Santa Cesarea	8.55	316	Pn	Pn	07 58 23.7	-3.1
TR2	Tor 2	8.62	130	P	Pn	07 58 26.2	-1.5
	baz=132						
EIL	Elat	8.65	119	Pn	Pn	07 58 28.5	+0.2
	comp=N,2.1nm,0.3s,baz=346,slow=4.5,SNR=14						
EIL				Sn	Sn	08 00 02.4	-2.2
	comp=N,2.4nm,0.3s,baz=348,slow=9.7,SNR=5.5						
HKAT	Jabal Katrina	8.70	128	P	Pn	07 58 27.6	-1.5
	baz=130						
TIP	Timpagrande	9.11	306	Pn	Pn	07 58 31.8	-2.8
RAFF	Raffo Rosso	10.13	291		Pn	07 58 46.9	-1.7
VAE	Valguarnera	10.16	292	Pn	Pn	07 58 48.4	-0.5
	comp=N,2.6nm,0.3s,baz=41,slow=9.3,SNR=2.2						
CORL	Corleone	11.12	293	Pn	Pn	07 59 01.5	-0.6
KEST	Kesra	13.96	281	Pn	Pn	07 59 45.1	+4.3
	comp=N,0.5nm,0.3s,baz=50,slow=10,SNR=4.6						
TEOL	Teolo	15.79	319	Pn	Pn	08 00 06.2	+1.0
TEOL				IAmb	IAmb	08 00 11.9	
	comp=Z,12nm,0.9s						
ABTA	Abfaltersbach	16.30	324	ePn	P	08 00 13.9	-0.4
	comp=Z,3.9nm,0.6s						
AKASG	Malin Array Be	16.65	7	Pn	Pn	08 00 15.3	-0.7
	comp=Z,2.2nm,0.3s,baz=193,slow=9.8,SNR=13						
AKASG	Malin Array Be	16.65	7		Pn	08 00 17.2	+1.2
AKBB	Malin Array Si	16.65	7	Pn	Pn	08 00 16.2	+0.2
WATA	Walderalm	17.17	324	ePn	P	08 00 25.0	+0.9
	comp=Z,9.3nm,1.4s						
SQTA	Sankt Quirin	17.27	323	ePn	P	08 00 25.4	+0.3
	comp=Z,5.6nm,1.0s						
GERES	GERESS Array B	17.37	331	P	Pn	08 00 25.0	-0.1
	comp=Z,0.1nm,0.3s,baz=143,slow=12,SNR=3.9						
FETA	Feichten	17.37	322	ePn	P	08 00 27.4	+1.0
	comp=Z,8.6nm,1.1s						
MOTA	Moosalm	17.41	324	ePn	Pn	08 00 26.8	+1.1
	comp=Z,2.2nm,0.6s						
DAVOX	Davos/Dischmat	17.66	320	P	Pn	08 00 28.7	-0.1
	comp=Z,0.2nm,0.3s,baz=144,slow=15,SNR=4.4						
SENIN	Lac Senin/Sane	18.84	316	P	P	08 00 41.8	-0.7
SENIN				IAmb	IAmb	08 00 53.1	
	comp=Z,14nm,1.4s						
BFO	Black Forest	19.46	322	P	P	08 00 48.1	-0.9
ECH	Echery	20.00	320	P	P	08 00 55.1	+0.1
ECH				IAmb	IAmb	08 00 55.2	
	comp=Z,10nm,1.4s						
BELG	Belogornoye	23.79	34	P	P	08 01 34.6	-0.1
	comp=Z,3.4nm,0.6s,baz=333,slow=3.3,SNR=5.4						
ESBB	Sonseca Array	24.70	292	P	P	08 01 42.6	-0.7
ESBB				IAmb	IAmb	08 01 50.6	
	comp=Z,8.0nm,1.2s						
ESDC	Sonseca Array	24.70	292	P	P	08 01 43.0	-0.3
	comp=Z,3.2nm,0.6s,baz=80,slow=9.2,SNR=23						
ESDC	Sonseca Array	24.70	292	P	P	08 01 42.6	-0.7
PAB	San Pablo	24.99	291	P	P	08 01 45.7	-0.3
GEYT	Alibeck	25.96	72	P	P	08 01 55.3	+0.5
	comp=Z,2.0nm,0.4s,baz=295,slow=7.8,SNR=2.6						
HFS	Hagfors	27.23	346	P	P	08 02 04.3	-1.6
	comp=Z,2.7nm,0.9s,baz=138,slow=9.6,SNR=9.4						
FINES	FINESS Array B	27.27	360	P	P	08 02 03.7	-2.6
	comp=Z,4.3nm,1.0s,baz=166,slow=11,SNR=11						
FINES	FINESS Array B	27.27	360	P	P	08 02 06.3	0.0

ABKAR	Akbulak array	29.02	49	P	P	08 02 22.6	+0.6
EKA	Eskdalemuir Ar	29.35	325	P	P	08 02 22.8	-2.1
	comp=Z,3.0nm,0.8s,baz=110,slow=11,SNR=4.5						
TOA0	Torodi Ar. Sit	30.59	233	P	P	08 02 36.3	+0.1
TORD	Torodi Ar. Bea	30.59	233	P	P	08 02 35.7	-0.5
	comp=Z,1.5nm,0.6s,baz=39,slow=8.5,SNR=4.2						
KOWA	Kowa	33.64	242	P	P	08 03 02.8	-0.2
	comp=Z,1.1nm,0.5s,baz=61,slow=10,SNR=2.1						
ARCES	ARCESS Array B	35.40	360	P	P	08 03 15.1	-2.6
	comp=Z,1.7nm,0.8s,baz=188,slow=7.4,SNR=9.6						
KURK	Kurchatov	41.10	50	P	P	08 04 07.0	+1.2
MK31	Makanchi Array	43.57	56	P	P	08 04 27.1	+1.1
MKAR	Makanchi Array	43.57	56	P	P	08 04 26.9	+1.0
	comp=Z,3.0nm,0.6s,baz=276,slow=6.5,SNR=54						
MKAR	Makanchi Array	43.57	56	P	P	08 04 27.2	+1.2
ZAA0	Zalesovo Array	45.03	45	P	P	08 04 37.9	+0.4
ZALV	Zalesovo Beam	45.03	45	P	P	08 04 37.9	+0.3
	comp=Z,3.7nm,0.4s,baz=269,slow=8.0,SNR=16						
SONM	Songino Array	59.41	50	P	P	08 06 25.8	+1.3
	comp=Z,0.6nm,0.6s,baz=282,slow=6.9,SNR=4.0						
YKA	Yellowknife Ar	78.65	343	P	P	08 08 23.2	-0.2
	comp=Z,0.6nm,0.8s,baz=39,slow=5.7,SNR=11						

WEL 25 08:12:11.9±0.8, **34°S**±15°×**18°0W**±2°5, **h368**^{km}±15^{km}, **M3.8**/23, **mB4.4**/13, **MLv4.2**/23, **Mw(mB)3.5**/13, **Error ellipse: s-maj=0.0km s-min=0.0km az=119.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.17	201	S	S	08 14 20.1	-1.5
WMGZ	Waiomatatini S	4.38	198	P	Pn	08 13 25.3	-0.4
WMGZ				S	S	08 14 28.4	+2.9
HAZ	Te Kaha	4.52	205	P	Pn	08 13 26.1	-1.0
HAZ				S	S	08 14 29.3	+1.3
PKGZ	Pakihiroa	4.54	201	P	Pn	08 13 27.8	+0.3
PKGZ				S	S	08 14 27.6	-1.0
PUZ	Puketiti	4.66	199	P	Pn	08 13 29.1	+0.4
PUZ				S	S	08 14 30.9	+0.1
RUGZ	Raukumara Rang	4.74	204	P	Pn	08 13 28.7	-0.9
CNGZ	Carnagh Statio	5.06	198	P	Pn	08 13 33.9	+1.0
TKGZ	Te Karaka	5.12	201	P	Pn	08 13 32.9	-0.6
TKGZ				S	S	08 14 39.5	-0.2
MWZ	Matawai	5.12	204	P	Pn	08 13 33.3	-0.3
MWZ				S	S	08 14 40.2	+0.3
URZ	Urewera	5.21	207	P	Pn	08 13 33.7	-0.7
URZ				S	S	08 14 41.2	-0.2
RIGZ	Rimuhau	5.39	200	P	Pn	08 13 36.0	-0.5
RIGZ				S	S	08 14 45.4	+0.2
MUGZ	Murupara	5.53	209	P	Pn	08 13 37.5	-0.5
MUGZ				S	S	08 14 47.0	-1.0
SNGZ	Shannon Statio	5.59	203	P	Pn	08 13 38.2	-0.5
SNGZ				S	S	08 14 52.5	+3.3
KNZ	Kokohu	5.71	200	P	Pn	08 13 40.1	+0.1
KNZ				S	S	08 14 52.4	+0.9
MHGZ	Mahia Peninsul	5.77	198	P	Pn	08 13 40.5	-0.1
MTHZ	Maungataniwha	5.83	206	P	Pn	08 13 41.0	-0.4
MTHZ				S	S	08 14 55.4	+1.4
NMHZ	Naumai	6.06	205	P	Pn	08 13 44.4	+0.5
BKZ	Black Stump Fm	6.23	207	P	Pn	08 13 45.9	-0.1
BKZ				S	S	08 15 04.9	+2.5
HIZ	Hauiti	6.46	220	P	Pn	08 13 51.0	+2.5
KWHZ	Kaweka Forest	6.49	206	P	Pn	08 13 48.8	0.0
KWHZ				S	S	08 15 06.7	-0.9
KAHZ	Kahuranaki	6.66	202	P	P	08 13 51.4	-0.5
KAHZ				S	S	08 15 14.2	+2.9
TUVZ	Tukino	6.66	212	P	P	08 13 51.6	-0.5
KRHZ	Kereru	6.70	206	P	Pn	08 13 51.0	-0.2
MOVZ	Moawhango	6.74	210	P	Pn	08 13 50.9	-0.8
WNVZ	Wahianoa	6.74	212	P	Pn	08 13 51.6	-0.1
MTVZ	Mangateitei	6.84	212	P	P	08 13 53.5	-0.5
PXZ	Pawanui	6.88	202	P	Pn	08 13 53.4	+0.2
PNHZ	Pukenui	7.00	206	P	Pn	08 13 54.4	-0.3
PRHZ	Porangahau	7.17	202	P	Pn	08 13 57.1	+0.6
BFZ	Birch Farm	7.67	203	P	P	08 14 03.0	-0.4
MRZ	Mangatainoka R	7.88	206	P	Pn	08 14 04.0	-0.8
MRZ				S	S	08 15 35.7	-1.4
HOWZ	Holdsworth Sta	8.11	206	P	Pn	08 14 06.7	-0.9
HOWZ				S	S	08 15 40.3	-1.8
OGWZ	Otaki Gorge	8.17	208	P	Pn	08 14 07.6	-0.6

*DDA **25** 08:15:58.2, 39°.37N×27°.88E, h6^{km}±5^{km}, MW3.6*
*ISK **25** 08:15:58.5, 39°.33N×27°.89E, h10^{km}, ML3.4/54*
*THE **25** 08:16:01.5, 39°.33N×27°.98E, h32^{km}±28^{km}, ML3.3/3, Error ellipse: s-maj=28.0km s-min=0.9km az=179.0*
ISC 25 08:15:58.1±0.9, **39°.33N**±0°.02×**27°.89E**±0°.01, **h16**^{km}±8^{km}, **n119**, σ1^{s}**88**/150, **12C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	Balikesir	0.31	358	PG	Pb	08 16 05.8	+0.6
BALB				SG	Sb	08 16 10.4	+0.4
AKHS	Akhisar	0.46	188	*i* P	Pg	08 16 07.8	+0.5
AKHS				*i* S	Sg	08 16 11.8	-1.7
BALY	Balya	0.46	333	*i* P	Pg	08 16 07.2	-0.1
BALY				*i* S	Sg	08 16 12.0	-1.5
DURS	Dursunbey	0.52	59	*i* P	Pg	08 16 09.1	+0.6
DURS				*i* S	Sg	08 16 15.7	+0.1
DST	Dursunbey	0.62	64	PG	Pb	08 16 11.1	+0.4
DST				SG	Sb	08 16 20.0	+0.8
GOMA	Golmarmara-Man	0.63	178	PG	Pb	08 16 11.1	+0.4
GOMA				SG	Sb	08 16 20.1	+0.9
BUHA	Balikesir, Bur	0.65	285	*i* P	Pb	08 16 11.6	+0.5
BUHA				*i* S	Sg	08 16 19.6	0.0
DEMI	Demirci	0.70	114	*i* P	Pb	08 16 12.8	+0.8
DEMI				*i* S	Sg	08 16 21.6	+0.4
ZEDA	zmir-Bergama	0.73	240	*i* P	Pb	08 16 13.2	+0.7
ZEDA				*i* S	Sg	08 16 19.5	-2.5
DKL	Dikili	0.81	251	PG	Pb	08 16 14.4	+0.6
DKL				SG	Sb	08 16 26.3	+1.8
SIMA	Simav-Kutahya	0.88	106	PG	Pb	08 16 15.8	+0.7
AYVA	Ayvalik	0.93	269	*i* P	Pn	08 16 17.2	+0.6
AYVA				*i* S	Sg	08 16 26.2	-2.2
KCTX	Karacabey (Bur	1.00	21	PG	Pg	08 16 17.8	+0.4
KCTX				SG	Sn	08 16 32.4	+1.1
EDC	Edincik	1.01	359	PG	Pn	08 16 18.5	+0.8
KULA	Kula-Manisa	1.01	144	P	Pn	08 16 18.6	+0.8
KULA				S	Sg	08 16 30.7	-0.3
KULA	Kula-Manisa	1.01	144	PG	Pn	08 16 18.6	+0.8
ORLT	Orhaneli	1.05	47	PG	Pb	08 16 18.9	+0.9
USAK	Uak-Merkez	1.07	125	*i* P	Pn	08 16 19.4	+0.9
USAK				*i* S	Sg	08 16 28.0	-4.9
SHAP	Saphane-Kutahy	1.08	106	PN	Pn	08 16 19.8	+1.1
BAYC	CANAKKALE_Bayr	1.12	292	*i* P	Pn	08 16 20.4	+1.2
BAYC				*i* S	Sg	08 16 30.0	-4.3
KRBG	Karabiga-Canak	1.15	337	PN	Pn	08 16 20.9	+1.3
GEDZ	Gediz	1.21	103	PN	Pg	08 16 22.1	+0.6
TVSB	Tavsanli	1.22	84	PN	Pn	08 16 21.4	+0.8
ULDT	Uludag	1.25	50	*i* P	Pg	08 16 22.8	+0.4
ULDT				*i* S	Sb	08 16 34.7	-2.8
GDZ	Gediz	1.26	101	*i* P	Pn	08 16 21.7	+0.5
GDZ				*i* S	Sb	08 16 34.5	-3.0
PRK	Paraskevi	1.26	267	P	Pg	08 16 23.6	+1.2
PRK				S	Sn	08 16 40.4	+2.7
	1µm,0.4s						
MDNY	Mudanya-Bursa	1.28	36	PN	Pb	08 16 22.7	+0.8
MRMT	Marmara Adasi	1.29	350	PN	Pg	08 16 23.1	+0.1
EZN	Ezine	1.31	293	P	Pg	08 16 23.4	+0.1
EZN				S	Sn	08 16 40.3	+1.5
	642nm,0.4s						
EZN	Ezine	1.31	293	PN	Pb	08 16 23.3	+1.0
LPK	Lapseki	1.35	320	PN	Pn	08 16 23.3	+0.9
KOCA	Canakkale, Ayv	1.37	278	*i* P	Pn	08 16 23.4	+0.8
KOCA				*i* S	Sb	08 16 37.2	-3.4
URLA	Izmir	1.40	227	PN	Pn	08 16 24.3	+1.2
URLA	Izmir	1.40	227	*i* P	Pn	08 16 22.8	-0.2
URLA				*i* S	Sn	08 16 36.6	-4.7
ARMT	Armutlu	1.44	31	PN	Pb	08 16 25.2	+0.7
RKY	Sarkoy-Tekirda	1.46	338	PN	Pb	08 16 25.4	+0.5
SART	Tekirdag	1.46	338	*i* P	Pn	08 16 24.1	+0.3
SART				*i* S	Sn	08 16 37.6	-5.1
GEMT	Gemlik	1.48	42	PN	Pb	08 16 25.9	+0.6
DGB	zmir	1.50	212	*i* P	Pb	08 16 26.8	+1.2
DGB				*i* S	Sn	08 16 40.9	-2.8
BOZC	Bozcaada	1.51	290	PN	Pb	08 16 26.2	+0.5
BOZC	Bozcaada	1.51	290	*i* P	Pb	08 16 26.2	+0.5
BOZC				*i* S	Sn	08 16 38.6	-5.3
MAR4	Marsite Statio	1.52	343	PN	Pn	08 16 26.2	+1.4
GELI	Tayfur-Gelibol	1.52	315	PN	Pb	08 16 26.4	+0.4
ZEYE	Izmir, Urla-Ze	1.54	225	*i* P	Pb	08 16 27.5	+1.2
ZEYE				*i* S	Sn	08 16 41.8	-2.8
ANDZ	Kutahya, Merke	1.56	83	*i* P	Pb	08 16 27.1	+0.4
ANDZ				*i* S	Sn	08 16 43.6	-1.8
SIGR	SIGRI	1.59	266	P	Pn	08 16 26.9	+1.4
SIGR				S	Sb	08 16 47.8	+1.0
	858nm,0.5s						
SIGR	SIGRI	1.59	266	PN	Pn	08 16 26.9	+1.4
TRML	Termal-Yalova	1.61	37	PN	Pn	08 16 26.9	+1.0
KHL	Karahalli	1.62	128	PN	Pn	08 16 27.9	+1.7
TKR	Tekirdag	1.68	351	PN	Pn	08 16 28.6	+1.8
ERIK	Erikli-Kesan	1.71	322	PN	Pn	08 16 28.8	+1.6
GCAM	G?zelcaml?	1.71	198	PN	Pn	08 16 28.9	+1.7
CFTB	Yalova	1.71	39	PN	Pb	08 16 29.3	+0.1
CAVI	Cavuskoy	1.73	59	PN	Pn	08 16 29.4	+1.8
BILE	Bilecik/Merkez	1.74	61	*i* P	Pn	08 16 29.2	+1.5
BILE				*i* S	Sn	08 16 46.7	-2.9
AUBOZ	BOZOYUK	1.75	70	PN	Pn	08 16 29.7	+1.8
AUBOZ	BOZOYUK	1.75	70	*i* P	Pb	08 16 31.1	+1.2
KESN	Edirne-Kesan	1.76	328	*i* P	Pn	08 16 29.6	+1.3
KESN				*i* S	Sn	08 16 46.7	-3.8
GADA	Gvkgeada	1.76	300	P	Pn	08 16 29.9	+2.0
GADA	Gvkgeada	1.76	300	PN	Pn	08 16 29.6	+1.7
ADVT	Abdulvahap	1.79	52	PN	Pn	08 16 30.2	+1.8
SMG	Samos	1.82	207	P	Pb	08 16 31.0	-0.1
SLVT	Silivri	1.91	7	PN	Pn	08 16 31.8	+1.8
ENEZ	Enez	1.94	317	PN	Pn	08 16 32.1	+1.8
KAVV	Kandilli-Istan	1.95	27	PN	Pn	08 16 31.7	+1.2
ISK	Istanbul-Kandi	1.95	27	P	Pn	08 16 31.5	+1.0
ISK	Istanbul-Kandi	1.95	27	PN	Pn	08 16 31.6	+1.0
CTKS	Kestanelik-??a	1.96	14	PN	Pn	08 16 31.7	+1.1
BGKT	Bogazkoy	1.96	20	PN	Pn	08 16 32.8	+2.1
HRT	Hereke	2.02	42	PN	Pn	08 16 33.0	+1.5
UKOP	Uzunkopru-Edir	2.04	332	PN	Pn	08 16 33.6	+1.9
BORA	Eskisehir	2.05	74	PN	Pn	08 16 33.9	+1.9
ALN	Alexandroupoli	2.11	318	P	Pn	08 16 34.6	+1.9
ALN	Alexandroupoli	2.11	318	PN	Pn	08 16 34.7	+2.0
KLYT	Kilyos	2.11	24	PN	Pn	08 16 34.5	+1.8
SMTH	Samothraki Isl	2.14	303	P	Pn	08 16 35.7	+2.5
CTYL	Yalikoy Yolu	2.16	8	PN	Pn	08 16 35.4	+2.0
GEYV	SAKARYA_Geyve	2.18	57	*i* P	Pg	08 16 40.7	+0.8
SHUT	Suhut-Afyon	2.21	110	PN	Pn	08 16 36.4	+2.1
YER	Yerkesik	2.22	172	P	Pn	08 16 35.1	+0.8
YER	Yerkesik	2.22	172	PN	Pn	08 16 35.4	+1.1
SRCK	Saricakaya, Es	2.22	71	PN	Pn	08 16 36.4	+2.1
SILT	Sile	2.26	36	PN	Pn	08 16 36.3	+1.5
SPNC	Sapanca-Adapaz	2.29	53	PN	Pn	08 16 37.6	+2.3
BODT	Bodrum	2.31	192	P	Pn	08 16 35.9	+0.3
BODT	Bodrum	2.31	192	PN	Pn	08 16 36.6	+1.0
SAUV	Serdivan-Sakar	2.34	52	PN	Pn	08 16 38.1	+2.2
KAYN	Sakarya, Kayna	2.48	48	*i* P	Pb	08 16 44.6	+2.2
KAND	Kocaeli-Kandir	2.49	44	*i* P	Pg	08 16 45.1	-0.7
KIRK	Kırklareli	2.52	346	*i* P	Pb	08 16 43.4	+0.4
ARMN	Kirklareli, Me	2.55	352	*i* P	Pn	08 16 39.4	+0.6
ISP	Isparta	2.55	125	PN	Pn	08 16 40.6	+1.6
RDO	Rodhopi	2.56	316	PN	Pn	08 16 41.1	+2.2
TURN	Turunc	2.57	174	PN	Pn	08 16 40.6	+1.6
DALY	Dalyan (Mula)	2.58	166	PN	Pn	08 16 41.5	+2.3
EDRB	Edirne	2.66	341	P	Pn	08 16 41.9	+1.6
EDRB	Edirne	2.66	341	PN	Pn	08 16 41.8	+1.5
SAHE	Sakarya_HENDEK	2.73	55	*i* P	Pg	08 16 50.4	0.0
MDUB	Mudurnu	2.78	65	PN	Pn	08 16 44.4	+2.3
SVRH	Sivrihisar-ESK	2.81	87	PN	Pn	08 16 44.7	+2.2
AUMIH	MIHALICIK	2.83	78	PN	Pn	08 16 45.0	+2.3
AUSIV	SIVRIHISAR	2.83	87	PN	Pn	08 16 45.1	+2.4
AUSIV	SIVRIHISAR	2.83	87	*i* P	Pg	08 16 53.4	+1.1
APE	Apeiranthos	2.93	220	⇑P	Pg	08 16 54.9	+0.6
APE				⇑S	Sg	08 17 35.0	+2.9
YUVA	Yuva-Kibriscik	3.10	69	PN	Pn	08 16 49.1	+2.5
KIBS	BOLU	3.23	69	*i* P	Pg	08 16 59.7	-0.3
VTS	Vitosha	4.81	314	⇓P	Pn	08 17 13.4	+3.3
VTS				⇓S	Sg	08 18 32.1	-0.5
CFR	Carcaliu	5.84	2	⇑P	Pn	08 17 25.6	+1.6
MLR	Muntele Rosu	6.32	347	⇑P	Pn	08 17 33.9	+3.2
VOIR		6.45	342	⇓P	Pn	08 17 35.1	+2.6
PLOR	Plostina	6.58	352	⇑P	Pn	08 17 37.3	+3.1
VRI	Vrincioaia	6.58	353	⇑P	Pn	08 17 37.0	+2.8
HERR	Herculane	6.88	325	⇓P	Pn	08 17 41.2	+3.0
DOPR	Dopca	6.88	345	⇑P	Pn	08 17 41.0	+2.7
MDVR	Moldovita	7.12	322	⇑P	Pn	08 17 43.7	+2.0
GZR	Gura Zlata	7.14	330	⇑P	Pn	08 17 45.2	+3.2
TESR	Tescani	7.23	353	⇑P	Pn	08 17 45.5	+2.4
BIZ	Bicaz	7.71	351	⇑P	Pn	08 17 52.7	+3.0
BZS	Buzias	7.80	326	⇑P	Pn	08 17 52.4	+1.4

*BJI **25** 08:24:30.6±0.0, 23°.39N×125°.48E, h14^{km}, mB4.8/45, mb4.6/60, Ms4.2/45, Ms7 3.9/42*
*BGR **25** 08:24:30.8±0.0, 20°.62N×125°.33E, h29^{km}±1^{km}, mb4.8*
*NEIC **25** 08:24:32.5±1.8, 23°.28N±0°.05×125°.55E±0°.07, h22^{km}±4^{km}, mb4.9/78, Error ellipse: s-maj=9.0km s-min=7.2km az=79.0*
*NIED **25** 08:24:33.4, 23°.51N×125°.47E, h88^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-9.81; M$_{\theta\theta}$8.94; M$_{\phi\phi}$0.87; M$_{r\theta}$2.37; M$_{\theta\phi}$1.16; M$_{\phi r}$-0.84; Fault plane solution: M$_0$9.78000×10^{15} NP1: φ$_s$268.00000°, δ52.00000°, λ-82.00000°. NP2:φ$_s$76.00000°, δ39.00000°, λ-99.00000°.*
*MOS **25** 08:24:33.5±0.9, 23°.47N×125°.51E, h33^{km}, mb5.1/36 Error ellipse: s-maj=9.4km s-min=5.1km az=117.2*
*GCMT **25** 08:24:33.5±0.4, 23°.30N±0°.02×125°.58E±0°.05, h19^{km}±1^{km}, MW4.8/85, Moment Tensor Solution. s10,c12; s85,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.94±.16; M$_{\theta\theta}$1.69±.10; M$_{\phi\phi}$0.25±.09; M$_{r\theta}$-0.67±.19; M$_{\theta\phi}$0.17±.05; M$_{\phi r}$-0.20±.27; Best double couple: M$_0$1.95500×10^{16} NP1:φ$_s$266.00000°, δ35.00000°, λ-85.00000°. NP2: φ$_s$80.00000°, δ55.00000°, λ-93.00000°. Principal axes: T 1.8370, Plg10.0000°, Azm172.0000°; N 0.2370, Plg3.0000°, Azm82.0000°; P -2.0720, Plg79.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*JMA **25** 08:24:33.3±0.2, 23°.51N×125°.47E, h88^{km}, M4.4*
*IDC **25** 08:24:35.2±0.5, 23°.33N×125°.53E, h40^{km}±3^{km}, mb4.3/30, mb1 4.4/32, mb1mx4.3/48, mbtmp4.5/32, ML3.5/2, MS3.6/14, Ms1 3.6/14, ms1mx3.4/41, Error ellipse: s-maj=12.8km s-min=9.7km az=84.0*
ISC 25 08:24:33.7±0.4, **23°.37N**±0°.04×**125°.58E**±0°.03, **h30**^{km}±2^{km}, **h29**^{km}**:pP-P, n399**, σ1^{s}**67**/436, **mb4.8**/145, **MS3.9**/17, **45C-29D, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ2	Miyako jima3	1.39	350	P	Pn	08 24 55.8	-1.3
JMJ2				*e*S	Sn	08 25 11.5	-2.9
JOGS	Gusukube	1.39	353	P	Pn	08 24 56.2	-1.0
JOGS				S	Sb	08 25 14.4	-2.2
JIRB	Irabujima	1.50	346	P	Pn	08 24 57.2	-1.4
JIRB				S	Sn	08 25 14.6	-2.6
JTJ	Tarama	1.50	328	P	Pn	08 24 57.3	-1.3
JTJ				S	Sb	08 25 15.1	-4.5
JIKM	Ikemajima	1.58	349	P	Pn	08 24 58.5	-1.2
JIKM				S	Sb	08 25 17.8	-4.0
JIJ	Ishigaki jima	1.65	307	P	Pn	08 24 59.1	-1.6
JIJ				S	Sn	08 25 18.0	-2.9
JISG	Ishigakijimahi	1.68	316	P	Pn	08 24 59.4	-1.7
JISG				S	Sn	08 25 19.3	-2.4
JKRS	Kuro-shima	1.68	301	P	Pn	08 24 59.8	-1.3
JKRS				S	Sn	08 25 19.3	-2.4
HATJ	Hateruma jima	1.77	293	P	Pn	08 25 00.7	-1.6
HATJ				S	Sn	08 25 20.6	-3.2
IRIF	Iriomote-Funau	1.95	300	P	Pn	08 25 03.4	-1.4
IRIF				S	Sn	08 25 25.5	-2.8
YOJ	Yonaguni jima	2.59	295	P	Pn	08 25 12.7	-1.0
YOJ				*e*S	Sn	08 25 40.3	-3.9
YOJ	Yonaguni jima	2.59	295	P	Pn	08 25 12.1	-1.6
YOJ	Yonaguni jima	2.59	295		Pn	08 25 12.1	-1.6
JYNG	Yonagunijimaku	2.64	295	P	Pn	08 25 13.0	-1.4
JYNG				S	Sn	08 25 41.3	-4.1
JKE	Kume jima 2	3.14	20	P	Pn	08 25 19.3	-1.9
JKE				S	Sn	08 25 53.6	-4.1
JJT3	Tamagusuku3	3.41	35	P	Pn	08 25 23.4	-1.5
JAGN	Aguni-jima	3.54	25	P	Pn	08 25 24.8	-1.9
JAGN				S	Sn	08 26 02.6	-5.0
NACB	Ninganchiao	3.74	283		Pn	08 25 27.1	-2.4
NACB				Sn	Sn	08 26 08.0	-4.6
JNTH	Nagotoyohara	3.84	35	P	Pn	08 25 28.8	-2.0
JNTH				S	Sn	08 26 10.4	-4.5
YULB	Yu-li	3.94	271		Pn	08 25 29.1	-3.2
YHNB	Yeheng	4.06	289		Pn	08 25 33.4	-0.5
TATO	Taipei	4.07	294		Pn	08 25 33.5	-0.5
TWG	Pinlang	4.19	263		Pn	08 25 32.4	-3.3
TWG				Sn	Sn	08 26 17.8	-5.8
JOW	Kunigami	4.22	35	P	Pn	08 25 33.8	-2.3
	58nm,0.3s,baz=181,slow=12,SNR=230						
JOW				S	Sn	08 26 18.9	-5.5
	105nm,0.3s,baz=118,slow=24,SNR=11						
SSLB	Suanglung	4.27	277		Pn	08 25 34.8	-1.9
BBP	Basco	4.45	230	*e*P	Pn	08 25 34.9	-4.3
TPUB	Ta-pu	4.55	270		Pn	08 25 39.3	-1.4
JMZ	Minamidaito 2	5.68	63	Pn	Pn	08 25 52.0	-4.1
SGCP	Mt. Cagua	6.08	214	*e*P	Pn	08 25 58.2	-3.4
CVP	Callao Caves	6.65	213	⇓*i*P	Pn	08 26 06.6	-2.8
KNMB	Chin-men Tao	6.67	281	Pn	Pn	08 26 06.8	-2.9
APYP	Conner	6.82	217	*e*P	Pn	08 26 09.6	-2.2
ABRA	Dolores	7.29	220	*e*P	Pn	08 26 15.5	-2.8
CAUP	Cauayan	7.30	210	*e*P	Pn	08 26 17.9	-0.5
SMPP	San Manuel, Pa	8.54	214	*e*P	Pn	08 26 32.2	-3.2
SSE	Sheshan	8.63	334	P	Pn	08 26 36.8	+0.2
SSE				S	Sn	08 28 15.0	+2.0
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				LR	LR		
	comp=N,240nm,9.2s						
SSE				LR	LR		
	comp=E,350nm,9.8s						
JSU	Suzuyama	9.19	27	Pn	Pn	08 26 42.4	-1.9
POLP	Polilio Island	9.26	202	*e*P	Pn	08 26 42.9	-2.4
QVP	Quezon City--P	9.72	207	*e*P	Pn	08 26 49.4	-2.2
LQP	Lukban	9.97	203	⇑*e*P	Pn	08 26 54.3	-1.0
TGY	Tagaytay City	10.21	206	P	Pn	08 26 56.8	-1.6
	78nm,0.3s,baz=126,slow=6.7,SNR=7.3						
BOAC	Boac	10.47	200	*e*P	Pn	08 27 03.7	+1.7
NJ2	Nanjing	10.50	327	*e*P	Pn	08 27 03.5	+1.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=N,280nm,7.5s						
NJ2				LR	LR		
	comp=E,710nm,10.3s						
NJ2				LR	LR		
	comp=Z,350nm,11.2s						
JNU	Nakatsue	10.78	24	P	Pn	08 27 04.1	-2.0
	2.5nm,0.3s,baz=227,slow=7.2,SNR=16						
JNU				LR	LR	08 31 57.7	
	comp=Z,280nm,18.5s,baz=208,slow=41						
JNU	Nakatsue	10.78	24	Pn	Pn	08 27 05.0	-1.1
JTU	Tsushima	11.60	16	Pn	Pn	08 27 17.7	+0.4
SJMP	San Jose	11.65	202	*e*P	Pn	08 27 26.1	+8.1
WHN	Wuhan	12.30	308	P	Pn	08 27 27.3	+0.4
BUSP	Coron	12.41	205	*e*P	Pn	08 27 27.4	-1.0
JMN	Monobe	12.63	33	Pn	Pn	08 27 27.3	-4.2
TJN	Taejon	13.05	6	⇓*e*P	Pn	08 27 37.6	+0.4
KSRS	Korea Array	14.18	8	P	Pn	08 27 52.0	-0.6
	0.2nm,0.3s,baz=187,slow=13,SNR=23						
KSRS				LR	LR	08 33 29.0	
	comp=Z,238nm,19.8s,baz=192,slow=38						
KS19	Wonju Array Si	14.22	7	Pn	Pn	08 27 52.9	-0.2
JWT	Wachi	14.62	34	Pn	Pn	08 27 55.0	-3.6
QIZ	Qiongzhong	15.30	257	P	Pn	08 28 04.8	-2.9
QIZ				S	Sn	08 30 56.0	-0.3
QIZ				LR	LR		
	comp=N,360nm,14.7s						
QIZ				LR	LR		
	comp=E,310nm,17.2s						
QIZ				LR	LR		
	comp=Z,360nm,13.2s						
JCJ	Chichijima	15.47	73	LR	LR	08 34 32.9	
	comp=Z,97nm,18.4s,baz=120,slow=38						
INU	Inuyama	15.54	37	Pn	Pn	08 28 10.1	-0.5
JHJ	Hachijo jima 2	15.82	49	LR	LR	08 33 45.3	
	comp=Z,47nm,18.2s,baz=281,slow=35						
JHJ2	Mitsune	15.84	49	Pn	Pn	08 28 12.4	-2.2
DL2	Dalian	15.85	349	P	P	08 28 18.0	-0.2
DL2				S	S	08 31 18.3	-4.9
DL2				pmax	pmax		
	comp=Z,30nm,1.0s						
DL2				LR	LR		
	comp=N,500nm,11.0s						
DL2				LR	LR		
	comp=E,500nm,12.9s						
DL2				LR	LR		
	comp=Z,530nm,10.7s						
JGF	Kuroka	15.91	37	Pn	Pn	08 28 15.7	+0.2
MAJO	Matsushiro	17.07	37	⇓*e*P	P	08 28 31.4	-0.3
MAJO	Matsushiro	17.07	37		P	08 28 31.5	-0.2
MAT	Matsushiro	17.07	37	P	P	08 28 30.3	-1.4
MAT				*e*S	Sn	08 31 37.0	-2.0
MJAR	Matsushiro Arr	17.07	37	P	P	08 28 32.4	+0.7
	0.2nm,0.3s,baz=216,slow=9.9,SNR=14						
MJAR				LR	LR	08 35 49.0	
	comp=Z,93nm,18.4s,baz=230,slow=39						
MJAR	Matsushiro Arr	17.07	37	P	P	08 28 31.5	-0.2
GYA	Guiyang	17.43	284	*e*P	P	08 28 40.0	+4.0
GYA				sP	pwP	08 28 49.8	-0.1
GYA				pmax	pmax		
	comp=Z,12nm,1.5s						
GYA				LR	LR		
	comp=Z,470nm,12.7s						
XAN	Xi'an	18.05	310	P	P	08 28 43.0	+0.4
XAN				pmax	pmax		
	comp=Z,27nm,1.2s						
XAN				pmax	pmax		
	comp=Z,290nm,6.9s						
XAN				LR	LR		
	comp=Z,650nm,20.6s						
XAN				LR	LR		
	comp=Z,330nm,22.8s						
XAN				LR	LR		
	comp=Z,440nm,15.2s						
BJI	Beijing	18.43	337	P	Pn	08 28 47.0	+0.1
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
BJI				pmax	pmax		
	comp=Z,160nm,4.8s						
BJI				LR	LR		
	comp=Z,300nm,21.8s						
BJI				LR	LR		
	comp=Z,530nm,16.8s						
SNY	Shenyang	18.48	355	⇑P	P	08 28 45.5	-1.8
SNY				S	S	08 32 19.8	+3.2
SNY				pmax	pmax		
	comp=Z,110nm,5.9s						
SNY				LR	LR		
	comp=Z,470nm,17.1s						
SNY				LR	LR		
	comp=Z,380nm,14.9s						
SNY				LR	LR		
	comp=Z,590nm,14.9s						
JMM	Marumori	19.46	39	P	Pn	08 28 57.8	-1.5
JMM				IAmb	IAmb	08 29 11.4	
	comp=Z,61nm,1.3s						
MSHR	Mys Shultsa	19.71	12	⇑*e*P	Pn	08 29 00.8	-1.5
UBPT	Khong Chiam	20.60	251	P	Pn	08 29 19.0	+6.0
	comp=Z,5.7nm,0.9s						
CD2	Chengdu	20.80	296	P	P	08 29 11.5	-1.3
CD2				S	Sn	08 33 05.3	-4.1
CD2				pmax	pmax		
	comp=Z,160nm,0.8s						
CD2				pmax	pmax		
	comp=Z,390nm,6.4s						
CD2				LR	LR		
	comp=Z,1µm,12.2s						
CD2				LR	LR		
	comp=Z,990nm,12.2s						
CD2				LR	LR		
	comp=Z,1µm,13.7s						
KMI	Kunming	20.90	279	P	Pn	08 29 15.3	-1.4
KMI				pP	pP	08 29 19.5	-0.7
KMI				S	S	08 33 00.0	-5.8
KMI				sS	Sn	08 33 06.5	-5.6
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,190nm,4.3s						
KMI				LR	LR		
	comp=Z,220nm,11.3s						
KMI				LR	LR		
	comp=Z,300nm,10.9s						
KMI				LR	LR		
	comp=Z,350nm,14.5s						

HHC	Hu-ho-hao-te	21.04	329	eP	P	08 29 17.5	+2.2
HHC				pP	sP	08 29 24.5	-0.5
HHC				sP	pwP	08 29 27.8	-0.9
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
HHC				LR	LR		
	comp=Z,360nm,16.5s						
HHC				LR	LR		
	comp=Z,480nm,17.3s						
HHC				LR	LR		
	comp=Z,200nm,17.1s						
USA0B	Ussuriysk Arra	21.43	13	ceP	P	08 29 20.8	+1.4
USA0B	Ussuriysk Arra	21.43	13	P	P	08 29 20.0	+0.7
USRK	Ussuriysk Ar.	21.43	13	P	P	08 29 21.1	+1.7
	comp=Z,18nm,0.8s,baz=194,slow=9.4,SNR=14						
USRK				LR	LR	08 38 01.2	
	comp=Z,138nm,18.6s,baz=188,slow=38						
USRK	Ussuriysk Ar.	21.43	13	P	P	08 29 20.3	+0.9
BTO	Baotou	21.61	326	eP	P	08 29 16.3	-5.1
BTO				S	S	08 33 07.5	-12
NONG	Nongkai	21.63	260	P	P	08 29 26.1	+4.4
	comp=Z,37nm,1.2s						
JTM	Tenmabayashi	21.71	33	P	P	08 29 22.2	-0.1
LZH	Lanzhou	22.68	309	eP	P	08 29 33.3	+0.3
LZH				pP	pP	08 29 39.8	+0.6
LZH				sP	sP	08 29 42.3	+0.1
LZH				PP	PnPn	08 30 00.5	+3.3
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,66nm,5.4s						
LZH				LR	LR		
	comp=Z,410nm,15.2s						
LZH				LR	LR		
	comp=Z,290nm,14.1s						
LZH				LR	LR		
	comp=Z,300nm,13.0s						
GTOI	Gorontalo	22.74	187	P	P	08 29 33.2	-0.3
	comp=Z,16nm,0.9s						
MRSI	Marisa	23.03	189	P	P	08 29 38.6	+2.1
	comp=Z,44nm,1.1s						
CHAI	Chaiyaphum	23.41	256	P	P	08 29 43.0	+2.6
	comp=Z,16nm,0.7s						
JEW	Eniwo	23.46	30	P	P	08 29 41.2	+0.6
MPSI	Mapaga	23.55	194	P	P	08 29 54.5	+13
ERM	Erimo	23.67	34	⇓eP	P	08 29 41.3	-1.4
ERM				pmax	pmax		
	comp=Z,70nm,1.7s						
ERM	Erimo	23.67	34	P	P	08 29 43.2	+0.5
PHIT	Phitsanulok	24.38	260	P	P	08 29 51.0	+1.5
	comp=Z,2µmcomp=Z,120nm,1.0s						
ASAJ	Asahikawa	24.97	30	P	P	08 29 55.3	+0.6
	comp=Z,32nm,0.7s,baz=240,slow=20,SNR=17						
SUKH	Sukhothai	25.00	261	P	P	08 29 58.7	+3.6
	comp=Z,15nm,0.9s						
CMMT	Chiang Mai	25.24	265	P	P	08 29 57.4	0.0
	comp=Z,5.2nm,0.9s						
CHTO	Chiang Mai	25.25	265	P	P	08 29 57.0	-0.4
SANI	Sanana	25.27	179	P	P	08 30 08.8	+11
CM09	Chiang Mai Arr	25.30	264	P	P	08 30 00.0	+2.1
	comp=Z,117nmcomp=Z,8.7nm,0.8s						
CM04	Chiang Mai Arr	25.32	264	P	P	08 29 59.9	+1.8
	comp=Z,7.6nm,0.9s						
CM31	Chiang Mai Arr	25.34	264	P	P	08 29 58.6	+0.3
CMAR	Chiang Mai Arr	25.34	264	P	P	08 29 58.1	-0.2
	comp=Z,4.3nm,0.8s,baz=62,slow=8.2,SNR=27						
CMAR				PcP	PcP	08 33 31.7	+1.0
	comp=Z,0.8nm,0.3s,baz=51,slow=0.5,SNR=5.5						
CMAR				pPcP		08 33 43.9	
	comp=Z,1.5nm,0.5s,baz=13,slow=1.1,SNR=7.4						
CMAR				LR	LR	08 41 34.3	
	comp=Z,120nm,18.0s,baz=124,slow=40						
CMAR	Chiang Mai Arr	25.34	264	ceP	P	08 29 59.5	+1.2
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	25.34	264	P	P	08 29 59.0	+0.8
CM02	Chiang Mai Arr	25.35	264	P	P	08 30 00.0	+1.7
	comp=Z,7.5nm,0.9s						
CM05	Chiang Mai Arr	25.36	264	P	P	08 30 00.2	+1.8
HIA	Hailar	26.25	351	⇓eP	P	08 30 07.0	+0.7
HIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KLR	Kul'dur	26.27	9	P	P	08 30 07.4	+1.1
	comp=Z,18nm,0.8s,baz=229,slow=5.9,SNR=31						
KLR	Kul'dur	26.27	9	deP	P	08 30 06.9	+0.6
KLR				pmax	pmax		
	comp=Z,22nm,1.0s						
GTA	Gaotai	27.06	312	⇑P	P	08 30 13.8	0.0
GTA				pP	sP	08 30 24.5	+1.0
GTA				sP	pwP	08 30 28.0	-0.7
GTA				PcP	PcP	08 33 35.8	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,72nm,6.0s						
GTA				LR	LR		
	comp=Z,230nm,18.7s						
GTA				LR	LR		
	comp=Z,270nm,18.2s						
GTA				LR	LR		
	comp=Z,210nm,19.2s						
YSS	Yuzh-Sakhalins	27.28	26	⇑eP	P	08 30 16.0	+0.5
YSS				e*PP	pwP	08 30 26.4	-2.4
YSS				e*SP	sP	08 30 30.9	+6.0
YSS				e		08 30 56.8	
YSS				eS	S	08 34 51.8	-1.1
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS	Yuzh-Sakhalins	27.28	26	P	P	08 30 19.7	+4.2
KUR	Kuril'sk	28.37	34	⇑eP	P	08 30 26.6	+1.4
ULN	Ulaanbaatar	28.56	333	⇑eP	P	08 30 27.6	+0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	Ulaanbaatar	28.56	333	P	P	08 30 31.5	+4.4
UGL	Uglegorsk	28.77	23	⇑iP	P	08 30 36.2	+7.5
UGL				e		08 30 46.4	
UGL				eS	S	08 35 18.6	+2.3
UGL				pmax	pmax		
	comp=Z,60nm,1.1s						
UGL				pmax	pmax		
	comp=Z,170nm,1.6s						
UGL				smax	smax		
	comp=N,600nm,5.0s						
SONM	Songino Array	28.81	333	P	P	08 30 28.7	-0.6
	comp=N,0.8nm,0.5s,baz=150,slow=9.2,SNR=6.0						
SONM				PcP	PcP	08 33 38.6	0.0
	comp=N,1.0nm,0.8s,baz=149,slow=5.9,SNR=3.4						
SONM				LR	LR	08 42 47.8	
	comp=N,242nm,21.0s,baz=184,slow=38						
SONM	Songino Array	28.81	333	P	P	08 30 31.1	+1.8
JAY	Jayapura	29.65	148	LR	LR	08 39 53.3	
	comp=N,140nm,21.5s,baz=1.0,slow=31						
ZEA	Zeya	30.35	2	eP	P	08 30 44.6	+1.9
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,11.0s						
TYV	Tymovskoe	30.48	22	eP	P	08 30 53.5	+10
TYV				pmax	pmax		
	comp=Z,13nm,1.0s						
PSI	Prapat	32.92	236	P	P	08 31 06.1	+0.2
	comp=Z,6.5nm,0.8s,baz=0.6,slow=5.7,SNR=5.6						
PSI				PcP	PcP	08 33 49.8	-0.2
	comp=Z,2.0nm,0.4s,baz=178,slow=1.4,SNR=4.2						
TLY	Talaya	32.93	335	P	P	08 31 06.1	+0.6
	comp=Z,1.5nm,0.5s,baz=293,slow=6.7,SNR=5.3						
TLY	Talaya	32.93	335	eP	P	08 31 06.4	+1.0
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,547nm,14.0s						
TLY	Talaya	32.93	335	IAmb	IAmb	08 31 06.9	
	comp=Z,2.1nm,0.7s						
RPSI	Rantau Prapat	32.99	235	P	P	08 31 06.1	-0.2
MNSI	Mandailing Nat	33.77	232	P	P	08 31 13.4	+0.3
	comp=Z,19nm,0.7s						
TAPN	Taplejung	34.37	285	eP	P	08 31 19.6	+1.0
	comp=Z,26nm,0.6s						
ODAN	Odare	34.67	284	eP	P	08 31 22.2	+1.0
RAMN	Ramite	35.37	284	eP	P	08 31 28.2	+1.0
	comp=Z,12nm,0.6s						
GUN	Gumba	35.97	286	eP	P	08 31 33.5	+1.0
PKI	Pulchoki	36.40	285	eP	P	08 31 36.6	+0.5
PKIN	Phulchoki	36.41	285	eP	P	08 31 36.5	+0.4
DMN	Daman	36.67	285	eP	P	08 31 38.7	+0.4
WMQ	Urumqi	37.15	313	eP	P	08 31 43.0	+1.0
WMQ				sP	pwP	08 31 55.0	-1.9
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.3s						
WMQ	Urumqi	37.15	313	P	P	08 31 40.8	-1.2
DANN	Dangsing	37.83	287	eP	P	08 31 49.2	+1.0
	comp=Z,21nm,0.6s						
KOLN	Koldanda	37.99	286	eP	P	08 31 50.0	+0.5
	comp=Z,21nm,0.8s						
PEA0B	Petropavlovsk-	38.38	31	⇓eP	P	08 31 51.8	-0.4
PETK	Petropavlovsk-	38.38	31	P	P	08 31 51.6	-0.6
	comp=Z,9.9nm,0.8s,baz=247,slow=3.1,SNR=8.5						
PETK				LR	LR	08 48 32.7	
	comp=Z,84nm,20.1s,baz=230,slow=37						
PETK	Petropavlovsk-	38.38	31	P	P	08 31 52.5	+0.4
PYUN	Piuthan	38.52	286	eP	P	08 31 54.7	+0.8
	comp=Z,22nm,0.6s						
YAK	Yakutsk	38.74	3	⇑eP	P	08 31 55.2	+0.2
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK	Yakutsk	38.74	3	P	P	08 31 54.6	-0.4
YAK				IAmb	IAmb	08 32 08.3	
	comp=Z,18nm,0.9s						
DGZ	Jazzator, Alta	39.72	321	⇑eP	P	08 32 04.0	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MA2	Magadan	40.29	20	⇑eP	P	08 32 08.7	+0.7
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZSN	Zaisan	40.33	317	eP	P	08 32 07.8	-0.8
	baz=317						
ZSN	Zaisan	40.33	317	eP	P	08 32 07.7	-0.8
COEN	Coen	40.90	153	P	P	08 32 11.5	-1.9
FITZ	Fitzroy Crossi	41.22	180	P	P	08 32 14.7	-1.3
MK31	Makanchi Array	41.74	315	d iP	P	08 32 20.3	+0.1
MK31				pmax	pmax		
	comp=Z,13nm,0.6s						
MK31	Makanchi Array	41.74	315	P	P	08 32 20.9	+0.7
MK31				IAmb	IAmb	08 32 33.3	
	comp=Z,20nm,0.9s						
MKAR	Makanchi Array	41.74	315	P	P	08 32 20.6	+0.4
	comp=Z,35nm,1.0s,baz=103,slow=9.8,SNR=163						
MKAR				pP	pwP	08 32 32.6	-2.6
	comp=Z,23nm,0.8s,baz=96,slow=11,SNR=14						
MKAR	Makanchi Array	41.74	315	P	P	08 32 20.7	+0.5
MAKZ	Makanchi	41.95	315	P	P	08 32 22.7	+0.8
SHLS	Shalkode	42.70	309	eP	P	08 32 25.2	-3.0
	comp=Z,8.2nm,1.0s,baz=309						
SHLS	Shalkode	42.70	309	eP	P	08 32 25.2	-3.0
SHLS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PDGK	Podgornoye	42.72	309	i P	P	08 32 28.0	-0.3
PDGK				pmax	pmax		
	comp=Z,49nm,1.0s						
ZAA0	Zalesovo Array	43.15	326	P	P	08 32 31.5	+0.1
ZAA0				IAmb	IAmb	08 32 44.4	
	comp=Z,20nm,1.3s						
ZALV	Zalesovo Beam	43.15	326	P	P	08 32 31.5	0.0
	comp=Z,6.5nm,0.6s,baz=119,slow=8.5,SNR=30						
ZALV				pP	sP	08 32 43.0	+1.9
	comp=Z,6.4nm,0.5s,baz=114,slow=7.3,SNR=9.8						
ZALV				PcP	PcP	08 34 20.4	-0.4
	comp=Z,1.9nm,0.7s,baz=122,slow=5.4,SNR=3.9						
ZALV				LR	LR	08 50 45.1	
	comp=Z,155nm,18.7s,baz=93,slow=36						
KPKS	Kokpek	43.32	309	eP	P	08 32 32.7	-0.5
	baz=309						
KPKS	Kokpek	43.32	309	eP	P	08 32 32.7	-0.5
SATY	Saty	43.44	309	eP	P	08 32 35.2	+1.0
	baz=309						
SATY	Saty	43.44	309	eP	P	08 32 35.1	+1.0
SEY	Seymchan	43.45	17	P	P	08 32 34.1	+0.3
	comp=Z,12nm,0.8s,baz=211,slow=7.3,SNR=12						
SEY	Seymchan	43.45	17	⇑eP	P	08 32 35.0	+1.2
WB0	Warramunga Arr	43.73	168	P	P	08 32 36.2	-0.3
WB0				IAmb	IAmb	08 32 50.5	
	comp=Z,30nm,1.1s						
TDK	Taldyqorghan	43.85	311	eP	P	08 32 37.6	+0.3
	comp=Z,21nm,1.1s,baz=311						
TDK	Taldyqorghan	43.85	311	eP	P	08 32 37.6	+0.3
TDK				pmax	pmax		
	comp=Z,21nm,1.1s						
WRAB	Tennant Creek	43.88	168	⇓eP	P	08 32 37.4	-0.3
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	43.89	168	P	P	08 32 37.6	-0.1
	comp=Z,8.8nm,0.9s,baz=348,slow=8.8,SNR=39						
WRA				pP	sP	08 32 49.2	+1.5
	comp=Z,23nm,0.8s,baz=348,slow=8.7,SNR=26						
WRA				LR	LR	08 52 27.4	
	comp=Z,49nm,18.4s,baz=285,slow=38						
WRA	Warramunga Arr	43.89	168	P	P	08 32 37.5	-0.3
WB2	Warramunga Arr	43.89	168	IAmb	IAmb	08 32 50.1	
	comp=Z,27nm,0.9s						
SEM	Semipalatinsk	44.24	319	eP	P	08 32 39.8	-0.8
	comp=Z,16nm,0.9s,baz=319						
SEM	Semipalatinsk	44.24	319	eP	P	08 32 39.8	-0.8
SEM				pmax	pmax		
	comp=Z,16nm,0.9s						
CHKK	Chushkaly	44.60	309	eP	P	08 32 43.5	+0.1
	baz=309						
CHKK	Chushkaly	44.60	309	eP	P	08 32 43.5	+0.1
KSH	Kashi	44.72	303	P	P	08 32 48.0	+3.5
KSH				pP	sP	08 32 54.0	-0.4
KSH				S	S	08 39 24.5	+5.0
KSH				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH				pmax	pmax		
	comp=Z,220nm,5.5s						
KSH				LR	LR		
	comp=Z,370nm,7.3s						
KSH				LR	LR		
	comp=Z,470nm,7.7s						
KSH				LR	LR		
	comp=Z,500nm,7.3s						
KUU	Kurty	45.07	309	eP	P	08 32 47.3	+0.1
	comp=Z,4.9nm,0.7s,baz=309						
KUU	Kurty	45.07	309	eP	P	08 32 47.2	+0.1
KUU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	45.32	319	d iP	P	08 32 48.8	-0.1
KURK				pmax	pmax		
	comp=Z,45nm,1.0s						
KURK	Kurchatov	45.32	319	P	P	08 32 49.6	+0.7
KURBB	Kurchatov Arra	45.34	319	P	P	08 32 48.5	-0.6
	comp=Z,31nm,0.9s,baz=107,slow=8.0,SNR=119						
KURBB				pP	pwP	08 33 01.2	-3.0
	comp=Z,32nm,0.9s,baz=110,slow=7.9,SNR=16						
TKM2	Tokmak 2	45.44	308	i P	P	08 32 50.3	0.0
TKM2				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	46.20	307	P	P	08 32 55.5	-0.8
	comp=Z,2.1nm,0.8s,baz=231,slow=6.5,SNR=1.9						
AAK				pP	pwP	08 33 08.2	-3.0
	comp=Z,5.3nm,0.9s,baz=144,slow=1.4,SNR=6.3						
AAK	Ala-Archa	46.20	307	⇑eP	P	08 32 52.7	-3.5
AAK				pmax	pmax		
	comp=Z,26nm,1.5s						
NIL	Nilore	46.69	295	P	P	08 33 00.4	+0.4
NIL				IAmb	IAmb	08 33 13.1	
	comp=Z,14nm,0.8s						
BTLS	Baital	46.89	310	eP	P	08 33 00.7	-0.7
	baz=310						
BTLS	Baital	46.89	310	eP	P	08 33 00.7	-0.7
AS31	Alice Springs	47.45	170	P	P	08 33 05.4	-0.5
ASAR	Alice Springs	47.45	170	P	P	08 33 05.5	-0.4
	comp=Z,1.5nm,0.5s,baz=353,slow=13,SNR=26						
ASAR				PcP	PcP	08 34 36.5	+0.4
	comp=Z,4.2nm,0.8s,baz=352,slow=3.4,SNR=9.9						
ASAR	Alice Springs	47.45	170	P	P	08 33 06.1	+0.2
TIXI	Tiksi	48.34	1	P	P	08 33 12.3	+0.1
TIXI				IAmb	IAmb	08 33 15.9	
	comp=Z,15nm,1.0s						
BRZS	Berezniki	48.77	317	eP	P	08 33 15.6	-0.4
	comp=Z,4.1nm,1.1s,baz=317						
BRZS	Berezniki	48.77	317	eP	P	08 33 15.5	-0.4
BRZS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KKAR	Karatay Array	49.16	307	P	P	08 33 20.0	+1.0
KKAR	Karatay Array	49.16	307	P	P	08 33 18.9	-0.1
KKAR					PcP	08 34 42.1	+0.1
IUG	Iuzhnay	49.44	306	eP	P	08 33 21.4	+0.1
	baz=306						
IUG	Iuzhnay	49.44	306	eP	P	08 33 21.3	+0.1
KBL	Kabul	50.15	296	P	P	08 33 26.7	-0.1
KBL				IAmb	IAmb	08 33 40.3	
	comp=Z,20nm,1.2s						
BRVK	Borovoye	50.93	320	d iP	P	08 33 32.4	+0.2
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
BRVK	Borovoye	50.93	320	P	P	08 33 33.1	+0.9
BILL	Bilibino	51.13	18	⇓eP	P	08 33 34.5	+1.0
BILL				pmax	pmax		
	comp=Z,13nm,1.3s						
BILL	Bilibino	51.13	18	P	P	08 33 34.5	+1.0
BILL				IAmb	IAmb	08 33 47.3	
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	56.89	315	P	P	08 34 16.1	+0.3
ABKAR	Akbulak array	56.89	315	IAmb	IAmb	08 34 30.6	
	comp=Z,9.3nm,0.8s						
STKA	Stephens Creek	57.03	164	P	P	08 34 15.9	-1.0
	comp=Z,2.7nm,0.9s,baz=345,slow=11,SNR=3.8						
SVE	Sverdlovsk	57.09	324	eP	P	08 34 17.4	+0.3
SVE				pmax	pmax		
	comp=Z,36nm,1.1s						
ARU	Arti	58.18	323	d iP	P	08 34 24.7	-0.1
ARU				S	S	08 42 26.5	+2.2
ARU				SS	SS	08 46 18.7	+2.9
ARU				pmax	pmax		
	comp=Z,21nm,0.9s						
ARU	Arti	58.18	323	P	P	08 34 24.7	-0.1
GEYT	Alibeck	58.67	301	P	P	08 34 28.7	+0.1
	comp=Z,7.7nm,0.8s,baz=63,slow=1.3,SNR=9.8						
GEYT				pP	pwP	08 34 41.7	-2.0
	comp=Z,9.3nm,0.9s,baz=73,slow=5.0,SNR=6.2						
GEYT	Alibeck	58.67	301	P	P	08 34 30.2	+1.5
GYA0B	ALIBECK ARRAY	58.67	301	P	P	08 34 28.1	-0.6
GYA0B				IAmb	IAmb	08 34 42.7	
	comp=Z,13nm,0.9s						
KIRV	Kirov	63.19	325	deP	P	08 34 58.9	+0.1
BELG	Belogornoye	64.59	318	⇑iP	P	08 35 08.2	+0.1
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
IMAR	Indian Mountai	65.11	26	P	P	08 35 12.3	+0.9
LKRN	Lenkeran, Azer	65.81	303	P	P	08 35 17.2	+0.9
BPAW	Bear Paw Mtn.	66.39	28	P	P	08 35 21.2	+1.5
COLD	Coldfoot	66.46	25	IAmb	IAmb	08 35 35.0	
	comp=Z,8.4nm,1.3s						
SEKA	Sheki	66.52	306	P	P	08 35 21.2	+0.2
MNGR	Mingechevir, A	66.69	306	P	P	08 35 22.6	+0.7
SUA	Susitna One	66.76	31	P	P	08 35 21.5	-0.7
SUA				IAmb	IAmb	08 35 23.2	
	comp=Z,7.7nm,1.1s						
ZKTA	Zakatala	66.86	307	P	P	08 35 23.7	+0.6
GANJ	Ganja	67.28	306	P	P	08 35 26.7	+0.9
RND	Reindeer	67.41	29	P	P	08 35 26.4	+0.2
RND				IAmb	IAmb	08 35 50.2	
	comp=Z,13nm,1.2s						
MDM	Murphy Dome	67.48	27	P	P	08 35 26.4	-0.2
MDM				IAmb	IAmb	08 35 41.7	
	comp=Z,16nm,1.1s						
WRH	Wood River Hil	67.61	28	P	P	08 35 28.8	+1.5
WRH				IAmb	IAmb	08 35 42.2	
	comp=Z,7.4nm,1.2s						
COLA	College	67.66	27	⇓eP	P	08 35 29.5	+1.9
COLA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KLMR	Klimovskoe	67.99	328	eP	P	08 35 29.3	-0.5
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	Klimovskoe	67.99	328	eP	P	08 35 29.4	-0.4
KLMR				AMP		08 35 34.1	
	comp=Z,14nm,1.3s						
ILAR	Eielson Array	68.08	27	P	P	08 35 30.6	+0.3
	comp=Z,0.6nm,0.7s,baz=260,slow=5.7,SNR=8.6						
ILAR	Eielson Array	68.08	27	P	P	08 35 30.4	+0.1
HDA	Harding Lake	68.11	28	P	P	08 35 31.4	+0.9
HDA				IAmb	IAmb	08 35 43.7	
	comp=Z,15nm,1.4s						
TMCR	Tamitsa	68.18	332	eP	P	08 35 31.2	+0.3
TMCR				pmax	pmax		
	comp=Z,22nm,0.9s						
NAX	Nakhchivan	68.22	304	P	P	08 35 32.9	+1.1
VRH	Novokhopyorsk	68.38	318	eP	P	08 35 30.9	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GNI	Garni	68.57	306	⇓eP	P	08 35 35.0	+0.9
GNI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BMAR	Burnt Mountain	68.60	24	P	P	08 35 32.9	-0.7
ZEI	Tsey	68.60	309	eP	P	08 35 33.4	-0.9
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s						
LVZ	Lovozero	68.94	336	⇑eP	P	08 35 34.1	-1.6
LVZ				pmax	pmax		
	comp=Z,18nm,1.3s						
KBZ	Khabaz	69.11	310	P	P	08 35 36.9	-0.3
	comp=Z,8.4nm,0.8s,baz=120,slow=4.7,SNR=14						
KBZ	Khabaz	69.11	310	deP	P	08 35 37.3	+0.2
KBZ				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	69.21	310	eP	P	08 35 38.0	+0.1
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV	Kislovodsk	69.21	310	P	P	08 35 38.2	+0.2
NEY	Neytrino	69.35	309	⇓eP	P	08 35 39.8	+0.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPSR	Galich'ya Gora	69.80	320	eP	P	08 35 40.0	-1.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	69.95	318	eP	P	08 35 40.0	-2.2
VSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BCAR	Beaver Creek A	70.61	29	P	P	08 35 47.1	+1.0
OBN	Obninsk	70.62	322	⇑eP	P	08 35 46.0	-0.1
OBN				i		08 36 04.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ARCES	ARCESS Array B	71.78	339	P	P	08 35 53.8	+0.8
	comp=Z,2.7nm,0.9s,baz=48,slow=1.8,SNR=4.6						
EPYK	Eagle Plains	71.86	25	IAmb	IAmb	08 36 07.7	
	comp=Z,13nm,0.9s						
RAYN	Ar Rayn	72.43	288	P	P	08 35 57.7	-0.1
RAYN				IAmb	IAmb	08 35 59.0	
	comp=Z,9.8nm,0.9s						
INK	Inuvik	72.45	23	P	P	08 35 57.3	+0.4
	comp=Z,3.6nm,0.9s,baz=294,slow=7.4,SNR=8.9						
INK	Inuvik	72.45	23	P	P	08 35 57.4	+0.5
INK				IAmb	IAmb	08 36 11.1	
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	74.16	330	P	P	08 36 06.8	-0.3
	comp=Z,6.8nm,0.7s,baz=55,slow=6.3,SNR=40						
FINES				LR	LR	09 12 36.9	
	comp=Z,221nm,21.7s,baz=28,slow=39						
FINES	FINESS Array B	74.16	330	P	P	08 36 07.6	+0.4
VSU	Vasula	74.86	327	⇑eP	P	08 36 11.6	+0.3
VSU				pmax	pmax		
	comp=Z,56nm,1.1s						
C36M	Paulatuk	75.20	20	IAmb	IAmb	08 36 14.2	
	comp=Z,20nm,1.4s						
EUNU	Eureka	75.35	5	P	P	08 36 13.9	0.0
EUNU				IAmb	IAmb	08 36 16.0	
	comp=Z,5.8nm,0.8s						
NACGM	Naroch	76.07	324	i P	P	08 36 19.1	+0.8
NACGM				i P	P	08 36 19.1	+0.8
NACGM				i P	P	08 36 19.1	+0.8
NACGM				i PP	PP	08 39 09.4	+0.5
NACGM				i PPP	PPP	08 40 55.6	
NACGM				i S	S	08 46 03.4	+3.7
NACGM				i SS	SS	08 50 12.6	-40
NACGM				i SSS	SSS	08 54 06.3	
AKASG	Malin Array Be	76.13	319	P	P	08 36 18.5	-0.2
	comp=Z,2.6nm,0.6s,baz=57,slow=6.1,SNR=12						
AKASG				pP	PcP	08 36 30.4	-0.4
	comp=Z,4.4nm,0.7s,baz=57,slow=5.8,SNR=6.9						
AKASG				LR	LR	09 11 33.0	
	comp=Z,78nm,19.1s,baz=335,slow=37						
AKASG	Malin Array Be	76.13	319	P	P	08 36 18.7	0.0
AKBB	Malin Array Si	76.13	319	⇑eP	P	08 36 18.6	-0.2
BR131	Keskin Array S	76.88	308	c iP	P	08 36 23.7	+0.3
BR131	Keskin Array S	76.88	308	IAmb	IAmb	08 36 36.6	

	comp=Z,17nm,0.9s						
BRTR	**Keskin Array B**	**76.88**	**308**	P	**P**	**08 36 23.9**	**+0.5**
	comp=Z,5.1nm,0.9s,baz=98,slow=5.5,SNR=22						
BRTR				pP	**sP**	**08 36 35.4**	**+1.7**
	comp=Z,8.1nm,1.0s,baz=89,slow=5.0,SNR=13						
BRTR	**Keskin Array B**	**76.88**	**308**	P	**P**	**08 36 23.3**	**-0.1**
SORM	**Soroca**	**77.56**	**317**	⇑P	**P**	**08 36 25.8**	**-1.1**
SORM	**Soroca**	**77.56**	**317**	⇑P	**P**	**08 36 25.8**	**-1.1**
DAG	**Danmarks Havn**	**77.75**	**352**	*i* P	**P**	**08 36 27.0**	**-0.4**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAG	**Danmarks Havn**	**77.75**	**352**	*i* P	**P**	**08 36 27.0**	**-0.4**
	comp=Z,5.0nm,0.9s						
DAG	**Danmarks Havn**	**77.75**	**352**	*i* P	**P**	**08 36 27.0**	**-0.4**
DAG				IAmb	IAmb	08 36 28.0	
	comp=Z,5.0nm,0.9s						
RPZ	**Rata Peaks**	**78.72**	**148**	P	**P**	**08 36 32.9**	**-0.2**
	comp=Z,6.3nm,0.6s,baz=278,slow=3.5,SNR=6.0						
RES	**Resolute Bay**	**78.78**	**10**	IAmb	IAmb	08 36 46.9	
	comp=Z,13nm,1.0s						
EFOR	**EFORIE**	**78.86**	**313**	⇓P	sP	08 36 47.8	+3.5
TESR	**Tescani**	**79.24**	**316**	⇑P	**P**	**08 36 36.7**	**+0.5**
ODBI	**Odobesti**	**79.27**	**315**	⇓P	P	08 36 41.0	+4.7
BIZ	**Bicaz**	**79.42**	**317**	⇑P	**P**	**08 36 37.9**	**+0.7**
VRI	**Vrincioaia**	**79.44**	**315**	⇑P	**P**	**08 36 38.8**	**+1.5**
VRI	**Vrincioaia**	**79.44**	**315**	⇑P	**P**	**08 36 38.8**	**+1.5**
PLOR	**Plostina**	**79.49**	**315**	⇓P	sP	08 36 52.7	+4.8
BUR08	**Bucovina Ar. S**	**79.71**	**317**	P	**P**	**08 36 39.1**	**+0.2**
BURAR	**Bucovina Array**	**79.71**	**317**	⇑P	**P**	**08 36 39.6**	**+0.7**
BURAR	**Bucovina Array**	**79.71**	**317**	⇑P	**P**	**08 36 39.6**	**+0.7**
OZUR		**79.95**	**316**	⇓P	**P**	**08 36 40.2**	**+0.1**
DBG	**Daneborg**	**80.06**	**351**	*i* P	**P**	**08 36 39.8**	**-0.3**
MLR	**Muntele Rosu**	**80.09**	**315**	⇓P	**P**	**08 36 42.0**	**+1.0**
MLR	**Muntele Rosu**	**80.09**	**315**	⇓P	**P**	**08 36 42.0**	**+1.0**
MLR	**Muntele Rosu**	**80.09**	**315**	P	**P**	**08 36 41.4**	**+0.4**
MLR				IAmb	IAmb	08 36 42.4	
	comp=Z,9.6nm,1.0s						
DOPR	**Dopca**	**80.26**	**316**	⇑P	**P**	**08 36 42.8**	**+1.0**
KWP	**Kalwaria Pacla**	**80.42**	**320**	*e*P	**P**	**08 36 43.1**	**+0.6**
VOIR		**80.69**	**315**	⇑P	pP	08 36 53.1	+1.5
VOIR		**80.69**	**315**	⇑P	pP	08 36 53.1	+1.5
NB2	**NORSAR Subarra**	**80.79**	**333**	P	**P**	**08 36 44.1**	**-0.3**
	comp=Z,20nm,1.2s,baz=56,slow=5.1						
NB2	**NORSAR Subarra**	**80.79**	**333**	P	**P**	**08 36 44.1**	**-0.3**
	baz=56,slow=5.1						
NOA	**NORSAR Array B**	**80.79**	**333**	P	**P**	**08 36 44.3**	**0.0**
	comp=Z,2.7nm,0.7s,baz=55,slow=5.1,SNR=11						
NOA				pP	**sP**	**08 36 56.4**	**+1.8**
	comp=Z,7.7nm,1.0s,baz=56,slow=5.2,SNR=8.9						
KOLS	**Kolonicke sedl**	**80.97**	**319**	*e*P	**P**	**08 36 46.9**	**+1.4**
KOLS	**Kolonicke sedl**	**80.97**	**319**	*e*P	**P**	**08 36 46.9**	**+1.4**
ARR	**Arges**	**80.98**	**316**	⇑P	**P**	**08 36 46.1**	**+0.4**
CJR	**Cluj-Napoca**	**81.09**	**317**	⇑P	**P**	**08 36 48.0**	**+1.7**
CJR	**Cluj-Napoca**	**81.09**	**317**	⇑P	**P**	**08 36 48.0**	**+1.7**
HUMR	**Humele**	**81.10**	**315**	⇑P	**P**	**08 36 47.2**	**+1.0**
LOT	**Lotru**	**81.51**	**316**	⇑P	**P**	**08 36 49.2**	**+0.7**
DRGR		**81.61**	**317**	⇑P	**P**	**08 36 49.7**	**+0.7**
DRGR		**81.61**	**317**	⇑P	**P**	**08 36 49.7**	**+0.7**
PLVB	**Pleven**	**81.80**	**314**	⇑P	**P**	**08 36 51.2**	**+1.2**
OJC	**Ojcow**	**81.85**	**321**	*e*P	**P**	**08 36 50.1**	**-0.1**
OJC	**Ojcow**	**81.85**	**321**	P	**P**	**08 36 50.0**	**-0.1**
OJC				IAmb	IAmb	08 37 13.7	
	comp=Z,16nm,1.4s						
YKA	**Yellowknife Ar**	**82.11**	**24**	P	**P**	**08 36 51.9**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=312,slow=4.4,SNR=24						
YKA				pP	**sP**	**08 37 03.5**	**+2.2**
	comp=Z,4.7nm,1.0s,baz=309,slow=4.6,SNR=11						
GZR	**Gura Zlata**	**82.16**	**316**	⇑P	**P**	**08 36 52.0**	**+0.1**
HERR	**Herculane**	**82.61**	**316**	⇑P	**P**	**08 36 52.4**	**-1.8**
VTS	**Vitosha**	**83.05**	**313**	⇑P	**P**	**08 36 56.9**	**+0.1**
VTS	**Vitosha**	**83.05**	**313**	⇑P	**P**	**08 36 56.9**	**+0.1**
MDVR	**Moldovita**	**83.11**	**316**	⇑P	**P**	**08 36 57.4**	**+0.6**
VYHS	**Vyhne**	**83.20**	**320**	*e*P	**P**	**08 36 58.4**	**+1.2**
VYHS				pmax	pmax		
	comp=Z,12nm,1.1s						
VYHS	**Vyhne**	**83.20**	**320**	*e*P	**P**	**08 36 58.4**	**+1.2**
MORC	**Moravsky Berou**	**83.35**	**322**	⇓P	**P**	**08 36 58.7**	**+0.7**
MORC	**Moravsky Berou**	**83.35**	**322**	*e*P	**P**	**08 36 58.9**	**+0.9**
MORC				*e*		08 37 11.0	
MORC	**Moravsky Berou**	**83.35**	**322**	⇓P	**P**	**08 36 58.7**	**+0.7**
MORC	**Moravsky Berou**	**83.35**	**322**	IAmb	IAmb	08 36 59.7	
	comp=Z,9.7nm,1.2s						
KSP	**Ksiaz**	**83.54**	**323**	*e*P	**P**	**08 37 00.1**	**+1.2**
KRLC	**Kraliky**	**83.64**	**322**	*e*P	**P**	**08 37 00.7**	**+1.2**
KRLC				*e*		08 37 07.4	
KRLC	**Kraliky**	**83.64**	**322**	*e*P	**P**	**08 37 00.7**	**+1.2**
KRLC				*e*pP	**pP**	**08 37 07.4**	**+0.4**
SUMG	**Summit**	**83.69**	**355**	*i* P	**P**	**08 37 00.0**	**+0.2**
SUMG	**Summit**	**83.69**	**355**	*i* P	**P**	**08 37 00.0**	**+0.2**
SUMG	**Summit**	**83.69**	**355**	*i* P	**P**	**08 37 00.0**	**+0.2**
JAVC	**Velka Javorina**	**83.71**	**321**	*e*P	**P**	**08 37 02.2**	**+2.3**
JAVC				*e*		08 37 13.3	
DPC	**Dobruska-Polom**	**83.76**	**323**	*e*P	**P**	**08 37 01.2**	**+1.1**
DPC				*e*		08 37 13.1	
DPC	**Dobruska-Polom**	**83.76**	**323**	*e*P	**P**	**08 37 01.2**	**+1.1**
DPC				*e*x	x	08 37 13.1	
UPC	**Upice**	**83.86**	**323**	*e*P	**P**	**08 37 01.9**	**+1.3**
UPC	**Upice**	**83.86**	**323**	*e*P	**P**	**08 37 01.9**	**+1.3**
SMOL	**Smolenice**	**84.02**	**321**	*e*P	**P**	**08 37 02.7**	**+1.3**
SMOL	**Smolenice**	**84.02**	**321**	*e*P	**P**	**08 37 02.7**	**+1.3**
VRAC	**Vranov**	**84.12**	**322**	⇓P	**P**	**08 37 03.0**	**+1.1**
VRAC	**Vranov**	**84.12**	**322**	*e*P	**P**	**08 37 03.1**	**+1.1**
VRAC				*e*		08 37 14.3	
VRAC	**Vranov**	**84.12**	**322**	⇓P	**P**	**08 37 03.0**	**+1.1**
MODS	**Modra-Piesok**	**84.17**	**320**	*e*P	**P**	**08 37 03.5**	**+1.3**
MODS				pmax	pmax		
	comp=Z,30nm,1.7s						
MODS	**Modra-Piesok**	**84.17**	**320**	*e*P	**P**	**08 37 03.5**	**+1.3**
KRUC	**Moravsky**	**84.35**	**321**	*e*P	**P**	**08 37 04.0**	**+0.9**
KRUC				*e*		08 37 15.6	
BRG	**Berggiesshubel**	**84.81**	**324**	*i* P	**P**	**08 37 06.3**	**+1.0**
BRG				Amp		08 37 07.9	
	comp=Z,15nm,1.2s						
BRG				*i* x	x	08 37 18.2	
BRG				Amp		08 37 19.8	
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**84.81**	**324**	*i* P	**P**	**08 37 06.3**	**+1.0**
BRG				pmax	pmax		
	comp=Z,15nm,1.2s						
BRG	**Berggiesshubel**	**84.81**	**324**	*i* P	**P**	**08 37 06.3**	**+1.0**
BRG				Amp		08 37 07.9	
	comp=Z,15nm,1.2s						
BRG				*i* x	x	08 37 18.2	
BRG				Amp		08 37 19.8	
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**84.81**	**324**	*e*P	**P**	**08 37 06.2**	**+0.9**
	comp=Z,5.5nm,1.0s,baz=59,slow=4.7						
BRG				*e*sP	**pwP**	**08 37 18.0**	**-2.8**
BSEG	**Bad Segeberg**	**85.06**	**328**	*e*P	**P**	**08 37 07.7**	**+1.2**
	comp=Z,11nm,1.1s,baz=59,slow=4.7						
BSEG				*e*sP	**pwP**	**08 37 19.3**	**-2.6**
CLL	**Collm**	**85.09**	**324**	*i* P	**P**	**08 37 07.1**	**+0.4**
	comp=Z,18nm,1.0s						
CLL				*i* (sP)	**sP**	**08 37 18.9**	**+1.9**
CLL				*i*		08 37 29.5	
CLL	**Collm**	**85.09**	**324**	*i* P	**P**	**08 37 07.1**	**+0.4**
CLL				*i*		08 37 18.9	
CLL				pmax	pmax		
	comp=Z,18nm,1.0s						
CLL	**Collm**	**85.09**	**324**	P	**P**	**08 37 06.7**	**-0.1**
CLL	**Collm**	**85.09**	**324**	*e*P	**P**	**08 37 07.3**	**+0.6**
	comp=Z,11nm,0.9s,baz=59,slow=4.7						
CLL				*e*sP	**pwP**	**08 37 19.3**	**-2.9**
FBE	**Freiberg**	**85.11**	**324**	*e*P	**P**	**08 37 07.7**	**+0.9**
	comp=Z,13nm,0.9s,baz=59,slow=4.7						
FBE				*e*sP	**pwP**	**08 37 19.4**	**-2.9**
CONA	**Conrad Observa**	**85.22**	**321**	*e*P	**P**	**08 37 08.6**	**+1.0**
	comp=Z,6.8nm,1.0s						
PBCC	**Pribram**	**85.39**	**323**	*e*P	**P**	**08 37 09.1**	**+0.8**
PBCC				*e*x	x	08 37 21.5	
FLTG	**Flechtingen**	**85.47**	**326**	*e*P	**P**	**08 37 09.2**	**+0.6**
	comp=Z,6.1nm,0.9s,baz=59,slow=4.7						
FLTG				*e*sP	**pwP**	**08 37 21.1**	**-2.9**
TANN	**Tannenbergstha**	**85.86**	**324**	*e*P	**P**	**08 37 11.3**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=59,slow=4.7						
TANN				*e*sP	**sP**	**08 37 22.9**	**+1.9**
KHC	**Kasperske Hory**	**85.92**	**322**	⇓*e*P	**P**	**08 37 12.3**	**+1.3**
KHC				pmax	pmax		
	comp=Z,16nm,1.3s						
KHC	**Kasperske Hory**	**85.92**	**322**	*e*P	**P**	**08 37 11.4**	**+0.4**
KHC				*e*x	x	08 37 22.9	
KHC				*e*x	x	08 37 32.0	
KHC	**Kasperske Hory**	**85.92**	**322**	P	**P**	**08 37 11.9**	**+0.9**
KHC				IAmb	IAmb	08 37 24.7	
	comp=Z,8.2nm,1.2s						
WERD	**Werda**	**85.92**	**324**	*e*P	**P**	**08 37 11.2**	**+0.3**
	comp=Z,5.4nm,0.9s,baz=59,slow=4.7						
WERD				*e*sP	**pwP**	**08 37 23.6**	**-2.8**
GUNZ	**Gunzen**	**85.95**	**324**	*e*P	**P**	**08 37 12.0**	**+0.9**
	comp=Z,9.7nm,0.9s,baz=59,slow=4.7						
GUNZ				*e*sP	**pwP**	**08 37 23.8**	**-2.8**
NKC	**Novy Kostel**	**85.96**	**324**	*e*P	**P**	**08 37 11.9**	**+0.8**
NKC				*e*		08 37 23.4	
NKC	**Novy Kostel**	**85.96**	**324**	*e*P	**P**	**08 37 11.9**	**+0.8**
NKC				*e*x	x	08 37 23.4	
NRDL	**Niedersach Rie**	**85.96**	**326**	*e*P	**P**	**08 37 12.5**	**+1.5**
	comp=Z,4.6nm,0.9s,baz=59,slow=4.7						
WERN	**Wernitzgruen**	**85.97**	**324**	*e*P	**P**	**08 37 12.0**	**+0.8**
	comp=Z,8.7nm,0.9s,baz=59,slow=4.7						
WERN				*e*sP	**pwP**	**08 37 24.5**	**-2.2**
GEC2	**GERESS Array S**	**85.99**	**322**	P	**P**	**08 37 11.7**	**+0.2**
GEC2				IAmb	IAmb	08 37 12.8	
	comp=Z,8.9nm,1.1s						
GEC2	**GERESS Array S**	**85.99**	**322**	*e*P	**P**	**08 37 11.8**	**+0.4**
	comp=Z,5.4nm,0.9s,baz=59,slow=4.7						
GEC2				*e*sP	**pwP**	**08 37 24.2**	**-2.6**
GERES	**GERESS Array B**	**85.99**	**322**	P	**P**	**08 37 11.7**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=58,slow=5.0,SNR=16						
GERES				pP	**pwP**	**08 37 23.9**	**-3.0**
	comp=Z,3.7nm,0.9s,baz=48,slow=4.0,SNR=7.3						
GERES	**GERESS Array B**	**85.99**	**322**	P	**P**	**08 37 11.6**	**+0.1**
MOA	**Molln**	**86.19**	**321**	*e*P	**P**	**08 37 13.6**	**+1.3**
	comp=Z,5.7nm,1.1s						
CLZ	**Clausthal**	**86.19**	**326**	*e*P	**P**	**08 37 13.6**	**+1.3**
	comp=Z,12nm,1.0s,baz=59,slow=4.7						
CLZ				*e*sP	**pwP**	**08 37 25.4**	**-2.3**
MOX	**Moxa**	**86.19**	**324**	*e*P	**P**	**08 37 12.9**	**+0.6**
	comp=Z,4.4nm,1.0s,baz=59,slow=4.7						
WET	**Wettzell**	**86.30**	**323**	*e*P	**P**	**08 37 13.4**	**+0.5**
	baz=59,slow=4.7						
ROTZ	**Rotzenmuhle**	**86.34**	**323**	*e*P	**P**	**08 37 13.4**	**+0.4**
	comp=Z,6.1nm,0.9s,baz=59,slow=4.7						
GRF	**Grafenberg Arr**	**86.92**	**324**	*e*P	**P**	**08 37 16.1**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=59,slow=4.7						
IBBN	**Ibbenburen**	**87.25**	**327**	*e*P	**P**	**08 37 18.8**	**+1.5**
	comp=Z,7.0nm,0.9s,baz=59,slow=4.7						
KASTN	**Kahler Asten**	**87.56**	**326**	*e*P	**P**	**08 37 20.2**	**+1.3**
	comp=Z,2.4nm,1.0s,baz=59,slow=4.7						
FUR	**Furstenfeldbru**	**87.72**	**322**	*e*P	**P**	**08 37 20.5**	**+0.7**
	comp=Z,15nm,0.8s,baz=59,slow=4.7						
ABTA	**Abfaltersbach**	**87.78**	**321**	*e*P	**P**	**08 37 19.8**	**-0.4**
	comp=Z,8.9nm,1.1s						
B08A	**Colville Reser**	**88.05**	**37**	IAmb	IAmb	08 37 23.7	
	comp=Z,5.1nm,0.8s						
TNS	**Taunus Mts**	**88.11**	**325**	*e*P	**P**	**08 37 22.7**	**+1.1**
	baz=59,slow=4.7						
MOTA	**Moosalm**	**88.27**	**322**	*e*P	**P**	**08 37 22.4**	**-0.2**
	comp=Z,5.1nm,0.9s						
SQTA	**Sankt Quirin**	**88.28**	**322**	*e*P	**P**	**08 37 22.9**	**+0.3**
	comp=Z,7.9nm,1.0s						
UBR	**Ueberruh**	**88.64**	**322**	*e*P	**P**	**08 37 24.3**	**+0.1**
	comp=Z,7.3nm,0.9s,baz=59,slow=4.7						
FETA	**Feichten**	**88.66**	**322**	*e*P	**P**	**08 37 24.7**	**+0.3**
	comp=Z,4.4nm,0.9s						
E07A	**Sunnyside**	**88.75**	**39**	P	**P**	**08 37 25.9**	**+1.3**
KMBO	**Kilima Mbogo**	**88.91**	**268**	P	**P**	**08 37 26.8**	**+0.5**
	comp=Z,9.5nm,0.2s,baz=61,slow=19,SNR=3.6						
BFO	**Black Forest**	**89.26**	**324**	*e*P	**P**	**08 37 25.8**	**-1.2**
	comp=Z,4.5nm,1.2s,baz=59,slow=4.7						
FCC	**Fort Churchill**	**91.83**	**19**	IAmb	IAmb	08 37 53.8	
	comp=Z,8.9nm,1.2s						
FFC	**Flin Flon**	**92.20**	**25**	P	**P**	**08 37 41.6**	**+1.1**
MFID	**Camas Ranch**	**92.88**	**40**	P	**P**	**08 37 45.0**	**+0.9**
MFID				IAmb	IAmb	08 37 47.0	
	comp=Z,6.9nm,1.1s						
DLMT	**Dillon**	**93.55**	**37**	IAmb	IAmb	08 37 49.8	
	comp=Z,8.1nm,1.1s						
HLID	**Hailey**	**93.62**	**39**	IAmb	IAmb	08 37 50.6	
	comp=Z,5.3nm,1.0s						
RYN	**Ryan**	**93.96**	**45**	P	**P**	**08 37 51.1**	**+1.9**
RYN				IAmb	IAmb	08 37 51.3	
	comp=Z,5.6nm,1.1s						
NVAR	**Mina Array Bea**	**94.22**	**45**	P	**P**	**08 37 52.2**	**+1.7**
	comp=Z,2.0nm,0.8s,baz=277,slow=5.7,SNR=16						
NVAR	**Mina Array Bea**	**94.22**	**45**	P	**P**	**08 37 51.7**	**+1.2**
TPH	**Tonopah**	**95.12**	**45**	P	**P**	**08 37 56.4**	**+1.8**
TPNV	**Topopah Spring**	**96.40**	**45**	P	**P**	**08 38 00.0**	**-0.4**
TPNV				IAmb	IAmb	08 38 05.8	
	comp=Z,3.7nm,1.1s						
PDAR	**Pinedale Array**	**96.89**	**37**	P	**P**	**08 38 03.5**	**+0.9**
	comp=Z,0.8nm,1.0s,baz=298,slow=3.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**114.20**	**298**	PKP	**PKiKP**	**08 43 10.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=183,slow=2.6,SNR=2.3						
DBIC	**Dimbokro**	**123.13**	**295**	PKP	**PKiKP**	**08 43 27.9**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=0.0,slow=2.0,SNR=4.1						
ROSC	**El Rosal**	**145.89**	**37**	PKPbc	**PKPab**	**08 44 12.2**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=44,slow=6.3,SNR=4.3						
ROSC	**El Rosal**	**145.89**	**37**		**PKiKP**	**08 44 12.9**	**-2.3**

TAP 25 08:24:41.2, 23°.68N×121°.40E, h17^{km}, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.03**	**118**	*i* P	Pg	08 24 45.0	+0.7
	baz=116						
EGFH				S	Sg	08 24 47.1	+0.8
	baz=116						
ESL	**Shilin**	**0.14**	**13**	*i* P	Pb	08 24 45.9	+0.5
	baz=16						
ESL				*i* S	Sb	08 24 48.3	+0.2
	baz=16						
EHY	**Hungye**	**0.19**	**202**	*i* P	Pb	08 24 46.6	+0.3
	baz=199						
EHY				S	Sb	08 24 49.6	-0.1
	baz=199						
HGSD	**Ruisui**	**0.19**	**173**	*e*P	Pb	08 24 47.7	+1.5
	baz=173						
HGSD				*e*S	Sb	08 24 51.4	+1.7
	baz=173						
YULB	**Yu-li**	**0.30**	**198**	*i* P	Pb	08 24 48.3	+0.1
	baz=198						
YULB				S	Sb	08 24 52.8	-0.1
	baz=198						
TWF1	**Yuli**	**0.34**	**196**	*i* P	Pb	08 24 49.0	+0.1
	baz=194						
TWF1				S	Sb	08 24 54.1	0.0
	baz=194						
SSLB	**Suanglung**	**0.42**	**284**	P	Pb	08 24 50.6	+0.4
	baz=284						
SSLB				*e*S	Sg	08 24 56.0	+0.3
	baz=284						
CHGB	**Renai**	**0.43**	**331**	*i* P	Pb	08 24 51.0	+0.5
	baz=331						
CHGB				S	Sb	08 24 56.9	+0.1
	baz=331						
YUS	**Yu-Shan**	**0.45**	**245**	P	Pb	08 24 51.7	+0.6
	baz=244						
YUS				*e*S	Sb	08 24 57.6	-0.1
	baz=244						
WHF	**Hehuan Shan**	**0.48**	**345**	*i* P	Pb	08 24 51.4	-0.1
	baz=345						
WHF				S	Sb	08 24 58.3	-0.1
	baz=345						
FULB	**Fuli**	**0.49**	**191**	*e*P	Pg	08 24 50.8	-0.3
	baz=191						
FULB				*e*S	Sb	08 24 59.9	+1.6
	baz=191						
NACB	**Ninganchiao**	**0.52**	**20**	P	Pb	08 24 52.0	+0.1
	baz=20						
NACB				S	Sb	08 24 59.2	0.0
	baz=20						
ETLH	**Xiulin Townshi**	**0.53**	**8**	*e*S	Sg	08 24 59.1	+0.2
	baz=8.0						
ALS	**Alishan**	**0.57**	**253**	*e*P	Pb	08 24 53.2	+0.2
	baz=252						
ALS				*e*S	Sb	08 25 01.4	+0.4
	baz=252						
FUSS	**Fushou**	**0.58**	**346**	*i* P	Pb	08 24 53.7	+0.6
	baz=345						
FUSS				S	Sb	08 25 01.4	+0.2
	baz=345						
TPUB	**Ta-pu**	**0.80**	**242**	*e*S	Sn	08 25 08.9	-0.5
	baz=241						
YHNB	**Yeheng**	**0.98**	**359**	*e*S	Sn	08 25 13.9	0.0
	baz=358						

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*IDC **25** 08:26:23.4±1.3, 13°.68N×91°.59W, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx4.0/37, mbtmp4.0/11, ML3.6/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/32, Error ellipse: s-maj=48.4km s-min=17.9km az=46.0*

*SNET **25** 08:26:26.9±1.1, 13°.48N×91°.92W, h36^{km}±999^{km}, ML4.1*

*UCR **25** 08:26:27.0±1.2, 13°.48N×91°.92W, h36^{km}±62^{km}, ML3.9, mb4.4(NEIC)*

*GCG **25** 08:26:27.5±0.6, 14°.02N×92°.25W, h36^{km}±999^{km}, MD4.2*

*NEIC **25** 08:26:28.4±2.6, 13°.60N±0°.02×91°.78W±0°.07, h35^{km}±1^{km}, mb4.4/78, Error ellipse: s-maj=10.9km s-min=4.2km az=273.0*

*MEX **25** 08:26:29.3±1.2, 13°.75N×92°.72W, h85^{km}±39^{km}, MD4.0*

ISC 25 08:26:28.8±0.7**, 13°.61N**±0°.07×**91°.90W**±0°.05**, h37**^{km}**, n152, σ1^{s}.49**/151**, mb4.4**/42**, MS3.5**/3**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.94**	**12**		**Pn**	**08 26 44.8**	**-0.7**
RTAL				Sn	**Sn**	**08 26 56.2**	**-1.5**
FUG	**Fuego 3**	**1.33**	**51**	*e*P	**Pn**	**08 26 51.3**	**+0.4**
THIG		**1.34**	**345**	*e*P	**Pn**	**08 26 50.7**	**-0.3**
THIG				*i* S	**Sn**	**08 27 06.2**	**-1.3**
PCG	**Pacaya**	**1.48**	**58**	*e*P	**Pn**	**08 26 53.5**	**+0.3**
HUEH	**Huehuetenango**	**1.75**	**13**	*e*P	**Pn**	**08 26 56.9**	**+0.1**
HUEH	**Huehuetenango**	**1.75**	**13**		**Pn**	**08 26 56.7**	**0.0**
NBG	**Las Nubes**	**1.80**	**57**	*e*P	**Pn**	**08 26 58.8**	**+1.2**
NBG				*e*S	**Sn**	**08 27 23.3**	**+4.0**
CEVE	**Cerro Verde**	**2.23**	**84**	*e*P	**Pn**	**08 27 02.6**	**-0.8**
CEVE				IAML		08 27 37.2	
	comp=Z,1µm,0.5s						
CEVE	**Cerro Verde**	**2.23**	**84**	*e*P	**Pn**	**08 27 02.6**	**-0.8**
CEVE				IAML		08 27 37.2	
	comp=Z,1µm,0.5s						
JAYA	**Jayaque - finc**	**2.39**	**89**	*e*S	**Sn**	**08 27 32.9**	**-0.8**
JAYA				IAML		08 27 42.4	
	comp=Z,549nm,0.5s						
JAYA	**Jayaque - finc**	**2.39**	**89**	*e*S	**Sn**	**08 27 32.9**	**-0.8**
JAYA				IAML		08 27 42.4	
	comp=Z,549nm,0.5s						
PCIG		**2.44**	**329**	*e*P	Pn	08 27 01.1	-5.0
PCIG				*e*S	Sn	08 27 23.3	-11
CEDA	**San Andres**	**2.45**	**85**	*e*P	**Pn**	**08 27 05.4**	**-0.8**
CEDA				IAML		08 27 52.2	
	comp=Z,990nm,0.4s						
CEDA	**San Andres**	**2.45**	**85**	*e*P	**Pn**	**08 27 05.4**	**-0.8**
CEDA				IAML		08 27 52.2	
	comp=Z,990nm,0.4s						
QUEZ	**Alcaldia de Qu**	**2.57**	**85**	*e*S	**Sn**	**08 27 37.8**	**-0.1**
MTO3	**Montecristo**	**2.59**	**72**	*e*P	**Pn**	**08 27 07.5**	**-0.9**
MTO3	**Montecristo**	**2.59**	**72**	*e*P	**Pn**	**08 27 07.5**	**-0.9**
MTO3	**Montecristo**	**2.59**	**72**		**Pn**	**08 27 07.8**	**-0.6**
SNET	**Serv Nac Est T**	**2.60**	**88**		**Pn**	**08 27 06.2**	**-2.2**
MRL	**Marmol**	**2.60**	**55**	*e*P	**Pn**	**08 27 09.0**	**+0.5**
MRL	**Marmol**	**2.60**	**55**	*e*P	**Pn**	**08 27 09.0**	**+0.5**
MRL	**Marmol**	**2.60**	**55**	*e*P	**Pn**	**08 27 09.9**	**+1.4**
ESQI	**Esquipulas**	**2.66**	**69**	*e*P	**Pn**	**08 27 09.0**	**-0.3**
ESQI	**Esquipulas**	**2.66**	**69**		**Pn**	**08 27 08.9**	**-0.4**
CCIG	**Comitan**	**2.67**	**355**	*e*P	**Pn**	**08 27 08.5**	**-1.0**
CCIG				*e*S	**Sn**	**08 27 38.5**	**-2.2**
CCIG	**Comitan**	**2.67**	**355**		**Pn**	**08 27 11.2**	**+1.8**
LBRS	**Las Brisas**	**2.78**	**87**	*e*P	**Pn**	**08 27 10.3**	**-0.6**
LBRS	**Las Brisas**	**2.78**	**87**	*e*P	**Pn**	**08 27 10.3**	**-0.6**
PETF	**Flores**	**3.83**	**31**	*e*P	**Pn**	**08 27 26.0**	**+0.7**
PETF	**Flores**	**3.83**	**31**		**Pn**	**08 27 26.5**	**+1.2**
CMIG	**Matias Romero**	**4.50**	**321**	Pn	**Pn**	**08 27 33.5**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=138,slow=12,SNR=19						
CMIG				Sn	**Sn**	**08 28 28.2**	**+2.5**
	comp=Z,8.4nm,0.3s,baz=68,slow=7.7,SNR=7.1						
CMIG	**Matias Romero**	**4.50**	**321**		**Pn**	**08 27 32.1**	**-2.4**
TGUH	**Tegucigalpa,Un**	**4.52**	**84**		**Pn**	**08 27 34.1**	**-0.7**
TEIG	**Tepich**	**7.44**	**27**	Pn	**Pn**	**08 28 15.0**	**+0.1**
TLIG	**Tlapa**	**7.53**	**302**	Pn	**Pn**	**08 28 16.9**	**+0.8**
JTS	**Las Juntas de**	**7.56**	**115**	Pn	**Pn**	**08 28 15.0**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=16,slow=15,SNR=2.0						
DBBC	**Dabeiba**	**16.76**	**111**	*e*P	**Pn**	**08 30 20.6**	**-0.5**
CBOC	**Ciudad Bolivar**	**17.44**	**115**	*e*P	**P**	**08 30 29.8**	**-0.7**
HELC	**Santa Helena**	**17.73**	**113**	*e*P	**P**	**08 30 34.0**	**+0.2**
NATX	**Nacogdoches**	**18.25**	**352**	P	**P**	**08 30 40.6**	**+1.5**
GUY2C	**Guyana, Caldas**	**18.31**	**116**	*e*P	**Pn**	**08 30 43.6**	**+3.2**
RREF	**El Recreo**	**18.48**	**116**	*e*P	**Pn**	**08 30 44.2**	**+1.5**
NORC	**Norcasia**	**18.59**	**114**	*e*P	**Pn**	**08 30 44.6**	**+1.1**
143A	**Socs Landing,**	**19.02**	**1**	P	**Pn**	**08 30 48.3**	**-0.2**
143A				IAmb	IAmb	08 30 58.1	
	comp=Z,19nm,1.0s						
ORTC	**Ortega, Tolima**	**19.06**	**119**	*e*P	**Pn**	**08 30 49.2**	**+0.1**
TXAR	**Lajitas Array**	**19.07**	**327**	P	**Pn**	**08 30 49.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=152,slow=9.8,SNR=26						
TX31	**Lajitas Ar. Si**	**19.08**	**327**	P	**Pn**	**08 30 50.0**	**+0.6**
TX31				IAmb	IAmb	08 31 05.8	
	comp=Z,20nm,1.1s						
TX32	**Lajitas Array**	**19.08**	**327**	P	**Pn**	**08 30 50.2**	**+0.9**
Z47A	**Carrollton**	**19.82**	**10**	P	**Pn**	**08 30 57.5**	**-0.4**
Z47A				IAmb	IAmb	08 31 18.4	
	comp=Z,32nm,1.4s						
LRAL	**Lakeview Retre**	**19.85**	**12**	P	**Pn**	**08 30 58.6**	**+0.2**
PAMC	**Pamplona, Colo**	**19.88**	**106**	*e*P	**P**	**08 30 56.2**	**-1.4**
CHIC	**Chingaza**	**20.02**	**115**	*e*P	Pn	08 31 02.3	+1.3
RUSC	**La Rusia**	**20.06**	**111**	*e*P	**P**	**08 30 59.4**	**-0.1**
Y49A	**Blount Mountai**	**20.77**	**13**	P	Pn	08 31 07.8	-1.4
Y49A				IAmb	IAmb	08 31 21.4	
	comp=Z,16nm,1.1s						
MIAR	**Mount Ida**	**20.90**	**356**	P	Pn	08 31 07.5	-3.2
TAMC	**Tame, Arauca**	**21.04**	**108**	*e*P	**P**	**08 31 07.6**	**-2.1**
X37A	**Clayton**	**21.13**	**352**	P	**P**	**08 31 10.6**	**+0.2**
X37A				IAmb	IAmb	08 31 31.4	
	comp=Z,13nm,1.1s						
GOGA	**Godfrey**	**21.16**	**20**	P	**P**	**08 31 10.3**	**-0.5**
GOGA				IAmb	IAmb	08 31 33.7	
	comp=Z,37nm,1.5s						
MACC	**Macarena, Meta**	**21.18**	**121**	*e*P	**P**	**08 31 14.9**	**+3.7**
X48A	**Hartselle**	**21.22**	**11**	P	**P**	**08 31 11.3**	**-0.1**
X48A				IAmb	IAmb	08 31 18.5	
	comp=Z,24nm,1.3s						
SOCV	**Socops**	**21.32**	**102**	*e*P	**P**	**08 31 10.8**	**-2.0**
SDV	**Santo Domingo**	**21.38**	**100**	P	**P**	**08 31 09.9**	**-3.6**
	comp=Z,2.4nm,0.5s,baz=345,slow=4.2,SNR=4.5						
SDV	**Santo Domingo**	**21.38**	**100**	P	**P**	**08 31 11.1**	**-2.4**
SDV	**Santo Domingo**	**21.38**	**100**	*e*P	**P**	**08 31 10.1**	**-3.5**
Y52A	**Lilburn**	**21.39**	**18**	P	**P**	**08 31 13.4**	**+0.2**
Y52A				IAmb	IAmb	08 31 19.9	
	comp=Z,21nm,1.3s						
PLAL	**Pickwick Lake**	**21.56**	**9**	P	**P**	**08 31 15.2**	**+0.1**
PTLC	**Puerto Leguiza**	**21.57**	**127**	*e*P	**P**	**08 31 20.8**	**+5.4**
FPAL	**Fort Paine**	**21.61**	**14**	P	**P**	**08 31 16.5**	**+0.8**
FPAL				IAmb	IAmb	08 31 16.7	
	comp=Z,14nm,1.0s						
PTGC	**Puerto Gaitan,**	**21.63**	**114**	*e*P	**P**	**08 31 15.4**	**-0.7**
GDL2	**Guadalupe Moun**	**21.74**	**330**	P	**P**	**08 31 18.9**	**+1.7**
MNTX	**Cornudas Mount**	**21.85**	**328**	P	**P**	**08 31 18.9**	**+0.7**
WMOK	**Wichita Mounta**	**21.94**	**345**		**P**	**08 31 18.5**	**-0.7**
FNO	**Franklin**	**22.12**	**348**	P	**P**	**08 31 22.5**	**+1.4**
SWET	**Sewanee**	**22.18**	**13**	P	**P**	**08 31 21.5**	**-0.3**
W50A	**Signal Mountai**	**22.31**	**14**	P	**P**	**08 31 22.7**	**-0.5**
W50A				IAmb	IAmb	08 31 36.2	
	comp=Z,14nm,1.1s						
HODGE	**Hodges**	**22.32**	**21**	P	**P**	**08 31 22.9**	**-0.3**
OK025	**Westminster Rd**	**22.42**	**348**	P	**P**	**08 31 23.9**	**-0.5**
OK025				IAmb	IAmb	08 31 25.3	
	comp=Z,12nm,0.7s						
MSTX	**Muleshoe**	**22.55**	**336**	P	**P**	**08 31 25.1**	**-0.7**
MSTX				IAmb	IAmb	08 31 27.4	
	comp=Z,8.5nm,0.6s						
W52A	**Murphy**	**22.57**	**17**	P	**P**	**08 31 26.4**	**+0.3**
W52A				IAmb	IAmb	08 31 33.0	
	comp=Z,18nm,1.4s						
OK030	**Cody Creek RV**	**22.66**	**350**	P	**P**	**08 31 26.5**	**-0.3**
OK030				IAmb	IAmb	08 31 36.8	
	comp=Z,16nm,0.8s						
U40A	**Yellville**	**22.67**	**358**	P	**P**	**08 31 27.7**	**+0.7**
WVT	**Waverly**	**22.73**	**9**	P	**P**	**08 31 26.5**	**-1.1**
CPCT	**Cooper Cave**	**22.75**	**16**	P	**P**	**08 31 28.0**	**+0.3**
CPCT				IAmb	IAmb	08 31 49.9	
	comp=Z,15nm,1.2s						
BG3	**Lake Jocassee**	**22.79**	**19**	P	**P**	**08 31 27.9**	**-0.3**
CLTN	**Cedars of Leba**	**22.94**	**12**	P	**P**	**08 31 29.7**	**-0.1**
CLTN				IAmb	IAmb	08 31 47.8	
	comp=Z,17nm,1.3s						
AMTX	**Amarillo**	**22.96**	**339**		**P**	**08 31 29.7**	**-0.3**
PBMO	**Poplar Bluff**	**23.11**	**3**	P	**P**	**08 31 30.4**	**-1.1**
PBMO				IAmb	IAmb	08 31 30.5	
	comp=Z,9.5nm,0.7s						
TKL	**Tuckaleechee C**	**23.15**	**17**	P	**P**	**08 31 30.5**	**-1.4**
	comp=Z,5.6nm,0.7s,baz=187,slow=10,SNR=8.3						
TKL				LR	LR	08 42 55.2	

	comp=Z,146nm,18.2s,baz=205,slow=43						
TKL	Tuckaleechee C	23.15	17	P	P	08 31 31.6	-0.3
TKL				IAmb	IAmb	08 31 55.3	
	comp=Z,20nm,1.3s						
V52A	Sevierville	23.37	17	P	P	08 31 33.0	-1.0
V52A				IAmb	IAmb	08 31 46.9	
	comp=Z,16nm,1.2s						
V53A	Saluda	23.45	19	P	P	08 31 33.9	-1.0
V53A				IAmb	IAmb	08 31 55.4	
	comp=Z,12nm,1.1s						
U49A	Red Boiling Sp	23.46	12	P	P	08 31 33.9	-1.1
U49A				IAmb	IAmb	08 31 57.8	
	comp=Z,11nm,1.1s						
121A	Cookes Peak, D	23.78	325	P	P	08 31 41.1	+2.8
121A				IAmb	IAmb	08 31 52.3	
	comp=Z,12nm,0.9s						
319A	Douglas	23.83	321	P	P	08 31 41.6	+3.0
S39A	Bolivar	24.02	357	P	P	08 31 39.0	-1.2
S39A				IAmb	IAmb	08 31 51.4	
	comp=Z,14nm,1.5s						
TZTN	Tazewell	24.04	17	P	P	08 31 39.3	-1.1
TZTN				IAmb	IAmb	08 31 58.6	
	comp=Z,28nm,1.4s						
S44A	Carbondale	24.11	5	P	P	08 31 39.7	-1.3
S44A				IAmb	IAmb	08 31 45.6	
	comp=Z,15nm,0.9s						
SIUC	Southern Illin	24.13	5	P	P	08 31 40.0	-1.3
V55A	Taylorsville	24.15	22	P	P	08 31 40.1	-1.3
V55A				IAmb	IAmb	08 32 01.4	
	comp=Z,21nm,1.3s						
CCM	Cathedral Cave	24.36	1	P	P	08 31 41.6	-1.8
U54A	Nelsons Funny	24.55	20	P	P	08 31 44.6	-0.6
R40A	Maddies Statio	24.59	359	P	P	08 31 43.4	-2.0
R40A				IAmb	IAmb	08 31 45.8	
	comp=Z,8.4nm,1.1s						
V58A	Windy Hill, Pi	24.91	25	P	P	08 31 47.5	-0.9
V58A				IAmb	IAmb	08 31 47.9	
	comp=Z,14nm,0.8s						
CNNC	Cliffs of the	24.98	28	P	P	08 31 47.6	-1.3
ANMO	Albuquerque	24.99	331	P	P	08 31 50.7	+1.4
	comp=Z,2.7nm,0.7s,baz=141,slow=11,SNR=12						
WCI	Wyandotte Cave	25.03	10	P	P	08 31 47.9	-1.5
WCI				IAmb	IAmb	08 31 52.3	
	comp=Z,12nm,0.8s						
SJG	San Juan	25.16	76	LR	LR	08 42 41.7	
	comp=Z,150nm,18.9s,baz=254,slow=39						
S54A	Dingess, Beckl	25.88	19	P	P	08 31 55.7	-1.4
S54A				IAmb	IAmb	08 32 22.0	
	comp=Z,9.2nm,0.9s						
O54A	Avella	28.34	19	P	P	08 32 17.6	-1.7
N53A	Lisbon	28.78	18	P	P	08 32 21.6	-1.5
N54A	Moraine State	29.18	19	P	P	08 32 25.1	-1.5
M53A	WI Miller and	29.41	17	P	P	08 32 27.1	-1.6
M53A				IAmb	IAmb	08 32 27.4	
	comp=Z,6.0nm,0.7s						
M56A	Emporium	30.24	21	P	P	08 32 34.8	-1.3
MTPU	Mount Pierson	30.28	327	P	P	08 32 39.4	+2.5
WVNY	West Valley, N	30.92	19	P	P	08 32 40.6	-1.5
K58A	Earlville	32.27	23	P	P	08 32 52.7	-1.3
HWUT	Hardware Ranch	32.73	332	P	P	08 33 00.2	+2.0
PDAR	Pinedale Array	32.82	336	P	P	08 32 57.5	-1.5
	comp=Z,0.2nm,0.5s,baz=133,slow=9.2,SNR=3.8						
PDAR				LR	LR	08 46 34.8	
	comp=Z,49nm,20.6s,baz=98,slow=37						
REDW	Red Top Meadow	33.84	335	P	P	08 33 09.0	+1.1
SNOW	Snow King Moun	33.88	335	P	P	08 33 09.8	+1.5
SNOW				IAmb	IAmb	08 33 13.0	
	comp=Z,7.0nm,0.9s						
NV11	Mina Array Sit	33.95	322	P	P	08 33 11.6	+2.8
NV11				IAmb	IAmb	08 33 20.6	
	comp=Z,3.6nm,0.9s						
NVAR	Mina Array Bea	34.03	321	P	P	08 33 12.2	+2.5
	comp=Z,2.0nm,0.6s,baz=129,slow=8.9,SNR=11						
NVAR	Mina Array Bea	34.03	321	P	P	08 33 12.3	+2.6
HLID	Hailey	35.56	331	P	P	08 33 24.7	+1.9
MCMT	McKenzie Canyo	35.87	334	P	P	08 33 27.6	+2.2
ULM	Lac du Bonnet	36.69	356	P	P	08 33 31.9	-0.1
ULM				IAmb	IAmb	08 33 35.4	
	comp=Z,6.0nm,1.4s						
WVOR	Wild Horse Val	36.87	326	P	P	08 33 37.2	+3.4
WVOR				IAmb	IAmb	08 33 55.0	
	comp=Z,5.2nm,1.2s						
LATQ	La Tuque	37.27	22	P	P	08 33 35.3	-1.7
LATQ				IAmb	IAmb	08 33 51.6	
	comp=Z,11nm,1.4s						
EGMT	Eagleton	37.39	340	P	P	08 33 38.7	+0.6
E63A	Oxbow	38.22	26	P	P	08 33 43.2	-1.8
D62A	Allapoint, All	38.47	25	P	P	08 33 45.5	-1.6
PQI	Presque Isle	38.58	27	P	P	08 33 46.3	-1.8
F10A	Beach Ranch, E	38.70	332	P	P	08 33 49.3	+0.1
F10A				IAmb	IAmb	08 34 01.2	
	comp=Z,8.9nm,0.8s						
LMN	Caledonia Moun	39.45	30	P	P	08 33 54.9	-0.5
BATG	Bathurst New B	39.91	28	P	P	08 33 57.5	-1.7
H04A	Detroit Lake	40.29	326	P	P	08 34 05.3	+2.9
H04A				IAmb	IAmb	08 34 05.7	
	comp=Z,5.0nm,0.6s						
LTY	Liberty	41.26	330	P	P	08 34 12.7	+2.2
SIV	San Ignacio	42.35	133	P	P	08 34 18.2	-1.5
	comp=Z,0.6nm,0.8s,baz=332,slow=6.8,SNR=8.9						
FCC	Fort Churchill	45.10	358	P	P	08 34 39.6	-1.5
YKA	Yellowknife Ar	51.43	347	P	P	08 35 29.3	-0.6
	comp=Z,3.0nm,0.6s,baz=144,slow=8.2,SNR=129						
INK	Inuvik	60.84	344	P	P	08 36 37.2	+0.2
	comp=Z,2.5nm,0.6s,baz=128,slow=4.4,SNR=4.7						
INK	Inuvik	60.84	344	P	P	08 36 37.2	+0.2
N25K	Chitina, Valde	60.86	334	P	P	08 36 39.6	+2.2
ILAR	Eielson Array	63.24	337	P	P	08 36 53.3	+0.1
	comp=Z,1.3nm,0.9s,baz=102,slow=6.4,SNR=8.6						
ILAR	Eielson Array	63.24	337	P	P	08 36 54.0	+0.8
BMAR	Burnt Mountain	63.69	340	P	P	08 36 55.8	-0.5
KTH	Kantishna Hill	64.33	335	P	P	08 37 01.0	+0.4
I23K	Minto, Yukon-K	64.35	337	P	P	08 37 01.6	+1.1
BPAW	Bear Paw Mtn.	64.57	335	P	P	08 37 03.1	+1.1
TTA	Tatalina	66.29	333	P	P	08 37 13.4	+0.1
CMAR	Chiang Mai Arr	146.39	341	PKPbc	PKPab	08 46 06.1	-1.4
	comp=Z,2.4nm,0.7s,baz=338,slow=3.6,SNR=11						
CMAR	Chiang Mai Arr	146.39	341		PKPab	08 46 06.7	-0.8

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*IDC **25** 08:31:22.0±1.7, 32°.42S×178°.06W, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.8/33, mbtmp4.0/3, ML3.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/35, Error ellipse: s-maj=57.9km s-min=32.3km az=133.0*

ISC 25 08:31:24.5±1.5**, 32°.2S**±0°.1×**178°.1W**±0°.3**, h24**^{km}**, n29, σ1**^{s}**.71**/45**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.97	3	P	Pn	08 32 09.0	-1.0
GLKZ				S	Sn	08 32 42.4	-2.5
MXZ	Matakaoa Point	6.08	208	P	Pn	08 32 51.9	-0.9
MXZ				S	Sn	08 33 59.9	-1.8
WMGZ	Waiomatatini S	6.26	206	P	Pn	08 32 55.7	+0.4
WMGZ				S	Sn	08 34 06.7	+0.5
PKGZ	Pakihiroa	6.46	208	S	Sn	08 34 11.7	+0.7
HAZ	Te Kaha	6.46	210	P	Pn	08 32 57.5	-0.6
HAZ				S	Sn	08 34 13.2	+2.1
PUZ	Puketiti	6.55	206	P	Pn	08 32 57.3	-1.9
PUZ				S	Sn	08 34 12.6	-0.6
RUGZ	Raukumara Rang	6.69	210	P	Pn	08 33 00.2	-1.1
RUGZ				S	Sn	08 34 17.6	+0.8
TWGZ	Tauwhareparae	6.74	207	S	Sn	08 34 18.7	+0.6
CNGZ	Carnagh Statio	6.93	205	P	Pn	08 33 02.9	-1.5
CNGZ				S	Sn	08 34 22.0	-0.5
TKGZ	Te Karaka	7.02	207	P	Pn	08 33 06.8	+1.0
TKGZ				S	Sn	08 34 25.0	+0.2
MWZ	Matawai	7.06	209	P	Pn	08 33 07.5	+1.1
MWZ				S	Sn	08 34 24.9	-1.0
URZ	Urewera	7.18	212	Pn	Pn	08 33 06.6	-1.3
	0.6nm,0.3s,baz=3.5,slow=12,SNR=1.9						
URZ				Sn	Sn	08 34 27.1	-1.6
	3.8nm,0.3s,baz=203,slow=23,SNR=12						
URZ	Urewera	7.18	212	P	Pn	08 33 06.1	-1.8
URZ				S	Sn	08 34 26.9	-1.7
NMHZ	Naumai	8.01	210	P	Pn	08 33 15.9	-3.4
NMHZ				S	Sn	08 34 50.1	+1.0
ARHZ	Aropaoanui	8.07	208	P	Pn	08 33 21.2	+1.1
ARHZ				S	Sn	08 34 50.7	+0.2
MCHZ	McNeill Hill	8.34	209	P	Pn	08 33 24.8	+0.9
MCHZ				S	Sn	08 34 56.5	-0.9
KWHZ	Kaweka Forest	8.44	210	S	Sn	08 34 58.6	-1.2
KAHZ	Kahuranaki	8.57	207	P	Pn	08 33 26.3	-0.8
KAHZ				S	Sn	08 34 59.8	-3.2
OTVZ	Oturere	8.57	215	P	Pn	08 33 28.0	+0.8
OTVZ				S	Sn	08 35 01.6	-1.7
KRHZ	Kereru	8.65	210	P	Pn	08 33 25.6	-2.5
KRHZ				P	Sn	08 35 02.1	-2.7
PXZ	Pawanui	8.78	206	S	Sn	08 35 03.7	-4.4
DZM	Mont Dzumac	17.07	303	LR	LR	08 40 45.1	
	comp=Z,183nm,18.4s,baz=190,slow=33						
ASAR	Alice Springs	42.97	269	P	P	08 39 23.3	+1.4
	2.0nm,1.0s,baz=119,slow=7.7,SNR=9.9						
WRA	Warramunga Arr	44.12	274	P	P	08 39 32.4	+1.2
	1.0nm,0.3s,baz=112,slow=8.1,SNR=17						
MKAR	Makanchi Array	118.88	309	PKP	PKiKP	08 50 14.2	+3.6
	0.1nm,0.4s,baz=154,slow=1.8,SNR=4.7						
KURBB	Kurchatov Arra	122.28	313	PKP	PKiKP	08 50 17.2	+0.1
	0.3nm,0.2s,baz=112,slow=2.3,SNR=4.4						
KBZ	Khabaz	146.04	302	PKPbc	PKPab	08 51 03.9	+1.2
	2.9nm,0.8s,baz=171,slow=4.4,SNR=3.9						
FINES	FINESS Array B	146.83	339	PKPbc	PKPab	08 51 04.9	-0.3
	3.6nm,0.9s,baz=66,slow=4.8,SNR=11						
BRTR	Keskin Array B	153.36	295	PKPbc	PKiKP	08 51 21.6	+0.7
	0.4nm,0.6s,baz=132,slow=1.8,SNR=5.0						

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*GCG **25** 08:43:26.8±0.6, 13°.16N×92°.69W, h35^{km}±999^{km}, MD3.9*
*SNET **25** 08:43:37.6±1.3, 13°.63N×91°.86W, h24^{km}±45^{km}, ML3.4*
*IDC **25** 08:43:43.6±13.0, 15°.34N×90°.48W, h0^{km}, mb3.5/2, mb1 3.9/3, mb1mx3.6/32, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=271.9km s-min=98.5km az=4.0*

ISC 25 08:43:36.2±3.6**, 13°.6N**±0°.1×**91°.90W**±0°.09**, h16**^{km}±19^{km}**, n14, σ0**^{s}**.91**/17**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.36	49	*e*P	Pn	08 44 01.5	+0.7
PCG	Pacaya	1.50	56	*e*P	Pn	08 44 03.8	+0.9
HUEH	Huehuetenango	1.80	12	*e*P	Pn	08 44 07.3	+0.4
HUEH				*e*S	Sn	08 44 29.1	-0.6
NBG	Las Nubes	1.82	55	*e*P	Pb	08 44 09.0	-0.5
RTR	El Retiro	2.21	81	*e*P	Pn	08 44 13.3	+0.7
RTR				*e*S	Sn	08 44 41.1	+1.4
JAYA	Jayaque - finc	2.38	87	*e*P	Pn	08 44 14.6	-0.2
JAYA				*e*S	Sn	08 44 42.9	-0.9
JAYA				IAML		08 44 51.6	
	comp=Z,313nm,0.3s						
MRL	Marmol	2.63	54	*e*P	Pn	08 44 17.7	-0.6
MRL	Marmol	2.63	54	*e*P	Pn	08 44 19.7	+1.3
MRL				*e*S	Sg	08 45 00.8	-0.1
ESQI	Esquipulas	2.67	68	*e*P	Pn	08 44 18.3	-0.5
ESQI				*e*S	Sn	08 44 51.2	+0.2
COEG	Centro de Oper	2.93	88	*e*P	Pn	08 44 23.0	+0.6
COEG				IAML		08 45 07.1	
	comp=Z,122nm,0.4s						
LCND	La Caada	3.90	93	IAML		08 45 33.2	
	comp=Z,52nm,0.5s						
TXAR	Lajitas Array	19.13	327	P	Pn	08 48 01.0	+1.2
	comp=Z,0.0nm,0.3s,baz=151,slow=11,SNR=8.5						
NVAR	Mina Array Bea	34.09	321	P	P	08 50 26.1	+5.7
	comp=Z,0.5nm,0.7s,baz=126,slow=9.0,SNR=5.2						
YKA	Yellowknife Ar	51.49	347	P	P	08 52 39.8	-1.0
	comp=Z,0.6nm,0.6s,baz=146,slow=8.2,SNR=24						

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*IDC **25** 08:45:52.1±6.2, 17°.42S×178°.82W, h548^{km}±76^{km}, mb3.2/9, mb1 3.5/10, mb1mx3.2/45, mbtmp4.1/10, Error ellipse: s-maj=63.5km s-min=26.6km az=153.0*

ISC 25 08:45:51.1±1.3**, 17°.4S**±0°.4×**178°.8W**±0°.3**, h539**^{km}**, n11, σ0**^{s}**.66**/11**, mb3.5**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.67	249	P	P	08 48 58.1	+0.6
	0.5nm,0.3s,baz=98,slow=21,SNR=9.6						
STKA	Stephens Creek	38.58	240	P	P	08 52 27.8	-0.2
	3.4nm,0.4s,baz=89,slow=8.9,SNR=20						
WRA	Warramunga Arr	44.38	259	P	P	08 53 13.5	-0.7
	1.3nm,0.5s,baz=92,slow=6.7,SNR=3.2						
ASAR	Alice Springs	44.59	254	P	P	08 53 15.6	-0.2
	15nm,0.5s,baz=87,slow=8.4,SNR=78						
NVAR	Mina Array Bea	79.29	44	P	P	08 57 02.1	+0.9
	0.5nm,0.6s,baz=223,slow=9.5,SNR=6.6						
SEY	Seymchan	83.18	347	P	P	08 57 20.9	+0.6
	1.1nm,0.6s,baz=180,slow=3.0,SNR=6.7						
ILAR	Eielson Array	85.45	13	P	P	08 57 31.2	-0.2
	0.4nm,0.4s,baz=218,slow=5.3,SNR=4.2						
TXAR	Lajitas Array	86.02	58	P	P	08 57 35.2	+0.2
	0.7nm,0.7s,baz=216,slow=5.8,SNR=9.4						
PDAR	Pinedale Array	87.22	44	P	P	08 57 40.6	0.0
	0.6nm,0.6s,baz=214,slow=3.1,SNR=6.7						
YKA	Yellowknife Ar	94.00	25	P	P	08 58 10.0	-1.1
	0.2nm,0.8s,baz=226,slow=4.0,SNR=4.5						
GERES	GERESS Array B	147.01	345	PKPbc	PKPbc	09 04 33.6	+0.1
	0.4nm,0.4s,baz=2.9,slow=2.0,SNR=2.9						

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*SJA **25** 08:46:55.0±0.5, 34°.47S×73°.01W, h14^{km}, ML4.8, MW4.6*
*VAO **25** 08:47:01.6±0.3, 34°.58S×71°.62W, h10^{km}, mb4.8*
*IDC **25** 08:47:05.0±0.6, 34°.68S×71°.61W, h41^{km}±5^{km}, mb4.4/15, mb1 4.5/17, mb1mx4.3/28, mbtmp4.6/17, ML4.6/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/34, Error ellipse: s-maj=19.8km s-min=12.2km az=77.0*
*NEIC **25** 08:47:05.6±1.6, 34°.70S±0°.05×71°.75W±0°.08, h47^{km}±6^{km}, Error ellipse: s-maj=9.2km s-min=6.8km az=95.0*
*GUC **25** 08:47:05.2±0.7, 34°.76S×71°.82W, h44^{km}±1^{km}, ML5.2*

ISC 25 08:47:04.7±0.5**, 34°.74S**±0°.03×**71°.84W**±0°.04**, h42**^{km}±4^{km}**, n277, σ1**^{s}**.39**/287**, mb4.8**/61**, MS3.9**/9**, 10C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BO03	Pichilemu	0.27	338	⇑*i*P	Pn	08 47 13.6	+0.8
BO03				*i* S	Sn	08 47 19.5	+1.1
BO02	Sierra Bellavi	0.88	93	⇑*i*P	Pn	08 47 20.6	0.0
BO02				*i* S	Sn	08 47 32.1	-0.1
BO02	Sierra Bellavi	0.88	93		Pn	08 47 20.3	-0.3
VA05	Santo Domingo	1.10	10	⇑*i*P	Pn	08 47 23.7	+0.1
VA05				*i* S	Sn	08 47 38.7	+1.1
MT09	Talagante	1.20	36	⇑*i*P	Pn	08 47 25.9	+0.8
MT09				*i* S	Sn	08 47 42.0	+1.8
MT09				IAML		08 47 44.0	
	comp=N,106μm,0.5s						
MT02	Curacav	1.59	22	⇓*i*P	Pn	08 47 31.0	+0.6
MT02				*i* S	Sn	08 47 50.7	+1.0
MT02	Curacav	1.59	22		Pn	08 47 31.0	+0.6
LMEL	Las Melosas	1.63	57	⇑*i*P	Pn	08 47 31.8	+0.8
LMEL				*i* S	Sn	08 47 52.1	+1.3
LMEL				IAML		08 47 55.3	
	comp=N,45μm,0.2s						
MT05	Renca	1.63	35	⇑*i*P	Pn	08 47 32.0	+1.0
MT05				*i* S	Sn	08 47 52.0	+1.2
MT05				IAML		08 47 59.6	
	comp=E,35μm,0.3s						
MT05	Renca	1.63	35		Pn	08 47 32.3	+1.3
MT03	Universidad Ad	1.67	42	⇑*i*P	Pn	08 47 32.2	+0.8
MT03				*i* S	Sn	08 47 52.8	+1.1
MT03				IAML		08 47 57.1	
	comp=N,54μm,0.2s						
FSR	Penalolen	1.67	41	*e*P	Pn	08 47 33.6	+2.1
FSR				*i* S	Sn	08 47 55.2	+3.5
PEL	Peldehue	1.86	31	⇓*i*P	Pn	08 47 35.1	+0.9
PEL				*i* S	Sn	08 47 58.2	+1.7
PEL				IAML		08 48 03.4	
	comp=N,23μm,0.4s						
PEL	Peldehue	1.86	31		Pn	08 47 35.6	+1.4
BI02	San Fabin de	1.97	167	*e*P	Pn	08 47 36.6	+1.0
BI02				*i* S	Sn	08 48 00.2	+1.0
BI02	San Fabin de	1.97	167		Pn	08 47 37.0	+1.3
VA03	San Esteban	2.25	29	*e*P	Pn	08 47 40.5	+1.0
VA03				*i* S	Sn	08 48 07.0	+0.9
VA03				IAML		08 48 15.1	
	comp=E,21μm,0.4s						
VA03	San Esteban	2.25	29		Pn	08 47 40.9	+1.4
BI03	Tigo	2.31	204	*e*P	Pn	08 47 40.6	+0.5
BI03				*i* S	Sn	08 48 08.1	+0.8
BI03				IAML		08 48 23.4	
	comp=E,13μm,0.4s						
BI03	Tigo	2.31	204		Pn	08 47 40.5	+0.3
AAGR	Agrelo	3.00	57	*e*P	Pn	08 47 52.8	+2.9
AAGR				IAML		08 48 57.0	
	comp=Z,1μm,0.9s						
ARCO	CERRO ARCO	3.08	53	*e*P	Pn	08 47 54.5	+3.6
ARCO				IAML		08 48 42.7	
	comp=Z,1μm,0.7s						
CANA	Caviahue	3.20	169	*e*P	Pn	08 47 56.0	+3.4
CANA				*e*S	Sn	08 48 40.8	+11
CANA				IAML		08 49 00.4	
	comp=Z,923nm,0.8s						
CO02	Combarbal	3.60	12	⇑*i*P	Pn	08 47 58.3	+0.2
CO02				IAML		08 49 01.8	
	comp=E,6μm,0.3s						
CO02	Combarbal	3.60	12	Pn	Pn	08 47 58.5	+0.4
RTLS	Leoncito	3.63	37	*e*P	Pn	08 48 01.3	+2.7
RTLS				IAML		08 49 03.3	
	comp=Z,2μm,0.9s						
RTCV	Cerro Valdivia	3.99	45	*e*P	Pn	08 48 05.2	+1.8
RTCV				IAML		08 49 17.2	
	comp=Z,804nm,1.2s						
BI04	Isla Mocha	4.01	204	*e*P	Pn	08 48 03.0	-0.6
BI04				IAML		08 49 24.0	
	comp=N,1μm,0.6s						
CO03	El Pedregal	4.01	14	⇓*i*P	Pn	08 48 04.2	+0.5
CO03				*i* S	Sn	08 48 50.5	+0.9
CO03				IAML		08 49 14.8	
	comp=E,2μm,0.5s						
CO03	El Pedregal	4.01	14	Pn	Pn	08 48 04.5	+0.7
LC01	Cunco	4.14	180	⇑*i*P	Pn	08 48 06.1	+0.7
LC01				*i* S	Sn	08 48 52.5	-0.2
LC01	Cunco	4.14	180	Pn	Pn	08 48 06.1	+0.7
RTLL	Cerro Villicun	4.43	41	*e*P	Pn	08 48 11.5	+2.1
RTLL				*e*S	Sn	08 49 10.1	+10
RTLL				IAML		08 49 16.1	
	comp=Z,747nm,0.4s						
GO04	Tololo Observa	4.64	11	⇑*i*P	Pn	08 48 12.6	+0.1
GO04				*i* S	Sn	08 49 05.8	+0.5
GO04	Tololo Observa	4.64	11		Pn	08 48 12.8	+0.3
ACCO	Cerro Coronel	4.76	30	*e*P	Pn	08 48 15.7	+1.5
ACCO				IAML		08 49 27.1	
	comp=Z,791nm,0.5s						
CO01	Juntas del Tor	4.98	18	*e*P	Pn	08 48 17.9	+0.8
CO01				*i* S	Sn	08 49 15.2	+1.6
CO01				IAML		08 49 34.8	
	comp=N,355nm,0.4s						
CO01	Juntas del Tor	4.98	18		Pn	08 48 18.0	+0.8
AROD	Rodeo	4.98	24	*e*P	Pn	08 48 19.5	+2.2
AROD				*e*S	Sn	08 49 19.2	+5.4
ACDV	Cuesta del Vie	5.11	28	*e*P	Pn	08 48 20.6	+1.7
ACDV				*e*S	Sn	08 49 21.3	+4.7
ACDV				IAML		08 49 34.6	
	comp=Z,449nm,0.8s						
LCO	Las Campanas	5.80	10	Pn	Pn	08 48 28.0	-0.4
VA04	Juan Fernndez	5.89	279	Pn	Pn	08 48 30.6	+1.1
H03S1	Juan Fernandez	5.92	277	T	T	08 54 23.9	
	baz=97,slow=75,SNR=1636						
H03S3	Juan Fernandez	5.92	277	T	T	08 54 26.5	
	baz=97,slow=75,SNR=1862						
H03S2	Juan Fernandez	5.93	277	T	T	08 54 25.6	
	baz=97,slow=75,SNR=1492						
H03N1	Juan Fernandez	6.01	281	T	T	08 54 32.3	
	baz=95,slow=74,SNR=51						
H03N3	Juan Fernandez	6.01	280	T	T	08 54 36.9	
	baz=95,slow=74,SNR=44						
H03N2	Juan Fernandez	6.02	280	T	T	08 54 36.6	
	baz=95,slow=74,SNR=45						
AC05	El Transito	6.04	13	Pn	Pn	08 48 31.5	-0.1
PLCA	Paso Flores	6.07	171	P	Pn	08 48 34.1	+2.3
	comp=Z,8.4nm,0.3s,baz=334,slow=12,SNR=371						
PLCA				S	Sn	08 49 50.8	+11
	comp=Z,1.3nm,0.3s,baz=264,slow=2.6,SNR=3.2						
PLCA				LR	LR	08 51 04.8	
	comp=Z,595nm,18.0s,baz=354,slow=39						
PLCA	Paso Flores	6.07	171		Pn	08 48 33.8	+1.9
PLCA	Paso Flores	6.07	171	*e*P	Pn	08 48 34.0	+2.2
APLL	PUNTA DE LOS L	6.24	47	*e*P	Pn	08 48 34.8	+0.5
APLL				IAML		08 49 55.2	
	comp=Z,313nm,0.6s						
AC04	Llanos de Chal	6.55	6	Pn	Pn	08 48 36.9	-1.7
GO03	Copiap	7.26	11		Pn	08 48 46.8	-1.4
LL01	San Ignacio de	7.64	183		Pn	08 48 52.8	-0.5
AC02	Maricunga	8.22	17		Pn	08 49 00.5	-1.4
GO07	Milladeo Hill,	8.48	189		Pn	08 49 02.6	-2.2
AC01	Pan de Azucar	8.63	7		Pn	08 49 03.9	-3.2
GO02	Mina Guanaco	9.75	12		Pn	08 49 19.4	-3.2
LVC	Limon Verde	12.36	13	P	Pn	08 49 53.1	-5.3
	comp=Z,0.2nm,0.3s,baz=36,slow=15,SNR=1.5						
LVC				LR	LR	08 54 54.1	
	comp=Z,239nm,21.8s,baz=217,slow=38						
PB07	IPOC Station P	13.08	8		Pn	08 50 08.8	+0.7
PATCX	Punta Patache	13.95	7		Pn	08 50 20.0	+0.1
TA01	Diego Aracena	14.20	6	P	Pn	08 50 22.4	-0.8
PB08	IPOC Station P	14.74	10	Pn	Pn	08 50 30.4	-0.3
CPUP	Villa Florida	15.04	60	P	Pn	08 50 33.2	-1.1
	comp=Z,0.2nm,0.3s,baz=241,slow=14,SNR=4.6						
CPUP	Villa Florida	15.04	60		Pn	08 50 32.9	-1.5
PSGCX	Pisagua	15.16	6		Pn	08 50 35.1	-0.9
PLTB	Pedras Altas	15.55	84	*e*P	Pn	08 50 39.4	-1.5
MNMC	Minye Minye	15.68	8		Pn	08 50 42.9	0.0
MNMC				IAmb	IAmb	08 50 49.7	
	comp=Z,35nm,0.6s						
CPSB	Cacapava Do Su	16.10	80	*e*P	Pn	08 50 46.9	-1.1
ITAB	Concordia	18.47	71	*e*P	P	08 51 15.2	-1.7
EFI	East Falkland	19.62	154	P	P	08 51 28.7	-0.6
EFI				IAmb	IAmb	08 51 43.8	
	comp=Z,50nm,1.1s						
PTGB	Pitanga	19.84	65	*e*P	P	08 51 30.8	-1.3
AQDB	Aquidauana	20.13	49	*e*P	P	08 51 34.3	-0.8
USHA	Ushuaia	20.23	174	P	P	08 51 37.3	+1.4
	comp=Z,50nm,0.3s,baz=185,slow=0.8,SNR=4.2						
MG01	Puerto William	20.40	173	P	P	08 51 39.6	+1.8
MG01				IAmb	IAmb	08 51 45.9	
	comp=Z,60nm,1.3s						
TRCB	Terra Rica	20.58	60	*e*P	P	08 51 39.0	-1.1
SIV	San Ignacio	21.03	30	P	P	08 51 43.9	-1.0
	comp=Z,26nm,0.9s,baz=220,slow=8.6,SNR=83						
PCMB	Pacaembu	22.32	59	*e*P	P	08 51 56.2	-2.5
FRTB	Fartura	22.50	66	*e*P	P	08 51 59.6	-1.1
PP1B	Ponte de Pedra	22.82	46	*e*P	P	08 52 03.5	-0.5
NNA	Nana	23.11	347	P	P	08 52 07.4	+0.4
	comp=Z,8.7nm,0.7s,baz=212,slow=7.4,SNR=6.9						
NNA	Nana	23.11	347	P	P	08 52 06.1	-0.9
SPB	Sao Paulo	23.98	69	P	P	08 52 13.4	-1.8
SPB				IAmb	IAmb	08 52 15.8	
	comp=Z,28nm,0.9s						
SPB	Sao Paulo	23.98	69	*e*P	P	08 52 13.8	-1.4
VILB	Vilhena	24.13	29	*e*P	P	08 52 15.9	-0.7
ITRB	Iturama	24.20	57	*e*P	P	08 52 14.8	-2.6
BB19B	Bebedouro	24.63	63	*e*P	P	08 52 19.3	-1.9
VAO	Valinhos	24.66	68	*e*P	P	08 52 19.9	-1.7
ETMB	Extrema	25.34	13	*e*P	P	08 52 28.1	+0.5
PARB	Paraibuna	25.51	71	*e*P	P	08 52 27.1	-2.2
ARAG	Araguaiana, MT	26.13	49	*e*P	P	08 52 32.8	-2.0
IPMB	Ipameri, GO	26.86	58	*e*P	P	08 52 39.4	-2.0
SAML	Samuel	26.88	19	P	P	08 52 40.6	-0.9
SAML	Samuel	26.88	19	*e*P	P	08 52 41.0	-0.5
CZSB	Cruzeiro do Su	26.90	358	*e*P	P	08 52 42.4	+0.6
ATAH	Atahualpa	28.13	346	LR	LR	09 02 34.8	
	comp=Z,57nm,20.6s,baz=172,slow=33						
BDFB	Brasilia	28.63	54	P	P	08 52 55.5	-1.8
	comp=Z,7.4nm,0.8s,baz=208,slow=4.7,SNR=12						
BDFB				LR	LR	09 05 44.7	
	comp=Z,218nm,18.1s,baz=251,slow=39						
BDFB	Brasilia	28.63	54	P	P	08 52 54.9	-2.5
SNDB	Serra Nova Dou	29.37	44	*e*P	P	08 53 01.6	-2.2
PMSA	Palmer Station	30.43	173	*e*P	P	08 53 15.0	+2.3
NPGB	Novo Progresso	31.47	33	*e*P	P	08 53 20.5	-1.9
SJMB	Sao Joao De Ma	31.54	68	*e*P	P	08 53 21.2	-1.8
JANB	Januaria	31.58	59	*e*P	P	08 53 21.8	-1.6
BSFB	Barra de Sao F	31.72	68	*e*P	P	08 53 23.0	-1.6
SDBA	SAO DESIDERIO	33.04	54	*e*P	P	08 53 34.4	-1.8
MACA	Manacapuru-AM	33.09	21	*e*P	P	08 53 36.0	-0.5
ITTB	Itaituba	33.72	30	*e*P	P	08 53 40.4	-1.6
SMTB	Santa Maria do	34.03	47	*e*P	P	08 53 43.2	-1.5
PTLC	Puerto Leguiza	34.84	355	*e*P	P	08 53 48.8	-3.0
PRPB	Parauapebas	34.95	41	*e*P	P	08 53 51.0	-1.8
OTAV	Otavalo	35.35	349	P	P	08 53 57.3	+0.7
OTAV	Otavalo	35.35	349	*e*P	P	08 53 58.8	+2.2
PTGA	Pitinga	35.61	21	LR	LR	09 08 43.0	
	comp=Z,98nm,19.4s,baz=190,slow=37						
PTGA	Pitinga	35.61	21	P	P	08 53 57.4	-1.0
GDU01	Guandu, BA	35.86	62	*e*P	P	08 53 58.8	-1.8
MALB	Monte Alegre	36.60	30	*e*P	P	08 54 05.5	-1.3
PCON	Cinco Dias	37.12	352	*e*P	P	08 54 14.9	+3.0
ORTC	Ortega, Tolima	38.58	355	*e*P	P	08 54 25.3	+1.7
YOTC	Yotoco, Valle	38.75	353	*e*P	P	08 54 25.6	+0.4
MCPB	Macapa, AP	38.89	33	*e*P	P	08 54 24.8	-1.4
TMAB	Tom-Au,PA,Br	39.06	40	*e*P	P	08 54 27.9	+0.2
CHIC	Chingaza	39.20	357	*e*P	P	08 54 30.4	+1.2

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ROSC  El Rosal          39.44 356  P      P       08 54 31.9 +0.6
        comp=Z,6.4nm,0.5s,baz=5.2,slow=10.0,SNR=5.1
ROSC  El Rosal          39.44 356  P      P       08 54 35.0 +3.8
ROSC                               IAmb   IAmb    08 54 55.3
        comp=Z,8.1nm,0.7s
ROSC  El Rosal          39.44 356 eP      P       08 54 33.2 +2.0
RREF  El Recreo         39.57 355 eP      P       08 54 35.1 +2.6
PLMC  San Jos del P     39.66 353 eP      P       08 54 33.4 +0.7
GUY2C Guyana, Caldas    39.89 355 eP      P       08 54 36.4 +1.4
NORC  Norcasia          40.19 355 eP      P       08 54 38.3 +1.3
RUSC  La Rusia          40.44 358 eP      P       08 54 40.9 +1.4
CBOC  Ciudad Bolivar    40.58 354 eP      P       08 54 42.0 +1.6
HELC  Santa Helena      40.86 354 eP      P       08 54 43.6 +0.7
TAMC  Tame, Arauca      40.96   0 eP      P       08 54 42.7 -0.7
BARC  Barichara         41.13 358 eP      P       08 54 41.4 -3.6
PTBC  PUERTO BERRIO,    41.13 356 eP      P       08 54 43.8 -1.0
DBBC  Dabeiba           41.74 353 eP      P       08 54 51.3 +1.4
PAMC  Pamplona, Colo    41.86 359 eP      P       08 54 49.8 -1.5
ZARC  Zaragoza, Cauc    42.10 356 eP      P       08 54 52.3 -0.4
UREC  San Jos de Ur     42.41 355 eP      P       08 54 55.6 +0.4
NBRF  Rio Formoso -     42.46  61 eP      P       08 54 55.9 +0.2
OCAC  Ocana             42.77 358 eP      P       08 54 56.3 -2.0
NBMO  Morrinhos-CE      43.01  50 eP      P       08 54 59.7 -0.4
NBPA  Parau_RN          43.12  56 eP      P       08 54 59.9 -1.2
SMLC  San Martn de      43.36 357 eP      P       08 55 01.5 -1.3
SDV   Santo Domingo     43.41   2  P      P       08 55 03.4 -0.1
SDV   Santo Domingo     43.41   2 eP      P       08 55 02.5 -1.0
SDV   Santo Domingo     43.41   2 eP      P       08 55 03.4 -0.1
MOTC  Monteria, Cord    43.44 355 eP      P       08 55 06.5 +3.0
MDP   Montagnes des     43.57  28  LR     LR      09 15 05.1
        comp=Z,88nm,19.1s,baz=202,slow=39
BCIP  Isla Barro Col    44.32 349  P      P       08 55 11.6 +1.0
BELA  Belgrano 2        46.12 170  P      P       08 55 24.2  0.0
BELA                               IAmb   IAmb    08 55 43.2
        comp=Z,10.0nm,0.7s
VNA3  Neumayer Olymp    48.61 158  P      P       08 55 43.8 +0.2
VNA2  Neumayer--Watz    49.27 157  P      P       08 55 48.6  0.0
        baz=286,slow=8.9
SNAA  Sanae             50.84 158  P      P       08 56 00.9 +0.3
SNAA  Sanae             50.84 158  P      P       08 56 01.0 +0.3
        comp=Z,4.2nm,0.6s,baz=264,slow=5.2,SNR=11
SNAA  Sanae             50.84 158  P      P       08 56 00.5 -0.1
SNAA                               IAmb   IAmb    08 56 01.9
        comp=Z,13nm,1.1s
MTO3  Montecristo       51.63 338  P      P       08 56 07.8 +0.4
OBIP  Obispado Ponce    52.73   6  P      P       08 56 14.9 -0.3
OBIP                               IAmb   IAmb    08 56 15.3
        comp=Z,10nm,0.9s
CBYP  Canovanas         53.03   7  P      P       08 56 16.0 -1.4
CBYP                               IAmb   IAmb    08 56 33.7
        comp=Z,8.0nm,0.9s
QSPA  South Pole Qui    55.49 180  P      P       08 56 36.2 +1.1
        comp=Z,6.3nm,0.9s,baz=156,slow=1.6,SNR=21
QSPA  South Pole Qui    55.49 180  P      P       08 56 35.4 +0.3
TLIG  Tlapa             57.89 330  P      P       08 56 52.4 -0.1
TLIG                               IAmb   IAmb    08 56 54.8
        comp=Z,5.0nm,0.9s
Y52A  Lilburn           69.20 349  P      P       08 58 06.6 -0.2
Z47A  Carrollton        69.28 345  P      P       08 58 07.7 +0.4
X51A  Calhoun           70.02 349  P      P       08 58 12.3 +0.5
JCT   Junction City     70.03 334  P      P       08 58 13.3 +1.3
JCT                                IAmb   IAmb    08 58 26.0
        comp=Z,11nm,1.1s
FPAL  Fort Paine        70.12 348  P      P       08 58 13.1 +0.6
BG3   Lake Jocassee     70.15 350  P      P       08 58 13.0 +0.4
BG3                                IAmb   IAmb    08 58 22.5
        comp=Z,12nm,1.5s
X48A  Hartselle         70.29 347  P      P       08 58 13.9 +0.4
X48A                               IAmb   IAmb    08 58 15.1
        comp=Z,11nm,1.2s
TXAR  Lajitas Array     70.46 331  P      P       08 58 15.7 +0.9
        comp=Z,2.1nm,0.6s,baz=156,slow=8.7,SNR=53
TXAR                               pP     pP      08 58 27.7 +0.4
        comp=Z,1.2nm,0.5s,baz=162,slow=14,SNR=10
TXAR                               LR     LR      09 23 30.4
        comp=Z,85nm,20.4s,baz=0.0,slow=31
TXAR  Lajitas Array     70.46 331  P      P       08 58 15.9 +1.1
TX31  Lajitas Ar. Si    70.46 331  P      P       08 58 15.9 +1.1
TX31                               IAmb   IAmb    08 58 16.1
        comp=Z,7.1nm,0.7s
TX32  Lajitas Array     70.46 331  P      P       08 58 15.9 +1.1
V58A  Windy Hill, Pi    70.50 354  P      P       08 58 14.7  0.0
V58A                               IAmb   IAmb    08 58 27.0
        comp=Z,8.0nm,0.9s
W50A  Signal Mountai    70.71 348  P      P       08 58 16.4 +0.3
W50A                               IAmb   IAmb    08 58 17.1
        comp=Z,9.3nm,0.7s
V55A  Taylorsville      70.78 352  P      P       08 58 16.5 +0.1
CPCT  Cooper Cave       70.83 349  P      P       08 58 17.0 +0.3
OXF   Oxford            70.83 345  P      P       08 58 16.8  0.0
SWET  Sewanee           70.83 348  P      P       08 58 17.2 +0.4
SWET                               IAmb   IAmb    08 58 17.6
        comp=Z,9.0nm,0.6s
PLAL  Pickwick Lake     71.01 346  P      P       08 58 17.8  0.0
PLAL                               IAmb   IAmb    08 58 18.4
        comp=Z,6.8nm,0.7s
V48A  Smith Brothers    71.50 347  P      P       08 58 21.2 +0.4
U54A  Nelsons Funny     71.51 352  P      P       08 58 20.8 -0.1
U54A                               IAmb   IAmb    08 58 38.0
        comp=Z,14nm,1.2s
T59A  Double "B" Far    71.55 355  P      P       08 58 22.0 +1.0
CLTN  Cedars of Leba    71.76 348  P      P       08 58 22.8 +0.4
CLTN                               IAmb   IAmb    08 58 30.5
        comp=Z,12nm,1.3s
TZTN  Tazewell          71.76 350  P      P       08 58 22.3  0.0
MIAR  Mount Ida         71.87 341  P      P       08 58 22.5 -0.5
WVT   Waverly           72.07 346  P      P       08 58 24.5 +0.3
WHAR  Wooly Hollow      72.25 343  P      P       08 58 25.6 +0.3
WHAR                               IAmb   IAmb    08 58 27.1
        comp=Z,17nm,1.4s
X37A  Clayton           72.40 340  P      P       08 58 26.4 +0.2
X37A                               IAmb   IAmb    08 58 55.4
        comp=Z,12nm,1.4s
MAW   Mawson            72.42 163  P      P       08 58 27.2 +1.2
        comp=Z,10nm,0.9s,baz=304,slow=3.6,SNR=2.6
MAW                                pP     pP      08 58 38.1 -0.5
        comp=Z,12nm,0.8s,baz=222,slow=8.0,SNR=3.3
MAW                                LR     LR      09 29 55.7
        comp=Z,152nm,18.3s,baz=102,slow=36
MAW   Mawson            72.42 163  IAmb   IAmb    08 58 54.6
        comp=Z,11nm,1.4s
W39A  Magazine          72.54 341  P      P       08 58 28.1 +1.0
W39A                               IAmb   IAmb    08 58 28.6
        comp=Z,12nm,0.8s
LCAR  Lake Charles      72.72 344  P      P       08 58 28.2 +0.2
LCAR                               IAmb   IAmb    08 58 28.6
        comp=Z,7.5nm,0.6s
T45A  Paducah           73.09 346  P      P       08 58 31.9 +1.6
PBMO  Poplar Bluff      73.23 344  P      P       08 58 31.2 +0.1
PBMO                               IAmb   IAmb    08 58 31.7
        comp=Z,7.5nm,0.6s
MNTX  Cornudas Mount    73.24 331  P      P       08 58 31.3  0.0
U40A  Yellville         73.40 342  P      P       08 58 32.4 +0.3
U40A                               IAmb   IAmb    08 58 32.5
        comp=Z,6.0nm,0.6s
HHAR  Hobbs             73.61 342  P      P       08 58 33.6 +0.3
HHAR                               IAmb   IAmb    08 58 33.8
        comp=Z,5.1nm,0.6s
TUL1  Leonard           73.76 340  P      P       08 58 34.7 +0.5
TUL1                               IAmb   IAmb    08 58 35.0
        comp=Z,7.8nm,0.6s
S44A  Carbondale        73.87 346  P      P       08 58 34.7  0.0
S44A                               IAmb   IAmb    08 58 36.7
        comp=Z,6.6nm,0.7s
OK025 Westminster Rd    73.90 339  P      P       08 58 35.4 +0.3
OK030 Cody Creek RV     74.06 339  P      P       08 58 36.5 +0.5
OK030                              IAmb   IAmb    08 58 36.7
        comp=Z,10nm,0.7s
SUR   Sutherland        74.33 119  P      P       08 58 38.8 +0.7
SUR                                IAmb   IAmb    08 58 57.5
        comp=Z,15nm,1.1s
CCM   Cathedral Cave    74.64 344  P      P       08 58 39.8 +0.5
S39A  Bolivar           74.78 342  P      P       08 58 40.4 +0.2
LIC   Lamto             74.86  71 eP      P       08 58 40.3 -0.8
        comp=Z,32nm,0.8s
P48A  Milroy            74.90 349  P      P       08 58 40.3 -0.5
P48A                               IAmb   IAmb    08 58 53.2
        comp=Z,11nm,0.9s
R40A  Maddies Statio    75.10 343  P      P       08 58 42.2 +0.2
R40A                               IAmb   IAmb    08 58 42.6
        comp=Z,9.6nm,0.7s
TIC   Toumodi           75.12  71 eP      P       08 58 42.1 -0.6
U32A  Winter Ranch,     75.15 338  P      P       08 58 43.2 +0.9
KIC   Kosan Boka        75.17  71 eP      P       08 58 42.2 -0.7
        comp=Z,38nm,0.9s
DBIC  Dimbokro          75.27  71  P      P       08 58 43.0 -0.4
        comp=Z,10.0nm,0.7s,baz=220,slow=7.0,SNR=12
DBIC                               LR     LR      09 29 50.6
        comp=Z,65nm,19.2s,baz=164,slow=34
DBIC  Dimbokro          75.27  71  P      P       08 58 43.1 -0.3
DBIC                               IAmb   IAmb    08 58 44.0
        comp=Z,11nm,0.8s
P43A  Skaggs, Pawnee    75.80 346  P      P       08 58 45.7 -0.2
TUC   Tucson            76.08 327  P      P       08 58 49.4 +1.6
O44A  Mansfield         76.09 347  P      P       08 58 47.3 -0.3
O44A                               IAmb   IAmb    08 59 10.2
        comp=Z,8.8nm,0.8s
M55A  Ridgway           76.11 355  P      P       08 58 48.0 +0.3
N49A  Columbus Grove    76.15 350  P      P       08 58 47.6 -0.3
N49A                               IAmb   IAmb    08 59 12.4
        comp=Z,9.0nm,0.9s
P40A  Paris             76.23 344  P      P       08 58 48.6 +0.2
ANMO  Albuquerque       76.51 331  P      P       08 58 51.8 +1.5
ANMO                               IAmb   IAmb    08 59 10.0
        comp=Z,8.7nm,1.4s
HDIL  Hopedale          76.64 346  P      P       08 58 50.6  0.0
P38A  Dawn              76.67 343  P      P       08 58 51.3 +0.4
X16A  Lo Mia Camp, P    78.15 327  P      P       08 59 01.4 +1.9
X16A                               IAmb   IAmb    08 59 20.2
        comp=Z,10nm,1.4s
SDCO  Great Sand Dun    78.61 333  P      P       08 59 03.7 +1.6
TSUM  Tsumeb            78.86 106  P      P       08 59 04.4 +0.6
BOSA  Boshof            79.58 117  P      P       08 59 06.8 -0.9
        comp=Z,14nm,0.8s,baz=244,slow=4.0,SNR=20
BOSA  Boshof            79.58 117  P      P       08 59 07.6 -0.1
KOWA  Kowa              80.80  65  P      P       08 59 14.1 -0.1
KNB   Kanab             80.94 328  P      P       08 59 16.7 +2.1
ECSD  EROS Data Cent    81.31 342  P      P       08 59 16.5 +0.3
ECSD                               IAmb   IAmb    08 59 17.3
        comp=Z,8.6nm,0.9s
MTPU  Mount Pierson     81.52 329  P      P       08 59 19.4 +1.5
SHPR  Sheep Range       81.56 326  P      P       08 59 20.0 +2.1
CCUT  Cedar City        81.62 328  P      P       08 59 20.7 +2.4
SRU   San Rafael Swe    81.74 331  P      P       08 59 20.1 +1.3
LBTB  Lobatse           81.85 115  P      P       08 59 19.8  0.0
TPNV  Topopah Spring    82.43 326  P      P       08 59 24.6 +2.2
F36A  Milaca            82.59 345  P      P       08 59 22.7 -0.1
F36A                               IAmb   IAmb    08 59 43.6
        comp=Z,8.8nm,1.1s
RDMU  Red Mountain      82.61 332  P      P       08 59 24.4 +1.0
RDMU                               IAmb   IAmb    08 59 25.0
        comp=Z,4.8nm,0.8s
DUG   Dugway, Tooele    83.59 330  P      P       08 59 29.9 +1.5
HWUT  Hardware Ranch    84.28 331  P      P       08 59 32.8 +0.9
HWUT                               IAmb   IAmb    08 59 34.0
        comp=Z,4.0nm,0.7s
TOA0  Torodi Ar. Sit    84.31  70  P      P       08 59 32.3 -0.2
TORD  Torodi Ar. Bea    84.31  70  P      P       08 59 32.3 -0.2
        comp=Z,6.5nm,0.9s,baz=260,slow=4.2,SNR=18
TORD                               pP     pP      08 59 44.5 -0.8
        comp=Z,4.3nm,0.8s,baz=262,slow=4.4,SNR=8.4
TORD                               LR     LR      09 37 19.2
        comp=Z,56nm,18.0s,baz=210,slow=36
TORD  Torodi Ar. Bea    84.31  70  P      P       08 59 31.9 -0.5
TORD                               IAmb   IAmb    08 59 50.6
        comp=Z,8.4nm,0.8s
PD31  Pinedale Array    84.50 333  P      P       08 59 33.4 +0.4
PDAR  Pinedale Array    84.50 333  P      P       08 59 33.2 +0.2
        comp=Z,1.2nm,0.6s,baz=138,slow=6.0,SNR=14
PDAR                               pP     pP      08 59 46.1 +0.2
        comp=Z,0.5nm,0.6s,baz=176,slow=6.6,SNR=3.6
NVAR  Mina Array Bea    84.59 325  P      P       08 59 34.4 +0.8
        comp=Z,1.0nm,0.7s,baz=154,slow=6.0,SNR=9.7
NVAR                               pP     pP      08 59 47.7 +1.3
        comp=Z,0.8nm,0.6s,baz=161,slow=6.4,SNR=5.5
HVU   Hansel Valley     84.91 331  P      P       08 59 35.8 +0.8
HVU                                IAmb   IAmb    08 59 36.3
        comp=Z,3.5nm,0.7s
ELK   Elko              85.08 328  P      P       08 59 37.2 +1.1
REDW  Red Top Meadow    85.50 333  P      P       08 59 38.5 +0.5
REDW                               IAmb   IAmb    08 59 57.2
        comp=Z,8.8nm,1.4s
LOHW  Long Hollow       85.62 333  P      P       08 59 39.4 +0.8
FLWY  Flagg Ranch       86.05 333  P      P       08 59 41.8 +1.0
FLWY                               IAmb   IAmb    08 59 42.4
        comp=Z,5.0nm,0.7s
RLMT  Red Lodge         86.43 334  P      P       08 59 43.3 +0.7
RLMT                               IAmb   IAmb    08 59 44.5
        comp=Z,3.4nm,0.7s
YMR   Madison River     86.65 333  P      P       08 59 45.3 +1.6
YMR                                IAmb   IAmb    08 59 45.8
        comp=Z,6.4nm,0.9s
ORV   Oroville          87.00 324  P      P       08 59 46.6 +1.3
ORV                                IAmb   IAmb    09 00 06.0
        comp=Z,8.5nm,1.2s
HLID  Hailey            87.06 330  P      P       08 59 47.1 +1.5
MFID  Camas Ranch       87.52 330  P      P       08 59 49.0 +1.2
MOD   Modoc Plateau     88.27 326  P      P       08 59 52.9 +1.4
MOD                                IAmb   IAmb    08 59 53.2
        comp=Z,2.9nm,0.7s
WDC   Whiskeytown Da    88.30 324  P      P       08 59 51.8 +0.4
WDC                                IAmb   IAmb    08 59 52.4
        comp=Z,4.2nm,0.7s
K05A  Summer Lake       89.19 326  P      P       08 59 57.8 +1.9
YBH   Yreka Blue Hor    89.27 325  P      P       08 59 56.5 +0.4
        comp=Z,1.1nm,0.6s,baz=103,slow=2.1,SNR=6.7
YBH   Yreka Blue Hor    89.27 325  P      P       08 59 56.6 +0.6
YBH                                IAmb   IAmb    09 00 16.0
        comp=Z,3.2nm,1.1s
I07A  Izee              89.63 328  P      P       08 59 59.3 +1.5
I07A                               IAmb   IAmb    08 59 59.5
        comp=Z,7.7nm,1.4s
MDT   Midelt            92.16  51  LR     LR      09 42 57.8
        comp=Z,79nm,19.1s,baz=278,slow=36
YKA   Yellowknife Ar   102.81 341  P      Pdif    09 00 56.3 -0.7
        comp=Z,0.1nm,0.6s,baz=136,slow=4.8,SNR=6.6
ASAR  Alice Springs    116.98 207  PKKPbc PKKPbc  09 16 09.8 -0.2
        comp=Z,0.2nm,0.4s,baz=341,slow=3.5,SNR=5.1
WRA   Warramunga Arr   120.19 209  PKP    PKPdf   09 05 50.4 -1.1
        comp=Z,0.3nm,0.5s,baz=184,slow=1.6,SNR=4.8
WRA                                pPKP   pPKPdf  09 06 03.6 -1.2
        comp=Z,0.3nm,0.4s,baz=161,slow=1.6,SNR=2.8
H11N3 WAKE ISLAND Hy126.35 270     T      T       11 25 06.7
        baz=115,slow=78,SNR=9.7
H11N1 WAKE ISLAND Hy126.36 270     T      T       11 25 06.5
        baz=115,slow=78,SNR=22
H11N2 WAKE ISLAND Hy126.37 270     T      T       11 25 03.4
        baz=115,slow=78,SNR=14
HYB   Hyderabad        148.47 116 iPKP    PKPbc   09 06 47.0 -0.2
HYB                               e               09 07 00.0
KSH   Kashi            153.98  70  PKPbc  PKPdf   09 06 51.5  0.0
KSH                                pPKP   PKPbc   09 06 59.8 +0.2
KSH                                PP     PP      09 10 47.0 -1.4
ZALV  Zalesovo Beam    154.76  33  PKPab  PKPab   09 07 14.8 -1.0
        comp=Z,1.2nm,0.6s,baz=298,slow=3.7,SNR=5.2
MKAR  Makanchi Array   157.12  50  PKPab  PKPab   09 07 25.6 -0.6
        comp=Z,1.1nm,0.8s,baz=304,slow=3.7,SNR=8.6
GTA   Gaotai           171.87  53 ePKP    PKPdf   09 07 12.0 +3.3
GTA                                pPKP   pPKPdf  09 07 22.5 +0.4
GTA                                sPKP           09 07 26.5
LZH   Lanzhou          176.23  68 ePKP    PKPdf   09 07 06.5 -3.9
LZH                                pPKP   pPKPdf  09 07 18.0 -5.8
LZH                                sPKP           09 07 22.0
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IDC ***25*** *09:11:11.6±1.3, 13.°85N×91.°55W, h0^{km}, mb4.0/9, mb1 4.2/12, mb1mx3.9/48, mbtmp3.9/12, ML3.6/3, MS3.2/2, Ms1 3.2/2, ms1mx2.8/38, Error ellipse: s-maj=48.7km s-min=16.8km az=44.0*

GCG ***25*** *09:11:14.0±0.7, 13.°64N×92.°09W, h35^{km}±999^{km}, MD4.1*

NEIC ***25*** *09:11:15.4±2.0, 13.°53N±0.°09×91.°87W±0.°08, h36^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=14.4km s-min=9.5km az=207.0*

UCR ***25*** *09:11:19.1±0.8, 13.°85N×91.°58W, h35^{km}±35^{km}, ML3.8, mb4.4(NEIC)*

SNET ***25*** *09:11:19.1±0.8, 13.°85N×91.°58W, h35^{km}±35^{km}, ML4.0*

ISC 25 09:11:15.8±0.7, **13.°56N**±0.°08×**91.°97W**±0.°06, **h37**^{km}**, n65,** σ**1.s61**/65, **mb4.2**/14, **Near coast of Guatemala**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC       h  m  s    ISC
RTAL  Retalhuleu        0.99  16   Pn      Pn       09 11 31.8 -1.4
FUG   Fuego 3           1.41  51  eP       Pn       09 11 38.1 -1.0
PCG   Pacaya            1.56  58  eP       Pn       09 11 40.7 -0.5
HUEH  Huehuetenango     1.80  15  eP       Pn       09 11 43.8 -0.8
HUEH  Huehuetenango     1.80  15   Pn      Pn       09 11 43.9 -0.7
NBG   Las Nubes         1.88  57  eP       Pn       09 11 45.8 +0.2
NBG                               eS       Sn       09 12 10.1 +1.9
CEVE  Cerro Verde       2.30  83  eP       Pn       09 11 49.4 -2.0
CEVE                               IAML             09 12 21.8
        comp=Z,1μm,0.3s
CEVE  Cerro Verde       2.30  83  eP       Pn       09 11 49.4 -2.0
CEVE                               IAML             09 12 21.8
        comp=Z,1μm,0.3s
CEDA  San Andres        2.52  84  eP       Pn       09 11 52.4 -1.8
CEDA                               IAML             09 12 42.6
        comp=Z,711nm,0.5s
CEDA  San Andres        2.52  84  eP       Pn       09 11 52.4 -1.8
CEDA                               IAML             09 12 42.6
        comp=Z,711nm,0.5s
SNET  Serv Nac Est T    2.67  87   Pn      Pn       09 11 54.3 -2.0
MTO3  Montecristo       2.67  72  eP       Pn       09 11 54.5 -2.0
MTO3  Montecristo       2.67  72  eP       Pn       09 11 54.5 -2.0
MTO3  Montecristo       2.67  72   Pn      Pn       09 11 55.3 -1.1
MRL   Marmol            2.68  55  eP       Pn       09 11 56.8 +0.2
CCIG  Comitan           2.71 357   Pn      Pn       09 11 57.8 +0.9
ESQI  Esquipulas        2.74  68  eP       Pn       09 11 54.9 -2.4
ESQI  Esquipulas        2.74  68   Pn      Pn       09 11 56.6 -0.7
PAVA  Las Pavas         2.96  87  eP       Pn       09 11 59.4 -0.9
PAVA  Las Pavas         2.96  87  eP       Pn       09 11 59.4 -0.9
COEG  Centro de Oper    3.01  89  eP       Pn       09 11 59.8 -1.1
COEG  Centro de Oper    3.01  89  eP       Pn       09 11 59.8 -1.1
COEB  Comit de Eme      3.35  91  eP       Pn       09 12 04.4 -1.3
COEB  Comit de Eme      3.35  91  eP       Pn       09 12 04.4 -1.3
PETF  Flores            3.91  31   Pn      Pn       09 12 13.7 +0.4
CMIG  Matias Romero     4.49 322   Pn      Pn       09 12 20.1 -1.3
        comp=Z,1.5nm,0.3s,baz=155,slow=12,SNR=23
CMIG                               Sn      Sn       09 13 12.7 +0.3
        comp=Z,10nm,0.3s,baz=37,slow=18,SNR=5.6
CMIG                               LR      LR       09 13 43.2
        comp=Z,97nm,19.2s,baz=151,slow=33
CMIG  Matias Romero     4.49 322           Pn       09 12 20.6 -0.7
CMIG                                       Sn       09 13 13.4 +1.0
TGUH  Tegucigalpa,Un    4.59  83   Pn      Pn       09 12 21.2 -1.6
TLIG  Tlapa             7.50 303   Pn      Pn       09 13 04.3 +1.6
TEIG  Tepich            7.51  28           Pn       09 13 02.8  0.0
JTS   Las Juntas de     7.60 115   Pn      Pn       09 13 02.2 -1.8
        comp=Z,0.4nm,0.3s,baz=169,slow=23,SNR=5.6
GUY2C Guyana, Caldas   18.35 115  eP       Pn       09 15 31.0 +3.0
RREF  El Recreo        18.52 116  eP       Pn       09 15 32.9 +2.7
TXAR  Lajitas Array    19.07 327   P       Pn       09 15 37.5 +1.2
        comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=19
TXAR  Lajitas Array    19.07 327   P       Pn       09 15 36.0 -0.3
TX31  Lajitas Ar. Si   19.08 327   P       Pn       09 15 35.9 -0.4
TX31                               IAmb    IAmb     09 15 59.0
        comp=Z,21nm,1.2s
TX32  Lajitas Array    19.08 327           Pn       09 15 38.6 +2.3
ORTC  Ortega, Tolima   19.10 119  eP       Pn       09 15 36.9 +0.2
CHIC  Chingaza         20.06 115  eP       Pn       09 15 49.3 +0.8
RUSC  La Rusia         20.11 110  eP       Pn       09 15 47.4 -1.6
MACC  Macarena, Meta   21.21 121  eP       P        09 16 02.4 +3.8
GOGA  Godfrey          21.22  20   P       P        09 15 58.0 -0.4
GOGA                               IAmb    IAmb     09 16 02.6
        comp=Z,20nm,1.3s
SDV   Santo Domingo    21.43 100   P       P        09 15 58.4 -2.7
        comp=Z,1.7nm,0.5s,baz=313,slow=9.9,SNR=2.2
PTLC  Puerto Leguiza   21.60 127  eP       P        09 16 11.1 +8.5
MNTX  Cornudas Mount   21.85 328   P       P        09 16 06.1 +0.9
WMOK  Wichita Mounta   21.96 345   P       P        09 16 05.4 -1.0
WMOK                               IAmb    IAmb     09 16 33.7
        comp=Z,26nm,2.0s
MSTX  Muleshoe         22.56 336   P       P        09 16 11.4 -1.6
MSTX                               IAmb    IAmb     09 16 13.2
        comp=Z,7.9nm,0.6s
WVT   Waverly          22.78   9   P       P        09 16 12.1 -3.0
AMTX  Amarillo         22.97 339   P       P        09 16 16.5 -0.7
AMTX                               IAmb    IAmb     09 16 17.9
        comp=Z,16nm,0.7s
PBMO  Poplar Bluff     23.16   3   P       P        09 16 16.5 -2.4
TKL   Tuckaleechee C   23.21  17   P       P        09 16 16.5 -3.0
        comp=Z,7.1nm,0.8s,baz=182,slow=11,SNR=7.8
TKL   Tuckaleechee C   23.21  17   P       P        09 16 17.4 -2.0
319A  Douglas          23.82 321   P       P        09 16 25.5 -0.1
319A                               IAmb    IAmb     09 16 44.2
        comp=Z,7.6nm,1.1s
BNM   Barren Site      24.43 330   P       P        09 16 33.2 +1.9
ANMO  Albuquerque      24.99 331   P       P        09 16 37.1 +0.7
        comp=Z,2.8nm,0.7s,baz=150,slow=13,SNR=15
ANMO  Albuquerque      24.99 331   P       P        09 16 37.0 +0.7
SJG   San Juan         25.24  76   LR      LR       09 27 29.0
        comp=Z,146nm,18.4s,baz=274,slow=40
PDAR  Pinedale Array   32.83 336   P       P        09 17 45.2 -0.8
        comp=Z,0.4nm,0.7s,baz=134,slow=8.5,SNR=4.6
NVAR  Mina Array Bea   34.03 321   P       P        09 17 59.6 +3.0
        comp=Z,2.2nm,0.6s,baz=132,slow=8.7,SNR=13
MCMT  McKenzie Canyo   35.88 334   P       P        09 18 13.4 +0.9
SIV   San Ignacio      42.37 133   P       P        09 19 06.2 -0.6
        comp=Z,0.9nm,0.7s,baz=309,slow=6.4,SNR=5.3
YKA   Yellowknife Ar   51.45 347   P       P        09 20 16.2 -0.8
        comp=Z,2.8nm,0.6s,baz=144,slow=8.2,SNR=102
YKA                                PcP     PcP      09 21 30.9 -0.1
        comp=Z,0.2nm,0.7s,baz=141,slow=4.4,SNR=6.0
INK   Inuvik           60.86 344   P       P        09 21 23.6 -0.5
        comp=Z,2.1nm,0.7s,baz=139,slow=6.8,SNR=7.6
ILAR  Eielson Array    63.25 337   P       P        09 21 41.0 +0.8
        comp=Z,0.6nm,0.6s,baz=171,slow=4.9,SNR=12
CMAR  Chiang Mai Arr  146.41 341   PKPbc   PKiKP    09 30 55.3 -1.5
        comp=Z,1.8nm,0.8s,baz=32,slow=3.5,SNR=1.6
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IDC ***25*** *09:20:51.3±0.3, 1.°03N×126.°27E, h0^{km}, mb5.4/44, mb1 5.3/49, mb1mx5.3/57, mbtmp5.3/49, ML4.5/4, MS4.3/11, Ms1 4.3/11, ms1mx4.0/38, Error ellipse: s-maj=12.8km s-min=8.3km az=75.0*

BJI ***25*** *09:20:52.5±0.0, 0.°82N×126.°27E, h35^{km}, mB5.3/49, mb5.4/77, Ms4.6/65, Ms7 4.4/65*

KLM ***25*** *09:20:53, 1.°19N×126.°43E, h8^{km}, mb5.5*

MOS ***25*** *09:20:54.6±1.1, 1.°09N×126.°24E, h33^{km}, mb5.8/84, Error ellipse: s-maj=7.2km s-min=3.9km az=113.5*

GCMT ***25*** *09:20:56.4±0.1, 1.°37N±0.°01×126.°27E±0.°01, h23^{km}, MW5.3/121, Moment Tensor Solution. s112,c177; s121,c178; Duration: 1.s3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$-0.50±.01; $M_{\phi\phi}$0.59±.01; $M_{r\theta}$-0.60±.02; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$-0.54±.02; Best double couple: $M_0$1.00300×10^{17} NP1:ϕ_s128.00000°, δ39.00000°, λ-174.00000°. NP2:ϕ_s33.00000°, δ86.00000°, λ-51.00000°. Principal axes: T 0.8970, Plg30.0000°, Azm93.0000°; N 0.2120, Plg39.0000°, Azm210.0000°; P -1.1090, Plg37.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *09:20:56.4±2.5, 1.°14N±0.°07×126.°43E±0.°06, h35^{km}±1^{km}, mb5.5/178, Mwc5.3(GCMT) Error ellipse: s-maj=12.4km s-min=10.0km az=209.0*

NEIC ***25*** *09:20:57, 1.°39N×126.°31E, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.07; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$0.63; $M_{r\theta}$-0.64; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.87; Fault plane solution: $M_0$1.27000×10^{17} NP1:ϕ_s125.00000°, δ32.00000°, λ-177.00000°. NP2:ϕ_s32.00000°, δ88.00000°, λ-58.00000°. Principal axes: T 1.2233, Plg35.0000°, Azm95.0000°; N 0.0932, Plg32.0000°, Azm211.0000°; P -1.3164, Plg38.0000°, Azm331.0000°;*

NOU ***25*** *09:20:58.4, 1.°09N×126.°39E, h49^{km}, mb5.5, Northern Molucca Sea*

DJA ***25*** *09:20:58.1±0.2, 1°N±2°×12°6E±°, h48^{km}±2^{km}, M5.1/83, mB5.5/46, mb5.4/83, MLv5.5/21, Mw(mB)5.0/46, MwMwp5.0/13, Mwp5.3/13*

ISC 25 09:20:56.8±0.2, **1.°13N**±0.°03×**126.°34E**±0.°04, **h35**^{km}±2^{km}, **h36**^{km}**:pP-P, n927,** σ**1.s60**/1011, **mb5.5**/262, **MS4.4**/42, **85C-79D, Fault plane solution: NP1:**ϕ_s67.09496°, δ79.20809°, λ-41.65725°. **NP2:**ϕ_s166.55226°, δ49.23807°, λ-165.68764°. **Principal axes:** T Plg19.2252°, Azm123.0733°; N Plg47.2161°, Azm235.2093°; P Plg36.4473°, Azm18.1485°; **Northern Molucca Sea**

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Code  Station Name       Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC       h  m  s    ISC
TNTI  Ternate           1.09 109   Pn      Pn       09 21 14.1 -1.5
TNTI  Ternate           1.09 109   P       Pn       09 21 14.0 -1.6
KMSI  Cibinong          2.42 257   P       Pn       09 21 33.9  0.0
SGSI  Sangihe           2.66 342   P       Pn       09 21 38.2 +0.9
SGSI                               S       Sn       09 22 11.4 +3.0
SANI  Sanana            3.18 186   P       Pn       09 21 44.4  0.0
GTOI  Gorontalo         3.36 262   P       Pn       09 21 44.4 -2.5
LUWI  Luwuk             4.17 239   Pn      Pn       09 22 00.2 +2.2
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LUWI	Luwuk	4.17	239	P	Pn	09 22 00.7	+2.7
NLAI	Namlea	4.41	170	P	Pn	09 22 01.4	+0.1
MRSI	Marisa	4.44	262	P	Pn	09 22 02.9	+1.1
DDMP	Don Marcelino,	4.98	353	eP	Pn	09 22 09.4	+0.2
APSI	Ampana	5.11	247	P	Pn	09 22 13.3	+2.4
	9.2nm5µm18µm2µm,1.0s						
MSAI	Masohi	5.15	150	P	Pn	09 22 11.9	+0.5
	0.6nm2µm202nm,0.8s						
SWI	Sorong	5.31	112	P	Pn	09 22 14.0	+0.4
	0.9nm10µm3µm237nm,0.9s						
SIJI	Sorong	5.31	112	Pn	Pn	09 22 13.5	-0.3
	10nm,0.3s,baz=307,slow=8.4,SNR=20						
TOLI2	Tolitoli	5.55	270	Pn	Pn	09 22 16.3	-0.7
SKMP	Bagumbayan, Su	5.64	342	eP	Pn	09 22 17.4	-0.9
SKMP				eS	Sn	09 23 17.3	-4.6
MATI	Mati	5.78	359	eP	Pn	09 22 21.4	+1.2
DAV	Davao City (W)	5.95	353	Pn	Pn	09 22 23.6	+1.1
	24nm,0.3s,baz=56,slow=1.8,SNR=9.6						
KCP	Kidapawan	5.97	348	⇑eP	Pn	09 22 24.6	+1.8
KCP				i S	Sn	09 23 23.2	-6.9
MPSI	Mapaga	6.49	263	P	Pn	09 22 34.2	+4.3
	1.3nm11µm4µm359nm,1.1s						
BUKP	Musuan	6.82	349	eP	Pn	09 22 37.0	+2.5
FAKI	Fak Fak	7.15	124	Pn	Pn	09 22 37.6	-1.4
FAKI	Fak Fak	7.15	124	P	Pn	09 22 39.1	+0.1
	1.2nm6µm3µm424nm,0.9s						
PAGZ	Pagadian	7.29	336	eP	Pn	09 22 39.9	-1.1
CGP	Cagayan de Oro	7.46	347	⇓eP	Pn	09 22 47.7	+4.5
TTSI	Tana Toraja	7.72	238	P	Pn	09 22 47.6	+0.7
	1.7nm5µm5µm454nm,0.8s						
BUTP	Butuan	7.82	355	eP	Pn	09 22 51.5	+3.3
SPSI	Sidrap Palu	8.29	232	P	Pn	09 22 57.4	+2.8
	1.3nm4µm383nm,0.7s						
BNSI	Bone	8.30	229	P	Pn	09 22 55.7	+0.9
	3µm313nm,0.8s						
GLSP	General Luna,	8.60	359	eP	Pn	09 23 00.3	+1.4
MYLDM	Lahad Datu	8.80	297		Pn	09 23 02.4	+0.8
BKSI	Bulukumba	8.92	224	P	Pn	09 23 06.0	+2.7
	0.9nm2µm289nm,0.8s						
KAPI	Kappang	8.97	227	Pn	Pn	09 23 03.4	-0.6
	12nm,0.3s,baz=350,slow=5.0,SNR=24						
KAPI	Kappang	8.97	227	P	Pn	09 23 05.9	+1.9
KAPI	Kappang	8.97	227	Pn	Pn	09 23 05.9	+1.9
KAPI	Kappang	8.97	227	P	Pn	09 23 06.5	+2.4
KAPI				P	Pn	09 23 06.5	+2.4
MSLP	Maasin	9.06	351	eP	Pn	09 23 08.6	+3.4
BSSI	Bau Bau, Buton	9.29	219	P	Pn	09 23 10.7	+2.4
	2µm182nm,0.8s						
CNOP	Candoni, Negro	9.39	337	eP	Pn	09 23 11.4	+1.7
LLP	Lapu-Lapu	9.43	346	⇑eP	Pn	09 23 12.5	+2.3
LLP				eS	Sn	09 25 09.7	+15
BKB	Balikpapan	9.73	256	Pn	Pn	09 23 17.2	+2.8
BKB	Balikpapan	9.73	256	P	Pn	09 23 17.1	+2.6
	7µm2µm190nm,0.9s						
BAKI	Biak	10.04	103	P	Pn	09 23 21.9	+3.3
	7µm656nm,0.9s						
GUIM	Jordan	10.14	339	eP	Pn	09 23 18.6	-1.5
SPMM	Sapulut	10.48	290	P	Pn	09 23 28.0	+3.3
EDFI	Ende, Flores	10.85	205	P	Pn	09 23 31.6	+1.7
	707nm67nm,0.7s						
CUYO	Cuyo Island	11.01	332	eP	Pn	09 23 33.3	+1.4
SOEI	Soe	11.01	191	Pn	Pn	09 23 37.5	+5.5
SOEI	Soe	11.01	191	P	Pn	09 23 36.0	+4.0
	3µm4µm315nm,1.0s						
KBKI	Kotabaru	11.08	247	P	Pn	09 23 46.2	+13
KKM	Kota Kinabalu	11.22	296	Pn	Pn	09 23 36.2	+1.4
BATP	Bataraza	11.41	312	eP	Pn	09 23 42.5	+5.1
BATI	Baumata	11.57	193	Pn	Pn	09 23 45.0	+5.3
	5.0nm,0.3s,baz=97,slow=4.5,SNR=8.1						
BATI	Baumata	11.57	193	P	Pn	09 23 49.8	+10
MTKI	Muara Teweh, K	11.62	260	P	Pn	09 23 42.7	+2.3
BBKI	Banjar Baru	12.36	248	P	P	09 23 59.6	-2.5
SJMP	San Jose	12.39	336	eP	Pn	09 23 52.5	+1.7
BUSP	Coron	12.40	331	eP	P	09 23 59.1	-3.4
PVCP	Virac	12.57	350	eP	Pn	09 23 56.5	+3.2
WBSI	Waikabubak, Su	12.74	213	P	P	09 24 12.5	+6.2
SMPI	Sarmi	12.75	104	P	Pn	09 23 58.9	+3.1
	2µm2µm114nm,1.3s						
BOAC	Boac	13.03	340	eP	Pn	09 24 02.3	+2.7
PLAI	Plampang	13.06	221	P	P	09 24 13.3	+3.5
JCNP	Jose Panganiba	13.56	345	eP	Pn	09 24 09.1	+2.3
TWSI	Taliwang, Sumb	13.60	224	P	Pn	09 24 10.0	+2.7
	1µm156nm,1.2s						
LQP	Lukban	13.74	340	⇑eP	Pn	09 24 11.2	+1.7
LUBP	Lubang	13.90	335	eP	Pn	09 24 10.2	-1.3
TGY	Tagaytay City	13.95	338	Pn	Pn	09 24 12.6	+0.4
	48nm,0.3s,baz=150,slow=15,SNR=1.7						
MACP	Maragondon, Ca	14.18	337	eP	Pn	09 24 18.4	+3.2
POLP	Polilio Island	14.19	342	eP	Pn	09 24 18.2	+2.8
GENI	Genyem	14.31	105	P	Pn	09 24 18.8	+1.7
	3µm5µm210nm,1.7s						
SRBI	Singaraja	14.38	230	P	P	09 24 30.0	+5.5
MTN	Manton Dam	14.68	161	P	Pn	09 24 21.8	-0.3
	baz=15,SNR=8.9						
MTN	Manton Dam	14.68	161		Pn	09 24 20.5	-1.5
DNP	Denpasar	14.76	228	P	P	09 24 33.9	+5.2
JAY	Jayapura	14.81	104	Pn	Pn	09 24 23.4	-0.6
	0.5nm,0.3s,baz=90,slow=6.2,SNR=6.3						
JAY	Jayapura	14.81	104	P	Pn	09 24 24.6	+0.7
	563nm35nm,0.8s						
STKI	Sintang	14.90	266	P	P	09 24 37.4	+7.1
KDU	Kakadu	15.02	156	P	Pn	09 24 22.2	-4.4
	baz=15,SNR=10.0						
PBKI	Pangkalan Bun	15.15	255	P	P	09 24 40.0	+6.9
JAGI	Jajag, Banyuwa	15.44	232		Pn	09 24 34.1	+1.9
JAGI				IAmb	IAmb	09 24 47.6	
	comp=Z,202nm,1.0s						
JAGI	Jajag, Banyuwa	15.44	232	P	P	09 24 44.4	+8.1
KSM	Kuching	16.03	271	P	P	09 24 41.9	-1.0
KSM	Kuching	16.03	271	P	P	09 24 45.0	+2.2
CAUP	Cauayan	16.33	344	eP	P	09 24 45.5	-0.6
KNRA	Kununurra	16.87	172		Pn	09 24 49.1	-1.3
ABRA	Dolores	17.32	342	eP	P	09 24 57.9	+0.8
APYP	Conner	17.36	344	eP	Pn	09 24 57.1	+0.6
FITZ	Fitzroy Crossi	19.12	182	P	P	09 25 15.3	-1.6
	baz=19,SNR=26						
FITZ	Fitzroy Crossi	19.12	182	P	P	09 25 15.3	-1.6
	comp=Z,1.7nm,0.3s,baz=15,slow=7.8,SNR=18						
FITZ				LR	LR	09 33 34.2	
	comp=Z,430nm,20.9s,baz=5.0,slow=40						
FITZ	Fitzroy Crossi	19.12	182	P	P	09 25 15.5	-1.4
JCJI	Jatiwangi	19.56	247	P	Pn	09 25 33.3	+10
LEM	Lembang	20.29	247	P	P	09 25 27.9	-2.0
	comp=Z,21nm,0.7s,baz=156,slow=18,SNR=3.7						
LEM				LR	LR	09 34 21.1	
	comp=Z,1µm,21.2s,baz=66,slow=40						
CISI	Cisompet, Garu	20.39	245	P	P	09 25 29.6	-1.4
CISI				IAmb	IAmb	09 25 54.9	
	comp=Z,156nm,0.7s						
CISI	Cisompet, Garu	20.39	245	P	P	09 25 29.5	-1.4
	comp=Z,2µmcomp=Z,218nm,0.8s						
PPBI	Pangkal Pinang	20.46	261	P	P	09 25 29.9	-1.7
	comp=Z,19µmcomp=Z,61nm,0.8s						
DLV	T Lat	20.71	302	P	P	09 25 35.3	+0.7
DLV				IAmb	IAmb	09 25 52.1	
	comp=Z,205nm,1.2s						
CBJI	Citeko	20.85	249	P	Pn	09 25 37.2	-1.2
	comp=Z,123nm,0.8s						
TWG	Pinlang	22.16	347	P	P	09 25 46.1	-3.7
TWG				IAmb	IAmb	09 25 51.8	
	comp=Z,112nm,0.8s						
KLSI		22.35	255	P	P	09 25 51.0	-1.0
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	22.36	160	c iP	P	09 25 49.9	-2.1
WRAB				pmax	pmax		
	comp=Z,470nm,1.3s						
WRAB	Tennant Creek	22.36	160	P	P	09 25 49.4	-2.6
WRA	Warramunga Arr	22.36	160	P	P	09 25 50.0	-2.1
	comp=Z,117nm,0.5s,baz=340,slow=11,SNR=184						
WRA				S	S	09 29 52.8	-3.2
	comp=Z,18nm,0.8s,baz=337,slow=22,SNR=5.9						
WRA	Warramunga Arr	22.36	160	P	P	09 25 49.8	-2.3
WRA	Warramunga Arr	22.36	160	P	P	09 25 49.8	-2.3
WB2	Warramunga Arr	22.37	160	P	P	09 25 49.8	-2.3
COEN	Coen	22.43	133	P	P	09 25 52.0	-0.8
	baz=22						
COEN	Coen	22.43	133	P	P	09 25 49.7	-3.1
WR0	Warramunga Arr	22.45	159	P	P	09 25 50.9	-2.1
WR0				IAmb	IAmb	09 25 54.1	
	comp=Z,262nm,1.1s						
MYKOM	Kota Tinggi	22.49	272	P	P	09 25 52.9	-0.6
MYKOM				IAmb	IAmb	09 25 58.0	
	comp=Z,175nm,1.2s						
MYKOM	Kota Tinggi	22.49	272	P	P	09 25 54.0	+0.5
YULB	Yu-li	22.66	348	P	P	09 25 51.8	-3.4
TPUB	Ta-pu	22.72	346	P	P	09 25 52.7	-3.1
KASI	Kota Agung	22.79	253	P	P	09 25 55.8	-0.9
	comp=Z,65nm,0.5s						
JMBI	JAMBI	22.86	263	P	P	09 25 59.7	+2.3
	comp=Z,2µmcomp=Z,104nm,0.9s						
MBWA	Marble Bar	23.08	196	P	P	09 26 03.8	+4.3
LWLI	Liwa	23.08	254	P	P	09 25 58.6	-1.2
	comp=Z,131nm,0.7s						
SSLB	Suanglung	23.12	347	P	P	09 25 58.9	-1.1
SSLB				IAmb	IAmb	09 26 03.5	
	comp=Z,123nm,0.8s						
PMG	Port Moresby	23.23	117	P	P	09 26 00.3	-0.8
PMG				pmax	pmax		
	comp=Z,60nm,1.0s						
PMG	Port Moresby	23.23	117	P	P	09 26 00.3	-0.8
LHSI	Lahat	23.33	258	P	P	09 26 01.9	-0.2
	comp=Z,50nm,0.9s						
NACB	Ninganchiao	23.36	349	P	P	09 26 00.4	-1.9
YOJ	Yonaguni jima	23.42	352	P	P	09 26 01.6	-1.2
YOJ				pmax	pmax		
	comp=Z,497nm,1.1s						
YOJ	Yonaguni jima	23.42	352	P	P	09 26 01.6	-1.2
PSA00	Pilbara Seismi	23.44	195	P	P	09 26 02.1	-1.0
PSA00	Pilbara Seismi	23.44	195	P	P	09 26 02.1	-1.0
XMI	Christmas Isla	23.55	240	P	P	09 26 07.0	+2.8
	comp=Z,152nm,0.9s						
XMIS	Christmas Isla	23.59	240	P	P	09 26 01.8	-2.9
XMIS				IAmb	IAmb	09 26 29.1	
	comp=Z,118nm,0.8s						
XMIS	Christmas Isla	23.59	240	P	P	09 26 07.2	+2.5
	comp=Z,158nm,0.9s						
YHNB	Yeheng	23.89	349	P	P	09 26 04.6	-2.8
YHNB				IAmb	IAmb	09 26 17.2	
	comp=Z,231nm,1.1s						
QIZ	Qiongzhong	24.04	319	P	P	09 26 08.0	-0.8
QIZ				S	S	09 30 24.3	+0.4
QIZ				sS	sS	09 30 38.3	-0.9
QIZ				pmax	pmax		
	comp=Z,52nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,460nm,5.5s						
QIZ				LR	LR		
	comp=Z,980nm,17.7s						
QIZ				LR	LR		
	comp=Z,860nm,17.7s						
QIZ				LR	LR		
	comp=Z,740nm,20.6s						
QIZ	Qiongzhong	24.04	319	P	P	09 26 07.7	-1.1
QIZ				IAmb	IAmb	09 26 11.6	
	comp=Z,153nm,1.4s						
KSI	Kapahiang	24.20	259	P	P	09 26 08.7	-1.8
	comp=Z,74nm,0.9s						
KNMB	Chin-men Tao	24.44	342	P	P	09 26 11.3	-1.1
KNMB				IAmb	IAmb	09 26 14.9	
	comp=Z,96nm,0.9s						
MASI	Maura Aman, Be	24.46	260	P	P	09 26 14.7	+1.9
	comp=Z,374nm,0.9s						
QZH	Quanzhou	24.83	343	P	P	09 26 15.0	-0.9
QZH				S	S	09 30 38.0	+1.5
QZH				LR	LR		
	comp=Z,840nm,14.2s						
QZH				LR	LR		
	comp=Z,800nm,18.0s						
UBPT	Khong Chiam	24.94	305	P	P	09 26 17.4	+0.4
	comp=Z,637nmcomp=Z,41nm,1.3s						
UBPT	Khong Chiam	24.94	305	P	P	09 26 16.8	-0.3
UBPT				IAmb	IAmb	09 26 19.9	
	comp=Z,135nm,1.4s						
SDSI	Sungai Dareh	24.99	265	P	P	09 26 16.9	-0.7
	comp=Z,957nmcomp=Z,114nm,1.0s						
JMZ	Minamidaito 2	24.99	10	P	P	09 26 14.4	-3.0
JMZ				IAmb	IAmb	09 26 38.9	
	comp=Z,248nm,1.1s						
KRJI	Kerinci	25.08	263	P	P	09 26 19.3	+0.8
	comp=Z,306nm,0.9s						
QIS	Mount Isa	25.17	150	P	P	09 26 17.9	-1.2
	baz=25,SNR=77						
BKNI	Bangkinang	25.31	268	P	P	09 26 19.0	-1.4
BKNI				IAmb	IAmb	09 26 24.9	
	comp=Z,186nm,1.1s						
BKNI	Bangkinang	25.31	268	P	P	09 26 20.1	-0.4
	comp=Z,181nm,1.1s						
IPM	Ipoh	25.50	278	P	P	09 26 22.0	-0.2
IPM				IAmb	IAmb	09 26 23.1	
	comp=Z,70nm,0.7s						
IPM	Ipoh	25.50	278	P	P	09 26 22.0	-0.2
JOW	Kunigami	25.62	4	P	P	09 26 24.1	+1.0
	comp=Z,373nm,0.9s,baz=190,slow=8.8,SNR=44						
AS31	Alice Springs	25.72	164	P	P	09 26 22.9	-1.2
ASAR	Alice Springs	25.72	164	P	P	09 26 22.6	-1.5
	comp=Z,61nm,0.8s,baz=344,slow=6.4,SNR=140						
ASAR				S	S	09 30 55.5	+4.6
	comp=Z,7.5nm,0.7s,baz=340,slow=18,SNR=4.6						
ASAR				ScP	ScP	09 33 32.0	+1.2
	comp=Z,2.6nm,0.8s,baz=343,slow=1.3,SNR=3.1						
ASAR				ScS	ScS	09 37 20.2	-0.1
	comp=Z,1.3nm,0.8s,baz=349,slow=5.0,SNR=6.3						
ASAR	Alice Springs	25.72	164	P	P	09 26 23.5	-0.6
ASAR	Alice Springs	25.72	164	P	P	09 26 23.5	-0.6
PDSI	Padang	25.95	266	P	P	09 26 25.8	-0.6
	comp=Z,41nm,1.2s						
KULM	Kulim	25.97	280	P	P	09 26 26.0	-0.5
KULM	Kulim	25.97	280	P	P	09 26 26.0	-0.5
MTSU	Mount Surprise	26.07	138	P	P	09 26 26.2	-1.1
	baz=26,SNR=22						
RABL	Rabaul	26.34	102	P	P	09 26 28.9	-1.0
RABL				IAmb	IAmb	09 26 45.3	
	comp=Z,94nm,0.5s						
RABL	Rabaul	26.34	102	P	P	09 26 30.6	+0.7
GIRL	Giralia	26.41	206	P	P	09 26 32.2	+1.9
	baz=26,SNR=4.5						
MNSI	Mandailing Nat	26.76	270	P	P	09 26 33.3	-0.3
	comp=Z,96nm,0.9s						
SRAK	Srakaew	27.23	299	P	P	09 26 33.3	-4.5
	comp=Z,5µmcomp=Z,450nm,1.2s						
SISI	Saibi	27.35	265	P	P	09 26 41.0	+2.0
	comp=Z,57nm,0.8s						
TRTT	Trang	27.37	285	P	P	09 26 38.1	-1.0
	comp=Z,1µmcomp=Z,41nm,1.2s						
PSI	Prapat	27.45	274	P	P	09 26 38.7	-1.2
	comp=Z,43nm,0.8s,baz=179,slow=2.3,SNR=26						
CHAI	Chaiyaphum	28.14	303	P	P	09 26 45.6	-0.3
	comp=Z,707nmcomp=Z,72nm,0.7s						
NONG	Nongkai	28.32	308	P	P	09 26 47.1	-0.4
	comp=Z,58nm,1.0s						
SURT	Suratani	28.50	287	P	P	09 26 51.1	+1.9
	comp=Z,1.5nm,1.1s						
MEEK	Meekatharra	28.59	195	P	P	09 26 50.2	+0.3
	baz=29,SNR=27						
CTAO	Charters Tower	28.74	138	P	P	09 26 50.7	-0.5
CTAO				pmax	pmax		
	comp=Z,53nm,1.1s						
CTAO	Charters Tower	28.74	138	P	P	09 26 50.7	-0.5
GSI	Gunungsitoli	28.75	271	P	P	09 26 50.2	-1.3
GSI				IAmb	IAmb	09 26 55.7	
	comp=Z,71nm,0.8s						
GSI	Gunungsitoli	28.75	271	P	P	09 26 53.0	+1.5
	comp=Z,111nm,0.8s						
PHET	Kaeng Krachan	28.93	295	P	P	09 26 53.8	+0.8
	comp=Z,49nm,1.0s						
SLVN	Son La	29.70	314	P	P	09 27 00.1	+0.3
SLVN				IAmb	IAmb	09 27 02.1	
	comp=Z,121nm,1.4s						
SRDT	SRDT	29.94	297	P	P	09 27 04.6	+2.6
	comp=Z,30nm,1.1s						
JCJ	Chichijima	29.97	29	P	P	09 27 00.8	-1.2
	comp=Z,173nm,0.7s,baz=298,slow=9.7,SNR=9.2						
JCJ	Chichijima	29.97	29	P	P	09 27 00.4	-1.6
PHIT	Phitsanulok	30.08	304	P	P	09 27 03.7	+0.5
	comp=Z,2µmcomp=Z,177nm,0.8s						
UTHA	Uthaitani	30.16	300	P	P	09 27 03.6	-0.3
	comp=Z,645nmcomp=Z,94nm,0.8s						
SSE	Sheshan	30.20	351	P	P	09 27 05.0	+1.0
SSE				S	S	09 32 02.3	+1.2
SSE				pmax	pmax		
	comp=Z,13nm,0.7s						
SSE				pmax	pmax		
	comp=Z,99nm,3.5s						
SSE				LR	LR		
	comp=Z,240nm,17.1s						
SSE				LR	LR		
	comp=Z,110nm,12.3s						
UTTA	Uttaradit	30.24	305	P	P	09 27 04.7	+0.1
	comp=Z,374nmcomp=Z,38nm,0.8s						
JSU	Suzuyama	30.46	7	P	P	09 27 05.4	-1.0
JSU				IAmb	IAmb	09 27 08.0	
	comp=Z,72nm,1.2s						
NANT	Nan	30.67	307	P	P	09 27 10.3	+1.9
	comp=Z,28µmcomp=Z,770nm,0.6s						
SUKH	Sukhothai	30.88	303	P	P	09 27 10.4	+0.2
	comp=Z,68nm,0.8s						
WHN	Wuhan	31.39	340	⇑P	P	09 27 15.0	+0.5
WHN				pP	sP	09 27 26.8	-1.4
WHN				S	S	09 32 19.8	+0.1
WHN				pmax	pmax		
	comp=Z,200nm,1.7s						
WHN				LR	LR		
	comp=Z,2µm,19.9s						
LAMP	Lampang	31.39	305	P	P	09 27 15.0	+0.3
	comp=Z,25nm,0.9s						
GYA	Guiyang	31.50	325	⇑P	P	09 27 16.0	+0.3
GYA				pP	pwP	09 27 27.0	-0.8
GYA				PP	PP	09 28 24.3	-3.0
GYA				S	S	09 32 21.5	-0.4
GYA				sS	sS	09 32 42.0	+4.4
GYA				pmax	pmax		
	comp=Z,81nm,1.0s						
GYA				pmax	pmax		
	comp=Z,270nm,3.6s						
GYA				LR	LR		
	comp=Z,400nm,14.0s						
GYA				LR	LR		
	comp=Z,320nm,16.0s						
GYA				LR	LR		
	comp=Z,810nm,22.4s						
NJ2	Nanjing	31.56	348	⇑P	P	09 27 16.5	+0.5
NJ2				pP	pP	09 27 24.3	-1.2
NJ2				S	S	09 32 26.0	+3.7
NJ2				sS	sS	09 32 39.8	+1.8
NJ2				pmax	pmax		
	comp=Z,28nm,0.9s						
NJ2				LR	LR		
	comp=Z,480nm,18.7s						
NJ2				LR	LR		
	comp=Z,550nm,16.9s						
NJ2				LR	LR		
	comp=Z,680nm,19.7s						
MORW	Morawa	31.60	197	P	P	09 27 16.8	+0.4
	baz=32,SNR=7.6						
MORW	Morawa	31.60	197	P	P	09 27 17.4	+0.9
PAYA	Payao	31.63	307	P	P	09 27 17.0	+0.2
	comp=Z,9µmcomp=Z,248nm,0.8s						
FORT	Forrest	31.77	177	P	P	09 27 17.1	-0.8
	baz=32,SNR=35						
FORT	Forrest	31.77	177	P	P	09 27 17.4	-0.5
CM36	Chiang Mai Arr	31.83	305	P	P	09 27 18.0	-0.6
CM35	Chiang Mai Arr	31.86	305	P	P	09 27 18.0	-0.8
CM04	Chiang Mai Arr	31.86	304	P	P	09 27 19.4	+0.4
	comp=Z,212nmcomp=Z,16nm,1.0s						
CM09	Chiang Mai Arr	31.88	304	P	P	09 27 19.0	0.0
	comp=Z,241nmcomp=Z,23nm,1.3s						
CM01	Chiang Mai Arr	31.89	304	P	P	09 27 19.6	+0.5
	comp=Z,245nmcomp=Z,23nm,1.3s						
CM05	Chiang Mai Arr	31.89	304	P	P	09 27 19.3	+0.1
	comp=Z,154nmcomp=Z,9.8nm,1.0s						
CM02	Chiang Mai Arr	31.91	304	P	P	09 27 19.0	-0.3
	comp=Z,193nmcomp=Z,16nm,1.1s						
CM31	Chiang Mai Arr	31.92	304	P	P	09 27 20.0	+0.6
	comp=Z,7µmcomp=Z,517nm,0.7s						
CM31	Chiang Mai Arr	31.92	304	P	P	09 27 18.8	-0.6
CMAR	Chiang Mai Arr	31.92	304	P	P	09 27 19.5	+0.1
	comp=Z,21nm,1.1s,baz=124,slow=7.1,SNR=71						
CMAR				PcP	PcP	09 30 11.3	+1.8
	comp=Z,6.1nm,0.8s,baz=169,slow=1.4,SNR=9.7						
CMAR				PKiKP	PKiKP	09 37 38.3	+0.1
	comp=Z,0.6nm,0.4s,baz=259,slow=0.6,SNR=4.6						
CMAR	Chiang Mai Arr	31.92	304	ceP	P	09 27 19.5	+0.1
CMAR				pmax	pmax		
	comp=Z,23nm,1.1s						
CM13	Chiang Mai Arr	31.93	304	P	P	09 27 19.0	-0.5
	comp=Z,186nmcomp=Z,19nm,1.3s						
CM15	Chiang Mai Arr	31.94	304	P	P	09 27 19.9	+0.4
	comp=Z,182nmcomp=Z,16nm,0.8s						
CM34	Chiang Mai Arr	31.95	305	P	P	09 27 19.0	-0.6
CMMT	Chiang Mai	32.09	305	P	P	09 27 19.8	-1.2
	comp=Z,321nmcomp=Z,14nm,0.7s						
CM33	Chiang Mai Arr	32.10	305	P	P	09 27 20.0	-1.0
CHTO	Chiang Mai	32.10	305	P	P	09 27 21.9	+0.9
CHTO				pmax	pmax		
	comp=Z,32nm,1.0s						
CHTO	Chiang Mai	32.10	305	P	P	09 27 21.9	+0.9
CHTO	Chiang Mai	32.10	305	P	P	09 27 20.9	-0.1
CHTO				P	P	09 27 20.9	-0.1
CM32	Chiang Mai Arr	32.10	305	P	P	09 27 21.7	+0.7
JNU	Nakatsue	32.11	7	P	P	09 27 21.6	+0.7
	comp=Z,112nm,1.0s,baz=194,slow=4.1,SNR=40						
JNU	Nakatsue	32.11	7	P	P	09 27 20.1	-0.7
QLP	Quilpie	32.51	149	P	P	09 27 23.6	-0.9
	baz=32,SNR=4.9						
KMBL	Kambalda	32.59	187	P	P	09 27 24.2	-0.9
	baz=33,SNR=14						
MHMT	Maesarieng	32.63	303	P	P	09 27 24.7	-0.9
BLDU	Ballidu	32.87	195	P	P	09 27 27.5	-0.1
	baz=33,SNR=36						
KMI	Kunming	32.99	318	⇑iP	P	09 27 29.8	+0.9
KMI				pP	pP	09 27 39.0	+0.5
KMI				sP	sP	09 27 46.0	+3.5
KMI				PP	PP	09 28 42.5	-1.4
KMI				S	S	09 32 45.8	+0.5
KMI				sS	sS	09 33 03.0	+2.2
KMI				pmax	pmax		
	comp=Z,74nm,1.3s						
KMI				pmax	pmax		
	comp=Z,210nm,3.6s						
KMI				LR	LR		
	comp=Z,520nm,21.6s						
KMI				LR	LR		
	comp=Z,540nm,20.1s						
KMI				LR	LR		
	comp=Z,870nm,19.6s						
KMI	Kunming	32.99	318	P	P	09 27 28.9	0.0
KMI				pmax	pmax		
	comp=Z,139nm,1.4s						
KMI	Kunming	32.99	318	P	P	09 27 28.9	0.0
KMI				IAmb	IAmb	09 27 31.3	
	comp=Z,139nm,1.4s						
ENH	Enshi	33.11	333	P	P	09 27 28.5	-1.2
ENH				IAmb	IAmb	09 27 30.8	
	comp=Z,91nm,1.0s						
JMN	Monobe	33.19	12	P	P	09 27 31.5	+1.1
JTU	Tsushima	33.34	5	P	P	09 27 32.3	+0.7
JTU				IAmb	IAmb	09 27 35.3	
	comp=Z,61nm,1.0s						
KLBR	Kellerberrin	33.55	193	P	P	09 27 32.8	-0.6
	baz=34,SNR=53						
JHJ	Hachijo jima 2	34.24	20	PcP	PcP	09 30 15.4	-0.2
	comp=Z,210nm,0.8s,baz=348,slow=3.5,SNR=4.0						
JHS	Saijyo	34.28	10	P	P	09 27 41.2	+1.4
MUN	Mundaring	34.30	195	P	P	09 27 40.0	0.0
	baz=34,SNR=22						
NWAO	Narrogin (SRO)	34.95	193	P	P	09 27 45.7	+0.1
	baz=35,SNR=25						
NWAO	Narrogin (SRO)	34.95	193	P	P	09 27 44.9	-0.6
NWAO				pmax	pmax		
	comp=Z,30nm,0.7s						
NWAO	Narrogin (SRO)	34.95	193	P	P	09 27 44.9	-0.6
NWAO				IAmb	IAmb	09 27 49.6	
	comp=Z,30nm,0.7s						
NWAO	Narrogin (SRO)	34.95	193	P	P	09 27 52.2	+6.6
RMQ	Roma	34.95	143	P	P	09 27 45.0	-0.7
	baz=35,SNR=6.8						
BBOO	Buckleboo	34.98	166	P	P	09 27 44.7	-1.2
	baz=35,SNR=26						
BBOO	Buckleboo	34.98	166	P	P	09 27 45.1	-0.8
BBOO				IAmb	IAmb	09 27 48.5	
	comp=Z,42nm,0.6s						
JWT	Wachi	35.01	13	P	P	09 27 47.3	+1.3
HNR	Honiara	35.08	108	P	P	09 27 45.1	-1.8
	comp=Z,92nm,0.6s,baz=242,slow=6.8,SNR=5.0						
HNR	Honiara	35.08	108	P	P	09 27 45.2	-1.8
HNR				pmax	pmax		
	comp=Z,194nm,0.7s						
HNR	Honiara	35.08	108	P	P	09 27 45.2	-1.8
HNR	Honiara	35.08	108	P	P	09 27 45.7	-1.3
TJN	Taejon	35.08	1	⇑eP	P	09 27 45.8	-0.9
INU	Inuyama	35.47	15	P	P	09 27 48.6	-1.4
EIDS	Eidsvold	35.60	139	P	P	09 27 49.8	-1.5
	baz=36,SNR=8.1						
EIDS	Eidsvold	35.60	139	P	P	09 27 48.1	-3.1
JGF	Kuroka	35.80	15	P	P	09 27 52.6	-0.3

JGF				IAmb	IAmb	09 27 54.8	
	comp=Z,48nm,0.8s						
STKA	Stephens Creek	35.87	158	P	P	09 27 52.4	-1.2
	baz=36,SNR=133						
STKA	Stephens Creek	35.87	158	P	P	09 27 52.4	-1.2
	comp=Z,58nm,0.7s,baz=328,slow=8.9,SNR=90						
STKA	Stephens Creek	35.87	158	P	P	09 27 51.5	-2.1
STKA				pmax	pmax		
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	35.87	158	P	P	09 27 51.5	-2.1
TIA	Tai'an	35.94	347	P	P	09 27 53.5	-0.5
TIA				S	S	09 33 30.8	+0.7
TIA				pmax	pmax		
	comp=Z,22nm,1.4s						
TIA				LR	LR		
	comp=Z,310nm,28.4s						
TIA				LR	LR		
	comp=Z,490nm,21.6s						
TIA				LR	LR		
	comp=Z,440nm,21.6s						
KSAR	Wonju Array Be	36.16	2	P	P	09 27 53.2	-2.7
KSAR	Wonju Array Be	36.16	2	P	P	09 27 53.2	-2.7
KSRS	Korea Array	36.17	2	P	P	09 27 57.2	+1.2
	comp=Z,16nm,0.8s,baz=180,slow=9.5,SNR=28						
KSRS				PcP	PcP	09 30 22.7	+1.5
	comp=Z,4.8nm,0.7s,baz=185,slow=2.3,SNR=7.5						
KS19	Wonju Array Si	36.22	2	P	P	09 27 55.0	-1.4
HTT	Hallett	36.37	162	P	P	09 27 57.0	-0.8
	baz=36,SNR=22						
CD2	Chengdu	36.54	326	P	P	09 27 58.5	-0.8
CD2				sP	pwP	09 28 11.8	+0.3
CD2				S	S	09 33 44.5	+5.0
CD2				sS	sS	09 34 00.0	+4.6
CD2				pmax	pmax		
	comp=Z,290nm,1.1s						
CD2				pmax	pmax		
	comp=Z,450nm,4.9s						
CD2				LR	LR		
	comp=Z,1µm,19.4s						
CD2				LR	LR		
	comp=Z,1µm,19.4s						
CD2				LR	LR		
	comp=Z,2µm,19.4s						
XAN	Xi'an	36.57	335	P	P	09 27 58.3	-1.3
XAN				pP	pP	09 28 07.3	-2.0
XAN				S	S	09 33 39.5	-0.5
XAN				PcS	PcS	09 34 12.5	+2.0
XAN				pmax	pmax		
	comp=Z,70nm,1.1s						
XAN				LR	LR		
	comp=Z,600nm,26.0s						
XAN				LR	LR		
	comp=Z,380nm,23.9s						
XAN				LR	LR		
	comp=Z,740nm,22.8s						
MAJO	Matsushiro	36.91	16	d iP	P	09 28 02.3	-0.1
MAJO				pmax	pmax		
	comp=Z,63nm,0.9s						
MAJO	Matsushiro	36.91	16	P	P	09 28 01.6	-0.7
MAJO				IAmb	IAmb	09 28 05.3	
	comp=Z,72nm,1.0s						
MAT	Matsushiro	36.91	16	P	P	09 28 01.9	-0.5
MAT				S	S	09 33 44.4	-0.6
MJAR	Matsushiro Arr	36.91	16	P	P	09 28 02.2	-0.2
	comp=Z,74nm,0.9s,baz=184,slow=9.2,SNR=118						
MJAR				PcP	PcP	09 30 24.7	+1.3
	comp=Z,7.6nm,0.8s,baz=175,slow=3.1,SNR=5.3						
MJAR	Matsushiro Arr	36.91	16	P	P	09 28 01.7	-0.7
MJAR				pmax	pmax		
	comp=Z,22nm,1.0s						
MJAR	Matsushiro Arr	36.91	16	P	P	09 28 01.7	-0.7
JYT	Yasato	37.21	19	P	P	09 28 02.9	-2.0
JYT				IAmb	IAmb	09 28 06.3	
	comp=Z,50nm,0.9s						
CMSA	Cobar Meteorol	37.32	152	P	P	09 28 05.6	-0.3
	baz=37,SNR=17						
DL2	Dalian	37.84	354	P	P	09 28 11.0	+0.8
DL2				S	S	09 34 01.5	+2.5
DL2				pmax	pmax		
	comp=Z,200nm,1.1s						
DL2				pmax	pmax		
	comp=Z,170nm,4.1s						
DL2				LR	LR		
	comp=Z,390nm,16.5s						
DL2				LR	LR		
	comp=Z,580nm,17.3s						
DL2				LR	LR		
	comp=Z,610nm,24.0s						
JSD	Sado	38.33	15	P	P	09 28 13.7	-0.6
TIY	Taiyuan	38.59	342	P	P	09 28 16.8	+0.2
TIY				pmax	pmax		
	comp=Z,36nm,0.6s						
SAIH	SAIHA	38.75	306	eP	P	09 28 16.9	-1.4
SAIH				IAmb	IAmb	09 28 20.5	
	comp=Z,90nm,0.9s						
JMM	Marumori	38.90	18	P	P	09 28 20.0	+0.9
IMP	Imphal	39.17	310	⇑eP	P	09 28 20.6	-1.0
KOHI	KOHIMA	39.52	311	eP	P	09 28 22.7	-2.0
KOHI				IAmb	IAmb	09 28 26.1	
	comp=Z,71nm,0.9s						
MOKO	MOKOCHONG	39.55	312	eP	P	09 28 23.9	-1.0
MOKO				IAmb	IAmb	09 28 27.0	
	comp=Z,89nm,0.7s						
ARMA	Armidale	39.56	145	P	P	09 28 24.4	-0.5
	baz=40,SNR=23						
ARMA	Armidale	39.56	145	P	P	09 28 25.0	+0.2
BJT	Baijiatuau	39.80	348	P	P	09 28 26.1	-0.5
BJT	Baijiatuau	39.80	348	P	P	09 28 26.1	-0.5
BJI	Beijing	39.82	348	P	P	09 28 26.0	-0.7
BJI				S	S	09 34 29.5	+0.8
BJI				pmax	pmax		
	comp=Z,29nm,0.9s						
BJI				LR	LR		
	comp=Z,270nm,25.5s						
BJI				LR	LR		
	comp=Z,300nm,17.7s						
ARPS	Mount Arapiles	40.37	161	P	P	09 28 31.0	-0.3
	baz=40,SNR=28						
LZH	Lanzhou	40.56	332	⇓P	P	09 28 33.3	+0.1
LZH				sP	pwP	09 28 46.0	+0.6
LZH				PP	PP	09 30 07.0	0.0
LZH				S	S	09 34 40.8	+0.4
LZH				sS	sS	09 34 55.0	-1.3
LZH				pmax	pmax		
	comp=Z,77nm,1.3s						
LZH				pmax	pmax		
	comp=Z,260nm,5.5s						
LZH				LR	LR		
	comp=Z,670nm,17.9s						
LZH				LR	LR		
	comp=Z,830nm,16.3s						
LZH				LR	LR		
	comp=Z,740nm,16.8s						
SNY	Shenyang	40.59	357	⇓P	P	09 28 34.0	+0.9
SNY				S	S	09 34 40.0	-0.2
SNY				pmax	pmax		
	comp=Z,120nm,1.0s						
SNY				LR	LR		
	comp=Z,340nm,16.8s						
SNY				LR	LR		
	comp=Z,220nm,22.5s						
SNY				LR	LR		
	comp=Z,590nm,21.3s						
YNG	Young	40.88	152	P	P	09 28 35.5	-0.1
	baz=41,SNR=8.3						
TEZP	TEZPUR	40.99	311	eP	P	09 28 34.7	-1.9
TEZP				IAmb	IAmb	09 28 37.0	
	comp=Z,280nm,1.9s						
SHL	Shillong	41.15	309	eP	P	09 28 36.8	-1.4
SHL				IAmb	IAmb	09 28 39.8	
	comp=Z,47nm,0.7s						
MGCD	Mangrove Creek	41.38	148	P	P	09 28 40.2	+0.4
	baz=41,SNR=8.0						
MSHR	Mys Shultsa	41.49	5	⇓eP	P	09 28 39.9	-0.6
MSHR				pmax	pmax		
	comp=Z,86nm,1.0s						
GUWA	GUWAHATI	41.62	310	eP	P	09 28 40.2	-1.6
GUWA				IAmb	IAmb	09 28 45.2	
	comp=Z,18nm,0.8s						
JTM	Tenmabayashi	41.67	17	P	P	09 28 42.2	+0.2
HHC	Hu-ho-hao-te	41.74	343	eP	P	09 28 42.5	-0.2
HHC				S	S	09 34 56.8	-0.9
HHC				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
HHC				LR	LR		
	comp=Z,400nm,17.9s						
HHC				LR	LR		
	comp=Z,430nm,19.0s						
HHC				LR	LR		
	comp=Z,590nm,18.0s						
BTO	Baotou	41.99	341	eP	P	09 28 46.0	+1.2
BTO				S	S	09 34 59.5	-1.8
CAN	Canberra	42.00	152	P	P	09 28 45.3	+0.5
CAN				pmax	pmax		
	comp=Z,40nm,1.0s						
CAN	Canberra	42.00	152	P	P	09 28 45.3	+0.5
CNB	Canberra Magne	42.16	152	P	P	09 28 46.1	-0.1
	baz=42,SNR=10						
TOO	Toolangi	42.39	157	P	P	09 28 48.6	+0.6
	baz=42,SNR=12						
KOUNC	Koumac, New Ca	42.95	122	P	P	09 28 52.4	-0.3
USA0B	Ussuriysk Arra	43.18	6	P	P	09 28 55.9	+1.7
USA0B				pmax	pmax		
	comp=Z,145nm,1.2s						
USA0B	Ussuriysk Arra	43.18	6	P	P	09 28 55.9	+1.7
USA0B				IAmb	IAmb	09 28 57.3	
	comp=Z,145nm,1.1s						
USRK	Ussuriysk Ar.	43.18	6	P	P	09 28 55.3	+1.1
	comp=Z,90nm,0.9s,baz=191,slow=7.3,SNR=85						
USRK	Ussuriysk Ar.	43.18	6	P	P	09 28 54.7	+0.5
MDJ	Mudanjiang	43.40	3	P	P	09 28 57.3	+1.3
MDJ				pP	pP	09 29 05.8	-0.1
MDJ				sP	sP	09 29 09.8	-0.4
MDJ				S	S	09 35 21.3	-0.4
MDJ				pmax	pmax		
	comp=Z,240nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.4s						
MDJ				LR	LR		
	comp=Z,430nm,24.2s						
MDJ				LR	LR		
	comp=Z,380nm,22.1s						
MDJ				LR	LR		
	comp=Z,590nm,24.2s						
MDJ	Mudanjiang	43.40	3	P	P	09 28 56.8	+0.8
ERM	Erimo	43.43	18	⇑eP	P	09 28 56.0	-0.2
ERM				pmax	pmax		
	comp=Z,26nm,0.8s						
ERM	Erimo	43.43	18	P	P	09 28 56.3	+0.1
SANVU	Saraoutou	43.62	114	P	P	09 28 57.4	-0.8
SANVU				IAmb	IAmb	09 29 12.8	
	comp=Z,53nm,0.8s						
SANVU	Saraoutou	43.62	114	P	P	09 28 58.1	-0.1
JEW	Eniwo	43.68	16	P	P	09 28 59.2	+0.9
JEW				IAmb	IAmb	09 29 11.8	
	comp=Z,130nm,0.9s						
LSA	Lhasa	43.90	314	P	P	09 29 00.6	-0.2
LSA				pmax	pmax		
	comp=Z,51nm,0.9s						
LSA	Lhasa	43.90	314	P	P	09 29 00.6	-0.2
LSA				IAmb	IAmb	09 29 02.3	
	comp=Z,51nm,0.9s						
TEY	Ternei	44.65	10	⇑iP	P	09 29 07.6	+1.6
TEY				pmax	pmax		
	comp=N,80nm,0.8s						
TEY				pmax	pmax		
	comp=Z,140nm,0.8s						
GTA	Gaotai	45.14	331	⇓P	P	09 29 09.5	-0.7
GTA				pP	pP	09 29 19.5	-0.7
GTA				sP	sP	09 29 23.5	-0.8
GTA				PcP	PcP	09 30 51.0	+0.7
GTA				ScP	ScP	09 34 41.0	+0.6
GTA				PcS	PcS	09 34 43.0	-1.2
GTA				S	S	09 35 47.5	+0.1
GTA				pmax	pmax		
	comp=Z,23nm,1.2s						
GTA				pmax	pmax		
	comp=Z,170nm,7.2s						
GTA				LR	LR		
	comp=Z,430nm,18.7s						
GTA				LR	LR		
	comp=Z,620nm,20.6s						
GTA				LR	LR		
	comp=Z,850nm,19.7s						
ASAJ	Asahikawa	45.18	17	P	P	09 29 12.2	+1.9
	comp=Z,95nm,0.9s,baz=233,slow=9.9,SNR=64						
ASAJ				LR	LR	09 48 10.1	
	comp=Z,296nm,22.0s,baz=184,slow=36						
ASAJ	Asahikawa	45.18	17	P	P	09 29 11.3	+1.1
ASAJ				pmax	pmax		
	comp=Z,107nm,0.9s						
JKA	Kamikawa-asahi	45.18	17	P	P	09 29 11.3	+1.0
JKA				IAmb	IAmb	09 29 13.7	
	comp=Z,107nm,0.9s						
DVP	Devils Point	45.26	116	P	P	09 29 13.6	+2.3
	comp=Z,111µm,0.7s						
TAPN	Taplejung	45.28	309	eP	P	09 29 11.0	-0.7
ODAN	Odare	45.30	308	eP	P	09 29 10.9	-0.9
	comp=Z,111nm,0.9s						
NOUC	Port Laguerre	45.31	123	P	P	09 29 11.1	-0.5
DZM	Mont Dzumac	45.41	123	eP	P	09 29 12.3	-0.3
	comp=Z,128nm,1.0s						
DZM				eS	S	09 35 50.5	-1.3
	comp=Z,353nm,38.1s						
DZM				eLR	LR	09 41 58.2	
	comp=Z,834nm,24.9s						
DZM	Mont Dzumac	45.41	123	P	P	09 29 11.6	-1.0
DZM				IAmb	IAmb	09 29 18.1	
	comp=Z,62nm,1.0s						
DZM	Mont Dzumac	45.41	123	P	P	09 29 12.3	-0.3
YATNC	Mamie plateau,	45.78	123	P	P	09 29 15.1	-0.3
OUENC	Ouen Island, N	45.89	123	P	P	09 29 16.1	-0.2
RAMN	Ramite	45.96	307	eP	P	09 29 16.2	-0.9
	comp=Z,367nm,1.3s						
PINNC	Pines Island,	46.48	123	P	P	09 29 19.7	-1.2
MARNC	Mare, Loyalty	46.51	121	P	P	09 29 21.1	0.0
GUN	Gumba	46.97	308	eP	P	09 29 24.0	-1.1
	comp=Z,191nm,0.7s						
PKI	Pulchoki	47.19	308	eP	P	09 29 25.2	-1.6
	comp=Z,223nm,1.4s						
PKIN	Phulchoki	47.20	308	eP	P	09 29 25.3	-1.5
KKN	Kakani	47.39	308	eP	P	09 29 27.8	-0.4
DMN	Daman	47.45	307	eP	P	09 29 27.3	-1.4
	comp=Z,192nm,1.2s						
YSS	Yuzh-Sakhalins	47.84	15	⇓eP	P	09 29 31.7	+0.7
YSS				e*SP	sP	09 29 45.5	+0.5
YSS				e		09 31 04.3	
YSS				eS	S	09 36 25.1	-0.5
YSS				eSS	SS	09 39 47.3	-7.3
YSS				pmax	pmax		
	comp=Z,80nm,1.0s						
YSS				pmax	pmax		
	comp=Z,200nm,3.9s						
YSS				MLR	MLR		
	comp=E,300nm,18.0s						
YSS	Yuzh-Sakhalins	47.84	15	P	P	09 29 30.8	-0.3
YSS				IAmb	IAmb	09 29 33.8	
	comp=Z,87nm,1.0s						
KUR	Kuril'sk	47.85	20	⇑eP	P	09 29 26.7	-4.5
KUR				pmax	pmax		
	comp=Z,57nm,0.7s						
GKN	Gorkha	47.99	308	eP	P	09 29 31.2	-1.6
	comp=Z,230nm,1.2s						
KLR	Kul'dur	48.14	5	P	P	09 29 34.1	+0.7
	comp=Z,84nm,1.1s,baz=204,slow=5.8,SNR=94						
KLR				PP	PP	09 31 25.7	-0.2
	comp=Z,16nm,1.0s,baz=200,slow=7.4,SNR=4.5						
KLR	Kul'dur	48.14	5	d iP	P	09 29 34.1	+0.7
KLR				pmax	pmax		
	comp=Z,128nm,1.1s						
KLR				MLR	MLR		
	comp=Z,296nm,19.0s						
HIA	Hailar	48.29	354	P	P	09 29 35.6	+1.1
HIA				pmax	pmax		
	comp=Z,158nm,1.2s						
HIA	Hailar	48.29	354	P	P	09 29 35.6	+1.1
KOLN	Koldanda	48.72	307	eP	P	09 29 37.4	-1.1
	comp=Z,536nm,1.2s						
DANN	Dangsing	48.84	308	eP	P	09 29 38.2	-1.3
	comp=Z,240nm,0.7s						
PYUN	Piuthan	49.34	307	eP	P	09 29 42.4	-0.9
	comp=Z,228nm,0.6s						
ULN	Ulaanbaatar	49.46	343	d iP	P	09 29 43.7	-0.1
ULN				pmax	pmax		
	comp=Z,52nm,1.7s						
ULN	Ulaanbaatar	49.46	343	P	P	09 29 43.5	-0.3
ULN				IAmb	IAmb	09 30 04.8	
	comp=Z,73nm,1.2s						
ULN	Ulaanbaatar	49.46	343	P	P	09 29 44.1	+0.3
SONM	Songino Array	49.63	342	P	P	09 29 45.3	+0.3
	comp=Z,23nm,1.0s,baz=162,slow=8.9,SNR=46						
SONM				PcP	PcP	09 31 07.5	+1.4
	comp=Z,13nm,0.9s,baz=148,slow=3.4,SNR=4.4						
SONM	Songino Array	49.63	342	P	P	09 29 44.3	-0.7
SONM				pmax	pmax		
	comp=Z,27nm,1.1s						
SONM	Songino Array	49.63	342	P	P	09 29 44.3	-0.7
UGL	Uglegorsk	49.64	14	eP	P	09 29 45.9	+1.1
UGL				eS	S	09 36 55.6	+4.7
UGL				pmax	pmax		
	comp=E,160nm,0.9s						
UGL				pmax	pmax		
	comp=Z,190nm,0.9s						
HYB	Hyderabad	49.67	292	i P	P	09 29 43.0	-2.7
	comp=Z,140nm,1.0s						
HYB	Hyderabad	49.67	292	eP	P	09 29 42.7	-3.0
HYB				IAmb	IAmb	09 29 44.9	
	comp=Z,143nm,1.1s						
GRNR	Gornyy	50.19	8	⇑iP	P	09 29 50.8	+1.7
GRNR				pmax	pmax		
	comp=N,40nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,90nm,0.9s						
GRNR				MLR	MLR		
	comp=N,120nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,220nm,18.0s						
TYV	Tymovskoe	51.45	13	eP	P	09 30 00.1	+1.6
TYV				e		09 37 21.2	
TYV				pmax	pmax		
	comp=Z,31nm,0.8s						
CIT	Chita	51.84	350	eP	P	09 30 02.6	+1.2
CIT				e		09 30 13.8	
CIT				e		09 30 16.8	
CIT				e		09 31 10.4	
CIT				pmax	pmax		
	comp=Z,586nm,1.4s						
BHPL	Bhopal	52.26	299	eP	P	09 30 02.7	-2.4
BHPL				IAmb	IAmb	09 30 04.3	
	comp=Z,33nm,0.7s						
ZEA	Zeya	52.44	1	eP	P	09 30 06.1	+0.3
ZEA				eS	S	09 37 32.9	+3.4
ZEA				pmax	pmax		
	comp=N,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				smax	smax		
	comp=N,200nm,4.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,17.0s						
ZAK	Zakamensk	52.84	342	eP	P	09 30 08.2	-0.8
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
NKL	Nikolayevsk	53.20	11	eP	P	09 30 12.8	+1.4
NKL				e		09 31 23.6	
NKL				pmax	pmax		
	comp=N,15nm,0.8s						
NKL				pmax	pmax		
	comp=E,85nm,0.9s						
NKL				pmax	pmax		
	comp=Z,137nm,0.9s						
NKL				pmax	pmax		
	comp=Z,74nm,3.0s						
NKL				MLR	MLR		
	comp=E,967nm,16.0s						
NKL				MLR	MLR		
	comp=N,261nm,14.0s						
NKL				MLR	MLR		
	comp=Z,365nm,18.0s						
TLY	Talaya	53.87	343	eP	P	09 30 16.9	+0.5
TLY				e		09 32 26.6	
TLY				eS	S	09 37 45.4	-3.7
TLY				pmax	pmax		
	comp=Z,50nm,0.8s						
TLY				MLR	MLR		
	comp=Z,816nm,19.0s						
TLY	Talaya	53.87	343	P	P	09 30 16.3	-0.1
TLY	Talaya	53.87	343	P	P	09 30 17.5	+1.1
TLY				P	P	09 30 17.5	+1.1
IRK	Irkutsk	54.18	343	eP	P	09 30 19.0	+0.3
IRK				pmax	pmax		
	comp=Z,74nm,2.1s						
DDI	Dehra Dun	54.19	307	eP	P	09 30 18.6	-0.6
DDI				IAmb	IAmb	09 30 20.4	
	comp=Z,71nm,0.9s						
NDI	New Delhi	54.25	305	eP	P	09 30 18.0	-1.6
POO	Poona	54.28	292	eP	P	09 30 17.0	-3.0
WMQ	Urumqi	54.64	326	P	P	09 30 22.5	+0.3
WMQ				pP	pwP	09 30 34.5	+1.9
WMQ				pmax	pmax		
	comp=Z,73nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
WMQ				LR	LR		
	comp=Z,830nm,17.5s						
WMQ				LR	LR		
	comp=Z,670nm,21.5s						
WMQ				LR	LR		
	comp=Z,610nm,21.5s						
WMQ	Urumqi	54.64	326	P	P	09 30 21.4	-0.9
WMQ				pmax	pmax		
	comp=Z,86nm,1.1s						
WMQ	Urumqi	54.64	326	P	P	09 30 21.4	-0.9
WMQ				IAmb	IAmb	09 30 24.7	
	comp=Z,86nm,1.1s						
MOY	Mondy	54.69	341	eP	P	09 30 22.5	0.0
MOY				pmax	pmax		
	comp=Z,66nm,1.8s						
SMLA	Simla	55.20	308	eP	P	09 30 25.6	-0.9
SMLA				IAmb	IAmb	09 30 29.4	
	comp=Z,203nm,0.8s						
DHRM	DHARAMSHALA	56.32	309	eP	P	09 30 32.5	-2.3
DHRM				IAmb	IAmb	09 30 36.1	
	comp=Z,163nm,0.9s						
BOD	Bodaibo	57.37	352	⇑iP	P	09 30 42.0	+0.6
BOD				pmax	pmax		
	comp=Z,89nm,1.1s						
PEA0B	Petropavlovsk-	57.97	22	P	P	09 30 46.9	+1.1
PEA0B				pmax	pmax		
	comp=Z,53nm,0.9s						
PEA0B	Petropavlovsk-	57.97	22	P	P	09 30 46.9	+1.1
PEA0B				IAmb	IAmb	09 30 49.6	
	comp=Z,53nm,0.9s						
PETK	Petropavlovsk-	57.97	22	P	P	09 30 47.2	+1.4
	comp=Z,25nm,0.7s,baz=179,slow=4.3,SNR=34						
PETK	Petropavlovsk-	57.97	22	P	P	09 30 46.4	+0.6
PET	Petropavlovsk	58.26	22	eP	P	09 30 50.1	+2.4
PET				eS	S	09 38 48.1	+0.8
PET				eSS	SS	09 42 47.5	+7.8
PET				MLR	MLR		
	comp=Z,200nm,21.0s						
ZSN	Zaisan	58.48	328	⇓iP	P	09 30 48.8	-0.7
	comp=Z,22nm,1.0s,baz=328						
ZSN	Zaisan	58.48	328	d iP	P	09 30 48.7	-0.7
ZSN				pmax	pmax		
	comp=Z,22nm,1.0s						
DGZ	Jazzator, Alta	58.66	331	d iP	P	09 30 50.5	-0.3
DGZ				pmax	pmax		
	comp=Z,27nm,1.0s						
SHLS	Shalkode	59.10	322	eP	P	09 30 51.6	-2.5
	comp=Z,71nm,1.1s,baz=322						
SHLS	Shalkode	59.10	322	eP	P	09 30 51.5	-2.5
SHLS				pmax	pmax		
	comp=Z,71nm,1.1s						
QRZ	Quartz Range	59.17	140	P	P	09 30 53.8	-0.6
QRZ				IAmb	IAmb	09 30 54.8	
	comp=Z,22nm,0.8s						
NIL	Nilore	59.22	309	P	P	09 30 53.8	-1.1
NIL				pmax	pmax		
	comp=Z,75nm,1.2s						
NIL	Nilore	59.22	309	P	P	09 30 53.8	-1.1
NIL				IAmb	IAmb	09 30 55.9	
	comp=Z,75nm,1.1s						
MK31	Makanchi Array	59.47	326	P	P	09 30 56.3	-0.1
MK31				pmax	pmax		
	comp=Z,65nm,1.1s						
MK31	Makanchi Array	59.47	326	P	P	09 30 56.2	-0.1
MK31				IAmb	IAmb	09 30 57.5	
	comp=Z,65nm,1.1s						
MKAR	Makanchi Array	59.47	326	P	P	09 30 55.7	-0.7
	comp=Z,48nm,0.8s,baz=124,slow=7.3,SNR=324						
MKAR				LR	LR	09 58 03.5	
	comp=Z,563nm,19.8s,baz=103,slow=38						
MKAR				PKPPKP	P'P'df	10 00 33.7	+7.0
	comp=Z,1.4nm,0.8s,baz=342,slow=1.9,SNR=6.8						

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MKAR  Makanchi Array    59.47 326   P      P        09 30 55.5 -0.8
KSH   Kashi             59.62 316   P      P        09 30 58.0 +0.4
KSH                                 sP     sP       09 31 14.5 +2.9
KSH                                 S      S        09 39 07.8 +2.1
KSH                                 ScS    ScS      09 40 45.5 -0.1
KSH                                 pmax   pmax
      comp=Z,160nm,1.1s
KSH                                 pmax   pmax
      comp=Z,420nm,4.3s
KSH                                 LR     LR
      comp=Z,380nm,7.8s
KSH                                 LR     LR
      comp=Z,520nm,7.7s
KSH                                 LR     LR
      comp=Z,550nm,7.0s
MAKZ  Makanchi          59.65 326   P      P        09 30 56.3 -1.3
MAKZ                                pmax   pmax
      comp=Z,117nm,1.2s
MAKZ  Makanchi          59.65 326   P      P        09 30 56.3 -1.3
SATY  Saty              59.71 321  eP      P        09 30 57.8 -0.5
      comp=Z,72nm,1.1s,baz=321
SATY  Saty              59.71 321  eP      P        09 30 57.7 -0.5
SATY                                pmax   pmax
      comp=Z,72nm,1.1s
KPKS  Kokpek            59.75 321⇓iP       P        09 30 57.7 -0.7
      comp=Z,77nm,1.2s,baz=321
KPKS  Kokpek            59.75 321d iP      P        09 30 57.7 -0.7
KPKS                                pmax   pmax
      comp=Z,77nm,1.2s
LBZ   Lake Benmore      59.78 145   P      P        09 30 57.5 -1.0
LBZ                                 IAmb   IAmb     09 30 58.3
      comp=Z,31nm,0.8s
RPZ   Rata Peaks        59.89 144   P      P        09 30 58.0 -1.3
      comp=Z,29nm,1.0s,baz=310,slow=4.7,SNR=9.3
RPZ   Rata Peaks        59.89 144   P      P        09 30 58.7 -0.5
RPZ                                 IAmb   IAmb     09 31 15.4
      comp=Z,34nm,1.0s
THZ   Tophouse          59.92 141   P      P        09 30 58.5 -1.0
THZ                                 IAmb   IAmb     09 30 59.5
      comp=Z,22nm,0.7s
NNZ   Nelson            59.92 140   P      P        09 30 58.2 -1.3
LTZ   Lake Taylor       60.09 142   P      P        09 30 59.7 -1.0
TUWZ  Tuamarina         60.40 140   P      P        09 31 00.7 -2.0
MDOK  Medeo             60.63 320  i P     P        09 31 04.2 -0.4
      baz=320
MDOK  Medeo             60.63 320  i P     P        09 31 04.1 -0.4
KHZ   Kahutara          60.67 141   P      P        09 31 02.5 -2.0
KHZ                                 IAmb   IAmb     09 31 06.8
      comp=Z,26nm,0.7s
ULHL  Ulahol            60.70 319   P      P        09 31 05.3 +0.2
      SNR=6.8
TDK   Taldyqorghan      60.72 323  eP      P        09 31 04.5 -0.5
      comp=Z,86nm,1.1s,baz=323
TDK   Taldyqorghan      60.72 323  eP      P        09 31 04.5 -0.5
TDK                                 pmax   pmax
      comp=Z,86nm,1.1s
AAA   Alma-Ata          60.73 320  eP      P        09 31 04.8 -0.3
      comp=Z,59nm,1.0s,baz=320
AAA   Alma-Ata          60.73 320  eP      P        09 31 04.8 -0.3
AAA                                 pmax   pmax
      comp=Z,59nm,1.0s
YAK   Yakutsk           60.80   2   P      P        09 31 06.0 +0.9
      comp=Z,56nm,0.7s,baz=188,slow=1.8,SNR=42
YAK   Yakutsk           60.80   2c iP      P        09 31 06.3 +1.2
YAK                                e*PP    pP       09 31 15.5 -0.1
YAK                                e                09 31 46.1
YAK                                e                09 33 23.2
YAK                                ePPP    PPP      09 34 47.5
YAK                                eS      S        09 39 21.4 +1.6
YAK                                e*SS    sS       09 39 43.6 +7.0
YAK                                 pmax   pmax
      comp=Z,194nm,1.0s
YAK                                 pmax   pmax
      comp=N,59nm,1.1s
YAK                                 pmax   pmax
      comp=E,26nm,1.2s
YAK                                 pmax   pmax
      comp=Z,76nm,1.5s
YAK                                 pmax   pmax
      comp=N,44nm,1.4s
YAK                                 smax   smax
      comp=E,114nm,2.8s
YAK   Yakutsk           60.80   2   P      P        09 31 05.0 -0.1
SNZO  South Karori      60.82 140   P      P        09 31 03.1 -2.5
SNZO                                IAmb   IAmb     09 31 12.1
      comp=Z,49nm,0.9s
BKZ   Black Stump Fm    60.94 137   P      P        09 31 05.2 -1.5
BKZ                                 IAmb   IAmb     09 31 10.9
      comp=Z,28nm,0.6s
URZ   Urewera           60.95 136   P      P        09 31 05.0 -1.5
      comp=Z,25nm,0.8s,baz=344,slow=4.5,SNR=10
MTBS  Maitube           61.01 320  eP      P        09 31 06.2 -0.8
      baz=320
MTBS  Maitube           61.01 320  eP      P        09 31 06.2 -0.8
CHKK  Chushkaly         61.01 321  eP      P        09 31 05.8 -1.2
      baz=321
CHKK  Chushkaly         61.01 321  eP      P        09 31 05.7 -1.2
MA2   Magadan           61.30  14c iP      P        09 31 10.5 +1.9
MA2                                 pmax   pmax
      comp=Z,91nm,0.8s
MA2   Magadan           61.30  14   P      P        09 31 10.7 +2.1
KUU   Kurty             61.43 321⇓iP       P        09 31 09.2 -0.7
      comp=Z,111nm,0.8s,baz=321
KUU   Kurty             61.43 321d iP      P        09 31 09.1 -0.7
KUU                                 pmax   pmax
      comp=Z,111nm,0.8s
TKM2  Tokmak 2          61.44 320   P      P        09 31 09.8 -0.4
      SNR=24
KBK   Karagaybulak      61.74 319   P      P        09 31 12.1  0.0
      SNR=22
UCH   Uchtor            61.83 319   P      P        09 31 12.9 -0.1
      SNR=52
CHMS  Chumysh           62.03 319   P      P        09 31 13.5 -0.3
      SNR=11
AAK   Ala-Archa         62.03 319   P      P        09 31 14.2 +0.2
      SNR=25
AAK   Ala-Archa         62.03 319d iP      P        09 31 13.5 -0.5
AAK                                 pmax   pmax
      comp=Z,201nm,1.7s
AAK   Ala-Archa         62.03 319   P      P        09 31 13.4 -0.6
AAK                                 IAmb   IAmb     09 31 19.6
      comp=Z,37nm,1.0s
AAK   Ala-Archa         62.03 319   P      P        09 31 14.2 +0.2
AAK                                 P      P        09 31 14.2 +0.2
USP   Ospenovka         62.31 320   P      P        09 31 15.3 -0.5
      SNR=56
SGDS  Sogindy           62.31 320⇓iP       P        09 31 14.9 -0.9
      baz=320
SGDS  Sogindy           62.31 320d iP      P        09 31 14.9 -0.9
AML   Almayashu         62.33 318   P      P        09 31 16.2 -0.1
      SNR=52
EKS2  Erkin-Say         62.51 319   P      P        09 31 17.1 -0.1
      SNR=37
ZAA0  Zalesovo Array    62.72 334   P      P        09 31 16.5 -1.7
ZAA0                                IAmb   IAmb     09 31 19.3
      comp=Z,53nm,1.0s
ZALV  Zalesovo Beam     62.72 334   P      P        09 31 17.2 -1.0
      comp=Z,29nm,0.8s,baz=122,slow=6.0,SNR=75
ZALV                                PKPPKP P'P'df   10 00 29.1 +8.0
      comp=Z,2.2nm,0.9s,baz=291,slow=4.1,SNR=7.1
ZALV  Zalesovo Beam     62.72 334   P      P        09 31 17.0 -1.2
KBL   Kabul             62.80 309   P      P        09 31 17.8 -1.7
KBL                                 pmax   pmax
      comp=Z,61nm,1.0s
KBL   Kabul             62.80 309   P      P        09 31 17.8 -1.7
KBL                                 IAmb   IAmb     09 31 20.5
      comp=Z,61nm,0.9s
KBL   Kabul             62.80 309   P      P        09 31 18.4 -1.0
      SNR=42
BTLS  Baital            63.42 321⇓iP       P        09 31 22.1 -0.9
      comp=Z,16nm,1.0s,baz=321
BTLS  Baital            63.42 321d iP      P        09 31 22.1 -0.9
BTLS                                pmax   pmax
      comp=Z,16nm,1.0s
KURBB Kurchatov Arra    63.72 328   PKPPKP PKPPKPdf10 00 22.4
      comp=Z,0.4nm,0.6s,baz=295,slow=3.5,SNR=4.5
KURK  Kurchatov         63.72 328d iP      P        09 31 24.3 -0.6
KURK                                pmax   pmax
      comp=Z,146nm,0.8s
KURK  Kurchatov         63.72 328   P      P        09 31 24.5 -0.3
KURK  Kurchatov         63.72 328   P      P        09 31 24.7 -0.1
DZA   Taraz             64.24 318⇓iP       P        09 31 27.7 -0.8
      comp=Z,25nm,1.2s,baz=318
DZA   Taraz             64.24 318⇓iP       P        09 31 27.7 -0.8
DZA                                 pmax   pmax
      comp=Z,25nm,1.2s
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SEY   Seymchan          64.64  13   P      P        09 31 32.0 +1.4
      comp=Z,49nm,1.0s,baz=219,slow=5.0,SNR=77
SEY   Seymchan          64.64  13  i P     P        09 31 32.8 +2.2
IUG   Iuzhnay           64.81 317⇓iP       P        09 31 31.8 -0.6
      comp=Z,26nm,0.9s,baz=317
IUG   Iuzhnay           64.81 317⇓iP       P        09 31 31.7 -0.6
IUG                                 pmax   pmax
      comp=Z,26nm,0.9s
KK31  Karatay Array     64.87 318   P      P        09 31 32.0 -0.7
KK31                                pmax   pmax
      comp=Z,56nm,1.1s
KK31  Karatay Array     64.87 318   P      P        09 31 31.9 -0.7
KK31                                IAmb   IAmb     09 31 34.0
      comp=Z,56nm,1.1s
KKAR  Karatay Array     64.87 318   P      P        09 31 31.2 -1.4
KKAR                                pmax   pmax
      comp=Z,56nm,1.1s
KKAR  Karatay Array     64.87 318   P      P        09 31 31.8 -0.9
KKAR  Karatay Array     64.87 318   P      P        09 31 31.2 -1.4
KKAR                                IAmb   IAmb     09 31 34.0
      comp=Z,56nm,1.1s
BRLS  Borolday          65.29 318  eP      P        09 31 34.6 -0.9
      comp=Z,25nm,1.0s,baz=317
BRLS  Borolday          65.29 318  eP      P        09 31 34.5 -0.9
BRLS                                pmax   pmax
      comp=Z,25nm,1.0s
BRZS  Berezniki         66.58 325  eP      P        09 31 43.2 -0.4
      comp=Z,21nm,0.9s,baz=325
BRZS  Berezniki         66.58 325  eP      P        09 31 43.1 -0.4
BRZS                                pmax   pmax
      comp=Z,21nm,0.9s
AMKA  Amchitka          66.88  33   P      P        09 31 44.1 -1.2
HRA   Herat             68.14 307   P      P        09 31 52.0 -2.0
WBK   Wadi Bani Khal    68.71 294   P      P        09 31 57.2 -0.3
WBK                                 P      P        09 31 57.2 -0.3
WSAR  Wadi Sarin        69.11 294   LR     LR       10 03 33.7
      comp=Z,158nm,21.0s,baz=118,slow=37
ADK   Adak              69.32  34   P      P        09 32 01.9 +1.2
ADK                                 pmax   pmax
      comp=Z,75nm,1.0s
ADK   Adak              69.32  34   P      P        09 32 01.9 +1.2
ADK                                 IAmb   IAmb     09 32 13.9
      comp=Z,74nm,0.9s
BRVK  Borovoye          69.35 328d iP      P        09 32 00.5 -0.3
BRVK                                pmax   pmax
      comp=Z,172nm,1.7s
BRVK  Borovoye          69.35 328   P      P        09 32 00.9 +0.1
BRVK  Borovoye          69.35 328   P      P        09 32 01.0 +0.1
MHTO  MHTO              69.43 292   P      P        09 32 00.8 -1.2
      SNR=6.1
MHTO                                P      P        09 32 00.8 -1.2
      SNR=6.1
JMDO  Jabal Madar       69.48 293   P      P        09 32 01.9 -0.4
JMDO                                P      P        09 32 01.9 -0.4
BIDO  Bidbid            69.61 295   P      P        09 32 03.3 +0.2
SMDO  Samad             69.62 294   P      P        09 32 03.0 -0.2
SMDO                                P      P        09 32 03.0 -0.2
DQM   DQM               69.71 291   P      P        09 32 03.7  0.0
BSY   Bisya             70.35 294   P      P        09 32 06.3 -1.4
BSY                                 P      P        09 32 06.3 -1.4
HOQ   Hoqain            70.36 295   P      P        09 32 07.5 -0.2
      SNR=5.5
HOQ                                 P      P        09 32 07.5 -0.2
      SNR=5.5
TIXI  Tiksi             70.43   1   P      P        09 32 06.9 -0.2
TIXI                                pmax   pmax
      comp=Z,81nm,1.2s
TIXI  Tiksi             70.43   1   P      P        09 32 06.8 -0.2
TIXI                                IAmb   IAmb     09 32 09.0
      comp=Z,81nm,1.2s
ATKA  Atka Island       70.85  34   P      P        09 32 10.2 +0.3
ARQ   Araqi             71.05 294   P      P        09 32 12.0 +0.2
ARQ                                 P      P        09 32 12.0 +0.2
SOHO  SOHO              71.14 295   P      P        09 32 12.1 -0.2
SOHO                                P      P        09 32 12.1 -0.2
SHAO  Shalim            71.32 289   P      P        09 32 13.8 +0.2
MDH   Madha             71.50 296   P      P        09 32 13.7 -0.8
UOSS  Minazif           71.54 296   P      P        09 32 14.4 -0.4
UOSS  Minazif           71.54 296   P      P        09 32 13.7 -1.1
UOSS                                P      P        09 32 13.7 -1.1
BANOM Banah             71.58 297   P      P        09 32 15.3 +0.2
HATD  Hatta, Dubai      71.59 296   P      P        09 32 15.4 +0.3
HATD                                P      P        09 32 15.4 +0.3
MASF  Masafi            71.64 296   P      P        09 32 16.0 +0.6
MASF                                P      P        09 32 16.0 +0.6
ASHO  Ashiyiah          71.64 296   P      P        09 32 15.7 +0.3
SHME  Shamm             71.74 297   P      P        09 32 15.5 -0.5
SHME                                P      P        09 32 15.5 -0.5
ALNE  Al Ain            71.84 295   P      P        09 32 17.4 +0.8
      SNR=14
ALNE                                P      P        09 32 17.4 +0.8
      SNR=14
DMTO  DMTO              71.94 288   P      P        09 32 18.3 +1.1
DMTO                                P      P        09 32 18.3 +1.1
BILL  Bilibino          72.15  15deP       P        09 32 18.5 +0.9
BILL                                pmax   pmax
      comp=Z,18nm,1.0s
UMZA  Um Al Zommool     72.22 293   P      P        09 32 19.3 +0.4
GEYT  Alibeck           72.22 310   P      P        09 32 18.7  0.0
      comp=Z,14nm,0.7s,baz=123,slow=5.5,SNR=20
GEYT                                LR     LR       10 09 06.9
      comp=Z,152nm,18.7s,baz=20,slow=40
GEYT  Alibeck           72.22 310   P      P        09 32 17.6 -1.1
GYA0B ALIBECK ARRAY     72.22 310   P      P        09 32 18.1 -0.5
GYA0B                               IAmb   IAmb     09 32 27.6
      comp=Z,48nm,1.2s
ASUD  Al Ashush, Dub    72.29 295   P      P        09 32 20.1 +0.8
      SNR=5.2
ASUD                                P      P        09 32 20.1 +0.8
      SNR=5.2
SOCY  Socotra           72.51 282   P      P        09 32 19.8 -1.0
SOCY                                IAmb   IAmb     09 32 21.8
      comp=Z,100nm,1.4s
SOCY  Socotra           72.51 282   P      P        09 32 20.3 -0.5
AJN   Ajban             72.59 295   P      P        09 32 19.9 -1.1
      SNR=6.4
AJN                                 P      P        09 32 19.9 -1.1
      SNR=6.4
DOK   Doka              72.79 289   P      P        09 32 22.2 -0.1
      SNR=6.1
DOK                                 P      P        09 32 22.2 -0.1
      SNR=6.1
WHFO  Wadi Hawf         73.07 288   P      P        09 32 23.6 -0.4
WHFO                                P      P        09 32 23.6 -0.4
ABTO  Aybut             73.48 288   P      P        09 32 26.8 +0.3
ABTO                                P      P        09 32 26.8 +0.3
MZWR  Madinat Zayed     73.50 294   P      P        09 32 26.8 +0.3
ABKAR Akbulak array     73.91 321   P      P        09 32 27.8 -0.6
ABKAR                               IAmb   IAmb     09 32 30.6
      comp=Z,69nm,1.1s
ABKAR Akbulak array     73.91 321   P      P        09 32 27.4 -0.9
NIKH  Nikolski High     74.16  35   P      P        09 32 30.5 +0.8
JRN   Qarnain Island    74.56 295   P      P        09 32 32.8 +0.1
JRN                                 P      P        09 32 32.8 +0.1
AKTO  Aktyubinsk        75.45 322   P      P        09 32 37.1 -0.2
      comp=Z,45nm,0.7s,baz=108,slow=7.3,SNR=85
AKTO                                LR     LR       10 08 15.6
      comp=Z,361nm,19.2s,baz=100,slow=38
SLWR  Sila              75.53 294   P      P        09 32 38.6 +0.4
UNV   Unalaska Valle    75.77  34   P      P        09 32 38.8 -0.2
UNV                                 IAmb   IAmb     09 32 44.9
      comp=Z,76nm,0.8s
SVE   Sverdlovsk        75.96 329c iP      P        09 32 40.2 +0.2
SVE                                 pmax   pmax
      comp=Z,369nm,1.1s
AKUT  Akutan            76.27  34   P      P        09 32 42.6 +0.7
ARU   Arti              76.92 328   P      P        09 32 45.1 -0.4
      comp=Z,43nm,0.6s,baz=113,slow=2.5,SNR=189
ARU   Arti              76.92 328d iP      P        09 32 44.9 -0.6
ARU                                                 09 32 56.6
ARU                                                 09 35 33.7
ARU                                 S      S        09 42 31.9 +1.0
ARU                                 SS     SS       09 47 23.4 -4.5
ARU                                 pmax   pmax
      comp=Z,207nm,0.8s
ARU   Arti              76.92 328   P      P        09 32 44.0 -1.5
FALS  False Pass        77.80  34   P      P        09 32 48.3 -2.1
SDPT  Sand Point        79.56  34   P      P        09 32 58.1 -2.0
LKRN  Lenkeran, Azer    79.59 309   P      P        09 33 01.1 +0.5
ANM   Nome              79.78  24   P      P        09 33 00.4 -0.8
ANM                                 pmax   pmax
      comp=Z,14nm,1.0s
ANM   Nome              79.78  24   P      P        09 33 00.4 -0.8
CNBA  Chernabura Isl    79.94  34   P      P        09 33 00.8 -1.3
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CNBA                                IAmb   IAmb     09 33 04.6
      comp=Z,49nm,0.8s
VNDA  Vanda             80.92 173   P      P        09 33 06.3 -0.7
      comp=Z,16nm,0.8s,baz=313,slow=7.3,SNR=25
VNDA  Vanda             80.92 173   P      P        09 33 06.3 -0.7
MAK   Makhachkala       81.06 313  eP      P        09 33 05.7 -2.7
MAK                                eS      S        09 43 16.3 +0.8
MAK                                 pmax   pmax
      comp=Z,825nm,1.3s
SEKA  Sheki             81.08 311   P      P        09 33 08.9 +0.2
MNGR  Mingechevir, A    81.12 311   P      P        09 33 09.3 +0.5
RAYN  Ar Rayn           81.14 293   P      P        09 33 07.6 -1.8
RAYN                                pmax   pmax
      comp=Z,44nm,1.0s
RAYN  Ar Rayn           81.14 293   P      P        09 33 07.5 -1.8
RAYN                                IAmb   IAmb     09 33 11.7
      comp=Z,44nm,0.9s
MAW   Mawson            81.20 200   P      P        09 33 08.8 +0.2
      comp=Z,14nm,0.8s,baz=89,slow=5.5,SNR=9.0
MAW   Mawson            81.20 200   P      P        09 33 08.1 -0.5
MAW                                 pmax   pmax
      comp=Z,11nm,1.2s
MAW   Mawson            81.20 200   P      P        09 33 08.1 -0.5
ZKTA  Zakatala          81.56 312   P      P        09 33 11.8 +0.6
GANJ  Ganja             81.69 311   P      P        09 33 11.9  0.0
RDOG  Red Dog Mine      81.83  21   P      P        09 33 11.5 -0.5
RDOG                                IAmb   IAmb     09 33 19.8
      comp=Z,47nm,1.2s
DDFL  Dedoflistskaro    81.92 312   P      P        09 33 15.7 +2.6
DAMY  Dhamar            81.92 284   P      P        09 33 14.2 +0.3
DAMY                                IAmb   IAmb     09 33 16.4
      comp=Z,42nm,0.9s
NAX   Nakhchivan        82.18 309   P      P        09 33 14.4 -0.2
BELG  Belogornoye       82.22 323   P      P        09 33 14.2 -0.1
      comp=Z,353nm,0.9s,baz=26,slow=0.4,SNR=89
BELG  Belogornoye       82.22 323d iP      P        09 33 14.1 -0.2
BELG                                pmax   pmax
      comp=Z,77nm,0.9s
BELG                                MLR    MLR
      comp=Z,45nm,20.0s
KIRV  Kirov             82.23 329   P      P        09 33 14.3 +0.1
      comp=Z,66nm,0.5s,baz=87,slow=2.4,SNR=56
KIRV  Kirov             82.23 329d iP      P        09 33 14.2 -0.1
GROC  Groznyy           82.33 313  eP      P        09 33 15.2 +0.1
GROC                               e                09 36 27.7
GROC                                pmax   pmax
      comp=Z,160nm,1.1s
GNI   Garni             82.84 310   P      P        09 33 19.0 +0.8
      comp=Z,18nm,0.9s,baz=192,slow=2.9,SNR=15
GNI   Garni             82.84 310   P      P        09 33 18.7 +0.5
GNI                                 pmax   pmax
      comp=Z,74nm,0.9s
GNI   Garni             82.84 310   P      P        09 33 18.7 +0.5
GNI   Garni             82.84 310   P      P        09 33 18.9 +0.8
TTA   Tatalina          83.38  27   P      P        09 33 20.8 +0.5
TTA                                 pmax   pmax
      comp=Z,29nm,0.8s
TTA   Tatalina          83.38  27   P      P        09 33 20.8 +0.5
TTA                                 IAmb   IAmb     09 33 23.5
      comp=Z,29nm,0.8s
ATD   Arta Tunnel       83.40 281   P      P        09 33 22.4 +1.0
ZEI   Tsey              83.68 313  eP      P        09 33 19.2 -3.2
ZEI                                 pmax   pmax
      comp=Z,94nm,0.9s
OHAK  Old Harbor        83.84  33   P      P        09 33 22.0 -0.6
OHAK                                IAmb   IAmb     09 33 26.9
      comp=Z,57nm,0.9s
NCK   Nalchik           83.95 313⇑eP       P        09 33 23.2 -0.4
NCK                                 pmax   pmax
      comp=Z,74nm,0.9s
GEVA  Gevas             84.02 308   P      P        09 33 24.6 +0.3
KDAK  Kodiak Island     84.28  32   P      P        09 33 25.7 +0.8
      comp=Z,57nm,0.8s,baz=283,slow=1.7,SNR=18
KDAK  Kodiak Island     84.28  32⇓eP       P        09 33 25.9 +1.0
KDAK                                pmax   pmax
      comp=Z,135nm,1.0s
KDAK  Kodiak Island     84.28  32   P      P        09 33 25.7 +0.8
GOF   Gofitskoye        84.46 315⇑eP       P        09 33 26.3 +0.2
GOF                                 pmax   pmax
      comp=Z,100nm,0.9s
KBZ   Khabaz            84.47 314   P      P        09 33 26.4 +0.3
      comp=Z,42nm,1.0s,baz=116,slow=1.6,SNR=36
KBZ   Khabaz            84.47 314d iP      P        09 33 26.3 +0.1
KBZ                                 pmax   pmax
      comp=Z,100nm,1.3s
RSO   Redoubt South     84.53  29   P      P        09 33 26.6 +0.2
NEY   Neytrino          84.57 313⇓eP       P        09 33 27.3 +0.4
NEY                                 pmax   pmax
      comp=Z,20nm,1.2s
KIV   Kislovodsk        84.64 314  eP      P        09 33 27.2  0.0
KIV                                 pmax   pmax
      comp=Z,193nm,1.0s
KIV   Kislovodsk        84.64 314   P      P        09 33 26.5 -0.7
KIV   Kislovodsk        84.64 314   P      P        09 33 27.7 +0.5
KIV                                 P      P        09 33 27.7 +0.5
PPT   Papeete           84.70 108   LR     LR       10 12 04.2
      comp=Z,159nm,18.0s,baz=257,slow=36
PPT2  Papeete2          84.70 108  eLR     LR       10 00 03.0
      comp=Z,447nm,29.5s
A21K  Barrow            84.79  18   P      P        09 33 29.4 +2.3
      baz=258
IMAR  Indian Mountai    84.86  24   P      P        09 33 28.7 +1.0
CHVG  Ch'k'valeri       85.01 313 ⇑P       P        09 33 30.1 +1.2
CHVG  Ch'k'valeri       85.01 313 ⇑P       P        09 33 30.1 +1.2
TBI   Tubuai            85.12 113  eS      S        09 43 53.6 -3.9
      comp=Z,137nm,25.2s
TBI   Tubuai            85.12 113  eLR     LR       10 00 10.7
      comp=Z,273nm,25.5s
CNPM  China Poot        85.18  30   P      P        09 33 29.6 +0.1
SKT   Skwentna          85.30  28   P      P        09 33 30.5 +0.6
SKT                                 IAmb   IAmb     09 33 50.5
      comp=Z,30nm,1.2s
BRLK  Bradley Lake      85.38  30   P      P        09 33 30.8 +0.3
SUA   Susitna One       85.62  29   P      P        09 33 31.8 +0.1
SUA                                 IAmb   IAmb     09 33 47.1
      comp=Z,33nm,0.8s
VRH   Novokhopyorsk     85.74 321  eP      P        09 33 31.9 -0.4
VRH                                 pmax   pmax
      comp=Z,320nm,0.8s
BPAW  Bear Paw Mtn.     85.78  26   P      P        09 33 32.6 +0.3
MARD  Mardin            85.78 307   P      P        09 33 33.0 -0.1
CUT   Chulitna          85.93  28   P      P        09 33 34.4 +1.3
      baz=265
RC01  Rabbit Creek A    86.07  29   P      P        09 33 34.4 +0.6
      baz=265
KOPT  Kop Dagi          86.09 310   P      P        09 33 36.1 +1.4
SEW   Seward            86.13  30   P      P        09 33 35.5 +1.4
SEW                                 IAmb   IAmb     09 33 40.0
      comp=Z,34nm,1.0s
PMR   Palmer            86.40  28   P      P        09 33 35.9 +0.5
PMR                                 pmax   pmax
      comp=Z,19nm,0.8s
PMR   Palmer            86.40  28   P      P        09 33 35.9 +0.5
PMR                                 IAmb   IAmb     09 33 38.9
      comp=Z,19nm,0.8s
COLD  Coldfoot          86.42  23   P      P        09 33 36.6 +1.2
      baz=264
COLD  Coldfoot          86.42  23   P      P        09 33 35.5 +0.1
COLD                                IAmb   IAmb     09 33 55.8
      comp=Z,23nm,1.0s
I23K  Minto, Yukon-K    86.58  25   P      P        09 33 37.4 +1.2
      baz=265
I23K  Minto, Yukon-K    86.58  25   P      P        09 33 36.8 +0.6
I23K                                IAmb   IAmb     09 33 39.4
      comp=Z,21nm,1.1s
MCK   McKinley          86.65  26   P      P        09 33 37.0 +0.3
      baz=266
NEA2  Nenana            86.66  25   P      P        09 33 37.5 +0.9
      baz=266
RND   Reindeer          86.66  27   P      P        09 33 36.1 -0.7
RND                                 pmax   pmax
      comp=Z,15nm,1.0s
RND   Reindeer          86.66  27   P      P        09 33 36.1 -0.7
KTUT  Trabzon           86.67 311 ⇑P       P        09 33 38.2 +1.0
KNK   Knik Glacier      86.71  29   P      P        09 33 38.1 +1.1
KNK                                 IAmb   IAmb     09 33 40.8
      comp=Z,32nm,0.9s
SOC   Sochi             86.77 313  eP      P        09 33 35.9 -1.7
SOC                                e                09 36 54.4
SOC                                eS      SKSac    09 43 59.5 -2.5
SOC                                eSS     SS       09 49 50.2 -4.9
SOC                                 pmax   pmax
      comp=Z,109nm,1.0s
SML   Sawmill           86.80  28   P      P        09 33 37.8 +0.4
SML                                 IAmb   IAmb     09 33 56.4
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	comp=Z,29nm,1.0s						
MDM	Murphy Dome	87.04	25	P	P	09 33 38.3	-0.2
WRH	Wood River Hil	87.07	26	P	P	09 33 38.7	+0.1
TCOL	CIGO, UAF Yank	87.19	25	P	P	09 33 38.3	-0.9
COLA	College	87.20	25	⇑eP	P	09 33 38.1	-1.1
COLA				pmax	pmax		
	comp=Z,25nm,3.2s						
COLA	College	87.20	25	P	P	09 33 38.8	-0.4
CCB	Clear Creek Bu	87.20	25	P	P	09 33 37.9	-1.3
VORD	Divnogorie	87.26	321	eP	P	09 33 39.3	-0.5
VORD				pmax	pmax		
	comp=Z,70nm,0.8s						
SCM	Sheep Creek Mo	87.27	28	P	P	09 33 41.1	+1.3
SCM				pmax	pmax		
	comp=Z,32nm,0.9s						
SCM	Sheep Creek Mo	87.27	28	P	P	09 33 41.1	+1.3
SCM				IAmb	IAmb	09 33 47.9	
	comp=Z,32nm,0.9s						
DHY	Denali Highway	87.31	27	P	P	09 33 40.8	+0.8
VORR	Voronezh	87.33	321	eP	P	09 33 38.0	-2.1
VORR				pmax	pmax		
	comp=Z,400nm,1.4s						
VSR	Storozhevoye	87.35	321	eP	P	09 33 39.6	-0.6
VSR				pmax	pmax		
	comp=Z,60nm,0.7s						
KLMR	Klimovskoe	87.46	331	eP	P	09 33 38.5	-2.0
KLMR				e		09 37 01.7	
KLMR				pmax	pmax		
	comp=Z,61nm,0.8s						
KLMR	Klimovskoe	87.46	331	eP	P	09 33 38.6	-2.0
KLMR				AMP		09 33 46.6	
	comp=Z,61nm,0.8s						
KLMR				ePP	PP	09 37 01.8	-3.6
LPSR	Galich'ya Gora	87.53	322	eP	P	09 33 40.8	-0.3
LPSR				pmax	pmax		
	comp=Z,160nm,0.9s						
HDA	Harding Lake	87.56	26	P	P	09 33 40.5	-0.5
	baz=267						
HDA	Harding Lake	87.56	26	P	P	09 33 40.1	-0.9
IL31		87.60	25	P	P	09 33 40.5	-0.6
ILAR	Eielson Array	87.60	25	P	P	09 33 40.1	-1.1
	comp=Z,2.7nm,0.4s,baz=254,slow=4.3,SNR=82						
ILAR				PP	PP	09 37 08.2	+1.7
	comp=Z,3.2nm,1.1s,baz=265,slow=6.2,SNR=4.2						
ILAR				PKKPbc	PKKPbc	09 51 32.3	0.0
	comp=Z,1.1nm,1.1s,baz=137,slow=1.5,SNR=5.3						
ILAR	Eielson Array	87.60	25	P	P	09 33 39.5	-1.7
PAX	Paxson	88.18	27	P	P	09 33 45.2	+1.1
PAX				pmax	pmax		
	comp=Z,26nm,1.2s						
PAX	Paxson	88.18	27	P	P	09 33 45.2	+1.1
PAX				IAmb	IAmb	09 33 46.4	
	comp=Z,26nm,1.2s						
TMCR	Tamitsa	88.25	334	eP	P	09 33 42.9	-1.3
KIBK	Kibwezi	88.34	268	P	P	09 33 47.4	+1.5
	SNR=5.3						
MOS	Moscow	88.35	326	eP	P	09 33 42.6	-2.3
MOS				e		09 33 55.0	
MOS				e		09 37 11.0	
MOS				e		09 44 25.9	
MOS				pmax	pmax		
	comp=Z,119nm,1.2s						
MOS				pmax	pmax		
	comp=Z,200nm,1.2s						
MOS				MLR	MLR		
	comp=Z,500nm,20.0s						
ANN	Anapa	88.43	315	eP	P	09 33 45.8	+0.3
ANN				e		09 44 23.5	
ANN				pmax	pmax		
	comp=Z,157nm,0.9s						
RIDG	Independent Ri	88.47	26	P	P	09 33 45.7	+0.3
RIDG				IAmb	IAmb	09 33 47.2	
	comp=Z,21nm,1.0s						
N25K	Chitina, Valde	88.57	29	P	P	09 33 47.5	+1.5
	baz=270						
BMAR	Burnt Mountain	88.61	23	P	P	09 33 45.6	-0.4
GAZ	Gaziantep	88.63	307	P	P	09 33 47.2	+0.4
SCRK	Sand Creek	88.85	26	P	P	09 33 48.1	+0.8
	baz=270						
GLB	Gilahina Butte	88.94	29	P	P	09 33 47.8	+0.1
OBN	Obninsk	88.95	325	P	P	09 33 46.9	-0.8
	comp=Z,7.3nm,0.6s,baz=301,slow=0.8,SNR=16						
OBN	Obninsk	88.95	325	d iP	P	09 33 46.9	-0.8
OBN				i		09 34 01.0	
OBN				eS	SKSac	09 44 07.3	-7.3
OBN				eSS	SS	09 50 27.7	+1.5
OBN				pmax	pmax		
	comp=Z,106nm,1.3s						
OBN	Obninsk	88.95	325	P	P	09 33 46.3	-1.4
KMBO	Kilima Mbogo	89.11	269	P	P	09 33 49.9	+0.1
	comp=Z,14nm,1.0s,baz=50,slow=7.2,SNR=18						
KMBO				LR	LR	10 11 35.5	
	comp=Z,179nm,21.4s,baz=96,slow=34						
TOKA	Tokat	89.17	310	P	P	09 33 50.2	+1.0
TOKA				IAmb	IAmb	09 33 54.9	
	comp=Z,31nm,0.9s						
LVZ	Lovozero	89.60	338	⇑eP	P	09 33 49.5	-1.1
LVZ				pmax	pmax		
	comp=Z,46nm,1.7s						
BCAR	Beaver Creek A	89.86	27	P	P	09 33 52.7	+0.8
BARN	Barnard Glacie	89.99	29	P	P	09 33 54.2	+1.4
BARN				IAmb	IAmb	09 34 00.5	
	comp=Z,20nm,0.9s						
EGAK	Eagle	90.06	25	P	P	09 33 53.1	+0.3
APA	Apatity	90.09	337	⇓iP	P	09 33 50.5	-2.3
APA				pmax	pmax		
	comp=Z,11nm,1.1s						
CTGM	Chitina Glacie	90.16	29	P	P	09 33 54.9	+1.4
CTGM				IAmb	IAmb	09 34 01.2	
	comp=Z,30nm,1.0s						
MMAI	Mount Meron Ar	90.18	303	P	P	09 33 53.6	-0.5
	comp=Z,15nm,0.7s,baz=76,slow=7.0,SNR=23						
EIL	Elat	90.65	300	P	P	09 33 56.1	-0.2
	comp=Z,9.2nm,0.9s,baz=105,slow=1.9,SNR=7.2						
SIM	Simferopol'	90.79	315	eP	P	09 33 55.2	-1.4
SIM				pmax	pmax		
	comp=Z,54nm,0.6s						
DAWY	Dawson	90.87	26	P	P	09 33 57.1	+0.5
DAWY				IAmb	IAmb	09 34 04.9	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	91.05	180	P	P	09 33 56.8	-0.7
	comp=Z,3.5nm,0.6s,baz=309,slow=0.7,SNR=31						
QSPA	South Pole Qui	91.05	180	P	P	09 33 57.5	-0.1
BR131	Keskin Array S	91.36	310	P	P	09 33 58.3	-1.3
BR131				pmax	pmax		
	comp=Z,20nm,1.1s						
BR131	Keskin Array S	91.36	310	P	P	09 33 58.3	-1.3
BR131				IAmb	IAmb	09 34 02.3	
	comp=Z,20nm,1.1s						
BRTR	Keskin Array B	91.36	310	P	P	09 33 59.0	-0.6
	comp=Z,10nm,0.9s,baz=122,slow=5.6,SNR=46						
BRTR				LR	LR	10 22 50.2	
	comp=Z,40nm,18.1s,baz=82,slow=41						
BRTR	Keskin Array B	91.36	310	P	P	09 33 59.2	-0.4
BRTR	Keskin Array B	91.36	310	P	P	09 33 59.2	-0.4
EPYK	Eagle Plains	91.76	24	P	P	09 34 01.2	+0.5
	baz=277						
EPYK	Eagle Plains	91.76	24	P	P	09 34 00.8	+0.1
EPYK				IAmb	IAmb	09 34 13.6	
	comp=Z,29nm,1.4s						
CSS	Mathiatis	91.83	305	P	P	09 34 01.1	-0.6
HYT	Haines Junctio	92.03	29	P	P	09 34 03.4	+1.2
HYT				IAmb	IAmb	09 34 05.3	
	comp=Z,36nm,1.4s						
INK	Inuvik	92.71	21	P	P	09 34 04.7	-0.2
	comp=Z,8.6nm,1.1s,baz=288,slow=5.4,SNR=14						
INK	Inuvik	92.71	21	P	P	09 34 05.2	+0.3
INK				pmax	pmax		
	comp=Z,19nm,1.4s						
INK	Inuvik	92.71	21	P	P	09 34 05.2	+0.3
INK				IAmb	IAmb	09 34 13.9	
	comp=Z,19nm,1.4s						
ARCES	ARCESS Array B	92.74	340	P	P	09 34 04.2	-0.9
	comp=Z,24nm,1.0s,baz=79,slow=4.5,SNR=24						
ARCES	ARCESS Array B	92.74	340	P	P	09 34 03.4	-1.7
ARCES				pmax	pmax		
	comp=Z,19nm,1.0s						
ARCES	ARCESS Array B	92.74	340	P	P	09 34 03.4	-1.7
SPITS	Spitsbergen Ar	92.94	349	P	P	09 34 05.6	-0.3
	comp=Z,6.2nm,0.6s,baz=94,slow=7.6,SNR=13						
WHY	Whitehorse	93.33	29	P	P	09 34 09.5	+1.3
WHY				IAmb	IAmb	09 34 10.8	
	comp=Z,15nm,0.8s						
TAOE	Nuku Hiva Isla	93.64	99	eLR	LR	10 04 07.7	
	comp=Z,362nm,23.4s						
AKASG	Malin Array Be	93.65	321	P	P	09 34 08.9	-0.8
	comp=Z,6.0nm,0.8s,baz=69,slow=4.6,SNR=21						
AKASG				LR	LR	10 20 33.9	
	comp=Z,213nm,19.1s,baz=305,slow=38						
AKASG	Malin Array Be	93.65	321	P	P	09 34 08.7	-1.0
AKASG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	93.65	321	P	P	09 34 08.7	-1.0
AKBB	Malin Array Si	93.65	321	P	P	09 34 07.6	-2.0
AKBB				pmax	pmax		
	comp=Z,11nm,1.0s						
AKBB	Malin Array Si	93.65	321	P	P	09 34 07.6	-2.0
FIA1	FINESS Array S	93.92	332	P	P	09 34 09.9	-0.8
FIA1				IAmb	IAmb	09 34 16.6	
	comp=Z,20nm,0.9s						
FINES	FINESS Array B	93.92	332	P	P	09 34 09.6	-1.1
	comp=Z,9.6nm,0.6s,baz=67,slow=4.8,SNR=21						
FINES	FINESS Array B	93.92	332	P	P	09 34 09.3	-1.4
MNK	Minsk	94.00	325	i P	P	09 34 09.9	-1.3
	comp=E,1.0nm,1.0s						
MNK				i P	P	09 34 09.9	-1.3
	comp=N,17nm,1.0s						
MNK				i P	P	09 34 09.9	-1.3
	comp=Z,26nm,1.0s						
MNK				i PP	PP	09 37 56.0	-1.4
MNK				i PPP	PPP	09 39 57.0	
MNK				i S	SKSac	09 44 41.7	-1.7
MNK				i ScS	S	09 45 18.9	-0.1
MNK				i SP	SP	09 46 14.4	-18
MNK				i SS	SS	09 51 38.6	-0.3
MNK				i SSS	SSS	09 54 58.3	
MNK				i SKKS	SKKSdf	09 58 33.0	+10
MNK				i LQ	LQ	10 06 53.2	
MNK				i LR	LR	10 11 38.1	
MNK				i LRM	MLR	10 17 05.5	
	comp=N,436nm,19.2s						
MNK				i LRM	MLR	10 17 13.5	
	comp=Z,115nm,19.2s						
MNK				i LRM	MLR	10 17 13.8	
	comp=E,20nm,19.1s						
VSU	Vasula	94.07	329	eP	P	09 34 10.9	-0.5
VSU	Vasula	94.07	329	⇑eP	P	09 34 08.7	-2.7
VSU				pmax	pmax		
	comp=Z,18nm,0.6s						
SORM	Soroca	94.50	318	⇑P	P	09 34 13.0	-0.6
SORM	Soroca	94.50	318	⇑P	P	09 34 13.0	-0.6
IDID	Didziasalis	94.54	326	eP	P	09 34 13.3	-0.3
NACGM	Naroch	94.58	325	i P	P	09 34 14.2	+0.4
NACGM				i P	P	09 34 14.2	+0.4
NACGM				i P	P	09 34 14.2	+0.4
NACGM				i PP	PP	09 38 07.3	+5.4
NACGM				i PPP	PPP	09 40 09.4	
NACGM				i SKS	SKSac	09 44 45.5	-1.0
NACGM				i PS	PS	09 46 44.0	-0.2
NACGM				i SS	SS	09 51 33.2	-14
NACGM				i SSS	SSS	09 55 14.1	
IIGN	Ignalina	94.83	326	eP	P	09 34 14.4	-0.6
ISAL	Salakas	94.85	326	eP	P	09 34 14.6	-0.4
VASR	Vaslui	95.06	317	⇑P	P	09 34 14.8	-1.5
C36M	Paulatuk	95.78	20	P	P	09 34 19.4	+0.4
	baz=289						
C36M	Paulatuk	95.78	20	P	P	09 34 18.9	-0.1
C36M				IAmb	IAmb	09 34 38.4	
	comp=Z,28nm,1.4s						
TESR	Tescani	95.86	317	⇑P	P	09 34 20.2	+0.3
VRI	Vrincioaia	95.89	316	⇑P	P	09 34 20.7	+0.6
VRI	Vrincioaia	95.89	316	⇑P	P	09 34 20.7	+0.6
BISRR	Bisoca	95.94	316	⇑P	P	09 34 21.4	+1.0
PLOR	Plostina	95.94	316	⇑P	P	09 34 20.9	+0.5
PLOR	Plostina	95.94	316	⇑P	P	09 34 20.9	+0.5
PABE	Paberze	96.07	326	eP	P	09 34 20.4	-0.3
BIZ	Bicaz	96.17	317	⇑P	P	09 34 21.7	+0.4
NEHR	Nehoiu	96.25	316	⇓P	P	09 34 22.7	+0.9
MLR	Muntele Rosu	96.48	316	⇑P	P	09 34 23.3	+0.3
MLR	Muntele Rosu	96.48	316	P	P	09 34 22.0	-1.0
MLR				pmax	pmax		
	comp=Z,15nm,0.8s						
MLR	Muntele Rosu	96.48	316	P	P	09 34 21.9	-1.0
MLR				IAmb	IAmb	09 34 28.1	
	comp=Z,15nm,0.8s						
OZUR		96.51	316	⇑P	P	09 34 21.7	-1.2
BURAR	Bucovina Array	96.66	318	⇑P	P	09 34 24.2	+0.5
BURAR	Bucovina Array	96.66	318	⇑P	P	09 34 24.2	+0.5
BUR08	Bucovina Ar. S	96.67	318	P	P	09 34 23.8	0.0
BUR08				IAmb	IAmb	09 34 25.4	
	comp=Z,20nm,0.9s						
DOPR	Dopca	96.80	316	⇑P	P	09 34 24.4	+0.2
SUW	Suwalki	96.81	325	eP	P	09 34 23.3	-0.7
SUW	Suwalki	96.81	325	P	P	09 34 22.6	-1.4
SUW				pmax	pmax		
	comp=Z,57nm,1.0s						
SUW	Suwalki	96.81	325	P	P	09 34 22.6	-1.4
LVV	L'vov	97.07	320	eP	Pdif	09 34 27.8	+2.4
LVV				e		09 38 21.1	
LVV				eS	S	09 45 45.4	-0.5
LVV				e		09 47 09.4	
VOIR		97.11	316	⇑P	P	09 34 24.7	-1.0
VOIR		97.11	316	⇑P	P	09 34 24.7	-1.0
ARCR	ARCALIA	97.33	318	⇑P	Pdif	09 34 27.6	+0.9
ARR	Arges	97.42	316	⇑P	P	09 34 27.0	-0.1
BMR	Baia Mare	97.80	318	⇑P	Pdif	09 34 29.4	+0.7
BMR	Baia Mare	97.80	318	⇑P	Pdif	09 34 29.4	+0.7
CJR	Cluj-Napoca	97.90	317	⇑P	Pdif	09 34 30.2	+0.9
CJR	Cluj-Napoca	97.90	317	⇑P	Pdif	09 34 30.2	+0.9
LOT	Lotru	98.00	316	⇑P	Pdif	09 34 30.1	+0.2
KOLS	Kolonicke sedl	98.36	320	eP	Pdif	09 34 32.3	+1.1
KOLS	Kolonicke sedl	98.36	320	ePDIFF	Pdif	09 34 32.3	+1.1
UZH	Uzhgorod	98.41	319	eP	Pdif	09 34 31.6	+0.2
UZH				e		09 34 40.4	
UZH				e		09 34 48.8	
DRGR		98.49	318	⇑P	Pdif	09 34 32.3	+0.4
DRGR		98.49	318	⇑P	Pdif	09 34 32.3	+0.4
GZR	Gura Zlata	98.70	316	⇑P	Pdif	09 34 33.0	+0.1
GZR	Gura Zlata	98.70	316	⇑P	Pdif	09 34 33.0	+0.1
VTS	Vitosha	98.86	313	⇑P	P	09 34 33.6	-0.2
VTS	Vitosha	98.86	313	⇑P	P	09 34 33.6	-0.2
CRVS	Cervenica-Dubn	98.90	320	eP	Pdif	09 34 34.3	+0.7
CRVS	Cervenica-Dubn	98.90	320	ePDIFF	Pdif	09 34 34.3	+0.7
HERR	Herculane	99.05	316	⇑P	Pdif	09 34 34.3	-0.1
BZS	Buzias	99.46	317	⇓P	Pdif	09 34 34.4	-1.8
BZS	Buzias	99.46	317	⇓P	Pdif	09 34 34.4	-1.8
MDVR	Moldovita	99.56	316	⇑P	Pdif	09 34 37.1	+0.5
DAG	Danmarks Havn	99.76	352	i P	Pdif	09 34 37.0	+0.2
DAG				pmax	pmax		
	comp=Z,22nm,0.8s						
DAG	Danmarks Havn	99.76	352	i P	Pdif	09 34 37.0	+0.2
	comp=Z,22nm,0.8s						
DAG	Danmarks Havn	99.76	352	i P	Pdif	09 34 37.0	+0.2
DAG				i P	Pdif	09 34 37.0	+0.2
DAG				IAmb	IAmb	09 34 37.4	
	comp=Z,22nm,0.8s						
HFS	Hagfors	100.12	332	P	Pdif	09 34 37.7	-1.1
	comp=Z,4.0nm,0.9s,baz=267,slow=2.9,SNR=2.8						
PSZ	Piszkesteto	100.13	319	eP	Pdif	09 34 38.8	-0.4
RES	Resolute Bay	100.42	10	P	Pdif	09 34 36.6	-3.2
	comp=Z,5.8nm,0.4s,baz=270,slow=1.1,SNR=25						
NB2	NORSAR Subarra	100.92	333	P	Pdif	09 34 40.9	-1.5
	comp=Z,18nm,1.2s,baz=70,slow=4.3						
NB2	NORSAR Subarra	100.92	333	P	Pdif	09 34 40.9	-1.5
	baz=70,slow=4.3						
NOA	NORSAR Array B	100.92	333	P	Pdif	09 34 40.6	-1.7
	comp=Z,2.6nm,0.8s,baz=69,slow=4.5,SNR=8.0						
MORC	Moravsky Berou	101.18	321	⇑P	Pdif	09 34 49.1	+5.3
MORC	Moravsky Berou	101.18	321	⇑P	Pdif	09 34 49.1	+5.3
MORH	Mrgy, Hungar	101.36	318	eP	Pdif	09 34 44.0	-0.5
KRLC	Kraliky	101.57	322	eP	Pdif	09 34 44.9	-0.6
KRLC	Kraliky	101.57	322	ePDIFF	Pdif	09 34 44.9	-0.6
DPC	Dobruska-Polom	101.78	322	eP	Pdif	09 34 50.0	+3.6
DPC	Dobruska-Polom	101.78	322	ePDIFF	Pdif	09 34 50.0	+3.6
OSTC	Ostas	101.79	322	ePDIFF	Pdif	09 34 50.4	+4.0
CHVC	Chvalec	101.88	322	ePDIFF	Pdif	09 34 51.4	+4.6
VRAC	Vranov	101.90	321	P	Pdif	09 34 47.4	+0.5
	comp=Z,1.6nm,0.6s,baz=95,slow=6.3,SNR=2.4						
YKA	Yellowknife Ar	102.01	25	P	Pdif	09 34 47.9	+0.8
	comp=Z,2.0nm,0.7s,baz=300,slow=3.9,SNR=36						
YKA				PP	PP	09 38 57.6	-0.8
	comp=Z,1.9nm,0.9s,baz=295,slow=6.2,SNR=7.0						
YKA				PKiKP	PKiKP	09 39 10.5	+1.0
	comp=Z,1.0nm,0.7s,baz=297,slow=0.8,SNR=9.2						
YKA				PKKPbc	PKKPbc	09 50 52.7	-1.0
	comp=Z,0.4nm,0.7s,baz=110,slow=3.1,SNR=5.0						
DBG	Daneborg	102.02	351	i P	Pdif	09 34 47.8	+0.9
D03D	Eldon	102.92	41	P	Pdif	09 34 53.7	+2.2
	baz=286						
PRU	Pruhonice	102.98	322	eP	Pdif	09 34 56.3	+4.6
PRU	Pruhonice	102.98	322	ePDIFF	Pdif	09 34 56.3	+4.6
BRG	Berggiesshubel	103.07	323	eP	Pdif	09 34 52.6	+0.5
BRG				Amp		09 34 59.5	
	comp=Z,7.5nm,1.1s						
BRG				ex	x	09 38 17.0	
BRG				Amp		09 38 23.8	
	comp=Z,9.8nm,1.2s						
BRG				ex	x	09 39 02.5	
BRG				Amp		09 39 11.0	
	comp=Z,14nm,1.5s						
BRG	Berggiesshubel	103.07	323	eP	Pdif	09 34 52.6	+0.5
BRG				e		09 39 02.4	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG	Berggiesshubel	103.07	323	eP	Pdif	09 34 52.6	+0.5
BRG				Amp		09 34 59.5	
	comp=Z,7.5nm,1.1s						
BRG				ex	x	09 38 17.0	
BRG				Amp		09 38 23.8	
	comp=Z,9.8nm,1.2s						
BRG				ex	x	09 39 02.5	
BRG				Amp		09 39 11.0	
	comp=Z,14nm,1.5s						
B05A	Bryant	103.36	40	P	Pdif	09 34 55.5	+2.1
	baz=287						
CLL	Collm	103.49	324	ePdif	Pdif	09 34 54.0	+0.1
CLL				e		09 38 28.0	
CLL				ePP	PP	09 39 06.0	-3.8
CLL				LmV		10 26 00.0	
	comp=Z,300nm,22.0s						
CLL	Collm	103.49	324	eP	Pdif	09 34 54.0	+0.1
KHC	Kasperske Hory	103.84	321	eP	Pdif	09 34 55.5	-0.1
KHC	Kasperske Hory	103.84	321	ePDIFF	Pdif	09 34 55.5	-0.1
GERES	GERESS Array B	103.86	321	Pdiff	Pdif	09 34 55.2	-0.6
	comp=Z,0.9nm,0.8s,baz=90,slow=5.3,SNR=5.5						
GERES				PKiKP	PKiKP	09 39 13.7	+0.3
	comp=Z,0.9nm,0.7s,baz=90,slow=1.0,SNR=4.5						
GERES				PKKPbc	PKKPdf	09 50 53.6	-3.0
	comp=Z,0.5nm,0.8s,baz=230,slow=3.3,SNR=3.8						
YBH	Yreka Blue Hor	104.75	46	PP	PKiKP	09 39 20.7	+5.4
	comp=Z,2.4nm,1.1s,baz=14,slow=2.5,SNR=3.3						
NEW	Newport	106.50	39	Pdiff	Pdif	09 35 08.4	+0.9
NEW				PP	PP	09 39 30.8	-1.5
	comp=Z,5.0nm,1.1s,baz=308,slow=4.0,SNR=3.8						
NVAR	Mina Array Bea	108.92	49	Pdiff	Pdif	09 35 18.9	+0.2
	comp=Z,2.3nm,0.9s,baz=268,slow=5.5,SNR=11						
NVAR				PKiKP	PKiKP	09 39 24.9	+1.6
	comp=Z,1.1nm,0.9s,baz=296,slow=2.4,SNR=3.8						
NVAR				PP	PP	09 39 47.0	-3.6
	comp=Z,4.2nm,1.0s,baz=274,slow=6.4,SNR=7.2						
NVAR				PKKPbc	PKKPbc	09 50 35.2	+3.1
	comp=Z,0.3nm,0.7s,baz=108,slow=8.4,SNR=3.6						
NVAR	Mina Array Bea	108.92	49		Pdif	09 35 20.1	+1.4
EKA	Eskdalemuir Ar	110.32	332	PKKPbc	PKKPbc	09 50 26.2	-1.7
	comp=Z,1.2nm,0.6s,baz=242,slow=3.3,SNR=4.5						
ELK	Elko	110.42	45	Pdiff	Pdif	09 35 26.2	+0.8
	comp=Z,0.6nm,0.4s,baz=1.6,slow=4.3,SNR=3.7						
ELK				PKiKP	PKiKP	09 39 27.5	+1.4
	comp=Z,1.2nm,0.9s,baz=200,slow=4.7,SNR=4.2						
ELK				PP	PP	09 40 00.8	-0.5
	comp=Z,2.8nm,1.1s,baz=291,slow=5.5,SNR=3.8						
KEST	Kesra	110.97	309	PP	PP	09 40 04.8	-0.4
	comp=Z,8.0nm,0.8s,baz=333,slow=5.3,SNR=4.1						
PFO	Pinyon Flats O	111.75	53	PP	PP	09 40 10.4	-0.6
	comp=Z,3.9nm,0.9s,baz=267,slow=3.5,SNR=4.7						
IRM	Iron Mountain	112.64	52	P	PKiKP	09 39 32.5	+2.2
	baz=288						
PDAR	Pinedale Array	113.55	42	PKKPbc	PKKPbc	09 50 18.1	+0.9
	comp=Z,0.8nm,0.8s,baz=120,slow=5.7,SNR=4.6						
W18A	Petrified Fore	116.50	49		PKPdf	09 39 37.8	0.0
TUC	Tucson	116.69	53	P	PKiKP	09 39 39.7	+1.5
	baz=290						
ULM	Lac du Bonnet	117.41	29	PKP	PKPdf	09 39 37.5	-1.4
	comp=Z,6.2nm,0.7s,baz=351,slow=3.1,SNR=11						
ULM	Lac du Bonnet	117.41	29	PKIKP	PKPdf	09 39 38.0	-0.9
ULM	Lac du Bonnet	117.41	29		PKPdf	09 39 38.0	-0.9
ESDC	Sonseca Array	119.12	318	PKP	PKiKP	09 39 42.8	+0.2
	comp=Z,0.4nm,0.6s,baz=28,slow=0.7,SNR=4.3						
ESDC				PP	PP	09 41 07.5	+5.1
	comp=Z,5.6nm,1.2s,baz=52,slow=7.2,SNR=6.5						
MVO	Moncorvo	120.36	320	ePKP	PKiKP	09 39 46.6	+1.6
POLO	Lamas de Olo	120.73	321	ePKP	PKPdf	09 39 45.2	-0.5
PCBR	Castelo Branco	121.36	319	ePKP	PKiKP	09 39 48.1	+1.2
PMRV	Marv??o	121.53	319	ePKP	PKiKP	09 39 47.7	+0.4
PBAR	Barrancos	121.95	318	ePKP	PKiKP	09 39 49.7	+1.6
PMTG	Montargil	122.26	319	ePKP	PKPdf	09 39 47.1	-1.4
MDT	Midelt	122.76	311	PKP	PKiKP	09 39 50.8	+0.7
	comp=Z,2.8nm,0.8s,baz=271,slow=7.0,SNR=5.0						
PCVE	Castro Verde	122.90	317	ePKP	PKiKP	09 39 51.3	+1.3
MESJ	Messejana	122.92	318	ePKP	PKPdf	09 39 48.1	-1.7
TOA0	Torodi Ar. Sit	123.31	286	PKPdf	PKPdf	09 39 51.1	-0.1
TORD	Torodi Ar. Bea	123.31	286	PKP	PKiKP	09 39 51.4	0.0
	comp=Z,9.4nm,0.8s,baz=53,slow=2.2,SNR=19						
TORD				PKKPbc	PKKPab	09 49 41.4	+0.3
	comp=Z,3.9nm,0.9s,baz=273,slow=3.8,SNR=8.1						
TORD	Torodi Ar. Bea	123.31	286		PKiKP	09 39 51.6	+0.1
TXAR	Lajitas Array	123.47	53	PKP	PKPdf	09 39 51.2	-0.1
	comp=Z,5.0nm,0.7s,baz=37,slow=8.5,SNR=4.6						
MATQ	Matagami	125.28	19	P	PKPdf	09 39 53.7	-0.3
	baz=330						
LSQQ	Lebel-sur-Quev	126.10	19	P	PKiKP	09 39 55.9	-0.1
	baz=331						
ALGO	Algonquin Park	128.41	22	P	PKiKP	09 40 01.0	+0.3
	baz=328						
D56A	ZEC Mazanza, M	128.58	18	P	PKiKP	09 40 01.4	+0.3
	baz=333						
G54A	Lake Saint Pet	128.86	22	P	PKiKP	09 40 01.7	0.0
	baz=328						
LATQ	La Tuque	128.87	17	P	PKiKP	09 40 01.8	+0.2
	baz=335						
L48A	N Adams	128.89	29		PKPdf	09 40 01.5	+0.3
SADO	Sadowa	128.99	23	PKP	PKiKP	09 40 01.8	-0.2
	comp=Z,14nm,1.1s,baz=318,slow=5.8,SNR=3.8						
E57A	Chemin Saint G	129.34	18	P	PKiKP	09 40 02.6	0.0
	baz=333						
E58A	La Victoria	129.64	18	P	PKiKP	09 40 03.1	-0.1
	baz=334						
N49A	Columbus Grove	129.78	30	PKPdf	PKiKP	09 40 04.9	+1.2
HICK	Hickman	130.04	38		PKPdf	09 40 02.2	-1.3
GLAT	Glass	130.18	38		PKPdf	09 40 01.3	-2.5
HALT	Halls	130.38	38		PKPdf	09 40 02.6	-1.5
KIC	Kosan Boka	130.60	279	ePKIKP	PKiKP	09 40 06.4	+0.3
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	130.68	280	PKP	PKiKP	09 40 06.1	-0.1
	comp=Z,8.0nm,0.8s,baz=140,slow=3.2,SNR=6.9						
DBIC				SKPbc	SKPab	09 43 30.6	+3.9
	comp=Z,11nm,0.9s,baz=97,slow=1.3,SNR=5.9						
TIC	Toumodi	130.84	280	ePKIKP	PKiKP	09 40 06.8	+0.3
LIC	Lamto	130.90	279	ePKIKP	PKiKP	09 40 06.9	+0.3
	comp=Z,28nm,0.8s						
M53A	WI Miller and	131.06	27	P	PKPdf	09 40 05.7	+0.4
	baz=323						
M53A	WI Miller and	131.06	27	PKPdf	PKPdf	09 40 05.4	+0.1
P52A	Corning	131.78	30	P	PKiKP	09 40 07.4	-0.4
	baz=320						
M56A	Emporium	132.11	25	P	PKPdf	09 40 07.8	+0.5
	baz=326						
L57A	Andrews Acres	132.22	23	P	PKiKP	09 40 08.2	-0.4
	baz=328						
N56A	West Decatur	132.53	25	P	PKPdf	09 40 08.7	+0.5
	baz=326						
M57A	Sunshine Farm,	132.67	24	P	PKiKP	09 40 09.4	0.0
	baz=327						
Q54A	Coxs Mills	132.92	29		PKiKP	09 40 10.3	+0.3
SSPA	Standing Stone	132.94	25	P	PKiKP	09 40 09.5	-0.6
	baz=326						
SSPA	Standing Stone	132.94	25		PKPdf	09 40 08.9	+0.1
S54A	Dingess, Beckl	133.60	31	P	PKiKP	09 40 11.5	-0.1
	baz=320						
O58A	Lewisberry	133.77	25	P	PKiKP	09 40 11.7	0.0
	baz=327						
TKL	Tuckaleechee C	133.87	35	PKP	PKiKP	09 40 12.6	+0.5
	comp=Z,10nm,0.6s,baz=191,slow=4.1,SNR=6.0						
TKL	Tuckaleechee C	133.87	35		PKPdf	09 40 11.1	+0.3
PLCA	Paso Flores	137.71	161	PKhKP	PKPpre	09 40 08.4	
	comp=Z,0.7nm,0.5s,baz=230,slow=3.9,SNR=6.7						
PLCA				PKP	PKiKP	09 40 19.4	-0.5
	comp=Z,8.2nm,1.1s,baz=244,slow=2.1,SNR=10						
PLCA				SKPbc	SKiKP	09 43 53.0	-0.5
	comp=Z,2.6nm,0.8s,baz=205,slow=7.3,SNR=6.3						
PLCA	Paso Flores	137.71	161	PKPdf	PKPdf	09 40 16.6	-1.2
PLCA	Paso Flores	137.71	161	eP	PKiKP	09 40 20.9	+1.0
LC01	Cunco	138.88	158		PKPdf	09 40 17.3	-2.7
BI02	San Fabin de	141.07	157	PKPdf	PKiKP	09 40 25.7	-1.2

MT02	Curacav	144.07	155		PKPbc	09 40 27.6	+0.2
PEL	Peldehue	144.36	155	PKIKP	PKPbc	09 40 28.8	+0.4
PEL	Peldehue	144.36	155	PKPdf	PKPbc	09 40 28.8	+0.5
VA03	San Esteban	144.75	155		PKPbc	09 40 30.1	+0.4
AAGR	Agrelo	145.16	157	*e*P	PKPdf	09 40 31.8	+0.3
ASAL	Salagasta	145.60	157	*e*P	PKPab	09 40 33.0	+0.3
AUSP	Uspallata	145.70	156	*e*P	PKPab	09 40 33.9	+0.6
CO02	Combarbal	145.88	153		PKPbc	09 40 33.1	-0.2
RTLS	Leoncito	146.11	156	*e*P	PKPab	09 40 35.0	+0.1
FSCY	Frank Sound, G	146.20	52		PKPdf	09 40 33.6	+0.2
CO03	El Pedregal	146.33	153	PKPdf	PKPdf	09 40 33.9	+0.4
RTCV	Cerro Valdivia	146.36	157	*e*P	PKPbc	09 40 34.8	+0.1
ESPN	Las Esperanzas	146.82	66		PKPbc	09 40 35.6	-0.8
GO04	Tololo Observa	146.84	152		PKiKP	09 40 39.6	+0.5
GO04	Tololo Observa	146.84	152	*e*P	PKPbc	09 40 36.5	+0.1
LCCY	Blossom Villag	146.85	50	PKPab	PKPab	09 40 37.9	+0.2
RTLL	Cerro Villicun	146.85	156	*e*P	PKPbc	09 40 36.2	+0.1
JTS	Las Juntas de	146.86	69	PKPbc	PKPbc	09 40 37.3	+0.7
	comp=Z,53nm,1.1s,baz=325,slow=3.7,SNR=12						
JTS	Las Juntas de	146.86	69		PKPbc	09 40 35.7	-0.9
MRA	San Martin	146.87	161	*e*P	PKPbc	09 40 36.5	+0.2
CBCY	The Bluff, Cay	147.06	50		PKPbc	09 40 37.5	+0.6
ACCO	Cerro Coronel	147.26	155	*e*P	PKPbc	09 40 38.3	+0.6
CO01	Juntas del Tor	147.33	153		PKPbc	09 40 37.0	-0.8
AROD	Rodeo	147.45	154	*e*P	PKPab	09 40 39.4	-0.8
ACDV	Cuesta del Vie	147.60	154	*e*P	PKPbc	09 40 37.8	-0.6
ACHE	Chepes	147.69	159	*e*P	PKPbc	09 40 38.8	+0.1
HDC	Heredia	147.74	69		PKiKP	09 40 40.8	-0.4
AVFE	Valle Fertil	147.85	157	*e*P	PKPdf	09 40 37.1	+1.0
LCO	Las Campanas	147.86	151	PKP2	PKPbc	09 40 39.4	+0.1
LCO	Las Campanas	147.86	151		PKPbc	09 40 39.4	+0.1
AC05	El Transito	148.21	152		PKPbc	09 40 40.2	+0.1
TCA	Tanti	148.22	162	*e*P	PKPdf	09 40 38.3	+1.6
AC04	Llanos de Chal	148.34	150		PKPbc	09 40 40.4	+0.2
APLL	PUNTA DE LOS L	148.44	158	*e*P	PKPbc	09 40 40.6	+0.1
ACLC	CERRO LA CRUZ	149.14	157	*e*P	PKPdf	09 40 39.4	+1.0
VCA	Vinchina	149.24	154	*e*P	PKiKP	09 40 43.4	-0.6
GO03	Copiap	149.26	150	*e*P	PKPbc	09 40 43.3	+0.6
AC01	Pan de Azucar	150.26	148		PKPbc	09 40 44.2	-0.9
GTBY	Guantanamo Bay	150.33	44		PKPbc	09 40 45.0	-0.4
CYA	Choya	150.47	158	*e*P	PKPbc	09 40 43.9	-1.7
AHML	Horco Molle	152.13	157	*e*P	PKPdf	09 40 44.9	+2.0
PB10	IPOC Station P	152.37	145		PKPbc	09 40 49.6	-0.5
FSA	Cafayete	152.48	155	*e*P	PKPdf	09 40 45.5	+2.0
PB15	IPOC Station P	153.22	146		PKiKP	09 40 53.0	+0.6
PB04	IPOC Station P	153.51	144		PKiKP	09 40 53.0	0.0
SDDR	Presa de Saban	153.56	40		PKPbc	09 40 50.8	-2.0
PB06	IPOC Station P	153.56	145		PKPbc	09 40 51.3	-1.6
LVC	Limon Verde	154.01	146	*e*P	PKPdf	09 40 48.4	+2.3
NNA	Nana	154.60	116	PKIKP	PKPbc	09 40 54.4	-0.8
NNA	Nana	154.60	116		PKPbc	09 40 54.4	-0.8
PATCX	Punta Patache	154.66	142		PKiKP	09 40 56.0	+0.8
CPUP	Villa Florida	154.70	172	PKP	PKPdf	09 40 46.9	+0.4
	comp=Z,7.8nm,1.1s,baz=358,slow=0.8,SNR=8.6						
CPUP				PKPab	sPKPbc	09 41 11.4	+1.9
	comp=Z,13nm,1.0s,baz=209,slow=0.8,SNR=6.4						
CPUP	Villa Florida	154.70	172	PKPdf	PKPdf	09 40 46.7	+0.2
TA01	Diego Aracena	154.83	141		PKiKP	09 40 55.5	+0.1
MOTC	Monteria, Cord	155.97	65	*e*P	PKPdf	09 40 47.6	-1.0
DBBC	Dabeiba	156.09	70	*e*P	PKPdf	09 40 55.9	+7.0
GCUF	Volcan Galeras	156.20	84	*e*P	PKPdf	09 40 55.8	+6.3
PLMC	San Jos del P	156.62	75	*e*P	PKPdf	09 40 50.3	+0.8
CBOC	Ciudad Bolivar	156.63	72	*e*P	PKPdf	09 40 50.1	+0.5
YOTC	Yotoco, Valle	156.77	77	*e*P	PKPdf	09 40 49.7	0.0
SPB	Sao Paulo	156.87	195	*e*P	PKPdf	09 40 51.9	+2.5
HELC	Santa Helena	156.99	71	*e*P	PKPdf	09 40 50.3	0.0
ZARC	Zaragoza, Cauc	157.19	68	*e*P	PKPdf	09 40 50.4	+0.2
MARP	Paez Belalcaza	157.37	80	*e*P	PKPdf	09 40 51.9	+1.1
SMLC	San Martn de	157.40	64	*e*P	PKPdf	09 40 50.8	+0.4
GUY2C	Guyana, Caldas	157.42	74	*e*P	PKPdf	09 40 51.5	+0.4
RREF	El Recreo	157.52	74	*e*P	PKPdf	09 40 55.0	+3.6
ORTC	Ortega, Tolima	157.86	77	*e*P	PKPdf	09 40 50.7	-0.3
PTBC	PUERTO BERRIO,	157.89	70	*e*P	PKPdf	09 40 50.2	-0.8
GARC	Garzon, Huila	157.93	81	*e*P	PKPdf	09 40 51.8	+0.4
OCAC	Ocana	158.31	64	*e*P	PKPdf	09 40 52.4	+0.7
BRRC	Barranca, Sant	158.39	67	*e*P	PKPdf	09 40 51.8	+0.2
ROSC	El Rosal	158.53	74	PKP	PKPdf	09 40 52.5	+0.2
	comp=Z,9.5nm,0.8s,baz=294,slow=9.8,SNR=4.8						
ROSC	El Rosal	158.53	74	PKPdf	PKPdf	09 40 46.5	-5.8
ROSC	El Rosal	158.53	74	*e*P	PKPdf	09 40 48.5	-3.8
SPBC	San Pablo de B	158.53	72	*e*P	PKPdf	09 40 52.0	+0.1
PTLC	Puerto Leguiza	158.83	87	*e*P	PKPdf	09 40 51.9	-0.3
BARC	Barichara	159.06	68	*e*P	PKPdf	09 40 53.3	+0.6
CHIC	Chingaza	159.15	74	*e*P	PKPdf	09 40 53.2	+0.1
PAMC	Pamplona, Colo	159.23	66	*e*P	PKPdf	09 40 53.5	+0.3
RUSC	La Rusia	159.39	70	*e*P	PKPdf	09 40 52.8	-0.6
MACC	Macarena, Meta	159.56	81	*e*P	PKPdf	09 40 51.8	-1.3
SDV	Santo Domingo	160.38	59	PKPdf	PKPdf	09 40 53.0	-1.2
SDV	Santo Domingo	160.38	59	⇓*e*P	PKPdf	09 40 53.4	-0.7
SDV	Santo Domingo	160.38	59	*e*P	PKPdf	09 40 55.5	+1.3
SOCV	Socops	160.47	61	*e*P	PKPdf	09 40 54.0	0.0
ELOV	Elorza	162.27	63	*e*P	PKPdf	09 40 56.3	+0.4
BDFB	Brasilia	164.54	201	PKP	PKPdf	09 40 58.8	+0.7
	comp=Z,7.0nm,1.0s,baz=302,slow=4.3,SNR=7.6						
BDFB				PKPab	PKPab	09 41 54.1	+1.3
	comp=Z,6.2nm,0.9s,baz=154,slow=7.2,SNR=3.8						
BDFB	Brasilia	164.54	201		PKPdf	09 40 58.2	+0.1
SAML	Samuel	167.75	130	PKIKP	PKPdf	09 40 59.7	-0.9
SAML	Samuel	167.75	130		PKPdf	09 40 59.7	-0.9
SAML	Samuel	167.75	130	*e*P	PKPdf	09 41 02.9	+2.3

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*ATH **25** 09:30:32.1, 35°.51N×27°.36E, h33^{km}±2^{km}, ML2.8/1 Error ellipse: s-maj=6.7km s-min=1.8km az=327.0*

*THE **25** 09:30:32.1, 35°.82N×27°.17E, h0^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=2.7km s-min=1.0km az=316.0*

*DDA **25** 09:30:33.3, 35°.62N×27°.87E, h7^{km}±6^{km}, ML2.6*

ISC 25 09:30:31.9±1.2**, 35°.51N**±0°.07×**27°.45E**±0°.05**, h29**^{km}±8^{km}**,**
n19, σ1^{s}.**62**/32**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.24	280	P	Pb	09 30 38.1	-0.4
KARP				S	Sb	09 30 42.9	-0.1
KARP				AML	AML	09 30 44.3	
	comp=E,4053µm,0.2s						
KARP				AML	AML	09 30 46.4	
	comp=N,4440µm,0.3s						
KARP	Karpathos	0.24	280	P	Pb	09 30 38.3	-0.2
KARP				S	Sb	09 30 42.9	-0.1
	comp=N,2µm,0.2s						
ARG	Arkhangelos	0.90	38	P	Pb	09 30 49.6	+0.7
ARG	Arkhangelos	0.90	38	P	Pb	09 30 49.8	+0.9
ARG				S	Sb	09 31 02.4	+1.9
	comp=N,872nm,0.4s						
ZKR	Zakros	1.08	249	P	Pn	09 30 51.0	-0.1
ZKR	Zakros	1.08	249	P	Pn	09 30 51.2	+0.1
ZKR				S	Sb	09 31 08.1	+2.3
	comp=N,572nm,0.5s						
STIA	Sitia Lasithi	1.15	255	P	Pn	09 30 52.9	+0.9
TURN	Turunc	1.42	27	*i* P	Pb	09 30 57.7	0.0
TURN				*i* S	Sn	09 31 13.0	-0.5
TURN				IAML		09 31 25.0	
	comp=N,99nm,0.3s						
NPS	Neapolis	1.52	261	P	Pn	09 30 58.1	+0.9
BDRM	Kayabasi	1.56	360	*i* P	Pb	09 31 00.8	+0.7
BDRM				*i* S	Sn	09 31 13.7	-3.2
BDRM				IAML		09 31 20.0	
	comp=N,95nm,0.5s						
ANAF	Anafi Island	1.60	302	P	Pn	09 30 59.7	+1.4
DALY	Dalyan (Mula)	1.63	36	*i* P	Pb	09 31 02.7	+1.4
DALY				*i* S	Sn	09 31 16.1	-2.6
DALY				IAML		09 31 31.0	
	comp=N,100nm,0.4s						
LAST	Lasithi	1.65	259	P	Pn	09 31 00.1	+1.2
FETY	Fethiye	1.74	49	*i* P	Pn	09 30 59.4	-0.8
FETY				*i* S	Sn	09 31 19.9	-1.5
MULA	Mugla, Merkez-	1.88	22	*i* P	Pn	09 31 03.0	+0.7
MULA				*i* S	Sn	09 31 21.4	-3.6
MULA				IAML		09 31 39.0	
	comp=E,81nm,0.7s						
AKAS	Kas	1.90	67	*i* P	Pn	09 31 02.4	0.0
AKAS				*i* S	Sn	09 31 23.7	-1.7
CAEL	Denizli, Camel	2.21	43	*i* P	Pb	09 31 11.5	+0.2
CAEL				*i* S	Sb	09 31 37.2	-1.0
CAEL				IAML		09 31 58.0	
	comp=N,112nm,1.3s						
CAEL				IAML		09 32 04.0	
	comp=E,104nm,1.0s						
TAVA	DENIZLI_Tavas	2.28	31	*i* P	Pn	09 31 10.3	+2.6
TAVA				*i* S	Sn	09 31 32.7	-2.2
TAVA				IAML		09 31 45.0	
	comp=N,49nm,1.4s						
TAVA				IAML		09 31 45.0	
	comp=E,49nm,0.8s						
GOLH	Golhisar	2.43	44	*i* P	Pn	09 31 11.9	+2.2
GOLH				*i* S	Sn	09 31 37.2	-1.3
GOLH				IAML		09 31 45.0	
	comp=N,49nm,2.1s						
GOLH				IAML		09 32 04.0	
	comp=E,40nm,0.7s						

ROM 25 09:33:08.3±0.1**, 43°.430N**±0°.004×**12°.365E**±0°.006**,**
h5^{km}±1^{km}**, ML1.0**/1**, 1C, Error ellipse: s-maj=0.5km**
s-min=0.2km az=231.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	Pietralunga -	0.03	52	P	Pg	09 33 09.4	0.0
ATPI				S	Sg	09 33 10.3	0.0
ATPI				AML	AML		
	comp=E,280µm,0.1s						
ATPI				AML	AML		
	comp=N,269µm,0.3s						
ATPI				AML	AML		
	comp=E,280µm,0.1s						
ATPI				AML	AML		
	comp=N,270µm,0.3s						
ATVO	AVT- Monte Val	0.06	148	P	Pg	09 33 09.9	+0.1
ATVO				S	Sg	09 33 11.3	+0.5
BADI	Badiali	0.12	312	P	Pg	09 33 11.0	+0.3
BADI				S	Sg	09 33 13.5	+1.1
BADI				AML	AML		
	comp=E,121µm,1.4s						
BADI				AML	AML		
	comp=N,114µm,1.6s						
PIEI	Pieia	0.16	49	P	Pg	09 33 11.9	+0.3
PIEI				S	Sg	09 33 15.1	+1.3
MURB	Monte Urbino	0.20	145	P	Pg	09 33 12.6	+0.3
MURB				S	Sg	09 33 16.6	+1.7
PARC	Parchiule	0.24	337	P	Pg	09 33 13.6	+0.6
PARC				S	Sg	09 33 17.6	+1.4
PE3	Peglio	0.28	20	S	Sg	09 33 19.0	+1.4
FSSB	Fossombrone	0.40	49	⇑P	Pg	09 33 05.9	-10
ARCI	Arcidosso	0.87	229	S	Sn	09 33 42.0	+1.6

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*IDC **25** 09:36:31.1±0.8, 37°.00N×97°.61W, h0^{km}, mb3.7/2, mb1 4.0/8, mb1mx3.6/50, mbtmp3.7/8, ML3.5/6, Error ellipse: s-maj=12.0km s-min=10.8km az=175.0*

*TUL **25** 09:36:32.2±1.6, 36°.95N±0°.02×97°.62W±0°.02, h6^{km}±5^{km}, ML4.0, mb_Lg4.1/143(NEIC), Mwr3.7/24(NEIC), Error ellipse: s-maj=3.4km s-min=1.7km az=221.0*

*NEIC **25** 09:36:32.4±1.2, 36°.93N±0°.02×97°.60W±0°.03, h4^{km}±8^{km}, Error ellipse: s-maj=3.3km s-min=2.3km az=54.0*

*NEIC **25** 09:36:32.5, 36°.94N×97°.60W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.30; M$_{\theta\theta}$2.92; M$_{\phi\phi}$-3.22; M$_{r\theta}$1.35; M$_{\theta\phi}$2.42; M$_{\phi r}$0.31; Fault plane solution: M$_{0}$4.16000×10^{14} NP1:φ$_{s}$24.21000°, δ75.01000°, λ167.57000°. NP2:φ$_{s}$117.48000°, δ78.00000°, λ15.33000°. Principal axes: T 4.2420, Plg19.0000°, Azm341.0000°; N -0.1711, Plg71.0000°, Azm155.0000°; P -4.0709, Plg2.0000°, Azm251.0000°;*

*ANF **25** 09:36:32.6±0.3, 36°.94N×97°.61W, h5^{km}, ML5.0/17 Error ellipse: s-maj=3.1km s-min=2.9km az=127.0*

ISC 25 09:36:32.8±0.8**, 36°.96N**±0°.02×**97°.59W**±0°.02**, h15**^{km}±5^{km}**,**
n193, σ1^{s}.**95**/208**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	South Haven SW	0.10	61		Pg	09 36 35.3	-1.0
KAN13				Sg	Sg	09 36 37.3	-1.2
KAN01	Argonia South	0.23	325		Pg	09 36 37.3	-0.8
KAN01				Sg	Sg	09 36 40.8	-0.9
KAN14	Manchester OK	0.30	269		Pg	09 36 38.0	-1.1
KAN14				Sg	Sg	09 36 41.8	-1.6
KS21	Milan North St	0.33	350		Pg	09 36 39.1	-0.6
KAN08	Anthony NE Sta	0.40	311		Pg	09 36 40.3	-0.7
KAN08				Sg	Sg	09 36 45.7	-0.8
KAN10	Anthony SW Sta	0.43	292		Pg	09 36 40.8	-0.8
KAN10					Sg	09 36 46.3	-1.2
KAN12	Harper NE Stat	0.47	316		Pg	09 36 41.5	-0.7
KAN12				Sg	Sg	09 36 47.7	-0.8
CROK	Carrier	0.55	215	Pg	Pg	09 36 42.7	-1.1
CROK				Sg	Sg	09 36 49.6	-1.5
T35A	Sooner Cattle	0.87	93		Pg	09 36 49.0	-0.6
T35A				Sg	Sg	09 37 00.6	-0.5
T35B	Sooner Cattle	0.87	93	P		09 36 49.1	
	baz=273,SNR=431						
T35B				S		09 37 00.7	
	baz=273						
QUOK	Quay	1.06	138	Pg	Pg	09 36 52.5	-0.9
QUOK				Sg	Sg	09 37 05.8	-1.4
OK029	Liberty Lake	1.17	174		Pg	09 36 54.0	-1.4
OK029				Sg	Sg	09 37 09.7	-0.9
OK031	S. Brethren Rd	1.18	149		Pg	09 36 54.4	-1.1
OK031				Sg	Sg	09 37 10.1	-0.8
OK030	Cody Creek RV	1.22	147		Pg	09 36 55.1	-1.2
OK030				Sg	Sg	09 37 11.1	-1.2
U32A	Winter Ranch,	1.27	243		Pg	09 36 55.6	-1.8
U32A				Sg	Sg	09 37 13.0	-1.0
U32A	Winter Ranch,	1.27	243	P		09 36 55.6	
	baz=62						
U32A				S		09 37 12.4	
	baz=62						
BCOK	Bluff Creek, N	1.30	181	Pn	Pn	09 36 56.3	-0.1
OK005	Luther M Schoo	1.34	166		Pn	09 36 57.3	+0.3
OK009	Oakdale Elemen	1.38	174		Pn	09 36 58.2	+0.6
OK025	Westminster Rd	1.39	171		Pn	09 36 58.1	+0.4
OKCFA	Oklahoma City	1.55	176		Pn	09 37 00.5	+0.6
OKCSW	OKLAHOMA CITY	1.56	175		Pn	09 37 00.7	+0.7
R32A	Long Quarter,	1.71	329		Pn	09 37 03.5	+1.5
R32A	Long Quarter,	1.71	329	P		09 37 03.5	
	baz=149,SNR=112						
R32A				S		09 37 26.3	
	baz=149						
FNO	Franklin	1.71	175		Pn	09 37 02.8	+0.8
TUL1	Leonard	1.79	125	P	Pn	09 37 04.6	+1.4
	baz=306,SNR=483						
TUL1				S	Sb	09 37 28.8	+1.2
	baz=306						
TUL1	Leonard	1.79	125		Pn	09 37 04.7	+1.5
TUL1	Leonard	1.79	125	P		09 37 04.5	
	baz=306,SNR=503						
TUL1				S		09 37 28.6	
	baz=306						
W35A	Tecumseh	1.90	162		Pn	09 37 05.7	+1.0
KSU1	Kansas State U	2.27	20	P	Pn	09 37 11.4	+1.6
	baz=201,SNR=345						
KSU1				S	Sb	09 37 41.2	-0.3
	baz=201						
KSU1	Kansas State U	2.27	20	Pn	Pn	09 37 11.5	+1.7
KSU1				IAmb_Lg		09 37 50.4	
	comp=Z,561nm,0.8s						
KSU1	Kansas State U	2.27	20	P		09 37 11.3	
	baz=201,SNR=114						
WMOK	Wichita Mounta	2.42	204	P	Pn	09 37 12.5	+0.6
	baz=23,SNR=173						
WMOK				S	Sn	09 37 43.7	+2.5
	baz=23						
WMOK	Wichita Mounta	2.42	204		Pn	09 37 12.3	+0.5
WMOK	Wichita Mounta	2.42	204	P		09 37 12.6	
	baz=23,SNR=196						
WMOK				S		09 37 43.5	
	baz=23						
CBKS	Cedar Bluff	2.51	318	P	Pn	09 37 14.3	+1.2
	baz=137						
CBKS				Sb	Sb	09 37 50.0	+1.7
	baz=137						
CBKS	Cedar Bluff	2.51	318	Pn	Pn	09 37 14.7	+1.6
CBKS	Cedar Bluff	2.51	318	P		09 37 14.4	
	baz=137,SNR=37						
CBKS				S		09 37 50.0	
	baz=137						
U38A	Gravette	2.63	100		Pn	09 37 17.3	+2.5
U38A				IAmb_Lg		09 37 54.0	
	comp=Z,378nm,0.8s						
U38A	Gravette	2.63	100	P		09 37 16.4	
	baz=282,SNR=214						
X37A	Clayton	2.98	142	Pn	Pn	09 37 21.0	+1.6
X37A				IAmb_Lg		09 38 10.2	
	comp=Z,664nm,0.9s						
X37A	Clayton	2.98	142	P		09 37 20.6	
	baz=323						
X37A				S		09 38 03.9	
	baz=323						
HHAR	Hobbs	3.02	102		Pn	09 37 21.8	+1.8
HHAR				IAmb_Lg		09 38 08.8	
	comp=Z,350nm,0.7s						
HHAR	Hobbs	3.02	102	P		09 37 21.7	
	baz=284						
S39A	Bolivar	3.48	77		Pn	09 37 28.3	+1.9
S39A				IAmb_Lg		09 38 31.2	
	comp=Z,278nm,0.7s						
S39A	Bolivar	3.48	77	P		09 37 27.7	
	baz=259,SNR=62						
W39A	Magazine	3.55	119	Pn	Pn	09 37 28.5	+1.1
	baz=301,SNR=23						
W39A				Pb	Pb	09 37 37.0	+1.6
	baz=301						
W39A				Sb	Sg	09 38 23.7	-3.2
	baz=301						
W39A	Magazine	3.55	119		Pn	09 37 29.6	+2.2
W39A				IAmb_Lg		09 38 28.0	
	comp=Z,711nm,0.9s						
W39A	Magazine	3.55	119	P		09 37 28.6	
	baz=301,SNR=7.0						
Z35A	Perchaven, San	3.63	176		Pn	09 37 29.5	+1.0
Z35A	Perchaven, San	3.63	176	P		09 37 29.3	
	baz=355,SNR=21						
Z35A				S		09 38 13.6	
	baz=355						
N33A	J Bar K, Exete	3.77	2		Pn	09 37 31.5	+1.1
U40A	Yellville	3.86	98	P	Pn	09 37 33.0	+1.4
	baz=280,SNR=52						
U40A				Sn	Sn	09 38 17.8	+1.2
	baz=280						
U40A				Sb	Sb	09 38 29.9	+2.8
	baz=280						
U40A	Yellville	3.86	98		Pn	09 37 33.9	+2.3
U40A	Yellville	3.86	98	P		09 37 32.8	
	baz=280,SNR=63						
U40A				P		09 37 32.8	
	baz=280,SNR=63						
AMTX	Amarillo	3.91	239	P	Pn	09 37 34.2	+1.8
	baz=57						
AMTX				Sb	Sg	09 38 33.6	-4.9
	baz=57						
AMTX	Amarillo	3.91	239	Pn	Pn	09 37 34.4	+1.9
AMTX				IAmb_Lg		09 38 45.4	
	comp=Z,431nm,0.9s						
AMTX	Amarillo	3.91	239	P		09 37 34.2	
	baz=57,SNR=19						
MIAR	Mount Ida	4.06	125	Pn	Pn	09 37 36.4	+2.0
	baz=307,SNR=9.6						
MIAR				Pb	Pb	09 37 45.4	+1.4
	baz=307						
MIAR				Sb	Sg	09 38 38.6	-4.6
	baz=307						
MIAR	Mount Ida	4.06	125	Pn	Pn	09 37 36.5	+2.2
MIAR				IAmb_Lg		09 38 43.9	
	comp=Z,489nm,0.9s						
MIAR	Mount Ida	4.06	125	P		09 37 35.8	
	baz=307,SNR=61						
P38A	Dawn	4.16	49		Pn	09 37 37.2	+1.6
P38A				IAmb_Lg		09 38 46.2	
	comp=Z,443nm,0.8s						
P38A	Dawn	4.16	49	P		09 37 36.6	
	baz=231,SNR=45						
N35A	Tabor	4.18	21		Pn	09 37 37.9	+1.9
N35A	Tabor	4.18	21	P		09 37 37.6	
	baz=202						
MGMO	Mountain Grove	4.26	86		Pn	09 37 39.8	+2.6
MGMO				IAmb_Lg		09 38 51.2	
	comp=Z,430nm,0.8s						
Z38A	Mt. Pleasant	4.27	149		Pn	09 37 38.8	+1.6
Z38A	Mt. Pleasant	4.27	149	P		09 37 38.2	
	baz=330						
R40A	Maddies Statio	4.43	71		Pn	09 37 40.7	+1.2
R40A				IAmb_Lg		09 38 53.5	
	comp=Z,379nm,0.8s						
R40A	Maddies Statio	4.43	71	P		09 37 40.4	
	baz=254,SNR=100						
BGNE	Belgrade	4.46	355	P	Pn	09 37 41.4	+1.5
	baz=174						
BGNE				Sb	Sb	09 38 50.3	+5.9
	baz=174						
BGNE	Belgrade	4.46	355		Pn	09 37 41.2	+1.3
BGNE	Belgrade	4.46	355	P		09 37 41.1	
	baz=174,SNR=8.6						
KSCO	Kaye Shedlock'	4.47	299	Pn	Pn	09 37 41.2	+1.1
	baz=116						
KSCO				Pb	Pb	09 37 52.2	+1.1
	baz=116						
KSCO				Sb	Sg	09 38 51.9	-4.6
	baz=116						
KSCO	Kaye Shedlock'	4.47	299		Pn	09 37 41.6	+1.5
KSCO				IAmb_Lg		09 38 59.6	
	comp=Z,291nm,0.8s						
KSCO	Kaye Shedlock'	4.47	299	P		09 37 41.3	
	baz=116,SNR=9.0						
FCAR	Ozark Folk Cen	4.54	102		Pn	09 37 42.2	+1.3
FCAR				IAmb_Lg		09 38 55.5	
	comp=Z,384nm,0.7s						
X40A	Basin Creek Fa	4.59	121	P	Pn	09 37 43.5	+1.8
	baz=304,SNR=10						
X40A				Sb	Sb	09 38 53.5	+5.4
	baz=304						
X40A	Basin Creek Fa	4.59	121	IAmb_Lg		09 39 03.1	
	comp=Z,282nm,0.8s						
X40A	Basin Creek Fa	4.59	121	P		09 37 42.7	
	baz=304,SNR=31						
X40A				P		09 37 42.7	
	baz=304,SNR=31						
WHAR	Wooly Hollow	4.61	110		Pn	09 37 43.4	+1.5
WHAR				IAmb_Lg		09 39 08.7	
	comp=Z,449nm,0.8s						
ABTX	Abilene, Hawle	4.64	202	P	Pn	09 37 42.8	+0.4
	baz=20						
ABTX				S	Sn	09 38 35.6	-0.5
	baz=20						
ABTX	Abilene, Hawle	4.64	202		Pn	09 37 42.6	+0.2
ABTX	Abilene, Hawle	4.64	202	P		09 37 42.6	
	baz=20,SNR=12						
W41B	Gary Mavity, V	4.68	111	P	Pn	09 37 44.5	+1.6
	baz=294,SNR=17						
W41B				Sb	Sg	09 38 57.6	-5.5
	baz=294						
W41B	Gary Mavity, V	4.68	111	P		09 37 43.9	
	baz=294,SNR=25						
WLAR	White Oak Lake	4.91	130		Pn	09 37 49.1	+3.1
WLAR				IAmb_Lg		09 39 09.8	
	comp=Z,306nm,1.0s						
WHTX	Lake Whitney,	4.96	179	P	Pn	09 37 47.3	+0.6
	baz=358,SNR=17						
WHTX				Sn	Sn	09 38 43.1	-0.7
	baz=358						
WHTX				Sb	Sg	09 39 05.6	-6.5
	baz=358						
WHTX	Lake Whitney,	4.96	179		Pn	09 37 47.7	+1.0
WHTX	Lake Whitney,	4.96	179	P		09 37 47.4	
	baz=358,SNR=37						
P40A	Paris	5.06	58		Pn	09 37 50.9	+2.8
P40A				IAmb_Lg		09 39 16.8	
	comp=Z,308nm,0.8s						
P40A	Paris	5.06	58	P		09 37 48.5	
	baz=241						
L34A	Svendsen Farm,	5.09	10		Pn	09 37 50.1	+1.6
N38A	Joes South For	5.12	40		Pn	09 37 50.0	+1.1
N38A				IAmb_Lg		09 39 28.0	
	comp=Z,487nm,0.7s						
N38A	Joes South For	5.12	40	P		09 37 49.5	
	baz=223,SNR=14						
237A	Washetta, Mont	5.16	163	P		09 37 50.1	
	baz=344,SNR=13						
237A	Washetta, Mont	5.16	163		Pn	09 37 49.6	+0.1
237A				IAmb_Lg		09 39 29.3	
	comp=Z,220nm,0.9s						
CCM	Cathedral Cave	5.16	76	P	Pn	09 37 51.2	+1.7
	baz=260						
CCM				Sn	Sn	09 38 51.4	+2.6
	baz=260						
CCM				Sb	Sg	09 39 14.0	-4.6
	baz=260						
CCM	Cathedral Cave	5.16	76		Pn	09 37 51.2	+1.7
CCM				IAmb_Lg		09 39 20.6	
	comp=Z,258nm,0.8s						
MSTX	Muleshoe	5.17	236	P	Pn	09 37 50.4	+0.6
	baz=53						

MSTX				Sb	**Sb**	**09 39 11.0**	**+6.0**
	baz=53						
MSTX	**Muleshoe**	**5.17**	**236**	P		09 37 50.4	
	baz=53						
T42A	**Van Buren**	**5.20**	**87**		**Pn**	**09 37 51.7**	**+1.7**
T42A				IAmb_Lg		09 39 29.5	
	comp=Z,217nm,0.9s						
T42A	**Van Buren**	**5.20**	**87**	P		09 37 51.8	
	baz=271,SNR=11						
LCAR	**Lake Charles**	**5.26**	**98**		**Pn**	**09 37 53.2**	**+2.3**
LCAR				IAmb_Lg		09 39 19.0	
	comp=Z,206nm,0.9s						
Z41A	**Richland Creek**	**5.39**	**132**	P	**Pn**	**09 37 55.3**	**+2.7**
	baz=314						
Z41A				S	**Sn**	**09 38 53.3**	**-1.1**
	baz=314						
T25A	**Trinidad**	**5.46**	**274**	P	**Pn**	**09 37 54.3**	**+0.5**
	baz=90						
CCAR	**Cane Creek**	**5.64**	**121**	IAmb_Lg		09 39 41.6	
	comp=Z,187nm,0.7s						
K31A	**O'Neill**	**5.72**	**351**	Pn	**Pn**	**09 37 59.7**	**+2.4**
K31A	**O'Neill**	**5.72**	**351**	P		09 37 59.2	
	baz=171,SNR=11						
NATX	**Nacogdoches**	**5.73**	**154**		**Pn**	**09 37 57.4**	**+0.1**
NATX				IAmb_Lg		09 39 40.9	
	comp=Z,214nm,0.8s						
PBMO	**Poplar Bluff**	**5.75**	**90**		**Pn**	**09 37 59.2**	**+1.7**
PBMO				IAmb_Lg		09 39 43.2	
	comp=Z,406nm,0.7s						
HBAR	**Harrisburg**	**5.78**	**102**	IAmb_Lg		09 39 48.4	
	comp=Z,427nm,0.7s						
X43A	**Marvell**	**5.98**	**112**	Sb	**Sb**	**09 39 36.8**	**+8.8**
	baz=296						
SCIA	**State Center**	**5.99**	**33**	P	**Pn**	**09 38 02.4**	**+1.6**
	baz=216,SNR=9.5						
SCIA				S	**Sn**	**09 39 08.7**	**-0.4**
	baz=216						
SCIA	**State Center**	**5.99**	**33**	Pn	**Pn**	**09 38 02.5**	**+1.6**
SCIA	**State Center**	**5.99**	**33**	P		09 38 02.4	
	baz=216,SNR=8.1						
LPAR	**Lepanto**	**6.04**	**101**	IAmb_Lg		09 39 58.8	
	comp=Z,320nm,0.7s						
SLM	**Saint Louis**	**6.06**	**72**	IAmb_Lg		09 39 44.3	
	comp=Z,238nm,0.8s						
435B	**Jarrell**	**6.16**	**180**	P	**Pn**	**09 38 03.4**	**+0.1**
	baz=360,SNR=40						
435B				S	**Sn**	**09 39 12.9**	**-0.6**
	baz=360						
435B	**Jarrell**	**6.16**	**180**	Pn	**Pn**	**09 38 03.3**	**+0.1**
435B				IAmb_Lg		09 40 01.3	
	comp=Z,308nm,0.9s						
435B	**Jarrell**	**6.16**	**180**	P		09 38 03.3	
	baz=360,SNR=34						
Q24A	**Divide**	**6.30**	**291**	P	**Pn**	**09 38 05.7**	**+0.3**
	baz=106						
Q24A				S	**Sn**	**09 39 17.7**	**+0.5**
	baz=106						
SDCO	**Great Sand Dun**	**6.35**	**279**	P	**Pn**	**09 38 07.7**	**+1.6**
	baz=95						
SDCO	**Great Sand Dun**	**6.35**	**279**		**Pn**	**09 38 07.5**	**+1.4**
SDCO	**Great Sand Dun**	**6.35**	**279**	P		09 38 07.6	
	baz=95,SNR=12						
PVMO	**Portageville**	**6.37**	**93**	IAmb_Lg		09 39 56.0	
	comp=Z,275nm,0.8s						
PENMO	**Penman**	**6.42**	**92**	IAmb_Lg		09 39 56.1	
	comp=Z,374nm,0.8s						
N41A	**Harden Midland**	**6.45**	**53**		**Pn**	**09 38 08.3**	**+1.1**
MET	**Memphis--Engin**	**6.47**	**104**	IAmb_Lg		09 40 07.5	
	comp=Z,285nm,0.7s						
143A	**Socs Landing,**	**6.63**	**128**	IAmb_Lg		09 40 18.6	
	comp=Z,151nm,0.8s						
S44A	**Carbondale**	**6.68**	**81**		**Pn**	**09 38 13.2**	**+2.8**
SIUC	**Southern Illin**	**6.71**	**81**		**Pn**	**09 38 13.2**	**+2.3**
GLAT	**Glass**	**6.72**	**93**	IAmb_Lg		09 40 10.4	
	comp=Z,841nm,0.9s						
JCT	**Junction City**	**6.72**	**197**	P	**Pn**	**09 38 10.6**	**-0.4**
	baz=15,SNR=9.5						
JCT				S	**Sn**	**09 39 26.4**	**-0.9**
	baz=15						
JCT	**Junction City**	**6.72**	**197**		**Pn**	**09 38 10.5**	**-0.5**
JCT				IAmb_Lg		09 40 20.0	
	comp=Z,222nm,1.0s						
JCT	**Junction City**	**6.72**	**197**	P		09 38 10.6	
	baz=15,SNR=20						
HICK	**Hickman**	**6.73**	**91**		**Pn**	**09 38 13.6**	**+2.5**
HALT	**Halls**	**6.74**	**96**	IAmb_Lg		09 40 14.2	
	comp=Z,238nm,0.8s						
K38A	**Parkersburg**	**6.78**	**32**		**Pn**	**09 38 10.9**	**-0.8**
ECSD	**EROS Data Cent**	**6.81**	**6**	P	**Pn**	**09 38 12.2**	**+0.1**
	baz=187,SNR=17						
ECSD				S	**Sn**	**09 39 28.6**	**-0.7**
	baz=187						
ECSD	**EROS Data Cent**	**6.81**	**6**		**Pn**	**09 38 12.7**	**+0.6**
ECSD	**EROS Data Cent**	**6.81**	**6**	P		09 38 12.2	
	baz=187,SNR=23						
P43A	**Skaggs, Pawnee**	**6.89**	**65**		**Pn**	**09 38 14.3**	**+1.1**
P43A	**Skaggs, Pawnee**	**6.89**	**65**	P		09 38 13.9	
	baz=250						
ISCO	**Idaho Springs**	**6.91**	**297**	P	**Pn**	**09 38 14.6**	**+0.9**
	baz=112						
ISCO	**Idaho Springs**	**6.91**	**297**	Pn	**Pn**	**09 38 14.8**	**+1.0**
ISCO	**Idaho Springs**	**6.91**	**297**	P		09 38 14.6	
	baz=112,SNR=14						
W45A	**Hickory Valley**	**7.04**	**102**	IAmb_Lg		09 40 23.2	
	comp=Z,223nm,0.7s						
Q44A	**Meyer Farm, Va**	**7.05**	**71**	Pn	**Pn**	**09 38 17.2**	**+1.8**
Q44A	**Meyer Farm, Va**	**7.05**	**71**	P		09 38 16.5	
	baz=257,SNR=5.1						
L40A	**Anamosa**	**7.08**	**42**		**Pn**	**09 38 16.1**	**+0.2**
L40A				IAmb_Lg		09 40 16.7	
	comp=Z,283nm,0.8s						
L40A	**Anamosa**	**7.08**	**42**	P		09 38 16.4	
	baz=226,SNR=16						
OXF	**Oxford**	**7.09**	**108**	P	**Pn**	**09 38 17.4**	**+1.5**
	baz=292,SNR=12						
OXF	**Oxford**	**7.09**	**108**	Pn	**Pn**	**09 38 17.2**	**+1.3**
OXF				IAmb_Lg		09 40 19.3	
	comp=Z,175nm,0.8s						
OXF	**Oxford**	**7.09**	**108**	P		09 38 16.8	
	baz=292,SNR=5.1						
Y45A	**Yeager Farm, C**	**7.26**	**113**		**Pn**	**09 38 20.1**	**+1.7**
Y45A				IAmb_Lg		09 40 34.8	
	comp=Z,169nm,0.8s						
GDL2	**Guadalupe Moun**	**7.33**	**232**		**Pn**	**09 38 20.1**	**+0.7**
HDIL	**Hopedale**	**7.41**	**59**	P	**Pn**	**09 38 21.2**	**+0.8**
	baz=244,SNR=9.0						
HDIL	**Hopedale**	**7.41**	**59**		**Pn**	**09 38 21.0**	**+0.7**
HDIL	**Hopedale**	**7.41**	**59**	P		09 38 21.3	
	baz=244,SNR=6.5						
ANMO	**Albuquerque**	**7.46**	**257**	Pn	**Pn**	**09 38 22.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=63,slow=14,SNR=2.2						
ANMO				Pg	Pb	09 38 48.4	+6.3
	comp=Z,0.9nm,0.3s,baz=67,slow=16,SNR=10						
ANMO				Lg	Lg	09 40 22.9	
	comp=Z,3.4nm,0.3s,baz=325,slow=22,SNR=6.2						
ANMO	**Albuquerque**	**7.46**	**257**	Sb	Sg	09 40 22.2	-10
	baz=72						
ANMO	**Albuquerque**	**7.46**	**257**	IAmb_Lg		09 40 32.9	
	comp=Z,71nm,0.9s						
ANMO				IAmb_Lg		09 40 32.9	
	comp=Z,74nm,0.9s						
PHWY	**Pilot Hill**	**7.49**	**308**	Pn	**Pn**	**09 38 23.0**	**+1.2**
VBMS	**Vicksburg**	**7.51**	**127**	IAmb_Lg		09 40 43.0	
	comp=Z,159nm,1.2s						
SUSD	**Miller**	**7.54**	**353**	P	**Pn**	**09 38 23.4**	**+1.2**
	baz=172						
SUSD				S	**Sn**	**09 39 46.4**	**-1.1**
	baz=172						
SUSD	**Miller**	**7.54**	**353**	IAmb_Lg		09 40 36.1	
	comp=Z,200nm,0.7s						
N23A	**Red Feather La**	**7.60**	**304**	P	**Pn**	**09 38 24.9**	**+1.7**
	baz=119						
OLIL	**Olney**	**7.72**	**74**		**Pn**	**09 38 25.9**	**+1.4**
SMCO	**Snowmass**	**7.72**	**289**	Pn	**Pn**	**09 38 25.1**	**+0.1**
I37A	**Lemond, Waseca**	**7.74**	**23**	IAmb_Lg		09 40 49.1	
	comp=Z,141nm,0.8s						
O44A	**Mansfield**	**7.83**	**63**		**Pn**	**09 38 27.2**	**+1.1**
O44A				IAmb_Lg		09 40 53.1	
	comp=Z,226nm,0.7s						
WVT	**Waverly**	**7.90**	**93**	P	**Pn**	**09 38 27.9**	**+0.8**
	baz=279						
WVT				S	**Sn**	**09 39 54.4**	**-1.8**
	baz=279						
WVT	**Waverly**	**7.90**	**93**		**Pn**	**09 38 27.9**	**+0.8**
L42A	**Oliver, Polo**	**7.93**	**48**	Pn	**Pn**	**09 38 28.5**	**+1.0**
PLAL	**Pickwick Lake**	**7.96**	**102**		**Pn**	**09 38 28.1**	**+0.1**
735A	**Kenedy**	**8.09**	**181**		**Pn**	**09 38 31.1**	**+1.4**
735A				IAmb_Lg		09 41 05.1	
	comp=Z,149nm,1.2s						
Y22D	**IRIS PASSCAL I**	**8.13**	**252**	IAmb_Lg		09 41 05.4	
	comp=Z,272nm,0.9s						
JFWS	**Jewell Farm**	**8.19**	**41**	P	**Pn**	**09 38 31.3**	**+0.2**
	baz=226,SNR=7.3						
JFWS	**Jewell Farm**	**8.19**	**41**		**Pn**	**09 38 31.8**	**+0.7**
JFWS				IAmb_Lg		09 40 58.7	
	comp=Z,168nm,0.7s						
JFWS	**Jewell Farm**	**8.19**	**41**	P		09 38 31.0	
	baz=226,SNR=36						
MNTX	**Cornudas Mount**	**8.31**	**233**	P	**Pn**	**09 38 33.4**	**+0.6**
	baz=48,SNR=7.3						
MNTX	**Cornudas Mount**	**8.31**	**233**	Pn	**Pn**	**09 38 33.4**	**+0.6**
MNTX	**Cornudas Mount**	**8.31**	**233**	P		09 38 32.9	
	baz=48,SNR=11						
RSSD	**Black Hills**	**8.67**	**328**	P	**Pn**	**09 38 39.5**	**+1.7**
	baz=144						
RSSD	**Black Hills**	**8.67**	**328**		**Pn**	**09 38 40.5**	**+2.7**
RSSD				IAmb_Lg		09 41 18.4	
	comp=Z,93nm,0.8s						
I40A	**Norwalk**	**8.73**	**35**	Pn	**Pn**	**09 38 38.4**	**0.0**
I40A				IAmb_Lg		09 41 22.7	
	comp=Z,131nm,0.8s						
I40A	**Norwalk**	**8.73**	**35**	P		09 38 38.5	
	baz=220,SNR=9.7						
833A	**Chaparral WMA,**	**8.75**	**190**	P	**Pn**	**09 38 39.4**	**+0.7**
	baz=9.4						
V48A	**Smith Brothers**	**8.78**	**95**	IAmb_Lg		09 41 08.7	
	comp=Z,97nm,0.9s						
RWWY	**Rawlins**	**8.82**	**305**	IAmb_Lg		09 41 30.4	
	comp=Z,109nm,0.9s						
SFIN	**Lafayette**	**8.89**	**64**	IAmb_Lg		09 41 23.2	
	comp=Z,226nm,0.8s						
K22A	**Casper**	**8.91**	**312**	P	**Pn**	**09 38 42.6**	**+1.5**
	baz=127						
K22A	**Casper**	**8.91**	**312**		**Pn**	**09 38 42.1**	**+0.9**
K22A				IAmb_Lg		09 41 23.0	
	comp=Z,195nm,1.0s						
O20A	**White River Ci**	**8.92**	**294**	Pn	**Pn**	**09 38 42.8**	**+1.5**
BLO	**Bloomington**	**9.01**	**72**		**Pn**	**09 38 42.7**	**+0.4**
BLO				IAmb_Lg		09 41 16.8	
	comp=Z,236nm,0.8s						
SPMN	**Marine on St.**	**9.01**	**22**	S	**Sn**	**09 40 21.6**	**-1.8**
	baz=205						
SPMN	**Marine on St.**	**9.01**	**22**	Pn	**Pn**	**09 38 42.9**	**+0.6**
WCI	**Wyandotte Cave**	**9.06**	**79**	P	**Pn**	**09 38 45.0**	**+2.0**
	baz=265						
WCI	**Wyandotte Cave**	**9.06**	**79**		**Pn**	**09 38 45.7**	**+2.7**
WCI				IAmb_Lg		09 41 33.7	
	comp=Z,173nm,0.9s						
CLTN	**Cedars of Leba**	**9.11**	**92**		**Pn**	**09 38 45.0**	**+1.3**
CLTN				IAmb_Lg		09 41 25.3	
	comp=Z,117nm,0.9s						
L44A	**Lake County Fo**	**9.11**	**52**	P	**Pn**	**09 38 43.9**	**+0.2**
	baz=238						
PV17	**East Wray Mesa**	**9.12**	**282**		**Pn**	**09 38 45.5**	**+1.5**
K43A	**Burlington**	**9.14**	**48**	IAmb_Lg		09 41 23.5	
	comp=Z,236nm,0.9s						
TX31	**Lajitas Ar. Si**	**9.15**	**216**		**Pn**	**09 38 44.3**	**-0.1**
TX32	**Lajitas Array**	**9.15**	**216**	Pn	**Pn**	**09 38 42.5**	**-1.9**
TXAR	**Lajitas Array**	**9.15**	**216**	Pn	**Pn**	**09 38 43.1**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=34,slow=10,SNR=13						
TXAR				Pg		09 39 19.6	
	comp=Z,1.4nm,0.3s,baz=42,slow=15,SNR=13						
TXAR				Lg	Lg	09 41 16.4	
	comp=Z,1.4nm,0.3s,baz=36,slow=23,SNR=5.3						
TXAR	**Lajitas Array**	**9.15**	**216**		**Pn**	**09 38 44.8**	**+0.4**
U49A	**Red Boiling Sp**	**9.49**	**89**	IAmb_Lg		09 41 33.4	
	comp=Z,196nm,1.3s						
I42A	**Draeger Farm,**	**9.57**	**41**	IAmb_Lg		09 41 35.8	
	comp=Z,108nm,0.9s						
I42A	**Draeger Farm,**	**9.57**	**41**	P		09 38 49.5	
	baz=227,SNR=8.7						
E28A	**Huff**	**9.88**	**347**	IAmb_Lg		09 41 58.1	
	comp=Z,123nm,0.9s						
P48A	**Milroy**	**9.89**	**72**		**Pn**	**09 38 54.1**	**-0.4**
P48A				IAmb_Lg		09 41 50.0	
	comp=Z,155nm,0.7s						
R49A	**Shelbyville**	**9.94**	**79**	IAmb_Lg		09 41 50.6	
	comp=Z,119nm,0.9s						
G40A	**Rib Lake**	**9.99**	**32**		**Pn**	**09 38 56.7**	**+0.9**
CPCT	**Cooper Cave**	**10.67**	**94**		**Pn**	**09 39 06.9**	**+1.8**
V51A	**Loudon**	**10.74**	**92**		**Pn**	**09 39 09.4**	**+3.4**
PDAR	**Pinedale Array**	**10.87**	**306**	Pn	**Pn**	**09 39 07.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=24						
PDAR				Pg		09 39 50.9	
	comp=Z,0.7nm,0.3s,baz=115,slow=21,SNR=5.1						
PDAR				Lg	Lg	09 42 09.5	
	comp=Z,1.7nm,0.3s,baz=113,slow=33,SNR=3.9						
PDAR	**Pinedale Array**	**10.87**	**306**	Pn	**Pn**	**09 39 07.8**	**-0.2**
BW06	**Boulder Array**	**10.87**	**306**	Pn	**Pn**	**09 39 07.8**	**-0.2**
S51A	**Beattyville**	**11.17**	**82**		**Pn**	**09 39 14.6**	**+2.6**
TKL	**Tuckaleechee C**	**11.23**	**93**	Pn	**Pn**	**09 39 11.5**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=226,slow=9.6,SNR=14						
TKL				Lg	Lg	09 42 20.5	
	comp=Z,3.5nm,0.3s,baz=358,slow=20,SNR=11						
HWUT	**Hardware Ranch**	**11.78**	**297**		**Pn**	**09 39 20.9**	**+0.5**
TCRU	**Three Creeks R**	**11.87**	**282**		**Pn**	**09 39 22.5**	**+0.8**
AAM	**Ann Arbor**	**11.99**	**59**	S	**Sn**	**09 41 32.7**	**-3.8**
	baz=248						
P52A	**Corning**	**12.44**	**73**	S	**Sn**	**09 41 43.5**	**-4.0**
	baz=262						
GLMI	**Grayling**	**12.56**	**47**	P	**Pn**	**09 39 28.8**	**-2.1**
	baz=236						
S54A	**Dingess, Beckl**	**12.98**	**81**	P	**Pn**	**09 39 37.0**	**+0.3**
	baz=271						
S54A	**Dingess, Beckl**	**12.98**	**81**		**Pn**	**09 39 37.8**	**+1.1**
V55A	**Taylorsville**	**13.24**	**90**	Pn	**Pn**	**09 39 40.6**	**+0.4**
ULM	**Lac du Bonnet**	**13.34**	**5**	Pn	Pn	09 39 37.0	-4.5
	comp=Z,0.5nm,0.3s,baz=182,slow=9.4,SNR=8.9						
ULM				Lg	Lg	09 43 21.4	
	comp=Z,0.7nm,0.3s,baz=276,slow=15,SNR=3.2						
E46A	**Sault Ste Mari**	**13.66**	**42**		**Pn**	**09 39 43.7**	**-2.1**
M54A	**Oil Creek Stat**	**14.61**	**66**	P	**P**	**09 40 06.2**	**+0.9**
	baz=258						
M54A	**Oil Creek Stat**	**14.61**	**66**		**Pn**	**09 39 57.5**	**-1.5**
M55A	**Ridgway**	**15.27**	**67**		**Pn**	**09 40 06.5**	**-1.3**
SADO	**Sadowa**	**15.97**	**55**	Lg	Lg	09 44 47.0	
	comp=Z,0.7nm,0.3s,baz=166,slow=11,SNR=6.1						
F10A	**Beach Ranch, E**	**17.22**	**308**		**Pn**	**09 40 27.9**	**-4.9**
YBH	**Yreka Blue Hor**	**19.97**	**292**	P	**P**	**09 41 03.0**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=114,slow=8.3,SNR=7.2						
YKA	**Yellowknife Ar**	**27.64**	**343**	P	**P**	**09 42 20.4**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=143,slow=9.0,SNR=7.8						
ILAR	**Eielson Array**	**40.11**	**330**	P	**P**	**09 44 09.2**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=110,slow=7.1,SNR=19						

KRNET ***25*** *09:52:39.6±0.1, 39°.51N×73°.46E, h14^{km}, mb3.1*

IDC ***25*** *09:52:40.7±2.3, 39°.54N×73°.59E, h0^{km}, mb3.7/3, mb1 3.6/5, mb1mx3.3/49, mbtmp3.5/5, ML2.8/2, Error ellipse: s-maj=41.3km s-min=23.4km az=130.0*

SOME ***25*** *09:52:40.9, 39°.70N×73°.68E, h0^{km}*

NNC ***25*** *09:52:45.2±1.4, 39°.71N×73°.72E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=10.5km s-min=6.2km az=175.0*

ISC 25 09:52:39.3±1.1**, 39°.59N**±0°.06×**73°.64E**±0°.03**, h10^{km}, n54,** σ1^{s}.**66**/87**, mb3.6**/3**, 24C-20D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.43**	**346**	⇓*i*P	**Pb**	**09 52 49.7**	**+0.5**
	baz=3.0						
SFK				⇓*i*S	**Sb**	**09 52 57.1**	**+1.2**
	baz=3.0						
OHH	**Osh**	**1.14**	**325**	⇑*i*P	**Pg**	**09 53 01.4**	**+0.2**
	baz=33						
OHH				⇑*i*S	**Sn**	**09 53 17.5**	**+0.3**
	baz=33						
DRK	**Karamyk**	**1.43**	**266**	⇓*i*P	**Pn**	**09 53 04.2**	**-1.4**
	baz=69						
DRK				⇓*i*S	**Sn**	**09 53 22.0**	**-2.6**
	baz=69						
ARSB	**Arslanbob**	**1.80**	**344**	⇑*i*P	**Pg**	**09 53 14.2**	**+0.3**
	baz=49						
ARSB				⇑*i*S	**Sg**	**09 53 39.3**	**+2.0**
	baz=49						
BTK	**Batken**	**2.23**	**283**	⇑*i*P	**Pb**	**09 53 18.3**	**-1.3**
	baz=86						
BTK				⇑*i*S	**Sb**	**09 53 46.4**	**-0.9**
	baz=86						
ARLS	**Aral**	**2.33**	**13**	⇓*i*P	**Pg**	**09 53 23.1**	**-0.8**
	baz=15						
ARLS				⇓*i*S	**Sg**	**09 53 54.9**	**+0.9**
	baz=15						
AML	**Almayashu**	**2.54**	**1**	⇓*i*P	**Pb**	**09 53 25.6**	**+0.5**
	baz=4.0						
AML				⇓*i*S	**Sg**	**09 53 59.2**	**-1.6**
	baz=4.0						
UCH	**Uchtor**	**2.71**	**14**	⇓*i*P	**Pb**	**09 53 28.4**	**+0.2**
	baz=16						
UCH				⇓*i*S	**Sg**	**09 54 04.1**	**-2.4**
	baz=16						
TRKS	**Terek-Say**	**2.72**	**316**	⇓*i*P	**Pb**	**09 53 25.4**	**-2.7**
	baz=19						
TRKS				⇓*i*S	**Sb**	**09 53 59.0**	**-2.5**
	baz=19						
MNAS	**Manas**	**3.02**	**344**	⇑*i*P	**Pb**	**09 53 31.7**	**-1.5**
	baz=47						
MNAS				⇑*i*S	**Sb**	**09 54 09.7**	**-0.5**
	baz=47						
EKS2	**Erkin-Say**	**3.07**	**2**	⇑*e*P	**Pb**	**09 53 33.0**	**-1.0**
	baz=4.0						
EKS2				⇑*i*S	**Sb**	**09 54 12.0**	**+0.4**
	baz=4.0						
AAK	**Ala-Archa**	**3.11**	**12**	Pn	**Pb**	**09 53 34.5**	**-0.3**
	2.6nm,0.3s,baz=188,slow=13,SNR=32						
AAK				Lg	Lg	09 54 22.7	
	4.1nm,0.3s,baz=81,slow=21,SNR=12						
AAK	**Ala-Archa**	**3.11**	**12**	⇑*i*P	**Pb**	**09 53 33.9**	**-0.9**
	baz=14						
AAK				⇑*i*S	**Sb**	**09 54 13.5**	**+0.7**
	baz=14						
AAK	**Ala-Archa**	**3.11**	**12**	⇑Pn	**Pb**	**09 53 35.1**	**+0.3**
	6.0nm,0.5s						
AAK				⇓Lg	Lg	09 54 19.9	
	33nm,0.7s						
MRKS	**Merke**	**3.17**	**354**	*e*P	**Pg**	**09 53 39.3**	**-0.6**
	8.1nm,0.3s						
MRKS				*e*S	**Sg**	**09 54 20.9**	**-0.1**
	26nm,0.4s						
MRKS	**Merke**	**3.17**	**354**	Pg	**Pg**	**09 53 39.3**	**-0.6**
	13nm,0.5s						
MRKS				Lg	Lg	09 54 21.8	
	20nm,0.4s						
KBK	**Karagaybulak**	**3.22**	**17**	⇓*e*P	**Pb**	**09 53 35.5**	**-1.1**
	baz=19						
KBK				⇓*i*S	**Sb**	**09 54 16.3**	**+0.4**
	baz=19						
ULHL	**Ulahol**	**3.30**	**36**	⇓*i*P	**Pb**	**09 53 37.0**	**-1.1**
	baz=37						
ULHL				⇓*i*S	**Sb**	**09 54 19.0**	**+0.6**
	baz=37						
CHMS	**Chumysh**	**3.50**	**13**	⇑*e*P	**Pb**	**09 53 39.3**	**-2.1**
	baz=15						
CHMS				⇑*i*S	**Sb**	**09 54 22.8**	**-1.2**
	baz=15						
TKM2	**Tokmak 2**	**3.64**	**23**	⇑*i*P	**Pb**	**09 53 41.4**	**-2.4**
	baz=25						
TKM2				⇑*i*S	**Sb**	**09 54 26.6**	**-1.4**
	baz=25						
TKM2	**Tokmak 2**	**3.64**	**23**	⇓Pn	**Pb**	**09 53 41.8**	**-2.0**
	7.2nm,0.8s						
TKM2				⇑Lg	Lg	09 54 38.6	
	24nm,1.2s						
USP	**Ospenovka**	**3.73**	**10**	⇑*e*P	**Pb**	**09 53 42.4**	**-2.8**
	baz=11						
USP				⇑*i*S	**Sb**	**09 54 28.2**	**-2.3**
	baz=11						
DZA	**Taraz**	**3.73**	**333**	*e*P	**Pg**	**09 53 50.9**	**+0.2**
	41nm,0.1s						
DZA				*e*S	**Sg**	**09 54 40.5**	**+1.5**
	53nm,0.2s						
IUG	**Iuzhnay**	**3.74**	**314**	*e*P	**Pg**	**09 53 50.1**	**-0.9**
	11nm,0.5s						
IUG				*e*S	**Sg**	**09 54 39.2**	**-0.3**
	30nm,0.4s						
IUG	**Iuzhnay**	**3.74**	**314**	Pg	**Pg**	**09 53 52.6**	**+1.6**
	21nm,0.3s						
IUG				Lg	Lg	09 54 43.9	
	67nm,0.6s						
KST	**Kastek**	**3.87**	**26**	*e*P	**Pg**	**09 53 52.8**	**-0.5**
	6.3nm,0.6s						
KST				*e*S	**Sg**	**09 54 43.8**	**+0.4**
	16nm,0.8s						
KST	**Kastek**	**3.87**	**26**	Pg	**Pg**	**09 53 52.2**	**-1.1**
	5.5nm,0.3s						
KST				Lg	Lg	09 54 44.2	
	17nm,0.6s						
SGDS	**Sogindy**	**3.93**	**11**	Pg	**Pg**	**09 53 53.8**	**-0.7**
	4.5nm,0.2s						
SGDS				Lg	Lg	09 54 46.8	
	14nm,0.7s						
DGS	**Degeres**	**3.98**	**23**	*e*P	**Pg**	**09 53 56.1**	**+0.5**
	6.6nm,0.5s						
DGS				*e*S	**Sg**	**09 54 49.9**	**+2.7**
	16nm,0.5s						
DGS	**Degeres**	**3.98**	**23**	Pg	**Pg**	**09 53 56.1**	**+0.5**
	6.6nm,0.5s						
DGS				Lg	Lg	09 54 49.9	
	16nm,0.5s						
IZV	**Izvestkoviy**	**4.10**	**32**	*e*P	**Pg**	**09 53 57.1**	**-0.8**
	4.5nm,0.5s						
IZV				*e*S	**Sg**	**09 54 51.4**	**+0.4**
	22nm,0.6s						
IZV	**Izvestkoviy**	**4.10**	**32**	Pg	**Pg**	**09 53 56.9**	**-0.9**
	4.5nm,0.5s						
IZV				Lg	Lg	09 54 51.8	
	22nm,0.6s						
MTBS	**Maitube**	**4.11**	**30**	*e*P	**Pg**	**09 53 54.7**	**-3.3**
	2.6nm,0.3s						
MTBS				*e*S	**Sg**	**09 54 47.7**	**-3.5**
	5.7nm,0.2s						
KK31	**Karatay Array**	**4.23**	**327**	Pn	**Pb**	**09 53 49.9**	**-3.8**
	1.3nm,0.4s,baz=125,slow=12,SNR=31						
KK31				⇑Pg	**Pg**	**09 53 58.6**	**-1.6**
	3.1nm,0.5s,baz=153,slow=17,SNR=7.8						
KK31				⇑Sn	**Sb**	**09 54 41.3**	**-3.5**
	2.0nm,0.4s,baz=331,slow=64,SNR=4.1						
KK31				⇓Lg	Lg	09 54 55.9	
	7.5nm,0.5s,baz=135,slow=30,SNR=4.0						
TNSS	**Tian-Shan**	**4.25**	**35**	*e*P	**Pg**	**09 53 59.9**	**-0.8**
	6.9nm,0.5s						
TNSS				*e*S	**Sg**	**09 54 56.1**	**+0.4**
	6.4nm,0.8s						
KRBS	**Karabastau**	**4.37**	**20**	*e*P	**Pg**	**09 54 01.8**	**-1.2**
	6.7nm,0.3s						
KRBS				*e*S	**Sg**	**09 54 59.4**	**-0.3**
	8.8nm,0.5s						
KRBS	**Karabastau**	**4.37**	**20**	Pg	**Pg**	**09 54 01.8**	**-1.2**
	6.7nm,0.3s						
KRBS				Lg	Lg	09 54 59.4	
	8.8nm,0.5s						
MDOK	**Medeo**	**4.39**	**35**	*e*P	**Pg**	**09 54 02.7**	**-0.7**
	4.0nm,0.3s						
MDOK				*e*S	**Sg**	**09 55 00.9**	**+0.6**
	16nm,1.0s						
MDOK	**Medeo**	**4.39**	**35**	Pg	**Pg**	**09 54 02.1**	**-1.3**
	4.4nm,0.5s						
MDOK				Lg	Lg	09 55 00.9	
	13nm,0.6s						
KOTS	**Kotyrbulak**	**4.48**	**35**	*e*P	**Pg**	**09 54 04.4**	**-0.6**
	9.2nm,0.2s						
KOTS				*e*S	**Sg**	**09 55 04.1**	**+1.1**
	60nm,0.5s						
KOTS	**Kotyrbulak**	**4.48**	**35**	Pg	**Pg**	**09 54 04.4**	**-0.6**
	9.2nm,0.2s						
KOTS				Lg	Lg	09 55 04.1	
	60nm,0.5s						
KTBS	**Karatobe**	**4.70**	**28**	*e*P	**Pg**	**09 54 07.7**	**-1.7**
	4.2nm,0.6s						
KTBS				*e*S	**Sg**	**09 55 09.8**	**-0.5**
	25nm,0.6s						
KTBS	**Karatobe**	**4.70**	**28**	Pg	**Pg**	**09 54 07.7**	**-1.7**
	4.2nm,0.6s						
KTBS				Lg	Lg	09 55 09.8	
	25nm,0.6s						
KUU	**Kurty**	**4.75**	**24**	*e*P	**Pg**	**09 54 08.2**	**-1.9**
	2.4nm,0.4s						
KUU				*e*S	**Sg**	**09 55 10.9**	**-0.7**
	12nm,0.6s						
KUU	**Kurty**	**4.75**	**24**	Pg	**Pg**	**09 54 08.2**	**-1.9**
	2.4nm,0.4s						
KUU				Lg	Lg	09 55 10.9	
	12nm,0.6s						
BTLS	**Baital**	**5.45**	**3**	*e*P	**Pg**	**09 54 22.2**	**-1.5**
	1.5nm,0.2s						
BTLS				*e*S	**Sg**	**09 55 34.5**	**+0.2**
	3.2nm,0.7s						
BTLS	**Baital**	**5.45**	**3**	Pg	**Pg**	**09 54 22.2**	**-1.5**
	1.5nm,0.2s						
BTLS				Lg	Lg	09 55 34.5	
	3.2nm,0.7s						

ARXS	**Arharly**	**5.57**	**33**	*e*P	**Pg**	**09 54 23.2**	**-2.8**
	6.8nm,0.5s						
ARXS				*e*S	**Sg**	**09 55 36.1**	**-2.0**
	9.9nm,0.5s						
ARXS	**Arharly**	**5.57**	**33**	Pg	**Pg**	**09 54 23.2**	**-2.8**
	6.8nm,0.5s						
ARXS				Lg	Lg	09 55 36.1	
	9.9nm,0.5s						
PDGK	**Podgornoye**	**5.76**	**48**	⇑Pn	Pn	09 54 10.3	+5.3
	5.0nm,1.1s						
PDGK				⇓Pg	**Pg**	**09 54 28.6**	**-1.0**
	10nm,1.4s						
PDGK				⇑Lg	Lg	09 55 47.5	
	8.9nm,1.0s						
MKAR	**Makanchi Array**	**9.57**	**38**	Pn	Pn	09 55 02.5	+5.4
	0.0nm,0.3s,baz=226,slow=9.7,SNR=4.2						
FINES	**FINESS Array B**	**36.18**	**323**	P	**P**	**09 59 45.3**	**+3.7**
	0.8nm,0.6s,baz=109,slow=10,SNR=5.3						
ARCES	**ARCESS Array B**	**39.14**	**335**	P	**P**	**10 00 10.2**	**+3.5**
	1.0nm,0.6s,baz=108,slow=8.6,SNR=7.0						
YKA	**Yellowknife Ar**	**78.05**	**4**	P	**P**	**10 04 40.5**	**+2.9**
	0.2nm,0.5s,baz=358,slow=5.4,SNR=7.0						

UPA ***25*** *10:15:44.9±1.3, 6°.77N×73°.36W, h0^{km}±39^{km}, MW4.9*
IDC ***25*** *10:15:46.0±0.4, 6°.80N×72°.97W, h157^{km}±4^{km}, mb3.7/13, mb1 4.0/20, mb1mx3.8/33, mbtmp4.3/20, Error ellipse: s-maj=10.7km s-min=6.7km az=128.0*
NEIC ***25*** *10:15:46.6±2.3, 6°.77N±0°.09×73°.06W±0°.09, h166^{km}±7^{km}, mb4.5/45, Error ellipse: s-maj=14.3km s-min=11.4km az=137.0*
RSNC ***25*** *10:15:47.1±1.2, 6°.82N×73°.15W, h150^{km}±5^{km}, ML4.6, Mw4.8, Fault plane solution: NP1:φ$_s$78.00000°, δ64.00000°, λ-180.00000°.*
VAO ***25*** *10:15:47.3±0.4, 6°.79N×73°.09W, h168^{km}±2^{km}, mb4.3*
ISC 25 10:15:45.8±0.4**, 6°.88N**±0°.03×**73°.14W**±0°.03**, h156**^{km}±4^{km}**,**
h156^{km}**:pP-P, n197,** σ1^{s}**86**/280**, mb4.3**/31**, 20C-11D,**
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**189**	⇑*i*P	**Pn**	**10 16 07.4**	**+0.1**
BARC				*e*S	**Sn**	**10 16 22.4**	**-1.4**
BARC				*i*		10 16 23.7	
	comp=Z,10µm,0.4s						
BRRC	**Barranca, Sant**	**0.61**	**292**	⇑*i*P	**Pn**	**10 16 09.2**	**+0.8**
BRRC				*e*S	**Sn**	**10 16 26.3**	**+0.6**
BRRC				*i*		10 16 30.0	
	comp=Z,9µm,0.4s						
PAMC	**Pamplona, Colo**	**0.64**	**43**	⇓*i*P	**Pn**	**10 16 10.2**	**+1.1**
PAMC				*e*S	**Sn**	**10 16 27.4**	**+0.5**
PAMC				*i*		10 16 29.6	
	comp=Z,19µm,0.4s						
RUSC	**La Rusia**	**0.98**	**177**	⇑*i*P	**Pn**	**10 16 11.3**	**-0.3**
RUSC				*e*S	**Sn**	**10 16 29.6**	**-1.6**
RUSC				*i*		10 16 31.9	
	comp=Z,7µm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	⇑*i*P	**Pn**	**10 16 13.8**	**-0.6**
PTBC				*e*S	**Sn**	**10 16 34.8**	**-1.4**
PTBC				*i*		10 16 42.1	
	comp=Z,11µm,0.4s						
OCAC	**Ocana**	**1.37**	**352**	⇑*i*P	**Pn**	**10 16 15.5**	**+0.8**
OCAC				*e*S	**Sn**	**10 16 37.3**	**+0.5**
OCAC				*i*		10 16 43.9	
	comp=Z,7µm,0.3s						
TAMC	**Tame, Arauca**	**1.41**	**108**	⇓*i*P	**Pn**	**10 16 15.8**	**+0.9**
TAMC				*e*S	**Sn**	**10 16 37.8**	**+0.5**
TAMC				*i*		10 16 38.4	
	comp=Z,2µm,0.4s						
SPBC	**San Pablo de B**	**1.53**	**217**	⇑*i*P	**Pn**	**10 16 16.1**	**-0.2**
SPBC				*e*S	**Sn**	**10 16 38.3**	**-1.4**
SPBC				*i*		10 16 42.5	
	comp=Z,7µm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.81**	**290**	⇓*i*P	**Pn**	**10 16 19.4**	**+0.3**
ZARC				*e*S	**Sn**	**10 16 45.0**	**+0.1**
ZARC				*i*		10 16 53.3	
	comp=Z,6µm,0.5s						
SMLC	**San Martn de**	**2.12**	**334**	⇓*i*P	**Pn**	**10 16 23.4**	**+0.6**
SMLC				*e*S	**Sn**	**10 16 51.7**	**+0.4**
SMLC				*i*		10 16 59.2	
	comp=Z,6µm,0.5s						
NORC	**Norcasia**	**2.16**	**233**	⇑*i*P	**Pn**	**10 16 22.9**	**-0.3**
NORC				*e*S	**Sn**	**10 16 51.9**	**-0.1**
NORC				*i*		10 16 56.2	
	comp=Z,4µm,0.3s						
CHIC	**Chingaza**	**2.31**	**195**	⇑*i*P	**Pn**	**10 16 25.3**	**-0.1**
CHIC				*e*S	**Sn**	**10 16 55.1**	**-0.7**
CHIC				*i*		10 16 59.3	
	comp=Z,3µm,0.5s						
ROSC	**El Rosal**	**2.34**	**210**	P	**Pn**	**10 16 27.1**	**+1.4**
	comp=Z,1µm,0.3s,baz=245,slow=3.0,SNR=2523						
ROSC				S	**Sn**	**10 16 58.1**	**+1.6**
	comp=Z,2µm,0.3s,baz=25,slow=22,SNR=16						
ROSC	**El Rosal**	**2.34**	**210**		**Pn**	**10 16 27.3**	**+1.6**
ROSC	**El Rosal**	**2.34**	**210**	⇑*i*P	**Pn**	**10 16 27.0**	**+1.4**
ROSC				*e*S	**Sn**	**10 16 58.5**	**+2.1**
ROSC				*i*		10 17 02.2	
	comp=Z,4µm,0.3s						
HELC	**Santa Helena**	**2.47**	**254**	*e*P	**Pn**	**10 16 27.4**	**+0.2**
HELC				*e*S	**Sn**	**10 16 55.9**	**-3.2**
HELC	**Santa Helena**	**2.47**	**254**	⇑*e*P	**Pn**	**10 16 27.2**	**0.0**
HELC				*e*S	**Sn**	**10 16 58.6**	**-0.5**
HELC				*i*		10 17 07.7	
	comp=Z,3µm,0.4s						
UREC	**San Jos de Ur**	**2.53**	**290**	⇓*i*P	**Pn**	**10 16 26.9**	**-0.7**
UREC				*e*S	**Sn**	**10 16 58.6**	**-1.3**
UREC				*i*		10 17 07.8	
	comp=Z,3µm,0.3s						
GUY2C	**Guyana, Caldas**	**2.75**	**234**	⇑*i*P	**Pn**	**10 16 31.0**	**+0.2**
GUY2C				*e*S	**Sn**	**10 17 05.2**	**-0.4**
GUY2C				*i*		10 17 15.5	
	comp=Z,3µm,0.6s						
PTGC	**Puerto Gaitan,**	**2.84**	**159**	⇓*i*P	**Pn**	**10 16 30.6**	**-0.9**
PTGC				*e*S	**Sn**	**10 17 03.6**	**-3.2**
PTGC				*i*		10 17 05.4	
	comp=Z,3µm,0.2s						
RREF	**El Recreo**	**2.94**	**228**	*e*P	**Pn**	**10 16 33.4**	**0.0**
RREF				*e*S	**Sn**	**10 17 12.2**	**+2.2**
RREF				*i*		10 17 19.2	
	comp=Z,3µm,0.4s						
CMAN1	**Manizales, Cal**	**2.97**	**233**	*e*P	**Pn**	**10 16 35.2**	**+1.8**
CMAN1				*e*S	**Sn**	**10 17 12.0**	**+1.9**
CBOC	**Ciudad Bolivar**	**3.03**	**251**	⇑*e*P	**Pn**	**10 16 34.8**	**+0.9**
CBOC				*e*S	**Sn**	**10 17 10.9**	**-0.2**
CBOC				*i*		10 17 28.5	
	comp=Z,1µm,0.7s						
DBBC	**Dabeiba**	**3.05**	**273**	⇓*i*P	**Pn**	**10 16 34.8**	**+0.7**
DBBC				*e*S	**Sn**	**10 17 11.4**	**-0.1**
MONA	**Monteria**	**3.13**	**307**	⇓*i*P	**Pn**	**10 16 34.4**	**-0.6**
MONA				*e*S	**Sn**	**10 17 11.5**	**-1.8**
MOTC	**Monteria, Cord**	**3.14**	**307**	⇓*i*P	**Pn**	**10 16 34.4**	**-0.8**
MOTC				*e*S	**Sn**	**10 17 12.7**	**-0.7**
MOTC				*i*		10 17 28.6	
	comp=Z,3µm,0.5s						
ARGC	**Ariguani, Magd**	**3.16**	**340**	⇓*i*P	**Pn**	**10 16 37.4**	**+2.0**
ARGC				*e*S	**Sn**	**10 17 14.1**	**+0.1**
ARGC				*i*		10 17 29.4	
	comp=Z,2µm,0.4s						
SDV	**Santo Domingo**	**3.19**	**51**	P	**Pn**	**10 16 36.9**	**+1.0**
	comp=Z,130nm,0.3s,baz=193,slow=3.5,SNR=582						
SDV				S	**Sn**	**10 17 14.3**	**-0.6**
	comp=Z,714nm,0.3s,baz=51,slow=21,SNR=57						
SDV	**Santo Domingo**	**3.19**	**51**	⇑*i*P	**Pn**	**10 16 36.9**	**+1.0**
SDV				*e*S	**Sn**	**10 17 13.2**	**-1.7**
SDV				*i*		10 17 18.7	
	comp=Z,2µm,0.7s						
SDV	**Santo Domingo**	**3.19**	**51**	*e*P	**Pn**	**10 16 37.3**	**+1.3**
CIBA1	**Ibague, SGC**	**3.19**	**221**	*e*P	**Pn**	**10 16 36.5**	**+0.5**
CIBA1				*e*S	**Sn**	**10 17 14.0**	**-0.8**
ANIL	**Santa Ana**	**3.27**	**224**	*e*P	**Pn**	**10 16 37.7**	**+0.5**
ANIL				*e*S	**Sn**	**10 17 16.3**	**-0.6**
ANIL				*i*		10 17 24.9	
	comp=Z,502nm,0.3s						
CVALL	**Valledupar, Ce**	**3.61**	**358**	*e*P	**Pn**	**10 16 41.3**	**+0.1**
CVALL				*e*S	**Sn**	**10 17 21.8**	**-2.6**
ORTC	**Ortega, Tolima**	**3.62**	**216**	⇑*i*P	**Pn**	**10 16 41.1**	**-0.2**
ORTC				*e*S	**Sn**	**10 17 25.4**	**+0.9**
ORTC				*i*		10 17 29.9	
	comp=Z,1µm,0.7s						
PLMC	**San Jos del P**	**3.69**	**238**	⇑*e*P	**Pn**	**10 16 42.5**	**+0.2**
PLMC				*e*S	**Sn**	**10 17 24.3**	**-1.9**
PLMC				*i*		10 17 44.8	
	comp=Z,684nm,0.7s						
SOLC	**Bahia Solano**	**4.29**	**262**	*e*P	**Pn**	**10 16 50.5**	**+0.5**
SOLC				*e*S	**Sn**	**10 17 36.8**	**-3.3**
YOTC	**Yotoco, Valle**	**4.29**	**228**	⇑*i*P	**Pn**	**10 16 49.6**	**-0.6**
YOTC				*e*S	**Sn**	**10 17 42.1**	**+1.7**
YOTC				*i*		10 17 51.6	
	comp=Z,236nm,0.6s						
GUVC	**San Jose del G**	**4.33**	**173**	*e*P	**Pn**	**10 16 49.8**	**-0.9**
GUVC				*e*S	**Sn**	**10 17 38.4**	**-2.8**
GUVC				*i*		10 17 46.0	
	comp=Z,2µm,0.2s						
SMRC	**Santa Marta, M**	**4.39**	**346**	*e*P	**Pn**	**10 16 52.3**	**+0.9**
SMRC				*e*S	**Sn**	**10 17 40.0**	**-2.5**
SMRC				*i*		10 17 43.6	
	comp=Z,933nm,0.4s						
CAPC	**Capurgana**	**4.53**	**293**	*e*P	**Pn**	**10 16 51.6**	**-1.5**
CAPC				*e*S	**Sn**	**10 17 42.7**	**-2.9**
CAPC				*i*		10 17 52.3	
	comp=Z,370nm,0.3s						
CAP2	**Capurgana**	**4.54**	**293**	*e*P	**Pn**	**10 16 52.5**	**-0.8**
CAP2				*e*S	**Sn**	**10 17 44.0**	**-1.9**
PIZC	**Pizarro, Choco**	**4.61**	**246**	*e*P	**Pn**	**10 16 55.6**	**+1.4**
PIZC				*e*S	**Sn**	**10 17 48.7**	**+1.2**
PIZC				*i*		10 18 02.3	
	comp=Z,413nm,0.6s						
PTAC	**Punta Ardita,**	**4.64**	**274**	*e*P	**Pn**	**10 16 54.1**	**-0.5**
PTAC				*e*S	**Sn**	**10 17 39.5**	**-8.9**
MACC	**Macarena, Meta**	**4.75**	**189**	⇑*i*P	**Pn**	**10 16 54.2**	**-1.9**
MACC				*e*S	**Sn**	**10 17 46.4**	**-4.6**
MACC				*i*		10 17 52.5	
	comp=Z,1µm,0.8s						
BETC	**Betania**	**4.76**	**209**	⇑*e*P	**Pn**	**10 16 54.8**	**-1.4**
BETC				*e*S	**Sn**	**10 17 45.3**	**-5.9**
MARP	**Paez Belalcaza**	**4.89**	**215**	*e*P	**Pn**	**10 16 57.0**	**-1.2**
MARP				*e*S	**Sn**	**10 17 50.7**	**-4.0**
MALC	**Bahia Malaga**	**5.05**	**236**	*e*P	**Pn**	**10 17 01.6**	**+1.5**
MALC				*e*S	**Sn**	**10 17 58.7**	**+0.6**
MALC				*i*		10 18 15.3	
	comp=Z,272nm,0.6s						
UPD2	**Meteti**	**5.11**	**289**	*e*P	**Pn**	**10 16 60.0**	**-0.8**
UPD2				*e*S	**Sn**	**10 17 57.5**	**-1.9**
GARC	**Garzon, Huila**	**5.21**	**207**	⇑*i*P	**Pn**	**10 17 00.9**	**-1.5**
GARC				*e*S	**Sn**	**10 17 57.8**	**-4.6**
GARC				*i*		10 18 00.1	
	comp=Z,457nm,0.2s						
PCON	**Cinco Dias**	**5.56**	**216**	*e*P	**Pn**	**10 17 07.5**	**+0.2**
PCON				*e*S	**Sn**	**10 18 03.5**	**-7.5**
PCON				*i*		10 18 39.5	
	comp=Z,188nm,0.5s						
PCON				*i*		10 18 39.5	
	comp=Z,188nm,0.5s						
CNTA3	**Canitas, Panam**	**6.15**	**293**	*e*P	**Pn**	**10 17 13.9**	**-0.7**
CHPO	**Chepo, Panama**	**6.34**	**291**	*e*P	**Pn**	**10 17 16.7**	**-0.5**
CHPO				*e*S	**Sn**	**10 18 27.2**	**-1.5**
FLAM	**Flamenco Islan**	**6.65**	**288**	*e*S	**Sn**	**10 18 34.2**	**-1.9**
UPA	**Univ. de Panam**	**6.67**	**289**	*e*P	**Pn**	**10 17 21.3**	**-0.2**
UPA				*e*S	**Sn**	**10 18 35.3**	**-1.3**
MIRA3	**Miramar, Colon**	**6.69**	**294**	*e*P	**Pn**	**10 17 22.4**	**+0.6**
CHOR3	**La Chorrera**	**6.86**	**287**	*e*P	**Pn**	**10 17 23.9**	**-0.2**
CHOR3				*e*S	**Sn**	**10 18 42.1**	**+0.8**
ZANG	**Zanguenga, Cho**	**6.98**	**288**	*e*P	**Pn**	**10 17 25.0**	**-0.6**
ZANG				*e*S	**Sn**	**10 18 43.7**	**-0.3**
GCUF	**Volcan Galeras**	**7.01**	**217**	*e*P	**Pn**	**10 17 27.2**	**+0.7**
GCUF				*e*P	**Pn**	**10 17 27.2**	**+0.7**
GCUF				*e*S	**Sn**	**10 18 43.4**	**-2.0**
GCUF				*e*S	**Sn**	**10 18 43.4**	**-2.0**
GCUF				*i*		10 18 52.7	
	comp=Z,51nm,0.4s						
GCUF				*i*		10 18 52.7	
	comp=Z,51nm,0.4s						
BCIP	**Isla Barro Col**	**7.01**	**289**	*e*P	**Pn**	**10 17 25.4**	**-0.7**
BCIP				*e*S	**Sn**	**10 18 43.2**	**-1.6**
BCIP	**Isla Barro Col**	**7.01**	**289**	Pn	**Pn**	**10 17 25.2**	**-0.8**
VTON	**El Valle, Cocl**	**7.12**	**284**	*e*P	**Pn**	**10 17 27.8**	**+0.2**
VTON				*e*S	**Sn**	**10 18 45.6**	**-1.9**
AZU	**Azuero**	**7.13**	**278**	⇓*i*P	**Pn**	**10 17 27.5**	**-0.2**
AZU				*e*S	**Sn**	**10 18 46.2**	**-1.6**
PNME	**Penonome**	**7.30**	**283**	*e*P	**Pn**	**10 17 30.3**	**+0.4**
PNME				*e*S	**Sn**	**10 18 49.0**	**-2.7**
CACAO	**El Cacao, Vera**	**7.68**	**274**	*e*P	**Pn**	**10 17 34.6**	**-0.4**
CACAO				*e*S	**Sn**	**10 18 57.8**	**-2.9**
MARI3	**Mariato, Verag**	**7.83**	**276**	*e*P	**Pn**	**10 17 38.2**	**+1.3**
PONU3	**Ponuga, Veragu**	**7.84**	**278**	*e*P	**Pn**	**10 17 36.1**	**-1.0**
GMAL	**Guarumal, Vera**	**8.08**	**277**	*e*P	**Pn**	**10 17 41.7**	**+1.5**
GMAL				*e*S	**Sn**	**10 19 07.8**	**-2.6**
OTAV	**Otavalo**	**8.46**	**219**	Pn	**Pn**	**10 17 44.7**	**-1.1**
OTAV	**Otavalo**	**8.46**	**219**	*e*P	**Pn**	**10 17 45.4**	**-0.4**
PCRV	**Puerto La Cruz**	**9.03**	**68**	P	**Pn**	**10 17 51.5**	**-1.4**
	comp=Z,2.0nm,0.3s,baz=272,slow=2.3,SNR=12						
PCRV				S	**Sn**	**10 19 32.8**	**-0.5**
	comp=Z,7.2nm,0.3s,baz=235,slow=23,SNR=5.9						
BCO2	**Palmira**	**9.48**	**282**	*e*P	**Pn**	**10 18 00.7**	**+1.6**
HDC	**Heredia**	**11.29**	**287**		**Pn**	**10 18 25.1**	**+2.2**
YHJ	**Yallahs**	**11.43**	**344**	*i* P	**P**	**10 18 29.3**	**-2.8**
HOJ	**Hope**	**11.61**	**343**	*i* P	**Pn**	**10 18 29.9**	**+3.0**
HOJ				*i* P	**P**	**10 18 32.0**	**-2.0**
CMJ	**Castle Mountai**	**11.63**	**345**	*i* P	**Pn**	**10 18 30.5**	**+3.4**
STH	**Stony Hill**	**11.70**	**343**	*i* P	**Pn**	**10 18 30.7**	**+2.7**
STH				*i* S	**Sn**	**10 20 29.4**	**-8.1**
MCJ	**Malvern**	**11.85**	**338**	⇑*i*P	**P**	**10 18 33.9**	**-2.8**
MCJ				*i* S	**Sn**	**10 20 33.4**	**-7.7**
BNJ	**Bonny Gate**	**11.97**	**342**	*i* P	**Pn**	**10 18 34.9**	**+3.3**
MTDJ	**Mount Denham**	**12.07**	**340**	Pn	**P**	**10 18 36.6**	**-2.6**
BBJ	**Bamboo Saint A**	**12.12**	**341**	*i* P	**P**	**10 18 37.6**	**-2.1**
BBJ				*i* S	**Sn**	**10 20 39.6**	**-8.3**
JTS	**Las Juntas de**	**12.16**	**287**	P	**Pn**	**10 18 36.3**	**+2.1**
	comp=Z,1.0nm,0.3s,baz=131,slow=2.0,SNR=9.6						
JTS	**Las Juntas de**	**12.16**	**287**	Pn	**Pn**	**10 18 33.0**	**-1.2**
SDDR	**Presa de Saban**	**12.17**	**8**	Pn	**Pn**	**10 18 35.2**	**+1.0**
ESPN	**Las Esperanzas**	**12.21**	**296**		**Pn**	**10 18 34.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**12.53**	**27**		**Pn**	**10 18 36.3**	**-2.5**
MPR	**Mayaguez**	**12.70**	**27**		**Pn**	**10 18 38.3**	**-2.7**
OBIP	**Obispado Ponce**	**12.80**	**29**	Pn	**Pn**	**10 18 40.4**	**-1.9**
IGPR	**InterUniversit**	**12.98**	**31**		**Pn**	**10 18 43.8**	**-0.8**
PDPR	**Patillas Dam,**	**13.07**	**31**		**Pn**	**10 18 45.0**	**-0.7**
SJG	**San Juan**	**13.08**	**31**	P	**Pn**	**10 18 44.1**	**-1.7**
	comp=Z,8.8nm,0.3s,baz=203,slow=12,SNR=38						
SJG	**San Juan**	**13.08**	**31**		**Pn**	**10 18 44.7**	**-1.2**
GTBY	**Guantanamo Bay**	**13.11**	**352**	Pn	**Pn**	**10 18 45.1**	**-1.2**
HUMP	**Col San Antoni**	**13.26**	**32**		**Pn**	**10 18 47.2**	**-1.0**
GCPR	**Guaynabo City**	**13.28**	**31**		**Pn**	**10 18 46.2**	**-2.2**
CBYP	**Canovanas**	**13.37**	**31**		**Pn**	**10 18 47.4**	**-2.2**
MTP	**Monte Pirata**	**13.38**	**33**	Pn	**Pn**	**10 18 48.5**	**-1.2**
CDVI	**St. Croix**	**13.55**	**36**	Pn	**Pn**	**10 18 52.2**	**+0.4**
FDF	**Fort de France**	**14.12**	**55**	Pn	**Pn**	**10 18 57.9**	**-1.2**
CBCY	**The Bluff, Cay**	**14.31**	**334**	P	**P**	**10 19 05.0**	**+1.0**
CZSB	**Cruzeiro do Su**	**14.52**	**178**	*e*P	**Pn**	**10 19 03.9**	**-0.2**
ATAH	**Atahualpa**	**14.87**	**201**	P	**Pn**	**10 19 09.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=59,slow=7.8,SNR=1.8						
PTGA	**Pitinga**	**15.16**	**119**	P	**Pn**	**10 19 10.7**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=305,slow=15,SNR=7.0						
TGUH	**Tegucigalpa,Un**	**15.62**	**298**	P	**Pn**	**10 19 18.2**	**+0.4**
MACA	**Manacapuru-AM**	**15.94**	**128**	*e*P	**Pn**	**10 19 20.5**	**-1.1**
MTO3	**Montecristo**	**17.60**	**296**	P	**P**	**10 19 40.4**	**-0.2**
MTO3				IAmb	IAmb	10 19 46.4	
	comp=Z,48nm,0.8s						
ESQI	**Esquipulas**	**17.65**	**297**	P	**P**	**10 19 41.8**	**+0.8**
ETMB	**Extrema**	**17.96**	**157**	*e*P	**P**	**10 19 43.0**	**-1.3**
SAML	**Samuel**	**18.59**	**148**	P	**P**	**10 19 49.8**	**-1.4**
SAML				IAmb	IAmb	10 20 19.2	
	comp=Z,9.1nm,0.7s						
SAML	**Samuel**	**18.59**	**148**	*e*P	**P**	**10 19 50.8**	**-0.4**
NNA	**Nana**	**19.10**	**191**	P	**P**	**10 19 57.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=39,slow=19,SNR=3.7						
PETF	**Flores**	**19.15**	**303**	P	**P**	**10 19 58.9**	**+1.6**
ITTB	**Itaituba**	**20.65**	**122**	*e*P	**P**	**10 20 14.0**	**+0.5**
ITTB				*e*pP	**pP**	**10 20 42.6**	**+1.6**
MALB	**Monte Alegre**	**20.74**	**114**	*e*P	**P**	**10 20 13.8**	**-0.6**
MALB				*e*pP	**pP**	**10 20 41.4**	**-0.5**
CCIG	**Comitan**	**20.81**	**298**	P	**P**	**10 20 17.0**	**+1.7**
CCIG				IAmb	IAmb	10 20 23.5	
	comp=Z,42nm,1.2s						
MCPB	**Macapa, AP**	**22.23**	**108**	*e*P	**P**	**10 20 30.0**	**0.0**
MCPB				*e*pP	**pP**	**10 20 58.8**	**+0.6**
NPGB	**Novo Progresso**	**22.49**	**128**	*e*P	**P**	**10 20 32.7**	**+0.2**
NPGB				*e*pP	**pP**	**10 21 02.6**	**+1.6**
VILB	**Vilhena**	**23.52**	**147**	*e*P	**P**	**10 20 42.1**	**+0.1**
VILB				*e*pP	**pP**	**10 21 13.1**	**+0.9**
SIV	**San Ignacio**	**25.67**	**152**	P	**P**	**10 20 59.9**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=322,slow=8.0,SNR=6.6						
SIV				pP	**pP**	**10 21 32.7**	**-2.1**
	comp=Z,3.0nm,0.7s,baz=336,slow=11,SNR=6.3						
PRPB	**Parauapebas**	**26.64**	**119**	*e*P	**P**	**10 21 10.8**	**+0.6**
PRPB				*e*pP	**pP**	**10 21 44.8**	**+1.4**
SNDB	**Serra Nova Dou**	**28.68**	**131**	*e*P	**P**	**10 21 28.8**	**+0.4**
ARAG	**Araguaiana, MT**	**30.82**	**137**	*e*P	**P**	**10 21 46.2**	**-0.9**
V48A	**Smith Brothers**	**31.35**	**338**	P	**P**	**10 21 54.0**	**+2.3**
V48A				IAmb	IAmb	10 22 11.4	
	comp=Z,4.7nm,0.8s						
ZAIG	**Zacatecas**	**32.44**	**302**	P	**P**	**10 22 01.5**	**-0.2**
ZAIG				IAmb	IAmb	10 22 05.6	
	comp=Z,7.5nm,1.2s						
BDFB	**Brasilia**	**33.47**	**132**	P	**P**	**10 22 10.1**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=266,slow=7.5,SNR=4.1						
SDBA	**SAO DESIDERIO**	**33.98**	**124**	*e*P	**P**	**10 22 14.4**	**-0.6**
SDBA				*e*pP	**pP**	**10 22 49.9**	**+1.2**
U40A	**Yellville**	**34.44**	**331**	P	**P**	**10 22 20.2**	**+1.7**
U40A				IAmb	IAmb	10 22 21.5	
	comp=Z,14nm,0.7s						
SFIN	**Lafayette**	**35.62**	**342**	P	**P**	**10 22 31.0**	**+2.4**
TXAR	**Lajitas Array**	**36.41**	**312**	P	**P**	**10 22 37.3**	**+1.7**
	comp=Z,4.2nm,0.7s,baz=128,slow=9.3,SNR=51						
TXAR				PcP	**PcP**	**10 24 58.4**	**+1.8**
	comp=Z,0.3nm,0.4s,baz=148,slow=5.2,SNR=4.3						
TXAR	**Lajitas Array**	**36.41**	**312**	P	**P**	**10 22 37.2**	**+1.6**
TX31	**Lajitas Ar. Si**	**36.41**	**312**	P	**P**	**10 22 37.0**	**+1.4**
TX31				IAmb	IAmb	10 22 38.0	
	comp=Z,12nm,0.7s						
TX32	**Lajitas Array**	**36.41**	**312**	P	**P**	**10 22 37.2**	**+1.6**
TX32				IAmb	IAmb	10 22 38.1	
	comp=Z,4.1nm,0.7s						
ITQB	**Itaqui**	**39.65**	**157**	*e*P	**P**	**10 23 01.6**	**-1.0**
319A	**Douglas**	**41.63**	**311**	P	**P**	**10 23 19.6**	**+0.6**
319A				IAmb	IAmb	10 23 22.4	
	comp=Z,8.8nm,0.8s						
SDCO	**Great Sand Dun**	**42.49**	**321**	P	**P**	**10 23 26.6**	**+0.5**
TUC	**Tucson**	**43.20**	**311**	P	**P**	**10 23 33.3**	**+1.7**
X18A	**Snowflake**	**43.66**	**314**	P	**P**	**10 23 36.6**	**+1.1**
SUSD	**Miller**	**43.68**	**333**	P	**P**	**10 23 35.1**	**-0.1**
WUAZ	**Wupatki**	**45.17**	**315**	P	**P**	**10 23 47.3**	**0.0**
WUAZ				IAmb	IAmb	10 23 51.1	
	comp=Z,15nm,0.9s						
P17A	**Butcher Ranch,**	**46.83**	**320**	P	**P**	**10 24 01.3**	**+1.0**
KNB	**Kanab**	**46.93**	**316**	P	**P**	**10 24 02.7**	**+1.6**
MTPU	**Mount Pierson**	**47.01**	**317**	P	**P**	**10 24 03.6**	**+1.6**
LCMT	**Little Creek M**	**47.22**	**315**	P	**P**	**10 24 04.7**	**+1.4**
ULM	**Lac du Bonnet**	**47.23**	**340**	P	**P**	**10 24 03.5**	**+0.6**
	comp=Z,2.4nm,0.4s,baz=143,slow=6.7,SNR=12						
ULM	**Lac du Bonnet**	**47.23**	**340**	P	**P**	**10 24 02.9**	**0.0**
ULM				IAmb	IAmb	10 24 04.8	
	comp=Z,8.1nm,1.1s						
MSU	**Marysvale**	**47.25**	**318**	P	**P**	**10 24 05.5**	**+1.9**
MVU	**Marysvale**	**47.27**	**318**	P	**P**	**10 24 05.7**	**+1.9**
SZCU	**Shurtz Canyon**	**47.40**	**316**	P	**P**	**10 24 05.8**	**+1.0**
TCRU	**Three Creeks R**	**47.48**	**318**	P	**P**	**10 24 06.6**	**+1.1**
PD31	**Pinedale Array**	**48.02**	**324**	P	**P**	**10 24 10.0**	**+0.5**
PDAR	**Pinedale Array**	**48.02**	**324**	P	**P**	**10 24 10.8**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=129,slow=9.0,SNR=9.9						
PDAR	**Pinedale Array**	**48.02**	**324**	P	**P**	**10 24 11.0**	**+1.5**
TCUT	**Toone Canyon**	**48.17**	**321**	P	**P**	**10 24 11.3**	**+0.6**
HWUT	**Hardware Ranch**	**48.55**	**322**	P	**P**	**10 24 14.3**	**+0.8**
BGU	**Big Grassy Mou**	**49.09**	**320**	P	**P**	**10 24 19.1**	**+1.5**
DGMT	**Dagmar**	**49.09**	**333**	P	**P**	**10 24 18.1**	**+0.8**
DGMT				IAmb	IAmb	10 24 20.3	
	comp=Z,13nm,0.8s						
REDW	**Red Top Meadow**	**49.14**	**324**	P	**P**	**10 24 19.7**	**+1.7**
REDW				IAmb	IAmb	10 24 20.4	
	comp=Z,7.1nm,0.9s						
LOHW	**Long Hollow**	**49.14**	**324**	P	**P**	**10 24 20.0**	**+1.9**
MOOW	**Moose Ponds**	**49.31**	**324**	P	**P**	**10 24 19.9**	**+0.6**
TPNV	**Topopah Spring**	**49.32**	**314**	P	**P**	**10 24 21.4**	**+2.0**
MCMT	**McKenzie Canyo**	**51.16**	**324**	P	**P**	**10 24 35.3**	**+2.0**
HLID	**Hailey**	**51.38**	**322**	P	**P**	**10 24 36.2**	**+1.4**
NVAR	**Mina Array Bea**	**51.43**	**315**	P	**P**	**10 24 37.1**	**+1.7**
	comp=Z,1.5nm,0.7s,baz=124,slow=7.5,SNR=15						
NVAR	**Mina Array Bea**	**51.43**	**315**	P	**P**	**10 24 36.7**	**+1.4**
MFID	**Camas Ranch**	**52.17**	**321**	P	**P**	**10 24 41.7**	**+1.1**
MFID				IAmb	IAmb	10 24 44.2	
	comp=Z,4.8nm,0.8s						
WVOR	**Wild Horse Val**	**53.48**	**319**	P	**P**	**10 24 51.0**	**+0.8**
WVOR				IAmb	IAmb	10 24 53.5	
	comp=Z,5.7nm,1.1s						
F10A	**Beach Ranch, E**	**54.37**	**323**	P	**P**	**10 24 57.0**	**+0.5**
F10A				IAmb	IAmb	10 24 58.5	
	comp=Z,33nm,2.0s						
PINE	**Pine Mountain**	**55.60**	**319**	P	**P**	**10 25 07.7**	**+2.1**
H04A	**Detroit Lake**	**56.80**	**320**	P	**P**	**10 25 15.0**	**+1.2**
H04A				IAmb	IAmb	10 27 02.9	
	comp=Z,22nm,1.8s						
YKA	**Yellowknife Ar**	**63.21**	**340**	P	**P**	**10 25 58.0**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=127,slow=7.6,SNR=89						
YKA				pP	**PcP**	**10 26 35.7**	**+2.6**
	comp=Z,0.7nm,0.4s,baz=129,slow=7.4,SNR=1.8						
ICESG	**Greenland Ices**	**65.90**	**13**	*i* P	**P**	**10 26 15.3**	**+0.3**
ICESG				IAmb	IAmb	10 26 16.5	
	comp=Z,31nm,1.0s						
TIC	**Toumodi**	**67.59**	**86**	*e*P	P	10 26 22.0	-4.2
LIC	**Lamto**	**67.62**	**86**	*e*P	**P**	**10 26 24.1**	**-2.3**
	comp=Z,29nm,0.9s						
DBIC	**Dimbokro**	**67.75**	**86**	P	**P**	**10 26 25.9**	**-1.3**
	comp=Z,7.9nm,0.8s,baz=285,slow=5.0,SNR=9.7						
DBIC	**Dimbokro**	**67.75**	**86**	P	**P**	**10 26 25.7**	**-1.5**
KIC	**Kosan Boka**	**67.89**	**86**	*e*P	**P**	**10 26 26.5**	**-1.6**
	comp=Z,19nm,0.8s						
SUMG	**Summit**	**68.94**	**11**	P	**P**	**10 26 34.7**	**+0.7**
SUMG	**Summit**	**68.94**	**11**	*i* P	**P**	**10 26 34.9**	**+0.9**
	comp=Z,103nm,0.8s						
SUMG	**Summit**	**68.94**	**11**	*i* P	**P**	**10 26 34.9**	**+0.9**
SUMG				IAmb	IAmb	10 26 36.1	
	comp=Z,104nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.75**	**78**	P	**P**	**10 27 01.7**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=284,slow=6.8,SNR=3.0						
BCAR	**Beaver Creek A**	**74.31**	**334**	P	**P**	**10 27 07.8**	**+1.9**
DAG	**Danmarks Havn**	**75.61**	**11**	*i* P	**P**	**10 27 12.0**	**-1.0**
	comp=Z,40nm,0.9s						
DAG	**Danmarks Havn**	**75.61**	**11**	*i* P	**P**	**10 27 12.0**	**-1.0**
DAG				IAmb	IAmb	10 27 12.5	
	comp=Z,40nm,0.9s						
ILAR	**Eielson Array**	**76.91**	**335**	P	**P**	**10 27 21.4**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=97,slow=4.2,SNR=7.7						
ILAR				pP	**pP**	**10 28 00.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=108,slow=4.5,SNR=3.5						
ILAR	**Eielson Array**	**76.91**	**335**	P	**P**	**10 27 21.2**	**+0.6**
NB2	**NORSAR Subarra**	**81.29**	**29**	P	**P**	**10 27 45.1**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=268,slow=5.3						
NOA	**NORSAR Array B**	**81.29**	**29**	P	**P**	**10 27 45.3**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=268,slow=5.3,SNR=5.5						
GERES	**GERESS Array B**	**82.80**	**42**	P	**P**	**10 27 52.0**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=285,slow=5.1,SNR=5.4						
ARCES	**ARCESS Array B**	**86.63**	**20**	P	**P**	**10 28 11.7**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=281,slow=4.2,SNR=14						
ZALV	**Zalesovo Beam**	**116.62**	**14**	PKP	**PKPdf**	**10 34 11.8**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=288,slow=2.3,SNR=7.7						
ZALV	**Zalesovo Beam**	**116.62**	**14**		**PKPdf**	**10 34 11.2**	**-0.1**
MKAR	**Makanchi Array**	**122.28**	**20**	PKP	**PKPdf**	**10 34 20.9**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=322,slow=2.2,SNR=8.8						
MKAR				pPKP	**pPKPdf**	**10 35 05.0**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=114,slow=2.8,SNR=3.4						
SONM	**Songino Array**	**125.53**	**0**	PKP	**PKPdf**	**10 34 29.6**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=56,slow=0.5,SNR=4.7						
ASAR	**Alice Springs**	**149.13**	**234**	PKP	**PKPdf**	**10 35 11.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=121,slow=3.6,SNR=7.4						
ASAR				PKPbc	**PKPbc**	**10 35 15.6**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=121,slow=3.2,SNR=11						
ASAR				pPKPbc	**pPKPbc**	**10 35 56.4**	**-2.0**
	comp=Z,2.3nm,0.7s,baz=122,slow=3.4,SNR=5.6						
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**10 35 19.2**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=106,slow=2.8,SNR=60						
WRA				pPKPbc	**pPKPbc**	**10 35 59.5**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=110,slow=2.5,SNR=3.5						
WRA	**Warramunga Arr**	**150.35**	**241**		**PKPdf**	**10 35 18.4**	**+4.1**
CMAR	**Chiang Mai Arr**	**153.64**	**17**	PKP	**PKPdf**	**10 35 20.6**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=321,slow=2.2,SNR=6.9						
CMAR				PKPbc	**PKPbc**	**10 35 27.8**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=312,slow=3.1,SNR=12						
CMAR	**Chiang Mai Arr**	**153.64**	**17**		**PKPdf**	**10 35 20.1**	**+0.8**
CMAR				PKPbc	**PKPbc**	**10 35 27.6**	**+0.5**
CMAR				PKPab	**PKPab**	**10 35 39.4**	**-0.7**

IDC ***25*** *10:16:33.8±1.9, 5°.98S×147°.24E, h0^{km}, mb4.5/3, mb1 4.6/5, mb1mx3.9/31, mbtmp4.4/5, ML4.2/1, Error ellipse: s-maj=47.4km s-min=19.8km az=108.0*
NEIC ***25*** *10:16:41.2±0.7, 6°.1S±0°.1×147°.4E±0°.1, h69^{km}±10^{km}, mb4.0/19, Error ellipse: s-maj=21.7km s-min=12.6km az=139.0*

ISC 25 10:16:41.9±0.8, 6°.08S±0°.09×147°.5E±0°.1, h77^{km}, n29, σ1^s.06/31, mb4.0/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.32	185	Pn	Pn	10 17 30.4	-1.1
	8.2nm,0.3s,baz=12,slow=5.6,SNR=21						
PMG				Sn	Sn	10 18 09.3	-0.5
	19nm,0.3s,baz=197,slow=21,SNR=12						
PMG	Port Moresby	3.32	185	Pn	Pn	10 17 30.6	-0.9
RABL	Rabaul	5.03	68		Pn	10 17 54.9	0.0
COEN	Coen	8.90	208	Pn	Pn	10 18 47.1	-0.6
MTN	Manton Dam	17.46	246	P	P	10 20 39.7	-1.0
WB0	Warramunga Arr	18.62	222	P	P	10 20 52.9	-0.5
WB0				IAmb	IAmb	10 20 56.0	
	comp=Z,8.8nm,0.8s						
WR0	Warramunga Arr	18.66	221	P	P	10 20 53.1	-0.8
WR0				IAmb	IAmb	10 20 56.6	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	18.77	222	P	P	10 20 55.0	-0.1
WRAB				IAmb	IAmb	10 20 56.6	
	comp=Z,7.8nm,1.0s						
WB2	Warramunga Arr	18.78	222	P	P	10 20 54.7	-0.4
WB2				IAmb	IAmb	10 20 58.3	
	comp=Z,7.0nm,0.6s						
WRA	Warramunga Arr	18.78	222	P	P	10 20 54.5	-0.7
	comp=Z,0.8nm,0.3s,baz=42,slow=12,SNR=32						
WRA	Warramunga Arr	18.78	222	P	P	10 20 54.5	-0.7
EIDS	Eidsvold	19.49	170	P	P	10 21 02.6	-0.1
EIDS				IAmb	IAmb	10 21 28.7	
	comp=Z,18nm,1.4s						
SANVU	Saraoutou	21.48	117	P	P	10 21 24.7	+0.4
AS31	Alice Springs	21.82	215	P	P	10 21 28.1	+0.2
AS31				IAmb	IAmb	10 21 28.5	
	comp=Z,3.1nm,0.6s						
ASAR	Alice Springs	21.82	215	P	P	10 21 27.9	-0.2
	comp=Z,8.9nm,0.6s,baz=56,slow=8.7,SNR=231						
ASAR				S	S	10 25 29.6	+4.5
	comp=Z,3.3nm,0.9s,baz=33,slow=20,SNR=12						
DZM	Mont Dzumac	24.26	133	P	P	10 21 52.8	+0.8
FITZ	Fitzroy Crossi	24.43	239	P	P	10 21 54.0	+0.5
	comp=Z,21nm,0.5s,baz=59,slow=8.1,SNR=99						
FITZ	Fitzroy Crossi	24.43	239	P	P	10 21 53.2	-0.3
ARMA	Armidale	24.52	171	P	P	10 21 55.2	+0.9
STKA	Stephens Creek	26.25	191	P	P	10 22 10.2	+0.4
	comp=Z,2.6nm,0.6s,baz=7.8,slow=12,SNR=6.8						
STKA	Stephens Creek	26.25	191	P	P	10 22 09.6	-0.2
BBOO	Buckleboo	28.64	200	P	P	10 22 31.4	+0.1
FORT	Forrest	30.59	214	P	P	10 22 48.5	-0.1
PSA00	Pilbara Seismi	30.85	237	P	P	10 22 50.8	-0.1
NWAO	Narrogin (SRO)	38.79	223	P	P	10 23 59.4	+0.2
THZ	Tophouse	42.12	151	P	P	10 24 26.2	-0.4
MKAR	Makanchi Array	77.86	320	P	P	10 28 31.1	-0.1
	comp=Z,0.1nm,0.4s,baz=108,slow=9.3,SNR=1.8						
QSPA	South Pole Qui	83.89	180	P	P	10 29 03.1	+0.1
QSPA				IAmb	IAmb	10 29 03.4	
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	145.57	284	PKPbc	PKiKP	10 36 14.5	-1.9
	comp=Z,0.7nm,0.6s,baz=97,slow=4.9,SNR=2.4						

IDC 25 10:24:45.0±1.4, 4°.53N×122°.37E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.5/32, mbtmp3.7/4, MS4.0/2, Ms1 4.0/2, ms1mx2.8/50, Error ellipse: s-maj=206.8km s-min=21.5km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.02	155	P	P	10 30 28.8	-0.2
	0.5nm,0.3s,baz=331,slow=11,SNR=13						
ASAR	Alice Springs	30.20	159	P	P	10 30 57.8	+0.4
	0.2nm,0.3s,baz=342,slow=8.3,SNR=5.1						
ASAJ	Asahikawa	43.26	21	LR	LR	10 51 16.9	
	comp=Z,223nm,19.4s,baz=184,slow=37						
KLR	Kul'dur	45.25	9	LR	LR	10 53 18.9	
	comp=Z,120nm,18.2s,baz=341,slow=38						
MKAR	Makanchi Array	54.47	327	P	P	10 34 15.3	+0.9
	1.0nm,0.4s,baz=120,slow=7.5,SNR=31						
ZALV	Zalesovo Beam	57.96	335	P	P	10 34 37.4	-1.8
	0.4nm,0.3s,baz=122,slow=7.0,SNR=2.9						

MAN 25 10:34:21.1, 9°.81N×123°.91E, h15^{km}, mb4.3, ML3.1, MS2.8, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.51	6	⇓eP	Pb	10 34 32.0	+0.2
LLP				eS	Sg	10 34 38.2	+0.2
MSLP	Maasin	0.99	71	eP	Pb	10 34 38.7	-1.3
MSLP				eS	Sn	10 34 54.3	+0.1
CNOP	Candoni, Negro	1.25	271	eP	Pn	10 34 43.3	-0.9
CNOP				eS	Sg	10 35 01.5	-0.2
GUIM	Jordan	1.53	302	eP	Pn	10 34 46.3	-1.7
GUIM				eS	Sb	10 35 08.7	+0.1
PAGZ	Pagadian	2.02	195	eP	Pn	10 34 55.0	+0.4
PAGZ				eS	Sn	10 35 19.3	-0.3

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*BJI **25** 10:36:06.2±0.0, 0°.10S×127°.07E, h74^{km}, mB5.0/16, mb4.6/24, Ms4.7/6, Ms7 4.4/4*

*DJA **25** 10:36:12.4±0.2, 1°N±3°×12°7E±°, h59^{km}±4^{km}, M4.6/14, mB5.1/8, mb4.9/14, MLv4.6/12, Mw(mB)4.5/8*

*NEIC **25** 10:36:12.4±1.5, 0°.51N±0°.08×126°.71E±0°.06, h67^{km}±6^{km}, mb4.8/34, Error ellipse: s-maj=11.4km s-min=8.4km az=161.0*

*IDC **25** 10:36:14.0±2.4, 0°.44N×126°.58E, h85^{km}±22^{km}, mb4.2/22, mb1 4.2/25, mb1mx3.9/63, mbtmp4.5/25, MS3.5/6, Ms1 3.5/6, ms1mx3.0/43, Error ellipse: s-maj=19.8km s-min=10.0km az=83.0*

*NOU **25** 10:36:15.8, 0°.27N×126°.61E, h83^{km}, mb4.7, Northern Molucca Sea*

ISC 25 10:36:10.7±0.3, 0°.49N±0°.04×126°.70E±0°.05, h47^{km}, n122, σ1^s.50/127, mb4.6/43, MS4.3/6, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.73	67	Pn	Pn	10 36 27.3	+2.7
TNTI				Sn	Sn	10 36 38.3	+3.5
TNTI	Ternate	0.73	67	P	Pn	10 36 27.3	+2.7
TNTI				S	Sn	10 36 38.2	+3.5
SANI	Sanana	2.62	196	P	Pn	10 36 52.6	+2.1
KMSI	Cibinong	2.72	272	P	Pn	10 36 53.3	+1.4
GTOI	Gorontalo	3.69	272	P	Pn	10 37 08.6	+3.4
GTOI				S	Sn	10 37 52.6	+5.1
LUWI	Luwuk	4.21	249	Pn	Pn	10 37 14.5	+2.1
LUWI	Luwuk	4.21	249	P	Pn	10 37 14.6	+2.3
MSAI	Masohi	4.41	150	P	Pn	10 37 20.5	+5.3
MRSI	Marisa	4.76	270	P	Pn	10 37 20.2	+0.3
SIJI	Sorong	4.76	106	P	Pn	10 37 23.9	+3.9
	7.6nm,0.3s,baz=234,slow=23,SNR=26						
SIJI				LR	LR	10 39 29.7	
	comp=Z,264nm,21.4s,baz=170,slow=40						
APSI	Ampana	5.24	255	P	Pn	10 37 27.0	+0.5
	0.7nm3μm103nm,0.4s						
TOLI2	Tolitoli	5.95	276	Pn	Pn	10 37 36.5	+0.3
FAKI	Fak Fak	6.50	121	Pn	Pn	10 37 46.7	+2.8
FAKI	Fak Fak	6.50	121	P	Pn	10 37 47.0	+3.2
	0.2nm42nm,0.7s						
MPSI	Mapaga	6.80	269	P	Pn	10 37 50.4	+2.5
	0.2nm813nm56nm,0.7s						
TTSI	Tana Toraja	7.72	243	P	Pn	10 38 01.5	+1.0
	0.8nm3μm237nm,0.6s						
BNSI	Bone	8.18	234	P	Pn	10 38 08.4	+1.5
	1μm102nm,0.7s						
SPSI	Sidrap Palu	8.21	237	P	Pn	10 38 08.5	+1.1
	3μm200nm,0.5s						
BKSI	Bulukumba	8.74	229	P	Pn	10 38 17.1	+2.5
	755nm67nm,0.7s						
KAPI	Kappang	8.83	232	P	Pn	10 38 17.0	+1.2
	6.7nm,0.3s,baz=53,slow=3.9,SNR=13						
KAPI				S	Sn	10 39 53.5	-0.5
	4.9nm,0.3s,baz=165,slow=20,SNR=2.7						
KAPI	Kappang	8.83	232	Pn	Pn	10 38 18.5	+2.7
MYLDM	Lahad Datu	9.42	300	Pn	Pn	10 38 27.1	+3.3
EDFI	Ende, Flores	10.45	208	P	Pn	10 38 41.3	+3.3
	6.3nm,0.8s						
MTN	Manton Dam	13.96	162	P	Pn	10 39 26.9	+1.1
	baz=14,SNR=9.0						
MTN	Manton Dam	13.96	162	Pn	Pn	10 39 26.3	+0.4
KDU	Kakadu	14.29	157	P	Pn	10 39 29.0	-1.3
	baz=14,SNR=19						
JAY	Jayapura	14.32	102	LR	LR	10 45 29.2	
	comp=Z,116nm,19.2s,baz=235,slow=38						
KSM	Kuching	16.42	274	Pn	Pn	10 39 57.9	0.0
FITZ	Fitzroy Crossi	18.50	183	P	P	10 40 23.0	0.0
	baz=18,SNR=11						
FITZ	Fitzroy Crossi	18.50	183	P	P	10 40 22.5	-0.6
	1.0nm,0.3s,baz=11,slow=9.1,SNR=19						
FITZ	Fitzroy Crossi	18.50	183	P	P	10 40 22.8	-0.2
WB0	Warramunga Arr	21.50	160	P	P	10 40 56.2	+0.5
WRAB	Tennant Creek	21.64	160	P	P	10 40 57.4	+0.3
WRA	Warramunga Arr	21.64	160	P	P	10 40 57.1	-0.1
	42nm,0.4s,baz=336,slow=11,SNR=245						
WRA				S	S	10 44 51.0	-3.5
	1.0nm,0.8s,baz=322,slow=23,SNR=4.3						
WRA				LR	LR	10 51 12.8	
	comp=Z,43nm,19.6s,baz=185,slow=42						
WRA	Warramunga Arr	21.64	160	P	P	10 40 58.0	+0.8
WB2	Warramunga Arr	21.64	160	P	P	10 40 57.5	+0.2
	baz=22						
WB2	Warramunga Arr	21.64	160	P	P	10 40 57.5	+0.2
WR0	Warramunga Arr	21.73	160	P	P	10 40 58.3	+0.2
WR0				IAmb	IAmb	10 40 59.6	
	comp=Z,35nm,0.9s						
COEN	Coen	21.73	132	P	P	10 40 58.5	+0.3
TWG	Pinlang	22.86	347	P	P	10 41 09.3	-0.9
TWG				IAmb	IAmb	10 41 19.8	
	comp=Z,50nm,1.5s						
PSA00	Pilbara Seismi	22.92	197	P	P	10 41 09.8	-1.0
PSA00				IAmb	IAmb	10 41 11.2	
	comp=Z,19nm,0.8s						
QIS	Mount Isa	24.43	150	P	P	10 41 25.5	+0.3
	baz=24,SNR=14						
AS31	Alice Springs	25.01	164	P	P	10 41 30.6	+0.2
AS31				IAmb	IAmb	10 41 33.2	
	comp=Z,21nm,0.3s						
ASAR	Alice Springs	25.01	164	P	P	10 41 30.6	+0.2
	comp=Z,21nm,0.4s,baz=342,slow=11,SNR=319						
ASAR				PcP	PcP	10 45 04.0	-0.7
	comp=Z,0.6nm,0.3s,baz=358,slow=1.7,SNR=4.2						
ASAR				S	S	10 45 53.5	+2.2
	comp=Z,1.2nm,0.7s,baz=347,slow=21,SNR=6.5						
ASAR	Alice Springs	25.01	164	P	P	10 41 30.7	+0.3
SDSI	Sungai Dareh	25.31	267	P	P	10 41 33.9	+0.7
	comp=Z,11nm,0.6s						
MTSU	Mount Surprise	25.35	138	P	P	10 41 34.5	+1.0
	baz=25,SNR=4.0						
MEEK	Meekatharra	28.07	196	P	P	10 41 57.3	-0.6
	baz=28,SNR=10						
FORT	Forrest	31.12	178	P	P	10 42 24.8	0.0
	baz=31,SNR=8.9						
FORT	Forrest	31.12	178	P	P	10 42 25.0	+0.1
FORT				IAmb	IAmb	10 42 25.8	
	comp=Z,28nm,0.8s						
KMBL	Kambalda	32.01	188	P	P	10 42 32.1	-0.6
	baz=32,SNR=12						
NJ2	Nanjing	32.26	347	eP	P	10 42 36.5	+1.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KLBR	Kellerberrin	33.01	194	P	P	10 42 42.0	+0.5
	baz=33,SNR=8.3						
MUN	Mundaring	33.78	196	P	P	10 42 47.6	-0.5
	baz=34,SNR=4.3						
BBOO	Buckleboo	34.28	166	P	P	10 42 52.2	-0.2
	baz=34,SNR=46						
BBOO	Buckleboo	34.28	166	P	P	10 42 52.5	0.0
NWAO	Narrogin (SRO)	34.41	194	P	P	10 42 53.1	-0.6
	baz=34,SNR=4.4						
NWAO	Narrogin (SRO)	34.41	194	P	P	10 42 52.8	-0.8
	comp=Z,8.4nm,0.9s,baz=17,slow=8.8,SNR=5.9						
NWAO	Narrogin (SRO)	34.41	194	P	P	10 42 52.6	-1.1
NWAO				IAmb	IAmb	10 43 18.6	
	comp=Z,14nm,1.1s						
JHJ	Hachijo jima 2	34.72	19	LR	LR	10 58 41.3	
	comp=Z,343nm,18.1s,baz=272,slow=39						
STKA	Stephens Creek	35.14	158	P	P	10 43 00.1	+0.1
	baz=35,SNR=33						
STKA	Stephens Creek	35.14	158	P	P	10 43 00.0	+0.1
	comp=Z,12nm,0.6s,baz=327,slow=9.0,SNR=55						
STKA	Stephens Creek	35.14	158	P	P	10 43 00.1	+0.1
HTT	Hallett	35.65	162	P	P	10 43 04.6	+0.3
	baz=36,SNR=8.4						
CMSA	Cobar Meteorol	36.59	152	P	P	10 43 13.5	+1.2
	baz=36,SNR=14						
KSRS	Korea Array	36.80	2	P	P	10 43 14.2	+0.2
	comp=Z,0.9nm,0.6s,baz=174,slow=10.0,SNR=4.8						
MJAR	Matsushiro Arr	37.43	15	LR	LR	10 59 25.6	
	comp=Z,28nm,18.8s,baz=215,slow=37						
ARMA	Armidale	38.83	144	P	P	10 43 32.3	+0.9
	baz=39,SNR=5.9						
ARMA	Armidale	38.83	144	P	P	10 43 32.3	+0.9
ARPS	Mount Arapiles	39.64	161	P	P	10 43 38.4	+0.5
	baz=40,SNR=14						
CAN	Canberra	41.26	152	P	P	10 43 52.5	+1.1
CAN				IAmb	IAmb	10 44 15.0	
	comp=Z,29nm,1.1s						
LZH	Lanzhou	41.29	332	eP	P	10 43 52.5	+0.6
LZH				pP	pwP	10 44 07.8	+1.1
LZH				sP	sP	10 44 18.0	+8.9
LZH				PP	PP	10 45 29.5	+1.6
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,68nm,5.0s						
LZH				LR	LR		
	comp=Z,310nm,15.2s						
LZH				LR	LR		
	comp=Z,510nm,12.5s						
LZH				LR	LR		
	comp=Z,240nm,15.7s						
TOO	Toolangi	41.66	157	P	P	10 43 54.6	-0.1
TOO				IAmb	IAmb	10 44 17.4	
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	42.46	343	eP	P	10 44 02.3	+1.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
HHC				LR	LR		
	comp=Z,310nm,15.0s						
HHC				LR	LR		
	comp=Z,300nm,7.7s						
HHC				LR	LR		
	comp=Z,680nm,14.7s						
USRK	Ussuriysk Ar.	43.78	6	P	P	10 44 11.5	-0.1
	comp=Z,5.1nm,0.6s,baz=185,slow=6.6,SNR=31						
USRK	Ussuriysk Ar.	43.78	6	P	P	10 44 12.3	+0.6
NOUC	Port Laguerre	44.66	123	P	P	10 44 19.8	+0.7
DZM	Mont Dzumac	44.76	123	P	P	10 44 22.1	+2.0
GTA	Gaotai	45.87	331	eP	P	10 44 30.0	+1.4
GTA				pP	sP	10 44 48.0	+1.9
GTA				sP	pwP	10 44 57.5	+14
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KLR	Kul'dur	48.75	4	P	P	10 44 50.2	-0.4
	comp=Z,2.8nm,0.5s,baz=188,slow=11,SNR=14						
SONM	Songino Array	50.35	342	P	P	10 45 02.5	-0.5
	comp=Z,1.2nm,0.7s,baz=136,slow=29,SNR=3.8						
TLY	Talaya	54.59	343	P	P	10 45 34.2	0.0
	comp=Z,0.7nm,0.3s,baz=229,slow=10,SNR=4.1						
WMQ	Urumqi	55.37	326	eP	P	10 45 41.0	+0.9
WMQ				sP	sP	10 46 05.5	+7.8
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
PETK	Petropavlovsk-	58.43	21	P	P	10 46 01.8	+0.3
	comp=Z,4.2nm,0.4s,baz=191,slow=3.6,SNR=46						
TUWZ	Tuamarina	59.67	140	P	P	10 46 09.6	-0.8
MK31	Makanchi Array	60.20	326	P	P	10 46 13.9	-0.1
MK31				IAmb	IAmb	10 46 14.8	
	comp=Z,6.7nm,0.6s						
MKAR	Makanchi Array	60.20	326	P	P	10 46 13.7	-0.2
	comp=Z,7.7nm,0.4s,baz=117,slow=8.1,SNR=151						
BKZ	Black Stump Fm	60.23	137	P	P	10 46 13.2	-1.1
BKZ				IAmb	IAmb	10 46 27.4	
	comp=Z,12nm,1.3s						
URZ	Urewera	60.24	136	P	P	10 46 12.2	-2.0
KSH	Kashi	60.33	316	P	P	10 46 16.8	+1.7
KSH				S	S	10 54 26.8	+0.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,250nm,4.8s						
KSH				LR	LR		
	comp=Z,310nm,6.0s						
KSH				LR	LR		
	comp=Z,320nm,6.2s						
KSH				LR	LR		
	comp=Z,330nm,5.8s						
MAKZ	Makanchi	60.38	326	P	P	10 46 14.8	-0.3
MA2	Magadan	61.84	14	P	P	10 46 24.0	-0.7
	comp=Z,11nm,0.7s,baz=186,slow=6.0,SNR=10.0						
MA2	Magadan	61.84	14	P	P	10 46 25.0	+0.2
MA2				IAmb	IAmb	10 46 26.1	
	comp=Z,15nm,0.8s						
ZAA0	Zalesovo Array	63.45	334	P	P	10 46 34.7	-0.9
ZALV	Zalesovo Beam	63.45	334	P	P	10 46 34.0	-1.6
	comp=Z,1.1nm,0.5s,baz=103,slow=4.7,SNR=6.4						
ZALV	Zalesovo Beam	63.45	334	P	P	10 46 34.5	-1.1
KURBB	Kurchatov Arra	64.45	328	P	P	10 46 41.7	-0.5
	comp=Z,4.5nm,0.4s,baz=129,slow=6.0,SNR=83						
KURK	Kurchatov	64.45	328	P	P	10 46 41.3	-0.9
KURK				IAmb	IAmb	10 46 42.5	
	comp=Z,14nm,0.9s						
SEY	Seymchan	65.18	13	P	P	10 46 47.4	+0.7
	comp=Z,4.0nm,0.8s,baz=228,slow=5.8,SNR=11						
KK31	Karatay Array	65.59	318	P	P	10 46 48.7	-1.1
KK31				IAmb	IAmb	10 46 50.8	
	comp=Z,4.2nm,0.8s						
KKAR	Karatay Array	65.59	318	P	P	10 46 49.2	-0.6
KKAR	Karatay Array	65.59	318	P	P	10 46 49.2	-0.6
KKAR				IAmb	IAmb	10 46 50.8	
	comp=Z,4.2nm,0.8s						
BVAR	Borovoye Array	70.01	328	P	P	10 47 16.0	-1.4
	comp=Z,1.0nm,0.6s,baz=32,slow=8.7,SNR=4.3						
TIXI	Tiksi	71.06	1	P	P	10 47 22.1	-1.3
AKTO	Aktyubinsk	76.17	322	P	P	10 47 52.8	-1.1
	comp=Z,2.3nm,0.7s,baz=120,slow=7.4,SNR=12						
ARU	Arti	77.65	328	P	P	10 48 00.3	-1.7
	comp=Z,0.5nm,0.3s,baz=105,slow=3.5,SNR=3.6						
VNDA	Vanda	80.23	173	P	P	10 48 14.4	-1.5
	comp=Z,2.2nm,0.8s,baz=311,slow=5.7,SNR=8.9						
VNDA	Vanda	80.23	173	P	P	10 48 15.3	-0.6
VNDA				IAmb	IAmb	10 48 37.8	
	comp=Z,16nm,1.4s						
BELG	Belogornoye	82.94	323	P	P	10 48 28.9	-1.7
	comp=Z,4.8nm,0.6s,baz=226,slow=6.3,SNR=3.9						
PPT	Papeete	84.16	108	LR	LR	11 26 12.8	
	comp=Z,173nm,18.8s,baz=182,slow=36						
KDAK	Kodiak Island	84.63	32	P	P	10 48 38.8	-0.3
	comp=Z,5.6nm,0.8s,baz=206,slow=1.2,SNR=7.6						
KDAK	Kodiak Island	84.63	32	P	P	10 48 37.9	-1.2
BRLK	Bradley Lake	85.75	30	P	P	10 48 44.0	-0.8
COLD	Coldfoot	86.87	23	P	P	10 48 49.9	-0.1
COLD				IAmb	IAmb	10 48 50.7	
	comp=Z,3.7nm,1.0s						
ILAR	Eielson Array	88.03	25	P	P	10 48 53.3	-2.4
	comp=Z,0.2nm,0.4s,baz=251,slow=4.8,SNR=9.8						
SYO	Syowa Base	89.41	201	⇑eP	P	10 49 01.3	-0.7
QSPA	South Pole Qui	90.42	180	P	P	10 49 06.3	-0.7
ARCES	ARCESS Array B	93.46	340	P	P	10 49 18.9	-2.0
	comp=Z,0.8nm,0.6s,baz=78,slow=4.4,SNR=7.3						
TORD	Torodi Ar. Bea	123.84	286	PKP	PKPdf	10 55 02.2	-2.4
	comp=Z,0.7nm,0.4s,baz=69,slow=1.5,SNR=4.9						
TORD	Torodi Ar. Bea	123.84	286		PKPdf	10 55 03.2	-1.4
CPUP	Villa Florida	154.01	172	PKPbc	PKPbc	10 56 04.0	-1.9
	comp=Z,0.9nm,0.4s,baz=154,slow=1.9,SNR=5.0						
CPUP				PKPab	sPKPdf	10 56 17.4	+1.0
	comp=Z,1.9nm,0.7s,baz=214,slow=3.3,SNR=4.9						
CPUP	Villa Florida	154.01	172		PKiKP	10 56 06.1	+0.1

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*MOS **25** 10:41:11.9±0.8, 29°.18N×139°.33E, h411^{km}, mb5.0/110, Error ellipse: s-maj=5.9km s-min=3.3km az=110.6*

*BJI **25** 10:41:12.4±0.0, 29°.18N×139°.36E, h419^{km}, mB5.0/51, mb5.3/76*

*NIED **25** 10:41:12.8, 29°.21N×139°.75E, h425^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.19; $M_{\theta\theta}$2.29; $M_{\phi\phi}$-0.10; $M_{r\theta}$-0.07; $M_{\theta\phi}$-1.54; $M_{\phi r}$-3.08; Fault plane solution: $M_0$4.00000×10^{16} NP1: ϕ_s333.00000°, δ70.00000°, λ-56.00000°. NP2: ϕ_s89.00000°, δ39.00000°, λ-148.00000°.*

*JMA **25** 10:41:12.8±0.2, 29°.21N×139°.75E, h425^{km}±4^{km}, M5.4 Broadband fault plane solution: P waves. NP1: ϕ_s84.00000°, δ32.00000°, λ-146.00000°. NP2: ϕ_s325.00000°, δ73.00000°, λ-62.00000°. Principal axes: T Plg23.0000°, Azm34.0000°; N Plg26.0000°, Azm136.0000°; P Plg54.0000°, Azm269.0000°;*

JMA Felt I J1.

*IDC **25** 10:41:13.6±0.4, 29°.18N×139°.42E, h418^{km}±4^{km}, mb4.5/59, mb1 4.5/67, mb1mx4.4/82, mbtmp5.3/67 Error ellipse: s-maj=7.2km s-min=4.9km az=85.0*

*NOU **25** 10:41:14.6, 29°.18N×139°.44E, h427^{km}, mb4.9, Southeast of Honshu, Japan*

*NEIC **25** 10:41:14.2±1.8, 29°.17N±0°.08×139°.5E±0°.1, h422^{km}±5^{km}, mb4.9/302, ML5.7(JMA), Error ellipse: s-maj=13.4km s-min=11.8km az=84.0*

*GCMT **25** 10:41:15.2±0.4, 29°.25N±0°.03×139°.25E±0°.04, h421^{km}±2^{km}, MW5.3/71, Moment Tensor Solution. s71, c99; Duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.33±.03; $M_{\theta\theta}$0.36±.04; $M_{\phi\phi}$-0.02±.04; $M_{r\theta}$0.08±.04; $M_{\theta\phi}$-0.34±.03; $M_{\phi r}$-0.85±.04; Best double couple: $M_0$0.97300×10^{17} NP1: ϕ_s92.00000°, δ27.00000°, λ-159.00000°. NP2: ϕ_s343.00000°, δ81.00000°, λ-65.00000°. Principal axes: T 0.8810, Plg31.0000°, Azm53.0000°; N 0.1840, Plg25.0000°, Azm159.0000°; P -1.0650, Plg48.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BGR **25** 10:41:25.8±0.0, 31°.43N×138°.87E, h429^{km}, mb4.9*

ISC 25 10:41:14.2±0.3, **29°.21N**±0°.03×**139°.47E**±0°.03, **h427**^{km}±2^{km}, **h426**^{km}**:pP-P, n1324,** σ**1^s.25**/1477, **mb4.9**/361, **135C-200D, Fault plane solution: NP1:** ϕ_s181.50702°, δ89.72089°, λ39.34147°. **NP2:** ϕ_s91.27824°, δ50.65909°, λ179.63911°. **Principal axes:** T Plg26.8530°, Azm53.7032°; N Plg50.6577°, Azm181.8475°; P Plg26.4114°, Azm309.1396°; **Fault plane solution: NP1:** ϕ_s331.27664°, δ69.70037°, λ-79.30415°. **NP2:** ϕ_s122.71169°, δ22.83940°, λ-116.64474°. **Principal axes:** T Plg23.9758°, Azm53.0188°; N Plg10.0244°, Azm147.5276°; P Plg63.7643°, Azm258.5464°;

Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.19	131	P	P	10 42 18.2	-2.8
CBIJ				S	S	10 43 10.8	-4.4
JCJ	Chichijima	3.19	131	P	P	10 42 18.2	-2.8
	2μm,0.3s,baz=57,slow=1.9,SNR=656						
JCJ				S	S	10 43 09.3	-6.0
	2μm,0.3s,baz=278,slow=23,SNR=34						
JAOM	Aogashimamukai	3.25	4	P	P	10 42 21.0	-0.3
JAOM				S	S	10 43 12.6	-3.4
JHH2	Haha-jima-NKT2	3.51	136	⇓P	P	10 42 21.0	-2.7
JHCJ	Hachijojimakas	3.86	4	P	P	10 42 25.8	-0.7
JHCJ				S	S	10 43 20.6	-4.8
JHJ2	Mitsune	3.90	4	P	P	10 42 26.1	-0.7
JHJ2				S	S	10 43 22.2	-3.8
JHJ2	Mitsune	3.90	4		P	10 42 25.7	-1.2
JHJ	Hachijo jima 2	3.90	4	P	P	10 42 25.3	-1.6
	377nm,0.3s,baz=1.1,slow=10,SNR=33						
JHJ				S	S	10 43 21.2	-4.9
	632nm,0.3s,baz=84,slow=22,SNR=12						
JMKN	Mikurajimanish	4.67	1	P	P	10 42 32.9	-1.1
TTO1	TONANKAI O.B.S	4.96	333	⇑P	P	10 42 38.2	+1.7
JKO	Kozu shima	4.97	357	P	P	10 42 36.2	-0.7
JTHY	Toshimahigashi	5.30	358	P	P	10 42 40.1	-0.1
JMMH	Miemihama	5.45	328	⇑P	P	10 42 42.9	+1.1
JIM2	Oshima 3	5.49	360	⇑P	P	10 42 41.3	-0.9
JIZS	Izushimoda	5.51	355	⇑P	P	10 42 41.7	-0.7
JIZS				S	S	10 43 51.0	-3.6
JSG	Sagara	5.55	349	⇑P	P	10 42 43.4	+0.6
JSG	Sagara	5.55	349	P	P	10 42 43.1	+0.2
BSO1	Boso 1	5.57	13	P	P	10 42 41.8	-0.7
BSO1				S	S	10 43 50.5	-4.3
BSO3	Boso 3	5.64	9	P	P	10 42 42.2	-1.3
JTNC	Tanabenakahech	5.65	325	⇑P	P	10 42 44.9	+1.0
JKKS	Kakegawashinom	5.66	348	⇑P	P	10 42 44.5	+0.5
JKKS				S	S	10 43 56.1	-1.4
JIE	Ise	5.67	336	⇑P	P	10 42 45.4	+1.3
JIE				S	S	10 43 56.8	-0.9
JKN2	Miekihoku	5.70	332	⇑P	P	10 42 45.4	+1.0
JHTM	Izuhatsuma	5.74	356	P	P	10 42 44.1	-0.7
JAA	Atsumi	5.75	341	⇑P	P	10 42 45.7	+0.8
JAA				S	S	10 43 56.8	-2.4
JWM	Minabe	5.80	324	⇑P	P	10 42 46.8	+1.3

BSO4	Boso 4	5.81	7	P	P	10 42 44.2	-1.2
HMMJ	Hamamatsu 2	5.82	346	P	P	10 42 45.8	+0.2
AJI	Ajiro2	5.82	357	P	P	10 42 44.7	-0.9
JSSY	Shinshiroyabe	5.92	344	⇑P	P	10 42 47.3	+0.6
SHZ3	Shizuoka 3	5.93	350	P	P	10 42 46.7	-0.2
JYZW	Yoshizawa	5.95	346	P	P	10 42 47.1	+0.1
JKUC	kamogawauchiur	5.96	6	P	P	10 42 45.3	-1.8
JKUC				S	S	10 43 58.1	-5.1
JWY	Kouya	5.98	328	⇑P	P	10 42 49.1	+1.7
JFNN	Fujinakano	6.00	354	P	P	10 42 46.9	-0.6
JOD2	Odawara 2	6.04	357	⇑P	P	10 42 46.5	-1.4
TSUJ	Tsu 2	6.06	335	⇑P	P	10 42 49.7	+1.6
JAI	Aioi	6.26	318	P	P	10 42 52.0	+1.7
JNY	Yasuok	6.28	348	⇑P	P	10 42 50.5	0.0
JHE	Heguri	6.30	330	P	P	10 42 52.1	+1.4
JYN	Shimob	6.32	353	⇑P	P	10 42 50.3	-0.6
JAO	Obara	6.32	343	⇑P	P	10 42 51.5	+0.6
INU	Inuyama	6.46	342	P	P	10 42 52.4	+0.1
JSMT	Sammumatsuo	6.46	7	P	P	10 42 51.4	-1.0
JICN	Ichinomiyachia	6.47	341	P	P	10 42 53.4	+1.0
JMN	Monobe	6.56	315	⇓P	P	10 42 55.4	+1.5
JMN	Monobe	6.56	315	P	P	10 42 54.7	+0.8
JGF	Kuroka	6.62	345	⇑P	P	10 42 54.2	-0.2
JGF	Kuroka	6.62	345		P	10 42 53.0	-1.5
JNT	Takato	6.74	351	P	P	10 42 55.1	-0.7
JYTA	Yamagatataniai	6.77	341	⇑P	P	10 42 56.0	0.0
JTO	Tosashimizu	6.78	304	⇓P	P	10 42 57.4	+1.2
JTO				S	S	10 44 20.2	+1.0
JRY	Ryogami san	6.80	356	⇑P	P	10 42 55.2	-1.2
JRY				S	S	10 44 13.9	-5.8
JKU	Kubokawa	6.84	308	⇓P	P	10 42 58.1	+1.3
JFM	Mihama	6.95	336	⇑P	P	10 42 58.9	+0.9
JFM				S	S	10 44 22.2	-0.4
JKS	Kasai	6.96	327	⇑P	P	10 42 58.9	+0.8
JWT	Wachi	6.96	331	⇑P	P	10 42 59.2	+1.1
JWT	Wachi	6.96	331		P	10 42 58.9	+0.8
JYT	Yasato	7.02	5		P	10 42 56.8	-1.9
JET	Tanbara	7.12	311	⇓P	P	10 43 01.4	+1.5
JAG	Ashikaga	7.19	360	⇑P	P	10 42 58.0	-2.6
JAG				S	S	10 44 19.4	-8.0
JGN	Niukaw	7.22	346	⇑P	P	10 43 00.5	-0.5
JGN				S	S	10 44 27.6	-0.5
JNG	Nsakai	7.27	351	⇑P	P	10 43 00.3	-1.2
JNA	Nagahama	7.38	308	⇓P	P	10 43 04.4	+1.7
JKY	Yasaka	7.38	331	P	P	10 43 03.5	+0.8
MJAR	Matsushiro Arr	7.38	352	P	P	10 43 00.8	-2.0
	2.5nm,0.3s,baz=167,slow=11,SNR=343						
MJAR				S	S	10 44 28.0	-3.3
	2.0nm,0.3s,baz=141,slow=14,SNR=2.2						
MJAR				ScP	ScP	10 51 47.8	+0.6
	baz=210,slow=2.6,SNR=6.8						
MJAR	Matsushiro Arr	7.38	352	P	P	10 42 60.0	-2.7
MAJO	Matsushiro	7.39	352	*c i*P	P	10 43 00.8	-1.9
MAJO	Matsushiro	7.39	352		P	10 43 00.8	-1.9
MAT	Matsushiro	7.39	352	P	P	10 43 00.8	-1.9
MAT				S	S	10 44 27.6	-3.7
MAT	Matsushiro	7.39	352	P	P	10 43 00.9	-1.8
MAT				S	S	10 44 28.4	-2.9
JNKG	Nichinankitago	7.40	291	P	P	10 43 05.3	+2.4
JSKE	Saikikamae	7.41	301	⇓P	P	10 43 05.0	+2.0
JHO	Hitachi	7.44	7	⇑P	P	10 43 01.2	-2.0
JNAR	Kushima--Naru	7.45	290	⇓P	P	10 43 05.8	+2.3
JHHC	Hyugahichiya	7.46	298	⇓P	P	10 43 05.4	+1.8
JTSN	Tsuno	7.49	296	⇓P	P	10 43 05.9	+2.0
JTN	Tanegashima 3	7.50	283	P	P	10 43 05.9	+1.8
JKT	Katashina	7.54	359	⇑P	P	10 43 01.9	-2.5
JTT	Ttatey	7.59	347	⇑P	P	10 43 04.6	-0.3
JUS	Usuki	7.65	302	⇓P	P	10 43 07.7	+2.1
JTSR	Tashiro 2	7.65	287	⇓P	P	10 43 07.7	+2.0
JKIT	Kitakata	7.68	298	⇓P	P	10 43 08.3	+2.3
JHM	Kurahashi	7.69	311	P	P	10 43 07.6	+1.6
JTZ	Takazaki	7.71	292	⇓P	P	10 43 08.4	+2.1
JHS	Saijyo	7.89	319	⇓P	P	10 43 09.7	+1.4
JHS	Saijyo	7.89	319		P	10 43 09.4	+1.1
JJN	Nakama	7.95	352	⇑P	P	10 43 07.3	-1.5
JKDJ	Kitadaitoujima	7.95	248	⇑P	P	10 43 09.8	+0.8
JJH	Hakui	8.01	344	P	P	10 43 09.1	-0.3
JKI	Kunimi	8.06	305	P	P	10 43 12.1	+2.1
JMZ	Minamidaito 2	8.06	247	⇑P	P	10 43 10.8	+0.6
JMZ				S	S	10 44 46.0	+0.7
JMZ	Minamidaito 2	8.06	247		P	10 43 10.6	+0.4
JKD	Kudamatsu	8.07	309	P	P	10 43 12.1	+1.9
JHT	Toyohira	8.08	314	⇓P	P	10 43 11.4	+1.1
JSU	Suzuyama	8.12	289	⇓P	P	10 43 12.3	+1.6
JSU	Suzuyama	8.12	289		P	10 43 11.9	+1.2
JIU3	Izumi3	8.15	296	⇓P	P	10 43 13.3	+2.3
JZO	Okuchi	8.18	293	⇓P	P	10 43 13.2	+1.9
JGT2	ShimaneMisato	8.30	316	⇓P	P	10 43 13.8	+1.2
JIZZ	Izumozaki	8.32	356	P	P	10 43 11.3	-1.5
JNU	Nakatsue	8.33	300	P	P	10 43 14.2	+1.2
	11nm,0.3s,baz=119,slow=4.2,SNR=116						
JNU	Nakatsue	8.33	300	⇓P	P	10 43 15.0	+2.0
JSZ	Suzu	8.40	348	P	P	10 43 12.0	-1.6
JTA	Tamana	8.53	298	P	P	10 43 16.9	+1.8
JHD	Hondo	8.65	294	P	P	10 43 18.5	+2.0
JFA	Akaike	8.66	303	P	P	10 43 18.2	+1.6
JMM	Marumori	8.70	7	P	P	10 43 16.4	-0.5
JTY	Toyota	8.75	307	P	P	10 43 19.3	+1.8
JSJ	Shimokoshiki	8.77	289	P	P	10 43 19.1	+1.3
JSJ				S	S	10 45 01.1	+1.5
JOI	OKI	8.79	325	P	P	10 43 19.4	+1.5
JOI				S	S	10 44 59.8	0.0
JFI	Itaya	8.83	301	P	P	10 43 20.2	+1.7
JSD	Sado	8.86	354	P	P	10 43 16.9	-1.8
JSD				S	S	10 44 56.3	-4.9
JSD	Sado	8.86	354		P	10 43 16.4	-2.3
NGSJ	Nagasakinomoza	8.98	295	P	P	10 43 21.7	+1.6
JAMN	Amaminishikomi	9.09	266	P	P	10 43 22.8	+1.4
JAMN				S	S	10 45 07.1	+0.9
JAW	Awa shima	9.22	359	P	P	10 43 21.8	-0.9
JFU	Fukue jima 2	9.82	293	P	P	10 43 31.1	+1.7
JMK	Ichinoseki	9.82	8	P	P	10 43 29.5	+0.2
JTSM	Tsushimamitsus	9.99	303	P	P	10 43 33.0	+1.8
JTU	Tsushima	10.06	304	P	P	10 43 33.7	+1.7
JTU				S	S	10 45 27.2	+1.4
JTU	Tsushima	10.06	304		P	10 43 31.2	-0.8
JOW	Kunigami	10.17	259	P	P	10 43 33.7	+0.3
	25nm,0.3s,baz=106,slow=20,SNR=36						
JOW				S	S	10 45 28.8	+0.7
	baz=349,slow=25,SNR=2.2						
JOW	Kunigami	10.17	259	P	P	10 43 35.3	+1.9
JIH	Iheya	10.38	261	P	P	10 43 37.5	+1.9
JNTH	Nagotoyohara	10.48	258	P	P	10 43 39.0	+2.3
JKE	Kume jima 2	11.59	259	P	P	10 43 50.3	+1.4
JTM	Tenmabayashi	11.62	6	P	P	10 43 49.5	+0.5
JOT	Ohata	12.21	6	P	P	10 43 56.1	+0.6
JOT				S	S	10 46 08.0	-0.6
JSR	Shiriuchi	12.31	3	P	P	10 43 57.4	+0.8
TJN	Taejon	12.43	308	*d i*P	P	10 43 58.1	+0.1
KSRS	Korea Array	12.67	313	P	P	10 44 01.1	+0.6
	11nm,0.3s,baz=128,slow=10,SNR=275						
KSRS				S	S	10 46 18.5	+0.6
	baz=118,slow=20,SNR=5.2						
KSRS				ScP	ScP	10 51 54.5	+0.8
	0.1nm,0.3s,baz=108,slow=0.4,SNR=7.4						
KSAR	Wonju Array Be	12.69	313	P	P	10 44 00.1	-0.6
KSAR	Wonju Array Be	12.69	313	P	P	10 44 00.1	-0.6
JKB	Kayabe	12.71	5	P	P	10 44 01.5	+0.6
JKB				S	S	10 46 17.6	-1.0
KS19	Wonju Array Si	12.73	313	P	P	10 44 00.4	-0.9
JOSM	Okushiri--Mats	12.84	0	P	P	10 44 03.0	+0.7
JYM2	Yakumo 2	12.90	3	P	P	10 44 03.6	+0.6
ERM	Erimo	13.12	12	*c i*P	P	10 44 06.6	+1.2
ERM				pmax	pmax		
	comp=Z,495nm,0.8s						
ERM	Erimo	13.12	12	P	P	10 44 05.9	+0.5
JEM	Erimo	13.12	12	P	P	10 44 06.7	+1.3
JNB	Noboribetsu	13.29	5	P	P	10 44 07.6	+0.4
JNBK	Urakawa-nobuka	13.31	11	P	P	10 44 08.8	+1.4
JSHD	Hidakashinhida	13.39	10	P	P	10 44 09.8	+1.5
JSH	Shimam	13.41	2	P	P	10 44 09.1	+0.6
JTHR	Tokachihiroo	13.41	12	P	P	10 44 10.0	+1.4
INCN	Inchon	13.52	311	P	P	10 44 09.7	-0.2
INCN	Inchon	13.52	311	P	P	10 44 09.7	-0.2
JIAM	Iburiatsuma	13.53	8	P	P	10 44 10.9	+1.1
JEW	Eniwo	13.69	6	P	P	10 44 12.3	+0.7
JEW	Eniwo	13.69	6	P	P	10 44 12.1	+0.5
JBT2	Biratori 2	13.74	9	P	P	10 44 13.1	+1.0
JCH	Churui	13.74	12	P	P	10 44 13.4	+1.3
JFR	Furan	14.15	9	P	P	10 44 17.5	+1.0
JISG	Ishigakijimahi	14.29	255	P	P	10 44 18.4	+0.1
JAK	Akkeshi	14.38	16	P	P	10 44 20.2	+1.1
JAB	Ashibetsu	14.43	8	P	P	10 44 21.1	+1.5
JAR	Ashorobuto	14.47	13	P	P	10 44 21.1	+1.1
JIJ	Ishigaki jima	14.51	254	P	P	10 44 20.8	+0.1
JHR	Hokuryu	14.61	6	P	P	10 44 23.1	+1.6
JKK2	Kamakawa 2	14.87	9	P	P	10 44 25.6	+1.3
IRIF	Iriomote-Funau	14.87	255	P	P	10 44 24.3	-0.3
MSHR	Mys Shultsa	14.93	336	*ce*P	P	10 44 26.0	+1.0
JNK	Nakash	14.95	15	P	P	10 44 25.8	+0.7
NEM2	Nemuro 2	14.99	18	P	P	10 44 26.5	+0.9
NMR	Nemuro--Hokkai	14.99	18	*e*P	P	10 44 25.9	+0.3
ASAJ	Asahikawa	15.08	9	P	P	10 44 28.0	+1.4
	comp=Z,7.2nm,0.3s,baz=222,slow=13,SNR=102						
ASAJ				ScP	ScP	10 51 58.6	+0.9
	comp=Z,1.1nm,0.3s,baz=263,slow=4.1,SNR=13						
ASAJ	Asahikawa	15.08	9	P	P	10 44 27.4	+0.8
ASAJ				pmax	pmax		
	comp=Z,369nm,1.4s						
JKA	Kamikawa-asahi	15.08	9	P	P	10 44 27.4	+0.8
JMP	Maruseppu	15.09	11	P	P	10 44 28.4	+1.7
JTKR	Abashiri--Toko	15.15	12	P	P	10 44 28.7	+1.4
JYG	Yagishiri	15.27	5	P	P	10 44 29.7	+1.2
JSS	Shosan	15.28	6	P	P	10 44 30.4	+1.8
GLVR	Golovnino	15.29	17	⇑*i*P	P	10 44 29.8	+1.1
GLVR				pmax	pmax		
	comp=Z,590nm,0.5s						
GRPR	Tuman	15.59	17	*d i*P	P	10 44 32.6	+0.6
GRPR				pmax	pmax		
	comp=N,101nm,0.6s						
GRPR				pmax	pmax		
	comp=E,67nm,0.6s						
GRPR				pmax	pmax		
	comp=Z,252nm,0.6s						
GRPR				pmax	pmax		
	comp=Z,924nm,1.2s						
YUK	Yuzh-Kuril'sk	15.65	17	⇑*i*P	P	10 44 33.8	+1.2
YUK				pmax	pmax		
	comp=Z,442nm,0.4s						
YUK				pmax	pmax		
	comp=N,36nm,0.2s						
YUK				pmax	pmax		
	comp=Z,854nm,1.1s						
SSE	Sheshan	15.93	281	P	P	10 44 34.5	-1.3
SSE				S	S	10 47 17.0	-5.5
SSE				pmax	pmax		
	comp=Z,34nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,3.5s						
TEY	Ternei	15.96	353	⇑*i*P	P	10 44 36.3	+0.4
TEY				*e*		10 47 24.3	
TEY				pmax	pmax		
	comp=Z,150nm,0.7s						
TEY				pmax	pmax		
	comp=N,120nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
USRK	Ussuriysk Ar.	16.10	340	P	P	10 44 38.1	+0.6
	baz=156,slow=8.2,SNR=416						
USRK				S	S	10 47 28.1	+2.5
	baz=124,slow=2.4,SNR=2.3						
USA0B	Ussuriysk Arra	16.10	340	P	P	10 44 37.4	-0.1
USA0B				pmax	pmax		
	comp=Z,156nm,0.9s						
USA0B	Ussuriysk Arra	16.10	340	P	P	10 44 37.4	-0.1
JRBN	Rebuntou	16.23	4	P	P	10 44 39.8	+1.0
TATO	Taipei	16.56	259	P	P	10 44 41.4	-1.2
TATO	Taipei	16.56	259	P	P	10 44 41.9	-0.7
NACB	Ninganchiao	16.74	257	P	P	10 44 41.9	-2.6
NACB				IAmb	IAmb	10 44 43.6	
	comp=Z,94nm,1.5s						
YHNB	Yeheng	16.75	259	P	P	10 44 43.0	-1.7
YHNB				IAmb	IAmb	10 44 44.1	
	comp=Z,58nm,1.0s						
MDJ	Mudanjiang	17.26	336	P	P	10 44 49.9	+0.1
MDJ				IAmb	IAmb	10 44 53.8	
	comp=Z,64nm,1.2s						
YULB	Yu-li	17.29	255	P	P	10 44 48.7	-1.6
KUR	Kuril'sk	17.32	20	*c i*P	P	10 44 50.8	+0.5
KUR				S	S	10 47 54.7	+5.7
KUR				pmax	pmax		
	comp=Z,95nm,0.8s						
KUR				pmax	pmax		
	comp=N,29nm,0.4s						
SSLB	Suanglung	17.43	256	P	P	10 44 50.7	-1.2
DL2	Dalian	17.64	308	P	P	10 44 51.8	-2.0
DL2				sP	sP	10 46 41.3	-2.9
DL2				S	S	10 47 51.3	-3.9
DL2				ScS	ScS	10 55 40.5	-2.9
DL2				pmax	pmax		
	comp=N,78nm,0.7s						
DL2				pmax	pmax		
	comp=N,140nm,3.8s						
TWG	Pinlang	17.71	253	P	P	10 44 53.6	-1.2
TPUB	Ta-pu	17.89	255	P	P	10 44 55.8	-0.9
YSS	Yuzh-Sakhalins	17.90	7	⇑*e*P	P	10 44 55.2	-1.3
YSS				*e*S	S	10 47 55.7	-4.0
YSS				pmax	pmax		
	comp=Z,600nm,3.2s						
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				smax	smax		
	comp=N,1μm,5.3s						
YSS				smax	smax		
	comp=E,1μm,8.5s						
YSS				smax	smax		
	comp=N,30nm,1.2s						
YSS				smax	smax		
	comp=E,30nm,2.0s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS	Yuzh-Sakhalins	17.90	7	P	P	10 44 56.4	0.0
NJ2	Nanjing	17.96	284	*e*P	P	10 44 55.5	-1.9
NJ2				S	S	10 47 59.8	-1.5
NJ2				pmax	pmax		
	comp=Z,55nm,1.0s						
SNY	Shenyang	18.01	319	⇓P	P	10 44 57.3	-0.4
SNY				S	S	10 48 00.0	-1.8
SNY				ScS	ScS	10 55 40.5	-4.0
QZH	Quanzhou	19.07	262	⇓*i*P	P	10 45 06.5	-1.9
QZH				S	S	10 48 18.3	-1.6
QZH				pmax	pmax		
	comp=Z,73nm,0.6s						
QZH				pmax	pmax		
	comp=Z,360nm,6.6s						
KNMB	Chin-men Tao	19.39	261	P	P	10 45 10.0	-1.5
UGL	Uglegorsk	19.94	5	*e*P	P	10 45 17.0	+0.9
UGL				*e*S	S	10 48 34.8	+1.3
UGL				pmax	pmax		
	comp=Z,660nm,2.0s						
UGL				pmax	pmax		
	comp=N,130nm,0.6s						
UGL				pmax	pmax		
	comp=E,250nm,0.7s						
UGL				pmax	pmax		
	comp=Z,260nm,0.7s						
UGL				smax	smax		
	comp=E,1μm,5.0s						
TIA	Tai'an	20.03	296	P	P	10 45 16.5	-0.7
TIA				sP	sP	10 47 09.0	-1.7
TIA				S	S	10 48 35.3	-0.2
TIA				pmax	pmax		
	comp=E,76nm,0.7s						
KLR	Kul'dur	20.84	346	P	P	10 45 25.4	+0.9
	comp=E,12nm,0.3s,baz=163,slow=11,SNR=40						
KLR				S	S	10 48 49.8	+1.6
	comp=E,3.1nm,0.7s,baz=73,slow=24,SNR=9.9						
KLR				ScP	ScP	10 52 10.8	+0.8
	comp=E,3.4nm,0.5s,baz=182,slow=4.3,SNR=14						
KLR	Kul'dur	20.84	346	*d i*P	P	10 45 25.3	+0.9
KLR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GRNR	Gornyy	21.65	355	⇑*i*P	P	10 45 32.7	+0.9
GRNR				pmax	pmax		
	comp=N,5.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,170nm,18.0s						
GRNR				MLR	MLR		
	comp=N,130nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,170nm,17.0s						
TYV	Tymovskoe	21.76	5	*e*P	P	10 45 33.8	+1.1
TYV				*e*S	S	10 49 05.9	+3.1
TYV				pmax	pmax		
	comp=Z,55nm,0.9s						
TYV				smax	smax		
	comp=N,700nm,4.5s						
TYV				smax	smax		
	comp=N,17nm,1.8s						
WHN	Wuhan	21.81	280	⇓P	P	10 45 33.5	0.0
WHN				sP	sP	10 47 30.0	-0.2
WHN				pmax	pmax		
	comp=N,270nm,0.6s						
WHN				pmax	pmax		
	comp=N,1μm,2.7s						
BJT	Baijiatuau	21.94	306	P	P	10 45 33.3	-1.2
BJT				pmax	pmax		
	comp=Z,78nm,0.7s						
BJT	Baijiatuau	21.94	306	P	P	10 45 33.2	-1.2
BJI	Beijing	21.94	306	P	P	10 45 33.3	-1.2
BJI				sP	sP	10 47 32.0	+0.4
BJI				S	S	10 49 07.5	+1.6
BJI				pmax	pmax		
	comp=Z,100nm,0.7s						
TIY	Taiyuan	24.03	298	*e*P	P	10 45 53.0	-0.5
TIY				pmax	pmax		
	comp=Z,51nm,0.7s						
HIA	Hailar	25.05	329	P	P	10 46 02.6	+0.2
HIA				pmax	pmax		
	comp=Z,56nm,0.6s						
HIA	Hailar	25.05	329	P	P	10 46 02.6	+0.2
HHC	Hu-ho-hao-te	25.52	305	*e*P	P	10 46 06.5	-0.3
HHC				pmax	pmax		
	comp=Z,84nm,1.3s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
ENH	Enshi	26.02	280	P	P	10 46 10.4	-0.8
ZEA	Zeya	26.08	343	*de*P	P	10 46 12.3	+0.9
ZEA				*e**SP	sP	10 48 17.1	+2.0
ZEA				*e*S	S	10 50 09.6	-1.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ZEA				smax	smax		
	comp=N,20nm,1.2s						
ZEA				smax	smax		
	comp=E,30nm,1.1s						
ZEA				smax	smax		
	comp=N,100nm,3.9s						
ZEA				smax	smax		
	comp=E,100nm,3.9s						
XAN	Xi'an	26.40	288	P	P	10 46 14.5	-0.1
XAN				pP	pP	10 47 29.0	+1.9
XAN				sP	sP	10 48 15.5	-2.5
XAN				pmax	pmax		
	comp=E,690nm,1.8s						
BTO	Baotou	26.57	303	*e*P	P	10 46 15.8	-0.2
PEA0B	Petropavlovsk-	27.38	24	⇑*e*P	P	10 46 23.0	+0.1
PETK	Petropavlovsk-	27.38	24	P	P	10 46 24.0	+1.1
	comp=E,10nm,0.8s,baz=238,slow=11,SNR=10.0						
PETK				ScP	ScP	10 52 28.3	+0.1
	comp=E,7.9nm,1.0s,baz=153,slow=2.0,SNR=6.5						
PETK	Petropavlovsk-	27.38	24	P	P	10 46 24.0	+1.1
PET	Petropavlovsk	27.66	25	⇓*e*P	P	10 46 26.1	+0.8
PET				pmax	pmax		
	comp=Z,225nm,1.3s						
QIZ	Qiongzhong	28.80	256	P	P	10 46 35.0	-0.8
QIZ				pP	PP	10 47 53.0	+0.9
QIZ				sP	sP	10 48 39.5	0.0
QIZ				S	S	10 50 54.5	+0.1
QIZ				pmax	pmax		
	comp=Z,24nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,500nm,3.7s						
GYA	Guiyang	29.09	273	⇓P	P	10 46 38.3	-0.1
GYA				S	S	10 50 57.0	-1.9
GYA				pmax	pmax		
	comp=Z,120nm,1.1s						
GYA				pmax	pmax		
	comp=Z,360nm,3.5s						
CIT	Chita	29.82	327	*e*P	P	10 46 45.4	+1.1
CIT				pmax	pmax		
	comp=Z,273nm,1.7s						
LZH	Lanzhou	30.65	292	⇓P	P	10 46 51.8	-0.1
LZH				pP	pP	10 48 05.3	-1.9
LZH				PP	pwP	10 48 19.5	+6.5
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.5s						
CD2	Chengdu	30.88	282	P	P	10 46 53.8	0.0
CD2				sP	sP	10 48 56.0	-2.2
CD2				S	S	10 51 24.5	-1.9
CD2				SS	SS	10 54 00.5	+0.1
CD2				pmax	pmax		
	comp=Z,600nm,3.8s						
SIJI	Sorong	30.92	196	P	P	10 46 54.6	+0.3
	comp=Z,22nm,0.9s,baz=0.8,slow=11,SNR=6.9						
ULN	Ulaanbaatar	31.14	316	*d i*P	P	10 46 56.3	+0.3
ULN				pmax	pmax		
	comp=Z,172nm,1.7s						
ULN	Ulaanbaatar	31.14	316	P	P	10 46 56.6	+0.6
ULN	Ulaanbaatar	31.14	316	P	P	10 46 56.8	+0.8
MA2	Magadan	31.32	11	P	P	10 46 57.9	+0.6
	comp=Z,34nm,0.8s,baz=188,slow=7.9,SNR=26						
MA2	Magadan	31.32	11	*c i*P	P	10 46 57.7	+0.5
MA2				pmax	pmax		
	comp=Z,35nm,0.7s						
MA2	Magadan	31.32	11	P	P	10 46 57.4	+0.2
MA2				IAmb	IAmb	10 46 58.9	
	comp=Z,46nm,0.9s						
SONM	Songino Array	31.53	315	P	P	10 46 59.7	+0.3
	comp=Z,21nm,0.4s,baz=123,slow=8.7,SNR=66						
SONM				PcP	PcP	10 49 40.5	+0.6
	comp=Z,6.6nm,0.7s,baz=135,slow=2.9,SNR=7.9						
SONM				ScP	ScP	10 52 42.8	+1.0
	comp=Z,2.9nm,0.9s,baz=134,slow=4.3,SNR=6.9						
SONM	Songino Array	31.53	315	P	P	10 46 59.3	0.0
SONM				pmax	pmax		
	comp=Z,44nm,1.1s						
SONM	Songino Array	31.53	315	P	P	10 46 59.3	0.0
JAY	Jayapura	31.57	178	P	P	10 46 59.8	-0.1
	comp=Z,22nm,0.8s,baz=302,slow=5.3,SNR=5.6						
KMI	Kunming	32.84	272	⇓*i*P	P	10 47 11.3	+0.2
KMI				PP	PP	10 48 40.5	+4.3
KMI				sP	sP	10 49 18.3	+2.6
KMI				S	S	10 51 56.3	-0.8
KMI				pmax	pmax		
	comp=Z,80nm,1.3s						
KMI				pmax	pmax		
	comp=Z,440nm,4.1s						
KMI	Kunming	32.84	272	P	P	10 47 10.9	-0.2
KMI				pmax	pmax		
	comp=Z,54nm,0.9s						
KMI	Kunming	32.84	272	P	P	10 47 10.9	-0.2
KMI				IAmb	IAmb	10 47 12.0	
	comp=Z,54nm,0.9s						
SLVN	Son La	33.01	265	P	P	10 47 12.1	-0.2
MRSI	Marisa	33.11	213	P	P	10 47 13.2	+0.1
	comp=Z,733nmcomp=Z,39nm,1.8s						
YAK	Yakutsk	33.45	352	P	P	10 47 15.5	+0.1
	comp=Z,8.1nm,0.3s,baz=115,slow=1.7,SNR=5.8						
YAK				PcP	PcP	10 49 44.7	-0.1
	comp=Z,9.6nm,0.5s,baz=273,slow=2.2,SNR=5.4						
YAK	Yakutsk	33.45	352	*e*P	P	10 47 14.7	-0.7
YAK				*e**PP	pP	10 48 28.4	-3.9
YAK				*e*		10 48 43.3	
YAK				*e*		10 49 44.6	
YAK				*e*S	S	10 52 00.7	-4.2
YAK				*e*SS	SS	10 54 51.5	-0.5
YAK				*e*		10 56 46.1	
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,1.4s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
YAK				smax	smax		
	comp=N,70nm,1.4s						
YAK				smax	smax		
	comp=E,191nm,2.3s						
YAK	Yakutsk	33.45	352	P	P	10 47 14.8	-0.7
BOD	Bodaibo	33.64	335	*e*P	P	10 47 17.0	-0.1
BOD				pmax	pmax		
	comp=Z,38nm,1.2s						
SANI	Sanana	33.66	205	P	P	10 47 16.9	-0.9
	comp=Z,806nmcomp=Z,68nm,0.8s						

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GTA   Gaotai           34.06 298 ⇓P    P      10 47 21.0 -0.1
GTA                              pP    pwP    10 48 41.0 -2.1
GTA                              PP    PP     10 48 51.5 +2.2
GTA                              PcP   PcP    10 49 45.3 -1.9
GTA                              S     S      10 52 13.0 -2.2
GTA                              ScP   ScP    10 52 49.8 -1.1
GTA                              SS    SS     10 54 59.5 -6.3
GTA                              ScS   ScS    10 56 52.8 -1.5
GTA                              pmax  pmax
      comp=Z,81nm,0.9s
GTA                              pmax  pmax
      comp=Z,320nm,7.4s
UBPT  Khong Chiam      34.25 254  P    P      10 47 23.0 +0.2
      comp=Z,10nm,1.8s
UBPT  Khong Chiam      34.25 254  P    P      10 47 22.9 +0.2
ZAK   Zakamensk        34.44 318 eP    P      10 47 24.0 -0.1
ZAK                              e            10 52 19.3
ZAK                              e            10 56 56.4
ZAK                              pmax  pmax
      comp=Z,70nm,1.3s
APSI  Ampana           34.46 213  P    P      10 47 24.4 -0.2
      comp=Z,694nmcomp=Z,59nm,0.5s
IRK   Irkutsk          34.70 321 eP    P      10 47 25.5 -0.7
IRK                              pmax  pmax
      comp=Z,130nm,2.0s
SEY   Seymchan         34.76  10  P    P      10 47 26.6 +0.1
      comp=Z,14nm,0.9s,baz=194,slow=6.3,SNR=22
SEY   Seymchan         34.76  10⇑iP    P      10 47 27.3 +0.8
TLY   Talaya           34.79 320  P    P      10 47 27.4 +0.5
      comp=Z,72nm,0.6s,baz=150,slow=4.0,SNR=9.8
TLY                              PcP   PcP    10 49 49.7 +0.8
      comp=Z,4.8nm,0.6s,baz=217,slow=2.4,SNR=3.3
TLY   Talaya           34.79 320d iP   P      10 47 27.9 +1.0
TLY                              pmax  pmax
      comp=Z,158nm,0.6s
TLY   Talaya           34.79 320  P    P      10 47 27.0  0.0
NONG  Nongkai          34.95 260  P    P      10 47 29.0 +0.3
      comp=Z,96nm,1.5s
MOY   Mondy            36.28 319 eP    P      10 47 39.7 +0.1
MOY                              pmax  pmax
      comp=Z,61nm,1.8s
CHAI  Chaiyaphum       36.90 257  P    P      10 47 44.8 -0.2
      comp=Z,2µmcomp=Z,182nm,0.8s
PAYA  Payao            37.25 264  P    P      10 47 48.0  0.0
      comp=Z,15µmcomp=Z,282nm,0.9s
UTTA  Uttaradit        37.31 261  P    P      10 47 48.0 -0.4
      comp=Z,811nmcomp=Z,52nm,0.6s
PHIT  Phitsanulok      37.67 260  P    P      10 47 52.0 +0.6
      comp=Z,91nm,1.2s
SRAK  Srakaew          37.75 254  P    P      10 47 48.5 -3.6
      comp=Z,7µmcomp=Z,799nm,0.7s
LAMP  Lampang          37.79 263  P    P      10 47 53.0 +0.6
      comp=Z,70nm,0.8s
CM34  Chiang Mai Arr   38.08 263  P    P      10 47 54.0 -0.8
CM35  Chiang Mai Arr   38.14 263  P    P      10 47 55.0 -0.3
SUKH  Sukhothai        38.22 261  P    P      10 47 56.8 +0.9
      comp=Z,34nm,1.2s
CMMT  Chiang Mai       38.27 264  P    P      10 47 55.2 -1.2
      comp=Z,445nmcomp=Z,42nm,1.1s
CHTO  Chiang Mai       38.27 264  P    P      10 47 56.0 -0.4
CHTO                             pmax  pmax
      comp=Z,50nm,0.8s
CHTO  Chiang Mai       38.27 264  P    P      10 47 56.0 -0.4
CHTO                             IAmb  IAmb   10 47 57.5
      comp=Z,50nm,0.8s
CM09  Chiang Mai Arr   38.38 263  P    P      10 47 57.0 -0.2
      comp=Z,274nmcomp=Z,25nm,0.7s
CM04  Chiang Mai Arr   38.41 263  P    P      10 47 58.0 +0.5
      comp=Z,302nmcomp=Z,27nm,1.1s
CM31  Chiang Mai Arr   38.41 263  P    P      10 47 58.1 +0.6
      comp=Z,9µmcomp=Z,587nm,0.7s
CM31  Chiang Mai Arr   38.41 263  P    P      10 47 57.4 -0.1
CMAR  Chiang Mai Arr   38.41 263  P    P      10 47 57.5  0.0
      comp=Z,11nm,0.7s,baz=50,slow=8.4,SNR=82
CMAR                             PcP   PcP    10 50 01.7 +1.1
      comp=Z,5.1nm,0.7s,baz=47,slow=1.4,SNR=10
CMAR                             ScP   ScP    10 53 08.1 +0.8
      comp=Z,1.2nm,0.5s,baz=14,slow=4.4,SNR=7.8
CMAR  Chiang Mai Arr   38.41 263  P    P      10 47 57.4 -0.1
CM01  Chiang Mai Arr   38.41 263  P    P      10 47 58.0 +0.5
      comp=Z,247nmcomp=Z,20nm,0.7s
CM32  Chiang Mai Arr   38.42 263  P    P      10 47 58.0 +0.4
CM02  Chiang Mai Arr   38.42 263  P    P      10 47 58.0 +0.5
      comp=Z,234nmcomp=Z,24nm,1.4s
CM15  Chiang Mai Arr   38.43 263  P    P      10 47 58.2 +0.5
      comp=Z,200nmcomp=Z,24nm,0.8s
CM05  Chiang Mai Arr   38.44 263  P    P      10 47 58.0 +0.3
      comp=Z,211nmcomp=Z,19nm,1.2s
CM13  Chiang Mai Arr   38.46 263  P    P      10 47 58.2 +0.3
      comp=Z,204nmcomp=Z,20nm,1.0s
KAPI  Kappang          38.95 212  PcP  PcP    10 50 02.6 +0.4
      comp=Z,7.3nm,0.3s,baz=138,slow=2.1,SNR=3.8
PMG   Port Moresby     39.10 168  P    P      10 48 03.2 +0.2
      comp=Z,11nm,0.4s,baz=29,slow=5.2,SNR=9.2
PMG                              S     S      10 53 30.5 -0.3
      comp=Z,5.3nm,0.6s,baz=239,slow=22,SNR=8.5
PMG   Port Moresby     39.10 168  P    P      10 48 02.9 -0.2
PMG                              pmax  pmax
      comp=Z,16nm,0.5s
PMG   Port Moresby     39.10 168  P    P      10 48 02.9 -0.2
PMG   Port Moresby     39.10 168  P    P      10 48 03.0 -0.2
KSM   Kuching          39.14 230  P    P      10 48 04.3 +0.8
KSM                              IAmb  IAmb   10 48 05.1
      comp=Z,23nm,0.6s
KSM   Kuching          39.14 230  P    P      10 48 05.0 +1.5
UTHA  Uthaitani        39.23 259  P    P      10 48 04.9 +0.7
      comp=Z,34nm,1.1s
MHMT  Maesarieng       39.41 263  P    P      10 48 05.1 -0.5
      comp=Z,1µmcomp=Z,103nm,1.5s
ADK   Adak             39.48  42  P    P      10 48 05.9 +0.1
ADK                              pmax  pmax
      comp=Z,118nm,1.2s
ADK   Adak             39.48  42  P    P      10 48 05.8 +0.1
MOKO  MOKOCHONG        39.70 277 eP    P      10 48 07.4 -0.7
MOKO                             IAmb  IAmb   10 48 09.0
      comp=Z,63nm,0.5s
KOHI  KOHIMA           40.21 276⇑eP    P      10 48 10.7 -1.6
KOHI                             IAmb  IAmb   10 48 12.4
      comp=Z,25nm,0.5s
PHET  Kaeng Krachan    40.33 255  P    P      10 48 14.6 +1.4
      comp=Z,978nmcomp=Z,30nm,1.1s
IMP   Imphal           40.60 275 eP    P      10 48 13.2 -2.1
IMP                              IAmb  IAmb   10 48 20.5
      comp=Z,41nm,1.0s
TEZP  TEZPUR           41.11 278 eP    P      10 48 19.3  0.0
SOEI  Soe              41.42 203  P    P      10 48 26.7 +4.7
EDFI  Ende, Flores     41.45 207  P    P      10 48 22.8 +0.6
      comp=Z,13nm,0.8s
LSA   Lhasa            41.83 283  Pn   P      10 48 26.3 +0.8
LSA                              smax  smax
      comp=N,51nm,0.8s
LSA                              smax  smax
      comp=E,130nm,0.7s
LSA   Lhasa            41.83 283 i P   P      10 48 26.5 +1.0
      SNR=19
LSA   Lhasa            41.83 283  P    P      10 48 25.4 -0.1
LSA                              pmax  pmax
      comp=Z,36nm,0.6s
LSA   Lhasa            41.83 283  P    P      10 48 25.4 -0.1
LSA                              IAmb  IAmb   10 48 27.1
      comp=Z,36nm,0.6s
BILL  Bilibino         41.98  15d iP   P      10 48 26.2 +0.6
BILL                             pmax  pmax
      comp=Z,73nm,1.7s
BILL  Bilibino         41.98  15  P    P      10 48 26.2 +0.6
BILL                             IAmb  IAmb   10 48 27.5
      comp=Z,34nm,0.9s
BATI  Baumata          42.05 204  P    P      10 48 27.0 +0.1
      comp=Z,25nm,0.3s,baz=50,slow=3.8,SNR=6.4
BATI  Baumata          42.05 204  P    P      10 48 26.3 -0.6
      comp=Z,39nm,1.5s
SAIH  SAIHA            42.15 272 eP    P      10 48 27.0 -0.7
GUWA  GUWAHATI         42.18 278 eP    P      10 48 27.1 -0.7
GUWA                             IAmb  IAmb   10 48 28.1
      comp=Z,94nm,0.7s
SHL   Shillong         42.19 277 eP    P      10 48 27.5 -0.6
SHL                              IAmb  IAmb   10 48 29.6
      comp=Z,36nm,0.7s
MTN   Manton Dam       42.58 192  P    P      10 48 30.1 -0.8
MTN                              IAmb  IAmb   10 48 31.5
      comp=Z,59nm,0.8s
TIXI  Tiksi            42.88 355  P    P      10 48 32.6 -0.1
TIXI                             pmax  pmax
      comp=Z,10.0nm,0.7s
TIXI  Tiksi            42.88 355  P    P      10 48 32.6 -0.1
TRTT  Trang            42.99 248  P    P      10 48 34.7 +0.4
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COEN  Coen             43.07 175  P    P      10 48 35.1 +0.3
WMQ   Urumqi           43.40 304 eP    P      10 48 38.0 +0.7
WMQ                              pP    pP     10 49 59.3 +1.5
WMQ                              pmax  pmax
      comp=Z,78nm,1.3s
WMQ                              pmax  pmax
      comp=Z,200nm,3.7s
WMQ   Urumqi           43.40 304  P    P      10 48 37.5 +0.2
WMQ                              pmax  pmax
      comp=Z,136nm,1.3s
WMQ   Urumqi           43.40 304  P    P      10 48 37.5 +0.2
DHUB  DHUBRI           43.70 278 eP    P      10 48 39.4 -0.4
DHUB                             IAmb  IAmb   10 48 40.9
      comp=Z,71nm,0.6s
KULM  Kulim            43.72 245  P    P      10 48 38.5 -1.6
KULM                             IAmb  IAmb   10 48 41.1
      comp=Z,35nm,0.6s
KULM  Kulim            43.72 245  P    P      10 48 41.0 +0.9
IPM   Ipoh             43.92 243  P    P      10 48 40.2 -1.5
IPM   Ipoh             43.92 243  P    P      10 48 42.0 +0.3
DGZ   Jazzator, Alta   44.07 313d iP   P      10 48 42.9 +0.3
DGZ                              pmax  pmax
      comp=Z,51nm,0.9s
NIKH  Nikolski High    44.40  43  P    P      10 48 44.4 -0.4
GTK   Tadong           44.56 280 eP    P      10 48 46.9 +0.2
GTK                              IAmb  IAmb   10 48 50.5
      comp=Z,23nm,0.7s
TAPN  Taplejung        45.31 281 eP    P      10 48 53.2 +0.5
      comp=Z,110nm,0.3s
ZSN   Zaisan           45.55 309⇓iP    P      10 48 54.3 +0.3
      baz=309
ZSN   Zaisan           45.55 309d iP   P      10 48 54.2 +0.3
ODAN  Odare            45.72 280 eP    P      10 48 56.2 +0.4
      comp=Z,238nm,0.5s
DGPR  DIGLIPUR         45.92 260 eP    P      10 48 57.0 -0.2
DGPR                             IAmb  IAmb   10 48 58.2
      comp=Z,72nm,0.7s
ZAA0  Zalesovo Array   46.32 318  P    P      10 48 58.9 -0.8
ZAA0                             IAmb  IAmb   10 49 00.2
      comp=Z,35nm,0.9s
ZALV  Zalesovo Beam    46.32 318  P    P      10 48 59.1 -0.5
      comp=Z,27nm,0.4s,baz=90,slow=8.3,SNR=108
ZALV                             PcP   PcP    10 50 26.2 -0.3
      comp=Z,25nm,0.6s,baz=113,slow=3.8,SNR=16
ZALV                             ScP   ScP    10 53 37.8 -0.7
      comp=Z,6.3nm,0.6s,baz=114,slow=4.4,SNR=7.4
ZALV  Zalesovo Beam    46.32 318 i P   P      10 48 59.0 -0.7
ZALV                             pmax  pmax
      comp=Z,28nm,0.4s
RAMN  Ramite           46.38 281 eP    P      10 49 01.2 +0.4
      comp=Z,181nm,0.3s
PSI   Prapat           46.60 243  P    P      10 49 02.5  0.0
      comp=Z,5.0nm,0.4s,baz=360,slow=1.8,SNR=7.2
PSI                              PcP   PcP    10 50 28.6 +0.2
      comp=Z,8.4nm,0.7s,baz=180,slow=23,SNR=4.8
GUN   Gumba            46.74 282 eP    P      10 49 04.4 +0.7
      comp=Z,301nm,0.3s
SDSI  Sungai Dareh     47.11 237  P    P      10 49 06.8 +0.5
      comp=Z,24nm,1.9s
LEM   Lembang          47.15 226  P    P      10 49 06.1 -0.6
      comp=Z,33nm,0.6s,baz=92,slow=7.6,SNR=11
PKI   Pulchoki         47.23 282 eP    P      10 49 07.4 -0.1
PKIN  Phulchoki        47.24 282 eP    P      10 49 07.4 -0.1
      comp=Z,133nm,0.7s
KKN   Kakani           47.28 282 eP    P      10 49 08.2 +0.5
MK31  Makanchi Array   47.28 308  P    P      10 49 06.4 -0.8
MK31                             pmax  pmax
      comp=Z,22nm,0.8s
MK31  Makanchi Array   47.28 308  P    P      10 49 06.4 -0.8
MKAR  Makanchi Array   47.28 308  P    P      10 49 07.1 -0.1
      comp=Z,25nm,0.6s,baz=84,slow=10,SNR=185
MKAR                             PcP   PcP    10 50 30.2 -0.1
      comp=Z,12nm,0.6s,baz=79,slow=6.3,SNR=11
MKAR                             ScP   ScP    10 53 42.7 -0.1
      comp=Z,1.2nm,0.6s,baz=76,slow=4.3,SNR=3.2
MKAR                             P4KPbc       11 26 43.6
      comp=Z,0.2nm,0.4s,baz=84,slow=5.3,SNR=6.3
MKAR  Makanchi Array   47.28 308  P    P      10 49 05.5 -1.8
MNSI  Mandailing Nat   47.36 241  P    P      10 49 07.8 -0.3
      comp=Z,40nm,1.3s
KLSI                   47.42 230  P    P      10 49 08.9 +0.3
      comp=Z,414nmcomp=Z,26nm,1.5s
DMN   Daman            47.48 282 eP    P      10 49 09.5 +0.2
      comp=Z,174nm,0.5s
MAKZ  Makanchi         47.50 308  P    P      10 49 08.5 -0.3
MAKZ                             pmax  pmax
      comp=Z,30nm,0.8s
MAKZ  Makanchi         47.50 308  P    P      10 49 08.5 -0.3
MAKZ                             IAmb  IAmb   10 49 10.1
      comp=Z,30nm,0.8s
LHSI  Lahat            47.62 232  P    P      10 49 11.2 +1.1
      comp=Z,50nm,1.5s
GKN   Gorkha           47.78 283 eP    P      10 49 11.7 +0.3
      comp=Z,142nm,0.4s
PDSI  Padang           47.81 238  P    P      10 49 11.4 -0.2
BOK   Bokaro           47.92 277 eP    P      10 49 12.8 +0.4
BOK                              IAmb  IAmb   10 49 13.3
      comp=Z,96nm,0.7s
DANN  Dangsing         48.43 283 eP    P      10 49 17.2 +0.7
      comp=Z,275nm,0.4s
GSI   Gunungsitoli     48.58 243  P    P      10 49 16.7 -0.7
GSI   Gunungsitoli     48.58 243  P    P      10 49 18.4 +1.0
      comp=Z,3µmcomp=Z,144nm,1.8s
KOLN  Koldanda         48.72 283 eP    P      10 49 18.9 +0.3
      comp=Z,186nm,0.5s
SEM   Semipalatinsk    48.74 313 eP    P      10 49 17.7 -0.7
      comp=Z,22nm,0.7s,baz=313
SEM   Semipalatinsk    48.74 313 eP    P      10 49 17.7 -0.7
SEM                              pmax  pmax
      comp=Z,22nm,0.7s
FITZ  Fitzroy Crossi   48.89 198  P    P      10 49 19.8 +0.3
      comp=Z,14nm,0.7s,baz=18,slow=8.2,SNR=32
WRAB  Tennant Creek    49.11 186d iP   P      10 49 20.6 -0.5
WRAB                             pmax  pmax
      comp=Z,88nm,1.3s
WRAB  Tennant Creek    49.11 186  P    P      10 49 19.9 -1.3
WRAB                             IAmb  IAmb   10 49 22.1
      comp=Z,46nm,0.6s
WR0   Warramunga Arr   49.12 186  P    P      10 49 20.0 -1.2
WB2   Warramunga Arr   49.12 186  P    P      10 49 19.7 -1.5
WRA   Warramunga Arr   49.12 186  P    P      10 49 20.8 -0.5
      comp=Z,57nm,0.5s,baz=2.4,slow=8.0,SNR=1011
WRA                              PcP   PcP    10 50 37.2  0.0
      comp=Z,5.3nm,0.4s,baz=358,slow=3.8,SNR=5.2
WRA                              pP    pP     10 50 44.6 +0.3
      comp=Z,5.1nm,0.7s,baz=5.2,slow=8.2,SNR=2.5
WRA                              S     S      10 55 49.0 -4.6
      comp=Z,2.5nm,0.7s,baz=3.2,slow=17,SNR=8.8
WRA   Warramunga Arr   49.12 186 i P   P      10 49 20.7 -0.5
WRA                              pmax  pmax
      comp=Z,48nm,0.3s
WRA   Warramunga Arr   49.12 186  P    P      10 49 20.6 -0.7
PYUN  Piuthan          49.16 283 eP    P      10 49 22.4 +0.6
      comp=Z,622nm,0.4s
ANM   Nome             49.18  28  P    P      10 49 22.3 +1.2
ANM                              pmax  pmax
      comp=Z,49nm,1.4s
ANM   Nome             49.18  28  P    P      10 49 22.3 +1.2
ANM                              IAmb  IAmb   10 49 24.0
      comp=Z,48nm,1.4s
PDGK  Podgornoye       49.37 304 i P   P      10 49 22.2 -0.9
PDGK                             pmax  pmax
      comp=Z,78nm,0.7s
SHLS  Shalkode         49.40 303 eP    P      10 49 20.9 -2.4
      comp=Z,14nm,0.4s,baz=303
SHLS  Shalkode         49.40 303 eP    P      10 49 20.9 -2.4
SHLS                             pmax  pmax
      comp=Z,14nm,0.4s
KURK  Kurchatov        49.80 313d iP   P      10 49 25.4 -0.5
KURK                             pmax  pmax
      comp=Z,137nm,1.3s
KURK  Kurchatov        49.80 313  P    P      10 49 25.6 -0.2
KURBB Kurchatov Arra   49.85 313  P    P      10 49 26.1 -0.2
      comp=Z,85nm,0.5s,baz=92,slow=8.1,SNR=1050
KURBB                            S     S      10 55 59.6 -3.4
      comp=Z,0.3nm,0.3s,baz=113,slow=15,SNR=4.1
KPKS  Kokpek           49.95 304⇓iP    P      10 49 27.2 -0.1
      comp=Z,18nm,0.5s,baz=304
KPKS  Kokpek           49.95 304d iP   P      10 49 27.1 -0.1
KPKS                             pmax  pmax
      comp=Z,18nm,0.5s
TDK   Taldyqorghan     50.04 306 i P   P      10 49 28.3 +0.4
      comp=Z,14nm,0.6s,baz=306
TDK   Taldyqorghan     50.04 306 i P   P      10 49 28.2 +0.4
TDK                              pmax  pmax
      comp=Z,14nm,0.6s
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SATY  Saty             50.18 303⇓iP    P      10 49 29.2 +0.1
      baz=303
SATY  Saty             50.18 303d iP   P      10 49 29.2 +0.1
CHKK  Chushkaly        51.14 305 eP    P      10 49 36.0  0.0
      baz=304
CHKK  Chushkaly        51.14 305 eP    P      10 49 35.9  0.0
MDOK  Medeo            51.16 304 eP    P      10 49 36.9 +0.5
      baz=304
MDOK  Medeo            51.16 304 eP    P      10 49 36.8 +0.5
TNSS  Tian-Shan        51.25 303 eP    P      10 49 38.0 +0.8
      baz=304
TNSS  Tian-Shan        51.25 303 eP    P      10 49 38.0 +0.8
RDOG  Red Dog Mine     51.25  24  P    P      10 49 37.6 +1.2
AAA   Alma-Ata         51.25 304 i P   P      10 49 37.6 +0.6
      comp=Z,40nm,0.7s,baz=304
AAA   Alma-Ata         51.25 304 i P   P      10 49 37.5 +0.6
AAA                              pmax  pmax
      comp=Z,40nm,0.7s
KUU   Kurty            51.60 305⇓iP    P      10 49 39.3  0.0
      comp=Z,46nm,0.4s,baz=305
KUU   Kurty            51.60 305d iP   P      10 49 39.3  0.0
KUU                              pmax  pmax
      comp=Z,46nm,0.4s
MTBS  Maitube          51.62 304 eP    P      10 49 40.2 +0.6
      baz=304
MTBS  Maitube          51.62 304 eP    P      10 49 40.1 +0.6
SANVU Saraoutou        51.85 145  P    P      10 49 41.2 -0.2
SANVU                            IAmb  IAmb   10 49 42.9
      comp=Z,52nm,0.7s
SANVU Saraoutou        51.85 145  P    P      10 49 42.0 +0.6
ULHL  Ulahol           51.86 303  P    P      10 49 41.9 +0.4
      SNR=13
TKM2  Tokmak 2         52.25 303  P    P      10 49 44.9 +0.7
      SNR=16
TKM2  Tokmak 2         52.25 303 i P   P      10 49 44.3  0.0
TKM2                             pmax  pmax
      comp=Z,19nm,0.6s
KSH   Kashi            52.45 299  P    P      10 49 49.3 +3.6
KSH                              S     S      10 56 43.8 +5.0
KSH                              pmax  pmax
      comp=Z,78nm,0.7s
KSH                              pmax  pmax
      comp=Z,540nm,7.0s
KBK   Karagaybulak     52.75 303  P    P      10 49 48.4 +0.5
      SNR=5.8
SVW2  Sparrevohn       52.83  34  P    P      10 49 48.6 +0.7
SVW2                             IAmb  IAmb   10 49 50.9
      comp=Z,85nm,1.3s
AS31  Alice Springs    52.84 186  P    P      10 49 47.5 -1.0
AS31                             IAmb  IAmb   10 49 50.1
      comp=Z,15nm,0.4s
ASAR  Alice Springs    52.85 186  P    P      10 49 48.1 -0.4
      comp=Z,12nm,0.4s,baz=4.2,slow=7.4,SNR=354
ASAR                             PcP   PcP    10 50 52.0 +0.8
      comp=Z,5.7nm,0.9s,baz=5.8,slow=3.4,SNR=7.0
ASAR                             S     S      10 56 41.0 -3.1
      comp=Z,2.8nm,1.0s,baz=19,slow=13,SNR=12
ASAR  Alice Springs    52.85 186  P    P      10 49 47.8 -0.7
CHMS  Chumysh          52.85 304  P    P      10 49 48.6 +0.2
      SNR=9.2
TTA   Tatalina         52.86  31  P    P      10 49 48.7 +0.5
TTA                              pmax  pmax
      comp=Z,32nm,1.5s
TTA   Tatalina         52.86  31  P    P      10 49 48.7 +0.5
SGDS  Sogindy          52.88 304⇓iP    P      10 49 48.6 -0.1
      baz=304
SGDS  Sogindy          52.88 304d iP   P      10 49 48.6 -0.1
USP   Ospenovka        53.00 304  P    P      10 49 49.6 +0.1
      SNR=5.9
AAK   Ala-Archa        53.09 303  P    P      10 49 50.5 +0.2
      comp=Z,16nm,0.5s,baz=123,slow=5.4,SNR=43
AAK                              PcP   PcP    10 50 52.0 -0.1
      comp=Z,4.4nm,0.4s,baz=137,slow=4.9,SNR=4.4
AAK   Ala-Archa        53.09 303  P    P      10 49 50.5 +0.2
      SNR=6.6
AAK   Ala-Archa        53.09 303 i P   P      10 49 50.5 +0.2
      SNR=6.8
AAK   Ala-Archa        53.09 303d iP   P      10 49 50.3  0.0
AAK                              pmax  pmax
      comp=Z,47nm,0.6s
AAK   Ala-Archa        53.09 303  P    P      10 49 49.7 -0.6
AAK   Ala-Archa        53.09 303  P    P      10 49 50.6 +0.3
BTLS  Baital           53.12 306⇓iP    P      10 49 50.1 -0.1
      comp=Z,14nm,0.5s,baz=306
BTLS  Baital           53.12 306d iP   P      10 49 50.1 -0.1
BTLS                             pmax  pmax
      comp=Z,14nm,0.5s
UCH   Uchtor           53.13 303  P    P      10 49 51.9 +0.9
      SNR=31
SMLA  Simla            53.26 289 eP    P      10 49 51.1 -0.3
EKS2  Erkin-Say        53.61 303  P    P      10 49 54.3 +0.3
      SNR=7.7
BRZS  Berezniki        53.61 313⇓iP    P      10 49 53.6 -0.1
      comp=Z,19nm,0.8s,baz=312
BRZS  Berezniki        53.61 313d iP   P      10 49 53.6 -0.1
BRZS                             pmax  pmax
      comp=Z,19nm,0.8s
DHRM  DHARAMSHALA      53.69 290 eP    P      10 49 53.0 -1.9
DHRM                             IAmb  IAmb   10 49 55.6
      comp=Z,46nm,0.4s
AML   Almayashu        53.75 303  P    P      10 49 56.0 +0.7
      SNR=54
NDI   New Delhi        53.88 286 eP    P      10 49 50.5 -5.5
KDAK  Kodiak Island    54.14  38  P    P      10 49 57.9 +0.6
      comp=Z,12nm,0.3s,baz=292,slow=2.4,SNR=110
KDAK                             pP    pP     10 51 24.5 +2.2
      comp=Z,18nm,0.8s,baz=353,slow=6.2,SNR=4.2
KDAK  Kodiak Island    54.14  38⇓eP    P      10 49 58.1 +0.8
KDAK                             pmax  pmax
      comp=Z,104nm,1.2s
RSO   Redoubt South    54.16  34  P    P      10 49 58.6 +0.9
A21K  Barrow           54.30  21  P    P      10 49 59.3 +1.1
      baz=255
A21K  Barrow           54.30  21  P    P      10 49 58.2  0.0
PPLA  Purkeypile       54.59  31  P    P      10 50 02.2 +1.6
PPLA                             IAmb  IAmb   10 50 03.6
      comp=Z,65nm,1.4s
NGP   Nagpur           54.76 276 eP    P      10 50 02.3  0.0
SKT   Skwentna         54.83  33  P    P      10 50 03.4 +1.2
BVAR  Borovoye Array   54.86 316  P    P      10 50 02.4 -0.2
      comp=Z,42nm,0.5s,baz=64,slow=13,SNR=135
BVAR                             PcP   PcP    10 50 58.3 -0.3
      comp=Z,8.8nm,0.3s,baz=75,slow=3.4,SNR=8.1
BRVK  Borovoye         54.93 316d iP   P      10 50 02.8 -0.1
BRVK                             pmax  pmax
      comp=Z,60nm,0.7s
BRVK  Borovoye         54.93 316  P    P      10 50 02.9 -0.1
BRVK                             IAmb  IAmb   10 50 03.6
      comp=Z,58nm,0.7s
BRVK  Borovoye         54.93 316  P    P      10 50 03.4 +0.4
SUA   Susitna One      55.18  33  P    P      10 50 05.3 +0.6
KTH   Kantishna Hill   55.21  31  P    P      10 50 06.3 +1.4
BPAW  Bear Paw Mtn.    55.22  30  P    P      10 50 06.6 +1.7
DZA   Taraz            55.35 304⇓iP    P      10 50 06.3  0.0
      baz=304
DZA   Taraz            55.35 304d iP   P      10 50 06.2  0.0
EIDS  Eidsvold         55.40 167  P    P      10 50 06.8 +0.2
BHPL  Bhopal           55.43 279 eP    P      10 50 05.5 -1.5
CUT   Chulitna         55.45  32  P    P      10 50 06.9 +0.4
      baz=268
TRF   Thorofare Moun   55.49  31  P    P      10 50 07.7 +0.7
RC01  Rabbit Creek A   55.66  34  P    P      10 50 08.1 +0.1
      baz=269
NIL   Nilore           55.81 293  P    P      10 50 10.0 +0.4
NIL                              pmax  pmax
      comp=Z,55nm,0.7s
NIL   Nilore           55.81 293  P    P      10 50 10.0 +0.4
NIL                              IAmb  IAmb   10 50 12.8
      comp=Z,55nm,0.7s
COLD  Coldfoot         55.82  26  P    P      10 50 10.2 +1.2
      baz=264
COLD  Coldfoot         55.82  26  P    P      10 50 10.4 +1.4
BWN   Browne           55.89  30  P    P      10 50 11.2 +1.7
BWN                              IAmb  IAmb   10 50 13.5
      comp=Z,78nm,1.3s
KK31  Karatay Array    55.91 304  P    P      10 50 10.8 +0.7
KK31                             pmax  pmax
      comp=Z,59nm,0.7s
KK31  Karatay Array    55.91 304  P    P      10 50 10.8 +0.7
KK31                             IAmb  IAmb   10 50 11.1
      comp=Z,59nm,0.7s
KKAR  Karatay Array    55.91 304  P    P      10 50 09.7 -0.4
KKAR                             pmax  pmax
      comp=Z,75nm,0.6s
KKAR  Karatay Array    55.91 304  P    P      10 50 10.0 -0.1
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KKAR  Karatay Array     55.91 304   P       P        10 50 09.7 -0.4
KKAR                                IAmb    IAmb     10 50 10.8
      comp=Z,75nm,0.6s
PMR   Palmer            55.96  33   P       P        10 50 11.0 +1.0
PMR                                 pmax    pmax
      comp=Z,53nm,1.4s
PMR   Palmer            55.96  33   P       P        10 50 11.0 +1.0
PMR                                 IAmb    IAmb     10 50 11.6
      comp=Z,53nm,1.4s
I23K  Minto, Yukon-K    55.99  29   P       P        10 50 11.5 +1.3
      baz=266,SNR=15
I23K  Minto, Yukon-K    55.99  29   P       P        10 50 11.7 +1.5
GHO   Glory Hole Cre    56.06  33   P       P        10 50 11.7 +0.9
NEA2  Nenana            56.09  30   P       P        10 50 12.1 +1.2
      baz=267,SNR=37
MCK   McKinley          56.11  31   P       P        10 50 11.8 +0.7
      baz=268,SNR=26
RND   Reindeer          56.13  31   P       P        10 50 11.5 +0.1
RND                                 pmax    pmax
      comp=Z,31nm,1.0s
RND   Reindeer          56.13  31   P       P        10 50 11.5 +0.1
KNK   Knik Glacier      56.28  33   P       P        10 50 12.6 +0.2
SML   Sawmill           56.34  33   P       P        10 50 13.2 +0.4
SML                                 IAmb    IAmb     10 50 14.0
      comp=Z,45nm,1.2s
IUG   Iuzhnay           56.43 303⇓iP      P        10 50 14.3 +0.5
      comp=Z,30nm,0.8s,baz=303
IUG   Iuzhnay           56.43 303⇓iP      P        10 50 14.3 +0.5
IUG                                 pmax    pmax
      comp=Z,30nm,0.8s
MDM   Murphy Dome       56.46  29   P       P        10 50 14.3 +0.7
MDM                                 IAmb    IAmb     10 50 16.0
      comp=Z,44nm,1.1s
WRH   Wood River Hil    56.50  30   P       P        10 50 14.1 +0.2
TCOL  CIGO, UAF Yank    56.62  29   P       P        10 50 15.7 +1.2
      baz=268,SNR=7.2
TCOL  CIGO, UAF Yank    56.62  29   P       P        10 50 15.2 +0.6
COLA  College           56.62  29deP      P        10 50 15.9 +1.3
COLA                                pmax    pmax
      comp=Z,19nm,1.0s
COLA  College           56.62  29   P       P        10 50 15.9 +1.3
HYB   Hyderabad         56.62 272 i P       P        10 50 15.0 -0.4
HYB   Hyderabad         56.62 272 eP       P        10 50 14.3 -1.2
HYB                                 IAmb    IAmb     10 50 15.3
      comp=Z,23nm,0.6s
CCB   Clear Creek Bu    56.63  29   P       P        10 50 15.7 +1.0
DHY   Denali Highway    56.80  31   P       P        10 50 16.6 +0.6
POKR  Poker Plat Res    56.80  29   P       P        10 50 17.2 +1.3
      baz=268,SNR=5.3
POKR  Poker Plat Res    56.80  29   P       P        10 50 16.3 +0.4
POKR                                IAmb    IAmb     10 50 18.6
      comp=Z,33nm,1.1s
SCM   Sheep Creek Mo    56.82  33   P       P        10 50 17.2 +1.0
SCM                                 pmax    pmax
      comp=Z,44nm,1.0s
SCM   Sheep Creek Mo    56.82  33   P       P        10 50 17.2 +1.0
SCM                                 IAmb    IAmb     10 50 18.2
      comp=Z,44nm,1.0s
HDA   Harding Lake      57.00  30   P       P        10 50 17.2  0.0
      baz=269,SNR=22
HDA   Harding Lake      57.00  30   P       P        10 50 16.5 -0.7
HDA                                 IAmb    IAmb     10 50 18.4
      comp=Z,23nm,0.8s
IL31                    57.03  29   P       P        10 50 16.7 -0.7
ILAR  Eielson Array     57.03  29   P       P        10 50 17.2 -0.2
      comp=Z,20nm,1.1s,baz=268,slow=5.6,SNR=70
ILAR                                PcP     PcP      10 51 06.5 -0.3
      comp=Z,2.0nm,0.8s,baz=281,slow=5.4,SNR=5.0
ILAR                                pP      pP       10 51 44.0  0.0
      comp=Z,4.6nm,1.0s,baz=268,slow=6.4,SNR=5.5
ILAR                                ScP     ScP      10 54 24.2 -0.5
      comp=Z,0.6nm,0.5s,baz=244,slow=4.9,SNR=5.0
ILAR  Eielson Array     57.03  29   P       P        10 50 16.8 -0.7
NOUC  Port Laguerre     57.19 150   P       P        10 50 20.5 +1.4
DZM   Mont Dzumac       57.23 150   P       P        10 50 20.1 +0.6
      comp=Z,30nm,1.0s,baz=346,slow=8.2,SNR=14
DZM   Mont Dzumac       57.23 150   P       P        10 50 20.4 +1.0
DZM                                 IAmb    IAmb     10 50 22.3
      comp=Z,62nm,1.2s
DZM   Mont Dzumac       57.23 150   P       P        10 50 21.2 +1.7
M24K  Tolsona, Glenn    57.36  33   P       P        10 50 21.1 +1.3
      baz=271
KLU   Klutina           57.50  33   P       P        10 50 21.9 +1.1
PRP   Porcupine Dome    57.61  28   P       P        10 50 21.7 +0.1
PAX   Paxson            57.66  31   P       P        10 50 22.8 +0.8
PAX                                 pmax    pmax
      comp=Z,27nm,1.2s
PAX   Paxson            57.66  31   P       P        10 50 22.8 +0.8
FYU   Fort Yukon        57.74  27   P       P        10 50 23.8 +1.5
FYU                                 IAmb    IAmb     10 50 25.5
      comp=Z,77nm,1.3s
RIDG  Independent Ri    57.93  31   P       P        10 50 24.4 +0.7
BMAR  Burnt Mountain    58.01  26   P       P        10 50 23.4 -0.8
N25K  Chitina, Valde    58.13  33   P       P        10 50 26.0 +0.9
      baz=273
SCRK  Sand Creek        58.30  30   P       P        10 50 26.9 +0.5
      baz=272,SNR=23
MENT  Mentasta          58.47  31   P       P        10 50 28.7 +1.3
GLB   Gilahina Butte    58.51  33   P       P        10 50 29.1 +1.3
GLB                                 IAmb    IAmb     10 50 30.0
      comp=Z,40nm,1.2s
VRDI  Verde Repeater    58.70  33   P       P        10 50 29.9 +0.7
VRDI                                IAmb    IAmb     10 50 36.9
      comp=Z,44nm,1.4s
CRQM  Cirque            58.89  34   P       P        10 50 31.0 +0.6
CRQM                                IAmb    IAmb     10 50 33.2
      comp=Z,44nm,1.0s
MCARA McCarthy VSAT     58.89  33   P       P        10 50 31.4 +1.1
MCARA                               IAmb    IAmb     10 50 33.1
      comp=Z,44nm,1.0s
KBL   Kabul             58.95 295   P       P        10 50 30.9 -0.5
KBL                                 pmax    pmax
      comp=Z,25nm,0.8s
KBL   Kabul             58.95 295   P       P        10 50 30.9 -0.5
KBL                                 IAmb    IAmb     10 50 31.7
      comp=Z,25nm,0.8s
KBL   Kabul             58.95 295   P       P        10 50 31.3 -0.1
      SNR=18
TGL   Tana Glacier      59.04  34   P       P        10 50 32.4 +1.0
TGL                                 IAmb    IAmb     10 50 33.5
      comp=Z,46nm,1.2s
BALM  Baldy             59.25  34   P       P        10 50 33.6 +0.8
PALK  Pallekele         59.28 261   P       P        10 50 33.9 +0.2
      comp=Z,20nm,0.6s,baz=163,slow=6.3,SNR=17
PALK  Pallekele         59.28 261⇑eP      P        10 50 33.0 -0.7
PALK                                pmax    pmax
      comp=Z,42nm,0.7s
BCAR  Beaver Creek A    59.34  31   P       P        10 50 34.7 +1.4
EGAK  Eagle             59.48  29   P       P        10 50 34.7 +0.6
SVE   Sverdlovsk        60.09 322c iP      P        10 50 38.7 +0.4
SVE                               eS       S        10 58 17.1 -0.1
SVE                                 pmax    pmax
      comp=Z,87nm,0.7s
POO   Poona             60.28 276 eP       P        10 50 40.0 -0.3
POO                               eP       P        10 50 40.0 -0.3
DAWY  Dawson            60.31  30   P       P        10 50 40.5 +0.7
ARMA  Armidale          60.42 168   P       P        10 50 41.0  0.0
FORT  Forrest           60.64 191   P       P        10 50 41.8 -0.5
STKA  Stephens Creek    60.79 178   P       P        10 50 43.4 +0.1
      comp=Z,15nm,0.8s,baz=339,slow=8.4,SNR=18
STKA  Stephens Creek    60.79 178c iP      P        10 50 43.3  0.0
STKA  Stephens Creek    60.79 178   P       P        10 50 43.3  0.0
EPYK  Eagle Plains      61.16  27   P       P        10 50 46.7 +1.3
      baz=277
EPYK  Eagle Plains      61.16  27   P       P        10 50 46.6 +1.3
EPYK                                IAmb    IAmb     10 50 47.8
      comp=Z,50nm,0.9s
ARU   Arti              61.28 321   P       P        10 50 46.2 -0.1
      comp=Z,50nm,0.3s,baz=90,slow=4.2,SNR=222
ARU   Arti              61.28 321d iP      P        10 50 46.2 -0.1
ARU                                                  10 51 22.9
ARU                                 *PP     pP       10 52 11.6 -2.6
ARU                                                  10 53 06.1
ARU                                 S       S        10 58 33.3 +1.2
ARU                                 SS      SS       11 02 42.5 +1.6
ARU                                 pmax    pmax
      comp=Z,95nm,0.5s
ARU   Arti              61.28 321   P       P        10 50 45.6 -0.7
HYT   Haines Junctio    61.62  34   P       P        10 50 49.4 +0.7
HYT                                 IAmb    IAmb     10 50 52.1
      comp=Z,42nm,1.1s
ABKAR Akbulak array     61.90 313   P       P        10 50 50.2 -0.3
ABKAR Akbulak array     61.90 313   P       P        10 50 50.4 -0.1
INK   Inuvik            62.11  25   P       P        10 50 52.0 +0.5
      comp=Z,8.3nm,0.3s,baz=279,slow=5.5,SNR=100
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INK                                 S       S        10 58 42.8 +0.8
      comp=Z,2.9nm,1.1s,baz=152,slow=26,SNR=8.2
INK   Inuvik            62.11  25   P       P        10 50 51.3 -0.2
INK                                 pmax    pmax
      comp=Z,14nm,1.0s
INK   Inuvik            62.11  25   P       P        10 50 51.3 -0.2
MORW  Morawa            62.13 203   P       P        10 50 52.0 -0.2
MORW                                IAmb    IAmb     10 50 53.0
      comp=Z,38nm,1.2s
AKTO  Aktyubinsk        62.85 315   P       P        10 50 56.1 -0.5
      comp=Z,45nm,0.6s,baz=90,slow=8.0,SNR=131
WHY   Whitehorse        62.92  33   P       P        10 50 58.8 +1.7
WHY                                 IAmb    IAmb     10 50 59.9
      comp=Z,43nm,1.1s
JIS   Juneau Island     63.69  36   P       P        10 51 03.7 +1.8
HRA   Herat             64.35 297   P       P        10 51 06.7 -0.2
HRA                                 IAmb    IAmb     10 51 07.8
      comp=Z,36nm,0.9s
C36M  Paulatuk          65.22  23   P       P        10 51 12.0 +0.5
      baz=287
C36M  Paulatuk          65.22  23   P       P        10 51 11.1 -0.4
C36M                                IAmb    IAmb     10 51 13.2
      comp=Z,32nm,1.0s
NWAO  Narrogin (SRO)    65.30 201   P       P        10 51 12.1 -0.4
      comp=Z,52nm,0.6s,baz=27,slow=5.6,SNR=65
NWAO  Narrogin (SRO)    65.30 201   P       P        10 51 12.4 -0.1
NWAO  Narrogin (SRO)    65.30 201   P       P        10 51 12.2 -0.4
NWAO                                IAmb    IAmb     10 51 13.5
      comp=Z,48nm,0.7s
KIRV  Kirov             65.59 325   P       P        10 51 14.3 +0.3
      comp=Z,112nm,0.5s,baz=70,slow=2.3,SNR=46
KIRV  Kirov             65.59 325d iP      P        10 51 14.2 +0.2
DLBC  Dease Lake        65.86  35   P       P        10 51 17.4 +1.4
DLBC                                IAmb    IAmb     10 51 18.9
      comp=Z,32nm,1.2s
GEYT  Alibeck           66.35 301   P       P        10 51 19.5 +0.2
      comp=Z,6.6nm,0.4s,baz=69,slow=8.1,SNR=15
GEYT  Alibeck           66.35 301   P       P        10 51 19.2 -0.1
GYA0B ALIBECK ARRAY     66.35 301   P       P        10 51 18.9 -0.4
GYA0B                               IAmb    IAmb     10 51 24.9
      comp=Z,18nm,0.7s
HOPEN Hopen             67.23 347 eP       P        10 51 25.0 +1.0
SPA0  Spitsbergen Ar    67.87 349 eP       P        10 51 29.6 +1.6
SPITS Spitsbergen Ar    67.87 349   P       P        10 51 28.6 +0.6
      comp=Z,7.3nm,0.6s,baz=82,slow=6.3,SNR=21
KBS   Kingsbay          68.07 350 eP       P        10 51 31.3 +2.2
EUNU  Eureka            68.14   8   P       P        10 51 30.8 +1.1
BELG  Belogornoye       68.50 319   P       P        10 51 32.2  0.0
      comp=Z,83nm,0.4s,baz=297,slow=0.5,SNR=87
BELG  Belogornoye       68.50 319d iP      P        10 51 31.9 -0.3
BELG                                pmax    pmax
      comp=Z,21nm,1.0s
LVZ   Lovozero          68.60 337⇑eP      P        10 51 32.8 +0.2
LVZ                                 pmax    pmax
      comp=Z,17nm,1.0s
HSPB  Hornsund (broa    68.75 348 eP       P        10 51 34.3 +1.0
HSPB  Hornsund (broa    68.75 348⇓iP      P        10 51 34.2 +1.0
TMCR  Tamitsa           68.87 333 eP       P        10 51 32.6 -1.6
TMCR                                pmax    pmax
      comp=Z,61nm,0.9s
KLMR  Klimovskoe        69.55 329 eP       P        10 51 36.4 -1.9
KLMR                                pmax    pmax
      comp=Z,51nm,0.7s
KLMR  Klimovskoe        69.55 329 eP       P        10 51 36.5 -1.9
KLMR                                AMP              10 51 38.8
      comp=Z,51nm,0.7s
KEV   Kevo              70.19 340   P       P        10 51 41.5 -0.6
KEV                                 pmax    pmax
      comp=Z,42nm,0.8s
KEV   Kevo              70.19 340   P       P        10 51 41.5 -0.6
RES   Resolute Bay      70.56  13   P       P        10 51 44.5 +0.3
RES                                 pmax    pmax
      comp=Z,15nm,1.0s
RES   Resolute Bay      70.56  13   P       P        10 51 44.5 +0.3
HAMF  Hammerfest        70.67 341⇓iP      P        10 51 45.1 +0.1
ARA0  ARCESS Array S    70.75 340⇓iP      P        10 51 46.2 +0.7
ARCES ARCESS Array B    70.75 340   P       P        10 51 46.1 +0.6
      comp=Z,38nm,0.5s,baz=69,slow=8.7,SNR=375
ARCES ARCESS Array B    70.75 340   P       P        10 51 45.7 +0.2
ARCES                               pmax    pmax
      comp=Z,41nm,0.6s
ARCES ARCESS Array B    70.75 340   P       P        10 51 45.7 +0.2
JLN   Jalan Bani Buh    71.22 285   P       P        10 51 49.3 +0.2
WBK   Wadi Bani Khal    71.40 286   P       P        10 51 50.8 +0.6
YKA   Yellowknife Ar    71.42  28   P       P        10 51 49.8 +0.2
      comp=Z,2.7nm,0.4s,baz=303,slow=5.5,SNR=90
YKA                                 pP      pP       10 53 19.4 -1.9
      comp=Z,2.2nm,0.7s,baz=296,slow=5.6,SNR=5.3
YKA                                 PKPPKP  P'P'df   11 19 39.2 -2.2
      comp=Z,0.4nm,1.0s,baz=117,slow=4.0,SNR=3.6
YKA   Yellowknife Ar    71.42  28 i P       P        10 51 49.7 +0.2
YKA                                 pmax    pmax
      comp=Z,5.0nm,0.6s
WSAR  Wadi Sarin        71.42 287   P       P        10 51 50.6 +0.2
      comp=Z,11nm,0.8s,baz=95,slow=7.4,SNR=8.6
KTK1  Kautokeino        71.72 340⇓iP      P        10 51 51.5 +0.3
BIDO  Bidbid            71.73 287   P       P        10 51 52.7 +0.6
      SNR=8.3
SMDO  Samad             71.99 287   P       P        10 51 53.9 +0.2
      SNR=6.5
MAK   Makhachkala       72.08 310 eP       P        10 51 49.6 -4.2
MAK                               e*PP     pP       10 53 15.9 -9.2
MAK                               e*SP     sP       10 53 58.6  -11
MAK                                 pmax    pmax
      comp=Z,603nm,1.2s
JMDO  Jabal Madar       72.23 286   P       P        10 51 55.1 +0.1
BANOM Banah             72.26 290 i P       P        10 51 55.8 +0.6
      SNR=7.8
BANOM Banah             72.26 290   P       P        10 51 55.9 +0.8
SHME  Shamm             72.33 290 i P       P        10 51 56.1 +0.5
      SNR=24
SHME  Shamm             72.33 290   P       P        10 51 56.5 +0.9
      SNR=5.5
VRH   Novokhopyorsk     72.34 319 eP       P        10 51 54.5 -0.7
VRH                                 pmax    pmax
      comp=Z,120nm,0.6s
HOQ   Hoqain            72.39 288   P       P        10 51 56.4 +0.4
      SNR=14
MDH   Madha             72.51 290   P       P        10 51 55.9 -0.8
TRO   Tromso            72.58 342⇓iP      P        10 51 56.5 +0.3
MASF  Masafi            72.60 290   P       P        10 51 57.9 +0.7
MOS   Moscow            72.60 325 eP       P        10 51 55.3 -1.3
MOS                               eS       SKiKP    11 00 42.9 -1.9
MOS                                 pmax    pmax
      comp=Z,70nm,0.6s
MOS                                 pmax    pmax
      comp=Z,100nm,0.6s
MSFE  Esma-Masafi       72.60 290   P       P        10 51 57.7 +0.4
UOSS  Minazif           72.74 289 i P       P        10 51 57.8 -0.2
      SNR=7.6
UOSS  Minazif           72.74 289   P       P        10 51 57.0 -1.0
UOSS                                IAmb    IAmb     10 51 59.0
      comp=Z,31nm,1.1s
UOSS  Minazif           72.74 289   P       P        10 51 58.1 +0.1
SOHO  SOHO              72.80 288 i P       P        10 51 58.5 +0.2
      SNR=26
SOHO  SOHO              72.80 288   P       P        10 51 58.7 +0.4
BSY   Bisya             72.83 287   P       P        10 51 58.9 +0.4
      SNR=11
HATD  Hatta, Dubai      72.85 289 i P       P        10 51 58.9 +0.3
      SNR=13
HATD  Hatta, Dubai      72.85 289   P       P        10 51 59.3 +0.6
      SNR=8.8
LKRN  Lenkeran, Azer    72.89 305   P       P        10 51 59.2 +0.6
MHTO  MHTO              72.92 285   P       P        10 51 59.1  0.0
      SNR=11
ASHO  Ashiyiah          72.97 289 i P       P        10 51 59.6 +0.2
      SNR=15
ASHO  Ashiyiah          72.97 289   P       P        10 51 59.8 +0.4
SEKA  Sheki             72.99 308   P       P        10 51 59.5 +0.3
TULEG Thule             73.04   7   P       P        10 51 58.8 +0.1
TULEG Thule             73.04   7 i P       P        10 51 59.1 +0.4
VALR  Valaam            73.07 331 i P       P        10 51 59.2 +0.1
VALR                                pmax    pmax
      comp=Z,100nm,0.9s
ARQ   Araqi             73.15 288   P       P        10 52 01.0 +0.7
      SNR=12
ZKTA  Zakatala          73.21 309   P       P        10 52 00.9 +0.5
MNGR  Mingechevir, A    73.25 308   P       P        10 52 01.1 +0.5
NLWA  Neilton Lookou    73.30  45   P       P        10 52 02.3 +1.4
NLWA                                IAmb    IAmb     10 52 04.1
      comp=Z,55nm,1.2s
LPSR  Galich'ya Gora    73.31 321 eP       P        10 52 00.2 -0.5
LPSR                                pmax    pmax
      comp=Z,70nm,0.7s
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FAQ   Al Faqa, Dubai    73.33 289 i P       P        10 52 01.2 -0.2
      SNR=8.4
DAG   Danmarks Havn     73.40 355 i P       P        10 52 01.0 +0.2
DAG                                 pmax    pmax
      comp=Z,4.0nm,0.5s
DAG   Danmarks Havn     73.40 355 i P       P        10 52 01.0 +0.2
      comp=Z,4.2nm,0.5s
DAG   Danmarks Havn     73.40 355 i P       P        10 52 01.1 +0.2
DAG                                 IAmb    IAmb     10 52 01.7
      comp=Z,4.2nm,0.5s
OBN   Obninsk           73.42 324   P       P        10 52 01.4 +0.1
      comp=Z,12nm,0.7s,baz=74,slow=2.4,SNR=20
OBN   Obninsk           73.42 324d iP      P        10 52 00.8 -0.5
OBN                               i *PP     pwP      10 53 36.8 -1.6
OBN                               e                  10 54 53.5
OBN                                 pmax    pmax
      comp=Z,155nm,1.7s
OBN   Obninsk           73.42 324   P       P        10 52 00.9 -0.4
ALNE  Al Ain            73.48 289 i P       P        10 52 02.6 +0.2
      SNR=8.0
ALNE  Al Ain            73.48 289   P       P        10 52 02.8 +0.5
      SNR=15
ASUD  Al Ashush, Dub    73.59 289 i P       P        10 52 03.2 +0.3
      SNR=7.3
DDFL  Dedoflistskaro    73.63 309   P       P        10 52 04.8 +1.9
D03D  Eldon             73.72  44   P       P        10 52 05.6 +2.4
      baz=296,SNR=12
DQM   DQM               73.74 284   P       P        10 52 03.7 -0.1
VSR   Storozhevoye      73.79 320 eP       P        10 52 02.9 -0.6
VSR                                 pmax    pmax
      comp=Z,190nm,1.1s
GANJ  Ganja             73.83 308   P       P        10 52 04.4 +0.4
VORD  Divnogorie        73.83 320 eP       P        10 52 03.1 -0.6
VORD                                pmax    pmax
      comp=Z,110nm,1.0s
AJN   Ajban             73.90 289 i P       P        10 52 04.4 -0.3
      SNR=5.8
AJN   Ajban             73.90 289   P       P        10 52 04.9 +0.2
      SNR=5.9
B05A  Bryant            74.00  43   P       P        10 52 06.5 +1.7
      baz=296,SNR=7.2
D04E  Lakebay           74.07  45   P       P        10 52 08.1 +2.9
      baz=296
NCK   Nalchik           74.46 311⇑eP      P        10 52 07.8 +0.3
NCK                                 pmax    pmax
      comp=Z,20nm,0.8s
E04D  Cinebar           74.47  45   P       P        10 52 09.6 +2.2
      baz=296,SNR=7.1
N2IH  Innhavet          74.49 341⇓iP      P        10 52 07.4 +0.2
D05A  Enumclaw          74.54  44   P       P        10 52 08.7 +0.8
D05A                                IAmb    IAmb     10 52 11.1
      comp=Z,26nm,1.0s
ZEI   Tsey              74.56 311 eP       P        10 52 06.3 -2.1
ZEI                                 pmax    pmax
      comp=Z,25nm,0.6s
STEI  Steigen           74.71 341⇓iP      P        10 52 08.7 +0.3
I02D  Swisshome         74.72  48   P       P        10 52 11.4 +2.4
      baz=296
KBZ   Khabaz            74.81 312   P       P        10 52 10.0 +0.5
      comp=Z,63nm,0.7s,baz=90,slow=4.0,SNR=115
KBZ   Khabaz            74.81 312d iP      P        10 52 09.6 +0.1
KBZ                                 pmax    pmax
      comp=Z,81nm,0.8s
KVAR  Kislovodsk Arr    74.85 312   P       P        10 52 11.0 +1.1
      comp=Z,14nm,0.8s,baz=90,slow=23,SNR=5.0
LON   Longmire          74.85  45   P       P        10 52 10.6 +0.9
LON                                 pmax    pmax
      comp=Z,13nm,1.2s
LON   Longmire          74.85  45   P       P        10 52 10.6 +0.9
KIV   Kislovodsk        74.85 312 eP       P        10 52 10.1 +0.2
KIV                                 pmax    pmax
      comp=Z,155nm,1.0s
KIV   Kislovodsk        74.85 312   P       P        10 52 09.2 -0.7
KIV   Kislovodsk        74.85 312   P       P        10 52 11.1 +1.2
KEBM  Edson Butte       74.94  49   P       P        10 52 12.4 +2.1
FIA1  FINESS Array S    74.98 333   P       P        10 52 09.1 -0.9
N2TV  T¥rnvik           74.98 341⇓iP      P        10 52 10.5 +0.5
FINES FINESS Array B    74.99 333   P       P        10 52 10.1  0.0
      comp=Z,44nm,0.4s,baz=67,slow=5.2,SNR=676
FINES FINESS Array B    74.99 333   P       P        10 52 09.6 -0.5
NAX   Nakhchivan        75.03 307   P       P        10 52 11.3 +0.4
LOF   Lofoten           75.05 342 eP       P        10 52 08.9 -1.4
HIZ   Hauiti            75.05 152   P       P        10 52 11.7 +1.0
FAUS  Fauske            75.06 341⇓iP      P        10 52 10.8 +0.4
J01E  Myrtle Point      75.08  49   P       P        10 52 13.1 +2.1
      baz=296,SNR=5.3
GNI   Garni             75.13 308   P       P        10 52 11.7 +0.1
      comp=Z,16nm,0.7s,baz=55,slow=2.0,SNR=13
GNI   Garni             75.13 308⇓eP      P        10 52 12.1 +0.5
GNI                                 pmax    pmax
      comp=Z,85nm,1.7s
GNI   Garni             75.13 308   P       P        10 52 11.8 +0.2
GNI   Garni             75.13 308   P       P        10 52 12.9 +1.3
NEY   Neytrino          75.14 311⇓eP      P        10 52 11.2 -0.4
NEY                                 pmax    pmax
      comp=Z,6.0nm,0.8s
I03D  Drain, OR         75.23  48   P       P        10 52 13.9 +2.1
      baz=296,SNR=11
H04D  Lebanon           75.26  47   P       P        10 52 13.9 +1.9
      baz=296,SNR=7.6
LTY   Liberty           75.31  44   P       P        10 52 13.0 +0.6
LTY                                 IAmb    IAmb     10 52 14.6
      comp=Z,31nm,1.3s
F05D  White Salmon      75.45  45   P       P        10 52 15.2 +2.1
      baz=297
K02D  Willamette Mer    75.46  49   P       P        10 52 15.3 +2.0
      baz=296,SNR=8.4
JRN   Qarnain Island    75.50 291   P       P        10 52 13.3 -0.4
H04A  Detroit Lake      75.54  47   P       P        10 52 14.5 +0.9
H04A                                IAmb    IAmb     10 52 16.2
      comp=Z,40nm,1.0s
B08A  Colville Reser    75.61  42   P       P        10 52 14.8 +0.9
B08A                                IAmb    IAmb     10 52 16.3
      comp=Z,32nm,0.9s
L02E  Cave Junction     75.74  50   P       P        10 52 16.4 +1.6
      baz=296
URZ   Urewera           75.79 150   P       P        10 52 14.2 -0.6
      comp=Z,22nm,0.9s,baz=197,slow=2.6,SNR=6.4
I04A  Tendick Farm,     75.79  48   P       P        10 52 16.5 +1.4
      baz=297,SNR=19
G05D  Wamic, OR         75.83  46   P       P        10 52 17.3 +2.1
      baz=297,SNR=5.1
DBG   Daneborg          75.87 354 i P       P        10 52 15.1 +0.2
HUMO  Hull Mountain     75.97  49   P       P        10 52 17.5 +1.4
MOR8  Moi Rana          76.12 340⇓iP      P        10 52 15.4 -1.0
QRZ   Quartz Range      76.13 155   P       P        10 52 17.2 +0.6
QRZ                                 IAmb    IAmb     10 52 18.4
      comp=Z,21nm,0.8s
E07A  Sunnyside         76.13  44   P       P        10 52 18.1 +1.2
E07A                                IAmb    IAmb     10 52 19.7
      comp=Z,43nm,1.2s
SHAO  Shalim            76.20 283 i P       P        10 52 17.7  0.0
      SNR=12
SHAO  Shalim            76.20 283   P       P        10 52 18.0 +0.2
KHMM  Horse Mountain    76.23  51   P       P        10 52 18.6 +0.9
KHMM                                IAmb    IAmb     10 52 21.5
      comp=Z,47nm,1.2s
I05D  Terrebonne, OR    76.23  47   P       P        10 52 19.3 +1.8
      baz=297,SNR=11
J04D  Umpqua Nationa    76.24  48   P       P        10 52 19.5 +1.8
      baz=297,SNR=12
BKZ   Black Stump Fm    76.28 151   P       P        10 52 17.9 +0.2
BKZ                                 IAmb    IAmb     10 52 20.5
      comp=Z,35nm,1.1s
KONS  Konsvik           76.29 341 eP       P        10 52 17.8 +0.5
VSU   Vasula            76.38 330 eP       P        10 52 17.9 -0.1
VSU   Vasula            76.38 330d iP      P        10 52 17.8 -0.1
VSU                                 pmax    pmax
      comp=Z,184nm,1.0s
F07A  Phinny Hill Vi    76.40  45   P       P        10 52 19.8 +1.4
F07A                                IAmb    IAmb     10 52 21.1
      comp=Z,23nm,0.9s
HAWA  Hanford           76.41  44   P       P        10 52 18.8 +0.5
HAWA                                IAmb    IAmb     10 52 21.0
      comp=Z,40nm,1.4s
STOK  Stokkvaagen       76.43 340 eP       P        10 52 18.2 +0.1
D08A  Wollman Farm,     76.47  44   P       P        10 52 19.1 +0.5
D08A                                IAmb    IAmb     10 52 21.1
      comp=Z,32nm,0.9s
C09A  Chrisman Ranch    76.50  43   P       P        10 52 20.2 +1.4
C09A                                IAmb    IAmb     10 52 21.3
      comp=Z,35nm,0.9s
YBH   Yreka Blue Hor    76.53  50   P       P        10 52 21.1 +1.8
YBH                                 pmax    pmax
      comp=Z,21nm,1.0s
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YBH	Yreka Blue Hor	76.53	50	P	P	10 52 21.1	+1.8
YBH				IAmb	IAmb	10 52 22.2	
	comp=Z,21nm,1.0s						
L04D	Klamath Falls	76.58	49	P	P	10 52 20.7	+1.1
	baz=297,SNR=9.3						
M02C	Callahan	76.59	50	P	P	10 52 21.5	+1.9
	baz=297,SNR=11						
E08A	Dider Farm, El	76.65	44	P	P	10 52 20.5	+0.8
E08A				IAmb	IAmb	10 52 22.2	
	comp=Z,20nm,0.9s						
PINE	Pine Mountain	76.74	47	P	P	10 52 21.5	+0.9
K04D	Chiloquin, OR	76.75	49	P	P	10 52 22.4	+1.8
	baz=298,SNR=7.2						
NNZ	Nelson	76.78	154	P	P	10 52 19.6	-0.7
J05D	Fort Rock, OR	76.79	48	P	P	10 52 22.6	+1.9
	baz=298,SNR=35						
SLWR	Sila	76.83	290	P	P	10 52 21.0	-0.1
N02D	Trinity Center	76.88	50	P	P	10 52 23.1	+2.0
	baz=297,SNR=11						
DMTO	DMTO	76.91	283	P	P	10 52 21.6	0.0
SOC	Sochi	76.94	313	*e*P	P	10 52 20.6	-0.8
SOC				*e*		10 55 19.3	
SOC				*e*S	S	11 01 32.8	-0.9
SOC				*e*SS	SS	11 06 41.5	+0.9
SOC				*e*SSS	SSS	11 10 07.3	
SOC				pmax	pmax		
	comp=Z,30nm,0.9s						
NEW	Newport	76.95	42	P	P	10 52 22.1	+0.7
NEW				pmax	pmax		
	comp=Z,33nm,1.0s						
NEW	Newport	76.95	42	P	P	10 52 22.7	+1.3
	baz=299						
NEW	Newport	76.95	42	P	P	10 52 22.1	+0.7
NEW				IAmb	IAmb	10 52 23.8	
	comp=Z,33nm,1.0s						
M04C	Macdoel	77.08	49	P	P	10 52 24.0	+1.7
	baz=298,SNR=21						
GEVA	Gevas	77.11	307	P	P	10 52 22.2	-0.4
WDC	Whiskeytown Da	77.17	51	P	P	10 52 23.5	+0.8
WDC				pmax	pmax		
	comp=Z,28nm,1.3s						
WDC	Whiskeytown Da	77.17	51	P	P	10 52 23.5	+0.8
WDC				IAmb	IAmb	10 52 25.4	
	comp=Z,28nm,1.2s						
TUWZ	Tuamarina	77.18	154	P	P	10 52 21.8	-0.7
O02D	Mt. Diablo Mer	77.19	51	P	P	10 52 24.9	+2.0
	baz=297						
E09A	Wood Farm, Sta	77.19	44	P	P	10 52 24.1	+1.4
E09A				IAmb	IAmb	10 52 25.3	
	comp=Z,35nm,1.0s						
DOK	Doka	77.21	284	P	P	10 52 22.9	-0.3
K05A	Summer Lake	77.27	48	P	P	10 52 24.8	+1.4
G08A	Pilot Rock	77.28	45	P	P	10 52 24.2	+0.8
BSWZ	Blackbirch Sta	77.40	154	P	P	10 52 22.9	-0.8
MTSE	Matsula	77.48	331	*e*P	P	10 52 24.4	+0.4
I07A	Izee	77.52	46	P	P	10 52 25.8	+1.1
UMR	Umm Al-Rimmam	77.59	297	*e*P		10 52 24.8	
RBK	Rabkut	77.64	283	P	P	10 52 25.7	0.0
UPNV	Upernavik	77.72	5	*i* P	P	10 52 25.4	+0.4
UPNV				IAmb	IAmb	10 52 26.1	
	comp=Z,14nm,0.7s						
MIB	Mutribah	77.77	297	*e*P		10 52 25.5	
KBD	Kabd	77.77	297	*e*P		10 52 25.6	
QRN	Al-Qurain	77.79	296	*e*P		10 52 25.6	
O03E	Paynes Creek	77.80	51	P	P	10 52 27.1	+0.8
	baz=298,SNR=9.2						
ANN	Anapa	77.81	315	*e*P	P	10 52 25.8	-0.2
ANN				pmax	pmax		
	comp=Z,79nm,0.8s						
WHFO	Wadi Hawf	77.82	284	P	P	10 52 26.1	-0.6
RDF	Al-Radifah	78.00	296	*e*P		10 52 26.9	
F10A	Beach Ranch, E	78.01	44	P	P	10 52 28.6	+1.3
NSS	Namsos	78.01	339	*e*P	P	10 52 26.8	0.0
MOD	Modoc Plateau	78.04	49	P	P	10 52 28.4	+0.7
MOD				IAmb	IAmb	10 52 30.1	
	comp=Z,19nm,1.0s						
MNK	Minsk	78.06	326	*i* P	P	10 52 28.2	+1.0
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	10 52 28.2	+1.0
	comp=N,12nm,1.0s						
MNK				*i* P	P	10 52 28.2	+1.0
	comp=Z,85nm,1.0s						
MNK				*i* pP	pwP	10 54 03.1	-2.3
MNK				*i* sP	sP	10 54 48.4	+3.5
MNK				*i* PP	PP	10 55 31.3	+1.3
MNK				*i* PPP	PPP	10 57 21.9	
MNK				*i* S	S	11 01 45.7	+0.5
MNK				*i* ScS	ScS	11 02 07.1	+0.4
MNK				*i* sS	sS	11 04 36.0	+4.9
MNK				*i* SS	SS	11 06 59.8	+3.1
MNK				*i* SSS	SSS	11 10 44.8	
MNK				*i* LRM	MLR	11 29 36.6	
	comp=E,18nm,19.0s						
MNK				*i* LRM	MLR	11 29 36.9	
	comp=Z,188nm,19.0s						
MNK				*i* LRM	MLR	11 29 37.6	
	comp=N,225nm,19.0s						
KOPT	Kop Dagi	78.09	309	P	P	10 52 29.0	+0.9
KOPT				IAmb	IAmb	10 52 30.3	
	comp=Z,32nm,1.1s						
RPZ	Rata Peaks	78.14	157	P	P	10 52 27.0	-0.7
	comp=Z,18nm,0.8s,baz=299,slow=10,SNR=3.1						
RPZ	Rata Peaks	78.14	157	P	P	10 52 26.7	-1.0
RPZ				IAmb	IAmb	10 52 30.9	
	comp=Z,28nm,0.8s						
AAL	Aland	78.14	334	*e*P	P	10 52 27.0	-0.6
IDID	Didziasalis	78.15	327	*e*P	P	10 52 28.2	+0.5
RST	Umm Al-Ruwaisa	78.17	297	*e*P		10 52 27.5	
ISAL	Salakas	78.29	328	*e*P	P	10 52 29.2	+0.7
ORV	Oroville	78.35	51	P	P	10 52 29.6	+0.4
ORV				pmax	pmax		
	comp=Z,28nm,1.1s						
ORV	Oroville	78.35	51	P	P	10 52 29.6	+0.4
ORV				IAmb	IAmb	10 52 31.1	
	comp=Z,28nm,1.1s						
NACGM	Naroch	78.36	327	*i* P	P	10 52 29.6	+0.8
NACGM				*i* P	P	10 52 29.6	+0.8
NACGM				*i* P	P	10 52 29.6	+0.8
NACGM				*i* pP	pP	10 54 03.0	+0.9
NACGM				*i* PP	PP	10 55 31.8	-0.8
NACGM				*i* PPP	PPP	10 57 38.7	
NACGM				*i* S	S	11 01 48.1	-0.2
NACGM				*i* sS	sS	11 04 35.6	+1.2
NACGM				*i* SS	SS	11 07 30.0	+29
NACGM				*i* SSS	SSS	11 10 13.7	
IIGN	Ignalina	78.38	328	*e*P	P	10 52 29.3	+0.3
WALA	Waterton Lakes	78.39	40	P	P	10 52 30.0	+0.7
WALA				IAmb	IAmb	10 52 31.9	
	comp=Z,20nm,0.9s						
SUMG	Summit	78.47	359	P	P	10 52 30.4	+0.7
SUMG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SUMG	Summit	78.47	359	P	P	10 52 30.4	+0.7
SUMG	Summit	78.47	359	*i* P	P	10 52 30.6	+0.9
SUMG	Summit	78.47	359	*i* P	P	10 52 30.6	+0.9
ABTO	Aybut	78.48	283	P	P	10 52 30.0	-0.3
BMO	Blue Mountains	78.52	45	P	P	10 52 31.2	+1.1
BMO				pmax	pmax		
	comp=Z,21nm,0.9s						
BMO	Blue Mountains	78.52	45	P	P	10 52 31.2	+1.1
BMO				IAmb	IAmb	10 52 32.6	
	comp=Z,20nm,0.9s						
SLIT	Slitere, Latvi	78.78	331	*e*P	P	10 52 30.5	-0.6
JTMT	Jette	78.86	41	P	P	10 52 33.1	+1.2
JTMT				IAmb	IAmb	10 52 34.5	
	comp=Z,28nm,1.0s						
WVOR	Wild Horse Val	78.87	48	P	P	10 52 32.9	+0.9
WVOR				pmax	pmax		
	comp=Z,20nm,1.1s						
WVOR	Wild Horse Val	78.87	48	P	P	10 52 32.9	+0.9
WVOR				IAmb	IAmb	10 52 34.6	
	comp=Z,20nm,1.1s						
BEKR	Beckworth	78.98	51	P	P	10 52 33.2	+0.5
BEKR				IAmb	IAmb	10 52 34.9	
	comp=Z,32nm,0.8s						
AFDM	Forest Hills D	79.00	52	P	P	10 52 33.4	+0.7
AFDM				IAmb	IAmb	10 52 34.9	
	comp=Z,22nm,1.2s						
MARD	Mardin	79.18	307	P	P	10 52 33.6	-0.2
UPP	Uppsala	79.25	334	*e*P	P	10 52 33.1	-0.4
PABE	Paberze	79.33	328	*e*P	P	10 52 34.4	+0.4
AKASG	Malin Array Be	79.49	323	P	P	10 52 34.6	-0.4
	comp=Z,47nm,0.6s,baz=50,slow=5.4,SNR=159						
AKASG	Malin Array Be	79.49	323	P	P	10 52 34.1	-0.9
AKBB	Malin Array Si	79.49	323	P	P	10 52 34.3	-0.7
AKBB				pmax	pmax		
	comp=Z,60nm,0.6s						
AKBB	Malin Array Si	79.49	323	P	P	10 52 34.2	-0.7
MSO	Missoula	79.54	42	P	P	10 52 36.3	+0.8
	baz=302						
MSO	Missoula	79.54	42	P	P	10 52 35.8	+0.3
SCO	Scoresbysund	79.70	354	*i* P	P	10 52 36.1	+0.4
SCO	Scoresbysund	79.70	354	*i* P	P	10 52 36.1	+0.4
SCO	Scoresbysund	79.70	354	*i* P	P	10 52 36.2	+0.4
PAHR	Pah Rah Range	79.71	50	P	P	10 52 37.6	+1.0
PAHR				IAmb	IAmb	10 52 38.9	
	comp=Z,24nm,1.1s						
VCNR	Virginia City	79.73	51	P	P	10 52 38.2	+1.4
SIM	Simferopol'	79.77	316	*e*P	P	10 52 35.8	-0.8
SIM				pmax	pmax		
	comp=Z,79nm,0.8s						
CMB	Columbia Colle	79.84	52	P	P	10 52 38.5	+1.3
CMB				pmax	pmax		
	comp=Z,30nm,1.0s						
CMB	Columbia Colle	79.84	52	P	P	10 52 38.5	+1.3
CMB				IAmb	IAmb	10 52 39.5	
	comp=Z,30nm,1.0s						
PNTR	Pine Nut	79.87	51	P	P	10 52 38.7	+1.1
PNTR				IAmb	IAmb	10 52 40.1	
	comp=Z,32nm,1.0s						
PBUR	Paburge	79.93	330	*e*P	P	10 52 37.6	+0.4
MFID	Camas Ranch	80.16	46	P	P	10 52 39.6	+0.8
MFID				IAmb	IAmb	10 52 41.5	
	comp=Z,27nm,1.1s						
SOCY	Socotra	80.26	279	P	P	10 52 38.3	-1.5
WAKR	Walker	80.27	51	P	P	10 52 40.6	+1.0
WAKR				IAmb	IAmb	10 52 42.3	
	comp=Z,18nm,1.0s						
MALT	Malatya	80.32	308	P	P	10 52 40.8	+1.0
HFS	Hagfors	80.53	336	P	P	10 52 39.8	-0.5
	comp=Z,44nm,0.6s,baz=76,slow=6.3,SNR=259						
NC405	NORSAR Array S	80.53	337	P	P	10 52 39.4	-0.9
NC303	NORSAR Array S	80.56	337	P	P	10 52 40.8	+0.3
SUW	Suwalki	80.59	328	*e*P	P	10 52 40.5	-0.2
SUW	Suwalki	80.59	328	*e*P	P	10 52 40.6	-0.2
SUW	Suwalki	80.59	328	P	P	10 52 40.2	-0.5
SUW				pmax	pmax		
	comp=Z,189nm,1.0s						
SUW	Suwalki	80.59	328	P	P	10 52 40.2	-0.5
NB201	NORSAR Array S	80.72	337	P	P	10 52 40.4	-0.9
DOMB	Dombas	80.72	339	*e*P	P	10 52 41.3	-0.1
NC204	NORSAR Array S	80.73	338	P	P	10 52 40.9	-0.5
NB2	NORSAR Subarra	80.75	337	P	P	10 52 40.8	-0.7
	comp=Z,23nm,0.5s,baz=45,slow=5.3						
NB2	NORSAR Subarra	80.75	337	P	P	10 52 40.8	-0.7
	baz=45,slow=5.3						
NOA	NORSAR Array B	80.75	337	P	P	10 52 40.9	-0.6
	comp=Z,22nm,0.5s,baz=55,slow=6.7,SNR=192						
NOA				PP	PP	10 55 51.3	-0.7
	comp=Z,1.0nm,0.6s,baz=46,slow=8.6,SNR=3.7						
MOL	Molde	80.80	340	*e*P	P	10 52 40.9	-0.8
HRY	Holter Researc	80.83	41	P	P	10 52 43.4	+1.1
RYN	Ryan	80.83	51	P	P	10 52 43.2	+0.7
RYN				IAmb	IAmb	10 52 45.0	
	comp=Z,29nm,1.0s						
NC602	NORSAR Array S	80.86	337	P	P	10 52 40.7	-1.3
NBO00	NORSAR Array S	80.90	337	P	P	10 52 41.2	-1.1
HLID	Hailey	80.97	45	P	P	10 52 44.6	+1.5
	baz=302,SNR=23						
HLID	Hailey	80.97	45	P	P	10 52 44.4	+1.2
NAO01	NORSAR Array S	81.00	337	P	P	10 52 42.2	-0.5
NAO01	NORSAR Array S	81.00	337	⇓*i*P	P	10 52 42.1	-0.6
OMMB	Old Mammoth Mi	81.01	52	P	P	10 52 44.4	+0.7
LHV	Little Huntoon	81.03	51	P	P	10 52 44.9	+1.5
LHV				IAmb	IAmb	10 52 46.4	
	comp=Z,34nm,1.0s						
PAGB	Antelope Grade	81.06	54	P	P	10 52 44.7	+1.1
PAGB				IAmb	IAmb	10 52 46.4	
	comp=Z,36nm,1.1s						
NVAR	Mina Array Bea	81.08	51	P	P	10 52 45.1	+1.3
	comp=Z,15nm,0.8s,baz=281,slow=5.7,SNR=121						
NVAR				pP	pP	10 54 17.1	-0.9
	comp=Z,3.2nm,0.8s,baz=285,slow=4.9,SNR=6.4						
NVAR	Mina Array Bea	81.08	51	P	P	10 52 44.8	+0.9
DLMT	Dillon	81.11	43	P	P	10 52 44.6	+0.8
DLMT				IAmb	IAmb	10 52 46.3	
	comp=Z,24nm,1.1s						
MLAC	Mammoth, Mammo	81.11	52	P	P	10 52 45.9	+1.8
	baz=300,SNR=7.2						
NV11	Mina Array Sit	81.17	51	P	P	10 52 44.6	+0.3
NV11				IAmb	IAmb	10 52 46.8	
	comp=Z,19nm,1.1s						
BCYI	Bear Canyon	81.19	44	P	P	10 52 45.2	+0.8
MCMT	McKenzie Canyo	81.25	43	P	P	10 52 45.5	+0.8
AKN	Aaknes	81.27	340	*e*P	P	10 52 44.5	+0.4
EGMT	Eagleton	81.27	39	P	P	10 52 45.4	+0.9
	baz=304,SNR=14						
EGMT	Eagleton	81.27	39	P	P	10 52 45.1	+0.6
EGMT				IAmb	IAmb	10 52 46.8	
	comp=Z,35nm,1.0s						
BZK	Bozkurt	81.40	313	⇓P	P	10 52 44.2	-1.0
SORM	Soroca	81.40	321	⇓P	P	10 52 44.7	-0.4
SORM	Soroca	81.40	321	⇓P	P	10 52 44.7	-0.4
SMMC	Simmler	81.45	54	P	P	10 52 47.6	+2.0
	baz=300						
BOZ	Bozeman (W)	81.55	42	P	P	10 52 47.1	+1.0
BOZ				pmax	pmax		
	comp=Z,12nm,0.9s						
BOZ	Bozeman (W)	81.55	42	P	P	10 52 47.3	+1.2
	baz=303,SNR=8.8						
BOZ	Bozeman (W)	81.55	42	P	P	10 52 47.1	+1.0
OSL	Oslo	81.72	337	*e*P	P	10 52 45.2	-1.3
GAZ	Gaziantep	81.73	308	P	P	10 52 47.5	+0.4
FCC	Fort Churchill	81.73	25	P	P	10 52 46.5	0.0
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FCC	Fort Churchill	81.73	25	P	P	10 52 46.5	0.0
PKM	Mcpherson Peak	81.79	55	P	P	10 52 49.5	+1.9
	baz=300						
TIN	Tinemaha, Big	81.82	52	P	P	10 52 49.8	+2.1
	baz=300						
MILM	Milestii Mici	81.83	320	⇓P	P	10 52 46.9	-0.3
VES	Vestal, Richgr	81.83	54	P	P	10 52 48.2	+0.7
	baz=300,SNR=14						
ELK	Elko	81.92	48	P	P	10 52 49.6	+1.3
ELK				pmax	pmax		
	comp=Z,31nm,1.4s						
ELK	Elko	81.92	48	P	P	10 52 49.6	+1.3
ELK				IAmb	IAmb	10 52 50.9	
	comp=Z,31nm,1.4s						
SKAR	Skarslia	81.98	338	*e*P	P	10 52 48.7	+0.8
ICESG	Greenland Ices	81.99	360	*i* P	P	10 52 48.7	+0.5
ICESG				IAmb	IAmb	10 52 49.3	
	comp=Z,152nm,0.8s						
TPH	Tonopah	81.99	51	P	P	10 52 49.3	+0.7
TPH				pmax	pmax		
	comp=Z,174nm,1.1s						
TPH	Tonopah	81.99	51	P	P	10 52 49.3	+0.7
ILGA	Ilgaz	82.06	313	P	P	10 52 49.2	+0.3
QLMT	Earthquake Lak	82.09	43	P	P	10 52 50.6	+1.6
RAYN	Ar Rayn	82.11	292	P	P	10 52 49.8	+0.5
RAYN	Ar Rayn	82.11	292	P	P	10 52 48.4	-0.9
RAYN				pmax	pmax		
	comp=Z,53nm,0.7s						
RAYN	Ar Rayn	82.11	292	P	P	10 52 48.4	-0.9
YHL	Hebgen Lake	82.23	43	P	P	10 52 51.2	+1.4
CWC	Cottonwood Cre	82.23	53	P	P	10 52 50.9	+1.1
	baz=301						
YHB	Horse Butte	82.27	43	P	P	10 52 50.6	+0.7
HYA	Hoyanger	82.29	339	⇓*i*P	P	10 52 49.3	0.0
KONO	Kongsberg	82.32	337	*e*P	P	10 52 49.1	-0.4
ISA	Isabella, Lake	82.35	53	P	P	10 52 50.6	+0.3
ISA				pmax	pmax		
	comp=Z,14nm,1.2s						
ISA	Isabella, Lake	82.35	53	P	P	10 52 50.7	+0.4
	baz=300,SNR=8.1						
ISA	Isabella, Lake	82.35	53	P	P	10 52 50.6	+0.3
ARVC	Arvin	82.37	54	P	P	10 52 51.7	+1.4
	baz=300						
IAS	Iasi	82.38	320	⇑P	P	10 52 49.9	-0.2
IAS	Iasi	82.38	320	⇑P	P	10 52 49.9	-0.2
GRAC	Grapevine Rang	82.44	52	P	P	10 52 52.6	+1.8
	baz=301,SNR=6.8						
YMR	Madison River	82.46	43	P	P	10 52 52.5	+1.6
VASR	Vaslui	82.56	320	⇑P	P	10 52 51.3	+0.2
YNR	Norris Junctio	82.60	43	P	P	10 52 54.0	+2.3
OSI	Osito Audit: C	82.70	54	P	P	10 52 53.6	+1.4
	baz=300						
OSI	Osito Audit: C	82.70	54	P	P	10 52 53.3	+1.2
OSI				IAmb	IAmb	10 52 54.7	
	comp=Z,18nm,0.9s						
LVV	L'vov	82.72	324	*e*P	P	10 52 51.2	-0.6
LVV				*e*		11 03 34.5	
LVV				pmax	pmax		
	comp=Z,90nm,1.4s						
YPP	Pitchstone Pla	82.77	43	P	P	10 52 54.3	+1.7
TLCR		82.81	318	⇑P	P	10 52 52.5	+0.2
TLCR		82.81	318	⇑P	P	10 52 52.5	+0.2
BR131	Keskin Array S	82.81	312	*d i*P	P	10 52 52.2	-0.4
BR131	Keskin Array S	82.81	312	P	P	10 52 52.2	-0.4
BRTR	Keskin Array B	82.81	312	P	P	10 52 52.5	-0.2
	comp=Z,23nm,0.7s,baz=104,slow=4.1,SNR=147						
BRTR	Keskin Array B	82.81	312	*i* P	P	10 52 52.5	-0.2
BRTR				pmax	pmax		
	comp=Z,25nm,0.7s						
BRTR	Keskin Array B	82.81	312	P	P	10 52 52.7	+0.1
YNE	Yellowstone No	82.83	42	P	P	10 52 54.5	+1.7
MPMC	Manual Prospec	82.84	53	P	P	10 52 54.2	+1.3
	baz=301,SNR=20						
H17A	Grant Village	82.84	43	P	P	10 52 56.3	+3.4
	baz=304,SNR=30						
H17A	Grant Village	82.84	43	P	P	10 52 55.1	+2.2
LKWY	Lake	82.85	43	P	P	10 52 54.7	+1.8
LKWY				pmax	pmax		
	comp=Z,36nm,1.0s						
LKWY	Lake	82.85	43	P	P	10 52 54.7	+1.8
LKWY				IAmb	IAmb	10 52 57.4	
	comp=Z,36nm,1.0s						
BIR	Birlad	82.87	320	⇓P	P	10 52 53.9	+1.2
BIR	Birlad	82.87	320	⇓P	P	10 52 53.9	+1.2
YMP	Mirror Lake Pl	82.89	42	P	P	10 52 54.4	+1.2
HVU	Hansel Valley	82.94	46	P	P	10 52 55.2	+1.9
HVU				pmax	pmax		
	comp=Z,30nm,0.9s						
HVU	Hansel Valley	82.94	46	P	P	10 52 55.2	+1.9
FLWY	Flagg Ranch	82.94	43	P	P	10 52 55.4	+2.1
FLWY				IAmb	IAmb	10 52 57.0	
	comp=Z,32nm,1.0s						
R11A	Troy Canyon, C	82.95	50	P	P	10 52 55.0	+1.5
	baz=302,SNR=36						
R11A	Troy Canyon, C	82.95	50	P	P	10 52 54.3	+0.8
R11A				IAmb	IAmb	10 52 56.0	
	comp=Z,25nm,1.1s						
VARL	Varlezi	82.96	319	⇓P	P	10 52 53.8	+0.8
LRMC	Laurel Mtn Rad	83.00	53	P	P	10 52 55.2	+1.5
	baz=301,SNR=9.7						
JURR	Jurilovca	83.01	318	⇓P	P	10 52 53.9	+0.6
PRAR	RASCA	83.02	321	⇓P	P	10 52 53.2	-0.2
FURC	Furnace Creek,	83.06	52	P	P	10 52 55.6	+1.8
	baz=301,SNR=24						
BEL	Belsk	83.08	327	*e*P	P	10 52 53.8	+0.3
EDW2	Edwards Air Fo	83.08	54	P	P	10 52 55.6	+1.6
	baz=301,SNR=26						
MOOW	Moose Ponds	83.10	43	P	P	10 52 55.2	+1.1
ECR	Eagle Creek	83.11	44	P	P	10 52 56.2	+2.0
ODD1	Odda	83.11	338	⇓*i*P	P	10 52 53.5	-0.1
GHRR		83.11	319	⇑P	P	10 52 55.2	+1.3
ASK	Askoy	83.13	339	*e*P	P	10 52 53.7	+0.1
BER	Bergen	83.16	339	*e*P	P	10 52 54.0	+0.2
DECC	Green Verdugo	83.16	55	P	P	10 52 55.8	+1.4
	baz=301,SNR=6.7						
RLMT	Red Lodge	83.20	42	P	P	10 52 56.3	+1.7
	baz=305,SNR=24						
RLMT	Red Lodge	83.20	42	P	P	10 52 56.0	+1.3
RLMT				IAmb	IAmb	10 52 57.4	
	comp=Z,30nm,1.0s						
CFR	Carcaliu	83.20	318	⇑P	P	10 52 54.2	-0.1
CFR	Carcaliu	83.20	318	⇑P	P	10 52 54.2	-0.1
TPGR	Topolog	83.22	318	⇓P	P	10 52 54.9	+0.4
TPNV	Topopah Spring	83.23	51	P	P	10 52 55.5	+0.6
TPNV				pmax	pmax		
	comp=Z,46nm,1.0s						
TPNV	Topopah Spring	83.23	51	P	P	10 52 56.3	+1.4
	baz=302,SNR=35						
TPNV	Topopah Spring	83.23	51	P	P	10 52 55.5	+0.6
BGU	Big Grassy Mou	83.24	47	P	P	10 52 56.0	+1.1
REDW	Red Top Meadow	83.25	44	P	P	10 52 56.2	+1.3
REDW				IAmb	IAmb	10 52 57.8	
	comp=Z,19nm,1.2s						
SNOW	Snow King Moun	83.25	44	P	P	10 52 56.7	+1.7
SNOW				IAmb	IAmb	10 52 58.0	
	comp=Z,16nm,0.9s						
LOHW	Long Hollow	83.26	43	P	P	10 52 55.8	+0.8
TESR	Tescani	83.28	320	⇓P	P	10 52 54.6	-0.2
BR231	Keskin MP Arra	83.31	312	P	P	10 52 54.3	-0.9
BR231				IAmb	IAmb	10 52 55.9	
	comp=Z,54nm,1.4s						
PASC	Pasadena Art C	83.31	55	P	P	10 52 56.1	+0.9
PASC				IAmb	IAmb	10 52 57.1	
	comp=Z,25nm,1.1s						
BIZ	Bicaz	83.33	321	⇓P	P	10 52 55.3	+0.3
MWC	Mount Wilson	83.38	55	P	P	10 52 56.6	+0.9
MWC				pmax	pmax		
	comp=Z,21nm,1.0s						
MWC	Mount Wilson	83.38	55	P	P	10 52 56.6	+0.9
MWC				IAmb	IAmb	10 52 57.7	
	comp=Z,21nm,0.9s						
SPUT	South Promonto	83.40	46	P	P	10 52 56.2	+0.6
BUR08	Bucovina Ar. S	83.41	322	P	P	10 52 55.1	-0.4
BUR08				IAmb	IAmb	10 52 56.7	
	comp=Z,24nm,0.9s						
PETR	Petresti	83.41	319	⇑P	P	10 52 57.0	+1.6
BURAR	Bucovina Array	83.42	322	⇓P	P	10 52 55.8	+0.3
BURAR	Bucovina Array	83.42	322	⇓P	P	10 52 55.8	+0.3
BURAR	Bucovina Array	83.42	322	P	P	10 52 55.6	+0.1
AHID	Auburn Hatcher	83.44	44	P	P	10 52 57.4	+1.5
AHID				IAmb	IAmb	10 52 58.4	
	comp=Z,21nm,1.0s						
TIRR	Tirgusor	83.45	318	⇑P	P	10 52 55.7	+0.1
TIRR	Tirgusor	83.45	318	⇑P	P	10 52 55.7	+0.1
ODBI	Odobesti	83.49	319	⇑P	P	10 52 57.2	+1.4
KWP	Kalwaria Pacla	83.52	324	*e*P	P	10 52 55.9	0.0
BSD	Bornholm Skovb	83.54	332	*e*P	P	10 52 55.2	-0.6
BSD	Bornholm Skovb	83.54	332	⇓*i*P	P	10 52 54.9	-0.9
BSD				pmax	pmax		
	comp=Z,60nm,0.9s						
BSD	Bornholm Skovb	83.54	332	⇓*i*P	P	10 52 54.9	-0.9
	comp=Z,60nm,0.9s						
BSD	Bornholm Skovb	83.54	332	⇓*i*P	P	10 52 54.9	-0.9
BSD				IAmb	IAmb	10 52 55.6	
	comp=Z,60nm,0.9s						
BLS5	Blasjo	83.54	338	*e*P	P	10 52 56.5	+0.7
HARR	Harsova	83.60	318	⇓P	P	10 52 56.6	+0.3
HARR	Harsova	83.60	318	⇓P	P	10 52 56.6	+0.3
VRI	Vrincioaia	83.61	320	⇑P	P	10 52 57.3	+0.9
VRI	Vrincioaia	83.61	320	⇑P	P	10 52 57.3	+0.9
TLBR	Topalu	83.62	318	⇓P	P	10 52 56.6	+0.2
BFSC	Mount Baldy Ra	83.65	54	P	P	10 52 58.0	+1.0
	baz=301,SNR=6.1						
PLOR	Plostina	83.67	320	⇓P	P	10 52 56.9	+0.2
PLOR	Plostina	83.67	320	⇓P	P	10 52 56.9	+0.2
GSC	Goldstone, Bar	83.70	53	P	P	10 52 58.1	+0.9
GSC				pmax	pmax		
	comp=Z,38nm,1.0s						
GSC	Goldstone, Bar	83.70	53	P	P	10 52 58.6	+1.4
	baz=301,SNR=39						
GSC	Goldstone, Bar	83.70	53	P	P	10 52 58.1	+0.9
GSC				IAmb	IAmb	10 52 59.5	
	comp=Z,38nm,1.0s						
HOMB	Homborsund	83.72	336	⇓*i*P	P	10 52 56.0	-0.7
HOMB	Homborsund	83.72	336	*i* P	P	10 52 56.2	-0.4
GRER		83.76	319	⇓P	P	10 52 58.5	+1.4
SHOC	Shoshone, Teco	83.76	52	P	P	10 52 58.9	+1.6
	baz=302,SNR=11						
DUG	Dugway, Tooele	83.78	47	P	P	10 52 58.3	+0.7
DUG				pmax	pmax		
	comp=Z,33nm,0.9s						
DUG	Dugway, Tooele	83.78	47	P	P	10 52 59.1	+1.6
	baz=303,SNR=38						
DUG	Dugway, Tooele	83.78	47	P	P	10 52 58.3	+0.7
DUG				IAmb	IAmb	10 53 00.2	
	comp=Z,33nm,0.8s						
SFJD	Kangerlussuaq	83.79	4	P	P	10 52 56.7	-0.1
SFJD				pmax	pmax		
	comp=Z,25nm,0.9s						
SFJD	Kangerlussuaq	83.79	4	P	P	10 52 56.7	-0.1
SFJD				IAmb	IAmb	10 52 57.8	
	comp=Z,25nm,0.8s						
SFJD	Kangerlussuaq	83.79	4	*i* P	P	10 52 56.9	+0.1
SFJD	Kangerlussuaq	83.79	4	*i* P	P	10 52 56.9	+0.1
GKP	Gorka Klasztor	83.79	329	*e*P	P	10 52 56.8	-0.3
GKP	Gorka Klasztor	83.79	329	*e*P	P	10 52 57.0	-0.1

RRX	Edison Barstow	83.79	54	P	P	10 52 59.4	+1.9
	baz=301						
HWUT	Hardware Ranch	83.79	46	P	P	10 52 59.0	+1.3
PRN	Pahroc Range	83.81	51	P	P	10 52 59.0	+1.3
PRN				IAmb	IAmb	10 53 00.9	
	comp=Z,31nm,1.0s						
BISRR	Bisoca	83.81	319	⇑P	P	10 52 58.4	+0.9
MDUB	Mudurnu	83.98	313	P	P	10 52 56.1	-2.4
PSUT	Pine Spring	84.00	49	P	P	10 52 59.5	+0.7
LAO	LASA Array	84.00	39	P	P	10 52 59.9	+1.5
	baz=307,SNR=8.7						
LAO	LASA Array	84.00	39	P	P	10 52 59.0	+0.6
LAO				IAmb	IAmb	10 53 01.4	
	comp=Z,26nm,1.1s						
OZUR		84.01	320	⇑P	P	10 52 58.4	0.0
ICOR	Ion Corvin	84.01	318	⇑P	P	10 52 59.0	+0.6
DGMT	Dagmar	84.01	37	P	P	10 52 58.6	+0.2
	baz=308						
DGMT	Dagmar	84.01	37	P	P	10 52 59.3	+0.9
DGMT				IAmb	IAmb	10 53 00.2	
	comp=Z,47nm,1.3s						
PGOR	Pogoanele	84.03	319	⇑P	P	10 52 59.3	+0.9
NEHR	Nehoiu	84.12	319	⇑P	P	10 52 59.4	+0.5
SNART	Snartemo	84.12	337	⇓iP	P	10 52 58.3	-0.3
SNART	Snartemo	84.12	337	i P	P	10 52 58.5	-0.1
COP	Copenhagen	84.15	333	eP	P	10 52 57.0	-1.8
COP	Copenhagen	84.15	333	i P	P	10 52 57.0	-1.8
COP	Copenhagen	84.15	333	eP	P	10 52 57.1	-1.8
ISR	Istrita	84.16	319	⇓P	P	10 53 00.1	+0.9
ISR	Istrita	84.16	319	⇓P	P	10 53 00.1	+0.9
TCUT	Toone Canyon	84.16	46	P	P	10 53 00.8	+1.2
KOLS	Kolonicke sedl	84.17	324	eP	P	10 52 59.0	-0.1
KOLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KOLS	Kolonicke sedl	84.17	324	eP	P	10 52 59.0	-0.1
CTU	Camp Tracy	84.18	46	P	P	10 53 00.7	+1.1
SHPR	Sheep Range	84.21	51	P	P	10 53 00.8	+1.0
SHPR				IAmb	IAmb	10 53 02.4	
	comp=Z,21nm,0.9s						
HEC	Hector,Ludlow	84.28	53	P	P	10 53 01.6	+1.6
	baz=302,SNR=8.3						
MLR	Muntele Rosu	84.28	320	⇓P	P	10 52 59.2	-0.6
MLR	Muntele Rosu	84.28	320	P	P	10 53 00.6	+0.7
MLR				pmax	pmax		
	comp=Z,19nm,0.8s						
MLR	Muntele Rosu	84.28	320	P	P	10 53 00.6	+0.7
MLR				IAmb	IAmb	10 53 22.0	
	comp=Z,19nm,0.8s						
DOPR	Dopca	84.31	320	⇓P	P	10 53 00.2	+0.3
BMR	Baia Mare	84.31	322	⇓P	P	10 53 00.5	+0.7
BMR	Baia Mare	84.31	322	⇓P	P	10 53 00.5	+0.7
MURC	Murrieta	84.31	55	P	P	10 53 00.5	+0.4
	baz=301,SNR=11						
UZH	Uzhgorod	84.35	324	eP	P	10 52 57.2	-2.8
BW06	Boulder Array	84.37	44	P	P	10 53 01.5	+1.0
	baz=305,SNR=19						
BW06	Boulder Array	84.37	44	P	P	10 53 00.6	0.0
BW06				IAmb	IAmb	10 53 03.1	
	comp=Z,18nm,1.1s						
PD31	Pinedale Array	84.37	44	P	P	10 53 00.9	+0.4
PD31				IAmb	IAmb	10 53 03.1	
	comp=Z,17nm,1.1s						
PDAR	Pinedale Array	84.37	44	P	P	10 53 01.4	+0.8
	comp=Z,15nm,1.0s,baz=300,slow=2.9,SNR=51						
PDAR				pP	pP	10 54 34.2	-1.5
	comp=Z,1.2nm,0.7s,baz=302,slow=1.5,SNR=4.4						
PDAR				PP	PP	10 56 22.4	+0.3
	comp=Z,3.9nm,1.1s,baz=300,slow=6.2,SNR=5.6						
PDAR	Pinedale Array	84.37	44	P	P	10 53 00.9	+0.4
NLU	North Lily Min	84.39	47	P	P	10 53 01.6	+1.0
GOET	G??ttrup	84.39	335	i P	P	10 53 00.1	+0.2
GOET	G??ttrup	84.39	335	i P	P	10 53 00.2	+0.2
JLU	Jordanelle	84.42	46	P	P	10 53 01.6	+0.7
LLD	Lille Linde	84.48	333	eP	P	10 52 59.3	-1.1
LLD	Lille Linde	84.48	333	i P	P	10 52 59.3	-1.1
LLD	Lille Linde	84.48	333	eP	P	10 52 59.4	-1.1
OJC	Ojcow	84.60	326	eP	P	10 53 00.8	-0.3
OJC	Ojcow	84.60	326	P	P	10 53 00.9	-0.3
OJC				pmax	pmax		
	comp=Z,28nm,1.1s						
OJC	Ojcow	84.60	326	P	P	10 53 00.9	-0.3
OJC				IAmb	IAmb	10 53 03.0	
	comp=Z,28nm,1.1s						
CRVS	Cervenica-Dubn	84.61	324	eP	P	10 53 01.5	+0.2
CRVS				pmax	pmax		
	comp=Z,60nm,1.4s						
CRVS	Cervenica-Dubn	84.61	324	eP	P	10 53 01.5	+0.2
MPU	Maple Canyon	84.63	47	P	P	10 53 02.9	+1.0
109C	Camp Elliot, M	84.74	55	P	P	10 53 02.3	+0.1
	baz=301,SNR=7.4						
109C	Camp Elliot, M	84.74	55	P	P	10 53 03.0	+0.7
GMRC	Granite Mounta	84.78	53	P	P	10 53 03.8	+1.3
	baz=302,SNR=20						
VOIR		84.82	320	⇑P	P	10 53 02.5	0.0
VOIR		84.82	320	⇑P	P	10 53 02.5	0.0
PFO	Pinyon Flats O	84.83	54c	eP	P	10 53 03.3	+0.5
PFO				pmax	pmax		
	comp=Z,64nm,0.9s						
PFO	Pinyon Flats O	84.83	54	P	P	10 53 04.0	+1.1
	baz=302,SNR=22						
TPFO	Pinon Flats	84.83	54	P	P	10 53 04.1	+1.2
	baz=302,SNR=25						
MUD	Monsted U'grnd	84.84	335	i P	P	10 53 01.8	-0.4
MUD				pmax	pmax		
	comp=Z,19nm,0.9s						
MUD	Monsted U'grnd	84.84	335	i P	P	10 53 01.8	-0.4
	comp=Z,19nm,0.9s						
MUD	Monsted U'grnd	84.84	335	i P	P	10 53 01.8	-0.4
MUD				IAmb	IAmb	10 53 02.0	
	comp=Z,19nm,0.9s						
CCUT	Cedar City	84.86	50	P	P	10 53 04.0	+0.9
NIE	Niedzica	84.87	325	eP	P	10 53 02.7	+0.1
TCRU	Three Creeks R	84.89	48	P	P	10 53 05.0	+1.8
BELC	Belle Mtn. Jos	84.95	54	P	P	10 53 04.3	+0.8
	baz=302,SNR=11						
SZCU	Shurtz Canyon	85.02	50	P	P	10 53 04.5	+0.7
ARR	Arges	85.09	320	⇓P	P	10 53 04.1	+0.3
MSU	Marysvale	85.12	48	P	P	10 53 05.8	+1.5
MSU	Marysvale	85.12	48	P	P	10 53 05.8	+1.5
MMAI	Mount Meron Ar	85.14	305	P	P	10 53 04.4	+0.1
	comp=Z,13nm,0.6s,baz=54,slow=6.5,SNR=18						
MONP2	Monument Peak	85.23	55	P	P	10 53 06.1	+1.2
	baz=302						
LCMT	Little Creek M	85.23	50	P	P	10 53 05.6	+0.8
DRGR		85.28	322	⇑P	P	10 53 04.4	-0.3
DRGR		85.28	322	⇑P	P	10 53 04.4	-0.3
TMUT	Trail Mountain	85.31	47	P	P	10 53 05.7	+0.4
CBX	Cerro Bola	85.36	56	P	P	10 53 06.3	+0.8
MTPU	Mount Pierson	85.37	49	P	P	10 53 07.2	+1.5
HUMR	Humele	85.40	319	⇑P	P	10 53 04.7	-0.6
LANS	Liptovska Anna	85.46	325	eP	P	10 53 06.0	+0.5
LANS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LANS	Liptovska Anna	85.46	325	eP	P	10 53 06.0	+0.5
IRM	Iron Mountain	85.47	53	P	P	10 53 07.2	+1.4
	baz=302,SNR=13						
COPA	Copaceanca	85.50	319	⇑P	P	10 53 05.2	-0.5
P17A	Butcher Ranch,	85.51	47	P	P	10 53 07.2	+1.0
NEE2	Needles Airpor	85.51	53	P	P	10 53 07.3	+1.4
	baz=303						
KNB	Kanab	85.51	50	P	P	10 53 07.8	+1.6
KNB				pmax	pmax		
	comp=Z,34nm,1.0s						
KNB	Kanab	85.51	50	P	P	10 53 07.8	+1.6
BC3	Big Chuckawall	85.52	54	P	P	10 53 07.6	+1.4
	baz=302,SNR=9.1						
LOT	Lotru	85.53	320	⇑P	P	10 53 05.8	-0.2
CSS	Mathiatis	85.56	308	P	P	10 53 05.2	-1.1
IKP	In-Ko-Pah, Jac	85.58	55	P	P	10 53 07.8	+1.3
	baz=302,SNR=8.0						
PKCU	Pink Cliffs	85.62	49	P	P	10 53 07.0	+0.1
SWSC	Sam W. Stewart	85.65	55	P	P	10 53 07.8	+1.1
	baz=302,SNR=6.5						
DEV	Deva	85.74	321	⇑P	P	10 53 06.9	+0.1
DEV	Deva	85.74	321	⇑P	P	10 53 06.9	+0.1
W13A	Hualapai Mount	85.84	52	P	P	10 53 09.0	+1.2
SRU	San Rafael Swe	85.85	47	P	P	10 53 08.8	+1.0
SRU				pmax	pmax		
	comp=Z,20nm,1.1s						
SRU	San Rafael Swe	85.85	47	P	P	10 53 08.8	+1.0
KSP	Ksiaz	85.86	328	eP	P	10 53 07.0	-0.3
MORC	Moravsky Berou	85.99	327	⇑P	P	10 53 08.0	-0.1
MORC	Moravsky Berou	85.99	327	eP	P	10 53 07.5	-0.5
MORC	Moravsky Berou	85.99	327	P	P	10 53 06.8	-1.2
MORC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	85.99	327	P	P	10 53 06.8	-1.2
ESJX	Sierra Juarez	86.04	56	P	P	10 53 09.1	+0.3
ESJX				IAmb	IAmb	10 53 10.3	
	comp=Z,20nm,1.0s						
PSZ	Piszkesteto	86.04	324	⇓P	P	10 53 08.1	-0.3
PSZ	Piszkesteto	86.04	324	⇓eP	P	10 53 08.3	-0.1
PSZ	Piszkesteto	86.04	324	P	P	10 53 07.5	-0.9
PSZ				pmax	pmax		
	comp=Z,34nm,1.4s						
PSZ	Piszkesteto	86.04	324	P	P	10 53 07.5	-0.9
PSZ				IAmb	IAmb	10 53 09.2	
	comp=Z,34nm,1.4s						
OSTC	Ostas	86.09	328	eP	P	10 53 07.5	-1.0
PDMCI	Parker Dam,Lak	86.09	53	P	P	10 53 09.9	+1.1
	baz=303						
GZR	Gura Zlata	86.11	321	⇑P	P	10 53 07.5	-1.2
GZR	Gura Zlata	86.11	321	⇑P	P	10 53 07.6	-1.2
CHVC	Chvalec	86.14	328	eP	P	10 53 08.2	-0.6
KRLC	Kraliky	86.15	327	eP	P	10 53 08.0	-0.8
KRLC	Kraliky	86.15	327	eP	P	10 53 08.0	-0.8
SIRR	Siria	86.17	322	⇑P	P	10 53 08.9	-0.1
DPC	Dobruska-Polom	86.18	327	eP	P	10 53 08.4	-0.6
DPC	Dobruska-Polom	86.18	327	eP	P	10 53 08.4	-0.6
U15A	North Rim	86.19	50	P	P	10 53 10.5	+0.9
VYHS	Vyhne	86.20	325	eP	P	10 53 09.0	-0.1
VYHS				pmax	pmax		
	comp=Z,146nm,2.5s						
VYHS	Vyhne	86.20	325	eP	P	10 53 09.0	-0.1
UPC	Upice	86.22	328	eP	P	10 53 08.5	-0.6
UPC	Upice	86.22	328	eP	P	10 53 08.5	-0.6
K22A	Casper	86.25	42	P	P	10 53 10.8	+1.2
	baz=307,SNR=11						
K22A	Casper	86.25	42	P	P	10 53 10.0	+0.4
K22A				IAmb	IAmb	10 53 11.6	
	comp=Z,15nm,0.8s						
BSEG	Bad Segeberg	86.26	333	eP	P	10 53 08.2	-1.0
	comp=Z,4.2nm,0.7s,baz=43,slow=4.8						
GLA	Glamis	86.28	54	P	P	10 53 11.3	+1.5
GLA				pmax	pmax		
	comp=Z,33nm,1.0s						
GLA	Glamis	86.28	54	P	P	10 53 11.8	+2.0
	baz=303,SNR=5.0						
GLA	Glamis	86.28	54	P	P	10 53 11.3	+1.5
SRE	Strehaia	86.33	320	⇑P	P	10 53 09.5	-0.2
SRE	Strehaia	86.33	320	⇑P	P	10 53 09.5	-0.2
JAVC	Velka Javorina	86.54	326	eP	P	10 53 11.4	+0.7
BZS	Buzias	86.61	322	⇑P	P	10 53 09.8	-1.2
BZS	Buzias	86.61	322	⇑P	P	10 53 09.8	-1.2
HERR	Herculane	86.63	321	⇓P	P	10 53 10.4	-0.7
O20A	White River Ci	86.70	45	P	P	10 53 13.2	+1.3
	baz=306,SNR=8.4						
O20A	White River Ci	86.70	45	P	P	10 53 12.6	+0.8
O20A				IAmb	IAmb	10 53 14.1	
	comp=Z,15nm,1.1s						
VRAC	Vranov	86.76	327	P	P	10 53 11.5	-0.2
	comp=Z,9.6nm,0.6s,baz=37,slow=4.0,SNR=16						
VRAC	Vranov	86.76	327	⇑P	P	10 53 11.3	-0.4
VRAC	Vranov	86.76	327	eP	P	10 53 11.2	-0.4
VRAC	Vranov	86.76	327	⇑P	P	10 53 11.3	-0.4
RSSD	Black Hills	86.79	40	P	P	10 53 12.6	+0.4
RSSD				pmax	pmax		
	comp=Z,11nm,0.9s						
RSSD	Black Hills	86.79	40	P	P	10 53 13.2	+1.0
	baz=308						
RSSD	Black Hills	86.79	40	P	P	10 53 12.6	+0.4
PVCC	Panska Ves	86.87	328	eP	P	10 53 11.8	-0.4
PVCC	Panska Ves	86.87	328	eP	P	10 53 11.8	-0.4
SMOL	Smolenice	86.89	326	eP	P	10 53 12.9	+0.6
SMOL	Smolenice	86.89	326	eP	P	10 53 12.9	+0.6
ELL	Elmali	86.89	311	P	P	10 53 12.0	-0.8
ELL				pmax	pmax		
	comp=Z,47nm,0.6s						
ELL	Elmali	86.89	311	P	P	10 53 11.9	-0.8
SPX	San Pedro Mart	86.90	56	P	P	10 53 13.6	+0.4
BRG	Berggiesshubel	86.92	329	i P	P	10 53 11.8	-0.6
BRG				Amp		10 53 12.9	
	comp=Z,15nm,1.0s						
BRG	Berggiesshubel	86.92	329	i P	P	10 53 11.7	-0.6
BRG				pmax	pmax		
	comp=Z,15nm,1.0s						
BRG	Berggiesshubel	86.92	329	i P	P	10 53 11.8	-0.6
BRG				Amp		10 53 12.9	
	comp=Z,15nm,1.0s						
BRG	Berggiesshubel	86.92	329	eP	P	10 53 11.9	-0.5
	comp=Z,7.9nm,0.8s,baz=43,slow=4.8						
ULM	Lac du Bonnet	86.95	32	P	P	10 53 12.9	+0.3
	comp=Z,5.6nm,0.8s,baz=297,slow=4.1,SNR=9.2						
ULM	Lac du Bonnet	86.95	32	⇑eP	P	10 53 12.3	-0.3
KRUC	Moravsky	87.02	327	eP	P	10 53 12.4	-0.5
CLL	Collm	87.03	330	⇓iP	P	10 53 11.9	-1.0
	comp=Z,27nm,1.3s						
CLL				epP	pP	10 54 50.0	+1.4
CLL				esP	sP	10 55 32.0	-0.6
CLL				ePP	PP	10 56 40.0	-2.7
CLL				eS	S	11 03 14.0	-0.9
CLL	Collm	87.03	330	⇓iP	P	10 53 11.9	-1.0
CLL				e*PP	pP	10 54 50.0	+1.4
CLL				eS	S	11 03 14.0	-0.9
CLL				pmax	pmax		
	comp=Z,27nm,1.3s						
CLL	Collm	87.03	330	P	P	10 53 11.7	-1.2
CLL				IAmb	IAmb	10 53 14.1	
	comp=Z,25nm,1.4s						
CLL	Collm	87.03	330	eP	P	10 53 12.0	-0.8
	baz=43,slow=4.8						
FLTG	Flechtingen	87.06	331	eP	P	10 53 12.1	-0.9
	comp=Z,5.9nm,0.7s,baz=43,slow=4.8						
MODS	Modra-Piesok	87.06	326	eP	P	10 53 12.5	-0.6
MODS				pmax	pmax		
	comp=Z,21nm,1.2s						
MODS	Modra-Piesok	87.06	326	eP	P	10 53 12.5	-0.6
MDVR	Moldovita	87.08	321	⇓P	P	10 53 12.6	-0.8
FBE	Freiberg	87.15	329	eP	P	10 53 13.3	-0.1
	baz=43,slow=4.8						
PV23	Carpenter Ridg	87.20	47	P	P	10 53 15.2	+0.8
PV23				IAmb	IAmb	10 53 16.8	
	comp=Z,20nm,1.1s						
EIL	Elat	87.22	302	P	P	10 53 13.2	-1.1
	comp=Z,4.2nm,0.7s,baz=14,slow=6.8,SNR=4.0						
PV14	Lion Creek, Pa	87.23	47	P	P	10 53 14.9	+0.5
PV14				IAmb	IAmb	10 53 16.8	
	comp=Z,26nm,1.2s						
PRU	Pruhonice	87.26	328	eP	P	10 53 13.3	-0.7
PRU	Pruhonice	87.26	328	eP	P	10 53 13.3	-0.7
ZST	Bratislava	87.26	326	eP	P	10 53 14.6	+0.5
ZST				pmax	pmax		
	comp=Z,30nm,0.9s						
ZST	Bratislava	87.26	326	eP	P	10 53 14.6	+0.5
WUAZ	Wupatki	87.32	50	P	P	10 53 16.4	+1.6
	baz=304						
WUAZ	Wupatki	87.32	50	P	P	10 53 15.5	+0.7
VTS	Vitosha	87.57	318	⇓P	P	10 53 15.6	-0.2
VTS	Vitosha	87.57	318	⇓P	P	10 53 15.6	-0.2
N23A	Red Feather La	87.66	44	P	P	10 53 18.2	+1.8
	baz=307,SNR=7.8						
PHWY	Pilot Hill	87.70	43	P	P	10 53 17.6	+0.9
PHWY				IAmb	IAmb	10 53 19.0	
	comp=Z,16nm,1.1s						
PBCC	Pribram	87.72	328	eP	P	10 53 15.0	-1.2
MPLH	Magyarpolny	87.73	325	⇓eP	P	10 53 15.6	-0.7
CLZ	Clausthal	87.78	331	eP	P	10 53 16.1	-0.3
	comp=Z,6.0nm,0.8s,baz=43,slow=4.8						
MORH	Mrgy, Hungar	87.80	323	⇓eP	P	10 53 15.6	-1.0
TANN	Tannenbergstha	87.91	329	eP	P	10 53 16.4	-0.7
	comp=Z,2.2nm,0.8s,baz=43,slow=4.8						
WERD	Werda	87.95	329	eP	P	10 53 16.7	-0.6
	comp=Z,4.9nm,0.9s,baz=43,slow=4.8						
GUNZ	Gunzen	88.00	329	eP	P	10 53 17.3	-0.3
	baz=43,slow=4.8						
WERN	Wernitzgruen	88.03	329	eP	P	10 53 17.3	-0.4
	comp=Z,6.8nm,0.8s,baz=43,slow=4.8						
NKC	Novy Kostel	88.04	329	eP	P	10 53 17.0	-0.7
NKC	Novy Kostel	88.04	329	eP	P	10 53 17.0	-0.7
CONA	Conrad Observa	88.06	326	i P	P	10 53 17.8	-0.1
	comp=Z,9.6nm,0.7s,SNR=5.8						
SMCO	Snowmass	88.06	45	P	P	10 53 18.8	+0.2
MOX	Moxa	88.11	330	eP	P	10 53 17.4	-0.6
	comp=Z,3.0nm,0.8s,baz=43,slow=4.8						
GTTG	Gottingen	88.17	331	eP	P	10 53 17.8	-0.5
	baz=43,slow=4.8						
MVCO	Mesa Verde	88.25	48	P	P	10 53 20.2	+1.0
	baz=306						
214A	Organ Pipe Nat	88.31	54	P	P	10 53 21.1	+1.7
	baz=304,SNR=5.1						
214A	Organ Pipe Nat	88.31	54	P	P	10 53 20.4	+1.1
214A				IAmb	IAmb	10 53 22.1	
	comp=Z,16nm,1.2s						
KHC	Kasperske Hory	88.31	328	⇑eP	P	10 53 18.7	-0.3
KHC				pmax	pmax		
	comp=Z,83nm,1.7s						
KHC	Kasperske Hory	88.31	328	eP	P	10 53 18.1	-0.9
KHC	Kasperske Hory	88.31	328	P	P	10 53 18.1	-0.9
KHC				IAmb	IAmb	10 53 19.6	
	comp=Z,15nm,0.8s						
AGMN	Agassiz Nation	88.32	33	P	P	10 53 19.4	+0.4
	baz=314						
GEC2	GERESS Array S	88.45	328	P	P	10 53 18.7	-1.1
GEC2				IAmb	IAmb	10 53 19.4	
	comp=Z,11nm,0.8s						
GEC2	GERESS Array S	88.45	328	eP	P	10 53 18.9	-0.9
	comp=Z,7.7nm,0.8s,baz=43,slow=4.8						
GERES	GERESS Array B	88.45	328	P	P	10 53 18.9	-0.9
	comp=Z,7.9nm,0.7s,baz=43,slow=4.8,SNR=47						
GERES				PP	PP	10 56 54.6	+0.5
	comp=Z,0.6nm,0.7s,baz=48,slow=6.0,SNR=4.3						
GERES				PKKPbc	PKKPbc	11 10 57.2	-2.8
	comp=Z,0.7nm,0.8s,baz=264,slow=1.0,SNR=3.5						
GERES	GERESS Array B	88.45	328	P	P	10 53 18.4	-1.4
GERES	GERESS Array B	88.45	328	P	P	10 53 18.4	-1.4
ROTZ	Rotzenmuhle	88.48	329	eP	P	10 53 19.5	-0.3
	comp=Z,6.4nm,0.9s,baz=43,slow=4.8						
IBBN	Ibbenburen	88.50	333	eP	P	10 53 19.3	-0.5
	comp=Z,16nm,0.7s,baz=43,slow=4.8						
ISCO	Idaho Springs	88.52	44	P	P	10 53 22.3	+1.7
	baz=308						
WET	Wettzell	88.62	328	eP	P	10 53 20.1	-0.4
	comp=Z,3.1nm,0.8s,baz=43,slow=4.8						
ARSA	Arzberg	88.69	326	eP	P	10 53 20.3	-0.5
	comp=Z,16nm,1.3s						
UBBA	Unterbreizbach	88.69	331	eP	P	10 53 19.9	-0.6
	baz=43,slow=4.8						
MOA	Molln	88.89	327	eP	P	10 53 21.5	-0.3
	comp=Z,11nm,1.0s,SNR=5.0						
GRA1	Grafenberg Arr	88.98	329	P	P	10 53 21.5	-0.6
GRA1				IAmb	IAmb	10 53 22.5	
	comp=Z,20nm,0.9s						
GRF	Grafenberg Arr	88.98	329	P	P	10 53 21.5	-0.6
GRF				pmax	pmax		
	comp=Z,20nm,0.9s						
GRF	Grafenberg Arr	88.98	329	eP	P	10 53 22.0	-0.1
	comp=Z,11nm,0.8s,baz=43,slow=4.8						
GRFO	Grafenberg	88.98	329	P	P	10 53 21.5	-0.6
GRFO				pmax	pmax		
	comp=Z,23nm,1.0s						
GRFO	Grafenberg	88.98	329	P	P	10 53 21.5	-0.6
GRFO				IAmb	IAmb	10 53 22.5	
	comp=Z,23nm,1.0s						
S22A	4UR Ranch, Cre	89.00	47	P	P	10 53 24.6	+1.8
	baz=307,SNR=5.2						
PERS	Pernice	89.31	325	i P	P	10 53 23.1	-0.7
Q24A	Divide	89.31	45	P	P	10 53 26.0	+1.8
	baz=308						
SOKA	Soboth	89.33	325	i P	P	10 53 23.0	-0.8
	comp=Z,11nm,0.7s,SNR=9.9						
BUG	Bochum--Univer	89.36	332	eP	P	10 53 23.3	-0.5
	comp=Z,9.9nm,0.8s,baz=43,slow=4.8						
GOLS	Golise	89.49	325	i P	P	10 53 23.8	-0.8
TUC	Tucson	89.53	53	P	P	10 53 25.8	+0.7
TUC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TUC	Tucson	89.53	53	P	P	10 53 26.7	+1.6
	baz=305						
TUC	Tucson	89.53	53	P	P	10 53 25.8	+0.7
LIT	Litokhoron	89.58	317	P	P	10 53 23.3	-1.8
LIT				pmax	pmax		
	comp=Z,29nm,0.8s						
LIT	Litokhoron	89.58	317	P	P	10 53 23.3	-1.8
OBKA	Obir	89.68	326	i P	P	10 53 24.8	-0.7
	comp=Z,3.3nm,0.6s						
TNS	Taunus Mts	89.80	331	eP	P	10 53 25.5	-0.4
	comp=Z,4.1nm,0.6s,baz=43,slow=4.8						
F33A	5 Mile Ranch,	89.81	35	P	P	10 53 26.1	+0.1
F33A				IAmb	IAmb	10 53 28.0	
	comp=Z,14nm,1.0s						
SDCO	Great Sand Dun	89.84	46	P	P	10 53 28.2	+1.5
	baz=308,SNR=11						
SDCO	Great Sand Dun	89.84	46	P	P	10 53 27.9	+1.2
SDCO				IAmb	IAmb	10 53 29.4	
	comp=Z,11nm,0.9s						
NRS	Narsarsuaq	89.87	2	P	P	10 53 26.2	+0.3
NRS				pmax	pmax		
	comp=Z,75nm,0.8s						
NRS	Narsarsuaq	89.87	2	P	P	10 53 26.2	+0.3
KBA	Koelnbreinsper	89.87	326	eP	P	10 53 25.7	-0.8
	comp=Z,8.3nm,0.9s						
EKA	Eskdalemuir Ar	89.91	340	P	P	10 53 25.5	-0.8
	comp=Z,3.0nm,0.4s,baz=53,slow=3.0,SNR=39						
EKA				PP	PP	10 57 05.1	-0.1
	comp=Z,1.5nm,0.6s,baz=36,slow=7.2,SNR=4.7						
LJU	Ljubljana	90.02	325	i P	P	10 53 26.0	-0.9
MYKA	Terra Mystica	90.05	326	i P	P	10 53 25.8	-1.4
	comp=Z,6.2nm,0.6s						
FUR	Furstenfeldbru	90.07	328	eP	P	10 53 27.1	-0.1
	comp=Z,31nm,0.7s,baz=43,slow=4.8						
AHRW	Bad Neuenahr-A	90.13	332	eP	P	10 53 27.4	0.0
	baz=43,slow=4.8						
AGG	Agios Georgios	90.35	316	P	P	10 53 26.2	-2.5
AGG				pmax	pmax		
	comp=Z,13nm,0.9s						
AGG	Agios Georgios	90.35	316	P	P	10 53 26.2	-2.5
AGG				IAmb	IAmb	10 53 26.9	
	comp=Z,12nm,0.9s						
ZOU	Zoufplan	90.42	326	P	P	10 53 27.1	-2.0
ZOU				IAmb	IAmb	10 53 29.0	
	comp=Z,11nm,0.8s						
ABTA	Abfaltersbach	90.51	327	eP	P	10 53 27.9	-1.4
	comp=Z,14nm,0.6s,SNR=7.6						
WATA	Walderalm	90.53	328	i P	P	10 53 28.3	-1.2
	comp=Z,4.2nm,0.5s						
STU	Stuttgart	90.56	330	P	P	10 53 28.7	-0.7
STU				pmax	pmax		
	comp=Z,30nm,1.0s						
STU	Stuttgart	90.56	330	P	P	10 53 28.7	-0.7
STU	Stuttgart	90.56	330	eP	P	10 53 29.1	-0.3
	comp=Z,13nm,0.7s,baz=43,slow=4.8						
MOTA	Moosalm	90.74	328	eP	P	10 53 29.2	-1.3
	comp=Z,6.4nm,0.6s						
SQTA	Sankt Quirin	90.79	328	eP	P	10 53 29.6	-1.1
	comp=Z,6.8nm,0.6s						
RETA	Reutte	90.80	328	i P	P	10 53 30.0	-0.7
	comp=Z,22nm,1.3s						
T25A	Trinidad	90.90	46	P	P	10 53 32.9	+1.4
	baz=308						
ANMO	Albuquerque	90.92	49c	iP	P	10 53 33.1	+1.4
ANMO				pmax	pmax		
	comp=Z,26nm,1.3s						
ANMO	Albuquerque	90.92	49	P	P	10 53 33.1	+1.4
	baz=307						
ANMO	Albuquerque	90.92	49	P	P	10 53 33.4	+1.8
ANMO				IAmb	IAmb	10 53 34.8	
	comp=Z,17nm,0.9s						
UBR	Ueberruh	90.96	328	eP	P	10 53 30.8	-0.6
	comp=Z,7.5nm,0.7s,baz=43,slow=4.8						
LENM	Lemitar	91.05	49	P	P	10 53 33.8	+1.6
ECSD	EROS Data Cent	91.09	37	P	P	10 53 32.6	+0.6
	baz=314						
319A	Douglas	91.11	53	P	P	10 53 34.2	+1.7
319A				IAmb	IAmb	10 53 35.3	
	comp=Z,18nm,0.8s						
FETA	Feichten	91.16	328	eP	P	10 53 31.8	-0.6
	comp=Z,19nm,1.1s,SNR=5.3						
WLF	Walferdange	91.18	332	eP	P	10 53 32.1	-0.2
	comp=Z,7.8nm,0.9s,baz=43,slow=4.8						
BFO	Black Forest	91.27	330	P	P	10 53 31.1	-1.6
BFO				pmax	pmax		
	comp=Z,45nm,1.2s						
BFO	Black Forest	91.27	330	P	P	10 53 31.1	-1.6
BFO	Black Forest	91.27	330	eP	P	10 53 32.3	-0.4
	comp=Z,15nm,0.7s,baz=43,slow=4.8						
BNM	Barren Site	91.29	49	P	P	10 53 34.0	+0.6
DAVA	Damuels	91.35	328	eP	P	10 53 32.6	-0.7
	comp=Z,25nm,0.9s,SNR=5.7						
CTI	Castel Tesino	91.43	327	P	P	10 53 32.2	-1.4
CTI				pmax	pmax		
	comp=Z,21nm,1.3s						
CTI	Castel Tesino	91.43	327	P	P	10 53 32.2	-1.4
CTI				IAmb	IAmb	10 53 32.8	
	comp=Z,21nm,1.3s						

121A	Cookes Peak, D	91.47	51	P	P	10 53 36.3	+2.1
	baz=306,SNR=13						
121A	Cookes Peak, D	91.47	51	P	P	10 53 35.4	+1.1
DAVOX	Davos/Dischmat	91.73	328	P	P	10 53 34.5	-0.6
	comp=Z,14nm,0.6s,baz=18,slow=3.0,SNR=31						
MNTX	Cornudas Mount	93.60	51	P	P	10 53 45.2	+1.4
	baz=308						
MNTX	Cornudas Mount	93.60	51	P	P	10 53 45.2	+1.4
MNTX				IAmb	IAmb	10 53 46.3	
	comp=Z,12nm,1.2s						
AMTX	Amarillo	94.03	46	P	P	10 53 47.2	+1.4
	baz=310						
AMTX	Amarillo	94.03	46	P	P	10 53 45.9	+0.1
AMTX				IAmb	IAmb	10 53 47.6	
	comp=Z,14nm,1.1s						
KSU1	Kansas State U	94.28	40	P	P	10 53 47.4	+0.7
	baz=313						
TX31	Lajitas Ar. Si	96.22	52	P	P	10 53 57.2	+1.4
TX32	Lajitas Array	96.22	52	P	P	10 53 56.5	+0.7
TX32				IAmb	IAmb	10 53 58.8	
	comp=Z,9.6nm,1.1s						
TXAR	Lajitas Array	96.22	52	P	P	10 53 57.3	+1.5
	comp=Z,8.8nm,1.0s,baz=301,slow=3.0,SNR=42						
TXAR				pP	pP	10 55 30.8	-2.0
	comp=Z,1.9nm,0.8s,baz=298,slow=2.7,SNR=7.7						
TXAR	Lajitas Array	96.22	52	P	P	10 53 56.2	+0.3
ESDC	Sonseca Array	103.48	332	PP	PKiKP	10 58 46.8	+2.6
	comp=Z,1.2nm,0.8s,baz=32,slow=7.2,SNR=4.4						
QSPA	South Pole Qui	118.98	180		PKPdf	10 59 11.6	-0.9
TOA0	Torodi Ar. Sit	121.39	310		PKPdf	10 59 18.0	-0.6
TORD	Torodi Ar. Bea	121.39	310	PKP	PKPdf	10 59 18.0	-0.6
	comp=Z,4.5nm,0.6s,baz=48,slow=1.3,SNR=19						
TORD				PP	PP	11 00 51.5	-4.3
	comp=Z,1.2nm,0.6s,baz=33,slow=6.4,SNR=3.8						
TORD				PKKPbc	PKKPbc	11 09 22.1	+1.9
	comp=Z,2.5nm,0.7s,baz=242,slow=3.8,SNR=6.5						
LBTB	Lobatse	121.68	257	PKIKP	PKPdf	10 59 18.3	-0.7
LBTB	Lobatse	121.68	257		PKPdf	10 59 18.3	-0.7
BOSA	Boshof	123.13	253	PKP	PKPdf	10 59 21.6	0.0
	comp=Z,1.8nm,0.3s,baz=336,slow=0.2,SNR=10						
KOWA	Kowa	124.04	316	PKPdf	PKPdf	10 59 23.8	+0.1
TSUM	Tsumeb	126.52	267	PKPdf	PKPdf	10 59 28.6	+0.2
MOTC	Monteria, Cord	129.28	47	*e*P	PKPdf	10 59 31.8	-2.0
UREC	San Jos de Ur	130.13	48	*e*P	PKPdf	10 59 34.1	-1.2
SMLC	San Martn de	130.27	46	*e*P	PKPdf	10 59 34.5	-1.1
DBIC	Dimbokro	130.50	310	PKP	PKPdf	10 59 35.6	-0.4
	comp=Z,7.3nm,0.7s,baz=41,slow=2.1,SNR=9.7						
DBIC				SKPbc	SKPbc	11 02 18.8	-0.3
	comp=Z,3.2nm,0.4s,baz=19,slow=3.6,SNR=8.2						
TIC	Toumodi	130.62	311	*e*PKIKP	PKPdf	10 59 36.4	+0.1
KIC	Kosan Boka	130.65	310	*e*PKIKP	PKPdf	10 59 36.5	+0.2
	comp=Z,7.1nm,0.6s						
ZARC	Zaragoza, Cauc	130.77	48	*e*P	PKPdf	10 59 36.5	0.0
LIC	Lamto	130.94	310	*e*PKIKP	PKPdf	10 59 36.4	-0.5
	comp=Z,9.7nm,0.4s						
BELA	Belgrano 2	131.18	182		PKPdf	10 59 34.7	-0.8
PLMC	San Jos del P	131.73	51	*e*P	PKPdf	10 59 38.2	-0.3
PTBC	PUERTO BERRIO,	131.74	48	*e*P	PKPdf	10 59 37.4	-1.0
BRRC	Barranca, Sant	131.79	47	*e*P	PKPdf	10 59 37.1	-1.4
GUY2C	Guyana, Caldas	132.12	50	*e*P	PKPdf	10 59 39.0	-0.7
PAMC	Pamplona, Colo	132.25	46	*e*P	PKPdf	10 59 38.4	-1.6
SDV	Santo Domingo	132.29	42		PKPdf	10 59 39.3	-0.3
SDV	Santo Domingo	132.29	42	*e*P	PKPdf	10 59 39.2	-0.5
SDV	Santo Domingo	132.29	42	*e*P	PKiKP	10 59 42.9	+2.1
YOTC	Yotoco, Valle	132.35	52	*e*P	PKPdf	10 59 39.5	-0.2
RREF	El Recreo	132.37	50	*e*P	PKPdf	10 59 40.9	+0.6
BARC	Barichara	132.52	47	*e*P	PKPdf	10 59 37.6	-2.5
SNAA	Sanae	132.80	195	PKiKP	PKPdf	10 59 38.2	-0.6
SNAA	Sanae	132.80	195	SKPbc	SKPbc	11 02 25.1	-0.4
SNAA	Sanae	132.80	195⇑	*i*PKIKP	PKiKP	10 59 39.5	-0.4
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
RUSC	La Rusia	133.12	47	*e*P	PKPdf	10 59 40.3	-1.3
ORTC	Ortega, Tolima	133.16	51	*e*P	PKPdf	10 59 39.1	-2.1
PCON	Cinco Dias	133.50	54	*e*P	PKPdf	10 59 41.3	-1.1
CHIC	Chingaza	133.65	49	*e*P	PKPdf	10 59 42.0	-0.5
GARC	Garzon, Huila	134.23	53	*e*P	PKPdf	10 59 43.1	-0.3
VNA2	Neumayer--Watz	134.37	195	PKiKP	PKPdf	10 59 42.0	+0.4
	baz=103,slow=1.4						
VNA2	Neumayer--Watz	134.37	195	SKPbc	SKPbc	11 02 30.2	-0.4
VNA3	Neumayer Olymp	134.60	193	PKiKP	PKPdf	10 59 42.1	+0.1
VNA3	Neumayer Olymp	134.60	193	SKPbc	SKPbc	11 02 30.6	-0.7
PMSA	Palmer Station	141.46	164	*e*P	PKiKP	10 59 59.6	+1.9
CZSB	Cruzeiro do Su	142.96	61	*e*P	PKiKP	11 00 03.9	+1.6
GO07	Milladeo Hill,	150.08	127		PKPbc	11 00 15.5	+0.1
SAML	Samuel	150.71	51	PKIKP	PKPdf	11 00 12.4	+0.6
SAML	Samuel	150.71	51		PKPdf	11 00 12.3	+0.6
SAML				PKPbc	PKPbc	11 00 17.7	-0.1
LL01	San Ignacio de	151.18	126		PKPbc	11 00 17.9	0.0
PSGCX	Pisagua	151.47	77		PKPbc	11 00 19.4	-0.1
MNMC	Minye Minye	151.72	76		PKPdf	11 00 14.4	+0.9
MNMC				PKPbc	PKiKP	11 00 20.9	+0.4
MNMC				PKPab	PKPab	11 00 32.8	+1.8
TA01	Diego Aracena	151.82	79		PKiKP	11 00 20.4	0.0
PATCX	Punta Patache	151.95	79		PKiKP	11 00 21.2	+0.5
LC01	Cunco	152.41	119	PKPdf	PKPdf	11 00 14.7	+1.0
LC01				PKPab	PKPab	11 00 34.0	+0.9
PB04	IPOC Station P	152.51	82		PKiKP	11 00 21.9	-0.1
PB07	IPOC Station P	152.52	81		PKiKP	11 00 22.2	+0.2
PB08	IPOC Station P	152.53	77		PKPdf	11 00 15.7	+0.8
PLCA	Paso Flores	152.98	123	PKPbc	PKiKP	11 00 22.9	+0.6
	comp=Z,4.8nm,0.7s,baz=238,slow=3.6,SNR=20						
PLCA				PKPab	PKPab	11 00 36.9	+1.3
	comp=Z,10nm,0.8s,baz=242,slow=4.8,SNR=18						
PLCA	Paso Flores	152.98	123	PKIKP	PKiKP	11 00 22.3	0.0
PLCA	Paso Flores	152.98	123		PKiKP	11 00 22.3	0.0
PLCA					PKPab	11 00 36.8	+1.3
PB14	IPOC Station P	153.01	87		PKPbc	11 00 22.7	-0.3
PB09	IPOC Station P	153.10	81		PKiKP	11 00 23.4	+0.2
BI02	San Fabin de	153.23	114		PKiKP	11 00 23.5	+0.6
PB15	IPOC Station P	153.40	84	PKPdf	PKPdf	11 00 14.4	-1.4
PB15					PKiKP	11 00 24.5	+0.7
LCO	Las Campanas	153.67	97	PKIKP	PKPbc	11 00 24.2	-0.1
LCO	Las Campanas	153.67	97		PKPbc	11 00 24.2	-0.1
ROC1	El Roble	153.67	106		PKiKP	11 00 24.7	+0.5
LVC	Limon Verde	153.68	82	PKIKP	PKiKP	11 00 25.4	+0.8
LVC	Limon Verde	153.68	82		PKiKP	11 00 25.4	+0.8
LVC	Limon Verde	153.68	82	*e*P	PKPdf	11 00 20.3	+3.9
BO02	Sierra Bellavi	153.81	110		PKPbc	11 00 24.0	-0.2
GO03	Copiap	153.85	94		PKiKP	11 00 24.7	+0.2
GO02	Mina Guanaco	153.87	88		PKPdf	11 00 17.2	+0.7
GO02					PKiKP	11 00 25.2	+0.3
NPGB	Novo Progresso	153.89	35	*e*P	PKPdf	11 00 19.7	+3.2
AC05	El Transito	154.02	96		PKiKP	11 00 25.2	+0.3
NBMO	Morrinhos-CE	154.24	359	*e*P	PKPdf	11 00 18.6	+1.6
BDFB	Brasilia	164.83	29	PKP	PKPdf	11 00 29.1	+0.2
	comp=Z,3.5nm,0.8s,baz=194,slow=6.0,SNR=5.0						
BDFB				PKPab	PKPab	11 01 27.9	+0.3
	comp=Z,2.4nm,0.8s,baz=215,slow=7.5,SNR=3.5						
CPUP	Villa Florida	164.86	83	PKP	PKPdf	11 00 28.6	+0.1
	comp=Z,3.0nm,1.1s,baz=70,slow=1.9,SNR=6.9						
CPUP				PKPab	PKPab	11 01 28.5	+0.9
	comp=Z,6.9nm,0.9s,baz=296,slow=4.7,SNR=15						
CPUP	Villa Florida	164.86	83		PKPdf	11 00 28.4	-0.1
CPUP				PKPab	PKPab	11 01 27.8	+0.2

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*KRSC **25** 10:59:34.3±0.6, 53°.77N×160°.00E, h107^{km}±6^{km}, ML4.2*

*IDC **25** 10:59:37.1±1.2, 54°.11N×159°.36E, h111^{km}±17^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.3/37, mbtmp3.9/11, Error ellipse: s-maj=30.9km s-min=16.9km az=158.0*

ISC 25 10:59:35.4±0.7, **53°.78N**±0°.04×**159°.91E**±0°.05, **h109**^{km}±6^{km}, **n51, σ1^{s}10**/65, **mb3.7**/10, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	Karymskiy	0.38	314	*e*P	Pn	10 59 51.0	-0.5
KII				*e*S	Sn	11 00 03.1	-0.6
SPN	Mys Shipunski	0.68	174	*e*P	Pn	10 59 53.7	+0.2
SPN				*e*S	Sn	11 00 07.0	-0.1
NLC	Nalytchevo	0.69	209	*e*P	Pn	10 59 53.8	+0.2
NLC				*e*S	Sn	11 00 07.9	+0.7
SMAR	Somma	0.84	233	*i* P	Pn	10 59 55.3	+0.1
SMAR				*e*S	Sn	11 00 10.3	+0.3
KRER	Koryakskii	0.84	236	*i* P	Pn	10 59 55.6	+0.4
KRER				*e*S	Sn	11 00 10.5	+0.5
KRX	Arik	0.86	241	*i* P	Pn	10 59 55.6	+0.3
KRX				*e*S	Sn	11 00 10.3	+0.1
UGLR	Uglovaya	0.86	229	*i* P	Pn	10 59 55.7	+0.4
UGLR				*e*S	Sn	11 00 10.9	+0.7
AVH	Avacha	0.87	234	*i* P	Pn	10 59 55.8	+0.5
AVH				*e*S	Sn	11 00 11.1	+0.9
KOK	Koryaka	0.90	238	*i* P	Pn	10 59 56.1	+0.5
KOK				*e*S	Sn	11 00 11.4	+0.5
DALK	Dalny	1.02	223	*e*P	Pn	10 59 57.1	+0.4
DALK				*e*S	Sn	11 00 13.0	+0.3
PET	Petropavlovsk	1.06	225	*e*P	Pn	10 59 57.6	+0.4
PET				*e*S	Sn	11 00 13.9	+0.3
GNL	Ganaly	1.17	267	*e*P	Pn	10 59 58.5	0.0
GNL				*e*S	Sn	11 00 15.9	0.0
KZV	Kizimen	1.36	9	*e*P	Pn	11 00 01.0	+0.4
KZV				*e*S	Sn	11 00 20.3	+0.5
KRMR	Karymshinskiy	1.43	229	*e*P	Pn	11 00 02.3	+1.0
TUMD	Tumrok D	1.46	11	*e*P	Pn	11 00 01.9	+0.2
TUMD				*e*S	Sn	11 00 22.1	+0.5
PETK	Petropavlovsk-	1.48	244	P	Pn	11 00 02.2	+0.3
	15nm,0.3s,baz=76,slow=18,SNR=528						
PETK				S	Sn	11 00 22.4	+0.3
	20nm,0.3s,baz=60,slow=32,SNR=9.0						
TUMR	Tumrok	1.52	5	*i* P	Pn	11 00 03.3	+0.8
TUMR				*e*S	Sn	11 00 24.0	+1.0
RUS	Russkaya	1.59	213	*e*P	Pn	11 00 03.5	+0.3
RUS				*e*S	Sn	11 00 24.7	+0.4
GRL	Gorelyy	1.65	223	*i* P	Pn	11 00 05.1	+1.0
MTVR	Mutnovka	1.66	219	*e*P	Pn	11 00 05.1	+0.9
KMNR	Kamenistaya	1.99	5	*i* P	Pn	11 00 09.5	+1.2
BZWR	Bezymyannyi-We	2.22	9	*e*P	Pn	11 00 12.5	+1.2
KDTR	Khodutka, Kamc	2.26	210	*e*P	Pn	11 00 12.2	+0.5
KDTR				*e*S	Sn	11 00 39.0	-0.4
ESO	Esso	2.27	343	*e*P	Pn	11 00 12.1	+0.4
KOZ	Kozyrevsk	2.29	359	*e*P	Pn	11 00 12.6	+0.6
SRDR	Sredinnyy	2.55	358	*e*P	Pn	11 00 15.7	+0.2
KLY	Klyuchi	2.58	9	*e*P	Pn	11 00 17.1	+1.4
BDR	Baidarnaya	2.90	14	*e*P	Pn	11 00 21.8	+1.8
SMKR	Semkarok	2.95	17	*e*P	Pn	11 00 22.0	+1.3
KBTR	Krutoberegovo	2.96	33	*i* P	Pn	11 00 21.4	+0.7
KBG	Krutoberegovo	2.96	32	*e*P	Pn	11 00 23.3	+2.5
SRKR	Sorokina	2.97	14	*e*P	Pn	11 00 22.4	+1.4
PAU	Pauzhetka	2.98	220	*e*P	Pn	11 00 23.0	+1.9
BKI	Bering	3.81	66	*e*P	Pn	11 00 31.8	-0.3
BKI				*e*S	Sn	11 01 12.7	-3.4
PALN	Palana	5.33	0	*e*P	Pn	11 00 53.2	+0.7
ASAJ	Asahikawa	14.89	237	P	P	11 03 01.8	-1.3
	0.3nm,0.3s,baz=77,slow=13,SNR=5.3						
MJAR	Matsushiro Arr	22.89	230	P	P	11 04 30.6	+0.9
	0.8nm,0.5s,baz=20,slow=9.6,SNR=4.6						
ILAR	Eielson Array	28.42	46	P	P	11 05 20.2	+1.0
	0.4nm,0.5s,baz=267,slow=10.0,SNR=8.2						
INK	Inuvik	33.40	38	P	P	11 06 04.2	+1.3
	0.7nm,0.3s,baz=300,slow=8.0,SNR=8.5						
H11N2	WAKE ISLAND Hy	34.41	168	T	T	11 42 39.2	
	baz=351,slow=74,SNR=18						
H11N3	WAKE ISLAND Hy	34.42	168	T	T	11 42 40.0	
	baz=283,slow=74,SNR=18						
H11N1	WAKE ISLAND Hy	34.42	168	T	T	11 43 18.5	
	SNR=22						
H11S1	WAKE ISLAND Hy	35.59	169	T	T	11 43 38.2	
	baz=354,slow=74,SNR=4.1						
H11S3	WAKE ISLAND Hy	35.60	169	T	T	11 43 41.0	
	baz=92,slow=74,SNR=6.6						
YKA	Yellowknife Ar	42.74	43	P	P	11 07 22.6	+1.4
	0.3nm,0.7s,baz=303,slow=6.9,SNR=12						
SPITS	Spitsbergen Ar	46.44	350	P	P	11 07 49.2	-1.3
	13nm,1.1s,baz=53,slow=9.6,SNR=9.5						
MKAR	Makanchi Array	47.76	295	P	P	11 07 58.9	-2.3
	0.7nm,0.6s,baz=57,slow=6.1,SNR=13						
ARCES	ARCESS Array B	52.60	342	P	P	11 08 35.0	-2.3
	1.2nm,0.8s,baz=49,slow=6.1,SNR=1.4						
FINES	FINESS Array B	59.45	336	P	P	11 09 23.9	-2.2
	1.7nm,1.0s,baz=42,slow=8.8,SNR=5.8						
TXAR	Lajitas Array	70.47	67	P	P	11 10 40.4	+2.3
	0.2nm,0.4s,baz=290,slow=5.4,SNR=8.1						
ESDC	Sonseca Array	85.89	348	P	P	11 12 03.5	+0.7
	0.6nm,0.7s,baz=1.7,slow=4.9,SNR=4.8						

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*IDC **25** 11:29:59.4±2.6, 25°.40N×123°.55E, h182^{km}±24^{km}, mb3.2/9, mb1 3.4/11, mb1mx3.1/40, mbtmp3.8/11, Error ellipse: s-maj=22.5km s-min=15.5km az=77.0*

*JMA **25** 11:30:02.3±0.2, 25°.34N×123°.55E, h176^{km}±3^{km}, M3.7*

ISC 25 11:30:00.2±0.7, **25°.45N**±0°.09×**123°.58E**±0°.07, **h189**^{km}±8^{km}, **n26, σ1^{s}27**/41, **mb3.5**/10, **Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JISG	Ishigakijimahi	1.08	142	P	Pn	11 30 29.8	+0.4
JISG				S	Sn	11 30 51.2	-0.8
YOJ	Yonaguni jima	1.11	208	P	Pn	11 30 29.8	+0.1
YOJ				*e*S	Sn	11 30 51.0	-1.4
IRIF	Iriomote-Funau	1.12	173	P	Pn	11 30 29.6	-0.1
IRIF				S	Sn	11 30 51.2	-1.3
JYNG	Yonagunijimaku	1.15	210	P	Pn	11 30 30.0	+0.1
JYNG				*e*S	Sn	11 30 51.9	-1.0
JIJ	Ishigaki jima	1.20	155	P	Pn	11 30 30.5	+0.2
JIJ				S	Sn	11 30 51.7	-1.9
JKRS	Kuro-shima	1.27	162	P	Pn	11 30 31.4	+0.5
JKRS				S	Sn	11 30 53.5	-1.2
JTJ	Tarama	1.30	128	P	Pn	11 30 32.1	+1.0
JTJ				S	Sn	11 30 53.9	-1.1
HATJ	Hateruma jima	1.40	172	P	Pn	11 30 32.5	+0.4
HATJ				*e*S	Sn	11 30 55.2	-1.6
JIRB	Irabujima	1.57	113	P	Pn	11 30 34.4	+0.8
JIRB				S	Sn	11 30 58.5	-0.9
JIKM	Ikemajima	1.60	109	P	Pn	11 30 35.0	+1.2
JIKM				S	Sn	11 30 59.4	-0.5
JMJ2	Miyako jima3	1.73	114	P	Pn	11 30 36.6	+1.4
JMJ2				S	Sn	11 31 02.1	-0.1
JOGS	Gusukube	1.79	112	P	Pn	11 30 37.3	+1.6
JOGS				S	Sn	11 31 03.5	+0.2
JKE	Kume jima 2	3.02	72	P	Pn	11 30 49.8	+0.4
JKE				S	Sn	11 31 28.0	+0.1
JAGN	Aguni-jima	3.48	70	P	Pn	11 30 55.2	+0.1
JAGN				*e*S	Sn	11 31 36.7	-1.4
JOW	Kunigami	4.44	71	P	Pn	11 31 05.8	-1.3
	36nm,0.3s,baz=164,slow=12,SNR=180						
JOW				S	Sn	11 31 54.7	-5.0
	6.7nm,0.3s,baz=252,slow=19,SNR=3.3						
KSRS	Korea Array	12.53	16	P	Pn	11 32 53.7	+1.8
	0.4nm,0.3s,baz=198,slow=12,SNR=11						
ASAJ	Asahikawa	24.20	35	P	P	11 34 59.7	+0.4
	5.1nm,1.1s,baz=178,slow=24,SNR=4.5						
KLR	Kul'dur	24.58	13	P	P	11 35 03.3	+0.6
	0.5nm,0.5s,baz=142,slow=23,SNR=5.0						
MKAR	Makanchi Array	38.99	314	P	P	11 37 08.6	+0.5
	0.2nm,0.3s,baz=99,slow=8.7,SNR=8.3						
ZALV	Zalesovo Beam	40.41	325	P	P	11 37 18.5	-1.2
	1.1nm,0.4s,baz=113,slow=9.1,SNR=7.7						
WRA	Warramunga Arr	46.32	166	P	P	11 38 06.2	-1.1
	0.6nm,0.5s,baz=348,slow=8.8,SNR=4.8						
ASAR	Alice Springs	49.84	168	P	P	11 38 34.5	+0.3
	0.2nm,0.5s,baz=353,slow=6.3,SNR=5.0						
KDAK	Kodiak Island	65.61	36	P	P	11 40 23.6	-0.1
	12nm,1.0s,baz=285,slow=1.9,SNR=8.8						
ILAR	Eielson Array	67.09	28	P	P	11 40 33.1	+0.2
	0.4nm,1.1s,baz=283,slow=7.3,SNR=4.7						
FINES	FINESS Array B	71.45	330	P	P	11 40 59.4	-0.4
	2.9nm,1.0s,baz=57,slow=5.1,SNR=3.6						
YKA	Yellowknife Ar	80.95	24	P	P	11 41 53.6	+0.4
	0.7nm,0.5s,baz=308,slow=4.8,SNR=35						

IDC 25 11:30:44.6±3.5, **14°.30N**×**142°.46E, h0**^{km}**, mb3.8**/4, **mb1 4.0**/4, **mb1mx3.4**/40, **mbtmp3.8**/4, **MS3.2**/2, **Ms1 3.3**/2, **ms1mx2.7**/39, **Error ellipse: s-maj=104.3km s-min=27.4km az=72.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	Nakatsue	21.50	333	LR	LR	11 42 36.5	
	comp=Z,121nm,18.0s,baz=274,slow=33						
WRA	Warramunga Arr	34.95	193	P	P	11 37 38.8	+0.2
	3.0nm,0.9s,baz=17,slow=9.3,SNR=10.0						
ASAR	Alice Springs	38.65	193	P	P	11 38 09.7	-0.3
	0.4nm,0.7s,baz=19,slow=10.0,SNR=7.4						
CMAR	Chiang Mai Arr	41.88	282	P	P	11 38 36.4	-0.6
	0.4nm,0.3s,baz=64,slow=6.1,SNR=4.3						
CMAR				LR	LR	11 53 30.1	
	comp=Z,18nm,20.9s,baz=165,slow=33						
SONM	Songino Array	44.82	326	P	P	11 39 00.7	+0.2
	0.6nm,0.4s,baz=116,slow=6.6,SNR=2.1						

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*IDC **25** 11:32:31.7±0.8, 6°.73N×72°.88W, h173^{km}±10^{km}, mb3.1/3, mb1 3.5/5, mb1mx3.1/33, mbtmp3.8/5, Error ellipse: s-maj=38.4km s-min=8.1km az=131.0*

*RSNC **25** 11:32:32.8±1.2, 6°.79N×73°.12W, h152^{km}±4^{km}, ML3.4, Mw3.7, Fault plane solution: NP1:ϕ_s5.00000°, δ50.00000°, λ-82.00000°.*

ISC 25 11:32:31.0±0.8, **6°.82N**±0°.03×**73°.10W**±0°.04, **h163**^{km}±5^{km}, **n35, σ1^{s}50**/65, **mb3.7**/3, **2C-8D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.24	200⇓	*i*P	Pn	11 32 53.1	-0.2
BARC				*e*S	Sn	11 33 08.8	-1.6
BARC				*i*		11 33 10.8	
	comp=Z,329nm,0.3s						
PAMC	Pamplona, Colo	0.65	38⇓	*i*P	Pn	11 32 55.9	+0.7
PAMC				*e*S	Sn	11 33 13.3	-0.5
PAMC				*i*		11 33 15.4	
	comp=Z,265nm,0.5s						
BRRC	Barranca, Sant	0.67	295⇓	*i*P	Pn	11 32 55.0	+0.3
BRRC				*e*S	Sn	11 33 12.5	-0.5
BRRC				*i*		11 33 16.9	
	comp=Z,292nm,0.2s						
RUSC	La Rusia	0.92	179⇓	*i*P	Pn	11 32 57.0	-0.1
RUSC				*e*S	Sn	11 33 15.9	-1.1
TAMC	Tame, Arauca	1.36	106⇓	*i*P	Pn	11 33 01.3	+1.1
TAMC				*i*		11 33 22.1	
	comp=Z,242nm,0.3s						
TAMC				*e*S	Sn	11 33 23.2	+0.5
PTBC	PUERTO BERRIO,	1.38	258	*e*P	Pn	11 32 59.8	-0.6
PTBC				*e*S	Sn	11 33 21.4	-1.5
PTBC				*i*		11 33 28.6	
	comp=Z,455nm,0.4s						
OCAC	Ocana	1.43	351	*e*P	Pn	11 33 01.5	+0.5
OCAC				*e*S	Sn	11 33 24.5	+0.3
OCAC				*i*		11 33 28.2	
	comp=Z,317nm,0.4s						
SPBC	San Pablo de B	1.51	220⇓	*e*P	Pn	11 33 01.9	+0.1
SPBC				*e*S	Sn	11 33 24.9	-0.6
SPBC				*i*		11 33 31.3	
	comp=Z,616nm,0.3s						
ZARC	Zaragoza, Cauc	1.87	291	*e*P	Pn	11 33 05.6	+0.1
ZARC				*e*S	Sn	11 33 33.3	+1.3
ZARC				*i*		11 33 37.6	
	comp=Z,354nm,0.2s						
NORC	Norcasia	2.15	235	*e*P	Pn	11 33 08.8	0.0
NORC				*e*S	Sn	11 33 37.1	-0.9
NORC				*i*		11 33 40.8	
	comp=Z,286nm,0.2s						
SMLC	San Martn de	2.19	334	*e*P	Pn	11 33 09.6	+0.4
SMLC				*e*S	Sn	11 33 39.0	+0.3
SMLC				*i*		11 33 43.0	
	comp=Z,254nm,0.4s						
CHIC	Chingaza	2.26	196⇓	*e*P	Pn	11 33 10.8	+0.3
CHIC				*e*S	Sn	11 33 40.0	-0.9
CHIC				*i*		11 33 48.3	
	comp=Z,90nm,0.3s						
ROSC	El Rosal	2.31	212	P	Pn	11 33 12.7	+1.7
	comp=Z,59nm,0.3s,baz=293,slow=0.4,SNR=59						
ROSC				S	Sn	11 33 45.0	+3.2
	comp=Z,49nm,0.3s,baz=106,slow=20,SNR=6.5						
ROSC	El Rosal	2.31	212	*e*P	Pn	11 33 12.6	+1.7
ROSC				*e*S	Sn	11 33 42.6	+0.8
ROSC				*i*		11 33 50.9	
	comp=Z,283nm,0.4s						
HELC	Santa Helena	2.49	256	*e*P	Pn	11 33 13.6	+0.6
HELC				*e*S	Sn	11 33 45.3	-0.3
HELC				*i*		11 33 52.9	
	comp=Z,111nm,0.3s						
UREC	San Jos de Ur	2.58	291	*e*P	Pn	11 33 12.9	-1.0
UREC				*e*S	Sn	11 33 45.3	-1.7
UREC				*i*		11 33 57.4	
	comp=Z,112nm,0.2s						
GUY2C	Guyana, Caldas	2.75	235	*e*P	Pn	11 33 17.3	+0.9
GUY2C				*e*S	Sn	11 33 51.7	+0.3
GUY2C				*i*		11 34 00.4	
	comp=Z,166nm,0.3s						
PTGC	Puerto Gaitan,	2.77	160⇓	*i*P	Pn	11 33 16.0	-0.2
PTGC				*e*S	Sn	11 33 49.2	-2.1
PTGC				*i*		11 33 54.4	
	comp=Z,95nm,0.3s						
RREF	El Recreo	2.94	230	*e*P	Pn	11 33 20.0	+1.3
RREF				*e*S	Sn	11 33 58.6	+2.9
RREF				*i*		11 34 05.3	
	comp=Z,157nm,0.3s						
CBOC	Ciudad Bolivar	3.04	252	*e*P	Pn	11 33 20.7	+1.0
CBOC				*e*S	Sn	11 33 57.1	-0.3
CBOC				*i*		11 34 08.6	
	comp=Z,47nm,0.6s						
DBBC	Dabeiba	3.09	274⇑	*e*P	Pn	11 33 20.6	+0.4
DBBC				*e*S	Sn	11 33 54.7	-3.6
DBBC				*i*		11 34 10.1	
	comp=Z,287nm,0.6s						
SDV	Santo Domingo	3.19	50	P	Pn	11 33 21.9	+0.4
	comp=Z,28nm,0.3s,baz=221,slow=3.9,SNR=120						
SDV				S	Sn	11 34 00.1	-0.6
	comp=Z,20nm,0.3s,baz=35,slow=20,SNR=27						
SDV	Santo Domingo	3.19	50⇑	*i*P	Pn	11 33 22.3	+0.8
SDV				*e*S	Sn	11 33 59.6	-1.1
SDV				*i*		11 34 02.0	
	comp=Z,43nm,0.5s						
MOTC	Monteria, Cord	3.20	308	*e*P	Pn	11 33 20.2	-1.2
MOTC				*e*S	Sn	11 33 59.1	-1.5
MOTC				*i*		11 34 02.8	
	comp=Z,46nm,0.3s						
ANIL	Santa Ana	3.25	225	*e*P	Pn	11 33 24.6	+2.2
ANIL				*e*S	Sn	11 34 01.9	-0.4
ANIL				*i*		11 34 11.7	
	comp=E,85nm,0.3s						
ORTC	Ortega, Tolima	3.59	217	*e*P	Pn	11 33 27.1	+0.6
ORTC				*e*S	Sn	11 34 10.4	+0.7
ORTC				*i*		11 34 15.8	
	comp=Z,71nm,0.5s						
PLMC	San Jos del P	3.69	239	*e*P	Pn	11 33 28.6	+0.8
PLMC				*e*S	Sn	11 34 10.1	-1.9
PLMC				*i*		11 34 23.6	
	comp=Z,49nm,0.5s						
SMRC	Santa Marta, M	4.46	346	*e*P	Pn	11 33 37.4	-0.2
SMRC				*e*S	Sn	11 34 25.8	-3.9
SMRC				*i*		11 34 29.2	
	comp=Z,38nm,0.3s						
MACC	Macarena, Meta	4.70	189	*e*P	Pn	11 33 39.9	-1.0
MACC				*e*S	Sn	11 34 31.2	-4.2
GARC	Garzon, Huila	5.18	208	*e*P	Pn	11 33 46.9	-0.5
GARC				*e*S	Sn	11 34 42.8	-4.2
TXAR	Lajitas Array	36.48	312	P	P	11 39 22.1	+1.4
	comp=Z,0.1nm,0.5s,baz=123,slow=11,SNR=2.3						
ULM	Lac du Bonnet	47.29	340	P	P	11 40 48.3	+0.3
	comp=Z,1.3nm,0.5s,baz=149,slow=5.9,SNR=2.2						
YKA	Yellowknife Ar	63.27	340	P	P	11 42 43.0	+1.1
	comp=Z,0.6nm,0.6s,baz=129,slow=7.3,SNR=29						
ASAR	Alice Springs	149.12	234	PKPbc	PKiKP	11 52 00.5	-1.6
	comp=Z,0.2nm,0.5s,baz=116,slow=3.1,SNR=4.9						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	11 52 03.2	-0.8
	comp=Z,0.2nm,0.4s,baz=110,slow=2.2,SNR=5.1						

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*IDC **25** 11:47:58.0±4.2, 6°.37S×154°.94E, h111^{km}±37^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.6/27, mbtmp4.0/11, Error ellipse: s-maj=27.6km s-min=20.2km az=95.0*

ISC 25 11:47:56.7±0.8, **6°.3S**±0°.1×**155°.0E**±0°.2, **h100**^{km}**, n15, σ0^{s}61**/14, **mb3.8**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.35	248	P	Pn	11 49 55.7	+0.6
	2.1nm,0.3s,baz=44,slow=9.3,SNR=9.2						
DZM	Mont Dzumac	19.15	146	P	P	11 52 12.9	+0.6
	0.6nm,0.3s,baz=319,slow=17,SNR=2.9						
WRA	Warramunga Arr	24.21	234	P	P	11 53 04.0	-0.2
	2.4nm,0.5s,baz=58,slow=9.6,SNR=34						
WRA				PcP	PcP	11 56 42.5	0.0
	0.2nm,0.3s,baz=58,slow=2.8,SNR=5.8						
ASAR	Alice Springs	26.62	227	P	P	11 53 25.2	-0.8
	0.8nm,0.7s,baz=58,slow=8.9,SNR=18						
ASAR				PcP	PcP	11 56 48.0	+0.2
	0.2nm,1.0s,baz=68,slow=2.5,SNR=4.6						
H11S3	WAKE ISLAND Hy	27.23	25	T	T	12 21 45.9	
	baz=204,slow=76,SNR=7.7						
H11S2	WAKE ISLAND Hy	27.23	25	T	T	12 21 42.6	
	baz=204,slow=76,SNR=6.2						
H11S1	WAKE ISLAND Hy	27.25	25	T	T	12 21 56.2	
	baz=204,slow=76,SNR=3.7						
STKA	Stephens Creek	28.34	205	P	P	11 53 41.0	-0.2
	0.8nm,0.5s,baz=336,slow=20,SNR=3.4						
PETK	Petropavlovsk-	59.26	2	P	P	11 57 48.1	+0.5
	1.7nm,0.8s,baz=153,slow=7.4,SNR=6.3						

CMAR	Chiang Mai Arr	60.52	295	P	P	11 57 56.7	-0.1
	1.9nm,0.7s,baz=124,slow=5.3,SNR=13						
SONM	Songino Array	68.80	327	P	P	11 58 50.9	+0.6
	0.7nm,0.5s,baz=128,slow=4.7,SNR=2.5						
MKAR	Makanchi Array	82.92	319	P	P	12 00 10.6	+0.1
	1.1nm,0.7s,baz=100,slow=5.4,SNR=14						
ZALV	Zalesovo Beam	83.65	326	P	P	12 00 12.9	-1.1
	0.4nm,0.4s,baz=93,slow=8.7,SNR=2.9						
YKA	Yellowknife Ar	95.75	28	P	P	12 01 11.1	-0.1
	0.2nm,0.7s,baz=261,slow=3.6,SNR=6.2						
TORD	Torodi Ar. Bea	152.86	286	PKPbc	PKPbc	12 07 42.3	-0.9
	0.4nm,0.4s,baz=48,slow=2.1,SNR=2.1						

IDC 25 12:00:07.4±1.6**, 2°.52S×139°.92E, h0^{km}, mb3.0**/2**, mb1 3.4**/3**, mb1mx3.2**/25**, mbtmp3.2**/3**, ML3.6**/1**, Error ellipse: s-maj=31.0km s-min=11.4km az=173.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.78	90	Pg	Pg	12 00 23.0	+0.6
	70nm,0.3s,baz=240,slow=11,SNR=257						
JAY				Lg	Lg	12 00 32.7	
	86nm,0.3s,baz=130,slow=21,SNR=16						
WRA	Warramunga Arr	18.16	197	P	P	12 04 21.4	-0.2
	0.2nm,0.3s,baz=18,slow=12,SNR=8.7						
ASAR	Alice Springs	21.82	195	P	P	12 05 01.6	+0.2
	0.3nm,0.5s,baz=20,slow=9.9,SNR=15						
MKAR	Makanchi Array	70.38	322	P	P	12 11 22.8	-0.6
	0.1nm,0.4s,baz=121,slow=5.6,SNR=1.8						

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*JMA **25** 12:20:29.9±0.3, 43°.86N×138°.19E, h268^{km}, M2.8*

*IDC **25** 12:20:30.2±1.2, 43°.89N×138°.19E, h263^{km}±13^{km}, mb3.0/6, mb1 3.1/10, mb1mx2.8/52, mbtmp3.5/10, Error ellipse: s-maj=22.6km s-min=14.5km az=71.0*

ISC 25 12:20:29.3±0.8**, 43°.84N**±0°.07×**138°.15E**±0°.06**, h250^{km}, n25, σ1^s.68**/33**, mb3.2**/6**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	Shakotan	1.76	105	P	Pn	12 21 11.8	+2.1
JSH	Shimam	1.83	130	P	Pn	12 21 12.3	+2.0
JOSM	Okushiri--Mats	2.01	151	P	Pn	12 21 14.3	+2.4
JYM2	Yakumo 2	2.37	136	P	Pn	12 21 17.3	+2.0
JYM2				*e*S	S	12 21 54.7	+3.1
JRBN	Rebuntou	2.62	52	P	Pn	12 21 19.0	+1.4
JWK2	Keihoku	3.06	60	P	Pn	12 21 24.7	+2.4
ASAJ	Asahikawa	3.22	84	P	Pn	12 21 25.7	+1.5
	5.1nm,0.3s,baz=276,slow=6.2,SNR=32						
JBT2	Biratori 2	3.26	108	P	Pn	12 21 26.1	+1.5
JBT2				*e*S	S	12 22 09.8	+1.5
JFR	Furan	3.31	100	P	Pn	12 21 26.4	+1.2
JFR				*e*S	S	12 22 10.8	+1.4
JKK2	Kamakawa 2	3.33	88	P	Pn	12 21 26.8	+1.4
JKK2				*e*S	S	12 22 11.6	+1.8
JNBK	Urakawa-nobuka	3.72	113	*e*S	S	12 22 19.0	+1.2
JCH	Churui	4.00	106	P	Pn	12 21 32.5	-0.6
JCH				*e*S	S	12 22 20.3	-3.5
JAR	Ashorobuto	4.12	96	P	Pn	12 21 35.3	+0.8
JAR				*e*S	S	12 22 26.0	-0.3
JTKR	Abashiri--Toko	4.17	86	P	Pn	12 21 35.8	+0.8
JANG	Nango	4.28	143	P	Pn	12 21 36.8	+0.4
JANG				*e*S	S	12 22 27.3	-2.4
USRK	Ussuriysk Ar.	4.46	277	P	Pn	12 21 40.8	+2.4
	baz=91,slow=15,SNR=4.4						
JOM	Ohasama	4.96	151	P	Pn	12 21 45.2	+0.6
KLR	Kul'dur	6.96	323	P	Pn	12 22 09.6	+0.2
	0.1nm,0.3s,baz=170,slow=7.7,SNR=3.6						
MJAR	Matsushiro Arr	7.29	180	P	Pn	12 22 15.2	+1.4
	0.2nm,0.3s,baz=5.8,slow=12,SNR=23						
KURBB	Kurchatov Arra	40.07	301	P	P	12 27 39.6	-0.7
	0.3nm,0.4s,baz=76,slow=9.9,SNR=4.0						
ARCES	ARCESS Array B	56.76	337	P	P	12 29 45.7	-1.1
	3.7nm,0.9s,baz=45,slow=10,SNR=1.9						
YKA	Yellowknife Ar	59.22	31	P	P	12 30 03.0	-1.0
	0.1nm,0.8s,baz=307,slow=6.2,SNR=2.4						
FINES	FINESS Array B	61.66	330	P	P	12 30 20.2	-0.2
	1.1nm,0.7s,baz=49,slow=5.8,SNR=4.8						
WRA	Warramunga Arr	63.56	184	P	P	12 30 32.3	-1.1
	0.3nm,0.5s,baz=2.3,slow=7.1,SNR=5.0						
WRA				PcP	PcP	12 31 06.9	-0.6
	0.4nm,0.5s,baz=0.7,slow=4.8,SNR=6.5						
ASAR	Alice Springs	67.29	184	P	P	12 30 57.8	+0.6
	0.3nm,0.7s,baz=357,slow=5.7,SNR=10						

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*IDC **25** 12:21:26.7±1.2, 38°.28N×109°.92E, h0^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.4/50, mbtmp3.5/8, ML3.1/2, Error ellipse: s-maj=44.7km s-min=17.7km az=62.0*

ISC 25 12:21:31.4±1.3**, 38°.3N**±0°.1×**109°.9E**±0°.3**, h35^{km}, n8, σ1^s.60**/8**, mb3.5**/6**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	9.82	346	Pn	Pn	12 23 49.2	-1.0
	0.2nm,0.3s,baz=174,slow=17,SNR=3.0						
TLY	Talaya	14.04	344	Pn	Pn	12 24 46.8	-0.9
	0.0nm,0.3s,baz=254,slow=20,SNR=4.6						
MKAR	Makanchi Array	21.90	302	P	P	12 26 20.7	-0.7
	0.4nm,0.7s,baz=104,slow=11,SNR=6.1						
CMAR	Chiang Mai Arr	21.98	209	P	P	12 26 21.8	-0.6
	1.1nm,0.7s,baz=11,slow=9.4,SNR=12						
ZALV	Zalesovo Beam	23.16	320	P	P	12 26 37.2	+2.7
	0.4nm,0.7s,baz=110,slow=12,SNR=1.7						
KURBB	Kurchatov Arra	25.30	309	P	P	12 26 56.0	+1.6
	1.4nm,1.0s,baz=104,slow=11,SNR=7.6						
WRA	Warramunga Arr	62.37	154	P	P	12 31 50.5	0.0
	0.9nm,0.8s,baz=346,slow=7.7,SNR=4.7						
ASAR	Alice Springs	65.68	156	P	P	12 32 12.6	+0.3
	0.7nm,0.8s,baz=342,slow=6.3,SNR=9.0						

IDC 25 12:28:36.5±1.6**, 2°.94S×139°.27E, h0^{km}, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.3**/34**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=33.9km s-min=15.0km az=155.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.50	73	Pg	Pb	12 29 05.1	-0.1
	4.1nm,0.3s,baz=276,slow=22,SNR=17						
JAY				Lg	Lg	12 29 23.1	
	38nm,0.3s,baz=53,slow=18,SNR=24						
WRA	Warramunga Arr	17.57	196	P	Pn	12 32 42.8	-0.2
	0.2nm,0.3s,baz=18,slow=13,SNR=7.5						
ASAR	Alice Springs	21.25	194	P	P	12 33 24.1	-0.3
	0.8nm,0.6s,baz=23,slow=9.7,SNR=18						
MKAR	Makanchi Array	70.31	322	P	P	12 39 51.9	-0.1
	0.2nm,0.6s,baz=111,slow=6.3,SNR=2.3						

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*MOS **25** 13:02:16.8±0.8, 40°.01N×141°.82E, h79^{km}, mb4.5/16, Error ellipse: s-maj=8.1km s-min=5.9km az=96.1*

*NEIC **25** 13:02:17.5±2.5, 39°.92N±0°.05×141°.80E±0°.10, h69^{km}±7^{km}, mb4.5/15, Error ellipse: s-maj=10.9km s-min=7.4km az=97.0*

*JMA **25** 13:02:18.0±0.1, 39°.87N×141°.87E, h77^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: φ$_s$66.00000°, δ16.00000°, λ165.00000°. NP2: φ$_s$171.00000°, δ86.00000°, λ74.00000°. Principal axes: T Plg47.0000°, Azm64.0000°; N Plg16.0000°, Azm172.0000°; P Plg39.0000°, Azm275.0000°;*

JMA Felt II J1.

*NIED **25** 13:02:18.1, 39°.87N×141°.87E, h77^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$1.74; M$_{\theta\theta}$-0.82; M$_{\phi\phi}$-0.93; M$_{r\theta}$-0.54; M$_{\theta\phi}$-3.93; M$_{\phi r}$-6.88; Fault plane solution: M$_0$8.08000×10^{14} NP1: φ$_s$187.00000°, δ83.00000°, λ62.00000°. NP2: φ$_s$84.00000°, δ29.00000°, λ165.00000°.*

*IDC **25** 13:02:19.5±2.0, 40°.05N×141°.71E, h82^{km}±18^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.7/49, mbtmp3.9/22 Error ellipse: s-maj=16.8km s-min=13.8km az=129.0*

ISC 25 13:02:17.7±0.6**, 39°.92N**±0°.04×**141°.91E**±0°.04**, h76^{km}**±5^{km}**, n142, σ1^s.27**/157**, mb4.4**/51**, 17C-8D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.04	297	⇑P	Pn	13 02 29.2	+0.6
JTH				S	Sn	13 02 37.2	+0.6
JKEN	Kujiedanarisaw	0.33	331	P	Pn	13 02 30.3	+0.6
JKEN				S	Sn	13 02 39.3	+0.8
MIYJ	Miyakonagasawa	0.35	192	⇑P	Pn	13 02 30.1	+0.3
MIYJ				S	Sn	13 02 38.8	0.0
JKZ	Kuzumaki	0.45	279	⇑P	Pn	13 02 31.1	+0.4
JKZ				S	Sn	13 02 40.4	+0.1
JANG	Nango	0.55	326	⇑P	Pn	13 02 32.0	+0.5
JANG				S	Sn	13 02 42.3	+0.6
JOM	Ohasama	0.65	227	⇑P	Pn	13 02 32.3	-0.2
JOM				S	Sn	13 02 42.9	-0.6
JAH	Hinai	1.02	286	⇑P	Pn	13 02 36.8	+0.1
JAH				S	Sn	13 02 51.2	+0.3
JTM	Tenmabayashi	1.08	324	⇓P	Pn	13 02 37.9	+0.4
JTM				S	Sn	13 02 53.0	+0.7
JTM	Tenmabayashi	1.08	324	Pn	Pn	13 02 37.9	+0.4
JTM				Sn	Sn	13 02 52.4	+0.1
JMK	Ichinoseki	1.10	209	⇑P	Pn	13 02 37.3	-0.5
JRG	Rokugo	1.12	243	⇑P	Pn	13 02 37.7	-0.2
JRG				*e*S	Sn	13 02 53.1	0.0
JIO	Ouri	1.53	197	⇑P	Pn	13 02 42.5	-0.7
JIO				S	Sn	13 03 00.5	-1.9
JYK	Kaneyama	1.56	231	⇑P	Pn	13 02 43.3	-0.4
JIW	Iwasaki	1.61	295	⇑P	Pn	13 02 44.9	+0.7
JMM	Marumori	2.23	203		Pn	13 02 52.0	-0.5
ERM	Erimo	2.30	24	P	Pn	13 02 54.5	+1.1
ERM	Erimo	2.30	24	Pn	Pn	13 02 54.5	+1.1
JEM	Erimo	2.30	24	Pn	Sn	13 03 20.9	+0.2
JEW	Eniwo	2.94	353	Pn	Pn	13 03 03.5	+1.4
JSD	Sado	3.41	238	Pn	Pn	13 03 08.3	-0.2
JYT	Yasato	3.93	201	Pn	Pn	13 03 13.6	-1.9
JKA	Kamikawa-asahi	4.22	7	Pn	Pn	13 03 20.4	+0.8
ASAJ	Asahikawa	4.23	7	P	Pn	13 03 19.8	+0.2
	2.6nm,0.3s,baz=198,slow=13,SNR=35						
ASAJ				S	Sn	13 04 08.7	+1.0
	3.9nm,0.3s,baz=205,slow=33,SNR=10.0						
ASAJ	Asahikawa	4.23	7	P	Pn	13 03 20.4	+0.8
MAJO	Matsushiro	4.46	222	⇑*e*P	Pn	13 03 23.4	+0.6
MAJO	Matsushiro	4.46	222	Pn	Pn	13 03 23.3	+0.5
MAT	Matsushiro	4.46	222	P	Pn	13 03 23.3	+0.5
MAT				*e*S	Sn	13 04 12.6	-0.8
MJAR	Matsushiro Arr	4.46	222	P	Pn	13 03 23.9	+1.1
	0.3nm,0.3s,baz=34,slow=13,SNR=38						
MJAR	Matsushiro Arr	4.46	222		Pn	13 03 22.9	+0.1
NMR	Nemuro--Hokkai	4.48	38	*e*P	Pn	13 03 22.2	-0.8
NMR				*e*S	Sn	13 04 09.9	-3.9
GLVR	Golovnino	4.67	34	*e*P	Pn	13 03 25.0	-0.6
GLVR				*e*S	Sn	13 04 16.3	-2.2
GLVR				pmax	pmax		
	comp=Z,69nm,0.2s						
GLVR				smax	smax		
	comp=E,342nm,0.3s						
GLVR				smax	smax		
	comp=N,511nm,0.2s						
GRPR	Tuman	4.98	34	*e*P	Pn	13 03 29.2	-0.7
GRPR				*e*S	Sn	13 04 22.9	-3.3
GRPR				pmax	pmax		
	comp=Z,61nm,0.2s						
GRPR				pmax	pmax		
	comp=N,44nm,0.1s						
GRPR				pmax	pmax		
	comp=E,17nm,0.1s						
GRPR				smax	smax		
	comp=E,289nm,0.3s						
GRPR				smax	smax		
	comp=N,447nm,0.2s						
YUK	Yuzh-Kuril'sk	5.06	34	*e*P	Pn	13 03 30.6	-0.3
YUK				*e*S	Sn	13 04 25.0	-2.9
YUK				pmax	pmax		
	comp=Z,98nm,0.2s						
YUK				smax	smax		
	comp=N,507nm,0.4s						
YUK				smax	smax		
	comp=E,179nm,0.2s						
JGF	Kuroka	5.62	221	Pn	Pn	13 03 39.5	+0.7
INU	Inuyama	5.99	222		Pn	13 03 44.2	+0.5
TEY	Ternei	6.45	324	⇑*e*P	Pn	13 03 50.5	+0.7
TEY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KUR	Kuril'sk	6.89	38	*e*P	Pn	13 03 56.2	+0.3
KUR				*i* S	Sn	13 05 11.1	-1.7
KUR				pmax	pmax		
	comp=Z,36nm,0.5s						
KUR				smax	smax		
	comp=N,69nm,0.4s						
KUR				smax	smax		
	comp=E,63nm,0.4s						
JWT	Wachi	6.94	230		Pn	13 03 55.7	-1.0
YSS	Yuzh-Sakhalins	7.06	5	*e*P	Pn	13 03 48.0	-10
USA0B	Ussuriysk Arra	8.53	303	P	Pn	13 04 18.9	+0.6
USA0B	Ussuriysk Arra	8.53	303	Pn	Pn	13 04 18.9	+0.6
USRK	Ussuriysk Ar.	8.53	303	P	Pn	13 04 17.6	-0.7
	baz=109,slow=14,SNR=13						
USRK				S	Sn	13 05 53.9	+1.0
	baz=117,slow=26,SNR=5.0						
USRK	Ussuriysk Ar.	8.53	303	Pn	Pn	13 04 18.5	+0.2
JHS	Saijyo	8.54	238	Pn	Pn	13 04 16.9	-1.7
JMN	Monobe	8.92	229	Pn	Pn	13 04 25.0	+1.2
KSRS	Korea Array	11.21	262	P	Pn	13 04 56.8	+1.9
	comp=E,1.4nm,0.3s,baz=71,slow=14,SNR=18						
KSRS				S	Sn	13 07 02.0	+3.7
	comp=E,0.2nm,0.3s,baz=76,slow=22,SNR=4.8						
KLR	Kul'dur	11.79	326	P	Pn	13 05 02.4	-0.3
	comp=E,0.1nm,0.3s,baz=118,slow=11,SNR=7.0						
KLR	Kul'dur	11.79	326	⇓*e*P	Pn	13 04 58.4	-4.3
KLR				pmax	pmax		
	comp=Z,1.0nm,1.8s						
ZEA	Zeya	17.03	329	*e*P	Pn	13 06 10.3	-0.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	Hailar	18.29	308	⇓*e*P	P	13 06 24.2	-1.2
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NJ2	Nanjing	20.21	254	*e*P	P	13 06 45.0	-1.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	23.09	282	*e*P	P	13 07 17.0	0.0
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
YAK	Yakutsk	23.36	345	*e*P	P	13 07 17.4	-1.8
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
SEY	Seymchan	23.89	12	P	P	13 07 22.9	-1.1
	comp=N,1.6nm,0.2s,baz=276,slow=21,SNR=4.1						
ULN	Ulaanbaatar	26.17	299	⇓*e*P	P	13 07 45.0	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	Ulaanbaatar	26.17	299	P	P	13 07 44.8	-0.2
SONM	Songino Array	26.61	299	P	P	13 07 47.0	-1.9
	comp=Z,1.1nm,0.5s,baz=95,slow=8.7,SNR=8.4						
SONM	Songino Array	26.61	299	P	P	13 07 48.4	-0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	26.61	299	P	P	13 07 48.4	-0.5
TLY	Talaya	28.82	307	⇓*e*P	P	13 08 08.0	-0.5
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZAK	Zakamensk	28.88	304	*e*P	P	13 08 08.3	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
H11N2	WAKE ISLAND Hy	29.40	126	T	T	13 38 58.9	
	baz=318,slow=75,SNR=284						
H11N1	WAKE ISLAND Hy	29.41	126	T	T	13 39 00.2	
	baz=318,slow=75,SNR=282						
H11N3	WAKE ISLAND Hy	29.42	126	T	T	13 39 00.8	
	baz=318,slow=75,SNR=298						
LZH	Lanzhou	30.09	275	*e*P	P	13 08 20.0	0.0
LZH				pP	pP	13 08 39.8	+1.8
LZH				sP	sP	13 08 47.8	+0.8
LZH				PP	PP	13 09 27.5	-1.6
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,5.4s						
LZH				LR	LR		
	comp=N,220nm,11.9s						
LZH				LR	LR		
	comp=E,180nm,10.8s						
LZH				LR	LR		
	comp=Z,110nm,11.9s						
H11S1	WAKE ISLAND Hy	30.20	128	T	T	13 39 58.2	
	baz=320,slow=76,SNR=50						
H11S3	WAKE ISLAND Hy	30.21	128	T	T	13 40 04.5	
	baz=320,slow=76,SNR=59						
H11S2	WAKE ISLAND Hy	30.22	128	T	T	13 40 05.0	
	baz=320,slow=76,SNR=45						
BILL	Bilibino	31.16	17	⇑*e*P	P	13 08 30.2	+1.3
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
DGZ	Jazzator, Alta	39.09	303	*de*P	P	13 09 37.8	+0.4
DGZ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ	Urumqi	39.96	294	*e*P	P	13 09 44.5	-0.1
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.7s						
ZAA0	Zalesovo Array	40.31	310	P	P	13 09 46.7	-0.5
ZAA0				IAmb	IAmb	13 09 49.9	
	comp=Z,3.3nm,0.6s						
ZALV	Zalesovo Beam	40.31	310	P	P	13 09 47.0	-0.3
	comp=Z,3.4nm,0.4s,baz=92,slow=7.6,SNR=20						
ZALV	Zalesovo Beam	40.31	310	P	P	13 09 46.8	-0.5
ZSN	Zaisan	41.12	300	*e*P	P	13 09 53.7	-0.3
	baz=300						
ZSN	Zaisan	41.12	300	*e*P	P	13 09 53.7	-0.3
MK31	Makanchi Array	42.98	300	P	P	13 10 08.3	-0.9
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	Makanchi Array	42.98	300	P	P	13 10 08.3	-0.9
MK31				IAmb	IAmb	13 10 09.5	
	comp=Z,4.1nm,0.7s						
MKAR	Makanchi Array	42.98	300	P	P	13 10 08.8	-0.4
	comp=Z,4.8nm,0.7s,baz=85,slow=11,SNR=81						
MKAR	Makanchi Array	42.98	300	P	P	13 10 08.2	-1.0
MAKZ	Makanchi	43.19	300	P	P	13 10 10.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	Makanchi	43.19	300	P	P	13 10 10.1	-0.8
MAKZ				IAmb	IAmb	13 10 12.4	
	comp=Z,4.9nm,0.6s						
KURK	Kurchatov	44.51	306	*de*P	P	13 10 20.7	-0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KURK	Kurchatov	44.51	306	P	P	13 10 20.1	-1.2
KDAK	Kodiak Island	44.72	44	P	P	13 10 23.7	+0.8
	comp=Z,8.2nm,1.0s,baz=342,slow=3.4,SNR=9.5						
SHLS	Shalkode	45.90	295	*e*P	P	13 10 29.3	-3.3
	comp=Z,4.7nm,1.4s,baz=295						
SHLS	Shalkode	45.90	295	*e*P	P	13 10 29.3	-3.3
SHLS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TDK	Taldyqorghan	46.07	298	*e*P	P	13 10 32.1	-1.7
	comp=Z,4.8nm,0.7s,baz=298						
TDK	Taldyqorghan	46.07	298	*e*P	P	13 10 33.0	-0.8
TDK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TAPN	Taplejung	46.20	272	*e*P	P	13 10 35.8	+0.4
	comp=Z,4.8nm,0.4s						
HDA	Harding Lake	46.87	34	P	P	13 10 40.5	+0.7
HDA				IAmb	IAmb	13 10 42.0	
	comp=Z,8.5nm,1.4s						
IL31		46.87	34	P	P	13 10 41.1	+1.4
ILAR	Eielson Array	46.87	34	P	P	13 10 41.1	+1.4
	comp=Z,1.3nm,0.7s,baz=262,slow=6.1,SNR=25						
ILAR	Eielson Array	46.87	34	P	P	13 10 40.7	+0.9
RAMN	Ramite	47.25	272	*e*P	P	13 10 42.8	-0.7
	comp=Z,8.1nm,0.3s						
GUN	Gumba	47.32	273	*e*P	P	13 10 43.7	-0.5
	comp=Z,37nm,0.4s						
CHKK	Chushkaly	47.39	297	*e*P	P	13 10 43.2	-0.9
	baz=297						
CHKK	Chushkaly	47.39	297	*e*P	P	13 10 43.2	-0.9
AAA	Alma-Ata	47.65	296	*e*P	P	13 10 45.3	-1.0
	comp=Z,7.6nm,0.5s,baz=296						
AAA	Alma-Ata	47.65	296	*e*P	P	13 10 45.2	-1.0
AAA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KUU	Kurty	47.82	297	*e*P	P	13 10 46.3	-1.1
	comp=Z,2.3nm,0.7s,baz=297						
KUU	Kurty	47.82	297	*e*P	P	13 10 46.3	-1.1
KUU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKN	Kakani	47.84	274	*e*P	P	13 10 47.8	-0.3
	comp=Z,25nm,0.5s						
PKI	Pulchoki	47.85	273	*e*P	P	13 10 48.2	-0.1
	comp=Z,6.5nm,0.4s						
PKIN	Phulchoki	47.86	273	*e*P	P	13 10 48.2	-0.1
	comp=Z,7.0nm,0.5s						
GKN	Gorkha	48.23	274	*e*P	P	13 10 50.3	-0.7
	comp=Z,7.3nm,0.4s						
BRZS	Berezniki	48.38	306	*e*P	P	13 10 50.5	-1.3
	baz=306						
BRZS	Berezniki	48.38	306	*e*P	P	13 10 50.4	-1.3
DANN	Dangsing	48.73	275	*e*P	P	13 10 54.5	-0.5
	comp=Z,30nm,0.5s						
BRVK	Borovoye	49.01	311	⇑*e*P	P	13 10 57.2	+0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KOLN	Koldanda	49.14	274	*e*P	P	13 10 57.6	-0.5
	comp=Z,8.0nm,0.4s						
PYUN	Piuthan	49.45	275	*e*P	P	13 11 00.1	-0.3
	comp=Z,11nm,0.5s						
INK	Inuvik	51.65	28	P	P	13 11 17.8	+1.7
	comp=Z,0.9nm,0.6s,baz=279,slow=6.2,SNR=3.9						
KK31	Karatay Array	52.06	298	P	P	13 11 18.5	-1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	Karatay Array	52.06	298	P	P	13 11 18.5	-1.1
KKAR	Karatay Array	52.06	298	P	P	13 11 18.5	-1.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	52.06	298	P	P	13 11 18.5	-1.1
KKAR	Karatay Array	52.06	298	P	P	13 11 18.5	-1.1
KKAR				IAmb	IAmb	13 11 19.7	
	comp=Z,2.3nm,0.8s						
ARU	Arti	54.48	317	*d i*P	P	13 11 36.6	-0.5
ARU						13 12 33.9	
ARU						13 13 36.5	
ARU				S	S	13 19 11.4	+1.4
ARU				SS	SS	13 22 46.7	-6.1
ARU				pmax	pmax		
	comp=Z,16nm,2.4s						
ARU	Arti	54.48	317	P	P	13 11 37.3	+0.1
ARU				IAmb	IAmb	13 11 37.4	
	comp=Z,4.0nm,0.7s						
ABKAR	Akbulak array	56.41	309	P	P	13 11 50.5	-0.6
ABKAR				IAmb	IAmb	13 11 51.3	
	comp=Z,4.1nm,0.6s						
ABKAR	Akbulak array	56.41	309	P	P	13 11 50.5	-0.6
WRA	Warramunga Arr	59.97	188	P	P	13 12 18.1	+2.0
	comp=Z,1.0nm,0.9s,baz=6.8,slow=7.7,SNR=2.7						
YKA	Yellowknife Ar	61.13	31	P	P	13 12 24.4	+0.9
	comp=Z,0.2nm,0.6s,baz=302,slow=5.8,SNR=10						
YKA	Yellowknife Ar	61.13	31	*ce*P	P	13 12 25.2	+1.7
ARCES	ARCESS Array B	61.44	339	P	P	13 12 26.4	+0.8
	comp=Z,1.7nm,0.8s,baz=62,slow=6.1,SNR=5.6						
ARCES	ARCESS Array B	61.44	339	IAmb	IAmb	13 12 35.1	
	comp=Z,22nm,1.5s						
ASAR	Alice Springs	63.70	188	P	P	13 12 43.0	+1.9
	comp=Z,0.2nm,0.4s,baz=1.4,slow=6.6,SNR=10						
FIA1	FINESS Array S	66.45	332	P	P	13 12 57.9	-0.6
FINES	FINESS Array B	66.45	332	P	P	13 12 58.5	0.0
	comp=Z,2.4nm,0.7s,baz=36,slow=9.7,SNR=9.2						
FINES	FINESS Array B	66.45	332	P	P	13 12 57.7	-0.8
KIV	Kislovodsk	69.33	310	*e*P	P	13 13 17.9	+0.9
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
NC204	NORSAR Array S	71.63	337	P	P	13 13 30.5	-0.1
NB201	NORSAR Array S	71.65	337	P	P	13 13 30.7	0.0
NOA	NORSAR Array B	71.68	337	P	P	13 13 31.0	+0.1
	comp=Z,0.5nm,0.5s,baz=52,slow=7.1,SNR=3.8						
AKASG	Malin Array Be	72.26	322	P	P	13 13 34.1	-0.4
	comp=Z,0.3nm,0.4s,baz=46,slow=6.0,SNR=6.2						
AKASG	Malin Array Be	72.26	322	*ce*P	P	13 13 35.5	+1.0
NVAR	Mina Array Bea	72.96	54	P	P	13 13 41.0	+1.8
	comp=Z,0.6nm,0.8s,baz=272,slow=8.9,SNR=4.7						
PDAR	Pinedale Array	75.38	46	P	P	13 13 54.2	+1.0
	comp=Z,0.7nm,0.6s,baz=283,slow=0.8,SNR=10						
PDAR	Pinedale Array	75.38	46	P	P	13 13 52.5	-0.7
BURAR	Bucovina Array	76.30	322	P	P	13 13 58.3	+0.1
TXAR	Lajitas Array	88.06	53	P	P	13 15 00.5	+0.6
	comp=Z,0.2nm,0.5s,baz=264,slow=3.3,SNR=3.1						

TAP 25 13:21:10.1,23°.94N×121°.48E,h16^{km},ML1.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	0.12	72	P	Pb	13 21 15.1	+1.0
	baz=73						
HWA				*e*S	Sb	13 21 18.1	+1.5
	baz=73						
ESL	**Shilin**	0.13	198	P	Pb	13 21 14.3	+0.2
	baz=194						
ESL				*e*S	Sg	13 21 16.5	+0.1
	baz=194						
TWD	**Chiawan**	0.18	38	P	Pb	13 21 15.5	+0.5
	baz=39						
TWD				S	Sb	13 21 18.5	+0.3
	baz=39						
NACB	**Ninganchiao**	0.26	25	P	Pb	13 21 16.7	+0.3
	baz=24						
NACB				S	Sb	13 21 20.4	-0.2
	baz=24						
ETLH	**Xiulin Townshi**	0.27	1	*e*P	Pb	13 21 17.0	+0.5
	baz=1.0						
ETLH				S	Sb	13 21 20.7	-0.2
	baz=1.0						
EGFH	**Guangfu**	0.27	189	*e*P	Pb	13 21 16.4	-0.1
	baz=189						
EGFH				*e*S	Sg	13 21 20.2	+0.1
	baz=189						
WHF	**Hehuan Shan**	0.28	317	P	Pb	13 21 17.2	+0.2
	baz=317						
WHF				S	Sb	13 21 21.6	-0.1
	baz=317						
CHGB	**Renai**	0.30	294	*e*P	Pb	13 21 17.7	+0.5
	baz=293						
CHGB				*e*S	Sb	13 21 22.4	+0.4
	baz=293						
FUSS	**Fushou**	0.37	325	P	Pb	13 21 19.1	+0.6
	baz=325						
FUSS				S	Sb	13 21 24.5	+0.3
	baz=325						
TDCB	**Techi**	0.43	317	*e*P	Pb	13 21 20.1	+0.7
	baz=317						
HGSD	**Ruisui**	0.45	186	*e*P	Pn	13 21 20.9	-0.9
	baz=186						
EHY	**Hungye**	0.45	198	*e*P	Pg	13 21 19.3	+0.1
	baz=197						
EHY				*e*S	Sg	13 21 24.7	-0.6
	baz=197						
NNSB	**Datong**	0.50	350	*e*P	Pb	13 21 21.2	+0.7
	baz=350						
NNSB				S	Sb	13 21 27.9	+0.3
	baz=350						
NNSH	**Datong**	0.50	350	*e*P	Pb	13 21 21.1	+0.6
	baz=350						
NNSH				*e*S	Sb	13 21 27.7	+0.2
	baz=350						
SSLB	**Suanglung**	0.50	253	*e*P	Pb	13 21 21.0	+0.5
	baz=252						
SSLB				*e*S	Sg	13 21 27.1	+0.2
	baz=252						
NNS	**Nan Shan**	0.51	349	*e*P	Pb	13 21 21.4	+0.7
	baz=350						
NNS				*e*S	Sb	13 21 28.5	+0.6
	baz=350						
SMLT	**Sun Moon Lake**	0.53	264	*e*P	Pb	13 21 21.6	+0.6
	baz=263						
SMLT				*e*S	Sb	13 21 29.1	+0.7
	baz=263						
ENA	**Nanau**	0.55	26	*e*P	Pb	13 21 21.2	0.0
	baz=27						
ENA				S	Sb	13 21 29.5	+0.7
	baz=27						
TYC	**Yuchr**	0.57	267	*e*P	Pb	13 21 22.0	+0.4
	baz=266						
TYC				*e*S	Sb	13 21 29.5	+0.1
	baz=266						
YULB	**Yu-li**	0.57	197	*e*P	Pb	13 21 21.6	0.0
	baz=196						
WHP	**Taichung City**	0.59	305	*e*P	Pn	13 21 23.3	-0.6
	baz=304						
TWF1	**Yuli**	0.61	196	*e*P	Pb	13 21 22.4	+0.1
	baz=195						
TWF1				*e*S	Sb	13 21 30.7	+0.1
	baz=195						
NDT	**Datong Townshi**	0.66	3	*e*P	Pn	13 21 24.2	-0.6
	baz=2.0						
NDT				S	Sb	13 21 32.9	+0.7
	baz=2.0						
ENTT	**Nioudou**	0.70	7	*e*S	Sb	13 21 34.0	+0.6
	baz=7.0						
YHNB	**Yeheng**	0.73	353	*e*P	Pn	13 21 25.6	-0.3
	baz=352						
YHNB				*e*S	Sb	13 21 34.9	+0.6
	baz=352						
NSK	**Sanguang**	0.74	352	*e*P	Pb	13 21 25.2	+0.5
	baz=352						
NSK				*e*S	Sb	13 21 35.3	+0.7
	baz=352						
ALS	**Alishan**	0.75	235	*e*P	Pn	13 21 26.0	-0.2
	baz=234						
CHN5	**Tsauling**	0.81	245	*e*P	Pn	13 21 27.5	+0.7
	baz=245						
CHN5				*e*S	Sn	13 21 39.6	+1.1
	baz=245						
NWLT	**Wulai**	0.84	2	*e*S	Sn	13 21 38.4	-0.8
	baz=1.0						

JMA 25 13:21:56.8±0.1**,24°.38N×122°.98E,h58^{km}**±1^{km}**,M1.4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.08	336	P	Pn	13 22 05.4	-0.1
JYNG				S	Sn	13 22 11.8	0.0
YOJ	**Yonaguni jima**	0.09	19	P	Pn	13 22 05.5	-0.1
YOJ				S	Sn	13 22 11.8	-0.1
IRIF	**Iriomote-Funau**	0.69	94	P	Pn	13 22 10.8	+0.1
IRIF				*e*S	Sn	13 22 21.0	+0.1
JKRS	**Kuro-shima**	0.95	98	P	Pn	13 22 14.6	+0.5
JKRS				*e*S	Sn	13 22 27.8	+0.9
JIJ	**Ishigaki jima**	1.06	91	P	Pn	13 22 15.6	0.0
JIJ				*e*S	Sn	13 22 29.8	+0.3
JISG	**Ishigakijimahi**	1.23	80	P	Pn	13 22 17.8	0.0
JISG				*e*S	Sn	13 22 34.5	+1.0

IDC ***25*** *13:49:46.2±0.9,5°.37S×76°.26W,h0^{km},mb3.6/7, mb1 3.9/11,mb1mx3.8/27,mbtmp3.7/11,ML4.1/4,Error ellipse: s-maj=23.9km s-min=18.0km az=84.0*

ISC 25 13:49:47.8±0.6**,5°.42S**±0°.07×**76°.24W**±0°.09**,h10^{km},n19, σ1^{s}.42**/21**,mb3.6**/7**,Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	2.73	231	Pn	Pn	13 50 32.8	+0.6
	36nm,0.3s,baz=31,slow=11,SNR=73						
ATAH				Sn	Sb	13 51 08.7	-2.1
	37nm,0.3s,baz=323,slow=23,SNR=7.9						
PTLC	**Puerto Leguiza**	5.74	15	*e*P	Pn	13 51 09.4	-3.7
NNA	**Nana**	6.55	185	Pn	Pn	13 51 25.4	+1.0
	15nm,0.3s,baz=6.5,slow=11,SNR=25						
NNA				Sn	Sn	13 52 39.1	-0.1
	9.7nm,0.3s,baz=204,slow=15,SNR=7.8						
GCUF	**Volcan Galeras**	6.69	350	*e*P	Pn	13 51 27.3	+0.6
GARC	**Garzon, Huila**	7.59	6	*e*P	Pn	13 51 39.1	+0.3
PCON	**Cinco Dias**	7.70	359	*e*P	Pn	13 51 43.3	+2.8
MACC	**Macarena, Meta**	7.89	18	*e*P	Pn	13 51 40.6	-2.1
BETC	**Betania**	8.09	6	*e*P	Pn	13 51 45.2	-0.2
ORTC	**Ortega, Tolima**	9.32	6	*e*P	Pn	13 52 02.7	+0.4
CHIC	**Chingaza**	10.29	14	*e*P	Pn	13 52 16.9	+0.9
PTGA	**Pitinga**	16.90	75	Pn	Pn	13 53 44.7	+0.1
	0.8nm,0.3s,baz=311,slow=19,SNR=2.1						
SIV	**San Ignacio**	18.22	126	P	P	13 54 02.1	+0.9
	0.2nm,0.3s,baz=322,slow=11,SNR=4.7						
CPUP	**Villa Florida**	27.55	141	P	P	13 55 34.9	-0.1
	1.1nm,0.6s,baz=330,slow=8.1,SNR=2.2						
PLCA	**Paso Flores**	35.53	173	P	P	13 56 45.1	+0.1
	0.4nm,0.4s,baz=346,slow=11,SNR=6.0						
TXAR	**Lajitas Array**	43.46	324	P	P	13 57 50.9	-0.5
	0.1nm,0.5s,baz=159,slow=8.4,SNR=1.5						
YKA	**Yellowknife Ar**	73.78	343	P	P	14 01 21.2	-0.8
	0.1nm,0.5s,baz=136,slow=6.6,SNR=8.3						
TORD	**Torodi Ar. Bea**	79.54	76	P	P	14 01 56.7	+1.0
	0.7nm,0.7s,baz=279,slow=4.3,SNR=2.0						
SNAA	**Sanae**	79.69	162	P	P	14 01 55.1	-0.3
	0.7nm,0.5s,baz=268,slow=12,SNR=2.9						
ILAR	**Eielson Array**	86.75	336	P	P	14 02 32.3	+0.5
	0.4nm,0.9s,baz=76,slow=4.7,SNR=2.9						

NEIC ***25*** *14:02:45.9±1.6,60°.1S±0°.1×27°.2W±0°.3,h56^{km}±6^{km}, mb4.6/21,Error ellipse: s-maj=19.1km s-min=15.0km az=63.0*

IDC ***25*** *14:02:45.4±5.8,60°.16S×27°.12W,h48^{km}±55^{km},mb3.8/6, mb1 4.0/7,mb1mx3.7/22,mbtmp4.2/7,ML4.9/1,MS3.3/2, Ms1 3.3/2,ms1mx3.0/20,Error ellipse: s-maj=33.2km s-min=23.1km az=63.0*

ISC 25 14:02:43.3±0.5**,60°.12S**±0°.09×**27°.0W**±0°.1**,h34^{km},n38, σ0^{s}.88**/35**,mb4.5**/14**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	13.06	152	P	Pn	14 05 46.1	-0.1
VNA3	**Neumayer Olymp**	13.18	155	P	Pn	14 05 46.5	-1.3
VNA2	**Neumayer--Watz**	13.46	152	P	Pn	14 05 50.5	-1.1
	baz=304,slow=16						
SNAA	**Sanae**	15.06	150	P	Pn	14 06 12.8	-0.5
SNAA	**Sanae**	15.06	150	P	Pn	14 06 12.9	-0.4
	5.0nm,0.3s,baz=311,slow=12,SNR=98						
SNAA				S	Sn	14 08 47.6	-11
	0.4nm,0.3s,baz=348,slow=20,SNR=9.7						
SNAA				LR	LR	14 10 57.4	
	comp=Z,148nm,20.6s,baz=12,slow=33						
SNAA	**Sanae**	15.06	150		Pn	14 06 12.6	-0.7
SNAA				IAmb	IAmb	14 06 15.6	
	comp=Z,13nm,0.5s						
PMSA	**Palmer Station**	17.55	239		P	14 06 45.7	0.0
PMSA				IAmb	IAmb	14 07 10.7	
	comp=Z,94nm,1.4s						
BELA	**Belgrano 2**	18.02	185	P	P	14 06 52.5	+1.7
QSPA	**South Pole Qui**	30.12	180	P	P	14 08 50.3	+0.8
	comp=Z,2.4nm,0.9s,baz=204,slow=2.3,SNR=11						
QSPA	**South Pole Qui**	30.12	180	IAmb	IAmb	14 08 52.1	
	comp=Z,8.9nm,1.4s						
MT02	**Curacav**	39.30	293	P	P	14 10 09.7	+0.9
VA03	**San Esteban**	39.45	294	P	P	14 10 09.7	-0.4
VA03				IAmb	IAmb	14 10 18.8	
	comp=Z,22nm,1.4s						
CPUP	**Villa Florida**	39.65	315	P	P	14 10 12.6	+0.9
	comp=Z,1.6nm,0.8s,baz=156,slow=4.6,SNR=3.5						
CPUP				LR	LR	14 24 20.1	
	comp=Z,37nm,21.9s,baz=136,slow=33						
CPUP	**Villa Florida**	39.65	315	P	P	14 10 11.9	+0.2
CO03	**El Pedregal**	41.13	296	P	P	14 10 24.1	+0.1
CO03				IAmb	IAmb	14 10 51.7	
	comp=Z,23nm,1.5s						
AC05	**El Transito**	42.66	298	P	P	14 10 36.4	-0.1
AC05				IAmb	IAmb	14 10 46.1	
	comp=Z,18nm,1.4s						
LCO	**Las Campanas**	42.70	297	P	P	14 10 35.3	-1.7
LCO				IAmb	IAmb	14 10 49.3	
	comp=Z,20nm,1.5s						
GO02	**Mina Guanaco**	45.55	301	P	P	14 10 59.4	-0.5
GO02				IAmb	IAmb	14 11 03.5	
	comp=Z,10nm,1.4s						
SHEL	**Horse Pasture**	46.74	29	P	P	14 11 08.5	-0.5
LVC	**Limon Verde**	47.51	303	P	P	14 11 13.9	-1.5
LVC				IAmb	IAmb	14 11 30.9	
	comp=Z,5.8nm,1.1s						
LBTB	**Lobatse**	50.23	70	P	P	14 11 36.8	+0.8
	comp=Z,2.7nm,0.8s,baz=269,slow=18,SNR=3.7						
LBTB	**Lobatse**	50.23	70	IAmb	IAmb	14 11 37.8	
	comp=Z,6.1nm,1.1s						
SIV	**San Ignacio**	50.50	316	P	P	14 11 38.5	+0.6
	comp=Z,0.5nm,0.6s,baz=216,slow=5.1,SNR=3.7						
MNMC	**Minye Minye**	50.90	305	P	P	14 11 40.8	-0.4
MNMC				IAmb	IAmb	14 11 42.5	
	comp=Z,4.6nm,0.8s						
RCBR	**Riachuelo**	54.58	349	P	P	14 12 07.1	-1.0
RCBR				IAmb	IAmb	14 12 08.3	
	comp=Z,16nm,1.1s						
SAML	**Samuel**	57.77	316	P	P	14 12 30.8	-0.1
AIS	**Amsterdam Isla**	64.65	122	P	P	14 13 16.2	-1.0
MCQ	**Macquarie Isla**	65.63	184	P	P	14 13 22.7	-0.6
TOA0	**Torodi Ar. Sit**	76.58	29	P	P	14 14 31.2	+1.2
TORD	**Torodi Ar. Bea**	76.58	29	P	P	14 14 31.1	+1.2
	comp=Z,1.0nm,0.4s,baz=196,slow=6.3,SNR=4.3						
TORD				pP	sP	14 14 44.4	+0.5
	comp=Z,1.7nm,0.4s,baz=201,slow=6.1,SNR=7.9						
ASAR	**Alice Springs**	95.08	163	P	P	14 16 02.9	+0.3
	comp=Z,0.5nm,0.8s,baz=179,slow=3.2,SNR=5.6						
YKA	**Yellowknife Ar**	139.18	315	PKP	PKPdf	14 22 04.5	-0.3
	comp=Z,0.5nm,0.7s,baz=123,slow=2.6,SNR=12						
ZALV	**Zalesovo Beam**	143.94	69	PKP	PKPbc	14 22 12.1	+0.5
	comp=Z,0.9nm,0.4s,baz=214,slow=1.6,SNR=5.7						
ZALV	**Zalesovo Beam**	143.94	69		PKPab	14 22 11.7	+0.7
SONM	**Songino Array**	150.65	94	PKPbc	PKPbc	14 22 31.3	+0.6
	comp=Z,3.0nm,1.0s,baz=220,slow=2.4,SNR=9.3						
SONM	**Songino Array**	150.65	94		PKPbc	14 22 30.9	+0.2
ILAR	**Eielson Array**	152.73	306	PKPbc	PKPbc	14 22 34.0	-0.8
	comp=Z,1.0nm,0.9s,baz=151,slow=2.3,SNR=8.0						
ILAR	**Eielson Array**	152.73	306		PKPbc	14 22 33.3	-1.5

TAP ***25*** *14:14:38.1,24°.81N×122°.86E,h132^{km}±1^{km},ML2.9,D*

JMA ***25*** *14:14:38.0±0.2,24°.76N×122°.85E,h134^{km}±3^{km},M2.3*

ISC 25 14:14:38.5±1.6**,24°.77N**±0°.07×**122°.87E**±0°.03**, h129^{km}**±10^{km}**,n59,σ0^{s}.67**/99**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.33	167	P	Pn	14 14 56.8	+0.3
JYNG				S	Sn	14 15 10.9	+0.7
YOJ	**Yonaguni jima**	0.34	157	P	Pn	14 14 56.8	+0.2
YOJ				S	Sn	14 15 10.9	+0.6
YOJ	**Yonaguni jima**	0.34	157	*i* P	Pn	14 14 56.7	+0.1
	baz=158						
YOJ				*e*S	Sn	14 15 10.8	+0.6
	baz=158						
IRIF	**Iriomote-Funau**	0.90	119	P	Pn	14 15 00.3	0.0
IRIF				*e*S	Sn	14 15 17.1	+0.3
TWC	**Suao**	0.94	260	*e*P	Pn	14 15 00.5	-0.2
	baz=257						
TWC				*e*S	Sn	14 15 16.8	-0.7
	baz=257						
TIPB	**Shuangxi**	0.96	282	P	Pn	14 15 00.9	0.0
	baz=279						
TIPB				*e*S	Sn	14 15 17.0	-1.0
	baz=279						
ENA	**Nanau**	1.08	252	P	Pn	14 15 02.2	+0.3
	baz=249						
ENA				S	Sn	14 15 19.8	0.0
	baz=249						
TWE	**Neicheng**	1.09	268	P	Pn	14 15 02.1	0.0
	baz=265						
HATJ	**Hateruma jima**	1.11	130	P	Pn	14 15 03.2	+0.9
HATJ				S	Sn	14 15 21.0	+0.6
JKRS	**Kuro-shima**	1.17	117	P	Pn	14 15 03.5	+0.6
JKRS				*e*S	Sn	14 15 22.1	+0.7
ENTT	**Nioudou**	1.19	264	*e*P	Pn	14 15 03.4	+0.3
	baz=261						
JIJ	**Ishigaki jima**	1.23	109	P	Pn	14 15 03.5	0.0
JIJ				S	Sn	14 15 21.7	-0.9
NWLT	**Wulai**	1.24	271	*e*P	Pn	14 15 03.5	-0.1
	baz=268						
NWLT				*e*S	Sn	14 15 21.7	-1.1
	baz=268						
NDT	**Datong Townshi**	1.24	262	*e*P	Pn	14 15 04.1	+0.4
	baz=260						
NDT				*e*S	Sn	14 15 22.9	+0.1
	baz=260						
NACB	**Ninganchiao**	1.30	243	*e*P	Pn	14 15 03.6	-0.6
	baz=241						
NACB				*e*S	Sn	14 15 24.2	+0.3
	baz=241						
JISG	**Ishigakijimahi**	1.33	98	P	Pn	14 15 04.4	-0.1
JISG				S	Sn	14 15 23.5	-0.8
TWD	**Chiawan**	1.35	239	*e*P	Pn	14 15 04.3	-0.4
	baz=237						
TWD				*e*S	Sn	14 15 23.9	-0.8
	baz=237						
YHNB	**Yeheng**	1.36	266	*e*P	Pn	14 15 05.2	+0.2
	baz=264						
YHNB				*e*S	Sn	14 15 24.9	-0.2
	baz=264						
NSK	**Sanguang**	1.37	266	P	Pn	14 15 05.2	0.0
	baz=264						
NSK				S	Sn	14 15 25.0	-0.4
	baz=264						
ETLH	**Xiulin Townshi**	1.38	246	*e*P	Pn	14 15 04.8	-0.5
	baz=244						
ETLH				*e*S	Sn	14 15 24.5	-1.1
	baz=244						
NNSB	**Datong**	1.39	256	P	Pn	14 15 05.4	0.0
	baz=254						
NNSB				*e*S	Sn	14 15 25.8	0.0
	baz=254						
NNSH	**Datong**	1.39	256	P	Pn	14 15 05.5	+0.1
	baz=254						
NNSH				*e*S	Sn	14 15 25.4	-0.5
	baz=254						
NNS	**Nan Shan**	1.40	257	P	Pn	14 15 05.4	0.0
	baz=254						
NNS				*e*S	Sn	14 15 25.3	-0.6
	baz=254						
FUSS	**Fushou**	1.57	251	*e*P	Pn	14 15 07.9	+0.4
	baz=249						
FUSS				*e*S	Sn	14 15 28.9	-0.6
	baz=249						
WHF	**Hehuan Shan**	1.59	247	P	Pn	14 15 07.9	0.0
	baz=245						
WHF				*e*S	Sn	14 15 29.6	-0.6
	baz=245						
ESL	**Shilin**	1.62	234	*e*P	Pn	14 15 07.1	-0.7
	baz=232						
ESL				*e*S	Sn	14 15 28.8	-1.4
	baz=232						
TDCB	**Techi**	1.64	252	*e*P	Pn	14 15 08.8	+0.6
	baz=250						
TDCB				S	Sn	14 15 30.5	-0.3
	baz=250						
JTJ	**Tarama**	1.68	94	P	Pn	14 15 08.7	+0.3
JTJ				*e*S	Sn	14 15 30.6	-0.7
LIOB	**Emei**	1.69	266	*e*P	Pn	14 15 09.0	+0.3
	baz=264						
LIOB				*e*S	Sn	14 15 30.9	-0.7
	baz=264						
CHGB	**Renai**	1.70	246	*e*P	Pn	14 15 09.2	+0.2
	baz=244						
CHGB				*e*S	Sn	14 15 33.0	+0.8
	baz=244						
NSTT	**Nanjuang**	1.70	266	*e*S	Sn	14 15 31.0	-0.9
	baz=263						
EGFH	**Guangfu**	1.71	230	*e*P	Pn	14 15 08.6	-0.3
	baz=229						
WHP	**Taichung City**	1.82	255	*e*P	Pn	14 15 10.8	+0.5
	baz=253						
WHP				*e*S	Sn	14 15 34.5	0.0
	baz=253						
HGSD	**Ruisui**	1.83	226	*e*P	Pn	14 15 10.3	0.0
	baz=225						
HGSD				*e*S	Sn	14 15 35.0	+0.3
	baz=225						
EHY	**Hungye**	1.89	229	*e*P	Pn	14 15 10.3	-0.8
	baz=227						
NMLH	**Miaoli**	1.90	263	*e*S	Sn	14 15 35.5	-0.7
	baz=261						
DPDB	**Guoxing**	1.92	248	*e*P	Pn	14 15 12.3	+1.0
	baz=246						
YULB	**Yu-li**	1.98	227	*e*P	Pn	14 15 11.5	-0.7
	baz=225						
SMLT	**Sun Moon Lake**	2.00	244	*e*P	Pn	14 15 13.5	+1.0
	baz=242						
SMLT				*e*S	Sn	14 15 40.3	+1.8
	baz=242						
SSLB	**Suanglung**	2.00	241	*e*P	Pn	14 15 13.2	+0.8
	baz=239						
SSLB				*e*S	Sn	14 15 39.2	+0.8
	baz=239						
TWF1	**Yuli**	2.01	226	*e*P	Pn	14 15 12.1	-0.5
	baz=224						
TYC	**Yuchr**	2.03	245	*e*P	Pn	14 15 13.4	+0.8
	baz=243						
TYC				*e*S	Sn	14 15 39.4	+0.6
	baz=243						
JIRB	**Irabujima**	2.10	88	P	Pn	14 15 14.0	+0.5
JIRB				*e*S	Sn	14 15 39.1	-1.3
FULB	**Fuli**	2.13	223	*e*P	Pn	14 15 13.9	-0.1
	baz=221						
FULB				*e*S	Sn	14 15 40.3	-0.8
	baz=221						
WJS	**Zhushan**	2.17	245	*e*P	Pn	14 15 14.9	+0.5
	baz=243						
WJS				*e*S	Sn	14 15 43.5	+1.5
	baz=243						
WNT	**Mingjian**	2.18	246	*e*S	Sn	14 15 43.1	+0.8
	baz=244						
JMJ2	**Miyako jima3**	2.24	90	*e*S	Sn	14 15 43.3	-0.2
ALS	**Alishan**	2.26	237	*e*P	Pn	14 15 16.7	+0.8
	baz=235						
ALS				*e*S	Sn	14 15 45.1	+0.5
	baz=235						
EDH	**Donghe**	2.29	219	*e*P	Pn	14 15 15.4	-0.5
	baz=217						
EDH				*e*S	Sn	14 15 43.4	-1.4
	baz=217						
ELDTW	**Lidau**	2.31	227	*e*P	Pn	14 15 16.0	-0.3
	baz=226						
CHN5	**Tsauling**	2.31	240	*e*P	Pn	14 15 16.9	+0.5
	baz=238						
LONT	**Longtian**	2.44	221	*e*P	Pn	14 15 18.2	+0.3
	baz=219						
LDUT	**Ludao**	2.45	212	*e*P	Pn	14 15 17.5	-0.5
	baz=210						
LDUT				*e*S	Sn	14 15 46.7	-1.6
	baz=210						
STYT	**Tauyuan**	2.51	231	*e*P	Pn	14 15 19.9	+1.1
	baz=229						
TPUB	**Ta-pu**	2.52	235	*e*P	Pn	14 15 19.4	+0.5
	baz=233						
TPUB				*e*S	Sn	14 15 50.4	+0.6
	baz=233						
TWGBT	**Beinan**	2.54	220	*e*P	Pn	14 15 18.6	-0.5
	baz=219						
TWG	**Pinlang**	2.54	221	*e*P	Pn	14 15 18.7	-0.5
	baz=219						
WTP	**Ta-pu**	2.56	234	*e*P	Pn	14 15 19.8	+0.4
	baz=232						
MASBT	**Mashibuluo**	2.97	224	*e*P	Pn	14 15 25.5	+0.8
	baz=223						

MAN ***25*** *14:20:51.2,13°.53N×120°.58E,h122^{km},mb4.3,ML3.1, MS2.8*

IDC ***25*** *14:20:51.3±2.1,13°.58N×121°.10E,h135^{km}±54^{km},mb2.9/3, mb1 3.2/3,mb1mx2.8/38,mbtmp3.3/3,Error ellipse: s-maj=226.5km s-min=25.3km az=37.0*

ISC 25 14:20:51.9±1.1**,13°.48N**±0°.06×**120°.71E**±0°.08**,h129^{km}**±8^{km}**, n12,σ1^{s}.23**/19**,mb3.3**/3**,3C,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.23	85⇑	*e*P	Pn	14 21 09.3	-0.5
PGP				*i* S	Sn	14 21 22.5	-0.7
LUBP	**Lubang**	0.52	299	*e*P	Pn	14 21 10.0	-0.9
LUBP				*e*S	Sn	14 21 23.9	-1.4
TGY	**Tagaytay City**	0.66	19	P	Pn	14 21 12.3	+0.4
	103nm,0.3s,baz=189,slow=0.8,SNR=14						
TGY				S	Sn	14 21 27.8	+0.6
	77nm,0.3s,baz=250,slow=15,SNR=7.7						
TGY	**Tagaytay City**	0.66	19⇑	*e*P	Pn	14 21 12.6	+0.7
TGY				*e*S	Sn	14 21 28.3	+1.2
LQP	**Lukban**	1.02	52⇑	*e*P	Pn	14 21 15.3	+0.2
LQP				*e*S	Sn	14 21 34.1	+1.4
SJMP	**San Jose**	1.09	159	*e*P	Pn	14 21 15.8	+0.2
SJMP				*e*S	Sn	14 21 34.5	+0.9
BOAC	**Boac**	1.10	91	*e*P	Pn	14 21 15.1	-0.5
BUSP	**Coron**	1.55	199	*e*P	Pn	14 21 21.0	+0.5
BUSP				*e*S	Sn	14 21 43.3	+0.9
CUYO	**Cuyo Island**	2.63	173	*e*P	Pn	14 21 34.5	+0.7
CMAR	**Chiang Mai Arr**	21.50	286	P	P	14 25 32.9	+2.2
	1.1nm,0.8s,baz=95,slow=7.9,SNR=7.9						
WRA	**Warramunga Arr**	35.82	158	P	P	14 27 36.7	-2.4
	0.4nm,0.7s,baz=338,slow=9.4,SNR=2.6						
ASAR	**Alice Springs**	39.11	161	P	P	14 28 05.7	-1.1
	0.2nm,0.7s,baz=335,slow=7.0,SNR=8.5						

NEIC ***25*** *14:26:12.2±1.1,20°.0S±0°.3×179°.2W±0°.1,h637^{km}±12^{km}, mb4.1/8,Error ellipse: s-maj=49.3km s-min=17.5km az=167.0*

IDC ***25*** *14:26:14.7±7.6,20°.19S×179°.20W,h678^{km}±99^{km},mb2.8/6, mb1 3.2/7,mb1mx2.9/31,mbtmp3.8/7,Error ellipse: s-maj=127.6km s-min=36.7km az=156.0*

ISC 25 14:26:12.9±1.3**,20°.0S**±0°.3×**179°.2W**±0°.2**,h650^{km},n16, σ0^{s}.88**/16**,mb3.7**/11**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.57	259	P	P	14 29 05.5	-0.6
	0.1nm,0.3s,baz=254,slow=19,SNR=1.1						
CTAO	Charters Tower	32.42	264	P	P	14 31 54.0	+1.3
CTAO				IAmb	IAmb	14 32 00.1	
	comp=Z,21nm,1.4s						
PATS	Pohnpei	34.62	318	P	P	14 32 10.7	-0.4
WR0	Warramunga Arr	43.37	262	P	P	14 33 21.4	+0.5
WR0				IAmb	IAmb	14 33 34.0	
	comp=Z,12nm,1.5s						
WB0	Warramunga Arr	43.53	262	P	P	14 33 22.4	+0.2
WB0				IAmb	IAmb	14 33 50.7	
	comp=Z,10.0nm,1.4s						
AS31	Alice Springs	43.54	256	P	P	14 33 22.1	-0.2
ASAR	Alice Springs	43.55	256	P	P	14 33 21.9	-0.3
	comp=Z,1.4nm,0.5s,baz=92,slow=8.0,SNR=44						
WB2	Warramunga Arr	43.55	262	P	P	14 33 22.7	+0.4
WB2				IAmb	IAmb	14 33 48.4	
	comp=Z,7.3nm,1.2s						
WRAB	Tennant Creek	43.55	262	P	P	14 33 22.0	-0.3
WRAB				IAmb	IAmb	14 33 47.6	
	comp=Z,4.6nm,1.2s						
WRA	Warramunga Arr	43.56	262	P	P	14 33 22.9	+0.6
	comp=Z,0.8nm,0.3s,baz=96,slow=6.9,SNR=26						
NVAR	Mina Array Bea	81.41	44	P	P	14 37 25.2	+0.8
	comp=Z,0.3nm,0.6s,baz=222,slow=7.7,SNR=4.1						
TXAR	Lajitas Array	87.72	58	P	P	14 37 54.6	-0.4
	comp=Z,0.2nm,0.6s,baz=211,slow=5.1,SNR=3.6						
ILAR	Eielson Array	88.04	13	P	P	14 37 55.6	+0.1
	comp=Z,0.2nm,0.5s,baz=224,slow=5.8,SNR=4.9						
PDAR	Pinedale Array	89.35	44	P	P	14 38 03.5	+1.0
	comp=Z,0.4nm,0.6s,baz=232,slow=3.6,SNR=4.5						
AKASG	Malin Array Be	141.99	331	PKP	PKPdf	14 44 30.8	-1.7
	comp=Z,0.8nm,0.4s,baz=44,slow=4.2,SNR=7.6						
AKASG	Malin Array Be	141.99	331	PKPdf	PKPdf	14 44 31.0	-1.5

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*IDC **25** 14:43:44.8±1.0, 30°.60S×178°.05W, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/22, mbtmp4.1/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/23, Error ellipse: s-maj=31.1km s-min=22.1km az=121.0*

*NEIC **25** 14:43:50.1±0.6, 30°.6S±0°.1×178°.1W±0°.2, h39km±9km, mb4.4/9, Error ellipse: s-maj=28.2km s-min=12.8km az=105.0*

ISC 25 14:43:48.8±0.9**, 30°.69S**±0°.08×**178°.0W**±0°.2**, h35km, n33, σ1s.96**/25**, mb4.3**/8**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.43	2	Pn	Pn	14 44 11.3	-1.0
	212nm,0.3s,baz=79,slow=12,SNR=11						
RAO				Sn	Sn	14 44 26.0	-3.9
	341nm,0.3s,baz=262,slow=23,SNR=3.7						
RAO	Raoul Island	1.43	2		Pn	14 44 12.2	-0.1
URZ	Urewera	8.57	207	Pn	Pn	14 45 47.3	-3.0
	1.0nm,0.3s,baz=275,slow=5.3,SNR=13						
URZ				Sn	Sn	14 47 23.1	-2.6
	3.8nm,0.3s,baz=184,slow=22,SNR=11						
BKZ	Black Stump Fm	9.60	207		Pn	14 46 00.4	-4.0
PLWZ	Palliser	12.15	205	Pn	Pn	14 46 36.4	-3.0
BHW	Baring Head	12.15	206	Pn	Pn	14 46 37.1	-2.3
QRZ	Quartz Range	12.71	215	Pn	Pn	14 46 48.6	+1.7
THZ	Tophouse	13.27	211	Pn	Pn	14 46 56.2	+1.5
DZM	Mont Dzumac	16.37	298	LR	LR	14 52 27.1	
	comp=Z,86nm,19.8s,baz=20,slow=32						
STKA	Stephens Creek	34.43	257	P	P	14 50 34.8	+1.7
	3.2nm,0.5s,baz=113,slow=14,SNR=8.7						
STKA	Stephens Creek	34.43	257	IAmb	IAmb	14 50 37.8	
	comp=Z,2.3nm,1.1s						
BBOO	Buckleboo	38.91	255	P	P	14 51 12.1	+0.9
AS31	Alice Springs	43.11	267	P	P	14 51 45.4	-0.5
ASAR	Alice Springs	43.11	267	P	P	14 51 46.2	+0.3
	comp=Z,1.3nm,0.5s,baz=106,slow=7.4,SNR=43						
WR0	Warramunga Arr	43.95	273	P	P	14 51 52.6	-0.1
WR0				IAmb	IAmb	14 52 09.4	
	comp=Z,7.0nm,1.1s						
WB2	Warramunga Arr	44.12	272	P	P	14 51 54.1	+0.1
WB2				IAmb	IAmb	14 52 00.5	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	44.13	272	P	P	14 51 53.9	-0.2
	comp=Z,1.7nm,0.3s,baz=111,slow=8.1,SNR=28						
WRA	Warramunga Arr	44.13	272	IAmb	IAmb	14 51 56.1	
	comp=Z,0.2nm,0.8s						
WB0	Warramunga Arr	44.15	273	P	P	14 51 54.4	+0.1
WB0				IAmb	IAmb	14 52 22.9	
	comp=Z,9.2nm,1.3s						
FORT	Forrest	45.99	255	P	P	14 52 09.0	+0.2
QSPA	South Pole Qui	59.42	180	P	P	14 53 49.6	+2.0
	comp=Z,0.8nm,0.7s,baz=313,slow=0.4,SNR=8.0						
QSPA	South Pole Qui	59.42	180	IAmb	IAmb	14 53 58.0	
	comp=Z,3.9nm,0.9s						
H03S2	Juan Fernandez	80.29	123	T	T	16 24 56.1	
	baz=238,slow=74,SNR=44						
H03S1	Juan Fernandez	80.30	124	T	T	16 25 01.5	
	baz=238,slow=74,SNR=54						
H03S3	Juan Fernandez	80.31	123	T	T	16 25 00.8	
	baz=238,slow=74,SNR=70						
H03N3	Juan Fernandez	80.48	123	T	T	16 25 12.4	
	baz=241,slow=72,SNR=29						
H03N2	Juan Fernandez	80.48	123	T	T	16 25 15.1	
	baz=241,slow=72,SNR=37						
H03N1	Juan Fernandez	80.50	123	T	T	16 25 11.3	
	baz=241,slow=72,SNR=36						
NVAR	Mina Array Bea	88.44	43	P	P	14 56 38.5	+1.0
	comp=Z,0.5nm,0.7s,baz=228,slow=5.8,SNR=3.9						
MKAR	Makanchi Array	117.97	310	PKP	PKiKP	15 02 33.5	+2.0
	comp=Z,0.2nm,0.6s,baz=110,slow=2.1,SNR=2.1						
FINES	FINESS Array B	145.42	340	PKPbc	PKPdf	15 03 21.5	-0.8
	comp=Z,3.3nm,0.5s,baz=42,slow=4.4,SNR=45						
AKASG	Malin Array Be	151.54	322	PKPbc	PKiKP	15 03 41.0	+1.8
	comp=Z,1.0nm,0.5s,baz=51,slow=3.1,SNR=7.9						
AKASG	Malin Array Be	151.54	322		PKPbc	15 03 39.0	+0.2

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*IDC **25** 15:17:34.6±0.7, 10°.05S×74°.34W, h0km, mb4.1/11, mb1 4.2/15, mb1mx4.1/29, mbtmp4.1/15, ML3.8/4, MS3.2/7, Ms1 3.2/7, ms1mx3.0/33, Error ellipse: s-maj=22.7km s-min=17.3km az=62.0*

*ARE **25** 15:17:36±1.9, 10°.33S±0°.09×74°.6W±0°.1, h52km±5km, Error ellipse: s-maj=20.0km s-min=11.5km az=68.0*

*NEIC **25** 15:17:38.9±1.4, 10°.20S±0°.07×74°.31W±0°.08, h32km±5km, mb4.6/57, ML4.4(ARE), Error ellipse: s-maj=11.0km s-min=9.6km az=76.0*

*VAO **25** 15:17:42.1±1.0, 10°.29S×74°.03W, h10km, mb4.5*

ISC 25 15:17:39.8±0.4**, 10°.22S**±0°.05×**74°.35W**±0°.06**, h35km, n129, σ1s.37**/124**, mb4.6**/35**, MS3.3**/3**, 1C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.96	33	eP	Pn	15 18 28.5	+4.2
NNA	Nana	3.02	234	Pn	Pn	15 18 24.2	-0.9
	44nm,0.3s,baz=52,slow=11,SNR=75						
NNA				Sn	Sn	15 19 01.3	+1.2
	90nm,0.3s,baz=174,slow=14,SNR=12						
NNA				LR	LR	15 19 42.8	
	comp=Z,304nm,20.8s,baz=90,slow=41						
NNA	Nana	3.02	234	Pn	Pn	15 18 24.4	-0.8
ATAH	Atahualpa	5.04	307	Pn	Pn	15 18 54.4	+1.1
	4.4nm,0.3s,baz=125,slow=2.7,SNR=23						
ATAH				Sn	Sn	15 19 54.9	+4.3
	6.5nm,0.3s,baz=311,slow=16,SNR=3.5						
ETMB	Extrema	8.02	88	eP	Pn	15 19 35.2	+1.4
AP01	Chacalluta	8.98	155	Pn	Pn	15 19 47.0	-0.1
PB16	IPOC Station P	9.33	150	Pn	Pn	15 19 51.5	-0.9
MNMC	Minye Minye	9.98	153	Pn	Pn	15 20 00.8	-0.2
PTLC	Puerto Leguiza	10.33	357	eP	Pn	15 20 00.3	-5.3
SAML	Samuel	11.08	84	Pn	Pn	15 20 16.3	+0.4
SAML	Samuel	11.08	84	eP	Pn	15 20 16.6	+0.8
OTAV	Otavalo	11.16	338	Pn	Pn	15 20 16.3	-1.1
OTAV	Otavalo	11.16	338	eP	Pn	15 20 18.7	+1.3
OTAV	Otavalo	11.16	338	eP	Pn	15 20 24.1	+6.8
PATCX	Punta Patache	11.29	160	Pn	Pn	15 20 17.4	-1.4
PB07	IPOC Station P	12.22	160	Pn	Pn	15 20 31.3	-0.2
MACC	Macarena, Meta	12.29	2	eP	Pn	15 20 31.4	-1.1
GARC	Garzon, Huila	12.38	355	eP	Pn	15 20 31.5	-2.3
PCON	Cinco Dias	12.63	351	eP	Pn	15 20 36.9	-0.7
LVC	Limon Verde	13.38	158	LR	LR	15 25 53.9	
	comp=Z,86nm,20.5s,baz=323,slow=37						
ORTC	Ortega, Tolima	14.06	356	eP	Pn	15 20 57.3	+0.7
SIV	San Ignacio	14.14	115	Pn	Pn	15 20 56.7	-1.0
	0.5nm,0.3s,baz=314,slow=11,SNR=13						
SIV				LR	LR	15 27 19.6	
	comp=Z,78nm,21.1s,baz=312,slow=41						
YOTC	Yotoco, Valle	14.25	352	eP	P	15 21 05.0	-1.1
ANIL	Santa Ana	14.65	356	eP	P	15 21 12.2	+1.4
CHIC	Chingaza	14.76	2	eP	Pn	15 21 04.5	-2.0
ROSC	El Rosal	14.96	0	LR	LR	15 27 19.3	
	comp=Z,84nm,21.8s,baz=140,slow=40						
RREF	El Recreo	15.05	356	eP	P	15 21 13.7	-1.9
PLMC	San Jos del P	15.15	353	eP	Pn	15 21 09.1	-2.3
MACA	Manacapuru-AM	15.27	64	eP	Pn	15 21 13.8	+0.9
GUY2C	Guyana, Caldas	15.37	356	eP	P	15 21 21.7	+2.7
GO02	Mina Guanaco	15.54	164	Pn	Pn	15 21 16.4	-0.2
CBOC	Ciudad Bolivar	16.06	354	eP	P	15 21 26.4	0.0
PTBC	PUERTO BERRIO,	16.65	360	eP	P	15 21 30.8	-1.8
PTGA	Pitinga	17.12	57	P	Pn	15 21 35.4	-1.2
	0.7nm,0.3s,baz=236,slow=14,SNR=4.8						
DBBC	Dabeiba	17.22	354	eP	P	15 21 40.2	+1.1
AC02	Maricunga	17.25	164	P	P	15 21 38.7	-1.1
PAMC	Pamplona, Colo	17.52	5	eP	P	15 21 45.0	+2.2
ZARC	Zaragoza, Cauc	17.60	358	eP	P	15 21 43.6	+0.4
SMLC	San Martn de	18.89	1	eP	P	15 21 51.9	-5.6
AC05	El Transito	18.91	169	P	P	15 21 56.0	-1.7
NPGB	Novo Progresso	19.03	82	eP	Pn	15 22 00.8	+0.8
SDV	Santo Domingo	19.33	11	P	P	15 22 01.3	-1.2
	0.4nm,0.3s,baz=28,slow=21,SNR=2.4						
SDV	Santo Domingo	19.33	11	P	P	15 22 01.1	-1.4
SDV	Santo Domingo	19.33	11	eP	Pn	15 22 07.9	+4.2
ITTB	Itaituba	19.35	74	eP	Pn	15 22 05.1	+1.4
MALB	Monte Alegre	21.61	69	eP	P	15 22 30.2	+3.2
SNDB	Serra Nova Dou	22.69	97	eP	P	15 22 40.3	+1.8
CPUP	Villa Florida	22.71	137	P	P	15 22 39.4	+0.7
	5.0nm,0.8s,baz=338,slow=10,SNR=4.0						
CPUP				LR	LR	15 33 58.6	
	comp=Z,92nm,18.1s,baz=300,slow=43						
CPUP	Villa Florida	22.71	137	P	P	15 22 38.6	-0.1
MCPB	Macapa, AP	24.23	68	eP	P	15 22 56.4	+2.7
ITRB	Iturama	24.99	115	eP	P	15 23 03.9	+3.4
BDFB	Brasilia	26.21	105	LR	LR	15 34 15.3	
	comp=Z,147nm,18.7s,baz=301,slow=38						
OBIP	Obispado Ponce	29.10	15	P	P	15 23 37.2	-0.1
OBIP				IAmb	IAmb	15 23 38.1	
	comp=Z,24nm,1.3s						
PDPR	Patillas Dam,	29.23	16	P	P	15 23 38.6	+0.1
PDPR				IAmb	IAmb	15 24 02.1	
	comp=Z,16nm,1.2s						
SJG	San Juan	29.29	16	P	P	15 23 38.5	-0.4
	comp=Z,8.9nm,0.7s,baz=269,slow=2.1,SNR=3.8						
SJG				LR	LR	15 34 23.1	
	comp=Z,39nm,19.0s,baz=183,slow=35						
PLCA	Paso Flores	30.58	174	P	P	15 23 53.5	+3.2
	comp=Z,1.4nm,0.9s,baz=342,slow=9.4,SNR=4.7						
PLCA	Paso Flores	30.58	174	IAmb	IAmb	15 24 00.4	
	comp=Z,2.8nm,1.4s						
W57A	Gilead	45.44	354	P	P	15 25 55.2	-0.1
W50A	Signal Mountai	46.35	348	P	P	15 26 01.8	-0.8
W50A				IAmb	IAmb	15 26 08.3	
	comp=Z,9.2nm,0.9s						
T59A	Double "B" Far	47.03	356	P	P	15 26 08.2	+0.4
T57A	Hurt	47.19	355	P	P	15 26 08.5	-0.6
V48A	Smith Brothers	47.20	346	P	P	15 26 08.1	-1.2
V48A				IAmb	IAmb	15 26 08.9	
	comp=Z,8.9nm,1.1s						
S57A	Dark Hollow, R	47.92	355	P	P	15 26 15.4	+0.6
TXAR	Lajitas Array	48.43	325	P	P	15 26 18.9	0.0
	comp=Z,0.9nm,0.5s,baz=147,slow=9.2,SNR=8.2						
TXAR	Lajitas Array	48.43	325	P	P	15 26 18.5	-0.4
R55A	Marlinton	48.55	354	P	P	15 26 19.2	-0.5
X37A	Clayton	48.82	337	P	P	15 26 21.2	-0.5
X37A				IAmb	IAmb	15 26 45.5	
	comp=Z,7.8nm,1.2s						
FCAR	Ozark Folk Cen	48.83	341	P	P	15 26 20.7	-1.1
FCAR				IAmb	IAmb	15 26 30.0	
	comp=Z,3.2nm,0.8s						
ABTX	Abilene, Hawle	48.97	331	P	P	15 26 22.7	-0.3
T42A	Van Buren	49.56	342	P	P	15 26 25.6	-1.7
T42A				IAmb	IAmb	15 26 34.8	
	comp=Z,5.0nm,0.8s						
MVL	Millersville	49.99	358	P	P	15 26 31.1	+0.5
MGMO	Mountain Grove	50.04	341	P	P	15 26 29.2	-1.8
MGMO				IAmb	IAmb	15 26 31.1	
	comp=Z,8.4nm,1.1s						
TUL1	Leonard	50.14	337	P	P	15 26 31.6	-0.3
TUL1				IAmb	IAmb	15 26 33.1	
	comp=Z,9.0nm,0.8s						
FVM	French Village	50.26	343	P	P	15 26 32.0	-0.6
FVM				IAmb	IAmb	15 26 52.2	
	comp=Z,3.3nm,0.7s						
P43A	Skaggs, Pawnee	51.57	345	P	P	15 26 41.0	-1.5
BINY	Binghamton	52.18	358	P	P	15 26 47.1	+0.1
SDCO	Great Sand Dun	55.92	330	P	P	15 27 13.8	-0.9
WUAZ	Wupatki	57.37	324	P	P	15 27 24.7	-0.3
WUAZ				IAmb	IAmb	15 27 26.3	
	comp=Z,5.3nm,1.0s						
PV01	Paradox Valley	57.76	328	P	P	15 27 27.2	-0.6
PV01				IAmb	IAmb	15 27 28.7	
	comp=Z,4.0nm,0.8s						
PV15	Paradox Valley	57.87	329	P	P	15 27 28.2	-0.3
PV15				IAmb	IAmb	15 27 30.0	
	comp=Z,8.8nm,1.0s						
PV13	Radium Mtn., P	57.91	328	P	P	15 27 28.1	-0.7
PV13				IAmb	IAmb	15 27 29.5	
	comp=Z,5.6nm,0.8s						
PV05	Paradox Valley	57.99	328	P	P	15 27 28.8	-0.6
PV05				IAmb	IAmb	15 27 30.2	
	comp=Z,3.9nm,0.9s						
F36A	Milaca	58.42	344	P	P	15 27 31.0	-1.0
F36A				IAmb	IAmb	15 27 31.5	
	comp=Z,6.5nm,0.9s						
MSU	Marysvale	59.96	326	P	P	15 27 42.1	-0.9
RDMU	Red Mountain	60.11	330	P	P	15 27 43.3	-0.7
PSUT	Pine Spring	60.90	325	P	P	15 27 49.3	-0.2
DRLN	Deer Lake	61.04	13	P	P	15 27 49.5	-0.3
DUG	Dugway, Tooele	61.51	327	P	P	15 27 52.1	-1.3
DUG				IAmb	IAmb	15 27 54.5	
	comp=Z,3.7nm,0.9s						
R11A	Troy Canyon, C	61.77	324	P	P	15 27 54.6	-0.6
BW06	Boulder Array	61.77	331	P	P	15 27 53.6	-1.7
PDAR	Pinedale Array	61.77	331	P	P	15 27 54.2	-1.0
	comp=Z,0.7nm,0.6s,baz=120,slow=6.7,SNR=6.8						
PDAR	Pinedale Array	61.77	331	P	P	15 27 53.8	-1.5
HWUT	Hardware Ranch	61.88	329	P	P	15 27 54.9	-1.0
HWUT				IAmb	IAmb	15 27 56.3	
	comp=Z,4.6nm,0.8s						
SPUT	South Promonto	62.12	328	P	P	15 27 56.4	-1.1
BGU	Big Grassy Mou	62.15	328	P	P	15 27 56.9	-0.8
HVU	Hansel Valley	62.63	328	P	P	15 28 00.3	-0.7
ULM	Lac du Bonnet	63.08	345	P	P	15 28 02.6	-0.9
	comp=Z,5.4nm,0.7s,baz=172,slow=6.0,SNR=9.8						
ULM	Lac du Bonnet	63.08	345	P	P	15 28 01.8	-1.8
ULM				IAmb	IAmb	15 28 03.5	
	comp=Z,6.8nm,1.0s						
NVAR	Mina Array Bea	63.42	322	P	P	15 28 04.5	-1.8
	comp=Z,0.7nm,0.8s,baz=145,slow=7.5,SNR=5.7						
YHL	Hebgen Lake	64.12	332	P	P	15 28 11.1	+0.3
HLID	Hailey	64.75	329	P	P	15 28 14.7	-0.2
BCYI	Bear Canyon	64.78	330	P	P	15 28 14.2	-0.9
AFDM	Forest Hills D	65.37	321	P	P	15 28 18.9	+0.1
MFID	Camas Ranch	65.38	328	P	P	15 28 18.7	-0.2
MFID				IAmb	IAmb	15 28 20.0	
	comp=Z,6.7nm,1.0s						
ORV	Oroville	66.06	322	P	P	15 28 22.9	-0.3
ORV				IAmb	IAmb	15 28 25.2	
	comp=Z,6.3nm,1.2s						
MOD	Modoc Plateau	66.82	324	P	P	15 28 27.7	-0.5
MOD				IAmb	IAmb	15 28 29.7	
	comp=Z,12nm,1.5s						
K05A	Summer Lake	67.68	325	P	P	15 28 34.2	+0.4
K05A				IAmb	IAmb	15 28 35.2	
	comp=Z,7.2nm,1.1s						
I07A	Izee	67.79	326	P	P	15 28 34.3	0.0
I07A				IAmb	IAmb	15 28 35.6	
	comp=Z,3.9nm,0.9s						
PINE	Pine Mountain	68.39	326	P	P	15 28 37.8	-0.4
DBIC	Dimbokro	71.20	79	P	P	15 28 55.1	-0.7
	comp=Z,5.1nm,1.1s,baz=220,slow=16,SNR=2.0						
VNA3	Neumayer Olymp	72.36	162	P	P	15 29 01.8	0.0
VNA1	Neumayer--Stat	72.59	161	P	P	15 29 03.1	0.0
VNA2	Neumayer--Watz	72.95	162	P	P	15 29 05.0	-0.3
	baz=292,slow=6.8						
SNAA	Sanae	74.58	162	P	P	15 29 14.6	-0.3
SNAA	Sanae	74.58	162	P	P	15 29 13.9	-1.0
SNAA				IAmb	IAmb	15 29 21.5	
	comp=Z,8.4nm,1.0s						
BBB	Bella Bella	77.33	329	P	P	15 29 31.4	+0.7
YKA	Yellowknife Ar	78.89	342	P	P	15 29 38.4	-0.8
	comp=Z,1.3nm,0.9s,baz=135,slow=6.6,SNR=17						
TORD	Torodi Ar. Bea	78.96	74	P	P	15 29 40.0	-0.6
	comp=Z,1.7nm,0.8s,baz=261,slow=5.9,SNR=3.9						
TORD	Torodi Ar. Bea	78.96	74	P	P	15 29 38.2	-2.3
ESDC	Sonseca Array	81.78	47	P	P	15 29 54.4	-0.9
	comp=Z,0.4nm,0.8s,baz=270,slow=5.9,SNR=2.4						
ZALV	Zalesovo Beam	133.31	17	PKP	PKiKP	15 36 52.2	-1.0
	comp=Z,0.8nm,0.4s,baz=248,slow=4.0,SNR=6.4						
ZALV	Zalesovo Beam	133.31	17		PKPdf	15 36 51.3	-0.7
ASAR	Alice Springs	136.44	219	PKP	PKPdf	15 36 58.2	-0.7
	comp=Z,1.0nm,0.9s,baz=156,slow=3.7,SNR=8.0						
MKAR	Makanchi Array	138.50	24	PKP	PKPdf	15 37 01.6	-0.4
	comp=Z,0.5nm,0.8s,baz=264,slow=1.2,SNR=4.0						
WRA	Warramunga Arr	138.82	223	PKP	PKPdf	15 37 02.7	-0.6
	comp=Z,1.3nm,1.0s,baz=145,slow=1.7,SNR=4.9						
SONM	Songino Array	142.50	359	PKP	PKPdf	15 37 09.5	+0.2
	comp=Z,0.4nm,0.7s,baz=289,slow=4.5,SNR=3.6						
KSRS	Korea Array	146.27	327	PKPbc	PKPbc	15 37 16.7	-0.4
	comp=Z,1.4nm,0.8s,baz=296,slow=1.8,SNR=5.8						
GTA	Gaotai	150.47	9	⇑PKPbc	PKPdf	15 37 23.3	+0.3
GTA				pPKP	pPKPdf	15 37 35.0	+0.1
GTA				sPKP		15 37 39.0	
CMAR	Chiang Mai Arr	169.54	38	PKP	PKPdf	15 37 45.0	+0.5
	comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=2.2						

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*BER **25** 15:53:10.4±3.9, 78°.90N×5°.18E, h10km, ML1.9, ML2.6(DNK), Confirmed Earthquake*

*IEPN **25** 15:53:16.0, 78°.64N×6°.40E, h10km*

ISC 25 15:53:06.6±0.9**, 78°.69N**±0°.08×**4°.89E**±0°.04**, h10km, n15, σ2s.52**/32**, 2C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.40	77	e	Pn	15 53 33.7	+1.7
	baz=297,slow=6.2						
KBS				⇑iP	Pg	15 53 34.3	+1.0
KBS				eS	Sb	15 53 49.3	-1.2
KBS				IAML		15 53 49.9	
	comp=Z,99nm,0.2s						
KBS	Kingsbay	1.40	77	e	Pn	15 53 33.7	+1.7
	baz=297,slow=6.2						
KBS				i P	Pg	15 53 34.3	+1.0
KBS				eS	Sb	15 53 48.5	-2.0
KBS				IAML		15 53 51.1	
	comp=Z,153nm,0.3s						
BRBA	Barentsburg A	1.99	104	eP	Pb	15 53 43.3	+0.6
BRBA				eS	Sn	15 54 03.9	-1.2
SPA0	Spitsbergen Ar	2.37	97	eP	Pb	15 53 49.2	-0.1
SPA0				eS	Sn	15 54 14.6	+0.1
SPA0	Spitsbergen Ar	2.37	97	⇑iP	Pb	15 53 49.1	-0.1
SPA0				i S	Sn	15 54 14.5	+0.1
HSPB	Hornsund (broa	2.81	122	eP	Pb	15 53 55.4	-1.5
HSPB				eS	Sn	15 54 25.7	+0.4
HSPB				IAML		15 54 32.5	
	comp=Z,8.1nm,1.0s						
HSPB	Hornsund (broa	2.81	122	eP	Pb	15 53 55.3	-1.5
HSPB				eS	Sn	15 54 24.2	-1.2
HOPEN	Hopen	4.83	107	eP	Pn	15 54 21.9	+2.8
HOPEN				eS	Sn	15 55 13.2	-1.9
HOPEN				IAML		15 55 15.6	
	comp=Z,7.7nm,0.4s						
HOPEN	Hopen	4.83	107	eP	Pn	15 54 22.0	+2.8
HOPEN				eS	Sn	15 55 12.2	-2.9
DAG	Danmarks Havn	5.35	261	eP	Pn	15 54 29.9	+3.6
DAG				eS	Sn	15 55 26.9	-0.8
DAG				IAML		15 55 30.9	
	comp=Z,1.7nm,0.3s						
DAG	Danmarks Havn	5.35	261	i P	Pn	15 54 29.8	+3.6
DAG				eS	Sn	15 55 27.1	-0.6
DAG	Danmarks Havn	5.35	261	i P	Pn	15 54 29.8	+3.6
DAG				eS	Sn	15 55 27.1	-0.6
DAG				IAML		15 55 30.9	
	comp=Z,1.7nm,0.3s						
DBG	Daneborg	7.27	246	eP	Pn	15 54 56.0	+3.4
DBG				eS	Sn	15 56 11.8	-3.2
DBG				IAML		15 56 19.8	
	comp=Z,1.0nm,0.4s						
DBG	Daneborg	7.27	246	i P	Pn	15 54 55.9	+3.4
DBG				eS	Sn	15 56 11.3	-3.7
DBG				IAML		15 56 19.8	
	comp=Z,1.0nm,0.4s						
ZFI2	Zemlya Franca-	7.75	54	eP	Pn	15 55 02.1	+3.0
ZFI2				eS	Sn	15 56 20.4	-6.3
	comp=Z,3.0nm,1.0s						

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*IDC **25** 16:54:43.9±1.7, 42°.44N×80°.65E, h0km, mb3.7/3, mb1 3.7/8, mb1mx3.4/52, mbtmp3.5/8, ML3.0/6, MS3.7/2, Ms1 3.7/2, ms1mx2.7/41, Error ellipse: s-maj=25.2km s-min=14.3km az=159.0*

*NNC **25** 16:54:52.0±0.8, 43°.06N×80°.42E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=5.9km s-min=3.4km az=152.0*

*SOME **25** 16:54:53.2, 43°.07N×80°.33E, h20km, MS2.8*

*KRNET **25** 16:54:54.2±0.1, 43°.13N×80°.37E, h30km, mb4.0*

ISC 25 16:54:49.5±1.5**, 43°.04N**±0°.04×**80°.44E**±0°.04**, h6km**±9km**, n84, σ1s.81**/131**, mb3.8**/3**, 22C-11D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	0.41	351	eP	Pn	16 55 01.6	-0.5
	baz=57						
KTMS				eS	Sb	16 55 07.6	+1.8
	baz=57						
KTMS	Ketmen	0.41	351	eP	Pn	16 55 01.6	-0.5
	310nm,0.1s						
KTMS				eS	Sb	16 55 07.6	+1.8
	1μm,0.2s						
KTMS	Ketmen	0.41	351	P	Pn	16 55 01.5	-0.5
	310nm,0.1s						
KTMS				S	Sb	16 55 07.6	+1.8
	1μm,0.2s						
SHLS	Shalkode	0.73	279	eP	Pg	16 55 02.0	-1.5
	baz=74						
SHLS				eS	Sg	16 55 08.5	-4.5
	baz=74						
SHLS	Shalkode	0.73	279	eP	Pg	16 55 01.9	-1.5
	656nm,0.2s						
SHLS				eS	Sg	16 55 08.5	-4.5
	7μm,0.3s						
PDGK	Podgornoye	0.75	293	P	Pn	16 55 07.0	+0.2
	237nm,0.2s						
PDGK				S	Sb	16 55 16.8	+1.1
	1μm,0.2s						
PDGK	Podgornoye	0.75	293	⇑P	Pn	16 55 06.8	0.0
	164nm,0.3s						
PDGK				⇓S	Sb	16 55 17.0	+1.3
	961nm,0.3s						
UZB	Uzynbulak	1.05	276	eP	Pn	16 55 11.8	+1.0
UZB				eS	Sb	16 55 25.1	+1.0
UZB	Uzynbulak	1.05	276	P	Pn	16 55 11.8	+1.0
UZB				S	Sb	16 55 25.1	+1.0
KPKS	Kokpek	1.35	289	eP	Pg	16 55 16.9	+1.4
	baz=86						
KPKS				eS	Sg	16 55 34.0	+1.0
	baz=86						
KPKS	Kokpek	1.35	289	eP	Pg	16 55 16.9	+1.4
	644nm,0.3s						
KPKS				eS	Sg	16 55 34.0	+1.0
	2μm,0.4s						
DJR	Jarkent	1.37	340	eP	Pg	16 55 17.6	+1.7
	81nm,0.4s						
DJR				eS	Sg	16 55 35.3	+1.6
	558nm,0.3s						
DJR	Jarkent	1.37	340	P	Pg	16 55 17.5	+1.7
	81nm,0.4s						
DJR				S	Sg	16 55 35.3	+1.6
	558nm,0.3s						
ZHN	Zhinishke	1.48	276	eP	Pg	16 55 19.6	+1.8
	baz=72						
ZHN				eS	Sg	16 55 38.7	+1.7
	baz=72						
ZHN	Zhinishke	1.48	276	eP	Pg	16 55 19.6	+1.8
	104nm,0.2s						
ZHN				eS	Sg	16 55 38.7	+1.7
	350nm,0.2s						
ZHN	Zhinishke	1.48	276	P	Pg	16 55 19.6	+1.8
	104nm,0.2s						
ZHN				S	Sg	16 55 38.7	+1.7
	350nm,0.2s						
SATY	Saty	1.49	271	eP	Pg	16 55 19.8	+1.6
	baz=68						
SATY				eS	Sg	16 55 38.9	+1.4
	baz=68						

SATY	Saty	1.49	271	eP	Pg	16 55 19.8	+1.6
	252nm,0.4s						
SATY				eS	Sg	16 55 38.9	+1.4
	1µm,0.1s						
SATY	Saty	1.49	271	P	Pg	16 55 19.8	+1.6
	252nm,0.4s						
SATY				S	Sg	16 55 38.9	+1.4
	1µm,0.1s						
PRZ	Przheval'sk	1.60	250	⇑iP	Pg	16 55 22.2	+1.9
	baz=47						
PRZ				⇑iS	Sg	16 55 43.5	+2.4
	baz=47						
KURS	Kuram	1.72	286	eP	Pg	16 55 23.3	+0.8
	94nm,0.4s						
KURS				eS	Sg	16 55 45.3	+0.6
KURS	Kuram	1.72	286	P	Pg	16 55 23.3	+0.8
	94nm,0.4s						
KURS				S	Sg	16 55 45.3	+0.6
MNBS	Baschi	1.81	306	eP	Pg	16 55 24.8	+0.6
	129nm,0.1s						
MNBS				eS	Sg	16 55 47.7	0.0
	2µm,0.4s						
ANVS	Anan'yevo	2.06	264	⇑iP	Pg	16 55 28.7	-0.2
	baz=61						
ANVS				⇑iS	Sb	16 55 53.3	+0.1
	baz=61						
ARXS	Arharly	2.23	303	eP	Pb	16 55 31.3	+1.0
	188nm,0.4s						
ARXS				eS	Sb	16 55 58.1	-0.1
	347nm,0.3s						
KAPS	Kapalarasan	2.37	341	eP	Pg	16 55 35.0	0.0
	42nm,0.2s						
KAPS				eS	Sg	16 56 04.7	-1.1
	605nm,0.6s						
KAPS	Kapalarasan	2.37	341	Pg	Pg	16 55 35.0	0.0
	42nm,0.2s						
KAPS				Lg	Lg	16 56 05.2	
	605nm,0.6s						
KOTS	Kotyrbulak	2.45	276	eP	Pg	16 55 35.9	-0.5
	37nm,0.3s						
KOTS				eS	Sb	16 56 06.5	+2.1
	2µm,0.5s						
KOTS	Kotyrbulak	2.45	276	Pg	Pg	16 55 35.9	-0.5
	37nm,0.3s						
KOTS				Lg	Lg	16 56 06.5	
	2µm,0.5s						
TDK	Taldyqorghan	2.45	324	eP	Pg	16 55 36.3	-0.1
TDK				eS	Sg	16 56 07.2	-1.0
TDK	Taldyqorghan	2.45	324	Pg	Pg	16 55 36.3	-0.1
TDK				Lg	Lg	16 56 07.2	
MDOK	Medeo	2.49	274	eP	Pg	16 55 36.6	-0.6
	20nm,0.4s						
MDOK				eS	Sb	16 56 07.6	+2.0
	207nm,0.5s						
MDOK	Medeo	2.49	274	⇑Pn	Pb	16 55 33.6	-1.1
	30nm,0.5s						
MDOK				⇓Lg	Lg	16 56 10.0	
	220nm,0.7s						
MDOK	Medeo	2.49	274	Pg	Pg	16 55 36.6	-0.6
	20nm,0.4s						
MDOK				Lg	Lg	16 56 07.6	
	207nm,0.5s						
KNDC	Almaty	2.55	275	⇓Pg	Pg	16 55 42.0	+3.6
	98nm,0.6s						
KNDC				⇓Lg	Lg	16 56 11.9	
	424nm,0.6s						
TNSS	Tian-Shan	2.56	271	eP	Pb	16 55 37.6	+1.5
	21nm,0.3s						
TNSS				eS	Sb	16 56 09.6	+1.6
	175nm,0.4s						
TNSS	Tian-Shan	2.56	271	Pg	Pb	16 55 37.6	+1.5
	21nm,0.3s						
TNSS				Lg	Lg	16 56 09.6	
	175nm,0.4s						
KDJ	Kajisay	2.58	250	⇑iP	Pb	16 55 36.2	0.0
	baz=48						
KDJ				⇑iS	Sb	16 56 07.0	-1.2
	baz=48						
AAA	Alma-Ata	2.59	275	eP	Pg	16 55 38.8	-0.3
	29nm,0.3s						
AAA				eS	Sg	16 56 11.6	-1.0
	230nm,0.5s						
AAA	Alma-Ata	2.59	275	Pg	Pg	16 55 38.8	-0.3
	29nm,0.3s						
AAA				Lg	Lg	16 56 11.6	
	230nm,0.5s						
CHKK	Chushkaly	2.64	289	eP	Pg	16 55 39.3	-0.8
	16nm,0.3s						
CHKK				eS	Sb	16 56 12.2	+2.2
	176nm,0.2s						
CHKK	Chushkaly	2.64	289	Pg	Pg	16 55 39.3	-0.8
	16nm,0.3s						
CHKK				Lg	Lg	16 56 12.2	
	176nm,0.2s						
IZV	Izvestkoviy	2.81	271	eP	Pg	16 55 42.2	-1.1
	26nm,0.2s						
IZV				eS	Sb	16 56 17.1	+2.3
	270nm,0.5s						
IZV	Izvestkoviy	2.81	271	Pg	Pg	16 55 42.2	-1.1
	26nm,0.2s						
IZV				Lg	Lg	16 56 17.1	
	270nm,0.5s						
KTBS	Karatobe	2.82	285	eP	Pg	16 55 42.6	-1.0
	27nm,0.5s						
KTBS				eS	Sb	16 56 17.9	+2.8
	244nm,0.5s						
KTBS	Karatobe	2.82	285	Pg	Pg	16 55 42.6	-1.0
	27nm,0.5s						
KTBS				Lg	Lg	16 56 17.9	
	244nm,0.5s						
MTBS	Maitube	2.94	273	eP	Pg	16 55 44.8	-1.1
	18nm,0.4s						
MTBS				eS	Sb	16 56 21.4	+2.7
	110nm,0.5s						
MTBS	Maitube	2.94	273	Pg	Pg	16 55 44.8	-1.1
	18nm,0.4s						
MTBS				Lg	Lg	16 56 21.4	
	110nm,0.5s						
KUU	Kurty	3.11	287	eP	Pg	16 55 48.5	-0.5
	17nm,0.3s						
KUU				eS	Sg	16 56 27.9	-1.4
	168nm,0.4s						
KUU	Kurty	3.11	287	Pg	Pg	16 55 48.5	-0.5
	17nm,0.3s						
KUU				Lg	Lg	16 56 27.9	
	168nm,0.4s						
KST	Kastek	3.28	272	eP	Pg	16 55 50.9	-1.6
	20nm,0.4s						
KST				eS	Sg	16 56 32.8	-2.2
	132nm,0.5s						
KST	Kastek	3.28	272	Pg	Pg	16 55 50.8	-1.6
	20nm,0.4s						
KST				Lg	Lg	16 56 32.8	
	132nm,0.5s						
BOOM	Boomskoye usch	3.36	262	⇓iP	Pb	16 55 46.3	-3.3
	baz=60						
BOOM				⇓iS	Sn	16 56 24.9	+1.9
	baz=60						
DGS	Degeres	3.42	275	eP	Pg	16 55 54.2	-0.9
	46nm,0.3s						
DGS				eS	Sg	16 56 38.3	-1.2
	131nm,0.5s						
DGS	Degeres	3.42	275	Pg	Pg	16 55 54.2	-0.9
	46nm,0.3s						
DGS				Lg	Lg	16 56 38.3	
	131nm,0.5s						
KRBS	Karabastau	3.54	282	eP	Pg	16 55 55.6	-1.6
	20nm,0.3s						
KRBS				eS	Sg	16 56 40.2	-2.9
	92nm,0.5s						
KRBS	Karabastau	3.54	282	Pg	Pg	16 55 55.6	-1.6
	20nm,0.3s						
KRBS				Lg	Lg	16 56 40.2	
	92nm,0.5s						
TKM2	Tokmak 2	3.56	270	⇑Pg	Pg	16 55 58.3	+0.6
	21nm,0.5s						
TKM2				⇓Lg	Lg	16 56 45.5	
	81nm,0.7s						
MAKZ	Makanchi	3.92	16	⇑Pn	Pn	16 55 53.9	+3.6
	5.4nm,0.5s						
MAKZ				⇑Sn	Sn	16 56 38.3	+1.7
	6.1nm,0.3s						
MAKZ				⇑Lg	Lg	16 56 52.0	
	18nm,0.4s						
MK31	Makanchi Array	3.97	19	⇑Pn	Pn	16 55 53.8	+2.8
	1.1nm,0.2s,baz=202,slow=14,SNR=443						
MK31				⇑Sn	Sn	16 56 40.2	+2.3
	6.6nm,0.3s,baz=195,slow=16,SNR=5.4						
MK31				⇑Lg	Lg	16 56 54.2	
	21nm,0.4s,baz=197,slow=30,SNR=9.1						
MKAR	Makanchi Array	3.97	19	Pn	Pn	16 55 54.8	+3.8
	3.3nm,0.3s,baz=201,slow=14,SNR=328						
MKAR				Lg	Lg	16 56 54.8	
	11nm,0.3s,baz=197,slow=30,SNR=9.0						
SGDS	Sogindy	4.27	277	Pg	Pg	16 56 09.5	-1.7
	5.5nm,0.7s						
SGDS				Lg	Lg	16 57 03.9	
	47nm,0.6s						
FRU1	Bishkek	4.28	269	⇓iP	Pn	16 55 58.7	+3.5
	baz=68						
FRU1				⇓iS	Sn	16 56 47.2	+1.8
	baz=68						
AAK	Ala-Archa	4.39	267	Pn	Pn	16 55 57.9	+1.0
	0.2nm,0.3s,baz=165,slow=21,SNR=2.3						
AAK				Pg	Pb	16 56 07.5	+0.4
	0.4nm,0.3s,baz=132,slow=11,SNR=8.9						
AAK				Lg	Lg	16 57 06.8	
	4.2nm,0.3s,baz=231,slow=22,SNR=7.1						
AAK	Ala-Archa	4.39	267	⇑Pg	Pg	16 56 12.3	-1.4
	17nm,0.9s						
AAK				⇓Lg	Lg	16 57 13.9	
	45nm,0.8s						
ARLS	Aral	4.68	257	⇑iP	Pn	16 56 05.1	+4.3
	baz=56						
ARLS				⇑iS	Sn	16 56 56.8	+1.3
	baz=56						
BTLS	Baital	5.03	296	eP	Pg	16 56 24.1	-1.7
	8.0nm,0.4s						
BTLS				eS	Sg	16 57 29.2	-1.6
	12nm,0.5s						
BTLS	Baital	5.03	296	Pg	Pg	16 56 24.1	-1.7
	8.0nm,0.4s						
BTLS				Lg	Lg	16 57 29.2	
	12nm,0.5s						
MRKS	Merke	5.31	269	eP	Pg	16 56 30.8	-0.4
	9.1nm,0.8s						
MRKS				eS	Sg	16 57 40.7	+0.7
	15nm,0.4s						
WMQ	Urumqi	5.34	79	ePn	Pn	16 56 12.8	+3.0
WMQ				Sn	Sn	16 57 13.8	+2.2
WMQ				smax	smax		
	comp=N,25nm,0.9s						
WMQ				smax	smax		
	comp=E,47nm,0.7s						
ZSN	Zaisan	5.40	34	eP	Pg	16 56 30.8	-2.2
	comp=E,2.1nm,0.1s						
ZSN				eS	Sg	16 57 40.4	-2.4
	comp=E,26nm,0.5s						
KK31	Karatay Array	7.27	274	⇑Pg	Pg	16 57 07.1	-1.7
	comp=E,2.3nm,0.6s,baz=83,slow=15,SNR=9.2						
KK31				⇑Lg	Lg	16 58 45.8	
	comp=E,8.1nm,0.6s,baz=80,slow=29,SNR=6.8						
KURBB	Kurchatov Arra	7.70	351	Pn	Pn	16 56 44.9	+2.9
	comp=E,0.1nm,0.3s,baz=177,slow=12,SNR=1.9						
KURBB				Sn	Sn	16 58 20.3	+11
	comp=E,0.4nm,0.3s,baz=170,slow=17,SNR=5.1						
KURBB				Lg	Lg	16 58 51.8	
	comp=E,0.4nm,0.3s,baz=172,slow=31,SNR=3.3						
KURBB	Kurchatov Arra	7.70	351	⇑Lg	Lg	16 58 52.8	
	comp=E,42nm,0.7s						
KURK	Kurchatov	7.78	351	⇓Pn	Pn	16 56 44.8	+1.6
	comp=E,3.5nm,0.6s						
KURK				⇑Lg	Lg	16 58 57.5	
	comp=E,24nm,0.8s						
ZALV	Zalesovo Beam	11.29	13	Pn	Pn	16 57 33.8	+2.5
	comp=E,0.2nm,0.3s,baz=201,slow=12,SNR=2.8						
ZALV				Sn	Sn	16 59 32.4	-5.2
	comp=E,0.8nm,0.3s,baz=195,slow=22,SNR=6.6						
BVAR	Borovoye Array	12.03	330	Sn	Sn	17 00 04.8	+9.0
	comp=E,0.3nm,0.3s,baz=167,slow=20,SNR=3.3						
BVAR				Lg	Lg	17 01 29.0	
	comp=E,0.3nm,0.3s,baz=172,slow=30,SNR=3.6						
AKTO	Aktyubinsk	17.02	304	P	P	16 58 49.2	-0.7
	comp=E,0.1nm,0.3s,baz=186,slow=22,SNR=2.3						
SONM	Songino Array	18.79	66	P	P	16 59 06.7	-2.8
	comp=E,0.1nm,0.3s,baz=267,slow=11,SNR=7.0						
BELG	Belogornoye	23.80	305	LR	LR	17 09 25.7	
	comp=E,64nm,18.1s,baz=282,slow=36						
ARCES	ARCESS Array B	38.30	332	P	P	17 02 10.3	-0.1
	comp=E,2.0nm,0.9s,baz=23,slow=4.3,SNR=4.3						
ILAR	Eielson Array	66.33	20	P	P	17 05 37.0	-1.5
	comp=E,0.6nm,0.7s,baz=320,slow=4.4,SNR=6.5						
YKA	Yellowknife Ar	74.12	7	P	P	17 06 25.2	-0.9
	comp=E,0.4nm,0.7s,baz=349,slow=5.5,SNR=11						
BOSA	Boshof	87.48	226	LR	LR	17 48 48.5	
	comp=E,85nm,18.0s,baz=178,slow=37						

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*BJI **25** 17:01:45.4±0.0, 6°.96S×130°.70E, h134^{km}, mB5.0/21, mb4.6/29*

*IDC **25** 17:01:50.1±1.8, 6°.40S×130°.23E, h110^{km}±18^{km}, mb4.0/14, mb1 4.2/19, mb1mx4.1/29, mbtmp4.5/19, MS3.0/3, Ms1 3.0/3, ms1mx2.7/29, Error ellipse: s-maj=15.4km s-min=10.8km az=96.0*

*DJA **25** 17:01:51.9±0.2, 6°S±2°×13°0E±°, h119^{km}±4^{km}, M4.8/26, mb4.9/26, mB5.2/12, MLv5.2/15, Mw(mB)4.6/12, MwMwp5.3/2, Mwp5.5/2*

*NEIC **25** 17:01:51.2±2.5, 6°.44S±0°.06×130°.3E±0°.1, h124^{km}±10^{km}, mb4.5/10, Error ellipse: s-maj=16.2km s-min=8.5km az=89.0*

*NOU **25** 17:01:52.4, 6°.59S×130°.11E, h109^{km}, mb4.7, Banda Sea*

ISC 25 17:01:52.9±0.4**, 6°.50S**±0°.05×**130°.21E**±0°.05**, h146^{km}, n85,** σ**1^{s}90**/89**, mb4.4**/27**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.83	144	Pn	Pn	17 02 25.9	+0.1
SAUI	Saumlaki	1.83	144	P	Pn	17 02 26.3	+0.5
SAUI				S	Sn	17 02 46.9	-4.1
BNDI	Bandanaira	1.99	351	P	Pn	17 02 25.5	-2.2
BNDI				S	Sn	17 02 50.2	-4.2
MSAI	Masohi	3.38	338	P	Pn	17 02 43.6	-1.5
FAKI	Fak Fak	4.10	30	Pn	Pn	17 02 50.4	-4.0
FAKI	Fak Fak	4.10	30	P	Pn	17 02 50.4	-4.0
NLAI	Namlea	4.48	316	P	Pn	17 02 59.0	-0.4
KMPI	Kaimana, Papua	4.49	51	P	Pn	17 02 56.9	-2.5
SIJI	Sorong	5.70	11	P	Pn	17 03 11.3	-4.3
	26nm,0.3s,baz=278,slow=23,SNR=108						
SIJI				S	Sn	17 04 09.7	-10
	88nm,0.3s,baz=78,slow=22,SNR=11						
SIJI				LR	LR	17 06 04.3	
	comp=Z,69nm,18.6s,baz=238,slow=46						
SWI	Sorong	5.70	11	P	Pn	17 03 11.1	-4.5
	3.3nm7µm96nm,0.4s						
SANI	Sanana	6.10	316	P	Pn	17 03 19.9	-1.1
	0.3nm793nm92nm,0.8s						
MTN	Manton Dam	6.37	172	Pn	Pn	17 03 23.8	-0.7
SOEI	Soe	6.71	241	Pn	Pn	17 03 29.4	+0.1
SOEI	Soe	6.71	241	P	Pn	17 03 29.3	+0.1
	2.1nm6µm752nm,0.8s						
BATI	Baumata	7.45	240	P	Pn	17 03 38.9	0.0
	103nm,0.3s,baz=106,slow=4.8,SNR=112						
BATI				S	Sn	17 04 58.5	-3.7
	30nm,0.3s,baz=218,slow=1.5,SNR=4.8						
BATI	Baumata	7.45	240	P	Pn	17 03 38.8	-0.2
	1.2nm3µm274nm,0.6s						
TNTI	Ternate	7.76	338	Pn	Pn	17 03 40.6	-2.5
TNTI	Ternate	7.76	338	P	Pn	17 03 40.7	-2.5
	0.4nm1µm142nm,0.7s						
BAKI	Biak	7.91	48	P	Pn	17 03 43.6	-1.5
	1.4nm2µm211nm,0.7s						
MMRI	Maumere	8.18	254	P	Pn	17 03 49.2	+0.5
	68nm,0.7s						
EDFI	Ende, Flores	8.73	255	P	Pn	17 03 57.4	+1.2
	17nm,0.8s						
WAMI	Wamena	8.86	73	P	Pn	17 03 59.8	+1.9
	3µm291nm,0.7s						
KMSI	Cibinong	9.38	318	P	Pn	17 04 03.9	-0.9
	94nm,1.1s						
APSI	Ampana	10.19	303	P	Pn	17 04 16.7	+1.2
	324nm23nm,1.0s						
GENI	Genyem	10.66	69	P	Pn	17 04 21.6	-0.2
	36nm,0.6s						
MRSI	Marisa	10.78	310	P	Pn	17 04 23.5	+0.2
	938nm124nm,0.9s						
WBSI	Waikabubak, Su	11.15	253	P	Pn	17 04 27.4	-0.9
	54nm,0.7s						
JAY	Jayapura	11.19	70	P	Pn	17 04 27.3	-1.5
	0.5nm,0.3s,baz=203,slow=13,SNR=2.3						
FITZ	Fitzroy Crossi	12.36	201	P	Pn	17 04 42.6	-1.4
	2.4nm,0.3s,baz=29,slow=9.3,SNR=49						
FITZ				S	Sn	17 06 48.7	-12
	20nm,0.3s,baz=56,slow=19,SNR=13						
FITZ				LR	LR	17 10 22.2	
	comp=Z,48nm,19.4s,baz=123,slow=41						
FITZ	Fitzroy Crossi	12.36	201	Pn	Pn	17 04 40.3	-3.7
PLAI	Plampang	12.53	259	P	Pn	17 04 45.1	-1.2
	31nm,0.8s						
WB0	Warramunga Arr	13.80	163	Pn	Pn	17 05 00.5	-2.0
WRAB	Tennant Creek	13.94	164	P	Pn	17 05 02.2	-2.2
WRA	Warramunga Arr	13.95	164	P	Pn	17 05 03.0	-1.4
	8.5nm,0.3s,baz=346,slow=13,SNR=149						
WRA				S	Sn	17 07 28.2	-11
	7.4nm,0.3s,baz=337,slow=22,SNR=11						
WRA	Warramunga Arr	13.95	164	P	Pn	17 05 01.6	-2.9
WB2	Warramunga Arr	13.95	164	Pn	Pn	17 05 02.3	-2.1
WR0	Warramunga Arr	14.02	163	P	Pn	17 05 03.0	-2.3
COEN	Coen	14.75	121	P	P	17 05 16.5	-0.2
BBKI	Banjar Baru	15.60	280	P	P	17 05 26.7	+0.5
	6µm51nm,0.8s						
PMG	Port Moresby	17.04	101	P	Pn	17 05 46.0	+3.5
	0.8nm,0.3s,baz=96,slow=1.6,SNR=4.5						
AS31	Alice Springs	17.43	169	P	Pn	17 05 47.7	+0.4
AS31				IAmb	IAmb	17 05 51.9	
	comp=Z,15nm,0.5s						
ASAR	Alice Springs	17.43	169	P	Pn	17 05 48.1	+0.9
	comp=Z,1.7nm,0.3s,baz=348,slow=10,SNR=136						
ASAR				S	S	17 08 54.1	-6.4
	comp=Z,2.4nm,0.3s,baz=355,slow=24,SNR=6.4						
ASAR	Alice Springs	17.43	169	P	Pn	17 05 47.9	+0.7
PSA00	Pilbara Seismi	18.02	213	P	Pn	17 05 54.3	+0.1
KSM	Kuching	21.39	291	P	P	17 06 30.0	+0.8
CISI	Cisompet, Garu	22.25	266	P	P	17 06 37.3	-0.8
	comp=Z,96nm,0.7s						
LEM	Lembang	22.44	268	P	P	17 06 41.4	+1.3
	comp=Z,33nm,0.7s,baz=104,slow=17,SNR=7.6						
TGY	Tagaytay City	22.44	336	P	P	17 06 39.6	-0.3
	comp=Z,153nm,0.4s,baz=58,slow=0.4,SNR=7.4						
CBJI	Citeko	23.21	269	P	P	17 06 47.6	+0.5
	comp=Z,70nm,0.7s						
STKA	Stephens Creek	27.40	159	P	P	17 07 26.2	+1.4
	comp=Z,1.6nm,0.4s,baz=330,slow=9.7,SNR=9.8						
STKA				LR	LR	17 19 21.6	
	comp=Z,106nm,19.0s,baz=216,slow=38						
STKA	Stephens Creek	27.40	159	P	P	17 07 25.9	+1.2
NWAO	Narrogin (SRO)	28.93	203	P	P	17 07 39.3	+0.9
	comp=Z,5.7nm,0.5s,baz=51,slow=8.7,SNR=8.6						
SDSI	Sungai Dareh	29.23	280	P	P	17 07 42.7	+1.4
KULM	Kulim	31.74	291	P	P	17 08 05.0	+1.6
PSI	Prapat	32.57	286	P	P	17 08 11.2	+0.4
	comp=Z,5.4nm,0.8s,baz=181,slow=2.8,SNR=7.4						
CMAR	Chiang Mai Arr	39.57	309	P	P	17 09 10.8	+0.6
	comp=Z,1.1nm,0.8s,baz=144,slow=7.6,SNR=9.5						
CMAR	Chiang Mai Arr	39.57	309	P	P	17 09 09.1	-1.1
NJ2	Nanjing	39.84	345	eP	P	17 09 12.8	+0.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JWT	Wachi	41.85	6	P	P	17 09 28.6	+0.1
MJAR	Matsushiro Arr	43.47	9	P	P	17 09 40.2	-1.5
	comp=Z,4.5nm,0.7s,baz=187,slow=9.3,SNR=22						
MAT	Matsushiro	43.47	9	P	P	17 09 40.4	-1.2
KSRS	Korea Array	43.78	357	P	P	17 09 43.9	-0.1
	comp=Z,0.9nm,0.7s,baz=173,slow=8.8,SNR=5.2						
XAN	Xi'an	45.08	335	P	P	17 09 53.5	-1.0
XAN				pP	pP	17 10 23.3	-2.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	Baijiatuau	48.07	345	P	P	17 10 17.3	-0.3
BJT				IAmb	IAmb	17 10 18.3	
	comp=Z,8.0nm,0.6s						
BJI	Beijing	48.09	346	P	P	17 10 18.0	+0.3
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
LZH	Lanzhou	49.07	332	eP	P	17 10 29.0	+3.5
LZH				pP	pP	17 10 55.3	-2.5
LZH				sP	sP	17 11 11.0	-2.6
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,64nm,4.9s						
HHC	Hu-ho-hao-te	50.14	342	eP	P	17 10 35.3	+1.8
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
USRK	Ussuriysk Ar.	50.49	2	P	P	17 10 35.1	-0.8
	comp=Z,2.5nm,0.6s,baz=183,slow=6.7,SNR=11						
GTA	Gaotai	53.64	331	eP	P	17 11 00.0	+0.5
GTA				pP	pP	17 11 29.5	-2.7
GTA				sP	sP	17 11 43.0	-4.9
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,33nm,4.6s						
GTA				LR	LR		
	comp=Z,120nm,15.7s						
GTA				LR	LR		
	comp=Z,120nm,17.2s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
ULN	Ulaanbaatar	57.86	342	P	P	17 11 29.7	+0.3
ULN				IAmb	IAmb	17 11 31.2	
	comp=Z,7.3nm,0.7s						
SONM	Songino Array	58.04	341	P	P	17 11 31.7	+1.0
	comp=Z,1.8nm,0.6s,baz=164,slow=7.6,SNR=13						
SONM	Songino Array	58.04	341	P	P	17 11 30.9	+0.2
WMQ	Urumqi	63.09	327	eP	P	17 12 06.3	+1.4
PETK	Petropavlovsk-	63.79	18	P	P	17 12 10.3	+1.1
	comp=Z,4.6nm,0.7s,baz=184,slow=3.6,SNR=11						
PETK	Petropavlovsk-	63.79	18	P	P	17 12 10.2	+1.0
MK31	Makanchi Array	67.92	327	P	P	17 12 36.5	+0.6
MK31				IAmb	IAmb	17 12 37.5	
	comp=Z,3.5nm,0.7s						
MKAR	Makanchi Array	67.92	327	P	P	17 12 36.9	+1.0
	comp=Z,4.6nm,0.6s,baz=115,slow=8.6,SNR=17						
MKAR	Makanchi Array	67.92	327	P	P	17 12 36.3	+0.4
MAKZ	Makanchi	68.11	326	P	P	17 12 37.6	+0.6
MAKZ				IAmb	IAmb	17 12 38.5	
	comp=Z,3.6nm,0.6s						
YAK	Yakutsk	68.33	360	P	P	17 12 37.5	-0.5
ZALV	Zalesovo Beam	71.23	334	P	P	17 12 56.0	0.0
	comp=Z,1.7nm,0.6s,baz=130,slow=6.1,SNR=8.8						
ZALV	Zalesovo Beam	71.23	334	P	P	17 12 55.6	-0.4
VNDA	Vanda	72.91	173	P	P	17 13 08.0	+2.4
	comp=Z,2.3nm,0.8s,baz=313,slow=5.6,SNR=2.5						
ILAR	Eielson Array	92.81	25	P	P	17 14 47.7	-0.9
	comp=Z,0.4nm,0.6s,baz=256,slow=4.6,SNR=6.4						
CPUP	Villa Florida	146.55	168	PKPbc	PKPab	17 21 19.9	+0.7
	comp=Z,2.3nm,0.8s,baz=200,slow=2.5,SNR=7.0						

IDC 25 17:30:33.1±1.6**, 51°.88S**×**16°.60E, h0^{km}, mb3.7**/1**, mb1 3.9**/1**, mb1mx3.3**/28**, mbtmp3.7**/1**, Error ellipse: s-maj=216.1km s-min=53.0km az=27.0, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	86.99	125	P	P	17 43 20.3	0.0
	0.3nm,0.5s,baz=206,slow=4.5,SNR=14						
PDAR	Pinedale Array	143.15	278	PKP	PKPbc	17 50 05.7	+0.1
	0.3nm,0.6s,baz=123,slow=3.3,SNR=4.2						
NVAR	Mina Array Bea	146.03	265	PKPbc	PKPdf	17 50 13.9	+0.2
	2.3nm,0.7s,baz=160,slow=2.9,SNR=21						
YKA	Yellowknife Ar	152.20	311	PKPbc	PKPbc	17 50 29.3	+0.1
	0.1nm,0.3s,baz=85,slow=3.7,SNR=3.7						

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*MAN **25** 17:48:50.1, 6°.86N×126°.90E, h17^{km}, mb4.9, ML3.8, MS3.9*

*DJA **25** 17:48:51.5±1.7, 7°N±7°×12°7E±°, h13^{km}±16^{km}, M4.5/13, mB4.9/6, mb4.5/13, MLv4.7/6, Mw(mB)4.2/6*

*IDC **25** 17:48:53.3±3.6, 6°.84N×126°.84E, h75^{km}±35^{km}, mb3.7/15, mb1 3.9/17, mb1mx3.8/36, mbtmp4.1/17, MS3.4/1, Ms1 3.6/1, ms1mx2.7/27, Error ellipse: s-maj=23.2km s-min=12.7km az=82.0*

*NEIC **25** 17:48:55.6±2.1, 6°.83N±0°.07×126°.7E±0°.1, h95^{km}±6^{km}, mb4.3/19, Error ellipse: s-maj=17.1km s-min=9.8km az=80.0*

ISC 25 17:48:53.6±0.9**, 6°.75N**±0°.04×**126°.71E**±0°.07**, h75^{km}**±8^{km}**, n69,** σ**1^{s}90**/77**, mb4.2**/26**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.49	293	eP	Pn	17 49 02.5	-4.2
MATI				eS	Sn	17 49 12.0	-4.5
DDMP	Don Marcelino,	1.19	237	eP	Pn	17 49 14.2	-0.5
DDMP				eS	Sn	17 49 29.6	-0.9

BUKP	**Musuan**	**1.98**	**304**	*e*P	**Pn**	**17 49 24.9**	**-0.2**
BUKP				*e*S	**Sn**	**17 49 50.2**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.17**	**264**	*e*P	**Pn**	**17 49 26.4**	**-1.2**
SKMP				*e*S	**Sn**	**17 49 56.2**	**+2.5**
BUTP	**Butuan**	**2.45**	**334**	*e*P	**Pn**	**17 49 32.6**	**+1.1**
BUTP				*e*S	**Sn**	**17 50 05.0**	**+4.5**
CGP	**Cagayan de Oro**	**2.62**	**310**	⇑*i*P	**Pn**	**17 49 34.6**	**+0.9**
CGP				*i* S	**Sn**	**17 50 07.5**	**+3.0**
GLSP	**General Luna,**	**3.07**	**349**	*e*P	**Pn**	**17 49 38.4**	**-1.4**
GLSP				*e*S	**Sn**	**17 50 19.9**	**+4.5**
SGSI	**Sangihe**	**3.27**	**201**	P	**Pn**	**17 49 45.5**	**+3.0**
SGSI				S	**Sn**	**17 50 24.5**	**+4.2**
PAGZ	**Pagadian**	**3.48**	**288**	*e*P	**Pn**	**17 49 45.2**	**-0.2**
MSLP	**Maasin**	**3.83**	**331**	*e*P	**Pn**	**17 49 49.0**	**-1.1**
MSLP				*e*S	**Sn**	**17 50 40.8**	**+6.9**
CNOP	**Candoni, Negro**	**5.06**	**307**	*e*P	**Pn**	**17 50 07.2**	**+0.2**
TNTI	**Ternate**	**5.98**	**174**	Pn	**Pn**	**17 50 22.2**	**+2.7**
TNTI	**Ternate**	**5.98**	**174**	P	**Pn**	**17 50 20.9**	**+1.4**
	0.2nm764nm49nm,0.8s						
GTOI	**Gorontalo**	**7.11**	**211**	P	**Pn**	**17 50 35.5**	**+0.5**
	0.1nm428nm37nm,0.8s						
MRSI	**Marisa**	**7.84**	**218**	P	**Pn**	**17 50 45.9**	**+0.9**
	0.3nm646nm46nm,0.7s						
TOLI2	**Tolitoli**	**8.15**	**227**	Pn	**Pn**	**17 50 48.3**	**-0.9**
MYLDM	**Lahad Datu**	**8.32**	**260**	Pn	**Pn**	**17 50 55.1**	**+3.6**
LUWI	**Luwuk**	**8.69**	**207**	Pn	Pn	17 51 02.3	+5.8
LUWI	**Luwuk**	**8.69**	**207**	P	**Pn**	**17 50 59.6**	**+3.1**
	726nm73nm,0.8s						
SANI	**Sanana**	**8.77**	**185**	P	**Pn**	**17 51 00.0**	**+2.3**
	12nm,0.9s						
SWI	**Sorong**	**8.82**	**149**	P	**Pn**	**17 50 58.8**	**+0.4**
	27nm,0.5s						
SIJI	**Sorong**	**8.83**	**149**	P	**Pn**	**17 50 57.8**	**-0.7**
	4.9nm,0.3s,baz=248,slow=24,SNR=37						
SIJI				S	Sn	17 52 29.9	-6.6
	0.7nm,0.3s,baz=169,slow=23,SNR=1.5						
MPSI	**Mapaga**	**9.32**	**227**	P	**Pn**	**17 51 06.1**	**+0.9**
	6.4nm,0.6s						
NLAI	**Namlea**	**9.93**	**178**	P	**Pn**	**17 51 14.6**	**+1.1**
	14nm,1.3s						
FAKI	**Fak Fak**	**11.08**	**150**	Pn	**Pn**	**17 51 30.8**	**+1.5**
FAKI	**Fak Fak**	**11.08**	**150**	P	**Pn**	**17 51 30.9**	**+1.6**
	24nm,1.6s						
BNSI	**Bone**	**12.89**	**211**	P	**Pn**	**17 51 55.8**	**+1.9**
	11nm,1.0s						
SAUI	**Saumlaki**	**15.34**	**163**	Pn	**Pn**	**17 52 25.8**	**0.0**
BATI	**Baumata**	**17.12**	**190**	P	**P**	**17 52 50.8**	**+2.0**
	1.4nm,0.3s,baz=344,slow=20,SNR=1.8						
FITZ	**Fitzroy Crossi**	**24.72**	**182**	P	**P**	**17 54 08.8**	**+0.8**
	1.5nm,0.3s,baz=33,slow=8.1,SNR=13						
FITZ	**Fitzroy Crossi**	**24.72**	**182**	P	**P**	**17 54 09.8**	**+1.8**
JCJ	**Chichijima**	**25.01**	**34**	P	**P**	**17 54 09.2**	**-1.5**
	34nm,0.5s,baz=297,slow=19,SNR=7.0						
WB0	**Warramunga Arr**	**27.42**	**164**	P	**P**	**17 54 33.4**	**+1.0**
WRAB	**Tennant Creek**	**27.56**	**164**	P	**P**	**17 54 33.0**	**-0.7**
WRAB				IAmb	IAmb	17 54 41.8	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**27.57**	**164**	P	**P**	**17 54 33.8**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=343,slow=11,SNR=10						
WRA	**Warramunga Arr**	**27.57**	**164**	P	**P**	**17 54 36.0**	**+2.3**
WB2	**Warramunga Arr**	**27.57**	**164**	P	**P**	**17 54 34.5**	**+0.7**
WB2				IAmb	IAmb	17 54 42.8	
	comp=Z,5.0nm,1.0s						
WR0	**Warramunga Arr**	**27.64**	**164**	P	**P**	**17 54 35.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**29.44**	**296**	P	**P**	**17 54 51.0**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=92,slow=7.5,SNR=4.9						
CMAR				LR	LR	18 09 23.2	
	comp=Z,71nm,18.2s,baz=210,slow=42						
CMAR	**Chiang Mai Arr**	**29.44**	**296**	P	**P**	**17 54 47.7**	**-2.7**
AS31	**Alice Springs**	**31.04**	**167**	P	**P**	**17 55 05.0**	**+0.5**
ASAR	**Alice Springs**	**31.04**	**167**	P	**P**	**17 55 04.8**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=344,slow=7.5,SNR=23						
ASAR				PcP	**PcP**	**17 57 59.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=347,slow=2.4,SNR=8.1						
ASAR	**Alice Springs**	**31.04**	**167**	P	**P**	**17 55 05.3**	**+0.8**
MJAR	**Matsushiro Arr**	**31.46**	**18**	P	**P**	**17 55 06.1**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=193,slow=9.9,SNR=6.0						
JMM	**Marumori**	**33.51**	**20**	P	**P**	**17 55 25.7**	**-0.3**
FORT	**Forrest**	**37.34**	**178**	P	**P**	**17 56 00.8**	**+1.9**
BBOO	**Buckleboo**	**40.34**	**168**	P	**P**	**17 56 24.5**	**+0.6**
BBOO				IAmb	IAmb	17 56 43.6	
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**40.48**	**192**	P	**P**	**17 56 23.6**	**-1.5**
STKA	**Stephens Creek**	**40.95**	**161**	P	**P**	**17 56 28.4**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=322,slow=8.4,SNR=6.7						
STKA	**Stephens Creek**	**40.95**	**161**	P	**P**	**17 56 29.9**	**+0.8**
SONM	**Songino Array**	**44.45**	**340**	P	**P**	**17 56 58.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=148,slow=9.2,SNR=3.1						
PALK	**Pallekele**	**45.66**	**274**	P	**P**	**17 57 07.7**	**+0.4**
PALK				IAmb	IAmb	17 57 17.0	
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**52.66**	**23**	P	**P**	**17 58 00.1**	**0.0**
	comp=Z,3.4nm,0.8s,baz=183,slow=5.9,SNR=6.5						
MK31	**Makanchi Array**	**55.10**	**324**	P	**P**	**17 58 17.9**	**-0.1**
MK31				IAmb	IAmb	17 58 18.7	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**55.10**	**324**	P	**P**	**17 58 17.9**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=122,slow=8.0,SNR=32						
MKAR	**Makanchi Array**	**55.10**	**324**	P	**P**	**17 58 17.8**	**-0.3**
MAKZ	**Makanchi**	**55.29**	**324**	P	**P**	**17 58 18.1**	**-1.2**
MAKZ				IAmb	IAmb	17 58 19.7	
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**57.91**	**332**	P	**P**	**17 58 36.2**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=129,slow=6.3,SNR=6.5						
AAK	**Ala-Archa**	**58.14**	**317**	P	**P**	**17 58 38.7**	**-1.2**
AAK				IAmb	IAmb	17 58 56.5	
	comp=Z,2.8nm,1.1s						
KURK	**Kurchatov**	**59.21**	**327**		**P**	**17 58 46.6**	**-0.3**
KURK				IAmb	IAmb	17 58 50.4	
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**61.04**	**316**	P	**P**	**17 58 59.5**	**-0.2**
BRVK	**Borovoye**	**64.88**	**326**	P	**P**	**17 59 23.5**	**-1.3**
BRVK				IAmb	IAmb	17 59 25.3	
	comp=Z,3.1nm,0.7s						
GEYT	**Alibeck**	**69.02**	**308**	P	**P**	**17 59 51.4**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=132,slow=2.1,SNR=3.0						
ABKAR	**Akbulak array**	**69.83**	**320**	P	**P**	**17 59 55.6**	**-0.6**
ABKAR	**Akbulak array**	**69.83**	**320**	P	**P**	**17 59 55.7**	**-0.5**
ABKAR				IAmb	IAmb	17 59 56.5	
	comp=Z,1.6nm,0.6s						
ILAR	**Eielson Array**	**82.40**	**26**	P	**P**	**18 01 05.8**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=238,slow=5.3,SNR=19						
ARCES	**ARCESS Array B**	**87.62**	**340**	P	**P**	**18 01 32.1**	**-1.3**
	comp=Z,4.0nm,0.9s,baz=49,slow=5.5,SNR=3.5						
FINES	**FINESS Array B**	**89.18**	**332**	P	**P**	**18 01 39.5**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=48,slow=2.8,SNR=5.0						
YKA	**Yellowknife Ar**	**96.77**	**24**	P	**P**	**18 02 15.0**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=303,slow=4.1,SNR=6.7						

IDC ***25*** *17:50:59.6±8.2, 21°.69S×179°.02W, h567^{km}±73^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.2/24, mbtmp4.4/8, Error ellipse: s-maj=74.6km s-min=30.3km az=113.0*

NEIC ***25*** *17:51:03.6±1.4, 21°.7S±0°.2×179°.3W±0°.1, h601^{km}±14^{km}, mb4.3/16, Error ellipse: s-maj=23.5km s-min=16.1km az=164.0*

ISC 25 17:51:03.4±0.9**, 21°.7S**±0°.1×**179°.3W**±0°.1**, h604**^{km}**, n33,** σ**0^s.72**/34**, mb4.2**/14**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.28**	**266**	P	**P**	**17 53 54.2**	**-1.0**
	0.6nm,0.3s,baz=89,slow=22,SNR=12						
DZM	**Mont Dzumac**	**13.28**	**266**	P	**P**	**17 53 54.9**	**-0.2**
SANVU	**Saraoutou**	**14.25**	**293**	P	**P**	**17 54 04.4**	**-0.3**
QRZ	**Quartz Range**	**20.32**	**198**	P	**P**	**17 54 59.2**	**-0.4**
QRZ				IAmb	IAmb	17 55 06.8	
	comp=Z,7.5nm,1.0s						
THZ	**Tophouse**	**21.09**	**196**	P	**P**	**17 55 05.6**	**-1.0**
EIDS	**Eidsvold**	**27.41**	**256**	P	**P**	**17 56 03.2**	**+0.6**
EIDS				IAmb	IAmb	17 56 20.0	
	comp=Z,6.8nm,1.1s						
ARMA	**Armidale**	**27.50**	**246**	P	**P**	**17 56 05.0**	**+1.5**
ARMA				IAmb	IAmb	17 56 16.8	
	comp=Z,7.4nm,1.1s						
CTAO	**Charters Tower**	**32.22**	**266**	P	**P**	**17 56 44.4**	**+0.4**
CTAO				IAmb	IAmb	17 56 51.5	
	comp=Z,10nm,1.1s						
PMG	**Port Moresby**	**34.49**	**285**	P	**P**	**17 57 02.6**	**-0.4**
	comp=Z,6.7nm,0.7s,baz=154,slow=8.9,SNR=3.7						
PMG	**Port Moresby**	**34.49**	**285**	P	**P**	**17 57 03.6**	**+0.6**
PMG				IAmb	IAmb	17 57 04.2	
	comp=Z,7.1nm,0.8s						
STKA	**Stephens Creek**	**36.22**	**245**	P	**P**	**17 57 17.5**	**+0.4**
	comp=Z,2.5nm,0.4s,baz=73,slow=9.5,SNR=7.9						
COEN	**Coen**	**36.51**	**276**	P	**P**	**17 57 20.7**	**+1.1**
COEN				IAmb	IAmb	17 57 21.6	
	comp=Z,5.4nm,0.8s						
BBOO	**Buckleboo**	**40.98**	**245**	P	**P**	**17 57 54.4**	**-1.0**
BBOO				IAmb	IAmb	17 58 10.8	
	comp=Z,13nm,1.1s						
WR0	**Warramunga Arr**	**43.10**	**264**	P	**P**	**17 58 11.8**	**-0.4**
WR0				IAmb	IAmb	17 58 26.1	
	comp=Z,6.0nm,1.1s						
AS31	**Alice Springs**	**43.11**	**258**	P	**P**	**17 58 12.5**	**+0.2**
ASAR	**Alice Springs**	**43.11**	**258**	P	**P**	**17 58 12.6**	**+0.3**
	comp=Z,6.1nm,0.5s,baz=93,slow=8.0,SNR=79						
ASAR				PcP	**PcP**	**17 59 48.1**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=106,slow=3.8,SNR=4.4						
ASAR				S	**S**	**18 03 55.5**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=98,slow=16,SNR=4.2						
WB0	**Warramunga Arr**	**43.27**	**264**	P	**P**	**17 58 13.4**	**-0.1**
WB2	**Warramunga Arr**	**43.27**	**264**	P	**P**	**17 58 13.4**	**-0.1**
WRAB	**Tennant Creek**	**43.28**	**264**	P	**P**	**17 58 13.4**	**-0.2**
WRAB				IAmb	IAmb	17 58 14.1	
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**43.29**	**264**	P	**P**	**17 58 13.4**	**-0.3**
	comp=Z,3.0nm,0.3s,baz=96,slow=7.7,SNR=76						
WRA	**Warramunga Arr**	**43.29**	**264**	P	**P**	**17 58 12.4**	**-1.3**
QSPA	**South Pole Qui**	**68.39**	**180**	P	**P**	**18 01 06.6**	**+0.8**
MJAR	**Matsushiro Arr**	**70.47**	**325**	P	**P**	**18 01 18.2**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=164,slow=5.3,SNR=5.5						
PETK	**Petropavlovsk-**	**77.11**	**346**	P	**P**	**18 01 55.8**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=151,slow=3.3,SNR=4.4						
PETK	**Petropavlovsk-**	**77.11**	**346**	P	**P**	**18 01 54.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.40**	**290**	P	**P**	**18 02 59.2**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=125,slow=2.8,SNR=9.1						
MKAR	**Makanchi Array**	**111.15**	**313**	PKiKP	**PKiKP**	**18 08 28.6**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=186,slow=1.4,SNR=1.5						
ARCES	**ARCESS Array B**	**129.85**	**349**	PKP	**PKPdf**	**18 09 03.8**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=350,slow=3.0,SNR=3.8						
FINES	**FINESS Array B**	**136.55**	**343**	PKP	**PKiKP**	**18 09 18.7**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=45,slow=0.6,SNR=3.4						
AKASG	**Malin Array Be**	**143.45**	**329**	PKP	PKPab	18 09 27.9	-0.8
	comp=Z,0.8nm,0.4s,baz=40,slow=4.6,SNR=10						
BRTR	**Keskin Array B**	**146.73**	**310**	PKPbc	**PKPbc**	**18 09 38.7**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=139,slow=4.5,SNR=5.6						
CLL	**Collm**	**148.91**	**345**	*e*PKPbc	**PKPbc**	**18 09 44.0**	**+0.1**
GERES	**GERESS Array B**	**150.98**	**342**	PKPbc	**PKPbc**	**18 09 48.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=357,slow=2.7,SNR=3.6						

ANF ***25*** *18:10:16.9±0.2, 33°.00N×116°.41W, h9^{km}±2^{km}, ML3.0/25, Error ellipse: s-maj=1.9km s-min=1.8km az=7.0*

NEIC ***25*** *18:10:17.2±0.7, 32°.97N±0°.01×116°.435W±0°.010, h17^{km}±1^{km}, Error ellipse: s-maj=1.6km s-min=1.1km az=201.0*

PAS ***25*** *18:10:17.8±1.1, 32°.971N±0°.009×116°.43W±0°.01, h9^{km}±3^{km}, ML3.2/172, ML3.0/24(NEIC), Error ellipse: s-maj=1.4km s-min=1.3km az=204.0*

ISC 25 18:10:17.1±0.9**, 32°.98N**±0°.01×**116°.43W**±0°.01**, h18**^{km}±4^{km}**, n111,** σ**0^s.71**/162**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MONP2	**Monument Peak**	**0.09**	**177**	P	**Pg**	**18 10 19.8**	**-1.0**
	baz=4.9,SNR=1000						
MONP2				S	**Pg**	**18 10 21.8**	**+0.9**
	baz=4.9						
MONP2	**Monument Peak**	**0.09**	**177**		**Pg**	**18 10 21.9**	**+0.9**
CBKC	**Canebrake**	**0.17**	**117**		**Pg**	**18 10 21.1**	**-0.4**
SLH	**Sleepy Hollow**	**0.26**	**34**		**Pg**	**18 10 22.9**	**-0.1**
SLH					**Sg**	**18 10 27.0**	**0.0**
MATG	**Mataguay Scout**	**0.29**	**320**		**Pg**	**18 10 23.5**	**0.0**
MATG					**Sg**	**18 10 27.5**	**-0.5**
BAR	**Barrett**	**0.36**	**215**		**Sg**	**18 10 29.7**	**-0.1**
BAR	**Barrett**	**0.36**	**215**	IAML		18 10 30.0	
	comp=E,4μm,0.3s						
BAR				IAML		18 10 30.1	
	comp=N,3μm,0.1s						
CRR	**Carrizo Plain**	**0.40**	**103**		**Pg**	**18 10 25.4**	**+0.1**
CRR					**Sg**	**18 10 31.2**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**0.42**	**140**	P	**Pg**	**18 10 25.5**	**-0.3**
	baz=324,SNR=353						
IKP				S	**Sg**	**18 10 31.3**	**-0.4**
	baz=324						
IKP	**In-Ko-Pah, Jac**	**0.42**	**140**		**Pg**	**18 10 25.7**	**-0.1**
IKP					**Sg**	**18 10 31.2**	**-0.4**
DPP	**Dos Picos Cty**	**0.43**	**273**		**Pg**	**18 10 26.1**	**+0.1**
DPP					**Sg**	**18 10 31.9**	**0.0**
TKX	**Tecate**	**0.43**	**200**		**Sg**	**18 10 30.7**	**-1.2**
TKX	**Tecate**	**0.43**	**200**		**Pg**	**18 10 25.0**	**-1.0**
TKX	**Tecate**	**0.43**	**200**	IAML		18 10 31.1	
	comp=E,7μm,0.2s						
TKX				IAML		18 10 31.1	
	comp=N,4μm,0.2s						
HWB	**Hans Werner Br**	**0.45**	**276**		**Pg**	**18 10 26.4**	**+0.1**
HWB					**Sg**	**18 10 32.4**	**0.0**
RMX	**La Rumorosa**	**0.47**	**142**		**Sb**	**18 10 34.8**	**+1.0**
RMX	**La Rumorosa**	**0.47**	**142**		**Pb**	**18 10 27.5**	**+0.5**
RMX	**La Rumorosa**	**0.47**	**142**	IAML		18 10 35.3	
	comp=E,1μm,0.4s						
RMX				IAML		18 10 36.2	
	comp=N,1μm,0.2s						
SALN	**Salton City**	**0.48**	**51**		**Pg**	**18 10 27.0**	**+0.2**
SALN					**Sb**	**18 10 33.9**	**+0.2**
SDRC	**San Diego Road**	**0.49**	**241**		**Pg**	**18 10 27.1**	**0.0**
SDRC					**Sg**	**18 10 33.7**	**-0.1**
SUP	**Superstition M**	**0.51**	**92**		**Pg**	**18 10 27.3**	**-0.1**
PLM	**Palomar**	**0.52**	**316**		**Pb**	**18 10 27.9**	**0.0**
PLM					**Sg**	**18 10 34.9**	**+0.1**
ERRC	**Elmore Ranch**	**0.53**	**74**		**Pb**	**18 10 28.3**	**+0.5**
SWSC	**Sam W. Stewart**	**0.53**	**93**	P	**Pg**	**18 10 27.7**	**0.0**
	baz=276,SNR=217						
SWSC				S	**Sg**	**18 10 34.7**	**-0.1**
	baz=276						
SWSC	**Sam W. Stewart**	**0.53**	**93**		**Pg**	**18 10 27.7**	**0.0**
SWSC					**Sg**	**18 10 34.7**	**-0.1**
FRD	**Ford Ranch, An**	**0.54**	**344**		**Pg**	**18 10 28.1**	**+0.1**
FRD					**Sg**	**18 10 35.1**	**-0.1**
FRD	**Ford Ranch, An**	**0.54**	**344**		**Pg**	**18 10 28.1**	**+0.1**
FRD					**Sg**	**18 10 35.3**	**+0.1**
YUH	**Yuha Desert**	**0.54**	**128**		**Pg**	**18 10 27.8**	**-0.1**
YUH					**Sg**	**18 10 34.7**	**-0.4**
BZNA	**Buzz No.'s Pla**	**0.55**	**339**		**Pg**	**18 10 28.3**	**+0.1**
BZNA					**Sg**	**18 10 35.6**	**-0.1**
OLP	**Otay Lakes Par**	**0.56**	**229**		**Pg**	**18 10 28.3**	**0.0**
OLP					**Sg**	**18 10 35.7**	**-0.1**
109C	**Camp Elliot, M**	**0.58**	**261**	P	**Pg**	**18 10 28.5**	**-0.1**
	baz=79,SNR=78						
109C				S	**Sg**	**18 10 36.1**	**-0.2**
	baz=79						
109C	**Camp Elliot, M**	**0.58**	**261**		**Pg**	**18 10 28.4**	**-0.1**
109C				IAML		18 10 41.0	
	comp=N,656nm,0.4s						
CPE	**Camp Elliot**	**0.58**	**261**		**Pg**	**18 10 28.5**	**-0.1**
CPE					**Sg**	**18 10 36.1**	**-0.2**
SNDA	**J Saunders Pla**	**0.59**	**345**		**Pb**	**18 10 29.2**	**+0.2**
COK2	**Cook Ranch 2**	**0.60**	**102**		**Pb**	**18 10 29.6**	**+0.5**
COK2					**Sb**	**18 10 38.4**	**+1.2**
DNR	**Dunn Ranch,Anz**	**0.61**	**344**		**Pb**	**18 10 29.6**	**+0.2**
WESC	**Westside Schoo**	**0.62**	**110**		**Pb**	**18 10 30.0**	**+0.5**
WESC					**Sb**	**18 10 39.2**	**+1.3**
XPFO	**Pion Flat**	**0.63**	**358**		**Pg**	**18 10 29.6**	**-0.1**
XPFO					**Sg**	**18 10 37.8**	**-0.4**
PFO	**Pinyon Flats O**	**0.63**	**358**	P	**Pg**	**18 10 29.5**	**-0.1**
	baz=176,SNR=173						
PFO				S	**Sg**	**18 10 37.7**	**-0.5**
	baz=176						
PFO	**Pinyon Flats O**	**0.63**	**358**		**Pg**	**18 10 29.6**	**-0.1**
PFO	**Pinyon Flats O**	**0.63**	**358**	Pg	**Pg**	**18 10 29.2**	**-0.5**
PFO				IAML		18 10 38.1	
	comp=N,326nm,0.5s						
PFO				IAML		18 10 41.0	
	comp=N,404nm,0.3s						
CRY	**Cary Ranch**	**0.64**	**336**		**Pb**	**18 10 30.0**	**+0.2**
CRY					**Sg**	**18 10 38.4**	**-0.1**
PMD	**Palm Desert**	**0.67**	**4**		**Pg**	**18 10 30.1**	**-0.2**
PMD					**Sg**	**18 10 38.7**	**-0.6**
SGL	**Mount Signal**	**0.68**	**119**		**Pg**	**18 10 30.6**	**+0.1**
SGL					**Sg**	**18 10 39.5**	**0.0**
CBX	**Cerro Bola**	**0.69**	**197**		**Pg**	**18 10 30.5**	**-0.3**
CBX				IAML		18 10 41.5	
	comp=N,564nm,0.4s						
CBX				IAML		18 10 44.2	
	comp=E,568nm,0.8s						
CBX	**Cerro Bola**	**0.69**	**197**		**Sg**	**18 10 39.9**	**-0.1**
GORC	**Green Oak Ranc**	**0.69**	**285**		**Pg**	**18 10 30.6**	**-0.2**
GORC					**Sg**	**18 10 39.6**	**-0.4**
TJX	**Tijuana**	**0.70**	**229**		**Sb**	**18 10 41.1**	**+0.9**
TJX	**Tijuana**	**0.70**	**229**		**Pg**	**18 10 31.1**	**+0.2**
TJX	**Tijuana**	**0.70**	**229**	IAML		18 10 41.3	
	comp=N,3μm,0.4s						
TJX				IAML		18 10 45.6	
	comp=E,1μm,0.8s						
WEMD	**Westmorland, C**	**0.71**	**85**		**Pg**	**18 10 31.9**	**+0.7**
GVDA	**Garner Valley**	**0.72**	**343**		**Pg**	**18 10 31.2**	**-0.1**
CTCC	**Cactus City**	**0.77**	**28**		**Pb**	**18 10 32.3**	**+0.3**
CTCC					**Sb**	**18 10 42.2**	**+0.1**
FRK	**Frink**	**0.79**	**57**		**Pb**	**18 10 31.8**	**-0.4**
BACC	**Bachelor Mtn.**	**0.81**	**321**		**Pb**	**18 10 32.8**	**0.0**
BACC					**Sb**	**18 10 43.6**	**+0.1**
POB	**Polly Butte**	**0.82**	**330**		**Pb**	**18 10 33.0**	**+0.1**
POB					**Sb**	**18 10 43.9**	**+0.2**
DGR	**Domenigoni Val**	**0.83**	**324**		**Pb**	**18 10 33.1**	**+0.1**
DGR					**Sb**	**18 10 44.0**	**+0.1**
CTW	**Cottonwood Mou**	**0.84**	**34**		**Pb**	**18 10 33.0**	**-0.2**
CTW					**Sb**	**18 10 44.4**	**+0.2**
SNR	**Schaffner Ranc**	**0.84**	**98**		**Pb**	**18 10 33.5**	**+0.3**
DREC	**Desert Rsrch C**	**0.84**	**101**		**Pb**	**18 10 33.5**	**+0.3**
HMTC	**Hemet**	**0.88**	**327**		**Pb**	**18 10 33.8**	**0.0**
HMTC					**Sb**	**18 10 45.3**	**+0.1**
MURC	**Murrieta**	**0.89**	**314**	P	**Pb**	**18 10 34.2**	**+0.1**
	baz=132,SNR=62						
MURC				S	**Sg**	**18 10 46.3**	**0.0**
	baz=132						
MURC	**Murrieta**	**0.89**	**314**		**Pb**	**18 10 34.2**	**+0.1**
MURC					**Sg**	**18 10 46.2**	**-0.2**
HAY	**Hayfield**	**0.96**	**40**		**Pg**	**18 10 35.9**	**+0.2**
HAY					**Sg**	**18 10 48.5**	**+0.1**
EW2	**E Wide Canyon**	**0.96**	**1**		**Pb**	**18 10 35.7**	**+0.4**
EW2					**Sb**	**18 10 48.4**	**+0.6**
BBSC	**Beaumont Base**	**1.05**	**334**		**Sn**	**18 10 51.6**	**+0.4**
ESJX	**Sierra Juarez**	**1.05**	**157**		**Pb**	**18 10 36.1**	**-0.8**
ESJX				IAML		18 10 50.8	
	comp=N,414nm,0.1s						
ESJX				IAML		18 10 52.3	
	comp=E,524nm,0.2s						
ESJX	**Sierra Juarez**	**1.05**	**157**		**Sb**	**18 10 49.7**	**-0.7**
BC3	**Big Chuckawall**	**1.06**	**50**	P	**Pb**	**18 10 36.4**	**-0.6**
	baz=231,SNR=45						
BC3				S	**Sb**	**18 10 49.6**	**-1.0**
	baz=231						
ELS	**Elsinore Mount**	**1.07**	**309**		**Pb**	**18 10 36.9**	**-0.3**
ELS					**Sb**	**18 10 50.8**	**-0.1**
BELC	**Belle Mtn. Jos**	**1.08**	**19**	P	**Pb**	**18 10 37.7**	**+0.2**
	baz=199,SNR=54						
BELC				S	**Sb**	**18 10 51.2**	**-0.1**
	baz=199						
BELC	**Belle Mtn. Jos**	**1.08**	**19**		**Pb**	**18 10 37.2**	**-0.2**
BELC					**Sb**	**18 10 51.4**	**+0.1**
BLAC	**Blackrock camp**	**1.09**	**2**		**Pb**	**18 10 37.8**	**+0.3**
BLAC					**Sn**	**18 10 52.5**	**+0.2**
CPBX	**Cerro Prieto**	**1.10**	**120**		**Sg**	**18 10 52.9**	**+0.1**
PEC	**Perris**	**1.10**	**326**		**Pb**	**18 10 37.8**	**+0.2**
COA	**Coachella**	**1.10**	**96**		**Pb**	**18 10 36.9**	**-0.8**
COA					**Sb**	**18 10 51.7**	**0.0**
SME	**Santa Rosa Mtn**	**1.15**	**318**		**Pn**	**18 10 38.5**	**+0.2**
TPC	**Twentynine Pal**	**1.17**	**16**		**Pn**	**18 10 38.5**	**-0.2**
CFT	**Crafton Hills**	**1.20**	**332**		**Pg**	**18 10 40.0**	**-0.3**
RUN	**Ruthven**	**1.22**	**90**		**Pn**	**18 10 38.4**	**-0.9**
RUN					**Sb**	**18 10 53.7**	**-1.4**
EMSC	**East Mesa**	**1.24**	**101**		**Pn**	**18 10 38.9**	**-0.6**
SVD	**Seven Oaks Dam**	**1.26**	**334**		**Pb**	**18 10 40.9**	**+0.6**
GTM	**Goat Mountain**	**1.32**	**3**		**Pb**	**18 10 41.9**	**+0.5**
BBRC	**Big Bear Solar**	**1.35**	**342**	P	**Pb**	**18 10 42.5**	**+0.5**
	baz=161,SNR=11						
BBRC				S	**Sg**	**18 11 00.2**	**-0.5**
	baz=161						
BBRC	**Big Bear Solar**	**1.35**	**342**		**Pb**	**18 10 42.2**	**+0.2**
BBRC					**Sg**	**18 11 00.5**	**-0.3**
GLA	**Glamis**	**1.35**	**86**	P	**Pn**	**18 10 40.3**	**-0.8**
	baz=268,SNR=23						
GLA	**Glamis**	**1.35**	**86**		**Pn**	**18 10 40.3**	**-0.8**
GLA				IAML		18 11 11.6	
	comp=E,156nm,0.7s						
BTL	**Butler Peak**	**1.36**	**340**		**Pb**	**18 10 42.6**	**+0.3**
HDB	**Hidalgo Marine**	**1.43**	**5**		**Pb**	**18 10 44.0**	**+0.8**
IRM	**Iron Mountain**	**1.59**	**42**	P	**Pn**	**18 10 45.3**	**+0.8**
	baz=223,SNR=46						
IRM				S	**Sb**	**18 11 07.2**	**+1.3**
	baz=223						
IRM	**Iron Mountain**	**1.59**	**42**		**Pn**	**18 10 45.3**	**+0.8**
SSK	**Sunset Peak**	**1.62**	**320**		**Pb**	**18 10 46.8**	**+0.1**
BFSC	**Mount Baldy Ra**	**1.62**	**321**	Pb	**Pb**	**18 10 46.7**	**+0.1**
	baz=140,SNR=14						
BFSC				S	**Sb**	**18 11 07.6**	**+0.7**
	baz=140						
FMP	**Fort Macarthur**	**1.73**	**296**	S	**Sb**	**18 11 11.1**	**+1.5**
	baz=114						
SCI2	**San Clemente I**	**1.78**	**271**	P	**Pn**	**18 10 47.6**	**+0.6**
	baz=89						
SCI2				S	**Sn**	**18 11 10.1**	**+0.9**
	baz=89						
MWC	**Mount Wilson**	**1.84**	**313**		**Pb**	**18 10 50.6**	**+0.2**
MWC				IAML		18 11 17.7	
	comp=N,158nm,0.4s						
MWC				IAML		18 11 20.6	
	comp=E,172nm,0.3s						
HEC	**Hector,Ludlow**	**1.85**	**2**	Pb	**Pb**	**18 10 51.5**	**+1.1**
	baz=182,SNR=45						
HEC				Sb	**Sg**	**18 11 16.3**	**-0.5**
	baz=182						
PASC	**Pasadena Art C**	**1.89**	**310**		**Pb**	**18 10 51.2**	**+0.1**
PASC				IAML		18 11 17.3	
	comp=N,105nm,0.6s						
PASC				IAML		18 11 19.3	
	comp=E,87nm,0.4s						
GMRC	**Granite Mounta**	**1.91**	**19**	Pn	**Pn**	**18 10 49.1**	**+0.2**
	baz=200						
GMRC				Pb	**Pb**	**18 10 52.7**	**+1.1**
	baz=200,SNR=25						
GMRC				Sb	**Sg**	**18 11 17.7**	**-1.1**
	baz=200						
RRX	**Edison Barstow**	**1.95**	**346**	Pb	**Pb**	**18 10 53.5**	**+1.3**
	baz=165,SNR=8.7						
DECC	**Green Verdugo**	**2.04**	**309**	Sb	**Sg**	**18 11 21.1**	**-1.6**
	baz=128						
ALV	**Alvord Mountai**	**2.09**	**355**		**Pg**	**18 10 56.4**	**-0.8**
HYS	**Haystack Butte**	**2.11**	**334**		**Pb**	**18 10 56.0**	**+1.2**
113A	**Mohawk Valley,**	**2.25**	**95**	Pn	**Pn**	**18 10 53.0**	**-0.4**
EDW2	**Edwards Air Fo**	**2.30**	**326**	Pn	**Pn**	**18 10 55.6**	**+1.4**
	baz=145						
EDW2				Pb	**Pb**	**18 10 59.0**	**+0.8**
	baz=145,SNR=29						
EDW2				Sb	**Sb**	**18 11 28.6**	**+2.2**
	baz=145						
NEE2	**Needles Airpor**	**2.34**	**40**	Sb	**Sb**	**18 11 28.7**	**+1.5**
	baz=221						
GSC	**Goldstone, Bar**	**2.34**	**352**	Pg	**Pg**	**18 11 00.7**	**-1.3**
	baz=172,SNR=33						
OSI	**Osito Audit: C**	**2.51**	**311**	S	**Sb**	**18 11 30.9**	**-1.5**
	baz=129						
ARVC	**Arvin**	**2.93**	**318**	Sb	**Sg**	**18 11 48.3**	**-2.9**
	baz=136						
ISA	**Isabella, Lake**	**3.17**	**328**	Sb	**Sg**	**18 11 55.7**	**-3.2**
	baz=147						
MPMC	**Manual Prospec**	**3.20**	**344**	Pg	**Pg**	**18 11 16.6**	**-1.8**
	baz=164,SNR=20						

BGR ***25*** *18:27:02.1±0.0, 65°.36N×21°.05W, h10^{km}, mb4.7*

REY ***25*** *18:27:17.6, 64°.66N×17°.39W, h4^{km}*

IDC ***25*** *18:27:18.4±0.6, 64°.62N×17°.56W, h0^{km}, mb3.7/17, mb1 3.9/21, mb1mx3.8/38, mbtmp3.7/21, ML2.6/3, MS3.6/14, Ms1 3.6/14, ms1mx3.3/46, Error ellipse: s-maj=20.2km s-min=8.8km az=15.0*

MOS ***25*** *18:27:19.3±1.4, 64°.74N×17°.47W, h10^{km}, mb4.3/21, Error ellipse: s-maj=12.1km s-min=8.1km az=109.8*

NEIC ***25*** *18:27:19.5±2.8, 64°.5N±0°.1×17°.8W±0°.1, h8^{km}±5^{km}, mb4.4/14, Error ellipse: s-maj=16.8km s-min=5.5km az=153.0*

ISC 25 18:27:19.1±0.7**, 64°.67N**±0°.02×**17°.44W**±0°.02**, h3**^{km}±4^{km}**, n171,** σ**2^s.02**/186**, mb4.2**/43**, MS3.4**/13**, 9C-3D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.12**	**15**	P	**Pg**	**18 27 20.6**	**-1.0**
	baz=4.1						

```
IDYN                                S      Sg      18 27 23.1  -0.2
      baz=4.1
IDJK  Dyngjujokull       0.19 152   P      Pg      18 27 21.0  -1.9
      baz=156
IDJK                                S      Sg      18 27 23.8  -1.6
      baz=156
IURH  Urdarhals          0.20  40   S      Sg      18 27 24.9  -0.6
      baz=32
IURH                                P      Pg      18 27 21.6  -1.3
      baz=32
IHAM  Hamarinn           0.25 220   P      Pg      18 27 22.6  -1.5
      baz=227
IGRF  Grimsfjall         0.28 164   P      Pg      18 27 23.3  -1.2
      baz=168
IHUS  Husbondi           0.39 194   P      Pg      18 27 24.7  -1.9
      baz=198
IVOT  Vottur             0.42 164   P      Pg      18 27 25.1  -2.1
      baz=167
THOR  Thorvaldshraun     0.42  51   P      Pg      18 27 25.2  -2.0
      baz=47
THOR                                S      Sg      18 27 31.9  -0.7
      baz=47
ISKR  Skrokkalda         0.42 255   P      Pg      18 27 25.8  -1.4
      baz=258
IKRE  Kreppuhraun        0.47  76   P      Pg      18 27 25.9  -2.2
      baz=73
IKRE                                S      Sg      18 27 32.3  -1.9
      baz=73
IJOK  Jokulheimar        0.49 224   P      Pg      18 27 26.6  -2.0
      baz=227
IJOK                                S      Sg      18 27 33.5  -1.4
      baz=227
IASK  Askja              0.51  41   P      Pg      18 27 26.9  -2.0
      baz=38
IASK                                S      Sg      18 27 34.4  -1.1
      baz=38
IMKO  Mokollar           0.56  57   P      Pg      18 27 27.7  -2.2
      baz=54
IMKO                                S      Sg      18 27 36.0  -1.1
      baz=54
IIEY  Innrieyrar         0.65 207   P      Pg      18 27 29.2  -2.4
      baz=210
IIEY                                S      Sg      18 27 38.0  -2.0
      baz=210
IKSK  Karasker           0.66 140   P      Pg      18 27 28.5  -3.3
      baz=141
ISVA  Svartarkot         0.67   7   P      Pg      18 27 29.7  -2.3
      baz=4.7
IKAL  Kalfafell          0.74 188   P      Pg      18 27 30.5  -2.7
      baz=190
IKAL                                S      Sg      18 27 40.9  -1.8
      baz=190
IVSH  V-Sauoahnukur      0.75  79   P      Pg      18 27 30.5  -2.9
      baz=77
IVSH                                S      Sg      18 27 39.9  -3.2
      baz=77
IADA  Aoalbol            0.87  66   P      Pg      18 27 32.5  -3.2
      baz=64
IFAG  Fagurholsmyri      0.87 156   P      Pg      18 27 32.5  -3.3
      baz=157
IHVE  Hveravellir        0.93 283   P      Pg      18 27 34.1  -2.9
      baz=284
IMEL  Melhnausar         0.96  20   P      Pg      18 27 34.5  -3.0
      baz=18
IREN  Reynihlio          1.00  13   P      Pg      18 27 35.3  -3.0
      baz=11
IKVO  Krokottuvotn       1.07  13   P      Pg      18 27 36.8  -2.9
      baz=11
IGRS  Grimsstaoir        1.12  29   P      Pg      18 27 37.1  -3.4
      baz=28
ISKI  Skildingahlsh      1.21   8   P      Pg      18 27 38.8  -3.6
      baz=7.0
ISKI                                S      Sg      18 27 54.8  -3.2
      baz=7.0
IGHA  Grjothals          1.22  15   P      Pg      18 27 38.5  -3.9
      baz=14
IGRA  Granastaoir        1.25 357   P      Pg      18 27 39.5  -3.6
      baz=356
IGYG  Gygjarholskot      1.26 253   P      Pg      18 27 39.7  -3.5
      baz=254
IDIM  Dimmadalss         1.31   9   P      Pn      18 27 40.4  -3.9
      baz=8.1
IHLA  Hella              1.34 343   P      Pn      18 27 41.2  -3.4
      baz=342
IHED  Heoinshofoi        1.42   2   P      Pn      18 27 41.8  -3.9
      baz=1.3
ISAU  Saurbar            1.47 243   P      Pn      18 27 42.9  -3.5
      baz=244
IBRE  Brettingsstaoi     1.47 353   P      Pn      18 27 42.8  -3.6
      baz=352
IGIL  Gilhagi            1.48  17   P      Pn      18 27 42.7  -3.9
      baz=16
ISIG  Siglufjorour       1.59 338   P      Pn      18 27 44.7  -3.3
      baz=337
BORG  Borgarnes          1.67 274   Pg     Pn      18 27 46.5  -2.7
      35nm,0.3s,baz=104,slow=10,SNR=30
BORG                                Lg     Lg      18 28 11.4
      15nm,0.3s,baz=246,slow=22,SNR=9.6
BORG  Borgarnes          1.67 274   P      Pn      18 27 46.9  -2.2
BORG  Borgarnes          1.67 274   Pn     Pn      18 27 46.9  -2.2
IKRO  Krokur             1.70 252   P      Pn      18 27 46.4  -3.2
      baz=253
ILEI  Leirhofn           1.79  12   P      Pn      18 27 47.3  -3.4
      baz=12
IHRN  Hraun              1.83 323   P      Pn      18 27 48.8  -2.5
      baz=323
IGRI  Grimsey            1.89 353   P      Pn      18 27 49.0  -3.2
      baz=352
SCO   Scoresbysund       6.08 346  e       Pn      18 28 46.2  -3.5
      baz=163,slow=7.9
SCO                                i P     Pn      18 28 50.0  +0.3
SCO                                i S     Sn      18 30 02.1  +2.4
SCO                                 IAML           18 30 19.1
      comp=Z,1.6nm,0.5s
EKA   Eskdalemuir Ar    11.75 136   Pn     Pn      18 30 05.7  -1.7
      baz=323,slow=13,SNR=12
DAG   Danmarks Havn     12.17 359  i P     Pn      18 30 15.0  +2.1
DAG   Danmarks Havn     12.17 359  i P     Pn      18 30 15.0  +2.1
DAG   Danmarks Havn     12.17 359  i P     Pn      18 30 15.0  +2.1
NOA   NORSAR Array B    13.51  92   Pn     Pn      18 30 28.7  -2.7
      comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.4
NOA                                 LR     LR      18 35 52.0
      comp=Z,99nm,20.0s,baz=295,slow=38
NOA   NORSAR Array B    13.51  92  eP      P       18 30 34.4  -6.4
SFJD  Kangerlussuaq     13.69 295   LR     LR      18 35 32.1
      comp=Z,550nm,20.4s,baz=100,slow=36
HFS   Hagfors           15.02  93   Pn     Pn      18 30 50.4  -1.6
      comp=Z,0.1nm,0.3s,baz=305,slow=18,SNR=1.3
HFS                                 LR     LR      18 36 03.1
      comp=Z,165nm,19.9s,baz=311,slow=35
ARCES ARCESS Array B    17.09  55   LR     LR      18 36 15.4
      comp=Z,160nm,20.3s,baz=280,slow=31
FINES FINESS Array B    19.68  79   P      Pn      18 31 49.5  -0.7
      comp=Z,0.1nm,0.3s,baz=333,slow=6.8,SNR=6.7
FINES                               LR     LR      18 38 46.8
      comp=Z,167nm,19.0s,baz=283,slow=35
TULEG Thule             19.86 327   P      Pn      18 31 52.1  -0.1
MFF   Saint Martin d    20.44 144  eP      Pn      18 31 59.9  +0.6
MFF                                 pmax   pmax
      comp=Z,41nm,1.7s
MOX   Moxa              20.68 119   P      Pn      18 32 00.2  -2.0
MOX                                 pmax   pmax
      comp=Z,8.0nm,1.5s
CLL   Collm             20.69 116  i P     P       18 31 58.9  -1.0
      comp=Z,76nm,2.4s
CLL                                 Lm     MLR     18 40 00.0
      comp=N,200nm,18.8s
CLL                                 Lm     MLR     18 40 00.0
      comp=E,200nm,18.7s
CLL   Collm             20.69 116   P      Pn      18 31 59.7  -2.5
CLL                                 pmax   pmax
      comp=Z,15nm,1.3s
CLL   Collm             20.69 116   P      Pn      18 31 59.7  -2.5
JOF   Joensuu           21.18  72   P      P       18 32 05.0  -0.1
JOF                                 pmax   pmax
      comp=Z,12nm,1.1s
GRF   Grafenberg Arr    21.32 121  eP      P       18 32 07.4  +0.7
      comp=Z,55nm,2.1s,baz=324,slow=10
NKC   Novy Kostel       21.33 118  eP      P       18 32 10.9  +4.0
NKC   Novy Kostel       21.33 118  eP      P       18 32 10.9  +4.0
BRG   Berggiesshubel    21.39 115  eP      P       18 32 07.6   0.0
BRG                                 Amp            18 32 09.5
      comp=Z,18nm,1.4s
BRG   Berggiesshubel    21.39 115  eP      P       18 32 07.5   0.0
BRG                                 pmax   pmax
      comp=Z,18nm,1.4s
BRG   Berggiesshubel    21.39 115  eP      P       18 32 07.6   0.0
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BRG                                 Amp            18 32 09.5
      comp=Z,18nm,1.4s
BFO   Black Forest      21.43 127   P      P       18 32 13.9  +5.9
BFO                                 pmax   pmax
      comp=Z,11nm,1.0s
BFO   Black Forest      21.43 127   P      P       18 32 13.9  +5.9
BFO                                 IAmb   IAmb    18 32 18.4
      comp=Z,11nm,1.0s
VSU   Vasula            21.54  86  eP      P       18 32 09.0   0.0
VSU   Vasula            21.54  86⇓eP      P       18 32 09.0   0.0
VSU                                 pmax   pmax
      comp=Z,43nm,0.8s
FRB   Frobisher Bay     21.77 291   P      P       18 32 11.5  +0.1
      comp=Z,0.9nm,0.7s,baz=79,slow=18,SNR=2.0
FRB                                 LR     LR      18 39 40.1
      comp=Z,158nm,19.5s,baz=98,slow=34
LFF   La Frestale       22.22 144  eP      P       18 32 19.4  +3.0
LFF                                 pmax   pmax
      comp=Z,9.0nm,1.0s
PRU   Pruhonice         22.33 116  eP      P       18 32 18.1  +0.5
PRU   Pruhonice         22.33 116  eP      P       18 32 18.1  +0.5
KSP   Ksiaz             22.34 112  eP      P       18 32 17.4  -0.3
CHVC  Chvalec           22.45 113  eP      P       18 32 19.7  +0.8
KHC   Kasperske Hory    22.66 119   P      P       18 32 24.7  +3.6
KHC                                 pmax   pmax
      comp=Z,5.0nm,0.9s
KHC   Kasperske Hory    22.66 119  eP      P       18 32 21.0  -0.1
KHC                                epP     sP      18 32 27.1  +4.1
KHC                                ex      x       18 32 40.3
KHC   Kasperske Hory    22.66 119   P      P       18 32 24.7  +3.6
DPC   Dobruska-Polom    22.74 113  eP      P       18 32 22.1  +0.1
DPC   Dobruska-Polom    22.74 113  eP      P       18 32 22.1  +0.1
GERES GERESS Array B    22.94 119   P      P       18 32 24.6  +0.4
      comp=Z,0.9nm,0.9s,baz=340,slow=7.3,SNR=5.1
GERES                               LR     LR      18 41 17.5
      comp=Z,130nm,20.7s,baz=316,slow=37
GERES GERESS Array B    22.94 119  eP      P       18 32 26.2  +2.1
GERES                               pmax   pmax
      comp=Z,1.0nm,0.9s
ISAL  Salakas           23.07  93  eP      P       18 32 26.3  +1.0
KRLC  Kraliky           23.14 113  eP      P       18 32 33.9  +7.7
KRLC  Kraliky           23.14 113  eP      P       18 32 33.9  +7.7
IIGN  Ignalina          23.26  93  eP      P       18 32 27.9  +0.7
DAVOX Davos/Dischmat    23.30 127   P      P       18 32 28.2  +0.2
      comp=Z,2.7nm,0.9s,baz=279,slow=11,SNR=4.1
DAVOX                               LR     LR      18 40 24.6
      comp=Z,121nm,18.8s,baz=48,slow=34
TMCR  Tamitsa           23.32  66  eP      P       18 32 28.4  +0.6
TMCR                                pmax   pmax
      comp=Z,16nm,1.1s
IDID  Didziasalis       23.50  92  eP      P       18 32 30.9  +1.2
EUNU  Eureka            23.67 336   P      P       18 32 32.0  +0.7
VRAC  Vranov            23.68 114   P      P       18 32 31.8  +0.3
      comp=Z,1.1nm,0.4s,baz=330,slow=10,SNR=6.6
VRAC                                LR     LR      18 42 00.4
      comp=Z,107nm,21.9s,baz=322,slow=37
VRAC  Vranov            23.68 114  eP      P       18 32 31.5   0.0
MORC  Moravsky Berou    23.68 112  eP      P       18 32 31.1  -0.4
NACGM Naroch            23.79  93  i P     P       18 32 32.6   0.0
NACGM                              i P     P       18 32 32.6   0.0
NACGM                              i P     P       18 32 32.6   0.0
NACGM                              i PP    PnPn    18 32 56.9  -3.0
NACGM                              i PPP   PPP     18 33 06.3
NACGM                              i S     S       18 36 44.0  -4.4
NACGM                              i SS    SnSn    18 37 23.2  -2.8
NACGM                              i SSS   SSS     18 37 46.0
NACGM                              i LQ    LQ      18 39 22.7
NACGM                              i LR    LR      18 41 08.3
KRUC  Moravsky          23.80 115  eP      P       18 32 31.7  -0.9
MNK   Minsk             24.54  93  i P     P       18 32 39.5   0.0
      comp=E,2.0nm,0.9s
MNK                                i P     P       18 32 39.5   0.0
      comp=N,4.0nm,0.9s
MNK                                i P     P       18 32 39.5   0.0
      comp=Z,8.0nm,0.9s
MNK                                i PP    PnPn    18 33 09.4  -0.6
MNK                                i PcP   PcP     18 36 18.6  +1.3
MNK                                i S     S       18 37 00.3   0.0
MNK                                i SS    SnSn    18 37 44.9  +0.7
MNK                                i SS    SnSn    18 37 44.9  +0.7
MNK                                i LR    LR      18 40 08.8
MNK                                i LRM   MLR     18 42 58.6
      comp=N,109nm,16.6s
MNK                                i LRM   MLR     18 42 58.7
      comp=Z,65nm,16.6s
MNK                                i LRM   MLR     18 43 37.0
      comp=E,11nm,16.6s
SMOL  Smolenice         24.64 114  eP      P       18 32 41.7  +1.2
SMOL  Smolenice         24.64 114  eP      P       18 32 41.7  +1.2
MODS  Modra-Piesok      24.70 115  eP      P       18 32 44.0  +3.0
MODS  Modra-Piesok      24.70 115  eP      P       18 32 44.0  +3.0
LANS  Liptovska Anna    24.94 111  eP      P       18 32 45.8  +2.6
LANS  Liptovska Anna    24.94 111  eP      P       18 32 45.8  +2.6
VYHS  Vyhne             25.21 112  eP      P       18 32 48.0  +2.3
VYHS  Vyhne             25.21 112  eP      P       18 32 48.0  +2.3
KLMR  Klimovskoe        25.58  72  eP      P       18 32 48.9  +0.1
KLMR                                pmax   pmax
      comp=Z,13nm,1.2s
KLMR  Klimovskoe        25.58  72  eP      P       18 32 48.9  +0.1
KLMR                                AMP            18 32 52.3
      comp=Z,13nm,1.2s
KWP   Kalwaria Pacla    25.89 106  eP      P       18 32 53.4  +1.6
KWP   Kalwaria Pacla    25.89 106   P      P       18 32 52.2  +0.4
KWP   Kalwaria Pacla    25.89 106   P      P       18 32 52.2  +0.4
ESDC  Sonseca Array     26.25 156   P      P       18 32 54.5  -0.6
      comp=Z,1.4nm,0.9s,baz=348,slow=9.3,SNR=6.3
ESDC                                LR     LR      18 42 52.1
      comp=Z,57nm,19.6s,baz=110,slow=36
KOLS  Kolonicke sedl    26.25 108  eP      P       18 32 56.8  +1.7
KOLS  Kolonicke sedl    26.25 108  eP      P       18 32 56.8  +1.7
LVV   L'vov             26.29 104  eP      P       18 32 55.1  -0.3
RES   Resolute Bay      26.48 324   LR     LR      18 43 26.8
      comp=Z,56nm,18.3s,baz=328,slow=37
UZH   Uzhgorod          26.50 108  eP      P       18 32 58.2  +0.9
UZH                                e               18 33 03.6
AKASG Malin Array Be    27.82  98   P      P       18 33 09.2  +0.1
      comp=Z,0.7nm,0.7s,baz=325,slow=8.9,SNR=4.8
AKASG Malin Array Be    27.82  98   P      P       18 33 07.9  -1.2
AKASG                               pmax   pmax
      comp=Z,4.0nm,1.4s
AKASG Malin Array Be    27.82  98   P      P       18 33 07.8  -1.2
OBN   Obninsk           27.86  84⇑eP      P       18 33 12.9  +3.5
OBN                                e               18 33 56.8
OBN                                eS      S       18 37 54.3  +1.4
OBN                                eSS     SnSn    18 39 08.2  +3.0
OBN                                 pmax   pmax
      comp=Z,8.0nm,1.0s
KIRV  Kirov             30.96  69⇑eP      P       18 33 36.4  -0.4
BELG  Belogornoye       34.46  79⇑eP      P       18 34 08.4  +0.9
BELG                                pmax   pmax
      comp=Z,2.0nm,1.0s
BR131 Keskin Array S    38.46 105   P      P       18 34 43.9  +1.9
BR131                               pmax   pmax
      comp=Z,7.0nm,1.4s
BR131 Keskin Array S    38.46 105   P      P       18 34 43.9  +1.9
BR131                               IAmb   IAmb    18 34 46.4
      comp=Z,7.2nm,1.4s
BRTR  Keskin Array B    38.46 105   P      P       18 34 41.9  -0.1
      comp=Z,1.1nm,0.8s,baz=335,slow=7.0,SNR=7.1
BRTR  Keskin Array B    38.46 105  eP      P       18 34 44.6  +2.6
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.8s
BRTR  Keskin Array B    38.46 105   P      P       18 34 42.5  +0.5
KIV   Kislovodsk        38.82  92  eP      P       18 34 46.0  +1.1
KIV                                 pmax   pmax
      comp=Z,14nm,1.1s
KIV                                 MLR    MLR
      comp=Z,142nm,16.0s
KBZ   Khabaz            39.09  93   P      P       18 34 48.3  +1.3
      comp=Z,2.4nm,0.9s,baz=299,slow=16,SNR=2.9
YKA   Yellowknife Ar    39.23 313   P      P       18 34 46.4  -1.5
      comp=Z,1.3nm,1.0s,baz=44,slow=8.6,SNR=12
YKA   Yellowknife Ar    39.23 313  eP      P       18 34 47.9  -0.1
YKA                                 pmax   pmax
      comp=Z,2.0nm,1.0s
GNI   Garni             42.81  94⇓eP      P       18 35 19.8  +1.9
GNI                                 pmax   pmax
      comp=Z,6.0nm,1.2s
BRVK  Borovoye          43.11  62⇑eP      P       18 35 21.2  +1.2
BRVK                                pmax   pmax
      comp=Z,2.0nm,0.7s
IL31                    45.69 332   P      P       18 35 39.1  -1.4
IL31                                IAmb   IAmb    18 35 44.9
      comp=Z,5.7nm,1.2s
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ILAR  Eielson Array     45.69 332   P      P       18 35 41.8  +1.2
      comp=Z,2.5nm,1.1s,baz=17,slow=7.1,SNR=10.0
ILAR                                PcP    PcP     18 37 18.6  +0.3
      comp=Z,0.7nm,1.0s,baz=351,slow=3.2,SNR=4.1
ILAR                                LR     LR      18 55 54.3
      comp=Z,54nm,19.3s,baz=359,slow=38
ILAR  Eielson Array     45.69 332   P      P       18 35 40.0  -0.5
MDM   Murphy Dome       45.79 333   P      P       18 35 43.0  +1.7
COLA  College           45.79 333⇑eP      P       18 35 42.9  +1.7
COLA                                pmax   pmax
      comp=Z,6.0nm,1.0s
BILL  Bilibino          47.54 358⇑eP      P       18 35 57.6  +2.6
BILL                                pmax   pmax
      comp=Z,2.0nm,1.1s
ZALV  Zalesovo Beam     47.61  51   P      P       18 35 56.8  +1.2
      comp=Z,0.6nm,0.6s,baz=347,slow=12,SNR=2.9
KURK  Kurchatov         48.09  58⇑eP      P       18 35 58.3  -1.1
KURK                                pmax   pmax
      comp=Z,5.0nm,1.3s
KURK  Kurchatov         48.09  58   P      P       18 35 59.2  -0.2
KURK                                IAmb   IAmb    18 36 02.6
      comp=Z,3.8nm,0.9s
KKAR  Karatay Array     51.25  70   P      P       18 36 25.4  +1.8
KKAR  Karatay Array     51.25  70   P      P       18 36 25.4  +1.8
DGZ   Jazzator, Alta    52.06  53⇑eP      P       18 36 30.7  +1.0
DGZ                                 pmax   pmax
      comp=Z,10.0nm,2.3s
MK31  Makanchi Array    52.70  58⇑eP      P       18 36 36.0  +1.6
MKAR  Makanchi Array    52.70  58   P      P       18 36 34.7  +0.3
      comp=Z,1.4nm,0.9s,baz=318,slow=7.0,SNR=10
MKAR  Makanchi Array    52.70  58  eP      P       18 36 33.9  -0.5
MKAR                                pmax   pmax
      comp=Z,1.0nm,0.9s
MKAR  Makanchi Array    52.70  58   P      P       18 36 34.2  -0.2
KAN12 Harper NE Stat    53.06 280   P      P       18 36 34.4  -2.7
TORD  Torodi Ar. Bea    53.14 156   P      P       18 36 37.5  -0.3
      comp=Z,1.1nm,0.8s,baz=342,slow=8.2,SNR=4.8
BW06  Boulder Array     53.20 293   P      P       18 36 38.8  +0.4
BW06                                IAmb   IAmb    18 36 41.9
      comp=Z,7.1nm,1.2s
PD31  Pinedale Array    53.20 293   P      P       18 36 37.6  -0.8
PD31                                IAmb   IAmb    18 36 41.9
      comp=Z,5.9nm,1.2s
PDAR  Pinedale Array    53.20 293   P      P       18 36 37.4  -1.0
      comp=Z,1.5nm,0.9s,baz=59,slow=7.1,SNR=11
AAK   Ala-Archa         53.23  67   LR     LR      18 59 15.2
      comp=Z,125nm,18.7s,baz=330,slow=36
ZAK   Zakamensk         56.44  41  eP      P       18 37 01.7  +0.1
ZAK                                 pmax   pmax
      comp=Z,2.0nm,1.4s
KSH   Kashi             56.47  68   P      P       18 37 04.3  +2.3
KSH                                 pmax   pmax
      comp=Z,22nm,1.4s
KSH                                 pmax   pmax
      comp=Z,330nm,5.6s
WMQ   Urumqi            57.21  56  eP      P       18 37 10.5  +3.4
SONM  Songino Array     59.62  40   P      P       18 37 23.4  -0.6
      comp=Z,0.8nm,1.0s,baz=341,slow=7.4,SNR=4.4
SONM  Songino Array     59.62  40  eP      P       18 37 25.7  +1.8
SONM                                pmax   pmax
      comp=Z,1.0nm,1.0s
ULN   Ulaanbaatar       59.77  40⇓eP      P       18 37 26.7  +1.7
ULN                                 pmax   pmax
      comp=Z,4.0nm,1.7s
NVAR  Mina Array Bea    60.32 297   LR     LR      19 03 05.2
      comp=Z,138nm,20.9s,baz=18,slow=36
TXAR  Lajitas Array     62.31 280   P      P       18 37 42.4   0.0
      comp=Z,1.0nm,1.0s,baz=64,slow=2.9,SNR=5.5
GTA   Gaotai            65.28  49  eP      P       18 38 01.5  -0.4
GTA                                 pP     sP      18 38 06.3  +2.4
GTA                                 sP     pP      18 38 09.5  +6.1
GTA                                 pmax   pmax
      comp=Z,1.0nm,1.4s
GTA                                 pmax   pmax
      comp=Z,96nm,5.7s
GTA                                 LR     LR
      comp=N,56nm,15.7s
GTA                                 LR     LR
      comp=E,110nm,16.8s
GTA                                 LR     LR
      comp=Z,110nm,15.7s
HHC   Hu-ho-hao-te      67.49  40  eP      P       18 38 20.3  +4.3
HHC                                 pmax   pmax
      comp=Z,6.0nm,0.7s
HHC                                 pmax   pmax
      comp=Z,82nm,8.5s
LZH   Lanzhou           69.61  48  eP      P       18 38 29.0  -0.4
LZH                                 pP     sP      18 38 32.3  +0.9
LZH                                 sP     pP      18 38 35.3  +4.5
LZH                                 PP     PP      18 41 04.3  +1.7
LZH                                 pmax   pmax
      comp=Z,19nm,1.3s
LZH                                 pmax   pmax
      comp=Z,61nm,5.4s
CMAR  Chiang Mai Arr    84.11  59   P      P       18 39 50.9  -0.3
      comp=Z,0.4nm,0.6s,baz=318,slow=6.7,SNR=5.4
CMAR  Chiang Mai Arr    84.11  59  eP      P       18 39 53.5  +2.4
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.8s
STKA  Stephens Creek   144.70  32   PKP    PKPdf   18 46 55.8  -0.6
      comp=Z,1.0nm,0.6s,baz=327,slow=6.4,SNR=2.9
STKA  Stephens Creek   144.70  32  ePKIKP  PKiKP   18 46 57.8  -2.3
STKA                                pmax   pmax
      comp=Z,1.0nm,0.6s
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RHSSO ***25*** *19:11:52.3±0.4, 43°.88N×16°.49E, h8km±2km, ML2.5/14*

ISC 25 19:11:51.6±1.1**, 43°.87N**±0°.02×**16°.48E**±0°.02**, h4km**±9km**,**
n37,σ0ˢ63/69**, 2C, Northwestern Balkan Peninsula**

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Code  Station Name         Δ°  AZ°     Phase ID          Time      Res
                                     Op      ISC       h  m  s     ISC
KIJV  Kijevo             0.15 339  i Pg     Pg      19 11 54.4  -0.2
KIJV                                 Sg     Sg      19 11 56.7  +0.2
MORI  Morici             0.56 270  ePg      Pg      19 12 01.2  -1.1
MORI                                 Sg     Sg      19 12 09.8  +0.3
RICI  Ricice             0.60 128  ePg      Pg      19 12 02.5  -0.6
RICI                                 Sg     Sg      19 12 11.6  +0.6
ZIRJ  Zirje              0.64 251  ePg      Pg      19 12 03.1  -0.8
ZIRJ                                 Sg     Sg      19 12 12.9  +0.7
HVAR  Hvar               0.69 182  ePg      Pg      19 12 03.7  -1.1
HVAR                                 Sg     Sg      19 12 14.2  +0.4
MAKA  Makarska           0.70 146  ePg      Pg      19 12 04.4  -0.6
MAKA                                 Sg     Sg      19 12 15.3  +1.2
MGRS  Mrkonjic Grad      0.70  38⇑iPg      Pg      19 12 05.0  -0.1
MGRS                               eSg      Sg      19 12 14.6  +0.4
UDBI  Udbina             0.84 322  ePg      Pg      19 12 08.2  +0.5
UDBI                                 Sg     Sg      19 12 18.7  +0.2
BLY   Banja Luka         1.02  30⇑iPg      Pg      19 12 10.7  -0.4
BLY                                eSg      Sg      19 12 24.9  +0.6
DUGI  Dugi Otok          1.03 277  ePg      Pg      19 12 10.3  -1.1
DUGI                                 Sg     Sg      19 12 25.5  +0.7
PRIJ  Prijedor           1.12   9  ePg      Pg      19 12 11.6  -1.5
PRIJ                               eSg      Sg      19 12 27.2  -0.5
STON  Ston               1.34 138  ePg      Pb      19 12 17.5  +0.4
STON                                 Sg     Sn      19 12 35.2   0.0
STON  Ston               1.34 138  ePg      Pn      19 12 15.9  -1.1
STON                               eSg      Sb      19 12 34.7  +0.1
NVLJ  Novalja            1.35 302  ePg      Pn      19 12 17.5  +0.4
NVLJ                                 Sg     Sb      19 12 35.3  +0.3
DBRK  Dubrovnik          1.71 134  ePn      Pb      19 12 23.5   0.0
DBRK                                 Sn     Sb      19 12 45.9  +0.5
BRY   Bratogost          1.79 122  ePn      Pn      19 12 23.9  +0.6
BRY                                eSn      Sn      19 12 46.7  +0.2
TREB  Trebinje           1.79 129  ePn      Pn      19 12 23.2   0.0
TREB                               eSn      Sn      19 12 46.2  -0.1
HAPS  Han Pijesak,Bl     1.80  82  ePn      Pn      19 12 23.0  -0.5
HAPS                               eSn      Sn      19 12 46.3  -0.5
UPM   Unac-Piva          1.89 110  ePn      Pn      19 12 24.2  -0.6
UPM                                eSn      Sn      19 12 49.0  -0.1
OZLJ  Ozalj              1.89 338  ePn      Pn      19 12 25.7  +1.1
OZLJ                                 Sn     Sb      19 12 49.8  -0.8
RIY   Rijeka             2.04 316  ePn      Pn      19 12 27.7  +1.0
RIY                                  Sn     Sb      19 12 54.4  -0.5
RIY   Rijeka             2.04 316  ePn      Pn      19 12 26.9  +0.2
RIY                                eSn      Sn      19 12 52.6   0.0
HCY   Herceg Novi        2.05 133  ePn      Pn      19 12 27.2  +0.4
HCY                                eSn      Sn      19 12 53.2  +0.4
PTJ   Puntijarka         2.07 350  ePn      Pn      19 12 27.7  +0.4
PTJ                                  Sn     Sb      19 12 55.3  -0.7
CRES  Cresnjev           2.09 340  ePn      Pn      19 12 27.5  +0.1
CRES                               eSn      Sn      19 12 53.1  -0.8
BBLS  Lazi&#263;i        2.12  89  ePn      Pn      19 12 27.3  -0.5
BBLS                               eSn      Sn      19 12 54.2  -0.4
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CEY	Cerknica	2.37	323	ePn	Pn	19 12 31.9	+0.6
CEY				eSn	Sn	19 13 00.7	-0.2
PDG	Podgorica	2.49	124	ePn	Pn	19 12 33.9	+1.1
PDG				eSn	Sn	19 13 04.2	+0.6
DIVS	Divibare	2.55	84	ePn	Pn	19 12 34.3	+0.6
DIVS				eSn	Sn	19 13 05.0	-0.2
DRME	Dracevica, Mon	2.60	129	ePn	Pn	19 12 34.9	+0.5
DRME				eSn	Sn	19 13 06.1	-0.3
SJES	Sjenica	2.61	102	ePn	Pn	19 12 34.6	-0.1
SJES				eSn	Sn	19 13 06.6	-0.3
MORH	Mrgy, Hungar	2.81	32	ePn	Pn	19 12 37.5	+0.3
MORH				eSn	Sn	19 13 11.1	-0.3
OBKA	Obir	2.97	333	ePn	Pn	19 12 40.6	+1.0
	1.9nm,0.4s						
SOKA	Soboth	2.99	341	ePn	Pn	19 12 39.9	0.0
	0.5nm,0.3s						
ARSA	Arzberg	3.45	349	ePn	Pn	19 12 46.1	0.0
	2.3nm,0.5s						
MOA	Molln	4.27	340	ePn	Pn	19 12 58.4	+1.0
	0.8nm,0.4s						
VYHS	Vyhne	4.91	19	ePN	Pn	19 13 07.1	+1.0

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*IDC **25** 19:16:04.3±7.6, 37°.24N×143°.04E, h0^{km}, mb3.3/3, mb1 3.3/4, mb1mx3.1/52, mbtmp3.2/4, ML2.3/1, Error ellipse: s-maj=139.6km s-min=46.6km az=143.0*

*JMA **25** 19:16:11.5±0.2, 37°.75N×142°.33E, h35^{km}±3^{km}, M3.4*

ISC 25 19:16:10.9±2.6**, 37°.78N**±0°.07×**142°.3E**±0°.1**, h3**^{km}±12^{km}**, n18, σ1^{s}.59**/28**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.82	310	P	Pg	19 16 27.7	+1.2
JIKH				S	Sg	19 16 39.0	+1.9
JIO	Ouri	0.98	313	P	Pg	19 16 30.2	+0.5
JMST	Minamisoumatoc	1.08	267	P	Pg	19 16 31.4	-0.3
JMST				eS	Sg	19 16 45.6	-0.2
JMM	Marumori	1.16	275	P	Pn	19 16 32.8	-1.1
JMM				S	Sb	19 16 47.8	-1.1
JFK	Kawauchi	1.17	250	P	Pn	19 16 32.5	-1.7
JFK				S	Sb	19 16 47.4	-2.0
JKMT	Kesennumamotoy	1.20	329	P	Pb	19 16 33.2	-0.9
JKMT				eS	Sg	19 16 48.3	-1.0
JOU	Okura	1.38	295	P	Pn	19 16 36.7	-0.3
JOU				S	Sn	19 16 54.7	-1.1
JMK	Ichinoseki	1.42	325	P	Pn	19 16 36.7	-0.8
JFT	Otama	1.54	261	P	Pn	19 16 38.9	-0.4
JFT				eS	Sn	19 16 58.9	-0.9
JYS	Shirataka	1.78	285	P	Pn	19 16 42.9	+0.4
JYS				S	Sn	19 17 07.0	+1.3
JOM	Ohasama	1.85	336	P	Pn	19 16 42.8	-0.6
JYK	Kaneyama	1.87	308	P	Pn	19 16 43.8	+0.1
JRG	Rokugo	2.05	322	P	Pn	19 16 46.6	+0.4
JFY	Yanaizu	2.06	260	P	Pn	19 16 46.9	+0.5
JFY				eS	Sn	19 17 12.1	-0.4
MJAR	Matsushiro Arr	3.46	250	Pn	Pn	19 17 06.4	+0.7
	0.2nm,0.3s,baz=78,slow=17,SNR=12						
MJAR				Sn	Sn	19 17 52.5	+5.4
	0.2nm,0.3s,baz=95,slow=15,SNR=5.1						
ZALV	Zalesovo Beam	41.91	312	P	P	19 24 04.8	+2.5
	0.3nm,0.5s,baz=99,slow=8.9,SNR=1.5						
MKAR	Makanchi Array	44.29	302	P	P	19 24 21.9	+0.1
	0.1nm,0.4s,baz=78,slow=9.1,SNR=4.6						
KURBB	Kurchatov Arra	46.07	308	P	P	19 24 34.2	-1.6
	0.2nm,0.4s,baz=81,slow=8.0,SNR=2.6						

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*MOS **25** 19:34:27.6±0.0, 42°.05N×48°.21E, h22^{km}, MPVA4.0*

*DRS **25** 19:34:28.4±0.0, 42°.06N×48°.50E, h21^{km}, ML3.2/5*

ISC 25 19:34:26.0±1.4**, 42°.11N**±0°.04×**48°.50E**±0°.06**, h27**^{km}±12^{km}**, n28, σ1^{s}.23**/51**, 2C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URKR	Urkarakh	0.65	275	ePg	Pb	19 34 38.5	-0.4
	532nm,0.2s						
URKR				eSg	Sb	19 34 46.4	-1.2
	1µm,0.2s						
SGKR	Sergokala	0.72	300	ePg	Pb	19 34 40.2	+0.3
	274nm,0.1s						
SGKR				eSg	Sb	19 34 49.7	+0.2
	1µm,0.2s						
AKT	Akhty	0.85	223	ePg	Pb	19 34 42.1	-0.2
	419nm,0.2s						
AKT				eSg	Sb	19 34 51.8	-1.6
	1µm,0.3s						
ARKR	Arakani	1.22	294	ePg	Pn	19 34 47.9	+0.4
	64nm,0.8s						
ARKR				eSg	Sn	19 35 03.3	+0.2
	318nm,0.3s						
BUJR	Buynaksk	1.25	305	ePg	Pb	19 34 50.1	+1.0
BUJR				eSg	Sb	19 35 05.4	+0.6
XNZR	Khunzakh	1.40	289	ePg	Pb	19 34 51.5	-0.1
XNZR				eSg	Sb	19 35 08.5	-0.7
DBC	Dubki	1.54	307	ePg	Pb	19 34 54.1	+0.3
DBC				eSg	Sb	19 35 12.3	-0.6
LGD	Lagodekhi	1.71	262	P	Pn	19 34 55.1	+1.0
LGD	Lagodekhi	1.71	262	ePg	Pn	19 34 55.0	+0.9
LGD				eSg	Sn	19 35 14.3	-0.8
BTLR	Botlikh	1.78	289	ePg	Pn	19 34 56.8	+1.7
BTLR				eSg	Sn	19 35 18.0	+1.1
DDFL	Dedoflistskaro	1.90	250	P	Pb	19 35 00.2	+0.1
DVE	Vedeno	1.95	297	ePg	Pn	19 34 58.6	+1.1
DVE				eSg	Sn	19 35 21.5	+0.4
GROC	Groznyy	2.28	300	ePg	Pb	19 35 04.9	-1.6
GROC				eSg	Sn	19 35 29.4	+0.3
BTNK	Botanikuri	2.80	262	P	Pn	19 35 10.7	+1.6
LACR	Lac	3.19	284	ePn	Pn	19 35 16.8	+2.2
LACR				eSn	Sn	19 35 52.2	+0.4
DMNI	Dmanisi	3.32	258	P	Pn	19 35 16.6	+0.2
DMNI				S	Sn	19 35 53.5	-1.5
KORR	Kora	3.42	288	ePn	Pn	19 35 17.6	0.0
KORR				eSn	Sn	19 35 57.3	0.0
GNI	Garni	3.45	237	ePn	Pn	19 35 20.0	+1.8
GNI				eSn	Sn	19 35 58.7	+0.5
ZEI	Tsey	3.47	283	ePn	Pn	19 35 20.7	+2.2
ZEI				eSn	Sn	19 35 57.5	-1.3
STDR	Stavd-Durt	3.50	293	ePn	Pn	19 35 19.4	+0.7
STDR				eSn	Sn	19 35 59.8	+0.4
BRNG	Burnasheti	3.52	264	P	Pn	19 35 20.5	+1.3
DIGR	Digorskoe uzhe	3.72	284	ePn	Pn	19 35 24.2	+2.2
DIGR				eSn	Sn	19 36 04.4	-0.6
KBTC	Kuba-Taba	4.11	296	ePn	Pn	19 35 27.6	+0.5
KBTC				eSn	Sn	19 36 13.7	-0.6
ABS	Abastumani	4.26	267	P	Pn	19 35 30.5	+1.2
KBZ	Khabaz	4.42	293	ePn	Pn	19 35 31.4	+0.1
KBZ				eSn	Sn	19 36 20.2	-1.8
KIV	Kislovodsk	4.65	295	ePn	Pn	19 35 35.7	+1.2
KIV				eSn	Sn	19 36 26.3	-1.3
AKTO	Aktyubinsk	10.61	35	⇑P	Pn	19 36 56.0	-0.2
	4.0nm,1.4s						
AKTO				⇑S	Sn	19 38 50.6	-3.4
	3.9nm,1.4s						
AB31	Akbulak array	10.72	44	P	Pn	19 36 60.0	+2.2
	0.2nm,0.5s,baz=235,slow=14,SNR=7.0						
AB31				⇓S	Sn	19 38 55.7	-1.1
	0.3nm,0.3s,baz=237,slow=22,SNR=6.5						

IDC 25 19:36:36.3±3.2**, 0°.35S**×**139°.69E, h0**^{km}**, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.2**/34**, mbtmp3.2**/4**, Error ellipse: s-maj=163.8km s-min=29.0km az=84.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.17	195	P	P	19 41 12.1	-0.4
	0.1nm,0.4s,baz=12,slow=12,SNR=1.3						
ASAR	Alice Springs	23.85	193	P	P	19 41 52.4	+0.8
	0.2nm,0.6s,baz=16,slow=11,SNR=5.1						
STKA	Stephens Creek	31.41	177	P	P	19 42 58.6	-0.6
	0.7nm,0.5s,baz=330,slow=11,SNR=2.9						
SONM	Songino Array	56.03	334	P	P	19 46 16.9	-0.1
	0.3nm,0.4s,baz=134,slow=4.2,SNR=2.5						

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*IDC **25** 19:41:52.8±14.0, 19°.51S×178°.12W, h408^{km}±165^{km}, mb3.1/7, mb1 3.5/7, mb1mx3.2/26, mbtmp3.9/7, Error ellipse: s-maj=129.4km s-min=33.7km az=166.0*

ISC 25 19:41:52.3±1.5**, 19°.7S**±0°.7×**178°.1W**±0°.4**, h400**^{km}**, n8, σ1^{s}.33**/8**, mb3.5**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.09	243	P	P	19 48 34.8	0.0
	0.8nm,0.4s,baz=77,slow=12,SNR=7.2						
ASAR	Alice Springs	44.65	256	P	P	19 49 26.9	-0.7
	3.2nm,0.6s,baz=88,slow=8.2,SNR=29						
WRA	Warramunga Arr	44.65	261	P	P	19 49 27.1	-0.4
	1.6nm,0.6s,baz=97,slow=7.6,SNR=25						
NVAR	Mina Array Bea	80.47	43	P	P	19 53 20.2	-1.1
	0.1nm,0.3s,baz=229,slow=9.3,SNR=3.8						
TXAR	Lajitas Array	86.67	57	P	P	19 53 52.6	+0.1
	0.4nm,0.6s,baz=232,slow=6.2,SNR=3.8						
PDAR	Pinedale Array	88.40	43	P	P	19 53 59.7	-0.8
	0.5nm,0.6s,baz=178,slow=5.8,SNR=5.3						
CMAR	Chiang Mai Arr	89.77	290	P	P	19 54 07.3	+0.3
	0.2nm,0.6s,baz=128,slow=2.3,SNR=4.1						
GERES	GERESS Array B	149.38	345	PKPbc	PKPdf	20 00 52.5	+2.5
	0.2nm,0.5s,baz=310,slow=3.7,SNR=2.7						

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*NIC **25** 19:53:03.0±0.0, 35°.73N×26°.94E, h15^{km}, Ml3.5/2*

*ISK **25** 19:53:03.1, 35°.72N×26°.94E, h15^{km}, ML2.8/14*

*ATH **25** 19:53:03.2, 35°.74N×26°.90E, h13^{km}±3^{km}, ML2.9/8, Error ellipse: s-maj=4.3km s-min=1.0km az=148.0*

*THE **25** 19:53:04.0, 35°.72N×26°.94E, h10^{km}±1^{km}, ML3.0/6, Error ellipse: s-maj=2.0km s-min=0.6km az=138.0*

*DDA **25** 19:53:07.5, 35°.88N×27°.24E, h19^{km}±2^{km}, ML2.6*

ISC 25 19:53:03.3±0.9**, 35°.73N**±0°.02×**26°.93E**±0°.02**, h15**^{km}±7^{km}**, n72, σ0^{s}.67**/97**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.26	134	P	Pg	19 53 08.9	0.0
KARP				S	Sg	19 53 13.1	+0.3
KARP				AML	AML	19 53 13.6	
	comp=N,18772µm,0.2s						
KARP				AML	AML	19 53 13.6	
	comp=E,18111µm,0.2s						
KARP	Karpathos	0.26	134	P	Pg	19 53 09.0	0.0
KARP				S	Sb	19 53 13.3	-0.8
	comp=E,9µm,0.2s						
KARP	Karpathos	0.26	134	PG	Pg	19 53 08.9	0.0
KARP				SG	Sg	19 53 13.1	+0.3
KARP	Karpathos	0.26	134	P	Pg	19 53 08.9	0.0
KARP				AML	AML	19 53 13.1	
	comp=E,18nm,0.2s						
KARP				AML	AML	19 53 13.1	
	comp=E,18nm,0.2s						
KARP				AML	AML	19 53 13.2	
	comp=E,19nm,0.2s						
KARP				AML	AML	19 53 13.2	
	comp=E,19nm,0.2s						
KARP				S	Sb	19 53 13.3	-0.8
ZKR	Zakros	0.85	224	P	Pg	19 53 19.8	+0.1
ZKR				S	Sg	19 53 31.1	+0.3
ZKR				AML	AML	19 53 34.1	
	comp=N,535µm,0.3s						
ZKR				AML	AML	19 53 34.4	
	comp=E,1683µm,0.4s						
ZKR	Zakros	0.85	224	P	Pg	19 53 19.8	+0.1
ZKR				S	Sn	19 53 32.5	-0.4
	comp=E,552nm,0.3s						
ZKR	Zakros	0.85	224	PG	Pb	19 53 19.7	0.0
ZKR				SG	Sn	19 53 32.4	-0.4
STIA	Sitia Lasithi	0.86	233	P	Pg	19 53 20.2	+0.2
STIA				S	Sn	19 53 32.9	-0.3
NISR	Nisiros	0.89	10	P	Pn	19 53 20.9	-0.4
NISR				S	Sg	19 53 32.2	-0.1
KOSK	Kos Island	1.02	2	PG	Pn	19 53 23.4	+0.4
ARG	Arkhangelos	1.08	63	P	Pb	19 53 23.2	-0.5
ARG				S	Sn	19 53 38.6	-0.1
ARG				AML	AML	19 53 40.5	
	comp=E,1245µm,0.2s						
ARG				AML	AML	19 53 40.5	
	comp=N,762µm,0.2s						
ARG	Arkhangelos	1.08	63	P	Pb	19 53 23.4	-0.3
ARG				S	Sn	19 53 38.8	+0.1
	comp=N,500nm,0.2s						
ARG	Arkhangelos	1.08	63	PN	Pg	19 53 24.4	+0.2
ARG				SN	Sn	19 53 39.4	+0.7
ARG	Arkhangelos	1.08	63	P	Pb	19 53 23.3	-0.5
ARG				S	Sn	19 53 38.9	+0.2
ANAF	Anafi Island	1.13	304	P	Pb	19 53 24.2	-0.3
ANAF				AML	AML	19 53 44.4	
	comp=N,3680µm,0.5s						
ANAF				AML	AML	19 53 46.8	
	comp=E,4720µm,0.4s						
ANAF	Anafi Island	1.13	304	P	Pb	19 53 24.4	-0.1
ANAF				S	Sn	19 53 39.8	0.0
	comp=E,2µm,0.4s						
NPS	Neapolis	1.17	247	P	Pn	19 53 24.9	-0.2
NPS				S	Sb	19 53 40.0	-0.2
NPS				AML	AML	19 53 43.6	
	comp=N,1380µm,0.3s						
NPS				AML	AML	19 53 46.5	
	comp=E,1250µm,0.4s						
NPS	Neapolis	1.17	247	P	Pn	19 53 25.1	0.0
NPS				S	Sb	19 53 40.8	+0.6
	comp=E,668nm,0.3s						
LAST	Lasithi	1.31	245	P	Pn	19 53 27.2	+0.1
LAST				S	Sb	19 53 42.9	-1.5
LAST				AML	AML	19 53 48.6	
	comp=E,408µm,0.3s						
LAST				AML	AML	19 53 48.9	
	comp=N,326µm,0.3s						
LAST	Lasithi	1.31	245	P	Pn	19 53 27.3	+0.1
LAST				S	Sn	19 53 45.0	+0.5
	comp=N,188nm,0.3s						
SANT	Santorini	1.35	299	P	Pn	19 53 27.4	-0.2
SANT				AML	AML	19 53 51.5	
	comp=N,419µm,0.3s						
SANT				AML	AML	19 53 52.6	
	comp=E,1254µm,0.4s						
SANT	Santorini	1.35	299	P	Pn	19 53 27.8	+0.1
SANT	Santorini	1.35	299	PN	Pn	19 53 28.0	+0.3
THR8	Santorini-Mono	1.36	300	P	Pn	19 53 27.6	0.0
THR8	Santorini-Mono	1.36	300	P	Pn	19 53 27.7	+0.1
BODT	Bodrum	1.36	13	PN	Pb	19 53 28.5	0.0
THR6	Thira Island,	1.39	297	P	Pn	19 53 28.3	+0.1
THR6	Thira Island,	1.39	297	P	Pn	19 53 28.5	+0.4
BDRM	Kayabasi	1.40	17	iP	Pg	19 53 30.1	0.0
SNT1	Gialos, Santor	1.40	300	P	Pn	19 53 27.8	-0.3
THR7	Fira-Santorini	1.40	300	P	Pn	19 53 28.4	+0.1
THR3	Thira Island,	1.41	299	P	Pn	19 53 28.6	+0.2
THR3	Thira Island,	1.41	299	P	Pn	19 53 28.8	+0.4
SNT5	Nea Kammeni, S	1.41	299	P	Pn	19 53 28.8	+0.4
SNT5	Nea Kammeni, S	1.41	299	P	Pn	19 53 28.9	+0.4
CMBO	Columbo, Santo	1.44	301	P	Pn	19 53 27.7	-1.1
CMBO	Columbo, Santo	1.44	301	P	Pn	19 53 28.0	-0.8
TURN	Turunc	1.49	45	PN	Pn	19 53 29.9	+0.4
TURN	Turunc	1.49	45	iP	Pn	19 53 29.4	0.0
TURN				iS	Sn	19 53 47.7	-0.9
TURN				IAML		19 53 49.0	
	comp=E,91nm,1.1s						
HRKL	Herakleio	1.55	255	PN	Pn	19 53 31.1	+0.8
MLSB	Milas	1.70	23	PN	Pn	19 53 33.2	+0.7
IDI	Anoyia	1.72	256	P	Pn	19 53 32.6	-0.2
IDI				AML	AML	19 54 02.1	
	comp=E,288µm,0.3s						
IDI				AML	AML	19 54 03.9	
	comp=N,254µm,0.4s						
IDI	Anoyia	1.72	256	P	Pn	19 53 32.5	-0.2
IDI	Anoyia	1.72	256	PN	Pn	19 53 32.7	-0.1
APE	Apeiranthos	1.75	320	P	Pn	19 53 33.0	-0.1
APE	Apeiranthos	1.75	320	PN	Pn	19 53 33.0	-0.1
APE	Apeiranthos	1.75	320	P	Pn	19 53 32.8	-0.3
DALY	Dalyan (Mula)	1.77	52	PN	Pn	19 53 33.9	+0.6
DALY	Dalyan (Mula)	1.77	52	iP	Pb	19 53 35.8	+0.4
DALY				iS	Sn	19 53 55.6	+0.2
DALY				IAML		19 54 02.0	
	comp=N,105nm,1.1s						
YER	Yerkesik	1.78	38	PN	Pn	19 53 34.2	+0.7
SIVA	Sivas	1.87	248	P	Pb	19 53 37.0	-0.2
SIVA				S	Sn	19 53 59.4	+1.3
MULA	Mugla, Merkez-	1.89	36	iP	Pb	19 53 37.0	-0.6
MULA				iS	Sn	19 53 59.3	+0.5
MULA				IAML		19 54 10.0	
	comp=E,43nm,0.5s						
FETY	Fethiye	1.96	62	PN	Pn	19 53 35.9	-0.1
GCAM	G?zelcaml?	1.98	7	PN	Pb	19 53 37.6	-1.4
GCAM	G?zelcaml?	1.98	7	iP	Pg	19 53 42.5	+1.2
VAM	Vamos	2.25	263	P	Pn	19 53 40.1	+0.2
TAVA	DENIZLI_Tavas	2.35	42	iP	Pb	19 53 44.1	-1.3
TAVA				iS	Sn	19 54 11.4	+1.2
CAEL	Denizli, Camel	2.38	54	iP	Pb	19 53 45.2	-0.6
CAEL				iS	Sb	19 54 12.9	-2.2
CAEL				IAML		19 54 27.0	
	comp=E,96nm,0.5s						
CAEL				IAML		19 54 32.0	
	comp=N,77nm,0.8s						
IMMV	Iera Moni Meta	2.42	264	P	Pn	19 53 43.1	+0.8
IMMV	Iera Moni Meta	2.42	264	PN	Pn	19 53 43.3	+1.0
GOLH	Golhisar	2.60	54	iP	Pn	19 53 46.8	+1.9
GOLH				iS	Sb	19 54 20.5	-0.9
GOLH				IAML		19 54 30.0	
	comp=E,30nm,0.4s						
ELL	Elmali	2.61	66	PN	Pn	19 53 46.0	+0.9
KORT	Korkueli	3.04	64	iP	Pn	19 53 52.4	+1.5
KORT				IAML		19 54 37.0	
	comp=E,29nm,1.7s						
KHAL	Karahalli	3.34	37	iP	Pn	19 53 56.8	+1.8
OSC1	CSNet OBS 1	4.22	121	P	Pn	19 54 07.1	+0.1
AKMS	Akamas	4.47	98	P	Pn	19 54 10.9	+0.4
AKMS				AML	AML	19 55 04.5	
	comp=E,0.3nm,0.9s						
AKMS				AML	AML	19 55 06.3	
	comp=E,0.2nm,0.9s						
ALFC	Alefka	4.66	95	P	Pn	19 54 13.7	+0.6
NATA	Nata	4.71	100	P	Pn	19 54 14.7	+0.8
SZAC	Souni	4.97	100	P	Pn	19 54 17.8	+0.4
OSC2	CSNet OBS 4	5.15	119	P	Pn	19 54 20.0	+0.2
ASGA	Asgata	5.25	99	P	Pn	19 54 21.7	+0.5
MVOU	Mavrovouni	5.52	95	P	Pn	19 54 26.0	+1.0

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*NNC **25** 20:03:06.3±0.6, 42°.98N×72°.40E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=15.5km s-min=3.3km az=5.0*

*KRNET **25** 20:03:07.1±0.1, 42°.83N×72°.46E, h17^{km}, mb2.8*

*SOME **25** 20:03:07.4, 42°.88N×72°.43E, h15^{km}*

ISC 25 20:03:06.8±1.1**, 42°.84N**±0°.04×**72°.46E**±0°.02**, h12**^{km}±11^{km}**, n35, σ0^{s}.96**/62**, 19C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.36	174	⇓iP	Pg	20 03 13.8	-0.2
	baz=74						
MNAS				⇓iS	Sg	20 03 18.5	-0.4
	baz=74						
MRKS	Merke	0.57	100	eP	Pb	20 03 18.7	-0.1
	baz=99						
MRKS				eS	Sb	20 03 27.0	0.0
	baz=99						
MRKS	Merke	0.57	100	eP	Pb	20 03 18.7	-0.1
	2.1nm,0.1s						
MRKS				eS	Sb	20 03 26.9	0.0
	12nm,0.2s						
MRKS	Merke	0.57	100	P	Pb	20 03 18.8	+0.1
	1.9nm,0.1s						
MRKS				S	Sb	20 03 26.7	-0.3
	12nm,0.2s						
DZA	Taraz	0.83	274	eP	Pb	20 03 22.9	-0.2
	baz=74						
DZA				eS	Sb	20 03 33.8	-0.4
	baz=74						
DZA	Taraz	0.83	274	eP	Pb	20 03 22.9	-0.2
	16nm,0.1s						
DZA				eS	Sb	20 03 33.8	-0.4
	21nm,0.2s						
EKS2	Erkin-Say	0.99	100	⇑iP	Pb	20 03 25.8	-0.1
	baz=0.0						
EKS2				⇑iS	Sb	20 03 38.8	-0.1
	baz=0.0						
EKS2	Erkin-Say	0.99	100	P	Pn	20 03 26.7	+0.2
	SNR=14						
AML	Almayashu	1.16	127	⇑iP	Pn	20 03 29.1	0.0
	baz=27						
AML				⇑iS	Sg	20 03 44.5	+0.3
	baz=27						
KK31	Karatay Array	1.45	281	⇑P	Pn	20 03 33.1	+0.3
	0.3nm,0.2s,baz=102,slow=17,SNR=21						
KK31				⇓S	Sn	20 03 50.2	-1.5
	0.7nm,0.3s,baz=100,slow=30,SNR=8.1						
AAK	Ala-Archa	1.52	97	⇑iP	Pb	20 03 35.0	+0.2
	baz=97						
AAK				⇑iS	Sg	20 03 55.4	-0.1
	baz=97						
AAK	Ala-Archa	1.52	97	P	Pg	20 03 35.9	0.0
	SNR=8.5						
AAK	Ala-Archa	1.52	97	⇓P	Pb	20 03 35.4	+0.6
	3.7nm,1.0s						
AAK				⇑S	Sg	20 03 56.5	+1.0
	6.3nm,0.6s						
USP	Ospenovka	1.56	74	⇑iP	Pb	20 03 35.6	+0.2
	baz=73						
USP				⇑iS	Sg	20 03 56.5	-0.3
	baz=73						
USP	Ospenovka	1.56	74	P	Pb	20 03 35.7	+0.2
	SNR=28						
ARSB	Arslanbob	1.57	165	⇓iP	Pb	20 03 36.1	+0.4
	baz=65						
ARSB				⇓iS	Sg	20 03 57.0	-0.2
	baz=65						
TRKS	Terek-Say	1.64	217	⇓iP	Pg	20 03 38.3	+0.1
	baz=15						
TRKS				⇓iS	Sg	20 04 00.3	+0.9
	baz=15						
UCH	Uchtor	1.64	111	⇑iP	Pb	20 03 37.7	+0.6
	baz=11						
UCH				⇑iS	Sg	20 03 59.2	-0.4
	baz=11						
CHMS	Chumysh	1.69	84	⇑iP	Pb	20 03 38.3	+0.5
	baz=84						
CHMS				⇑iS	Sg	20 04 00.3	-0.9
	baz=84						
CHMS	Chumysh	1.69	84	P	Pb	20 03 37.3	-0.5
	SNR=6.0						
ARLS	Aral	1.70	125	⇑iP	Pb	20 03 38.2	+0.3
	baz=25						
ARLS				⇑iS	Sg	20 04 00.6	-0.7
	baz=25						
SGDS	Sogindy	1.70	68	P	Pb	20 03 38.1	+0.1
	5.9nm,0.3s						
SGDS				S	Sb	20 03 59.8	+0.4
	8.7nm,0.2s						
KBK	Karagaybulak	1.84	95	⇑iP	Pb	20 03 41.1	+0.6
	baz=95						
KBK				⇑iS	Sg	20 04 05.3	-0.8
	baz=95						
KBK	Karagaybulak	1.84	95	P	Pb	20 03 41.3	+0.8
	SNR=11						
IUG	Iuzhnay	1.93	250	eP	Pb	20 03 42.7	+0.9
	baz=50						
IUG				eS	Sg	20 04 07.9	-0.7
	baz=50						
IUG	Iuzhnay	1.93	250	eP	Pb	20 03 42.7	+0.9
	2.2nm,0.2s						
IUG				eS	Sg	20 04 08.0	-0.7
	5.7nm,0.8s						
IUG	Iuzhnay	1.93	250	P	Pb	20 03 42.9	+1.1
	2.2nm,0.2s						
IUG				S	Sg	20 04 08.0	-0.7
	5.7nm,0.8s						
TKM2	Tokmak 2	2.31	87	⇓iP	Pb	20 03 48.1	-0.3
	baz=87						
TKM2				⇓iS	Sb	20 04 17.5	+0.5
	baz=87						
TKM2	Tokmak 2	2.31	87	⇑Pn	Pb	20 03 47.3	-1.1
	5.7nm,1.4s						
TKM2				⇓Lg	Lg	20 04 19.1	
	3.7nm,0.5s						
BTLS	Baital	2.48	27	eP	Pb	20 03 51.9	+0.7
	1.2nm,0.2s						
BTLS				eS	Sb	20 04 23.9	+2.2
	2.2nm,0.1s						
KST	Kastek	2.58	84	eP	Pb	20 03 54.6	+1.5
	1.5nm,0.1s						
KST				eS	Sg	20 04 28.2	-1.5
	8.6nm,0.8s						
KST	Kastek	2.58	84	Pg	Pb	20 03 54.6	+1.5
	1.5nm,0.1s						
KST				Lg	Lg	20 04 28.2	
	8.6nm,0.8s						
KUU	Kurty	3.02	68	eP	Pb	20 04 01.9	+1.5
	1.0nm,0.2s						
KUU				eS	Sg	20 04 41.1	-2.6
	2.3nm,0.2s						
KTBS	Karatobe	3.21	73	eP	Pb	20 04 06.0	+2.4
	0.5nm,0.2s						
KTBS				eS	Sg	20 04 47.5	-2.2
KTBS	Karatobe	3.21	73	Pg	Pb	20 04 06.0	+2.4

	0.5nm,0.2s						
KTBS				Lg	Lg	20 04 47.5	

BJI **25** *20:11:19.9±0.0,27°.59N×55°.73E,h30^{km},mB5.0/40, mb4.6/47,Ms4.8/39,Ms7 4.5/38*
TEH **25** *20:11:19.4,27°.46N×56°.19E,h9^{km},ML5.0*
THR **25** *20:11:19.3±0.6,27°.39N×56°.14E,h14^{km}±2^{km},ML5.0*
IDC **25** *20:11:19.2±0.5,27°.53N×56°.14E,h0^{km},mb4.6/32, mb1 4.7/39,mb1mx4.6/42,mbtmp4.6/39,ML4.0/7,MS4.3/30, Ms1 4.3/30,ms1mx4.2/45,Error ellipse: s-maj=11.9km s-min=10.2km az=173.0*
DSN **25** *20:11:20.4±0.7,27°.49N×56°.49E,h10^{km},ML5.0/12,Error ellipse: s-maj=16.3km s-min=5.8km az=96.0*
MOS **25** *20:11:21.5±1.0,27°.52N×56°.15E,h28^{km},mb5.0/51, MS4.3/9,Error ellipse: s-maj=5.4km s-min=3.4km az=104.2*
GCMT **25** *20:11:22.0±0.2,27°.27N±0°.01×56°.14E±0°.02,h13^{km}, MW4.9/91,Moment Tensor Solution. s35,c47; s91,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.90±.12; $M_{\theta\theta}$-3.24±.10; $M_{\phi\phi}$1.35±.09; $M_{r\theta}$1.07±.22; $M_{\theta\phi}$1.13±.07; $M_{\phi r}$-0.12±.28; Best double couple: $M_0$2.92000×10^{16} NP1:ϕ_s299.00000°,δ36.00000°,λ112.00000°. NP2: ϕ_s92.00000°,δ57.00000°,λ75.00000°. Principal axes: T 2.1320, Plg73.0000°, Azm322.0000°; N 1.5850, Plg13.0000°, Azm100.0000°; P -3.7070, Plg11.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC **25** *20:11:22.9±2.0,27°.40N±0°.06×56°.01E±0°.07,h30^{km}±5^{km} Error ellipse: s-maj=9.8km s-min=7.2km az=54.0*
OMAN **25** *20:11:25.4±0.3,27°.25N×56°.13E,h32^{km},mb6.4/10, ml4.8/19,ms4.3/5,Mwp5.1/12,Error ellipse: s-maj=7.4km s-min=5.6km az=327.0*
ISC 25 20:11:22.5±0.4**,27°.46N**±0°.03×**56°.20E**±0°.03**,h23**^{km}±2^{km}**,** **h23**^{km}**:pP-P,n700,**σ1^{s}**43**/741**,mb4.8**/165**,MS4.4**/45**,** **46C-41D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.07	203	ePg	Pb	20 11 21.7	-5.1
GENO				eSg	Sb	20 11 23.6	-6.1
BNDS	Bandar-Abbas	0.07	203	ePg	Pb	20 11 21.8	-5.0
BNDS				AML	AML	20 11 24.4	
	comp=E,714µm,0.5s						
BNDS				AML	AML	20 11 24.6	
	comp=N,378µm,0.2s						
BNDS	Bandar-Abbas	0.07	203	ePg	Pb	20 11 21.7	-5.1
IBND	Bandar-abas	0.30	92	ePg	Pb	20 11 25.7	-3.6
SHME	Shamm	1.41	182	eP	Pn	20 11 46.3	-0.4
	SNR=360						
SHME				S	Sb	20 12 07.1	+1.5
SHME	Shamm	1.41	182	ePn	Pn	20 11 46.9	+0.2
SHME	Shamm	1.41	182	P	Pn	20 11 46.7	0.0
	SNR=360						
SHME				P	Pn	20 11 46.7	0.0
	SNR=360						
SHME				S	Sb	20 12 07.5	+1.9
SHME				S	Sb	20 12 07.5	+1.9
KHNJ	Kahnooj	1.42	70	ePg	Pn	20 11 46.2	-0.7
BANOM	Banah	1.54	177	eP	Pn	20 11 48.3	-0.2
	SNR=217						
BANOM				S	Sb	20 12 10.0	+0.7
BANOM	Banah	1.54	177	ePn	Pn	20 11 49.3	+0.8
BANOM	Banah	1.54	177	P	Pn	20 11 48.2	-0.2
	SNR=842						
BANOM				S	Sb	20 12 10.3	+1.0
LAR1	LAR	1.64	278	ePg	Pn	20 11 49.8	-0.1
LAR1				e		20 12 47.5	
	comp=Z,99nm,1.5s						
UMQ	Umm Al-Quwin	1.99	194	eP	Pn	20 11 56.1	+1.5
	SNR=26						
UMQ	Umm Al-Quwin	1.99	194	ePn	Pb	20 11 56.4	-1.5
UMQ	Umm Al-Quwin	1.99	194	P	Pn	20 11 56.2	+1.5
	SNR=26						
UMQ				P	Pn	20 11 56.2	+1.5
	SNR=26						
UMQ				S	Sb	20 12 24.1	+1.8
UMQ				S	Sb	20 12 24.1	+1.8
MASF	Masafi	2.08	181	P	Pn	20 11 56.8	+0.7
	SNR=369						
MASF				P	Pn	20 11 56.8	+0.7
	SNR=369						
MSFE	Esma-Masafi	2.09	181	eP	Pn	20 11 56.7	+0.5
	SNR=369						
MSFE	Esma-Masafi	2.09	181	ePn	Pn	20 11 57.0	+0.8
MDH	Madha	2.16	178	eP	Pn	20 11 57.8	+0.8
	SNR=84						
MDH	Madha	2.16	178	ePn	Pn	20 11 57.9	+0.8
MDH	Madha	2.16	178	P	Pn	20 11 58.0	+1.0
	SNR=20						
MDH				P	Pn	20 11 58.0	+1.0
	SNR=20						
NGRK	Negar Kerman	2.22	12	ePn	Pn	20 11 58.4	+0.1
NGRK				e		20 12 44.2	
	comp=Z,99nm,1.5s						
JSK1	Jask	2.30	142	ePn	Pn	20 12 00.8	+1.9
UOSS	Minazif	2.51	180	eP	Pn	20 12 02.0	+0.1
	SNR=101						
UOSS	Minazif	2.51	180		Pn	20 12 01.7	-0.1
UOSS	Minazif	2.51	180	ePn	Pn	20 12 02.4	+0.5
UOSS	Minazif	2.51	180	P	Pn	20 12 02.0	+0.1
NAZ	Nazwa, Dubai	2.51	191	eP	Pn	20 12 02.7	+0.8
	SNR=68						
NAZ	Nazwa, Dubai	2.51	191	ePn	Pn	20 12 03.4	+1.5
NAZ	Nazwa, Dubai	2.51	191	P	Pn	20 12 02.9	+1.0
	SNR=93						
NAZ				P	Pn	20 12 02.9	+1.0
	SNR=93						
JHRM	Jahrom	2.54	295	ePn	Pn	20 12 02.5	+0.1
JHRM				e		20 13 08.7	
	comp=Z,99nm,0.6s						
KRBR	Kerman	2.56	11	ePn	Pn	20 12 03.8	+1.0
KRBR				eSg	Sb	20 12 42.3	+3.3
KRBR				AML	AML	20 12 52.0	
	comp=E,9µm,0.6s						
KRBR				AML	AML	20 12 53.2	
	comp=N,7µm,0.7s						
KRBR	Kerman	2.56	11	ePn	Pn	20 12 03.8	+1.0
TVBK	TV Kerman	2.56	11	ePn	Pn	20 12 04.1	+1.2
TVBK				e		20 12 48.8	
	comp=Z,99nm,0.4s						
KBAM	BAM	2.59	49	ePn	Pn	20 12 04.4	+1.3
KBAM				e		20 12 56.3	
	comp=Z,99nm,1.9s						
HATD	Hatta, Dubai	2.63	181	eP	Pn	20 12 03.7	+0.2
	SNR=100						
HATD	Hatta, Dubai	2.63	181	ePn	Pn	20 12 04.4	+0.9
HATD	Hatta, Dubai	2.63	181	P	Pn	20 12 04.0	+0.5
	SNR=103						
HATD				P	Pn	20 12 04.0	+0.5
	SNR=103						
HATD				P	Pn	20 12 04.1	+0.5
	SNR=100						
HATD				P	Pn	20 12 04.1	+0.5
	SNR=100						
CHMN	Cheshme madani	2.66	26	ePn	Pn	20 12 05.1	+0.8
CHMN				e		20 12 51.9	
	comp=Z,99nm,0.7s						
LMD1	Lamerd	2.70	268	ePn	Pn	20 12 04.7	+0.1
FAQ	Al Faqa, Dubai	2.76	192	eP	Pn	20 12 06.1	+0.8
	SNR=68						
FAQ	Al Faqa, Dubai	2.76	192	ePn	Pn	20 12 06.7	+1.4
FAQ	Al Faqa, Dubai	2.76	192	P	Pn	20 12 06.1	+0.8
	SNR=215						
FAQ				P	Pn	20 12 06.1	+0.8
	SNR=215						
ASHO	Ashiyiah	2.77	183	eP	Pn	20 12 06.1	+0.6
	SNR=117						
ASHO	Ashiyiah	2.77	183	ePn	Pn	20 12 06.8	+1.3
ASHO	Ashiyiah	2.77	183	P	Pn	20 12 06.5	+1.0
	SNR=169						
KHGB	Koh Gabri	2.91	5	ePn	Pn	20 12 08.9	+1.2
KHGB				e		20 13 10.3	
	comp=Z,99nm,1.9s						
ASUD	Al Ashush, Dub	2.93	196	i P	Pn	20 12 09.0	+1.4
	SNR=38						
ASUD	Al Ashush, Dub	2.93	196	ePn	Pn	20 12 09.5	+1.8
ASUD	Al Ashush, Dub	2.93	196	P	Pn	20 12 09.1	+1.4
	SNR=130						
ASUD				P	Pn	20 12 09.1	+1.4
	SNR=130						
QIR1	Qir	2.97	291	ePn	Pn	20 12 07.9	-0.4
AJN	Ajban	3.09	201	i P	Pn	20 12 10.8	+1.0
	SNR=11						
AJN	Ajban	3.09	201	ePn	Pn	20 12 11.3	+1.5
AJN	Ajban	3.09	201	P	Pn	20 12 09.7	-0.1
	SNR=6.3						
AJN				P	Pn	20 12 09.7	-0.1
	SNR=6.3						
SOHO	SOHO	3.33	175	i P	Pn	20 12 12.9	-0.3
	SNR=10						
SOHO	SOHO	3.33	175	ePn	Pn	20 12 12.8	-0.3
ALNE	Al Ain	3.42	187	i P	Pn	20 12 14.7	+0.3
	SNR=39						
ALNE	Al Ain	3.42	187	ePn	Pn	20 12 15.3	+0.9
ALNE	Al Ain	3.42	187	P	Pn	20 12 15.1	+0.7
	SNR=39						
SHI	Shiraz	3.90	305	ePn	Pn	20 12 20.9	-0.3
SHI				e		20 14 18.4	
	comp=Z,99nm,1.2s						
JRN	Qarnain Island	3.92	231	ePn	Pn	20 12 22.3	+1.0
HOQ	Hoqain	3.99	165	P	Pn	20 12 21.1	-1.2
	SNR=24						
ARQ	Araqi	4.12	176	P	Pn	20 12 24.8	+0.7
	SNR=25						
ARQ				P	Pn	20 12 24.8	+0.7
	SNR=25						
IMEH	Mehriz	4.15	341	ePn	Pn	20 12 25.6	+0.9
CHBR	Chabahar	4.26	115	ePn	Pn	20 12 26.4	+0.4
CHBR	Chabahar	4.26	115	ePn	Pn	20 12 26.3	+0.3
BIDO	Bidbid	4.29	156	ePn	Pn	20 12 25.7	-0.7
BIDO	Bidbid	4.29	156	P	Pn	20 12 25.8	-0.7
	SNR=21						
KAZ1	Kazerun	4.55	299	ePn	Pn	20 12 29.2	-0.9
SMDO	Samad	4.69	159	P	Pn	20 12 33.0	+1.0
	SNR=42						
WSAR	Wadi Sarin	4.74	152	Pn	Pn	20 12 32.5	-0.1
	comp=Z,59nm,0.3s,baz=350,slow=12,SNR=197						
WSAR				Sn	Sn	20 13 27.0	0.0
	comp=Z,31nm,0.3s,baz=26,slow=18,SNR=7.5						
WSAR				LR	LR	20 15 01.1	
	comp=Z,2µm,21.1s,baz=354,slow=46						
BSY	Bisya	4.78	169	P	Pn	20 12 34.6	+1.4
	SNR=29						
ISAD	Sadrabad	4.95	334	ePn	Pn	20 12 37.2	+1.5
ICHK	Chekchek	5.01	342	ePn	Pn	20 12 36.9	+0.4
NHDN	Nehbandan	5.16	40	ePn	Pn	20 12 39.4	+1.0
SLWR	Sila	5.29	231	ePn	Pn	20 12 40.3	+0.2
SLWR	Sila	5.29	231	P	Pn	20 12 40.5	+0.4
SLWR				S	Sn	20 13 40.4	+0.1
JMDO	Jabal Madar	5.36	161	P	Pn	20 12 42.0	+1.0
	SNR=16						
KLNJ	Kolanjah	5.36	312	ePn	Pn	20 12 40.8	-0.6
WBK	Wadi Bani Khal	5.44	152	P	Pn	20 12 42.0	-0.3
	SNR=116						
WBK				S	Sn	20 13 43.9	-0.3
IRAM	Ramesheh	5.46	323	ePn	Pn	20 12 43.0	+0.3
IKOO	Kooshah	5.51	26	ePn	Pn	20 12 44.7	+1.3
TPRV	Parvadeh(Tabas	5.56	4	ePn	Pn	20 12 44.0	0.0
ITEG	Tejag	5.85	22	ePn	Pn	20 12 49.7	+1.7
JLN	Jalan Bani Buh	6.04	150	P	Pn	20 12 49.7	-0.8
	SNR=44						
NASN	Na'in	6.08	332	ePn	Pn	20 12 51.6	+0.4
ANAR	Anarak	6.10	340	ePn	Pn	20 12 52.2	+0.9
IGAR	Gharneh	6.11	325	ePn	Pn	20 12 51.5	0.0
IDAH	Dahanechah	6.14	30	ePn	Pn	20 12 56.3	+4.2
TKDS	Koohdasht(Taba	6.18	7	ePn	Pn	20 12 52.8	+0.3
IZEF	Zefreh	6.37	329	ePn	Pn	20 12 54.4	-0.8
AFRZ	Afriz	6.42	22	ePn	Pn	20 12 56.2	+0.4
IMON	Monand	6.45	27	ePn	Pn	20 13 00.7	+4.4
TNSJ	Nastanj	6.49	3	ePn	Pn	20 12 56.3	-0.4
MHTO	MHTO	6.64	166	P	Pn	20 12 58.8	0.0
	SNR=32						
SHK1	Shahrekord	6.69	318	ePn	Pn	20 12 59.8	+0.2
IPIR	Pirpir	6.95	320	ePn	Pn	20 13 03.2	+0.1
IKLH	Kolahrood	7.07	327	ePn	Pn	20 13 04.1	-0.7
AMIS	Naft Sefid	7.33	306	ePn	Pn	20 13 07.9	-0.3
KRSH	Karshahi	7.37	333	ePn	Pn	20 13 09.4	+0.6
QAM	Ghamsar	7.50	328	ePn	Pn	20 13 10.6	0.0
DQM	DQM	7.60	170	P	Pn	20 13 11.9	0.0
	SNR=14						
DQM				P	Pn	20 13 11.9	0.0
	SNR=14						
IANJ	Anjilo	8.22	347	ePn	Pn	20 13 21.4	+0.9
ILAS	Lasjerd	8.37	341	ePn	Pn	20 13 24.0	+1.4
IVRN	Varamin	8.43	334	ePn	Pn	20 13 24.1	+0.8
IQOM	Qom	8.57	330	ePn	Pn	20 13 25.5	+0.1
HRA	Herat	8.63	35		Pn	20 13 27.3	+1.0
IFIR	Firoozkooh	8.67	341	ePn	Pn	20 13 27.3	+0.6
ISHM	Shahmirzad	8.68	344	ePn	Pn	20 13 28.0	+1.1
IDMV	Damavand	8.84	337	ePn	Pn	20 13 29.4	+0.3
SBZV	Sabzevar	8.98	7	ePn	Pn	20 13 31.7	+0.7
IHSB	Hasanabad	8.99	333	ePn	Pn	20 13 31.5	+0.4
DOK	Doka	9.01	193	P	Pn	20 13 29.9	-1.3
	SNR=45						
DOK				P	Pn	20 13 29.9	-1.3
	SNR=45						
IKMR	Kamar-syah	9.05	314	ePn	Pn	20 13 30.5	-1.2
IGLO	Ghaloghah	9.23	348	ePn	Pn	20 13 35.3	+0.8
IPAY	Payeh	9.27	14	ePn	Pn	20 13 37.0	+2.0
IPRN	Peran	9.35	340	ePn	Pn	20 13 37.7	+1.8
IDOB	Doab	9.35	314	ePn	Pn	20 13 32.8	-3.3
IKFM	Kafar-mosalman	9.40	312	ePn	Pn	20 13 34.2	-2.3
SHAO	Shalim	9.41	183	i P	Pn	20 13 36.1	-0.6
	SNR=23						
SHAO	Shalim	9.41	183	P	Pn	20 13 35.0	-1.8
	SNR=65						
SHAO				P	Pn	20 13 35.0	-1.8
	SNR=65						
SHAO				P	P	20 13 37.0	+0.3
	SNR=23						
SHAO				P	P	20 13 37.0	+0.3
	SNR=23						
SHAO				P	P	20 13 39.0	+2.2
	SNR=6.3						
SHAO				P	P	20 13 39.0	+2.2
	SNR=6.3						
IMHD	Mahdasht	9.46	331	ePn	Pn	20 13 36.9	-0.5
IRAZ	Razeghan	9.56	327	ePn	Pn	20 13 38.9	0.0
IKRD	Kardeh	9.70	16	ePn	Pn	20 13 42.7	+1.8
WHFO	Wadi Hawf	9.76	194	P	Pn	20 13 40.9	-0.6
	SNR=88						
WHFO				P	Pn	20 13 40.9	-0.6
	SNR=88						
WHFO				P	Pn	20 13 40.9	-0.6
	SNR=88						
DMTO	DMTO	9.77	187	P	Pn	20 13 39.6	-2.0
	SNR=50						
DMTO				P	Pn	20 13 39.6	-2.0
	SNR=50						
QABG	Abgarm-Qazvin	9.97	327	ePn	Pn	20 13 42.4	-2.1
IBZA	Bozab	10.00	316	ePn	Pn	20 13 44.4	-0.6
RBK	Rabkut	10.08	191	P	Pn	20 13 44.9	-1.0
	SNR=31						
IALM	Almabolaq	10.08	319	ePn	Pn	20 13 43.8	-2.3
QALM	Alamut, Qazvin	10.11	334	ePn	Pn	20 13 47.7	+1.2
HSRG	Sareghieh	10.29	321	ePn	Pn	20 13 47.8	-1.2
KCHF	Cheshme Sefid,	10.39	313	ePn	Pn	20 13 49.0	-1.3
KER	Kermanshah	10.40	314	ePn	Pn	20 13 49.1	-1.3
ABTO	Aybut	10.41	196	P	Pn	20 13 48.9	-1.6
	SNR=195						
RAYN	Ar Rayn	10.43	250	P	Pn	20 13 47.1	-3.6
RAYN	Ar Rayn	10.43	250	Pn	Pn	20 13 47.1	-3.6
GEYT	Alibeck	10.56	8	Pn	Pn	20 13 50.7	-1.7
	comp=Z,0.3nm,0.3s,baz=187,slow=7.0,SNR=2.4						
GEYT	Alibeck	10.56	8		Pn	20 13 52.8	+0.4
GYA0B	ALIBECK ARRAY	10.56	8	Pn	Pn	20 13 53.3	+0.9
IGHG	Ghaleghazi	10.73	312	ePn	Pn	20 13 52.9	-2.1
IDHR	Dehrash	11.08	313	ePn	Pn	20 13 56.7	-3.0
ISRB	Sarab	12.58	327	ePn	Pn	20 14 20.4	+0.1
MAHB	Mahabad	12.84	319	ePn	Pn	20 14 25.5	+1.7
KBL	Kabul	13.07	54	P	Pn	20 14 31.4	+4.4
KBL	Kabul	13.07	54	Pn	Pn	20 14 31.4	+4.4
KBL	Kabul	13.07	54	P	Pn	20 14 32.0	+5.0
	SNR=20						
IHRS	Heris	13.27	327	ePn	Pn	20 14 31.2	+1.5
ITBZ	Tabriz	13.66	324	ePn	Pn	20 14 34.5	-0.4
IMRD	Marand	14.25	325	ePn	P	20 14 50.4	+0.3
CUKT	Cukurca	14.43	316	eP	Pn	20 14 39.7	-5.7
THW	Thamme Wali	14.46	65	P	Pn	20 14 44.2	-1.5
CEP	Cherat	14.93	61	P	Pn	20 14 52.1	-0.1
SARP	Sargodha	14.99	69	P	Pn	20 14 50.4	-2.5
SIRT	Sirnak	15.31	314	eP	Pn	20 14 54.2	-3.1
SOCY	Socotra	15.34	188	Pn	Pn	20 14 51.9	-5.8
SOCY	Socotra	15.34	188	P	Pn	20 14 52.7	-5.0
	SNR=8.6						
VANB	Van	15.43	319	eP	Pn	20 14 58.8	0.0
GEVA	Gevas	15.44	318	Pn	Pn	20 14 58.7	-0.3
AKDM	Akdamar-Van	15.50	318	eP	Pn	20 14 59.1	-0.6
CLDR	Caldiran	15.51	322	eP	Pn	20 14 59.5	-0.5
GNI	Garni	15.82	326	Pn	P	20 15 05.8	-1.7
	comp=Z,3.7nm,0.3s,baz=217,slow=0.4,SNR=24						
GNI				LR	LR	20 20 39.1	
	comp=Z,551nm,19.0s,baz=137,slow=36						
GNI	Garni	15.82	326⇓	eP	Pn	20 15 05.3	+1.4
GNI	Garni	15.82	326	P	P	20 15 07.0	-0.6
GNI				IAmb	IAmb	20 15 15.8	
	comp=Z,62nm,0.7s						
NIL	Nilore	15.92	63	P	Pn	20 15 03.2	-2.0
NIL				pmax	pmax		
	comp=Z,70nm,1.0s						
NIL	Nilore	15.92	63		Pn	20 15 03.2	-2.0
NIL				IAmb	IAmb	20 15 21.5	
	comp=Z,70nm,0.9s						
TASB	TASBURUN-IGDIR	15.95	325	eP	P	20 15 10.1	+1.2
GURO	Guroymak-BITLI	16.21	317	eP	Pn	20 15 07.5	-1.4
DDFL	Dedoflistskaro	16.22	332	P	P	20 15 14.6	+2.7
MLAZ	Malazgirt-MUS	16.28	319	eP	P	20 15 13.7	+1.0
MARD	Mardin	16.30	311	Pn	Pn	20 15 09.2	-0.7
AGRB	Hanur-Agry	16.33	321	eP	P	20 15 13.1	-0.1
LGD	Lagodekhi	16.50	333	P	P	20 15 16.4	+1.5
DAMY	Dhamar	16.89	223	P	Pn	20 15 17.1	-0.7
MAK	Makhachkala	17.00	338	eP	Pn	20 15 17.1	-1.6
MAK				eS	Sn	20 18 23.1	-3.9
MAK				pmax	pmax		
	comp=Z,679nm,1.5s						
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
DYBB	Diyarbakir	17.07	312	eP	P	20 15 21.2	-0.1
BNGB	Bingl	17.32	316	eP	Pn	20 15 22.4	-0.4
SENK	Senkaya-Erzuru	17.36	322	eP	P	20 15 25.9	+1.2
BINT	Bingol	17.37	315	P	Pn	20 15 22.4	-1.1
DVE	Vedeno	17.49	335⇓	eP	P	20 15 26.0	0.0
DVE				pmax	pmax		
	comp=Z,82nm,1.0s						
YEDI	Yedisu-Bingol	17.67	316	eP	Pn	20 15 26.5	-0.8
GROC	Groznyy	17.83	334	eP	Pn	20 15 27.6	-1.4
GROC				pmax	pmax		
	comp=Z,25nm,0.6s						
BHK	Bhakra	18.04	73	ex	Pn	20 15 28.2	-3.5
KOPT	Kop Dagi	18.06	318	P	P	20 15 33.4	+0.9
ZEI	Tsey	18.27	330	eP	P	20 15 35.8	+1.1
ZEI				pmax	pmax		
	comp=Z,49nm,0.7s						
MALT	Malatya	18.40	310	eP	P	20 15 34.9	-1.2
MALT	Malatya	18.40	310	P	P	20 15 35.4	-0.7
IUG	Iuzhnay	18.50	34	eP	P	20 15 36.7	-0.4
	baz=34						
IUG	Iuzhnay	18.50	34	eP	P	20 15 36.7	-0.4
QRWL	Qaraoun	18.68	294	eP	P	20 15 38.8	-0.3
GAZ	Gaziantep	18.71	306	eP	P	20 15 39.1	-0.4
GAZ	Gaziantep	18.71	306	P	Pn	20 15 40.8	+0.8
BHL	Bhannes	18.79	295	eP	P	20 15 39.5	-0.8
MMAI	Mount Meron Ar	18.79	292	P	P	20 15 40.1	-0.3
	comp=Z,2.1nm,0.3s,baz=101,slow=16,SNR=35						
MMAI				LR	LR	20 24 40.4	
	comp=Z,550nm,20.7s,baz=95,slow=43						
EIL	Elat	18.79	282	P	P	20 15 39.7	-0.7
	comp=Z,1.2nm,0.3s,baz=33,slow=3.3,SNR=20						
EIL				LR	LR	20 23 29.8	
	comp=Z,241nm,20.6s,baz=98,slow=39						
ILIC	ilic-Erzincan	18.92	314	eP	Pn	20 15 42.9	+0.4
NCK	Nalchik	18.97	331⇓	eP	P	20 15 42.6	+0.4
NCK				pmax	pmax		
	comp=Z,27nm,0.9s						
KMRS	Kahramanmaras	19.08	306	eP	P	20 15 42.9	-0.6
KTUT	Trabzon	19.11	319	eP	Pn	20 15 46.1	+1.5
NEY	Neytrino	19.17	329⇓	eP	Pn	20 15 46.3	+0.8
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DARE	Darende-Malaty	19.17	310	eP	Pn	20 15 47.3	+1.8
KK31	Karatay Array	19.45	33	P	Pn	20 15 48.2	-0.5
KK31				pmax	pmax		
	comp=Z,30nm,0.9s						
KK31	Karatay Array	19.45	33	P	Pn	20 15 48.2	-0.5
KKAR	Karatay Array	19.45	33	P	Pn	20 15 48.5	-0.2
KKAR				pmax	pmax		
	comp=Z,30nm,0.9s						
KKAR	Karatay Array	19.45	33	P	P	20 15 47.6	+0.1
KKAR	Karatay Array	19.45	33	P	Pn	20 15 48.5	-0.2
KKAR				IAmb	IAmb	20 15 55.9	
	comp=Z,30nm,0.9s						
KBZ	Khabaz	19.46	330	P	P	20 15 48.0	+0.5
	comp=Z,0.2nm,0.3s,baz=291,slow=18,SNR=4.9						
KBZ	Khabaz	19.46	330⇑	eP	Pn	20 15 50.0	+1.2
KBZ				pmax	pmax		
	comp=Z,26nm,0.8s						
ESPY	Espiye-Giresun	19.68	317	eP	Pn	20 15 52.9	+1.5
DZA	Taraz	19.70	35	eP	P	20 15 49.7	-0.6
	baz=35						
DZA				LR	LR	20 23 15.4	
	comp=Z,188nm,11.2s,baz=35						
DZA	Taraz	19.70	35	eP	P	20 15 49.6	-0.6
DZA				MLR	MLR		
	comp=Z,188nm,11.0s						
CEYT	Ceyhan	19.71	304	eP	Pn	20 15 51.8	-0.1
KVAR	Kislovodsk Arr	19.73	330	P	P	20 15 51.0	+0.3
	baz=88,slow=21,SNR=3.9						
KIV	Kislovodsk	19.74	330	eP	Pn	20 15 51.6	-0.6
KIV				eS	Sn	20 19 32.7	-0.6
KIV				pmax	pmax		
	comp=Z,110nm,1.0s						
KIV				MLR	MLR		
	comp=Z,741nm,14.0s						
KIV	Kislovodsk	19.74	330	P	P	20 15 50.7	+0.1
KRTS	Karatas	19.83	302	eP	P	20 15 47.9	-3.7
SARI	SarD1z-Kayseri	19.83	308	eP	P	20 15 52.1	+0.3
KOZT	Kozan	19.84	305	eP	P	20 15 52.5	+0.7
ATD	Arta Tunnel	20.21	221	P	P	20 15 56.9	+1.0
	comp=Z,18nm,0.9s,baz=80,slow=19,SNR=2.8						
ATD				LR	LR	20 25 23.1	
	comp=Z,3µm,18.1s,baz=46,slow=42						
ATD	Arta Tunnel	20.21	221	eP	P	20 15 56.9	+1.0
RSDY	Resadiye-TOKAT	20.24	314	eP	P	20 15 54.5	-1.6
KSH	Kashi	20.36	49	P	P	20 15 54.8	-2.7
KSH				sP	sP	20 16 10.5	+3.4
KSH				S	S	20 19 31.3	-13
KSH				pmax	pmax		
	comp=Z,73nm,0.7s						
KSH				pmax	pmax		
	comp=Z,810nm,5.8s						
KSH				LR	LR		
	comp=Z,3µm,11.7s						
KSH				LR	LR		
	comp=Z,2µm,11.3s						
KSH				LR	LR		
	comp=Z,600nm,9.1s						
BNN	Bunyan	20.43	309	eP	Pn	20 16 00.2	-0.3
AML	Almayashu	20.45	40	P	P	20 15 59.0	+0.3
	SNR=33						
GOF	Gofitskoye	20.47	333⇑	eP	P	20 15 58.9	+0.4
GOF				pmax	pmax		
	comp=Z,58nm,0.7s						
RPOR	Krasnaya Polya	20.69	326	ceP	P	20 16 01.5	+0.6
RPOR				pmax	pmax		
	comp=Z,36nm,1.0s						
TOKT	Tokat	20.70	313	eP	P	20 16 01.9	+0.8
TOKA	Tokat	20.74	313	P	P	20 16 00.2	-1.3
TOKA				IAmb	IAmb	20 16 13.1	
	comp=Z,47nm,0.8s						
EKS2	Erkin-Say	20.84	39	P	Pn	20 16 05.2	0.0
	SNR=30						
SOC	Sochi	20.88	325	eP	P	20 16 01.5	-1.5
SOC				e		20 16 19.6	
SOC				eS	S	20 19 52.5	-2.3
SOC				eSS	SnSn	20 20 14.6	-1.1
SOC				pmax	pmax		
	comp=Z,54nm,0.6s						
SOC				MLR	MLR		
	comp=Z,973nm,17.0s						
CSS	Mathiatis	20.91	297	P	P	20 16 03.0	-0.5
CSS				IAmb	IAmb	20 16 13.2	
	comp=Z,67nm,1.2s						
GUZR	Guzeripl'	20.98	326	ceP	P	20 16 04.5	+0.4
GUZR				pmax	pmax		
	comp=Z,60nm,0.9s						
UCH	Uchtor	20.98	41	P	P	20 16 04.2	-0.4
	SNR=9.8						

KEBE	Keben-Mersin	21.04	301	eP	P	20 16 07.5	+2.6
AAK	Ala-Archa	21.23	40	P	P	20 16 06.8	-0.1
	comp=Z,19nm,0.7s,baz=222,slow=6.5,SNR=50						
AAK				LR	LR	20 25 35.0	
	comp=Z,2µm,19.4s,baz=246,slow=40						
AAK	Ala-Archa	21.23	40	P	P	20 16 07.6	+0.7
	SNR=24						
AAK	Ala-Archa	21.23	40	deP	P	20 16 07.1	+0.2
AAK				i *PP	sP	20 16 18.6	+2.1
AAK				pmax	pmax		
	comp=Z,53nm,0.7s						
AAK	Ala-Archa	21.23	40	P	P	20 16 06.8	-0.1
AAK				IAmb	IAmb	20 16 17.1	
	comp=Z,41nm,1.0s						
TEVE	Tevekalti-Mers	21.24	301	eP	P	20 15 59.4	-7.6
LZRR	Lazarevskoye	21.30	325	deP	P	20 16 08.3	+0.8
LZRR				pmax	pmax		
	comp=Z,30nm,0.7s						
BERE	Bereket-Mersin	21.39	300	eP	P	20 16 02.7	-5.9
KVT	Kavak	21.43	315	eP	P	20 16 12.6	+3.7
KBK	Karagaybulak	21.50	40	P	P	20 16 12.4	+2.5
	SNR=12						
TPSR	Tuapse	21.55	325	⇑eP	P	20 16 10.1	0.0
TPSR				pmax	pmax		
	comp=Z,34nm,0.6s						
CHMS	Chumysh	21.60	39	P	P	20 16 15.4	+4.6
	SNR=14						
USP	Ospenovka	21.64	38	P	P	20 16 14.0	+2.8
	SNR=16						
SULT	Sultanhani-AKS	21.81	305	eP	P	20 16 16.5	+3.4
SGDS	Sogindy	21.83	38	eP	P	20 16 12.3	-1.0
	baz=38						
SGDS	Sogindy	21.83	38	eP	P	20 16 12.2	-1.0
CORM	Corum	21.89	311	eP	P	20 16 11.5	-2.5
YAYX	Yaylak	21.89	307	eP	P	20 16 14.0	0.0
ABKAR	Akbulak array	21.95	7	P	P	20 16 13.8	-0.5
ABKAR	Akbulak array	21.95	7	P	P	20 16 13.9	-0.5
TKM2	Tokmak 2	22.04	41	i P	P	20 16 16.0	+0.3
TKM2				pmax	pmax		
	comp=Z,24nm,1.2s						
SERE	Sereflikochisa	22.07	307	eP	P	20 16 19.2	+3.2
DIKM	Dikmen	22.23	315	⇓P	P	20 16 19.8	+2.3
BR131	Keskin Array S	22.35	309	P	P	20 16 17.9	-1.1
BR131				pmax	pmax		
	comp=Z,88nm,0.9s						
BR131	Keskin Array S	22.35	309	P	P	20 16 17.9	-1.1
BRTR	Keskin Array B	22.35	309	P	P	20 16 18.4	-0.7
	comp=Z,18nm,0.8s,baz=130,slow=13,SNR=49						
BRTR				PcP	PcP	20 20 14.8	+0.9
	comp=Z,1.2nm,0.5s,baz=152,slow=4.5,SNR=5.0						
BRTR				LR	LR	20 26 20.5	
	comp=Z,785nm,18.2s,baz=121,slow=40						
BRTR	Keskin Array B	22.35	309	P	P	20 16 18.1	-1.0
KONT	Konya--Tatoy	22.56	304	eP	P	20 16 24.2	+3.1
BTLS	Baital	22.61	34	eP	P	20 16 20.0	-1.5
	comp=Z,7.1nm,0.5s,baz=34						
BTLS				LR	LR	20 25 19.1	
	comp=Z,125nm,9.8s,baz=34						
BTLS	Baital	22.61	34	eP	P	20 16 20.0	-1.5
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BTLS				MLR	MLR		
	comp=Z,125nm,10.0s						
AFSR	Afar-Bala (An	22.63	308	eP	P	20 16 22.3	+0.4
LADK	Ladik-KONYA	22.65	304	eP	P	20 16 23.8	+1.6
CANT	Cankiri	22.77	311	eP	P	20 16 24.8	+1.5
ANN	Anapa	22.91	324	eP	P	20 16 25.8	+1.1
ANN				e*PP	sP	20 16 35.9	+1.8
ANN				e		20 16 47.8	
ANN				eS	S	20 20 36.4	+3.2
ANN				pmax	pmax		
	comp=Z,96nm,1.3s						
ANN				MLR	MLR		
	comp=Z,404nm,10.0s						
ANN				MLR	MLR		
	comp=N,551nm,11.0s						
HYB	Hyderabad	22.92	111	i P	P	20 16 25.0	0.0
AKTO	Aktyubinsk	22.98	3	P	P	20 16 25.1	-0.2
	comp=N,19nm,0.7s,baz=174,slow=11,SNR=23						
AKTO				LR	LR	20 27 08.1	
	comp=N,4µm,18.7s,baz=170,slow=41						
LOD	Lodumlu	23.03	309	eP	P	20 16 26.6	+0.5
MDOK	Medeo	23.03	42	eP	P	20 16 25.9	-0.3
	baz=42						
MDOK	Medeo	23.03	42	eP	P	20 16 25.8	-0.3
KUU	Kurty	23.07	39	eP	P	20 16 26.7	+0.3
	comp=N,17nm,0.9s,baz=40						
KUU	Kurty	23.07	39	eP	P	20 16 26.6	+0.3
KUU				pmax	pmax		
	comp=Z,17nm,0.9s						
BZK	Bozkurt	23.19	314	⇓P	P	20 16 29.0	+1.4
CHKK	Chushkaly	23.41	40	eP	P	20 16 29.1	-0.8
	baz=40						
CHKK	Chushkaly	23.41	40	eP	P	20 16 29.0	-0.8
ANKE	Ethiopia-Afar	23.61	224	eP	P	20 16 19.9	-12
SVRH	Sivrihisar-ESK	23.73	307	eP	P	20 16 33.4	+0.4
KORT	Korkueli	23.79	300	eP	P	20 16 34.5	+0.9
ISP	Isparta	23.89	302	P	P	20 16 30.2	-4.4
ISP				pmax	pmax		
	comp=Z,59nm,1.1s						
ISP	Isparta	23.89	302	P	P	20 16 30.2	-4.4
ISP				IAmb	IAmb	20 16 43.8	
	comp=Z,59nm,1.1s						
KURC	Kurucasile-Bar	23.95	313	eP	P	20 16 33.6	-1.3
CIFT	Cifteler, Eski	24.02	306	eP	P	20 16 36.0	+0.2
SHUT	Suhut-Afyon	24.11	304	eP	P	20 16 37.0	+0.4
KPKS	Kokpek	24.18	43	eP	P	20 16 37.3	0.0
	baz=43						
KPKS	Kokpek	24.18	43	eP	P	20 16 37.2	0.0
DANN	Dangsing	24.35	81	eP	P	20 16 40.8	+1.6
	comp=Z,190nm,0.8s						
MDUB	Mudurnu	24.37	309	eP	P	20 16 37.9	-1.0
SHLS	Shalkode	24.49	44	eP	P	20 16 42.3	+2.1
	comp=Z,17nm,0.8s,baz=45						
SHLS	Shalkode	24.49	44	eP	P	20 16 42.2	+2.1
SHLS				pmax	pmax		
	comp=Z,17nm,0.8s						
SRCK	Saricakaya, Es	24.59	307	eP	P	20 16 40.9	0.0
PDGK	Podgornoye	24.60	44	i P	P	20 16 40.9	-0.2
PDGK				pmax	pmax		
	comp=Z,44nm,1.2s						
SIM	Simferopol'	24.82	320	eP	P	20 16 44.0	+1.2
SIM				pmax	pmax		
	comp=Z,27nm,0.6s						
GULT	Gulveren	24.83	308	eP	P	20 16 43.1	0.0
TDK	Taldyqorghan	24.91	40	eP	P	20 16 43.6	-0.2
	comp=Z,24nm,0.5s,baz=40						
TDK	Taldyqorghan	24.91	40	eP	P	20 16 43.5	-0.2
TDK				pmax	pmax		
	comp=Z,24nm,0.5s						
SAUV	Serdivan-Sakar	25.08	309	eP	P	20 16 47.2	+1.9
GEDZ	Gediz	25.11	304	eP	P	20 16 46.5	+0.8
TVSB	Tavsanli	25.21	305	eP	P	20 16 47.5	+0.9
TURN	Turunc	25.36	298	eP	P	20 16 49.2	+1.4
ADVT	Abdulvahap	25.37	307	eP	P	20 16 48.3	+0.4
KULA	Kula-Manisa	25.50	303	eP	P	20 16 49.4	+0.2
HRT	Hereke	25.57	308	eP	P	20 16 51.1	+1.3
DMN	Daman	25.61	83	eP	P	20 16 51.4	+0.9
	comp=Z,45nm,0.9s						
BELG	Belogornoye	25.72	348	P	P	20 16 50.0	-0.8
	comp=Z,37nm,0.8s,baz=259,slow=1.6,SNR=22						
BELG				LR	LR	20 29 44.9	
	comp=Z,266nm,18.1s,baz=147,slow=43						
BELG	Belogornoye	25.72	348	⇑eP	P	20 16 49.7	-1.2
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKN	Kakani	25.74	82	eP	P	20 16 52.6	+0.9
	comp=Z,57nm,0.6s						
BRZS	Berezniki	25.79	25	eP	P	20 16 51.4	-0.2
	baz=25						
BRZS	Berezniki	25.79	25	eP	P	20 16 51.4	-0.2
PKIN	Phulchoki	25.87	83	eP	P	20 16 53.7	+0.8
	comp=Z,43nm,0.7s						
PKI	Pulchoki	25.88	83	eP	P	20 16 53.8	+0.7
	comp=Z,85nm,0.8s						
MDNY	Mudanya-Bursa	25.95	307	eP	P	20 16 55.5	+2.3
ARMT	Armutlu	26.04	307	eP	P	20 16 56.4	+2.4
VRH	Novokhopyorsk	26.12	339	eP	P	20 16 52.9	-1.7
VRH				pmax	pmax		
	comp=Z,130nm,0.6s						
GUN	Gumba	26.26	82	eP	P	20 16 57.5	+1.0
	comp=Z,85nm,0.7s						
VORD	Divnogorie	26.75	336	eP	P	20 17 02.2	+1.9
VORD				pmax	pmax		
	comp=Z,20nm,0.4s						
VSR	Storozhevoye	27.00	336	eP	P	20 17 02.1	-0.4
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
RAMN	Ramite	27.01	84	eP	P	20 17 03.4	+0.2
	comp=Z,30nm,0.7s						
SANT	Santorini	27.47	297	⇑P	P	20 17 07.2	+0.2
APE	Apeiranthos	27.55	298	⇑P	P	20 17 08.0	+0.3
APE	Apeiranthos	27.55	298	P	P	20 17 08.0	+0.3
BRVK	Borovoye	27.63	18	⇓eP	P	20 17 07.3	-0.9
BRVK				pmax	pmax		
	comp=Z,26nm,1.1s						
BRVK	Borovoye	27.63	18	P	P	20 17 07.6	-0.6
BRVK				IAmb	IAmb	20 17 14.6	
	comp=Z,26nm,1.1s						
BVAR	Borovoye Array	27.63	19	P	P	20 17 08.3	+0.2
	comp=Z,8.4nm,0.8s,baz=1.9,slow=4.5,SNR=37						
BVAR				PcP	PcP	20 20 26.0	+0.9
	comp=Z,1.2nm,0.5s,baz=128,slow=2.4,SNR=4.2						
ODAN	Odare	27.72	84	eP	P	20 17 10.0	+0.4
	comp=Z,37nm,1.1s						
IDI	Anoyia	27.76	294	P	P	20 17 09.4	-0.3
	comp=Z,16nm,0.8s,baz=104,slow=10,SNR=8.2						
IDI	Anoyia	27.76	294	⇑P	P	20 17 10.6	+1.0
IDI	Anoyia	27.76	294	IAmb	IAmb	20 17 13.8	
	comp=Z,36nm,1.0s						
TAPN	Taplejung	27.94	83	eP	P	20 17 11.4	-0.2
	comp=Z,24nm,1.1s						
MAKZ	Makanchi	27.99	40	P	P	20 17 11.7	+0.2
MAKZ				pmax	pmax		
	comp=Z,20nm,1.0s						
MAKZ	Makanchi	27.99	40	P	P	20 17 11.7	+0.2
MAKZ				IAmb	IAmb	20 17 29.3	
	comp=Z,20nm,0.9s						
MK31	Makanchi Array	28.16	40	ceP	P	20 17 13.0	0.0
MK31				i *PP	sP	20 17 23.2	+0.3
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	Makanchi Array	28.16	40	P	P	20 17 13.1	+0.1
MKAR	Makanchi Array	28.16	40	P	P	20 17 13.2	+0.1
	comp=Z,4.0nm,0.5s,baz=225,slow=7.7,SNR=48						
MKAR				LR	LR	20 29 58.8	
	comp=Z,686nm,20.0s,baz=236,slow=40						
MKAR	Makanchi Array	28.16	40	P	P	20 17 12.9	-0.1
TPGR	Topolog	28.16	315	⇑P	P	20 17 12.2	-0.9
LPSR	Galich'ya Gora	28.23	337	eP	P	20 17 16.2	+2.7
LPSR				pmax	pmax		
	comp=Z,40nm,1.6s						
HARR	Harsova	28.39	315	⇑P	P	20 17 15.1	0.0
HARR	Harsova	28.39	315	P	P	20 17 15.1	0.0
CFR	Carcaliu	28.50	316	⇓P	P	20 17 15.1	-0.8
CFR	Carcaliu	28.50	316	⇓P	P	20 17 15.1	-0.8
KURBB	Kurchatov Arra	28.70	30	P	P	20 17 17.4	-0.3
	comp=Z,6.4nm,0.7s,baz=230,slow=8.6,SNR=38						
KURBB				S	S	20 22 14.5	+9.1
	comp=Z,2.2nm,1.1s,baz=226,slow=17,SNR=6.0						
KURK	Kurchatov	28.80	30	⇑eP	P	20 17 18.9	+0.3
KURK				pmax	pmax		
	comp=Z,15nm,1.0s						
KURK	Kurchatov	28.80	30	P	P	20 17 18.4	-0.3
RAZG	Razgrad	28.82	312	⇑P	P	20 17 18.5	-0.4
MILM	Milestii Mici	28.98	319	⇑P	P	20 17 18.8	-1.4
ARU	Arti	29.00	3	P	P	20 17 20.8	+0.5
ARU						20 18 10.9	
ARU				S	S	20 22 10.7	+0.8
ARU				SS	SnSn	20 23 34.8	+1.0
ARU				MLR	MLR		
	comp=Z,1µm,18.0s						
SEM	Semipalatinsk	29.34	32	eP	P	20 17 23.4	-0.3
	baz=32						
SEM	Semipalatinsk	29.34	32	eP	P	20 17 23.4	-0.3
SULR		29.45	314	⇑P	P	20 17 25.0	+0.5
SVE	Sverdlovsk	29.52	5	eP	P	20 17 25.2	+0.3
SVE				pmax	pmax		
	comp=Z,14nm,1.2s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
VRI	Vrincioaia	29.69	316	⇑P	P	20 17 27.1	+0.5
VRI	Vrincioaia	29.69	316	P	P	20 17 27.1	+0.5
SMIA	Simia	29.72	301	P	P	20 17 28.2	+1.3
PLOR	Plostina	29.73	316	⇑P	P	20 17 26.6	-0.4
PLOR	Plostina	29.73	316	⇑P	P	20 17 26.6	-0.4
NEHR	Nehoiu	29.76	315	⇓P	P	20 17 28.5	+1.2
SORM	Soroca	29.90	321	⇓P	P	20 17 27.2	-1.2
SORM	Soroca	29.90	321	⇓P	P	20 17 27.2	-1.2
THAL	Thalero	29.97	299	P	P	20 17 29.6	+0.5
ZSN	Zaisan	30.00	41	eP	P	20 17 29.6	+0.2
	baz=41						
ZSN	Zaisan	30.00	41	eP	P	20 17 29.5	+0.2
SRS	Serrai	30.00	305	P	P	20 17 29.5	+0.1
MLR	Muntele Rosu	30.01	315	P	P	20 17 29.2	-0.4
	comp=Z,4.6nm,0.7s,baz=322,slow=1.9,SNR=14						
MLR	Muntele Rosu	30.01	315	⇓P	P	20 17 29.8	+0.2
MLR	Muntele Rosu	30.01	315	P	P	20 17 27.8	-1.8
MLR				pmax	pmax		
	comp=Z,20nm,1.0s						
MLR	Muntele Rosu	30.01	315	P	P	20 17 27.8	-1.8
MLR				IAmb	IAmb	20 17 40.1	
	comp=Z,20nm,1.0s						
TESR	Tescani	30.05	317	⇑P	P	20 17 29.1	-0.7
SOH	Sokhos	30.09	305	P	P	20 17 29.9	-0.3
WMQ	Urumqi	30.12	49	eP	P	20 17 31.3	+0.8
WMQ				pP	sP	20 17 43.5	+2.9
WMQ				sP	pP	20 17 49.3	+12
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,310nm,5.3s						
WMQ				LR	LR		
	comp=Z,1µm,16.1s						
WMQ				LR	LR		
	comp=Z,1µm,15.7s						
WMQ				LR	LR		
	comp=Z,2µm,26.7s						
TRIP	Tripoli	30.19	298	P	P	20 17 31.0	-0.2
HORT	Hortiatis	30.21	304	P	P	20 17 30.8	-0.6
ITM	Ithomi	30.40	297	P	P	20 17 31.0	-2.1
ITM				IAmb	IAmb	20 17 43.3	
	comp=Z,25nm,0.9s						
AGG	Agios Georgios	30.42	301	P	P	20 17 32.2	-0.9
AGG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AGG	Agios Georgios	30.42	301	P	P	20 17 32.2	-0.9
AGG				IAmb	IAmb	20 17 37.0	
	comp=Z,9.4nm,0.6s						
KALE	Kalithea	30.44	300	P	P	20 17 32.6	-0.8
TRIZ	Trizonia	30.49	300	P	P	20 17 33.0	-0.7
VOIR		30.55	314	⇓P	P	20 17 34.2	-0.1
VOIR		30.55	314	⇓P	P	20 17 34.2	-0.1
DOPR	Dopca	30.57	315	⇓P	P	20 17 33.9	-0.5
BIZ	Bicaz	30.58	318	⇑P	P	20 17 34.0	-0.4
DRO	Drossia	30.69	299	P	P	20 17 35.9	+0.3
ARR	Arges	30.79	314	⇓P	P	20 17 36.1	-0.3
AKASG	Malin Array Be	30.95	326	P	P	20 17 36.5	-1.1
	comp=Z,3.2nm,0.4s,baz=132,slow=8.4,SNR=19						
AKASG				PcP	PcP	20 20 34.5	+1.0
	comp=Z,2.1nm,0.5s,baz=93,slow=2.9,SNR=5.5						
AKASG				LR	LR	20 32 45.5	
	comp=Z,288nm,20.6s,baz=115,slow=42						
AKBB	Malin Array Si	30.95	326	⇓eP	P	20 17 36.1	-1.6
OBN	Obninsk	31.10	338	⇓eP	P	20 17 38.5	-0.3
OBN				i		20 17 47.8	
OBN				eS	S	20 22 40.7	-2.2
OBN				eSS	SnSn	20 24 25.6	+0.7
OBN				pmax	pmax		
	comp=Z,117nm,2.5s						
OBN				MLR	MLR		
	comp=Z,333nm,18.0s						
OBN	Obninsk	31.10	338	P	P	20 17 39.0	+0.2
PDO	Prodromos	31.21	300	P	P	20 17 39.6	-0.5
MOS	Moscow	31.28	340	eP	P	20 17 39.5	-0.9
MOS				eS	S	20 22 43.2	-2.5
MOS				pmax	pmax		
	comp=Z,89nm,1.4s						
MOS				pmax	pmax		
	comp=Z,400nm,2.5s						
LOT	Lotru	31.38	314	⇑P	P	20 17 42.1	+0.5
BURAR	Bucovina Array	31.44	318	⇑P	P	20 17 41.5	-0.6
BURAR	Bucovina Array	31.44	318	⇑P	P	20 17 41.5	-0.6
BURAR	Bucovina Array	31.44	318	P	P	20 17 42.2	+0.1
BUR08	Bucovina Ar. S	31.46	318	P	P	20 17 42.5	+0.1
KIRV	Kirov	31.47	353	⇑eP	P	20 17 42.9	+0.8
FNA	Florina	31.53	304	P	P	20 17 42.3	-0.7
FNA	Florina	31.53	304	P	P	20 17 42.4	-0.6
FNA				pmax	pmax		
	comp=Z,33nm,0.7s						
FNA	Florina	31.53	304	P	P	20 17 42.4	-0.6
PENT	Pentalofos	31.57	303	P	P	20 17 43.1	-0.3
VLS	Valsamata	31.60	299	P	P	20 17 42.7	-0.9
NYDR	Nydri-Lefkada	31.61	300	P	P	20 17 42.8	-0.8
EVGI	Lefkada island	31.63	300	P	P	20 17 42.3	-1.5
LKD2	Lefkada island	31.65	300	P	P	20 17 43.2	-0.8
NEST	Nestorio	31.68	303	P	P	20 17 44.4	0.0
KEF5	Kardakata, Kep	31.71	299	P	P	20 17 44.4	-0.2
DMLN	Damoulianata-K	31.78	299	P	P	20 17 44.6	-0.6
GZR	Gura Zlata	32.00	313	⇑P	P	20 17 46.6	-0.5
CJR	Cluj-Napoca	32.01	316	⇑P	P	20 17 46.4	-0.7
CJR	Cluj-Napoca	32.01	316	⇑P	P	20 17 46.4	-0.7
OHR	Ohrid	32.03	304	i P	P	20 17 47.2	-0.2
MDVR	Moldovita	32.48	311	⇑P	P	20 17 50.9	-0.3
DRGR		32.60	315	⇑P	P	20 17 52.1	-0.2
DRGR		32.60	315	⇑P	P	20 17 52.1	-0.2
DGZ	Jazzator, Alta	32.62	39	⇑eP	P	20 17 53.0	+0.4
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SIRR	Siria	33.05	314	⇓P	P	20 17 56.2	0.0
LTVH	Ltavrtes, Hu	33.35	316	eP	P	20 18 00.5	+1.8
UZH	Uzhgorod	33.65	318	eP	P	20 18 06.4	+5.1
UZH				e		20 18 15.8	
KMBO	Kilima Mbogo	33.77	216	P	P	20 18 03.8	+0.9
	comp=Z,1.1nm,0.4s,baz=47,slow=14,SNR=2.0						
ZAA0	Zalesovo Array	33.79	31	IAmb	IAmb	20 18 08.5	
	comp=Z,19nm,0.7s						
ZALV	Zalesovo Beam	33.79	31	P	P	20 18 01.9	-0.6
	comp=Z,12nm,0.4s,baz=234,slow=9.1,SNR=44						
ZALV				S	S	20 23 27.7	+2.8
	comp=Z,1.2nm,0.7s,baz=228,slow=16,SNR=4.2						
ZALV				LR	LR	20 33 25.6	
	comp=Z,925nm,18.9s,baz=226,slow=39						
ZALV	Zalesovo Beam	33.79	31	P	P	20 18 02.0	-0.4
KOLS	Kolonicke sedl	33.79	319	eP	P	20 18 04.5	+1.9
KOLS				pmax	pmax		
	comp=Z,33nm,1.6s						
KOLS	Kolonicke sedl	33.79	319	eP	P	20 18 04.5	+1.9
MNK	Minsk	34.02	330	i P	P	20 18 03.3	-1.2
	comp=E,3.0nm,0.9s						
MNK				i P	P	20 18 03.3	-1.2
	comp=N,8.0nm,0.9s						
MNK				i P	P	20 18 03.3	-1.2
	comp=Z,24nm,0.9s						
MNK				i pP	sP	20 18 18.2	+3.9
MNK				i sP	pP	20 18 25.6	+14
MNK				i PP	PP	20 19 19.0	-2.6
MNK				i PcP	PcP	20 20 38.6	-3.3
MNK				i S	S	20 23 25.6	-2.8
MNK				i sS	sS	20 23 52.3	+12
MNK				i SS	SnSn	20 25 40.9	+5.1
MNK				i LQ	LQ	20 29 15.9	
MNK				i LR	LR	20 30 56.3	
MNK				i LRM	MLR	20 33 34.9	
	comp=Z,134nm,18.0s						
MNK				i LRM	MLR	20 33 58.3	
	comp=E,31nm,18.3s						
MNK				i LRM	MLR	20 35 36.3	
	comp=N,269nm,18.3s						
KECS	Kecovo	34.67	317	eP	P	20 18 11.3	+1.1
KECS	Kecovo	34.67	317	eP	P	20 18 11.3	+1.1
TIP	Timpagrande	34.72	300	⇑P	P	20 18 10.8	-0.1
TIP	Timpagrande	34.72	300	P	P	20 18 10.5	-0.3
TIP				IAmb	IAmb	20 18 19.2	
	comp=Z,33nm,1.0s						
NACGM	Naroch	34.77	330	i P	P	20 18 11.2	+0.3
NACGM				i P	P	20 18 11.2	+0.3
NACGM				i P	P	20 18 11.2	+0.3
NACGM				i PP	PnPn	20 19 27.6	+0.4
NACGM				i PPP	PPP	20 19 44.5	
NACGM				i S	S	20 23 50.8	+11
NACGM				i SS	SS	20 26 10.1	-0.9
NACGM				i SS	SnSn	20 26 20.9	+27
NACGM				i SSS	SSS	20 26 48.2	
NACGM				i LQ	LQ	20 30 46.8	
NACGM				i LR	LR	20 33 11.1	
PSZ	Piszkesteto	34.80	316	eP	P	20 18 14.0	+2.6
PSZ	Piszkesteto	34.80	316	IAmb	IAmb	20 18 18.8	
	comp=Z,35nm,1.5s						
MORH	Mrgy, Hungar	34.99	312	eP	P	20 18 13.8	+0.8
IDID	Didziasalis	35.05	331	eP	P	20 18 14.5	+1.1
BUD	Budapest	35.19	315	eP	P	20 18 17.2	+2.6
KLMR	Klimovskoe	35.25	346	eP	P	20 18 14.8	-0.2
KLMR				pmax	pmax		
	comp=Z,42nm,1.2s						
KLMR	Klimovskoe	35.25	346	eP	P	20 18 14.8	-0.2
KLMR				AMP		20 18 25.7	
	comp=Z,42nm,1.2s						
KLMR				LQ	LQ	20 30 12.9	
KLMR				LQ	LQ	20 30 12.9	
KLMR				LR	LR	20 31 45.0	
IIGN	Ignalina	35.30	330	eP	P	20 18 14.9	-0.6
ISAL	Salakas	35.48	331	eP	P	20 18 16.6	-0.5
LANS	Liptovska Anna	35.55	318	eP	P	20 18 18.6	+0.7
LANS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LANS	Liptovska Anna	35.55	318	eP	P	20 18 18.6	+0.7
CSKK	Cskako	35.63	314	eP	P	20 18 16.4	-2.0
VYHS	Vyhne	35.68	316	eP	P	20 18 19.0	+0.1
VYHS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VYHS	Vyhne	35.68	316	eP	P	20 18 19.0	+0.1
SRO	Srobarova	35.75	315	eP	P	20 18 19.8	+0.3
SRO				pmax	pmax		
	comp=Z,18nm,1.1s						
SRO	Srobarova	35.75	315	eP	P	20 18 19.8	+0.3
OJC	Ojcow	35.81	319	eP	P	20 18 20.8	+0.8
SUW	Suwalki	35.90	327	eP	P	20 18 20.3	-0.4
SUW	Suwalki	35.90	327	eP	P	20 18 20.9	+0.2
MPLH	Magyarpolny	36.02	314	eP	P	20 18 20.9	-0.9
EGYH	Egyhazaskeszo	36.24	314	eP	P	20 18 19.6	-4.1
PABE	Paberze	36.40	329	eP	P	20 18 24.1	-0.8
JAVC	Velka Javorina	36.53	316	eP	P	20 18 28.5	+2.2
SMOL	Smolenice	36.56	316	eP	P	20 18 26.7	+0.3
SMOL				pmax	pmax		
	comp=Z,12nm,1.6s						
SMOL	Smolenice	36.56	316	eP	P	20 18 26.7	+0.3
MODS	Modra-Piesok	36.60	315	eP	P	20 18 26.0	-0.8
MODS				pmax	pmax		
	comp=Z,25nm,1.5s						
MODS	Modra-Piesok	36.60	315	eP	P	20 18 26.0	-0.8
PAOL	Paolisi	36.64	303	P	P	20 18 26.3	-0.9
PAOL				IAmb	IAmb	20 18 31.8	
	comp=Z,38nm,1.3s						
SOP	Sopron	36.82	314	eP	P	20 18 28.4	-0.3
MORC	Moravsky Berou	36.96	318	⇑P	P	20 18 28.0	-1.9
MORC	Moravsky Berou	36.96	318	eP	P	20 18 28.6	-1.3
MORC	Moravsky Berou	36.96	318	⇑P	P	20 18 28.0	-1.9
MORC	Moravsky Berou	36.96	318	IAmb	IAmb	20 18 37.5	
	comp=Z,23nm,1.5s						
VSU	Vasula	37.17	335	eP	P	20 18 31.2	-0.2
VSU	Vasula	37.17	335	⇑eP	P	20 18 30.9	-0.5
VSU				pmax	pmax		
	comp=Z,123nm,2.0s						
CONA	Conrad Observa	37.35	314	eP	P	20 18 32.1	-1.2
	comp=Z,5.9nm,0.7s						
ARSA	Arzberg	37.35	313	eP	P	20 18 32.8	-0.4
	comp=Z,8.1nm,1.2s						
VRAC	Vranov	37.36	317	⇑P	P	20 18 32.6	-0.6
VRAC	Vranov	37.36	317	eP	P	20 18 31.5	-1.7
VRAC	Vranov	37.36	317	⇑P	P	20 18 32.6	-0.6
KRUC	Moravsky	37.39	316	eP	P	20 18 32.0	-1.5
SOKA	Soboth	37.51	312	eP	P	20 18 34.8	+0.1
	comp=Z,8.7nm,1.3s						
KRLC	Kraliky	37.52	318	eP	P	20 18 33.5	-1.2
KRLC	Kraliky	37.52	318	eP	P	20 18 33.5	-1.2
PBUR	Paburge	37.64	329	eP	P	20 18 35.5	0.0
DPC	Dobruska-Polom	37.90	318	eP	P	20 18 36.7	-1.2
DPC	Dobruska-Polom	37.90	318	eP	P	20 18 36.7	-1.2
VALR	Valaam	37.91	340	eP	P	20 18 37.5	-0.2
VALR				pmax	pmax		
	comp=Z,11nm,0.6s						
GTA	Gaotai	37.96	60	eP	P	20 18 39.3	+0.7
GTA				pP	sP	20 18 48.0	-0.4
GTA				sP	pP	20 18 51.5	+5.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,5.3s						
GTA				LR	LR		
	comp=Z,420nm,17.2s						
GTA				LR	LR		

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      comp=Z,320nm,16.0s
GTA                                  LR      LR
      comp=Z,610nm,18.0s
OSTC  Ostas              38.04 318 ePP       P       20 18 38.9 -0.1
UPC   Upice              38.14 318 eP        P       20 18 39.5 -0.3
UPC   Upice              38.14 318 eP        P       20 18 39.5 -0.3
CHVC  Chvalec            38.15 318 eP        P       20 18 38.8 -1.1
MOA   Molln              38.34 313 eP        P       20 18 41.0 -0.6
      comp=Z,6.6nm,0.6s
MTSE  Matsula            38.47 333 eP        P       20 18 43.0 +0.6
TMCR  Tamitsa            38.53 347 eP        P       20 18 40.4 -2.4
TMCR                                 pmax    pmax
      comp=Z,9.0nm,0.6s
KBA   Koelnbreinsper     38.73 312 eP        P       20 18 43.9 -1.2
      comp=Z,12nm,0.7s,SNR=14
PRU   Pruhonice          38.84 317 eP        P       20 18 45.3 -0.4
PRU   Pruhonice          38.84 317 eP        P       20 18 45.3 -0.4
GEC2  GERESS Array S     39.00 315  P        P       20 18 45.5 -1.6
GERES GERESS Array B     39.00 315  P        P       20 18 46.1 -1.1
      comp=Z,2.6nm,0.5s,baz=113,slow=7.3,SNR=36
GERES                                LR      LR      20 39 25.3
      comp=Z,253nm,18.1s,baz=114,slow=43
GERES GERESS Array B     39.00 315  P        P       20 18 46.2 -0.9
GERES GERESS Array B     39.00 315  P        P       20 18 46.2 -0.9
PBCC  Pribram            39.08 316 eP        P       20 18 45.7 -2.0
KHC   Kasperske Hory     39.16 315ceP        P       20 18 47.5 -1.0
KHC                                  pmax    pmax
      comp=Z,38nm,0.6s
KHC   Kasperske Hory     39.16 315 eP        P       20 18 46.9 -1.6
KHC                                ex        x       20 18 59.5
KHC   Kasperske Hory     39.16 315  P        P       20 18 47.8 -0.7
KHC                                  IAmb    IAmb    20 19 02.3
      comp=Z,25nm,0.9s
ABTA  Abfaltersbach      39.20 311 eP        P       20 18 48.1 -0.8
      comp=Z,10nm,1.1s
FIA1  FINESS Array S     39.50 338  P        P       20 18 50.0 -1.0
FIA1                                 IAmb    IAmb    20 19 04.9
      comp=Z,29nm,1.1s
FINES FINESS Array B     39.50 338  P        P       20 18 50.3 -0.7
      comp=Z,8.2nm,0.5s,baz=136,slow=8.5,SNR=62
FINES FINESS Array B     39.50 338  P        P       20 18 50.0 -1.0
BRG   Berggiesshubel     39.50 318 eP        P       20 18 50.3 -0.9
BRG                                  Amp             20 18 58.2
      comp=Z,6.3nm,1.0s
BRG   Berggiesshubel     39.50 318 eP        P       20 18 50.3 -0.9
BRG                                  pmax    pmax
      comp=Z,6.0nm,1.0s
BRG   Berggiesshubel     39.50 318 eP        P       20 18 50.3 -0.9
BRG                                  Amp             20 18 58.2
      comp=Z,6.3nm,1.0s
WATA  Walderalm          39.97 312 eP        P       20 18 53.0 -2.3
      comp=Z,6.3nm,0.6s
CM33  Chiang Mai Arr     40.08  93  P        P       20 18 58.0 +1.6
CMMT  Chiang Mai         40.08  93  P        P       20 18 57.6 +1.1
      comp=Z,209nmcomp=Z,5.2nm,1.5s
SQTA  Sankt Quirin       40.18 312 eP        P       20 18 55.0 -2.0
      comp=Z,18nm,0.6s,SNR=16
CMAR  Chiang Mai Arr     40.20  94  P        P       20 18 58.9 +1.5
      comp=Z,0.7nm,0.7s,baz=282,slow=10.0,SNR=9.4
CMAR                                 PcP     PcP     20 21 03.3 +1.9
      comp=Z,2.2nm,0.8s,baz=286,slow=4.7,SNR=3.7
CMAR                                 LR      LR      20 37 48.3
      comp=Z,197nm,21.8s,baz=331,slow=40
CMAR  Chiang Mai Arr     40.20  94ceP        P       20 19 01.5 +4.1
CMAR                                 pmax    pmax
      comp=Z,1.0nm,0.8s
CLL   Collm              40.21 318 i P       P       20 18 56.1 -1.0
      comp=Z,7.0nm,1.1s
CLL                                i                 20 19 03.6
      comp=Z,21nm,1.5s
CLL                                e                 20 19 09.0
CLL                                i                 20 19 45.3
      comp=Z,15nm,1.3s
CLL                                ePPP      PPP     20 20 50.0
CLL                                eSS       SS      20 27 54.0 -6.9
CLL   Collm              40.21 318 i P       P       20 18 56.1 -1.0
CLL                                i *PP     pP      20 19 03.6 -0.5
CLL                                  pmax    pmax
      comp=Z,7.0nm,1.1s
CM34  Chiang Mai Arr     40.25  93  P        P       20 19 02.0 +4.2
MOTA  Moosalm            40.28 312 eP        P       20 18 56.2 -1.7
      comp=Z,10nm,0.5s,SNR=16
CM35  Chiang Mai Arr     40.31  93  P        P       20 19 02.0 +3.7
CM36  Chiang Mai Arr     40.31  93  P        P       20 19 01.0 +2.6
KEST  Kesra              40.44 294  P        P       20 18 59.2 -0.1
      comp=Z,10nm,0.8s,baz=60,slow=3.6,SNR=18
FETA  Feichten           40.46 311 eP        P       20 18 57.7 -1.7
      comp=Z,26nm,1.0s,SNR=9.7
RETA  Reutte             40.54 312 eP        P       20 18 58.4 -1.6
      comp=Z,6.8nm,0.6s
BSD   Bornholm Skovb     40.62 324 eP        P       20 18 58.7 -1.7
BSD   Bornholm Skovb     40.62 324 i P       P       20 18 58.0 -2.4
BSD                                  pmax    pmax
      comp=Z,17nm,0.9s
BSD   Bornholm Skovb     40.62 324 i P       P       20 18 58.0 -2.4
      comp=Z,17nm,0.9s
BSD   Bornholm Skovb     40.62 324 i P       P       20 18 58.0 -2.4
BSD                                  IAmb    IAmb    20 18 58.6
      comp=Z,17nm,0.9s
GRA1  Grafenberg Arr     40.80 315  P        P       20 19 01.4 -0.6
GRA1                                 IAmb    IAmb    20 19 09.0
      comp=Z,24nm,0.7s
GRF   Grafenberg Arr     40.80 315  P        P       20 19 01.4 -0.6
GRF                                  pmax    pmax
      comp=Z,24nm,0.7s
GRFO  Grafenberg         40.80 315  P        P       20 18 59.9 -2.1
GRFO                                 pmax    pmax
      comp=Z,23nm,0.8s
GRFO  Grafenberg         40.80 315  P        P       20 18 59.9 -2.1
GRFO                                 IAmb    IAmb    20 19 09.0
      comp=Z,23nm,0.8s
AAL   Aland              40.92 333 eP        P       20 19 02.9 +0.1
LZH   Lanzhou            41.07  66 eP        P       20 19 05.3 +0.7
LZH                                  pP      sP      20 19 15.5 +1.0
LZH                                  sP      pP      20 19 20.5 +8.7
LZH                                  PP      PP      20 20 39.8 +0.4
LZH                                  pmax    pmax
      comp=Z,18nm,1.1s
LZH                                  pmax    pmax
      comp=Z,63nm,4.9s
LZH                                  LR      LR
      comp=Z,800nm,15.7s
LZH                                  LR      LR
      comp=Z,630nm,16.8s
LZH                                  LR      LR
      comp=Z,330nm,16.8s
DAVA  Damuels            41.08 311 eP        P       20 19 02.2 -2.3
      comp=Z,29nm,0.5s,SNR=12
SUKH  Sukhothai          41.16  95  P        P       20 19 11.0 +5.6
      comp=Z,21nm,0.9s
KMI   Kunming            41.60  82⇓eP        P       20 19 11.3 +2.1
KMI                                  pP      sP      20 19 18.5 -0.6
KMI                                  PP      PnPn    20 20 51.0 +0.7
KMI                                  S       S       20 25 21.0 -3.5
KMI                                  pmax    pmax
      comp=Z,27nm,1.4s
KMI                                  pmax    pmax
      comp=Z,280nm,4.0s
KMI                                  LR      LR
      comp=Z,220nm,15.5s
KMI                                  LR      LR
      comp=Z,220nm,15.7s
KMI                                  LR      LR
      comp=Z,310nm,16.7s
UPP   Uppsala            41.70 332 eP        P       20 19 08.7 -0.5
UTHA  Uthaitani          41.74  97  P        P       20 19 13.8 +3.7
      comp=Z,250nmcomp=Z,26nm,0.9s
UTTA  Uttaradit          41.89  94  P        P       20 19 14.6 +3.4
      comp=Z,208nmcomp=Z,26nm,1.0s
PHIT  Phitsanulok        41.97  95  P        P       20 19 18.6 +6.7
      comp=Z,82nm,0.9s
COP   Copenhagen         42.14 324 i P       P       20 19 12.6 -0.3
COP   Copenhagen         42.14 324 i P       P       20 19 12.6 -0.3
COP   Copenhagen         42.14 324 i P       P       20 19 12.6 -0.3
ZAK   Zakamensk          42.29  44 eP        P       20 19 15.1 +0.8
ZAK                                  pmax    pmax
      comp=Z,8.0nm,1.3s
BFO   Black Forest       42.32 313  P        P       20 19 11.8 -2.7
BFO                                  pmax    pmax
      comp=Z,4.0nm,0.7s
BFO   Black Forest       42.32 313  P        P       20 19 11.8 -2.7
APA   Apatity            42.44 347⇓iP        P       20 19 12.9 -2.3
APA                                  pmax    pmax
      comp=Z,8.0nm,1.0s
APA                                  MLR     MLR
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      comp=Z,2µm,15.0s
SENIN Lac Senin/Sane     42.66 310  P        P       20 19 15.8 -1.7
TLY   Talaya             42.85  42⇑eP        P       20 19 16.7 -2.1
TLY                                  pmax    pmax
      comp=Z,1.0nm,0.8s
ECH   Echery             43.06 312  P        P       20 19 19.4 -1.2
ECH                                  pmax    pmax
      comp=Z,16nm,1.1s
ECH   Echery             43.06 312  P        P       20 19 19.4 -1.2
SONM  Songino Array      43.76  48  P        P       20 19 26.4 +0.1
      comp=Z,13nm,0.9s,baz=269,slow=8.5,SNR=38
SONM                                 LR      LR      20 39 56.7
      comp=Z,1µm,18.6s,baz=255,slow=39
SONM  Songino Array      43.76  48  P        P       20 19 27.3 +1.0
SONM                                 pmax    pmax
      comp=Z,21nm,1.3s
SONM  Songino Array      43.76  48  P        P       20 19 27.3 +1.0
CHAI  Chaiyaphum         43.85  95  P        P       20 19 38.9  +12
WLF   Walferdange        43.99 314 dP        P       20 19 27.4 -0.6
NONG  Nongkai            44.07  92  P        P       20 19 31.2 +2.2
      comp=Z,35nm,1.1s
MUD   Monsted U'grnd     44.13 324 eP        P       20 19 28.8 -0.1
MUD   Monsted U'grnd     44.13 324 i P       P       20 19 28.8 -0.1
MUD   Monsted U'grnd     44.13 324 eP        P       20 19 28.9 -0.1
ULN   Ulaanbaatar        44.20  49ceP        P       20 19 30.1 +0.2
ULN                                  pmax    pmax
      comp=Z,20nm,1.0s
ULN   Ulaanbaatar        44.20  49  P        P       20 19 30.4 +0.5
ULN                                  IAmb    IAmb    20 19 35.5
      comp=Z,14nm,0.7s
MEM   Membach            44.27 315 dP        P       20 19 31.4 +1.2
BEBN  Eben Emael         44.52 316 dP        P       20 19 32.1 -0.1
SRAK  Srakaew            44.67  98  P        P       20 19 41.3 +7.5
      comp=Z,2µmcomp=Z,189nm,1.0s
RCHB  Rochefort          44.67 315 dP        P       20 19 32.5 -0.9
BCLA  Clavier            44.68 315 dP        P       20 19 33.5  0.0
BCLA                               dPcP      PcP     20 21 14.0 -1.7
GYA   Guiyang            44.74  79 eP        P       20 19 45.0  +11
GYA                                  pmax    pmax
      comp=Z,8.0nm,1.3s
NC602 NORSAR Array S     44.76 331 eP        P       20 19 33.9  0.0
OSL   Oslo               44.76 329 eP        P       20 19 34.7 +0.7
BGES  Gesves             44.80 315 dP        P       20 19 34.1 -0.4
NC405 NORSAR Array S     44.86 331  P        P       20 19 33.4 -1.4
BMRD  Maredsous          44.99 315 dP        P       20 19 36.2 +0.2
BMRD                               dPcP      PcP     20 21 18.0 +1.2
NB201 NORSAR Array S     45.01 331 eP        P       20 19 35.9 -0.1
NB2   NORSAR Subarra     45.04 331  P        P       20 19 35.5 -0.7
      comp=Z,22nm,1.4s,baz=118,slow=8.6
NB2   NORSAR Subarra     45.04 331  P        P       20 19 35.5 -0.7
      baz=118,slow=8.6
NOA   NORSAR Array B     45.04 331  P        P       20 19 34.7 -1.5
      comp=Z,4.2nm,0.7s,baz=117,slow=7.9,SNR=17
NOA                                  LR      LR      20 41 37.1
      comp=Z,253nm,20.6s,baz=120,slow=40
DOU   Dourbes            45.06 315 dP        P       20 19 36.3 -0.2
DOU                                dpP       sP      20 19 46.5 -0.3
KONO  Kongsberg          45.16 329 eP        P       20 19 37.0 -0.1
SNF   Seneffe            45.33 315 dP        P       20 19 40.1 +1.5
XAN   Xi'an              45.37  68  P        P       20 19 46.8 +7.5
XAN                                  pP      sP      20 19 57.0 +7.8
XAN                                  S       S       20 26 30.0  +11
XAN                                  pmax    pmax
      comp=Z,9.0nm,0.7s
XAN                                  LR      LR
      comp=N,1µm,22.8s
XAN                                  LR      LR
      comp=E,440nm,22.8s
XAN                                  LR      LR
      comp=Z,640nm,20.6s
KEV   Kevo               45.57 346  P        P       20 19 40.3 +0.1
KEV                                  pmax    pmax
      comp=Z,39nm,1.2s
KEV   Kevo               45.57 346  P        P       20 19 40.3 +0.1
ARA0  ARCESS Array S     45.72 345 eP        P       20 19 43.0 +1.5
ARCES ARCESS Array B     45.72 345  P        P       20 19 41.5  0.0
      comp=Z,3.1nm,0.6s,baz=160,slow=3.9,SNR=23
ARCES                                LR      LR      20 42 04.1
      comp=Z,497nm,18.6s,baz=130,slow=40
BTO   Baotou             45.83  59 eP        P       20 19 40.5 -2.4
KTK1  Kautokeino         45.85 344 eP        P       20 19 42.9 +0.4
SKAR  Skarslia           46.17 330 eP        P       20 19 45.7 +0.6
DOMB  Dombas             46.41 332 eP        P       20 19 46.9 -0.1
NSS   Namsos             46.46 335 eP        P       20 19 48.1 +0.8
MOR8  Moi Rana           46.49 338 eP        P       20 19 47.8 +0.2
BLS5  Blasjo             46.55 327 eP        P       20 19 48.3 +0.2
FAUS  Fauske             46.94 340 eP        P       20 19 50.9 -0.1
HAMF  Hammerfest         46.98 346 eP        P       20 19 51.7 +0.4
HHC   Hu-ho-hao-te       47.00  59 eP        P       20 19 52.5 +0.4
HHC                                  pmax    pmax
      comp=Z,8.0nm,0.6s
HHC                                  pmax    pmax
      comp=Z,110nm,6.6s
N2IH  Innhavet           47.10 341 eP        P       20 19 53.2 +0.9
KONS  Konsvik            47.12 338 eP        P       20 19 53.3 +0.9
UBPT  Khong Chiam        47.18  94  P        P       20 19 58.0 +4.4
MOL   Molde              47.28 332 eP        P       20 19 52.8 -0.9
STEI  Steigen            47.29 340 eP        P       20 19 55.1 +1.4
HYA   Hoyanger           47.31 330 eP        P       20 19 52.6 -1.4
TRO   Tromso             47.37 343 eP        P       20 19 55.0 +0.7
BER   Bergen             47.41 328 eP        P       20 19 55.6 +0.7
PSI   Prapat             47.60 113  LR       LR      20 40 54.3
      comp=Z,131nm,19.7s,baz=271,slow=37
LOF   Lofoten            47.92 340 eP        P       20 19 58.5 -0.2
QIZ   Qiongzhong         49.68  88  P        P       20 20 11.3 -1.6
QIZ                                  S       S       20 27 20.3 -0.4
QIZ                                  LR      LR
      comp=N,240nm,17.7s
QIZ                                  LR      LR
      comp=E,370nm,23.5s
QIZ                                  LR      LR
      comp=Z,270nm,21.6s
BOD   Bodaibo            50.14  36 eP        P       20 20 16.0 +0.2
BOD                                  pmax    pmax
      comp=Z,17nm,1.4s
ESDC  Sonseca Array      50.74 300  P        P       20 20 19.1 -1.6
      comp=Z,2.6nm,0.8s,baz=65,slow=7.5,SNR=29
ESDC                                 LR      LR      20 43 12.2
      comp=Z,206nm,20.3s,baz=60,slow=38
ESDC  Sonseca Array      50.74 300  P        P       20 20 20.3 -0.4
PDSI  Padang             51.02 116  P        P       20 20 25.0 +1.9
PAB   San Pablo          51.05 300  P        P       20 20 22.4 -0.7
PAB                                  pmax    pmax
      comp=Z,15nm,1.2s
PAB   San Pablo          51.05 300  P        P       20 20 22.4 -0.7
PAB                                  IAmb    IAmb    20 20 26.8
      comp=Z,15nm,1.2s
SDSI  Sungai Dareh       51.81 115  P        P       20 20 28.6 -0.3
      comp=Z,11nm,2.1s
PBRG  Braganca           52.64 303 eP        P       20 20 34.5 -0.4
      comp=Z,19nm,2.0s
TOA0  Torodi Ar. Sit     52.68 266  P        P       20 20 34.0 -1.4
TORD  Torodi Ar. Bea     52.68 266  P        P       20 20 34.6 -0.9
      comp=Z,20nm,0.5s,baz=64,slow=6.7,SNR=63
TORD                                 LR      LR      20 45 48.7
      comp=Z,341nm,19.0s,baz=70,slow=39
TORD  Torodi Ar. Bea     52.68 266  P        P       20 20 34.0 -1.4
MVO   Moncorvo           52.92 302 eP        P       20 20 36.8 -0.2
      comp=Z,33nm,2.3s
PBAR  Barrancos          53.30 299 eP        P       20 20 39.5 -0.2
      comp=Z,32nm,1.9s
PMRV  Marv??o            53.40 300 eP        P       20 20 39.7 -0.8
      comp=Z,28nm,1.7s
PCBR  Castelo Branco     53.41 301 eP        P       20 20 41.2 +0.7
      comp=Z,26nm,2.0s
PVRL  Vila Real          53.42 303 eP        P       20 20 40.0 -0.6
      comp=Z,22nm,2.0s
POLO  Lamas de Olo       53.47 303 eP        P       20 20 42.4 +1.3
      comp=Z,15nm,1.9s
PVIS  Viseu              53.62 302 eP        P       20 20 41.9 -0.2
      comp=Z,22nm,1.8s
SPA0  Spitsbergen Ar     53.87 351 eP        P       20 20 44.6 +1.3
NJ2   Nanjing            53.92  69 eP        P       20 20 44.8 +0.4
NJ2                                  pmax    pmax
      comp=Z,4.0nm,0.5s
NJ2                                  LR      LR
      comp=Z,410nm,13.1s
NJ2                                  LR      LR
      comp=Z,400nm,15.0s
NJ2                                  LR      LR
      comp=Z,330nm,18.2s
EVO   Evora              54.00 299 eP        P       20 20 44.6 -0.3
      comp=Z,20nm,2.2s
COI   Coimbra            54.08 301 eP        P       20 20 46.3 +0.9
      comp=Z,40nm,1.3s
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PCAS  Casmilo, Conde     54.16 301 eP        P       20 20 47.9 +1.9
      comp=Z,33nm,1.5s
PSBE  So Bento           54.46 301 eP        P       20 20 51.7 +3.4
      comp=Z,53nm,1.7s
KASI  Kota Agung         57.00 118  P        P       20 21 05.5 -1.2
      comp=Z,18nm,1.8s
KOWA  Kowa               57.21 270  P        P       20 21 06.9 -1.3
ZEA   Zeya               57.29  42 eP        P       20 21 10.3 +2.1
ZEA                                  pmax    pmax
      comp=Z,10.0nm,1.0s
ZEA                                  MLR     MLR
      comp=E,200nm,15.0s
ZEA                                  MLR     MLR
      comp=N,300nm,14.0s
ZEA                                  MLR     MLR
      comp=Z,200nm,16.0s
YAK   Yakutsk            58.42  32⇓eP        P       20 21 17.0 +1.0
YAK                                  pmax    pmax
      comp=Z,8.0nm,1.2s
TIXI  Tiksi              58.74  21  P        P       20 21 18.4 +0.3
TIXI                                 pmax    pmax
      comp=Z,6.0nm,0.7s
TIXI  Tiksi              58.74  21  P        P       20 21 18.4 +0.3
TIXI                                 IAmb    IAmb    20 21 31.8
      comp=Z,5.5nm,0.7s
LBTB  Lobatse            59.93 212  P        P       20 21 26.2 -0.9
LBTB                                 pmax    pmax
      comp=Z,10.0nm,1.0s
LBTB  Lobatse            59.93 212  P        P       20 21 26.2 -0.9
LBTB                                 IAmb    IAmb    20 21 34.6
      comp=Z,10nm,0.9s
DAG   Danmarks Havn      60.01 345 i P       P       20 21 26.6 -0.2
DAG                                  pmax    pmax
      comp=Z,9.0nm,0.5s
DAG   Danmarks Havn      60.01 345 i P       P       20 21 26.6 -0.2
      comp=Z,8.6nm,0.5s
DAG   Danmarks Havn      60.01 345 i P       P       20 21 26.7 -0.2
DAG                                  IAmb    IAmb    20 21 31.5
      comp=Z,8.6nm,0.5s
KSRS  Korea Array        60.03  61  P        P       20 21 27.7 +0.1
      comp=Z,2.7nm,0.6s,baz=281,slow=7.0,SNR=11
KSRS                                 LR      LR      20 51 08.3
      comp=Z,230nm,19.6s,baz=294,slow=40
DBG   Daneborg           60.12 342 eP        P       20 21 29.3 +1.8
KLR   Kul'dur            60.54  47⇑eP        P       20 21 30.0 -0.9
KLR                                  pmax    pmax
      comp=Z,10.0nm,0.9s
DBIC  Dimbokro           61.31 262  P        P       20 21 37.1 +0.5
      comp=Z,3.0nm,0.4s,baz=24,slow=5.9,SNR=11
DBIC                                 LR      LR      20 49 41.3
      comp=Z,130nm,18.3s,baz=42,slow=38
KIC   Kosan Boka         61.35 262 eP        P       20 21 35.8 -1.1
      comp=Z,13nm,0.8s
TIC   Toumodi            61.47 262 eP        P       20 21 38.1 +0.4
USA0B Ussuriysk Arra     61.60  52⇓eP        P       20 21 40.3 +2.1
USRK  Ussuriysk Ar.      61.60  52  P        P       20 21 38.9 +0.8
      comp=Z,2.0nm,0.6s,baz=269,slow=7.1,SNR=7.8
USRK                                 LR      LR      20 50 40.7
      comp=Z,476nm,20.5s,baz=288,slow=38
LIC   Lamto              61.67 262 eP        P       20 21 38.7 -0.3
      comp=Z,23nm,0.7s
BOSA  Boshof             63.16 210  P        P       20 21 48.8  0.0
      comp=Z,3.4nm,0.6s,baz=25,slow=7.2,SNR=12
BOSA                                 LR      LR      20 51 52.0
      comp=Z,390nm,18.0s,baz=24,slow=38
BOSA  Boshof             63.16 210  P        P       20 21 48.2 -0.6
BOSA                                 pmax    pmax
      comp=Z,7.0nm,0.9s
BOSA  Boshof             63.16 210  P        P       20 21 48.1 -0.6
BOSA                                 IAmb    IAmb    20 21 52.7
      comp=Z,6.9nm,0.9s
SUMG  Summit             65.44 341 i P       P       20 22 04.1 +0.6
SUMG                                 pmax    pmax
      comp=Z,98nm,1.0s
SUMG  Summit             65.44 341 i P       P       20 22 04.1 +0.6
      comp=Z,98nm,1.0s
SUMG  Summit             65.44 341 i P       P       20 22 04.2 +0.6
SUMG                                 IAmb    IAmb    20 22 12.3
      comp=Z,98nm,1.0s
ICESG Greenland Ices     66.69 337 eP        P       20 22 11.8 +0.2
TYV   Tymovskoe          67.07  43 eP        P       20 22 17.7 +3.9
TYV                                  pmax    pmax
      comp=Z,7.0nm,0.7s
TYV                                  MLR     MLR
      comp=E,4µm,16.0s
TYV                                  MLR     MLR
      comp=Z,1µm,16.0s
MJAR  Matsushiro Arr     68.20  59  P        P       20 22 22.4 +1.1
      comp=Z,2.6nm,1.1s,baz=288,slow=7.6,SNR=6.2
MJAR                                 LR      LR      20 56 12.0
      comp=Z,166nm,18.3s,baz=295,slow=40
YSS   Yuzh-Sakhalins     68.24  47 eP        P       20 22 19.8 -1.5
YSS                                  pmax    pmax
      comp=Z,20nm,0.7s
YSS                                  MLR     MLR
      comp=Z,400nm,16.0s
SEY   Seymchan           68.64  29⇑eP        P       20 22 23.0 -0.6
MA2   Magadan            68.97  33⇑eP        P       20 22 27.2 +1.5
MA2                                  pmax    pmax
      comp=Z,10.0nm,1.2s
ERM   Erimo              70.06  52           PcP     20 22 50.0 -4.7
JEM   Erimo              70.06  52           PcP     20 22 49.5 -5.2
EUNU  Eureka             70.79 354  P        P       20 22 37.5 +0.9
EUNU                                 IAmb    IAmb    20 22 51.0
      comp=Z,16nm,1.5s
TULEG Thule              70.95 348  P        P       20 22 37.1 -0.4
TULEG Thule              70.95 348 eP        P       20 22 35.9 -1.6
BILL  Bilibino           71.92  22⇓eP        P       20 22 44.8 +1.3
BILL                                 pmax    pmax
      comp=Z,3.0nm,1.0s
PETK  Petropavlovsk-     74.98  38  P        P       20 23 01.6 -0.2
      comp=Z,4.8nm,0.9s,baz=262,slow=10.0,SNR=4.8
PETK                                 LR      LR      20 57 19.0
      comp=Z,272nm,18.1s,baz=299,slow=37
FRB   Frobisher Bay      79.30 338  LR       LR      21 00 18.9
      comp=Z,175nm,18.7s,baz=26,slow=37
RDOG  Red Dog Mine       80.45  14           PcP     20 23 37.7 -1.3
C36M  Paulatuk           83.47   0  IAmb     IAmb    20 23 56.8
      comp=Z,16nm,1.1s
IMAR  Indian Mountai     84.06  12  P        P       20 23 50.4 -0.6
BMAR  Burnt Mountain     84.12   8  P        P       20 23 48.8 -2.5
MDM   Murphy Dome        85.94  10  IAmb     IAmb    20 24 09.4
      comp=Z,17nm,1.2s
COLA  College            86.08  10⇓eP        P       20 24 00.9 -0.2
COLA                                 pmax    pmax
      comp=Z,3.0nm,0.9s
IL31                     86.32  10  P        P       20 24 00.3 -2.0
ILAR  Eielson Array      86.32  10  P        P       20 24 01.2 -1.1
      comp=Z,2.0nm,0.7s,baz=324,slow=3.4,SNR=34
ILAR                                 LR      LR      21 08 07.9
      comp=Z,318nm,19.7s,baz=328,slow=40
TTA   Tatalina           86.33  14  P        P       20 24 03.3 +0.8
TTA                                  pmax    pmax
      comp=Z,11nm,1.4s
TTA   Tatalina           86.33  14  P        P       20 24 03.3 +0.8
TTA                                  IAmb    IAmb    20 24 11.7
      comp=Z,11nm,1.4s
WRH   Wood River Hil     86.42  10  P        P       20 24 02.2 -0.6
HDA   Harding Lake       86.66  10  IAmb     IAmb    20 24 08.7
      comp=Z,6.3nm,0.8s
KTH   Kantishna Hill     86.79  12  IAmb     IAmb    20 24 13.5
      comp=Z,12nm,1.0s
TRF   Thorofare Moun     87.00  12  IAmb     IAmb    20 24 17.5
      comp=Z,8.4nm,0.8s
PPLA  Purkeypile         87.15  13  IAmb     IAmb    20 24 16.8
      comp=Z,8.0nm,0.7s
RND   Reindeer           87.29  11  P        P       20 24 07.0 -0.1
RND                                  pmax    pmax
      comp=Z,18nm,1.3s
RND   Reindeer           87.29  11  P        P       20 24 07.0 -0.1
RND                                  IAmb    IAmb    20 24 15.6
      comp=Z,18nm,1.3s
DAWY  Dawson             87.96   7  IAmb     IAmb    20 24 17.2
      comp=Z,9.5nm,0.8s
SKT   Skwentna           88.11  13  P        P       20 24 11.0  0.0
BCAR  Beaver Creek A     88.65   8  P        P       20 24 13.9 +0.3
WRA   Warramunga Arr     89.07 113  P        P       20 24 16.4 +0.2
      comp=Z,4.5nm,0.7s,baz=312,slow=3.9,SNR=38
WRA   Warramunga Arr     89.07 113 i P       P       20 24 16.3 +0.1
WRA                                  pmax    pmax
      comp=Z,5.0nm,0.7s
WRA   Warramunga Arr     89.07 113  P        P       20 24 16.4 +0.2
WRAB  Tennant Creek      89.07 113⇓eP        P       20 24 17.8 +1.6
WRAB                                 pmax    pmax
      comp=Z,16nm,1.3s
WB2   Warramunga Arr     89.08 113  P        P       20 24 16.6 +0.4
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2				IAmb	IAmb	20 24 18.3	
	comp=Z,9.2nm,0.8s						
YKA	**Yellowknife Ar**	**90.06**	**356**	P	**P**	**20 24 19.5**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=8.7,slow=4.5,SNR=17						
YKA				LR	LR	21 09 48.0	
	comp=Z,318nm,20.6s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	**90.06**	**356**	*ce*P	**P**	**20 24 21.3**	**+1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**90.55**	**116**	P	**P**	**20 24 23.1**	**-0.1**
	comp=Z,4.8nm,0.6s,baz=306,slow=4.6,SNR=68						
ASAR	**Alice Springs**	**90.55**	**116**	P	**P**	**20 24 22.7**	**-0.4**
MAW	**Mawson**	**94.91**	**177**	LR	LR	20 59 39.1	
	comp=Z,117nm,21.3s,baz=28,slow=30						
PDAR	**Pinedale Array**	**108.90**	**349**	PKiKP	**PKiKP**	**20 29 51.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=94,slow=3.1,SNR=4.6						
PDAR				PKKPbc	**PKKPdf**	**20 41 09.2**	**-3.3**
	comp=Z,0.4nm,0.7s,baz=142,slow=3.3,SNR=4.5						
NVAR	**Mina Array Bea**	**114.25**	**355**	PKP	PKPdf	20 30 01.2	+0.5
	comp=Z,0.7nm,0.5s,baz=348,slow=1.5,SNR=10						
TXAR	**Lajitas Array**	**120.33**	**340**	PKP	**PKiKP**	**20 30 13.2**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=0.0,slow=0.9,SNR=4.2						
CPUP	**Villa Florida**	**121.38**	**255**	PKP	**PKiKP**	**20 30 15.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=71,slow=3.8,SNR=3.3						

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*IDC **25** 20:14:04.3±1.8, 3°.53N×124°.41E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/35, mbtmp3.5/4, MS3.5/2, Ms1 3.5/2, ms1mx2.8/25, Error ellipse: s-maj=244.6km s-min=21.8km az=64.0*

*DJA **25** 20:14:36.4±1.1, 3°N±10°×12°5E±°, h281^{km}±11^{km}, M3.8/7, mb3.6/5, mB4.3/1, MLv3.9/7, Mw(mB)3.5/1*

ISC 25 20:14:34.9±1.3**, 3°.3N**±0°.1×**124°.8E**±0°.1**, h300**^{km}**, n13, σ0^s.88**/11**, mb3.2**/4**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**3.19**	**213**	P	**Pn**	**20 15 32.0**	**-0.6**
TNTI	**Ternate**	**3.63**	**134**	P	**Pn**	**20 15 37.9**	**+0.7**
MRSI	**Marisa**	**3.99**	**225**	P	**Pn**	**20 15 41.4**	**+0.3**
APSI	**Ampana**	**5.23**	**217**	P	**Pn**	**20 15 56.0**	**+0.8**
	0.1nm10nm,1.1s						
SANI	**Sanana**	**5.47**	**167**	P	**Pn**	**20 15 56.6**	**-1.4**
MPSI	**Mapaga**	**5.69**	**239**	P	**Pn**	**20 16 00.5**	**-0.1**
	0.0nm7.1nm,1.7s						
NLAI	**Namlea**	**6.92**	**160**	P	**Pn**	**20 16 15.2**	**-0.2**
	0.2nm24nm,1.0s						
WRA	**Warramunga Arr**	**24.96**	**158**	P	**P**	**20 19 33.2**	**+1.3**
	0.4nm,0.3s,baz=336,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**28.26**	**162**	P	**P**	**20 20 01.5**	**+0.2**
	0.2nm,0.5s,baz=346,slow=7.2,SNR=2.1						
ASAJ	**Asahikawa**	**43.58**	**19**	LR	LR	20 39 17.9	
	comp=Z,14nm,19.0s,baz=74,slow=35						
TLY	**Talaya**	**51.33**	**343**	LR	LR	20 47 19.7	
	comp=Z,142nm,18.1s,baz=234,slow=39						
MKAR	**Makanchi Array**	**56.79**	**326**	P	**P**	**20 23 48.4**	**0.0**
	0.5nm,0.4s,baz=117,slow=7.8,SNR=12						
KURBB	**Kurchatov Arra**	**61.04**	**328**	P	**P**	**20 24 16.5**	**-0.9**
	0.3nm,0.5s,baz=128,slow=6.3,SNR=5.9						

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*TIR **25** 20:18:42.9, 42°.71N×20°.35E, h0^{km}±13^{km}, Md3.2*

*SKO **25** 20:18:44.0, 42°.71N×20°.30E, h22^{km}*

*PDG **25** 20:18:43.9±0.2, 42°.73N×20°.32E, h11^{km}, MD3.0/4, ML3.0/13, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*

*RHSSO **25** 20:18:43.6±0.6, 42°.73N×20°.40E, h4^{km}±2^{km}, ML3.0/12*

*BEO **25** 20:18:44.8±0.6, 42°.75N×20°.40E, h0^{km}, ML2.9/13*

ISC 25 20:18:43.7±1.0**, 42°.75N**±0°.01×**20°.34E**±0°.01**, h8**^{km}±8^{km}**, n94, σ1^s.35**/163**, 25C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVY	**Plav**	**0.32**	**242**	*e*Pg	**Pg**	**20 18 49.7**	**-0.3**
PVY				*i* Sg	**Sg**	**20 18 54.5**	**+0.3**
BEY	**Berane**	**0.35**	**291**	⇑*i*Pg	**Pg**	**20 18 51.0**	**+0.5**
IVA	**Berane**	**0.35**	**291**	⇑*i*Pg	**Pg**	**20 18 50.4**	**-0.2**
IVA				*i* Sg	**Sg**	**20 18 56.0**	**+0.8**
BCI	**Bajram Curri**	**0.43**	**208**	P	**Pg**	**20 18 51.8**	**-0.2**
	baz=212						
BCI				S	**Sg**	**20 18 57.9**	**+0.2**
	baz=212						
SJES	**Sjenica**	**0.58**	**333**	*e*Pg	**Pg**	**20 18 55.4**	**+0.5**
SJES				*e*Sg	**Sg**	**20 19 03.3**	**+0.8**
SJES	**Sjenica**	**0.58**	**333**	⇑*i*Pg	**Pg**	**20 18 55.4**	**+0.5**
SJES				*e*Sg	**Sg**	**20 19 03.3**	**+0.8**
KOME	**Kolasin**	**0.61**	**280**	⇑*i*Pg	**Pg**	**20 18 55.2**	**-0.3**
KOME				*i* Sg	**Sg**	**20 19 04.7**	**+1.1**
PUK	**Puka**	**0.78**	**205**	P	**Pg**	**20 18 58.2**	**-0.4**
	baz=207						
PUK				S	**Sb**	**20 19 10.1**	**-0.1**
	baz=207						
IVAS	**Ivanjica**	**0.84**	**351**	*e*Pg	**Pg**	**20 18 59.9**	**0.0**
IVAS				*e*Sg	**Sg**	**20 19 10.6**	**-0.2**
PDG	**Podgorica**	**0.86**	**249**	⇓P	**Pg**	**20 18 59.3**	**-0.9**
PDG				⇑S	**Sg**	**20 19 11.0**	**-0.3**
PDG	**Podgorica**	**0.86**	**249**	*e*Pg	**Pg**	**20 18 59.1**	**-1.1**
PDG				*e*Sg	**Sg**	**20 19 11.6**	**+0.3**
PDG	**Podgorica**	**0.86**	**249**	*i* Pg	**Pg**	**20 18 59.1**	**-1.1**
PDG				*i* Sg	**Sg**	**20 19 11.1**	**-0.3**
TTG	**Podgorica**	**0.86**	**249**	⇓*i*Pg	**Pg**	**20 18 59.4**	**-0.8**
TTG				*i* Sg	**Sg**	**20 19 11.2**	**-0.1**
GJIK	**Gjilan**	**0.86**	**109**	⇑*i*Pg	**Pg**	**20 18 60.0**	**-0.2**
GJIK				*i* Sg	**Sb**	**20 19 12.8**	**+0.3**
PLE	**Pljevlja**	**0.91**	**310**	⇓*i*Pg	**Pg**	**20 19 00.7**	**-0.4**
PLE				*i* Sg	**Sg**	**20 19 12.6**	**-0.3**
NKY	**Niksic**	**0.99**	**274**	*e*Pg	**Pg**	**20 19 02.1**	**-0.6**
NKY				*i* Sg	**Sn**	**20 19 17.4**	**-0.8**
DRME	**Dracevica, Mon**	**1.02**	**237**	⇑*i*Pg	**Pg**	**20 19 02.0**	**-1.2**
DRME				*e*Sg	**Sb**	**20 19 16.9**	**-0.2**
DRME	**Dracevica, Mon**	**1.02**	**237**	⇓*i*Pg	**Pg**	**20 19 02.4**	**-0.8**
DRME				*i* Sg	**Sn**	**20 19 18.2**	**-0.5**
NKME	**Niksic**	**1.02**	**272**	⇑*i*Pg	**Pg**	**20 19 02.6**	**-0.6**
NKME				*i* Sg	**Sg**	**20 19 16.6**	**+0.1**
PHP	**Peshkopia**	**1.06**	**176**	P	**Pg**	**20 19 03.0**	**-1.0**
	baz=176						
PHP				S	**Sn**	**20 19 19.8**	**-0.1**
	baz=176						
CEME	**Cevo**	**1.06**	**260**	⇓*i*Pg	**Pg**	**20 19 03.3**	**-0.8**
CEME				*i* Sg	**Sn**	**20 19 19.4**	**-0.6**
RUDO	**Rudo**	**1.12**	**321**	⇑*i*Pg	**Pb**	**20 19 04.0**	**-1.3**
RUDO				*e*Sg	**Sb**	**20 19 19.9**	**-0.2**
SKO	**Skopje**	**1.12**	**133**	*i* Pg	**Pb**	**20 19 04.6**	**-0.8**
ULC	**Ulcinj**	**1.12**	**226**	P	**Pn**	**20 19 06.0**	**+0.3**
	baz=228						
ULC	**Ulcinj**	**1.12**	**226**	⇓*i*Pg	**Pb**	**20 19 04.4**	**-1.0**
ULC				*i* Sg	**Sn**	**20 19 21.8**	**+0.4**
UPM	**Unac-Piva**	**1.15**	**294**	*e*Pg	**Pb**	**20 19 05.4**	**-0.4**
UPM				*e*Sg	**Sn**	**20 19 21.9**	**-0.3**
UPM	**Unac-Piva**	**1.15**	**294**	⇑*i*Pg	**Pb**	**20 19 05.0**	**-0.8**
UPM				*i* Sg	**Sn**	**20 19 22.9**	**+0.7**
BUM	**Brajici-Budva**	**1.16**	**248**	⇑*i*Pg	**Pb**	**20 19 05.0**	**-0.9**
BUM				*i* Sg	**Sn**	**20 19 22.9**	**+0.7**
GRUS	**Gruza**	**1.18**	**13**	*e*Pg	**Pg**	**20 19 07.0**	**+0.8**
GRUS				*e*Sg	**Sn**	**20 19 22.4**	**-0.2**
BBLS	**Lazići**	**1.31**	**329**	*e*Pg	**Pb**	**20 19 08.6**	**0.0**
BBLS				*e*Sg	**Sg**	**20 19 27.3**	**+1.5**
BBLS	**Lazići**	**1.31**	**329**	⇑*i*Pg	**Pn**	**20 19 08.1**	**-0.2**
BBLS				*e*Sg	**Sg**	**20 19 26.9**	**+1.1**
BRY	**Bratogost**	**1.33**	**277**	⇓*i*Pg	**Pn**	**20 19 08.3**	**-0.4**
BRY				*e*Sg	**Sg**	**20 19 27.5**	**+1.0**
BRY	**Bratogost**	**1.33**	**277**	⇓*i*Pg	**Pn**	**20 19 08.3**	**-0.4**
BRY				*i* Sg	**Sg**	**20 19 29.0**	**+2.5**
BOVS	**Bovan**	**1.34**	**48**	*e*Pg	**Pn**	**20 19 08.1**	**-0.6**
BOVS				*e*Sg	**Sg**	**20 19 26.9**	**+0.2**
DIVS	**Divibare**	**1.38**	**350**	*e*Pg	**Pg**	**20 19 09.9**	**-0.2**
DIVS				*e*Sg	**Sg**	**20 19 27.6**	**-0.3**
DIVS	**Divibare**	**1.38**	**350**	⇑*i*Pg	**Pn**	**20 19 08.9**	**-0.4**
DIVS				*e*Sg	**Sg**	**20 19 28.3**	**+0.4**
HCY	**Herceg Novi**	**1.39**	**258**	⇓*i*Pg	**Pb**	**20 19 09.7**	**-0.2**
HCY				*e*Sg	**Sg**	**20 19 29.7**	**+1.3**
HCY	**Herceg Novi**	**1.39**	**258**	⇑*i*Pg	**Pn**	**20 19 09.4**	**0.0**
HCY				*i* Sg	**Sg**	**20 19 31.0**	**+2.6**
TIR	**Tirane**	**1.44**	**194**	⇑P	**Pg**	**20 19 11.5**	**+0.2**
TIR				⇑S	**Sg**	**20 19 32.9**	**+2.9**
TIR	**Tirane**	**1.44**	**194**	P	**Pg**	**20 19 11.2**	**-0.1**
	baz=195						
TIR				S	**Sg**	**20 19 32.8**	**+2.9**
	baz=195						
TIR	**Tirane**	**1.44**	**194**	*i* Pn	**Pg**	**20 19 12.1**	**+0.8**
TREB	**Trebinje**	**1.46**	**270**	*e*Pg	**Pb**	**20 19 10.8**	**-0.3**
TREB				*e*Sg	**Sg**	**20 19 32.0**	**+1.3**
TRUS	**Trudelj**	**1.48**	**2**	*e*Pg	**Pg**	**20 19 12.3**	**+0.3**
TRUS				*e*Sg	**Sg**	**20 19 31.8**	**+0.6**
BOSS	**Bosilegrad**	**1.60**	**98**	*e*Pg	**Pb**	**20 19 12.9**	**-0.6**
BOSS				*e*Sg	**Sn**	**20 19 32.7**	**-0.5**
DBRK	**Dubrovnik**	**1.62**	**268**	*e*Pn	**Pn**	**20 19 12.4**	**-0.1**
DBRK				Sn	**Sg**	**20 19 37.4**	**+1.8**
SVIS	**Svilajnac**	**1.65**	**23**	*e*Sg	**Sg**	**20 19 36.1**	**-0.6**
OHR	**Ohrid**	**1.67**	**168**	*i* Pn	**Pb**	**20 19 14.8**	**+0.2**
HAPS	**Han Pijesak,Bl**	**1.68**	**323**	*e*Pn	**Pn**	**20 19 13.5**	**+0.1**
HAPS				*e*Sn	**Sb**	**20 19 36.5**	**+0.3**
ZAGS	**Zajecar**	**1.75**	**52**	*e*Pg	**Pn**	**20 19 14.6**	**+0.3**
ZAGS				*e*Sg	**Sg**	**20 19 38.9**	**-0.9**
ZAPS	**Zavoj**	**1.77**	**72**	*e*Pg	**Pb**	**20 19 16.1**	**-0.2**
ZAPS				*e*Sg	**Sg**	**20 19 39.1**	**-1.3**
TEKS	**Tekeris**	**1.90**	**342**	*e*Pg	**Pb**	**20 19 18.9**	**+0.4**
TEKS				*e*Sg	**Sg**	**20 19 45.0**	**+0.4**
TEKS	**Tekeris**	**1.90**	**342**	*e*Pn	**Pb**	**20 19 17.3**	**-1.2**
TEKS				*e*Sn	**Sb**	**20 19 42.0**	**-0.4**
BLKB	**Belogradchik**	**1.92**	**62**	⇑S	**Sb**	**20 19 43.1**	**0.0**
KUBS	**Kucevo**	**1.93**	**30**	*e*Pg	**Pb**	**20 19 18.8**	**-0.3**
STON	**Ston**	**1.94**	**275**	*e*Pn	**Pb**	**20 19 18.5**	**-0.8**
STON				Sn	**Sg**	**20 19 45.5**	**-0.6**
STON	**Ston**	**1.94**	**275**	*e*Pn	**Pn**	**20 19 17.4**	**+0.5**
STON				*e*Sn	**Sb**	**20 19 43.2**	**-0.5**
FNA	**Florina**	**2.11**	**158**	*i* Pn	**Pb**	**20 19 20.7**	**-1.5**
VTS	**Vitosha**	**2.14**	**92**	⇓P	**Pb**	**20 19 20.9**	**-1.9**
VTS				⇑S	**Sb**	**20 19 48.0**	**-1.5**
VTS	**Vitosha**	**2.14**	**92**	*i* Pn	**Pn**	**20 19 20.8**	**+0.9**
MDVR	**Moldovita**	**2.27**	**26**	⇓P	**Pn**	**20 19 21.8**	**+0.4**
MDVR				⇓S	**Sb**	**20 19 52.6**	**-0.4**
GRG	**Griva**	**2.36**	**139**	*i* Pn	**Pn**	**20 19 24.0**	**+1.2**
RICI	**Ricice**	**2.46**	**289**	*e*Pn	**Pb**	**20 19 27.2**	**-0.9**
RICI				Sn	**Sb**	**20 20 00.6**	**+1.9**
KNT	**Kendrikon**	**2.48**	**129**	*i* Pn	**Pn**	**20 19 25.2**	**+0.8**
MAKA	**Makarska**	**2.49**	**284**	*e*Pn	**Pn**	**20 19 25.4**	**+0.9**
MAKA				Sn	**Sb**	**20 19 59.7**	**+0.3**
HERR	**Herculane**	**2.61**	**34**	⇑P	**Pn**	**20 19 26.5**	**+0.4**
HERR				⇑S	**Sb**	**20 20 01.1**	**-1.9**
HVAR	**Hvar**	**2.89**	**280**	*e*Pn	**Pn**	**20 19 31.3**	**+1.4**
HVAR				Sn	**Sb**	**20 20 08.7**	**-2.1**
MGRS	**Mrkonjic Grad**	**2.89**	**306**	*e*Pn	**Pn**	**20 19 31.5**	**+1.4**
MGRS				*e*Sn	**Sn**	**20 20 06.6**	**+1.5**
BZS	**Buzias**	**3.01**	**17**	⇓P	**Pn**	**20 19 33.1**	**+1.4**
BZS				⇑S	**Sn**	**20 20 08.7**	**+0.8**
BLY	**Banja Luka**	**3.04**	**312**	*e*Pn	**Pn**	**20 19 33.4**	**+1.4**
BLY				*e*Sn	**Sn**	**20 20 10.2**	**+1.7**
KIJV	**Kijevo**	**3.13**	**295**	*e*Pn	**Pb**	**20 19 36.7**	**-2.9**
KIJV				Sn	**Sb**	**20 20 15.6**	**-2.3**
GZR	**Gura Zlata**	**3.18**	**33**	⇓P	**Pn**	**20 19 35.6**	**+1.6**
ZIRJ	**Zirje**	**3.55**	**286**	*e*Pn	**Pn**	**20 19 41.3**	**+2.3**
ZIRJ				Sn	**Sb**	**20 20 25.6**	**-4.3**
MORI	**Morici**	**3.56**	**290**	*e*Pn	**Pn**	**20 19 41.0**	**+1.9**
MORI				Sn	**Sb**	**20 20 25.9**	**-4.3**
SIRR	**Siria**	**3.65**	**15**	⇑P	**Pn**	**20 19 41.4**	**+1.0**
MORH	**Mrgy, Hungar**	**3.67**	**341**	⇑*e*PN	**Pn**	**20 19 41.5**	**+0.8**
MORH				*e*SN	**Sn**	**20 20 25.9**	**+1.7**
MORH	**Mrgy, Hungar**	**3.67**	**341**	*e*Pn	**Pn**	**20 19 41.3**	**+0.6**
MORH				*e*Sn	**Sn**	**20 20 24.6**	**+0.4**
UDBI	**Udbina**	**3.77**	**300**	*e*Pn	**Pn**	**20 19 45.3**	**+3.2**
UDBI				Sn	**Sb**	**20 20 31.5**	**-4.7**
DUGI	**Dugi Otok**	**4.04**	**290**	*e*Pn	**Pn**	**20 19 48.4**	**+2.5**
DUGI				Sn	**Sn**	**20 20 37.1**	**+3.7**
ARR	**Arges**	**4.06**	**48**	⇑P	**Pn**	**20 19 47.9**	**+1.8**
VOIR		**4.33**	**50**	⇓P	**Pn**	**20 19 51.2**	**+1.3**
NVLJ	**Novalja**	**4.36**	**296**	*e*Pn	**Pn**	**20 19 51.9**	**+1.7**
KALN	**Kalnik**	**4.38**	**322**	*e*Pn	**Pn**	**20 19 51.5**	**+1.0**
PTJ	**Puntijarka**	**4.45**	**317**	*e*Pn	**Pn**	**20 19 52.4**	**+0.9**
OZLJ	**Ozalj**	**4.53**	**311**	*e*Pn	**Pn**	**20 19 54.7**	**+2.3**
RAZG	**Razgrad**	**4.59**	**78**	⇑P	**Pn**	**20 19 54.3**	**+1.0**
CRES	**Cresnjev**	**4.66**	**313**	*e*Pn	**Pn**	**20 19 55.4**	**+1.0**
MPLH	**Magyarpolny**	**4.85**	**337**	*e*PN	**Pn**	**20 19 58.6**	**+1.8**
MPLH				*e*SN	**Sn**	**20 20 57.1**	**+3.9**
PSZ	**Piszkesteto**	**5.18**	**357**	*e*PN	**Pn**	**20 20 02.6**	**+1.0**
PSZ				*e*SN	**Sn**	**20 21 03.4**	**+1.9**
CEY	**Cerknica**	**5.19**	**307**	*e*Pn	**Pn**	**20 20 02.5**	**+0.8**
SOKA	**Soboth**	**5.45**	**318**	*i* Pn	**Pn**	**20 20 06.5**	**+1.2**
	1.2nm,0.3s						
OBKA	**Obir**	**5.59**	**314**	*e*Pn	**Pn**	**20 20 08.9**	**+1.8**
	1.4nm,0.3s						
ARSA	**Arzberg**	**5.65**	**325**	*e*Pn	**Pn**	**20 20 09.3**	**+1.4**
	3.4nm,0.3s						
ARSA				*e*Sn	**Sn**	**20 21 11.4**	**-1.6**
	2.2nm,0.3s						
VYHS	**Vyhne**	**5.84**	**350**	*e*PN	**Pn**	**20 20 12.5**	**+1.9**
VYHS				*e*SN	**Sn**	**20 21 16.6**	**-1.1**
MODS	**Modra-Piesok**	**6.02**	**340**	*e*PN	**Pn**	**20 20 13.5**	**+0.5**
MODS				*e*SN	**Sn**	**20 21 19.9**	**-2.3**

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*ANF **25** 20:19:01.8±0.2, 33°.35N×116°.34W, h15^{km}±2^{km}, ML2.2/10, Error ellipse: s-maj=1.5km s-min=1.2km az=80.0*

*ECX **25** 20:19:03.6±0.5, 33°.33N×116°.35W, h14^{km}±9^{km}, MD2.1, ML2.3*

*MEX **25** 20:19:06.0±0.3, 32°.25N×115°.63W, h20^{km}, MD3.7*

ISC 25 20:19:01.9±1.0**, 33°.35N**±0°.02×**116°.36W**±0°.03**, h18**^{km}±4^{km}**, n21, σ0^s.42**/41**, 2C-2D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFO	**Pinyon Flats O**	**0.27**	**342**	P	**Pg**	**20 19 08.2**	**+0.1**
	baz=160,SNR=75						
PFO				S	**Sg**	**20 19 12.4**	**+0.1**
	baz=160						
MONP2	**Monument Peak**	**0.46**	**187**	P	**Pb**	**20 19 11.6**	**0.0**
	baz=8.2,SNR=14						
MONP2				S	**Sb**	**20 19 18.1**	**-0.1**
	baz=8.2						
MONP2	**Monument Peak**	**0.46**	**187**	*e*P	**Pb**	**20 19 11.7**	**0.0**
MONP2				*e*S	**Sb**	**20 19 18.1**	**-0.1**
SWSC	**Sam W. Stewart**	**0.62**	**131**	P	**Pb**	**20 19 14.0**	**-0.1**
	baz=312,SNR=13						
SWSC				S	**Sb**	**20 19 22.5**	**+0.1**
	baz=312						
SWSC	**Sam W. Stewart**	**0.62**	**131**	*e*P	**Pb**	**20 19 14.0**	**-0.1**
SWSC				*e*S	**Sb**	**20 19 22.6**	**+0.2**
BELC	**Belle Mtn. Jos**	**0.71**	**25**	P	**Pg**	**20 19 16.1**	**+0.2**
	baz=204						
BELC				S	**Sb**	**20 19 25.5**	**+0.1**
	baz=204						
BAR	**Barrett**	**0.72**	**202**	*e*P	**Pg**	**20 19 16.2**	**+0.2**
BAR				*e*S	**Sg**	**20 19 25.3**	**-0.3**
BAR				⇓*e*		20 19 25.6	
BAR				IAML		20 19 25.6	
	comp=N,207nm,0.2s						
BAR				⇑*e*		20 19 25.9	
BAR				IAML		20 19 25.9	
	comp=E,169nm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.73**	**163**	P	**Pg**	**20 19 16.3**	**+0.1**
	baz=344,SNR=15						
IKP				S	**Sg**	**20 19 25.9**	**0.0**
	baz=344						
IKP	**In-Ko-Pah, Jac**	**0.73**	**163**	*e*P	**Pg**	**20 19 16.4**	**+0.1**
IKP				*e*S	**Sg**	**20 19 25.9**	**0.0**
MURC	**Murrieta**	**0.74**	**290**	P	**Pg**	**20 19 16.9**	**+0.5**
	baz=109,SNR=11						
MURC				S	**Sb**	**20 19 26.7**	**+0.6**
	baz=109						
109C	**Camp Elliot, M**	**0.78**	**234**	P	**Pb**	**20 19 17.0**	**+0.1**
	baz=54,SNR=8.0						
109C				S	**Sb**	**20 19 27.3**	**+0.2**
	baz=54						
RMX	**La Rumorosa**	**0.78**	**163**	*e*P	**Pn**	**20 19 18.3**	**+0.1**
RMX				*e*S	**Sn**	**20 19 29.3**	**-0.1**
SDRC	**San Diego Road**	**0.79**	**219**	*e*P	**Pg**	**20 19 17.1**	**-0.1**
SDRC				*e*S	**Sg**	**20 19 27.4**	**-0.2**
SDRC				IAML		20 19 28.0	
	comp=E,95nm,0.2s						
SDRC				⇓*e*		20 19 28.0	
BC3	**Big Chuckawall**	**0.81**	**68**	P	**Pb**	**20 19 17.4**	**-0.1**
	baz=248						
BC3				S	**Sb**	**20 19 28.0**	**-0.3**
	baz=248						
TJIG	**Tijuana**	**0.95**	**196**	*e*P	**Pn**	**20 19 20.3**	**-0.1**
	baz=102,slow=18						
TJIG				*e*S	**Sb**	**20 19 31.4**	**-0.8**
BBRC	**Big Bear Solar**	**1.02**	**333**	P	**Pg**	**20 19 22.0**	**+0.2**
	baz=152						
BBRC				S	**Sg**	**20 19 35.8**	**+0.5**
	baz=152						
CBX	**Cerro Bola**	**1.07**	**194**	*e*P	**Pg**	**20 19 22.2**	**-0.4**
CBX				*e*S	**Sn**	**20 19 35.9**	**-0.5**
CBX				IAML		20 19 38.5	
	comp=E,60nm,0.2s						
CBX				⇑*e*		20 19 38.5	
IRM	**Iron Mountain**	**1.29**	**51**	P	**Pb**	**20 19 25.6**	**0.0**
	baz=231						
IRM				S	**Sn**	**20 19 42.6**	**+0.7**
	baz=231						
GMRC	**Granite Mounta**	**1.54**	**22**	Pg	**Pg**	**20 19 31.6**	**-0.1**
	baz=202						
GMRC				Sb	**Sg**	**20 19 50.9**	**-0.8**
	baz=202						
EDW2	**Edwards Air Fo**	**2.04**	**319**	Pg	**Pg**	**20 19 40.6**	**-0.5**
	baz=138						
EDW2				Sb	**Sg**	**20 20 06.5**	**-1.1**
	baz=138						
SPIG	**San Pedro Mart**	**2.42**	**162**	*e*P	**Pb**	**20 19 46.2**	**+1.2**

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*IDC **25** 20:43:05.5±0.8, 42°.35N×84°.51E, h0^{km}, mb3.7/9, mb1 3.8/15, mb1mx3.5/64, mbtmp3.7/15, ML3.4/6, MS3.3/1, Ms1 3.3/1, ms1mx2.6/38, Error ellipse: s-maj=19.7km s-min=10.9km az=59.0*

*NNC **25** 20:43:06.5±2.4, 42°.34N×84°.38E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=18.9km s-min=11.3km az=143.0*

*SOME **25** 20:43:09.6, 42°.43N×84°.35E, h10^{km}*

*BJI **25** 20:43:10.9±0.0, 42°.33N×84°.42E, h13^{km}, mb3.9/5, ML3.9/9, Ms3.7/2, Ms7 3.7/1*

ISC 25 20:43:07.1±0.6**, 42°.41N**±0°.04×**84°.42E**±0°.03**, h10**^{km}**, n70, σ1^s.68**/96**, mb3.6**/8**, 13C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.79**	**58**	Pn	**Pb**	**20 43 56.8**	**-0.2**
WMQ				Sn	**Sg**	**20 44 36.3**	**-0.3**
WMQ				smax	smax		
	comp=N,490nm,0.7s						
WMQ				smax	smax		
	comp=E,460nm,0.7s						
KTMS	**Ketmen**	**3.16**	**291**	*e*P	**Pg**	**20 44 06.4**	**-1.3**
	14nm,0.2s						
KTMS				*e*S	**Sg**	**20 44 47.6**	**-1.0**
	200nm,0.5s						
KTMS	**Ketmen**	**3.16**	**291**	Pg	**Pb**	**20 44 00.7**	**-2.8**
	8.0nm,0.2s						
KTMS				Lg	Lg	20 44 48.0	
	200nm,0.5s						
SHLS	**Shalkode**	**3.72**	**283**	*e*P	**Pb**	**20 44 12.7**	**-0.3**
	24nm,0.2s						
SHLS				*e*S	**Sb**	**20 44 57.5**	**-0.7**
	236nm,0.5s						
SHLS	**Shalkode**	**3.72**	**283**	Pg	**Pn**	**20 44 05.5**	**+0.7**
	24nm,0.2s						
SHLS				Lg	Lg	20 44 56.2	
	236nm,0.5s						
PDGK	**Podgornoye**	**3.74**	**286**	Pg	**Pb**	**20 44 11.3**	**-1.9**
	2.2nm,0.2s						
PDGK				Lg	Lg	20 45 06.7	
	104nm,0.4s						
PDGK	**Podgornoye**	**3.74**	**286**	⇓Pn	**Pn**	**20 44 07.6**	**+2.6**
	2.2nm,0.3s						
PDGK				⇑Pg	**Pg**	**20 44 18.1**	**-0.6**
	20nm,0.4s						
PDGK				⇑Lg	Lg	20 45 07.7	
	269nm,0.7s						
DJR	**Jarkent**	**3.88**	**301**	*e*P	**Pg**	**20 44 20.9**	**-0.6**
	8.1nm,0.2s						
DJR				*e*S	**Sg**	**20 45 11.9**	**+0.1**
	145nm,0.4s						
UZB	**Uzynbulak**	**4.04**	**282**	*e*P	**Pg**	**20 44 23.7**	**-0.8**
	4.3nm,0.2s						
UZB				*e*S	**Sg**	**20 45 16.7**	**-0.1**
	166nm,0.4s						
UZB	**Uzynbulak**	**4.04**	**282**	Pg	**Pb**	**20 44 16.5**	**-1.9**
	5.3nm,0.1s						
UZB				Lg	Lg	20 45 15.4	
	166nm,0.4s						
KPKS	**Kokpek**	**4.34**	**286**	*e*P	**Pg**	**20 44 29.5**	**-0.7**
	22nm,0.2s						
KPKS				*e*S	**Sg**	**20 45 26.9**	**+0.5**
	298nm,0.4s						
ZHN	**Zhinishke**	**4.47**	**282**	*e*P	**Pg**	**20 44 32.0**	**-0.7**
	6.4nm,0.2s						
ZHN				*e*S	**Sg**	**20 45 30.8**	**+0.3**
	46nm,0.5s						
ZHN	**Zhinishke**	**4.47**	**282**	Pg	**Pb**	**20 44 25.7**	**0.0**
	6.4nm,0.2s						
ZHN				Lg	Lg	20 45 30.8	
	46nm,0.5s						
SATY	**Saty**	**4.47**	**280**	*e*P	**Pg**	**20 44 30.9**	**-1.9**
	11nm,0.3s						
SATY				*e*S	**Sg**	**20 45 29.3**	**-1.5**
	132nm,0.3s						
SATY	**Saty**	**4.47**	**280**	Pg	**Pb**	**20 44 24.9**	**-0.9**
	11nm,0.3s						
SATY				Lg	Lg	20 45 29.5	
	132nm,0.3s						
MK31	**Makanchi Array**	**4.64**	**342**	Pn	**Pn**	**20 44 20.1**	**+2.8**
	0.5nm,0.2s,baz=168,slow=11,SNR=148						
MK31				⇓Pg	**Pg**	**20 44 35.2**	**-0.8**
	6.1nm,0.3s,baz=147,slow=17,SNR=7.1						
MK31				⇑Lg	Lg	20 45 35.5	
	110nm,0.7s,baz=153,slow=30,SNR=15						
MKAR	**Makanchi Array**	**4.64**	**342**	Pn	**Pn**	**20 44 19.9**	**+2.5**
	1.3nm,0.3s,baz=164,slow=14,SNR=55						
MKAR				Sn	**Sn**	**20 45 12.8**	**+1.6**
	12nm,0.3s,baz=171,slow=17,SNR=6.3						
MKAR				Lg	Lg	20 45 34.2	
	28nm,0.3s,baz=153,slow=30,SNR=12						
KAPS	**Kapalarasan**	**4.66**	**310**	*e*P	**Pg**	**20 44 36.2**	**0.0**
	8.8nm,0.3s						
KAPS				*e*S	**Sg**	**20 45 38.7**	**+2.2**
	134nm,0.7s						
KAPS	**Kapalarasan**	**4.66**	**310**	Pg	**Pb**	**20 44 29.9**	**+1.1**
	6.4nm,0.3s						
KAPS				Lg	Lg	20 45 38.7	
	134nm,0.7s						
MNBS	**Baschi**	**4.70**	**293**	*e*P	**Pg**	**20 44 34.4**	**-2.8**
	12nm,0.2s						
MNBS				*e*S	**Sg**	**20 45 35.4**	**-2.7**
	142nm,0.7s						
MNBS	**Baschi**	**4.70**	**293**	Pg	**Pb**	**20 44 28.1**	**-1.6**
	16nm,0.2s						
MNBS				Lg	Lg	20 45 35.4	
	142nm,0.7s						
KURS	**Kuram**	**4.71**	**285**	*e*P	**Pg**	**20 44 36.3**	**-1.1**
	7.3nm,0.4s						
KURS				*e*S	**Sg**	**20 45 38.6**	**+0.2**
	40nm,0.5s						
KURS	**Kuram**	**4.71**	**285**	Pg	**Pb**	**20 44 30.2**	**+0.4**
	7.3nm,0.4s						
KURS				Lg	Lg	20 45 39.2	
	40nm,0.5s						
MAKZ	**Makanchi**	**4.73**	**339**	⇑Pn	**Pn**	**20 44 21.2**	**+2.7**
	3.6nm,0.7s						
MAKZ				⇓Pg	**Pg**	**20 44 36.1**	**-1.7**
	14nm,0.5s						
MAKZ				⇑Sn	**Sn**	**20 45 15.9**	**+2.4**
	16nm,0.6s						
MAKZ				⇓Lg	Lg	20 45 38.4	
	35nm,0.7s						
ZSN	**Zaisan**	**5.05**	**3**	*e*P	**Pg**	**20 44 41.3**	**-2.6**
	6.0nm,0.4s						
ZSN				*e*S	**Sg**	**20 45 47.6**	**-1.7**
	95nm,0.5s						
ZSN	**Zaisan**	**5.05**	**3**	Pg	**Pb**	**20 44 35.3**	**-0.4**
	4.9nm,0.1s						
ZSN				Lg	Lg	20 45 47.6	
	95nm,0.5s						
TDK	**Taldyqorghan**	**5.07**	**303**	*e*P	**Pg**	**20 44 42.2**	**-2.0**
	32nm,0.5s						
TDK				*e*S	**Sg**	**20 45 49.4**	**-0.5**
	205nm,0.6s						
TDK	**Taldyqorghan**	**5.07**	**303**	Pg	**Pb**	**20 44 36.5**	**+0.6**
	26nm,0.3s						
TDK				Lg	Lg	20 45 49.4	
	205nm,0.6s						
ARXS	**Arharly**	**5.14**	**293**	*e*P	**Pg**	**20 44 42.2**	**-3.3**
	29nm,0.4s						
ARXS				*e*S	**Sg**	**20 45 49.3**	**-2.7**
	117nm,0.7s						
KOTS	**Kotyrbulak**	**5.44**	**281**	*e*P	**Pg**	**20 44 46.7**	**-4.5**
	30nm,0.2s						
KOTS				*e*S	**Sg**	**20 45 57.2**	**-4.4**
	232nm,0.5s						
KOTS	**Kotyrbulak**	**5.44**	**281**	Pg	**Pb**	**20 44 40.6**	**-1.7**
	11nm,0.2s						
KOTS				Lg	Lg	20 45 57.2	
	232nm,0.5s						

MDOK	Medeo	5.47	280	eP	Pg	20 44 49.9	-2.1
	8.0nm,0.6s						
MDOK				eS	Sg	20 46 02.5	-0.4
	78nm,0.5s						
MDOK	Medeo	5.47	280	⇑Pn	Pn	20 44 31.6	+2.8
	4.1nm,0.5s						
MDOK				⇓Pg	Pg	20 44 50.9	-1.0
	24nm,0.9s						
MDOK				⇓Lg	Lg	20 45 59.9	
	40nm,0.5s						
MDOK	Medeo	5.47	280	Pg	Pb	20 44 43.6	+0.7
	6.3nm,0.3s						
MDOK				Lg	Lg	20 46 02.5	
	78nm,0.5s						
TNSS	Tian-Shan	5.54	279	eP	Pg	20 44 51.6	-1.6
	7.6nm,0.3s						
TNSS				eS	Sg	20 46 05.2	+0.3
	34nm,0.5s						
TNSS	Tian-Shan	5.54	279	Pg	Pb	20 44 45.3	+1.1
	9.8nm,0.3s						
TNSS				Lg	Lg	20 46 05.2	
	34nm,0.5s						
CHKK	Chushkaly	5.63	287	eP	Pg	20 44 52.0	-2.8
	4.8nm,0.4s						
CHKK				eS	Sg	20 46 06.1	-1.6
	65nm,0.3s						
CHKK	Chushkaly	5.63	287	Pg	Pb	20 44 45.7	+0.4
	4.2nm,0.2s						
CHKK				Lg	Lg	20 46 06.1	
	65nm,0.3s						
MTBS	Maitube	5.92	280	eP	Pg	20 44 59.0	-1.5
	5.3nm,0.3s						
MTBS				eS	Sg	20 46 17.8	+0.6
	53nm,0.6s						
KUU	Kurty	6.09	287	Pg	Pb	20 44 55.7	+2.3
	4.2nm,0.3s						
KUU				Lg	Lg	20 46 22.8	
	73nm,0.4s						
KST	Kastek	6.26	279	Pg	Pb	20 44 57.5	+1.2
	14nm,0.7s						
KST				Lg	Lg	20 46 26.0	
	89nm,0.8s						
TKM2	Tokmak 2	6.52	277	⇓Pn	Pn	20 44 46.1	+2.8
	9.1nm,0.9s						
TKM2				⇓Lg	Lg	20 46 36.0	
	40nm,0.6s						
AAK	Ala-Archa	7.33	275	Pn	Pn	20 44 56.4	+2.0
	1.3nm,0.3s,baz=121,slow=9.6,SNR=17						
AAK				Lg	Lg	20 47 02.3	
	3.0nm,0.3s,baz=251,slow=17,SNR=6.0						
AAK	Ala-Archa	7.33	275	⇑Pn	Pn	20 44 56.3	+2.0
	5.1nm,0.8s						
AAK				⇑Lg	Lg	20 46 59.3	
	30nm,0.7s						
KURBB	Kurchatov Arra	9.16	336	Pn	Pn	20 45 21.3	+2.1
	0.1nm,0.3s,baz=144,slow=13,SNR=7.2						
KURBB				Sn	Sn	20 47 01.5	-0.9
	0.3nm,0.3s,baz=151,slow=20,SNR=4.2						
KURBB				Lg	Lg	20 48 02.8	
	0.4nm,0.3s,baz=164,slow=28,SNR=4.0						
KURBB	Kurchatov Arra	9.16	336	⇑Pn	Pn	20 45 22.0	+2.7
	2.9nm,0.5s						
KURBB				⇑Lg	Lg	20 47 59.8	
	54nm,0.8s						
KURK	Kurchatov	9.22	336	⇑Pn	Pn	20 45 21.6	+1.6
	5.5nm,1.1s						
KURK				⇑Lg	Lg	20 47 59.5	
	41nm,1.1s						
KK31	Karatay Array	10.25	279	⇑Lg	Lg	20 48 31.8	
	3.5nm,0.6s,baz=82,slow=27,SNR=4.1						
ZALV	Zalesovo Beam	11.55	1	Pn	Pn	20 45 52.2	+0.2
	0.9nm,0.3s,baz=181,slow=14,SNR=15						
ZALV				Sn	Sn	20 47 58.4	-2.5
	0.8nm,0.3s,baz=172,slow=26,SNR=4.1						
ZALV				Lg	Lg	20 49 16.1	
	0.1nm,0.3s,baz=183,slow=22,SNR=2.1						
DANN	Dangsing	14.04	182	eP	P	20 46 36.3	+2.1
	26nm,0.4s						
BVAR	Borovoye Array	14.19	323	Pn	Pn	20 46 27.9	-0.1
	0.1nm,0.3s,baz=158,slow=20,SNR=3.4						
BVAR				Lg	Lg	20 50 42.0	
	0.2nm,0.3s,baz=166,slow=21,SNR=5.4						
GUN	Gumba	14.51	175	eP	P	20 46 40.2	+0.6
	10nm,0.5s						
KKN	Kakani	14.60	177	eP	P	20 46 40.8	+0.4
	9.8nm,0.5s						
DMN	Daman	14.77	178	eP	P	20 46 41.2	-1.2
	5.7nm,0.4s						
PKIN	Phulchoki	14.82	177	eP	P	20 46 41.9	-1.0
	8.0nm,0.5s						
PKI	Pulchoki	14.82	177	eP	P	20 46 42.8	-0.2
	5.3nm,0.4s						
TAPN	Taplejung	15.26	169	eP	Pn	20 46 44.1	+1.2
	4.6nm,0.3s						
RAMN	Ramite	15.52	173	eP	Pn	20 46 46.9	+0.6
	4.7nm,0.2s						
ODAN	Odare	15.70	170	eP	Pn	20 46 46.7	-1.9
	3.9nm,0.6s						
SONM	Songino Array	16.41	63	Pn	Pn	20 46 58.2	+0.6
	0.3nm,0.3s,baz=112,slow=16,SNR=20						
SONM				Lg	Lg	20 51 57.7	
	0.1nm,0.3s,baz=259,slow=22,SNR=5.9						
GEYT	Alibeck	20.55	266	P	P	20 47 46.4	+0.6
	1.3nm,0.3s,baz=46,slow=4.2,SNR=3.4						
CMAR	Chiang Mai Arr	26.88	148	P	P	20 48 47.1	-1.0
	0.8nm,0.6s,baz=329,slow=8.7,SNR=6.9						
CMAR				PcP	PcP	20 52 09.2	-1.3
	0.6nm,0.3s,baz=342,slow=2.3,SNR=4.3						
BRTR	Keskin Array B	37.92	284	P	P	20 50 25.6	+0.9
	0.6nm,0.8s,baz=78,slow=8.4,SNR=4.5						
FINES	FINESS Array B	39.10	320	P	P	20 50 35.7	+1.6
	1.3nm,0.8s,baz=96,slow=10,SNR=2.2						
ARCES	ARCESS Array B	40.23	332	P	P	20 50 43.8	+0.3
	1.3nm,0.6s,baz=95,slow=7.4,SNR=9.0						
NOA	NORSAR Array B	46.28	320	P	P	20 51 33.1	+0.6
	0.6nm,0.6s,baz=68,slow=7.2,SNR=4.4						
KEST	Kesra	56.91	290	LR	LR	21 20 06.5	
	comp=Z,29nm,21.6s,baz=286,slow=39						
YKA	Yellowknife Ar	74.34	9	P	P	20 54 43.8	-0.6
	0.2nm,0.5s,baz=341,slow=5.5,SNR=3.6						
WRA	Warramunga Arr	77.25	132	P	P	20 55 01.1	-0.4
	0.7nm,0.9s,baz=330,slow=5.1,SNR=7.2						
ASAR	Alice Springs	80.04	135	P	P	20 55 16.9	0.0
	0.2nm,0.5s,baz=325,slow=5.4,SNR=2.5						

IDC ***25*** *20:45:25.9±1.5, 44.°28N×105.°60W, h0km, mb1 3.3/4, mb1mx3.1/58, mbtmp3.0/4, ML2.9/4, Error ellipse: s-maj=46.2km s-min=8.6km az=144.0*

NEIC ***25*** *20:45:26.4±2.2, 44.°27N±0.°05×105.°39W±0.°02, h0km±2km, ML3.0/26, Error ellipse: s-maj=8.7km s-min=3.0km az=12.0*

ISC 25 20:45:25.8±0.9**, 44.°25N**±0.°06×**105.°39W**±0.°06**, h0km, n35, σ1§15**/36**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.99	97		Pg	20 45 44.0	-0.7
K22A	Casper	1.80	208	Pn	Pn	20 45 57.9	-0.3
K22A				Sn	Sn	20 46 20.7	-1.2
K22A				IAML		20 46 24.9	
	comp=E,224nm,0.3s						
K22A				IAML		20 46 26.5	
	comp=N,173nm,0.3s						
LAO	LASA Array	2.50	347		Pb	20 46 11.7	0.0
LAO				IAML		20 46 49.5	
	comp=N,80nm,0.9s						
LAO				IAML		20 46 52.0	
	comp=N,74nm,0.5s						
RWWY	Rawlins	2.89	208	Pn	Pn	20 46 11.5	-1.8
RWWY				IAML		20 46 58.6	
	comp=N,39nm,0.6s						
RWWY				IAML		20 47 01.2	
	comp=N,44nm,0.6s						
PHWY	Pilot Hill	2.95	181	Pn	Pn	20 46 14.9	+0.7
PHWY				IAML		20 47 01.0	
	comp=N,34nm,0.5s						
BW06	Boulder Array	3.37	245		Pn	20 46 21.2	+1.2
PD31	Pinedale Array	3.37	245	Pn	Pn	20 46 21.2	+1.2
PDAR	Pinedale Array	3.37	245	Pn	Pn	20 46 20.6	+0.7
	comp=N,1.2nm,0.3s,baz=70,slow=16,SNR=45						
PDAR				Lg	Lg	20 47 08.2	
	comp=N,5.9nm,0.3s,baz=61,slow=32,SNR=12						
PDAR	Pinedale Array	3.37	245	Pn	Pn	20 46 21.4	+1.4
YNE	Yellowstone No	3.38	285		Pn	20 46 20.3	+0.3
FLWY	Flagg Ranch	3.82	269		Pn	20 46 28.1	+2.0
FLWY				IAML		20 47 12.6	
	comp=N,28nm,4.8s						
FLWY				IAML		20 48 14.1	
	comp=N,20nm,4.8s						
E28A	Huff	4.04	53	Pn	Pn	20 46 31.2	+2.2
ISCO	Idaho Springs	4.45	182		Pn	20 46 36.4	+1.5
ISCO				IAML		20 47 36.8	
	comp=N,12nm,4.1s						
ISCO				IAML		20 48 18.1	
	comp=N,12nm,4.1s						
O20A	White River Ci	4.63	208		Pn	20 46 37.9	+0.8
O20A				IAML		20 48 14.7	
	comp=E,29nm,4.3s						
RDMU	Red Mountain	4.80	221		Pn	20 46 41.3	+1.7
EGMT	Eagleton	4.84	323	Pn	Pn	20 46 38.5	-1.4
JLU	Jordanelle	5.78	233	Pn	Pn	20 46 53.3	+0.3
P17A	Butcher Ranch,	6.22	222		Pn	20 47 00.5	+1.4
PV22	Blue Mesa, Par	6.26	205		Pn	20 47 00.6	+1.1
MPU	Maple Canyon	6.28	230	Pn	Pn	20 47 00.2	+0.4
PV23	Carpenter Ridg	6.40	206		Pn	20 47 02.2	+0.6
SRU	San Rafael Swe	6.41	219		Pn	20 47 01.8	+0.1
SDCO	Great Sand Dun	6.50	181	Pn	Pn	20 47 04.0	+1.0
NLU	North Lily Min	6.57	231	Pn	Pn	20 47 03.6	-0.2
TMUT	Trail Mountain	6.59	223		Pn	20 47 05.3	+1.1
DUG	Dugway, Tooele	6.84	236		Pn	20 47 07.4	-0.1
Q16A	Castle Valley	6.87	221		Pn	20 47 08.7	+0.7
MSU	Marysvale	7.67	224		Pn	20 47 20.6	+1.6
AGMN	Agassiz Nation	7.74	55	Pn	Pn	20 47 20.4	+0.7
MTPU	Mount Pierson	8.04	222	Pn	Pn	20 47 24.9	+0.7
ULM	Lac du Bonnet	8.82	44	Pn	Pn	20 47 33.7	-0.8
	comp=E,0.4nm,0.3s,baz=232,slow=11,SNR=8.5						
ULM				Lg	Lg	20 50 03.3	
	comp=E,0.2nm,0.3s,baz=143,slow=22,SNR=2.0						
CCUT	Cedar City	9.01	225		Pn	20 47 38.8	+1.4
B35A	Bob, Littlefor	9.06	59	Pn	Pn	20 47 37.1	-0.6
NVAR	Mina Array Bea	11.31	243	Pn	Pn	20 48 10.4	+1.6
	comp=E,0.1nm,0.3s,baz=67,slow=14,SNR=2.9						
YKA	Yellowknife Ar	19.05	347	P	P	20 49 49.1	-0.1
	comp=E,0.0nm,0.3s,baz=157,slow=13,SNR=3.6						

GCG ***25*** *21:02:22.7±0.5, 14.°25N×92.°75W, h0km±898km, MD4.5*

MEX ***25*** *21:02:25.6±0.4, 14.°40N×92.°77W, h53km±16km, MD4.7*

NEIC ***25*** *21:02:26.5±3.6, 14.°43N±0.°05×92.°82W±0.°05, h53km±6km, Error ellipse: s-maj=9.4km s-min=1.7km az=223.0*

IDC ***25*** *21:02:26.3±0.7, 14.°68N×92.°42W, h48km±5km, mb3.9/19, mb1 4.1/21, mb1mx3.9/44, mbtmp4.2/21, MS3.6/8, Ms1 3.6/8, ms1mx3.3/32, Error ellipse: s-maj=24.2km s-min=8.7km az=49.0*

NEIC ***25*** *21:02:26.8, 14.°41N×92.°72W, h43km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.29; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-0.08; $M_{r\theta}$-0.77; $M_{\theta\phi}$0.17; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.54000×10^{16} NP1:ϕ_s88.19000°, δ29.21000°, λ70.83000°. NP2:ϕ_s289.91000°, δ62.55000°, λ100.40000°. Principal axes: T 1.5916, Plg71.0000°, Azm222.0000°; N -0.1130, Plg9.0000°, Azm105.0000°; P -1.4786, Plg17.0000°, Azm12.0000°;*

UCR ***25*** *21:02:31.5±1.1, 14.°04N×92.°42W, h34km±999km, ML4.2*

SNET ***25*** *21:02:31.7±1.1, 14.°06N×92.°42W, h35km±999km, ML4.5*

INET ***25*** *21:02:32.7, 14.°53N×92.°27W, h15km, ML5.2*

ISC 25 21:02:25.3±0.7**, 14.°37N**±0.°05×**92.°79W**±0.°04**, h50km**±6km**, n232, σ1§64**/233**, mb4.4**/62**, MS3.6**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.74	44	*i* P	Pn	21 02 38.4	-1.0
THIG				*i* S	Sn	21 02 48.7	-1.1
THIG		0.74	44	eP	Pn	21 02 38.5	-1.0
THIG				*i* S	Sn	21 02 47.6	-2.2
THIG		0.74	44		Pn	21 02 38.5	-1.0
THIG					Sn	21 02 47.6	-2.2
RTAL	Retalhuleu	1.07	82		Pn	21 02 43.8	-0.2
RTAL				Sn	Sn	21 02 56.2	-1.7
PCIG		1.39	343	*i* P	Pn	21 02 46.6	-1.6
PCIG				*i* S	Sn	21 03 03.4	-2.1
PCIG		1.39	343	eP	Pn	21 02 46.7	-1.6
PCIG				*i* S	Sn	21 03 03.6	-1.8
PCIG		1.39	343		Pn	21 02 46.7	-1.6
PCIG					Sn	21 03 03.6	-1.8
HUEH	Huehuetenango	1.56	53		Pn	21 02 51.6	+0.8
HUEH				Sn	Sn	21 03 10.0	-0.1
FUG	Fuego 3	1.89	88	eP	Pn	21 02 56.0	+0.7
CCIG	Comitan	2.00	18	eP	Pn	21 02 58.1	+1.3
CCIG				eS	Sn	21 03 21.4	+0.6
CCIG	Comitan	2.00	18		Pn	21 02 57.7	+0.9
CCIG				Sn	Sn	21 03 21.5	+0.8
PCG	Pacaya	2.12	89	eP	Pn	21 02 59.9	+1.4
NBG	Las Nubes	2.38	85	eP	Pn	21 03 04.9	+2.8
NBG				eS	Sn	21 03 35.3	+5.1
TGBT	Tuxtla Gutierr	2.41	353	*i* P	Pn	21 03 02.7	+0.5
TGBT				*i* S	Sn	21 03 31.0	+0.5
MRL	Marmol	3.09	76	eP	Pn	21 03 13.5	+1.7
CEVE	Cerro Verde	3.12	100	eP	Pn	21 03 13.6	+1.3
CEVE				eS	Sn	21 03 47.6	-0.8
CEVE				IAML		21 04 06.4	
	comp=Z,12µm,0.4s						
CEVE	Cerro Verde	3.12	100	eP	Pn	21 03 13.6	+1.3
CEVE				eS	Sn	21 03 47.6	-0.8
CEVE				IAML		21 04 06.4	
	comp=Z,12µm,0.4s						
JAYA	Jayaque - finc	3.32	102	eP	Pn	21 03 15.5	+0.6
JAYA				eS	Sn	21 03 50.6	-2.7
JAYA	Jayaque - finc	3.32	102	eP	Pn	21 03 15.5	+0.6
JAYA				eS	Sn	21 03 50.6	-2.7
MTO3	Montecristo	3.33	89		Pn	21 03 16.0	+1.0
ESQI	Esquipulas	3.35	86		Pn	21 03 16.5	+1.3
CMIG	Matias Romero	3.37	324	P	Pn	21 03 15.1	-0.4
	comp=Z,20nm,0.3s,baz=146,slow=16,SNR=82						
CMIG				S	Sn	21 03 52.8	-1.5
	comp=Z,95nm,0.3s,baz=107,slow=8.1,SNR=11						
CMIG				LR	LR	21 04 52.8	
	comp=Z,529nm,20.1s,baz=173,slow=44						
CMIG	Matias Romero	3.37	324	*i* P	Pn	21 03 15.1	-0.4
CMIG				*i* S	Sn	21 03 54.1	-0.2
CMIG	Matias Romero	3.37	324	eP	Pn	21 03 15.1	-0.4
CMIG				*i* S	Sn	21 03 52.6	-1.7
LALI	Alcalda de L	3.48	104	eP	Pn	21 03 17.6	+0.6
LALI				eS	Sn	21 03 53.7	-3.2
LALI				IAML		21 04 10.4	
	comp=Z,1µm,0.4s						
LALI	Alcalda de L	3.48	104	eP	Pn	21 03 17.6	+0.6
LALI				eS	Sn	21 03 53.7	-3.2
LALI				IAML		21 04 10.4	
	comp=Z,1µm,0.4s						
HUIG	Huatulco	3.49	294	*i* P	Pn	21 03 16.2	-0.9
HUIG	Huatulco	3.49	294	eP	Pn	21 03 16.3	-0.9
HUIG				*i* S	Sn	21 03 55.7	-1.5
HUIG	Huatulco	3.49	294		Pn	21 03 16.3	-0.9
HUIG					Sn	21 03 55.7	-1.5
SNET	Serv Nac Est T	3.52	101		Pn	21 03 18.9	+1.3
SNET				Sn	Sn	21 03 58.7	+0.6
OPAM	Oficina de Pla	3.55	100	eP	Pn	21 03 20.1	+2.1
OPAM				eS	Sn	21 03 56.4	-2.4
OPAM	Oficina de Pla	3.55	100	eP	Pn	21 03 20.1	+2.1
OPAM				eS	Sn	21 03 56.4	-2.4
PETF	Flores	3.79	48		Pn	21 03 22.5	+1.4
PETF				Sn	Sn	21 04 04.3	-0.1
PAVA	Las Pavas	3.80	99	eP	Pn	21 03 22.1	+0.6
PAVA				eS	Sn	21 04 03.2	-1.7
PAVA				IAML		21 04 29.3	
	comp=Z,1µm,0.5s						
PAVA	Las Pavas	3.80	99	eP	Pn	21 03 22.1	+0.6
PAVA				eS	Sn	21 04 03.2	-1.7
PAVA				IAML		21 04 29.3	
	comp=Z,1µm,0.5s						
COEG	Centro de Oper	3.87	101	eP	Pn	21 03 23.8	+1.4
COEG				IAML		21 04 23.1	
	comp=Z,2µm,0.6s						
COEG	Centro de Oper	3.87	101	eP	Pn	21 03 23.8	+1.4
COEG				IAML		21 04 23.1	
	comp=Z,2µm,0.6s						
PQSS	Presa 15 de Se	4.17	100	eP	Pn	21 03 27.9	+1.4
PQSS				eS	Sn	21 04 10.8	-3.2
PQSS				IAML		21 04 34.5	
	comp=Z,199nm,0.6s						
COEB	Comit de Eme	4.23	101	eP	Pn	21 03 29.3	+2.0
COEB				IAML		21 04 37.6	
	comp=Z,1µm,0.4s						
COEB	Comit de Eme	4.23	101	eP	Pn	21 03 29.3	+2.0
COEB				IAML		21 04 37.6	
	comp=Z,1µm,0.4s						
PEIG	Puerto Escondi	4.50	292	*i* P	Pn	21 03 30.9	-0.2
PEIG	Puerto Escondi	4.50	292	eP	Pn	21 03 31.1	+0.1
PEIG				*i* S	Sn	21 04 20.7	-1.5
JUCU	Jucuar¡n	4.55	104	eP	Pn	21 03 33.4	+1.7
JUCU				eS	Sn	21 04 20.3	-3.1
JUCU				IAML		21 04 50.5	
	comp=Z,742nm,0.7s						
JUCU	Jucuar¡n	4.55	104	eP	Pn	21 03 33.4	+1.7
JUCU				eS	Sn	21 04 20.3	-3.1
JUCU				IAML		21 04 50.5	
	comp=Z,742nm,0.7s						
FAGO	Alcalda de S	4.60	98	eP	Pn	21 03 33.8	+1.5
FAGO				IAML		21 04 39.9	
	comp=Z,162nm,0.7s						
FAGO	Alcalda de S	4.60	98	eP	Pn	21 03 33.8	+1.5
FAGO				IAML		21 04 39.9	
	comp=Z,162nm,0.7s						
VHO	Vista Hermosa	4.65	306	*i* P	Pn	21 03 33.1	-0.1
VHO				*i* S	Sn	21 04 25.6	-0.4
LCND	La Caada	4.88	102	eP	Pn	21 03 37.1	+1.0
LCND				IAML		21 04 53.8	
	comp=Z,769nm,0.4s						
LCND	La Caada	4.88	102	eP	Pn	21 03 37.1	+1.0
LCND				IAML		21 04 53.8	
	comp=Z,769nm,0.4s						
YOIG	Yosondua	5.20	299	eP	Pn	21 03 41.1	+0.2
YOIG				*i* S	Sn	21 04 39.0	-0.8
TGUH	Tegucigalpa,Un	5.36	93		Pn	21 03 44.0	+1.1
TGUH				Sn	Sn	21 04 43.9	+0.4
CRIN	San Cristobal	5.83	106		Pn	21 03 49.9	+0.6
CRIN				Sn	Sn	21 04 56.6	+1.8
TEIG	Tepich	7.24	36		Pn	21 04 08.4	-0.2
TEIG	Tepich	7.24	36	eP	Pn	21 04 06.8	-1.7
ACON	Acoyapa	7.79	107		Pn	21 04 17.8	+1.7
ESPN	Las Esperanzas	8.54	104		Pn	21 04 28.0	+1.5
JTS	Las Juntas de	8.67	117	Pn	Pn	21 04 29.0	+0.8
MOIG	Morelia	9.61	304	Pn	Pn	21 04 43.7	+2.5
ZAIG	Zacatecas	12.47	313	Pn	Pn	21 05 18.0	-2.4
CBCY	The Bluff, Cay	13.55	65		Pn	21 05 34.3	-0.7
HKT	Hockley	15.75	350	P	P	21 06 06.0	-0.9
435B	Jarrell	16.92	346		P	21 06 20.1	+0.2
JCT	Junction City	17.28	339		P	21 06 23.8	-0.2
HPIG		17.34	318		P	21 06 25.0	+0.1
BRAL	Brewton	17.53	17	P	P	21 06 29.4	+2.7
	baz=198						
656A	Willston	17.68	31	Pn	Pn	21 06 26.0	-2.1
TX32	Lajitas Array	17.97	328	P	P	21 06 33.5	+1.8
TXAR	Lajitas Array	17.97	328	P	P	21 06 33.4	+1.7
	comp=Z,0.7nm,0.3s,baz=151,slow=13,SNR=36						
TXAR	Lajitas Array	17.97	328	P	Pn	21 06 31.2	-0.5
TX31	Lajitas Ar. Si	17.97	328	P	P	21 06 33.7	+2.1
TX31				IAmb	IAmb	21 06 47.4	
	comp=Z,45nm,1.0s						
WHTX	Lake Whitney,	18.05	347	P	Pn	21 06 38.0	+5.5
	baz=165						
352A	Blakely	18.49	22	P	Pn	21 06 37.7	-0.1
250A	Grady	18.51	18	P	Pn	21 06 38.4	+0.3
250A				IAmb	IAmb	21 06 40.6	
	comp=Z,48nm,1.1s						
TIGA	Tifton	18.96	25	P	P	21 06 43.1	+0.6
LPIG	La Paz	19.14	303	LR	LR	21 14 31.1	
	comp=Z,118nm,21.1s,baz=112,slow=38						
ABTX	Abilene, Hawle	19.21	342	P	Pn	21 06 49.7	+3.1
	baz=159						
ABTX	Abilene, Hawle	19.21	342	P	Pn	21 06 47.0	+0.5
Z47A	Carrollton	19.23	12	IAmb	IAmb	21 07 02.0	
	comp=Z,22nm,0.8s						
LRAL	Lakeview Retre	19.31	15	P	Pn	21 06 49.6	+1.9
	baz=197						
LRAL	Lakeview Retre	19.31	15	P	Pn	21 06 48.2	+0.5
255A	Hazlehurst	19.86	27	P	P	21 06 53.2	+1.0
255A				IAmb	IAmb	21 07 05.6	
	comp=Z,42nm,1.1s						
OTAV	Otavalo	19.96	133	P	P	21 06 53.5	-0.5
MIAR	Mount Ida	20.10	358	P	Pn	21 06 59.7	+2.7
	baz=178						
MIAR	Mount Ida	20.10	358	P	P	21 06 54.7	-0.1
Y49A	Blount Mountai	20.24	16	P	Pn	21 06 58.2	-0.5
X37A	Clayton	20.26	354	P	Pn	21 06 58.5	-0.4
X37A				IAmb	IAmb	21 07 04.1	
	comp=Z,13nm,0.8s						
OXF	Oxford	20.28	8	P	Pn	21 07 01.1	+2.0
	baz=189						
OXF	Oxford	20.28	8	P	P	21 06 55.6	-1.2
X48A	Hartselle	20.66	14	P	Pn	21 07 02.7	-0.9
X48A				IAmb	IAmb	21 07 17.4	
	comp=Z,29nm,1.0s						
MNTX	Cornudas Mount	20.74	328	P	Pn	21 07 05.9	+1.2
	baz=143						
MNTX	Cornudas Mount	20.74	328	P	Pn	21 07 04.0	-0.7
W39A	Magazine	20.75	358	P	Pn	21 07 06.1	+1.4
	baz=177						
GOGA	Godfrey	20.76	22	P	P	21 07 02.2	+0.2
	baz=206						
GOGA	Godfrey	20.76	22	P	P	21 07 01.8	-0.2
GOGA				IAmb	IAmb	21 07 19.0	
	comp=Z,27nm,0.9s						
WHAR	Wooly Hollow	20.83	1	P	Pn	21 07 04.7	-1.0
PLAL	Pickwick Lake	20.96	11	P	Pn	21 07 06.0	-1.2
PLAL				IAmb	IAmb	21 07 20.0	
	comp=Z,24nm,1.1s						
Y52A	Lilburn	20.96	21	P	P	21 07 04.9	+0.7
WMOK	Wichita Mounta	20.98	346	P	P	21 07 05.9	+1.4
FPAL	Fort Paine	21.10	17	P	P	21 07 06.1	+0.4
CPRX	Cap Rock	21.13	333	P	P	21 07 08.2	+2.0
LPAR	Lepanto	21.26	6	P	P	21 07 09.0	+1.7
X51A	Calhoun	21.34	18	P	P	21 07 10.1	+1.8
X51A				IAmb	IAmb	21 07 23.8	
	comp=Z,29nm,1.0s						
MSTX	Muleshoe	21.50	337	P	P	21 07 13.4	+3.3
	baz=153						
MSTX	Muleshoe	21.50	337	P	P	21 07 12.2	+2.0
TUL1	Leonard	21.61	353		P	21 07 13.1	+2.0
TUL1				IAmb	IAmb	21 07 28.7	
	comp=Z,18nm,0.8s						
SWET	Sewanee	21.65	15	P	P	21 07 12.8	+1.2
SWET				IAmb	IAmb	21 07 25.2	
	comp=Z,24nm,0.9s						
LCAR	Lake Charles	21.66	4	P	P	21 07 13.8	+2.3
LCAR				IAmb	IAmb	21 07 29.8	
	comp=Z,20nm,0.9s						
OK029	Liberty Lake	21.74	350	P	P	21 07 14.5	+2.0
OK029				IAmb	IAmb	21 07 29.4	
	comp=Z,22nm,0.8s						
W50A	Signal Mountai	21.80	17	P	P	21 07 14.8	+1.5
HHAR	Hobbs	21.84	358	P	P	21 07 15.4	+1.8
HHAR				IAmb	IAmb	21 07 31.6	
	comp=Z,24nm,1.2s						
NHSC	New Hope	21.90	29	P	P	21 07 21.7	+7.5
	baz=214						
NHSC	New Hope	21.90	29	P	P	21 07 15.4	+1.2
AMTX	Amarillo	21.94	340	P	P	21 07 16.7	+2.0
	baz=156						
AMTX	Amarillo	21.94	340	P	P	21 07 16.0	+1.2
V48A	Smith Brothers	21.94	13		P	21 07 15.5	+0.8
V48A				IAmb	IAmb	21 07 27.8	
	comp=Z,23nm,1.1s						
HODGE	Hodges	21.95	24	P	P	21 07 16.3	+1.6
HODGE				IAmb	IAmb	21 07 28.7	
	comp=Z,19nm,0.9s						
U38A	Gravette	22.02	357	IAmb	IAmb	21 07 33.4	
	comp=Z,12nm,0.8s						
WVT	Waverly	22.12	11	P	P	21 07 16.4	-0.2
	baz=193						
WVT	Waverly	22.12	11	P	P	21 07 17.7	+1.1
WVT				IAmb	IAmb	21 07 33.7	
	comp=Z,15nm,1.1s						
SDV	Santo Domingo	22.37	102	P	P	21 07 17.3	-2.4
	comp=Z,5.5nm,0.6s,baz=299,slow=8.9,SNR=7.8						
SDV				LR	LR	21 16 48.7	
	comp=Z,75nm,19.8s,baz=314,slow=39						
SDV	Santo Domingo	22.37	102	P	P	21 07 20.1	+0.4
SDV				IAmb	IAmb	21 07 37.6	
	comp=Z,9.4nm,0.7s						
BG3	Lake Jocassee	22.37	22	IAmb	IAmb	21 07 34.9	
	comp=Z,22nm,1.1s						
CLTN	Cedars of Leba	22.39	14		P	21 07 20.7	+1.2
CLTN				IAmb	IAmb	21 07 33.8	
	comp=Z,23nm,1.0s						
PBMO	Poplar Bluff	22.41	5	P	P	21 07 21.0	+1.3
PBMO				IAmb	IAmb	21 07 34.3	
	comp=Z,16nm,0.9s						
PAULI	Pauline	22.64	24	IAmb	IAmb	21 07 30.3	

	comp=Z,31nm,1.2s						
V51A	Loudon	22.64	18	P	P	21 07 23.3	+1.1
V51A				IAmb	IAmb	21 07 40.6	
	comp=Z,14nm,0.8s						
121A	Cookes Peak, D	22.66	325	P	P	21 07 27.2	+4.6
	baz=139						
121A	Cookes Peak, D	22.66	325	P	P	21 07 24.1	+1.4
121A				IAmb	IAmb	21 07 39.5	
	comp=Z,27nm,0.9s						
TKL	Tuckaleechee C	22.69	19	P	P	21 07 19.8	-2.9
	comp=Z,3.6nm,0.6s,baz=184,slow=12,SNR=7.1						
TKL	Tuckaleechee C	22.69	19	IAmb	IAmb	21 07 40.9	
	comp=Z,13nm,0.9s						
V52A	Sevierville	22.92	19	IAmb	IAmb	21 07 39.9	
	comp=Z,14nm,0.9s						
U49A	Red Boiling Sp	22.92	15	IAmb	IAmb	21 07 34.2	
	comp=Z,28nm,1.1s						
BIRD	Birdtown, Kers	23.05	27	IAmb	IAmb	21 07 44.6	
	comp=Z,28nm,1.2s						
KMSC	Kings Mountain	23.11	25	P	P	21 07 26.2	-0.8
	baz=209						
KMSC	Kings Mountain	23.11	25	IAmb	IAmb	21 07 44.4	
	comp=Z,11nm,0.8s						
BNM	Barren Site	23.34	330	P	P	21 07 31.1	+1.6
W56A	Indian Trail	23.41	26	P	P	21 07 29.0	-0.9
	baz=211						
LENM	Lemitar	23.52	329	P	P	21 07 33.5	+2.4
TZTN	Tazewell	23.57	19	P	P	21 07 34.1	+2.7
	baz=203						
TZTN	Tazewell	23.57	19	IAmb	IAmb	21 07 49.1	
	comp=Z,27nm,1.1s						
CCM	Cathedral Cave	23.63	3	P	P	21 07 30.4	-1.5
W57A	Gilead	23.68	27	P	P	21 07 31.0	-1.5
	baz=212						
V55A	Taylorsville	23.78	24	P	P	21 07 32.1	-1.2
V55A				IAmb	IAmb	21 07 47.9	
	comp=Z,11nm,0.8s						
R40A	Maddies Statio	23.83	1	IAmb	IAmb	21 07 49.9	
	comp=Z,12nm,1.1s						
ANMO	Albuquerque	23.90	331	P	P	21 07 36.1	+1.4
	comp=Z,1.8nm,0.5s,baz=160,slow=11,SNR=6.2						
ANMO	Albuquerque	23.90	331	P	P	21 07 36.7	+2.0
	baz=146						
ANMO	Albuquerque	23.90	331	P	P	21 07 34.2	-0.5
V56A	Mocksville	24.03	25	P	P	21 07 34.2	-1.5
	baz=210						
U54A	Nelsons Funny	24.14	22	P	P	21 07 36.5	-0.2
	baz=207						
TUC	Tucson	24.26	320	P	P	21 07 39.1	+1.2
V57A	Coltrane Farms	24.40	26	P	P	21 07 37.7	-1.3
	baz=212						
WCI	Wyandotte Cave	24.45	12	P	P	21 07 39.2	-0.3
	baz=195						
WCI	Wyandotte Cave	24.45	12	P	P	21 07 40.6	+1.2
U56A	King	24.54	25	P	P	21 07 39.5	-0.8
	baz=210						
U56A	King	24.54	25	P	P	21 07 39.3	-1.0
S51A	Beattyville	24.57	18	P	P	21 07 39.9	-0.7
S51A				IAmb	IAmb	21 07 53.6	
	comp=Z,12nm,1.0s						
V58A	Windy Hill, Pi	24.61	27	P	P	21 07 39.7	-1.2
	baz=213						
V58A	Windy Hill, Pi	24.61	27	IAmb	IAmb	21 07 53.6	
	comp=Z,15nm,0.9s						
T25A	Trinidad	24.93	338	P	P	21 07 46.6	+2.6
	baz=152						
R50A	Paris	24.97	16	P	P	21 07 43.3	-0.8
R50A				IAmb	IAmb	21 07 60.0	
	comp=Z,17nm,1.1s						
V59A	Middlesex	24.99	29	P	P	21 07 43.4	-0.9
	baz=215						
U57A	Blanch	25.05	26	P	P	21 07 43.9	-1.0
	baz=212						
T57A	Hurt	25.56	26	P	P	21 07 48.5	-1.1
	baz=212						
ATAH	Atahualpa	25.70	145	P	P	21 07 54.0	+2.5
	comp=Z,17nm,0.8s,baz=332,slow=9.8,SNR=9.3						
ATAH				LR	LR	21 16 42.8	
	comp=Z,113nm,21.3s,baz=285,slow=33						
P48A	Milroy	25.82	13	P	P	21 07 52.8	+0.9
P48A				IAmb	IAmb	21 08 06.3	
	comp=Z,21nm,1.1s						
SDCO	Great Sand Dun	25.87	336	P	P	21 07 55.0	+2.3
	baz=151						
Q51A	Peebles	25.93	17	P	P	21 07 53.1	+0.2
S56A	Natural Bridge	26.02	24	P	P	21 07 52.6	-1.1
	baz=210						
T59A	Double "B" Far	26.29	28	P	P	21 07 54.7	-1.4
	baz=215						
N38A	Joes South For	26.32	359	P	P	21 07 55.7	-0.7
S57A	Dark Hollow, R	26.34	25	P	P	21 07 55.7	-0.9
	baz=211						
S22A	4UR Ranch, Cre	26.41	334	P	P	21 07 60.0	+2.4
	baz=148						
MVCO	Mesa Verde	26.70	331	P	P	21 08 03.3	+3.2
	baz=144						
MVCO	Mesa Verde	26.70	331	IAmb	IAmb	21 08 19.1	
	comp=Z,8.9nm,0.8s						
PV13	Radium Mtn., P	27.62	332	IAmb	IAmb	21 08 13.2	
	comp=Z,9.9nm,1.1s						
PV05	Paradox Valley	27.68	332	IAmb	IAmb	21 08 24.0	
	comp=Z,9.4nm,1.1s						
PV03	Paradox Valley	27.71	332	IAmb	IAmb	21 08 24.5	
	comp=Z,12nm,1.2s						
PV12	Saucer Basin,	27.74	332	IAmb	IAmb	21 08 26.9	
	comp=Z,12nm,1.0s						
PV11	David Mesa, Pa	27.76	332	IAmb	IAmb	21 08 31.4	
	comp=Z,9.9nm,1.0s						
PV17	East Wray Mesa	27.78	332	IAmb	IAmb	21 08 24.9	
	comp=Z,11nm,1.1s						
PV16	Nyswonger Mesa	27.79	332	P	P	21 08 11.2	+1.3
PV16				IAmb	IAmb	21 08 25.7	
	comp=Z,9.1nm,1.1s						
PV04	Paradox Valley	27.85	332	IAmb	IAmb	21 08 31.0	
	comp=Z,16nm,1.1s						
PV14	Lion Creek, Pa	27.89	332	IAmb	IAmb	21 08 15.5	
	comp=Z,8.7nm,1.1s						
PV23	Carpenter Ridg	27.95	332	P	P	21 08 09.8	-1.6
PV23				IAmb	IAmb	21 08 27.0	
	comp=Z,12nm,1.0s						
Q16A	Castle Valley	29.34	330	P	P	21 08 22.6	-1.0
NNA	Nana	30.59	148	LR	LR	21 18 47.0	
	comp=Z,124nm,21.7s,baz=269,slow=32						
PDAR	Pinedale Array	31.77	336	P	P	21 08 45.7	+0.6
	comp=Z,0.5nm,0.8s,baz=104,slow=3.8,SNR=4.9						
PDAR	Pinedale Array	31.77	336	P	P	21 08 44.2	-0.9
HVU	Hansel Valley	32.34	331	P	P	21 08 51.0	+0.9
ELK	Elko	32.76	328	LR	LR	21 22 55.4	
	comp=Z,306nm,18.8s,baz=16,slow=38						
REDW	Red Top Meadow	32.78	335	P	P	21 08 55.2	+1.3
REDW				IAmb	IAmb	21 09 10.5	
	comp=Z,7.1nm,0.9s						
NV11	Mina Array Sit	32.81	322	P	P	21 08 56.3	+2.1
SNOW	Snow King Moun	32.83	336	P	P	21 08 53.9	-0.4
NVAR	Mina Array Bea	32.90	321	P	P	21 08 57.7	+2.6
	comp=Z,1.6nm,0.6s,baz=132,slow=8.4,SNR=21						
NVAR				pP	pP	21 09 10.6	+2.6
	comp=Z,2.5nm,0.7s,baz=133,slow=8.8,SNR=9.6						
NVAR	Mina Array Bea	32.90	321	P	P	21 08 56.8	+1.7
HLID	Hailey	34.48	332	P	P	21 09 10.7	+2.0
MCMT	McKenzie Canyo	34.80	335	P	P	21 09 13.5	+1.9
ULM	Lac du Bonnet	35.87	357	P	P	21 09 18.1	-2.1
	comp=Z,1.4nm,0.5s,baz=166,slow=7.0,SNR=4.4						
SAML	Samuel	37.41	127	P	P	21 09 35.1	+1.3
SAML				IAmb	IAmb	21 09 50.7	
	comp=Z,5.1nm,0.9s						
F10A	Beach Ranch, E	37.62	332	IAmb	IAmb	21 09 50.4	
	comp=Z,6.4nm,0.7s						
SIV	San Ignacio	43.51	133	P	P	21 10 24.4	+0.1
	comp=Z,3.3nm,0.7s,baz=314,slow=8.3,SNR=19						
YKA	Yellowknife Ar	50.49	347	P	P	21 11 18.2	+0.2
	comp=Z,4.5nm,0.7s,baz=146,slow=7.8,SNR=115						
CPUP	Villa Florida	53.16	139	P	P	21 11 38.0	-0.4
	comp=Z,0.7nm,0.4s,baz=4.5,slow=4.4,SNR=3.5						
CPUP	Villa Florida	53.16	139	IAmb	IAmb	21 11 52.1	
	comp=Z,3.9nm,1.1s						
BDFB	Brasilia	53.37	122	P	P	21 11 39.0	-1.3
	comp=Z,2.1nm,0.8s,baz=232,slow=5.0,SNR=4.4						
BDFB	Brasilia	53.37	122	P	P	21 11 38.8	-1.5
BDFB				IAmb	IAmb	21 11 54.8	
	comp=Z,5.1nm,1.0s						
NRS	Narsarsuaq	57.73	25	P	P	21 12 09.3	-1.4
PLCA	Paso Flores	58.58	160	P	P	21 12 19.1	+2.0
	comp=Z,4.4nm,1.0s,baz=1.3,slow=3.6,SNR=5.6						
PLCA	Paso Flores	58.58	160	P	P	21 12 19.1	+2.0
BCAR	Beaver Creek A	59.39	336	P	P	21 12 24.2	+1.8
INK	Inuvik	59.87	344	P	P	21 12 25.9	+0.4
	comp=Z,2.1nm,0.6s,baz=117,slow=8.3,SNR=7.0						
INK	Inuvik	59.87	344	P	P	21 12 27.3	+1.8
INK				IAmb	IAmb	21 12 27.5	
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay	60.32	359	P	P	21 12 27.3	-1.2
	comp=Z,1.4nm,0.6s,baz=192,slow=8.5,SNR=6.9						
RES	Resolute Bay	60.32	359	IAmb	IAmb	21 12 29.0	
	comp=Z,1.8nm,0.7s						
ILAR	Eielson Array	62.20	337	P	P	21 12 41.9	+0.5
	comp=Z,1.2nm,0.9s,baz=162,slow=3.7,SNR=13						
ILAR				pP	pP	21 12 56.1	+0.8
	comp=Z,2.8nm,0.8s,baz=126,slow=4.4,SNR=11						
ILAR				LR	LR	21 44 20.8	
	comp=Z,80nm,18.6s,baz=126,slow=40						
ILAR	Eielson Array	62.20	337	P	P	21 12 43.6	+2.2
RND	Reindeer	62.37	335	P	P	21 12 44.5	+1.8
I23K	Minto, Yukon-K	63.31	337	P	P	21 12 49.9	+1.2
I23K				IAmb	IAmb	21 13 02.2	
	comp=Z,2.6nm,0.9s						
ESDC	Sonseca Array	80.09	52	P	P	21 14 26.9	-3.3
	comp=Z,0.6nm,0.8s,baz=292,slow=4.5,SNR=2.3						
ESDC				pP	pP	21 14 42.5	-2.1
	comp=Z,0.9nm,0.8s,baz=286,slow=5.0,SNR=4.6						
BILL	Bilibino	80.83	338	P	P	21 14 34.8	+1.3
BILL				IAmb	IAmb	21 14 50.0	
	comp=Z,6.3nm,0.9s						
ARCES	ARCESS Array B	86.02	18	P	P	21 14 58.1	-2.1
	comp=Z,5.3nm,1.0s,baz=316,slow=8.5,SNR=4.2						
SEY	Seymchan	88.10	335	P	P	21 15 12.2	+1.9
	comp=Z,1.0nm,0.6s,baz=83,slow=16,SNR=5.3						
FINES	FINESS Array B	90.49	25	P	P	21 15 20.0	-1.5
	comp=Z,1.9nm,1.0s,baz=280,slow=11,SNR=3.7						
FINES	FINESS Array B	90.49	25	P	P	21 15 20.1	-1.4
OBN	Obninsk	98.70	27	LR	LR	21 59 07.3	
	comp=Z,21nm,18.1s,baz=348,slow=35						
BOSA	Boshof	121.21	115	PKP	PKiKP	21 21 14.7	+1.0
	comp=Z,1.1nm,0.6s,baz=200,slow=4.2,SNR=4.1						
BOSA	Boshof	121.21	115		PKPdf	21 21 12.2	-1.3
STKA	Stephens Creek	127.57	241	PKP	PKiKP	21 21 26.8	+0.8
	comp=Z,0.8nm,0.6s,baz=63,slow=6.8,SNR=3.9						
WRA	Warramunga Arr	134.74	256	PKP	PKiKP	21 21 40.5	-0.3
	comp=Z,0.7nm,0.9s,baz=91,slow=2.0,SNR=6.1						
WRA	Warramunga Arr	134.74	256		PKPdf	21 21 37.4	-1.9
ASAR	Alice Springs	135.06	251	PKP	PKiKP	21 21 41.1	-0.3
	comp=Z,0.3nm,0.7s,baz=84,slow=2.0,SNR=2.4						
CMAR	Chiang Mai Arr	145.39	340	PKPbc	PKPbc	21 21 58.5	-0.1
	comp=Z,2.2nm,0.7s,baz=334,slow=3.3,SNR=12						
CMAR				pPKPbc	pPKPab	21 22 12.7	-0.8
	comp=Z,4.5nm,0.8s,baz=341,slow=3.6,SNR=8.6						

BGR ***25*** *21:10:04.9±0.0, 51°.19N×135°.63W, h33^{km}, mb4.4*

NEIC ***25*** *21:10:10.2±1.5, 52°.50N±0°.06×132°.0W±0°.1, h11^{km}±5^{km}, Error ellipse: s-maj=13.4km s-min=6.1km az=59.0*

PGC ***25*** *21:10:12.1±2.2, 52°.56N×131°.97W, h18^{km}, ML4.5/16, Mw4.5, 77km Ssw of Sandspit, Bc Haida Gwaii Region*

IDC ***25*** *21:10:12.8±0.7, 52°.66N×131°.81W, h0^{km}, mb4.2/17, mb1 4.3/27, mb1mx4.3/39, mbtmp4.2/27, ML3.6/10, MS3.8/21, Ms1 3.8/21, ms1mx3.6/43, Error ellipse: s-maj=15.9km s-min=8.7km az=51.0*

BJI ***25*** *21:10:15.0±0.0, 52°.70N×131°.90W, h30^{km}, mB5.1/13, mb4.5/18*

NEIC ***25*** *21:10:17.4, 52°.56N×131°.97W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.03; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$0.46; M$_{r\theta}$-0.38; M$_{\theta\phi}$0.09; M$_{\phi r}$0.37; Fault plane solution: M$_0$6.60000×10^{15} NP1:ϕ_s141.00000°, δ87.00000°, λ-125.00000°. NP2:ϕ_s48.00000°, δ36.00000°, λ-5.00000°. Principal axes: T 0.6155, Plg33.0000°, Azm261.0000°; N 0.0686, Plg35.0000°, Azm143.0000°; P -0.6842, Plg37.0000°, Azm20.0000°;*

NEIC ***25*** *21:10:17.4, 52°.74N×131°.75W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.52; M$_{\theta\theta}$1.30; M$_{\phi\phi}$-0.78; M$_{r\theta}$-1.46; M$_{\theta\phi}$-2.26; M$_{\phi r}$-1.51; Fault plane solution: M$_0$3.29000×10^{15} NP1:ϕ_s341.52000°, δ59.32000°, λ-18.82000°. NP2:ϕ_s81.38000°, δ73.89000°, λ-147.92000°. Principal axes: T 2.8218, Plg9.0000°, Azm209.0000°; N 0.7908, Plg54.0000°, Azm105.0000°; P -3.6126, Plg34.0000°, Azm305.0000°;*

ISC 25 21:10:12.2±1.1**, 52°.64N**±0°.03×**131°.82W**±0°.04**, h1**^{km}±6^{km}**, n483,** σ**2^{s}19**/410**, mb4.4**/96**, MS4.0**/18**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG1B	Mitchell Dam	0.35	328	P	Pg	21 10 19.4	+0.3
HG1B				S	Sg	21 10 24.6	+1.0
HG4B	Hotspring	0.51	132	P	Pg	21 10 22.2	+0.2
HG4B				S	Sg	21 10 29.6	+0.9
MOBC	Moresby Island	0.52	350	P	Pg	21 10 23.0	+0.9
MOBC				S	Sb	21 10 30.8	-1.4
DIB	Dawson Inlet,	0.69	325	P	Pg	21 10 25.3	-0.2
DIB				S	Sg	21 10 34.6	0.0
DIB	Dawson Inlet,	0.69	325	Pg	Pg	21 10 25.4	-0.2
DIB				Sg	Sg	21 10 35.4	+0.9
H02S1	DAWSON INLET T	0.69	325	T	T	21 12 04.1	
	SNR=140						
BNAB	Bonilla	1.12	39	P	Pb	21 10 33.9	-0.4
BNAB				S	Sn	21 10 49.7	-1.3
MASB	Masset	1.39	355	P	Pn	21 10 38.1	-0.6
NDB	Naden	1.48	333	Pn	Pn	21 10 38.1	-2.0
NDB				Sn	Sn	21 10 58.5	-1.6
GRNB	Grenville Isla	1.65	42	Pn	Pn	21 10 41.6	-0.7
GRNB				Sg	Sg	21 11 06.1	+0.9
LIB	Langara Island	1.79	336	Pn	Pn	21 10 42.0	-2.2
LIB				Sg	Sb	21 11 08.1	-0.5
RUBB	Prince Rupert	1.94	28	Pn	Pn	21 10 45.5	-0.7
RUBB				Sg	Sg	21 11 13.3	-1.1
BBB	Bella Bella	2.31	100	Pn	Pn	21 10 49.8	-1.6
	30nm,0.3s,baz=289,slow=14,SNR=102						
BBB				Sn	Sb	21 11 23.5	-0.2
	334nm,0.3s,baz=198,slow=23,SNR=13						
BBB				LR	LR	21 11 23.6	
	comp=Z,344nm,21.0s,baz=290,slow=31						
BBB	Bella Bella	2.31	100	Pn	Pn	21 10 49.9	-1.5
BBB				Sn	Sn	21 11 18.9	-1.6
BBB	Bella Bella	2.31	100		Pn	21 10 49.9	-1.5
BBB				Sn	Sn	21 11 20.1	-0.3
KITB	Kitimat	2.39	52	Pn	Pn	21 10 51.9	-0.6
KITB				Sg	Sg	21 11 28.6	-0.4
CRAG	Craig	2.94	345		Pn	21 10 59.0	-1.1
HOLB	Holberg	3.04	130	Pn	Pn	21 10 59.7	-1.8
HOLB				Sn	Sn	21 11 34.6	-3.9
PHC	Port Hardy	3.34	124	Pn	Pn	21 11 02.9	-2.7
PHC				Sn	Sn	21 11 42.5	-3.4
MAYB	Maynard	3.66	126	Pn	Pn	21 11 07.6	-2.5
TLCB	Telegraph Cove	3.75	122	Pn	Pn	21 11 09.2	-1.9
TLCB				Sn	Sn	21 11 51.1	-4.7
WRAK	Wrangell Islan	3.81	356		Pn	21 11 11.1	-0.8
FHRB	Fair Harbour	3.92	129	Pn	Pn	21 11 12.3	-1.1
EDB	Eliza Dome	4.04	131	Pn	Pn	21 11 13.8	-1.4
WOSB	Woss	4.12	125	Pn	Pn	21 11 14.9	-1.4
NCRB	Newcastle Ridg	4.24	120	Pn	Pn	21 11 16.6	-1.3
GDR	Gold River	4.62	126	Pn	Pn	21 11 23.4	+0.3
CBB	Campbell River	4.81	120	Pn	Pn	21 11 24.9	-0.9
CBB				Sn	Sn	21 12 18.7	-3.4
FSB	Fort Saint Jam	4.83	65	Pn	Pn	21 11 25.6	-0.5
SIT	Sitka	4.87	337	Pn	Pn	21 11 24.4	-2.1
BTB	Buttle Lake	5.08	126	Pn	Pn	21 11 29.6	0.0
TXB	Texada	5.50	119	Pn	Pn	21 11 35.0	-0.2
B927	Port Alberni	5.60	125	Pn	Pn	21 11 36.2	-0.3
B928	Bamfield	5.70	129	Pn	Pn	21 11 38.4	+0.6
MGB	Mount Grey	5.80	126	Pn	Pn	21 11 39.3	-0.2
JIS	Juneau Island	5.84	347		Pn	21 11 38.8	-1.0
SHB	Sechelt	5.85	118	Pn	Pn	21 11 39.7	-0.5
DLBC	Dease Lake	5.90	9	Pn	Pn	21 11 42.0	+1.1
	1.8nm,0.3s,baz=205,slow=14,SNR=23						
DLBC				Lg	Lg	21 13 19.2	
	9.8nm,0.3s,baz=334,slow=17,SNR=8.1						
DLBC	Dease Lake	5.90	9	Pn	Pn	21 11 41.6	+0.8
DLBC	Dease Lake	5.90	9	Pn	Pn	21 11 39.7	-1.1
NLLB	Nanaimo Lost L	6.01	121	Pn	Pn	21 11 42.6	+0.4
WPB	Watts Point	6.18	115	Pn	Pn	21 11 44.4	-0.2
B926	Mesachie Lake	6.20	125	Pn	Pn	21 11 45.4	+0.7
BESE	Bessie Mountai	6.20	345	Pn	Pn	21 11 43.0	-1.9
BESE	Bessie Mountai	6.20	345		Pn	21 11 43.1	-1.7
PFB	Port Renfrew	6.21	128	Pn	Pn	21 11 45.2	+0.2
BIB	Bowen Island	6.27	118	Pn	Pn	21 11 46.1	+0.4
GOBB	Galiano Island	6.43	122	Pn	Pn	21 11 50.8	+2.9
LLLB	Lillooet	6.51	104	Pn	Pn	21 11 51.7	+2.6
BMBC	Bull Mountain	6.61	55	Pn	Pn	21 11 50.5	0.0
B010	North Saanich	6.65	124	Pn	Pn	21 11 52.6	+1.7
PGC	Sidney	6.65	124	Pn	Pn	21 11 52.6	+1.7
PGC	Sidney	6.65	124		Pn	21 11 49.2	-1.7
B011	North Saanich	6.65	124	Pn	Pn	21 11 52.6	+1.6
STW	Striped Peak	6.88	128	Pn	Pn	21 11 56.5	+2.5
MCW	Mount Constitu	6.95	121	Pn	Pn	21 11 57.5	+2.4
A04D	Lummi Island	6.99	120	P	Pn	21 11 58.9	+3.3
	baz=308,SNR=13						
SKAG	Skagway	7.12	345		Pn	21 11 56.0	-1.4
NBC5	NorthernBC 5	7.17	43	Pn	Pn	21 11 57.9	-0.3
PLBC	Pleasant Camp	7.29	341	Pn	Pn	21 12 02.1	+2.4
NLWA	Neilton Lookou	7.33	133	Pn	Pn	21 11 58.0	-2.4
MBW	Mount Baker	7.38	118	Pn	Pn	21 12 03.1	+1.9
HDW	Hoodsport	7.52	128	Pn	Pn	21 12 05.2	+2.1
WISH	Wishkah	7.58	134	Pn	Pn	21 12 05.8	+2.1
D03D	Eldon	7.59	129	P	Pn	21 12 07.6	+3.8
	baz=316						
B05A	Bryant	7.59	121	P	Pn	21 12 06.3	+2.4
	baz=310,SNR=8.4						
GNW	Green Mountain	7.69	128	Pn	Pn	21 12 07.0	+1.8
JCW	Jim Creek	7.72	121	Pn	Pn	21 12 07.5	+1.7
RPW	Rockport	7.79	118	Pn	Pn	21 12 06.5	-0.1
WHY	Whitehorse	8.22	349	Pn	Pn	21 12 13.3	+0.7
WHY	Whitehorse	8.22	349		Pn	21 12 10.8	-1.8
MNB	Mounoet Dainar	8.23	88	Pn	Pn	21 12 14.6	+1.7
D05A	Enumclaw	8.36	127	Pn	Pn	21 12 12.9	-1.5
E04D	Cinebar	8.55	132	P	Pn	21 12 21.1	+4.1
	baz=320,SNR=11						
SLEB	Sale Mountain	8.59	94	Pn	Pn	21 12 19.8	+2.0
LON	Longmire	8.76	128	Pn	Pn	21 12 23.0	+3.1
LON	Longmire	8.76	128		Pn	21 12 17.7	-2.2
LTY	Liberty	8.97	122		Pn	21 12 20.9	-2.1
B08A	Colville Reser	9.03	113	Pn	Pn	21 12 22.1	-1.7
YUK5	Granite Creek	9.13	341	Pn	Pn	21 12 23.6	-1.5
G03D	McMinnville, O	9.32	139	P	Pn	21 12 30.7	+3.2
	baz=327						
F05D	White Salmon	9.56	131	P	Pn	21 12 34.8	+3.9
	baz=319						
LOGN	Logan Glacier	9.63	332	P	Pn	21 12 32.4	+0.5
COR	Corvallis	9.83	142		Pn	21 12 32.0	-2.5
CTGM	Chitina Glacie	9.84	332		Pn	21 12 32.5	-2.2
E07A	Sunnyside	9.86	123	Pn	Pn	21 12 33.1	-1.9
C09A	Chrisman Ranch	9.93	114	Pn	Pn	21 12 34.3	-1.7
BARN	Barnard Glacie	10.01	331		Pn	21 12 34.9	-2.3
D08A	Wollman Farm,	10.02	119	Pn	Pn	21 12 35.5	-1.7
I02D	Swisshome	10.04	145	P	Pn	21 12 42.5	+5.0
	baz=332						
H04D	Lebanon	10.10	140	P	Pn	21 12 42.9	+4.7
	baz=327,SNR=12						
KIAG	Kiagna River	10.11	329	P	Pn	21 12 39.6	+1.0
G05D	Wamic, OR	10.11	133	P	Pn	21 12 42.7	+4.2
	baz=322						
HAWA	Hanford	10.13	123		Pn	21 12 36.9	-1.9
H04A	Detroit Lake	10.19	138	Pn	Pn	21 12 35.9	-3.6
BALM	Baldy	10.19	330	P	Pn	21 12 38.2	-1.4
CRQM	Cirque	10.23	327	Pn	Pn	21 12 37.5	-2.7
NEW	Newport	10.34	109	Pn	Pn	21 12 43.0	+1.4
	0.3nm,0.3s,baz=241,slow=18,SNR=3.8						
NEW				Lg	Lg	21 15 34.7	
	0.5nm,0.3s,baz=38,slow=20,SNR=4.4						
NEW				LR	LR	21 16 48.8	
	comp=Z,303nm,21.7s,baz=321,slow=38						
I03D	Drain, OR	10.57	144	P	Pn	21 12 49.1	+4.4
	baz=331						
YUK1	Sand Pete Hill	10.62	337	P	Pn	21 12 47.4	+1.9
I05D	Terrebonne, OR	10.82	136	P	Pn	21 12 51.9	+3.7
	baz=324						
I04A	Tendick Farm,	10.84	141	P	Pn	21 12 52.9	+4.4
	baz=329,SNR=10						
K02D	Willamette Mer	11.35	148	P	Pn	21 13 00.9	+5.4
	baz=334						
J04D	Umpqua Nationa	11.42	142	P	Pn	21 13 01.3	+4.7
	baz=329						
PINE	Pine Mountain	11.43	136	Pn	Pn	21 12 55.2	-1.5
HUMO	Hull Mountain	11.67	146	Pn	Pn	21 12 58.1	-1.7
KLU	Klutina	11.71	325		Pn	21 12 58.0	-2.3
J05D	Fort Rock, OR	11.73	139	P	Pn	21 13 05.5	+4.8
	baz=327						
I07A	Izee	11.83	131	Pn	Pn	21 12 59.0	-3.1
L02E	Cave Junction	11.86	149	P	Pn	21 13 06.1	+3.8
	baz=335						
K04D	Chiloquin, OR	12.09	142	P	Pn	21 13 10.1	+4.5
	baz=330						
L04D	Klamath Falls	12.24	145	P	Pn	21 13 12.4	+4.7
	baz=332						
BMO	Blue Mountains	12.33	123	Pn	Pn	21 13 06.6	-2.3
K05A	Summer Lake	12.33	139	Pn	Pn	21 13 05.8	-3.2
YBH	Yreka Blue Hor	12.53	147	Pn	Pn	21 13 14.3	+2.7
	0.1nm,0.3s,baz=346,slow=12,SNR=8.4						
DOT	Dot Lake	12.77	335	Pn	Pn	21 13 11.8	-2.9
M04C	Macdoel	12.79	144	P	Pn	21 13 20.2	+5.1
	baz=332						
M02C	Callahan	12.79	148	P	Pn	21 13 20.0	+4.8
	baz=335						
KDAK	Kodiak Island	12.91	302	Pn	Pn	21 13 16.0	-0.5
	0.2nm,0.3s,baz=138,slow=16,SNR=1.8						
KDAK				LR	LR	21 17 17.1	
	comp=Z,578nm,18.3s,baz=113,slow=33						
RC01	Rabbit Creek A	12.91	318	P	Pn	21 13 16.8	+0.2
	baz=122						
MSO	Missoula	12.93	110	P	Pn	21 13 20.8	+3.7
	baz=304,SNR=6.8						
MSO	Missoula	12.93	110	Pn	Pn	21 13 15.6	-1.5
PMR	Palmer	12.96	321		Pn	21 13 15.3	-1.9
EGAK	Eagle	13.09	342		Pn	21 13 15.5	-3.5
N02D	Trinity Center	13.21	148	P	Pn	21 13 23.4	+2.5
	baz=336						
YKA	Yellowknife Ar	13.47	36	Pn	Pn	21 13 23.3	-1.0
	0.4nm,0.3s,baz=228,slow=12,SNR=38						
YKA				LR	LR	21 19 12.7	
	comp=Z,468nm,19.8s,baz=0.0,slow=40						
CUT	Chulitna	13.87	322	P	Pn	21 13 32.0	+2.3
	baz=126						
O02D	Mt. Diablo Mer	13.91	150	P	P	21 13 35.4	-3.6
	baz=337						
EPYK	Eagle Plains	13.99	352	P	P	21 13 34.9	-4.7
	baz=167						
MFID	Camas Ranch	14.10	125	Pn	Pn	21 13 29.9	-3.1
O03E	Paynes Creek	14.12	147	P	P	21 13 42.0	+0.7
	baz=335						
HDA	Harding Lake	14.15	332	P	P	21 13 40.7	-0.6
	baz=139						
HDA	Harding Lake	14.15	332		Pn	21 13 30.9	-2.6
MCK	McKinley	14.26	328	P	P	21 13 38.3	-4.3
	baz=133						
ILAR	Eielson Array	14.41	333	Pn	Pn	21 13 39.5	+2.4
	0.1nm,0.3s,baz=165,slow=12,SNR=7.1						
ILAR				Lg	Lg	21 17 54.5	
	0.0nm,0.3s,baz=121,slow=30,SNR=4.3						
ILAR				LR	LR	21 19 12.6	
	comp=Z,363nm,20.3s,baz=152,slow=38						
WRH	Wood River Hil	14.53	331	Pn	Pn	21 13 35.8	-2.9
TRF	Thorofare Moun	14.53	325	P	Pn	21 13 35.0	-3.9
DLMT	Dillon	14.54	112		Pn	21 13 36.3	-2.8
CCB	Clear Creek Bu	14.57	332	P	Pn	21 13 35.2	-4.1
HLID	Hailey	14.72	121	P	P	21 13 44.3	-3.6
	baz=315,SNR=18						
HLID	Hailey	14.72	121	Pn	Pn	21 13 38.3	-3.3
MCMT	McKenzie Canyo	14.72	114	Pn	Pn	21 13 38.7	-3.0
BCYI	Bear Canyon	14.75	117	Pn	Pn	21 13 39.4	-2.7
KTH	Kantishna Hill	14.81	325	Pn	Pn	21 13 38.8	-3.8
PPLA	Purkeypile	14.88	322	Pn	Pn	21 13 40.8	-2.9
ORV	Oroville	14.89	147	Pn	Pn	21 13 40.4	-3.3
NEA2	Nenana	14.91	330	P	P	21 13 50.6	+0.8
	baz=135,SNR=8.7						
BOZ	Bozeman (W)	14.95	110	P	P	21 13 47.8	-2.7
	baz=306						
BOZ	Bozeman (W)	14.95	110	Pn	Pn	21 13 42.8	-1.8
BOZ				IAmb	IAmb	21 13 48.2	
	comp=Z,13nm,1.1s						
BPAW	Bear Paw Mtn.	15.19	327	IAmb	IAmb	21 13 56.5	
	comp=Z,25nm,1.0s						
SVW2	Sparrevohn	15.43	313	Pn	Pn	21 13 47.0	-3.8
SVW2				IAmb	IAmb	21 13 58.0	
	comp=Z,19nm,0.8s						
FYU	Fort Yukon	15.47	340	Pn	Pn	21 13 48.7	-2.7
PAHR	Pah Rah Range	15.50	142	Pn	Pn	21 13 48.1	-3.9
AFDM	Forest Hills D	15.61	147	Pn	Pn	21 13 49.8	-3.5
DHRN	Dharma Camp	15.66	18	P	Pn	21 13 54.0	+0.3
YHB	Horse Butte	15.70	112	Pn	Pn	21 13 50.7	-3.9
YHB				IAmb	IAmb	21 14 03.3	
	comp=Z,45nm,1.2s						
MLY	Manley	15.73	329	P	Pn	21 13 54.7	0.0
	baz=133						

INK	**Inuvik**	**15.75**	**358**	Pn	**P**	**21 13 56.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=168,slow=14,SNR=8.9						
INK				Lg	Lg	21 18 36.1	
	comp=Z,0.0nm,0.3s,baz=76,slow=25,SNR=8.0						
INK				LR	LR	21 19 32.0	
	comp=Z,230nm,20.1s,baz=153,slow=36						
INK	**Inuvik**	**15.75**	**358**	P	**Pn**	**21 13 55.6**	**+0.7**
YMR	**Madison River**	**15.88**	**112**	IAmb	IAmb	21 14 16.0	
	comp=Z,33nm,1.1s						
PNTR	**Pine Nut**	**15.96**	**143**	IAmb	IAmb	21 14 10.2	
	comp=Z,21nm,1.1s						
YNR	**Norris Junctio**	**16.01**	**111**	IAmb	IAmb	21 14 20.5	
	comp=Z,20nm,1.2s						
BMAR	**Burnt Mountain**	**16.09**	**342**	Pn	**Pn**	**21 13 56.8**	**-2.6**
YNE	**Yellowstone No**	**16.22**	**109**	Pn	**Pn**	**21 13 58.2**	**-3.2**
YNE				IAmb	IAmb	21 14 10.7	
	comp=Z,19nm,1.0s						
LKWY	**Lake**	**16.26**	**111**	IAmb	IAmb	21 14 21.5	
	comp=Z,17nm,0.9s						
H17A	**Grant Village**	**16.27**	**112**	P	**P**	**21 14 06.7**	**+1.5**
	baz=308,SNR=20						
H17A	**Grant Village**	**16.27**	**112**	Pn	**Pn**	**21 13 59.4**	**-2.6**
H17A				IAmb	IAmb	21 14 13.5	
	comp=Z,15nm,1.0s						
IMW	**Indian Meadow**	**16.37**	**114**	IAmb	IAmb	21 14 13.6	
	comp=Z,16nm,1.0s						
FLWY	**Flagg Ranch**	**16.39**	**113**	IAmb	IAmb	21 14 22.3	
	comp=Z,19nm,1.1s						
TTA	**Tatalina**	**16.40**	**318**	Pn	**Pn**	**21 14 00.2**	**-3.2**
TTA				IAmb	IAmb	21 14 09.0	
	comp=Z,28nm,0.9s						
ELK	**Elko**	**16.41**	**130**	Pn	**P**	**21 14 07.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=316,slow=12,SNR=9.6						
RLMT	**Red Lodge**	**16.58**	**108**	P	**P**	**21 14 09.1**	**+0.5**
	baz=306,SNR=5.3						
RLMT	**Red Lodge**	**16.58**	**108**	IAmb	IAmb	21 14 23.9	
	comp=Z,38nm,1.0s						
SNOW	**Snow King Moun**	**16.75**	**115**	IAmb	IAmb	21 14 30.4	
	comp=Z,20nm,1.1s						
REDW	**Red Top Meadow**	**16.77**	**115**	IAmb	IAmb	21 14 29.5	
	comp=Z,38nm,1.1s						
AHID	**Auburn Hatcher**	**17.03**	**117**	IAmb	IAmb	21 14 29.5	
	comp=Z,20nm,1.1s						
NVAR	**Mina Array Bea**	**17.03**	**141**	P	**P**	**21 14 13.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=320,slow=9.8,SNR=13						
C36M	**Paulatuk**	**17.16**	**9**	P	**P**	**21 14 13.6**	**-1.0**
C36M	**Paulatuk**	**17.16**	**9**	P	**P**	**21 14 17.2**	**+2.7**
	baz=196,SNR=5.4						
C36M	**Paulatuk**	**17.16**	**9**	Pn	**Pn**	**21 14 10.8**	**-2.1**
C36M				IAmb	IAmb	21 14 29.2	
	comp=Z,26nm,1.1s						
COLD	**Coldfoot**	**17.17**	**335**	P	**P**	**21 14 16.2**	**+1.4**
	baz=139						
KUKN	**Kugluktuk,NWT**	**17.25**	**22**	P	**Pn**	**21 14 13.8**	**-0.2**
IMAR	**Indian Mountai**	**17.30**	**329**	Pn	**Pn**	**21 14 11.1**	**-3.6**
MLAC	**Mammoth, Mammo**	**17.53**	**144**	P	**P**	**21 14 23.0**	**+3.8**
	baz=333						
LAO	**LASA Array**	**17.55**	**100**	P	**P**	**21 14 22.2**	**+3.0**
	baz=300						
HWUT	**Hardware Ranch**	**17.59**	**121**	Pn	**Pn**	**21 14 15.5**	**-3.1**
HWUT				IAmb	IAmb	21 14 25.6	
	comp=Z,20nm,1.1s						
FFC	**Flin Flon**	**17.74**	**71**	Pn	**Pn**	**21 14 17.9**	**-2.3**
FFC				IAmb	IAmb	21 14 34.1	
	comp=Z,49nm,1.1s						
TPH	**Tonopah**	**17.76**	**139**	IAmb	IAmb	21 14 28.9	
	comp=Z,25nm,0.9s						
BW06	**Boulder Array**	**17.87**	**115**	P	**P**	**21 14 24.0**	**+1.0**
	baz=312,SNR=13						
PDAR	**Pinedale Array**	**17.87**	**115**	LR	LR	21 21 16.8	
	comp=Z,281nm,21.1s,baz=358,slow=37						
PDAR	**Pinedale Array**	**17.87**	**115**	Pn	**Pn**	**21 14 19.4**	**-2.9**
DGMT	**Dagmar**	**17.99**	**92**	P	**P**	**21 14 25.5**	**+1.5**
	baz=294						
DUG	**Dugway, Tooele**	**18.00**	**126**	P	**P**	**21 14 26.4**	**+2.2**
	baz=320,SNR=6.1						
TCUT	**Toone Canyon**	**18.02**	**122**	IAmb	IAmb	21 14 33.3	
	comp=Z,14nm,0.9s						
PMPB	**Monarch Peak**	**18.17**	**150**	IAmb	IAmb	21 14 37.2	
	comp=Z,26nm,1.1s						
R11A	**Troy Canyon, C**	**18.20**	**135**	P	**P**	**21 14 28.9**	**+2.3**
	baz=327						
TIN	**Tinemaha, Big**	**18.27**	**143**	P	**P**	**21 14 28.8**	**+1.6**
	baz=333						
VOG	**Valley Oaks Go**	**18.52**	**147**	P	**Pn**	**21 14 33.2**	**+3.3**
	baz=336						
GRAC	**Grapevine Rang**	**18.64**	**141**	P	**Pn**	**21 14 35.3**	**+3.9**
	baz=332						
CWC	**Cottonwood Cre**	**18.87**	**144**	P	**Pn**	**21 14 36.8**	**+2.5**
	baz=334						
VES	**Vestal, Richgr**	**19.06**	**147**	P	**Pn**	**21 14 39.1**	**+2.7**
	baz=336						
TPNV	**Topopah Spring**	**19.12**	**139**	P	**Pn**	**21 14 40.3**	**+2.9**
	baz=330,SNR=6.7						
TPNV	**Topopah Spring**	**19.12**	**139**	IAmb	IAmb	21 14 44.1	
	comp=Z,16nm,1.1s						
SMMC	**Simmler**	**19.25**	**149**	P	**Pn**	**21 14 39.7**	**+0.9**
	baz=338						
FURC	**Furnace Creek,**	**19.30**	**141**	P	**Pn**	**21 14 42.0**	**+2.7**
	baz=332,SNR=5.9						
MPMC	**Manual Prospec**	**19.42**	**143**	P	**Pn**	**21 14 41.0**	**-0.1**
	baz=333,SNR=7.1						
ISA	**Isabella, Lake**	**19.43**	**146**	P	**Pn**	**21 14 43.6**	**+2.6**
	baz=335,SNR=13						
ISA	**Isabella, Lake**	**19.43**	**146**	IAmb	IAmb	21 14 54.1	
	comp=Z,14nm,1.1s						
K22A	**Casper**	**19.66**	**110**	P	**Pn**	**21 14 43.5**	**-0.3**
	baz=310						
PKM	**Mcpherson Peak**	**19.70**	**150**	P	**Pn**	**21 14 46.8**	**+2.5**
	baz=338						
Q16A	**Castle Valley**	**19.79**	**126**	IAmb	IAmb	21 14 52.7	
	comp=Z,15nm,1.2s						
ARVC	**Arvin**	**19.79**	**147**	P	**Pn**	**21 14 47.1**	**+1.8**
	baz=336						
LRMC	**Laurel Mtn Rad**	**19.87**	**144**	P	**Pn**	**21 14 47.8**	**+1.5**
	baz=334						
SZCU	**Shurtz Canyon**	**19.93**	**132**	P	**P**	**21 14 41.8**	**-3.7**
SHPR	**Sheep Range**	**19.94**	**137**	P	**P**	**21 14 41.9**	**-3.8**
SRU	**San Rafael Swe**	**19.97**	**124**	P	**P**	**21 14 42.1**	**-3.8**
SRU				IAmb	IAmb	21 14 58.7	
	comp=Z,14nm,1.0s						
SHOC	**Shoshone, Teco**	**20.02**	**141**	P	Pn	21 14 49.6	+1.6
	baz=332						
OSI	**Osito Audit: C**	**20.30**	**147**	P	Pn	21 14 52.6	+1.3
	baz=337						
EDW2	**Edwards Air Fo**	**20.30**	**146**	P	Pn	21 14 52.4	+1.0
	baz=336						
LCMT	**Little Creek M**	**20.34**	**133**	P	**P**	**21 14 46.0**	**-3.9**
LCMT				IAmb	IAmb	21 15 04.0	
	comp=Z,16nm,1.2s						
GSC	**Goldstone, Bar**	**20.35**	**142**	P	Pn	21 14 53.3	+1.4
	baz=333						
GSC	**Goldstone, Bar**	**20.35**	**142**	P	**P**	**21 14 46.8**	**-3.1**
GSC				IAmb	IAmb	21 14 53.7	
	comp=Z,10nm,1.1s						
O20A	**White River Ci**	**20.40**	**118**	P	Pn	21 14 53.6	+1.0
	baz=316,SNR=14						
O20A	**White River Ci**	**20.40**	**118**	P	Pn	21 14 53.5	+0.9
PKCU	**Pink Cliffs**	**20.41**	**130**	P	**P**	**21 14 47.2**	**-3.7**
PKCU				IAmb	IAmb	21 14 57.4	
	comp=Z,20nm,1.2s						
RRX	**Edison Barstow**	**20.66**	**143**	P	Pn	21 14 56.5	+1.0
	baz=334						
DECC	**Green Verdugo**	**20.75**	**147**	P	Pn	21 14 54.7	-2.0
	baz=337						
ANM	**Nome**	**20.87**	**318**	P	**P**	**21 14 51.7**	**-3.6**
MWC	**Mount Wilson**	**20.88**	**146**	IAmb	IAmb	21 14 59.1	
	comp=Z,12nm,1.1s						
HEC	**Hector,Ludlow**	**20.94**	**142**	P	Pn	21 14 59.5	+0.6
	baz=333,SNR=9.3						
E28A	**Huff**	**20.95**	**94**	P	**P**	**21 14 53.8**	**-2.6**
E28A				IAmb	IAmb	21 15 10.2	
	comp=Z,21nm,0.9s						
BFSC	**Mount Baldy Ra**	**21.00**	**146**	P	Pn	21 14 60.0	+0.4
	baz=336						
MDND	**Maddock**	**21.04**	**90**	P	**P**	**21 15 00.1**	**+2.8**
	baz=296,SNR=6.1						
MDND	**Maddock**	**21.04**	**90**	P	**P**	**21 14 54.7**	**-2.7**
N23A	**Red Feather La**	**21.13**	**113**	P	**P**	**21 15 01.1**	**+2.5**
	baz=313						
PHWY	**Pilot Hill**	**21.14**	**112**	P	**P**	**21 14 54.8**	**-3.9**
PHWY				IAmb	IAmb	21 15 06.9	
	comp=Z,21nm,0.9s						
BBRC	**Big Bear Solar**	**21.24**	**144**	P	**P**	**21 15 03.0**	**+3.2**
	baz=335						
PV23	**Carpenter Ridg**	**21.24**	**123**	IAmb	IAmb	21 15 03.1	
	comp=Z,23nm,1.1s						
GMRC	**Granite Mounta**	**21.24**	**141**	P	**P**	**21 15 02.9**	**+3.3**
	baz=332,SNR=6.7						
U15A	**North Rim**	**21.25**	**132**	IAmb	IAmb	21 15 14.4	
	comp=Z,18nm,1.1s						
PV22	**Blue Mesa, Par**	**21.29**	**122**	P	**P**	**21 14 57.0**	**-3.2**
PV22				IAmb	IAmb	21 15 10.8	
	comp=Z,18nm,0.9s						
PV14	**Lion Creek, Pa**	**21.29**	**123**	IAmb	IAmb	21 15 03.5	
	comp=Z,29nm,1.1s						
PV04	**Paradox Valley**	**21.33**	**123**	IAmb	IAmb	21 15 04.2	
	comp=Z,21nm,1.2s						
PV20	**West Nyswonger**	**21.34**	**123**	P	**P**	**21 14 57.3**	**-3.5**
PV20				IAmb	IAmb	21 15 04.1	
	comp=Z,21nm,1.1s						
PV19	**Morning Glory**	**21.36**	**123**	IAmb	IAmb	21 15 04.3	
	comp=Z,17nm,1.1s						
PV16	**Nyswonger Mesa**	**21.39**	**123**	IAmb	IAmb	21 15 04.7	
	comp=Z,16nm,1.1s						
PV17	**East Wray Mesa**	**21.39**	**123**	IAmb	IAmb	21 15 04.7	
	comp=Z,23nm,1.1s						
PV11	**David Mesa, Pa**	**21.42**	**123**	IAmb	IAmb	21 15 12.1	
	comp=Z,16nm,0.8s						
RDOG	**Red Dog Mine**	**21.43**	**328**	P	**P**	**21 14 57.6**	**-3.7**
RDOG				IAmb	IAmb	21 15 02.9	
	comp=Z,8.6nm,0.9s						
PV07	**Paradox Valley**	**21.43**	**122**	IAmb	IAmb	21 15 05.1	
	comp=Z,18nm,1.1s						
PV12	**Saucer Basin,**	**21.44**	**123**	IAmb	IAmb	21 15 06.4	
	comp=Z,15nm,1.0s						
PV18	**Skein Mesa, Pa**	**21.44**	**123**	IAmb	IAmb	21 15 04.6	
	comp=Z,18nm,1.2s						
PV03	**Paradox Valley**	**21.47**	**123**	IAmb	IAmb	21 15 07.5	
	comp=Z,17nm,1.0s						
PV05	**Paradox Valley**	**21.48**	**124**	P	**P**	**21 14 59.4**	**-2.9**
PV05				IAmb	IAmb	21 15 11.1	
	comp=Z,8.6nm,1.0s						
PV13	**Radium Mtn., P**	**21.56**	**123**	P	**P**	**21 14 59.2**	**-4.0**
PV13				IAmb	IAmb	21 15 08.4	
	comp=Z,26nm,1.1s						
PV02	**Paradox Valley**	**21.56**	**123**	IAmb	IAmb	21 15 08.5	
	comp=Z,16nm,1.0s						
PV15	**Paradox Valley**	**21.59**	**122**	P	**P**	**21 15 01.0**	**-2.6**
PV15				IAmb	IAmb	21 15 10.3	
	comp=Z,20nm,0.9s						
NEE2	**Needles Airpor**	**21.66**	**139**	P	**P**	**21 15 06.5**	**+2.5**
	baz=331						
W13A	**Hualapai Mount**	**21.68**	**137**	P	**P**	**21 15 00.6**	**-3.8**
PV01	**Paradox Valley**	**21.70**	**123**	IAmb	IAmb	21 15 09.9	
	comp=Z,17nm,1.0s						
A21K	**Barrow**	**21.75**	**339**	P	**P**	**21 15 07.0**	**+2.3**
	baz=136,SNR=15						
A21K	**Barrow**	**21.75**	**339**	P	**P**	**21 15 02.6**	**-2.0**
BELC	**Belle Mtn. Jos**	**21.81**	**142**	P	**P**	**21 15 07.8**	**+2.1**
	baz=334,SNR=8.8						
FCC	**Fort Churchill**	**21.90**	**59**	P	**P**	**21 15 07.8**	**+1.4**
FCC	**Fort Churchill**	**21.90**	**59**	P	**P**	**21 15 08.2**	**+1.9**
PFO	**Pinyon Flats O**	**21.99**	**144**	P	**P**	**21 15 08.0**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=330,slow=14,SNR=4.6						
PFO				LR	LR	21 22 22.9	
	comp=Z,223nm,20.4s,baz=334,slow=33						
PFO	**Pinyon Flats O**	**21.99**	**144**	P	**P**	**21 15 08.3**	**+0.6**
	baz=335						
IRM	**Iron Mountain**	**21.99**	**141**	P	**P**	**21 15 10.4**	**+2.8**
	baz=332,SNR=7.7						
TPFO	**Pinon Flats**	**21.99**	**144**	P	**P**	**21 15 09.9**	**+2.2**
	baz=335						
PDMCI	**Parker Dam,Lak**	**22.26**	**138**	P	**P**	**21 15 13.3**	**+2.8**
	baz=331						
BC3	**Big Chuckawall**	**22.32**	**142**	P	**P**	**21 15 13.7**	**+2.5**
	baz=334						
ULM	**Lac du Bonnet**	**22.39**	**82**	P	**P**	**21 15 12.4**	**+0.7**
	comp=Z,17nm,1.0s,baz=290,slow=11,SNR=16						
ULM				Lg	Lg	21 22 06.3	
	comp=Z,11nm,1.1s,baz=8.1,slow=8.4,SNR=5.5						
ULM	**Lac du Bonnet**	**22.39**	**82**	P	**P**	**21 15 11.8**	**+0.1**
WUAZ	**Wupatki**	**22.42**	**132**	P	**P**	**21 15 14.8**	**+2.4**
	baz=326,SNR=9.8						
WUAZ	**Wupatki**	**22.42**	**132**	P	**P**	**21 15 08.8**	**-3.6**
WUAZ				IAmb	IAmb	21 15 26.5	
	comp=Z,14nm,1.1s						
MVCO	**Mesa Verde**	**22.45**	**124**	P	**P**	**21 15 15.1**	**+2.4**
	baz=321,SNR=8.7						
MVCO	**Mesa Verde**	**22.45**	**124**	P	**P**	**21 15 09.1**	**-3.6**
MVCO				IAmb	IAmb	21 15 27.6	
	comp=Z,9.8nm,1.0s						
MONP2	**Monument Peak**	**22.65**	**145**	P	**P**	**21 15 17.6**	**+2.7**
	baz=336						
BAR	**Barrett**	**22.75**	**145**	IAmb	IAmb	21 15 36.5	
	comp=Z,8.3nm,1.1s						
SWSC	**Sam W. Stewart**	**22.82**	**143**	P	**P**	**21 15 18.7**	**+2.3**
	baz=335						
S22A	**4UR Ranch, Cre**	**22.90**	**121**	P	**P**	**21 15 20.4**	**+2.9**
	baz=319,SNR=16						
Q24A	**Divide**	**22.91**	**116**	P	**P**	**21 15 21.4**	**+3.7**
	baz=316						
D32A	**Dogwood Acres,**	**22.93**	**90**	P	**P**	**21 15 15.2**	**-2.3**
IKP	**In-Ko-Pah, Jac**	**22.98**	**144**	P	**P**	**21 15 20.4**	**+2.2**
	baz=335						
SUSD	**Miller**	**23.09**	**98**	P	**P**	**21 15 21.9**	**+2.7**
	baz=303						
GLA	**Glamis**	**23.09**	**141**	P	**P**	**21 15 21.1**	**+1.8**
	baz=333						
AGMN	**Agassiz Nation**	**23.13**	**86**	P	**P**	**21 15 21.8**	**+2.2**
	baz=295,SNR=17						
AGMN	**Agassiz Nation**	**23.13**	**86**	P	**P**	**21 15 17.4**	**-2.2**
X16A	**Lo Mia Camp, P**	**23.31**	**133**	P	**P**	**21 15 18.4**	**-3.3**
OGNE	**Ogallala**	**23.33**	**108**	P	**P**	**21 15 24.2**	**+2.5**
	baz=310						
W18A	**Petrified Fore**	**23.51**	**129**	P	**P**	**21 15 25.9**	**+2.2**
	baz=325						
W18A	**Petrified Fore**	**23.51**	**129**	P	**P**	**21 15 20.1**	**-3.6**
W18A				IAmb	IAmb	21 15 26.2	
	comp=Z,8.7nm,1.1s						
SDCO	**Great Sand Dun**	**23.60**	**119**	P	**P**	**21 15 26.3**	**+1.6**
	baz=318,SNR=10						
SDCO	**Great Sand Dun**	**23.60**	**119**	IAmb	IAmb	21 15 27.1	
	comp=Z,8.9nm,1.1s						
EPLO	**Experimental L**	**23.89**	**82**	P	**P**	**21 15 27.3**	**+0.2**
X18A	**Snowflake**	**23.89**	**131**	P	**P**	**21 15 23.6**	**-3.8**
X18A				IAmb	IAmb	21 15 31.4	
	comp=Z,15nm,1.1s						
F33A	**5 Mile Ranch,**	**23.98**	**92**	P	**P**	**21 15 26.0**	**-2.0**
F33A				IAmb	IAmb	21 15 30.7	
	comp=Z,17nm,0.9s						
K31A	**O'Neill**	**24.23**	**101**	P	**P**	**21 15 27.6**	**-2.8**
KSCO	**Kaye Shedlock'**	**24.28**	**112**	P	**P**	**21 15 34.1**	**+3.1**
	baz=314						
B35A	**Bob, Littlefor**	**24.41**	**85**	P	**P**	**21 15 29.7**	**-2.2**
B35A				IAmb	IAmb	21 15 37.2	
	comp=Z,11nm,0.8s						
T25A	**Trinidad**	**24.64**	**118**	P	**P**	**21 15 37.0**	**+2.6**
	baz=318						
SPX	**San Pedro Mart**	**24.67**	**145**	IAmb	IAmb	21 15 42.0	
	comp=Z,8.9nm,1.0s						
SOLO	**Sioux Lookout**	**24.75**	**80**	P	**P**	**21 15 35.1**	**+0.1**
214A	**Organ Pipe Nat**	**24.85**	**139**	P	**P**	**21 15 37.6**	**+1.5**
	baz=332						
ECSD	**EROS Data Cent**	**24.89**	**97**	P	**P**	**21 15 37.7**	**+1.4**
	baz=304,SNR=10						
ECSD	**EROS Data Cent**	**24.89**	**97**	P	**P**	**21 15 33.8**	**-2.5**
ANMO	**Albuquerque**	**25.24**	**124**	P	**P**	**21 15 42.5**	**+2.7**
	comp=Z,2.5nm,0.8s,baz=309,slow=12,SNR=6.4						
ANMO	**Albuquerque**	**25.24**	**124**	P	**P**	**21 15 41.1**	**+1.3**
	baz=323						
ANMO	**Albuquerque**	**25.24**	**124**	P	**P**	**21 15 43.1**	**+3.3**
BGNE	**Belgrade**	**25.32**	**103**	P	**P**	**21 15 42.0**	**+1.8**
	baz=308						
TUC	**Tucson**	**25.39**	**135**	P	**P**	**21 15 43.1**	**+2.1**
	baz=330						
TUC	**Tucson**	**25.39**	**135**	P	**P**	**21 15 37.7**	**-3.3**
ATKO	**Atikokan Iron**	**25.50**	**82**	P	**P**	**21 15 41.5**	**-0.3**
EYMN	**Ely**	**25.93**	**84**	P	**P**	**21 15 48.2**	**+2.4**
	baz=296,SNR=6.8						
EYMN	**Ely**	**25.93**	**84**	P	**P**	**21 15 42.9**	**-2.9**
CBKS	**Cedar Bluff**	**26.06**	**109**	P	**P**	**21 15 49.8**	**+2.8**
	baz=313						
SPMN	**Marine on St.**	**26.42**	**91**	P	**P**	**21 15 52.4**	**+2.2**
	baz=301,SNR=5.2						
121A	**Cookes Peak, D**	**26.55**	**130**	P	**P**	**21 15 53.5**	**+1.8**
	baz=327						
121A	**Cookes Peak, D**	**26.55**	**130**	IAmb	IAmb	21 15 57.3	
	comp=Z,8.5nm,1.0s						
RES	**Resolute Bay**	**26.65**	**21**	LR	LR	21 26 49.6	
	comp=Z,386nm,19.6s,baz=338,slow=37						
RES	**Resolute Bay**	**26.65**	**21**	P	**P**	**21 15 55.6**	**+3.7**
RES				IAmb	IAmb	21 16 10.1	
	comp=Z,7.5nm,1.1s						
I37A	**Lemond, Waseca**	**26.68**	**93**	IAmb	IAmb	21 16 10.2	
	comp=Z,4.5nm,0.8s						
319A	**Douglas**	**26.84**	**133**	IAmb	IAmb	21 16 06.0	
	comp=Z,4.7nm,0.9s						
SILO	**Sutton Inlier**	**27.53**	**67**	P	**P**	**21 16 00.9**	**+0.9**
KSU1	**Kansas State U**	**27.69**	**105**	P	**P**	**21 16 03.2**	**+1.5**
	baz=311						
AMTX	**Amarillo**	**27.79**	**118**	P	**P**	**21 16 04.3**	**+1.6**
	baz=319						
K38A	**Parkersburg**	**27.82**	**95**	IAmb	IAmb	21 16 09.4	
	comp=Z,8.0nm,0.8s						
MSTX	**Muleshoe**	**27.90**	**120**	P	**P**	**21 16 05.5**	**+1.8**
	baz=321						
MSTX	**Muleshoe**	**27.90**	**120**	IAmb	IAmb	21 16 11.8	
	comp=Z,4.5nm,1.1s						
SCIA	**State Center**	**27.98**	**97**	P	**P**	**21 16 06.4**	**+2.1**
	baz=306						
MNTX	**Cornudas Mount**	**28.39**	**127**	P	**P**	**21 16 09.9**	**+2.0**
	baz=326,SNR=5.2						
MNTX	**Cornudas Mount**	**28.39**	**127**	P	**P**	**21 16 05.3**	**-2.7**
WMOK	**Wichita Mounta**	**29.48**	**114**	P	**P**	**21 16 19.7**	**+2.0**
	baz=318						
P40A	**Paris**	**30.13**	**100**	IAmb	IAmb	21 16 29.1	
	comp=Z,6.7nm,0.9s						
TUL1	**Leonard**	**30.34**	**109**	P	**P**	**21 16 27.7**	**+2.5**
	baz=315						
U38A	**Gravette**	**30.78**	**107**	IAmb	IAmb	21 16 45.1	
	comp=Z,5.6nm,1.0s						
HDIL	**Hopedale**	**31.16**	**96**	P	**P**	**21 16 33.4**	**+1.0**
	baz=308						
TX31	**Lajitas Ar. Si**	**31.17**	**127**	IAmb	IAmb	21 16 35.3	
	comp=Z,6.9nm,0.8s						
TX32	**Lajitas Array**	**31.17**	**127**	IAmb	IAmb	21 16 35.3	
	comp=Z,2.4nm,0.8s						
TXAR	**Lajitas Array**	**31.17**	**127**	P	**P**	**21 16 34.8**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=327,slow=6.8,SNR=16						
TXAR				LR	LR	21 29 20.0	
	comp=Z,202nm,20.0s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**31.17**	**127**	P	**P**	**21 16 29.4**	**-3.3**
EUNU	**Eureka**	**31.23**	**14**	P	**P**	**21 16 29.9**	**-2.8**
EUNU				IAmb	IAmb	21 16 49.3	
	comp=Z,3.3nm,0.8s						
CCM	**Cathedral Cave**	**31.56**	**101**	P	**P**	**21 16 37.1**	**+1.2**
	baz=311						
CCM	**Cathedral Cave**	**31.56**	**101**	P	**P**	**21 16 32.8**	**-3.2**
U40A	**Yellville**	**31.74**	**105**	P	**P**	**21 16 38.6**	**+1.1**
	baz=314,SNR=5.8						
JCT	**Junction City**	**32.19**	**121**	P	**P**	**21 16 43.0**	**+1.4**
	baz=323						
MIAR	**Mount Ida**	**32.58**	**108**	P	**P**	**21 16 46.5**	**+1.6**
	baz=316						
BILL	**Bilibino**	**32.59**	**322**	P	**P**	**21 16 41.5**	**-3.2**
BILL				IAmb	IAmb	21 16 46.6	
	comp=Z,7.9nm,1.1s						
Z41A	**Richland Creek**	**33.95**	**109**	P	**P**	**21 16 59.3**	**+2.4**
	baz=317						
LSQQ	**Lebel-sur-Quev**	**34.10**	**74**	P	**P**	**21 16 59.5**	**+1.4**
	baz=298						
833A	**Chaparral WMA,**	**34.13**	**123**	P	**P**	**21 17 00.4**	**+1.9**
	baz=325						
WCI	**Wyandotte Cave**	**34.43**	**96**	P	**P**	**21 16 58.4**	**-2.6**
WVT	**Waverly**	**34.88**	**100**	P	**P**	**21 17 06.0**	**+1.2**
	baz=313						
PLAL	**Pickwick Lake**	**35.51**	**102**	IAmb	IAmb	21 17 25.4	
	comp=Z,7.6nm,1.1s						
T50A	**Nancy**	**36.09**	**97**	IAmb	IAmb	21 17 20.3	
	comp=Z,5.3nm,0.9s						
D56A	**ZEC Mazanza, M**	**36.38**	**75**	P	**P**	**21 17 18.8**	**+1.1**
	baz=301						
N54A	**Moraine State**	**36.58**	**87**	P	**P**	**21 17 20.4**	**+0.9**
	baz=307						
TRQ	**Mont Tremblant**	**36.93**	**76**	P	**P**	**21 17 20.1**	**-2.4**
E57A	**Chemin Saint G**	**37.07**	**76**	P	**P**	**21 17 25.3**	**+1.7**
	baz=302						
TZTN	**Tazewell**	**37.18**	**96**	P	**P**	**21 17 26.1**	**+1.4**
	baz=312						
TZTN	**Tazewell**	**37.18**	**96**	IAmb	IAmb	21 17 28.7	
	comp=Z,8.5nm,1.1s						
V51A	**Loudon**	**37.19**	**98**	IAmb	IAmb	21 17 40.6	
	comp=Z,7.9nm,1.1s						
LATQ	**La Tuque**	**37.37**	**74**	P	**P**	**21 17 27.8**	**+1.7**
	baz=301						
M56A	**Emporium**	**37.37**	**85**	P	**P**	**21 17 27.2**	**+1.0**
	baz=306						
LRAL	**Lakeview Retre**	**37.51**	**103**	P	**P**	**21 17 28.4**	**+1.0**
	baz=315						
R54A	**Victor**	**37.68**	**92**	P	**P**	**21 17 31.9**	**+3.0**
	baz=310						
FRNY	**Flat Rock**	**38.24**	**78**	P	**P**	**21 17 30.6**	**-2.9**
FRNY				IAmb	IAmb	21 17 47.9	
	comp=Z,8.8nm,1.1s						
H59A	**Cadyville**	**38.28**	**78**	P	**P**	**21 17 35.4**	**+1.5**
	baz=304						
F60A	**Warwick**	**38.60**	**75**	P	**P**	**21 17 37.9**	**+1.5**
	baz=303						
BLA	**Blacksburg**	**38.65**	**93**	P	**P**	**21 17 37.3**	**+0.2**
	baz=311						
Y52A	**Lilburn**	**38.68**	**100**	IAmb	IAmb	21 17 44.4	
	comp=Z,9.1nm,1.1s						
P57A	**Homestead Farm**	**38.68**	**88**	P	**P**	**21 17 37.4**	**+0.2**
	baz=308						
S56A	**Natural Bridge**	**38.87**	**91**	P	**P**	**21 17 39.4**	**+0.5**
	baz=310						
SEY	**Seymchan**	**39.34**	**316**	P	**P**	**21 17 43.1**	**+0.6**
	comp=Z,5.4nm,0.9s,baz=79,slow=10.0,SNR=15						
GOGA	**Godfrey**	**39.35**	**100**	P	**P**	**21 17 43.9**	**+1.0**
	baz=314						
GOGA	**Godfrey**	**39.35**	**100**	IAmb	IAmb	21 17 58.0	
	comp=Z,7.9nm,1.1s						
R58B	**Mineral**	**39.72**	**90**	P	**P**	**21 17 47.1**	**+1.2**
	baz=310						
R58B	**Mineral**	**39.72**	**90**	IAmb	IAmb	21 17 55.7	
	comp=Z,4.2nm,0.8s						
PETK	**Petropavlovsk-**	**40.95**	**300**	P	**P**	**21 17 57.0**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=82,slow=11,SNR=2.1						
PETK				LR	LR	21 33 18.4	
	comp=Z,118nm,20.4s,baz=83,slow=34						
NHSC	**New Hope**	**41.54**	**97**	P	**P**	**21 18 02.3**	**+1.3**
	baz=314						
NHSC	**New Hope**	**41.54**	**97**	P	**P**	**21 17 57.9**	**-3.2**
SUMG	**Summit**	**41.82**	**27**	*i* P	**P**	**21 18 05.5**	**+2.1**
SUMG	**Summit**	**41.82**	**27**	*i* P	**P**	**21 18 05.6**	**+2.1**
DAG	**Danmarks Havn**	**44.25**	**18**	*i* P	**P**	**21 18 24.1**	**+1.6**
DAG	**Danmarks Havn**	**44.25**	**18**	*i* P	**P**	**21 18 24.1**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**57.19**	**259**	T	T	22 21 51.6	
	baz=39,slow=76,SNR=6793						
H11N3	**WAKE ISLAND Hy**	**57.19**	**259**	T	T	22 21 50.9	
	baz=39,slow=76,SNR=5632						
H11N1	**WAKE ISLAND Hy**	**57.20**	**259**	T	T	22 21 52.9	
	baz=39,slow=76,SNR=4328						
H11S1	**WAKE ISLAND Hy**	**58.25**	**259**	T	T	22 23 11.7	
	baz=39,slow=76,SNR=138						
H11S2	**WAKE ISLAND Hy**	**58.26**	**259**	T	T	22 23 10.7	
	baz=39,slow=76,SNR=100						
H11S3	**WAKE ISLAND Hy**	**58.26**	**259**	T	T	22 23 10.8	
	baz=39,slow=76,SNR=120						
TAOE	**Nuku Hiva Isla**	**61.66**	**189**	*e*T	T	22 27 15.4	
	comp=Z,79nm,0.2s						
MJAR	**Matsushiro Arr**	**61.95**	**294**	LR	LR	21 46 28.5	
	comp=Z,24nm,20.3s,baz=255,slow=35						
NOA	**NORSAR Array B**	**62.90**	**19**	P	**P**	**21 20 39.7**	**+0.3**
	comp=Z,3.5nm,1.0s,baz=336,slow=6.8,SNR=4.4						
FINES	**FINESS Array B**	**64.92**	**12**	P	**P**	**21 20 53.5**	**+0.9**
	comp=Z,3.7nm,0.9s,baz=340,slow=12,SNR=6.8						
KLMR	**Klimovskoe**	**66.65**	**5**	*e*P	**P**	**21 21 03.0**	**-0.8**
KLMR				AMP		21 21 06.7	
	comp=Z,23nm,1.3s						
KSRS	**Korea Array**	**66.81**	**302**	LR	LR	21 48 07.1	
	comp=Z,22nm,21.1s,baz=70,slow=34						
SONM	**Songino Array**	**68.31**	**322**	P	**P**	**21 21 15.3**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=19,slow=3.3,SNR=6.2						
SONM				LR	LR	21 52 22.6	
	comp=Z,91nm,18.2s,baz=5.5,slow=37						
ZALV	**Zalesovo Beam**	**69.49**	**338**	P	**P**	**21 21 21.6**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=14,slow=5.7,SNR=21						
ZALV	**Zalesovo Beam**	**69.49**	**338**	P	**P**	**21 21 21.7**	**-0.1**
NRDL	**Niedersach Rie**	**70.49**	**24**	*e*P	**P**	**21 21 30.0**	**+2.2**
	comp=Z,7.2nm,0.9s,baz=339,slow=5.7						
FLTG	**Flechtingen**	**70.91**	**23**	*e*P	**P**	**21 21 32.4**	**+1.9**
	comp=Z,4.7nm,0.8s,baz=339,slow=5.7						
ASSE	**Asse, Remlinge**	**70.96**	**23**	*e*P	**P**	**21 21 32.7**	**+1.9**
	comp=Z,3.8nm,0.8s,baz=339,slow=5.7						
CLZ	**Clausthal**	**71.15**	**24**	*e*P	**P**	**21 21 34.5**	**+2.4**
	comp=Z,6.7nm,0.9s,baz=339,slow=5.7						
GTTG	**Gottingen**	**71.32**	**24**	*e*P	**P**	**21 21 35.3**	**+2.3**
	comp=Z,5.9nm,1.0s,baz=339,slow=5.7						
RUE	**Ruedersdorf**	**71.36**	**21**	*e*P	**P**	**21 21 34.6**	**+1.4**
	comp=Z,6.4nm,0.8s,baz=339,slow=5.7						

TIAR	**Tiarei**	71.53	198	*e*T	T	22 39 29.7	
	comp=Z,31nm,0.3s						
PPT2	**Papeete2**	71.61	198	*e*LR	LR	21 43 29.6	
	comp=Z,214nm,23.0s						
PAE	**Paea**	71.68	198	*e*T	T	22 39 40.3	
	comp=Z,6.1nm,0.3s						
TVO	**Taravao**	71.74	197	*e*T	T	22 39 44.9	
	comp=Z,5.3nm,0.3s						
MNK	**Minsk**	71.91	12	*i* P	P	21 21 37.0	+0.4
	comp=E,1.0nm,0.9s						
MNK				*i* P	P	21 21 37.0	+0.4
	comp=N,11nm,0.9s						
MNK				*i* P	P	21 21 37.0	+0.4
	comp=Z,12nm,0.9s						
MNK				*i* PcP	PcP	21 21 55.5	+0.3
MNK				*i* PP	PP	21 24 16.2	+0.9
MNK				*i* PPP	PPP	21 25 59.9	
MNK				*i* S	S	21 30 56.0	-2.0
MNK				*i* ScS	ScS	21 31 42.5	-0.4
MNK				*i* SS	SS	21 35 35.5	+2.6
MNK				*i* SSS	SSS	21 38 55.1	
MNK				*i* LQ	LQ	21 46 57.0	
MNK				*i* LR	LR	21 49 05.4	
MNK				*i* LRM	MLR	21 55 13.3	
	comp=E,9.0nm,19.7s						
MNK				*i* LRM	MLR	21 55 15.2	
	comp=N,102nm,19.7s						
MNK				*i* LRM	MLR	21 55 18.1	
	comp=Z,95nm,19.6s						
HHC	**Hu-ho-hao-te**	71.98	315	*e*P	P	21 21 40.8	+3.5
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
TNS	**Taunus Mts**	72.15	26	*e*P	P	21 21 40.1	+2.0
	baz=339,slow=5.7						
CLL	**Collm**	72.27	22	*e*(P)	P	21 21 40.0	+1.2
CLL				LmV		21 53 00.0	
	comp=Z,100nm,19.8s						
CLL	**Collm**	72.27	22	*e*P	P	21 21 40.6	+1.8
	comp=Z,2.4nm,1.0s,baz=339,slow=5.7						
MOX	**Moxa**	72.56	23	*e*P	P	21 21 42.0	+1.4
	comp=Z,3.8nm,0.8s,baz=339,slow=5.7						
FBE	**Freiberg**	72.71	22	*e*P	P	21 21 42.8	+1.4
	baz=339,slow=5.7						
BRG	**Berggiesshubel**	72.89	22	*e*P	P	21 21 44.4	+1.9
BRG				Amp		21 21 46.2	
	comp=Z,57nm,1.9s						
BRG	**Berggiesshubel**	72.89	22	*e*P	P	21 21 44.4	+1.9
BRG				Amp		21 21 46.2	
	comp=Z,57nm,1.9s						
BRG	**Berggiesshubel**	72.89	22	*e*P	P	21 21 43.9	+1.4
	comp=Z,4.2nm,0.9s,baz=339,slow=5.7						
WERD	**Werda**	72.91	23	*e*P	P	21 21 44.0	+1.4
	comp=Z,1.3nm,0.9s,baz=339,slow=5.7						
TANN	**Tannenbergstha**	72.98	23	*e*P	P	21 21 44.8	+1.7
	comp=Z,2.2nm,0.9s,baz=339,slow=5.7						
GUNZ	**Gunzen**	72.99	23	*e*P	P	21 21 44.5	+1.4
	comp=Z,1.9nm,0.9s,baz=339,slow=5.7						
NKC	**Novy Kostel**	73.14	23	*e*P	P	21 21 45.1	+1.1
GRF	**Grafenberg Arr**	73.34	24	*e*P	P	21 21 46.7	+1.5
	baz=339,slow=5.7						
KSP	**Ksiaz**	73.44	20	*e*P	P	21 21 47.3	+1.6
CHVC	**Chvalec**	73.63	21	*e*P	P	21 21 47.5	+0.6
OSTC	**Ostas**	73.69	21	*e*P	P	21 21 49.0	+1.7
BFO	**Black Forest**	73.85	26	*e*P	P	21 21 49.9	+1.7
	comp=Z,6.0nm,0.9s,baz=339,slow=5.7						
PRU	**Pruhonice**	73.86	22	*e*P	P	21 21 50.0	+1.8
DPC	**Dobruska-Polom**	73.91	21	*e*P	P	21 21 50.2	+1.6
WET	**Wettzell**	74.26	23	*e*P	P	21 21 52.0	+1.4
	comp=Z,2.0nm,0.9s,baz=339,slow=5.7						
KRLC	**Kraliky**	74.27	20	*e*P	P	21 21 52.5	+1.8
KHC	**Kasperske Hory**	74.44	23	*e*P	P	21 21 53.2	+1.6
MORC	**Moravsky Berou**	74.71	20	*e*P	P	21 21 54.6	+1.4
GEC2	**GERESS Array S**	74.73	23	*e*P	P	21 21 54.5	+1.1
	comp=Z,3.6nm,1.0s,baz=339,slow=5.7						
GERES	**GERESS Array B**	74.73	23	P	P	21 21 54.6	+1.2
	comp=Z,2.7nm,0.9s,baz=333,slow=4.5,SNR=18						
OJC	**Ojcow**	74.74	18	*e*P	P	21 21 52.8	-0.6
UBR	**Ueberruh**	74.92	26	*e*P	P	21 21 56.1	+1.6
	comp=Z,3.4nm,0.9s,baz=339,slow=5.7						
VRAC	**Vranov**	74.95	21	*e*P	P	21 21 55.9	+1.3
KRUC	**Moravsky**	75.14	21	*e*P	P	21 21 57.3	+1.6
DAVA	**Damuels**	75.22	26	*e*P	P	21 21 56.9	+0.6
	comp=Z,15nm,1.7s						
MOTA	**Moosalm**	75.49	25	*e*P	P	21 21 59.6	+1.7
	comp=Z,11nm,1.5s						
NIE	**Niedzica**	75.61	18	*e*P	P	21 22 00.1	+1.7
JAVC	**Velka Javorina**	75.61	20	*e*P	P	21 22 01.0	+2.6
WATA	**Walderalm**	75.62	25	*e*P	P	21 22 00.6	+2.0
	comp=Z,9.2nm,1.1s						
SQTA	**Sankt Quirin**	75.63	25	*e*P	P	21 22 01.0	+2.3
	comp=Z,7.3nm,1.1s						
DAVOX	**Davos/Dischmat**	75.69	26	LR	LR	21 57 56.9	
	comp=Z,93nm,18.2s,baz=323,slow=38						
FETA	**Feichten**	75.69	25	*e*P	P	21 22 01.2	+2.1
	comp=Z,9.0nm,1.1s						
LANS	**Liptovska Anna**	75.70	19	*e*P	P	21 22 01.3	+2.4
AKASG	**Malin Array Be**	75.80	12	P	P	21 21 59.6	+0.2
	comp=Z,3.2nm,0.9s,baz=352,slow=5.2,SNR=10						
AKASG				LR	LR	21 57 49.7	
	comp=Z,89nm,18.7s,baz=295,slow=38						
AKASG	**Malin Array Be**	75.80	12	IAmb	IAmb	21 22 05.0	
	comp=Z,1.1nm,1.0s						
KWP	**Kalwaria Pacla**	75.84	17	*e*P	P	21 22 01.7	+2.0
SMOL	**Smolenice**	75.88	21	*e*P	P	21 22 02.4	+2.5
MODS	**Modra-Piesok**	75.98	21	*e*P	P	21 22 01.9	+1.4
CONA	**Conrad Observa**	76.09	22	*e*P	P	21 22 03.5	+2.2
	comp=Z,6.6nm,1.0s						
VYHS	**Vyhne**	76.20	20	*e*P	P	21 22 03.5	+1.8
KBA	**Koelnbreinsper**	76.30	24	*e*P	P	21 22 04.7	+2.1
	comp=Z,13nm,1.3s						
CRVS	**Cervenica-Dubn**	76.32	18	*e*P	P	21 22 04.1	+1.7
KOLS	**Kolonicke sedl**	76.44	17	*e*P	P	21 22 05.0	+1.9
ARSA	**Arzberg**	76.66	22	*e*P	P	21 22 06.7	+2.4
	comp=Z,12nm,1.6s						
MKAR	**Makanchi Array**	76.74	337	P	P	21 22 04.5	-0.4
	comp=Z,1.5nm,0.7s,baz=25,slow=4.5,SNR=15						
SOKA	**Soboth**	77.08	23	*e*P	P	21 22 08.4	+1.5
	comp=Z,15nm,1.4s						
OBKA	**Obir**	77.12	23	*e*P	P	21 22 08.8	+1.6
	comp=Z,4.2nm,0.8s						
TBI	**Tubuai**	77.21	197	*e*LR	LR	21 46 12.3	
	comp=Z,170nm,22.8s						
TBI	**Tubuai**	77.21	197	*e*T	T	22 46 35.5	
	comp=Z,22nm,0.3s						
ESDC	**Sonseca Array**	77.56	39	P	P	21 22 10.2	+0.6
	comp=Z,2.0nm,0.9s,baz=325,slow=5.7,SNR=10						
ESDC	**Sonseca Array**	77.56	39	P	P	21 22 11.0	+1.3
ESDC				IAmb	IAmb	21 22 15.0	
	comp=Z,2.8nm,1.1s						
WMQ	**Urumqi**	78.07	332	*e*P	P	21 22 15.8	+3.4
LZH	**Lanzhou**	79.25	317	*e*P	P	21 22 19.5	+0.3
LZH				pP	PcP	21 22 27.0	-0.5
LZH				sP	sP	21 22 30.0	+10
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
MLR	**Muntele Rosu**	80.41	16	LR	LR	21 59 21.4	
	comp=Z,62nm,20.4s,baz=352,slow=37						
KBZ	**Khabaz**	83.91	4	P	P	21 22 44.2	+0.8
	comp=Z,2.0nm,0.8s,baz=272,slow=4.8,SNR=4.7						
KSH	**Kashi**	85.10	339	P	P	21 22 52.5	+2.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,190nm,5.0s						
KEST	**Kesra**	85.72	31	P	P	21 22 53.4	+0.6
	comp=Z,5.6nm,0.8s,baz=161,slow=2.0,SNR=4.1						
KEST				LR	LR	22 01 59.4	
	comp=Z,123nm,18.1s,baz=232,slow=36						
BRTR	**Keskin Array B**	87.15	11	P	P	21 23 01.2	+1.4
	comp=Z,0.6nm,0.8s,baz=29,slow=2.8,SNR=4.9						
BRTR				LR	LR	22 05 46.7	
	comp=Z,19nm,18.9s,baz=318,slow=38						
DZM	**Mont Dzumac**	91.63	235	*e*LR	LR	21 52 50.2	
	comp=Z,280nm,23.6s						
BDFB	**Brasilia**	98.57	104	LR	LR	22 13 56.1	
	comp=Z,33nm,18.4s,baz=50,slow=39						
KOWA	**Kowa**	99.47	51	LR	LR	22 05 36.9	
	comp=Z,86nm,19.3s,baz=1.0,slow=33						
VNA3	**Neumayer Olymp**	148.77	148	PKPdf	PKiKP	21 29 59.4	-1.7
VNA1	**Neumayer--Stat**	149.29	147	PKPdf	PKPbc	21 30 00.1	-0.9
VNA2	**Neumayer--Watz**	149.54	148	PKPdf	PKiKP	21 30 01.5	-1.2
BOSA	**Boshof**	150.60	44	PKPbc	PKiKP	21 30 05.4	-1.0
	comp=Z,4.0nm,0.7s,baz=329,slow=2.5,SNR=9.4						
SNAA	**Sanae**	150.85	150	PKPdf	PKPbc	21 30 02.2	-2.7

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*NEIC **25** 21:16:07.5±0.9, 12.°24S±0.°07×77.°4W±0.°2, h44^{km}±18^{km},*
Error ellipse: s-maj=27.6km s-min=9.9km az=88.0
ARE 25 21:16:07±0.9**, 12.°3S**±0.°1×**77.°5W**±0.°1**, h29**^{km}±8^{km}**, ML4.0,**
mb3.9/2(NEIC)**, Error ellipse: s-maj=17.9km**
s-min=17.6km az=139.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	0.66	64	Pn	Pn	21 16 20.3	-0.2
NNA				Sn	Sb	21 16 28.6	-0.5
OTAV	**Otavalo**	12.48	355	Pn	Pn	21 19 02.3	-0.9
OTAV					Sn	21 21 20.0	-1.5
SDV	**Santo Domingo**	22.09	18	P	P	21 20 59.1	-1.1
SDV				IAmb	IAmb	21 21 00.3	
	comp=Z,10nm,1.0s						
CPUP	**Villa Florida**	23.53	129	P	P	21 21 13.4	-1.5
CPUP				IAmb	IAmb	21 21 17.8	
	comp=Z,2.8nm,1.1s						

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*JMA **25** 21:16:41.5±0.1, 24.°11N×121.°72E, h63^{km}±1^{km}, M2.2*
*TAP **25** 21:16:42.4, 24.°17N×121.°72E, h61^{km}, ML2.8, C*
ISC 25 21:16:42.9±1.2**, 24.°15N**±0.°02×**121.°79E**±0.°02**, h57**^{km}±5^{km}**,**
n113, σ1^{s}08/213**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	0.17	276	P	Pn	21 16 51.4	-0.5
	baz=259						
NACB				*e*S	Sn	21 16 57.7	-0.6
	baz=259						
TWD	**Chiawan**	0.19	247	P	Pn	21 16 51.7	-0.3
	baz=243						
TWD				S	Sn	21 16 58.0	-0.5
	baz=243						
HWA	**Hwalien**	0.24	223	*e*P	Pn	21 16 53.7	+1.4
	baz=201						
HWA				*e*S	Sn	21 17 00.4	+1.4
	baz=201						
ENA	**Nanau**	0.28	352	P	Pn	21 16 52.4	-0.2
	baz=357						
ENA				*e*S	Sn	21 17 00.3	+0.8
	baz=357						
ETLH	**Xiulin Townshi**	0.28	281	P	Pn	21 16 52.1	-0.6
	baz=275						
ETLH				S	Sn	21 16 59.2	-0.6
	baz=275						
ENAH	**Nanao**	0.29	4	*i* P	Pn	21 16 52.8	0.0
	baz=22						
ENAH				*i* S	Sn	21 17 01.2	+1.4
	baz=22						
TWC	**Suao**	0.46	7	P	Pn	21 16 54.5	+0.3
	baz=22						
TWC				S	Sn	21 17 03.8	+1.5
	baz=22						
NNSB	**Datong**	0.46	307	P	Pn	21 16 53.9	-0.5
	baz=310						
NNSB				*e*S	Sn	21 17 02.3	-0.4
	baz=310						
NNSH	**Datong**	0.46	307	*e*P	Pn	21 16 54.3	-0.1
	baz=310						
NNSH				S	Sn	21 17 02.3	-0.3
	baz=310						
ESL	**Shilin**	0.47	224	P	Pn	21 16 53.1	-1.2
	baz=222						
ESL				S	Sn	21 17 01.7	-0.9
	baz=222						
NNS	**Nan Shan**	0.47	307	*i* P	Pn	21 16 54.1	-0.4
	baz=311						
NNS				*e*S	Sn	21 17 02.2	-0.7
	baz=311						
WHF	**Hehuan Shan**	0.47	269	P	Pn	21 16 54.4	-0.5
	baz=266						
WHF				*e*S	Sn	21 17 03.1	-0.4
	baz=266						
FUSS	**Fushou**	0.50	281	P	Pn	21 16 54.7	-0.3
	baz=280						
FUSS				S	Sn	21 17 03.5	-0.2
	baz=280						
NDT	**Datong Townshi**	0.51	331	*i* P	Pn	21 16 54.4	-0.5
	baz=329						
NDT				S	Sn	21 17 03.4	0.0
	baz=329						
ENTT	**Nioudou**	0.52	338	*i* P	Pn	21 16 54.7	-0.3
	baz=341						
ENTT				S	Sn	21 17 03.8	+0.1
	baz=341						
TWT	**Tachien**	0.56	280	*e*P	Pn	21 16 56.2	+0.6
	baz=276						
TWT				*e*S	Sn	21 17 04.8	0.0
	baz=276						
CHGB	**Renai**	0.57	261	P	Pn	21 16 55.3	-0.4
	baz=255						
CHGB				S	Sn	21 17 05.5	+0.6
	baz=255						
TWE	**Neicheng**	0.57	349	P	Pn	21 16 55.2	-0.3
	baz=352						
TWE				*e*S	Sn	21 17 05.5	+0.9
	baz=352						
TDCB	**Techi**	0.58	280	P	Pn	21 16 55.3	-0.5
	baz=276						
TDCB				S	Sn	21 17 04.5	-0.5
	baz=276						
EGFH	**Guangfu**	0.58	214	*e*P	Pn	21 16 56.7	+1.0
	baz=217						
EGFH				S	Sn	21 17 04.5	-0.3
	baz=217						
YHNB	**Yeheng**	0.63	324	P	Pn	21 16 55.8	-0.5
	baz=328						
YHNB				S	Sn	21 17 05.5	-0.6
	baz=328						
NSK	**Sanguang**	0.65	323	*i* P	Pn	21 16 55.9	-0.6
	baz=327						
NSK				S	Sn	21 17 05.6	-0.8
	baz=327						
NWLT	**Wulai**	0.67	337	P	Pn	21 16 56.6	-0.1
	baz=335						
NWLT				S	Sn	21 17 06.7	-0.1
	baz=335						
NTC	**Toucheng**	0.70	3	*e*P	Pn	21 16 57.3	+0.3
	baz=2.0						
NTC				*e*S	Sn	21 17 08.5	+1.3
	baz=2.0						
HGSD	**Ruisui**	0.74	207	P	Pn	21 16 57.7	+0.2
	baz=210						
HGSD				*e*S	Sn	21 17 08.9	+0.8
	baz=210						
WPL	**Puli Township**	0.77	260	*e*P	Pn	21 16 57.7	-0.2
	baz=257						
WPL				*e*S	Sn	21 17 09.1	+0.2
	baz=257						
EHY	**Hungye**	0.77	213	*e*P	Pn	21 16 55.8	-2.1
	baz=208						
EHY				S	Sn	21 17 07.7	-1.2
	baz=208						
WHP	**Taichung City**	0.78	279	P	Pn	21 16 58.2	+0.2
	baz=278						
WHP				S	Sn	21 17 09.8	+0.6
	baz=278						
DPDB	**Guoxing**	0.79	261	P	Pn	21 16 58.2	-0.1
	baz=259						
DPDB				S	Sn	21 17 10.3	+0.8
	baz=259						
TIPB	**Shuangxi**	0.81	3	P	Pn	21 16 58.9	+0.4
	baz=358						
TIPB				*e*S	Sn	21 17 10.7	+0.8
	baz=358						
TWA	**Mucha**	0.84	347	P	Pn	21 16 57.7	-1.2
	baz=342						
TWA				*e*S	Sn	21 17 12.3	+1.8
	baz=342						
SSLB	**Suanglung**	0.84	245	P	Pn	21 16 58.5	-0.4
	baz=240						
SSLB				*e*S	Sn	21 17 10.2	-0.4
	baz=240						
SMLT	**Sun Moon Lake**	0.85	252	P	Pn	21 16 58.9	-0.1
	baz=244						
SMLT				*e*S	Sn	21 17 11.6	+0.7
	baz=244						
LIOB	**Emei**	0.85	305	P	Pn	21 16 59.1	+0.1
	baz=306						
LIOB				S	Sn	21 17 12.0	+1.1
	baz=306						
NSTT	**Nanjuang**	0.86	304	*i* P	Pn	21 16 59.1	+0.1
	baz=304						
NSTT				*i* S	Sn	21 17 11.5	+0.6
	baz=304						
TATO	**Taipei**	0.86	342	*e*P	Pn	21 16 58.2	-0.9
	baz=346						
TWB1	**Santiao Chiao**	0.87	12	*e*P	Pn	21 17 00.4	+1.2
	baz=30						
TWB1				*e*S	Sn	21 17 12.5	+1.4
	baz=30						
YULB	**Yu-li**	0.88	211	*e*P	Pn	21 16 57.6	-1.8
	baz=206						
YULB				*e*S	Sn	21 17 09.7	-1.7
	baz=206						
TYC	**Yuchr**	0.89	254	P	Pn	21 16 59.5	+0.1
	baz=247						
TYC				*e*S	Sn	21 17 13.1	+1.7
	baz=247						
EYUL	**Yuli**	0.91	208	*e*P	Pn	21 16 58.3	-1.4
	baz=209						
EYUL				*e*S	Sn	21 17 11.0	-1.1
	baz=209						
NWF	**Wu-fen Shan**	0.91	360	*e*P	Pn	21 17 00.4	+0.5
	baz=352						
NWF				*e*S	Sn	21 17 14.1	+1.8
	baz=352						
WFSB	**Wu-fen Shan**	0.91	360	*e*P	Pn	21 17 00.6	+0.9
	baz=352						
WFSB				*e*S	Sn	21 17 12.0	-0.1
	baz=352						
TWF1	**Yuli**	0.92	209	*e*P	Pn	21 16 59.2	-0.6
	baz=210						
TWF1				S	Sn	21 17 12.3	+0.1
	baz=210						
TWQ1	**Liyutan**	0.94	282	P	Pn	21 16 59.1	-1.1
	baz=289						
TWQ1				S	Sn	21 17 13.3	+0.4
	baz=289						
NTY	**Taoyuan**	0.95	332	*e*P	Pn	21 17 00.6	+0.4
	baz=335						
NTY				*e*S	Sn	21 17 13.8	+0.8
	baz=335						
SBCB	**Hsinchu**	0.97	311	*e*P	Pn	21 17 00.4	-0.1
	baz=323						
WHYT	**Xinyi Township**	0.97	242	*i* P	Pn	21 17 01.0	+0.5
	baz=244						
WHYT				*i* S	Sn	21 17 15.1	+1.7
	baz=244						
NCUH	**Zhongli**	0.98	326	*e*P	Pn	21 16 59.6	-1.0
	baz=328						
NCUH				*e*S	Sn	21 17 14.6	+1.0
	baz=328						
TNOU	**National Taiwa**	0.99	359	*e*P	Pn	21 17 00.1	-0.6
	baz=352						
TNOU				*e*S	Sn	21 17 14.3	+0.4
	baz=352						
WWF	**Wufeng**	1.00	264	*e*P	Pn	21 17 00.1	-0.7
	baz=261						
WWF				*e*S	Sn	21 17 15.9	+1.8
	baz=261						
TWS1	**Kuangyinshan**	1.00	341	*e*P	Pn	21 16 59.9	-1.0
	baz=344						
TWS1				S	Sn	21 17 13.8	-0.3
	baz=344						
YM01	**YM01**	1.01	349	P	Pn	21 17 01.0	0.0
	baz=343						
YM01				*e*S	Sn	21 17 12.9	-1.4
	baz=343						
YUS	**Yu-Shan**	1.01	229	P	Pn	21 17 01.3	-0.2
	baz=218						
YUS				*e*S	Sn	21 17 15.9	+0.8
	baz=218						
TCU	**Taichung**	1.01	270	*i* P	Pn	21 17 00.6	-0.4
	baz=267						
TCU				S	Sn	21 17 14.1	-0.4
	baz=267						
YM10	**YM10**	1.02	348	P	Pn	21 17 00.9	-0.3
	baz=343						
YM10				*e*S	Sn	21 17 13.4	-1.3
	baz=343						
YM04	**YM04**	1.02	347	*e*P	Pn	21 17 00.6	-0.6
	baz=351						
YM04				*e*S	Sn	21 17 14.0	-0.7
	baz=351						
WJS	**Zhushan**	1.02	251	P	Pn	21 17 01.6	+0.4
	baz=248						
WJS				*e*S	Sn	21 17 16.4	+1.8
	baz=248						
YM05	**YM05**	1.02	349	*e*P	Pn	21 17 00.4	-0.9
	baz=343						
YM05				*e*S	Sn	21 17 14.3	-0.5
	baz=343						
YM11	**YM11**	1.02	349	P	Pn	21 17 00.1	-1.2
	baz=344						
YM11				S	Sn	21 17 15.1	+0.2
	baz=344						
WNT1	**Nantou City**	1.04	257	*e*P	Pn	21 17 02.3	+0.9
	baz=253						
WNT1				*e*S	Sn	21 17 16.4	+1.3
	baz=253						
WNT	**Mingjian**	1.04	255	P	Pn	21 17 02.1	+0.7
	baz=252						
WNT				S	Sn	21 17 17.3	+2.2
	baz=252						
YM03	**YM03**	1.04	348	*e*P	Pn	21 16 59.4	-2.2
	baz=351						
YM03				*e*S	Sn	21 17 14.1	-1.2
	baz=351						
YM08	**YM08**	1.04	350	P	Pn	21 16 59.9	-1.6
	baz=345						
YM08				S	Sn	21 17 14.0	-1.2
	baz=345						
FULB	**Fuli**	1.05	205	P	Pn	21 17 02.0	+0.4
	baz=208						
FULB				S	Sn	21 17 16.1	+0.7
	baz=208						
JYNG	**Yonagunijimaku**	1.10	74	P	Pn	21 17 02.3	+0.1
JYNG				S	Sn	21 17 16.8	+0.4
ALS	**Alishan**	1.10	235	P	Pn	21 17 02.5	0.0
	baz=224						
ALS				*e*S	Sn	21 17 19.0	+2.0
	baz=224						
CHKT	**Chengkung**	1.12	200	*e*P	Pn	21 17 02.7	+0.2
	baz=196						
CHKT				*e*S	Sn	21 17 16.9	0.0
	baz=196						
WCHH	**Zhanghua**	1.12	266	*e*P	Pn	21 17 01.9	-0.6
	baz=264						
WCHH				*e*S	Sn	21 17 17.9	+0.9
	baz=264						
TWY	**Chenhua**	1.13	351	*e*S	Sn	21 17 16.4	-0.8
	baz=346						
CHN5	**Tsauling**	1.16	242	P	Pn	21 17 03.3	+0.2
	baz=229						
CHN5				*e*S	Sn	21 17 20.0	+2.0
	baz=229						
YOJ	**Yonaguni jima**	1.16	74	P	Pn	21 17 03.2	+0.2
YOJ				S	Sn	21 17 18.7	+0.8
YOJ	**Yonaguni jima**	1.16	74	P	Pn	21 17 03.2	+0.2
	baz=77						
YOJ				S	Sn	21 17 19.5	+1.6
	baz=77						
ELDTW	**Lidau**	1.19	216	P	Pn	21 17 03.4	-0.2
	baz=206						
ELDTW				*e*S	Sn	21 17 18.6	-0.2
	baz=206						
WGK	**Gukeng**	1.21	248	*e*P	Pn	21 17 04.0	+0.3
	baz=244						
WGK				S	Sn	21 17 22.1	+2.9
	baz=244						
WDLH	**Douliu**	1.23	248	*e*P	Pn	21 17 04.3	+0.3
	baz=245						
WDLH				S	Sn	21 17 22.2	+2.6
	baz=245						
EDH	**Donghe**	1.26	201	*e*P	Pn	21 17 01.9	-2.4
	baz=197						
EDH				S	Sn	21 17 21.0	+0.8
	baz=197						
CHN2	**Minshiung**	1.35	243	*e*S	Sn	21 17 25.4	+3.0
	baz=231						
TPUB	**Ta-pu**	1.36	231	P	Pn	21 17 06.2	+0.5
	baz=228						
TPUB				*e*S	Sn	21 17 23.3	+0.6
	baz=228						
WTK	**Tuku**	1.36	250	*e*P	Pn	21 17 06.1	+0.4
	baz=259						
WTK				*e*S	Sn	21 17 23.9	+1.2
	baz=259						
STYT	**Tauyuan**	1.36	224	P	Pn	21 17 06.5	+0.7

	baz=220						
STYT				S	Sn	21 17 23.6	+0.7
	baz=220						
LONT	Longtian	1.38	206	eP	Pn	21 17 05.3	-0.7
	baz=193						
LONT				eS	Sn	21 17 22.3	-0.9
	baz=193						
WTP	Ta-pu	1.40	230	P	Pn	21 17 06.2	-0.1
	baz=226						
WTP				S	Sn	21 17 25.4	+1.6
	baz=226						
CHY	Chiayi	1.41	243	eP	Pn	21 17 07.1	+0.8
	baz=229						
CHY				S	Sn	21 17 24.6	+0.8
	baz=229						
TWG	Pinlang	1.48	206	eS	Sn	21 17 23.9	-1.8
	baz=193						
TWGBT	Beinan	1.48	206	eP	Pn	21 17 07.3	0.0
	baz=193						
TWGBT				eS	Sn	21 17 23.7	-2.0
	baz=193						
TWK	Hsinying	1.48	234	P	Pn	21 17 07.9	+0.5
	baz=230						
TWK				S	Sn	21 17 27.5	+1.7
	baz=230						
PCYT	Pengchaiyu	1.49	10	eP	Pn	21 17 06.6	-0.9
	baz=17						
PCYT				eS	Sn	21 17 27.7	+1.8
	baz=17						
CHN1	Nanshi	1.50	230	P	Pn	21 17 07.9	+0.2
	baz=227						
CHN1				S	Sn	21 17 27.5	+1.3
	baz=227						
LDUT	Ludao	1.50	191	eP	Pn	21 17 06.8	-0.8
	baz=181						
LDUT				eS	Sn	21 17 23.6	-2.5
	baz=181						
SNST	Tainan City	1.50	232	eP	Pn	21 17 07.1	-0.5
	baz=229						
SNST				eS	Sn	21 17 27.2	+1.0
	baz=229						
TTN	Taitung	1.51	203	eP	Pn	21 17 06.6	-1.2
	baz=192						
TTN				eS	Sn	21 17 24.4	-2.0
	baz=192						
WLGB	Puzi	1.52	244	eS	Sn	21 17 28.3	+1.7
	baz=241						
WSF	Szhu	1.52	251	eP	Pn	21 17 07.6	-0.2
	baz=257						
WSF				eS	Sn	21 17 27.2	+0.6
	baz=257						
SGST	Jiashian	1.54	226	eP	Pn	21 17 08.1	+0.1
	baz=222						
SGST				eS	Sn	21 17 28.0	+1.0
	baz=222						
SLGT	Liugui	1.56	222	P	Pn	21 17 09.2	+0.8
	baz=211						
SLGT				S	Sn	21 17 29.9	+2.3
	baz=211						
ICHU	Yijhu	1.59	241	eP	Pn	21 17 09.4	+0.6
	baz=227						
ICHU				eS	Sn	21 17 31.1	+2.8
	baz=227						
CHN8	Yiju	1.65	241	eS	Sn	21 17 32.4	+2.6
	baz=238						
ECL	Taimali	1.73	206	eP	Pn	21 17 09.4	-1.3
	baz=197						
ECL				S	Sn	21 17 30.3	-1.3
	baz=197						
SSD	Sandimen	1.76	217	eP	Pn	21 17 12.2	+1.2
	baz=224						
SSD				eS	Sn	21 17 34.5	+2.1
	baz=224						
TSMG	Majia	1.78	216	eP	Pn	21 17 12.5	+1.1
	baz=224						
TSMG				eS	Sn	21 17 33.7	+0.7
	baz=224						
IRIF	Iriomote-Funau	1.78	84	P	Pn	21 17 11.3	-0.1
IRIF				S	Sn	21 17 33.0	0.0
MASBT	Mashibuluo	1.86	215	eP	Pn	21 17 13.8	+1.3
	baz=224						
MASBT				eS	Sn	21 17 36.5	+1.5
	baz=224						
JKRS	Kuro-shima	2.03	87	P	Pn	21 17 15.3	+0.5
JKRS				S	Sn	21 17 39.9	+0.8
PNG	Penghu	2.12	254	eS	Sn	21 17 37.8	-3.5
	baz=251						
PHUB	P'eng-hu	2.12	253	S	Sn	21 17 39.9	-1.5
	baz=250						
JIJ	Ishigaki jima	2.16	84	P	Pn	21 17 16.4	-0.2
JIJ				S	Sn	21 17 41.7	-0.5
PTTC	Pingtan	2.27	307	eP	Pn	21 17 16.4	-1.7
	baz=305						
VWUC	VWUC	2.28	292	eP	Pn	21 17 17.8	-0.5
	baz=290						
JISG	Ishigakijimahi	2.34	79	P	Pn	21 17 18.7	-0.3
JISG				S	Sn	21 17 46.3	-0.4
PTMZ	Houxiangcun	2.58	291	eP	Pn	21 17 20.6	-1.7
	baz=288						
MATB	Ma-tsu	2.59	320	eP	Pn	21 17 22.3	-0.2
	baz=326						
MATB				eS	Sn	21 17 52.8	-0.1
	baz=326						
LYJJ	Jianjiangzhen	3.01	323	eS	Sn	21 18 02.6	-0.4
	baz=330						
XPSS	Dashiqiu	3.12	333	eP	Pn	21 17 29.7	+0.1
	baz=331						
XPSS				eS	Sn	21 18 05.1	-0.6
	baz=331						

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*NOU **25** 21:21:21.8, 41°.45S×179°.26E, h124^{km}, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL 25 21:21:27.9±0.5, **41°S**±3°×**17°9E**±°, **h33**^{km}, **M3.2**/27, **ML3.5**/27, **MLv3.2**/27, **Error ellipse: s-maj=0.0km s-min=0.0km az=40.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRHZ	Porangahau	1.73	304	P	Pn	21 21 54.9	-0.8
ANWZ	Angora Road	1.73	296	P	Pn	21 21 55.1	-0.5
ANWZ				S	Sn	21 22 16.9	+0.2
PXZ	Pawanui	1.75	314	P	Pn	21 21 56.7	+0.9
PXZ				S	Sb	21 22 20.0	-0.9
BFZ	Birch Farm	1.81	287	P	Pn	21 21 57.9	+1.2
KAHZ	Kahuranaki	1.91	319	P	Pn	21 21 59.5	+1.3
KAHZ				S	Sn	21 22 22.9	+1.7
WPHZ	Waipukurau	1.97	306	P	Pn	21 22 00.4	+1.5
WPHZ				S	Sb	21 22 25.2	-2.1
TMWZ	Te Maipa	1.98	273	P	Pn	21 22 00.2	+1.0
TMWZ				S	Sn	21 22 21.4	-1.5
DVHZ	Dannevirke	2.02	297	P	Pn	21 22 00.8	+1.1
PRWZ	Pori Road	2.04	289	P	Pn	21 22 01.8	+1.8
TRWZ	Traveller	2.13	265	P	Pn	21 22 01.9	+0.7
TRWZ				S	Sn	21 22 25.9	-0.6
MHGZ	Mahia Peninsul	2.14	347	P	Pn	21 22 01.3	0.0
MHGZ				S	Sn	21 22 24.5	-2.2
PNHZ	Pukenui	2.21	306	P	Pn	21 22 03.7	+1.4
POWZ	Post Office Ro	2.25	291	P	Pn	21 22 04.4	+1.6
MCHZ	McNeill Hill	2.27	322	P	Pn	21 22 04.5	+1.4
MCHZ				S	Sn	21 22 27.9	-2.1
MTW	Mount Morrison	2.27	271	P	Pn	21 22 03.4	+0.3
MTW				S	Sn	21 22 27.9	-2.1
TSZ	Takapari Road	2.27	301	P	Pn	21 22 04.5	+1.4
KRHZ	Kereru	2.29	314	P	Pn	21 22 04.4	+1.0
KRHZ				S	Sn	21 22 32.1	+1.7
HOWZ	Holdsworth Sta	2.29	278	P	Pn	21 22 04.6	+1.2
HOWZ				S	Sn	21 22 28.3	-2.2
ARHZ	Aropaoanui	2.29	329	P	Pn	21 22 04.4	+1.0
ARHZ				S	Sn	21 22 28.6	-2.0
MRZ	Mangatainoka R	2.30	284	P	Pn	21 22 04.3	+0.8
KNZ	Kokohu	2.31	344	P	Pn	21 22 03.5	-0.2
PAWZ	Paruwai Farm	2.33	266	P	Pn	21 22 05.0	+1.1
PAWZ				S	Sn	21 22 28.8	-2.6
PRGZ	Paritu Road	2.37	348	P	Pn	21 22 04.3	-0.2
WHHZ	Waihua	2.38	335	P	Pn	21 22 05.8	+1.2
KWHZ	Kaweka Forest	2.42	318	P	Pn	21 22 06.4	+1.1
MSWZ	Moikau Station	2.46	265	P	Pn	21 22 06.2	+0.5
NMHZ	Naumai	2.51	328	P	Pn	21 22 08.0	+1.5
OGWZ	Otaki Gorge	2.56	279	P	Pn	21 22 08.1	+1.0
BHHZ	Black Hill Sta	2.56	312	P	Pn	21 22 08.5	+1.3
RAHZ	Arahi	2.57	334	P	Pn	21 22 08.1	+0.9
RAHZ				S	Sn	21 22 33.9	-3.5
BKZ	Black Stump Fm	2.59	323	P	Pn	21 22 08.5	+0.9
BKZ				S	Sn	21 22 34.9	-3.1
RIGZ	Rimuhau	2.60	347	P	Pn	21 22 07.8	+0.1
CAW	Cannon Point	2.60	272	P	Pn	21 22 08.3	+0.6
SNGZ	Shannon Statio	2.62	340	P	Pn	21 22 08.4	+0.4
MTHZ	Maungataniwha	2.71	331	P	Pn	21 22 09.9	+0.7
MTHZ				S	Sn	21 22 37.5	-3.4
KIW	Kapiti Island	2.75	277	P	Pn	21 22 10.7	+1.0
CNGZ	Carnagh Statio	2.77	355	P	Pn	21 22 09.6	-0.3
MOVZ	Moawhango	2.80	310	P	Pn	21 22 12.2	+1.8
TKGZ	Te Karaka	2.85	349	P	Pn	21 22 11.1	0.0
RAGZ	Rawiri	2.87	343	P	Pn	21 22 12.4	+0.9
RTZ	Ruatahuna	2.88	335	P	Pn	21 22 12.1	+0.5
MRHZ	Matea Rd	2.90	326	P	Pn	21 22 13.3	+1.5
WNVZ	Wahianoa	2.94	310	P	Pn	21 22 14.7	+2.3
TUVZ	Tukino	2.95	311	P	Pn	21 22 15.1	+2.6
WHVZ	Whangaehu Hut	2.97	310	P	Pn	21 22 15.5	+2.5
MTVZ	Mangateitei	2.98	308	P	Pn	21 22 15.4	+2.5
MWZ	Matawai	3.01	345	P	Pn	21 22 13.2	-0.1
ETVZ	East Tongariro	3.01	314	P	Pn	21 22 15.4	+2.0
OTVZ	Oturere	3.01	313	P	Pn	21 22 15.5	+2.1
TMVZ	Te Maari	3.02	314	P	Pn	21 22 15.6	+2.0
NGZ	Ngauruhoe	3.04	312	P	Pn	21 22 16.0	+2.1
MUGZ	Murupara	3.07	334	P	Pn	21 22 15.2	+1.1
WAZ	Wanganui	3.07	298	P	Pn	21 22 17.1	+2.9
WTVZ	West Tongariro	3.09	313	P	Pn	21 22 16.7	+2.2
TWGZ	Tauwhareparae	3.09	352	P	Pn	21 22 15.4	+0.9
PKVZ	Pokaka	3.11	308	P	Pn	21 22 17.2	+2.5
KATZ	Kakaramea	3.13	316	P	Pn	21 22 17.2	+2.2
ALRZ	Allen Road	3.16	327	P	Pn	21 22 17.1	+1.8
URZ	Urewera	3.17	340	P	Pn	21 22 15.7	+0.2
PUZ	Puketiti	3.18	356	P	Pn	21 22 15.2	-0.4
TCW	Tory Channel	3.19	269	P	Pn	21 22 16.7	+0.9
WPRZ	Whakapapatarin	3.27	326	P	Pn	21 22 18.3	+1.4
HRRZ	Handcock Road	3.33	328	P	Pn	21 22 18.5	+0.8
RUGZ	Raukumara Rang	3.34	349	P	Pn	21 22 17.3	-0.6
PKGZ	Pakihiroa	3.37	354	P	Pn	21 22 18.5	+0.2
TARZ	Mount Tarawera	3.38	332	P	Pn	21 22 19.5	+1.0
HSRZ	Hossack Road	3.41	328	P	Pn	21 22 20.4	+1.6
EDRZ	Edgecumbe	3.42	336	P	Pn	21 22 19.6	+0.6
WMGZ	Waiomatatini S	3.42	359	P	Pn	21 22 19.0	0.0
DUWZ	D’Urville Isla	3.50	276	P	Pn	21 22 21.5	+1.5
HAZ	Te Kaha	3.53	351	P	Pn	21 22 20.4	0.0
MXZ	Matakaoa Point	3.68	357	P	Pn	21 22 22.5	0.0
OPRZ	Ohinepanea	3.72	335	P	Pn	21 22 23.3	+0.3
KHZ	Kahutara	3.89	251	P	Pn	21 22 26.1	+0.7
HIZ	Hauiti	3.92	313	P	Pn	21 22 27.7	+2.0
PKE	Pukeiti	4.02	299	P	Pn	21 22 30.9	+3.6
TOZ	Tahuroa Road	4.21	325	P	Pn	21 22 30.6	+0.8
THZ	Tophouse	4.24	261	P	Pn	21 22 31.0	+0.8
CTZ	Chatham Island	4.38	126	P	Pn	21 22 33.1	+1.1
CTZ				S	Sn	21 23 17.4	-4.5
GVZ	Greta Valley S	4.42	245	P	Pn	21 22 32.9	+0.2
GVZ				S	Sn	21 23 19.0	-4.0
LTZ	Lake Taylor	4.89	250	P	Pn	21 22 39.8	+0.6
MQZ	McQueen’s Vall	4.98	238	P	Pn	21 22 38.6	-1.7
MQZ				S	Sn	21 23 30.6	-6.1
ETAZ	East Tamaki Re	5.11	326	P	Pn	21 22 43.7	+1.6
MBAZ	Motutapu North	5.28	327	P	Pn	21 22 46.2	+1.7
WTAZ	Waiatarua	5.29	323	P	Pn	21 22 46.5	+1.9
ARCZ	Arundel	6.05	241	P	Pn	21 22 54.7	-0.3
TMZ	Timaru	6.35	238	P	Pn	21 22 58.3	-0.8

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*IDC **25** 21:45:11.8±1.0, 27°.43N×56°.12E, h0^{km}, mb3.7/16, mb1 3.8/21, mb1mx3.7/58, mbtmp3.7/21, ML3.6/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/48, Error ellipse: s-maj=20.2km s-min=15.8km az=12.0*

*THR **25** 21:45:11.9±0.4, 27°.39N×56°.18E, h14^{km}±2^{km}, ML3.8*

*TEH **25** 21:45:12.3, 27°.45N×56°.13E, h10^{km}, ML3.7*

*OMAN **25** 21:45:13.7±1.8, 27°.51N×56°.42E, h10^{km}, mb5.5/2, Error ellipse: s-maj=41.9km s-min=11.2km az=315.0*

ISC 25 21:45:12.6±1.3, **27°.50N**±0°.04×**56°.18E**±0°.04, **h3**^{km}±9^{km}, **n86**, σ1^{s}.**25**/90, **mb3.6**/16, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.10	184	ePg	Pg	21 45 14.6	0.0
BNDS	Bandar-Abbas	0.10	184	ePg	Pg	21 45 14.7	+0.1
BNDS				AML	AML	21 45 17.1	
	comp=E,39µm,0.3s						
BNDS				AML	AML	21 45 17.2	
	comp=N,43µm,0.4s						
BNDS	Bandar-Abbas	0.10	184	ePg	Pg	21 45 14.7	+0.1
IBND	Bandar-abas	0.32	98	ePg	Pg	21 45 18.8	0.0
IBND				e		21 45 34.2	
	comp=Z,99nm,0.4s						
KHNJ	Kahnooj	1.43	71	ePg	Pn	21 45 38.8	-0.6
SHME	Shamm	1.44	181	ePn	Pn	21 45 39.6	0.0
SHME	Shamm	1.44	181	P	Pn	21 45 39.8	+0.2
	SNR=12						
SHME				S	Sg	21 46 00.5	+1.5
BANOM	Banah	1.57	176	ePn	Pn	21 45 41.9	+0.5
BANOM	Banah	1.57	176	P	Pn	21 45 41.9	+0.5
	SNR=20						
BANOM				S	Sg	21 46 03.6	+0.5
LAR1	LAR	1.61	277	ePg	Pn	21 45 41.7	-0.3
LAR1				e		21 46 29.5	
	comp=Z,99nm,0.5s						
UMQ	Umm Al-Quwin	2.02	193	ePn	Pb	21 45 49.7	-0.2
MASF	Masafi	2.12	180	P	Pn	21 45 50.0	+1.1
	SNR=16						
MSFE	Esma-Masafi	2.13	180	ePn	Pn	21 45 50.5	+1.4
MDH	Madha	2.19	177	ePn	Pb	21 45 51.9	-1.0
MDH	Madha	2.19	177	P	Pn	21 45 51.6	+1.6
NGRK	Negar Kerman	2.19	13	ePn	Pn	21 45 52.2	+1.9
NGRK				e		21 45 59.9	
	comp=Z,99nm,0.4s						
JHRM	Jahrom	2.51	294	ePn	Pn	21 45 54.3	-0.1
KRBR	Kerman	2.53	12	ePn	Pn	21 45 56.1	+1.3
KRBR	Kerman	2.53	12	ePn	Pn	21 45 56.1	+1.3
TVBK	TV Kerman	2.53	11	ePn	Pn	21 45 56.4	+1.5
TVBK				e		21 46 04.3	
	comp=Z,99nm,0.3s						
NAZ	Nazwa, Dubai	2.54	191	ePn	Pn	21 45 55.1	+0.4
UOSS	Minazif	2.54	179	ePn	Pn	21 45 55.4	+0.7
UOSS	Minazif	2.54	179	P	Pn	21 45 55.5	+0.8
KBAM	BAM	2.58	50	ePn	Pn	21 45 57.4	+2.0
KBAM				e		21 46 01.9	
	comp=Z,99nm,0.4s						
CHMN	Cheshme madani	2.64	27	ePn	Pn	21 45 58.7	+2.3
CHMN				e		21 46 44.4	
	comp=Z,99nm,0.6s						
HATD	Hatta, Dubai	2.66	181	ePn	Pn	21 45 56.9	+0.5
HATD	Hatta, Dubai	2.66	181	P	Pn	21 45 57.7	+1.3
FAQ	Al Faqa, Dubai	2.79	191	ePn	Pn	21 45 59.4	+1.2
FAQ	Al Faqa, Dubai	2.79	191	P	Pn	21 45 59.0	+0.9
ASHO	Ashiyiah	2.80	182	P	Pn	21 45 59.7	+1.3
	SNR=11						
KHGB	Koh Gabri	2.88	5	ePn	Pn	21 46 01.8	+2.2
KHGB				e		21 46 47.4	
	comp=Z,99nm,0.6s						
QIR1	Qir	2.94	290	ePn	Pn	21 46 01.7	+1.4
ASUD	Al Ashush, Dub	2.96	195	ePn	Pn	21 46 02.2	+1.7
ASUD	Al Ashush, Dub	2.96	195	P	Pn	21 46 02.6	+2.1
	SNR=16						
SOHO	SOHO	3.36	174	ePn	Pn	21 46 06.9	+0.9
SOHO	SOHO	3.36	174	P	Pn	21 46 06.4	+0.4
ALNE	Al Ain	3.45	187	ePn	Pn	21 46 08.2	+1.0
HOQ	Hoqain	4.03	165	P	Pn	21 46 14.6	-0.6
IMEH	Mehriz	4.11	341	ePn	Pn	21 46 17.8	+1.2
ARQ	Araqi	4.15	176	P	Pn	21 46 18.5	+1.5
MZWR	Madinat Zayed	4.26	210	ePn	Pn	21 46 19.4	+1.0
AHBU	AHRAM	4.52	289	ePn	Pn	21 46 22.6	+0.6
WSAR	Wadi Sarin	4.78	152	Pn	Pn	21 46 25.4	-0.2
	comp=Z,3.9nm,0.3s,baz=344,slow=12,SNR=22						
WSAR				Sn	Sn	21 47 20.6	-1.0
	comp=Z,2.3nm,0.3s,baz=106,slow=19,SNR=6.0						
ISAD	Sadrabad	4.91	334	ePn	Pn	21 46 29.9	+2.4
ICHK	Chekchek	4.97	342	ePn	Pn	21 46 30.2	+1.8
BSRN	Basiran	5.14	29	ePn	Pn	21 46 32.1	+1.5
BSRN				eSg	Sg	21 47 53.8	-3.9
BSRN	Basiran	5.14	29	ePn	Pn	21 46 32.1	+1.5
NHDN	Nehbandan	5.14	40	ePn	Pn	21 46 33.2	+2.5
IRAM	Ramesheh	5.42	323	ePn	Pn	21 46 35.9	+1.4
WBK	Wadi Bani Khal	5.48	152	P	Pn	21 46 34.7	-0.6
IKOO	Kooshah	5.49	26	ePn	Pn	21 46 37.6	+2.1
TPRV	Parvadeh(Tabas	5.53	4	ePn	Pn	21 46 37.7	+1.8
ANAR	Anarak	6.06	340	ePn	Pn	21 46 44.6	+1.4
IGAR	Gharneh	6.07	325	ePn	Pn	21 46 44.6	+1.2
IZEF	Zefreh	6.33	329	ePn	Pn	21 46 47.6	+0.5
SHK1	Shahrekord	6.66	318	ePn	Pn	21 46 52.4	+0.9
MHTO	MHTO	6.68	165	P	Pn	21 46 52.3	+0.6
IPIR	Pirpir	6.91	320	ePn	Pn	21 46 56.0	+1.0
IKLH	Kolahrood	7.03	327	ePn	Pn	21 46 59.6	+2.9
KRSH	Karshahi	7.33	333	ePn	Pn	21 47 02.0	+1.3
QAM	Ghamsar	7.46	328	ePn	Pn	21 47 03.9	+1.4
IVRN	Varamin	8.39	334	ePn	Pn	21 47 16.5	+1.3
DOK	Doka	9.04	192	P	Pn	21 47 23.5	-0.5
SHAO	Shalim	9.44	183	P	Pn	21 47 29.7	+0.1
	SNR=15						
WHFO	Wadi Hawf	9.79	194	P	Pn	21 47 33.9	-0.4
	SNR=42						
GNI	Garni	15.78	326	Pn	Pn	21 48 56.9	+0.9
	comp=Z,0.1nm,0.3s,baz=159,slow=1.9,SNR=1.6						
MMAI	Mount Meron Ar	18.76	292	P	P	21 49 32.8	-0.1
	comp=Z,0.7nm,0.3s,baz=102,slow=14,SNR=4.7						
EIL	Elat	18.77	282	P	P	21 49 33.1	+0.2
	comp=Z,0.2nm,0.3s,baz=45,slow=8.3,SNR=1.4						
KBZ	Khabaz	19.42	330	P	P	21 49 41.1	+1.1
	comp=Z,0.1nm,0.3s,baz=246,slow=12,SNR=2.7						
AAK	Ala-Archa	21.21	40	P	P	21 49 59.7	0.0
	comp=Z,1.5nm,0.6s,baz=222,slow=8.6,SNR=6.7						
BRTR	Keskin Array B	22.32	309	P	P	21 50 10.4	-1.1
	comp=Z,0.5nm,0.5s,baz=130,slow=12,SNR=8.9						
AKTO	Aktyubinsk	22.95	3	P	P	21 50 17.6	-0.3
	comp=Z,0.8nm,0.5s,baz=307,slow=15,SNR=2.8						
AKTO				LR	LR	22 00 26.0	
	comp=Z,57nm,21.9s,baz=357,slow=40						
MKAR	Makanchi Array	28.15	40	P	P	21 51 07.0	+1.0
	comp=Z,0.4nm,0.4s,baz=226,slow=8.0,SNR=9.0						
KURBB	Kurchatov Arra	28.68	30	P	P	21 51 11.1	+0.5
	comp=Z,0.4nm,0.7s,baz=230,slow=8.5,SNR=1.5						
AKASG	Malin Array Be	30.91	326	P	P	21 51 30.8	+0.4
	comp=Z,0.4nm,0.4s,baz=129,slow=8.4,SNR=2.1						
OBN	Obninsk	31.06	338	P	P	21 51 33.0	+1.4
	comp=Z,2.0nm,0.5s,baz=150,slow=20,SNR=3.6						
ZALV	Zalesovo Beam	33.77	31	P	P	21 51 55.6	+0.2
	comp=Z,0.7nm,0.3s,baz=230,slow=9.3,SNR=5.2						
GERES	GERESS Array B	38.96	315	P	P	21 52 40.1	+0.2
	comp=Z,0.2nm,0.4s,baz=114,slow=6.4,SNR=4.0						
KHC	Kasperske Hory	39.12	315	eP	P	21 52 41.3	0.0
FINES	FINESS Array B	39.46	338	P	P	21 52 43.0	-0.8
	comp=Z,1.0nm,0.5s,baz=135,slow=10,SNR=8.0						
HFS	Hagfors	43.49	331	P	P	21 53 16.6	-0.4
	comp=Z,2.4nm,0.9s,baz=118,slow=9.2,SNR=6.5						
SONM	Songino Array	43.75	48	P	P	21 53 19.3	-0.1
	comp=Z,0.8nm,0.7s,baz=266,slow=9.2,SNR=8.8						
ARCES	ARCESS Array B	45.68	345	P	P	21 53 34.7	+0.3
	comp=Z,3.7nm,1.1s,baz=135,slow=8.2,SNR=2.1						
ESDC	Sonseca Array	50.70	300	P	P	21 54 13.2	-0.5
	comp=Z,0.4nm,0.8s,baz=78,slow=6.3,SNR=4.7						
TORD	Torodi Ar. Bea	52.66	266	P	P	21 54 26.7	-1.8
	comp=Z,1.7nm,0.5s,baz=61,slow=7.4,SNR=7.0						
ASAR	Alice Springs	90.58	116	P	P	21 58 16.8	+0.1
	comp=Z,0.3nm,0.8s,baz=303,slow=3.9,SNR=4.3						

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*SOME **25** 22:01:33.6, 46°.68N×80°.23E, h5^{km}*

*NNC **25** 22:01:33.9±0.5, 46°.73N×80°.19E, h0^{km}, mb2.7, mpv2.8, Error ellipse: s-maj=4.8km s-min=1.4km az=148.0*

ISC 25 22:01:32.1±1.2, **46°.78N**±0°.04×**80°.08E**±0°.04, **h8**^{km}±16^{km}, **n19**, σ1^{s}.**00**/32, **4C**, **Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	1.30	88	⇑P	Pg	22 01 57.0	-0.1
	2.3nm,0.5s						
MAKZ				⇑S	Sn	22 02 14.0	-0.4
	1.6nm,0.2s						
MK31	Makanchi Array	1.52	89	⇑P	Pb	22 02 00.5	-0.1
	0.4nm,0.2s,baz=270,slow=14,SNR=91						
MK31				⇑S	Sg	22 02 20.6	-0.4
	0.7nm,0.2s,baz=267,slow=29,SNR=9.3						
KAPS	Kapalarasan	1.58	199	eP	Pg	22 02 03.0	+0.6
	1.3nm,0.3s						
KAPS				eS	Sg	22 02 24.1	+1.2
	17nm,0.2s						
KAPS	Kapalarasan	1.58	199	P	Pg	22 02 03.0	+0.6
	1.3nm,0.3s						
KAPS				S	Sg	22 02 24.1	+1.2
	17nm,0.3s						
TDK	Taldyqorghan	2.13	214	eP	Pb	22 02 12.3	+1.3
	4.8nm,0.1s						
TDK				eS	Sg	22 02 40.0	-0.6
	16nm,0.3s						
TDK	Taldyqorghan	2.13	214	Pg	Pb	22 02 12.3	+1.3
	4.8nm,0.1s						
TDK				Lg	Lg	22 02 40.0	
	16nm,0.3s						
DJR	Jarkent	2.46	185	eP	Pg	22 02 18.4	-0.8
	0.4nm,0.1s						
DJR				eS	Sg	22 02 50.7	-0.4
	3.4nm,0.2s						
DJR	Jarkent	2.46	185	Pg	Pg	22 02 18.4	-0.8
	0.4nm,0.1s						
DJR				Lg	Lg	22 02 50.7	
	3.4nm,0.2s						
MNBS	Baschi	2.95	204	eP	Pg	22 02 28.2	-0.5
	1.4nm,0.3s						
MNBS				eS	Sg	22 03 07.5	+0.6
	9.3nm,0.4s						
MNBS	Baschi	2.95	204	Pg	Pg	22 02 28.2	-0.5
	1.4nm,0.3s						
MNBS				Lg	Lg	22 03 07.5	
	9.3nm,0.4s						
ARXS	Arharly	3.02	212	eP	Pg	22 02 29.7	-0.2
	1.2nm,0.4s						
ARXS				eS	Sg	22 03 09.9	+0.8
	4.1nm,0.4s						
ARXS	Arharly	3.02	212	Pg	Pg	22 02 29.7	-0.2
	1.2nm,0.4s						
ARXS				Lg	Lg	22 03 09.9	
	4.1nm,0.4s						
KPKS	Kokpek	3.46	197	eP	Pg	22 02 37.7	-0.8
	2.0nm,0.5s						
KPKS				eS	Sg	22 03 23.9	+0.6
	5.7nm,0.4s						
SEM	Semipalatinsk	3.63	2	eP	Pg	22 02 41.1	-0.5
	2.1nm,0.0s						
SEM				eS	Sg	22 03 29.9	+1.2
	9.9nm,0.2s						
CHKK	Chushkaly	3.65	218	eP	Pg	22 02 40.8	-1.2
	0.7nm,0.1s						
CHKK				eS	Sg	22 03 28.8	-0.5
	3.5nm,0.2s						
CHKK	Chushkaly	3.65	218	Pg	Pg	22 02 40.8	-1.2
	0.7nm,0.1s						
CHKK				Lg	Lg	22 03 28.8	
	3.5nm,0.2s						
UZB	Uzynbulak	3.71	192	eP	Pg	22 02 42.0	-1.2
	2.5nm,0.8s						
UZB				eS	Sg	22 03 31.6	+0.2
	3.4nm,0.3s						
KUU	Kurty	3.91	224	eP	Pg	22 02 45.0	-2.1
	0.5nm,0.3s						
KUU				eS	Sg	22 03 36.6	-1.1
	2.5nm,0.3s						
KUU	Kurty	3.91	224	Pg	Pg	22 02 45.0	-2.1
	0.5nm,0.3s						
KUU				Lg	Lg	22 03 36.6	
	2.5nm,0.3s						

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*IDC **25** 22:01:57.9±0.6, 14°.21N×146°.79E, h0^{km}, mb4.1/21, mb1 4.3/21, mb1mx4.2/48, mbtmp4.2/21, Error ellipse: s-maj=22.6km s-min=13.2km az=95.0*

*NEIC **25** 22:02:06.8±0.9, 14°.18N±0°.09×146°.7E±0°.1, h70^{km}±7^{km}, mb4.4/21, Error ellipse: s-maj=19.8km s-min=11.4km az=62.0*

ISC 25 22:02:03.3±0.6, **14°.19N**±0°.08×**146°.7E**±0°.1, **h37**^{km}, **n52**, σ**0**^{s}.**72**/52, **mb4.3**/30, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	21.40	227	P	P	22 06 50.0	+1.9
	19nm,1.0s,baz=46,slow=6.7,SNR=5.1						
INU	Inuyama	22.81	339	P	P	22 07 03.1	+0.2
INU				IAmb	IAmb	22 07 07.1	
	comp=Z,14nm,1.0s						
PMG	Port Moresby	23.44	179	P	P	22 07 09.1	-0.4
	comp=Z,5.9nm,0.2s,baz=40,slow=7.8,SNR=6.1						
PMG	Port Moresby	23.44	179	P	P	22 07 08.9	-0.5
PMG				IAmb	IAmb	22 07 09.8	
	comp=Z,17nm,0.9s						
MJAR	Matsushiro Arr	23.53	343	P	P	22 07 08.1	-2.1
	comp=Z,2.8nm,0.9s,baz=167,slow=9.8,SNR=6.5						
JNU	Nakatsue	23.73	325	P	P	22 07 11.5	-0.6
	comp=Z,22nm,1.0s,baz=271,slow=3.2,SNR=3.8						
JNU	Nakatsue	23.73	325	P	P	22 07 12.8	+0.6

KSRS	Korea Array	28.58	328	P	P	22 07 55.8	-0.1
	comp=Z,3.3nm,0.9s,baz=144,slow=9.8,SNR=7.9						
USRK	Ussuriysk Ar.	32.45	340	P	P	22 08 29.8	-0.2
	comp=Z,1.1nm,0.8s,baz=181,slow=13,SNR=2.5						
USRK	Ussuriysk Ar.	32.45	340	P	P	22 08 31.1	+1.1
WR0	Warramunga Arr	35.99	200	P	P	22 09 00.6	-0.3
WB2	Warramunga Arr	36.03	200	P	P	22 09 01.3	0.0
WRA	Warramunga Arr	36.04	200	P	P	22 09 00.4	-0.9
	comp=Z,6.0nm,0.9s,baz=22,slow=9.2,SNR=20						
WRA	Warramunga Arr	36.04	200	P	P	22 09 01.1	-0.3
ASAR	Alice Springs	39.65	199	P	P	22 09 31.4	-0.4
	comp=Z,1.0nm,1.0s,baz=27,slow=7.6,SNR=6.1						
ASAR	Alice Springs	39.65	199	P	P	22 09 31.9	0.0
CMAR	Chiang Mai Arr	45.95	282	P	P	22 10 23.8	+0.7
	comp=Z,0.7nm,0.3s,baz=65,slow=4.5,SNR=4.6						
CMAR	Chiang Mai Arr	45.95	282	P	P	22 10 22.8	-0.3
STKA	Stephens Creek	46.06	186	P	P	22 10 24.3	+0.7
	comp=Z,0.9nm,0.7s,baz=340,slow=6.9,SNR=2.8						
STKA	Stephens Creek	46.06	186	P	P	22 10 23.2	-0.4
ULN	Ulaanbaatar	46.94	324	P	P	22 10 30.7	+0.1
SONM	Songino Array	47.30	324	P	P	22 10 34.0	+0.6
	comp=Z,1.8nm,0.9s,baz=136,slow=6.4,SNR=12						
SONM	Songino Array	47.30	324	P	P	22 10 33.6	+0.2
SEY	Seymchan	48.85	3	P	P	22 10 45.7	+0.8
	comp=Z,1.1nm,0.6s,baz=181,slow=7.2,SNR=5.6						
LSA	Lhasa	53.33	297	P	P	22 11 19.2	-0.6
LSA				IAmb	IAmb	22 11 22.4	
	comp=Z,2.1nm,0.7s						
ZALV	Zalesovo Beam	62.20	324	P	P	22 12 21.1	+0.1
	comp=Z,1.6nm,0.7s,baz=97,slow=8.0,SNR=8.1						
ZALV	Zalesovo Beam	62.20	324	P	P	22 12 21.3	+0.3
MKAR	Makanchi Array	62.32	316	P	P	22 12 22.5	+0.5
	comp=Z,1.2nm,0.7s,baz=89,slow=8.9,SNR=14						
KTH	Kantishna Hill	65.21	26	P	P	22 12 40.7	-0.1
KURK	Kurchatov	65.29	320	P	P	22 12 41.5	0.0
KURK				IAmb	IAmb	22 12 42.7	
	comp=Z,6.1nm,0.9s						
BPAW	Bear Paw Mtn.	65.36	25	P	P	22 12 41.8	+0.1
BPAW				IAmb	IAmb	22 12 44.2	
	comp=Z,5.7nm,1.1s						
WRH	Wood River Hil	66.68	25	P	P	22 12 50.0	-0.2
WRH				IAmb	IAmb	22 12 54.3	
	comp=Z,5.2nm,1.0s						
COLD	Coldfoot	66.72	22	P	P	22 12 50.5	+0.2
COLD				IAmb	IAmb	22 12 56.1	
	comp=Z,4.6nm,1.0s						
ILAR	Eielson Array	67.26	25	P	P	22 12 53.2	-0.7
	comp=Z,1.4nm,0.9s,baz=253,slow=6.2,SNR=8.3						
ILAR	Eielson Array	67.26	25	P	P	22 12 52.5	-1.3
NIL	Nilore	68.62	301	P	P	22 13 02.7	-0.3
NIL				IAmb	IAmb	22 13 11.7	
	comp=Z,7.1nm,1.1s						
BMAR	Burnt Mountain	68.86	23	P	P	22 13 04.1	+0.2
BRVK	Borovoye	70.64	322	P	P	22 13 15.0	0.0
BRVK				IAmb	IAmb	22 13 19.0	
	comp=Z,5.8nm,1.1s						
INK	Inuvik	73.13	22	P	P	22 13 29.6	-0.1
	comp=Z,0.6nm,0.4s,baz=270,slow=5.2,SNR=4.2						
INK	Inuvik	73.13	22	P	P	22 13 29.8	+0.2
DLBC	Dease Lake	74.51	33	P	P	22 13 39.0	+1.0
	comp=Z,2.9nm,1.0s,baz=292,slow=3.5,SNR=3.3						
DLBC	Dease Lake	74.51	33	P	P	22 13 38.2	+0.1
C36M	Paulatuk	76.56	21	P	P	22 13 49.8	+0.4
C36M				IAmb	IAmb	22 13 50.3	
	comp=Z,4.8nm,1.0s						
ABKAR	Akbulak array	77.31	318		P	22 13 54.0	-0.1
YKA	Yellowknife Ar	81.50	28	P	P	22 14 16.4	-0.3
	comp=Z,1.1nm,0.9s,baz=287,slow=5.0,SNR=11						
NVAR	Mina Array Bea	85.14	52	P	P	22 14 37.1	+0.8
	comp=Z,1.0nm,0.8s,baz=261,slow=7.6,SNR=5.9						
ARCES	ARCESS Array B	87.06	342	P	P	22 14 44.3	-0.5
	comp=Z,3.8nm,0.8s,baz=55,slow=6.7,SNR=2.8						
ARCES	ARCESS Array B	87.06	342	P	P	22 14 44.4	-0.5
FINES	FINESS Array B	91.37	336	P	P	22 15 04.1	-1.1
	comp=Z,2.8nm,0.7s,baz=40,slow=4.2,SNR=11						
FINES	FINESS Array B	91.37	336	P	P	22 15 04.3	-0.9
DBIC	Dimbokro	145.00	304	PKPbc	PKPdf	22 21 37.9	+0.1
	comp=Z,11nm,1.0s,baz=45,slow=6.3,SNR=8.1						
DBIC	Dimbokro	145.00	304		PKPab	22 21 35.1	-2.0

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*NEIC **25** 22:05:44.3±1.2, 17°.08N±0°.10×146°.1E±0°.2, h171^{km}±7^{km}, mb4.1/6, Error ellipse: s-maj=28.2km s-min=12.2km az=105.0*

*IDC **25** 22:05:49.1±4.4, 17°.20N×145°.51E, h209^{km}±43^{km}, mb3.1/10, mb1 3.4/11, mb1mx3.2/45, mbtmp3.8/11, Error ellipse: s-maj=34.7km s-min=14.3km az=103.0*

ISC 25 22:05:47.7±0.8**, 17°.18N**±0°.09×**145°.7E**±0°.2**, h200**^{km}**, n22, σ1^{s}.16**/21**, mb3.6**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	0.84	180	Pn	Pn	22 06 09.7	-6.9
ANA2				Sn	Sn	22 06 29.5	-9.4
JCJ	Chichijima	10.39	342	P	Pn	22 08 11.9	0.0
	7.0nm,0.3s,baz=283,slow=23,SNR=7.9						
JCJ	Chichijima	10.39	342		Pn	22 08 11.4	-0.6
MJAR	Matsushiro Arr	20.39	342	P	P	22 10 09.4	+0.2
	0.4nm,0.4s,baz=164,slow=10,SNR=1.5						
SIJI	Sorong	22.90	220	P	P	22 10 35.3	+1.0
	8.6nm,0.8s,baz=105,slow=19,SNR=2.2						
KAPI	Kappang	33.82	232	P	P	22 12 13.0	+1.8
WB0	Warramunga Arr	38.36	197	P	P	22 12 49.1	-0.6
WB0				IAmb	IAmb	22 12 50.3	
	comp=Z,2.6nm,0.8s						
WR0	Warramunga Arr	38.51	197	P	P	22 12 49.7	-1.1
WR0				IAmb	IAmb	22 12 52.2	
	comp=Z,4.4nm,1.1s						
WB2	Warramunga Arr	38.54	197	P	P	22 12 50.5	-0.7
WB2				IAmb	IAmb	22 12 53.2	
	comp=Z,4.9nm,1.1s						
WRA	Warramunga Arr	38.55	197	P	P	22 12 50.8	-0.4
	comp=Z,1.3nm,0.8s,baz=354,slow=9.8,SNR=6.3						
WRA	Warramunga Arr	38.55	197	P	P	22 12 50.8	-0.4
FITZ	Fitzroy Crossi	40.24	210	P	P	22 13 05.8	+0.6
ASAR	Alice Springs	42.20	196	P	P	22 13 20.8	-0.3
	comp=Z,0.2nm,0.5s,baz=18,slow=11,SNR=2.1						
SONM	Songino Array	44.33	322	P	P	22 13 38.7	+0.6
	comp=Z,0.3nm,0.7s,baz=101,slow=7.5,SNR=1.5						
BBOO	Buckleboo	50.56	191	P	P	22 14 24.3	-1.6
BBOO				IAmb	IAmb	22 14 27.2	
	comp=Z,7.1nm,1.0s						
MKAR	Makanchi Array	59.52	315	P	P	22 15 27.9	-2.1
	comp=Z,0.3nm,0.8s,baz=124,slow=6.0,SNR=1.3						
ILAR	Eielson Array	65.00	26	P	P	22 16 05.7	-0.3
	comp=Z,0.5nm,0.6s,baz=249,slow=5.8,SNR=6.3						
ILAR	Eielson Array	65.00	26	P	P	22 16 05.2	-0.8
YKA	Yellowknife Ar	79.32	28	P	P	22 17 32.0	+1.2
	comp=Z,1.1nm,0.8s,baz=290,slow=5.0,SNR=8.9						
NVAR	Mina Array Bea	84.06	52	P	P	22 17 58.7	+2.2
	comp=Z,1.1nm,0.7s,baz=264,slow=5.4,SNR=7.6						
NVAR	Mina Array Bea	84.06	52	P	P	22 17 55.2	-1.3
PDAR	Pinedale Array	88.88	45	P	P	22 18 20.7	+0.9
	comp=Z,0.2nm,0.4s,baz=36,slow=0.8,SNR=3.9						

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*IASPEI **25** 22:08:54.0±0.8, 13°.74N±0°.02×89°.22W±0°.02, h11^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=2.1km az=20.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **25** 22:08:54.5±0.6, 13°.73N±0°.04×89°.16W±0°.08, h5^{km}±11^{km}, Error ellipse: s-maj=11.7km s-min=5.9km az=77.0*

*SNET **25** 22:08:54.2±1.3, 13°.74N×89°.23W, h7^{km}±1^{km}, ML3.6, Fault plane solution: NP1:ϕ_s189.34000°, δ71.25000°, λ-23.86000°.*

*UCR **25** 22:08:54.3±1.3, 13°.74N×89°.23W, h7^{km}±1^{km}, ML3.8, MW4.0, Fault plane solution: NP1:ϕ_s189.34000°, δ71.25000°, λ-23.86000°.*

*INET **25** 22:08:57.0, 13°.69N×89°.23W, h5^{km}, ML3.3*

ISC 25 22:08:53.9±0.7**, 13°.75N**±0°.02×**89°.21W**±0°.02**, h11**^{km}±4^{km}**, n66, σ0^{s}.49**/123**, 27C-13D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UESS	Universidad de	0.03	157	⇑iP	Pg	22 08 56.5	+0.4
UESS				eS	Sg	22 08 58.1	+0.4
UESS	Universidad de	0.03	157	⇑iP	Pg	22 08 56.5	+0.4
UESS				eS	Sg	22 08 58.1	+0.4
OPAM	Oficina de Pla	0.04	158	⇑eP	Pg	22 08 56.5	+0.3
OPAM				eS	Sg	22 08 58.0	+0.2
OPAM				IAML		22 08 59.0	
	comp=Z,52μm,0.2s						
OPAM	Oficina de Pla	0.04	158	⇑eP	Pg	22 08 56.5	+0.3
OPAM				eS	Sg	22 08 58.0	+0.2
OPAM				IAML		22 08 59.0	
	comp=Z,52μm,0.2s						
CRW	Hotel Crowe Pl	0.05	215	⇑iP	Pg	22 08 56.4	+0.1
CRW				eS	Sg	22 08 57.6	-0.3
CRW				AML	AML	22 08 59.8	
	comp=Z,43μm,0.1s						
IGN	Direccin Gen	0.05	129	⇑iP	Pg	22 08 56.7	+0.4
IGN				eS	Sg	22 08 58.3	+0.3
IGN	Direccin Gen	0.05	129	⇑iP	Pg	22 08 56.7	+0.4
IGN				eS	Sg	22 08 58.3	+0.3
CLUB	Club Campestre	0.06	221	⇑iP	Pg	22 08 56.5	+0.1
CLUB				eS	Sg	22 08 58.0	-0.2
CLUB				AML	AML	22 08 59.0	
	comp=Z,45μm,0.2s						
CLUB	Club Campestre	0.06	221	⇑iP	Pg	22 08 56.5	+0.1
CLUB				eS	Sg	22 08 58.0	-0.2
CLUB				AML	AML	22 08 59.0	
	comp=Z,45μm,0.2s						
CIGS	Centro de Inve	0.06	142	⇓iP	Pg	22 08 56.8	+0.4
CIGS				eS	Sg	22 08 58.4	+0.3
CIGS				AML	AML	22 08 59.5	
	comp=Z,76μm,0.2s						
SNET	Serv Nac Est T	0.06	196	⇑iP	Pg	22 08 56.3	-0.1
SNET				⇑iP	Pg	22 08 56.4	-0.1
	comp=Z,24μm,0.2s						
SNET				eS	Sg	22 08 57.7	-0.5
SNET				eS	Sg	22 08 57.8	-0.5
SNET				AML	AML	22 08 59.3	
	comp=Z,30μm,0.2s						
SNET				IAML		22 08 59.4	
	comp=Z,24μm,0.2s						
SNET	Serv Nac Est T	0.06	196	⇑iP	Pg	22 08 56.3	-0.1
SNET				⇑iP	Pg	22 08 56.4	-0.1
	comp=Z,24μm,0.2s						
SNET				eS	Sg	22 08 57.7	-0.5
SNET				eS	Sg	22 08 57.8	-0.5
SNET				AML	AML	22 08 59.3	
	comp=Z,30μm,0.2s						
SNET				IAML		22 08 59.4	
	comp=Z,24μm,0.2s						
SNET	Serv Nac Est T	0.06	196		Pg	22 08 56.3	-0.1
ITCA	Escuela Especi	0.10	220	⇑iP	Pg	22 08 56.9	+0.1
ITCA				eS	Sg	22 08 58.9	0.0
ITCA	Escuela Especi	0.10	220	⇑iP	Pg	22 08 56.9	+0.1
ITCA				eS	Sg	22 08 58.9	0.0
QUEZ	Alcaldia de Qu	0.10	326	⇓iP	Pb	22 08 57.8	-0.2
QUEZ				eS	Sg	22 08 60.0	+1.1
PMON	Piamonte	0.10	250	⇓iP	Pg	22 08 57.1	+0.2
PMON				eS	Sg	22 08 59.1	0.0
PMON	Piamonte	0.10	250	⇓iP	Pg	22 08 57.1	+0.2
PMON				eS	Sg	22 08 59.1	0.0
CEDA	San Andres	0.18	287	eP	Pb	22 08 58.7	-0.7
CEDA				eS	Sg	22 09 02.1	+1.3
CEDA				eS	Sg	22 09 02.1	+1.3
CEDA	San Andres	0.18	287	eP	Pb	22 08 58.7	-0.7
CEDA				eS	Sg	22 09 02.1	+1.3
CEDA				eS	Sg	22 09 02.1	+1.3
JAYA	Jayaque - finc	0.25	248	⇑iP	Pg	22 08 59.5	+0.3
JAYA				eS	Sg	22 09 03.1	+0.3
JAYA				IAML		22 09 04.0	
	comp=Z,14μm,0.2s						
JAYA	Jayaque - finc	0.25	248	⇑iP	Pg	22 08 59.5	+0.3
JAYA				eS	Sg	22 09 03.1	+0.3
JAYA				IAML		22 09 04.0	
	comp=Z,14μm,0.2s						
TACO	Tacachico	0.26	328	⇓iP	Pb	22 09 00.3	-0.3
TACO				eS	Sb	22 09 04.6	-0.5
TACO	Tacachico	0.26	328	⇓iP	Pb	22 09 00.3	-0.3
TACO				eS	Sb	22 09 04.6	-0.5
PAVA	Las Pavas	0.27	97	⇑iP	Pb	22 09 00.8	-0.1
PAVA				eS	Sb	22 09 05.4	-0.1
PAVA	Las Pavas	0.27	97	⇑iP	Pb	22 09 00.8	-0.1
PAVA				eS	Sb	22 09 05.4	-0.1
LALI	Alcalda de L	0.28	202	⇑iP	Pg	22 09 00.0	+0.4
LALI				eS	Sg	22 09 04.3	+0.8
LALI				IAML		22 09 05.6	
	comp=Z,7μm,0.3s						
LALI	Alcalda de L	0.28	202	⇑iP	Pg	22 09 00.0	+0.4
LALI				eS	Sg	22 09 04.3	+0.8
LALI				IAML		22 09 05.6	
	comp=Z,7μm,0.3s						
COEG	Centro de Oper	0.35	112	⇓eP	Pb	22 09 02.0	-0.2
	comp=Z,3μm,0.3s						
COEG				eS	Sb	22 09 07.3	-0.4
COEG	Centro de Oper	0.35	112	⇓eP	Pb	22 09 02.0	-0.2
	comp=Z,3μm,0.3s						
COEG				eS	Sb	22 09 07.3	-0.4
SNJE	San Jose	0.40	287	eP	Pb	22 09 02.9	-0.3
SNJE	San Jose	0.40	287	eP	Pb	22 09 02.9	-0.3
UNIC	Universidad Ca	0.40	305	⇓iP	Pb	22 09 02.5	-0.6
UNIC				eS	Sb	22 09 08.7	-0.5
UNIC	Universidad Ca	0.40	305	⇓iP	Pb	22 09 02.5	-0.6
UNIC				eS	Sb	22 09 08.7	-0.5
CEVE	Cerro Verde	0.41	281	eP	Pb	22 09 03.3	0.0
CEVE				eS	Sb	22 09 10.2	+0.6
CEVE				IAML		22 09 15.1	
	comp=Z,4μm,0.2s						
CEVE	Cerro Verde	0.41	281	eP	Pb	22 09 03.3	0.0
CEVE				eS	Sb	22 09 10.2	+0.6
CEVE				IAML		22 09 15.1	
	comp=Z,4μm,0.2s						
SBLS	San Blas	0.41	283	eP	Pb	22 09 03.3	0.0
SBLS	San Blas	0.41	283	eP	Pb	22 09 03.3	0.0
RTR	El Retiro	0.45	289	eP	Pb	22 09 03.7	-0.2
RTR	El Retiro	0.45	289	eP	Pb	22 09 03.7	-0.2
LLGN	La Laguna	0.49	32	⇑iP	Pb	22 09 04.5	-0.1
LLGN				eS	Sb	22 09 12.1	+0.3
LLGN	La Laguna	0.49	32	⇑iP	Pb	22 09 04.5	-0.1
LLGN				eS	Sb	22 09 12.1	+0.3
PQSS	Presa 15 de Se	0.65	101	eP	Pb	22 09 07.3	0.0
PQSS				eS	Sb	22 09 16.6	+0.4
MTO3	Montecristo	0.66	348	⇓iP	Pb	22 09 07.6	-0.1
MTO3				eS	Sb	22 09 17.2	+0.3
MTO3	Montecristo	0.66	348	⇓iP	Pb	22 09 07.6	-0.1
MTO3				eS	Sb	22 09 17.2	+0.3
MTO3	Montecristo	0.66	348		Pb	22 09 07.5	-0.1
MTO3				Sg	Sb	22 09 17.1	+0.1
COEB	Comit de Eme	0.71	110	⇑iP	Pb	22 09 08.5	+0.1
COEB				eS	Sb	22 09 18.5	+0.3
COEB				IAML		22 09 22.5	
	comp=Z,2μm,0.2s						
COEB	Comit de Eme	0.71	110	⇑iP	Pb	22 09 08.5	+0.1
COEB				eS	Sb	22 09 18.5	+0.3
COEB				IAML		22 09 22.5	
	comp=Z,2μm,0.2s						
TECA	Tecapa	0.74	110	eP	Pn	22 09 09.4	-1.0
TECA	Tecapa	0.74	110	eP	Pn	22 09 09.4	-1.0
ESQI	Esquipulas	0.82	351	⇓iP	Pb	22 09 10.5	+0.3
ESQI				eS	Sn	22 09 22.3	-1.2
ESQI	Esquipulas	0.82	351		Pb	22 09 10.5	+0.3
ESQI				Sg	Sn	22 09 22.4	-1.2
PACA	Pacayal	0.91	108	i P	Pn	22 09 12.5	-0.3
PACA				eS	Sn	22 09 25.2	-0.7
PACA	Pacayal	0.91	108	i P	Pn	22 09 12.5	-0.3
PACA				eS	Sn	22 09 25.2	-0.7
JUCU	Jucuar¡n	1.06	118	eP	Pb	22 09 14.0	-0.3
JUCU				eS	Sn	22 09 29.2	-0.3
JUCU	Jucuar¡n	1.06	118	eP	Pb	22 09 14.0	-0.3
JUCU				eS	Sn	22 09 29.2	-0.3
FAGO	Alcalda de S	1.08	93	eP	Pb	22 09 14.3	-0.3
FAGO				eS	Sn	22 09 29.2	-0.7
FAGO	Alcalda de S	1.08	93	eP	Pb	22 09 14.3	-0.3
FAGO				eS	Sn	22 09 29.2	-0.7
LCND	La Caada	1.36	109	eP	Pb	22 09 19.4	0.0
LCND				eS	Sg	22 09 38.5	+0.8
LCND	La Caada	1.36	109	eP	Pb	22 09 19.4	0.0
LCND				eS	Sg	22 09 38.5	+0.8
MRL	Marmol	1.40	341	⇑iP	Pg	22 09 20.6	-0.3
MRL	Marmol	1.40	341	⇑iP	Pg	22 09 20.6	-0.3
TGUH	Tegucigalpa,Un	1.91	81		Pn	22 09 27.1	+0.6
CRIN	San Cristobal	2.35	116	Pg	Pb	22 09 36.5	+0.1
RTAL	Retalhuleu	2.53	288	Pg	Pb	22 09 40.6	+1.2
JTS	Las Juntas de	5.40	129	Pn	Pn	22 10 15.3	+0.8

WEL 25 22:13:53.4±0.8**, 45°S**±3°×**16°7E**±°**, h12**^{km}**, M3.7**/13**, ML3.9**/13**, MLv3.7**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.8, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.34	123	P	Pb	22 14 01.8	+0.4
DCZ				S	Sb	22 14 07.0	+0.2
PYZ	Puysegur Point	0.89	183	P	Pg	22 14 09.9	-0.7
PYZ				S	Sg	22 14 21.3	-0.9
MLZ	Mavora Lakes	0.97	96	P	Pg	22 14 12.1	0.0
MLZ				S	Sg	22 14 24.8	0.0
MSZ	Milford Sound	1.03	54	P	Pb	22 14 13.1	-0.1
MSZ				S	Sn	22 14 27.4	-0.6
WHZ	Wether Hill Ro	1.04	126	P	Pb	22 14 13.1	-0.3
WHZ				S	Sb	22 14 26.9	-0.1
WKZ	Wanaka	1.67	75	P	Pb	22 14 23.7	-0.4
WKZ				S	Sb	22 14 44.8	-0.3
APZ	The Paps	1.78	151	P	Pb	22 14 25.2	-0.7
APZ				S	Sb	22 14 49.3	+1.1
EAZ	Earnscleugh	1.81	89	P	Pb	22 14 25.5	-1.0
EAZ				S	Sn	22 14 47.7	+0.4
SYZ	Scrubby Hill	2.09	128	P	Pn	22 14 28.7	+0.4
SYZ				S	Sn	22 14 54.5	+0.3
TUZ	Tuapeka	2.13	109	P	Pn	22 14 29.8	+1.0
TUZ				S	Sn	22 14 55.2	0.0
LBZ	Lake Benmore	2.60	71	P	Pn	22 14 35.6	+0.3
ODZ	Otahua Downs	2.77	86	P	Pn	22 14 37.6	0.0
HHSZ	Highcliff Hill	2.77	104	P	Pn	22 14 38.4	+0.8
HHSZ				S	Sn	22 15 10.4	-0.6
FOZ	Fox Glacier	2.81	53	P	Pn	22 14 36.9	-1.3
TMZ	Timaru	3.16	75	P	Pn	22 14 42.8	-0.2
GCSZ	Gaunt Creek Bo	3.23	54	P	Pn	22 14 42.6	-1.4
ARCZ	Arundel	3.43	69	P	Pn	22 14 46.5	-0.3
RPZ	Rata Peaks	3.46	65	P	Pn	22 14 47.1	+0.1
WVZ	Waitaha Valley	3.62	54	P	Pn	22 14 48.2	-1.1
WACZ	Wakanui South	3.87	72	P	Pn	22 14 52.4	-0.4
MQZ	McQueen's Vall	4.51	72	P	Pn	22 15 00.8	-0.7
LTZ	Lake Taylor	4.70	60	P	Pn	22 15 04.5	+0.3
GVZ	Greta Valley S	5.08	65	P	Pn	22 15 09.3	-0.1
DSZ	Denniston Nort	5.10	48	P	Pn	22 15 08.6	-1.1
THZ	Tophouse	5.69	54	P	Pn	22 15 17.8	0.0
QRZ	Quartz Range	6.14	46	P	Pn	22 15 22.8	-1.2

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*IDC **25** 22:19:57.5±0.5, 35°.84N×140°.41E, h0^{km}, mb4.8/29, mb1 4.9/33, mb1mx4.8/41, mbtmp4.8/33, ML4.7/4, MS4.1/29, Ms1 4.1/29, ms1mx4.0/43, Error ellipse: s-maj=12.8km s-min=11.0km az=99.0*

*NOU **25** 22:19:58.0, 35°.81N×140°.72E, h2^{km}, mb5.1, Near East Coast of Honshu, Japan*

*BJI **25** 22:19:59.0±0.0, 35°.80N×140°.50E, h20^{km}, mB4.9/58, mb4.6/72, Ms4.5/63, Ms7 4.2/60*

*MOS **25** 22:19:59.9±1.0, 35°.92N×140°.51E, h28^{km}, mb5.3/45, Error ellipse: s-maj=6.3km s-min=3.9km az=109.7*

*NEIC **25** 22:20:01.8±1.1, 35°.83N±0°.03×140°.53E±0°.06, h35^{km}±4^{km}, mb4.9/272, Mwr4.9/23, Error ellipse: s-maj=7.1km s-min=4.3km az=114.0*

*NIED **25** 22:20:01.7, 35°.88N×140°.48E, h37^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.86; $M_{\theta\theta}$-2.15; $M_{\phi\phi}$0.29; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.98; $M_{\phi r}$0.95; Fault plane solution: $M_0$2.51000×10^{16} NP1:ϕ_s51.00000°, δ60.00000°, λ67.00000°. NP2:ϕ_s273.00000°, δ37.00000°, λ125.00000°.*

*NEIC **25** 22:20:01.9, 35°.83N×140°.53E, h43^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.56; $M_{\theta\theta}$-2.59; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.68; $M_{\theta\phi}$-1.53; $M_{\phi r}$0.46; Fault plane solution: $M_0$3.11000×10^{16} NP1:ϕ_s262.53000°, δ51.95000°, λ113.68000°. NP2:ϕ_s47.09000°, δ43.85000°, λ62.83000°. Principal axes: T 2.8302, Plg71.0000°, Azm233.0000°; N 0.4977, Plg18.0000°, Azm67.0000°; P -3.3278, Plg4.0000°, Azm336.0000°;*

*JMA **25** 22:20:01.6±0.1, 35°.88N×140°.48E, h37^{km}±1^{km}, M5.0 Broadband fault plane solution: P waves. NP1: ϕ_s223.00000°, δ40.00000°, λ69.00000°. NP2:ϕ_s70.00000°, δ53.00000°, λ106.00000°. Principal axes: T Plg75.0000°, Azm30.0000°; N Plg13.0000°, Azm240.0000°; P Plg7.0000°, Azm148.0000°;*

JMA Felt IV J1.

*GCMT **25** 22:20:02.7±0.2, 35°.85N±0°.01×140°.59E±0°.02, h35^{km}, MW5.0/97, Moment Tensor Solution. s69,c96; s97,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.37±.16; $M_{\theta\theta}$-3.84±.10; $M_{\phi\phi}$-0.53±.10; $M_{r\theta}$1.56±.11; $M_{\theta\phi}$-1.51±.07; $M_{\phi r}$0.68±.11; Best double couple: $M_0$4.71500×10^{16} NP1:ϕ_s250.00000°, δ34.00000°, λ91.00000°. NP2: ϕ_s68.00000°, δ56.00000°, λ89.00000°. Principal axes: T 4.6880, Plg79.0000°, Azm334.0000°; N 0.0530, Plg1.0000°, Azm69.0000°; P -4.7430, Plg11.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **25** 22:20:16.9±0.0, 38°.08N×139°.82E, h42^{km}, mb4.5*

ISC 25 22:20:01.4±0.4**, 35°.86N**±0°.02×**140°.56E**±0°.03**, h28**^{km}±2^{km}**, h28**^{km}**:pP-P, n796, σ1^{s}.40**/777**, mb4.9**/252**, MS4.2**/43**, 45C-64D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.11	346	⇑P	Pn	22 20 08.4	+1.0
JIHU				S	Sb	22 20 13.5	+3.4
JSMT	Sammumatsuo	0.23	203	⇑P	Pn	22 20 09.3	+0.3
JSMT				S	Sb	22 20 15.1	+3.0
CHOJ	Chosi	0.29	122	⇑P	Pn	22 20 10.0	+0.2
CHOJ				S	Sn	22 20 15.7	+0.6
JYT	Yasato	0.47	321	⇓P	Pb	22 20 11.3	-0.1
JYT				S	Sb	22 20 17.6	-0.5
JYT	Yasato	0.47	321		Pb	22 20 11.3	-0.1
JYT				Sn	Sb	22 20 17.9	-0.3
JHO	Hitachi	0.75	1	⇓P	Pb	22 20 15.4	-0.6
JHO				S	Sb	22 20 24.8	-1.1
JKUC	kamogawauchiur	0.76	203	⇑P	Pn	22 20 16.5	+0.3
BSO4	Boso 4	0.88	192	⇓P	Pb	22 20 18.5	+0.4
BSO3	Boso 3	1.05	182	⇓P	Pb	22 20 20.3	-0.6
JAG	Ashikaga	1.06	303	⇓P	Pn	22 20 18.9	-1.5
JAG				S	Sn	22 20 31.4	-2.9
JSGW	Sagamiharawaka	1.13	257	⇓P	Pn	22 20 20.8	-0.6
JSB	Shiboa	1.22	335	⇓P	Pn	22 20 22.0	-0.7
JFFD	Fukushimafurud	1.23	0	⇓P	Pn	22 20 22.5	-0.3
ONAJ	Iwakimizuishiy	1.26	9	⇓P	Pn	22 20 22.6	-0.6
JOD2	Odawara 2	1.34	244	⇓P	Pn	22 20 24.9	+0.6
JRY	Ryogami san	1.35	277	⇓P	Pn	22 20 23.5	-1.0
JKT	Katashina	1.40	311	⇓P	Pn	22 20 24.3	-0.8
AJI	Ajiro2	1.45	236	⇓P	Pn	22 20 26.0	+0.3
JIM2	Oshima 3	1.46	219	P	Pn	22 20 25.7	-0.3
JFK	Kawauchi	1.53	9	⇓P	Pn	22 20 26.2	-0.7
JFT	Otama	1.67	354	⇓P	Pn	22 20 28.8	0.0
JYN	Shimob	1.68	258	⇓P	Pn	22 20 29.6	+0.6
JFY	Yanaizu	1.69	336	⇓P	Pn	22 20 28.9	-0.3
JGK	Kuni	1.71	295	⇓P	Pn	22 20 28.2	-1.1
JMST	Minamisoumatoc	1.88	8	⇓P	Pn	22 20 31.4	-0.3
JNT	Takato	1.97	271	⇓P	Pn	22 20 34.1	+1.1
JMM	Marumori	2.01	5	⇓P	Pn	22 20 33.8	+0.3
JMM	Marumori	2.01	5		Pn	22 20 33.9	+0.3
JMM				Sn	Sn	22 20 57.5	-0.3
MJAR	Matsushiro Arr	2.02	290	Pn	Pn	22 20 32.0	-1.7
	46nm,0.3s,baz=88,slow=8.3,SNR=1532						
MJAR				Lg	Lg	22 20 56.4	
	50nm,0.3s,baz=345,slow=28,SNR=3.6						
MJAR				LR	LR	22 21 28.8	
	comp=Z,6μm,18.5s,baz=125,slow=49						
MJAR	Matsushiro Arr	2.02	290	P	Pn	22 20 32.0	-1.7
MJAR	Matsushiro Arr	2.02	290		Pn	22 20 32.3	-1.3
MJAR					Sn	22 20 56.6	-1.4
MAJO	Matsushiro	2.02	290	P	Pn	22 20 32.8	-0.9
MAJO						22 20 56.3	
MAJO	Matsushiro	2.02	290		Pn	22 20 32.8	-0.9
MAJO				Sn	Sn	22 20 56.3	-1.7
MAT	Matsushiro	2.02	290	P	Pn	22 20 32.7	-1.0
MAT				S	Sn	22 20 56.7	-1.3
JNG	Nsakai	2.06	286	⇓P	Pn	22 20 34.4	+0.1
JNS	Sasagawa	2.20	333	⇓P	Pn	22 20 36.4	+0.3
JIZZ	Izumozaki	2.24	319	⇓P	Pn	22 20 37.8	+1.2
JSG	Sagara	2.27	239		Pn	22 20 36.3	-0.8
JJN	Nakama	2.30	303	⇓P	Pn	22 20 38.0	+0.6
JYS	Shirataka	2.39	351	⇓P	Pn	22 20 39.8	+1.0
JYZW	Yoshizawa	2.46	250	P	Pn	22 20 41.2	+1.5

JOU	**Okura**	2.51	2	⇓P	**Pn**	**22 20 40.8**	**+0.5**
JIKH	**Ishinomakikobu**	2.55	16	⇓P	**Pn**	**22 20 40.4**	**-0.6**
JGF	**Kuroka**	2.62	265	Pn	**Pn**	**22 20 43.5**	**+1.7**
JGF				Sn	**Sn**	**22 21 10.8**	**-1.9**
JGN	**Niukaw**	2.65	279	⇓P	**Pn**	**22 20 43.4**	**+1.0**
JIO	**Ouri**	2.67	13	⇓P	**Pn**	**22 20 42.3**	**-0.2**
JAW	**Awa shima**	2.80	338	P	**Pn**	**22 20 44.7**	**+0.4**
JHJ	**Hachijo jima 2**	2.81	193	Pn	**Pn**	**22 20 43.6**	**-0.8**
	335nm,0.3s,baz=267,slow=6.0,SNR=44						
JHJ				Sn	**Sn**	**22 21 14.2**	**-3.1**
	484nm,0.3s,baz=96,slow=21,SNR=8.4						
JHJ				LR	LR	22 21 50.6	
	comp=Z,3µm,20.8s,baz=62,slow=41						
JHJ2	**Mitsune**	2.81	193	Pn	**Pn**	**22 20 43.5**	**-0.9**
JHJ2				Sn	**Sn**	**22 21 15.3**	**-2.0**
JYA	**Atsumi**	2.81	346	⇓P	**Pn**	**22 20 45.6**	**+1.1**
JSD	**Sado**	2.85	320	⇓P	**Pn**	**22 20 44.8**	**-0.2**
JSD	**Sado**	2.85	320		**Pn**	**22 20 45.2**	**+0.2**
INU	**Inuyama**	2.93	261		**Pn**	**22 20 45.9**	**-0.2**
JKMT	**Kesennumamotoy**	3.04	14	⇓P	**Pn**	**22 20 47.4**	**-0.2**
OFUJ	**Ofunato**	3.34	15	P	**Pn**	**22 20 51.4**	**-0.3**
JRG	**Rokugo**	3.53	1	⇓P	**Pn**	**22 20 55.9**	**+1.5**
JOM	**Ohasama**	3.66	9	⇓P	**Pn**	**22 20 56.4**	**+0.3**
JKZ	**Kuzumaki**	4.17	8	P	**Pn**	**22 21 03.8**	**+0.6**
JWT	**Wachi**	4.24	264	Pn	**Pn**	**22 21 03.9**	**-0.3**
JTM	**Tenmabayashi**	4.94	4	Pn	**Pn**	**22 21 13.8**	**0.0**
JMN	**Monobe**	5.89	251		**Pn**	**22 21 26.3**	**-0.6**
JHS	**Saijyo**	6.14	264	Pn	**Pn**	**22 21 29.4**	**-0.9**
ERM	**Erimo**	6.47	17	*ce*P	**Pn**	**22 21 34.5**	**-0.3**
ERM				pmax	pmax		
	comp=Z,74nm,0.5s						
ERM	**Erimo**	6.47	17		**Pn**	**22 21 34.2**	**-0.6**
JEW	**Eniwo**	7.01	5	Pn	**Pn**	**22 21 42.2**	**+0.1**
ASAJ	**Asahikawa**	8.40	10	Pn	**Pn**	**22 21 59.1**	**-2.1**
	comp=Z,10nm,0.3s,baz=212,slow=12,SNR=33						
ASAJ				LR	LR	22 25 25.5	
	comp=Z,708nm,21.5s,baz=200,slow=39						
ASAJ	**Asahikawa**	8.40	10	P	**Pn**	**22 22 00.3**	**-0.9**
JKA	**Kamikawa-asahi**	8.40	10	Pn	**Pn**	**22 22 00.3**	**-0.9**
JNU	**Nakatsue**	8.45	254	Pn	**Pn**	**22 22 02.5**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=98,slow=9.4,SNR=2.1						
JNU				LR	LR	22 25 36.6	
	comp=Z,2µm,18.1s,baz=65,slow=41						
NMR	**Nemuro--Hokkai**	8.49	26	*e*P	**Pn**	**22 22 00.2**	**-2.3**
NMR				*e*S	**Sn**	**22 23 31.7**	**-5.7**
GLVR	**Golovnino**	8.75	24	*e*P	**Pn**	**22 22 04.7**	**-1.3**
GLVR				*e*S	**Sn**	**22 23 39.4**	**-4.2**
GLVR				pmax	pmax		
	comp=Z,127nm,0.3s						
GLVR				pmax	pmax		
	comp=N,52nm,0.2s						
GLVR				pmax	pmax		
	comp=E,57nm,0.2s						
JCJ	**Chichijima**	8.84	171	Pn	**Pn**	**22 22 04.7**	**-2.7**
	comp=E,61nm,0.3s,baz=74,slow=8.8,SNR=28						
JCJ				Sn	**Sn**	**22 23 42.7**	**-3.4**
	comp=E,21nm,0.3s,baz=261,slow=23,SNR=1.9						
JCJ	**Chichijima**	8.84	171	Pn	**Pn**	**22 22 05.4**	**-2.0**
GRPR	**Tuman**	9.06	25	*e*P	**Pn**	**22 22 08.9**	**-1.3**
GRPR				*e*S	**Sn**	**22 23 46.9**	**-4.3**
GRPR				pmax	pmax		
	comp=Z,55nm,0.2s						
YUK	**Yuzh-Kuril'sk**	9.12	25	P	**Pn**	**22 22 09.5**	**-1.6**
YUK				*e*S	**Sn**	**22 23 48.2**	**-4.6**
TEY	**Ternei**	9.65	343	⇑*e*P	**Pn**	**22 22 21.5**	**+3.2**
TEY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	10.28	283	Pn	**Pn**	**22 22 27.6**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=100,slow=13,SNR=11						
KSRS				LR	LR	22 26 16.2	
	comp=Z,2µm,21.4s,baz=90,slow=37						
USA0B	**Ussuriysk Arra**	10.61	324	*d i*P	**Pn**	**22 22 34.6**	**+3.2**
USA0B	**Ussuriysk Arra**	10.61	324		**Pn**	**22 22 31.8**	**+0.4**
USRK	**Ussuriysk Ar.**	10.61	324	Pn	**Pn**	**22 22 32.7**	**+1.2**
	baz=138,slow=12,SNR=47						
USRK				LR	LR	22 26 29.0	
	comp=Z,1µm,18.5s,baz=127,slow=37						
USRK	**Ussuriysk Ar.**	10.61	324	P	**Pn**	**22 22 32.3**	**+0.9**
USRK	**Ussuriysk Ar.**	10.61	324		**Pn**	**22 22 32.3**	**+0.9**
TJN	**Taejon**	10.69	277	⇑*e*P	**Pn**	**22 22 35.9**	**+3.3**
KUR	**Kuril'sk**	10.89	28	*e*P	**Pn**	**22 22 34.2**	**-1.1**
KUR				*e*S	**Sn**	**22 24 33.0**	**-3.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.7s						
KUR				smax	smax		
	comp=E,118nm,0.6s						
KUR				smax	smax		
	comp=N,62nm,0.9s						
YSS	**Yuzh-Sakhalins**	11.21	8	*e*P	**Pn**	**22 22 40.6**	**+0.9**
YSS				*e*S	**Sn**	**22 24 40.3**	**-3.6**
YSS				pmax	pmax		
	comp=Z,60nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS				MLR	MLR		
	comp=N,1µm,15.0s						
YSS	**Yuzh-Sakhalins**	11.21	8		**Pn**	**22 22 40.2**	**+0.6**
MDJ	**Mudanjiang**	12.11	320	P	**Pn**	**22 22 52.5**	**+0.5**
MDJ				S	**Sn**	**22 25 07.0**	**+1.1**
MDJ				PcP	**PcP**	**22 28 36.8**	**+1.5**
MDJ				pmax	pmax		
	comp=N,10.0nm,1.5s						
MDJ				pmax	pmax		
	comp=N,400nm,5.7s						
MDJ				LR	LR		
	comp=N,1µm,16.4s						
MDJ				LR	LR		
	comp=N,840nm,19.2s						
MDJ				LR	LR		
	comp=N,2µm,19.2s						
MDJ	**Mudanjiang**	12.11	320	Pn	**Pn**	**22 22 51.6**	**-0.4**
UGL	**Uglegorsk**	13.26	4	*e*P	**P**	**22 23 21.1**	**+3.9**
UGL				pmax	pmax		
	comp=Z,70nm,0.7s						
UGL				MLR	MLR		
	comp=Z,1µm,17.0s						
UGL				MLR	MLR		
	comp=E,2µm,18.0s						
UGL				MLR	MLR		
	comp=N,2µm,13.0s						
JOW	**Kunigami**	13.81	233	LR	LR	22 28 07.3	
	comp=N,461nm,21.7s,baz=96,slow=36						
SNY	**Shenyang**	14.51	299	⇑P	**Pn**	**22 23 27.3**	**+2.6**
SNY				S	**Sn**	**22 26 10.5**	**+6.0**
SNY				pmax	pmax		
	comp=N,26nm,1.8s						
SNY				LR	LR		
	comp=N,620nm,14.9s						
SNY				LR	LR		
	comp=N,890nm,17.1s						
SNY				LR	LR		
	comp=N,1µm,17.5s						
KLR	**Kul'dur**	14.84	337	Pn	**Pn**	**22 23 27.8**	**-1.5**
	comp=N,0.5nm,0.3s,baz=148,slow=11,SNR=15						
KLR				LR	LR	22 28 54.2	
	comp=N,976nm,21.1s,baz=146,slow=36						
KLR	**Kul'dur**	14.84	337	⇓*e*P	**Pn**	**22 23 28.7**	**-0.6**
TYV	**Tymovskoe**	15.08	5	*e*P	**Pn**	**22 23 30.6**	**-1.8**
TYV				*e*S	**Sn**	**22 26 15.7**	**-2.6**
TYV				pmax	pmax		
	comp=Z,19nm,1.1s						
TYV				smax	smax		
	comp=E,8.0nm,0.8s						
TYV				MLR	MLR		
	comp=Z,1µm,13.0s						
TYV				MLR	MLR		
	comp=E,2µm,11.0s						
GRNR	**Gornyy**	15.20	350	⇑*i*P	**Pn**	**22 23 32.7**	**-1.4**
GRNR				pmax	pmax		
	comp=N,5.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,270nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,360nm,16.0s						
DL2	**Dalian**	15.36	287	P	**Pn**	**22 23 36.8**	**+0.7**
DL2				PP	**pP**	**22 23 48.0**	**-0.1**
DL2				S	**Sn**	**22 26 26.8**	**+1.6**
DL2				SS	**S**	**22 26 47.8**	**+6.9**
DL2				pmax	pmax		
	comp=Z,27nm,1.6s						
DL2				pmax	pmax		
	comp=Z,300nm,4.4s						
DL2				LR	LR		
	comp=Z,980nm,18.2s						
DL2				LR	LR		
	comp=Z,510nm,19.9s						
DL2				LR	LR		
	comp=Z,1µm,21.7s						
SSE	**Sheshan**	16.84	259	P	**Pn**	**22 23 53.5**	**-1.7**
SSE				S	**Sn**	**22 27 05.0**	**+3.6**
SSE				pmax	pmax		
	comp=Z,11nm,0.6s						
SSE				pmax	pmax		
	comp=Z,140nm,6.0s						
SSE				LR	LR		
	comp=Z,390nm,11.3s						
SSE				LR	LR		
	comp=Z,260nm,12.5s						
OKH	**Okha**	17.77	5	*de*P	P	22 24 23.2	+16
OKH				pmax	pmax		
	comp=Z,100nm,14.4s						
OKH				MLR	MLR		
	comp=E,800nm,16.0s						
OKH				MLR	MLR		
	comp=N,600nm,16.0s						
OKH				MLR	MLR		
	comp=Z,400nm,16.0s						
NJ2	**Nanjing**	18.40	264	*e*P	Pn	22 24 26.0	+12
NJ2				pmax	pmax		
	comp=Z,13nm,1.0s						
NJ2				LR	LR		
	comp=N,550nm,13.1s						
NJ2				LR	LR		
	comp=E,700nm,12.6s						
NJ2				LR	LR		
	comp=Z,880nm,12.6s						
SKR	**Severo-Kuril's**	18.59	32	*e*P	**P**	**22 24 11.6**	**-4.6**
SKR				*e*S	Sn	22 27 31.8	-12
SKR				pmax	pmax		
	comp=Z,600nm,3.4s						
SKR				pmax	pmax		
	comp=Z,200nm,3.8s						
SKR				MLR	MLR		
	comp=Z,400nm,18.0s						
TIA	**Tai'an**	18.95	278	P	**P**	**22 24 19.5**	**-0.8**
TIA				S	**S**	**22 27 56.5**	**+2.6**
TIA				pmax	pmax		
	comp=Z,18nm,1.2s						
TIA				pmax	pmax		
	comp=Z,370nm,8.3s						
TIA				LR	LR		
	comp=Z,660nm,19.1s						
TIA				LR	LR		
	comp=Z,600nm,20.1s						
TIA				LR	LR		
	comp=Z,620nm,24.0s						
BJI	**Beijing**	19.66	290	P	**P**	**22 24 28.0**	**0.0**
BJI				S	**Sn**	**22 28 09.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,16nm,1.2s						
BJI				pmax	pmax		
	comp=Z,150nm,5.0s						
BJI				LR	LR		
	comp=Z,380nm,20.1s						
BJI				LR	LR		
	comp=Z,370nm,20.0s						
BJT	**Baijiatuau**	19.66	290	P	**P**	**22 24 27.3**	**-0.7**
BJT				pmax	pmax		
	comp=Z,30nm,1.2s						
BJT	**Baijiatuau**	19.66	290		**P**	**22 24 27.3**	**-0.7**
ZEA	**Zeya**	20.16	337	*e*P	**P**	**22 24 32.9**	**-0.4**
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
HIA	**Hailar**	20.28	318	P	**P**	**22 24 34.1**	**-0.6**
HIA				pmax	pmax		
	comp=Z,19nm,1.1s						
HIA	**Hailar**	20.28	318	P	**P**	**22 24 34.1**	**-0.6**
SSLB	**Suanglung**	20.79	240	P	**P**	**22 24 39.4**	**-1.1**
YULB	**Yu-li**	20.80	239	P	**P**	**22 24 39.0**	**-1.6**
PETK	**Petropavlovsk-**	21.05	30	P	**P**	**22 24 43.9**	**+0.9**
	comp=Z,5.4nm,0.8s,baz=232,slow=4.5,SNR=9.3						
PETK				LR	LR	22 32 38.7	
	comp=Z,262nm,21.2s,baz=221,slow=36						
PETK	**Petropavlovsk-**	21.05	30	P	**P**	**22 24 43.5**	**+0.5**
TPUB	**Ta-pu**	21.33	240	P	**P**	**22 24 44.9**	**-1.3**
PET	**Petropavlovsk**	21.38	31	⇑*e*P	**P**	**22 24 50.8**	**+4.3**
PET				pmax	pmax		
	comp=Z,165nm,0.8s						
PET	**Petropavlovsk**	21.38	31	P	**P**	**22 24 46.9**	**+0.5**
PET				IAmb	IAmb	22 24 58.6	
	comp=Z,82nm,1.0s						
WHN	**Wuhan**	22.53	264	⇓P	**P**	**22 24 58.8**	**-0.3**
WHN				S	**S**	**22 29 02.8**	**-1.7**
WHN				pmax	pmax		
	comp=Z,49nm,0.6s						
WHN				pmax	pmax		
	comp=Z,620nm,4.0s						
WHN				LR	LR		
	comp=Z,4µm,21.0s						
WHN				LR	LR		
	comp=Z,1µm,15.1s						
WHN				LR	LR		
	comp=Z,2µm,19.6s						
HHC	**Hu-ho-hao-te**	23.22	291	*e*P	**P**	**22 25 04.3**	**-2.0**
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,60nm,6.6s						
HHC				LR	LR		
	comp=Z,410nm,15.0s						
HHC				LR	LR		
	comp=Z,440nm,18.0s						
HHC				LR	LR		
	comp=Z,380nm,20.8s						
BTO	**Baotou**	24.39	290	*e*P	**P**	**22 25 10.3**	**-7.1**
MA2	**Magadan**	24.65	12	P	**P**	**22 25 20.1**	**+0.7**
	comp=Z,48nm,0.7s,baz=200,slow=8.7,SNR=43						
MA2				LR	LR	22 36 07.6	
	comp=Z,284nm,18.2s,baz=216,slow=39						
MA2	**Magadan**	24.65	12	*d i*P	**P**	**22 25 20.4**	**+1.0**
MA2				pmax	pmax		
	comp=Z,45nm,0.7s						
MA2	**Magadan**	24.65	12	P	**P**	**22 25 19.7**	**+0.3**
XAN	**Xi'an**	25.94	275	P	**P**	**22 25 29.8**	**-1.6**
XAN				pP	pP	22 25 37.0	-2.6
XAN				S	**S**	**22 29 52.8**	**-7.3**
XAN				pmax	pmax		
	comp=Z,15nm,0.6s						
XAN				pmax	pmax		
	comp=Z,160nm,6.8s						
XAN				LR	LR		
	comp=Z,710nm,19.5s						
XAN				LR	LR		
	comp=Z,490nm,21.7s						
XAN				LR	LR		
	comp=Z,660nm,20.6s						
ENH	**Enshi**	26.56	267	P	**P**	**22 25 35.4**	**-1.7**
YAK	**Yakutsk**	27.08	349	P	**P**	**22 25 40.9**	**-0.4**
	comp=Z,36nm,0.7s,baz=155,slow=0.8,SNR=30						
YAK	**Yakutsk**	27.08	349	*d i*P	**P**	**22 25 41.2**	**-0.1**
YAK				*e**PP	**pP**	**22 25 48.9**	**-0.6**
YAK				*e*		22 26 26.6	
YAK				*e*S	**S**	**22 30 19.1**	**+1.8**
YAK				*e**SS	**sS**	**22 30 28.8**	**-2.1**
YAK				*e*SS	**SnSn**	**22 31 24.4**	**-0.5**
YAK				*e*SSS	SSS	22 31 52.5	
YAK				pmax	pmax		
	comp=Z,127nm,1.0s						
YAK				pmax	pmax		
	comp=E,13nm,1.0s						
YAK				pmax	pmax		
	comp=N,75nm,1.3s						
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				smax	smax		
	comp=E,75nm,2.1s						
YAK				smax	smax		
	comp=N,23nm,1.4s						
YAK	**Yakutsk**	27.08	349	P	**P**	**22 25 41.2**	**-0.1**
ULN	**Ulaanbaatar**	27.47	306	⇓*e*P	**P**	**22 25 44.2**	**-1.0**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s						
ULN	**Ulaanbaatar**	27.47	306	P	**P**	**22 25 44.5**	**-0.7**
SONM	**Songino Array**	27.89	306	P	**P**	**22 25 48.5**	**-0.5**
	comp=Z,6.1nm,0.5s,baz=112,slow=9.6,SNR=36						
SONM				ScP	**ScP**	**22 32 44.2**	**+1.3**
	comp=Z,1.3nm,1.1s,baz=136,slow=2.4,SNR=5.6						
SONM				LR	LR	22 37 21.5	
	comp=Z,469nm,18.4s,baz=93,slow=38						
SONM	**Songino Array**	27.89	306	P	**P**	**22 25 48.3**	**-0.7**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	**Songino Array**	27.89	306	P	**P**	**22 25 48.3**	**-0.7**
SEY	**Seymchan**	28.08	11	P	**P**	**22 25 51.1**	**+0.8**
	comp=Z,12nm,0.9s,baz=200,slow=5.4,SNR=23						
SEY	**Seymchan**	28.08	11	⇓*e*P	**P**	**22 25 51.9**	**+1.6**
H11N2	**WAKE ISLAND Hy**	28.17	118	T	T	22 55 08.3	
	baz=314,slow=75,SNR=297						
BOD	**Bodaibo**	28.18	330	*e*P	**P**	**22 25 51.1**	**-0.1**
BOD				pmax	pmax		
	comp=Z,28nm,1.4s						
H11N3	**WAKE ISLAND Hy**	28.19	118	T	T	22 55 06.0	
	baz=320,slow=75,SNR=373						
H11S1	**WAKE ISLAND Hy**	28.84	120	T	T	22 56 23.9	
	SNR=874						
H11S3	**WAKE ISLAND Hy**	28.84	120	T	T	22 56 57.4	
	baz=310,slow=74,SNR=453						
H11S2	**WAKE ISLAND Hy**	28.85	120	T	T	22 56 58.9	
	baz=259,slow=74,SNR=465						
LZH	**Lanzhou**	29.61	281	⇑P	**P**	**22 26 04.3**	**0.0**
LZH				pP	pP	22 26 10.5	-2.1
LZH				sP	sP	22 26 13.0	-3.1
LZH				S	**S**	**22 30 56.5**	**-1.5**
LZH				SS	**SnSn**	**22 32 28.8**	**+1.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,200nm,4.9s						
LZH				LR	LR		
	comp=Z,670nm,16.8s						
LZH				LR	LR		
	comp=Z,710nm,15.2s						
LZH				LR	LR		
	comp=Z,570nm,16.3s						
GYA	**Guiyang**	30.36	262	⇓P	**P**	**22 26 09.0**	**-2.0**
GYA				pP	pP	22 26 17.8	-1.5
GYA				sP	sP	22 26 24.5	+1.8
GYA				pmax	pmax		
	comp=Z,29nm,1.0s						
GYA				LR	LR		
	comp=Z,360nm,16.1s						
ZAK	**Zakamensk**	30.48	310	*e*P	**P**	**22 26 10.3**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY	**Talaya**	30.60	313	P	**P**	**22 26 12.4**	**-0.5**
	comp=Z,4.7nm,0.7s,baz=119,slow=5.8,SNR=4.6						
TLY				LR	LR	22 39 13.3	
	comp=Z,501nm,18.3s,baz=64,slow=38						
TLY	**Talaya**	30.60	313	*e*P	**P**	**22 26 12.8**	**0.0**
TLY				*e*		22 27 30.1	
TLY				*e*S	**S**	**22 31 17.9**	**+4.9**
TLY				pmax	pmax		
	comp=Z,22nm,1.0s						
TLY				MLR	MLR		
	comp=Z,1µm,14.0s						
CD2	**Chengdu**	31.00	272	P	**P**	**22 26 15.3**	**-1.3**
CD2				sP	sP	22 26 28.3	0.0
CD2				PP	**PnPn**	**22 27 19.3**	**+1.3**
CD2				S	**S**	**22 31 19.0**	**-0.7**
CD2				sS	sS	22 31 31.8	-1.6
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,240nm,7.2s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		
	comp=Z,2µm,12.9s						
CD2				LR	LR		
	comp=Z,2µm,18.7s						
QIZ	**Qiongzhong**	31.82	246	P	**P**	**22 26 20.5**	**-3.3**
QIZ				S	**S**	**22 31 33.5**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,13nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,270nm,4.0s						
QIZ				LR	LR		
	comp=Z,290nm,15.7s						
QIZ				LR	LR		
	comp=Z,390nm,19.6s						
QIZ				LR	LR		
	comp=Z,260nm,21.6s						
GTA	**Gaotai**	32.27	289	⇑P	**P**	**22 26 27.8**	**0.0**
GTA				pP	pP	22 26 35.5	-0.6
GTA				sP	sP	22 26 38.5	-1.0
GTA				PcP	**PcP**	**22 29 16.0**	**+0.4**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,77nm,8.2s						
GTA				LR	LR		
	comp=Z,390nm,20.6s						
GTA				LR	LR		
	comp=Z,320nm,20.2s						
GTA				LR	LR		
	comp=Z,410nm,21.6s						
KMI	**Kunming**	34.11	262	⇓*i*P	**P**	**22 26 42.5**	**-1.6**
KMI				pP	pP	22 26 49.0	-3.4
KMI				sP	sP	22 26 54.0	-1.9
KMI				PP	**PP**	**22 27 59.8**	**-1.7**
KMI				S	**S**	**22 32 11.5**	**+2.9**
KMI				sS	sS	22 32 23.3	+1.0
KMI				SS	**SnSn**	**22 34 12.3**	**-4.9**
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,4.5s						
KMI				LR	LR		
	comp=Z,300nm,18.7s						
KMI				LR	LR		
	comp=Z,390nm,15.4s						
KMI				LR	LR		
	comp=Z,370nm,19.8s						
KMI	**Kunming**	34.11	262	P	**P**	**22 26 42.3**	**-1.8**
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI	**Kunming**	34.11	262	P	**P**	**22 26 42.3**	**-1.8**
KMI				IAmb	IAmb	22 26 44.0	
	comp=Z,17nm,1.1s						
BILL	**Bilibino**	35.35	16	*e*P	**P**	**22 26 54.5**	**+0.5**
BILL				*e*S	**S**	**22 32 25.3**	**-1.0**
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
BILL				MLR	MLR		
	comp=Z,215nm,16.0s						
BILL	**Bilibino**	35.35	16	P	**P**	**22 26 54.8**	**+0.8**
BILL				IAmb	IAmb	22 26 56.7	
	comp=Z,23nm,1.0s						
TIXI	**Tiksi**	36.38	354	P	**P**	**22 27 02.6**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	**Tiksi**	36.38	354	P	**P**	**22 27 02.6**	**-0.1**
TIXI				IAmb	IAmb	22 27 08.4	
	comp=Z,9.3nm,0.9s						
UBPT	**Khong Chiam**	37.42	246	P	**P**	**22 27 11.7**	**-0.6**
NONG	**Nongkai**	37.48	252	P	**P**	**22 27 12.5**	**-0.3**
SPMM	**Sapulut**	38.13	221	P	P	22 27 23.0	+4.8
FAKI	**Fak Fak**	39.35	193	P	**P**	**22 27 28.4**	**0.0**
FAKI				IAmb	IAmb	22 27 31.2	
	comp=Z,24nm,0.9s						
CHAI	**Chaiyaphum**	39.66	250	P	**P**	**22 27 30.4**	**-0.6**
	comp=Z,35nm,1.0s						
UTTA	**Uttaradit**	39.68	254	P	**P**	**22 27 32.3**	**+1.1**
	comp=Z,13nm,1.1s						
CM35	**Chiang Mai Arr**	40.25	256	P	**P**	**22 27 35.0**	**-1.0**
CM33	**Chiang Mai Arr**	40.34	256	P	**P**	**22 27 36.0**	**-0.7**
CMMT	**Chiang Mai**	40.34	256	P	**P**	**22 27 35.4**	**-1.3**
	comp=Z,250nmcomp=Z,4.0nm,1.2s						
CHTO	**Chiang Mai**	40.34	256	P	**P**	**22 27 36.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	**Chiang Mai**	40.34	256	P	**P**	**22 27 36.0**	**-0.7**
CM36	**Chiang Mai Arr**	40.38	256	P	**P**	**22 27 37.0**	**-0.1**
CM32	**Chiang Mai Arr**	40.51	256	P	**P**	**22 27 42.0**	**+3.9**
DGZ	**Jazzator, Alta**	40.53	307	*d i*P	**P**	**22 27 39.2**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,35nm,1.0s						
CMAR	**Chiang Mai Arr**	40.54	256	P	**P**	**22 27 37.1**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=51,slow=7.2,SNR=9.5						
CMAR				LR	LR	22 45 40.3	
	comp=Z,158nm,19.1s,baz=102,slow=38						
SUKH	**Sukhothai**	40.55	254	P	**P**	**22 27 42.8**	**+4.4**
	comp=Z,11nm,0.9s						
CM05	**Chiang Mai Arr**	40.57	256	P	**P**	**22 27 42.7**	**+4.1**

	comp=Z,3.4nm,0.6s						
WMQ	**Urumqi**	**40.77**	**298**	*e*P	**P**	**22 27 41.0**	**+0.9**
WMQ				pP	pP	22 27 49.8	+1.3
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,270nm,8.3s						
WMQ	**Urumqi**	**40.77**	**298**	P	**P**	**22 27 39.8**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ	**Urumqi**	**40.77**	**298**	P	**P**	**22 27 39.8**	**-0.3**
WMQ				IAmb	IAmb	22 27 43.4	
	comp=Z,18nm,0.9s						
MHMT	**Maesarieng**	**41.49**	**256**	P	P	22 27 55.0	+8.9
LSA	**Lhasa**	**41.64**	**276**	P	**P**	**22 27 46.9**	**-1.0**
LSA				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**41.64**	**276**	P	**P**	**22 27 46.9**	**-1.0**
UTHA	**Uthaitani**	**41.81**	**252**	P	P	22 27 53.7	+4.9
	comp=Z,12nm,1.0s						
ZAA0	**Zalesovo Array**	**42.21**	**313**	P	**P**	**22 27 51.7**	**+0.1**
ZALV	**Zalesovo Beam**	**42.21**	**313**	P	**P**	**22 27 51.5**	**-0.1**
	comp=Z,33nm,1.0s,baz=91,slow=5.9,SNR=80						
ZALV				PcP	**PcP**	**22 29 46.0**	**+0.7**
	comp=Z,4.2nm,0.6s,baz=115,slow=3.0,SNR=5.6						
ZALV				LR	LR	22 46 03.3	
	comp=Z,215nm,18.4s,baz=73,slow=37						
ZALV	**Zalesovo Beam**	**42.21**	**313**	P	**P**	**22 27 51.4**	**-0.3**
ZSN	**Zaisan**	**42.35**	**304**	*e*P	**P**	**22 27 53.4**	**+0.5**
	comp=Z,18nm,1.2s,baz=303						
ZSN	**Zaisan**	**42.35**	**304**	*e*P	**P**	**22 27 53.4**	**+0.5**
ZSN				pmax	pmax		
	comp=Z,19nm,1.2s						
ANM	**Nome**	**42.96**	**31**	P	**P**	**22 27 58.1**	**+0.5**
ANM				pmax	pmax		
	comp=Z,20nm,1.0s						
ANM	**Nome**	**42.96**	**31**	P	**P**	**22 27 58.1**	**+0.5**
ANM				IAmb	IAmb	22 28 10.9	
	comp=Z,20nm,1.0s						
PHET	**Kaeng Krachan**	**43.29**	**249**	P	**P**	**22 28 04.8**	**+4.0**
	comp=Z,1µmcomp=Z,24nm,0.8s						
MK31	**Makanchi Array**	**44.17**	**303**	P	**P**	**22 28 07.4**	**-0.3**
MK31				pmax	pmax		
	comp=Z,32nm,1.1s						
MK31	**Makanchi Array**	**44.17**	**303**	P	**P**	**22 28 07.4**	**-0.3**
MK31				IAmb	IAmb	22 28 09.2	
	comp=Z,32nm,1.1s						
MKAR	**Makanchi Array**	**44.17**	**303**	P	**P**	**22 28 07.5**	**-0.2**
	comp=Z,29nm,1.0s,baz=88,slow=9.3,SNR=156						
MKAR				LR	LR	22 47 06.8	
	comp=Z,422nm,19.5s,baz=87,slow=37						
MKAR	**Makanchi Array**	**44.17**	**303**	P	**P**	**22 28 07.3**	**-0.3**
KSM	**Kuching**	**44.24**	**226**	P	P	22 28 14.0	+5.5
MAKZ	**Makanchi**	**44.38**	**303**	P	**P**	**22 28 09.0**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,37nm,1.1s						
MAKZ	**Makanchi**	**44.38**	**303**	P	**P**	**22 28 09.0**	**-0.3**
BNSI	**Bone**	**44.40**	**210**	P	**P**	**22 28 10.8**	**+1.1**
	comp=Z,12nm,0.5s						
RDOG	**Red Dog Mine**	**44.86**	**26**	P	**P**	**22 28 12.7**	**-0.2**
SEM	**Semipalatinsk**	**45.12**	**308**	*e*P	**P**	**22 28 14.5**	**-1.0**
	comp=Z,27nm,1.2s,baz=308						
SEM				*e*S	**S**	**22 34 51.5**	**-1.5**
	baz=308						
SEM				LR	LR	22 46 48.3	
	comp=Z,137nm,13.8s,baz=308						
SEM	**Semipalatinsk**	**45.12**	**308**	*e*P	**P**	**22 28 14.4**	**-1.0**
SEM				*e*S	**S**	**22 34 51.5**	**-1.5**
SEM				pmax	pmax		
	comp=Z,27nm,1.2s						
SEM				MLR	MLR		
	comp=Z,137nm,14.0s						
TAPN	**Taplejung**	**45.34**	**275**	*e*P	**P**	**22 28 17.6**	**0.0**
	comp=Z,22nm,0.4s						
ODAN	**Odare**	**45.80**	**274**	*e*P	**P**	**22 28 20.7**	**-0.5**
	comp=Z,13nm,0.4s						
KURK	**Kurchatov**	**46.12**	**309**	*c i*P	**P**	**22 28 22.4**	**-0.6**
KURK				pmax	pmax		
	comp=Z,91nm,1.3s						
KURK	**Kurchatov**	**46.12**	**309**	P	**P**	**22 28 22.8**	**-0.2**
KURBB	**Kurchatov Arra**	**46.19**	**309**	P	**P**	**22 28 23.0**	**-0.5**
	comp=Z,33nm,0.9s,baz=77,slow=7.4,SNR=141						
RAMN	**Ramite**	**46.41**	**275**	*e*P	**P**	**22 28 25.5**	**-0.4**
	comp=Z,34nm,0.5s						
SURT	**Suratani**	**46.46**	**245**	P	**P**	**22 28 30.5**	**+4.4**
GUN	**Gumba**	**46.59**	**276**	*e*P	**P**	**22 28 27.6**	**+0.1**
	comp=Z,22nm,0.5s						
TTA	**Tatalina**	**46.78**	**34**	P	**P**	**22 28 28.7**	**+0.6**
TTA				pmax	pmax		
	comp=Z,11nm,1.1s						
TTA	**Tatalina**	**46.78**	**34**	P	**P**	**22 28 28.7**	**+0.6**
TTA				IAmb	IAmb	22 28 42.0	
	comp=Z,11nm,1.1s						
SHLS	**Shalkode**	**46.78**	**298**	*e*P	**P**	**22 28 25.9**	**-2.7**
	comp=Z,14nm,0.9s,baz=298						
SHLS	**Shalkode**	**46.78**	**298**	*e*P	**P**	**22 28 25.8**	**-2.7**
SHLS				pmax	pmax		
	comp=Z,14nm,0.9s						
SVW2	**Sparrevohn**	**46.87**	**37**	P	**P**	**22 28 28.6**	**-0.2**
PKI	**Pulchoki**	**47.11**	**276**	*e*P	**P**	**22 28 30.8**	**-0.7**
	comp=Z,12nm,0.5s						
PKIN	**Phulchoki**	**47.12**	**276**	*e*P	**P**	**22 28 31.3**	**-0.2**
	comp=Z,19nm,0.5s						
KKN	**Kakani**	**47.13**	**276**	*e*P	**P**	**22 28 31.5**	**0.0**
	comp=Z,22nm,0.6s						
TDK	**Taldyqorghan**	**47.14**	**301**	*e*P	**P**	**22 28 30.9**	**-0.3**
	baz=301						
TDK				LR	LR	22 47 35.8	
	comp=Z,428nm,15.4s,baz=301						
TDK	**Taldyqorghan**	**47.14**	**301**	*e*P	**P**	**22 28 30.9**	**-0.3**
TDK				MLR	MLR		
	comp=Z,428nm,15.0s						
KPKS	**Kokpek**	**47.27**	**299**	*e*P	**P**	**22 28 32.1**	**-0.2**
	comp=Z,16nm,1.2s,baz=299						
KPKS	**Kokpek**	**47.27**	**299**	*e*P	**P**	**22 28 32.1**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,16nm,1.2s						
DMN	**Daman**	**47.34**	**276**	*e*P	**P**	**22 28 32.5**	**-0.7**
	comp=Z,23nm,0.8s						
SATY	**Saty**	**47.56**	**299**	*e*P	**P**	**22 28 34.4**	**-0.2**
	baz=298						
SATY	**Saty**	**47.56**	**299**	*e*P	**P**	**22 28 34.3**	**-0.2**
KULM	**Kulim**	**47.63**	**240**	P	P	22 28 40.0	+4.8
A21K	**Barrow**	**47.81**	**23**	P	**P**	**22 28 37.9**	**+2.0**
	baz=257,SNR=38						
A21K	**Barrow**	**47.81**	**23**	P	**P**	**22 28 35.7**	**-0.1**
IPM	**Ipoh**	**47.94**	**239**	P	P	22 28 44.0	+6.3
IMAR	**Indian Mountai**	**48.01**	**30**	P	**P**	**22 28 38.2**	**+0.6**
DANN	**Dangsing**	**48.12**	**278**	*e*P	**P**	**22 28 39.0**	**-0.3**
	comp=Z,158nm,0.9s						
RSO	**Redoubt South**	**48.25**	**38**	P	**P**	**22 28 40.1**	**+0.4**
CHKK	**Chushkaly**	**48.38**	**300**	*e*P	**P**	**22 28 40.4**	**-0.4**
	baz=300						
CHKK	**Chushkaly**	**48.38**	**300**	*e*P	**P**	**22 28 40.4**	**-0.4**
KDAK	**Kodiak Island**	**48.44**	**41**	P	**P**	**22 28 41.8**	**+0.9**
	comp=Z,7.8nm,0.5s,baz=318,slow=4.6,SNR=36						
KDAK	**Kodiak Island**	**48.44**	**41**	P	**P**	**22 28 41.6**	**+0.7**
KDAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KDAK	**Kodiak Island**	**48.44**	**41**	P	**P**	**22 28 41.6**	**+0.7**
KDAK				IAmb	IAmb	22 28 56.6	
	comp=Z,9.6nm,0.8s						
MDOK	**Medeo**	**48.50**	**299**	*e*P	**P**	**22 28 42.3**	**+0.4**
	baz=299						
MDOK				LR	LR	22 48 21.6	
	comp=Z,202nm,19.0s,baz=299						
MDOK	**Medeo**	**48.50**	**299**	*e*P	**P**	**22 28 42.2**	**+0.4**
MDOK				MLR	MLR		
	comp=Z,202nm,19.0s						
PPLA	**Purkeypile**	**48.53**	**34**	P	**P**	**22 28 41.0**	**-0.7**
PPLA				IAmb	IAmb	22 28 57.0	
	comp=Z,22nm,1.1s						
AAA	**Alma-Ata**	**48.58**	**299**	*e*P	**P**	**22 28 42.6**	**+0.2**
	baz=299						
AAA				LR	LR	22 49 11.7	
	comp=Z,272nm,16.7s,baz=299						
AAA	**Alma-Ata**	**48.58**	**299**	*e*P	**P**	**22 28 42.6**	**+0.2**
AAA				MLR	MLR		
	comp=Z,272nm,17.0s						
TNSS	**Tian-Shan**	**48.60**	**299**	*e*P	**P**	**22 28 42.6**	**-0.4**
	baz=299						
TNSS	**Tian-Shan**	**48.60**	**299**	*e*P	**P**	**22 28 42.6**	**-0.4**
KUU	**Kurty**	**48.83**	**300**	*e*P	**P**	**22 28 43.8**	**-0.4**
	comp=Z,26nm,1.1s,baz=300						
KUU	**Kurty**	**48.83**	**300**	*e*P	**P**	**22 28 43.8**	**-0.4**
KUU				pmax	pmax		
	comp=Z,26nm,1.1s						
MTBS	**Maitube**	**48.95**	**299**	*e*P	**P**	**22 28 44.3**	**-0.9**
	baz=299						
MTBS	**Maitube**	**48.95**	**299**	*e*P	**P**	**22 28 44.3**	**-0.9**
BPAW	**Bear Paw Mtn.**	**49.08**	**33**	P	**P**	**22 28 45.5**	**-0.4**
BPAW				IAmb	IAmb	22 29 00.1	
	comp=Z,12nm,1.2s						
KTH	**Kantishna Hill**	**49.11**	**33**	P	**P**	**22 28 45.5**	**-0.6**
MLY	**Manley**	**49.21**	**31**	P	**P**	**22 28 49.2**	**+2.4**
	baz=268						
MTN	**Manton Dam**	**49.25**	**192**	P	**P**	**22 28 45.6**	**-1.9**
COLD	**Coldfoot**	**49.51**	**29**	P	**P**	**22 28 51.3**	**+2.2**
	baz=267,SNR=5.8						
COLD	**Coldfoot**	**49.51**	**29**	IAmb	IAmb	22 29 05.1	
	comp=Z,11nm,1.0s						
TKM2	**Tokmak 2**	**49.59**	**299**	P	**P**	**22 28 51.1**	**+0.8**
	SNR=15						
RC01	**Rabbit Creek A**	**49.71**	**37**	P	**P**	**22 28 51.5**	**+0.8**
	baz=273						
I23K	**Minto, Yukon-K**	**49.80**	**31**	P	**P**	**22 28 53.4**	**+2.2**
	baz=270						
I23K	**Minto, Yukon-K**	**49.80**	**31**	IAmb	IAmb	22 29 05.7	
	comp=Z,12nm,1.1s						
NEA2	**Nenana**	**49.92**	**32**	P	**P**	**22 28 54.6**	**+2.3**
	baz=270,SNR=16						
MCK	**McKinley**	**49.99**	**33**	P	**P**	**22 28 53.7**	**+0.9**
	baz=271						
BRZS	**Berezniki**	**50.00**	**309**	*e*P	**P**	**22 28 52.1**	**-0.9**
	comp=Z,13nm,1.4s,baz=308						
BRZS	**Berezniki**	**50.00**	**309**	*e*P	**P**	**22 28 52.1**	**-0.9**
BRZS				pmax	pmax		
	comp=Z,13nm,1.4s						
KBK	**Karagaybulak**	**50.12**	**299**	P	**P**	**22 28 54.7**	**+0.4**
	SNR=20						
SGDS	**Sogindy**	**50.14**	**300**	*e*P	**P**	**22 28 54.0**	**-0.3**
	comp=Z,7.9nm,1.6s,baz=300						
SGDS	**Sogindy**	**50.14**	**300**	*e*P	**P**	**22 28 54.0**	**-0.3**
SGDS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BTLS	**Baital**	**50.15**	**302**	*e*P	**P**	**22 28 53.9**	**-0.4**
	comp=Z,11nm,1.1s,baz=302						
BTLS	**Baital**	**50.15**	**302**	*e*P	**P**	**22 28 53.8**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,11nm,1.1s						
CHMS	**Chumysh**	**50.17**	**299**	P	**P**	**22 28 54.6**	**+0.2**
	SNR=6.9						
KSH	**Kashi**	**50.26**	**295**	P	**P**	**22 28 59.0**	**+3.6**
KSH				sP	sP	22 29 09.3	+2.0
KSH				S	**S**	**22 36 09.5**	**+3.4**
KSH				SS	**SS**	**22 39 41.5**	**+2.0**
KSH				pmax	pmax		
	comp=Z,26nm,1.2s						
KSH				pmax	pmax		
	comp=Z,500nm,6.6s						
KSH				LR	LR		
	comp=Z,570nm,6.4s						
KSH				LR	LR		
	comp=Z,460nm,5.7s						
KSH				LR	LR		
	comp=Z,310nm,8.0s						
USP	**Ospenovka**	**50.28**	**300**	P	**P**	**22 28 55.4**	**+0.1**
	SNR=10						
WRH	**Wood River Hil**	**50.35**	**32**	IAmb	IAmb	22 29 10.1	
	comp=Z,8.6nm,0.8s						
TCOL	**CIGO, UAF Yank**	**50.44**	**32**	P	**P**	**22 28 58.2**	**+2.1**
	baz=271						
TCOL	**CIGO, UAF Yank**	**50.44**	**32**	IAmb	IAmb	22 29 09.8	
	comp=Z,21nm,1.1s						
COLA	**College**	**50.44**	**32**	⇓*e*P	**P**	**22 28 58.1**	**+2.0**
COLA				pmax	pmax		
	comp=Z,14nm,1.0s						
COLA	**College**	**50.44**	**32**	P	**P**	**22 28 56.8**	**+0.7**
COLA				IAmb	IAmb	22 29 09.7	
	comp=Z,19nm,1.1s						
AAK	**Ala-Archa**	**50.45**	**299**	P	**P**	**22 28 56.8**	**+0.1**
	SNR=8.8						
AAK	**Ala-Archa**	**50.45**	**299**	⇑*e*P	**P**	**22 28 56.7**	**-0.1**
AAK				pmax	pmax		
	comp=Z,24nm,0.8s						
AAK	**Ala-Archa**	**50.45**	**299**	P	**P**	**22 28 56.1**	**-0.6**
AAK				IAmb	IAmb	22 29 14.1	
	comp=Z,14nm,1.0s						
UCH	**Uchtor**	**50.55**	**298**	P	**P**	**22 29 01.9**	**+4.1**
	SNR=5.7						
POKR	**Poker Plat Res**	**50.61**	**31**	P	**P**	**22 28 59.8**	**+2.3**
	baz=271,SNR=22						
SCM	**Sheep Creek Mo**	**50.82**	**36**	IAmb	IAmb	22 29 11.2	
	comp=Z,21nm,1.0s						
HDA	**Harding Lake**	**50.84**	**32**	P	**P**	**22 29 00.1**	**+0.9**
	baz=272,SNR=14						
HDA	**Harding Lake**	**50.84**	**32**	IAmb	IAmb	22 29 11.5	
	comp=Z,24nm,1.1s						
IL31		**50.85**	**32**	IAmb	IAmb	22 29 11.1	
	comp=Z,19nm,0.9s						
ILAR	**Eielson Array**	**50.85**	**32**	P	**P**	**22 29 00.2**	**+1.0**
	comp=Z,6.6nm,0.8s,baz=269,slow=5.6,SNR=61						
ILAR				LR	LR	22 51 59.7	
	comp=Z,48nm,19.3s,baz=288,slow=38						
ILAR	**Eielson Array**	**50.85**	**32**	P	**P**	**22 28 60.0**	**+0.7**
BRVK	**Borovoye**	**50.92**	**313**	⇓*e*P	**P**	**22 29 00.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,20nm,1.3s						
BRVK	**Borovoye**	**50.92**	**313**	P	**P**	**22 28 59.8**	**-0.1**
BRVK				IAmb	IAmb	22 29 04.1	
	comp=Z,16nm,1.0s						
AML	**Almayashu**	**51.16**	**299**	P	**P**	**22 29 02.9**	**+0.5**
	SNR=25						
M24K	**Tolsona, Glenn**	**51.34**	**35**	P	**P**	**22 29 04.7**	**+1.7**
	baz=275						
PRP	**Porcupine Dome**	**51.40**	**31**	IAmb	IAmb	22 29 16.2	
	comp=Z,16nm,1.0s						
BMAR	**Burnt Mountain**	**51.69**	**28**	P	**P**	**22 29 05.9**	**+0.3**
RIDG	**Independent Ri**	**51.81**	**33**	IAmb	IAmb	22 29 23.3	
	comp=Z,16nm,1.2s						
SCRK	**Sand Creek**	**52.17**	**33**	P	**P**	**22 29 10.3**	**+1.0**
	baz=275,SNR=18						
MENT	**Mentasta**	**52.39**	**34**	IAmb	IAmb	22 29 26.4	
	comp=Z,13nm,0.9s						
GSI	**Gunungsitoli**	**52.61**	**239**	P	**P**	**22 29 12.2**	**-0.8**
DZA	**Taraz**	**52.61**	**300**	*e*P	**P**	**22 29 12.7**	**-0.1**
	baz=300						
DZA	**Taraz**	**52.61**	**300**	*e*P	**P**	**22 29 12.6**	**-0.1**
KK31	**Karatay Array**	**53.12**	**301**	IAmb	IAmb	22 29 34.0	
	comp=Z,23nm,1.0s						
KKAR	**Karatay Array**	**53.12**	**301**	P	**P**	**22 29 16.1**	**-0.4**
KKAR	**Karatay Array**	**53.12**	**301**	P	**P**	**22 29 16.1**	**-0.4**
KKAR	**Karatay Array**	**53.12**	**301**	IAmb	IAmb	22 29 34.0	
	comp=Z,23nm,1.0s						
BCAR	**Beaver Creek A**	**53.25**	**34**	P	**P**	**22 29 17.7**	**+0.4**
BALM	**Baldy**	**53.29**	**36**	IAmb	IAmb	22 29 30.1	
	comp=Z,16nm,1.0s						
EGAK	**Eagle**	**53.30**	**32**	IAmb	IAmb	22 29 30.6	
	comp=Z,15nm,1.1s						
IUG	**Iuzhnay**	**53.75**	**300**	*e*P	**P**	**22 29 21.6**	**+0.3**
	baz=299						
IUG	**Iuzhnay**	**53.75**	**300**	*e*P	**P**	**22 29 21.5**	**+0.3**
NIL	**Nilore**	**54.33**	**289**	P	**P**	**22 29 25.1**	**-0.5**
NIL				pmax	pmax		
	comp=Z,23nm,1.2s						
NIL	**Nilore**	**54.33**	**289**	P	**P**	**22 29 25.1**	**-0.5**
NIL				IAmb	IAmb	22 29 28.0	
	comp=Z,23nm,1.1s						
EPYK	**Eagle Plains**	**54.89**	**29**	P	**P**	**22 29 31.2**	**+2.2**
	baz=280						
FITZ	**Fitzroy Crossi**	**55.49**	**197**	P	**P**	**22 29 33.5**	**-0.3**
FITZ				IAmb	IAmb	22 29 45.8	
	comp=Z,19nm,0.9s						
SVE	**Sverdlovsk**	**55.58**	**319**	*ce*P	**P**	**22 29 34.8**	**+0.7**
SVE				pmax	pmax		
	comp=Z,33nm,1.1s						
HYT	**Haines Junctio**	**55.65**	**36**	IAmb	IAmb	22 29 50.4	
	comp=Z,20nm,1.0s						
INK	**Inuvik**	**55.74**	**27**	P	**P**	**22 29 36.6**	**+1.5**
	comp=Z,6.4nm,0.5s,baz=296,slow=8.1,SNR=21						
INK	**Inuvik**	**55.74**	**27**	IAmb	IAmb	22 29 47.5	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**55.80**	**187**	P	**P**	**22 29 36.0**	**0.0**
WRAB				pmax	pmax		
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**55.80**	**187**	P	**P**	**22 29 36.0**	**0.0**
WRAB				IAmb	IAmb	22 29 41.8	
	comp=Z,18nm,0.9s						
WB2	**Warramunga Arr**	**55.80**	**187**	IAmb	IAmb	22 29 41.9	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**55.81**	**187**	P	**P**	**22 29 35.1**	**-0.9**
	comp=Z,3.7nm,0.4s,baz=2.7,slow=7.5,SNR=56						
WRA				LR	LR	22 52 25.5	
	comp=Z,164nm,21.7s,baz=25,slow=35						
WRA	**Warramunga Arr**	**55.81**	**187**	P	**P**	**22 29 35.5**	**-0.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**55.81**	**187**	P	**P**	**22 29 35.5**	**-0.6**
ARU	**Arti**	**56.79**	**319**	*c i*P	**P**	**22 29 42.4**	**-0.4**
ARU						22 30 33.5	
ARU				S	**S**	**22 37 32.2**	**-1.6**
ARU				SS	**SS**	**22 41 16.0**	**-5.5**
ARU				pmax	pmax		
	comp=Z,33nm,0.8s						
ARU	**Arti**	**56.79**	**319**	P	**P**	**22 29 42.6**	**-0.1**
SANVU	**Saraoutou**	**56.92**	**149**	P	**P**	**22 29 44.0**	**-0.1**
WHY	**Whitehorse**	**56.94**	**36**	IAmb	IAmb	22 29 57.7	
	comp=Z,22nm,1.1s						
KBL	**Kabul**	**57.20**	**291**	P	**P**	**22 29 45.5**	**-0.8**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBL	**Kabul**	**57.20**	**291**	P	**P**	**22 29 45.5**	**-0.8**
KBL				IAmb	IAmb	22 30 01.7	
	comp=Z,10nm,0.8s						
HYB	**Hyderabad**	**57.48**	**269**	*i* P	**P**	**22 29 47.0**	**-1.3**
ABKAR	**Akbulak array**	**58.17**	**310**	P	**P**	**22 29 52.1**	**-0.5**
ABKAR	**Akbulak array**	**58.17**	**310**	IAmb	IAmb	22 29 59.9	
	comp=Z,16nm,1.1s						
C36M	**Paulatuk**	**58.78**	**24**	P	**P**	**22 29 57.7**	**+1.2**
	baz=289						
ASAR	**Alice Springs**	**59.53**	**187**	P	**P**	**22 30 02.9**	**+0.6**
	comp=Z,5.0nm,0.6s,baz=4.4,slow=7.2,SNR=38						
ASAR				LR	LR	22 54 18.7	
	comp=Z,159nm,21.6s,baz=2.5,slow=35						
ASAR	**Alice Springs**	**59.53**	**187**	P	**P**	**22 30 01.9**	**-0.4**
DLBC	**Dease Lake**	**59.98**	**37**	P	**P**	**22 30 05.2**	**+0.1**
DLBC				IAmb	IAmb	22 30 18.7	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**60.39**	**202**	P	**P**	**22 30 07.9**	**-0.3**
KIRV	**Kirov**	**60.77**	**323**	*c i*P	**P**	**22 30 10.2**	**-0.2**
EUNU	**Eureka**	**61.45**	**8**	P	**P**	**22 30 15.7**	**+0.9**
EUNU				IAmb	IAmb	22 30 17.4	
	comp=Z,12nm,0.9s						
SPA0	**Spitsbergen Ar**	**61.54**	**349**	*e*P	**P**	**22 30 16.4**	**+1.1**
KBS	**Kingsbay**	**61.70**	**350**	*e*P	**P**	**22 30 17.8**	**+1.4**
EIDS	**Eidsvold**	**61.70**	**169**	P	**P**	**22 30 17.0**	**0.0**
EIDS				IAmb	IAmb	22 30 29.8	
	comp=Z,12nm,1.1s						
HSPB	**Hornsund (broa**	**62.45**	**348**	*e*P	**P**	**22 30 21.9**	**+0.4**
HSPB	**Hornsund (broa**	**62.45**	**348**	*e*P	**P**	**22 30 21.8**	**+0.4**
DZM	**Mont Dzumac**	**62.61**	**153**	*e*P	**P**	**22 30 23.8**	**+0.6**
	comp=Z,48nm,1.3s						
DZM	**Mont Dzumac**	**62.61**	**153**	*e*LR	LR	22 48 44.8	
	comp=Z,425nm,27.4s						
DZM	**Mont Dzumac**	**62.61**	**153**	P	**P**	**22 30 23.2**	**0.0**
COCO	**West Island**	**63.15**	**229**	*i* P	P	22 30 32.8	+5.9
TMCR	**Tamitsa**	**63.45**	**331**	*e*P	**P**	**22 30 26.1**	**-2.1**
TMCR				pmax	pmax		
	comp=Z,53nm,1.1s						
GEYT	**Alibeck**	**63.80**	**299**	P	**P**	**22 30 31.4**	**+0.3**
	comp=Z,7.0nm,0.9s,baz=52,slow=2.4,SNR=12						
GEYT				LR	LR	23 00 07.4	
	comp=Z,197nm,19.2s,baz=50,slow=38						
GEYT	**Alibeck**	**63.80**	**299**	P	**P**	**22 30 29.9**	**-1.2**
RES	**Resolute Bay**	**63.91**	**14**	P	**P**	**22 30 31.1**	**0.0**
RES				pmax	pmax		
	comp=Z,28nm,1.1s						
RES	**Resolute Bay**	**63.91**	**14**	P	**P**	**22 30 31.1**	**0.0**
BELG	**Belogornoye**	**64.19**	**317**	*ce*P	**P**	**22 30 32.8**	**-0.5**
BELG				pmax	pmax		
	comp=Z,16nm,1.2s						
KEV	**Kevo**	**64.30**	**339**	P	**P**	**22 30 34.1**	**+0.4**
KEV				pmax	pmax		
	comp=Z,21nm,1.1s						
KEV	**Kevo**	**64.30**	**339**	P	**P**	**22 30 34.1**	**+0.4**
KLMR	**Klimovskoe**	**64.38**	**328**	*e*P	**P**	**22 30 32.3**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,58nm,1.4s						
KLMR	**Klimovskoe**	**64.38**	**328**	*e*P	**P**	**22 30 32.3**	**-2.1**
KLMR				AMP		22 30 36.2	
	comp=Z,58nm,1.4s						
HAMF	**Hammerfest**	**64.70**	**341**	*e*P	**P**	**22 30 36.6**	**+0.3**
ARA0	**ARCESS Array S**	**64.85**	**339**	*e*P	**P**	**22 30 38.2**	**+0.7**
ARCES	**ARCESS Array B**	**64.85**	**339**	P	**P**	**22 30 37.1**	**-0.3**
	comp=Z,14nm,0.9s,baz=50,slow=7.0,SNR=21						
ARCES				LR	LR	23 02 14.5	
	comp=Z,255nm,19.5s,baz=45,slow=39						
ARCES	**ARCESS Array B**	**64.85**	**339**	P	**P**	**22 30 37.8**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,18nm,1.0s						
ARCES	**ARCESS Array B**	**64.85**	**339**	P	**P**	**22 30 37.8**	**+0.4**
ARCES				IAmb	IAmb	22 30 39.8	
	comp=Z,18nm,1.0s						
YKA	**Yellowknife Ar**	**65.17**	**30**	P	**P**	**22 30 40.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=311,slow=7.3,SNR=22						
KTK1	**Kautokeino**	**65.82**	**339**	*e*P	**P**	**22 30 44.3**	**+0.7**
TULEG	**Thule**	**66.35**	**7**	*i* P	**P**	**22 30 47.4**	**+0.5**
TULEG				IAmb	IAmb	22 30 49.2	
	comp=Z,20nm,1.0s						
TRO	**Tromso**	**66.60**	**341**	*e*P	**P**	**22 30 48.1**	**-0.5**
DAG	**Danmarks Havn**	**66.88**	**355**	*i* P	**P**	**22 30 50.4**	**+0.1**
DAG	**Danmarks Havn**	**66.88**	**355**	*i* P	**P**	**22 30 50.4**	**+0.1**
DAG	**Danmarks Havn**	**66.88**	**355**	*i* P	**P**	**22 30 50.4**	**+0.1**
FORT	**Forrest**	**67.32**	**192**	P	**P**	**22 30 53.5**	**-0.1**
STKA	**Stephens Creek**	**67.39**	**179**	P	**P**	**22 30 54.4**	**+0.4**
	comp=Z,7.8nm,0.7s,baz=0.5,slow=7.0,SNR=23						
STKA				LR	LR	22 59 55.8	
	comp=Z,98nm,21.1s,baz=20,slow=36						
STKA	**Stephens Creek**	**67.39**	**179**	P	**P**	**22 30 54.0**	**0.0**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**67.39**	**179**	P	**P**	**22 30 54.0**	**0.0**
MOS	**Moscow**	**67.78**	**323**	*e*P	**P**	**22 30 55.2**	**-1.2**
MOS				*e*		22 33 35.0	
MOS				pmax	pmax		
	comp=Z,60nm,1.2s						
VRH	**Novokhopyorsk**	**67.99**	**318**	*e*P	**P**	**22 30 56.4**	**-1.3**
VRH				pmax	pmax		
	comp=Z,50nm,1.8s						
NLWA	**Neilton Lookou**	**68.02**	**47**	IAmb	IAmb	22 31 02.7	
	comp=Z,19nm,1.1s						
D03D	**Eldon**	**68.41**	**46**	P	**P**	**22 31 03.0**	**+2.5**
	baz=300,SNR=7.3						
OBN	**Obninsk**	**68.62**	**323**	*d i*P	**P**	**22 31 01.6**	**0.0**
OBN				*i*		22 31 08.0	
OBN				*e*		22 33 33.5	
OBN				*e*S	**S**	**22 39 59.9**	**-2.4**
OBN				pmax	pmax		
	comp=Z,72nm,1.7s						
OBN	**Obninsk**	**68.62**	**323**	P	**P**	**22 31 01.7**	**+0.1**
STEI	**Steigen**	**68.75**	**341**	*e*P	**P**	**22 31 03.7**	**+1.5**
LPSR	**Galich'ya Gora**	**68.76**	**320**	*e*P	**P**	**22 31 01.1**	**-1.4**
LPSR				pmax	pmax		
	comp=Z,50nm,1.2s						
FAUS	**Fauske**	**69.12**	**340**	*e*P	**P**	**22 31 05.3**	**+0.8**
E04D	**Cinebar**	**69.21**	**47**	P	**P**	**22 31 07.2**	**+1.8**
	baz=300						
VSR	**Storozhevoye**	**69.36**	**319**	*e*P	**P**	**22 31 05.9**	**-0.4**
VSR				pmax	pmax		
	comp=Z,60nm,1.3s						
VORD	**Divnogorie**	**69.42**	**319**	*e*P	**P**	**22 31 06.0**	**-0.7**
VORD				pmax	pmax		
	comp=Z,20nm,1.2s						
FIA1	**FINESS Array S**	**69.53**	**332**	P	**P**	**22 31 07.4**	**+0.2**
FINES	**FINESS Array B**	**69.53**	**332**	P	**P**	**22 31 07.2**	**0.0**
	comp=Z,12nm,0.8s,baz=69,slow=5.7,SNR=25						
FINES				LR	LR	23 04 49.2	
	comp=Z,207nm,18.3s,baz=32,slow=39						
FINES	**FINESS Array B**	**69.53**	**332**	P	**P**	**22 31 07.5**	**+0.3**
FINES	**FINESS Array B**	**69.53**	**332**	P	**P**	**22 31 07.5**	**+0.3**
H04D	**Lebanon**	**70.14**	**49**	P	**P**	**22 31 13.9**	**+2.7**
	baz=301						
B08A	**Colville Reser**	**70.16**	**44**	IAmb	IAmb	22 31 13.8	
	comp=Z,8.4nm,1.1s						
I03D	**Drain, OR**	**70.19**	**50**	P	**P**	**22 31 13.4**	**+1.8**
	baz=301						
MOR8	**Moi Rana**	**70.22**	**340**	*e*P	**P**	**22 31 10.4**	**-1.0**
KONS	**Konsvik**	**70.36**	**340**	*e*P	**P**	**22 31 12.9**	**+0.8**
GOF	**Gofitskoye**	**70.36**	**312**	⇑*e*P	**P**	**22 31 12.9**	**+0.3**
GOF				pmax	pmax		
	comp=Z,57nm,1.1s						
H04A	**Detroit Lake**	**70.40**	**49**	IAmb	IAmb	22 31 15.8	
	comp=Z,9.6nm,1.0s						
K02D	**Willamette Mer**	**70.50**	**51**	P	**P**	**22 31 15.6**	**+2.0**
	baz=301						
G05D	**Wamic, OR**	**70.63**	**48**	P	**P**	**22 31 15.1**	**+0.8**
	baz=302						
I04A	**Tendick Farm,**	**70.72**	**50**	P	**P**	**22 31 16.5**	**+1.6**

	baz=301						
E07A	Sunnyside	70.81	46	IAmb	IAmb	22 31 18.3	
	comp=Z,13nm,1.2s						
L02E	Cave Junction	70.82	52	P	P	22 31 17.3	+1.9
	baz=301						
NCK	Nalchik	70.83	310	⇓eP	P	22 31 15.7	+0.2
NCK				pmax	pmax		
	comp=Z,19nm,1.2s						
ZEI	Tsey	71.01	309	eP	P	22 31 15.5	-1.4
ZEI				pmax	pmax		
	comp=Z,11nm,1.2s						
UPNV	Upernavik	71.03	5	i P	P	22 31 16.5	+0.3
C09A	Chrisman Ranch	71.06	44	IAmb	IAmb	22 31 20.1	
	comp=Z,12nm,1.1s						
I05D	Terrebonne, OR	71.09	49	P	P	22 31 18.6	+1.5
	baz=302						
F07A	Phinny Hill Vi	71.12	47	IAmb	IAmb	22 31 20.8	
	comp=Z,12nm,0.9s						
VSU	Vasula	71.12	329	eP	P	22 31 16.5	-0.4
VSU	Vasula	71.12	329	⇑eP	P	22 31 16.0	-0.9
VSU				pmax	pmax		
	comp=Z,105nm,1.2s						
KBZ	Khabaz	71.14	311	P	P	22 31 17.9	+0.6
	comp=Z,27nm,1.2s,baz=40,slow=8.7,SNR=13						
KBZ				LR	LR	23 05 11.8	
	comp=Z,127nm,19.3s,baz=50,slow=38						
KBZ	Khabaz	71.14	311	c iP	P	22 31 17.2	-0.1
KBZ				pmax	pmax		
	comp=Z,36nm,1.3s						
KIV	Kislovodsk	71.16	311	eP	P	22 31 17.5	-0.1
KIV				pmax	pmax		
	comp=Z,149nm,1.1s						
KIV				MLR	MLR		
	comp=Z,350nm,18.0s						
KIV	Kislovodsk	71.16	311	P	P	22 31 17.2	-0.4
E08A	Dider Farm, El	71.31	46	IAmb	IAmb	22 31 21.6	
	comp=Z,7.4nm,0.9s						
NEW	Newport	71.45	44	P	P	22 31 20.8	+1.6
	baz=303,SNR=6.1						
YBH	Yreka Blue Hor	71.61	52	P	P	22 31 20.4	0.0
YBH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YBH	Yreka Blue Hor	71.61	52	P	P	22 31 20.4	0.0
L04D	Klamath Falls	71.61	51	P	P	22 31 22.0	+1.6
	baz=302,SNR=5.4						
PINE	Pine Mountain	71.63	49	IAmb	IAmb	22 31 24.6	
	comp=Z,13nm,0.8s						
M02C	Callahan	71.70	52	P	P	22 31 22.5	+1.6
	baz=302						
J05D	Fort Rock, OR	71.72	50	P	P	22 31 22.8	+1.7
	baz=302						
E09A	Wood Farm, Sta	71.83	45	IAmb	IAmb	22 31 24.3	
	comp=Z,10nm,0.9s						
GNI	Garni	71.86	307	deP	P	22 31 23.1	+1.2
GNI				pmax	pmax		
	comp=Z,26nm,1.3s						
GNI	Garni	71.86	307	P	P	22 31 21.6	-0.4
SUMG	Summit	71.86	360	i P	P	22 31 22.6	+1.0
SUMG	Summit	71.86	360	IAmb	IAmb	22 31 28.6	
	comp=Z,7.2nm,0.7s						
SUMG	Summit	71.86	360	i P	P	22 31 22.6	+1.0
SUMG	Summit	71.86	360	i P	P	22 31 22.7	+1.0
AKH	Akhalkalaki	72.00	308	⇓P	P	22 31 23.8	+1.1
N02D	Trinity Center	72.01	52	P	P	22 31 24.9	+2.2
	baz=302,SNR=6.3						
M04C	Macdoel	72.14	51	P	P	22 31 25.9	+2.3
	baz=302						
NSS	Namsos	72.14	339	eP	P	22 31 22.3	-0.6
MTSE	Matsula	72.14	331	eP	P	22 31 21.3	-1.7
K05A	Summer Lake	72.22	50	IAmb	IAmb	22 31 27.7	
	comp=Z,14nm,1.0s						
WDC	Whiskeytown Da	72.33	53	P	P	22 31 24.9	+0.3
WDC				pmax	pmax		
	comp=Z,11nm,1.1s						
WDC	Whiskeytown Da	72.33	53	P	P	22 31 24.9	+0.3
WDC				IAmb	IAmb	22 31 37.4	
	comp=Z,11nm,1.1s						
O02D	Mt. Diablo Mer	72.38	53	P	P	22 31 27.2	+2.2
	baz=302						
AAL	Aland	72.62	333	eP	P	22 31 26.7	+0.8
CLDR	Caldiran	72.93	306	eP	P	22 31 28.1	-0.3
O03E	Paynes Creek	72.96	52	P	P	22 31 29.9	+1.5
	baz=303,SNR=9.8						
MNK	Minsk	73.08	326	i P	P	22 31 29.2	+0.5
	comp=E,3.0nm,1.0s						
MNK				i P	P	22 31 29.2	+0.5
	comp=N,14nm,1.0s						
MNK				i P	P	22 31 29.2	+0.5
	comp=Z,30nm,1.0s						
MNK				i PcP	PcP	22 31 45.8	+0.4
MNK				i PP	PP	22 34 11.6	+0.6
MNK				i PPP	PPP	22 35 56.5	
MNK				i S	SKiKP	22 40 56.6	-2.3
MNK				i ScS	ScS	22 41 34.3	-0.4
MNK				i SS	SS	22 45 36.2	+1.8
MNK				i SSS	SSS	22 48 57.3	
MNK				i LQ	LQ	22 55 10.6	
MNK				i LR	LR	22 58 29.1	
MNK				i LRM	MLR	23 05 55.7	
	comp=Z,144nm,18.1s						
MNK				i LRM	MLR	23 06 02.2	
	comp=N,124nm,18.7s						
MNK				i LRM	MLR	23 06 03.5	
	comp=E,20nm,18.7s						
IDID	Didziasalis	73.09	327	eP	P	22 31 29.2	+0.5
ISAL	Salakas	73.19	327	eP	P	22 31 29.5	+0.1
IIGN	Ignalina	73.29	327	eP	P	22 31 30.3	+0.3
AGRB	Hanur-Agry	73.30	307	eP	P	22 31 31.7	+1.1
JTMT	Jette	73.32	43	IAmb	IAmb	22 31 35.9	
	comp=Z,9.9nm,0.9s						
NACGM	Naroch	73.33	327	i P	P	22 31 30.7	+0.5
NACGM				i P	P	22 31 30.7	+0.5
NACGM				i P	P	22 31 30.7	+0.5
NACGM				i PP	PP	22 34 13.3	+0.2
NACGM				i PPP	PPP	22 35 51.6	
NACGM				i S	S	22 40 56.2	-0.7
NACGM				i SS	SS	22 45 39.5	+1.5
NACGM				i SSS	SSS	22 48 47.9	
NACGM				i LR	LR	23 02 05.5	
ORV	Oroville	73.55	53	P	P	22 31 32.2	+0.3
ORV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ORV	Oroville	73.55	53	P	P	22 31 32.1	+0.3
ORV				IAmb	IAmb	22 31 34.6	
	comp=Z,9.4nm,1.1s						
UPP	Uppsala	73.70	334	eP	P	22 31 32.2	0.0
GEVA	Gevas	73.94	306	P	P	22 31 33.7	-0.6
GEVA				IAmb	IAmb	22 31 37.4	
	comp=Z,17nm,1.1s						
AKDM	Akdamar-Van	73.98	306	eP	P	22 31 35.0	+0.4
MSO	Missoula	74.04	43	P	P	22 31 36.0	+1.2
	baz=306						
BEKR	Beckworth	74.12	52	IAmb	IAmb	22 31 38.5	
	comp=Z,16nm,1.1s						
CUKT	Cukurca	74.16	305	eP	P	22 31 34.3	-1.3
PABE	Paberze	74.17	328	eP	P	22 31 35.7	+0.6
GURO	Guroymak-BITLI	74.48	306	eP	P	22 31 38.2	+0.7
KOPT	Kop Dagi	74.66	308	IAmb	IAmb	22 31 40.8	
	comp=Z,16nm,1.2s						
PBUR	Paburge	74.69	329	eP	P	22 31 38.4	+0.2
SIRT	Sirnak	74.80	305	eP	P	22 31 39.5	+0.3
AKASG	Malin Array Be	74.80	322	P	P	22 31 38.4	-0.5
	comp=Z,3.8nm,0.4s,baz=46,slow=6.5,SNR=33						
AKASG				LR	LR	23 07 27.7	
	comp=Z,419nm,18.1s,baz=40,slow=38						
AKASG	Malin Array Be	74.80	322	P	P	22 31 38.7	-0.2
AKASG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AKASG	Malin Array Be	74.80	322	P	P	22 31 38.7	-0.2
AKBB	Malin Array Si	74.80	322	⇑eP	P	22 31 38.2	-0.7
AKBB	Malin Array Si	74.80	322	IAmb	IAmb	22 31 41.5	
	comp=Z,13nm,1.0s						
PAHR	Pah Rah Range	74.83	52	IAmb	IAmb	22 31 42.7	
	comp=Z,12nm,1.0s						
DOMB	Dombas	74.89	339	eP	P	22 31 40.4	+1.2
MOL	Molde	74.92	339	eP	P	22 31 39.7	+0.4
YEDI	Yedisu-Bingol	74.96	308	eP	P	22 31 37.1	-3.1
NB201	NORSAR Array S	74.97	337	IAmb	IAmb	22 31 55.5	
	comp=Z,20nm,0.9s						
NB2	NORSAR Subarra	75.00	337	P	P	22 31 39.6	-0.3
	comp=Z,4.6nm,0.5s,baz=41,slow=5.9						
NB2	NORSAR Subarra	75.00	337	P	P	22 31 39.6	-0.3
	baz=41,slow=5.9						
NOA	NORSAR Array B	75.00	337	P	P	22 31 39.2	-0.7
	comp=Z,8.6nm,0.7s,baz=61,slow=8.2,SNR=38						
NOA				LR	LR	23 07 08.5	
	comp=Z,222nm,21.1s,baz=50,slow=38						
PNTR	Pine Nut	75.04	53	IAmb	IAmb	22 31 44.4	
	comp=Z,10nm,1.1s						
FFC	Flin Flon	75.07	32	P	P	22 31 40.8	+0.4
FFC				pmax	pmax		
	comp=Z,11nm,1.1s						
FFC	Flin Flon	75.07	32	P	P	22 31 40.8	+0.4
FFC				IAmb	IAmb	22 31 55.3	
	comp=Z,11nm,1.1s						
CMB	Columbia Colle	75.11	54	IAmb	IAmb	22 31 44.3	
	comp=Z,7.4nm,0.8s						
BNGB	Bingl	75.12	307	eP	P	22 31 32.8	-8.3
NC602	NORSAR Array S	75.13	337	eP	P	22 31 40.1	-0.5
ICESG	Greenland Ices	75.36	0	i P	P	22 31 43.6	+1.4
SUW	Suwalki	75.50	327	eP	P	22 31 42.6	-0.3
SUW	Suwalki	75.50	327	eP	P	22 31 42.3	-0.6
SUW	Suwalki	75.50	327	IAmb	IAmb	22 31 57.1	
	comp=Z,18nm,1.1s						
EGMT	Eagleton	75.61	41	P	P	22 31 46.1	+2.4
	baz=308						
DLMT	Dillon	75.66	44	IAmb	IAmb	22 31 47.4	
	comp=Z,18nm,1.0s						
HLID	Hailey	75.68	46	P	P	22 31 46.1	+1.8
	baz=306,SNR=8.4						
RYN	Ryan	75.99	52	IAmb	IAmb	22 31 49.1	
	comp=Z,11nm,1.2s						
BOZ	Bozeman (W)	76.07	44	P	P	22 31 47.9	+1.4
	baz=307,SNR=12						
BOZ	Bozeman (W)	76.07	44	IAmb	IAmb	22 31 59.0	
	comp=Z,11nm,1.1s						
SKAR	Skarslia	76.18	338	eP	P	22 31 47.9	+1.2
ILIC	ilic-Erzincan	76.21	309	eP	P	22 31 48.2	+0.9
LHV	Little Huntoon	76.22	53	IAmb	IAmb	22 31 51.3	
	comp=Z,12nm,0.9s						
NVAR	Mina Array Bea	76.25	52	P	P	22 31 49.5	+1.8
	comp=Z,5.7nm,0.8s,baz=293,slow=5.8,SNR=36						
NVAR	Mina Array Bea	76.25	52	P	P	22 31 47.6	-0.1
HYA	Hoyanger	76.43	339	eP	P	22 31 48.6	+0.6
PAGB	Antelope Grade	76.50	56	IAmb	IAmb	22 32 01.8	
	comp=Z,12nm,1.1s						
KONO	Kongsberg	76.59	337	eP	P	22 31 50.8	+1.8
YHL	Hebgen Lake	76.77	44	IAmb	IAmb	22 31 54.2	
	comp=Z,9.1nm,1.1s						
YHB	Horse Butte	76.82	44	IAmb	IAmb	22 31 54.4	
	comp=Z,11nm,1.1s						
SORM	Soroca	76.86	320	⇓P	P	22 31 50.3	-0.4
SUE	Sulen	76.92	340	eP	P	22 31 52.9	+2.2
MALT	Malatya	76.95	308	eP	P	22 31 52.6	+1.0
TOKT	Tokat	76.97	310	eP	P	22 31 52.1	+0.6
YMR	Madison River	77.00	44	IAmb	IAmb	22 31 55.7	
	comp=Z,12nm,1.1s						
TOKA	Tokat	77.01	310	IAmb	IAmb	22 31 53.5	
	comp=Z,20nm,1.2s						
PKM	Mcpherson Peak	77.27	56	P	P	22 31 55.5	+2.0
	baz=305						
ODD1	Odda	77.31	338	eP	P	22 31 53.7	+0.7
BER	Bergen	77.31	339	eP	P	22 31 51.6	-1.3
YNE	Yellowstone No	77.33	43	IAmb	IAmb	22 31 57.1	
	comp=Z,8.1nm,1.1s						
H17A	Grant Village	77.39	44	P	P	22 31 57.5	+3.4
	baz=308,SNR=20						
MILM	Milestii Mici	77.39	319	⇑P	P	22 31 54.5	+0.8
DARE	Darende-Malaty	77.41	309	eP	P	22 31 55.2	+1.1
YMP	Mirror Lake Pl	77.41	44	IAmb	IAmb	22 32 14.9	
	comp=Z,15nm,1.1s						
IMW	Indian Meadow	77.49	45	IAmb	IAmb	22 31 58.7	
	comp=Z,9.5nm,1.0s						
FLWY	Flagg Ranch	77.51	44	IAmb	IAmb	22 32 08.5	
	comp=Z,12nm,1.0s						
CWC	Cottonwood Cre	77.53	54	P	P	22 31 55.9	+1.0
	baz=305						
RLMT	Red Lodge	77.67	43	IAmb	IAmb	22 31 58.5	
	comp=Z,7.2nm,0.8s						
GRAC	Grapevine Rang	77.68	53	P	P	22 31 57.3	+1.7
	baz=306						
HVU	Hansel Valley	77.71	47	IAmb	IAmb	22 31 58.2	
	comp=Z,6.0nm,0.7s						
ISA	Isabella, Lake	77.72	55	P	P	22 31 56.7	+0.8
	baz=305						
SNOW	Snow King Moun	77.86	45	IAmb	IAmb	22 32 00.5	
	comp=Z,6.2nm,0.8s						
LVV	L'vov	77.92	324	eP	P	22 31 57.1	+0.5
LVV				eS	S	22 41 47.7	-0.2
LVV				pmax	pmax		
	comp=Z,70nm,1.4s						
LVV				MLR	MLR		
	comp=E,200nm,15.0s						
LVV				MLR	MLR		
	comp=N,400nm,14.0s						
LVV				MLR	MLR		
	comp=Z,300nm,15.0s						
HOMB	Homborsund	78.02	336	eP	P	22 31 55.1	-1.8
R11A	Troy Canyon, C	78.03	51	P	P	22 31 59.3	+1.6
	baz=306,SNR=13						
MPMC	Manual Prospec	78.14	54	P	P	22 31 59.7	+1.3
	baz=306,SNR=5.6						
BSD	Bornholm Skovb	78.15	332	eP	P	22 31 51.7	-6.0
BSD				pmax	pmax		
	comp=Z,18nm,1.1s						
BSD	Bornholm Skovb	78.15	332	i P	P	22 31 51.7	-6.0
	comp=Z,18nm,1.1s						
BSD	Bornholm Skovb	78.15	332	eP	P	22 31 51.7	-6.0
BSD				IAmb	IAmb	22 31 54.0	
	comp=Z,18nm,1.1s						
BNN	Bunyan	78.27	310	eP	P	22 31 59.1	+0.1
LAO	LASA Array	78.31	40	P	P	22 32 00.7	+1.7
	baz=310						
FURC	Furnace Creek,	78.32	53	P	P	22 32 00.8	+1.8
	baz=306						
SNART	Snartemo	78.39	337	eP	P	22 31 59.1	+0.2
GAZ	Gaziantep	78.40	307	IAmb	IAmb	22 32 02.4	
	comp=Z,17nm,1.0s						
TPNV	Topopah Spring	78.43	53	IAmb	IAmb	22 32 13.0	
	comp=Z,10nm,1.1s						
BIR	Birlad	78.44	319	⇑P	P	22 32 00.3	+0.7
PRAR	RASCA	78.45	321	⇓P	P	22 31 59.4	-0.2
EDW2	Edwards Air Fo	78.50	55	P	P	22 32 01.5	+1.4
	baz=306						
HWUT	Hardware Ranch	78.53	47	IAmb	IAmb	22 32 17.8	
	comp=Z,14nm,1.1s						
GIRR	Girov	78.58	320	⇑P	P	22 32 00.4	+0.1
DUG	Dugway, Tooele	78.65	48	P	P	22 32 02.9	+1.9
	baz=308,SNR=13						
DUG	Dugway, Tooele	78.65	48	IAmb	IAmb	22 32 04.7	
	comp=Z,9.3nm,1.0s						
KWP	Kalwaria Pacla	78.68	324	eP	P	22 32 01.4	+0.5
BUR08	Bucovina Ar. S	78.79	321	IAmb	IAmb	22 32 15.2	
	comp=Z,10nm,1.1s						
TESR	Tescani	78.79	320	⇑P	P	22 32 01.3	-0.2
BIZ	Bicaz	78.80	321	⇓P	P	22 32 02.3	+0.8
BURAR	Bucovina Array	78.80	321	⇑P	P	22 32 01.6	0.0
BURAR	Bucovina Array	78.80	321	P	P	22 32 01.4	-0.3
CFR	Carcaliu	78.87	318	⇑P	P	22 32 02.7	+0.9
TPGR	Topolog	78.92	318	⇑P	P	22 32 02.4	+0.2
TCUT	Toone Canyon	78.93	47	IAmb	IAmb	22 32 09.9	
	comp=Z,12nm,1.0s						
BW06	Boulder Array	78.98	45	P	P	22 32 04.0	+1.1
	baz=309,SNR=6.7						
BW06	Boulder Array	78.98	45	P	P	22 32 02.3	-0.6
PD31	Pinedale Array	78.98	45	P	P	22 32 02.3	-0.6
PDAR	Pinedale Array	78.98	45	P	P	22 32 03.9	+0.9
	comp=Z,2.7nm,0.5s,baz=267,slow=1.4,SNR=51						
PDAR	Pinedale Array	78.98	45	P	P	22 32 02.9	0.0
PSUT	Pine Spring	79.01	50	IAmb	IAmb	22 32 19.6	
	comp=Z,11nm,1.1s						
BFSC	Mount Baldy Ra	79.09	56	P	P	22 32 05.0	+1.4
	baz=306						
BR131	Keskin Array S	79.11	311	deP	P	22 32 03.7	+0.1
BR131	Keskin Array S	79.11	311	IAmb	IAmb	22 32 15.7	
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	79.11	311	P	P	22 32 03.9	+0.3
	comp=Z,4.7nm,0.8s,baz=108,slow=3.0,SNR=30						
BRTR				LR	LR	23 11 57.0	
	comp=Z,43nm,18.3s,baz=20,slow=40						
BRTR	Keskin Array B	79.11	311	P	P	22 32 03.1	-0.4
VRI	Vrincioaia	79.17	319	⇑P	P	22 32 04.6	+1.0
JLU	Jordanelle	79.22	47	P	P	22 32 03.5	-0.8
PLOR	Plostina	79.22	319	⇑P	P	22 32 04.1	+0.2
KOLS	Kolonicke sedl	79.36	324	eP	P	22 32 05.3	+0.7
KOLS				pmax	pmax		
	comp=Z,12nm,1.4s						
KOLS	Kolonicke sedl	79.36	324	eP	P	22 32 05.3	+0.7
MPU	Maple Canyon	79.47	48	P	P	22 32 05.1	-0.5
MPU				IAmb	IAmb	22 32 18.4	
	comp=Z,9.4nm,1.0s						
UZH	Uzhgorod	79.56	324	eP	P	22 32 05.2	-0.4
UZH				e		22 32 18.2	
ARCR	ARCALIA	79.59	321	⇑P	P	22 32 07.0	+1.1
HEC	Hector,Ludlow	79.63	55	P	P	22 32 07.7	+1.3
	baz=307						
OJC	Ojcow	79.63	326	eP	P	22 32 06.2	+0.2
OJC	Ojcow	79.63	326	P	P	22 32 05.3	-0.7
OJC				pmax	pmax		
	comp=Z,19nm,1.0s						
OJC	Ojcow	79.63	326	P	P	22 32 05.3	-0.7
OJC				IAmb	IAmb	22 32 09.0	
	comp=Z,19nm,1.0s						
ICOR	Ion Corvin	79.73	318	⇑P	P	22 32 07.8	+1.2
CRVS	Cervenica-Dubn	79.78	324	eP	P	22 32 08.3	+1.5
CRVS				pmax	pmax		
	comp=Z,16nm,1.0s						
CRVS	Cervenica-Dubn	79.78	324	eP	P	22 32 08.3	+1.5
MURC	Murrieta	79.78	56	P	P	22 32 08.6	+1.4
	baz=306						
DOPR	Dopca	79.81	320	⇑P	P	22 32 08.4	+1.4
MLR	Muntele Rosu	79.83	319	⇑P	P	22 32 08.1	+0.7
NIE	Niedzica	79.96	325	eP	P	22 32 08.6	+0.8
MSU	Marysvale	80.07	50	P	P	22 32 08.1	-0.8
MSU	Marysvale	80.07	50	P	P	22 32 08.1	-0.8
GMRC	Granite Mounta	80.10	54	P	P	22 32 09.9	+0.9
	baz=307						
CJR	Cluj-Napoca	80.23	322	⇑P	P	22 32 10.7	+1.4
PFO	Pinyon Flats O	80.27	56	⇑eP	P	22 32 10.5	+0.6
PFO				pmax	pmax		
	comp=Z,19nm,1.1s						
PFO	Pinyon Flats O	80.27	56	P	P	22 32 11.4	+1.4
	baz=307,SNR=6.9						
PFO	Pinyon Flats O	80.27	56	P	P	22 32 09.8	-0.2
PFO				IAmb	IAmb	22 32 12.4	
	comp=Z,9.1nm,1.1s						
TPFO	Pinon Flats	80.28	56	P	P	22 32 11.4	+1.5
	baz=307,SNR=8.5						
LCMT	Little Creek M	80.32	51	P	P	22 32 09.6	-0.5
VOIR		80.34	320	⇑P	P	22 32 09.3	-0.7
BELC	Belle Mtn. Jos	80.34	55	P	P	22 32 11.3	+1.0
	baz=307,SNR=5.8						
P17A	Butcher Ranch,	80.35	48	P	P	22 32 09.8	-0.6
P17A				IAmb	IAmb	22 32 13.8	
	comp=Z,13nm,0.9s						
RDMU	Red Mountain	80.36	47	P	P	22 32 09.8	-0.7
Q16A	Castle Valley	80.43	49	P	P	22 32 09.9	-0.9
Q16A				IAmb	IAmb	22 32 15.4	
	comp=Z,8.5nm,1.0s						
RAYN	Ar Rayn	80.46	292	P	P	22 32 10.3	-0.7
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RAYN	Ar Rayn	80.46	292	P	P	22 32 10.3	-0.7
RAYN				IAmb	IAmb	22 32 13.4	
	comp=Z,6.4nm,0.7s						
LANS	Liptovska Anna	80.54	325	eP	P	22 32 12.6	+1.6
LANS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LANS	Liptovska Anna	80.54	325	eP	P	22 32 12.6	+1.6
RUE	Ruedersdorf	80.57	330	eP	P	22 32 10.9	0.0
	baz=38,slow=5.3						
RUE				epP	sP	22 32 23.3	+0.1
KNB	Kanab	80.58	51	P	P	22 32 11.0	-0.7
KNB				pmax	pmax		
	comp=Z,25nm,1.2s						
KNB	Kanab	80.58	51	P	P	22 32 11.0	-0.7
KNB				IAmb	IAmb	22 32 16.4	
	comp=Z,25nm,1.2s						
ARR	Arges	80.60	320	⇓P	P	22 32 12.8	+1.3
DRGR		80.62	322	⇑P	P	22 32 11.4	-0.1
SRU	San Rafael Swe	80.71	48	IAmb	IAmb	22 32 15.4	
	comp=Z,11nm,0.9s						
MONP2	Monument Peak	80.72	56	P	P	22 32 13.5	+1.0
	baz=307						
KSP	Ksiaz	80.73	328	eP	P	22 32 11.7	-0.3
K22A	Casper	80.78	44	P	P	22 32 13.6	+1.1
	baz=311						
BSEG	Bad Segeberg	80.79	333	eP	P	22 32 11.9	-0.3
	baz=38,slow=5.3						
BSEG				epP	sP	22 32 24.0	-0.4
IRM	Iron Mountain	80.82	54	P	P	22 32 14.0	+1.3
	baz=307,SNR=6.1						
ULM	Lac du Bonnet	80.86	33	P	P	22 32 12.2	-0.4
	comp=Z,5.8nm,1.0s,baz=296,slow=4.7,SNR=6.3						
ULM	Lac du Bonnet	80.86	33	⇓eP	P	22 32 13.1	+0.5
ULM	Lac du Bonnet	80.86	33	IAmb	IAmb	22 32 16.7	
	comp=Z,9.7nm,1.1s						
CBX	Cerro Bola	80.90	57	P	P	22 32 12.3	-1.0
BC3	Big Chuckawall	80.91	55	P	P	22 32 14.5	+1.1
	baz=307						
MORC	Moravsky Berou	80.96	327	⇓P	P	22 32 14.1	+0.9
MORC	Moravsky Berou	80.96	327	eP	P	22 32 13.1	-0.1
MORC	Moravsky Berou	80.96	327	P	P	22 32 12.5	-0.7
MORC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MORC	Moravsky Berou	80.96	327	P	P	22 32 12.5	-0.7
MORC				IAmb	IAmb	22 32 26.1	
	comp=Z,9.3nm,1.1s						
OSTC	Ostas	80.98	328	eP	P	22 32 14.4	+1.1
CHVC	Chvalec	81.03	328	eP	P	22 32 13.4	-0.1
IKP	In-Ko-Pah, Jac	81.08	56	P	P	22 32 15.9	+1.7
	baz=307,SNR=6.1						
DPC	Dobruska-Polom	81.08	328	eP	P	22 32 14.5	+0.6
DPC	Dobruska-Polom	81.08	328	eP	P	22 32 14.5	+0.6
KRLC	Kraliky	81.08	327	eP	P	22 32 14.1	+0.2
KRLC	Kraliky	81.08	327	eP	P	22 32 14.1	+0.2
SWSC	Sam W. Stewart	81.11	56	P	P	22 32 15.3	+1.0
	baz=307						
RSSD	Black Hills	81.17	41	P	P	22 32 14.5	-0.1
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	81.17	41	P	P	22 32 15.3	+0.7
	baz=312						
RSSD	Black Hills	81.17	41	P	P	22 32 14.5	-0.1
PSZ	Piszkesteto	81.21	324	⇑P	P	22 32 14.5	-0.1
PSZ	Piszkesteto	81.21	324	eP	P	22 32 14.0	-0.6
PSZ	Piszkesteto	81.21	324	P	P	22 32 13.8	-0.8
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PSZ	Piszkesteto	81.21	324	P	P	22 32 13.8	-0.8
PSZ				IAmb	IAmb	22 32 24.1	
	comp=Z,9.9nm,1.1s						
U15A	North Rim	81.28	51	IAmb	IAmb	22 32 29.9	
	comp=Z,9.5nm,1.0s						
VYHS	Vyhne	81.30	325	eP	P	22 32 15.5	+0.5
VYHS				pmax	pmax		
	comp=Z,22nm,1.4s						
VYHS	Vyhne	81.30	325	eP	P	22 32 15.5	+0.5
PDMCI	Parker Dam,Lak	81.39	54	P	P	22 32 16.7	+1.0
	baz=308						
O20A	White River Ci	81.42	46	P	P	22 32 17.1	+1.0
	baz=310,SNR=8.3						
O20A	White River Ci	81.42	46	P	P	22 32 15.4	-0.7
O20A				IAmb	IAmb	22 32 28.9	
	comp=Z,14nm,1.1s						
GZR	Gura Zlata	81.55	321	⇑P	P	22 32 16.3	-0.1
JAVC	Velka Javorina	81.57	326	eP	P	22 32 17.6	+1.1
ESJX	Sierra Juarez	81.57	57	IAmb	IAmb	22 32 19.3	
	comp=Z,7.7nm,0.9s						
FLTG	Flechtingen	81.69	331	eP	P	22 32 16.5	-0.4
	comp=Z,4.2nm,0.8s,baz=38,slow=5.3						
BRG	Berggiesshubel	81.71	329	i P	P	22 32 16.9	-0.3
BRG				Amp		22 32 19.5	
	comp=Z,5.8nm,0.8s						
BRG	Berggiesshubel	81.71	329	i P	P	22 32 16.8	-0.3
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRG	Berggiesshubel	81.71	329	i P	P	22 32 16.9	-0.3
BRG				Amp		22 32 19.5	
	comp=Z,5.8nm,0.8s						
BRG	Berggiesshubel	81.71	329	eP	P	22 32 17.2	+0.1
	baz=38,slow=5.3						
VRAC	Vranov	81.73	327	eP	P	22 32 17.5	+0.2
CLL	Collm	81.77	330	i P	P	22 32 17.0	-0.4
	comp=Z,44nm,1.9s						
CLL				i pP	pP	22 32 27.1	+0.7
CLL				i		22 32 54.7	
CLL				ePP	PP	22 35 22.0	-1.9
CLL				eSS	SS	22 48 06.0	+21
CLL				eSSSS		22 53 48.0	
CLL	Collm	81.77	330	i P	P	22 32 17.0	-0.4
CLL				i		22 32 27.1	
CLL				pmax	pmax		
	comp=Z,44nm,1.9s						
CLL	Collm	81.77	330	IAmb	IAmb	22 32 29.6	
	comp=Z,14nm,1.0s						

CLL	Collm	81.77	330	eP	P	22 32 17.3	-0.1
	comp=Z,6.3nm,0.9s,baz=38,slow=5.3						
FBE	Freiberg	81.92	329	eP	P	22 32 18.3	+0.1
	baz=38,slow=5.3						
SMOL	Smolenice	81.93	326	eP	P	22 32 19.2	+0.9
SMOL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SMOL	Smolenice	81.93	326	eP	P	22 32 19.2	+0.9
BZS	Buzias	81.98	322	⇑P	P	22 32 18.4	-0.3
KRUC	Moravsky	82.00	327	eP	P	22 32 18.9	+0.2
PV23	Carpenter Ridg	82.04	48	P	P	22 32 18.3	-1.2
PV23				IAmb	IAmb	22 32 22.3	
	comp=Z,16nm,0.8s						
PV10	Paradox Valley	82.07	48	P	P	22 32 19.2	-0.4
PV14	Lion Creek, Pa	82.08	48	P	P	22 32 18.9	-0.8
MODS	Modra-Piesok	82.10	326	eP	P	22 32 19.0	-0.3
MODS				pmax	pmax		
	comp=Z,41nm,2.2s						
MODS	Modra-Piesok	82.10	326	eP	P	22 32 19.0	-0.3
PV22	Blue Mesa, Par	82.12	48	P	P	22 32 19.4	-0.4
PV22				IAmb	IAmb	22 32 33.1	
	comp=Z,20nm,1.2s						
PRU	Pruhonice	82.12	328	eP	P	22 32 19.3	0.0
PRU				e		22 35 30.5	
PRU	Pruhonice	82.12	328	eP	P	22 32 19.3	0.0
PRU				ePP	PP	22 35 30.5	+3.7
PV20	West Nyswonger	82.14	48	P	P	22 32 19.2	-0.7
PV20				IAmb	IAmb	22 32 32.6	
	comp=Z,17nm,1.1s						
PV04	Paradox Valley	82.14	48	IAmb	IAmb	22 32 36.3	
	comp=Z,12nm,1.0s						
PV19	Morning Glory	82.14	48	P	P	22 32 19.2	-0.8
PV16	Nyswonger Mesa	82.19	48	P	P	22 32 19.6	-0.5
PV16				IAmb	IAmb	22 32 23.1	
	comp=Z,16nm,1.1s						
PV18	Skein Mesa, Pa	82.23	48	P	P	22 32 19.5	-0.9
PV18				IAmb	IAmb	22 32 33.1	
	comp=Z,15nm,1.0s						
PV12	Saucer Basin,	82.25	48	P	P	22 32 19.9	-0.6
PV12				IAmb	IAmb	22 32 24.3	
	comp=Z,8.6nm,0.9s						
N23A	Red Feather La	82.25	45	P	P	22 32 22.4	+1.9
	baz=311,SNR=9.4						
PV03	Paradox Valley	82.26	48	P	P	22 32 19.8	-0.8
PV03				IAmb	IAmb	22 32 34.0	
	comp=Z,14nm,1.1s						
PV13	Radium Mtn., P	82.34	48	P	P	22 32 20.3	-0.7
NEUB	Neuenburg	82.34	330	eP	P	22 32 20.8	+0.4
	comp=Z,5.9nm,0.8s,baz=38,slow=5.3						
PV02	Paradox Valley	82.36	48	P	P	22 32 20.1	-1.0
PV02				IAmb	IAmb	22 32 35.4	
	comp=Z,10nm,0.9s						
CLZ	Clausthal	82.41	331	eP	P	22 32 20.8	0.0
	baz=38,slow=5.3						
PV15	Paradox Valley	82.43	48	P	P	22 32 20.7	-0.8
PV15				IAmb	IAmb	22 32 25.5	
	comp=Z,5.5nm,0.8s						
WUAZ	Wupatki	82.43	51	P	P	22 32 23.3	+1.9
	baz=309,SNR=6.7						
WUAZ	Wupatki	82.43	51	P	P	22 32 20.7	-0.7
WUAZ				IAmb	IAmb	22 32 35.7	
	comp=Z,7.9nm,1.1s						
PV01	Paradox Valley	82.51	48	P	P	22 32 21.2	-0.7
PV01				IAmb	IAmb	22 32 26.8	
	comp=Z,16nm,1.2s						
MDVR	Moldovita	82.51	321	⇑P	P	22 32 21.3	-0.3
113A	Mohawk Valley,	82.57	55	P	P	22 32 21.6	-0.4
GUNZ	Gunzen	82.77	330	eP	P	22 32 22.6	-0.1
	comp=Z,6.8nm,1.2s,baz=38,slow=5.3						
SMCO	Snowmass	82.78	46	P	P	22 32 22.5	-1.0
GTTG	Gottingen	82.80	331	eP	P	22 32 22.8	0.0
	baz=38,slow=5.3						
WERN	Wernitzgruen	82.81	329	eP	P	22 32 23.0	+0.1
	comp=Z,4.8nm,1.0s,baz=38,slow=5.3						
NKC	Novy Kostel	82.82	329	eP	P	22 32 23.7	+0.7
NKC	Novy Kostel	82.82	329	eP	P	22 32 23.7	+0.7
MOX	Moxa	82.84	330	eP	P	22 32 22.9	-0.2
	comp=Z,1.7nm,0.8s,baz=38,slow=5.3						
MPLH	Magyarpolny	82.86	325	eP	P	22 32 23.6	+0.4
SOP	Sopron	82.94	326	eP	P	22 32 24.4	+0.8
MORH	Mrgy, Hungar	83.02	324	eP	P	22 32 22.8	-1.2
IBBN	Ibbenburen	83.03	333	eP	P	22 32 24.0	0.0
	comp=Z,4.3nm,0.8s,baz=38,slow=5.3						
X16A	Lo Mia Camp, P	83.07	52	P	P	22 32 24.2	-0.6
X16A				IAmb	IAmb	22 32 28.1	
	comp=Z,10nm,1.1s						
CONA	Conrad Observa	83.07	326	eP	P	22 32 26.1	+1.7
	comp=Z,11nm,1.6s						
MVCO	Mesa Verde	83.14	49	P	P	22 32 26.8	+1.6
	baz=310,SNR=7.9						
MVCO	Mesa Verde	83.14	49	P	P	22 32 24.4	-0.8
MVCO				IAmb	IAmb	22 32 38.3	
	comp=Z,7.4nm,0.9s						
ISCO	Idaho Springs	83.17	45	P	P	22 32 24.6	-0.8
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ISCO	Idaho Springs	83.17	45	P	P	22 32 26.8	+1.5
	baz=312						
ISCO	Idaho Springs	83.17	45	P	P	22 32 24.6	-0.8
ISCO				IAmb	IAmb	22 32 32.0	
	comp=Z,6.9nm,1.0s						
KHC	Kasperske Hory	83.18	328	P	P	22 32 24.3	-0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KHC	Kasperske Hory	83.18	328	eP	P	22 32 24.9	0.0
KHC				ePP	PP	22 35 36.1	+0.5
KHC	Kasperske Hory	83.18	328	P	P	22 32 24.3	-0.6
VTS	Vitosha	83.21	319	⇑P	P	22 32 25.9	+0.5
ROTZ	Rotzenmuhle	83.27	329	eP	P	22 32 25.5	+0.2
	baz=38,slow=5.3						
ROTZ				epP	sP	22 32 37.6	0.0
GEC2	GERESS Array S	83.34	328	eP	P	22 32 25.8	0.0
	baz=38,slow=5.3						
GERES	GERESS Array B	83.34	328	P	P	22 32 25.7	-0.1
	comp=Z,0.9nm,0.4s,baz=43,slow=5.9,SNR=17						
GERES				PP	PP	22 35 37.5	+0.5
	comp=Z,0.8nm,0.9s,baz=46,slow=9.5,SNR=4.0						
GERES				LR	LR	23 11 15.7	
	comp=Z,185nm,19.8s,baz=29,slow=37						
GERES	GERESS Array B	83.34	328	P	P	22 32 25.6	-0.3
UBBA	Unterbreizbach	83.35	331	eP	P	22 32 25.9	+0.4
	comp=Z,1.3nm,0.7s,baz=38,slow=5.3						
WET	Wettzell	83.47	328	eP	P	22 32 26.8	+0.4
	baz=38,slow=5.3						
PIX	Pinacate	83.52	56	P	P	22 32 26.5	-0.4
KASTN	Kahler Asten	83.66	332	eP	P	22 32 27.6	+0.3
	comp=Z,2.5nm,0.7s,baz=38,slow=5.3						
214A	Organ Pipe Nat	83.71	55	P	P	22 32 29.5	+1.6
	baz=309,SNR=6.8						
214A	Organ Pipe Nat	83.71	55	P	P	22 32 27.4	-0.6
214A				IAmb	IAmb	22 32 31.3	
	comp=Z,13nm,1.1s						
ARSA	Arzberg	83.73	326	eP	P	22 32 28.9	+1.1
	comp=Z,10nm,1.5s						
GRA1	Grafenberg Arr	83.74	330	P	P	22 32 27.3	-0.4
GRF	Grafenberg Arr	83.74	330	P	P	22 32 27.3	-0.4
GRF				pmax	pmax		
	comp=Z,18nm,1.1s						
GRF	Grafenberg Arr	83.74	330	eP	P	22 32 28.3	+0.6
	comp=Z,7.3nm,0.8s,baz=38,slow=5.3						
GRFO	Grafenberg	83.74	330	P	P	22 32 27.8	+0.1
GRFO				pmax	pmax		
	comp=Z,17nm,1.1s						
GRFO	Grafenberg	83.74	330	P	P	22 32 27.8	+0.1
GRFO				IAmb	IAmb	22 32 40.2	
	comp=Z,17nm,1.1s						
S22A	4UR Ranch, Cre	83.81	47	P	P	22 32 30.6	+2.0
	baz=311,SNR=11						
DIVS	Divibare	83.87	321	P	P	22 32 28.0	-0.6
F33A	5 Mile Ranch,	83.89	36	P	P	22 32 28.2	-0.3
F33A				IAmb	IAmb	22 32 31.3	
	comp=Z,13nm,1.1s						
X18A	Snowflake	83.96	52	P	P	22 32 28.8	-0.6
X18A				IAmb	IAmb	22 32 32.8	
	comp=Z,8.4nm,0.9s						
Q24A	Divide	83.99	46	P	P	22 32 31.1	+1.5
	baz=312						
SOKA	Soboth	84.38	326	eP	P	22 32 31.2	+0.1
	comp=Z,25nm,1.6s						
OGNE	Ogallala	84.41	43	P	P	22 32 32.1	+0.7
	baz=314						
OGNE	Ogallala	84.41	43	P	P	22 32 31.0	-0.4
OGNE				IAmb	IAmb	22 32 38.6	
	comp=Z,9.9nm,0.8s						
VAY	Valandovo	84.47	318	i P	P	22 32 31.7	+0.2
SDCO	Great Sand Dun	84.59	47	P	P	22 32 34.3	+1.6
	baz=312,SNR=15						
SDCO	Great Sand Dun	84.59	47	P	P	22 32 31.6	-1.1
SDCO				IAmb	IAmb	22 32 36.2	
	comp=Z,7.4nm,1.0s						
SKO	Skopje	84.62	319	i P	P	22 32 33.1	+0.8
OBKA	Obir	84.73	326	eP	P	22 32 35.2	+2.3
	comp=Z,15nm,1.4s						
PPT	Papeete	84.73	116	LR	LR	23 01 23.4	
	comp=Z,131nm,20.7s,baz=329,slow=29						
PPT2	Papeete2	84.75	116	eLR	LR	22 58 51.2	
	comp=Z,215nm,22.2s						
TUC	Tucson	84.83	54	P	P	22 32 33.7	+0.1
TUC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TUC	Tucson	84.83	54	P	P	22 32 35.2	+1.5
	baz=310						
TUC	Tucson	84.83	54	P	P	22 32 33.7	+0.1
TUC				IAmb	IAmb	22 32 36.9	
	comp=Z,6.4nm,0.9s						
MEM	Membach	85.05	333	dP	P	22 32 32.9	-1.4
MYKA	Terra Mystica	85.05	326	eP	P	22 32 34.8	+0.3
	comp=Z,2.1nm,0.4s						
ECSD	EROS Data Cent	85.27	38	P	P	22 32 35.9	+0.4
	baz=317						
PDG	Podgorica	85.44	321	⇓P	P	22 32 36.7	+0.3
ABTA	Abfaltersbach	85.46	327	eP	P	22 32 36.1	-0.4
	comp=Z,9.5nm,1.3s						
FNA	Florina	85.49	318	IAmb	IAmb	22 32 37.9	
	comp=Z,7.7nm,1.1s						
BGES	Gesves	85.57	333	dP	P	22 32 36.0	-0.9
MOTA	Moosalm	85.61	328	eP	P	22 32 37.8	+0.4
	comp=Z,11nm,1.4s						
T25A	Trinidad	85.64	47	P	P	22 32 39.3	+1.4
	baz=312,SNR=9.7						
RETA	Reutte	85.65	328	eP	P	22 32 37.4	-0.1
	comp=Z,4.9nm,0.7s						
SQTA	Sankt Quirin	85.66	328	eP	P	22 32 38.2	+0.6
	comp=Z,6.0nm,1.2s						
SNF	Seneffe	85.76	334	dP	P	22 32 37.4	-0.4
SNF				dsP	sP	22 32 49.2	-1.0
ANMO	Albuquerque	85.87	49	⇑eP	P	22 32 40.2	+1.2
ANMO				pmax	pmax		
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	85.87	49	P	P	22 32 40.8	+1.8
	baz=312						
ANMO	Albuquerque	85.87	49	P	P	22 32 39.0	0.0
ANMO				IAmb	IAmb	22 32 41.8	
	comp=Z,11nm,1.1s						
BFO	Black Forest	85.99	330	P	P	22 32 39.0	-0.1
BFO				pmax	pmax		
	comp=Z,16nm,1.1s						
BFO	Black Forest	85.99	330	P	P	22 32 39.0	-0.1
BFO	Black Forest	85.99	330	eP	P	22 32 40.1	+1.0
	comp=Z,5.8nm,0.9s,baz=38,slow=5.3						
FETA	Feichten	86.03	328	eP	P	22 32 37.2	-2.3
	comp=Z,4.1nm,1.0s						
LENM	Lemitar	86.07	50	P	P	22 32 39.0	-1.0
BGNE	Belgrade	86.16	40	P	P	22 32 40.7	+0.6
	baz=316						
DAVA	Damuels	86.18	329	eP	P	22 32 40.0	-0.2
	comp=Z,5.9nm,0.9s						
319A	Douglas	86.41	54	IAmb	IAmb	22 33 03.2	
	comp=Z,8.4nm,1.1s						
ECH	Echery	86.55	331	IAmb	IAmb	22 32 41.9	
	comp=Z,12nm,1.1s						
I37A	Lemond, Waseca	86.62	36	P	P	22 32 41.8	-0.5
121A	Cookes Peak, D	86.62	52	P	P	22 32 44.6	+1.9
	baz=311						
L34A	Svendsen Farm,	86.67	39	P	P	22 32 42.0	-0.6
G40A	Rib Lake	87.13	33	IAmb	IAmb	22 32 46.9	
	comp=Z,14nm,1.1s						
MATQ	Matagami	88.29	24	P	P	22 32 50.7	+0.6
	baz=330						
TBI	Tubuai	88.52	120	eLR	LR	23 00 35.3	
	comp=Z,238nm,27.0s						
TBI	Tubuai	88.52	120	eT	T	00 08 49.3	
	comp=Z,14nm,0.3s						
KSU1	Kansas State U	88.65	41	P	P	22 32 52.5	+0.4
	baz=317						
MNTX	Cornudas Mount	88.70	51	P	P	22 32 52.9	+0.4
	baz=312						
AMTX	Amarillo	88.80	47	P	P	22 32 54.5	+1.5
	baz=314						
AMTX	Amarillo	88.80	47	P	P	22 32 52.1	-0.9
LSQQ	Lebel-sur-Quev	89.11	24	P	P	22 32 54.5	+0.5
	baz=330						
OK029	Liberty Lake	90.59	44	P	P	22 33 00.2	-1.0
WMOK	Wichita Mounta	90.59	45	P	P	22 33 01.7	+0.4
	baz=316						
WMOK	Wichita Mounta	90.59	45	IAmb	IAmb	22 33 04.0	
	comp=Z,7.5nm,0.9s						
TX31	Lajitas Ar. Si	91.39	52	P	P	22 33 04.2	-1.0
TXAR	Lajitas Array	91.39	52	P	P	22 33 06.6	+1.5
	comp=Z,2.9nm,0.6s,baz=303,slow=3.1,SNR=24						
TXAR				LR	LR	23 11 42.5	
	comp=Z,38nm,19.4s,baz=0.0,slow=34						
TXAR	Lajitas Array	91.39	52	P	P	22 33 05.0	-0.1
TUL1	Leonard	91.42	43	P	P	22 33 05.8	+0.7
	baz=318						
ABTX	Abilene, Hawle	91.59	47	P	P	22 33 07.2	+1.3
	baz=315						
ABTX	Abilene, Hawle	91.59	47	P	P	22 33 05.2	-0.8
U40A	Yellville	92.67	40	P	P	22 33 11.2	+0.4
	baz=319						
U40A	Yellville	92.67	40	P	P	22 33 10.1	-0.8
JCT	Junction City	93.01	49	P	P	22 33 13.5	+0.9
	baz=315						
WCI	Wyandotte Cave	94.48	35	P	P	22 33 19.7	+0.6
	baz=324						
ESDC	Sonseca Array	98.03	333	LR	LR	23 21 07.7	
	comp=Z,107nm,19.0s,baz=345,slow=38						
TORD	Torodi Ar. Bea	117.66	314	PKP	PKiKP	22 38 46.1	+0.7
	comp=Z,0.5nm,0.6s,baz=90,slow=1.5,SNR=4.9						
TORD				PP	PP	22 39 52.9	-4.5
	comp=Z,2.3nm,1.0s,baz=27,slow=5.5,SNR=5.7						
TORD	Torodi Ar. Bea	117.66	314		PKPdf	22 38 43.7	-1.8
BOSA	Boshof	125.67	258	PKP	PKiKP	22 39 01.9	+1.0
	comp=Z,3.5nm,1.0s,baz=116,slow=4.5,SNR=4.1						
SDV	Santo Domingo	126.67	40	eP	PKPdf	22 39 02.6	-0.3
SNAA	Sanae	139.42	197	PKPdf	PKPdf	22 39 19.6	-5.4
VNA2	Neumayer--Watz	141.00	196	PKPdf	PKPdf	22 39 24.1	-3.7
	baz=102,slow=2.3						
VNA3	Neumayer Olymp	141.25	195	PKPdf	PKPdf	22 39 22.3	-6.0
SAML	Samuel	145.57	45	eP	PKPab	22 39 38.2	+0.3
LVC	Limon Verde	151.22	71	eP	PKPdf	22 39 47.6	+0.6
SNDB	Serra Nova Dou	153.92	27	eP	PKPdf	22 39 53.7	+3.0
PLCA	Paso Flores	155.18	111	PKPab	PKPab	22 40 18.6	+1.9
	comp=Z,2.7nm,1.1s,baz=132,slow=1.6,SNR=2.7						
PLCA	Paso Flores	155.18	111	PKP2	PKPab	22 40 16.9	+0.1
PLCA	Paso Flores	155.18	111		PKPab	22 40 16.9	+0.1
BDFB	Brasilia	158.46	23	PKPab	PKPab	22 40 32.4	+1.1
	comp=Z,2.1nm,0.8s,baz=207,slow=4.2,SNR=2.5						

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*ISK **25** 22:21:51.3, 36°.95N×36°.34E, h13^{km}, ML3.4/17*
*DDA **25** 22:21:51.7, 36°.95N×36°.36E, h8^{km}±3^{km}, MW3.5*
ISC 25 22:21:51.5±1.1**, 36°.95N**±0°.03×**36°.33E**±0°.02**, h12**^{km}±9^{km}**,**
n52, σ**0^{s}.87**/76**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	Osmaniye	0.36	49	i P	Pg	22 21 59.0	+0.2
KAMA				i S	Sg	22 22 03.5	-0.1
KAMA				IAML		22 22 05.0	
	comp=N,2µm,0.3s						
KAMA				IAML		22 22 06.0	
	comp=E,1µm,0.2s						
CEYT	Ceyhan	0.47	277	PG	Pg	22 22 01.3	+0.6
HCB	Kahramanmara	0.61	50	i P	Pg	22 22 03.4	+0.1
HCB				i S	Sg	22 22 11.0	-0.4
HCB				IAML		22 22 13.0	
	comp=N,636nm,0.2s						
HCB				IAML		22 22 13.0	
	comp=E,815nm,0.1s						
KUZU	Kuzuini	0.63	106	i P	Pb	22 22 04.3	-0.2
KUZU				i S	Sg	22 22 12.0	0.0
KUZU				IAML		22 22 15.0	
	comp=N,4µm,0.3s						
KUZU				IAML		22 22 17.0	
	comp=E,5µm,0.3s						
ANDN	Andirin	0.63	1	i P	Pg	22 22 03.8	0.0
ANDN				i S	Sb	22 22 13.0	-0.3
ANDN				IAML		22 22 14.0	
	comp=N,1µm,0.2s						
ANDN				IAML		22 22 15.0	
	comp=E,692nm,0.2s						
KOZT	Kozan	0.66	323	PG	Pg	22 22 04.1	-0.3
KOZT				SG	Sb	22 22 14.8	+0.6
GAZ	Gaziantep	0.74	73	PG	Pb	22 22 05.9	-0.5
GAZ				SG	Sb	22 22 16.5	0.0
KRTS	Karatas	0.85	244	PG	Pb	22 22 08.5	+0.3
SAIM	ADANA	1.04	349	i P	Pg	22 22 11.3	-0.3
SAIM				i S	Sg	22 22 24.8	-0.4
SAIM				IAML		22 22 31.0	
	comp=N,501nm,0.2s						
SAIM				IAML		22 22 32.0	
	comp=E,585nm,0.3s						
KARA	Karaisali	1.06	287	PG	Pb	22 22 10.6	-1.2
GZT	Gaziantep	1.07	68	i P	Pb	22 22 12.0	-0.1
GZT				i S	Sn	22 22 27.1	-0.2
GZT				IAML		22 22 29.0	
	comp=N,1µm,0.6s						
GZT				IAML		22 22 30.0	
	comp=E,913nm,0.2s						
DED	Mersin	1.22	271	i P	Pn	22 22 13.2	-1.2
DED				i S	Sb	22 22 30.5	+0.1
DED				IAML		22 22 34.0	
	comp=N,215nm,0.3s						
DED				IAML		22 22 34.0	
	comp=E,250nm,0.4s						
GULE	Gulek	1.28	285	i P	Pn	22 22 14.9	-0.5
GULE				i S	Sb	22 22 32.8	+0.6
GULE				IAML		22 22 37.0	
	comp=E,661nm,0.4s						
GULE				IAML		22 22 38.0	
	comp=N,880nm,0.5s						
YAHY	KAYSERI_Yahyal	1.37	326	i P	Pn	22 22 16.8	+0.2
YAHY				i S	Sg	22 22 36.0	+0.2
YAHY				IAML		22 22 39.0	
	comp=N,172nm,0.7s						
YAHY				IAML		22 22 40.0	
	comp=E,172nm,0.8s						
SARI	SarD1z-Kayseri	1.45	3	PN	Pn	22 22 17.9	+0.1
ELBS	KAHRAMANMARAS	1.51	25	i P	Pn	22 22 18.8	+0.3
ELBS				i S	Sg	22 22 39.6	-0.6
ELBS				IAML		22 22 44.0	
	comp=E,455nm,0.4s						
ELBS				IAML		22 22 50.0	
	comp=N,297nm,0.8s						
NIDE	Nigde/Merkez-G	1.62	311	i P	Pn	22 22 19.9	-0.1
NIDE				i S	Sb	22 22 42.1	+0.3
NIDE				IAML		22 22 46.0	
	comp=N,179nm,0.5s						
NIDE				IAML		22 22 49.0	
	comp=E,347nm,0.3s						
ATAB	Bozova	1.65	71	i P	Pn	22 22 20.4	-0.1
ATAB				i S	Sg	22 22 43.9	-0.8
ATAB				IAML		22 22 47.0	
	comp=N,0.3nm,0.5s						
ATAB				IAML		22 22 54.0	
	comp=E,367nm,0.5s						
KIZK	Mersin	1.82	256	PN	Pn	22 22 23.1	+0.5
KIZK	Mersin	1.82	256	i P	Pn	22 22 22.9	+0.3
KIZK				i S	Sn	22 22 44.5	-1.0
KIZK				IAML		22 22 49.0	
	comp=N,139nm,0.3s						
KIZK				IAML		22 22 49.0	
	comp=E,110nm,0.4s						
KERG	Konya-Eregli	1.82	285	i P	Pn	22 22 24.0	+1.2
KERG				i S	Sn	22 22 47.2	+1.4
KERG				IAML		22 22 51.0	
	comp=E,123nm,0.3s						
KERG				IAML		22 22 52.0	
	comp=N,106nm,0.3s						
SURC	SANLIURFA_SURC	1.83	92	i P	Pn	22 22 22.7	-0.2
SURC				i S	Sb	22 22 48.6	+0.7
SURC				IAML		22 22 52.0	
	comp=N,618nm,0.4s						
SURC				IAML		22 22 56.0	
	comp=E,547nm,0.7s						
AKCD	Akcadag	1.84	43	i P	Pn	22 22 23.6	+0.5
AKCD				IAML		22 22 53.0	
	comp=N,507nm,0.4s						
AKCD				IAML		22 22 55.0	
	comp=E,953nm,0.5s						
DARE	Darende-Malaty	1.86	29	PN	Pb	22 22 24.5	-1.0
CUGUR	Gurin_SVAS	1.92	23	i P	Pb	22 22 25.7	-0.9
CUGUR				i S	Sg	22 22 53.8	+0.5
CUGUR				IAML		22 22 59.0	
	comp=E,631nm,0.5s						
CUGUR				IAML		22 23 00.0	
	comp=N,601nm,0.5s						
BNN	Bunyan	1.93	349	PN	Pn	22 22 24.5	+0.1
SANL	SANLIURFA_Merk	2.14	83	i P	Pb	22 22 30.6	+0.3
SANL				IAML		22 23 04.0	
	comp=E,432nm,0.6s						
SANL				IAML		22 23 08.0	
	comp=N,453nm,0.3s						
MALT	Malatya	2.15	50	PN	Pn	22 22 27.7	+0.4
KEBE	Keben-Mersin	2.16	257	PN	Pn	22 22 28.5	+1.1
AVNS	Nevsehir-Avano	2.19	328	i P	Pn	22 22 29.5	+1.7
AVNS				i S	Sn	22 22 55.7	+0.8
AVNS				IAML		22 23 07.0	
	comp=N,111nm,0.7s						
AVNS				IAML		22 23 07.0	
	comp=E,146nm,0.8s						
KARG	Kargicak-Mersi	2.24	251	PN	Pn	22 22 29.5	+1.1
IKL	Isikli	2.24	252	PN	Pn	22 22 29.3	+0.9
EREN	Erenkoy	2.25	231	PN	Pn	22 22 29.4	+0.9
EREN	Erenkoy	2.25	231	i P	Pn	22 22 29.0	+0.5
EREN				i S	Sn	22 22 55.4	-0.7
EREN				IAML		22 23 04.0	
	comp=N,151nm,0.4s						
EREN				IAML		22 23 04.0	
	comp=E,109nm,0.7s						
TISA	Tisan-Mersin	2.27	250	PN	Pn	22 22 29.8	+0.9
HEKM	Malatya_Hekimh	2.32	33	i P	Pn	22 22 31.4	+1.7
HEKM				IAML		22 23 10.0	
	comp=N,337nm,0.5s						
HEKM				IAML		22 23 13.0	
	comp=E,311nm,0.5s						
CUALT	Altinyayla-SIV	2.34	8	i P	Pn	22 22 31.7	+1.8
CUALT				i S	Sb	22 23 03.7	+1.0
CUALT				IAML		22 23 10.0	
	comp=N,74nm,0.4s						
CUALT				IAML		22 23 14.0	
	comp=E,76nm,1.0s						
TEPK	Tepekoy-MERSIN	2.35	253	PN	Pn	22 22 31.1	+1.1
GULN	MERSIN_Gulnar	2.37	252	i P	Pn	22 22 31.1	+1.0
GULN				i S	Sn	22 22 55.8	-3.4
GULN				IAML		22 23 04.0	
	comp=E,44nm,0.3s						
GULN				IAML		22 23 05.0	
	comp=N,52nm,0.5s						
AKKU	Akkuyu-Mersin	2.37	251	PN	Pn	22 22 31.2	+1.0
TEVE	Tevekalti-Mers	2.37	258	PN	Pn	22 22 30.9	+0.6
AKK1	Akkuyu-Mersin	2.38	251	PN	Pn	22 22 31.6	+1.2
OREN	Orenkoy-Mersin	2.42	253	PN	Pn	22 22 31.9	+0.9
CUSAR	Sarkisla-SIVAS	2.46	359	i P	Pn	22 22 32.9	+1.2
CUSAR				i S	Sb	22 23 05.4	-0.8
CUSAR				IAML		22 23 14.0	
	comp=E,34nm,0.8s						
CUSAR				IAML		22 23 18.0	
	comp=N,48nm,0.5s						
YORU	Yoruktepe-Mers	2.48	252	PN	Pn	22 22 32.6	+0.8
SULT	Sultanhani-AKS	2.56	300	PN	Pn	22 22 33.9	+1.0
BERE	Bereket-Mersin	2.57	257	PN	Pn	22 22 34.0	+0.9
ELZG	Elazig	2.61	53	i P	Pn	22 22 33.6	-0.1
ELZG				i S	Sb	22 23 10.8	+0.4
ELZG				IAML		22 23 19.0	
	comp=N,146nm,0.4s						
ELZG				IAML		22 23 21.0	
	comp=E,169nm,0.5s						
TEKE	Tekeli-Mersin	2.71	254	PN	Pn	22 22 35.5	+0.6
BHL	Bhannes	3.09	190	eP	Pn	22 22 41.0	+0.8
DQRL	Deir Qamar	3.30	191	eP	Pn	22 22 43.5	+0.4
QRWL	Qaraoun	3.44	189	eP	Pn	22 22 45.3	+0.3

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*NEIC **25** 22:22:09.9±0.9, 32°.60N±0°.04×109°.07W±0°.03, h5^{km}±2^{km},*
ML3.4/32, Error ellipse: s-maj=6.1km s-min=4.7km
az=343.0
*ANF **25** 22:22:10.0±0.6, 32°.59N×109°.13W, h3^{km}±5^{km}, ML3.7/8,*
Error ellipse: s-maj=3.5km s-min=2.1km az=179.0
ISC 25 22:22:09.4±1.3**, 32°.62N**±0°.04×**109°.10W**±0°.03**, h6**^{km}±12^{km}**,**
n32, σ**1^{s}.02**/40**, Eastern Arizona**

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

121A	**Cookes Peak, D**	1.11	94	P	**Pn**	**22 22 32.1**	**+0.4**
	baz=274						
121A				S	**Sn**	**22 22 47.9**	**+0.5**
	baz=274						
121A	**Cookes Peak, D**	1.11	94	Pn	**Pn**	**22 22 32.0**	**+0.4**
121A				Sn	**Sn**	**22 22 47.2**	**-0.1**
121A				IAML		22 22 50.0	
	comp=N,1µm,0.6s						
121A				IAML		22 22 51.0	
	comp=E,822nm,0.6s						
319A	**Douglas**	1.25	187	Pn	**Pg**	**22 22 33.9**	**+0.6**
319A				Sn	**Sn**	**22 22 51.1**	**+0.5**
319A				IAML		22 22 53.9	
	comp=E,760nm,0.3s						
TUC	**Tucson**	1.46	258	P	**Pg**	**22 22 37.5**	**+0.1**
	baz=78						
TUC				S	**Sg**	**22 22 57.3**	**+1.1**
	baz=78						
TUC	**Tucson**	1.46	258	Pn	**Pg**	**22 22 37.4**	**+0.1**
TUC				Sn	**Sg**	**22 22 57.0**	**+0.8**
TUC				IAML		22 22 59.2	
	comp=E,444nm,0.2s						
X18A	**Snowflake**	2.04	340	Pn	**Pb**	**22 22 45.8**	**-1.1**
X18A				Sn	**Sb**	**22 23 11.6**	**-0.9**
Y22D	**IRIS PASSCAL I**	2.33	51	S	**Sg**	**22 23 26.3**	**+2.0**
	baz=231						
Y22D	**IRIS PASSCAL I**	2.33	51	Pn	**Pn**	**22 22 48.6**	**+0.3**
LENM	**Lemitar**	2.35	48	Pn	**Pn**	**22 22 47.2**	**-1.5**
W18A	**Petrified Fore**	2.55	348	P	**Pn**	**22 22 53.1**	**+1.7**
	baz=167						
W18A				Sb	**Sg**	**22 23 31.3**	**0.0**
	baz=167						
W18A	**Petrified Fore**	2.55	348	Pn	**Pn**	**22 22 52.7**	**+1.3**
W18A				IAML		22 23 40.9	
	comp=N,192nm,0.6s						
BNM	**Barren Site**	2.57	53	Pn	**Pn**	**22 22 53.0**	**+1.3**
X16A	**Lo Mia Camp, P**	2.66	313	Pn	**Pn**	**22 22 54.1**	**+1.2**
X16A				IAML		22 23 34.3	
	comp=E,130nm,0.5s						
X16A				IAML		22 23 36.0	
	comp=N,204nm,0.7s						
ANMO	**Albuquerque**	3.20	43	Sb	**Sg**	**22 23 51.2**	**-0.9**
	baz=223						
ANMO	**Albuquerque**	3.20	43	Pn	**Pn**	**22 23 01.4**	**+1.0**
214A	**Organ Pipe Nat**	3.21	259	P	**Pn**	**22 23 00.3**	**-0.1**
	baz=78						
214A	**Organ Pipe Nat**	3.21	259	Pn	**Pn**	**22 23 00.1**	**-0.3**
214A				IAML		22 23 54.5	
	comp=N,80nm,0.6s						
214A				IAML		22 23 55.7	
	comp=E,103nm,0.6s						
MNTX	**Cornudas Mount**	3.28	105	P	**Pn**	**22 23 02.0**	**+0.7**
	baz=287						
MNTX				Sb	**Sg**	**22 23 53.5**	**-1.3**
	baz=287						
MNTX	**Cornudas Mount**	3.28	105	Pn	**Pn**	**22 23 01.7**	**+0.4**
WUAZ	**Wupatki**	3.45	327	Sb	**Sg**	**22 23 58.2**	**-2.1**
	baz=146						
PIX	**Pinacate**	3.85	255	Pn	**Pn**	**22 23 07.3**	**-1.8**
PIX				IAML		22 24 19.3	
	comp=E,39nm,0.7s						
PIX				IAML		22 24 19.4	
	comp=N,42nm,0.7s						
HSIG		3.92	204	Pn	**Pn**	**22 23 10.0**	**-0.2**
HSIG				IAML		22 24 15.4	
	comp=E,56nm,0.4s						
HSIG				IAML		22 24 16.4	
	comp=N,32nm,0.6s						
113A	**Mohawk Valley,**	3.94	273	Pn	**Pn**	**22 23 10.4**	**+0.1**
W13A	**Hualapai Mount**	4.69	303	Pn	**Pn**	**22 23 22.3**	**+1.5**
W13A				IAML		22 24 51.5	
	comp=N,14nm,2.5s						
GLA	**Glamis**	4.84	277	Pn	**Pn**	**22 23 23.9**	**+1.1**
GLA				IAML		22 24 57.9	
	comp=N,30nm,0.6s						
GLA				IAML		22 25 12.4	
	comp=E,31nm,0.7s						
IRM	**Iron Mountain**	5.29	289	P	**Pn**	**22 23 29.6**	**+0.7**
	baz=105						
PV18	**Skein Mesa, Pa**	5.62	2	Pn	**Pn**	**22 23 33.4**	**-0.2**
PV15	**Paradox Valley**	5.73	5	Pn	**Pn**	**22 23 35.5**	**+0.3**
PV14	**Lion Creek, Pa**	5.74	1	Pn	**Pn**	**22 23 36.4**	**+1.0**
PV23	**Carpenter Ridg**	5.82	1	Pn	**Pn**	**22 23 37.3**	**+0.9**
PV22	**Blue Mesa, Par**	5.91	2	Pn	**Pn**	**22 23 38.3**	**+0.7**
PFO	**Pinyon Flats O**	6.25	281	P	**Pn**	**22 23 42.7**	**+0.4**
	baz=97						

IDC ***25*** *22:34:02.8±0.6, 35°.73N×140°.49E, h0^{km}, mb3.9/15, mb1 4.0/20, mb1mx3.9/44, mbtmp3.9/20, ML3.8/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/47, Error ellipse: s-maj=16.7km s-min=13.0km az=82.0*

NEIC ***25*** *22:34:05.0±1.3, 35°.77N±0°.02×140°.57E±0°.07, h22^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=8.4km s-min=2.8km az=102.0*

JMA ***25*** *22:34:07.0±0.1, 35°.87N×140°.48E, h37^{km}±1^{km}, M3.8*

JMA Felt II J1.

NIED ***25*** *22:34:07.1, 35°.87N×140°.48E, h37^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.51; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$0.76; $M_{r\theta}$0.70; $M_{\theta\phi}$-0.11; $M_{\phi r}$-0.69; Fault plane solution: $M_0$1.19000×10^{15} NP1: ϕ_s322.00000°, δ76.00000°, λ-113.00000°. NP2: ϕ_s204.00000°, δ27.00000°, λ-31.00000°.*

ISC 25 22:34:07.6±0.8**, 35°.80N**±0°.03×**140°.47E**±0°.04**, h34**^{km}±2^{km}**, n64,** σ**1^s.27**/68**, mb3.9**/19**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	**Sammumatsuo**	0.16	185	⇓P	**Pb**	**22 34 14.6**	**+0.7**
JSMT				S	**Sb**	**22 34 20.4**	**+2.2**
JIHU	**Itakohorinouch**	0.17	16	⇓P	**Pn**	**22 34 13.8**	**+1.7**
JIHU				S	**Sb**	**22 34 18.9**	**+0.5**
CHOJ	**Chosi**	0.33	107	⇓P	**Pb**	**22 34 15.4**	**-0.4**
CHOJ				S	**Sn**	**22 34 21.2**	**0.0**
JYT	**Yasato**	0.48	333	⇓P	**Pb**	**22 34 16.7**	**-1.2**
JYT				S	**Sb**	**22 34 23.1**	**-1.9**
JHO	**Hitachi**	0.81	6	⇓P	**Pn**	**22 34 20.8**	**-1.8**
JHO				S	**Sn**	**22 34 30.4**	**-3.1**
BSO3	**Boso 3**	1.00	178	P	**Pn**	**22 34 25.6**	**+0.7**
JAG	**Ashikaga**	1.03	307	P	**Pn**	**22 34 24.6**	**-1.0**
MJAR	**Matsushiro Arr**	1.97	293	Pn	**Pn**	**22 34 38.7**	**+0.1**
	2.4nm,0.3s,baz=94,slow=12,SNR=57						
MJAR				Sn	**Sn**	**22 35 02.8**	**+0.7**
	4.0nm,0.3s,baz=123,slow=39,SNR=4.8						
MJAR				LR	LR	22 35 31.8	
	comp=Z,115nm,20.6s,baz=120,slow=45						
MJAR	**Matsushiro Arr**	1.97	293	Pn	**Pn**	**22 34 38.1**	**-0.5**
MJAR					**Sn**	**22 35 03.2**	**+1.1**
MAT	**Matsushiro**	1.97	293	P	**Pn**	**22 34 39.1**	**+0.5**
MAT				S	**Sn**	**22 35 02.2**	**0.0**
JMM	**Marumori**	2.08	7		**Pn**	**22 34 39.3**	**-0.7**
JMM				Sn	**Sn**	**22 35 03.5**	**-1.2**
JSG	**Sagara**	2.18	240	Pn	**Pn**	**22 34 42.7**	**+1.2**
JSG				Sn	**Sn**	**22 35 06.6**	**-0.6**
JGF	**Kuroka**	2.54	266	Pn	**Pn**	**22 34 49.8**	**+3.4**
JHJ	**Hachijo jima 2**	2.73	192	Pn	**Pn**	**22 34 48.0**	**-1.0**
	55nm,0.3s,baz=83,slow=22,SNR=9.5						
JHJ				Sn	**Sn**	**22 35 19.9**	**-1.0**
	85nm,0.3s,baz=22,slow=23,SNR=11						
JHJ2	**Mitsune**	2.74	192	Pn	**Pn**	**22 34 47.6**	**-1.5**
INU	**Inuyama**	2.85	262	Pn	**Pn**	**22 34 48.1**	**-2.5**
JWT	**Wachi**	4.16	264	Pn	**Pn**	**22 35 08.4**	**-0.3**
JTM	**Tenmabayashi**	5.00	5	Pn	**Pn**	**22 35 19.8**	**-0.4**
JMN	**Monobe**	5.80	251	Pn	**Pn**	**22 35 30.7**	**-0.6**
ASAJ	**Asahikawa**	8.46	10	Pn	**Pn**	**22 36 06.8**	**-0.9**
	1.2nm,0.3s,baz=167,slow=11,SNR=5.0						
JKA	**Kamikawa-asahi**	8.46	10		**Pn**	**22 36 07.0**	**-0.8**
JCJ	**Chichijima**	8.80	170	Pn	**Pn**	**22 36 09.6**	**-2.9**
	3.6nm,0.3s,baz=292,slow=18,SNR=1.4						
JCJ				LR	LR	22 38 57.7	
	comp=Z,177nm,18.5s,baz=1.5,slow=34						
JCJ	**Chichijima**	8.80	170		**Pn**	**22 36 09.0**	**-3.5**
KSRS	**Korea Array**	10.22	283	Pn	**Pn**	**22 36 32.9**	**+1.1**
	0.1nm,0.3s,baz=123,slow=17,SNR=2.0						
KSRS				LR	LR	22 40 22.0	
	comp=Z,61nm,18.9s,baz=100,slow=37						
USRK	**Ussuriysk Ar.**	10.61	325	Pn	**Pn**	**22 36 38.8**	**+1.7**
	baz=131,slow=12,SNR=5.0						
USRK	**Ussuriysk Ar.**	10.61	325		**Pn**	**22 36 37.2**	**+0.1**
PETK	**Petropavlovsk-**	21.13	30	P	**P**	**22 38 50.5**	**+1.2**
	3.6nm,0.9s,baz=175,slow=20,SNR=2.2						
ENH	**Enshi**	26.48	267	P	**P**	**22 39 41.1**	**-0.7**
SONM	**Songino Array**	27.87	306	P	**P**	**22 39 54.5**	**+0.4**
	0.7nm,0.6s,baz=103,slow=7.6,SNR=6.9						
SONM	**Songino Array**	27.87	306	P	**P**	**22 39 54.0**	**-0.1**
H11N2	**WAKE ISLAND Hy**	28.22	118	T	T	23 08 55.2	
	baz=309,slow=75,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	28.22	118	T	T	23 09 14.4	
	baz=309,slow=75,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	28.23	118	T	T	23 09 18.1	
	baz=309,slow=75,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	28.87	120	T	T	23 10 00.8	
	baz=312,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	28.87	120	T	T	23 09 59.7	
	baz=312,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	28.89	120	T	T	23 10 06.1	
	baz=312,slow=75,SNR=8.6						
ZALV	**Zalesovo Beam**	42.19	313	P	**P**	**22 41 57.5**	**+0.6**
	1.2nm,0.6s,baz=96,slow=6.0,SNR=7.5						
ZALV	**Zalesovo Beam**	42.19	313	P	**P**	**22 41 56.2**	**-0.7**
MKAR	**Makanchi Array**	44.14	303	P	**P**	**22 42 13.6**	**+0.9**
	1.0nm,0.7s,baz=91,slow=9.8,SNR=16						
MKAR	**Makanchi Array**	44.14	303	P	**P**	**22 42 12.2**	**-0.5**
ILAR	**Eielson Array**	50.94	32	P	**P**	**22 43 06.0**	**+0.7**
	0.8nm,0.8s,baz=264,slow=5.3,SNR=8.7						
ILAR	**Eielson Array**	50.94	32	P	**P**	**22 43 06.2**	**+0.9**
FITZ	**Fitzroy Crossi**	55.42	197	P	**P**	**22 43 39.2**	**+0.6**
FITZ				IAmb	IAmb	22 43 41.9	
	comp=Z,3.1nm,0.9s						
WB0	**Warramunga Arr**	55.56	187	P	**P**	**22 43 38.7**	**-1.0**
WB0				IAmb	IAmb	22 43 47.0	
	comp=Z,3.8nm,0.9s						
WR0	**Warramunga Arr**	55.74	187	P	**P**	**22 43 39.9**	**-1.0**
WR0				IAmb	IAmb	22 43 44.6	
	comp=Z,2.6nm,0.6s						
WB2	**Warramunga Arr**	55.74	187	P	**P**	**22 43 39.7**	**-1.3**
WB2				IAmb	IAmb	22 43 56.5	
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	55.74	187	P	**P**	**22 43 40.3**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=4.4,slow=7.6,SNR=20						
WRA	**Warramunga Arr**	55.74	187	P	**P**	**22 43 40.1**	**-0.9**
ASAR	**Alice Springs**	59.47	187	P	**P**	**22 44 07.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=16,slow=13,SNR=9.4						
ASAR	**Alice Springs**	59.47	187	P	**P**	**22 44 06.5**	**-0.7**
YKA	**Yellowknife Ar**	65.25	30	P	**P**	**22 44 46.5**	**+1.0**
	comp=Z,0.2nm,0.8s,baz=298,slow=6.4,SNR=2.6						
FORT	**Forrest**	67.25	192	P	**P**	**22 44 56.7**	**-1.7**
STKA	**Stephens Creek**	67.33	179	P	**P**	**22 44 59.4**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=360,slow=7.7,SNR=4.2						
STKA	**Stephens Creek**	67.33	179	P	**P**	**22 44 58.0**	**-1.0**
FINES	**FINESS Array B**	69.55	332	P	**P**	**22 45 12.6**	**0.0**
	comp=Z,2.6nm,0.9s,baz=46,slow=5.5,SNR=3.8						
FINES	**FINESS Array B**	69.55	332	P	**P**	**22 45 13.0**	**+0.4**
AKASG	**Malin Array Be**	74.80	322	P	**P**	**22 45 43.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=48,slow=6.3,SNR=4.4						
NOA	**NORSAR Array B**	75.02	337	P	**P**	**22 45 45.5**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=51,slow=6.3,SNR=1.4						
NVAR	**Mina Array Bea**	76.34	52	P	**P**	**22 45 54.2**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=286,slow=5.1,SNR=6.9						
NVAR	**Mina Array Bea**	76.34	52	P	**P**	**22 45 53.0**	**-0.6**
PDAR	**Pinedale Array**	79.08	45	P	**P**	**22 46 09.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=261,slow=1.2,SNR=6.2						
PDAR	**Pinedale Array**	79.08	45	P	**P**	**22 46 08.9**	**+0.2**
ASF	**Jabal al Asfar**	81.55	304	LR	LR	23 27 31.9	
	comp=Z,6.2nm,18.7s,baz=76,slow=39						
TXAR	**Lajitas Array**	91.48	52	P	**P**	**22 47 12.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=290,slow=3.0,SNR=4.6						

IDC 25 22:44:40.4±1.7**, 19°.66S**×**177°.31W, h534**^{km}±38^{km}**, mb3.3**/3**, mb1 3.4**/6**, mb1mx3.0**/35**, mbtmp4.2**/6**, Error ellipse: s-maj=34.2km s-min=26.8km az=103.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	7.80	44	P	P	22 46 37.2	+1.4
	5.6nm,0.3s,baz=68,slow=4.3,SNR=5.8						
AFI				S	S	22 48 08.7	-1.7
	3.2nm,0.3s,baz=206,slow=23,SNR=1.4						
DZM	**Mont Dzumac**	15.37	258	P	P	22 47 55.6	+1.4
	0.2nm,0.3s,baz=161,slow=14,SNR=1.3						
URZ	**Urewera**	19.15	193	P	P	22 48 28.9	-0.4
	1.2nm,0.3s,baz=258,slow=1.6,SNR=8.6						
STKA	**Stephens Creek**	38.74	243	P	P	22 51 19.1	+0.2
	3.3nm,0.9s,baz=102,slow=9.3,SNR=3.6						
ASAR	**Alice Springs**	45.35	256	P	P	22 52 11.1	0.0
	3.5nm,0.7s,baz=85,slow=8.8,SNR=38						
ASAR				PcP	PcP	22 53 40.0	+0.5
	0.5nm,0.7s,baz=94,slow=5.3,SNR=4.1						
WRA	**Warramunga Arr**	45.37	261	P	P	22 52 10.3	-0.9
	1.1nm,0.3s,baz=98,slow=7.8,SNR=34						

IDC ***25*** *22:47:09.2±6.5, 19°.25S×177°.79W, h532^{km}±71^{km}, mb2.9/6, mb1 3.3/6, mb1mx3.0/32, mbtmp3.7/6, Error ellipse: s-maj=99.6km s-min=24.7km az=155.0*

ISC 25 22:47:09.4±1.6**, 18°.8S**±0°.6×**178°.1W**±0°.3**, h532**^{km}**, n15,** σ**0^s.86**/16**, mb3.3**/6**, 4C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	44.81	260	P	**P**	**22 54 37.0**	**+0.7**
	0.4nm,0.3s,baz=98,slow=7.5,SNR=7.8						
ASAR	**Alice Springs**	44.88	255	P	**P**	**22 54 37.4**	**+0.6**
	1.3nm,0.6s,baz=94,slow=7.4,SNR=14						
ASAR				PcP	**PcP**	**22 56 07.0**	**-0.2**
	0.5nm,0.6s,baz=104,slow=4.1,SNR=5.0						
NVAR	**Mina Array Bea**	79.84	44	P	**P**	**22 58 23.8**	**+0.8**
	0.3nm,0.7s,baz=221,slow=8.6,SNR=4.0						
TXAR	**Lajitas Array**	86.19	57	P	**P**	**22 58 54.5**	**-0.4**
	0.5nm,0.7s,baz=213,slow=6.2,SNR=8.5						
ILAR	**Eielson Array**	86.69	13	P	**P**	**22 58 57.5**	**+1.2**
	0.4nm,0.6s,baz=224,slow=5.2,SNR=5.4						
PDAR	**Pinedale Array**	87.77	43	P	**P**	**22 59 02.6**	**+0.4**
	0.3nm,0.6s,baz=236,slow=0.5,SNR=3.9						
ARCES	**ARCESS Array B**	127.26	350	PKP	**PKiKP**	**23 05 12.9**	**-0.6**
	1.0nm,0.8s,baz=0.0,slow=2.0,SNR=6.7						
FINES	**FINESS Array B**	134.15	344	PKP	**PKiKP**	**23 05 26.7**	**-0.8**
	1.8nm,1.0s,baz=18,slow=5.0,SNR=1.1						
BURAR	**Bucovina Array**	145.57	332	⇑P	**PKiKP**	**23 05 51.8**	**+0.3**
BRTR	**Keskin Array B**	145.66	314	PKPbc	**PKPab**	**23 05 49.7**	**-1.0**
	0.8nm,0.6s,baz=147,slow=4.6,SNR=6.8						
BIZ	**Bicaz**	145.66	330	⇑P	**PKiKP**	**23 05 51.3**	**-0.3**
DOPR	**Dopca**	146.71	330	⇓P	**PKPab**	**23 05 53.9**	**-0.6**
MLR	**Muntele Rosu**	146.78	329	⇑P	**PKiKP**	**23 05 53.3**	**-0.8**
ARR	**Arges**	147.51	330	⇑P	**PKPab**	**23 05 56.2**	**-1.6**
GERES	**GERESS Array B**	148.57	345	PKPbc	**PKiKP**	**23 05 56.9**	**-0.8**
	1.5nm,0.8s,baz=48,slow=2.0,SNR=11						

JMA ***25*** *22:52:34.5±0.2, 40°.10N×142°.89E, h18^{km}±2^{km}, M3.8*

NIED ***25*** *22:52:34.6, 40°.10N×142°.89E, h18^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.93; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-1.46; $M_{r\theta}$1.54; $M_{\theta\phi}$-1.52; $M_{\phi r}$3.83; Fault plane solution: $M_0$4.72000×10^{14} NP1: ϕ_s23.00000°, δ76.00000°, λ81.00000°. NP2: ϕ_s235.00000°, δ16.00000°, λ122.00000°.*

IDC ***25*** *22:52:36.6±1.1, 40°.01N×143°.04E, h43^{km}±9^{km}, mb3.3/6, mb1 3.5/9, mb1mx3.3/37, mbtmp3.5/9, ML3.1/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/25 Error ellipse: s-maj=25.8km s-min=19.9km az=99.0*

ISC 25 22:52:37.4±0.9**, 40°.03N**±0°.05×**142°.77E**±0°.07**, h42**^{km}±8^{km}**, n29,** σ**1^s.70**/31**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	0.70	263	P	**Pn**	**22 52 50.0**	**-0.9**
JTH				*e*S	**Sn**	**22 53 00.8**	**+0.1**
JKEN	**Kujiedanarisaw**	0.83	282	P	**Pn**	**22 52 51.5**	**-1.2**
JKEN				*e*S	**Sn**	**22 53 03.6**	**-0.2**
MIYJ	**Miyakonagasawa**	0.86	239	P	**Pn**	**22 52 52.5**	**-0.6**
MIYJ				*e*S	**Sn**	**22 53 05.0**	**+0.5**
JANG	**Nango**	1.02	290	P	**Pn**	**22 52 54.2**	**-1.1**
JKZ	**Kuzumaki**	1.11	268	P	**Pn**	**22 52 56.1**	**-0.4**
JOM	**Ohasama**	1.27	244	P	**Pn**	**22 52 58.9**	**+0.2**
OFUJ	**Ofunato**	1.27	222	P	**Pn**	**22 52 59.3**	**+0.5**
JARK	**Aomorirokkasho**	1.45	313	P	**Pn**	**22 53 00.7**	**-0.4**
JTM	**Tenmabayashi**	1.50	301	P	**Pn**	**22 53 02.0**	**+0.1**
JTM				*e*S	**Sn**	**22 53 21.8**	**+1.5**
JMK	**Ichinoseki**	1.61	229	P	**Pn**	**22 53 04.5**	**+1.1**
JAH	**Hinai**	1.65	276	P	**Pn**	**22 53 04.7**	**+0.9**
JAH				*e*S	**Sn**	**22 53 26.9**	**+3.1**
ASAJ	**Asahikawa**	4.08	358	P	**Pn**	**22 53 38.1**	**+0.8**
	3.5nm,0.3s,baz=222,slow=8.7,SNR=11						
ASAJ				S	**Sn**	**22 54 27.8**	**+3.9**
	baz=304,slow=22,SNR=1.7						
ASAJ				LR	LR	22 55 39.1	
	comp=Z,104nm,19.7s,baz=164,slow=44						
MJAR	**Matsushiro Arr**	5.00	227	P	**Pn**	**22 53 52.0**	**+2.1**
	0.3nm,0.3s,baz=39,slow=12,SNR=12						
MAT	**Matsushiro**	5.00	227	P	**Pn**	**22 53 51.9**	**+1.9**
MAT				*e*S	**Sn**	**22 54 50.5**	**+4.0**
USRK	**Ussuriysk Ar.**	9.03	301	P	**Pn**	**22 54 48.7**	**+3.5**
	baz=105,slow=14,SNR=7.5						
KSRS	**Korea Array**	11.88	262	LR	LR	22 59 37.9	
	comp=Z,61nm,18.7s,baz=85,slow=35						
SONM	**Songino Array**	27.13	299	P	**P**	**22 58 16.4**	**-0.2**
	0.2nm,0.3s,baz=106,slow=10,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	28.94	127	T	T	23 29 04.1	
	baz=319,slow=75,SNR=49						
H11N1	**WAKE ISLAND Hy**	28.95	127	T	T	23 29 24.2	
	baz=319,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	28.96	127	T	T	23 29 20.8	
	baz=319,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	29.76	129	T	T	23 29 49.1	
	baz=322,slow=76,SNR=9.2						
H11S3	**WAKE ISLAND Hy**	29.76	129	T	T	23 29 50.3	
	baz=322,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	29.78	129	T	T	23 29 50.3	
	baz=322,slow=76,SNR=8.4						
ZALV	**Zalesovo Beam**	40.75	310	P	**P**	**23 00 14.4**	**+0.4**
	0.7nm,0.4s,baz=92,slow=10,SNR=5.4						
ZALV				pP	**pP**	**23 00 25.4**	**0.0**
	0.8nm,0.5s,baz=89,slow=8.7,SNR=3.2						
MKAR	**Makanchi Array**	43.49	300	P	**P**	**23 00 36.7**	**+0.1**
	0.3nm,0.7s,baz=84,slow=10,SNR=4.4						
ILAR	**Eielson Array**	46.41	34	P	**P**	**23 00 57.5**	**-1.9**
	0.3nm,0.9s,baz=262,slow=6.2,SNR=2.5						
ILAR				pP	**pP**	**23 01 09.7**	**-1.1**
	0.4nm,0.7s,baz=280,slow=6.3,SNR=3.7						
SPITS	**Spitsbergen Ar**	57.80	349	LR	LR	23 28 21.0	
	comp=Z,42nm,18.2s,baz=10.0,slow=37						
WRA	**Warramunga Arr**	60.18	189	P	**P**	**23 02 40.2**	**-0.8**
	0.2nm,0.5s,baz=9.5,slow=7.5,SNR=1.7						
WRA				pP	**pP**	**23 02 52.2**	**-0.6**
	0.6nm,0.8s,baz=7.1,slow=7.0,SNR=3.4						
FINES	**FINESS Array B**	66.66	332	P	**P**	**23 03 22.8**	**-0.6**
	1.3nm,0.9s,baz=72,slow=6.2,SNR=4.0						

IDC ***25*** *23:03:53.0±1.6, 15°.33S×177°.12W, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.9/23, mbtmp3.9/5, ML4.0/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/34, Error ellipse: s-maj=97.9km s-min=26.2km az=157.0*

ISC 25 23:03:55.4±1.1**, 15°.2S**±0°.4×**177°.0W**±0°.2**, h10**^{km}**, n25,** σ**2^s.11**/6**, mb3.9**/4**, MS3.6**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	5.20	77	Pn	**Pn**	**23 05 12.9**	**-0.5**
	5.0nm,0.3s,baz=308,slow=0.8,SNR=4.5						
AFI				Sn	Sn	23 06 03.2	-10
	2.2nm,0.3s,baz=218,slow=17,SNR=1.7						
AFI				LR	LR	23 06 47.5	
	comp=Z,648nm,21.3s,baz=288,slow=33						
DZM	**Mont Dzumac**	17.13	244	*e*P	**P**	**23 07 59.3**	**+2.4**
	41nm,1.5s						
DZM				*e*LR	LR	23 12 11.7	
	comp=Z,452nm,25.1s						
DZM	**Mont Dzumac**	17.13	244	LR	LR	23 13 30.2	
	comp=Z,278nm,18.5s,baz=20,slow=34						
RAR	**Rarotonga**	17.42	113	LR	LR	23 12 17.7	
	comp=Z,134nm,19.9s,baz=254,slow=29						
HNR	**Honiara**	23.23	282	LR	LR	23 16 31.0	
	comp=Z,147nm,18.4s,baz=108,slow=33						
URZ	**Urewera**	23.59	192	LR	LR	23 16 52.6	
	comp=Z,201nm,18.4s,baz=31,slow=33						
PPT	**Papeete**	26.40	99	LR	LR	23 16 52.4	
	comp=Z,111nm,21.5s,baz=214,slow=29						
PPT2	**Papeete2**	26.40	99	*e*LR	LR	23 16 09.9	
	comp=Z,198nm,25.0s						
TBI	**Tubuai**	27.20	112	*e*LR	LR	23 16 41.4	
	comp=Z,225nm,28.8s						
PMG	**Port Moresby**	35.46	275	LR	LR	23 22 30.5	
	comp=Z,99nm,21.7s,baz=356,slow=32						
H11S2	**WAKE ISLAND Hy**	37.10	334	T	T	23 49 41.2	
	baz=151						
H11S3	**WAKE ISLAND Hy**	37.11	334	T	T	23 49 44.5	
	baz=151						
H11S1	**WAKE ISLAND Hy**	37.12	334	T	T	23 49 45.9	
	baz=151						
H11N3	**WAKE ISLAND Hy**	38.11	335	T	T	23 50 54.0	
	baz=155						
H11N1	**WAKE ISLAND Hy**	38.12	335	T	T	23 50 54.7	
	baz=155,slow=74						
H11N2	**WAKE ISLAND Hy**	38.13	335	T	T	23 51 01.6	
	baz=155,slow=74						
STKA	**Stephens Creek**	41.17	239	LR	LR	23 26 57.5	
	comp=Z,103nm,20.0s,baz=36,slow=34						
WRA	**Warramunga Arr**	46.52	257	LR	LR	23 29 24.6	
	comp=Z,71nm,21.6s,baz=90,slow=33						
ASAR	**Alice Springs**	46.89	252	P	**P**	**23 12 23.9**	**-2.5**
	2.2nm,0.8s,baz=83,slow=8.0,SNR=20						
SIJI	**Sorong**	53.01	281	LR	LR	23 35 29.4	
	comp=Z,49nm,18.5s,baz=158,slow=36						
MJAR	**Matsushiro Arr**	66.57	322	LR	LR	23 39 50.3	
	comp=Z,19nm,19.5s,baz=185,slow=32						
ILAR	**Eielson Array**	82.93	13	P	**P**	**23 16 20.1**	**0.0**
	0.5nm,0.8s,baz=224,slow=7.6,SNR=4.7						
TXAR	**Lajitas Array**	83.38	57	P	**P**	**23 16 24.5**	**+1.1**
	1.1nm,1.0s,baz=232,slow=4.4,SNR=8.0						
PDAR	**Pinedale Array**	84.43	43	P	**P**	**23 16 28.9**	**+0.2**
	0.5nm,0.7s,baz=188,slow=5.5,SNR=4.5						
CMIG	**Matias Romero**	87.08	72	LR	LR	23 46 27.1	
	comp=Z,53nm,18.0s,baz=246,slow=29						

DNK ***25*** *23:10:37.0±0.4, 51°.45N×15°.83E, h0^{km}±243^{km}, ML1.9*

IPEC ***25*** *23:10:38.5±0.2, 51°.47N×16°.27E, h1^{km}, ML2.1/3, Error ellipse: s-maj=1.4km s-min=0.7km az=36.0*

IDC ***25*** *23:10:39.0±1.3, 51°.48N×15°.97E, h0^{km}, mb1 3.0/5, mb1mx2.9/38, mbtmp2.9/5, ML2.6/5, Error ellipse: s-maj=16.9km s-min=9.3km az=134.0*

PRU ***25*** *23:10:39.3±0.0, 51°.45N×16°.19E, h0^{km}*

VIE ***25*** *23:10:42.0±0.7, 51°.27N×15°.89E, h0^{km}, mb2.2/4, ml2.5/6, Error ellipse: s-maj=6.5km s-min=4.3km az=14.0 77 km NE of Liberec Suspected Mining induced.*

ISC 25 23:10:36.9±0.8**, 51°.53N**±0°.03×**16°.24E**±0°.02**, h0**^{km}**, n38,** σ**0^s.91**/76**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.69	177	*e*Pg	**Pg**	**23 10 51.0**	**+0.9**
KSP				*e*Sg	**Sg**	**23 10 59.3**	**+0.3**
CHVC	**Chvalec**	0.95	187	*e*PG	**Pg**	**23 10 56.0**	**+0.9**
CHVC				*e*SG	**Sg**	**23 11 07.6**	**+0.2**
	comp=Z,36nm,0.4s						
OSTC	**Ostas**	0.98	181	*e*PG	**Pb**	**23 10 56.5**	**-0.2**
OSTC				*e*SG	**Sg**	**23 11 08.2**	**0.0**
	comp=Z,24nm,0.6s						
UPC	**Upice**	1.04	188	*e*PG	**Pg**	**23 10 57.1**	**+0.4**
UPC				*e*SG	**Sg**	**23 11 09.8**	**-0.3**
	comp=Z,91nm,0.3s						
DPC	**Dobruska-Polom**	1.18	178	*e*PG	**Pg**	**23 10 59.9**	**+0.4**
DPC				*e*SG	**Sg**	**23 11 14.2**	**-0.7**
	comp=Z,18nm,0.3s						
PVCC	**Panska Ves**	1.46	227	*e*PG	**Pg**	**23 11 05.2**	**+0.4**
PVCC				*e*SG	**Sb**	**23 11 24.2**	**+0.2**
	comp=Z,117nm,0.3s						
KRLC	**Kraliky**	1.50	167	*e*PG	**Pn**	**23 11 05.4**	**+0.4**
KRLC				*e*SG	**Sg**	**23 11 24.6**	**-0.3**
	comp=Z,21nm,0.5s						
BRG	**Berggiesshubel**	1.59	246	Pn	**Pn**	**23 11 07.0**	**+0.8**
BRG				Pg	**Pb**	**23 11 07.7**	**+0.6**
BRG				Sg	**Sg**	**23 11 28.2**	**+0.3**
BRG				Amp		23 11 28.9	
	comp=Z,37nm,0.2s						
BRG	**Berggiesshubel**	1.59	246	Pn	**Pn**	**23 11 07.0**	**+0.8**
BRG				Pg	**Pb**	**23 11 07.7**	**+0.6**
BRG				Sg	**Sg**	**23 11 28.2**	**+0.3**
BRG				Amp		23 11 28.9	
	comp=Z,37nm,0.2s						
PRA	**Prague**	1.86	219	*e*PG	**Pn**	**23 11 10.7**	**+0.7**
PRA				*e*SG	**Sb**	**23 11 35.9**	**+0.4**
	comp=Z,7.1nm,0.3s						
PRU	**Pruhonice**	1.89	216	*e*PG	**Pb**	**23 11 12.1**	**-0.1**
PRU				*e*SG	**Sb**	**23 11 36.3**	**+0.1**
	comp=Z,16nm,0.2s						
MORC	**Moravsky Berou**	1.94	154	*e*PN	**Pn**	**23 11 11.6**	**+0.4**

MORC				*e*SG	**Sb**	**23 11 38.1**	**+0.1**
MORC	**Moravsky Berou**	**1.94**	**154**	*e*Pn	**Pn**	**23 11 11.6**	**+0.4**
	baz=335						
MORC				*e*Sg	**Sb**	**23 11 38.0**	**+0.1**
	comp=Z,18nm,0.3s,baz=335						
CLL	**Collm**	**2.04**	**265**	*e*Pg	**Pb**	**23 11 16.0**	**+1.2**
CLL				*e*Sg	**Sg**	**23 11 43.0**	**+0.6**
	comp=Z,14nm,0.6s						
OKC	**Ostrava-Krasne**	**2.08**	**144**	*e*SG	**Sg**	**23 11 43.3**	**-0.5**
	comp=Z,26nm,0.6s						
VRAC	**Vranov**	**2.24**	**174**	Pn	**Pn**	**23 11 16.2**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=337,slow=16,SNR=11						
VRAC				Sn	**Sb**	**23 11 46.4**	**0.0**
	comp=Z,4.4nm,0.3s,baz=85,slow=18,SNR=12						
VRAC	**Vranov**	**2.24**	**174**	*e*PN	**Pn**	**23 11 15.7**	**+0.5**
VRAC				*e*SG	**Sb**	**23 11 46.4**	**0.0**
VRAC	**Vranov**	**2.24**	**174**	*e*Pn	**Pn**	**23 11 15.6**	**+0.4**
	baz=355						
VRAC				*e*Sg	**Sb**	**23 11 46.4**	**0.0**
	comp=Z,9.8nm,0.3s,baz=355						
TREC	**Trest**	**2.29**	**192**	*e*PG	**Pb**	**23 11 20.0**	**+0.9**
TREC				*e*SG	**Sb**	**23 11 48.7**	**+0.8**
	comp=Z,20nm,0.2s						
PBCC	**Pribram**	**2.34**	**219**	*e*PG	**Pb**	**23 11 20.5**	**+0.6**
PBCC				*e*SG	**Sg**	**23 11 50.7**	**-1.2**
	comp=Z,5.1nm,0.4s						
KRUC	**Moravsky**	**2.48**	**178**	*e*PN	**Pn**	**23 11 19.7**	**+1.3**
KRUC				*e*PG	**Pb**	**23 11 22.8**	**+0.6**
KRUC				*e*SG	**Sb**	**23 11 53.6**	**+0.4**
KRUC	**Moravsky**	**2.48**	**178**	*e*Pn	**Pn**	**23 11 19.7**	**+1.3**
	baz=358						
KRUC	**Moravsky**	**2.48**	**178**	*e*Pg	**Pb**	**23 11 22.8**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**23 11 53.5**	**+0.4**
	comp=Z,6.0nm,0.2s,baz=358						
OJC	**Ojcow**	**2.61**	**119**	*e*Pg	**Pg**	**23 11 27.5**	**+0.7**
OJC				*e*Sg	**Sg**	**23 12 02.3**	**+1.7**
NKC	**Novy Kostel**	**2.73**	**243**	*e*PN	**Pn**	**23 11 23.4**	**+1.4**
NKC				*e*PG	**Pg**	**23 11 28.6**	**-0.6**
NKC				*e*SG	**Sg**	**23 12 05.0**	**+0.4**
	comp=Z,15nm,0.3s						
KHC	**Kasperske Hory**	**2.95**	**216**	*e*PN	**Pn**	**23 11 25.5**	**+0.5**
KHC				*e*PG	**Pb**	**23 11 31.1**	**+0.8**
KHC				*e*SN	**Sn**	**23 12 00.8**	**-0.3**
KHC				*e*SG	**Sg**	**23 12 10.1**	**-1.4**
	comp=Z,9.7nm,0.4s						
GERES	**GERESS Array B**	**3.15**	**212**	Pn	**Pn**	**23 11 27.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=30,slow=14,SNR=13						
GERES				Sn	**Sn**	**23 12 04.1**	**-2.0**
	comp=Z,1.2nm,0.3s,baz=28,slow=21,SNR=5.1						
GERES				Lg	Lg	23 12 14.4	
	comp=Z,4.2nm,0.3s,baz=36,slow=27,SNR=10						
LANS	**Liptovska Anna**	**3.15**	**138**	*e*PG	**Pg**	**23 11 38.4**	**+1.1**
LANS				*e*SG	**Sg**	**23 12 17.1**	**-1.0**
MODS	**Modra-Piesok**	**3.23**	**168**	*e*PG	**Pg**	**23 11 39.7**	**+0.9**
MODS				*e*SG	**Sg**	**23 12 18.8**	**-1.8**
VYHS	**Vyhne**	**3.47**	**150**	*e*PN	**Pn**	**23 11 32.2**	**+0.1**
VYHS				*e*SG	**Sg**	**23 12 27.3**	**-1.0**
CONA	**Conrad Observa**	**3.62**	**184**	*e*Pn	**Pn**	**23 11 35.9**	**+1.7**
	comp=Z,0.9nm,0.3s						
BSD	**Bornholm Skovb**	**3.68**	**348**	*e*	**Pn**	**23 11 34.4**	**-0.5**
	baz=172,slow=12						
BSD				*i* P	Pb	23 11 35.8	-6.9
BSD				*i* S	**Sn**	**23 12 18.5**	**-0.4**
BSD				IAML		23 12 51.6	
	comp=Z,1.1nm,0.4s						
MOA	**Molln**	**3.90**	**200**	*i* Pn	**Pn**	**23 11 39.1**	**+1.0**
	comp=Z,0.7nm,0.2s						
ARSA	**Arzberg**	**4.31**	**187**	*e*Pn	**Pn**	**23 11 46.1**	**+2.5**
	comp=Z,1.0nm,0.3s						
ARSA				Sg	**Sg**	**23 12 55.2**	**-0.1**
	comp=Z,1.8nm,0.3s						
KBA	**Koelnbreinsper**	**4.84**	**204**	*e*Pn	**Pn**	**23 11 52.3**	**+1.1**
	comp=Z,0.5nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.33**	**224**	Pn	**Pn**	**23 12 12.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=146,slow=18,SNR=1.2						
DAVOX				Sn	**Sn**	**23 13 23.2**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=300,slow=12,SNR=1.4						
DAVOX				Lg	Lg	23 13 55.7	
	comp=Z,0.1nm,0.3s,baz=201,slow=20,SNR=2.4						
AKASG	**Malin Array Be**	**8.21**	**91**	Pn	**Pn**	**23 12 38.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=259,slow=11,SNR=2.2						
AKASG				Sn	**Sn**	**23 14 08.1**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=227,slow=16,SNR=1.9						
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**23 13 19.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=210,slow=8.0,SNR=1.3						

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*IDC **25** 23:36:55.4±1.8, 15°.22S×177°.10W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.9/33, mbtmp3.9/7, MS3.9/12, Ms1 3.9/12, ms1mx3.6/47, Error ellipse: s-maj=94.4km s-min=27.4km az=152.0*

ISC 25 23:36:56.7±1.7**, 15°.3S**±0°.6×**177°.1W**±0°.3**, h10^{km}, n31, σ0^{s}87**/9**, mb4.0**/7**, MS4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.33**	**76**	LR	LR	23 39 49.2	
	comp=Z,1μm,21.5s,baz=260,slow=33						
DZM	**Mont Dzumac**	**16.98**	**244**	*e*LR	LR	23 45 31.8	
	comp=Z,858nm,25.2s						
DZM	**Mont Dzumac**	**16.98**	**244**	LR	LR	23 46 23.2	
	comp=Z,645nm,21.8s,baz=92,slow=33						
HNR	**Honiara**	**23.16**	**282**	LR	LR	23 49 25.2	
	comp=Z,285nm,19.4s,baz=110,slow=32						
PPT	**Papeete**	**26.48**	**99**	LR	LR	23 49 38.7	
	comp=Z,146nm,21.8s,baz=20,slow=29						
PPT2	**Papeete2**	**26.48**	**99**	*e*LR	LR	23 49 11.6	
	comp=Z,318nm,26.8s						
TBI	**Tubuai**	**27.24**	**111**	*e*LR	LR	23 49 40.3	
	comp=Z,206nm,32.8s						
TAOE	**Nuku Hiva Isla**	**36.65**	**84**	*e*LR	LR	23 53 45.6	
	comp=Z,407nm,25.2s						
H11S2	**WAKE ISLAND Hy**	**37.18**	**334**	T	T	00 22 43.2	
	baz=153,slow=76						
H11S3	**WAKE ISLAND Hy**	**37.19**	**334**	T	T	00 22 45.7	
	baz=153,slow=76						
H11S1	**WAKE ISLAND Hy**	**37.20**	**334**	T	T	00 22 44.9	
	baz=153,slow=76						
H11N3	**WAKE ISLAND Hy**	**38.20**	**335**	T	T	00 23 57.3	
	baz=154						
H11N1	**WAKE ISLAND Hy**	**38.20**	**335**	T	T	00 23 56.1	
	baz=154,slow=74						
H11N2	**WAKE ISLAND Hy**	**38.21**	**335**	T	T	00 23 59.1	
	baz=154,slow=74						
ASAR	**Alice Springs**	**46.76**	**252**	P	**P**	**23 45 26.6**	**0.0**
	2.4nm,0.8s,baz=85,slow=8.4,SNR=15						
MJAR	**Matsushiro Arr**	**66.62**	**322**	LR	LR	00 13 49.9	
	comp=Z,56nm,19.8s,baz=185,slow=33						
ASAJ	**Asahikawa**	**69.63**	**330**	LR	LR	00 13 47.3	
	comp=Z,138nm,20.3s,baz=166,slow=32						
USRK	**Ussuriysk Ar.**	**75.21**	**325**	LR	LR	00 15 54.2	
	comp=Z,126nm,21.4s,baz=121,slow=31						
PFO	**Pinyon Flats O**	**75.50**	**49**	LR	LR	00 14 42.4	
	comp=Z,93nm,18.4s,baz=258,slow=30						
YBH	**Yreka Blue Hor**	**75.72**	**39**	LR	LR	00 14 36.5	
	comp=Z,83nm,20.0s,baz=265,slow=30						
NVAR	**Mina Array Bea**	**76.68**	**44**	P	**P**	**23 48 48.0**	**-0.4**
	0.8nm,0.8s,baz=240,slow=8.2,SNR=5.7						
KLR	**Kul'dur**	**78.54**	**329**	LR	LR	00 18 09.3	
	comp=Z,110nm,21.0s,baz=179,slow=32						
MA2	**Magadan**	**79.04**	**344**	LR	LR	00 19 03.5	
	comp=Z,58nm,20.2s,baz=148,slow=32						
ILAR	**Eielson Array**	**83.08**	**13**	P	**P**	**23 49 21.2**	**-1.0**
	1.0nm,0.9s,baz=226,slow=6.5,SNR=8.7						
TXAR	**Lajitas Array**	**83.54**	**57**	P	**P**	**23 49 26.1**	**+0.6**
	1.0nm,1.0s,baz=235,slow=4.4,SNR=6.0						
PDAR	**Pinedale Array**	**84.60**	**43**	P	**P**	**23 49 30.6**	**-0.2**
	0.7nm,0.8s,baz=255,slow=3.5,SNR=4.8						
YKA	**Yellowknife Ar**	**91.45**	**24**	P	**P**	**23 50 03.7**	**+0.9**
	0.3nm,0.9s,baz=72,slow=36,SNR=2.7						
SONM	**Songino Array**	**92.42**	**319**	P	**P**	**23 50 08.8**	**+0.9**
	0.7nm,1.0s,baz=132,slow=2.1,SNR=3.6						
ULM	**Lac du Bonnet**	**96.11**	**40**	LR	LR	00 26 34.4	
	comp=Z,83nm,18.6s,baz=288,slow=31						
BRTR	**Keskin Array B**	**143.77**	**318**	PKP	**PKPdf**	**23 56 31.7**	**-1.0**
	0.5nm,0.9s,baz=22,slow=2.1,SNR=3.1						
GERES	**GERESS Array B**	**145.40**	**347**	PKPbc	**PKPbc**	**23 56 34.4**	**-0.6**
	0.1nm,0.3s,baz=327,slow=2.2,SNR=3.9						

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*BJI **25** 23:55:48.1±0.0, 20°.24S×170°.27E, h130^{km}, mB5.0/36, mb5.0/53*

*MOS **25** 23:55:49.6±1.0, 20°.63S×169°.86E, h143^{km}, mb5.2/38, Error ellipse: s-maj=8.1km s-min=7.7km az=85.3*

*IDC **25** 23:55:50.5±0.8, 20°.67S×169°.82E, h142^{km}±6^{km}, mb4.8/35, mb1 4.9/38, mb1mx4.8/49, mbtmp5.1/38, MS3.9/14, Ms1 3.9/14, ms1mx3.7/36, Error ellipse: s-maj=9.6km s-min=7.5km az=155.0*

*NEIC **25** 23:55:50.7±1.6, 20°.59S±0°.06×169°.89E±0°.08, h142^{km}±3^{km}, mb5.2/256, Error ellipse: s-maj=11.2km s-min=8.4km az=93.0*

*NOU **25** 23:55:51.2, 20°.53S×169°.84E, h139^{km}, mb5.4, Vanuatu Islands*

*BGR **25** 23:55:51.5±0.0, 20°.49S×169°.86E, h137^{km}*

*GCMT **25** 23:55:53.7±0.1, 20°.69S±0°.01×169°.82E±0°.01, h148^{km}±1^{km}, MW5.2/138, Moment Tensor Solution. s84,c117; s138,c212; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-5.47±.15; $M_{\theta\theta}$2.24±.23; $M_{\phi\phi}$3.24±.22; $M_{r\theta}$-3.12±.14; $M_{\theta\phi}$-2.68±.18; $M_{\phi r}$5.68±.13; Best double couple: $M_0$8.47900×10^{16} NP1:ϕ_s312.00000°, δ21.00000°, λ-105.00000°. NP2:ϕ_s149.00000°, δ70.00000°, λ-84.00000°. Principal axes: T 8.4190, Plg25.0000°, Azm234.0000°; N 0.1280, Plg5.0000°, Azm327.0000°; P -8.5380, Plg65.0000°, Azm68.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 23:55:50.1±0.3**, 20°.64S**±0°.04×**169°.92E**±0°.04**, h141^{km}**±2^{km}**, h141^{km}:pP-P, n943, σ1^{s}28**/947**, mb5.1**/175**, 45C-82D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.96**	**244**	P	**Pn**	**23 56 23.5**	**-0.7**
PINNC	**Pines Island,**	**3.03**	**229**	P	**Pn**	**23 56 37.4**	**-0.1**
YATNC	**Mamie plateau,**	**3.16**	**243**	P	**Pn**	**23 56 38.3**	**-0.9**
DVP	**Devils Point**	**3.33**	**330**	P	**Pn**	**23 56 40.8**	**-0.6**
OUENC	**Ouen Island, N**	**3.37**	**238**	P	**Pn**	**23 56 42.1**	**+0.1**
DZM	**Mont Dzumac**	**3.54**	**246**	*e*Pn	**Pn**	**23 56 44.3**	**0.0**
	636nm,0.3s						
DZM				*e*Sn	**Sn**	**23 57 25.8**	**-0.4**
	977nm,0.3s						
DZM				*e*LR	LR	23 57 34.0	
	comp=Z,3μm,32.0s						
DZM	**Mont Dzumac**	**3.54**	**246**	P	**Pn**	**23 56 44.0**	**-0.2**
	111nm,0.3s,baz=63,slow=18,SNR=508						
DZM				S	**Sn**	**23 57 24.4**	**-1.8**
	448nm,0.3s,baz=351,slow=22,SNR=18						
DZM				LR	LR	23 57 43.8	
	comp=Z,2μm,20.4s,baz=78,slow=33						
DZM	**Mont Dzumac**	**3.54**	**246**	P	**Pn**	**23 56 44.6**	**+0.3**
NOUC	**Port Laguerre**	**3.68**	**246**	P	**Pn**	**23 56 46.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**5.28**	**270**	P	**Pn**	**23 57 08.6**	**+1.4**
SANVU	**Saraoutou**	**5.77**	**333**		**Pn**	**23 57 13.2**	**-0.6**
SANVU	**Saraoutou**	**5.77**	**333**	P	**Pn**	**23 57 13.6**	**-0.1**
NFK	**Norfolk Island**	**8.56**	**192**	P	**Pn**	**23 57 52.0**	**+0.9**
	baz=8.7,SNR=83						
NFK	**Norfolk Island**	**8.56**	**192**	P	**Pn**	**23 57 53.0**	**+1.9**
RAO	**Raoul Island**	**13.96**	**130**	LR	LR	00 02 39.0	
	comp=Z,346nm,20.9s,baz=152,slow=29						
LHI	**Lord Howe Isla**	**14.57**	**220**	P	**Pn**	**23 59 09.8**	**+0.1**
	baz=15,SNR=6.5						
LHI	**Lord Howe Isla**	**14.57**	**220**		**Pn**	**23 59 10.2**	**+0.6**
LHI	**Lord Howe Isla**	**14.57**	**220**	P	**P**	**23 59 13.1**	**+0.9**
HNR	**Honiara**	**14.72**	**318**	P	**P**	**23 59 13.8**	**-0.1**
	18nm,0.3s,baz=204,slow=7.0,SNR=1.3						
HNR				LR	LR	00 03 59.6	
	comp=Z,155nm,20.2s,baz=140,slow=33						
HNR	**Honiara**	**14.72**	**318**	P	**P**	**23 59 12.8**	**-1.1**
HNR	**Honiara**	**14.72**	**318**	P	**P**	**23 59 12.8**	**-1.1**
OUZ	**Omahuta**	**14.89**	**168**		**P**	**23 59 16.1**	**+0.4**
OUZ	**Omahuta**	**14.89**	**168**	P	**Pn**	**23 59 14.2**	**+0.7**
FUNA	**Funafuti**	**15.01**	**38**		**P**	**23 59 17.2**	**+0.1**
WCZ	**Waipu Caves**	**15.73**	**167**	P	**P**	**23 59 28.2**	**+3.2**
EIDS	**Eidsvold**	**17.97**	**251**	P	**Pn**	**23 59 52.3**	**+1.1**
	baz=18,SNR=106						
EIDS	**Eidsvold**	**17.97**	**251**	Pn	**Pn**	**23 59 51.6**	**+0.4**
HIZ	**Hauiti**	**18.32**	**168**	P	**Pn**	**23 59 54.8**	**-0.4**
HIZ	**Hauiti**	**18.32**	**168**	P	**Pn**	**23 59 56.3**	**+1.1**
MXZ	**Matakaoa Point**	**18.37**	**158**	P	**Pn**	**23 59 56.0**	**+0.2**
MXZ	**Matakaoa Point**	**18.37**	**158**	P	**Pn**	**23 59 57.5**	**+1.7**
MXZ				S	**Sn**	**00 03 26.4**	**+4.3**
HAZ	**Te Kaha**	**18.38**	**160**	P	**Pn**	**23 59 56.7**	**+0.9**
HAZ				S	**Sn**	**00 03 29.9**	**+7.8**
RUGZ	**Raukumara Rang**	**18.53**	**160**	P	**Pn**	**23 59 58.7**	**+0.9**
RUGZ				S	**Sn**	**00 03 30.2**	**+4.1**
PKGZ	**Pakihiroa**	**18.59**	**159**	P	**Pn**	**23 59 59.4**	**+1.0**
PKGZ				S	**Sn**	**00 03 36.9**	**+10**
URZ	**Urewera**	**18.63**	**162**	P	**P**	**23 59 57.3**	**+0.4**
	4.1nm,0.3s,baz=344,slow=3.3,SNR=27						
URZ				S	**Sn**	**00 03 32.5**	**+4.2**
	1.8nm,0.3s,baz=179,slow=22,SNR=10						
URZ				LR	LR	00 05 55.3	
	comp=Z,151nm,19.4s,baz=30,slow=32						
URZ	**Urewera**	**18.63**	**162**	P	**Pn**	**23 59 58.8**	**0.0**
URZ	**Urewera**	**18.63**	**162**	P	**Pn**	**23 59 59.4**	**+0.6**
URZ				S	**Sn**	**00 03 35.2**	**+6.9**
WMGZ	**Waiomatatini S**	**18.64**	**159**	P	**Pn**	**23 59 59.1**	**+0.2**
WMGZ				S	**Sn**	**00 03 31.0**	**+2.5**
AFI	**Afiamalu**	**18.70**	**72**	P	**P**	**23 59 58.4**	**+0.5**
	4.6nm,0.3s,baz=229,slow=3.2,SNR=18						
AFI	**Afiamalu**	**18.70**	**72**	P	**P**	**23 59 57.4**	**-0.5**
AFI				IAmb	IAmb	00 00 03.1	
	comp=Z,189nm,0.9s						
PUZ	**Puketiti**	**18.82**	**159**	P	**Pn**	**00 00 00.6**	**-0.4**
PUZ				S	**Sn**	**00 03 37.7**	**+5.0**
TWGZ	**Tauwhareparae**	**18.82**	**160**	P	**Pn**	**00 00 01.5**	**+0.4**
TWGZ				S	**Sn**	**00 03 35.2**	**+2.3**
RTZ	**Ruatahuna**	**18.93**	**163**	P	**Pn**	**00 00 02.5**	**+0.1**
RTZ				S	**Sn**	**00 03 38.7**	**+3.2**
RAGZ	**Rawiri**	**18.94**	**162**	P	**Pn**	**00 00 02.9**	**+0.4**
RAGZ				S	**Sn**	**00 03 41.3**	**+5.5**
TWVZ	**Taurewa**	**18.98**	**167**	P	**Pn**	**00 00 06.0**	**+3.0**
MRHZ	**Matea Rd**	**18.98**	**164**	P	**Pn**	**00 00 03.8**	**+0.8**
MRHZ				S	**Sn**	**00 03 35.3**	**-1.5**
NIUE	**Niue**	**19.02**	**89**	P	**P**	**00 00 00.0**	**-1.2**
	baz=19,SNR=3.6						
NIUE	**Niue**	**19.02**	**89**		**P**	**00 00 01.9**	**+0.7**
NIUE				IAmb	IAmb	00 00 05.4	
	comp=Z,216nm,1.1s						
NIUE	**Niue**	**19.02**	**89**	P	**P**	**00 00 02.0**	**+0.7**
	comp=Z,176nm,1.3s						
TKGZ	**Te Karaka**	**19.02**	**161**	P	**Pn**	**00 00 03.0**	**-0.4**
WTVZ	**West Tongariro**	**19.05**	**166**	P	**Pn**	**00 00 05.6**	**+1.7**
NGZ	**Ngauruhoe**	**19.11**	**166**	P	**Pn**	**00 00 06.5**	**+1.8**
OTVZ	**Oturere**	**19.12**	**166**	P	**Pn**	**00 00 06.5**	**+1.8**
ARMA	**Armidale**	**19.15**	**236**	P	**Pn**	**00 00 04.1**	**-1.0**
	baz=19,SNR=167						
ARMA	**Armidale**	**19.15**	**236**	P	**Pn**	**00 00 05.0**	**-0.1**
SNGZ	**Shannon Statio**	**19.18**	**162**	P	**Pn**	**00 00 04.7**	**-0.6**
SNGZ				S	**Sn**	**00 03 41.8**	**+0.3**
RAHZ	**Arahi**	**19.24**	**163**	P	**Pn**	**00 00 05.9**	**0.0**
RAHZ				S	**Sn**	**00 03 43.9**	**+1.1**
RIGZ	**Rimuhau**	**19.24**	**161**	P	**Pn**	**00 00 05.2**	**-0.8**
RIGZ				S	**Sn**	**00 03 42.3**	**-0.5**
WNVZ	**Wahianoa**	**19.26**	**167**	P	**Pn**	**00 00 07.8**	**+1.5**
BKZ	**Black Stump Fm**	**19.32**	**164**		**Pn**	**00 00 05.8**	**-1.1**
BKZ	**Black Stump Fm**	**19.32**	**164**	P	**Pn**	**00 00 06.2**	**-0.7**
MOVZ	**Moawhango**	**19.37**	**166**	P	**Pn**	**00 00 07.9**	**+0.4**
KWHZ	**Kaweka Forest**	**19.54**	**165**	P	**Pn**	**00 00 09.2**	**-0.3**
KWHZ				S	**Sn**	**00 03 49.3**	**-0.8**
MCHZ	**McNeill Hill**	**19.63**	**164**	P	**Pn**	**00 00 10.2**	**-0.3**
MCHZ				S	**Sn**	**00 03 51.2**	**-0.9**
RMQ	**Roma**	**20.25**	**249**	P	Pn	00 00 17.0	-0.9
	baz=20,SNR=154						
QRZ	**Quartz Range**	**20.25**	**174**	P	**P**	**00 00 15.3**	**+0.9**
BFZ	**Birch Farm**	**20.70**	**166**	P	**P**	**00 00 19.2**	**+0.1**
BFZ				IAmb	IAmb	00 00 23.2	
	comp=Z,76nm,0.9s						
NNZ	**Nelson**	**20.73**	**173**	P	**P**	**00 00 21.4**	**+2.0**
MGCD	**Mangrove Creek**	**20.89**	**229**	P	Pn	00 00 23.4	-2.1
	baz=21,SNR=7.4						
SNZO	**South Karori**	**21.01**	**170**	P	**P**	**00 00 24.1**	**+1.7**
SNZO				IAmb	IAmb	00 00 26.7	
	comp=Z,111nm,1.1s						
TUWZ	**Tuamarina**	**21.01**	**172**	P	**P**	**00 00 24.3**	**+1.8**
BHW	**Baring Head**	**21.13**	**170**	P	**P**	**00 00 25.8**	**+2.1**
RIV	**Riverview**	**21.20**	**228**	P	**P**	**00 00 26.9**	**+2.4**
	baz=21,SNR=6.9						
THZ	**Tophouse**	**21.21**	**174**		**P**	**00 00 26.6**	**+1.9**
BSWZ	**Blackbirch Sta**	**21.28**	**172**	P	**P**	**00 00 27.6**	**+2.3**
PLWZ	**Palliser**	**21.35**	**169**	P	**P**	**00 00 27.4**	**+1.2**
KHZ	**Kahutara**	**21.93**	**173**	P	**P**	**00 00 33.7**	**+1.5**
LTZ	**Lake Taylor**	**22.17**	**175**	P	**P**	**00 00 35.1**	**+0.4**
LTZ				IAmb	IAmb	00 00 39.0	
	comp=Z,65nm,1.2s						
CTAO	**Charters Tower**	**22.20**	**267**	P	**P**	**00 00 35.4**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,133nm,0.8s						
CTAO	**Charters Tower**	**22.20**	**267**	P	**P**	**00 00 35.4**	**+0.2**
CTAO				IAmb	IAmb	00 00 37.5	
	comp=Z,133nm,0.8s						
FOZ	**Fox Glacier**	**22.83**	**180**	P	**P**	**00 00 42.3**	**+1.3**
RPZ	**Rata Peaks**	**23.03**	**178**	P	**P**	**00 00 42.8**	**-0.1**
	comp=Z,13nm,0.6s,baz=333,slow=5.3,SNR=7.6						
RPZ	**Rata Peaks**	**23.03**	**178**	P	**P**	**00 00 43.7**	**+0.8**
MQZ	**McQueen's Vall**	**23.12**	**175**	P	**P**	**00 00 44.5**	**+0.8**
CNB	**Canberra Magne**	**23.25**	**227**	P	**P**	**00 00 46.5**	**+1.4**
	baz=23,SNR=122						
YNG	**Young**	**23.39**	**230**	P	**P**	**00 00 47.9**	**+1.6**
	baz=24,SNR=53						
CAN	**Canberra**	**23.50**	**227**	P	**P**	**00 00 48.3**	**+1.0**
CAN				pmax	pmax		
	comp=Z,390nm,0.9s						
CAN	**Canberra**	**23.50**	**227**	P	**P**	**00 00 48.3**	**+1.0**
LBZ	**Lake Benmore**	**23.69**	**180**	P	**P**	**00 00 49.4**	**+0.5**
WKZ	**Wanaka**	**24.14**	**182**	P	**P**	**00 00 53.9**	**+1.0**
QLP	**Quilpie**	**24.25**	**251**	P	**P**	**00 00 54.6**	**+0.5**
	baz=24,SNR=96						
CMSA	**Cobar Meteorol**	**24.27**	**239**	P	**P**	**00 00 55.1**	**+0.8**
	baz=24,SNR=186						
MTSU	**Mount Surprise**	**24.28**	**271**	P	**P**	**00 00 55.9**	**+1.4**
	baz=24,SNR=184						
ODZ	**Otahua Downs**	**24.35**	**179**	P	**P**	**00 00 55.2**	**+0.3**
PMG	**Port Moresby**	**24.62**	**294**	P	**P**	**00 00 57.9**	**+0.3**
	comp=Z,96nm,0.8s,baz=98,slow=6.2,SNR=39						
PMG				ScP	**ScP**	**00 07 58.1**	**+0.5**
	comp=Z,5.5nm,0.3s,baz=164,slow=2.3,SNR=5.0						
PMG				LR	LR	00 09 22.3	
	comp=Z,460nm,18.0s,baz=54,slow=33						
PMG	**Port Moresby**	**24.62**	**294**	P	**P**	**00 00 58.5**	**+0.9**
PMG				pmax	pmax		
	comp=Z,99nm,0.8s						
PMG	**Port Moresby**	**24.62**	**294**	P	**P**	**00 00 58.5**	**+0.9**
PMG				IAmb	IAmb	00 00 59.9	
	comp=Z,99nm,0.8s						
PMG	**Port Moresby**	**24.62**	**294**	P	**P**	**00 00 58.9**	**+1.3**
MLZ	**Mavora Lakes**	**24.71**	**183**	P	**P**	**00 00 59.3**	**+1.2**
KNTN	**Kanton**	**25.21**	**48**	P	**P**	**00 01 03.1**	**+0.2**
KNTN				IAmb	IAmb	00 01 04.0	
	comp=Z,137nm,1.1s						
WHZ	**Wether Hill Ro**	**25.24**	**183**	P	**P**	**00 01 03.0**	**0.0**
COEN	**Coen**	**26.36**	**280**	P	**P**	**00 01 14.5**	**+1.1**
COEN				IAmb	IAmb	00 01 18.6	
	comp=Z,34nm,0.9s						
TOO	**Toolangi**	**27.09**	**226**	P	**P**	**00 01 21.0**	**+1.2**
	baz=27,SNR=9.2						
TOO	**Toolangi**	**27.09**	**226**	P	**P**	**00 01 21.2**	**+1.4**
TOO				pmax	pmax		
	comp=Z,52nm,1.1s						
TOO	**Toolangi**	**27.09**	**226**	P	**P**	**00 01 21.2**	**+1.4**
TOO				IAmb	IAmb	00 01 23.2	
	comp=Z,52nm,1.1s						
STKA	**Stephens Creek**	**27.68**	**240**	P	**P**	**00 01 25.9**	**+0.9**
	baz=28,SNR=97						
STKA	**Stephens Creek**	**27.68**	**240**	P	**P**	**00 01 25.6**	**+0.6**
	comp=Z,71nm,0.7s,baz=86,slow=11,SNR=142						
STKA				ScP	**ScP**	**00 08 07.4**	**+1.1**
	comp=Z,15nm,0.8s,baz=44,slow=4.2,SNR=12						
STKA				LR	LR	00 11 19.6	
	comp=Z,337nm,21.4s,baz=63,slow=34						
STKA	**Stephens Creek**	**27.68**	**240**	P	**P**	**00 01 25.9**	**+0.9**
STKA				pmax	pmax		
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**27.68**	**240**	P	**P**	**00 01 25.9**	**+0.9**
QIS	**Mount Isa**	**28.36**	**265**	P	**P**	**00 01 31.5**	**+0.2**
	baz=28,SNR=14						
TAU	**Tasmania Unive**	**29.20**	**215**	P	**P**	**00 01 39.2**	**+0.9**
TAU				pmax	pmax		
	comp=Z,32nm,0.8s						
TAU	**Tasmania Unive**	**29.20**	**215**	P	**P**	**00 01 39.2**	**+0.9**
TAU				IAmb	IAmb	00 01 40.1	
	comp=Z,32nm,0.8s						
ARPS	**Mount Arapiles**	**29.27**	**231**	P	**P**	**00 01 40.2**	**+1.2**
	baz=29,SNR=15						
HTT	**Hallett**	**30.29**	**239**	P	**P**	**00 01 48.8**	**+0.6**
	baz=30,SNR=28						
BBOO	**Buckleboo**	**32.45**	**241**	P	**P**	**00 02 07.4**	**+0.3**
	baz=32,SNR=36						
BBOO	**Buckleboo**	**32.45**	**241**	P	**P**	**00 02 07.3**	**+0.3**
WR0	**Warramunga Arr**	**33.16**	**265**	IAmb	IAmb	00 02 13.6	
	comp=Z,67nm,0.9s						
WB2	**Warramunga Arr**	**33.33**	**265**	IAmb	IAmb	00 02 14.7	
	comp=Z,47nm,0.8s						
WRAB	**Tennant Creek**	**33.34**	**265***c*	*i*P	**P**	**00 02 13.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,98nm,1.2s						
WRAB	**Tennant Creek**	**33.34**	**265**	P	**P**	**00 02 14.3**	**-0.7**
WRAB				IAmb	IAmb	00 02 14.7	
	comp=Z,38nm,0.8s						
WRA	**Warramunga Arr**	**33.34**	**265**	P	**P**	**00 02 13.7**	**-1.4**
	comp=Z,44nm,0.7s,baz=96,slow=8.5,SNR=278						
WRA				PcP	**PcP**	**00 04 52.5**	**-1.2**
	comp=Z,5.1nm,0.9s,baz=90,slow=3.1,SNR=4.2						
WRA				S	**S**	**00 07 22.9**	**-2.8**
	comp=Z,8.1nm,1.1s,baz=93,slow=15,SNR=8.2						
WRA				ScP	**ScP**	**00 08 24.8**	**-0.3**
	comp=Z,5.5nm,1.0s,baz=95,slow=3.6,SNR=6.4						
WRA				LR	LR	00 15 12.0	
	comp=Z,123nm,19.9s,baz=120,slow=35						
WRA	**Warramunga Arr**	**33.34**	**265**	P	**P**	**00 02 14.1**	**-1.0**
AS31	**Alice Springs**	**33.44**	**258**	P	**P**	**00 02 16.2**	**+0.3**
AS31				IAmb	IAmb	00 02 17.1	
	comp=Z,82nm,1.1s						
ASAR	**Alice Springs**	**33.44**	**258**	P	**P**	**00 02 15.6**	**-0.3**
	comp=Z,133nm,0.7s,baz=93,slow=8.8,SNR=381						
ASAR				PcP	**PcP**	**00 04 52.8**	**-1.3**
	comp=Z,8.0nm,0.8s,baz=103,slow=3.3,SNR=6.3						
ASAR				S	**S**	**00 07 24.2**	**-2.9**
	comp=Z,8.7nm,1.1s,baz=87,slow=17,SNR=9.6						
ASAR				ScP	**ScP**	**00 08 26.1**	**+0.6**
	comp=Z,7.3nm,0.8s,baz=99,slow=3.8,SNR=12						
ASAR				PKiKP	**PKiKP**	**00 12 18.0**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=132,slow=1.9,SNR=4.8						
ASAR				LR	LR	00 15 17.5	
	comp=Z,126nm,19.1s,baz=97,slow=35						
ASAR	**Alice Springs**	**33.44**	**258**	P	**P**	**00 02 15.7**	**-0.2**
JAY	**Jayapura**	**33.70**	**298**	P	**P**	**00 02 17.8**	**-0.4**
	comp=Z,25nm,0.8s,baz=175,slow=5.1,SNR=8.4						
KDU	**Kakadu**	**36.67**	**276**	P	**P**	**00 02 43.5**	**0.0**
	baz=37,SNR=12						
TBI	**Tubuai**	**37.67**	**102**	*e*LR	LR	00 13 20.9	
	comp=Z,255nm,36.8s						
MTN	**Manton Dam**	**37.87**	**276**	P	**P**	**00 02 53.6**	**-0.1**
	baz=38,SNR=39						
PPT2	**Papeete2**	**38.32**	**93**	*e*LR	LR	00 13 35.0	
	comp=Z,653nm,33.0s						
FORT	**Forrest**	**38.86**	**246**	P	**P**	**00 03 01.7**	**0.0**
	baz=39,SNR=13						
FORT	**Forrest**	**38.86**	**246**	P	**P**	**00 03 01.4**	**-0.3**
XMAS	**Kiritimati**	**39.12**	**59**	P	**P**	**00 03 03.8**	**-0.3**
FAKI	**Fak Fak**	**40.70**	**291**	P	**P**	**00 03 16.7**	**-0.5**
FAKI				IAmb	IAmb	00 03 18.2	
	comp=Z,50nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.76**	**266**	P	**P**	**00 03 26.1**	**+0.3**
	baz=42,SNR=136						
FITZ	**Fitzroy Crossi**	**41.76**	**266**	P	**P**	**00 03 26.2**	**+0.4**
	comp=Z,138nm,0.8s,baz=105,slow=6.8,SNR=280						
FITZ	**Fitzroy Crossi**	**41.76**	**266**	P	**P**	**00 03 26.7**	**+0.9**
JOHN	**Johnston Islan**	**42.26**	**30**	P	**P**	**00 03 29.8**	**+0.1**
KMBL	**Kambalda**	**44.18**	**246**	P	**P**	**00 03 44.8**	**-0.3**
	baz=44,SNR=38						
SOEI	**Soe**	**45.23**	**277**	P	**P**	**00 03 53.2**	**-0.6**
SOEI				IAmb	IAmb	00 03 56.1	
	comp=Z,61nm,1.1s						
PSA00	**Pilbara Seismi**	**46.56**	**259**	P	**P**	**00 04 03.0**	**-1.1**
PSA00	**Pilbara Seismi**	**46.56**	**259**	IAmb	IAmb	00 04 05.2	
	comp=Z,64nm,0.8s						
MEEK	**Meekatharra**	**47.13**	**252**	P	**P**	**00 04 08.2**	**-0.3**
	baz=47,SNR=95						
KLBR	**Kellerberrin**	**47.71**	**246**	P	**P**	**00 04 12.6**	**-0.2**
	baz=48,SNR=12						
NWAO	**Narrogin (SRO)**	**48.16**	**244**	P	**P**	**00 04 16.2**	**-0.1**
	baz=48,SNR=30						
NWAO	**Narrogin (SRO)**	**48.16**	**244**	P	**P**	**00 04 15.9**	**-0.3**
	comp=Z,73nm,0.7s,baz=98,slow=6.2,SNR=51						
NWAO	**Narrogin (SRO)**	**48.16**	**244**	P	**P**	**00 04 16.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**48.16**	**244**	P	**P**	**00 04 16.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**48.16**	**244**	IAmb	IAmb	00 04 17.0	
	comp=Z,62nm,0.8s						
BLDU	**Ballidu**	**48.62**	**247**	P	**P**	**00 04 19.5**	**-0.3**

	baz=49,SNR=14						
MUN	**Mundaring**	49.03	245	P	**P**	00 04 22.9	0.0
	baz=49,SNR=5.5						
MORW	**Morawa**	49.26	249	P	**P**	00 04 24.5	-0.2
	baz=49,SNR=18						
MORW	**Morawa**	49.26	249	P	**P**	00 04 24.8	+0.1
TAOE	**Nuku Hiva Isla**	49.50	84	P	**P**	00 04 27.4	+0.6
LUWI	**Luwuk**	49.97	287	P	**P**	00 04 31.0	+0.8
LUWI				IAmb	IAmb	00 04 50.5	
	comp=Z,71nm,1.1s						
KAPI	**Kappang**	51.09	281	P	**P**	00 04 39.1	+0.4
	comp=Z,30nm,0.7s,baz=129,slow=8.0,SNR=7.3						
KAPI	**Kappang**	51.09	281	P	**P**	00 04 39.0	+0.4
KAPI				IAmb	IAmb	00 04 40.9	
	comp=Z,38nm,0.8s						
GIRL	**Giralia**	51.55	257	P	**P**	00 04 43.4	+1.4
	baz=52,SNR=4.0						
GIRL	**Giralia**	51.55	257	P	**P**	00 04 43.0	+1.0
HON	**Honolulu**	52.17	39	P	**P**	00 04 46.3	-0.2
HON				pmax	pmax		
	comp=Z,158nm,1.0s						
HON	**Honolulu**	52.17	39	P	**P**	00 04 46.3	-0.2
TOLI2	**Tolitoli**	52.71	288	P	**P**	00 04 50.8	+0.2
TOLI2				IAmb	IAmb	00 04 52.0	
	comp=Z,22nm,0.9s						
VNDA	**Vanda**	57.07	182	P	**P**	00 05 21.1	+0.1
	comp=Z,3.5nm,0.8s,baz=356,slow=6.7,SNR=11						
SBA	**Scott Base**	57.28	181	P	**P**	00 05 24.9	+2.3
SBA				pmax	pmax		
	comp=Z,42nm,1.2s						
SBA	**Scott Base**	57.28	181	P	**P**	00 05 24.9	+2.3
SBA				IAmb	IAmb	00 05 36.6	
	comp=Z,42nm,1.1s						
UGM	**Wanagama**	58.65	273	P	**P**	00 05 33.6	+0.4
CASY	**Casey**	59.11	204	P	**P**	00 05 35.3	-0.1
JOW	**Kunigami**	62.09	318	P	**P**	00 05 55.3	-0.8
	comp=Z,39nm,0.8s,baz=131,slow=12,SNR=4.7						
JGF	**Kuroka**	63.88	331	IAmb	IAmb	00 06 10.1	
	comp=Z,20nm,0.8s						
JMN	**Monobe**	64.05	327	P	**P**	00 06 08.9	-0.1
JMN				IAmb	IAmb	00 06 12.8	
	comp=Z,32nm,0.9s						
MJAR	**Matsushiro Arr**	64.28	332	P	**P**	00 06 10.2	-0.2
	comp=Z,17nm,0.9s,baz=164,slow=6.5,SNR=32						
MJAR	**Matsushiro Arr**	64.28	332	P	**P**	00 06 10.8	+0.4
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJAR	**Matsushiro Arr**	64.28	332	P	**P**	00 06 10.8	+0.4
MAJO	**Matsushiro**	64.28	332	P	**P**	00 06 11.0	+0.6
MAJO				pmax	pmax		
	comp=Z,24nm,0.7s						
MAJO	**Matsushiro**	64.28	332	P	**P**	00 06 11.0	+0.6
MAJO				IAmb	IAmb	00 06 13.6	
	comp=Z,24nm,0.7s						
MAT	**Matsushiro**	64.28	332	P	**P**	00 06 10.6	+0.2
JWT	**Wachi**	64.54	329	IAmb	IAmb	00 06 15.1	
	comp=Z,33nm,0.7s						
TPUB	**Ta-pu**	64.92	310	P	**P**	00 06 14.4	-0.5
TPUB				IAmb	IAmb	00 06 30.1	
	comp=Z,27nm,1.1s						
JNU	**Nakatsue**	65.17	324	P	**P**	00 06 15.8	-0.5
	comp=Z,17nm,0.8s,baz=102,slow=7.6,SNR=7.3						
JNU	**Nakatsue**	65.17	324	P	**P**	00 06 16.2	-0.1
JNU				IAmb	IAmb	00 06 17.8	
	comp=Z,44nm,1.0s						
YHNB	**Yeheng**	65.25	311	IAmb	IAmb	00 06 18.7	
	comp=Z,29nm,0.9s						
JHS	**Saijyo**	65.44	327	P	**P**	00 06 18.6	+0.6
JHS				IAmb	IAmb	00 06 19.9	
	comp=Z,27nm,0.9s						
JSD	**Sado**	65.51	333	IAmb	IAmb	00 06 20.0	
	comp=Z,30nm,0.8s						
JTM	**Tenmabayashi**	66.74	336	P	**P**	00 06 26.6	+0.5
QSPA	**South Pole Qui**	69.43	180	P	**P**	00 06 43.1	+0.3
	comp=Z,60nm,1.0s,baz=17,slow=2.0,SNR=83						
QSPA	**South Pole Qui**	69.43	180	P	**P**	00 06 43.0	+0.2
QSPA				IAmb	IAmb	00 06 44.2	
	comp=Z,57nm,0.9s						
TJN	**Taejon**	69.52	324	⇓*e*P	**P**	00 06 44.8	+1.3
KSRS	**Korea Array**	70.02	325	P	**P**	00 06 46.6	+0.1
	comp=Z,4.4nm,0.9s,baz=134,slow=5.7,SNR=11						
COCO	**West Island**	70.13	264	*i* P	**P**	00 06 46.9	-0.9
YSS	**Yuzh-Sakhalins**	71.60	341	*e*P	**P**	00 06 57.4	+1.5
YSS				*e*		00 07 15.4	
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
ADK	**Adak**	73.15	9	P	**P**	00 07 05.9	+0.9
ADK				pmax	pmax		
	comp=Z,60nm,1.2s						
ADK	**Adak**	73.15	9	P	**P**	00 07 05.8	+0.9
ADK				IAmb	IAmb	00 07 06.5	
	comp=Z,60nm,1.1s						
USA0B	**Ussuriysk Arra**	73.27	333	*de*P	**P**	00 07 06.6	+0.8
USRK	**Ussuriysk Ar.**	73.27	333	P	**P**	00 07 06.7	+0.9
	comp=Z,6.4nm,0.7s,baz=134,slow=4.1,SNR=17						
USRK				LR	LR	00 41 30.3	
	comp=Z,31nm,18.1s,baz=123,slow=37						
USRK	**Ussuriysk Ar.**	73.27	333	P	**P**	00 07 06.6	+0.8
PSI	**Prapat**	73.29	280	LR	LR	00 42 46.1	
	comp=Z,203nm,18.1s,baz=275,slow=38						
PEA0B	**Petropavlovsk-**	74.19	352	P	**P**	00 07 11.8	+0.7
PEA0B				pmax	pmax		
	comp=Z,20nm,1.1s						
PEA0B	**Petropavlovsk-**	74.19	352	P	**P**	00 07 11.8	+0.7
PETK	**Petropavlovsk-**	74.19	352	P	**P**	00 07 11.7	+0.6
	comp=Z,6.4nm,0.8s,baz=116,slow=6.8,SNR=6.2						
PETK				LR	LR	00 36 58.7	
	comp=Z,57nm,18.7s,baz=151,slow=33						
PETK	**Petropavlovsk-**	74.19	352	P	**P**	00 07 10.7	-0.4
DL2	**Dalian**	74.51	323	P	**P**	00 07 13.8	+0.6
DL2				pP	**pP**	00 07 47.0	-0.6
DL2				S	**S**	00 16 39.3	+2.4
DL2				pmax	pmax		
	comp=Z,61nm,1.0s						
MDJ	**Mudanjiang**	74.65	331	P	**P**	00 07 13.8	-0.1
MDJ				pP	pP	00 07 49.8	+1.4
MDJ				S	**S**	00 16 42.0	+3.8
MDJ				pmax	pmax		
	comp=Z,21nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.8s						
TIA	**Tai'an**	75.41	318	P	**P**	00 07 19.0	+0.5
TIA				pmax	pmax		
	comp=Z,28nm,1.0s						
CN2	**Changchun**	75.98	328	*e*P	**P**	00 07 22.0	+0.5
CN2				pP	pP	00 07 55.0	-1.1
CN2				sP	sP	00 08 07.5	-3.5
CN2				S	**S**	00 16 54.5	+1.6
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,120nm,6.0s						
UNV	**Unalaska Valle**	76.91	14	P	**P**	00 07 26.6	+0.1
UNV				IAmb	IAmb	00 07 27.7	
	comp=Z,29nm,0.9s						
GYA	**Guiyang**	77.14	305	⇑P	**P**	00 07 29.5	+0.9
GYA				pmax	pmax		
	comp=Z,13nm,1.3s						
MAW	**Mawson**	77.39	202	P	**P**	00 07 29.8	+0.7
	comp=Z,18nm,1.0s,baz=128,slow=9.2,SNR=6.7						
MAW	**Mawson**	77.39	202	IAmb	IAmb	00 07 33.0	
	comp=Z,5.7nm,1.1s						
KLR	**Kul'dur**	77.40	335	P	**P**	00 07 30.3	+0.9
	comp=Z,7.4nm,0.7s,baz=130,slow=2.3,SNR=32						
KLR	**Kul'dur**	77.40	335	*d i*P	**P**	00 07 30.1	+0.7
BJI	**Beijing**	78.42	321	P	**P**	00 07 36.0	+0.8
BJI				pP	**pP**	00 08 12.5	+2.6
BJI				S	**S**	00 17 23.0	+3.5
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI				pmax	pmax		
	comp=Z,91nm,3.9s						
BJI				LR	LR		
	comp=Z,160nm,5.9s						
BJI				LR	LR		
	comp=Z,130nm,9.0s						
BJI				LR	LR		
	comp=Z,75nm,18.9s						
XAN	**Xi'an**	79.52	312	P	**P**	00 07 42.0	+0.5
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
CNBA	**Chernabura Isl**	79.55	17	P	**P**	00 07 40.6	-0.4
CNBA				IAmb	IAmb	00 07 43.6	
	comp=Z,42nm,1.1s						
KMI	**Kunming**	79.55	302	⇑*i*P	**P**	00 07 44.0	+2.0
KMI				pP	pP	00 08 16.5	-0.3
KMI				sP	sP	00 08 26.8	-4.8
KMI				PP	**PP**	00 10 48.0	+3.2
KMI				S	**S**	00 17 33.8	+1.2
KMI				sS	sS	00 18 27.8	-2.6
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI				pmax	pmax		
	comp=Z,75nm,4.4s						
KMI				LR	LR		
	comp=Z,100nm,11.4s						
KMI				LR	LR		
	comp=Z,120nm,13.5s						
KMI				LR	LR		
	comp=Z,120nm,17.3s						
KMI	**Kunming**	79.55	302	P	**P**	00 07 43.6	+1.5
KMI				pmax	pmax		
	comp=Z,43nm,1.2s						
KMI	**Kunming**	79.55	302	P	**P**	00 07 43.6	+1.5
KMI				IAmb	IAmb	00 07 44.8	
	comp=Z,43nm,1.2s						
CMAR	**Chiang Mai Arr**	79.66	294	P	**P**	00 07 44.1	+1.6
	comp=Z,15nm,0.9s,baz=132,slow=4.1,SNR=59						
CMAR	**Chiang Mai Arr**	79.66	294	*ce*P	**P**	00 07 44.4	+1.9
CMAR				pmax	pmax		
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	79.66	294	P	**P**	00 07 43.6	+1.2
SDPT	**Sand Point**	79.77	17	P	**P**	00 07 42.6	+0.4
SDPT				IAmb	IAmb	00 07 43.4	
	comp=Z,42nm,0.8s						
CHTO	**Chiang Mai**	79.81	295	P	**P**	00 07 44.3	+1.0
CHTO				pmax	pmax		
	comp=Z,21nm,0.9s						
CHTO	**Chiang Mai**	79.81	295	P	**P**	00 07 44.3	+1.0
BELA	**Belgrano 2**	80.66	175	P	**P**	00 07 46.5	-0.4
CHGN	**Chignik**	81.17	17	P	**P**	00 07 50.2	+0.6
CHGN				IAmb	IAmb	00 07 53.7	
	comp=Z,33nm,1.0s						
CHIR	**Chirikof Islan**	81.57	19	P	**P**	00 07 54.0	+2.2
CD2	**Chengdu**	81.59	307	P	**P**	00 07 53.5	+0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
BTO	**Baotou**	82.50	318	*e*P	P	00 07 48.0	-9.2
SII	**Sitkinak Islan**	82.62	19	P	**P**	00 07 56.7	-0.6
HIA	**Hailar**	82.64	330	*de*P	**P**	00 07 57.7	+0.2
HIA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZEA	**Zeya**	82.69	336	*e*P	**P**	00 07 59.1	+1.4
ZEA				*e*		00 08 47.0	
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
OHAK	**Old Harbor**	83.45	19	P	**P**	00 08 01.7	+0.2
OHAK				IAmb	IAmb	00 08 04.7	
	comp=Z,53nm,0.9s						
SYO	**Syowa Base**	83.78	196	⇓*e*P	**P**	00 08 03.0	-0.2
SYO	**Syowa Base**	83.78	196	⇑*e*PcP	**PcP**	00 08 06.4	-0.6
KDAK	**Kodiak Island**	84.13	19	P	**P**	00 08 06.0	+1.1
	comp=Z,42nm,1.0s,baz=247,slow=3.0,SNR=10						
KDAK	**Kodiak Island**	84.13	19	*de*P	**P**	00 08 06.8	+1.9
KDAK				pmax	pmax		
	comp=Z,79nm,1.0s						
KDAK	**Kodiak Island**	84.13	19	P	**P**	00 08 06.1	+1.2
KDAK				IAmb	IAmb	00 08 08.3	
	comp=Z,47nm,1.1s						
LZH	**Lanzhou**	84.14	312	⇑P	**P**	00 08 07.8	+2.1
LZH				pP	pP	00 08 41.3	+0.5
LZH				sP	sP	00 08 53.8	-1.8
LZH				PP	**PP**	00 11 25.5	+3.3
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
SEY	**Seymchan**	84.43	352	P	**P**	00 08 06.4	0.0
	comp=Z,3.9nm,0.8s,baz=146,slow=6.9,SNR=7.2						
SEY	**Seymchan**	84.43	352	⇑*e*P	**P**	00 08 06.7	+0.4
GAMB	**Gambell**	85.35	8	IAmb	IAmb	00 08 13.1	
	comp=Z,46nm,1.1s						
PMSA	**Palmer Station**	85.39	160	P	**P**	00 08 11.4	+0.1
	comp=Z,56nm,0.9s,baz=155,slow=2.8,SNR=4.5						
PMSA	**Palmer Station**	85.39	160	P	**P**	00 08 10.9	-0.4
MCCM	**Marconi Confer**	85.94	47	P	**P**	00 08 11.8	-2.7
MCCM				IAmb	IAmb	00 08 17.1	
	comp=Z,48nm,0.9s						
SNCC	**San Nicolas Is**	85.98	52	P	**P**	00 08 16.6	+1.9
	baz=242						
SNCC	**San Nicolas Is**	85.98	52	P	**P**	00 08 16.1	+1.3
SNCC				IAmb	IAmb	00 08 17.6	
	comp=Z,48nm,0.8s						
SVW2	**Sparrevohn**	86.06	16	P	**P**	00 08 15.8	+1.3
HOPS	**Hopland Field**	86.24	46	P	**P**	00 08 16.9	+1.0
HOPS				IAmb	IAmb	00 08 18.9	
	comp=Z,40nm,1.0s						
SCZ2	**Santa Cruz Isl**	86.24	52	P	**P**	00 08 17.6	+1.5
	baz=242						
KCPM	**Cahto Peak**	86.25	45	P	**P**	00 08 17.4	+1.3
SAO	**San Andreas Ge**	86.26	49	IAmb	IAmb	00 08 18.9	
	comp=Z,38nm,0.9s						
BRLK	**Bradley Lake**	86.26	19	P	**P**	00 08 17.4	+1.8
BRLK				IAmb	IAmb	00 08 21.0	
	comp=Z,21nm,0.9s						
RSO	**Redoubt South**	86.29	18	P	**P**	00 08 17.1	+1.2
GDXM	**Geysers**	86.33	46	P	**P**	00 08 18.1	+1.6
GDXM				IAmb	IAmb	00 08 20.5	
	comp=Z,30nm,1.1s						
SBC	**Santa Barbara**	86.39	51	P	**P**	00 08 18.5	+1.7
	baz=242						
SAIH	**SAIHA**	86.41	295	⇑*e*P	**P**	00 08 15.7	-1.6
KMRM	**Mail Ridge**	86.44	45	P	**P**	00 08 18.4	+1.4
PMPB	**Monarch Peak**	86.45	49	P	**P**	00 08 17.9	+0.9
PMPB				IAmb	IAmb	00 08 20.2	
	comp=Z,51nm,1.0s						
PKM	**Mcpherson Peak**	86.53	51	P	**P**	00 08 19.4	+1.7
	baz=242						
JCC	**Jacoby Creek,**	86.53	44	P	**P**	00 08 18.3	+1.1
JCC				IAmb	IAmb	00 08 21.2	
	comp=Z,64nm,1.1s						
SCI2	**San Clemente I**	86.58	53	P	**P**	00 08 19.0	+1.3
	baz=243,SNR=5.1						
SMMC	**Simmler**	86.60	50	P	**P**	00 08 19.7	+1.9
	baz=242						
PAGB	**Antelope Grade**	86.61	50	P	**P**	00 08 18.9	+1.1
PAGB				IAmb	IAmb	00 08 20.3	
	comp=Z,22nm,0.9s						
KHMM	**Horse Mountain**	86.76	44	P	**P**	00 08 20.2	+1.7
KRMB	**Red Mountain**	86.97	43	P	**P**	00 08 21.4	+1.9
KRMB				IAmb	IAmb	00 08 22.3	
	comp=Z,26nm,0.9s						
CAPN	**Captain Cook N**	86.99	18	P	**P**	00 08 21.1	+2.1
	baz=216						
O02D	**Mt. Diablo Mer**	87.02	45	P	**P**	00 08 22.0	+2.2
	baz=240,SNR=52						
ANM	**Nome**	87.05	10	P	**P**	00 08 19.4	+0.2
ANM				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ANM	**Nome**	87.05	10	P	**P**	00 08 19.4	+0.2
FMP	**Fort Macarthur**	87.10	52	P	**P**	00 08 21.7	+1.5
	baz=243						
OSI	**Osito Audit: C**	87.20	51	P	**P**	00 08 22.2	+1.5
	baz=243						
OSI	**Osito Audit: C**	87.20	51	P	**P**	00 08 21.7	+1.0
OSI				IAmb	IAmb	00 08 23.6	
	comp=Z,49nm,1.1s						
DECC	**Green Verdugo**	87.32	52	P	**P**	00 08 22.3	+1.0
	baz=243						
ARVC	**Arvin**	87.35	51	P	**P**	00 08 22.9	+1.5
	baz=243,SNR=6.9						
WDC	**Whiskeytown Da**	87.39	45	IAmb	IAmb	00 08 23.8	
	comp=Z,35nm,1.1s						
PASC	**Pasadena Art C**	87.39	52	P	**P**	00 08 22.1	+0.5
PASC				IAmb	IAmb	00 08 23.8	
	comp=Z,26nm,0.8s						
N02D	**Trinity Center**	87.48	44	P	**P**	00 08 24.1	+2.1
	baz=240,SNR=27						
L02E	**Cave Junction**	87.49	43	P	**P**	00 08 23.8	+1.9
	baz=239						
VES	**Vestal, Richgr**	87.50	50	P	**P**	00 08 23.0	+1.0
	baz=242,SNR=13						
VOG	**Valley Oaks Go**	87.51	50	P	**P**	00 08 23.2	+1.1
	baz=242						
MWC	**Mount Wilson**	87.51	52	P	**P**	00 08 23.2	+0.8
MWC				pmax	pmax		
	comp=Z,22nm,0.8s						
MWC	**Mount Wilson**	87.51	52	P	**P**	00 08 23.2	+0.8
MWC				IAmb	IAmb	00 08 24.2	
	comp=Z,22nm,0.8s						
TTA	**Tatalina**	87.51	15	P	**P**	00 08 23.0	+1.4
TTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TTA	**Tatalina**	87.51	15	P	**P**	00 08 23.0	+1.4
CCX	**Cicese**	87.51	55	P	**P**	00 08 22.4	+0.2
NVL	**N'lazarevskaya**	87.56	187	⇑*i*P	**P**	00 08 20.5	-1.3
NVL				*e**PP	**pP**	00 08 52.7	-4.1
NVL				*e*S	**S**	00 18 43.3	-7.7
NVL				pmax	pmax		
	comp=Z,31nm,0.8s						
ORV	**Oroville**	87.58	46	IAmb	IAmb	00 08 24.4	
	comp=Z,29nm,1.1s						
M02C	**Callahan**	87.59	44	P	**P**	00 08 24.6	+2.1
	baz=240,SNR=30						
CMB	**Columbia Colle**	87.61	48	IAmb	IAmb	00 08 25.1	
	comp=Z,35nm,0.9s						
109C	**Camp Elliot, M**	87.62	54	P	**P**	00 08 23.9	+1.2
	baz=244,SNR=5.3						
109C	**Camp Elliot, M**	87.62	54	P	**P**	00 08 23.8	+1.1
109C				IAmb	IAmb	00 08 25.2	
	comp=Z,39nm,1.0s						
RC01	**Rabbit Creek A**	87.67	18	P	**P**	00 08 24.2	+2.0
	baz=217						
SUA	**Susitna One**	87.67	18	P	**P**	00 08 23.8	+1.4
SUA				IAmb	IAmb	00 08 26.6	
	comp=Z,14nm,1.0s						
CBX	**Cerro Bola**	87.70	54	P	**P**	00 08 23.8	+0.5
K02D	**Willamette Mer**	87.73	43	P	**P**	00 08 24.6	+1.5
	baz=239,SNR=7.9						
O03E	**Paynes Creek**	87.74	45	P	**P**	00 08 24.6	+1.4
	baz=240,SNR=39						
J01E	**Myrtle Point**	87.80	42	P	**P**	00 08 24.8	+1.5
	baz=239,SNR=6.6						
SNAA	**Sanae**	87.80	182	P	**P**	00 08 22.6	-0.4
SNAA	**Sanae**	87.80	182	*d i*P	**P**	00 08 22.1	-1.0
SNAA				*i* *PP	**pP**	00 08 56.1	-1.9
SNAA				pmax	pmax		
	comp=Z,22nm,1.0s						
SNAA	**Sanae**	87.80	182	P	**P**	00 08 22.1	-1.0
SNAA				IAmb	IAmb	00 08 23.5	
	comp=Z,21nm,0.7s						
BFSC	**Mount Baldy Ra**	87.81	52	P	**P**	00 08 24.9	+1.1
	baz=243,SNR=12						
EDW2	**Edwards Air Fo**	87.85	52	P	**P**	00 08 25.3	+1.5
	baz=243,SNR=27						
YBH	**Yreka Blue Hor**	87.85	44	P	**P**	00 08 25.5	+1.8
	comp=Z,17nm,0.9s,baz=187,slow=2.8,SNR=48						
YBH	**Yreka Blue Hor**	87.85	44	IAmb	IAmb	00 08 26.2	
	comp=Z,22nm,0.9s						
ISA	**Isabella, Lake**	87.86	51	P	**P**	00 08 25.3	+1.4
	baz=243,SNR=39						
BAR	**Barrett**	87.86	54	P	**P**	00 08 25.3	+1.4
BAR				IAmb	IAmb	00 08 26.3	
	comp=Z,24nm,1.1s						
TKX	**Tecate**	87.86	54	P	**P**	00 08 23.2	-0.7
MURC	**Murrieta**	87.87	53	P	**P**	00 08 25.0	+1.1
	baz=244,SNR=13						
SPX	**San Pedro Mart**	88.07	56	P	**P**	00 08 26.0	+0.7
ESJX	**Sierra Juarez**	88.12	55	P	**P**	00 08 26.4	+1.0
ESJX				IAmb	IAmb	00 08 26.7	
	comp=Z,13nm,1.0s						
HUMO	**Hull Mountain**	88.13	43	IAmb	IAmb	00 08 28.2	
	comp=Z,32nm,0.9s						
MONP2	**Monument Peak**	88.14	54	P	**P**	00 08 26.9	+1.5
	baz=244,SNR=34						
IKP	**In-Ko-Pah, Jac**	88.27	54	P	**P**	00 08 27.5	+1.6
	baz=244,SNR=18						
RMX	**La Rumorosa**	88.28	54	P	**P**	00 08 27.2	+1.2
RMX				IAmb	IAmb	00 08 28.9	
	comp=Z,38nm,1.0s						
I02D	**Swisshome**	88.34	41	P	**P**	00 08 27.5	+1.7
	baz=239						
LRMC	**Laurel Mtn Rad**	88.35	51	P	**P**	00 08 27.5	+1.2
	baz=243,SNR=7.1						
L04D	**Klamath Falls**	88.36	43	P	**P**	00 08 27.5	+1.3
	baz=240,SNR=15						
ULN	**Ulaanbaatar**	88.36	323	*d i*P	**P**	00 08 26.3	+0.2
ULN				*i* *PP	**pP**	00 09 00.3	-1.2
ULN				pmax	pmax		
	comp=Z,28nm,1.2s						
ULN	**Ulaanbaatar**	88.36	323	P	**P**	00 08 26.5	+0.4
ULN				IAmb	IAmb	00 08 28.0	
	comp=Z,22nm,1.1s						
VNA3	**Neumayer Olymp**	88.37	180	P	**P**	00 08 25.3	-0.4
BBRC	**Big Bear Solar**	88.37	52	P	**P**	00 08 27.9	+1.4
	baz=244						
OMMB	**Old Mammoth Mi**	88.38	49	P	**P**	00 08 27.7	+1.1
OMMB				IAmb	IAmb	00 08 28.7	
	comp=Z,21nm,1.2s						
YAK	**Yakutsk**	88.39	342	*de*P	**P**	00 08 25.3	-0.3
YAK				pmax	pmax		
	comp=Z,23nm,0.7s						
YAK	**Yakutsk**	88.39	342	P	**P**	00 08 25.8	+0.2
YAK				IAmb	IAmb	00 08 26.0	
	comp=Z,23nm,0.8s						
PFO	**Pinyon Flats O**	88.43	53	P	**P**	00 08 28.2	+1.5
	comp=Z,20nm,1.1s,baz=262,slow=4.2,SNR=27						
PFO	**Pinyon Flats O**	88.43	53	*d i*P	**P**	00 08 27.8	+1.1
PFO				pmax	pmax		
	comp=Z,41nm,1.2s						
PFO	**Pinyon Flats O**	88.43	53	P	**P**	00 08 28.0	+1.3
	baz=244,SNR=20						
PFO	**Pinyon Flats O**	88.43	53	P	**P**	00 08 28.0	+1.3
PFO				IAmb	IAmb	00 08 28.7	
	comp=Z,22nm,1.1s						
TPFO	**Pinon Flats**	88.43	53	P	**P**	00 08 28.0	+1.3
	baz=244,SNR=24						
I03D	**Drain, OR**	88.44	42	P	**P**	00 08 28.0	+1.7
	baz=239,SNR=9.6						
M04C	**Macdoel**	88.44	44	P	**P**	00 08 28.1	+1.5
	baz=240,SNR=13						
GHO	**Glory Hole Cre**	88.45	18	P	**P**	00 08 27.1	+1.0
BILL	**Bilibino**	88.45	359	*c i*P	**P**	00 08 25.8	0.0
BILL				*e**PP	**pP**	00 08 59.6	-2.1
BILL				*i* *SP	**sP**	00 09 20.1	+3.6
BILL				*e*S	**S**	00 19 06.2	+7.0
BILL				SSS	SSS	00 28 24.0	
BILL				pmax	pmax		
	comp=Z,27nm,1.3s						
BILL	**Bilibino**	88.45	359	P	**P**	00 08 25.9	0.0
BILL				IAmb	IAmb	00 08 27.9	
	comp=Z,18nm,1.1s						
CWC	**Cottonwood Cre**	88.50	50	P	**P**	00 08 28.4	+1.4
	baz=243						
BEKR	**Beckworth**	88.50	46	IAmb	IAmb	00 08 28.9	
	comp=Z,23nm,0.9s						
MLAC	**Mammoth, Mammo**	88.50	49	P	**P**	00 08 28.9	+1.8
	baz=242						
GTA	**Gaotai**	88.55	313	⇓P	**P**	00 08 27.8	+0.7
GTA				pP	pP	00 09 00.8	-1.8
GTA				sP	sP	00 09 17.0	-0.2
GTA	**Gaotai**	88.55	313	SS	SS	00 24 55.5	-0.6
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA				pmax	pmax		
	comp=Z,71nm,7.2s						
GTA				LR	LR		
	comp=N,90nm,19.7s						
GTA				LR	LR		
	comp=E,110nm,18.7s						
GTA				LR	LR		
	comp=Z,140nm,23.0s						
SFX	**San Felipe**	88.55	56	P	**P**	00 08 26.2	-0.9
SFX				IAmb	IAmb	00 08 29.6	
	comp=Z,21nm,1.1s						
RRX	**Edison Barstow**	88.58	52	P	**P**	00 08 28.6	+1.3
	baz=244						
SWSC	**Sam W. Stewart**	88.64	54	P	**P**	00 08 29.0	+1.5
	baz=244,SNR=27						
TIN	**Tinemaha, Big**	88.67	49	P	**P**	00 08 29.3	+1.6
	baz=243,SNR=16						
VNA2	**Neumayer--Watz**	88.67	181	P	**P**	00 08 26.9	-0.2
	baz=175,slow=4.3						
VCNR	**Virginia City**	88.71	47	P	**P**	00 08 28.6	+0.6
VCNR				IAmb	IAmb	00 08 33.9	
	comp=Z,14nm,0.8s						
SONM	**Songino Array**	88.72	323	P	**P**	00 08 28.2	+0.5
	comp=Z,10.0nm,0.9s,baz=141,slow=5.4,SNR=71						
SONM	**Songino Array**	88.72	323	P	**P**	00 08 28.6	+0.9
SONM				pmax	pmax		
	comp=Z,16nm,1.0s						
SONM	**Songino Array**	88.72	323	P	**P**	00 08 28.6	+0.9
MPMC	**Manual Prospec**	88.75	51	P	**P**	00 08 29.7	+1.5
	baz=243,SNR=45						
GSC	**Goldstone, Bar**	88.91	52	P	**P**	00 08 29.2	+0.3
GSC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GSC	**Goldstone, Bar**	88.91	52	P	**P**	00 08 30.4	+1.5

	baz=244,SNR=14						
GSC	Goldstone, Bar	88.91	52	P	P	00 08 29.1	+0.3
K04D	Chiloquin, OR	88.91	43	P	P	00 08 30.1	+1.4
	baz=240						
COR	Corvallis	88.92	41	P	P	00 08 28.8	+0.3
COR				pmax	pmax		
	comp=Z,44nm,1.1s						
COR	Corvallis	88.92	41	P	P	00 08 28.8	+0.3
COR				IAmb	IAmb	00 08 31.6	
	comp=Z,44nm,1.1s						
BELC	Belle Mtn. Jos	88.94	53	P	P	00 08 30.7	+1.6
	baz=244,SNR=61						
VNA1	Neumayer--Stat	88.95	181	P	P	00 08 28.2	-0.2
J04D	Umpqua Nationa	88.99	43	P	P	00 08 31.0	+1.8
	baz=240,SNR=13						
HEC	Hector,Ludlow	89.05	52	P	P	00 08 30.8	+1.3
	baz=244,SNR=47						
I04A	Tendick Farm,	89.08	42	P	P	00 08 30.6	+1.2
	baz=240						
SRIG	Santa Rosalia	89.10	60	P	P	00 08 30.2	+0.4
RYN	Ryan	89.18	48	IAmb	IAmb	00 08 32.7	
	comp=Z,37nm,0.9s						
BC3	Big Chuckawall	89.20	54	P	P	00 08 32.0	+1.6
	baz=244,SNR=20						
H04D	Lebanon	89.24	41	P	P	00 08 31.7	+1.7
	baz=240						
NVAR	Mina Array Bea	89.24	48	P	P	00 08 32.0	+1.5
	comp=Z,25nm,0.7s,baz=226,slow=8.4,SNR=231						
NVAR				LR	LR	00 40 05.9	
	comp=Z,123nm,20.7s,baz=226,slow=30						
NVAR	Mina Array Bea	89.24	48	P	P	00 08 32.3	+1.8
GRAC	Grapevine Rang	89.26	50	P	P	00 08 32.2	+1.8
	baz=243,SNR=54						
G03D	McMinnville, O	89.26	41	P	P	00 08 32.0	+1.9
	baz=239,SNR=5.5						
FURC	Furnace Creek,	89.39	51	P	P	00 08 32.4	+1.5
	baz=244,SNR=14						
GLA	Glamis	89.42	54	P	P	00 08 32.8	+1.5
GLA				pmax	pmax		
	comp=Z,82nm,1.0s						
GLA	Glamis	89.42	54	P	P	00 08 33.4	+2.1
	baz=245,SNR=15						
GLA	Glamis	89.42	54	P	P	00 08 32.8	+1.5
MOD	Modoc Plateau	89.50	44	IAmb	IAmb	00 08 34.2	
	comp=Z,35nm,1.0s						
K05A	Summer Lake	89.52	44	P	P	00 08 32.6	+1.0
M24K	Tolsona, Glenn	89.53	19	P	P	00 08 33.7	+2.6
	baz=220						
GMRC	Granite Mounta	89.53	52	P	P	00 08 33.3	+1.5
	baz=244,SNR=21						
SHOC	Shoshone, Teco	89.56	51	P	P	00 08 33.1	+1.2
	baz=244,SNR=18						
J05D	Fort Rock, OR	89.57	43	P	P	00 08 33.4	+1.6
	baz=241,SNR=48						
SLBS	Sierra La Lagu	89.59	65	P	P	00 08 34.3	+2.0
N25K	Chitina, Valde	89.64	20	P	P	00 08 33.1	+1.4
	baz=222						
N25K	Chitina, Valde	89.64	20	P	P	00 08 31.6	-0.1
IRM	Iron Mountain	89.65	53	P	P	00 08 34.0	+1.7
	baz=245,SNR=29						
ISLE	Juniper Island	89.65	21	P	P	00 08 31.8	0.0
ISLE				IAmb	IAmb	00 08 33.4	
	comp=Z,31nm,1.2s						
GO10	Punta Arenas	89.66	148	P	P	00 08 32.8	+0.7
H04A	Detroit Lake	89.66	41	IAmb	IAmb	00 08 34.2	
	comp=Z,32nm,0.8s						
E03A	Lebam	89.76	39	P	P	00 08 33.5	+1.1
GLB	Gilahina Butte	89.78	20	P	P	00 08 33.1	+0.9
TPH	Tonopah	89.84	49	P	P	00 08 34.2	+0.9
TPH				pmax	pmax		
	comp=Z,102nm,0.8s						
TPH	Tonopah	89.84	49	P	P	00 08 34.2	+0.9
PIX	Pinacate	89.85	56	IAmb	IAmb	00 08 34.7	
	comp=Z,27nm,1.0s						
F04D	Rainier, OR	89.86	40	P	P	00 08 34.8	+1.9
	baz=240						
I05D	Terrebonne, OR	90.02	42	P	P	00 08 35.1	+1.3
	baz=241,SNR=9.3						
NLWA	Neilton Lookou	90.02	38	IAmb	IAmb	00 08 36.7	
	comp=Z,34nm,1.1s						
TPNV	Topopah Spring	90.04	50	P	P	00 08 35.6	+1.3
	baz=244,SNR=45						
BARN	Barnard Glacie	90.21	21	IAmb	IAmb	00 08 36.4	
	comp=Z,14nm,1.0s						
CTGM	Chitina Glacie	90.26	22	P	P	00 08 34.6	-0.1
NEE2	Needles Airpor	90.30	53	P	P	00 08 36.9	+1.6
	baz=245						
E04D	Cinebar	90.36	40	P	P	00 08 36.9	+1.7
	baz=240,SNR=8.5						
PDMCI	Parker Dam,Lak	90.46	53	P	P	00 08 37.6	+1.6
	baz=245,SNR=43						
G05D	Wamic, OR	90.47	41	P	P	00 08 37.3	+1.5
	baz=241,SNR=6.5						
214A	Organ Pipe Nat	90.52	56	P	P	00 08 38.1	+1.7
	baz=246						
214A	Organ Pipe Nat	90.52	56	P	P	00 08 38.5	+2.1
D03D	Eldon	90.55	39	P	P	00 08 37.7	+1.7
	baz=240,SNR=8.3						
D04E	Lakebay	90.55	39	P	P	00 08 38.5	+2.5
	baz=240						
IMAR	Indian Mountai	90.62	14	P	P	00 08 35.9	0.0
SHPR	Sheep Range	90.64	51	P	P	00 08 37.8	+0.8
SHPR				IAmb	IAmb	00 08 39.3	
	comp=Z,19nm,1.1s						
RDOG	Red Dog Mine	90.65	10	P	P	00 08 36.2	+0.1
F05D	White Salmon	90.70	41	P	P	00 08 38.4	+1.5
	baz=241						
LSA	Lhasa	90.81	301	P	P	00 08 38.9	+0.6
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LSA	Lhasa	90.81	301	P	P	00 08 38.9	+0.6
WVOR	Wild Horse Val	90.85	45	IAmb	IAmb	00 08 39.9	
	comp=Z,19nm,0.9s						
BOD	Bodaibo	90.86	334	*e*P	P	00 08 36.5	-0.8
BOD				pmax	pmax		
	comp=Z,18nm,1.5s						
MENT	Mentasta	90.91	19	P	P	00 08 38.3	+0.8
W13A	Hualapai Mount	90.99	53	IAmb	IAmb	00 08 41.5	
	comp=Z,27nm,0.9s						
D05A	Enumclaw	91.02	39	P	P	00 08 39.7	+1.4
D05A				IAmb	IAmb	00 08 45.5	
	comp=Z,40nm,1.2s						
I07A	Izee	91.05	43	IAmb	IAmb	00 08 41.3	
	comp=Z,22nm,0.9s						
BESE	Bessie Mountai	91.06	25	P	P	00 08 38.6	+0.3
BESE				IAmb	IAmb	00 08 40.5	
	comp=Z,34nm,1.0s						
HDA	Harding Lake	91.07	17	P	P	00 08 38.2	+0.1
R11A	Troy Canyon, C	91.12	49	P	P	00 08 40.4	+1.1
	baz=244,SNR=24						
R11A	Troy Canyon, C	91.12	49	IAmb	IAmb	00 08 41.5	
	comp=Z,11nm,0.8s						
RIDG	Independent Ri	91.17	18	P	P	00 08 38.5	-0.2
RIDG				IAmb	IAmb	00 08 40.4	
	comp=Z,15nm,1.0s						
A04D	Lummi Island	91.37	38	P	P	00 08 41.2	+1.4
	baz=240						
ILAR	Eielson Array	91.37	17	P	P	00 08 38.5	-1.0
	comp=Z,2.6nm,0.8s,baz=230,slow=5.9,SNR=5.2						
ILAR				PKiKP	PKiKP	00 13 29.8	-1.0
	comp=Z,0.4nm,0.6s,baz=274,slow=2.3,SNR=4.6						
ILAR				LR	LR	00 46 42.6	
	comp=Z,42nm,19.4s,baz=234,slow=33						
B05A	Bryant	91.49	38	P	P	00 08 41.8	+1.4
	baz=240,SNR=7.8						
HYT	Haines Junctio	91.52	23	P	P	00 08 38.8	-1.7
HYT				IAmb	IAmb	00 08 41.7	
	comp=Z,13nm,0.9s						
BCAR	Beaver Creek A	91.61	20	P	P	00 08 40.6	-0.1
F07A	Phinny Hill Vi	91.64	41	P	P	00 08 40.7	-0.5
F07A				IAmb	IAmb	00 08 43.6	
	comp=Z,11nm,0.8s						
ZAK	Zakamensk	91.80	324	*e*P	P	00 08 40.7	-1.3
ZAK				*e*		00 09 15.5	
ZAK				pmax	pmax		
	comp=Z,16nm,1.3s						
G08A	Pilot Rock	91.96	42	IAmb	IAmb	00 08 45.1	
	comp=Z,17nm,0.8s						
E07A	Sunnyside	92.00	41	IAmb	IAmb	00 08 47.0	
	comp=Z,9.3nm,0.9s						
TUC	Tucson	92.23	56	P	P	00 08 46.2	+1.8
TUC				pmax	pmax		
	comp=Z,25nm,1.0s						
TUC	Tucson	92.23	56	P	P	00 08 46.2	+1.8
	baz=247						
TUC	Tucson	92.23	56	P	P	00 08 46.2	+1.8
TUC				IAmb	IAmb	00 08 47.4	
	comp=Z,25nm,1.0s						
TLY	Talaya	92.27	325	P	P	00 08 44.0	0.0
	comp=Z,14nm,0.8s,baz=228,slow=4.2,SNR=12						
TLY				LR	LR	00 50 24.0	
	comp=Z,72nm,18.7s,baz=264,slow=36						
TLY	Talaya	92.27	325	*e*P	P	00 08 44.5	+0.5
TLY				pmax	pmax		
	comp=Z,40nm,0.9s						
TLY	Talaya	92.27	325	P	P	00 08 43.8	-0.2
TLY				IAmb	IAmb	00 08 46.4	
	comp=Z,15nm,0.8s						
CCUT	Cedar City	92.38	51	P	P	00 08 45.9	+0.7
WHY	Whitehorse	92.39	24	IAmb	IAmb	00 08 47.3	
	comp=Z,9.0nm,0.8s						
ELK	Elko	92.39	47	P	P	00 08 45.6	+0.5
ELK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ELK	Elko	92.39	47	P	P	00 08 45.6	+0.5
ELK				IAmb	IAmb	00 08 47.4	
	comp=Z,8.8nm,0.9s						
E08A	Dider Farm, El	92.45	41	P	P	00 08 45.7	+0.8
E08A				IAmb	IAmb	00 08 46.8	
	comp=Z,14nm,1.0s						
COLD	Coldfoot	92.46	14	P	P	00 08 47.2	+2.7
	baz=217						
TAPN	Taplejung	92.71	298	*e*P	P	00 08 47.2	+0.2
	comp=Z,15nm,0.9s						
ODAN	Odare	92.79	298	*e*P	P	00 08 47.7	+0.4
	comp=Z,29nm,0.9s						
D08A	Wollman Farm,	92.80	40	IAmb	IAmb	00 08 48.2	
	comp=Z,10nm,1.2s						
DLBC	Dease Lake	92.98	27	P	P	00 08 47.9	+0.7
	comp=Z,8.0nm,0.9s,baz=229,slow=11,SNR=7.4						
DLBC	Dease Lake	92.98	27	P	P	00 08 47.9	+0.7
DLBC				IAmb	IAmb	00 08 51.3	
	comp=Z,13nm,1.1s						
E09A	Wood Farm, Sta	93.02	41	P	P	00 08 47.9	+0.4
EGAK	Eagle	93.03	19	P	P	00 08 47.4	+0.3
EGAK				IAmb	IAmb	00 08 49.0	
	comp=Z,12nm,0.9s						
WUAZ	Wupatki	93.03	53	P	P	00 08 49.8	+1.7
	baz=247						
WUAZ	Wupatki	93.03	53	P	P	00 08 49.0	+0.9
DAWY	Dawson	93.08	20	P	P	00 08 47.4	-0.1
DAWY				IAmb	IAmb	00 08 48.7	
	comp=Z,14nm,1.1s						
PKCU	Pink Cliffs	93.10	51	P	P	00 08 49.6	+1.0
MFID	Camas Ranch	93.13	45	P	P	00 08 48.6	+0.3
MFID				IAmb	IAmb	00 08 51.6	
	comp=Z,9.2nm,0.9s						
F10A	Beach Ranch, E	93.35	42	P	P	00 08 49.2	-0.1
F10A				IAmb	IAmb	00 08 50.9	
	comp=Z,16nm,1.1s						
MTPU	Mount Pierson	93.43	51	P	P	00 08 51.7	+1.5
TCRU	Three Creeks R	93.47	50	P	P	00 08 50.6	+0.4
RAMN	Ramite	93.48	297	*e*P	P	00 08 50.9	+0.4
	comp=Z,10nm,0.8s						
MVU	Marysvale	93.60	50	P	P	00 08 51.9	+1.1
MSU	Marysvale	93.62	50	P	P	00 08 52.3	+1.4
MSU	Marysvale	93.62	50	P	P	00 08 52.3	+1.4
X18A	Snowflake	93.73	55	P	P	00 08 51.4	0.0
X18A				IAmb	IAmb	00 08 53.4	
	comp=Z,11nm,0.9s						
DUG	Dugway, Tooele	93.84	48	P	P	00 08 51.9	+0.2
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	Dugway, Tooele	93.84	48	P	P	00 08 52.6	+0.9
	baz=246						
DUG	Dugway, Tooele	93.84	48	P	P	00 08 51.9	+0.2
BGU	Big Grassy Mou	93.99	48	P	P	00 08 52.5	+0.2
BMAR	Burnt Mountain	94.00	16	P	P	00 08 50.3	-1.3
W18A	Petrified Fore	94.12	54	P	P	00 08 54.4	+1.2
	baz=248						
HLID	Hailey	94.13	45	P	P	00 08 54.2	+1.2
	baz=245						
HLID	Hailey	94.13	45	P	P	00 08 52.9	-0.1
NLU	North Lily Min	94.27	49	P	P	00 08 53.3	-0.5
GUN	Gumba	94.42	298	*e*P	P	00 08 55.1	+0.2
	comp=Z,17nm,0.9s						
HVU	Hansel Valley	94.50	47	P	P	00 08 55.2	+0.5
HVU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HVU	Hansel Valley	94.50	47	P	P	00 08 55.2	+0.5
Q16A	Castle Valley	94.51	50	P	P	00 08 56.0	+1.2
SPUT	South Promonto	94.54	48	P	P	00 08 55.8	+0.9
A21K	Barrow	94.58	10	P	P	00 08 55.2	+1.1
	baz=211						
A21K	Barrow	94.58	10	P	P	00 08 52.7	-1.4
MPU	Maple Canyon	94.60	49	P	P	00 08 55.1	-0.2
TMUT	Trail Mountain	94.63	50	P	P	00 08 55.2	-0.3
121A	Cookes Peak, D	94.67	57	P	P	00 08 57.4	+1.7
	baz=249						
121A	Cookes Peak, D	94.67	57	P	P	00 08 56.5	+0.8
121A				IAmb	IAmb	00 08 58.3	
	comp=Z,9.4nm,1.0s						
PKI	Pulchoki	94.69	298	*e*P	P	00 08 56.2	+0.1
	comp=Z,15nm,1.0s						
PKIN	Phulchoki	94.71	298	*e*P	P	00 08 55.8	-0.3
	comp=Z,16nm,0.8s						
CTU	Camp Tracy	94.79	48	P	P	00 08 56.1	0.0
KKN	Kakani	94.88	298	*e*P	P	00 08 57.0	+0.2
	comp=Z,8.8nm,0.8s						
DMN	Daman	94.96	297	*e*P	P	00 08 57.7	+0.4
	comp=Z,30nm,0.8s						
JLU	Jordanelle	94.96	49	P	P	00 08 57.3	+0.3
SRU	San Rafael Swe	95.05	50	P	P	00 08 57.5	+0.2
SRU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SRU	San Rafael Swe	95.05	50	P	P	00 08 57.5	+0.2
EPYK	Eagle Plains	95.47	19	P	P	00 08 58.4	0.0
	baz=229						
GKN	Gorkha	95.48	298	*e*P	P	00 09 00.4	+0.9
PV05	Paradox Valley	95.70	52	P	P	00 09 01.3	+1.0
PV05				IAmb	IAmb	00 09 03.6	
	comp=Z,4.4nm,0.8s						
PV14	Lion Creek, Pa	95.86	51	P	P	00 09 01.4	+0.3
PV14				IAmb	IAmb	00 09 05.0	
	comp=Z,11nm,1.1s						
PV17	East Wray Mesa	95.87	51	P	P	00 09 00.9	-0.2
PV17				IAmb	IAmb	00 09 03.8	
	comp=Z,4.5nm,0.9s						
PV23	Carpenter Ridg	95.90	51	P	P	00 09 01.7	+0.4
PV23				IAmb	IAmb	00 09 04.8	
	comp=Z,9.6nm,0.7s						
PV04	Paradox Valley	95.95	51	P	P	00 09 01.8	+0.4
PV04				IAmb	IAmb	00 09 04.3	
	comp=Z,5.9nm,0.8s						
PV12	Saucer Basin,	96.00	51	P	P	00 09 02.3	+0.6
PV12				IAmb	IAmb	00 09 04.5	
	comp=Z,5.4nm,0.8s						
PV22	Blue Mesa, Par	96.09	51	P	P	00 09 02.2	+0.1
PV01	Paradox Valley	96.11	52	P	P	00 09 02.2	0.0
TIXI	Tiksi	96.23	348⇑	*e*P	P	00 09 00.8	-0.9
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
MNTX	Cornudas Mount	96.28	59	P	P	00 09 03.7	+0.8
	baz=250						
MNTX	Cornudas Mount	96.28	59	P	P	00 09 03.3	+0.5
MNTX				IAmb	IAmb	00 09 04.5	
	comp=Z,6.3nm,1.1s						
DANN	Dangsing	96.33	298	*e*P	P	00 09 02.9	-0.6
	comp=Z,12nm,0.8s						
ANMO	Albuquerque	96.56	55	P	P	00 09 04.8	+0.5
	comp=Z,2.0nm,0.9s,baz=199,slow=5.7,SNR=7.9						
ANMO	Albuquerque	96.56	55⇑	*e*P	P	00 09 05.3	+1.0
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	Albuquerque	96.56	55	P	P	00 09 05.1	+0.8
	baz=250						
BOZ	Bozeman (W)	96.76	44	P	P	00 09 05.3	+0.4
	baz=248						
YHL	Hebgen Lake	96.77	45	P	P	00 09 05.5	+0.3
TX31	Lajitas Ar. Si	96.86	61	P	P	00 09 05.6	-0.1
TX32	Lajitas Array	96.86	61	IAmb	IAmb	00 09 08.2	
	comp=Z,6.9nm,1.1s						
TXAR	Lajitas Array	96.86	61	P	P	00 09 06.7	+1.0
	comp=Z,3.6nm,0.9s,baz=223,slow=6.2,SNR=32						
H17A	Grant Village	97.00	45	P	Pdif	00 09 07.7	+1.5
	baz=248						
O20A	White River Ci	97.06	50	P	Pdif	00 09 07.4	+0.9
	baz=249						
PLCA	Paso Flores	97.07	138	P	Pdif	00 09 06.5	0.0
	comp=Z,1.3nm,0.8s,baz=166,slow=5.0,SNR=4.8						
BW06	Boulder Array	97.09	47	P	Pdif	00 09 07.5	+0.9
	baz=249						
PDAR	Pinedale Array	97.09	47	P	P	00 09 06.5	-0.1
	comp=Z,1.3nm,0.6s,baz=236,slow=2.7,SNR=9.2						
S22A	4UR Ranch, Cre	97.25	53	P	Pdif	00 09 08.6	+1.0
	baz=250						
INK	Inuvik	97.66	18	P	P	00 09 07.5	-0.6
	comp=Z,4.0nm,0.9s,baz=232,slow=3.5,SNR=3.9						
INK				PKKPbc	PKKPbc	00 25 43.9	-2.6
	comp=Z,1.2nm,0.5s,baz=7.2,slow=7.4,SNR=4.8						
INK	Inuvik	97.66	18	P	P	00 09 07.5	-0.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	97.66	18	P	P	00 09 07.5	-0.6
INK				IAmb	IAmb	00 09 11.3	
	comp=Z,6.6nm,1.1s						
WMQ	Urumqi	98.63	313	*e*P	Pdif	00 09 14.3	+1.1
WMQ				pP	pP	00 09 50.0	+1.1
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.5s						
MSTX	Muleshoe	99.10	57	P	Pdif	00 09 16.2	+0.5
	baz=251						
AMTX	Amarillo	100.25	57	P	Pdif	00 09 20.9	+0.2
	baz=252						
DGZ	Jazzator, Alta	100.78	319⇑	*e*P	Pdif	00 09 23.0	+0.3
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
C36M	Paulatuk	101.09	19	P	Pdif	00 09 23.8	+0.3
	baz=241						
YKA	Yellowknife Ar	101.61	27	P	Pdif	00 09 26.1	+0.2
	comp=Z,2.2nm,0.8s,baz=247,slow=4.0,SNR=28						
YKA				PKiKP	PKiKP	00 13 50.5	+1.8
	comp=Z,0.5nm,0.6s,baz=238,slow=0.6,SNR=7.7						
YKA				PKKPbc	PKKPbc	00 25 32.1	-3.0
	comp=Z,0.3nm,0.7s,baz=68,slow=3.4,SNR=5.7						
MKAR	Makanchi Array	103.18	315	Pdiff	Pdif	00 09 33.2	-0.1
	comp=Z,1.3nm,0.6s,baz=84,slow=5.6,SNR=17						
MKAR				PKiKP	PKiKP	00 13 51.7	-0.5
	comp=Z,0.7nm,0.9s,baz=102,slow=4.3,SNR=3.7						
MKAR				PKKPbc	PKKPbc	00 25 26.6	-3.4
	comp=Z,0.5nm,0.6s,baz=288,slow=2.2,SNR=9.7						
ZALV	Zalesovo Beam	103.61	323	Pdiff	Pdif	00 09 34.7	-0.3
	comp=Z,1.6nm,0.7s,baz=119,slow=4.2,SNR=8.5						
ZALV				PKiKP	PKiKP	00 13 51.9	-0.8
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=2.5						
ZALV				PKKPbc	PKKPbc	00 25 26.2	-2.6
	comp=Z,0.5nm,0.5s,baz=288,slow=5.1,SNR=3.7						
ECSD	EROS Data Cent	106.40	49	P	PKiKP	00 13 57.5	-0.7
	baz=257						
W41B	Gary Mavity, V	107.78	58	P	PKiKP	00 14 00.2	-0.8
	baz=257						
ULM	Lac du Bonnet	108.22	42	PKiKP	PKiKP	00 13 60.0	-1.4
	comp=Z,2.2nm,0.5s,baz=302,slow=1.2,SNR=9.1						
WCI	Wyandotte Cave	113.06	56	P	PKiKP	00 14 09.3	-1.6
	baz=261						
P49A	Miami Univ. Ec	114.45	55	P	PKPdf	00 14 12.2	-1.3
	baz=263						
GOGA	Godfrey	114.58	62	P	PKPdf	00 14 13.2	-0.8
	baz=261						
CPUP	Villa Florida	114.58	134	PKP	PKiKP	00 14 12.8	-1.5
	comp=Z,1.9nm,0.9s,baz=256,slow=0.9,SNR=4.5						
TZTN	Tazewell	114.98	58	P	PKPdf	00 14 14.2	-0.5
	baz=262						
ACSO	Alum Creek Sta	115.86	54	P	PKPdf	00 14 14.9	-1.3
	baz=264						
U54A	Nelsons Funny	116.36	59	P	PKPdf	00 14 16.8	-0.6
	baz=263						
P52A	Corning	116.45	55	P	PKPdf	00 14 16.1	-1.2
	baz=264						
KMSC	Kings Mountain	116.58	60	P	PKPdf	00 14 17.2	-0.5
	baz=263						
Q53A	Leroy	116.84	56	P	PKPdf	00 14 17.1	-1.0
	baz=264						
S54A	Dingess, Beckl	116.90	57	P	PKPdf	00 14 17.6	-0.7
	baz=264						
W56A	Indian Trail	117.19	60	P	PKPdf	00 14 18.2	-0.7
	baz=263						
O53A	New Philadelph	117.21	55	P	PKPdf	00 14 17.8	-1.0
	baz=265						
V56A	Mocksville	117.34	60	P	PKPdf	00 14 18.6	-0.6
	baz=263						
U56A	King	117.49	59	P	PKPdf	00 14 18.8	-0.6
	baz=264						
X57A	Johnson Farm,	117.50	61	P	PKPdf	00 14 19.0	-0.5
	baz=263						
BLA	Blacksburg	117.55	58	P	PKPdf	00 14 18.8	-0.8
	baz=264						
I51A	Listowel	117.58	51	P	PKPdf	00 14 18.3	-1.1
	baz=267						
W57A	Gilead	117.67	60	P	PKPdf	00 14 19.2	-0.6
	baz=263						
M53A	WI Miller and	117.70	53	P	PKPdf	00 14 18.9	-0.8
	baz=266						
T56A	Rocky Mt	117.84	58	P	PKPdf	00 14 19.3	-0.9
	baz=264						
R55A	Marlinton	117.89	57	P	PKPdf	00 14 19.2	-1.0
	baz=265						
V57A	Coltrane Farms	117.93	60	P	PKPdf	00 14 19.2	-1.1
	baz=264						
L53A	Girard	118.05	53	P	PKPdf	00 14 19.1	-1.3
	baz=267						
X58A	Rowland	118.13	61	P	PKPdf	00 14 19.7	-1.0
	baz=263						
N54A	Moraine State	118.19	54	P	PKPdf	00 14 19.8	-0.9
	baz=266						
ERPA	Erie	118.26	52	P	PKPdf	00 14 19.9	-0.8
	baz=267						
S56A	Natural Bridge	118.27	58	P	PKPdf	00 14 19.7	-1.2
	baz=265						
W58A	Raeford	118.27	61	P	PKPdf	00 14 19.9	-1.1
	baz=264						
ABKAR	Akbulak array	118.32	316	PKPdf	PKPdf	00 14 19.6	-1.0
U57A	Blanch	118.34	59	P	PKPdf	00 14 20.1	-1.0
	baz=264						
V58A	Windy Hill, Pi	118.45	60	P	PKPdf	00 14 20.6	-0.7
	baz=264						
T57A	Hurt	118.45	58	P	PKPdf	00 14 20.5	-0.8
	baz=265						
M54A	Oil Creek Stat	118.47	53	P	PKPdf	00 14 20.6	-0.6
	baz=267						
Q56A	Snyder Ridge,	118.68	56	P	PKPdf	00 14 20.9	-0.8
	baz=266						
X59A	McDuffie Farm,	118.74	61	P	PKPdf	00 14 21.4	-0.5
	baz=264						
ARU	Arti	118.74	324	PKP	PKPdf	00 14 20.4	-0.8
	comp=Z,3.3nm,0.6s,baz=28,slow=0.6,SNR=24						
ARU				PKKPbc	PKKPab	00 24 37.3	-1.5
	comp=Z,0.9nm,0.5s,baz=190,slow=5.9,SNR=4.4						
ARU	Arti	118.74	324	*i* PKIKP	PKPdf	00 14 20.4	-0.8
ARU						00 21 20.1	
S57A	Dark Hollow, R	118.76	57	P	PKPdf	00 14 20.7	-1.2
	baz=265						
U58A	Oxford	118.96	59	P	PKPdf	00 14 21.2	-1.1
	baz=265						
P56A	Dayton Farm, R	118.98	56	P	PKPdf	00 14 21.1	-1.1
	baz=266						
T58A	Grand View Acr	119.03	58	P	PKPdf	00 14 21.3	-1.1
	baz=265						
O56A	Blue Knob Stat	119.23	55	P	PKPdf	00 14 22.0	-0.7
	baz=267						
X60A	Albert Glenn T	119.25	61	P	PKPdf	00 14 22.1	-0.8
	baz=264						
UOSS	Minazif	119.27	288		PKPdf	00 14 22.2	-1.0
Q57A	Strasburg	119.28	56	P	PKPdf	00 14 21.9	-0.9
	baz=266						
GEYT	Alibeck	119.31	303	PKP	PKPdf	00 14 22.4	-0.6
	comp=Z,3.5nm,0.7s,baz=94,slow=4.5,SNR=7.6						
H53A	Bobcaygeon	119.36	50	P	PKPdf	00 14 21.8	-1.0
	baz=269						
S58A	Poland Farm, P	119.46	58	P	PKPdf	00 14 22.4	-0.8
	baz=266						
N56A	West Decatur	119.47	54	P	PKPdf	00 14 22.1	-1.0
	baz=268						
W60A	Pink Hill	119.52	61	P	PKPdf	00 14 22.5	-0.9
	baz=264						
AKTO	Aktyubinsk	119.53	317	PKP	PKPdf	00 14 22.2	-0.7
	comp=Z,4.5nm,0.8s,baz=89,slow=4.6,SNR=16						
R58A	Rapidan	119.55	57	P	PKPdf	00 14 22.0	-1.3
	baz=266						
U59A	Littleton	119.57	59	P	PKPdf	00 14 22.3	-1.1
	baz=265						
M56A	Emporium	119.58	53	P	PKPdf	00 14 22.5	-0.9
	baz=268						
P57A	Homestead Farm	119.61	56	P	PKPdf	00 14 22.3	-1.1
	baz=267						
R58B	Mineral	119.62	57	P	PKPdf	00 14 22.4	-1.1
	baz=266						

G54A	Lake Saint Pet	119.71	49	P	PKPdf	00 14 22.5	-1.0
	baz=270						
ALGO	Algonquin Park	119.74	48	P	PKPdf	00 14 22.4	-1.1
	baz=270						
SSPA	Standing Stone	119.77	54	P	PKPdf	00 14 23.1	-0.6
	baz=268						
T59A	Double "B" Far	119.81	58	P	PKPdf	00 14 22.8	-1.1
	baz=266						
Q58A	Fox Den Farm,	119.84	56	P	PKPdf	00 14 22.8	-1.0
	baz=267						
MATQ	Matagami	119.90	44	P	PKPdf	00 14 22.1	-1.6
	baz=273						
O57A	Amberson	119.94	55	P	PKPdf	00 14 23.0	-1.0
	baz=268						
V60A	Jim Taylor Roa	119.95	60	P	PKPdf	00 14 22.9	-1.2
	baz=265						
N57A	Milroy	120.03	54	P	PKPdf	00 14 23.1	-1.1
	baz=268						
L56A	Greenwood	120.06	53	P	PKPdf	00 14 22.9	-1.4
	baz=269						
S59A	Mechanicsville	120.07	58	P	PKPdf	00 14 23.0	-1.3
	baz=266						
P58A	Pank, Wackersv	120.16	56	P	PKPdf	00 14 23.5	-1.0
	baz=267						
R59A	King George, V	120.24	57	P	PKPdf	00 14 24.0	-0.7
	baz=267						
BOSA	Boshof	120.33	216	PKP	PKPdf	00 14 24.8	-0.6
	comp=Z,0.8nm,0.5s,baz=151,slow=4.5,SNR=5.3						
M57A	Sunshine Farm,	120.36	53	P	PKPdf	00 14 24.1	-0.8
	baz=268						
LSQQ	Lebel-sur-Quev	120.37	45	P	PKPdf	00 14 23.3	-1.3
	baz=273						
T60A	Surry	120.47	58	P	PKPdf	00 14 24.2	-1.0
	baz=266						
O58A	Lewisberry	120.48	55	P	PKPdf	00 14 24.2	-0.9
	baz=268						
SDMD	Soldier’s Deli	120.52	56		PKPdf	00 14 24.8	-0.4
L57A	Andrews Acres	120.59	53	P	PKPdf	00 14 24.5	-0.8
	baz=269						
J56A	Wolcott	120.60	51	P	PKPdf	00 14 24.2	-1.0
	baz=270						
N58A	Sunbury	120.66	54	P	PKPdf	00 14 24.7	-0.8
	baz=268						
K57A	Scipio Center	120.84	52	P	PKPdf	00 14 24.9	-0.9
	baz=270						
M58A	Price’s Panora	120.87	53	P	PKPdf	00 14 24.9	-0.9
	baz=269						
SPA0	Spitsbergen Ar	121.05	354	ePKPdf	PKiKP	00 14 25.3	+0.1
SPITS	Spitsbergen Ar	121.05	354	PKP	PKPdf	00 14 24.3	-0.9
	comp=Z,10nm,0.6s,baz=80,slow=5.2,SNR=24						
O59A	Robesonia	121.05	55	P	PKPdf	00 14 25.4	-0.8
	baz=268						
E55A	Montcerf-Lytto	121.11	48	P	PKPdf	00 14 25.1	-1.0
	baz=272						
J57A	Williamstown	121.22	51	P	PKPdf	00 14 25.5	-0.9
	baz=270						
BINY	Binghamton	121.23	52	P	PKPdf	00 14 25.9	-0.7
	baz=270						
Q60A	Greensboro	121.27	56	P	PKPdf	00 14 26.2	-0.4
	baz=268						
L58A	Harry Jones Me	121.33	53	P	PKPdf	00 14 26.2	-0.5
	baz=270						
N59A	State Game Lan	121.38	54	P	PKPdf	00 14 26.1	-0.7
	baz=269						
P60A	Greenville	121.46	55	P	PKPdf	00 14 26.4	-0.5
	baz=268						
I57A	Carthage	121.46	50	P	PKPdf	00 14 26.0	-0.8
	baz=271						
K58A	Earlville	121.48	52	P	PKPdf	00 14 26.2	-0.8
	baz=270						
M59A	Waymart	121.64	53	P	PKPdf	00 14 26.8	-0.6
	baz=270						
O60A	Telford	121.65	55	P	PKPdf	00 14 27.0	-0.3
	baz=269						
J58A	Remsen	121.74	51	P	PKPdf	00 14 26.5	-1.0
	baz=271						
E56A	St. Veronique	121.81	47	P	PKPdf	00 14 26.3	-1.1
	baz=273						
N60A	Cedar Hill Far	121.89	54	P	PKPdf	00 14 26.7	-1.0
	baz=270						
G57A	Newington	121.91	49	P	PKPdf	00 14 26.9	-0.8
	baz=272						
L59A	Walton	121.94	53	P	PKPdf	00 14 27.2	-0.7
	baz=270						
I58A	Old Forge	121.96	51	P	PKPdf	00 14 26.9	-1.0
	baz=271						
D56A	ZEC Mazanza, M	121.97	47	P	PKPdf	00 14 26.8	-1.0
	baz=274						
K59A	Cooperstown	122.07	52	P	PKPdf	00 14 27.1	-1.0
	baz=271						
HSPB	Hornsund (broa	122.17	353	ePKPdf	PKPdf	00 14 27.0	-0.3
LONY	Lake Ozonia	122.22	50	P	PKPdf	00 14 27.4	-1.0
	baz=272						
O61A	Allentown	122.30	55	P	PKPdf	00 14 27.9	-0.7
	baz=269						
J59A	Piesco	122.31	51	P	PKPdf	00 14 27.7	-0.9
	baz=272						
E57A	Chemin Saint G	122.43	47	P	PKPdf	00 14 27.8	-0.9
	baz=274						
H58A	Gabriels	122.51	50	P	PKPdf	00 14 28.2	-0.7
	baz=272						
L60A	Shokan	122.55	53	P	PKPdf	00 14 28.5	-0.5
	baz=271						
G58A	Ormstown	122.57	49	P	PKPdf	00 14 27.9	-1.0
	baz=273						
I59A	Olmsteadville	122.76	51	P	PKPdf	00 14 28.8	-0.6
	baz=272						
PAL	Palisades	122.79	54	P	PKPdf	00 14 28.6	-0.9
	baz=270						
H59A	Cadyville	122.85	50	P	PKPdf	00 14 28.6	-1.0
	baz=273						
M61A	Granite Spring	122.90	54	P	PKPdf	00 14 29.0	-0.7
	baz=271						
E58A	La Victoria	123.04	47	P	PKPdf	00 14 29.0	-0.8
	baz=274						
J60A	Lant Hill Farm	123.11	51	P	PKPdf	00 14 29.4	-0.6
	baz=272						
I60A	Shoreham	123.18	51	P	PKPdf	00 14 29.4	-0.7
	baz=273						
KIRV	Kirov	123.19	327	PKP	PKPdf	00 14 29.3	-0.3
	comp=Z,9.3nm,0.7s,baz=91,slow=6.8,SNR=5.4						
KIRV	Kirov	123.19	327c	iPKIKP	PKPdf	00 14 29.6	-0.1
D58A	Chemin du LacG	123.25	47	P	PKPdf	00 14 29.3	-0.9
	baz=275						
LATQ	La Tuque	123.29	46	P	PKPdf	00 14 29.4	-0.8
	baz=275						
F59A	Saint Guilaume	123.42	48	P	PKPdf	00 14 29.9	-0.6
	baz=274						
L61B	Northampton	123.68	52	P	PKPdf	00 14 30.5	-0.7
	baz=272						
J61A	Chester	123.74	51	P	PKPdf	00 14 30.7	-0.5
	baz=273						
I61A	Oroboro, Fairl	123.95	50	P	PKPdf	00 14 31.4	-0.3
	baz=274						
F60A	Warwick	123.99	48	P	PKPdf	00 14 31.1	-0.6
	baz=275						
K62A	Royalston	124.00	52	P	PKPdf	00 14 31.4	-0.4
	baz=273						
H61A	Lyndonville	124.12	50	P	PKPdf	00 14 31.3	-0.6
	baz=274						
J62A	Henniker	124.28	51	P	PKPdf	00 14 32.1	-0.2
	baz=273						
E60A	Ste Agathe de	124.30	47	P	PKPdf	00 14 31.8	-0.4
	baz=276						
HRV	Adam Dziewonsk	124.51	52	P	PKPdf	00 14 32.3	-0.4
	baz=273						
K63A	Dunstable	124.52	52	P	PKPdf	00 14 32.2	-0.5
	baz=273						
D60A	Saint Jean D’O	124.60	47	P	PKPdf	00 14 31.6	-1.1
	baz=276						
F61A	St Evariste	124.65	48	P	PKPdf	00 14 33.0	0.0
	baz=276						
H62A	Milan	124.66	50	P	PKPdf	00 14 33.1	+0.1
	baz=275						
M64A	Tiverton	124.81	53	P	PKPdf	00 14 32.8	-0.5
	baz=273						
J63A	Strafford	124.81	51	P	PKPdf	00 14 32.8	-0.5
	baz=274						
E61A	Lac Etchemin	124.95	47	P	PKPdf	00 14 33.4	-0.1
	baz=276						
G62A	West of Eustis	125.05	49	P	PKPdf	00 14 33.0	-0.8
	baz=276						
D61A	St Aubert, Com	125.07	46	P	PKPdf	00 14 32.9	-0.8
	baz=277						
BELG	Belogornoye	125.70	320	PKP	PKPdf	00 14 34.2	-0.5
	comp=Z,31nm,0.8s,baz=330,slow=1.0,SNR=20						
BELG	Belogornoye	125.70	320c	iPKIKP	PKPdf	00 14 34.5	-0.2
G63A	Kingsbury	125.70	49	P	PKPdf	00 14 34.5	-0.5
	baz=276						
I64A	Boothbay	125.81	50	P	PKPdf	00 14 35.2	0.0
	baz=275						
PKME	Peaks-Kenny Pk	125.92	49	P	PKPdf	00 14 35.0	-0.3
	baz=277						
F63A	Nahmakanta, Br	126.00	48	P	PKPdf	00 14 34.8	-0.8
	baz=277						
HAMF	Hammerfest	126.15	347	ePKPdf	PKPdf	00 14 34.3	-0.7
G64A	Maxfield	126.29	48	P	PKPdf	00 14 36.1	0.0
	baz=277						
E63A	Oxbow	126.37	47	P	PKPdf	00 14 35.7	-0.5
	baz=278						
D63A	Stockholm	126.50	46	P	PKPdf	00 14 35.7	-0.7
	baz=279						
F64A	Sherman	126.50	48	P	PKPdf	00 14 35.8	-0.6
	baz=278						
ARA0	ARCESS Array S	126.57	345	ePKPdf	PKiKP	00 14 36.5	+0.1
ARCES	ARCESS Array B	126.57	345	PKP	PKPdf	00 14 35.3	-0.6
	comp=Z,6.5nm,0.6s,baz=36,slow=0.9,SNR=40						
ARCES	ARCESS Array B	126.57	345	PKIKP	PKPdf	00 14 35.9	0.0
ARCES	ARCESS Array B	126.57	345	PKPdf	PKPdf	00 14 35.9	0.0
E64A	Bridgewater	126.78	47	P	PKPdf	00 14 35.9	-1.1
	baz=279						
KLMR	Klimovskoe	127.06	332	ePKIKP	PKPdf	00 14 35.5	-1.5
KLMR				e		00 15 24.3	
KLMR				pmax	pmax		
	comp=Z,25nm,1.0s						
KLMR	Klimovskoe	127.06	332	ePKPdf	PKPdf	00 14 35.6	-1.5
KLMR				AMP		00 14 37.4	
	comp=Z,25nm,1.0s						
KLMR				esPKPdf	sPKPdf	00 15 24.3	-3.9
G65A	Princeton	127.13	48	P	PKPdf	00 14 37.2	-0.5
	baz=278						
SJG	San Juan	127.26	83	PKP	PKPdf	00 14 38.1	-0.6
	comp=Z,27nm,0.6s,baz=107,slow=3.7,SNR=14						
KTK1	Kautokeino	127.50	346	ePKPdf	PKPdf	00 14 36.5	-1.2
HUMP	Col San Antoni	127.54	83		PKPdf	00 14 39.0	-0.3
TRO	Tromso	127.95	348	ePKPdf	PKPdf	00 14 38.7	+0.3
BDFB	Brasilia	128.16	131	PKP	PKPdf	00 14 40.2	-0.5
	comp=Z,7.9nm,0.7s,baz=187,slow=0.9,SNR=13						
BDFB	Brasilia	128.16	131	PKIKP	PKPdf	00 14 40.5	-0.2
BDFB	Brasilia	128.16	131	PKPdf	PKPdf	00 14 40.5	-0.2
LSZ	Lusaka	128.17	229	PKIKP	PKiKP	00 14 41.4	+0.1
LSZ	Lusaka	128.17	229	PKPdf	PKiKP	00 14 41.4	+0.1
RAYN	Ar Rayn	128.68	284	PKIKP	PKPdf	00 14 41.6	+0.2
RAYN	Ar Rayn	128.68	284	PKPdf	PKPdf	00 14 41.6	+0.2
KMBO	Kilima Mbogo	128.89	251	PKP	PKiKP	00 14 43.0	0.0
	comp=Z,2.9nm,0.8s,baz=49,slow=5.3,SNR=7.4						
GNI	Garni	129.69	305	PKP	PKPdf	00 14 42.6	-0.3
	comp=Z,5.0nm,0.8s,baz=25,slow=10.0,SNR=6.2						
GNI	Garni	129.69	305	⇑iPKIKP	PKiKP	00 14 43.5	-0.2
STEI	Steigen	130.12	348	ePKPdf	PKPdf	00 14 42.2	-0.4
AKH	Akhalkalaki	130.48	307	⇑P	PKiKP	00 14 45.6	+0.3
KBZ	Khabaz	130.56	310	SKPbc	SKPbc	00 17 54.6	-0.3
	comp=Z,3.0nm,0.9s,baz=110,slow=4.2,SNR=5.7						
FAUS	Fauske	130.57	347	ePKPdf	PKPdf	00 14 42.8	-0.8
NEY	Neytrino	130.77	310	⇑iPKIKP	PKiKP	00 14 46.5	+0.7
OBN	Obninsk	131.01	326	PKP	PKPdf	00 14 44.1	-0.6
	comp=Z,1.0nm,0.4s,baz=187,slow=18,SNR=3.7						
OBN	Obninsk	131.01	326	⇓iPKIKP	PKiKP	00 14 45.6	0.0
OBN				e		00 15 34.5	
OBN						00 17 06.0	
OBN				pmax	pmax		
	comp=Z,24nm,2.0s						
MOR8	Moi Rana	131.78	347	ePKPdf	PKPdf	00 14 45.6	-0.4
FINES	FINESS Array B	132.12	338	PKP	PKPdf	00 14 44.9	-1.8
	comp=Z,3.8nm,0.8s,baz=102,slow=3.0,SNR=9.6						
FINES				SKPbc	SKPbc	00 17 59.4	-0.6
	comp=Z,10.0nm,0.9s,baz=96,slow=5.7,SNR=18						
NSS	Namsos	133.73	347	ePKPdf	PKPdf	00 14 49.3	-0.2
AKN	Aaknes	136.84	348	ePdif	Pdif	00 12 03.3	+0.6
NB2	NORSAR Subarra	136.95	345	PKPdf	PKPdf	00 14 56.5	+0.7
	comp=Z,4.4nm,0.8s,baz=35,slow=1.9						
NOA	NORSAR Array B	136.95	345	PKP	PKPdf	00 14 54.5	-1.2
	comp=Z,2.4nm,0.7s,baz=33,slow=2.0,SNR=8.3						
AKASG	Malin Array Be	136.99	324	PKP	PKPdf	00 14 55.2	-0.9
	comp=Z,4.4nm,0.7s,baz=59,slow=2.1,SNR=14						
AKASG				SKPbc	SKPbc	00 18 15.7	-0.4
	comp=Z,12nm,1.0s,baz=45,slow=3.6,SNR=19						
AKASG	Malin Array Be	136.99	324c	iPKIKP	PKPdf	00 14 57.0	+0.9
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NC602	NORSAR Array S	137.14	345	ePKPdf	PKPdf	00 14 55.0	-1.1
MMAI	Mount Meron Ar	137.88	297	PKhKP	PKPpre	00 14 52.8	
	comp=Z,0.9nm,0.7s,baz=79,slow=8.7,SNR=2.3						
MMAI				PKP	PKPdf	00 14 57.7	-0.7
	comp=Z,1.5nm,0.5s,baz=84,slow=10,SNR=7.2						
MMAI				SKP		00 18 20.5	
	comp=Z,15nm,1.0s,baz=80,slow=4.7,SNR=20						
HYA	Hoyanger	137.93	348	ePKPdf	PKPdf	00 14 57.2	-0.2
BRTR	Keskin Array B	138.17	307	PKhKP	PKPpre	00 14 53.1	
	comp=Z,0.9nm,0.9s,baz=119,slow=2.6,SNR=5.5						
BRTR				PKP	PKPdf	00 14 58.7	-0.1
	comp=Z,2.2nm,0.7s,baz=145,slow=4.3,SNR=11						
BRTR				SKPbc	SKPbc	00 18 19.1	-1.0
	comp=Z,2.0nm,0.9s,baz=113,slow=3.6,SNR=9.1						
SORM	Soroca	138.73	321	⇓P	PKPdf	00 14 57.7	-1.7
SORM	Soroca	138.73	321	⇓PKIKP	PKPdf	00 14 57.7	-1.7
ASK	Askoy	138.75	349	ePKPdf	PKPdf	00 14 59.5	+0.5
BER	Bergen	138.81	348	ePKPdf	PKPdf	00 14 60.0	+0.9
VARL	Varlezi	140.06	318	⇓P	PKiKP	00 15 03.4	-0.9
BIZ	Bicaz	140.64	320	⇓P	PKPdf	00 14 58.0	-5.0
BEL	Belsk	140.68	330	ePKP	PKiKP	00 15 05.1	-0.4
VRI	Vrincioaia	140.77	319	⇑P	PKPdf	00 15 03.6	+0.4
VRI	Vrincioaia	140.77	319	⇑PKIKP	PKPdf	00 15 03.6	+0.4
BURAR	Bucovina Array	140.82	322	⇑P	PKPdf	00 14 59.6	-3.8
BURAR	Bucovina Array	140.82	322	⇑PKIKP	PKPdf	00 14 59.6	-3.8
KWP	Kalwaria Pacla	141.09	326	ePKP	PKPdf	00 15 03.9	+0.3
MLR	Muntele Rosu	141.43	318	PKhKP	PKPpre	00 15 00.0	
MLR				PKP	PKPdf	00 15 04.4	-0.1
	comp=Z,2.4nm,0.7s,baz=159,slow=8.6						
MLR				SKPbc	SKPbc	00 18 28.6	-0.1
	comp=Z,7.4nm,1.1s,baz=192,slow=1.6,SNR=6.1						
MLR	Muntele Rosu	141.43	318	⇑P	PKPdf	00 15 05.3	+0.8
DOPR	Dopca	141.55	319	⇑P	PKPdf	00 14 59.9	-4.7
VOIR		142.01	319	⇑P	PKPdf	00 15 02.8	-2.7
VOIR		142.01	319	⇑PKIKP	PKPdf	00 15 02.8	-2.7
OJC	Ojcow	142.21	329	ePKP	PKPdf	00 15 05.7	0.0
OJC				eSKPdf	SKPdf	00 18 28.5	+1.4
ARR	Arges	142.30	319	⇑P	PKPdf	00 15 02.8	-3.2
NIE	Niedzica	142.47	327	ePKP	PKPdf	00 15 07.2	+1.1
NIE				eSKPdf	SKPbc	00 18 30.8	-0.2
HUMR	Humele	142.49	318	⇑P	PKPdf	00 15 02.1	-4.2
DRGR		142.71	322	⇓P	PKPdf	00 15 03.5	-3.2
DRGR		142.71	322	⇓PKIKP	PKPdf	00 15 03.5	-3.2
LOT	Lotru	142.79	320	⇓P	PKPdf	00 15 03.7	-3.2
DEV	Deva	143.09	321	⇑P	PKPbc	00 15 04.5	-0.1
DEV	Deva	143.09	321	⇑PKIKP	PKPbc	00 15 04.5	-0.1
VLAD	Vladila	143.10	317	⇓P	PKPbc	00 15 04.0	-0.6
BSEG	Bad Segeberg	143.29	340	ePKPbc	PKPbc	00 15 04.5	-0.3
	baz=35,slow=3.0						
SHEL	Horse Pasture	143.39	187	PKIKP	PKPdf	00 15 07.8	-1.0
SHEL	Horse Pasture	143.39	187	PKPdf	PKPdf	00 15 07.8	-1.0
KSP	Ksiaz	143.41	332	ePKP	PKPbc	00 15 05.3	0.0
KSP				eSKPdf	SKiKP	00 18 33.8	-0.4
GZR	Gura Zlata	143.42	320	⇑P	PKPab	00 15 05.0	+0.6
MORC	Moravsky Berou	143.59	330	⇑P	PKPbc	00 15 06.3	+0.4
MORC	Moravsky Berou	143.59	330	ePKP	PKPbc	00 15 05.5	-0.4
MORC	Moravsky Berou	143.59	330	⇑PKIKP	PKPbc	00 15 06.3	+0.4
SIRR	Siria	143.60	322	⇓P	PKPbc	00 15 06.5	+0.5
OSTC	Ostas	143.65	332	ePKP	PKPab	00 15 05.5	+0.3
CHVC	Chvalec	143.70	332	ePKP	PKPbc	00 15 06.1	-0.1
KRLC	Kraliky	143.74	331	ePKIKP	PKPbc	00 15 06.1	-0.2
KRLC				e		00 15 40.6	
KRLC	Kraliky	143.74	331	ePKP	PKPbc	00 15 06.1	-0.2
KRLC				ex	x	00 15 40.6	
DPC	Dobruska-Polom	143.75	331	ePKIKP	PKPbc	00 15 06.6	+0.2
DPC				e		00 15 41.0	
DPC				e		00 15 54.4	
DPC	Dobruska-Polom	143.75	331	ePKP	PKPbc	00 15 06.6	+0.2
DPC				ex	x	00 15 41.0	
DPC				ex	x	00 15 54.4	
BAIL	Bailesti	143.76	318	⇑P	PKPbc	00 15 07.3	+0.7
PUNG	Punghina	143.89	318	⇑P	PKPbc	00 15 07.4	+0.5
HERR	Herculane	143.90	320	⇑P	PKPbc	00 15 07.1	+0.2
BZS	Buzias	143.99	321	⇑P	PKPbc	00 15 07.0	-0.1
BZS	Buzias	143.99	321	⇑PKIKP	PKPbc	00 15 07.0	-0.2
JAVC	Velka Javorina	144.15	328	ePKP	PKPdf	00 15 09.1	-0.1
FLTG	Flechtingen	144.30	338	ePKPbc	PKPbc	00 15 07.8	-0.1
	baz=35,slow=3.0						
KAVA	Kavala	144.35	313	P	PKPab	00 15 07.8	-0.3
VRAC	Vranov	144.36	330	⇓P	PKPbc	00 15 08.5	+0.3
VRAC	Vranov	144.36	330	ePKP	PKPbc	00 15 08.5	+0.3
VRAC				e		00 15 42.8	
VRAC	Vranov	144.36	330	⇓PKIKP	PKPbc	00 15 08.5	+0.3
MDVR	Moldovita	144.38	320	⇑P	PKPbc	00 15 09.1	+0.6
PVCC	Panska Ves	144.39	333	ePKIKP	PKPbc	00 15 08.5	+0.3
PVCC	Panska Ves	144.39	333	ePKP	PKPbc	00 15 08.5	+0.3
PVCC				ex	x	00 15 27.0	
BRG	Berggiesshubel	144.40	334	i PKP	PKPbc	00 15 08.2	0.0
BRG				Amp		00 15 09.4	
	comp=Z,54nm,0.8s						
BRG				pPKP	pPKPdf	00 15 43.0	-3.4
BRG				Amp		00 15 44.7	
	comp=Z,24nm,1.2s						
BRG				sPKP		00 15 58.3	
BRG				Amp		00 16 00.1	
	comp=Z,31nm,1.1s						
BRG				SKP		00 18 36.0	
BRG				Amp		00 18 36.1	
	comp=Z,7.1nm,0.9s						
BRG	Berggiesshubel	144.40	334	i PKIKP	PKPbc	00 15 08.2	0.0
BRG						00 15 43.0	
BRG						00 15 58.2	
BRG						00 18 35.9	
BRG				pmax	pmax		
	comp=Z,54nm,0.8s						
BRG	Berggiesshubel	144.40	334	i PKP	PKPbc	00 15 08.2	0.0
BRG				Amp		00 15 09.4	
	comp=Z,54nm,0.8s						
BRG				pPKP	pPKPdf	00 15 43.0	-3.4
BRG				Amp		00 15 44.7	
	comp=Z,24nm,1.2s						
BRG				sPKP		00 15 58.3	
BRG				Amp		00 16 00.1	
	comp=Z,31nm,1.1s						
BRG				SKP		00 18 36.0	
BRG				Amp		00 18 36.1	
	comp=Z,7.1nm,0.9s						
BRG	Berggiesshubel	144.40	334	ePKPbc	PKPbc	00 15 08.5	+0.2
	baz=35,slow=3.0						
BRG				epPKPbc	pPKPdf	00 15 43.8	-2.6
BANR	Banloc	144.40	321	⇑P	PKPdf	00 15 09.5	-0.1
CLL	Collm	144.45	335	⇓iPKPdf	PKPab	00 15 08.2	+0.1
	comp=Z,49nm,0.8s						
CLL				e		00 15 43.0	
CLL				e		00 15 57.0	
CLL				eSKPbc	SKiKP	00 18 36.0	-0.3
CLL	Collm	144.45	335	⇓iPKIKP	PKPab	00 15 08.2	+0.1
CLL				e		00 15 43.0	
CLL				e		00 15 57.0	
CLL				e		00 18 36.0	
CLL				pmax	pmax		
	comp=Z,49nm,0.8s						
CLL	Collm	144.45	335	ePKPbc	PKPbc	00 15 08.5	+0.2
	baz=35,slow=3.0						
VTS	Vitosha	144.50	316	⇓P	PKPdf	00 15 09.6	-0.5
VTS	Vitosha	144.50	316	⇓PKIKP	PKPdf	00 15 09.6	-0.5
EBL	Broad Law	144.52	353	eP	PKPab	00 15 08.3	0.0
NRDL	Niedersach Rie	144.56	339	ePKPbc	PKPbc	00 15 08.8	+0.3
	baz=35,slow=3.0						
FBE	Freiberg	144.60	334	ePKPbc	PKPbc	00 15 09.3	+0.4
	baz=35,slow=3.0						
KRUC	Moravsky	144.62	330	ePKP	PKPbc	00 15 09.4	+0.4
KRUC				e		00 15 43.4	
PGBU	Glenifferbraes	144.63	355	eP	PKPab	00 15 07.9	-0.8
NVR	Nevrokopi	144.65	313	P	PKPab	00 15 08.6	-0.7
ASSE	Asse, Remlinge	144.66	338	ePKPbc	PKPbc	00 15 09.2	+0.3
	baz=35,slow=3.0						
PRA	Prague	144.79	332	ePKIKP	PKPab	00 15 09.4	0.0
PRA				e		00 15 44.4	
PRA	Prague	144.79	332	ePKP	PKPab	00 15 09.4	0.0
PRA				ex	x	00 15 44.4	
PRU	Pruhonice	144.81	332	ePKIKP	PKPab	00 15 09.5	0.0
PRU				e		00 15 43.2	
PRU	Pruhonice	144.81	332	ePKP	PKPab	00 15 09.5	0.0
PRU				ex	x	00 15 43.2	
TREC	Trest	144.88	331	ePKIKP	PKPbc	00 15 09.4	-0.4
TREC				e		00 15 44.1	
TREC	Trest	144.88	331	ePKP	PKPbc	00 15 09.4	-0.4
TREC				ex	x	00 15 44.1	
SRS	Serrai	144.93	313	P	PKPbc	00 15 08.5	-1.7
ESK	Eskdalemuir	144.99	353	eP	PKPbc	00 15 09.4	-0.5
ESK	Eskdalemuir	144.99	353	PKIKP	PKPbc	00 15 09.7	-0.2
ESK	Eskdalemuir	144.99	353		PKPbc	00 15 09.7	-0.2
NEUB	Neuenburg	145.00	336	ePKPbc	PKPdf	00 15 10.4	-0.1
	baz=35,slow=3.0						
CLZ	Clausthal	145.01	338	ePKPbc	PKPbc	00 15 10.2	0.0
	baz=35,slow=3.0						
NEWG	New Galloway	145.29	354	eP	PKPdf	00 15 10.3	-0.5
MORH	Mrgy, Hungar	145.33	324	⇓iP	PKPdf	00 15 11.2	0.0
TANN	Tannenbergstha	145.36	334	ePKPbc	PKPab	00 15 11.6	0.0
	baz=35,slow=3.0						
TANN				epPKPbc	pPKPbc	00 15 46.6	-1.5
KNT	Kendrikon	145.38	314	P	PKPdf	00 15 11.2	-0.3
WERD	Werda	145.40	335	ePKPbc	PKPab	00 15 12.0	+0.2
	baz=35,slow=3.0						
WERD				epPKPbc	pPKPbc	00 15 46.7	-1.4
GTTG	Gottingen	145.40	338	ePKPbc	PKPab	00 15 11.6	0.0
	baz=35,slow=3.0						
GTTG				epPKPbc	pPKPbc	00 15 46.5	-1.5
GUNZ	Gunzen	145.45	335	ePKPbc	PKPab	00 15 12.0	0.0
	baz=35,slow=3.0						
GUNZ				epPKPbc	pPKPbc	00 15 47.0	-1.3
IBBN	Ibbenburen	145.49	341	ePKPbc	PKPab	00 15 12.0	+0.1
	baz=35,slow=3.0						
IBBN				epPKPbc	pPKPbc	00 15 47.1	-1.1
WERN	Wernitzgruen	145.49	334	ePKPbc	PKPab	00 15 12.1	0.0
	baz=35,slow=3.0						
NKC	Novy Kostel	145.50	334	ex	pPKPab	00 15 47.1	-1.6
NKC				ex	sPKPab	00 16 00.5	-2.8
MOX	Moxa	145.51	335	ePKPbc	PKPbc	00 15 11.7	0.0
	baz=35,slow=3.0						
MOX				epPKPbc	pPKPdf	00 15 47.2	-1.2
VAY	Valandovo	145.53	314	i P	PKPdf	00 15 11.5	-0.2
GDLE	Glaisdale, N Y	145.54	350	eP	PKPbc	00 15 11.6	-0.1
GAL1	Galloway	145.58	355	eP	PKPdf	00 15 10.5	-0.8
CONA	Conrad Observa	145.66	329	eP	PKPab	00 15 13.2	+0.3
	comp=Z,38nm,0.9s,SNR=17						
CONA				eP	pPKPdf	00 15 48.2	-0.7
	comp=Z,19nm,1.0s						
CONA				eS	sPKPdf	00 16 02.6	-0.6
	comp=Z,24nm,0.9s						
KESW	Keswick, Cumbr	145.69	353	eP	PKPbc	00 15 12.2	0.0
DIVS	Divibare	145.79	320	⇓iP	PKPbc	00 15 12.8	-0.1
KHC	Kasperske Hory	145.86	332	ePKIKP	PKPdf	00 15 11.7	-0.4
KHC				e		00 15 47.4	
KHC				e		00 16 01.2	
KHC	Kasperske Hory	145.86	332	ePKP	PKPdf	00 15 11.7	-0.4
KHC				ex	x	00 15 47.4	
KHC				ex	x	00 16 01.2	
ROTZ	Rotzenmuhle	145.96	334	ePKPbc	PKPbc	00 15 13.3	+0.1
	baz=35,slow=3.0						
SKO	Skopje	145.98	316	i P	PKPbc	00 15 13.7	+0.2
UBBA	Unterbreizbach	145.98	337	ePKPbc	PKPbc	00 15 13.2	+0.2
	baz=35,slow=3.0						
GEC2	GERESS Array S	146.02	332		PKPbc	00 15 13.5	0.0
GEC2	GERESS Array S	146.02	332	ePKPbc	PKPbc	00 15 13.7	+0.3
	baz=35,slow=3.0						
GEC2				epPKPbc	pPKPdf	00 15 49.4	-0.1
GERES	GERESS Array B	146.02	332	PKPbc	PKPbc	00 15 13.8	+0.3
	comp=Z,21nm,0.7s,baz=50,slow=1.8,SNR=182						
GERES				SKPbc	SKPbc	00 18 39.5	0.0
	comp=Z,2.4nm,0.8s,baz=64,slow=3.1,SNR=4.6						
IDI	Anoyia	146.04	303	⇓P	PKPbc	00 15 14.1	+0.1
ATH	Athens Observa	146.08	308	P	PKPdf	00 15 12.7	0.0
WET	Wettzell	146.16	333	ePKPbc	PKPbc	00 15 14.2	+0.4
	baz=35,slow=3.0						
KASTN	Kahler Asten	146.22	339	ePKPbc	PKPbc	00 15 13.9	+0.1
	baz=35,slow=3.0						
SJES	Sjenica	146.25	319	⇓iP	PKPbc	00 15 14.5	+0.1
BBLS	Lazići	146.27	320	⇓iP	PKPbc	00 15 14.5	+0.2
WIM	Isle of Man	146.29	354	eP	PKPdf	00 15 12.4	-0.2
ARSA	Arzberg	146.29	328	eP	PKPab	00 15 15.2	-0.1
	comp=Z,16nm,1.1s						
BUG	Bochum--Univer	146.39	340	ePKPbc	PKPbc	00 15 14.8	+0.5
	baz=35,slow=3.0						
HAPS	Han Pijesak,Bl	146.42	321	⇓iP	PKPbc	00 15 14.2	-0.6
GRF	Grafenberg Arr	146.42	335	ePKPbc	PKPbc	00 15 14.9	+0.4
	baz=35,slow=3.0						
GRFO	Grafenberg	146.42	335	PKP2	PKPbc	00 15 14.7	+0.2
GRFO	Grafenberg	146.42	335		PKPbc	00 15 14.7	+0.2
MOA	Molln	146.48	330	eP	PKPbc	00 15 15.1	+0.3
	comp=Z,21nm,1.0s,SNR=7.3						
MOA				eS	sPKPdf	00 16 04.2	-0.3
	comp=Z,39nm,1.1s,SNR=5.3						
FNA	Florina	146.58	314	P	PKPdf	00 15 12.3	-1.3

LBWR	Ladybower, Pea	146.67	351	eP	PKPbc	00 15 14.7	-0.4
PHP	Peshkopia	146.77	316	P	PKPbc	00 15 15.4	-0.4
OHR	Ohrid	146.81	315	i P	PKPbc	00 15 15.5	-0.5
SOKA	Soboth	146.93	328	eP	PKPbc	00 15 15.9	-0.3
	comp=Z,13nm,0.8s						
PTJ	Puntijarka	146.97	326	P	PKPbc	00 15 15.9	-0.4
ZAG	Zagreb	147.01	326	P	PKPbc	00 15 17.0	+0.8
ZAG	Zagreb	147.01	326	⇓iP	PKPbc	00 15 16.3	0.0
TNS	Taunus Mts	147.03	338	ePKPbc	PKPbc	00 15 16.4	+0.2
	baz=35,slow=3.0						
BLY	Banja Luka	147.04	323	⇓iP	PKPbc	00 15 16.3	-0.1
EVR	Evrytania	147.10	311	P	PKPbc	00 15 16.4	-0.5
WLF1	Llynfaes	147.11	354	eP	PKPbc	00 15 16.2	-0.1
PDG	Podgorica	147.14	318	⇑P	PKPbc	00 15 16.9	+0.2
PDG	Podgorica	147.14	318	⇓iP	PKPbc	00 15 16.3	-0.4
YRC	Rhoscolyn	147.17	354	eP	PKPbc	00 15 16.2	-0.2
KLV	Kalavryta, Ach	147.20	309	P	PKPbc	00 15 16.7	-0.5
EFP	Efpalio	147.23	310	P	PKPbc	00 15 17.4	+0.3
CWF	Charnwood Fore	147.24	350	eP	PKPdf	00 15 14.9	+0.7
VLX	Vlachokerasia	147.29	308	P	PKPbc	00 15 17.1	-0.4
CRES	Cresnjev	147.29	326	i PKPbc	PKPbc	00 15 17.0	-0.1
CRES	Cresnjev	147.29	326	⇓iP	PKPbc	00 15 16.5	-0.6
OBKA	Obir	147.29	328	eP	PKPbc	00 15 16.9	-0.3
	comp=Z,9.7nm,1.2s						
OBKA				eS	sPKPdf	00 16 05.8	-0.2
	comp=Z,20nm,1.4s						
MGRS	Mrkonjic Grad	147.30	323	eP	PKPbc	00 15 17.6	+0.4
TIR	Tirane	147.31	316	⇑P	PKPbc	00 15 17.7	+0.4
TIR	Tirane	147.31	316	⇑PKP2	PKPbc	00 15 17.7	+0.4
DRME	Dracevica, Mon	147.32	318	⇓iP	PKPbc	00 15 16.4	-0.9
BRY	Bratogost	147.33	319	⇓iP	PKPbc	00 15 17.0	-0.5
FOEL	Foel Wylfa	147.37	352	eP	PKPbc	00 15 15.9	-1.1
LSK	Leskovik	147.40	313	P	PKPbc	00 15 18.0	+0.3
OZLJ	Ozalj	147.42	326	P	PKPbc	00 15 17.7	+0.3
BEBN	Eben Emael	147.44	341	dPKPab	PKPab	00 15 19.8	+0.3
BEBN				dsPKP		00 16 07.8	
BEBN				dsPKPbc	sPKPab	00 16 09.9	-0.6
KBA	Koelnbreinsper	147.47	330	eP	PKPbc	00 15 16.6	-1.2
	comp=Z,13nm,0.7s,SNR=8.0						
KBA				eS	sPKPdf	00 16 06.5	+0.1
	comp=Z,24nm,1.1s						
BTNL	Ternell	147.49	341	dPKPbc	PKPbc	00 15 17.8	+0.3
BTNL				dpPKPdf	pPKPbc	00 15 53.6	-0.7
BTNL				dsPKP		00 16 06.8	
MEM	Membach	147.50	341	dPKPbc	PKPbc	00 15 17.0	-0.5
MEM				dpPKPdf	pPKPdf	00 15 52.6	+0.8
MEM				dsPKP		00 16 06.7	
TREB	Trebinje	147.55	319	eP	PKPbc	00 15 17.3	-0.6
FUR	Furstenfeldbru	147.59	333	ePKPbc	PKPbc	00 15 18.7	+0.9
	baz=35,slow=3.0						
HCY	Herceg Novi	147.61	319	eP	PKPbc	00 15 17.1	-0.9
BOJS	Bojanci	147.61	326	i PKPbc	PKPbc	00 15 18.3	+0.4
LJU	Ljubljana	147.62	327	i PKPbc	PKPbc	00 15 17.8	-0.2
LJU	Ljubljana	147.62	327	⇓iP	PKPbc	00 15 17.8	-0.2
MYKA	Terra Mystica	147.65	329	eP	PKPbc	00 15 17.5	-0.6
	comp=Z,16nm,0.6s,SNR=5.0						
MYKA				eS	sPKPdf	00 16 06.6	+0.1
	comp=Z,17nm,0.9s						
BSTI	Sart Tilman	147.66	341	dPKPbc	PKPbc	00 15 18.3	+0.4
BSTI				dpPKPdf	pPKPdf	00 15 53.0	+1.0
BSTI				dsPKP		00 16 07.1	
PDO	Prodromos	147.68	310	P	PKPbc	00 15 18.3	0.0
DBRK	Dubrovnik	147.70	319	P	PKPbc	00 15 17.0	-1.3
BHOU	Houvegnez	147.73	341	dPKPbc	PKPbc	00 15 18.4	+0.3
BHOU				dsPKP		00 16 07.6	
UCC	Uccle	147.82	343	dPKPbc	PKPbc	00 15 17.9	-0.4
UCC				dsPKP		00 16 07.8	
RICI	Ricice	147.83	321	P	PKPbc	00 15 17.4	-1.2
STON	Ston	147.86	320	⇓iP	PKPdf	00 15 16.5	+1.0
IGT	Igoumenitsa	147.87	313	P	PKPbc	00 15 18.4	-0.4
IGT	Igoumenitsa	147.87	313	P	PKPbc	00 15 18.2	-0.6
CEY	Cerknica	147.88	327	⇓iP	PKPbc	00 15 17.3	-1.4
BCLA	Clavier	147.88	341	dPKPbc	PKPbc	00 15 18.2	-0.3
BCLA				dPKPab	PKPab	00 15 21.1	-0.3
BCLA				dpPKPdf	pPKPdf	00 15 53.3	+0.9
BCLA				dsPKP		00 16 08.6	
BCLA				dsPKPbc	sPKPab	00 16 11.2	-1.1
KIJV	Kijevo	147.94	323	P	PKPbc	00 15 18.8	-0.1
LKD2	Lefkada island	147.97	311	P	PKPbc	00 15 19.1	-0.1
NYDR	Nydri-Lefkada	147.97	311	P	PKPbc	00 15 19.1	0.0
BGES	Gesves	147.98	342	dPKPbc	PKPbc	00 15 18.8	0.0
BGES				dPKP	PKPab	00 15 21.5	-0.3
BGES				dsPKP		00 16 08.5	
BGES				dsPKPbc	sPKPbc	00 16 11.2	+1.3
MAKA	Makarska	148.02	321	P	PKPbc	00 15 17.6	-1.5
WATA	Walderalm	148.09	332	eP	PKPbc	00 15 19.0	-0.4
	comp=Z,6.8nm,0.6s,SNR=5.3						
WATA				eS	sPKPdf	00 16 07.9	+0.5
	comp=Z,37nm,1.2s						
SNF	Seneffe	148.10	343	dPKiKP	PKiKP	00 15 20.3	-0.4
SNF				dpPKPdf	pPKPdf	00 15 53.8	+1.1
SNF				dpPKPbc	pPKPbc	00 15 56.4	+0.5
SNF				dpPKiKP	pPKPab	00 15 58.4	-0.2
SNF				dsPKP		00 16 09.2	
ABTA	Abfaltersbach	148.11	330	eP	PKPbc	00 15 18.8	-0.5
	comp=Z,20nm,0.7s,SNR=5.3						
ABTA				eS	sPKPdf	00 16 07.9	+0.6
	comp=Z,22nm,0.8s						
BMRD	Maredsous	148.15	342	dPKP	PKPbc	00 15 17.9	-1.3
BMRD				dpPKP	pPKPbc	00 15 55.0	-1.1
BMRD				dsPKP		00 16 08.5	
MCH1	Michaelchurch	148.21	352	eP	PKPbc	00 15 18.9	-0.4
WLF	Walferdange	148.28	340	dPKPbc	PKPbc	00 15 19.7	+0.1
WLF				dpPKPdf	pPKPbc	00 15 54.8	-1.6
WLF				dsPKP		00 16 09.5	
WLF	Walferdange	148.28	340	ePKPbc	PKiKP	00 15 20.5	-0.6
	baz=35,slow=3.0						
MOTA	Moosalm	148.30	332	eP	PKPbc	00 15 19.3	-0.6
	comp=Z,30nm,0.7s,SNR=8.2						
MOTA				eS	sPKPdf	00 16 08.3	+0.6
	comp=Z,59nm,0.9s,SNR=5.8						
RETA	Reutte	148.34	333	eP	PKPbc	00 15 19.5	-0.4
	comp=Z,12nm,0.7s						
RETA				eS	sPKPdf	00 16 08.6	+1.0
	comp=Z,26nm,1.1s						
SQTA	Sankt Quirin	148.34	332	eP	PKPbc	00 15 19.6	-0.4
	comp=Z,33nm,0.6s,SNR=11						
SQTA				eS	sPKPdf	00 16 08.5	+0.7
	comp=Z,47nm,0.9s,SNR=6.9						
DOU	Dourbes	148.38	342	dPKP	PKPbc	00 15 20.0	+0.2
DOU				dpPKP	pPKPdf	00 15 54.6	+1.4
DOU				dsPKP		00 16 09.1	
MORI	Morici	148.42	323	P	PKPbc	00 15 19.7	-0.4
NVLJ	Novalja	148.44	325	P	PKPbc	00 15 19.2	-0.9
UBR	Ueberruh	148.46	334	ePKPbc	PKPbc	00 15 20.4	+0.2
	baz=35,slow=3.0						
ZIRJ	Zirje	148.59	323	P	PKPbc	00 15 19.8	-0.7
BFO	Black Forest	148.65	336	PKP2	PKPbc	00 15 20.6	0.0
BFO	Black Forest	148.65	336		PKPbc	00 15 20.6	0.0
BFO	Black Forest	148.65	336	ePKPbc	PKPbc	00 15 20.6	0.0
	baz=35,slow=3.0						
DUGI	Dugi Otok	148.70	324	P	PKPbc	00 15 20.5	-0.4
FETA	Feichten	148.71	332	eP	PKPbc	00 15 20.7	-0.3
	comp=Z,29nm,0.7s,SNR=9.5						
FETA				eS	sPKPdf	00 16 10.5	+2.1
	comp=Z,49nm,0.9s,SNR=6.8						
DAVA	Damuels	148.87	333	eP	PKPbc	00 15 21.1	-0.2
	comp=Z,16nm,0.8s						
SCTE	Santa Cesarea	148.87	315		PKPbc	00 15 21.6	+0.2
TIP	Timpagrande	150.46	315	⇑P	PKPbc	00 15 25.7	+0.3
TIP	Timpagrande	150.46	315		PKPbc	00 15 25.3	-0.1
ZCCA	Zocca	150.59	328		PKiKP	00 15 27.1	+0.9
AQU	L'Aquila	150.69	323	⇓iP	PKPbc	00 15 24.0	-1.8
JSA	Saint Aubin	150.82	349	eP	PKPbc	00 15 24.6	-1.2
CEL	Celeste	151.51	314	PKPdf	PKPdf	00 15 20.2	-1.4
CEL				PKPbc	PKPbc	00 15 27.9	+0.1
ESDC	Sonseca Array	160.31	346	PKP	PKPdf	00 15 31.8	-1.3
	comp=Z,1.4nm,1.1s,baz=337,slow=2.3,SNR=4.5						
ESDC				PKPab	PKPab	00 16 14.4	0.0
	comp=Z,2.5nm,0.8s,baz=16,slow=3.7,SNR=17						
ESDC	Sonseca Array	160.31	346	PKPdf	PKPdf	00 15 33.6	+0.5
ESDC					PKPab	00 16 14.3	0.0
LIC	Lamto	164.86	200	eP	PKPab	00 16 35.4	+0.6
	comp=Z,69nm,0.9s						
KIC	Kosan Boka	164.90	201	ePKP2	PKPab	00 16 35.5	+0.6
	comp=Z,35nm,0.8s						
DBIC	Dimbokro	165.22	201	PKPab	PKPab	00 16 37.1	+0.7
	comp=Z,18nm,0.8s,baz=148,slow=5.0,SNR=16						
DBIC	Dimbokro	165.22	201	PKIKP	PKPdf	00 15 37.5	-1.1
DBIC						00 16 37.5	
DBIC	Dimbokro	165.22	201	PKPdf	PKPdf	00 15 37.5	-1.1
DBIC					PKPab	00 16 37.5	+1.2
TIC	Toumodi	165.25	200	ePKP2	PKPab	00 16 37.0	+0.5
TORD	Torodi Ar. Bea	166.50	238	PKP	PKPdf	00 15 39.0	-0.6
	comp=Z,1.7nm,0.6s,baz=34,slow=0.5,SNR=9.4						
TORD				PKPab	PKPab	00 16 42.2	-0.1
	comp=Z,4.4nm,1.1s,baz=113,slow=3.4,SNR=4.9						
TORD	Torodi Ar. Bea	166.50	238		PKPdf	00 15 39.2	-0.3

*NOU **26** 00:06:21.9, 38°.56S×175°.10E, h304^{km}, MLv3.3, North Island, New Zealand*

WEL 26 00:06:22.7, 39°S±3°×**17°5E**±°, **h305**^{km}±8^{km}, **M2.9**/63, **mB3.7**/1, **MLv2.9**/63, **Mw(mB)2.6**/1, **Error ellipse: s-maj=0.0km s-min=0.0km az=100.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HIZ	Hauiti	0.29	315	P	Pn	00 07 01.0	-0.6
TWVZ	Taurewa	0.43	144	P	Pn	00 07 01.4	-0.5
WTVZ	West Tongariro	0.55	137	P	Pn	00 07 01.9	-0.3
KRVZ	Karewarewa	0.56	132	P	Pn	00 07 02.0	-0.2
NGZ	Ngauruhoe	0.60	140	P	Pn	00 07 02.1	-0.2
PKVZ	Pokaka	0.60	162	P	Pn	00 07 01.9	-0.4
TMVZ	Te Maari	0.61	131	P	Pn	00 07 02.4	+0.1
OTVZ	Oturere	0.62	136	P	Pn	00 07 02.5	+0.1
ETVZ	East Tongariro	0.63	132	P	Pn	00 07 02.3	-0.1
FWVZ	Far West T-bar	0.64	147	P	Pn	00 07 02.4	-0.2
TUVZ	Tukino	0.69	143	P	Pn	00 07 02.5	-0.1
WNVZ	Wahianoa	0.72	148	P	Pn	00 07 02.6	-0.1
MTVZ	Mangateitei	0.72	157	P	Pn	00 07 02.4	-0.2
MOVZ	Moawhango	0.85	144	P	Pn	00 07 02.6	-0.5
NEZ	North Egmont	0.96	235	P	Pn	00 07 03.9	+0.3
PKE	Pukeiti	1.00	241	P	Pn	00 07 03.9	+0.2
MRHZ	Matea Rd	1.03	97	P	Pn	00 07 03.1	-0.8
KHEZ	Kahui Hut	1.03	236	P	Pn	00 07 04.1	+0.2
TOZ	Tahuroa Road	1.03	17	P	Pn	00 07 03.3	-0.6
WAZ	Wanganui	1.04	185	P	Pn	00 07 04.1	+0.3
BHHZ	Black Hill Sta	1.07	136	P	Pn	00 07 03.7	-0.3
BKZ	Black Stump Fm	1.17	113	P	Pn	00 07 04.3	-0.3
KWHZ	Kaweka Forest	1.24	125	P	Pn	00 07 05.3	+0.4
MUGZ	Murupara	1.32	80	P	Pn	00 07 04.7	-0.6
KRHZ	Kereru	1.35	134	P	Pn	00 07 05.7	+0.3
MTHZ	Maungataniwha	1.36	96	P	Pn	00 07 05.4	-0.2
NMHZ	Naumai	1.38	107	P	Pn	00 07 06.4	+0.7
MCHZ	McNeill Hill	1.43	121	P	Pn	00 07 06.7	+0.8
PNHZ	Pukenui	1.46	145	P	Pn	00 07 06.5	+0.3
RTZ	Ruatahuna	1.47	87	P	Pn	00 07 05.8	-0.5
TSZ	Takapari Road	1.49	154	P	Pn	00 07 06.7	+0.4
RAHZ	Arahi	1.56	98	P	Pn	00 07 07.1	+0.3
ARHZ	Aropaoanui	1.57	111	P	Pn	00 07 07.5	+0.7
URZ	Urewera	1.63	74	P	Pn	00 07 06.3	-1.0
KAHZ	Kahuranaki	1.74	129	P	Pn	00 07 08.9	+0.8
POWZ	Post Office Ro	1.75	163	P	Pn	00 07 08.3	+0.3
DVHZ	Dannevirke	1.78	153	P	Pn	00 07 08.5	+0.2
RAGZ	Rawiri	1.82	84	P	Pn	00 07 08.6	-0.1
MWZ	Matawai	1.93	79	P	Pn	00 07 09.2	-0.3
PRWZ	Pori Road	1.95	160	P	Pn	00 07 10.1	+0.6
MRZ	Mangatainoka R	1.97	170	P	Pn	00 07 09.9	+0.2
KNZ	Kokohu	2.02	99	P	Pn	00 07 10.5	+0.4
RIGZ	Rimuhau	2.07	91	P	Pn	00 07 11.1	+0.5
OGWZ	Otaki Gorge	2.10	179	P	Pn	00 07 11.0	+0.4
TIWZ	Tintock	2.14	164	P	Pn	00 07 11.4	+0.3
KIW	Kapiti Island	2.15	184	P	Pn	00 07 11.2	+0.2
BFZ	Birch Farm	2.15	156	P	Pn	00 07 11.5	+0.4
RUGZ	Raukumara Rang	2.15	70	P	Pn	00 07 10.1	-1.3
TKGZ	Te Karaka	2.16	83	P	Pn	00 07 11.9	+0.6
PRGZ	Paritu Road	2.17	96	P	Pn	00 07 11.9	+0.6
HOWZ	Holdsworth Sta	2.20	172	P	Pn	00 07 11.6	+0.1
MHGZ	Mahia Peninsul	2.22	102	P	Pn	00 07 12.5	+0.7
DUWZ	D'Urville Isla	2.27	203	P	Pn	00 07 12.5	+0.3
HAZ	Te Kaha	2.31	66	P	Pn	00 07 11.5	-1.0
TWGZ	Tauwhareparae	2.32	77	P	Pn	00 07 13.2	+0.6
CAW	Cannon Point	2.39	181	P	Pn	00 07 13.4	+0.3
CNGZ	Carnagh Statio	2.44	85	P	Pn	00 07 14.8	+1.2
MTW	Mount Morrison	2.46	173	P	Pn	00 07 13.9	+0.2
TMWZ	Te Maipa	2.46	166	P	Pn	00 07 14.1	+0.4
PKGZ	Pakihiroa	2.48	71	P	Pn	00 07 14.1	+0.1
PUZ	Puketiti	2.56	76	P	Pn	00 07 14.6	-0.1
TCW	Tory Channel	2.57	194	P	Pn	00 07 15.3	+0.6
PAWZ	Paruwai Farm	2.67	175	P	Pn	00 07 16.0	+0.3
BHW	Baring Head	2.69	184	P	Pn	00 07 16.0	+0.2
MSWZ	Moikau Station	2.70	178	P	Pn	00 07 16.2	+0.3
TRWZ	Traveller	2.71	171	P	Pn	00 07 16.7	+0.7
WMGZ	Waiomatatini S	2.75	72	P	Pn	00 07 16.6	+0.1
MXZ	Matakaoa Point	2.77	66	P	Pn	00 07 17.2	+0.6
NNZ	Nelson	2.83	208	P	Pn	00 07 17.5	+0.4
PLWZ	Palliser	2.85	178	P	Pn	00 07 17.7	+0.3
TUWZ	Tuamarina	2.85	198	P	Pn	00 07 18.1	+0.7
QRZ	Quartz Range	2.90	223	P	Pn	00 07 17.7	0.0
BSWZ	Blackbirch Sta	3.14	197	P	Pn	00 07 21.1	+1.0
THZ	Tophouse	3.48	208	P	Pn	00 07 24.0	+0.4
KHZ	Kahutara	3.88	197	P	Pn	00 07 28.8	+1.0
GVZ	Greta Valley S	4.53	200	P	Pn	00 07 36.0	+1.0
LTZ	Lake Taylor	4.60	207	P	Pn	00 07 36.5	+0.7
INZ	Inchbonnie	4.88	214	P	Pn	00 07 39.5	+0.6
OXZ	Oxford	5.16	206	P	Pn	00 07 42.5	+0.3
MQZ	McQueen's Vall	5.32	200	P	Pn	00 07 44.1	+0.2
RACZ	Rakaia	5.48	203	P	Pn	00 07 46.5	+0.6
GCSZ	Gaunt Creek Bo	5.85	217	P	Pn	00 07 51.0	+0.8
RPZ	Rata Peaks	5.86	210	P	Pn	00 07 48.8	-1.6
ARCZ	Arundel	6.00	208	P	Pn	00 07 53.0	+0.9
TMZ	Timaru	6.44	207	P	Pn	00 07 58.7	+1.4
MSZ	Milford Sound	8.02	220	P	Pn	00 08 17.2	+0.9

*NIED **26** 00:10:19.3, 40°.10N×142°.89E, h20^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.75; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.82; $M_{r\theta}$0.35; $M_{\theta\phi}$-0.43; $M_{\phi r}$0.81; Fault plane solution: $M_0$1.24000×10^{15} NP1:ϕ_s23.00000°, δ68.00000°, λ91.00000°. NP2:ϕ_s200.00000°, δ22.00000°, λ87.00000°.*

*JMA **26** 00:10:19.3±0.2, 40°.10N×142°.89E, h20^{km}±2^{km}, M3.8*

*IDC **26** 00:10:34.7±2.3, 39°.72N×141°.79E, h135^{km}±21^{km}, mb3.3/16, mb1 3.4/21, mb1mx3.3/67, mbtmp3.7/21, MS3.1/1, Ms1 3.1/1, ms1mx2.6/32, Error ellipse: s-maj=17.9km s-min=15.9km az=76.0*

ISC 26 00:10:17.2±1.9, **40°.15N**±0°.04×**142°.94E**±0°.06, **h11**^{km}±11^{km}, **n44**, $\sigma 1^{s}$.**30**/43, **mb3.8**/18, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.85	256	P	Pn	00 10 34.6	-0.5
JTH				eS	Sb	00 10 45.4	0.0
JKEN	Kujiedanarisaw	0.94	274	P	Pn	00 10 36.2	-0.2
JKEN				eS	Sb	00 10 48.4	+0.4
MIYJ	Miyakonagasawa	1.03	236	P	Pg	00 10 37.1	0.0
MIYJ				eS	Sb	00 10 49.7	-1.0
JANG	Nango	1.11	282	P	Pn	00 10 38.8	+0.1
JKZ	Kuzumaki	1.24	263	P	Pb	00 10 41.0	+0.3
JOM	Ohasama	1.44	242	P	Pb	00 10 43.7	-0.3
OFUJ	Ofunato	1.45	223	P	Pb	00 10 43.7	-0.5
OFUJ				eS	Sn	00 11 01.1	-1.3
JARK	Aomorirokkasho	1.47	306	P	Pb	00 10 45.2	+0.7
JARK				eS	Sb	00 11 03.9	+0.7
JTM	Tenmabayashi	1.56	295	P	Pb	00 10 46.6	+0.5
JTM				eS	Sb	00 11 06.5	+0.7
JAH	Hinai	1.76	272	P	Pb	00 10 49.2	-0.3
JMK	Ichinoseki	1.79	228	P	Pb	00 10 49.4	-0.6
JMK				eS	Sb	00 11 10.9	-1.5
JEM	Erimo	1.87	5	P	Pb	00 10 50.9	-0.5
JEM				eS	Sb	00 11 14.6	-0.1
JOT	Ohata	1.89	311	P	Pb	00 10 51.7	0.0
JOT				eS	Sb	00 11 15.5	+0.3
JRG	Rokugo	1.93	248	P	Pb	00 10 52.3	-0.1
MJAR	Matsushiro Arr	5.18	227	P	Pn	00 11 37.5	+2.8
	0.3nm,0.3s,baz=28,slow=13,SNR=14						
MAT	Matsushiro	5.18	227	P	Pn	00 11 37.3	+2.6
MAT				eS	Sn	00 12 38.9	+4.5
USRK	Ussuriysk Ar.	9.07	300	P	Pn	00 12 34.3	+6.2
	baz=102,slow=14,SNR=7.9						
USRK				S	Sn	00 14 07.4	-2.9
	baz=155,slow=41,SNR=4.0						
KSRS	Korea Array	12.02	262	P	Pn	00 13 10.6	+2.2
	0.4nm,0.3s,baz=80,slow=12,SNR=1.8						
KSRS				LR	LR	00 17 12.0	
	comp=Z,91nm,21.1s,baz=135,slow=36						
KLR	Kul'dur	12.06	323	P	P	00 13 20.3	-1.6
	0.1nm,0.3s,baz=139,slow=14,SNR=4.1						
PETK	Petropavlovsk-	16.41	33	P	P	00 14 28.4	+18
	0.0nm,0.3s,baz=204,slow=12,SNR=1.8						
SONM	Songino Array	27.18	299	P	P	00 16 00.8	0.0
	0.7nm,0.6s,baz=96,slow=9.1,SNR=6.6						
H11N2	WAKE ISLAND Hy	28.92	128	T	T	00 46 41.1	
	baz=319,slow=75						
H11N1	WAKE ISLAND Hy	28.93	128	T	T	00 47 13.7	
	baz=319						
H11N3	WAKE ISLAND Hy	28.93	128	T	T	00 47 04.1	
	baz=319,slow=75						
H11S1	WAKE ISLAND Hy	29.74	130	T	T	00 47 37.5	
	baz=322,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.74	130	T	T	00 47 38.2	
	baz=322,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	29.76	130	T	T	00 47 38.6	
	baz=322,slow=76,SNR=13						
ZALV	Zalesovo Beam	40.77	310	P	P	00 17 58.9	+0.8
	2.6nm,0.6s,baz=89,slow=8.5,SNR=11						
CMAR	Chiang Mai Arr	43.49	253	P	P	00 18 19.3	-1.4
	0.6nm,0.3s,baz=51,slow=8.5,SNR=1.7						
MKAR	Makanchi Array	43.54	300	P	P	00 18 21.4	+0.5
	0.6nm,0.6s,baz=85,slow=8.6,SNR=9.1						
KURBB	Kurchatov Arra	45.09	306	P	P	00 18 33.3	+0.2
	3.5nm,0.5s,baz=80,slow=8.6,SNR=23						
ILAR	Eielson Array	46.23	34	P	P	00 18 52.0	+10
	0.7nm,0.6s,baz=261,slow=6.9,SNR=9.5						
BVAR	Borovoye Array	49.40	311	P	P	00 19 07.5	+0.8
	0.8nm,0.5s,baz=91,slow=9.2,SNR=8.3						
AAK	Ala-Archa	50.11	297	P	P	00 19 12.1	-0.4
	0.6nm,0.5s,baz=76,slow=12,SNR=2.0						
ARU	Arti	54.84	317	P	P	00 19 48.0	+0.9
	0.6nm,0.5s,baz=321,slow=5.5,SNR=4.0						
AKTO	Aktyubinsk	57.51	311	P	P	00 20 06.5	+0.2
	0.6nm,0.5s,baz=76,slow=14,SNR=2.2						
WRA	Warramunga Arr	60.32	189	P	P	00 20 25.0	-1.1
	0.3nm,0.5s,baz=8.4,slow=7.2,SNR=4.8						
YKA	Yellowknife Ar	60.52	31	P	P	00 20 36.4	+9.4
	0.2nm,0.7s,baz=304,slow=5.7,SNR=3.3						
ASAR	Alice Springs	64.05	189	P	P	00 20 50.4	-0.6
	0.2nm,0.7s,baz=358,slow=5.3,SNR=4.3						
FINES	FINESS Array B	66.61	332	P	P	00 21 08.0	+0.7
	2.0nm,0.7s,baz=44,slow=6.3,SNR=5.7						
NVAR	Mina Array Bea	72.19	55	P	P	00 21 54.1	+12
	0.5nm,0.9s,baz=324,slow=4.5,SNR=2.7						
AKASG	Malin Array Be	72.56	322	P	P	00 21 44.8	+0.7
	0.4nm,0.4s,baz=46,slow=5.7,SNR=3.0						
PDAR	Pinedale Array	74.65	47	P	P	00 22 05.2	+8.3
	0.3nm,0.6s,baz=299,slow=4.0,SNR=2.5						
BRTR	Keskin Array B	77.67	312	P	P	00 22 14.7	+0.7
	0.4nm,0.8s,baz=70,slow=1.7,SNR=2.3						

*THE **26** 00:14:39.3, 40°.51N×23°.51E, h10^{km}±4^{km}, ML0.9/3, Error ellipse: s-maj=4.8km s-min=0.8km az=217.0*

ATH 26 00:14:38.9, 40°.51N×23°.49E, h14^{km}±3^{km}, **ML1.0**/3, **Error ellipse: s-maj=3.4km s-min=0.9km az=231.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLG	Polygyros	0.14	194	P	Pg	00 14 42.7	+0.1
PLG				S	Sg	00 14 44.3	-0.8
PLG				AML	AML	00 14 45.4	
	comp=N,167μm,0.1s						
PLG				AML	AML	00 14 45.4	
	comp=E,181μm,0.1s						
PLG	Polygyros	0.14	194	P	Pg	00 14 42.7	+0.1
PLG				S	Sg	00 14 44.8	-0.3
	comp=E,88nm,0.1s						
HORT	Hortiatis	0.31	287	P	Pg	00 14 45.6	+0.2
HORT				S	Sb	00 14 50.5	-0.7
HORT				AML	AML	00 14 51.7	
	comp=E,43μm,0.1s						
HORT				AML	AML	00 14 51.8	
	comp=N,26μm,0.1s						
HORT	Hortiatis	0.31	287	P	Pb	00 14 46.2	0.0
HORT				S	Sb	00 14 50.5	-0.7
	comp=N,18nm,0.1s						
SOH	Sokhos	0.33	342	P	Pg	00 14 45.8	+0.1
SOH				S	Sg	00 14 49.5	-0.9
SOH				AML	AML	00 14 50.7	
	comp=E,80μm,0.4s						
SOH				AML	AML	00 14 51.8	
	comp=N,85μm,0.3s						
SOH	Sokhos	0.33	342	P	Pg	00 14 45.9	+0.2
SOH				S	Sg	00 14 50.5	+0.2
	comp=N,32nm,0.3s						
OUR	Ouranopolis	0.41	115	P	Pg	00 14 47.3	+0.2
OUR				S	Sg	00 14 52.7	-0.1
OUR	Ouranopolis	0.41	115	P	Pg	00 14 47.3	+0.1
OUR				S	Sg	00 14 52.8	0.0
PAIG	Paliouri	0.60	166	P	Pg	00 14 50.0	-0.6
PAIG				S	Sg	00 14 58.1	-0.5
SRS	Serrai	0.61	7	P	Pg	00 14 50.6	-0.3
SRS				S	Sg	00 14 58.2	-0.9
KNT	Kendrikon	0.79	326	P	Pg	00 14 53.8	-0.4
KNT				S	Sg	00 15 03.9	-0.7
NVR	Nevrokopi	0.89	18	P	Pb	00 14 55.7	-0.4
NVR				S	Sg	00 15 07.0	-0.7
KAVA	Kavala	0.92	58	P	Pb	00 14 56.4	-0.1
KAVA				S	Sg	00 15 08.7	+0.1

*IDC **26** 00:14:49.4±1.3, 44°.44S×94°.22E, h0^{km}, mb4.3/6, mb1 4.5/6, mb1mx3.9/48, mbtmp4.3/6, MS4.0/15, Ms1 4.1/15, ms1mx3.8/37, Error ellipse: s-maj=42.3km s-min=22.4km az=127.0*

*NEIC **26** 00:14:50.0±2.1, 44°.3S±0°.1×94°.1E±0°.1, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=26.9km s-min=9.0km az=321.0*

*GCMT **26** 00:14:51.0±0.3, 44°.35S±0°.02×93°.89E±0°.03, h12^{km}, MW4.9/69, Moment Tensor Solution. s16,c17; s69,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.22±.12; $M_{\theta\theta}$-2.40±.11; $M_{\phi\phi}$1.17±.09; $M_{r\theta}$-0.51±.30; $M_{\theta\phi}$-1.54±.08; $M_{\phi r}$1.60±.27; Best double couple: $M_0$3.07700×10^{16} NP1:ϕ_s287.00000°, δ62.00000°, λ150.00000°. NP2: ϕ_s32.00000°, δ64.00000°, λ32.00000°. Principal axes: T 3.1790, Plg41.0000°, Azm250.0000°; N -0.2150, Plg49.0000°, Azm68.0000°; P -2.9740, Plg1.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 00:14:50.2±0.8, **44°.3S**±0°.1×**94°.2E**±0°.2, **h10**^{km}, **n40**, $\sigma 1^{s}$.**11**/24, **mb4.5**/12, **MS4.1**/15, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	17.98	65	T	T	00 37 20.0	
	baz=232,slow=74,SNR=89						
H01W3	Cape Leeuwin H	17.99	65	T	T	00 37 20.8	
	baz=232,slow=74,SNR=102						
H01W1	Cape Leeuwin H	17.99	65	T	T	00 37 21.4	
	baz=232,slow=74,SNR=137						
NWAO	Narrogin (SRO)	21.22	65	LR	LR	00 25 42.4	
	comp=Z,989nm,21.0s,baz=231,slow=31						
FITZ	Fitzroy Crossi	37.12	55	LR	LR	00 35 57.9	
	comp=Z,214nm,19.4s,baz=234,slow=34						
ASAR	Alice Springs	38.35	71	P	P	00 22 12.0	+0.6
	5.3nm,0.8s,baz=226,slow=7.4,SNR=30						
ASAR	Alice Springs	38.35	71	P	P	00 22 11.7	+0.3
AS31	Alice Springs	38.35	71	P	P	00 22 11.8	+0.4
STKA	Stephens Creek	38.80	88	P	P	00 22 16.1	+1.1
	3.5nm,0.9s,baz=241,slow=9.7,SNR=4.6						
STKA				LR	LR	00 34 58.7	
	comp=Z,324nm,20.5s,baz=215,slow=31						
STKA	Stephens Creek	38.80	88	IAmb	IAmb	00 22 17.9	
	comp=Z,1.9nm,1.1s						
WRA	Warramunga Arr	41.21	67	P	P	00 22 36.1	+0.9
	comp=Z,5.0nm,1.0s,baz=224,slow=8.4,SNR=16						
WRA				LR	LR	00 37 53.8	
	comp=Z,766nm,20.0s,baz=235,slow=34						
WB2	Warramunga Arr	41.22	67	P	P	00 22 36.0	+0.7
WB2				IAmb	IAmb	00 22 37.8	
	comp=Z,22nm,1.3s						
WRAB	Tennant Creek	41.23	67	P	P	00 22 36.4	+1.0
WR0	Warramunga Arr	41.33	67	P	P	00 22 36.4	+0.2
WR0				IAmb	IAmb	00 22 41.0	
	comp=Z,10nm,1.1s						
WB0	Warramunga Arr	41.37	67	P	P	00 22 38.0	+1.5
WB0				IAmb	IAmb	00 22 48.4	
	comp=Z,23nm,1.4s						
VNDA	Vanda	42.33	163	LR	LR	00 38 38.7	
	comp=Z,193nm,18.6s,baz=286,slow=34						
BATI	Baumata	42.47	46	LR	LR	00 39 50.1	
	comp=Z,237nm,18.2s,baz=225,slow=35						
KAPI	Kappang	45.14	37	LR	LR	00 38 05.3	

	comp=Z,94nm,21.8s,baz=202,slow=31						
QSPA	South Pole Qui	45.80	180	P	P	00 23 12.0	+0.2
	comp=Z,1.1nm,0.5s,baz=318,slow=1.0,SNR=1.6						
IPM	Ipoh	48.98	9	P	P	00 23 35.9	-1.0
SNAA	Sanae	50.73	204	P	P	00 23 49.8	0.0
	comp=Z,2.5nm,0.8s,baz=118,slow=6.7,SNR=8.0						
SNAA	Sanae	50.73	204	P	P	00 23 50.6	+0.9
SNAA				IAmb	IAmb	00 24 04.5	
	comp=Z,9.6nm,1.3s						
MYLDM	Lahad Datu	53.92	30	P	P	00 24 13.2	-0.7
BOSA	Boshof	56.05	262	LR	LR	00 43 09.8	
	comp=Z,199nm,19.1s,baz=149,slow=30						
BSWZ	Blackbirch Sta	56.07	117	P	P	00 24 27.2	-2.1
CMWZ	Cape Campbell	56.27	118	P	P	00 24 28.6	-2.1
PLWZ	Palliser	57.03	118	P	P	00 24 36.3	+0.2
PMG	Port Moresby	57.34	69	LR	LR	00 47 26.8	
	comp=Z,239nm,20.5s,baz=263,slow=34						
CMAR	Chiang Mai Arr	62.64	5	P	P	00 25 16.4	+1.6
	comp=Z,1.5nm,0.3s,baz=195,slow=5.6,SNR=4.6						
CMAR				LR	LR	00 47 29.3	
	comp=Z,106nm,21.5s,baz=215,slow=31						
CHTO	Chiang Mai	63.00	5	P	P	00 25 17.4	+0.3
CHTO				IAmb	IAmb	00 25 22.7	
	comp=Z,5.9nm,1.4s						
KBL	Kabul	81.78	339	P	P	00 27 10.3	+1.1
KSRS	Korea Array	86.95	26	LR	LR	01 06 24.8	
	comp=Z,24nm,19.0s,baz=135,slow=36						
KK31	Karatay Array	89.60	343	P	P	00 27 46.6	-1.0
KK31				IAmb	IAmb	00 27 47.4	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	89.60	343	P	P	00 27 46.3	-1.3
KKAR				IAmb	IAmb	00 27 47.4	
	comp=Z,2.9nm,0.8s						
KKAR	Karatay Array	89.60	343	P	P	00 27 46.3	-1.2
MKAR	Makanchi Array	91.36	352	LR	LR	01 05 25.6	
	comp=Z,62nm,20.6s,baz=152,slow=33						
SONM	Songino Array	92.42	8	LR	LR	01 07 47.6	
	comp=Z,42nm,21.1s,baz=210,slow=34						
PLCA	Paso Flores	94.20	192	LR	LR	01 10 00.5	
	comp=Z,105nm,18.6s,baz=180,slow=35						
ZALV	Zalesovo Beam	98.24	354	LR	LR	01 11 46.3	
	comp=Z,53nm,18.7s,baz=157,slow=35						
TXAR	Lajitas Array	159.35	131	PKPab	PKPab	00 35 26.2	-0.2
	comp=Z,0.5nm,1.0s,baz=205,slow=2.6,SNR=4.3						

*MAN **26** 00:17:39.3, 6.°49N×126.°15E, h27^{km}, MS4.2*
*IDC **26** 00:17:41.5±1.1, 6.°59N×126.°16E, h64^{km}±10^{km}, mb4.0/25, mb1 4.1/28, mb1mx3.9/57, mbtmp4.3/28, MS3.6/5, Ms1 3.6/5, ms1mx3.2/40, Error ellipse: s-maj=20.1km s-min=8.2km az=73.0*
*NEIC **26** 00:17:43.4±1.5, 6.°55N±0.°08×126.°10E±0.°07, h81^{km}±7^{km}, mb4.5/52, Error ellipse: s-maj=15.3km s-min=4.2km az=219.0*
*DJA **26** 00:17:48.4±1.4, 6°N±12°×12°6E±°, h76^{km}±32^{km}, M4.6/10, mB5.0/7, mb4.8/8, MLv4.8/10, Mw(mB)4.3/7*
ISC 26 00:17:42.1±0.7**, 6.°48N**±0.°04×**126.°07E**±0.°06**, h68**^{km}±6^{km}**, n152, σ1.ˢ54**/154**, mb4.4**/62**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.52	224	eP	Pn	00 17 51.5	-3.4
DDMP				eS	Sn	00 18 01.8	-2.6
DAV	Davao City (W)	0.76	320	P	Pn	00 17 56.6	-1.1
	1μm,0.3s,baz=113,slow=1.9,SNR=361						
DAV				S	Sn	00 18 12.0	+2.9
	1μm,0.3s,baz=246,slow=19,SNR=5.7						
KCP	Kidapawan	1.11	298	⇓iP	Pn	00 18 00.5	-1.4
KCP				iS	Sn	00 18 15.0	-1.7
SKMP	Bagumbayan, Su	1.52	271	eP	Pn	00 18 04.9	-2.4
SKMP				eS	Sn	00 18 27.2	+0.9
BUKP	Musuan	1.71	324	eP	Pn	00 18 08.7	-1.2
BUKP				eS	Sn	00 18 29.6	-1.4
CGP	Cagayan de Oro	2.39	325	⇓eP	Pn	00 18 18.8	-0.2
CGP				iS	Sn	00 18 52.4	+5.1
BUTP	Butuan	2.51	350	eP	Pn	00 18 19.9	-0.8
BUTP				eS	Sn	00 19 02.9	+13
SGSI	Sangihe	2.83	191	P	Pn	00 18 25.1	+0.1
PAGZ	Pagadian	3.00	297	eP	Pn	00 18 25.5	-1.8
GLSP	General Luna,	3.28	1	eP	Pn	00 18 30.3	-0.9
GLSP				eS	Sn	00 19 14.8	+5.8
MSLP	Maasin	3.82	342	eP	Pn	00 18 36.6	-1.9
MSLP				eS	Sn	00 19 17.9	-4.4
LLP	Lapu-Lapu	4.34	331	eP	Pn	00 18 44.9	-0.9
LLP				eS	Sn	00 19 39.2	+4.1
CNOP	Candoni, Negro	4.75	315	eP	Pn	00 18 50.2	-1.1
GUIM	Jordan	5.37	320	eP	Pn	00 19 00.8	+1.0
TNTI	Ternate	5.82	167	Pn	Pn	00 19 07.5	+1.6
TNTI	Ternate	5.82	167	P	Pn	00 19 06.3	+0.4
	0.6nm2μm125nm,0.5s						
GTOI	Gorontalo	6.56	208	P	Pn	00 19 15.5	-0.6
	0.3nm1μm70nm,0.5s						
MRSI	Marisa	7.25	215	P	Pn	00 19 25.3	-0.2
	0.6nm2μm144nm,0.8s						
TOLI2	Tolitoli	7.51	225		Pn	00 19 28.2	-0.8
MYLDM	Lahad Datu	7.64	261		Pn	00 19 34.8	+3.9
LUWI	Luwuk	8.17	204	Pn	Pn	00 19 40.9	+2.8
LUWI	Luwuk	8.17	204	P	Pn	00 19 40.0	+2.0
	0.7nm3μm162nm,0.6s						
SANI	Sanana	8.47	181	P	Pn	00 19 41.1	-1.1
	0.2nm1μm44nm,0.5s						
APSI	Ampana	8.57	211	P	Pn	00 19 46.0	+2.5
	669nm59nm,1.1s						
SIJI	Sorong	8.95	144	P	Pn	00 19 49.0	+0.2
	1.6nm,0.3s,baz=213,slow=23,SNR=1.9						
SIJI				S	Sn	00 21 28.1	-0.1
	1.5nm,0.3s,baz=198,slow=23,SNR=1.7						
NLAI	Namlea	9.71	174	P	Pn	00 19 56.5	-2.6
FAKI	Fak Fak	11.19	146	Pn	Pn	00 20 21.2	+1.9
BNSI	Bone	12.34	209	P	P	00 20 43.8	-1.0
KAPI	Kappang	13.05	209	P	Pn	00 20 44.4	-0.3
	0.6nm,0.3s,baz=169,slow=16,SNR=2.1						
KAPI	Kappang	13.05	209	Pn	Pn	00 20 46.5	+1.8
EDFI	Ende, Flores	15.75	196	P	P	00 21 33.6	+11
SOEI	Soe	16.23	186		P	00 21 29.1	+1.0
SOEI				IAmb	IAmb	00 21 45.6	
	comp=Z,27nm,1.0s						
SOEI	Soe	16.23	186	P	P	00 21 37.0	+8.9
BATI	Baumata	16.75	188	P	P	00 21 34.5	+0.7
	comp=Z,4.4nm,0.3s,baz=256,slow=4.2,SNR=2.0						
BATI	Baumata	16.75	188	P	P	00 21 46.1	+12
PLAI	Plampang	17.31	209	P	P	00 21 51.0	+11
MTN	Manton Dam	19.85	165	P	P	00 22 08.2	+0.4
MTN				IAmb	IAmb	00 22 23.4	
	comp=Z,21nm,0.7s						
UBPT	Khong Chiam	22.02	295	P	P	00 22 31.7	+0.5
FITZ	Fitzroy Crossi	24.43	181	P	P	00 22 56.0	+1.4
	comp=Z,3.4nm,0.4s,baz=35,slow=9.7,SNR=19						
FITZ	Fitzroy Crossi	24.43	181	P	P	00 22 56.4	+1.8
KULM	Kulim	25.32	269	P	P	00 23 02.6	-0.2
KULM				IAmb	IAmb	00 23 18.1	
	comp=Z,18nm,1.1s						
JCJ	Chichijima	25.59	35	P	P	00 23 02.6	-2.6
	comp=Z,34nm,0.5s,baz=302,slow=19,SNR=1.4						
WHN	Wuhan	26.35	337	⇑P	P	00 23 15.8	+3.9
WHN				S	S	00 27 38.0	-2.2
WHN				pmax	pmax		
	comp=Z,56nm,0.9s						
WHN				LR	LR		
	comp=Z,540nm,11.4s						
WB0	Warramunga Arr	27.34	163	P	P	00 23 21.2	+0.3
WB0				IAmb	IAmb	00 23 29.4	
	comp=Z,10nm,0.7s						
WRAB	Tennant Creek	27.48	163	P	P	00 23 21.0	-1.2
WRAB				IAmb	IAmb	00 23 29.8	
	comp=Z,9.9nm,0.9s						
WRA	Warramunga Arr	27.49	163	P	P	00 23 22.5	+0.2
	comp=Z,1.9nm,0.5s,baz=343,slow=10,SNR=25						
WRA				ScP	ScP	00 30 14.0	-0.1
	comp=Z,0.4nm,0.6s,baz=340,slow=3.1,SNR=2.8						
WRA	Warramunga Arr	27.49	163	P	P	00 23 23.3	+1.0
WB2	Warramunga Arr	27.49	163	P	P	00 23 23.6	+1.3
WB2				IAmb	IAmb	00 23 34.9	
	comp=Z,10nm,1.1s						
WR0	Warramunga Arr	27.57	163	P	P	00 23 23.3	+0.4
WR0				IAmb	IAmb	00 23 31.6	
	comp=Z,6.9nm,0.8s						
JMN	Monobe	28.06	14	P	P	00 23 25.5	-1.8
JMN				IAmb	IAmb	00 23 39.6	
	comp=Z,14nm,1.1s						
ENH	Enshi	28.34	329	P	P	00 23 29.9	0.0
ENH				IAmb	IAmb	00 23 34.4	
	comp=Z,17nm,0.8s						
PSA00	Pilbara Seismi	28.54	192	P	P	00 23 32.1	+0.5
PSA00				IAmb	IAmb	00 23 35.5	
	comp=Z,11nm,0.9s						
CMAR	Chiang Mai Arr	28.99	297	P	P	00 23 37.0	+1.4
	comp=Z,1.1nm,0.3s,baz=116,slow=7.1,SNR=6.4						
CHTO	Chiang Mai	29.12	297	P	P	00 23 36.3	-0.5
KSRS	Korea Array	30.88	3	P	P	00 23 51.7	-0.4
	comp=Z,0.5nm,0.4s,baz=190,slow=8.8,SNR=2.2						
KSRS				LR	LR	00 36 19.5	
	comp=Z,32nm,20.6s,baz=165,slow=36						
AS31	Alice Springs	30.92	166	P	P	00 23 53.1	+0.4
ASAR	Alice Springs	30.93	166	P	P	00 23 53.4	+0.7
	comp=Z,1.4nm,0.4s,baz=342,slow=7.4,SNR=45						
ASAR				PcP	PcP	00 26 48.4	+0.4
	comp=Z,0.9nm,0.7s,baz=356,slow=3.0,SNR=4.5						
ASAR				S	S	00 28 53.4	+1.0
	comp=Z,0.6nm,0.8s,baz=351,slow=17,SNR=3.9						
ASAR	Alice Springs	30.93	166	P	P	00 23 52.4	-0.3
XAN	Xi'an	31.69	332	P	P	00 24 00.5	+1.1
XAN				pP	pP	00 24 09.8	-5.6
XAN				pmax	pmax		
	comp=Z,43nm,0.7s						
MJAR	Matsushiro Arr	31.91	19	P	P	00 24 03.9	+2.6
	comp=Z,1.1nm,0.5s,baz=222,slow=7.0,SNR=2.2						
MJAR				LR	LR	00 36 20.7	
	comp=Z,38nm,19.4s,baz=215,slow=35						
BJT	Baijiatuau	34.56	347	P	P	00 24 23.9	-0.3
LZH	Lanzhou	35.82	328	eP	P	00 24 34.8	-0.6
LZH				pP	pP	00 24 55.8	+4.3
LZH				sP	sP	00 25 08.8	+10
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
HHC	Hu-ho-hao-te	36.60	341	eP	P	00 24 44.5	+2.6
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,12μm,6.4s						
MORW	Morawa	36.64	195	P	P	00 24 41.6	-0.6
FORT	Forrest	37.10	177	P	P	00 24 46.8	+0.7
USRK	Ussuriysk Ar.	37.92	7	P	P	00 24 52.2	-0.7
	comp=Z,1.5nm,0.5s,baz=188,slow=7.9,SNR=9.1						
USRK	Ussuriysk Ar.	37.92	7	P	P	00 24 52.7	-0.2
USA0B	Ussuriysk Arra	37.92	7	P	P	00 24 51.8	-1.1
USA0B				IAmb	IAmb	00 24 53.3	
	comp=Z,3.7nm,0.7s						
EIDS	Eidsvold	39.92	143	P	P	00 25 10.5	+0.6
EIDS				IAmb	IAmb	00 25 19.0	
	comp=Z,4.2nm,0.8s						
NWAO	Narrogin (SRO)	40.08	192	P	P	00 25 12.2	+1.1
	comp=Z,16nm,0.9s,baz=30,slow=9.3,SNR=8.6						
NWAO	Narrogin (SRO)	40.08	192	P	P	00 25 11.9	+0.8
NWAO	Narrogin (SRO)	40.08	192	IAmb	IAmb	00 25 14.1	
	comp=Z,21nm,1.1s						
BBOO	Buckleboo	40.21	167	P	P	00 25 13.8	+1.7
GTA	Gaotai	40.42	328	⇑P	P	00 25 17.3	+3.3
GTA				pP	pP	00 25 22.8	-7.6
GTA				sP	sP	00 25 26.0	-12
GTA				pmax	pmax		
	comp=Z,22nm,0.9s						
GTA				pmax	pmax		
	comp=Z,77nm,5.3s						
GTA				LR	LR		
	comp=N,82nm,18.9s						
GTA				LR	LR		
	comp=E,110nm,18.5s						
GTA				LR	LR		
	comp=Z,130nm,18.5s						
STKA	Stephens Creek	40.92	160	P	P	00 25 18.7	+0.7
	comp=Z,2.0nm,0.4s,baz=332,slow=8.7,SNR=9.6						
STKA	Stephens Creek	40.92	160	P	P	00 25 19.4	+1.4
H11S3	WAKE ISLAND Hy	41.30	69	T	T	01 09 29.2	
	baz=252,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	41.32	69	T	T	01 09 23.0	
	baz=252,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	41.32	69	T	T	01 09 25.2	
	baz=252,slow=76,SNR=24						
H11N1	WAKE ISLAND Hy	41.75	68	T	T	01 10 18.9	
	baz=265,slow=74,SNR=20						
H11N2	WAKE ISLAND Hy	41.76	68	T	T	01 10 19.1	
	baz=265,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	41.77	68	T	T	01 10 22.7	
	baz=265,slow=74,SNR=36						
TAPN	Taplejung	41.90	304	eP	P	00 25 27.0	+0.4
	comp=Z,7.9nm,0.8s						
ODAN	Odare	41.98	303	eP	P	00 25 27.9	+0.8
	comp=Z,20nm,0.9s						
RAMN	Ramite	42.67	303	eP	P	00 25 33.6	+0.8
	comp=Z,13nm,0.8s						
GUN	Gumba	43.62	304	eP	P	00 25 40.4	-0.1
	comp=Z,12nm,0.8s						
PKI	Pulchoki	43.88	303	eP	P	00 25 42.5	-0.1
PKIN	Phulchoki	43.90	303	eP	P	00 25 42.6	-0.1
	comp=Z,4.5nm,0.6s						
DMN	Daman	44.15	303	eP	P	00 25 44.9	+0.2
SONM	Songino Array	44.50	341	P	P	00 25 47.9	+0.9
	comp=Z,4.9nm,1.0s,baz=161,slow=8.8,SNR=24						
SONM				PcP	PcP	00 27 29.3	0.0
	comp=Z,1.7nm,0.9s,baz=161,slow=3.3,SNR=5.9						
SONM	Songino Array	44.50	341	P	P	00 25 47.9	+0.9
GKN	Gorkha	44.68	304	eP	P	00 25 48.5	-0.2
DANN	Dangsing	45.52	304	eP	P	00 25 55.8	+0.2
	comp=Z,11nm,0.6s						
TOO	Toolangi	47.42	159	P	P	00 26 10.7	+0.7
TOO				IAmb	IAmb	00 26 19.6	
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	48.67	127	P	P	00 26 19.7	-0.2
TLY	Talaya	48.73	342	P	P	00 26 20.2	+0.3
	comp=Z,2.0nm,0.5s,baz=191,slow=6.3,SNR=7.2						
WMQ	Urumqi	50.12	324	eP	P	00 26 32.0	+1.4
PETK	Petropavlovsk-	53.16	23	P	P	00 26 52.5	-0.6
	comp=Z,4.2nm,1.0s,baz=205,slow=6.2,SNR=2.3						
MK31	Makanchi Array	54.94	324	P	P	00 27 05.8	-0.4
MK31				IAmb	IAmb	00 27 10.2	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	54.94	324	P	P	00 27 05.7	-0.5
	comp=Z,3.0nm,0.5s,baz=119,slow=4.9,SNR=36						
MKAR				PcP	PcP	00 28 07.0	-0.4
	comp=Z,1.2nm,0.7s,baz=116,slow=4.4,SNR=1.5						
MKAR	Makanchi Array	54.94	324	P	P	00 27 05.4	-0.8
MAKZ	Makanchi	55.13	324	P	P	00 27 07.1	-0.5
MAKZ				IAmb	IAmb	00 27 11.5	
	comp=Z,4.5nm,0.8s						
ZAA0	Zalesovo Array	57.86	333	P	P	00 27 27.6	+0.8
ZAA0				IAmb	IAmb	00 27 29.0	
	comp=Z,5.5nm,0.8s						
ZALV	Zalesovo Beam	57.86	333	P	P	00 27 25.6	-1.1
	comp=Z,5.9nm,0.8s,baz=111,slow=6.5,SNR=24						
ZALV	Zalesovo Beam	57.86	333	P	P	00 27 27.5	+0.8
AAK	Ala-Archa	57.90	317	P	P	00 27 27.7	+0.2
	comp=Z,0.5nm,0.5s,baz=189,slow=13,SNR=1.4						
AAK	Ala-Archa	57.90	317	P	P	00 27 28.1	+0.5
KURBB	Kurchatov Arra	59.09	327	P	P	00 27 34.7	-0.7
	comp=Z,8.9nm,0.8s,baz=125,slow=6.1,SNR=34						
KURK	Kurchatov	59.09	327	P	P	00 27 34.7	-0.7
KURK	Kurchatov	59.09	327	IAmb	IAmb	00 27 39.0	
	comp=Z,14nm,0.8s						
KBL	Kabul	59.36	306	P	P	00 27 36.9	-1.0
KBL				IAmb	IAmb	00 27 38.1	
	comp=Z,2.7nm,0.7s						
BVAR	Borovoye Array	64.67	326	P	P	00 28 12.2	-0.7
	comp=Z,1.8nm,0.7s,baz=138,slow=11,SNR=6.2						
TUWZ	Tuamarina	64.70	142	P	P	00 28 12.6	-0.6
KHZ	Kahutara	65.03	143	P	P	00 28 15.9	+0.6
BKZ	Black Stump Fm	65.06	139	P	P	00 28 16.8	+1.2
BKZ				IAmb	IAmb	00 28 17.9	
	comp=Z,6.8nm,1.0s						
ABKAR	Akbulak array	69.62	320	P	P	00 28 43.5	-0.8
ABKAR	Akbulak array	69.62	320	P	P	00 28 43.1	-1.2
AKTO	Aktyubinsk	71.11	321	P	P	00 28 51.8	-1.5
	comp=Z,1.9nm,0.7s,baz=112,slow=6.9,SNR=6.8						
UNV	Unalaska Valle	71.55	35	P	P	00 28 55.5	-0.4
AKUT	Akutan	72.05	35	P	P	00 28 57.1	-1.7
ARU	Arti	72.28	327	P	P	00 28 58.5	-1.7
	comp=Z,0.7nm,0.5s,baz=157,slow=3.0,SNR=6.5						
ARU				LR	LR	01 01 17.6	
	comp=Z,54nm,18.4s,baz=108,slow=36						
ARU	Arti	72.28	327	P	P	00 28 58.3	-1.9
ARU				IAmb	IAmb	00 29 15.4	
	comp=Z,5.0nm,1.0s						
IMAR	Indian Mountai	80.11	24	P	P	00 29 44.9	+0.4
SUA	Susitna One	81.08	29		P	00 29 49.5	-0.5
SUA				IAmb	IAmb	00 30 03.3	
	comp=Z,4.4nm,1.0s						
BPAW	Bear Paw Mtn.	81.12	26	P	P	00 29 49.5	-0.5
TRF	Thorofare Moun	81.39	27	P	P	00 29 51.2	-0.4
TRF				IAmb	IAmb	00 30 02.5	
	comp=Z,4.6nm,1.1s						
WRH	Wood River Hil	82.39	26	P	P	00 29 56.4	-0.2
CCB	Clear Creek Bu	82.52	26	P	P	00 29 57.4	+0.1
HDA	Harding Lake	82.89	26	P	P	00 29 57.8	-1.4
HDA				IAmb	IAmb	00 29 60.0	
	comp=Z,3.7nm,0.8s						
IL31		82.92	26	P	P	00 29 57.5	-1.8
ILAR	Eielson Array	82.92	26	P	P	00 29 57.6	-1.7
	comp=Z,0.7nm,0.6s,baz=245,slow=5.0,SNR=15						
OBN	Obninsk	84.45	325	P	P	00 30 10.4	+3.1
	comp=Z,1.4nm,0.4s,baz=76,slow=8.3,SNR=2.8						
BCAR	Beaver Creek A	85.24	27	P	P	00 30 11.1	-0.1
BARN	Barnard Glacie	85.48	29	P	P	00 30 13.2	+0.6
BARN				IAmb	IAmb	00 30 18.4	
	comp=Z,8.6nm,1.0s						
CTGM	Chitina Glacie	85.64	29	P	P	00 30 13.8	+0.4
CTGM				IAmb	IAmb	00 30 21.8	
	comp=Z,6.3nm,0.8s						
DAWY	Dawson	86.21	26	P	P	00 30 14.4	-1.6
PPT	Papeete	86.58	108	LR	LR	01 07 30.8	
	comp=Z,62nm,18.1s,baz=266,slow=34						
ARCES	ARCESS Array B	87.66	340	P	P	00 30 22.3	-0.6
	comp=Z,2.6nm,0.7s,baz=72,slow=7.8,SNR=6.8						
SPITS	Spitsbergen Ar	87.67	349	P	P	00 30 20.9	-1.9
	comp=Z,5.2nm,0.8s,baz=10,slow=12,SNR=1.8						
BRTR	Keskin Array B	87.78	310	P	P	00 30 22.8	-1.5
	comp=Z,0.5nm,0.8s,baz=113,slow=9.5,SNR=4.6						
FIA1	FINESS Array S	89.11	332	P	P	00 30 29.3	-0.5
FINES	FINESS Array B	89.11	332	P	P	00 30 28.9	-1.0
	comp=Z,2.0nm,0.9s,baz=97,slow=4.4,SNR=6.5						
FINES	FINESS Array B	89.11	332	P	P	00 30 29.1	-0.8
AKASG	Malin Array Be	89.36	321	P	P	00 30 30.4	-0.8
	comp=Z,0.1nm,0.3s,baz=64,slow=4.3,SNR=1.8						
C36M	Paulatuk	90.85	19	P	P	00 30 37.1	-0.8
C36M				IAmb	IAmb	00 30 52.0	
	comp=Z,3.1nm,1.1s						
TIRR	Tirgusor	90.95	315	P	P	00 30 39.0	+0.2
DAG	Danmarks Havn	94.46	352	iP	P	00 30 53.0	-1.3
	comp=Z,12nm,1.0s						
DAG	Danmarks Havn	94.46	352	iP	P	00 30 53.0	-1.3
DAG				IAmb	IAmb	00 30 55.3	
	comp=Z,12nm,1.0s						
NOA	NORSAR Array B	96.05	334	LR	LR	01 17 24.9	
	comp=Z,67nm,19.1s,baz=95,slow=37						
YKA	Yellowknife Ar	97.27	24	P	P	00 31 06.2	-1.2
	comp=Z,0.7nm,0.8s,baz=304,slow=4.1,SNR=13						
TXAR	Lajitas Array	120.40	51	PKP	PKiKP	00 36 27.2	+0.4
	comp=Z,0.2nm,0.7s,baz=338,slow=1.9,SNR=2.5						
TORD	Torodi Ar. Bea	121.42	290	PKP	PKPdf	00 36 27.4	-1.4
	comp=Z,1.2nm,0.8s,baz=51,slow=2.4,SNR=4.8						

*NEIC **26** 00:18:29.5±1.4, 36.°23N±0.°02×97.°61W±0.°06, h4^{km}±7^{km}, Error ellipse: s-maj=6.7km s-min=1.8km az=76.0*
*TUL **26** 00:18:29.5±1.5, 36.°23N±0.°02×97.°58W±0.°04, h6^{km}±7^{km}, ML3.2, mb_Lg3.2/68(NEIC), Error ellipse: s-maj=5.3km s-min=1.7km az=73.0*
*ANF **26** 00:18:30.0±0.5, 36.°16N×97.°52W, h0^{km}, ML3.9/10, Error ellipse: s-maj=5.5km s-min=3.7km az=163.0*
ISC 26 00:18:29.7±1.1**, 36.°23N**±0.°02×**97.°58W**±0.°03**, h6**^{km}±10^{km}**, n81, σ0.ˢ86**/76**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	Carrier	0.43	310		Pg	00 18 37.9	-0.1
CROK				Sg	Sg	00 18 43.8	+0.2
OK029	Liberty Lake	0.45	167		Pg	00 18 38.3	0.0
OK029				Sg	Sg	00 18 44.6	+0.5
BCOK	Bluff Creek, N	0.57	183	Pg	Pg	00 18 40.7	0.0
BCOK				Sg	Sg	00 18 48.8	+0.5
OK031	S. Brethren Rd	0.66	115		Pg	00 18 42.4	+0.1
OK031				Sg	Sg	00 18 51.3	+0.4
OK025	Westminster Rd	0.68	163		Pg	00 18 42.7	0.0
OK025				IAmb_Lg		00 18 51.5	
	comp=Z,227nm,0.9s						
OK025				Sg	Sg	00 18 52.1	+0.6
QUOK	Quay	0.70	95	Pg	Pg	00 18 43.1	-0.1
OK030	Cody Creek RV	0.71	115		Pg	00 18 43.3	0.0
KAN13	South Haven SW	0.78	6		Pg	00 18 44.6	-0.1
KAN14	Manchester OK	0.79	337		Pg	00 18 44.6	-0.3
OKCFA	Oklahoma City	0.82	173		Pg	00 18 45.2	-0.2
OKCSW	OKLAHOMA CITY	0.83	172		Pg	00 18 45.4	-0.3
KAN01	Argonia South	0.93	351		Pg	00 18 47.2	-0.3
FNO	Franklin	0.98	172		Pg	00 18 48.1	-0.5
KAN10	Anthony SW Sta	0.98	335		Pg	00 18 48.0	-0.6
KAN08	Anthony NE Sta	1.04	342		Pg	00 18 49.2	-0.5
T35A	Sooner Cattle	1.09	51		Pg	00 18 50.2	-0.5
T35B	Sooner Cattle	1.09	51	P		00 18 50.1	
	baz=232,SNR=171						
T35B				S		00 19 04.7	
	baz=232						
KAN12	Harper NE Stat	1.12	342		Pg	00 18 50.6	-0.5
U32A	Winter Ranch,	1.16	278		Pb	00 18 51.0	-1.1
U32A	Winter Ranch,	1.16	278	P		00 18 50.9	
	baz=97						
U32A				S		00 19 07.3	
	baz=97						
W35A	Tecumseh	1.22	152		Pb	00 18 51.9	-1.2
TUL1	Leonard	1.48	102	P	Pn	00 18 56.3	-0.5
	baz=283						
TUL1				S	Sg	00 19 16.6	-0.7
	baz=283						
TUL1	Leonard	1.48	102		Pn	00 18 56.4	-0.5
TUL1	Leonard	1.48	102	P		00 18 56.3	
	baz=283,SNR=110						
TUL1				S		00 19 16.6	
	baz=283						
X34A	Smith Ranch, M	1.64	187	Pn	Pn	00 19 00.0	+0.9
WMOK	Wichita Mounta	1.79	214	P	Pn	00 19 01.1	+0.1
	baz=33						
WMOK				S	Sn	00 19 25.3	+1.2
	baz=33						
WMOK	Wichita Mounta	1.79	214		Pn	00 19 01.1	+0.1
WMOK				IAmb_Lg		00 19 30.0	
	comp=Z,67nm,0.8s						
WMOK	Wichita Mounta	1.79	214	P		00 19 01.1	
	baz=33,SNR=152						
WMOK				S		00 19 25.3	
	baz=33						
R32A	Long Quarter,	2.37	338		Pn	00 19 10.8	+1.8
X37A	Clayton	2.43	132	Pn	Pn	00 19 10.8	+0.9
X37A	Clayton	2.43	132	P		00 19 10.8	
	baz=313						
U38A	Gravette	2.58	84		Pn	00 19 13.7	+1.7
U38A				IAmb_Lg		00 19 54.6	
	comp=Z,50nm,0.8s						
U38A	Gravette	2.58	84	P		00 19 12.9	
	baz=266,SNR=21						
Z35A	Perchaven, San	2.91	175		Pn	00 19 16.0	-0.5
Z35A	Perchaven, San	2.91	175	S		00 19 54.0	
	baz=355						
HHAR	Hobbs	2.94	88		Pn	00 19 18.8	+1.8
KSU1	Kansas State U	2.96	15	Pb	Pg	00 19 25.1	-1.4
	baz=195						
KSU1	Kansas State U	2.96	15	Pn	Pn	00 19 18.6	+1.4
CBKS	Cedar Bluff	3.10	327	Pb	Pb	00 19 26.8	+1.6
	baz=146						
CBKS	Cedar Bluff	3.10	327	Pn	Pn	00 19 19.7	+0.5
W39A	Magazine	3.25	107		Pn	00 19 21.8	+0.6
W39A	Magazine	3.25	107	P		00 19 22.2	
	baz=290						
AMTX	Amarillo	3.61	249	Pn	Pn	00 19 26.1	-0.1
AMTX				IAmb_Lg		00 20 32.5	
	comp=Z,40nm,0.7s						
Z38A	Mt. Pleasant	3.65	144		Pn	00 19 27.1	+0.4
Z38A				IAmb_Lg		00 20 34.8	
	comp=Z,71nm,0.8s						
MIAR	Mount Ida	3.67	116	P	Pn	00 19 28.2	+1.1
	baz=298						
MIAR	Mount Ida	3.67	116	Pn	Pn	00 19 28.1	+1.1
MIAR				IAmb_Lg		00 20 32.3	
	comp=Z,59nm,1.0s						
MIAR	Mount Ida	3.67	116	P		00 19 28.1	
	baz=298,SNR=20						
S39A	Bolivar	3.70	66		Pn	00 19 28.6	+1.1
S39A				IAmb_Lg		00 20 32.4	
	comp=Z,33nm,0.7s						
S39A	Bolivar	3.70	66	P		00 19 28.4	
	baz=248,SNR=37						
U40A	Yellville	3.82	87	Pn	Pn	00 19 30.6	+1.6
U40A	Yellville	3.82	87	P		00 19 29.4	
	baz=270,SNR=43						
U40A				P		00 19 29.4	
	baz=270,SNR=43						

ABTX	Abilene, Hawle	3.98	206		Pn	00 19 32.1	+0.8
ABTX				IAmb_Lg		00 20 39.5	
	comp=Z,32nm,0.7s						
WHTX	Lake Whitney,	4.23	179	P	Pn	00 19 35.9	+1.2
	baz=359						
WHTX	Lake Whitney,	4.23	179		Pn	00 19 33.9	-0.7
WHTX	Lake Whitney,	4.23	179	P		00 19 35.6	
	baz=359						
X40A	Basin Creek Fa	4.25	113	P	Pn	00 19 36.2	+1.3
	baz=296						
X40A	Basin Creek Fa	4.25	113	Pn	Pn	00 19 35.4	+0.5
X40A				IAmb_Lg		00 20 51.1	
	comp=Z,40nm,0.8s						
MGMO	Mountain Grove	4.36	76		Pn	00 19 36.4	-0.1
WHAR	Wooly Hollow	4.40	101		Pn	00 19 37.5	+0.6
WHAR				IAmb_Lg		00 20 54.9	
	comp=Z,49nm,0.8s						
FCAR	Ozark Folk Cen	4.43	93	Pn	Pn	00 19 38.6	+1.2
WLAR	White Oak Lake	4.46	123	Pn	Pn	00 19 37.3	-0.5
WLAR				IAmb_Lg		00 20 57.4	
	comp=Z,58nm,0.9s						
W41B	Gary Mavity, V	4.46	102	P	Pn	00 19 38.4	+0.6
	baz=285						
W41B				S	Sn	00 20 29.7	-0.4
	baz=285						
W41B	Gary Mavity, V	4.46	102	P		00 19 38.3	
	baz=285,SNR=16						
W41B				S		00 20 29.7	
	baz=285						
237A	Washetta, Mont	4.47	160	Pn	Pn	00 19 37.2	-0.7
P38A	Dawn	4.66	42		Pn	00 19 39.7	-0.8
P38A				IAmb_Lg		00 21 04.3	
	comp=Z,34nm,0.8s						
R40A	Maddies Statio	4.71	63		Pn	00 19 40.7	-0.5
R40A				IAmb_Lg		00 20 56.7	
	comp=Z,46nm,0.8s						
R40A	Maddies Statio	4.71	63	P		00 19 41.7	
	baz=246,SNR=12						
MSTX	Muleshoe	4.82	244		Pn	00 19 40.7	-2.2
N35A	Tabor	4.86	18		Pn	00 19 42.8	-0.5
KSCO	Kaye Shedlock'	4.88	306		Pn	00 19 43.1	-0.6
KSCO				IAmb_Lg		00 21 15.5	
	comp=Z,43nm,0.7s						
Z41A	Richland Creek	4.92	126	S	Sn	00 20 41.0	-0.4
	baz=308						
BGNE	Belgrade	5.19	355		Pn	00 19 47.4	-0.4
BGNE				IAmb_Lg		00 21 17.3	
	comp=Z,34nm,0.8s						
LCAR	Lake Charles	5.20	90	Pn	Pn	00 19 48.8	+0.9
T42A	Van Buren	5.27	79		Pn	00 19 49.2	+0.2
T42A				IAmb_Lg		00 21 16.1	
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	5.38	68	P	Pn	00 19 51.5	+1.1
	baz=252						
CCM	Cathedral Cave	5.38	68	Pn	Pn	00 19 51.5	+1.1
CCM				IAmb_Lg		00 21 22.4	
	comp=Z,29nm,0.8s						
CCM	Cathedral Cave	5.38	68	P		00 19 50.8	
	baz=252,SNR=8.0						
435B	Jarrell	5.43	180	Pn	Pn	00 19 51.0	-0.2
435B				IAmb_Lg		00 21 28.3	
	comp=Z,29nm,0.8s						
P40A	Paris	5.47	51	Pn	Pn	00 19 52.4	+0.7
PBMO	Poplar Bluff	5.78	82	IAmb_Lg		00 21 41.4	
	comp=Z,41nm,0.8s						
L34A	Svendsen Farm,	5.80	9	Pn	Pn	00 19 55.7	-0.5
OGNE	Ogallala	5.86	325	IAmb_Lg		00 21 48.7	
	comp=Z,32nm,1.0s						
FVM	French Village	5.97	71	Pn	Pn	00 19 59.2	+0.6
FVM				IAmb_Lg		00 21 39.4	
	comp=Z,35nm,0.8s						
JCT	Junction City	6.03	199	Pn	Pn	00 19 59.7	+0.2
JCT				IAmb_Lg		00 21 51.1	
	comp=Z,41nm,0.7s						
143A	Socs Landing,	6.19	123	IAmb_Lg		00 21 53.3	
	comp=Z,30nm,1.0s						
PEBM	Pemiscott Bayo	6.24	89	IAmb_Lg		00 22 00.0	
	comp=Z,47nm,0.8s						
PARMO	Parma	6.32	84	IAmb_Lg		00 21 56.1	
	comp=Z,42nm,0.8s						
K31A	O'Neill	6.45	352	IAmb_Lg		00 21 57.5	
	comp=Z,30nm,0.7s						
S44A	Carbondale	6.82	75	IAmb_Lg		00 22 02.5	
	comp=Z,30nm,0.9s						
OXF	Oxford	6.89	102	IAmb_Lg		00 22 17.5	
	comp=Z,32nm,1.0s						
N41A	Harden Midland	6.91	48	IAmb_Lg		00 22 24.2	
	comp=Z,39nm,0.7s						
W45A	Hickory Valley	6.91	96	IAmb_Lg		00 22 18.4	
	comp=Z,30nm,1.0s						
ECSD	EROS Data Cent	7.53	5	Pn	Pn	00 20 18.6	-1.4
SUSD	Miller	8.27	353	IAmb_Lg		00 23 01.8	
	comp=Z,18nm,0.8s						
JFWS	Jewell Farm	8.75	38	IAmb_Lg		00 23 07.6	
	comp=Z,21nm,0.8s						
BLO	Bloomington	9.24	68	IAmb_Lg		00 23 20.0	
	comp=Z,27nm,0.7s						

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*IDC **26** 00:53:25.1±0.9, 32.°67N×91.°91E, h0km, mb3.5/11, mb1 3.7/15, mb1mx3.5/52, mbtmp3.5/15, ML3.5/4, Error ellipse: s-maj=27.6km s-min=17.9km az=48.0*

ISC 26 00:53:30.0±0.7, **32.°54N**±0.°09×**91.°9E**±0.°1, **h41**km, **n24**, σ**1.s75**/24, **mb3.5**/11, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	6.31	216	*e*P	Pn	00 55 00.0	-0.8
	12nm,0.6s						
ODAN	Odare	6.87	216	*e*P	Pn	00 55 04.7	-3.7
GUN	Gumba	6.94	230	*e*P	Pn	00 55 10.9	+1.4
	11nm,0.3s						
RAMN	Ramite	7.21	221	*e*P	Pn	00 55 10.7	-2.4
	17nm,0.4s						
KKN	Kakani	7.41	232	*e*P	Pn	00 55 16.0	+0.1
	13nm,0.5s						
PKI	Pulchoki	7.48	230	*e*P	Pn	00 55 16.3	-0.5
	18nm,0.6s						
PKIN	Phulchoki	7.48	230	*e*P	Pn	00 55 16.3	-0.5
	11nm,0.5s						
DANN	Dangsing	8.15	241	*e*P	Pn	00 55 25.2	-0.9
	11nm,0.4s						
CMAR	Chiang Mai Arr	15.39	154	Pn	Pn	00 57 03.3	-1.1
	0.6nm,0.3s,baz=338,slow=12,SNR=1.7						
MKAR	Makanchi Array	16.02	336	Pn	Pn	00 57 09.5	-2.8
	0.0nm,0.3s,baz=134,slow=15,SNR=3.6						
AAK	Ala-Archa	17.04	311	Pn	Pn	00 57 25.7	+0.3
	0.1nm,0.3s,baz=129,slow=6.5,SNR=2.6						
SONM	Songino Array	18.83	32	P	P	00 57 46.6	+0.2
	0.1nm,0.3s,baz=218,slow=12,SNR=9.0						
KURBB	Kurchatov Arra	20.59	335	P	P	00 58 04.8	-0.5
	0.4nm,0.3s,baz=147,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	21.99	349	P	P	00 58 17.9	-2.4
	1.6nm,0.8s,baz=169,slow=10,SNR=8.8						
BRTR	Keskin Array B	46.87	296	P	P	01 01 56.3	0.0
	0.4nm,0.7s,baz=68,slow=9.4,SNR=2.7						
AKASG	Malin Array Be	48.71	311	P	P	01 02 11.9	+1.7
	0.3nm,0.5s,baz=82,slow=6.0,SNR=1.7						
PETK	Petropavlovsk-	50.53	45	P	P	01 02 23.0	-1.0
	5.5nm,1.0s,baz=262,slow=10.0,SNR=2.9						
MLR	Muntele Rosu	51.48	305	P	P	01 02 30.1	-1.3
	0.5nm,0.6s,baz=105,slow=16						
GERES	GERESS Array B	58.92	311	P	P	01 03 26.5	+1.5
	0.2nm,0.6s,baz=50,slow=1.5,SNR=1.4						
WRA	Warramunga Arr	66.12	136	P	P	01 04 13.9	+0.7
	0.6nm,0.8s,baz=328,slow=6.1,SNR=4.1						
ASAR	Alice Springs	68.80	139	P	P	01 04 33.5	+3.5
	0.4nm,0.8s,baz=322,slow=6.7,SNR=4.3						
ILAR	Eielson Array	72.79	23	P	P	01 04 53.7	-0.1
	0.3nm,0.9s,baz=285,slow=3.5,SNR=2.5						
YKA	Yellowknife Ar	82.93	12	P	P	01 05 51.5	+1.3
	0.1nm,0.7s,baz=321,slow=4.8,SNR=2.2						
TORD	Torodi Ar. Bea	83.20	281	P	P	01 05 54.2	+1.8
	0.7nm,0.8s,baz=27,slow=7.1,SNR=2.7						

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*IDC **26** 01:09:46.3±0.7, 52.°41N×173.°56E, h0km, mb3.8/17, mb1 4.0/19, mb1mx3.9/48, mbtmp3.8/19, ML4.0/2, Error ellipse: s-maj=22.8km s-min=14.4km az=169.0*

*KRSC **26** 01:09:47.1±0.9, 52.°45N×173.°35E, h49km±12km, ML4.3*

*AEIC **26** 01:09:48.7±3.2, 52.°8N±0.°1×173.°28E±0.°09, h22km±4km, Error ellipse: s-maj=14.7km s-min=7.5km az=185.0*

*MOS **26** 01:09:49.9±1.1, 52.°45N×173.°26E, h36km, mb4.4/10, Error ellipse: s-maj=8.6km s-min=7.2km az=41.3*

*NEIC **26** 01:09:52.2±1.6, 52.°50N±0.°08×173.°39E±0.°09, h35km±7km, mb4.4/74, ML4.1/17(AEIC), Error ellipse: s-maj=11.5km s-min=7.7km az=160.0*

ISC 26 01:09:51.7±0.4, **52.°47N**±0.°07×**173.°36E**±0.°04, **h33**km, **n191**, σ**1.s35**/194, **mb4.3**/60, **1C**, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.52	60	P	Pb	01 09 59.6	-3.0
SMY				S	Sb	01 10 07.2	-2.9
SMY	Shemya	0.52	60	*e*P	Pb	01 09 59.6	-3.0
SMY				*e*S	Sb	01 10 07.2	-2.9
SMY	Shemya	0.52	60		Pb	01 09 59.1	-3.4
SMY	Shemya	0.52	60	Sn	Sb	01 10 07.5	-2.5
LSNW	Little Sitkin	3.21	97		Pn	01 10 39.8	+0.1
LSNW					Sn	01 11 19.7	+2.8
LSSA	Little Sitkin	3.22	97		Pn	01 10 40.1	+0.3
LSPA	Little Sitkin	3.25	97		Pn	01 10 39.7	-0.6
LSPA					Sn	01 11 20.6	+2.8
AMKA	Amchitka	3.84	104	Pn	Pn	01 10 48.0	-0.4
AMKA				Sn	Sn	01 11 32.2	-0.1
CEAP	Semis' Anvil P	3.85	95		Pn	01 10 48.8	+0.2
CESW	Semis' Southwe	3.86	96		Pn	01 10 48.4	-0.3
BKI	Bering	5.16	305	P	Pn	01 11 06.4	0.0
BKI				S	Sn	01 12 03.1	-1.6
BKI	Bering	5.16	305	P	Pn	01 11 06.4	0.0
BKI				S	Sn	01 12 03.1	-1.6
TAFP	Tanaga Falls P	5.36	93		Pn	01 11 09.0	-0.3
TAFP					Sn	01 12 10.7	+0.9
KIMD	Kanaga Island	5.84	93		Pn	01 11 16.4	+0.6
KIKV	Kanaga Island	5.86	92		Pn	01 11 16.3	+0.2
ADK	Adak	6.16	92	P	Pn	01 11 19.8	-0.4
ADK	Adak	6.16	92	Pn	Pn	01 11 19.8	-0.4
KBTR	Krutoberegovo	7.21	305	P	Pn	01 11 34.5	0.0
KBTR	Krutoberegovo	7.21	305	*e*P	Pn	01 11 34.5	0.0
MKZ	Mys Kozlova	7.24	291	P	Pn	01 11 35.1	+0.1
MKZ	Mys Kozlova	7.24	291	*e*P	Pn	01 11 35.1	+0.1
KOKL	Mount Kliuchef	7.62	86		Pn	01 11 39.4	-0.8
ATKA	Atka Island	7.63	87	Pn	Pn	01 11 40.0	-0.4
SPN	Mys Shipunski	8.11	280	P	Pn	01 11 45.8	-1.1
SPN				S	Sn	01 13 12.7	-4.7
SPN	Mys Shipunski	8.11	280	*e*P	Pn	01 11 45.8	-1.1
SPN				*e*S	Sn	01 13 12.7	-4.7
TUMD	Tumrok D	8.14	295	*e*P	Pn	01 11 48.1	+0.8
KZV	Kizimen	8.17	294	P	Pn	01 11 48.3	+0.3
KZV	Kizimen	8.17	294	*e*P	Pn	01 11 48.3	+0.3
TUMR	Tumrok	8.30	295	P	Pn	01 11 48.1	-1.5
UGLR	Uglovaya	8.83	281	P	Pn	01 11 57.3	+0.4
UGLR	Uglovaya	8.83	281	*e*P	Pn	01 11 57.3	+0.4
AVH	Avacha	8.88	281	P	Pn	01 11 57.1	-0.5
AVH	Avacha	8.88	281	*e*P	Pn	01 11 57.1	-0.5
OSSR	Ossora	8.91	324	P	Pn	01 11 58.7	+0.8
OSSR	Ossora	8.91	324	*e*P	Pn	01 11 58.7	+0.8
TILK	Tilichiki	8.93	336	P	Pn	01 11 58.8	+0.7
TILK	Tilichiki	8.93	336	*e*P	Pn	01 11 58.8	+0.7
KOK	Koryaka	8.94	281	P	Pn	01 11 58.2	-0.2
KOK	Koryaka	8.94	281	*e*P	Pn	01 11 58.2	-0.2
RUS	Russkaya	9.07	276	P	Pn	01 12 00.5	+0.5
RUS	Russkaya	9.07	276	*e*P	Pn	01 12 00.5	+0.5
MTVR	Mutnovka	9.26	276	P	Pn	01 12 03.1	+0.2
MTVR	Mutnovka	9.26	276	*e*P	Pn	01 12 03.1	+0.2
KRMR	Karymshinskiy	9.27	278	P	Pn	01 12 01.6	-1.2
KRMR				S	Sn	01 13 42.1	-3.6
KRMR	Karymshinskiy	9.27	278	*e*P	Pn	01 12 01.6	-1.2
KRMR				*e*S	Sn	01 13 42.1	-3.6
GNL	Ganaly	9.36	284	P	Pn	01 12 04.6	+0.4
GNL	Ganaly	9.36	284	*e*P	Pn	01 12 04.6	+0.4
PEA0B	Petropavlovsk-	9.51	280	P	Pn	01 12 07.1	+1.0
PEA0B	Petropavlovsk-	9.51	280	Pn	Pn	01 12 07.1	+1.0
PETK	Petropavlovsk-	9.51	280	Pn	Pn	01 12 07.1	+1.0
	2.2nm,0.3s,baz=98,slow=17,SNR=46						
PETK				Sn	Sn	01 13 46.0	-5.7
	0.2nm,0.3s,baz=103,slow=18,SNR=2.2						
PETK	Petropavlovsk-	9.51	280	Pn	Pn	01 12 06.5	+0.4
SPIA	Saint Paul Isl	10.56	57	Pn	Pn	01 12 21.3	+0.9
UNV	Unalaska Valle	12.16	76	Pn	Pn	01 12 43.5	+1.1
GAMB	Gambell	13.76	29	Pn	Pn	01 13 03.7	-0.4
MA2	Magadan	14.44	308	Pn	P	01 13 20.8	+0.9
	0.4nm,0.3s,baz=111,slow=9.7,SNR=3.8						
SEY	Seymchan	15.26	322	Pn	P	01 13 29.9	+1.0
	0.2nm,0.3s,baz=75,slow=20,SNR=1.5						
BILL	Bilibino	15.99	350⇑	*e*P	P	01 13 40.7	+3.8
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,69nm,15.0s						
ANM	Nome	16.32	34	P	P	01 13 40.4	-0.3
ANM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ANM	Nome	16.32	34	P	P	01 13 40.4	-0.3
CHGN	Chignik	16.82	66	Pn	P	01 13 44.0	-2.2
CHGN				IAmb	IAmb	01 13 45.5	
	comp=Z,28nm,1.4s						
SVW2	Sparrevohn	18.91	51	P	Pn	01 14 10.2	+0.1
TTA	Tatalina	19.22	45	P	Pn	01 14 14.0	+0.2
TTA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
TTA	Tatalina	19.22	45	P	Pn	01 14 14.0	+0.2
OHAK	Old Harbor	19.66	63	P	P	01 14 15.8	-1.5
OHAK				IAmb	IAmb	01 14 28.7	
	comp=Z,33nm,1.2s						
KDAK	Kodiak Island	20.04	61	P	P	01 14 20.1	-1.4
	comp=Z,1.1nm,0.3s,baz=326,slow=1.9,SNR=21						
KDAK	Kodiak Island	20.04	61	P	P	01 14 20.6	-0.9
KDAK				pmax	pmax		
	comp=Z,58nm,1.5s						
KDAK	Kodiak Island	20.04	61	P	P	01 14 20.6	-0.9
RSO	Redoubt South	20.16	53	P	Pn	01 14 24.1	-1.0
CNPM	China Poot	20.82	56	P	Pn	01 14 30.5	-2.1
PPLA	Purkeypile	20.89	47	P	Pn	01 14 33.3	-0.3
PPLA				IAmb	IAmb	01 14 42.7	
	comp=Z,21nm,1.2s						
SKT	Skwentna	20.99	49	P	P	01 14 32.6	+0.7
SKT				IAmb	IAmb	01 14 42.6	
	comp=Z,8.7nm,0.8s						
BRLK	Bradley Lake	21.01	56	P	P	01 14 31.6	-0.5
IMAR	Indian Mountai	21.25	38	P	P	01 14 35.9	+1.3
SUA	Susitna One	21.27	51	P	P	01 14 35.2	+0.2
KTH	Kantishna Hill	21.61	45	P	P	01 14 40.5	+2.0
KTH				IAmb	IAmb	01 14 49.2	
	comp=Z,11nm,0.8s						
BPAW	Bear Paw Mtn.	21.72	44	P	P	01 14 40.8	+1.1
TRF	Thorofare Moun	21.86	46	P	P	01 14 41.7	+0.4
TRF				IAmb	IAmb	01 14 51.3	
	comp=Z,14nm,0.9s						
GHO	Glory Hole Cre	22.18	50	P	P	01 14 44.6	-0.1
GHO				IAmb	IAmb	01 14 57.4	
	comp=Z,16nm,1.2s						
KNK	Knik Glacier	22.36	51	P	P	01 14 47.2	+0.7
KNK				IAmb	IAmb	01 14 48.0	
	comp=Z,12nm,0.8s						
BWN	Browne	22.39	44	P	P	01 14 47.9	+1.2
SML	Sawmill	22.46	50	P	P	01 14 46.5	-1.2
RND	Reindeer	22.48	46	P	P	01 14 48.0	+0.1
RND				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RND	Reindeer	22.48	46	P	P	01 14 48.0	+0.1
I23K	Minto, Yukon-K	22.68	42	P	P	01 14 49.9	0.0
SCM	Sheep Creek Mo	22.94	50	P	P	01 14 51.4	-1.3
SCM				pmax	pmax		
	comp=Z,20nm,1.2s						
SCM	Sheep Creek Mo	22.94	50	P	P	01 14 51.4	-1.3
SCM				IAmb	IAmb	01 14 57.6	
	comp=Z,20nm,1.2s						
WRH	Wood River Hil	23.04	44	P	P	01 14 52.9	-0.7
WRH				IAmb	IAmb	01 15 01.4	
	comp=Z,9.3nm,0.8s						
DHY	Denali Highway	23.08	47	P	P	01 14 54.8	+0.6
MDM	Murphy Dome	23.10	42	P	P	01 14 54.5	+0.3
MDM				IAmb	IAmb	01 15 02.6	
	comp=Z,8.1nm,0.9s						
A21K	Barrow	23.14	24	P	P	01 14 51.9	-2.7
CCB	Clear Creek Bu	23.20	43	P	P	01 14 54.9	-0.3
TCOL	CIGO, UAF Yank	23.23	43	P	P	01 14 55.2	-0.2
TCOL				IAmb	IAmb	01 15 03.3	
	comp=Z,13nm,0.9s						
COLA	College	23.23	43	P	P	01 14 55.7	+0.2
COLA				pmax	pmax		
	comp=Z,13nm,1.0s						
COLA	College	23.23	43	P	P	01 14 55.7	+0.2
COLA				IAmb	IAmb	01 15 03.3	
	comp=Z,12nm,0.9s						
POKR	Poker Plat Res	23.46	42	P	P	01 14 56.0	-1.8
POKR				IAmb	IAmb	01 15 06.6	
	comp=Z,8.6nm,0.8s						
M24K	Tolsona, Glenn	23.51	50	P	P	01 14 58.8	+0.4
M24K				IAmb	IAmb	01 15 10.6	
	comp=Z,17nm,1.1s						
IL31		23.61	43	P	P	01 14 59.2	+0.1
ILAR	Eielson Array	23.61	43	P	P	01 14 57.2	-2.0
	comp=Z,1.7nm,0.9s,baz=240,slow=8.9,SNR=14						
ILAR	Eielson Array	23.61	43	P	P	01 15 00.2	+0.9
ILAR	Eielson Array	23.61	43	P	P	01 15 00.2	+0.9
PAX	Paxson	23.93	48	P	P	01 15 02.8	+0.5
PAX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PAX	Paxson	23.93	48	P	P	01 15 02.8	+0.5
RIDG	Independent Ri	24.31	46	P	P	01 15 04.3	-1.5
PRP	Porcupine Dome	24.34	42	P	P	01 15 05.9	-0.2
PRP				IAmb	IAmb	01 15 14.8	
	comp=Z,8.7nm,1.0s						
GLB	Gilahina Butte	24.59	52	P	P	01 15 08.7	+0.3
GLB				IAmb	IAmb	01 15 17.2	
	comp=Z,20nm,1.2s						
DOT	Dot Lake	24.64	46	P	P	01 15 07.7	-1.1
DOT				IAmb	IAmb	01 15 16.4	
	comp=Z,9.7nm,0.6s						
CRQM	Cirque	24.91	53	P	P	01 15 11.9	+0.5
MCARA	McCarthy VSAT	24.97	52	P	P	01 15 13.0	+1.3
BMAR	Burnt Mountain	25.17	37	P	P	01 15 13.4	-0.1
BARN	Barnard Glacie	25.62	53	P	P	01 15 17.7	-0.2
BARN				IAmb	IAmb	01 15 19.1	
	comp=Z,9.1nm,0.7s						
CTGM	Chitina Glacie	25.79	53	P	P	01 15 19.6	+0.2
CTGM				IAmb	IAmb	01 15 37.0	
	comp=Z,20nm,1.2s						
KLR	Kul'dur	26.20	280	P	P	01 15 24.6	+1.6
	comp=Z,0.4nm,0.4s,baz=108,slow=13,SNR=2.4						
HYT	Haines Junctio	27.66	53	P	P	01 15 37.1	+0.8
HYT				IAmb	IAmb	01 15 55.0	
	comp=Z,12nm,1.3s						
C36M	Paulatuk	32.90	35	P	P	01 16 21.7	-0.5
C36M				IAmb	IAmb	01 16 31.0	
	comp=Z,5.0nm,0.9s						
H11N2	WAKE ISLAND Hy	33.06	191	T	T	01 51 20.9	
	baz=7.2,slow=76,SNR=355						
H11N3	WAKE ISLAND Hy	33.08	191	T	T	01 51 21.8	
	baz=7.2,slow=76,SNR=567						
H11N1	WAKE ISLAND Hy	33.08	191	T	T	01 51 22.3	
	baz=7.2,slow=76,SNR=547						
H11S1	WAKE ISLAND Hy	34.29	191	T	T	01 52 52.2	
	baz=6.9,slow=76,SNR=444						
H11S3	WAKE ISLAND Hy	34.31	191	T	T	01 52 54.0	
	baz=6.9,slow=76,SNR=438						
H11S2	WAKE ISLAND Hy	34.31	191	T	T	01 52 54.4	
	baz=6.9,slow=76,SNR=395						
YKA	Yellowknife Ar	37.98	46	P	P	01 17 05.4	-0.4
	comp=Z,1.1nm,0.7s,baz=290,slow=7.5,SNR=16						
MWH	Moku'aweowe	40.82	132	P	P	01 17 29.5	-1.1
AIN	Ainahou	40.98	132	P	P	01 17 32.9	+1.3
LTY	Liberty	41.51	70	P	P	01 17 35.4	-0.2
B08A	Colville Reser	41.69	68	P	P	01 17 36.5	-0.4
B08A				IAmb	IAmb	01 17 49.7	
	comp=Z,6.9nm,1.4s						
SONM	Songino Array	41.77	291	P	P	01 17 39.7	+2.0
	comp=Z,0.1nm,0.5s,baz=61,slow=7.9,SNR=1.6						
HAWA	Hanford	42.64	70	P	P	01 17 44.8	+0.2
HAWA				IAmb	IAmb	01 17 52.1	
	comp=Z,4.1nm,0.7s						
HHC	Hu-ho-hao-te	42.71	280	*e*P	P	01 17 48.0	+2.6
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,6.9s						
NEW	Newport	42.98	67	P	P	01 17 47.5	0.0
NEW				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NEW	Newport	42.98	67	P	P	01 17 47.5	0.0
MCMT	McKenzie Canyo	47.37	68	P	P	01 18 21.7	-0.8
NVAR	Mina Array Bea	48.16	78	P	P	01 18 31.3	+2.5
	comp=Z,0.2nm,0.5s,baz=301,slow=7.3,SNR=1.4						
YHL	Hebgen Lake	48.30	67	P	P	01 18 28.4	-1.4
FLWY	Flagg Ranch	49.04	68	P	P	01 18 36.2	+0.8
FLWY				IAmb	IAmb	01 18 40.2	
	comp=Z,3.7nm,1.1s						
DUG	Dugway, Tooele	50.28	73	P	P	01 18 45.0	+0.2
DUG				pmax	pmax		
	comp=Z,4.0nm,1.5s						
DUG	Dugway, Tooele	50.28	73	P	P	01 18 45.0	+0.2
LZH	Lanzhou	50.41	280	*e*P	P	01 18 45.5	-0.3
LZH				pP	sP	01 18 56.0	-3.7
LZH				sP	pP	01 19 00.3	+4.6
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,56nm,5.4s						
PDAR	Pinedale Array	50.52	68	P	P	01 18 45.0	-1.6
	comp=Z,1.3nm,0.8s,baz=299,slow=3.6,SNR=8.1						
PDAR	Pinedale Array	50.52	68	P	P	01 18 46.3	-0.4
ULM	Lac du Bonnet	53.04	53	P	P	01 19 04.3	-0.7
	comp=Z,1.2nm,0.4s,baz=263,slow=4.1,SNR=3.4						
ULM	Lac du Bonnet	53.04	53	P	P	01 19 04.5	-0.6
ULM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULM	Lac du Bonnet	53.04	53	P	P	01 19 04.5	-0.6
ULM				IAmb	IAmb	01 19 05.4	
	comp=Z,3.2nm,1.0s						
PV17	East Wray Mesa	53.79	72	P	P	01 19 11.5	+0.5
PV17				IAmb	IAmb	01 19 22.7	
	comp=Z,6.2nm,1.5s						
PV13	Radium Mtn., P	53.95	72	P	P	01 19 12.7	+0.5
WMQ	Urumqi	54.60	298	*e*P	P	01 19 19.5	+2.9
KURK	Kurchatov	54.65	309	P	P	01 19 16.5	-0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	54.65	309	P	P	01 19 16.5	-0.3
KURK				IAmb	IAmb	01 19 24.9	
	comp=Z,2.2nm,0.8s						
KURBB	Kurchatov Arra	54.76	309	P	P	01 19 17.4	-0.2
	comp=Z,1.2nm,0.5s,baz=50,slow=6.9,SNR=8.4						
MK31	Makanchi Array	55.46	303	P	P	01 19 21.6	-1.2
MK31				pmax	pmax		
	comp=Z,1.0nm,1.3s						
MK31	Makanchi Array	55.46	303	P	P	01 19 21.6	-1.2
MKAR	Makanchi Array	55.46	303	P	P	01 19 21.6	-1.1
	comp=Z,0.5nm,0.5s,baz=60,slow=6.2,SNR=9.7						
MAKZ	Makanchi	55.61	304	P	P	01 19 23.6	-0.2
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MAKZ	Makanchi	55.61	304	P	P	01 19 23.6	-0.2
PIX	Pinacate	55.73	81	P	P	01 19 23.8	-1.1
PIX				IAmb	IAmb	01 19 28.3	
	comp=Z,4.3nm,1.2s						
XMAS	Kiritimati	55.83	144	P	P	01 19 23.1	-2.6
ARCES	ARCESS Array B	56.05	347	P	P	01 19 27.1	+0.5
	comp=Z,4.8nm,1.0s,baz=42,slow=8.6,SNR=2.5						
BVAR	Borovoye Array	56.80	315	P	P	01 19 33.8	+1.6
	comp=Z,0.2nm,0.4s,baz=30,slow=12,SNR=4.1						
MNTX	Cornudas Mount	60.47	76	P	P	01 20 00.4	+2.3
MNTX				IAmb	IAmb	01 20 06.2	
	comp=Z,2.4nm,0.8s						
TX31	Lajitas Ar. Si	63.20	76	P	P	01 20 18.7	+2.2
TX32	Lajitas Array	63.20	76	P	P	01 20 18.6	+2.1
TX32				IAmb	IAmb	01 20 24.5	
	comp=Z,2.1nm,0.6s						
TXAR	Lajitas Array	63.20	76	P	P	01 20 15.8	-0.8
	comp=Z,0.4nm,0.4s,baz=298,slow=5.4,SNR=7.4						
TXAR	Lajitas Array	63.20	76	P	P	01 20 16.8	+0.2
TXAR	Lajitas Array	63.20	76	P	P	01 20 16.8	+0.2
FINES	FINESS Array B	63.48	343	P	P	01 20 19.9	+2.1
	comp=Z,1.5nm,0.9s,baz=354,slow=11,SNR=1.8						
NOA	NORSAR Array B	65.94	351	P	P	01 20 41.7	+7.8
	comp=Z,0.7nm,0.7s,baz=3.6,slow=3.0,SNR=4.4						
M53A	WI Miller and	66.73	52	P	P	01 20 40.3	+1.1
WVT	Waverly	67.14	60	P	P	01 20 42.7	+0.8
WVT				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WVT	Waverly	67.14	60	P	P	01 20 42.7	+0.8
N54A	Moraine State	67.43	52	P	P	01 20 44.6	+0.9
PLAL	Pickwick Lake	67.87	61	P	P	01 20 48.8	+2.3
SSPA	Standing Stone	68.69	51	P	P	01 20 51.5	-0.1
WES	Weston	70.28	45	P	P	01 21 02.3	+1.0
WES	Weston	70.28	45	P	P	01 21 02.3	+1.0
AKASG	Malin Array Be	72.82	337	P	P	01 21 16.3	-0.2
	comp=Z,0.3nm,0.5s,baz=27,slow=5.3,SNR=1.9						
GEYT	Alibeck	73.86	312	P	P	01 21 22.5	-0.4
	comp=Z,0.8nm,0.5s,baz=357,slow=5.8,SNR=2.0						
BUR08	Bucovina Ar. S	76.62	338	P	P	01 21 38.8	+0.1
BUR08				IAmb	IAmb	01 21 46.6	

	comp=Z,3.1nm,0.9s						
BURAR	Bucovina Array	76.64	338	P	P	01 21 39.1	+0.3
WLF	Walferdange	77.66	352	P	P	01 21 43.9	-0.5
WLF				pmax	pmax		
	comp=Z,15nm,1.4s						
WLF	Walferdange	77.66	352	P	P	01 21 43.9	-0.5
WB0	Warramunga Arr	79.51	217	P	P	01 21 54.7	-0.1
WB0				IAmb	IAmb	01 22 09.1	
	comp=Z,8.1nm,1.3s						
WR0	Warramunga Arr	79.64	217	P	P	01 21 55.7	+0.2
WR0				IAmb	IAmb	01 21 59.7	
	comp=Z,4.9nm,1.2s						
WB2	Warramunga Arr	79.69	217	P	P	01 21 56.1	+0.3
WB2				IAmb	IAmb	01 21 57.0	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	79.69	217	P	P	01 21 55.2	-0.6
	comp=Z,1.3nm,0.8s,baz=31,slow=6.4,SNR=8.1						
WRA	Warramunga Arr	79.69	217	P	P	01 21 56.0	+0.2
WRA	Warramunga Arr	79.69	217	P	P	01 21 56.0	+0.2
FITZ	Fitzroy Crossi	81.53	225	P	P	01 22 06.1	+0.4
FITZ				IAmb	IAmb	01 22 18.4	
	comp=Z,4.3nm,1.1s						
BRTR	Keskin Array B	81.74	330	P	P	01 22 07.7	+0.8
	comp=Z,0.3nm,0.7s,baz=26,slow=6.5,SNR=2.4						
ASAR	Alice Springs	83.26	216	P	P	01 22 15.3	+0.7
	comp=Z,0.5nm,0.7s,baz=16,slow=5.6,SNR=5.4						
ASAR	Alice Springs	83.26	216	P	P	01 22 15.5	+0.9
ASAR	Alice Springs	83.26	216	P	P	01 22 15.5	+0.9
URZ	Urewera	90.42	177	P	P	01 22 48.9	-0.1
	comp=Z,5.0nm,0.6s,baz=79,slow=16,SNR=1.3						

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*NEIC **26** 01:17:15.8±2.3, 31°.07S±0°.04×71°.78W±0°.02, h11^{km}±5^{km}, mb4.3/3, ML3.9(GUC), Error ellipse: s-maj=6.3km s-min=2.2km az=175.0*

*SJA **26** 01:17:15.2±0.9, 30°.98S×71°.87W, h15^{km}, ML4.0, MW4.3*

*GUC **26** 01:17:16.6±1.1, 31°.09S×71°.68W, h39^{km}±5^{km}, ML4.0*

*IDC **26** 01:17:19.5±7.2, 30°.97S×71°.74W, h51^{km}±55^{km}, mb3.6/3, mb1 3.6/6, mb1mx3.4/31, mbtmp3.7/6, ML3.5/3, Error ellipse: s-maj=50.5km s-min=33.1km az=28.0*

ISC 26 01:17:15.6±1.3**, 31°.01S**±0°.02×**71°.75W**±0°.04**, h14**^{km}±8^{km}**, n78,** σ**1^{s}.88**/108**, mb4.2**/5**, 7C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	Combarbal	0.67	107	⇓iP	Pn	01 17 29.8	-1.0
CO02				i S	Sn	01 17 39.1	-2.0
CO02	Combarbal	0.67	107		Pn	01 17 29.7	-1.1
CO02				Sg	Sb	01 17 36.8	-1.5
CO03	El Pedregal	0.93	80	⇓iP	Pn	01 17 34.3	0.0
CO03				i S	Sn	01 17 47.0	-0.4
CO03	El Pedregal	0.93	80		Pn	01 17 34.2	0.0
GO04	Tololo Observa	1.17	45	⇑iP	Pg	01 17 39.0	+0.8
GO04				i S	Sn	01 17 55.9	+2.3
GO04	Tololo Observa	1.17	45	Pn	Pn	01 17 37.8	+0.1
GO04					Sn	01 17 55.2	+1.7
GO04	Tololo Observa	1.17	45	eP	Pg	01 17 39.0	+0.8
GO04				eS	Sn	01 17 56.3	+2.8
CO01	Juntas del Tor	1.76	55	⇑iP	Pg	01 17 48.4	-1.0
CO01				i S	Sg	01 18 11.6	-0.7
CO01	Juntas del Tor	1.76	55		Pg	01 17 48.4	-1.0
CO01				Sn	Sg	01 18 11.4	-0.9
VA03	San Esteban	2.02	150	⇑iP	Pn	01 17 49.9	+0.5
VA03				eS	Sn	01 18 14.4	-0.1
VA03				IAML		01 18 20.0	
	comp=E,2μm,0.6s						
VA03	San Esteban	2.02	150	Pn	Pn	01 17 49.7	+0.3
ROCH	El Roble	2.05	162	eP	Pn	01 17 49.7	-0.2
ROCH				i S	Sb	01 18 16.4	-1.9
ROCH				IAML		01 18 22.0	
	comp=N,945nm,0.6s						
ROC1	El Roble	2.06	163		Pn	01 17 49.6	-0.3
ROC1	El Roble	2.06	163	eP	Pn	01 17 49.8	-0.2
ROC1				eS	Sb	01 18 17.4	-0.9
AROD	Rodeo	2.13	67	eP	Pb	01 17 54.8	+0.6
AROD				eS	Sg	01 18 24.6	+0.3
LCO	Las Campanas	2.19	25	Pn	Pn	01 17 53.4	+1.6
RTLS	Leoncito	2.24	111	eP	Pb	01 17 56.3	+0.3
RTLS				eS	Sg	01 18 26.5	-1.1
RTLS				IAML		01 18 28.0	
	comp=Z,894nm,0.9s						
MT02	Curacav	2.30	167	eP	Pn	01 17 53.3	+0.2
MT02				i S	Sn	01 18 21.3	+0.1
MT02	Curacav	2.30	167	Pn	Pn	01 17 52.8	-0.3
PEL	Peldehue	2.31	157	⇑iP	Pn	01 17 53.7	+0.4
PEL				i S	Sn	01 18 22.2	+0.7
PEL				IAML		01 18 33.9	
	comp=E,951nm,0.7s						
PEL	Peldehue	2.31	157	Pn	Pn	01 17 53.6	+0.3
PEL	Peldehue	2.31	157	eP	Pn	01 17 53.9	+0.6
PEL				eS	Sb	01 18 25.2	-0.3
ACCO	Cerro Coronel	2.34	80	eP	Pb	01 17 57.7	-0.1
ACCO				IAML		01 18 34.6	
	comp=Z,398nm,0.7s						
AUSP	Uspallata	2.35	122	eP	Pb	01 17 57.6	-0.2
AUSP				eS	Sg	01 18 28.7	-2.4
ACDV	Cuesta del Vie	2.42	70	eP	Pb	01 17 59.7	+0.8
ACDV				IAML		01 18 42.1	
	comp=Z,362nm,1.1s						
AC05	El Transito	2.52	31	⇑iP	Pb	01 17 58.8	-1.8
AC05				i S	Sb	01 18 31.3	-0.1
AC05				IAML		01 18 40.1	
	comp=N,977nm,0.7s						
AC05	El Transito	2.52	31	Pn	Pb	01 17 58.8	-1.8
MT05	Renca	2.52	160	eP	Pn	01 17 56.6	+0.3
MT05				eS	Sn	01 18 27.2	+0.4
MT05				IAML		01 18 40.9	
	comp=N,1μm,0.3s						
MT05	Renca	2.52	160	Pn	Pn	01 17 56.3	+0.1
MT03	Universidad Ad	2.69	157	⇑iP	Pn	01 17 59.2	+0.7
MT03				i S	Sn	01 18 31.4	+0.5
MT03				IAML		01 18 41.5	
	comp=E,1μm,0.4s						
SJA	San Juan	2.78	102	eP	Pb	01 18 04.8	-0.2
SJA				eS	Sg	01 18 45.4	+0.6
SJA				IAML		01 19 02.9	
	comp=Z,298nm,1.2s						
RTLL	Cerro Villicun	2.82	97	eP	Pb	01 18 03.8	-1.9
RTLL				eS	Sg	01 18 50.4	+4.1
RTLL				IAML		01 18 53.7	
	comp=Z,316nm,1.5s						
MT09	Talagante	2.83	167	⇑iP	Pn	01 18 01.0	+0.5
MT09				IAML		01 18 46.0	
	comp=N,468nm,0.3s						
AC04	Llanos de Chal	2.86	12	⇓iP	Pn	01 18 01.6	+0.9
AC04				IAML		01 18 58.1	
	comp=E,362nm,0.6s						
AC04	Llanos de Chal	2.86	12	Pn	Pn	01 18 01.1	+0.4
RTCV	Cerro Valdivia	2.87	108	eP	Pb	01 18 05.0	-1.5
RTCV				IAML		01 18 50.8	
	comp=Z,291nm,3.3s						
ASAL	Salagasta	2.94	123	eP	Pb	01 18 06.0	-1.8
ASAL				eS	Sg	01 18 52.3	+2.3
ASAL				IAML		01 18 57.5	
	comp=Z,454nm,1.4s						
ARCO	CERRO ARCO	3.01	128	eP	Pb	01 18 08.0	-1.1
ARCO				eS	Sg	01 18 55.5	+3.1
ARCO				IAML		01 18 58.0	
	comp=Z,394nm,0.8s						
AAGR	Agrelo	3.23	131	eP	Pb	01 18 10.3	-2.4
AAGR				eS	Sg	01 18 58.4	-0.9
AAGR				IAML		01 19 10.6	
	comp=Z,252nm,0.6s						
GO03	Copiap	3.65	22	Pn	Pn	01 18 13.3	+1.6
GO03	Copiap	3.65	22	eP	Pn	01 18 13.4	+1.8
GO03				eS	Sg	01 19 13.3	+0.4
AVIZ	Vizcacheras	3.68	133	eP	Pb	01 18 16.5	-3.9
AVFE	Valle Fertil	3.71	86	eP	Pn	01 18 15.2	+2.7
AVFE				IAML		01 19 12.1	
	comp=Z,195nm,0.5s						
VCA	Vinchina	3.82	55	eP	Pn	01 18 02.4	-12
VCA				eS	Sg	01 19 14.8	-3.5
VCA				IAML		01 19 25.4	
	comp=Z,530nm,0.5s						
BO02	Sierra Bellavi	3.86	168	Pn	Pn	01 18 14.9	+0.3
ACHE	Chepes	4.36	93	eP	Pn	01 18 16.3	-5.3
ACHE				eS	Sb	01 19 24.6	-0.1
ACLC	CERRO LA CRUZ	4.44	70	eP	Pn	01 18 26.0	+3.4
ACLC				eS	Sb	01 19 21.4	-5.5
ACLC				IAML		01 19 27.8	
	comp=Z,455nm,0.6s						
RFA	San Rafael	4.66	145	eP	Pn	01 18 27.8	+2.3
RFA				IAML		01 19 43.8	
	comp=Z,84nm,1.4s						
AC02	Maricunga	4.75	30	Pn	Pn	01 18 29.4	+2.2
AC01	Pan de Azucar	4.95	12	Pn	Pn	01 18 29.1	-0.4
MRA	San Martin	5.33	107	eP	Pn	01 18 37.3	+2.5
MRA				eS	Sb	01 19 42.8	-10
MRA				IAML		01 20 11.0	
	comp=Z,170nm,0.8s						
BI02	San Fabin de	5.65	176	Pn	Pn	01 18 38.4	-0.9
CYA	Choya	5.77	65	eP	Pn	01 18 43.5	+2.7
CYA				eS	Sb	01 20 01.8	-3.2
CYA				IAML		01 20 33.3	
	comp=Z,48nm,1.7s						
BI03	Tigo	5.92	190	Pn	Pn	01 18 39.9	-2.9
TCA	Tanti	6.14	95	eP	Pn	01 18 47.5	+1.6
TCA				eS	Sn	01 20 03.8	+7.9
TCA				IAML		01 20 04.3	
	comp=Z,81nm,0.8s						
PB14	IPOC Station P	6.47	11	eP	Pb	01 19 06.7	-1.4
PB14				IAML		01 20 44.2	
	comp=Z,65nm,0.8s						
VA04	Juan Fernndez	6.54	244	Pn	Pn	01 18 49.4	-2.0
AHML	Horco Molle	7.02	55	eP	Pn	01 19 00.8	+2.8
AHML				eS	Sb	01 20 31.4	-10
AHML				IAML		01 20 52.1	
	comp=Z,32nm,0.7s						
FSA	Cafayete	7.04	48	eP	Pn	01 19 01.7	+3.3
FSA				eS	Sb	01 20 35.0	-6.6
LC01	Cunco	7.87	181	Pn	Pn	01 19 08.7	-0.9
SLA	San Lorenzo	8.35	43	eP	Pn	01 19 26.7	+10
LVC	Limon Verde	8.74	18	P	Pn	01 19 23.3	+1.4
	comp=Z,0.4nm,0.3s,baz=131,slow=11,SNR=2.5						
LVC				S	Sn	01 21 01.1	+0.7
	comp=Z,0.7nm,0.3s,baz=214,slow=11,SNR=2.3						
LVC	Limon Verde	8.74	18	Pn	Pn	01 19 25.6	+3.7
PLCA	Paso Flores	9.75	175	Pn	Pn	01 19 35.3	-0.1
CPUP	Villa Florida	13.49	73	P	Pn	01 20 28.4	+1.9
	comp=Z,0.1nm,0.3s,baz=247,slow=16,SNR=1.9						
CPUP				S	Sn	01 22 57.5	+1.3
	comp=Z,0.0nm,0.3s,baz=252,slow=16,SNR=1.2						
CPUP	Villa Florida	13.49	73	Pn	Pn	01 20 29.0	+2.5
SIV	San Ignacio	17.85	36	P	Pn	01 21 23.7	+0.1
	comp=Z,0.1nm,0.3s,baz=230,slow=14,SNR=4.8						
NNA	Nana	19.51	345	P	Pn	01 21 47.0	+3.3
NNA				IAmb	IAmb	01 21 56.6	
	comp=Z,19nm,1.2s						
BDFB	Brasilia	26.54	60	P	P	01 22 51.4	-1.8
	comp=Z,2.2nm,0.6s,baz=206,slow=8.6,SNR=5.7						
SNAA	Sanae	54.26	159	P	P	01 26 40.0	-0.8
SNAA				IAmb	IAmb	01 26 41.0	
	comp=Z,2.7nm,1.1s						
VNDA	Vanda	67.08	191	P	P	01 28 10.5	+2.6
VNDA				IAmb	IAmb	01 28 14.1	
	comp=Z,11nm,1.4s						
TXAR	Lajitas Array	67.26	330	P	P	01 28 08.2	-1.6
	comp=Z,0.2nm,0.7s,baz=148,slow=5.3,SNR=2.1						
TXAR	Lajitas Array	67.26	330	P	P	01 28 10.8	+1.0
TORD	Torodi Ar. Bea	82.96	70	P	P	01 29 39.9	-0.6
	comp=Z,1.2nm,0.7s,baz=243,slow=4.9,SNR=4.2						
WRA	Warramunga Arr	123.48	210	PKP	PKPdf	01 36 11.3	-1.8
	comp=Z,0.3nm,0.8s,baz=171,slow=1.8,SNR=1.5						
ZALV	Zalesovo Beam	151.54	30	PKPbc	PKPbc	01 37 08.0	-0.7
	comp=Z,1.1nm,0.5s,baz=316,slow=3.4,SNR=7.7						
MKAR	Makanchi Array	154.54	44	PKPbc	PKPbc	01 37 14.1	-1.5
	comp=Z,0.3nm,0.7s,baz=321,slow=1.8,SNR=2.0						
LZH	Lanzhou	173.74	35	ePKP	PKPdf	01 37 22.5	-2.4
LZH				pPKP	sPKPdf	01 37 32.0	+0.5
LZH				sPKP		01 37 36.5	

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*JMA **26** 01:24:11.8±0.1, 29°.97N×139°.47E, h483^{km}, M3.8*

*IDC **26** 01:24:13.6±0.8, 29°.83N×138°.86E, h432^{km}±11^{km}, mb2.8/9, mb1 3.0/14, mb1mx2.8/71, mbtmp3.8/14, Error ellipse: s-maj=25.8km s-min=9.8km az=74.0*

*NEIC **26** 01:24:14.1±2.1, 29°.8N±0°.1×138°.8E±0°.2, h438^{km}±8^{km}, mb4.0/7, Error ellipse: s-maj=26.3km s-min=15.4km az=72.0*

ISC 26 01:24:14.1±0.7**, 29°.95N**±0°.07×**139°.2E**±0°.1**, h450**^{km}**, n42,** σ**1^{s}.48**/45**, mb3.0**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.19	9	P	P	01 25 23.8	+1.4
JHJ	Hachijo jima 2	3.19	8	P	P	01 25 23.5	+1.0
	19nm,0.3s,baz=84,slow=22,SNR=8.9						
JHJ				S	S	01 26 17.5	-0.6
	15nm,0.3s,baz=72,slow=19,SNR=1.9						
CBIJ	Chichi jima	3.85	137	P	P	01 25 27.3	-0.8
CBIJ				eS	S	01 26 26.5	-1.6
JCJ	Chichijima	3.85	137	P	P	01 25 28.7	+0.7
	6.7nm,0.3s,baz=275,slow=23,SNR=18						
JCJ				S	S	01 26 27.1	-1.0
	42nm,0.3s,baz=280,slow=21,SNR=18						
JCJ	Chichijima	3.85	137	P	P	01 25 26.7	-1.4
JHH2	Haha-jima-NKT2	4.20	141	eS	S	01 26 33.3	-0.4
JIE	Ise	4.92	335	P	P	01 25 39.2	+1.6
JTNC	Tanabenakahech	4.94	322	P	P	01 25 38.6	+0.8
JGF	Kuroka	5.85	345	P	P	01 25 48.2	+1.3
JMN	Monobe	5.91	311	P	P	01 25 48.6	+1.1
JWT	Wachi	6.22	330	P	P	01 25 51.9	+1.3
JAG	Ashikaga	6.46	2	P	P	01 25 52.8	-0.2
JAG				eS	S	01 27 09.1	-4.9
MJAR	Matsushiro Arr	6.63	353	P	P	01 25 54.5	-0.3
	0.2nm,0.3s,baz=208,slow=9.4,SNR=2.2						
MJAR	Matsushiro Arr	6.63	353	P	P	01 25 54.8	0.0
MAJO	Matsushiro	6.63	353	P	P	01 25 55.1	+0.3
JHO	Hitachi	6.73	9	eS	S	01 27 16.8	-2.4
JHS	Saijyo	7.22	316	P	P	01 26 01.8	+0.7
JHS	Saijyo	7.22	316	P	P	01 26 02.1	+1.1
JFK	Kawauchi	7.52	10	eS	S	01 27 31.9	-2.7
KSRS	Korea Array	12.03	311	P	P	01 26 52.4	-0.7
	0.2nm,0.3s,baz=127,slow=11,SNR=7.3						
USA0B	Ussuriysk Arra	15.34	340	P	P	01 27 29.6	+0.9
USA0B				IAmb	IAmb	01 27 30.2	
	comp=Z,10nm,0.8s						
USRK	Ussuriysk Ar.	15.34	340	P	P	01 27 29.4	+0.8
	baz=145,slow=9.9,SNR=41						
USRK	Ussuriysk Ar.	15.34	340	P	P	01 27 29.6	+0.9
KLR	Kul'dur	20.08	346	P	P	01 28 16.9	+0.9
	comp=Z,1.6nm,0.8s,baz=154,slow=7.4,SNR=7.5						
PETK	Petropavlovsk-	26.79	25	P	P	01 29 20.6	+4.5
	comp=Z,5.5nm,1.0s,baz=209,slow=15,SNR=2.8						
SONM	Songino Array	30.87	315	P	P	01 29 51.5	-0.5
	comp=Z,0.4nm,0.7s,baz=99,slow=8.9,SNR=2.7						
SONM	Songino Array	30.87	315	P	P	01 29 51.8	-0.3
AMKA	Amchitka	36.54	43	P	P	01 30 46.1	+6.3
MK31	Makanchi Array	46.67	308	P	P	01 31 59.7	-1.0
MKAR	Makanchi Array	46.67	308	P	P	01 31 59.9	-0.8
	comp=Z,0.1nm,0.3s,baz=83,slow=9.4,SNR=5.5						
MKAR	Makanchi Array	46.67	308	P	P	01 31 59.7	-1.0
WB0	Warramunga Arr	49.65	186	P	P	01 32 23.1	-0.1
WB0				IAmb	IAmb	01 32 24.6	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	49.83	186	P	P	01 32 24.1	-0.5
WB2				IAmb	IAmb	01 32 26.6	
	comp=Z,9.6nm,1.5s						
WR0	Warramunga Arr	49.83	186	P	P	01 32 23.4	-1.2
WR0				IAmb	IAmb	01 32 30.3	
	comp=Z,5.9nm,1.3s						
WRA	Warramunga Arr	49.83	186	P	P	01 32 24.3	-0.3
	comp=Z,0.5nm,0.6s,baz=1.2,slow=7.7,SNR=7.3						
ASAR	Alice Springs	53.56	186	P	P	01 32 51.6	-0.1
	comp=Z,0.4nm,0.5s,baz=1.9,slow=6.2,SNR=10						
ASAR	Alice Springs	53.56	186	P	P	01 32 52.2	+0.6
BVAR	Borovoye Array	54.20	316	P	P	01 32 54.9	-0.9
	comp=Z,0.4nm,0.5s,baz=76,slow=13,SNR=6.1						
ABKAR	Akbulak array	61.26	313	P	P	01 33 43.4	-0.8
FORT	Forrest	61.33	191	P	P	01 33 45.4	+0.6
ARCES	ARCESS Array B	69.99	340	P	P	01 34 38.5	-0.2
	comp=Z,2.6nm,0.9s,baz=66,slow=7.0,SNR=2.0						
YKA	Yellowknife Ar	70.86	28	P	P	01 34 46.3	+2.3
	comp=Z,0.3nm,0.9s,baz=306,slow=5.3,SNR=2.5						

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*NEIC **26** 01:31:55.5±1.7, 38°.19N±0°.06×141°.65E±0°.09, h51^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=10.9km s-min=7.3km az=119.0*

*NIED **26** 01:31:55.3, 38°.18N×141°.67E, h50^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.38; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$-4.09; $M_{r\theta}$2.17; $M_{\theta\phi}$-1.26; $M_{\phi r}$4.20; Fault plane solution: $M_0$6.86000×10^{14} NP1:ϕ_s25.00000°, δ67.00000°, λ93.00000°. NP2:ϕ_s198.00000°, δ23.00000°, λ84.00000°.*

*JMA **26** 01:31:55.3±0.1, 38°.18N×141°.67E, h50^{km}±1^{km}, M3.8*

JMA Felt II J1.

*IDC **26** 01:31:57.0±0.8, 38°.17N×141°.70E, h70^{km}±5^{km}, mb3.5/19, mb1 3.7/23, mb1mx3.5/61, mbtmp3.8/23, MS2.9/6, Ms1 2.9/6, ms1mx2.7/39, Error ellipse: s-maj=17.0km s-min=12.1km az=104.0*

ISC 26 01:31:54.7±0.7**, 38°.15N**±0°.04×**141°.74E**±0°.07**, h48**^{km}±4^{km}**, n89,** σ**1^{s}.36**/101**, mb4.2**/30**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.27	307	P	Pn	01 32 03.8	+0.4
JIKH				S	Sn	01 32 09.6	+0.1
JIO	Ouri	0.43	315	P	Pn	01 32 05.2	+0.2
JIO				S	Sn	01 32 12.1	-0.3
JKMT	Kesennumamotoy	0.69	343	P	Pn	01 32 08.3	0.0
JKMT				S	Sn	01 32 17.3	-0.8
JOFO	Osakifurukawao	0.79	305	P	Pn	01 32 09.7	+0.1
JMM	Marumori	0.80	250	P	Pn	01 32 09.4	-0.3
JMM				S	Sn	01 32 19.6	-1.0
JMM	Marumori	0.80	250		Pn	01 32 09.4	-0.3
JMM				Sn	Sn	01 32 19.5	-1.0
JOU	Okura	0.87	285	P	Pn	01 32 10.7	0.0
JOU				S	Sn	01 32 22.1	-0.3
JMK	Ichinoseki	0.90	333	P	Pn	01 32 11.2	+0.2
JMK				S	Sn	01 32 22.4	-0.5
JFK	Kawauchi	1.04	222	P	Pn	01 32 13.1	+0.1
JFK				S	Sn	01 32 25.7	-0.7
JFT	Otama	1.28	241	P	Pn	01 32 16.6	+0.4
JFT				eS	Sn	01 32 32.1	-0.1
JYS	Shirataka	1.32	274	P	Pn	01 32 16.9	+0.1
JYK	Kaneyama	1.33	306	P	Pn	01 32 16.9	+0.1
JYK				eS	Sn	01 32 33.1	-0.3
JOM	Ohasama	1.37	345	P	Pn	01 32 17.8	+0.4
JOM				eS	Sn	01 32 34.0	-0.3
JRG	Rokugo	1.52	326	P	Pn	01 32 20.0	+0.6
JYA	Atsumi	1.65	286	P	Pn	01 32 21.4	+0.1
JYT	Yasato	2.28	213	Pn	Pn	01 32 30.5	+0.7
JTM	Tenmabayashi	2.68	349	Pn	Pn	01 32 36.2	+0.8
JSD	Sado	2.75	269	Pn	Pn	01 32 35.9	-0.3
MJAR	Matsushiro Arr	3.24	241	P	Pn	01 32 44.8	+1.8
	0.7nm,0.3s,baz=49,slow=11,SNR=20						
MJAR				LR	LR	01 34 13.5	
	comp=Z,107nm,20.2s,baz=30,slow=43						
MAJO	Matsushiro	3.24	241	Pn	Pn	01 32 44.8	+1.7
MAT	Matsushiro	3.24	241	P	Pn	01 32 44.6	+1.5
MAT				eS	Sn	01 33 22.3	+1.9
ERM	Erimo	4.01	15	Pn	Pn	01 32 55.0	+1.4
JGF	Kuroka	4.34	235	Pn	Pn	01 33 01.7	+3.6
INU	Inuyama	4.71	235	Pn	Pn	01 33 07.3	+4.1
JHJ	Hachijo jima 2	5.27	198	P	Pn	01 33 13.4	+2.5
	6.8nm,0.3s,baz=241,slow=19,SNR=1.7						
JHJ				S	Sn	01 34 08.6	-1.7
	19nm,0.3s,baz=69,slow=23,SNR=1.7						
JHJ				LR	LR	01 35 13.3	
	comp=Z,92nm,20.5s,baz=140,slow=37						
JWT	Wachi	5.84	243	Pn	Pn	01 33 22.4	+3.6
ASAJ	Asahikawa	6.00	6	P	Pn	01 33 22.0	+1.2
	1.6nm,0.3s,baz=61,slow=3.5,SNR=4.4						
ASAJ				S	Sn	01 34 31.1	+3.0
	0.8nm,0.3s,baz=262,slow=32,SNR=1.8						
JKA	Kamikawa-asahi	6.00	6	Pn	Pn	01 33 21.3	+0.4
JHS	Saijyo	7.62	248	Pn	Pn	01 33 47.0	+3.9
USA0B	Ussuriysk Arra	9.51	313	Pn	Pn	01 34 10.3	+1.3
USRK	Ussuriysk Ar.	9.51	313	P	Pn	01 34 08.0	-1.0
	baz=124,slow=16,SNR=8.3						
USRK	Ussuriysk Ar.	9.51	313	Pn	Pn	01 34 10.7	+1.7
JNU	Nakatsue	10.16	244	LR	LR	01 37 31.2	
	comp=Z,59nm,21.0s,baz=44,slow=33						
JTU	Tsushima	10.59	254	Pn	Pn	01 34 26.4	+2.6
KSRS	Korea Array	10.96	271	P	Pn	01 34 32.4	+3.7
	0.3nm,0.3s,baz=69,slow=14,SNR=2.9						
KSRS				LR	LR	01 37 40.7	
	comp=Z,29nm,19.4s,baz=148,slow=31						
KLR	Kul'dur	13.21	330	P	P	01 35 04.1	-4.1
	0.1nm,0.3s,baz=282,slow=14,SNR=2.1						
KLR				LR	LR	01 39 48.5	
	comp=Z,42nm,19.1s,baz=135,slow=36						
HHC	Hu-ho-hao-te	23.39	286	eP	P	01 37 00.5	+1.2
SONM	Songino Array	27.39	302	P	P	01 37 35.9	+0.2
	0.5nm,0.6s,baz=88,slow=9.0,SNR=4.7						
H11N2	WAKE ISLAND Hy	28.52	123	T	T	02 07 56.9	
	baz=316,slow=75,SNR=600						
H11N1	WAKE ISLAND Hy	28.52	123	T	T	02 07 57.6	
	baz=316,slow=75,SNR=641						
H11N3	WAKE ISLAND Hy	28.53	123	T	T	02 07 58.3	
	baz=316,slow=75,SNR=465						
H11S1	WAKE ISLAND Hy	29.27	125	T	T	02 08 56.3	
	baz=318,slow=76,SNR=108						
H11S3	WAKE ISLAND Hy	29.27	125	T	T	02 08 56.5	
	baz=318,slow=76,SNR=146						
H11S2	WAKE ISLAND Hy	29.28	125	T	T	02 08 57.4	
	baz=318,slow=76,SNR=106						
LZH	Lanzhou	30.15	278	eP	P	01 37 59.3	-1.0
LZH				pP	pP	01 38 14.5	+1.7
LZH				sP	sP	01 38 18.8	+0.3
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,55nm,4.9s						
WMQ	Urumqi	40.58	296	eP	P	01 39 31.3	+1.7
ZAA0	Zalesovo Array	41.36	311	P	P	01 39 35.7	-0.1
ZALV	Zalesovo Beam	41.36	311	P	P	01 39 35.6	-0.2
	comp=Z,2.2nm,0.5s,baz=83,slow=7.7,SNR=12						
ZALV				pP	sP	01 39 53.5	-0.7
	comp=Z,2.6nm,0.6s,baz=87,slow=8.2,SNR=8.4						
MK31	Makanchi Array	43.76	301	P	P	01 39 54.9	-0.4
MKAR	Makanchi Array	43.76	301	P	P	01 39 55.1	-0.3
	comp=Z,1.2nm,0.6s,baz=83,slow=9.7,SNR=16						
MKAR				pP	sP	01 40 13.6	-0.2
	comp=Z,2.6nm,0.7s,baz=88,slow=9.9,SNR=16						
MKAR	Makanchi Array	43.76	301	P	P	01 39 55.0	-0.4
MAKZ	Makanchi	43.96	301	P	P	01 39 56.8	-0.2
KURK	Kurchatov	45.46	307	P	P	01 40 08.2	-0.6
TAPN	Taplejung	46.13	273	eP	P	01 40 16.1	+1.3
	comp=Z,3.1nm,0.4s						
RAMN	Ramite	47.19	273	eP	P	01 40 21.7	-1.3
	comp=Z,4.3nm,0.4s						
GUN	Gumba	47.31	275	eP	P	01 40 23.9	-0.2
	comp=Z,5.6nm,0.4s						
IL31		48.42	33	P	P	01 40 31.4	-0.2
IL31				IAmb	IAmb	01 40 45.5	
	comp=Z,5.5nm,1.5s						
ILAR	Eielson Array	48.42	33	P	P	01 40 32.2	+0.5
	comp=Z,0.3nm,0.6s,baz=260,slow=6.1,SNR=7.4						
DANN	Dangsing	48.77	276	eP	P	01 40 35.6	+0.3
	comp=Z,18nm,0.7s						
BRVK	Borovoye	50.07	312	P	P	01 40 44.6	0.0
BRVK				IAmb	IAmb	01 41 03.2	
	comp=Z,2.2nm,0.7s						
KKAR	Karatay Array	52.80	299	P	P	01 41 05.3	+0.2
INK	Inuvik	53.28	28	P	P	01 41 07.8	-0.3
	comp=Z,0.9nm,0.6s,baz=255,slow=7.7,SNR=3.6						
INK	Inuvik	53.28	28	P	P	01 41 09.8	+1.6
ARU	Arti	55.70	318	P	P	01 41 25.7	-0.2
	comp=Z,0.9nm,0.5s,baz=115,slow=7.8,SNR=5.7						
ABKAR	Akbulak array	57.42	310	P	P	01 41 37.5	-0.8
ABKAR				IAmb	IAmb	01 41 56.9	
	comp=Z,2.2nm,0.6s						
WB0	Warramunga Arr	58.02	188	P	P	01 41 42.7	0.0
WB0				IAmb	IAmb	01 41 46.6	
	comp=Z,5.4nm,1.2s						
AKTO	Aktyubinsk	58.13	312	P	P	01 41 42.6	-0.6
	comp=Z,0.6nm,0.6s,baz=106,slow=7.4,SNR=2.0						
AKTO				pP	pP	01 41 59.9	+3.3
	comp=Z,1.7nm,0.8s,baz=70,slow=11,SNR=4.1						
WR0	Warramunga Arr	58.19	188	P	P	01 41 43.8	-0.2
WB2	Warramunga Arr	58.20	188	P	P	01 41 43.7	-0.2
WB2				IAmb	IAmb	01 41 52.9	
	comp=Z,7.0nm,1.5s						
WRA	Warramunga Arr	58.20	188	P	P	01 41 43.8	-0.2
	comp=Z,1.1nm,0.5s,baz=5.6,slow=7.3,SNR=24						
WRA	Warramunga Arr	58.20	188	P	P	01 41 43.8	-0.2
EUNU	Eureka	59.05	9	P	P	01 41 49.2	0.0
ASAR	Alice Springs	61.93	188	P	P	01 42 09.2	-0.3
	comp=Z,0.6nm,0.5s,baz=5.5,slow=4.6,SNR=11						
ASAR	Alice Springs	61.93	188	P	P	01 42 10.1	+0.6
YKA	Yellowknife Ar	62.72	31	P	P	01 42 13.1	-1.2
	comp=Z,0.2nm,0.8s,baz=298,slow=7.0,SNR=2.5						
ARCES	ARCESS Array B	63.05	339	P	P	01 42 16.3	-0.1
	comp=Z,2.7nm,0.9s,baz=37,slow=6.7,SNR=5.4						

FINES	FINESS Array B	67.95	332	P	P	01 42 47.2	-0.9
	comp=Z,2.7nm,1.0s,baz=36,slow=3.5,SNR=5.3						
FINES				pP	sP	01 43 05.6	-1.6
	comp=Z,2.7nm,1.0s,baz=27,slow=9.0,SNR=2.1						
FINES	FINESS Array B	67.95	332	P	P	01 42 47.6	-0.5
NC405	NORSAR Array S	73.05	337	P	P	01 43 19.3	0.0
NB2	NORSAR Subarra	73.26	337	P	P	01 43 20.2	-0.4
	comp=Z,0.5nm,0.5s,baz=38,slow=5.9						
NOA	NORSAR Array B	73.26	337	P	P	01 43 20.1	-0.5
	comp=Z,0.4nm,0.4s,baz=51,slow=5.6,SNR=5.4						
AKASG	Malin Array Be	73.58	322	P	P	01 43 21.0	-1.5
	comp=Z,1.3nm,0.5s,baz=42,slow=6.1,SNR=5.1						
AKASG				pP	PcP	01 43 40.0	+1.7
	comp=Z,1.0nm,0.5s,baz=45,slow=7.0,SNR=4.4						
NVAR	Mina Array Bea	74.11	54	P	P	01 43 27.7	+1.5
	comp=Z,0.2nm,0.6s,baz=281,slow=9.7,SNR=2.6						
PDAR	Pinedale Array	76.70	46	P	P	01 43 40.8	-0.3
	comp=Z,0.4nm,0.6s,baz=308,slow=1.2,SNR=4.6						
BUR08	Bucovina Ar. S	77.59	322	P	P	01 43 46.3	+0.6
BUR08				IAmb	IAmb	01 43 58.3	
	comp=Z,4.8nm,1.2s						
BURAR	Bucovina Array	77.60	322	P	P	01 43 46.0	+0.3
BRTR	Keskin Array B	78.31	312	P	P	01 43 49.6	-0.3
	comp=Z,0.3nm,0.5s,baz=206,slow=31,SNR=4.4						
GERES	GERESS Array B	81.90	328	P	P	01 44 08.7	-0.4
	comp=Z,0.3nm,0.5s,baz=38,slow=6.8,SNR=4.7						
TXAR	Lajitas Array	89.24	53	P	P	01 44 46.4	+0.6
	comp=Z,0.2nm,0.6s,baz=289,slow=2.9,SNR=3.7						
TXAR				LR	LR	02 24 03.0	
	comp=Z,26nm,19.2s,baz=0.0,slow=35						

ISK ***26*** *01:39:09.1, 34.°57N×33.°01E, h22km, ML2.6/5*
NIC ***26*** *01:39:10.1±0.0, 34.°58N×33.°15E, h38km, Ml2.8/6*
GII ***26*** *01:39:12.9±0.2, 34.°65N×33.°27E, h31km, Mm2.0/3*
DDA ***26*** *01:39:13.5, 34.°71N×33.°27E, h32km±5km, ML2.2*
ISC 26 01:39:10.5±1.1, **34.°58N**±0.°03×**33.°16E**±0.°03, **h33**km±3km, **n42,** σ**1.s19**/71, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	Asgata	0.22	20	P	Pn	01 39 17.3	+0.4
ASGA				S	Sb	01 39 23.0	+1.0
ASGA				AML	AML	01 39 23.1	
	4.9nm,0.1s						
ASGA				AML	AML	01 39 23.1	
	4.9nm,0.1s						
ASGA				AML	AML	01 39 23.5	
	7.3nm,0.1s						
ASGA				AML	AML	01 39 23.5	
	7.3nm,0.1s						
SZAC	Souni	0.29	308	P	Pb	01 39 18.0	-0.2
SZAC				S	Sb	01 39 24.0	+0.6
SZAC				AML	AML	01 39 24.6	
	8.1nm,0.1s						
SZAC				AML	AML	01 39 24.6	
	8.1nm,0.1s						
SZAC				AML	AML	01 39 24.7	
	6.4nm,0.2s						
SZAC				AML	AML	01 39 24.7	
	6.4nm,0.2s						
CSS	Mathiatis	0.41	20	PG	Pb	01 39 19.4	-0.3
CSS				SG	Sn	01 39 26.8	+0.3
CSS	Mathiatis	0.41	20	P	Pb	01 39 19.4	-0.3
CSS				S	Sn	01 39 26.6	+0.1
CSS				AML	AML	01 39 29.1	
	0.6nm,0.3s						
CSS				AML	AML	01 39 29.1	
	0.6nm,0.3s						
AKIN	Akıncılar- Kıb	0.51	30	PG	Pb	01 39 20.9	-0.3
NATA	Nata	0.53	293	P	Pb	01 39 21.1	-0.4
NATA				AML	AML	01 39 32.6	
	1.6nm,0.4s						
LEF	Lefka	0.58	338	PG	Pb	01 39 20.9	-1.5
MVOU	Mavrovouni	0.59	42	P	Pb	01 39 22.2	-0.3
MVOU				S	Sn	01 39 32.4	+1.6
ATHAL	Athalassa	0.60	19	P	Pb	01 39 22.7	+0.1
ATHAL				S	Sn	01 39 33.6	+2.5
ALFC	Alefka	0.74	322	P	Pn	01 39 23.8	-0.8
ALFC				S	Sn	01 39 34.4	-0.3
ALFC				AML	AML	01 39 35.2	
	1.2nm,0.3s						
ALFC				AML	AML	01 39 35.2	
	1.2nm,0.3s						
ALFC				AML	AML	01 39 36.6	
	1.2nm,0.3s						
ALFC				AML	AML	01 39 36.6	
	1.2nm,0.3s						
AKMS	Akamas	0.81	303	P	Pn	01 39 25.0	-0.5
AKMS				S	Sn	01 39 37.4	+1.0
AKMS				AML	AML	01 39 39.4	
	1.2nm,0.2s						
AKMS				AML	AML	01 39 39.4	
	1.2nm,0.2s						
AKMS				AML	AML	01 39 39.4	
	1.4nm,0.3s						
AKMS				AML	AML	01 39 39.4	
	1.4nm,0.3s						
EREN	Erenkoy	1.26	41	PN	Pb	01 39 33.9	+0.2
EREN	Erenkoy	1.26	41	*i* P	Pb	01 39 34.1	+0.4
EREN				IAML		01 39 56.0	
	comp=N,49nm,1.0s						
TEKE	Tekeli-Mersin	1.56	359	PN	Pn	01 39 36.5	+0.6
TEKE				SN	Sn	01 39 56.4	+1.4
AKK1	Akkuyu-Mersin	1.59	11	PN	Pn	01 39 37.3	+1.0
AKK1				SN	Sb	01 39 57.8	-1.3
AKKU	Akkuyu-Mersin	1.61	11	PN	Pn	01 39 37.0	+0.5
AKKU				SN	Sb	01 39 58.2	-1.4
GULN	MERSIN_Gulnar	1.63	11	*i* P	Pn	01 39 37.4	+0.5
GULN				*i* S	Sn	01 39 57.2	+0.4
KARG	Kargicak-Mersi	1.68	15	PN	Pn	01 39 38.7	+1.1
KARG				SN	Sb	01 40 00.2	-1.5
IKL	Isikli	1.71	14	PN	Pn	01 39 39.1	+1.1
BERE	Bereket-Mersin	1.77	2	PN	Pn	01 39 39.5	+0.6
BERE				SN	Sn	01 40 01.6	+1.3
GAZI	Gazipasa	1.79	338	PN	Pn	01 39 39.1	0.0
GAZI	Gazipasa	1.79	338	*i* P	Pn	01 39 38.8	-0.3
GAZI				*i* S	Sn	01 39 57.1	-3.5
GAZI				IAML		01 40 03.0	
	comp=E,37nm,0.7s						
GAZI				IAML		01 40 03.0	
	comp=N,28nm,1.1s						
TEVE	Tevekalti-Mers	1.87	7	PN	Pn	01 39 41.1	+0.9
KEBE	Keben-Mersin	1.92	13	PN	Pn	01 39 42.1	+1.2
KIZK	Mersin	2.06	23	PN	Pn	01 39 44.4	+1.7
KIZK	Mersin	2.06	23	*i* P	Pn	01 39 44.5	+1.7
KIZK				*i* S	Sn	01 40 07.5	+0.2
KIZK				IAML		01 40 12.0	
	comp=E,27nm,0.9s						
ERMK	Ermenek	2.07	355	*i* P	Pn	01 39 43.8	+0.8
ERMK				*i* S	Sn	01 40 07.5	-0.3
ERMK				IAML		01 40 19.0	
	comp=E,20nm,0.5s						
ERMK				IAML		01 40 21.0	
	comp=N,22nm,0.4s						
MMA0B	Mount Meron ar	2.43	129	Pn	Pn	01 39 47.9	0.0
MMA0B				Sn	Sn	01 40 16.2	-0.4
OFRI	\`Ofer	2.48	141	Pn	Pn	01 39 48.6	+0.1
OFRI				Sn	Sn	01 40 17.3	-0.3
GEM	Giv'at Ha'Em	2.49	122	Pn	Pn	01 39 49.0	+0.4
GEM				Sn	Sn	01 40 17.3	-0.6
NATI	Neve Ativ	2.51	121	Pn	Pn	01 39 49.2	+0.3
NATI				Sn	Sn	01 40 17.3	-1.1
KKBE	Karaman, Kazim	2.64	356	*i* P	Pn	01 39 52.3	+1.5
KKBE				*i* S	Sn	01 40 22.2	+0.4
DED	Mersin	2.73	29	*i* P	Pn	01 39 53.2	+1.3
DED				*i* S	Sn	01 40 21.8	-2.0
DED				IAML		01 40 28.0	
	comp=N,12nm,1.2s						
MMLI	Mount Malkishu	2.85	138	Pn	Pn	01 39 54.4	+0.7
KERG	Konya-Eregli	2.94	15	*i* P	Pn	01 39 57.2	+2.3
KERG				*i* S	Sn	01 40 28.8	-0.3
KERG				IAML		01 40 35.0	
	comp=N,11nm,0.2s						
GULE	Gulek	3.00	25	*i* P	Pn	01 39 57.0	+1.2
GULE				*i* S	Sn	01 40 30.9	+0.1
GULE				IAML		01 40 37.0	
	comp=N,9.5nm,0.5s						
GULE				IAML		01 40 49.0	
	comp=E,23nm,1.8s						
HMDT	Nahal Hemdat	3.05	139	Pn	Pn	01 39 57.6	+1.3
HMDT				Sn	Sn	01 40 32.4	+0.7
SEDI	Konya, Seydise	3.08	339	*i* P	Pn	01 39 59.8	+2.9
SEDI				*i* S	Sn	01 40 33.4	+0.6
SEDI				IAML		01 40 38.0	
	comp=N,11nm,0.6s						
SEDI				IAML		01 40 41.0	
	comp=E,9.0nm,1.1s						
DSI	Dead Sea	3.53	148	Pn	Pn	01 40 03.9	+0.9
KZIT	Kziot	3.81	164	Pn	Pn	01 40 08.2	+1.4
KAMA	Osmaniye	3.86	47	*i* P	Pn	01 40 07.3	-0.3
KAMA				*i* S	Sn	01 40 48.9	-3.0
KAMA				IAML		01 40 51.0	
	comp=E,5.6nm,0.6s						
KAMA				IAML		01 40 53.0	
	comp=N,4.9nm,0.5s						
KUZU	Kuzuini	3.87	54	*i* P	Pn	01 40 06.8	-0.8
KUZU				*i* S	Sn	01 40 50.1	-1.9
KUZU				IAML		01 40 52.0	
	comp=N,14nm,0.5s						
KUZU				IAML		01 40 54.0	
	comp=E,9.3nm,0.3s						

IDC ***26*** *01:55:49.2±2.0, 6.°95S×129.°26E, h168km±21km, mb3.4/2, mb1 3.6/7, mb1mx3.2/38, mbtmp4.0/7, Error ellipse: s-maj=32.4km s-min=16.2km az=86.0*
ISC 26 01:55:46.6±0.9, **7.°05S**±0.°06×**129.°45E**±0.°10, **h139**km, **n7,** σ**3.s23**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.41	17	P	Pn	01 57 20.8	+2.1
	1.0nm,0.3s,baz=226,slow=22,SNR=8.9						
SIJI				S	Sn	01 58 27.9	-2.8
	2.6nm,0.3s,baz=252,slow=22,SNR=8.1						
BATI	Baumata	6.52	241	P	Pn	01 57 22.4	+2.2
	11nm,0.3s,baz=225,slow=0.9,SNR=6.3						
BATI				S	Sn	01 58 31.7	-1.7
	4.5nm,0.3s,baz=76,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	11.59	198	P	Pn	01 58 29.3	+1.4
	0.3nm,0.3s,baz=38,slow=13,SNR=24						
FITZ				S	Sn	02 00 31.7	-4.1
	1.1nm,0.3s,baz=86,slow=15,SNR=3.8						
WRA	Warramunga Arr	13.66	160	P	Pn	01 58 56.7	+1.9
	1.3nm,0.3s,baz=342,slow=12,SNR=33						
WRA				S	Sn	02 01 20.9	-5.0
	0.1nm,0.3s,baz=321,slow=20,SNR=1.5						
ASAR	Alice Springs	17.07	166	P	Pn	01 59 40.5	+3.5
	0.7nm,0.3s,baz=342,slow=9.7,SNR=54						
ASAR				S	S	02 02 50.0	+2.5
	0.1nm,0.3s,baz=331,slow=22,SNR=3.1						
MKAR	Makanchi Array	67.97	327	P	P	02 06 29.0	-1.6
	0.7nm,0.4s,baz=130,slow=6.2,SNR=26						
KURBB	Kurchatov Arra	72.27	329	P	P	02 06 54.7	-2.0
	0.4nm,0.5s,baz=131,slow=5.0,SNR=8.8						

IDC ***26*** *02:06:12.4±1.3, 19.°14N×80.°12W, h0km, mb3.4/2, mb1 4.1/6, mb1mx3.6/46, mbtmp4.0/6, ML3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/23, Error ellipse: s-maj=40.0km s-min=24.7km az=60.0*
SSNC ***26*** *02:06:15.7±1.9, 19.°08N×80.°07W, h20km±28km, MD3.8, ML4.0, MW3.8*
JSN ***26*** *02:06:18.2±0.7, 19.°28N×79.°60W, h2km±48km, MD4.3*
ISC 26 02:06:12.5±1.9, **19.°10N**±0.°06×**80.°08W**±0.°05, **h4**km±14km, **n26,** σ**2.s62**/37, **5C-1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	1.06	282	*i* P	Pg	02 06 33.0	+0.1
FSCY				*e*S	Sg	02 06 43.6	-3.0
MCJ	Malvern	2.56	117	⇑*i*P	Pn	02 06 55.0	+0.3
MCJ				*i* S	Sn	02 07 23.5	-2.9
MTDJ	Mount Denham	2.57	109	*i* P	Pn	02 06 54.7	-0.2
MTDJ				*e*S	Sn	02 07 22.0	-4.7
BBJ	Bamboo Saint A	2.76	104	⇑*i*P	Pn	02 06 57.4	-0.2
MGV	Manicaragua	3.00	2	*e*P	Pn	02 06 60.0	-0.8
MGV				*e*S	Sn	02 07 32.6	-4.6
MGV				IAML		02 07 34.9	
	comp=N,410nm,0.2s						
MGV				IAML		02 07 38.5	
	comp=E,580nm,0.2s						
CCCC	Cccc	3.02	46	*e*P	Pn	02 07 05.4	+4.4
CCCC				*e*S	Sn	02 07 42.0	+4.3
CCCC				IAML		02 07 47.4	
	comp=N,87nm,0.4s						
CCCC				IAML		02 07 49.3	
	comp=E,120nm,0.5s						
LMGC	Las Mercedes	3.06	71	*e*P	Pn	02 07 01.1	-0.5
LMGC				*e*S	Sn	02 07 34.5	-4.1
LMGC				IAML		02 07 37.6	
	comp=E,443nm,0.2s						
LMGC				IAML		02 07 43.6	
	comp=N,578nm,0.2s						
BNJ	Bonny Gate	3.07	104	*i* P	Pn	02 07 01.3	-0.5
STH	Stony Hill	3.27	108	⇑*i*P	Pn	02 07 04.4	-0.1
STH				*i* S	Sn	02 07 39.1	-4.8
GWJ	Greenwich	3.34	107	⇓*i*P	Pn	02 07 05.6	0.0
HOJ	Hope	3.34	108	*i* P	Pn	02 07 06.1	+0.6
YHJ	Yallahs	3.61	109	⇑*i*P	Pn	02 07 09.8	+0.5
CMJ	Castle Mountai	3.65	105	⇑*i*P	Pn	02 07 09.3	-0.4
RCC	Rio Carpintero	4.23	77	*e*P	Pn	02 07 16.9	-0.8
RCC				*e*S	Sn	02 08 02.1	-5.5
RCC				*e*Sg	Sn	02 08 04.8	-2.8
SOR	Soroa	4.58	324	*e*P	Pn	02 07 22.3	-0.3
SOR				*e*S	Sn	02 08 13.1	-3.1
SOR				IAML		02 08 17.7	
	comp=E,79nm,0.3s						
SOR				IAML		02 08 17.8	
	comp=N,76nm,0.3s						
GTMO	Guantanamo	4.76	77	*e*P	Pn	02 07 25.3	+0.3
GTMO				*e*S	Sn	02 08 16.8	-3.9
MASC	Masc	5.62	78	*e*P	Pn	02 07 37.1	+0.3
MASC				*e*S	Sn	02 08 40.0	-1.8
JTS	Las Juntas de	9.94	209	Pn	Pn	02 08 38.0	+1.8
	comp=N,1.5nm,0.3s,baz=341,slow=18,SNR=5.8						
SDV	Santo Domingo	13.67	137	Pn	Pn	02 09 29.0	+1.5
	comp=N,2.3nm,0.3s,baz=301,slow=4.0,SNR=12						
TKL	Tuckaleechee C	16.82	350	Pn	Pn	02 10 07.4	-1.4
	comp=N,0.2nm,0.3s,baz=239,slow=5.9,SNR=2.9						
PCRV	Puerto La Cruz	17.37	119	P	P	02 10 19.3	+2.0
	comp=N,1.0nm,0.3s,baz=0.0,slow=12,SNR=2.0						
TXAR	Lajitas Array	23.76	300	P	P	02 11 27.2	+1.1
	comp=N,1.6nm,0.9s,baz=116,slow=10,SNR=15						
PTGA	Pitinga	27.90	133	LR	LR	02 23 27.5	
	comp=N,27nm,18.6s,baz=290,slow=37						
YKA	Yellowknife Ar	49.48	340	P	P	02 15 03.3	-0.3
	comp=N,0.2nm,0.7s,baz=130,slow=8.9,SNR=7.2						
WRA	Warramunga Arr	147.58	263	PKPbc	PKPdf	02 25 57.8	+1.6
	comp=N,0.3nm,0.9s,baz=98,slow=2.0,SNR=3.0						
ASAR	Alice Springs	148.07	256	PKPbc	PKPdf	02 25 59.1	+2.1
	comp=N,0.1nm,0.5s,baz=101,slow=3.9,SNR=4.1						

IDC ***26*** *02:08:12.5±8.6, 13.°92N×90.°91W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/47, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=192.5km s-min=61.7km az=11.0*
GCG ***26*** *02:08:18.9±0.3, 13.°76N×91.°20W, h0km±9km, MD3.9*
ISC 26 02:08:14.0±2.1, **13.°6N**±0.°2×**91.°45W**±0.°07, **h10**km, **n10,** σ**1.s08**/12, **mb3.8**/4, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	1.01	36	*e*P	Pn	02 08 35.1	+0.7
PCG	Pacaya	1.12	47	*e*P	Pn	02 08 36.7	+0.7
NBG	Las Nubes	1.44	48	*e*P	Pg	02 08 42.0	+0.4
NBG				*e*S	Sg	02 08 59.9	-0.3
MRL	Marmol	2.24	50	*e*P	Pb	02 08 54.2	-0.5
CMIG	Matias Romero	4.77	317	Pn	Pn	02 09 26.4	+0.3
	1.1nm,0.3s,baz=130,slow=10,SNR=11						
CMIG				Sn	Sn	02 10 21.0	-0.5
	2.3nm,0.3s,baz=10,slow=17,SNR=4.1						
TXAR	Lajitas Array	19.30	326	P	Pn	02 12 41.9	+1.5
	0.1nm,0.3s,baz=151,slow=13,SNR=6.9						
NVAR	Mina Array Bea	34.29	321	P	P	02 15 01.6	+0.8
	0.6nm,0.7s,baz=130,slow=8.4,SNR=2.7						
YKA	Yellowknife Ar	51.51	347	P	P	02 17 17.9	-1.6
	0.3nm,0.6s,baz=145,slow=8.1,SNR=13						
DLBC	Dease Lake	53.20	336	P	P	02 17 33.1	+0.7
	0.9nm,0.4s,baz=170,slow=11,SNR=3.4						
INK	Inuvik	60.94	343	P	P	02 18 25.4	-1.5
	1.2nm,1.2s,baz=99,slow=3.8,SNR=2.9						

IDC ***26*** *02:10:00.8±1.4, 52.°59N×106.°97E, h0km, mb3.3/3, mb1 3.4/7, mb1mx3.2/60, mbtmp3.3/7, ML2.8/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=20.9km s-min=14.6km az=132.0*
MOS ***26*** *02:10:00.4±1.7, 52.°63N×107.°03E, h10km, mb3.7/1, Error ellipse: s-maj=13.6km s-min=10.7km az=68.8*
BYKL ***26*** *02:10:01.2±0.2, 52.°67N×106.°99E*
ISC 26 02:10:00.9±0.8, **52.°65N**±0.°02×**107.°04E**±0.°02, **h9**km±6km, **n43,** σ**2.s17**/79, **mb3.5**/3, **4C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZRHB	Zarechye	0.12	146	⇑*i*Pg	Pg	02 10 05.0	+1.3
ZRHB				*e*Sg	Sb	02 10 07.9	+2.2
ZRHB				Pmax			
	2μm,0.1s						
ZRHB				Smax			
	82μm,0.6s						
TRG	Tyrgan	0.44	284	*e*Pg	Pg	02 10 09.0	-0.4
TRG				*e*Sg	Sg	02 10 15.4	+0.2
TRG				Pmax			
	446nm,0.1s						
TRG				Smax			
	2μm,0.1s						
TRG	Tyrgan	0.44	284	⇑*i*PG	Pg	02 10 09.1	-0.4
TRG				*e*		02 10 14.9	
TRG				pmax	pmax		
	comp=Z,558nm,0.1s						
TRG				smax	smax		
	comp=E,2μm,0.1s						
FFNB	Fofonovo	0.63	196	*i* Pg	Pg	02 10 12.9	-0.2
FFNB				*e*Sg	Sg	02 10 21.3	0.0
STDB	Stepnoy Dvoret	0.64	221	*e*Pg	Pb	02 10 14.0	-0.2
STDB				*e*Sg	Sb	02 10 23.0	-0.2
KAB	Kabansk	0.65	202	*e*Pg	Pg	02 10 13.4	0.0
KAB				*e*Sg	Sg	02 10 22.2	+0.3
KAB				Pmax			
	comp=E,407nm,0.1s						
KAB				Smax			
	comp=E,7μm,0.3s						
KAB	Kabansk	0.65	202	⇑*i*PG	Pg	02 10 13.5	0.0
KAB				*e*		02 10 22.5	
KAB				pmax	pmax		
	comp=Z,649nm,0.2s						
KAB				smax	smax		
	comp=E,7μm,0.8s						
HRMR	Khuramsha	1.03	183	⇑*i*Pg	Pb	02 10 20.1	-0.8
HRMR				*e*Sg	Sg	02 10 34.0	0.0
HRMR				Pmax			
	comp=E,851nm,0.5s						
HRMR				Smax			
	comp=E,10μm,0.5s						
OGRR	Ongureny	1.05	18	*e*Pg	Pb	02 10 21.2	0.0
OGRR				*e*Pb	Pg	02 10 23.1	+2.1
OGRR				*e*Sg	Sb	02 10 34.9	-0.1
OGRR				max			
	comp=E,267nm,0.1s						
OGRR				Smax			
	comp=E,2μm,0.2s						
OGRR	Ongureny	1.05	18	*e*PG	Pb	02 10 21.4	+0.2
OGRR				*e*		02 10 35.1	
OGRR				pmax	pmax		
	comp=Z,300nm,0.4s						
OGRR				smax	smax		
	comp=E,2μm,0.3s						
BGT	Bolshoye Golou	1.17	239	*e*Pg	Pn	02 10 22.9	-0.6
BGT				*e*		02 10 23.5	
BGT				*e*Sg	Sg	02 10 38.9	+0.3
BGT				max			
	comp=E,121nm,0.1s						
BGT				Smax			
	comp=E,1μm,0.3s						
MXMB	Maximikha	1.20	59	*e*Pg	Pn	02 10 23.4	-0.4
MXMB				*e*Sg	Sb	02 10 39.8	+0.5
LSTR	Listvyanka	1.57	241	*e*Pg	Pn	02 10 28.9	0.0
LSTR				*e*Sg	Sb	02 10 49.4	-0.6
LSTR				Pmax			
	comp=E,74nm,0.1s						
LSTR				Smax			
	comp=E,544nm,0.5s						
IRK	Irkutsk	1.75	257	*e*Pg	Pb	02 10 32.2	-0.9
IRK				*e*Sg	Sb	02 10 55.1	0.0
IRK				Pmax			
	comp=E,397nm,0.3s						
IRK				Smax			
	comp=E,3μm,0.5s						
IRK	Irkutsk	1.75	257	*e*PN	Pn	02 10 31.6	+0.3
IRK				*e*		02 10 54.3	
IRK				pmax	pmax		
	comp=Z,480nm,0.5s						
IRK				smax	smax		
	comp=N,3μm,0.8s						
SYVR	Suvo	2.04	59	*e*Pn	Pn	02 10 35.3	-0.2
SYVR				*e*Pg	Pb	02 10 37.8	-0.4
SYVR				*e*Sn	Sn	02 11 01.6	+0.5
SYVR				*e*Sg	Sg	02 11 06.1	-0.5
SYVR				Pmax			
	comp=N,137nm,0.3s						
SYVR				Smax			
	comp=N,582nm,0.4s						
SYVR	Suvo	2.04	59	*e*PN	Pb	02 10 37.6	-0.6
SYVR				*e*		02 11 05.9	
SYVR				pmax	pmax		
	comp=Z,140nm,0.5s						
SYVR				smax	smax		
	comp=N,596nm,0.4s						
TLY	Talaya	2.31	246	Pn	Pn	02 10 39.3	+0.2
	comp=N,0.2nm,0.3s,baz=55,slow=11,SNR=18						
TLY				Lg	Lg	02 11 09.8	
	comp=N,0.4nm,0.3s,baz=222,slow=15,SNR=13						
TLY	Talaya	2.31	246	*e*Pn	Pn	02 10 39.4	+0.3
TLY				*e*		02 10 40.3	
TLY				*e*Pg	Pb	02 10 41.8	-0.9
TLY				*e*		02 11 08.7	
TLY				*e*Sg	Sb	02 11 11.7	+0.4
TLY				Pmax			
	comp=N,37nm,0.1s						
TLY				Smax			
	comp=N,486nm,0.5s						
TLY	Talaya	2.31	246	*e*PN	Pn	02 10 40.3	+1.2
TLY				*e*		02 10 41.4	
TLY				*e*		02 11 10.2	
TLY				pmax	pmax		
	comp=Z,61nm,0.4s						
TLY				smax	smax		
	comp=E,1.0nm,0.6s						
ARS	Arshan	2.93	257	*e*Pn	Pn	02 10 45.3	-2.4
ARS				*e*Pg	Pb	02 10 52.2	-1.1
ARS				*e*Sn	Sn	02 11 21.0	-2.0
ARS				*e*Sg	Sb	02 11 29.4	+0.2
ARS				Pmax			
	comp=E,131nm,0.4s						
ARS				Smax			
	comp=E,1μm,0.6s						
ARS	Arshan	2.93	257	*e*PN	Pb	02 10 52.5	-0.8
ARS				*e*		02 11 29.4	
ARS				pmax	pmax		
	comp=Z,127nm,0.3s						
ARS				smax	smax		
	comp=E,1μm,0.6s						
ZAK	Zakamensk	3.27	227	*e*Pn	Pn	02 10 53.3	+0.9
ZAK				*e*Pg	Pb	02 11 00.3	+1.2
ZAK				*e*Sg	Sg	02 11 43.2	-2.7
ZAK				Pmax			
	comp=E,14nm,0.2s						
ZAK				Smax			
	comp=E,122nm,0.6s						
YLYR	Ulyunkhan	3.31	46	*e*Pg	Pb	02 11 00.3	+0.6
YLYR				*e*Sg	Sb	02 11 43.7	+3.7
YLYR				Pmax			
	comp=E,16nm,0.1s						
YLYR				Smax			
	comp=E,334nm,0.4s						
NIZ	Nizh Angarsk	3.46	24	*e*Pn	Pn	02 10 55.6	+0.8
NIZ				*e*Pg	Pb	02 11 04.3	+2.1
NIZ				*e*		02 11 36.1	
NIZ				*e*Sg	Sb	02 11 48.7	+4.5
NIZ				Pmax			
	comp=E,71nm,0.4s						
NIZ				Smax			
	comp=E,938nm,0.6s						
MOY	Mondy	3.85	258	*e*Pg	Pb	02 11 09.6	+0.5
MOY				*e*		02 11 49.4	
MOY				*e*Sg	Sb	02 11 58.6	+2.8
MOY				Pmax			
	comp=E,931nm,0.5s						

MOY				Smax			
	comp=E,488nm,1.0s						
CIT	**Chita**	**4.04**	**96**	*e*Pg	**Pb**	**02 11 14.0**	**+1.8**
CIT				*e*Sg	**Sg**	**02 12 07.2**	**-3.4**
CIT				Pmax			
	comp=E,115nm,0.3s						
CIT				Smax			
	comp=E,896nm,0.5s						
KMO	**Kumora**	**4.05**	**35**	*e*Pg	**Pb**	**02 11 14.2**	**+1.8**
KMO				*e*Sg	**Sb**	**02 12 06.2**	**+4.7**
KMO				Pmax			
	comp=E,59nm,0.3s						
KMO				Smax			
	comp=E,273nm,0.9s						
ORL	**Orlik**	**4.41**	**271**	*e*Pn	**Pn**	**02 11 09.0**	**+0.9**
ORL				*e*Pg	**Pb**	**02 11 20.0**	**+1.4**
ORL				*e*		02 12 01.6	
ORL				*e*		02 12 13.2	
ORL				*e*Sg	**Sb**	**02 12 16.3**	**+4.4**
ORL				Pmax			
	comp=E,46nm,1.0s						
ORL				Smax			
	comp=E,206nm,1.2s						
ORL	**Orlik**	**4.41**	**271**	*e*PN	**Pn**	**02 11 08.7**	**+0.6**
ORL				*e*PG	**Pb**	**02 11 20.6**	**+2.0**
ORL				*e*SG	**Sg**	**02 12 19.1**	**-3.4**
KPC	**Khapcheranga**	**4.47**	**129**	*e*Pn	**Pn**	**02 11 08.3**	**-0.5**
KPC				*e*Pg	**Pb**	**02 11 22.3**	**+2.8**
KPC				*e*Sn	**Sn**	**02 11 59.8**	**-1.2**
KPC				*e*Sg	**Sg**	**02 12 21.5**	**-2.9**
KPC				Pmax			
	comp=E,63nm,0.8s						
KPC				Smax			
	comp=E,188nm,1.1s						
KPC	**Khapcheranga**	**4.47**	**129**	*e*PN	**Pn**	**02 11 08.7**	**-0.1**
KPC				*e*		02 11 21.0	
KPC				*e*		02 12 19.1	
KPC				pmax	pmax		
	comp=Z,63nm,0.8s						
KPC				smax	smax		
	comp=E,187nm,1.7s						
UKT	**Uakit**	**4.81**	**51**	*e*Sg	**Sg**	**02 12 30.7**	**-4.4**
UKT				Smax			
	comp=E,113nm,1.2s						
SONM	**Songino Array**	**4.84**	**185**	Pn	**Pn**	**02 11 15.2**	**+1.2**
	comp=E,0.7nm,0.3s,baz=357,slow=14,SNR=8.4						
SONM				Pg	**Pb**	**02 11 27.5**	**+1.6**
	comp=E,6.5nm,0.3s,baz=2.2,slow=15,SNR=28						
SONM				Lg	Lg	02 12 32.7	
	comp=E,16nm,0.3s,baz=0.8,slow=29,SNR=14						
SONM				LR	LR	02 13 03.9	
	comp=E,99nm,19.2s,baz=0.5,slow=38						
KNGR	**Kungurtug, Tuv**	**6.28**	**255**	*e*Pg	**Pb**	**02 11 53.5**	**+3.2**
KNGR				*e*Sg	**Sg**	**02 13 15.6**	**-6.7**
NLYR	**Nelyaty**	**6.33**	**49**	*e*Sg	**Sg**	**02 13 17.1**	**-6.9**
NLYR				Smax			
	comp=E,187nm,1.1s						
BOD	**Bodaibo**	**6.53**	**35**	*e*		02 13 18.0	
BOD				*e*Sg	**Sg**	**02 13 24.3**	**-5.9**
BOD				Smax			
	comp=E,137nm,1.5s						
ZALV	**Zalesovo Beam**	**13.35**	**284**	Pn	**Pn**	**02 13 10.2**	**-0.1**
	comp=E,0.0nm,0.3s,baz=82,slow=10,SNR=3.9						
ZALV				Lg	Lg	02 16 55.7	
	comp=E,0.2nm,0.3s,baz=91,slow=24,SNR=7.0						
KLR	**Kul'dur**	**15.92**	**93**	Lg	Lg	02 18 24.7	
	comp=E,0.1nm,0.3s,baz=9.0,slow=20,SNR=4.3						
MKAR	**Makanchi Array**	**17.00**	**260**	Pn	**P**	**02 14 00.1**	**-0.5**
	comp=E,0.0nm,0.3s,baz=55,slow=10,SNR=3.1						
BVAR	**Borovoye Array**	**22.00**	**286**	P	**P**	**02 14 55.7**	**+0.7**
	comp=E,0.3nm,0.5s,baz=144,slow=10.0,SNR=3.8						
FINES	**FINESS Array B**	**42.15**	**315**	P	**P**	**02 17 56.0**	**+3.0**
	comp=E,0.7nm,0.7s,baz=84,slow=14,SNR=2.3						
ILAR	**Eielson Array**	**49.89**	**33**	P	**P**	**02 18 54.1**	**0.0**
	comp=E,0.3nm,0.6s,baz=303,slow=6.2,SNR=6.9						

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*NEIC **26** 02:18:11.1±1.5, 54°.65N±0°.10×158°.1W±0°.1, h27^{km}±8^{km}, Error ellipse: s-maj=15.5km s-min=5.9km az=152.0*

AEIC 26 02:18:09.9±1.7**, 54°.59N**±0°.05×**158°.01W**±0°.08**, h30**^{km}±8^{km}**, ML3.3**/29**, mb3.6**/3(NEIC)**, ML3.1**/14(NEIC)**, Error ellipse: s-maj=7.2km s-min=6.3km az=163.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.94**	**285**		Pn	02 18 26.7	-0.3
CNBA					Sn	02 18 38.5	-0.9
SDPT	**Sand Point**	**1.61**	**299**		Pn	02 18 36.3	+0.1
SDPT					Sn	02 18 55.1	-0.8
SDPT				IAML		02 19 05.7	
	comp=N,122nm,0.9s						
CHGN	**Chignik**	**1.73**	**353**		Pn	02 18 38.5	+0.8
CHGN					Sn	02 18 59.8	+1.1
CHGN				IAML		02 19 02.5	
	comp=E,322nm,0.1s						
CHGN				IAML		02 19 03.0	
	comp=N,268nm,0.1s						
CHIR	**Chirikof Islan**	**1.84**	**47**		Pn	02 18 39.9	+0.5
CHIR				IAML		02 19 01.3	
	comp=E,121nm,0.5s						
CHIR				IAML		02 19 36.5	
	comp=N,93nm,2.0s						
PVV	**Pavlof Volcano**	**2.31**	**291**		Pn	02 18 46.7	+0.8
PS4A	**Pavlof South-4**	**2.34**	**290**		Pn	02 18 47.1	+0.9
HAG	**Hague Volcano**	**2.36**	**289**		Pn	02 18 47.6	+1.1
DT1	**Dutton Round H**	**2.52**	**284**		Pn	02 18 49.3	+0.6
SII	**Sitkinak Islan**	**2.93**	**46**		Pn	02 18 55.1	+0.7
SII				IAML		02 20 30.9	
	comp=E,101nm,1.2s						
FALS	**False Pass**	**3.15**	**277**		Sn	02 19 34.2	+0.5
FALS	**False Pass**	**3.15**	**277**		Pn	02 18 58.0	+0.7
SSLN	**Shishaldin Nor**	**3.48**	**276**		Pn	02 19 03.8	+1.8
SSLW	**Shishaldin Wes**	**3.55**	**275**		Pn	02 19 04.7	+1.8
SSBA	**Shishaldin**	**3.55**	**275**		Pn	02 19 04.4	+1.5
OHAK	**Old Harbor**	**3.74**	**43**		Pn	02 19 06.0	+0.6
OHAK				IAML		02 20 27.8	
	comp=E,37nm,4.0s						
OHAK				IAML		02 21 01.0	
	comp=N,49nm,3.8s						
ANCK	**Angle Creek**	**3.88**	**20**		Pn	02 19 08.9	+1.5
WESP	**Westdahl Peak**	**3.91**	**271**		Pn	02 19 09.3	+1.4
WEBT	**Westdahl Beart**	**3.92**	**273**		Pn	02 19 09.5	+1.5
KABU	**Katmai Buttres**	**3.99**	**21**		Pn	02 19 10.7	+1.8
KDAK	**Kodiak Island**	**4.41**	**41**	Pn	Pn	02 19 15.2	+0.7
AKUT	**Akutan**	**4.56**	**267**	Pn	Pn	02 19 17.5	+0.8
UNV	**Unalaska Valle**	**5.04**	**265**	Pn	Pn	02 19 23.8	+0.5
MREP	**Makushin Rep't**	**5.19**	**265**		Pn	02 19 25.5	+0.1
CNPM	**China Poot**	**6.17**	**34**	Pn	Pn	02 19 39.6	+0.7
BRLK	**Bradley Lake**	**6.47**	**34**	Pn	Pn	02 19 42.1	-0.8
RSO	**Redoubt South**	**6.53**	**24**	Pn	Pn	02 19 45.3	+1.4
NCT	**North Crescent**	**6.58**	**22**		Pn	02 19 45.9	+1.4
SVW2	**Sparrevohn**	**6.65**	**10**	Pn	Pn	02 19 46.6	+1.2
SEW	**Seward**	**7.21**	**36**	Pn	Pn	02 19 54.4	+1.4
SLKM	**Skilak Lake**	**7.26**	**32**		Pn	02 19 54.2	+0.4
RC01	**Rabbit Creek A**	**7.86**	**31**		Pn	02 20 02.7	+0.7
SUA	**Susitna One**	**7.89**	**26**	Pn	Pn	02 20 03.1	+0.6
TTA	**Tatalina**	**8.43**	**6**	Pn	Pn	02 20 10.6	+0.8
PMR	**Palmer**	**8.44**	**30**	Pn	Pn	02 20 10.5	+0.6
HIN	**Hinchinbrook I**	**8.49**	**42**	Pn	Pn	02 20 12.1	+1.4
KNK	**Knik Glacier**	**8.51**	**33**	Pn	Pn	02 20 11.7	+0.9
GHO	**Glory Hole Cre**	**8.64**	**30**	Pn	Pn	02 20 15.0	+2.2
SML	**Sawmill**	**8.85**	**31**	Pn	Pn	02 20 17.4	+1.9
PPLA	**Purkeypile**	**8.86**	**18**	Pn	Pn	02 20 17.6	+1.9
EYAK	**Cordova Ski Ar**	**8.88**	**43**	Pn	Pn	02 20 16.9	+1.0
KAIM	**Kayak Island**	**9.09**	**49**	Pn	Pn	02 20 21.3	+2.4
SCM	**Sheep Creek Mo**	**9.18**	**33**	Pn	Pn	02 20 21.8	+1.7
RAGM	**Ragged Mountai**	**9.22**	**46**	Pn	Pn	02 20 22.2	+1.5
KLU	**Klutina**	**9.42**	**38**	Pn	Pn	02 20 24.7	+1.4
SUCK	**Suckling Hills**	**9.45**	**49**	Pn	Pn	02 20 26.4	+2.7
TRF	**Thorofare Moun**	**9.72**	**21**	Pn	Pn	02 20 29.7	+2.1
M24K	**Tolsona, Glenn**	**9.76**	**35**	Pn	Pn	02 20 29.6	+1.6
N25K	**Chitina, Valde**	**9.97**	**40**	Pn	Pn	02 20 32.5	+1.5
RND	**Reindeer**	**10.01**	**24**	Pn	Pn	02 20 32.6	+1.2
CRQM	**Cirque**	**10.06**	**46**	Pn	Pn	02 20 34.5	+2.2
DHY	**Denali Highway**	**10.12**	**29**	Pn	Pn	02 20 34.4	+1.3
GLB	**Gilahina Butte**	**10.17**	**42**	Pn	Pn	02 20 34.9	+1.2
VRDI	**Verde Repeater**	**10.19**	**43**	Pn	Pn	02 20 35.5	+1.5
TGL	**Tana Glacier**	**10.19**	**47**	Pn	Pn	02 20 35.6	+1.6
YAH	**Yahtse**	**10.48**	**50**	Pn	Pn	02 20 40.1	+2.0
BALM	**Baldy**	**10.54**	**46**	Pn	Pn	02 20 40.7	+1.9
PAX	**Paxson**	**10.61**	**33**	Pn	Pn	02 20 40.8	+1.2
BARN	**Barnard Glacie**	**10.84**	**47**	Pn	Pn	02 20 45.8	+2.8
CTGM	**Chitina Glacie**	**10.94**	**48**	Pn	Pn	02 20 46.2	+2.0
PCA	**Pinnacle**	**11.05**	**53**	Pn	Pn	02 20 48.0	+2.3
BCPM	**Bancas Point**	**11.29**	**54**	Pn	Pn	02 20 51.2	+2.4
RIDG	**Independent Ri**	**11.36**	**31**	Pn	Pn	02 20 51.3	+1.3
MDM	**Murphy Dome**	**11.49**	**21**	Pn	Pn	02 20 50.1	-1.5
DOT	**Dot Lake**	**11.54**	**33**	Pn	Pn	02 20 54.8	+2.5
BCAR	**Beaver Creek A**	**11.91**	**38**	Pn	Pn	02 20 58.9	+1.4
HYT	**Haines Junctio**	**12.58**	**52**	Pn	Pn	02 21 09.4	+2.7
EGAK	**Eagle**	**13.24**	**33**	Pn	Pn	02 21 16.6	+1.2
DAWY	**Dawson**	**13.37**	**37**	Pn	Pn	02 21 20.0	+2.6
WHY	**Whitehorse**	**13.75**	**54**	Pn	Pn	02 21 25.3	+2.6
EPYK	**Eagle Plains**	**15.68**	**33**	P	P	02 21 56.1	+4.0
EPYK				IAmb	IAmb	02 22 00.9	
	comp=Z,13nm,1.4s						
INK	**Inuvik**	**17.86**	**30**	P	P	02 22 16.6	+0.5
INK				IAmb	IAmb	02 22 31.1	
	comp=Z,2.9nm,1.1s						
C36M	**Paulatuk**	**21.31**	**33**	P	P	02 22 55.3	+1.6
C36M				IAmb	IAmb	02 22 59.5	
	comp=Z,2.3nm,0.8s						

BYKL 26 02:19:42.3±0.2**, 56°.10N**×**113°.72E, h5**^{km}±3^{km}**, 2C-3D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**281**	⇑*i*Pg	Pg	02 19 44.1	-0.2
SVKR				*e*Sg	Sg	02 19 46.1	+0.4
SVKR				Pmax			
	4µm,0.2s						
SVKR				Smax			
	74µm,0.4s						
UKT	**Uakit**	**0.61**	**185**	⇑*i*Pg	Pg	02 19 53.2	-0.9
UKT				*e*Sg	Sg	02 20 01.7	-0.4
UKT				Pmax			
	174nm,0.4s						
UKT				Smax			
	450nm,0.4s						
YOA	**Uoyan**	**1.12**	**273**	*e*Pg	Pg	02 20 02.9	-0.8
YOA				*e*Pb	Pn	02 20 04.9	+0.3
YOA				*e*Sg	Sg	02 20 18.5	+0.3
YOA				*e*		02 20 23.5	
YOA				max			
	316nm,0.1s						
YOA				max			
	3µm,0.4s						
NLYR	**Nelyaty**	**1.17**	**70**	⇓*i*Pg	Pg	02 20 03.1	-1.7
NLYR				*e*Pb	Pn	02 20 05.4	0.0
NLYR				*e*Sg	Sg	02 20 19.1	-0.9
NLYR				*e*Sb	Sn	02 20 23.3	+1.5
NLYR				max			
	739nm,0.3s						
NLYR				max			
	1µm,1.0s						
KMO	**Kumora**	**1.43**	**262**	⇓*i*Pg	Pn	02 20 08.1	-0.8
KMO				*e*Pb	Pg	02 20 09.6	-0.1
KMO				*e*Sg	Sb	02 20 26.9	-1.1
KMO				*e*Sb	Sg	02 20 29.2	+1.0
KMO				max			
	255nm,0.4s						
KMO				max			
	2µm,0.6s						
BOD	**Bodaibo**	**1.73**	**5**	*e*Pg	Pn	02 20 12.9	-0.1
BOD				*e*Sg	Sn	02 20 35.3	-0.2
BOD				Pmax			
	211nm,0.7s						
BOD				Smax			
	555nm,0.8s						
YLYR	**Ulyunkhan**	**1.90**	**231**	⇓*i*Pg	Pn	02 20 16.4	+1.0
YLYR				*e*		02 20 19.0	
YLYR				*e*Sg	Sb	02 20 42.1	+0.5
YLYR				max			
	203nm,0.7s						
YLYR				Smax			
	929nm,0.4s						
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*Pn	Pn	02 20 22.7	+0.8
NIZ				*e*Pg	Pb	02 20 25.1	-0.4
NIZ				*e*Sn	Sn	02 20 50.3	-1.0
NIZ				*e*Sg	Sg	02 20 56.8	-1.7
NIZ				Pmax			
	53nm,0.6s						
NIZ				Smax			
	473nm,0.6s						
CRS	**Chara**	**2.65**	**70**	*e*Pn	Pn	02 20 25.9	+0.3
CRS				*e*Pg	Pb	02 20 30.3	+0.1
CRS				*e*Sn	Sn	02 20 57.2	-0.9
CRS				*e*Sg	Sb	02 21 04.8	+1.9
CRS				Pmax			
	426nm,0.7s						
CRS				Smax			
	238nm,0.9s						
SYVR	**Suvo**	**3.26**	**223**	*e*Pn	Pn	02 20 33.1	-0.9
SYVR				*e*Pg	Pb	02 20 40.2	-0.4
SYVR				*e*PgPg	PbPb	02 20 43.4	-0.3
SYVR				*e*Sn	Sn	02 21 12.7	-0.4
SYVR				*e*Sg	Sb	02 21 23.3	+2.8
SYVR				max			
	42nm,0.2s						
SYVR				Smax			
	421nm,1.7s						
TUP	**Tupik**	**3.94**	**113**	*e*Pn	Pn	02 20 43.4	0.0
TUP				*e*Pg	Pb	02 20 53.7	+1.5
TUP				*e*Sn	Sn	02 21 28.5	-1.5
TUP				*e*Sg	Sb	02 21 44.4	+4.2
TUP				*e*		02 21 48.7	
TUP				Pmax			
	27nm,0.8s						
TUP				max			
	363nm,0.8s						
MXMB	**Maximikha**	**4.05**	**228**	*e*Pg	Pb	02 20 55.7	+1.6
MXMB				*e*Sg	Sg	02 21 48.8	-3.5
CIT	**Chita**	**4.09**	**181**	Pg	Pb	02 20 55.6	+0.9
CIT				*e*Sg	Sg	02 21 49.8	-3.7
CIT				Pmax			
	66nm,0.2s						
CIT				Smax			
	146nm,0.3s						
OGRR	**Ongureny**	**4.31**	**238**	*e*Pn	Pn	02 20 50.3	+1.8
OGRR				*e*Pg	Pb	02 20 59.3	+0.8
OGRR				*e*		02 21 41.8	
OGRR				*e*Sg	Sb	02 21 55.3	+4.5
OGRR				*e*		02 22 02.1	
OGRR				Pmax			
	40nm,0.7s						
OGRR				max			
	130nm,1.6s						
TRG	**Tyrgan**	**5.45**	**235**	*e*	Pb	02 21 16.8	-1.1
TRG				*e*Pg	Pg	02 21 19.7	-6.9
TRG				*e*Sg	Sb	02 22 29.9	+6.3
TRG				Pmax			
	12nm,0.6s						
TRG				Smax			
	62nm,1.1s						
KPC	**Khapcheranga**	**6.46**	**188**	*e*Pn	Pn	02 21 17.2	-0.8
KPC				*e*Pg	Pb	02 21 38.9	+3.8
KPC				*e*		02 22 48.3	
KPC				*e*Sg	Sg	02 23 01.8	-7.7
KPC				Pmax			
	6.0nm,0.6s						
KPC				Smax			
	126nm,1.2s						

BYKL 26 02:20:23.1±0.3**, 56°.15N**×**113°.73E, h6**^{km}±3^{km}**, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**251**	*e*Pg	Pg	02 20 25.0	-0.3
SVKR				*e*Sg	Sg	02 20 26.8	-0.1
SVKR				Pmax			
	2µm,0.2s						
SVKR				Smax			
	25µm,0.2s						
UKT	**Uakit**	**0.67**	**185**	*e*Pg	Pg	02 20 34.4	-1.5
UKT				*e*Sg	Sg	02 20 43.5	-1.0
UKT				Pmax			
	93nm,0.6s						
UKT				Smax			
	181nm,1.0s						
NLYR	**Nelyaty**	**1.15**	**72**	*e*Pg	Pg	02 20 44.2	-1.0
NLYR				*e*Pb	Pn	02 20 46.2	+0.4
NLYR				*e*Sg	Sg	02 20 58.1	-2.0
NLYR				*e*Sb	Sn	02 21 01.4	-0.4
NLYR				max			
	356nm,0.3s						
NLYR				Smax			
	653nm,0.8s						
KMO	**Kumora**	**1.44**	**261**	*e*Pg	Pn	02 20 49.2	-0.6
KMO				*e*Pb	Pb	02 20 50.3	-0.1
KMO				*e*Sg	Sb	02 21 08.7	-0.3
KMO				*e*Sb	Sg	02 21 10.9	+1.4
KMO				max			
	256nm,0.6s						
KMO				max			
	579nm,0.6s						
BOD	**Bodaibo**	**1.68**	**5**	*e*Pg	Pn	02 20 53.2	+0.2
BOD				*e*Sg	Sn	02 21 14.9	+0.1
BOD				Pmax			
	193nm,0.6s						
BOD				Smax			
	200nm,0.7s						
TUP	**Tupik**	**3.96**	**113**	*e*Pg	Pb	02 21 34.8	+1.6
TUP				*e*Sg	Sg	02 22 26.3	-3.7
TUP				Pmax			
	23nm,0.7s						
TUP				Smax			
	155nm,0.9s						

IDC 26 02:21:23.1±4.5**, 6°.86N**×**125°.98E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/34**, mbtmp3.3**/3**, Error ellipse: s-maj=445.6km s-min=27.7km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.88**	**163**	P	P	02 27 16.0	+1.2
	0.2nm,0.7s,baz=348,slow=7.7,SNR=2.6						
ASAR	**Alice Springs**	**31.31**	**166**	P	P	02 27 43.9	-1.5
	0.1nm,0.3s,baz=344,slow=6.9,SNR=4.8						
MKAR	**Makanchi Array**	**54.58**	**324**	P	P	02 30 53.4	0.0
	0.2nm,0.5s,baz=135,slow=6.3,SNR=4.7						

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*IASPEI **26** 02:36:35.2±0.8, 46°.84N±0°.02×121°.91W±0°.02, h15^{km}±4^{km}, Error ellipse: s-maj=2.6km s-min=2.2km az=98.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **26** 02:36:35.4±1.4, 46°.84N±0°.01×121°.93W±0°.02, h12^{km}±2^{km}, Error ellipse: s-maj=1.6km s-min=1.5km az=103.0*

*ANF **26** 02:36:35.7±0.3, 46°.81N×121°.94W, h28^{km}±4^{km}, ML2.9/9, Error ellipse: s-maj=3.5km s-min=1.8km az=79.0*

*PGC **26** 02:36:36.0, 46°.84N×121°.92W, h9^{km}, ML2.2/12, ML2.7, 90km Sse of Seattle, Wa Washington*

*SEA **26** 02:36:36.0±1.1, 46°.84N±0°.01×121°.92W±0°.02, h9^{km}±3^{km}, Md2.8/33, ML2.6/34(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=95.0*

ISC 26 02:36:35.7±0.8**, 46°.85N**±0°.01×**121°.93W**±0°.01**, h12**^{km}±4^{km}**, n171, σ0^{s}.92**/217**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
REMR	**Mount Rainier-**	**0.06**	**115**		**Pg**	**02 36 37.9**	**-0.4**
OBSR	**Observation Ro**	**0.09**	**55**		**Pg**	**02 36 39.3**	**+0.6**
RVC	**Mount Rainier-**	**0.10**	**342**		**Pg**	**02 36 38.7**	**+0.1**
LON	**Longmire**	**0.12**	**140**	P	**Pg**	**02 36 38.5**	**-0.3**
LON				S	**Sg**	**02 36 40.4**	**-0.8**
LON	**Longmire**	**0.12**	**140**		**Pg**	**02 36 38.6**	**-0.3**
LON	**Longmire**	**0.12**	**140**		**Pg**	**02 36 38.5**	**-0.3**
LON				Sg	**Sg**	**02 36 40.3**	**-0.8**
LON				IAML		02 36 40.5	
	comp=N,5µm,0.1s						
LON				IAML		02 36 40.6	
	comp=E,1µm,0.2s						
RCM	**Mount Rainier-**	**0.13**	**94**		**Pg**	**02 36 39.0**	**-0.3**
RCM					**Sg**	**02 36 41.0**	**-0.9**
RCS	**Mount Rainier-**	**0.14**	**79**		**Pg**	**02 36 38.9**	**-0.3**
FMW	**Mount Fremont**	**0.19**	**64**	P	**Pg**	**02 36 39.9**	**-0.2**
FMW	**Mount Fremont**	**0.19**	**64**		**Pg**	**02 36 39.9**	**-0.2**
PANH	**Panhandle Gap,**	**0.19**	**86**		**Pg**	**02 36 39.0**	**-1.1**
B941	**Kapowsin**	**0.25**	**305**		**Pg**	**02 36 40.9**	**+0.1**
B941					**Sg**	**02 36 44.8**	**+0.5**
WPW	**White Pass**	**0.30**	**120**		**Pg**	**02 36 41.6**	**-0.2**
GHW	**Garrison Hill**	**0.31**	**310**		**Pg**	**02 36 42.0**	**+0.1**
GHW					**Sg**	**02 36 46.8**	**+0.7**
D05A	**Enumclaw**	**0.34**	**353**	P	**Pg**	**02 36 42.8**	**+0.1**
D05A	**Enumclaw**	**0.34**	**353**		**Pg**	**02 36 42.8**	**+0.1**
D05A	**Enumclaw**	**0.34**	**353**		**Sg**	**02 36 48.2**	**+0.9**
GLK	**Glacier Lake**	**0.36**	**142**		**Pg**	**02 36 41.6**	**-1.2**
GSM	**Grass Mountain**	**0.37**	**14**		**Pg**	**02 36 43.1**	**0.0**
PCFR	**Pierce County**	**0.38**	**292**		**Pg**	**02 36 43.4**	**+0.1**
PAYL	**Puyallup Schoo**	**0.44**	**323**		**Pg**	**02 36 44.6**	**+0.2**
TBPA	**Tacoma Substat**	**0.51**	**324**		**Pg**	**02 36 45.9**	**+0.1**
E04D	**Cinebar**	**0.53**	**237**	P	**Pg**	**02 36 46.2**	**+0.1**
	baz=58,SNR=66						
E04D				S	**Sg**	**02 36 53.9**	**+0.9**
	baz=58						
E04D	**Cinebar**	**0.53**	**237**		**Pg**	**02 36 46.1**	**+0.1**
TDL	**Tradedollar La**	**0.54**	**202**		**Pg**	**02 36 45.7**	**-0.5**
LCW	**Lucas Creek**	**0.56**	**252**		**Pg**	**02 36 46.5**	**-0.1**
RATT	**Rattlesnake La**	**0.59**	**8**		**Pg**	**02 36 46.8**	**-0.3**
RATT					**Sg**	**02 36 55.1**	**+0.3**
CDMR	**Cedar Moraine**	**0.59**	**11**		**Pg**	**02 36 46.9**	**-0.3**
CDMR					**Sg**	**02 36 55.3**	**+0.3**
B201	**Coldwater, Mou**	**0.59**	**203**		**Pg**	**02 36 46.6**	**-0.7**
B201					**Sg**	**02 36 54.8**	**-0.2**
JRO	**Jston Ridge Ob**	**0.61**	**200**		**Pg**	**02 36 46.9**	**-0.7**
JRO					**Sg**	**02 36 55.4**	**-0.1**
ERK	**Elk Rock**	**0.61**	**208**		**Pg**	**02 36 47.1**	**-0.6**
B202	**Windy Ridge, M**	**0.62**	**194**		**Pg**	**02 36 47.0**	**-0.8**
B202					**Sg**	**02 36 55.6**	**-0.3**
SOSW	**Source of Smit**	**0.62**	**194**		**Pg**	**02 36 47.2**	**-0.5**
STD	**Studebaker Rid**	**0.64**	**199**		**Pg**	**02 36 47.5**	**-0.7**
ELW	**Echo Lake**	**0.65**	**3**		**Pg**	**02 36 47.9**	**-0.5**
ELW					**Sg**	**02 36 57.4**	**+0.5**
VALT	**Mount Saint He**	**0.66**	**196**		**Pg**	**02 36 48.1**	**-0.5**
ESD	**East Dome**	**0.67**	**194**		**Pg**	**02 36 48.2**	**-0.5**
D04E	**Lakebay**	**0.67**	**300**	P	**Pg**	**02 36 49.0**	**+0.3**
	baz=120,SNR=5.7						
D04E				Sn	**Sb**	**02 36 59.9**	**+1.3**
	baz=120						
VVHS	**Vashon High Sc**	**0.68**	**328**		**Pg**	**02 36 48.6**	**-0.3**
SHW	**Mount Saint He**	**0.69**	**198**		**Pg**	**02 36 48.5**	**-0.6**
HSR	**South Ridge**	**0.70**	**195**		**Pg**	**02 36 48.7**	**-0.5**
SWF2	**Southwest Flan**	**0.70**	**197**		**Pg**	**02 36 48.7**	**-0.5**
FL2	**Flat Top 2**	**0.71**	**204**		**Pg**	**02 36 48.8**	**-0.7**
JLK	**June Lake**	**0.72**	**193**		**Pg**	**02 36 48.9**	**-0.7**
ASR	**Mount Adams--S**	**0.73**	**162**		**Pg**	**02 36 49.1**	**-0.8**
B203	**Quarry, Mount**	**0.73**	**203**		**Pg**	**02 36 49.1**	**-0.8**
B203					**Sg**	**02 36 59.1**	**-0.4**
CDFW	**Cedar Flats**	**0.73**	**187**		**Pg**	**02 36 49.2**	**-0.7**
SP2	**Seward Park 2**	**0.74**	**343**		**Pg**	**02 36 50.4**	**+0.2**
NAC	**Naches**	**0.76**	**98**		**Pg**	**02 36 50.3**	**-0.2**
CPW	**Capitol Peak**	**0.84**	**279**	P	**Pg**	**02 36 51.4**	**-0.5**
CPW				S	**Sg**	**02 37 03.4**	**+0.4**
CPW	**Capitol Peak**	**0.84**	**279**		**Pg**	**02 36 51.5**	**-0.5**
MTMW	**Mount Mitchell**	**0.84**	**194**		**Pg**	**02 36 51.2**	**-0.8**
LVP	**Lakeview Peak**	**0.85**	**203**		**Pg**	**02 36 51.2**	**-0.8**
C05A	**Tolt Reservoir**	**0.86**	**11**	P	**Pg**	**02 36 51.4**	**-1.0**
C05A				S	**Sg**	**02 37 02.7**	**-0.9**
C05A	**Tolt Reservoir**	**0.86**	**11**		**Pg**	**02 36 51.5**	**-1.0**
C05A					**Sg**	**02 37 02.8**	**-0.9**
RVW	**Rose Valley**	**0.90**	**219**		**Pg**	**02 36 51.9**	**-1.1**
GMW	**Gold Mountain**	**0.92**	**320**		**Pg**	**02 36 52.1**	**-1.3**
EBG	**Ellensburg**	**0.93**	**86**		**Pg**	**02 36 53.5**	**-0.2**
GNW	**Green Mountain**	**0.94**	**320**	P	**Pg**	**02 36 52.4**	**-1.5**
GNW				S	**Sg**	**02 37 05.5**	**-0.7**
GNW	**Green Mountain**	**0.94**	**320**		**Pg**	**02 36 52.5**	**-1.5**
GULW	**Guler Mountain**	**0.95**	**166**		**Pg**	**02 36 52.9**	**-1.1**
LTY	**Liberty**	**0.95**	**64**	P	**Pg**	**02 36 53.0**	**-1.0**
LTY				S	**Sg**	**02 37 05.5**	**-1.0**
LTY	**Liberty**	**0.95**	**64**		**Pg**	**02 36 52.9**	**-1.2**
LTY				Sg	**Sg**	**02 37 05.4**	**-1.1**
LTY				IAML		02 37 05.9	
	comp=N,269nm,0.2s						
LTY				IAML		02 37 06.0	
	comp=E,183nm,0.2s						
HTW	**Haystack Looko**	**0.96**	**6**		**Pg**	**02 36 53.2**	**-1.1**
TBM	**Table Mountain**	**0.96**	**70**		**Pg**	**02 36 54.1**	**-0.2**
BMW	**Boistfort Moun**	**0.97**	**248**		**Pg**	**02 36 53.5**	**-0.9**
BLH	**Bald Hill**	**0.99**	**356**		**Pg**	**02 36 53.7**	**-1.2**

F05D	White Salmon	1.01	161	P	Pg	02 36 54.0	-1.3
	baz=342						
F05D				S	Sg	02 37 07.1	-1.3
	baz=342						
F05D	White Salmon	1.01	161		Pg	02 36 54.5	-0.7
D03D	Eldon	1.05	311	P	Pg	02 36 54.5	-1.4
	baz=131,SNR=70						
D03D				S	Sg	02 37 09.0	-0.6
	baz=131						
D03D	Eldon	1.05	311		Pg	02 36 54.6	-1.4
F04D	Rainier, OR	1.07	225	Pb	Pg	02 36 55.2	-1.1
	baz=44						
F04D				Sb	Sg	02 37 09.8	-0.4
	baz=44						
F04D	Rainier, OR	1.07	225		Pg	02 36 55.3	-1.0
SMW	South Mountain	1.08	297	P	Pg	02 36 55.8	-0.6
B023	Clatskanie	1.08	228		Pg	02 36 55.1	-1.4
TRW	Toppenish Ridg	1.10	120		Pg	02 36 57.0	+0.1
HDW	Hoodsport	1.11	317	P	Pg	02 36 55.4	-1.7
HDW	Hoodsport	1.11	317		Pg	02 36 55.4	-1.7
C04A	Brinnon	1.13	321		Pb	02 36 55.6	-1.6
B017	Montesano	1.13	278		Pb	02 36 57.0	-0.1
MXC	Moxie City	1.16	103		Pb	02 36 57.4	-0.2
E03A	Lebam	1.17	256	P	Pb	02 36 56.9	-0.9
E03A				S	Sb	02 37 12.5	-0.4
E03A	Lebam	1.17	256		Pb	02 36 56.5	-1.4
E03A				Sg	Sb	02 37 12.8	-0.1
E03A				IAML		02 37 18.8	
	comp=N,91nm,0.6s						
B013	Quilcene	1.18	326		Pb	02 36 56.4	-1.6
B013	Quilcene	1.18	326		Pb	02 36 56.4	-1.6
WRW	Wenatchee Ridg	1.24	35		Pn	02 36 57.8	-1.1
C06D	Leavenworth	1.28	33	P	Pn	02 36 58.7	-0.8
	baz=213						
C06D				S	Sb	02 37 15.2	-1.2
	baz=213						
C06D	Leavenworth	1.28	33		Pn	02 36 58.9	-0.7
WISH	Wishkah	1.29	283	P	Pn	02 36 59.8	+0.2
NLO	Nicolai Mounta	1.30	235		Pn	02 36 59.3	-0.5
ETW	Entiat	1.32	54		Pn	02 37 00.2	0.0
JCW	Jim Creek	1.35	360	P	Pn	02 36 59.6	-0.9
JCW	Jim Creek	1.35	360		Pn	02 36 59.5	-0.9
BLN	Blyn Mountain	1.36	329	P	Pn	02 36 59.4	-1.2
BLN				S	Sb	02 37 16.9	-1.7
BLN	Blyn Mountain	1.36	329		Pn	02 36 59.4	-1.2
GPW	Glacier Peak	1.38	22	P	Pn	02 37 00.5	-0.6
GPW				S	Sb	02 37 18.2	-1.2
GPW	Glacier Peak	1.38	22		Pn	02 37 00.5	-0.6
BVW	Beverly	1.40	91		Pn	02 37 01.9	+0.7
HIYU	Hiyu Mountain	1.41	177		Pn	02 37 01.3	-0.1
B05A	Bryant	1.42	355	P	Pn	02 37 00.7	-0.7
	baz=175,SNR=20						
B05A				S	Sn	02 37 19.1	-1.0
	baz=175						
B05A	Bryant	1.42	355		Pn	02 37 01.0	-0.4
PGO	Gresham	1.43	195		Pn	02 37 01.7	+0.3
NLWA	Neilton Lookou	1.44	293		Pn	02 37 00.8	-0.9
NLWA				IAML		02 37 24.5	
	comp=N,62nm,0.6s						
SQM	Sequim	1.45	329		Pn	02 37 01.2	-0.5
E07A	Sunnyside	1.45	101	Pn	Pn	02 37 01.9	+0.1
E07A				IAML		02 37 25.2	
	comp=E,114nm,0.5s						
E07A				IAML		02 37 26.6	
	comp=N,102nm,0.5s						
MDW	Midway	1.51	98		Pb	02 37 03.6	0.0
BLTW	Bickleton	1.53	127		Pn	02 37 03.1	+0.2
TDH	Tom, Dick, Har	1.56	176		Pn	02 37 03.4	0.0
CMW	Cultus Mountai	1.58	355	P	Pn	02 37 04.2	+0.4
WTV	Waterville	1.59	57		Pn	02 37 04.8	+1.0
GBB	Gable Butte	1.60	98		Pb	02 37 05.5	+0.4
CBSW	Chelan Butte S	1.60	53		Pn	02 37 04.8	+0.9
B04A	Port Angeles	1.62	319		Pn	02 37 04.3	+0.2
B04A	Port Angeles	1.62	319		Pn	02 37 04.4	+0.2
WAH2	Wahluke Slope	1.62	92		Pb	02 37 05.7	+0.1
KMOR	Kings Mountain	1.63	222		Pn	02 37 04.0	-0.3
RPW	Rockport	1.63	10	P	Pn	02 37 04.5	+0.2
RPW				S	Sn	02 37 25.2	0.0
RPW	Rockport	1.63	10		Pn	02 37 04.5	+0.2
NLW	Nelson Butte	1.64	41		Pn	02 37 05.1	+0.6
G05D	Wamic, OR	1.66	165	Pb	Pn	02 37 05.1	+0.4
	baz=346,SNR=8.8						
G05D				Sb	Sn	02 37 26.9	+1.0
	baz=346						
FHE	Frenchman Hill	1.67	85		Pn	02 37 05.9	+1.1
EPH	Ephrata	1.67	71		Pn	02 37 05.1	+0.2
RSW	Rattlesnake Hi	1.67	105		Pn	02 37 05.9	+1.0
F07A	Phinny Hill Vi	1.68	124	Pn	Pn	02 37 06.0	+1.0
F07A				IAML		02 37 29.4	
	comp=N,98nm,0.5s						
F07A				IAML		02 37 29.4	
	comp=E,71nm,0.8s						
B06A	Marblemount	1.70	10	P	Pn	02 37 05.3	+0.1
B06A				S	Sn	02 37 26.8	-0.1
B06A	Marblemount	1.70	10	Pn	Pn	02 37 05.3	+0.1
HAWA	Hanford	1.71	105	Pn	Pn	02 37 05.7	+0.3
HAWA				IAML		02 37 29.6	
	comp=E,70nm,0.6s						
GBL	Gable Mountain	1.71	97		Pb	02 37 07.2	0.0
CRF	Corfu	1.74	90		Pn	02 37 06.6	+0.8
STW	Striped Peak	1.76	318	P	Pn	02 37 06.7	+0.6
REDWA	Red Mountain	1.80	107		Pb	02 37 08.7	+0.1
VBEM	Beaver Butte	1.80	172		Pb	02 37 08.4	-0.4
VGZ	Gonzales	1.83	329	P	Pn	02 37 06.4	-0.6
DHW2	Dyer Hill 2	1.85	51		Pb	02 37 09.6	0.0
G03D	McMinnville, O	1.88	210	Pb	Pn	02 37 08.3	+0.6
	baz=29,SNR=14						
G03D				Sb	Sb	02 37 33.3	-0.2
	baz=29						
OBC	Olympics--Boni	1.88	310	P	Pn	02 37 09.2	+1.3
MCW	Mount Constitu	1.93	342	P	Pn	02 37 09.0	+0.5
MCW				S	Sn	02 37 34.1	+1.3
MCW	Mount Constitu	1.93	342		Pn	02 37 09.1	+0.6
MBW	Mount Baker	1.94	0	P	Pn	02 37 09.7	+1.0
MBW	Mount Baker	1.94	0		Pn	02 37 09.7	+1.0
A04D	Lummi Island	1.95	345	Sb	Sb	02 37 36.1	+0.7
	baz=164						
B011	North Saanich	2.08	331	P	Pn	02 37 10.6	+0.3
B011				S	Sn	02 37 37.1	+0.9
B011	North Saanich	2.08	331		Pn	02 37 10.7	+0.3
PA12	PA12 Sannich	2.08	331	P	Pn	02 37 10.5	+0.1
B009	North Saanich	2.08	331	P	Pn	02 37 10.5	+0.1
B009				S	Sn	02 37 37.4	+1.2
B010	North Saanich	2.08	331	P	Pn	02 37 10.6	+0.2
B010				S	Sn	02 37 37.2	+1.0
PGC	Sidney	2.08	331	P	Pn	02 37 10.5	+0.1
PGC				S	Sn	02 37 37.3	+1.1
PGC	Sidney	2.08	331	Pn	Pn	02 37 10.4	+0.1
PGC				IAML		02 37 29.3	
	comp=E,29nm,4.8s						
PA01	PA01 North	2.08	331	P	Pn	02 37 10.8	+0.4
PA01				S	Sn	02 37 37.4	+1.2
A05A	Maple Falls	2.16	357	P	Pn	02 37 13.0	+1.5
A05A				S	Sn	02 37 40.3	+2.2
H04A	Detroit Lake	2.17	185	Pn	Pn	02 37 12.8	+1.1
H04A				IAML		02 37 43.1	
	comp=N,44nm,0.5s						
H04A				IAML		02 37 49.9	
	comp=E,45nm,0.3s						
B08A	Colville Reser	2.32	48	P	Pn	02 37 13.7	-0.1
B08A				S	Sn	02 37 42.0	-0.2
B08A	Colville Reser	2.32	48	Pn	Pn	02 37 13.5	-0.2
B08A				IAML		02 37 47.3	
	comp=E,35nm,0.3s						
GOBB	Galiano Island	2.36	334	P	Pn	02 37 15.7	+1.4
GOBB				S	Sb	02 37 46.3	-0.9
H04D	Lebanon	2.39	194	Pb	Pn	02 37 16.2	+1.4
	baz=14						
H04D				Sb	Sb	02 37 48.4	+0.2
	baz=14						
PFB	Port Renfrew	2.42	316	P	Pn	02 37 16.9	+1.7
COR	Corvallis	2.46	204	Pn	Pn	02 37 17.3	+1.6
COR				IAML		02 38 00.1	
	comp=E,30nm,5.0s						
COR				IAML		02 38 08.9	
	comp=E,26nm,4.2s						
B926	Mesachie Lake	2.47	324	S	Sn	02 37 46.3	+0.4
I05D	Terrebonne, OR	2.54	170	Pb	Pb	02 37 20.2	-1.1
	baz=351						
HOPB	Hope	2.56	7	S	Sn	02 37 49.6	+1.4
BIB	Bowen Island	2.72	341	P	Pn	02 37 21.3	+2.0
BIB				S	Sn	02 37 54.9	+2.8
NLLB	Nanaimo Lost L	2.76	331	P	Pn	02 37 21.5	+1.8
MGB	Mount Grey	2.85	320	P	Pn	02 37 22.8	+1.6
PNT	Penticton	2.92	31	P	Pb	02 37 25.7	-2.0
PNT				Sg	Sb	02 38 05.1	+1.8
WPB	Watts Point	2.94	344	P	Pn	02 37 24.1	+1.8
SHB	Sechelt	3.05	335	P	Pn	02 37 25.3	+1.5
SHB				S	Sn	02 38 02.2	+2.0
I04A	Tendick Farm,	3.07	187	Sb	Sb	02 38 07.8	0.0
	baz=6.3						
I07A	Izee	3.25	147	Pn	Pn	02 37 27.7	+1.1
I07A				IAML		02 38 17.9	
	comp=N,12nm,5.0s						
I07A				IAML		02 38 45.5	
	comp=E,9.6nm,3.9s						
BMO	Blue Mountains	3.79	120	Pn	Pn	02 37 34.4	+0.2
BMO				IAML		02 38 43.6	
	comp=E,9.2nm,4.8s						
K05A	Summer Lake	4.18	170	Pn	Pn	02 37 41.9	+2.3
JTMT	Jette	5.28	77	Pn	Pn	02 37 57.3	+2.7

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*SNET **26** 02:47:25.2±1.1, 14°.48N×89°.15W, h1^{km}±4^{km}, ML3.0*
*GCG **26** 02:47:27.4±0.7, 15°.37N×89°.45W, h76^{km}, MD3.3*
ISC 26 02:47:25.0±1.5**, 14°.54N**±0°.05×**89°.06W**±0°.05**, h3**^{km}±16^{km}**,**
n18, σ0^{s}**.75**/23**, 6C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.27	273	⇑iP	Pg	02 47 30.0	-0.2
ESQI				IAML		02 47 30.3	
	comp=Z,3µm,0.1s						
ESQI				eS	Sg	02 47 33.5	-0.3
MTO3	Montecristo	0.32	243	⇑iP	Pg	02 47 30.8	-0.5
MTO3				eS	Sg	02 47 35.1	-0.4
MTO3				IAML		02 47 36.0	
	comp=Z,3µm,0.3s						
LLGN	La Laguna	0.40	163	⇑iP	Pg	02 47 33.2	+0.5
LLGN				eS	Sg	02 47 39.3	+1.4
LLGN				IAML		02 47 39.8	
	comp=Z,2µm,0.2s						
UNIC	Universidad Ca	0.73	220	eP	Pg	02 47 38.5	-0.5
LBRS	Las Brisas	0.80	179	eP	Pg	02 47 40.6	+0.1
MRL	Marmol	0.80	312	eP	Pg	02 47 40.5	0.0
MRL				eS	Sg	02 47 50.8	-0.1
PAVA	Las Pavas	0.83	171	⇓iP	Pg	02 47 41.4	+0.3
SBLS	San Blas	0.89	218	eP	Pg	02 47 41.8	-0.2
COEG	Centro de Oper	0.94	169	⇑eP	Pg	02 47 42.9	-0.1
JAYA	Jayaque - finc	0.96	203	eP	Pg	02 47 42.5	-1.0
JAYA				IAML		02 47 59.8	
	comp=Z,634nm,0.2s						
COEB	Comit de Eme	1.16	153	eP	Pg	02 47 47.1	-0.3
TECA	Tecapa	1.18	152	⇑iP	Pg	02 47 47.4	-0.2
NBG	Las Nubes	1.24	272	eP	Pb	02 47 48.8	-0.6
NBG				eS	Sg	02 48 06.4	+1.3
FAGO	Alcalda de S	1.25	132	⇑eP	Pn	02 47 48.4	-1.1
PACA	Pacayal	1.29	146	eP	Pn	02 47 49.7	-0.4
PCG	Pacaya	1.50	264	eP	Pn	02 47 53.8	+0.6
LCND	La Caada	1.68	137	eP	Pn	02 47 55.7	+0.4
FUG	Fuego 3	1.72	267	eP	Pn	02 47 57.6	+1.5

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*IDC **26** 02:51:58.7±2.8, 27°.00N×56°.11E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.3/38, mbtmp3.5/4, Error ellipse: s-maj=64.1km s-min=32.2km az=155.0*
*OMAN **26** 02:52:00.6±1.1, 27°.56N×56°.12E, h7^{km}, ml3.1/5, Error ellipse: s-maj=23.9km s-min=3.9km az=176.0*
*TEH **26** 02:52:00.8, 27°.45N×56°.17E, h8^{km}, ML3.0*
ISC 26 02:52:00.9±1.2**, 27°.47N**±0°.03×**56°.16E**±0°.05**, h3**^{km}±9^{km}**,**
n33, σ1^{s}**.59**/37**, mb3.4**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.07	170	ePg	Pg	02 52 02.4	0.0
GENO				eSg	Sg	02 52 04.7	+1.3
IBND	Bandar-abas	0.34	93	ePg	Pg	02 52 06.8	-0.7
SHME	Shamm	1.41	181	ePn	Pg	02 52 27.6	-0.4
SHME	Shamm	1.41	181	P	Pg	02 52 28.0	0.0
	SNR=9.3						
SHME				S	Sg	02 52 48.7	+2.4
KHNJ	Kahnooj	1.45	70	ePg	Pn	02 52 27.7	-0.5
BANOM	Banah	1.54	175	ePn	Pg	02 52 30.1	-0.4
BANOM	Banah	1.54	175	P	Pg	02 52 30.1	-0.4
	SNR=47						
BANOM				S	Sg	02 52 51.9	+1.4
LAR1	LAR	1.60	278	ePg	Pg	02 52 30.8	-0.7
MASF	Masafi	2.09	180	P	Pn	02 52 37.1	+0.2
MSFE	Esma-Masafi	2.10	180	ePn	Pb	02 52 38.4	-1.3
MDH	Madha	2.16	177	ePn	Pb	02 52 39.0	-1.8
MDH	Madha	2.16	177	P	Pn	02 52 37.8	-0.1
NGRK	Negar Kerman	2.23	13	ePn	Pb	02 52 40.8	-1.3
NGRK				e		02 53 34.1	
	comp=Z,99nm,0.5s						
NAZ	Nazwa, Dubai	2.51	190	ePn	Pn	02 52 43.4	+0.7
UOSS	Minazif	2.51	179	ePn	Pn	02 52 43.3	+0.6
UOSS	Minazif	2.51	179	P	Pn	02 52 43.3	+0.6
UOSS				S	Sg	02 53 22.5	+0.8
TVBK	TV Kerman	2.56	12	ePn	Pb	02 52 45.8	-2.0
TVBK				e		02 52 53.0	
	comp=Z,99nm,0.4s						
KBAM	BAM	2.62	50	ePn	Pn	02 52 46.3	+2.0
HATD	Hatta, Dubai	2.63	181	ePn	Pb	02 52 46.2	-2.6
CHMN	Cheshme madani	2.67	27	ePn	Pb	02 52 47.4	-2.3
CHMN				e		02 53 31.7	
	comp=Z,99nm,0.4s						
FAQ	Al Faqa, Dubai	2.76	191	ePn	Pn	02 52 46.2	+0.1
ASHO	Ashiyiah	2.77	182	ePn	Pn	02 52 45.8	-0.6
KHGB	Koh Gabri	2.91	5	ePn	Pb	02 52 50.8	-2.9
KHGB				e		02 53 31.6	
	comp=Z,99nm,0.4s						
ASUD	Al Ashush, Dub	2.93	195	P	Pb	02 52 50.5	-3.3
	SNR=5.1						
SOHO	SOHO	3.34	174	ePn	Pn	02 52 55.8	+1.8
IRAM	Ramesheh	5.43	324	ePn	Pn	02 53 24.8	+1.7
IZEF	Zefreh	6.34	329	ePn	Pn	02 53 37.1	+1.5
IPIR	Pirpir	6.92	320	ePn	Pn	02 53 44.6	+1.1
WHFO	Wadi Hawf	9.76	194	P	Pn	02 54 23.0	+0.7
	SNR=9.4						
BRTR	Keskin Array B	22.32	309	P	P	02 57 01.9	+1.9
	comp=Z,0.2nm,0.4s,baz=117,slow=12,SNR=3.1						
MKAR	Makanchi Array	28.18	40	P	P	02 57 56.7	+2.0
	comp=Z,0.2nm,0.6s,baz=226,slow=9.2,SNR=5.0						
FINES	FINESS Array B	39.48	338	P	P	02 59 32.9	+0.5
	comp=Z,1.2nm,0.8s,baz=146,slow=10,SNR=3.9						
TORD	Torodi Ar. Bea	52.64	266	P	P	03 01 14.3	-2.5
	comp=Z,0.9nm,0.8s,baz=65,slow=7.9,SNR=4.3						

IDC 26 03:03:27.5±66.0**, 16°.38S**×**176°.21W, h0**^{km}**, mb3.9**/3**,**
mb1 4.1/3**, mb1mx3.6**/37**, mbtmp3.9**/3**, MS3.8**/4**, Ms1 3.8**/4**,**
ms1mx3.2/31**, Error ellipse: s-maj=1235.0km**
s-min=171.5km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.21	240	P	P	03 11 14.3	+0.1
	0.5nm,0.3s,baz=104,slow=12,SNR=3.4						
WRA	Warramunga Arr	46.99	258	P	P	03 12 00.4	-0.5
	0.4nm,0.5s,baz=95,slow=7.4,SNR=7.3						
WRA				LR	LR	03 30 35.8	
	comp=Z,42nm,18.2s,baz=245,slow=35						
ASAR	Alice Springs	47.24	253	P	P	03 12 02.8	0.0
	2.2nm,0.4s,baz=89,slow=7.9,SNR=59						
BATI	Baumata	58.67	268	LR	LR	03 37 50.4	
	comp=Z,226nm,19.1s,baz=240,slow=35						
KAPI	Kappang	63.71	272	LR	LR	03 42 04.0	
	comp=Z,62nm,18.7s,baz=204,slow=36						
CMAR	Chiang Mai Arr	90.37	289	LR	LR	03 54 15.6	
	comp=Z,28nm,21.2s,baz=275,slow=34						

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*BJI **26** 03:30:08.2±0.0, 41°.24N×48°.32E, h27^{km}, mB5.0/35, mb4.7/48, Ms4.6/31, Ms7 4.4/30*
*MOS **26** 03:30:10.5±1.6, 41°.21N×48°.99E, h22^{km}, mb4.9/43, MS4.2/8, Error ellipse: s-maj=4.2km s-min=2.5km az=38.8*
MOS Felt (IV) at Kasumkent; (II-III) at Akhty.
*AZER **26** 03:30:12.4±0.1, 41°.19N×48°.72E, h7^{km}, ml4.9/35, Error ellipse: s-maj=0.9km s-min=0.5km az=225.0*
*MOS **26** 03:30:12.8±0.0, 41°.13N×48°.69E, h19^{km}, MPVA5.1*
*IDC **26** 03:30:13.5±0.5, 41°.22N×48°.74E, h32^{km}±3^{km}, mb4.4/31, mb1 4.5/45, mb1mx4.4/60, mbtmp4.6/45, ML4.2/13, MS4.0/41, Ms1 4.0/41, ms1mx3.9/58, Error ellipse: s-maj=8.7km s-min=6.3km az=172.0*
*NEIC **26** 03:30:15.2±2.7, 41°.29N±0°.06×48°.88E±0°.08, h50^{km}±5^{km}, mb5.0/109, Error ellipse: s-maj=9.6km s-min=8.4km az=160.0*
*DRS **26** 03:30:17.3±0.0, 41°.12N×48°.72E, h22^{km}, ML4.8/9, FELT I=II-III MSK at Akhty*
*NNC **26** 03:30:19.1±4.1, 41°.43N×49°.53E, h27^{km}±36^{km}, mb4.8, Error ellipse: s-maj=26.1km s-min=12.3km az=69.0*
ISC 26 03:30:12.5±0.3**, 41°.22N**±0°.02×**48°.75E**±0°.02**, h27**^{km}±1^{km}**,**
h27^{km}:pP-P, n796, σ2^{s}**.13**/923**, mb4.9**/153**, MS4.2**/40**,**
65C-69D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIZA	Siyzn	0.18	143	P	Pb	03 30 19.2	+0.9
SIZA				S	Sb	03 30 24.1	+1.9
QUBA	Quba, Azerbaij	0.24	304	P	Pb	03 30 21.5	+2.7
	SNR=256						
QUBA				S	Sb	03 30 26.8	+3.6
ATGJ	Altiaghaj	0.39	159	P	Pn	03 30 22.3	-0.2
	SNR=2268						
ATGJ				S	Sn	03 30 28.9	-0.2
PQL	Pirkuli	0.45	196	P	Pn	03 30 24.0	+0.7
	SNR=989						
PQL				S	Sn	03 30 31.9	+1.3
XNQ	Khinaliq	0.47	264	P	Pn	03 30 24.5	+0.9
XNQ				S	Sn	03 30 32.6	+1.5
QSAR	Qusar	0.47	309	P	Pn	03 30 25.0	+1.4
	SNR=5985						
QSAR				S	Sn	03 30 33.2	+2.2
IML	Ismayilli	0.61	225	P	Pn	03 30 26.8	+1.4
	SNR=1861						
IML				S	Sn	03 30 36.6	+2.2
GBS	Qobustan	0.70	168	P	Pn	03 30 29.1	+2.3
	SNR=751						
GBS				S	Sn	03 30 41.8	+5.1
QBL	Gabala	0.74	249	P	Pn	03 30 28.7	+1.4
	SNR=1061						
QBL				S	Sn	03 30 41.5	+3.8
AKT	Akhty	0.81	289	i Pg	Pn	03 30 30.1	+1.7
	1µm,0.4s						
AKT				eSg	Sn	03 30 41.9	+2.4
	4µm,0.6s						
AKT	Akhty	0.81	289	⇑iPG	Pn	03 30 30.0	+1.7
AKT				e		03 30 41.9	
KDMR	Kurdemir	0.95	207	P	Pn	03 30 32.8	+2.8
KDMR				S	Sn	03 30 48.5	+5.8
GOBA	Gobu	1.11	137	P	Pb	03 30 35.7	+2.7
	SNR=201						
GOBA				S	Sn	03 30 52.8	+6.2
NDR	Nardaran	1.14	124	P	Pb	03 30 35.1	+1.7
	SNR=656						
NDR				S	Sn	03 30 51.9	+4.7
SEKA	Sheki	1.17	270	PG	Pb	03 30 36.2	+2.0
SEKA	Sheki	1.17	270	P	Pb	03 30 36.2	+2.0
	SNR=386						
SEKA				S	Sn	03 30 52.8	+4.4
ZRD	Zardab	1.24	221	P	Pb	03 30 37.0	+1.7
	SNR=795						
ZRD				S	Sb	03 30 55.8	+4.9
URKR	Urkarakh	1.26	319	ePg	Pb	03 30 37.6	+1.9
	4µm,0.6s						
URKR				eSg	Sb	03 30 53.6	+2.0
	4µm,0.5s						
URKR	Urkarakh	1.26	319	⇑ePG	Pb	03 30 37.5	+1.9
URKR				e		03 30 53.5	
URKR				pmax	pmax		
	comp=Z,4µm,0.6s						
ALIB	Äli-Bayra	1.28	171	P	Pb	03 30 38.5	+2.6
	SNR=314						
ALIB				S	Sb	03 30 54.9	+3.1
GALA	Gala	1.34	127	Pn	Pb	03 30 38.7	+1.8
	SNR=18						
GALA				Sn	Sb	03 30 59.9	+6.3
MNGR	Mingechevir, A	1.34	251	PG	Pb	03 30 39.0	+2.1
MNGR	Mingechevir, A	1.34	251	Pn	Pb	03 30 39.0	+2.1
	SNR=166						
MNGR				Sn	Sb	03 30 58.4	+4.8
SAAT	Saatly	1.38	191	P	Pb	03 30 38.5	+0.9
	SNR=193						
SAAT				S	Sb	03 30 58.3	+3.4
SGKR	Sergokala	1.48	327	ePg	Pb	03 30 41.8	+2.4
	comp=Z,4µm,0.8s						
SGKR				eSg	Sb	03 31 01.2	+3.4
	comp=Z,2µm,0.9s						
SGKR	Sergokala	1.48	327	⇑ePG	Pb	03 30 41.8	+2.4
SGKR				e		03 31 01.2	
SGKR				pmax	pmax		
	comp=Z,4µm,0.8s						
BRDA	Brd	1.53	232	Pn	Pb	03 30 41.1	+0.9
	SNR=72						
BRDA				Sn	Sb	03 31 04.0	+4.9
ZKTA	Zakatala	1.66	285	PN	Pb	03 30 44.0	+1.7
ZKTA	Zakatala	1.66	285	Pn	Pb	03 30 43.9	+1.6
	SNR=244						
ZKTA				Sn	Sb	03 31 07.2	+4.5
AGDM	Agdam	1.67	229	Pn	Pb	03 30 42.4	-0.2
	SNR=699						
AGDM				Sn	Sb	03 31 05.6	+2.3
BLQ	Beylaqan	1.75	212	Pn	Pb	03 30 42.8	-1.2
	SNR=435						
BLQ				Sn	Sb	03 31 08.7	+3.1
ARKR	Arakani	1.90	317	i Pg	Pb	03 30 48.4	+1.9
	comp=Z,2µm,0.7s						
ARKR				i Sg	Sb	03 31 16.2	+6.3
	comp=Z,4µm,0.9s						
ARKR	Arakani	1.90	317	⇓iPN	Pb	03 30 48.4	+1.9
ARKR				i		03 31 16.2	
ARKR				pmax	pmax		
	comp=Z,2µm,0.7s						
ARKR				smax	smax		
	comp=N,4µm,0.9s						
GANJ	Ganja	1.93	253	PN	Pb	03 30 45.7	-1.3
GANJ	Ganja	1.93	253	Pg	Pb	03 30 46.0	-1.0
	SNR=184						
GANJ				Sg	Sb	03 31 10.9	+0.2
MAK	Makhachkala	1.97	332	ePg	Pb	03 30 49.6	+1.9
MAK				eSg	Sb	03 31 15.5	+3.8
MAK	Makhachkala	1.97	332	⇓iPN	Pb	03 30 49.5	+1.9
MAK				e		03 31 18.4	
MAK				pmax	pmax		
	comp=Z,985nm,0.5s						
MAK				smax	smax		
	comp=N,7.0nm,0.6s						
MAK				smax	smax		
	comp=N,9µm,0.6s						
MAK				MLR	MLR		
	comp=Z,3µm,12.0s						
LGD	Lagodekhi	1.98	289	P	Pb	03 30 48.4	+0.5
LGD				S	Sb	03 31 18.8	+6.7
LGD	Lagodekhi	1.98	289	i Pg	Pb	03 30 48.3	+0.5
LGD				eSg	Sb	03 31 14.3	+2.2
LGD	Lagodekhi	1.98	289	⇓iPN	Pb	03 30 48.3	+0.5
LGD				eS	Sb	03 31 14.3	+2.2
DDFL	Dedoflistskaro	2.00	277	P	Pb	03 30 52.6	+4.4
DDFL	Dedoflistskaro	2.00	277	i PN	Pb	03 30 49.8	+1.7
GLBA	Clilabad	2.00	188	Pn	Pb	03 30 46.2	-1.9
	SNR=88						
GLBA				Sn	Sb	03 31 15.0	+2.5
BUJR	Buynaksk	2.02	323	i Pg	Pb	03 30 50.2	+1.8
	comp=Z,2µm,0.7s						
BUJR				eSg	Sb	03 31 18.6	+5.5
	comp=Z,3µm,0.8s						
BUJR	Buynaksk	2.02	323	⇓iPN	Pb	03 30 50.2	+1.8
BUJR				e		03 31 18.6	
BUJR				pmax	pmax		
	comp=Z,2µm,0.7s						
XNZR	Khunzakh	2.02	311	ePg	Pb	03 30 50.4	+1.8
XNZR				eSg	Sb	03 31 15.8	+2.5
XNZR	Khunzakh	2.02	311	ePN	Pb	03 30 50.4	+1.8
XNZR				eS	Sb	03 31 15.8	+2.5
QRD	Qoradiz	2.07	212	Pn	Pb	03 30 46.9	-2.5
	SNR=29						
QRD				Sn	Sb	03 31 18.7	+4.0
KRNR	Karanay	2.11	320	i Pg	Pb	03 30 51.2	+1.0
	comp=Z,792nm,1.0s						
KRNR				eSg	Sb	03 31 20.9	+4.9
	comp=Z,3µm,1.1s						
KRNR	Karanay	2.11	320	⇓ePN	Pb	03 30 51.1	+1.0
KRNR				e		03 31 20.8	
KRNR				pmax	pmax		
	comp=Z,792nm,1.0s						
KRNR				smax	smax		
	comp=E,3µm,1.1s						
DBC	Dubki	2.30	322	ePn	Pb	03 30 54.1	+0.8

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      comp=E,482nm,0.6s
DBC                           eSn    Sb    03 31 24.7 +3.5
      comp=E,4µm,1.6s
DBC   Dubki          2.30 322⇑ePN    Pb    03 30 54.0 +0.8
DBC                           e            03 31 24.7
DBC                            pmax  pmax
      comp=Z,482nm,0.6s
DBC                            smax  smax
      comp=N,4µm,1.6s
GDB   GEDABAY        2.33 259  Pg    Pb    03 30 51.3 -2.5
      SNR=497
GDB                            Sn    Sb    03 31 21.6 -0.6
YRD   Yardimli       2.34 190  Pn    Pn    03 30 50.2 +0.9
      SNR=208
YRD                            Sn    Sb    03 31 24.6 +2.1
BTLR  Botlikh        2.37 308 ePn    Pb    03 30 55.8 +1.1
      comp=N,1µm,0.8s
BTLR                          i Sn   Sb    03 31 28.1 +4.6
      comp=N,2µm,0.8s
BTLR  Botlikh        2.37 308⇓ePN    Pb    03 30 55.7 +1.1
BTLR                          i            03 31 28.0
BTLR                           pmax  pmax
      comp=Z,1µm,0.8s
BTLR                           smax  smax
      comp=N,2µm,0.8s
DLMR  Dylym          2.43 320 i Pn   Pb    03 30 55.9 +0.3
      comp=N,3µm,0.6s
DLMR                          eSn    Sb    03 31 28.3 +3.3
      comp=N,6µm,1.4s
DLMR  Dylym          2.43 320⇓iPN    Pb    03 30 55.8 +0.3
DLMR                          e            03 31 28.2
DLMR                           pmax  pmax
      comp=Z,3µm,0.6s
LKRN  Lenkeran, Azer 2.51 180  Pn    Pn    03 30 51.9 +0.4
      SNR=24
QZX   Qazax, Azerbai 2.56 267  Pn    Pb    03 30 54.9 -2.8
      SNR=608
QZX                            Sn    Sb    03 31 27.9 -0.9
LRK   Lerik          2.60 187  Pn    Pn    03 30 53.5 +0.7
      SNR=68
LRK                            Sn    Sb    03 31 30.8 +0.8
DVE   Vedeno         2.61 312 ePn    Pb    03 30 57.8 -0.8
DVE                           eSn    Sb    03 31 28.1 -2.2
DVE   Vedeno         2.61 312 ePN    Pb    03 30 57.8 -0.8
DVE                           eS     Sb    03 31 28.1 -2.2
ASTR  Astara         2.66 179  Pn    Pn    03 30 53.9 +0.3
      SNR=58
GROC  Groznyy        2.96 313 ePn    Pb    03 31 02.7 -1.7
GROC                          eSn    Sb    03 31 37.4 -2.7
GROC  Groznyy        2.96 313 ePN    Pb    03 31 02.7 -1.7
GROC                          e            03 31 08.4
GROC                          e            03 31 41.1
GROC                          e            03 31 51.4
GROC                           pmax  pmax
      comp=Z,131nm,0.2s
GROC                           pmax  pmax
      comp=Z,534nm,0.6s
GROC                           smax  smax
      comp=N,967nm,0.6s
GROC                           smax  smax
      comp=E,941nm,0.6s
GROC                           smax  smax
      comp=N,1µm,0.9s
GROC                           smax  smax
      comp=N,3µm,1.6s
GROC                           MLR   MLR
      comp=Z,8µm,2.0s
BTNK  Botanikuri     3.01 280  P     Pn    03 31 01.8 +3.4
BTNK  Botanikuri     3.01 280 i PN   Pn    03 31 00.9 +2.5
SEAG  Tbilisi Sea    3.02 282  P     Pn    03 31 01.9 +3.4
SEAG  Tbilisi Sea    3.02 282  PN    Pn    03 31 01.7 +3.2
SBZ   Shahbuz        3.05 234  Pn    Pb    03 31 02.3 -3.8
      SNR=908
SBZ                            Sn    Sb    03 31 42.1 -0.9
ORD   Ordubad        3.12 224  Pn    Pn    03 31 02.5 +2.5
      SNR=381
ORD                            Sn    Sb    03 31 40.9 -4.0
NAX   Nakhchivan     3.23 232  Pn    Pb    03 31 04.7 -4.4
      SNR=245
NAX                            Sn    Sb    03 31 46.0 -2.0
GNI   Garni          3.23 252  Pn    Pn    03 31 05.0 +3.3
      comp=Z,14nm,0.3s,baz=64,slow=2.8,SNR=70
GNI                            LR    LR    03 32 50.6
      comp=Z,4µm,19.6s,baz=78,slow=49
GNI   Garni          3.23 252  P     Pb    03 31 05.1 -4.1
GNI   Garni          3.23 252 i Pn   Pn    03 31 04.9 +3.3
GNI                           eSn    Sn    03 31 42.9 +3.6
GNI   Garni          3.23 252⇓iPN    Pn    03 31 04.9 +3.3
GNI                           eS     Sn    03 31 42.9 +3.6
GNI   Garni          3.23 252  Pn    Pb    03 31 05.1 -4.1
GNI   Garni          3.23 252  P     Pb    03 31 05.1 -4.1
HYR   Heyderabad     3.33 244  Pn    Pb    03 31 06.5 -4.4
      SNR=83
HYR                            Sn    Sb    03 31 47.9 -3.2
KMGR  Komgaron       3.42 304 ePn    Pb    03 31 09.0 -3.4
KMGR                          eSn    Sn    03 31 48.6 +4.8
KMGR  Komgaron       3.42 304 ePN    Pb    03 31 09.0 -3.4
KMGR                          eS     Sn    03 31 48.6 +4.8
DMNI  Dmanisi        3.44 273  P     Pn    03 31 07.0 +2.5
VLKR  Vladikavkaz    3.54 302 ePn    Pb    03 31 10.5 -3.9
VLKR                          eSn    Sb    03 31 52.8 -4.1
VLKR  Vladikavkaz    3.54 302 ePN    Pb    03 31 10.5 -3.9
VLKR                          eS     Sb    03 31 52.8 -4.1
LACR  Lac            3.69 297 ePn    Pn    03 31 11.3 +3.5
LACR                          eSn    Sn    03 31 54.3 +3.9
LACR  Lac            3.69 297 ePN    Pn    03 31 11.3 +3.5
LACR                          eS     Sn    03 31 54.3 +3.9
BRNG  Burnasheti     3.73 278  P     Pn    03 31 11.5 +3.1
BTKR  Batakoyurt     3.79 306 ePn    Pn    03 31 13.6 +4.5
BTKR                          eSn    Sn    03 31 56.7 +3.8
BTKR  Batakoyurt     3.79 306 ePN    Pn    03 31 13.6 +4.5
BTKR                          eS     Sn    03 31 56.7 +3.8
TRKR  Terskaya       3.88 311 i Pn   Pn    03 31 14.5 +4.1
TRKR                          eSn    Sn    03 32 00.7 +5.6
TRKR  Terskaya       3.88 311⇓iPN    Pn    03 31 14.5 +4.1
TRKR                          eS     Sn    03 32 00.7 +5.6
ZEI   Tsey           3.94 295 ePn    Pn    03 31 15.1 +3.8
ZEI                           eSn    Sn    03 32 02.0 +5.2
ZEI   Tsey           3.94 295 ePN    Pn    03 31 15.1 +3.8
ZEI                           eS     Sn    03 32 02.0 +5.2
KORR  Kora           3.95 300 ePn    Pn    03 31 14.9 +3.6
KORR                          eSn    Sn    03 31 59.5 +2.7
KORR  Kora           3.95 300 ePN    Pn    03 31 14.9 +3.6
KORR                          eS     Sn    03 31 59.5 +2.7
BKRG  Bakuriani      3.96 279  P     Pn    03 31 14.9 +3.2
AKH   Akhalkalaki    3.97 274  P     Pn    03 31 15.3 +3.7
AKH   Akhalkalaki    3.97 274 ePn    Pn    03 31 15.2 +3.5
AKH                           eSn    Sn    03 32 00.2 +2.8
AKH   Akhalkalaki    3.97 274 ePN    Pn    03 31 15.2 +3.5
AKH                           eS     Sn    03 32 00.2 +2.8
AKH   Akhalkalaki    3.97 274  Pn    Pn    03 31 15.4 +3.7
STDR  Stavd-Durt     4.09 303 ePn    Pn    03 31 17.3 +4.1
STDR                          eSn    Sn    03 32 05.8 +5.7
STDR  Stavd-Durt     4.09 303 ePN    Pn    03 31 17.3 +4.1
STDR                          eS     Sn    03 32 05.8 +5.7
PRTR  Priterechnaya  4.16 309 ePn    Pn    03 31 18.0 +3.8
PRTR                          eSn    Sn    03 32 07.0 +5.1
PRTR  Priterechnaya  4.16 309 ePN    Pn    03 31 18.0 +3.8
PRTR                          eS     Sn    03 32 07.0 +5.1
LSNR  Lesken         4.19 301 ePn    Pn    03 31 18.6 +3.9
LSNR                          eSn    Sn    03 32 08.7 +5.9
LSNR  Lesken         4.19 301 ePN    Pn    03 31 18.6 +3.9
LSNR                          eS     Sn    03 32 08.7 +5.9
DIGR  Digorskoe uzhe 4.20 295 ePn    Pn    03 31 18.6 +3.7
DIGR                          eSn    Sn    03 32 06.7 +3.5
DIGR  Digorskoe uzhe 4.20 295 ePN    Pn    03 31 18.6 +3.7
DIGR                          eS     Sn    03 32 06.7 +3.5
KARS  Kars           4.34 264  PN    Pb    03 31 25.1 -3.0
NCK   Nalchik        4.45 302 ePn    Pn    03 31 21.8 +3.7
NCK                           eSn    Sn    03 32 11.7 +2.7
NCK   Nalchik        4.45 302 ePN    Pn    03 31 21.8 +3.7
NCK                           eS     Sn    03 32 11.7 +2.7
TKB   Tkibuli        4.45 287  P     Pn    03 31 21.6 +3.3
KBTC  Kuba-Taba      4.72 305 i Pn   Pn    03 31 24.8 +2.8
KBTC                          eSn    Sn    03 32 19.0 +3.1
KBTC  Kuba-Taba      4.72 305⇓iPN    Pn    03 31 24.8 +2.8
KBTC                          eS     Sn    03 32 19.0 +3.1
NEY   Neytrino       4.91 296 ePn    Pn    03 31 29.0 +4.3
NEY                           eSn    Sn    03 32 24.6 +3.8
NEY   Neytrino       4.91 296 ePN    Pn    03 31 29.0 +4.3
NEY                           eS     Sn    03 32 24.6 +3.8
KBZ   Khabaz         5.00 302  Pn    Pn    03 31 28.1 +2.3
      comp=Z,2.0nm,0.3s,baz=108,slow=6.7,SNR=48
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KBZ                            Lg    Lg    03 32 44.1
      comp=Z,9.3nm,0.3s,baz=270,slow=2.0,SNR=2.3
KBZ                            LR    LR    03 33 18.6
      comp=Z,554nm,18.9s,baz=117,slow=37
KBZ   Khabaz         5.00 302 i Pn   Pn    03 31 28.1 +2.3
KBZ                           eSn    Sn    03 32 24.4 +1.8
KBZ   Khabaz         5.00 302⇓iPN    Pn    03 31 28.0 +2.3
KBZ                           eS     Sn    03 32 24.4 +1.8
PYA1  Pyatigorsk     5.04 306 ePn    Pn    03 31 28.6 +2.2
PYA1                          eSn    Sn    03 32 24.9 +1.0
PYA1  Pyatigorsk     5.04 306⇓ePN    Pn    03 31 28.6 +2.2
BEYR  Belyy Ugol+    5.19 304 ePn    Pn    03 31 30.7 +2.3
BEYR  Belyy Ugol+    5.19 304 ePN    Pn    03 31 30.7 +2.3
KVAR  Kislovodsk Arr 5.24 303  Pn    Pn    03 31 31.8 +2.7
      baz=90,slow=20,SNR=8.5
KVAR                           LR    LR    03 33 50.9
      comp=Z,1µm,20.9s,baz=302,slow=42
KIV   Kislovodsk     5.24 303  P     Pn    03 31 31.2 +2.1
KIV   Kislovodsk     5.24 303 i Pn   Pn    03 31 31.3 +2.1
KIV                           eSn    Sn    03 32 30.7 +1.9
KIV   Kislovodsk     5.24 303  P     Pn    03 31 31.3 +2.1
KIV   Kislovodsk     5.24 303  Pn    Pn    03 31 31.3 +2.1
KIV   Kislovodsk     5.24 303  P     Pn    03 31 31.3 +2.1
GEVA  Gevas          5.26 238        Pn    03 31 34.2 +4.7
GOF   Gofitskoye     5.67 314 ePn    Pn    03 31 37.4 +2.5
GOF                           eSn    Sn    03 32 41.1 +2.0
GOF   Gofitskoye     5.67 314⇑eP     Pn    03 31 37.5 +2.6
GOF                           eS     Sn    03 32 41.4 +2.3
GOF                            pmax  pmax
      comp=Z,38nm,0.6s
GOF                            smax  smax
      comp=N,350nm,0.8s
GOF                            smax  smax
      comp=E,551nm,0.7s
KOPT  Kop Dagi       6.39 262  Pn    Pn    03 31 48.7 +3.6
RPOR  Krasnaya Polya 6.75 294 eP     Pn    03 31 55.6 +5.9
RPOR                          eS     Sn    03 33 06.8 +1.1
LABN  Labinsk        6.81 303 ePn    Pn    03 31 54.7 +4.1
LABN                          eSn    Sn    03 33 07.9 +0.7
LABN  Labinsk        6.81 303 eP     Pn    03 31 54.7 +4.1
LABN                          eS     Sn    03 33 07.9 +0.7
VSLR  Vesyoloye      6.84 292 ePn    Pn    03 31 55.2 +4.2
VSLR  Vesyoloye      6.84 292 eP     Pn    03 31 55.2 +4.2
VSLR                          eS     Sn    03 33 09.9 +2.0
GUZR  Guzeripl'      6.95 296 eSn    Sn    03 33 11.7 +1.1
GUZR  Guzeripl'      6.95 296 eP     Pn    03 31 57.5 +5.0
GUZR                          eS     Sn    03 33 11.7 +1.1
SOC   Sochi          7.09 292 eP     Pn    03 31 51.3 -3.1
SOC                           e            03 33 10.8
SOC                            MLR   MLR
      comp=Z,991nm,13.0s
MARD  Mardin         7.31 240  Pn    Pn    03 32 01.6 +4.0
LZRR  Lazarevskoye   7.43 295 ePn    Pn    03 32 01.5 +2.4
LZRR  Lazarevskoye   7.43 295 eP     Pn    03 32 01.5 +2.4
LZRR                          eS     Sn    03 33 25.8 +3.4
ERBR  Yeremizino-Bor 7.50 310 ePn    Pn    03 32 02.7 +2.6
ERBR                          eSn    Sn    03 33 26.0 +1.7
ERBR  Yeremizino-Bor 7.50 310 eP     Pn    03 32 02.7 +2.6
ERBR                          eS     Sn    03 33 26.0 +1.7
GEYT  Alibeck        7.94 111  Pn    Pn    03 32 04.7 -1.5
      comp=Z,8.6nm,0.3s,baz=307,slow=15,SNR=45
GEYT                           Sn    Sn    03 33 31.0 -4.2
      comp=Z,13nm,0.3s,baz=337,slow=22,SNR=5.9
GEYT                           LR    LR    03 36 37.3
      comp=Z,208nm,18.8s,baz=265,slow=48
GEYT  Alibeck        7.94 111        Pn    03 32 04.0 -2.2
GYB1  ALIBECK ARRAY  7.96 111 ⇓Pn    Pn    03 32 04.3 -2.0
GYB1                          ⇑Sn    Sn    03 33 31.4 -4.1
ASHT  Ashkhabad      8.13 111  P     Pn    03 32 09.0 +0.3
ASHT  Ashkhabad      8.13 111  Pn    Pn    03 32 09.0 +0.3
MALT  Malatya        8.46 253  P     Pn    03 32 19.0 +5.6
ANN   Anapa          9.03 297 eP     Pn    03 32 19.5 -1.5
ANN                            pmax  pmax
      comp=Z,96nm,1.1s
ANN                            MLR   MLR
      comp=N,715nm,16.0s
ANN                            MLR   MLR
      comp=Z,2µm,19.0s
ANN                            MLR   MLR
      comp=E,2µm,18.0s
GAZ   Gaziantep      9.83 249  Pn    Pn    03 32 36.7 +4.7
VRH   Novokhopyorsk 11.10 336 eP     Pn    03 32 50.7 +1.4
VRH                            pmax  pmax
      comp=Z,60nm,0.7s
BELG  Belogornoye   11.20 356  LR    LR    03 39 04.5
      comp=Z,423nm,18.5s,baz=137,slow=47
BELG  Belogornoye   11.20 356⇑eP     Pn    03 32 50.6 -0.1
I31KZ AKTYUBINSK INF 11.23  32 i           04 42 00.0
      baz=211,slow=323,SNR=0.4
AKTO  Aktyubinsk    11.24  32  Pn    Pn    03 32 50.2 -1.1
      comp=Z,2.6nm,0.3s,baz=203,slow=10,SNR=44
AKTO                           Sn    Sn    03 34 50.3 -5.7
      comp=Z,9.3nm,0.3s,baz=42,slow=21,SNR=7.3
AKTO                           LR    LR    03 38 18.5
      comp=Z,623nm,20.0s,baz=221,slow=43
AKTO  Aktyubinsk    11.24  32 ⇑Pn    Pn    03 32 51.1 -0.2
      comp=Z,29nm,0.7s
AKTO                          ⇑Sn    Sn    03 34 50.4 -5.6
      comp=Z,104nm,0.8s
AKTO  Aktyubinsk    11.24  32  P     Pn    03 32 51.8 +0.5
AKTO                           SN    Sn    03 34 50.4 -5.6
AB31  Akbulak array 11.25  41 ⇓Pn    Pn    03 32 50.0 -1.3
      comp=Z,28nm,0.7s,baz=220,slow=12,SNR=220
AB31                          ⇓Sn    Sn    03 34 49.4 -6.7
      comp=Z,69nm,0.9s,baz=225,slow=20,SNR=3.8
AB31  Akbulak array 11.25  41  P     Pn    03 32 50.2 -1.2
AB31                           SN    Sn    03 34 49.4 -6.7
ABKAR Akbulak array 11.25  41  Pn    Pn    03 32 49.6 -1.8
ABKAR Akbulak array 11.25  41  Pn    Pn    03 32 50.1 -1.3
BR131 Keskin Array S 11.61 268d iP   Pn    03 33 01.1 +4.6
BR131 Keskin Array S 11.61 268 Pn    Pn    03 33 00.8 +4.3
BRTR  Keskin Array B 11.61 268 Pn    Pn    03 33 00.8 +4.2
      comp=Z,0.1nm,0.3s,baz=92,slow=10,SNR=34
BRTR                           LR    LR    03 37 58.6
      comp=Z,378nm,21.1s,baz=83,slow=40
BRTR  Keskin Array B 11.61 268 Pn    Pn    03 33 00.5 +4.0
VSR   Storozhevoye  11.99 330 eP     Pn    03 33 01.1 -0.3
VSR                            pmax  pmax
      comp=Z,20nm,1.2s
BR231 Keskin MP Arra 12.24 269       Pn    03 33 09.2 +4.1
VORR  Voronezh      12.34 331 eP     Pn    03 33 07.0 +0.8
VORR                           pmax  pmax
      comp=Z,250nm,1.4s
HRA   Herat         12.66 118        Pn    03 33 10.0 -0.9
LPSR  Galich'ya Gora 13.20 333 eP    Pn    03 33 19.1 +1.1
LPSR                           pmax  pmax
      comp=Z,20nm,0.7s
MDUB  Mudurnu       13.32 273        Pn    03 33 21.9 +2.2
MMAI  Mount Meron Ar 13.43 237 Pn    Pn    03 33 25.4 +4.2
      comp=Z,0.2nm,0.3s,baz=44,slow=12,SNR=8.3
MMAI                           LR    LR    03 39 27.3
      comp=Z,2µm,19.6s,baz=40,slow=41
CSS   Mathiatis     13.65 248  P     P     03 33 34.2 +1.4
ISP   Isparta       14.47 262  P     P     03 33 43.8 +1.8
ISP   Isparta       14.47 262  P     P     03 33 43.8 +1.8
TLCR                15.06 292 ⇑P     Pn    03 33 45.1 +1.8
TLCR                15.06 292 ⇑P     Pn    03 33 45.1 +1.8
MANR  Mangalia      15.09 287 ⇑P     P     03 33 50.4 +1.7
MFTR  Murfatlar     15.23 288 ⇑P     Pn    03 33 46.4 +0.8
TIRR  Tirgusor      15.26 289 ⇑P     Pn    03 33 46.8 +0.8
TIRR  Tirgusor      15.26 289 ⇑P     Pn    03 33 46.8 +0.8
TIRR  Tirgusor      15.26 289        P     03 33 51.6 +0.9
TIRR                           IAmb  IAmb  03 34 10.1
      comp=Z,82nm,1.1s
MILM  Milestii Mici 15.41 298 ⇓P     Pn    03 33 48.5 +0.6
KIS   Kishinev      15.42 299 eP     P     03 33 52.8 +0.4
KIS   Kishinev      15.42 299 ePP    P     03 34 09.0  +17
KIS                            LRM   MLR   03 41 16.0
      comp=Z,140nm,11.0s
KIS   Kishinev      15.42 299 ⇑P     P     03 33 52.3 -0.1
KIS   Kishinev      15.42 299 eP     P     03 33 52.8 +0.4
KIS                            MLR   MLR
      comp=Z,140nm,11.0s
TLBR  Topalu        15.53 289 ⇑P     Pn    03 33 51.1 +1.6
CFR   Carcaliu      15.54 292 ⇑P     Pn    03 33 50.8 +1.2
CFR   Carcaliu      15.54 292 ⇑P     Pn    03 33 50.8 +1.2
HARR  Harsova       15.63 290 ⇑P     P     03 33 53.7 -1.0
HARR  Harsova       15.63 290 ⇑P     P     03 33 53.7 -1.0
ICOR  Ion Corvin    15.68 288 ⇑P     P     03 33 55.1 -0.2
VASR  Vaslui        16.02 297 ⇓P     Pn    03 33 57.1 +1.3
SORM  Soroca        16.05 302 ⇓P     Pn    03 33 55.8 -0.3
SORM  Soroca        16.05 302 ⇓P     Pn    03 33 55.8 -0.3
OBN   Obninsk       16.06 334  Pn    Pn    03 33 53.5 -2.8
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      comp=Z,0.5nm,0.3s,baz=327,slow=23,SNR=3.8
OBN                            LR    LR    03 41 08.1
      comp=Z,142nm,20.8s,baz=168,slow=41
OBN   Obninsk       16.06 334⇓eP     Pn    03 33 54.1 -2.2
OBN                           eS     Sn    03 37 00.7 +7.3
OBN                            pmax  pmax
      comp=Z,19nm,1.0s
OBN                            MLR   MLR
      comp=Z,357nm,16.0s
OBN   Obninsk       16.06 334        Pn    03 33 54.5 -1.7
OBN                            IAmb  IAmb  03 34 36.2
      comp=Z,205nm,1.5s
EIL   Elat          16.08 229  Pn    Pn    03 33 58.1 +1.4
      comp=Z,1.4nm,0.3s,baz=23,slow=6.9,SNR=27
EIL                            LR    LR    03 40 57.8
      comp=Z,608nm,20.4s,baz=58,slow=40
GHRR                16.18 295 ⇓P     Pn    03 33 59.3 +1.5
KK31  Karatay Array 16.24  76 ⇑P     Pn    03 33 56.0 -2.6
      comp=Z,42nm,0.6s,baz=266,slow=18,SNR=241
KK31                          ⇓S     Sn    03 36 49.8 -8.2
      comp=Z,53nm,0.9s,baz=235,slow=37,SNR=6.5
KK31  Karatay Array 16.24  76  P     Pn    03 33 56.4 -2.3
KK31                           S     Sn    03 36 49.8 -8.2
KK31  Karatay Array 16.24  76        Pn    03 33 56.0 -2.6
KK31                           IAmb  IAmb  03 34 13.7
      comp=Z,78nm,0.6s
KKAR  Karatay Array 16.24  76  P     Pn    03 33 56.5 -2.2
KKAR                           pmax  pmax
      comp=Z,78nm,0.6s
KKAR  Karatay Array 16.24  76  P     Pn    03 33 56.5 -2.2
KKAR                           IAmb  IAmb  03 34 13.7
      comp=Z,78nm,0.6s
MOS   Moscow        16.26 337 eP     Pn    03 33 56.7 -2.1
MOS                           eS     Sn    03 36 58.0 -0.1
MOS                            pmax  pmax
      comp=Z,35nm,0.8s
MOS                            MLR   MLR
      comp=N,600nm,8.0s
MOS                            MLR   MLR
      comp=Z,600nm,8.0s
IAS   Iasi          16.30 299 ⇓P     Pn    03 34 00.2 +0.8
IAS   Iasi          16.30 299 ⇓P     Pn    03 34 00.2 +0.8
SHME  Shamm         16.32 156  P     P     03 34 02.2 -0.4
SHME                           P     P     03 34 02.2 -0.4
ODBI  Odobesti      16.37 293 ⇑P     P     03 34 02.4 -0.5
GRER                16.38 292 ⇓P     P     03 34 04.0 +0.9
BANOM Banah         16.49 155 i P    P     03 34 04.4 -0.1
      SNR=7.1
BANOM Banah         16.49 155  P     P     03 34 04.5 +0.1
      SNR=5.8
ARU   Arti          16.50  19  Pn    Pn    03 33 58.4 -3.5
      comp=Z,0.0nm,0.3s,baz=212,slow=8.6,SNR=21
ARU                            LR    LR    03 41 57.4
      comp=Z,311nm,19.5s,baz=206,slow=43
ARU   Arti          16.50  19  P     Pn    03 33 56.8 -5.1
ARU                            S     Sn    03 36 54.8 -9.3
ARU   Arti          16.50  19        Pn    03 33 58.4 -3.5
AKASG Malin Array Be 16.51 312 Pn    Pn    03 34 00.1 -1.9
      comp=Z,3.6nm,0.3s,baz=116,slow=12,SNR=12
AKASG                          LR    LR    03 41 25.5
      comp=Z,500nm,21.2s,baz=110,slow=41
AKASG Malin Array Be 16.51 312 P     Pn    03 34 01.3 -0.8
AKASG                          pmax  pmax
      comp=Z,5.0nm,0.9s
AKASG Malin Array Be 16.51 312       Pn    03 34 01.2 -0.8
AKBB  Malin Array Si 16.51 312 P     Pn    03 34 00.8 -1.3
AKBB                           pmax  pmax
      comp=Z,29nm,0.9s
AKBB  Malin Array Si 16.51 312 Pn    Pn    03 34 00.8 -1.3
BISRR Bisoca        16.58 292 ⇓P     P     03 34 06.0 +0.6
RAZG  Razgrad       16.59 286 ⇓P     P     03 34 05.3 -0.2
VRI   Vrincioaia    16.61 294 ⇓P     Pn    03 34 04.7 +1.3
VRI   Vrincioaia    16.61 294 ⇓P     Pn    03 34 04.7 +1.3
ISR   Istrita       16.65 291 ⇓P     P     03 34 06.5 +0.4
ISR   Istrita       16.65 291 ⇓P     P     03 34 06.5 +0.4
PLOR  Plostina      16.66 294 ⇑P     Pn    03 34 05.3 +1.2
PLOR  Plostina      16.66 294 ⇑P     Pn    03 34 05.3 +1.2
TESR  Tescani       16.77 296 ⇓P     Pn    03 34 05.6 +0.2
DZA   Taraz         16.85  77 eP     Pn    03 34 04.8 -1.6
      comp=Z,39nm,0.8s,baz=77
DZA   Taraz         16.85  77 eP     Pn    03 34 04.7 -1.6
DZA                            pmax  pmax
      comp=Z,39nm,0.8s
NEHR  Nehoiu        16.86 292 ⇑P     P     03 34 09.1 +0.7
MLR   Muntele Rosu  17.11 292  P     Pn    03 34 10.2 +0.5
      comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=11
MLR                            LR    LR    03 43 05.9
      comp=Z,363nm,20.7s,baz=78,slow=45
MLR   Muntele Rosu  17.11 292 ⇑P     P     03 34 11.8 +0.6
MLR   Muntele Rosu  17.11 292  P     P     03 34 12.0 +0.7
MLR                            pmax  pmax
      comp=Z,33nm,0.9s
MLR   Muntele Rosu  17.11 292        P     03 34 12.0 +0.7
ALN   Alexandroupoli 17.12 276 P     P     03 34 11.7 +0.4
NAZ   Nazwa, Dubai  17.18 158 i P    P     03 34 12.9 +0.8
      SNR=15
NAZ   Nazwa, Dubai  17.18 158  P     P     03 34 13.3 +1.3
      SNR=6.7
NAZ                            P     P     03 34 13.3 +1.3
      SNR=6.7
BIZ   Bicaz         17.22 297 ⇑P     Pn    03 34 10.9 -0.1
OZUR                17.30 294 ⇓P     P     03 34 13.4 +0.2
KBL   Kabul         17.33 106  P     Pn    03 34 13.6 +0.9
KBL                            pmax  pmax
      comp=Z,84nm,1.4s
KBL   Kabul         17.33 106  P     Pn    03 34 13.6 +0.9
KBL   Kabul         17.33 106  P     P     03 34 16.5 +2.6
      SNR=31
KBL                            P     P     03 34 16.5 +2.6
      SNR=31
UOSS  Minazif       17.38 157 i P    P     03 34 14.2 -0.1
      SNR=6.7
UOSS  Minazif       17.38 157  P     P     03 34 14.9 +0.7
UOSS                           P     P     03 34 14.9 +0.7
KIRV  Kirov         17.39   1  P     Pn    03 34 10.7 -2.3
      comp=Z,2.5nm,0.3s,baz=159,slow=2.0,SNR=10
KIRV                           LR    LR    03 42 36.3
      comp=Z,357nm,19.5s,baz=184,slow=43
AJN   Ajban         17.41 161  P     P     03 34 16.5 +1.9
AJN                            P     P     03 34 16.5 +1.9
AJN                            S     S     03 37 30.9 -3.4
AJN                            S     S     03 37 30.9 -3.4
SVE   Sverdlovsk    17.41  22 eP     Pn    03 34 11.7 -1.6
SVE                           eS     Sn    03 37 17.3 -8.8
SVE                            pmax  pmax
      comp=Z,85nm,0.9s
ZIMR                17.42 286 ⇑P     P     03 34 15.7 +1.1
ZIMR                17.42 286 ⇑P     P     03 34 15.7 +1.1
ASUD  Al Ashush, Dub 17.44 160 i P   P     03 34 14.7 -0.2
      SNR=5.1
HATD  Hatta, Dubai  17.47 157 i P    Pn    03 34 14.1 -0.2
      SNR=5.4
HATD  Hatta, Dubai  17.47 157  P     P     03 34 16.4 +1.1
      SNR=7.7
HATD                           P     P     03 34 16.4 +1.1
      SNR=7.7
DOPR  Dopca         17.55 293 ⇓P     P     03 34 16.5 +0.4
ASHO  Ashiyiah      17.58 157 i P    Pn    03 34 16.1 +0.4
      SNR=19
ASHO  Ashiyiah      17.58 157  P     P     03 34 16.9 +0.4
      SNR=9.3
ASHO                           P     P     03 34 16.9 +0.4
      SNR=9.3
MTUR  Matau         17.70 291 ⇑P     P     03 34 19.8 +2.0
MTUR  Matau         17.70 291 ⇑P     P     03 34 19.8 +2.0
VOIR                17.73 292 ⇑P     P     03 34 19.3 +1.2
VOIR                17.73 292 ⇑P     P     03 34 19.3 +1.2
RAYN  Ar Rayn       17.86 190  P     Pn    03 34 17.5 -1.6
RAYN                           pmax  pmax
      comp=Z,31nm,0.9s
RAYN  Ar Rayn       17.86 190  P     Pn    03 34 17.4 -1.6
MZWR  Madinat Zayed 17.93 165  P     Pn    03 34 19.8 -0.1
MZWR                           S     Sn    03 37 41.2 +2.0
BURAR Bucovina Array 17.95 299 ⇓P    Pn    03 34 19.7 -0.4
BURAR Bucovina Array 17.95 299 ⇓P    Pn    03 34 19.7 -0.4
BURAR Bucovina Array 17.95 299  P    Pn    03 34 19.9 -0.2
PLVB  Pleven        17.97 285 ⇓P     P     03 34 22.2 +1.6
ARR   Arges         18.02 291 ⇓P     P     03 34 23.2 +1.9
VLAD  Vladila       18.12 287 ⇑P     P     03 34 23.9 +1.6
SOHO  SOHO          18.24 157 i P    P     03 34 23.9 +0.2
      SNR=12
SOHO  SOHO          18.24 157  P     P     03 34 24.4 +0.6
SOHO                           P     P     03 34 24.4 +0.6
ARCR  ARCALIA       18.43 297 ⇑P     Pn    03 34 26.6 +0.8
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AML	Almayashu	18.64	79	P	P	03 34 28.8	+0.3
	SNR=18						
EKS2	Erkin-Say	18.66	77	P	Pn	03 34 29.8	+1.0
	SNR=31						
BRVK	Borovoye	18.75	44	⇓P	P	03 34 27.9	-1.2
	comp=Z,45nm,0.7s						
BRVK	Borovoye	18.75	44	P	P	03 34 28.7	-0.4
BRVK				pmax	pmax		
	comp=Z,57nm,0.7s						
BRVK	Borovoye	18.75	44	P	P	03 34 28.7	-0.4
BRVK				IAmb	IAmb	03 34 46.7	
	comp=Z,57nm,0.7s						
BVAR	Borovoye Array	18.79	44	P	P	03 34 30.2	+0.7
	comp=Z,2.1nm,0.3s,baz=343,slow=25,SNR=24						
BTLS	Baital	18.82	70	eP	P	03 34 28.7	-1.4
	comp=Z,18nm,1.0s,baz=70						
BTLS	Baital	18.82	70	eP	P	03 34 28.6	-1.4
BTLS				pmax	pmax		
	comp=Z,18nm,1.0s						
BRZS	Berezniki	18.83	54	eP	P	03 34 28.5	-1.6
	baz=54						
BRZS	Berezniki	18.83	54	eP	P	03 34 28.4	-1.6
CJR	Cluj-Napoca	18.88	295	⇑P	P	03 34 31.0	+0.3
CJR	Cluj-Napoca	18.88	295	⇑P	P	03 34 31.0	+0.3
ARQ	Araqi	18.99	158	P	Pn	03 34 34.2	+1.4
	SNR=5.3						
ARQ				P	Pn	03 34 34.2	+1.4
	SNR=5.3						
VTS	Vitosha	19.02	283	⇑P	Pn	03 34 34.3	+1.1
VTS	Vitosha	19.02	283	⇑P	Pn	03 34 34.3	+1.1
USP	Ospenovka	19.15	75	P	Pn	03 34 36.4	+1.7
	SNR=27						
AAK	Ala-Archa	19.19	77	P	P	03 34 34.6	+0.4
	comp=Z,1.6nm,0.3s,baz=256,slow=6.0,SNR=33						
AAK				LR	LR	03 43 16.6	
	comp=Z,782nm,19.2s,baz=286,slow=41						
AAK	Ala-Archa	19.19	77	P	P	03 34 34.8	+0.6
	SNR=32						
AAK	Ala-Archa	19.19	77	i P	P	03 34 34.7	+0.4
	SNR=46						
AAK	Ala-Archa	19.19	77	⇑P	P	03 34 34.3	+0.1
	comp=Z,54nm,0.9s						
AAK	Ala-Archa	19.19	77	P	P	03 34 34.6	+0.4
AAK				pmax	pmax		
	comp=Z,52nm,0.9s						
AAK	Ala-Archa	19.19	77	P	P	03 34 34.5	+0.4
AAK	Ala-Archa	19.19	77	P	P	03 34 34.8	+0.6
AAK				P	P	03 34 34.8	+0.6
AAK				S	Sn	03 38 09.5	0.0
AAK				S	Sn	03 38 09.5	0.0
MNK	Minsk	19.20	321	i P	P	03 34 32.0	-2.0
	comp=E,11nm,0.9s						
MNK				i P	P	03 34 32.0	-2.0
	comp=N,45nm,0.9s						
MNK				i P	P	03 34 32.0	-2.0
	comp=Z,111nm,0.9s						
MNK				i PP	sP	03 34 45.4	+0.4
MNK				i S	Sn	03 38 03.8	-5.5
MNK				i SS	S	03 38 17.8	+8.0
MNK				i PcP	PcP	03 38 51.4	-5.1
MNK				i LQ	LQ	03 40 12.5	
MNK				i LR	LR	03 41 38.2	
MNK				i LRM	MLR	03 42 58.7	
	comp=E,37nm,16.6s						
MNK				i LRM	MLR	03 43 00.5	
	comp=N,315nm,16.6s						
MNK				i LRM	MLR	03 43 00.5	
	comp=Z,369nm,16.6s						
MNK	Minsk	19.20	321	eP	P	03 34 32.0	-2.1
MNK				eS	Sn	03 38 02.0	-7.4
UCH	Uchtor	19.24	78	P	Pn	03 34 39.5	+3.3
	SNR=17						
SGDS	Sogindy	19.24	75	eP	P	03 34 33.2	-1.4
	baz=75						
SGDS	Sogindy	19.24	75	eP	P	03 34 33.2	-1.4
LVV	L'vov	19.27	305	eP	P	03 34 34.1	-0.7
DEV	Deva	19.27	293	⇑P	Pn	03 34 36.7	+0.7
DEV	Deva	19.27	293	⇑P	Pn	03 34 36.7	+0.7
GZR	Gura Zlata	19.32	291	⇑P	P	03 34 36.5	+0.9
CHMS	Chumysh	19.35	76	P	Pn	03 34 37.4	+0.4
	SNR=28						
DRGR		19.50	295	⇓P	P	03 34 38.3	+0.9
DRGR		19.50	295	⇓P	P	03 34 38.3	+0.9
KBK	Karagaybulak	19.52	77	P	P	03 34 38.6	+0.7
	SNR=23						
HERR	Herculane	19.56	290	⇓P	P	03 34 38.3	+0.2
IDI	Anoyia	19.63	260	P	P	03 34 39.0	+0.1
	comp=Z,2.2nm,0.3s,baz=52,slow=11,SNR=16						
IDI				LR	LR	03 43 58.4	
	comp=Z,239nm,18.2s,baz=62,slow=42						
IDI	Anoyia	19.63	260	⇑P	P	03 34 38.4	-0.5
IDI	Anoyia	19.63	260	IAmb	IAmb	03 35 03.8	
	comp=Z,69nm,1.3s						
SMDO	Samad	19.73	154	P	Pn	03 34 43.1	+1.4
	SNR=6.4						
BSY	Bisya	19.75	156	P	Pn	03 34 41.4	-0.5
BSY				P	Pn	03 34 41.4	-0.5
WSAR	Wadi Sarin	19.76	152	P	Pn	03 34 41.5	-0.5
	comp=Z,1.3nm,0.3s,baz=358,slow=8.9,SNR=11						
NACGM	Naroch	19.96	321	i P	P	03 34 41.5	-0.8
NACGM				i P	P	03 34 41.5	-0.8
NACGM				i P	P	03 34 41.5	-0.8
NACGM				i PP	sP	03 34 54.6	+1.4
NACGM				i S	S	03 38 17.0	-8.3
NACGM				i SS	SnSn	03 38 39.0	-3.0
NACGM				i LQ	LQ	03 40 24.1	
NACGM				i LR	LR	03 41 57.8	
TKM2	Tokmak 2	19.97	76	P	Pn	03 34 47.5	+2.8
	SNR=12						
TKM2	Tokmak 2	19.97	76	⇓P	P	03 34 43.8	+0.9
	comp=Z,52nm,0.8s						
TKM2	Tokmak 2	19.97	76	i P	P	03 34 43.7	+0.9
TKM2				pmax	pmax		
	comp=Z,52nm,0.8s						
KWP	Kalwaria Pacla	20.04	304	eP	P	03 34 44.0	+0.6
KWP	Kalwaria Pacla	20.04	304	IAmb	IAmb	03 34 45.7	
	comp=Z,147nm,1.3s						
MDVR	Moldovita	20.06	289	⇑P	P	03 34 44.4	+0.8
UZH	Uzhgorod	20.08	301	d iP	P	03 34 44.4	+0.7
UZH				e		03 34 54.7	
LTVH	Ltavrtes, Hu	20.12	297	eP	P	03 34 44.6	+0.4
BZS	Buzias	20.15	292	⇓P	P	03 34 44.8	+0.3
BZS	Buzias	20.15	292	⇓P	P	03 34 44.8	+0.3
KOLS	Kolonicke sedl	20.15	301	eP	P	03 34 45.0	+0.5
KOLS				pmax	pmax		
	comp=Z,46nm,1.4s						
KOLS	Kolonicke sedl	20.15	301	eP	P	03 34 45.0	+0.5
SIRR	Siria	20.16	294	⇑P	P	03 34 46.0	+1.4
IDID	Didziasalis	20.21	322	eP	P	03 34 44.2	-0.8
AGG	Agios Georgios	20.30	272	P	Pn	03 34 48.2	-0.1
AGG				pmax	pmax		
	comp=Z,66nm,1.1s						
AGG	Agios Georgios	20.30	272	P	Pn	03 34 48.2	-0.1
AGG				IAmb	IAmb	03 34 59.6	
	comp=Z,66nm,1.1s						
KLMR	Klimovskoe	20.46	347	d iP	P	03 34 45.4	-2.2
KLMR				pmax	pmax		
	comp=Z,68nm,1.0s						
KLMR	Klimovskoe	20.46	347	⇓iP	P	03 34 45.5	-2.2
KLMR				i P	P	03 34 45.5	-2.2
KLMR				⇑iP	P	03 34 45.5	-2.2
KLMR				AMP		03 34 52.9	
	comp=Z,68nm,1.0s						
KLMR				LQ	LQ	03 42 06.6	
KLMR				LQ	LQ	03 42 06.6	
KLMR				LR	LR	03 43 21.4	
KUU	Kurty	20.46	73	eP	P	03 34 46.2	-1.8
	comp=Z,41nm,0.9s,baz=74						
KUU	Kurty	20.46	73	eP	P	03 34 46.1	-1.8
KUU				pmax	pmax		
	comp=Z,41nm,0.9s						
IIGN	Ignalina	20.47	321	eP	P	03 34 46.4	-1.5
IIGN				IAmb	IAmb	03 35 20.6	
	comp=Z,15nm,0.8s						
ULHL	Ulahol	20.51	78	P	P	03 34 50.1	+1.4
	SNR=8.6						
MTBS	Maitube	20.57	75	eP	P	03 34 47.4	-1.8
	baz=76						
MTBS	Maitube	20.57	75	eP	P	03 34 47.3	-1.8
FNA	Florina	20.64	278	P	Pn	03 34 53.6	+1.3
FNA				pmax	pmax		
	comp=Z,19nm,0.8s						
FNA	Florina	20.64	278	P	Pn	03 34 53.6	+1.3
ISAL	Salakas	20.64	322	eP	P	03 34 48.8	-0.9
ISAL				IAmb	IAmb	03 35 17.4	
	comp=Z,19nm,0.5s						
CRVS	Cervenica-Dubn	20.67	301	eP	P	03 34 51.3	+1.2
CRVS				pmax	pmax		
	comp=Z,58nm,0.9s						
CRVS	Cervenica-Dubn	20.67	301	eP	P	03 34 51.3	+1.2
KSH	Kashi	20.78	86	P	P	03 34 50.0	-1.6
KSH				pP	pP	03 34 59.5	+0.6
KSH				S	S	03 38 31.8	-10
KSH				sS	Sn	03 38 48.0	+0.1
KSH				pmax	pmax		
	comp=Z,83nm,0.5s						
KSH				pmax	pmax		
	comp=Z,400nm,4.5s						
KSH				LR	LR		
	comp=Z,610nm,6.2s						
KSH				LR	LR		
	comp=Z,410nm,10.2s						
KSH				LR	LR		
	comp=Z,470nm,10.3s						
AMBH	Ambrzfalva	20.82	294	eP	Pn	03 34 54.1	-0.1
NIL	Nilore	20.83	103	P	P	03 34 52.5	+0.5
NIL				pmax	pmax		
	comp=Z,119nm,1.0s						
NIL	Nilore	20.83	103	P	P	03 34 52.5	+0.5
NIL				IAmb	IAmb	03 34 58.9	
	comp=Z,119nm,0.9s						
CHKK	Chushkaly	20.93	73	eP	P	03 34 52.1	-1.0
	baz=74						
CHKK	Chushkaly	20.93	73	eP	P	03 34 52.0	-1.0
MDOK	Medeo	21.02	75	⇑P	P	03 34 54.6	+0.5
	comp=Z,62nm,1.3s						
MDOK	Medeo	21.02	75	P	P	03 34 54.6	+0.5
JLN	Jalan Bani Buh	21.04	151	P	P	03 34 54.9	+0.6
JLN				P	P	03 34 54.9	+0.6
ITM	Ithomi	21.14	268	P	P	03 34 56.0	+0.7
KECS	Kecovo	21.23	300	eP	P	03 34 57.3	+1.1
KECS				pmax	pmax		
	comp=Z,16nm,0.6s						
KECS	Kecovo	21.23	300	eP	P	03 34 57.2	+1.1
PDO	Prodromos	21.28	272	P	P	03 34 58.5	+1.8
DIVS	Divibare	21.30	287	eP	P	03 34 58.1	+1.1
SUW	Suwalki	21.32	316	i P	P	03 34 56.5	-0.5
SUW	Suwalki	21.32	316	eP	P	03 34 56.6	-0.5
LSK	Leskovik	21.34	276	P	P	03 35 01.5	+4.0
SJES	Sjenica	21.36	285	eP	P	03 34 59.5	+1.8
NIE	Niedzica	21.52	302	eP	P	03 34 59.8	+0.5
PSZ	Piszkesteto	21.54	298	⇑P	P	03 35 00.6	+1.0
PSZ	Piszkesteto	21.54	298	eP	P	03 35 01.3	+1.7
PSZ	Piszkesteto	21.54	298	P	P	03 35 00.0	+0.4
PSZ				pmax	pmax		
	comp=Z,31nm,1.0s						
PSZ	Piszkesteto	21.54	298	P	P	03 34 60.0	+0.4
NYDR	Nydri-Lefkada	21.61	273	P	P	03 35 02.8	+2.5
LKD2	Lefkada island	21.62	273	P	P	03 35 02.2	+1.7
MHTO	MHTO	21.64	156	P	P	03 35 01.0	+0.3
MHTO				P	P	03 35 01.0	+0.3
MHTO				S	S	03 38 58.0	-0.9
MHTO				S	S	03 38 58.0	-0.9
PABE	Paberze	21.64	320	eP	P	03 35 00.2	-0.3
PABE				IAmb	IAmb	03 35 16.7	
	comp=Z,122nm,0.8s						
EVGI	Lefkada island	21.67	272	P	P	03 35 03.5	+2.6
IGT	Igoumenitsa	21.68	275	P	P	03 35 03.3	+2.2
BBLS	Lazići	21.73	287	eP	P	03 35 01.9	+0.2
PUL	Pulkovo	21.82	335	⇓eP	P	03 35 03.3	+0.9
PUL				pmax	pmax		
	comp=Z,52nm,0.4s						
BEL	Belsk	21.84	309	eP	P	03 35 02.6	0.0
SRN	Sarande	21.85	276	P	P	03 35 04.5	+1.7
TDK	Taldyqorghan	21.91	70	eP	P	03 35 02.5	-1.1
	baz=70						
TDK	Taldyqorghan	21.91	70	eP	P	03 35 02.4	-1.1
KEF4	Livadi, Kephal	21.94	272	P	P	03 35 05.5	+1.6
PDG	Podgorica	21.97	283	⇑P	P	03 35 04.5	+0.4
PDG	Podgorica	21.97	283	eP	P	03 35 05.8	+1.7
LANS	Liptovska Anna	22.01	301	eP	P	03 35 05.9	+1.4
LANS	Liptovska Anna	22.01	301	eP	P	03 35 05.9	+1.4
OJC	Ojcow	22.01	304	eP	P	03 35 03.6	-0.9
OJC	Ojcow	22.01	304	IAmb	IAmb	03 35 07.2	
	comp=Z,32nm,0.7s						
SATY	Saty	22.02	75	eP	P	03 35 03.4	-1.5
	baz=76						
SATY	Saty	22.02	75	eP	P	03 35 03.3	-1.5
KEF3	Kipouria, Keph	22.02	271	P	P	03 35 02.4	-2.3
KEK	Kerkira	22.04	276	P	P	03 35 06.0	+1.1
HAPS	Han Pijesak,Bl	22.05	287	eP	P	03 35 04.1	-1.0
DRME	Dracevica, Mon	22.05	282	eP	P	03 35 04.8	-0.2
DRME				eP	P	03 35 03.9	-1.1
VSU	Vasula	22.17	329	eP	P	03 35 06.0	-0.1
VSU	Vasula	22.17	329	d iP	P	03 35 05.6	-0.5
VSU				i *PP	sP	03 35 17.2	+0.1
VSU				pmax	pmax		
	comp=Z,183nm,0.9s						
KPKS	Kokpek	22.18	74	eP	P	03 35 05.0	-1.6
	comp=Z,12nm,1.4s,baz=74						
KPKS	Kokpek	22.18	74	eP	P	03 35 04.9	-1.6
KPKS				pmax	pmax		
	comp=Z,12nm,1.4s						
MORH	Mrgy, Hungar	22.25	293	eP	P	03 35 07.9	+0.8
MORH	Mrgy, Hungar	22.25	293	eP	P	03 35 07.3	+0.2
VYHS	Vyhne	22.32	299	eP	P	03 35 08.4	+0.6
VYHS				pmax	pmax		
	comp=Z,23nm,1.3s						
VYHS	Vyhne	22.32	299	eP	P	03 35 08.4	+0.6
BRY	Bratogost	22.44	284	eP	P	03 35 10.0	+0.6
HCY	Herceg Novi	22.53	283	eP	P	03 35 11.6	+1.5
CSKK	Cskako	22.58	296	eP	P	03 35 07.9	-2.7
SRO	Srobarova	22.58	297	eP	P	03 35 13.6	+2.9
SRO	Srobarova	22.58	297	eP	P	03 35 13.6	+2.9
TREB	Trebinje	22.60	284	eP	P	03 35 11.1	+0.2
KURBB	Kurchatov Arra	22.61	55	P	P	03 35 11.6	+0.7
	comp=Z,22nm,1.0s,baz=259,slow=10,SNR=92						
KURBB	Kurchatov Arra	22.61	55	⇑P	P	03 35 11.5	+0.5
	comp=Z,72nm,1.2s						
KURK	Kurchatov	22.69	55	d iP	P	03 35 12.1	+0.3
KURK				pmax	pmax		
	comp=Z,39nm,1.0s						
KURK	Kurchatov	22.69	55	P	P	03 35 11.9	+0.2
KURK				IAmb	IAmb	03 35 20.2	
	comp=Z,121nm,1.1s						
DBRK	Dubrovnik	22.75	284	P	P	03 35 12.8	+0.3
SHLS	Shalkode	22.78	75	eP	P	03 35 14.5	+1.6
	baz=75						
SHLS	Shalkode	22.78	75	eP	P	03 35 14.5	+1.6
PDGK	Podgornoye	22.78	74	⇑P	P	03 35 13.7	+0.7
	comp=Z,19nm,0.8s						
PDGK	Podgornoye	22.78	74	P	P	03 35 13.7	+0.7
TIH	Tihany	22.80	295	eP	P	03 35 08.5	-4.5
PBUR	Paburge	22.90	319	eP	P	03 35 13.9	+0.1
VALR	Valaam	22.90	338	i P	P	03 35 14.0	+0.2
VALR				i AP	AP	03 35 27.4	
DOK	Doka	23.00	167	P	P	03 35 14.1	-1.1
	SNR=16						
DOK				P	P	03 35 14.1	-1.1
	SNR=16						
DOK				S	S	03 39 20.7	-3.3
DOK				S	S	03 39 20.7	-3.3
MPLH	Magyarpolny	23.06	295	eP	P	03 35 16.4	+0.8
STON	Ston	23.06	284	P	P	03 35 15.4	-0.2
STON	Ston	23.06	284	eP	P	03 35 15.0	-0.6
JAVC	Velka Javorina	23.13	300	eP	P	03 35 18.4	+2.0
SMOL	Smolenice	23.25	299	eP	P	03 35 18.6	+1.1
SMOL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SMOL	Smolenice	23.25	299	eP	P	03 35 18.6	+1.1
BLY	Banja Luka	23.28	289	eP	P	03 35 16.8	-1.1
MODS	Modra-Piesok	23.33	298	eP	P	03 35 18.3	-0.1
MODS				pmax	pmax		
	comp=Z,39nm,1.2s						
MODS	Modra-Piesok	23.33	298	eP	P	03 35 18.3	-0.1
MORC	Moravsky Berou	23.35	302	eP	P	03 35 18.0	-0.6
MGRS	Mrkonjic Grad	23.37	288	eP	P	03 35 19.5	+0.7
RICI	Ricice	23.41	286	P	P	03 35 19.4	+0.2
ZST	Bratislava	23.43	298	eP	P	03 35 19.9	+0.6
ZST				pmax	pmax		
	comp=Z,43nm,0.7s						
ZST	Bratislava	23.43	298	eP	P	03 35 19.9	+0.6
MTSE	Matsula	23.52	327	eP	P	03 35 20.0	0.0
SLIT	Slitere, Latvi	23.55	323	eP	P	03 35 20.2	-0.2
WHFO	Wadi Hawf	23.62	168	P	P	03 35 20.4	-1.1
	SNR=33						
WHFO				S	S	03 39 31.8	-2.6
SEM	Semipalatinsk	23.64	56	eP	P	03 35 21.9	+0.2
	baz=57						
SEM	Semipalatinsk	23.64	56	eP	P	03 35 21.8	+0.1
TMCR	Tamitsa	23.81	348	eP	P	03 35 22.0	-0.8
TMCR				pmax	pmax		
	comp=Z,74nm,1.1s						
SHAO	Shalim	23.86	164	i P	P	03 35 23.6	-0.1
	SNR=12						
KRLC	Kraliky	23.88	303	eP	P	03 35 23.1	-0.6
KRLC				e		03 35 35.0	
KRLC	Kraliky	23.88	303	eP	P	03 35 23.1	-0.6
KRLC				epP	sP	03 35 35.0	-0.1
VRAC	Vranov	23.89	301	P	P	03 35 23.9	+0.1
	comp=Z,6.6nm,0.7s,baz=101,slow=8.7,SNR=12						
VRAC				LR	LR	03 46 45.5	
	comp=Z,460nm,19.8s,baz=88,slow=42						
VRAC	Vranov	23.89	301	⇓P	P	03 35 23.7	-0.1
VRAC	Vranov	23.89	301	eP	P	03 35 23.7	-0.1
KRUC	Moravsky	23.99	300	eP	P	03 35 24.6	-0.1
RBK	Rabkut	24.10	167	P	P	03 35 25.2	-0.7
	SNR=5.4						
RBK				P	P	03 35 25.2	-0.7
	SNR=5.4						
ABTO	Aybut	24.11	169	P	P	03 35 25.3	-0.8
	SNR=18						
ABTO				P	P	03 35 25.3	-0.8
	SNR=18						
ABTO				S	S	03 39 39.2	-3.0
ABTO				S	S	03 39 39.2	-3.0
PTJ	Puntijarka	24.11	292	P	P	03 35 26.2	+0.3
DPC	Dobruska-Polom	24.22	303	eP	P	03 35 27.2	+0.3
DPC	Dobruska-Polom	24.22	303	eP	P	03 35 27.2	+0.3
CONA	Conrad Observa	24.24	297	eP	P	03 35 27.3	+0.2
	comp=Z,7.1nm,1.4s						
OSTC	Ostas	24.32	304	eP	P	03 35 27.6	-0.2
KSP	Ksiaz	24.33	304	eP	P	03 35 27.9	+0.1
GKP	Gorka Klasztor	24.34	310	eP	P	03 35 28.2	+0.3
GKP	Gorka Klasztor	24.34	310	eP	P	03 35 27.7	-0.1
MORI	Morici	24.40	287	P	P	03 35 27.6	-0.9
MAKZ	Makanchi	24.42	66	⇑P	P	03 35 28.9	+0.2
	comp=Z,36nm,0.9s						
MAKZ	Makanchi	24.42	66	P	P	03 35 28.4	-0.3
MAKZ				pmax	pmax		
	comp=Z,39nm,1.1s						
MAKZ	Makanchi	24.42	66	P	P	03 35 28.4	-0.3
MAKZ				IAmb	IAmb	03 35 41.5	
	comp=Z,39nm,1.1s						
CHVC	Chvalec	24.43	304	eP	P	03 35 28.9	+0.2
CHVC				ex	x	03 35 39.6	
ARSA	Arzberg	24.43	296	eP	P	03 35 29.1	+0.3
	comp=Z,5.0nm,0.7s						
UPC	Upice	24.44	303	eP	P	03 35 29.0	+0.2
UPC	Upice	24.44	303	eP	P	03 35 29.0	+0.2
TIP	Timpagrande	24.45	276	⇑P	P	03 35 29.1	0.0
OZLJ	Ozalj	24.47	292	P	P	03 35 29.7	+0.6
ZIRJ	Zirje	24.47	287	P	P	03 35 28.5	-0.6
CRES	Cresnjev	24.47	292	eP	P	03 35 28.8	-0.3
FIA1	FINESS Array S	24.47	333	P	P	03 35 28.4	-0.6
FIA1				IAmb	IAmb	03 35 46.8	
	comp=Z,46nm,0.8s						
FINES	FINESS Array B	24.47	333	P	P	03 35 28.9	0.0
	comp=Z,22nm,0.5s,baz=137,slow=10,SNR=115						
FINES				LR	LR	03 46 21.8	
	comp=Z,595nm,18.9s,baz=140,slow=40						
FINES	FINESS Array B	24.47	333	i P	P	03 35 29.0	0.0
FINES				pmax	pmax		
	comp=Z,22nm,0.5s						
FINES	FINESS Array B	24.47	333	P	P	03 35 28.2	-0.7
TREC	Trest	24.61	300	eP	P	03 35 30.0	-0.4
TREC	Trest	24.61	300	eP	P	03 35 30.0	-0.4
MK31	Makanchi Array	24.63	66	⇓P	P	03 35 30.7	+0.1
	comp=Z,20nm,0.6s,baz=267,slow=8.1,SNR=287						
MK31	Makanchi Array	24.63	66	deP	P	03 35 30.7	+0.1
MK31				i *PP	sP	03 35 40.9	-0.9
MK31				pmax	pmax		
	comp=Z,20nm,0.5s						
MK31	Makanchi Array	24.63	66	IAmb	IAmb	03 35 42.4	
	comp=Z,23nm,0.6s						
MKAR	Makanchi Array	24.63	66	P	P	03 35 30.8	+0.2
	comp=Z,7.5nm,0.5s,baz=264,slow=8.8,SNR=88						
MKAR				LR	LR	03 46 40.5	
	comp=Z,785nm,18.4s,baz=262,slow=40						
MKAR	Makanchi Array	24.63	66	ceP	P	03 35 30.7	+0.1
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MKAR	Makanchi Array	24.63	66	P	P	03 35 30.4	-0.2
SOKA	Soboth	24.76	294	eP	P	03 35 32.3	+0.5
	comp=Z,27nm,0.9s,SNR=12						
DUGI	Dugi Otok	24.86	288	P	P	03 35 32.3	-0.3
OBKA	Obir	25.09	294	eP	P	03 35 36.8	+2.0
	comp=Z,9.8nm,0.8s,SNR=4.2						
CEY	Cerknica	25.19	292	eP	P	03 35 34.0	-1.7
PRU	Pruhonice	25.30	302	eP	P	03 35 36.3	-0.3
PRU				MLR	MLR		
	comp=Z,400nm,18.0s						
PRU	Pruhonice	25.30	302	eP	P	03 35 36.3	-0.3
PRU				AMS	AMS	03 46 20.0	
	comp=Z,400nm,18.0s						
MOA	Molln	25.31	297	eP	P	03 35 36.5	-0.2
	comp=Z,4.6nm,0.6s						
PVCC	Panska Ves	25.36	303	eP	P	03 35 37.4	+0.3
PVCC	Panska Ves	25.36	303	eP	P	03 35 37.4	+0.3
MYKA	Terra Mystica	25.71	294	eP	P	03 35 42.9	+2.4
	comp=Z,5.0nm,0.6s						
GERES	GERESS Array B	25.74	299	P	P	03 35 40.3	-0.4
	comp=Z,3.8nm,0.5s,baz=92,slow=9.0,SNR=31						
GERES				PcP	PcP	03 39 10.7	+0.6
	comp=Z,1.2nm,0.6s,baz=66,slow=3.3,SNR=5.5						
GERES				LR	LR	03 47 43.2	
	comp=Z,249nm,21.0s,baz=91,slow=41						
BRG	Berggiesshubel	25.80	304	i P	P	03 35 41.5	+0.4
BRG				Amp		03 35 44.6	
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	25.80	304	i P	P	03 35 41.5	+0.4
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	25.80	304	i P	P	03 35 41.5	+0.4
BRG				Amp		03 35 44.6	
	comp=Z,12nm,0.9s						
KHC	Kasperske Hory	25.84	300	⇓eP	P	03 35 40.8	-0.7
KHC				pmax	pmax		
	comp=Z,15nm,1.3s						
KHC	Kasperske Hory	25.84	300	eP	P	03 35 40.5	-1.0
KHC				ex	x	03 36 09.0	
KHC				AMS	AMS	03 47 20.0	
	comp=Z,500nm,17.1s						
KHC	Kasperske Hory	25.84	300	P	P	03 35 40.2	-1.3
KBA	Koelnbreinsper	25.92	295	eP	P	03 35 42.8	+0.3
	comp=Z,4.1nm,0.6s						
AAL	Aland	25.96	327	eP	P	03 35 41.9	-0.4
BSD	Bornholm Skovb	26.19	314	i P	P	03 35 43.5	-1.1
BSD				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BSD	Bornholm Skovb	26.19	314	i P	P	03 35 43.5	-1.1
	comp=Z,3.9nm,0.3s						
BSD	Bornholm Skovb	26.19	314	i P	P	03 35 43.5	-1.1
BSD				IAmb	IAmb	03 35 44.1	
	comp=Z,3.9nm,0.3s						
NDI	New Delhi	26.35	109	eP	P	03 35 46.0	-0.3
ZSN	Zaisan	26.40	64	eP	P	03 35 45.6	-1.1
	baz=64						
ZSN	Zaisan	26.40	64	eP	P	03 35 45.5	-1.1
CLL	Collm	26.45	305	eP	P	03 35 47.0	0.0
	comp=Z,13nm,0.9s						
CLL				i		03 35 59.1	
CLL				Lm	MLR	03 47 00.0	
	comp=N,400nm,20.8s						
CLL				Lm	MLR	03 47 00.0	
	comp=E,200nm,20.0s						
CLL				Lm	MLR	03 47 00.0	
	comp=Z,300nm,20.5s						
CLL	Collm	26.45	305	eP	P	03 35 47.0	0.0
CLL				i		03 35 59.1	
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL				MLR	MLR		
	comp=Z,300nm,20.5s						
CLL	Collm	26.45	305	P	P	03 35 46.6	-0.3
ABTA	Abfaltersbach	26.49	294	eP	PcP	03 39 12.1	+0.2
	comp=Z,6.9nm,1.0s,SNR=4.4						
NKC	Novy Kostel	26.67	302	eP	P	03 35 48.8	-0.2
NKC	Novy Kostel	26.67	302	eP	P	03 35 48.8	-0.2
VAE	Valguarnera	26.71	273	P	P	03 35 51.3	+1.7
	comp=Z,32nm,1.0s,baz=58,slow=3.7,SNR=3.9						
UPP	Uppsala	26.79	325	eP	P	03 35 50.1	+0.2

DAMY	Dhamar	26.82	189	P	P	03 35 52.1	+1.2
DAMY				IAmb	IAmb	03 36 10.7	
	comp=Z,32nm,0.9s						
WATA	Walderalm	27.12	296	*e*P	P	03 35 52.6	-0.6
	comp=Z,8.4nm,1.1s						
WATA				*e*P	PcP	03 39 14.0	+0.6
	comp=Z,7.6nm,0.6s,SNR=4.0						
ZAA0	Zalesovo Array	27.13	50	⇓P	P	03 35 54.8	+1.7
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	27.13	50	P	P	03 35 53.5	+0.4
	comp=Z,4.0nm,0.6s,baz=277,slow=12,SNR=19						
ZALV				LR	LR	03 48 16.9	
	comp=Z,680nm,19.7s,baz=250,slow=40						
ZALV	Zalesovo Beam	27.13	50	*i* P	P	03 35 55.4	+2.3
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	27.13	50	P	P	03 35 52.8	-0.3
SQTA	Sankt Quirin	27.37	295	*e*P	P	03 35 55.9	+0.4
	comp=Z,3.8nm,0.5s						
SQTA				*e*P	PcP	03 39 14.8	+0.8
	comp=Z,7.9nm,0.6s						
MOTA	Moosalm	27.44	296	*i* P	PcP	03 39 14.9	+0.7
	comp=Z,8.2nm,0.8s,SNR=5.7						
RETA	Reutte	27.67	296	*e*P	P	03 35 58.6	+0.5
	comp=Z,1.6nm,0.6s						
RETA				*e*P	PcP	03 39 15.0	+0.4
	comp=Z,4.1nm,0.9s						
APA	Apatity	27.70	347	⇑*i*P	P	03 35 56.7	-1.3
APA				*i*		03 36 44.0	
APA				pmax	pmax		
	comp=Z,11nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,13.0s						
FETA	Feichten	27.70	295	*e*P	PcP	03 39 16.1	+1.3
	comp=Z,5.0nm,0.6s						
LVZ	Lovozero	27.81	349	⇓*e*P	P	03 35 59.5	+0.4
LVZ				pmax	pmax		
	comp=Z,41nm,1.3s						
LVZ	Lovozero	27.81	349	P	P	03 35 59.4	+0.4
LVZ				IAmb	IAmb	03 36 28.5	
	comp=Z,34nm,0.9s						
DGZ	Jazzator, Alta	28.16	59	⇑*e*P	P	03 36 02.0	-0.5
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DAVA	Damuels	28.27	296	*e*P	PcP	03 39 17.3	+1.1
	comp=Z,8.4nm,0.5s,SNR=7.1						
DAVOX	Davos/Dischmat	28.30	295	P	P	03 36 03.1	-0.7
	comp=Z,2.0nm,0.6s,baz=68,slow=6.7,SNR=7.2						
DAVOX				PcP	PcP	03 39 17.1	+0.8
	comp=Z,3.8nm,0.5s,baz=220,slow=4.4,SNR=8.6						
DAVOX				LR	LR	03 49 52.0	
	comp=Z,504nm,18.5s,baz=74,slow=42						
WMQ	Urumqi	28.64	72	*e*P	P	03 36 08.3	+1.5
WMQ				pP	sP	03 36 17.8	-0.3
WMQ				sP	pP	03 36 24.8	+10
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.3s						
WMQ				LR	LR		
	comp=Z,400nm,13.5s						
WMQ				LR	LR		
	comp=Z,800nm,15.3s						
WMQ				LR	LR		
	comp=Z,640nm,13.5s						
HFS	Hagfors	28.67	323	P	P	03 36 07.2	+0.4
	comp=Z,61nm,0.7s,baz=113,slow=9.6,SNR=185						
HFS				LR	LR	03 48 50.1	
	comp=Z,634nm,18.5s,baz=114,slow=39						
NC602	NORSAR Array S	29.89	323	*e*P	P	03 36 17.2	-0.4
OSL	Oslo	29.96	322	*e*P	P	03 36 18.8	+0.6
ATD	Arta Tunnel	30.03	192	LR	LR	03 49 42.0	
	comp=Z,172nm,19.6s,baz=338,slow=39						
NB2	NORSAR Subarra	30.16	324	P	P	03 36 19.7	-0.3
	comp=Z,22nm,0.6s,baz=117,slow=8.6						
NB2	NORSAR Subarra	30.16	324	P	P	03 36 19.7	-0.3
	baz=117,slow=8.6						
NOA	NORSAR Array B	30.16	324	P	P	03 36 19.9	-0.2
	comp=Z,28nm,0.7s,baz=117,slow=8.3,SNR=82						
NOA				pP	sP	03 36 29.8	-1.6
	comp=Z,13nm,0.6s,baz=118,slow=8.4,SNR=10						
NOA				LR	LR	03 49 55.2	
	comp=Z,691nm,18.2s,baz=115,slow=39						
NAO01	NORSAR Array S	30.23	323	P	P	03 36 20.3	-0.3
NAO01	NORSAR Array S	30.23	323	*e*P	P	03 36 20.5	-0.1
KONO	Kongsberg	30.39	321	*de*P	P	03 36 21.7	-0.3
KONO				pmax	pmax		
	comp=Z,39nm,0.8s						
KONO	Kongsberg	30.39	321	P	P	03 36 21.9	-0.1
KONO				IAmb	IAmb	03 36 22.9	
	comp=Z,37nm,0.8s						
KONO	Kongsberg	30.39	321	*e*P	P	03 36 22.1	+0.1
HOMB	Homborsund	30.50	318	*e*P	P	03 36 22.6	-0.4
BTNL	Ternell	30.72	302	*d*P	P	03 36 25.9	+0.8
	comp=Z,12nm,1.1s						
BTNL				*d*pP	sP	03 36 36.3	-0.3
BTNL				*d*sP	pP	03 36 41.5	+8.4
BTNL				*d*PnPn	PnPn	03 37 26.1	+0.9
BTNL				*d*PP	PP	03 37 33.1	-1.4
MEM	Membach	30.80	302	*d*P	P	03 36 25.6	-0.1
MEM				*d*PP	PP	03 37 34.3	-1.0
PYUN	Piuthan	30.85	104	*e*P	P	03 36 27.4	+0.8
	comp=Z,27nm,0.6s						
ARA0	ARCESS Array S	30.87	344	*e*P	P	03 36 27.0	+0.9
ARCES	ARCESS Array B	30.87	344	P	P	03 36 26.6	+0.4
	comp=Z,2.2nm,0.5s,baz=142,slow=12,SNR=43						
ARCES				pP	sP	03 36 36.2	-1.3
	comp=Z,6.4nm,0.7s,baz=144,slow=10,SNR=3.8						
ARCES				LR	LR	03 50 28.8	
	comp=Z,354nm,19.7s,baz=140,slow=39						
KTK1	Kautokeino	30.95	342	*e*P	P	03 36 27.1	+0.3
KEST	Kesra	31.14	273	P	P	03 36 29.8	+0.8
	comp=Z,14nm,0.8s,baz=324,slow=4.2,SNR=10						
KEST	Kesra	31.14	273	IAmb	IAmb	03 36 32.0	
	comp=Z,23nm,0.9s						
SNART	Snartemo	31.18	317	*e*P	P	03 36 29.3	+0.3
SNART	Snartemo	31.18	317	*i* P	P	03 36 29.9	+1.0
DANN	Dangsing	31.27	103	*e*P	P	03 36 31.5	+1.0
	comp=Z,54nm,0.6s						
SKAR	Skarslia	31.35	322	*e*P	P	03 36 31.7	+1.1
NSS	Namsos	31.44	330	*e*P	P	03 36 31.0	-0.1
MOR8	Moi Rana	31.46	334	*e*P	P	03 36 31.8	+0.4
KOLN	Koldanda	31.48	104	*e*P	P	03 36 32.2	0.0
	comp=Z,16nm,0.5s						
TBLU	Trondheim	31.50	327	*e*P	P	03 36 31.1	-0.6
DOMB	Dombas	31.51	325	*e*P	P	03 36 32.4	+0.5
BLS5	Blasjo	31.85	319	*e*P	P	03 36 36.3	+1.4
ODD1	Odda	31.90	320	*e*P	P	03 36 37.0	+1.6
FAUS	Fauske	31.92	336	*e*P	P	03 36 35.1	-0.3
STOK	Stokkvaagen	32.03	334	*e*P	P	03 36 37.5	+1.2
KONS	Konsvik	32.09	334	*e*P	P	03 36 36.3	-0.5
GKN	Gorkha	32.11	103	*e*P	P	03 36 38.3	+0.6
	comp=Z,29nm,0.4s						
HAMF	Hammerfest	32.14	345	*e*P	P	03 36 38.2	+1.0
STEI	Steigen	32.28	337	*e*P	P	03 36 36.6	-1.9
MOL	Molde	32.36	325	*e*P	P	03 36 39.3	0.0
KMY	Karmoy	32.39	319	*e*P	P	03 36 41.5	+1.9
TRO	Tromso	32.43	341	*e*P	P	03 36 40.1	+0.3
AKN	Aaknes	32.46	324	*e*P	P	03 36 41.0	+0.8
HYA	Hoyanger	32.49	322	*e*P	P	03 36 41.8	+1.4
BER	Bergen	32.66	321	*e*P	P	03 36 42.9	+1.0
DMN	Daman	32.67	103	*e*P	P	03 36 42.5	-0.2
	comp=Z,16nm,0.4s						
ASK	Askoy	32.75	321	*e*P	P	03 36 43.4	+0.7
LOF	Lofoten	32.91	337	*e*P	P	03 36 44.0	0.0
PKIN	Phulchoki	32.91	103	*e*P	P	03 36 45.2	+0.4
	comp=Z,23nm,0.6s						
PKI	Pulchoki	32.92	103	*e*P	P	03 36 45.2	+0.2
	comp=Z,23nm,0.6s						
GUN	Gumba	33.08	102	*e*P	P	03 36 47.6	+1.2
	comp=Z,71nm,1.1s						
SUE	Sulen	33.12	322	*e*P	P	03 36 47.0	+1.1
FOO	Floro	33.14	323	*e*P	P	03 36 46.5	+0.4
RAMN	Ramite	34.14	103	*e*P	P	03 36 55.9	+0.4
	comp=Z,18nm,0.6s						
TAPN	Taplejung	34.74	101	*e*P	P	03 37 01.3	+0.5
	comp=Z,18nm,0.5s						
ODAN	Odare	34.77	102	*e*P	P	03 37 02.0	+1.0
	comp=Z,25nm,0.3s						
HYB	Hyderabad	34.89	124	*i* P	P	03 37 04.0	+2.2
HPK	Haverah Park	35.52	308	*e*P	P	03 37 06.8	0.0
HPK				IAmb	IAmb	03 37 07.7	
	comp=Z,42nm,0.6s						
LBWR	Ladybower, Pea	35.59	307	*e*P	P	03 37 06.7	-0.8
EDMD	Edmundbyers	35.73	310	*e*P	P	03 37 08.2	-0.5
EDMD				IAmb	IAmb	03 37 08.8	
	comp=Z,64nm,0.8s						
LRW	Lerwick	35.77	319	*e*P	P	03 37 09.4	+0.6
LRW				IAmb	IAmb	03 37 10.0	
	comp=Z,157nm,1.1s						
DRUM	Mains of Drumt	36.10	313	*e*P	P	03 37 12.2	+0.4
DRUM				IAmb	IAmb	03 37 13.4	
	comp=Z,26nm,0.6s						
ESY	Stoneypath	36.13	312	*e*P	P	03 37 12.4	+0.3
HLM1	Long Mynd	36.31	306	*e*P	P	03 37 13.2	-0.4
EBL	Broad Law	36.37	312	*e*P	P	03 37 14.1	+0.1
KESW	Keswick, Cumbr	36.39	310	*e*P	P	03 37 14.1	-0.2
KESW				IAmb	IAmb	03 37 18.2	
	comp=Z,64nm,1.1s						
MCH1	Michaelchurch	36.42	305	*e*P	P	03 37 13.6	-0.9
MCH1				IAmb	IAmb	03 37 14.2	
	comp=Z,25nm,0.8s						
EKA	Eskdalemuir Ar	36.42	311	P	P	03 37 14.2	-0.3
	comp=Z,10nm,0.6s,baz=97,slow=8.9,SNR=38						
EKA				PcP	PcP	03 39 37.5	-0.7
	comp=Z,3.4nm,0.8s,baz=102,slow=2.3,SNR=3.6						
ESK	Eskdalemuir	36.45	311	*e*P	P	03 37 13.9	-0.9
ESK				IAmb	IAmb	03 37 15.5	
	comp=Z,17nm,0.7s						
HOPEN	Hopen	36.85	351	*e*P	P	03 37 19.1	+1.2
INVG	Invergeldie, C	36.94	313	*e*P	P	03 37 19.1	+0.2
KAC	Achnashellach	37.66	314	*e*P	P	03 37 25.8	+0.8
LAWE	Loch Awe, Argy	37.69	312	*e*P	P	03 37 25.4	+0.2
ZAK	Zakamensk	38.32	57	*e*P	P	03 37 31.6	+0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA	Gaotai	38.52	75	P	P	03 37 33.0	+0.3
GTA				pP	sP	03 37 43.5	-0.6
GTA				sP	pP	03 37 47.3	+6.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,66nm,5.3s						
GTA				LR	LR		
	comp=Z,150nm,16.4s						
GTA				LR	LR		
	comp=Z,240nm,17.1s						
GTA				LR	LR		
	comp=Z,290nm,17.1s						
HSPB	Hornsund (broa	38.53	349	*e*P	P	03 37 32.8	+0.7
SPA0	Spitsbergen Ar	39.31	350	*e*P	P	03 37 40.1	+1.4
SPITS	Spitsbergen Ar	39.31	350	P	P	03 37 40.0	+1.4
	comp=Z,19nm,0.5s,baz=138,slow=11,SNR=71						
SPITS	Spitsbergen Ar	39.31	350	P	P	03 37 40.0	+1.4
LODK	Lodwar	39.51	201	P	P	03 37 42.6	+1.5
	SNR=5.0						
ESDC	Sonseca Array	39.63	286	P	P	03 37 41.4	-0.5
	comp=Z,1.5nm,0.4s,baz=58,slow=8.3,SNR=34						
ESDC				PcP	PcP	03 39 48.9	+0.4
	comp=Z,1.6nm,0.6s,baz=35,slow=2.7,SNR=10						
ESDC				LR	LR	03 56 49.6	
	comp=Z,126nm,21.7s,baz=60,slow=40						
ESDC	Sonseca Array	39.63	286	P	P	03 37 40.9	-1.0
TAM	Tamanrasset	40.53	257	P	P	03 37 50.7	+1.1
TAM				pmax	pmax		
	comp=Z,18nm,1.6s						
TAM	Tamanrasset	40.53	257	P	P	03 37 50.7	+1.1
SONM	Songino Array	40.79	61	P	P	03 37 53.1	+1.6
	comp=Z,1.3nm,0.7s,baz=280,slow=9.6,SNR=11						
SONM				pP	sP	03 38 02.3	-0.4
	comp=Z,1.6nm,0.6s,baz=281,slow=7.6,SNR=9.4						
SONM				PcP	PcP	03 39 52.3	+0.1
	comp=Z,1.4nm,0.7s,baz=240,slow=3.6,SNR=4.4						
SONM				LR	LR	03 56 26.2	
	comp=Z,682nm,18.6s,baz=298,slow=38						
SONM	Songino Array	40.79	61	P	P	03 37 49.6	-1.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	40.79	61	P	P	03 37 49.6	-1.8
ULN	Ulaanbaatar	41.21	60	*ce*P	P	03 37 56.6	+1.6
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
ULN				MLR	MLR		
	comp=Z,727nm,17.0s						
ULN	Ulaanbaatar	41.21	60	P	P	03 37 55.3	+0.3
PESTR	Estremoz	42.55	286	P	P	03 38 05.5	-0.4
LZH	Lanzhou	42.72	78	*e*P	P	03 38 08.0	+0.5
LZH				pP	sP	03 38 19.3	+0.4
LZH				sP	pP	03 38 25.5	+10
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				pmax	pmax		
	comp=Z,91nm,4.9s						
LZH				LR	LR		
	comp=Z,330nm,14.6s						
LZH				LR	LR		
	comp=Z,300nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,14.6s						
KMBO	Kilima Mbogo	43.43	197	P	P	03 38 15.3	+2.0
	comp=Z,6.9nm,1.0s,baz=18,slow=9.0,SNR=8.5						
KMBO				LR	LR	03 57 20.8	
	comp=Z,209nm,20.2s,baz=82,slow=38						
BOD	Bodaibo	43.65	45	*e*P	P	03 38 14.5	+0.1
BOD				pmax	pmax		
	comp=Z,17nm,1.2s						
MBAR	Mbarara	44.73	206	⇓*e*P	P	03 38 23.7	0.0
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DAG	Danmarks Havn	45.12	343	*i* P	P	03 38 36.3	+10
DAG				pmax	pmax		
	comp=Z,17nm,1.0s						
DAG	Danmarks Havn	45.12	343	*i* P	P	03 38 36.3	+10
	comp=Z,17nm,1.0s						
DAG	Danmarks Havn	45.12	343	*i* P	P	03 38 36.3	+10
DAG				IAmb	IAmb	03 38 38.0	
	comp=Z,17nm,1.0s						
BTO	Baotou	45.44	70	*e*P	P	03 38 24.5	-4.6
HHC	Hu-ho-hao-te	46.43	69	*e*P	P	03 38 38.0	+1.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,100nm,7.5s						
HHC				LR	LR		
	comp=Z,270nm,15.5s						
HHC				LR	LR		
	comp=Z,190nm,11.0s						
HHC				LR	LR		
	comp=Z,100nm,18.6s						
KMI	Kunming	47.22	92	*e*P	P	03 38 44.3	+0.9
KMI				pP	sP	03 38 54.0	-0.9
KMI				pmax	pmax		
	comp=Z,25nm,0.9s						
KMI				pmax	pmax		
	comp=Z,81nm,3.7s						
KMI				LR	LR		
	comp=Z,99nm,8.2s						
KMI				LR	LR		
	comp=Z,160nm,11.7s						
KMI				LR	LR		
	comp=Z,290nm,19.8s						
KMI	Kunming	47.22	92	P	P	03 38 43.9	+0.5
KMI				pmax	pmax		
	comp=Z,48nm,1.0s						
KMI	Kunming	47.22	92	P	P	03 38 43.9	+0.5
XAN	Xi'an	47.36	78	P	P	03 38 45.3	+1.1
XAN				pP	sP	03 38 55.0	-0.7
XAN				sP	pP	03 38 59.8	+7.3
XAN				pmax	pmax		
	comp=Z,33nm,0.8s						
XAN				pmax	pmax		
	comp=Z,220nm,4.8s						
XAN				LR	LR		
	comp=Z,240nm,9.8s						
XAN				LR	LR		
	comp=Z,320nm,15.2s						
XAN				LR	LR		
	comp=Z,350nm,14.1s						
MHMT	Maesarieng	47.75	104	P	P	03 38 48.0	+0.7
	comp=Z,24nm,0.8s						
CHTO	Chiang Mai	48.09	102	P	P	03 38 49.6	-0.4
CHTO				pmax	pmax		
	comp=Z,19nm,1.2s						
CHTO	Chiang Mai	48.09	102	P	P	03 38 49.6	-0.4
CHTO				IAmb	IAmb	03 39 01.1	
	comp=Z,20nm,1.2s						
CMMT	Chiang Mai	48.10	102	P	P	03 38 49.8	-0.2
	comp=Z,7.4nm,0.8s						
CM15	Chiang Mai Arr	48.31	103	P	P	03 38 54.5	+2.8
	comp=Z,7.6nm,0.4s						
CM13	Chiang Mai Arr	48.31	103	P	P	03 38 53.0	+1.4
	comp=Z,108nmcomp=Z,11nm,0.9s						
CM31	Chiang Mai Arr	48.32	102	P	P	03 38 56.6	+4.9
	comp=Z,224nm,0.8s						
CMAR	Chiang Mai Arr	48.32	102	P	P	03 38 52.4	+0.7
	comp=Z,6.6nm,0.9s,baz=303,slow=8.0,SNR=24						
CMAR				pP	sP	03 39 01.9	-1.3
	comp=Z,6.6nm,0.7s,baz=305,slow=8.8,SNR=5.5						
CMAR				LR	LR	04 04 48.2	
	comp=Z,64nm,18.8s,baz=170,slow=43						
CMAR	Chiang Mai Arr	48.32	102	P	P	03 38 51.6	-0.1
CM02	Chiang Mai Arr	48.33	103	P	P	03 38 53.0	+1.2
	comp=Z,140nmcomp=Z,18nm,1.1s						
CM05	Chiang Mai Arr	48.35	103	P	P	03 38 53.1	+1.1
	comp=Z,8.5nm,0.7s						
CM09	Chiang Mai Arr	48.36	102	P	P	03 38 54.4	+2.3
	comp=Z,11nm,1.0s						
CM04	Chiang Mai Arr	48.38	103	P	P	03 38 53.0	+0.8
	comp=Z,12nm,0.9s						
TIXI	Tiksi	48.42	25	P	P	03 38 52.0	+0.2
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s						
TIXI	Tiksi	48.42	25	P	P	03 38 52.0	+0.2
TIXI				IAmb	IAmb	03 39 11.0	
	comp=Z,11nm,1.1s						
LAMP	Lampang	48.78	102	P	P	03 38 56.9	+1.6
	comp=Z,40nm,1.1s						
SUKH	Sukhothai	49.44	103	P	P	03 39 12.0	+12
GYA	Guiyang	49.45	88	⇑P	P	03 39 01.0	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TORD	Torodi Ar. Bea	49.53	250	P	P	03 39 00.8	-0.3
	comp=Z,10nm,0.7s,baz=31,slow=8.0,SNR=34						
TORD				PcP	PcP	03 40 22.8	+0.1
	comp=Z,2.4nm,0.8s,baz=19,slow=3.9,SNR=3.5						
TORD				LR	LR	04 03 07.1	
	comp=Z,80nm,21.5s,baz=245,slow=40						
TORD	Torodi Ar. Bea	49.53	250	P	P	03 38 59.8	-1.3
SLVN	Son La	50.26	96	P	P	03 39 08.0	+1.4
SLVN				IAmb	IAmb	03 39 18.8	
	comp=Z,13nm,1.1s						
SUMG	Summit	50.43	337	*i* P	P	03 39 08.6	+1.0
SUMG	Summit	50.43	337	*i* P	P	03 39 08.6	+1.0
SUMG	Summit	50.43	337	*i* P	P	03 39 08.7	+1.0
ICESG	Greenland Ices	51.66	333	*i* P	P	03 39 17.7	+0.8
ICESG				IAmb	IAmb	03 39 19.1	
	comp=Z,26nm,0.8s						
KOWA	Kowa	52.75	256	P	P	03 39 24.9	-0.2
WHN	Wuhan	53.07	79	⇓P	P	03 39 38.5	+11
WHN				pmax	pmax		
	comp=Z,42nm,0.8s						
CN2	Changchun	54.66	60	*e*P	P	03 39 33.0	-5.8
CN2				*e*S	S	03 47 10.5	-6.5
CN2				LR	LR		
	comp=N,230nm,17.0s						
CN2				LR	LR		
	comp=E,350nm,17.0s						
CN2				LR	LR		
	comp=Z,650nm,20.0s						
NJ2	Nanjing	55.62	75	*e*P	P	03 39 43.5	-2.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KLR	Kul'dur	56.22	52	⇑*e*P	P	03 39 50.4	+0.4
KLR				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KLR				MLR	MLR		
	comp=Z,326nm,18.0s						
SFJD	Kangerlussuaq	56.26	332	P	P	03 39 50.3	+0.3
	comp=Z,3.9nm,0.5s,baz=76,slow=5.8,SNR=5.1						
SFJD	Kangerlussuaq	56.26	332	P	P	03 39 49.9	-0.1
SFJD				pmax	pmax		
	comp=Z,18nm,0.6s						
SFJD	Kangerlussuaq	56.26	332	P	P	03 39 49.9	-0.1
EUNU	Eureka	56.39	352	P	P	03 39 51.5	+0.6
EUNU				IAmb	IAmb	03 40 03.5	
	comp=Z,13nm,0.9s						
DBIC	Dimbokro	58.65	249	P	P	03 40 07.3	-0.2
	comp=Z,17nm,0.4s,baz=34,slow=7.6,SNR=69						
DBIC	Dimbokro	58.65	249	P	P	03 40 06.5	-1.0
DBIC				pmax	pmax		
	comp=Z,29nm,0.8s						
DBIC	Dimbokro	58.65	249	P	P	03 40 06.5	-1.0
USRK	Ussuriysk Ar.	58.67	57	P	P	03 40 07.3	0.0
	comp=Z,0.8nm,0.4s,baz=299,slow=6.4,SNR=3.6						
USRK				LR	LR	04 08 07.0	
	comp=Z,216nm,18.2s,baz=281,slow=39						
TIC	Toumodi	58.78	250	*e*P	P	03 40 08.2	-0.3
KIC	Kosan Boka	58.78	249	*e*P	P	03 40 08.3	-0.2
	comp=Z,3.5nm,0.3s						
PSI	Prapat	59.04	117	P	P	03 40 09.4	-1.0
	comp=Z,2.3nm,0.5s,baz=180,slow=2.0,SNR=3.7						
PSI				pP	pP	03 40 19.3	+0.5
	comp=Z,10nm,0.8s,baz=359,slow=4.7,SNR=5.1						
LIC	Lamto	59.08	249	*e*P	P	03 40 10.4	-0.1
	comp=Z,48nm,0.3s						
KSAR	Wonju Array Be	59.29	65	P	P	03 40 12.0	+0.2
KSAR	Wonju Array Be	59.29	65	P	P	03 40 12.0	+0.2
KSRS	Korea Array	59.31	65	P	P	03 40 12.1	+0.2
	comp=Z,3.0nm,0.6s,baz=292,slow=6.7,SNR=11						
KSRS				LR	LR	04 08 47.5	
	comp=Z,240nm,18.7s,baz=282,slow=39						
LSZ	Lusaka	59.35	203	P	P	03 40 12.6	+0.2
LSZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LSZ	Lusaka	59.35	203	P	P	03 40 12.6	+0.2
LSZ				IAmb	IAmb	03 40 13.8	
	comp=Z,7.9nm,0.8s						
SEY	Seymchan	59.84	31	⇑*e*P	P	03 40 15.3	+0.2
YHNB	Yeheng	61.48	81	P	P	03 40 27.1	+0.1
BILL	Bilibino	61.50	22	*c i*P	P	03 40 27.1	+0.7
BILL				*i* *PP	sP	03 40 37.4	-0.6
BILL						03 41 10.0	
BILL				*e*S	S	03 48 43.0	-2.7
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BILL	Bilibino	61.50	22	P	P	03 40 26.4	+0.1
YSS	Yuzh-Sakhalins	63.76	50	*e*P	P	03 40 47.4	+5.7
YSS				MLR	MLR		
	comp=Z,400nm,19.5s						
YSS				MLR	MLR		
	comp=E,300nm,15.5s						
TSUM	Tsumeb	66.71	212	P	P	03 41 00.9	-0.4
MJAR	Matsushiro Arr	66.74	61	P	P	03 41 01.6	+0.3
	comp=E,1.2nm,0.5s,baz=302,slow=8.9,SNR=5.3						
MJAR				pP	sP	03 41 11.2	-2.1
	comp=E,1.7nm,0.7s,baz=299,slow=8.2,SNR=2.8						
MJAR				LR	LR	04 12 37.3	
	comp=E,351nm,18.4s,baz=305,slow=38						
PETK	Petropavlovsk-	67.91	38	LR	LR	04 14 29.8	
	comp=E,121nm,19.3s,baz=294,slow=39						
RDOG	Red Dog Mine	68.47	12	IAmb	IAmb	03 41 24.4	
	comp=Z,24nm,1.1s						
LBTB	Lobatse	69.32	202	P	P	03 41 17.7	+0.2
LBTB				pmax	pmax		
	comp=Z,14nm,0.6s						
LBTB	Lobatse	69.32	202	P	P	03 41 17.7	+0.2
LBTB				IAmb	IAmb	03 41 19.0	
	comp=Z,14nm,0.6s						
C36M	Paulatuk	69.62	357	P	P	03 41 18.7	0.0
	baz=5.7						
C36M	Paulatuk	69.62	357	IAmb	IAmb	03 41 19.5	
	comp=Z,12nm,0.7s						
INK	Inuvik	70.78	1	P	P	03 41 25.7	-0.1
	comp=Z,1.4nm,0.6s,baz=355,slow=4.2,SNR=6.3						
ANM	Nome	71.19	15	IAmb	IAmb	03 41 41.7	
	comp=Z,31nm,1.4s						
IMAR	Indian Mountai	71.72	9	P	P	03 41 32.3	+0.7
EPYK	Eagle Plains	72.66	2	P	P	03 41 37.9	+0.6
	baz=356						
EPYK	Eagle Plains	72.66	2	IAmb	IAmb	03 41 49.8	
	comp=Z,33nm,1.1s						
BOSA	Boshof	72.81	202	P	P	03 41 39.1	+0.5
	comp=Z,14nm,0.7s,baz=19,slow=5.3,SNR=42						
BOSA				LR	LR	04 15 08.3	
	comp=Z,120nm,18.1s,baz=18,slow=37						
BOSA	Boshof	72.81	202	P	P	03 41 38.7	0.0
BOSA				pmax	pmax		
	comp=Z,15nm,0.7s						
BOSA	Boshof	72.81	202	P	P	03 41 38.7	0.0
BOSA				IAmb	IAmb	03 41 39.6	
	comp=Z,15nm,0.7s						
I23K	Minto, Yukon-K	73.02	8	P	P	03 41 41.0	+1.6
	baz=346						
POKR	Poker Plat Res	73.24	7	P	P	03 41 42.5	+1.8
	baz=347						
POKR	Poker Plat Res	73.24	7	IAmb	IAmb	03 41 53.8	
	comp=Z,27nm,1.1s						

MDM	Murphy Dome	73.32	7	IAmb	IAmb	03 41 54.7	
	comp=Z,17nm,1.2s						
COLA	College	73.44	7	P	P	03 41 42.8	+1.0
COLA				pmax	pmax		
	comp=Z,38nm,1.2s						
COLA	College	73.44	7	P	P	03 41 42.8	+1.0
COLA				IAmb	IAmb	03 41 54.4	
	comp=Z,38nm,1.1s						
TCOL	CIGO, UAF Yank	73.44	7	P	P	03 41 43.1	+1.2
	baz=347						
TCOL	CIGO, UAF Yank	73.44	7	IAmb	IAmb	03 41 54.5	
	comp=Z,38nm,1.1s						
NEA2	Nenana	73.59	8	P	P	03 41 43.6	+0.8
	baz=346						
ILAR	Eielson Array	73.63	7	P	P	03 41 43.1	+0.1
	comp=Z,1.2nm,0.6s,baz=338,slow=5.5,SNR=16						
ILAR				LR	LR	04 18 16.0	
	comp=Z,32nm,19.7s,baz=308,slow=39						
ILAR	Eielson Array	73.63	7	P	P	03 41 43.2	+0.2
CCB	Clear Creek Bu	73.67	7	IAmb	IAmb	03 41 55.3	
	comp=Z,21nm,1.2s						
BPAW	Bear Paw Mtn.	73.86	9	IAmb	IAmb	03 41 58.2	
	comp=Z,15nm,1.0s						
HDA	Harding Lake	73.98	7	P	P	03 41 45.3	+0.3
	baz=348						
HDA	Harding Lake	73.98	7	IAmb	IAmb	03 41 57.2	
	comp=Z,16nm,0.9s						
EGAK	Eagle	74.05	4	IAmb	IAmb	03 41 57.8	
	comp=Z,20nm,1.1s						
KTH	Kantishna Hill	74.40	9	IAmb	IAmb	03 42 00.5	
	comp=Z,16nm,0.9s						
MCK	McKinley	74.45	8	P	P	03 41 48.3	+0.5
	baz=346						
TRF	Thorofare Moun	74.57	9	IAmb	IAmb	03 42 02.1	
	comp=Z,13nm,1.0s						
SCRK	Sand Creek	74.66	6	P	P	03 41 50.3	+1.2
	baz=350						
RND	Reindeer	74.77	8	IAmb	IAmb	03 42 01.6	
	comp=Z,26nm,0.9s						
RIDG	Independent Ri	74.82	6	P	P	03 41 50.4	+0.4
RIDG				IAmb	IAmb	03 42 02.4	
	comp=Z,32nm,1.2s						
DAWY	Dawson	74.86	4	IAmb	IAmb	03 42 02.5	
	comp=Z,26nm,1.1s						
DOT	Dot Lake	74.98	6	IAmb	IAmb	03 42 03.5	
	comp=Z,26nm,1.1s						
DHY	Denali Highway	75.25	8	IAmb	IAmb	03 42 07.4	
	comp=Z,19nm,1.2s						
FCC	Fort Churchill	75.70	341	P	P	03 41 55.5	+0.5
FCC				pmax	pmax		
	comp=Z,18nm,1.1s						
FCC	Fort Churchill	75.70	341	P	P	03 41 55.5	+0.5
FCC				IAmb	IAmb	03 42 07.9	
	comp=Z,18nm,1.1s						
MENT	Mentasta	75.70	6	IAmb	IAmb	03 42 07.9	
	comp=Z,27nm,0.8s						
BCAR	Beaver Creek A	75.72	5	P	P	03 41 56.1	+1.0
YKA	Yellowknife Ar	75.77	352	P	P	03 41 55.2	-0.2
	comp=Z,4.3nm,0.6s,baz=17,slow=5.7,SNR=120						
YKA				LR	LR	04 17 22.8	
	comp=Z,52nm,21.5s,baz=0.0,slow=37						
YKA	Yellowknife Ar	75.77	352	*ce*P	P	03 41 55.4	0.0
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SKT	Skwentna	75.85	10	IAmb	IAmb	03 42 07.7	
	comp=Z,41nm,1.3s						
M24K	Tolsona, Glenn	76.32	7	P	P	03 42 00.3	+1.7
	baz=348						
E63A	Oxbow	76.36	321	P	P	03 42 00.7	+1.7
	baz=44						
PMR	Palmer	76.51	9	IAmb	IAmb	03 42 11.8	
	comp=Z,23nm,0.9s						
D61A	St Aubert, Com	76.63	322	P	P	03 42 02.3	+1.8
	baz=42						
F64A	Sherman	76.73	320	P	P	03 42 02.8	+1.6
	baz=43						
RC01	Rabbit Creek A	76.93	9	P	P	03 42 02.8	+0.8
	baz=346						
KLU	Klutina	76.94	7	P	P	03 42 03.0	+0.8
N25K	Chitina, Valde	76.95	7	P	P	03 42 02.7	+0.4
	baz=350						
MATQ	Matagami	77.91	328	P	P	03 42 09.2	+1.5
	baz=38						
RAGM	Ragged Mountai	78.15	7	P	P	03 42 06.5	-2.4
LSQQ	Lebel-sur-Quev	78.19	327	P	P	03 42 10.9	+1.6
	baz=38						
KMSI	Cibinong	78.53	99	P	P	03 42 10.4	-1.2
E58A	La Victoria	78.66	323	P	P	03 42 13.1	+1.2
	baz=40						
E57A	Chemin Saint G	79.02	324	P	P	03 42 15.6	+1.7
	baz=40						
E56A	St. Veronique	79.31	324	P	P	03 42 17.0	+1.6
	baz=39						
G58A	Ormstown	79.94	323	P	P	03 42 20.5	+1.6
	baz=40						
G57A	Newington	80.40	323	P	P	03 42 23.0	+1.7
	baz=39						
LONY	Lake Ozonia	80.59	323	P	P	03 42 24.2	+1.7
	baz=40						
FFC	Flin Flon	81.20	343	P	P	03 42 25.4	-0.1
FFC	Flin Flon	81.20	343	P	P	03 42 25.4	-0.1
FFC				IAmb	IAmb	03 42 37.6	
	comp=Z,13nm,0.8s						
G54A	Lake Saint Pet	81.54	325	P	P	03 42 29.3	+1.8
	baz=37						
ULM	Lac du Bonnet	83.77	338	P	P	03 42 39.2	+0.3
	comp=Z,2.8nm,0.6s,baz=35,slow=6.0,SNR=8.1						
ULM				pP	sP	03 42 50.4	-0.6
	comp=Z,7.3nm,0.7s,baz=25,slow=4.8,SNR=10						
ULM				LR	LR	04 19 11.5	
	comp=Z,81nm,19.4s,baz=86,slow=35						
ULM	Lac du Bonnet	83.77	338	P	P	03 42 39.0	0.0
ULM				pmax	pmax		
	comp=Z,57nm,1.9s						
ULM	Lac du Bonnet	83.77	338	P	P	03 42 39.0	0.0
M58A	Price's Panora	83.98	322	P	P	03 42 41.6	+1.4
	baz=38						
N59A	State Game Lan	84.01	321	P	P	03 42 42.0	+1.6
	baz=38						
SIJI	Sorong	84.93	96	LR	LR	04 25 59.9	
	comp=Z,48nm,18.8s,baz=332,slow=39						
SPMN	Marine on St.	87.31	334	P	P	03 42 57.5	+0.8
	baz=28						
NBPV	Pedro Velho	89.72	261	*e*P	P	03 43 10.3	+1.8
ECSD	EROS Data Cent	89.87	336	P	P	03 43 09.9	+1.1
	baz=25						
ECSD	EROS Data Cent	89.87	336	P	P	03 43 08.9	+0.1
NEW	Newport	90.02	351	P	P	03 43 11.0	+1.5
	baz=10						
HRY	Holter Researc	90.76	347	P	P	03 43 13.6	+0.6
NBRF	Rio Formoso -	91.08	259	*e*P	P	03 43 16.3	+1.4
RSSD	Black Hills	91.59	341	P	P	03 43 18.7	+1.6
	baz=20						
BOZ	Bozeman (W)	91.80	346	P	P	03 43 18.4	+0.5
	baz=14						
RLMT	Red Lodge	91.81	345	P	P	03 43 19.2	+1.1
	baz=16						
E09A	Wood Farm, Sta	91.87	351	P	P	03 43 18.6	+0.5
E09A				IAmb	IAmb	03 43 31.0	
	comp=Z,10nm,1.0s						
NBPS	Pedro II - PI	93.01	267	*e*P	P	03 43 25.2	+1.3
PDAR	Pinedale Array	94.13	344	P	P	03 43 33.4	+4.5
	comp=Z,0.1nm,0.6s,baz=7.6,slow=7.5,SNR=1.5						
PDAR				LR	LR	04 29 35.1	
	comp=Z,78nm,18.7s,baz=20,slow=38						
MFID	Camas Ranch	94.61	349	IAmb	IAmb	03 43 44.0	
	comp=Z,8.8nm,0.8s						
ELK	Elko	97.13	348	P	Pdif	03 43 44.3	+1.6
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ELK	Elko	97.13	348	P	Pdif	03 43 44.2	+1.6
ELK				IAmb	IAmb	03 43 55.9	
	comp=Z,3.7nm,1.0s						
WRA	Warramunga Arr	99.67	108	P	Pdif	03 43 52.7	-1.2
	comp=Z,1.1nm,0.7s,baz=317,slow=4.3,SNR=9.5						
WRA				pP	pP	03 44 03.2	+0.3
	comp=Z,1.4nm,0.7s,baz=318,slow=4.4,SNR=6.6						
WRA				PKKP	PKKPbc	04 00 16.1	+2.2
	comp=Z,0.3nm,0.9s,baz=134,slow=2.7,SNR=5.0						
WRA	Warramunga Arr	99.67	108	*i* P	Pdif	03 43 53.0	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	99.85	350	P	Pdif	03 43 54.6	-0.2
	comp=Z,0.2nm,0.5s,baz=51,slow=7.1,SNR=2.2						
NVAR				pP	sP	03 44 05.9	-0.9
	comp=Z,0.8nm,0.7s,baz=28,slow=4.9,SNR=7.2						
ASAR	Alice Springs	101.75	111	PKKPbc	PKKPbc	04 00 09.2	+1.1
	comp=Z,0.3nm,0.6s,baz=123,slow=3.7,SNR=7.0						
SNAA	Sanae	118.33	196	PKPdf	PKPdf	03 48 56.1	0.0
SNAA	Sanae	118.33	196	⇓*i*PKIKP	PKPdf	03 48 56.4	+0.3
SNAA				pmax	pmax		
	comp=Z,7.0nm,2.5s						
SNAA	Sanae	118.33	196		PKPdf	03 48 56.0	-0.2
CPUP	Villa Florida	118.50	259	PKP	PKPdf	03 48 57.2	-0.5
	comp=Z,2.3nm,0.8s,baz=136,slow=2.6,SNR=6.4						
CPUP				pPKP	sPKPdf	03 49 07.9	-2.3
	comp=Z,1.8nm,0.7s,baz=41,slow=3.3,SNR=3.8						
VNA2	Neumayer--Watz	118.81	198	PKPdf	PKPdf	03 48 57.2	+0.2
	baz=15,slow=3.7						
VNA1	Neumayer--Stat	118.82	199	PKPdf	PKPdf	03 48 56.0	-0.9
VNA3	Neumayer Olymp	119.56	198	PKPdf	PKPdf	03 48 58.4	-0.1
PLCA	Paso Flores	135.01	250	PKP	PKPdf	03 49 30.1	+1.3
	comp=Z,2.8nm,1.1s,baz=135,slow=5.7,SNR=3.5						
PLCA				pPKP	sPKPdf	03 49 40.9	-0.5
	comp=Z,1.4nm,0.7s,baz=75,slow=1.9,SNR=2.9						

IDC 26 03:46:11.8±14.0**, 6°.25S**×**130°.11E, h95**^{km}±159^{km}**, mb3.3**/1**, mb1 3.3**/4**, mb1mx3.1**/25**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=96.9km s-min=58.9km az=25.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.56	200	P	Pn	03 49 06.4	-0.7
	0.1nm,0.3s,baz=40,slow=13,SNR=5.5						
FITZ				S	Sn	03 51 11.7	-13
	0.1nm,0.3s,baz=192,slow=20,SNR=4.3						
WRA	Warramunga Arr	14.22	164	P	Pn	03 49 30.2	+1.4
	0.2nm,0.3s,baz=344,slow=11,SNR=9.5						
WRA				S	Sn	03 51 51.4	-14
	0.1nm,0.3s,baz=344,slow=21,SNR=3.9						
ASAR	Alice Springs	17.70	168	P	P	03 50 11.4	-0.4
	0.2nm,0.3s,baz=346,slow=11,SNR=9.4						
MKAR	Makanchi Array	67.66	327	P	P	03 56 58.8	0.0
	0.3nm,0.4s,baz=118,slow=8.1,SNR=8.0						

KRNET ***26*** *03:48:24.9±0.1, 39°.37N×74°.78E, mb3.5*

SOME ***26*** *03:48:26.5, 39°.62N×74°.93E, h10*^{km}

NNC ***26*** *03:48:29.8±0.7, 39°.71N×74°.82E, h1*^{km}*±3*^{km}*, mb4.2, mpv3.9, Error ellipse: s-maj=5.1km s-min=3.1km az=173.0*

ISC 26 03:48:25.3±1.2**, 39°.55N**±0°.05×**74°.88E**±0°.03**, h10**^{km}**, n78,** σ**1**^{s}**.88**/118**, 28C-22D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.16	294	⇓*i*P	Pn	03 48 47.7	-0.1
	baz=4.0						
SFK				⇓*i*S	Sn	03 49 04.0	+0.2
	baz=4.0						
OHH	Osh	1.88	302	⇑*i*P	Pg	03 49 00.6	-0.7
	baz=8.0						
OHH				⇑*i*S	Sg	03 49 26.7	+1.0
	baz=8.0						
ARSB	Arslanbob	2.29	321	⇑*i*P	Pg	03 49 07.7	-1.5
	baz=25						
ARSB				⇑*i*S	Sg	03 49 39.1	+0.2
	baz=25						
ARLS	Aral	2.35	350	⇑*i*P	Pg	03 49 09.2	-1.1
	baz=52						
ARLS				⇑*i*S	Sg	03 49 41.4	+0.6
	baz=52						
DRK	Karamyk	2.38	269	⇑*i*P	Pb	03 49 06.6	-1.9
	baz=74						
DRK				⇑*i*S	Sb	03 49 36.8	-1.2
	baz=74						
UCH	Uchtor	2.69	354	⇓*e*P	Pb	03 49 14.0	+0.2
	baz=56						
UCH				⇓*i*S	Sg	03 49 50.3	-1.5
	baz=56						
UCH	Uchtor	2.69	354	P	Pb	03 49 14.3	+0.5
	SNR=23						
AML	Almayashu	2.73	341	⇓*i*P	Pb	03 49 14.3	-0.2
	baz=44						
AML				⇓*i*S	Sb	03 49 50.4	+2.2
	baz=44						
AML	Almayashu	2.73	341	P	Pb	03 49 14.1	-0.4
	SNR=18						
ULHL	Ulahol	2.89	21	⇑*i*P	Pb	03 49 17.4	+0.4
	baz=21						
ULHL				⇑*i*S	Sg	03 49 55.7	-2.3
	baz=21						
BOOM	Boomskoye usch	3.05	15	⇓*i*P	Pb	03 49 19.3	-0.4
	baz=15						
BOOM				⇓*i*S	Sb	03 49 59.1	+2.1
	baz=15						
AAK	Ala-Archa	3.10	355	⇑*e*P	Pb	03 49 19.6	-1.0
	baz=56						
AAK				⇑*i*S	Sb	03 49 59.5	+0.9
	baz=56						
AAK	Ala-Archa	3.10	355	P	Pb	03 49 19.7	-1.0
	SNR=22						
AAK	Ala-Archa	3.10	355	⇓Pn	Pb	03 49 18.7	-1.9
	27nm,0.6s						
AAK				⇓Lg	Lg	03 50 01.1	
	39nm,0.7s						
KBK	Karagaybulak	3.11	1	⇓*i*P	Pb	03 49 20.1	-0.6
	baz=2.0						
KBK				⇓*i*S	Sb	03 50 00.3	+1.6
	baz=2.0						
KBK	Karagaybulak	3.11	1	P	Pb	03 49 20.3	-0.4
	SNR=15						
BTK	Batken	3.17	281	⇑*i*P	Pb	03 49 17.8	-3.9
	baz=84						
BTK				⇑*i*S	Sn	03 49 56.3	+3.1
	baz=84						
EKS2	Erkin-Say	3.22	345	⇑*i*P	Pb	03 49 21.0	-1.6
	baz=47						
EKS2				⇑*i*S	Sb	03 50 02.1	+0.1
	baz=47						
TKM2	Tokmak 2	3.41	9	⇓*i*P	Pb	03 49 24.4	-1.6
	baz=10.0						
TKM2				⇓*i*S	Sb	03 50 08.0	+0.4
	baz=10.0						
TKM2	Tokmak 2	3.41	9	P	Pb	03 49 24.1	-1.9
	SNR=29						
TKM2	Tokmak 2	3.41	9	⇓Pn	Pb	03 49 22.8	-3.2
	17nm,0.5s						
TKM2				⇓Lg	Lg	03 50 12.4	
	51nm,0.8s						
MRKS	Merke	3.43	339	*e*P	Pg	03 49 29.8	-1.2
	25nm,0.5s						
MRKS				*e*S	Sg	03 50 14.9	-0.5
	19nm,0.4s						
MRKS	Merke	3.43	339	Pg	Pg	03 49 29.8	-1.2
	25nm,0.5s						
MRKS				Lg	Lg	03 50 14.9	
	19nm,0.4s						
MNAS	Manas	3.44	329	⇓*i*P	Pb	03 49 24.2	-2.2
	baz=32						
MNAS				⇓*i*S	Sb	03 50 06.9	-1.5
	baz=32						
CHMS	Chumysh	3.45	358	⇑*i*P	Pb	03 49 24.4	-2.0
	baz=60						
CHMS				⇑*i*S	Sb	03 50 08.1	-0.4
	baz=60						
CHMS	Chumysh	3.45	358	P	Pb	03 49 24.5	-2.0
	SNR=12						
TRKS	Terek-Say	3.47	306	⇓*i*P	Pn	03 49 21.8	+2.3
	baz=8.0						
TRKS				⇓*i*S	Sn	03 50 04.4	+3.7
	baz=8.0						
KST	Kastek	3.59	13	*e*P	Pg	03 49 32.1	-1.9
	33nm,0.4s						
KST				*e*S	Sg	03 50 19.0	-1.5
	40nm,0.3s						
KST	Kastek	3.59	13	Pg	Pg	03 49 32.1	-1.9
	33nm,0.4s						
KST				Lg	Lg	03 50 19.0	
	40nm,0.3s						
USP	Ospenovka	3.73	356	⇑*i*P	Pb	03 49 28.2	-3.0
	baz=57						
USP				⇑*i*S	Sb	03 50 14.6	-1.9
	baz=57						
USP	Ospenovka	3.73	356	P	Pb	03 49 28.9	-2.3
	SNR=6.4						
DGS	Degeres	3.75	10	*e*P	Pg	03 49 35.2	-2.0
	38nm,0.4s						
DGS				*e*S	Sg	03 50 24.1	-1.6
	29nm,0.4s						
DGS	Degeres	3.75	10	Pg	Pg	03 49 35.2	-2.0
	38nm,0.4s						
DGS				Lg	Lg	03 50 24.1	
	29nm,0.4s						
MTBS	Maitube	3.77	18	*e*P	Pg	03 49 34.9	-2.5
	11nm,0.2s						
MTBS				*e*S	Sg	03 50 24.0	-2.2
	23nm,0.3s						
MTBS	Maitube	3.77	18	Pg	Pg	03 49 34.9	-2.5
	11nm,0.2s						
MTBS				Lg	Lg	03 50 24.0	
	23nm,0.3s						
TNSS	Tian-Shan	3.82	23	*e*P	Pg	03 49 37.3	-1.1
	14nm,0.5s						
TNSS				*e*S	Sg	03 50 28.2	+0.3
	10nm,0.5s						
TNSS	Tian-Shan	3.82	23	Pg	Pg	03 49 37.3	-1.1
	14nm,0.5s						
TNSS				Lg	Lg	03 50 28.2	
	10nm,0.5s						
SGDS	Sogindy	3.91	357	Pg	Pg	03 49 38.7	-1.4
	7.3nm,0.6s						
SGDS				Lg	Lg	03 50 30.2	
	8.4nm,0.4s						
MDOK	Medeo	3.96	24	*e*P	Pg	03 49 39.5	-1.7
	15nm,0.8s						
MDOK				*e*S	Sg	03 50 31.9	-0.7
	25nm,0.9s						
MDOK	Medeo	3.96	24	⇑Lg	Lg	03 50 31.4	
	41nm,0.8s						
MDOK	Medeo	3.96	24	Pg	Pg	03 49 39.5	-1.7
	15nm,0.8s						
MDOK				Lg	Lg	03 50 31.9	
	25nm,0.9s						
KOTS	Kotyrbulak	4.05	24	*e*P	Pg	03 49 41.3	-1.5
	27nm,0.4s						
KOTS				*e*S	Sg	03 50 34.7	-0.5
	33nm,0.6s						
KOTS	Kotyrbulak	4.05	24	Pg	Pg	03 49 41.3	-1.5
	27nm,0.4s						
KOTS				Lg	Lg	03 50 34.7	
	33nm,0.6s						
DZA	Taraz	4.28	322	*e*P	Pg	03 49 46.0	-1.2
	82nm,0.1s						
DZA				*e*S	Sg	03 50 42.9	+0.2
	91nm,0.1s						
DZA	Taraz	4.28	322	Pg	Pg	03 49 46.0	-1.2
	82nm,0.1s						
DZA				Lg	Lg	03 50 42.9	
	91nm,0.1s						
KTBS	Karatobe	4.38	17	*e*P	Pg	03 49 47.3	-1.8
	9.9nm,0.5s						
KTBS				*e*S	Sg	03 50 45.5	-0.2
	54nm,0.5s						
KTBS	Karatobe	4.38	17	Pg	Pg	03 49 47.3	-1.8
	9.9nm,0.5s						
KTBS				Lg	Lg	03 50 45.5	
	54nm,0.5s						
SATY	Saty	4.40	36	⇑*i*P	Pg	03 49 47.9	-1.7
	5.5nm,0.7s						
SATY				⇑*i*S	Sg	03 50 46.5	-0.1
	29nm,0.6s						
SATY	Saty	4.40	36	Pg	Pg	03 49 47.9	-1.7
	5.5nm,0.7s						
SATY				Lg	Lg	03 50 46.5	
	29nm,0.6s						
KUU	Kurty	4.48	14	*e*P	Pg	03 49 49.0	-2.1
	11nm,0.8s						
KUU				*e*S	Sg	03 50 48.1	-1.0
	58nm,0.5s						
KUU	Kurty	4.48	14	Pg	Pg	03 49 48.9	-2.1
	11nm,0.8s						
KUU				Lg	Lg	03 50 48.1	
	58nm,0.5s						
ZHN	Zhinishke	4.50	35	*e*P	Pg	03 49 49.4	-2.1
	216nm,0.6s						
ZHN				*e*S	Sg	03 50 48.8	-1.0
	3.0nm,0.2s						
ZHN	Zhinishke	4.50	35	Pg	Pg	03 49 49.4	-2.1
	216nm,0.6s						
ZHN				Lg	Lg	03 50 48.8	
	3.0nm,0.2s						
IUG	Iuzhnay	4.50	307	*e*P	Pg	03 49 50.4	-1.0
	24nm,0.3s						
IUG				*e*S	Sg	03 50 50.1	+0.3
	57nm,0.6s						
IUG	Iuzhnay	4.50	307	Pg	Pg	03 49 50.4	-1.0
	24nm,0.3s						
IUG				Lg	Lg	03 50 50.1	
	57nm,0.6s						
CHKK	Chushkaly	4.58	19	*e*P	Pg	03 49 51.3	-1.7
	6.5nm,0.3s						
CHKK				⇑*i*S	Sg	03 50 52.3	-0.1
	23nm,0.3s						
CHKK	Chushkaly	4.58	19	Pg	Pg	03 49 51.3	-1.7
	6.5nm,0.3s						
CHKK				Lg	Lg	03 50 52.3	
	23nm,0.3s						
KURS	Kuram	4.65	31	*e*P	Pg	03 49 52.2	-2.1
	5.2nm,0.3s						
KURS				*e*S	Sg	03 50 53.5	-1.0
	11nm,0.9s						
KURS	Kuram	4.65	31	Pg	Pg	03 49 52.2	-2.1
	5.2nm,0.3s						
KURS				Lg	Lg	03 50 53.5	
	11nm,0.9s						
UZB	Uzynbulak	4.76	40	*e*P	Pg	03 49 54.5	-2.0
	3.4nm,0.3s						
UZB				*e*S	Sg	03 50 57.3	-0.8
	13nm,0.9s						
UZB	Uzynbulak	4.76	40	Pg	Pg	03 49 54.5	-2.0
	3.4nm,0.3s						
UZB				Lg	Lg	03 50 57.3	
	13nm,0.9s						
KK31	Karatay Array	4.84	319	Pn	Pn	03 49 41.6	+3.5
	0.9nm,0.4s,baz=126,slow=12,SNR=18						
KK31				⇑Pg	Pg	03 49 55.0	-3.0
	1.6nm,0.5s,baz=131,slow=15,SNR=3.2						
KK31				⇓Sn	Sn	03 50 37.1	+2.8
	4.5nm,0.7s,baz=138,slow=28,SNR=4.1						
KK31				⇓Lg	Lg	03 50 57.9	
	6.7nm,0.6s,baz=131,slow=28,SNR=5.2						
KPKS	Kokpek	4.85	35	*e*P	Pg	03 49 55.4	-2.7
	12nm,0.3s						
KPKS				*e*S	Sg	03 50 59.4	-1.5
	25nm,0.6s						
SHLS	Shalkode	4.99	42	*e*P	Pg	03 50 02.6	+1.8
	10.0nm,0.7s						
SHLS				*e*S	Sg	03 51 11.4	+6.0
	18nm,0.5s						
SHLS	Shalkode	4.99	42	Pg	Pg	03 50 02.6	+1.8
	10.0nm,0.7s						
SHLS				Lg	Lg	03 51 11.5	
	18nm,0.5s						
PDGK	Podgornoye	5.13	41	Pg	Pg	03 50 01.5	-1.9
	2.8nm,0.6s						
PDGK				Lg	Lg	03 51 09.1	
	9.3nm,0.7s						
PDGK	Podgornoye	5.13	41	⇑Pg	Pg	03 50 00.6	-2.8
	8.6nm,1.0s						
PDGK				⇑Lg	Lg	03 51 08.8	
	23nm,0.8s						
ARXS	Arharly	5.16	24	*e*P	Pg	03 50 01.3	-2.7
	19nm,0.4s						
ARXS				*e*S	Sg	03 51 09.3	-1.5
	18nm,0.6s						
ARXS	Arharly	5.16	24	Pg	Pg	03 50 01.3	-2.7
	19nm,0.4s						
ARXS				Lg	Lg	03 51 09.3	
	18nm,0.6s						
MNBS	Baschi	5.24	29	*e*P	Pg	03 50 03.8	-1.8
	6.3nm,0.5s						
MNBS				*e*S	Sg	03 51 13.4	0.0
	8.0nm,0.5s						
MNBS	Baschi	5.24	29	Pg	Pg	03 50 03.8	-1.8
	6.3nm,0.5s						
MNBS				Lg	Lg	03 51 13.4	
	8.0nm,0.5s						
BTLS	Baital	5.52	354	*e*P	Pg	03 50 08.5	-2.6
	2.2nm,0.4s						
BTLS				*e*S	Sg	03 51 21.3	-1.3
	6.8nm,0.9s						
BTLS	Baital	5.52	354	Pg	Pg	03 50 08.5	-2.6
	2.2nm,0.4s						
BTLS				Lg	Lg	03 51 21.3	
	6.8nm,0.9s						
KTMS	Ketmen	5.66	45	Pg	Pg	03 50 11.1	-2.6
	0.9nm,0.1s						
KTMS				Lg	Lg	03 51 26.3	
	10.0nm,0.5s						
DJR	Jarkent	6.02	36	Pg	Pg	03 50 17.9	-2.7
	2.8nm,0.3s						

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DJR                                Lg    Lg     03 51 37.7
      5.2nm,0.4s
KAPS  Kapalarasan       6.62  29   Pg    Pg     03 50 29.1 -2.9
      2.2nm,0.9s
KAPS                               Lg    Lg     03 51 57.2
      4.5nm,0.4s
AB31  Akbulak array    14.40 317   Pn    Pn     03 51 49.9 +0.8
      1.7nm,0.8s,baz=128,slow=12,SNR=11
AKTO  Aktyubinsk       16.11 318 ⇑Pn    P      03 52 15.2 +0.1
      2.6nm,1.1s
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IDC ***26*** *03:58:46.1±6.1, 7.°00N×72.°92W, h135^{km}±104^{km}, mb3.0/3, mb1 3.4/4, mb1mx3.1/22, mbtmp3.5/4, ML2.7/1, Error ellipse: s-maj=122.8km s-min=69.8km az=157.0*

RSNC ***26*** *03:58:49.3±1.3, 6.°82N×73.°15W, h145^{km}±5^{km}, ML3.2, Mw3.5, Fault plane solution: NP1:ϕ_s0.00000°, δ18.00000°, λ-2.00000°.*

ISC 26 03:58:47.6±0.9**, 6.°83N**±0.°03×**73.°11W**±0.°04**, h153**^{km}±6^{km}**, n35, σ1^{s}12**/58**, mb3.3**/3**, 2C-4D, Northern Colombia**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
BARC  Barichara         0.24 196⇓iP     Pn     03 59 08.9 +0.2
BARC                             eS     Sn     03 59 23.8 -1.0
BARC                             i             03 59 25.1
      comp=Z,403nm,0.3s
BRRC  Barranca, Sant    0.66 295⇑iP     Pn     03 59 10.7 +0.6
BRRC                             eS     Sn     03 59 27.7 +0.3
BRRC                             i             03 59 31.9
      comp=Z,272nm,0.3s
PAMC  Pamplona, Colo    0.66  39⇑iP     Pn     03 59 11.7 +1.0
PAMC                             eS     Sn     03 59 28.5 +0.1
PAMC                             i             03 59 31.1
      comp=Z,312nm,0.5s
RUSC  La Rusia          0.93 178⇓iP     Pn     03 59 12.8 +0.1
RUSC                             eS     Sn     03 59 31.9 +0.1
RUSC                             i             03 59 33.1
      comp=Z,158nm,0.4s
PTBC  PUERTO BERRIO,    1.36 258 eP     Pn     03 59 15.5 -0.6
PTBC                             eS     Sn     03 59 35.5 -2.3
PTBC                             i             03 59 43.8
      comp=Z,149nm,0.2s
TAMC  Tame, Arauca      1.37 106⇓iP     Pn     03 59 17.4 +1.2
TAMC                             i             03 59 38.4
      comp=Z,103nm,0.3s
TAMC                             eS     Sn     03 59 38.9 +1.0
OCAC  Ocana             1.42 352 eP     Pn     03 59 17.0 +0.2
OCAC                             eS     Sn     03 59 38.9 -0.3
OCAC                             i             03 59 47.3
      comp=Z,196nm,0.2s
SPBC  San Pablo de B    1.51 219 eP     Pn     03 59 17.8 +0.2
SPBC                             eS     Sn     03 59 39.6 -1.0
SPBC                             i             03 59 48.5
      comp=Z,278nm,0.3s
ZARC  Zaragoza, Cauc    1.85 291 eP     Pn     03 59 21.3  0.0
ZARC                             eS     Sn     03 59 46.7 -0.4
ZARC                             i             03 59 52.2
      comp=Z,193nm,0.4s
NORC  Norcasia          2.15 234 eP     Pn     03 59 24.9 +0.1
NORC                             eS     Sn     03 59 53.0 -0.4
NORC                             i             03 59 58.2
      comp=Z,106nm,0.2s
SMLC  San Martn de      2.18 334 eP     Pn     03 59 24.9 -0.1
SMLC                             eS     Sn     03 59 55.1 +1.2
SMLC                             i             04 00 01.0
      comp=Z,143nm,0.3s
CHIC  Chingaza          2.27 196 eP     Pn     03 59 27.1 +0.5
CHIC                             eS     Sn     03 59 56.4 -0.1
CHIC                             i             03 59 59.9
      comp=Z,144nm,0.6s
ROSC  El Rosal          2.31 211  P     Pn     03 59 29.0 +2.0
      comp=Z,29nm,0.3s,baz=349,slow=7.8,SNR=46
ROSC                              S     Sn     03 59 59.8 +2.5
      comp=Z,86nm,0.3s,baz=51,slow=20,SNR=15
ROSC  El Rosal          2.31 211 eP     Pn     03 59 28.4 +1.4
ROSC                             eS     Sn     03 59 56.5 -0.8
ROSC                             i             04 00 03.3
      comp=Z,305nm,0.4s
HELC  Santa Helena      2.48 255 eP     Pn     03 59 29.5 +0.5
HELC                             eS     Sn     04 00 01.1 +0.3
HELC                             i             04 00 06.9
      comp=Z,107nm,0.3s
UREC  San Jos de Ur     2.57 291 eP     Pn     03 59 28.8 -1.0
UREC                             eS     Sn     03 59 59.5 -2.7
UREC                             i             04 00 11.5
      comp=Z,95nm,0.2s
GUY2C Guyana, Caldas    2.75 235 eP     Pn     03 59 33.6 +1.2
GUY2C                            eS     Sn     04 00 07.3 +0.3
GUY2C                            i             04 00 15.0
      comp=Z,98nm,0.3s
PTGC  Puerto Gaitan,    2.79 159⇓eP     Pn     03 59 32.1 -0.4
PTGC                             eS     Sn     04 00 05.9 -1.3
PTGC                             i             04 00 06.2
      comp=N,179nm,0.2s
RREF  El Recreo         2.93 229 eP     Pn     03 59 35.4 +0.5
RREF                             eS     Sn     04 00 14.4 +3.1
RREF                             i             04 00 20.8
      comp=Z,124nm,0.4s
CBOC  Ciudad Bolivar    3.04 252 eP     Pn     03 59 36.6 +0.9
CBOC                             i             04 00 18.4
      comp=Z,28nm,0.6s
SDV   Santo Domingo     3.20  50 eP     Pn     03 59 38.4 +0.6
SDV                              eS     Sn     04 00 16.5 -0.1
SDV                              i             04 00 19.1
      comp=Z,26nm,0.3s
ARGC  Ariguani, Magd    3.21 340 eP     Pn     03 59 39.0 +1.1
ARGC                             eS     Sn     04 00 18.1 +1.4
ARGC                             i             04 00 24.6
      comp=Z,35nm,0.3s
ANIL  Santa Ana         3.25 225 eP     Pn     03 59 39.5 +0.9
ANIL                             eS     Sn     04 00 19.4 +1.3
ANIL                             i             04 00 28.9
      comp=Z,34nm,0.3s
ORTC  Ortega, Tolima    3.59 216 eP     Pn     03 59 42.9 +0.2
ORTC                             eS     Sn     04 00 26.5 +0.9
ORTC                             i             04 00 30.2
      comp=Z,75nm,0.3s
PLMC  San Jos del P     3.69 239 eP     Pn     03 59 44.4 +0.4
PLMC                             i             04 00 34.3
      comp=N,93nm,0.3s
YOTC  Yotoco, Valle     4.28 229 eP     Pn     03 59 51.4 -0.4
GUVC  San Jose del G    4.28 173 eP     Pn     03 59 50.2 -1.5
SMRC  Santa Marta, M    4.45 346 eP     Pn     03 59 53.3 -0.5
MACC  Macarena, Meta    4.71 189 eP     Pn     03 59 56.5 -0.8
MALC  Bahia Malaga      5.05 237 eP     Pn     04 00 03.5 +1.8
GARC  Garzon, Huila     5.18 207 eP     Pn     04 00 03.1 -0.7
PCON  Cinco Dias        5.54 216 eP     Pn     04 00 10.0 +1.2
TXAR  Lajitas Array    36.46 312  P     P      04 05 39.0 +0.9
      comp=N,0.1nm,0.5s,baz=132,slow=8.9,SNR=3.4
ULM   Lac du Bonnet    47.28 340  P     P      04 07 04.0 -1.5
      comp=N,0.9nm,0.6s,baz=180,slow=6.1,SNR=3.2
YKA   Yellowknife Ar   63.26 340  P     P      04 08 59.5 -0.1
      comp=N,0.2nm,0.5s,baz=129,slow=7.5,SNR=16
```

NEIC ***26*** *04:08:04.0±1.5, 23.°55N±0.°05×122.°77E±0.°07, h10^{km}±1^{km}, mb4.3/15, Error ellipse: s-maj=11.5km s-min=7.7km az=110.0*

JMA ***26*** *04:08:06.2±0.1, 23.°59N×122.°67E, h52^{km}, M3.7*

NIED ***26*** *04:08:06.3, 23.°59N×122.°67E, h52^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.05; $M_{\theta\theta}$1.32; $M_{\phi\phi}$-1.27; $M_{r\theta}$0.57; $M_{\theta\phi}$0.17; $M_{\phi r}$1.04; Fault plane solution: $M_0$1.75000×10^{15} NP1: ϕ_s221.00000°, δ87.00000°, λ-139.00000°. NP2: ϕ_s128.00000°, δ49.00000°, λ-5.00000°.*

TAP ***26*** *04:08:07.2, 23.°63N×122.°70E, h41^{km}±1^{km}, ML4.2, D*

IDC ***26*** *04:08:12.4±6.8, 24.°56N×122.°90E, h33^{km}±52^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.7/38, mbtmp4.0/15, ML3.3/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/54, Error ellipse: s-maj=24.1km s-min=14.9km az=67.0*

ISC 26 04:08:04.2±1.2**, 23.°58N**±0.°02×**122.°68E**±0.°02**, h10**^{km}±8^{km}**, n180, σ1^{s}03**/287**, mb4.1**/20**, 20C-21D, Taiwan region**

```
Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                  Op     ISC       h  m  s    ISC
JYNG  Yonagunijimaku    0.90  16  P     Pn     04 08 22.7 -0.2
JYNG                              S     Sb     04 08 34.5 +0.6
YOJ   Yonaguni jima     0.93  19  P     Pn     04 08 23.2 -0.1
YOJ                               S     Sb     04 08 35.5 +0.8
YOJ   Yonaguni jima     0.93  19⇑iP     Pb     04 08 22.8 +0.4
      baz=18
YOJ                               S     Sb     04 08 35.5 +0.8
      baz=18
YOJ   Yonaguni jima     0.93  19        Pn     04 08 23.2 -0.1
HWA   Hwalien           1.06 292 eP     Pn     04 08 25.2 +0.1
      baz=281
HWA                              eS     Sn     04 08 39.4 -0.4
      baz=281
TWD   Chiawan           1.11 297⇓iP     Pn     04 08 25.6 -0.1
      baz=285
TWD                               S     Sb     04 08 39.0 -0.9
      baz=285
HATJ  Hateruma jima     1.14  65  P     Pn     04 08 26.2 +0.1
HATJ                              S     Sg     04 08 41.0 +0.2
EGFH  Guangfu           1.15 274 ⇓P     Pg     04 08 26.5 +0.2
      baz=282
NACB  Ninganchiao       1.15 301 ⇑P     Pb     04 08 26.0 -0.2
      baz=290
NACB                             eS     Sb     04 08 40.0 -1.2
      baz=290
NACB  Ninganchiao       1.15 301        Pb     04 08 26.0 -0.2
HGSD  Ruisui            1.15 266⇓iP     Pb     04 08 26.0 -0.2
      baz=264
HGSD                             eS     Sb     04 08 40.0 -1.3
      baz=264
ESL   Shilin            1.16 282 ⇓P     Pb     04 08 25.9 -0.5
      baz=280
ESL                              eS     Sb     04 08 38.5 -3.0
      baz=280
ENAH  Nanao             1.17 318⇓iP     Pg     04 08 27.2 +0.5
      baz=315
ENAH                             eS     Sb     04 08 41.1 -0.7
      baz=315
ENA   Nanau             1.20 315⇓iP     Pg     04 08 27.5 +0.2
      baz=313
ENA                              eS     Sn     04 08 43.2 -0.1
      baz=313
IRIF  Iriomote-Funau    1.22  52  P     Pb     04 08 27.5 +0.1
IRIF                              S     Sb     04 08 42.6 -0.5
EHY   Hungye            1.25 267 i P    Pb     04 08 28.0 +0.2
      baz=265
EHY                               S     Sb     04 08 43.7 -0.2
      baz=265
ETLH  Xiulin Townshi    1.26 300⇑eP     Pg     04 08 28.3 -0.1
      baz=298
ETLH                             eS     Sb     04 08 43.1 -1.2
      baz=298
EYUL  Yuli              1.27 260 ⇑P     Pb     04 08 28.3 +0.1
      baz=258
EYUL                             eS     Sb     04 08 44.2 -0.4
      baz=258
TWC   Suao              1.27 324 i P    Pn     04 08 27.9 -0.1
      baz=322
TWC                              eS     Sb     04 08 42.3 -2.4
      baz=322
YULB  Yu-li             1.28 262  P     Pn     04 08 28.2 +0.1
      baz=253
YULB                              S     Sb     04 08 44.8 -0.2
      baz=253
YULB  Yu-li             1.28 262  Pn    Pn     04 08 28.2 +0.1
TWF1  Yuli              1.29 260⇓eP     Pn     04 08 28.2 -0.1
      baz=259
TWF1                              S     Sb     04 08 44.9 -0.3
      baz=259
CHKT  Chengkung         1.30 248 ⇑P     Pn     04 08 28.1 -0.3
      baz=239
CHKT                              S     Sb     04 08 43.7 -1.7
      baz=239
FULB  Fuli              1.33 253 ⇑P     Pn     04 08 28.5 -0.3
      baz=243
FULB                             eS     Sb     04 08 44.6 -1.6
      baz=243
JKRS  Kuro-shima        1.38  62  P     Pb     04 08 30.0 -0.1
JKRS                              S     Sn     04 08 47.2 -0.6
EDH   Donghe            1.40 245⇓eP     Pn     04 08 29.5 -0.3
      baz=237
EDH                              eS     Sn     04 08 45.9 -2.4
      baz=237
WHF   Hehuan Shan       1.41 294⇓eP     Pn     04 08 30.3  0.0
      baz=283
WHF                              eS     Sb     04 08 48.0 -1.1
      baz=283
LDUT  Ludao             1.44 231  P     Pn     04 08 30.1 -0.2
      baz=239
LDUT                             eS     Sn     04 08 46.2 -2.9
      baz=239
NNSB  Datong            1.45 306⇑eP     Pb     04 08 31.1 -0.3
      baz=304
NNSB                             eS     Sn     04 08 48.3 -1.5
      baz=304
NNSH  Datong            1.45 306  P     Pb     04 08 31.4 -0.1
      baz=304
NNSH                              S     Sn     04 08 48.5 -1.2
      baz=304
CHGB  Renai             1.46 289  P     Pn     04 08 31.0 +0.2
      baz=287
TWE   Neicheng          1.46 321 ⇑P     Pb     04 08 31.5 +0.1
      baz=320
TWE                              eS     Sn     04 08 49.7 -0.1
      baz=320
ENTT  Nioudou           1.46 316 eP     Pb     04 08 31.6  0.0
      baz=314
NNS   Nan Shan          1.47 306  P     Pb     04 08 31.6 -0.1
      baz=304
NNS                              eS     Sn     04 08 49.3 -0.9
      baz=304
FUSS  Fushou            1.47 297⇓eP     Pb     04 08 31.7 -0.1
      baz=288
FUSS                             eS     Sn     04 08 49.5 -0.8
      baz=288
NDT   Datong Townshi    1.47 314  P     Pb     04 08 31.8 +0.2
      baz=312
NDT                              eS     Sn     04 08 48.5 -1.5
      baz=312
NTC   Toucheng          1.48 329  P     Pb     04 08 32.0 +0.2
      baz=327
NTC                              eS     Sn     04 08 47.2 -3.1
      baz=327
TDCB  Techi             1.54 296 eP     Pb     04 08 32.9 -0.1
      baz=287
TDCB                             eS     Sn     04 08 51.2 -0.8
      baz=287
JIJ   Ishigaki jima     1.55  60  P     Pn     04 08 31.7 -0.1
JIJ                               S     Sn     04 08 50.3 -1.7
TWB1  Santiao Chiao     1.55 336 ⇑P     Pn     04 08 32.1 +0.3
      baz=335
TWB1                             eS     Sn     04 08 50.1 -1.9
      baz=335
ELDTW Lidau             1.57 256 eP     Pn     04 08 32.3  0.0
      baz=245
ELDTW                            eS     Sn     04 08 51.9 -0.8
      baz=245
LONT  Longtian          1.57 245 eP     Pb     04 08 33.0 -0.4
      baz=237
LONT                             eS     Sn     04 08 51.5 -1.2
      baz=237
TIPB  Shuangxi          1.59 331 eP     Pb     04 08 33.1 -0.6
      baz=329
TIPB                             eS     Sn     04 08 51.5 -1.5
      baz=329
SSLB  Suanglung         1.59 278 ⇓P     Pn     04 08 33.0 +0.5
      baz=277
SSLB                             eS     Sn     04 08 52.9 -0.2
      baz=277
SSLB  Suanglung         1.59 278  Pn    Pn     04 08 32.9 +0.4
NWLT  Wulai             1.60 318 eP     Pb     04 08 33.6 -0.3
      baz=317
NWLT                             eS     Sn     04 08 52.8 -0.5
      baz=317
YHNB  Yeheng            1.61 313 ⇑P     Pb     04 08 33.9 -0.1
      baz=311
YHNB                             eS     Sn     04 08 53.0 -0.5
      baz=311
YHNB  Yeheng            1.61 313  Pn    Pb     04 08 33.5 -0.5
NSK   Sanguang          1.62 312 eP     Pb     04 08 33.8 -0.5
      baz=311
NSK                              eS     Sn     04 08 52.8 -1.2
      baz=311
WPL   Puli Township     1.63 285 eP     Pb     04 08 34.8 +0.4
      baz=276
WPL                              eS     Sb     04 08 54.6 -0.5
      baz=276
TTN   Taitung           1.63 240 eP     Pb     04 08 34.8 +0.4
      baz=239
TTN                              eS     Sn     04 08 53.1 -0.9
      baz=239
SMLT  Sun Moon Lake     1.66 281 ⇑P     Pb     04 08 34.3 -0.5
      baz=280
SMLT                             eS     Sn     04 08 53.4 -1.4
      baz=280
TWGBT Beinan            1.66 243 eP     Pn     04 08 33.6 +0.3
      baz=235
TWGBT                            eS     Sn     04 08 53.4 -1.2
      baz=235
TWG   Pinlang           1.66 243 eP     Pn     04 08 33.7 +0.3
      baz=235
TWG                              eS     Sn     04 08 53.7 -1.1
      baz=235
TWG   Pinlang           1.66 243  Pn    Pn     04 08 33.5 +0.1
DPDB  Guoxing           1.67 286⇓eP     Pb     04 08 34.8 -0.2
      baz=277
DPDB                             eS     Sb     04 08 55.7 -0.4
      baz=277
NWF   Wu-fen Shan       1.69 331  P     Pn     04 08 34.6 +0.7
      baz=329
WFSB  Wu-fen Shan       1.69 331 ⇑P     Pn     04 08 34.5 +0.7
      baz=330
WFSB                             eS     Sn     04 08 55.6 +0.1
      baz=330
TYC   Yuchr             1.70 281 ⇓P     Pb     04 08 34.9 -0.6
      baz=280
TYC                              eS     Sn     04 08 55.9 +0.3
      baz=280
TWA   Mucha             1.71 325 eP     Pb     04 08 35.3 -0.5
      baz=338
TWA                              eS     Sn     04 08 55.3 -0.7
      baz=338
ALS   Alishan           1.72 268⇓iP     Pb     04 08 36.2 +0.1
      baz=267
ALS                              i S    Sn     04 08 55.8 -0.8
      baz=267
WHP   Taichung City     1.73 294 eP     Pb     04 08 36.3 +0.2
      baz=293
WHP                              eS     Sn     04 08 56.0 -0.6
      baz=293
NHDH  Xindian Distri    1.73 323 eP     Pb     04 08 36.3 +0.2
      baz=322
NHDH                             eS     Sb     04 08 57.1 -0.8
      baz=322
TATO  Taipei            1.76 322 eP     Pb     04 08 36.2 -0.3
      baz=321
TATO                             eS     Sb     04 08 58.0 -0.7
      baz=321
TATO  Taipei            1.76 322  Pn    Pb     04 08 35.9 -0.7
TNOU  National Taiwa    1.76 332 eP     Pn     04 08 35.1 +0.3
      baz=330
JISG  Ishigakijimahi    1.80  56  P     Pn     04 08 34.9 -0.3
JISG                              S     Sn     04 08 56.0 -2.1
WJS   Zhushan           1.80 278 i P    Pb     04 08 38.0 +0.7
      baz=277
WJS                              eS     Sb     04 08 59.7 -0.2
      baz=277
STYT  Tauyuan           1.81 257 i P    Pb     04 08 37.1 -0.4
      baz=250
STYT                             eS     Sn     04 08 58.4 -0.2
      baz=250
CHN5  Tsauling          1.83 271  P     Pb     04 08 37.9  0.0
      baz=270
CHN5                             eS     Sb     04 09 00.6 -0.4
      baz=270
LIOB  Emei              1.85 305 i P    Pb     04 08 38.5 +0.3
      baz=304
LIOB                             eS     Sn     04 08 58.4 -1.0
      baz=304
WNT   Mingjian          1.85 280 eP     Pb     04 08 38.9 +0.7
      baz=279
WNT                              eS     Sn     04 09 00.1 +0.7
      baz=279
NSTT  Nanjuang          1.85 305  P     Pb     04 08 38.2  0.0
      baz=304
NSTT                             eS     Sn     04 08 59.7 +0.2
      baz=304
YM01  YM01              1.85 327 eP     Pb     04 08 37.7 -0.5
      baz=338
LAY   Lan-yu            1.86 214 eP     Pn     04 08 35.7 -0.4
      baz=215
LAY                              eS     Sn     04 08 57.8 -1.8
      baz=215
WNT1  Nantou City       1.86 280 eP     Pg     04 08 39.4 -0.5
      baz=280
WNT1                             eS     Sb     04 09 00.9 -0.7
      baz=280
ECL   Taimali           1.87 239⇑eP     Pn     04 08 36.4 +0.2
      baz=249
ECL                              eS     Sn     04 08 58.6 -1.2
      baz=249
YM10  YM10              1.87 327 eP     Pn     04 08 37.0 +0.7
      baz=338
WWF   Wufeng            1.87 285 eP     Pg     04 08 39.6 -0.5
      baz=284
WWF                              eS     Sg     04 09 04.2 -0.2
      baz=284
YM11  YM11              1.87 328 eP     Pn     04 08 36.9 +0.6
      baz=337
YM05  YM05              1.87 327⇑eP     Pn     04 08 37.3 +0.9
      baz=337
YM04  YM04              1.88 327⇓eP     Pn     04 08 37.0 +0.6
      baz=337
YM08  YM08              1.88 328 eP     Pn     04 08 36.3 -0.1
      baz=327
YM08                             eS     Sn     04 08 59.4 -0.8
      baz=327
YM03  YM03              1.90 327 eP     Pn     04 08 37.6 +0.9
      baz=337
TWS1  Kuangyinshan      1.90 323 eP     Pn     04 08 37.7 +1.0
      baz=334
TWS1                             eS     Sn     04 09 01.3 +0.7
      baz=334
TWQ1  Liyutan           1.90 294 eP     Pb     04 08 39.2 +0.2
      baz=285
TWQ1                             eS     Sb     04 09 01.8 -1.1
      baz=285
TPUB  Ta-pu             1.90 262⇓iP     Pb     04 08 38.5 -0.5
      baz=260
TPUB  Ta-pu             1.90 262  Pn    Pb     04 08 38.6 -0.4
TCU   Taichung          1.92 287 eP     Pb     04 08 39.9 +0.6
      baz=287
TCU                              eS     Sb     04 09 03.9 +0.7
      baz=287
WTP   Ta-pu             1.93 260 eP     Pb     04 08 39.0 -0.4
      baz=260
WTP                              eS     Sb     04 09 02.4 -1.2
      baz=260
HSN1  Hsinchu           1.93 308 eP     Pb     04 08 39.5 +0.1
      baz=318
NCU   National Centr    1.94 316 eS     Sn     04 09 02.3 +0.7
      baz=315
NCUH  Zhongli           1.94 316 eP     Pb     04 08 38.8 -0.8
      baz=315
NCUH                             eS     Sb     04 09 02.5 -1.3
      baz=315
NSY   Sanyi             1.94 296 eP     Pb     04 08 40.0 +0.4
      baz=287
NSY                              eS     Sb     04 09 03.5 -0.4
      baz=287
SBCB  Hsinchu           1.96 308 eP     Pb     04 08 40.2 +0.3
      baz=320
SBCB                             eS     Sb     04 09 03.8 -0.6
      baz=320
SLGT  Liugui            1.96 253 eP     Pb     04 08 40.2 +0.2
      baz=246
WDLH  Douliu            1.96 273 eP     Pb     04 08 40.2 +0.2
      baz=273
WDLH                             eS     Sb     04 09 04.3 -0.3
      baz=273
NMLH  Miaoli            1.97 299 eP     Pb     04 08 39.9 -0.3
      baz=286
NMLH                             eS     Sb     04 09 03.6 -1.1
      baz=286
HSN   Hsinchu           1.98 308 eS     Sb     04 09 04.0 -0.9
      baz=321
SGST  Jiashian          1.99 256 eP     Pb     04 08 39.4 -1.1
      baz=256
SGST                             eS     Sb     04 09 04.8 -0.6
      baz=256
WCHH  Zhanghua          2.00 285 eP     Pb     04 08 41.1 +0.4
      baz=284
WCHH                             eS     Sb     04 09 05.3 -0.4
      baz=284
WDJ   Dajia District    2.01 293 eP     Pb     04 08 40.4 -0.5
      baz=292
WDJ                              eS     Sb     04 09 04.7 -1.3
      baz=292
CHN1  Nanshi            2.01 259⇑eP     Pb     04 08 41.0  0.0
      baz=259
CHN1                             eS     Sb     04 09 06.1  0.0
      baz=259
```

SNST	Tainan City	2.04	260	⇓eP	Pb	04 08 41.3	0.0
	baz=260						
SNST				eS	Sb	04 09 07.6	+1.0
	baz=260						
TWK	Hsinying	2.04	262	eP	Pb	04 08 40.9	-0.4
	baz=261						
TWK				eS	Sb	04 09 05.9	-0.8
	baz=261						
TAW	Tawu	2.05	234	eP	Pb	04 08 40.0	-1.4
	baz=234						
TAW				eS	Sn	04 09 03.3	-0.9
	baz=234						
SSD	Sandimen	2.06	247	eP	Pb	04 08 40.3	-1.4
	baz=242						
SSD				eS	Sn	04 09 05.5	+0.9
	baz=242						
TSMG	Majia	2.06	245	eP	Pn	04 08 40.2	+1.2
	baz=237						
EAST	Anshuo	2.07	235	eP	Pn	04 08 39.6	+0.7
	baz=243						
EAST				eS	Sb	04 09 06.8	-0.8
	baz=243						
CHY	Chiayi	2.07	268	⇓eP	Pb	04 08 41.6	-0.2
	baz=268						
CHY				eS	Sn	04 09 05.7	+0.9
	baz=268						
PCYT	Pengchaiyu	2.11	345	eP	Pn	04 08 40.3	+0.8
	baz=344						
PCYT				eS	Sn	04 09 05.8	0.0
	baz=344						
MASBT	Mashibuluo	2.12	243	⇑P	Pn	04 08 41.0	+1.3
	baz=243						
MASBT				eS	Sn	04 09 05.4	-0.6
	baz=243						
SCST	Cishan	2.12	251	eP	Pn	04 08 41.0	+1.2
	baz=243						
JTJ	Tarama	2.13	60	P	Pn	04 08 40.3	+0.5
JTJ				eS	Sn	04 09 04.9	-1.4
SLIU	Shizi	2.20	232	eP	Pn	04 08 41.8	+1.0
	baz=233						
SLIU				eS	Sn	04 09 06.5	-1.6
	baz=233						
ICHU	Yijhu	2.21	265	eP	Pb	04 08 44.4	+0.1
	baz=265						
ICHU				eS	Sb	04 09 11.4	-0.4
	baz=265						
CHN8	Yiju	2.28	265	eP	Pb	04 08 44.7	-0.7
	baz=264						
CHN8				eS	Sb	04 09 12.3	-1.2
	baz=264						
TSEB	Hengchuen, Pin	2.34	225	eS	Sb	04 09 13.8	-1.7
	baz=234						
TWKBT	Hengchun	2.37	227	eP	Pn	04 08 45.0	+1.8
	baz=218						
TWKBT				eS	Sn	04 09 11.4	-1.0
	baz=218						
TWK1	Hengchun	2.38	227	eP	Pn	04 08 44.9	+1.6
	baz=218						
TWK1				eS	Sn	04 09 11.5	-0.9
	baz=218						
HEN	Hengchun	2.38	229	eP	Pn	04 08 45.0	+1.7
	baz=229						
HEN				eS	Sn	04 09 13.5	+1.0
	baz=229						
JIRB	Irabujima	2.59	61	P	Pn	04 08 46.5	+0.3
JIRB				S	Sn	04 09 16.6	-1.2
JMJ2	Miyako jima3	2.68	64	P	Pn	04 08 48.1	+0.7
JMJ2				S	Sn	04 09 18.1	-1.8
JMJ	Miyako jima 2	2.69	62	eP	Pn	04 08 48.5	+1.1
	baz=62						
JMJ				S	Sn	04 09 19.2	-0.8
	baz=62						
JIKM	Ikemajima	2.70	60	P	Pn	04 08 48.4	+0.8
JIKM				eS	Sn	04 09 19.1	-1.2
WDGT	Dungji	2.79	264	⇑P	Pn	04 08 50.9	+2.0
	baz=264						
WDGT				eS	Sn	04 09 22.4	-0.2
	baz=264						
PHUB	P'eng-hu	2.85	269	⇑P	Pn	04 08 51.8	+2.0
	baz=269						
PHUB				eS	Sn	04 09 24.6	+0.5
	baz=269						
PNG	Penghu	2.87	270	⇑eP	Pn	04 08 51.9	+2.0
	baz=282						
PNG				eS	Sn	04 09 24.8	+0.3
	baz=282						
VCHM	Qimei	3.01	264	⇓eP	Pn	04 08 53.6	+1.7
	baz=264						
VCHM				eS	Sn	04 09 27.4	-0.5
	baz=264						
VWUC	VWUC	3.26	296	⇓iP	Pn	04 08 56.4	+1.0
	baz=286						
VWUC				eS	Sn	04 09 32.1	-2.1
	baz=286						
PTTC	Pingtan	3.26	306	eP	Pn	04 08 56.1	+0.7
	baz=317						
PTTC				eS	Sn	04 09 31.6	-2.7
	baz=317						
PTMZ	Houxiangcun	3.55	295	eP	Pn	04 09 00.3	+0.9
	baz=285						
PTMZ				eS	Sn	04 09 38.6	-2.9
	baz=285						
MATB	Ma-tsu	3.56	316	eP	Pn	04 09 00.0	+0.5
	baz=316						
MATB				eS	Sn	04 09 39.2	-2.5
	baz=316						
MSUT	Lienchiang	3.59	316	eP	Pn	04 08 59.6	-0.2
	baz=316						
MSUT				eS	Sn	04 09 39.9	-2.4
	baz=316						
LYJJ	Jianjiangzhen	3.96	319	eP	Pn	04 09 05.6	+0.5
	baz=319						
LYJJ				eS	Sn	04 09 48.8	-2.8
	baz=319						
KNM	Kinmen	3.97	283	⇓eP	Pn	04 09 08.2	+3.1
	baz=282						
KNM				iS	Sn	04 09 53.0	+1.3
	baz=282						
KNMB	Chin-men Tao	4.02	283	eP	Pn	04 09 06.9	+1.1
	baz=284						
KNMB				eS	Sn	04 09 50.2	-2.8
	baz=284						
KNMB	Chin-men Tao	4.02	283	Pn	Pn	04 09 06.2	+0.4
XPSS	Dashiqiu	4.02	326	eP	Pn	04 09 06.2	+0.4
	baz=334						
XPSS				eS	Sn	04 09 49.3	-3.7
	baz=334						
MHZQ	Yeshan	4.15	308	⇑eP	Pn	04 09 08.1	+0.4
	baz=306						
AXDP	Jialang	4.49	288	eP	Pn	04 09 13.7	+1.4
	baz=288						
AXDP				eS	Sn	04 10 01.5	-3.1
	baz=288						
JOW	Kunigami	6.01	56	Pn	Pn	04 09 28.1	-5.1
	2.1nm,0.3s,baz=168,slow=18,SNR=2.5						
JOW	Kunigami	6.01	56	Pn	Pn	04 09 31.1	-2.1
KSRS	Korea Array	14.54	17	Pn	Pn	04 11 29.3	-0.7
	0.3nm,0.3s,baz=194,slow=11,SNR=3.0						
KSRS				LR	LR	04 17 07.5	
	comp=Z,53nm,20.1s,baz=179,slow=40						
CMAR	Chiang Mai Arr	22.72	262	P	P	04 13 15.5	+9.0
	0.7nm,0.3s,baz=62,slow=11,SNR=1.3						
CMAR				LR	LR	04 22 54.9	
	comp=Z,41nm,18.6s,baz=80,slow=38						
SONM	Songino Array	27.46	336	P	P	04 13 49.4	-1.1
	2.5nm,0.6s,baz=152,slow=10,SNR=18						
SONM	Songino Array	27.46	336	P	P	04 13 50.4	0.0
MK31	Makanchi Array	39.72	316	P	P	04 15 37.6	+0.8
MKAR	Makanchi Array	39.72	316	P	P	04 15 37.6	+0.8
	1.3nm,0.5s,baz=100,slow=10,SNR=32						
MKAR	Makanchi Array	39.72	316	P	P	04 15 37.4	+0.6
MAKZ	Makanchi	39.92	316	P	P	04 15 39.1	+0.6
ZALV	Zalesovo Beam	41.49	327	P	P	04 15 50.3	-1.0
	2.9nm,0.7s,baz=112,slow=8.3,SNR=14						
ZALV	Zalesovo Beam	41.49	327	P	P	04 15 50.6	-0.7
KURK	Kurchatov	43.43	320	P	P	04 16 07.4	+0.3
WRAB	Tennant Creek	44.73	164	P	P	04 16 16.8	-1.0
WRA	Warramunga Arr	44.73	164	P	P	04 16 29.4	+12
	1.7nm,0.7s,baz=345,slow=8.7,SNR=11						
WRA	Warramunga Arr	44.73	164	P	P	04 16 18.1	+0.3
KK31	Karatay Array	46.92	308	P	P	04 16 36.9	+1.9
KK31				IAmb	IAmb	04 16 50.9	
	comp=Z,1.9nm,1.1s						
KKAR	Karatay Array	46.92	308	P	P	04 16 36.9	+1.9
ASAR	Alice Springs	48.22	166	P	P	04 16 57.6	+12
	comp=Z,1.8nm,0.9s,baz=346,slow=6.7,SNR=12						
ABKAR	Akbulak array	54.84	315	P	P	04 17 35.5	+1.0
STKA	Stephens Creek	58.04	161	P	P	04 18 08.1	+11
	comp=Z,1.0nm,0.7s,baz=14,slow=4.2,SNR=2.9						
MDM	Murphy Dome	68.52	27	P	P	04 19 07.2	+0.7
MDM				IAmb	IAmb	04 19 14.7	
	comp=Z,2.6nm,1.2s						
POKR	Poker Plat Res	68.83	27	P	P	04 19 09.2	+0.7
POKR				IAmb	IAmb	04 19 09.9	
	comp=Z,1.3nm,0.6s						
ILAR	Eielson Array	69.12	27	P	P	04 19 09.4	-0.9
	comp=Z,0.3nm,0.5s,baz=262,slow=5.2,SNR=8.7						
ILAR	Eielson Array	69.12	27	P	P	04 19 09.2	-1.1
KEV	Kevo	70.04	338	P	P	04 19 15.8	0.0
ARCES	ARCESS Array B	70.60	338	P	P	04 19 19.2	-0.1
	comp=Z,1.9nm,0.8s,baz=56,slow=6.6,SNR=8.5						
ARCES	ARCESS Array B	70.60	338	P	P	04 19 18.7	-0.6
EGAK	Eagle	71.50	27	P	P	04 19 25.0	+0.1
EGAK				IAmb	IAmb	04 19 32.0	
	comp=Z,2.6nm,1.1s						
DAWY	Dawson	72.44	27	P	P	04 19 30.9	+0.3
DAWY				IAmb	IAmb	04 19 45.1	
	comp=Z,1.7nm,0.9s						
FIA1	FINESS Array S	72.65	330	P	P	04 19 32.2	+0.5
FIA1				IAmb	IAmb	04 19 35.0	
	comp=Z,19nm,1.4s						
FINES	FINESS Array B	72.65	330	P	P	04 19 32.1	+0.3
	comp=Z,1.9nm,0.4s,baz=53,slow=6.3,SNR=28						
BRTR	Keskin Array B	74.63	307	P	P	04 19 45.0	+1.0
	comp=Z,0.4nm,0.6s,baz=117,slow=7.1,SNR=4.3						
NC405	NORSAR Array S	79.14	333	P	P	04 20 08.8	-0.1
NB2	NORSAR Subarra	79.39	333	P	P	04 20 10.0	-0.3
	comp=Z,0.7nm,0.5s,baz=58,slow=5.6						
NOA	NORSAR Array B	79.39	333	P	P	04 20 09.7	-0.6
	comp=Z,0.9nm,0.6s,baz=57,slow=5.5,SNR=4.3						
NC204	NORSAR Array S	79.46	333	P	P	04 20 10.8	+0.2
YKA	Yellowknife Ar	82.99	23	P	P	04 20 29.4	+0.1
	comp=Z,0.6nm,0.6s,baz=311,slow=4.5,SNR=27						
GERES	GERESS Array B	84.17	321	P	P	04 20 36.4	+0.6
	comp=Z,0.7nm,0.6s,baz=57,slow=4.9,SNR=6.8						

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*DRS **26** 04:19:29.2±0.0, 41°.74N×48°.84E, h4^{km}, ML3.1/4*

MOS 26 04:19:34.9±0.0**, 41°.32N×48°.72E, h13**^{km}**, MPVA3.9, 2C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKT	Akhty	0.76	283	⇑iPg	Pn	04 19 50.8	-0.6
	258nm,0.2s						
AKT				⇑eSg	Sn	04 20 04.0	+1.2
	2µm,0.2s						
URKR	Urkarakh	1.17	317	⇓ePg	Pg	04 19 58.5	+1.0
	59nm,0.3s						
URKR				⇓eSg	Sn	04 20 16.6	+3.6
	380nm,0.2s						
ARKR	Arakani	1.82	316	⇓ePg	Pg	04 20 09.6	-0.1
	11nm,0.3s						
ARKR				⇓eSg	Sg	04 20 35.7	+2.3
	81nm,0.5s						
LGD	Lagodekhi	1.93	286	P	Pb	04 20 10.8	+0.9
LGD				S	Sg	04 20 41.0	+4.2
LGD	Lagodekhi	1.93	286	ePg	Pb	04 20 10.2	+0.3
DDFL	Dedoflistskaro	1.96	275	P	Pg	04 20 13.5	+1.0
DBC	Dubki	2.21	321	⇓ePg	Pg	04 20 18.2	+1.0
	3.2nm,0.1s						
DBC				⇓eSg	Sg	04 20 48.1	+2.3
	44nm,0.6s						
BTLR	Botlikh	2.29	307	ePn	Pb	04 20 16.6	+0.4
BTLR				eSn	Sb	04 20 44.7	+0.2
DVE	Vedeno	2.53	311	ePn	Pb	04 20 19.9	-0.3
DVE				eSn	Sb	04 20 50.3	-0.8
GROC	Groznyy	2.87	312	eSn	Sb	04 20 58.1	-2.9
LACR	Lac	3.62	296	ePn	Pb	04 20 35.4	-3.3
LACR				eSn	Sn	04 21 17.3	+4.0
ZEI	Tsey	3.87	294	ePn	Pn	04 20 38.4	+4.1
ZEI				eSn	Sn	04 21 21.7	+2.0

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*IDC **26** 04:20:42.5±1.6, 2°.57N×128°.39E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.7/38, mbtmp4.0/5, MS3.2/2, Ms1 3.2/2, ms1mx2.7/34, Error ellipse: s-maj=93.2km s-min=21.0km az=69.0*

*DJA **26** 04:21:07.4±0.6, 2°N±4°×12°8E±°, h215^{km}±5^{km}, M4.1/11, mb4.0/6, mB4.7/2, MLv4.1/11, Mw(mB)3.9/2*

*NEIC **26** 04:21:08.2±0.5, 2°.3N±0°.1×128°.3E±0°.1, h239^{km}±9^{km}, mb4.2/15, Error ellipse: s-maj=19.1km s-min=15.9km az=51.0*

ISC 26 04:21:08.6±0.9**, 2°.31N**±0°.10×**128°.3E**±0°.1**, h250**^{km}**, n37,** σ**1^{s}25**/35**, mb4.1**/10**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.81	213	Pn	Pn	04 21 47.9	-1.6
TNTI	Ternate	1.81	213	P	Pn	04 21 47.3	-2.2
SGSI	Sangihe	3.12	296	P	Pn	04 22 00.6	-1.9
SANI	Sanana	4.93	209	P	Pn	04 22 22.4	-1.2
	0.1nm24nm,0.6s						
GTOI	Gorontalo	5.58	253	P	Pn	04 22 33.1	+1.4
	0.1nm12nm,0.6s						
MSAI	Masohi	5.65	174	P	Pn	04 22 34.2	+1.7
NLAI	Namlea	5.65	193	P	Pn	04 22 33.6	+1.1
	0.4nm2µm54nm,0.6s						
LUWI	Luwuk	6.49	239	Pn	Pn	04 22 42.4	-0.5
FAKI	Fak Fak	6.50	143	Pn	Pn	04 22 42.0	-1.0
FAKI	Fak Fak	6.50	143	P	Pn	04 22 41.1	-2.0
	0.1nm32nm,0.8s						
MRSI	Marisa	6.65	254	P	Pn	04 22 45.9	+0.9
	0.1nm697nm25nm,0.7s						
APSI	Ampana	7.42	245	P	Pn	04 22 54.2	-0.5
SAUI	Saumlaki	10.64	164	Pn	Pn	04 23 34.0	-1.4
MTN	Manton Dam	15.31	170	P	Pn	04 24 31.4	-1.2
KSM	Kuching	18.04	268	P	P	04 25 01.2	-0.7
KSM				IAmb	IAmb	04 25 12.9	
	comp=Z,5.6nm,0.6s						
FITZ	Fitzroy Crossi	20.45	187	P	P	04 25 25.6	-2.1
	comp=Z,1.6nm,0.6s,baz=5.4,slow=6.9,SNR=5.6						
FITZ	Fitzroy Crossi	20.45	187	P	P	04 25 27.9	+0.2
FITZ				IAmb	IAmb	04 25 29.8	
	comp=Z,8.1nm,1.2s						
CISI	Cisompet, Garu	22.70	244		P	04 25 48.5	-0.9
WB0	Warramunga Arr	22.73	165	P	P	04 25 49.4	-0.1
WB0				IAmb	IAmb	04 25 51.1	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	22.88	165	P	P	04 25 50.9	+0.1
WRAB				IAmb	IAmb	04 25 52.7	
	comp=Z,4.4nm,0.6s						
WRA	Warramunga Arr	22.89	165	P	P	04 25 50.7	-0.1
	comp=Z,3.9nm,0.7s,baz=343,slow=10,SNR=37						
WRA	Warramunga Arr	22.89	165	P	P	04 25 48.1	-2.7
WB2	Warramunga Arr	22.89	165	P	P	04 25 51.0	+0.1
WB2				IAmb	IAmb	04 26 05.7	
	comp=Z,8.1nm,1.1s						
WR0	Warramunga Arr	22.95	165	P	P	04 25 51.7	+0.2
WR0				IAmb	IAmb	04 25 54.3	
	comp=Z,8.4nm,1.2s						
JOW	Kunigami	24.38	360	LR	LR	04 34 42.7	
	comp=Z,48nm,19.8s,baz=197,slow=35						
PSA00	Pilbara Seismi	25.15	199	P	P	04 26 13.6	+2.2
AS31	Alice Springs	26.38	168	P	P	04 26 22.3	-0.1
ASAR	Alice Springs	26.38	168	P	P	04 26 22.4	0.0
	comp=Z,1.4nm,0.5s,baz=355,slow=8.1,SNR=32						
ASAR	Alice Springs	26.38	168	P	P	04 26 22.5	+0.1
JCJ	Chichijima	27.99	27	LR	LR	04 36 31.8	
	comp=Z,53nm,18.2s,baz=98,slow=34						
BBOO	Buckleboo	35.69	169	P	P	04 27 43.9	+0.5
BBOO				IAmb	IAmb	04 28 02.6	
	comp=Z,25nm,1.5s						
STKA	Stephens Creek	36.25	161	P	P	04 27 48.5	+0.2
	comp=Z,1.7nm,0.5s,baz=348,slow=7.6,SNR=7.0						
STKA	Stephens Creek	36.25	161	P	P	04 27 48.5	+0.2
MK31	Makanchi Array	59.63	325	P	P	04 30 47.4	+0.8
MKAR	Makanchi Array	59.63	325	P	P	04 30 47.5	+0.8
	comp=Z,1.0nm,0.5s,baz=109,slow=8.1,SNR=18						
KURK	Kurchatov	63.80	327	P	P	04 31 14.8	+0.6
KURK				IAmb	IAmb	04 31 15.3	
	comp=Z,2.4nm,0.7s						
IMAR	Indian Mountai	82.98	24	P	P	04 33 06.6	+1.0

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*IDC **26** 04:25:43.1±0.5, 20°.88S×168°.47E, h0^{km}, mb4.7/19, mb1 4.8/21, mb1mx4.6/37, mbtmp4.7/21, ML4.0/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/31, Error ellipse: s-maj=17.8km s-min=14.3km az=137.0*

*BJI **26** 04:25:46.0±0.0, 20°.80S×168°.40E, h20^{km}, mB5.2/23, mb4.9/31, Ms4.9/5, Ms7 4.6/4*

*BGR **26** 04:25:46.0±0.0, 20°.65S×168°.93E, h16^{km}±2^{km}*

*NOU **26** 04:25:46.5, 20°.94S×168°.26E, h0^{km}, MLv4.8, Loyalty Islands*

*NEIC **26** 04:25:48.0±1.8, 20°.86S±0°.08×168°.4E±0°.1, h30^{km}±2^{km}, mb5.0/53, Error ellipse: s-maj=16.3km s-min=9.6km az=115.0*

ISC 26 04:25:47.7±0.7**, 20°.95S**±0°.05×**168°.42E**±0°.07**, h30**^{km}±4^{km}**, h30**^{km}**:pP-P, n250,** σ**1^{s}08**/250**, mb5.0**/53**, MS3.6**/8**, 4C-24D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	0.65	214	P	Pb	04 25 57.9	-2.6
YATNC	Mamie plateau,	1.81	232	P	Pn	04 26 17.1	+0.3
PINNC	Pines Island,	1.89	208	P	Pn	04 26 18.5	+0.5
OUENC	Ouen Island, N	2.08	225	P	Pn	04 26 21.0	+0.5
DZM	Mont Dzumac	2.15	238	Pn	Pn	04 26 19.9	-1.8
	58nm,0.3s,baz=88,slow=9.7,SNR=796						
DZM				Sn	Sn	04 26 47.0	-0.6
	596nm,0.3s,baz=56,slow=18,SNR=16						
DZM				LR	LR	04 27 07.7	
	comp=Z,1µm,19.7s,baz=37,slow=38						
DZM	Mont Dzumac	2.15	238	P	Pn	04 26 20.8	-0.9
NOUC	Port Laguerre	2.28	239	P	Pn	04 26 23.0	-0.4
DVP	Devils Point	3.21	356	P	Pn	04 26 38.5	+2.3
KOUNC	Koumac, New Ca	3.89	275	P	Pn	04 26 45.0	-0.5
SANVU	Saraoutou	5.59	348	Pn	Pn	04 27 07.3	-1.6
SANVU	Saraoutou	5.59	348	P	Pn	04 27 09.5	+0.6
EIDS	Eidsvold	16.54	251		Pn	04 29 36.8	-0.8
ARMA	Armidale	17.82	235	P	P	04 30 00.0	+5.9
URZ	Urewera	18.82	158	P	Pn	04 30 06.3	+0.7
	0.3nm,0.3s,baz=174,slow=8.9,SNR=3.6						
URZ				LR	LR	04 35 02.9	
	comp=Z,113nm,19.4s,baz=30,slow=30						
URZ	Urewera	18.82	158	P	Pn	04 30 07.6	+2.0
BKZ	Black Stump Fm	19.44	161	P	Pn	04 30 14.7	+1.5
AFI	Afiamalu	20.14	73	LR	LR	04 36 44.9	
	comp=Z,134nm,19.0s,baz=292,slow=33						
THZ	Tophouse	21.10	171	P	P	04 30 31.9	+2.1
MSWZ	Moikau Station	21.21	166	P	P	04 30 31.4	+0.4
FOZ	Fox Glacier	22.55	177	P	P	04 30 50.0	+4.7
FOZ				IAmb	IAmb	04 31 11.2	
	comp=Z,115nm,1.6s						
RPZ	Rata Peaks	22.81	175	P	P	04 30 49.8	+1.7
	comp=Z,18nm,0.7s,baz=46,slow=17,SNR=4.0						
LBZ	Lake Benmore	23.42	177	P	P	04 30 57.0	+2.7
PMG	Port Moresby	23.48	296	LR	LR	04 38 42.9	
	comp=Z,215nm,18.3s,baz=114,slow=33						
COEN	Coen	25.05	282	P	P	04 31 10.4	+0.8
TOO	Toolangi	25.87	225	P	P	04 31 18.7	+1.8
TOO				IAmb	IAmb	04 31 41.9	
	comp=Z,60nm,1.8s						
STKA	Stephens Creek	26.31	240	P	P	04 31 22.1	+1.2
	comp=Z,3.0nm,0.8s,baz=44,slow=11,SNR=4.8						
STKA				LR	LR	04 41 14.8	
	comp=Z,326nm,18.8s,baz=56,slow=35						
STKA	Stephens Creek	26.31	240	P	P	04 31 22.9	+2.0
RAR	Rarotonga	29.65	96	LR	LR	04 41 28.1	
	comp=Z,65nm,21.0s,baz=268,slow=32						
BBOO	Buckleboo	31.07	241	P	P	04 32 04.7	+1.4
BBOO				IAmb	IAmb	04 32 55.1	
	comp=Z,63nm,1.8s						
WR0	Warramunga Arr	31.73	266	P	P	04 32 08.2	-1.1
WB0	Warramunga Arr	31.89	266	P	P	04 32 09.7	-1.0
WB0				IAmb	IAmb	04 32 55.4	
	comp=Z,16nm,1.4s						
WB2	Warramunga Arr	31.91	266	P	P	04 32 09.7	-1.1
WRA	Warramunga Arr	31.92	266	P	P	04 32 09.7	-1.2
	comp=Z,3.3nm,0.8s,baz=91,slow=8.5,SNR=21						
WRA				PcP	PcP	04 35 00.9	-0.2
	comp=Z,1.2nm,0.8s,baz=100,slow=2.6,SNR=5.5						
WRA				LR	LR	04 45 04.9	
	comp=Z,214nm,19.1s,baz=95,slow=36						
WRA	Warramunga Arr	31.92	266	P	P	04 32 09.5	-1.5
AS31	Alice Springs	32.00	259	P	P	04 32 11.5	-0.2
ASAR	Alice Springs	32.01	259	P	P	04 32 11.2	-0.6
	comp=Z,14nm,0.6s,baz=83,slow=9.1,SNR=164						
ASAR				LR	LR	04 44 53.8	
	comp=Z,227nm,20.5s,baz=99,slow=36						
ASAR	Alice Springs	32.01	259	P	P	04 32 11.0	-0.7
JAY	Jayapura	32.63	300	P	P	04 32 16.5	-0.7
	comp=Z,18nm,0.8s,baz=117,slow=6.1,SNR=6.6						
JAY				LR	LR	04 43 59.2	
	comp=Z,131nm,18.7s,baz=26,slow=34						
JAY	Jayapura	32.63	300	P	P	04 32 15.1	-2.1
	comp=Z,15nm,1.0s						
FORT	Forrest	37.45	246	P	P	04 32 58.0	-0.6
FORT				IAmb	IAmb	04 33 25.1	
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	40.34	266	P	P	04 33 23.1	+0.2
	comp=Z,9.6nm,0.6s,baz=109,slow=7.8,SNR=27						
FITZ	Fitzroy Crossi	40.34	266	P	P	04 33 23.1	+0.2
PSA00	Pilbara Seismi	45.13	260	P	P	04 34 02.3	+0.5
VNDA	Vanda	56.71	182	P	P	04 35 28.6	+0.5
	comp=Z,3.4nm,0.9s,baz=9.8,slow=4.3,SNR=4.2						
VNDA	Vanda	56.71	182	P	P	04 35 28.6	+0.5
VNDA				IAmb	IAmb	04 36 13.9	
	comp=Z,31nm,1.8s						
SBA	Scott Base	56.96	180	P	P	04 35 31.3	+1.5
LEM	Lembang	60.35	274	P	P	04 35 55.3	+0.7
	comp=Z,17nm,0.3s,baz=31,slow=5.1,SNR=3.6						
KSM	Kuching	61.02	284	P	P	04 35 59.2	+0.2
KSM				IAmb	IAmb	04 35 59.7	
	comp=Z,15nm,0.9s						
MJAR	Matsushiro Arr	63.91	333	P	P	04 36 17.3	-0.5
	comp=Z,2.3nm,0.6s,baz=162,slow=7.0,SNR=7.4						
QSPA	South Pole Qui	69.11	180	P	P	04 36 50.8	-0.2
QSPA				IAmb	IAmb	04 37 01.7	
	comp=Z,16nm,1.1s						
NJ2	Nanjing	70.91	317	eP	P	04 37 05.0	+2.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USA0B	Ussuriysk Arra	72.90	333	P	P	04 37 14.4	+0.5
USA0B				IAmb	IAmb	04 37 15.5	
	comp=Z,16nm,0.9s						
USRK	Ussuriysk Ar.	72.90	333	P	P	04 37 14.8	+0.8
	comp=Z,10nm,0.8s,baz=135,slow=4.0,SNR=15						
USRK	Ussuriysk Ar.	72.90	333	P	P	04 37 14.6	+0.7
MDJ	Mudanjiang	74.26	332	P	P	04 37 22.5	+0.6
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,87nm,3.9s						
PEA0B	Petropavlovsk-	74.33	353	P	P	04 37 22.7	+0.6
PETK	Petropavlovsk-	74.33	353	P	P	04 37 22.7	+0.6
	comp=Z,17nm,0.8s,baz=146,slow=8.2,SNR=13						
PETK	Petropavlovsk-	74.33	353	P	P	04 37 22.4	+0.3
NIKH	Nikolski High	76.21	14	P	P	04 37 32.7	-0.2
UNV	Unalaska Valle	77.56	15	P	P	04 37 39.6	-0.9
CMAR	Chiang Mai Arr	78.51	295	P	P	04 37 48.1	+1.5
	comp=Z,7.2nm,0.6s,baz=135,slow=4.4,SNR=32						
CMAR				LR	LR	05 14 45.5	
	comp=Z,21nm,19.8s,baz=105,slow=38						
CMAR	Chiang Mai Arr	78.51	295	P	P	04 37 48.0	+1.4
KMI	Kunming	78.53	303	⇑eP	P	04 37 48.5	+1.6
KMI				pP	sP	04 37 58.3	+0.6
KMI				sP	pwP	04 38 04.8	+3.9
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				pmax	pmax		
	comp=Z,120nm,6.5s						
CHTO	Chiang Mai	78.67	295	P	P	04 37 48.5	+1.0
CHTO				IAmb	IAmb	04 37 49.5	
	comp=Z,13nm,0.8s						
BELA	Belgrano 2	80.47	175	P	P	04 37 54.8	-1.5
CD2	Chengdu	80.67	308	P	P	04 37 59.0	+0.9
CD2				pmax	pmax		
	comp=Z,40nm,0.4s						
HHC	Hu-ho-hao-te	81.02	320	eP	P	04 38 01.0	+1.1
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,71nm,6.4s						
SYO	Syowa Base	83.09	196	⇑eP	P	04 38 10.2	0.0
SYO	Syowa Base	83.09	196	⇑epP	pP	04 38 19.2	+0.8
LZH	Lanzhou	83.30	313	eP	P	04 38 13.5	+1.5
LZH				pP	pP	04 38 19.5	-0.5
LZH				sP	sP	04 38 24.0	+1.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
SII	Sitkinak Islan	83.39	20	P	P	04 38 11.4	-0.4

KDAK	**Kodiak Island**	**84.89**	**20**	P	**P**	**04 38 18.9**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=259,slow=10						
SNAA	**Sanae**	**87.43**	**183**	P	**P**	**04 38 31.3**	**-0.7**
SNAA	**Sanae**	**87.43**	**183**	P	**P**	**04 38 31.4**	**-0.6**
SNAA				IAmb	IAmb	04 38 42.1	
	comp=Z,7.8nm,1.0s						
KCPM	**Cahto Peak**	**87.47**	**46**	P	**P**	**04 38 33.0**	**+0.3**
GTA	**Gaotai**	**87.74**	**314**	⇑P	**P**	**04 38 34.5**	**+0.5**
GTA				pP	pP	04 38 43.8	+1.7
GTA				sP	pwP	04 38 48.0	-0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PKM	**Mcpherson Peak**	**87.82**	**51**	P	**P**	**04 38 35.1**	**+0.5**
	baz=243						
KHMM	**Horse Mountain**	**87.96**	**45**	P	**P**	**04 38 35.4**	**+0.4**
VNA3	**Neumayer Olymp**	**88.05**	**181**	P	**P**	**04 38 34.2**	**-0.7**
SONM	**Songino Array**	**88.12**	**323**	P	**P**	**04 38 35.8**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=137,slow=5.4,SNR=29						
SONM	**Songino Array**	**88.12**	**323**	P	**P**	**04 38 35.6**	**0.0**
O02D	**Mt. Diablo Mer**	**88.24**	**46**	P	**P**	**04 38 37.3**	**+1.0**
	baz=241						
VNA2	**Neumayer--Watz**	**88.33**	**181**	P	**P**	**04 38 35.7**	**-0.4**
	baz=180,slow=3.4						
WDC	**Whiskeytown Da**	**88.60**	**45**	P	**P**	**04 38 37.8**	**-0.1**
WDC				IAmb	IAmb	04 38 39.8	
	comp=Z,16nm,1.3s						
VNA1	**Neumayer--Stat**	**88.62**	**181**	P	**P**	**04 38 37.1**	**-0.4**
ARVC	**Arvin**	**88.64**	**52**	P	**P**	**04 38 39.4**	**+1.1**
	baz=243						
L02E	**Cave Junction**	**88.68**	**44**	P	**P**	**04 38 39.2**	**+1.0**
	baz=240						
N02D	**Trinity Center**	**88.69**	**45**	P	**P**	**04 38 39.1**	**+0.7**
	baz=241						
VES	**Vestal, Richgr**	**88.78**	**51**	P	**P**	**04 38 38.5**	**-0.3**
	baz=243						
M02C	**Callahan**	**88.79**	**45**	P	**P**	**04 38 39.8**	**+0.9**
	baz=241						
ORV	**Oroville**	**88.81**	**47**	P	**P**	**04 38 38.3**	**-0.6**
ORV				IAmb	IAmb	04 38 40.4	
	comp=Z,14nm,1.4s						
MWC	**Mount Wilson**	**88.81**	**53**	P	**P**	**04 38 38.4**	**-0.9**
CMB	**Columbia Colle**	**88.86**	**48**	P	**P**	**04 38 39.0**	**-0.2**
CMB				IAmb	IAmb	04 38 39.9	
	comp=Z,6.7nm,0.9s						
AFDM	**Forest Hills D**	**88.88**	**47**	P	**P**	**04 38 39.0**	**-0.3**
AFDM				IAmb	IAmb	04 38 40.0	
	comp=Z,10nm,1.1s						
O03E	**Paynes Creek**	**88.96**	**46**	P	**P**	**04 38 40.0**	**+0.3**
	baz=241						
YBH	**Yreka Blue Hor**	**89.05**	**44**	P	**P**	**04 38 40.4**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=243,slow=4.7,SNR=12						
YBH	**Yreka Blue Hor**	**89.05**	**44**	P	**P**	**04 38 40.6**	**+0.5**
BFSC	**Mount Baldy Ra**	**89.11**	**53**	P	**P**	**04 38 40.2**	**-0.4**
	baz=244						
ISA	**Isabella, Lake**	**89.14**	**51**	P	**P**	**04 38 40.7**	**0.0**
	baz=243						
EDW2	**Edwards Air Fo**	**89.15**	**52**	P	**P**	**04 38 40.6**	**-0.1**
	baz=244						
HUMO	**Hull Mountain**	**89.32**	**43**	P	**P**	**04 38 41.6**	**+0.4**
HUMO				IAmb	IAmb	04 38 42.7	
	comp=Z,10nm,0.9s						
MONP2	**Monument Peak**	**89.46**	**54**	P	**P**	**04 38 41.9**	**-0.5**
	baz=245						
IKP	**In-Ko-Pah, Jac**	**89.60**	**55**	P	**P**	**04 38 43.5**	**+0.7**
	baz=245						
I03D	**Drain, OR**	**89.61**	**42**	P	**P**	**04 38 42.7**	**+0.2**
	baz=240						
LRMC	**Laurel Mtn Rad**	**89.64**	**52**	P	**P**	**04 38 43.3**	**+0.2**
	baz=244						
M04C	**Macdoel**	**89.65**	**45**	P	**P**	**04 38 43.3**	**+0.4**
	baz=241						
BEKR	**Beckworth**	**89.73**	**47**	P	**P**	**04 38 43.7**	**+0.2**
BEKR				IAmb	IAmb	04 38 44.1	
	comp=Z,6.4nm,1.0s						
WAKR	**Walker**	**89.74**	**48**	P	**P**	**04 38 44.1**	**+0.6**
WAKR				IAmb	IAmb	04 38 54.6	
	comp=Z,8.3nm,1.1s						
PFO	**Pinyon Flats O**	**89.74**	**54**	P	**P**	**04 38 42.4**	**-1.2**
	comp=Z,3.8nm,1.0s,baz=257,slow=4.0,SNR=6.7						
PFO	**Pinyon Flats O**	**89.74**	**54**	P	**P**	**04 38 43.5**	**-0.1**
	baz=245						
CWC	**Cottonwood Cre**	**89.78**	**51**	P	**P**	**04 38 43.7**	**0.0**
	baz=244						
SWSC	**Sam W. Stewart**	**89.96**	**55**	P	**P**	**04 38 44.5**	**0.0**
	baz=245						
MPMC	**Manual Prospec**	**90.04**	**51**	P	**P**	**04 38 45.1**	**+0.1**
	baz=244						
GSC	**Goldstone, Bar**	**90.21**	**52**	P	**P**	**04 38 45.4**	**-0.3**
	baz=244						
I04A	**Tendick Farm,**	**90.25**	**43**	P	**P**	**04 38 45.5**	**-0.1**
	baz=241						
BELC	**Belle Mtn. Jos**	**90.25**	**54**	P	**P**	**04 38 46.1**	**+0.1**
	baz=245						
RYN	**Ryan**	**90.43**	**49**	P	**P**	**04 38 46.6**	**-0.1**
RYN				IAmb	IAmb	04 38 47.4	
	comp=Z,4.1nm,0.8s						
NVAR	**Mina Array Bea**	**90.50**	**49**	P	**P**	**04 38 47.1**	**0.0**
	comp=Z,3.4nm,0.7s,baz=227,slow=8.3,SNR=31						
BC3	**Big Chuckawall**	**90.52**	**54**	P	**P**	**04 38 47.5**	**+0.3**
	baz=245						
GRAC	**Grapevine Rang**	**90.53**	**50**	P	**P**	**04 38 47.3**	**+0.2**
	baz=244						
NV11	**Mina Array Sit**	**90.61**	**49**	P	**P**	**04 38 48.0**	**+0.4**
NV11				IAmb	IAmb	04 38 48.5	
	comp=Z,5.8nm,0.9s						
FURC	**Furnace Creek,**	**90.67**	**51**	P	**P**	**04 38 47.7**	**+0.1**
	baz=244						
K05A	**Summer Lake**	**90.71**	**44**	P	**P**	**04 38 48.7**	**+0.7**
K05A				IAmb	IAmb	04 38 49.0	
	comp=Z,13nm,1.1s						
GLA	**Glamis**	**90.75**	**55**	P	**P**	**04 38 48.8**	**+0.6**
	baz=246						
J05D	**Fort Rock, OR**	**90.76**	**43**	P	**P**	**04 38 48.7**	**+0.6**
	baz=242						
H04A	**Detroit Lake**	**90.82**	**42**	P	**P**	**04 38 47.7**	**-0.5**
SHOC	**Shoshone, Teco**	**90.86**	**52**	P	**P**	**04 38 48.6**	**0.0**
	baz=245						
IRM	**Iron Mountain**	**90.96**	**54**	P	**P**	**04 38 49.3**	**+0.2**
	baz=245						
PINE	**Pine Mountain**	**91.18**	**43**	P	**P**	**04 38 50.7**	**+0.6**
I05D	**Terrebonne, OR**	**91.19**	**42**	P	**P**	**04 38 50.0**	**0.0**
	baz=242						
TPNV	**Topopah Spring**	**91.32**	**51**	P	**P**	**04 38 51.0**	**+0.1**
	baz=245						
TPNV	**Topopah Spring**	**91.32**	**51**	P	**P**	**04 38 51.6**	**+0.7**
TPNV				IAmb	IAmb	04 38 51.8	
	comp=Z,6.0nm,0.9s						
113A	**Mohawk Valley,**	**91.44**	**55**	P	**P**	**04 38 50.9**	**-0.4**
113A				IAmb	IAmb	04 39 35.6	
	comp=Z,16nm,1.9s						
E04D	**Cinebar**	**91.50**	**40**	P	**P**	**04 38 51.8**	**+0.6**
	baz=241						
D03D	**Eldon**	**91.67**	**39**	P	**P**	**04 38 52.3**	**+0.3**
	baz=240						
WVOR	**Wild Horse Val**	**92.06**	**45**	P	**P**	**04 38 54.5**	**+0.4**
WVOR				IAmb	IAmb	04 38 54.9	
	comp=Z,7.5nm,1.2s						
IL31		**92.08**	**18**	P	**P**	**04 38 53.2**	**-0.3**
IL31				IAmb	IAmb	04 39 03.1	
	comp=Z,20nm,2.0s						
ILAR	**Eielson Array**	**92.08**	**18**	P	**P**	**04 38 51.3**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=235,slow=4.6,SNR=12						
ILAR				PP	**PP**	**04 42 28.9**	**-5.0**
	comp=Z,0.8nm,1.1s,baz=217,slow=8.9,SNR=4.3						
ILAR	**Eielson Array**	**92.08**	**18**	P	**P**	**04 38 51.1**	**-2.4**
I07A	**Izee**	**92.24**	**43**	P	**P**	**04 38 54.3**	**-0.6**
I07A				IAmb	IAmb	04 39 09.4	
	comp=Z,5.7nm,0.9s						
B05A	**Bryant**	**92.61**	**39**	P	**P**	**04 38 57.0**	**+0.6**
	baz=241						
WMQ	**Urumqi**	**97.83**	**314**	*e*P	Pdif	04 39 21.3	+0.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TXAR	**Lajitas Array**	**98.25**	**62**	P	**P**	**04 39 19.7**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=212,slow=4.4,SNR=3.9						
INK	**Inuvik**	**98.40**	**19**	P	**P**	**04 39 19.9**	**-2.3**
	comp=Z,1.1nm,0.8s,baz=255,slow=5.4,SNR=3.1						
C36M	**Paulatuk**	**101.85**	**20**	P	**Pdif**	**04 39 36.6**	**-1.1**
	baz=242						
MKAR	**Makanchi Array**	**102.41**	**315**	P	**Pdif**	**04 39 40.6**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=110,slow=6.4,SNR=7.5						
MKAR				PKKPbc	**PKKPbc**	**04 55 40.3**	**-3.0**
	comp=Z,0.8nm,0.9s,baz=316,slow=3.3,SNR=6.0						
MKAR	**Makanchi Array**	**102.41**	**315**		**Pdif**	**04 39 40.3**	**-0.4**
YKA	**Yellowknife Ar**	**102.53**	**28**	P	**Pdif**	**04 39 41.1**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=249,slow=4.1,SNR=9.5						
SDV	**Santo Domingo**	**121.97**	**93**	PKP	**PKPdf**	**04 44 38.8**	**-1.6**
	comp=Z,3.7nm,0.8s,baz=265,slow=2.2,SNR=5.1						
ARCES	**ARCESS Array B**	**126.51**	**345**	PKP	**PKPdf**	**04 44 46.9**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=76,slow=1.5,SNR=26						
SJG	**San Juan**	**128.69**	**83**	PKP	**PKPdf**	**04 44 51.8**	**-1.0**
	comp=Z,20nm,0.9s,baz=24,slow=2.3,SNR=6.0						
HUMP	**Col San Antoni**	**128.98**	**83**		**PKPdf**	**04 44 52.4**	**-1.0**
FINES	**FINESS Array B**	**131.86**	**337**	PKP	**PKPdf**	**04 44 57.1**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=41,slow=2.3,SNR=15						
FINES	**FINESS Array B**	**131.86**	**337**		**PKPdf**	**04 44 57.9**	**+0.3**
AKASG	**Malin Array Be**	**136.40**	**323**	PKP	**PKPdf**	**04 45 05.9**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=56,slow=2.4,SNR=6.2						
NB2	**NORSAR Subarra**	**136.88**	**344**	PKPdf	**PKPdf**	**04 45 07.6**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**136.88**	**344**	PKP	**PKPdf**	**04 45 07.8**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=32,slow=1.9,SNR=4.9						
BRTR	**Keskin Array B**	**137.23**	**306**	PKP	**PKPdf**	**04 45 09.7**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=90,slow=1.5,SNR=5.5						
KOLS	**Kolonicke sedl**	**141.18**	**324**	*e*	**PKPdf**	**04 45 16.8**	**+1.5**
OJC	**Ojcow**	**141.72**	**327**	*e*PKP	**PKPdf**	**04 45 16.5**	**+0.3**
LANS	**Liptovska Anna**	**142.55**	**326**	*e*	**PKiKP**	**04 45 21.4**	**+0.6**
KSP	**Ksiaz**	**143.01**	**330**	*e*PKP	**PKPdf**	**04 45 15.0**	**-3.5**
MORC	**Moravsky Berou**	**143.13**	**328**	*e*PKP	PKPbc	04 45 17.2	+1.5
OSTC	**Ostas**	**143.24**	**330**	*e*PKP	PKPbc	04 45 17.5	+1.6
KRLC	**Kraliky**	**143.30**	**329**	*e*PKP	PKPbc	04 45 16.9	+0.8
DPC	**Dobruska-Polom**	**143.33**	**330**	*e*PKP	PKPbc	04 45 17.1	+0.9
JAVC	**Velka Javorina**	**143.66**	**327**	*e*PKP	**PKPdf**	**04 45 19.2**	**-0.5**
VRAC	**Vranov**	**143.90**	**328**	*e*PKP	PKPbc	04 45 18.7	+0.8
PVCC	**Panska Ves**	**144.01**	**331**	*e*PKP	PKPbc	04 45 18.4	+0.3
FLTG	**Flechtingen**	**144.03**	**336**	*e*PKPbc	**PKPab**	**04 45 18.2**	**+0.7**
	baz=39,slow=3.1						
BRG	**Berggiesshubel**	**144.04**	**332**	*i* P	PKPbc	04 45 18.4	+0.2
BRG				Amp		04 45 19.4	
	comp=Z,15nm,1.2s						
BRG	**Berggiesshubel**	**144.04**	**332**	*i* P	PKPbc	04 45 18.4	+0.2
BRG				Amp		04 45 19.4	
	comp=Z,15nm,1.2s						
BRG	**Berggiesshubel**	**144.04**	**332**	*e*PKPbc	PKPbc	04 45 18.4	+0.2
	baz=39,slow=3.1						
BRG				*e*pPKPbc	**PKiKP**	**04 45 24.0**	**+0.2**
CLL	**Collm**	**144.12**	**334**	⇓*i*PKPdf	**PKPab**	**04 45 18.2**	**+0.2**
	comp=Z,13nm,0.9s						
CLL	**Collm**	**144.12**	**334**		**PKPab**	**04 45 18.1**	**+0.2**
CLL	**Collm**	**144.12**	**334**	*e*PKPbc	**PKPab**	**04 45 18.6**	**+0.7**
	baz=39,slow=3.1						
KRUC	**Moravsky**	**144.16**	**328**	*e*PKP	PKPbc	04 45 18.9	+0.2
MODS	**Modra-Piesok**	**144.17**	**327**	*e*	PKPbc	04 45 19.0	+0.3
FBE	**Freiberg**	**144.26**	**333**	*e*PKPbc	PKPbc	04 45 19.4	+0.5
	baz=39,slow=3.1						
ASSE	**Asse, Remlinge**	**144.40**	**336**	*e*PKPbc	PKPbc	04 45 19.6	+0.4
	baz=39,slow=3.1						
PRU	**Pruhonice**	**144.41**	**331**	*e*PKP	PKPbc	04 45 20.0	+0.6
NEUB	**Neuenburg**	**144.69**	**334**	*e*PKPbc	PKPbc	04 45 20.7	+0.5
	baz=39,slow=3.1						
CLZ	**Clausthal**	**144.75**	**336**	*e*PKPbc	PKPbc	04 45 21.1	+0.7
	baz=39,slow=3.1						
TANN	**Tannenbergstha**	**145.01**	**333**	*e*PKPbc	**PKPbc**	**04 45 21.7**	**+0.3**
	baz=39,slow=3.1						
WERD	**Werda**	**145.05**	**333**	*e*PKPbc	**PKPbc**	**04 45 21.8**	**+0.3**
	baz=39,slow=3.1						
GUNZ	**Gunzen**	**145.11**	**333**	*e*PKPbc	**PKPbc**	**04 45 22.1**	**+0.4**
	baz=39,slow=3.1						
DIVS	**Divibare**	**145.11**	**319**		**PKPbc**	**04 45 22.4**	**+0.4**
GTTG	**Gottingen**	**145.13**	**336**	*e*PKPbc	**PKPdf**	**04 45 22.5**	**+0.3**
	baz=39,slow=3.1						
WERN	**Wernitzgruen**	**145.15**	**333**	*e*PKPbc	**PKPbc**	**04 45 22.2**	**+0.4**
	baz=39,slow=3.1						
NKC	**Novy Kostel**	**145.15**	**333**	*e*PKP	**PKPbc**	**04 45 22.3**	**+0.5**
NKC				*e*pPKP	sPKPab	04 45 32.4	-0.5
CONA	**Conrad Observa**	**145.18**	**327**	*e*P	**PKPdf**	**04 45 22.9**	**+0.4**
	comp=Z,15nm,0.8s,SNR=10.0						
MOX	**Moxa**	**145.19**	**334**	*e*PKPbc	**PKPbc**	**04 45 22.3**	**+0.4**
	baz=39,slow=3.1						
LIT	**Litokhoron**	**145.28**	**311**		**PKPbc**	**04 45 21.4**	**-1.2**
IBBN	**Ibbenburen**	**145.29**	**339**	*e*PKPbc	**PKPab**	**04 45 22.7**	**+0.4**
	baz=39,slow=3.1						
KHC	**Kasperske Hory**	**145.46**	**330**	*e*PKP	**PKPdf**	**04 45 22.8**	**0.0**
KHC				*e*pPKP	**pPKPdf**	**04 45 33.1**	**+1.8**
KHC	**Kasperske Hory**	**145.46**	**330**		**PKPdf**	**04 45 23.2**	**+0.3**
GEC2	**GERESS Array S**	**145.60**	**330**		**PKPdf**	**04 45 23.6**	**+0.4**
GEC2	**GERESS Array S**	**145.60**	**330**	*e*PKPbc	**PKPdf**	**04 45 23.1**	**-0.1**
	baz=39,slow=3.1						
GEC2				*e*pPKPbc	**PKiKP**	**04 45 27.8**	**+0.6**
GERES	**GERESS Array B**	**145.60**	**330**	PKPbc	**PKPbc**	**04 45 23.8**	**+0.4**
	comp=Z,11nm,0.7s,baz=33,slow=3.2,SNR=92						
GERES	**GERESS Array B**	**145.60**	**330**		**PKPdf**	**04 45 23.3**	**+0.2**
ROTZ	**Rotzenmuhle**	**145.61**	**332**	*e*PKPbc	**PKPbc**	**04 45 23.7**	**+0.4**
	baz=39,slow=3.1						
UBBA	**Unterbreizbach**	**145.70**	**336**	*e*PKPbc	**PKPbc**	**04 45 23.9**	**+0.5**
	baz=39,slow=3.1						
WET	**Wettzell**	**145.77**	**331**	*e*PKPbc	**PKPbc**	**04 45 24.2**	**+0.3**
	baz=39,slow=3.1						
WET				*e*pPKPbc	**PKiKP**	**04 45 28.5**	**+1.1**
ARSA	**Arzberg**	**145.79**	**326**	*e*P	**PKPbc**	**04 45 24.6**	**+0.6**
	comp=Z,9.4nm,1.0s						
KASTN	**Kahler Asten**	**145.98**	**337**	*e*PKPbc	**PKPbc**	**04 45 24.7**	**+0.3**
	baz=39,slow=3.1						
MOA	**Molln**	**146.03**	**328**	*e*P	**PKPbc**	**04 45 25.3**	**+0.6**
	comp=Z,26nm,1.1s,SNR=7.7						
GRA1	**Grafenberg Arr**	**146.08**	**333**		**PKPdf**	**04 45 24.5**	**+0.7**
GRF	**Grafenberg Arr**	**146.08**	**333**	*e*PKPbc	**PKPbc**	**04 45 25.3**	**+0.6**
	baz=39,slow=3.1						
GRFO	**Grafenberg**	**146.09**	**333**		**PKPbc**	**04 45 24.9**	**+0.2**
BUG	**Bochum--Univer**	**146.19**	**339**	*e*PKPbc	**PKPbc**	**04 45 25.5**	**+0.6**
	baz=39,slow=3.1						
SOKA	**Soboth**	**146.42**	**326**	*i* P	**PKPbc**	**04 45 26.1**	**+0.1**
	comp=Z,8.3nm,1.1s						
TNS	**Taunus Mts**	**146.77**	**336**	*e*PKPbc	**PKPbc**	**04 45 27.6**	**+0.8**
	baz=39,slow=3.1						
TNS				*e*pPKPbc	**PKiKP**	**04 45 31.9**	**+2.4**
KBA	**Koelnbreinsper**	**147.01**	**328**	*e*P	**PKPdf**	**04 45 26.9**	**+1.2**
	comp=Z,14nm,1.2s						
MYKA	**Terra Mystica**	**147.17**	**327**	*i* P	**PKPbc**	**04 45 27.7**	**-0.4**
	comp=Z,6.2nm,0.6s						
BTNL	**Ternell**	**147.29**	**339**	*d*PKP	**PKPbc**	**04 45 28.4**	**+0.2**
BTNL				*d*pPKP	**pPKPab**	**04 45 38.5**	**+0.3**
MEM	**Membach**	**147.31**	**339**	*d*PKP	**PKPbc**	**04 45 28.3**	**0.0**
MEM				*d*pPKP	**pPKPab**	**04 45 38.5**	**+0.3**
BSTI	**Sart Tilman**	**147.48**	**340**	*d*PKP	**PKPbc**	**04 45 29.3**	**+0.6**
BSTI				*d*pPKP	**pPKPab**	**04 45 39.1**	**+0.2**
BHOU	**Houvegnez**	**147.53**	**339**	*d*PKP	**PKPbc**	**04 45 29.5**	**+0.7**
BHOU				*d*pPKP	**pPKPab**	**04 45 39.4**	**+0.2**
STU	**Stuttgart**	**147.64**	**334**		**PKPbc**	**04 45 29.4**	**+0.2**
ABTA	**Abfaltersbach**	**147.65**	**328**	*i* P	**PKPbc**	**04 45 28.9**	**-0.5**
	comp=Z,9.8nm,0.7s						
UCC	**Uccle**	**147.68**	**341**		**PKPbc**	**04 45 29.4**	**+0.2**
WATA	**Walderalm**	**147.68**	**330**	*e*P	**PKPbc**	**04 45 29.7**	**+0.1**
	comp=Z,14nm,1.1s						
BCLA	**Clavier**	**147.71**	**340**	*d*PKP	**PKPbc**	**04 45 29.3**	**0.0**
BCLA				*d*pPKPdf	**pPKPdf**	**04 45 35.5**	**+0.5**
BCLA				*d*pPKPbc	**pPKPbc**	**04 45 38.0**	**+0.3**
BGES	**Gesves**	**147.81**	**340**	*d*PKP	**PKPbc**	**04 45 29.8**	**+0.2**
BGES				*d*pPKP	**pPKPab**	**04 45 40.0**	**-0.2**
MOTA	**Moosalm**	**147.89**	**330**	*e*P	**PKPbc**	**04 45 29.8**	**-0.4**
	comp=Z,20nm,1.0s,SNR=6.3						
SQTA	**Sankt Quirin**	**147.94**	**330**	*e*P	**PKPbc**	**04 45 30.2**	**0.0**
	comp=Z,26nm,1.1s,SNR=7.0						
RETA	**Reutte**	**147.94**	**331**	*e*P	**PKPbc**	**04 45 30.4**	**+0.2**
	comp=Z,17nm,1.2s						
SNF	**Seneffe**	**147.95**	**341**	*d*PKP	**PKPbc**	**04 45 30.2**	**+0.2**
RCHB	**Rochefort**	**147.96**	**339**	*d*PKP	**PKPbc**	**04 45 30.4**	**+0.4**
RCHB				*d*pPKP	**pPKPab**	**04 45 40.7**	**-0.1**
BMRD	**Maredsous**	**147.98**	**340**	*d*PKP	**PKPbc**	**04 45 29.7**	**-0.4**
BMRD				*d*pPKP	**pPKPab**	**04 45 40.3**	**-0.6**
WLF	**Walferdange**	**148.07**	**338**	*d*PKP	**PKPbc**	**04 45 31.1**	**+0.8**
WLF				*d*pPKP	**pPKPab**	**04 45 41.4**	**+0.1**
WLF	**Walferdange**	**148.07**	**338**		**PKPbc**	**04 45 31.1**	**+0.8**
WLF	**Walferdange**	**148.07**	**338**	*e*PKPbc	**PKPbc**	**04 45 31.5**	**+1.2**
	baz=39,slow=3.1						
UBR	**Ueberruh**	**148.09**	**332**	*e*PKPbc	**PKPbc**	**04 45 30.7**	**+0.2**
	baz=39,slow=3.1						
DOU	**Dourbes**	**148.22**	**340**	*d*PKP	**PKPbc**	**04 45 31.0**	**+0.4**
DOU				*d*pPKP	**pPKPab**	**04 45 41.2**	**-0.7**
DOU				*d*sPKP		04 45 44.6	
FETA	**Feichten**	**148.30**	**330**	*e*P	**PKPbc**	**04 45 31.4**	**+0.2**
	comp=Z,25nm,1.1s,SNR=9.2						
BFO	**Black Forest**	**148.34**	**334**		**PKPbc**	**04 45 30.9**	**-0.2**
BFO	**Black Forest**	**148.34**	**334**	*e*PKPbc	**PKPbc**	**04 45 31.4**	**+0.3**
	baz=39,slow=3.1						
DAVA	**Damuels**	**148.49**	**332**	*i* P	**PKPbc**	**04 45 32.1**	**+0.4**
	comp=Z,18nm,1.0s						
CTI	**Castel Tesino**	**148.57**	**328**		**PKPbc**	**04 45 31.6**	**-0.3**
ECH	**Echery**	**148.90**	**335**	PKPbc	**PKPbc**	**04 45 32.0**	**-0.5**
TEOL	**Teolo**	**149.04**	**327**	PKPbc	**PKPbc**	**04 45 32.8**	**-0.2**
SALO	**Salr**	**149.43**	**329**	PKPbc	**PKPbc**	**04 45 33.9**	**0.0**
SENIN	**Lac Senin/Sane**	**150.33**	**333**	PKPbc	**PKPbc**	**04 45 36.5**	**+0.1**
CLF	**Chambon-Foret**	**150.77**	**341**		**PKPbc**	**04 45 37.8**	**+0.7**
BNI	**Bardonecchia**	**151.63**	**332**	PKPbc	**PKPbc**	**04 45 39.2**	**-0.1**
ESDC	**Sonseca Array**	**160.22**	**342**	PKPab	**PKPab**	**04 46 24.9**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=11,slow=5.9,SNR=4.1						
DBIC	**Dimbokro**	**164.39**	**206**	PKPab	**PKPab**	**04 46 43.9**	**+0.3**
	comp=Z,9.0nm,1.1s,baz=117,slow=6.8,SNR=4.0						
DBIC				PP	**PP**	**04 50 26.9**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=186,slow=9.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	**165.13**	**241**	PKPab	**PKPab**	**04 46 46.0**	**-1.0**
	comp=Z,3.8nm,1.1s,baz=90,slow=3.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**165.13**	**241**		**PKPab**	**04 46 45.9**	**-1.1**

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*UUSS **26** 04:31:37.9±1.1, 40°.74N±0°.04×111°.52W±0°.05, h12^{km}±6^{km}, Md2.4/23, ML2.7/96(NEIC), Error ellipse: s-maj=6.0km s-min=4.5km az=53.0*

NEIC 26 04:31:38.3±3.5, **40°.70N**±0°.04×**111°.43W**±0°.05, **h8**^{km}±6^{km}, **Error ellipse: s-maj=5.3km s-min=4.8km az=139.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCJ	**Ross Creek**	**0.04**	**189**		Pg	04 31 40.9	+0.7
KLJ	**Keetly**	**0.07**	**164**		Pg	04 31 41.6	+1.1
HLJ	**Hailstone**	**0.09**	**165**		Pg	04 31 41.9	+1.2
JLU	**Jordanelle**	**0.10**	**188**		Pg	04 31 41.6	+0.7
JLU				Sg	Sg	04 31 43.8	+1.1
JLU				IAML		04 31 44.0	
	comp=E,1µm,0.4s						
JLU				IAML		04 31 44.1	
	comp=N,2µm,0.3s						
LDJ	**Lady**	**0.12**	**172**		Pg	04 31 42.5	+1.3
HTU	**Hoyt Peak**	**0.16**	**98**		Pg	04 31 43.3	+1.4
N16A	**Rees Ranch, Co**	**0.19**	**359**		Pg	04 31 42.2	-0.1
HEB	**Heber**	**0.21**	**160**		Pg	04 31 44.0	+1.4
CTU	**Camp Tracy**	**0.24**	**269**		Pg	04 31 42.1	-1.1
MHD	**Mile High Driv**	**0.28**	**262**		Pg	04 31 43.0	-1.0
RBU	**Red Butte Cany**	**0.30**	**286**		Pg	04 31 42.9	-1.3
DAU	**Daniels Canyon**	**0.32**	**155**		Pb	04 31 46.2	-0.1
TCVU	**Timpanogos Cav**	**0.33**	**219**		Pg	04 31 44.7	-0.2
HRU	**Hogsback Ridge**	**0.36**	**284**		Pg	04 31 44.0	-1.3
EOCU	**Emergency Oper**	**0.36**	**283**		Pg	04 31 44.2	-1.2
LHUT	**Little Humpy P**	**0.38**	**60**		Pb	04 31 47.1	-0.4
TCUT	**Toone Canyon**	**0.42**	**2**	Pg	Pg	04 31 46.0	-0.6
TCUT				Sg	Sg	04 31 51.9	-0.2
TCUT				IAML		04 31 52.7	
	comp=E,752nm,0.7s						
TCUT				IAML		04 31 53.2	
	comp=N,1µm,0.3s						
FPU	**Francis Peak**	**0.45**	**317**		Pg	04 31 45.7	-1.5
WTU	**Western Traver**	**0.47**	**239**		Pg	04 31 47.0	-0.4
NOQ	**North Oquirrh**	**0.53**	**265**		Pg	04 31 47.1	-1.4
BSUT	**Blindstream Ca**	**0.54**	**107**		Pb	04 31 49.9	-0.2
CWU	**Camp Williams**	**0.57**	**244**		Pg	04 31 48.7	-0.6
SAIU	**Southern Antel**	**0.59**	**286**		Pg	04 31 47.8	-1.9
WMUT	**West Mountain**	**0.69**	**206**		Pg	04 31 51.6	-0.1
MPU	**Maple Canyon**	**0.70**	**193**	Pg	Pg	04 31 51.5	-0.3
GZU	**Grizzly Peak**	**0.83**	**331**		Pg	04 31 53.1	-1.3
SNUT	**Stansbury Nort**	**0.84**	**283**		Pg	04 31 52.5	-1.9
SUU	**Santaquin Cany**	**0.85**	**199**		Pg	04 31 54.8	0.0
NLU	**North Lily Min**	**0.89**	**214**	Pg	Pg	04 31 55.0	-0.5
NLU				Sg	Sg	04 32 06.5	-0.6
HWUT	**Hardware Ranch**	**0.91**	**354**	Pg	Pg	04 31 54.0	-1.9
HWUT				Sg	Sg	04 32 05.9	-1.8
SPUT	**South Promonto**	**0.98**	**309**	Pg	Pg	04 31 55.0	-2.2
SPUT				Sg	Sg	04 32 07.4	-2.6
SPUT				IAML		04 32 09.1	
	comp=N,182nm,0.3s						
SPUT				IAML		04 32 10.5	
	comp=E,128nm,0.7s						
WVUT	**Wellsville**	**0.99**	**337**		Pg	04 31 55.9	-1.5
EMUT	**Emma Park**	**1.00**	**152**		Pn	04 31 58.9	+0.1
EPU	**East Promontor**	**1.01**	**313**		Pg	04 31 56.0	-1.8
LTU	**Little Mountai**	**1.08**	**326**		Pg	04 31 57.2	-1.9
ARGU	**Argyle Ridge**	**1.11**	**142**		Pn	04 32 00.8	+0.5
DUG	**Dugway, Tooele**	**1.17**	**245**		Pg	04 31 58.8	-1.9
BGU	**Big Grassy Mou**	**1.23**	**281**		Pb	04 31 59.2	-2.7
BGU				IAML		04 32 17.1	
	comp=E,73nm,1.1s						
P17A	**Butcher Ranch,**	**1.33**	**156**	Pn	Pn	04 32 03.4	+0.1
SNO	**Snow College**	**1.39**	**183**		Pg	04 32 05.0	+0.1
TMUT	**Trail Mountain**	**1.41**	**173**	Pn	Pn	04 32 04.5	-0.1
TMUT				IAML		04 32 28.1	
	comp=N,56nm,0.8s						
TMUT				IAML		04 32 29.4	
	comp=E,60nm,0.6s						
RDMU	**Red Mountain**	**1.42**	**95**	Pn	Pn	04 32 04.7	+0.1
HVU	**Hansel Valley**	**1.48**	**317**	Pn	Pn	04 32 03.0	-2.3
HVU				IAML		04 32 24.7	
	comp=E,54nm,0.6s						
HVU				IAML		04 32 25.5	
	comp=N,65nm,0.4s						
SRU	**San Rafael Swe**	**1.73**	**156**	Pn	Pb	04 32 10.0	-0.4
SRU				IAML		04 32 40.3	
	comp=E,35nm,0.6s						
SRU				IAML		04 32 42.1	
	comp=N,44nm,0.5s						
AHID	**Auburn Hatcher**	**2.08**	**7**	Pn	Pn	04 32 14.5	+0.9
AHID				IAML		04 32 46.5	
	comp=E,86nm,0.5s						
TCRU	**Three Creeks R**	**2.23**	**201**		Pg	04 32 20.1	-1.0
TCRU				IAML		04 32 51.0	
	comp=E,24nm,0.9s						
TCRU				IAML		04 32 55.5	
	comp=N,24nm,1.9s						
MSU	**Marysvale**	**2.26**	**195**	Pg	Pb	04 32 20.1	+0.7
ECR	**Eagle Creek**	**2.35**	**1**	Pn	Pn	04 32 16.9	-0.5
BW06	**Boulder Array**	**2.50**	**34**	Pn	Pn	04 32 17.5	-1.9
BW06				IAML		04 32 55.8	
	comp=N,20nm,0.9s						
BW06				IAML		04 32 55.9	
	comp=N,19nm,0.6s						
PD31	**Pinedale Array**	**2.50**	**34**	Pn	Pn	04 32 17.5	-1.9
PDAR	**Pinedale Array**	**2.50**	**34**	Pn	Pn	04 32 19.2	-0.2
O20A	**White River Ci**	**2.50**	**102**	Pg	Pb	04 32 24.0	+0.5
REDW	**Red Top Meadow**	**2.70**	**9**	Pn	Pn	04 32 22.2	+0.1
REDW				IAML		04 33 10.9	
	comp=N,32nm,0.8s						
REDW				IAML		04 33 11.3	
	comp=N,27nm,0.8s						
MTPU	**Mount Pierson**	**2.72**	**193**	Pg	Pg	04 32 28.9	-1.5
SNOW	**Snow King Moun**	**2.81**	**10**	Pg	Pb	04 32 27.9	-0.9
SNOW				IAML		04 33 13.8	
	comp=N,29nm,2.6s						
SNOW				IAML		04 33 37.8	
	comp=N,21nm,4.5s						
PSUT	**Pine Spring**	**2.86**	**222**	Pg	Pb	04 32 30.3	+0.7
ELK	**Elko**	**2.89**	**272**	Pg	Pb	04 32 28.9	-1.4
PV23	**Carpenter Ridg**	**2.92**	**139**	Pg	Pb	04 32 31.2	+0.5
PV10	**Paradox Valley**	**2.97**	**141**	Pg	Pg	04 32 33.9	-1.2
PV10				IAML		04 33 18.4	
	comp=N,28nm,0.4s						
PV22	**Blue Mesa, Par**	**2.97**	**136**	Pg	Pb	04 32 32.5	+1.0
PV22				IAML		04 33 15.6	
	comp=N,34nm,1.6s						
PV14	**Lion Creek, Pa**	**2.98**	**141**	Pg	Pb	04 32 32.4	+0.7
PV04	**Paradox Valley**	**3.02**	**139**	Pg	Pb	04 32 34.0	+1.7
PV20	**West Nyswonger**	**3.03**	**140**	Pg	Pb	04 32 33.7	+1.2
PV16	**Nyswonger Mesa**	**3.08**	**140**	Pg	Pb	04 32 32.5	-0.8
PV17	**East Wray Mesa**	**3.08**	**141**	Pg	Pb	04 32 33.4	0.0
PV17				IAML		04 33 28.5	
	comp=E,20nm,0.4s						
MOOW	**Moose Ponds**	**3.09**	**9**	Pn	Pn	04 32 27.0	-0.5
PV11	**David Mesa, Pa**	**3.11**	**140**	Pg	Pb	04 32 35.0	+1.1
PV07	**Paradox Valley**	**3.12**	**135**	Pg	Pb	04 32 35.0	+0.9
PV07				IAML		04 33 18.0	
	comp=E,26nm,0.9s						
PV12	**Saucer Basin,**	**3.13**	**139**	Pg	Pb	04 32 35.7	+1.4
PV18	**Skein Mesa, Pa**	**3.13**	**141**	Pg	Pb	04 32 35.7	+1.4
PV18				IAML		04 33 18.8	
	comp=E,19nm,0.6s						
PV18				IAML		04 33 20.5	
	comp=N,17nm,0.5s						
PV03	**Paradox Valley**	**3.15**	**140**	Pg	Pg	04 32 36.7	-2.0
PV03				IAML		04 33 20.5	
	comp=E,27nm,0.3s						
PV03				IAML		04 33 23.0	
	comp=N,20nm,0.5s						
IMW	**Indian Meadow**	**3.22**	**6**	Pn	Pn	04 32 29.3	0.0
IMW				IAML		04 33 22.6	
	comp=N,24nm,0.5s						
IMW				IAML		04 33 23.2	
	comp=N,30nm,0.5s						
PV13	**Radium Mtn., P**	**3.24**	**141**	Pg	Pb	04 32 37.0	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PV13				IAML		04 33 22.1	
	comp=N,20nm,0.3s						
PV02	Paradox Valley	3.25	139	Pg	Pb	04 32 37.9	+1.6
PV02				IAML		04 33 24.9	
	comp=E,26nm,0.5s						
PV02				IAML		04 33 30.1	
	comp=N,26nm,0.5s						
PKCU	Pink Cliffs	3.32	192	Pg	Pg	04 32 40.4	-1.6
PKCU				IAML		04 32 54.9	
	comp=E,21nm,4.7s						
PKCU				IAML		04 33 41.4	
	comp=N,22nm,4.5s						
PV01	Paradox Valley	3.39	138	Pn	Pn	04 32 28.4	-3.2
PV01				IAML		04 33 27.5	
	comp=E,18nm,0.4s						
PV01				IAML		04 33 27.6	
	comp=N,20nm,0.5s						
FLWY	Flagg Ranch	3.42	9	Pg	Pb	04 32 40.6	+1.4
FLWY				IAML		04 33 17.7	
	comp=N,23nm,4.7s						
FLWY				IAML		04 34 11.2	
	comp=N,23nm,4.8s						
LCMT	Little Creek M	3.94	202	Pg	Pg	04 32 51.0	-2.8
LCMT				IAML		04 33 53.5	
	comp=E,5.5nm,3.0s						
LCMT				IAML		04 34 25.4	
	comp=N,5.9nm,4.5s						
R11A	Troy Canyon, C	3.98	235	Pg	Pb	04 32 50.9	+2.2
R11A				IAML		04 33 42.9	
	comp=N,5.5nm,0.7s						
MVCO	Mesa Verde	4.17	146	Pg	Pg	04 32 56.6	-1.5
MVCO				IAML		04 33 27.5	
	comp=N,10nm,4.5s						
U15A	North Rim	4.32	189	Pg	Pg	04 32 57.9	-3.1
U15A				IAML		04 35 25.7	
	comp=E,6.7nm,4.4s						
U15A				IAML		04 35 33.9	
	comp=N,6.9nm,4.5s						
ISCO	Idaho Springs	4.54	100	Pg	Pb	04 33 00.2	+1.9
ISCO				IAML		04 34 34.6	
	comp=N,7.8nm,5.0s						

*AZER **26** 04:40:53.0±0.0, 41°.17N×48°.74E, h8km, ml3.0/26, Error ellipse: s-maj=0.7km s-min=0.4km az=233.0*
*MOS **26** 04:40:53.5±0.0, 41°.25N×48°.71E, h9km, MPVA4.0*
*DRS **26** 04:40:56.3±0.0, 41°.32N×48°.78E, h16km, ML3.1/6*
ISC 26 04:40:54.3±0.8**, 41°.21N**±0°.02×**48°.81E**±0°.03**, h25**km±6km**,**
n39, σ**2ˢ.23**/77**, 9C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIZA	Siyzn	0.15	153	P	Pb	04 40 58.8	-0.9
	SNR=194						
SIZA				S	Sb	04 41 03.2	0.0
QUBA	Quba, Azerbaij	0.28	301	P	Pb	04 41 01.4	+0.3
	SNR=143						
QUBA				S	Sn	04 41 07.1	-1.1
ATGJ	Altiaghaj	0.36	164	P	Pb	04 41 01.8	-0.6
	SNR=41						
ATGJ				S	Sb	04 41 08.8	+0.8
PQL	Pirkuli	0.45	201	P	Pb	04 41 03.6	-0.2
	SNR=31						
PQL				S	Sb	04 41 11.5	+1.2
XNQ	Khinaliq	0.50	266	P	Pb	04 41 04.2	-0.6
	SNR=2990						
XNQ				S	Sb	04 41 12.8	+1.0
QSAR	Qusar	0.51	307	P	Pb	04 41 04.8	+0.1
	SNR=327						
QSAR				S	Sn	04 41 13.7	-0.3
IML	Ismayilli	0.63	229	P	Pb	04 41 06.5	-0.3
	SNR=49						
IML				S	Sn	04 41 16.8	-0.1
GBS	Qobustan	0.68	171	P	Pn	04 41 08.8	+0.4
	SNR=15						
GBS				S	Sn	04 41 19.1	+0.8
QBL	Gabala	0.78	250	P	Pb	04 41 08.5	-0.7
	SNR=8.5						
QBL				S	Sn	04 41 20.3	-0.3
AKT	Akhty	0.85	289	⇑*i*Pg	Pb	04 41 09.9	-0.6
	365nm,0.5s						
AKT				⇑*e*Sg	Sb	04 41 21.7	0.0
	2μm,0.4s						
KDMR	Kurdemir	0.96	210	P	Pn	04 41 12.2	+0.1
KDMR				S	Sn	04 41 28.5	+3.6
GOBA	Gobu	1.07	139	P	Pb	04 41 14.9	+0.7
	SNR=3.6						
GOBA				S	Sn	04 41 31.5	+3.8
NDR	Nardaran	1.09	125	P	Pb	04 41 15.4	+0.8
	SNR=10						
NDR				S	Sn	04 41 34.0	+5.7
SEKA	Sheki	1.21	270	P	Pn	04 41 16.1	+0.4
	SNR=52						
SEKA				S	Sb	04 41 33.1	+1.2
ALIB	Äli-Bayra	1.26	173	P	Pb	04 41 18.3	+0.9
	SNR=9.7						
ALIB				S	Sb	04 41 36.7	+3.5
ZRD	Zardab	1.26	223	P	Pb	04 41 17.2	-0.2
	SNR=14						
ZRD				S	Sb	04 41 36.1	+2.9
URKR	Urkarakh	1.29	318	⇑*e*Pg	Pb	04 41 17.9	-0.2
	78nm,0.3s						
URKR				⇑*e*Sg	Sb	04 41 36.2	+1.9
	342nm,0.2s						
MNGR	Mingechevir, A	1.37	252	P	Pb	04 41 19.3	0.0
	SNR=3.3						
MNGR				S	Sb	04 41 39.4	+3.0
SGKR	Sergokala	1.51	326	⇓*e*Pg	Pb	04 41 22.0	+0.3
	42nm,0.3s						
SGKR				⇓*e*Sg	Sb	04 41 42.3	+1.8
	220nm,0.5s						
BRDA	Brd	1.56	233	Pn	Pn	04 41 21.2	+0.9
BRDA				S	Sb	04 41 41.4	-0.3
ZKTA	Zakatala	1.70	285	Pn	Pb	04 41 24.0	-0.8
	SNR=22						
ZKTA				Sn	Sb	04 41 47.3	+1.6
AGDM	Agdam	1.70	230	Pn	Pn	04 41 22.4	+0.1
	SNR=7.8						
AGDM				Sn	Sb	04 41 45.9	+0.1
ARKR	Arakani	1.94	316	⇑*e*Pg	Pb	04 41 29.1	+0.1
	14nm,0.5s						
ARKR				⇓*i*Sg	Sb	04 41 57.1	+4.3
	103nm,0.4s						
GANJ	Ganja	1.96	254	Pn	Pn	04 41 25.9	-0.1
GANJ				Sn	Sn	04 41 51.1	+1.3
GLBA	Clilabad	1.99	189	Pn	Pn	04 41 25.9	-0.5
GLBA				Sn	Sb	04 41 54.0	-0.2
LGD	Lagodekhi	2.02	289	*e*Pg	Pb	04 41 29.6	-0.8
LGD				*e*Sg	Sb	04 41 55.7	+0.6
KRNR	Karanay	2.15	319	⇑*e*Pg	Pb	04 41 31.7	-0.8
	22nm,0.3s						
KRNR				⇑*i*Sg	Sb	04 42 01.4	+2.7
	69nm,0.5s						
YRD	Yardimli	2.33	191	Pn	Pn	04 41 32.6	+1.4
YRD				Sn	Sb	04 42 02.7	-1.5
GDB	GEDABAY	2.36	259	Pn	Pn	04 41 31.4	-0.2
GDB				Sn	Sn	04 42 00.0	+0.2
BTLR	Botlikh	2.41	308	⇑*e*Pg	Pb	04 41 37.1	+0.1
	9.8nm,0.5s						
BTLR				⇓*e*Sg	Sb	04 42 11.3	+4.9
	30nm,0.4s						
QZX	Qazax, Azerbai	2.60	268	Pn	Pn	04 41 36.0	+1.3
	SNR=11						
QZX				Sn	Sn	04 42 06.6	+1.1
DVE	Vedeno	2.65	312	*e*Pn	Pb	04 41 38.4	-2.7
GROC	Groznyy	2.99	313	*e*Pn	Pn	04 41 41.5	+1.5
GROC				*e*Sn	Sn	04 42 17.6	+2.5
SBZ	Shahbuz	3.08	235	Pn	Pn	04 41 42.3	+1.0
	SNR=3.7						
SBZ				Sn	Sn	04 42 19.8	+2.4
ORD	Ordubad	3.14	224	Pn	Pn	04 41 42.7	+0.5
	SNR=5.1						
ORD				Sn	Sn	04 42 20.4	+1.5
LACR	Lac	3.73	297	*e*Pn	Pn	04 41 54.5	+4.2
LACR				*e*Sn	Sn	04 42 36.7	+3.3
ZEI	Tsey	3.98	295	*e*Pn	Pn	04 41 57.0	+3.1
ZEI				*e*Sn	Sn	04 42 43.1	+3.3
AB31	Akbulak array	11.23	41	Pn	Pn	04 43 32.7	-0.4
	0.2nm,0.5s,baz=230,slow=12,SNR=4.9						
AB31				⇑Sn	Sn	04 45 30.8	-6.9
	0.4nm,0.5s,baz=216,slow=20,SNR=3.1						
AKTO	Aktyubinsk	11.23	32	⇓Pn	Pn	04 43 32.2	-0.9
	2.3nm,1.1s						
AKTO				⇓Sn	Sn	04 45 29.6	-8.2
	1.9nm,0.7s						

*IDC **26** 04:50:56.1±0.8, 44°.43N×113°.98W, h0km, mb1 3.5/5, mb1mx3.3/49, mbtmp3.2/5, ML3.2/5, Error ellipse: s-maj=13.0km s-min=8.5km az=53.0*
*BUT **26** 04:50:56.5±2.8, 44°.35N±0°.04×114°.05W±0°.06, h13km±7km, Md3.6, ML3.4/90(NEIC), Error ellipse: s-maj=6.6km s-min=5.6km az=113.0*
*NEIC **26** 04:50:57.7±1.8, 44°.43N±0°.04×114°.02W±0°.05, h5km±2km, Error ellipse: s-maj=7.0km s-min=5.7km az=212.0*
ISC 26 04:50:57.1±1.1**, 44°.43N**±0°.04×**114°.07W**±0°.04**, h6**km**, n60,**
σ**1ˢ.44**/60**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCYI	Bear Canyon	0.49	104		Pg	04 51 05.4	-1.3
HLID	Hailey	0.91	196	Pg	Pg	04 51 12.1	-2.4
HLID				IAML		04 51 24.5	
	905nm,0.3s						
HLID				IAML		04 51 25.5	
	1μm,0.2s						
MCMT	McKenzie Canyo	0.96	65		Pg	04 51 15.1	-0.5
DLMT	Dillon	1.40	48		Pn	04 51 23.1	-0.3
DLMT				Sg	Sb	04 51 43.0	+1.1
DLMT				IAML		04 51 45.3	
	946nm,0.2s						
MFID	Camas Ranch	1.63	232		Pn	04 51 25.7	-0.7
LRM	Limekiln Ridge	1.80	39	Pn	Pn	04 51 31.0	+2.1
QLMT	Earthquake Lak	1.93	77	Pn	Pn	04 51 30.7	0.0
YHB	Horse Butte	2.08	80	Pn	Pn	04 51 32.9	+0.1
BOZ	Bozeman (W)	2.09	55	Pn	Pn	04 51 32.6	-0.2
BOZ				IAML		04 52 04.8	
	447nm,0.4s						
YHL	Hebgen Lake	2.10	78	Pn	Pn	04 51 33.6	+0.4
YMR	Madison River	2.23	83	Pn	Pn	04 51 35.2	+0.3
IMW	Indian Meadow	2.32	102	Pn	Pn	04 51 36.2	0.0
IMW				IAML		04 52 11.4	
	371nm,0.5s						
BMO	Blue Mountains	2.34	281	Pn	Pn	04 51 36.0	-0.3
BMO				IAML		04 52 13.8	
	175nm,0.3s						
YPP	Pitchstone Pla	2.35	93		Pn	04 51 37.0	+0.4
YPP				IAML		04 52 11.5	
	comp=N,136nm,0.3s						
YPP				IAML		04 52 17.8	
	comp=E,135nm,0.6s						
ECR	Eagle Creek	2.40	124		Pn	04 51 37.2	+0.1
MSO	Missoula	2.40	2	Pn	Pn	04 51 37.0	0.0
MSO				IAML		04 52 15.5	
	comp=E,262nm,0.5s						
MSO				IAML		04 52 16.0	
	comp=E,268nm,0.3s						
YNR	Norris Junctio	2.44	82	Pn	Pn	04 51 39.1	+1.3
YNR				IAML		04 52 19.9	
	comp=E,328nm,0.6s						
FLWY	Flagg Ranch	2.45	97	Pn	Pn	04 51 38.1	+0.3
FLWY				IAML		04 52 16.8	
	comp=E,175nm,1.2s						
FLWY				IAML		04 52 16.8	
	comp=E,189nm,0.9s						
MOOW	Moose Ponds	2.49	105	Pn	Pn	04 51 38.0	-0.4
H17A	Grant Village	2.51	90	Pn	Pn	04 51 39.9	+1.2
REDW	Red Top Meadow	2.56	114	Pn	Pn	04 51 39.0	-0.4
REDW				IAML		04 52 14.8	
	comp=E,115nm,0.5s						
SNOW	Snow King Moun	2.59	111	Pn	Pn	04 51 40.5	+0.7
SNOW				IAML		04 52 27.6	
	comp=E,120nm,1.0s						
LKWY	Lake	2.63	86	Pn	Pn	04 51 42.0	+1.6
LKWY				IAML		04 52 25.4	
	comp=E,163nm,0.7s						
LKWY				IAML		04 52 28.5	
	comp=E,100nm,1.0s						
LOHW	Long Hollow	2.63	107	Pn	Pn	04 51 40.1	-0.3
F10A	Beach Ranch, E	2.71	306	Pn	Pn	04 51 42.5	+1.2
AHID	Auburn Hatcher	2.73	127	Pn	Pn	04 51 42.2	+0.5
AHID				IAML		04 52 20.8	
	comp=E,107nm,0.6s						
AHID				IAML		04 52 25.8	
	comp=N,172nm,0.5s						
HRY	Holter Researc	2.77	34	Pn	Pn	04 51 41.7	-0.4
YMP	Mirror Lake Pl	2.81	82	Pn	Pn	04 51 43.9	+1.0
YMP				IAML		04 52 31.8	
	comp=N,114nm,0.7s						
HVU	Hansel Valley	2.82	160	Pn	Pn	04 51 43.3	+0.5
HVU				IAML		04 52 30.5	
	comp=E,247nm,0.7s						
YNE	Yellowstone No	2.95	77	Pn	Pn	04 51 45.3	+0.5
YNE				IAML		04 52 31.2	
	comp=E,163nm,0.5s						
JTMT	Jette	3.32	358	Pn	Pn	04 51 50.6	+0.9
JTMT				IAML		04 52 47.5	
	comp=N,83nm,0.4s						
JTMT				IAML		04 52 48.3	
	comp=E,112nm,0.4s						
SPUT	South Promonto	3.34	159	Pn	Pn	04 51 50.1	0.0
RLMT	Red Lodge	3.49	77	Pn	Pn	04 51 54.3	+2.1
RLMT				IAML		04 52 47.7	
	comp=E,116nm,0.6s						
RLMT				IAML		04 52 50.4	
	comp=E,128nm,0.6s						
G08A	Pilot Rock	3.58	286	Pn	Pn	04 51 52.8	-0.5
G08A				IAML		04 52 51.2	
	comp=N,45nm,0.8s						
BGU	Big Grassy Mou	3.59	167	Pn	Pn	04 51 55.2	+1.8
BGU				IAML		04 52 51.5	
	comp=N,56nm,0.8s						
BW06	Boulder Array	3.68	115	Pn	Pn	04 51 55.3	+0.5
PDAR	Pinedale Array	3.68	115	Pn	Pn	04 51 57.6	+2.8
	comp=N,0.8nm,0.3s,baz=297,slow=12,SNR=25						
PDAR				Lg	Lg	04 52 48.0	
	comp=N,1.0nm,0.3s,baz=313,slow=30,SNR=5.7						
PDAR	Pinedale Array	3.68	115		Pn	04 51 56.1	+1.4
ELK	Elko	3.79	194	Pn	Pn	04 51 56.0	-0.3
	comp=N,1.5nm,0.3s,baz=2.1,slow=13,SNR=30						
ELK				Lg	Lg	04 52 48.6	
	comp=N,6.7nm,0.3s,baz=148,slow=8.4,SNR=13						
ELK	Elko	3.79	194	Pn	Pn	04 51 56.8	+0.5
WVOR	Wild Horse Val	3.88	241	Pn	Pn	04 51 57.1	-0.3
WVOR				IAML		04 53 05.1	
	comp=N,37nm,0.8s						
WVOR				IAML		04 53 05.2	
	comp=N,38nm,2.0s						
I07A	Izee	3.92	267	Pn	Pn	04 51 57.7	-0.3
I07A				IAML		04 53 10.8	
	comp=N,42nm,1.3s						
D08A	Wollman Farm,	4.29	309	Pn	Pn	04 52 04.8	+1.9
D08A				IAML		04 53 23.7	
	comp=N,33nm,1.1s						
HAWA	Hanford	4.31	299	Pn	Pn	04 52 04.8	+1.6
DUG	Dugway, Tooele	4.34	167	Pn	Pn	04 52 03.2	-0.5
DUG				IAML		04 53 14.3	
	comp=N,33nm,1.1s						
DUG				IAML		04 53 22.3	
	comp=N,40nm,0.9s						
NEW	Newport	4.37	332	Pn	Pn	04 52 04.8	+0.6
	comp=N,0.8nm,0.3s,baz=136,slow=11,SNR=9.8						
NEW				Lg	Lg	04 53 16.0	
	comp=N,6.4nm,0.3s,baz=69,slow=23,SNR=6.5						
NEW	Newport	4.37	332	Pn	Pn	04 52 04.7	+0.6
NEW				IAML		04 53 20.1	
	comp=N,60nm,0.6s						
NEW				IAML		04 53 27.2	
	comp=N,34nm,0.7s						
C09A	Chrisman Ranch	4.46	321	Pn	Pn	04 52 07.7	+2.4
E07A	Sunnyside	4.59	300	Pn	Pn	04 52 10.2	+3.2
E07A				IAML		04 53 36.9	
	comp=E,33nm,1.1s						
E07A				IAML		04 53 41.9	
	comp=N,34nm,0.7s						
WALA	Waterton Lakes	4.63	1	Pn	Pn	04 52 08.4	+0.7
WALA				IAML		04 53 27.0	
	comp=N,32nm,1.5s						
EGMT	Eagleton	4.68	38	Pn	Pn	04 52 07.2	-1.1
PINE	Pine Mountain	4.99	265	Pn	Pn	04 52 14.5	+1.8
PINE				IAML		04 53 43.0	
	comp=E,20nm,5.0s						
PINE				IAML		04 54 48.7	
	comp=N,19nm,4.9s						
MOD	Modoc Plateau	5.21	243	Pn	Pn	04 52 15.7	0.0
MOD				IAML		04 53 46.2	
	comp=N,15nm,1.7s						
MOD				IAML		04 54 01.4	
	comp=E,14nm,2.6s						
K05A	Summer Lake	5.24	253	Pn	Pn	04 52 15.9	-0.2
K05A				IAML		04 53 56.4	
	comp=N,20nm,4.5s						
K05A				IAML		04 54 20.9	
	comp=E,14nm,4.6s						
B08A	Colville Reser	5.35	319	Pn	Pn	04 52 18.9	+1.3
LTY	Liberty	5.40	304	Pn	Pn	04 52 19.4	+1.1
R11A	Troy Canyon, C	6.18	191	Pn	Pn	04 52 32.7	+3.6
NVAR	Mina Array Bea	6.79	209	Pn	Pn	04 52 40.4	+3.0
	comp=E,0.3nm,0.3s,baz=19,slow=12,SNR=6.8						
NVAR				Lg	Lg	04 54 26.2	
	comp=E,0.7nm,0.3s,baz=50,slow=25,SNR=4.7						
PV11	David Mesa, Pa	7.27	146		Pn	04 52 48.8	+4.8
YKA	Yellowknife Ar	18.10	359	P	Pn	04 55 06.8	-2.1
	comp=E,0.0nm,0.3s,baz=176,slow=12,SNR=4.0						

*INET **26** 05:02:18.7, 10°.20N×87°.24W, h15km, MW3.7*
UCR 26 05:02:24.1±1.9**, 10°.41N×86°.84W, h10**km**, MW3.6, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	1.31	96	*i* P	Pn	05 02 46.7	-1.8
GUAI				*i* S	Sb	05 03 05.2	-0.6
ORTG	Ortega, Santa	1.36	92	*e*P	Pn	05 02 47.5	-1.7
ORTG				*e*S	Sb	05 03 06.7	-0.5
DUNO	Dulce Nombre,	1.36	104	*e*P	Pn	05 02 47.3	-2.0
DUNO				*e*S	Sb	05 03 06.0	-1.2
GBS3	Finca Las Img	1.41	75	*i* P	Pn	05 02 48.2	-1.7
LAPC	Finca la Perla	1.43	75	*i* P	Pn	05 02 48.3	-1.8
BUEV	Buena Vista	1.46	74	*e*P	Pn	05 02 49.2	-1.4
BUEV				*e*S	Sg	05 03 10.9	-0.2
GB1A	Borinquen Arri	1.47	74	*e*P	Pn	05 02 50.1	-0.7
GPS2	Hotel Rincn d	1.50	77	*e*P	Pn	05 02 49.8	-1.4
GPS2				*i* S	Sb	05 03 11.5	+0.2
GPS1	Guardaparques	1.51	76	*i* P	Pn	05 02 50.1	-1.2
LIM1	Limonal	1.59	79	*i* S	Sn	05 03 13.3	+0.3
CUI	Cuipilapa	1.67	81	*e*P	Pn	05 02 52.3	-1.1
CUI				*i* S	Sn	05 03 15.4	+0.5
ACAL	Aguas Claras	1.79	83	*i* P	Pn	05 02 54.2	-0.9
PTEN	Parque Tenorio	1.85	80	*i* P	Pn	05 02 55.8	-0.2
LAFE	Finca La Fe, P	1.99	107	*e*P	Pn	05 02 55.8	-2.1
LAFE				*e*S	Sn	05 03 20.4	-2.5
ARE1	Arenal 1	2.09	88	*e*P	Pn	05 02 59.4	+0.2
CEDE	Laguna Cedeo	2.10	88	*e*P	Pn	05 02 59.5	0.0
JACO	JACO, Garabito	2.27	109	*e*P	Pn	05 03 01.5	-0.2
SRA1	San Ramn	2.34	98	*e*P	Pn	05 03 03.0	+0.1
LCR2	La Lucha 2	2.87	103	*e*P	Pn	05 03 10.5	+0.4
RIMA	Rio Macho	3.00	102	*e*P	Pn	05 03 12.5	+0.6
CVTR	Volcan Turrial	3.06	97	*e*P	Pn	05 03 15.2	+2.3
CDM	Cerro de Muert	3.15	105	*e*P	Pn	05 03 14.5	+0.3
PEZE	Perez Zeledon,	3.28	108	*e*P	Pn	05 03 15.9	+0.3
MRVA	Moravia de Chi	3.39	100	*e*P	Pn	05 03 18.4	+1.1
DRK0	Durika	3.72	107	*e*P	Pn	05 03 22.1	+0.3
PIRO	Carate, Puerto	3.99	120	*e*P	Pn	05 03 25.9	+0.6

IDC 26 05:18:41.6±2.1**, 14°.82S×177°.51W, h0**km**, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.7**/26**, mbtmp3.8**/3**, MS3.8**/17**, Ms1 3.8**/17**, ms1mx3.7**/33**, Error ellipse: s-maj=133.5km s-min=32.9km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.63	81	LR	LR	05 21 45.4	
	comp=Z,1μm,20.2s,baz=262,slow=33						
RAO	Raoul Island	14.37	181	LR	LR	05 26 43.9	
	comp=Z,593nm,21.6s,baz=90,slow=34						
DZM	Mont Dzumac	16.84	242	*e*LR	LR	05 25 52.3	
	comp=Z,750nm,25.3s						
DZM	Mont Dzumac	16.84	242	LR	LR	05 28 16.6	
	comp=Z,563nm,18.2s,baz=52,slow=34						
RAR	Rarotonga	18.02	113	LR	LR	05 28 21.9	
	comp=Z,161nm,21.7s,baz=295,slow=32						
HNR	Honiara	22.67	281	LR	LR	05 31 16.9	
	comp=Z,266nm,20.9s,baz=120,slow=33						
URZ	Urewera	23.82	191	LR	LR	05 32 18.7	
	comp=Z,273nm,19.5s,baz=31,slow=34						
PPT	Papeete	26.95	100	LR	LR	05 32 02.9	
	comp=Z,102nm,19.4s,baz=203,slow=30						
PPT2	Papeete2	26.95	100	*e*LR	LR	05 30 29.5	
	comp=Z,414nm,26.0s						
TBI	Tubuai	27.79	112	*e*LR	LR	05 31 03.4	
	comp=Z,462nm,27.8s						
TAOE	Nuku Hiva Isla	37.01	85	*e*LR	LR	05 34 53.7	
	comp=Z,385nm,27.1s						
STKA	Stephens Creek	40.92	238	LR	LR	05 42 04.4	
	comp=Z,130nm,19.1s,baz=51,slow=34						
WRA	Warramunga Arr	46.11	256	LR	LR	05 44 10.2	
	comp=Z,141nm,21.1s,baz=155,slow=33						
ASAR	Alice Springs	46.52	251	P	P	05 27 11.2	-0.1
	2.2nm,0.8s,baz=83,slow=8.4,SNR=28						
ASAR				LR	LR	05 44 33.1	
	comp=Z,177nm,21.8s,baz=91,slow=33						
VNDA	Vanda	63.58	185	LR	LR	05 52 03.5	
	comp=Z,93nm,18.4s,baz=317,slow=32						
ASAJ	Asahikawa	69.02	330	LR	LR	05 55 02.4	
	comp=Z,45nm,19.4s,baz=122,slow=32						
PETK	Petropavlovsk-	70.94	344	LR	LR	05 55 00.3	
	comp=Z,65nm,21.4s,baz=159,slow=31						
USRK	Ussuriysk Ar.	74.58	325	LR	LR	05 58 57.7	
	comp=Z,63nm,19.2s,baz=139,slow=32						
KLR	Kul'dur	77.92	329	LR	LR	05 59 22.6	
	comp=Z,95nm,21.5s,baz=189,slow=31						
ILAR	Eielson Array	82.70	13	P	P	05 31 06.8	0.0
	0.5nm,0.9s,baz=229,slow=6.8,SNR=4.0						
ILAR				LR	LR	06 00 19.4	
	comp=Z,46nm,20.8s,baz=220,slow=30						
TXAR	Lajitas Array	83.62	58	P	P	05 31 12.5	0.0
	0.4nm,0.9s,baz=232,slow=5.3,SNR=4.8						
YKA	Yellowknife Ar	91.18	24	LR	LR	06 07 38.2	
	comp=Z,66nm,19.4s,baz=0.0,slow=32						

*IDC **26** 05:24:25.1±8.8, 37°.32N×72°.08E, h214km±56km, mb2.9/1, mb1 2.7/5, mb1mx2.6/44, mbtmp3.4/5, Error ellipse: s-maj=104.1km s-min=75.6km az=93.0*
*NNC **26** 05:24:26.1±4.2, 37°.49N×71°.61E, h199km±67km, mb2.3, mpv3.2, Error ellipse: s-maj=46.8km s-min=23.4km az=11.0*
ISC 26 05:24:21.9±2.4**, 37°.2N**±0°.2×**71°.7E**±0°.1**, h200**km**, n9,**
σ**0ˢ.91**/12**, 5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.80	21	P	Pn	05 25 48.0	+1.3
	1.2nm,0.3s,baz=188,slow=7.1,SNR=14						
AAK				S	Sn	05 26 54.0	+0.3
	1.5nm,0.3s,baz=322,slow=22,SNR=22						
AAK	Ala-Archa	5.80	21	⇑P	Pn	05 25 47.8	+1.1
	2.2nm,0.5s						
AAK				⇑S	Sn	05 26 53.6	-0.1
	19nm,0.8s						
KK31	Karatay Array	5.93	351	⇑P	Pn	05 25 49.6	+1.4
	0.9nm,0.4s,baz=164,slow=11,SNR=12						
KK31				⇑S	Sn	05 26 55.3	-1.2
	1.3nm,0.2s,baz=32,slow=51,SNR=4.8						
MK31	Makanchi Array	12.36	36	P	P	05 27 15.2	-0.1
	0.1nm,0.3s,baz=191,slow=8.5,SNR=6.0						
MKAR	Makanchi Array	12.36	36	P	Pn	05 27 10.8	-0.4
	0.0nm,0.3s,baz=213,slow=13,SNR=3.6						
KURBB	Kurchatov Arra	14.24	18	P	Pn	05 27 34.0	-0.6
	0.0nm,0.3s,baz=202,slow=10,SNR=4.5						
AB31	Akbulak array	14.73	328	⇑P	Pn	05 27 40.9	+0.3
	1.8nm,1.1s,baz=147,slow=12,SNR=4.8						
ZALV	Zalesovo Beam	19.01	24	P	P	05 28 28.5	+0.1
	0.5nm,0.3s,baz=216,slow=9.8,SNR=11						
SONM	Songino Array	27.45	56	P	P	05 29 48.8	-0.5
	0.3nm,0.5s,baz=251,slow=12,SNR=2.7						

*SJA **26** 05:35:13.0±0.6, 15°.49S×70°.28W, h203km±171km, ML4.8, MW4.4*
*NEIC **26** 05:35:14.7±2.1, 15°.54S±0°.07×70°.26W±0°.10, h200km±6km, mb4.5/126, Error ellipse: s-maj=13.6km s-min=9.4km az=80.0*
*VAO **26** 05:35:14.5±0.5, 15°.54S×70°.32W, h199km±5km, mb4.3*
*IDC **26** 05:35:15.1±1.0, 15°.47S×70°.14W, h203km±8km, mb3.9/15, mb1 4.1/21, mb1mx3.9/45, mbtmp4.4/21, Error ellipse: s-maj=14.4km s-min=10.0km az=44.0*
ISC 26 05:35:14.2±0.3**, 15°.59S**±0°.04×**70°.31W**±0°.06**, h200**km**,**
n254, σ**1ˢ.60**/271**, mb4.4**/61**, 8C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.77	181	⇑iP	Pn	05 36 02.9	+1.8
AP01				iS	Sn	05 36 38.6	+0.7
AP01				IAML		05 36 40.2	
	comp=E,3μm,0.5s						
AP01	Chacalluta	2.77	181		Pn	05 36 02.9	+1.8
PB16	IPOC Station P	2.84	164	Pn	Pn	05 36 05.9	+3.3
PB16				Sn	Sn	05 36 44.7	+4.4
MNMC	Minye Minye	3.59	169	⇑iP	Pn	05 36 13.3	+2.1
MNMC				eS	Sn	05 36 56.4	+0.5
MNMC	Minye Minye	3.59	169		Pn	05 36 13.3	+2.1
MNMC				Sn	Sn	05 36 57.4	+1.4
PSGC	Pisagua	3.99	177	eP	Pn	05 36 16.5	+0.5
PSGC				iS	Sn	05 37 02.1	-2.6
PSGCX	Pisagua	3.99	177	Pn	Pn	05 36 16.6	+0.6
PSGCX				Sn	Sn	05 37 02.6	-2.0
PB08	IPOC Station P	4.66	166	⇑iP	Pn	05 36 26.5	+1.9
PB08				iS	Sn	05 37 19.4	-0.9
PB08	IPOC Station P	4.66	166		Pn	05 36 26.4	+1.8
PB08				Sn	Sn	05 37 19.3	-0.9
TA02	Huaiquique	4.66	178	⇑iP	Pn	05 36 24.7	+0.4
TA02				eS	Sn	05 37 15.9	-3.6
HMBC	Humberstone	4.68	175	⇑iP	Pn	05 36 25.1	+0.4
HMBC				eS	Sn	05 37 15.0	-5.3
TA01	Diego Aracena	4.95	179	⇑iP	Pn	05 36 28.1	+0.2
TA01				iS	Sn	05 37 22.2	-4.1
TA01	Diego Aracena	4.95	179		Pn	05 36 28.2	+0.2
TA01				Sn	Sn	05 37 24.2	-2.0
PATCX	Punta Patache	5.21	178	eP	Pn	05 36 29.4	-2.0
PATCX				eS	Sn	05 37 28.0	-4.3
PATCX	Punta Patache	5.21	178		Pn	05 36 31.5	+0.2
PATCX				Sn	Sn	05 37 29.8	-2.5
PB07	IPOC Station P	6.12	176	⇑iP	Pn	05 36 43.4	+0.3
PB07				eS	Sn	05 37 47.5	-6.2
PB07	IPOC Station P	6.12	176		Pn	05 36 43.5	+0.3
PB07				Sn	Sn	05 37 50.9	-2.7
PB07	IPOC Station P	6.12	176	iP	Pn	05 36 43.7	+0.6
PB07				eS	Sn	05 37 49.7	-3.9
PB07				IAML		05 37 55.2	
	comp=Z,756nm,0.6s						
PB09	IPOC Station P	6.26	171	⇑iP	Pn	05 36 45.7	+0.7
PB09				eS	Sn	05 37 51.7	-5.2
PB09	IPOC Station P	6.26	171		Pn	05 36 45.0	0.0
PB09				Sn	Sn	05 37 55.0	-1.8
PB09	IPOC Station P	6.26	171	iP	Pn	05 36 45.9	+0.9
PB09				iS	Sn	05 37 54.6	-2.3
PB09				IAML		05 38 03.3	
	comp=Z,348nm,0.8s						
PB03	IPOC Station P	6.45	175	iP	Pn	05 36 47.6	+0.2
PB03				eS	Sn	05 37 58.1	-3.2
PB03				IAML		05 38 00.6	
	comp=Z,511nm,0.4s						
PB04	IPOC Station P	6.71	179		Pn	05 36 51.4	+0.5
PB04	IPOC Station P	6.71	179	iP	Pn	05 36 51.6	+0.8
PB04				eS	Sn	05 38 04.1	-3.5
PB04				IAML		05 38 06.9	
	comp=Z,384nm,0.4s						
ETMB	Extrema	6.99	35	eP	Pn	05 36 55.7	+1.3
LVC	Limon Verde	7.11	169	P	Pn	05 36 57.0	+0.9
	comp=Z,40nm,0.3s,baz=9.3,slow=7.8,SNR=256						
LVC				S	Sn	05 38 13.0	-4.2
	comp=Z,30nm,0.3s,baz=169,slow=15,SNR=9.4						
LVC	Limon Verde	7.11	169	iP	Pn	05 36 57.1	+0.9
LVC				eS	Sn	05 38 13.8	-3.4
LVC				IAML		05 38 24.3	
	comp=Z,100nm,0.5s						
LVC	Limon Verde	7.11	169	eP	Pn	05 36 57.3	+1.1
PB06	IPOC Station P	7.12	174		Pn	05 36 55.8	-0.3
PB05	IPOC Station P	7.23	179	iP	Pn	05 36 57.2	-0.3
PB05				IAML		05 38 36.4	
	comp=Z,192nm,0.7s						
NNA	Nana	7.28	299	P	Pn	05 36 59.4	+1.2
	comp=Z,4.2nm,0.3s,baz=132,slow=9.3,SNR=10						
NNA				S	Sn	05 38 18.2	-2.6
	comp=Z,4.3nm,0.3s,baz=210,slow=14,SNR=2.9						
NNA	Nana	7.28	299	Pn	Pn	05 36 59.8	+1.5
PB15	IPOC Station P	7.62	174		Pn	05 37 03.6	+0.8
PB10	IPOC Station P	7.89	182	Pn	Pn	05 37 06.4	+0.4
PB10	IPOC Station P	7.89	182	iP	Pn	05 37 06.2	+0.2
PB10				iS	Sn	05 38 31.2	-3.8
PB10				IAML		05 38 34.2	
	comp=Z,102nm,0.3s						
YJA	Yavi	7.97	146	iP	Pn	05 37 08.6	+1.1
YJA				iS	Sn	05 38 38.1	+0.4
YJA				IAML		05 38 39.8	
	comp=Z,6.8nm,0.6s						
CZSB	Cruzeiro do Su	8.15	343	eP	Pn	05 37 06.8	-2.7
HJA	Humahuaca	8.88	149	iP	Pn	05 37 20.1	+0.9
HJA				IAML		05 39 07.6	
	comp=Z,17nm,0.5s						
SIV	San Ignacio	8.90	94	P	Pn	05 37 19.1	-0.2
	comp=Z,1.7nm,0.3s,baz=292,slow=10,SNR=62						
PB14	IPOC Station P	8.99	181	Pn	Pn	05 37 21.2	+0.5
PB14	IPOC Station P	8.99	181	iP	Pn	05 37 21.2	+0.5
PB14				eS	Sn	05 38 56.6	-5.1
PB14				IAML		05 39 03.6	
	comp=Z,84nm,0.7s						
GO02	Mina Guanaco	9.55	176	Pn	Pn	05 37 28.7	+0.8
SAML	Samuel	9.59	47		Pn	05 37 28.4	+0.2
ASTB	Santa Barbara	9.98	147	iP	Pn	05 37 32.8	-0.5
ASTB				eS	Sn	05 39 16.6	-8.3
ASTB				IAML		05 39 20.3	
	comp=Z,2.6nm,0.5s						
VILB	Vilhena	10.14	76	eP	Pn	05 37 35.2	-0.2
AC01	Pan de Azucar	10.51	181	Pn	Pn	05 37 40.6	+0.6
FSA	Cafayete	11.22	160	iP	Pn	05 37 49.9	+0.5
AC02	Maricunga	11.25	175	Pn	Pn	05 37 51.4	+1.5
ATAH	Atahualpa	11.54	316	P	Pn	05 37 55.1	+1.3
	comp=Z,0.5nm,0.3s,baz=132,slow=13,SNR=9.0						
GO03	Copiap	11.95	180		Pn	05 37 59.3	+0.9
AC04	Llanos de Chal	12.58	183		Pn	05 38 07.2	+0.8
AC05	El Transito	13.19	180	Pn	Pn	05 38 16.0	+1.8
LCO	Las Campanas	13.37	181	Pn	Pn	05 38 18.1	+1.6
CO01	Juntas del Tor	14.32	179	Pn	Pn	05 38 29.3	+0.9
GO04	Tololo Observa	14.53	182	P	P	05 38 33.0	+1.0
AQDB	Aquidauana	14.72	111	eP	P	05 38 34.5	+0.4
PP1B	Ponte de Pedra	14.93	100	eP	P	05 38 36.2	-0.2
CO03	El Pedregal	15.19	181	P	P	05 38 40.9	+1.7
CO03				IAmb	IAmb	05 38 57.7	
	comp=Z,14nm,0.8s						
CO02	Combarbal	15.56	182		P	05 38 45.5	+2.1
CO02				IAmb	IAmb	05 38 47.3	
	comp=Z,23nm,1.1s						
MACA	Manacapuru-AM	15.57	38	eP	P	05 38 43.4	-0.1
CPUP	Villa Florida	16.15	134	P	Pn	05 38 50.4	+0.1
	comp=Z,0.5nm,0.3s,baz=327,slow=9.4,SNR=20						
CPUP	Villa Florida	16.15	134	P	Pn	05 38 51.3	+0.9
CPUP	Villa Florida	16.15	134	eP	P	05 38 49.7	0.0
NPGB	Novo Progresso	16.93	62	eP	P	05 38 58.9	+0.4
VA03	San Esteban	17.10	181	P	Pn	05 39 02.6	+0.8
ROC1	El Roble	17.32	182	P	P	05 39 04.1	+1.2
MT02	Curacav	17.61	182	P	Pn	05 39 07.8	+0.2
MT02				IAmb	IAmb	05 39 09.4	
	comp=Z,16nm,0.9s						
OTAV	Otavalo	17.66	332	P	Pn	05 39 08.0	-0.8
OTAV				IAmb	IAmb	05 39 19.6	
	comp=Z,16nm,0.7s						
OTAV	Otavalo	17.66	332	eP	Pn	05 39 08.2	-0.6
OTAV	Otavalo	17.66	332	eP	P	05 39 07.2	+0.3
MT05	Renca	17.73	181	P	P	05 39 07.8	+0.7
MT05				IAmb	IAmb	05 39 18.5	
	comp=Z,40nm,1.2s						
ARAG	Araguaiana, MT	17.82	93	eP	P	05 39 08.9	+0.8
PTGA	Pitinga	17.95	36	P	P	05 39 08.8	-0.8
	comp=Z,7.5nm,0.3s,baz=204,slow=11,SNR=72						
PTGA	Pitinga	17.95	36	P	P	05 39 09.8	+0.2
MACC	Macarena, Meta	17.96	348	eP	P	05 39 08.1	-1.7
GCUF	Volcan Galeras	18.09	337	eP	Pn	05 39 14.8	+0.8
ITTB	Itaituba	18.16	54	eP	P	05 39 12.3	+0.4
TRCB	Terra Rica	18.16	116	eP	P	05 39 13.2	+1.3
GARC	Garzon, Huila	18.39	343	eP	P	05 39 15.2	+0.5
SOTA	Rioblanco	18.68	340	eP	Pn	05 39 20.9	+0.1
PCON	Cinco Dias	18.79	341	eP	Pn	05 39 22.1	-0.2
SNDB	Serra Nova Dou	18.81	81	eP	Pn	05 39 20.7	-1.2
ITQB	Itaqui	18.84	140	eP	P	05 39 20.9	+1.8
PCMB	Pacaembu	19.02	111	eP	P	05 39 22.5	+1.4
BO02	Sierra Bellavi	19.13	181	P	Pn	05 39 24.6	-1.0
PTGB	Pitanga	19.37	121	eP	P	05 39 25.6	+0.6
ITRB	Iturama	19.45	105	eP	P	05 39 26.2	+0.4
YOTC	Yotoco, Valle	20.34	342	eP	P	05 39 34.5	-1.0
CHIC	Chingaza	20.37	350	eP	P	05 39 36.0	-0.1
ITAB	Concordia	20.48	127	eP	P	05 39 36.2	-0.5
MALB	Monte Alegre	20.89	51	eP	P	05 39 41.8	+0.5
BI02	San Fabin de	21.01	182	P	P	05 39 42.2	-0.1
BI02				IAmb	IAmb	05 39 46.4	
	comp=Z,20nm,0.6s						
PLMC	San Jos del P	21.20	343	eP	P	05 39 43.0	-1.5
GUY2C	Guyana, Caldas	21.27	346	eP	P	05 39 45.0	-0.7
IPMB	Ipameri, GO	21.29	100	eP	P	05 39 44.2	-1.3
BI03	Tigo	21.31	186	P	P	05 39 47.3	+1.9
BB19B	Bebedouro	21.38	108	eP	P	05 39 45.5	-0.8
CPSB	Cacapava Do Su	21.38	137	eP	P	05 39 47.4	+1.2
SPBC	San Pablo de B	21.43	350	eP	P	05 39 45.0	-1.9
BDFB	Brasilia	21.48	93	P	P	05 39 47.5	0.0
	comp=Z,3.2nm,0.6s,baz=266,slow=13,SNR=12						
BDFB	Brasilia	21.48	93	P	P	05 39 47.0	-0.5
RUSC	La Rusia	21.52	352	eP	P	05 39 47.7	-0.6
TAMC	Tame, Arauca	21.93	356	eP	P	05 39 52.1	+0.2
PLTB	Pedras Altas	22.16	140	eP	P	05 39 54.0	0.0
PRPB	Parauapebas	22.17	67	eP	P	05 39 53.7	-0.5
BARC	Barichara	22.22	352	eP	P	05 39 53.4	-1.5
PTBC	PUERTO BERRIO,	22.36	349	eP	P	05 39 52.1	-3.9
CNLB	Canela	22.54	131	eP	P	05 39 58.6	+1.1
PAMC	Pamplona, Colo	22.90	354	eP	P	05 40 01.4	0.0
SPB	Sao Paulo	22.96	114	eP	P	05 40 02.4	+1.2
SMTB	Santa Maria do	23.18	76	eP	P	05 40 04.0	+0.7
VAO	Valinhos	23.21	112	eP	P	05 40 04.6	+0.9
LC01	Cunco	23.26	183	P	P	05 40 04.6	+0.8
LC01				IAmb	IAmb	05 40 07.0	
	comp=Z,14nm,1.1s						
ZARC	Zaragoza, Cauc	23.37	349	eP	P	05 40 02.1	-2.9
MCPB	Macapa, AP	23.53	52	eP	P	05 40 07.3	+0.8
SDV	Santo Domingo	24.32	359	P	P	05 40 13.8	-0.1
	comp=Z,3.5nm,0.4s,baz=183,slow=6.4,SNR=8.2						
SDV	Santo Domingo	24.32	359	P	P	05 40 13.8	-0.1
SDV				IAmb	IAmb	05 40 22.8	
	comp=Z,6.8nm,0.5s						
SDV	Santo Domingo	24.32	359	eP	P	05 40 14.2	+0.3
PARB	Paraibuna	24.50	112	eP	P	05 40 15.2	-0.2
SMLC	San Martn de	24.52	351	eP	P	05 40 11.8	-3.6
SDBA	SAO DESIDERIO	24.85	86	eP	P	05 40 18.1	-0.5
PLCA	Paso Flores	25.06	180	P	P	05 40 21.9	+1.6
	comp=Z,4.5nm,0.6s,baz=360,slow=11,SNR=20						
PLCA	Paso Flores	25.06	180	P	P	05 40 22.1	+1.9
PLCA				IAmb	IAmb	05 40 25.6	
	comp=Z,12nm,1.2s						
PLCA	Paso Flores	25.06	180	eP	P	05 40 21.8	+1.6
JANB	Januaria	25.08	92	eP	P	05 40 19.9	-0.7
TMAB	Tom-Au,PA,Br	25.53	61	eP	P	05 40 26.0	+1.4
ROSB	Rosrio	28.71	67	eP	P	05 40 53.3	+0.3
GDU01	Guandu, BA	29.78	90	eP	P	05 41 02.4	-0.1
SVB	Belmont	30.04	18	P	P	05 41 03.9	-0.8
FDF	Fort de France	31.46	17	P	P	05 41 15.8	-1.4
NBMO	Morrinhos-CE	32.19	71	eP	P	05 41 23.8	+0.1
HUMP	Col San Antoni	33.80	8	P	P	05 41 36.7	-0.8
HUMP				IAmb	IAmb	05 41 38.1	
	comp=Z,11nm,0.9s						
AOPR	Arecibo Observ	33.90	6	P	P	05 41 37.3	-1.0
AOPR				IAmb	IAmb	05 41 45.5	
	comp=Z,35nm,1.4s						
GCPR	Guaynabo City	33.94	7	P	P	05 41 38.1	-0.5
GCPR				IAmb	IAmb	05 41 38.1	
	comp=Z,9.4nm,0.6s						
NBRF	Rio Formoso -	35.04	83	eP	P	05 41 47.5	-0.7
RCBR	Riachuelo	35.12	78	P	P	05 41 49.2	+0.2
RCBR				IAmb	IAmb	05 41 49.7	
	comp=Z,15nm,0.8s						
RCBR	Riachuelo	35.12	78	eP	P	05 41 49.2	+0.2
NBPV	Pedro Velho	35.51	79	eP	P	05 41 52.2	-0.1
PETF	Flores	37.62	328	P	P	05 42 12.2	+2.3
PETF				IAmb	IAmb	05 42 13.4	
	comp=Z,20nm,0.8s						
MG01	Puerto William	39.32	178	P	P	05 42 25.3	+1.7
TEIG	Tepich	39.73	333	P	P	05 42 27.7	+0.3
352A	Blakely	48.86	343	P	P	05 43 37.1	-2.4
BIRD	Birdtown, Kers	50.88	349	P	P	05 43 53.5	-1.3
BIRD				IAmb	IAmb	05 43 54.1	
	comp=Z,5.0nm,0.6s						
JCT	Junction City	53.89	328	P	P	05 44 16.2	-0.9
JCT				IAmb	IAmb	05 44 19.5	
	comp=Z,5.2nm,0.8s						
WHTX	Lake Whitney,	53.99	331	P	P	05 44 18.4	+0.7
WVT	Waverly	54.04	342	P	P	05 44 15.2	-2.7
WVT				IAmb	IAmb	05 44 39.3	
	comp=Z,8.6nm,1.2s						
TX32	Lajitas Array	55.06	324	P	P	05 44 26.1	+0.5
TXAR	Lajitas Array	55.06	324	P	P	05 44 26.0	+0.4
	comp=Z,1.5nm,0.6s,baz=151,slow=9.0,SNR=23						
TXAR	Lajitas Array	55.06	324	P	P	05 44 26.0	+0.4
TX31	Lajitas Ar. Si	55.06	324	P	P	05 44 25.9	+0.3
TX31				IAmb	IAmb	05 44 26.6	
	comp=Z,4.9nm,0.7s						
X37A	Clayton	55.30	335	P	P	05 44 27.5	+0.4
X37A				IAmb	IAmb	05 44 29.3	
	comp=Z,7.0nm,0.6s						
PBMO	Poplar Bluff	55.44	340	P	P	05 44 26.0	-2.0
PBMO				IAmb	IAmb	05 44 27.3	
	comp=Z,21nm,1.4s						
ABTX	Abilene, Hawle	55.55	330	P	P	05 44 29.3	+0.4
U40A	Yellville	55.88	338	IAmb	IAmb	05 44 31.4	
	comp=Z,7.1nm,0.8s						
S44A	Carbondale	55.91	342	P	P	05 44 29.9	-1.4
FVM	French Village	56.54	341	IAmb	IAmb	05 44 36.5	
	comp=Z,11nm,0.7s						
WMOK	Wichita Mounta	56.89	332	P	P	05 44 38.0	-0.4
WMOK				IAmb	IAmb	05 44 40.1	
	comp=Z,3.3nm,0.6s						
OK025	Westminster Rd	56.97	334	P	P	05 44 38.4	-0.5
OK030	Cody Creek RV	57.03	334	P	P	05 44 39.5	+0.2
OK031	S. Brethren Rd	57.08	334	P	P	05 44 38.4	-1.2
BCOK	Bluff Creek, N	57.15	334	P	P	05 44 40.3	+0.2
OK029	Liberty Lake	57.20	334	P	P	05 44 40.5	0.0
QUOK	Quay	57.21	335	P	P	05 44 41.0	+0.5
S39A	Bolivar	57.24	338	P	P	05 44 39.3	-1.5
S39A				IAmb	IAmb	05 44 40.5	
	comp=Z,8.1nm,0.8s						
R40A	Maddies Statio	57.42	340	P	P	05 44 40.9	-1.0
R40A				IAmb	IAmb	05 44 41.7	
	comp=Z,6.7nm,0.7s						
MSTX	Muleshoe	58.18	328	P	P	05 44 47.2	-0.3
MSTX				IAmb	IAmb	05 44 49.2	
	comp=Z,13nm,0.9s						
KAN13	South Haven SW	58.25	335	P	P	05 44 48.0	+0.2
U32A	Winter Ranch,	58.36	333	P	P	05 44 49.2	+0.6
KAN01	Argonia South	58.49	334	P	P	05 44 49.4	0.0
KAN08	Anthony NE Sta	58.64	334	P	P	05 44 50.9	+0.5
KAN12	Harper NE Stat	58.71	334	P	P	05 44 51.7	+0.7
R32A	Long Quarter,	59.96	334	IAmb	IAmb	05 45 00.7	
	comp=Z,13nm,0.7s						
CBKS	Cedar Bluff	60.72	334	P	P	05 45 05.2	+0.5
ANMO	Albuquerque	60.86	326	P	P	05 45 06.5	+0.6
KSCO	Kaye Shedlock'	62.15	332	P	P	05 45 15.4	+1.0
BGNE	Belgrade	62.29	337	P	P	05 45 15.4	+0.3
214A	Organ Pipe Nat	62.40	320	P	P	05 45 17.7	+1.6
SDCO	Great Sand Dun	62.51	329	P	P	05 45 17.8	+0.8
SDCO				IAmb	IAmb	05 45 19.1	
	comp=Z,10nm,0.8s						
X16A	Lo Mia Camp, P	63.27	322	P	P	05 45 23.4	+1.5
K31A	O'Neill	63.56	337	P	P	05 45 22.9	-0.6
MVCO	Mesa Verde	63.65	327	P	P	05 45 25.8	+1.4
MVCO				IAmb	IAmb	05 45 27.9	
	comp=Z,3.3nm,0.8s						
ECSD	EROS Data Cent	63.75	339	P	P	05 45 24.1	-0.6
ECSD				IAmb	IAmb	05 45 26.1	
	comp=Z,6.1nm,0.8s						
ISCO	Idaho Springs	64.17	330	P	P	05 45 28.2	+0.3
ISCO				IAmb	IAmb	05 45 29.8	
	comp=Z,4.5nm,0.7s						
SMCO	Snowmass	64.35	329	P	P	05 45 30.4	+1.2
SMCO				IAmb	IAmb	05 45 31.3	
	comp=Z,5.1nm,0.9s						
PV01	Paradox Valley	64.37	327	IAmb	IAmb	05 45 33.0	
	comp=Z,4.0nm,0.8s						
PV15	Paradox Valley	64.48	327	IAmb	IAmb	05 45 32.2	
	comp=Z,12nm,1.1s						
PV13	Radium Mtn., P	64.52	327	IAmb	IAmb	05 45 33.4	
	comp=Z,5.1nm,0.9s						
PV03	Paradox Valley	64.61	327	P	P	05 45 30.8	+0.2
PV03				IAmb	IAmb	05 45 32.9	
	comp=Z,5.2nm,1.2s						
BELA	Belgrano 2	64.76	172	P	P	05 45 30.4	-0.3
PHWY	Pilot Hill	65.28	331	IAmb	IAmb	05 45 36.7	
	comp=Z,5.7nm,0.6s						
F33A	5 Mile Ranch,	65.50	340	IAmb	IAmb	05 45 36.2	
	comp=Z,5.9nm,0.7s						
CCUT	Cedar City	66.57	324	P	P	05 45 44.6	+1.4
MSU	Marysvale	66.58	325	P	P	05 45 45.4	+2.2
MVU	Marysvale	66.60	325	P	P	05 45 44.9	+1.6
RDMU	Red Mountain	66.71	328	P	P	05 45 43.5	-0.5
RSSD	Black Hills	66.92	334	P	P	05 45 46.5	+1.2
RSSD				IAmb	IAmb	05 45 47.0	
	comp=Z,8.6nm,0.6s						
B35A	Bob, Littlefor	67.00	343	P	P	05 45 44.2	-1.2
AGMN	Agassiz Nation	67.56	342	P	P	05 45 48.8	0.0
AGMN				IAmb	IAmb	05 45 49.2	
	comp=Z,7.3nm,0.8s						
E28A	Huff	67.66	338	P	P	05 45 49.6	0.0
TPNV	Topopah Spring	67.85	322	IAmb	IAmb	05 45 54.1	
	comp=Z,7.3nm,1.1s						
SNAA	Sanae	68.28	162	P	P	05 45 54.6	+1.4
SNAA				IAmb	IAmb	05 45 55.4	
	comp=Z,5.1nm,0.6s						
PD31	Pinedale Array	68.35	330	P	P	05 45 55.1	+0.9
PDAR	Pinedale Array	68.35	330	P	P	05 45 54.5	+0.3
	comp=Z,0.8nm,0.6s,baz=120,slow=7.9,SNR=11						
PDAR	Pinedale Array	68.35	330	P	P	05 45 54.9	+0.6
MDND	Maddock	68.36	339	P	P	05 45 54.7	+0.8
DBIC	Dimbokro	68.48	76	P	P	05 45 53.4	-2.0
	comp=Z,4.7nm,0.9s,baz=242,slow=4.4,SNR=11						
DBIC	Dimbokro	68.48	76	P	P	05 45 54.5	-0.9
DBIC				IAmb	IAmb	05 46 05.7	
	comp=Z,11nm,1.3s						
HWUT	Hardware Ranch	68.49	328	P	P	05 45 55.3	+0.2
HWUT				IAmb	IAmb	05 45 57.4	
	comp=Z,8.9nm,1.4s						
ULM	Lac du Bonnet	69.31	343	P	P	05 45 58.3	-1.4
	comp=Z,8.5nm,0.5s,baz=154,slow=6.1,SNR=23						
ULM	Lac du Bonnet	69.31	343	IAmb	IAmb	05 45 59.6	
	comp=Z,7.8nm,0.7s						
FLWY	Flagg Ranch	69.89	330	IAmb	IAmb	05 46 06.1	
	comp=Z,14nm,1.1s						
LAO	LASA Array	69.90	335	IAmb	IAmb	05 46 04.7	
	comp=Z,6.1nm,0.6s						
OMMB	Old Mammoth Mi	69.95	321	P	P	05 46 06.2	+1.9
RLMT	Red Lodge	70.00	332	P	P	05 46 05.5	+1.2
RLMT				IAmb	IAmb	05 46 05.9	
	comp=Z,4.3nm,0.7s						
NVAR	Mina Array Bea	70.05	322	P	P	05 46 06.4	+1.6
	comp=Z,1.2nm,0.8s,baz=145,slow=6.1,SNR=8.9						
NVAR	Mina Array Bea	70.05	322	P	P	05 46 05.0	+0.3
H17A	Grant Village	70.06	330	IAmb	IAmb	05 46 16.7	
	comp=Z,8.4nm,1.4s						
LKWY	Lake	70.11	331	P	P	05 46 06.8	+1.8
LKWY				IAmb	IAmb	05 46 08.2	
	comp=Z,7.1nm,0.8s						
PNTR	Pine Nut	71.25	321	IAmb	IAmb	05 46 15.0	
	comp=Z,3.8nm,0.8s						
PAHR	Pah Rah Range	71.51	322	IAmb	IAmb	05 46 16.4	
	comp=Z,5.3nm,0.9s						
KOWA	Kowa	72.01	69	P	P	05 46 16.1	-0.7
ORV	Oroville	72.69	321	P	P	05 46 21.4	+1.1
BMO	Blue Mountains	73.75	327	P	P	05 46 27.8	+1.3
WDC	Whiskeytown Da	73.95	321	P	P	05 46 27.8	+0.2
JTMT	Jette	74.28	331	P	P	05 46 31.3	+1.8
K05A	Summer Lake	74.31	324	P	P	05 46 29.1	-0.8
I07A	Izee	74.41	326	P	P	05 46 32.4	+2.0
QSPA	South Pole Qui	74.57	180	P	P	05 46 32.8	+1.8
QSPA				IAmb	IAmb	05 46 33.7	
	comp=Z,6.9nm,1.0s						
YBH	Yreka Blue Hor	74.75	322	P	P	05 46 31.6	-0.7
	comp=Z,0.7nm,0.8s,baz=180,slow=12,SNR=4.2						
YBH	Yreka Blue Hor	74.75	322	P	P	05 46 32.9	+0.6
FFC	Flin Flon	75.03	342	P	P	05 46 34.3	+0.8
WALA	Waterton Lakes	75.05	332	P	P	05 46 34.0	+0.1
WALA				IAmb	IAmb	05 46 41.2	
	comp=Z,5.2nm,1.1s						
HUMO	Hull Mountain	75.43	323	P	P	05 46 37.2	+1.1
TOA0	Torodi Ar. Sit	76.72	72	P	P	05 46 42.0	-1.9
TOA0				IAmb	IAmb	05 46 43.0	
	comp=Z,4.4nm,0.7s						
TORD	Torodi Ar. Bea	76.72	72	P	P	05 46 42.3	-1.6
	comp=Z,4.0nm,0.7s,baz=268,slow=5.0,SNR=11						
TORD	Torodi Ar. Bea	76.72	72	P	P	05 46 42.5	-1.4
ESDC	Sonseca Array	82.61	45	P	P	05 47 14.4	-0.8
	comp=Z,1.6nm,1.0s,baz=276,slow=4.5,SNR=4.7						
YKA	Yellowknife Ar	85.20	341	P	P	05 47 27.9	+0.3
	comp=Z,6.9nm,0.8s,baz=131,slow=5.5,SNR=140						
DLBC	Dease Lake	88.37	333	P	P	05 47 44.5	+1.4
	comp=Z,2.9nm,0.7s,baz=74,slow=4.4,SNR=5.2						
RES	Resolute Bay	91.41	354	P	P	05 47 56.9	+0.1
	comp=Z,1.9nm,0.8s,baz=161,slow=5.7,SNR=5.5						
INK	Inuvik	94.96	341	P	P	05 48 13.3	0.0
	comp=Z,2.5nm,0.6s,baz=103,slow=5.2,SNR=9.5						
AKTO	Aktyubinsk	125.98	38	PKP	PKiKP	05 53 53.8	+1.0
	comp=Z,1.4nm,0.7s,baz=331,slow=6.0,SNR=5.2						
ASAR	Alice Springs	134.37	212	PKP	PKPdf	05 54 09.6	+0.4
	comp=Z,0.6nm,0.6s,baz=121,slow=1.8,SNR=9.6						
ASAR				SKPbc	SKPbc	05 57 19.4	-0.8
	comp=Z,1.3nm,1.0s,baz=118,slow=4.2,SNR=5.8						
KURK	Kurchatov	136.96	29		PKiKP	05 54 14.6	-0.3
KURBB	Kurchatov Arra	136.98	29	PKP	PKiKP	05 54 14.6	-0.3
	comp=Z,1.1nm,0.6s,baz=314,slow=2.7,SNR=10						
KURBB				SKP		05 57 27.9	
	comp=Z,0.8nm,1.0s,baz=317,slow=3.4,SNR=4.7						
ZALV	Zalesovo Beam	137.07	21	PKP	PKiKP	05 54 14.5	-0.5
	comp=Z,5.1nm,0.6s,baz=291,slow=2.8,SNR=24						
ZALV				SKP		05 57 28.1	
	comp=Z,1.5nm,0.8s,baz=317,slow=2.0,SNR=6.8						
ZALV	Zalesovo Beam	137.07	21	PKPdf	PKiKP	05 54 14.7	-0.3
WRA	Warramunga Arr	137.18	215	PKP	PKPdf	05 54 15.4	+1.0
	comp=Z,0.7nm,0.4s,baz=138,slow=1.6,SNR=13						
WRA				SKPbc	SKPbc	05 57 28.9	+0.1
	comp=Z,0.7nm,0.6s,baz=148,slow=2.4,SNR=14						
AAK	Ala-Archa	139.58	41	SKPbc	SKPbc	05 57 33.9	-1.2
	comp=Z,3.1nm,0.8s,baz=233,slow=3.2,SNR=8.8						
MKAR	Makanchi Array	141.43	30	PKP	PKPdf	05 54 21.4	0.0
	comp=Z,1.2nm,0.7s,baz=303,slow=4.2,SNR=5.1						
MKAR				SKPbc	SKPbc	05 57 38.5	-1.2
	comp=Z,0.9nm,0.8s,baz=303,slow=1.8,SNR=8.0						
USRK	Ussuriysk Ar.	145.77	331	PKPbc	PKPbc	05 54 29.7	-0.2
	comp=Z,3.7nm,0.7s,baz=31,slow=3.7,SNR=6.4						
USRK	Ussuriysk Ar.	145.77	331	PKPbc	PKPbc	05 54 30.0	+0.2
MJAR	Matsushiro Arr	147.16	315	PKPbc	PKPbc	05 54 34.3	+0.2
	comp=Z,2.0nm,0.5s,baz=88,slow=2.4,SNR=4.0						
SONM	Songino Array	147.73	4	PKPbc	PKPbc	05 54 36.3	+0.9
	comp=Z,8.8nm,0.6s,baz=329,slow=1.6,SNR=71						

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*NNC **26** 05:36:14.2±3.1, 53.°58N×86.°95E, h0km, mb2.6, mpv2.4, Error ellipse: s-maj=26.6km s-min=12.6km az=51.0, Suspected Mining explosion.*

IDC 26 05:36:14.9±2.3**, 53.°65N**×**87.°02E, h0**km**, mb1 2.7**/2**, mb1mx2.6**/64**, mbtmp2.7**/2**, ML2.4**/2**, 4C-4D, Error ellipse: s-maj=20.3km s-min=12.9km az=76.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.34	284	i		05 43 37.2	
	baz=103,slow=344,SNR=5.1						
ZAA0	Zalesovo Array	1.34	284	⇓P	Pg	05 36 38.9	-1.7
	0.4nm,0.7s						
ZAA0				⇓S	Sg	05 36 56.7	-1.2
	1.5nm,0.7s						
ZALV	Zalesovo Beam	1.34	284	Pg	Pg	05 36 38.6	-2.0
	0.9nm,0.3s,baz=106,slow=17,SNR=14						
ZALV				Lg	Lg	05 36 57.4	
	1.5nm,0.3s,baz=102,slow=27,SNR=14						
ZALV				Rg	Rg	05 37 09.5	
	3.4nm,0.8s,baz=99,slow=33,SNR=6.7						
KURBB	Kurchatov Arra	6.04	243	Pn	Pn	05 37 47.1	+1.7
	0.0nm,0.3s,baz=59,slow=13,SNR=4.2						
KURBB				Sn	Sn	05 38 55.2	0.0
	0.0nm,0.3s,baz=77,slow=32,SNR=4.0						
KURBB				Lg	Lg	05 39 28.4	
	0.0nm,0.3s,baz=63,slow=28,SNR=4.9						
KURBB	Kurchatov Arra	6.04	243	⇑Pn	Pn	05 37 44.1	-1.3
	1.7nm,1.1s						
KURBB				⇑Sn	Sn	05 38 54.2	-1.0
	2.1nm,0.8s						
KURBB				⇓Lg	Lg	05 39 22.6	
	3.0nm,0.7s						
MK31	Makanchi Array	7.50	206	⇑Pn	Pn	05 38 04.1	-1.4
	0.2nm,0.5s,baz=28,slow=14						
MK31				⇑Sn	Sn	05 39 29.8	-1.4
	0.2nm,0.5s,baz=27,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	05 40 10.2	
	0.4nm,0.6s,baz=15,slow=27						
MKAR	Makanchi Array	7.50	206	Pn	Pn	05 38 06.8	+1.4
	0.2nm,0.3s,baz=28,slow=14,SNR=11						

MKAR				Sn	Sn	05 39 29.8	-1.4
	0.1nm,0.3s,baz=24,slow=24,SNR=5.7						
MKAR				Lg	Lg	05 40 13.8	
	0.0nm,0.3s,baz=20,slow=26,SNR=4.2						

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*MOS **26** 05:36:36.2±1.7, 41°.24N×49°.13E, h19^{km}, mb3.9/1, Error ellipse: s-maj=8.5km s-min=6.0km az=37.3*

*AZER **26** 05:36:37.5±0.0, 41°.17N×48°.70E, h6^{km}, ml3.5/31, Error ellipse: s-maj=0.6km s-min=0.4km az=235.0*

*MOS **26** 05:36:38.0±0.0, 41°.24N×48°.66E, h11^{km}, MPVA4.1*

*DRS **26** 05:36:39.5±0.0, 41°.56N×48°.91E, h14^{km}, ML3.5/7*

*IDC **26** 05:36:39.1±1.1, 41°.32N×48°.78E, h34^{km}±8^{km}, mb3.7/6, mb1 3.7/12, mb1mx3.4/53, mbtmp3.7/12, ML3.1/5, MS2.7/3, Ms1 2.7/3, ms1mx2.4/41, Error ellipse: s-maj=19.5km s-min=9.6km az=165.0*

*NNC **26** 05:36:43.5±3.0, 41°.59N×49°.79E, h0^{km}, mb3.7, Error ellipse: s-maj=42.5km s-min=20.8km az=103.0*

ISC 26 05:36:38.4±0.6, **41°.25N**±0°.02×**48°.83E**±0°.02, **h30**^{km}±4^{km}, **n85**, σ**2^{s}33**/142, **mb3.7**/6, **10C-11D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIZA	Siyzn	0.18	164	P	Pb	05 36 43.5	-1.1
	SNR=248						
SIZA				S	Sb	05 36 47.9	-0.8
QUBA	Quba, Azerbaij	0.28	292	P	Pb	05 36 45.9	+0.2
	SNR=116						
QUBA				S	Sb	05 36 51.3	+0.8
ATGJ	Altiaghaj	0.40	169	P	Pb	05 36 46.6	-0.8
	SNR=186						
ATGJ				S	Sb	05 36 53.3	-0.1
PQL	Pirkuli	0.49	202	P	Pb	05 36 48.4	-0.5
	SNR=53						
PQL				S	Sb	05 36 56.4	+0.4
QSAR	Qusar	0.51	302	P	Pb	05 36 49.4	+0.4
	SNR=1252						
QSAR				S	Sn	05 36 58.8	+1.4
XNQ	Khinaliq	0.53	262	P	Pb	05 36 48.8	-0.7
	SNR=2820						
XNQ				S	Sb	05 36 57.6	+0.5
IML	Ismayilli	0.67	228	P	Pb	05 36 51.2	-0.6
	SNR=103						
IML				S	Sb	05 37 01.2	+0.4
GBS	Qobustan	0.72	173	P	Pb	05 36 53.5	+1.0
	SNR=48						
GBS				S	Sn	05 37 06.5	+3.9
QBL	Gabala	0.81	248	P	Pb	05 36 53.2	-0.9
	SNR=63						
QBL				S	Sb	05 37 05.7	+0.9
AKT	Akhty	0.86	286	⇑*i*Pg	Pb	05 36 54.5	-0.4
	1µm,0.4s						
AKT				⇑*e*Sg	Sb	05 37 06.4	+0.1
	5µm,0.4s						
AKT	Akhty	0.86	286	⇑*i*PG	Pb	05 36 54.5	-0.4
AKT				pmax	pmax		
	comp=Z,1µm,0.4s						
KDMR	Kurdemir	1.00	210	P	Pn	05 36 57.4	+1.0
	SNR=4.3						
KDMR				S	Sb	05 37 13.2	+3.2
GOBA	Gobu	1.09	141	P	Pb	05 37 00.3	+1.7
	SNR=8.9						
GOBA				S	Sb	05 37 17.8	+5.3
NDR	Nardaran	1.10	127	P	Pb	05 36 60.0	+1.2
	SNR=9.4						
NDR				S	Sb	05 37 18.1	+5.3
SEKA	Sheki	1.23	269	PG	Pn	05 37 00.5	+0.8
SEKA	Sheki	1.23	269	P	Pn	05 37 00.6	+0.8
	SNR=87						
SEKA				S	Sb	05 37 18.4	+1.7
URKR	Urkarakh	1.28	316	⇑*e*Pg	Pn	05 37 02.6	+2.2
	comp=Z,244nm,0.6s						
URKR				⇑*i*Sg	Sb	05 37 19.8	+1.5
	comp=Z,879nm,0.7s						
URKR	Urkarakh	1.28	316	*e*PG	Pn	05 37 02.5	+2.1
URKR				*e*S	Sb	05 37 19.7	+1.5
ALIB	Äli-Bayra	1.30	174	P	Pb	05 37 03.0	+0.8
	SNR=9.2						
ALIB				S	Sb	05 37 23.1	+4.6
ZRD	Zardab	1.30	222	P	Pn	05 37 01.5	+1.0
	SNR=17						
ZRD				S	Sb	05 37 20.3	+1.7
MNGR	Mingechevir, A	1.41	251	PG	Pn	05 37 04.2	+2.3
MNGR	Mingechevir, A	1.41	251	P	Pn	05 37 04.2	+2.3
	SNR=9.1						
MNGR				S	Sb	05 37 24.2	+2.6
SAAT	Saatly	1.42	193	P	Pb	05 37 04.7	+0.4
SAAT				S	Sb	05 37 23.4	+1.5
SGKR	Sergokala	1.50	324	⇑*e*Pg	Pn	05 37 04.7	+1.5
	comp=Z,131nm,0.4s						
SGKR				⇑*e*Sg	Sn	05 37 22.6	+0.8
	comp=Z,833nm,0.9s						
SGKR	Sergokala	1.50	324	*e*PN	Pn	05 37 04.8	+1.5
BRDA	Brd	1.60	232	Pn	Pn	05 37 07.0	+2.4
BRDA				Sn	Sb	05 37 27.2	+0.2
ZKTA	Zakatala	1.71	284	PN	Pn	05 37 08.9	+2.8
ZKTA	Zakatala	1.71	284	Pn	Pn	05 37 09.0	+2.8
	SNR=58						
ZKTA				Sn	Sb	05 37 31.1	+0.9
AGDM	Agdam	1.74	230	Pg	Pn	05 37 06.9	+0.4
	SNR=15						
AGDM				Sg	Sn	05 37 30.6	+2.8
BLQ	Beylaqan	1.81	213	Pn	Pn	05 37 09.8	+2.3
	SNR=7.0						
BLQ				Sg	Sn	05 37 30.7	+1.2
ARKR	Arakani	1.93	315	⇓*e*Pg	Pb	05 37 12.9	0.0
	comp=Z,58nm,0.6s						
ARKR				⇓*e*Sg	Sb	05 37 38.8	+2.2
	comp=Z,341nm,0.9s						
ARKR	Arakani	1.93	315	⇓*e*PN	Pb	05 37 12.9	0.0
ARKR				*e*		05 37 38.8	
ARKR				pmax	pmax		
	comp=Z,58nm,0.6s						
ARKR				smax	smax		
	comp=N,341nm,0.9s						
GANJ	Ganja	2.00	253	PN	Pn	05 37 10.4	+0.3
GANJ	Ganja	2.00	253	Pg	Pn	05 37 10.6	+0.4
	SNR=11						
GANJ				Sg	Sn	05 37 35.3	+1.2
LGD	Lagodekhi	2.03	288	*e*Pg	Pb	05 37 14.4	-0.3
LGD				*e*Sg	Sb	05 37 39.2	-0.3
LGD	Lagodekhi	2.03	288	⇓*e*PN	Pb	05 37 14.4	-0.3
LGD				*e*S	Sb	05 37 39.2	-0.3
BUJR	Buynaksk	2.03	321	*e*Pg	Pn	05 37 14.2	+3.6
BUJR	Buynaksk	2.03	321	*e*PN	Pn	05 37 14.2	+3.6
BUJR				*e*S	Sn	05 37 38.8	+3.8
GLBA	Clilabad	2.03	190	Pg	Pn	05 37 10.7	+0.1
	SNR=6.6						
GLBA				Sn	Sb	05 37 39.8	+0.2
QRD	Qoradiz	2.13	213	Pn	Pn	05 37 14.9	+3.0
	SNR=6.0						
QRD				Sn	Sb	05 37 43.2	+0.9
KRNR	Karanay	2.13	318	⇓*e*Pg	Pb	05 37 16.0	-0.5
	comp=N,43nm,0.4s						
KRNR				⇓*e*Sg	Sb	05 37 45.7	+3.2
	comp=N,195nm,0.8s						
KRNR	Karanay	2.13	318	*e*PN	Pb	05 37 16.0	-0.5
KRNR				*e*S	Sb	05 37 45.7	+3.2
DBC	Dubki	2.31	321	⇓*e*Pg	Pb	05 37 18.9	-0.6
	comp=N,2.8nm,0.1s						
DBC				⇓*e*Sg	Sb	05 37 49.4	+1.7
	comp=N,221nm,0.6s						
DBC	Dubki	2.31	321	*e*PN	Pn	05 37 17.8	+3.3
DBC				*e*S	Sb	05 37 49.0	+1.3
YRD	Yardimli	2.37	191	Pg	Pn	05 37 14.8	-0.7
	SNR=7.2						
YRD				Sg	Sb	05 37 49.3	-0.2
GDB	GEDABAY	2.39	258	Pn	Pn	05 37 16.0	+0.3
GDB				Sn	Sn	05 37 45.4	+1.3
BTLR	Botlikh	2.41	307	⇓*e*Pg	Pb	05 37 23.4	+2.3
	comp=N,92nm,0.6s						
BTLR				⇓*e*Sg	Sb	05 37 55.1	+4.7
	comp=N,126nm,0.5s						
BTLR	Botlikh	2.41	307	*e*PN	Pb	05 37 22.1	+1.0
BTLR				*e*S	Sn	05 37 48.9	+4.6
QZX	Qazax, Azerbai	2.62	267	Pn	Pn	05 37 19.8	+1.1
	SNR=31						
QZX				Sn	Sb	05 37 54.8	-1.7
LRK	Lerik	2.63	188	Pn	Pn	05 37 18.4	-0.5
	SNR=8.7						
LRK				Sn	Sn	05 37 51.8	+1.9
DVE	Vedeno	2.64	311	*e*Pn	Pn	05 37 23.3	+4.3
DVE	Vedeno	2.64	311	*e*PN	Pn	05 37 23.3	+4.3
ASTR	Astara	2.69	181	Pn	Pn	05 37 21.7	+2.1
ASTR				Sn	Sb	05 37 56.8	-1.5
GROC	Groznyy	2.98	312	*e*Pn	Pn	05 37 25.8	+2.1
GROC	Groznyy	2.98	312	*e*PN	Pn	05 37 25.8	+2.1
GROC				*e*S	Sb	05 38 05.4	-1.4
SBZ	Shahbuz	3.12	235	Pn	Pn	05 37 27.0	+1.4
	SNR=8.0						
SBZ				Sn	Sn	05 38 04.9	+3.0
ORD	Ordubad	3.18	224	Pn	Pn	05 37 27.3	+0.8
	SNR=9.5						
ORD				Sn	Sn	05 38 06.5	+3.1
GNI	Garni	3.30	252	Pn	Pn	05 37 32.4	+4.2
	comp=N,2.7nm,0.3s,baz=56,slow=5.5,SNR=6.1						
GNI				Sn	Sn	05 38 11.0	+4.6
	comp=N,3.5nm,0.3s,baz=259,slow=8.7,SNR=3.5						
GNI				LR	LR	05 39 13.6	
	comp=N,95nm,21.3s,baz=49,slow=47						
GNI	Garni	3.30	252	*e*Pn	Pn	05 37 32.1	+3.9
LACR	Lac	3.73	297	*e*Pn	Pn	05 37 38.0	+4.0
LACR				*e*Sn	Sn	05 38 20.3	+3.3
LACR	Lac	3.73	297	*e*PN	Pn	05 37 38.0	+4.0
LACR				*e*S	Sn	05 38 20.3	+3.3
ZEI	Tsey	3.98	294	*e*Pn	Pn	05 37 41.4	+3.8
ZEI				*e*Sn	Sn	05 38 25.4	+2.0
ZEI	Tsey	3.98	294	*e*PN	Pn	05 37 41.4	+3.8
DIGR	Digorskoe uzhe	4.24	295	*e*Sn	Sn	05 38 32.7	+2.9
DIGR	Digorskoe uzhe	4.24	295	*e*PN	Pn	05 37 46.4	+5.2
KBZ	Khabaz	5.04	301	Pn	Pn	05 37 53.0	+1.1
	comp=N,0.1nm,0.3s,baz=313,slow=19,SNR=1.5						
KBZ				Sn	Sn	05 38 50.0	+1.0
	comp=N,1.0nm,0.3s,baz=337,slow=20,SNR=4.6						
KBZ				LR	LR	05 40 13.5	
	comp=N,46nm,19.0s,baz=115,slow=43						
KBZ	Khabaz	5.04	301	PN	Pn	05 37 53.0	+1.1
AB31	Akbulak array	11.19	41	⇓Pn	Pn	05 39 15.3	-0.9
	comp=N,0.2nm,0.3s,baz=28,slow=25,SNR=12						
AB31				⇑Sn	Sn	05 41 13.8	-6.3
	comp=N,2.5nm,0.7s,baz=221,slow=21,SNR=7.5						
AB31	Akbulak array	11.19	41	P	Pn	05 39 15.3	-0.9
AB31				SN	Sn	05 41 13.8	-6.3
AKTO	Aktyubinsk	11.19	32	Pn	Pn	05 39 15.0	-1.3
	comp=N,0.2nm,0.3s,baz=212,slow=14,SNR=5.9						
AKTO	Aktyubinsk	11.19	32	⇑Pn	Pn	05 39 14.9	-1.3
	comp=N,1.9nm,0.9s						
AKTO				⇑Sn	Sn	05 41 15.3	-4.9
	comp=N,5.8nm,0.6s						
AKTO	Aktyubinsk	11.19	32	P	Pn	05 39 14.9	-1.3
AKTO				SN	Sn	05 41 15.3	-4.9
KK31	Karatay Array	16.17	76	P	Pn	05 40 21.7	-1.7
	comp=N,2.0nm,0.7s,baz=278,slow=13,SNR=14						
KK31	Karatay Array	16.17	76	P	Pn	05 40 21.7	-1.7
ARU	Arti	16.46	19	Pn	Pn	05 40 23.5	-3.4
	comp=N,0.0nm,0.3s,baz=243,slow=14,SNR=1.7						
AKASG	Malin Array Be	16.54	311	Pn	Pn	05 40 28.4	+0.4
	comp=N,0.6nm,0.3s,baz=111,slow=12,SNR=2.6						
BVAR	Borovoye Array	18.72	44	P	P	05 40 54.4	0.0
	comp=N,0.3nm,0.3s,baz=242,slow=3.2,SNR=5.6						
AAK	Ala-Archa	19.12	77	P	P	05 41 01.1	+2.1
	comp=N,0.2nm,0.3s,baz=270,slow=20,SNR=2.6						
KURBB	Kurchatov Arra	22.55	55	P	P	05 41 35.0	-0.8
	comp=N,0.5nm,0.8s,baz=259,slow=11,SNR=5.7						
KURK	Kurchatov	22.62	55	P	P	05 41 35.0	-1.6
FINES	FINESS Array B	24.47	333	P	P	05 41 53.6	-0.8
	comp=N,1.8nm,0.5s,baz=131,slow=8.3,SNR=13						
FINES				pP	pP	05 42 03.3	0.0
	comp=N,1.3nm,0.4s,baz=139,slow=12,SNR=3.5						
MKAR	Makanchi Array	24.57	66	P	P	05 41 55.2	-0.3
	comp=N,0.9nm,0.9s,baz=263,slow=8.5,SNR=7.1						
MKAR				pP	pP	05 42 05.2	+0.9
	comp=N,1.0nm,0.7s,baz=270,slow=7.7,SNR=8.0						
HFS	Hagfors	28.69	323	P	P	05 42 31.8	-0.6
	comp=N,2.5nm,0.4s,baz=112,slow=10.0,SNR=12						
NOA	NORSAR Array B	30.18	324	P	P	05 42 44.1	-1.5
	comp=N,0.2nm,0.4s,baz=125,slow=9.1,SNR=5.7						
NOA				LR	LR	05 56 35.5	
	comp=N,37nm,18.4s,baz=300,slow=40						
ARCES	ARCESS Array B	30.86	344	P	P	05 42 50.9	-0.7
	comp=N,2.2nm,0.9s,baz=145,slow=11,SNR=7.0						
ARCES				pP	pP	05 43 01.1	+0.7
	comp=N,3.0nm,0.9s,baz=156,slow=11,SNR=1.6						

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*IDC **26** 05:39:27.2±1.9, 62°.31N×151°.87W, h65^{km}±20^{km}, mb3.2/6, mb1 3.5/11, mb1mx3.3/65, mbtmp3.5/11, MS3.4/1, Ms1 3.4/1, ms1mx2.5/24, Error ellipse: s-maj=19.6km s-min=14.4km az=101.0*

*ANF **26** 05:39:29.9±0.8, 62°.28N×151°.27W, h97^{km}±7^{km}, ML3.8/14, Error ellipse: s-maj=9.1km s-min=4.1km az=92.0*

*NEIC **26** 05:39:29.7±0.9, 62°.27N±0°.02×151°.42W±0°.07, h92^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=2.4km az=69.0*

*AEIC **26** 05:39:30±1.1, 62°.26N±0°.03×151°.42W±0°.06, h89^{km}±5^{km}, ML3.4, ML3.7/88(NEIC), Error ellipse: s-maj=4.8km s-min=3.5km az=132.0*

ISC 26 05:39:30.1±0.8, **62°.28N**±0°.02×**151°.40W**±0°.03, **h94**^{km}±6^{km}, **n146**, σ**1^{s}08**/149, **mb3.4**/6, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKT	Skwentna	0.30	192		Sn	05 39 53.2	-1.3
SKT	Skwentna	0.30	192		Pn	05 39 43.2	-0.9
SKT	Skwentna	0.30	192	IAML		05 39 53.6	
	comp=E,8µm,0.6s						
SKT				IAML		05 39 53.8	
	comp=N,11µm,0.3s						
CUT	Chulitna	0.54	76	P	Pn	05 39 45.3	-0.2
	baz=256,SNR=283						
CUT				S	Sn	05 39 57.1	0.0
	baz=256						
CUT	Chulitna	0.54	76		Pn	05 39 45.3	-0.2
CUT					Sn	05 39 57.0	-0.1
PPLA	Purkeypile	0.72	330		Pn	05 39 47.0	-0.3
PPLA					Sn	05 39 59.5	-0.7
STLK	Strandline Lak	0.81	195		Pn	05 39 47.3	-0.8
SUA	Susitna One	0.87	159		Pn	05 39 48.2	-0.6
SUA					Sn	05 40 02.3	-0.5
SUA	Susitna One	0.87	159	IAML		05 40 03.2	
	comp=E,2µm,0.8s						
SPCG	Spurr Capps Gl	1.03	197		Pn	05 39 49.7	-0.9
SPCG					Sn	05 40 05.1	-0.8
CRP	Crater Peak	1.07	200		Pn	05 39 50.5	-0.6
CRP					Sn	05 40 06.9	+0.1
SPCP	Crater Peak Br	1.08	200		Pn	05 39 50.4	-0.7
HUR	Hurricane	1.08	48		Pn	05 39 50.9	0.0
SPCN	Chakachatna No	1.12	200		Pn	05 39 51.0	-0.4
FIS	Fire Island	1.27	153		Pn	05 39 54.0	+0.8
GHO	Glory Hole Cre	1.27	112		Pn	05 39 52.9	-0.4
GHO	Glory Hole Cre	1.27	112	IAML		05 40 14.6	
	comp=N,1µm,0.5s						
PMR	Palmer	1.27	122		Sn	05 40 10.3	-0.4
PMR	Palmer	1.27	122		Pn	05 39 52.4	-0.8
PMR	Palmer	1.27	122	IAML		05 40 12.1	
	comp=N,575nm,0.4s						
PMR				IAML		05 40 13.6	
	comp=E,602nm,0.3s						
TRF	Thorofare Moun	1.28	23		Sn	05 40 11.8	+0.6
TRF	Thorofare Moun	1.28	23		Pn	05 39 53.3	-0.2
TRF	Thorofare Moun	1.28	23	IAML		05 40 12.3	
	comp=N,1µm,0.4s						
TRF				IAML		05 40 12.5	
	comp=E,906nm,0.4s						
KTH	Kantishna Hill	1.30	10		Pn	05 39 53.8	+0.2
KTH					Sn	05 40 10.8	-0.5
KTH	Kantishna Hill	1.30	10	IAML		05 40 12.0	
	comp=N,641nm,0.4s						
WAT7	Susitna Watana	1.31	64		Pn	05 39 53.6	-0.1
RC01	Rabbit Creek A	1.43	146	P	Pn	05 39 54.4	-0.8
	baz=326,SNR=41						
RC01				S	Sn	05 40 13.2	-0.9
	baz=326						
RC01	Rabbit Creek A	1.43	146		Pn	05 39 54.4	-0.8
WAT1	Susitna Watana	1.43	66		Pn	05 39 55.0	-0.1
WAT2	Susitna Watana	1.47	61		Pn	05 39 55.7	-0.1
WAT2					Sn	05 40 15.0	-0.2
CAPN	Captain Cook N	1.52	175	P	Pn	05 39 57.5	+1.3
	baz=355						
CAPN				S	Sn	05 40 17.8	+1.8
	baz=355						
CAPN	Captain Cook N	1.52	175		Pn	05 39 57.7	+1.5
SML	Sawmill	1.52	107		Pn	05 39 55.8	-0.5
SML	Sawmill	1.52	107	IAML		05 40 21.0	
	comp=E,925nm,0.9s						
SML				IAML		05 40 22.7	
	comp=N,1µm,0.7s						
RND	Reindeer	1.63	45		Pn	05 39 57.7	0.0
KNK	Knik Glacier	1.64	121		Pn	05 39 57.0	-0.8
KNK	Knik Glacier	1.64	121	IAML		05 40 24.7	
	comp=N,864nm,0.5s						
CHUM	Lake Minchumin	1.67	346		Pn	05 39 58.1	+0.1
CHUM					Sn	05 40 19.1	-0.2
WAT6	Susitna Watana	1.73	78		Pn	05 39 58.6	-0.4
DFR	Drift River	1.80	201		Pn	05 39 58.8	-1.1
BPAW	Bear Paw Mtn.	1.84	6		Pn	05 40 00.1	-0.2
BPAW					Sn	05 40 22.1	-1.2
BPAW	Bear Paw Mtn.	1.84	6	IAML		05 40 23.8	
	comp=N,345nm,0.5s						
MCK	McKinley	1.84	37	P	Pn	05 40 00.7	+0.3
	baz=219,SNR=31						
MCK				S	Sn	05 40 23.1	-0.3
	baz=219						
MCK	McKinley	1.84	37		Pn	05 40 00.8	+0.3
SLKM	Skilak Lake	1.86	162		Pn	05 39 59.9	-0.8
NCT	North Crescent	1.87	204		Pn	05 40 00.5	-0.3
RSO	Redoubt South	1.93	200		Pn	05 40 01.5	-0.3
SCM	Sheep Creek Mo	1.97	101		Pn	05 40 01.2	-0.9
O22K	Cooper Landing	1.98	155	P	Pn	05 40 01.3	-0.8
	baz=336,SNR=13						
O22K				S	Sn	05 40 24.2	-2.2
	baz=336						
O22K	Cooper Landing	1.98	155		Pn	05 40 01.3	-0.8
RED	Redoubt Volcan	1.98	200		Pn	05 40 02.1	-0.1
DHY	Denali Highway	2.02	65		Pn	05 40 02.6	-0.2
DHY					Sn	05 40 28.2	+0.4
DHY	Denali Highway	2.02	65	IAML		05 40 30.5	
	comp=N,438nm,0.5s						
PWL	Port Wells	2.04	133		Pn	05 40 01.5	-1.5
BWN	Browne	2.09	24		Pn	05 40 04.3	+0.7
BWN	Browne	2.09	24	IAML		05 40 30.8	
	comp=N,252nm,1.1s						
TTA	Tatalina	2.23	289		Sn	05 40 30.9	-1.6
TTA	Tatalina	2.23	289		Pn	05 40 04.7	-0.7
TTA	Tatalina	2.23	289	IAML		05 40 32.9	
	comp=N,333nm,0.7s						
TTA				IAML		05 40 33.0	
	comp=E,152nm,1.2s						
SVW2	Sparrevohn	2.32	241		Pn	05 40 06.2	-0.4
SVW2				IAML		05 40 35.1	
	comp=N,232nm,0.7s						
SEW	Seward	2.38	156		Pn	05 40 07.8	+0.5
IVE	Iliamna Volcan	2.40	200		Pn	05 40 07.6	-0.2
M24K	Tolsona, Glenn	2.46	92	P	Pn	05 40 08.2	-0.2
	baz=276,SNR=30						
M24K				S	Sn	05 40 38.0	+0.2
	baz=276						
M24K	Tolsona, Glenn	2.46	92		Pn	05 40 08.2	-0.2
BRLK	Bradley Lake	2.53	174		Pn	05 40 07.8	-1.6
BRLK				IAML		05 40 48.0	
	comp=N,182nm,0.5s						
NEA2	Nenana	2.55	23	P	Pn	05 40 09.2	-0.4
	baz=205,SNR=36						
NEA2				S	Sn	05 40 37.7	-2.3
	baz=205						
NEA2	Nenana	2.55	23		Pn	05 40 09.2	-0.4
BRSE	Bradley Lake S	2.56	173		Pn	05 40 10.3	+0.5
HOM	Homer	2.63	183	S	Sn	05 40 41.2	-0.7
	baz=2.3						
WRH	Wood River Hil	2.66	33		Pn	05 40 10.8	-0.3
KLU	Klutina	2.71	104		Pn	05 40 10.5	-1.4
KLU	Klutina	2.71	104	IAML		05 40 53.5	
	comp=E,186nm,0.7s						
KLU				IAML		05 40 54.9	
	comp=N,204nm,0.7s						
CNPM	China Poot	2.76	178		Pn	05 40 12.2	-0.3
CNPM				IAML		05 40 50.2	
	comp=E,300nm,0.6s						
CNPM				IAML		05 40 52.0	
	comp=N,327nm,0.4s						
PS11	TAPS Pump St11	2.79	91		Pn	05 40 12.7	-0.1
PAX	Paxson	2.83	73		Pn	05 40 13.4	0.0
CCB	Clear Creek Bu	2.88	33		Pn	05 40 13.7	-0.3
DIV	Divide	2.92	111		Pn	05 40 13.0	-1.6
HDA	Harding Lake	2.93	41	P	Pn	05 40 14.4	-0.3
	baz=225,SNR=38						
HDA				S	Sn	05 40 47.1	-2.1
	baz=225						
HDA				S	Sn	05 40 47.1	-2.1
	baz=225						
HDA	Harding Lake	2.93	41		Pn	05 40 14.5	-0.3
HDA	Harding Lake	2.93	41	IAML		05 40 49.0	
	comp=N,125nm,0.9s						
HIN	Hinchinbrook I	3.02	126		Pn	05 40 14.2	-1.8
HIN	Hinchinbrook I	3.02	126	IAML		05 40 51.9	
	comp=N,236nm,1.0s						
HIN				IAML		05 41 09.3	
	comp=E,244nm,0.8s						
I23K	Minto, Yukon-K	3.02	17	P	Pn	05 40 15.9	0.0
	baz=198,SNR=12						
I23K				S	Sn	05 40 49.1	-2.1
	baz=198						
I23K	Minto, Yukon-K	3.02	17		Pn	05 40 16.2	+0.3
MDM	Murphy Dome	3.04	26		Pn	05 40 16.1	-0.1
TCOL	CIGO, UAF Yank	3.05	30	P	Pn	05 40 16.0	-0.3
	baz=213						
TCOL				S	Sn	05 40 49.8	-2.0
	baz=213						
TCOL	CIGO, UAF Yank	3.05	30		Pn	05 40 15.8	-0.4
TCOL	CIGO, UAF Yank	3.05	30	IAML		05 40 53.4	
	comp=N,263nm,0.4s						
TCOL				IAML		05 40 56.7	
	comp=E,216nm,0.5s						
COLA	College	3.05	30		Pn	05 40 16.3	+0.1
COLA	College	3.05	30	IAML		05 41 09.2	
	comp=E,233nm,0.5s						
PS08	TAPS Pump Stn8	3.07	40		Pn	05 40 16.2	-0.3
IL31		3.22	37		Pn	05 40 18.1	-0.3
ILAR	Eielson Array	3.22	37	P	Pn	05 40 18.2	-0.3
	comp=E,2.7nm,0.3s,baz=223,slow=14,SNR=73						
ILAR				S	Sn	05 40 53.9	-2.1
	comp=E,6.6nm,0.3s,baz=222,slow=16,SNR=4.4						
ILAR	Eielson Array	3.22	37	Pn	Pn	05 40 17.3	-1.2
EYAK	Cordova Ski Ar	3.22	120	Pn	Pn	05 40 19.4	+0.8
N25K	Chitina, Valde	3.29	99	P	Pn	05 40 18.4	-1.1
	baz=284,SNR=9.3						
N25K				S	Sn	05 40 55.5	-2.2
	baz=284						
N25K	Chitina, Valde	3.29	99		Pn	05 40 18.5	-1.1
N25K	Chitina, Valde	3.29	99	IAML		05 40 57.0	
	comp=E,125nm,0.6s						
N25K				IAML		05 40 57.4	
	comp=N,128nm,0.6s						
RIDG	Independent Ri	3.33	61		Pn	05 40 20.8	+0.7
RIDG	Independent Ri	3.33	61	IAML		05 41 01.0	
	comp=E,213nm,0.4s						
RIDG				IAML		05 41 10.8	
	comp=N,195nm,0.7s						
POKR	Poker Plat Res	3.35	30	P	Pn	05 40 20.4	+0.1
	baz=214,SNR=8.5						
POKR				S	Sn	05 40 57.7	-1.6
	baz=214						
POKR	Poker Plat Res	3.35	30		Pn	05 40 20.7	+0.3
BMRM	Bremner River	3.50	109		Pn	05 40 20.8	-1.6
MENT	Mentasta	3.61	76		Pn	05 40 23.5	-0.4
MENT				IAML		05 41 18.3	
	comp=N,143nm,0.8s						
MENT				IAML		05 41 29.1	
	comp=E,153nm,0.7s						
DOT	Dot Lake	3.62	64		Pn	05 40 23.7	-0.3
GLB	Gilahina Butte	3.69	100		Pn	05 40 23.9	-1.2
GLB	Gilahina Butte	3.69	100	IAML		05 41 21.1	
	comp=E,83nm,0.5s						
GLB				IAML		05 41 24.9	
	comp=N,120nm,0.6s						
SCRK	Sand Creek	3.77	60	P	Pn	05 40 25.9	-0.2
	baz=246,SNR=27						
SCRK				S	Sn	05 41 07.8	-1.8
	baz=246						
SCRK	Sand Creek	3.77	60		Pn	05 40 25.9	-0.2
IMAR	Indian Mountai	3.86	346		Pn	05 40 27.2	0.0
VRDI	Verde Repeater	3.92	102		Pn	05 40 27.6	-0.6
VRDI				IAML		05 41 27.3	
	comp=N,79nm,0.8s						
VRDI				IAML		05 41 32.0	
	comp=E,73nm,0.7s						
MCARA	McCarthy VSAT	4.07	99		Pn	05 40 29.1	-1.0
PRP	Porcupine Dome	4.16	36		Pn	05 40 31.4	0.0
BERG	Berg Lake	4.16	114		Pn	05 40 29.9	-1.5
CRQM	Cirque	4.24	107		Pn	05 40 31.8	-0.8
TGL	Tana Glacier	4.38	107		Pn	05 40 34.4	0.0
PTPK	Patty Peak	4.39	100		Pn	05 40 33.4	-1.2

BALM	**Baldy**	**4.49**	**102**		**Pn**	**05 40 34.5**	**-1.3**
BALM				IAML		05 41 46.9	
	comp=E,56nm,0.7s						
BCAR	**Beaver Creek A**	**4.50**	**76**		**Pn**	**05 40 34.6**	**-1.3**
KIAG	**Kiagna River**	**4.53**	**103**		**Pn**	**05 40 34.7**	**-1.7**
KDAK	**Kodiak Island**	**4.55**	**188**	P	**Pn**	**05 40 34.4**	**-2.1**
	comp=E,0.2nm,0.3s,baz=59,slow=10,SNR=16						
KDAK				S	**Sn**	**05 41 25.2**	**-2.9**
	comp=E,1.8nm,0.3s,baz=195,slow=20,SNR=6.8						
BARN	**Barnard Glacie**	**4.80**	**100**		**Pn**	**05 40 38.8**	**-1.3**
BARN				IAML		05 41 56.5	
	comp=E,56nm,1.0s						
BARN				IAML		05 41 58.8	
	comp=N,57nm,0.7s						
GRNC	**Granite Creek**	**4.87**	**104**		**Pn**	**05 40 39.5**	**-1.6**
BVCY	**Beaver Creek**	**4.92**	**84**		**Pn**	**05 40 41.1**	**-0.4**
CTGM	**Chitina Glacie**	**4.98**	**101**		**Pn**	**05 40 41.8**	**-0.7**
CTGM	**Chitina Glacie**	**4.98**	**101**	IAML		05 42 00.1	
	comp=N,57nm,0.7s						
CTGM				IAML		05 42 06.6	
	comp=E,31nm,3.4s						
YUK2	**White River**	**5.00**	**91**		**Pn**	**05 40 42.0**	**-0.7**
YAH	**Yahtse**	**5.03**	**108**		**Pn**	**05 40 43.3**	**0.0**
YAH				IAML		05 41 39.0	
	comp=E,56nm,0.8s						
FYU	**Fort Yukon**	**5.07**	**29**	Pn	**Pn**	**05 40 41.9**	**-1.5**
FYU				IAML		05 42 46.3	
	comp=E,46nm,4.4s						
FYU				IAML		05 43 43.6	
	comp=N,53nm,4.5s						
YUK3	**Moose Creek**	**5.18**	**91**		**Pn**	**05 40 44.5**	**-0.7**
EGAK	**Eagle**	**5.22**	**57**		**Pn**	**05 40 45.1**	**-0.5**
EGAK	**Eagle**	**5.22**	**57**	IAML		05 42 28.3	
	comp=N,38nm,0.9s						
DAWY	**Dawson**	**5.73**	**66**		**Pn**	**05 40 51.9**	**-0.7**
BMAR	**Burnt Mountain**	**5.93**	**26**		**Pn**	**05 40 52.9**	**-2.4**
INK	**Inuvik**	**9.59**	**43**	P	**Pn**	**05 41 43.8**	**-1.2**
	comp=N,0.5nm,0.3s,baz=230,slow=15,SNR=12						
DLBC	**Dease Lake**	**11.24**	**100**	P	**Pn**	**05 42 06.2**	**-1.3**
	comp=N,0.1nm,0.3s,baz=287,slow=14,SNR=2.5						
DLBC	**Dease Lake**	**11.24**	**100**	Pn	**Pn**	**05 42 06.0**	**-1.6**
C36M	**Paulatuk**	**13.14**	**46**	P	**Pn**	**05 42 29.2**	**-3.4**
	baz=251						
YKA	**Yellowknife Ar**	**16.92**	**73**	P	**Pn**	**05 43 20.1**	**-0.5**
	comp=N,0.2nm,0.3s,baz=282,slow=9.1,SNR=21						
NEW	**Newport**	**23.68**	**110**	LR	LR	05 53 26.0	
	comp=N,84nm,18.2s,baz=312,slow=35						
NVAR	**Mina Array Bea**	**31.26**	**124**	P	**P**	**05 45 43.1**	**+2.2**
	comp=N,0.7nm,0.7s,baz=306,slow=8.5,SNR=7.6						
PDAR	**Pinedale Array**	**31.29**	**109**	P	**P**	**05 45 43.5**	**+2.3**
	comp=N,0.2nm,0.5s,baz=303,slow=4.1,SNR=3.5						
ULM	**Lac du Bonnet**	**32.04**	**86**	P	**P**	**05 45 48.4**	**+1.0**
	comp=N,1.6nm,0.8s,baz=315,slow=6.4,SNR=3.7						
TXAR	**Lajitas Array**	**45.13**	**114**	P	**P**	**05 47 38.9**	**+1.9**
	comp=N,0.3nm,0.8s,baz=321,slow=6.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**60.68**	**326**	P	**P**	**05 49 29.8**	**-1.1**
	comp=N,0.3nm,0.7s,baz=27,slow=6.9,SNR=3.5						
MKAR	**Makanchi Array**	**63.13**	**322**	P	**P**	**05 49 46.6**	**-0.7**
	comp=N,0.2nm,0.5s,baz=48,slow=1.8,SNR=3.5						

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*SKHL **26** 05:44:39.6±0.2, 43°.77N×148°.55E, h62^{km}±2^{km}, mb4.3/3*
*IDC **26** 05:44:40.7±1.8, 45°.00N×147°.20E, h168^{km}±18^{km}, mb3.2/10, mb1 3.5/12, mb1mx3.2/47, mbtmp3.7/12, Error ellipse: s-maj=19.9km s-min=14.2km az=137.0*
*JMA **26** 05:44:41.7±0.4, 44°.66N×147°.31E, h162^{km}, M3.4*
ISC 26 05:44:40.4±0.8, **44°.73N**±0°.08×**147°.31E**±0°.07, **h172**^{km}±6^{km}, **n32,** σ**1^{s}.46**/44, **mb3.4**/10, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.64**	**38**	*e*P	**Pn**	**05 45 03.9**	**-1.0**
KUR				AMB	AMB	05 45 04.0	
	80nm,0.3s						
KUR				*e*S	**Sn**	**05 45 22.0**	**-1.8**
KUR				A	A	05 45 23.0	
	268nm,0.3s						
KUR				A	A	05 45 23.0	
	177nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.25**	**237**	*i* P	**Pn**	**05 45 10.0**	**+0.7**
YUK				AMB	AMB	05 45 10.0	
	72nm,0.3s						
YUK				*i* S	**Sn**	**05 45 33.0**	**+1.4**
YUK				A	A	05 45 37.0	
	641nm,0.4s						
YUK				A	A	05 45 37.0	
	170nm,0.4s						
GRPR	**Tuman**	**1.33**	**237**	*i* P	**Pn**	**05 45 10.7**	**+0.7**
GRPR				AMB	AMB	05 45 12.0	
	91nm,0.4s						
GRPR				*i* S	**Sn**	**05 45 34.0**	**+1.2**
GRPR				A	A	05 45 35.0	
	298nm,0.4s						
GRPR				A	A	05 45 35.0	
	508nm,0.4s						
JRA	**Rausu**	**1.76**	**244**	P	**Pn**	**05 45 14.5**	**+0.3**
NEM2	**Nemuro 2**	**1.77**	**220**	P	**Pn**	**05 45 14.4**	**0.0**
NEM2				*e*S	**Sn**	**05 45 39.6**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.77**	**221**	*i* P	**Pn**	**05 45 12.2**	**-2.2**
JNSB	**Nemuroshibetsu**	**1.91**	**241**	P	**Pn**	**05 45 16.7**	**+0.8**
JNK	**Nakash**	**2.19**	**239**	P	**Pn**	**05 45 19.7**	**+0.7**
JKHN	**Kushirohamanak**	**2.26**	**224**	P	**Pn**	**05 45 20.2**	**+0.4**
JKHN				*e*S	**Sn**	**05 45 50.1**	**-0.3**
JTKR	**Abashiri--Toko**	**2.56**	**254**	P	**Pn**	**05 45 23.5**	**+0.3**
JTKR				*e*S	**Sn**	**05 45 56.3**	**-0.1**
JAK	**Akkeshi**	**2.56**	**228**	P	**Pn**	**05 45 23.7**	**+0.4**
JAK				*e*S	**Sn**	**05 45 56.2**	**-0.5**
JAR	**Ashorobuto**	**2.93**	**242**	P	**Pn**	**05 45 29.0**	**+1.3**
JSE	**Soyaes**	**3.37**	**276**	P	**Pn**	**05 45 32.9**	**-0.2**
JKK2	**Kamakawa 2**	**3.38**	**257**	P	**Pn**	**05 45 34.4**	**+1.0**
JKK2				*e*S	**Sn**	**05 46 15.6**	**+0.9**
ASAJ	**Asahikawa**	**3.43**	**261**	P	**Pn**	**05 45 35.0**	**+1.0**
	3.3nm,0.3s,baz=78,slow=15,SNR=15						
ASAJ				S	**Sn**	**05 46 15.1**	**-0.6**
	0.9nm,0.3s,baz=319,slow=20,SNR=3.0						
JCH	**Churui**	**3.56**	**235**	P	**Pn**	**05 45 36.5**	**+0.9**
JCH				*e*S	**Sn**	**05 46 17.2**	**-1.4**
JWK2	**Keihoku**	**3.88**	**281**	P	**Pn**	**05 45 40.5**	**+0.9**
JNBK	**Urakawa-nobuka**	**4.12**	**235**	P	**Pn**	**05 45 42.4**	**-0.3**
JKB	**Kayabe**	**5.39**	**240**	P	**Pn**	**05 45 58.4**	**-0.8**
JKB				*e*S	**Sn**	**05 46 57.2**	**-3.8**
JOT	**Ohata**	**5.68**	**236**	P	**Pn**	**05 46 01.8**	**-1.2**
JOT				*e*S	**Sn**	**05 47 02.7**	**-5.1**
USRK	**Ussuriysk Ar.**	**10.97**	**273**	P	**Pn**	**05 47 11.8**	**-0.7**
	baz=78,slow=13,SNR=8.2						
SONM	**Songino Array**	**28.21**	**291**	P	**P**	**05 50 16.9**	**0.0**
	0.5nm,0.5s,baz=87,slow=9.1,SNR=3.0						
ILAR	**Eielson Array**	**40.63**	**37**	P	**P**	**05 52 01.9**	**-1.0**
	0.9nm,0.4s,baz=262,slow=4.9,SNR=20						
MKAR	**Makanchi Array**	**44.24**	**297**	P	**P**	**05 52 31.5**	**-0.8**
	0.7nm,0.7s,baz=76,slow=8.6,SNR=7.4						
KURBB	**Kurchatov Arra**	**45.17**	**303**	P	**P**	**05 52 38.1**	**-1.5**
	0.3nm,0.4s,baz=73,slow=8.2,SNR=5.6						
YKA	**Yellowknife Ar**	**54.93**	**34**	P	**P**	**05 53 52.4**	**-0.4**
	1.7nm,0.8s,baz=302,slow=6.6,SNR=26						
WRA	**Warramunga Arr**	**65.44**	**193**	P	**P**	**05 55 06.5**	**+1.9**
	0.3nm,0.5s,baz=9.3,slow=6.8,SNR=3.1						
NVAR	**Mina Array Bea**	**66.96**	**58**	P	**P**	**05 55 14.7**	**+0.2**
	0.6nm,0.7s,baz=301,slow=5.8,SNR=5.9						
ASAR	**Alice Springs**	**69.16**	**193**	P	**P**	**05 55 30.7**	**+2.7**
	0.2nm,0.6s,baz=8.1,slow=6.6,SNR=3.4						
PDAR	**Pinedale Array**	**69.19**	**50**	P	**P**	**05 55 28.2**	**-0.1**
	0.3nm,0.6s,baz=288,slow=0.5,SNR=5.5						
TXAR	**Lajitas Array**	**82.01**	**56**	P	**P**	**05 56 42.5**	**+1.2**
	0.3nm,0.7s,baz=283,slow=3.6,SNR=7.0						
PLCA	**Paso Flores**	**152.07**	**95**	PKPbc	**PKiKP**	**06 04 15.8**	**+0.8**
	0.4nm,0.5s,baz=254,slow=3.1,SNR=6.6						

IDC 26 05:48:10.4±1.8, **14°.34S**×**177°.57W**, **h0**^{km}, **mb3.8**/5, **mb1 4.2**/5, **mb1mx3.9**/27, **mbtmp3.8**/5, **MS3.7**/16, **Ms1 3.7**/16, **ms1mx3.6**/27, **Error ellipse: s-maj=125.0km s-min=28.0km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.63**	**86**	LR	LR	05 50 54.4	
	comp=Z,574nm,20.1s,baz=268,slow=29						
DZM	**Mont Dzumac**	**17.02**	**241**	*e*LR	LR	05 56 19.0	
	comp=Z,812nm,25.4s						
DZM	**Mont Dzumac**	**17.02**	**241**	LR	LR	05 57 47.2	
	comp=Z,436nm,20.2s,baz=60,slow=34						
HNR	**Honiara**	**22.53**	**280**	LR	LR	06 00 25.8	
	comp=Z,177nm,19.8s,baz=90,slow=33						
PPT	**Papeete**	**27.09**	**101**	LR	LR	06 03 19.7	
	comp=Z,38nm,19.6s,baz=206,slow=34						
PPT2	**Papeete2**	**27.09**	**101**	*e*LR	LR	06 00 28.3	
	comp=Z,279nm,25.5s						
TBI	**Tubuai**	**28.02**	**113**	*e*LR	LR	06 00 57.5	
	comp=Z,183nm,27.5s						
TAOE	**Nuku Hiva Isla**	**37.02**	**86**	*e*LR	LR	06 05 11.2	
	comp=Z,307nm,24.9s						
STKA	**Stephens Creek**	**41.13**	**238**	LR	LR	06 11 14.5	
	comp=Z,173nm,20.7s,baz=39,slow=34						
WRA	**Warramunga Arr**	**46.17**	**256**	LR	LR	06 13 30.2	
	comp=Z,100nm,21.0s,baz=90,slow=33						
ASAR	**Alice Springs**	**46.63**	**251**	P	P	05 56 40.7	-0.1
	1.8nm,0.8s,baz=85,slow=8.0,SNR=19						
ASAR				LR	LR	06 14 02.9	
	comp=Z,128nm,20.9s,baz=78,slow=33						
MJAR	**Matsushiro Arr**	**65.58**	**322**	LR	LR	06 27 26.0	
	comp=Z,14nm,18.0s,baz=235,slow=36						
PETK	**Petropavlovsk-**	**70.47**	**344**	LR	LR	06 26 52.6	
	comp=Z,37nm,20.6s,baz=168,slow=33						
KSRS	**Korea Array**	**72.62**	**317**	LR	LR	06 26 10.1	
	comp=Z,35nm,18.8s,baz=157,slow=31						
USRK	**Ussuriysk Ar.**	**74.16**	**325**	LR	LR	06 29 07.4	
	comp=Z,39nm,18.3s,baz=148,slow=33						
NVAR	**Mina Array Bea**	**76.31**	**44**	P	P	06 00 01.2	-0.4
	0.9nm,0.9s,baz=226,slow=8.6,SNR=5.6						
NVAR				LR	LR	06 24 46.5	
	comp=Z,46nm,20.1s,baz=194,slow=29						
KLR	**Kul'dur**	**77.48**	**329**	LR	LR	06 29 24.4	
	comp=Z,78nm,21.8s,baz=190,slow=32						
ILAR	**Eielson Array**	**82.25**	**13**	P	P	06 00 33.5	+0.3
	0.7nm,1.0s,baz=222,slow=4.8,SNR=4.6						
TXAR	**Lajitas Array**	**83.41**	**58**	P	P	06 00 40.8	+0.6
	1.6nm,1.1s,baz=216,slow=4.5,SNR=8.6						
TXAR				LR	LR	06 30 13.8	
	comp=Z,78nm,19.9s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**84.22**	**43**	P	P	06 00 43.8	-0.4
	0.3nm,0.7s,baz=216,slow=6.8,SNR=3.6						
PLCA	**Paso Flores**	**93.18**	**133**	LR	LR	06 34 34.7	
	comp=Z,30nm,20.1s,baz=180,slow=30						
TLY	**Talaya**	**94.32**	**322**	LR	LR	06 37 10.8	
	comp=Z,32nm,20.7s,baz=120,slow=31						

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*NNC **26** 06:06:25.0±1.0, 54°.51N×86°.91E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=13.1km s-min=6.1km az=166.0, Suspected Mining explosion.*
IDC 26 06:06:26.6±2.7, **54°.51N**×**86°.89E**, **h0**^{km}, **mb1 3.2**/2, **mb1mx3.0**/35, **mbtmp3.2**/2, **ML2.9**/2, **6C, Error ellipse: s-maj=22.3km s-min=16.0km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.34**	**246**	*i*		06 13 50.0	
	baz=64,slow=350,SNR=2.7						
ZAA0	**Zalesovo Array**	**1.34**	**246**	⇑P	Pg	06 06 50.0	-2.2
	0.2nm,0.2s						
ZAA0				⇑S	Sg	06 07 08.8	-0.8
	2.9nm,0.8s						
ZALV	**Zalesovo Beam**	**1.34**	**246**	Pg	Pg	06 06 50.2	-2.0
	2.0nm,0.3s,baz=62,slow=16,SNR=23						
ZALV				Lg	Lg	06 07 10.1	
	1.9nm,0.3s,baz=66,slow=25,SNR=8.7						
KURBB	**Kurchatov Arra**	**6.41**	**236**	Pn	Pn	06 08 03.2	+1.1
	0.1nm,0.3s,baz=53,slow=14,SNR=12						
KURBB				Sn	Sn	06 09 14.0	-2.0
	0.0nm,0.3s,baz=45,slow=31,SNR=2.0						
KURBB				Lg	Lg	06 09 52.3	
	0.1nm,0.3s,baz=51,slow=28,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.41**	**236**	⇑Pn	Pn	06 08 00.7	-1.4
	4.6nm,1.1s						
KURBB				⇑Lg	Lg	06 09 47.6	
	6.8nm,0.9s						
MK31	**Makanchi Array**	**8.26**	**203**	Pn	Pn	06 08 27.0	-0.5
	0.1nm,0.2s,baz=21,slow=12,SNR=20						
MK31				⇑Sn	Sn	06 10 00.7	-0.8
	1.8nm,0.8s						
MK31				⇑Lg	Lg	06 10 47.1	
	6.6nm,1.1s,baz=119,slow=7.8,SNR=5.7						
MKAR	**Makanchi Array**	**8.26**	**203**	Pn	Pn	06 08 28.7	+1.1
	0.4nm,0.3s,baz=25,slow=13,SNR=25						
MKAR				Sn	Sn	06 10 00.8	-0.7
	0.1nm,0.3s,baz=25,slow=25,SNR=7.3						
MKAR				Lg	Lg	06 10 47.5	
	0.0nm,0.3s,baz=23,slow=27,SNR=3.2						

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*IDC **26** 06:12:03.0±0.8, 11°.44S×56°.71W, h0^{km}, mb3.9/7, mb1 4.2/12, mb1mx4.0/32, mbtmp4.0/12, ML4.0/5, Error ellipse: s-maj=22.1km s-min=16.2km az=74.0*
*VAO **26** 06:12:02.5±0.3, 11°.49S×56°.73W, h0^{km}, mbR3.9*
ISC 26 06:12:03.6±0.6, **11°.47S**±0°.05×**56°.66W**±0°.06, **h10**^{km}, **n30,** σ**1^{s}.74**/34, **mb4.0**/7, **Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VILB	**Vilhena**	**3.76**	**247**	*e*P	**Pn**	**06 13 01.5**	**-0.3**
NPGB	**Novo Progresso**	**4.58**	**16**	*e*P	**Pn**	**06 13 13.9**	**+0.9**
SIV	**San Ignacio**	**6.21**	**223**	Pn	**Pn**	**06 13 34.9**	**-0.6**
	1.7nm,0.3s,baz=69,slow=16,SNR=28						
SIV				Pg	**Pb**	**06 13 54.1**	**+2.2**
	1.6nm,0.3s,baz=80,slow=19,SNR=7.3						
SIV				Sn	**Sn**	**06 14 45.5**	**-1.1**
	4.3nm,0.3s,baz=82,slow=16,SNR=5.4						
SIV				Lg	Lg	06 15 13.3	
	17nm,0.3s,baz=342,slow=22,SNR=13						
ARAG	**Araguaiana, MT**	**6.32**	**132**	*e*P	**Pn**	**06 13 37.7**	**+0.8**
ITTB	**Itaituba**	**7.12**	**7**	*e*P	**Pn**	**06 13 48.7**	**+0.8**
PRPB	**Parauapebas**	**8.57**	**53**	*e*P	**Pn**	**06 14 08.8**	**+0.9**
AQDB	**Aquidauana**	**9.00**	**174**	*e*P	**Pn**	**06 14 13.6**	**-0.2**
MACA	**Manacapuru-AM**	**9.17**	**334**	*e*P	**Pn**	**06 14 16.5**	**+0.4**
SMTB	**Santa Maria do**	**9.30**	**75**	*e*P	**Pn**	**06 14 18.7**	**+0.8**
BDFB	**Brasilia**	**9.38**	**117**	Pn	**Pn**	**06 14 20.8**	**+1.8**
	1.2nm,0.3s,baz=284,slow=18,SNR=12						
BDFB				Sn	**Sn**	**06 16 01.1**	**-3.5**
	3.9nm,0.3s,baz=135,slow=20,SNR=9.2						
BDFB				Lg	Lg	06 17 02.1	
	5.8nm,0.3s,baz=353,slow=27,SNR=3.5						
ETMB	**Extrema**	**9.53**	**279**	*e*P	**Pn**	**06 14 19.9**	**-1.2**
MALB	**Monte Alegre**	**9.85**	**14**	*e*P	**Pn**	**06 14 25.4**	**+0.1**
IPMB	**Ipameri, GO**	**10.43**	**129**	*e*P	**Pn**	**06 14 34.5**	**+1.2**
PTGA	**Pitinga**	**11.16**	**343**	Pn	**Pn**	**06 14 41.6**	**-1.8**
	1.7nm,0.3s,baz=348,slow=22,SNR=19						
PTGA				Sn	**Sn**	**06 16 42.9**	**-5.5**
	1.7nm,0.3s,baz=68,slow=17,SNR=5.5						
PTGA				Lg	Lg	06 17 55.4	
	1.3nm,0.3s,baz=53,slow=20,SNR=3.0						
PCMB	**Pacaembu**	**11.33**	**154**	*e*P	**Pn**	**06 14 44.0**	**-1.6**
SDBA	**SAO DESIDERIO**	**11.54**	**96**	*e*P	**Pn**	**06 14 50.0**	**+1.3**
MCPB	**Macapa, AP**	**11.95**	**23**	*e*P	**Pn**	**06 14 53.2**	**-1.0**
CPUP	**Villa Florida**	**14.80**	**182**	Pn	**Pn**	**06 15 34.0**	**+1.0**
	0.1nm,0.3s,baz=24,slow=18,SNR=2.0						
CPUP				Sn	**Sn**	**06 18 13.2**	**-3.9**
	0.1nm,0.3s,baz=258,slow=9.3,SNR=2.5						
CPUP				Lg	Lg	06 19 46.8	
	0.2nm,0.3s,baz=72,slow=20,SNR=4.6						
CZSB	**Cruzeiro do Su**	**16.25**	**282**	*e*P	**Pn**	**06 15 51.2**	**-1.0**
MDP	**Montagnes des**	**16.94**	**14**	Pn	**Pn**	**06 16 00.9**	**-0.1**
	0.4nm,0.3s,baz=187,slow=11,SNR=6.0						
MDP				Sn	Sn	06 18 57.9	-12
	0.3nm,0.3s,baz=66,slow=20,SNR=2.1						
RIB01	**Linhares ES**	**17.51**	**118**	*e*P	**P**	**06 16 09.5**	**+0.3**
SDV	**Santo Domingo**	**24.54**	**325**	P	**P**	**06 17 25.1**	**+1.2**
	4.6nm,0.8s,baz=214,slow=12,SNR=5.6						
PLCA	**Paso Flores**	**31.61**	**200**	P	**P**	**06 18 27.8**	**+0.9**
	1.3nm,0.7s,baz=20,slow=9.5,SNR=7.0						
TXAR	**Lajitas Array**	**60.83**	**313**	P	**P**	**06 22 16.6**	**0.0**
	0.2nm,0.8s,baz=110,slow=6.8,SNR=4.8						
TORD	**Torodi Ar. Bea**	**62.85**	**69**	P	**P**	**06 22 31.2**	**+0.9**
	1.2nm,0.8s,baz=261,slow=5.2,SNR=4.2						
ULM	**Lac du Bonnet**	**70.36**	**334**	P	**P**	**06 23 17.3**	**-0.2**
	1.0nm,0.7s,baz=180,slow=4.0,SNR=3.1						
PDAR	**Pinedale Array**	**72.43**	**322**	P	**P**	**06 23 31.6**	**+1.1**
	1.0nm,0.8s,baz=120,slow=8.8,SNR=9.1						
NVAR	**Mina Array Bea**	**75.91**	**315**	P	**P**	**06 23 53.3**	**+2.3**
	0.4nm,0.7s,baz=131,slow=6.1,SNR=4.6						
ASAR	**Alice Springs**	**143.58**	**196**	PKP	PKPbc	06 31 37.9	+1.0
	0.5nm,0.6s,baz=156,slow=3.1,SNR=9.1						
WRA	**Warramunga Arr**	**146.96**	**199**	PKPbc	**PKPab**	**06 31 48.6**	**-0.1**
	1.4nm,0.6s,baz=161,slow=3.0,SNR=15						

MEX 26 06:27:28.5±0.3, **15°.16N**×**91°.98W**, **h6**^{km}±17^{km}, **MD3.6, Mexico-Guatemala border region**

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*NNC **26** 06:29:03.8±1.5, 53°.70N×88°.10E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=18.2km s-min=8.7km az=33.0, Suspected Mining explosion.*
IDC 26 06:29:05.1±2.7, **53°.59N**×**87°.91E**, **h0**^{km}, **mb1 2.9**/2, **mb1mx2.8**/43, **mbtmp2.9**/2, **ML2.6**/2, **5C-1D, Error ellipse: s-maj=22.6km s-min=15.3km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**282**	*i*		06 40 06.0	
	baz=97,slow=342,SNR=6.3						
ZAA0	**Zalesovo Array**	**1.87**	**282**	⇑Pn	Pn	06 29 38.1	-0.2
	0.3nm,0.3s						
ZAA0				⇑Sn	Sg	06 30 04.7	-0.5
	1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**1.87**	**282**	Pn	Pn	06 29 38.2	-0.1
	2.2nm,0.3s,baz=97,slow=16,SNR=33						
ZALV				Lg	Lg	06 30 04.6	
	3.6nm,0.3s,baz=102,slow=25,SNR=30						
KURBB	**Kurchatov Arra**	**6.49**	**247**	Pn	Pn	06 30 42.9	+1.0
	0.1nm,0.3s,baz=60,slow=14,SNR=5.7						
KURBB				Sn	Sn	06 31 55.6	-1.0
	0.0nm,0.3s,baz=61,slow=28,SNR=1.7						
KURBB				Lg	Lg	06 32 29.9	
	0.0nm,0.3s,baz=57,slow=34,SNR=3.4						
KURBB	**Kurchatov Arra**	**6.49**	**247**	⇑Pn	Pn	06 30 42.2	+0.4
	1.1nm,0.4s						
KURBB				⇓Lg	Lg	06 32 33.3	
	5.3nm,0.7s						
MK31	**Makanchi Array**	**7.69**	**210**	⇑Pn	Pn	06 30 59.9	+1.5
	baz=26,slow=14,SNR=9.0						
MK31				⇑Lg	Lg	06 33 11.7	
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**7.69**	**210**	Pn	Pn	06 30 59.3	+0.9
	0.1nm,0.3s,baz=27,slow=14,SNR=8.1						
MKAR				Sn	Sn	06 32 26.2	+0.1
	0.1nm,0.3s,baz=29,slow=30,SNR=3.8						
MKAR				Lg	Lg	06 33 07.8	
	0.0nm,0.3s,baz=38,slow=31,SNR=2.5						

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*JMA **26** 06:32:50.9±0.1, 23°.99N×122°.27E, h19^{km}±3^{km}, M2.3*
*TAP **26** 06:32:51.8, 24°.11N×122°.26E, h23^{km}, ML2.7, D*
ISC 26 06:32:51.4±1.2, **24°.06N**±0°.02×**122°.27E**±0°.02, **h20**^{km}±4^{km}, **n72,** σ**0^{s}.83**/141, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.57**	**313**	*e*P	**Pb**	**06 33 02.5**	**-0.2**
	baz=317						
ENAH				*e*S	**Sb**	**06 33 10.7**	**+0.3**
	baz=317						
ENA	**Nanau**	**0.60**	**307**	*e*P	**Pb**	**06 33 03.5**	**+0.1**
	baz=312						
ENA				*e*S	**Sb**	**06 33 11.0**	**-0.5**
	baz=312						
TWD	**Chiawan**	**0.61**	**272**	*e*P	**Pb**	**06 33 04.1**	**+0.7**
	baz=253						
TWD				*e*S	**Sb**	**06 33 12.7**	**+1.0**
	baz=253						
NACB	**Ninganchiao**	**0.62**	**281**	P	**Pb**	**06 33 03.6**	**0.0**
	baz=260						
NACB				*e*S	**Sn**	**06 33 13.2**	**-1.2**
	baz=260						
TWC	**Suao**	**0.67**	**325**	P	**Pb**	**06 33 03.6**	**-0.7**
	baz=323						
TWC				S	**Sb**	**06 33 12.4**	**-0.8**
	baz=323						
JYNG	**Yonagunijimaku**	**0.73**	**58**	P	**Pb**	**06 33 05.1**	**-0.3**
JYNG				S	**Sn**	**06 33 16.0**	**-1.1**
ETLH	**Xiulin Townshi**	**0.73**	**282**	P	**Pb**	**06 33 05.2**	**-0.2**
	baz=264						
ETLH				*e*S	**Sb**	**06 33 15.6**	**+0.5**
	baz=264						
YOJ	**Yonaguni jima**	**0.79**	**59**	P	**Pb**	**06 33 06.2**	**-0.2**
YOJ				*e*S	**Sb**	**06 33 16.7**	**+0.1**
YOJ	**Yonaguni jima**	**0.79**	**59**	*e*P	**Pb**	**06 33 06.4**	**0.0**
	baz=61						
YOJ				*e*S	**Sn**	**06 33 18.4**	**0.0**
	baz=61						
ESL	**Shilin**	**0.80**	**252**	*e*P	**Pb**	**06 33 06.6**	**0.0**
	baz=238						
ESL				*e*S	**Sb**	**06 33 17.6**	**+0.6**
	baz=238						
TWE	**Neicheng**	**0.86**	**320**	*e*P	**Pn**	**06 33 07.7**	**-0.5**
	baz=318						
TWE				*e*S	**Sb**	**06 33 18.6**	**0.0**
	baz=318						
ENTT	**Nioudou**	**0.86**	**312**	*e*P	**Pn**	**06 33 08.2**	**-0.1**
	baz=321						
ENTT				*e*S	**Sn**	**06 33 19.6**	**-0.7**
	baz=321						
NDT	**Datong Townshi**	**0.88**	**308**	*e*P	**Pn**	**06 33 08.3**	**-0.2**
	baz=317						
NDT				*e*S	**Sb**	**06 33 18.8**	**-0.3**
	baz=317						
NNSB	**Datong**	**0.89**	**295**	*e*P	**Pb**	**06 33 08.2**	**+0.1**
	baz=292						
NNSB				*e*S	**Sn**	**06 33 20.4**	**-0.7**
	baz=292						
NTC	**Toucheng**	**0.89**	**333**	*e*P	**Pn**	**06 33 08.2**	**-0.4**
	baz=331						
NTC				*e*S	**Sn**	**06 33 19.9**	**-1.0**
	baz=331						
NNS	**Nan Shan**	**0.90**	**295**	*e*P	**Pb**	**06 33 08.6**	**+0.2**
	baz=292						
NNS				*e*S	**Sn**	**06 33 20.7**	**-0.7**
	baz=292						
WHF	**Hehuan Shan**	**0.92**	**275**	*e*P	**Pb**	**06 33 08.3**	**-0.6**
	baz=261						
WHF				*e*S	**Sb**	**06 33 21.3**	**+0.5**
	baz=261						
FUSS	**Fushou**	**0.95**	**282**	*e*P	**Pb**	**06 33 09.1**	**-0.2**
	baz=279						
FUSS				*e*S	**Sn**	**06 33 22.9**	**0.0**
	baz=279						
HGSD	**Ruisui**	**0.96**	**234**	*e*P	**Pb**	**06 33 08.4**	**-0.8**
	baz=233						
HGSD				*e*S	**Sn**	**06 33 23.4**	**+0.8**
	baz=233						
TWB1	**Santiao Chiao**	**0.98**	**345**	*e*P	**Pn**	**06 33 10.0**	**+0.1**
	baz=330						
TWB1				*e*S	**Sn**	**06 33 22.7**	**-0.4**
	baz=330						
TIPB	**Shuangxi**	**0.99**	**336**	*e*P	**Pn**	**06 33 10.0**	**-0.2**
	baz=334						
TIPB				*e*S	**Sb**	**06 33 21.9**	**-0.6**
	baz=334						
NWLT	**Wulai**	**1.00**	**316**	*e*P	**Pn**	**06 33 10.5**	**+0.2**
	baz=322						
NWLT				*e*S	**Sn**	**06 33 22.9**	**-0.8**
	baz=322						
CHGB	**Renai**	**1.00**	**270**	*e*P	**Pb**	**06 33 09.5**	**-0.6**
	baz=255						
CHGB				*e*S	**Sn**	**06 33 23.7**	**-0.3**
	baz=255						
YHNB	**Yeheng**	**1.01**	**307**	*e*P	**Pn**	**06 33 10.4**	**-0.1**
	baz=304						
YHNB				*e*S	**Sn**	**06 33 23.6**	**-0.6**
	baz=304						
EHY	**Hungye**	**1.03**	**238**	*e*P	**Pn**	**06 33 09.4**	**-1.2**
	baz=228						
EHY				*e*S	**Sb**	**06 33 24.4**	**+0.9**
	baz=228						
NSK	**Sanguang**	**1.03**	**307**	*e*P	**Pn**	**06 33 10.8**	**+0.1**
	baz=304						
NSK				*e*S	**Sn**	**06 33 24.0**	**-0.6**
	baz=304						
TDCB	**Techi**	**1.03**	**281**	*e*P	**Pb**	**06 33 10.5**	**-0.1**
	baz=266						
TDCB				*e*S	**Sn**	**06 33 24.4**	**-0.2**
	baz=266						
NWF	**Wu-fen Shan**	**1.10**	**336**	*e*P	**Pb**	**06 33 11.8**	**+0.1**
	baz=334						
NWF				*e*S	**Sn**	**06 33 26.0**	**-0.3**
	baz=334						
WFSB	**Wu-fen Shan**	**1.10**	**336**	*e*P	**Pb**	**06 33 11.8**	**+0.1**
	baz=334						
WFSB				*e*S	**Sn**	**06 33 26.2**	**0.0**
	baz=334						
TWA	**Mucha**	**1.11**	**326**	*e*P	**Pb**	**06 33 12.9**	**+1.1**
	baz=323						
TWA				*e*S	**Sn**	**06 33 26.3**	**-0.1**
	baz=323						
YULB	**Yu-li**	**1.11**	**233**	*e*P	**Pn**	**06 33 10.4**	**-1.3**
	baz=248						

YULB				*e*S	Sb	06 33 25.1	-0.8
	baz=248						
EYUL	Yuli	1.12	231	*e*P	Pn	06 33 11.0	-0.9
	baz=247						
EYUL				*e*S	Sb	06 33 25.6	-0.6
	baz=247						
NHDH	Xindian Distri	1.12	323	*e*S	Sn	06 33 27.1	+0.3
	baz=334						
TWF1	Yuli	1.13	232	*e*P	Pn	06 33 10.9	-1.1
	baz=247						
TWF1				*e*S	Sb	06 33 25.7	-0.9
	baz=247						
TATO	Taipei	1.16	322	*e*P	Pb	06 33 13.1	+0.5
	baz=319						
TATO				*e*S	Sn	06 33 27.6	+0.1
	baz=319						
BACT	New Taipei Cit	1.20	321	*e*P	Pb	06 33 13.8	+0.4
	baz=320						
WHP	Taichung City	1.23	280	*e*P	Pb	06 33 14.8	+0.9
	baz=267						
WHP				*e*S	Sb	06 33 30.0	+0.7
	baz=267						
SSLB	Suanglung	1.23	258	*e*P	Pn	06 33 12.5	-0.9
	baz=245						
SSLB				*e*S	Sn	06 33 29.4	-0.1
	baz=245						
FULB	Fuli	1.24	226	*e*P	Pn	06 33 13.1	-0.4
	baz=213						
FULB				*e*S	Sn	06 33 27.7	-1.9
	baz=213						
YM01	YM01	1.25	330	*e*P	Pb	06 33 13.9	-0.5
	baz=342						
YM01				*e*S	Sb	06 33 30.1	0.0
	baz=342						
SMLT	Sun Moon Lake	1.26	262	*e*P	Pn	06 33 12.7	-1.2
	baz=261						
SMLT				*e*S	Sn	06 33 29.9	-0.4
	baz=261						
CHKT	Chengkung	1.26	221	*e*P	Pn	06 33 12.4	-1.4
	baz=209						
CHKT				*e*S	Sn	06 33 27.0	-3.2
	baz=209						
YM10	YM10	1.27	330	*e*P	Pb	06 33 14.6	+0.1
	baz=342						
YM10				*e*S	Sb	06 33 30.1	-0.3
	baz=342						
YM11	YM11	1.27	330	*e*P	Pn	06 33 13.5	-0.5
	baz=343						
YM11				*e*S	Sb	06 33 30.8	+0.2
	baz=343						
YM05	YM05	1.27	330	*e*P	Pb	06 33 14.4	-0.3
	baz=342						
YM05				*e*S	Sb	06 33 30.1	-0.5
	baz=342						
YM04	YM04	1.28	329	*e*P	Pb	06 33 14.5	-0.2
	baz=341						
YM04				*e*S	Sb	06 33 30.4	-0.3
	baz=341						
YM08	YM08	1.28	331	*e*P	Pb	06 33 14.5	-0.3
	baz=329						
YM08				*e*S	Sb	06 33 30.2	-0.6
	baz=329						
LIOB	Emei	1.28	297	*e*P	Pb	06 33 14.6	-0.2
	baz=295						
LIOB				*e*S	Sb	06 33 30.8	-0.1
	baz=295						
YM03	YM03	1.30	329	*e*P	Pb	06 33 14.8	-0.3
	baz=341						
YM03				*e*S	Sb	06 33 30.6	-0.7
	baz=341						
TYC	Yuchr	1.30	263	*e*P	Pn	06 33 15.0	+0.7
	baz=262						
TYC				*e*S	Sb	06 33 31.5	+0.2
	baz=262						
YUS	Yu-Shan	1.33	245	*e*P	Pn	06 33 15.2	-0.1
	baz=244						
YUS				*e*S	Sn	06 33 33.0	+0.4
	baz=244						
TWY	Chenhua	1.35	334	*e*P	Pb	06 33 15.4	-0.6
	baz=331						
TWY				*e*S	Sb	06 33 33.0	+0.1
	baz=331						
IRIF	Iriomote-Funau	1.36	78	P	Pn	06 33 15.8	+0.6
IRIF				*e*S	Sb	06 33 34.1	+0.9
EDH	Donghe	1.40	219	*e*P	Pn	06 33 14.2	-1.5
	baz=209						
EDH				*e*S	Sn	06 33 31.1	-2.4
	baz=209						
HATJ	Hateruma jima	1.41	90	P	Pn	06 33 16.2	+0.4
HATJ				S	Sb	06 33 35.1	+0.7
LDUT	Ludao	1.56	208	*e*P	Pn	06 33 17.6	-0.3
	baz=209						
LDUT				*e*S	Sn	06 33 36.1	-1.4
	baz=209						
JKRS	Kuro-shima	1.60	83	P	Pb	06 33 19.9	-0.3
JKRS				S	Sb	06 33 40.3	+0.3
WGK	Gukeng	1.60	257	*e*P	Pn	06 33 19.4	+0.9
	baz=256						
TWGBT	Beinan	1.65	222	*e*P	Pn	06 33 18.0	-1.1
	baz=234						
TWGBT				*e*S	Sn	06 33 38.9	-0.9
	baz=234						
TWG	Pinlang	1.65	222	*e*P	Pn	06 33 19.0	-0.2
	baz=234						
TWG				*e*S	Sn	06 33 39.3	-0.5
	baz=234						
TPUB	Ta-pu	1.68	244	*e*P	Pn	06 33 20.4	+0.8
	baz=243						
TPUB				*e*S	Sn	06 33 41.6	+1.0
	baz=243						
WTP	Ta-pu	1.72	242	*e*P	Pn	06 33 21.4	+1.2
	baz=242						
WTP				*e*S	Sn	06 33 43.2	+1.6
	baz=242						
JIJ	Ishigaki jima	1.74	80	P	Pn	06 33 20.9	+0.5
JIJ				S	Sn	06 33 41.8	-0.1
CHN1	Nanshi	1.82	242	*e*P	Pn	06 33 22.9	+1.4
	baz=242						
CHN1				*e*S	Sn	06 33 45.8	+1.9
	baz=242						
SLGT	Liugui	1.83	235	*e*P	Pn	06 33 23.0	+1.4
	baz=225						
SLGT				*e*S	Sn	06 33 45.6	+1.5
	baz=225						
JISG	Ishigakijimahi	1.94	74	P	Pn	06 33 23.1	0.0
JISG				S	Sn	06 33 45.5	-1.3
TSMG	Majia	2.01	228	*e*P	Pn	06 33 25.6	+1.5
	baz=222						
TSMG				*e*S	Sn	06 33 49.2	+0.6
	baz=222						
MASBT	Mashibuluo	2.08	227	*e*P	Pn	06 33 26.2	+1.2
	baz=220						
MASBT				*e*S	Sn	06 33 52.5	+2.0
	baz=220						
EAST	Anshuo	2.12	218	*e*P	Pn	06 33 25.2	-0.4
	baz=220						
EAST				*e*S	Sn	06 33 50.0	-1.4
	baz=220						
SLIU	Shizi	2.28	217	*e*P	Pn	06 33 28.5	+0.7
	baz=218						
SLIU				*e*S	Sn	06 33 56.1	+0.9
	baz=218						
JTJ	Tarama	2.29	75	P	Pn	06 33 29.0	+1.0
JTJ				S	Sn	06 33 55.3	-0.4
PHUB	P'eng-hu	2.53	258	*e*P	Pn	06 33 32.5	+1.2
	baz=257						
PHUB				*e*S	Sn	06 34 01.9	+0.5
	baz=257						

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*IDC **26** 06:35:19.5±1.0, 51°.70N×166°.87W, h0^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/41, mbtmp3.6/11, ML2.9/1, Error ellipse: s-maj=29.9km s-min=17.6km az=179.0*

*AEIC **26** 06:35:22.9±2.1, 51°.75N±0°.09×166°.88W±0°.07, h18^{km}±5^{km}, ML3.2/22, mb4.2/6(NEIC), Error ellipse: s-maj=13.5km s-min=5.4km az=163.0*

*NEIC **26** 06:35:23.5±2.5, 51°.84N±0°.04×166°.83W±0°.09, h20^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=4.8km az=77.0*

ISC 26 06:35:21.3±0.8, **51°.75N**±0°.08×**166°.70W**±0°.06, **h10**^{km}, **n67**, σ**1^{s}49**/72, **mb3.7**/11, **South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKSP	Okmok Steeple	1.79	328		Pn	06 35 52.4	+0.1
NIKH	Nikolski High	1.80	314		Sn	06 36 14.3	-0.9
NIKH	Nikolski High	1.80	314		Pn	06 35 51.9	-0.5
OKFG	Magazine Ridge	1.82	337		Pn	06 35 52.2	-0.5
OKFG					Sn	06 36 15.1	-0.6
OKSO	Okmok South	1.84	332		Pn	06 35 52.2	-0.8
OKSO					Sn	06 36 15.4	-0.9
MGOD	Makushin Gods	2.05	357		Pn	06 35 56.8	+0.9
MREP	Makushin Rep't	2.07	359		Pn	06 35 56.9	+0.8
MAPS	Pakushin South	2.07	356		Pn	06 35 56.9	+0.8
MAPS					Sn	06 36 23.2	+1.3
UNV	Unalaska Valle	2.10	3	Pn	Pn	06 35 57.5	+1.0
AKMO	Akutan Morgan	2.38	10		Pn	06 36 01.3	+0.9
AKRB	Akutan Reef Bi	2.42	9		Pn	06 36 01.9	+1.1
AKRB					Sn	06 36 32.0	+1.5
AKUT	Akutan	2.46	13	Pn	Pn	06 36 01.0	-0.3
WESP	Westdahl Peak	3.00	23		Pn	06 36 11.5	+2.6
SSBA	Shishaldin	3.40	26		Pn	06 36 16.5	+2.1
FALS	False Pass	3.69	31	Pn	Pn	06 36 19.5	+1.3
DT1	Dutton Round H	4.28	36		Pn	06 36 28.1	+1.7
ATKA	Atka Island	4.66	279		Pn	06 36 30.2	-1.4
SDPT	Sand Point	5.18	43		Pn	06 36 40.3	+1.6
GSMY	Great Sitkin M	5.80	277		Pn	06 36 48.2	+0.9
GSTR	Great Sitkin T	5.80	277	Pn	Pn	06 36 46.7	-0.7
GSTD	Great Sitkin T	5.85	277		Pn	06 36 47.4	-0.7
ADK	Adak	6.19	275	Pn	Pn	06 36 51.7	-1.0
CHGN	Chignik	6.68	44	Pn	Pn	06 37 00.9	+1.6
AMKA	Amchitka	8.73	273	Pn	Pn	06 37 26.8	-0.6
SII	Sitkinak Islan	8.78	52	Pn	Pn	06 37 29.6	+1.4
OHAK	Old Harbor	9.53	50	Pn	Pn	06 37 36.4	-2.0
KDAK	Kodiak Island	10.14	48	Pn	Pn	06 37 46.6	-0.1
	1.0nm,0.3s,baz=183,slow=3.7,SNR=54						
KDAK				Sn	Sn	06 39 34.0	-6.4
	0.0nm,0.3s,baz=323,slow=20,SNR=2.5						
KDAK	Kodiak Island	10.14	48		Pn	06 37 46.3	-0.5
CNPM	China Poot	11.68	42	Pn	Pn	06 38 08.0	+0.1
SEW	Seward	12.76	42	Pn	Pn	06 38 22.5	0.0
O22K	Cooper Landing	12.86	41	Pn	Pn	06 38 24.1	+0.2
SUA	Susitna One	13.07	36	Pn	Pn	06 38 27.9	+1.0
PPLA	Purkeypile	13.61	29	Pn	Pn	06 38 37.5	+3.3
PMR	Palmer	13.75	37	Pn	Pn	06 38 36.9	+0.8
KNK	Knik Glacier	13.90	39	Pn	Pn	06 38 37.5	-0.7
GHO	Glory Hole Cre	13.94	37	Pn	Pn	06 38 39.4	+0.6
HIN	Hinchinbrook I	14.17	44	Pn	Pn	06 38 41.2	-0.6
SML	Sawmill	14.19	38	Pn	Pn	06 38 41.5	-0.6
KTH	Kantishna Hill	14.48	29	Pn	Pn	06 38 48.4	+2.3
EYAK	Cordova Ski Ar	14.57	45	Pn	Pn	06 38 46.4	-0.9
SCM	Sheep Creek Mo	14.59	39	Pn	Pn	06 38 46.1	-1.5
TRF	Thorofare Moun	14.60	30	Pn	Pn	06 38 48.4	+0.6
BPAW	Bear Paw Mtn.	14.87	28	Pn	Pn	06 38 53.0	+1.6
KLU	Klutina	14.96	41	Pn	Pn	06 38 51.4	-1.3
KLU				IAmb	IAmb	06 38 52.6	
	comp=Z,12nm,1.2s						
M24K	Tolsona, Glenn	15.19	39	Pn	Pn	06 38 55.3	-0.5
M24K				IAmb	IAmb	06 39 03.6	
	comp=Z,9.7nm,0.9s						
I23K	Minto, Yukon-K	16.12	27	Pn	Pn	06 39 05.5	-2.2
ILAR	Eielson Array	16.59	31	Pn	Pn	06 39 12.4	-1.3
	comp=Z,0.0nm,0.3s,baz=224,slow=12,SNR=4.6						
BCAR	Beaver Creek A	17.43	40	Pn	Pn	06 39 24.5	+0.2
PEA0B	Petropavlovsk-	21.62	288	P	P	06 40 11.7	+0.5
PETK	Petropavlovsk-	21.62	288	P	P	06 40 09.2	-2.0
	comp=Z,1.7nm,0.6s,baz=77,slow=14,SNR=1.8						
PETK	Petropavlovsk-	21.62	288	P	P	06 40 13.5	+2.3
INK	Inuvik	22.99	31	P	P	06 40 27.7	+2.0
	comp=Z,4.0nm,0.5s,baz=233,slow=7.3,SNR=20						
INK	Inuvik	22.99	31	P	P	06 40 27.4	+1.7
INK				IAmb	IAmb	06 40 30.6	
	comp=Z,5.9nm,0.7s						
C36M	Paulatuk	26.55	33	P	P	06 41 00.1	+1.3
C36M				IAmb	IAmb	06 41 05.0	
	comp=Z,4.8nm,1.1s						
YKA	Yellowknife Ar	29.42	48	P	P	06 41 23.9	-0.6
	comp=Z,0.4nm,0.8s,baz=268,slow=6.5,SNR=5.2						
MCMT	McKenzie Canyo	35.78	79	P	P	06 42 22.3	+1.7
NVAR	Mina Array Bea	36.00	92	P	P	06 42 24.0	+1.5
	comp=Z,0.2nm,0.5s,baz=310,slow=5.8,SNR=2.7						
NVAR	Mina Array Bea	36.00	92	P	P	06 42 23.5	+1.0
PDAR	Pinedale Array	38.90	80	P	P	06 42 48.2	+1.2
	comp=Z,0.2nm,0.4s,baz=301,slow=2.9,SNR=4.6						
PDAR	Pinedale Array	38.90	80	P	P	06 42 48.1	+1.1
TXAR	Lajitas Array	51.10	91	P	P	06 44 24.5	+0.4
	comp=Z,0.6nm,0.5s,baz=301,slow=6.1,SNR=15						
TXAR	Lajitas Array	51.10	91	P	P	06 44 24.7	+0.6
SONM	Songino Array	53.03	303	P	P	06 44 39.4	+1.2
	comp=Z,0.4nm,0.4s,baz=64,slow=7.1,SNR=4.8						
ZALV	Zalesovo Beam	58.98	319	P	P	06 45 19.3	-1.2
	comp=Z,0.2nm,0.4s,baz=32,slow=8.5,SNR=1.6						
MKAR	Makanchi Array	65.42	315	P	P	06 46 03.9	0.0
	comp=Z,0.4nm,0.6s,baz=54,slow=6.8,SNR=4.2						
ABKAR	Akbulak array	71.81	330	P	P	06 46 44.3	+0.6
ASAR	Alice Springs	91.28	232	P	P	06 48 25.0	-1.8
	comp=Z,0.5nm,0.6s,baz=29,slow=4.9,SNR=7.3						

IDC 26 06:53:17.2±3.8, **25°.64S**×**29°.49E, h0**^{km}**, mb1 2.7**/3, **mb1mx2.7**/30, **mbtmp2.7**/3, **ML2.4**/3, **Error ellipse: s-maj=35.1km s-min=21.1km az=110.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	3.57	279	Pn	Pn	06 54 14.6	+0.6
	0.2nm,0.3s,baz=100,slow=11,SNR=1.7						
LBTB				Pg	Pg	06 54 23.7	-2.0
	0.8nm,0.3s,baz=110,slow=17,SNR=3.3						
LBTB				Lg	Lg	06 55 10.5	
	1.4nm,0.3s,baz=9.0,slow=21,SNR=6.9						
BOSA	Boshof	4.79	231	Pn	Pn	06 54 31.0	+0.2
	0.1nm,0.3s,baz=48,slow=12,SNR=1.6						
BOSA				Pg	Pb	06 54 42.6	+0.5
	0.2nm,0.3s,baz=50,slow=17,SNR=5.8						
BOSA				Sn	Sn	06 55 21.0	-6.2
	0.3nm,0.3s,baz=304,slow=12,SNR=2.7						
BOSA				Lg	Lg	06 55 40.5	
	0.7nm,0.3s,baz=144,slow=16,SNR=8.7						
I47ZA	BOSHOF INFRASO	4.81	231	*i*		07 21 20.0	
	baz=54,slow=317,SNR=1.1						
MATP	Matopo	5.27	350	Pn	Pn	06 54 38.1	+0.7
	0.2nm,0.3s,baz=168,slow=11,SNR=1.6						
MATP				Sn	Sn	06 55 39.5	+0.6
	0.2nm,0.3s,baz=220,slow=6.6,SNR=1.9						
MATP				Lg	Lg	06 56 02.6	
	1.2nm,0.3s,baz=260,slow=20,SNR=7.1						
I35NA	TSUMEB INFRASO	12.74	298	*i*		08 13 50.0	
	baz=124,slow=305,SNR=1.3						

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*MAN **26** 07:09:50.1, 9°.82N×122°.26E, h16^{km}, MS5.1*

MAN INTENSITY V - HINOBAAN AND SIPALAY.

*GCMT **26** 07:09:52.8±0.1, 9°.79N±0°.01×122°.22E±0°.01, h32^{km}, MW5.5/147, Moment Tensor Solution. s137,c238; s147,c279; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M_{rr}1.86±.03; $M_{\theta\theta}$0.24±.02; $M_{\phi\phi}$-2.09±.02; $M_{r\theta}$-0.83±.03; $M_{\theta\phi}$-0.35±.02; $M_{\phi r}$-1.26±.04; Best double couple: $M_0$2.51700×10^{17} NP1:ϕ_s351.00000°, δ30.00000°, λ61.00000°. NP2:ϕ_s204.00000°, δ64.00000°, λ106.00000°. Principal axes: T 2.4570, Plg67.0000°, Azm143.0000°; N 0.1270, Plg14.0000°, Azm17.0000°; P -2.5770, Plg18.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **26** 07:09:53.3±0.4, 10°N±3°×12°2E±°, h44^{km}±3^{km}, M5.2/76, mB5.6/51, mb5.2/76, MLv5.8/4, Mw(mB)5.1/51, MwMwp5.2/28, Mwp5.5/28*

*BJI **26** 07:09:53.6±0.0, 9°.75N×122°.43E, h48^{km}, mB5.1/60, mb4.8/70, Ms5.2/80, Ms7 5.0/76*

*MOS **26** 07:09:53.3±1.0, 9°.79N×122°.44E, h51^{km}, mb5.2/68, MS4.9/12, Error ellipse: s-maj=7.9km s-min=4.1km az=111.9*

*KLM **26** 07:09:54, 9°.51N×122°.53E, h43^{km}, mb5.0*

*NEIC **26** 07:09:54.8±1.9, 9°.61N±0°.04×122°.38E±0°.05, h57^{km}±4^{km}, mb5.1/144, Error ellipse: s-maj=8.7km s-min=2.4km az=47.0*

*IDC **26** 07:09:55.9±1.5, 9°.71N×122°.47E, h63^{km}±13^{km}, mb4.5/33, mb1 4.6/38, mb1mx4.6/44, mbtmp4.8/38, MS4.8/29, Ms1 4.8/29, ms1mx4.7/44, Error ellipse: s-maj=13.3km s-min=7.2km az=76.0*

ISC 26 07:09:52.5±0.4, **9°.66N**±0°.02×**122°.39E**±0°.03, **h33**^{km}±1^{km}, **h33**^{km}**:pP-P, n666,** σ**1^{s}66**/741, **mb5.0**/186, **MS4.9**/56, **44C-15D, Fault plane solution: NP1:**ϕ_s224.90480°, δ89.56293°, λ119.81847°. **NP2:**ϕ_s315.66736°, δ29.82138°, λ0.87892°. **Principal axes:** T Plg38.2333°, Azm161.4965°; N Plg29.8175°, Azm44.6543°; P Plg37.4506°, Azm288.6155°; **Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	Candoni, Negro	0.29	57	*e*P	Pb	07 09 57.8	-2.5
CNOP				*e*S	Sb	07 10 05.2	-0.3
GUIM	Jordan	0.97	12	*e*P	Pn	07 10 06.3	-3.6
GUIM				*e*S	Sn	07 10 19.4	-3.2
LLP	Lapu-Lapu	1.68	67	⇓*i*P	Pn	07 10 20.3	+0.6
LLP				*i* S	Sb	07 10 43.2	-0.5
CUYO	Cuyo Island	1.79	311	*e*P	Pn	07 10 17.7	-3.5
CUYO				*e*S	Sn	07 10 38.2	-4.6
PAGZ	Pagadian	2.05	151	*e*P	Pn	07 10 26.4	+1.7
PAGZ				*e*S	Sb	07 10 55.0	+0.6
MSLP	Maasin	2.48	79	*e*P	Pn	07 10 31.9	+1.4
MSLP				*e*S	Sb	07 11 06.8	+0.3
CGP	Cagayan de Oro	2.57	118	⇓*e*P	Pn	07 10 35.3	+3.4
CGP				*i* S	Sb	07 11 07.5	-1.8
ZCP	Zamboanga City	2.73	187	⇓*i*P	Pn	07 10 35.6	+1.5
ZCP				*i* S	Sn	07 11 06.6	+0.6
SJMP	San Jose	3.05	336	*e*P	Pn	07 10 35.6	-2.8
SJMP				*e*S	Sn	07 11 09.9	-3.8
BUKP	Musuan	3.18	124	*e*P	Pn	07 10 44.1	+3.8
BUKP				*e*S	Sn	07 11 21.7	+4.5
BUTP	Butuan	3.26	102	*e*P	Pn	07 10 44.1	+2.8
GLSP	General Luna,	3.69	88	*e*P	Pn	07 10 48.5	+1.3
GLSP				*e*S	Sn	07 11 34.2	+4.6
KCP	Kidapawan	3.75	134	⇑*e*P	Pb	07 10 54.2	-4.0
KCP				*i* S	Sb	07 12 03.7	+20
PGP	Puerto Galera	4.07	340	⇓*e*P	Pn	07 10 51.5	-0.9
DAV	Davao City (W)	4.07	129	P	Pn	07 10 55.3	+2.7
	92nm,0.3s,baz=255,slow=14,SNR=5.8						
DAV				S	Sn	07 11 34.0	-5.2
	142nm,0.3s,baz=285,slow=20,SNR=3.0						
DAV				LR	LR	07 12 54.8	
	comp=Z,31µm,18.4s,baz=216,slow=44						
PVCP	Virac	4.27	24	*e*P	Pn	07 10 56.4	+1.1
PVCP				*e*S	Sb	07 11 59.6	+1.5
JCNP	Jose Panganiba	4.61	4	*e*P	Pn	07 10 59.8	-0.1
TGY	Tagaytay City	4.63	342	P	Pn	07 11 03.5	+3.2
	80nm,0.3s,baz=160,slow=2.9,SNR=5.1						
TGY				S	Sn	07 11 54.7	+1.7
	64nm,0.3s,baz=76,slow=21,SNR=3.8						
TGY				LR	LR	07 13 10.5	
	comp=Z,21µm,19.8s,baz=156,slow=42						
DDMP	Don Marcelino,	4.83	137	*e*P	Pn	07 11 07.5	+4.6
DDMP				*e*S	Sb	07 12 08.5	-5.7
MACP	Maragondon, Ca	4.85	340	*e*P	Pn	07 11 01.6	-1.7
MYLDM	Lahad Datu	5.89	221	Pn	Pn	07 11 18.9	+1.4
MYLDM				Sn	Sn	07 12 28.8	+4.8
SGSI	Sangihe	6.71	152	P	Pn	07 11 31.6	+2.8
	2.7nm8µm486nm,0.6s						
KKM	Kota Kinabalu	7.10	240	Pn	Pn	07 11 34.6	+0.4
KKM				Sn	Sn	07 12 52.8	-1.0
SPMM	Sapulut	7.67	230	P	Pn	07 11 44.0	+2.0
CVP	Callao Caves	8.01	356	*e*P	Pn	07 11 49.5	+2.9
TOLI2	Tolitoli	8.65	191	Pn	Pn	07 11 55.6	+0.2
TOLI2				Sn	Sn	07 13 25.2	-6.6
GTOI	Gorontalo	8.99	176	P	Pn	07 11 59.6	-0.5
	1µm106nm,0.8s						
MRSI	Marisa	9.14	183	P	Pn	07 12 04.0	+1.9
	5µm2µm93nm,1.6s						
KMSI	Cibinong	9.17	170	P	Pn	07 12 04.7	+2.1
	448nm,0.9s						
MPSI	Mapaga	9.59	195	P	Pn	07 12 08.5	+0.1
TNTI	Ternate	10.13	150	Pn	Pn	07 12 20.2	+4.6
TNTI	Ternate	10.13	150	P	Pn	07 12 20.3	+4.6
	4µm4µm274nm,0.9s						
APSI	Ampana	10.53	184	P	Pn	07 12 26.5	+5.3
	3µm2µm205nm,1.2s						
SANI	Sanana	12.18	163	P	Pn	07 12 46.1	+2.3
	5µm3µm162nm,0.8s						
I39PW	PALAU INFRASON	12.21	99	*i*		08 25 40.0	
	baz=280,slow=311,SNR=0.6						
SBUM	Sibu	12.39	235	Pn	Pn	07 12 48.1	+1.4
SBUM	Sibu	12.39	235	P	Pn	07 12 48.0	+1.3
TTSI	Tana Toraja	12.88	192	P	Pn	07 12 57.0	+3.6
	1µm59nm,0.7s						
TWG	Pinlang	13.14	355	Pn	Pn	07 12 59.0	+2.1
NLAI	Namlea	13.65	160	P	Pn	07 13 06.9	+3.0
	2µm143nm,1.1s						
TPUB	Ta-pu	13.66	353		Pn	07 13 06.7	+2.6
SWI	Sorong	13.69	139	P	Pn	07 13 07.7	+3.3
	7µm1µm65nm,0.8s						
YULB	Yu-li	13.69	356	Pn	P	07 13 10.6	-2.2
SIJI	Sorong	13.70	139	P	Pn	07 13 06.3	+1.8
	1.7nm,0.3s,baz=346,slow=16,SNR=16						
SIJI				LR	LR	07 18 35.6	
	comp=Z,9µm,21.7s,baz=320,slow=38						
SPSI	Sidrap Palu	13.79	191	P	Pn	07 13 09.7	+3.9
	6µm65nm,0.8s						
DLV	T Lat	13.85	281	Pn	Pn	07 13 07.6	+0.9
SSLB	Suanglung	14.11	355	Pn	Pn	07 13 13.0	+2.8
BNSI	Bone	14.16	189	P	P	07 13 15.1	-2.8
	2µm116nm,0.9s						
KBKI	Kotabaru	14.29	206	P	P	07 13 18.3	-1.1
	36nm,0.9s						
NACB	Ninganchiao	14.45	357	Pn	Pn	07 13 13.9	-0.9
MSAI	Masohi	14.47	153	P	Pn	07 13 17.9	+2.7
	39nm,0.9s						
KSM	Kuching	14.51	237	Pn	Pn	07 13 13.7	-2.0
KAPI	Kappang	14.82	190	P	P	07 13 24.1	-1.2
	2.2nm,0.3s,baz=20,slow=15,SNR=2.1						
KAPI				LR	LR	07 19 04.8	
	comp=Z,4µm,21.7s,baz=6.0,slow=37						
BKSI	Bulukumba	15.06	189	P	Pn	07 13 22.3	-0.7
	3µm856nm54nm,1.0s						
QIZ	Qiongzhong	15.30	309	P	Pn	07 13 26.5	+0.3
QIZ				S	Sn	07 16 17.3	+2.6
QIZ				pmax	pmax		
	comp=Z,20nm,2.5s						
QIZ				pmax	pmax		
	comp=Z,810nm,7.4s						
QIZ				LR	LR		
	comp=N,7µm,15.2s						
QIZ				LR	LR		
	comp=E,6µm,12.8s						
QIZ				LR	LR		
	comp=Z,8µm,19.6s						
QIZ	Qiongzhong	15.30	309	Pn	Pn	07 13 26.8	+0.6
QZH	Quanzhou	15.62	347	⇓*i*P	Pn	07 13 31.0	+0.7
QZH				S	Sn	07 16 21.3	-1.1
QZH				LR	LR		
	comp=N,3µm,19.7s						
QZH				LR	LR		
	comp=E,2µm,20.3s						
QZH				LR	LR		
	comp=Z,6µm,19.4s						
FAKI	Fak Fak	15.90	141	P	Pn	07 13 35.6	+1.6
FAKI				IAmb	IAmb	07 13 53.9	
	comp=Z,220nm,1.1s						
FAKI	Fak Fak	15.90	141	P	Pn	07 13 35.8	+1.8
	comp=Z,6µmcomp=Z,5µmcomp=Z,236nm,1.5s						
BNDI	Bandanaira	15.96	152	P	Pn	07 13 36.7	+2.0
	comp=Z,8µmcomp=Z,43µmcomp=Z,432nm,1.1s						
PBKI	Pangkalan Bun	16.28	222	P	P	07 13 43.7	+2.2
KMPI	Kaimana, Papua	17.39	139	P	P	07 13 54.3	+0.5
	comp=Z,4µmcomp=Z,287nm,0.8s						
JOW	Kunigami	17.96	17	P	P	07 14 01.4	+1.4
	comp=Z,2.9nm,0.3s,baz=180,slow=16,SNR=5.8						
JOW				LR	LR	07 20 22.2	
	comp=Z,3µm,21.7s,baz=160,slow=35						
JMZ	Minamidaito 2	18.12	26	P	P	07 14 03.8	+2.0
JMZ				IAmb	IAmb	07 14 40.8	
	comp=Z,264nm,1.4s						
MMRI	Maumere	18.18	180	P	P	07 14 02.3	-0.2
MMRI	Maumere	18.18	180	P	Pn	07 14 06.6	+4.1
	comp=Z,7µmcomp=Z,8µmcomp=Z,467nm,1.3s						
EDFI	Ende, Flores	18.31	182	P	Pn	07 14 07.2	+3.0
	comp=Z,3µmcomp=Z,2µmcomp=Z,134nm,0.8s						
KMMI	Kalianget	18.60	207	P	Pn	07 14 12.1	+4.4
	comp=Z,160nm,1.0s						
PLAI	Plampang	18.94	194	P	Pn	07 14 14.7	+3.0
	comp=Z,6µmcomp=Z,3µmcomp=Z,195nm,1.1s						
SRBI	Singaraja	19.03	202	P	Pn	07 14 12.9	+0.1
	comp=Z,5µmcomp=Z,2µmcomp=Z,130nm,0.8s						
TWSI	Taliwang, Sumb	19.09	197	P	Pn	07 14 17.3	+3.8
	comp=Z,53nm,1.0s						
WSI	Waingapu	19.32	186	P	P	07 14 16.0	+1.0
	comp=Z,22µmcomp=Z,327nm,0.6s						
SOEI	Soe	19.38	174	P	P	07 14 15.7	-0.2
SOEI	Soe	19.38	174	P	Pn	07 14 19.2	+2.0
	comp=Z,9µmcomp=Z,4µmcomp=Z,266nm,1.0s						
WBSI	Waikabubak, Su	19.41	189	P	Pn	07 14 17.6	+0.2

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      comp=Z,2µmcomp=Z,150nm,0.9s
BATI  Baumata        19.78 176  P      Pn      07 14 23.0 +1.1
      comp=Z,21nm,0.3s,baz=359,slow=1.5,SNR=24
BATI  Baumata        19.78 176  P      Pn      07 14 22.9 +1.1
      comp=Z,3µmcomp=Z,3µmcomp=Z,302nm,0.7s
SMPI  Sarmi          19.96 125  P      Pn      07 14 23.7 -0.2
      comp=Z,6µmcomp=Z,2µmcomp=Z,80nm,1.2s
PPBI  Pangkal Pinang 20.00 235  P      Pn      07 14 25.7 +1.2
      comp=Z,76nm,1.1s
SRAK  Srakaew        20.37 284  P      P       07 14 24.4 -2.2
      comp=Z,8µmcomp=Z,242nm,1.1s
NONG  Nongkai        20.45 296  P      Pn      07 14 31.7 +2.0
      comp=Z,34nm,0.9s
WOJI  Wonogiri, Jawa 20.80 214  P      Pn      07 14 34.2 +0.4
      comp=Z,88nm,1.0s
CHAI  Chaiyaphum     20.83 289  P      Pn      07 14 33.8 -0.3
      comp=Z,686nmcomp=Z,57nm,1.3s
UGM   Wanagama       21.09 214  P      P       07 14 35.7 +1.4
SLVN  Son La         21.23 305  P      P       07 14 37.5 +1.7
SLVN                            IAmb   IAmb    07 14 49.1
      comp=Z,112nm,1.9s
SSE   Sheshan        21.35 357  P      P       07 14 32.8 -4.2
SSE                             sP     pP      07 14 43.5 -2.3
SSE                             S      S       07 18 31.5 -0.9
SSE                             pmax   pmax
      comp=Z,13nm,1.1s
SSE                             pmax   pmax
      comp=Z,130nm,3.5s
SSE                             LR     LR
      comp=N,460nm,16.1s
SSE   Sheshan        21.35 357  P      P       07 14 33.8 -3.2
SSE                             IAmb   IAmb    07 14 49.3
      comp=Z,52nm,0.9s
GENI  Genyem         21.49 124  P      P       07 14 40.7 +2.0
      comp=Z,7µmcomp=Z,6µmcomp=Z,183nm,0.9s
IPM   Ipoh           21.81 258  P      P       07 14 40.3 -1.8
IPM                             IAmb   IAmb    07 14 54.7
      comp=Z,33nm,0.6s
JAY   Jayapura       21.89 123  P      P       07 14 45.0 +2.0
      comp=Z,16nm,0.8s,baz=243,slow=4.5,SNR=3.1
JAY                             LR     LR      07 23 14.0
      comp=Z,1µm,20.6s,baz=322,slow=36
JAY   Jayapura       21.89 123  P      P       07 14 45.5 +2.5
      comp=Z,1µmcomp=Z,38nm,1.1s
KULM  Kulim          21.98 260  P      P       07 14 41.2 -2.8
KULM                            IAmb   IAmb    07 15 07.3
      comp=Z,71nm,1.4s
KULM  Kulim          21.98 260  P      P       07 14 46.0 +2.0
LEM   Lembang        22.02 222  P      P       07 14 47.2 +2.7
      comp=Z,31nm,0.6s,baz=96,slow=9.1,SNR=4.5
WHN   Wuhan          22.09 341 ⇑P      P       07 14 48.0 +3.1
WHN                             S      S       07 18 46.5 -0.1
WHN                             pmax   pmax
      comp=Z,1µm,11.6s
WHN                             LR     LR
      comp=Z,7µm,15.1s
WHN                             LR     LR
      comp=Z,1µm,10.6s
WHN                             LR     LR
      comp=Z,8µm,15.5s
CBJI  Citeko         22.25 225  P      P       07 14 51.7 +4.9
      comp=Z,133nm,0.9s
GYA   Guiyang        22.38 320 ⇓P      P       07 14 51.8 +3.6
GYA                             pP     sP      07 15 03.5 +2.6
GYA                             sP     pwP     07 15 08.5  +12
GYA                             S      S       07 18 52.0 -0.3
GYA                             sS     sS      07 19 06.5  0.0
GYA                             pmax   pmax
      comp=Z,21nm,1.6s
GYA                             pmax   pmax
      comp=Z,430nm,4.3s
GYA                             LR     LR
      comp=Z,3µm,15.4s
GYA                             LR     LR
      comp=Z,3µm,17.5s
GYA                             LR     LR
      comp=Z,6µm,16.9s
CISI  Cisompet, Garu 22.44 221  P      P       07 14 48.0 -0.9
CISI                            IAmb   IAmb    07 15 22.1
      comp=Z,111nm,1.0s
CISI  Cisompet, Garu 22.44 221  P      P       07 14 53.0 +4.1
      comp=Z,4µmcomp=Z,109nm,0.9s
NJ2   Nanjing        22.52 352 ⇓P      P       07 14 52.5 +3.0
NJ2                             pP     sP      07 15 04.8 +3.0
NJ2                             sP     pP      07 15 10.0  +12
NJ2                             PP     PnPn    07 15 17.5 +4.0
NJ2                             S      S       07 18 56.3 +1.8
NJ2                             sS     sS      07 19 09.5 +0.7
NJ2                             SS     SnSn    07 19 24.8 -0.2
NJ2                             pmax   pmax
      comp=Z,26nm,0.8s
NJ2                             pmax   pmax
      comp=Z,830nm,4.5s
NJ2                             LR     LR
      comp=Z,3µm,22.0s
NJ2                             LR     LR
      comp=Z,2µm,21.5s
NJ2                             LR     LR
      comp=Z,4µm,23.3s
PHET  Kaeng Krachan  22.55 280  P      P       07 14 53.5 +3.4
      comp=Z,707nmcomp=Z,28nm,0.8s
PHIT  Phitsanulok    22.63 292  P      P       07 14 55.1 +4.2
      comp=Z,162nm,1.1s
KLSI                 22.65 232  P      P       07 14 52.0 +0.9
      comp=Z,442nmcomp=Z,18nm,1.1s
UTTA  Uttaradit      22.66 293  P      P       07 14 55.2 +4.0
      comp=Z,23nm,1.2s
LHSI  Lahat          23.09 235  P      P       07 14 59.3 +3.7
      comp=Z,78nm,1.1s
UTHA  Uthaitani      23.13 287  P      P       07 14 57.7 +1.6
      comp=Z,395nmcomp=Z,34nm,0.9s
BKNI  Bangkinang     23.18 248  P      P       07 14 57.6 +1.0
      comp=Z,4µmcomp=Z,4µmcomp=Z,134nm,1.3s
KASI  Kota Agung     23.36 230  P      P       07 14 59.6 +1.3
      comp=Z,1µmcomp=Z,54nm,1.1s
LWLI  Liwa           23.38 232  P      P       07 15 00.5 +1.9
      comp=Z,8µmcomp=Z,146nm,0.9s
SDSI  Sungai Dareh   23.38 244  P      P       07 15 00.0 +1.5
      comp=Z,20µmcomp=Z,27nm,1.7s
ANA2  Anatahan       23.66  71  P      P       07 15 00.7 -0.6
KSI   Kapahiang      23.75 237  P      P       07 15 04.5 +2.3
ENH   Enshi          23.78 331  P      P       07 14 59.6 -2.7
ENH                             IAmb   IAmb    07 15 54.5
      comp=Z,80nm,1.6s
MTN   Manton Dam     23.99 159  P      P       07 15 04.2 -0.1
      baz=24,SNR=72
MTN   Manton Dam     23.99 159  P      P       07 15 05.2 +0.9
KMI   Kunming        24.19 312⇑eP      P       07 15 08.5 +2.1
KMI                             pP     pwP     07 15 17.3 +1.5
KMI                             sP     sP      07 15 26.5 +6.5
KMI                             S      S       07 19 24.5 +1.6
KMI                             sS     sS      07 19 38.8 +1.9
KMI                             pmax   pmax
      comp=Z,10.0nm,0.6s
KMI                             pmax   pmax
      comp=Z,290nm,4.3s
KMI                             LR     LR
      comp=Z,3µm,15.1s
KMI                             LR     LR
      comp=Z,5µm,17.2s
KMI                             LR     LR
      comp=Z,6µm,19.5s
KMI   Kunming        24.19 312  P      P       07 15 06.7 +0.3
KMI                             pmax   pmax
      comp=Z,20nm,1.2s
KMI   Kunming        24.19 312  P      P       07 15 08.6 +2.1
KMI                             IAmb   IAmb    07 15 47.0
      comp=Z,116nm,1.8s
PDSI  Padang         24.23 245  P      P       07 15 08.6 +2.0
      comp=Z,2µmcomp=Z,4µmcomp=Z,47nm,0.7s
PSI   Prapat         24.29 255  P      P       07 15 08.0 +0.7
      comp=Z,8.4nm,0.6s,baz=0.7,slow=6.4,SNR=10
CM04  Chiang Mai Arr 24.29 293  P      P       07 15 11.5 +4.4
      comp=Z,152nmcomp=Z,11nm,1.3s
CM09  Chiang Mai Arr 24.29 294  P      P       07 15 08.0 +0.8
      comp=Z,167nmcomp=Z,17nm,0.9s
CM01  Chiang Mai Arr 24.32 294  P      P       07 15 10.9 +3.5
      comp=Z,15nm,0.9s
CM05  Chiang Mai Arr 24.32 293  P      P       07 15 11.5 +4.1
      comp=Z,116nmcomp=Z,6.9nm,1.1s
CM02  Chiang Mai Arr 24.33 294  P      P       07 15 11.1 +3.6
      comp=Z,148nmcomp=Z,14nm,0.9s
CM31  Chiang Mai Arr 24.34 294  P      P       07 15 08.4 +0.8
CM31                            IAmb   IAmb    07 15 20.3
      comp=Z,101nm,1.9s
CMAR  Chiang Mai Arr 24.34 294  P      P       07 15 08.3 +0.7
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      comp=Z,5.1nm,1.0s,baz=119,slow=7.9,SNR=14
CMAR                            LR     LR      07 24 01.1
      comp=Z,2µm,20.9s,baz=175,slow=35
CMAR  Chiang Mai Arr 24.34 294 iP      P       07 15 08.1 +0.5
CMAR                            pmax   pmax
      comp=Z,5.0nm,1.0s
CMAR  Chiang Mai Arr 24.34 294  P      P       07 15 06.9 -0.7
MNSI  Mandailing Nat 24.34 250  P      P       07 15 08.7 +1.1
      comp=Z,44nm,1.1s
CM15  Chiang Mai Arr 24.36 294  P      P       07 15 09.0 +1.3
      comp=Z,14nm,1.0s
KDU   Kakadu         24.36 156  P      P       07 15 07.0 -0.7
      baz=24,SNR=102
CM13  Chiang Mai Arr 24.36 293  P      P       07 15 12.9 +5.1
      comp=Z,505nmcomp=Z,14nm,1.1s
CHTO  Chiang Mai     24.45 294  P      P       07 15 08.0 -0.6
CHTO                            pmax   pmax
      comp=Z,58nm,1.8s
CHTO  Chiang Mai     24.45 294  P      P       07 15 08.0 -0.6
JNU   Nakatsue       24.62  17  P      P       07 15 09.1 -1.0
      comp=Z,15nm,1.0s,baz=215,slow=19,SNR=3.2
JNU                             LR     LR      07 26 10.9
      comp=Z,1µm,18.9s,baz=204,slow=40
MHMT  Maesarieng     25.18 292  P      P       07 15 22.6 +7.4
JCJ   Chichijima     25.50  45  LR     LR      07 24 23.4
      comp=Z,2µm,20.2s,baz=230,slow=34
TPTI                 25.83 257  P      P       07 15 20.5 -0.6
      comp=Z,18µmcomp=Z,334nmcomp=Z,10nm,1.0s
KNRA  Kununurra      25.96 166  P      P       07 15 22.5 +0.4
KNRA                            IAmb   IAmb    07 15 28.6
      comp=Z,88nm,0.9s
GSI   Gunungsitoli   26.04 253  P      P       07 15 22.2 -0.8
GSI                             IAmb   IAmb    07 15 31.1
      comp=Z,59nm,0.8s
GSI   Gunungsitoli   26.04 253  P      P       07 15 22.8 -0.2
      comp=Z,10µmcomp=Z,82nm,1.2s
JMN   Monobe         26.18  22  P      P       07 15 23.8 -0.3
JMN                             IAmb   IAmb    07 15 56.0
      comp=Z,96nm,1.2s
JHS   Saijyo         27.06  20  P      P       07 15 31.7 -0.3
JHS                             IAmb   IAmb    07 15 45.7
      comp=Z,50nm,1.2s
XAN   Xi'an          27.23 335  P      P       07 15 37.5 +3.9
XAN                             pP     sP      07 15 48.3 +1.3
XAN                             sP     pP      07 15 54.3  +11
XAN                             S      S       07 20 07.5 -3.1
XAN                             pmax   pmax
      comp=Z,13nm,1.5s
XAN                             pmax   pmax
      comp=Z,310nm,9.6s
XAN                             LR     LR
      comp=Z,2µm,15.2s
XAN                             LR     LR
      comp=Z,2µm,13.7s
XAN                             LR     LR
      comp=Z,3µm,17.5s
CD2   Chengdu        27.34 323  P      P       07 15 35.0 +0.4
CD2                             sP     sP      07 15 50.5 +2.6
CD2                             S      S       07 20 11.3 -1.2
CD2                             sS     sS      07 20 36.0 +9.2
CD2                             pmax   pmax
      comp=Z,60nm,1.1s
CD2                             pmax   pmax
      comp=Z,650nm,11.3s
CD2                             LR     LR
      comp=Z,9µm,17.8s
CD2                             LR     LR
      comp=Z,8µm,16.3s
CD2                             LR     LR
      comp=Z,11µm,16.8s
FITZ  Fitzroy Crossi 27.77 173  P      P       07 15 39.3 +0.7
      baz=28,SNR=25
FITZ  Fitzroy Crossi 27.77 173  P      P       07 15 39.2 +0.7
      comp=Z,32nm,0.8s,baz=5.6,slow=7.0,SNR=54
FITZ  Fitzroy Crossi 27.77 173  P      P       07 15 38.9 +0.4
KSAR  Wonju Array Be 28.10   9  P      P       07 15 39.8 -1.5
KSAR  Wonju Array Be 28.10   9  P      P       07 15 39.8 -1.5
KSRS  Korea Array    28.11   9  P      P       07 15 42.5 +1.1
      comp=Z,6.2nm,0.8s,baz=184,slow=10,SNR=14
KSRS                            LR     LR      07 27 59.7
      comp=Z,2µm,19.9s,baz=208,slow=39
JWT   Wachi          28.13  23  P      P       07 15 41.1 -0.5
JHJ   Hachijo jima 2 28.32  32  LR     LR      07 27 11.2
      comp=Z,1µm,19.6s,baz=264,slow=37
JSG   Sagara         28.79  28  P      P       07 15 47.6 +0.1
INU   Inuyama        28.84  25  P      P       07 15 45.1 -2.8
DL2   Dalian         29.12 359  P      P       07 15 58.5 +8.1
DL2                             pP     sP      07 16 11.0 +7.9
DL2                            eS      S       07 20 52.8  +13
DL2                             pmax   pmax
      comp=Z,64nm,1.0s
DL2                             pmax   pmax
      comp=Z,440nm,7.7s
DL2                             LR     LR
      comp=N,2µm,19.5s
DL2                             LR     LR
      comp=E,2µm,19.1s
DL2                             LR     LR
      comp=Z,2µm,17.4s
JGF   Kuroka         29.20  26  P      P       07 15 49.2 -1.9
TIY   Taiyuan        29.33 344 eP      P       07 15 57.3 +5.0
TIY                             S      S       07 20 44.8 +1.1
TIY                             LR     LR
      comp=Z,2µm,14.6s
TIY                             LR     LR
      comp=Z,440nm,10.0s
TIY                             LR     LR
      comp=Z,3µm,16.4s
MAT   Matsushiro     30.36  26  P      P       07 15 59.3 -2.1
MAT                             S      S       07 20 59.4 -0.4
MAJO  Matsushiro     30.36  26  P      P       07 15 59.7 -1.7
MAJO                            pmax   pmax
      comp=Z,45nm,1.8s
MAJO  Matsushiro     30.36  26  P      P       07 15 59.7 -1.7
MAJO                            IAmb   IAmb    07 16 01.8
      comp=Z,45nm,1.8s
MJAR  Matsushiro Arr 30.36  26  P      P       07 15 59.6 -1.8
      comp=Z,6.9nm,0.8s,baz=197,slow=8.7,SNR=16
MJAR                            PcP    PcP     07 19 00.9 -0.1
      comp=Z,1.9nm,0.6s,baz=189,slow=3.4,SNR=3.1
MJAR                            LR     LR      07 27 45.4
      comp=Z,1µm,20.3s,baz=215,slow=35
MJAR  Matsushiro Arr 30.36  26  P      P       07 15 59.3 -2.1
MJAR                            pmax   pmax
      comp=Z,22nm,2.0s
MJAR  Matsushiro Arr 30.36  26  P      P       07 15 59.3 -2.1
BJT   Baijiatuau     30.73 351  P      P       07 16 03.5 -1.1
BJT                             pmax   pmax
      comp=Z,14nm,0.9s
BJT   Baijiatuau     30.73 351  P      P       07 16 03.5 -1.1
BJI   Beijing        30.75 351  P      P       07 16 05.8 +1.1
BJI                             S      S       07 21 06.0 +0.3
BJI                             pmax   pmax
      comp=Z,7.0nm,1.9s
BJI                             pmax   pmax
      comp=Z,200nm,3.5s
BJI                             LR     LR
      comp=Z,930nm,29.0s
BJI                             LR     LR
      comp=Z,1µm,19.2s
BJI                             LR     LR
      comp=Z,2µm,26.9s
PSA00 Pilbara Seismi 31.14 185  P      P       07 16 08.9 +0.5
LZH   Lanzhou        31.24 330 eP      P       07 16 14.0 +4.6
LZH                             pP     sP      07 16 24.5 +1.8
LZH                             sP     pP      07 16 28.5  +10
LZH                             PP     PnPn    07 17 15.3 +3.3
LZH                             S      S       07 21 14.5 +0.6
LZH                             sS     sS      07 21 33.8 +5.0
LZH                             pmax   pmax
      comp=Z,22nm,1.3s
LZH                             pmax   pmax
      comp=Z,200nm,5.4s
LZH                             LR     LR
      comp=Z,3µm,16.3s
LZH                             LR     LR
      comp=Z,4µm,14.6s
LZH                             LR     LR
      comp=Z,4µm,14.6s
COEN  Coen           31.24 138  P      P       07 16 07.7 -1.6
WB0   Warramunga Arr 31.55 158  P      P       07 16 11.3 -0.7
WB0                             IAmb   IAmb    07 16 16.5
      comp=Z,23nm,0.7s
JSD   Sado           31.66  24  P      P       07 16 11.4 -1.3
WRAB  Tennant Creek  31.68 158  P      P       07 16 12.5 -0.7
WRAB                            pmax   pmax
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      comp=Z,29nm,0.7s
WRAB  Tennant Creek  31.68 158  P      P       07 16 12.5 -0.7
WRAB                            IAmb   IAmb    07 16 17.9
      comp=Z,29nm,0.7s
WRA   Warramunga Arr 31.69 158  P      P       07 16 12.6 -0.6
      comp=Z,15nm,0.4s,baz=330,slow=11,SNR=184
WRA                             PcP    PcP     07 19 04.2 -0.6
      comp=Z,5.6nm,0.7s,baz=332,slow=2.6,SNR=5.8
WRA                             LR     LR      07 32 21.5
      comp=Z,1µm,19.7s,baz=335,slow=42
WRA   Warramunga Arr 31.69 158 iP      P       07 16 11.5 -1.8
WRA                             pmax   pmax
      comp=Z,15nm,0.4s
WRA   Warramunga Arr 31.69 158  P      P       07 16 11.4 -1.8
WRA                             PcP    PcP     07 19 04.1 -0.6
WB2   Warramunga Arr 31.69 158  P      P       07 16 12.4 -0.8
WB2                             IAmb   IAmb    07 16 18.0
      comp=Z,37nm,0.8s
WR0   Warramunga Arr 31.78 158  P      P       07 16 13.2 -0.8
WR0                             IAmb   IAmb    07 16 17.4
      comp=Z,20nm,0.8s
HHC   Hu-ho-hao-te   32.51 345 eP      P       07 16 22.5 +2.2
HHC                             PP     PP      07 17 32.0 -2.2
HHC                             S      S       07 21 33.8 +0.4
HHC                             pmax   pmax
      comp=Z,18nm,1.1s
HHC                             pmax   pmax
      comp=Z,340nm,6.7s
HHC                             LR     LR
      comp=Z,2µm,19.0s
HHC                             LR     LR
      comp=Z,2µm,20.1s
HHC                             LR     LR
      comp=Z,3µm,19.4s
BTO   Baotou         32.71 342 eP      P       07 16 22.5 +0.4
BTO                             S      S       07 21 27.0  -10
MSHR  Mys Shultsa    33.68  12ceP      P       07 16 31.2 +0.8
MSHR                            pmax   pmax
      comp=Z,27nm,0.8s
CN2   Changchun      34.11   4 eP      P       07 16 33.8 -0.4
CN2                             S      S       07 21 56.3 -1.7
CN2                             pmax   pmax
      comp=Z,20nm,0.6s
CN2                             LR     LR
      comp=Z,2µm,16.0s
CN2                             LR     LR
      comp=Z,1µm,16.0s
CN2                             LR     LR
      comp=Z,2µm,17.0s
QIS   Mount Isa      34.48 151  P      P       07 16 37.2 -0.4
      baz=34,SNR=16
AS31  Alice Springs  34.99 161  P      P       07 16 42.1 +0.1
AS31                            IAmb   IAmb    07 16 43.7
      comp=Z,22nm,0.6s
ASAR  Alice Springs  34.99 161  P      P       07 16 42.6 +0.7
      comp=Z,47nm,0.6s,baz=345,slow=7.1,SNR=900
ASAR                            PcP    PcP     07 19 14.1 +0.1
      comp=Z,11nm,0.7s,baz=342,slow=2.5,SNR=8.7
ASAR                            S      S       07 22 08.9 -3.0
      comp=Z,1.4nm,0.8s,baz=340,slow=11,SNR=2.9
ASAR                            ScP    ScP     07 22 54.0 -3.2
      comp=Z,2.0nm,0.9s,baz=346,slow=3.4,SNR=4.4
ASAR  Alice Springs  34.99 161  P      P       07 16 42.1 +0.1
ASAR                                   PcP     07 19 13.8 -0.2
MTSU  Mount Surprise 35.09 142  P      P       07 16 42.4 -0.6
      baz=35,SNR=11
LSA   Lhasa          35.34 309  P      P       07 16 43.6 -2.0
LSA                             pmax   pmax
      comp=Z,19nm,1.1s
LSA   Lhasa          35.34 309  P      P       07 16 43.6 -2.0
LSA                             IAmb   IAmb    07 17 28.1
      comp=Z,19nm,1.1s
MDJ   Mudanjiang     35.38   9  P      P       07 16 45.8 +0.7
MDJ                             pP     sP      07 16 58.0 +0.1
MDJ                             sP     pP      07 17 04.3  +10
MDJ                             S      S       07 22 20.0 +2.6
MDJ                             pmax   pmax
      comp=Z,43nm,0.9s
MDJ                             pmax   pmax
      comp=Z,390nm,4.2s
MDJ                             LR     LR
      comp=Z,980nm,21.4s
MDJ                             LR     LR
      comp=Z,1µm,22.9s
MDJ                             LR     LR
      comp=Z,3µm,18.5s
MDJ   Mudanjiang     35.38   9  P      P       07 16 45.7 +0.6
USA0B Ussuriysk Arra 35.40  12  P      P       07 16 45.7 +0.4
USA0B                           pmax   pmax
      comp=Z,36nm,1.0s
USA0B Ussuriysk Arra 35.40  12  P      P       07 16 45.7 +0.4
USA0B                           IAmb   IAmb    07 16 53.2
      comp=Z,36nm,0.9s
USRK  Ussuriysk Ar.  35.40  12  P      P       07 16 46.0 +0.8
      comp=Z,24nm,0.8s,baz=201,slow=7.2,SNR=34
USRK                            LR     LR      07 31 29.4
      comp=Z,2µm,21.2s,baz=183,slow=37
USRK  Ussuriysk Ar.  35.40  12  P      P       07 16 45.4 +0.1
GTA   Gaotai         35.83 329 ⇓P      P       07 16 50.0 +0.8
GTA                             pP     sP      07 17 03.3 +0.7
GTA                             sP     pP      07 17 07.3 +8.7
GTA                             S      S       07 22 24.3 -0.5
GTA                             sS     sS      07 22 45.0 +5.2
GTA                             pmax   pmax
      comp=Z,4.0nm,1.2s
GTA                             pmax   pmax
      comp=Z,62nm,4.6s
GTA                             LR     LR
      comp=Z,3µm,15.6s
GTA                             LR     LR
      comp=Z,3µm,15.6s
GTA                             LR     LR
      comp=Z,4µm,15.3s
MEEK  Meekatharra    36.27 186  P      P       07 16 53.4 +0.4
      baz=36,SNR=33
TAPN  Taplejung      37.12 303 eP      P       07 17 02.2 +1.6
      comp=Z,22nm,0.5s
ODAN  Odare          37.20 302 eP      P       07 17 03.6 +2.3
      comp=Z,42nm,0.7s
TEY   Ternei         37.31  17⇑eP      P       07 17 01.2 -0.4
TEY                             pmax   pmax
      comp=Z,10.0nm,1.6s
CTAO  Charters Tower 37.76 142  P      P       07 17 05.9 +0.2
CTAO                            pmax   pmax
      comp=Z,12nm,0.9s
CTAO  Charters Tower 37.76 142  P      P       07 17 05.9 +0.2
CTAO                            IAmb   IAmb    07 17 08.6
      comp=Z,12nm,0.8s
RAMN  Ramite         37.90 302 eP      P       07 17 09.1 +2.0
      comp=Z,35nm,0.7s
ASAJ  Asahikawa      38.54  24  P      P       07 17 12.4 +0.4
ASAJ                            pmax   pmax
      comp=Z,257nm,1.8s
JKA   Kamikawa-asahi 38.54  24  P      P       07 17 12.4 +0.4
GUN   Gumba          38.83 303 eP      P       07 17 16.3 +1.2
      comp=Z,51nm,0.7s
MORW  Morawa         38.99 189  P      P       07 17 17.1 +1.2
      baz=39,SNR=12
MORW  Morawa         38.99 189  P      P       07 17 16.9 +1.0
PKI   Pulchoki       39.10 302 eP      P       07 17 18.9 +1.5
      comp=Z,39nm,0.9s
PKIN  Phulchoki      39.12 302 eP      P       07 17 18.3 +0.9
      comp=Z,21nm,0.5s
KKN   Kakani         39.29 302 eP      P       07 17 20.4 +1.6
DMN   Daman          39.37 302 eP      P       07 17 21.3 +1.8
      comp=Z,46nm,0.9s
HIA   Hailar         39.54 357  P      P       07 17 21.4 +1.1
HIA                             pmax   pmax
      comp=Z,12nm,0.7s
HIA   Hailar         39.54 357  P      P       07 17 21.4 +1.1
GKN   Gorkha         39.90 302 eP      P       07 17 24.7 +0.9
KLR   Kul'dur        40.21  10ceP      P       07 17 25.7 -0.1
KLR                             pmax   pmax
      comp=Z,34nm,1.0s
ULN   Ulaanbaatar    40.22 344ceP      P       07 17 26.6 +0.5
ULN                             pmax   pmax
      comp=Z,24nm,1.7s
ULN   Ulaanbaatar    40.22 344  P      P       07 17 26.2  0.0
SONM  Songino Array  40.37 343  P      P       07 17 27.2 -0.2
      comp=Z,4.1nm,0.6s,baz=163,slow=8.5,SNR=28
SONM                            PcP    PcP     07 19 29.6 -0.6
      comp=Z,3.2nm,1.0s,baz=121,slow=3.0,SNR=4.4
SONM                            LR     LR      07 35 40.5
      comp=Z,2µm,21.6s,baz=154,slow=38
SONM  Songino Array  40.37 343  P      P       07 17 27.2 -0.2
SONM                            pmax   pmax
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	comp=Z,12nm,1.4s						
SONM	Songino Array	40.37	343	P	P	07 17 27.2	-0.2
BLDU	Ballidu	40.42	188	P	P	07 17 29.6	+1.8
	baz=41,SNR=9.6						
FORT	Forrest	40.58	172	P	P	07 17 30.0	+1.0
	baz=41,SNR=53						
FORT	Forrest	40.58	172	P	P	07 17 28.9	-0.2
KOLN	Koldanda	40.69	302	eP	P	07 17 30.6	+0.2
	comp=Z,48nm,0.7s						
DANN	Dangsing	40.74	303	eP	P	07 17 31.6	+0.7
	comp=Z,58nm,0.9s						
KMBL	Kambalda	40.80	181	P	P	07 17 31.6	+0.7
	baz=41,SNR=31						
YSS	Yuzh-Sakhalins	41.00	21⇑	eP	P	07 17 32.1	-0.3
YSS				e*PP	sP	07 17 44.0	-1.4
YSS				e		07 19 41.8	
YSS				eS	S	07 23 41.6	-0.8
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				pmax	pmax		
	comp=Z,300nm,4.8s						
YSS				MLR	MLR		
	comp=Z,600nm,14.3s						
YSS				MLR	MLR		
	comp=E,500nm,13.9s						
YSS	Yuzh-Sakhalins	41.00	21	P	P	07 17 32.5	+0.1
YSS				IAmb	IAmb	07 17 35.0	
	comp=Z,74nm,1.3s						
KLBR	Kellerberrin	41.26	186	P	P	07 17 36.0	+1.3
	baz=41,SNR=14						
PYUN	Piuthan	41.30	302	eP	P	07 17 35.9	+0.5
	comp=Z,141nm,0.9s						
QLP	Quilpie	41.81	150	P	P	07 17 38.9	-0.4
	baz=42,SNR=13						
MUN	Mundaring	41.83	188	P	P	07 17 40.2	+0.9
	baz=42,SNR=5.9						
NWAO	Narrogin (SRO)	42.64	186	P	P	07 17 47.7	+1.8
	baz=43,SNR=13						
NWAO	Narrogin (SRO)	42.64	186	P	P	07 17 46.9	+0.9
	comp=Z,38nm,0.7s,baz=15,slow=8.1,SNR=24						
NWAO				LR	LR	07 35 23.4	
	comp=Z,438nm,21.9s,baz=12,slow=36						
NWAO	Narrogin (SRO)	42.64	186	P	P	07 17 47.2	+1.3
NWAO				pmax	pmax		
	comp=Z,50nm,0.8s						
NWAO	Narrogin (SRO)	42.64	186	P	P	07 17 47.2	+1.3
NWAO	Narrogin (SRO)	42.64	186	P	P	07 17 47.2	+1.3
HYB	Hyderabad	43.23	285	i P	P	07 17 57.0	+5.9
ZAK	Zakamensk	43.57	342	eP	P	07 17 52.3	-1.1
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZEA	Zeya	44.13	4	eP	P	07 17 57.9	+0.2
ZEA				eS	S	07 24 29.4	+1.1
ZEA				e		07 27 55.8	
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.9s						
ZEA				smax	smax		
	comp=E,100nm,14.0s						
ZEA				smax	smax		
	comp=N,300nm,16.2s						
ZEA				MLR	MLR		
	comp=N,600nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,18.0s						
RMQ	Roma	44.13	145	P	P	07 17 58.1	0.0
	baz=44,SNR=6.3						
BBOO	Buckleboo	44.20	163	P	P	07 17 58.8	+0.3
	baz=44,SNR=36						
BBOO	Buckleboo	44.20	163	P	P	07 17 58.7	+0.2
BBOO				IAmb	IAmb	07 18 04.6	
	comp=Z,37nm,0.8s						
TYV	Tymovskoe	44.34	18	eP	P	07 18 00.0	+0.6
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
TYV				pmax	pmax		
	comp=Z,16nm,1.0s						
TLY	Talaya	44.62	343	P	P	07 18 02.3	+0.7
	comp=Z,5.3nm,0.5s,baz=171,slow=5.3,SNR=11						
TLY				LR	LR	07 38 17.7	
	comp=Z,2µm,21.0s,baz=146,slow=38						
TLY	Talaya	44.62	343	eP	P	07 18 02.1	+0.4
TLY				eS	S	07 24 34.9	-0.6
TLY				eSSS	SSS	07 28 41.7	
TLY				pmax	pmax		
	comp=Z,21nm,0.8s						
TLY				MLR	MLR		
	comp=Z,4µm,21.0s						
TLY	Talaya	44.62	343	P	P	07 18 02.0	+0.4
EIDS	Eidsvold	44.65	142	P	P	07 18 01.5	-0.8
	baz=45,SNR=11						
EIDS	Eidsvold	44.65	142	P	P	07 18 01.5	-0.8
EIDS				IAmb	IAmb	07 18 02.8	
	comp=Z,43nm,1.2s						
IRK	Irkutsk	44.95	344	eP	P	07 18 03.2	-1.1
IRK				pmax	pmax		
	comp=Z,49nm,3.3s						
STKA	Stephens Creek	45.21	157	P	P	07 18 06.6	0.0
	baz=45,SNR=78						
STKA	Stephens Creek	45.21	157	P	P	07 18 06.9	+0.3
	comp=Z,34nm,0.7s,baz=333,slow=8.0,SNR=107						
STKA				PP	PP	07 19 54.1	+1.3
	comp=Z,13nm,0.8s,baz=334,slow=9.8,SNR=3.6						
STKA				LR	LR	07 38 50.7	
	comp=Z,718nm,21.9s,baz=331,slow=38						
STKA	Stephens Creek	45.21	157	P	P	07 18 06.6	0.0
STKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
STKA	Stephens Creek	45.21	157	P	P	07 18 06.6	0.0
MOY	Mondy	45.39	341	eP	P	07 18 08.0	0.0
MOY				pmax	pmax		
	comp=Z,21nm,1.4s						
WMQ	Urumqi	45.42	325	eP	P	07 18 09.5	+1.2
WMQ				pP	sP	07 18 22.3	+0.1
WMQ				sP	pP	07 18 32.8	+15
WMQ				PP	PP	07 19 57.8	+2.9
WMQ				S	S	07 24 47.8	+0.3
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,410nm,6.1s						
WMQ				LR	LR		
	comp=Z,3µm,16.3s						
WMQ				LR	LR		
	comp=Z,1µm,15.1s						
WMQ				LR	LR		
	comp=Z,1µm,17.5s						
WMQ	Urumqi	45.42	325	P	P	07 18 08.4	+0.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WMQ	Urumqi	45.42	325	P	P	07 18 08.4	+0.1
HTT	Hallett	45.65	161	P	P	07 18 10.8	+0.6
	baz=46,SNR=32						
CMSA	Cobar Meteorol	46.65	152	P	P	07 18 18.8	+0.8
	baz=47,SNR=16						
BOD	Bodaibo	48.48	354	eP	P	07 18 32.2	+0.4
BOD				pmax	pmax		
	comp=Z,18nm,1.6s						
ARMA	Armidale	48.76	146	P	P	07 18 35.5	+1.0
	baz=49,SNR=17						
ARMA	Armidale	48.76	146	P	P	07 18 35.1	+0.6
ZSN	Zaisan	49.22	327	eP	P	07 18 37.8	+0.1
	comp=Z,2.3nm,0.9s,baz=327						
ZSN				eS	S	07 25 41.9	+0.5
	baz=327						
ZSN	Zaisan	49.22	327	eP	P	07 18 37.8	+0.1
ZSN				eS	S	07 25 41.8	+0.5
ZSN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DGZ	Jazzator, Alta	49.34	331⇓	iP	P	07 18 39.6	+0.8
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SKR	Severo-Kuril's	49.43	28	eP	P	07 18 41.9	+2.7
SKR				eS	S	07 25 50.4	+6.3
SKR				pmax	pmax		
	comp=Z,300nm,4.6s						
SKR				MLR	MLR		
	comp=N,400nm,17.0s						
ARPS	Mount Arapiles	49.67	159	P	P	07 18 41.5	+0.3
	baz=50,SNR=18						
SHLS	Shalkode	50.06	319	eP	P	07 18 43.0	-1.4
	comp=N,4.4nm,0.8s,baz=319						
SHLS				eS	S	07 25 51.0	-2.5
	baz=319						
SHLS	Shalkode	50.06	319	eP	P	07 18 43.0	-1.4
SHLS				eS	S	07 25 51.0	-2.5
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PDGK	Podgornoye	50.13	320	i P	P	07 18 45.5	+0.6
PDGK				pmax	pmax		
	comp=Z,32nm,1.3s						
YNG	Young	50.20	152	P	P	07 18 46.1	+0.7
	baz=50,SNR=5.7						
MK31	Makanchi Array	50.25	325	i P	P	07 18 45.4	-0.2
MK31				pmax	pmax		
	comp=Z,13nm,0.9s						
MK31	Makanchi Array	50.25	325	P	P	07 18 45.9	+0.3
MKAR	Makanchi Array	50.25	325	P	P	07 18 46.0	+0.3
	comp=Z,4.6nm,0.6s,baz=129,slow=8.7,SNR=54						
MKAR				PcP	PcP	07 20 04.2	-0.2
	comp=Z,4.0nm,0.7s,baz=130,slow=3.9,SNR=6.3						
MKAR				LR	LR	07 41 28.4	
	comp=Z,2µm,18.3s,baz=118,slow=38						
MKAR	Makanchi Array	50.25	325	i P	P	07 18 46.2	+0.6
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	50.25	325	P	P	07 18 45.7	+0.1
MAKZ	Makanchi	50.44	325	P	P	07 18 47.6	+0.6
MAKZ				pmax	pmax		
	comp=Z,25nm,1.4s						
MAKZ	Makanchi	50.44	325	P	P	07 18 47.6	+0.6
MAKZ				IAmb	IAmb	07 18 55.1	
	comp=Z,25nm,1.4s						
MGCD	Mangrove Creek	50.65	149	P	P	07 18 51.2	+2.5
	baz=51,SNR=5.2						
SATY	Saty	50.70	319	eP	P	07 18 49.8	+0.7
	comp=Z,5.2nm,1.3s,baz=319						
SATY	Saty	50.70	319	eP	P	07 18 49.8	+0.7
SATY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KPKS	Kokpek	50.71	319	eP	P	07 18 49.5	+0.3
	comp=Z,11nm,1.6s,baz=319						
KPKS				eS	S	07 26 02.8	+0.3
	baz=319						
KPKS	Kokpek	50.71	319	eP	P	07 18 49.5	+0.3
KPKS				eS	S	07 26 02.7	+0.3
KPKS				pmax	pmax		
	comp=Z,11nm,1.6s						
KSH	Kashi	50.84	314	P	P	07 18 52.8	+2.5
KSH				pP	sP	07 19 05.5	+1.3
KSH				S	S	07 26 06.0	+1.6
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,570nm,4.6s						
KSH				LR	LR		
	comp=Z,1µm,13.1s						
KSH				LR	LR		
	comp=Z,4µm,16.8s						
KSH				LR	LR		
	comp=Z,4µm,17.5s						
SANVU	Saraoutou	50.92	119	P	P	07 18 48.9	-2.1
SANVU				IAmb	IAmb	07 19 03.0	
	comp=Z,18nm,0.8s						
NIL	Nilore	50.94	306	P	P	07 18 51.9	+0.8
NIL				pmax	pmax		
	comp=Z,36nm,0.9s						
NIL	Nilore	50.94	306	P	P	07 18 51.9	+0.8
CAN	Canberra	51.33	152	P	P	07 18 54.5	+0.7
CAN				pmax	pmax		
	comp=Z,40nm,0.8s						
CAN	Canberra	51.33	152	P	P	07 18 54.5	+0.7
CNB	Canberra Magne	51.49	152	P	P	07 18 55.6	+0.6
	baz=52,SNR=15						
TDK	Taldyqorghan	51.62	321	eP	P	07 18 56.5	+0.5
	comp=Z,10nm,0.7s,baz=321						
TDK				eS	S	07 26 15.6	+0.7
	baz=321						
TDK	Taldyqorghan	51.62	321	eP	P	07 18 56.4	+0.5
TDK				eS	S	07 26 15.5	+0.7
TDK				pmax	pmax		
	comp=Z,11nm,0.7s						
MDOK	Medeo	51.63	318	eS	S	07 26 13.5	-1.8
	baz=318						
TNSS	Tian-Shan	51.64	318	eP	P	07 18 57.1	+0.5
	baz=318						
TNSS	Tian-Shan	51.64	318	eP	P	07 18 57.1	+0.5
TOO	Toolangi	51.73	157	P	P	07 18 57.6	+0.9
	baz=52,SNR=8.2						
TOO	Toolangi	51.73	157	P	P	07 18 57.7	+0.9
TOO				pmax	pmax		
	comp=Z,21nm,0.9s						
TOO	Toolangi	51.73	157	P	P	07 18 57.7	+0.9
TOO				IAmb	IAmb	07 19 02.9	
	comp=Z,21nm,0.9s						
AAA	Alma-Ata	51.73	318	eP	P	07 18 57.1	+0.2
	baz=318						
AAA	Alma-Ata	51.73	318	eP	P	07 18 57.1	+0.2
PETK	Petropavlovsk-	51.82	26	P	P	07 18 57.0	-0.2
	comp=Z,4.8nm,0.8s,baz=210,slow=4.1,SNR=6.4						
PETK	Petropavlovsk-	51.82	26	P	P	07 18 56.8	-0.5
CHKK	Chushkaly	51.98	319	eP	P	07 18 58.5	-0.1
	baz=319						
CHKK	Chushkaly	51.98	319	eP	P	07 18 58.5	-0.1
PET	Petropavlovsk	52.18	27	eP	P	07 18 57.2	-2.7
PET				eS	S	07 26 22.9	+0.7
PET				e*SS	sS	07 26 48.0	+9.4
PET				pmax	pmax		
	comp=Z,400nm,9.1s						
PET				pmax	pmax		
	comp=Z,45nm,1.7s						
PET				MLR	MLR		
	comp=Z,600nm,23.0s						
KUU	Kurty	52.41	319	eP	P	07 19 02.2	+0.3
	comp=Z,25nm,0.9s,baz=319						
KUU				eS	S	07 26 26.1	+0.3
	baz=319						
KUU	Kurty	52.41	319	eP	P	07 19 02.1	+0.3
KUU				eS	S	07 26 26.1	+0.3
KUU				pmax	pmax		
	comp=Z,25nm,0.9s						
TKM2	Tokmak 2	52.48	318	i P	P	07 19 03.1	+0.5
TKM2				pmax	pmax		
	comp=Z,12nm,1.0s						
YAK	Yakutsk	52.54	4	eP	P	07 19 01.7	-0.7
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,1µm,25.0s						
YAK				MLR	MLR		
	comp=N,791nm,23.0s						
YAK	Yakutsk	52.54	4	P	P	07 19 02.4	0.0
AAK	Ala-Archa	53.10	317	LR	LR	07 44 41.5	
	comp=N,1µm,19.2s,baz=114,slow=39						
AAK	Ala-Archa	53.10	317	ceP	P	07 19 09.0	+1.8
AAK				pmax	pmax		
	comp=Z,53nm,1.1s						
AAK	Ala-Archa	53.10	317	P	P	07 19 08.1	+1.0
AAK				IAmb	IAmb	07 19 16.2	
	comp=Z,20nm,1.2s						
ZALV	Zalesovo Beam	53.38	333	P	P	07 19 08.2	-0.6
	comp=Z,4.0nm,0.6s,baz=123,slow=10,SNR=7.9						
ZALV				PcP	PcP	07 20 15.4	-0.4
	comp=Z,4.1nm,0.7s,baz=116,slow=3.4,SNR=2.5						
ZALV				LR	LR	07 42 47.8	
	comp=Z,570nm,18.6s,baz=124,slow=37						
ZALV	Zalesovo Beam	53.38	333	i P	P	07 19 13.6	+4.8
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SEM	Semipalatinsk	53.42	328	eP	P	07 19 08.6	-0.9
	baz=327						
SEM	Semipalatinsk	53.42	328	eP	P	07 19 08.5	-0.9
DZM	Mont Dzumac	53.49	127	eLR	LR	07 35 03.8	
	comp=Z,1µm,23.2s						
DZM	Mont Dzumac	53.49	127	LR	LR	07 41 22.3	
	comp=Z,533nm,21.2s,baz=284,slow=35						
MA2	Magadan	54.19	17	ceP	P	07 19 14.6	0.0
MA2				pmax	pmax		
	comp=Z,31nm,1.0s						
MA2	Magadan	54.19	17	P	P	07 19 14.3	-0.3
BTLS	Baital	54.39	319	eP	P	07 19 15.8	-0.5
	baz=319						
BTLS	Baital	54.39	319	eP	P	07 19 15.8	-0.5
KURK	Kurchatov	54.45	327	c iP	P	07 19 17.0	+0.4
KURK				pmax	pmax		
	comp=Z,47nm,1.4s						
KURK	Kurchatov	54.45	327	P	P	07 19 16.1	-0.5
KBL	Kabul	54.55	306	P	P	07 19 18.9	+1.0
KBL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBL	Kabul	54.55	306	P	P	07 19 18.9	+1.0
KBL				IAmb	IAmb	07 19 35.7	
	comp=Z,10nm,0.8s						
DZA	Taraz	55.35	316	eP	P	07 19 23.8	+0.4
	baz=316						
DZA	Taraz	55.35	316	eP	P	07 19 23.8	+0.4
KK31	Karatay Array	55.99	316	P	P	07 19 28.4	+0.5
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KK31	Karatay Array	55.99	316	P	P	07 19 28.4	+0.5
KK31				IAmb	IAmb	07 19 36.0	
	comp=Z,9.8nm,0.8s						
KKAR	Karatay Array	55.99	316	P	P	07 19 28.2	+0.3
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	Karatay Array	55.99	316	P	P	07 19 28.2	+0.3
KKAR	Karatay Array	55.99	316	P	P	07 19 28.4	+0.4
KKAR				IAmb	IAmb	07 19 36.0	
	comp=Z,9.8nm,0.8s						
IUG	Iuzhnay	55.99	315	eP	P	07 19 28.7	+0.6
	baz=315						
IUG				eS	S	07 27 15.0	+0.7
	baz=315						
IUG	Iuzhnay	55.99	315	eP	P	07 19 28.7	+0.6
IUG				eS	S	07 27 15.0	+0.7
BRZS	Berezniki	57.39	324	eP	P	07 19 37.6	-0.1
	baz=324						
BRZS	Berezniki	57.39	324	eP	P	07 19 37.6	-0.1
SEY	Seymchan	57.39	16⇑	iP	P	07 19 38.5	+1.1
HRA	Herat	60.02	304	P	P	07 19 56.5	-0.1
BRVK	Borovoye	60.10	327	P	P	07 19 56.6	+0.1
BRVK				pmax	pmax		
	comp=Z,22nm,1.1s						
BRVK	Borovoye	60.10	327	P	P	07 19 56.6	+0.1
BRVK				IAmb	IAmb	07 20 10.4	
	comp=Z,22nm,1.1s						
TIXI	Tiksi	62.06	2⇑	eP	P	07 20 08.2	-1.2
TIXI	Tiksi	62.06	2	P	P	07 20 08.3	-1.2
WSAR	Wadi Sarin	62.20	291	P	P	07 20 10.8	-0.5
	comp=Z,6.3nm,0.8s,baz=77,slow=19,SNR=2.9						
GEYT	Alibeck	63.86	307	P	P	07 20 23.8	+1.7
	comp=Z,5.1nm,0.7s,baz=0.0,slow=3.1,SNR=7.6						
GEYT				LR	LR	07 52 31.1	
	comp=Z,519nm,18.9s,baz=85,slow=40						
GEYT	Alibeck	63.86	307	P	P	07 20 23.6	+1.5
ABKAR	Akbulak array	64.86	320	P	P	07 20 28.1	-0.3
ABKAR				IAmb	IAmb	07 20 44.6	
	comp=Z,18nm,1.0s						
BILL	Bilibino	65.05	17	d iP	P	07 20 29.0	-0.3
BILL				e*PP	sP	07 20 45.2	+2.1
BILL				e*SP	PcP	07 20 51.0	-11
BILL				e		07 21 03.9	
BILL				eS	S	07 29 08.4	-0.7
BILL				pmax	pmax		
	comp=Z,39nm,1.5s						
BILL				MLR	MLR		
	comp=Z,374nm,20.0s						
BILL	Bilibino	65.05	17	P	P	07 20 28.9	-0.4
BILL				IAmb	IAmb	07 20 30.1	
	comp=Z,21nm,1.0s						
AKTO	Aktyubinsk	66.36	321	LR	LR	07 51 06.8	
	comp=Z,650nm,19.1s,baz=111,slow=37						
SVE	Sverdlovsk	66.68	328	eP	P	07 20 40.4	+0.4
SVE				pmax	pmax		
	comp=Z,20nm,0.8s						
ARU	Arti	67.65	327	c iP	P	07 20 45.2	-0.9
ARU				*PP	sP	07 20 57.9	-2.4
ARU						07 21 11.7	
ARU						07 23 13.3	
ARU				S	S	07 29 40.6	-0.4
ARU				SS	SS	07 33 58.1	-4.0
ARU				pmax	pmax		
	comp=Z,22nm,1.8s						
ARU				MLR	MLR		
	comp=Z,970nm,17.0s						
ARU	Arti	67.65	327	P	P	07 20 45.5	-0.6
ARU				IAmb	IAmb	07 21 13.1	
	comp=Z,15nm,1.0s						
QRZ	Quartz Range	68.23	141	P	P	07 20 50.5	+0.5
NNZ	Nelson	68.98	141	P	P	07 20 53.4	-1.3
LBZ	Lake Benmore	68.98	145	P	P	07 20 54.5	-0.1
THZ	Tophouse	69.00	142	P	P	07 20 53.8	-1.1
THZ				IAmb	IAmb	07 20 55.6	
	comp=Z,22nm,0.8s						
RPZ	Rata Peaks	69.06	144	P	P	07 20 55.0	-0.2
BKZ	Black Stump Fm	69.85	138	P	P	07 20 59.5	-0.6
SNZO	South Karori	69.86	141	P	P	07 20 58.3	-1.7
BHW	Baring Head	70.01	141	P	P	07 20 59.7	-1.3
BFZ	Birch Farm	70.49	139	P	P	07 21 03.4	-0.6
MAK	Makhachkala	72.42	312	eP	P	07 21 17.0	+1.3
MAK				eS	S	07 30 41.2	+3.8
MAK				MLR	MLR		
	comp=Z,501nm,14.0s						
KIRV	Kirov	72.94	328	i P	P	07 21 18.3	-0.1
BELG	Belogornoye	73.11	322	i P	P	07 21 18.8	-0.7
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANM	Nome	73.72	25	P	P	07 21 23.1	+0.2
ANM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ANM	Nome	73.72	25	P	P	07 21 23.1	+0.2
RAYN	Ar Rayn	74.25	292	P	P	07 21 27.1	+0.2
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RAYN	Ar Rayn	74.25	292	P	P	07 21 27.1	+0.2
GNI	Garni	74.41	309	eP	P	07 21 30.0	+2.3
GNI	Garni	74.41	309	ceP	P	07 21 29.1	+1.4
GNI				pmax	pmax		
	comp=Z,12nm,1.0s						
GNI	Garni	74.41	309	P	P	07 21 28.4	+0.8
GNI				IAmb	IAmb	07 21 57.4	
	comp=Z,34nm,1.1s						
CLDR	Caldiran	75.04	308	eP	P	07 21 31.5	0.0
ZEI	Tsey	75.06	312	eP	P	07 21 31.2	-0.3
ZEI				pmax	pmax		
	comp=Z,24nm,1.5s						
CUKT	Cukurca	75.31	306	eP	P	07 21 32.6	-0.3
RDOG	Red Dog Mine	75.38	22	P	P	07 21 31.6	-1.0
VANB	Van	75.46	307	eP	P	07 21 43.4	+10
GEVA	Gevas	75.73	307	P	P	07 21 35.9	+0.6
GEVA				IAmb	IAmb	07 21 50.0	
	comp=Z,17nm,0.9s						
AGRB	Hanur-Agry	75.76	308	eP	P	07 21 37.4	+1.9
AKDM	Akdamar-Van	75.79	307	eP	P	07 21 37.2	+1.5
KBZ	Khabaz	75.80	313	P	P	07 21 36.2	+0.8
	comp=Z,4.1nm,0.8s,baz=66,slow=4.8,SNR=6.3						
KBZ				LR	LR	07 59 23.8	
	comp=Z,792nm,18.4s,baz=82,slow=39						
KBZ	Khabaz	75.80	313	ceP	P	07 21 35.2	-0.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	Kislovodsk	75.96	313	eP	P	07 21 37.9	+1.5
KIV				eS	S	07 31 18.5	+1.2
KIV				eSS	SS	07 36 13.2	+3.1
KIV				pmax	pmax		
	comp=Z,59nm,1.0s						
KIV				pmax	pmax		
	comp=Z,72nm,4.7s						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s						
KIV	Kislovodsk	75.96	313	P	P	07 21 38.1	+1.6
KIV				IAmb	IAmb	07 22 01.0	
	comp=Z,21nm,0.9s						
CASY	Casey	76.24	185	P	P	07 21 36.8	-0.5
CASY				IAmb	IAmb	07 21 44.1	
	comp=Z,28nm,1.0s						
VRH	Novokhopyorsk	76.69	320	eP	P	07 21 37.9	-2.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MARD	Mardin	77.56	306	P	P	07 21 47.1	+1.4
BNGB	Bingl	77.57	308	eP	P	07 21 47.3	+1.6
TTA	Tatalina	77.63	28	P	P	07 21 45.3	-0.1
TTA				pmax	pmax		
	comp=Z,31nm,2.0s						
TTA	Tatalina	77.63	28	P	P	07 21 45.3	-0.1
TTA				IAmb	IAmb	07 22 13.8	
	comp=Z,31nm,2.0s						
YEDI	Yedisu-Bingol	77.65	308	eP	P	07 21 55.6	+9.4
KOPT	Kop Dagi	77.67	309	P	P	07 21 46.2	-0.2
KOPT				IAmb	IAmb	07 22 02.1	
	comp=Z,30nm,1.3s						
A21K	Barrow	78.02	19	P	P	07 21 47.5	+0.2
	baz=264						

A21K	Barrow	78.02	19	P	P	07 21 47.5	+0.2
KLMR	Klimovskoe	78.15	330	*e*P	P	07 21 44.4	-3.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLMR	Klimovskoe	78.15	330	*e*P	P	07 21 44.5	-3.8
KLMR				AMP		07 21 59.4	
	comp=Z,21nm,1.0s						
KLMR				LQ	LQ	07 51 30.6	
KLMR				LQ	LQ	07 51 30.6	
KLMR				LQ	LQ	07 57 21.7	
VORD	Divnogorie	78.22	320	*e*P	P	07 21 46.9	-1.9
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	Storozhevoye	78.30	320	*e*P	P	07 21 46.2	-3.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LPSR	Galich'ya Gora	78.42	322	*e*P	P	07 21 47.9	-2.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
IMAR	Indian Mountai	78.74	25	P	P	07 21 50.8	-0.6
OHAK	Old Harbor	78.87	33	P	P	07 21 51.9	-0.4
OHAK				IAmb	IAmb	07 22 31.6	
	comp=Z,40nm,1.2s						
TMCR	Tamitsa	78.91	334	*e*P	P	07 21 50.6	-1.7
TMCR				pmax	pmax		
	comp=Z,11nm,0.4s						
MOS	Moscow	79.14	325	*e*P	P	07 21 51.6	-2.2
MOS				*e*		07 22 03.7	
MOS				pmax	pmax		
	comp=Z,35nm,0.7s						
MOS				MLR	MLR		
	comp=Z,900nm,18.0s						
KDAK	Kodiak Island	79.24	33	P	P	07 21 54.3	0.0
KDAK				pmax	pmax		
	comp=Z,219nm,2.0s						
KDAK	Kodiak Island	79.24	33	P	P	07 21 54.3	0.0
OPO	Ambohidratompo	79.28	249	P	P	07 21 56.1	+0.6
	comp=Z,6.4nm,0.7s,baz=0.0,slow=10,SNR=3.1						
MALT	Malatya	79.36	307	*e*P	P	07 21 56.6	+1.0
PPLA	Purkeypile	79.38	28	P	P	07 21 54.9	-0.3
PPLA				IAmb	IAmb	07 22 41.5	
	comp=Z,20nm,1.3s						
SKT	Skwentna	79.70	29	P	P	07 21 55.1	-1.7
OBN	Obninsk	79.76	324	LR	LR	07 59 58.9	
	comp=Z,126nm,18.3s,baz=40,slow=38						
OBN	Obninsk	79.76	324⇓	*e*P	P	07 21 56.9	-0.3
OBN						07 22 03.0	
OBN				*PP	sP	07 22 12.0	+0.5
OBN				*SP	pP	07 22 18.0	+11
OBN				*e*S	S	07 31 53.5	-4.1
OBN				PS	PnS	07 32 53.3	+8.7
OBN				pmax	pmax		
	comp=Z,19nm,1.3s						
OBN				MLR	MLR		
	comp=Z,838nm,17.0s						
BPAW	Bear Paw Mtn.	79.90	26	P	P	07 21 57.5	-0.4
KTH	Kantishna Hill	79.94	27	P	P	07 21 58.5	+0.4
KTH				IAmb	IAmb	07 22 30.9	
	comp=Z,43nm,2.0s						
BRLK	Bradley Lake	80.08	31	P	P	07 21 58.3	-0.5
SUA	Susitna One	80.08	29	P	P	07 21 58.3	-0.7
SUA				IAmb	IAmb	07 21 59.6	
	comp=Z,16nm,0.9s						
DARE	Darende-Malaty	80.09	308	*e*P	P	07 22 01.2	+1.7
TRF	Thorofare Moun	80.23	27	P	P	07 21 58.9	-0.9
GAZ	Gaziantep	80.41	306	*e*P	P	07 22 02.7	+1.5
I23K	Minto, Yukon-K	80.57	25	P	P	07 22 01.8	+0.4
	baz=272						
I23K	Minto, Yukon-K	80.57	25	P	P	07 22 01.7	+0.3
RC01	Rabbit Creek A	80.59	29	P	P	07 22 01.3	-0.2
	baz=273						
NEA2	Nenana	80.72	26	P	P	07 22 02.2	-0.1
	baz=273						
SEW	Seward	80.78	30	P	P	07 22 01.6	-1.0
SEW				IAmb	IAmb	07 22 10.1	
	comp=Z,33nm,1.1s						
MCK	McKinley	80.82	27	P	P	07 22 02.2	-0.6
	baz=273						
PMR	Palmer	80.85	29	P	P	07 22 01.9	-1.0
PMR	Palmer	80.85	29	P	P	07 22 01.9	-1.0
RND	Reindeer	80.88	27	P	P	07 22 02.0	-1.2
RND				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RND	Reindeer	80.88	27	P	P	07 22 02.0	-1.2
KVT	Kavak	80.98	310	*e*P	P	07 22 05.5	+1.3
MDM	Murphy Dome	81.06	26	P	P	07 22 02.1	-2.0
WRH	Wood River Hil	81.15	26	P	P	07 22 03.0	-1.5
KNK	Knik Glacier	81.19	29	P	P	07 22 03.8	-1.0
KNK				IAmb	IAmb	07 22 45.5	
	comp=Z,39nm,1.4s						
SML	Sawmill	81.22	29	P	P	07 22 04.1	-0.9
SML				IAmb	IAmb	07 22 06.6	
	comp=Z,21nm,0.9s						
CCB	Clear Creek Bu	81.26	26	P	P	07 22 03.7	-1.3
BNN	Bunyan	81.34	308	*e*P	P	07 22 08.2	+2.0
POKR	Poker Plat Res	81.38	25	P	P	07 22 06.5	+0.8
	baz=274						
POKR	Poker Plat Res	81.38	25	P	P	07 22 04.5	-1.2
KOZT	Kozan	81.48	307	*e*P	P	07 22 06.9	0.0
DHY	Denali Highway	81.57	27	P	P	07 22 06.3	-0.6
DHY				IAmb	IAmb	07 22 43.4	
	comp=Z,30nm,1.9s						
IL31		81.64	26	P	P	07 22 05.9	-1.1
ILAR	Eielson Array	81.64	26	P	P	07 22 05.7	-1.5
	comp=Z,3.0nm,0.8s,baz=250,slow=5.2,SNR=29						
ILAR				PKKPbc	PKKPbc	07 40 39.3	-2.6
	comp=Z,0.5nm,0.9s,baz=154,slow=1.7,SNR=5.2						
ILAR	Eielson Array	81.64	26	P	P	07 22 06.0	-1.1
ILAR	Eielson Array	81.64	26	P	P	07 22 06.0	-1.1
HDA	Harding Lake	81.65	26	P	P	07 22 05.7	-1.4
	baz=275						
HDA	Harding Lake	81.65	26	P	P	07 22 06.5	-0.7
CORM	Corum	82.14	309	*e*P	P	07 22 10.2	-0.2
PRP	Porcupine Dome	82.14	25	P	P	07 22 09.9	0.0
FYU	Fort Yukon	82.15	24	P	P	07 22 10.5	+0.8
FYU				IAmb	IAmb	07 22 12.9	
	comp=Z,22nm,1.2s						
BMAR	Burnt Mountain	82.31	23	P	P	07 22 09.1	-1.5
KLU	Klutina	82.39	29	P	P	07 22 11.4	+0.2
KLU				IAmb	IAmb	07 22 13.6	
	comp=Z,24nm,1.4s						
PAX	Paxson	82.44	27	P	P	07 22 11.0	-0.5
PAX				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PAX	Paxson	82.44	27	P	P	07 22 11.0	-0.5
RIDG	Independent Ri	82.63	27	P	P	07 22 11.8	-0.7
RIDG				IAmb	IAmb	07 22 14.1	
	comp=Z,20nm,1.0s						
YAYX	Yaylak	82.91	308	*e*P	P	07 22 14.5	+0.1
BR131	Keskin Array S	82.95	309	P	P	07 22 14.3	-0.4
BR131				pmax	pmax		
	comp=Z,13nm,1.0s						
BR131	Keskin Array S	82.95	309	P	P	07 22 14.3	-0.4
BR131				IAmb	IAmb	07 22 28.8	
	comp=Z,13nm,0.9s						
BRTR	Keskin Array B	82.95	309	P	P	07 22 14.8	+0.1
	comp=Z,5.4nm,0.8s,baz=128,slow=4.7,SNR=28						
BRTR	Keskin Array B	82.95	309	P	P	07 22 14.1	-0.6
DOT	Dot Lake	82.99	27	P	P	07 22 13.3	-0.9
N25K	Chitina, Valde	83.01	29	P	P	07 22 15.1	+0.6
SERE	Sereflikochisa	83.10	308	*e*P	P	07 22 15.2	-0.2
MENT	Mentasta	83.24	27	P	P	07 22 15.7	+0.2
GLB	Gilahina Butte	83.40	29	P	P	07 22 16.3	-0.2
GLB				IAmb	IAmb	07 22 18.7	
	comp=Z,18nm,1.0s						
AFSR	Afar-Bala (An	83.42	309	*e*P	P	07 22 15.3	-1.7
ARCES	ARCESS Array B	83.42	339	P	P	07 22 15.8	-0.5
	comp=Z,7.4nm,0.7s,baz=67,slow=4.0,SNR=19						
ARCES				LR	LR	08 04 29.6	
	comp=Z,846nm,18.2s,baz=80,slow=39						
ARCES	ARCESS Array B	83.42	339	P	P	07 22 15.6	-0.7
ARCES				pmax	pmax		
	comp=Z,29nm,1.2s						
ARCES	ARCESS Array B	83.42	339	P	P	07 22 15.6	-0.7
VRDI	Verde Repeater	83.61	29	P	P	07 22 17.2	-0.5
VRDI				IAmb	IAmb	07 25 22.9	
	comp=Z,44nm,1.8s						
CSS	Mathiatis	83.78	304	P	P	07 22 18.0	-0.9
CSS				IAmb	IAmb	07 22 20.1	
	comp=Z,16nm,0.7s						
EGAK	Eagle	84.08	25	P	P	07 22 19.4	-0.3
BCAR	Beaver Creek A	84.09	27	P	P	07 22 20.8	+0.8
YUVA	Yuva-Kibriscik	84.35	310	*e*P	P	07 22 22.1	+0.3
BARN	Barnard Glacie	84.49	29	P	P	07 22 22.8	+0.6
AUMIH	MIHALICIK	84.58	309	*e*P	P	07 22 22.9	-0.1
AUSIV	SIVRIHISAR	84.59	309	*e*P	P	07 22 23.2	+0.2
FINES	FINESS Array B	84.60	331	P	P	07 22 22.2	-0.1
	comp=Z,3.2nm,0.5s,baz=57,slow=5.5,SNR=24						
FINES				LR	LR	08 02 59.1	
	comp=Z,1µm,19.6s,baz=74,slow=38						
FINES	FINESS Array B	84.60	331	*i* P	P	07 22 24.1	+1.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	84.60	320	P	P	07 22 22.0	-0.6
	comp=Z,4.9nm,0.7s,baz=66,slow=5.0,SNR=20						
AKASG				LR	LR	08 04 49.9	
	comp=Z,624nm,18.5s,baz=80,slow=39						
AKASG	Malin Array Be	84.60	320	*i* P	P	07 22 22.0	-0.6
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKBB	Malin Array Si	84.60	320	P	P	07 22 22.3	-0.4
AKBB				pmax	pmax		
	comp=Z,25nm,1.4s						
AKBB	Malin Array Si	84.60	320	P	P	07 22 22.3	-0.4
AKBB				IAmb	IAmb	07 22 36.7	
	comp=Z,25nm,1.4s						
SVRH	Sivrihisar-ESK	84.61	309	*e*P	P	07 22 23.4	+0.3
CTGM	Chitina Glacie	84.66	29	P	P	07 22 23.5	+0.5
MDUB	Mudurnu	84.71	310	*e*P	P	07 22 22.7	-0.9
MDUB	Mudurnu	84.71	310	P	P	07 22 23.1	-0.5
VSU	Vasula	84.79	328	*e*P	P	07 22 23.4	0.0
MNK	Minsk	84.82	324	*i* P	P	07 22 20.5	-3.2
	comp=E,3.0nm,0.7s						
MNK				*i* P	P	07 22 20.5	-3.2
	comp=N,15nm,0.8s						
MNK				*i* P	P	07 22 20.5	-3.2
	comp=Z,37nm,1.1s						
MNK				*i* pP	pP	07 22 35.0	+0.8
MNK				*i* PP	PP	07 25 33.8	-6.2
MNK				*i* PPP	PPP	07 27 25.8	
MNK				*i* S	SKSac	07 32 37.7	-7.9
MNK				*i* SS	SS	07 37 40.1	-42
MNK				*i* SSS	SSS	07 40 51.6	
MNK				*i* LQ	LQ	07 54 18.5	
MNK				*i* LR	LR	08 00 41.3	
MNK				*i* LRM	MLR	08 01 49.4	
	comp=N,318nm,18.4s						
MNK				*i* LRM	MLR	08 02 12.9	
	comp=Z,503nm,16.2s						
MNK				*i* LRM	MLR	08 02 14.2	
	comp=E,80nm,18.7s						
MNK	Minsk	84.82	324	*e*P	P	07 22 24.0	+0.3
DAWY	Dawson	84.96	26	P	P	07 22 24.5	+0.2
DAWY				IAmb	IAmb	07 22 25.1	
	comp=Z,16nm,1.1s						
CIFT	Cifteler, Eski	84.97	309	*e*P	P	07 22 24.7	-0.2
SRCK	Saricakaya, Es	85.21	310	*e*P	P	07 22 26.1	+0.1
GULT	Gulveren	85.23	310	*e*P	P	07 22 23.9	-2.3
IDID	Didziasalis	85.33	325	*e*P	P	07 22 26.5	+0.3
BORA	Eskisehir	85.36	310	*e*P	P	07 22 25.9	-1.0
NACGM	Naroch	85.38	325	*i* P	P	07 22 26.7	+0.2
NACGM				*i* P	P	07 22 26.7	+0.2
NACGM				*i* P	P	07 22 26.7	+0.2
NACGM				*i* PcP	sP	07 23 03.4	+23
NACGM				*i* PP	PP	07 26 00.4	+16
NACGM				*i* PPP	PPP	07 27 36.4	
NACGM				*i* S	SKSac	07 32 50.9	+1.8
NACGM				*i* PS	PnS	07 33 51.7	-2.2
NACGM				*i* SS	SS	07 38 13.8	-16
NACGM				*i* SSS	SSS	07 41 46.4	
NACGM				*i* LQ	LQ	07 55 27.8	
NACGM				*i* LR	LR	08 01 30.4	
KMBO	Kilima Mbogo	85.39	268	P	P	07 22 29.2	+1.5
	comp=Z,1.5nm,0.3s,baz=69,slow=4.9,SNR=5.7						
SHUT	Suhut-Afyon	85.49	308	*e*P	P	07 22 27.6	+0.1
EPYK	Eagle Plains	85.55	23	P	P	07 22 27.4	+0.2
	baz=284						
EPYK	Eagle Plains	85.55	23	P	P	07 22 27.4	+0.2
SORM	Soroca	85.57	318	⇑P	P	07 22 26.6	-1.0
SORM	Soroca	85.57	318	⇑P	P	07 22 26.6	-1.0
IIGN	Ignalina	85.62	325	*e*P	P	07 22 27.4	-0.3
ISP	Isparta	85.62	307	*e*P	P	07 22 30.6	+2.4
ISAL	Salakas	85.63	326	*e*P	P	07 22 27.9	+0.2
KORT	Korkueli	85.88	307	*e*P	P	07 22 29.9	+0.3
TVSB	Tavsanli	86.18	309	*e*P	P	07 22 29.6	-1.4
CFR	Carcaliu	86.21	315	⇑P	P	07 22 30.3	-0.5
CFR	Carcaliu	86.21	315	⇑P	P	07 22 30.3	-0.5
INK	Inuvik	86.24	21	P	P	07 22 30.3	-0.2
	comp=Z,16nm,0.9s,baz=281,slow=5.3,SNR=50						
INK	Inuvik	86.24	21	P	P	07 22 30.3	-0.2
INK				pmax	pmax		
	comp=Z,18nm,0.9s						
INK	Inuvik	86.24	21	P	P	07 22 30.3	-0.2
INK				IAmb	IAmb	07 22 31.5	
	comp=Z,18nm,0.9s						
HYT	Haines Junctio	86.53	29	P	P	07 22 32.1	-0.1
HYT				IAmb	IAmb	07 22 35.1	
	comp=Z,13nm,0.9s						
PABE	Paberze	86.85	326	*e*P	P	07 22 33.9	+0.2
TESR	Tescani	86.99	317	⇑P	P	07 22 34.5	-0.2
VRI	Vrincioaia	87.06	316	⇑P	P	07 22 35.3	+0.3
VRI	Vrincioaia	87.06	316	⇑P	P	07 22 35.3	+0.3
PLOR	Plostina	87.11	316	⇑P	P	07 22 35.3	0.0
PLOR	Plostina	87.11	316	⇑P	P	07 22 35.3	0.0
BISRR	Bisoca	87.13	316	⇓P	P	07 22 35.7	+0.3
BIZ	Bicaz	87.28	317	⇑P	P	07 22 37.0	+1.0
NEHR	Nehoiu	87.44	315	⇑P	P	07 22 37.5	+0.6
MLR	Muntele Rosu	87.67	316	⇑P	P	07 22 38.1	0.0
MLR	Muntele Rosu	87.67	316	P	P	07 22 36.8	-1.3
MLR				pmax	pmax		
	comp=Z,17nm,1.1s						
MLR	Muntele Rosu	87.67	316	P	P	07 22 36.8	-1.3
MLR				IAmb	IAmb	07 23 18.9	
	comp=Z,17nm,1.1s						
BURAR	Bucovina Array	87.73	318	⇑P	P	07 22 38.8	+0.4
BURAR	Bucovina Array	87.73	318	⇑P	P	07 22 38.8	+0.4
BURAR	Bucovina Array	87.73	318	P	P	07 22 37.2	-1.1
BUR08	Bucovina Ar. S	87.74	318	P	P	07 22 38.0	-0.4
BUR08				IAmb	IAmb	07 22 39.6	
	comp=Z,31nm,1.6s						
ARG	Arkhangelos	87.78	306	*e*P	P	07 22 38.3	-0.3
DOPR	Dopca	87.95	316	⇑P	P	07 22 39.4	+0.1
VOIR		88.30	316	⇑P	P	07 22 40.4	-0.6
VOIR		88.30	316	⇑P	P	07 22 40.4	-0.6
C36M	Paulatuk	89.07	19	P	P	07 22 43.8	-0.2
	baz=295						
C36M	Paulatuk	89.07	19	P	P	07 22 43.8	-0.2
C36M				IAmb	IAmb	07 22 44.8	
	comp=Z,12nm,0.9s						
EUNU	Eureka	89.20	5	P	P	07 22 44.6	+0.1
EUNU				IAmb	IAmb	07 22 47.0	
	comp=Z,22nm,1.4s						
KOLS	Kolonicke sedl	89.36	320	*e*P	P	07 22 48.0	+2.1
KOLS	Kolonicke sedl	89.36	320	*e*P	P	07 22 48.0	+2.1
UZH	Uzhgorod	89.42	319*c*	*i*P	P	07 22 46.2	+0.1
UZH				*e*		07 22 59.5	
DRGR		89.58	317	⇑P	P	07 22 46.9	-0.1
DRGR		89.58	317	⇑P	P	07 22 46.9	-0.1
VNDA	Vanda	89.84	172	P	P	07 22 46.6	-0.8
	comp=Z,4.9nm,0.8s,baz=312,slow=8.3,SNR=15						
VNDA	Vanda	89.84	172	P	P	07 22 46.8	-0.6
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	Vanda	89.84	172	P	P	07 22 46.8	-0.6
VNDA				IAmb	IAmb	07 22 49.7	
	comp=Z,9.6nm,1.1s						
CRVS	Cervenica-Dubn	89.89	320	*e*P	P	07 22 49.4	+1.1
CRVS	Cervenica-Dubn	89.89	320	*e*P	P	07 22 49.4	+1.1
NIE	Niedzica	90.49	320	*e*P	P	07 22 51.0	-0.2
BZS	Buzias	90.61	316	⇑P	P	07 22 50.9	-0.8
BZS	Buzias	90.61	316	⇑P	P	07 22 50.9	-0.8
MDVR	Moldovita	90.75	316	⇑P	P	07 22 52.8	+0.3
DAG	Danmarks Havn	90.82	352	*i* P	P	07 22 50.6	-1.5
DAG	Danmarks Havn	90.82	352	*i* P	P	07 22 50.6	-1.5
DAG	Danmarks Havn	90.82	352	*i* P	P	07 22 50.6	-1.5
PPT2	Papeete2	91.02	108	*e*S	S	07 34 08.6	+18
	comp=Z,344nm,24.2s						
PPT2	Papeete2	91.02	108	*e*LR	LR	07 52 08.7	
	comp=Z,1µm,22.8s,baz=286						
NB2	NORSAR Subarra	91.58	333	P	P	07 22 55.4	-0.6
	comp=Z,9.1nm,1.0s,baz=67,slow=4.8						
NOA	NORSAR Array B	91.58	333	P	P	07 22 55.2	-0.8
	comp=Z,0.8nm,0.6s,baz=66,slow=4.8,SNR=4.0						
TBI	Tubuai	92.09	113	*e*S	S	07 34 18.8	+19
	comp=Z,296nm,26.8s						
TBI	Tubuai	92.09	113	*e*LR	LR	07 52 41.2	
	comp=Z,881nm,22.5s,baz=295						
KSP	Ksiaz	92.54	322	*e*P	P	07 23 00.9	+0.3
RES	Resolute Bay	92.73	9	P	P	07 22 59.7	-1.3
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay	92.73	9	P	P	07 22 59.7	-1.3
RES				IAmb	IAmb	07 23 03.4	
	comp=Z,5.4nm,0.8s						
DBG	Daneborg	93.02	350	*i* P	P	07 23 02.6	+0.3
BRG	Berggiesshubel	93.94	323	*e*P	P	07 23 07.2	+0.2
BRG				Amp		07 23 09.9	
	comp=Z,13nm,1.2s						
BRG	Berggiesshubel	93.94	323	*e*P	P	07 23 07.2	+0.2
BRG				pmax	pmax		
	comp=Z,13nm,1.2s						
BRG	Berggiesshubel	93.94	323	*e*P	P	07 23 07.2	+0.2
BRG				Amp		07 23 09.9	
	comp=Z,13nm,1.2s						
CLL	Collm	94.34	324	*e*P	P	07 23 08.0	-0.8
CLL				*e*SKSac	SKSac	07 33 38.0	-3.6
CLL				*e*S	S	07 34 12.0	-6.3
CLL				*e*SP	SP	07 35 32.0	-0.7
CLL				*e*PPS	PPS	07 36 12.0	
CLL				*e*		07 39 54.0	
CLL				*e*SS	SS	07 40 42.0	+2.4
CLL				*e*SSS	SSS	07 44 24.0	
CLL				*e*SSSS		07 47 30.0	
CLL				Lm	MLR	08 10 00.0	
	comp=N,600nm,18.9s						
CLL				Lm	MLR	08 10 00.0	
	comp=E,700nm,20.2s						
CLL				Lm	MLR	08 10 00.0	
	comp=Z,900nm,20.6s						
CLL	Collm	94.34	324	*e*P	P	07 23 08.0	-0.8
CLL				*e*		07 33 38.0	
CLL				MLR	MLR		
	comp=Z,900nm,20.6s						
GERES	GERESS Array B	94.79	321	P	P	07 23 10.8	-0.3
	comp=Z,0.8nm,0.6s,baz=64,slow=6.1,SNR=5.7						
GERES	GERESS Array B	94.79	321	P	P	07 23 10.6	-0.5
YKA	Yellowknife Ar	95.83	23	P	P	07 23 14.9	-0.5
	comp=Z,4.5nm,0.8s,baz=304,slow=3.9,SNR=75						
YKA				PKiKP	PKiKP	07 27 54.0	-0.5
	comp=Z,0.5nm,0.9s,baz=329,slow=1.0,SNR=5.5						
YKA				PKKPbc	PKKPdf	07 40 03.5	-3.2
	comp=Z,0.6nm,0.7s,baz=119,slow=3.0,SNR=13						
YKA	Yellowknife Ar	95.83	23	*i* P	P	07 23 14.8	-0.6
YKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SYO	Syowa Base	96.38	201⇓	*e*PcP	PcP	07 23 20.8	+3.1
SUMG	Summit	96.98	354	*i* P	P	07 23 20.9	0.0
SUMG	Summit	96.98	354	*i* P	P	07 23 20.9	0.0
SUMG	Summit	96.98	354	*i* P	P	07 23 21.0	0.0
TAOE	Nuku Hiva Isla	98.75	98	*e*S	S	07 35 15.5	+18
	comp=Z,666nm,30.2s						
TAOE	Nuku Hiva Isla	98.75	98	*e*LQ	LQ	07 51 34.0	
	comp=Z,619nm,30.8s						
TAOE				*e*LR	LR	07 56 05.1	
	comp=Z,798nm,22.4s						
NVAR	Mina Array Bea	106.01	45	PKiKP	PKiKP	07 28 15.1	+1.2
	comp=Z,0.3nm,0.6s,baz=237,slow=3.1,SNR=2.2						
PDAR	Pinedale Array	109.55	38	PKiKP	PKiKP	07 28 20.9	+0.5
	comp=Z,0.2nm,0.6s,baz=130,slow=2.4,SNR=3.8						
PDAR	Pinedale Array	109.55	38		PKiKP	07 28 18.4	-2.0
VNA2	Neumayer--Watz	111.40	196	PKiKP	PKiKP	07 28 23.1	+0.4
ULM	Lac du Bonnet	111.66	25	PKKPbc	PKKPbc	07 39 22.0	+2.8
	comp=Z,2.5nm,1.1s,baz=132,slow=4.6,SNR=4.2						
VNA3	Neumayer Olymp	111.81	195	PKiKP	PKiKP	07 28 24.4	+0.9
ANMO	Albuquerque	115.97	43	PKIKP	PKiKP	07 28 31.1	-1.7
ANMO	Albuquerque	115.97	43	P	PKPdf	07 28 33.9	+1.1
	baz=304						
ANMO	Albuquerque	115.97	43		PKiKP	07 28 31.1	-1.7
TORD	Torodi Ar. Bea	116.91	290	PKP	PKPdf	07 28 33.0	-1.8
	comp=Z,1.9nm,0.7s,baz=18,slow=2.6,SNR=4.6						
TORD	Torodi Ar. Bea	116.91	290		PKPdf	07 28 33.8	-1.0
MNTX	Cornudas Mount	118.53	46	P	PKiKP	07 28 38.2	+0.5
	baz=304						
MNTX	Cornudas Mount	118.53	46	PKPdf	PKiKP	07 28 38.2	+0.5
E46A	Sault Ste Mari	119.32	21	PKPdf	PKPdf	07 28 36.9	-1.8
TX31	Lajitas Ar. Si	121.07	47		PKPdf	07 28 42.7	0.0
TX32	Lajitas Array	121.07	47	PKPdf	PKPdf	07 28 42.7	0.0
TXAR	Lajitas Array	121.08	47	PKP	PKPdf	07 28 42.8	+0.1
	comp=Z,1.7nm,0.6s,baz=237,slow=0.7,SNR=27						
TXAR				PKKPbc	PKKPbc	07 38 45.9	+0.1
	comp=Z,0.2nm,0.7s,baz=148,slow=5.3,SNR=2.6						
TXAR	Lajitas Array	121.08	47	PKPdf	PKPdf	07 28 42.7	0.0
WMOK	Wichita Mounta	121.11	39	PKIKP	PKPdf	07 28 41.8	-0.7
WMOK	Wichita Mounta	121.11	39	P	PKPdf	07 28 42.4	0.0
	baz=311						
WMOK	Wichita Mounta	121.11	39		PKPdf	07 28 41.8	-0.7
D56A	ZEC Mazanza, M	121.51	14	P	PKPdf	07 28 42.8	-0.1
	baz=340						
OK030	Cody Creek RV	121.53	37		PKPdf	07 28 40.8	-2.4
LATQ	La Tuque	121.62	12	P	PKPdf	07 28 43.0	0.0
	baz=342						
LATQ	La Tuque	121.62	12		PKPdf	07 28 41.0	-2.0
E56A	St. Veronique	121.91	14	P	PKPdf	07 28 43.6	-0.1
	baz=340						
S39A	Bolivar	122.25	33		PKPdf	07 28 44.0	-0.6
E57A	Chemin Saint G	122.25	13	P	PKiKP	07 28 44.5	0.0
	baz=341						
R40A	Maddies Statio	122.36	32		PKPdf	07 28 42.8	-1.9
E58A	La Victoria	122.48	13	P	PKPdf	07 28 44.0	-0.7
	baz=342						
U38A	Gravette	122.56	35		PKPdf	07 28 43.5	-1.7
E61A	Lac Etchemin	122.98	11	P	PKiKP	07 28 46.0	+0.1
	baz=345						
CCM	Cathedral Cave	123.07	31	P	PKPdf	07 28 45.5	-0.6
	baz=319						
JCT	Junction City	123.12	44	PKIKP	PKPdf	07 28 46.3	-0.2
JCT	Junction City	123.12	44	P	PKPdf	07 28 46.6	+0.1
	baz=308						
JCT	Junction City	123.12	44	PKPdf	PKPdf	07 28 46.3	-0.2
F60A	Warwick	123.14	12	P	PKiKP	07 28 46.2	0.0
	baz=343						
U40A	Yellville	123.48	34	P	PKPdf	07 28 46.5	-0.5
	baz=317						
U40A	Yellville	123.48	34	PKPdf	PKPdf	07 28 46.2	-0.8
T42A	Van Buren	123.92	32	PKPdf	PKPdf	07 28 46.8	-1.0
MIAR	Mount Ida	124.37	36	P	PKiKP	07 28 49.0	-0.1
	baz=316						
833A	Chaparral WMA,	124.71	46	P	PKiKP	07 28 50.5	+0.6
	baz=307						
J58A	Remsen	124.83	16	P	PKiKP	07 28 49.8	+0.2
	baz=339						
J59A	Piesco	124.93	15	PKPdf	PKPdf	07 28 49.4	-0.1
DBIC	Dimbokro	125.00	285	PKP	PKPdf	07 28 49.7	-0.7
	comp=Z,2.8nm,0.7s,baz=108,slow=3.2,SNR=1.8						
N53A	Lisbon	125.39	22		PKiKP	07 28 51.0	+0.1
N54A	Moraine State	125.56	21	P	PKiKP	07 28 51.1	-0.1
	baz=333						
M56A	Emporium	125.70	19	P	PKPdf	07 28 51.2	+0.1
	baz=335						
BINY	Binghamton	125.71	17	P	PKiKP	07 28 51.5	0.0
	baz=338						
O54A	Avella	126.11	22		PKiKP	07 28 52.2	-0.1
WVT	Waverly	126.29	30	PKIKP	PKPdf	07 28 51.7	-0.6
WVT	Waverly	126.29	30	P	PKPdf	07 28 52.3	0.0
	baz=322						
WVT	Waverly	126.29	30	PKPdf	PKPdf	07 28 51.7	-0.6
P53A	Whipple	126.34	23	PKPdf	PKiKP	07 28 53.1	+0.3
T50A	Nancy	126.99	27		PKPdf	07 28 53.8	+0.1
S51A	Beattyville	127.03	26		PKPdf	07 28 53.7	0.0
PLAL	Pickwick Lake	127.06	31	PKPdf	PKPdf	07 28 53.5	-0.4
P56A	Dayton Farm, R	127.26	21	P	PKiKP	07 28 54.8	+0.2
	baz=333						
Q58A	Fox Den Farm,	128.16	20	P	PKPdf	07 28 56.1	+0.3
	baz=334						
CMIG	Matias Romero	134.56	54	PKP	PKPdf	07 29 09.1	+0.6
	comp=Z,7.1nm,0.7s,baz=355,slow=1.6,SNR=9.2						
LL01	San Ignacio de	144.92	161		PKPab	07 29 25.7	0.0
ACON	Acoyapa	145.18	52		PKPbc	07 29 26.0	-1.4
ESPN	Las Esperanzas	145.72	51		PKPdf	07 29 28.5	-0.2
GTBY	Guantanamo Bay	145.92	30	PKPab	PKPab	07 29 30.5	+0.5
JTS	Las Juntas de	146.34	55	PKPbc	PKPdf	07 29 29.2	-0.6
	baz=260,slow=11						
PLCA	Paso Flores	147.00	162	PKPbc	PKPdf	07 29 30.9	+0.6
	comp=Z,27nm,0.8s,baz=214,slow=3.4,SNR=91						
PLCA	Paso Flores	147.00	162	PKP2	PKPdf	07 29 31.3	+1.0
PLCA	Paso Flores	147.00	162		PKPdf	07 29 31.3	+1.0
PRVC	Isla de Provid	147.14	46	*e*P	PKPdf	07 29 30.2	-0.9
LC01	Cunco	148.21	159	PKPbc	PKPbc	07 29 34.5	-1.0
BI03	Tigo	149.55	155		PKPbc	07 29 38.7	-0.3
BI02	San Fabin de	150.40	157	PKPbc	PKPbc	07 29 39.4	-1.8
BCIP	Isla Barro Col	151.02	50	*e*P	PKPdf	07 29 39.3	+1.9
OBIP	Obispado Ponce	151.07	18		PKPbc	07 29 40.8	-2.3

PDPR	**Patillas Dam,**	**151.27**	**17**		**PKPbc**	**07 29 42.9**	**-0.7**
BO02	**Sierra Bellavi**	**152.24**	**156**		**PKPbc**	**07 29 44.8**	**-0.7**
PTBC	**PUERTO BERRIO,**	**156.74**	**47**	*e*P	**PKPdf**	**07 29 45.0**	**-0.6**
YOTC	**Yotoco, Valle**	**156.93**	**55**	*e*P	**PKPdf**	**07 29 45.8**	**-0.2**
SDV	**Santo Domingo**	**157.47**	**36**	*e*P	**PKPdf**	**07 29 46.7**	**+0.1**
CHIC	**Chingaza**	**158.56**	**49**	*e*P	**PKPdf**	**07 29 48.2**	**-0.1**
CPUP	**Villa Florida** comp=Z,3.1nm,0.8s,baz=146,slow=2.4,SNR=7.9	**163.42**	**181**	PKP	**PKPdf**	**07 29 53.0**	**+0.4**
CPUP	comp=Z,3.2nm,0.8s,baz=167,slow=4.0,SNR=5.9			PKPab	**PKPab**	**07 30 41.7**	**-1.7**
MNMC	**Minye Minye**	**165.06**	**130**		**PKPdf**	**07 29 54.1**	**-0.5**
SAML	**Samuel**	**174.45**	**83**	PKIKP	**PKPdf**	**07 29 59.7**	**-0.3**
SAML	**Samuel**	**174.45**	**83**		**PKPdf**	**07 29 59.6**	**-0.3**

WEL 26 07:11:19.0, 36°S±9°×**17°8E**±3°0**, h273**km±16km**, M3.2**/18**, mB4.1**/1**, MLv3.2**/18**, Mw(mB)3.1**/1 **Error ellipse: s-maj=0.0km s-min=0.0km az=83.2, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.73**	**186**	P	Pn	07 12 00.9	-0.2
HAZ				S	S	07 12 31.0	-3.7
WMGZ	**Waiomatatini S**	**1.82**	**170**	P	Pn	07 12 02.1	+0.3
PKGZ	**Pakihiroa**	**1.86**	**178**	P	Pn	07 12 02.6	+0.3
RUGZ	**Raukumara Rang**	**1.95**	**187**	P	Pn	07 12 02.6	-0.5
TWGZ	**Tauwhareparae**	**2.14**	**180**	P	Pn	07 12 05.9	+1.3
TWGZ				S	S	07 12 39.0	-2.0
MWZ	**Matawai**	**2.33**	**189**	P	Pn	07 12 06.9	+0.6
MWZ				S	S	07 12 41.3	-2.7
URZ	**Urewera**	**2.34**	**197**	P	Pn	07 12 06.8	+0.5
URZ				S	S	07 12 41.8	-2.2
TKGZ	**Te Karaka**	**2.41**	**183**	P	Pn	07 12 07.8	+0.8
CNGZ	**Carnagh Statio**	**2.46**	**176**	P	Pn	07 12 08.7	+1.3
RAGZ	**Rawiri**	**2.51**	**191**	P	Pn	07 12 07.9	-0.1
RIGZ	**Rimuhau**	**2.68**	**184**	P	Pn	07 12 10.6	+0.9
RIGZ				S	S	07 12 48.2	-1.8
KNZ	**Kokohu**	**3.00**	**185**	P	Pn	07 12 13.7	+0.9
NMHZ	**Naumai**	**3.21**	**197**	P	Pn	07 12 16.9	+1.8
NMHZ				S	S	07 13 00.9	+1.1
BKZ	**Black Stump Fm**	**3.35**	**200**	P	Pn	07 12 17.2	+0.5
HIZ	**Hauiti**	**3.52**	**224**	P	Pn	07 12 22.3	+3.8
KWHZ	**Kaweka Forest**	**3.61**	**200**	P	Pn	07 12 20.5	+1.0
KWHZ				S	S	07 13 07.6	-0.2
OTVZ	**Oturere**	**3.64**	**210**	P	Pn	07 12 21.7	+1.8
KRHZ	**Kereru**	**3.83**	**199**	P	Pn	07 12 22.9	+1.0
KRHZ				S	S	07 13 10.8	-1.3
KAHZ	**Kahuranaki**	**3.86**	**193**	P	Pn	07 12 23.5	+1.2
PNHZ	**Pukenui**	**4.13**	**200**	P	Pn	07 12 25.9	+0.6
PNHZ				S	S	07 13 16.6	-1.7
PRHZ	**Porangahau**	**4.37**	**194**	P	Pn	07 12 29.1	+1.2
BFZ	**Birch Farm**	**4.84**	**196**	P	Pn	07 12 34.0	+0.4
BFZ				S	S	07 13 32.0	-1.4
MRZ	**Mangatainoka R**	**5.00**	**202**	P	Pn	07 12 35.3	-0.1
MRZ				S	S	07 13 33.7	-2.9
TIWZ	**Tintock**	**5.02**	**199**	P	Pn	07 12 36.2	+0.5

IDC 26 07:14:39.7±6.8**, 0°.52N**×**100°.25W, h0**km**, mb3.8**/6**, mb1 4.2**/6**, mb1mx3.9**/23**, mbtmp3.8**/6**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/22**, Error ellipse: s-maj=150.3km s-min=116.6km az=122.0, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero** comp=Z,60nm,18.9s,baz=198,slow=30	**17.30**	**17**	LR	LR	07 23 15.6	
LPIG	**La Paz** comp=Z,87nm,18.3s,baz=166,slow=31	**25.39**	**338**	LR	LR	07 27 39.6	
TXAR	**Lajitas Array** 0.7nm,0.9s,baz=172,slow=10,SNR=7.1	**28.84**	**354**	P	P	07 20 40.0	0.0
NVAR	**Mina Array Bea** 0.3nm,0.7s,baz=162,slow=8.5,SNR=4.8	**41.22**	**338**	P	P	07 22 26.7	0.0
PDAR	**Pinedale Array** 1.4nm,0.9s,baz=160,slow=9.0,SNR=8.9	**42.89**	**350**	P	P	07 22 39.9	-0.3
ULM	**Lac du Bonnet** 0.5nm,0.3s,baz=180,slow=5.1,SNR=3.5	**49.69**	**4**	P	P	07 23 33.1	-0.2
YKA	**Yellowknife Ar** 1.6nm,0.9s,baz=158,slow=6.9,SNR=9.3	**62.76**	**353**	P	P	07 25 06.8	+0.3
ILAR	**Eielson Array** 1.3nm,0.8s,baz=149,slow=5.6,SNR=13	**72.40**	**341**	P	P	07 26 07.3	-0.1

DJA 26 07:23:44.8±0.3**, 7°S**±3°×**11°2E**±°**, h10**km**, M4.0**/9**, MLv4.0**/9**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBJI	**Tambak Boyo**	**0.59**	**311**	P	Pg	07 23 56.2	-0.1
TBJI				S	Sb	07 24 06.0	+0.2
WOJI	**Wonogiri, Jawa**	**1.50**	**245**	P	Pn	07 24 11.0	-0.8
WOJI				S	Sb	07 24 32.2	+0.3
KMMI	**Kalianget**	**1.66**	**85**	P	Pn	07 24 12.9	-1.1
KMMI				S	Sn	07 24 34.9	-0.5
SMRI	**Semarang**	**1.85**	**275**	P	Pn	07 24 15.9	-0.8
UGM	**Wanagama**	**1.90**	**248**	P	Pn	07 24 17.1	-0.2
UGM				S	Sb	07 24 44.2	+0.9
JAGI	**Jajag, Banyuwa**	**2.22**	**124**	P	Pn	07 24 21.8	+0.1
SRBI	**Singaraja**	**3.02**	**107**	P	Pn	07 24 33.2	+0.6
LEM	**Lembang**	**4.66**	**274**	P	Pn	07 24 54.9	-0.6
KBKI	**Kotabaru**	**5.47**	**45**	P	Pg	07 25 34.1	+4.5
STKI	**Sintang**	**7.27**	**353**	P	Pg	07 26 02.5	-1.7
WSI	**Waingapu**	**8.28**	**108**	P	Pn	07 25 39.7	-5.3

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*KNET **26** 07:30:53.8±0.4, 42°.86N×74°.11E, h20km±4km, ml2.5, Error ellipse: s-maj=3.4km s-min=2.3km az=151.0*
*SOME **26** 07:30:54.6, 42°.90N×74°.08E, h20km*
*KRNET **26** 07:30:54.3±0.1, 42°.88N×74°.10E, h22km, mb3.6*
*NNC **26** 07:30:54.6±0.3, 42°.92N×74°.15E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=1.7km s-min=1.4km az=69.0*
ISC 26 07:30:52.4±1.1**, 42°.91N**±0°.02×**74°.09E**±0°.01**, h9**km±10km**, n89,** σ**1s.42**/154**, 49C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	**Erkin-Say** baz=27	**0.33**	**223**	⇑*i*P	**Pb**	**07 31 01.4**	**+0.8**
EKS2	baz=27			⇑*i*S	**Sb**	**07 31 06.4**	**+0.3**
EKS2	**Erkin-Say** 177nm,0.2s,SNR=93	**0.33**	**223**	⇑P	**Pb**	**07 31 01.3**	**+0.8**
EKS2	526nm,0.2s			⇑S	**Sb**	**07 31 05.1**	**-1.0**
AAK	**Ala-Archa** baz=29	**0.40**	**132**	⇑*i*P	**Pb**	**07 31 02.3**	**+0.5**
AAK	baz=29			⇑*i*S	**Sb**	**07 31 07.9**	**-0.2**
AAK	**Ala-Archa** 32nm,0.1s,SNR=48	**0.40**	**132**	⇑P	**Pb**	**07 31 02.3**	**+0.5**
AAK	198nm,0.1s			⇑S	**Sb**	**07 31 07.9**	**-0.2**
AAK	**Ala-Archa** 11nm,0.4s	**0.40**	**132**	⇓P	**Pb**	**07 31 02.3**	**+0.5**
AAK	181nm,0.4s			⇑S	**Sb**	**07 31 07.4**	**-0.7**
FRU1	**Bishkek** baz=96	**0.41**	**103**	⇓*i*P	**Pb**	**07 31 02.6**	**+0.7**
FRU1	baz=96			⇓*i*S	**Sb**	**07 31 08.4**	**+0.1**
USP	**Ospenovka** baz=37	**0.47**	**40**	⇑*i*P	**Pn**	**07 31 04.1**	**-1.3**
USP	baz=37			⇑*i*S	**Sb**	**07 31 10.9**	**+0.9**
USP	**Ospenovka** 36nm,0.1s,SNR=30	**0.47**	**40**	⇓P	**Pn**	**07 31 04.1**	**-1.3**
USP	849nm,0.3s			⇑S	**Sb**	**07 31 10.9**	**+0.9**
CHMS	**Chumysh** baz=76	**0.50**	**79**	⇑*i*P	**Pb**	**07 31 04.1**	**+0.8**
CHMS	baz=76			⇑*i*S	**Sb**	**07 31 10.9**	**+0.2**
CHMS	**Chumysh** 91nm,0.1s,SNR=213	**0.50**	**79**	P	**Pb**	**07 31 04.0**	**+0.8**
CHMS	325nm,0.1s			⇑S	**Sb**	**07 31 10.9**	**+0.2**
MRKS	**Merke** baz=59	**0.65**	**256**	⇑*i*P	**Pn**	**07 31 06.9**	**-1.0**
MRKS	baz=59			⇑*e*S	**Sb**	**07 31 15.9**	**+0.7**
MRKS	**Merke** 64nm,0.1s	**0.65**	**256**	⇑*i*P	**Pn**	**07 31 06.9**	**-1.0**
MRKS	247nm,0.1s			*e*S	**Sb**	**07 31 16.0**	**+0.7**
MRKS	**Merke** 64nm,0.1s	**0.65**	**256**	P	**Pn**	**07 31 06.9**	**-1.0**
MRKS	247nm,0.1s			S	**Sb**	**07 31 16.0**	**+0.7**
SGDS	**Sogindy** 36nm,0.1s	**0.68**	**36**	P	**Pn**	**07 31 07.6**	**-0.6**
SGDS	294nm,0.1s			S	**Sb**	**07 31 17.0**	**+1.1**
KBK	**Karagaybulak** baz=9.0	**0.68**	**111**	⇑*i*P	**Pn**	**07 31 07.4**	**-1.0**
KBK	baz=9.0			⇑*i*S	**Sb**	**07 31 16.2**	**0.0**
KBK	**Karagaybulak** 126nm,0.1s,SNR=271	**0.68**	**111**	P	**Pn**	**07 31 07.4**	**-1.0**
KBK	269nm,0.2s			⇑S	**Sb**	**07 31 16.6**	**+0.5**
UCH	**Uchtor** baz=54	**0.75**	**155**	⇓*i*P	**Pn**	**07 31 08.4**	**-1.1**
UCH	baz=54			⇓*i*S	**Sb**	**07 31 18.0**	**-0.3**
UCH	**Uchtor** 66nm,0.1s,SNR=376	**0.75**	**155**	P	**Pn**	**07 31 08.4**	**-1.1**
UCH	161nm,0.1s			⇑S	**Sb**	**07 31 18.2**	**-0.2**
AML	**Almayashu** baz=2.0	**0.83**	**201**	⇑*i*P	**Pn**	**07 31 09.9**	**-0.7**
AML	baz=2.0			⇑*i*S	**Sb**	**07 31 20.8**	**+0.3**
AML	**Almayashu** 15nm,0.1s,SNR=81	**0.83**	**201**	⇓P	**Pn**	**07 31 09.9**	**-0.7**
AML	192nm,0.4s			⇑S	**Sb**	**07 31 20.6**	**+0.1**
ARLS	**Aral** baz=70	**1.06**	**170**	⇓*i*P	**Pn**	**07 31 13.7**	**+0.1**
ARLS	baz=70			⇓*i*S	**Sn**	**07 31 27.5**	**-1.0**
TKM2	**Tokmak 2** baz=87	**1.11**	**89**	⇑*i*P	**Pn**	**07 31 14.5**	**+0.2**
TKM2	baz=87			⇑*i*S	**Sn**	**07 31 29.3**	**-0.5**
TKM2	**Tokmak 2** 24nm,0.1s,SNR=196	**1.11**	**89**	⇑P	**Pn**	**07 31 14.5**	**+0.2**
TKM2	124nm,0.1s			⇑S	**Sn**	**07 31 29.7**	**-0.2**
TKM2	**Tokmak 2** 11nm,0.3s	**1.11**	**89**	⇑P	**Pn**	**07 31 14.4**	**+0.1**
TKM2	32nm,0.2s			⇓S	**Sb**	**07 31 29.0**	**+0.5**
MNAS	**Manas** baz=52	**1.24**	**251**	⇓*i*P	**Pg**	**07 31 16.8**	**+0.6**
MNAS	baz=52			⇓*i*S	**Sn**	**07 31 33.3**	**+0.4**
DGS	**Degeres** baz=73	**1.28**	**74**	*e*P	**Pg**	**07 31 18.1**	**+1.2**
DGS	baz=73			*e*S	**Sn**	**07 31 35.3**	**+1.4**
DGS	**Degeres** 122nm,0.1s	**1.28**	**74**	*e*P	**Pg**	**07 31 18.1**	**+1.2**
DGS	154nm,0.1s			*e*S	**Sn**	**07 31 35.3**	**+1.4**
DGS	**Degeres** 122nm,0.1s	**1.28**	**74**	P	**Pg**	**07 31 18.1**	**+1.2**
DGS	154nm,0.1s			S	**Sn**	**07 31 35.3**	**+1.4**
KST	**Kastek** baz=83	**1.38**	**84**	*e*P	**Pg**	**07 31 19.7**	**+0.8**
KST	baz=83			*e*S	**Sg**	**07 31 37.8**	**+0.9**
KST	**Kastek** 80nm,0.3s	**1.38**	**84**	*e*P	**Pg**	**07 31 19.7**	**+0.8**
KST	69nm,0.3s			*e*S	**Sg**	**07 31 37.8**	**+0.9**
KST	**Kastek** 80nm,0.3s	**1.38**	**84**	P	**Pg**	**07 31 19.7**	**+0.8**
KST	69nm,0.3s			S	**Sg**	**07 31 37.8**	**+0.9**
BOOM	**Boomskoye usch** baz=5.0	**1.43**	**106**	⇑*i*P	**Pg**	**07 31 20.2**	**+0.4**
BOOM	baz=5.0			⇑*i*S	**Sg**	**07 31 39.0**	**+0.7**
ULHL	**Ulahol** baz=11	**1.72**	**112**	⇑*i*P	**Pg**	**07 31 25.5**	**+0.1**
ULHL	baz=11			⇑*i*S	**Sg**	**07 31 47.7**	**-0.1**
ULHL	**Ulahol** 25nm,0.2s,SNR=105	**1.72**	**112**	⇑P	**Pg**	**07 31 25.5**	**+0.1**
MTBS	**Maitube** baz=81	**1.73**	**82**	*e*P	**Pg**	**07 31 26.0**	**+0.4**
MTBS	baz=81			*e*S	**Sg**	**07 31 48.5**	**+0.4**
MTBS	**Maitube** 32nm,0.2s	**1.73**	**82**	*e*P	**Pg**	**07 31 26.0**	**+0.4**
MTBS	50nm,0.2s			*e*S	**Sg**	**07 31 48.5**	**+0.4**
MTBS	**Maitube** 32nm,0.2s	**1.73**	**82**	P	**Pg**	**07 31 26.0**	**+0.4**
MTBS	50nm,0.2s			S	**Sg**	**07 31 48.5**	**+0.4**
ARSB	**Arslanbob** baz=8.0	**1.78**	**208**	⇑*i*P	**Pg**	**07 31 25.9**	**-0.6**
ARSB	baz=8.0			⇑*i*S	**Sg**	**07 31 49.2**	**-0.4**
KUU	**Kurty** baz=57	**1.92**	**58**	⇓*i*P	**Pg**	**07 31 28.6**	**-0.5**
KUU	baz=57			⇓*e*S	**Sg**	**07 31 53.6**	**-0.4**
KUU	**Kurty** 31nm,0.1s	**1.92**	**58**	⇓*i*P	**Pg**	**07 31 28.6**	**-0.5**
KUU	269nm,0.1s			*e*S	**Sg**	**07 31 53.5**	**-0.4**
KUU	**Kurty** 31nm,0.1s	**1.92**	**58**	P	**Pg**	**07 31 28.6**	**-0.5**
KUU	269nm,0.1s			S	**Sg**	**07 31 53.5**	**-0.4**
DZA	**Taraz** 69nm,0.1s	**2.02**	**271**	*e*P	**Pg**	**07 31 31.8**	**+0.6**
DZA	133nm,0.2s			*e*S	**Sg**	**07 31 58.6**	**+1.2**
DZA	**Taraz** 69nm,0.1s	**2.02**	**271**	Pg	**Pg**	**07 31 31.8**	**+0.6**
DZA	133nm,0.2s			Lg	Lg	07 31 58.6	
KTBS	**Karatobe** 24nm,0.1s	**2.06**	**66**	*e*P	**Pg**	**07 31 31.6**	**-0.3**
KTBS	208nm,0.3s			*e*S	**Sg**	**07 31 58.1**	**-0.5**
KTBS	**Karatobe** 24nm,0.1s	**2.06**	**66**	Pg	**Pg**	**07 31 31.6**	**-0.3**
KTBS	208nm,0.3s			Lg	Lg	07 31 58.1	
AAA	**Alma-Ata** 51nm,0.1s	**2.10**	**81**	*e*P	**Pg**	**07 31 32.3**	**-0.3**
AAA	5.7nm,0.0s			*e*S	**Sg**	**07 31 59.5**	**-0.2**
AAA	**Alma-Ata** 51nm,0.1s	**2.10**	**81**	Pg	**Pg**	**07 31 32.3**	**-0.3**
AAA	5.7nm,0.0s			Lg	Lg	07 31 59.5	
TNSS	**Tian-Shan** 81nm,0.3s	**2.10**	**85**	*e*P	**Pg**	**07 31 32.5**	**-0.2**
TNSS	52nm,0.5s			*e*S	**Sg**	**07 32 00.0**	**0.0**
TNSS	**Tian-Shan** 81nm,0.3s	**2.10**	**85**	Pg	**Pg**	**07 31 32.5**	**-0.2**
TNSS	52nm,0.5s			Lg	Lg	07 32 00.0	
KNDC	**Almaty** 61nm,0.7s	**2.13**	**81**	⇓Pg	**Pg**	**07 31 32.7**	**-0.6**
KNDC	81nm,0.5s			⇑Lg	Lg	07 32 02.1	
BTLS	**Baital** 7.3nm,0.1s	**2.13**	**359**	*e*P	**Pg**	**07 31 33.6**	**+0.3**
BTLS	93nm,0.1s			*e*S	**Sg**	**07 32 01.6**	**+0.7**
BTLS	**Baital** 7.3nm,0.1s	**2.13**	**359**	Pg	**Pg**	**07 31 33.6**	**+0.3**
BTLS	93nm,0.1s			Lg	Lg	07 32 01.7	
MDOK	**Medeo** 34nm,0.3s	**2.19**	**82**	*e*P	**Pg**	**07 31 34.1**	**-0.2**
MDOK	62nm,0.2s			*e*S	**Sg**	**07 32 02.8**	**+0.2**
MDOK	**Medeo** 16nm,0.5s	**2.19**	**82**	⇑Pg	**Pg**	**07 31 33.3**	**-1.0**
MDOK	34nm,0.4s			⇑Lg	Lg	07 32 03.5	
MDOK	**Medeo** 34nm,0.3s	**2.19**	**82**	Pg	**Pg**	**07 31 34.1**	**-0.2**
MDOK	62nm,0.2s			Lg	Lg	07 32 02.8	
KOTS	**Kotyrbulak** 67nm,0.2s	**2.24**	**81**	*e*P	**Pg**	**07 31 35.3**	**0.0**
KOTS	62nm,0.4s			*e*S	**Sg**	**07 32 04.6**	**+0.2**
KOTS	**Kotyrbulak** 67nm,0.2s	**2.24**	**81**	Pg	**Pg**	**07 31 35.3**	**0.0**
KOTS	62nm,0.4s			Lg	Lg	07 32 04.6	
CHKK	**Chushkaly** 8.4nm,0.1s	**2.32**	**65**	*e*P	**Pb**	**07 31 35.3**	**+1.0**
CHKK	162nm,0.1s			*e*S	**Sb**	**07 32 04.6**	**+1.5**
CHKK	**Chushkaly** 8.4nm,0.1s	**2.32**	**65**	Pg	**Pb**	**07 31 35.3**	**+1.0**
CHKK	162nm,0.1s			Lg	Lg	07 32 04.6	
KDJ	**Kajisay** baz=7.0	**2.42**	**108**	⇑*i*P	**Pb**	**07 31 35.4**	**-0.7**
KDJ	baz=7.0			⇑*i*S	**Sb**	**07 32 04.9**	**-1.2**
TRKS	**Terek-Say** baz=38	**2.58**	**239**	⇑*i*P	**Pb**	**07 31 37.7**	**-1.3**
TRKS	baz=38			⇑*i*S	**Sb**	**07 32 09.4**	**-1.5**
KK31	**Karatay Array** 2.6nm,0.3s,baz=97,slow=17,SNR=121	**2.63**	**276**	Pn	**Pb**	**07 31 40.7**	**+1.0**
KK31	14nm,0.3s,baz=92,slow=28,SNR=19			Sn	**Sg**	**07 32 14.2**	**-2.6**
ANVS	**Anan'yevo** baz=91	**2.64**	**91**	⇑*i*P	**Pb**	**07 31 38.4**	**-1.5**
ANVS	baz=91			⇑*i*S	**Sb**	**07 32 10.4**	**-2.0**
SFK	**Sufi-Kurgan** baz=89	**2.92**	**189**	⇑*i*P	**Pn**	**07 31 41.5**	**+2.2**
SFK	baz=89			⇑*i*S	**Sn**	**07 32 16.3**	**+1.7**
ARXS	**Arharly** 24nm,0.3s	**3.02**	**63**	*e*P	**Pb**	**07 31 48.0**	**+1.7**
ARXS	85nm,0.3s			*e*S	**Sg**	**07 32 26.7**	**-2.6**
ARXS	**Arharly** 24nm,0.3s	**3.02**	**63**	Pg	**Pb**	**07 31 48.0**	**+1.7**
ARXS	85nm,0.3s			Lg	Lg	07 32 26.7	
KURS	**Kuram** 4.8nm,0.3s	**3.04**	**78**	*e*P	**Pg**	**07 31 48.8**	**-1.9**
KURS	22nm,0.3s			*e*S	**Sg**	**07 32 27.8**	**-2.3**
KURS	**Kuram** 4.8nm,0.3s	**3.04**	**78**	Pg	**Pg**	**07 31 48.8**	**-1.9**
KURS	22nm,0.3s			Lg	Lg	07 32 27.8	
IUG	**Iuzhnay** 8.5nm,0.1s	**3.09**	**257**	*e*P	**Pg**	**07 31 51.2**	**-0.4**
IUG	75nm,0.2s			*e*S	**Sg**	**07 32 32.3**	**+0.6**
IUG	**Iuzhnay** 8.5nm,0.1s	**3.09**	**257**	Pg	**Pg**	**07 31 51.2**	**-0.4**
IUG	75nm,0.2s			Lg	Lg	07 32 32.3	
SATY	**Saty** 8.9nm,0.3s	**3.17**	**86**	*e*P	**Pg**	**07 31 52.1**	**-1.1**
SATY	39nm,0.1s			*e*S	**Sg**	**07 32 33.7**	**-0.6**
SATY	**Saty** 8.9nm,0.3s	**3.17**	**86**	Pg	**Pg**	**07 31 52.1**	**-1.1**
SATY	39nm,0.1s			Lg	Lg	07 32 33.7	
ZHN	**Zhinishke** 119nm,0.3s	**3.20**	**84**	*e*P	**Pg**	**07 31 51.8**	**-1.8**
ZHN	13nm,0.1s			*e*S	**Sg**	**07 32 33.0**	**-2.1**
ZHN	**Zhinishke** 119nm,0.3s	**3.20**	**84**	Pg	**Pg**	**07 31 51.8**	**-1.8**
ZHN	13nm,0.1s			Lg	Lg	07 32 33.0	
MNBS	**Baschi** 18nm,0.2s	**3.35**	**68**	*e*P	**Pg**	**07 31 55.7**	**-0.9**
MNBS	69nm,0.1s			*e*S	**Sg**	**07 32 39.5**	**-0.5**
MNBS	**Baschi** 18nm,0.2s	**3.35**	**68**	Pg	**Pg**	**07 31 55.7**	**-0.9**
MNBS	69nm,0.1s			Lg	Lg	07 32 39.5	
KPKS	**Kokpek** 27nm,0.2s	**3.41**	**79**	*e*P	**Pg**	**07 31 55.9**	**-1.8**
KPKS	74nm,0.2s			*e*S	**Sg**	**07 32 40.1**	**-1.8**
UZB	**Uzynbulak** 11nm,0.3s	**3.63**	**85**	*e*P	**Pg**	**07 32 00.1**	**-1.8**
UZB	22nm,0.1s			*e*S	**Sg**	**07 32 47.0**	**-1.8**
UZB	**Uzynbulak** 11nm,0.3s	**3.63**	**85**	Pg	**Pg**	**07 32 00.1**	**-1.8**
UZB	22nm,0.1s			Lg	Lg	07 32 47.0	
TDK	**Taldyqorghan** 53nm,0.3s	**3.76**	**55**	*e*P	**Pg**	**07 32 02.2**	**-2.1**
TDK	43nm,0.2s			*e*S	**Sg**	**07 32 50.7**	**-2.3**
TDK	**Taldyqorghan** 53nm,0.3s	**3.76**	**55**	Pg	**Pg**	**07 32 02.2**	**-2.1**
TDK	43nm,0.2s			Lg	Lg	07 32 50.7	
SHLS	**Shalkode** 9.7nm,0.3s	**3.95**	**85**	*e*P	**Pg**	**07 32 11.9**	**+3.9**
SHLS	11nm,0.3s			*e*S	**Sg**	**07 33 07.7**	**+8.5**
SHLS	**Shalkode** 9.7nm,0.3s	**3.95**	**85**	Pg	**Pg**	**07 32 12.0**	**+3.9**
SHLS	11nm,0.3s			Lg	Lg	07 33 07.7	
PDGK	**Podgornoye** 3.9nm,0.5s	**3.98**	**82**	Pg	**Pg**	**07 32 06.9**	**-1.7**
PDGK	5.5nm,0.6s			Lg	Lg	07 32 58.5	
PDGK	**Podgornoye** 7.0nm,0.8s	**3.98**	**82**	⇓Pg	**Pb**	**07 32 05.3**	**+2.6**
PDGK	14nm,0.6s			⇑Lg	Lg	07 32 58.6	
DJR	**Jarkent** 3.0nm,0.1s	**4.38**	**69**	*e*P	**Pg**	**07 32 14.0**	**-2.3**
DJR	10nm,0.6s			*e*S	**Sg**	**07 33 11.2**	**-1.8**
DJR	**Jarkent** 3.0nm,0.1s	**4.38**	**69**	Pg	**Pg**	**07 32 14.0**	**-2.3**
DJR	10nm,0.6s			Lg	Lg	07 33 11.2	
KAPS	**Kapalarasan** 2.8nm,0.2s	**4.48**	**56**	*e*P	**Pg**	**07 32 15.3**	**-2.8**
KAPS	22nm,0.2s			*e*S	**Sg**	**07 33 13.3**	**-2.9**
KAPS	**Kapalarasan** 2.8nm,0.2s	**4.48**	**56**	Pg	**Pg**	**07 32 15.3**	**-2.8**
KAPS	22nm,0.2s			Lg	Lg	07 33 13.3	

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*IDC **26** 07:32:25.1±0.5, 0°.72N×30°.19W, h0km, mb4.2/23, mb1 4.3/24, mb1mx4.2/49, mbtmp4.2/24, ML4.0/1, MS4.3/16, Ms1 4.3/16, ms1mx4.1/40, Error ellipse: s-maj=19.7km s-min=12.1km az=151.0*
*NEIC **26** 07:32:26.2±2.3, 0°.8N±0°.1×30°.2W±0°.1, h10km±1km, mb4.7/20, Error ellipse: s-maj=21.3km s-min=13.7km az=137.0*
*GCMT **26** 07:32:29.2±0.2, 0°.84N±0°.01×30°.12W±0°.01, h23km, MW5.2/124, Moment Tensor Solution. s60,c76; s124,c193; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.30±.21; $M_{\theta\theta}$1.56±.18; $M_{\phi\phi}$-0.25±.16; $M_{r\theta}$-0.61±.25; $M_{\theta\phi}$-6.54±.15; $M_{\phi r}$0.21±.26; Best double couple: $M_0$6.63000×10^{16} NP1:ϕ_s356.00000°, δ85.00000°, λ1.00000°. NP2:ϕ_s266.00000°, δ89.00000°, λ175.00000°. Principal axes: T 7.2970, Plg4.0000°, Azm221.0000°; N -1.3300, Plg85.0000°, Azm77.0000°; P -5.9630, Plg3.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 07:32:26.8±0.4**, 0°.81N**±0°.08×**30°.22W**±0°.06**, h10**km**, n99,** σ**1s.46**/86**, mb4.5**/37**, MS4.3**/15**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	8.70	221	Pn	Pn	07 34 30.1	-2.7
	1.6nm,0.3s,baz=323,slow=8.5,SNR=16						
RCBR				Sn	Sn	07 36 01.0	-10
	2.6nm,0.3s,baz=318,slow=5.2,SNR=4.1						
RCBR				LR	LR	07 37 17.9	
	comp=Z,3µm,18.9s,baz=38,slow=34						
RCBR	Riachuelo	8.70	221		Pn	07 34 29.8	-3.0
RCBR	Riachuelo	8.70	221	*e*P	Pn	07 34 30.2	-2.7
NBPA	Parau_RN	9.48	226	*e*P	Pn	07 34 38.7	-4.8
NBRF	Rio Formoso -	10.62	207	*e*P	Pn	07 34 57.2	-2.0
NBMO	Morrinhos-CE	10.63	247	*e*P	Pn	07 34 55.1	-4.3
ROSB	Rosrio	14.38	255	*e*P	Pn	07 35 45.6	-5.0
SACV	Santiago Islan	15.51	25		Pn	07 36 04.0	-1.9
GDU01	Guandu, BA	17.16	212	*e*P	Pn	07 36 25.0	-1.9
H10N3	ASCENSION HYDR	17.88	119	P	Pn	07 36 34.9	-0.7
	baz=301,slow=15,SNR=9.7						
H10N3				T	T	07 54 51.4	
	baz=298,slow=74,SNR=622						
H10N2	ASCENSION HYDR	17.89	119	P	Pn	07 36 36.1	+0.4
	baz=301,slow=15,SNR=6.2						
H10N2				T	T	07 54 53.6	
	baz=298,slow=74,SNR=448						
H10N1	ASCENSION HYDR	17.90	119	P	Pn	07 36 36.3	+0.5
	baz=301,slow=15,SNR=9.2						
H10N1				T	T	07 54 54.7	
	baz=298,slow=74,SNR=600						
ASCN	Ascension	18.05	119		Pn	07 36 37.0	-0.9
ASCN				IAmb	IAmb	07 37 21.5	
	comp=Z,77nm,1.1s						
TMAB	Tom-Au,PA,Br	18.15	260	*e*P	Pn	07 36 36.9	-2.3
H10S3	ASCENSION HYDR	18.29	122	T	T	07 55 20.0	
	baz=300,slow=74,SNR=333						
H10S2	ASCENSION HYDR	18.30	122	T	T	07 55 19.8	
	baz=280,slow=74,SNR=219						
MBO	M'Bour	18.82	44	P	P	07 36 45.7	-1.2
MBO				IAmb	IAmb	07 36 54.0	
	comp=Z,54nm,0.7s						
SDBA	SAO DESIDERIO	19.62	228	*e*P	P	07 36 54.6	-1.1
SMTB	Santa Maria do	19.79	241	*e*P	P	07 36 57.1	-0.5
PRPB	Parauapebas	20.75	250	*e*P	P	07 37 08.4	+0.3
NAN01	Guarapari, ES	20.95	207	*e*P	P	07 37 11.1	+1.0
JANB	Januaria	21.04	221	*e*P	P	07 37 10.5	-0.7
MCPB	Macapa, AP	21.86	267	*e*P	P	07 37 22.1	+2.1
BSFB	Barra de Sao F	22.14	208	*e*P	P	07 37 24.5	+1.7
SJMB	Sao Joao De Ma	22.19	209	*e*P	P	07 37 25.5	+2.1
RIB01	Linhares ES	22.36	206	*e*P	P	07 37 27.8	+2.6
MDP	Montagnes des	22.79	281	LR	LR	07 45 30.1	
	comp=Z,323nm,20.5s,baz=88,slow=34						
ALF01	Guarapari-ES	23.65	205	*e*P	P	07 37 41.9	+3.4
BDFB	Brasilia	24.01	226	P	P	07 37 40.6	-1.6
	comp=Z,3.0nm,0.7s,baz=92,slow=10,SNR=5.5						
BDFB				LR	LR	07 46 25.7	
	comp=Z,2µm,18.1s,baz=91,slow=35						
MALB	Monte Alegre	24.18	264	*e*P	P	07 37 46.5	+2.7
SNDB	Serra Nova Dou	24.48	238	*e*P	P	07 37 47.3	+0.9
DUB01	Friburgo-RJ	25.66	207	*e*P	P	07 38 01.3	+4.2
LIC	Lamto	25.71	77	*e*P	P	07 37 57.5	-0.1
	comp=Z,42nm,0.9s						
IPMB	Ipameri, GO	25.73	223	*e*P	P	07 37 59.1	+1.2
TIC	Toumodi	25.80	76	*e*P	P	07 37 58.5	+0.1
DBIC	Dimbokro	25.96	76	P	P	07 37 59.3	-0.6
	comp=Z,18nm,0.8s,baz=242,slow=12,SNR=20						
DBIC				LR	LR	07 46 20.8	
	comp=Z,811nm,19.5s,baz=236,slow=32						
DBIC	Dimbokro	25.96	76	P	P	07 38 00.4	+0.6
DBIC				IAmb	IAmb	07 38 01.5	
	comp=Z,19nm,0.8s						
KIC	Kosan Boka	26.01	77	*e*P	P	07 38 00.4	0.0
	comp=Z,34nm,1.1s						
NPGB	Novo Progresso	26.27	252	*e*P	P	07 38 03.9	+1.3
KOWA	Kowa	29.26	61	P	P	07 38 28.3	-1.1
	comp=Z,8.0nm,0.9s,baz=241,slow=6.3,SNR=14						
KOWA				LR	LR	07 48 25.3	
	comp=Z,484nm,20.6s,baz=236,slow=33						
KOWA	Kowa	29.26	61	P	P	07 38 27.8	-1.6
KOWA				IAmb	IAmb	07 38 30.6	
	comp=Z,9.9nm,0.9s						
PTGA	Pitinga	29.78	267	LR	LR	07 48 41.9	
	comp=Z,448nm,21.4s,baz=81,slow=33						
H05S1	Guadeloupe/Mar	33.15	296	T	T	08 13 54.5	
	SNR=21						
TOA0	Torodi Ar. Sit	33.91	67	P	P	07 39 09.5	-0.8
TORD	Torodi Ar. Bea	33.91	67	P	P	07 39 09.3	-1.0
	comp=Z,4.0nm,0.7s,baz=258,slow=8.8,SNR=9.8						
TORD				LR	LR	07 51 29.0	
	comp=Z,650nm,18.4s,baz=255,slow=34						
TORD	Torodi Ar. Bea	33.91	67	P	P	07 39 09.8	-0.6
H05N1	Guadeloupe/Mar	34.07	299	T	T	08 15 08.9	
	SNR=5.8						
SIV	San Ignacio	34.74	240	P	P	07 39 17.9	+0.3
	comp=Z,3.3nm,0.8s,baz=83,slow=9.1,SNR=14						
CPUP	Villa Florida	37.58	222	P	P	07 39 42.5	+0.8
	comp=Z,1.8nm,0.9s,baz=39,slow=15,SNR=3.1						
CPUP				LR	LR	07 54 50.7	
	comp=Z,1µm,18.9s,baz=64,slow=36						
CPUP	Villa Florida	37.58	222	P	P	07 39 42.4	+0.7
MDT	Midelt	39.93	35	P	P	07 40 02.9	+1.4
	comp=Z,4.9nm,0.9s,baz=224,slow=5.9,SNR=6.5						
SDV	Santo Domingo	41.02	283	P	P	07 40 12.5	+1.6
	comp=Z,4.3nm,0.7s,baz=16,slow=6.9,SNR=5.7						
SDV	Santo Domingo	41.02	283	P	P	07 40 11.8	+0.8
H09N1	TRISTAN DA CUN	41.19	158	T	T	08 22 20.6	
	SNR=12						
H09W1	TRISTAN DA CUN	41.20	158	T	T	08 24 06.6	
	SNR=7.1						
CZSB	Cruzeiro do Su	43.20	258	*e*P	P	07 40 31.8	+3.2
ROSC	El Rosal	44.21	276	LR	LR	07 57 58.2	
	comp=Z,832nm,21.4s,baz=105,slow=35						
ROSC	El Rosal	44.21	276	P	P	07 40 36.4	-0.7
ROSC				IAmb	IAmb	07 40 48.8	
	comp=Z,7.7nm,0.7s						
PB07	IPOC Station P	44.72	238	P	P	07 40 40.3	-0.5
PB07				IAmb	IAmb	07 40 40.8	
	comp=Z,16nm,1.1s						
ESDC	Sonseca Array	45.49	29	P	P	07 40 47.7	+1.2
	comp=Z,1.4nm,0.8s,baz=234,slow=8.5,SNR=7.0						
ESDC				LR	LR	07 57 28.4	
	comp=Z,117nm,18.6s,baz=220,slow=33						
GO02	Mina Guanaco	46.01	233	P	P	07 40 50.4	-0.8
KEST	Kesra	50.56	42	P	P	07 41 25.7	-0.2
	comp=Z,8.5nm,0.9s,baz=149,slow=5.9,SNR=2.6						
KEST				LR	LR	08 01 58.4	
	comp=Z,663nm,21.7s,baz=212,slow=35						
TSUM	Tsumeb	50.95	116	P	P	07 41 29.5	+0.4
	comp=Z,0.9nm,0.3s,baz=323,slow=10,SNR=3.7						
TSUM	Tsumeb	50.95	116	P	P	07 41 29.1	0.0
TSUM				IAmb	IAmb	07 41 38.7	
	comp=Z,8.9nm,0.9s						
PLCA	Paso Flores	55.24	217	LR	LR	08 05 38.1	
	comp=Z,362nm,19.1s,baz=68,slow=36						
DAVA	Damuels	57.93	31	*e*P	P	07 42 20.3	+0.8
	comp=Z,16nm,1.2s						
FETA	Feichten	58.20	32	*e*P	P	07 42 21.2	-0.2
	comp=Z,4.5nm,0.8s						
RETA	Reutte	58.51	31	*e*P	P	07 42 23.2	-0.3
	comp=Z,3.4nm,0.9s						
SQTA	Sankt Quirin	58.58	32	*e*P	P	07 42 23.9	-0.1
	comp=Z,11nm,1.0s						
MOTA	Moosalm	58.60	32	*e*P	P	07 42 23.8	-0.4
	comp=Z,6.7nm,1.1s						
ABTA	Abfaltersbach	58.98	33	*e*P	P	07 42 28.0	+1.2
	comp=Z,12nm,1.0s						
SOKA	Soboth	60.34	34	*e*P	P	07 42 36.6	+0.5
	comp=Z,8.4nm,0.9s						
TKL	Tuckaleechee C	60.53	311	LR	LR	08 03 43.1	
	comp=Z,117nm,21.4s,baz=113,slow=31						
BOSA	Boshof	60.56	124	P	P	07 42 39.0	+1.0
	comp=Z,2.2nm,0.9s,baz=309,slow=6.0,SNR=3.7						
BOSA				LR	LR	08 02 51.7	
	comp=Z,307nm,21.5s,baz=30,slow=30						
BOSA	Boshof	60.56	124	P	P	07 42 38.0	-0.1
BOSA				IAmb	IAmb	07 42 46.8	
	comp=Z,9.1nm,0.9s						
MOA	Molln	60.60	33	*e*P	P	07 42 38.1	+0.3
	comp=Z,4.3nm,0.8s						
GERES	GERESS Array B	60.90	32	P	P	07 42 40.4	+0.4
	comp=Z,1.9nm,0.8s,baz=233,slow=6.0,SNR=9.2						
GERES	GERESS Array B	60.90	32	P	P	07 42 39.6	-0.3
KHC	Kasperske Hory	61.01	31	*e*P	P	07 42 40.0	-0.6
CONA	Conrad Observa	61.52	33	*e*P	P	07 42 45.3	+1.1
	comp=Z,2.6nm,0.9s						
BR131	Keskin Array S	69.59	48	P	P	07 43 36.6	0.0
BR131				IAmb	IAmb	07 43 37.7	
	comp=Z,3.6nm,0.8s						
BRTR	Keskin Array B	69.59	48	P	P	07 43 36.6	0.0
	comp=Z,2.2nm,0.8s,baz=243,slow=6.9,SNR=13						
BRTR	Keskin Array B	69.59	48	P	P	07 43 35.6	-1.0
Z35A	Perchaven, San	70.47	305	P	P	07 43 40.9	-1.0
AKASG	Malin Array Be	70.48	36	P	P	07 43 41.8	+0.2
	comp=Z,4.2nm,0.8s,baz=246,slow=6.0,SNR=12						
AKASG	Malin Array Be	70.48	36	P	P	07 43 40.6	-1.0
FINES	FINESS Array B	73.80	25	P	P	07 44 01.7	+0.4
	comp=Z,3.1nm,0.8s,baz=156,slow=5.6,SNR=4.3						
TXAR	Lajitas Array	75.19	300	P	P	07 44 09.2	-0.9
	comp=Z,1.3nm,0.9s,baz=122,slow=7.6,SNR=10						
TXAR	Lajitas Array	75.19	300	P	P	07 44 10.4	+0.3
TX31	Lajitas Ar. Si	75.19	300	P	P	07 44 10.2	0.0
TX32	Lajitas Array	75.19	300	P	P	07 44 10.0	-0.2
TX32				IAmb	IAmb	07 44 34.5	
	comp=Z,11nm,1.6s						
ANMO	Albuquerque	78.26	305	P	P	07 44 27.7	+0.2
	comp=Z,0.7nm,0.4s,baz=56,slow=3.6,SNR=3.9						
PDAR	Pinedale Array	81.62	313	P	P	07 44 46.1	+0.5
	comp=Z,0.4nm,0.9s,baz=54,slow=4.6,SNR=2.1						
YKA	Yellowknife Ar	86.68	332	P	P	07 45 09.4	-1.2
	comp=Z,0.3nm,0.9s,baz=106,slow=5.9,SNR=4.4						
NVAR	Mina Array Bea	87.99	308	P	P	07 45 18.9	+1.0
	comp=Z,0.4nm,0.8s,baz=88,slow=6.0,SNR=4.3						
AKTO	Aktyubinsk	88.25	40	P	P	07 45 18.9	+0.3
	comp=Z,0.5nm,0.3s,baz=237,slow=7.3,SNR=3.6						
ARU	Arti	88.65	34	P	P	07 45 21.1	+0.8
	comp=Z,2.5nm,0.2s,baz=276,slow=10,SNR=4.7						
ARU				LR	LR	08 24 10.6	
	comp=Z,96nm,20.4s,baz=2.5,slow=35						
MAW	Mawson	91.93	157	LR	LR	08 19 12.3	
	comp=Z,120nm,19.4s,baz=64,slow=31						
ASAR	Alice Springs	152.56	147	PKPbc	PKPbc	07 52 23.9	-0.6
	comp=Z,0.7nm,0.9s,baz=319,slow=0.5,SNR=6.5						
ASAR				PKPab	PKPab	07 52 31.6	-3.2
	comp=Z,1.7nm,0.8s,baz=199,slow=1.9,SNR=14						

IDC 26 07:38:43.4±3.0**, 54°.19N**×**87°.31E, h0^{km}, mb1 3.0**/2**, mb1mx2.9**/51**, mbtmp3.0**/2**, ML2.5**/2**, Error ellipse: s-maj=25.0km s-min=16.2km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.48	262	*i*		07 46 50.0	
	baz=80,slow=345,SNR=8.9						
ZALV	Zalesovo Beam	1.48	262	Pn	Pn	07 39 10.0	-1.4
	3.7nm,0.3s,baz=82,slow=17,SNR=34						
ZALV				Lg	Lg	07 39 29.9	
	2.8nm,0.3s,baz=84,slow=23,SNR=7.7						
ZALV				Rg	Rg	07 39 41.1	
	6.1nm,0.4s,baz=87,slow=25,SNR=3.7						
KURBB	Kurchatov Arra	6.45	240	Pn	Pn	07 40 20.5	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=4.5						
KURBB				Lg	Lg	07 42 10.8	
	0.1nm,0.3s,baz=60,slow=35,SNR=5.0						
MKAR	Makanchi Array	8.06	205	Pn	Pn	07 40 42.9	+1.2
	0.1nm,0.3s,baz=28,slow=14,SNR=5.7						
MKAR				Sn	Sn	07 42 13.6	+0.1
	0.1nm,0.3s,baz=29,slow=27,SNR=3.9						
MKAR				Lg	Lg	07 42 59.9	
	0.1nm,0.3s,baz=19,slow=29,SNR=5.7						

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*NEIC **26** 07:46:05.8±1.6, 17°.9N±0°.1×102°.99W±0°.06, h20^{km}±7^{km}, Error ellipse: s-maj=16.0km s-min=5.2km az=206.0*

*MEX **26** 07:46:07.9±0.6, 17°.87N×103°.02W, h16^{km}±6^{km}, MD4.2*

*IDC **26** 07:46:16.5±5.7, 18°.42N×102°.34W, h99^{km}±43^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.3/32, mbtmp3.4/7, Error ellipse: s-maj=84.8km s-min=35.9km az=41.0*

ISC 26 07:46:06.7±1.3**, 17°.91N**±0°.07×**103°.04W**±0°.05**, h30^{km}**±9^{km}**, n38, σ1^{s}.26**/54**, mb3.4**/6**, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.48	323	*i* P	Pb	07 46 16.6	-0.3
MMIG				*i* S	Sb	07 46 23.3	-0.5
MMIG	Aquila	0.48	323		Pb	07 46 16.6	-0.3
MMIG					Sb	07 46 23.3	-0.5
COIG	Colima	1.41	334	*i* P	Pn	07 46 29.6	-0.8
COIG				*i* S	Sn	07 46 46.8	-1.3
R15V		1.54	325	*i* P	Pn	07 46 31.6	-0.6
R15V				*i* S	Sn	07 46 49.6	-1.7
R15V		1.54	325		Pn	07 46 31.6	-0.6
EZ5V		1.65	341	*i* P	Pn	07 46 34.0	+0.1
EZ5V				*i* S	Sn	07 46 53.6	-0.7
EZ5V		1.65	341		Pn	07 46 34.0	+0.1
MOIG	Morelia	2.49	45	*i* P	Pn	07 46 44.5	-0.9
MOIG				*i* S	Sn	07 47 14.1	-0.7
MOIG	Morelia	2.49	45		Pn	07 46 44.3	-1.1
MOIG				Sn	Sn	07 47 13.0	-1.8
ARIG	Puente Sto Nin	2.59	81	*i* P	Pn	07 46 45.6	-0.9
ARIG				*i* S	Sn	07 47 16.5	-0.5
ARIG	Puente Sto Nin	2.59	81		Pn	07 46 45.6	-0.9
ARIG					Sn	07 47 16.5	-0.5
CAIG	El Cayaco	2.78	107	*i* P	Pn	07 46 48.5	-0.7
CAIG				*i* S	Sn	07 47 20.4	-1.3
CAIG	El Cayaco	2.78	107		Pn	07 46 48.5	-0.7
CAIG					Sn	07 47 20.4	-1.3
MEIG	Mezcala	3.26	89	*i* P	Pn	07 46 55.6	-0.2
MEIG				*i* S	Sn	07 47 31.9	-1.7
MEIG	Mezcala	3.26	89		Pn	07 46 55.6	-0.2
MEIG					Sn	07 47 31.9	-1.7
PLIG	Platanillo	3.40	81	*i* P	Pn	07 46 57.6	-0.1
PLIG				*i* S	Sn	07 47 37.0	-0.1
PLIG	Platanillo	3.40	81		Pn	07 46 57.6	-0.1
PLIG					Sn	07 47 37.0	-0.1
YAIG	Yautepec	3.89	75	*i* P	Pn	07 47 04.3	-0.3
YAIG				*i* S	Sn	07 47 48.2	-1.2
YAIG	Yautepec	3.89	75		Pn	07 47 04.3	-0.3
YAIG					Sn	07 47 48.2	-1.2
CRIG	Cruz Grande	3.91	107	*i* P	Pn	07 47 04.9	+0.1
CRIG				*i* S	Sn	07 47 48.1	-1.5
UNM	Universidad Na	3.93	68	Pn	Pn	07 47 06.7	+1.5
FTIG	Fresnillo de T	4.67	89	*i* P	Pn	07 47 15.7	+0.4
FTIG				*i* S	Sn	07 48 08.5	-0.1
ZAIG	Zacatecas	4.86	5		Pn	07 47 18.2	+0.2
CMIG	Matias Romero	7.82	95	P	Pn	07 47 59.3	+0.8
	1.9nm,0.3s,baz=263,slow=14,SNR=72						
TX32	Lajitas Array	11.39	357	Pn	Pn	07 48 49.5	+2.0
TXAR	Lajitas Array	11.39	357	P	Pn	07 48 50.1	+2.6
	0.1nm,0.3s,baz=176,slow=16,SNR=6.1						
TXAR	Lajitas Array	11.39	357	Pn	Pn	07 48 50.4	+2.9
TX31	Lajitas Ar. Si	11.39	357	Pn	Pn	07 48 50.4	+2.9
MTPU	Mount Pierson	21.60	340	P	P	07 50 56.9	+2.3
PLAL	Pickwick Lake	21.61	35	P	P	07 50 53.8	-0.4
PLAL				IAmb	IAmb	07 50 55.4	
	comp=Z,5.0nm,0.7s						
NVAR	Mina Array Bea	24.41	330	P	P	07 51 25.1	+2.3
	comp=Z,0.7nm,0.7s,baz=154,slow=9.9,SNR=6.7						
PDAR	Pinedale Array	25.39	349	P	P	07 51 31.2	-0.5
	comp=Z,0.2nm,0.5s,baz=150,slow=9.2,SNR=2.6						
ULM	Lac du Bonnet	32.78	9	P	P	07 52 35.0	-2.0
	comp=Z,0.8nm,0.5s,baz=239,slow=5.9,SNR=2.8						
YKA	Yellowknife Ar	45.27	352	P	P	07 54 19.9	-1.3
	comp=Z,0.2nm,0.7s,baz=158,slow=8.0,SNR=7.0						
ILAR	Eielson Array	55.22	339	P	P	07 55 37.4	+0.8
	comp=Z,0.5nm,0.9s,baz=143,slow=4.8,SNR=5.2						
H03N2	Juan Fernandez	56.01	156	T	T	08 56 15.1	
	baz=333,slow=77,SNR=7.8						
H03N1	Juan Fernandez	56.01	156	T	T	08 56 19.6	
	baz=333,slow=77,SNR=6.3						
H03N3	Juan Fernandez	56.02	156	T	T	08 56 15.6	
	baz=333,slow=77,SNR=7.5						

IDC 26 07:59:52.5±2.8**, 54°.20N**×**86°.39E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/44**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=22.0km s-min=13.4km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.96	256	*i*		08 05 36.6	
	baz=74,slow=349,SNR=2.6						
ZALV	Zalesovo Beam	0.96	256	Pg	Pg	08 00 09.0	-1.8
	2.2nm,0.3s,baz=73,slow=17,SNR=24						
ZALV				Lg	Lg	08 00 24.9	
	3.3nm,0.3s,baz=78,slow=28,SNR=17						
KURBB	Kurchatov Arra	5.99	237	Pn	Pn	08 01 24.3	+1.9
	0.1nm,0.3s,baz=56,slow=14,SNR=1.8						
MKAR	Makanchi Array	7.86	201	Pn	Pn	08 01 48.9	+0.9
	0.1nm,0.3s,baz=24,slow=12,SNR=5.7						

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*NOU **26** 08:07:21.1, 40°.86S×174°.64E, h126^{km}, MLv3.5, Cook Strait, New Zealand*

WEL 26 08:07:25.9, 40°.6S±0°.9×**17°5E**±°**, h55^{km}**±3^{km}**, M3.5**/43**, ML3.8**/43**, MLv3.5**/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=79.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.32	138	P	Pn	08 07 35.9	+0.2
KIW				S	Sn	08 07 43.0	+0.2
OGWZ	Otaki Gorge	0.46	116	P	Pn	08 07 37.4	+0.4
OGWZ				S	Sn	08 07 45.5	+0.5
DUWZ	D'Urville Isla	0.57	251	P	Pn	08 07 38.1	-0.2
DUWZ				S	Sn	08 07 47.2	0.0
CAW	Cannon Point	0.59	146	P	Pn	08 07 39.2	+0.6
CAW				S	Sn	08 07 49.2	+1.5
TCW	Tory Channel	0.65	204	P	Pn	08 07 40.0	+0.8
TCW				S	Sn	08 07 49.8	+0.9
OHWZ	Ohakea	0.67	52	P	Pn	08 07 39.9	+0.4
OHWZ				S	Sn	08 07 50.3	+1.0
WEL	Wellington	0.67	171	P	Pn	08 07 40.4	+0.9
WEL				S	Sn	08 07 51.1	+1.7
MRZ	Mangatainoka R	0.72	93	P	Pn	08 07 40.3	+0.1
MRZ				S	Sn	08 07 51.3	+0.8
HOWZ	Holdsworth Sta	0.73	113	P	Pn	08 07 40.3	+0.1
HOWZ				S	Sn	08 07 51.5	+0.8
BHW	Baring Head	0.81	167	P	Pn	08 07 41.8	+0.5
BHW				S	Sn	08 07 54.5	+2.0
MTW	Mount Morrison	0.85	129	P	Pn	08 07 42.5	+0.7
POWZ	Post Office Ro	0.90	76	P	Pn	08 07 42.5	0.0
WAZ	Wanganui	0.91	18	P	Pn	08 07 42.6	+0.1
MSWZ	Moikau Station	0.92	150	P	Pn	08 07 43.8	+1.1
TUWZ	Tuamarina	0.96	212	P	Pn	08 07 44.1	+0.9
TUWZ				S	Sn	08 07 57.6	+1.6
TIWZ	Tintock	0.97	100	P	Pn	08 07 43.2	-0.2
TIWZ				S	Sn	08 07 56.0	-0.2
PAWZ	Paruwai Farm	0.97	142	P	Pn	08 07 43.4	0.0
PRWZ	Pori Road	1.02	87	P	Pn	08 07 44.2	+0.1
PRWZ				S	Sn	08 07 58.3	+0.7
PLWZ	Palliser	1.06	154	P	Pn	08 07 45.0	+0.4
TMWZ	Te Maipa	1.07	117	P	Pn	08 07 45.6	+0.8
TMWZ				S	Sn	08 07 58.7	-0.1
TRWZ	Traveller	1.12	134	P	Pn	08 07 46.9	+1.6
NNZ	Nelson	1.12	237	P	Pn	08 07 45.8	+0.5
NNZ				S	Sn	08 08 01.2	+1.4
TSZ	Takapari Road	1.16	62	P	Pn	08 07 45.8	-0.2
TSZ				S	Sn	08 08 04.2	+3.3
CMWZ	Cape Campbell	1.17	195	P	Pn	08 07 49.7	+3.6
LREZ	Lake Rotokare	1.17	351	P	Pn	08 07 46.4	+0.4
LREZ				S	Sn	08 08 02.7	+1.7
DVHZ	Dannevirke	1.22	75	P	Pn	08 07 46.1	-0.6
CPWZ	Castlepoint	1.23	104	P	Pn	08 07 47.2	+0.4
BSWZ	Blackbirch Sta	1.23	207	P	Pn	08 07 48.1	+1.2
BFZ	Birch Farm	1.23	93	P	Pn	08 07 46.3	-0.5
PREZ	Palmer Road	1.33	344	P	Pn	08 07 48.9	+0.8
NMEZ	Namu Road	1.34	334	P	Pn	08 07 49.1	+0.8
MTVZ	Mangateitei	1.39	28	P	Pn	08 07 49.4	+0.3
PNHZ	Pukenui	1.40	60	P	Pn	08 07 48.5	-0.6
KHEZ	Kahui Hut	1.41	340	P	Pn	08 07 49.8	+0.6
NEZ	North Egmont	1.41	343	P	Pn	08 07 49.8	+0.5
ANWZ	Angora Road	1.42	84	P	Pn	08 07 48.6	-0.8
PKVZ	Pokaka	1.44	23	P	Pn	08 07 50.0	+0.3
DREZ	Durham Road	1.47	347	P	Pn	08 07 50.9	+0.8
NBEZ	Newall Road No	1.47	336	P	Pn	08 07 50.6	+0.5
MOVZ	Moawhango	1.49	36	P	Pn	08 07 50.5	+0.1
WNVZ	Wahianoa	1.49	30	P	Pn	08 07 50.7	+0.2
WPHZ	Waipukurau	1.49	69	P	Pn	08 07 51.9	+1.5
VRZ	Vera Road	1.50	4	P	Pn	08 07 50.6	+0.2
PKE	Pukeiti	1.51	341	P	Pn	08 07 51.1	+0.4
DRZ	Dome Shelter	1.52	28	P	Pn	08 07 52.5	+1.4
WHVZ	Whangaehu Hut	1.53	29	P	Pn	08 07 52.0	+1.0
FWVZ	Far West T-bar	1.54	28	P	Pn	08 07 52.1	+0.8
MHEZ	Mangahewa	1.56	351	P	Pn	08 07 52.3	+1.0
TUVZ	Tukino	1.56	31	P	Pn	08 07 52.4	+0.9
PRHZ	Porangahau	1.57	78	P	Pn	08 07 51.2	-0.2
BHHZ	Black Hill Sta	1.58	45	P	Pn	08 07 51.8	+0.2
QRZ	Quartz Range	1.61	262	P	Pn	08 07 52.4	+0.4
NGZ	Ngauruhoe	1.63	28	P	Pn	08 07 53.4	+1.0
KRHZ	Kereru	1.65	54	P	Pn	08 07 52.0	-0.6
OTVZ	Oturere	1.66	29	P	Pn	08 07 53.4	+0.6
TWVZ	Taurewa	1.67	22	P	Pn	08 07 53.3	+0.4
WTVZ	West Tongariro	1.68	27	P	Pn	08 07 53.8	+0.8
ETVZ	East Tongariro	1.70	30	P	Pn	08 07 54.1	+0.8
KRVZ	Karewarewa	1.71	27	P	Pn	08 07 54.9	+1.4
TMVZ	Te Maari	1.72	29	P	Pn	08 07 54.4	+0.8
THZ	Tophouse	1.73	228	P	Pn	08 07 54.7	+1.1
PXZ	Pawanui	1.81	72	P	Pn	08 08 01.0	+6.4
KWHZ	Kaweka Forest	1.82	50	P	Pn	08 07 54.4	-0.6
KATZ	Kakaramea	1.84	27	P	Pn	08 07 56.2	+1.0
RITZ	Rihia Road	1.90	30	P	Pn	08 07 57.9	+2.0
KAHZ	Kahuranaki	1.91	65	P	Pn	08 07 55.1	-1.0
RATZ	Rangitukua	1.96	27	P	Pn	08 07 58.7	+1.8
KHZ	Kahutara	1.97	204	P	Pn	08 07 57.5	+0.6
MCHZ	McNeill Hill	1.98	54	P	Pn	08 07 56.6	-0.3
BKZ	Black Stump Fm	2.04	45	P	Pn	08 07 57.4	-0.5
HATZ	Hinemaiaia	2.06	34	P	Pn	08 07 59.9	+1.7
HIZ	Hauiti	2.11	5	P	Pn	08 07 59.4	+0.5
MRHZ	Matea Rd	2.26	38	P	Pn	08 08 01.3	+0.5
NMHZ	Naumai	2.26	48	P	Pn	08 08 00.3	-0.6
ARHZ	Aropaoanui	2.27	54	P	Pn	08 08 06.4	+5.4
KUTZ	Kaahu Road	2.32	24	P	Pn	08 08 04.4	+2.7
TLZ	Tolley Road	2.39	17	P	Pn	08 08 04.1	+1.4
DSZ	Denniston Nort	2.41	241	P	Pn	08 08 03.9	+1.0
WPRZ	Whakapapatarin	2.41	30	P	Pn	08 08 05.6	+2.7
ALRZ	Allen Road	2.45	33	P	Pn	08 08 04.2	+0.8
MTHZ	Maungataniwha	2.46	45	P	Pn	08 08 04.3	+0.7
PRRZ	Plateau Road	2.52	33	P	Pn	08 08 02.6	-1.8
RAHZ	Arahi	2.55	49	P	Pn	08 08 10.4	+5.6
GVZ	Greta Valley S	2.63	206	P	Pn	08 08 05.8	-0.1
RTZ	Ruatahuna	2.70	43	P	Pn	08 08 09.6	+2.7
MUGZ	Murupara	2.71	38	P	Pn	08 08 06.4	-0.5
LTZ	Lake Taylor	2.79	218	P	Pn	08 08 08.1	0.0
TOZ	Tahuroa Road	2.96	14	P	Pn	08 08 11.2	+0.8
RAGZ	Rawiri	3.02	46	P	Pn	08 08 17.9	+6.5
URZ	Urewera	3.04	40	P	Pn	08 08 10.0	-1.5
RIGZ	Rimuhau	3.08	53	P	Pn	08 08 09.9	-2.2
TGRZ	Tauranga	3.15	24	P	Pn	08 08 14.8	+1.7
INZ	Inchbonnie	3.18	228	P	Pn	08 08 13.2	-0.2
MWZ	Matawai	3.20	45	P	Pn	08 08 13.3	-0.5
OKCZ	Okains Bay	3.31	200	P	Pn	08 08 14.2	-1.1
OXZ	Oxford	3.32	215	P	Pn	08 08 14.0	-1.4
MQZ	McQueen's Vall	3.42	205	P	Pn	08 08 14.7	-1.9
AKCZ	Akaroa Harbour	3.49	201	P	Pn	08 08 16.2	-1.5
MKAZ	Moumakai	3.54	7	P	Pn	08 08 18.5	+0.2
AWAZ	Awhitu Peninsu	3.55	0	P	Pn	08 08 18.8	+0.2
RUGZ	Raukumara Rang	3.55	43	P	Pn	08 08 17.1	-1.5
RACZ	Rakaia	3.61	210	P	Pn	08 08 17.4	-1.9
ETAZ	East Tamaki Re	3.67	4	P	Pn	08 08 20.7	+0.6
WTAZ	Waiatarua	3.68	359	P	Pn	08 08 21.1	+0.8
HAZ	Te Kaha	3.77	42	P	Pn	08 08 21.0	-0.5
WVZ	Waitaha Valley	3.80	229	P	Pn	08 08 22.4	+0.4
WIAZ	Waiheke Island	3.84	6	P	Pn	08 08 23.0	+0.5
RVAZ	Riverhead Bore	3.84	359	P	Pn	08 08 22.7	+0.2
MBAZ	Motutapu North	3.85	3	P	Pn	08 08 22.9	+0.2
WACZ	Wakanui South	3.91	211	P	Pn	08 08 22.0	-1.4
KUZ	Kuaotunu	3.96	13	P	Pn	08 08 24.4	+0.3
ABAZ	Army Bay	4.02	2	P	Pn	08 08 25.3	+0.4
RPZ	Rata Peaks	4.08	219	P	Pn	08 08 32.0	+6.3
GCSZ	Gaunt Creek Bo	4.19	229	P	Pn	08 08 27.2	0.0
ARCZ	Arundel	4.20	216	P	Pn	08 08 26.6	-0.7
FOZ	Fox Glacier	4.61	229	P	Pn	08 08 32.7	-0.4
TMZ	Timaru	4.62	214	P	Pn	08 08 31.8	-1.3
WCZ	Waipu Caves	4.68	357	P	Pn	08 08 34.0	0.0
ODZ	Otahua Downs	5.30	212	P	Pn	08 08 40.4	-2.0
OUZ	Omahuta	5.45	351	P	Pn	08 08 44.7	+0.1
JCZ	Jackson Bay	5.54	230	P	Pn	08 08 44.7	-1.0

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*NNC **26** 08:18:50.0±2.4, 54°.15N×87°.31E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=19.5km s-min=10.6km az=26.0, Suspected Mining explosion.*

IDC 26 08:18:50.3±1.4**, 54°.17N**×**87°.34E, h0^{km}, mb1 3.4**/4**, mb1mx3.2**/50**, mbtmp3.4**/4**, ML2.9**/4**, 3C-4D, Error ellipse: s-maj=14.8km s-min=11.6km az=177.0, Southwestern Siberia**

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

I46RU	**ZALESOVO INFRA**	**1.50**	**263**	*i*		08 27 00.0	
	baz=80,slow=348,SNR=9.3						
ZAA0	**Zalesovo Array**	**1.50**	**263**	⇑P	Pn	08 19 16.9	-1.5
ZAA0				⇓S	Sg	08 19 37.5	-0.9
	1.6nm,0.2s						
ZALV	**Zalesovo Beam**	**1.50**	**263**	Pg	Pn	08 19 17.1	-1.4
	5.9nm,0.3s,baz=82,slow=16,SNR=53						
ZALV				Lg	Lg	08 19 36.9	
	4.0nm,0.3s,baz=79,slow=30,SNR=11						
KURK	**Kurchatov**	**6.35**	**241**	⇑Pn	Pn	08 20 26.1	+1.1
	0.6nm,0.4s						
KURK				⇑Sn	Sn	08 21 38.7	+0.4
	1.2nm,0.7s						
KURK				⇓Lg	Lg	08 22 11.6	
	5.4nm,1.2s						
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	Pn	08 20 27.4	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=11						
KURBB				Sn	Sn	08 21 40.3	-0.4
	0.1nm,0.3s,baz=45,slow=26,SNR=4.4						
MK31	**Makanchi Array**	**8.05**	**206**	Pn	Pn	08 20 47.4	-1.1
	0.4nm,0.6s,baz=28,slow=14,SNR=15						
MK31				⇓Sn	Sn	08 22 20.4	+0.3
	0.5nm,0.6s,baz=0.0,slow=0.1,SNR=4.5						
MK31				⇓Lg	Lg	08 23 05.9	
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**8.05**	**206**	Pn	Pn	08 20 50.3	+1.9
	0.1nm,0.3s,baz=27,slow=14,SNR=10						
MKAR				Sn	Sn	08 22 18.3	-1.8
	0.1nm,0.3s,baz=25,slow=25,SNR=3.4						
MKAR				Lg	Lg	08 23 04.5	
	0.0nm,0.3s,baz=28,slow=28,SNR=2.8						
BVAR	**Borovoye Array**	**10.14**	**270**	Pn	Pn	08 21 15.6	-1.4
	0.3nm,0.3s,baz=71,slow=18,SNR=4.9						
TLY	**Talaya**	**10.16**	**98**	Pn	Pn	08 21 17.5	+0.2
	0.0nm,0.3s,baz=304,slow=7.3,SNR=3.1						

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*PGC **26** 08:23:28.0±4.6, 47.°97N×128.°99W, h10^{km}, MLSn3.1/23, Mw3.8/23, 261km Wsw of Tofino, Bc Off Coast Of Washington*

*IDC **26** 08:23:30.3±1.8, 48.°16N×128.°77W, h0^{km}, mb3.4/3, mb1 3.9/12, mb1mx3.7/46, mbtmp3.7/12, ML3.2/8, MS3.6/6, Ms1 3.6/6, ms1mx3.2/27, Error ellipse: s-maj=32.9km s-min=12.4km az=66.0*

ISC 26 08:23:31.0±1.1**, 48.°17N**±0.°05×**128.°71W**±0.°08**, h10^{km}, n84,** σ**1^{s}08**/101**, mb3.4**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**0.34**	**230**	P	Pg	08 23 27.7	-10
NC27	**ODP1027**	**0.76**	**122**	P	**Pg**	**08 23 43.5**	**-2.1**
NC89	**ODP889**	**1.34**	**67**	Pn	**Pn**	**08 23 54.6**	**-1.0**
EDB	**Eliza Dome**	**2.00**	**31**	Pn	**Pn**	**08 24 03.1**	**-1.9**
TOFB	**Tofino**	**2.10**	**61**	Pn	**Pn**	**08 24 04.9**	**-1.4**
TOFB				Sn	**Sn**	**08 24 32.1**	**-0.4**
FHRB	**Fair Harbour**	**2.16**	**28**	Pn	**Pn**	**08 24 05.5**	**-1.6**
B012	**Ucluelet**	**2.24**	**69**	Pn	**Pn**	**08 24 06.8**	**-1.3**
OZB	**Mount Ozzard**	**2.28**	**68**	Pn	**Pn**	**08 24 07.4**	**-1.4**
OZB				Sn	**Sn**	**08 24 36.5**	**-0.4**
GDR	**Gold River**	**2.39**	**47**	Pn	**Pn**	**08 24 09.6**	**-0.6**
WOSB	**Woss**	**2.44**	**34**	Pn	**Pn**	**08 24 10.2**	**-0.8**
MAYB	**Maynard**	**2.46**	**24**	Pn	**Pn**	**08 24 09.9**	**-1.4**
BFSB	**Bamfield**	**2.47**	**73**	Pn	**Pn**	**08 24 10.1**	**-1.2**
BFSB				Sn	**Sn**	**08 24 40.1**	**-1.3**
B928	**Bamfield**	**2.47**	**73**	Pn	**Pn**	**08 24 10.1**	**-1.2**
B928				Sn	**Sn**	**08 24 40.7**	**-0.7**
BTB	**Buttle Lake**	**2.48**	**57**	Pn	**Pn**	**08 24 11.1**	**-0.5**
BTB				Sn	**Sn**	**08 24 42.4**	**+0.4**
HOLB	**Holberg**	**2.51**	**8**	Pn	**Pn**	**08 24 10.7**	**-1.2**
PHC	**Port Hardy**	**2.68**	**18**	Pn	**Pn**	**08 24 12.6**	**-1.6**
TLCB	**Telegraph Cove**	**2.68**	**27**	Pn	**Pn**	**08 24 13.6**	**-0.6**
B927	**Port Alberni**	**2.79**	**66**	Pn	**Pn**	**08 24 14.5**	**-1.2**
B927				Sn	**Sn**	**08 24 49.1**	**-0.2**
MGB	**Mount Grey**	**2.80**	**71**	Pn	**Pn**	**08 24 14.3**	**-1.6**
MGB				Sn	**Sn**	**08 24 49.1**	**-0.6**
NCRB	**Newcastle Ridg**	**2.83**	**37**	Pn	**Pn**	**08 24 15.1**	**-1.4**
CBB	**Campbell River**	**2.88**	**48**	Pn	**Pn**	**08 24 16.8**	**-0.2**
CBB				Sn	**Sn**	**08 24 53.0**	**+1.2**
OBC	**Olympics--Boni**	**3.11**	**91**	Pn	**Pn**	**08 24 19.0**	**-1.2**
OBC				Sn	**Sn**	**08 24 56.8**	**-0.6**
B926	**Mesachie Lake**	**3.12**	**76**	Pn	**Pn**	**08 24 19.0**	**-1.2**
B926				Sn	**Sn**	**08 24 57.6**	**+0.1**
GHNB	**Nanoose**	**3.17**	**67**	Pn	**Pn**	**08 24 20.5**	**-0.4**
GHNB				Sn	**Sn**	**08 25 00.2**	**+1.4**
TXB	**Texada**	**3.21**	**60**	Pn	**Pn**	**08 24 21.4**	**-0.1**
NLLB	**Nanaimo Lost L**	**3.30**	**69**	Pn	**Pn**	**08 24 22.2**	**-0.6**
STW	**Striped Peak**	**3.38**	**88**	Pn	**Pn**	**08 24 23.1**	**-0.6**
SHB	**Sechelt**	**3.50**	**64**	Pn	**Pn**	**08 24 25.1**	**-0.5**
SHB				Sn	**Sn**	**08 25 08.2**	**+1.2**
WISH	**Wishkah**	**3.50**	**106**	Pn	**Pn**	**08 24 24.8**	**-0.7**
WISH				Sn	**Sn**	**08 25 06.2**	**-0.7**
B009	**North Saanich**	**3.54**	**80**	Pn	**Pn**	**08 24 25.0**	**-1.0**
B009				Sn	**Sn**	**08 25 08.4**	**+0.6**
B010	**North Saanich**	**3.54**	**80**	Pn	**Pn**	**08 24 24.9**	**-1.0**
B010				Sn	**Sn**	**08 25 08.4**	**+0.6**
PGC	**Sidney**	**3.54**	**80**	Pn	**Pn**	**08 24 24.9**	**-1.0**
PGC				Sn	**Sn**	**08 25 08.4**	**+0.6**
PA12	**PA12 Sannich**	**3.54**	**80**	Sn	**Sn**	**08 25 08.6**	**+0.8**
B011	**North Saanich**	**3.54**	**80**	Pn	**Pn**	**08 24 24.9**	**-1.1**
B011				Sn	**Sn**	**08 25 08.1**	**+0.3**
GOBB	**Galiano Island**	**3.54**	**75**	Pn	**Pn**	**08 24 25.6**	**-0.5**
GOBB				Sn	**Sn**	**08 25 09.0**	**+1.1**
BIB	**Bowen Island**	**3.78**	**69**	Pn	**Pn**	**08 24 28.6**	**-0.7**
BIB				Sn	**Sn**	**08 25 14.4**	**+0.5**
D03D	**Eldon**	**3.84**	**97**	P	**Pn**	**08 24 30.1**	**0.0**
	baz=278						
HDW	**Hoodsport**	**3.84**	**96**	Pn	**Pn**	**08 24 30.2**	**0.0**
E03A	**Lebam**	**3.86**	**113**	Sn	**Sn**	**08 25 12.6**	**-3.0**
WPB	**Watts Point**	**3.92**	**66**	Pn	**Pn**	**08 24 31.3**	**0.0**
MCW	**Mount Constitu**	**3.95**	**80**	Pn	**Pn**	**08 24 31.2**	**-0.5**
GNW	**Green Mountain**	**4.01**	**96**	Pn	**Pn**	**08 24 31.6**	**-0.8**
GNW				Sn	**Sn**	**08 25 18.8**	**-0.6**
A04D	**Lummi Island**	**4.04**	**80**	P	**Pn**	**08 24 32.9**	**+0.1**
	baz=262						
BBB	**Bella Bella**	**4.04**	**5**	Pn	**Pn**	**08 24 32.5**	**-0.4**
	44nm,0.3s,baz=194,slow=5.8,SNR=188						
BBB	**Bella Bella**	**4.04**	**5**	Pn	**Pn**	**08 24 32.3**	**-0.6**
BBB				Sn	**Sn**	**08 25 19.7**	**-0.6**
WSLR	**Whistler**	**4.28**	**61**	Pn	**Pn**	**08 24 36.9**	**+0.7**
B05A	**Bryant**	**4.42**	**86**	P	**Pn**	**08 24 38.3**	**+0.1**
	baz=269						
E04D	**Cinebar**	**4.47**	**109**	P	**Pn**	**08 24 39.4**	**+0.6**
	baz=290						
A05A	**Maple Falls**	**4.48**	**77**	Pn	**Pn**	**08 24 38.9**	**0.0**
A05A				Sn	**Sn**	**08 25 32.3**	**+1.4**
JCW	**Jim Creek**	**4.54**	**87**	Pn	**Pn**	**08 24 39.6**	**-0.2**
JCW				Sn	**Sn**	**08 25 33.0**	**+0.4**
MBW	**Mount Baker**	**4.57**	**80**	Pn	**Pn**	**08 24 40.4**	**0.0**
D05A	**Enumclaw**	**4.64**	**100**	Pn	**Pn**	**08 24 41.1**	**-0.1**
RPW	**Rockport**	**4.81**	**84**	Pn	**Pn**	**08 24 43.7**	**+0.1**
LON	**Longmire**	**4.89**	**104**	Pn	**Pn**	**08 24 44.7**	**0.0**
LON				Sn	**Sn**	**08 25 41.5**	**+0.1**
FMW	**Mount Fremont**	**4.92**	**102**	Pn	**Pn**	**08 24 45.5**	**+0.2**
FMW				Sn	**Sn**	**08 25 41.7**	**-0.6**
LLLB	**Lillooet**	**5.09**	**59**	Pn	**Pn**	**08 24 47.8**	**+0.4**
LTY	**Liberty**	**5.50**	**97**	Pn	**Pn**	**08 24 53.6**	**+0.6**
LTY				Sn	**Sn**	**08 25 57.3**	**+0.9**
H04D	**Lebanon**	**5.51**	**129**	P	**Pn**	**08 24 54.5**	**+1.4**
	baz=311						
GRNB	**Grenville Isla**	**5.74**	**353**	Pn	**Pn**	**08 24 56.0**	**-0.3**
KITB	**Kitimat**	**5.92**	**0**	Pn	**Pn**	**08 24 58.8**	**+0.1**
PNT	**Penticton**	**6.12**	**76**	Pn	**Pn**	**08 25 01.8**	**+0.3**
FSB	**Fort Saint Jam**	**6.89**	**22**	Pn	**Pn**	**08 25 11.6**	**-0.4**
J05D	**Fort Rock, OR**	**7.15**	**130**	P	**Pn**	**08 25 19.2**	**+3.4**
	baz=314						
SLEB	**Sale Mountain**	**7.49**	**62**	Pn	**Pn**	**08 25 21.0**	**+0.5**
YBH	**Yreka Blue Hor**	**7.71**	**144**	Pn	**Pn**	**08 25 25.1**	**+1.7**
	0.1nm,0.3s,baz=352,slow=12,SNR=10						
YBH				LR	LR	08 28 00.2	
	comp=Z,420nm,20.6s,baz=310,slow=35						
NEW	**Newport**	**7.74**	**85**	Pn	**Pn**	**08 25 23.6**	**-0.2**
	0.6nm,0.3s,baz=287,slow=13,SNR=6.5						
MNB	**Mounoet Dainar**	**7.76**	**55**	Pn	**Pn**	**08 25 24.9**	**+0.7**
DLBC	**Dease Lake**	**10.32**	**356**	Pn	**Pn**	**08 25 58.8**	**-0.3**
	0.0nm,0.3s,baz=102,slow=20,SNR=1.8						
ELK	**Elko**	**12.14**	**123**	LR	LR	08 31 11.0	
	comp=Z,295nm,19.2s,baz=334,slow=38						
NVAR	**Mina Array Bea**	**12.32**	**138**	Pn	**Pn**	**08 26 30.4**	**+3.7**
	0.1nm,0.3s,baz=313,slow=12,SNR=14						
NVAR				LR	LR	08 31 06.7	
	comp=Z,266nm,19.8s,baz=350,slow=37						
PDAR	**Pinedale Array**	**14.47**	**105**	Pn	**P**	**08 27 01.1**	**-1.8**
	0.1nm,0.3s,baz=293,slow=7.9,SNR=4.9						
PDAR				LR	LR	08 32 54.0	
	comp=Z,210nm,19.7s,baz=322,slow=39						
YKA	**Yellowknife Ar**	**16.39**	**24**	Pn	**Pn**	**08 27 20.3**	**-0.5**
	0.1nm,0.3s,baz=209,slow=11,SNR=17						
PFO	**Pinyon Flats O**	**17.21**	**143**	P	**Pn**	**08 27 31.6**	**+0.1**
	0.1nm,0.3s,baz=311,slow=8.0,SNR=6.5						
KDAK	**Kodiak Island**	**17.21**	**313**	LR	LR	08 32 10.2	
	comp=Z,237nm,20.8s,baz=130,slow=30						
ILAR	**Eielson Array**	**19.31**	**336**	P	**Pn**	**08 27 56.9**	**0.0**
	0.0nm,0.3s,baz=150,slow=10,SNR=13						
ANMO	**Albuquerque**	**21.16**	**120**	P	**P**	**08 28 17.8**	**+1.3**
	1.3nm,0.8s,baz=314,slow=12,SNR=4.8						
ULM	**Lac du Bonnet**	**21.46**	**72**	P	**P**	**08 28 21.4**	**+2.0**
	2.2nm,0.8s,baz=276,slow=9.0,SNR=5.2						
TXAR	**Lajitas Array**	**26.92**	**125**	P	**P**	**08 29 13.6**	**+1.2**
	0.4nm,0.8s,baz=321,slow=9.7,SNR=4.2						
TXAR				LR	LR	08 40 09.5	
	comp=Z,222nm,20.6s,baz=0.0,slow=37						
H11N2	**WAKE ISLAND Hy**	**58.54**	**265**	T	T	09 36 38.5	
	baz=44,slow=75,SNR=73						
H11N3	**WAKE ISLAND Hy**	**58.54**	**265**	T	T	09 36 38.5	
	baz=44,slow=75,SNR=115						
H11N1	**WAKE ISLAND Hy**	**58.56**	**265**	T	T	09 36 39.7	
	baz=44,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**59.54**	**264**	T	T	09 37 47.2	
	baz=44,slow=76,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**59.55**	**264**	T	T	09 37 49.6	
	baz=44,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**59.55**	**264**	T	T	09 37 48.9	
	baz=44,slow=76,SNR=6.2						

IDC 26 08:24:11.4±3.8**, 55.°44N**×**85.°95E, h0^{km}, mb1 2.6**/2**, mb1mx2.6**/43**, mbtmp2.6**/2**, ML2.4**/2**, Error ellipse: s-maj=30.9km s-min=23.6km az=36.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.63**	**204**	*i*		08 34 34.5	
	baz=24,slow=358,SNR=3.1						
ZALV	**Zalesovo Beam**	**1.63**	**204**	Pg	Pn	08 24 40.1	-1.2
	2.6nm,0.3s,baz=22,slow=14,SNR=36						
ZALV				Lg	Lg	08 25 03.4	
	1.6nm,0.3s,baz=24,slow=28,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.58**	**226**	Pn	Pn	08 25 49.0	-0.3
	0.1nm,0.3s,baz=44,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	**8.95**	**196**	Pn	Pn	08 26 22.6	+0.7
	0.1nm,0.3s,baz=7.0,slow=13,SNR=2.5						

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*TEH **26** 08:28:43.8, 29.°86N×52.°18E, h10^{km}, ML3.1*

*THR **26** 08:28:47.4±0.3, 29.°87N×51.°90E, h6^{km}±10^{km}, ML3.3*

*OMAN **26** 08:28:48.1±0.6, 29.°55N×52.°12E, h130^{km}, mb4.1/4, ml3.3/2, Error ellipse: s-maj=16.0km s-min=10.8km az=252.0*

ISC 26 08:28:43.6±1.0**, 29.°76N**±0.°05×**52.°14E**±0.°05**, h10^{km}, n23,** σ**1^{s}77**/31**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.34**	**109**	*e*Pg	**Pg**	**08 28 50.7**	**+0.2**
SHI				*e*Sg	**Sb**	**08 28 56.5**	**-1.1**
SHI				*e*		08 28 59.5	
	comp=Z,99nm,0.3s						
KAZ1	**Kazerun**	**0.45**	**253**	*e*Pg	**Pb**	**08 28 54.3**	**+0.6**
KAZ1				*e*		08 29 13.0	
	comp=Z,99nm,0.6s						
KLNJ	**Kolanjah**	**1.33**	**339**	*e*		08 29 31.2	
	comp=Z,99nm,0.6s						
KLNJ				*e*Pg	**Pn**	**08 29 07.2**	**-1.4**
QIR1	**Qir**	**1.50**	**148**	*e*Pg	**Pg**	**08 29 14.5**	**+2.1**
IRAM	**Ramesheh**	**2.06**	**6**	*e*Pn	**Pn**	**08 29 19.3**	**+0.9**
IRAM				*e*		08 29 55.9	
	comp=Z,99nm,0.5s						
ISAD	**Sadrabad**	**2.53**	**31**	*e*Pn	**Pn**	**08 29 26.1**	**+1.1**
IGAR	**Gharneh**	**2.64**	**358**	*e*Pn	**Pn**	**08 29 27.0**	**+0.5**
IMEH	**Mehriz**	**2.68**	**52**	*e*Pn	**Pn**	**08 29 28.3**	**+1.2**
NASN	**Na'in**	**3.08**	**11**	*e*Pn	**Pb**	**08 29 37.9**	**-0.9**
IPIR	**Pirpir**	**3.11**	**340**	*e*Pn	**Pn**	**08 29 33.8**	**+0.8**
IZEF	**Zefreh**	**3.13**	**3**	*e*Pn	**Pn**	**08 29 34.1**	**+0.8**
NGRK	**Negar Kerman**	**4.00**	**90**	*e*Pn	**Pn**	**08 29 48.0**	**+2.7**
NGRK				*e*		08 30 37.2	
	comp=Z,99nm,0.5s						
KRBR	**Kerman**	**4.02**	**86**	*e*Pn	**Pb**	**08 29 54.6**	**-0.1**
KRBR				AML	AML	08 30 57.2	
	comp=E,33nm,0.8s						
KRBR				AML	AML	08 31 03.9	
	comp=N,27nm,0.5s						
KRSH	**Karshahi**	**4.20**	**360**	*e*Pn	**Pn**	**08 29 48.7**	**+0.8**
ASAO	**Ashtian**	**5.10**	**340**	*e*P	**Pn**	**08 30 04.3**	**+4.0**
SHME	**Shamm**	**5.12**	**135**	P	**Pn**	**08 30 01.0**	**+0.7**
SHME				S	**Sn**	**08 31 00.6**	**+1.2**
BANOM	**Banah**	**5.31**	**135**	P	**Pn**	**08 30 03.1**	**+0.1**
	SNR=7.6						
BANOM				S	**Sn**	**08 31 02.9**	**-1.3**
MASF	**Masafi**	**5.64**	**140**	P	**Pn**	**08 30 08.6**	**+1.0**
MASF				S	**Sn**	**08 31 10.7**	**-1.8**
MDH	**Madha**	**5.78**	**139**	P	**Pn**	**08 30 09.8**	**+0.5**
MDH				S	**Sn**	**08 31 12.9**	**-2.8**
UOSS	**Minazif**	**6.00**	**142**	P	**Pn**	**08 30 12.4**	**-0.1**
UOSS				S	**Sn**	**08 31 17.3**	**-4.1**
ASHO	**Ashiyiah**	**6.14**	**144**	P	**Pn**	**08 30 15.1**	**+0.7**
	SNR=9.3						
ASHO				S	**Sn**	**08 31 22.7**	**-2.1**
ARQ	**Araqi**	**7.50**	**147**	P	**Pn**	**08 30 33.2**	**+0.1**
	SNR=6.3						
ARQ				S	**Sn**	**08 31 54.8**	**-3.5**
HOQ	**Hoqain**	**7.70**	**142**	P	**Pn**	**08 30 35.6**	**-0.1**

IDC 26 08:42:54.4±10.0**, 0.°05N**×**99.°74W, h0^{km}, mb3.3**/4**, mb1 3.8**/4**, mb1mx3.6**/22**, mbtmp3.3**/4**, Error ellipse: s-maj=417.6km s-min=141.6km az=101.0, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**29.37**	**353**	P	P	08 48 59.8	+0.4
	0.4nm,0.9s,baz=170,slow=5.5,SNR=4.5						
PDAR	**Pinedale Array**	**43.44**	**349**	P	P	08 50 58.9	-0.6
	0.3nm,0.8s,baz=156,slow=7.9,SNR=3.3						
YKA	**Yellowknife Ar**	**63.29**	**352**	P	P	08 53 25.6	+0.8
	0.4nm,0.8s,baz=158,slow=7.1,SNR=4.4						
ILAR	**Eielson Array**	**73.01**	**341**	P	P	08 54 25.2	-0.6
	0.3nm,0.8s,baz=147,slow=5.2,SNR=4.5						

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*IDC **26** 09:03:18.2±1.3, 0.°57S×124.°38E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.2/42, mbtmp3.4/4, Error ellipse: s-maj=182.9km s-min=22.2km az=66.0*

*DJA **26** 09:03:23.4±0.3, 1°S±2°×12°4E±°, h10^{km}, M4.1/11, mb4.2/3, mB5.1/2, MLv4.0/11, Mw(mB)4.5/2*

ISC 26 09:03:20.9±0.8**, 0.°69S**±0.°08×**124.°6E**±0.°1**, h10^{km}, n12,** σ**1^{s}55**/14**, mb3.3**/4**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.40**	**334**	P	**Pg**	**09 03 50.3**	**+2.5**
KMSI				S	**Sg**	**09 04 06.4**	**+0.4**
SANI	**Sanana**	**1.94**	**134**	P	**Pb**	**09 03 57.1**	**+0.7**
SANI				S	**Sb**	**09 04 21.2**	**+0.6**
MRSI	**Marisa**	**2.90**	**294**	P	**Pn**	**09 04 07.4**	**+0.2**
APSI	**Ampana**	**2.96**	**266**	P	**Pn**	**09 04 08.2**	**+0.2**
MPSI	**Mapaga**	**4.81**	**282**	P	**Pn**	**09 04 35.0**	**+1.5**
TTSI	**Tana Toraja**	**5.32**	**244**	P	**Pn**	**09 04 40.7**	**+0.2**
	0.2nm691nm19nm,0.5s						
SPSI	**Sidrap Palu**	**5.82**	**236**	P	**Pn**	**09 04 47.5**	**+0.1**
	0.3nm5μm34nm,1.4s						
BKSI	**Bulukumba**	**6.42**	**224**	P	**Pn**	**09 04 55.9**	**+0.3**
WRA	**Warramunga Arr**	**21.38**	**154**	P	**P**	**09 08 10.7**	**+1.8**
	0.3nm,0.8s,baz=325,slow=13,SNR=2.7						
ASAR	**Alice Springs**	**24.56**	**159**	P	**P**	**09 08 40.8**	**-0.4**
	0.3nm,0.8s,baz=342,slow=12,SNR=4.5						
SONM	**Songino Array**	**50.87**	**344**	P	**P**	**09 12 19.2**	**-2.9**
	0.3nm,0.3s,baz=142,slow=7.3,SNR=3.9						
MKAR	**Makanchi Array**	**60.04**	**328**	P	**P**	**09 13 25.9**	**-2.2**
	0.6nm,0.7s,baz=128,slow=8.0,SNR=7.0						

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*NNC **26** 09:05:04.2±2.1, 53.°81N×86.°87E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=23.2km s-min=10.8km az=25.0, Suspected Mining explosion.*

IDC 26 09:05:04.3±2.5**, 53.°74N**×**86.°86E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/45**, mbtmp2.8**/2**, ML2.5**/2**, 2C-3D, Error ellipse: s-maj=21.2km s-min=13.0km az=68.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.23**	**281**	*i*		09 12 14.7	
	baz=98,slow=350,SNR=1.6						
ZAA0	**Zalesovo Array**	**1.23**	**281**	⇓P	Pg	09 05 27.0	-0.7
	0.3nm,0.3s						
ZAA0				⇓S	Sb	09 05 44.2	-0.4
	2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**1.23**	**281**	Pg	Pg	09 05 26.8	-1.0
	1.7nm,0.3s,baz=103,slow=18,SNR=22						
ZALV				Lg	Lg	09 05 44.1	
	1.6nm,0.3s,baz=99,slow=26,SNR=13						
KURBB	**Kurchatov Arra**	**6.00**	**242**	Pn	Pn	09 06 35.1	+0.9
	0.1nm,0.3s,baz=56,slow=13,SNR=8.1						
KURBB				Sn	Sn	09 07 43.2	-0.3
	0.0nm,0.3s,baz=50,slow=6.2,SNR=2.1						
KURBB				Lg	Lg	09 08 14.2	
	0.0nm,0.3s,baz=45,slow=28,SNR=3.4						
KURBB	**Kurchatov Arra**	**6.00**	**242**	⇓Pn	Pn	09 06 35.8	+1.6
	0.5nm,0.4s						
KURBB				⇑Sn	Sn	09 07 44.4	+1.0
	1.3nm,0.6s						
MK31	**Makanchi Array**	**7.54**	**205**	Pn	Pn	09 06 57.0	+1.6
	0.1nm,0.2s,baz=25,slow=13,SNR=14						
MK31				⇑Lg	Lg	09 09 05.9	
	1.8nm,1.0s						
MKAR	**Makanchi Array**	**7.54**	**205**	Pn	Pn	09 06 56.8	+1.3
	0.2nm,0.3s,baz=25,slow=14,SNR=9.2						
MKAR				Sn	Sn	09 08 21.4	-0.2
	0.1nm,0.3s,baz=25,slow=24,SNR=2.7						
MKAR				Lg	Lg	09 09 00.3	
	baz=24,slow=33,SNR=1.7						

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*IDC **26** 09:16:49.3±1.0, 32.°49N×93.°48E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.6/49, mbtmp3.8/7, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/53, Error ellipse: s-maj=47.4km s-min=20.6km az=60.0*

ISC 26 09:16:52.5±0.9**, 32.°4N**±0.°1×**93.°3E**±0.°1**, h22^{km}, n19,** σ**0^{s}69**/18**, mb3.9**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**7.00**	**225**	*e*P	**Pn**	**09 18 33.9**	**-0.2**
	9.9nm,0.4s						
ODAN	**Odare**	**7.56**	**224**	*e*P	**Pn**	**09 18 42.0**	**+0.4**
	15nm,0.4s						
GUN	**Gumba**	**7.83**	**237**	*e*P	**Pn**	**09 18 45.9**	**+0.4**
RAMN	**Ramite**	**7.98**	**228**	*e*P	**Pn**	**09 18 46.8**	**-0.6**
	14nm,0.4s						
KKN	**Kakani**	**8.33**	**238**	*e*P	**Pn**	**09 18 52.4**	**+0.2**
	16nm,0.4s						
PKI	**Pulchoki**	**8.37**	**237**	*e*P	**Pn**	**09 18 53.1**	**+0.3**
	44nm,0.3s						
PKIN	**Phulchoki**	**8.38**	**237**	*e*P	**Pn**	**09 18 53.0**	**+0.1**
	40nm,0.4s						
DMN	**Daman**	**8.56**	**238**	*e*P	**Pn**	**09 18 55.2**	**-0.2**
	24nm,0.6s						
DANN	**Dangsing**	**9.18**	**246**	*e*P	**Pn**	**09 19 02.6**	**-1.2**
	21nm,0.5s						
KOLN	**Koldanda**	**9.59**	**243**	*e*P	**Pn**	**09 19 08.7**	**-0.7**
	10.0nm,0.6s						
PYUN	**Piuthan**	**9.89**	**247**	*e*P	**Pn**	**09 19 12.9**	**-0.7**
	17nm,0.4s						
MKAR	**Makanchi Array**	**16.63**	**333**	Pn	**Pn**	**09 20 44.2**	**+0.1**
	0.1nm,0.3s,baz=143,slow=13,SNR=6.5						
KURBB	**Kurchatov Arra**	**21.19**	**333**	P	**P**	**09 21 37.9**	**+1.5**
	1.4nm,0.8s,baz=139,slow=12,SNR=10						
SIJI	**Sorong**	**48.82**	**125**	LR	LR	09 46 42.9	
	comp=Z,33nm,18.9s,baz=312,slow=37						
WRA	**Warramunga Arr**	**65.24**	**137**	P	**P**	**09 27 32.5**	**0.0**
	2.3nm,0.8s,baz=315,slow=8.0,SNR=15						
ASAR	**Alice Springs**	**67.95**	**140**	P	**P**	**09 27 50.2**	**+0.4**
	3.1nm,0.6s,baz=327,slow=6.7,SNR=42						
ILAR	**Eielson Array**	**72.42**	**23**	P	**P**	**09 28 15.5**	**-1.2**
	0.2nm,0.7s,baz=281,slow=5.2,SNR=2.6						
YKA	**Yellowknife Ar**	**82.78**	**13**	P	**P**	**09 29 14.4**	**0.0**
	0.3nm,0.7s,baz=335,slow=4.3,SNR=7.5						
TORD	**Torodi Ar. Bea**	**84.39**	**282**	P	**P**	**09 29 23.9**	**+0.3**
	1.2nm,0.6s,baz=44,slow=5.0,SNR=3.0						

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*NIED **26** 09:26:08.4, 21.°03N×122.°63E, h0^{km}, MW3.9, Moment Tensor Solution.   s2   Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.64; M$_{\theta\theta}$1.13; M$_{\phi\phi}$-1.76; M$_{r\theta}$1.28; M$_{\theta\phi}$2.36; M$_{\phi r}$8.71; Fault plane solution: M$_{0}$9.24000×10^{14} NP1:ϕ_{s}9.00000°, δ87.00000°, λ107.00000°.   NP2:ϕ_{s}107.00000°, δ17.00000°, λ9.00000°.*

JMA 26 09:26:08.3±0.5**, 21.°03N**×**122.°62E, h0^{km}, M3.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**3.21**	**20**	P	Pn	09 27 02.0	+2.1
HATJ				*e*S	Sn	09 27 40.8	+1.9
JKRS	**Kuro-shima**	**3.44**	**22**	P	Pn	09 27 05.2	+2.0
JKRS				*e*S	Sn	09 27 45.9	+1.2
IRIF	**Iriomote-Funau**	**3.44**	**17**	P	Pn	09 27 05.3	+2.1
IRIF				*e*S	Sn	09 27 47.4	+2.6
JIJ	**Ishigaki jima**	**3.60**	**23**	P	Pn	09 27 07.0	+1.6
JIJ				*e*S	Sn	09 27 50.1	+1.4
JISG	**Ishigakijimahi**	**3.87**	**23**	P	Pn	09 27 10.5	+1.4
JISG				*e*S	Sn	09 27 57.2	+2.0
JTJ	**Tarama**	**4.08**	**28**	P	Pn	09 27 13.6	+1.7
JIRB	**Irabujima**	**4.45**	**31**	P	Pn	09 27 18.4	+1.3
JIKM	**Ikemajima**	**4.57**	**31**	P	Pn	09 27 19.8	+1.1

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*IDC **26** 09:32:00.0±1.4, 52.°57N×131.°89W, h0^{km}, mb3.6/3, mb1 3.6/8, mb1mx3.4/67, mbtmp3.4/8, ML3.3/5, MS2.9/2, Ms1 2.9/2, ms1mx2.6/43, Error ellipse: s-maj=18.5km s-min=7.1km az=43.0*

*PGC **26** 09:32:00.5±0.9, 52.°57N×131.°90W, h16^{km}, ML3.2/13, 75km south of Sandspit, Bc Haida Gwaii Region*

ISC 26 09:31:59.7±1.4**, 52.°57N**±0.°04×**131.°82W**±0.°04**, h2^{km}**±10^{km}**, n37,** σ**1^{s}78**/48**, mb3.5**/3**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG1B	**Mitchell Dam**	**0.41**	**333**	P	**Pg**	**09 32 07.6**	**-0.1**
HG1B				S	**Sg**	**09 32 14.0**	**+1.0**
HG4B	**Hotspring**	**0.47**	**125**	P	**Pg**	**09 32 10.2**	**+1.5**
MOBC	**Moresby Island**	**0.59**	**351**	P	**Pg**	**09 32 11.2**	**+0.2**
MOBC				S	**Sg**	**09 32 19.4**	**+0.8**
DIB	**Dawson Inlet,**	**0.75**	**328**	P	**Pg**	**09 32 13.4**	**-0.7**
DIB				S	**Sg**	**09 32 23.2**	**-0.6**
H02S1	**DAWSON INLET T**	**0.75**	**328**	Pg	**Pg**	**09 32 13.2**	**-0.9**
H02S1				Lg	Lg	09 32 22.8	
BNAB	**Bonilla**	**1.17**	**37**	P	**Pb**	**09 32 21.9**	**-0.8**
BNAB				S	**Sg**	**09 32 37.8**	**+0.4**
MASB	**Masset**	**1.46**	**355**	P	**Pn**	**09 32 26.9**	**-0.2**
MASB				Sn	**Sn**	**09 32 44.3**	**-2.3**
NDB	**Naden**	**1.55**	**335**	P	**Pn**	**09 32 26.8**	**-1.5**
NDB				Sn	**Sn**	**09 32 47.6**	**-1.4**
GRNB	**Grenville Isla**	**1.71**	**40**	Pn	**Pn**	**09 32 29.7**	**-0.8**
GRNB				Pg	**Pb**	**09 32 31.6**	**-0.2**
GRNB				Sg	**Sb**	**09 32 53.9**	**+0.2**
LIB	**Langara Island**	**1.85**	**337**	Pn	**Pn**	**09 32 32.0**	**-0.3**
RUBB	**Prince Rupert**	**2.00**	**27**	Pn	**Pn**	**09 32 33.6**	**-0.8**
RUBB				Sn	**Sn**	**09 32 59.8**	**-0.3**
BBB	**Bella Bella**	**2.31**	**98**	Pn	**Pn**	**09 32 37.9**	**-0.8**
	4.6nm,0.3s,baz=261,slow=4.2,SNR=19						
BBB				Sn	**Sn**	**09 33 05.2**	**-2.3**
	11nm,0.3s,baz=4.9,slow=22,SNR=7.7						
BBB				Lg	Lg	09 33 13.3	
	40nm,0.3s,baz=17,slow=19,SNR=11						
BBB				LR	LR	09 33 21.0	
	comp=Z,106nm,18.5s,baz=229,slow=34						
BBB	**Bella Bella**	**2.31**	**98**	Pn	**Pn**	**09 32 37.7**	**-1.0**
BBB				Sn	**Sn**	**09 33 05.1**	**-2.5**
KITB	**Kitimat**	**2.44**	**50**	Pn	**Pn**	**09 32 39.8**	**-0.7**
KITB				Sg	**Sb**	**09 33 15.8**	**+1.1**
HOLB	**Holberg**	**3.00**	**128**	Pn	**Pn**	**09 32 47.2**	**-1.1**
HOLB				Sn	**Sn**	**09 33 22.4**	**-2.4**
PHC	**Port Hardy**	**3.31**	**122**	Pn	**Pn**	**09 32 50.9**	**-1.5**
PHC				Sn	**Sn**	**09 33 30.4**	**-1.9**
MAYB	**Maynard**	**3.62**	**125**	Pn	**Pn**	**09 32 56.8**	**-0.2**
TLCB	**Telegraph Cove**	**3.71**	**121**	Pn	**Pn**	**09 32 57.1**	**-0.9**
TLCB				Sn	**Sn**	**09 33 39.6**	**-2.6**

WOSB	**Woss**	**4.08**	**124**	Pn	**Pn**	**09 33 03.6**	**+0.5**
CBB	**Campbell River**	**4.78**	**119**	Pn	**Pn**	**09 33 11.3**	**-1.4**
CBB				Sn	**Sn**	**09 34 03.3**	**-5.3**
FSB	**Fort Saint Jam**	**4.87**	**64**	Pn	**Pn**	**09 33 14.7**	**+0.8**
TXB	**Texada**	**5.47**	**119**	Pn	**Pn**	**09 33 23.3**	**+1.1**
DLBC	**Dease Lake**	**5.97**	**9**	Pn	**Pn**	**09 33 31.7**	**+2.5**
	0.6nm,0.3s,baz=200,slow=14,SNR=16						
DLBC				Sn	**Sn**	**09 34 39.4**	**+1.3**
	0.9nm,0.3s,baz=284,slow=20,SNR=3.7						
DLBC				Lg	Lg	09 35 04.7	
	1.2nm,0.3s,baz=296,slow=24,SNR=13						
DLBC				LR	LR	09 35 51.0	
	comp=Z,223nm,19.2s,baz=126,slow=39						
DLBC	**Dease Lake**	**5.97**	**9**	Pn	**Pn**	**09 33 31.1**	**+1.9**
DLBC				Sg	**Sg**	**09 35 06.0**	**-5.4**
NEW	**Newport**	**10.32**	**109**	Lg	Lg	09 37 21.0	
	0.3nm,0.3s,baz=209,slow=13,SNR=3.7						
YKA	**Yellowknife Ar**	**13.53**	**36**	Pn	**Pn**	**09 35 10.9**	**-1.6**
	0.1nm,0.3s,baz=216,slow=12,SNR=14						
NVAR	**Mina Array Bea**	**16.98**	**141**	Pn	**P**	**09 36 00.7**	**+0.2**
	0.0nm,0.3s,baz=313,slow=8.5,SNR=2.5						
PDAR	**Pinedale Array**	**17.85**	**114**	P	**P**	**09 36 11.8**	**+1.8**
	0.0nm,0.3s,baz=324,slow=7.0,SNR=4.3						
ULM	**Lac du Bonnet**	**22.40**	**81**	P	**P**	**09 37 01.2**	**+2.0**
	2.2nm,0.8s,baz=301,slow=10,SNR=3.8						
TXAR	**Lajitas Array**	**31.13**	**127**	P	**P**	**09 38 21.6**	**+1.9**
	0.5nm,0.9s,baz=322,slow=7.1,SNR=3.9						
SEY	**Seymchan**	**39.39**	**316**	P	**P**	**09 39 31.0**	**+0.7**
	0.4nm,0.4s,baz=65,slow=9.3,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**57.17**	**259**	T	T	10 43 41.0	
	baz=39,slow=76,SNR=1386						
H11N3	**WAKE ISLAND Hy**	**57.17**	**259**	T	T	10 43 40.5	
	baz=39,slow=76,SNR=920						
H11N1	**WAKE ISLAND Hy**	**57.19**	**259**	T	T	10 43 42.3	
	baz=39,slow=76,SNR=1004						
H11S1	**WAKE ISLAND Hy**	**58.23**	**259**	T	T	10 45 00.5	
	baz=39,slow=76,SNR=28						
H11S2	**WAKE ISLAND Hy**	**58.24**	**259**	T	T	10 44 60.0	
	baz=39,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**58.25**	**259**	T	T	10 45 01.1	
	baz=39,slow=76,SNR=28						

JMA 26 09:33:51.6±0.1**, 35°.88N×140°.48E, h38^{km}**±1^{km}**, M2.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.09**	**23**	P	Pn	09 33 58.4	+0.4
JIHU				S	Sn	09 34 03.4	+1.0
JSMT	**Sammumatsuo**	**0.24**	**186**	P	Pn	09 33 59.3	-0.7
JSMT				S	Sn	09 34 05.2	-2.4
CHOJ	**Chosi**	**0.35**	**120**	P	Pn	09 34 00.1	-0.1
CHOJ				S	Sn	09 34 05.9	-0.9
JYT	**Yasato**	**0.42**	**326**	P	Pn	09 34 01.2	+0.3
JYT				S	Sn	09 34 07.7	-0.1
JHO	**Hitachi**	**0.73**	**6**	P	Pn	09 34 05.3	-0.1
JHO				S	Sn	09 34 14.9	-0.5
MAT	**Matsushiro**	**1.95**	**290**	P	Pn	09 34 24.6	+2.4
MAT				*e*S	Sn	09 34 45.2	-0.3

IDC 26 09:34:23.5±1.7**, 9°.47S×155°.63E, h0^{km}, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/45**, mbtmp3.8**/5**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=70.8km s-min=25.7km az=124.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.27**	**142**	LR	LR	09 43 34.7	
	comp=Z,99nm,18.2s,baz=261,slow=34						
WRA	**Warramunga Arr**	**23.05**	**241**	P	P	09 39 28.9	-1.8
	1.8nm,0.8s,baz=65,slow=9.4,SNR=6.6						
ASAR	**Alice Springs**	**25.11**	**233**	P	P	09 39 49.5	-0.8
	2.9nm,1.0s,baz=62,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**25.82**	**208**	P	P	09 39 57.7	+1.1
	3.3nm,0.9s,baz=34,slow=8.9,SNR=5.0						
ILAR	**Eielson Array**	**85.44**	**21**	P	P	09 47 02.2	-0.5
	0.7nm,1.1s,baz=238,slow=5.0,SNR=2.7						
MKAR	**Makanchi Array**	**85.67**	**319**	P	P	09 47 06.2	+1.9
	0.6nm,0.9s,baz=116,slow=3.4,SNR=4.2						

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*PGC **26** 09:45:24.0±1.9, 52°.54N×131°.91W, h14^{km}, ML3.7/13, 79km south of Sandspit, Bc Haida Gwaii Region*

*IDC **26** 09:45:24.1±1.8, 52°.57N×131°.82W, h0^{km}, mb3.4/2, mb1 3.6/6, mb1mx3.4/46, mbtmp3.3/6, ML3.3/4, MS3.2/9, Ms1 3.2/9, ms1mx3.0/30, Error ellipse: s-maj=25.0km s-min=7.2km az=39.0*

ISC 26 09:45:24.0±1.5**, 52°.62N**±0°.04×**131°.73W**±0°.04**, h1^{km}**±10^{km}**, n46, σ1^{s}.84**/54**, MS3.3**/4**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG1B	**Mitchell Dam**	**0.40**	**322**	P	**Pg**	**09 45 31.8**	**+0.2**
HG1B				S	**Sg**	**09 45 37.4**	**+0.6**
MOBC	**Moresby Island**	**0.55**	**345**	P	**Pg**	**09 45 35.5**	**+1.0**
MOBC				S	**Sb**	**09 45 43.6**	**-1.1**
DIB	**Dawson Inlet,**	**0.74**	**323**	P	**Pg**	**09 45 37.7**	**-0.5**
DIB				S	**Sg**	**09 45 47.6**	**-0.1**
H02S1	**DAWSON INLET T**	**0.74**	**323**	Pg	**Pg**	**09 45 38.0**	**-0.2**
H02S1				Lg	Lg	09 45 47.1	
BNAB	**Bonilla**	**1.10**	**37**	P	**Pb**	**09 45 46.0**	**+0.3**
BNAB				S	**Sn**	**09 46 01.4**	**-0.7**
MASB	**Masset**	**1.41**	**353**	Pn	**Pb**	**09 45 50.9**	**-0.1**
MASB				Sn	**Sn**	**09 46 08.8**	**-1.1**
NDB	**Naden**	**1.52**	**332**	Pn	**Pn**	**09 45 50.8**	**-1.6**
NDB				Sn	**Sn**	**09 46 10.5**	**-2.3**
GRNB	**Grenville Isla**	**1.63**	**40**	Pn	**Pn**	**09 45 53.5**	**-0.2**
GRNB				Pg	**Pb**	**09 45 55.4**	**+0.6**
GRNB				Sg	**Sg**	**09 46 17.8**	**+1.6**
LIB	**Langara Island**	**1.82**	**335**	Pn	**Pn**	**09 45 55.0**	**-1.4**
RUBB	**Prince Rupert**	**1.92**	**27**	Pn	**Pn**	**09 45 57.5**	**-0.3**
RUBB				Sg	**Sg**	**09 46 26.0**	**+0.2**
BBB	**Bella Bella**	**2.26**	**100**	Pn	**Pn**	**09 46 01.1**	**-1.2**
	5.0nm,0.3s,baz=284,slow=10,SNR=18						
BBB				LR	LR	09 46 35.3	
	comp=Z,65nm,21.9s,baz=310,slow=31						
BBB				Lg	Lg	09 46 35.7	
	63nm,0.3s,baz=189,slow=21,SNR=20						
BBB	**Bella Bella**	**2.26**	**100**	Pn	**Pn**	**09 46 01.5**	**-0.8**
BBB				Sn	**Sn**	**09 46 29.9**	**-0.9**
BBB				Sg	**Sg**	**09 46 36.3**	**-0.2**
KITB	**Kitimat**	**2.36**	**51**	Pn	**Pn**	**09 46 03.8**	**0.0**
KITB				Sg	**Sg**	**09 46 40.1**	**+0.3**
HOLB	**Holberg**	**2.99**	**130**	Pn	**Pn**	**09 46 11.4**	**-1.1**
HOLB				Sn	**Sn**	**09 46 46.0**	**-3.0**
PHC	**Port Hardy**	**3.29**	**124**	Pn	**Pn**	**09 46 14.8**	**-1.8**
PHC				Sn	**Sn**	**09 46 54.0**	**-2.2**
MAYB	**Maynard**	**3.61**	**126**	Pn	**Pn**	**09 46 19.7**	**-1.4**
TLCB	**Telegraph Cove**	**3.69**	**122**	Pn	**Pn**	**09 46 21.4**	**-0.7**
TLCB				Sn	**Sn**	**09 47 04.0**	**-2.2**
WOSB	**Woss**	**4.06**	**125**	Pn	**Pn**	**09 46 26.3**	**-1.0**
NCRB	**Newcastle Ridg**	**4.18**	**120**	Pn	**Pn**	**09 46 27.9**	**-1.0**
CBB	**Campbell River**	**4.76**	**120**	Pn	**Pn**	**09 46 36.6**	**-0.2**
CBB				Sn	**Sn**	**09 47 29.8**	**-2.7**
FSB	**Fort Saint Jam**	**4.79**	**64**	Pn	**Pn**	**09 46 38.7**	**+1.5**
TXB	**Texada**	**5.44**	**120**	Pn	**Pn**	**09 46 45.9**	**-0.3**
MGB	**Mount Grey**	**5.75**	**126**	Pn	**Pn**	**09 46 50.8**	**+0.4**
SHB	**Sechelt**	**5.80**	**118**	Pn	**Pn**	**09 46 53.5**	**+2.3**
DLBC	**Dease Lake**	**5.91**	**9**	Pn	**Pn**	**09 46 56.3**	**+3.7**
	0.3nm,0.3s,baz=210,slow=15,SNR=9.7						
DLBC				LR	LR	09 49 14.8	
	comp=Z,264nm,18.6s,baz=131,slow=39						
DLBC	**Dease Lake**	**5.91**	**9**	Pn	**Pn**	**09 46 55.1**	**+2.4**
DLBC				Sg	**Sg**	**09 48 28.7**	**-5.0**
BMBC	**Bull Mountain**	**6.58**	**55**	Pn	**Pn**	**09 46 59.3**	**-2.5**
BMBC				Sg	**Sg**	**09 48 51.1**	**-4.0**
NBC5	**NorthernBC 5**	**7.15**	**43**	Pn	**Pn**	**09 47 11.4**	**+1.8**
NBC5				Sg	**Sg**	**09 49 09.8**	**-3.6**
MNB	**Mounoet Dainar**	**8.18**	**88**	Pn	**Pn**	**09 47 26.3**	**+2.4**
WHY	**Whitehorse**	**8.24**	**349**	Pn	**Pn**	**09 47 26.3**	**+1.6**
SLEB	**Sale Mountain**	**8.54**	**94**	Pn	**Pn**	**09 47 31.4**	**+2.6**
NEW	**Newport**	**10.28**	**109**	LR	LR	09 51 27.8	
	comp=Z,118nm,18.0s,baz=267,slow=35						
YBH	**Yreka Blue Hor**	**12.49**	**147**	LR	LR	09 52 35.4	
	comp=Z,73nm,19.8s,baz=349,slow=35						
YKA	**Yellowknife Ar**	**13.45**	**36**	Pn	**Pn**	**09 48 35.5**	**-0.2**
	0.1nm,0.3s,baz=227,slow=15,SNR=18						
INK	**Inuvik**	**15.76**	**358**	LR	LR	09 55 07.7	
	comp=Z,54nm,18.2s,baz=166,slow=37						
PDAR	**Pinedale Array**	**17.82**	**115**	P	**P**	**09 49 35.6**	**+1.6**
	0.1nm,0.3s,baz=314,slow=11,SNR=2.4						
ULM	**Lac du Bonnet**	**22.34**	**82**	P	**P**	**09 50 24.3**	**+1.4**
	3.1nm,1.1s,baz=282,slow=8.8,SNR=2.9						
ULM				LR	LR	09 58 42.3	
	comp=Z,83nm,18.5s,baz=244,slow=36						
RES	**Resolute Bay**	**26.64**	**21**	LR	LR	10 00 47.8	
	comp=Z,90nm,18.4s,baz=225,slow=35						
TXAR	**Lajitas Array**	**31.12**	**127**	P	**P**	**09 51 45.9**	**+1.9**
	0.2nm,0.6s,baz=317,slow=7.4,SNR=3.8						
TXAR				LR	LR	10 05 18.5	
	comp=Z,58nm,19.2s,baz=0.0,slow=38						
H11N2	**WAKE ISLAND Hy**	**57.24**	**260**	T	T	10 57 05.5	
	baz=39,slow=76,SNR=860						
H11N3	**WAKE ISLAND Hy**	**57.24**	**259**	T	T	10 57 05.7	
	baz=39,slow=76,SNR=866						
H11N1	**WAKE ISLAND Hy**	**57.25**	**259**	T	T	10 57 06.8	
	baz=39,slow=76,SNR=507						
H11S1	**WAKE ISLAND Hy**	**58.30**	**259**	T	T	10 58 25.0	
	baz=39,slow=76,SNR=39						
H11S2	**WAKE ISLAND Hy**	**58.31**	**259**	T	T	10 58 26.0	
	baz=39,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**58.31**	**259**	T	T	10 58 26.5	
	baz=39,slow=76,SNR=63						
FINES	**FINESS Array B**	**64.92**	**12**	LR	LR	10 25 27.4	
	comp=Z,30nm,18.6s,baz=52,slow=37						

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*SOME **26** 09:47:45.0, 43°.52N×69°.65E*

*NNC **26** 09:47:47.0±1.1, 43°.34N×69°.62E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=7.3km s-min=5.3km az=177.0, Suspected Mining explosion.*

*KRNET **26** 09:47:52.7±0.1, 42°.91N×69°.53E, mb2.6*

ISC 26 09:47:47.7±2.1**, 43°.38N**±0°.07×**69°.73E**±0°.08**, h0^{km}, n29, σ1^{s}.14**/48**, 24C-16D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK08	**Karatay Array**	**0.62**	**116**	⇓P	**Pg**	**09 47 59.6**	**+0.1**
KK08				⇑S	**Sb**	**09 48 09.9**	**-0.7**
KK09	**Karatay Array**	**0.62**	**114**	⇓P	**Pg**	**09 47 59.6**	**+0.1**
KK09				⇑S	**Sb**	**09 48 10.1**	**-0.5**
KK03	**Karatay Array**	**0.63**	**116**	⇓P	**Pg**	**09 47 59.7**	**+0.1**
KK03				⇑S	**Sb**	**09 48 10.3**	**-0.6**
KK04	**Karatay Array**	**0.63**	**115**	⇓P	**Pg**	**09 47 59.7**	**+0.1**
KK04				⇓S	**Sb**	**09 48 10.3**	**-0.6**
KK01	**Karatay Array**	**0.63**	**115**	⇑P	**Pg**	**09 47 59.8**	**+0.1**
KK01				⇑S	**Sb**	**09 48 10.4**	**-0.5**
KK02	**Karatay Array**	**0.63**	**115**	⇓P	**Pg**	**09 47 59.9**	**+0.1**
KK02				⇑S	**Sb**	**09 48 10.5**	**-0.6**
KK07	**Karatay Array**	**0.63**	**117**	⇑P	**Pg**	**09 47 59.7**	**-0.1**
KK07				⇑S	**Sb**	**09 48 10.1**	**-1.0**
KK31	**Karatay Array**	**0.63**	**115**	P	**Pg**	**09 47 59.9**	**+0.1**
	3.4nm,0.3s,baz=290,slow=16,SNR=106						
KK31				⇓S	**Sb**	**09 48 10.6**	**-0.4**
	7.2nm,0.4s,baz=291,slow=30,SNR=59						
KK05	**Karatay Array**	**0.64**	**114**	⇑P	**Pg**	**09 48 00.0**	**+0.2**
KK05				⇓S	**Sb**	**09 48 10.3**	**-0.8**
KK06	**Karatay Array**	**0.65**	**116**	⇑P	**Pg**	**09 47 59.9**	**-0.1**
KK06				⇑S	**Sb**	**09 48 10.2**	**-1.2**
IUG	**Iuzhnay**	**1.25**	**170**	P	**Pn**	**09 48 12.5**	**0.0**
	1.4nm,0.1s						
IUG				S	**Sg**	**09 48 26.8**	**-1.0**
	21nm,0.4s						
TRKS	**Terek-Say**	**2.12**	**150**	⇑*i*P	**Pg**	**09 48 28.1**	**-0.2**
	baz=39						
TRKS				⇑*i*S	**Sb**	**09 48 53.6**	**-0.4**
	baz=39						
MNAS	**Manas**	**2.22**	**113**	⇑*i*P	**Pg**	**09 48 33.0**	**+2.7**
	baz=0.0						
MNAS				⇑*i*S	**Sg**	**09 49 02.7**	**+3.6**
	baz=0.0						
MRKS	**Merke**	**2.64**	**103**	Pg	**Pg**	**09 48 39.2**	**+0.9**
	4.6nm,0.4s						
MRKS				Lg	Lg	09 49 12.4	
	5.9nm,0.4s						
EKS2	**Erkin-Say**	**3.05**	**102**	⇑*i*P	**Pg**	**09 48 45.5**	**-0.7**
	baz=93						
EKS2				⇑*i*S	**Sg**	**09 49 24.7**	**-1.1**
	baz=93						
AML	**Almayashu**	**3.17**	**112**	⇑*e*P	**Pb**	**09 48 46.3**	**+1.1**
	baz=3.0						
AML				⇑*i*S	**Sb**	**09 49 25.6**	**+1.0**
	baz=3.0						
USP	**Ospenovka**	**3.48**	**90**	⇓*i*P	**Pb**	**09 48 52.5**	**+2.3**
	baz=83						
USP				⇓*i*S	**Sg**	**09 49 37.1**	**-2.4**
	baz=83						
BTLS	**Baital**	**3.52**	**60**	Pg	**Pg**	**09 48 55.9**	**+0.8**
	1.0nm,0.3s						
BTLS				Lg	Lg	09 49 40.9	
	3.2nm,0.5s						
SGDS	**Sogindy**	**3.57**	**87**	Pg	**Pg**	**09 48 55.5**	**-0.6**
	2.3nm,0.3s						
SGDS				Lg	Lg	09 49 40.7	
	3.8nm,0.6s						
AAK	**Ala-Archa**	**3.57**	**100**	⇓*i*P	**Pb**	**09 48 52.5**	**+0.7**
	baz=92						
AAK				⇓*i*S	**Sb**	**09 49 37.1**	**+1.3**
	baz=92						
AAK	**Ala-Archa**	**3.57**	**100**	⇓Pg	**Pb**	**09 48 53.2**	**+1.3**
	1.4nm,0.5s						
AAK				⇓Lg	Lg	09 49 40.6	
	10nm,1.4s						
UCH	**Uchtor**	**3.70**	**106**	⇑*e*P	**Pb**	**09 48 54.1**	**-0.1**
	baz=99						
UCH				⇑*i*S	**Sb**	**09 49 39.0**	**-0.8**
	baz=99						
ARLS	**Aral**	**3.71**	**113**	⇓*i*P	**Pb**	**09 48 53.7**	**-0.5**
	baz=5.0						
ARLS				⇓*i*S	**Sb**	**09 49 38.2**	**-1.6**
	baz=5.0						
KBK	**Karagaybulak**	**3.90**	**99**	⇑*i*P	**Pb**	**09 48 57.2**	**-0.1**
	baz=92						
KBK				⇑*i*S	**Sb**	**09 49 44.8**	**-0.3**
	baz=92						
TKM2	**Tokmak 2**	**4.32**	**94**	⇑Lg	Lg	09 50 05.7	
	6.1nm,0.7s						
DGS	**Degeres**	**4.41**	**90**	Pg	**Pg**	**09 49 11.3**	**-0.9**
	1.5nm,0.5s						
DGS				Lg	Lg	09 50 07.6	
	5.9nm,0.7s						
KST	**Kastek**	**4.57**	**92**	Pg	**Pg**	**09 49 13.9**	**-1.3**
	3.1nm,0.3s						
KST				Lg	Lg	09 50 11.7	
	12nm,0.7s						
KUU	**Kurty**	**4.83**	**82**	Pg	**Pg**	**09 49 18.0**	**-2.1**
	0.9nm,0.3s						
KUU				Lg	Lg	09 50 18.9	
	4.2nm,0.6s						
TNSS	**Tian-Shan**	**5.29**	**91**	Pg	**Pg**	**09 49 28.6**	**-0.3**
	1.7nm,0.2s						
TNSS				Lg	Lg	09 50 37.0	
	3.5nm,0.8s						

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*IDC **26** 10:16:24.7±0.9, 56°.47S×150°.51W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx4.0/25, mbtmp4.0/4, MS3.6/6, Ms1 3.6/6, ms1mx3.3/21, Error ellipse: s-maj=45.9km s-min=24.0km az=16.0*

ISC 26 10:16:26.2±1.0**, 56°.5S**±0°.3×**150°.5W**±0°.2**, h10^{km}, n32, σ1^{s}.06**/9**, mb4.0**/5**, MS3.5**/9**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**26.71**	**201**	LR	LR	10 29 08.5	
	comp=Z,103nm,18.5s,baz=52,slow=29						
RPZ	**Rata Peaks**	**27.37**	**281**	LR	LR	10 30 54.8	
	comp=Z,83nm,18.5s,baz=344,slow=32						
URZ	**Urewera**	**28.13**	**297**	LR	LR	10 30 51.8	
	comp=Z,66nm,18.9s,baz=32,slow=31						
TBI	**Tubuai**	**33.09**	**2**	*e*LR	LR	10 31 47.2	
	comp=Z,73nm,29.5s						
TBI	**Tubuai**	**33.09**	**2**	*e*T	T	10 58 11.3	
	12nm,0.3s						
QSPA	**South Pole Qui**	**33.68**	**180**	P	**P**	**10 23 07.0**	**0.0**
	1.1nm,0.8s,baz=129,slow=4.7,SNR=4.5						
PPT2	**Papeete2**	**38.82**	**1**	*e*LR	LR	10 34 39.7	
	comp=Z,82nm,25.0s						
PPT	**Papeete**	**38.84**	**1**	LR	LR	10 36 39.7	
	comp=Z,74nm,19.8s,baz=22,slow=31						
VAH	**Vaihoa**	**41.21**	**4**	*e*T	T	11 08 19.7	
	20nm,0.3s						
DZM	**Mont Dzumac**	**46.61**	**299**	*e*LR	LR	10 38 11.5	
	comp=Z,55nm,21.6s						
PLCA	**Paso Flores**	**52.10**	**109**	P	**P**	**10 25 36.9**	**+0.6**
	1.5nm,0.8s,baz=184,slow=7.7,SNR=4.3						
H03S2	**Juan Fernandez**	**52.62**	**96**	T	T	11 22 36.6	
	baz=219,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**52.63**	**96**	T	T	11 22 40.0	
	baz=219,slow=74,SNR=16						
H03S3	**Juan Fernandez**	**52.64**	**96**	T	T	11 22 38.3	
	baz=219,slow=74,SNR=12						
H03N3	**Juan Fernandez**	**52.91**	**96**	T	T	11 22 59.2	
	baz=222,slow=72,SNR=26						
H03N2	**Juan Fernandez**	**52.91**	**96**	T	T	11 22 57.0	
	baz=222,slow=72,SNR=48						
H03N1	**Juan Fernandez**	**52.92**	**96**	T	T	11 22 55.6	
	baz=222,slow=72,SNR=21						
ASAR	**Alice Springs**	**62.70**	**268**	P	**P**	**10 26 50.1**	**-1.1**
	0.8nm,0.7s,baz=141,slow=6.6,SNR=14						
H01W1	**Cape Leeuwin H**	**64.46**	**245**	T	T	11 37 01.2	
	baz=142,slow=76,SNR=4.2						
H01W2	**Cape Leeuwin H**	**64.46**	**245**	T	T	11 36 59.7	
	baz=142,slow=76,SNR=3.2						
H01W3	**Cape Leeuwin H**	**64.47**	**245**	T	T	11 37 01.4	
	baz=142,slow=76,SNR=5.3						
WRA	**Warramunga Arr**	**65.43**	**271**	P	**P**	**10 27 11.1**	**+2.0**
	1.2nm,1.1s,baz=149,slow=5.4,SNR=4.1						
CPUP	**Villa Florida**	**70.16**	**108**	P	**P**	**10 27 38.3**	**-0.5**
	0.7nm,0.4s,baz=241,slow=7.3,SNR=3.9						
NNA	**Nana**	**71.07**	**83**	LR	LR	10 51 13.3	
	comp=Z,60nm,21.0s,baz=210,slow=29						
CMIG	**Matias Romero**	**86.75**	**52**	LR	LR	10 59 48.9	
	comp=Z,41nm,18.5s,baz=202,slow=30						
H10N3	**ASCENSION HYDR**	**106.43**	**134**	T	T	12 30 09.8	
	baz=203,slow=74,SNR=22						
H10N1	**ASCENSION HYDR**	**106.43**	**134**	T	T	12 30 13.7	
	baz=203						
H10N2	**ASCENSION HYDR**	**106.44**	**134**	T	T	12 30 10.3	
	baz=203,SNR=6.5						
ILAR	**Eielson Array**	**120.94**	**2**	PKP	**PKiKP**	**10 35 17.2**	**-0.1**
	0.6nm,0.8s,baz=246,slow=1.3,SNR=6.9						
MKAR	**Makanchi Array**	**146.62**	**276**	PKPbc	**PKPbc**	**10 36 06.6**	**-0.4**
	2.3nm,0.8s,baz=119,slow=4.3,SNR=26						
ZALV	**Zalesovo Beam**	**149.05**	**289**	PKPbc	**PKPbc**	**10 36 12.5**	**-0.8**
	0.7nm,0.6s,baz=114,slow=3.7,SNR=4.9						
KURBB	**Kurchatov Arra**	**150.82**	**279**	PKPbc	**PKPbc**	**10 36 17.2**	**-0.4**
	1.4nm,0.8s,baz=120,slow=2.1,SNR=14						

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*NEIC **26** 10:25:51.5±0.8, 18°.9N±0°.2×68°.06W±0°.09, h53^{km}±50^{km}, Error ellipse: s-maj=24.6km s-min=10.9km az=196.0*

*RSPR **26** 10:25:52.1, 18°.98N×68°.07W, h25^{km}±14^{km}, MD3.1/9*

ISC 26 10:25:48.6±1.6**, 19°.14N**±0°.09×**67°.89W**±0°.06**, h20^{km}, n43, σ1^{s}.03**/48**, 3C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.99**	**132**	⇑*e*P	**Pn**	**10 26 08.1**	**+0.7**
AGPR	**Aguadilla, PR**	**0.99**	**132**	*e*S	**Sn**	**10 26 21.7**	**+0.8**
AGPR	**Aguadilla, PR**	**0.99**	**132**		**Pn**	**10 26 08.1**	**+0.7**
AGPR					**Sn**	**10 26 21.7**	**+0.8**
AGPR	**Aguadilla, PR**	**0.99**	**132**	IAML		10 26 21.8	
	comp=N,136nm,0.3s						
AGPR				IAML		10 26 24.1	
	comp=E,191nm,0.3s						
MPR	**Mayaguez**	**1.16**	**142**		**Sn**	**10 26 25.7**	**+0.7**
LSP	**Las Mesas**	**1.22**	**141**	⇓*e*P	**Pb**	**10 26 11.3**	**+0.2**
LSP	**Las Mesas**	**1.22**	**141**		**Pb**	**10 26 11.3**	**+0.2**
AOPR	**Arecibo Observ**	**1.33**	**126**	⇓*e*P	**Pb**	**10 26 13.7**	**+0.7**
AOPR	**Arecibo Observ**	**1.33**	**126**	*e*S	**Sb**	**10 26 30.9**	**+1.3**
AOPR	**Arecibo Observ**	**1.33**	**126**		**Pb**	**10 26 13.7**	**+0.7**
AOPR					**Sb**	**10 26 30.9**	**+1.3**
AOPR	**Arecibo Observ**	**1.33**	**126**	IAML		10 26 37.6	
	comp=N,152nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.35**	**146**	⇑*e*P	**Pb**	**10 26 12.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.35**	**146**	*e*S	**Sn**	**10 26 28.9**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.35**	**146**		**Pb**	**10 26 12.9**	**-0.3**
CRPR					**Sn**	**10 26 28.9**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.35**	**146**	IAML		10 26 33.1	
	comp=N,140nm,0.6s						
CRPR				IAML		10 26 36.2	
	comp=E,97nm,0.5s						
MLPR	**Magueyes Islan**	**1.41**	**145**	⇓*e*P	**Pb**	**10 26 14.0**	**-0.3**
MLPR	**Magueyes Islan**	**1.41**	**145**	*e*S	**Sb**	**10 26 31.1**	**-0.8**
MLPR	**Magueyes Islan**	**1.41**	**145**		**Pb**	**10 26 14.0**	**-0.3**
MLPR					**Sb**	**10 26 31.1**	**-0.8**
MLPR	**Magueyes Islan**	**1.41**	**145**	IAML		10 26 34.1	
	comp=E,132nm,0.3s						
EMPR	**Esperanza - Ma**	**1.45**	**117**	⇓*e*P	**Pb**	**10 26 16.1**	**+1.3**
EMPR	**Esperanza - Ma**	**1.45**	**117**	*e*S	**Sb**	**10 26 34.3**	**+1.4**
EMPR	**Esperanza - Ma**	**1.45**	**117**		**Pb**	**10 26 16.1**	**+1.3**
EMPR					**Sb**	**10 26 34.3**	**+1.4**
CELP	**Cerrillos**	**1.63**	**130**	⇓*e*P	**Pb**	**10 26 17.6**	**-0.4**
CELP	**Cerrillos**	**1.63**	**130**	*e*S	**Sb**	**10 26 37.9**	**-0.3**
CELP	**Cerrillos**	**1.63**	**130**		**Pb**	**10 26 17.6**	**-0.4**
CELP					**Sb**	**10 26 37.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.63**	**132**	⇓*e*P	**Pb**	**10 26 17.5**	**-0.5**
OBIP	**Obispado Ponce**	**1.63**	**132**	*e*S	**Sb**	**10 26 37.6**	**-0.6**
OBIP	**Obispado Ponce**	**1.63**	**132**		**Pb**	**10 26 17.5**	**-0.5**
OBIP					**Sb**	**10 26 37.6**	**-0.6**
OBIP	**Obispado Ponce**	**1.63**	**132**	IAML		10 26 41.1	
	comp=N,71nm,0.4s						
OBIP				IAML		10 26 41.5	
	comp=E,72nm,0.4s						
ICMP	**Isla Caja de M**	**1.79**	**134**	Pn	**Pb**	**10 26 21.0**	**+0.2**
ICMP				IAML		10 26 49.5	
	comp=N,63nm,0.9s						
ICMP				IAML		10 26 50.1	
	comp=E,65nm,0.6s						
GCPR	**Guaynabo City**	**1.90**	**115**		**Sb**	**10 26 48.1**	**+2.2**
SJG	**San Juan**	**1.94**	**121**		**Sb**	**10 26 46.2**	**-0.9**
PDPR	**Patillas Dam,**	**2.09**	**122**	Pn	**Pb**	**10 26 25.8**	**-0.1**
CBYP	**Canovanas**	**2.11**	**114**	⇑*e*P	**Pb**	**10 26 25.5**	**-0.8**
CBYP	**Canovanas**	**2.11**	**114**	*e*S	**Sb**	**10 26 51.2**	**-0.9**
CBYP	**Canovanas**	**2.11**	**114**		**Pb**	**10 26 25.5**	**-0.8**
CBYP					**Sb**	**10 26 51.2**	**-0.9**
HUMP	**Col San Antoni**	**2.17**	**117**	⇓*e*P	**Pb**	**10 26 26.4**	**-0.9**
HUMP	**Col San Antoni**	**2.17**	**117**	*e*S	**Sb**	**10 26 52.5**	**-1.3**
HUMP	**Col San Antoni**	**2.17**	**117**		**Pb**	**10 26 26.4**	**-0.9**
HUMP					**Sb**	**10 26 52.5**	**-1.3**
MTP	**Monte Pirata**	**2.45**	**115**	⇓*e*P	**Pb**	**10 26 29.8**	**-2.2**
MTP	**Monte Pirata**	**2.45**	**115**	*e*S	**Sb**	**10 26 59.8**	**-1.9**
MTP	**Monte Pirata**	**2.45**	**115**		**Pb**	**10 26 29.8**	**-2.2**
MTP					**Sb**	**10 26 59.8**	**-1.9**
SDDR	**Presa de Saban**	**3.22**	**268**	Pn	**Pn**	**10 26 38.4**	**+0.4**
SDDR				IAML		10 27 36.4	
	comp=E,25nm,0.8s						
SDDR				IAML		10 27 37.1	
	comp=E,27nm,0.7s						

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*IDC **26** 10:48:00.4±1.0, 5°.21N×73°.81W, h159^{km}±6^{km}, mb3.0/2, mb1 3.3/3, mb1mx2.9/39, mbtmp3.5/3, Error ellipse: s-maj=39.3km s-min=21.2km az=104.0*

*RSNC **26** 10:48:01.2±0.9, 5°.27N×73°.73W, h148^{km}±4^{km}, ML3.3, Mw3.6*

ISC 26 10:47:59.6±0.9**, 5°.29N**±0°.03×**73°.74W**±0°.04**, h161^{km}**±6^{km}**, n31, σ1^{s}.33**/57**, 7C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.49**	**317**	⇑*i*P	**Pn**	**10 48 22.4**	**0.0**
SPBC				*e*S	**Sn**	**10 48 38.6**	**-1.2**
SPBC				*i*		10 48 41.8	
	comp=Z,705nm,0.2s						
CHIC	**Chingaza**	**0.66**	**180**	⇑*e*P	**Pn**	**10 48 23.6**	**0.0**
CHIC				*e*S	**Sn**	**10 48 40.1**	**-2.0**
CHIC				*i*		10 48 42.1	
	comp=Z,300nm,0.4s						
ROSC	**El Rosal**	**0.73**	**232**	P	**Pn**	**10 48 25.2**	**+1.1**
	comp=Z,162nm,0.3s,baz=118,slow=11,SNR=141						
ROSC				S	**Sn**	**10 48 42.6**	**-0.1**
	comp=Z,152nm,0.3s,baz=148,slow=19,SNR=10						
ROSC	**El Rosal**	**0.73**	**232**	⇑*i*P	**Pn**	**10 48 25.2**	**+1.1**
ROSC				*e*S	**Sn**	**10 48 42.8**	**+0.1**
ROSC				*i*		10 48 46.9	
	comp=Z,500nm,0.5s						
RUSC	**La Rusia**	**0.88**	**47**	⇑*e*P	**Pn**	**10 48 25.7**	**+0.5**
RUSC				*e*S	**Sn**	**10 48 44.2**	**-0.5**
RUSC				*i*		10 48 45.6	
	comp=Z,291nm,0.3s						
NORC	**Norcasia**	**1.16**	**283**	⇑*i*P	**Pn**	**10 48 26.9**	**0.0**
NORC				*e*S	**Sn**	**10 48 47.0**	**-0.8**
NORC				*i*		10 48 48.3	
	comp=Z,447nm,0.2s						
BARC	**Barichara**	**1.40**	**23**	*e*P	**Pn**	**10 48 29.5**	**0.0**
BARC				*e*S	**Sn**	**10 48 51.0**	**-1.3**
BARC				*i*		10 48 53.5	
	comp=Z,275nm,0.3s						

PTBC	PUERTO BERRIO,	1.43	330	⇑eP	Pn	10 48 29.1	-0.4
PTBC				eS	Sn	10 48 51.3	-1.1
PTBC				i		10 48 53.9	
	comp=Z,190nm,0.3s						
GUY2C	Guyana, Caldas	1.62	268	eP	Pn	10 48 32.0	+0.1
GUY2C				eS	Sn	10 48 55.8	-0.8
GUY2C				i		10 49 03.2	
	comp=Z,82nm,0.4s						
RREF	El Recreo	1.65	256	eP	Pn	10 48 32.6	+0.3
RREF				eS	Sn	10 48 57.2	-0.2
RREF				i		10 49 07.5	
	comp=Z,101nm,0.3s						
BRRC	Barranca, Sant	1.80	1	⇑eP	Pn	10 48 34.0	+0.7
BRRC				eS	Sn	10 48 59.3	-0.1
BRRC				i		10 49 07.7	
	comp=Z,194nm,0.4s						
ANIL	Santa Ana	1.84	244	eP	Pn	10 48 34.3	+0.3
ANIL				eS	Sn	10 49 00.0	-0.4
PTGC	Puerto Gaitan,	1.93	124	⇓iP	Pn	10 48 34.7	-0.1
PTGC				eS	Sn	10 48 59.9	-1.8
PTGC				i		10 49 03.4	
	comp=Z,163nm,0.3s						
HELC	Santa Helena	1.99	297	eP	Pn	10 48 36.3	+0.5
HELC				eS	Sn	10 49 03.1	-0.5
HELC				i		10 49 06.2	
	comp=Z,260nm,0.4s						
ORTC	Ortega, Tolima	2.04	228	eP	Pn	10 48 36.1	+0.1
ORTC				eS	Sn	10 49 02.8	-1.2
ORTC				i		10 49 07.3	
	comp=Z,108nm,0.4s						
TAMC	Tame, Arauca	2.24	60	eP	Pn	10 48 39.5	+1.1
TAMC				eS	Sn	10 49 07.9	-0.3
TAMC				i		10 49 10.1	
	comp=Z,165nm,0.3s						
PAMC	Pamplona, Colo	2.28	27	eP	Pn	10 48 40.1	+0.9
PAMC				eS	Sn	10 49 09.4	-0.4
PAMC				i		10 49 13.4	
	comp=Z,65nm,0.2s						
ZARC	Zaragoza, Cauc	2.45	333	eP	Pn	10 48 40.0	-0.8
ZARC				eS	Sn	10 49 11.3	-1.4
ZARC				i		10 49 15.6	
	comp=Z,206nm,0.6s						
PLMC	San Jos del P	2.56	261	eP	Pn	10 48 43.9	+1.7
PLMC				eS	Sn	10 49 17.5	+2.4
OCAC	Ocana	2.96	8	eP	Pn	10 48 48.1	+1.0
OCAC				eS	Sn	10 49 24.8	+0.9
OCAC				i		10 49 27.8	
	comp=Z,114nm,0.4s						
DBBC	Dabeiba	3.00	305	eP	Pn	10 48 48.2	+0.7
DBBC				eS	Sn	10 49 25.1	+0.5
UREC	San Jos de Ur	3.02	324	⇓eP	Pn	10 48 46.6	-1.2
UREC				eS	Sn	10 49 22.5	-2.7
UREC				i		10 49 24.6	
	comp=Z,233nm,0.2s						
MACC	Macarena, Meta	3.13	182	eP	Pn	10 48 48.2	-0.9
MACC				eS	Sn	10 49 24.6	-3.1
MACC				i		10 49 25.1	
	comp=Z,40nm,0.4s						
SMLC	San Martn de	3.50	355	eP	Pn	10 48 53.3	-0.5
SMLC				eS	Sn	10 49 34.7	-1.3
SMLC				i		10 49 37.0	
	comp=Z,96nm,0.1s						
MOTC	Monteria, Cord	3.96	331	eP	Pn	10 48 58.5	-1.2
MOTC				eS	Sn	10 49 44.8	-1.7
MOTC				i		10 49 47.1	
	comp=Z,53nm,0.3s						
ARGC	Ariguani, Magd	4.56	354	eS	Sn	10 49 59.9	-0.8
ARGC				i		10 50 04.3	
	comp=Z,20nm,0.2s						
SDV	Santo Domingo	4.71	41	P	Pn	10 49 11.3	+1.6
	comp=Z,2.1nm,0.3s,baz=241,slow=11,SNR=9.4						
SDV				S	Sn	10 50 01.7	-2.8
	comp=Z,4.2nm,0.3s,baz=275,slow=16,SNR=13						
CAPC	Capurgana	4.89	313	eS	Sn	10 50 03.7	-4.6
CAPC				i		10 50 08.8	
	comp=Z,19nm,0.4s						
PLCA	Paso Flores	45.89	177	P	P	10 56 06.1	0.0
	comp=Z,1.8nm,1.2s,baz=352,slow=7.1,SNR=3.4						
YKA	Yellowknife Ar	64.48	340	P	P	10 58 20.0	+1.3
	comp=Z,0.1nm,0.5s,baz=131,slow=6.7,SNR=6.5						
WRA	Warramunga Arr	149.05	239	PKPbc	PKPbc	11 07 30.0	+0.3
	comp=Z,0.3nm,0.4s,baz=106,slow=3.4,SNR=5.9						

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*NEIC **26** 10:49:45.1±0.7, 40°.23S±0°.09×173°.8E±0°.1, h187^{km}±5^{km}, Error ellipse: s-maj=14.1km s-min=9.1km az=145.0*

*NOU **26** 10:49:45.0, 40°.20S×173°.76E, h186^{km}, MLv4.0, Cook Strait, New Zealand*

*WEL **26** 10:49:48.3, 40°S±2°×17°4E±°, h151^{km}±3^{km}, M4.0/25, MLv4.0/25, Error ellipse: s-maj=0.0km s-min=0.0km az=50.6*

ISC 26 10:49:45.1±1.6, **40°.28S**±0°.04×**173°.79E**±0°.05, **h174**^{km}±10^{km}, **n189**, σ**1^{s}.31**/205, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.53	169	P	Pn	10 50 10.5	+1.2
DUWZ				S	Sn	10 50 26.8	-1.4
NMEZ	Namu Road	0.87	4	P	Pn	10 50 12.4	+1.1
NMEZ				S	Sn	10 50 30.1	-1.2
LREZ	Lake Rotokare	0.94	30	P	Pn	10 50 12.9	+1.1
LREZ				S	Sn	10 50 31.0	-1.3
PREZ	Palmer Road	0.98	17	P	Pn	10 50 13.2	+1.0
PREZ				S	Sn	10 50 31.9	-1.0
NNZ	Nelson	0.99	198	Pn	Pn	10 50 13.6	+1.5
NNZ	Nelson	0.99	198	P	Pn	10 50 13.5	+1.5
NNZ				S	Sn	10 50 31.7	-1.3
KHEZ	Kahui Hut	1.00	10	P	Pn	10 50 13.4	+1.1
TCW	Tory Channel	1.00	158	P	Pn	10 50 13.8	+1.7
TCW				S	Sn	10 50 31.8	-1.4
NBEZ	Newall Road No	1.01	3	P	Pn	10 50 13.6	+1.3
NBEZ				S	Sn	10 50 32.3	-1.0
KIW	Kapiti Island	1.03	125	P	Pn	10 50 13.7	+1.2
KIW				S	Sn	10 50 31.0	-2.6
NEZ	North Egmont	1.04	13	P	Pn	10 50 13.4	+0.8
NEZ				S	Sn	10 50 32.1	-1.7
WAZ	Wanganui	1.06	61	P	Pn	10 50 14.4	+1.8
WAZ				S	Sn	10 50 34.2	+0.3
PKE	Pukeiti	1.09	8	P	Pn	10 50 14.1	+1.1
PKE				S	Sn	10 50 33.2	-1.3
QRZ	Quartz Range	1.10	240		Pn	10 50 14.2	+1.2
QRZ	Quartz Range	1.10	240	P	Pn	10 50 14.1	+1.2
QRZ				S	Sn	10 50 32.8	-1.8
DREZ	Durham Road	1.14	16	P	Pn	10 50 14.3	+1.0
DREZ				S	Sn	10 50 34.4	-0.6
TUWZ	Tuamarina	1.15	174		Pn	10 50 14.9	+1.5
TUWZ	Tuamarina	1.15	174	P	Pn	10 50 14.9	+1.5
TUWZ				S	Sn	10 50 33.7	-1.7
OHWZ	Ohakea	1.17	87	P	Pn	10 50 15.2	+1.7
OHWZ				S	Sn	10 50 35.0	-0.5
OGWZ	Otaki Gorge	1.18	117	P	Pn	10 50 15.0	+1.4
OGWZ				S	Sn	10 50 33.6	-2.1
SNZO	South Karori	1.24	146	Pn	Pn	10 50 15.6	+1.5
WEL	Wellington	1.25	144	P	Pn	10 50 15.8	+1.7
MHEZ	Mangahewa	1.27	19	P	Pn	10 50 15.8	+1.4
CAW	Cannon Point	1.27	131	P	Pn	10 50 16.0	+1.6
VRZ	Vera Road	1.38	33	P	Pn	10 50 16.1	+0.8
BHW	Baring Head	1.39	144		Pn	10 50 16.9	+1.4
BHW	Baring Head	1.39	144	P	Pn	10 50 17.0	+1.5
MRZ	Mangatainoka R	1.42	106	P	Pn	10 50 17.0	+1.3
BSWZ	Blackbirch Sta	1.44	177		Pn	10 50 17.9	+2.0
BSWZ	Blackbirch Sta	1.44	177	P	Pn	10 50 17.9	+2.0
HOWZ	Holdsworth Sta	1.45	116	P	Pn	10 50 17.5	+1.4
CMWZ	Cape Campbell	1.50	168		Pn	10 50 18.9	+2.4
CMWZ	Cape Campbell	1.50	168	P	Pn	10 50 19.0	+2.5
POWZ	Post Office Ro	1.52	95	P	Pn	10 50 17.9	+1.2
PKVZ	Pokaka	1.56	51	P	Pn	10 50 18.2	+1.0
MTW	Mount Morrison	1.57	125	P	Pn	10 50 18.8	+1.6
MTVZ	Mangateitei	1.57	56	P	Pn	10 50 18.4	+1.0
MSWZ	Moikau Station	1.58	136		Pn	10 50 18.9	+1.5
MSWZ	Moikau Station	1.58	136	P	Pn	10 50 18.9	+1.5
THZ	Tophouse	1.62	204	Pn	Pn	10 50 19.5	+1.7
THZ	Tophouse	1.62	204	P	Pn	10 50 19.5	+1.7
PAWZ	Paruwai Farm	1.66	132	P	Pn	10 50 19.7	+1.5
TIWZ	Tintock	1.67	108	P	Pn	10 50 19.7	+1.5
TSZ	Takapari Road	1.68	83	P	Pn	10 50 19.5	+1.1
PRWZ	Pori Road	1.69	100	P	Pn	10 50 20.0	+1.6
WNVZ	Wahianoa	1.69	56	P	Pn	10 50 19.5	+0.9
DRZ	Dome Shelter	1.69	54	P	Pn	10 50 20.3	+1.5
PLWZ	Palliser	1.70	140	Pn	Pn	10 50 20.0	+1.5
PLWZ	Palliser	1.70	140	P	Pn	10 50 20.1	+1.5
FWVZ	Far West T-bar	1.70	54	P	Pn	10 50 19.6	+0.7
WHVZ	Whangaehu Hut	1.71	55	P	Pn	10 50 19.9	+1.0
MOVZ	Moawhango	1.75	61	P	Pn	10 50 19.7	+0.6
TWVZ	Taurewa	1.75	47	P	Pn	10 50 19.9	+0.7
TUVZ	Tukino	1.76	55	P	Pn	10 50 20.3	+1.0
NGZ	Ngauruhoe	1.78	52	P	Pn	10 50 20.3	+0.7
TMWZ	Te Maipa	1.80	118	P	Pn	10 50 21.2	+1.6
WTVZ	West Tongariro	1.81	51	P	Pn	10 50 20.5	+0.7
DVHZ	Dannevirke	1.82	91	P	Pn	10 50 20.9	+1.1
TRWZ	Traveller	1.82	128	P	Pn	10 50 21.4	+1.6
OTVZ	Oturere	1.83	53	P	Pn	10 50 21.0	+0.9
KRVZ	Karewarewa	1.85	51	P	Pn	10 50 21.1	+0.8
ETVZ	East Tongariro	1.87	53	P	Pn	10 50 21.7	+1.2
TMVZ	Te Maari	1.88	52	P	Pn	10 50 21.7	+1.1
PNHZ	Pukenui	1.88	80	P	Pn	10 50 21.6	+1.1
BFZ	Birch Farm	1.92	103		Pn	10 50 22.2	+1.4
BFZ	Birch Farm	1.92	103	P	Pn	10 50 22.2	+1.4
BHHZ	Black Hill Sta	1.92	66	P	Pn	10 50 21.6	+0.7
CPWZ	Castlepoint	1.94	110	P	Pn	10 50 23.1	+2.1
HIZ	Hauiti	1.95	25	Pn	Pn	10 50 21.9	+0.7
HIZ	Hauiti	1.95	25	P	Pn	10 50 21.9	+0.7
KATZ	Kakaramea	1.96	49	P	Pn	10 50 22.5	+0.9
WPHZ	Waipukurau	2.04	85	P	Pn	10 50 23.6	+1.5
ANWZ	Angora Road	2.06	96	P	Pn	10 50 23.9	+1.6
RITZ	Rihia Road	2.06	51	P	Pn	10 50 23.9	+1.4
KRHZ	Kereru	2.08	73	P	Pn	10 50 23.7	+1.0
RATZ	Rangitukua	2.08	48	P	Pn	10 50 24.1	+1.4
DSZ	Denniston Nort	2.10	225	P	Pn	10 50 24.4	+1.6
KHZ	Kahutara	2.14	185	Pn	Pn	10 50 25.5	+2.3
KHZ	Kahutara	2.14	185	P	Pn	10 50 25.3	+2.1
WATZ	Wairara	2.17	44	P	Pn	10 50 25.0	+1.3
PRHZ	Porangahau	2.18	91	P	Pn	10 50 25.2	+1.5
KWHZ	Kaweka Forest	2.20	68	P	Pn	10 50 25.0	+1.0
HATZ	Hinemaiaia	2.26	53	P	Pn	10 50 25.3	+0.7
WHTZ	Whakaora	2.33	47	P	Pn	10 50 27.2	+1.7
BKZ	Black Stump Fm	2.36	63	Pn	Pn	10 50 26.4	+0.5
BKZ	Black Stump Fm	2.36	63	P	Pn	10 50 26.4	+0.5
PXZ	Pawanui	2.37	85	P	Pn	10 50 27.3	+1.4
TLZ	Tolley Road	2.37	35	P	Pn	10 50 26.6	+0.6
KUTZ	Kaahu Road	2.38	42	P	Pn	10 50 27.4	+1.2
MCHZ	McNeill Hill	2.39	70	P	Pn	10 50 27.5	+1.4
KAHZ	Kahuranaki	2.42	79	P	Pn	10 50 27.8	+1.3
MRHZ	Matea Rd	2.49	55	P	Pn	10 50 27.7	+0.3
WPRZ	Whakapapatarin	2.54	47	P	Pn	10 50 28.7	+0.8
CKHZ	Cape Kidnapper	2.60	77	P	Pn	10 50 29.9	+1.3
NMHZ	Naumai	2.61	64	P	Pn	10 50 30.2	+1.3
ALRZ	Allen Road	2.62	50	P	Pn	10 50 29.4	+0.5
GRRZ	Galatos Road	2.64	44	P	Pn	10 50 30.2	+1.1
ARHZ	Aropaoanui	2.67	69	P	Pn	10 50 30.6	+1.1
PRRZ	Plateau Road	2.69	49	P	Pn	10 50 30.3	+0.6
HRRZ	Handcock Road	2.70	46	P	Pn	10 50 30.8	+0.9
HSRZ	Hossack Road	2.74	45	P	Pn	10 50 31.4	+1.1
GVZ	Greta Valley S	2.74	192	P	Pn	10 50 32.0	+1.7
LTZ	Lake Taylor	2.75	204	Pn	Pn	10 50 32.1	+1.7
LTZ	Lake Taylor	2.75	204	P	Pn	10 50 31.9	+1.5
MTHZ	Maungataniwha	2.76	60	P	Pn	10 50 31.0	+0.5
UTU	Utuhina	2.81	42	P	Pn	10 50 32.7	+1.5
HLRZ	Highlands Stat	2.84	45	P	Pn	10 50 33.5	+2.0
NGRZ	Ngongotaha	2.86	41	P	Pn	10 50 33.1	+1.2
RRRZ	Republican Roa	2.87	48	P	Pn	10 50 32.4	+0.5
TOZ	Tahuroa Road	2.87	28	P	Pn	10 50 32.4	+0.5
RAHZ	Arahi	2.89	63	P	Pn	10 50 33.0	+0.9
WHHZ	Waihua	2.92	67	P	Pn	10 50 33.4	+1.0
MUGZ	Murupara	2.93	53	P	Pn	10 50 32.7	+0.1
TARZ	Mount Tarawera	2.94	47	P	Pn	10 50 33.7	+0.9
KMRZ	Kaimai	2.95	35	P	Pn	10 50 35.2	+2.2
KARZ	Kaharoa	2.96	41	P	Pn	10 50 34.0	+1.1
OMRZ	Omania	2.96	44	P	Pn	10 50 33.9	+0.9
RTZ	Ruatahuna	2.98	57	P	Pn	10 50 33.4	+0.2
MKRZ	Makatiti	2.98	45	P	Pn	10 50 34.9	+1.6
INZ	Inchbonnie	3.01	215	P	Pn	10 50 34.9	+1.4
AMCZ	Amberley	3.02	196	P	Pn	10 50 35.2	+1.6
LIRZ	Lichensteins R	3.04	42	P	Pn	10 50 35.9	+2.0
SNGZ	Shannon Statio	3.13	63	P	Pn	10 50 35.8	+0.8
EDRZ	Edgecumbe	3.16	47	P	Pn	10 50 36.2	+0.8
MARZ	Manawahe	3.21	45	P	Pn	10 50 36.7	+0.7
OPRZ	Ohinepanea	3.25	42	P	Pn	10 50 37.9	+1.4
KNZ	Kokohu	3.25	69	P	Pn	10 50 36.9	+0.4
URZ	Urewera	3.27	53	Pn	Pn	10 50 36.2	-0.6
URZ	Urewera	3.27	53	P	Pn	10 50 36.5	-0.3
AWAZ	Awhitu Peninsu	3.28	12	P	Pn	10 50 38.7	+1.8
OXZ	Oxford	3.31	203		Pn	10 50 37.9	+0.7
OXZ	Oxford	3.31	203	P	Pn	10 50 38.1	+0.8
RAGZ	Rawiri	3.33	59	P	Pn	10 50 37.9	+0.3
MKAZ	Moumakai	3.35	19	P	Pn	10 50 39.1	+1.4
MHGZ	Mahia Peninsul	3.37	72	P	Pn	10 50 38.8	+0.8
WTAZ	Waiatarua	3.40	11	P	Pn	10 50 40.5	+2.1
ETAZ	East Tamaki Re	3.44	15	P	Pn	10 50 40.7	+1.8
PRGZ	Paritu Road	3.44	68	P	Pn	10 50 39.5	+0.6
RIGZ	Rimuhau	3.45	64	P	Pn	10 50 39.4	+0.3
OKCZ	Okains Bay	3.48	189	P	Pn	10 50 40.5	+1.1
MWZ	Matawai	3.49	57	P	Pn	10 50 39.5	-0.1
MQZ	McQueen's Vall	3.53	194	Pn	Pn	10 50 40.6	+0.7
MQZ	McQueen's Vall	3.53	194	P	Pn	10 50 40.4	+0.5
RVAZ	Riverhead Bore	3.56	10	P	Pn	10 50 42.3	+1.9
WVZ	Waitaha Valley	3.61	218	P	Pn	10 50 42.2	+1.3
MBAZ	Motutapu North	3.61	14	P	Pn	10 50 43.7	+2.6
WIAZ	Waiheke Island	3.64	17	P	Pn	10 50 43.4	+2.0
TKGZ	Te Karaka	3.64	61	P	Pn	10 50 41.7	+0.3
AKCZ	Akaroa Harbour	3.65	190	P	Pn	10 50 42.3	+0.8
RACZ	Rakaia	3.66	199	P	Pn	10 50 42.4	+0.9
RUGZ	Raukumara Rang	3.81	54	P	Pn	10 50 42.9	-0.7
KUZ	Kuaotunu	3.84	24	P	Pn	10 50 44.9	+0.9
CNGZ	Carnagh Statio	3.86	64	P	Pn	10 50 45.0	+0.7
TWGZ	Tauwhareparae	3.87	58	P	Pn	10 50 44.7	+0.3
WACZ	Wakanui South	3.94	201	P	Pn	10 50 46.1	+1.0
GCSZ	Gaunt Creek Bo	3.99	219	P	Pn	10 50 46.8	+1.0
RPZ	Rata Peaks	3.99	210		Pn	10 50 47.1	+1.3
RPZ	Rata Peaks	3.99	210	P	Pn	10 50 46.3	+0.5
HAZ	Te Kaha	4.00	52	P	Pn	10 50 45.3	-0.7
PKGZ	Pakihiroa	4.10	56	P	Pn	10 50 47.5	+0.1
PUZ	Puketiti	4.11	59	P	Pn	10 50 47.1	-0.4
ARCZ	Arundel	4.15	207	P	Pn	10 50 48.5	+0.6
WCZ	Waipu Caves	4.36	6	P	Pn	10 50 52.8	+2.2
WMGZ	Waiomatatini S	4.36	57	P	Pn	10 50 50.3	-0.3
FOZ	Fox Glacier	4.40	221	Pn	Pn	10 50 51.9	+0.9
FOZ	Fox Glacier	4.40	221	P	Pn	10 50 51.6	+0.6
MXZ	Matakaoa Point	4.45	54	Pn	Pn	10 50 52.0	+0.2
MXZ	Matakaoa Point	4.45	54	P	Pn	10 50 52.0	+0.2
TMZ	Timaru	4.59	206	P	Pn	10 50 54.2	+0.7
LBZ	Lake Benmore	4.90	212	Pn	Pn	10 50 58.6	+1.1
LBZ	Lake Benmore	4.90	212	P	Pn	10 50 57.9	+0.4
OUZ	Omahuta	5.05	358	P	Pn	10 51 02.4	+2.7
ODZ	Otahua Downs	5.29	205		Pn	10 51 03.6	+0.9
ODZ	Otahua Downs	5.29	205	P	Pn	10 51 03.7	+1.1
JCZ	Jackson Bay	5.31	223	P	Pn	10 51 03.5	+0.6
WKZ	Wanaka	5.75	216	Pn	Pn	10 51 08.7	0.0
WKZ	Wanaka	5.75	216	P	Pn	10 51 08.4	-0.3
EAZ	Earnscleugh	5.95	212	P	Pn	10 51 11.5	+0.3
HHSZ	Highcliff Hill	6.07	202	P	Pn	10 51 14.6	+1.8
MSZ	Milford Sound	6.17	223	P	Pn	10 51 15.0	+0.9
TUZ	Tuapeka	6.43	207	P	Pn	10 51 19.3	+1.7
MLZ	Mavora Lakes	6.57	217	Pn	Pn	10 51 20.8	+1.3
MLZ	Mavora Lakes	6.57	217	P	Pn	10 51 20.5	+1.0
WHZ	Wether Hill Ro	7.05	215	Pn	Pn	10 51 26.6	+0.8
WHZ	Wether Hill Ro	7.05	215	P	Pn	10 51 25.6	-0.2
SYZ	Scrubby Hill	7.11	207	P	Pn	10 51 27.5	+1.0
APZ	The Paps	7.79	211	P	Pn	10 51 35.8	+0.3
PYZ	Puysegur Point	7.84	219	P	Pn	10 51 36.5	+0.3
CTZ	Chatham Island	7.93	119	P	Pn	10 51 41.8	+4.4

DNK 26 10:51:56.7±2.1, **65°.39N**×**37°.94W**, **h7**^{km}±9^{km}, **ML3.5**, **1D**, **Probable volcanic**, **Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANGG	Ammassalik, Gr	0.26	29	e	Pg	10 52 01.4	-0.3
	baz=209,slow=18						
ANGG				⇓iP	Pg	10 52 01.8	0.0
ANGG				i S	Sg	10 52 05.2	0.0
ANGG				IAML		10 52 05.5	
	comp=Z,5μm,0.3s						
ISOG	Isortoq, Green	0.46	290	e	Pg	10 52 05.6	+0.1
	baz=105,slow=16						
ISOG				i P	Pg	10 52 05.9	+0.4
ISOG				i S	Sg	10 52 12.2	+0.6
ISOG				IAML		10 52 12.6	
	comp=Z,4μm,0.4s						
ICESG	Greenland Ices	3.77	351	i P	Pn	10 52 55.3	-0.3
ICESG				i	S	10 53 47.5	+7.2
ICESG				i S	S	10 53 47.5	+7.2
ICESG				IAML		10 53 54.7	
	comp=Z,107nm,0.3s						
SFJD	Kangerlussuaq	5.38	293	i P	Pn	10 53 16.7	-0.6
SFJD	Kangerlussuaq	5.38	293	i P	Pn	10 53 17.9	+0.6
SFJD	Kangerlussuaq	5.38	293	eP	Pn	10 53 18.0	+0.7
SFJD				IAML		10 54 42.5	
	comp=Z,14nm,0.3s						
NRS	Narsarsuaq	5.42	222	i P	Pn	10 53 17.1	-0.8
NRS				i S	Sn	10 54 18.9	-1.6
NRS	Narsarsuaq	5.42	222	i P	Pn	10 53 17.2	-0.7
NRS				i S	Sn	10 54 18.9	-1.6
NUUK	Nuuk	6.02	265	i P	Pn	10 53 25.2	-0.8
SUMG	Summit	7.22	359	i P	Pn	10 53 43.0	+0.1
SUMG				i		10 53 45.2	
SUMG				i S	Sn	10 55 00.5	-4.7
SUMG	Summit	7.22	359	i P	Pn	10 53 40.8	-2.0
SUMG				i		10 53 45.3	
SUMG				i S	Sn	10 55 00.6	-4.6
SUMG				IAML		10 55 40.8	
	comp=Z,38nm,0.4s						
SCO	Scoresbysund	7.87	43	i P	Pn	10 53 55.2	+3.8
SCO	Scoresbysund	7.87	43	eP	Pn	10 53 55.2	+3.8
UPNV	Upernavik	9.81	327	i P	Pn	10 54 14.3	-3.7
UPNV				IAML		10 56 06.8	
	comp=Z,4.9nm,0.4s						

WEL 26 10:54:43.3±0.9, **36°S**±12°×**17°9E**±1°4, **h213**^{km}±12^{km}, **M3.8**/30, **mB4.3**/1, **MLv3.8**/30, **Mw(mB)3.5**/1, **Error ellipse: s-maj=0.0km s-min=0.0km az=119.5**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.12	203	P	Pn	10 55 24.1	+0.1
MXZ				S	S	10 55 53.6	-1.9
WMGZ	Waiomatatini S	2.33	198	P	Pn	10 55 27.0	+0.8
WMGZ				S	S	10 56 01.1	+1.7
HAZ	Te Kaha	2.49	210	P	Pn	10 55 27.4	-0.3
HAZ				S	S	10 56 02.7	+0.4
PKGZ	Pakihiroa	2.50	204	P	Pn	10 55 28.3	+0.4
PUZ	Puketiti	2.61	199	P	Pn	10 55 29.5	+0.3
PUZ				S	S	10 56 04.9	0.0
RUGZ	Raukumara Rang	2.71	209	P	Pn	10 55 30.0	-0.3
TWGZ	Tauwhareparae	2.79	203	P	Pn	10 55 31.9	+0.7
TWGZ				S	S	10 56 11.1	+2.6
CNGZ	Carnagh Statio	3.01	197	P	Pn	10 55 35.0	+1.4
TKGZ	Te Karaka	3.07	202	P	Pn	10 55 34.6	+0.3
MWZ	Matawai	3.09	208	P	Pn	10 55 35.0	+0.4
URZ	Urewera	3.20	213	P	Pn	10 55 35.2	-0.6
URZ				S	S	10 56 15.8	-1.0
RAGZ	Rawiri	3.27	208	P	Pn	10 55 37.3	+0.5
RAGZ				S	S	10 56 19.8	+1.2
RIGZ	Rimuhau	3.34	202	P	Pn	10 55 37.8	+0.2
RIGZ				S	S	10 56 21.1	+1.1
MUGZ	Murupara	3.53	215	P	Pn	10 55 39.2	-0.6
KMRZ	Kaimai	3.53	230	P	Pn	10 55 40.1	+0.3
RTZ	Ruatahuna	3.55	211	P	Pn	10 55 31.8	-8.3
SNGZ	Shannon Statio	3.55	206	P	Pn	10 55 40.2	+0.2
SNGZ				S	S	10 56 25.9	+1.4
KNZ	Kokohu	3.66	201	P	Pn	10 55 41.2	-0.1
MHGZ	Mahia Peninsul	3.72	197	P	Pn	10 55 42.7	+0.7
MHGZ				S	S	10 56 27.2	-0.9
TOZ	Tahuroa Road	3.75	234	P	Pn	10 55 42.6	+0.2
RAHZ	Arahi	3.76	208	P	Pn	10 55 42.8	+0.1
RAHZ				S	S	10 56 30.4	+1.3
MTHZ	Maungataniwha	3.81	211	P	Pn	10 55 42.9	-0.2
WHHZ	Waihua	3.85	205	P	Pn	10 55 43.6	0.0
WHHZ				S	S	10 56 34.0	+3.1
MRHZ	Matea Rd	3.98	215	P	Pn	10 55 45.1	-0.2
NMHZ	Naumai	4.03	209	P	Pn	10 55 45.8	-0.1
ARHZ	Aropaoanui	4.10	206	P	Pn	10 55 46.7	0.0
BKZ	Black Stump Fm	4.22	212	P	Pn	10 55 47.6	-0.5
MCHZ	McNeill Hill	4.37	208	P	Pn	10 55 49.8	-0.3
KWHZ	Kaweka Forest	4.46	210	P	Pn	10 55 50.5	-0.8
TMVZ	Te Maari	4.55	218	P	Pn	10 55 52.6	+0.2
OTVZ	Oturere	4.60	218	P	Pn	10 55 52.6	-0.5
HIZ	Hauiti	4.61	230	P	Pn	10 55 54.3	+1.3
KAHZ	Kahuranaki	4.62	204	P	Pn	10 55 52.7	-0.4
KRHZ	Kereru	4.67	209	P	Pn	10 55 52.6	-1.2
BHHZ	Black Hill Sta	4.67	213	P	Pn	10 55 53.2	-0.7
FWVZ	Far West T-bar	4.73	218	P	Pn	10 55 56.1	+1.4
PNHZ	Pukenui	4.97	209	P	Pn	10 55 56.9	-0.7
PRHZ	Porangahau	5.12	204	P	Pn	10 55 58.3	-1.2
TSZ	Takapari Road	5.19	210	P	Pn	10 55 59.0	-1.3

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*IDC **26** 11:02:18.6±2.1, 37°.68S×73°.93W, h0^{km}, mb3.9/2, mb1 4.0/4, mb1mx3.8/15, mbtmp3.8/4, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.9/25, Error ellipse: s-maj=58.1km s-min=22.0km az=54.0*

*GUC **26** 11:02:23.1±0.5, 37°.59S×73°.68W, h21^{km}±3^{km}, ML3.9*

ISC 26 11:02:20.9±3.4, **37°.59S**±0°.05×**73°.68W**±0°.08, **h8**^{km}±23^{km}, **n14**, σ**1^{s}.01**/15, **5C**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAJA	Laja	0.83	69	⇑iP	Pb	11 02 37.3	-0.2
LAJA				i S	Sb	11 02 48.6	-0.1
LAJA				IAML		11 02 50.2	
	comp=E,9μm,0.5s						
BI04	Isla Mocha	0.84	191	⇑iP	Pb	11 02 37.6	-0.1
BI04				i S	Sb	11 02 48.6	-0.5
BI04				IAML		11 02 54.8	
	comp=N,8μm,0.3s						
BI03	Tigo	0.91	35	⇑iP	Pb	11 02 38.7	-0.1
BI03				i S	Sb	11 02 51.1	+0.1
LC01	Cunco	1.93	133	⇑iP	Pn	11 02 54.0	0.0
LC01				eS	Sn	11 03 18.4	0.0
BI02	San Fabin de	2.13	65	⇑iP	Pn	11 02 56.4	-0.4
BI02				i S	Sb	11 03 25.0	-1.4
BI02				IAML		11 03 27.4	
	comp=N,1μm,0.4s						
BO02	Sierra Bellavi	3.64	41	i S	Sn	11 04 01.9	+1.1
PLCA	Paso Flores	3.97	143	Pn	Pn	11 03 23.1	+1.0
	comp=N,2.2nm,0.3s,baz=315,slow=12,SNR=68						
PLCA				Lg	Lg	11 04 25.8	
	comp=N,4.8nm,0.3s,baz=43,slow=23,SNR=7.5						
PLCA				LR	LR	11 05 13.4	
	comp=N,134nm,20.4s,baz=274,slow=44						
H03S1	Juan Fernandez	5.66	310	T	T	11 09 25.5	
	baz=130,slow=75,SNR=464						
H03S3	Juan Fernandez	5.67	310	T	T	11 09 25.3	
	baz=130,slow=75,SNR=386						
H03S2	Juan Fernandez	5.68	310	T	T	11 09 26.7	
	baz=130,slow=75,SNR=362						
CPUP	Villa Florida	17.82	56	P	P	11 06 32.2	+2.3
	comp=N,0.2nm,0.3s,baz=212,slow=9.5,SNR=3.5						
CPUP				LR	LR	11 14 01.7	
	comp=N,67nm,18.2s,baz=218,slow=39						
BDFB	Brasilia	31.50	53	LR	LR	11 21 49.5	
	comp=N,54nm,19.9s,baz=68,slow=37						
TXAR	Lajitas Array	72.26	333	P	P	11 13 46.1	-0.6
	comp=N,0.3nm,0.7s,baz=151,slow=8.9,SNR=3.9						
DBIC	Dimbokro	77.58	72	P	P	11 14 16.9	-0.9
	comp=N,2.3nm,0.7s,baz=220,slow=7.9,SNR=2.1						

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*IDC **26** 11:07:43.0±3.0, 29°.07N×80°.55E, h0^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.2/50, mbtmp3.3/6, ML3.5/2, Error ellipse: s-maj=115.6km s-min=22.2km az=67.0*

ISC 26 11:07:47.2±0.9, **29°.3N**±0°.1×**81°.02E**±0°.07, **h17**^{km}, **n8**, σ**0^{s}.77**/9, **mb3.4**/5, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDI	New Delhi	3.38	261	eP	Pg	11 08 53.0	+0.9
NDI				eS	Sg	11 09 35.0	-1.0
MKAR	Makanchi Array	17.53	3	P	Pn	11 11 50.2	-0.5
	0.0nm,0.3s,baz=191,slow=13,SNR=3.6						
CMAR	Chiang Mai Arr	19.58	119	P	Pn	11 12 16.1	+0.3
	0.2nm,0.3s,baz=316,slow=10,SNR=4.5						
KURBB	Kurchatov Arra	21.41	356	P	P	11 12 33.9	-0.2
	0.3nm,0.6s,baz=181,slow=10,SNR=6.9						
ZALV	Zalesovo Beam	24.82	5	P	P	11 13 09.2	+0.9
	0.9nm,0.5s,baz=197,slow=12,SNR=3.7						
WRA	Warramunga Arr	70.97	127	P	P	11 19 03.5	-0.6
	0.1nm,0.5s,baz=322,slow=5.8,SNR=1.3						
ASAR	Alice Springs	73.18	130	P	P	11 19 17.0	-0.4
	11nm,0.4s,baz=314,slow=6.4,SNR=6.2						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
YKA	**Yellowknife Ar**	87.70	7	P	P	11 20 34.8	+0.2
	0.1nm,0.5s,baz=342,slow=5.0,SNR=3.5						

BGR ***26*** *11:25:01.7±0.0, 49˚.35N×88˚.33E, h10^{km}, mb4.7*

IDC ***26*** *11:25:05.3±0.4, 49˚.65N×87˚.69E, h0^{km}, mb4.5/29, mb1 4.6/35, mb1mx4.4/60, mbtmp4.5/35, ML4.2/7, MS3.7/22, Ms1 3.7/22, ms1mx3.5/48, Error ellipse: s-maj=11.8km s-min=6.8km az=6.0*

ASRS ***26*** *11:25:06.5±0.3, 50˚N±2˚×8˚8E±˚, h5^{km}, MLh5.1/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***26*** *11:25:07.3±0.8, 49˚.89N×87˚.48E, h0^{km}, mb5.3, mpv5.1, Error ellipse: s-maj=8.6km s-min=4.4km az=99.0*

MOS ***26*** *11:25:07.0±1.3, 49˚.77N×87˚.54E, h21^{km}, mb4.9/30, Error ellipse: s-maj=5.8km s-min=5.4km az=115.7*

BJI ***26*** *11:25:07.8±0.0, 49˚.70N×87˚.67E, h22^{km}, mB4.6/35, mb4.5/48, ML5.0/8, Ms4.5/42, Ms7 4.2/38*

NEIC ***26*** *11:25:11.7±1.9, 49˚.73N±0˚.07×87˚.5E±0˚.1, h45^{km}±1^{km}, mb4.8/65, Error ellipse: s-maj=10.2km s-min=9.6km az=88.0*

ISC 26 11:25:06.8±0.6, **49˚.95N**±0˚.02×**87˚.62E**±0˚.02, **h7**^{km}±3^{km}, **n387**, σ**1^{s}72**/426, **mb4.7**/128, **MS3.8**/25, **48C-17D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	0.28	206	Pg	Pg	11 25 09.5	-2.9
DGZ				Sg	Sg	11 25 12.5	-3.6
DGZ	**Jazzator, Alta**	0.28	206	*c i*PG	Pg	11 25 09.3	-3.0
CHBI	**Chibit, Altay**	0.37	349	Pg	Pb	11 25 15.2	-0.6
CHBI				Sg	Sb	11 25 22.0	+0.2
CUR	**Chagan-Uzun**	0.50	72	Pg	Pg	11 25 14.5	-1.9
CUR				Sg	Sg	11 25 21.3	-1.6
ULGR	**Ulagan, Altay**	0.71	18	Pg	Pg	11 25 20.5	+0.1
ULGR				S	Sb	11 25 31.2	-0.4
ARTR	**Artybash**	1.86	354	P	Pb	11 25 41.0	-0.1
ARTR				S	Sg	11 26 06.1	-0.5
TEL	**Teeli**	1.97	56	P	Pb	11 25 41.7	-1.2
TEL				S	Sb	11 26 06.8	-0.9
UKR	**Ust'-Kan**	2.07	300	P	Pb	11 25 44.9	+0.2
UKR				S	Sg	11 26 12.7	-0.5
TASR	**Tashtagol**	2.82	3	P	Pb	11 25 56.1	-1.3
TASR				S	Sb	11 26 31.0	-1.1
ELT	**Eltsovka**	3.42	346	P	Pb	11 26 04.0	-3.7
ELT				S	Sb	11 26 50.3	+0.8
TBTR	**Tabat**	3.56	32	P	Pn	11 26 05.2	+2.8
TBTR				S	Sb	11 26 52.2	-1.2
DJO	**Djoy, Khakassi**	3.62	37	P	Pn	11 26 05.7	+2.4
DJO				S	Sb	11 26 54.9	-0.4
DJOS	**Djoyskaya Sosn**	3.70	38	P	Pn	11 26 06.8	+2.4
DJOS				S	Sb	11 26 55.8	-1.8
VEH	**Verkhnyaya Baz**	3.71	26	Pg	Pg	11 26 16.1	-1.7
VEH				Sg	Sg	11 27 03.0	-2.9
CERR	**Cheremushki**	3.75	38	P	Pn	11 26 07.5	+2.4
CERR				S	Sb	11 26 58.8	-0.3
LUZB	**Luzhba, Kemero**	3.80	12	P	Pn	11 26 09.0	+3.3
LUZB				S	Sb	11 26 57.2	-3.1
ZAA0	**Zalesovo Array**	4.36	338	⇓Pn	Pn	11 26 15.7	+2.3
	29nm,0.6s						
ZAA0				⇑Pg	Pg	11 26 26.9	-3.4
	61nm,0.8s						
ZAA0				⇓Lg	Lg	11 27 26.5	
	197nm,0.7s						
ZAA0	**Zalesovo Array**	4.36	338		Pn	11 26 16.1	+2.7
ZALV	**Zalesovo Beam**	4.36	338	Pn	Pn	11 26 16.1	+2.7
	62nm,0.3s,baz=158,slow=12,SNR=380						
ZALV				Sn	Sb	11 27 10.3	-6.1
	62nm,0.3s,baz=158,slow=23,SNR=5.8						
ZALV				Lg	Lg	11 27 26.7	
	124nm,0.3s,baz=151,slow=28,SNR=13						
ZALV				LR	LR	11 28 09.2	
	comp=Z,393nm,20.2s,baz=113,slow=39						
MK31	**Makanchi Array**	4.75	230	Pn	Pn	11 26 19.0	+0.2
	234nm,0.6s,baz=61,slow=12,SNR=2399						
MK31				Pg	Pb	11 26 33.2	+2.8
	821nm,0.8s,baz=57,slow=13,SNR=14						
MK31				⇑Lg	Lg	11 27 35.0	
	451nm,0.5s,baz=60,slow=35,SNR=5.1						
MK31	**Makanchi Array**	4.75	230	PN	Pn	11 26 20.8	+2.0
MK31	**Makanchi Array**	4.75	230		Pn	11 26 20.8	+2.0
MKAR	**Makanchi Array**	4.75	230	Pn	Pn	11 26 20.6	+1.7
	61nm,0.3s,baz=60,slow=13,SNR=2489						
MKAR				Lg	Lg	11 27 36.2	
	114nm,0.3s,baz=48,slow=31,SNR=8.1						
MKAR	**Makanchi Array**	4.75	230	PN	Pn	11 26 20.9	+2.1
MKAR	**Makanchi Array**	4.75	230		Pn	11 26 20.9	+2.1
MAKZ	**Makanchi**	4.90	232	⇑Pn	Pn	11 26 21.8	+0.9
	200nm,0.7s						
MAKZ				⇓Pg	Pb	11 26 35.0	+2.1
	518nm,0.8s						
MAKZ				⇑Lg	Lg	11 27 40.8	
	1µm,1.1s						
MAKZ	**Makanchi**	4.90	232	PN	Pn	11 26 22.9	+2.0
MAKZ	**Makanchi**	4.90	232	Pn	Pn	11 26 22.9	+2.0
KURK	**Kurchatov**	5.81	281	⇑Pn	Pn	11 26 34.7	+1.4
	694nm,0.6s						
KURK				⇑Sn	Sn	11 27 41.1	+0.9
	519nm,0.6s						
KURK				⇓Lg	Lg	11 28 10.2	
	1µm,0.7s						
KURK	**Kurchatov**	5.81	281	PN	Pn	11 26 36.8	+3.5
KURK						11 27 44.9	
KURK	**Kurchatov**	5.81	281		Pn	11 26 35.6	+2.3
KURBB	**Kurchatov Arra**	5.86	280	Pn	Pn	11 26 36.8	+2.7
	45nm,0.3s,baz=91,slow=15,SNR=1699						
KURBB				Sn	Sn	11 27 44.9	+3.5
	17nm,0.3s,baz=86,slow=28,SNR=12						
KURBB				Lg	Lg	11 28 13.3	
	18nm,0.3s,baz=90,slow=34,SNR=5.9						
WMQ	**Urumqi**	6.13	179	Pn	Pn	11 26 37.8	0.0
WMQ				Sn	Sn	11 27 48.3	+0.1
WMQ				smax	smax		
	comp=N,860nm,1.1s						
WMQ				smax	smax		
	comp=E,1µm,0.9s						
WMQ				LR	LR		
	comp=N,1µm,10.3s						
WMQ				LR	LR		
	comp=E,1µm,11.5s						
WMQ				LR	LR		
	comp=Z,940nm,10.1s						
WMQ	**Urumqi**	6.13	179	PN	Pn	11 26 37.8	0.0
WMQ	**Urumqi**	6.13	179	Pn	Pn	11 26 37.8	0.0
MOY	**Mondy**	8.65	73	*e*P	Pn	11 27 10.9	-1.4
MOY				*e*S	Sn	11 28 45.0	-5.1
PDGK	**Podgornoye**	8.66	223	⇑Pn	Pn	11 27 12.3	-0.3
	74nm,0.7s						
PDGK				⇑Sn	Sn	11 28 50.2	-0.4
	204nm,1.0s						
PDGK				⇑Lg	Lg	11 29 38.3	
	460nm,0.9s						
PDGK	**Podgornoye**	8.66	223	P	Pn	11 27 12.3	-0.3
PDGK				SN	Sn	11 28 50.2	-0.4
MDOK	**Medeo**	9.95	231	⇓Pn	Pn	11 27 29.5	-0.7
	38nm,0.7s						
MDOK				⇓Lg	Lg	11 30 19.6	
	353nm,1.3s						
MDOK	**Medeo**	9.95	231	P	Pn	11 27 29.5	-0.7
TLY	**Talaya**	10.29	74	Lg	Lg	11 30 24.8	
	0.0nm,0.3s,baz=22,slow=10.0,SNR=6.0						
TLY				LR	LR	11 31 32.0	
	comp=Z,663nm,21.9s,baz=298,slow=37						
TLY	**Talaya**	10.29	74	*i* P	Pn	11 27 38.4	+3.6
TKM2	**Tokmak 2**	10.87	234	P	Pn	11 27 43.9	+1.1
	SNR=14						
TKM2	**Tokmak 2**	10.87	234	⇑Pn	Pn	11 27 42.0	-0.8
	33nm,0.8s						
TKM2				⇑Lg	Lg	11 30 50.2	
	121nm,0.9s						
TKM2	**Tokmak 2**	10.87	234	P	Pn	11 27 42.2	-0.6
BVAR	**Borovoye Array**	11.17	293	Pn	Pn	11 27 46.8	+0.1
	6.4nm,0.3s,baz=103,slow=17,SNR=52						
BVAR				Sn	Sn	11 29 51.9	+0.1
	5.1nm,0.3s,baz=180,slow=19,SNR=4.2						
BVAR				Lg	Lg	11 31 05.9	
	3.9nm,0.3s,baz=184,slow=13,SNR=3.7						
USP	**Ospenovka**	11.22	238	P	Pn	11 27 46.1	-1.4
	SNR=48						
BRVK	**Borovoye**	11.24	293	⇑Pn	Pn	11 27 47.6	-0.1
	42nm,0.7s						
BRVK				⇑Sn	Sn	11 29 55.9	+2.4
	71nm,0.7s						
BRVK				⇑Lg	Lg	11 31 04.9	
	212nm,1.3s						
BRVK	**Borovoye**	11.24	293	P	Pn	11 27 47.6	-0.1
BRVK				SN	Sn	11 29 55.9	+2.4
BRVK	**Borovoye**	11.24	293	Pn	Pn	11 27 48.1	+0.4
CHMS	**Chumysh**	11.26	237	P	Pn	11 27 46.8	-1.3
	SNR=6.4						
KBK	**Karagaybulak**	11.39	235	P	Pn	11 27 49.7	-0.3
	SNR=34						
AAK	**Ala-Archa**	11.65	236	Pn	Pn	11 27 52.7	-0.7
	2.0nm,0.3s,baz=65,slow=7.5,SNR=30						
AAK				Lg	Lg	11 31 13.4	
	1.2nm,0.3s,baz=318,slow=22,SNR=5.7						
AAK				LR	LR	11 32 36.4	
	comp=Z,569nm,19.9s,baz=44,slow=39						
AAK	**Ala-Archa**	11.65	236	P	Pn	11 27 51.7	-1.8
	SNR=13						
AAK	**Ala-Archa**	11.65	236	⇓Pn	Pn	11 27 52.4	-1.1
	22nm,0.6s						
AAK				⇓Lg	Lg	11 31 14.2	
	116nm,0.9s						
AAK	**Ala-Archa**	11.65	236	*ce*P	Pn	11 27 52.7	-0.7
AAK				pmax	pmax		
	comp=Z,49nm,0.8s						
UCH	**Uchtor**	11.92	235	P	Pn	11 27 56.8	-0.7
	SNR=15						
EKS2	**Erkin-Say**	12.02	238	P	Pn	11 27 57.7	-0.8
	SNR=22						
AML	**Almayashu**	12.43	236	P	Pn	11 28 05.0	+0.7
	SNR=19						
SONM	**Songino Array**	12.54	93	Pn	Pn	11 28 05.8	+0.2
	comp=Z,0.2nm,0.3s,baz=282,slow=14,SNR=32						
SONM				Lg	Lg	11 31 34.7	
	comp=Z,0.9nm,0.3s,baz=273,slow=20,SNR=4.5						
SONM				LR	LR	11 33 04.4	
	comp=Z,496nm,18.6s,baz=292,slow=38						
ULN	**Ulaanbaatar**	12.95	92	P	Pn	11 28 13.3	+2.0
ULN	**Ulaanbaatar**	12.95	92	Pn	Pn	11 28 13.3	+2.0
KSH	**Kashi**	13.30	223	P	P	11 28 23.8	-2.1
KSH				pmax	pmax		
	comp=Z,18nm,0.8s						
KSH				pmax	pmax		
	comp=Z,390nm,4.4s						
KSH				LR	LR		
	comp=Z,2µm,8.8s						
KSH				LR	LR		
	comp=Z,2µm,7.4s						
KSH				LR	LR		
	comp=Z,2µm,10.4s						
KK31	**Karatay Array**	13.61	246	⇑Pn	Pn	11 28 17.7	-2.4
	comp=Z,29nm,0.8s,baz=48,slow=12,SNR=135						
KK31				⇑Lg	Lg	11 32 16.5	
	comp=Z,46nm,0.7s,baz=50,slow=28,SNR=2.5						
KK31	**Karatay Array**	13.61	246	P	Pn	11 28 16.9	-3.2
KK31	**Karatay Array**	13.61	246	Pn	Pn	11 28 16.9	-3.2
KKAR	**Karatay Array**	13.61	246	P	Pn	11 28 17.4	-2.7
KKAR	**Karatay Array**	13.61	246		Pn	11 28 17.4	-2.7
KKAR	**Karatay Array**	13.61	246	Pn	Pn	11 28 17.2	-2.9
GTA	**Gaotai**	13.63	136	P	Pn	11 28 19.8	-0.8
GTA				pP	P	11 28 28.5	-1.1
GTA				sP		11 28 33.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,27nm,4.0s						
GTA				LR	LR		
	comp=Z,820nm,11.6s						
GTA				LR	LR		
	comp=Z,1µm,10.9s						
GTA				LR	LR		
	comp=Z,750nm,10.9s						
BOD	**Bodaibo**	17.34	53	*e*P	Pn	11 29 09.1	0.0
BOD				pmax	pmax		
	comp=Z,38nm,1.3s						
SVE	**Sverdlovsk**	17.42	304	*e*P	Pn	11 29 08.8	-1.3
SVE				*e*S	Sn	11 32 14.1	-10
SVE				pmax	pmax		
	comp=Z,67nm,1.1s						
AB31	**Akbulak array**	17.92	278	⇓P	Pn	11 29 15.3	-0.9
	comp=Z,20nm,0.7s,baz=81,slow=12,SNR=128						
AB31	**Akbulak array**	17.92	278	P	Pn	11 29 15.3	-0.9
ABKAR	**Akbulak array**	17.92	278		Pn	11 29 14.8	-1.4
ABKAR	**Akbulak array**	17.92	278	P	Pn	11 29 14.6	-1.7
ABKAR				IAmb	IAmb	11 29 18.0	
	comp=Z,25nm,0.8s						
LZH	**Lanzhou**	18.19	134	⇑P	Pn	11 29 19.3	-0.5
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,430nm,11.4s						
BTO	**Baotou**	18.27	112	*e*P	Pn	11 29 16.3	-4.4
ARU	**Arti**	18.48	302	P	Pn	11 29 23.6	+0.5
	comp=Z,0.0nm,0.3s,baz=104,slow=5.3,SNR=23						
ARU				S	Sn	11 32 44.5	-5.1
	comp=Z,0.0nm,0.3s,baz=252,slow=20,SNR=2.8						
ARU				LR	LR	11 37 30.5	
	comp=Z,116nm,19.4s,baz=106,slow=40						
ARU	**Arti**	18.48	302	*d i*P	Pn	11 29 23.1	0.0
ARU				S	S	11 32 51.9	-2.1
ARU				pmax	pmax		
	comp=Z,23nm,0.5s						
ARU	**Arti**	18.48	302		P	11 29 22.1	-0.9
ARU				IAmb	IAmb	11 29 28.3	
	comp=Z,40nm,0.5s						
AKTO	**Aktyubinsk**	18.91	283	P	P	11 29 27.9	+0.1
	comp=Z,4.3nm,0.3s,baz=91,slow=10,SNR=236						
AKTO				Lg	Lg	11 34 53.8	
	comp=Z,0.1nm,0.3s,baz=307,slow=8.2,SNR=4.1						
AKTO				LR	LR	11 37 10.0	
	comp=Z,293nm,19.0s,baz=82,slow=38						
AKTO	**Aktyubinsk**	18.91	283	⇑P	P	11 29 27.8	+0.1
	comp=Z,118nm,0.8s						
HHC	**Hu-ho-hao-te**	19.05	109	*e*P	Pn	11 29 33.8	+3.5
HHC				S	Sn	11 33 02.5	-1.3
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,7.3s						
HHC				LR	LR		
	comp=Z,990nm,10.1s						
HHC				LR	LR		
	comp=Z,700nm,10.0s						
HHC				LR	LR		
	comp=Z,570nm,8.8s						
NIL	**Nilore**	19.44	218	P	P	11 29 32.8	-0.9
NIL				pmax	pmax		
	comp=Z,41nm,0.8s						
NIL	**Nilore**	19.44	218	P	P	11 29 32.8	-0.9
NIL				IAmb	IAmb	11 29 34.3	
	comp=Z,41nm,0.8s						
CEP	**Cherat**	19.84	222	P	P	11 29 37.2	-1.1
LSA	**Lhasa**	20.40	171	P	P	11 29 45.0	+0.3
LSA				pmax	pmax		
	comp=Z,29nm,0.7s						
LSA	**Lhasa**	20.40	171	P	P	11 29 43.4	-1.3
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	20.40	171	P	P	11 29 43.4	-1.3
KBL	**Kabul**	20.56	228	P	P	11 29 44.0	-2.1
KBL				pmax	pmax		
	comp=Z,16nm,0.8s						
KBL	**Kabul**	20.56	228		P	11 29 44.0	-2.1
HIA	**Hailar**	20.75	79	P	Pn	11 29 49.6	-0.7
HIA				pmax	pmax		
	comp=Z,18nm,1.0s						
HIA	**Hailar**	20.75	79		Pn	11 29 49.6	-0.6
DANN	**Dangsing**	21.77	189	*e*P	P	11 30 00.7	+1.4
	comp=Z,70nm,0.9s						
GKN	**Gorkha**	22.04	187	*e*P	P	11 30 03.5	+1.5
	comp=Z,20nm,0.7s						
GUN	**Gumba**	22.05	184	*e*P	P	11 30 03.5	+1.1
	comp=Z,50nm,0.6s						
PYUN	**Piuthan**	22.11	191	*e*P	P	11 30 03.8	+1.0
	comp=Z,43nm,0.6s						
KKN	**Kakani**	22.20	185	*e*P	P	11 30 04.7	+0.8
	comp=Z,35nm,0.5s						
XAN	**Xi'an**	22.32	127	P	P	11 30 03.0	-1.9
XAN				pP	sP	11 30 14.5	+5.6
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
KOLN	**Koldanda**	22.36	189	*e*P	P	11 30 05.4	-0.2
	comp=Z,45nm,1.0s						
BJI	**Beijing**	22.37	105	P	P	11 30 05.8	+0.5
BJI				S	S	11 34 11.5	+0.2
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
BJI				pmax	pmax		
	comp=Z,130nm,4.7s						
BJI				LR	LR		
	comp=Z,1µm,12.6s						
BJI				LR	LR		
	comp=Z,750nm,10.0s						
BJT	**Baijiatuau**	22.38	105	P	P	11 30 05.4	-0.1
BJT				pmax	pmax		
	comp=Z,11nm,0.8s						
BJT	**Baijiatuau**	22.38	105	P	P	11 30 05.4	-0.1
DMN	**Daman**	22.39	186	*e*P	P	11 30 06.6	+0.7
	comp=Z,28nm,0.6s						
PKIN	**Phulchoki**	22.41	185	*e*P	P	11 30 07.2	+1.1
	comp=Z,32nm,0.5s						
PKI	**Pulchoki**	22.41	185	*e*P	P	11 30 06.7	+0.5
	comp=Z,20nm,0.6s						
TAPN	**Taplejung**	22.57	180	*e*P	P	11 30 06.8	-1.1
	comp=Z,34nm,0.9s						
RAMN	**Ramite**	22.98	182	*e*P	P	11 30 11.3	-0.8
	comp=Z,30nm,0.7s						
ODAN	**Odare**	23.06	181	*e*P	P	11 30 11.6	-1.3
KIRV	**Kirov**	23.63	306	P	P	11 30 19.3	+1.2
	comp=Z,23nm,0.5s,baz=93,slow=12,SNR=10						
KIRV				LR	LR	11 40 14.8	
	comp=Z,225nm,19.1s,baz=98,slow=38						
KIRV	**Kirov**	23.63	306	*i* P	P	11 30 19.2	+1.1
GEYT	**Alibeck**	24.24	252	P	P	11 30 24.7	+0.5
	comp=Z,3.2nm,0.6s,baz=352,slow=6.7,SNR=3.6						
GEYT	**Alibeck**	24.24	252	P	P	11 30 23.0	-1.2
HRA	**Herat**	24.24	240	P	P	11 30 26.1	+1.6
ZEA	**Zeya**	24.55	66	*e*P	P	11 30 29.5	+2.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=N,100nm,7.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,8.0s						
BELG	**Belogornoye**	24.97	291	*i* P	P	11 30 30.8	+0.2
BELG				pmax	pmax		
	comp=Z,13nm,1.3s						
YAK	**Yakutsk**	25.93	46	P	P	11 30 41.5	+2.3
	comp=Z,22nm,0.6s,baz=207,slow=0.8,SNR=13						
YAK				LR	LR	11 40 16.4	
	comp=Z,83nm,20.9s,baz=251,slow=35						
YAK	**Yakutsk**	25.93	46	*ce*P	P	11 30 40.8	+1.5
YAK				pmax	pmax		
	comp=Z,34nm,0.6s						
YAK	**Yakutsk**	25.93	46	P	P	11 30 39.6	+0.3
CN2	**Changchun**	26.37	89	*e*P	P	11 30 42.5	-0.9
CN2				*e*S	S	11 35 11.8	-4.9
CN2				LR	LR		
	comp=Z,790nm,12.0s						
CN2				LR	LR		
	comp=Z,420nm,12.0s						
CN2				LR	LR		
	comp=Z,530nm,11.0s						
KMI	**Kunming**	27.43	149	*e*P	P	11 30 49.5	-3.8
KMI				pP	pP	11 30 56.3	0.0
KMI				sP	sP	11 31 01.3	+3.8
KMI				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI				pmax	pmax		
	comp=Z,74nm,4.3s						
KMI				LR	LR		
	comp=Z,150nm,9.8s						
KMI				LR	LR		
	comp=Z,170nm,8.2s						
KMI				LR	LR		
	comp=Z,230nm,12.7s						
GYA	**Guiyang**	27.67	141	⇓P	P	11 30 54.5	-0.8
GYA				S	S	11 35 38.0	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				LR	LR		
	comp=Z,310nm,13.4s						
GYA				LR	LR		
	comp=Z,210nm,9.5s						
GYA				LR	LR		
	comp=Z,430nm,12.0s						
KLR	**Kul'dur**	28.31	74	P	P	11 31 01.9	+1.1
	comp=Z,2.3nm,0.7s,baz=288,slow=14,SNR=4.8						
KLR				LR	LR	11 42 44.9	
	comp=Z,253nm,18.6s,baz=253,slow=37						
KLR	**Kul'dur**	28.31	74	*ce*P	P	11 31 02.4	+1.6
KLR				pmax	pmax		
	comp=Z,9.0nm,1.8s						
TIXI	**Tiksi**	28.61	26	*e*P	P	11 31 05.7	+2.5
TIXI	**Tiksi**	28.61	26	P	P	11 31 04.4	+1.2
KLMR	**Klimovskoe**	28.74	311	*e*P	P	11 31 03.4	-1.0
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	**Klimovskoe**	28.74	311	*e*P	P	11 31 03.5	-1.0
KLMR				AMP		11 31 06.6	
	comp=Z,14nm,1.0s						
VRH	**Novokhopyorsk**	28.81	290	*e*P	P	11 31 03.4	-1.8
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2	**Nanjing**	29.29	116	*e*P	P	11 31 10.0	+0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,470nm,15.5s						
NJ2				LR	LR		
	comp=Z,600nm,15.7s						
NJ2				LR	LR		
	comp=Z,270nm,14.5s						
TMCR	**Tamitsa**	29.58	317	*e*P	P	11 31 11.1	-0.7
LPSR	**Galich'ya Gora**	30.11	294	*e*P	P	11 31 16.9	+0.2
LPSR				pmax	pmax		
	comp=Z,40nm,0.7s						
MOS	**Moscow**	30.18	301	*e*P	P	11 31 16.8	-0.5
MOS				pmax	pmax		
	comp=Z,75nm,0.6s						
VORD	**Divnogorie**	30.35	291	*e*P	P	11 31 18.7	-0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	**Storozhevoye**	30.35	291	*e*P	P	11 31 18.1	-0.7
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
USA0B	**Ussuriysk Arra**	30.41	84	P	P	11 31 21.0	+1.6
USA0B				pmax	pmax		
	comp=Z,82nm,2.0s						
USA0B	**Ussuriysk Arra**	30.41	84	P	P	11 31 21.0	+1.6
USRK	**Ussuriysk Ar.**	30.41	84	P	P	11 31 19.4	0.0
	comp=Z,4.4nm,0.5s,baz=292,slow=8.0,SNR=24						
USRK				LR	LR	11 44 25.6	
	comp=Z,234nm,20.7s,baz=283,slow=38						
USRK	**Ussuriysk Ar.**	30.41	84	P	P	11 31 18.5	-0.9
KBZ	**Khabaz**	30.84	276	LR	LR	11 45 17.3	
	comp=Z,157nm,20.8s,baz=42,slow=39						
KIV	**Kislovodsk**	30.88	276	*e*P	P	11 31 24.5	+0.8
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,288nm,15.0s						
OBN	**Obninsk**	30.89	300	*ce*P	P	11 31 23.8	+0.2
OBN				*SP	sP	11 31 30.0	+2.2
OBN						11 32 24.0	
OBN				pmax	pmax		
	comp=Z,35nm,0.9s						
OBN				MLR	MLR		
	comp=Z,134nm,17.0s						
KSRS	**Korea Array**	31.32	98	P	P	11 31 26.0	-1.5
	comp=Z,2.3nm,0.8s,baz=298,slow=6.5,SNR=8.2						
KSRS				LR	LR	11 44 57.4	
	comp=Z,272nm,18.7s,baz=303,slow=38						
APA	**Apatity**	31.80	324	⇓*i*P	P	11 31 45.7	+14
APA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,400nm,13.0s						
CM33	**Chiang Mai Arr**	32.36	160	P	P	11 31 39.0	+2.2
CMMT	**Chiang Mai**	32.37	160	P	P	11 31 40.0	+3.2
	comp=Z,1.8nm,0.8s						
CM34	**Chiang Mai Arr**	32.37	159	P	P	11 31 42.0	+5.1
CM32	**Chiang Mai Arr**	32.50	160	P	P	11 31 44.0	+6.0
JOF	**Joensuu**	32.57	315	P	P	11 31 39.4	+1.2
JOF				pmax	pmax		
	comp=Z,16nm,2.9s						

CM36	Chiang Mai Arr	32.68	160	P	P	11 31 39.0	-0.6
CMAR	Chiang Mai Arr	32.71	160	P	P	11 31 38.5	-1.3
	comp=Z,3.1nm,0.7s,baz=340,slow=8.8,SNR=8.1						
CMAR	Chiang Mai Arr	32.71	160	P	P	11 31 38.1	-1.7
CM15	Chiang Mai Arr	32.71	160	P	P	11 31 46.0	+6.2
	comp=Z,5.3nm,0.8s						
CM02	Chiang Mai Arr	32.73	160	P	P	11 31 45.0	+5.0
	comp=Z,5.8nm,0.8s						
CM13	Chiang Mai Arr	32.73	160	P	P	11 31 45.5	+5.5
	comp=Z,5.2nm,0.8s						
CM01	Chiang Mai Arr	32.75	160	P	P	11 31 46.0	+5.9
	comp=Z,76nmcomp=Z,4.7nm,0.8s						
CM05	Chiang Mai Arr	32.76	160	P	P	11 31 43.6	+3.3
	comp=Z,4.4nm,0.8s						
CM04	Chiang Mai Arr	32.77	160	P	P	11 31 45.9	+5.5
	comp=Z,5.5nm,0.9s						
ARCES	ARCESS Array B	34.83	327	P	P	11 31 58.2	+0.4
	comp=Z,6.6nm,0.9s,baz=71,slow=9.6,SNR=4.1						
ARCES				PcP	PcP	11 34 28.9	-1.8
	comp=Z,3.8nm,0.9s,baz=90,slow=3.7,SNR=1.9						
ARCES				LR	LR	11 48 40.2	
	comp=Z,96nm,19.5s,baz=150,slow=40						
FIA1	FINESS Array S	35.17	313	P	P	11 32 02.0	+1.2
FINES	FINESS Array B	35.18	313	P	P	11 32 01.9	+1.1
	comp=Z,3.4nm,0.7s,baz=74,slow=9.4,SNR=14						
FINES				PcP	PcP	11 34 31.2	-0.6
	comp=Z,1.6nm,0.5s,baz=108,slow=4.5,SNR=2.0						
FINES				LR	LR	11 48 04.6	
	comp=Z,140nm,18.9s,baz=104,slow=39						
FINES	FINESS Array B	35.18	313	P	P	11 32 01.6	+0.7
QIZ	Qiongzhong	35.60	142	P	P	11 32 03.5	-1.4
QIZ				S	S	11 37 40.5	-0.7
QIZ				PcS	PcS	11 38 21.5	+0.4
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				LR	LR		
	comp=Z,190nm,20.1s						
QIZ				LR	LR		
	comp=Z,490nm,13.7s						
QIZ				LR	LR		
	comp=Z,290nm,13.2s						
MARD	Mardin	35.60	267	P	P	11 32 05.5	+0.5
MA2	Magadan	36.33	50	P	P	11 32 13.6	+2.8
	comp=Z,4.0nm,0.7s,baz=289,slow=8.4,SNR=3.6						
NACGM	Naroch	36.39	302	*i* P	P	11 32 12.7	+1.3
NACGM				*i* P	P	11 32 12.7	+1.3
NACGM				*i* P	P	11 32 12.7	+1.3
NACGM				*i* PP	PP	11 33 35.6	+1.8
NACGM				*i* PPP	PPP	11 33 55.5	
NACGM				*i* S	S	11 37 53.6	+1.0
NACGM				*i* SS	SnSn	11 40 20.7	+0.9
NACGM				*i* SSS	SSS	11 40 42.4	
NACGM				*i* LQ	LQ	11 44 29.6	
NACGM				*i* LR	LR	11 47 16.3	
SEY	Seymchan	36.41	44	P	P	11 32 13.7	+2.3
	comp=Z,2.6nm,0.6s,baz=260,slow=5.9,SNR=16						
AKASG	Malin Array Be	36.45	294	P	P	11 32 12.0	+0.1
	comp=Z,9.4nm,0.4s,baz=59,slow=8.6,SNR=38						
AKASG				LR	LR	11 47 27.8	
	comp=Z,137nm,18.8s,baz=75,slow=37						
AKASG	Malin Array Be	36.45	294	P	P	11 32 11.7	-0.2
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	Malin Array Be	36.45	294	P	P	11 32 11.7	-0.2
AKBB	Malin Array Si	36.45	294	P	P	11 32 11.8	-0.1
AKBB				pmax	pmax		
	comp=Z,19nm,0.9s						
AKBB	Malin Array Si	36.45	294	P	P	11 32 11.8	-0.1
BZK	Bozkurt	37.41	279	⇑P	P	11 32 21.5	+1.3
SPITS	Spitsbergen Ar	37.84	341	P	P	11 32 25.0	+1.6
	comp=Z,7.8nm,0.9s,baz=73,slow=5.0,SNR=3.7						
SPITS				PcP	PcP	11 34 41.2	+1.7
	comp=Z,11nm,0.9s,baz=51,slow=5.7,SNR=5.4						
SORM	Soroca	38.01	291	⇑P	P	11 32 25.1	0.0
ILGA	Ilgaz	38.07	278	P	P	11 32 26.7	+0.6
ILGA				IAmb	IAmb	11 32 28.0	
	comp=Z,14nm,1.0s						
MILM	Milestii Mici	38.27	289	⇑P	P	11 32 27.3	0.0
JOW	Kunigami	38.68	111	LR	LR	11 50 35.8	
	comp=Z,90nm,19.1s,baz=336,slow=40						
BR131	Keskin Array S	38.84	276	P	P	11 32 32.6	+0.1
BR131				pmax	pmax		
	comp=Z,24nm,0.6s						
BR131	Keskin Array S	38.84	276	P	P	11 32 32.6	+0.1
BRTR	Keskin Array B	38.84	276	P	P	11 32 33.2	+0.8
	comp=Z,13nm,0.5s,baz=73,slow=5.9,SNR=45						
BRTR				LR	LR	11 48 51.4	
	comp=Z,51nm,20.0s,baz=41,slow=37						
BRTR	Keskin Array B	38.84	276	P	P	11 32 31.9	-0.6
TPGR	Topolog	39.48	286	⇑P	P	11 32 38.1	+0.6
CFR	Carcaliu	39.50	287	⇑P	P	11 32 38.1	+0.4
PRAR	RASCA	39.63	291	⇓P	P	11 32 39.6	+0.7
TESR	Tescani	39.77	289	⇑P	P	11 32 40.8	+0.8
LVV	L'vov	39.85	295	*e*P	P	11 32 41.3	+0.7
BIZ	Bicaz	39.91	290	⇑P	P	11 32 42.0	+0.8
VRI	Vrincioaia	40.03	288	⇑P	P	11 32 42.4	+0.2
VRI	Vrincioaia	40.03	288	P	P	11 32 42.1	-0.1
VRI				pmax	pmax		
	comp=Z,12nm,2.2s						
PLOR	Plostina	40.09	288	⇑P	P	11 32 44.6	+1.9
BUR08	Bucovina Ar. S	40.12	292	P	P	11 32 43.2	+0.1
BUR08				IAmb	IAmb	11 32 44.8	
	comp=Z,11nm,0.8s						
BURAR	Bucovina Array	40.13	292	⇑P	P	11 32 43.4	+0.3
BURAR	Bucovina Array	40.13	292	P	P	11 32 43.0	-0.1
BISRR	Bisoca	40.20	288	⇑P	P	11 32 44.2	+0.6
ICOR	Ion Corvin	40.23	285	⇑P	P	11 32 43.1	-0.7
NEHR	Nehoiu	40.51	288	⇑P	P	11 32 47.4	+1.3
MLR	Muntele Rosu	40.69	288	⇑P	P	11 32 48.8	+1.0
MLR	Muntele Rosu	40.69	288	P	P	11 32 47.6	-0.2
MLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MLR	Muntele Rosu	40.69	288	P	P	11 32 47.6	-0.2
KWP	Kalwaria Pacla	40.71	295	*e*P	P	11 32 49.0	+1.3
KWP	Kalwaria Pacla	40.71	295	P	P	11 32 48.1	+0.4
KWP				pmax	pmax		
	comp=Z,98nm,1.4s						
KWP	Kalwaria Pacla	40.71	295	P	P	11 32 48.1	+0.4
DOPR	Dopca	40.80	289	⇑P	P	11 32 48.6	0.0
ARCR	ARCALIA	40.90	291	⇑P	P	11 32 50.5	+1.2
BILL	Bilibino	40.97	34	P	P	11 32 51.9	+2.3
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL	Bilibino	40.97	34	P	P	11 32 51.9	+2.3
VOIR		41.27	289	⇑P	P	11 32 53.2	+0.7
KOLS	Kolonicke sedl	41.27	295	*e*P	P	11 32 53.6	+1.2
KOLS	Kolonicke sedl	41.27	295	*e*P	P	11 32 53.6	+1.2
ARR	Arges	41.56	289	⇓P	P	11 32 55.0	+0.1
CRVS	Cervenica-Dubn	41.76	295	*e*P	P	11 33 00.7	+4.3
CRVS	Cervenica-Dubn	41.76	295	*e*P	P	11 33 00.7	+4.3
HUMR	Humele	41.77	288	⇑P	P	11 32 56.4	0.0
NC405	NORSAR Array S	41.95	315	P	P	11 32 58.0	+0.2
DRGR		42.02	292	⇑P	P	11 32 58.9	+0.3
RAYN	Ar Rayn	42.03	247	P	P	11 32 58.1	-0.8
RAYN				pmax	pmax		
	comp=Z,23nm,0.7s						
RAYN	Ar Rayn	42.03	247	P	P	11 32 58.1	-0.8
RAYN				IAmb	IAmb	11 32 59.3	
	comp=Z,23nm,0.7s						
PETK	Petropavlovsk-	42.12	58	P	P	11 33 00.8	+1.5
	comp=Z,5.6nm,0.7s,baz=291,slow=4.6,SNR=19						
PETK				LR	LR	11 51 41.4	
	comp=Z,56nm,18.1s,baz=301,slow=38						
PETK	Petropavlovsk-	42.12	58	P	P	11 33 00.5	+1.2
OJC	Ojcow	42.12	298	*e*P	P	11 33 00.4	+1.0
OJC	Ojcow	42.12	298	P	P	11 32 59.8	+0.4
OJC				pmax	pmax		
	comp=Z,20nm,0.6s						
OJC	Ojcow	42.12	298	P	P	11 32 59.8	+0.4
OJC				IAmb	IAmb	11 33 03.9	
	comp=Z,20nm,0.6s						
NIE	Niedzica	42.20	296	*e*P	P	11 33 01.6	+1.6
NIE				*e*pP	sP	11 33 04.8	+0.6
NB2	NORSAR Subarra	42.20	315	P	P	11 33 00.3	+0.4
	comp=Z,3.0nm,0.6s,baz=68,slow=7.9						
NOA	NORSAR Array B	42.20	315	P	P	11 33 00.6	+0.7
	comp=Z,4.9nm,0.8s,baz=65,slow=7.8,SNR=14						
NOA				LR	LR	11 50 23.8	
	comp=Z,72nm,18.9s,baz=285,slow=36						
KECS	Kecovo	42.53	295	*e*P	P	11 33 04.2	+1.5
KECS	Kecovo	42.53	295	*e*P	P	11 33 04.2	+1.5
GZR	Gura Zlata	42.68	290	⇑P	P	11 33 04.9	+0.9
LANS	Liptovska Anna	42.81	296	*e*P	P	11 33 07.8	+2.8
LANS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LANS	Liptovska Anna	42.81	296	*e*P	P	11 33 07.8	+2.8
SIRR	Siria	42.91	291	⇑P	P	11 33 06.7	+0.9
PSZ	Piszkesteto	43.15	294	⇓*e*P	P	11 33 11.3	+3.5
BZS	Buzias	43.27	291	⇑P	P	11 33 09.2	+0.5
VYHS	Vyhne	43.49	296	*e*P	P	11 33 12.0	+1.6
VYHS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VYHS	Vyhne	43.49	296	*e*P	P	11 33 12.0	+1.6
MORC	Moravsky Berou	43.62	298	P	P	11 33 12.1	+0.6
MORC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MORC	Moravsky Berou	43.62	298	P	P	11 33 12.1	+0.6
KSP	Ksiaz	43.82	300	*e*P	P	11 33 13.9	+0.8
KRLC	Kraliky	43.91	299	*e*P	P	11 33 14.9	+1.1
KRLC	Kraliky	43.91	299	*e*P	P	11 33 14.9	+1.1
JAVC	Velka Javorina	43.99	297	*e*P	P	11 33 16.6	+2.1
OSTC	Ostas	44.00	300	*e*P	P	11 33 19.1	+4.6
DPC	Dobruska-Polom	44.04	299	*e*P	P	11 33 16.4	+1.5
DPC				*e*		11 34 57.4	
DPC	Dobruska-Polom	44.04	299	*e*P	P	11 33 16.4	+1.5
DPC				*e*PP	PP	11 34 57.4	+0.2
CHVC	Chvalec	44.08	300	*e*P	P	11 33 16.5	+1.3
CHVC				*e*PP	PP	11 34 58.4	+0.9
UPC	Upice	44.14	300	*e*P	P	11 33 17.0	+1.4
UPC				*e*		11 33 20.0	
UPC	Upice	44.14	300	*e*P	P	11 33 17.0	+1.4
UPC				*e*x	x	11 33 20.0	
SMOL	Smolenice	44.30	296	*e*P	P	11 33 18.5	+1.6
SMOL	Smolenice	44.30	296	*e*P	P	11 33 18.5	+1.6
VRAC	Vranov	44.39	298	*e*P	P	11 33 19.0	+1.4
MODS	Modra-Piesok	44.45	296	*e*P	P	11 33 21.3	+3.1
MODS	Modra-Piesok	44.45	296	*e*P	P	11 33 21.3	+3.1
KRUC	Moravsky	44.62	298	*e*P	P	11 33 20.7	+1.2
MORH	Mrgy, Hungar	44.74	293	⇑*e*P	P	11 33 21.0	+0.6
MPLH	Magyarpolny	44.91	295	⇓*e*P	P	11 33 23.4	+1.6
PVCC	Panska Ves	44.94	300	*e*PP	PP	11 35 10.3	+3.6
TREC	Trest	45.02	298	*e*P	P	11 33 24.3	+1.6
TREC	Trest	45.02	298	*e*P	P	11 33 24.3	+1.6
DIVS	Divibare	45.05	290	P	P	11 33 23.1	0.0
BRG	Berggiesshubel	45.12	301	*e*P	P	11 33 24.1	+0.7
BRG				Amp		11 33 25.9	
	comp=Z,3.9nm,0.8s						
BRG				*e*x	x	11 33 37.2	
BRG				Amp		11 33 38.4	
	comp=Z,5.7nm,0.8s						
BRG				*e*x	x	11 35 10.6	
BRG				Amp		11 35 15.0	
	comp=Z,13nm,1.3s						
BRG	Berggiesshubel	45.12	301	*e*P	P	11 33 24.1	+0.7
BRG				*e*		11 33 37.2	
BRG				*e*		11 35 10.5	
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,13nm,1.3s						
BRG	Berggiesshubel	45.12	301	*e*P	P	11 33 24.1	+0.7
BRG				Amp		11 33 25.9	
	comp=Z,3.9nm,0.8s						
BRG				*e*x	x	11 33 37.2	
BRG				Amp		11 33 38.4	
	comp=Z,5.7nm,0.8s						
BRG				*e*x	x	11 35 10.6	
BRG				Amp		11 35 15.0	
	comp=Z,13nm,1.3s						
BRG	Berggiesshubel	45.12	301	*e*P	P	11 33 24.5	+1.1
	comp=Z,3.5nm,0.7s,baz=60,slow=7.9						
PRU	Pruhonice	45.22	300	*e*P	P	11 33 25.5	+1.3
PRU				*e*		11 35 09.7	
PRU	Pruhonice	45.22	300	*e*P	P	11 33 25.5	+1.3
PRU				*e*PP	PP	11 35 09.7	+0.1
SOP	Sopron	45.22	296	⇓*e*P	P	11 33 26.6	+2.4
FBE	Freiberg	45.42	301	*e*P	P	11 33 27.1	+1.3
	baz=60,slow=7.9						
CLL	Collm	45.43	302	⇑*i*P	P	11 33 26.6	+0.8
	comp=Z,14nm,0.7s						
CLL				*i*		11 33 29.6	
CLL				*e*PP	PP	11 35 11.0	-0.8
CLL				*e*		11 35 17.0	
CLL	Collm	45.43	302	⇑*i*P	P	11 33 26.6	+0.8
CLL				*i*		11 33 29.6	
CLL				pmax	pmax		
	comp=Z,14nm,0.7s						
CLL	Collm	45.43	302	P	P	11 33 26.4	+0.6
CLL				IAmb	IAmb	11 33 31.6	
	comp=Z,14nm,0.6s						
CLL	Collm	45.43	302	*e*P	P	11 33 26.9	+1.1
	comp=Z,13nm,0.7s,baz=60,slow=7.9						
CONA	Conrad Observa	45.50	296	*e*P	P	11 33 28.2	+1.7
	comp=Z,3.6nm,0.6s						
BSEG	Bad Segeberg	45.60	306	*e*P	P	11 33 28.1	+0.9
	baz=60,slow=7.9						
PBCC	Pribram	45.67	299	*e*P	P	11 33 29.2	+1.3
FLTG	Flechtingen	45.89	304	*e*P	P	11 33 30.5	+1.0
	comp=Z,6.4nm,0.7s,baz=60,slow=7.9						
ARSA	Arzberg	46.04	296	*e*P	P	11 33 30.4	-0.4
	comp=Z,3.7nm,0.8s						
TANN	Tannenbergstha	46.16	301	*e*P	P	11 33 33.3	+1.5
	baz=60,slow=7.9						
KHC	Kasperske Hory	46.19	299	P	P	11 33 31.2	-0.8
KHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KHC	Kasperske Hory	46.19	299	*e*P	P	11 33 33.1	+1.1
KHC				*e*PP	PP	11 35 19.6	-0.4
KHC	Kasperske Hory	46.19	299	P	P	11 33 31.2	-0.8
KHC				IAmb	IAmb	11 33 36.9	
	comp=Z,9.6nm,1.1s						
WERD	Werda	46.23	301	*e*P	P	11 33 33.4	+1.2
	comp=Z,3.4nm,0.8s,baz=60,slow=7.9						
GUNZ	Gunzen	46.26	301	*e*P	P	11 33 33.9	+1.4
	comp=Z,5.6nm,0.7s,baz=60,slow=7.9						
GEC2	GERESS Array S	46.27	299	*e*P	P	11 33 33.5	+0.8
	comp=Z,2.7nm,0.9s,baz=60,slow=7.9						
GERES	GERESS Array B	46.27	299	P	P	11 33 33.8	+1.2
	comp=Z,1.4nm,0.5s,baz=66,slow=7.6,SNR=10						
GERES				PP	PP	11 35 20.2	-0.7
	comp=Z,2.2nm,0.8s,baz=58,slow=10,SNR=6.3						
GERES				LR	LR	11 53 48.6	
	comp=Z,143nm,19.8s,baz=82,slow=37						
GERES	GERESS Array B	46.27	299	P	P	11 33 32.2	-0.5
WERN	Wernitzgruen	46.28	301	*e*P	P	11 33 34.1	+1.5
	comp=Z,5.7nm,0.8s,baz=60,slow=7.9						
NRDL	Niedersach Rie	46.41	304	*e*P	P	11 33 35.1	+1.6
	baz=60,slow=7.9						
MOA	Molln	46.46	297	*e*P	P	11 33 34.8	+0.8
	comp=Z,2.2nm,0.6s						
MOX	Moxa	46.52	302	P	P	11 33 35.7	+1.2
MOX				pmax	pmax		
	comp=Z,13nm,1.1s						
MOX	Moxa	46.52	302	*e*P	P	11 33 35.7	+1.2
	comp=Z,5.2nm,0.7s,baz=60,slow=7.9						
WET	Wettzell	46.58	299	*e*P	P	11 33 36.2	+1.2
	comp=Z,3.4nm,0.7s,baz=60,slow=7.9						
SOKA	Soboth	46.63	295	*e*P	P	11 33 36.1	+0.6
	comp=Z,5.3nm,1.2s						
ROTZ	Rotzenmuhle	46.63	300	*e*P	P	11 33 36.8	+1.4
	comp=Z,3.6nm,0.7s,baz=60,slow=7.9						
GTTG	Gottingen	46.96	303	*e*P	P	11 33 39.4	+1.4
	comp=Z,17nm,0.9s,baz=60,slow=7.9						
GRF	Grafenberg Arr	47.22	301	*e*P	P	11 33 41.0	+1.0
	comp=Z,5.0nm,0.7s,baz=60,slow=7.9						
UBBA	Unterbreizbach	47.31	303	*e*P	P	11 33 41.7	+1.2
	baz=60,slow=7.9						
RJOB	Jochberg	47.36	298	*e*P	P	11 33 41.5	+0.3
	comp=Z,12nm,0.9s,baz=60,slow=7.9						
KBA	Koelnbreinsper	47.40	297	*e*P	P	11 33 42.8	+1.2
	comp=Z,15nm,1.3s						
KASTN	Kahler Asten	47.97	304	*e*P	P	11 33 47.2	+1.3
	comp=Z,6.3nm,0.9s,baz=60,slow=7.9						
ABTA	Abfaltersbach	48.05	297	*e*P	P	11 33 47.7	+1.1
	comp=Z,3.7nm,0.7s						
BUG	Bochum--Univer	48.46	304	*e*P	P	11 33 51.0	+1.5
	comp=Z,8.1nm,0.7s,baz=60,slow=7.9						
SQTA	Sankt Quirin	48.55	298	*e*P	P	11 33 51.5	+1.1
	comp=Z,3.4nm,0.6s						
RETA	Reutte	48.65	298	*e*P	P	11 33 52.5	+1.3
	comp=Z,7.0nm,0.6s						
FETA	Feichten	48.93	298	*e*P	P	11 33 54.3	+0.9
	comp=Z,6.5nm,0.7s						
DAVA	Damuels	49.27	299	*e*P	P	11 33 57.0	+0.9
	comp=Z,9.3nm,0.8s						
BFO	Black Forest	49.56	301	*e*P	P	11 33 58.9	+0.8
	comp=Z,1.7nm,0.7s,baz=60,slow=7.9						
EUNU	Eureka	50.21	359	P	P	11 34 04.0	+1.4
EUNU				IAmb	IAmb	11 34 54.4	
	comp=Z,11nm,1.1s						
LPL	La Plagne	52.06	298	*e*P	P	11 34 18.0	+0.8
LPL				pmax	pmax		
	comp=Z,40nm,1.5s						
BNI	Bardonecchia	52.37	298	P	P	11 34 20.0	+0.6
BNI				pmax	pmax		
	comp=Z,78nm,1.8s						
BNI	Bardonecchia	52.37	298	P	P	11 34 20.0	+0.6
SSF	Saint Saulge	52.96	302	*e*P	P	11 34 23.3	-0.2
SSF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DAV	Davao City (W)	53.22	130	LR	LR	11 58 55.9	
	comp=Z,59nm,19.0s,baz=326,slow=38						
MFF	Saint Martin d	55.23	303	*e*P	P	11 34 40.3	+0.2
MFF				pmax	pmax		
	comp=Z,43nm,1.3s						
IMAR	Indian Mountai	55.26	26	P	P	11 34 41.0	+1.0
BMAR	Burnt Mountain	56.54	21	P	P	11 34 49.4	+0.1
TTA	Tatalina	56.80	29	P	P	11 34 54.4	+3.1
TTA	Tatalina	56.80	29	P	P	11 34 54.4	+3.1
I23K	Minto, Yukon-K	57.11	25	P	P	11 34 55.2	+2.0
I23K				IAmb	IAmb	11 34 57.6	
	comp=Z,6.3nm,0.8s						
MDM	Murphy Dome	57.56	25	P	P	11 34 58.2	+1.7
MDM				IAmb	IAmb	11 35 29.5	
	comp=Z,28nm,2.0s						
BWN	Browne	57.83	26	P	P	11 35 00.1	+1.8
PRP	Porcupine Dome	57.83	23	P	P	11 35 00.9	+2.3
PRP				IAmb	IAmb	11 35 03.8	
	comp=Z,4.5nm,0.6s						
KTH	Kantishna Hill	57.89	27	P	P	11 35 01.2	+2.3
KTH				IAmb	IAmb	11 35 02.8	
	comp=Z,16nm,1.1s						
CCB	Clear Creek Bu	57.92	25	P	P	11 35 00.5	+1.6
WRH	Wood River Hil	57.98	25	P	P	11 35 01.2	+1.8
WRH				IAmb	IAmb	11 35 02.9	
	comp=Z,4.7nm,0.6s						
PPLA	Purkeypile	58.01	28	P	P	11 35 02.4	+2.5
IL31		58.07	24	P	P	11 35 02.0	+2.0
IL31				IAmb	IAmb	11 35 03.6	
	comp=Z,27nm,2.0s						
ILAR	Eielson Array	58.07	24	P	P	11 35 01.9	+1.8
	comp=Z,2.2nm,0.5s,baz=313,slow=3.3,SNR=64						
ILAR				PP	PP	11 37 05.3	-2.7
	comp=Z,0.8nm,0.9s,baz=310,slow=7.9,SNR=4.6						
ILAR	Eielson Array	58.07	24	P	P	11 35 01.4	+1.4
INK	Inuvik	58.15	17	P	P	11 35 03.0	+2.6
	comp=Z,7.2nm,0.8s,baz=339,slow=10,SNR=19						
INK	Inuvik	58.15	17	P	P	11 35 02.1	+1.6
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
INK	Inuvik	58.15	17	P	P	11 35 02.1	+1.6
INK				IAmb	IAmb	11 35 04.3	
	comp=Z,8.4nm,0.9s						
C36M	Paulatuk	58.76	13	P	P	11 35 05.3	+0.6
SKT	Skwentna	58.91	28	P	P	11 35 07.4	+1.4
SKT				IAmb	IAmb	11 35 10.5	
	comp=Z,7.0nm,0.9s						
DHY	Denali Highway	59.27	26	P	P	11 35 09.9	+1.3
DHY				IAmb	IAmb	11 35 12.2	
	comp=Z,5.4nm,0.7s						
RIDG	Independent Ri	59.43	24	P	P	11 35 10.7	+1.1
RIDG				IAmb	IAmb	11 37 13.4	
	comp=Z,20nm,1.5s						
SUA	Susitna One	59.54	28	P	P	11 35 13.2	+2.8
SUA				IAmb	IAmb	11 35 14.7	
	comp=Z,7.4nm,0.6s						
SCM	Sheep Creek Mo	60.27	27	P	P	11 35 17.3	+1.9
SCM				pmax	pmax		
	comp=Z,43nm,1.5s						
SCM	Sheep Creek Mo	60.27	27	P	P	11 35 17.3	+1.9
KNK	Knik Glacier	60.27	27	P	P	11 35 17.8	+2.4
BCAR	Beaver Creek A	60.78	23	P	P	11 35 19.9	+1.1
ESBB	Sonseca Array	61.86	299	P	P	11 35 26.4	-0.1
ESBB				IAmb	IAmb	11 35 31.5	
	comp=Z,7.5nm,0.7s						
ESDC	Sonseca Array	61.86	299	P	P	11 35 26.7	+0.2
	comp=Z,6.5nm,0.6s,baz=46,slow=6.7,SNR=35						
ESDC	Sonseca Array	61.86	299	P	P	11 35 26.3	-0.2
PBRG	Braganca	61.95	302	*e*P	P	11 35 28.2	+1.1
MVO	Moncorvo	62.55	302	*e*P	P	11 35 32.2	+1.1
PMRV	Marv??o	63.95	301	*e*P	P	11 35 41.2	+0.8
PCAS	Casmilo, Conde	64.12	302	*e*P	P	11 35 42.9	+1.4
PNCL	Nicolau / Gran	65.50	300	*e*P	P	11 35 51.9	+1.4
MESJ	Messejana	65.52	300	*e*P	P	11 35 52.0	+1.4
YKA	Yellowknife Ar	66.52	11	P	P	11 35 57.1	+0.5
	comp=Z,1.9nm,0.6s,baz=347,slow=6.6,SNR=39						
FITZ	Fitzroy Crossi	75.62	143	P	P	11 36 50.2	-2.1
	comp=Z,3.3nm,0.8s,baz=39,slow=6.5,SNR=6.6						
FITZ	Fitzroy Crossi	75.62	143	P	P	11 36 49.9	-2.3
FITZ				IAmb	IAmb	11 39 38.0	
	comp=Z,6.7nm,1.0s						
TOA0	Torodi Ar. Sit	77.45	275	P	P	11 37 01.8	-1.1
TORD	Torodi Ar. Bea	77.45	275	P	P	11 37 01.9	-1.1
	comp=Z,3.1nm,0.6s,baz=32,slow=4.8,SNR=13						
TORD	Torodi Ar. Bea	77.45	275	P	P	11 37 01.5	-1.4
KOWA	Kowa	80.09	281	P	P	11 37 16.8	-0.7
LON	Longmire	80.36	20	P	P	11 37 19.2	+0.7
LON				pmax	pmax		
	comp=Z,21nm,1.8s						
LON	Longmire	80.36	20	P	P	11 37 19.2	+0.7
LON				IAmb	IAmb	11 37 24.9	
	comp=Z,21nm,1.8s						
WB0	Warramunga Arr	80.79	136	P	P	11 37 18.7	-2.3
WB0				IAmb	IAmb	11 39 58.4	
	comp=Z,8.8nm,1.1s						
JTMT	Jette	80.86	15	P	P	11 37 22.6	+1.3
JTMT				IAmb	IAmb	11 37 25.3	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	80.92	136	P	P	11 37 18.7	-3.0
	comp=Z,1.8nm,0.6s,baz=338,slow=5.4,SNR=22						
WRA	Warramunga Arr	80.92	136	P	P	11 37 19.2	-2.5
WRA	Warramunga Arr	80.92	136	P	P	11 37 19.2	-2.5
WB2	Warramunga Arr	80.93	136	P	P	11 37 19.6	-2.0
WB2				IAmb	IAmb	11 37 46.7	
	comp=Z,30nm,1.7s						
WR0	Warramunga Arr	81.03	136	P	P	11 37 19.9	-2.3
WR0				IAmb	IAmb	11 39 00.6	
	comp=Z,24nm,1.7s						
DLMT	Dillon	83.45	14	P	P	11 37 36.4	+1.4
MCMT	McKenzie Canyo	83.93	14	P	P	11 37 38.9	+1.4
AS31	Alice Springs	84.00	138	P	P	11 37 35.5	-2.1
ASAR	Alice Springs	84.00	138	P	P	11 37 35.1	-2.5
	comp=Z,2.1nm,0.6s,baz=331,slow=4.9,SNR=28						
ASAR				LR	LR	12 18 20.0	
	comp=Z,43nm,18.4s,baz=170,slow=38						
PDAR	Pinedale Array	86.45	13	P	P	11 37 51.0	+0.8
	comp=Z,0.4nm,0.6s,baz=19,slow=2.5,SNR=5.5						
DBIC	Dimbokro	86.54	276	P	P	11 37 49.9	-0.8
	comp=Z,2.3nm,0.6s,baz=48,slow=4.6,SNR=5.2						
HWUT	Hardware Ranch	87.28	14	P	P	11 37 51.9	-2.3
HWUT				IAmb	IAmb	11 37 57.9	
	comp=Z,3.2nm,0.8s						
PNTR	Pine Nut	88.15	21	P	P	11 38 01.1	+2.7
PNTR				IAmb	IAmb	11 38 05.2	
	comp=Z,3.6nm,0.7s						
DUG	Dugway, Tooele	88.45	16	P	P	11 38 02.3	+2.6
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DUG	Dugway, Tooele	88.45	16	P	P	11 38 02.3	+2.6
DUG				IAmb	IAmb	11 38 08.3	
	comp=Z,5.0nm,1.0s						
NVAR	Mina Array Bea	89.07	20	P	P	11 38 04.6	+1.8
	comp=Z,0.7nm,0.7s,baz=330,slow=3.9,SNR=7.8						
NVAR	Mina Array Bea	89.07	20	P	P	11 38 03.6	+0.8
STKA	Stephens Creek	94.47	136	P	P	11 38 24.4	-2.9
	comp=Z,1.4nm,0.5s,baz=312,slow=1.3,SNR=8.5						
TXAR	Lajitas Array	100.43	10	PKKP	PKKPbc	11 55 09.3	+0.8
	comp=Z,0.2nm,0.7s,baz=213,slow=3.1,SNR=2.9						
SNAA	Sanae	136.53	207	PKiKP	PKiKP	11 44 31.1	+1.4
VNA2	Neumayer--Watz	137.69	209	PKiKP	PKiKP	11 44 33.3	+1.3
VNA3	Neumayer Olymp	138.49	209	PKPdf	PKiKP	11 44 33.6	-0.1
CPUP	Villa Florida	144.22	298	PKP	PKPab	11 44 40.5	-0.5
	comp=Z,2.8nm,0.4s,baz=38,slow=4.1,SNR=8.8						
CPUP	Villa Florida	144.22	298	PKIKP	PKPdf	11 44 42.7	-0.5
CPUP	Villa Florida	144.22	298		PKPdf	11 44 42.7	-0.5

IDC 26 11:26:13.0±5.5**, 58°.34S**×**157°.74W, h0^{km}, mb4.6**/3**, mb1 4.8**/3**, mb1mx4.1**/34**, mbtmp4.6**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.9**/19**, Error ellipse: s-maj=433.0km s-min=48.7km az=172.0, Pacific-Antarctic Ridge**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	Stephens Creek	48.22	276	P	P	11 34 55.1	+0.1
	2.4nm,0.8s,baz=134,slow=10,SNR=4.0						
PLCA	Paso Flores	55.12	112	LR	LR	11 54 46.6	
	comp=Z,38nm,20.6s,baz=143,slow=31						
ASAR	Alice Springs	58.84	275	P	P	11 36 13.4	+0.3
	2.4nm,0.9s,baz=139,slow=6.9,SNR=16						
WRA	Warramunga Arr	61.67	278	P	P	11 36 32.3	-0.3
	3.3nm,0.9s,baz=143,slow=6.1,SNR=17						
ILAR	Eielson Array	123.06	6	PKP	PKPdf	11 45 09.7	+0.1
	1.3nm,0.8s,baz=216,slow=4.5,SNR=12						
MKAR	Makanchi Array	142.97	279	PKP	PKPdf	11 45 44.6	-2.9
	0.5nm,0.7s,baz=113,slow=3.3,SNR=5.2						

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*JMA **26** 11:26:20.4±0.1,24°.07N×122°.52E,h33^{km}±3^{km},M2.5*
*TAP **26** 11:26:20.9,24°.18N×122°.51E,h36^{km},ML3.1,D*
ISC 26 11:26:20.2±1.0,**24°.10N**±0°.02×**122°.49E**±0°.02,**h29**^{km}±11^{km},**n94,**σ**0^s.78**/164,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.54	50	P	Pb	11 26 31.4	+0.1
JYNG				S	Sb	11 26 39.2	+0.3
YOJ	Yonaguni jima	0.60	53	P	Pb	11 26 32.1	-0.1
YOJ				S	Sb	11 26 40.4	+0.1
YOJ	Yonaguni jima	0.60	53	*i* P	Pb	11 26 32.3	+0.1
	baz=65						
YOJ				S	Sb	11 26 40.5	+0.2
	baz=65						
ENAH	Nanao	0.71	299	P	Pn	11 26 34.6	+0.4
	baz=293						
ENAH				*e*S	Sn	11 26 44.4	+0.2
	baz=293						
ENA	Nanau	0.76	296	*i* P	Pn	11 26 35.3	+0.4
	baz=290						
ENA				S	Sn	11 26 45.7	+0.3
	baz=290						
TWC	Suao	0.77	311	*i* P	Pn	11 26 35.2	+0.1
	baz=306						
TWC				*e*S	Sn	11 26 45.6	-0.2
	baz=306						
NACB	Ninganchiao	0.82	275	P	Pn	11 26 36.1	+0.4
	baz=257						
NACB				S	Sn	11 26 47.9	+1.0
	baz=257						
ETLH	Xiulin Townshi	0.93	277	*i* P	Pn	11 26 37.7	+0.4
	baz=272						
ETLH				S	Sn	11 26 50.4	+0.7
	baz=272						
ILA	Ilan	0.95	315	*i* P	Pn	11 26 38.1	+0.6
	baz=310						
NTC	Toucheng	0.96	321	P	Pn	11 26 38.5	+0.8
	baz=318						
NTC				S	Sn	11 26 50.6	+0.2
	baz=318						
TWE	Neicheng	0.97	310	P	Pn	11 26 38.5	+0.7
	baz=306						
TWE				*e*S	Sn	11 26 51.8	+1.2
	baz=306						
ENTT	Nioudou	1.00	303	*i* P	Pn	11 26 39.2	+1.0
	baz=299						
ENTT				S	Sn	11 26 52.4	+1.1
	baz=299						
ESL	Shilin	1.01	254	*e*P	Pn	11 26 39.6	+1.3
	baz=240						
ESL				*e*S	Sn	11 26 53.0	+1.5
	baz=240						
TWB1	Santiao Chiao	1.01	333	*e*P	Pb	11 26 38.4	-0.7
	baz=345						
TWB1				*e*S	Sn	11 26 52.0	+0.3
	baz=345						
NDT	Datong Townshi	1.02	300	P	Pn	11 26 39.5	+1.0
	baz=296						
NDT				S	Sn	11 26 52.7	+0.8
	baz=296						
TIPB	Shuangxi	1.06	325	P	Pb	11 26 39.6	-0.4
	baz=323						
TIPB				*e*S	Sn	11 26 53.9	+1.0
	baz=323						
NNSB	Datong	1.06	288	*e*P	Pn	11 26 39.5	+0.3
	baz=284						
NNSB				S	Sn	11 26 53.4	+0.4
	baz=284						
NNSH	Datong	1.06	288	*e*P	Pb	11 26 39.9	-0.1
	baz=284						
NNSH				*e*S	Sn	11 26 53.7	+0.7
	baz=284						
NNS	Nan Shan	1.07	289	P	Pb	11 26 40.1	-0.1
	baz=284						
WHF	Hehuan Shan	1.12	273	*e*P	Pb	11 26 41.3	+0.1
	baz=256						
WHF				*e*S	Sn	11 26 55.8	+0.9
	baz=256						
NWLT	Wulai	1.12	307	*i* P	Pb	11 26 41.2	+0.1
	baz=315						
NWLT				S	Sn	11 26 55.9	+1.4
	baz=315						
FUSS	Fushou	1.15	278	P	Pb	11 26 41.4	-0.2
	baz=274						
FUSS				S	Sn	11 26 56.2	+0.9
	baz=274						
HGSD	Ruisui	1.15	238	*e*P	Pb	11 26 41.6	+0.2
	baz=235						
HGSD				*e*S	Sn	11 26 55.6	+0.6
	baz=235						
IRIF	Iriomote-Funau	1.16	78	P	Pn	11 26 40.7	+0.4
IRIF				*e*S	Sb	11 26 55.8	-0.4
NWF	Wu-fen Shan	1.16	326	*e*P	Pn	11 26 41.0	+0.5
	baz=324						
NWF				S	Sb	11 26 55.7	-0.8
	baz=324						
WFSB	Wu-fen Shan	1.16	326	*i* P	Pn	11 26 40.9	+0.5
	baz=324						
WFSB				S	Sb	11 26 55.6	-0.8
	baz=324						
YHNB	Yeheng	1.16	299	*i* P	Pb	11 26 41.6	-0.1
	baz=296						
YHNB				S	Sn	11 26 56.4	+0.9
	baz=296						
NSK	Sanguang	1.18	299	P	Pb	11 26 41.8	-0.3
	baz=282						
NSK				S	Sn	11 26 56.4	+0.5
	baz=282						
CHGB	Renai	1.20	268	P	Pb	11 26 42.1	-0.3
	baz=253						
CHGB				*e*S	Sn	11 26 57.4	+0.8
	baz=253						
HATJ	Hateruma jima	1.20	92	P	Pn	11 26 40.9	-0.1
TWA	Mucha	1.20	317	P	Pn	11 26 41.4	+0.4
	baz=330						
TWA				*e*S	Sb	11 26 58.1	+0.5
	baz=330						
EHY	Hungye	1.22	241	*e*P	Pb	11 26 42.7	+0.1
	baz=238						
EHY				*e*S	Sb	11 26 58.0	-0.1
	baz=238						
TDCB	Techi	1.23	277	*e*P	Pb	11 26 42.5	-0.4
	baz=265						
TDCB				*e*S	Sb	11 26 58.4	+0.1
	baz=265						
NHDH	Xindian Distri	1.23	315	*e*P	Pb	11 26 42.9	+0.1
	baz=312						
NHDH				*e*S	Sb	11 26 58.1	-0.2
	baz=312						
TNOU	National Taiwa	1.23	328	*e*P	Pn	11 26 41.2	-0.2
	baz=326						
TNOU				*e*S	Sn	11 26 57.1	0.0
	baz=326						
TATO	Taipei	1.26	314	*e*P	Pb	11 26 42.9	-0.5
	baz=326						
TATO				*e*S	Sb	11 26 58.6	-0.6
	baz=326						
YULB	Yu-li	1.30	237	*e*P	Pn	11 26 42.9	+0.5
	baz=224						
YULB				*e*S	Sn	11 26 59.5	+0.8
	baz=224						
EYUL	Yuli	1.31	235	*e*P	Pb	11 26 43.5	-0.6
	baz=221						
EYUL				*e*S	Sn	11 26 59.9	+0.9
	baz=221						
TWF1	Yuli	1.32	236	*e*P	Pb	11 26 43.8	-0.5
	baz=223						
TWF1				*e*S	Sb	11 27 00.6	-0.3
	baz=223						
YM01	YM01	1.34	321	*e*P	Pn	11 26 42.7	-0.2
	baz=319						
YM01				S	Sn	11 27 00.0	+0.3
	baz=319						
YM10	YM10	1.35	321	P	Pn	11 26 42.9	-0.2
	baz=319						
YM10				S	Sb	11 27 01.4	-0.4
	baz=319						
YM11	YM11	1.35	322	*e*P	Pb	11 26 44.4	-0.5
	baz=320						
YM11				*e*S	Sn	11 27 00.2	+0.1
	baz=320						
YM05	YM05	1.35	322	P	Pn	11 26 43.6	+0.5
	baz=320						
YM05				*e*S	Sb	11 27 01.4	-0.5
	baz=320						
YM08	YM08	1.36	323	*e*P	Pb	11 26 45.4	+0.4
	baz=320						
YM04	YM04	1.36	321	*e*P	Pn	11 26 43.5	+0.3
	baz=319						
YM04				S	Sn	11 27 00.4	+0.1
	baz=319						
YM03	YM03	1.38	321	*e*P	Pb	11 26 45.3	-0.1
	baz=320						
YM03				*e*S	Sb	11 27 02.6	-0.1
	baz=320						
JKRS	Kuro-shima	1.40	84	P	Pn	11 26 44.6	+1.0
JKRS				*e*S	Sb	11 27 02.9	-0.1
TWS1	Kuangyinshan	1.40	316	*e*P	Pn	11 26 43.8	+0.2
	baz=328						
TWS1				*e*S	Sb	11 27 03.0	0.0
	baz=328						
ANP	Anpu	1.40	321	*e*P	Pb	11 26 45.4	-0.3
	baz=319						
ANP				*e*S	Sn	11 27 01.3	+0.1
	baz=319						
FULB	Fuli	1.42	231	*e*S	Sn	11 27 02.6	+0.9
	baz=228						
WHP	Taichung City	1.42	277	*e*P	Pb	11 26 47.0	+0.9
	baz=263						
WHP				*e*S	Sb	11 27 03.7	-0.1
	baz=263						
TWY	Chenhua	1.42	326	*e*P	Pb	11 26 45.2	-0.9
	baz=324						
TWY				*e*S	Sn	11 27 02.1	+0.3
	baz=324						
CHKT	Chengkung	1.43	226	*e*S	Sn	11 27 01.5	-0.5
	baz=223						
SSLB	Suanglung	1.44	258	*e*P	Pb	11 26 45.4	-1.0
	baz=254						
SSLB				*e*S	Sb	11 27 03.5	-0.8
	baz=254						
LIOB	Emei	1.45	292	*e*P	Pb	11 26 46.3	-0.3
	baz=289						
LIOB				*e*S	Sb	11 27 04.4	-0.2
	baz=289						
NSTT	Nanjuang	1.46	292	*e*S	Sb	11 27 04.8	0.0
	baz=289						
SMLT	Sun Moon Lake	1.47	262	*e*P	Pb	11 26 47.3	+0.4
	baz=258						
SMLT				*e*S	Sb	11 27 05.0	-0.3
	baz=258						
JIJ	Ishigaki jima	1.53	80	P	Pn	11 26 45.7	+0.2
JIJ				S	Sn	11 27 04.3	-0.1
WHYT	Xinyi Township	1.55	255	*e*S	Sn	11 27 06.2	+1.3
	baz=242						
EDH	Donghe	1.56	224	*e*P	Pn	11 26 46.5	+0.6
	baz=214						
EDH				*e*S	Sn	11 27 04.6	-0.6
	baz=214						
PCYT	Pengchaiyu	1.57	346	*e*P	Pn	11 26 46.3	+0.2
	baz=346						
PCYT				*e*S	Sn	11 27 05.9	+0.5
	baz=346						
TWQ1	Liyutan	1.59	279	*e*S	Sn	11 27 06.7	+0.9
	baz=276						
ELDTW	Lidau	1.63	236	*e*S	Sn	11 27 08.1	+1.2
	baz=233						
WJS	Zhushan	1.64	261	*e*S	Sb	11 27 09.6	-0.3
	baz=258						
ALS	Alishan	1.65	250	*e*P	Pb	11 26 49.6	-0.5
	baz=246						
ALS				*e*S	Sn	11 27 08.7	+0.9
	baz=246						
WNT1	Nantou City	1.67	264	*e*S	Sb	11 27 12.4	+1.7
	baz=261						
LDUT	Ludao	1.70	214	*e*P	Pn	11 26 48.2	+0.4
	baz=211						
LDUT				*e*S	Sn	11 27 08.2	-0.4
	baz=211						
LONT	Longtian	1.72	227	*e*S	Sn	11 27 10.0	+0.8
	baz=217						
JISG	Ishigakijimahi	1.73	73	P	Pn	11 26 48.3	+0.1
JISG				S	Sn	11 27 09.0	-0.3
CHN5	Tsauling	1.73	254	*e*P	Pb	11 26 51.0	-0.4
	baz=242						
CHN5				*e*S	Sb	11 27 12.2	-0.6
	baz=242						
TWGBT	Beinan	1.82	226	*e*P	Pb	11 26 51.3	-1.5
	baz=234						
TWGBT				*e*S	Sn	11 27 12.3	+0.7
	baz=234						
TWG	Pinlang	1.82	226	*e*P	Pb	11 26 51.5	-1.3
	baz=234						
TWG				*e*S	Sn	11 27 12.3	+0.7
	baz=234						
WDLH	Douliu	1.83	258	*e*S	Sb	11 27 14.0	-1.6
	baz=254						
STYT	Tauyuan	1.84	240	*e*P	Pb	11 26 52.8	-0.5
	baz=228						
STYT				*e*S	Sn	11 27 14.0	+1.8
	baz=228						
TPUB	Ta-pu	1.88	245	*e*P	Pb	11 26 53.9	0.0
	baz=242						
TPUB				*e*S	Sb	11 27 15.6	-1.4
	baz=242						
WTP	Ta-pu	1.92	244	*e*P	Pb	11 26 54.4	-0.1
	baz=241						
WTP				*e*S	Sn	11 27 15.4	+1.4
	baz=241						
WTK	Tuku	1.97	258	*e*S	Sb	11 27 18.7	-0.7
	baz=256						
TWK	Hsinying	2.01	246	*e*S	Sb	11 27 19.4	-1.4
	baz=243						
CHN1	Nanshi	2.02	244	*e*S	Sb	11 27 19.1	-1.7
	baz=241						
SGST	Jiashian	2.02	240	*e*S	Sb	11 27 20.3	-0.7
	baz=237						
ECL	Taimali	2.06	224	*e*S	Sn	11 27 17.1	-0.3
	baz=221						
JTJ	Tarama	2.09	75	P	Pn	11 26 54.4	+1.2
TSMG	Majia	2.19	231	*e*P	Pb	11 26 58.5	-0.6
	baz=224						
TSMG				*e*S	Sb	11 27 24.2	-1.7
	baz=224						
LAY	Lan-yu	2.23	203	*e*P	Pn	11 26 55.5	+0.4
	baz=200						
MASBT	Mashibuluo	2.26	229	*e*P	Pb	11 26 58.0	-2.3
	baz=222						
MASBT				*e*S	Sb	11 27 26.4	-1.4
	baz=222						
EAST	Anshuo	2.28	222	*e*P	Pn	11 26 58.1	+2.2
	baz=219						
EAST				*e*S	Sn	11 27 23.9	+0.9
	baz=219						
TWKBT	Hengchun	2.65	216	*e*S	Sn	11 27 33.9	+1.9
	baz=213						
PHUB	P'eng-hu	2.73	258	*e*S	Sn	11 27 35.6	+1.4
	baz=270						
VWUC	VWUC	2.91	288	*e*P	Pn	11 27 04.9	+0.5
	baz=286						
VWUC				*e*S	Sn	11 27 37.6	-0.8
	baz=286						
MATB	Ma-tsu	3.08	312	*e*P	Pn	11 27 06.7	-0.1
	baz=321						
MATB				*e*S	Sn	11 27 41.6	-1.1
	baz=321						
PTMZ	Houxiangcun	3.21	288	*e*P	Pn	11 27 09.0	+0.4
	baz=286						
PTMZ				*e*S	Sn	11 27 44.7	-1.1
	baz=286						
LYJJ	Jianjiangzhen	3.47	315	*e*P	Pn	11 27 12.4	+0.2
	baz=324						
LYJJ				*e*S	Sn	11 27 51.0	-1.4
	baz=324						
XPSS	Dashiqiu	3.50	324	*e*P	Pn	11 27 13.3	+0.7
	baz=323						
XPSS				*e*S	Sn	11 27 52.8	-0.3
	baz=323						
MHZQ	Yeshan	3.72	303	*e*S	Sn	11 27 56.9	-1.4
	baz=301						

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*IDC **26** 11:30:56.3±1.0,9°.67N×122°.38E,h0^{km},mb3.9/6,
mb1 3.9/6,mb1mx3.6/42,mbtmp3.9/6,MS3.2/3,Ms1 3.2/3,
ms1mx2.8/50,Error ellipse: s-maj=45.2km s-min=18.6km
az=68.0*
*MAN **26** 11:30:59.5,9°.85N×122°.30E,h20^{km},MS3.9*
MAN INTENSITY II - SIPALAY CITY; SANTA CATALINA AND BASAY.
ISC 26 11:30:58.9±1.7,**9°.79N**±0°.05×**122°.27E**±0°.05,**h14**^{km}±11^{km},**n18,**σ**0^s.92**/23,**mb4.1**/7,**2D,Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	0.37	84	*e*P	Pg	11 31 06.5	+0.1
CNOP				*e*S	Sb	11 31 13.0	+0.2
GUIM	Jordan	0.89	21	*e*P	Pg	11 31 15.3	-0.9
GUIM				*e*S	Sb	11 31 27.8	0.0
CUYO	Cuyo Island	1.62	311	*e*P	Pn	11 31 26.9	-0.1
CUYO				*e*S	Sn	11 31 47.8	+0.2
LLP	Lapu-Lapu	1.76	72⇓	*i*P	Pn	11 31 29.5	+0.7
LLP				*i* S	Sn	11 31 50.9	-0.1
PAGZ	Pagadian	2.22	150	*e*P	Pn	11 31 36.0	+0.7
PAGZ				*e*S	Sb	11 32 06.8	+0.6
MSLP	Maasin	2.58	82	*e*P	Pn	11 31 40.9	+0.7
MSLP				*e*S	Sn	11 32 10.2	-1.2
CGP	Cagayan de Oro	2.74	119⇓	*e*P	Pn	11 31 43.0	+0.7
CGP				*e*S	Sb	11 32 21.5	+0.4
SJMP	San Jose	2.88	337	*e*P	Pn	11 31 45.3	+0.9
SJMP				*e*S	Sn	11 32 17.9	-0.9
TGY	Tagaytay City	4.48	343	LR	LR	11 34 15.2	
	comp=Z,234nm,18.8s,baz=136,slow=43						
SIJI	Sorong	13.87	139	LR	LR	11 39 56.5	
	comp=Z,124nm,19.3s,baz=352,slow=39						
CMAR	Chiang Mai Arr	24.18	293	P	P	11 36 16.4	+1.3
	0.5nm,0.3s,baz=104,slow=6.4,SNR=7.6						
ASAR	Alice Springs	35.14	161	P	P	11 37 50.8	-1.5
	2.1nm,0.5s,baz=344,slow=7.4,SNR=16						
USRK	Ussuriysk Ar.	35.31	12	P	P	11 37 54.3	+0.9
	2.5nm,0.9s,baz=217,slow=7.0,SNR=6.0						
SONM	Songino Array	40.22	343	P	P	11 38 35.5	+0.4
	1.9nm,1.1s,baz=168,slow=9.7,SNR=3.1						
HNR	Honiara	42.09	116	LR	LR	11 57 52.3	
	comp=Z,31nm,18.0s,baz=344,slow=38						
STKA	Stephens Creek	45.37	157	P	P	11 39 15.0	-1.9
	1.6nm,0.6s,baz=340,slow=8.0,SNR=4.2						
MKAR	Makanchi Array	50.08	325	P	P	11 39 54.5	+1.1
	1.9nm,0.9s,baz=144,slow=7.1,SNR=4.3						
ZALV	Zalesovo Beam	53.22	333	P	P	11 40 16.8	+0.2
	0.4nm,0.4s,baz=123,slow=7.1,SNR=1.9						

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*OTT **26** 11:35:36.5±0.2,71°.53N×68°.89W,h18^{km},MN3.7/1,
120km northeast from Clyde River, Nu Baffin Bay Seismic Zone.*
ISC 26 11:35:33.2±0.9,**71°.54N**±0°.05×**69°.09W**±0°.07,**h10**^{km},**n10,**σ**3^s.06**/19,**Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	Clyde River	1.09	171	PG	Pn	11 35 56.2	+1.8
CLRN				SG	Sg	11 36 09.4	+1.2
CLRN				Trac		11 36 11.0	
	comp=Z,637nm,0.1s						
UPNV	Upernavik	4.17	67	*e*	Pn	11 36 40.5	+3.7
	baz=232,slow=18						
UPNV				*i* P	Pn	11 36 40.7	+3.9
UPNV				*i* S	Sn	11 37 24.9	-0.6
UPNV				IAML		11 37 25.0	
	comp=Z,4.6nm,0.4s						
TULEG	Thule	5.02	1	PN	Pn	11 36 51.2	+2.7
TULEG				SN	Sn	11 37 44.9	-1.5
TULEG				Trac		11 37 49.8	
	comp=Z,3.8nm,0.2s						
TULEG	Thule	5.02	1	*e*P	Pn	11 36 50.8	+2.3
TULEG				*i*		11 36 51.5	
TULEG				*e*S	Sn	11 37 44.4	-2.1
TULEG				IAML		11 37 47.0	
	comp=Z,4.4nm,0.4s						
FRB	Frobisher Bay	7.84	178	PN	Pn	11 37 29.2	+2.2
FRB				SN	Sn	11 38 51.5	-4.2
FRB				Trac		11 39 29.6	
	comp=Z,73nm,0.8s						
FRB				LG	Lg	11 39 40.2	
SFJD	Kangerlussuaq	7.96	116	PN	Pn	11 37 30.4	+1.8
SFJD				SN	Sn	11 38 53.0	-5.6
SFJD				Trac		11 38 59.4	
	comp=Z,180nm,5.0s						
RES	Resolute Bay	8.10	305	SN	Sn	11 38 59.0	-2.9
RES				SN	Sn	11 39 01.9	-0.1
RES				Trac		11 39 12.0	
	comp=Z,255nm,3.8s						
SUMG	Summit	9.45	69	*i* P	Pn	11 37 51.6	+2.2
SUMG				*i*		11 39 31.1	
SUMG	Summit	9.45	69	*i* P	Pn	11 37 51.6	+2.2
SUMG				*i*		11 39 31.2	
SUMG				IAML		11 39 35.1	
	comp=Z,3.5nm,0.3s						
EUNU	Eureka	9.48	342	PN	Pn	11 37 51.5	+1.9
EUNU				SN	Sn	11 39 31.6	-4.4
EUNU				Trac		11 39 38.3	
	comp=Z,877nm,5.6s						

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*DNK **26** 11:56:21.8±4.4,81°.42N×0°.09W,h385^{km}±52^{km},ML3.4*
*IDC **26** 11:56:28.4±0.6,81°.55N×4°.58W,h0^{km},mb3.7/15,
mb1 3.9/17,mb1mx3.7/54,mbtmp3.8/17,ML3.9/2,MS3.6/27,
Ms1 3.6/27,ms1mx3.4/58,Error ellipse: s-maj=22.0km
s-min=12.4km az=21.0*
*NEIC **26** 11:56:30.2±1.2,81°.44N±0°.09×5°.8W±0°.3,h28^{km}±5^{km},
mb4.1/22,Error ellipse: s-maj=14.3km s-min=1.6km
az=205.0*
*IEPN **26** 11:56:31.0,81°.57N×3°.26W,h10^{km}*
*BER **26** 11:56:31.6±3.7,81°.44N×3°.76W,h10^{km}±31^{km},ML2.8,
ML3.3(NAO),Confirmed Earthquake*
ISC 26 11:56:27.9±0.4,**81°.41N**±0°.06×**4°.73W**±0°.04,**h10**^{km},**n100,**σ**2^s.62**/109,**mb3.9**/23,**MS3.5**/23,**1C,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	3.78	123	Pn	Pn	11 57 26.1	0.0
KBS				Sn	Sn	11 58 06.8	-3.7
KBS	Kingsbay	3.78	123	Pn	Pn	11 57 26.5	+0.4
KBS	Kingsbay	3.78	123	*e*P	Pn	11 57 26.2	0.0
KBS				*e*S	Sn	11 58 06.8	-3.7
KBS				IAML		11 58 15.2	
	comp=Z,17nm,0.7s						
KBS	Kingsbay	3.78	123	*e*P	Pn	11 57 26.0	0.0
KBS				*e*S	Sn	11 58 06.9	-3.7
KBS	Kingsbay	3.78	123	*i* P	Pn	11 57 26.1	0.0
KBS				*i*		11 58 06.1	
KBS				IAML		11 58 12.7	
	comp=Z,23nm,0.3s						
BRBA	Barentsburg A	4.75	125	Pn	Pn	11 57 40.7	+1.4
BRBA	Barentsburg A	4.75	125	*e*P	Pn	11 57 41.1	+1.8
BRBA				*e*S	Sn	11 58 30.2	-4.1
BRBA				IAML		11 58 50.6	
	comp=Z,14nm,0.6s						
SPA0	Spitsbergen Ar	4.92	120	Pn	Pn	11 57 41.8	0.0
	baz=345,slow=11						
SPA0				Sn	Sn	11 58 34.1	-4.6
SPA0	Spitsbergen Ar	4.92	120		Pn	11 57 42.6	+0.8
SPA0	Spitsbergen Ar	4.92	120	Pn	Pn	11 57 41.8	0.0
	baz=345,slow=11						
SPA0				Sn	Sn	11 58 34.1	-4.6
SPA0	Spitsbergen Ar	4.92	120⇑	*i*P	Pn	11 57 41.7	-0.2
SPA0				*e*S	Sn	11 58 33.9	-4.9
SPITS	Spitsbergen Ar	4.92	120	Pn	Pn	11 57 42.1	+0.3
	baz=345,slow=9.5,SNR=353						
SPITS				Sn	Sn	11 58 34.3	-4.4
	baz=341,slow=13,SNR=1.3						
SPITS				LR	LR	11 59 38.4	
	comp=Z,616nm,19.7s,baz=345,slow=38						
DAG	Danmarks Havn	5.34	217	*e*	Pn	11 57 49.9	+2.4
	baz=32,slow=14						
DAG				*e*P	Pn	11 57 50.4	+3.0
DAG				*e*S	Sn	11 58 49.1	+0.3
DAG				*i*		11 58 49.3	
DAG				IAML		11 59 00.6	
	comp=Z,21nm,0.4s						
DAG	Danmarks Havn	5.34	217	*e*	Pn	11 57 49.9	+2.4
	baz=32,slow=14						
DAG				*i* P	Pn	11 57 50.6	+3.1

DAG				*i*		11 58 49.3	
DAG				IAML		11 59 00.6	
	comp=Z,21nm,0.4s						
HSPB	Hornsund (broa	5.79	129	Pn	Pn	11 57 54.1	+0.4
HSPB	Hornsund (broa	5.79	129	*e*P	Pn	11 57 55.1	+1.4
HSPB				*e*S	Sn	11 58 56.0	-4.0
HSPB	Hornsund (broa	5.79	129	*e*P	Pn	11 57 54.6	+1.0
HSPB				*e*S	Sn	11 58 56.5	-3.5
HOPEN	Hopen	7.41	115	Pn	Pn	11 58 15.3	-0.5
HOPEN				Sn	Sn	11 59 33.1	-6.7
HOPEN	Hopen	7.41	115	*e*P	Pn	11 58 15.4	-0.5
HOPEN				*e*S	Sn	11 59 33.0	-6.8
HOPEN				IAML		11 59 41.0	
	comp=Z,11nm,0.9s						
HOPEN	Hopen	7.41	115	*e*P	Pn	11 58 14.9	-0.9
HOPEN				*e*S	Sn	11 59 31.7	-8.1
DBG	Daneborg	7.80	212	Pn	Pn	11 58 23.9	+2.6
DBG				Sn	Sn	11 59 49.1	-0.3
DBG	Daneborg	7.80	212	*e*P	Pn	11 58 23.9	+2.6
DBG				*e*S	Sn	11 59 44.3	-5.1
DBG				IAML		11 59 59.9	
	comp=Z,12nm,0.4s						
DBG	Daneborg	7.80	212	*i* P	Pn	11 58 23.7	+2.4
DBG				*i* S	Sn	11 59 47.7	-1.7
DBG				IAML		11 59 59.9	
	comp=Z,12nm,0.4s						
ZFI2	Zemlya Franca-	7.89	68	*e*P	Pn	11 58 18.6	-3.9
ZFI2				*e*S	Sn	11 59 37.6	-14
	comp=Z,41nm,0.4s						
ZFI	Zemlya Franca-	7.89	68	*e*P	Pn	11 58 19.6	-2.9
ZFI				*e*S	Sn	11 59 39.7	-12
SUMG	Summit	11.37	238		Pn	11 59 09.7	-0.7
SUMG	Summit	11.37	238	*i* P	Pn	11 59 11.0	+0.6
SUMG				*i* S	Sn	12 01 12.1	-5.4
SUMG				IAML		12 01 18.2	
	comp=Z,12nm,0.4s						
SUMG	Summit	11.37	238	*i* P	Pn	11 59 11.0	+0.6
SUMG				*i* S	Sn	12 01 12.1	-5.4
SUMG	Summit	11.37	238	*i* P	Pn	11 59 11.0	+0.6
SUMG				*i* S	Sn	12 01 12.1	-5.4
SUMG				IAML		12 01 18.2	
	comp=Z,12nm,0.4s						
SCO	Scoresbysund	11.65	210	Pn	Pn	11 59 14.1	+0.2
EUNU	Eureka	12.21	306	Pn	Pn	11 59 19.3	-2.3
TULEG	Thule	12.44	282	Pn	Pn	11 59 21.6	-3.1
TULEG	Thule	12.44	282	*i* P	Pn	11 59 22.2	-2.4
TULEG				IAML		12 01 48.4	
	comp=Z,4.7nm,0.4s						
TULEG	Thule	12.44	282	*i* P	Pn	11 59 22.2	-2.4
TULEG				IAML		12 01 48.4	
	comp=Z,4.7nm,0.4s						
UPNV	Upernavik	13.66	260	*e*	Pn	11 59 31.8	-10
UPNV				*i* S	Sn	12 02 01.3	-12
UPNV				IAML		12 02 03.7	
	comp=Z,9.6nm,0.4s						
UPNV	Upernavik	13.66	260	*e*	Pn	11 59 31.8	-10
UPNV				*i* S	Sn	12 02 01.3	-12
UPNV				IAML		12 02 03.7	
	comp=Z,9.6nm,0.4s						
ARA0	ARCESS Array S	13.80	132	Pn	Pn	11 59 43.1	-0.1
	baz=354,slow=9.3						
ARA0	ARCESS Array S	13.80	132	Pn	Pn	11 59 43.1	-0.1
	baz=354,slow=9.3						
ARCES	ARCESS Array B	13.80	132	Pn	Pn	11 59 42.8	-0.3
	baz=354,slow=10.0,SNR=6.9						
ARCES				LR	LR	12 04 40.3	
	comp=Z,170nm,19.6s,baz=340,slow=36						
BORG	Borgarnes	17.28	204	Pn	Pn	12 00 27.6	-1.2
RES	Resolute Bay	17.64	299	P	Pn	12 00 28.6	-4.6
	comp=Z,0.5nm,0.3s,baz=41,slow=10,SNR=14						
RES				LR	LR	12 06 50.1	
	comp=Z,181nm,21.0s,baz=76,slow=35						
RES	Resolute Bay	17.64	299		Pn	12 00 29.0	-4.2
RES				IAmb	IAmb	12 00 30.3	
	comp=Z,10.0nm,1.1s						
SFJD	Kangerlussuaq	18.16	245	P	Pn	12 00 37.9	-1.7
	comp=Z,0.7nm,0.3s,baz=20,slow=13,SNR=2.7						
SFJD				LR	LR	12 08 20.3	
	comp=Z,308nm,18.4s,baz=15,slow=39						
SFJD	Kangerlussuaq	18.16	245		Pn	12 00 38.0	-1.6
SFJD				IAmb	IAmb	12 00 42.6	
	comp=Z,27nm,1.4s						
NOA	NORSAR Array B	20.94	158	LR	LR	12 07 51.8	
	comp=Z,51nm,19.8s,baz=315,slow=32						
FINES	FINESS Array B	21.71	138	P	P	12 01 21.2	+2.7
	comp=Z,2.1nm,0.8s,baz=9.6,slow=9.2,SNR=2.9						
FINES				LR	LR	12 09 17.2	
	comp=Z,117nm,21.9s,baz=318,slow=35						
FINES	FINESS Array B	21.71	138	P	P	12 01 20.6	+2.0
HFS	Hagfors	21.99	155	LR	LR	12 10 06.0	
	comp=Z,49nm,18.6s,baz=302,slow=37						
FRB	Frobisher Bay	23.80	262	P	P	12 01 42.0	+1.9
	comp=Z,8.3nm,0.9s,baz=12,slow=9.5,SNR=9.4						
FRB				LR	LR	12 11 53.2	
	comp=Z,156nm,19.2s,baz=42,slow=39						
TIXI	Tiksi	25.19	33	P	P	12 01 52.7	-0.1
TIXI				IAmb	IAmb	12 01 55.1	
	comp=Z,5.2nm,1.1s						
C36M	Paulatuk	26.08	315	P	P	12 01 59.8	-1.1
C36M				IAmb	IAmb	12 02 13.0	
	comp=Z,3.6nm,1.2s						
KIRV	Kirov	27.34	112	LR	LR	12 14 27.9	
	comp=Z,160nm,18.1s,baz=327,slow=39						
INK	Inuvik	28.02	322	LR	LR	12 15 17.8	
	comp=Z,51nm,21.3s,baz=22,slow=40						
OBN	Obninsk	29.07	129	LR	LR	12 14 23.4	
	comp=Z,37nm,18.1s,baz=5.0,slow=37						
ARU	Arti	30.73	104	LR	LR	12 16 37.7	
	comp=Z,90nm,19.4s,baz=262,slow=39						
YKA	Yellowknife Ar	31.58	304	P	P	12 02 51.2	+1.3
	comp=Z,0.6nm,1.1s,baz=6.1,slow=9.0,SNR=4.8						
YKA				PcP	PcP	12 05 43.7	+1.9
	comp=Z,0.6nm,0.8s,baz=23,slow=2.9,SNR=7.0						
YKA				LR	LR	12 15 28.2	
	comp=Z,174nm,18.1s,baz=0.0,slow=36						
IMAR	Indian Mountai	31.86	336	P	P	12 02 51.4	-1.0
EGAK	Eagle	32.15	326	P	P	12 02 53.2	-1.8
ILAR	Eielson Array	32.61	331	P	P	12 03 00.5	+1.5
	comp=Z,0.3nm,0.7s,baz=8.2,slow=7.7,SNR=4.6						
ILAR				PcP	PcP	12 05 45.6	+1.0
	comp=Z,0.3nm,0.5s,baz=346,slow=3.4,SNR=5.2						
AKASG	Malin Array Be	32.62	139	LR	LR	12 15 59.8	
	comp=Z,70nm,21.3s,baz=290,slow=36						
DAWY	Dawson	32.70	325	P	P	12 02 58.3	-1.6
DAWY				IAmb	IAmb	12 03 14.9	
	comp=Z,3.3nm,1.2s						
BELG	Belogornoye	33.12	117	LR	LR	12 17 10.9	
	comp=Z,60nm,19.5s,baz=295,slow=38						
GERES	GERESS Array B	33.24	158	P	P	12 03 07.6	+2.9
	comp=Z,0.7nm,0.7s,baz=5.7,slow=6.7,SNR=4.8						
GERES	GERESS Array B	33.24	158	P	P	12 03 05.0	+0.3
DAVOX	Davos/Dischmat	35.10	162	LR	LR	12 16 38.9	
	comp=Z,74nm,18.2s,baz=254,slow=34						
BURAR	Bucovina Array	35.30	144	P	P	12 03 23.9	+1.3
SKT	Skwentna	35.70	334	P	P	12 03 24.9	-0.9
AKTO	Aktyubinsk	36.48	107	P	P	12 03 35.2	+2.6
	comp=Z,1.3nm,0.7s,baz=11,slow=16,SNR=3.4						
AKTO				LR	LR	12 20 11.7	
	comp=Z,121nm,18.3s,baz=357,slow=39						
ZALV	Zalesovo Beam	37.05	79	P	P	12 03 38.3	+1.0
	comp=Z,0.4nm,0.4s,baz=352,slow=5.8,SNR=2.6						
ZALV				LR	LR	12 21 43.2	
	comp=Z,51nm,18.2s,baz=335,slow=41						
ZALV	Zalesovo Beam	37.05	79	P	P	12 03 37.6	+0.3
DLBC	Dease Lake	37.33	315	P	P	12 03 38.4	-1.4
DLBC				IAmb	IAmb	12 03 51.6	
	comp=Z,2.9nm,1.1s						
MLR	Muntele Rosu	37.47	144	LR	LR	12 18 37.6	
	comp=Z,113nm,18.6s,baz=358,slow=35						
ABKAR	Akbulak array	37.91	105	P	P	12 03 45.8	+1.1
ABKAR	Akbulak array	37.91	105	P	P	12 03 46.0	+1.3
ABKAR				IAmb	IAmb	12 03 47.6	
	comp=Z,3.4nm,1.2s						
KURK	Kurchatov	39.27	86	P	P	12 03 57.3	+1.3
KURK				IAmb	IAmb	12 04 06.1	
	comp=Z,3.0nm,1.1s						
KURBB	Kurchatov Arra	39.34	86	P	P	12 03 58.9	+2.2
	comp=Z,2.0nm,0.9s,baz=346,slow=7.8,SNR=20						
KURBB				PcP	PcP	12 06 06.5	+1.6
	comp=Z,0.2nm,0.6s,baz=327,slow=3.8,SNR=5.1						
WRAK	Wrangell Islan	39.56	316	P	P	12 03 57.8	-0.6
KDAK	Kodiak Island	39.95	334	P	P	12 04 00.8	-0.8
ULM	Lac du Bonnet	40.88	281	P	P	12 04 12.1	+2.6
	comp=Z,1.7nm,0.8s,baz=23,slow=7.7,SNR=2.9						
ULM				LR	LR	12 20 53.9	
	comp=Z,132nm,18.8s,baz=36,slow=36						
ULM	Lac du Bonnet	40.88	281	P	P	12 04 07.9	-1.5
ULM				IAmb	IAmb	12 04 12.4	
	comp=Z,3.9nm,1.1s						
ESDC	Sonseca Array	41.87	179	P	P	12 04 16.8	-1.0
MAKZ	Makanchi	43.58	84	P	P	12 04 31.4	-0.1
MAKZ				IAmb	IAmb	12 04 34.3	
	comp=Z,7.3nm,1.4s						
MK31	Makanchi Array	43.64	84	P	P	12 04 33.1	+1.1
MKAR	Makanchi Array	43.64	84	P	P	12 04 33.8	+1.8
	comp=Z,0.7nm,0.6s,baz=344,slow=7.4,SNR=10						
MKAR				LR	LR	12 25 40.8	
	comp=Z,48nm,19.2s,baz=333,slow=40						
MKAR	Makanchi Array	43.64	84	P	P	12 04 33.2	+1.2
BRTR	Keskin Array B	43.93	136	P	P	12 04 38.9	+4.3
	comp=Z,0.3nm,0.3s,baz=341,slow=8.1,SNR=2.9						
BRTR	Keskin Array B	43.93	136	P	P	12 04 35.2	+0.7
SONM	Songino Array	46.05	61	P	P	12 04 52.8	+1.5
	comp=Z,0.9nm,0.7s,baz=335,slow=8.1,SNR=6.0						
SONM				LR	LR	12 25 06.2	
	comp=Z,72nm,18.4s,baz=282,slow=37						
SONM	Songino Array	46.05	61	P	P	12 04 51.8	+0.5
ULN	Ulaanbaatar	46.10	60	P	P	12 04 52.4	+0.7
AAK	Ala-Archa	46.53	93	P	P	12 04 58.6	+3.4
	comp=Z,1.4nm,0.6s,baz=240,slow=12,SNR=4.6						
AAK	Ala-Archa	46.53	93	P	P	12 04 56.5	+1.3
ECSD	EROS Data Cent	47.35	280	P	P	12 05 00.3	-1.1
ECSD				IAmb	IAmb	12 05 02.3	
	comp=Z,2.9nm,1.1s						
PDAR	Pinedale Array	50.17	292	LR	LR	12 26 54.9	
	comp=Z,202nm,18.8s,baz=104,slow=36						
USRK	Ussuriysk Ar.	52.54	38	P	P	12 05 40.8	0.0
	comp=Z,1.4nm,0.8s,baz=340,slow=10,SNR=5.1						
NVAR	Mina Array Bea	55.62	299	LR	LR	12 28 33.5	
	comp=Z,116nm,18.5s,baz=0.5,slow=35						
TXAR	Lajitas Array	62.52	284	P	P	12 06 53.8	+2.4
	comp=Z,0.2nm,0.6s,baz=38,slow=2.2,SNR=3.9						
TXAR				LR	LR	12 33 25.3	
	comp=Z,77nm,19.1s,baz=0.0,slow=36						
CMAR	Chiang Mai Arr	73.89	74	LR	LR	12 43 30.9	
	comp=Z,27nm,18.2s,baz=265,slow=38						
NNA	Nana	99.14	251	LR	LR	13 00 00.7	
	comp=Z,18nm,19.6s,baz=330,slow=38						
ASAR	Alice Springs	119.87	44	PKP	PKiKP	12 15 18.2	+0.5
	comp=Z,0.4nm,0.8s,baz=344,slow=1.6,SNR=4.4						

IDC 26 12:05:23.9±362.0,50°.93N×50°.94E,h0^{km},Error ellipse: s-maj=165.7km s-min=95.1km az=95.0,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	4.54	94	*i*		12 32 40.0	
	baz=280,slow=312,SNR=2.5						
I43RU	DUBNA INFRASON	9.96	311	*i*		13 08 50.0	
	baz=121,slow=338,SNR=1.2						
I46RU	ZALESOVO INFRA	20.76	68	*i*		14 13 00.0	
	baz=279,slow=340,SNR=1.2						
I34MN	SONGINO INFRAS	35.54	73	*i*		15 43 50.0	
	baz=289,slow=335,SNR=2.1						

NOU ***26*** *12:10:43.2,38°.09S×175°.84E,h235^{km},MLv3.6,North Island, New Zealand*

WEL 26 12:10:48.1,38°S±2°×17°6E±°,h194^{km}±3^{km},M2.8/61, MLv2.8/61,Error ellipse: s-maj=0.0km s-min=0.0km az=111.6,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRRZ	Galatos Road	0.27	132	P	Pn	12 11 14.1	+0.2
TLZ	Tolley Road	0.29	237	P	Pn	12 11 14.0	+0.1
KMRZ	Kaimai	0.33	12	P	Pn	12 11 14.2	+0.1
KARZ	Kaharoa	0.34	64	P	Pn	12 11 14.1	+0.1
OMRZ	Omania	0.41	81	P	Pn	12 11 14.1	-0.1
TOZ	Tahuroa Road	0.52	327	P	Pn	12 11 14.7	+0.1
TGRZ	Tauranga	0.55	36	P	Pn	12 11 14.7	0.0
OPRZ	Ohinepanea	0.64	60	P	Pn	12 11 15.0	-0.2
MARZ	Manawahe	0.67	74	P	Pn	12 11 15.7	+0.3
HATZ	Hinemaiaia	0.74	166	P	Pn	12 11 15.7	0.0
HATZ				S	Sn	12 11 35.6	-1.6
MUGZ	Murupara	0.78	113	P	Pn	12 11 15.8	-0.1
MUGZ				S	Sn	12 11 37.1	-0.2
MRHZ	Matea Rd	0.80	146	P	Pn	12 11 15.8	-0.2
MRHZ				S	Sn	12 11 35.5	-2.2
RITZ	Rihia Road	0.81	180	P	Pn	12 11 16.5	+0.5
KATZ	Kakaramea	0.81	189	P	Pn	12 11 16.4	+0.2
HIZ	Hauiti	0.86	246	P	Pn	12 11 16.3	0.0
KRVZ	Karewarewa	0.94	190	P	Pn	12 11 17.1	+0.1
TMVZ	Te Maari	0.95	187	P	Pn	12 11 17.1	+0.1
TWVZ	Taurewa	0.96	200	P	Pn	12 11 17.1	+0.1
WTVZ	West Tongariro	0.97	192	P	Pn	12 11 17.2	+0.1
ETVZ	East Tongariro	0.97	187	P	Pn	12 11 17.4	+0.2
RTZ	Ruatahuna	0.99	117	P	Pn	12 11 17.2	-0.1
RTZ				S	Sn	12 11 38.9	-1.0
URZ	Urewera	0.99	96	P	Pn	12 11 16.7	-0.5
URZ				S	Sn	12 11 38.0	-1.7
OTVZ	Oturere	1.00	188	P	Pn	12 11 17.5	+0.1
OTVZ				S	Sn	12 11 39.5	-0.8
NGZ	Ngauruhoe	1.02	191	P	Pn	12 11 17.7	+0.1
MTHZ	Maungataniwha	1.03	132	P	Pn	12 11 17.6	+0.2
MTHZ				S	Sn	12 11 39.0	-1.4
TUVZ	Tukino	1.11	188	P	Pn	12 11 18.2	0.0
FWVZ	Far West T-bar	1.11	192	P	Pn	12 11 18.2	0.0
BKZ	Black Stump Fm	1.11	154	P	Pn	12 11 17.9	-0.2
BKZ				S	Sn	12 11 39.2	-2.3
WNVZ	Wahianoa	1.17	190	P	Pn	12 11 18.6	-0.1
WNVZ				S	Sn	12 11 41.0	-1.6
PKVZ	Pokaka	1.19	199	P	Pn	12 11 18.6	-0.1
NMHZ	Naumai	1.19	141	P	Pn	12 11 19.5	+0.8
NMHZ				S	Sn	12 11 42.8	+0.2
MKAZ	Moumakai	1.20	332	P	Pn	12 11 19.0	+0.2
RAHZ	Arahi	1.22	128	P	Pn	12 11 19.4	+0.5
RAHZ				S	Sn	12 11 42.3	-0.5
MOVZ	Moawhango	1.24	184	P	Pn	12 11 18.6	-0.5
MOVZ				S	Sn	12 11 40.4	-2.9
MTVZ	Mangateitei	1.25	194	P	Pn	12 11 19.1	-0.1
RAGZ	Rawiri	1.27	105	P	Pn	12 11 19.6	+0.2
RAGZ				S	Sn	12 11 42.7	-0.9
VRZ	Vera Road	1.28	222	P	Pn	12 11 19.6	+0.3
SNGZ	Shannon Statio	1.32	118	P	Pn	12 11 20.0	+0.4
SNGZ				S	Sn	12 11 43.2	-1.0
BHHZ	Black Hill Sta	1.33	173	P	Pn	12 11 19.3	-0.5
BHHZ				S	Sn	12 11 41.8	-2.8
MWZ	Matawai	1.33	98	P	Pn	12 11 19.6	-0.2
MWZ				S	Sn	12 11 42.6	-1.8
KWHZ	Kaweka Forest	1.33	161	P	Pn	12 11 19.9	+0.1
ARHZ	Aropaoanui	1.41	141	P	Pn	12 11 20.9	+0.5
ARHZ				S	Sn	12 11 44.8	-0.9
WHHZ	Waihua	1.41	130	P	Pn	12 11 20.8	+0.4
WHHZ				S	Sn	12 11 44.5	-1.1
ETAZ	East Tamaki Re	1.42	328	P	Pn	12 11 20.7	+0.1
KUZ	Kuaotunu	1.43	356	P	Pn	12 11 20.6	0.0
MCHZ	McNeill Hill	1.43	153	P	Pn	12 11 21.3	+0.6
RUGZ	Raukumara Rang	1.45	82	P	Pn	12 11 19.9	-1.1
AWAZ	Awhitu Peninsu	1.47	319	P	Pn	12 11 21.2	+0.2
WIAZ	Waiheke Island	1.49	337	P	Pn	12 11 21.4	+0.2
MHEZ	Mangahewa	1.50	233	P	Pn	12 11 22.3	+1.1
KRHZ	Kereru	1.52	165	P	Pn	12 11 21.3	-0.2
HAZ	Te Kaha	1.58	75	P	Pn	12 11 21.2	-0.8
RIGZ	Rimuhau	1.59	110	P	Pn	12 11 22.4	+0.2
TKGZ	Te Karaka	1.59	100	P	Pn	12 11 22.2	+0.2
MBAZ	Motutapu North	1.59	331	P	Pn	12 11 22.3	+0.1
KNZ	Kokohu	1.66	121	P	Pn	12 11 22.8	+0.1
TWGZ	Tauwhareparae	1.68	91	P	Pn	12 11 23.3	+0.3
LREZ	Lake Rotokare	1.72	221	P	Pn	12 11 23.8	+0.5
WAZ	Wanganui	1.72	203	P	Pn	12 11 23.0	-0.4
PRGZ	Paritu Road	1.76	116	P	Pn	12 11 23.9	+0.2
NEZ	North Egmont	1.76	231	P	Pn	12 11 24.4	+0.6
PNHZ	Pukenui	1.76	171	P	Pn	12 11 23.2	-0.6
CKHZ	Cape Kidnapper	1.77	148	P	Pn	12 11 24.2	+0.4
PREZ	Palmer Road	1.77	228	P	Pn	12 11 24.6	+0.7
PKGZ	Pakihiroa	1.78	82	P	Pn	12 11 23.8	-0.2
PKE	Pukeiti	1.78	234	P	Pn	12 11 24.4	+0.4
KAHZ	Kahuranaki	1.81	154	P	Pn	12 11 24.4	+0.2
KHEZ	Kahui Hut	1.82	231	P	Pn	12 11 25.0	+0.5
CNGZ	Carnagh Statio	1.88	100	P	Pn	12 11 25.5	+0.6
MHGZ	Mahia Peninsul	1.88	122	P	Pn	12 11 25.3	+0.4
TSZ	Takapari Road	1.89	178	P	Pn	12 11 24.4	-0.6
PUZ	Puketiti	1.90	88	P	Pn	12 11 24.7	-0.5
NBEZ	Newall Road No	1.90	234	P	Pn	12 11 25.5	+0.4
WPHZ	Waipukurau	1.94	167	P	Pn	12 11 25.1	-0.5
NMEZ	Namu Road	1.98	231	P	Pn	12 11 26.4	+0.5
PXZ	Pawanui	2.02	157	P	Pn	12 11 26.0	-0.2
MXZ	Matakaoa Point	2.03	73	P	Pn	12 11 26.7	+0.2
WMGZ	Waiomatatini S	2.05	81	P	Pn	12 11 26.6	-0.2
OHWZ	Ohakea	2.08	191	P	Pn	12 11 26.5	-0.3
DVHZ	Dannevirke	2.14	174	P	Pn	12 11 26.6	-1.1
PRHZ	Porangahau	2.18	164	P	Pn	12 11 27.4	-0.6
POWZ	Post Office Ro	2.22	182	P	Pn	12 11 27.3	-1.2
ANWZ	Angora Road	2.34	168	P	Pn	12 11 29.1	-0.7
PRWZ	Pori Road	2.38	178	P	Pn	12 11 29.3	-1.0
MRZ	Mangatainoka R	2.50	185	P	Pn	12 11 29.9	-1.6
BFZ	Birch Farm	2.53	173	P	Pn	12 11 30.4	-1.4
TIWZ	Tintock	2.60	179	P	Pn	12 11 31.3	-1.5
OGWZ	Otaki Gorge	2.69	191	P	Pn	12 11 32.2	-1.5
HOWZ	Holdsworth Sta	2.74	185	P	Pn	12 11 32.3	-2.0
CPWZ	Castlepoint	2.75	175	P	Pn	12 11 33.9	-0.5
KIW	Kapiti Island	2.79	195	P	Pn	12 11 32.8	-2.1
TMWZ	Te Maipa	2.93	179	P	Pn	12 11 34.9	-1.7
CAW	Cannon Point	3.00	191	P	Pn	12 11 35.3	-2.0
MTW	Mount Morrison	3.00	185	P	Pn	12 11 35.1	-2.2
DUWZ	D'Urville Isla	3.02	209	P	Pn	12 11 35.4	-2.2
WEL	Wellington	3.22	195	P	Pn	12 11 37.8	-2.2
PAWZ	Paruwai Farm	3.22	186	P	Pn	12 11 37.6	-2.5
TRWZ	Traveller	3.23	182	P	Pn	12 11 38.0	-2.1
TCW	Tory Channel	3.27	201	P	Pn	12 11 38.3	-2.3
MSWZ	Moikau Station	3.27	188	P	Pn	12 11 38.1	-2.6
BHW	Baring Head	3.32	193	P	Pn	12 11 38.6	-2.6
PLWZ	Palliser	3.43	188	P	Pn	12 11 39.7	-2.9
TUWZ	Tuamarina	3.57	204	P	Pn	12 11 41.7	-2.5
NNZ	Nelson	3.59	211	P	Pn	12 11 41.7	-2.9
QRZ	Quartz Range	3.69	223	P	Pn	12 11 42.8	-3.0
BSWZ	Blackbirch Sta	3.85	203	P	Pn	12 11 45.2	-2.6
THZ	Tophouse	4.24	211	P	Pn	12 11 49.5	-3.2
KHZ	Kahutara	4.59	202	P	Pn	12 11 54.3	-2.8
DSZ	Denniston Nort	4.74	220	P	Pn	12 11 55.1	-3.8
GVZ	Greta Valley S	5.25	203	P	Pn	12 12 02.1	-3.5
LTZ	Lake Taylor	5.36	210	P	Pn	12 12 03.0	-3.9
INZ	Inchbonnie	5.66	215	P	Pn	12 12 07.5	-3.2
OXZ	Oxford	5.91	208	P	Pn	12 12 09.6	-4.4
OKCZ	Okains Bay	5.94	200	P	Pn	12 12 10.9	-3.4
MQZ	McQueen's Vall	6.04	203	P	Pn	12 12 11.1	-4.5
AKCZ	Akaroa Harbour	6.12	200	P	Pn	12 12 12.9	-3.8
RACZ	Rakaia	6.22	206	P	Pn	12 12 13.7	-4.3
WACZ	Wakanui South	6.51	206	P	Pn	12 12 18.0	-3.8
RPZ	Rata Peaks	6.62	212	P	Pn	12 12 19.5	-3.8
ARCZ	Arundel	6.77	210	P	Pn	12 12 21.1	-4.1
TMZ	Timaru	7.20	209	P	Pn	12 12 26.6	-4.2
ODZ	Otahua Downs	7.90	208	P	Pn	12 12 36.3	-3.6

DDA ***26*** *12:12:48.6,36°.90N×45°.22E,h7^{km}±4^{km},ML3.8*

TEH ***26*** *12:12:49.8,37°.13N×45°.29E,h4^{km},ML4.0*

IDC ***26*** *12:12:50.7±1.0,37°.24N×45°.42E,h0^{km},mb3.7/8, mb1 3.8/12,mb1mx3.6/50,mbtmp3.7/12,ML3.7/4,MS2.7/2, Ms1 2.7/2,ms1mx2.4/58,Error ellipse: s-maj=25.5km s-min=16.3km az=2.0*

ISN ***26*** *12:12:50.6±1.2,36°.87N×45°.26E,h46^{km}±8^{km},ML3.6*

ISK ***26*** *12:12:52.9,36°.86N×44°.99E,h4^{km},ML3.9/14*

THR ***26*** *12:12:54.2±0.4,37°.18N×45°.51E,h14^{km}±8^{km},ML3.9*

ISC 26 12:12:51.2±1.2,37°.14N±0°.03×45°.26E±0°.02,h1^{km}±8^{km}, n93,σ1^{s}.77/108,mb3.6/8,1D,Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	Mahabad	0.52	136	*e*Pg	Pg	12 12 59.6	-1.5
MAHB				*e*Sg	Sg	12 13 06.3	-1.5
YOVA	Hakkari_Yksek	0.89	300	*i* P	Pg	12 13 07.9	-0.4
YOVA				*i* S	Sg	12 13 21.8	+2.0
YOVA				IAML		12 13 24.0	
	comp=N,2µm,0.4s						
YOVA	Hakkari_Yksek	0.89	300	*e*Pg	Pg	12 13 07.8	-0.4
TABZ	Tabriz	1.25	43	*e*	Sn	12 13 37.3	+3.8
	comp=Z,99nm,0.4s						
ITBZ	Tabriz	1.30	33	*e*Pg	Pg	12 13 14.3	-1.8
ITBZ				*e*Sg	Sg	12 13 32.1	-0.9
HAKT	HAKKARI	1.30	289	*i* P	Pg	12 13 14.2	-2.0
HAKT				*i* S	Sn	12 13 35.2	+0.2
HAKT				IAML		12 13 42.0	
	comp=E,914nm,1.0s						
HAKT	HAKKARI	1.30	289	*e*Pg	Pg	12 13 14.2	-2.0
CUKT	Cukurca	1.32	275	PN	Pn	12 13 15.6	-1.3
CUKT				SN	Sg	12 13 32.7	-0.9
CUKT	Cukurca	1.32	275	*i* P	Pn	12 13 13.6	-3.3
CUKT				*i* S	Sg	12 13 33.2	-0.5
CUKT				IAML		12 13 40.0	
	comp=N,4µm,0.6s						
CUKT	Cukurca	1.32	275	*e*Pn	Pn	12 13 14.1	-2.8
BASK	Baskale_VAN	1.35	313	*i* P	Pn	12 13 16.5	-0.9
BASK				*i* S	Sn	12 13 38.5	+2.4
BASK	Baskale_VAN	1.35	313	*e*Pn	Pn	12 13 16.5	-0.9
IHSH	Hashtrud	1.61	84	*e*Pg	Pn	12 13 19.3	-6.7
IMRD	Marand	1.61	13	*e*Pg	Pn	12 13 20.2	-0.7
IMRD				*e*		12 13 49.9	
	comp=Z,99nm,0.4s						
OZAP	Van, Ozalp-Mer	1.82	327	*i* P	Pb	12 13 26.2	+0.8
OZAP				*i* S	Sg	12 13 57.0	+7.4
IHRS	Heris	1.84	50	*e*Pn	Pn	12 13 24.0	-0.1
IHRS				*e*		12 13 57.4	
	comp=Z,99nm,0.4s						
TVAN	Van	2.02	314	*i* P	Pb	12 13 29.7	+0.9
TVAN				*i* S	Sg	12 13 57.2	+1.2
TVAN				IAML		12 14 07.0	
	comp=N,460nm,1.3s						
ISRB	Sarab	2.04	70	*e*Pn	Pn	12 13 26.5	-0.3
ISRB				*e*		12 14 02.4	
	comp=Z,99nm,0.9s						
VANB	Van	2.07	315	PN	Pb	12 13 29.7	0.0
VANB				SN	Sb	12 13 55.9	-0.1
VANB	Van	2.07	315	*e*Pn	Pb	12 13 29.1	-0.6
GEVA	Gevas	2.10	305	⇓*i*P	Pb	12 13 29.7	-0.5
GEVA				*i* S	Sg	12 13 60.0	+1.3
GEVA				IAML		12 14 02.0	
	comp=E,806nm,0.9s						
GEVA	Gevas	2.10	305	*e*Pn	Pb	12 13 29.6	-0.5
AKDM	Akdamar-Van	2.16	304	PN	Pb	12 13 30.8	-0.4
AKDM	Akdamar-Van	2.16	304	*e*Pn	Pb	12 13 30.9	-0.3
MAKU	Maku	2.26	349	*e*Pn	Pb	12 13 33.6	+0.7
MAKU				*e*Sg	Sg	12 14 05.5	+1.8
MAKU	Maku	2.26	349	*e*Pn	Pb	12 13 33.6	+0.7
CLDR	Caldiran	2.26	333	PN	Pg	12 13 34.4	-0.1
SIRT	Sirnak	2.27	280	PN	Pn	12 13 30.4	+0.4
SIRT				SN	Sn	12 13 57.6	-1.1
SIRT	Sirnak	2.27	280	*e*Pn	Pn	12 13 30.2	+0.2
SIRN	Sırnak	2.29	280	*i* P	Pb	12 13 32.8	-0.7
SIRN				*i* S	Sb	12 14 03.9	+1.6
SIRN				IAML		12 14 07.0	
	comp=E,1µm,0.6s						
SIRN	Sırnak	2.29	280	*e*Pn	Pb	12 13 32.7	-0.7
PERV	Siirt/Pervari-	2.30	291	*i* P	Pb	12 13 33.0	-0.7
PERV				*i* S	Sb	12 14 04.5	+1.9
PERV				IAML		12 14 12.0	
	comp=N,1µm,0.6s						
IDHR	Dehrash	2.60	159	*e*Pn	Pn	12 13 35.3	+0.7
IDHR				*e*		12 14 19.3	
	comp=Z,99nm,0.6s						
ADCV	BITLIS_Adilcev	2.60	311	*i* P	Pb	12 13 37.1	-1.6
ADCV				*i* S	Sb	12 14 11.8	+0.5
ADCV	BITLIS_Adilcev	2.60	311	*e*Pn	Pb	12 13 37.1	-1.6
SNGE	Sanandaj	2.65	140	AML	AML	12 13 52.0	
	comp=N,466nm,0.6s						
GRMI	Germi	2.67	51	*e*Pn	Pn	12 13 36.3	+0.9
GRMI				*e*Sg	Sb	12 14 12.4	-0.7
GRMI	Germi	2.67	51	*e*Pn	Pn	12 13 36.3	+0.9
SRTM	Siirt_Merkez	2.78	289	*i* P	Pn	12 13 39.6	+2.7
SRTM				*i* S	Sg	12 14 21.0	+0.5
SRTM				IAML		12 14 32.0	
	comp=N,641nm,0.7s						
BLIS	Bitlis-Merkez	2.80	298	*i* P	Pb	12 13 41.3	-0.7
BLIS				*i* S	Sg	12 14 21.9	+0.9
GURO	Guroymak-BITLI	2.92	300	PN	Pn	12 13 41.1	+2.3
GURO	Guroymak-BITLI	2.92	300	*e*Pn	Pn	12 13 40.9	+2.1
MLAZ	Malazgirt-MUS	2.92	314	PN	Pb	12 13 42.4	-1.8
TASB	TASBURUN-IGDIR	2.95	345	PN	Pb	12 13 45.3	+0.7
IGHG	Ghaleghazi	3.00	159	*e*Pn	Pn	12 13 40.9	+0.8
IGHG				*e*		12 14 40.4	
	comp=Z,99nm,0.8s						
AGRB	Hanur-Agry	3.01	324	PN	Pb	12 13 44.7	-1.1
GNI	Garni	3.03	353	Pn	Pg	12 13 48.3	-1.0
	comp=Z,8.8nm,0.3s,baz=88,slow=4.3,SNR=11						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNI				Lg	Lg	12 14 32.7	
	comp=Z,2.4nm,0.3s,baz=234,slow=21,SNR=5.2						
GNI				LR	LR	12 15 08.0	
	comp=Z,112nm,21.1s,baz=199,slow=46						
GNI	**Garni**	**3.03**	**353**	PN	**Pb**	**12 13 46.8**	**+0.7**
HSRG	**Sareghieh**	**3.09**	**127**	*e*Pn	**Pn**	**12 13 41.4**	**0.0**
HSRG				*e*		12 14 38.9	
	comp=Z,99nm,0.9s						
KCHF	**Cheshme Sefid,**	**3.21**	**153**	*e*	**Sg**	**12 14 42.0**	**+7.8**
	comp=Z,99nm,0.6s						
IALM	**Almabolaq**	**3.28**	**133**	*e*Pn	**Pn**	**12 13 44.5**	**+0.6**
MUSM	**Mu-Merkez**	**3.36**	**299**	*i* P	**Pn**	**12 13 45.7**	**+0.8**
MUSM				*i* S	**Sg**	**12 14 38.5**	**-0.6**
MUSM	**Mu-Merkez**	**3.36**	**299**	*e*Pn	**Pn**	**12 13 45.7**	**+0.8**
SVAN	**Silvan-Diyarba**	**3.38**	**289**	PN	**Pn**	**12 13 46.6**	**+1.5**
SVAN	**Silvan-Diyarba**	**3.38**	**289**	*e*Pn	**Pn**	**12 13 46.3**	**+1.2**
IBZA	**Bozab**	**3.40**	**141**	*e*Pn	**Pn**	**12 13 45.2**	**-0.4**
IBZA				*e*		12 14 54.1	
	comp=Z,99nm,0.8s						
QABG	**Abgarm-Qazvin**	**3.77**	**111**	*e*Pn	**Pn**	**12 13 49.4**	**-1.3**
MAZI	**Mazidag**	**3.85**	**276**	PN	**Pn**	**12 13 52.3**	**+0.7**
BHD	**Baghdad**	**3.93**	**191**	*e*Pg	**Pn**	**12 13 54.0**	**+1.4**
	baz=11						
BHD				*e*Sg	**Sn**	**12 14 42.0**	**+2.7**
BHD				AML	AML	12 14 56.5	
	comp=E,407nm,0.2s						
IGZV	**Ghazvin**	**4.05**	**99**	*e*		12 15 09.4	
	comp=Z,99nm,0.7s						
BNGB	**Bingl**	**4.06**	**298**	PN	**Pn**	**12 13 57.3**	**+2.8**
IBDR	**Badra**	**4.06**	**172**	*e*Pn	Pn	12 13 47.0	-7.4
IBDR				*e*Sn	Sn	12 14 29.0	-14
IBDR				AML	AML	12 15 08.3	
	comp=E,139nm,0.8s						
IBDR				AML	AML	12 15 23.8	
	comp=N,110nm,0.7s						
IDOB	**Doab**	**4.11**	**144**	*e*Pn	**Pn**	**12 13 55.3**	**0.0**
DYBB	**Diyarbakir**	**4.15**	**283**	PN	**Pn**	**12 13 57.1**	**+1.4**
IRAZ	**Razeghan**	**4.15**	**113**	*e*Pn	**Pn**	**12 13 56.1**	**+0.2**
IRAZ				*e*		12 14 15.3	
	comp=Z,99nm,0.6s						
IKFM	**Kafar-mosalman**	**4.18**	**149**	*e*Pn	**Pn**	**12 13 56.8**	**+0.7**
IKFM				*e*		12 15 13.2	
	comp=Z,99nm,0.8s						
YEDI	**Yedisu-Bingol**	**4.36**	**303**	PN	**Pn**	**12 14 01.9**	**+3.2**
QALM	**Alamut, Qazvin**	**4.38**	**98**	*e*Pn	**Pn**	**12 13 58.7**	**-0.4**
QALM				*e*		12 14 17.0	
	comp=Z,99nm,0.7s						
IKMR	**Kamar-syah**	**4.42**	**144**	*e*Pn	**Pn**	**12 14 01.2**	**+1.8**
IKMR				*e*		12 14 57.7	
	comp=Z,99nm,0.8s						
ASAO	**Ashtian**	**4.66**	**122**	*e*Pn	**Pn**	**12 14 04.3**	**+1.4**
ASAO	**Ashtian**	**4.66**	**122**	*e*Pn	**Pn**	**12 14 04.3**	**+1.4**
MALT	**Malatya**	**5.54**	**284**	PN	**Pn**	**12 14 17.1**	**+2.2**
IDMV	**Damavand**	**5.69**	**104**	*e*Pn	**Pn**	**12 14 17.0**	**-0.1**
AMIS	**Naft Sefid**	**6.40**	**147**	*e*Pn	**Pn**	**12 14 27.3**	**+0.7**
IPIR	**Pirpir**	**6.42**	**132**	*e*Pn	**Pn**	**12 14 27.8**	**+0.7**
KLNJ	**Kolanjah**	**8.06**	**137**	*e*Pn	**Pn**	**12 14 50.6**	**+0.9**
MMAI	**Mount Meron Ar**	**9.06**	**246**	Pn	**Pn**	**12 15 04.2**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=57,slow=14,SNR=3.3						
MMAI				LR	LR	12 19 09.2	
	comp=Z,66nm,19.8s,baz=65,slow=41						
BRTR	**Keskin Array B**	**9.47**	**289**	Pn	**Pn**	**12 15 12.8**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=112,slow=16,SNR=5.7						
TPRV	**Parvadeh(Tabas**	**10.22**	**110**	*e*Pn	**Pn**	**12 15 19.9**	**+0.8**
TKDS	**Koohdasht(Taba**	**10.31**	**106**	*e*Pn	**Pn**	**12 15 20.4**	**+0.1**
IKRD	**Kardeh**	**11.42**	**88**	*e*Pn	Pn	12 15 36.2	+12
AKASG	**Malin Array Be**	**17.75**	**325**	P	**Pn**	**12 16 57.9**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=128,slow=12,SNR=3.2						
WSAR	**Wadi Sarin**	**18.02**	**137**	P	**Pn**	**12 17 01.2**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=351,slow=8.0,SNR=5.2						
KOLS	**Kolonicke sedl**	**20.43**	**312**	*e*P	Pn	12 17 31.0	-0.9
ARU	**Arti**	**21.27**	**21**	P	**P**	**12 17 37.4**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=238,slow=9.5,SNR=3.5						
VYHS	**Vyhne**	**22.34**	**309**	*e*P	**P**	**12 17 51.2**	**+0.8**
GERES	**GERESS Array B**	**25.69**	**307**	P	**P**	**12 18 24.2**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=107,slow=8.9,SNR=6.4						
KURBB	**Kurchatov Arra**	**27.25**	**50**	P	**P**	**12 18 35.5**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=264,slow=9.1,SNR=3.7						
MKAR	**Makanchi Array**	**28.94**	**59**	P	**P**	**12 18 50.8**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=274,slow=7.1,SNR=2.9						
ARCES	**ARCESS Array B**	**34.18**	**348**	P	**P**	**12 19 36.3**	**-1.4**
	comp=Z,7.1nm,1.1s,baz=152,slow=9.8,SNR=4.6						
CMAR	**Chiang Mai Arr**	**50.33**	**96**	P	**P**	**12 21 48.5**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=299,slow=8.4,SNR=7.3						
DBIC	**Dimbokro**	**54.66**	**249**	P	**P**	**12 22 23.6**	**+1.6**
	comp=Z,5.1nm,1.1s,baz=27,slow=6.8,SNR=3.2						
YKA	**Yellowknife Ar**	**79.39**	**351**	P	**P**	**12 24 56.4**	**-2.1**
	comp=Z,0.2nm,0.8s,baz=23,slow=5.5,SNR=3.2						

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*IDC **26** 12:23:10.9±10.0, 1°.09N×121°.49E, h0^{km}, mb3.7/2, mb1 3.8/3, mb1mx3.4/33, mbtmp3.6/3, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/53, Error ellipse: s-maj=190.2km s-min=131.9km az=106.0*

*DJA **26** 12:23:14.1±0.4, 1°N±5°×12°0E±°, h35^{km}±7^{km}, M3.4/6, MLv3.4/6*

ISC 26 12:23:09.9±2.4, **1°.3N**±0°.2×**120°.22E**±0°.10, **h35**^{km}**, n9,** σ**1**^{s}**74**/12, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.01**	**198**	P	**Pn**	**12 23 29.4**	**+1.8**
MPSI				S	**Sn**	**12 23 39.8**	**-0.7**
MRSI	**Marisa**	**1.91**	**115**	P	**Pn**	**12 23 42.2**	**+2.2**
MRSI				S	**Sn**	**12 24 02.0**	**-0.8**
APSI	**Ampana**	**2.62**	**147**	P	**Pn**	**12 23 52.1**	**+2.3**
APSI				S	**Sn**	**12 24 20.0**	**-0.4**
GTOI	**Gorontalo**	**2.87**	**103**	P	**Pn**	**12 23 55.2**	**+2.0**
GTOI				S	**Sn**	**12 24 24.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**20.00**	**165**	P	**P**	**12 27 38.1**	**-1.6**
	0.2nm,0.3s,baz=0.3,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**25.25**	**147**	P	**P**	**12 28 31.4**	**-1.6**
	0.7nm,0.6s,baz=333,slow=9.6,SNR=15						
ASAR	**Alice Springs**	**28.16**	**153**	P	**P**	**12 28 59.0**	**-0.2**
	14nm,0.4s,baz=338,slow=14,SNR=12						
NWAO	**Narrogin (SRO)**	**34.16**	**184**	LR	LR	12 44 31.5	
	comp=Z,42nm,18.1s,baz=219,slow=38						
STKA	**Stephens Creek**	**38.72**	**150**	P	**P**	**12 30 30.2**	**-0.7**
	0.8nm,0.5s,baz=319,slow=9.3,SNR=2.9						

IDC 26 12:31:19.3±2.2, **55°.57S**×**27°.93W, h0**^{km}**, mb3.8**/1, **mb1 3.8**/1, **mb1mx3.5**/22, **mbtmp3.8**/1, **Error ellipse: s-maj=116.6km s-min=70.7km az=142.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**72.85**	**30**	P	P	12 42 49.8	0.0
	0.6nm,0.7s,baz=201,slow=7.1,SNR=2.9						
ILAR	**Eielson Array**	**149.48**	**312**	PKPbc	PKPbc	12 51 08.3	-0.5
	1.0nm,0.7s,baz=122,slow=1.8,SNR=20						
SONM	**Songino Array**	**151.11**	**86**	PKPbc	PKPbc	12 51 13.2	-0.2
	0.3nm,0.6s,baz=240,slow=3.7,SNR=2.6						

IDC 26 12:39:23.9±324.0, **53°.84N**×**43°.33E, h0**^{km}**, Error ellipse: s-maj=146.7km s-min=87.6km az=138.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.53**	**312**	*i*		13 08 00.0	
	baz=128,slow=336,SNR=0.7						
I31KZ	**AKTYUBINSK INF**	**9.68**	**105**	*i*		13 33 10.0	
	baz=302,slow=292,SNR=3.9						
I46RU	**ZALESOVO INFRA**	**24.20**	**73**	*i*		15 10 10.0	
	baz=289,slow=345,SNR=1.0						
I34MN	**SONGINO INFRAS**	**39.13**	**72**	*i*		16 38 40.0	
	baz=298,slow=340,SNR=2.1						

IDC 26 12:40:05.4±3.1, **28°.17N**×**142°.52E, h0**^{km}**, mb3.5**/5, **mb1 3.7**/5, **mb1mx3.3**/66, **mbtmp3.5**/5, **Error ellipse: s-maj=133.5km s-min=23.5km az=75.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.47**	**190**	P	P	12 48 50.5	+0.6
	0.3nm,0.5s,baz=24,slow=7.3,SNR=4.7						
MKAR	**Makanchi Array**	**50.03**	**309**	P	P	12 49 00.8	-0.9
	0.1nm,0.4s,baz=95,slow=9.1,SNR=4.7						
ASAR	**Alice Springs**	**52.20**	**190**	P	P	12 49 17.4	-0.7
	9.8nm,0.3s,baz=358,slow=4.7,SNR=5.8						
KURBB	**Kurchatov Arra**	**52.51**	**314**	P	P	12 49 20.1	0.0
	0.6nm,0.4s,baz=92,slow=8.2,SNR=11						
BVAR	**Borovoye Array**	**57.46**	**317**	P	P	12 49 56.2	+0.2
	0.3nm,0.5s,baz=67,slow=8.2,SNR=4.2						
FINES	**FINESS Array B**	**77.12**	**334**	P	P	12 52 00.9	+0.5
	1.6nm,0.9s,baz=72,slow=6.2,SNR=3.8						

IDC 26 12:46:34.2±429.0, **51°.91N**×**103°.56E, h0**^{km}**, Error ellipse: s-maj=251.8km s-min=102.6km az=146.0, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	**4.51**	**155**	*i*		13 17 30.0	
	baz=338,slow=334,SNR=0.6						
I45RU	**USSURIYSK INFR**	**20.41**	**101**	*i*		14 50 40.0	
	baz=298,slow=331,SNR=0.7						
I44RU	**PETROPAVLOVSK**	**32.33**	**66**	*i*		16 06 00.0	
	baz=290,slow=338,SNR=1.1						

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*IDC **26** 13:03:24.6±2.1, 6°.52S×130°.19E, h135^{km}±20^{km}, mb3.5/6, mb1 3.8/11, mb1mx3.6/34, mbtmp4.1/11, Error ellipse: s-maj=23.0km s-min=13.3km az=78.0*

*NEIC **26** 13:03:26.0±2.1, 6°.47S±0°.07×130°.15E±0°.10, h150^{km}±9^{km}, mb4.4/17, Error ellipse: s-maj=14.0km s-min=9.9km az=78.0*

ISC 26 13:03:24.9±0.5, **6°.45S**±0°.06×**130°.20E**±0°.07, **h146**^{km}**, n38,** σ**1**^{s}**65**/38, **mb4.1**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.88**	**144**	Pn	**Pn**	**13 03 59.6**	**+1.2**
FAKI	**Fak Fak**	**4.06**	**30**		**Pn**	**13 04 26.6**	**+0.7**
SIJI	**Sorong**	**5.64**	**11**	P	**Pn**	**13 04 47.5**	**+0.6**
	3.9nm,0.3s,baz=31,slow=15,SNR=32						
SIJI				S	**Sn**	**13 05 46.9**	**-4.0**
	7.7nm,0.3s,baz=252,slow=23,SNR=4.9						
MTN	**Manton Dam**	**6.42**	**172**		**Pn**	**13 04 56.6**	**-0.7**
SOEI	**Soe**	**6.73**	**240**	Pn	**Pn**	**13 05 02.6**	**+1.1**
BATI	**Baumata**	**7.47**	**240**	P	**Pn**	**13 05 11.9**	**+0.6**
	11nm,0.3s,baz=195,slow=1.2,SNR=12						
BATI				S	**Sn**	**13 06 33.5**	**-1.2**
	6.6nm,0.3s,baz=133,slow=22,SNR=11						
FITZ	**Fitzroy Crossi**	**12.41**	**201**	P	**Pn**	**13 06 13.9**	**-2.7**
	0.5nm,0.3s,baz=26,slow=8.7,SNR=17						
FITZ				S	Sn	13 08 20.9	-13
	1.1nm,0.3s,baz=274,slow=19,SNR=4.8						
WB0	**Warramunga Arr**	**13.86**	**163**	Pn	**Pn**	**13 06 32.7**	**-2.5**
WRAB	**Tennant Creek**	**14.00**	**164**	Pn	**Pn**	**13 06 34.2**	**-2.9**
WRA	**Warramunga Arr**	**14.01**	**164**	P	**Pn**	**13 06 34.6**	**-2.6**
	0.6nm,0.3s,baz=350,slow=11,SNR=22						
WRA				S	Sn	13 08 59.9	-13
	2.1nm,0.3s,baz=354,slow=22,SNR=10						
WRA	**Warramunga Arr**	**14.01**	**164**	Pn	**Pn**	**13 06 34.1**	**-3.1**
WB2	**Warramunga Arr**	**14.01**	**164**	Pn	**Pn**	**13 06 34.0**	**-3.2**
WR0	**Warramunga Arr**	**14.08**	**163**	Pn	**Pn**	**13 06 35.4**	**-2.7**
COEN	**Coen**	**14.79**	**121**	Pn	**Pn**	**13 06 46.6**	**-0.4**
JAGI	**Jajag, Banyuwa**	**16.04**	**262**		**Pn**	**13 07 01.8**	**-0.7**
JAGI				IAmb	IAmb	13 07 10.3	
	comp=Z,34nm,1.2s						
AS31	**Alice Springs**	**17.49**	**169**		**P**	**13 07 19.5**	**+0.5**
ASAR	**Alice Springs**	**17.49**	**169**	P	**P**	**13 07 19.7**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=350,slow=10,SNR=81						
ASAR				S	S	13 10 22.2	-11
	comp=Z,0.5nm,0.3s,baz=359,slow=29,SNR=6.2						
PSA00	**Pilbara Seismi**	**18.07**	**213**		**P**	**13 07 26.0**	**+0.7**
PSA00				IAmb	IAmb	13 07 33.0	
	comp=Z,23nm,1.2s						
KKM	**Kota Kinabalu**	**18.67**	**311**	P	**P**	**13 07 31.9**	**-0.2**
KKM				IAmb	IAmb	13 07 49.2	
	comp=Z,59nm,1.4s						
CTAO	**Charters Tower**	**20.66**	**133**	P	**P**	**13 07 53.2**	**-0.2**
CTAO				IAmb	IAmb	13 07 55.9	
	comp=Z,10nm,1.2s						
FORT	**Forrest**	**24.29**	**184**	P	**P**	**13 08 29.4**	**+0.6**
FORT				IAmb	IAmb	13 08 34.0	
	comp=Z,35nm,1.3s						
BBOO	**Buckleboo**	**26.79**	**169**	P	**P**	**13 08 51.2**	**-0.2**
MNAI	**Manna**	**27.20**	**273**	P	**P**	**13 08 54.1**	**-1.1**
STKA	**Stephens Creek**	**27.45**	**159**	P	**P**	**13 08 57.7**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=341,slow=8.2,SNR=9.9						
YOJ	**Yonaguni jima**	**31.51**	**347**	P	**P**	**13 09 34.3**	**+1.1**
KULM	**Kulim**	**31.71**	**291**	P	**P**	**13 09 34.8**	**-0.4**
KULM				IAmb	IAmb	13 09 51.3	
	comp=Z,13nm,1.1s						
CAN	**Canberra**	**33.54**	**152**	P	**P**	**13 09 52.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**39.53**	**309**	P	**P**	**13 10 42.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=140,slow=6.9,SNR=4.3						
SONM	**Songino Array**	**57.98**	**341**	P	**P**	**13 13 03.2**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=159,slow=8.0,SNR=2.8						
SONM	**Songino Array**	**57.98**	**341**	IAmb	IAmb	13 13 06.9	
	comp=Z,0.7nm,1.2s						
MK31	**Makanchi Array**	**67.87**	**327**	P	**P**	**13 14 08.8**	**+1.3**
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**13 14 08.9**	**+1.4**
	comp=Z,1.5nm,0.4s,baz=114,slow=8.3,SNR=26						
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**13 14 08.7**	**+1.1**
MAKZ	**Makanchi**	**68.05**	**326**	P	**P**	**13 14 10.0**	**+1.3**
MAKZ				IAmb	IAmb	13 14 10.5	
	comp=Z,1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**72.14**	**328**	P	**P**	**13 14 34.6**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=126,slow=5.0,SNR=7.8						
KURK	**Kurchatov**	**72.15**	**328**	P	**P**	**13 14 34.6**	**+1.1**
VNDA	**Vanda**	**72.97**	**173**	P	**P**	**13 14 38.6**	**+0.6**
	comp=Z,1.3nm,1.1s,baz=306,slow=6.8,SNR=3.5						
VNDA	**Vanda**	**72.97**	**173**	IAmb	IAmb	13 15 05.9	
	comp=Z,9.5nm,1.4s						

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*DJA **26** 13:11:54.3±1.0, 6°S±3°×10°4E±°, h19^{km}±9^{km}, M4.4/15, mb4.5/2, mB6.0/1, MLv4.4/15, Mw(mB)5.6/1*

*NEIC **26** 13:11:54.6±1.4, 6°.4S±0°.1×104°.50E±0°.09, h59^{km}±8^{km}, mb4.6/25, Error ellipse: s-maj=18.8km s-min=8.8km az=217.0*

*IDC **26** 13:11:58.2±2.5, 6°.28S×104°.55E, h85^{km}±19^{km}, mb3.9/13, mb1 4.1/15, mb1mx3.8/44, mbtmp4.3/15, MS3.2/2, Ms1 3.3/2, ms1mx2.8/34, Error ellipse: s-maj=26.7km s-min=11.3km az=40.0*

ISC 26 13:11:52.6±0.6, **6°.46S**±0°.06×**104°.40E**±0°.06, **h40**^{km}**, n94,** σ**1**^{s}**59**/93, **mb4.5**/40, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.93**	**6**	P	**Pn**	**13 12 10.8**	**+1.6**
KASI				S	**Sn**	**13 12 22.2**	**+0.8**
BLSI	**Bandar Lampung**	**1.37**	**38**	P	**Pn**	**13 12 17.2**	**+1.9**
BLSI				S	**Sn**	**13 12 33.2**	**+0.9**
LWLI	**Liwa**	**1.47**	**347**	P	**Pn**	**13 12 19.5**	**+2.8**
LWLI				S	**Sn**	**13 12 37.8**	**+3.0**
KLSI		**1.79**	**11**	P	**Pn**	**13 12 23.9**	**+2.9**
KLSI				S	**Sn**	**13 12 44.3**	**+1.8**
SKJI	**Sukabumi**	**2.21**	**104**	P	**Pn**	**13 12 29.2**	**+2.3**
DBJI	**Dramaga**	**2.34**	**93**	P	**Pn**	**13 12 31.4**	**+2.8**
CBJI	**Citeko**	**2.44**	**89**	P	Pn	13 12 33.5	+3.6
MNAI	**Manna**	**2.53**	**325**		**Pn**	**13 12 33.6**	**+2.4**
MNAI	**Manna**	**2.53**	**325**	P	**Pn**	**13 12 33.8**	**+2.6**
LHSI	**Lahat**	**2.75**	**342**	P	**Pn**	**13 12 38.0**	**+3.7**
LEM	**Lembang**	**3.22**	**97**	P	**Pn**	**13 12 44.0**	**+3.1**
	25nm,0.3s,baz=166,slow=13,SNR=10						
LEM				S	**Sn**	**13 13 22.8**	**+4.6**
	13nm,0.3s,baz=324,slow=3.8,SNR=4.5						
LEM	**Lembang**	**3.22**	**97**	P	**Pn**	**13 12 42.7**	**+1.8**
KSI	**Kapahiang**	**3.31**	**327**	P	**Pn**	**13 12 45.0**	**+2.9**
PMBI	**Palembang**	**3.52**	**6**	Pn	**Pn**	**13 12 46.8**	**+1.9**
PMBI	**Palembang**	**3.52**	**6**	P	**Pn**	**13 12 47.9**	**+3.0**
CISI	**Cisompet, Garu**	**3.56**	**108**	Pn	**Pn**	**13 12 45.8**	**+0.2**
CISI	**Cisompet, Garu**	**3.56**	**108**	P	**Pn**	**13 12 47.7**	**+2.2**
XMIS	**Christmas Isla**	**4.19**	**163**		Pn	13 12 49.0	-5.0
PPBI	**Pangkal Pinang**	**4.61**	**22**	P	**Pn**	**13 13 00.6**	**+0.8**
PPBI				S	**Sn**	**13 13 54.2**	**+2.2**
TPI	**Tanjungpandan**	**4.90**	**42**	P	**Pn**	**13 13 06.1**	**+2.2**
UGM	**Wanagama**	**6.25**	**104**	Pn	**Pn**	**13 13 24.1**	**+1.8**
UGM	**Wanagama**	**6.25**	**104**	P	**Pn**	**13 13 25.2**	**+2.8**
JAGI	**Jajag, Banyuwa**	**9.88**	**102**	Pn	**Pn**	**13 14 13.5**	**+1.3**
GSI	**Gunungsitoli**	**10.29**	**318**	Pn	**Pn**	**13 14 18.5**	**+0.8**
KAPI	**Kappang**	**15.35**	**85**	LR	LR	13 21 45.1	
	comp=Z,87nm,19.1s,baz=253,slow=39						
GIRL	**Giralia**	**18.68**	**150**	P	**P**	**13 16 07.1**	**-0.5**
DLV	**T Lat**	**18.73**	**13**	P	**P**	**13 16 06.3**	**-1.9**
BATI	**Baumata**	**19.42**	**102**	P	**Pn**	**13 16 17.0**	**-0.2**
	8.5nm,0.3s,baz=297,slow=5.4,SNR=12						
BATI				S	**S**	**13 19 50.9**	**-2.5**
	1.7nm,0.3s,baz=340,slow=15,SNR=2.0						
SOEI	**Soe**	**19.94**	**101**	P	**P**	**13 16 20.4**	**-1.1**
SOEI				IAmb	IAmb	13 16 22.6	
	comp=Z,41nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.73**	**121**	P	**P**	**13 17 01.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**25.33**	**348**	P	**P**	**13 17 14.2**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=182,slow=8.6,SNR=10						
CMAR				LR	LR	13 26 45.3	
	comp=Z,47nm,20.2s,baz=312,slow=35						
H01W3	**Cape Leeuwin H**	**29.68**	**164**	T	T	13 49 13.8	
	baz=342,slow=76,SNR=6.4						
H01W1	**Cape Leeuwin H**	**29.70**	**164**	T	T	13 49 11.9	
	baz=342,slow=76,SNR=6.2						
H01W2	**Cape Leeuwin H**	**29.70**	**164**	T	T	13 49 13.0	
	baz=342,slow=76,SNR=6.5						
H08S2	**Diego Garcia H**	**31.68**	**266**	T	T	13 51 58.4	
	baz=89,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**31.69**	**266**	T	T	13 51 59.9	
	baz=89,slow=76,SNR=46						
H08S1	**Diego Carcia H**	**31.70**	**266**	T	T	13 51 59.0	
	baz=89,slow=76,SNR=26						
WB0	**Warramunga Arr**	**32.00**	**117**	P	**P**	**13 18 15.3**	**-0.1**
WB0				IAmb	IAmb	13 18 39.5	
	comp=Z,9.4nm,1.3s						
WRA	**Warramunga Arr**	**32.01**	**118**	P	**P**	**13 18 15.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=290,slow=10,SNR=9.2						
WRA	**Warramunga Arr**	**32.01**	**118**	P	**P**	**13 18 15.5**	**0.0**
WB2	**Warramunga Arr**	**32.02**	**118**	P	**P**	**13 18 15.4**	**-0.2**
WB2				IAmb	IAmb	13 18 15.8	
	comp=Z,6.4nm,1.2s						
WR0	**Warramunga Arr**	**32.19**	**118**	P	**P**	**13 18 17.1**	**0.0**
WR0				IAmb	IAmb	13 18 38.0	
	comp=Z,5.8nm,1.1s						
AS31	**Alice Springs**	**33.12**	**124**	P	**P**	**13 18 25.0**	**-0.2**
ASAR	**Alice Springs**	**33.12**	**124**	P	**P**	**13 18 25.9**	**+0.6**
	comp=Z,11nm,0.4s,baz=302,slow=8.1,SNR=8.6						
YOJ	**Yonaguni jima**	**35.69**	**30**	P	**P**	**13 18 44.8**	**-2.5**
TAPN	**Taplejung**	**37.28**	**335**	*e*P	**P**	**13 19 01.2**	**-0.1**
	comp=Z,8.6nm,0.6s						
RAMN	**Ramite**	**37.42**	**333**	*e*P	**P**	**13 19 02.5**	**+0.2**
	comp=Z,4.9nm,0.5s						
PKI	**Pulchoki**	**38.49**	**332**	*e*P	**P**	**13 19 11.2**	**-0.3**
	comp=Z,2.5nm,0.3s						
GUN	**Gumba**	**38.56**	**333**	*e*P	**P**	**13 19 11.6**	**-0.5**
	comp=Z,11nm,0.5s						
KKN	**Kakani**	**38.73**	**332**	*e*P	**P**	**13 19 13.5**	**+0.1**
	comp=Z,11nm,0.5s						
DANN	**Dangsing**	**39.92**	**331**	*e*P	**P**	**13 19 22.3**	**-1.1**
	comp=Z,14nm,0.6s						
NJ2	**Nanjing**	**40.70**	**19**	*e*P	**P**	**13 19 30.3**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LZH	**Lanzhou**	**42.32**	**359**	*e*P	**P**	**13 19 44.0**	**+1.2**
LZH				pP	sP	13 19 58.5	+0.3
LZH				sP	pP	13 20 07.3	+14
LZH				PP	**PP**	**13 21 18.0**	**-3.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,58nm,4.9s						
STKA	**Stephens Creek**	**42.93**	**131**	P	**P**	**13 19 48.9**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=320,slow=7.1,SNR=9.8						
STKA	**Stephens Creek**	**42.93**	**131**	P	**P**	**13 19 49.0**	**+1.2**
GTA	**Gaotai**	**45.83**	**355**	*e*P	**P**	**13 20 12.0**	**+1.1**
GTA				pP	sP	13 20 25.5	-0.8
GTA				sP	pP	13 20 32.3	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**47.53**	**7**	*e*P	**P**	**13 20 24.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,7.2s						
KSRS	**Korea Array**	**48.89**	**25**	P	**P**	**13 20 34.0**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=226,slow=7.0,SNR=5.0						
JHS	**Saijyo**	**49.33**	**31**	P	**P**	**13 20 37.1**	**-0.9**
NIL	**Nilore**	**49.62**	**326**	P	**P**	**13 20 40.0**	**-0.3**
NIL				IAmb	IAmb	13 20 40.4	
	comp=Z,5.2nm,0.6s						
JWT	**Wachi**	**50.76**	**33**	P	**P**	**13 20 47.4**	**-1.4**
WMQ	**Urumqi**	**52.27**	**345**	*e*P	**P**	**13 21 01.3**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,6.1s						
KSH	**Kashi**	**52.75**	**332**	P	**P**	**13 21 03.0**	**-0.8**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,510nm,6.6s						
MJAR	**Matsushiro Arr**	**53.22**	**34**	P	**P**	**13 21 05.2**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=198,slow=8.6,SNR=2.5						
SONM	**Songino Array**	**54.09**	**2**	P	**P**	**13 21 14.0**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=180,slow=8.4,SNR=5.4						
SONM				PcP	**PcP**	**13 22 18.2**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=178,slow=3.5,SNR=11						
SONM	**Songino Array**	**54.09**	**2**	IAmb	IAmb	13 21 14.5	
	comp=Z,0.9nm,0.8s						
SHLS	**Shalkode**	**54.32**	**338**	*e*P	**P**	**13 21 14.0**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=338						
KPKS	**Kokpek**	**54.88**	**337**	*e*P	**P**	**13 21 18.5**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=337						
KUU	**Kurty**	**56.16**	**336**	*e*P	**P**	**13 21 27.1**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=336						
USA0B	**Ussuriysk Arra**	**56.23**	**24**	P	**P**	**13 21 28.1**	**-0.7**
USA0B				IAmb	IAmb	13 21 28.9	
	comp=Z,11nm,0.8s						
USRK	**Ussuriysk Ar.**	**56.23**	**24**	P	**P**	**13 21 28.4**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=208,slow=5.7,SNR=22						
USRK	**Ussuriysk Ar.**	**56.23**	**24**	P	**P**	**13 21 28.0**	**-0.8**
TDK	**Taldyqorghan**	**56.29**	**338**	*e*P	**P**	**13 21 28.7**	**-0.6**
	comp=Z,5.0nm,0.5s,baz=338						
ZSN	**Zaisan**	**56.38**	**344**	*e*P	**P**	**13 21 29.6**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=344						
MK31	**Makanchi Array**	**56.53**	**342**	P	**P**	**13 21 30.5**	**-0.5**
MK31				IAmb	IAmb	13 21 31.6	
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**56.53**	**342**	P	**P**	**13 21 30.7**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=144,slow=7.9,SNR=60						
MKAR	**Makanchi Array**	**56.53**	**342**	P	**P**	**13 21 30.1**	**-0.9**
MAKZ	**Makanchi**	**56.65**	**342**	P	**P**	**13 21 30.8**	**-1.0**
SEM	**Semipalatinsk**	**60.37**	**342**	*e*P	**P**	**13 21 56.6**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=342						
SEM				*e*S	**S**	**13 30 10.8**	**+0.8**
	baz=342						
KURK	**Kurchatov**	**61.14**	**342**	P	**P**	**13 22 02.3**	**-0.5**
KURK				IAmb	IAmb	13 22 03.3	
	comp=Z,4.1nm,0.8s						
ZAA0	**Zalesovo Array**	**62.40**	**347**	P	**P**	**13 22 10.4**	**-0.8**
ZALV	**Zalesovo Beam**	**62.40**	**347**	P	**P**	**13 22 10.6**	**-0.6**
	comp=Z,4.5nm,0.3s,baz=155,slow=5.5,SNR=43						
ZALV	**Zalesovo Beam**	**62.40**	**347**	P	**P**	**13 22 10.3**	**-0.9**
BRZS	**Berezniki**	**62.59**	**338**	*e*P	**P**	**13 22 11.7**	**-1.0**
	baz=338						
ABKAR	**Akbulak array**	**67.64**	**330**	P	**P**	**13 22 45.1**	**-0.3**
ABKAR	**Akbulak array**	**67.64**	**330**	P	**P**	**13 22 45.1**	**-0.3**
ABKAR				IAmb	IAmb	13 22 46.1	
	comp=Z,5.9nm,0.8s						
PETK	**Petropavlovsk-**	**74.40**	**30**	P	**P**	**13 23 25.3**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=273,slow=2.2,SNR=4.5						
PET	**Petropavlovsk**	**74.83**	**31**	P	**P**	**13 23 27.8**	**-1.0**
PET				IAmb	IAmb	13 23 32.3	
	comp=Z,13nm,0.9s						
BR131	**Keskin Array S**	**79.54**	**312**	P	**P**	**13 23 56.1**	**+0.4**
BR131				IAmb	IAmb	13 23 56.9	
	comp=Z,3.1nm,0.8s						
BRTR	**Keskin Array B**	**79.54**	**312**	P	**P**	**13 23 56.2**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=140,slow=6.3,SNR=9.4						
BRTR	**Keskin Array B**	**79.54**	**312**	P	**P**	**13 23 55.9**	**+0.1**
FINES	**FINESS Array B**	**90.07**	**332**	P	**P**	**13 24 48.7**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=95,slow=3.2,SNR=4.2						
TXAR	**Lajitas Array**	**145.10**	**46**	PKP	**PKPdf**	**13 31 27.0**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=241,slow=1.1,SNR=22						
TXAR	**Lajitas Array**	**145.10**	**46**		PKPbc	13 31 25.8	-0.3

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*IDC **26** 13:15:24.9±1.9, 2°.11N×128°.08E, h0^{km}, mb4.4/3, mb1 4.7/3, mb1mx3.7/42, mbtmp4.5/3, Error ellipse: s-maj=135.4km s-min=24.8km az=66.0*

*NEIC **26** 13:15:41.9±1.7, 1°.4N±0°.1×127°.2E±0°.2, h132^{km}±9^{km}, mb4.0/11, Error ellipse: s-maj=24.4km s-min=16.9km az=74.0*

ISC 26 13:15:42.9±0.8, **1°.32N**±0°.10×**127°.2E**±0°.1, **h150**^{km}**, n20,** σ**1**^{s}**69**/20, **mb3.9**/10, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.57	162	Pn	Pn	13 16 03.0	-1.7
TNTI				Sn	Sn	13 16 17.2	-4.0
TOLI2	Tolitoli	6.42	268	Pn	Pn	13 17 15.4	+0.2
KAPI	Kappang	9.74	230	Pn	Pn	13 17 58.7	-0.9
WB0	Warramunga Arr	22.11	162	P	P	13 20 27.6	+1.2
WB0				IAmb	IAmb	13 20 49.7	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	22.26	162	P	P	13 20 29.4	+1.5
	comp=Z,3.0nm,0.5s,baz=345,slow=11,SNR=23						
WRA	Warramunga Arr	22.26	162	P	P	13 20 28.7	+0.8
WB2	Warramunga Arr	22.27	162	P	P	13 20 29.3	+1.3
WB2				IAmb	IAmb	13 20 39.0	
	comp=Z,13nm,1.5s						
WR0	Warramunga Arr	22.34	162	P	P	13 20 30.1	+1.5
WR0				IAmb	IAmb	13 20 30.9	
	comp=Z,2.9nm,0.6s						
AS31	Alice Springs	25.68	166	P	P	13 21 00.7	+1.5
ASAR	Alice Springs	25.68	166	P	P	13 21 01.1	+2.0
	comp=Z,0.7nm,0.5s,baz=349,slow=7.2,SNR=12						
BBOO	Buckleboo	34.97	167	P	P	13 22 22.5	+1.7
BBOO				IAmb	IAmb	13 22 23.6	
	comp=Z,23nm,1.3s						
INU	Inuyama	35.07	14	P	P	13 22 21.8	+0.2
STKA	Stephens Creek	35.73	159	P	P	13 22 29.3	+2.0
	comp=Z,1.9nm,0.4s,baz=339,slow=10,SNR=5.8						
STKA	Stephens Creek	35.73	159	IAmb	IAmb	13 22 30.0	
	comp=Z,0.8nm,0.8s						
KSAR	Wonju Array Be	35.95	1	P	P	13 22 29.9	+0.8
JYT	Yasato	36.76	18	P	P	13 22 36.6	+0.6
MK31	Makanchi Array	59.79	326	P	P	13 25 31.0	-1.3
MK31				IAmb	IAmb	13 25 34.2	
	comp=Z,1.2nm,1.1s						
MKAR	Makanchi Array	59.79	326	P	P	13 25 31.1	-1.3
	comp=Z,0.2nm,0.3s,baz=109,slow=8.5,SNR=4.8						
MKAR	Makanchi Array	59.79	326	P	P	13 25 30.8	-1.6
MAKZ	Makanchi	59.98	326	P	P	13 25 33.6	0.0
MAKZ				IAmb	IAmb	13 25 56.3	
	comp=Z,1.7nm,1.2s						

IDC ***26*** *13:41:34.2±1.4, 13°.40N×120°.06E, h0^{km}, mb4.6/2, mb1 4.9/2, mb1mx3.5/35, mbtmp4.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/40, Error ellipse: s-maj=28.2km s-min=12.6km az=125.0*

MAN ***26*** *13:41:35.9, 13°.47N×120°.03E, h11^{km}, MS3.2*

ISC 26 13:41:36.7±1.5**, 13°.50N**±0°.05×**120°.08E**±0°.07**, h18**^{km}±7^{km}**, n12, σ0^s.55**/17**, 2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.28	35	eP	Pg	13 41 42.8	-0.2
LUBP				eS	Sb	13 41 47.8	+0.1
PGP	Puerto Galera	0.85	90	⇓eP	Pb	13 41 53.3	+0.3
PGP				eS	Sg	13 42 04.8	+0.2
TGY	Tagaytay City	1.03	54	Pg	Pn	13 41 56.7	+0.4
	354nm,0.3s,baz=240,slow=3.9,SNR=14						
TGY				Lg	Lg	13 42 09.2	
	416nm,0.3s,baz=316,slow=20,SNR=15						
TGY	Tagaytay City	1.03	54	⇓eP	Pn	13 41 56.5	+0.2
TGY				eS	Sb	13 42 08.3	-0.9
SJMP	San Jose	1.45	135	eP	Pn	13 42 02.2	+0.1
SJMP				eS	Sb	13 42 22.1	+0.8
BOAC	Boac	1.72	91	eP	Pn	13 42 06.0	+0.2
BOAC				eS	Sb	13 42 28.7	-0.4
ENPP	El Nido	2.37	196	eP	Pn	13 42 14.9	+0.2
ENPP				eS	Sn	13 42 43.0	-0.4
CUYO	Cuyo Island	2.79	161	eP	Pn	13 42 20.7	+0.1
DAV	Davao City (W)	8.37	139	LR	LR	13 47 16.9	
	comp=Z,82nm,19.6s,baz=204,slow=41						
WRA	Warramunga Arr	36.08	157	P	P	13 48 36.6	-1.0
	2.2nm,0.6s,baz=336,slow=9.6,SNR=23						
SONM	Songino Array	36.08	344	P	P	13 48 38.2	+0.7
	0.2nm,0.5s,baz=153,slow=9.7,SNR=2.8						
ASAR	Alice Springs	39.34	160	P	P	13 49 04.8	-0.4
	16nm,0.5s,baz=337,slow=6.7,SNR=41						

IDC 26 14:00:59.9±15.0**, 6°.58S**×**129°.67E, h140**^{km}±165^{km}**, mb3.0**/1**, mb1 3.0**/3**, mb1mx2.8**/30**, mbtmp3.3**/3**, ML2.9**/3**, Error ellipse: s-maj=118.0km s-min=57.8km az=40.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.10	199	P	Pn	14 03 48.6	+0.7
	0.1nm,0.3s,baz=42,slow=14,SNR=2.2						
FITZ				S	Sn	14 05 55.4	-6.1
	0.1nm,0.3s,baz=20,slow=12,SNR=2.5						
WRA	Warramunga Arr	14.03	162	P	Pn	14 04 11.4	-1.3
	0.1nm,0.3s,baz=342,slow=12,SNR=2.8						
WRA				S	Sn	14 06 36.9	-11
	0.1nm,0.3s,baz=338,slow=23,SNR=3.7						
ASAR	Alice Springs	17.47	167	P	P	14 04 54.4	+0.2
	0.1nm,0.3s,baz=342,slow=9.8,SNR=12						
MKAR	Makanchi Array	67.70	327	P	P	14 11 42.1	0.0
	0.3nm,0.6s,baz=112,slow=6.4,SNR=3.7						

SKHL ***26*** *14:02:39.7±0.2, 44°.06N×149°.10E, h70^{km}±3^{km}, mb4.7/11*

MOS ***26*** *14:02:39.8±1.1, 44°.13N×148°.96E, h69^{km}, mb4.3/6, Error ellipse: s-maj=9.9km s-min=8.1km az=63.7*

NEIC ***26*** *14:02:42.4±1.5, 44°.2N±0°.1×148°.95E±0°.03, h77^{km}±9^{km}, mb4.1/16, Error ellipse: s-maj=14.8km s-min=2.6km az=182.0*

JMA ***26*** *14:02:43.1±0.3, 44°.34N×148°.62E, h30^{km}, M4.7*

IDC ***26*** *14:02:44.4±4.4, 44°.42N×148°.78E, h81^{km}±26^{km}, mb3.4/7, mb1 3.6/10, mb1mx3.3/37, mbtmp3.8/10, Error ellipse: s-maj=77.5km s-min=21.2km az=160.0*

ISC 26 14:02:38.7±1.2**, 43°.98N**±0°.05×**149°.03E**±0°.06**, h50**^{km}±12^{km}**, n112, σ2^s.08**/135**, mb4.0**/14**, 4D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.50	327	iP	Pn	14 03 03.7	+0.6
KUR				AMB	AMB	14 03 04.0	
	380nm,0.2s						
KUR				iS	Sn	14 03 20.2	-1.3
KUR				A	A	14 03 20.8	
	5μm,0.3s						
KUR				A	A	14 03 20.8	
	4μm,0.3s						
KUR	Kuril'sk	1.50	327	⇓iPN	Pn	14 03 03.7	+0.6
KUR				iS	Sn	14 03 20.0	-1.5
KUR				pmax	pmax		
	comp=N,57nm,0.1s						
KUR				pmax	pmax		
	comp=E,51nm,0.1s						
KUR				pmax	pmax		
	comp=Z,531nm,0.1s						
KUR				smax	smax		
	comp=N,5μm,0.3s						
KUR				smax	smax		
	comp=E,4μm,0.2s						
YUK	Yuzh-Kuril'sk	2.29	272	iP	Pn	14 03 14.1	+0.2
YUK				AMB	AMB	14 03 17.0	
	comp=E,470nm,0.3s						
YUK				iS	Sn	14 03 39.8	-1.0
YUK				A	A	14 03 43.0	
	comp=E,2μm,0.3s						
YUK				A	A	14 03 43.0	
	comp=E,1μm,0.3s						
YUK	Yuzh-Kuril'sk	2.29	272	d iPN	Pn	14 03 15.6	+1.7
YUK				iS	Sn	14 03 39.8	-1.0
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=E,210nm,0.1s						
YUK				smax	smax		
	comp=E,1μm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
GRPR	Tuman	2.35	271	iP	Pn	14 03 16.0	+1.2
GRPR				AMB	AMB	14 03 18.0	
	comp=N,420nm,0.3s						
GRPR				iS	Sn	14 03 40.9	-1.5
GRPR				A	A	14 03 43.0	
	comp=N,2μm,0.3s						
GRPR				A	A	14 03 43.0	
	comp=N,2μm,0.3s						
GRPR	Tuman	2.35	271	d iPN	Pn	14 03 16.3	+1.5
GRPR				iS	Sn	14 03 40.1	-2.3
GRPR				pmax	pmax		
	comp=E,52nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,415nm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.2s						
GRPR				smax	smax		
	comp=E,2μm,0.3s						
NEM2	Nemuro 2	2.46	257	P	Pn	14 03 18.1	+1.8
NEM2				eS	Sn	14 03 43.5	-1.6
NMR	Nemuro--Hokkai	2.47	257	iP	Pn	14 03 18.0	+1.6
NMR				iS	Sn	14 03 44.5	-0.9
NMR	Nemuro--Hokkai	2.47	257	⇓iPN	Pn	14 03 18.1	+1.6
NMR				iS	Sn	14 03 44.1	-1.3
GLVR	Golovnino	2.55	266	eP	Pn	14 03 19.7	+2.2
GLVR				AMB	AMB	14 03 20.4	
	comp=E,450nm,0.3s						
GLVR				iS	Sn	14 03 47.0	-0.2
GLVR				A	A	14 03 49.0	
	comp=E,942nm,0.4s						
GLVR				A	A	14 03 49.0	
	comp=E,2μm,0.4s						
GLVR	Golovnino	2.55	266	ePN	Pn	14 03 19.7	+2.2
GLVR				iS	Sn	14 03 47.1	-0.2
GLVR				pmax	pmax		
	comp=E,38nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,452nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,942nm,0.4s						
JRA	Rausu	2.82	270	P	Pn	14 03 23.6	+2.4
JRA				eS	Sn	14 03 54.0	0.0
JNK	Nakash	3.15	264	P	Pn	14 03 27.6	+1.9
JNK				eS	Sn	14 04 00.4	-1.6
JAK	Akkeshi	3.30	254	P	Pn	14 03 29.7	+1.9
JAK				eS	Sn	14 04 04.0	-1.8
JTKR	Abashiri--Toko	3.70	272	P	Pn	14 03 35.6	+2.4
JTKR				eS	Sn	14 04 15.1	-0.4
JAR	Ashorobuto	3.88	262	P	Pn	14 03 38.3	+2.6
JAR				eS	Sn	14 04 19.6	-0.4
JOB	Onbets	3.93	256	P	Pn	14 03 38.7	+2.2
JOB				eS	Sn	14 04 20.6	-0.7
JMP	Maruseppu	4.09	272	P	Pn	14 03 41.3	+2.6
JCH	Churui	4.36	254	P	Pn	14 03 44.1	+1.8
JCH				eS	Sn	14 04 29.7	-2.0
JKK2	Kamakawa 2	4.54	271	P	Pn	14 03 47.7	+2.9
JKA	Kamikawa-asahi	4.64	274	eP	Pn	14 03 49.2	+3.1
JKA	Kamikawa-asahi	4.64	274		Pn	14 03 49.2	+3.1
ASAJ	Asahikawa	4.64	274	P	Pn	14 03 49.2	+3.0
	comp=N,6.6nm,0.3s,baz=72,slow=22,SNR=92						
ASAJ				S	Sn	14 04 48.8	+10
	comp=N,2.4nm,0.3s,baz=34,slow=29,SNR=3.8						
ASAJ	Asahikawa	4.64	274	P	Pn	14 03 49.0	+2.9
JSE	Soyaes	4.72	284	P	Pn	14 03 49.3	+2.1
JEM	Erimo	4.73	247	Pn	Pn	14 03 50.0	+2.6
ERM	Erimo	4.74	247	iPN	Pn	14 03 51.7	+4.3
ERM	Erimo	4.74	247	Pn	Pn	14 03 51.3	+3.9
JFR	Furan	4.75	262	P	Pn	14 03 50.9	+3.2
JFR				eS	Sn	14 04 41.6	+0.2
JNBK	Urakawa-nobuka	4.90	252	P	Pn	14 03 51.5	+1.8
JNBK				eS	Sn	14 04 43.0	-2.1
JBT2	Biratori 2	5.01	258	P	Pn	14 03 53.3	+2.1
JBT2				eS	Sn	14 04 44.1	-3.6
JWK2	Keihoku	5.26	287	P	Pn	14 03 57.9	+3.3
YSS	Yuzh-Sakhalins	5.32	306	eP	Pn	14 03 56.8	+1.4
YSS				AMB	AMB	14 03 57.3	
	comp=N,30nm,0.6s						
YSS				eS	Sn	14 04 54.8	-0.6
YSS	Yuzh-Sakhalins	5.32	306	ePN	Pn	14 03 56.8	+1.4
YSS				eS	Sn	14 04 54.8	-0.6
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				smax	smax		
	comp=E,30nm,0.8s						
YSS	Yuzh-Sakhalins	5.32	306		Pn	14 03 56.5	+1.1
JEW	Eniwo	5.64	261	Pn	Pn	14 04 03.3	+3.5
JRBN	Rebuntou	5.86	287	P	Pn	14 04 05.2	+2.4
JNB	Noboribetsu	6.03	258	P	Pn	14 04 07.3	+2.1
JNB				eS	Sn	14 05 10.6	-2.3
JKB	Kayabe	6.23	253	P	Pn	14 04 10.2	+2.2
JKB				eS	Sn	14 05 14.1	-3.7
JYM2	Yakumo 2	6.61	257	P	Pn	14 04 15.4	+2.2
JANG	Nango	6.64	240	P	Pn	14 04 14.7	+1.0
JANG				eS	Sn	14 05 23.3	-4.7
JTH	Tanohata	6.70	235	P	Pn	14 04 15.0	+0.6
JTH				eS	Sn	14 05 24.2	-5.1
JTM	Tenmabayashi	6.70	244	P	Pn	14 04 16.3	+1.8
JTM				eS	Sn	14 05 24.9	-4.5
JTM	Tenmabayashi	6.70	244	Pn	Pn	14 04 16.2	+1.8
JSR	Shiriuchi	6.80	252	P	Pn	14 04 17.9	+2.2
JSR				eS	Sn	14 05 28.0	-3.7
UGL	Uglegorsk	7.00	319	eP	Pn	14 04 19.2	+0.7
UGL				AMB	AMB	14 04 21.1	
	comp=E,18nm,0.6s						
OFUJ	Ofunato	7.38	231	P	Pn	14 04 25.4	+1.7
JRG	Rokugo	7.78	237	eS	Sn	14 05 52.6	-3.2
JIO	Ouri	8.00	229	eS	Sn	14 05 56.2	-5.0
TYV	Tymovskoe	8.12	330	eP	Pn	14 04 36.3	+2.4
TYV				AMB	AMB	14 04 45.7	
	comp=E,4.0nm,0.5s						
TYV				eS	Sn	14 06 00.9	-3.3
TYV	Tymovskoe	8.12	330	ePN	Pn	14 04 43.9	+10
TYV				eS	Sn	14 06 15.4	+11
TYV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TYV				smax	smax		
	comp=E,7.0nm,1.3s						
SKR	Severo-Kuril's	8.25	33	eP	Pn	14 04 37.2	+1.7
SKR				AMB	AMB	14 04 40.7	
	comp=E,11nm,0.8s						
SKR				eS	Sn	14 06 03.2	-4.1
SKR	Severo-Kuril's	8.25	33	ePN	Pn	14 04 36.6	+1.1
SKR				MLR	MLR		
	comp=Z,700nm,14.0s						
PAU	Pauzhetka	9.14	32	eP	Pn	14 04 49.0	+1.3
PAU				AMB	AMB	14 04 58.7	
	comp=Z,15nm,0.8s						
PAU				eS	Sn	14 06 26.6	-2.4
PAU				A	A	14 06 26.7	
	comp=Z,29nm,0.3s						
PAU				A	A	14 06 26.7	
	comp=Z,24nm,0.3s						
JSD	Sado	10.07	238	Pn	Pn	14 05 02.2	+1.7
OKH	Okha	10.38	339	erx	rx	14 05 04.1	
PEA0B	Petropavlovsk-	10.78	29	PN	Pn	14 05 11.7	+1.5
PEA0B	Petropavlovsk-	10.78	29	Pn	Pn	14 05 11.7	+1.5
PETK	Petropavlovsk-	10.78	29	P	Pn	14 05 11.7	+1.5
	comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=32						
MAJO	Matsushiro	11.11	232	iPN	Pn	14 05 18.0	+3.2
USA0B	Ussuriysk Arra	12.26	277	iPN	Pn	14 05 31.9	+1.5
EKMR	Ekimchan	13.98	316	eP	Pn	14 05 53.0	-0.8
MA2	Magadan	15.65	3	eP	P	14 06 17.1	-1.9
MA2	Magadan	15.65	3	P	P	14 06 17.1	-1.9
MA2				pmax	pmax		
	comp=Z,19nm,1.5s						
MA2	Magadan	15.65	3	P	P	14 06 17.1	-1.9
MA2				IAmb	IAmb	14 06 20.8	
	comp=Z,19nm,1.5s						
BMKR	Bomnak	16.91	316	eP	Pn	14 06 30.0	-1.6
KS19	Wonju Array Si	17.27	255	P	P	14 06 38.5	+1.4
KS19				IAmb	IAmb	14 06 59.3	
	comp=Z,22nm,1.4s						
SEY	Seymchan	19.09	5	P	P	14 06 55.5	-1.3
	comp=Z,0.3nm,0.3s,baz=188,slow=10,SNR=11						
YAK	Yakutsk	21.35	335	eP	P	14 07 22.3	+1.0
YAK	Yakutsk	21.35	335	iP	P	14 07 22.3	+1.0
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ADK	Adak	24.11	59	P	P	14 07 49.9	+0.5
ADK				pmax	pmax		
	comp=Z,82nm,1.2s						
ADK	Adak	24.11	59	P	P	14 07 49.9	+0.5
H11N2	WAKE ISLAND Hy	28.42	143	T	T	14 39 31.7	
	baz=333,slow=76,SNR=97						
H11N1	WAKE ISLAND Hy	28.44	143	T	T	14 39 32.2	
	baz=333,slow=76,SNR=95						
H11N3	WAKE ISLAND Hy	28.44	143	T	T	14 39 38.0	
	baz=333,slow=76,SNR=103						
H11S1	WAKE ISLAND Hy	29.42	144	T	T	14 40 50.4	
	baz=334,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	29.43	144	T	T	14 40 50.7	
	baz=334,slow=76,SNR=95						
H11S2	WAKE ISLAND Hy	29.44	144	T	T	14 40 50.1	
	baz=334,slow=76,SNR=77						
FALS	False Pass	32.19	53	P	P	14 09 01.9	+0.4
IMAR	Indian Mountai	37.69	34	P	P	14 09 51.0	+2.3
RSO	Redoubt South	37.86	43	P	P	14 09 49.8	-0.8
HDA	Harding Lake	40.48	37	P	P	14 10 12.8	+0.7
IL31		40.49	36	P	P	14 10 13.3	+1.2
IL31				IAmb	IAmb	14 10 27.3	
	comp=Z,4.5nm,1.4s						
ILAR	Eielson Array	40.49	36	P	P	14 10 11.3	-0.9
	comp=Z,0.2nm,0.5s,baz=266,slow=8.7,SNR=6.4						
ILAR	Eielson Array	40.49	36	eP	P	14 10 14.6	+2.4
ILAR	Eielson Array	40.49	36	P	P	14 10 13.3	+1.1
PRP	Porcupine Dome	41.05	35	P	P	14 10 19.7	+2.7
FYU	Fort Yukon	41.16	34	P	P	14 10 19.6	+1.9
DGZ	Jazzator, Alta	41.48	300	iP	P	14 10 21.8	+1.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.3s						
INK	Inuvik	45.51	31	P	P	14 10 54.7	+2.0
	comp=Z,0.9nm,0.3s,baz=299,slow=8.9,SNR=14						
INK	Inuvik	45.51	31	P	P	14 10 54.7	+2.0
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	Inuvik	45.51	31	IAmb	IAmb	14 11 00.1	
	comp=Z,4.2nm,1.2s						
MK31	Makanchi Array	45.68	298	P	P	14 10 54.6	+0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MK31	Makanchi Array	45.68	298	P	P	14 10 54.6	+0.3
MK31				IAmb	IAmb	14 11 19.0	
	comp=Z,2.9nm,1.4s						
MKAR	Makanchi Array	45.68	298	P	P	14 10 54.7	+0.3
	comp=Z,0.2nm,0.5s,baz=82,slow=9.0,SNR=4.0						
MKAR	Makanchi Array	45.68	298	eP	P	14 10 55.4	+1.1
MKAR	Makanchi Array	45.68	298	iP	P	14 10 55.4	+1.1
KURK	Kurchatov	46.52	304	eP	P	14 11 00.8	-0.1
KURK	Kurchatov	46.52	304	P	P	14 11 00.8	-0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURK	Kurchatov	46.52	304	P	P	14 11 00.8	-0.1
KURK				IAmb	IAmb	14 11 20.3	
	comp=Z,2.7nm,1.2s						
C36M	Paulatuk	48.63	28	P	P	14 11 17.9	+1.0
YKA	Yellowknife Ar	54.85	34	P	P	14 12 02.7	-0.6
	comp=Z,0.2nm,0.7s,baz=297,slow=7.0,SNR=2.4						
ABKAR	Akbulak array	57.97	309	P	P	14 12 25.1	-0.7
ABKAR				IAmb	IAmb	14 12 40.4	
	comp=Z,2.0nm,1.2s						
MTN	Manton Dam	58.86	200	P	P	14 12 33.8	+1.5
ARCES	ARCESS Array B	59.50	340	P	P	14 12 34.2	-1.9
	comp=Z,2.2nm,0.8s,baz=67,slow=7.1,SNR=0.9						
ARCES	ARCESS Array B	59.50	340	P	P	14 12 34.2	-1.9
ARCES				pmax	pmax		
	comp=Z,12nm,1.2s						
LRM	Limekiln Ridge	65.17	50	P	P	14 13 14.8	+0.1
FIA1	FINESS Array S	65.28	334	P	P	14 13 13.8	-0.9
FINES	FINESS Array B	65.28	334	P	P	14 13 13.6	-1.2
	comp=Z,1.8nm,0.5s,baz=35,slow=8.0,SNR=14						
FINES	FINESS Array B	65.28	334	eP	P	14 13 13.8	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	NORSAR Array B	69.87	340	P	P	14 13 43.2	-0.6
	comp=Z,0.6nm,0.6s,baz=30,slow=6.6,SNR=6.0						
NOA	NORSAR Array B	69.87	340	eP	P	14 13 43.0	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

TAP 26 14:04:50.6, 23°.28N×**120°.74E, h10**^{km}**, ML0.7, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	Ta-pu	0.11	280	eP	Pg	14 04 54.0	+0.6
	baz=279						
TPUB				eS	Sg	14 04 56.4	+1.0
	baz=279						
STYT	Tauyuan	0.12	174	eP	Pb	14 04 54.4	-0.7
	baz=170						
STYT				eS	Sg	14 04 57.0	+1.2
	baz=170						
WTP	Ta-pu	0.12	253	eS	Sg	14 04 56.8	+1.0
	baz=250						
CHN4	Tsaushan	0.15	296	eP	Pg	14 04 54.8	+0.7
	baz=296						
CHN4				eS	Sg	14 04 57.9	+1.4
	baz=296						
SGST	Jiashian	0.25	216	eP	Pb	14 04 56.7	-0.6
	baz=214						
ELDTW	Lidau	0.27	110	eP	Pb	14 04 57.1	-0.6
	baz=110						

TAP 26 14:04:55.3, 23°.29N×**120°.75E, h12**^{km}**, ML1.3, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPUB	Ta-pu	0.11	275	P	Pb	14 04 59.0	-0.4
	baz=275						
TPUB				S	Sg	14 05 01.5	+0.9
	baz=275						
STYT	Tauyuan	0.13	177	P	Pb	14 04 59.4	-0.3
	baz=173						
STYT				S	Sg	14 05 02.1	+1.0
	baz=173						
WTP	Ta-pu	0.13	251	S	Sg	14 05 01.9	+0.8
	baz=248						
CHN4	Tsaushan	0.16	293	eP	Pb	14 04 59.7	-0.4
	baz=293						
CHN4				eS	Sg	14 05 03.0	+1.3
	baz=293						
ALS	Alishan	0.23	13	S	Sg	14 05 05.0	+1.2
	baz=15						
CHN1	Nanshi	0.23	243	S	Sg	14 05 05.2	+1.6
	baz=242						
TWK	Hsinying	0.24	265	eP	Pg	14 05 00.8	+0.3
	baz=263						
TWK				eS	Sg	14 05 05.3	+1.4
	baz=263						
SGST	Jiashian	0.26	216	eS	Sg	14 05 05.3	+0.9
	baz=214						
ELDTW	Lidau	0.27	112	eP	Pb	14 05 02.0	-0.1
	baz=111						
ELDTW				eS	Sb	14 05 06.2	-0.4
	baz=111						
ELDTW	Lidau	0.27	112	eS	Pb	14 05 02.1	0.0
	baz=110						
SLGT	Liugui	0.31	198	eS	Pb	14 05 02.7	-0.1
	baz=197						
SLGT	Liugui	0.31	198	eP	Pb	14 05 02.5	-0.3
	baz=197						
SLGT				eS	Sb	14 05 07.7	-0.1
	baz=197						
CHN5	Tsauling	0.31	348	eP	Pb	14 05 02.5	-0.4
	baz=347						
CHN5				eS	Sb	14 05 07.8	-0.2
	baz=347						

IDC ***26*** *14:15:10.0±4.0, 31°.40N×141°.29E, h0^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.5/34, mbtmp3.6/6, ML2.8/3, Error ellipse: s-maj=156.8km s-min=16.9km az=69.0*

ISC 26 14:15:14.6±2.2**, 31°.5N**±0°.2×**141°.4E**±0°.5**, h40**^{km}**, n7, σ1^s.32**/8**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.14	321	Pn	Pn	14 15 46.1	-1.7
	2.2nm,0.3s,baz=73,slow=19,SNR=2.0						
JCJ	Chichijima	4.41	171	Pn	Pn	14 16 18.2	-0.7
	5.2nm,0.3s,baz=287,slow=23,SNR=5.2						
JCJ				Sn	Sn	14 17 08.0	-1.1
	4.2nm,0.3s,baz=216,slow=17,SNR=1.9						
MJAR	Matsushiro Arr	5.71	333	Pn	Pn	14 16 35.8	-1.1
	0.1nm,0.3s,baz=153,slow=11,SNR=5.9						
SONM	Songino Array	31.19	312	P	P	14 21 31.5	+1.5
	0.3nm,0.5s,baz=111,slow=8.2,SNR=3.1						
MKAR	Makanchi Array	47.24	307	P	P	14 23 43.9	+0.3
	0.3nm,0.6s,baz=84,slow=9.9,SNR=5.3						
WRA	Warramunga Arr	51.56	188	P	P	14 24 17.1	+0.4
	1.4nm,0.5s,baz=6.7,slow=7.8,SNR=17						
ASAR	Alice Springs	55.28	188	P	P	14 24 44.8	+0.7
	0.6nm,0.6s,baz=16,slow=13,SNR=12						

ROM ***26*** *14:23:32.8±0.1, 46°.113N±0°.008×12°.153E±0°.009, h10^{km}, ML3.0/1, Error ellipse: s-maj=0.9km s-min=0.7km az=3.0*

*PRU **26** 14:23:32.9±0.0, 46.°12N×12.°11E, h0^{km}*

*VIE **26** 14:23:32.1±0.1, 46.°13N×12.°10E, h6^{km}±3^{km}, mb2.6/12, ml3.4/15, Error ellipse: s-maj=1.0km s-min=0.8km az=11.0 9 km W of Belluno*

*LDG **26** 14:23:34.0±0.1, 46.°19N×12.°20E, h12^{km}, Ml3.2/29, Error ellipse: s-maj=3.3km s-min=2.3km az=163.0*

*BGR **26** 14:23:35.5±0.5, 46.°19N×12.°16E, h5^{km}, ML2.9/9, Error ellipse: s-maj=11.1km s-min=4.4km az=2.0*

*STR **26** 14:23:41.7±5.2, 46°N±16°×1°2E±4°2, h10^{km}, MLv3.5/8, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11*

ISC 26 14:23:32.1±0.8**, 46.°13N**±0.°01×**12.°14E**±0.°01**, h12**^{km}±5^{km}**, n171, σ1^{s}79**/253**, 9C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VARN	Col Varnada, M	0.14	189	⇑ePg	Pg	14 23 35.4	-0.2
VARN				eSg	Sg	14 23 37.7	-0.4
FAU	Forcella Aurin	0.14	312	⇓ePg	Pg	14 23 35.6	-0.1
FAU				eSg	Sg	14 23 38.3	0.0
AGOR	Agordo	0.16	338	⇓ePg	Pg	14 23 35.8	-0.1
AGOR				eSg	Sg	14 23 38.5	0.0
CSO	Casso	0.19	43	⇓ePg	Pg	14 23 36.2	-0.2
CSO				eSg	Sg	14 23 39.0	-0.3
FRE8	Fregona	0.19	128	P	Pg	14 23 36.4	+0.1
FRE8				S	Sg	14 23 39.9	+0.6
CAE	Caneva	0.24	121	⇑ePg	Pg	14 23 37.4	+0.2
CAE				eSg	Sg	14 23 41.6	+0.8
CIMO	Cimolais	0.28	50	⇓ePg	Pg	14 23 37.5	-0.3
POLC	Polcenigo	0.28	113	P	Pg	14 23 37.6	-0.2
POLC				S	Sg	14 23 43.1	+1.6
POLC				AML	AML		
	comp=E,10075µm,0.6s						
POLC				AML	AML		
	comp=N,16800µm,0.3s						
POLC				AML	AML		
	comp=N,16800µm,0.3s						
ED06	Collalto TV	0.28	170	⇑ePg	Pg	14 23 38.2	+0.4
ED06				eSg	Sg	14 23 42.5	+0.8
CRND	Cornuda	0.30	188	P	Pg	14 23 38.8	+0.6
CRND				S	Sg	14 23 43.9	+1.6
MTLO	Montello	0.32	185	⇑ePg	Pg	14 23 39.1	+0.5
MTLO				eSg	Sg	14 23 44.6	+1.7
CGRP	Cima Grappa	0.34	223	⇑ePg	Pg	14 23 38.5	-0.6
CGRP				eSg	Sg	14 23 44.3	+0.5
CTI	Castel Tesino	0.35	256	P	Pg	14 23 38.7	-0.4
CTI				AML	AML		
	comp=E,8030µm,1.5s						
CTI				AML	AML		
	comp=N,6725µm,1.3s						
ASOL	Asolo	0.37	206	P	Pg	14 23 39.5	+0.1
AFL	Alpe Faloria	0.40	4	⇑ePg	Pb	14 23 40.6	-0.6
AFL				eSg	Sb	14 23 46.7	-0.6
CSMI	Casera Mimoias	0.52	43	ePg	Pg	14 23 42.3	0.0
PANI	Panarotta	0.56	262	ePg	Pg	14 23 43.5	+0.4
PANI				eSg	Sg	14 23 51.2	+0.6
MPRI	Monte Prat	0.60	79	ePg	Pg	14 23 44.2	+0.4
CLUD	Cludinico	0.61	58	ePg	Pb	14 23 44.4	-0.2
CLUD				eSg	Sb	14 23 53.8	+0.5
KOSI	Kohlern	0.62	302	P	Pb	14 23 46.2	+1.3
KOSI				S	Sb	14 23 54.6	+0.9
KOSI				AML	AML		
	comp=E,972µm,0.6s						
KOSI				AML	AML		
	comp=N,800µm,1.2s						
FVI	Forni Avoltri	0.64	44	P	Pb	14 23 45.1	-0.1
FVI				S	Sb	14 23 54.3	+0.1
FVI				AML	AML		
	comp=N,818µm,1.4s						
FVI				AML	AML		
	comp=E,810µm,0.5s						
FVI				AML	AML		
	comp=N,818µm,1.4s						
FUSE	Fusea	0.66	65	ePg	Pb	14 23 45.7	+0.1
FUSE				eSg	Sn	14 23 55.7	-1.9
ABTA	Abfaltersbach	0.67	23	ePg	Pb	14 23 45.7	0.0
	comp=N,21nm,0.2s,SNR=16						
ABTA				eSg	Sn	14 23 55.1	-2.7
	comp=N,86nm,0.2s						
BUA	Buia	0.69	83	ePg	Pg	14 23 45.6	+0.1
BOO	Bordano	0.69	74	ePg	Pb	14 23 46.2	+0.1
DOSS	Dosso del Somm	0.71	249	Pg	Pg	14 23 46.0	+0.2
GEPF	Gemona	0.71	78	P	Pb	14 23 46.7	+0.4
GEPF				S	Sb	14 23 56.9	+0.9
GEPF				AML	AML		
	comp=N,864µm,0.7s						
GEPF				AML	AML		
	comp=E,506µm,1.3s						
APPI	Appiano	0.72	299	P	Pg	14 23 46.5	+0.5
APPI				AML	AML		
	comp=E,554µm,0.4s						
APPI				AML	AML		
	comp=N,781µm,0.2s						
APPI				AML	AML		
	comp=E,554µm,0.4s						
APPI				AML	AML		
	comp=N,782µm,0.2s						
ZOU	Zoufplan	0.72	54	ePg	Pb	14 23 46.7	+0.1
VENL	Venezia Lido	0.74	167	P	Pg	14 23 48.1	+1.8
BAD	Bernadia	0.78	82	ePg	Pg	14 23 46.7	-0.4
OZOL	Ozolo	0.80	290	ePg	Pg	14 23 47.8	+0.3
MARN	Marana (Italy)	0.81	233	ePg	Pb	14 23 47.8	-0.4
PLRO	Paularo	0.81	59	ePg	Pb	14 23 48.6	+0.4
RISI	Rein	0.82	357	P	Pb	14 23 48.4	+0.1
RISI				AML	AML		
	comp=N,1235µm,0.7s						
RISI				AML	AML		
	comp=N,1230µm,0.7s						
RISI				AML	AML		
	comp=E,874µm,0.3s						
ZOVE	Zovencedo	0.82	214	P	Pb	14 23 48.1	-0.1
ABSI	Aberstueckl	0.82	317	P	Pg	14 23 48.2	+0.2
ABSI				S	Sb	14 23 59.2	-0.2
ABSI				AML	AML		
	comp=E,1125µm,0.6s						
ABSI				AML	AML		
	comp=N,1685µm,0.3s						
GAGG	Gaggia	0.82	267	ePg	Pg	14 23 47.9	-0.1
TEOL	Teolo	0.84	203	ePg	Pb	14 23 48.7	+0.2
TEOL	Teolo	0.84	203	P	Pb	14 23 48.7	+0.2
TEOL				AML	AML		
	comp=N,4345µm,0.5s						
TEOL				AML	AML		
	comp=E,4070µm,0.4s						
TEOL				AML	AML		
	comp=N,4340µm,0.5s						
COLI	Coloredo	0.86	90	ePg	Pg	14 23 48.9	+0.2
PTCC	Patocco-Chiusa	0.89	72	P	Pg	14 23 48.6	-0.6
PTCC				AML	AML		
	comp=N,417µm,0.5s						
PTCC				AML	AML		
	comp=E,410µm,1.1s						
PTCC				AML	AML		
	comp=N,418µm,0.5s						
ROVR	Rover Verones	0.89	237	P	Pb	14 23 49.2	-0.2
ROVR				AML	AML		
	comp=N,3570µm,0.2s						
ROVR				AML	AML		
	comp=N,1460µm,0.2s						
ROVR				AML	AML		
	comp=E,530µm,0.2s						
ROVR				AML	AML		
	comp=E,1380µm,1.4s						
TREG	Tregnago	0.92	229	P	Pb	14 23 49.9	+0.1
TREG				AML	AML		
	comp=N,4835µm,1.5s						
TREG				AML	AML		
	comp=E,5350µm,0.5s						
ROSI	Rosskopf	0.94	328	P	Pb	14 23 50.5	+0.1
ROSI				AML	AML		
	comp=N,558µm,0.9s						
ROSI				AML	AML		
	comp=E,574µm,0.8s						
SABO	M.te Sabotino	1.03	98	P	Pn	14 23 53.1	+0.8
SABO				AML	AML		
	comp=E,761µm,0.5s						
SABO				AML	AML		
	comp=N,1170µm,1.5s						
ACOM	Acomizza, Ital	1.04	66	⇑P	Pn	14 23 52.9	+0.3
ACOM				AML	AML		
	comp=E,823µm,0.2s						
ACOM				AML	AML		
	comp=N,1140µm,0.5s						
ACOM				AML	AML		
	comp=E,822µm,0.2s						
OPPE	Oppeano	1.07	220	P	Pb	14 23 53.2	+0.8
OPPE				AML	AML		
	comp=E,4660µm,0.5s						
OPPE				AML	AML		
	comp=N,7215µm,0.5s						
OPPE				AML	AML		
	comp=N,7210µm,0.5s						
MAGA	Magasa	1.11	252	P	Pb	14 23 53.7	+0.4
MAGA				AML	AML		
	comp=E,3530µm,0.4s						
MAGA				AML	AML		
	comp=N,2990µm,0.6s						
MABI	Malga Bissina	1.13	267	P	Pb	14 23 54.1	+0.4
MABI				AML	AML		
	comp=E,471µm,0.5s						
MABI				AML	AML		
	comp=N,588µm,0.1s						
MYKA	Terra Mystica	1.15	64	ePg	Pg	14 23 54.4	+0.1
	comp=N,20nm,0.2s,SNR=12						
MYKA				eSg	Sn	14 24 11.4	+1.6
	comp=N,40nm,0.2s						
MOSI	Grossmontoni	1.20	294	P	Pn	14 23 55.3	+0.5
MOSI				AML	AML		
	comp=E,765µm,0.5s						
MOSI				AML	AML		
	comp=N,1940µm,0.5s						
TRI	Trieste	1.21	110	P	Pn	14 23 55.3	+0.5
TRI				AML	AML		
	comp=E,380µm,1.0s						
TRI				AML	AML		
	comp=N,317µm,0.5s						
TRI				AML	AML		
	comp=E,380µm,1.0s						
SALO	Salr	1.24	246	P	Pn	14 23 56.2	+1.0
SALO				AML	AML		
	comp=E,1330µm,0.6s						
SALO				AML	AML		
	comp=N,859µm,0.8s						
SALO				AML	AML		
	comp=N,858µm,0.8s						
SALO				AML	AML		
	comp=E,3030µm,0.5s						
SALO				AML	AML		
	comp=N,2195µm,0.6s						
KBA	Koelnbreinsper	1.26	41	ePg	Pg	14 23 56.3	0.0
	comp=N,15nm,0.2s,SNR=59						
KBA				Sg	Sg	14 24 14.5	+1.8
	comp=N,115nm,0.4s						
KBA	Koelnbreinsper	1.26	41	ePn	Pg	14 23 56.5	+0.2
KBA				eSg	Sg	14 24 14.3	+1.5
SQTA	Sankt Quirin	1.26	330	ePg	Pg	14 23 56.7	+0.4
	comp=N,49nm,0.2s,SNR=88						
SQTA				eSg	Sg	14 24 13.8	+1.0
	comp=N,160nm,0.3s						
WATA	Walderalm	1.26	342	ePg	Pg	14 23 57.1	+0.7
	comp=N,38nm,0.2s,SNR=12						
WATA				eSg	Sg	14 24 13.9	+1.1
	comp=N,120nm,0.2s						
BRMO	Bormio	1.27	286	⇑P	Pn	14 23 56.6	+0.9
BRMO				AML	AML		
	comp=N,340µm,0.3s						
BRMO				AML	AML		
	comp=N,340µm,0.3s						
BRMO				AML	AML		
	comp=E,298µm,0.2s						
SERM	Sermide	1.27	208	P	Pn	14 23 57.0	+1.5
SERM				AML	AML		
	comp=E,1210µm,0.4s						
SERM				AML	AML		
	comp=N,1317µm,0.5s						
SERM				AML	AML		
	comp=E,1920µm,1.3s						
SERM				AML	AML		
	comp=N,1750µm,0.4s						
GORS	Gorjuse	1.30	81	i Pg	Pn	14 23 56.6	+0.5
GORS				IAML		14 24 18.8	
	comp=Z,45nm,0.2s						
FETA	Feichten	1.31	313	ePg	Pb	14 23 57.1	+0.3
	comp=Z,7.3nm,0.1s,SNR=35						
FETA				eSg	Sg	14 24 14.2	-0.3
	comp=Z,16nm,0.2s						
JAVS	Javornik	1.36	99	i Pg	Pb	14 23 58.0	+0.4
JAVS				IAML		14 24 19.6	
	comp=Z,27nm,0.1s						
MOTA	Moosalm	1.40	330	ePg	Pg	14 23 59.3	+0.3
	comp=Z,32nm,0.4s,SNR=31						
MOTA				eSg	Sg	14 24 18.5	+1.2
	comp=Z,64nm,0.3s						
SKDS	Skadanscina	1.44	113	i Pg	Pn	14 23 58.7	+0.8
SKDS				i		14 23 59.6	
SKDS				IAML		14 24 21.1	
	comp=Z,239nm,0.3s						
BERNI	Berninapass	1.49	282	⇑P	Pb	14 24 00.3	+0.5
BERNI				AML	AML		
	comp=E,200µm,0.6s						
BERNI				AML	AML		
	comp=N,204µm,0.5s						
BERNI				AML	AML		
	comp=N,204µm,0.6s						
BERNI				AML	AML		
	comp=E,200µm,0.6s						
ZUGS	Zugspitze, Sch	1.51	329	ePn	Pg	14 24 01.9	+0.9
ZUGS				eSg	Sg	14 24 22.9	+2.2
PART	Garmisch-Parte	1.53	333	ePn	Pg	14 24 03.6	+2.1
RETA	Reutte	1.65	326	ePg	Pg	14 24 04.3	+0.6
	comp=E,30nm,0.3s,SNR=16						
RETA				eSg	Sg	14 24 26.6	+1.5
	comp=E,44nm,0.3s						
LJU	Ljubljana	1.67	92	P	Pb	14 24 03.1	+0.4
LJU				AML	AML		
	comp=E,995µm,0.4s						
LJU				AML	AML		
	comp=N,931µm,0.5s						
DAVOX	Davos/Dischmat	1.69	293	P	Pb	14 24 03.8	+0.6
DAVOX				AML	AML		
	comp=E,182µm,0.3s						
DAVOX				AML	AML		
	comp=N,234µm,0.5s						
OBKA	Obir	1.71	76	Pn	Pb	14 24 03.4	-0.1
	comp=N,19nm,0.4s						
OBKA				Sg	Sg	14 24 29.1	+1.9
	comp=N,65nm,0.4s						
OBKA	Obir	1.71	76	ePn	Pb	14 24 04.4	+0.9
OBKA				eSg	Sg	14 24 28.9	+1.7
OBER	Oberstdorf	1.80	316	ePn	Pg	14 24 06.7	+0.2
RIY	Rijeka	1.83	115	ePn	Pn	14 24 05.0	+1.7
RIY				Sn	Sb	14 24 28.5	+0.2
BE1	Monatshausen	1.89	341	ePn	Pg	14 24 07.8	-0.4
DAVA	Damuels	1.93	307	ePg	Pg	14 24 09.1	0.0
	comp=N,20nm,0.2s,SNR=13						
DAVA				Sg	Sg	14 24 34.6	+0.4
	comp=N,56nm,0.4s						
DAVA	Damuels	1.93	307	ePn	Pg	14 24 09.1	0.0
SOKA	Soboth	2.08	74	ePn	Pb	14 24 08.6	-1.1
	comp=N,2.0nm,0.2s,SNR=7.2						
SOKA				eSg	Sg	14 24 38.6	-0.2
	comp=N,15nm,0.4s						
UBR	Ueberruh	2.08	319	ePn	Pb	14 24 10.2	+0.5
PLONS	Plons/SG	2.11	297	ePn	Pb	14 24 11.2	+0.9
PLONS				eSg	Sg	14 24 39.1	-0.7
SFI	Santa Sofia	2.24	185	P	Pn	14 24 09.6	+0.6
SFI				AML	AML		
	comp=N,153µm,0.6s						
SFI				AML	AML		
	comp=E,134µm,1.2s						
MOA	Molln	2.25	40	ePn	Pb	14 24 12.3	-0.4
	comp=E,13nm,0.3s						
MOA				Sn	Sb	14 24 40.7	+0.2
	comp=E,17nm,0.3s						
MOA	Molln	2.25	40	ePn	Pb	14 24 12.3	-0.4
BOJS	Bojanci	2.27	105	i Pn	Pn	14 24 11.1	+1.8
BOJS	Bojanci	2.27	105	AML	AML		
	comp=E,114µm,1.4s						
BOJS				AML	AML		
	comp=N,128µm,0.8s						
VARE	Varese	2.36	265	P	Pn	14 24 13.0	+2.3
VARE				AML	AML		
	comp=E,208µm,0.8s						
VARE				AML	AML		
	comp=N,230µm,0.6s						
OZLJ	Ozalj	2.38	101	ePn	Pn	14 24 13.0	+2.1
OZLJ				Sn	Sb	14 24 42.7	-1.5
NVLJ	Novalja	2.49	128	ePn	Pn	14 24 13.7	+1.4
NVLJ				Sn	Sn	14 24 42.4	-0.1
MPAG	Monte Paganucc	2.54	170	P	Pn	14 24 13.8	+0.6
MPAG				AML	AML		
	comp=N,131µm,0.7s						
MPAG				AML	AML		
	comp=E,205µm,0.4s						
ARSA	Arzberg	2.58	63	ePn	Pn	14 24 15.3	+1.7
	comp=E,2.0nm,0.2s						
ARSA				Sn	Sb	14 24 47.3	-2.8
	comp=E,15nm,0.7s						
PIEI	Pieia	2.61	174	P	Pn	14 24 14.6	+0.5
PIEI				AML	AML		
	comp=N,73µm,1.6s						
PIEI				AML	AML		
	comp=E,116µm,0.3s						
PTJ	Puntijarka	2.68	93	ePn	Pb	14 24 18.9	-1.1
PTJ				Sn	Sb	14 24 52.4	-0.5
MURB	Monte Urbino	2.88	174	AML	AML		
	comp=E,182µm,0.4s						
MURB				AML	AML		
	comp=N,169µm,0.4s						
GEC2	GERESS Array S	2.91	21	ePn	Pn	14 24 20.2	+1.9
DUGI	Dugi Otok	2.98	135	ePn	Pn	14 24 19.8	+0.7
DUGI				Sn	Sn	14 24 53.7	-1.0
SLE	Schleitheim	2.98	304	P	Pn	14 24 21.6	+2.4
SLE	Schleitheim	2.98	304	ePn	Pn	14 24 21.5	+2.4
KALN	Kalnik	3.00	88	ePn	Pb	14 24 23.5	-2.0
KALN				Sn	Sb	14 25 00.1	-2.0
UDBI	Udbina	3.02	121	ePn	Pn	14 24 21.4	+1.7
UDBI				Sn	Sn	14 24 56.6	+0.8
WET	Wettzell	3.05	9	ePn	Pn	14 24 22.0	+1.8
CONA	Conrad Observa	3.12	53	i Pn	Pn	14 24 23.0	+1.9
	comp=N,1.1nm,0.2s						
CONA				eSn	Sb	14 25 01.2	-4.2
	comp=N,10nm,0.6s						
KHC	Kasperske Hory	3.15	17	ePN	Pn	14 24 23.4	+1.9
KHC				ePG	Pg	14 24 31.5	-1.0
KHC				eSN	Sb	14 25 01.6	-4.8
KHC				eSG	Sg	14 25 13.8	+0.5
	comp=N,19nm,0.6s						
FDMO	Fiordimonte	3.17	167	AML	AML		
	comp=N,53µm,1.3s						
FDMO				AML	AML		
	comp=E,64µm,1.3s						
MGAB	Montegabbione	3.22	180	AML	AML		
	comp=N,79µm,1.3s						
MGAB				AML	AML		
	comp=E,75µm,1.6s						
BALST	Balsthal	3.28	293	P	Pn	14 24 26.3	+3.0
BFO	Black Forest	3.40	312	ePn	Pn	14 24 27.3	+2.4
MORI	Morici	3.40	131	ePn	Pn	14 24 25.6	+0.7
MORI				Sn	Sn	14 25 04.4	-0.7
KIZ	Kirchzarten	3.41	304	P	Pn	14 24 27.5	+2.5
ZIRJ	Zirje	3.52	134	ePn	Pn	14 24 27.5	+1.1
ZIRJ				Sn	Sn	14 25 06.2	-1.7
OPP	Oppenau	3.58	313	P	Pn	14 24 29.7	+2.4
BOURR	Bourrignon	3.60	292	P	Pn	14 24 30.4	+2.7
ROTZ	Rotzenmuhle	3.64	1	ePn	Pn	14 24 29.5	+1.4
KIJV	Kijevo	3.70	124	ePn	Pn	14 24 30.1	+1.2
KIJV				Sn	Sn	14 25 12.0	-0.4
LPG	La Plagne	3.82	262	ePn	Pn	14 24 31.5	+0.6
LPG				eSn	Sn	14 25 14.3	-1.5
	comp=E,18nm,0.7s						
LPL	La Plagne	3.83	263	ePn	Pn	14 24 32.3	+1.3
LPL				eSn	Sn	14 25 14.3	-1.7
	comp=E,12nm,0.6s						
MOF	Molkenrain	3.83	298	P	Pn	14 24 33.4	+2.5
RSL	Roselend	3.87	265	P	Pn	14 24 35.9	+4.4
CHMF	Charmoille	3.94	288	P	Pn	14 24 35.2	+3.0
ECH	Echery	3.98	303	P	Pn	14 24 35.1	+2.2
HINF	Hinteralfeld	3.99	297	eP	Pn	14 24 35.2	+2.2
HINF				eSn	Sn	14 25 17.2	-2.5
	comp=E,10nm,0.2s						
BRANT	Les Verrieres	3.99	284	P	Pn	14 24 35.9	+2.8
CDF	Champ du Feu	4.02	306	eP	Pn	14 24 35.9	+2.5
CDF				eSn	Sn	14 25 18.7	-1.7
	comp=E,4.2nm,0.3s						
MBDF	Montbardon	4.03	251	ePn	Pn	14 24 34.0	+0.3
MBDF	Montbardon	4.03	251	eP	Pn	14 24 37.8	+4.1
MBDF				eSn	Sn	14 25 19.2	-1.6
	comp=E,33nm,0.6s						
SBF	Sospel	4.03	237	ePn	Pn	14 24 34.3	+0.7
SBF				eSn	Sn	14 25 19.9	-0.9
	comp=E,26nm,0.5s						
NKC	Novy Kostel	4.11	3	eSN	Sn	14 25 24.6	+2.0
KRUC	Moravsky	4.11	43	ePN	Pn	14 24 35.3	+0.7
KRUC				ePG	Pg	14 24 49.8	-0.9
KRUC				eSN	Sn	14 25 24.5	+1.9
KRUC				eSG	Sg	14 25 46.2	+2.3
MODS	Modra-Piesok	4.16	56	ePG	Pg	14 24 51.6	0.0
MODS				eSG	Sg	14 25 46.3	+0.8
CABF	La Chapelle	4.21	279	ePn	Pn	14 24 36.7	+0.6
CABF	La Chapelle	4.21	279	eP	Pn	14 24 40.4	+4.3
CABF				eSn	Sn	14 25 21.9	-3.4
	comp=E,6.6nm,0.6s						
PGF	Pioggiola	4.23	213	ePn	Pn	14 24 36.7	+0.3
PGF				eSn	Sn	14 25 24.8	-1.0
	comp=E,4.8nm,0.4s						
HVAR	Hvar	4.27	132	ePn	Pn	14 24 37.4	+0.7
HVAR				Sn	Sn	14 25 25.4	-1.0
HAU	Haudompre	4.38	297	ePn	Pn	14 24 38.9	+0.6
HAU	Haudompre	4.38	297	eP	Pn	14 24 41.4	+3.1
HAU				eSn	Sn	14 25 27.0	-2.2
	comp=E,16nm,0.3s						
RICI	Ricice	4.43	125	ePn	Pn	14 24 40.6	+1.6
RICI				Sn	Sn	14 25 29.8	-0.7
MAKA	Makarska	4.50	128	ePn	Pn	14 24 40.3	+0.4
MAKA				Sn	Sn	14 25 31.8	-0.2
MOX	Moxa	4.53	356	ePn	Pn	14 24 41.9	+1.6
ORIF	Oris-en-Rattie	4.56	257	ePn	Pn	14 24 44.9	+4.0
ORIF	Oris-en-Rattie	4.56	257	eP	Pn	14 24 45.0	+4.0
ORIF				eSn	Sn	14 25 32.2	-1.7
	comp=E,19nm,0.6s						
FRF	La Foret Royal	4.67	239	ePn	Pn	14 24 43.5	+1.1
FRF				eSn	Sn	14 25 35.4	-1.1
	comp=E,10nm,0.4s						
TNS	Taunus Mts	4.78	330	ePn	Pn	14 24 46.7	+2.9
LMR	La Mourre	4.89	237	ePn	Pn	14 24 46.0	+0.7
LMR				eSn	Sn	14 25 40.0	-1.8
	comp=E,9.8nm,0.7s						
BRG	Berggiesshubel	4.89	14	Pn	Pb	14 24 51.9	-5.7
BRG				Amp		14 24 52.4	
	comp=Z,1.7nm,0.4s						
BRG	Berggiesshubel	4.89	14	Pg	Pg	14 25 04.3	-1.4
BRG				Sn	Sn	14 25 47.1	+5.2
BRG				Sg	Sg	14 26 10.3	+1.3
BRG				Amp		14 26 19.7	
	comp=Z,7.8nm,0.7s						
BRG	Berggiesshubel	4.89	14	Pn	Pb	14 24 51.9	-5.7
BRG				Amp		14 24 52.4	
	comp=Z,1.7nm,0.4s						
BRG	Berggiesshubel	4.89	14	Pg	Pg	14 25 04.3	-1.4
BRG				Sn	Sn	14 25 47.1	+5.2
BRG				Sg	Sg	14 26 10.3	+1.3
BRG				Amp		14 26 19.7	
	comp=Z,7.8nm,0.7s						
PAGF	Fort de Pagny	4.99	301	ePn	Pn	14 24 46.0	-0.6
PAGF				eSn	Sn	14 25 41.5	-2.7
	comp=Z,10nm,0.5s						
SMRF	Simiane la Rot	5.12	247	ePn	Pn	14 24 49.5	+0.9
SMRF	Simiane la Rot	5.12	247	eP	Pn	14 24 52.6	+4.0
SMRF				eSn	Sn	14 25 45.8	-1.9
	comp=Z,5.6nm,0.5s						
STON	Ston	5.14	127	ePn	Pn	14 24 49.0	+0.2
STON				Sn	Sn	14 25 46.1	-2.0
CLL	Collm	5.21	6	ePn	Pn	14 24 53.0	+3.3
CLL				e		14 25 49.0	
CLL				eSg	Sg	14 26 18.0	-1.2
	comp=Z,17nm,1.0s						
SFTF	Sexfontaines	5.26	296	ePn	Pn	14 24 50.5	0.0
	baz=116						
SFTF				eSn	Sn	14 25 48.6	-2.5
	comp=Z,8.3nm,0.3s						
MEZF	Maizieres J'vi	5.37	299	ePn	Pn	14 24 52.4	+0.5
SAVF	Savonnieres en	5.37	300	ePn	Pn	14 24 51.2	-0.7
SAVF				eSn	Sn	14 25 49.1	-4.5
	comp=Z,8.4nm,0.5s						
VIVF	Saint-Julien-l	5.40	259	ePn	Pn	14 24 52.8	+0.4
VIVF	Saint-Julien-l	5.40	259	eP	Pn	14 24 55.6	+3.2
VIVF				eSn	Sn	14 25 51.3	-3.2
SMF	Signal de Mont	5.76	278	ePn	Pn	14 24 58.3	+1.0
SMF	Signal de Mont	5.76	278	eP	Pn	14 25 01.9	+4.6
SMF				eSn	Sn	14 26 00.2	-3.1
	comp=Z,4.6nm,0.4s						

LOR	Lormes	5.81	284	*e*P	Pn	14 25 02.1	+4.2
	baz=105						
LOR				*e*Sn	Sn	14 26 01.2	-3.2
	comp=Z,8.0nm,0.6s						
SSF	Saint Saulge	6.02	282	*e*Pn	Pn	14 25 01.6	+0.8
SSF				*e*Sn	Sn	14 26 06.2	-3.4
	comp=Z,7.4nm,0.7s						
AVF	Avril sur Loir	6.10	279	*e*P	Pn	14 25 04.7	+2.7
AVF				*e*Sn	Sn	14 26 08.6	-3.1
	comp=Z,4.4nm,0.6s						
LASF	Ste Croix	6.21	254	*e*Pn	Pn	14 25 03.6	+0.1
GIVF	Givet	6.30	312	*e*P	Pn	14 25 09.0	+4.3
GIVF				*e*Sn	Sn	14 26 12.7	-3.9
	comp=Z,1.6nm,0.2s						
BGF	Bois d'Agland	6.45	277	*e*Pn	Pn	14 25 07.2	+0.5
BGF				*e*Sn	Sn	14 26 16.6	-3.5
	comp=Z,10nm,0.4s						
BAIF	Baives	6.60	309	*e*P	Pn	14 25 12.7	+3.9
BAIF				*e*Sn	Sn	14 26 19.8	-4.2
	comp=Z,4.0nm,0.5s						
TCF	Toulx Ste Croi	6.89	275	*e*Pn	Pn	14 25 12.2	-0.6
TCF				*e*Sn	Sn	14 26 27.0	-4.1
	comp=Z,3.6nm,0.5s						
CAF	Calviac	7.18	264	*e*Pn	Pn	14 25 17.1	+0.3
CAF	Calviac	7.18	264	*e*P	Pn	14 25 20.6	+3.8
RJF	Les Rejaudoux	7.48	267	*e*Pn	Pn	14 25 20.6	-0.3
FLN	La Foliniere	8.95	292	*e*Pn	Pn	14 25 40.5	-0.5

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*IDC **26** 14:24:43.1±1.2, 37°.08N×141°.43E, h0^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.4/39, mbtmp3.5/8, ML3.0/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/46, Error ellipse: s-maj=26.6km s-min=21.2km az=115.0*

*JMA **26** 14:24:47.4±0.1, 37°.10N×141°.18E, h28^{km}±1^{km}, M3.7*

JMA Felt II J1.

*NIED **26** 14:24:47.4, 37°.11N×141°.18E, h28^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.43; $M_{\theta\theta}$2.71; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.61; $M_{\theta\phi}$1.41; $M_{\phi r}$1.47; Fault plane solution: $M_0$3.33000×10^{14} NP1: ϕ_s225.00000°, δ61.00000°, λ-119.00000°. NP2: ϕ_s93.00000°, δ40.00000°, λ-50.00000°.*

ISC 26 14:24:46.6±1.1**, 37°.12N**±0°.05×**141°.26E**±0°.09**, h22**^{km}±5^{km}**, n25, σ0^s.94**/29**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.37	268	P	Pb	14 24 54.6	+0.2
ONAJ				S	Sb	14 24 59.5	-0.3
JFK	Kawauchi	0.40	310	P	Pb	14 24 55.2	+0.3
JFK				S	Sb	14 25 00.7	+0.2
JFFD	Fukushimafurud	0.56	268	P	Pb	14 24 57.4	-0.3
JFFD				S	Sb	14 25 04.3	-1.0
JMST	Minamisoumatoc	0.68	334	P	Pb	14 24 59.7	0.0
JMST				S	Sb	14 25 08.6	-0.1
JHO	Hitachi	0.75	228	P	Pb	14 25 00.2	-0.7
JMM	Marumori	0.84	334	P	Pn	14 25 02.2	-0.9
JFT	Otama	0.84	299	P	Pn	14 25 02.7	-0.4
JFT				S	Sn	14 25 13.4	-1.4
JFY	Yanaizu	1.27	284	P	Pb	14 25 09.4	-0.5
JFY				S	Sb	14 25 26.0	+0.2
JOU	Okura	1.33	340	P	Pn	14 25 10.6	+0.7
JOU				S	Sb	14 25 27.9	+0.3
MJAR	Matsushiro Arr	2.51	258	Pn	Pn	14 25 27.8	+1.7
	0.4nm,0.3s,baz=83,slow=15,SNR=18						
MJAR				Sn	Sb	14 26 01.4	-0.1
	0.6nm,0.3s,baz=62,slow=5.3,SNR=9.5						
MJAR				LR	LR	14 26 08.0	
	comp=Z,57nm,20.1s,baz=45,slow=32						
MAT	Matsushiro	2.51	258	P	Pn	14 25 27.8	+1.7
MAT				S	Sb	14 26 01.9	+0.4
JHJ	Hachijo jima 2	4.17	197	Pn	Pn	14 25 46.8	-2.0
	7.0nm,0.3s,baz=68,slow=19,SNR=2.1						
ASAJ	Asahikawa	7.07	8	Pn	Pn	14 26 29.1	+0.5
	0.4nm,0.3s,baz=192,slow=17,SNR=7.8						
ASAJ				Sn	Sn	14 27 46.9	-1.5
	0.1nm,0.3s,baz=72,slow=20,SNR=2.6						
USRK	Ussuriysk Ar.	9.98	318	Pn	Pn	14 27 14.1	+5.5
	baz=131,slow=14,SNR=7.1						
SONM	Songino Array	27.64	304	P	P	14 30 32.8	+0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=1.9						
H11N2	WAKE ISLAND Hy	28.30	121	T	T	15 00 07.4	
	baz=314,slow=75,SNR=29						
H11N1	WAKE ISLAND Hy	28.30	121	T	T	15 00 08.5	
	baz=314,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	28.31	121	T	T	15 00 08.7	
	baz=314,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	29.01	123	T	T	15 01 10.7	
	baz=316,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	29.01	123	T	T	15 01 14.6	
	baz=316,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	29.02	123	T	T	15 01 12.6	
	baz=316,slow=76,SNR=12						
ZALV	Zalesovo Beam	41.77	312	P	P	14 32 35.2	+1.2
	0.6nm,0.6s,baz=99,slow=9.3,SNR=2.6						
MKAR	Makanchi Array	43.97	302	P	P	14 32 53.1	+1.0
	0.3nm,0.8s,baz=86,slow=8.8,SNR=3.1						
MKAR				PcP	PcP	14 34 36.3	-1.3
	0.1nm,0.5s,baz=76,slow=6.0,SNR=1.3						
ILAR	Eielson Array	49.49	32	P	P	14 33 34.6	-0.3
	0.5nm,0.7s,baz=268,slow=6.8,SNR=7.1						
WRA	Warramunga Arr	57.12	188	P	P	14 34 32.1	+0.6
	0.5nm,0.7s,baz=6.5,slow=7.5,SNR=5.2						

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*IDC **26** 14:26:44.1±2.9, 33°.32S×179°.09W, h0^{km}, mb4.3/2, mb1 4.5/3, mb1mx3.9/30, mbtmp4.3/3, ML3.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/25, Error ellipse: s-maj=67.7km s-min=35.6km az=114.0*

*WEL **26** 14:26:49.8±0.7, 33°S±5°×17°9W±°, h110^{km}±47^{km}, M4.1/23, mB4.5/6, ML4.6/19, MLv4.4/23, Mw(mB)3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0*

*NEIC **26** 14:26:54.0±1.1, 33°.3S±0°.1×179°.2W±0°.3, h75^{km}±12^{km}, mb4.3/5, Error ellipse: s-maj=32.2km s-min=13.8km az=78.0*

ISC 26 14:26:49.5±1.1**, 33°.50S**±0°.07×**178°.8W**±0°.1**, h48**^{km}**, n44, σ1^s.55**/59**, mb4.3**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.29	10	P	Pn	14 27 48.8	-3.4
RAO	Raoul Island	4.30	10	Pn	Pn	14 27 55.3	+3.0
RIZ	Raoul Island	4.30	10	P	Pn	14 27 55.8	+3.5
MXZ	Matakaoa Point	4.71	210	P	Pn	14 27 58.6	+0.7
MXZ				S	Sn	14 28 52.1	+0.9
HAZ	Te Kaha	5.09	213	P	Pn	14 28 03.4	+0.2
HAZ				S	Sn	14 29 04.9	+4.1
RUGZ	Raukumara Rang	5.31	212	P	Pn	14 28 06.8	+0.5
RUGZ				S	Sn	14 29 07.7	+1.4
TWGZ	Tauwhareparae	5.37	209	P	Pn	14 28 07.0	0.0
TWGZ				S	Sn	14 29 08.6	+1.1
MWZ	Matawai	5.69	211	P	Pn	14 28 11.0	-0.5
MWZ				S	Sn	14 29 16.1	+0.7
OPRZ	Ohinepanea	5.77	220	P	Pn	14 28 13.1	+0.5
URZ	Urewera	5.81	214	Pn	Pn	14 28 12.2	-0.8
	2.5nm,0.3s,baz=270,slow=4.7,SNR=21						
URZ				Sn	Sn	14 29 17.3	-1.2
	4.7nm,0.3s,baz=223,slow=4.1,SNR=8.1						
URZ	Urewera	5.81	214	P	Pn	14 28 12.3	-0.8
URZ				S	Sn	14 29 17.2	-1.2
RAGZ	Rawiri	5.87	211	P	Pn	14 28 13.4	-0.6
RIGZ	Rimuhau	5.91	207	P	Pn	14 28 13.9	-0.5
RIGZ				S	Sn	14 29 21.8	+1.0
MUGZ	Murupara	6.15	215	P	Pn	14 28 17.1	-0.6
MUGZ				S	Sn	14 29 26.5	-0.2
TOZ	Tahuroa Road	6.30	226	P	Pn	14 28 21.9	+2.1
RAHZ	Arahi	6.36	211	P	Pn	14 28 21.3	+0.6
RAHZ				S	Sn	14 29 32.2	+0.2
MTHZ	Maungataniwha	6.42	212	P	Pn	14 28 22.6	+1.2
MTHZ				S	Sn	14 29 32.9	-0.4
WHHZ	Waihua	6.44	209	P	Pn	14 28 23.9	+2.3
WHHZ				S	Sn	14 29 35.2	+1.4
OUZ	Omahuta	6.55	253	P	Pn	14 28 24.3	+1.1
OUZ				S	Sn	14 29 35.3	-1.3
MRHZ	Matea Rd	6.60	215	P	Pn	14 28 23.5	-0.4
MRHZ				S	Sn	14 29 37.4	-0.4
NMHZ	Naumai	6.63	211	P	Pn	14 28 24.9	+0.5
BKZ	Black Stump Fm	6.83	213	Pn	Pn	14 28 25.2	-1.9
BKZ	Black Stump Fm	6.83	213	P	Pn	14 28 26.4	-0.7
BKZ				S	Sn	14 29 42.6	-0.9
MCHZ	McNeill Hill	6.97	210	P	Pn	14 28 29.5	+0.6
MCHZ				S	Sn	14 29 46.7	-0.1
KWHZ	Kaweka Forest	7.07	212	P	Pn	14 28 30.4	-0.1
KWHZ				S	Sn	14 29 48.7	-0.8
TMVZ	Te Maari	7.17	217	P	Pn	14 28 31.4	-0.4
KAHZ	Kahuranaki	7.19	208	P	Pn	14 28 29.2	-2.9
HIZ	Hauiti	7.20	224	Pn	Pn	14 28 33.9	+1.9
HIZ	Hauiti	7.20	224	P	Pn	14 28 34.5	+2.4
OTVZ	Oturere	7.22	217	P	Pn	14 28 32.4	-0.2
KRHZ	Kereru	7.27	211	P	Pn	14 28 33.0	-0.1
BHHZ	Black Hill Sta	7.29	213	P	Pn	14 28 35.3	+1.9
TSZ	Takapari Road	7.79	211	P	Pn	14 28 40.6	+0.3
BFZ	Birch Farm	8.20	208	Pn	Pn	14 28 44.2	-1.7
MSWZ	Moikau Station	9.22	209	Pn	Pn	14 28 57.8	-2.0
SNZO	South Karori	9.37	212	Pn	Pn	14 28 59.5	-2.3
AFI	Afiamalu	20.51	20	LR	LR	14 40 13.7	
	comp=Z,98nm,18.4s,baz=318,slow=40						
TAU	Tasmania Unive	28.10	241	P	P	14 32 33.6	-3.0
CTAO	Charters Tower	33.80	284	P	P	14 33 28.3	+1.2
CTAO				IAmb	IAmb	14 33 49.6	
	comp=Z,5.1nm,1.1s						
AS31	Alice Springs	42.40	271	P	P	14 34 38.5	-1.0
ASAR	Alice Springs	42.40	271	P	P	14 34 39.2	-0.3
	comp=Z,12nm,0.4s,baz=110,slow=7.7,SNR=7.5						
WRA	Warramunga Arr	43.67	276	P	P	14 34 47.4	-2.3
	comp=Z,0.3nm,0.3s,baz=115,slow=8.0,SNR=4.9						
QSPA	South Pole Qui	56.62	180	P	P	14 36 30.7	+3.3
QSPA				IAmb	IAmb	14 36 55.9	
	comp=Z,4.8nm,1.5s						
FINES	FINESS Array B	147.79	338	PKPbc	PKPbc	14 46 28.5	+0.3
	comp=Z,2.9nm,0.8s,baz=50,slow=2.2,SNR=4.2						

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*IDC **26** 14:30:31.1±2.3, 5°.01S×129°.23E, h0^{km}, mb3.5/1, mb1 4.1/3, mb1mx3.5/40, mbtmp3.8/3, ML3.2/2, Error ellipse: s-maj=168.0km s-min=29.3km az=68.0*

*NEIC **26** 14:30:45.9±0.4, 5°.4S±0°.1×129°.0E±0°.3, h137^{km}±18^{km}, mb4.0/8, Error ellipse: s-maj=40.0km s-min=13.4km az=102.0*

ISC 26 14:30:45.9±0.8**, 5°.51S**±0°.08×**129°.2E**±0°.1**, h150**^{km}**, n17, σ2^s.02**/18**, mb3.8**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.21	140	Pn	Pn	14 31 38.4	+2.5
FAKI	Fak Fak	3.96	50	Pn	Pn	14 31 46.1	+0.4
MTN	Manton Dam	7.53	166	Pn	Pn	14 32 38.5	+5.5
FITZ	Fitzroy Crossi	13.00	195	P	P	14 33 51.6	+1.7
WB0	Warramunga Arr	15.04	161	P	P	14 34 13.2	+0.6
WB0				IAmb	IAmb	14 34 41.2	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	15.19	161	Pn	P	14 34 14.9	+0.6
	comp=Z,0.1nm,0.3s,baz=344,slow=12,SNR=3.4						
WRA				Sn	Sn	14 36 56.4	-5.2
	comp=Z,0.4nm,0.3s,baz=340,slow=25,SNR=9.5						
WRA	Warramunga Arr	15.19	161		Pn	14 34 10.5	-2.3
WB2	Warramunga Arr	15.19	161	P	P	14 34 16.9	+2.6
WR0	Warramunga Arr	15.27	161	P	P	14 34 17.8	+2.7
WR0				IAmb	IAmb	14 34 23.4	
	comp=Z,16nm,1.4s						
ASAR	Alice Springs	18.61	166	P	Pn	14 34 54.9	+0.9
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=8.8						
ASAR				S	S	14 38 15.1	-1.2
	comp=Z,0.0nm,0.3s,baz=356,slow=22,SNR=2.9						
FORT	Forrest	25.16	182	P	P	14 35 57.1	-0.3
CM31	Chiang Mai Arr	38.19	309	P	P	14 37 50.4	-0.9
CM31				IAmb	IAmb	14 38 15.1	
	comp=Z,2.4nm,1.0s						
CMAR	Chiang Mai Arr	38.19	309	P	P	14 37 50.1	-1.2
MK31	Makanchi Array	66.56	327	P	P	14 41 19.9	0.0
MK31				IAmb	IAmb	14 41 24.8	
	comp=Z,1.6nm,1.3s						
MKAR	Makanchi Array	66.56	327	P	P	14 41 20.5	+0.6
	comp=Z,0.2nm,0.3s,baz=122,slow=8.3,SNR=7.8						
MKAR	Makanchi Array	66.56	327	P	P	14 41 20.0	+0.1
MAW	Mawson	76.05	201	P	P	14 42 16.5	+0.1
MAW				IAmb	IAmb	14 42 37.3	
	comp=Z,12nm,1.4s						

KRSC 26 14:36:25.8±2.2**, 50°.25N**×**157°.15E, h47**^{km}±23^{km}**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.79	304	*e*P	Pn	14 36 41.0	+0.4
SKR				*e*S	Sn	14 36 51.2	-0.2
PAU	Pauzhetka	1.24	350	*e*P	Pn	14 36 48.9	+2.2
PAU				*e*S	Sn	14 37 04.6	+2.3
KDTR	Khodutka, Kamc	1.67	20	*e*P	Pn	14 36 54.6	+2.0
KDTR				*e*S	Sn	14 37 15.2	+2.4
MTVR	Mutnovka	2.33	16	*e*P	Pn	14 37 04.6	+2.8
MTVR				*e*S	Sn	14 37 32.4	+3.1
RUS	Russkaya	2.35	21	*e*P	Pn	14 37 04.1	+2.2
RUS				*e*S	Sn	14 37 31.6	+2.1
GRL	Gorelyy	2.38	14	*e*P	Pn	14 37 05.5	+3.0
GRL				*e*S	Sn	14 37 35.0	+4.5
KRMR	Karymshinskiy	2.66	13	*e*P	Pn	14 37 08.4	+2.3
APC	Apacha	2.68	0	*e*P	Pn	14 37 10.1	+3.7
PET	Petropavlovsk	2.94	18	*e*P	Pn	14 37 13.6	+3.7
PET				*e*S	Sn	14 37 47.4	+3.5
DALK	Dalny	2.96	19	*e*P	Pn	14 37 13.3	+3.0
DALK				*e*S	Sn	14 37 48.0	+3.4
UGLR	Uglovaya	3.15	19	*e*P	Pn	14 37 17.0	+4.1
AVH	Avacha	3.18	17	*e*P	Pn	14 37 17.8	+4.4
AVH				*e*S	Sn	14 37 56.5	+6.4
KOK	Koryaka	3.19	16	*e*P	Pn	14 37 18.2	+4.7
SMAR	Somma	3.19	18	*e*P	Pn	14 37 17.9	+4.3
KRER	Koryakskii	3.22	17	*e*P	Pn	14 37 18.2	+4.2
KRER				*e*S	Sn	14 37 56.7	+5.5
SDLR	Sedlovina	3.22	19	*i* P	Pn	14 37 17.3	+3.3
NLC	Nalytchevo	3.23	24	*e*S	Sn	14 37 51.9	+0.7
KRX	Arik	3.25	16	*e*P	Pn	14 37 18.7	+4.3
SPN	Mys Shipunski	3.37	31	*e*P	Pn	14 37 19.0	+3.1
SPN				*e*S	Sn	14 37 57.3	+2.7
GNL	Ganaly	3.49	8	*e*P	Pn	14 37 22.8	+5.2
MKZ	Mys Kozlova	5.15	31	*e*P	Pn	14 37 43.0	+2.8
MKZ				*e*S	Sn	14 38 39.9	+1.6
KZV	Kizimen	5.24	20	*e*P	Pn	14 37 47.1	+5.5
KBTR	Krutoberegovo	6.87	27	*e*P	Pn	14 38 07.2	+3.3

IDC 26 14:50:56.4±12.0**, 0°.48N**×**99°.57W, h0**^{km}**, mb3.3**/3**, mb1 3.7**/3**, mb1mx3.5**/26**, mbtmp3.3**/3**, Error ellipse: s-maj=436.8km s-min=195.8km az=102.0, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	43.05	349	P	P	14 58 57.9	-0.3
	0.3nm,0.7s,baz=146,slow=9.8,SNR=2.9						
YKA	Yellowknife Ar	62.89	352	P	P	15 01 24.8	+0.7
	0.3nm,0.8s,baz=158,slow=6.6,SNR=4.0						
ILAR	Eielson Array	72.66	341	P	P	15 02 25.3	-0.4
	0.3nm,0.8s,baz=148,slow=5.3,SNR=4.8						

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*NNC **26** 15:02:10.9±0.8, 47°.19N×81°.99E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=4.1km s-min=3.8km az=78.0*

*SOME **26** 15:02:10.4, 47°.13N×81°.58E, h0^{km}*

ISC 26 15:02:06.0±1.2**, 47°.20N**±0°.02×**81°.89E**±0°.03**, h7**^{km}±12^{km}**, n39, σ1^s.92**/64**, 18C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.40	171	P	Pn	15 02 18.8	+0.5
MAKZ				S	Sb	15 02 23.2	+1.5
MAKZ	Makanchi	0.40	171	⇓P	Pn	15 02 18.8	+0.5
	31nm,0.3s						
MAKZ				⇑S	Sb	15 02 24.1	+2.3
	37nm,0.2s						
MK31	Makanchi Array	0.49	146	⇑P	Pn	15 02 19.6	0.0
	6.1nm,0.1s,baz=356,slow=7.2,SNR=7583						
MK31				⇑S	Sb	15 02 25.6	+1.1
	32nm,0.2s,baz=19,slow=20,SNR=45						
MKAR	Makanchi Array	0.49	146	P	Pn	15 02 19.8	+0.2
MKAR				S	Sb	15 02 25.6	+1.1
MK05	Makanchi Array	0.49	146	⇓P	Pn	15 02 19.7	+0.1
MK05				⇑S	Sb	15 02 25.5	+0.9
MK09	Makanchi Array	0.51	148	⇑P	Pn	15 02 19.8	+0.1
MK09				⇑S	Sb	15 02 25.9	+1.0
MK04	Makanchi Array	0.51	147	⇑P	Pn	15 02 20.1	+0.2
MK04				⇓S	Sb	15 02 26.1	+1.0
MK01	Makanchi Array	0.52	147	⇑P	Pn	15 02 20.1	+0.1
MK01				⇑S	Sb	15 02 26.2	+1.0
MK06	Makanchi Array	0.52	145	⇑P	Pn	15 02 20.0	+0.1
MK06				⇓S	Sb	15 02 26.1	+0.9
MK02	Makanchi Array	0.52	146	⇑P	Pn	15 02 20.1	+0.1
MK02				⇑S	Sb	15 02 26.3	+1.0
MK03	Makanchi Array	0.52	147	⇑P	Pn	15 02 20.1	+0.2
MK03				⇑S	Sb	15 02 26.1	+0.8
MK08	Makanchi Array	0.52	148	⇑P	Pn	15 02 20.2	+0.2
MK08				⇓S	Sb	15 02 26.4	+1.0
MK07	Makanchi Array	0.54	147	⇑P	Pn	15 02 20.3	+0.1
MK07				⇑S	Sb	15 02 26.7	+0.9
ZSN	Zaisan	2.04	82	*e*P	Pg	15 02 47.1	+1.9
	3.4nm,0.2s						
ZSN				*e*S	Sg	15 03 14.1	+2.5
	41nm,0.3s						
ZSN	Zaisan	2.04	82	Pg	Pb	15 02 43.1	-0.4
	3.8nm,0.4s						
ZSN				Lg	Lg	15 03 09.4	
	41nm,0.3s						
KAPS	Kapalarasan	2.60	223	*e*P	Pg	15 02 56.6	+0.8
	0.7nm,0.1s						
KAPS				*e*S	Sg	15 03 30.2	+0.8
	22nm,0.3s						
KAPS	Kapalarasan	2.60	223	Pg	Pg	15 02 55.6	-0.2
	0.2nm,0.2s						
KAPS				Lg	Lg	15 03 30.5	
	22nm,0.3s						
DJR	Jarkent	3.22	208	*e*P	Pg	15 03 08.0	+0.2
	0.8nm,0.2s						
DJR				*e*S	Sg	15 03 49.2	-0.3
	9.7nm,0.3s						
DJR	Jarkent	3.22	208	Pg	Pg	15 03 08.6	+0.9
	1.0nm,0.3s						
DJR				Lg	Lg	15 03 53.5	
	9.7nm,0.3s						
SEM	Semipalatinsk	3.39	342	*e*P	Pg	15 03 13.3	+2.5
	2.7nm,0.1s						
SEM				*e*S	Sg	15 03 58.5	+3.7
	22nm,0.2s						
SEM	Semipalatinsk	3.39	342	Pg	Pg	15 03 12.1	+1.2
	2.7nm,0.1s						
SEM				Lg	Lg	15 03 58.4	
	22nm,0.2s						
KTMS	Ketmen	3.91	197	*e*P	Pg	15 03 20.4	-0.5
	1.3nm,0.2s						
KTMS				*e*S	Sg	15 04 10.9	-0.6
	10nm,0.2s						
KTMS	Ketmen	3.91	197	Pg	Pg	15 03 19.2	-1.7
	1.4nm,0.2s						
KTMS				Lg	Lg	15 04 10.9	
	10nm,0.2s						
MNBS	Baschi	3.96	219	*e*P	Pg	15 03 20.7	-1.3
	0.9nm,0.1s						
MNBS				*e*S	Sg	15 04 11.8	-1.5
	18nm,0.2s						
MNBS	Baschi	3.96	219	Pg	Pg	15 03 21.1	-0.9
	0.8nm,0.1s						
MNBS				Lg	Lg	15 04 14.4	
	18nm,0.2s						
KURK	Kurchatov	4.12	330	P	Pb	15 03 18.4	-0.5
KURK				S	Sb	15 04 09.2	+0.3
KURK	Kurchatov	4.12	330	⇓Pg	Pg	15 03 28.3	+3.3
	0.5nm,0.3s						
KURK				⇓Lg	Lg	15 04 24.1	
	15nm,0.5s						
ARXS	Arharly	4.12	225	*e*P	Pg	15 03 25.0	-0.1
	1.3nm,0.1s						
ARXS				*e*S	Sg	15 04 19.0	+0.5
	20nm,0.5s						
ARXS	Arharly	4.12	225	Pg	Pg	15 03 24.9	-0.1
ARXS				Lg	Lg	15 04 20.5	
UKR	Ust'-Kan	4.19	26	P	Pb	15 03 18.7	-1.4
UKR				S	Sb	15 04 10.9	-0.1
PDGK	Podgornoye	4.23	204	Pg	Pg	15 03 24.7	-2.3
	0.7nm,0.2s						
PDGK				Lg	Lg	15 04 20.4	
	4.0nm,0.4s						
PDGK	Podgornoye	4.23	204	⇑Lg	Lg	15 04 23.0	
	6.6nm,0.6s						
KPKS	Kokpek	4.37	212	*e*P	Pg	15 03 30.4	+0.7
	3.3nm,0.1s						
KPKS				*e*S	Sg	15 04 27.5	+1.4
	21nm,0.3s						
DGZ	Jazzator, Alta	4.46	54	P	Pb	15 03 23.9	-0.8
DGZ				S	Sb	15 04 15.5	-3.2
CHBI	Chibit, Altay	4.85	48	P	Pb	15 03 27.7	-3.6
CHBI				S	Sb	15 04 24.7	-5.1
KUU	Kurty	5.11	232	Pg	Pg	15 03 41.8	-2.1
	1.4nm,0.3s						
KUU				Lg	Lg	15 04 49.7	
	12nm,0.4s						
CUR	Chagan-Uzun	5.17	54	P	Pb	15 03 33.6	-3.2
CUR				S	Sb	15 04 32.5	-6.8
ULGR	Ulagan, Altay	5.27	47	P	Pb	15 03 34.0	-4.5
ULGR				S	Sn	15 04 30.6	+4.3
ARTR	Artybash	5.79	35	S	Sn	15 04 39.8	+0.8

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*NIED **26** 15:08:16.6, 22°.87N×120°.42E, h13^{km}, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}1.67; $M_{\theta\theta}$4.48; $M_{\phi\phi}$-6.15; $M_{r\theta}$-3.46; $M_{\theta\phi}$3.81; $M_{\phi r}$-3.53; Fault plane solution: $M_0$8.31000×10^{14} NP1: ϕ_s204.00000°, δ78.00000°, λ144.00000°. NP2: ϕ_s302.00000°, δ55.00000°, λ14.00000°.*

*IDC **26** 15:08:16.0±0.8, 22°.78N×120°.60E, h0^{km}, mb3.6/9, mb1 3.9/10, mb1mx3.5/53, mbtmp3.7/10, ML3.7/1, MS3.6/2, Ms1 3.7/2, ms1mx2.8/57 Error ellipse: s-maj=25.5km s-min=16.6km az=78.0*

*JMA **26** 15:08:16.6±0.1, 22°.87N×120°.42E, h13^{km}±2^{km}, M4.2*

*TAP **26** 15:08:18.3, 22°.92N×120°.54E, h15^{km}, ML4.2, B*

*NEIC **26** 15:08:18.2±2.4, 22°.88N±0°.04×120°.56E±0°.04, h21^{km}±3^{km}, Error ellipse: s-maj=6.5km s-min=5.8km az=206.0*

*IASPEI **26** 15:08:19.1±0.8, 22°.92N±0°.01×120°.52E±0°.02, h18^{km}±4^{km}, mb4.4/16, Error ellipse: s-maj=2.5km s-min=1.8km az=82.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ISC 26 15:08:17.9±0.6**, 22°.93N**±0°.01×**120°.53E**±0°.01**, h16**^{km}±2^{km}**, n188, σ1^s.24**/286**, mb4.4**/16**, 20C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCST	Cishan	0.06	213	*i* P	Pg	15 08 21.6	+0.7
	baz=230						
SCST				*i* S	Sg	15 08 24.0	+1.2
	baz=230						
SLGT	Liugui	0.12	61	⇓*i*P	Pb	15 08 22.6	+0.7
	baz=63						
SLGT				*e*S	Sb	15 08 25.9	+1.2
	baz=63						
TWM1	Shoushan	0.15	221	⇑*i*P	Pb	15 08 23.2	+0.9
	baz=227						
TWM1				S	Sb	15 08 27.4	+2.2
	baz=227						
SGST	Jiashian	0.16	19	⇓*i*P	Pg	15 08 22.4	+0.4
	baz=16						
SGST				S	Sb	15 08 26.2	+0.6
	baz=16						
CHN3	Shinhua	0.21	314	⇑*i*P	Pb	15 08 25.2	+1.8
	baz=320						
CHN3				S	Sb	15 08 31.5	+4.6
	baz=320						
SGLT	Jiouru	0.21	189	⇑*i*P	Pb	15 08 24.5	+1.1
	baz=185						
SGLT				S	Sb	15 08 29.8	+2.7
	baz=185						
SSD	Sandimen	0.21	153	⇑*i*P	Pb	15 08 23.6	+0.2
	baz=145						
SSD				S	Sb	15 08 27.3	+0.2
	baz=145						
CHN1	Nanshi	0.25	0	⇑*i*P	Pb	15 08 25.1	+1.0
	baz=3.0						
CHN1				*e*S	Sb	15 08 29.8	+1.5
	baz=3.0						
SNJT	Kaohsiung City	0.25	225	P	Pb	15 08 25.6	+1.5
	baz=229						
SNJT				S	Sb	15 08 31.7	+3.4
	baz=229						
TSMG	Majia	0.25	154	⇑*i*P	Pb	15 08 24.1	0.0
	baz=149						
TSMG				*i* S	Sb	15 08 28.6	+0.3

	baz=149						
TSPT	**Pingtung City** baz=185	0.26	186	⇑*i*P	Pb	15 08 25.5	+1.3
TSPT	baz=185			*i* S	Sb	15 08 31.6	+3.2
SNST	**Tainan City** baz=353	0.29	355	⇑*i*P	Pb	15 08 25.9	+1.1
SNST	baz=353			*i* S	Sb	15 08 31.5	+2.2
TAI1	**Yung-k'ang** baz=294	0.29	291	*e*P	Pb	15 08 26.1	+1.3
TAI1	baz=294			*e*S	Sn	15 08 34.2	+0.5
STYT	**Tauyuan** baz=45	0.31	43	⇓*i*P	Pb	15 08 26.0	+0.8
STYT	baz=45			*i* S	Sb	15 08 32.0	+1.9
WTP	**Ta-pu** baz=13	0.32	14	⇓*i*P	Pb	15 08 26.4	+1.0
WTP	baz=13			*i* S	Sb	15 08 32.7	+2.3
TWK	**Hsinying** baz=354	0.33	354	*i* P	Pb	15 08 26.6	+1.0
TWK	baz=354			S	Sn	15 08 33.2	-1.6
MASBT	**Mashibuluo** baz=160	0.34	163	⇑*i*P	Pb	15 08 25.6	+0.1
MASBT	baz=160			*i* S	Sb	15 08 30.7	+0.1
TPUB	**Ta-pu** baz=12	0.38	14	⇑*i*P	Pb	15 08 27.0	+0.7
TPUB	baz=12			S	Sb	15 08 33.7	+1.7
TPUB	**Ta-pu**	0.38	14	Pg	Pb	15 08 27.0	+0.7
TPUB				Sg	Sb	15 08 32.9	+0.9
SCLT	**Jiali** baz=309	0.39	308	*e*P	Pb	15 08 27.5	+1.0
KAU	**Kaohsiung** baz=211	0.42	209	*e*P	Pn	15 08 28.3	-1.0
KAU	baz=211			*e*S	Sn	15 08 36.4	-0.2
CHN4	**Tsaushan** baz=7.0	0.42	8	*i* P	Pb	15 08 27.9	+0.9
CHN4	baz=7.0			*e*S	Sn	15 08 35.4	-1.5
SSPT	**Xinbi** baz=164	0.45	175	*i* P	Pb	15 08 28.3	+0.8
SSPT	baz=164			*e*S	Sn	15 08 36.4	-1.1
ICHU	**Yijhu** baz=332	0.48	332	*e*P	Pn	15 08 29.4	-0.8
ICHU	baz=332			*e*S	Sn	15 08 36.9	-1.4
CHN8	**Yiju** baz=327	0.50	325	*e*P	Pb	15 08 29.4	+1.0
CHN8	baz=327			*e*S	Sn	15 08 38.6	-0.3
TWG	**Pinlang** baz=100	0.52	102	*i* P	Pb	15 08 29.2	+0.6
TWG	baz=100			*e*S	Sb	15 08 37.2	+1.3
TWG	**Pinlang**	0.52	102	Pg	Pb	15 08 29.0	+0.4
ECL	**Taimali** baz=128	0.52	130	⇑*i*P	Pb	15 08 28.8	+0.1
ECL	baz=128			S	Sb	15 08 35.8	-0.1
ELDTW	**Lidau** baz=58	0.52	61	*e*P	Pb	15 08 29.5	+0.7
ELDTW	baz=58			*e*S	Sb	15 08 37.4	+1.3
TWGBT	**Beinan** baz=100	0.52	103	⇑*i*P	Pb	15 08 29.2	+0.4
TWGBT	baz=100			*e*S	Sb	15 08 36.8	+0.7
LONT	**Longtian** baz=92	0.56	93	P	Pb	15 08 30.1	+0.8
LONT	baz=92			*e*S	Sb	15 08 38.0	+0.9
SCZT	**Fangliau** baz=161	0.56	171	⇑*i*P	Pb	15 08 29.6	+0.1
SCZT	baz=161			*e*S	Sb	15 08 38.2	+0.9
CHY	**Chiayi** baz=351	0.57	350	*e*P	Pn	15 08 31.0	-0.4
CHY	baz=351			S	Sn	15 08 40.8	+0.3
WLGB	**Puzi** baz=339	0.58	339	*i* P	Pb	15 08 29.9	+0.2
WLGB	baz=339			*i* S	Sn	15 08 39.9	-0.9
WLCH	**Liuqiu** baz=195	0.60	193	*i* P	Pn	15 08 32.8	+1.0
WLCH	baz=195			S	Sn	15 08 43.8	+2.7
CHN2	**Minshiung** baz=355	0.60	355	*e*P	Pn	15 08 31.6	-0.2
CHN2	baz=355			*e*S	Sn	15 08 41.8	+0.5
TTN	**Taitung** baz=106	0.60	107	*e*P	Pn	15 08 31.6	-0.2
TWP	**Hsiaoliuchiu** baz=196	0.60	195	*i* P	Pn	15 08 32.7	+0.8
TWP	baz=196			S	Sn	15 08 44.3	+2.9
EAST	**Anshuo** baz=146	0.62	152	⇑*i*P	Pb	15 08 30.8	+0.3
EAST	baz=146			*e*S	Sn	15 08 41.3	-0.6
ALS	**Alishan** baz=23	0.63	24	*i* P	Pb	15 08 31.5	+0.7
ALS	baz=23			*e*S	Sn	15 08 41.5	-0.9
TAW	**Tawu** baz=144	0.67	149	⇑*i*P	Pb	15 08 31.5	+0.3
CHN5	**Tsauling** baz=10.0	0.68	12	*i* P	Pb	15 08 32.3	+0.9
CHN5	baz=10.0			*e*S	Sn	15 08 43.3	+0.1
YUS	**Yu-Shan** baz=34	0.68	35	*i* P	Pb	15 08 32.5	+0.8
YUS	baz=34			*e*S	Sn	15 08 43.0	-0.8
EDH	**Donghe** baz=76	0.72	87	P	Pn	15 08 33.2	-0.2
EDH	baz=76			*e*S	Sn	15 08 44.9	+0.7
WGK	**Gukeng** baz=2.0	0.75	2	P	Pn	15 08 34.0	+0.1
WGK	baz=2.0			*e*S	Sn	15 08 46.1	+1.1
WDLH	**Douliu** baz=360	0.75	1	P	Pn	15 08 34.1	+0.2
WDLH	baz=360			*e*S	Sn	15 08 46.3	+1.3
FULB	**Fuli** baz=67	0.75	69	P	Pn	15 08 34.1	+0.1
FULB	baz=67			*e*S	Sb	15 08 43.8	+1.0
WSF	**Szhu** baz=339	0.76	338	*e*P	Pb	15 08 33.5	+0.8
WSF	baz=339			S	Sn	15 08 45.7	+0.6
SLIU	**Shizi** baz=154	0.76	161	*e*P	Pb	15 08 33.1	+0.3
SLIU	baz=154			*e*S	Sn	15 08 45.9	+0.8
WTK	**Tuku** baz=350	0.76	350	*e*P	Pn	15 08 34.1	+0.1
WTK	baz=350			S	Sn	15 08 46.2	+1.0
CHKT	**Chengkung** baz=91	0.79	78	*e*P	Pn	15 08 34.5	+0.1
CHKT	baz=91			*e*S	Sn	15 08 46.9	+1.0
WHYT	**Xinyi Township** baz=20	0.82	21	*e*P	Pn	15 08 34.8	-0.1
WHYT	baz=20			*e*S	Sn	15 08 47.1	+0.4
TWF1	**Yuli** baz=57	0.82	59	*i* P	Pn	15 08 34.8	-0.1
TWF1	baz=57			*e*S	Sb	15 08 44.8	+0.1
EYUL	**Yuli** baz=58	0.84	60	*i* P	Pn	15 08 35.1	0.0
EYUL	baz=58			*e*S	Sg	15 08 46.2	+1.0
YULB	**Yu-li** baz=48	0.84	57	⇑*i*P	Pg	15 08 34.9	+0.6
YULB	baz=48			*e*S	Sn	15 08 46.9	-0.4
YULB	**Yu-li**	0.84	57		Pg	15 08 34.8	+0.4
YULB					Sb	15 08 45.7	+0.3
WDGT	**Dungji** baz=295	0.86	292	⇓*i*P	Pb	15 08 34.5	-0.1
WDGT	baz=295			*e*S	Sg	15 08 46.6	+0.6
WJS	**Zhushan** baz=10.0	0.90	12	*e*P	Pn	15 08 36.7	+0.7
WJS	baz=10.0			*e*S	Sn	15 08 50.2	+1.4
LDUT	**Ludao** baz=93	0.91	106	*e*P	Pg	15 08 35.8	+0.3
LDUT	baz=93			*e*S	Sn	15 08 50.5	+1.6
EHY	**Hungye** baz=50	0.93	52	*e*P	Pn	15 08 36.5	+0.2
EHY	baz=50			*e*S	Sn	15 08 50.2	+0.8
SSLB	**Suanglung** baz=23	0.94	25	P	Pn	15 08 36.6	+0.1
SSLB	baz=23			*e*S	Sn	15 08 52.0	+2.4
SSLB	**Suanglung**	0.94	25		Pg	15 08 36.4	+0.3
HEN	**Hengchun** baz=162	0.94	168	P	Pn	15 08 37.0	+0.5
HEN	baz=162			*e*S	Sn	15 08 51.5	+1.8
WNT	**Mingjian** baz=8.0	0.95	9	*e*P	Pn	15 08 37.1	+0.4
WNT	baz=8.0			*e*S	Sn	15 08 50.7	+0.8
RLNB	**Erlin** baz=350	0.97	351	*e*P	Pb	15 08 36.3	0.0
WNT1	**Nantou City** baz=7.0	0.98	8	*e*P	Pn	15 08 37.8	+0.7
WNT1	baz=7.0			*e*S	Sn	15 08 52.1	+1.5
SNW	**Nanwan** baz=157	0.99	168	*e*P	Pb	15 08 36.6	-0.1
SNW	baz=157			*e*S	Sn	15 08 52.8	+1.9
HGSD	**Ruisui** baz=47	0.99	56	⇑*i*P	Pn	15 08 38.3	+1.0
HGSD	baz=47			*e*S	Sn	15 08 52.2	+1.2
SMLT	**Sun Moon Lake** baz=19	1.00	20	*e*P	Pn	15 08 38.4	+0.9
SMLT	baz=19			*e*S	Sn	15 08 53.6	+2.2
TYC	**Yuchr** baz=17	1.01	17	*i* P	Pg	15 08 38.6	+1.1
TYC	baz=17			*e*S	Sn	15 08 53.3	+1.9
TWK1	**Hengchun** baz=165	1.02	165	⇑*i*P	Pn	15 08 37.9	+0.4
TWKBT	**Hengchun** baz=154	1.02	165	⇑*i*P	Pg	15 08 37.9	+0.2
TWKBT	baz=154			*e*S	Sn	15 08 52.3	+0.6
VCHM	**Qimei** baz=288	1.05	285	*e*P	Pb	15 08 37.0	-0.7
PHUB	**P'eng-hu** baz=318	1.05	303	P	Pb	15 08 36.9	-0.8
PHUB	baz=318			S	Sb	15 08 50.8	-0.5
TSEB	**Hengchuen, Pin** baz=163	1.08	161	*e*P	Pn	15 08 38.5	0.0
TSEB	baz=163			*e*S	Sn	15 08 53.8	+0.6
PNG	**Penghu** baz=308	1.09	305	*e*P	Pb	15 08 37.7	-0.8
PNG	baz=308			*e*S	Sb	15 08 51.8	-0.7
EGFH	**Guangfu** baz=46	1.10	48	*e*P	Pg	15 08 40.0	+0.7
WWF	**Wufeng** baz=356	1.11	8	*e*P	Pg	15 08 39.9	+0.4
WWF	baz=356			*e*S	Sg	15 08 55.8	+1.7
WCHH	**Zhanghua** baz=1.0	1.14	1	*e*P	Pg	15 08 39.9	-0.1
WCHH	baz=1.0			*e*S	Sg	15 08 56.1	+1.2
WPL	**Puli Township** baz=19	1.14	20	*e*P	Pg	15 08 40.0	-0.1
WPL	baz=19			*e*S	Sg	15 08 56.2	+1.2
DPDB	**Guoxing** baz=17	1.16	18	*e*P	Pg	15 08 40.4	+0.1
DPDB	baz=17			*e*S	Sg	15 08 57.0	+1.7
ESL	**Shilin** baz=42	1.21	43	*e*P	Pg	15 08 41.3	+0.1
ESL	baz=42			*e*S	Sg	15 08 58.7	+1.7
TCU	**Taichung** baz=355	1.22	6	*e*P	Pg	15 08 41.4	0.0
TCU	baz=355			*e*S	Sg	15 08 57.4	+0.1
CHGB	**Renai** baz=26	1.27	28	*e*P	Pb	15 08 42.3	+0.6
CHGB	baz=26			*e*S	Sg	15 09 01.2	+2.2
LAY	**Lan-yu** baz=131	1.30	133	*e*P	Pn	15 08 41.3	-0.2
WHF	**Hehuan Shan** baz=17	1.38	29	*e*P	Pg	15 08 44.6	0.0
WHP	**Taichung City** baz=14	1.39	16	*e*P	Pb	15 08 44.1	+0.4
WHP	baz=14			*e*S	Sg	15 09 03.9	+1.0
WDJ	**Dajia District** baz=3.0	1.41	4	*e*P	Pb	15 08 44.6	+0.7
WDJ	baz=3.0			*e*S	Sg	15 09 04.5	+1.0
TWQ1	**Liyutan** baz=8.0	1.43	9	*e*P	Pb	15 08 44.6	+0.4
TWQ1	baz=8.0			*e*S	Sg	15 09 04.1	+0.1
HWA	**Hwalien** baz=26	1.44	43	*e*P	Pg	15 08 45.3	-0.2
TDCB	**Techi** baz=22	1.44	24	P	Pb	15 08 45.0	+0.5
TWT	**Tachien** baz=22	1.44	24	*e*P	Pb	15 08 45.0	+0.4
FUSS	**Fushou** baz=25	1.46	27	*e*P	Pb	15 08 45.2	+0.2
FUSS	baz=25			*e*S	Sb	15 09 04.4	+0.9
NSY	**Sanyi** baz=7.0	1.49	8	*e*P	Pb	15 08 45.8	+0.5
NSY	baz=7.0			*e*S	Sg	15 09 07.2	+1.2
TWD	**Chiawan** baz=39	1.50	40	*e*P	Pb	15 08 46.0	+0.5
TWD	baz=39			*e*S	Sg	15 09 07.2	+0.7
ETLH	**Xiulin Townshi** baz=40	1.54	34	*e*P	Pb	15 08 46.9	+0.7
ETLH	baz=40			*e*S	Sg	15 09 09.4	+1.7
NACB	**Ninganchiao** baz=35	1.58	38	*e*P	Pb	15 08 46.7	-0.1
NACB	baz=35			*e*S	Sb	15 09 06.4	0.0
NACB	**Ninganchiao**	1.58	38		Pn	15 08 45.1	-0.1
NMLH	**Miaoli** baz=7.0	1.61	9	*e*P	Pb	15 08 47.9	+0.5
NMLH	baz=7.0			*e*S	Sg	15 09 10.5	+0.5
NNSB	**Datong** baz=12	1.68	28	*e*P	Pb	15 08 48.6	0.0
NNSB	baz=12			*e*S	Sg	15 09 11.5	-0.7
NNSH	**Datong** baz=12	1.68	28	*e*P	Pb	15 08 48.9	+0.3
NNSH	baz=12			*e*S	Sg	15 09 11.6	-0.6
NNS	**Nan Shan** baz=11	1.69	27	*e*P	Pb	15 08 49.0	+0.3
NNS	baz=11			*e*S	Sg	15 09 11.5	-0.9
NSTT	**Nanjuang** baz=14	1.75	14	*e*P	Pb	15 08 48.9	-0.7
LIOB	**Emei** baz=14	1.76	15	*e*P	Pn	15 08 49.0	+1.1
ENA	**Nanau** baz=35	1.86	37	*e*P	Pb	15 08 51.2	-0.3
NDT	**Datong Townshi** baz=26	1.89	28	*e*P	Pb	15 08 51.8	-0.3
NDT	baz=26			*e*S	Sb	15 09 17.5	+2.0
NSK	**Sanguang** baz=22	1.89	24	*e*P	Pb	15 08 51.4	-0.8
YHNB	**Yeheng** baz=6.0	1.90	24	*e*P	Pn	15 08 51.1	+1.3
YHNB	baz=6.0			*e*S	Sn	15 09 14.9	+1.5
YHNB	**Yeheng**	1.90	24		Pn	15 08 50.1	+0.4
SBCB	**Hsinchu** baz=12	1.90	13	*e*P	Pn	15 08 50.4	+0.7
ENAH	**Nanao** baz=36	1.91	38	*e*P	Pb	15 08 52.1	-0.4
ENTT	**Nioudou** baz=27	1.95	29	*e*P	Pb	15 08 53.5	+0.4
ENTT	baz=27			*e*S	Sg	15 09 20.2	-0.5
NWLT	**Wulai** baz=24	2.04	26	*e*P	Pn	15 08 52.9	+1.2
TWC	**Suao** baz=34	2.06	36	*e*P	Pb	15 08 54.2	-0.7
TWE	**Neicheng** baz=13	2.06	30	*e*P	Pb	15 08 54.9	-0.1
NCUH	**Zhongli** baz=1.0	2.11	16	*e*P	Pb	15 08 54.6	-1.2
TATO	**Taipei** baz=22	2.21	23	*e*P	Pb	15 08 56.5	-1.1
TATO	**Taipei**	2.21	23	Pn	Pn	15 08 55.3	+1.2
NTC	**Toucheng** baz=45	2.25	32	*e*P	Pb	15 08 58.0	-0.3
TWA	**Mucha** baz=24	2.25	25	*e*P	Pb	15 08 58.9	+0.6
VWUC	**VWUC** baz=336	2.27	335	*e*P	Pn	15 08 54.0	-0.8
TWS1	**Kuangyinshan** baz=3.0	2.31	21	*e*P	Pb	15 08 58.6	-0.6
TIPB	**Shuangxi** baz=12	2.35	30	*e*P	Pn	15 08 58.1	+2.1
NTST	**Danshui** baz=4.0	2.38	21	*e*P	Pn	15 08 58.3	+2.1
YM04	**YM04** baz=21	2.40	22	*e*P	Pn	15 08 57.8	+1.3
YM10	**YM10** baz=22	2.41	23	*e*P	Pn	15 08 57.2	+0.5
YM05	**YM05** baz=22	2.42	23	*e*P	Pn	15 08 57.1	+0.2
NWF	**Wu-fen Shan** baz=12	2.42	28	*e*P	Pb	15 09 01.3	+0.1
WFSB	**Wu-fen Shan** baz=12	2.42	28	*e*P	Pb	15 09 00.4	-0.7
YM03	**YM03** baz=21	2.42	22	*e*P	Pn	15 08 58.2	+1.3
YM11	**YM11** baz=22	2.42	23	*e*P	Pn	15 08 58.0	+1.0
TWB1	**Santiao Chiao** baz=31	2.46	33	*e*P	Pb	15 09 00.4	-1.4
KNMB	**Chin-men Tao**	2.48	308	Pn	Pn	15 08 57.4	-0.3
PTTC	**Pingtan** baz=347	2.65	345	*e*P	Pn	15 09 00.2	+0.3
JYNG	**Yonagunijimaku**	2.68	55	P	Pn	15 09 02.5	+2.0
JYNG				S	Sb	15 09 36.1	-2.2
YOJ	**Yonaguni jima**	2.74	56	P	Pn	15 09 03.4	+2.2
YOJ				S	Sn	15 09 36.8	+2.8
YOJ	**Yonaguni jima** baz=53	2.74	56	*e*P	Pn	15 09 03.4	+2.2
YOJ	**Yonaguni jima**	2.74	56	Pn	Pn	15 09 03.1	+1.9
AXDP	**Jialang** baz=313	3.05	310	*e*P	Pn	15 09 04.8	-0.7
HATJ	**Hateruma jima**	3.21	69	P	Pn	15 09 09.6	+1.9
HATJ				S	Sn	15 09 47.4	+1.7
MATB	**Ma-tsu** baz=352	3.25	351	*e*P	Pn	15 09 08.0	-0.2
IRIF	**Iriomote-Funau**	3.25	64	P	Pn	15 09 10.4	+2.1
IRIF				S	Sn	15 09 49.7	+3.0
MHZQ	**Yeshan** baz=339	3.44	337	*e*P	Pn	15 09 10.6	-0.2
JKRS	**Kuro-shima**	3.45	67	P	Pn	15 09 13.5	+2.5
JKRS				S	Sn	15 09 54.1	+2.5
JIJ	**Ishigaki jima**	3.61	66	P	Pn	15 09 14.5	+1.3
JIJ				S	Sn	15 09 57.9	+2.4
LYJJ	**Jianjiangzhen** baz=351	3.67	349	*e*P	Pn	15 09 13.3	-0.8
JISG	**Ishigakijimahi**	3.84	64	P	Pn	15 09 17.5	+1.1
JISG				S	Sn	15 10 02.7	+1.5
XPSS	**Dashiqiu** baz=346	3.99	356	*e*P	Pn	15 09 18.2	-0.2
VDOS	**Pratas Island** baz=243	4.17	239	*e*P	Pn	15 09 20.9	0.0
JTJ	**Tarama**	4.18	65	P	Pn	15 09 22.7	+1.6
JTJ				S	Sn	15 10 12.1	+2.3
JIRB	**Irabujima**	4.65	65	P	Pn	15 09 28.6	+1.0
JIRB				S	Sn	15 10 22.6	+1.3
JMJ	**Miyako jima 2** baz=64	4.75	66	*e*P	Pn	15 09 30.6	+1.7
JMJ2	**Miyako jima3**	4.75	67	P	Pn	15 09 30.1	+1.2
JMJ2				S	Sn	15 10 27.1	+3.4
JIKM	**Ikemajima**	4.75	64	P	Pn	15 09 30.3	+1.4
JIKM				S	Sn	15 10 25.2	+1.5
JOGS	**Gusukube**	4.82	67	P	Pn	15 09 32.2	+2.3
JOGS				S	Sn	15 10 29.2	+3.7
CVP	**Callao Caves**	5.34	167	⇑*e*P	Pn	15 09 35.4	-1.7
JOW	**Kunigami** 2.1nm,0.3s,baz=0.2,slow=30,SNR=8.3	8.03	60	Pn	Pn	15 10 13.4	-0.6
JMZ	**Minamidaito 2**	10.16	71	Pn	Pn	15 10 41.6	-1.7
INU	**Inuyama**	18.95	46	P	Pn	15 12 39.1	0.0
INU	comp=Z,41nm,1.5s			IAmb	IAmb	15 12 42.2	
JGF	**Kuroka**	19.33	45	P	P	15 12 42.4	-0.2
JCJ	**Chichijima**	20.05	74	P	P	15 12 48.5	-2.0
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.5s,baz=223,slow=7.5,SNR=4.5	20.44	44	P	Pn	15 12 57.5	+0.7
MJAR	**Matsushiro Arr** comp=Z,2.8nm,1.1s	20.44	44	IAmb	IAmb	15 12 59.5	
CMAR	**Chiang Mai Arr** comp=Z,0.3nm,0.5s,baz=56,slow=8.7,SNR=5.6	20.67	262	P	Pn	15 12 59.5	-0.2
CMAR	comp=Z,103nm,18.5s,baz=60,slow=40			LR	LR	15 22 06.7	
SIJI	**Sorong** comp=Z,3.8nm,0.8s,baz=343,slow=14,SNR=4.6	25.87	155	P	P	15 13 48.9	-0.2
SONM	**Songino Array** comp=Z,0.2nm,0.5s,baz=141,slow=9.3,SNR=2.9	27.30	339	P	P	15 14 03.9	+2.0
FAKI	**Fak Fak**	28.13	155	P	P	15 14 10.2	+0.7
FAKI	comp=Z,18nm,1.1s			IAmb	IAmb	15 14 32.7	
BKNI	**Bangkinang**	29.39	223	P	P	15 14 21.5	+0.7
MTN	**Manton Dam**	37.04	163	P	P	15 15 24.7	-2.7
MTN	comp=Z,22nm,1.3s			IAmb	IAmb	15 15 48.8	
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,baz=98,slow=10,SNR=4.2	38.83	317	P	P	15 15 43.0	+0.8
PETK	**Petropavlovsk-**	41.24	34	P	P	15 16 01.6	-0.5
COEN	**Coen**	42.85	147	P	P	15 16 14.4	-1.2
COEN	comp=Z,10.0nm,1.4s			IAmb	IAmb	15 16 21.6	
WB0	**Warramunga Arr**	44.55	161	P	P	15 16 27.2	-2.0
WB0	comp=Z,12nm,1.4s			IAmb	IAmb	15 16 43.6	
WRA	**Warramunga Arr** comp=Z,2.2nm,0.6s,baz=344,slow=8.7,SNR=17	44.70	161	P	P	15 16 28.6	-1.8
WB2	**Warramunga Arr**	44.70	161	P	P	15 16 28.7	-1.7
WB2	comp=Z,6.5nm,1.2s			IAmb	IAmb	15 16 28.9	
WR0	**Warramunga Arr**	44.77	161	P	P	15 16 29.1	-1.9
WR0	comp=Z,15nm,1.5s			IAmb	IAmb	15 16 29.3	
KKAR	**Karatay Array**	45.76	308	P	P	15 16 39.8	+1.1
AS31	**Alice Springs**	48.11	163	P	P	15 16 56.5	-0.8
ASAR	**Alice Springs** comp=Z,8.8nm,0.3s,baz=343,slow=7.0,SNR=22	48.11	163	P	P	15 16 56.7	-0.5
AKTO	**Aktyubinsk** comp=Z,85nm,18.4s,baz=329,slow=38	55.25	316	LR	LR	15 43 06.7	
STKA	**Stephens Creek** comp=Z,1.8nm,0.9s,baz=23,slow=7.7,SNR=2.7	58.11	159	P	P	15 18 10.1	-0.7
TOO	**Toolangi**	64.61	158	P	P	15 18 52.7	-1.9
MDM	**Murphy Dome**	70.00	27	P	P	15 19 28.8	+0.3
MDM	comp=Z,3.8nm,1.3s			IAmb	IAmb	15 19 31.6	
RND	**Reindeer**	70.03	29	P	P	15 19 28.7	-0.2
RND	comp=Z,5.9nm,1.3s			IAmb	IAmb	15 19 44.8	
ILAR	**Eielson Array** comp=Z,0.1nm,0.6s,baz=291,slow=7.6,SNR=4.6	70.60	27	P	P	15 19 34.5	+2.3

BCAR	Beaver Creek A	73.22	28	P	P	15 19 46.4	-1.6
DAWY	Dawson	73.92	27	P	P	15 19 52.0	-0.2
YKA	Yellowknife Ar comp=Z,0.3nm,0.7s,baz=322,slow=4.1,SNR=7.1	84.35	23	P	P	15 20 49.4	+0.2

IDC 26 15:11:21.8±325.0**,53°.72N×43°.11E,h0^{km},Error ellipse: s-maj=149.5km s-min=87.4km az=140.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON baz=131,slow=336,SNR=1.2	4.52	314	*i*		15 40 10.0	
I31KZ	AKTYUBINSK INF baz=301,slow=291,SNR=2.2	9.77	104	*i*		16 07 50.0	
I46RU	ZALESOVO INFRA baz=289,slow=337,SNR=0.9	24.36	72	*i*		17 41 10.0	
I34MN	SONGINO INFRAS baz=298,slow=340,SNR=1.4	39.28	72	*i*		19 13 00.0	

NOU 26 15:27:49.4,51°.84S×179°.78W,h0^{km},mb4.5,South of Chatham Islands,South of Chatham Islands

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IASPEI ***26*** *15:29:12.8±0.8,22°.93N±0°.01×120°.52E±0°.02,h17^{km}±1^{km}, mb4.2/6,Error ellipse: s-maj=2.2km s-min=1.6km az=86.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***26*** *15:29:12.6±1.7,22°.82N±0°.03×120°.67E±0°.04,h15^{km}±2^{km}, Error ellipse: s-maj=5.4km s-min=5.0km az=114.0*

JMA ***26*** *15:29:12.7,22°.90N×120°.49E,h14^{km}±2^{km},M4.0*

TAP ***26*** *15:29:12.9,22°.92N×120°.55E,h15^{km},ML4.0,B*

IDC ***26*** *15:29:13.4±1.4,22°.54N×121°.12E,h0^{km},mb3.6/3, mb1 3.8/4,mb1mx3.3/61,mbtmp3.7/4,ML3.4/1,MS3.0/2, Ms1 3.1/2,ms1mx2.7/31,Error ellipse: s-maj=44.9km s-min=27.4km az=71.0*

ISC 26 15:29:12.9±0.8**,22°.93N**±0°.01×**120°.54E**±0°.01**,h17**^{km}±1^{km}**, n156,**σ1^{s}.**13**/262**,mb4.2**/6**,20C-9D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCST	Cishan baz=234	0.06	223	*i* P	Pg	15 29 16.3	+0.2
SCST	baz=234			*i* S	Sg	15 29 19.2	+1.0
SLGT	Liugui baz=61	0.12	58	⇓*i*P	Pg	15 29 17.3	+0.7
SLGT	baz=61			*e*S	Sg	15 29 20.4	+1.2
TWM1	Shoushan baz=229	0.15	225	⇑*i*P	Pb	15 29 18.1	+0.8
TWM1	baz=229			S	Sb	15 29 22.5	+2.3
SGST	Jiashian baz=14	0.16	15	⇓*i*P	Pg	15 29 17.1	-0.1
SGST	baz=14			*i* S	Sb	15 29 20.9	+0.6
SSD	Sandimen baz=147	0.20	155	⇑*i*P	Pb	15 29 18.2	+0.1
SSD	baz=147			*i* S	Sb	15 29 21.9	+0.3
SGLT	Jiouru baz=188	0.21	192	*i* P	Pb	15 29 19.1	+0.9
SGLT	baz=188			*i* S	Sb	15 29 24.7	+2.9
CHN3	Shinhua baz=319	0.22	312	⇑*i*P	Pb	15 29 19.8	+1.5
CHN3	baz=319			S	Sb	15 29 26.1	+4.1
TSMG	Majia baz=151	0.24	156	⇑*i*P	Pb	15 29 18.8	0.0
TSMG	baz=151			*i* S	Sb	15 29 23.1	+0.2
CHN1	Nanshi baz=1.0	0.25	358	*e*P	Pb	15 29 19.8	+0.8
CHN1	baz=1.0			*e*S	Sb	15 29 24.8	+1.6
TSPT	Pingtung City baz=187	0.26	189	*i* P	Pb	15 29 20.2	+1.2
TSPT	baz=187			*i* S	Sn	15 29 26.4	-1.0
SNJT	Kaohsiung City baz=230	0.26	227	*e*P	Pb	15 29 20.4	+1.4
SNJT	baz=230			*e*S	Sn	15 29 26.8	-0.6
SNST	Tainan City baz=351	0.29	353	⇑*i*P	Pb	15 29 20.6	+0.9
SNST	baz=351			*e*S	Sb	15 29 26.2	+2.0
TAI1	Yung-k'ang baz=294	0.31	291	*e*P	Pb	15 29 20.9	+1.1
TAI1	baz=294			*e*S	Sn	15 29 27.6	-1.1
STYT	Tauyuan baz=44	0.31	41	⇓*i*P	Pb	15 29 20.6	+0.6
STYT	baz=44			*e*S	Sb	15 29 26.2	+1.5
WTP	Ta-pu baz=12	0.32	13	⇓*i*P	Pb	15 29 21.0	+0.8
WTP	baz=12			*i* S	Sb	15 29 27.2	+2.0
MASBT	Mashibuluo baz=161	0.33	165	⇑*i*P	Pb	15 29 20.3	+0.1
MASBT	baz=161			*i* S	Sb	15 29 25.4	+0.2
TWK	Hsinying baz=353	0.34	352	*i* P	Pb	15 29 21.3	+0.8
TWK	baz=353			S	Sb	15 29 27.6	+2.0
TPUB	Ta-pu baz=11	0.38	13	⇓*i*P	Pb	15 29 21.8	+0.6
TPUB	baz=11			*e*S	Sb	15 29 27.5	+0.7
TPUB	Ta-pu	0.38	13	Pg	Pb	15 29 21.7	+0.6
TPUB				Sg	Sb	15 29 27.5	+0.7
SCLT	Jiali baz=310	0.40	308	P	Pb	15 29 22.3	+0.8
SCLT	baz=310			*e*S	Sn	15 29 30.1	-0.9
KAU	Kaohsiung baz=212	0.42	211	*e*P	Pb	15 29 23.0	+1.2
KAU	baz=212			*e*S	Sn	15 29 30.3	-1.1
CHN4	Tsaushan baz=6.0	0.42	7	⇓*i*P	Pb	15 29 22.5	+0.6
CHN4	baz=6.0			*e*S	Sb	15 29 28.4	+0.4
SSPT	Xinbi baz=165	0.45	176	⇑*i*P	Pb	15 29 23.0	+0.7
SSPT	baz=165			*e*S	Sn	15 29 31.0	-1.0
ICHU	Yijhu baz=332	0.49	331	*e*P	Pb	15 29 24.1	+1.0
ICHU	baz=332			S	Sb	15 29 31.8	+1.8
TWG	Pinlang baz=100	0.50	102	⇑*i*P	Pb	15 29 23.9	+0.6
TWG	baz=100			*e*S	Sb	15 29 31.4	+1.0
ECL	Taimali baz=134	0.51	131	⇑*i*P	Pb	15 29 23.4	+0.1
ECL	baz=134			*i* S	Sb	15 29 30.4	0.0
ELDTW	Lidau baz=47	0.51	60	⇑*i*P	Pb	15 29 24.2	+0.7
ELDTW	baz=47			*e*S	Sb	15 29 31.9	+1.3
CHN8	Yiju baz=326	0.51	324	*e*P	Pb	15 29 24.5	+1.1
CHN8	baz=326			*e*S	Sn	15 29 33.5	-0.3
TWGBT	Beinan baz=100	0.51	103	⇑*i*P	Pb	15 29 23.8	+0.4
TWGBT	baz=100			S	Sb	15 29 31.4	+0.8
LONT	Longtian baz=78	0.55	92	P	Pb	15 29 24.7	+0.7
LONT	baz=78			*e*S	Sn	15 29 34.0	-0.7
SCZT	Fangliau baz=161	0.56	172	⇑*i*P	Pb	15 29 24.4	+0.2
SCZT	baz=161			*e*S	Sb	15 29 32.5	+0.5
CHY	Chiayi baz=350	0.57	349	*e*P	Pb	15 29 25.9	+1.4
CHY	baz=350			*e*S	Sn	15 29 35.2	-0.1
TTN	Taitung baz=105	0.59	107	*e*P	Pn	15 29 26.1	-0.3
TTN	baz=105			*e*S	Sn	15 29 36.3	+0.7
WLGB	Puzi baz=338	0.59	338	*e*P	Pg	15 29 24.1	-0.5
WLGB	baz=338			*e*S	Sb	15 29 34.7	+2.0
WLCH	Liuqiu baz=196	0.59	194	⇓*i*P	Pn	15 29 27.4	+0.9
WLCH	baz=196			*e*S	Sn	15 29 38.3	+2.5
CHN2	Minshiung baz=354	0.60	354	*e*P	Pb	15 29 26.3	+1.3
CHN2	baz=354			*e*S	Sn	15 29 36.4	+0.4
TWP	Hsiaoliuchiu baz=196	0.60	196	⇓*i*P	Pn	15 29 27.4	+0.7
TWP	baz=196			*e*S	Sn	15 29 38.9	+2.9
EAST	Anshuo baz=146	0.61	152	⇑*i*P	Pb	15 29 25.5	+0.3
EAST	baz=146			*e*S	Sn	15 29 36.1	-0.2
ALS	Alishan baz=22	0.63	23	*i* P	Pb	15 29 26.2	+0.6
ALS	baz=22			*e*S	Sn	15 29 36.1	-0.9
TAW	Tawu baz=144	0.66	150	*i* P	Pb	15 29 26.2	+0.3
TAW	baz=144			*e*S	Sn	15 29 36.5	-0.8
CHN5	Tsauling baz=10.0	0.68	11	P	Pb	15 29 26.9	+0.6
CHN5	baz=10.0			*e*S	Sn	15 29 37.6	-0.4
EDH	Donghe baz=76	0.71	86	*e*P	Pn	15 29 28.0	0.0
EDH	baz=76			*e*S	Sn	15 29 38.8	+0.2
FULB	Fuli baz=67	0.75	69	⇑*i*P	Pn	15 29 28.8	+0.1
FULB	baz=67			*e*S	Sn	15 29 39.0	-0.5
SLIU	Shizi baz=161	0.75	161	⇑*i*P	Pg	15 29 27.8	+0.2
SLIU	baz=161			*e*S	Sn	15 29 40.5	+0.9
WGK	Gukeng baz=1.0	0.75	2	P	Pg	15 29 28.5	+0.9
WGK	baz=1.0			*e*S	Sn	15 29 41.0	+1.2
WDLH	Douliu baz=359	0.76	0	P	Pg	15 29 28.5	+0.8
WDLH	baz=359			S	Sn	15 29 40.5	+0.8
WSF	Szhu baz=338	0.76	338	*i* P	Pb	15 29 28.0	+0.4
WSF	baz=338			*e*S	Sn	15 29 40.2	+0.3
WTK	Tuku baz=349	0.77	350	*e*P	Pg	15 29 28.7	+0.8
WTK	baz=349			S	Sn	15 29 40.8	+0.7
CHKT	Chengkung baz=91	0.78	77	*e*P	Pn	15 29 29.2	+0.1
CHKT	baz=91			*e*S	Sn	15 29 39.7	-0.6
TWF1	Yuli baz=57	0.81	59	*i* P	Pn	15 29 29.4	-0.2
TWF1	baz=57			*e*S	Sn	15 29 41.0	-0.2
WHYT	Xinyi Township baz=19	0.82	21	P	Pn	15 29 29.6	-0.1
WHYT	baz=19			*e*S	Sn	15 29 41.5	+0.2
EYUL	Yuli baz=58	0.83	60	⇑*i*P	Pn	15 29 29.7	-0.1
EYUL	baz=58			*e*S	Sn	15 29 41.0	-0.6
YULB	Yu-li baz=47	0.84	56	⇑*i*P	Pg	15 29 29.5	+0.3
YULB	baz=47			*e*S	Sn	15 29 41.2	-0.7
YULB	Yu-li	0.84	56		Pg	15 29 29.3	+0.1
YULB				Sg	Sb	15 29 39.5	-0.5
WDGT	Dungji baz=295	0.87	292	⇓*i*P	Pb	15 29 29.1	-0.4
WDGT	baz=295			*e*S	Sb	15 29 41.2	+0.3
LDUT	Ludao baz=104	0.90	106	P	Pg	15 29 30.5	+0.2
LDUT	baz=104			*e*S	Sn	15 29 45.3	+2.1
WJS	Zhushan baz=356	0.91	11	*e*P	Pn	15 29 31.2	+0.4
WJS	baz=356			*e*S	Sn	15 29 44.9	+1.4
EHY	Hungye baz=50	0.92	51	*i* P	Pg	15 29 31.1	+0.3
EHY	baz=50			*e*S	Sn	15 29 44.9	+1.0
SSLB	Suanglung baz=23	0.94	24	*e*P	Pb	15 29 31.1	+0.5
SSLB	baz=23			*e*S	Sn	15 29 44.2	-0.1
SSLB	Suanglung	0.94	24	Pn	Pb	15 29 31.0	+0.4
SSLB				Sn	Sn	15 29 44.1	-0.1
HEN	Hengchun baz=163	0.94	169	P	Pn	15 29 31.8	+0.5
HEN	baz=163			*e*S	Sn	15 29 46.3	+2.1
WNT	Mingjian baz=8.0	0.95	8	P	Pn	15 29 31.9	+0.4
WNT	baz=8.0			*e*S	Sn	15 29 45.8	+1.1
RLNB	Erlin baz=350	0.97	350	*e*P	Pb	15 29 31.6	+0.3
WNT1	Nantou City baz=7.0	0.98	8	*e*P	Pn	15 29 32.2	+0.4
WNT1	baz=7.0			*e*S	Sn	15 29 46.6	+1.2
SNW	Nanwan baz=157	0.98	169	*e*P	Pg	15 29 32.7	+0.7
SNW	baz=157			*e*S	Sn	15 29 47.7	+2.3
HGSD	Ruisui baz=47	0.99	55	⇑*i*P	Pg	15 29 32.9	+0.8
HGSD	baz=47			*e*S	Sn	15 29 47.0	+1.5
SMLT	Sun Moon Lake baz=18	1.00	19	*e*P	Pg	15 29 32.9	+0.5
SMLT	baz=18			*e*S	Sn	15 29 47.2	+1.1
TWK1	Hengchun baz=154	1.01	166	⇑*i*P	Pg	15 29 32.7	+0.1
TWK1	baz=154			*e*S	Sn	15 29 48.4	+2.3
TYC	Yuchr baz=16	1.01	17	P	Pg	15 29 33.0	+0.5
TYC	baz=16			*e*S	Sn	15 29 47.7	+1.6
TWKBT	Hengchun baz=154	1.02	165	⇑*i*P	Pg	15 29 32.6	+0.1
TWKBT	baz=154			*e*S	Sn	15 29 46.9	+0.7
VCHM	Qimei baz=288	1.06	285	*e*P	Pb	15 29 31.4	-1.3
PHUB	P'eng-hu baz=318	1.06	303	*e*P	Pb	15 29 31.5	-1.3
PHUB	baz=318			S	Sb	15 29 45.8	-0.6
TSEB	Hengchuen, Pin baz=163	1.08	162	*e*P	Pb	15 29 33.2	+0.2
TSEB	baz=163			*e*S	Sg	15 29 48.7	+0.8
EGFH	Guangfu baz=46	1.10	48	*e*P	Pg	15 29 34.8	+0.6
EGFH	baz=46			*e*S	Sg	15 29 49.3	+0.7
PNG	Penghu baz=308	1.10	305	*i* P	Pn	15 29 32.2	-1.3
PNG	baz=308			S	Sb	15 29 46.9	-0.7
WWF	Wufeng baz=355	1.12	8	*e*P	Pb	15 29 34.4	+0.7
WWF	baz=355			*e*S	Sg	15 29 50.4	+1.3
WCHH	Zhanghua	1.14	1	*e*P	Pb	15 29 34.6	+0.4
WCHH				*e*S	Sg	15 29 51.0	+1.0
WPL	Puli Township baz=18	1.14	20	*e*P	Pb	15 29 34.8	+0.6
WPL	baz=18			*e*S	Sg	15 29 50.9	+0.9
DPDB	Guoxing baz=17	1.16	18	P	Pb	15 29 35.2	+0.7
DPDB	baz=17			*e*S	Sg	15 29 51.8	+1.4
ESL	Shilin baz=41	1.20	43	P	Pg	15 29 36.3	+0.2
ESL	baz=41			S	Sg	15 29 53.4	+1.4
TCU	Taichung baz=355	1.22	6	P	Pb	15 29 36.0	+0.6
TCU	baz=355			*e*S	Sg	15 29 52.7	+0.3
CHGB	Renai baz=26	1.27	27	P	Pg	15 29 37.2	-0.2
CHGB	baz=26			*e*S	Sg	15 29 54.9	+0.9
LAY	Lan-yu baz=131	1.29	133	*e*P	Pn	15 29 36.1	0.0
LAY	baz=131			*e*S	Sg	15 29 54.1	-0.5
WHF	Hehuan Shan baz=18	1.38	29	*e*P	Pb	15 29 39.2	+0.7
WHF	baz=18			*e*S	Sg	15 30 00.1	+2.4
WHP	Taichung City baz=14	1.39	15	*e*P	Pb	15 29 38.6	+0.1
WHP	baz=14			*e*S	Sg	15 29 57.7	-0.3
WDJ	Dajia District baz=3.0	1.42	4	*e*P	Pb	15 29 39.4	+0.6
TWQ1	Liyutan baz=8.0	1.43	9	*e*P	Pb	15 29 39.2	+0.1
TWQ1	baz=8.0			*e*S	Sg	15 29 58.5	-0.5
HWA	Hwalien baz=41	1.43	43	*e*P	Pg	15 29 40.1	-0.4
TDCB	Techi baz=22	1.44	23	*e*P	Pb	15 29 39.3	0.0
TDCB	baz=22			*e*S	Sb	15 29 58.1	+0.8
TWT	Tachien baz=22	1.44	24	*e*P	Pb	15 29 40.3	+0.9
FUSS	Fushou baz=25	1.46	26	*e*P	Pb	15 29 40.2	+0.4
NSY	Sanyi baz=7.0	1.49	8	*e*P	Pb	15 29 40.6	+0.4
NSY	baz=7.0			*e*S	Sg	15 30 01.4	+0.2
TWD	Chiawan baz=38	1.50	40	*e*P	Pb	15 29 40.7	+0.5
TWD	baz=38			*e*S	Sg	15 30 00.9	-0.5
ETLH	Xiulin Townshi baz=32	1.54	34	*e*P	Pb	15 29 41.6	+0.6
ETLH	baz=32			*e*S	Sb	15 30 01.4	+1.2
NACB	Ninganchiao baz=35	1.57	38	*e*P	Pb	15 29 41.6	+0.1
NACB	baz=35			*e*S	Sb	15 30 02.1	+1.0
NACB	Ninganchiao	1.57	38	Pn	Pb	15 29 41.2	-0.3
NMLH	Miaoli baz=8.0	1.62	8	*e*P	Pb	15 29 41.9	-0.4
NNSB	Datong baz=12	1.68	27	*e*P	Pb	15 29 43.0	-0.5
NNSB	baz=12			*e*S	Sb	15 30 05.8	+1.5
NNSH	Datong baz=11	1.68	27	*e*P	Pb	15 29 43.4	-0.1
NNSH	baz=11			*e*S	Sg	15 30 06.1	-1.1
NNS	Nan Shan baz=11	1.69	27	*e*P	Pb	15 29 43.6	+0.1
NNS	baz=11			*e*S	Sg	15 30 06.5	-0.9
NSTT	Nanjuang baz=13	1.75	14	*e*P	Pb	15 29 44.3	-0.1
LIOB	Emei baz=14	1.76	14	*e*P	Pn	15 29 43.3	+0.7
ENA	Nanau baz=34	1.85	36	*e*P	Pb	15 29 45.6	-0.7
ENA	baz=34			*e*S	Sb	15 30 09.5	+0.2
NDT	Datong Townshi baz=26	1.89	28	*e*P	Pb	15 29 47.1	+0.2
NDT	baz=26			*e*S	Sg	15 30 13.2	-0.6
NSK	Sanguang baz=22	1.89	23	*e*P	Pb	15 29 46.1	-0.9
YHNB	Yeheng baz=7.0	1.89	24	*e*P	Pn	15 29 44.9	+0.4
YHNB	baz=7.0			*e*S	Sb	15 30 11.0	+0.5
YHNB	Yeheng	1.89	24	Pn	Pn	15 29 45.5	+1.0
ENAH	Nanao baz=36	1.91	37	*e*P	Pb	15 29 47.2	-0.1
ENTT	Nioudou baz=27	1.94	29	*e*P	Pb	15 29 47.6	-0.3
ENTT	baz=27			*e*S	Sb	15 30 12.0	+0.1
NWLT	Wulai baz=24	2.04	25	*e*P	Pb	15 29 49.5	0.0
NWLT	baz=24			*e*S	Sg	15 30 17.2	-1.3
TWC	Suao baz=33	2.06	35	*e*P	Pb	15 29 49.0	-0.8
TWC	baz=33			*e*S	Sb	15 30 15.9	+0.8
TWE	Neicheng baz=28	2.06	30	*e*P	Pb	15 29 48.9	-1.0
TWE	baz=28			*e*S	Sg	15 30 17.8	-1.5
TATO	Taipei baz=22	2.21	23	*e*P	Pb	15 29 51.6	-0.9
TATO	Taipei	2.21	23		Pb	15 29 51.5	-0.9
NHDH	Xindian Distri baz=23	2.22	24	*e*P	Pb	15 29 51.8	-0.7
TWA	Mucha baz=24	2.25	25	*e*P	Pb	15 29 54.7	+1.6
VWUC	VWUC baz=336	2.28	334	*e*P	Pn	15 29 49.7	0.0
TWS1	Kuangyinshan baz=3.0	2.31	20	*e*P	Pb	15 29 52.6	-1.4
TIPB	Shuangxi baz=12	2.35	30	*e*P	Pn	15 29 52.7	+1.9
YM04	YM04 baz=21	2.39	22	*e*P	Pn	15 29 51.6	+0.3
YM01	YM01 baz=22	2.40	23	*e*P	Pn	15 29 51.9	+0.4
YM10	YM10 baz=22	2.41	23	*e*P	Pn	15 29 52.6	+1.1
YM05	YM05 baz=22	2.41	23	*e*P	Pn	15 29 52.9	+1.2
ANP	Anpu baz=21	2.42	22	*e*P	Pn	15 29 52.8	+1.1
YM03	YM03 baz=21	2.42	22	*e*P	Pn	15 29 53.4	+1.7
YM11	YM11 baz=22	2.42	23	*e*P	Pb	15 29 54.3	-1.7
YM08	YM08 baz=22	2.44	23	*e*P	Pn	15 29 54.1	+2.1
PTMZ	Houxiangcun baz=345	2.47	329	*e*P	Pn	15 29 51.6	-0.7
KNMB	Chin-men Tao baz=311	2.49	308	*e*P	Pn	15 29 52.0	-0.6
KNMB	Chin-men Tao	2.49	308		Pb	15 29 58.4	+1.2
JYNG	Yonagunijimaku	2.68	55	P	Pn	15 29 57.4	+2.2
JYNG				S	Sn	15 30 29.9	+2.7
YOJ	Yonaguni jima	2.73	56	P	Pn	15 29 58.2	+2.3
YOJ				S	Sb	15 30 32.3	-2.2
YOJ	Yonaguni jima baz=53	2.73	56	*e*P	Pn	15 29 58.3	+2.3
YOJ	Yonaguni jima	2.73	56		Pn	15 29 56.5	+0.6
HATJ	Hateruma jima	3.20	69	P	Pn	15 30 04.2	+1.8
HATJ				S	Sn	15 30 40.7	+0.5

IRIF	**Iriomote-Funau**	**3.24**	**64**	P	**Pn**	**15 30 05.2**	**+2.2**
IRIF				S	**Sn**	**15 30 43.9**	**+2.7**
MATB	**Ma-tsu**	**3.25**	**351**	*e*P	**Pn**	**15 30 02.2**	**-0.9**
	baz=351						
JKRS	**Kuro-shima**	**3.44**	**67**	P	**Pn**	**15 30 07.7**	**+2.0**
JKRS				S	**Sn**	**15 30 47.6**	**+1.6**
MHZQ	**Yeshan**	**3.44**	**337**	*e*P	**Pn**	**15 30 06.0**	**+0.3**
	baz=339						
JIJ	**Ishigaki jima**	**3.60**	**66**	P	**Pn**	**15 30 09.5**	**+1.6**
JIJ				S	**Sn**	**15 30 51.5**	**+1.5**
LYJJ	**Jianjiangzhen**	**3.67**	**349**	*e*P	**Pn**	**15 30 08.0**	**-0.9**
	baz=351						
JISG	**Ishigakijimahi**	**3.83**	**64**	P	**Pn**	**15 30 11.9**	**+0.9**
JISG				S	**Sn**	**15 30 57.0**	**+1.3**
VDOS	**Pratas Island**	**4.18**	**239**	*e*P	**Pn**	**15 30 15.6**	**-0.2**
	baz=241						
JTJ	**Tarama**	**4.18**	**65**	P	**Pn**	**15 30 18.1**	**+2.3**
JTJ				S	**Sn**	**15 31 06.3**	**+2.1**
JIRB	**Irabujima**	**4.64**	**65**	P	**Pn**	**15 30 24.2**	**+2.0**
JIRB				S	**Sn**	**15 31 17.4**	**+1.6**
JMJ2	**Miyako jima3**	**4.74**	**67**	P	**Pn**	**15 30 26.0**	**+2.4**
JIKM	**Ikemajima**	**4.74**	**64**	P	**Pn**	**15 30 26.0**	**+2.4**
JIKM				S	**Sn**	**15 31 20.1**	**+1.9**
JOW	**Kunigami**	**8.03**	**59**	Pn	**Pn**	**15 31 08.0**	**-0.7**
	1.2nm,0.3s,baz=0.0,slow=30,SNR=9.1						
MJAR	**Matsushiro Arr**	**20.43**	**44**	LR	LR	15 41 54.4	
	comp=Z,59nm,19.8s,baz=335,slow=37						
CMAR	**Chiang Mai Arr**	**20.68**	**262**	LR	LR	15 43 26.7	
	comp=Z,26nm,19.1s,baz=200,slow=40						
MKAR	**Makanchi Array**	**38.84**	**317**	P	P	15 36 45.5	+8.5
	0.3nm,0.8s,baz=118,slow=7.2,SNR=3.7						
WB0	**Warramunga Arr**	**44.54**	**161**	P	**P**	**15 37 22.1**	**-1.7**
WB0				IAmb	IAmb	15 37 27.5	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**44.69**	**161**	P	**P**	**15 37 23.6**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=344,slow=8.9,SNR=9.4						
WB2	**Warramunga Arr**	**44.69**	**161**	P	**P**	**15 37 23.4**	**-1.7**
WB2				IAmb	IAmb	15 37 44.0	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**44.77**	**161**	P	**P**	**15 37 24.1**	**-1.6**
WR0				IAmb	IAmb	15 37 27.7	
	comp=Z,10nm,1.4s						
ASAR	**Alice Springs**	**48.10**	**163**	P	**P**	**15 37 51.3**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=343,slow=6.9,SNR=16						

JMA ***26*** *15:33:56.4±0.1, 31°.97N×131°.66E, h37^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s92.00000°, δ43.00000°, λ-13.00000°. NP2: ϕ_s192.00000°, δ81.00000°, λ-132.00000°. Principal axes: T Plg24.0000°, Azm313.0000°; N Plg42.0000°, Azm200.0000°; P Plg39.0000°, Azm64.0000°;*

JMA Felt I J1.

IDC ***26*** *15:33:58.2±2.5, 31°.85N×131°.50E, h63^{km}±16^{km}, mb3.4/5, mb1 3.4/6, mb1mx3.0/67, mbtmp3.7/6 Error ellipse: s-maj=60.7km s-min=16.0km az=78.0*

ISC 26 15:33:55.5±1.0, 31°.92N±0°.04×131°.72E±0°.06, h40^{km}±5^{km}, n15, σ1^{s}.07/24, mb3.6/5, 3C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.37**	**330**	⇑P	**Pn**	**15 34 04.2**	**-0.3**
JTSN				S	**Sn**	**15 34 10.1**	**-0.9**
JNKG	**Nichinankitago**	**0.39**	**229**	⇓P	**Pn**	**15 34 05.3**	**+0.6**
JNKG				S	**Sn**	**15 34 11.9**	**+0.6**
JHHC	**Hyugahichiya**	**0.53**	**352**	⇑P	**Pn**	**15 34 06.3**	**-0.3**
JHHC				*e*S	**Sn**	**15 34 13.8**	**-0.6**
JTZ	**Takazaki**	**0.54**	**268**	⇓P	**Pn**	**15 34 06.3**	**-0.5**
JTZ				S	**Sn**	**15 34 13.8**	**-0.9**
JNAR	**Kushima--Naru**	**0.55**	**225**	⇓P	**Pn**	**15 34 07.8**	**+0.9**
JNAR				S	**Sn**	**15 34 16.4**	**+1.5**
JZO	**Okuchi**	**0.98**	**283**	⇓P	**Pn**	**15 34 13.1**	**+0.3**
JZO				S	**Sn**	**15 34 25.8**	**+0.3**
JIU3	**Izumi3**	**0.99**	**309**	⇑P	**Pn**	**15 34 13.4**	**+0.4**
JIU3				S	**Sn**	**15 34 26.7**	**+0.9**
JTO	**Tosashimizu**	**1.31**	**44**	⇓P	**Pn**	**15 34 17.6**	**+0.3**
JTO				S	**Sn**	**15 34 34.4**	**+0.9**
JNU	**Nakatsue**	**1.40**	**329**	P	**Pn**	**15 34 20.1**	**+1.6**
	37nm,0.3s,baz=182,slow=9.1,SNR=297						
JNU				S	**Sn**	**15 34 38.9**	**+3.1**
	50nm,0.3s,baz=237,slow=7.2,SNR=11						
JOW	**Kunigami**	**5.89**	**212**	P	**Pn**	**15 35 19.8**	**-0.6**
	0.3nm,0.3s,baz=180,slow=30,SNR=8.1						
SONM	**Songino Array**	**24.95**	**317**	P	**P**	**15 39 15.4**	**+0.2**
	1.1nm,0.7s,baz=120,slow=10,SNR=6.8						
MKAR	**Makanchi Array**	**40.33**	**306**	P	**P**	**15 41 28.6**	**-0.6**
	0.6nm,0.5s,baz=83,slow=9.0,SNR=22						
KURBB	**Kurchatov Arra**	**43.10**	**312**	P	**P**	**15 41 51.0**	**-0.6**
	0.2nm,0.4s,baz=93,slow=9.5,SNR=2.6						
ASAR	**Alice Springs**	**55.31**	**178**	P	**P**	**15 43 25.7**	**+0.5**
	0.2nm,0.7s,baz=8.8,slow=6.7,SNR=3.0						
FINES	**FINESS Array B**	**69.44**	**330**	P	**P**	**15 44 58.2**	**-1.0**
	6.6nm,1.1s,baz=69,slow=7.6,SNR=5.6						

IDC ***26*** *15:42:28.9±1.0, 20°.34S×172°.37E, h0^{km}, mb4.0/8, mb1 4.3/10, mb1mx4.2/22, mbtmp4.1/10, ML3.7/2, MS3.9/17, Ms1 3.9/17, ms1mx3.8/21, Error ellipse: s-maj=37.7km s-min=21.1km az=151.0*

NOU ***26*** *15:42:28.2, 20°.69S×172°.74E, h0^{km}, mb4.6, Vanuatu Islands Region*

GCMT ***26*** *15:42:34.1±0.4, 20°.52S±0°.02×172°.51E±0°.02, h24^{km}±1^{km}, MW4.9/77, Moment Tensor Solution. s18,c20; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.19; $M_{\theta\theta}$1.20±.17; $M_{\phi\phi}$-0.66±.14; $M_{r\theta}$0.02±.18; $M_{\theta\phi}$2.33±.10; $M_{\phi r}$-0.39±.18; Best double couple: $M_0$2.54700×10^{16} NP1: ϕ_s281.00000°, δ80.00000°, λ-5.00000°. NP2: ϕ_s11.00000°, δ85.00000°, λ-170.00000°. Principal axes: T 2.7900, Plg3.0000°, Azm146.0000°; N -0.4820, Plg79.0000°, Azm38.0000°; P -2.3050, Plg11.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *15:42:35.1±0.9, 20°.47S±0°.10×172°.4E±0°.1, h49^{km}±8^{km}, mb4.9/24 Error ellipse: s-maj=15.8km s-min=13.3km az=111.0*

ISC 26 15:42:33.5±0.6, 20°.53S±0°.07×172°.48E±0°.10, h35^{km}, n73, σ1^{s}.05/59, mb4.7/16, MS3.9/16, 1C, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**4.26**	**256**	P	**Pn**	**15 43 35.7**	**-0.2**
DVP	**Devils Point**	**4.92**	**304**	P	**Pn**	**15 43 47.6**	**+2.6**
PINNC	**Pines Island,**	**5.12**	**245**	P	**Pn**	**15 43 47.6**	**-0.2**
YATNC	**Mamie plateau,**	**5.43**	**253**	P	**Pn**	**15 43 52.3**	**+0.3**
OUENC	**Ouen Island, N**	**5.58**	**249**	P	**Pn**	**15 43 55.0**	**+1.0**
DZM	**Mont Dzumac**	**5.83**	**254**	*e*Pn	**Pn**	**15 43 59.0**	**+1.4**
	5.8nm,0.3s						
DZM				*e*LR	LR	15 45 13.3	
	comp=Z,1µm,24.2s						
DZM	**Mont Dzumac**	**5.83**	**254**	Pn	**Pn**	**15 43 57.2**	**-0.4**
	2.6nm,0.3s,baz=36,slow=22,SNR=48						
DZM				LR	LR	15 45 55.7	
	comp=Z,653nm,19.8s,baz=76,slow=36						
DZM	**Mont Dzumac**	**5.83**	**254**		**Pn**	**15 43 57.0**	**-0.6**
DZM	**Mont Dzumac**	**5.83**	**254**	P	**Pn**	**15 43 59.6**	**+2.0**
NOUC	**Port Laguerre**	**5.96**	**254**	P	**Pn**	**15 44 00.7**	**+1.3**
SANVU	**Saraoutou**	**7.12**	**314**	Pn	**Pn**	**15 44 16.2**	**+1.0**
SANVU	**Saraoutou**	**7.12**	**314**	P	**Pn**	**15 44 17.6**	**+2.3**
KOUNC	**Koumac, New Ca**	**7.67**	**268**	P	**Pn**	**15 44 24.9**	**+2.0**
RAO	**Raoul Island**	**12.30**	**137**	LR	LR	15 49 09.2	
	comp=Z,706nm,19.9s,baz=304,slow=32						
LHI	**Lord Howe Isla**	**16.27**	**225**	Pn	**Pn**	**15 46 20.3**	**+0.9**
AFI	**Afiamalu**	**16.41**	**69**	LR	LR	15 50 40.5	
	comp=Z,94nm,21.9s,baz=232,slow=30						
URZ	**Urewera**	**18.12**	**168**	P	**Pn**	**15 46 44.0**	**+1.6**
	0.2nm,0.3s,baz=350,slow=7.3,SNR=7.8						
URZ				LR	LR	15 52 00.6	
	comp=Z,517nm,21.6s,baz=31,slow=31						
BKZ	**Black Stump Fm**	**18.90**	**170**	P	**Pn**	**15 46 52.5**	**+0.6**
BKZ				IAmb	IAmb	15 46 57.3	
	comp=Z,72nm,1.8s						
EIDS	**Eidsvold**	**20.28**	**252**	Pn	Pn	15 47 08.1	-0.3
BFZ	**Birch Farm**	**20.35**	**172**	P	Pn	15 47 09.6	+0.6
SNZO	**South Karori**	**20.80**	**175**	P	**P**	**15 47 13.2**	**+1.4**
SNZO				IAmb	IAmb	15 47 22.2	
	comp=Z,117nm,1.3s						
TUWZ	**Tuamarina**	**20.88**	**177**	P	**P**	**15 47 13.4**	**+0.8**
RPZ	**Rata Peaks**	**23.15**	**183**	LR	LR	15 55 10.3	
	comp=Z,224nm,18.5s,baz=9.5,slow=33						
LBZ	**Lake Benmore**	**23.87**	**184**	P	**P**	**15 47 44.4**	**+0.7**
CTAO	**Charters Tower**	**24.59**	**266**	P	**P**	**15 47 51.6**	**+1.0**
PMG	**Port Moresby**	**26.80**	**291**	LR	LR	15 56 57.6	
	comp=Z,207nm,18.8s,baz=78,slow=33						
STKA	**Stephens Creek**	**29.82**	**241**	P	**P**	**15 48 38.2**	**+0.7**
	comp=Z,8.7nm,0.8s,baz=57,slow=6.2,SNR=16						
STKA				LR	LR	15 59 42.8	
	comp=Z,236nm,18.8s,baz=32,slow=35						
STKA	**Stephens Creek**	**29.82**	**241**	P	**P**	**15 48 37.2**	**-0.2**
PATS	**Pohnpei**	**30.55**	**331**	P	**P**	**15 48 43.4**	**-0.5**
TAU	**Tasmania Unive**	**30.71**	**218**	P	**P**	**15 48 45.5**	**+0.4**
BBOO	**Buckleboo**	**34.60**	**242**	P	**P**	**15 49 18.9**	**-0.4**
TBI	**Tubuai**	**35.35**	**102**	*e*LR	LR	15 58 59.5	
	comp=Z,202nm,27.0s						
WR0	**Warramunga Arr**	**35.55**	**264**	P	**P**	**15 49 26.6**	**-1.0**
WR0				IAmb	IAmb	15 49 26.7	
	comp=Z,39nm,2.0s						
WB0	**Warramunga Arr**	**35.71**	**264**	P	**P**	**15 49 27.9**	**-1.1**
WB0				IAmb	IAmb	15 49 52.5	
	comp=Z,17nm,1.6s						
WB2	**Warramunga Arr**	**35.72**	**264**	P	**P**	**15 49 28.9**	**-0.3**
WB2				IAmb	IAmb	15 50 44.4	
	comp=Z,35nm,2.0s						
WRAB	**Tennant Creek**	**35.73**	**264**	P	**P**	**15 49 29.2**	**+0.1**
WRAB				IAmb	IAmb	15 50 17.0	
	comp=Z,25nm,1.6s						
WRA	**Warramunga Arr**	**35.73**	**264**	P	**P**	**15 49 27.9**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=99,slow=8.3,SNR=7.7						
WRA				LR	LR	16 03 18.3	
	comp=Z,154nm,21.2s,baz=175,slow=35						
WRA	**Warramunga Arr**	**35.73**	**264**	P	**P**	**15 49 28.1**	**-1.2**
ASAR	**Alice Springs**	**35.80**	**258**	P	**P**	**15 49 29.1**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=87,slow=8.9,SNR=38						
ASAR	**Alice Springs**	**35.80**	**258**	P	**P**	**15 49 29.2**	**-0.6**
PPT2	**Papeete2**	**35.94**	**92**	*e*LQ	LQ	15 57 43.0	
	comp=Z,431nm,30.5s						
PPT2				*e*LR	LR	15 59 17.9	
	comp=Z,171nm,26.2s						
GENI	**Genyem**	**36.19**	**295**	P	P	15 49 38.0	+4.8
MTN	**Manton Dam**	**40.24**	**274**	P	**P**	**15 50 06.7**	**-0.6**
FORT	**Forrest**	**41.09**	**246**	P	**P**	**15 50 13.6**	**-0.5**
FORT				IAmb	IAmb	15 50 29.1	
	comp=Z,21nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.15**	**265**		**P**	**15 50 39.3**	**+0.2**
TAOE	**Nuku Hiva Isla**	**47.11**	**83**	*e*LR	LR	16 04 14.7	
	comp=Z,92nm,29.2s						
PSA00	**Pilbara Seismi**	**48.93**	**259**	P	**P**	**15 51 15.2**	**-1.4**
PSA00				IAmb	IAmb	15 51 17.6	
	comp=Z,20nm,1.1s						
NWAO	**Narrogin (SRO)**	**50.36**	**244**	P	**P**	**15 51 27.0**	**-0.3**
MORW	**Morawa**	**51.53**	**249**	P	**P**	**15 51 35.9**	**-0.3**
MORW				IAmb	IAmb	15 52 57.3	
	comp=Z,18nm,1.1s						
VNDA	**Vanda**	**57.27**	**183**	LR	LR	16 15 03.4	
	comp=Z,91nm,18.2s,baz=342,slow=34						
JMM	**Marumori**	**65.28**	**333**	P	**P**	**15 53 09.8**	**-2.0**
PETK	**Petropavlovsk-**	**74.44**	**351**	LR	LR	16 22 49.6	
	comp=Z,64nm,19.1s,baz=140,slow=33						
CMAR	**Chiang Mai Arr**	**81.81**	**293**	P	**P**	**15 54 51.0**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=135,slow=4.2,SNR=9.3						
CMAR				LR	LR	16 33 14.8	
	comp=Z,63nm,18.5s,baz=205,slow=37						
CMAR	**Chiang Mai Arr**	**81.81**	**293**	P	**P**	**15 54 48.9**	**-0.6**
ISA	**Isabella, Lake**	**85.95**	**50**	P	**P**	**15 55 11.0**	**+0.6**
ISA				IAmb	IAmb	15 55 18.7	
	comp=Z,6.9nm,0.9s						
NVAR	**Mina Array Bea**	**87.40**	**47**	P	**P**	**15 55 19.6**	**+2.1**
	comp=Z,0.7nm,0.8s,baz=224,slow=10,SNR=3.4						
NVAR				LR	LR	16 29 23.3	
	comp=Z,98nm,18.1s,baz=350,slow=32						
NVAR	**Mina Array Bea**	**87.40**	**47**	P	**P**	**15 55 17.4**	**-0.1**
SONM	**Songino Array**	**90.09**	**322**	P	**P**	**15 55 29.0**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=108,slow=4.7,SNR=1.9						
SONM				LR	LR	16 34 20.9	
	comp=Z,54nm,18.8s,baz=60,slow=35						
ILAR	**Eielson Array**	**90.58**	**16**	P	**P**	**15 55 30.2**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=224,slow=4.9,SNR=4.4						
ILAR				LR	LR	16 29 01.3	
	comp=Z,58nm,21.4s,baz=126,slow=31						
TXAR	**Lajitas Array**	**94.72**	**61**	P	**P**	**15 55 52.2**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=224,slow=5.2,SNR=5.2						
TXAR				LR	LR	16 33 33.5	
	comp=Z,70nm,18.0s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**94.72**	**61**	P	**P**	**15 55 51.5**	**-0.2**
PDAR	**Pinedale Array**	**95.28**	**46**	LR	LR	16 37 20.5	
	comp=Z,98nm,18.3s,baz=29,slow=35						
PLCA	**Paso Flores**	**95.54**	**137**	LR	LR	16 29 19.7	
	comp=Z,39nm,21.5s,baz=312,slow=29						
OSTC	**Ostas**	**144.66**	**334**	*e*PKP	**PKPdf**	**16 02 06.1**	**-0.3**
DPC	**Dobruska-Polom**	**144.77**	**333**	*e*PKP	**PKPdf**	**16 02 06.3**	**-0.3**
DPC				*e*x	x	16 02 17.2	
JAVC	**Velka Javorina**	**145.27**	**330**	*e*PKP	**PKPdf**	**16 02 08.4**	**+0.8**
JAVC				*e*		16 02 20.3	
CLL	**Collm**	**145.32**	**337**	⇑*i*PKPbc	**PKPdf**	**16 02 07.3**	**-0.2**
	comp=Z,12nm,1.0s						
CLL				*i*		16 02 18.2	
	comp=Z,21nm,1.3s						
CLL				LmV		19 31 00.0	
	comp=Z,300nm,18.9s						
CLL	**Collm**	**145.32**	**337**		**PKPbc**	**16 02 06.6**	**-0.7**
VRAC	**Vranov**	**145.43**	**332**	*e*PKP	**PKPdf**	**16 02 08.0**	**+0.2**
VRAC				*e*		16 02 19.9	
KRUC	**Moravsky**	**145.70**	**332**	*e*PKP	**PKPbc**	**16 02 08.2**	**-0.4**
KRUC				*e*		16 02 20.1	
KHC	**Kasperske Hory**	**146.85**	**334**	*e*PKP	**PKPab**	**16 02 12.6**	**-0.8**
KHC				*e*x	x	16 02 23.6	
GERES	**GERESS Array B**	**147.02**	**334**	PKPbc	**PKPbc**	**16 02 12.4**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=29,slow=3.0,SNR=9.4						
GERES	**GERESS Array B**	**147.02**	**334**		**PKPbc**	**16 02 11.8**	**-0.8**

NOU 26 16:07:46.2, 18°.77S×169°.25E, h130^{km}, MLv4.1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.45**	**316**	P	Pn	16 08 14.2	+0.5
MARNC	**Mare, Loyalty**	**2.93**	**203**	P	Pn	16 08 30.9	-1.0
SANVU	**Saraoutou**	**3.84**	**329**	P	Pn	16 08 43.7	-0.2
YATNC	**Mamie plateau,**	**3.95**	**214**	P	Pn	16 08 45.0	-0.3
PINNC	**Pines Island,**	**4.18**	**204**	P	Pn	16 08 49.6	+1.3
DZM	**Mont Dzumac**	**4.21**	**218**	P	Pn	16 08 48.7	-0.1
OUENC	**Ouen Island, N**	**4.27**	**211**	P	Pn	16 08 48.9	-0.7
NOUC	**Port Laguerre**	**4.32**	**219**	P	Pn	16 08 50.4	+0.3
KOUNC	**Koumac, New Ca**	**5.00**	**248**	P	Pn	16 08 59.3	0.0

SOME ***26*** *16:28:02.4, 40°.58N×77°.73E, h10^{km}*

KRNET ***26*** *16:28:03.2±0.1, 40°.63N×77°.63E, h24^{km}, mb2.9*

NNC ***26*** *16:28:04.2±0.7, 40°.65N×77°.67E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=5.0km s-min=3.5km az=174.0*

ISC 26 16:28:00.1±2.1, 40°.30N±0°.10×77°.47E±0°.04, h10^{km}, n56, σ1^{s}.53/88, 27C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.84**	**353**	⇑*i*P	**Pn**	**16 28 32.4**	**+0.4**
	baz=48						
KDJ				⇑*i*S	**Sn**	**16 28 53.5**	**-1.9**
	baz=48						
ULHL	**Ulahol**	**2.15**	**335**	⇑*i*P	**Pb**	**16 28 38.8**	**-0.5**
	baz=28						
ULHL				⇑*i*S	**Sb**	**16 29 04.8**	**-1.4**
	baz=28						
PRZ	**Przheval'sk**	**2.29**	**17**	⇑*i*P	**Pn**	**16 28 39.3**	**+1.2**
	baz=17						
PRZ				⇑*i*S	**Sn**	**16 29 06.2**	**-0.3**
	baz=17						
ANVS	**Anan'yevo**	**2.48**	**3**	⇑*i*P	**Pn**	**16 28 42.9**	**+2.1**
	baz=1.0						
ANVS				⇑*i*S	**Sn**	**16 29 11.8**	**+0.5**
	baz=1.0						
TNSS	**Tian-Shan**	**2.76**	**352**	*e*P	**Pb**	**16 28 49.2**	**-0.6**
	20nm,0.4s						
TNSS				*e*S	**Sb**	**16 29 23.3**	**-0.6**
	12nm,0.5s						
TNSS	**Tian-Shan**	**2.76**	**352**	Pg	**Pb**	**16 28 49.2**	**-0.6**
	20nm,0.4s						
TNSS				Lg	Lg	16 29 23.3	
	12nm,0.5s						
IZV	**Izvestkoviy**	**2.81**	**347**	*e*P	**Pb**	**16 28 50.0**	**-0.5**
	6.2nm,0.3s						
IZV				*e*S	**Sb**	**16 29 24.5**	**-0.5**
	15nm,0.5s						
IZV	**Izvestkoviy**	**2.81**	**347**	Pg	**Pb**	**16 28 50.0**	**-0.5**
	6.2nm,0.3s						
IZV				Lg	Lg	16 29 24.5	
	15nm,0.5s						
ARLS	**Aral**	**2.84**	**304**	⇑*i*P	**Pb**	**16 28 51.4**	**+0.3**
	baz=97						
ARLS				⇑*i*S	**Sb**	**16 29 26.8**	**+0.8**
	baz=97						
SATY	**Saty**	**2.84**	**14**	*e*P	**Pb**	**16 28 50.0**	**-1.1**
	8.8nm,0.5s						
SATY				*e*S	**Sb**	**16 29 24.6**	**-1.4**
	7.8nm,0.5s						
SATY	**Saty**	**2.84**	**14**	Pg	**Pb**	**16 28 50.0**	**-1.1**
	8.8nm,0.5s						
SATY				Lg	Lg	16 29 24.6	
	7.8nm,0.5s						
MDOK	**Medeo**	**2.88**	**354**	*e*P	**Pb**	**16 28 50.8**	**-0.8**
	13nm,0.4s						
MDOK				*e*S	**Sb**	**16 29 26.0**	**-1.0**
	14nm,0.7s						
MDOK	**Medeo**	**2.88**	**354**	⇑Pg	**Pb**	**16 28 50.8**	**-0.8**
	26nm,1.0s						
MDOK				⇑Lg	Lg	16 29 26.1	
	24nm,1.0s						
MDOK	**Medeo**	**2.88**	**354**	Pg	**Pb**	**16 28 50.8**	**-0.8**
	13nm,0.4s						
MDOK				Lg	Lg	16 29 26.0	
	14nm,0.7s						
MTBS	**Maitube**	**2.93**	**345**	*e*P	**Pb**	**16 28 52.3**	**-0.2**
	6.7nm,0.4s						
MTBS				*e*S	**Sb**	**16 29 28.4**	**-0.1**
	11nm,0.4s						
MTBS	**Maitube**	**2.93**	**345**	Pg	**Pb**	**16 28 52.3**	**-0.2**
	6.7nm,0.4s						
MTBS				Lg	Lg	16 29 28.4	
	11nm,0.4s						
KOTS	**Kotyrbulak**	**2.94**	**355**	*e*P	**Pb**	**16 28 52.1**	**-0.6**
	22nm,0.6s						
KOTS				*e*S	**Sb**	**16 29 28.4**	**-0.4**
	38nm,0.5s						
KOTS	**Kotyrbulak**	**2.94**	**355**	Pg	**Pb**	**16 28 52.1**	**-0.6**
	22nm,0.6s						
KOTS				Lg	Lg	16 29 28.4	
	38nm,0.5s						
UCH	**Uchtor**	**2.94**	**312**	⇑*i*P	**Pb**	**16 28 51.9**	**-1.1**
	baz=5.0						
UCH				⇑*i*S	**Sb**	**16 29 27.9**	**-1.3**
	baz=5.0						
ZHN	**Zhinishke**	**2.96**	**14**	*e*P	**Pn**	**16 28 49.5**	**+2.3**
	94nm,0.3s						
ZHN				*e*S	**Sn**	**16 29 23.6**	**+0.9**
	1.6nm,0.2s						
ZHN	**Zhinishke**	**2.96**	**14**	Pg	**Pn**	**16 28 49.5**	**+2.3**
	94nm,0.3s						
ZHN				Lg	Lg	16 29 23.6	
	1.6nm,0.2s						
KST	**Kastek**	**2.96**	**338**	*e*P	**Pb**	**16 28 53.7**	**+0.6**
	4.9nm,0.2s						
KST				*e*S	**Sb**	**16 29 30.5**	**+1.0**
	10nm,0.8s						
KST	**Kastek**	**2.96**	**338**	Pg	**Pb**	**16 28 53.7**	**+0.6**
	4.9nm,0.2s						
KST				Lg	Lg	16 29 30.5	
	10nm,0.8s						
TKM2	**Tokmak 2**	**2.97**	**332**	⇑*i*P	**Pn**	**16 28 50.5**	**+3.0**
	baz=27						
TKM2				⇑*i*S	**Sn**	**16 29 25.5**	**+2.2**
	baz=27						
TKM2	**Tokmak 2**	**2.97**	**332**	⇓Pg	**Pb**	**16 28 54.6**	**+1.3**
	1.7nm,0.5s						
TKM2				⇓Lg	Lg	16 29 32.0	
	5.9nm,0.8s						
KBK	**Karagaybulak**	**3.02**	**322**	⇓*i*P	**Pb**	**16 28 52.3**	**-1.8**
	baz=16						
KBK				⇓*i*S	**Sb**	**16 29 28.3**	**-2.8**
	baz=16						
UZB	**Uzynbulak**	**3.07**	**22**	*e*P	**Pb**	**16 28 53.6**	**-1.4**
	5.0nm,0.5s						
UZB				*e*S	**Sb**	**16 29 30.5**	**-2.0**
	8.3nm,0.6s						
UZB	**Uzynbulak**	**3.07**	**22**	Pg	**Pb**	**16 28 53.6**	**-1.4**
	5.0nm,0.5s						
UZB				Lg	Lg	16 29 30.5	
	8.3nm,0.6s						
DGS	**Degeres**	**3.20**	**337**	*e*P	**Pb**	**16 28 57.2**	**0.0**
	5.0nm,0.5s						
DGS				*e*S	**Sb**	**16 29 36.7**	**+0.5**
	8.8nm,0.4s						
DGS	**Degeres**	**3.20**	**337**	Pg	**Pb**	**16 28 57.2**	**0.0**
	5.0nm,0.5s						
DGS				Lg	Lg	16 29 36.7	
	8.8nm,0.4s						
SHLS	**Shalkode**	**3.22**	**27**	*e*P	**Pb**	**16 28 59.2**	**+1.8**
	8.3nm,0.4s						
SHLS				*e*S	**Sg**	**16 29 40.2**	**-3.3**
	20nm,0.4s						
SHLS	**Shalkode**	**3.22**	**27**	Pg	**Pb**	**16 28 59.2**	**+1.8**
	8.3nm,0.4s						
SHLS				Lg	Lg	16 29 40.2	
	20nm,0.4s						
KURS	**Kuram**	**3.23**	**9**	*e*P	**Pb**	**16 28 56.3**	**-1.3**
	4.3nm,0.6s						
KURS				*e*S	**Sb**	**16 29 35.2**	**-1.8**
	6.0nm,0.7s						
KURS	**Kuram**	**3.23**	**9**	Pg	**Pb**	**16 28 56.3**	**-1.3**
	4.3nm,0.6s						
KURS				Lg	Lg	16 29 35.2	
	6.0nm,0.7s						
AAK	**Ala-Archa**	**3.23**	**317**	⇑*i*P	**Pb**	**16 28 55.5**	**-2.2**
	baz=12						
AAK				⇑*i*S	**Sb**	**16 29 33.8**	**-3.4**
	baz=12						
AAK	**Ala-Archa**	**3.23**	**317**	⇑Pg	**Pg**	**16 29 02.0**	**-0.1**
	1.9nm,0.5s						
AAK				⇓Lg	Lg	16 29 41.2	
	11nm,0.9s						
KPKS	**Kokpek**	**3.29**	**16**	*e*P	**Pb**	**16 28 57.1**	**-1.6**
	8.6nm,0.4s						
KPKS				*e*S	**Sb**	**16 29 36.5**	**-2.3**
	17nm,0.5s						
PDGK	**Podgornoye**	**3.38**	**26**	Pg	**Pb**	**16 28 58.8**	**-1.5**
	2.5nm,0.6s						
PDGK				Lg	Lg	16 29 39.6	
	6.0nm,0.9s						
PDGK	**Podgornoye**	**3.38**	**26**	⇑Pg	**Pb**	**16 28 58.5**	**-1.7**
	3.4nm,0.6s						
PDGK				⇑Lg	Lg	16 29 39.9	
	24nm,1.3s						
AML	**Almayashu**	**3.38**	**304**	⇑*i*P	**Pb**	**16 28 58.6**	**-1.8**
	baz=98						
AML				⇑*i*S	**Sb**	**16 29 38.9**	**-2.9**
	baz=98						
KTBS	**Karatobe**	**3.46**	**350**	*e*P	**Pb**	**16 29 00.9**	**-0.6**
	4.5nm,0.3s						
KTBS				*e*S	**Sb**	**16 29 43.5**	**-0.1**
	24nm,0.7s						
KTBS	**Karatobe**	**3.46**	**350**	Pg	**Pb**	**16 29 00.9**	**-0.6**
	4.5nm,0.3s						
KTBS				Lg	Lg	16 29 43.5	
	24nm,0.7s						
CHKK	**Chushkaly**	**3.57**	**354**	*e*P	**Pb**	**16 29 02.9**	**-0.4**
	4.9nm,0.3s						
CHKK				*e*S	**Sb**	**16 29 46.7**	**0.0**
	11nm,0.4s						
CHKK	**Chushkaly**	**3.57**	**354**	Pg	**Pb**	**16 29 02.9**	**-0.4**
	4.9nm,0.3s						
CHKK				Lg	Lg	16 29 46.7	
	11nm,0.4s						
EKS2	**Erkin-Say**	**3.64**	**312**	⇑*i*P	**Pb**	**16 29 01.9**	**-2.7**
	baz=6.0						
EKS2				⇑*i*S	**Sb**	**16 29 44.9**	**-4.0**
	baz=6.0						
KUU	**Kurty**	**3.69**	**347**	*e*P	**Pb**	**16 29 05.3**	**-0.1**
	1.4nm,0.3s						
KUU				*e*S	**Sb**	**16 29 50.5**	**+0.4**
	9.0nm,0.9s						
KUU	**Kurty**	**3.69**	**347**	Pg	**Pb**	**16 29 05.3**	**-0.1**
	1.4nm,0.3s						
KUU				Lg	Lg	16 29 50.5	
	9.0nm,0.9s						
USP	**Ospenovka**	**3.70**	**324**	⇑*i*P	**Pn**	**16 29 01.5**	**+4.1**
	baz=19						
USP				⇑*i*S	**Sn**	**16 29 43.9**	**+2.7**
	baz=19						
KTMS	**Ketmen**	**3.81**	**33**	*e*P	**Pb**	**16 29 06.4**	**-1.1**
	1.0nm,0.2s						
KTMS				*e*S	**Sb**	**16 29 52.8**	**-1.0**
	6.3nm,0.4s						

KTMS	**Ketmen**	**3.81**	**33**	Pg	**Pb**	**16 29 06.4**	**-1.1**
	1.0nm,0.2s						
KTMS				Lg	Lg	16 29 52.8	
	6.3nm,0.4s						
MNBS	**Baschi**	**3.84**	**10**	*e*P	**Pb**	**16 29 07.0**	**-1.0**
	1.7nm,0.6s						
MNBS				*e*S	**Sb**	**16 29 53.6**	**-1.0**
	12nm,0.3s						
MNBS	**Baschi**	**3.84**	**10**	Pg	**Pb**	**16 29 07.0**	**-1.0**
	1.7nm,0.6s						
MNBS				Lg	Lg	16 29 53.6	
	12nm,0.3s						
ARXS	**Arharly**	**3.92**	**4**	*e*P	**Pb**	**16 29 08.9**	**-0.4**
	4.8nm,0.5s						
ARXS				*e*S	**Sb**	**16 29 56.8**	**0.0**
	5.5nm,0.5s						
ARXS	**Arharly**	**3.92**	**4**	Pg	**Pb**	**16 29 08.9**	**-0.4**
	4.8nm,0.5s						
ARXS				Lg	Lg	16 29 56.8	
	5.5nm,0.5s						
KAPS	**Kapalarasan**	**5.17**	**15**	*e*P	**Pb**	**16 29 31.1**	**+0.5**
	0.9nm,1.1s						
KAPS				*e*S	**Sb**	**16 30 35.2**	**+2.4**
	1.3nm,0.6s						
KAPS	**Kapalarasan**	**5.17**	**15**	Pg	**Pb**	**16 29 31.1**	**+0.5**
	0.9nm,1.1s						
KAPS				Lg	Lg	16 30 35.2	
	1.3nm,0.6s						

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*NEIC **26** 16:35:26.2±1.1, 6°.4S±0°.1×149°.0E±0°.1, h75^{km}±8^{km}, mb4.0/12, Error ellipse: s-maj=19.6km s-min=10.6km az=132.0*

*IDC **26** 16:35:26.4±4.2, 6°.10S×148°.51E, h51^{km}±39^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/30, mbtmp3.8/7, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=56.6km s-min=23.5km az=113.0*

*NOU **26** 16:35:55.7, 8°.22S×147°.40E, h110^{km}, mb4.1, Eastern New Guinea Reg., P.N.G.*

ISC 26 16:35:24.8±0.6**, 6°.26S**±0°.08×**148°.94E**±0°.09**, h53**^{km}**, n30, σ1^{s}27**/28**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.59**	**209**	P	**Pn**	**16 36 18.4**	**+0.5**
	13nm,0.3s,baz=21,slow=3.7,SNR=24						
PMG				S	**Sn**	**16 37 00.4**	**+1.4**
	43nm,0.3s,baz=257,slow=20,SNR=20						
PMG				LR	LR	16 37 57.9	
	comp=Z,176nm,19.2s,baz=81,slow=43						
PMG	**Port Moresby**	**3.59**	**209**	P	**Pn**	**16 36 18.6**	**+0.7**
RABL	**Rabaul**	**3.82**	**58**	Pn	**Pn**	**16 36 22.7**	**+1.6**
COEN	**Coen**	**9.52**	**216**	Pn	**Pn**	**16 37 38.6**	**-0.7**
HNR	**Honiara**	**11.35**	**107**	Pn	**Pn**	**16 38 04.2**	**-0.2**
HNR	**Honiara**	**11.35**	**107**	P	Pn	16 38 49.8	+45
EIDS	**Eidsvold**	**19.11**	**174**	P	**P**	**16 39 42.1**	**-1.3**
EIDS				IAmb	IAmb	16 39 49.4	
	comp=Z,22nm,1.5s						
WB0	**Warramunga Arr**	**19.49**	**225**	P	**P**	**16 39 47.1**	**-0.6**
WR0	**Warramunga Arr**	**19.52**	**224**	P	**P**	**16 39 47.6**	**-0.4**
WR0				IAmb	IAmb	16 40 01.1	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**19.63**	**225**	P	**P**	**16 39 48.9**	**-0.3**
WRAB				IAmb	IAmb	16 39 53.5	
	comp=Z,4.0nm,0.6s						
WB2	**Warramunga Arr**	**19.64**	**225**	P	**P**	**16 39 48.6**	**-0.6**
WRA	**Warramunga Arr**	**19.65**	**225**	P	**P**	**16 39 48.4**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=51,slow=11,SNR=15						
SANVU	**Saraoutou**	**20.11**	**118**	P	Pn	16 40 25.8	+29
KOUNC	**Koumac, New Ca**	**20.58**	**135**	P	Pn	16 40 24.9	+23
ASAR	**Alice Springs**	**22.55**	**218**	P	**P**	**16 40 20.4**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=56,slow=9.3,SNR=44						
ASAR				PcP	**PcP**	**16 44 12.5**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=38,slow=2.1,SNR=4.2						
ASAR	**Alice Springs**	**22.55**	**218**	PcP	**PcP**	**16 44 12.3**	**-0.5**
DZM	**Mont Dzumac**	**23.09**	**135**	P	**P**	**16 40 23.6**	**-2.7**
FITZ	**Fitzroy Crossi**	**25.59**	**241**	P	**P**	**16 40 49.6**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=57,slow=7.6,SNR=22						
FITZ	**Fitzroy Crossi**	**25.59**	**241**	IAmb	IAmb	16 41 11.4	
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	**26.39**	**194**	P	**P**	**16 41 00.6**	**+4.3**
	comp=Z,1.1nm,0.7s,baz=358,slow=8.1,SNR=3.2						
TWG	**Pinlang**	**39.73**	**318**	P	**P**	**16 42 51.4**	**-1.0**
PEA0B	**Petropavlovsk-**	**59.61**	**6**	P	**P**	**16 45 22.7**	**-0.4**
PETK	**Petropavlovsk-**	**59.61**	**6**	P	**P**	**16 45 24.5**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=159,slow=6.6,SNR=19						
PETK	**Petropavlovsk-**	**59.61**	**6**	P	**P**	**16 45 22.9**	**-0.2**
BILL	**Bilibino**	**75.14**	**7**	P	**P**	**16 47 01.2**	**+0.3**
BILL				IAmb	IAmb	16 47 05.8	
	comp=Z,3.0nm,1.4s						
MKAR	**Makanchi Array**	**78.93**	**320**	P	**P**	**16 47 22.4**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=102,slow=7.6,SNR=1.7						
KDAK	**Kodiak Island**	**79.23**	**28**	P	**P**	**16 47 24.4**	**+0.3**
CMB	**Columbia Colle**	**94.34**	**52**	P	**P**	**16 48 38.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**147.02**	**284**	PKPbc	**PKPbc**	**16 55 01.9**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=53,slow=3.2,SNR=6.0						
TORD	**Torodi Ar. Bea**	**147.02**	**284**		**PKPdf**	**16 55 01.5**	**+0.8**

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*IDC **26** 16:48:09.2±1.1, 52°.02N×169°.83W, h0^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/50, mbtmp3.5/9, ML3.3/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/40, Error ellipse: s-maj=37.1km s-min=18.4km az=1.0*

*NEIC **26** 16:48:11.5±1.8, 51°.85N±0°.05×169°.63W±0°.09, h25^{km}±3^{km}, ML3.1(AEIC), Error ellipse: s-maj=10.2km s-min=4.2km az=127.0*

*AEIC **26** 16:48:11±1.9, 51°.88N±0°.04×169°.59W±0°.10, h26^{km}±5^{km}, Error ellipse: s-maj=9.4km s-min=4.3km az=115.0*

ISC 26 16:48:13.3±0.9**, 52°.0N**±0°.1×**169°.71W**±0°.07**, h30**^{km}**, n24, σ1^{s}81**/27**, mb3.4**/7**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.08**	**29**		**Pn**	**16 48 32.8**	**+0.3**
NIKH					**Sn**	**16 48 49.2**	**+2.8**
OKSP	**Okmok Steeple**	**1.50**	**35**		**Pn**	**16 48 39.2**	**+0.9**
OKSO	**Okmok South**	**1.64**	**35**		**Pn**	**16 48 39.5**	**-0.5**
OKSO					**Sn**	**16 49 01.4**	**+1.3**
OKFG	**Magazine Ridge**	**1.77**	**38**		**Pn**	**16 48 41.9**	**0.0**
MAPS	**Pakushin South**	**2.45**	**42**		**Pn**	**16 48 52.2**	**+1.0**
MAPS					**Sn**	**16 49 22.2**	**+2.0**
MSW	**Makushin Switc**	**2.59**	**42**		**Pn**	**16 48 54.1**	**+0.9**
UNV	**Unalaska Valle**	**2.66**	**46**		**Pn**	**16 48 54.8**	**+0.7**
ATKA	**Atka Island**	**2.77**	**275**	Pn	**Pn**	**16 48 55.2**	**-0.4**
AKUT	**Akutan**	**3.18**	**47**	Pn	**Pn**	**16 49 00.6**	**-0.6**
ADK	**Adak**	**4.32**	**271**	Pn	**Pn**	**16 49 16.4**	**-0.5**
OHAK	**Old Harbor**	**10.84**	**55**	Pn	**Pn**	**16 50 44.9**	**-1.3**
KDAK	**Kodiak Island**	**11.40**	**53**	Pn	**Pn**	**16 50 52.5**	**-1.4**
	0.2nm,0.3s,baz=331,slow=19,SNR=6.3						
KDAK				Sn	**Sn**	**16 52 53.2**	**-7.0**
	0.1nm,0.3s,baz=167,slow=19,SNR=2.3						
CNPM	**China Poot**	**12.79**	**47**	Pn	**Pn**	**16 51 13.1**	**+0.2**
BRLK	**Bradley Lake**	**13.06**	**46**	Pn	**Pn**	**16 51 16.0**	**-0.6**
ILAR	**Eielson Array**	**17.36**	**34**	P	**Pn**	**16 52 11.6**	**-1.4**
	0.1nm,0.3s,baz=227,slow=11,SNR=7.7						
PETK	**Petropavlovsk-**	**19.75**	**286**	P	**P**	**16 52 41.0**	**+0.5**
	0.7nm,0.3s,baz=90,slow=14,SNR=58						
SEY	**Seymchan**	**22.75**	**313**	P	**P**	**16 53 12.8**	**+0.1**
	1.0nm,0.7s,baz=79,slow=23,SNR=5.6						
DLBC	**Dease Lake**	**23.24**	**58**	LR	LR	17 02 19.9	
	comp=Z,129nm,18.4s,baz=70,slow=36						
YKA	**Yellowknife Ar**	**30.63**	**48**	P	**P**	**16 54 25.8**	**+1.4**
	0.5nm,0.8s,baz=273,slow=8.8,SNR=7.0						
KLR	**Kul'dur**	**36.38**	**289**	P	**P**	**16 55 13.8**	**-0.7**
	0.5nm,0.5s,baz=55,slow=12,SNR=4.4						
PDAR	**Pinedale Array**	**40.68**	**79**	P	**P**	**16 55 51.9**	**+0.9**
	0.3nm,0.7s,baz=311,slow=3.5,SNR=2.8						
TXAR	**Lajitas Array**	**52.97**	**88**	P	**P**	**16 57 28.2**	**+1.2**
	0.4nm,0.8s,baz=298,slow=10.0,SNR=2.5						
MKAR	**Makanchi Array**	**63.89**	**313**	P	**P**	**16 58 42.4**	**-0.5**
	0.7nm,1.1s,baz=45,slow=7.2,SNR=3.3						
ASAR	**Alice Springs**	**90.01**	**230**	P	**P**	**17 01 09.9**	**+0.1**
	0.6nm,0.9s,baz=24,slow=4.7,SNR=12						

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*SKHL **26** 16:58:36.9±0.3, 44°.37N×149°.00E, h40^{km}±8^{km}, mb4.5/3*

*JMA **26** 16:58:37.6±0.5, 44°.61N×148°.82E, h30^{km}, M3.9*

ISC 26 16:58:31.6±3.5**, 44°.21N**±0°.08×**149°.4E**±0°.2**, h38**^{km}**, n22, σ3^{s}27**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.49**	**314**	*i* P	**Pn**	**16 58 56.0**	**+0.2**
KUR				AMB	AMB	16 58 56.0	
	160nm,0.3s						
KUR				*e*S	**Sn**	**16 59 10.2**	**-3.7**
KUR				A	A	16 59 11.0	
	1μm,0.3s						
KUR				A	A	16 59 11.0	
	656nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.54**	**267**	*e*P	**Pn**	**16 59 12.0**	**+1.8**
YUK				AMB	AMB	16 59 15.0	
	110nm,0.4s						
YUK				*e*S	**Sn**	**16 59 38.5**	**-1.3**
YUK				A	A	16 59 44.0	
	455nm,0.4s						
YUK				A	A	16 59 44.0	
	382nm,0.4s						
GRPR	**Tuman**	**2.60**	**267**	*i* P	**Pn**	**16 59 13.0**	**+1.9**
GRPR				AMB	AMB	16 59 19.0	
	45nm,0.4s						
GRPR				*i* S	**Sn**	**16 59 40.3**	**-1.2**
GRPR				A	A	16 59 47.0	
	397nm,0.4s						
GRPR				A	A	16 59 47.0	
	254nm,0.4s						
NEM2	**Nemuro 2**	**2.76**	**254**	P	**Pn**	**16 59 15.7**	**+2.4**
NEM2				*e*S	**Sn**	**16 59 43.8**	**-1.5**
NMR	**Nemuro--Hokkai**	**2.77**	**254**	*i* P	**Pn**	**16 59 15.9**	**+2.5**
NMR				*e*S	**Sn**	**16 59 45.0**	**-0.5**
JRA	**Rausu**	**3.08**	**267**	P	**Pn**	**16 59 20.8**	**+3.2**
JRA				*e*S	**Sn**	**16 59 52.9**	**-0.2**
JNK	**Nakash**	**3.42**	**261**	P	**Pn**	**16 59 24.9**	**+2.5**
JNK				*e*S	**Sn**	**16 59 59.5**	**-2.2**
JAK	**Akkeshi**	**3.61**	**252**	P	**Pn**	**16 59 27.6**	**+2.7**
JTKR	**Abashiri--Toko**	**3.95**	**269**	P	**Pn**	**16 59 32.9**	**+3.4**
JAR	**Ashorobuto**	**4.16**	**259**	P	**Pn**	**16 59 36.2**	**+3.7**
JOB	**Onbets**	**4.23**	**254**	P	**Pn**	**16 59 37.2**	**+3.7**
JCH	**Churui**	**4.66**	**252**	P	**Pn**	**16 59 43.0**	**+3.6**
JKK2	**Kamakawa 2**	**4.79**	**268**	P	**Pn**	**16 59 43.6**	**+2.4**
JFR	**Furan**	**5.03**	**260**	P	Pn	16 59 49.2	+4.8
JNBK	**Urakawa-nobuka**	**5.21**	**251**	P	**Pn**	**16 59 49.7**	**+2.8**
JBT2	**Biratori 2**	**5.30**	**257**	P	**Pn**	**16 59 51.7**	**+3.6**
JNB	**Noboribetsu**	**6.32**	**257**	P	**Pn**	**17 00 05.9**	**+3.7**
JKB	**Kayabe**	**6.54**	**252**	P	**Pn**	**17 00 07.9**	**+2.8**
JKB				*e*S	**Sn**	**17 01 15.0**	**-3.3**
JANG	**Nango**	**6.97**	**239**	*e*S	**Sn**	**17 01 24.6**	**-4.5**
JTH	**Tanohata**	**7.03**	**235**	*e*S	**Sn**	**17 01 24.7**	**-5.8**
OFUJ	**Ofunato**	**7.71**	**231**	*e*S	**Sn**	**17 01 42.8**	**-4.5**
JIO	**Ouri**	**8.33**	**229**	*e*S	**Sn**	**17 01 57.6**	**-4.9**

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*IDC **26** 16:59:12.8±3.3, 1°.69S×99°.06E, h0^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.3/43, mbtmp3.4/6, Error ellipse: s-maj=131.7km s-min=21.7km az=59.0*

ISC 26 16:59:18.2±3.4**, 1°.5S**±0°.5×**99°.3E**±0°.8**, h30**^{km}**, n13, σ1^{s}45**/6**, mb3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.87**	**359**	P	**P**	**17 03 46.3**	**-0.8**
	0.3nm,0.7s,baz=184,slow=9.7,SNR=3.3						
H08S2	**Diego Garcia H**	**27.41**	**256**	T	T	17 32 56.2	
	baz=78,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**27.42**	**256**	T	T	17 32 56.2	
	baz=78,slow=76,SNR=32						
H08S1	**Diego Carcia H**	**27.43**	**256**	T	T	17 32 57.1	
	baz=78,slow=76,SNR=6.6						
H01W3	**Cape Leeuwin H**	**35.94**	**159**	T	T	17 44 04.3	
	baz=334,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**35.95**	**159**	T	T	17 44 04.1	
	baz=334,slow=76,SNR=11						
H01W1	**Cape Leeuwin H**	**35.95**	**159**	T	T	17 44 04.5	
	baz=334,slow=76,SNR=13						
WRA	**Warramunga Arr**	**38.81**	**121**	P	**P**	**17 06 39.5**	**-1.1**
	0.3nm,0.6s,baz=302,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**40.07**	**126**	P	**P**	**17 06 52.0**	**+0.8**
	0.3nm,0.8s,baz=303,slow=8.5,SNR=5.0						
SONM	**Songino Array**	**49.55**	**6**	P	**P**	**17 08 08.1**	**+1.6**
	0.4nm,0.9s,baz=198,slow=7.3,SNR=2.8						
MKAR	**Makanchi Array**	**50.40**	**345**	P	**P**	**17 08 12.5**	**-0.3**
	0.6nm,0.5s,baz=151,slow=8.2,SNR=7.8						
ZALV	**Zalesovo Beam**	**56.59**	**350**	P	**P**	**17 08 57.0**	**-1.0**
	0.5nm,0.5s,baz=176,slow=10,SNR=4.1						
TXAR	**Lajitas Array**	**144.73**	**36**	PKPbc	PKPbc	17 18 51.9	0.0
	0.2nm,0.4s,baz=188,slow=1.1,SNR=4.7						

KRNET 26 17:07:49.5±0.1**, 42°.57N**×**75°.17E, h21**^{km}**, mb1.8, 12C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.18**	**297**	⇑*i*P	Pb	17 07 54.2	-1.5
	baz=97						
KBK				⇑*i*S	Sb	17 07 57.4	-2.6
	baz=97						
TKM2	**Tokmak 2**	**0.47**	**42**	⇑*i*P	Pb	17 07 58.8	-0.3
	baz=42						
AAK	**Ala-Archa**	**0.51**	**277**	⇑*i*P	Pb	17 07 59.5	-0.3
	baz=77						
CHMS	**Chumysh**	**0.53**	**324**	⇑*i*P	Pb	17 07 59.6	-0.5
	baz=24						
CHMS				⇑*i*S	Sb	17 08 07.4	+0.1
	baz=24						
BOOM	**Boomskoye usch**	**0.57**	**98**	⇑*i*P	Pb	17 08 00.7	-0.3
	baz=98						
BOOM				⇑*i*S	Sb	17 08 08.8	-0.1
	baz=98						
UCH	**Uchtor**	**0.60**	**235**	⇑*i*P	Pb	17 08 01.0	-0.7
	baz=35						
UCH				⇑*i*S	Sb	17 08 09.4	-0.5
	baz=35						
USP	**Ospenovka**	**0.85**	**325**	⇑*i*P	Pb	17 08 05.4	-0.2
	baz=25						
USP				⇑*i*S	Sb	17 08 17.3	+0.7
	baz=25						

KRNET 26 17:07:55.7±0.1**, 42°.54N**×**75°.20E, h19**^{km}**, mb1.7, 16C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.22**	**302**	⇑*i*P	Pb	17 08 00.9	0.0
	baz=2.0						
KBK				⇑*i*S	Sb	17 08 04.4	+0.1
	baz=2.0						
TKM2	**Tokmak 2**	**0.48**	**37**	⇑*i*P	Pg	17 08 05.1	-0.5
	baz=37						
TKM2				⇑*i*S	Sg	17 08 12.0	-0.3
	baz=37						
TKM2	**Tokmak 2**	**0.48**	**37**	⇑*i*S	Pg	17 08 05.2	-0.4
	baz=42						
AAK	**Ala-Archa**	**0.53**	**281**	⇑*i*P	Pb	17 08 06.1	-0.4
	baz=81						
AAK				⇑*i*S	Sg	17 08 13.6	-0.2
	baz=81						
AAK	**Ala-Archa**	**0.53**	**281**	⇑*i*S	Pb	17 08 06.4	-0.1
	baz=77						
BOOM	**Boomskoye usch**	**0.55**	**95**	⇑*i*P	Pb	17 08 06.4	-0.4
	baz=95						
BOOM				⇑*i*S	Sb	17 08 14.2	-0.1
	baz=95						
CHMS	**Chumysh**	**0.57**	**324**	⇑*i*P	Pb	17 08 06.7	-0.3
	baz=24						
CHMS				⇑*i*S	Sb	17 08 14.5	-0.2
	baz=24						
UCH	**Uchtor**	**0.60**	**239**	⇑*i*P	Pb	17 08 07.4	-0.3
	baz=39						
UCH				⇑*i*S	Sb	17 08 15.5	-0.4
	baz=39						
USP	**Ospenovka**	**0.89**	**325**	⇑*i*P	Pb	17 08 12.7	0.0
	baz=25						
USP				⇑*i*S	Sg	17 08 24.9	-0.1
	baz=25						

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*IDC **26** 17:17:56.4±1.7, 4°.29N×125°.10E, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.3/48, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=94.0km s-min=26.1km az=59.0*

*MAN **26** 17:18:01.2, 4°.64N×125°.08E, h9^{km}, MS3.4*

ISC 26 17:17:57.4±0.9**, 4°.48N**±0°.06×**125°.3E**±0°.1**, h10**^{km}**, n9, σ1^{s}53**/15**, mb3.3**/3**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.66**	**14**	*e*P	**Pn**	**17 18 27.9**	**+1.3**
DDMP				*e*S	**Sb**	**17 18 51.0**	**+1.9**
SKMP	**Bagumbayan, Su**	**2.16**	**340**	*e*P	**Pn**	**17 18 34.2**	**+0.7**
SKMP				*e*S	**Sn**	**17 18 59.4**	**-1.0**
KCP	**Kidapawan**	**2.52**	**355**	⇓*e*P	**Pb**	**17 18 41.8**	**-1.0**
KCP				*i* S	**Sb**	**17 19 12.8**	**-1.1**
PAGZ	**Pagadian**	**3.85**	**330**	*e*P	**Pn**	**17 18 58.5**	**+1.7**
PAGZ				*e*S	**Sn**	**17 19 39.8**	**-2.2**
CGP	**Cagayan de Oro**	**3.99**	**351**	⇑*e*P	**Pn**	**17 18 58.5**	**-0.2**
CGP				*e*S	**Sb**	**17 19 57.7**	**+1.4**
SIJI	**Sorong**	**7.99**	**132**	Pn	**Pn**	**17 19 55.4**	**+1.7**
	1.4nm,0.3s,baz=328,slow=19,SNR=8.2						
SIJI				Sn	**Sn**	**17 21 22.1**	**-2.1**
	0.6nm,0.3s,baz=169,slow=19,SNR=3.1						
WRA	**Warramunga Arr**	**25.85**	**160**	P	**P**	**17 23 28.5**	**-0.9**
	1.1nm,0.7s,baz=340,slow=10,SNR=12						
ASAR	**Alice Springs**	**29.21**	**164**	P	**P**	**17 23 58.8**	**-0.7**
	0.3nm,0.6s,baz=344,slow=7.8,SNR=10.0						
MKAR	**Makanchi Array**	**56.13**	**326**	P	**P**	**17 27 38.1**	**+0.9**
	0.2nm,0.6s,baz=109,slow=6.4,SNR=3.6						

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*IDC **26** 17:34:20.7±4.3, 3°.12N×127°.84E, h58^{km}±48^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/36, mbtmp3.7/6, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/23, Error ellipse: s-maj=68.1km s-min=19.4km az=61.0*

ISC 26 17:34:20.1±1.1**, 3°.1N**±0°.2×**127°.7E**±0°.3**, h49**^{km}**, n7, σ0^{s}56**/7**, mb3.6**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.51**	**332**	LR	LR	17 37 20.0	
	comp=Z,71nm,19.6s,baz=8.0,slow=40						
SIJI	**Sorong**	**5.29**	**137**	P	**Pn**	**17 35 37.4**	**+0.7**
	3.5nm,0.3s,baz=122,slow=14,SNR=12						
SIJI				S	**Sn**	**17 36 35.8**	**-0.7**
	2.0nm,0.3s,baz=219,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**23.77**	**164**	P	**P**	**17 39 28.3**	**0.0**
	1.4nm,0.6s,baz=345,slow=10.0,SNR=19						
ASAR	**Alice Springs**	**27.24**	**167**	P	**P**	**17 40 00.1**	**+0.3**
	0.5nm,0.7s,baz=351,slow=7.7,SNR=16						
CMAR	**Chiang Mai Arr**	**32.03**	**301**	P	**P**	**17 40 42.3**	**0.0**
	0.4nm,0.7s,baz=97,slow=8.2,SNR=5.9						
STKA	**Stephens Creek**	**37.17**	**160**	P	**P**	**17 41 26.1**	**-0.4**
	1.5nm,0.5s,baz=345,slow=7.3,SNR=10						
SONM	**Songino Array**	**48.24**	**341**	P	**P**	**17 42 56.0**	**-0.2**
	0.2nm,0.3s,baz=141,slow=7.4,SNR=2.2						

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*SOME **26** 17:41:56.2, 42°.37N×81°.28E, h20^{km}*

*NNC **26** 17:41:57.3±0.7, 42°.40N×81°.17E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=4.7km s-min=3.2km az=155.0*

ISC 26 17:41:57.4±1.9**, 42°.42N**±0°.07×**81°.08E**±0°.05**, h7**^{km}±11^{km}**, n58, σ1^{s}96**/90**, 9C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.15**	**333**	*e*P	**Pg**	**17 42 19.8**	**+0.3**
	34nm,0.2s						
KTMS				*e*S	**Sn**	**17 42 37.1**	**+0.7**
	50nm,0.4s						
KTMS	**Ketmen**	**1.15**	**333**	P	**Pg**	**17 42 19.8**	**+0.3**
	34nm,0.2s						
KTMS				S	**Sn**	**17 42 37.1**	**+0.7**
	50nm,0.4s						
SHLS	**Shalkode**	**1.40**	**302**	*e*P	**Pn**	**17 42 20.6**	**-3.0**
	120nm,0.2s						
SHLS				*e*S	**Sn**	**17 42 38.2**	**-4.2**
	120nm,0.3s						
SHLS	**Shalkode**	**1.40**	**302**	P	**Pn**	**17 42 20.6**	**-3.0**
	120nm,0.2s						
SHLS				S	**Sn**	**17 42 38.2**	**-4.2**
	120nm,0.3s						
PDGK	**Podgornoye**	**1.48**	**308**	P	**Pg**	**17 42 25.9**	**+0.1**
	13nm,0.4s						
PDGK				S	**Sg**	**17 42 47.6**	**+2.7**
	50nm,0.3s						
PDGK	**Podgornoye**	**1.48**	**308**	⇑P	**Pg**	**17 42 25.9**	**+0.1**
	11nm,0.4s						
PDGK				⇓S	**Sg**	**17 42 48.0**	**+3.1**
	60nm,0.5s						
UZB	**Uzynbulak**	**1.68**	**296**	*e*P	**Pg**	**17 42 29.6**	**0.0**
	6.3nm,0.2s						
UZB				*e*S	**Sg**	**17 42 53.8**	**+2.4**
	101nm,0.2s						
UZB	**Uzynbulak**	**1.68**	**296**	P	**Pg**	**17 42 29.6**	**0.0**
	6.3nm,0.2s						
UZB				S	**Sg**	**17 42 53.8**	**+2.4**
	101nm,0.2s						
KPKS	**Kokpek**	**2.04**	**301**	*e*P	**Pg**	**17 42 35.8**	**-0.8**
	103nm,0.2s						
KPKS				*e*S	**Sg**	**17 43 04.4**	**+1.3**
	287nm,0.3s						
SATY	**Saty**	**2.07**	**289**	*e*P	**Pg**	**17 42 36.7**	**-0.4**
	14nm,0.2s						
SATY				*e*S	**Sg**	**17 43 06.3**	**+2.4**
	119nm,0.2s						
SATY	**Saty**	**2.07**	**289**	Pg	**Pg**	**17 42 36.7**	**-0.4**
	14nm,0.2s						
SATY				Lg	Lg	17 43 06.3	
	119nm,0.2s						
ZHN	**Zhinishke**	**2.08**	**292**	*e*P	**Pg**	**17 42 37.0**	**-0.3**
	80nm,0.3s						
ZHN				*e*S	**Sg**	**17 43 06.3**	**+2.0**
	37nm,0.2s						
ZHN	**Zhinishke**	**2.08**	**292**	Pg	**Pg**	**17 42 37.0**	**-0.3**
	80nm,0.3s						
ZHN				Lg	Lg	17 43 06.3	
	37nm,0.2s						
DJR	**Jarkent**	**2.13**	**334**	*e*P	**Pg**	**17 42 37.1**	**-1.1**
	18nm,0.4s						
DJR				*e*S	**Sg**	**17 43 06.8**	**+1.1**
	60nm,0.4s						
DJR	**Jarkent**	**2.13**	**334**	Pg	**Pg**	**17 42 37.1**	**-1.1**
	18nm,0.4s						
DJR				Lg	Lg	17 43 06.8	
	60nm,0.4s						
KURS	**Kuram**	**2.39**	**297**	*e*P	**Pg**	**17 42 42.2**	**-0.9**
	12nm,0.3s						
KURS				*e*S	**Sg**	**17 43 15.8**	**+1.8**
	42nm,0.5s						
KURS	**Kuram**	**2.39**	**297**	Pg	**Pg**	**17 42 42.2**	**-0.9**
	12nm,0.3s						
KURS				Lg	Lg	17 43 15.8	
	42nm,0.5s						
MNBS	**Baschi**	**2.56**	**311**	*e*P	**Pb**	**17 42 44.6**	**+0.7**
	13nm,0.2s						
MNBS				*e*S	**Sg**	**17 43 19.9**	**+0.1**
	151nm,0.3s						
MNBS	**Baschi**	**2.56**	**311**	Pg	**Pb**	**17 42 44.6**	**+0.7**
	13nm,0.2s						
MNBS				Lg	Lg	17 43 19.9	
	151nm,0.3s						
ARXS	**Arharly**	**2.97**	**308**	*e*P	**Pb**	**17 42 52.2**	**+1.4**
	16nm,0.3s						
ARXS				*e*S	**Sg**	**17 43 32.2**	**-0.7**
	45nm,0.3s						
ARXS	**Arharly**	**2.97**	**308**	Pg	**Pb**	**17 42 52.2**	**+1.4**
	16nm,0.3s						
ARXS				Lg	Lg	17 43 32.2	
	45nm,0.3s						
KOTS	**Kotyrbulak**	**3.03**	**287**	*e*P	**Pb**	**17 42 53.0**	**+1.2**
	32nm,0.3s						
KOTS				*e*S	**Sg**	**17 43 33.6**	**-1.1**
	106nm,0.5s						
KOTS	**Kotyrbulak**	**3.03**	**287**	Pg	**Pb**	**17 42 53.0**	**+1.2**
	32nm,0.3s						
KOTS				Lg	Lg	17 43 33.6	
	106nm,0.5s						
MDOK	**Medeo**	**3.06**	**285**	*e*P	**Pg**	**17 42 54.2**	**-1.8**
	7.9nm,0.4s						
MDOK				*e*S	**Sg**	**17 43 36.2**	**+0.5**
	36nm,0.5s						
MDOK	**Medeo**	**3.06**	**285**	⇑Pg	**Pg**	**17 42 54.8**	**-1.2**
	23nm,1.1s						
MDOK				Lg	Lg	17 43 36.2	
	40nm,0.8s						
MDOK	**Medeo**	**3.06**	**285**	Pg	**Pg**	**17 42 54.2**	**-1.8**
	7.9nm,0.4s						
MDOK				Lg	Lg	17 43 36.2	
	36nm,0.5s						
TNSS	**Tian-Shan**	**3.11**	**283**	*e*P	**Pg**	**17 42 55.2**	**-1.7**
	5.1nm,0.3s						
TNSS				*e*S	**Sg**	**17 43 37.7**	**+0.5**
	22nm,0.4s						
TNSS	**Tian-Shan**	**3.11**	**283**	Pg	**Pg**	**17 42 55.3**	**-1.7**
	5.1nm,0.3s						
TNSS				Lg	Lg	17 43 37.7	
	22nm,0.4s						

KAPS	**Kapalarasan** 6.1nm,0.2s	**3.12**	**337**	*e*P	**Pb**	**17 42 54.1**	**+0.8**
KAPS	38nm,0.5s			*e*S	**Sg**	**17 43 35.7**	**-2.0**
KAPS	**Kapalarasan** 6.1nm,0.2s	**3.12**	**337**	Pg	**Pb**	**17 42 54.1**	**+0.8**
KAPS	38nm,0.5s			Lg	Lg	17 43 35.7	
AAA	**Alma-Ata** 14nm,0.1s	**3.16**	**286**	*e*P	**Pg**	**17 42 56.5**	**-1.5**
AAA	22nm,0.1s			*e*S	**Sg**	**17 43 39.6**	**+0.6**
AAA	**Alma-Ata** 14nm,0.1s	**3.16**	**286**	Pg	**Pg**	**17 42 56.5**	**-1.5**
AAA	22nm,0.1s			Lg	Lg	17 43 39.6	
TDK	**Taldyqorghan** 13nm,0.3s	**3.23**	**324**	*e*P	**Pb**	**17 42 56.5**	**+1.4**
TDK	82nm,0.3s			*e*S	**Sg**	**17 43 39.6**	**-1.4**
TDK	**Taldyqorghan** 13nm,0.3s	**3.23**	**324**	Pg	**Pb**	**17 42 56.5**	**+1.4**
TDK	82nm,0.3s			Lg	Lg	17 43 39.6	
CHKK	**Chushkaly** 2.6nm,0.3s	**3.32**	**297**	*e*P	**Pb**	**17 42 58.0**	**+1.3**
CHKK	26nm,0.3s			*e*S	**Sg**	**17 43 42.1**	**-1.8**
CHKK	**Chushkaly** 2.6nm,0.3s	**3.32**	**297**	Pg	**Pb**	**17 42 58.0**	**+1.3**
CHKK	26nm,0.3s			Lg	Lg	17 43 42.1	
IZV	**Izvestkoviy** 15nm,0.5s	**3.35**	**282**	*e*P	**Pb**	**17 42 59.1**	**+1.9**
IZV	58nm,0.5s			*e*S	**Sg**	**17 43 44.1**	**-0.8**
IZV	**Izvestkoviy** 15nm,0.5s	**3.35**	**282**	Pg	**Pb**	**17 42 59.1**	**+1.9**
IZV	58nm,0.5s			Lg	Lg	17 43 44.1	
KTBS	**Karatobe** 2.4nm,0.5s	**3.47**	**293**	*e*P	**Pb**	**17 43 01.3**	**+2.0**
KTBS	34nm,0.5s			*e*S	**Sg**	**17 43 47.9**	**-0.9**
KTBS	**Karatobe** 2.4nm,0.5s	**3.47**	**293**	Pg	**Pb**	**17 43 01.3**	**+2.0**
KTBS	34nm,0.5s			Lg	Lg	17 43 47.9	
MTBS	**Maitube** 11nm,0.4s	**3.50**	**283**	*e*P	**Pb**	**17 43 01.2**	**+1.4**
MTBS	22nm,0.5s			*e*S	**Sg**	**17 43 48.4**	**-1.3**
MTBS	**Maitube** 11nm,0.4s	**3.50**	**283**	Pg	**Pb**	**17 43 01.2**	**+1.4**
MTBS	22nm,0.5s			Lg	Lg	17 43 48.4	
KUU	**Kurty** 2.5nm,0.2s	**3.77**	**295**	*e*P	**Pg**	**17 43 07.6**	**-2.0**
KUU	18nm,0.5s			*e*S	**Sg**	**17 43 59.1**	**+0.7**
KUU	**Kurty** 2.5nm,0.2s	**3.77**	**295**	Pg	**Pg**	**17 43 07.6**	**-2.0**
KUU	18nm,0.5s			Lg	Lg	17 43 59.1	
KST	**Kastek** 18nm,0.9s	**3.82**	**281**	*e*P	**Pg**	**17 43 08.2**	**-2.4**
KST	23nm,0.4s			*e*S	**Sg**	**17 43 60.0**	**-0.1**
KST	**Kastek** 18nm,0.9s	**3.82**	**281**	Pg	**Pg**	**17 43 08.2**	**-2.4**
KST	23nm,0.4s			Lg	Lg	17 43 60.0	
DGS	**Degeres** 4.0nm,0.3s	**3.99**	**284**	*e*P	**Pb**	**17 43 10.4**	**+2.3**
DGS	14nm,0.5s			*e*S	**Sg**	**17 44 03.5**	**-2.0**
DGS	**Degeres** 4.0nm,0.3s	**3.99**	**284**	Pg	**Pb**	**17 43 10.4**	**+2.3**
DGS	14nm,0.5s			Lg	Lg	17 44 03.5	
TKM2	**Tokmak 2** 2.6nm,0.6s	**4.07**	**279**	⇑Pn	**Pn**	**17 43 02.9**	**+2.5**
TKM2	11nm,0.6s			⇓Lg	Lg	17 44 09.4	
MAKZ	**Makanchi** 1.6nm,0.3s	**4.43**	**8**	⇑Pn	**Pn**	**17 43 06.1**	**+1.0**
MAKZ	3.8nm,1.1s			⇓Sn	**Sn**	**17 43 59.0**	**+2.0**
MAKZ	4.2nm,0.4s			⇑Lg	Lg	17 44 17.8	
MK31	**Makanchi Array** 0.2nm,0.2s,baz=194,slow=13,SNR=104	**4.45**	**11**	⇓Pn	**Pn**	**17 43 06.6**	**+1.1**
MK31	2.3nm,0.5s,baz=188,slow=16,SNR=9.3			Pg	**Pg**	**17 43 18.7**	**-4.0**
MK31	0.8nm,0.3s,baz=194,slow=29,SNR=5.0			⇑Sn	**Sn**	**17 44 00.8**	**+3.3**
MK31	10nm,0.6s,baz=192,slow=29,SNR=12			⇑Lg	Lg	17 44 19.1	
SGDS	**Sogindy** 3.4nm,0.8s	**4.85**	**284**	Pg	**Pg**	**17 43 27.1**	**-3.1**
SGDS	3.9nm,0.5s			Lg	Lg	17 44 32.5	
AAK	**Ala-Archa** 7.1nm,1.1s	**4.87**	**275**	⇑Pg	**Pg**	**17 43 27.6**	**-3.1**
AAK	10nm,0.8s			Lg	Lg	17 44 35.0	
ZSN	**Zaisan** 2.4nm,0.5s	**5.70**	**27**	*e*P	**Pb**	**17 43 39.8**	**+2.6**
ZSN	7.3nm,0.5s			*e*S	**Sg**	**17 44 53.8**	**-6.6**
ZSN	**Zaisan** 2.4nm,0.5s	**5.70**	**27**	Pg	**Pb**	**17 43 39.8**	**+2.6**
ZSN	7.3nm,0.5s			Lg	Lg	17 44 53.7	
MRKS	**Merke** 1.7nm,0.6s	**5.81**	**276**	*e*P	**Pg**	**17 43 47.1**	**-1.6**
MRKS	2.8nm,0.7s			*e*S	**Sg**	**17 45 06.2**	**+2.3**
MRKS	**Merke** 1.7nm,0.6s	**5.81**	**276**	Pg	**Pg**	**17 43 47.1**	**-1.6**
MRKS	2.8nm,0.7s			Lg	Lg	17 45 06.2	
KURK	**Kurchatov** 5.7nm,1.0s	**8.46**	**349**	⇑Lg	Lg	17 46 28.2	

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*NEIC **26** 17:44:52.7±1.3, 54°.7S±0°.2×136°.8W±0°.1, h10^{km}±1^{km}, mb4.5/7, Ms_20 5.0/120, Mwc5.6/9(GCMT), Error ellipse: s-maj=38.5km s-min=12.8km az=349.0*

*IDC **26** 17:44:52.3±0.8, 54°.72S×136°.92W, h0^{km}, mb4.2/6, mb1 4.4/6, mb1mx4.2/24, mbtmp4.2/6, MS4.9/21, Ms1 4.8/21, ms1mx4.8/26, Error ellipse: s-maj=35.0km s-min=24.4km az=168.0*

*NEIC **26** 17:44:52.7, 54°.70S×135°.55W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.24; $M_{\theta\theta}$1.98; $M_{\phi\phi}$-1.73; $M_{r\theta}$0.42; $M_{\theta\phi}$1.90; $M_{\phi r}$0.27; Fault plane solution: $M_0$2.70000×10^{17} NP1:ϕ_s22.00000°, δ85.00000°, λ172.00000°. NP2:ϕ_s113.00000°, δ82.00000°, λ5.00000°. Principal axes: T 2.8563, Plg9.0000°, Azm337.0000°; N -0.3202, Plg81.0000°, Azm171.0000°; P -2.5361, Plg2.0000°, Azm67.0000°;*

*GCMT **26** 17:44:57.7±0.1, 54°.72S±0°.01×135°.55W±0°.01, h18^{km}, MW5.6/144, Moment Tensor Solution. s121,c210; s144,c277; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.35±.03; $M_{\theta\theta}$2.16±.04; $M_{\phi\phi}$-1.81±.03; $M_{r\theta}$0.11±.08; $M_{\theta\phi}$1.84±.03; $M_{\phi r}$0.12±.07; Best double couple: $M_0$2.71100×10^{17} NP1:ϕ_s114.00000°, δ87.00000°, λ1.00000°. NP2:ϕ_s24.00000°, δ89.00000°, λ177.00000°. Principal axes: T 2.8880, Plg3.0000°, Azm339.0000°; N -0.3520, Plg87.0000°, Azm193.0000°; P -2.5340, Plg2.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 17:44:52.8±0.5**, 54°.7S**±0°.1×**136°.9W**±0°.1**, h10^{km}, n129, σ1^{s}34**/33**, mb4.4**/8**, MS5.0**/85**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda** comp=Z,2µm,21.9s,baz=82,slow=30	**31.22**	**202**	LR	LR	18 00 19.5	
RKT	**Rikitea** 2µm,38.8s	**31.54**	**3**	*e*LQ	LQ	17 58 02.5	
RKT	comp=Z,6µm,28.0s			*e*LR	LR	17 59 22.7	
TBI	**Tubuai** 484nm,28.5s	**32.67**	**338**	*e*S	**S**	**17 56 39.0**	**-2.0**
TBI	comp=Z,7µm,30.0s,baz=171			*e*LR	LR	17 59 54.0	
TBI	**Tubuai** 135nm,0.5s	**32.67**	**338**	*e*T	T	18 25 45.9	
LBZ	**Lake Benmore** comp=Z,3µm,20.0s	**35.09**	**265**	IAMs_20	IAMs_20	18 02 43.0	
QSPA	**South Pole Qui** comp=Z,3.3nm,0.7s,baz=98,slow=1.8,SNR=12	**35.49**	**180**	P	**P**	**17 51 50.3**	**+1.0**
QSPA	**South Pole Qui**	**35.49**	**180**	P	**P**	**17 51 50.0**	**+0.7**
QSPA	comp=Z,12nm,1.1s			IAmb	IAmb	17 51 57.3	
QSPA	**South Pole Qui** comp=Z,3µm,18.0s	**35.49**	**180**	IAMs_20	IAMs_20	18 04 13.6	
FOZ	**Fox Glacier** comp=Z,3µm,21.0s	**35.81**	**266**	IAMs_20	IAMs_20	18 03 37.2	
PAE	**Paea** comp=Z,2.9nm,0.3s	**38.22**	**340**	*e*T	T	18 32 42.1	
PPT2	**Papeete2** comp=Z,772nm,27.0s	**38.29**	**340**	*e*S	**S**	**17 58 06.6**	**-0.8**
PPT2	comp=Z,7µm,27.0s,baz=172			*e*LR	LR	18 02 32.9	
PPT	**Papeete** comp=Z,2µm,18.0s,baz=154,slow=30	**38.31**	**340**	LR	LR	18 04 08.4	
BELA	**Belgrano 2**	**39.68**	**161**	P	**P**	**17 52 23.2**	**-1.2**
VAH	**Vaihoa** comp=Z,45nm,0.2s	**40.24**	**344**	*e*T	T	18 35 13.0	
H03S2	**Juan Fernandez** baz=222,slow=74,SNR=439	**44.94**	**87**	T	T	18 40 22.6	
H03S1	**Juan Fernandez** baz=222,slow=74,SNR=494	**44.94**	**87**	T	T	18 40 25.3	
H03S3	**Juan Fernandez** baz=222,slow=74,SNR=421	**44.95**	**87**	T	T	18 40 24.1	
PLCA	**Paso Flores** comp=Z,2µm,19.4s,baz=232,slow=30	**45.05**	**100**	LR	LR	18 07 17.7	
H03N3	**Juan Fernandez** baz=225,slow=72,SNR=166	**45.21**	**87**	T	T	18 40 43.8	
H03N2	**Juan Fernandez** baz=225,slow=72,SNR=208	**45.22**	**87**	T	T	18 40 42.2	
H03N1	**Juan Fernandez** baz=225,slow=72,SNR=161	**45.23**	**87**	T	T	18 40 42.9	
LC01	**Cunco** comp=Z,3µm,19.0s	**45.51**	**98**	IAMs_20	IAMs_20	18 07 04.3	
TAOE	**Nuku Hiva Isla** comp=Z,3µm,24.9s	**45.77**	**355**	*e*LQ	LQ	18 04 02.8	
TAOE	comp=Z,4µm,25.7s			*e*LR	LR	18 05 59.6	
BI02	**San Fabin de** comp=Z,2µm,22.0s	**47.39**	**96**	IAMs_20	IAMs_20	18 07 40.0	
AFI	**Afiamalu** comp=Z,528nm,21.6s,baz=158,slow=30	**48.94**	**312**	LR	LR	18 09 16.0	
VNA3	**Neumayer Olymp**	**48.95**	**160**	P	**P**	**17 53 36.5**	**-2.0**
BO02	**Sierra Bellavi** comp=Z,2µm,20.0s	**48.98**	**94**	IAMs_20	IAMs_20	18 08 21.3	
VNA2	**Neumayer--Watz** baz=222,slow=7.5	**49.65**	**161**	P	**P**	**17 53 42.1**	**-1.8**
VNA1	**Neumayer--Stat**	**49.71**	**160**	P	**P**	**17 53 42.5**	**-1.8**
MT02	**Curacav** comp=Z,1µm,20.0s	**49.87**	**93**	IAMs_20	IAMs_20	18 08 42.9	
SNAA	**Sanae** comp=Z,2µm,19.0s	**49.87**	**163**	IAMs_20	IAMs_20	18 12 37.1	
MT05	**Renca** comp=Z,2µm,18.0s	**50.01**	**93**	IAMs_20	IAMs_20	18 08 49.5	
PEL	**Peldehue** comp=Z,2µm,19.0s	**50.22**	**93**	IAMs_20	IAMs_20	18 08 56.2	
VA03	**San Esteban** comp=Z,2µm,20.0s	**50.57**	**93**	IAMs_20	IAMs_20	18 09 06.4	
CO02	**Combarbal** comp=Z,2µm,22.0s	**51.44**	**91**	IAMs_20	IAMs_20	18 09 13.6	
CO03	**El Pedregal** comp=Z,1µm,18.0s	**51.89**	**91**	IAMs_20	IAMs_20	18 10 35.5	
GO04	**Tololo Observa** comp=Z,1µm,19.0s	**52.32**	**90**	IAMs_20	IAMs_20	18 10 45.8	
ZON	**Zonda** comp=Z,1µm,18.0s	**52.54**	**93**	IAMs_20	IAMs_20	18 10 39.5	
CO01	**Juntas del Tor** comp=Z,1µm,20.0s	**52.87**	**91**	IAMs_20	IAMs_20	18 11 05.5	
DZM	**Mont Dzumac** comp=Z,855nm,35.9s	**53.14**	**284**	*e*S	**S**	**18 01 38.4**	**-2.8**
DZM	comp=Z,2µm,29.2s			*e*LQ	LQ	18 07 17.2	
DZM	comp=Z,1µm,28.0s			*e*LQ	LQ	18 07 19.3	
DZM	comp=Z,2µm,25.4s			*e*LR	LR	18 09 31.2	
DZM	**Mont Dzumac** comp=Z,845nm,20.7s,baz=154,slow=31	**53.14**	**284**	LR	LR	18 11 58.0	
AC05	**El Transito** comp=Z,1µm,18.0s	**53.62**	**90**	IAMs_20	IAMs_20	18 11 49.2	
AC04	**Llanos de Chal** comp=Z,1µm,18.0s	**53.63**	**88**	IAMs_20	IAMs_20	18 11 18.6	
GO03	**Copiap** comp=Z,952nm,19.0s	**54.57**	**89**	IAMs_20	IAMs_20	18 12 07.5	
GO02	**Mina Guanaco** comp=Z,972nm,21.0s	**56.79**	**87**	IAMs_20	IAMs_20	18 12 13.4	
MAW	**Mawson** comp=Z,927nm,18.7s,baz=160,slow=36	**57.16**	**189**	LR	LR	18 18 38.2	
STKA	**Stephens Creek** comp=Z,1.9nm,0.9s,baz=139,slow=19,SNR=3.3	**59.98**	**256**	P	**P**	**17 54 59.4**	**+0.2**
STKA	comp=Z,719nm,19.9s,baz=150,slow=32			LR	LR	18 17 09.2	
STKA	**Stephens Creek**	**59.98**	**256**	P	**P**	**17 54 59.4**	**+0.2**
TA01	**Diego Aracena** comp=Z,878nm,19.0s	**60.01**	**83**	IAMs_20	IAMs_20	18 12 37.8	
PSGCX	**Pisagua** comp=Z,965nm,20.0s	**60.81**	**83**	IAMs_20	IAMs_20	18 13 43.8	
MNMC	**Minye Minye**	**61.48**	**83**	P	**P**	**17 55 09.7**	**-0.1**
AP01	**Chacalluta** comp=Z,1µm,21.0s	**61.65**	**82**	IAMs_20	IAMs_20	18 14 09.2	
PB16	**IPOC Station P**	**62.16**	**82**	P	**P**	**17 55 14.0**	**-0.8**
CPUP	**Villa Florida** comp=Z,1.8nm,0.6s,baz=216,slow=8.2,SNR=3.9	**63.01**	**98**	P	**P**	**17 55 19.2**	**-0.5**
CPUP	comp=Z,2µm,20.6s,baz=220,slow=31			LR	LR	18 17 52.6	
HNR	**Honiara** comp=Z,108nm,21.1s,baz=143,slow=31	**66.99**	**287**	LR	LR	18 19 14.2	
FORT	**Forrest** comp=Z,1µm,22.0s	**68.28**	**247**	IAMs_20	IAMs_20	18 19 29.9	
AS31	**Alice Springs**	**70.61**	**256**	P	**P**	**17 56 08.8**	**+0.4**
AS31	comp=Z,1.7nm,0.9s			IAmb	IAmb	17 56 20.8	
ASAR	**Alice Springs** comp=Z,2.7nm,0.9s,baz=140,slow=5.4,SNR=15	**70.61**	**256**	P	**P**	**17 56 08.0**	**-0.3**
ASAR	comp=Z,839nm,19.4s,baz=148,slow=33			LR	LR	18 23 34.6	
ASAR	**Alice Springs**	**70.61**	**256**	P	**P**	**17 56 08.1**	**-0.3**
H01W1	**Cape Leeuwin H** baz=143,slow=76,SNR=47	**72.05**	**235**	T	T	19 16 32.8	
H01W2	**Cape Leeuwin H** baz=143,slow=76,SNR=67	**72.06**	**235**	T	T	19 16 33.2	
H01W3	**Cape Leeuwin H** baz=143,slow=76,SNR=47	**72.07**	**235**	T	T	19 16 34.1	
WR8	**Warramunga Arr** comp=Z,988nm,20.0s	**73.20**	**259**	IAMs_20	IAMs_20	18 25 22.9	
WR6	**Warramunga Arr** comp=Z,966nm,19.0s	**73.23**	**259**	IAMs_20	IAMs_20	18 25 24.7	
WR4	**Warramunga Arr** comp=Z,1µm,20.0s	**73.26**	**259**	IAMs_20	IAMs_20	18 27 28.4	
WC3	**Warramunga Arr** comp=Z,996nm,19.0s	**73.27**	**259**	IAMs_20	IAMs_20	18 25 44.8	
WR3	**Warramunga Arr** comp=Z,968nm,18.0s	**73.27**	**259**	IAMs_20	IAMs_20	18 25 34.8	
WB2	**Warramunga Arr** comp=Z,1µm,19.0s	**73.29**	**259**	IAMs_20	IAMs_20	18 25 34.4	
WC2	**Warramunga Arr** comp=Z,952nm,20.0s	**73.30**	**259**	IAMs_20	IAMs_20	18 25 26.6	
WR1	**Warramunga Arr** comp=Z,835nm,19.0s	**73.30**	**259**	IAMs_20	IAMs_20	18 25 44.6	
WRA	**Warramunga Arr** comp=Z,2.3nm,0.8s,baz=146,slow=5.2,SNR=10	**73.30**	**259**	P	**P**	**17 56 24.9**	**+0.4**
WRA	comp=Z,724nm,18.5s,baz=155,slow=34			LR	LR	18 26 05.3	
WRAB	**Tennant Creek** comp=Z,1µm,18.0s	**73.30**	**259**	IAMs_20	IAMs_20	18 25 35.5	
SAML	**Samuel**	**73.31**	**82**	P	**P**	**17 56 24.1**	**-0.4**
SAML	comp=Z,8.7nm,1.4s			IAmb	IAmb	17 56 37.5	
WC1	**Warramunga Arr** comp=Z,1µm,18.0s	**73.31**	**259**	IAMs_20	IAMs_20	18 25 38.0	
WB5	**Warramunga Arr** comp=Z,910nm,19.0s	**73.34**	**259**	IAMs_20	IAMs_20	18 25 18.6	
PMG	**Port Moresby** comp=Z,475nm,19.7s,baz=130,slow=33	**74.28**	**276**	LR	LR	18 25 17.7	
MORW	**Morawa** comp=Z,715nm,20.0s	**75.89**	**240**	IAMs_20	IAMs_20	18 22 06.0	
BDFB	**Brasilia** comp=Z,2µm,21.7s,baz=213,slow=32	**76.73**	**98**	LR	LR	18 26 05.3	
JTS	**Las Juntas de** comp=Z,1µm,20.0s	**77.98**	**52**	IAMs_20	IAMs_20	18 22 57.0	
ROSC	**El Rosal** comp=Z,989nm,21.8s,baz=234,slow=30	**78.53**	**64**	LR	LR	18 24 38.6	
BCIP	**Isla Barro Col** comp=Z,886nm,20.0s	**79.43**	**57**	IAMs_20	IAMs_20	18 23 11.3	
HUEH	**Huehuetenango** comp=Z,617nm,19.0s	**79.62**	**44**	IAMs_20	IAMs_20	18 38 13.7	
FITZ	**Fitzroy Crossi** comp=Z,787nm,20.1s,baz=143,slow=33	**79.68**	**253**	LR	LR	18 28 43.6	
PSAD2	**Pilbara Seismi** comp=Z,906nm,19.0s	**79.93**	**247**	IAMs_20	IAMs_20	18 32 58.6	
PSAA3	**Pilbara Seismi** comp=Z,737nm,18.0s	**80.02**	**247**	IAMs_20	IAMs_20	18 34 44.9	
MBWA	**Marble Bar** comp=Z,667nm,22.0s	**80.43**	**247**	IAMs_20	IAMs_20	18 26 00.8	
MTN	**Manton Dam** comp=Z,874nm,21.0s	**80.80**	**261**	IAMs_20	IAMs_20	18 29 44.4	
SDV	**Santo Domingo** comp=Z,465nm,19.0s	**83.88**	**65**	IAMs_20	IAMs_20	18 28 07.0	
BATI	**Baumata** comp=Z,541nm,18.3s,baz=154,slow=35	**87.19**	**256**	LR	LR	18 35 50.3	
SOEI	**Soe** comp=Z,883nm,20.0s	**87.21**	**257**	IAMs_20	IAMs_20	18 36 15.2	
H11S2	**WAKE ISLAND Hy** baz=148,slow=75,SNR=23	**87.24**	**308**	T	T	19 34 53.5	
H11S3	**WAKE ISLAND Hy** baz=148,slow=75,SNR=16	**87.26**	**308**	T	T	19 34 56.6	
H11S1	**WAKE ISLAND Hy** baz=148,slow=75,SNR=15	**87.26**	**308**	T	T	19 34 54.1	
H11N3	**WAKE ISLAND Hy** baz=148,slow=76,SNR=4.4	**88.22**	**308**	T	T	19 36 01.6	
H11N1	**WAKE ISLAND Hy** baz=148	**88.22**	**308**	T	T	19 36 03.3	
H11N2	**WAKE ISLAND Hy** baz=148,slow=76,SNR=3.2	**88.24**	**308**	T	T	19 36 02.1	
MTDJ	**Mount Denham** comp=Z,537nm,19.0s	**88.36**	**55**	IAMs_20	IAMs_20	18 36 38.9	
TXAR	**Lajitas Array** comp=Z,0.7nm,0.8s,baz=184,slow=9.9,SNR=3.3	**88.41**	**29**	P	**P**	**17 57 45.5**	**+0.8**
RMX	**La Rumorosa** comp=Z,980nm,22.0s	**88.75**	**17**	IAMs_20	IAMs_20	18 27 18.0	
MMRI	**Maumere** comp=Z,587nm,21.0s	**89.27**	**256**	IAMs_20	IAMs_20	18 35 36.7	
GRGR	**Grenville** comp=Z,854nm,19.0s	**91.42**	**71**	IAMs_20	IAMs_20	18 33 43.7	
NVAR	**Mina Array Bea** comp=Z,581nm,19.1s,baz=188,slow=30	**94.09**	**15**	LR	LR	18 32 19.7	
VCNR	**Virginia City** comp=Z,721nm,20.0s	**94.75**	**13**	IAMs_20	IAMs_20	18 30 18.2	
BOSA	**Boshof** comp=Z,1µm,18.5s,baz=174,slow=34	**95.63**	**164**	LR	LR	18 38 53.0	
YBH	**Yreka Blue Hor** comp=Z,517nm,18.1s,baz=172,slow=30	**96.79**	**11**	LR	LR	18 34 08.7	
LEM	**Lembang** comp=Z,192nm,20.9s,baz=153,slow=31	**98.77**	**245**	LR	LR	18 35 52.6	
PDAR	**Pinedale Array** comp=Z,380nm,21.4s,baz=206,slow=30	**99.82**	**20**	LR	LR	18 34 22.6	
SBUM	**Sibu** comp=Z,476nm,21.0s	**104.00**	**254**	IAMs_20	IAMs_20	18 42 24.0	
KKM	**Kota Kinabalu** comp=Z,526nm,21.0s	**104.68**	**260**	IAMs_20	IAMs_20	18 43 11.2	
MYKOM	**Kota Tinggi** comp=Z,348nm,22.0s	**108.02**	**246**	IAMs_20	IAMs_20	18 38 39.1	
IPM	**Ipoh** comp=Z,280nm,18.0s	**111.78**	**245**	IAMs_20	IAMs_20	18 43 47.6	
KULM	**Kulim** comp=Z,285nm,18.0s	**112.66**	**246**	IAMs_20	IAMs_20	18 49 35.0	
UBPT	**Khong Chiam** comp=Z,297nm,22.0s	**118.27**	**256**	IAMs_20	IAMs_20	18 40 16.1	
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=224,slow=2.5,SNR=4.0	**119.36**	**355**	PKP	**PKiKP**	**18 03 43.3**	**+2.5**
SLVN	**Son La** comp=Z,266nm,21.0s	**123.98**	**259**	IAMs_20	IAMs_20	18 55 03.6	
CMAR	**Chiang Mai Arr** comp=Z,0.4nm,0.6s,baz=201,slow=1.4,SNR=5.1	**124.48**	**252**	PKP	**PKiKP**	**18 03 54.9**	**+2.5**
CMAR	**Chiang Mai Arr**	**124.48**	**252**		**PKiKP**	**18 03 54.0**	**+1.7**
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,1.0s,baz=288,slow=1.4,SNR=3.7	**127.45**	**126**	PKP	**PKiKP**	**18 03 59.1**	**+0.7**
TOB1	**Torodi Ar. Sit** comp=Z,398nm,18.0s	**127.46**	**126**	IAMs_20	IAMs_20	18 54 18.3	
SONM	**Songino Array** comp=Z,0.4nm,0.8s,baz=150,slow=5.0,SNR=3.1	**141.05**	**287**	PKP	**PKPdf**	**18 04 22.3**	**-0.1**
SONM	**Songino Array**	**141.05**	**287**	PKPdf	**PKPdf**	**18 04 22.9**	**+0.5**
SFS	**San Fernando** comp=Z,390nm,20.0s	**141.88**	**98**	IAMs_20	IAMs_20	19 13 09.3	
ESDC	**Sonseca Array** comp=Z,2.7nm,1.0s,baz=228,slow=3.8,SNR=7.3	**145.36**	**96**	PKPbc	**PKPdf**	**18 04 30.6**	**+0.5**
ESDC	**Sonseca Array**	**145.36**	**96**		**PKPdf**	**18 04 30.4**	**+0.2**
SMLA	**Simla**	**146.26**	**240**	*e*P	**PKiKP**	**18 04 35.1**	**-1.0**
DHRM	**DHARAMSHALA**	**147.60**	**240**	*e*P	**PKPab**	**18 04 40.9**	**+1.6**
MKAR	**Makanchi Array** comp=Z,1.0nm,1.1s,baz=182,slow=3.5,SNR=4.1	**154.29**	**268**	PKP	**PKPdf**	**18 04 46.3**	**+2.3**
MKAR	comp=Z,1.1nm,0.9s,baz=90,slow=4.0,SNR=3.6			PKPbc	**pPKPbc**	**18 04 55.0**	**+0.3**
MKAR	**Makanchi Array**	**154.29**	**268**		**PKPdf**	**18 04 43.4**	**-0.6**
LATE	**Laterza** comp=Z,207nm,20.0s	**156.25**	**108**	IAMs_20	IAMs_20	19 10 27.5	

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*IDC **26** 18:10:44.1±3.1, 2°.00S×100°.21E, h0^{km}, mb3.4/6, mb1 3.5/6, mb1mx3.3/36, mbtmp3.4/6, MS3.9/1, Ms1 3.9/1, ms1mx2.8/22, Error ellipse: s-maj=131.2km s-min=20.3km az=57.0*

ISC 26 18:10:52.1±2.9**, 1°.9S**±0°.4×**100°.4E**±0°.7**, h56^{km}, n8, σ0^{s}46**/7**, mb3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.2nm,0.5s,baz=185,slow=10.0,SNR=5.0	**20.25**	**356**	P	**P**	**18 15 22.9**	**-0.2**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=302,slow=9.4,SNR=4.2	**37.69**	**121**	P	**P**	**18 18 02.3**	**-0.2**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=302,slow=7.9,SNR=7.3	**38.98**	**126**	P	**P**	**18 18 13.8**	**+0.4**
SONM	**Songino Array** 0.2nm,0.4s,baz=191,slow=12,SNR=2.5	**49.78**	**5**	P	**P**	**18 19 39.5**	**+0.3**
MKAR	**Makanchi Array** 0.7nm,0.6s,baz=145,slow=8.3,SNR=11	**51.02**	**344**	P	**P**	**18 19 48.9**	**+0.3**
MJAR	**Matsushiro Arr** comp=Z,134nm,21.8s,baz=145,slow=37	**51.91**	**39**	LR	LR	18 43 05.1	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=152,slow=6.6,SNR=6.5	**57.12**	**349**	P	**P**	**18 20 32.5**	**-0.2**
TXAR	**Lajitas Array** 0.1nm,0.4s,baz=207,slow=1.8,SNR=3.0	**144.34**	**38**	PKP	**PKPdf**	**18 30 22.3**	**-0.6**

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*NEIC **26** 18:29:23.5±1.0, 12°.33N±0°.08×92°.8E±0°.1, h30^{km}±5^{km}, mb4.4/27, Error ellipse: s-maj=16.4km s-min=11.3km az=112.0*

*NDI **26** 18:29:24.3±3.7, 12°.52N×92°.68E, h10^{km}, mb4.4, ML4.2, mb4.4(NEIC)*

*IDC **26** 18:29:25.7±0.8, 12°.33N×92°.77E, h44^{km}±6^{km}, mb4.0/22, mb1 4.1/24, mb1mx4.0/42, mbtmp4.3/24, ML3.8/2, MS3.4/4, Ms1 3.4/4, ms1mx3.2/37, Error ellipse: s-maj=15.8km s-min=11.9km az=48.0*

ISC 26 18:29:25.8±0.4**, 12°.44N**±0°.05×**92°.77E**±0°.06**, h41^{km}, n126, σ1^{s}80**/130**, mb4.3**/35**, 2C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.75**	**12**	*e*P	**Pn**	**18 29 40.8**	**+0.8**
DGPR				*e*S	**Sn**	**18 29 52.0**	**+1.8**
DGPR	comp=N,35µm,0.4s			IAML		18 29 53.9	
DGPR	comp=E,83µm,0.3s			IAML		18 29 53.9	
PBA	**Port Blair**	**0.78**	**182**	*e*P	Pn	18 29 41.2	+0.8
PBA				*e*S	Sn	18 29 54.0	+3.1
PBA	comp=E,18µm,0.5s			IAML		18 29 56.8	
PBA	comp=N,14µm,0.5s			IAML		18 29 58.1	
SRDT	**SRDT** comp=N,0.2nmcomp=N,27nm,0.7s	**6.46**	**72**	P	**Pn**	**18 31 01.0**	**+2.5**
PHET	**Kaeng Krachan** comp=N,0.5nmcomp=N,2µmcomp=N,156nm,0.6s	**6.71**	**85**	P	**Pn**	**18 31 04.9**	**+3.1**
SURT	**Suratani** comp=N,0.0nmcomp=N,1.7nm,0.9s	**6.85**	**120**	P	Pn	18 31 08.8	+5.0
PKDT	**Phuket** comp=N,0.2nmcomp=N,61nm,0.5s	**7.10**	**129**	P	**Pn**	**18 31 10.8**	**+3.7**
UTHA	**Uthaitani** comp=N,0.2nmcomp=N,541nmcomp=N,38nm,0.7s	**7.18**	**64**	P	**Pn**	**18 31 11.0**	**+2.7**
PATY	**Pattaya** comp=N,0.4nmcomp=N,3µmcomp=N,103nm,0.6s	**7.91**	**86**	P	**Pn**	**18 31 21.8**	**+3.4**
TRTT	**Trang**	**8.20**	**123**	P	**Pn**	**18 31 24.0**	**+1.6**

	comp=N,0.1nmcomp=N,33nm,0.7s						
CM13	Chiang Mai Arr	8.39	44	P	Pn	18 31 28.0	+3.1
	comp=N,0.1nmcomp=N,147nmcomp=N,20nm,0.7s						
CM05	Chiang Mai Arr	8.40	44	P	Pn	18 31 27.0	+1.9
	comp=N,0.1nmcomp=N,200nmcomp=N,27nm,0.8s						
CM04	Chiang Mai Arr	8.42	44	P	Pn	18 31 27.3	+1.9
	comp=N,0.1nmcomp=N,246nmcomp=N,32nm,0.7s						
CM15	Chiang Mai Arr	8.42	44	P	Pn	18 31 27.1	+1.8
	comp=N,0.1nmcomp=N,184nmcomp=N,20nm,0.7s						
CM01	Chiang Mai Arr	8.42	44	P	Pn	18 31 28.8	+3.4
	comp=N,0.1nmcomp=N,214nmcomp=N,29nm,0.7s						
CM02	Chiang Mai Arr	8.42	44	P	Pn	18 31 28.8	+3.4
	comp=N,0.1nmcomp=N,196nmcomp=N,26nm,0.8s						
CM31	Chiang Mai Arr	8.44	44	P	Pn	18 31 28.0	+2.4
	comp=N,2.4nmcomp=N,6μmcomp=N,650nm,0.7s						
CM31	Chiang Mai Arr	8.44	44		Pn	18 31 25.1	-0.5
CMAR	Chiang Mai Arr	8.44	44	P	Pn	18 31 26.6	+1.0
	comp=N,0.4nm,0.3s,baz=237,slow=15,SNR=22						
CMAR				S	Sn	18 32 56.0	-3.6
	comp=N,0.7nm,0.3s,baz=232,slow=19,SNR=3.5						
CMAR				LR	LR	18 34 28.7	
	comp=N,154nm,21.4s,baz=302,slow=36						
CMAR	Chiang Mai Arr	8.44	44		Pn	18 31 23.8	-1.8
CM09	Chiang Mai Arr	8.46	44	P	Pn	18 31 29.0	+3.1
	comp=N,0.1nmcomp=N,240nmcomp=N,32nm,0.8s						
CM32	Chiang Mai Arr	8.51	43	P	Pn	18 31 30.0	+3.4
CHTO	Chiang Mai	8.69	42	Pn	Pn	18 31 28.9	-0.1
CMMT	Chiang Mai	8.69	42	P	Pn	18 31 31.8	+2.8
	comp=N,0.0nmcomp=N,7.8nm,0.7s						
CM33	Chiang Mai Arr	8.69	42	P	Pn	18 31 32.0	+2.9
CM35	Chiang Mai Arr	8.73	44	P	Pn	18 31 31.0	+1.4
CM34	Chiang Mai Arr	8.85	43	P	Pn	18 31 37.0	+5.7
LAMP	Lampang	8.96	47	P	Pn	18 31 38.2	+5.4
	comp=N,541nmcomp=N,45nm,0.6s						
SRAK	Srakaew	9.16	79	P	Pn	18 31 47.0	+12
UTTA	Uttaradit	9.18	54	P	Pn	18 31 46.5	+11
CHAI	Chaiyaphum	9.57	68	P	Pn	18 31 45.2	+4.0
	comp=N,24nm,0.9s						
SAIH	SAIHA	10.00	1	*e*P	Pn	18 31 46.2	-0.8
SAIH				*e*S	Sn	18 33 31.6	-6.5
SAIH				IAML		18 33 35.8	
	comp=E,43nm,0.4s						
SAIH				IAML		18 33 36.0	
	comp=N,37nm,0.5s						
PSI	Prapat	11.35	147	LR	LR	18 36 25.9	
	comp=N,165nm,21.1s,baz=267,slow=37						
NONG	Nongkai	11.46	60	P	Pn	18 32 11.0	+4.0
PALK	Pallekele	12.95	248	P	Pn	18 32 27.7	+0.3
	comp=N,0.4nm,0.3s,baz=108,slow=9.6,SNR=3.2						
PALK				S	Sn	18 34 36.1	-14
	comp=N,1.5nm,0.3s,baz=126,slow=17,SNR=8.2						
PALK				LR	LR	18 36 58.3	
	comp=N,138nm,21.3s,baz=141,slow=35						
BOK	Bokaro	13.05	331	*e*P	Pn	18 32 28.6	-0.1
BOK				IAmb	IAmb	18 32 31.4	
	comp=Z,22nm,0.3s						
BOK				*e*S	Sn	18 34 41.1	-12
BOK				IAML		18 34 46.1	
	comp=N,39nm,0.6s						
BOK				IAML		18 34 48.8	
	comp=E,48nm,0.6s						
SHL	Shillong	13.09	356	*e*P	Pn	18 32 29.8	+0.4
SHL				*e*S	Sn	18 34 41.5	-12
SHL				IAML		18 34 49.4	
	comp=E,13nm,0.3s						
SHL				IAML		18 34 50.0	
	comp=N,12nm,0.4s						
KOHI	KOHIMA	13.27	5	*e*P	Pn	18 32 29.9	-2.0
KOHI				*e*S	Sn	18 34 48.8	-9.5
KOHI				IAML		18 34 55.1	
	comp=E,18nm,0.4s						
KOHI				IAML		18 34 55.5	
	comp=N,16nm,0.5s						
SLVN	Son La	13.84	49	Pn	Pn	18 32 37.6	-1.9
MOKO	MOKOCHONG	13.91	7	*e*P	Pn	18 32 37.5	-3.1
MOKO				IAML		18 35 15.5	
	comp=N,37nm,0.3s						
MOKO				IAML		18 35 16.7	
	comp=E,21nm,0.4s						
TEZP	TEZPUR	14.11	0	*e*P	Pn	18 32 38.9	-4.2
TEZP				*e*S	Sn	18 35 06.2	-12
HYB	Hyderabad	14.60	292	*i* P	P	18 32 57.0	+1.4
HYB				*e*		18 35 19.0	
HYB				*e*S	Sn	18 35 29.0	-1.6
ZIRO	ZIRO	15.04	4	*e*P	Pn	18 32 51.7	-4.2
ZIRO				*e*S	Sn	18 35 30.6	-11
ZIRO				IAML		18 35 39.2	
	comp=E,89nm,0.5s						
ZIRO				IAML		18 35 40.2	
	comp=N,169nm,0.4s						
LKP	Lekhapani	15.10	11	*e*P	Pn	18 32 53.9	-2.4
ODAN	Odare	15.21	341	*e*P	Pn	18 32 57.9	-0.2
RAMN	Ramite	15.56	339	*e*P	Pn	18 33 02.6	0.0
	comp=N,38nm,0.7s						
TAPN	Taplejung	15.58	343	*e*P	Pn	18 33 03.3	+0.4
NGP	Nagpur	15.73	305	*e*P	Pn	18 33 05.3	+0.7
NGP				*e*S	Sn	18 35 45.8	-12
NGP				IAML		18 35 49.6	
	comp=N,20nm,0.9s						
PKI	Pulchoki	16.56	336	*e*P	Pn	18 33 15.7	+0.3
	comp=N,18nm,0.5s						
PKIN	Phulchoki	16.57	336	*e*P	Pn	18 33 15.7	+0.2
	comp=N,36nm,0.6s						
GUN	Gumba	16.69	338	*e*P	Pn	18 33 17.3	+0.2
	comp=N,30nm,0.7s						
DMN	Daman	16.71	336	*e*P	Pn	18 33 17.4	+0.1
	comp=N,34nm,0.7s						
KKN	Kakani	16.81	336	*e*P	Pn	18 33 18.7	+0.3
	comp=N,15nm,0.8s						
LSA	Lhasa	17.24	355	P	P	18 33 27.3	+2.1
LSA	Lhasa	17.24	355	P	Pn	18 33 25.0	+0.9
DANN	Dangsing	17.93	333	*e*P	P	18 33 33.3	+0.6
	comp=N,35nm,0.6s						
BHPL	Bhopal	18.12	308	*e*P	P	18 33 33.1	-1.4
BHPL				IAmb	IAmb	18 33 41.9	
	comp=Z,15nm,0.5s						
BHPL				*e*S	Sn	18 36 39.9	-16
POO	Poona	19.21	291	*e*P	Sn	18 37 07.0	-15
ENH	Enshi	23.55	39	P	P	18 34 31.8	-0.8
ENH				IAmb	IAmb	18 34 39.0	
	comp=Z,11nm,0.6s						
XAN	Xi'an	26.05	32	P	P	18 34 55.5	0.0
XAN				pP	pP	18 35 06.0	-0.6
XAN				sP	sP	18 35 10.0	-1.6
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA	Gaotai	27.58	12	*e*P	P	18 35 13.5	+4.3
GTA				pP	pP	18 35 22.5	+2.1
GTA				sP	sP	18 35 26.5	+1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
H08S3	Diego Garcia H	28.36	226	T	T	19 04 34.0	
	baz=45,slow=74,SNR=30						
H08S2	Diego Garcia H	28.36	226	T	T	19 04 29.7	
	baz=45,slow=74,SNR=11						
H08S1	Diego Carcia H	28.38	226	T	T	19 04 34.7	
	baz=45						
WMQ	Urumqi	31.58	353	*e*P	P	18 35 46.5	+2.0
MK31	Makanchi Array	35.37	348	P	P	18 36 17.4	-0.1
MK31				IAmb	IAmb	18 36 31.6	
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	35.37	348	P	P	18 36 18.0	+0.5
	comp=Z,3.3nm,0.8s,baz=164,slow=8.4,SNR=33						
MKAR				pP	pP	18 36 29.9	+1.2
	comp=Z,4.6nm,0.8s,baz=153,slow=8.2,SNR=18						
MKAR	Makanchi Array	35.37	348	P	P	18 36 17.5	0.0
MAKZ	Makanchi	35.45	347	P	P	18 36 18.4	+0.3
MAKZ				IAmb	IAmb	18 36 31.6	
	comp=Z,7.0nm,1.1s						
KK31	Karatay Array	36.12	332	P	P	18 36 24.7	+0.8
KK31				IAmb	IAmb	18 36 46.6	
	comp=Z,4.3nm,1.2s						
KKAR	Karatay Array	36.12	332	P	P	18 36 24.7	+0.8
KKAR				IAmb	IAmb	18 36 46.6	
	comp=Z,4.3nm,1.2s						
KKAR	Karatay Array	36.12	332	P	P	18 36 24.6	+0.7
SONM	Songino Array	37.08	15	P	P	18 36 33.9	+1.7
	comp=Z,1.0nm,0.7s,baz=198,slow=8.9,SNR=8.3						
SONM				PcP	PcP	18 38 52.5	+0.3
	comp=Z,0.6nm,0.6s,baz=145,slow=1.3,SNR=3.9						
SONM	Songino Array	37.08	15	P	P	18 36 33.7	+1.4
KURK	Kurchatov	39.88	346	P	P	18 36 55.4	-0.2
KURK				IAmb	IAmb	18 37 09.3	
	comp=Z,7.1nm,1.0s						
GEYT	Alibeck	39.97	316	P	P	18 36 57.5	+1.0
	comp=Z,3.6nm,0.6s,baz=144,slow=11,SNR=5.6						
GEYT	Alibeck	39.97	316	P	P	18 36 56.4	-0.1
KSRS	Korea Array	40.07	45	P	P	18 36 56.6	-0.7
	comp=Z,1.5nm,0.4s,baz=242,slow=8.6,SNR=7.1						
ZAA0	Zalesovo Array	41.89	353	P	P	18 37 11.9	-0.1
ZALV	Zalesovo Beam	41.89	353	P	P	18 37 12.0	0.0
	comp=Z,1.5nm,0.6s,baz=173,slow=10,SNR=12						
ZALV				pP	pP	18 37 24.0	+0.5
	comp=Z,2.0nm,0.6s,baz=174,slow=7.4,SNR=6.6						
ZALV	Zalesovo Beam	41.89	353	P	P	18 37 11.6	-0.4
BRVK	Borovoye	44.33	341	P	P	18 37 31.8	0.0
FITZ	Fitzroy Crossi	44.41	132	P	P	18 37 31.3	-1.6
ABKAR	Akbulak array	45.62	330	P	P	18 37 42.6	+0.5
ABKAR				IAmb	IAmb	18 37 43.5	
	comp=Z,3.6nm,1.0s						
ABKAR	Akbulak array	45.62	330	P	P	18 37 42.5	+0.5
USRK	Ussuriysk Ar.	46.13	39	P	P	18 37 46.6	+0.5
	comp=Z,2.0nm,0.7s,baz=235,slow=9.7,SNR=4.5						
MJAR	Matsushiro Arr	47.24	51	P	P	18 37 56.2	+1.1
	comp=Z,0.9nm,0.6s,baz=260,slow=4.6,SNR=3.5						
MJAR				PcP	PcP	18 39 27.1	+1.1
	comp=Z,0.9nm,0.5s,baz=228,slow=2.3,SNR=4.5						
NWAO	Narrogin (SRO)	50.80	153	P	P	18 38 20.9	-1.3
WB0	Warramunga Arr	51.99	127	P	P	18 38 29.9	-1.5
WB0				IAmb	IAmb	18 38 30.6	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	52.05	128	P	P	18 38 30.2	-1.6
	comp=Z,5.0nm,0.6s,baz=300,slow=10.0,SNR=68						
WRA				PcP	PcP	18 39 43.4	-0.3
	comp=Z,0.7nm,0.5s,baz=318,slow=3.0,SNR=8.3						
WRA				ScP	ScP	18 43 34.2	-3.4
	comp=Z,0.5nm,0.8s,baz=316,slow=3.9,SNR=4.6						
WRA	Warramunga Arr	52.05	128	P	P	18 38 30.1	-1.7
WB2	Warramunga Arr	52.06	128	P	P	18 38 30.5	-1.4
WR0	Warramunga Arr	52.21	128	P	P	18 38 31.7	-1.3
ASAR	Alice Springs	53.90	132	P	P	18 38 44.0	-1.5
	comp=Z,2.7nm,0.5s,baz=308,slow=6.8,SNR=120						
ASAR				PcP	PcP	18 39 48.8	-1.9
	comp=Z,0.9nm,0.8s,baz=313,slow=4.6,SNR=4.2						
ASAR				ScP	ScP	18 43 42.6	-3.0
	comp=Z,0.6nm,0.7s,baz=313,slow=4.3,SNR=7.7						
ASAR				LR	LR	19 02 27.8	
	comp=Z,63nm,18.3s,baz=244,slow=37						
AS31	Alice Springs	53.90	132	P	P	18 38 43.7	-1.8
BR131	Keskin Array S	58.48	309	P	P	18 39 17.2	-1.0
BR131				IAmb	IAmb	18 39 18.4	
	comp=Z,3.8nm,0.8s						
BRTR	Keskin Array B	58.48	309	P	P	18 39 17.3	-0.9
	comp=Z,2.3nm,0.8s,baz=117,slow=8.1,SNR=18						
BRTR				pP	pP	18 39 30.8	+0.7
	comp=Z,0.9nm,0.6s,baz=131,slow=8.0,SNR=5.0						
BRTR	Keskin Array B	58.48	309	P	P	18 39 17.1	-1.0
TIXI	Tiksi	63.06	12	P	P	18 39 47.9	-0.6
TIXI				IAmb	IAmb	18 40 11.8	
	comp=Z,7.2nm,1.2s						
AKASG	Malin Array Be	63.78	321	P	P	18 39 52.9	-0.8
	comp=Z,0.4nm,0.5s,baz=95,slow=4.4,SNR=4.4						
STKA	Stephens Creek	64.23	135	P	P	18 39 55.8	-1.1
	comp=Z,2.7nm,0.7s,baz=319,slow=8.4,SNR=8.1						
STKA	Stephens Creek	64.23	135	P	P	18 39 56.0	-0.9
VRI	Vrincioaia	64.52	315	⇑P	P	18 39 59.5	+0.9
PLOR	Plostina	64.57	315	⇑P	P	18 39 59.9	+0.9
MLR	Muntele Rosu	65.01	314	⇓P	P	18 40 03.2	+1.3
BURAR	Bucovina Array	65.80	317	P	P	18 40 06.4	-0.6
BUR08	Bucovina Ar. S	65.82	317	P	P	18 40 06.3	-0.8
BUR08				IAmb	IAmb	18 40 08.2	
	comp=Z,3.6nm,1.1s						
FINES	FINESS Array B	68.08	332	P	P	18 40 20.7	-0.3
	comp=Z,2.5nm,0.6s,baz=86,slow=5.7,SNR=14						
ARCES	ARCESS Array B	70.54	340	P	P	18 40 36.5	+0.2
	comp=Z,2.5nm,0.7s,baz=90,slow=6.8,SNR=18						
ARCES	ARCESS Array B	70.54	340	P	P	18 40 36.4	+0.2
GERES	GERESS Array B	73.56	317	P	P	18 40 54.9	+0.1
	comp=Z,2.8nm,0.8s,baz=83,slow=5.6,SNR=17						
GERES	GERESS Array B	73.56	317	P	P	18 40 54.6	-0.2
HFS	Hagfors	73.86	329	P	P	18 40 55.7	-0.5
	comp=Z,1.9nm,0.5s,baz=117,slow=8.5,SNR=8.8						
SPITS	Spitsbergen Ar	75.12	348	P	P	18 41 02.5	-0.7
	comp=Z,6.9nm,0.8s,baz=119,slow=5.1,SNR=5.2						
NOA	NORSAR Array B	75.12	330	P	P	18 41 02.9	-0.7
	comp=Z,0.8nm,0.5s,baz=91,slow=5.7,SNR=4.6						
LBTB	Lobatse	75.30	240	P	P	18 41 06.0	+0.7
LBTB				IAmb	IAmb	18 41 06.7	
	comp=Z,3.9nm,0.7s						
BOSA	Boshof	76.91	237	P	P	18 41 14.0	-0.4
	comp=Z,2.6nm,0.8s,baz=82,slow=4.7,SNR=5.7						
BOSA	Boshof	76.91	237	P	P	18 41 12.6	-1.9
EKA	Eskdalemuir Ar	83.23	325	P	P	18 41 48.0	+0.2
	comp=Z,2.6nm,0.9s,baz=79,slow=5.1,SNR=3.3						
IMAR	Indian Mountai	87.94	22	P	P	18 42 12.1	+1.0
TORD	Torodi Ar. Bea	88.25	283	P	P	18 42 13.7	+0.1
	comp=Z,1.5nm,0.8s,baz=76,slow=4.5,SNR=4.0						
ILAR	Eielson Array	91.04	22	P	P	18 42 24.4	-1.2
	comp=Z,0.5nm,0.8s,baz=293,slow=4.9,SNR=5.7						
ILAR				pP	pP	18 42 38.5	+0.3
	comp=Z,0.6nm,0.8s,baz=274,slow=4.1,SNR=4.4						
PDAR	Pinedale Array	121.37	19	PKP	PKPdf	18 48 14.8	-0.5
	comp=Z,0.3nm,0.7s,baz=109,slow=2.8,SNR=4.0						
NVAR	Mina Array Bea	121.64	28	PKP	PKPdf	18 48 15.8	-0.1
	comp=Z,0.3nm,0.5s,baz=306,slow=2.0,SNR=2.8						
TXAR	Lajitas Array	135.54	21	PKP	PKiKP	18 48 43.7	-0.3
	comp=Z,0.4nm,0.7s,baz=253,slow=0.0,SNR=5.2						
TXAR				SKPbc	SKPbc	18 52 08.6	-2.0
	comp=Z,0.4nm,0.8s,baz=336,slow=2.7,SNR=5.0						
PLCA	Paso Flores	148.24	204	PKPbc	PKPbc	18 49 07.2	-0.7
	comp=Z,1.8nm,0.9s,baz=225,slow=5.7,SNR=3.0						
CPUP	Villa Florida	148.69	239	PKPbc	PKPbc	18 49 09.3	-0.1
	comp=Z,1.7nm,0.6s,baz=125,slow=3.1,SNR=4.1						

IDC ***26*** *19:04:38.6±1.5, 43°.71N×105°.40W, h0^{km}, mb1 3.7/4, mb1mx3.4/48, mbtmp3.5/4, ML2.9/3, Error ellipse: s-maj=43.9km s-min=8.5km az=150.0*

NEIC ***26*** *19:04:40.2±0.7, 43°.81N±0°.05×105°.22W±0°.05, h0^{km}±2^{km}, ML3.3/60, Error ellipse: s-maj=9.6km s-min=3.8km az=324.0*

ISC 26 19:04:39.7±1.0**, 43°.81N**±0°.06×**105°.26W**±0°.06**, h0^{km}, n63, σ0ˢ.87**/64**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	70	Pg	Pg	19 04 57.9	+0.2
K22A	Casper	1.48	219		Pn	19 05 06.3	-1.4
PHWY	Pilot Hill	2.51	183	Pn	Pn	19 05 22.0	0.0
PHWY				IAML		19 05 59.0	
	112nm,0.3s						
RWWY	Rawlins	2.56	215		Pn	19 05 23.8	+1.2
RWWY				IAML		19 05 59.3	
	148nm,0.8s						
RWWY				IAML		19 06 01.2	
	104nm,0.7s						
LAO	LASA Array	2.96	347	Pn	Pn	19 05 28.5	+0.5
RLMT	Red Lodge	3.15	296		Pn	19 05 31.4	+0.7
RLMT				IAML		19 06 29.1	
	57nm,0.3s						
RLMT				IAML		19 06 29.8	
	76nm,0.3s						
BW06	Boulder Array	3.30	253		Pn	19 05 33.3	+0.4
BW06				IAML		19 06 25.9	
	60nm,0.4s						
PD31	Pinedale Array	3.30	253		Pn	19 05 33.3	+0.4
PDAR	Pinedale Array	3.30	253	Pn	Pn	19 05 33.5	+0.6
	5.5nm,0.3s,baz=85,slow=10.0,SNR=96						
PDAR				Pg	Pb	19 05 38.8	-0.5
	25nm,0.3s,baz=74,slow=22,SNR=94						
PDAR				Lg	Lg	19 06 18.1	
	19nm,0.3s,baz=76,slow=33,SNR=9.7						
PDAR	Pinedale Array	3.30	253		Pn	19 05 33.3	+0.4
YNE	Yellowstone No	3.60	291		Pn	19 05 37.2	+0.2
YMP	Mirror Lake Pl	3.63	287		Pn	19 05 38.2	+0.7
OGNE	Ogallala	3.73	139		Pn	19 05 39.8	+1.2
LKWY	Lake	3.77	283		Pn	19 05 40.3	+1.0
LKWY				IAML		19 06 48.2	
	35nm,0.9s						
LKWY				IAML		19 06 50.6	
	60nm,0.9s						
H17A	Grant Village	3.87	281		Pn	19 05 42.1	+1.4
H17A				IAML		19 06 43.8	
	comp=N,38nm,3.5s						
LOHW	Long Hollow	3.88	269		Pn	19 05 41.7	+0.9
FLWY	Flagg Ranch	3.94	276	Pn	Pn	19 05 42.0	+0.5
FLWY				IAML		19 06 53.4	
	comp=N,57nm,2.9s						
FLWY				IAML		19 06 56.2	
	comp=N,32nm,1.8s						
MOOW	Moose Ponds	3.97	271		Pn	19 05 42.9	+0.9
SNOW	Snow King Moun	4.00	267		Pn	19 05 43.5	+1.0
SNOW				IAML		19 06 58.3	
	comp=N,38nm,0.9s						
SNOW				IAML		19 07 01.4	
	comp=N,37nm,4.2s						
ISCO	Idaho Springs	4.01	184		Pn	19 05 43.2	+0.5
YPP	Pitchstone Pla	4.02	279		Pn	19 05 43.5	+0.7
REDW	Red Top Meadow	4.08	266		Pn	19 05 44.5	+0.9
REDW				IAML		19 06 57.6	
	comp=N,48nm,2.3s						
REDW				IAML		19 07 06.0	
	comp=N,43nm,4.0s						
IMW	Indian Meadow	4.11	273		Pn	19 05 44.5	+0.5
IMW				IAML		19 06 38.2	
	comp=N,27nm,3.9s						
IMW				IAML		19 06 52.5	
	comp=N,27nm,1.2s						
YHH	Holmes Hill	4.13	286		Pn	19 05 44.5	+0.3
YMR	Madison River	4.19	284		Pn	19 05 45.3	+0.3
O20A	White River Ci	4.29	212		Pn	19 05 47.1	+0.7
O20A				IAML		19 06 43.0	
	comp=E,41nm,4.9s						
YHB	Horse Butte	4.36	285		Pn	19 05 47.6	+0.2
AHID	Auburn Hatcher	4.39	258		Pn	19 05 49.0	+1.3
AHID				IAML		19 07 02.1	
	comp=N,36nm,1.7s						
AHID				IAML		19 07 14.2	
	comp=E,26nm,0.9s						
ECR	Eagle Creek	4.51	262		Pn	19 05 50.5	+1.1
RDMU	Red Mountain	4.55	226		Pn	19 05 51.2	+1.2
DGMT	Dagmar	4.72	9		Pn	19 05 53.7	+1.6
HWUT	Hardware Ranch	5.14	247		Pn	19 05 58.9	+0.8
HWUT				IAML		19 07 33.0	
	comp=E,25nm,4.8s						
HWUT				IAML		19 07 50.2	
	comp=E,20nm,3.7s						
EGMT	Eagleton	5.25	325		Pn	19 05 59.7	+0.2
TCUT	Toone Canyon	5.28	241		Pn	19 06 00.3	+0.2
MCMT	McKenzie Canyo	5.54	283		Pn	19 06 05.3	+1.8
SPUT	South Promonto	5.87	247		Pn	19 06 09.1	+1.1
HVU	Hansel Valley	5.89	252		Pn	19 06 08.7	+0.4
PV22	Blue Mesa, Par	5.90	208		Pn	19 06 09.3	+0.8
PV07	Paradox Valley	5.94	207		Pn	19 06 09.5	+0.4
P17A	Butcher Ranch,	5.96	225		Pn	19 06 10.1	+0.7
PV04	Paradox Valley	6.07	208	Pn	Pn	19 06 11.1	+0.3
PV14	Lion Creek, Pa	6.13	209		Pn	19 06 12.5	+0.8
PV10	Paradox Valley	6.13	209	Pn	Pn	19 06 13.1	+1.4
SRU	San Rafael Swe	6.13	222		Pn	19 06 11.9	+0.2
PV20	West Nyswonger	6.14	208	Pn	Pn	19 06 12.8	+1.1
PV11	David Mesa, Pa	6.14	208		Pn	19 06 12.7	+0.8
PV16	Nyswonger Mesa	6.15	208	Pn	Pn	19 06 12.3	+0.4
PV19	Morning Glory	6.17	208	Pn	Pn	19 06 12.9	+0.6
PV03	Paradox Valley	6.17	207	Pn	Pn	19 06 12.7	+0.3
PV02	Paradox Valley	6.18	206	Pn	Pn	19 06 13.4	+1.0
PV17	East Wray Mesa	6.19	208	Pn	Pn	19 06 13.3	+0.8
PV01	Paradox Valley	6.20	205	Pn	Pn	19 06 13.2	+0.6
PV18	Skein Mesa, Pa	6.20	208	Pn	Pn	19 06 13.3	+0.6
PV13	Radium Mtn., P	6.25	207	Pn	Pn	19 06 14.0	+0.6
ECSD	EROS Data Cent	6.26	88	Pn	Pn	19 06 13.1	-0.2
TMUT	Trail Mountain	6.34	227		Pn	19 06 15.2	+0.5
PV05	Paradox Valley	6.42	208	Pn	Pn	19 06 15.2	-0.5
MSU	Marysvale	7.43	227	Pn	Pn	19 06 30.5	+1.0
JTMT	Jette	7.43	305	Pn	Pn	19 06 30.4	+0.9
ELK	Elko	8.01	251	Pn	Pn	19 06 38.6	+1.1
	comp=E,0.7nm,0.3s,baz=61,slow=12,SNR=10						
CCUT	Cedar City	8.77	227	Pn	Pn	19 06 48.7	+0.8
ULM	Lac du Bonnet	9.08	42	Pn	Pn	19 06 50.8	-1.2
	comp=E,0.8nm,0.3s,baz=235,slow=13,SNR=8.6						
ULM				Lg	Lg	19 09 20.6	
	comp=E,0.4nm,0.3s,baz=137,slow=19,SNR=4.8						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	19 07 19.4	-1.8
	comp=E,0.1nm,0.3s,baz=62,slow=12,SNR=2.2						

MOS ***26*** *19:12:07.6±0.9, 18°.62S×174°.83W, h44^{km}, mb5.6/17, Error ellipse: s-maj=8.4km s-min=6.8km az=58.9*

BJI ***26*** *19:12:11.5±0.0, 18°.80S×174°.70W, h80^{km}, mB5.5/36, mb5.2/60, Ms5.2/12, Ms7 4.9/12*

IDC ***26*** *19:12:11.4±3.7, 18°.68S×174°.76W, h65^{km}±33^{km}, mb4.9/29, mb1 5.0/31, mb1mx5.0/32, mbtmp5.2/31, ML4.6/2, MS4.0/18, Ms1 4.0/18, ms1mx3.9/30, Error ellipse: s-maj=14.2km s-min=11.5km az=150.0*

NEIC ***26*** *19:12:12.8±1.5, 18°.8S±0°.1×174°.79W±0°.09, h82^{km}±4^{km}, mb5.2/311, Error ellipse: s-maj=16.2km s-min=12.6km az=173.0*

BGR ***26*** *19:12:14.3±0.0, 18°.70S×174°.74W, h78^{km}*

NOU ***26*** *19:12:15.3, 18°.78S×174°.51W, h107^{km}, mb5.3, Tonga Islands*

GCMT ***26*** *19:12:20.9±0.1, 18°.70S±0°.01×174°.35W±0°.01, h121^{km}±1^{km}, MW5.3/140, Moment Tensor Solution. s108,c165; s140,c237; Duration: 1ˢ.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38±.02; $M_{\theta\theta}$-0.18±.03; $M_{\phi\phi}$0.55±.03; $M_{r\theta}$-0.29±.02; $M_{\theta\phi}$-0.10±.02; $M_{\phi r}$-1.22±.01; Best double couple: $M_0$1.34700×10^{17} NP1:ϕ_s143.00000°, δ14.00000°, λ-138.00000°. NP2:ϕ_s13.00000°, δ81.00000°, λ-79.00000°. Principal axes: T 1.4000, Plg35.0000°, Azm94.0000°; N -0.1060, Plg11.0000°, Azm191.0000°; P -1.2950, Plg53.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 19:12:13.2±0.4**, 18°.83S**±0°.04×**174°.61W**±0°.04**, h90^{km}**±3^{km}**, h90^{km}:pP-P, n1028, σ1ˢ.42**/1076**, mb5.2**/231**, 67C-63D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.44	94	P	Pn	19 13 19.1	+0.8
	baz=4.5,SNR=459						
NIUE				S	Sn	19 14 05.0	-3.7
	baz=4.5						
NIUE	Niue	4.44	94	Pn	Pn	19 13 19.0	+0.8
NIUE				Sn	Sn	19 14 03.2	-5.5
NIUE	Niue	4.44	94	P	Pn	19 13 19.0	+0.8
AFI	Afiamalu	5.60	29	P	Pn	19 13 30.8	-3.3
AFI	Afiamalu	5.60	29		Pn	19 13 30.8	-3.3
AFI	Afiamalu	5.60	29	P	Pn	19 13 33.8	-0.3
	576nm,1.1s						
RAO	Raoul Island	10.80	196	S	Sn	19 16 38.1	-5.8
	baz=37,slow=20,SNR=1.9						
RAO				LR	LR	19 18 17.1	
	comp=Z,159nm,20.3s,baz=354,slow=34						
GLKZ	Green Lake	10.81	196	P	Pn	19 14 47.0	+2.0
GLKZ				S	Sn	19 16 44.0	-0.1
RAR	Rarotonga	14.14	102	P	Pn	19 15 30.1	+0.6
	23nm,0.3s,baz=248,slow=5.9,SNR=19						
RAR				S	Sn	19 17 57.7	-7.5
	20nm,0.3s,baz=91,slow=17,SNR=3.6						
RAR				LR	LR	19 20 09.2	
	comp=Z,787nm,21.6s,baz=303,slow=33						
RAR	Rarotonga	14.14	102	P	Pn	19 15 31.4	+1.9
RAR	Rarotonga	14.14	102	Pn	Pn	19 15 31.4	+1.9
RAR	Rarotonga	14.14	102	P	P	19 15 32.4	-1.8
	430nm,0.9s						
DVP	Devils Point	16.38	271	P	P	19 16 04.1	+5.0
MARNC	Mare, Loyalty	16.51	258	P	P	19 16 04.7	+4.2
	425nm,1.1s						
PINNC	Pines Island,	17.20	254	P	P	19 16 12.7	+4.6
	684nm,1.4s						
SANVU	Saraoutou	17.70	278		Pn	19 16 15.4	+1.3
SANVU				IAmb	IAmb	19 16 27.9	
	comp=Z,199nm,1.0s						
SANVU	Saraoutou	17.70	278	P	Pn	19 16 16.5	+2.4
	comp=Z,208nm,2.0s						
DZM	Mont Dzumac	18.04	256	*e*P	Pn	19 16 21.1	+2.8
	comp=Z,323nm,1.2s						
DZM				*e*LQ	LQ	19 19 53.4	
	comp=Z,3μm,23.9s						
DZM				*e*LR	LR	19 20 39.2	
	comp=Z,3μm,31.8s						
DZM	Mont Dzumac	18.04	256	P	Pn	19 16 18.3	0.0
	comp=Z,2.1nm,0.3s,baz=79,slow=21,SNR=28						
DZM				LR	LR	19 21 08.3	
	comp=Z,1μm,19.0s,baz=90,slow=30						
DZM	Mont Dzumac	18.04	256	P	Pn	19 16 20.8	+2.6
DZM				IAmb	IAmb	19 16 22.8	
	comp=Z,248nm,1.4s						
OUZ	Omahuta	19.38	210		Pn	19 16 34.2	+0.3
WCZ	Waipu Caves	19.63	208	P	Pn	19 16 38.4	+1.5
MXZ	Matakaoa Point	19.66	197	P	Pn	19 16 39.7	+2.4

KUZ	Kuaotunu	19.77	204	P	Pn	19 16 39.7	+1.3
URZ	Urewera	20.66	199	P	P	19 16 47.2	+1.4
	comp=Z,86nm,0.4s,baz=4.1,slow=3.0,SNR=76						
URZ				S	S	19 20 24.8	-6.7
	comp=Z,9.4nm,0.5s,baz=252,slow=20,SNR=6.1						
URZ				LR	LR	19 24 04.5	
	comp=Z,216nm,18.5s,baz=30,slow=34						
URZ	Urewera	20.66	199	P	P	19 16 47.1	+1.3
KMRZ	Kaimai	20.66	202	P	Pn	19 16 50.8	+1.9
KARZ	Kaharoa	20.72	201	P	Pn	19 16 50.8	+1.2
TOZ	Tahuroa Road	20.72	203	P	Pn	19 16 49.5	0.0
OMRZ	Omania	20.75	200	P	Pn	19 16 50.9	+0.9
RAGZ	Rawiri	20.79	198	P	Pn	19 16 50.0	-0.5
TARZ	Mount Tarawera	20.83	200	P	Pn	19 16 51.0	+0.1
MUGZ	Murupara	20.96	199	P	Pn	19 16 51.2	-1.2
RTZ	Ruatahuna	21.03	199	P	P	19 16 52.1	+2.3
HRRZ	Handcock Road	21.04	200	P	P	19 16 53.5	+3.6
PRGZ	Paritu Road	21.05	196	P	P	19 16 55.3	+5.3
PRGZ				S	S	19 20 35.5	-3.9
SNGZ	Shannon Statio	21.07	198	P	P	19 16 53.9	+3.7
RAHZ	Arahi	21.27	198	P	P	19 16 54.9	+2.5
RAHZ				S	S	19 20 43.1	-0.6
MTHZ	Maungataniwha	21.29	199	P	P	19 16 54.6	+2.0
MTHZ				S	S	19 20 40.0	-4.0
WHHZ	Waihua	21.38	198	P	P	19 16 57.7	+4.3
NMHZ	Naumai	21.52	198	P	P	19 16 58.6	+3.5
ARHZ	Aropaoanui	21.62	198	P	P	19 16 59.3	+3.3
HIZ	Hauiti	21.65	203	P	P	19 16 58.7	+2.4
HIZ				IAmb	IAmb	19 17 26.3	
	comp=Z,77nm,0.9s						
HIZ	Hauiti	21.65	203	P	P	19 16 59.3	+3.0
BKZ	Black Stump Fm	21.68	199	P	P	19 16 56.1	-0.6
BKZ	Black Stump Fm	21.68	199	P	P	19 16 56.7	0.0
BKZ				S	S	19 20 46.0	-5.8
KATZ	Kakaramea	21.76	201	P	P	19 17 00.6	+2.9
MCHZ	McNeill Hill	21.88	198	P	P	19 16 59.9	+1.2
TMVZ	Te Maari	21.89	201	P	P	19 17 01.5	+2.5
ETVZ	East Tongariro	21.90	201	P	P	19 17 00.5	+1.4
WTVZ	West Tongariro	21.93	201	P	P	19 17 00.1	+0.7
TWVZ	Taurewa	21.94	201	P	P	19 17 01.9	+2.4
KWHZ	Kaweka Forest	21.94	199	P	P	19 17 01.1	+1.6
KWHZ				S	S	19 20 52.8	-3.7
OTVZ	Oturere	21.94	201	P	P	19 16 59.0	-0.6
CKHZ	Cape Kidnapper	21.96	197	P	P	19 17 03.2	+3.6
NGZ	Ngauruhoe	21.98	201	P	P	19 17 01.1	+1.2
TUVZ	Tukino	22.04	200	P	P	19 17 02.5	+1.9
FWVZ	Far West T-bar	22.06	201	P	P	19 17 01.8	+0.8
WHVZ	Whangaehu Hut	22.08	201	P	P	19 17 03.1	+1.9
BHHZ	Black Hill Sta	22.11	199	P	P	19 17 01.8	+0.5
BHHZ				S	S	19 20 54.5	-5.1
WNVZ	Wahianoa	22.11	201	P	P	19 17 01.3	-0.2
MOVZ	Moawhango	22.14	200	P	P	19 17 03.4	+1.8
MOVZ				S	S	19 20 56.2	-3.8
KAHZ	Kahuranaki	22.15	198	P	P	19 17 03.6	+1.9
KAHZ				S	S	19 20 57.5	-2.7
KRHZ	Kereru	22.16	199	P	P	19 17 03.1	+1.4
KRHZ				S	S	19 20 55.2	-5.1
PKVZ	Pokaka	22.16	201	P	P	19 17 03.1	+1.2
VRZ	Vera Road	22.22	202	P	P	19 17 06.3	+3.9
PXZ	Pawanui	22.37	197	P	P	19 17 04.5	+0.5
PNHZ	Pukenui	22.46	199	P	P	19 17 04.8	-0.2
NEZ	North Egmont	22.59	203	P	P	19 17 09.6	+3.2
ANWZ	Angora Road	22.88	198	P	P	19 17 11.2	+2.0
BFZ	Birch Farm	23.15	198	P	P	19 17 12.7	+0.8
BFZ				IAmb	IAmb	19 17 16.4	
	comp=Z,135nm,1.3s						
PAE	Paea	23.80	91	eP	P	19 17 19.5	+1.6
	comp=Z,120nm,1.3s						
PAE	Paea	23.80	91	eT	T	19 41 34.3	
	comp=Z,31nm,0.3s						
PPT2	Papeete2	23.81	91	eS	S	19 21 27.0	-0.6
	comp=Z,684nm,26.8s						
PPT2				eLQ	LQ	19 22 08.3	
	comp=Z,2µm,24.2s						
PPT2				eLR	LR	19 22 57.7	
	comp=Z,4µm,34.5s						
PPT	Papeete	23.81	91	P	P	19 17 20.1	+2.0
	comp=Z,236nm,1.0s,baz=274,slow=2.7,SNR=16						
PPT				LR	LR	19 24 53.0	
	comp=Z,593nm,18.3s,baz=261,slow=32						
PPTF	Pamatai, Papee	23.82	91	P	P	19 17 20.1	+1.9
TBI	Tubuai	23.88	105	eP	P	19 17 21.3	+2.7
	comp=Z,1µm,1.3s						
TBI				eS	S	19 21 27.4	-1.0
	comp=Z,508nm,27.1s						
TBI				eLQ	LQ	19 22 13.6	
	comp=Z,653nm,27.2s						
TBI				eLR	LR	19 23 04.8	
	comp=Z,2µm,35.8s						
TBI	Tubuai	23.88	105	eT	T	19 41 37.7	
	comp=Z,56nm,0.3s						
TIAR	Tiarei	24.03	91	eP	P	19 17 21.7	+1.6
	comp=Z,171nm,1.4s						
TVO	Taravao	24.09	92	eP	P	19 17 22.5	+1.8
	comp=Z,193nm,1.4s						
TVO	Taravao	24.09	92	eT	T	19 41 41.7	
	comp=Z,6.0nm,0.3s						
MSWZ	Moikau Station	24.12	199	P	P	19 17 20.2	-0.4
BHW	Baring Head	24.23	200	P	P	19 17 21.9	+0.3
QRZ	Quartz Range	24.54	204	P	P	19 17 26.0	+1.6
QRZ				IAmb	IAmb	19 17 47.1	
	comp=Z,102nm,1.4s						
TUWZ	Tuamarina	24.56	201	P	P	19 17 24.8	+0.3
MEH	Mehetia	25.20	92	eP	P	19 17 33.4	+2.6
	comp=Z,45nm,1.1s						
MEH	Mehetia	25.20	92	eT	T	19 43 27.2	
	comp=Z,71nm,0.3s						
THZ	Tophouse	25.21	202	P	P	19 17 31.5	+0.8
KHZ	Kahutara	25.57	201	P	P	19 17 35.0	+1.2
KHZ				IAmb	IAmb	19 17 43.2	
	comp=Z,67nm,1.2s						
VAH	Vaihoa	26.03	86	eP	P	19 17 39.3	+1.0
	comp=Z,278nm,1.1s						
LTZ	Lake Taylor	26.33	202	P	P	19 17 39.9	-0.9
LTZ				IAmb	IAmb	19 17 47.7	
	comp=Z,40nm,0.5s						
HNR	Honiara	26.35	287	P	P	19 17 39.7	-1.4
	comp=Z,119nm,0.9s,baz=153,slow=2.3,SNR=3.0						
OXZ	Oxford	26.89	202	P	P	19 17 44.9	-0.8
OXZ				IAmb	IAmb	19 17 51.3	
	comp=Z,110nm,1.2s						
RPZ	Rata Peaks	27.58	203	P	P	19 17 53.5	+1.6
	comp=Z,28nm,0.5s,baz=16,slow=5.7,SNR=11						
RPZ				LR	LR	19 28 22.7	
	comp=Z,271nm,19.6s,baz=24,slow=35						
RPZ	Rata Peaks	27.58	203	P	P	19 17 52.2	+0.3
RPZ				IAmb	IAmb	19 18 01.1	
	comp=Z,72nm,1.2s						
FOZ	Fox Glacier	27.90	205	P	P	19 17 54.2	-0.5
FOZ				IAmb	IAmb	19 18 00.4	
	comp=Z,162nm,1.4s						
MLZ	Mavora Lakes	30.10	205	P	P	19 18 13.9	-0.3
MLZ				IAmb	IAmb	19 18 16.4	
	comp=Z,66nm,1.2s						
WHZ	Wether Hill Ro	30.60	204	P	P	19 18 18.9	+0.2
WHZ				IAmb	IAmb	19 18 23.7	
	comp=Z,69nm,0.9s						
EIDS	Eidsvold	32.38	252	P	P	19 18 34.6	+0.1
	baz=32,SNR=12						
EIDS	Eidsvold	32.38	252	P	P	19 18 34.2	-0.4
EIDS				IAmb	IAmb	19 18 36.4	
	comp=Z,50nm,1.1s						
ARMA	Armidale	32.67	243	P	P	19 18 37.6	+0.5
	baz=33,SNR=18						
ARMA	Armidale	32.67	243	P	P	19 18 37.2	+0.1
ARMA				IAmb	IAmb	19 18 44.9	
	comp=Z,39nm,1.3s						
MGCD	Mangrove Creek	33.80	238	P	P	19 18 47.8	+1.0
	baz=34,SNR=6.1						
RMQ	Roma	34.56	251	P	P	19 18 54.0	+0.5
	baz=35,SNR=21						
TAOE	Nuku Hiva Isla	34.84	78	eT	T	19 55 17.2	
	comp=Z,92nm,0.3s						
CNB	Canberra Magne	35.80	235	P	P	19 19 04.1	0.0
	baz=36,SNR=8.0						
CAN	Canberra	36.09	235	P	P	19 19 06.8	+0.3
CAN				pmax	pmax		
	comp=Z,118nm,1.4s						
CAN	Canberra	36.09	235	P	P	19 19 06.8	+0.3
RKT	Rikitea	37.18	104	eLR	LR	19 29 08.9	
	comp=Z,1µm,32.0s						
CMSA	Cobar Meteorol	37.88	243	P	P	19 19 21.2	-0.5
	baz=38,SNR=49						
PMG	Port Moresby	38.17	279	P	P	19 19 24.3	0.0
PMG				pmax	pmax		
	comp=Z,147nm,1.2s						
PMG	Port Moresby	38.17	279	P	P	19 19 24.3	0.0
PMG	Port Moresby	38.17	279	P	P	19 19 25.9	+1.6
	comp=Z,105nm,1.2s						
QLP	Quilpie	38.61	251	P	P	19 19 27.4	-0.5
	baz=39,SNR=11						
MTSU	Mount Surprise	38.90	264	P	P	19 19 30.1	-0.3
	baz=39,SNR=7.6						
TOO	Toolangi	39.45	233	P	P	19 19 34.3	-0.5
	baz=40,SNR=14						
TOO	Toolangi	39.45	233	P	P	19 19 34.6	-0.2
TOO				pmax	pmax		
	comp=Z,46nm,1.4s						
TOO	Toolangi	39.45	233	P	P	19 19 34.6	-0.2
TOO				IAmb	IAmb	19 19 35.7	
	comp=Z,46nm,1.4s						
COEN	Coen	40.72	270	P	P	19 19 44.7	-0.8
MANU	Manus Island	40.80	290	P	P	19 19 45.8	-0.4
MANU				IAmb	IAmb	19 19 49.3	
	comp=Z,56nm,1.2s						
STKA	Stephens Creek	41.39	243	P	P	19 19 50.5	-0.3
	baz=42,SNR=29						
STKA	Stephens Creek	41.39	243	P	P	19 19 50.4	-0.4
	comp=Z,15nm,0.7s,baz=79,slow=11,SNR=27						
STKA				PcP	PcP	19 21 48.4	+0.9
	comp=Z,2.7nm,0.5s,baz=90,slow=6.1,SNR=2.4						
STKA				LR	LR	19 35 36.5	
	comp=Z,237nm,18.4s,baz=80,slow=34						
STKA	Stephens Creek	41.39	243	P	P	19 19 50.6	-0.3
STKA				pmax	pmax		
	comp=Z,15nm,1.3s						
STKA	Stephens Creek	41.39	243	P	P	19 19 50.6	-0.3
QIS	Mount Isa	43.03	260	P	P	19 20 03.1	-1.3
	baz=43,SNR=15						
HTT	Hallett	43.83	241	P	P	19 20 10.0	-0.6
	baz=44,SNR=14						
BBOO	Buckleboo	46.15	242	P	P	19 20 27.8	-1.1
	baz=46,SNR=19						
BBOO	Buckleboo	46.15	242	P	P	19 20 28.0	-0.9
JAY	Jayapura	46.63	285	P	P	19 20 33.6	+0.6
	comp=Z,583nmcomp=Z,42nm,1.0s						
GENI	Genyem	47.09	284	P	P	19 20 37.0	+0.5
	comp=Z,2µmcomp=Z,139nm,1.0s						
WR0	Warramunga Arr	47.83	260	P	P	19 20 40.7	-1.6
WR0				IAmb	IAmb	19 20 42.2	
	comp=Z,67nm,1.1s						
WC3	Warramunga Arr	47.98	260	P	P	19 20 41.9	-1.6
	baz=48						
WB0	Warramunga Arr	47.99	260	P	P	19 20 41.4	-2.1
WB2	Warramunga Arr	48.01	260	P	P	19 20 41.6	-2.0
WRAB	Tennant Creek	48.01	260	ceP	P	19 20 42.1	-1.5
WRAB				pmax	pmax		
	comp=Z,77nm,0.8s						
WRAB	Tennant Creek	48.01	260	P	P	19 20 41.6	-2.0
WRA	Warramunga Arr	48.02	260	P	P	19 20 42.1	-1.6
	comp=Z,42nm,0.3s,baz=97,slow=7.6,SNR=1130						
WRA				S	S	19 27 27.2	-8.2
	comp=Z,2.6nm,0.9s,baz=97,slow=13,SNR=6.8						
WRA				LR	LR	19 39 45.2	
	comp=Z,284nm,19.4s,baz=85,slow=34						
WRA	Warramunga Arr	48.02	260	P	P	19 20 41.2	-2.5
WRA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WRA	Warramunga Arr	48.02	260	P	P	19 20 41.2	-2.5
AS31	Alice Springs	48.02	255	P	P	19 20 42.3	-1.5
AS31				IAmb	IAmb	19 20 45.7	
	comp=Z,26nm,1.0s						
ASAR	Alice Springs	48.02	255	P	P	19 20 42.7	-1.0
	comp=Z,64nm,0.6s,baz=85,slow=8.0,SNR=1049						
ASAR				S	S	19 27 29.7	-5.8
	comp=Z,1.8nm,0.8s,baz=91,slow=15,SNR=7.6						
ASAR	Alice Springs	48.02	255	P	P	19 20 41.5	-2.2
SRPI	Serui, Papua	50.98	283	P	P	19 21 06.7	+0.4
	comp=Z,81nm,1.2s						
KDU	Kakadu	51.15	269	P	P	19 21 06.4	-1.0
	baz=51,SNR=15						
BAKI	Biak	51.37	284	P	P	19 21 10.1	+0.9
	comp=Z,84nm,1.1s						
MTN	Manton Dam	52.38	268	P	P	19 21 15.4	-1.2
	baz=52,SNR=9.6						
MTN	Manton Dam	52.38	268	P	P	19 21 14.9	-1.8
FORT	Forrest	52.89	245	P	P	19 21 19.0	-1.2
	baz=53,SNR=24						
FORT	Forrest	52.89	245	P	P	19 21 18.9	-1.4
FAKI	Fak Fak	54.29	280	P	P	19 21 30.0	-0.7
FAKI	Fak Fak	54.29	280	P	P	19 21 31.0	+0.3
	comp=Z,898nmcomp=Z,51nm,1.4s						
SWI	Sorong	55.97	282	P	P	19 21 42.7	0.0
	comp=Z,2µmcomp=Z,277nm,1.0s						
FITZ	Fitzroy Crossi	56.44	260	P	P	19 21 45.2	-0.8
	baz=56,SNR=24						
FITZ	Fitzroy Crossi	56.44	260	P	P	19 21 45.3	-0.7
FITZ				IAmb	IAmb	19 21 47.6	
	comp=Z,57nm,1.4s						
MSAI	Masohi	57.25	278	P	P	19 22 02.9	+11
KMBL	Kambalda	58.16	244	P	P	19 21 56.6	-1.5
	baz=58,SNR=9.7						
NLAI	Namlea	59.00	278	P	P	19 22 04.5	+0.4
	comp=Z,83nm,1.5s						
SOEI	Soe	59.68	270	P	P	19 22 09.1	+0.1
SOEI	Soe	59.68	270	P	P	19 22 10.0	+1.1
	comp=Z,2µmcomp=Z,204nm,1.2s						
SBA	Scott Base	59.76	184	P	P	19 22 10.8	+2.5
SBA				pmax	pmax		
	comp=Z,20nm,0.8s						
SBA	Scott Base	59.76	184	P	P	19 22 10.8	+2.5
SBA				IAmb	IAmb	19 22 13.4	
	comp=Z,20nm,0.8s						
VNDA	Vanda	59.86	186	P	P	19 22 11.9	+2.9
	comp=Z,8.1nm,0.8s,baz=6.6,slow=5.9,SNR=30						
VNDA				LR	LR	19 47 50.3	
	comp=Z,43nm,18.2s,baz=8.5,slow=36						
VNDA	Vanda	59.86	186	P	P	19 22 11.3	+2.3
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
VNDA	Vanda	59.86	186	P	P	19 22 11.3	+2.3
VNDA				IAmb	IAmb	19 22 13.3	
	comp=Z,11nm,0.9s						
BATI	Baumata	60.12	269	P	P	19 22 11.8	-0.1
	comp=Z,30nm,1.0s						
TNTI	Ternate	60.18	282	P	P	19 22 11.8	-0.4
TNTI	Ternate	60.18	282	P	P	19 22 09.6	-2.6
	comp=Z,1µmcomp=Z,117nm,1.3s						
SANI	Sanana	60.45	279	P	P	19 22 13.9	-0.1
	comp=Z,1µmcomp=Z,125nm,1.2s						
PSA00	Pilbara Seismi	61.17	255	P	P	19 22 17.0	-1.8
PSA00	Pilbara Seismi	61.17	255	P	P	19 22 16.2	-2.7
PSA00				IAmb	IAmb	19 22 18.7	
	comp=Z,23nm,0.8s						
MEEK	Meekatharra	61.49	249	P	P	19 22 19.3	-1.7
	baz=62,SNR=37						
KLBR	Kellerberrin	61.65	244	P	P	19 22 20.9	-1.1
	baz=62,SNR=8.1						
NWAO	Narrogin (SRO)	61.97	242	P	P	19 22 23.4	-0.7
	baz=62,SNR=9.4						
EDFI	Ende, Flores	62.40	270	P	P	19 22 26.7	-0.6
	comp=Z,429nmcomp=Z,40nm,1.4s						
BLDU	Ballidu	62.65	245	P	P	19 22 27.6	-1.0
	baz=63,SNR=27						
MUN	Mundaring	62.92	243	P	P	19 22 29.9	-0.6
	baz=63,SNR=18						
MORW	Morawa	63.42	246	P	P	19 22 32.7	-1.0
	baz=64,SNR=13						
MORW	Morawa	63.42	246	P	P	19 22 31.8	-1.9
MORW				IAmb	IAmb	19 22 34.7	
	comp=Z,67nm,1.4s						
MRSI	Marisa	65.12	280	P	P	19 22 44.8	-0.3
	comp=Z,652nmcomp=Z,68nm,1.3s						
GIRL	Giralia	66.08	253	P	P	19 22 50.7	-0.5
	baz=66,SNR=6.6						
PLAI	Plampang	66.08	269	P	P	19 22 51.1	-0.2
TOLI2	Tolitoli	66.43	280	P	P	19 22 52.8	-0.7
JYT	Yasato	69.46	322	P	P	19 23 12.2	+0.3
MYLDM	Lahad Datu	70.03	283	P	P	19 23 18.0	+2.0
JMM	Marumori	70.27	324	P	P	19 23 16.8	-0.1
JMM				IAmb	IAmb	19 23 18.6	
	comp=Z,72nm,1.1s						
JGF	Kuroka	70.72	320	P	P	19 23 19.4	-0.4
JGF				IAmb	IAmb	19 23 20.8	
	comp=Z,50nm,1.1s						
ATKA	Atka Island	70.73	0	P	P	19 23 19.0	-0.4
INU	Inuyama	70.76	320	P	P	19 23 20.3	+0.3
INU				IAmb	IAmb	19 23 21.8	
	comp=Z,41nm,1.1s						
MJAR	Matsushiro Arr	70.84	321	P	P	19 23 20.2	-0.2
	comp=Z,46nm,0.9s,baz=156,slow=6.0,SNR=57						
MJAR	Matsushiro Arr	70.84	321	P	P	19 23 19.3	-1.2
MJAR				pmax	pmax		
	comp=Z,29nm,1.0s						
MJAR	Matsushiro Arr	70.84	321	P	P	19 23 19.3	-1.2
MAJO	Matsushiro	70.84	321	i P	P	19 23 20.4	0.0
MAJO				pmax	pmax		
	comp=Z,64nm,1.0s						
MAJO	Matsushiro	70.84	321	P	P	19 23 20.4	0.0
MAJO				IAmb	IAmb	19 23 21.4	
	comp=Z,58nm,1.1s						
MAT	Matsushiro	70.84	321	P	P	19 23 19.7	-0.8
JMN	Monobe	71.70	317	P	P	19 23 25.2	-0.5
JWT	Wachi	71.72	319	P	P	19 23 26.3	+0.5
JWT				IAmb	IAmb	19 23 27.1	
	comp=Z,64nm,1.2s						
SPMM	Sapulut	71.74	282	P	P	19 23 26.0	-0.4
JSD	Sado	71.83	322	P	P	19 23 26.8	+0.5
JSD				IAmb	IAmb	19 23 28.3	
	comp=Z,57nm,0.9s						
JTM	Tenmabayashi	72.20	326	P	P	19 23 29.0	+0.5
JTM				IAmb	IAmb	19 23 30.4	
	comp=Z,56nm,1.0s						
KKM	Kota Kinabalu	72.47	283	P	P	19 23 28.9	-1.9
KKM				IAmb	IAmb	19 23 32.4	
	comp=Z,26nm,0.7s						
JHS	Saijyo	72.99	317	P	P	19 23 34.1	+0.8
UGM	Wanagama	73.21	267	P	P	19 23 34.5	-0.7
JNU	Nakatsue	73.33	314	P	P	19 23 34.9	-0.5
JNU				IAmb	IAmb	19 23 36.6	
	comp=Z,63nm,1.1s						
SNCC	San Nicolas Is	73.79	46	P	P	19 23 40.1	+2.0
	baz=234						
JKA	Kamikawa-asahi	73.86	329	P	P	19 23 38.0	-0.2
JKA				IAmb	IAmb	19 23 40.6	
	comp=Z,86nm,1.3s						
ASAJ	Asahikawa	73.86	329	P	P	19 23 38.0	-0.2
ASAJ				pmax	pmax		
	comp=Z,86nm,1.3s						
SCZ2	Santa Cruz Isl	74.15	45	P	P	19 23 42.2	+2.0
	baz=234						
YOJ	Yonaguni jima	74.45	303	P	P	19 23 42.3	+0.2
YOJ				pmax	pmax		
	comp=Z,223nm,1.0s						
YOJ	Yonaguni jima	74.45	303	P	P	19 23 42.3	+0.2
PKM	Mcpherson Peak	74.56	44	P	P	19 23 44.9	+2.1
	baz=234,SNR=6.4						
SAO	San Andreas Ge	74.65	42	P	P	19 23 43.7	+0.7
SAO				pmax	pmax		
	comp=Z,22nm,1.1s						
SAO	San Andreas Ge	74.65	42	P	P	19 23 43.7	+0.7
SAO				IAmb	IAmb	19 23 45.5	
	comp=Z,22nm,1.1s						
SMMC	Simmler	74.70	44	P	P	19 23 45.5	+2.1
	baz=233						
PMPB	Monarch Peak	74.72	43	P	P	19 23 45.5	+2.0
PMPB				IAmb	IAmb	19 23 46.2	
	comp=Z,29nm,1.2s						
PAGB	Antelope Grade	74.78	43	P	P	19 23 45.3	+1.5
SBUM	Sibu	74.91	278	P	P	19 23 44.8	-0.2
SBUM				IAmb	IAmb	19 23 47.2	
	comp=Z,32nm,1.1s						
SBUM	Sibu	74.91	278	P	P	19 23 45.0	0.0
HOPS	Hopland Field	75.05	39	P	P	19 23 47.0	+1.8
HOPS				IAmb	IAmb	19 23 49.1	
	comp=Z,73nm,1.4s						
GDXM	Geysers	75.10	39	P	P	19 23 44.4	-1.2
KCPM	Cahto Peak	75.19	38	P	P	19 23 44.6	-1.6
KCPM				IAmb	IAmb	19 23 49.5	
	comp=Z,70nm,1.5s						
TWG	Pinlang	75.23	301	P	P	19 23 44.9	-1.7
YULB	Yu-li	75.31	301	P	P	19 23 46.0	-1.1
YULB				IAmb	IAmb	19 23 51.0	
	comp=Z,55nm,0.9s						
MWC	Mount Wilson	75.35	46	P	P	19 23 47.0	-0.3
MWC				pmax	pmax		
	comp=Z,14nm,1.1s						
MWC	Mount Wilson	75.35	46	P	P	19 23 47.0	-0.3
NACB	Ninganchiao	75.44	302	P	P	19 23 46.6	-1.2
KMRM	Mail Ridge	75.47	38	P	P	19 23 49.5	+1.8
KMRM				IAmb	IAmb	19 23 51.8	
	comp=Z,75nm,1.1s						
PEA0B	Petropavlovsk-	75.55	343	P	P	19 23 47.3	-0.4
PEA0B				pmax	pmax		
	comp=Z,60nm,1.0s						
PEA0B	Petropavlovsk-	75.55	343	P	P	19 23 47.3	-0.4
PEA0B				IAmb	IAmb	19 23 49.7	
	comp=Z,60nm,1.0s						
PETK	Petropavlovsk-	75.55	343	P	P	19 23 47.4	-0.3
	comp=Z,12nm,0.4s,baz=119,slow=8.4,SNR=241						
PETK				LR	LR	19 49 40.7	
	comp=Z,156nm,21.9s,baz=190,slow=30						
PETK	Petropavlovsk-	75.55	343	P	P	19 23 46.7	-1.0
ESJX	Sierra Juarez	75.57	49	P	P	19 23 47.6	-0.9
VES	Vestal, Richgr	75.61	44	P	P	19 23 49.8	+1.3
	baz=234						
BFSC	Mount Baldy Ra	75.63	46	P	P	19 23 50.2	+1.4
	baz=235						
MONP2	Monument Peak	75.72	48	P	P	19 23 51.2	+1.7
	baz=236,SNR=8.7						
EDW2	Edwards Air Fo	75.77	45	P	P	19 23 51.3	+1.7
	baz=235,SNR=19						
SSLB	Suanglung	75.78	302	P	P	19 23 48.8	-1.0
IKP	In-Ko-Pah, Jac	75.81	48	P	P	19 23 51.5	+1.7
	baz=236						
TPUB	Ta-pu	75.81	301	P	P	19 23 49.0	-1.0
YHNB	Yeheng	75.86	303	P	P	19 23 49.1	-1.2
KHMM	Horse Mountain	75.88	37	P	P	19 23 52.2	+2.0
KHMM				IAmb	IAmb	19 23 56.8	
	comp=Z,40nm,1.3s						
CISI	Cisompet, Garu	75.88	267	P	P	19 23 48.5	-2.2
YSS	Yuzh-Sakhalins	75.90	331	ceP	P	19 23 49.9	0.0
YSS				pmax	pmax		
	comp=Z,87nm,1.1s						
YSS	Yuzh-Sakhalins	75.90	331	P	P	19 23 50.5	+0.6
ISA	Isabella, Lake	75.91	44	P	P	19 23 51.1	+0.8
ISA				pmax	pmax		
	comp=Z,20nm,1.1s						
ISA	Isabella, Lake	75.91	44	P	P	19 23 52.2	+1.9
	baz=234,SNR=12						
ISA	Isabella, Lake	75.91	44	P	P	19 23 51.1	+0.8
TATO	Taipei	75.91	303	P	P	19 23 50.2	-0.3
O02D	Mt. Diablo Mer	75.97	38	P	P	19 23 52.7	+2.0
	baz=230,SNR=16						
CMB	Columbia Colle	76.09	41	P	P	19 23 52.3	+1.0
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
CMB	Columbia Colle	76.09	41	P	P	19 23 52.2	+1.0
PFO	Pinyon Flats O	76.10	47	i P	P	19 23 52.2	+0.7
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	76.10	47	P	P	19 23 53.0	+1.5
	baz=236						
PFO	Pinyon Flats O	76.10	47	P	P	19 23 51.7	+0.2
TPFO	Pinon Flats	76.10	47	P	P	19 23 53.1	+1.6
	baz=236						
SWSC	Sam W. Stewart	76.19	48	P	P	19 23 53.6	+1.7
	baz=237						
AFDM	Forest Hills D	76.29	40	P	P	19 23 51.2	-1.2
LRMC	Laurel Mtn Rad	76.32	45	P	P	19 23 54.2	+1.5
	baz=235						
ORV	Oroville	76.35	40	P	P	19 23 53.4	+0.8
ORV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ORV	Oroville	76.35	40	P	P	19 23 53.4	+0.8
KSM	Kuching	76.38	276	P	P	19 23 53.3	-0.1
KSM				IAmb	IAmb	19 23 55.7	
	comp=Z,66nm,1.0s						
WDC	Whiskeytown Da	76.38	38	P	P	19 23 53.7	+0.9
WDC				pmax	pmax		
	comp=Z,28nm,1.2s						
WDC	Whiskeytown Da	76.38	38	P	P	19 23 53.7	+0.9
WDC				IAmb	IAmb	19 23 56.5	
	comp=Z,28nm,1.2s						
N02D	Trinity Center	76.53	38	P	P	19 23 55.8	+2.1
	baz=230,SNR=12						
CWC	Cottonwood Cre	76.62	44	P	P	19 23 56.2	+1.8
	baz=234						
BELC	Belle Mtn. Jos	76.63	47	P	P	19 23 56.2	+1.7
	baz=236,SNR=7.9						
O03E	Paynes Creek	76.63	39	P	P	19 23 55.5	+1.1
	baz=231,SNR=15						
MDPB	Devils Postpil	76.67	42	P	P	19 23 55.3	+0.4
OMMB	Old Mammoth Mi	76.71	42	P	P	19 23 56.2	+1.0
M02C	Callahan	76.72	37	P	P	19 23 56.8	+2.0

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      baz=230,SNR=15
MPMC  Manual Prospec  76.78  44  P     P      19 23 57.2 +1.8
      baz=235,SNR=18
L02E  Cave Junction   76.79  36  P     P      19 23 56.7 +1.6
      baz=229
GSC   Goldstone, Bar  76.81  45  P     P      19 23 56.4 +0.9
GSC                              pmax  pmax
      comp=Z,16nm,1.2s
GSC   Goldstone, Bar  76.81  45  P     P      19 23 57.0 +1.5
      baz=236
GSC   Goldstone, Bar  76.81  45  P     P      19 23 56.4 +0.9
BC3   Big Chuckawall  76.82  47  P     P      19 23 57.7 +2.1
      baz=237,SNR=6.3
MLAC  Mammoth, Mammo76.83  42  P     P      19 23 57.4 +1.8
      baz=234
HEC   Hector,Ludlow   76.86  46  P     P      19 23 57.2 +1.5
      baz=236,SNR=14
TIN   Tinemaha, Big   76.88  43  P     P      19 23 57.6 +1.8
      baz=234
GLA   Glamis          76.93  48  P     P      19 23 57.7 +1.6
GLA                              pmax  pmax
      comp=Z,21nm,1.2s
GLA   Glamis          76.93  48  P     P      19 23 58.3 +2.2
      baz=237
GLA   Glamis          76.93  48  P     P      19 23 57.7 +1.6
WAKR  Walker          76.97  41  P     P      19 23 57.8 +1.3
WAKR                             IAmb  IAmb   19 24 00.6
      comp=Z,26nm,1.3s
YBH   Yreka Blue Hor  77.02  37  P     P      19 23 57.9 +1.4
      comp=Z,8.1nm,0.9s,baz=229,slow=3.0,SNR=16
YBH   Yreka Blue Hor  77.02  37  P     P      19 23 57.7 +1.2
YBH                              pmax  pmax
      comp=Z,19nm,1.1s
YBH   Yreka Blue Hor  77.02  37  P     P      19 23 57.6 +1.2
K02D  Willamette Mer  77.11  36  P     P      19 23 58.6 +1.7
      baz=229
PNTR  Pine Nut        77.22  41  P     P      19 23 59.2 +1.3
PNTR                             IAmb  IAmb   19 24 01.7
      comp=Z,31nm,1.2s
BEKR  Beckworth       77.23  40  P     P      19 23 58.8 +0.9
J01E  Myrtle Point    77.26  35  P     P      19 23 59.3 +1.6
      baz=229
GMRC  Granite Mounta  77.30  46  P     P      19 23 59.9 +1.6
      baz=236,SNR=7.6
IRM   Iron Mountain   77.31  47  P     P      19 24 00.2 +2.0
      baz=237,SNR=8.9
GRAC  Grapevine Rang  77.41  44  P     P      19 24 00.7 +2.0
      baz=235
LHV   Little Huntoon  77.41  42  P     P      19 23 59.8 +1.2
LHV                              IAmb  IAmb   19 24 07.1
      comp=Z,33nm,1.2s
FURC  Furnace Creek,  77.43  44  P     P      19 24 00.4 +1.7
      baz=235
HUMO  Hull Mountain   77.44  36  P     P      19 24 00.8 +2.1
SHOC  Shoshone, Teco  77.50  45  P     P      19 24 00.9 +1.7
      baz=236
113A  Mohawk Valley,  77.53  49  P     P      19 24 00.2 +0.8
M04C  Macdoel         77.55  38  P     P      19 24 01.2 +1.7
      baz=231,SNR=5.9
L04D  Klamath Falls   77.56  37  P     P      19 24 01.0 +1.4
      baz=230
RYN   Ryan            77.62  42  P     P      19 24 01.0 +1.0
RYN                              IAmb  IAmb   19 24 03.9
      comp=Z,26nm,1.3s
NVAR  Mina Array Bea  77.64  42  P     P      19 24 01.2 +1.0
      comp=Z,6.5nm,0.8s,baz=227,slow=9.3,SNR=31
NVAR                             LR    LR     19 50 56.1
      comp=Z,102nm,20.1s,baz=252,slow=30
NVAR  Mina Array Bea  77.64  42  P     P      19 24 00.6 +0.4
PAHR  Pah Rah Range   77.73  40  P     P      19 24 01.9 +1.3
NV11  Mina Array Sit  77.73  42  P     P      19 24 02.2 +1.5
214A  Organ Pipe Nat  77.79  50  P     P      19 24 03.0 +2.0
      baz=239
214A  Organ Pipe Nat  77.79  50  P     P      19 24 02.1 +1.2
KSRS  Korea Array     77.82 317  P     P      19 24 02.2 +1.4
      comp=Z,35nm,1.1s,baz=136,slow=6.0,SNR=38
KSRS                             LR    LR     19 56 45.4
      comp=Z,75nm,18.8s,baz=342,slow=34
KSAR  Wonju Array Be  77.83 317  P     P      19 24 01.0  0.0
KSAR  Wonju Array Be  77.83 317  P     P      19 24 01.0  0.0
KS19  Wonju Array Si  77.88 317  P     P      19 24 02.2 +0.9
KS19                             IAmb  IAmb   19 24 03.5
      comp=Z,97nm,1.4s
I02D  Swisshome       77.93  35  P     P      19 24 03.2 +1.8
      baz=229
I03D  Drain, OR       77.94  35  P     P      19 24 03.4 +2.0
      baz=229
NEE2  Needles Airpor  78.00  47  P     P      19 24 03.7 +1.7
      baz=237
PDMCI Parker Dam,Lak  78.08  47  P     P      19 24 04.4 +1.9
      baz=237,SNR=8.1
TPNV  Topopah Spring  78.11  44  P     P      19 24 04.2 +1.4
TPNV                             pmax  pmax
      comp=Z,13nm,1.0s
TPNV  Topopah Spring  78.11  44  P     P      19 24 04.6 +1.8
      baz=236,SNR=13
TPNV  Topopah Spring  78.11  44  P     P      19 24 04.2 +1.4
TPH   Tonopah         78.12  43  P     P      19 24 03.7 +0.8
TPH                              pmax  pmax
      comp=Z,68nm,1.1s
TPH   Tonopah         78.12  43  P     P      19 24 03.7 +0.8
J04D  Umpqua Nationa  78.33  36  P     P      19 24 05.5 +1.6
      baz=230
KDAK  Kodiak Island   78.50  12  P     P      19 24 04.4 +0.2
      comp=Z,47nm,1.0s,baz=252,slow=1.3,SNR=18
KDAK  Kodiak Island   78.50  12  P     P      19 24 05.0 +0.8
KDAK                             pmax  pmax
      comp=Z,127nm,1.3s
KDAK  Kodiak Island   78.50  12  P     P      19 24 05.0 +0.8
I04A  Tendick Farm,   78.52  36  P     P      19 24 06.4 +1.7
      baz=230
MOD   Modoc Plateau   78.52  38  P     P      19 24 05.8 +0.8
SHPR  Sheep Range     78.59  45  P     P      19 24 06.7 +1.3
INCN  Inchon          78.68 316  P     P      19 24 06.5 +0.8
INCN                             pmax  pmax
      comp=Z,93nm,1.3s
INCN  Inchon          78.68 316  P     P      19 24 06.5 +0.8
W13A  Hualapai Mount  78.69  47  P     P      19 24 07.4 +1.4
K05A  Summer Lake     78.69  37  P     P      19 24 07.1 +1.2
K05A                             IAmb  IAmb   19 24 09.7
      comp=Z,41nm,1.3s
J05D  Fort Rock, OR   78.85  37  P     P      19 24 08.1 +1.4
      baz=231
TYV   Tymovskoe       78.89 334 eP     P      19 24 06.3 -0.2
TYV                             eS     S      19 34 02.5 +5.1
TYV                              pmax  pmax
      comp=Z,38nm,1.4s
TYV                              pmax  pmax
      comp=Z,400nm,6.2s
TYV                              smax  smax
      comp=N,200nm,7.4s
G03D  McMinnville, O  78.98  34  P     P      19 24 08.5 +1.4
      baz=229
PRN   Pahroc Range    79.16  44  P     P      19 24 09.8 +1.3
PRN                              IAmb  IAmb   19 24 12.0
      comp=Z,38nm,1.5s
H04A  Detroit Lake    79.21  35  P     P      19 24 09.6 +1.1
H04A                             IAmb  IAmb   19 24 11.5
      comp=Z,35nm,1.3s
PINE  Pine Mountain   79.33  36  P     P      19 24 10.6 +1.2
PINE                             IAmb  IAmb   19 24 13.2
      comp=Z,45nm,1.4s
R11A  Troy Canyon, C  79.34  43  P     P      19 24 11.0 +1.5
      baz=236,SNR=7.5
R11A  Troy Canyon, C  79.34  43  P     P      19 24 10.5 +1.0
USA0B Ussuriysk Arra  79.44 324  P     P      19 24 11.2 +1.5
USA0B                            pmax  pmax
      comp=Z,40nm,1.2s
USA0B Ussuriysk Arra  79.44 324  P     P      19 24 11.2 +1.5
USA0B                            IAmb  IAmb   19 24 12.6
      comp=Z,40nm,1.2s
USRK  Ussuriysk Ar.   79.44 324  P     P      19 24 10.5 +0.9
      comp=Z,10nm,0.8s,baz=116,slow=4.4,SNR=16
USRK                             LR    LR     19 57 35.6
      comp=Z,74nm,18.2s,baz=73,slow=34
USRK  Ussuriysk Ar.   79.44 324  P     P      19 24 09.9 +0.3
TUC   Tucson          79.45  51  P     P      19 24 11.7 +1.6
TUC                              pmax  pmax
      comp=Z,17nm,1.1s
TUC   Tucson          79.45  51  P     P      19 24 12.3 +2.2
      baz=240
TUC   Tucson          79.45  51  P     P      19 24 11.7 +1.6
I05D  Terrebonne, OR  79.46  36  P     P      19 24 11.3 +1.4
      baz=231
WVOR  Wild Horse Val  79.83  39  P     P      19 24 12.7 +0.8
WVOR                             pmax  pmax
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      comp=Z,27nm,1.4s
WVOR  Wild Horse Val  79.83  39  P     P      19 24 12.7 +0.8
WVOR                             IAmb  IAmb   19 24 14.6
      comp=Z,27nm,1.4s
X16A  Lo Mia Camp, P  80.04  49  P     P      19 24 15.4 +2.0
G05D  Wamic, OR       80.05  35  P     P      19 24 14.3 +1.3
      baz=231
319A  Douglas         80.10  52  P     P      19 24 15.1 +1.4
319A                             IAmb  IAmb   19 24 16.9
      comp=Z,24nm,1.1s
NLWA  Neilton Lookou  80.11  32  P     P      19 24 14.7 +1.5
NLWA                             IAmb  IAmb   19 24 16.2
      comp=Z,59nm,1.4s
E04D  Cinebar         80.22  34  P     P      19 24 15.3 +1.4
      baz=229
I07A  Izee            80.33  37  P     P      19 24 15.4 +0.8
CCUT  Cedar City      80.36  45  P     P      19 24 17.0 +1.9
F05D  White Salmon    80.38  35  P     P      19 24 16.3 +1.6
      baz=230
CNPM  China Poot      80.38  12  P     P      19 24 15.0 +0.6
CNPM                             IAmb  IAmb   19 24 15.9
      comp=Z,61nm,1.0s
KNB   Kanab           80.44  46  P     P      19 24 16.8 +1.3
KNB                              pmax  pmax
      comp=Z,18nm,1.3s
KNB   Kanab           80.44  46  P     P      19 24 16.8 +1.3
U15A  North Rim       80.49  46  P     P      19 24 17.3 +1.4
D04E  Lakebay         80.53  33  P     P      19 24 17.9 +2.5
      baz=229
PSUT  Pine Spring     80.57  44  P     P      19 24 15.9 -0.3
SZCU  Shurtz Canyon   80.57  45  P     P      19 24 17.9 +1.6
D03D  Eldon           80.60  33  P     P      19 24 17.6 +1.8
      baz=229
WUAZ  Wupatki         80.66  48  P     P      19 24 18.6 +1.9
      baz=239
WUAZ  Wupatki         80.66  48  P     P      19 24 18.0 +1.3
BRLK  Bradley Lake    80.67  12  P     P      19 24 16.5 +0.5
LON   Longmire        80.75  34  P     P      19 24 17.6 +0.9
LON                              pmax  pmax
      comp=Z,16nm,1.4s
LON   Longmire        80.75  34  P     P      19 24 17.6 +0.9
BELA  Belgrano 2      80.78 172  P     P      19 24 16.9 +0.4
ELK   Elko            80.91  41  P     P      19 24 18.9 +0.9
      comp=Z,3.5nm,1.0s,baz=240,slow=4.8,SNR=12
ELK   Elko            80.91  41  P     P      19 24 18.6 +0.6
ELK                              pmax  pmax
      comp=Z,8.0nm,1.2s
ELK   Elko            80.91  41  P     P      19 24 18.6 +0.6
D05A  Enumclaw        80.94  33  P     P      19 24 19.3 +1.6
RSO   Redoubt South   80.97  11  P     P      19 24 17.4 -0.3
MDJ   Mudanjiang      81.05 323  P     P      19 24 18.5 +0.2
MDJ                              pmax  pmax
      comp=Z,53nm,1.5s
MDJ                              pmax  pmax
      comp=Z,450nm,6.6s
PGC   Sidney          81.16  32  P     P      19 24 19.8 +1.1
PGC                              IAmb  IAmb   19 24 22.0
      comp=Z,34nm,1.1s
X18A  Snowflake       81.16  49  P     P      19 24 19.7 +0.3
SEW   Seward          81.27  12  P     P      19 24 19.4 +0.3
SEW                              IAmb  IAmb   19 24 20.2
      comp=Z,43nm,1.0s
NJ2   Nanjing         81.33 308 ⇑P     P      19 24 21.8 +1.7
NJ2                              pmax  pmax
      comp=Z,10.0nm,0.7s
G08A  Pilot Rock      81.38  36  P     P      19 24 20.8 +0.7
G08A                             IAmb  IAmb   19 24 22.7
      comp=Z,38nm,1.3s
MTPU  Mount Pierson   81.42  45  P     P      19 24 22.6 +1.8
BBB   Bella Bella     81.45  27  P     P      19 24 19.7 -0.5
      comp=Z,54nm,1.2s,baz=276,slow=4.4,SNR=3.9
TCRU  Three Creeks R  81.54  44  P     P      19 24 22.3 +0.9
GRNR  Gornyy          81.55 331⇓iP     P      19 24 21.1 +0.3
GRNR                             pmax  pmax
      comp=Z,20nm,1.1s
GRNR                             MLR   MLR
      comp=E,280nm,11.0s
GRNR                             MLR   MLR
      comp=N,110nm,18.0s
GRNR                             MLR   MLR
      comp=Z,140nm,19.0s
O22K  Cooper Landing  81.56  12  P     P      19 24 22.0 +1.4
      baz=204
A04D  Lummi Island    81.57  32  P     P      19 24 22.1 +1.2
      baz=229
B05A  Bryant          81.58  32  P     P      19 24 22.8 +1.8
      baz=230
ZAIG  Zacatecas       81.60  63  P     P      19 24 24.5 +2.4
MVU   Marysvale       81.64  45  P     P      19 24 23.4 +1.5
E07A  Sunnyside       81.67  35  P     P      19 24 23.0 +1.5
E07A                             IAmb  IAmb   19 24 24.3
      comp=Z,46nm,1.3s
MSU   Marysvale       81.67  45  P     P      19 24 23.5 +1.5
MSU   Marysvale       81.67  45  P     P      19 24 23.5 +1.5
LTY   Liberty         81.67  34  P     P      19 24 22.4 +0.7
HAWA  Hanford         81.74  35  P     P      19 24 22.7 +0.8
HAWA                             IAmb  IAmb   19 24 25.3
      comp=Z,54nm,1.4s
121A  Cookes Peak, D  81.77  52  P     P      19 24 24.6 +1.9
      baz=242
121A  Cookes Peak, D  81.77  52  P     P      19 24 24.9 +2.3
BMO   Blue Mountains  82.05  37  P     P      19 24 24.0 +0.3
BMO                              pmax  pmax
      comp=Z,28nm,1.4s
BMO   Blue Mountains  82.05  37  P     P      19 24 24.0 +0.3
BMO                              IAmb  IAmb   19 24 26.1
      comp=Z,28nm,1.4s
E08A  Dider Farm, El  82.06  35  P     P      19 24 23.6  0.0
E08A                             IAmb  IAmb   19 24 26.2
      comp=Z,46nm,1.3s
MFID  Camas Ranch     82.07  39  P     P      19 24 24.7 +0.8
RC01  Rabbit Creek A  82.12  12  P     P      19 24 23.7 +0.2
      baz=204,SNR=6.4
DUG   Dugway, Tooele  82.15  43  P     P      19 24 25.6 +1.2
      baz=238
SUA   Susitna One     82.27  11  P     P      19 24 24.3 -0.2
SUA                              IAmb  IAmb   19 24 25.4
      comp=Z,33nm,0.9s
GAMB  Gambell         82.37   1  P     P      19 24 25.6 +0.8
GAMB                             IAmb  IAmb   19 24 26.9
      comp=Z,55nm,1.2s
BGU   Big Grassy Mou  82.40  42  P     P      19 24 26.1 +0.4
D08A  Wollman Farm,   82.48  35  P     P      19 24 26.6 +0.8
D08A                             IAmb  IAmb   19 24 29.1
      comp=Z,60nm,1.4s
NLU   North Lily Min  82.50  43  P     P      19 24 26.9 +0.6
Q16A  Castle Valley   82.55  45  P     P      19 24 28.8 +2.2
E09A  Wood Farm, Sta  82.57  35  P     P      19 24 26.4 +0.2
E09A                             IAmb  IAmb   19 24 28.5
      comp=Z,36nm,1.3s
MYKOM Kota Tinggi     82.57 274  P     P      19 24 27.0  0.0
SKT   Skwentna        82.61  11  P     P      19 24 25.2 -0.9
SKT                              IAmb  IAmb   19 24 26.3
      comp=Z,30nm,1.2s
KNK   Knik Glacier    82.67  12  P     P      19 24 26.5 +0.1
KNK                              IAmb  IAmb   19 24 27.7
      comp=Z,40nm,1.0s
PMR   Palmer          82.70  12  P     P      19 24 26.6 +0.1
PMR                              pmax  pmax
      comp=Z,62nm,1.3s
PMR   Palmer          82.70  12  P     P      19 24 26.6 +0.1
PMR                              IAmb  IAmb   19 24 27.8
      comp=Z,62nm,1.3s
TMUT  Trail Mountain  82.72  44  P     P      19 24 29.2 +1.6
F10A  Beach Ranch, E  82.76  36  P     P      19 24 27.8 +0.4
F10A                             IAmb  IAmb   19 24 29.4
      comp=Z,40nm,1.2s
KLR   Kul'dur         82.77 328ceP     P      19 24 27.2  0.0
KLR                              pmax  pmax
      comp=Z,28nm,1.4s
TTA   Tatalina        82.80   8  P     P      19 24 27.1  0.0
TTA                              pmax  pmax
      comp=Z,48nm,1.2s
TTA   Tatalina        82.80   8  P     P      19 24 27.1  0.0
TTA                              IAmb  IAmb   19 24 29.2
      comp=Z,48nm,1.2s
GHO   Glory Hole Cre  82.90  12  P     P      19 24 27.8  0.0
GHO                              IAmb  IAmb   19 24 29.0
      comp=Z,52nm,0.9s
WRAK  Wrangell Islan  82.95  22  P     P      19 24 29.2 +1.2
WRAK                             IAmb  IAmb   19 24 30.3
      comp=Z,54nm,1.4s
SPUT  South Promonto  82.98  42  P     P      19 24 29.4 +0.6
CN2   Changchun       82.98 321 eP     P      19 24 28.8 +0.4
CN2                              pmax  pmax
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      comp=Z,40nm,1.2s
HLID  Hailey          83.00  39  P     P      19 24 30.2 +1.3
      baz=236
HLID  Hailey          83.00  39  P     P      19 24 30.1 +1.3
HVU   Hansel Valley   83.03  42  P     P      19 24 29.7 +0.8
HVU                              pmax  pmax
      comp=Z,11nm,1.0s
HVU   Hansel Valley   83.03  42  P     P      19 24 29.7 +0.8
SML   Sawmill         83.05  12  P     P      19 24 28.4 -0.1
SML                              IAmb  IAmb   19 24 29.8
      comp=Z,42nm,1.4s
B08A  Colville Reser  83.06  34  P     P      19 24 28.6 -0.2
B08A                             IAmb  IAmb   19 24 31.5
      comp=Z,22nm,1.2s
MA2   Magadan         83.08 343ceP     P      19 24 27.8 -0.8
MA2                              pmax  pmax
      comp=Z,43nm,1.3s
MA2   Magadan         83.08 343  P     P      19 24 27.3 -1.3
MA2                              IAmb  IAmb   19 24 29.3
      comp=Z,68nm,1.4s
SRU   San Rafael Swe  83.08  45  P     P      19 24 30.6 +1.3
SRU                              pmax  pmax
      comp=Z,20nm,1.0s
SRU   San Rafael Swe  83.08  45  P     P      19 24 30.6 +1.3
P17A  Butcher Ranch,  83.12  44  P     P      19 24 31.5 +2.0
QIZ   Qiongzhong      83.13 293  P     P      19 24 30.3 +0.5
QIZ                              sP    sP     19 25 01.8 -0.5
QIZ                              S     S      19 34 41.5 -1.3
QIZ                              pmax  pmax
      comp=Z,22nm,1.7s
QIZ                              pmax  pmax
      comp=Z,140nm,14.1s
QIZ                              LR    LR
      comp=Z,140nm,20.1s
QIZ                              LR    LR
      comp=Z,140nm,14.2s
QIZ                              LR    LR
      comp=Z,190nm,18.1s
LENM  Lemitar         83.14  51  P     P      19 24 30.0 +0.2
MNTX  Cornudas Mount  83.19  53  P     P      19 24 31.9 +2.0
      baz=243
MNTX  Cornudas Mount  83.19  53  P     P      19 24 31.4 +1.5
MNTX                             IAmb  IAmb   19 24 33.0
      comp=Z,22nm,1.1s
CUT   Chulitna        83.23  11  P     P      19 24 29.1 -0.1
      baz=203,SNR=11
JLU   Jordanelle      83.25  43  P     P      19 24 30.5 +0.3
CRQM  Cirque          83.27  15  P     P      19 24 29.8  0.0
KLU   Klutina         83.28  13  P     P      19 24 29.7 +0.1
KLU                              IAmb  IAmb   19 24 31.1
      comp=Z,29nm,1.0s
C09A  Chrisman Ranch  83.28  34  P     P      19 24 31.0 +1.1
C09A                             IAmb  IAmb   19 24 33.8
      comp=Z,22nm,1.1s
SCM   Sheep Creek Mo  83.28  13  P     P      19 24 29.9 +0.2
SCM                              pmax  pmax
      comp=Z,72nm,1.0s
SCM   Sheep Creek Mo  83.28  13  P     P      19 24 29.9 +0.2
YAH   Yahtse          83.28  16  P     P      19 24 31.0 +1.1
YAH                              IAmb  IAmb   19 24 31.9
      comp=Z,64nm,1.1s
TGL   Tana Glacier    83.35  15  P     P      19 24 30.7 +0.6
TGL                              IAmb  IAmb   19 24 31.8
      comp=Z,71nm,1.2s
BNM   Barren Site     83.39  51  P     P      19 24 33.1 +2.1
ANM   Nome            83.44   4  P     P      19 24 31.2 +0.9
ANM                              pmax  pmax
      comp=Z,29nm,1.2s
ANM   Nome            83.44   4  P     P      19 24 31.2 +0.9
ANM                              IAmb  IAmb   19 24 32.4
      comp=Z,29nm,1.2s
TX31  Lajitas Ar. Si  83.47  56  P     P      19 24 33.2 +1.7
TX32  Lajitas Array   83.47  56  P     P      19 24 33.0 +1.6
TX32                             IAmb  IAmb   19 24 35.0
      comp=Z,31nm,1.2s
TXAR  Lajitas Array   83.47  56  P     P      19 24 33.6 +2.1
      comp=Z,8.2nm,1.0s,baz=224,slow=5.2,SNR=51
TXAR                             LR    LR     19 53 46.2
      comp=Z,70nm,19.7s,baz=0.0,slow=30
TXAR  Lajitas Array   83.47  56  P     P      19 24 33.3 +1.8
BCPM  Bancas Point    83.50  17  P     P      19 24 30.8 +0.1
BCPM                             IAmb  IAmb   19 24 44.8
      comp=Z,59nm,1.0s
MVCO  Mesa Verde      83.51  47  P     P      19 24 32.9 +1.2
      baz=241
MVCO  Mesa Verde      83.51  47  P     P      19 24 32.9 +1.2
PV05  Paradox Valley  83.53  46  P     P      19 24 33.3 +1.6
PV05                             IAmb  IAmb   19 24 34.7
      comp=Z,28nm,1.1s
TCUT  Toone Canyon    83.54  43  P     P      19 24 32.5 +0.8
VRDI  Verde Repeater  83.61  15  P     P      19 24 31.4 -0.1
VRDI                             IAmb  IAmb   19 24 33.1
      comp=Z,57nm,1.1s
N25K  Chitina, Valde  83.67  14  P     P      19 24 32.1 +0.4
      baz=209,SNR=18
N25K  Chitina, Valde  83.67  14  P     P      19 24 31.6 -0.1
N25K                             IAmb  IAmb   19 24 33.3
      comp=Z,56nm,1.2s
HWUT  Hardware Ranch  83.70  42  P     P      19 24 33.2 +0.8
JIS   Juneau Island   83.70  20  P     P      19 24 32.3 +0.6
JIS                              IAmb  IAmb   19 24 33.3
      comp=Z,22nm,1.0s
BALM  Baldy           83.71  15  P     P      19 24 32.0  0.0
BALM                             IAmb  IAmb   19 24 33.5
      comp=Z,69nm,1.3s
GLB   Gilahina Butte  83.71  14  P     P      19 24 31.6 -0.3
GLB                              IAmb  IAmb   19 24 33.3
      comp=Z,60nm,1.2s
PV10  Paradox Valley  83.71  46  P     P      19 24 33.0 +0.3
PV10                             IAmb  IAmb   19 24 34.7
      comp=Z,21nm,1.1s
PV19  Morning Glory   83.72  46  P     P      19 24 33.9 +1.3
PV19                             IAmb  IAmb   19 24 35.6
      comp=Z,42nm,1.5s
PV17  East Wray Mesa  83.72  46  P     P      19 24 33.9 +1.3
PV17                             IAmb  IAmb   19 24 35.0
      comp=Z,22nm,1.2s
PV14  Lion Creek, Pa  83.72  46  P     P      19 24 33.7 +1.0
PV14                             IAmb  IAmb   19 24 35.6
      comp=Z,24nm,1.0s
PV18  Skein Mesa, Pa  83.74  46  P     P      19 24 34.0 +1.3
PV20  West Nyswonger  83.75  46  P     P      19 24 34.1 +1.3
PV20                             IAmb  IAmb   19 24 35.6
      comp=Z,21nm,1.1s
PV13  Radium Mtn., P  83.76  46  P     P      19 24 33.9 +1.0
PV16  Nyswonger Mesa  83.77  46  P     P      19 24 33.8 +0.9
PV16                             IAmb  IAmb   19 24 35.9
      comp=Z,26nm,1.5s
M24K  Tolsona, Glenn  83.77  13  P     P      19 24 32.9 +0.7
      baz=207,SNR=15
M24K  Tolsona, Glenn  83.77  13  P     P      19 24 32.9 +0.7
PV23  Carpenter Ridg  83.77  46  P     P      19 24 34.2 +1.2
PV23                             IAmb  IAmb   19 24 36.0
      comp=Z,19nm,0.9s
PV03  Paradox Valley  83.78  46  P     P      19 24 33.9 +0.9
PV11  David Mesa, Pa  83.79  46  P     P      19 24 33.6 +0.6
PV11                             IAmb  IAmb   19 24 36.1
      comp=Z,29nm,1.3s
BESE  Bessie Mountai  83.79  20  P     P      19 24 33.2 +0.8
BESE                             IAmb  IAmb   19 24 34.6
      comp=Z,61nm,1.2s
PV04  Paradox Valley  83.81  46  P     P      19 24 34.1 +1.0
PV04                             IAmb  IAmb   19 24 35.5
      comp=Z,23nm,1.1s
PV02  Paradox Valley  83.84  46  P     P      19 24 34.0 +0.7
PV12  Saucer Basin,   83.85  46  P     P      19 24 34.3 +1.0
PV12                             IAmb  IAmb   19 24 37.9
      comp=Z,23nm,1.1s
MCARA McCarthy VSAT   83.85  15  P     P      19 24 33.1 +0.6
MCARA                            IAmb  IAmb   19 24 34.2
      comp=Z,43nm,1.1s
ANMO  Albuquerque     83.88  50  P     P      19 24 34.8 +1.3
ANMO                             pmax  pmax
      comp=Z,19nm,1.1s
ANMO  Albuquerque     83.88  50  P     P      19 24 35.4 +1.9
      baz=242
ANMO  Albuquerque     83.88  50  P     P      19 24 34.8 +1.3
ANMO                             IAmb  IAmb   19 24 36.5
      comp=Z,19nm,1.1s
BARN  Barnard Glacie  83.90  15  P     P      19 24 33.1 +0.1
CTGM  Chitina Glacie  83.90  16  P     P      19 24 33.1 +0.1
CTGM                             IAmb  IAmb   19 24 34.7
      comp=Z,54nm,1.1s
PV01  Paradox Valley  83.92  46  P     P      19 24 34.7 +1.0
PV22  Blue Mesa, Par  83.96  46  P     P      19 24 35.2 +1.3
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PV07	Paradox Valley	84.01	46	P	P	19 24 35.4	+1.3
BCYI	Bear Canyon	84.02	39	P	P	19 24 34.9	+0.8
WHN	Wuhan	84.08	305	⇓P	P	19 24 36.3	+2.0
WHN				pmax	pmax		
	comp=Z,100nm,1.4s						
PV15	Paradox Valley	84.08	46	P	P	19 24 34.5	0.0
PV15				IAmb	IAmb	19 24 36.7	
	comp=Z,23nm,1.2s						
KTH	Kantishna Hill	84.18	10	P	P	19 24 33.4	-0.8
KTH				IAmb	IAmb	19 24 34.0	
	comp=Z,26nm,1.1s						
NEW	Newport	84.18	34	P	P	19 24 35.2	+0.6
	comp=Z,2.5nm,0.7s,baz=255,slow=4.9,SNR=4.9						
NEW	Newport	84.18	34	P	P	19 24 35.1	+0.6
NEW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NEW	Newport	84.18	34	P	P	19 24 35.5	+1.0
	baz=234						
NEW	Newport	84.18	34	P	P	19 24 35.1	+0.6
MAW	Mawson	84.19	199	LR	LR	20 00 27.2	
	comp=Z,108nm,19.0s,baz=62,slow=34						
GDL2	Guadalupe Moun	84.19	53	P	P	19 24 36.8	+1.7
TRF	Thorofare Moun	84.19	11	P	P	19 24 34.5	+0.1
SKAG	Skagway	84.35	19	P	P	19 24 36.8	+1.8
SKAG				IAmb	IAmb	19 24 37.9	
	comp=Z,46nm,1.1s						
DHY	Denali Highway	84.39	12	P	P	19 24 34.8	-0.6
DHY				IAmb	IAmb	19 24 36.0	
	comp=Z,24nm,1.1s						
RND	Reindeer	84.41	11	P	P	19 24 35.9	+0.5
RND				pmax	pmax		
	comp=Z,108nm,1.0s						
RND	Reindeer	84.41	11	P	P	19 24 35.9	+0.5
RDMU	Red Mountain	84.46	44	P	P	19 24 37.0	+0.6
AHID	Auburn Hatcher	84.60	41	P	P	19 24 37.8	+0.7
AHID				IAmb	IAmb	19 24 39.6	
	comp=Z,27nm,1.3s						
MCMT	McKenzie Canyo	84.64	39	P	P	19 24 38.4	+1.2
PAX	Paxson	84.69	13	P	P	19 24 36.1	-0.7
PAX				pmax	pmax		
	comp=Z,36nm,1.2s						
PAX	Paxson	84.69	13	P	P	19 24 36.1	-0.7
PAX				IAmb	IAmb	19 24 37.9	
	comp=Z,36nm,1.2s						
MCK	McKinley	84.69	11	P	P	19 24 36.8	0.0
	baz=204,SNR=47						
HYT	Haines Junctio	84.81	17	P	P	19 24 38.6	+1.0
CPRX	Cap Rock	84.93	53	P	P	19 24 40.5	+1.7
S22A	4UR Ranch, Cre	84.93	47	P	P	19 24 41.1	+2.1
	baz=242,SNR=15						
BWN	Browne	85.00	11	P	P	19 24 38.3	+0.1
MENT	Mentasta	85.04	14	P	P	19 24 38.7	+0.2
REDW	Red Top Meadow	85.07	41	P	P	19 24 40.2	+0.9
DLMT	Dillon	85.08	39	P	P	19 24 40.4	+1.1
DLMT				IAmb	IAmb	19 24 42.9	
	comp=Z,23nm,1.4s						
MSO	Missoula	85.11	37	P	P	19 24 40.6	+1.3
	baz=236						
MSO	Missoula	85.11	37	P	P	19 24 39.4	+0.1
O20A	White River Ci	85.12	45	P	P	19 24 40.6	+0.9
	baz=241						
O20A	White River Ci	85.12	45	P	P	19 24 40.3	+0.6
SNOW	Snow King Moun	85.18	41	P	P	19 24 40.1	+0.1
IMW	Indian Meadow	85.30	41	P	P	19 24 41.2	+0.6
DLBC	Dease Lake	85.30	22	P	P	19 24 40.9	+0.9
	comp=Z,17nm,1.0s,baz=222,slow=6.9,SNR=25						
DLBC	Dease Lake	85.30	22	P	P	19 24 40.8	+0.9
DLBC				IAmb	IAmb	19 24 42.3	
	comp=Z,38nm,1.1s						
MOOW	Moose Ponds	85.34	41	P	P	19 24 41.0	+0.3
LOHW	Long Hollow	85.36	41	P	P	19 24 41.0	+0.2
JTMT	Jette	85.43	36	P	P	19 24 40.7	-0.2
WHY	Whitehorse	85.44	18	P	P	19 24 41.3	+0.7
WHY				IAmb	IAmb	19 24 43.0	
	comp=Z,45nm,1.2s						
NEA2	Nenana	85.46	11	P	P	19 24 40.2	-0.3
	baz=204,SNR=19						
QLMT	Earthquake Lak	85.49	40	P	P	19 24 43.1	+1.7
RIDG	Independent Ri	85.50	13	P	P	19 24 40.9	0.0
SMCO	Snowmass	85.51	46	P	P	19 24 43.0	+1.1
WRH	Wood River Hil	85.52	11	P	P	19 24 40.5	-0.3
SEY	Seymchan	85.53	346	P	P	19 24 40.7	-0.1
	comp=Z,27nm,0.9s,baz=143,slow=5.4,SNR=44						
SEY	Seymchan	85.53	346	⇓*i*P	P	19 24 39.6	-1.2
FLWY	Flagg Ranch	85.54	40	P	P	19 24 43.4	+1.7
FLWY				IAmb	IAmb	19 24 44.8	
	comp=Z,25nm,1.4s						
YPP	Pitchstone Pla	85.58	40	P	P	19 24 44.0	+2.0
BW06	Boulder Array	85.58	42	P	P	19 24 41.8	-0.1
	baz=240						
BW06	Boulder Array	85.58	42	P	P	19 24 42.2	+0.3
PD31	Pinedale Array	85.58	42	P	P	19 24 42.0	0.0
PDAR	Pinedale Array	85.58	42	P	P	19 24 42.5	+0.5
	comp=Z,3.1nm,0.9s,baz=207,slow=3.5,SNR=25						
PDAR	Pinedale Array	85.58	42	P	P	19 24 41.8	-0.1
YHB	Horse Butte	85.59	40	P	P	19 24 43.5	+1.6
DOT	Dot Lake	85.59	13	P	P	19 24 41.1	-0.1
UBPT	Khong Chiam	85.64	288	P	P	19 24 42.8	+0.3
UBPT				IAmb	IAmb	19 24 45.2	
	comp=Z,31nm,1.2s						
YHL	Hebgen Lake	85.65	40	P	P	19 24 43.5	+1.2
HDA	Harding Lake	85.68	12	P	P	19 24 41.9	+0.3
	baz=206,SNR=69						
HDA	Harding Lake	85.68	12	P	P	19 24 41.0	-0.6
YMR	Madison River	85.69	40	P	P	19 24 43.8	+1.4
CCB	Clear Creek Bu	85.73	11	P	P	19 24 41.1	-0.7
BOZ	Bozeman (W)	85.78	39	P	P	19 24 42.9	+0.2
BOZ				pmax	pmax		
	comp=Z,15nm,1.2s						
BOZ	Bozeman (W)	85.78	39	P	P	19 24 44.0	+1.2
	baz=238						
BOZ	Bozeman (W)	85.78	39	P	P	19 24 42.9	+0.2
H17A	Grant Village	85.78	40	P	P	19 24 44.6	+1.7
	baz=239						
H17A	Grant Village	85.78	40	P	P	19 24 45.3	+2.3
YHH	Holmes Hill	85.82	40	P	P	19 24 43.9	+0.8
SDCO	Great Sand Dun	85.86	48	P	P	19 24 44.8	+1.2
	baz=243						
SDCO	Great Sand Dun	85.86	48	P	P	19 24 45.0	+1.5
SCRK	Sand Creek	85.90	13	P	P	19 24 43.4	+0.5
	baz=209,SNR=40						
TCOL	CIGO, UAF Yank	85.93	11	P	P	19 24 43.1	+0.3
	baz=206,SNR=21						
TCOL	CIGO, UAF Yank	85.93	11	P	P	19 24 42.5	-0.3
COLA	College	85.93	11	*d i*P	P	19 24 42.8	0.0
COLA				pmax	pmax		
	comp=Z,126nm,1.0s						
COLA	College	85.93	11	P	P	19 24 42.2	-0.6
MDM	Murphy Dome	85.94	11	P	P	19 24 42.3	-0.6
LKWY	Lake	85.98	40	P	P	19 24 44.9	+1.0
LKWY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LKWY	Lake	85.98	40	P	P	19 24 44.9	+1.0
IL31		86.02	12	P	P	19 24 42.7	-0.5
ILAR	Eielson Array	86.02	12	P	P	19 24 43.0	-0.3
	comp=Z,20nm,0.6s,baz=223,slow=6.0,SNR=272						
ILAR	Eielson Array	86.02	12	P	P	19 24 42.7	-0.6
IPM	Ipoh	86.11	276	P	P	19 24 45.2	+0.2
IPM				IAmb	IAmb	19 24 47.3	
	comp=Z,48nm,1.0s						
MSTX	Muleshoe	86.16	52	P	P	19 24 46.6	+1.7
	baz=244						
MSTX	Muleshoe	86.16	52	P	P	19 24 45.8	+0.9
MSTX				IAmb	IAmb	19 24 48.1	
	comp=Z,51nm,1.1s						
POKR	Poker Plat Res	86.23	11	P	P	19 24 44.3	0.0
	baz=206,SNR=47						
POKR	Poker Plat Res	86.23	11	P	P	19 24 44.1	-0.2
HRY	Holter Researc	86.26	38	P	P	19 24 45.4	+0.3
WALA	Waterton Lakes	86.37	35	P	P	19 24 46.6	+1.0
WALA				IAmb	IAmb	19 24 47.8	
	comp=Z,30nm,1.4s						
YNE	Yellowstone No	86.44	40	P	P	19 24 46.9	+0.7
Q24A	Divide	86.67	47	P	P	19 24 48.3	+0.8
	baz=243						
KULM	Kulim	86.73	277	P	P	19 24 45.0	-2.9
KULM				IAmb	IAmb	19 24 50.6	
	comp=Z,28nm,1.0s						
KULM	Kulim	86.73	277	P	P	19 24 49.0	+1.1
ISCO	Idaho Springs	86.73	46	P	P	19 24 49.0	+1.2
	baz=242						
PRP	Porcupine Dome	86.95	12	P	P	19 24 47.8	-0.2
RLMT	Red Lodge	86.95	40	P	P	19 24 50.1	+1.5
	baz=240						

BJI	Beijing	87.00	314	P	P	19 24 49.0	+0.4
BJI				sS	sS	19 36 02.5	+2.9
BJI				pmax	pmax		
	comp=Z,22nm,1.6s						
BJI				pmax	pmax		
	comp=Z,320nm,4.3s						
BJI				LR	LR		
	comp=Z,230nm,21.4s						
BJI				LR	LR		
	comp=Z,170nm,13.7s						
BJI				LR	LR		
	comp=Z,93nm,18.6s						
JCT	Junction City	87.00	57	P	P	19 24 49.5	+0.6
JCT				pmax	pmax		
	comp=Z,16nm,1.3s						
JCT	Junction City	87.00	57	P	P	19 24 50.1	+1.2
	baz=246						
JCT	Junction City	87.00	57	P	P	19 24 49.5	+0.6
JCT				IAmb	IAmb	19 24 51.3	
	comp=Z,16nm,1.2s						
N23A	Red Feather La	87.02	45	P	P	19 24 50.8	+1.7
	baz=242						
EGAK	Eagle	87.21	14	P	P	19 24 49.5	+0.4
AMTX	Amarillo	87.37	52	P	P	19 24 52.7	+2.0
	baz=245						
AMTX	Amarillo	87.37	52	P	P	19 24 52.2	+1.5
AMTX				IAmb	IAmb	19 24 53.8	
	comp=Z,26nm,1.4s						
BILL	Bilibino	87.75	353	*ce*P	P	19 24 51.4	-0.2
BILL				pmax	pmax		
	comp=Z,62nm,1.4s						
BILL	Bilibino	87.75	353	P	P	19 24 51.2	-0.4
ZEA	Zeya	87.77	330	*e*P	P	19 24 52.3	+0.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
ABTX	Abilene, Hawle	87.98	55	P	P	19 24 55.1	+1.5
	baz=246						
ABTX	Abilene, Hawle	87.98	55	P	P	19 24 55.1	+1.5
PLCA	Paso Flores	88.07	132	P	P	19 24 56.4	+2.3
	comp=Z,2.0nm,0.5s,baz=273,slow=7.1,SNR=5.7						
PLCA				LR	LR	19 58 26.0	
	comp=Z,130nm,18.2s,baz=222,slow=31						
EGMT	Eagleton	88.15	37	P	P	19 24 55.4	+1.4
	baz=239						
TIY	Taiyuan	88.58	311	*e*P	P	19 24 58.5	+2.1
TIY				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA	Guiyang	88.64	298	⇑P	P	19 24 58.3	+1.4
GYA				pP	pP	19 25 16.3	-4.0
GYA				SKS	SKSac	19 35 15.5	-3.1
GYA				S	S	19 35 38.0	+1.4
GYA				sS	sS	19 36 12.0	-4.3
GYA				pmax	pmax		
	comp=Z,25nm,1.1s						
SYO	Syowa Base	89.02	192	⇑*e*P	P	19 24 58.4	+0.6
SLVN	Son La	89.16	293	P	P	19 25 00.1	+0.7
SLVN				IAmb	IAmb	19 25 04.2	
	comp=Z,12nm,1.0s						
SNAA	Sanae	89.55	177	P	P	19 25 01.1	+0.8
SNAA	Sanae	89.55	177	*ce*P	P	19 25 01.4	+1.0
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
SNAA	Sanae	89.55	177	P	P	19 25 00.6	+0.2
SNAA				IAmb	IAmb	19 25 02.3	
	comp=Z,10nm,0.8s						
VNA3	Neumayer Olymp	89.56	175	P	P	19 25 01.3	+1.0
XAN	Xi'an	89.70	306	P	P	19 25 03.0	+1.3
XAN				pmax	pmax		
	comp=Z,22nm,1.8s						
RSSD	Black Hills	89.76	43	P	P	19 25 01.5	-0.4
RSSD				pmax	pmax		
	comp=Z,16nm,1.4s						
RSSD	Black Hills	89.76	43	P	P	19 25 02.8	+0.9
	baz=243						
RSSD	Black Hills	89.76	43	P	P	19 25 01.4	-0.4
RSSD				IAmb	IAmb	19 25 06.4	
	comp=Z,16nm,1.4s						
VNA2	Neumayer--Watz	90.04	176	P	P	19 25 03.8	+1.3
	baz=201,slow=3.3						
VNA1	Neumayer--Stat	90.24	175	P	P	19 25 04.9	+1.4
CBKS	Cedar Bluff	90.41	49	P	P	19 25 05.9	+1.0
	baz=246						
HHC	Hu-ho-hao-te	90.51	313	*e*P	P	19 25 06.3	+0.9
HHC				pmax	pmax		
	comp=Z,22nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,6.7s						
NVL	N'lazarevskaya	90.52	182	*e*P	P	19 25 09.8	+5.0
NVL				*e*S	SKSac	19 35 35.7	+7.8
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
A21K	Barrow	90.78	6	P	P	19 25 06.2	+0.5
	baz=197						
A21K	Barrow	90.78	6	P	P	19 25 05.2	-0.5
A21K				IAmb	IAmb	19 25 06.9	
	comp=Z,38nm,1.5s						
KAN01	Argonia South	91.19	51	P	P	19 25 09.4	+0.9
KMI	Kunming	91.47	296	⇑*i*P	P	19 25 12.3	+2.0
KMI				pmax	pmax		
	comp=Z,28nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,4.6s						
DGMT	Dagmar	91.62	39	P	P	19 25 10.8	+0.7
YAK	Yakutsk	91.80	337	*ce*P	P	19 25 09.3	-1.3
YAK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
INK	Inuvik	91.86	14	P	P	19 25 11.2	+0.5
	comp=Z,27nm,0.9s,baz=208,slow=5.3,SNR=45						
INK	Inuvik	91.86	14	P	P	19 25 10.9	+0.2
INK				pmax	pmax		
	comp=Z,74nm,1.3s						
INK	Inuvik	91.86	14	P	P	19 25 10.9	+0.2
GO04	Tololo Observa	92.02	123	P	P	19 25 14.7	+1.8
T35A	Sooner Cattle	92.03	52	P	P	19 25 13.9	+1.6
X37A	Clayton	92.03	54	P	P	19 25 12.2	-0.2
TUL1	Leonard	92.19	53	P	P	19 25 14.9	+1.8
	baz=248						
LCO	Las Campanas	92.56	122	P	P	19 25 17.5	+2.1
LCO				pmax	pmax		
	comp=Z,34nm,1.4s						
LCO	Las Campanas	92.56	122	P	P	19 25 17.5	+2.1
CM31	Chiang Mai Arr	92.59	288	P	P	19 25 16.6	+1.2
CMAR	Chiang Mai Arr	92.59	288	P	P	19 25 16.4	+1.1
	comp=Z,19nm,0.9s,baz=112,slow=2.1,SNR=58						
CMAR				LR	LR	20 07 26.3	
	comp=Z,28nm,18.6s,baz=95,slow=36						
CMAR	Chiang Mai Arr	92.59	288	P	P	19 25 15.5	+0.1
CD2	Chengdu	92.61	302	P	P	19 25 14.5	-0.7
CD2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	Chiang Mai	92.71	289	P	P	19 25 16.3	+0.4
CHTO				pmax	pmax		
	comp=Z,50nm,1.3s						
CHTO	Chiang Mai	92.71	289	P	P	19 25 16.2	+0.4
KSU1	Kansas State U	92.77	50	P	P	19 25 17.4	+1.7
	baz=248						
JTS	Las Juntas de	92.94	80	P	P	19 25 19.1	+2.0
JTS				pmax	pmax		
	comp=Z,28nm,1.1s						
JTS	Las Juntas de	92.94	80	P	P	19 25 19.1	+2.0
MIAR	Mount Ida	93.40	55	P	P	19 25 19.9	+1.2
	baz=250						
U38A	Gravette	93.44	53	P	P	19 25 20.0	+1.1
U38A				IAmb	IAmb	19 25 21.1	
	comp=Z,30nm,1.5s						
WLAR	White Oak Lake	93.46	56	P	P	19 25 20.8	+1.8
W39A	Magazine	93.46	54	P	P	19 25 21.1	+2.1
	baz=250						
W39A	Magazine	93.46	54	P	P	19 25 20.6	+1.6
W39A				IAmb	IAmb	19 25 21.7	
	comp=Z,20nm,1.1s						
YKA	Yellowknife Ar	93.69	24	P	P	19 25 19.7	+0.4
	comp=Z,6.0nm,0.9s,baz=231,slow=4.0,SNR=48						
YKA				PP	PP	19 28 59.5	-6.3
	comp=Z,0.5nm,1.0s,baz=221,slow=6.5,SNR=4.2						
YKA				LR	LR	20 05 05.5	
	comp=Z,174nm,18.1s,baz=0.0,slow=34						
HHAR	Hobbs	93.72	53	P	P	19 25 21.1	+0.9
HHAR				IAmb	IAmb	19 25 22.1	
	comp=Z,7.8nm,0.9s						
LZH	Lanzhou	94.32	307	*e*P	P	19 25 24.3	+1.1

LZH				pP	pP	19 25 46.3	-0.4
LZH				sP	sP	19 25 55.0	-1.1
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,60nm,5.0s						
ECSD	EROS Data Cent	94.49	45	P	P	19 25 24.4	+0.8
	baz=248,SNR=6.6						
ECSD	EROS Data Cent	94.49	45	P	P	19 25 23.8	+0.3
ECSD				IAmb	IAmb	19 25 26.6	
	comp=Z,23nm,1.4s						
U40A	Yellville	94.57	53	P	P	19 25 25.2	+1.1
	baz=250						
U40A	Yellville	94.57	53	P	P	19 25 24.8	+0.7
U40A				IAmb	IAmb	19 25 26.6	
	comp=Z,27nm,1.3s						
W41B	Gary Mavity, V	94.64	55	P	P	19 25 26.1	+1.7
	baz=250						
S39A	Bolivar	94.68	52	P	P	19 25 25.2	+0.7
S39A				IAmb	IAmb	19 25 26.5	
	comp=Z,12nm,1.1s						
C36M	Paulatuk	94.96	16	P	P	19 25 24.7	-0.3
	baz=227						
C36M	Paulatuk	94.96	16	P	P	19 25 24.7	-0.3
C36M				IAmb	IAmb	19 25 27.2	
	comp=Z,10nm,1.2s						
FCAR	Ozark Folk Cen	94.97	54	P	P	19 25 26.3	+0.4
FCAR				IAmb	IAmb	19 25 28.0	
	comp=Z,12nm,1.2s						
MGMO	Mountain Grove	95.28	53	P	P	19 25 28.5	+1.2
R40A	Maddies Statio	95.66	52	P	P	19 25 29.6	+0.6
R40A				IAmb	IAmb	19 25 31.5	
	comp=Z,18nm,1.1s						
T42A	Van Buren	96.13	53	P	P	19 25 32.1	+1.0
T42A				IAmb	IAmb	19 25 33.0	
	comp=Z,16nm,1.4s						
ULN	Ulaanbaatar	96.22	318	*ce*P	P	19 25 32.4	+0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ULN	Ulaanbaatar	96.22	318	P	P	19 25 30.1	-1.5
ULN				IAmb	IAmb	19 25 33.4	
	comp=Z,6.8nm,1.4s						
CCM	Cathedral Cave	96.35	52	P	P	19 25 33.1	+1.0
	baz=251						
SONM	Songino Array	96.62	318	P	P	19 25 33.3	0.0
	comp=Z,0.8nm,0.6s,baz=100,slow=3.3,SNR=8.1						
SONM				PP	PP	19 29 26.4	-2.7
	comp=Z,1.0nm,1.0s,baz=134,slow=6.4,SNR=4.5						
SONM	Songino Array	96.62	318	P	P	19 25 33.1	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	96.62	318	P	P	19 25 33.1	-0.2
I37A	Lemond, Waseca	96.76	46	P	P	19 25 35.2	+1.4
ULM	Lac du Bonnet	97.31	39	P	P	19 25 35.2	-0.9
	comp=Z,2.0nm,0.9s,baz=233,slow=5.1,SNR=3.1						
PB08	IPOC Station P	97.31	114	P	P	19 25 36.5	-0.9
PB08				IAmb	IAmb	19 25 39.6	
	comp=Z,6.8nm,0.9s						
PB16	IPOC Station P	97.70	112	P	Pdif	19 25 43.3	+3.8
PB16				IAmb	IAmb	19 25 53.8	
	comp=Z,6.7nm,1.4s						
TIXI	Tiksi	97.98	345	⇓*i*P	P	19 25 37.6	-1.1
TIXI	Tiksi	97.98	345	P	P	19 25 37.3	-1.4
TIXI				IAmb	IAmb	19 25 39.2	
	comp=Z,10nm,1.1s						
GTA	Gaotai	98.41	309	P	P	19 25 41.5	-0.1
GTA				pP	pP	19 26 08.5	+3.3
GTA				sP	sP	19 26 18.8	+4.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.6s						
EYMN	Ely	99.28	43	P	Pdif	19 25 46.2	+1.1
	baz=252						
R54A	Victor	104.16	54	P	Pdif	19 26 08.0	+1.0
	baz=257						
R56A	Bull Pasture M	105.43	54	P	PKiKP	19 30 25.0	-1.1
	baz=258						
L53A	Girard	105.50	51	P	PKiKP	19 30 26.9	+0.9
	baz=259						
Q57A	Strasburg	106.31	54	P	PKiKP	19 30 27.8	+0.2
	baz=259						
ZALV	Zalesovo Beam	111.19	321	PKiKP	PKiKP	19 30 35.3	-1.0
	comp=Z,2.4nm,0.4s,baz=143,slow=1.2,SNR=17						
ZALV				PP	PP	19 31 13.4	-3.7
	comp=Z,0.6nm,0.6s,baz=106,slow=4.7,SNR=3.2						
MK31	Makanchi Array	112.37	314	*c i*PKIKP	PKiKP	19 30 38.3	-0.5
MKAR	Makanchi Array	112.37	314	Pdiff	Pdif	19 26 44.4	+1.0
	comp=Z,0.3nm,0.8s,baz=97,slow=6.2,SNR=2.4						
MKAR				PKiKP	PKiKP	19 30 38.0	-0.8
	comp=Z,1.8nm,0.4s,baz=124,slow=1.0,SNR=55						
MKAR				PKKPbc	PKKPbc	19 41 30.3	0.0
	comp=Z,0.5nm,0.6s,baz=284,slow=3.0,SNR=6.1						
MKAR	Makanchi Array	112.37	314	*i* PKIKP	PKiKP	19 30 38.0	-0.8
MKAR	Makanchi Array	112.37	314		PKKPbc	19 41 30.0	-0.3
KURK	Kurchatov	114.92	318	*c i*PKIKP	PKiKP	19 30 41.6	-1.9
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSH	Kashi	116.55	305	PKP	PKiKP	19 30 48.0	+0.8
KSH				sPKP		19 31 22.5	
KSH				PP	PP	19 32 01.0	+5.3
KSH				AMB	AMB		
	comp=Z,640nm,6.3s						
SGDS	Sogindy	117.67	310	*e*PKP	PKPdf	19 30 47.8	-1.4
	baz=310						
SGDS	Sogindy	117.67	310	*e*PKIKP	PKPdf	19 30 47.7	-1.4
BTLS	Baital	118.08	312	*e*PKP	PKPdf	19 30 48.2	-1.5
	baz=312						
BTLS	Baital	118.08	312	*e*PKIKP	PKPdf	19 30 48.2	-1.5
BRZS	Berezniki	118.76	317	*e*PKP	PKPdf	19 30 49.0	-1.9
	baz=317						
BRZS	Berezniki	118.76	317	*e*PKIKP	PKPdf	19 30 49.0	-1.9
BRVK	Borovoye	119.89	321	*c i*PKIKP	PKPdf	19 30 52.0	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	Borovoye	119.89	321	PKPdf	PKPdf	19 30 52.2	-0.8
DZA	Taraz	120.09	309	*e*PKP	PKPdf	19 30 52.5	-1.3
	baz=309						
DZA	Taraz	120.09	309	*e*PKIKP	PKPdf	19 30 52.4	-1.3
SFJD	Kangerlussuaq	120.21	22	PKP	PKPdf	19 30 52.9	-0.2
	comp=Z,3.6nm,0.5s,baz=90,slow=2.0,SNR=4.7						
SPITS	Spitsbergen Ar	120.38	357	PKP	PKPdf	19 30 52.7	-0.6
	comp=Z,2.7nm,0.6s,baz=46,slow=4.2,SNR=9.5						
KK31	Karatay Array	120.68	309	PKIKP	PKPdf	19 30 54.0	-0.9
KK31	Karatay Array	120.68	309	PKPdf	PKPdf	19 30 54.0	-0.9
KKAR	Karatay Array	120.68	309	PKIKP	PKPdf	19 30 54.0	-0.9
KKAR	Karatay Array	120.68	309		PKPdf	19 30 54.0	-0.9
KKAR	Karatay Array	120.68	309	PKPdf	PKPdf	19 30 53.7	-1.1
IUG	Iuzhnay	121.08	308	*e*PKP	PKPdf	19 30 54.5	-1.3
	baz=308						
IUG	Iuzhnay	121.08	308	*e*PKIKP	PKPdf	19 30 54.5	-1.3
KBL	Kabul	121.88	299	PKIKP	PKPdf	19 30 57.7	0.0
KBL	Kabul	121.88	299		PKPdf	19 30 57.7	0.0
SVE	Sverdlovsk	124.39	327	*e*PKIKP	PKPdf	19 31 01.6	+0.1
SVE				pmax	pmax		
	comp=Z,27nm,1.6s						
ARU	Arti	125.61	327	*i* PKIKP	PKPdf	19 31 03.5	-0.3
ARU						19 32 55.2	
ARU						19 38 11.9	
ARU				SP	SP	19 42 45.4	-2.3
ARU				SS	SS	19 49 51.9	+3.1
ARU	Arti	125.61	327	PKPdf	PKPdf	19 31 02.7	-1.2
ABKAR	Akbulak array	127.03	318	PKPdf	PKPdf	19 31 06.1	-0.7
ABKAR	Akbulak array	127.03	318	PKPdf	PKPdf	19 31 06.2	-0.6
ARCES	ARCESS Array B	127.82	351	PKhKP	PKPpre	19 31 02.5	
	comp=Z,4.1nm,1.0s,baz=22,slow=1.0,SNR=3.9						
ARCES				PKP	PKPdf	19 31 07.7	0.0
	comp=Z,3.7nm,0.5s,baz=29,slow=2.1,SNR=52						
KIRV	Kirov	129.05	332	*c i*PKIKP	PKiKP	19 31 11.0	0.0
BOSA	Boshof	129.07	203	PKP	PKiKP	19 31 12.3	0.0
	comp=Z,3.1nm,0.6s,baz=151,slow=0.9,SNR=16						
GEYT	Alibeck	130.54	304	PP	PP	19 33 26.8	-3.0
	comp=Z,2.9nm,0.8s,baz=100,slow=6.0,SNR=5.0						
KLMR	Klimovskoe	131.57	338	*e*PKIKP	PKPdf	19 31 13.5	-1.5
KLMR				pmax	pmax		
	comp=Z,29nm,1.5s						
KLMR	Klimovskoe	131.57	338	*e*PKPdf	PKPdf	19 31 13.6	-1.5
KLMR				AMP		19 31 18.3	
	comp=Z,29nm,1.5s						
KLMR				*e*SKP		19 34 30.5	
FINES	FINESS Array B	135.00	346	PKhKP	PKPpre	19 31 12.7	
	comp=Z,0.7nm,0.3s,baz=31,slow=3.7,SNR=7.9						
FINES				PKP	PKiKP	19 31 23.1	+0.1
	comp=Z,5.3nm,0.5s,baz=35,slow=3.4,SNR=25						
OBN	Obninsk	136.73	334	⇓*i*PKIKP	PKPdf	19 31 25.4	+0.5
OBN				*e*		19 31 35.0	
OBN						19 34 11.0	

OBN				pmax	pmax		
	comp=Z,59nm,2.4s						
NB2	NORSAR Subarra	137.64	356	PKP	PKPpre	19 31 18.3	
	comp=Z,6.9nm,1.1s,baz=11,slow=4.1						
NOA	NORSAR Array B	137.64	356	PKP	PKPdf	19 31 27.2	+0.7
	comp=Z,1.8nm,0.9s,baz=14,slow=3.9,SNR=4.1						
HFS	Hagfors	138.32	354	PKhKP	PKPpre	19 31 15.9	
	comp=Z,2.0nm,0.4s,baz=90,slow=3.0,SNR=10						
HFS				PKP	PKiKP	19 31 29.9	+0.1
	comp=Z,3.0nm,0.6s,baz=43,slow=6.7,SNR=4.6						
HFS	Hagfors	138.32	354		PKPpre	19 31 15.9	
LSZ	Lusaka	139.35	215	PKIKP	PKPdf	19 31 28.8	-2.3
LSZ	Lusaka	139.35	215	PKPdf	PKPdf	19 31 28.8	-2.3
RAYN	Ar Rayn	142.39	284	PKIKP	PKPdf	19 31 34.0	-2.3
RAYN	Ar Rayn	142.39	284	PKPdf	PKPdf	19 31 34.0	-2.3
GURO	Guroymak-BITLI	142.66	310	*e*P	PKPdf	19 31 33.4	-3.0
SIRT	Sirnak	142.72	308	*e*P	PKPdf	19 31 32.9	-3.6
KMBO	Kilima Mbogo	142.94	241	PKhKP	PKPdf	19 31 35.2	-2.6
	comp=Z,1.8nm,0.7s,baz=182,slow=4.9,SNR=5.6						
EKA	Eskdalemuir Ar	142.99	8	PKhKP	PKPdf	19 31 32.2	-4.1
	comp=Z,1.1nm,0.4s,baz=343,slow=2.4,SNR=12						
AKASG	Malin Array Be	142.99	335	PKhKP	PKPdf	19 31 31.9	-4.5
	comp=Z,3.0nm,0.3s,baz=38,slow=4.2,SNR=32						
KOPT	Kop Dagi	143.18	313		PKPbc	19 31 35.2	+0.6
BNGB	Bingl	143.47	311	*e*P	PKPab	19 31 29.3	-4.9
MARD	Mardin	144.03	308	PKPdf	PKPbc	19 31 37.1	+0.1
DYBB	Diyarbakir	144.26	310	*e*P	PKPbc	19 31 37.9	+0.3
BSEG	Bad Segeberg	144.76	355	*e*PKPbc	PKPdf	19 31 39.2	-0.2
	baz=7.5,slow=2.7						
ILIC	ilic-Erzincan	144.77	313	*e*P	PKPdf	19 31 40.4	+0.3
BEL	Belsk	144.91	343	*e*PKP	PKPdf	19 31 39.9	+0.2
RSDY	Resadiye-TOKAT	145.18	315	*e*P	PKPdf	19 31 41.4	+0.8
SORM	Soroca	145.33	333	⇑P	PKPbc	19 31 40.2	-0.3
SORM	Soroca	145.33	333	⇑PKIKP	PKPbc	19 31 40.2	-0.3
MALT	Malatya	145.36	311	*e*P	PKPab	19 31 42.2	+0.8
LVV	L'vov	145.67	338	*e*PKP2	PKPdf	19 31 40.7	-0.4
KVT	Kavak	145.69	317	*e*P	PKPab	19 31 43.2	+0.8
TOKT	Tokat	145.74	315	*e*P	PKPdf	19 31 41.8	+0.2
RUE	Ruedersdorf	145.78	351	*e*PKPbc	PKPab	19 31 42.4	+0.1
	baz=7.5,slow=2.7						
TOKA	Tokat	145.79	315		PKPbc	19 31 42.3	-0.1
DARE	Darende-Malaty	145.91	312	*e*P	PKPab	19 31 44.0	+0.6
MILM	Milestii Mici	146.03	331	⇑P	PKPbc	19 31 42.6	-0.2
NRDL	Niedersach Rie	146.21	355	*e*PKPbc	PKPab	19 31 43.6	-0.2
	baz=7.5,slow=2.7						
FLTG	Flechtingen	146.26	354	*e*PKPbc	PKPab	19 31 43.7	-0.4
	baz=7.5,slow=2.7						
KWP	Kalwaria Pacla	146.27	340	*e*PKP	PKPbc	19 31 43.6	+0.2
KWP				*e*pPKPdf	sPKPab	19 32 17.1	-0.2
KWP	Kalwaria Pacla	146.27	340	PKP2	PKPbc	19 31 43.0	-0.4
KWP	Kalwaria Pacla	146.27	340		PKPbc	19 31 43.0	-0.4
ASSE	Asse, Remlinge	146.51	354	*e*PKPbc	PKPab	19 31 44.7	-0.3
	baz=7.5,slow=2.7						
IBBN	Ibbenburen	146.54	357	*e*PKPbc	PKPab	19 31 44.9	-0.3
	baz=7.5,slow=2.7						
OJC	Ojcow	146.64	343	*e*PKP	PKPbc	19 31 44.5	+0.1
OJC				*e*pPKPdf	sPKPbc	19 32 17.4	-0.7
OJC	Ojcow	146.64	343	PKP2	PKPdf	19 31 43.4	+0.6
OJC	Ojcow	146.64	343	PKPdf	PKPdf	19 31 43.4	+0.6
GAZ	Gaziantep	146.71	310	*e*P	PKPab	19 31 45.9	-0.6
GAZ	Gaziantep	146.71	310	PKPdf	PKPdf	19 31 43.7	+0.3
VASR	Vaslui	146.71	331	⇓P	PKPbc	19 31 45.2	+0.4
SARI	SarD1z-Kayseri	146.74	312	*e*P	PKPbc	19 31 45.3	-0.1
KMRS	Kahramanmaras	146.79	311	*e*P	PKPbc	19 31 45.9	+0.5
CLZ	Clausthal	146.83	354	*e*PKPbc	PKPbc	19 31 45.7	+0.7
	baz=7.5,slow=2.7						
PRAR	RASCA	146.83	334	⇓P	PKPab	19 31 45.9	-0.7
KSP	Ksiaz	146.91	347	*e*PKP	PKPbc	19 31 45.5	+0.3
KSP				*e*pPKPdf	sPKPbc	19 32 18.5	-0.4
BNN	Bunyan	146.93	314	*e*P	PKPbc	19 31 45.4	-0.4
KOLS	Kolonicke sedl	147.02	339	*e*PKP2	PKPdf	19 31 44.5	+1.0
KOLS	Kolonicke sedl	147.02	339	*e*PKP	PKPdf	19 31 44.5	+1.0
KOLS				*e*		19 31 46.5	
BUR08	Bucovina Ar. S	147.03	335		PKPbc	19 31 46.5	+0.7
CLL	Collm	147.04	351	*i* PKPbc	PKPbc	19 31 45.7	+0.1
	comp=Z,148nm,1.5s						
CLL				*i* sPKPbc	sPKPbc	19 32 18.5	-0.8
CLL				*e*(SKPdf)		19 35 14.0	
CLL	Collm	147.04	351	*i* PKP2	PKPbc	19 31 45.7	+0.1
CLL				pmax	pmax		
	comp=Z,148nm,1.5s						
CLL	Collm	147.04	351	PKPdf	PKPbc	19 31 45.6	+0.1
CLL	Collm	147.04	351	*e*PKPbc	PKPbc	19 31 46.2	+0.7
	baz=7.5,slow=2.7						
CLL				*e*pPKPbc	sPKPbc	19 32 19.5	+0.3
BURAR	Bucovina Array	147.04	335	⇑P	PKPab	19 31 46.9	-0.6
BURAR	Bucovina Array	147.04	335	⇑PKP2	PKPab	19 31 46.9	-0.6
BURAR	Bucovina Array	147.04	335	PKPdf	PKPdf	19 31 44.0	+0.4
CORM	Corum	147.08	316	*e*P	PKPbc	19 31 46.3	+0.1
GTTG	Gottingen	147.16	355	*e*PKPbc	PKPbc	19 31 46.3	+0.4
	baz=7.5,slow=2.7						
ILGA	Ilgaz	147.19	319		PKPbc	19 31 45.5	-1.2
OSTC	Ostas	147.19	347	⇑*e*PKP	PKPab	19 31 47.1	-0.8
CHVC	Chvalec	147.20	347	⇑*e*PKP	PKPbc	19 31 45.7	-0.4
NIE	Niedzica	147.21	342	*e*PKP	PKPbc	19 31 47.0	+0.8
BIZ	Bicaz	147.22	333	⇑P	PKPab	19 31 47.3	-0.8
UZH	Uzhgorod	147.28	339	*c i*PKP2	PKPbc	19 31 46.0	-0.3
UPC	Upice	147.28	347	*e*PKP2	PKPbc	19 31 46.8	+0.5
UPC	Upice	147.28	347	⇑*e*PKP	PKPbc	19 31 46.8	+0.5
TLCR		147.29	329	⇑P	PKPbc	19 31 46.9	+0.5
TLCR		147.29	329	⇑PKP2	PKPbc	19 31 46.9	+0.5
NEUB	Neuenburg	147.30	353	*e*PKPbc	PKPbc	19 31 46.9	+0.6
	baz=7.5,slow=2.7						
CRVS	Cervenica-Dubn	147.31	340	*e*PKP2	PKPbc	19 31 47.3	+0.9
CRVS	Cervenica-Dubn	147.31	340	*e*PKP	PKPbc	19 31 47.3	+0.9
BRG	Berggiesshubel	147.32	350	*e*PKP	PKPdf	19 31 44.8	+1.0
BRG				Amp		19 31 45.7	
	comp=Z,34nm,1.8s						
BRG				*i* x	x	19 31 47.3	
BRG				Amp		19 31 48.9	
	comp=Z,107nm,1.7s						
BRG				*i* pPKP	sPKPbc	19 32 19.9	-0.2
BRG				Amp		19 32 21.5	
	comp=Z,40nm,1.4s						
BRG	Berggiesshubel	147.32	350	*e*PKIKP	PKPdf	19 31 44.8	+1.0
BRG				*i*		19 31 47.2	
BRG				pmax	pmax		
	comp=Z,34nm,1.8s						
BRG				pmax	pmax		
	comp=Z,107nm,1.7s						
BRG	Berggiesshubel	147.32	350	*e*PKP	PKPdf	19 31 44.8	+1.0
BRG				Amp		19 31 45.7	
	comp=Z,34nm,1.8s						
BRG				*i* x	x	19 31 47.3	
BRG				Amp		19 31 48.9	
	comp=Z,107nm,1.7s						
BRG				*i* pPKP	sPKPbc	19 32 19.9	-0.2
BRG				Amp		19 32 21.5	
	comp=Z,40nm,1.4s						
BRG	Berggiesshubel	147.32	350	*e*PKPbc	PKPbc	19 31 47.2	+0.9
	baz=7.5,slow=2.7						
BRG				*e*pPKPbc	sPKPbc	19 32 20.5	+0.5
TESR	Tescani	147.32	332	⇓P	PKPbc	19 31 46.7	+0.2
GHRR		147.32	331	⇓P	PKPab	19 31 48.5	0.0
FBE	Freiberg	147.36	351	*e*PKPbc	PKPbc	19 31 47.5	+1.0
	baz=7.5,slow=2.7						
DPC	Dobruska-Polom	147.37	347	*e*PKP2	PKPbc	19 31 47.1	+0.5
DPC	Dobruska-Polom	147.37	347	⇑*e*PKP	PKPbc	19 31 47.1	+0.5
BUG	Bochum--Univer	147.43	358	*e*PKPbc	PKPbc	19 31 47.2	+0.7
	baz=7.5,slow=2.7						
KRLC	Kraliky	147.52	346	*e*PKP2	PKPbc	19 31 47.6	+0.6
KRLC	Kraliky	147.52	346	⇑*e*PKP	PKPbc	19 31 47.6	+0.6
PVCC	Panska Ves	147.54	349	*e*PKP2	PKiKP	19 31 48.1	-0.9
PVCC	Panska Ves	147.54	349	⇑*e*PKP	PKiKP	19 31 48.1	-0.9
KOZT	Kozan	147.57	311	*e*P	PKPbc	19 31 48.0	+0.5
KASTN	Kahler Asten	147.61	356	*e*PKPbc	PKPbc	19 31 47.7	+0.6
	baz=7.5,slow=2.7						
MORC	Moravsky Berou	147.62	345	⇑P	PKPbc	19 31 47.9	+0.7
MORC	Moravsky Berou	147.62	345	*e*PKP	PKPbc	19 31 48.0	+0.7
MORC	Moravsky Berou	147.62	345	⇑PKP2	PKPbc	19 31 47.9	+0.7
MORC	Moravsky Berou	147.62	345	PKPdf	PKPdf	19 31 44.6	+0.2
CFR	Carcaliu	147.63	329	⇑P	PKPbc	19 31 47.8	+0.5
CFR	Carcaliu	147.63	329	⇑PKP2	PKPbc	19 31 47.8	+0.5
BMR	Baia Mare	147.66	337	⇓P	PKiKP	19 31 48.6	-0.8
BMR	Baia Mare	147.66	337	⇓PKP2	PKiKP	19 31 48.6	-0.8
LANS	Liptovska Anna	147.69	343	*e*PKP2	PKiKP	19 31 48.7	-0.8
LANS	Liptovska Anna	147.69	343	*e*PKP	PKiKP	19 31 48.7	-0.8
ODBI	Odobesti	147.71	331	⇑P	PKiKP	19 31 49.1	-0.4
TPGR	Topolog	147.73	329	⇓P	PKPbc	19 31 48.0	+0.3
VRI	Vrincioaia	147.78	332	⇑P	PKPbc	19 31 48.2	+0.4
VRI	Vrincioaia	147.78	332	⇑PKP2	PKPbc	19 31 48.2	+0.4
ARCR	ARCALIA	147.82	335	⇑P	PKiKP	19 31 49.0	-0.8
PLOR	Plostina	147.82	332	⇑P	PKPbc	19 31 47.9	-0.1
PLOR	Plostina	147.82	332	⇑PKP2	PKPbc	19 31 47.9	-0.1
CEYT	Ceyhan	147.84	311	*e*P	PKiKP	19 31 49.6	-0.5
MOX	Moxa	147.87	353	*e*PKPbc	PKPbc	19 31 48.2	+0.4
	baz=7.5,slow=2.7						
BR131	Keskin Array S	147.96	317	PKIKP	PKPdf	19 31 44.8	-0.7
BR131						19 31 48.7	
BR131	Keskin Array S	147.96	317	PKPdf	PKPdf	19 31 44.8	-0.7
BR131				PKPbc	PKPbc	19 31 48.7	0.0
BRTR	Keskin Array B	147.96	317	PKPbc	PKPbc	19 31 48.7	0.0
	comp=Z,7.0nm,0.5s,baz=142,slow=2.8,SNR=24						
BRTR	Keskin Array B	147.96	317	PKPdf	PKPdf	19 31 43.9	-1.6
WERD	Werda	147.98	352	*e*PKPbc	PKPbc	19 31 48.9	+0.8
	baz=7.5,slow=2.7						
TANN	Tannenbergstha	147.99	351	*e*PKPbc	PKPbc	19 31 48.9	+0.7
	baz=7.5,slow=2.7						
KECS	Kecovo	147.99	341	*e*PKP2	PKiKP	19 31 49.4	-0.6
KECS	Kecovo	147.99	341	*e*PKP	PKiKP	19 31 49.4	-0.6
TIRR	Tirgusor	148.01	328	PKP2	PKPbc	19 31 48.8	+0.4
TIRR	Tirgusor	148.01	328		PKPbc	19 31 48.8	+0.4
OZUR		148.02	333	⇑P	PKPbc	19 31 49.2	+0.8
GUNZ	Gunzen	148.06	352	*e*PKPbc	PKPbc	19 31 49.2	+0.8
	baz=7.5,slow=2.7						
PRU	Pruhonice	148.06	349	*e*PKP2	PKPbc	19 31 49.2	+0.8
PRU	Pruhonice	148.06	349	⇑*e*PKP	PKPbc	19 31 49.2	+0.8
HARR	Harsova	148.09	329	⇓P	PKPbc	19 31 48.6	0.0
HARR	Harsova	148.09	329	⇓PKP2	PKPbc	19 31 48.6	0.0
UCC	Uccle	148.09	1	*d*PKiKP	PKPbc	19 31 48.7	+0.3
UCC	Uccle	148.09	1	PKP2	PKPbc	19 31 48.7	+0.3
UCC	Uccle	148.09	1		PKPbc	19 31 48.7	+0.3
WERN	Wernitzgruen	148.12	352	*e*PKPbc	PKPbc	19 31 49.3	+0.7
	baz=7.5,slow=2.7						
TLBR	Topalu	148.13	329	⇓P	PKiKP	19 31 49.6	-0.8
NKC	Novy Kostel	148.17	351	*e*PKP2	PKiKP	19 31 49.6	-0.8
NKC	Novy Kostel	148.17	351	⇑*e*PKP	PKiKP	19 31 49.6	-0.8
KARA	Karaisali	148.22	311	*e*P	PKPdf	19 31 46.7	+0.9
VRAC	Vranov	148.29	346	PKPbc	PKPbc	19 31 49.6	+0.6
	comp=Z,20nm,1.1s,baz=41,slow=3.8,SNR=10						
VRAC	Vranov	148.29	346	⇑P	PKiKP	19 31 49.9	-0.7
VRAC	Vranov	148.29	346	*e*PKP	PKiKP	19 31 49.9	-0.7
VRAC	Vranov	148.29	346	⇑PKP2	PKiKP	19 31 49.9	-0.7
DOPR	Dopca	148.29	333	⇓P	PKPbc	19 31 49.8	+0.7
MEM	Membach	148.29	359	*d*PKP	PKPbc	19 31 49.4	+0.4
NEHR	Nehoiu	148.31	331	⇓P	PKPbc	19 31 49.9	+0.7
BTNL	Ternell	148.31	359	*d*PKiKP	PKPbc	19 31 49.8	+0.8
BTNL				*d*pPKP	pPKPdf	19 32 10.6	+0.5
BSTI	Sart Tilman	148.32	360	*d*PKiKP	PKPbc	19 31 49.5	+0.5
SNF	Seneffe	148.38	1	*d*PKiKP	PKiKP	19 31 50.1	-0.6
SNF				*d*PKPab	PKPab	19 31 52.7	+0.2
MLR	Muntele Rosu	148.42	332	⇑P	PKPbc	19 31 49.6	0.0
MLR	Muntele Rosu	148.42	332	⇑PKP2	PKPbc	19 31 49.6	0.0
MLR	Muntele Rosu	148.42	332	PKPdf	PKPdf	19 31 46.2	+0.1
CJR	Cluj-Napoca	148.42	336	⇑P	PKiKP	19 31 50.6	-0.4
CJR	Cluj-Napoca	148.42	336	⇑PKP2	PKiKP	19 31 50.7	-0.4
JAVC	Velka Javorina	148.44	344	*e*PKP	PKiKP	19 31 51.3	+0.3
PBCC	Pribram	148.45	349	⇑*e*PKP	PKPbc	19 31 50.2	+0.8
BR231	Keskin MP Arra	148.46	317		PKPdf	19 31 46.2	-0.1
VYHS	Vyhne	148.47	343	*e*PKP2	PKiKP	19 31 50.3	-0.7
VYHS	Vyhne	148.47	343	*e*PKP	PKiKP	19 31 50.3	-0.7
VYHS				*e*		19 31 53.6	
LTVH	Ltavrtes, Hu	148.48	338	⇓*e*P	PKiKP	19 31 50.6	-0.4
BCLA	Clavier	148.49	0	*d*PKiKP	PKiKP	19 31 50.6	-0.4
BCLA				*d*PKPab	PKPab	19 31 53.1	+0.1
BGES	Gesves	148.52	0	*d*PKPbc	PKPbc	19 31 49.5	0.0
BGES				*d*PKPab	PKPab	19 31 53.1	0.0
BGES				*d*pPKPdf	pPKPdf	19 32 07.0	-3.4
BHOU	Houvegnez	148.55	359	*d*PKPbc	PKPbc	19 31 48.9	-0.7
BHOU				*d*PKPab	PKPab	19 31 53.8	+0.5
BHOU				*d*pPKP	pPKPdf	19 32 12.2	+1.7
KRUC	Moravsky	148.56	346	*e*PKP	PKiKP	19 31 50.5	-0.7
TNS	Taunus Mts	148.59	356	*e*PKPbc	PKPbc	19 31 50.3	+0.5
	baz=7.5,slow=2.7						
BMRD	Maredsous	148.60	1	*d*PKP	PKPbc	19 31 50.2	+0.5
BMRD				*d*sPKP		19 32 20.5	
ROTZ	Rotzenmuhle	148.66	351	*e*PKPbc	PKiKP	19 31 50.7	-0.7
	baz=7.5,slow=2.7						
ROTZ				*e*pPKPbc	sPKPbc	19 32 24.2	+0.5
PSZ	Piszkesteto	148.67	341	⇓P	PKPbc	19 31 50.4	+0.3
PSZ	Piszkesteto	148.67	341	⇓*e*P	PKiKP	19 31 51.2	-0.4
PSZ	Piszkesteto	148.67	341	PKP2	PKiKP	19 31 50.9	-0.7
PSZ	Piszkesteto	148.67	341		PKiKP	19 31 50.9	-0.7
DRGR		148.69	337	⇑P	PKPbc	19 31 50.6	+0.4
DRGR		148.69	337	⇑PKP2	PKPbc	19 31 50.6	+0.4
DOU	Dourbes	148.80	1	*d*PKPdf	PKPdf	19 31 47.7	+1.4
DOU				*d*PKPab	PKPab	19 31 54.4	+0.1
DOU				*d*pPKPdf	pPKPdf	19 32 08.5	-2.3
DOU				*d*pPKPab	pPKPbc	19 32 14.7	-0.1
DOU				*d*sPKPab	sPKPbc	19 32 22.6	-1.4
SMOL	Smolenice	148.82	344	*e*PKP2	PKiKP	19 31 51.4	-0.4
SMOL	Smolenice	148.82	344	*e*PKP	PKiKP	19 31 51.4	-0.4
VOIR		148.85	333	⇑P	PKPbc	19 31 51.1	+0.4
VOIR		148.85	333	⇑PKP2	PKPbc	19 31 51.1	+0.4
GRA1	Grafenberg Arr	148.86	353		PKPbc	19 31 51.1	+0.6
GRF	Grafenberg Arr	148.86	353	PKP2	PKPbc	19 31 51.1	+0.6
GRF	Grafenberg Arr	148.86	353	*e*PKPbc	PKPbc	19 31 51.0	+0.5
	baz=7.5,slow=2.7						
GRFO	Grafenberg	148.86	353	PKP2	PKPbc	19 31 51.1	+0.6
GRFO	Grafenberg	148.86	353		PKPbc	19 31 51.1	+0.6
MODS	Modra-Piesok	148.99	345	*e*PKP2	PKPbc	19 31 51.0	+0.1
MODS	Modra-Piesok	148.99	345	*e*PKP	PKPbc	19 31 51.0	+0.1
MTUR	Matau	149.01	332	⇓P	PKiKP	19 31 53.3	+1.0
MTUR	Matau	149.01	332	⇓PKP2	PKiKP	19 31 53.3	+1.0
KHC	Kasperske Hory	149.06	350	*e*PKIKP	PKPdf	19 31 47.8	+1.0
KHC				*e*		19 31 51.7	
KHC	Kasperske Hory	149.06	350	*e*PKPDF	PKPdf	19 31 47.8	+1.0
KHC				⇑*e*PKP	PKiKP	19 31 51.7	-0.6
KHC	Kasperske Hory	149.06	350	PKPdf	PKPdf	19 31 47.3	+0.4
MDUB	Mudurnu	149.09	320		PKPbc	19 31 50.5	-0.9
ARR	Arges	149.09	333	⇑P	PKiKP	19 31 52.8	+0.3
WET	Wettzell	149.16	350	*e*PKPbc	PKiKP	19 31 52.2	-0.3
	baz=7.5,slow=2.7						
ZST	Bratislava	149.20	345	*e*PKP2	PKiKP	19 31 52.4	-0.1
ZST	Bratislava	149.20	345	*e*PKP	PKiKP	19 31 52.4	-0.1
ZST				*e*		19 31 57.3	
KIZK	Mersin	149.22	311	*e*P	PKiKP	19 31 52.5	-0.4
WLF	Walferdange	149.24	359	*d*PKiKP	PKiKP	19 31 52.3	-0.2
WLF	Walferdange	149.24	359	PKP2	PKiKP	19 31 52.1	-0.4
WLF	Walferdange	149.24	359		PKiKP	19 31 52.1	-0.4
WLF	Walferdange	149.24	359	*e*PKPbc	PKiKP	19 31 52.1	-0.4
	baz=7.5,slow=2.7						
GEC2	GERESS Array S	149.31	349		PKPdf	19 31 47.8	+0.5
GEC2	GERESS Array S	149.31	349	*e*PKPbc	PKPbc	19 31 52.3	+0.6
	baz=7.5,slow=2.7						
GEC2				*e*pPKPbc	sPKPbc	19 32 26.0	+0.5
GERES	GERESS Array B	149.31	349	PKP	PKPdf	19 31 47.8	+0.5
	comp=Z,6.6nm,0.5s,baz=157,slow=3.8,SNR=4.6						
GERES				PKPbc	PKPbc	19 31 52.3	+0.6
	comp=Z,7.4nm,0.5s,baz=24,slow=3.0,SNR=54						
GERES	GERESS Array B	149.31	349	PKPdf	PKPdf	19 31 46.9	-0.5
BUD	Budapest	149.33	342	⇓*e*P	PKPbc	19 31 52.1	+0.5
SIRR	Siria	149.52	337	⇑P	PKiKP	19 31 52.9	-0.4
RAZG	Razgrad	149.61	329	⇑P	PKPbc	19 31 52.9	+0.4
CSKK	Cskako	149.66	343	⇓*e*P	PKPbc	19 31 52.9	+0.4
CONA	Conrad Observa	149.75	346	*i* P	PKiKP	19 31 53.4	-0.4
	comp=Z,74nm,1.4s,SNR=16						
CONA				*e*S	sPKPbc	19 32 27.4	+0.9
	comp=Z,38nm,1.4s						
AMBH	Ambrzfalva	149.78	339	⇓*e*P	PKiKP	19 31 54.0	+0.2
SOP	Sopron	149.81	345	⇓*e*P	PKiKP	19 31 53.6	-0.2
GZR	Gura Zlata	149.83	335	⇑P	PKPbc	19 31 53.3	+0.2
GZR	Gura Zlata	149.83	335	⇑PKIKP	PKPbc	19 31 53.3	+0.2
EGYH	Egyhazaskeszo	149.86	344	⇓*e*P	PKPdf	19 31 50.0	+1.9
MPLH	Magyarpolny	150.03	343	⇓*e*P	PKiKP	19 31 54.3	0.0
BZS	Buzias	150.09	337	⇑P	PKiKP	19 31 54.1	-0.4
BZS	Buzias	150.09	337	⇑PKP2	PKiKP	19 31 54.1	-0.4
MOA	Molln	150.17	348	*i* P	PKPbc	19 31 53.9	+0.1
	comp=Z,11nm,0.7s,SNR=6.3						
MOA				*i* S	sPKPbc	19 32 27.9	+0.4
	comp=Z,13nm,1.1s						
TIH	Tihany	150.18	343	⇓*e*P	PKPbc	19 31 54.0	+0.2
VLAD	Vladila	150.27	332	⇑P	PKiKP	19 31 54.6	-0.3
FUR	Furstenfeldbru	150.35	352	*e*PKPbc	PKiKP	19 31 54.8	-0.1
	baz=7.5,slow=2.7						
HERR	Herculane	150.40	335	⇑P	PKPbc	19 31 54.2	-0.2
ARSA	Arzberg	150.47	346	*i* P	PKPbc	19 31 54.5	0.0
	comp=Z,20nm,1.3s,SNR=5.2						
BANR	Banloc	150.47	337	⇑P	PKiKP	19 31 55.9	+0.7
BFO	Black Forest	150.48	356	PKIKP	PKiKP	19 31 54.9	-0.3
BFO	Black Forest	150.48	356		PKiKP	19 31 54.9	-0.3
BFO	Black Forest	150.48	356	*e*PKPbc	PKiKP	19 31 54.9	-0.3
	baz=7.5,slow=2.7						
BFO				*e*pPKPbc	sPKPbc	19 32 28.4	+0.2
CSS	Mathiatis	150.49	309		PKPbc	19 31 54.6	-0.3
MORH	Mrgy, Hungar	150.58	341	⇓*e*P	PKPbc	19 31 54.7	0.0
MORH	Mrgy, Hungar	150.58	341	*e*P	PKPdf	19 31 48.3	-0.9
ECH	Echery	150.66	358	PKIKP	PKPbc	19 31 54.7	-0.2
ECH	Echery	150.66	358		PKPbc	19 31 54.7	-0.2
MDVR	Moldovita	150.76	336	⇑P	PKPbc	19 31 55.2	-0.1
CLF	Chambon-Foret	150.77	4		PKPbc	19 31 55.0	-0.1
BEHE	Becsehely	150.88	344	⇓*e*P	PKPbc	19 31 52.8	-2.6
BEHE	Becsehely	150.88	344	*e*P	PKPdf	19 31 52.0	+2.3
UBR	Ueberruh	150.97	353	*e*PKPbc	PKiKP	19 31 56.1	-0.2
	baz=7.5,slow=2.7						
KBA	Koelnbreinsper	151.08	349	*i* P	PKPbc	19 31 55.7	-0.4
	comp=Z,20nm,0.5s,SNR=8.4						
RETA	Reutte	151.08	352	*i* P	PKPbc	19 31 56.2	+0.2
	comp=Z,18nm,0.7s,SNR=9.4						
RETA				*i* S	sPKPbc	19 32 30.0	+0.3
	comp=Z,8.1nm,0.8s						
SOKA	Soboth	151.12	346	*i* P	PKPbc	19 31 55.8	-0.3
	comp=Z,16nm,0.7s,SNR=7.5						
SOKA				*i* S	sPKPbc	19 32 29.6	-0.2
	comp=Z,12nm,1.2s						
WATA	Walderalm	151.12	351	*i* P	PKPbc	19 31 56.0	-0.2
	comp=Z,25nm,0.5s,SNR=11						
WATA				*i* S	sPKPbc	19 32 29.9	0.0
	comp=Z,7.4nm,0.8s						
FRGS	Fruska Gora	151.13	339	⇓*i*P	PKPbc	19 31 56.1	0.0
PERS	Pernice	151.14	346	*e*PKPbc	PKPbc	19 31 55.7	-0.4
PERS				*i*		19 31 57.1	
PERS				*e*PKPab	PKPab	19 32 04.2	+0.1
MOTA	Moosalm	151.18	352	*i* P	PKPbc	19 31 56.5	+0.1
	comp=Z,39nm,1.1s,SNR=9.3						
MOTA				*i* S	sPKPbc	19 32 30.1	0.0
	comp=Z,27nm,1.1s						
KALN	Kalnik	151.28	344	P	PKPbc	19 31 56.1	-0.4
SQTA	Sankt Quirin	151.29	352	*i* P	PKPbc	19 31 56.7	+0.2
	comp=Z,26nm,0.7s,SNR=9.7						
SQTA				*i* S	sPKPbc	19 32 30.6	+0.3
	comp=Z,16nm,0.8s						
DAVA	Damuels	151.38	354	*i* P	PKiKP	19 31 57.2	0.0
	comp=Z,53nm,1.2s,SNR=11						
DAVA				*i* S	sPKPbc	19 32 30.9	+0.4
	comp=Z,15nm,1.1s						
OBKA	Obir	151.38	347	*e*P	PKPbc	19 31 56.2	-0.5
	comp=Z,20nm,1.4s						
MYKA	Terra Mystica	151.46	348	*i* P	PKPbc	19 31 56.2	-0.7
	comp=Z,20nm,0.5s,SNR=9.5						
MYKA				*i* S	sPKPbc	19 32 29.9	-0.7
	comp=Z,16nm,1.0s						
FETA	Feichten	151.55	352	*i* P	PKiKP	19 31 57.5	-0.1
	comp=Z,24nm,0.7s,SNR=7.9						
FETA				*i* S	sPKPbc	19 32 31.2	+0.2
	comp=Z,21nm,1.0s						
ABTA	Abfaltersbach	151.55	350	*i* P	PKPbc	19 31 56.7	-0.4
	comp=Z,39nm,0.6s,SNR=13						
ABTA				*i* S	sPKPbc	19 32 30.2	-0.6
	comp=Z,31nm,1.3s						
PTJ	Puntijarka	151.62	344	P	PKPbc	19 31 57.1	-0.1
ZOU	Zoufplan	151.65	349		PKPbc	19 31 57.0	-0.6
VNDS	Vrh nad Dolski	151.74	346	*i* PKPbc	PKPbc	19 31 57.3	-0.2
TEKS	Tekeris	151.76	338	*e*P	PKPdf	19 31 54.0	+2.8
CRES	Cresnjev	151.82	345	⇓*i*P	PKPbc	19 31 57.3	-0.4
LJU	Ljubljana	151.83	346	*i* PKPbc	PKPbc	19 31 57.6	-0.1
LJU				*i*		19 31 58.5	
LJU				*e*PKPab	PKPab	19 32 06.8	-0.1
LJU				*e*		19 32 30.7	
LJU	Ljubljana	151.83	346	⇓*i*P	PKPbc	19 31 57.1	-0.6
VTS	Vitosha	151.88	331	⇓P	PKPbc	19 31 57.3	-0.8
VTS	Vitosha	151.88	331	⇓PKIKP	PKPbc	19 31 57.3	-0.8
DAVOX	Davos/Dischmat	151.88	353	PKP	PKPdf	19 31 52.9	+1.4
	comp=Z,4.3nm,1.1s,baz=165,slow=4.9,SNR=3.8						
DAVOX				PKPbc	PKiKP	19 31 58.6	+0.2
	comp=Z,25nm,0.4s,baz=267,slow=3.4,SNR=88						
MANT	Manisa	151.91	319		PKPbc	19 31 57.9	-0.5
STAL	STALIGIAL	151.99	349		PKPbc	19 31 57.1	-1.0
DIVS	Divibare	151.99	337	⇓*i*P	PKPbc	19 31 57.1	-1.1
DIVS	Divibare	151.99	337		PKPbc	19 31 58.4	+0.2
OZLJ	Ozalj	152.01	345	P	PKiKP	19 31 58.3	-0.1
ELL	Elmali	152.04	315	PKIKP	PKiKP	19 31 58.8	-0.1
ELL	Elmali	152.04	315		PKiKP	19 31 58.8	-0.1
CEY	Cerknica	152.14	346	*i* PKPbc	PKPbc	19 31 58.3	-0.1
CEY	Cerknica	152.14	346	⇓*i*P	PKPbc	19 31 58.1	-0.3
BLY	Banja Luka	152.34	342	*e*P	PKPbc	19 31 56.6	-2.3
CTI	Castel Tesino	152.37	351	PKIKP	PKPdf	19 31 52.0	-0.1
CTI	Castel Tesino	152.37	351	PKPdf	PKPdf	19 31 52.0	-0.1
HAPS	Han Pijesak,BI	152.37	339	*e*P	PKPbc	19 31 58.4	-0.7
BBLS	Lazići	152.40	338	⇓*i*P	PKPbc	19 31 59.2	+0.1
SENIN	Lac Senin/Sane	152.50	357	PKPdf	PKPdf	19 31 53.1	+0.6
RIY	Rijeka	152.52	346	*e*P	PKPdf	19 31 53.5	+1.3
MGRS	Mrkonjic Grad	152.68	342	*e*P	PKPab	19 32 09.5	-1.0
SJES	Sjenica	152.71	336	*e*P	PKPbc	19 31 56.4	-3.5
UDBI	Udbina	152.95	344	P	PKPbc	19 31 59.9	-0.4
SALO	Salr	152.95	352		PKPbc	19 32 00.3	+0.1
NVLJ	Novalja	153.15	345	P	PKPbc	19 32 00.4	-0.2
KIJV	Kijevo	153.25	342	P	PKPbc	19 32 00.8	-0.2
RICI	Ricice	153.50	341	P	PKPbc	19 32 01.0	-0.4
BRY	Bratogost	153.55	338	*e*P	PKPbc	19 32 00.8	-1.0
MORI	Morici	153.58	343	P	PKPbc	19 32 01.4	-0.1
MAKA	Makarska	153.72	341	P	PKPbc	19 32 01.3	-0.6
TREB	Trebinje	153.78	338	*e*P	PKPbc	19 32 00.8	-1.3
ZIRJ	Zirje	153.79	343	P	PKPbc	19 32 01.5	-0.6
BNI	Bardonecchia	153.83	358	PKIKP	PKiKP	19 32 03.6	+1.2
BNI	Bardonecchia	153.83	358		PKiKP	19 32 03.6	+1.2
ZCCA	Zocca	154.13	351		PKPbc	19 32 02.7	-0.2
POLO	Lamas de Olo	154.86	24	*e*PKPab	PKPab	19 32 20.6	+0.6
MURB	Monte Urbino	154.91	348		PKPab	19 32 19.9	-0.2
NRCA	Norcia	155.20	346		PKPab	19 32 21.5	+0.2
MVO	Moncorvo	155.33	23	*e*PKPab	PKPab	19 32 22.9	+0.9
PVIS	Viseu	155.39	25	*e*PKPab	PKPab	19 32 22.9	+0.7
PMRV	Marv??o	156.69	26	*e*PKPab	PKPab	19 32 28.1	+0.3
PAB	San Pablo	157.71	20	PKP2	PKPab	19 32 33.0	+0.8
PAB	San Pablo	157.71	20	PKPab	PKPab	19 32 33.0	+0.8
ESBB	Sonseca Array	157.71	19	PKPab	PKPab	19 32 33.2	+1.0
ESDC	Sonseca Array	157.71	19	PKP	PKPdf	19 32 00.7	+1.2
	comp=Z,0.7nm,0.8s,baz=334,slow=3.0,SNR=3.1						
ESDC				PKPab	sPKPdf	19 32 33.3	-0.3
	comp=Z,21nm,1.2s,baz=327,slow=3.8,SNR=28						
KEST	Kesra	162.81	349	PKPab	PKPab	19 32 55.5	+1.0
	comp=Z,4.3nm,0.7s,baz=293,slow=7.7,SNR=3.2						
DBIC	Dimbokro	164.33	139	PKP	PKPdf	19 32 07.1	-0.2
	comp=Z,4.4nm,1.0s,baz=28,slow=1.1,SNR=4.9						
DBIC				PKPab	PKPab	19 33 02.7	+1.0
	comp=Z,2.6nm,0.7s,baz=217,slow=7.7,SNR=4.1						
DBIC	Dimbokro	164.33	139		PKPdf	19 32 06.5	-0.7
KOWA	Kowa	170.01	114		PKPdf	19 32 09.9	-1.5
TORD	Torodi Ar. Bea	173.32	147	PKP	PKPdf	19 32 12.3	-0.7
	comp=Z,2.3nm,0.9s,baz=327,slow=2.0,SNR=6.8						
TORD				PKPab	PKPab	19 33 43.1	+1.7
	comp=Z,1.4nm,0.6s,baz=228,slow=2.9,SNR=4.6						
TORD				PP	PP	19 37 37.3	+5.1
	comp=Z,1.5nm,0.8s,baz=204,slow=6.3,SNR=4.3						
TORD	Torodi Ar. Bea	173.32	147		PKPdf	19 32 12.5	-0.5
TAM	Tamanrasset	176.06	358	PKIKP	PKPdf	19 32 14.9	+1.1
TAM						19 33 53.5	
TAM	Tamanrasset	176.06	358	PKPdf	PKPdf	19 32 14.9	+1.1
TAM					PKPab	19 33 53.5	0.0

REY ***26*** *19:24:38.5, 64°.67N×17°.45W, h4km*

IDC ***26*** *19:24:39.5±0.8, 64°.48N×17°.87W, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.7/52, mbtmp3.8/10, ML4.3/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/47, Error ellipse: s-maj=26.0km s-min=14.8km az=26.0*

NEIC ***26*** *19:24:40.1±1.9, 64°.5N±0°.1×17°.96W±0°.08, h10km±1km, mb4.4/14, Error ellipse: s-maj=18.6km s-min=4.2km az=195.0*

ISC 26 19:24:40.0±0.5**, 64°.68N**±0°.02×**17°.47W**±0°.03**, h10**km**, n77,** σ**2.s41**/80**, mb3.9**/12**, 1C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.12	21	P	Pg	19 24 41.4	-1.7
	baz=16						
IDYN				S	Sg	19 24 44.0	-1.2
	baz=16						
IDJK	Dyngjujokull	0.20	149	P	Pg	19 24 42.3	-2.0
	baz=150						
IURH	Urdarhals	0.20	44	P	Pg	19 24 42.6	-1.6
	baz=40						
IURH				S	Sg	19 24 45.3	-1.9
	baz=40						
IHAM	Hamarinn	0.25	218	P	Pg	19 24 43.3	-1.8
	baz=221						
IGRF	Grimsfjall	0.28	162	P	Pg	19 24 43.9	-1.9
	baz=163						

IKVE Kverkfjoll 0.34 89 P Pg 19 24 45.1 -1.8
baz=88
IHUS Husbondi 0.39 192 P Pg 19 24 45.9 -1.8
baz=194
ISKR Skrokkalda 0.41 254 P Pg 19 24 46.1 -1.9
baz=256
IVOT Vottur 0.42 163 P Pg 19 24 46.3 -2.0
baz=164
THOR Thorvaldshraun 0.43 52 P Pg 19 24 46.4 -2.0
baz=51
IKRE Kreppuhraun 0.48 76 P Pg 19 24 47.0 -2.4
baz=75
IJOK Jokulheimar 0.49 222 P Pg 19 24 47.1 -2.3
baz=224
IASK Askja 0.52 43 P Pg 19 24 47.8 -2.3
baz=41
IMKO Mokollar 0.57 57 P Pg 19 24 48.8 -2.3
baz=56
IIEY Innrieyrar 0.65 206 P Pg 19 24 50.1 -2.4
baz=207
ISVA Svartarkot 0.67 8 P Pg 19 24 50.5 -2.4
baz=7.0
ISVA S Sg 19 25 00.2 -1.5
baz=7.0
IKSK Karasker 0.67 139 P Pg 19 24 49.9 -3.1
baz=140
IKAL Kalfafell 0.74 187 P Pg 19 24 51.6 -2.5
baz=188
IVSH V-Sauoahnukur 0.76 79 P Pg 19 24 51.7 -3.0
baz=78
IFAG Fagurholsmyri 0.88 156 P Pg 19 24 54.0 -2.9
baz=156
IADA Aoalbol 0.88 66 P Pg 19 24 53.7 -3.2
baz=65
IMEL Melhnausar 0.96 21 P Pg 19 24 55.3 -3.2
baz=20
IREN Reynihlio 1.00 14 P Pg 19 24 56.1 -3.2
baz=13
ISNB Snabyli 1.07 209 P Pg 19 24 57.2 -3.3
baz=210
IKVO Krokottuvotn 1.07 13 P Pg 19 24 57.0 -3.5
baz=13
IGRS Grimsstaoir 1.12 30 P Pb 19 24 58.1 -3.4
baz=29
IRJU Rjupnafell 1.19 207 P Pb 19 24 59.4 -3.1
baz=208
IMJO Mjoaskard 1.21 233 P Pb 19 25 00.4 -2.6
baz=234
ISKI Skildingahlsh 1.22 9 P Pn 19 24 59.4 -3.6
baz=8.2
IGHA Grjothals 1.22 16 P Pn 19 24 59.6 -3.5
baz=15
IDIM Dimmadalss 1.31 10 P Pn 19 25 01.0 -3.3
baz=9.3
IHLA Hella 1.33 344 P Pn 19 25 01.7 -2.9
baz=343
IHED Heoinshofoi 1.41 3 P Pn 19 25 02.7 -3.0
baz=2.3
IESK Eystri-Skogar 1.45 218 P Pn 19 25 03.8 -2.4
baz=218
ISAU Saurbar 1.45 243 P Pn 19 25 03.8 -2.5
baz=244
IBRE Brettingsstaoi 1.47 353 P Pn 19 25 03.7 -2.7
baz=353
IGIL Gilhagi 1.48 18 P Pn 19 25 03.6 -3.1
baz=18
ISIG Siglufjorour 1.58 338 P Pn 19 25 05.3 -2.7
baz=338
ISIG S Sn 19 25 26.6 -1.9
baz=338
BORG Borgarnes 1.66 274 Pn Pn 19 25 06.6 -2.4
55nm,0.3s,baz=102,slow=9.6,SNR=80
BORG Sn Sb 19 25 30.3 -1.1
22nm,0.3s,baz=285,slow=20,SNR=2.7
BORG Borgarnes 1.66 274 Pn 19 25 06.4 -2.6
IHRN Hraun 1.82 324 P Pn 19 25 09.1 -2.1
baz=324
SCO Scoresbysund 6.08 346 Pn 19 26 10.3 +0.6
SCO Scoresbysund 6.08 346 *e* Pn 19 26 01.9 -7.8
baz=168,slow=6.5
SCO *i* P Pn 19 26 09.0 -0.7
SCO *e*S Sn 19 27 24.4 +5.2
SCO IAML 19 27 33.3
comp=Z,1.8nm,0.6s
EKA Eskdalemuir Ar 11.76 136 Pn Pn 19 27 27.2 -0.3
baz=321,slow=13,SNR=12
BRG Berggiesshubel 21.41 115 *e*P P 19 29 30.9 +3.4
BRG Amp 19 29 31.7
comp=Z,58nm,2.2s
BRG Berggiesshubel 21.41 115 *e*P P 19 29 30.9 +3.4
BRG Amp 19 29 31.7
comp=Z,58nm,2.2s
GERES GERESS Array B 22.95 119 P P 19 29 44.8 +0.6
comp=Z,0.6nm,0.7s,baz=315,slow=13,SNR=4.2
GERES GERESS Array B 22.95 119 P P 19 29 46.8 +2.6
EUNU Eureka 23.67 336 P P 19 29 53.3 +2.2
ESDC Sonseca Array 26.26 156 P P 19 30 15.8 +0.7
comp=Z,0.9nm,0.7s,baz=353,slow=8.9,SNR=9.1
BZK Bozkurt 36.76 103 ⇑P P 19 31 45.1 -2.0
SNOP Sinop 37.22 102 *e*P P 19 31 42.9 -8.2
YKA Yellowknife Ar 39.22 313 P P 19 32 08.1 +0.4
comp=Z,1.0nm,0.9s,baz=43,slow=8.7,SNR=9.2
YKA PcP PcP 19 34 18.2 +1.8
comp=Z,0.3nm,0.7s,baz=42,slow=3.6,SNR=3.8
INK Inuvik 39.84 329 P P 19 32 14.6 +1.7
comp=Z,1.5nm,0.8s,baz=14,slow=11,SNR=3.0
TIXI Tiksi 42.02 15 P P 19 32 32.6 +1.9
TIXI IAmb IAmb 19 32 37.7
comp=Z,3.8nm,0.8s
BMAR Burnt Mountain 42.89 333 P P 19 32 38.5 +0.5
ILAR Eielson Array 45.68 332 P P 19 33 02.2 +1.9
comp=Z,4.2nm,1.2s,baz=32,slow=7.5,SNR=12
ILAR PcP PcP 19 34 40.6 +2.7
comp=Z,0.4nm,0.7s,baz=18,slow=3.0,SNR=4.7
ILAR Eielson Array 45.68 332 P P 19 33 01.7 +1.4
MDM Murphy Dome 45.78 333 P P 19 33 04.2 +3.2
IMAR Indian Mountai 45.85 337 P P 19 33 03.4 +1.8
BCAR Beaver Creek A 46.11 329 P P 19 33 05.7 +2.0
ZALV Zalesovo Beam 47.62 51 P P 19 33 18.6 +3.0
comp=Z,1.1nm,0.8s,baz=316,slow=6.2,SNR=4.0
ZALV Zalesovo Beam 47.62 51 P P 19 33 18.0 +2.5
TKL Tuckaleechee C 48.34 266 LR LR 19 50 32.8
comp=Z,105nm,20.1s,baz=22,slow=32
EGMT Eagleton 48.88 297 P P 19 33 23.3 -2.2
YNE Yellowstone No 51.48 295 P P 19 33 44.8 -0.6
BOZ Bozeman (W) 51.61 297 P P 19 33 47.1 +0.8
YMP Mirror Lake Pl 51.76 295 P P 19 33 46.4 -1.2
YHL Hebgen Lake 52.07 296 P P 19 33 49.5 -0.3
H17A Grant Village 52.21 295 P P 19 33 52.1 +1.2
H17A IAmb IAmb 19 33 57.3
comp=Z,8.1nm,1.4s
MKAR Makanchi Array 52.71 58 P P 19 33 58.7 +4.4
comp=Z,1.4nm,1.0s,baz=323,slow=6.1,SNR=5.2
CCUT Cedar City 59.15 293 P P 19 34 38.2 -2.5
SONM Songino Array 59.63 40 P P 19 34 45.7 +2.0
comp=Z,0.9nm,1.1s,baz=319,slow=6.4,SNR=4.4
SONM Songino Array 59.63 40 P P 19 34 45.8 +2.0
W13A Hualapai Mount 61.49 292 P 19 34 54.0 -2.8
W13A IAmb IAmb 19 35 00.4
comp=Z,3.1nm,0.8s
ROSC El Rosal 71.94 241 LR LR 20 07 16.8
comp=Z,68nm,18.1s,baz=258,slow=36
CMAR Chiang Mai Arr 84.12 59 P P 19 37 12.2 +1.2
comp=Z,0.7nm,0.9s,baz=323,slow=5.1,SNR=6.6

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*IDC **26** 19:30:43.7±0.8, 36°.92N×97°.62W, h0km, mb3.8/3, mb1 4.2/7, mb1mx3.8/40, mbtmp3.9/7, ML3.8/5, Error ellipse: s-maj=11.8km s-min=10.4km az=128.0*
*NEIC **26** 19:30:44.7±1.0, 36°.83N±0°.03×97°.68W±0°.05, h7km±6km, Error ellipse: s-maj=7.4km s-min=1.3km az=57.0*
*TUL **26** 19:30:44.7±1.4, 36°.85N±0°.03×97°.70W±0°.05, h7km±6km, ML4.2, mb_Lg4.0/124(NEIC), Error ellipse: s-maj=6.8km s-min=2.5km az=57.0*
*ANF **26** 19:30:44.2±0.2, 36°.88N×97°.69W, h5km, ML5.1/18, Error ellipse: s-maj=3.5km s-min=2.5km az=35.0*
ISC 26 19:30:44.7±0.9, **36°.83N**±0°.02×**97°.72W**±0°.03, **h14**km±6km, **n185**, σ**1s.04**/169, **mb3.7**/3, **Oklahoma**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KAN14 Manchester OK 0.24 303 Pg Pg 19 30 49.8 0.0
KAN13 South Haven SW 0.27 46 Pg 19 30 50.0 -0.4
KAN13 Sg Sg 19 30 53.6 -0.5
KAN01 Argonia South 0.33 354 Pg 19 30 51.2 -0.3
KAN01 Sg Sg 19 30 55.7 -0.3
CROK Carrier 0.39 214 Pg 19 30 52.8 +0.3
CROK Sg Sg 19 30 58.8 +0.9
KAN10 Anthony SW Sta 0.42 314 Pg 19 30 53.3 +0.1
KAN10 Sg Sg 19 30 59.1 +0.1
KAN08 Anthony NE Sta 0.45 333 Pg 19 30 53.6 -0.1
KAN08 Sg Sg 19 30 59.8 +0.2
KS21 Milan North St 0.46 5 Pg 19 30 53.5 -0.3
KAN12 Harper NE Stat 0.52 334 Pg 19 30 54.9 -0.1
T35A Sooner Cattle 0.97 84 Pg Pg 19 31 02.8 -0.7
T35B Sooner Cattle 0.97 84 P 19 31 02.8
baz=266,SNR=1000
T35B S 19 31 15.5
baz=266
QUOK Quay 1.04 129 Pg Pb 19 31 04.3 -0.3
OK029 Liberty Lake 1.05 168 Pb 19 31 04.7 -0.1
OK031 S. Brethren Rd 1.12 141 Pb 19 31 05.9 -0.1
U32A Winter Ranch, 1.13 247 Pb 19 31 06.0 0.0
U32A Winter Ranch, 1.13 247 P 19 31 06.0
baz=66
U32A S 19 31 21.8
baz=66
OK030 Cody Creek RV 1.17 140 Pb 19 31 06.7 -0.1
BCOK Bluff Creek, N 1.17 176 Pn Pn 19 31 06.8 +0.1
ADOK Arcadia Dam 1.21 167 Pn 19 31 07.5 +0.3
OK005 Luther M Schoo 1.25 160 Pn Pn 19 31 08.1 +0.3
OK009 Oakdale Elemen 1.27 169 Pn 19 31 08.6 +0.6
OK025 Westminster Rd 1.28 166 Pn 19 31 08.9 +0.6
OKCFA Oklahoma City 1.43 171 Pb 19 31 11.2 +0.1
OKCFA IAmb_Lg 19 31 32.8
comp=Z,696nm,0.9s
OKCSW OKLAHOMA CITY 1.44 171 Pb 19 31 11.4 +0.1
OK011 Prague 1.58 148 Pn 19 31 13.2 +0.9
FNO Franklin 1.59 171 Pb 19 31 13.8 -0.1
R32A Long Quarter, 1.78 334 Pb 19 31 16.5 -0.6
R32A Long Quarter, 1.78 334 P 19 31 16.4
baz=153,SNR=778
R32A S 19 31 40.2
baz=153
TUL1 Leonard 1.80 120 P Pb 19 31 16.6 -0.9
baz=302
TUL1 Sb Sb 19 31 41.3 +1.3
baz=302
TUL1 Leonard 1.80 120 Pn Pb 19 31 16.6 -0.9
TUL1 Leonard 1.80 120 P 19 31 16.7
baz=302,SNR=361
TUL1 S 19 31 40.9
baz=302
W35A Tecumseh 1.81 158 Pn 19 31 16.6 +1.1
X34A Smith Ranch, M 2.23 182 Pn 19 31 23.2 +2.0
WMOK Wichita Mounta 2.26 203 P Pn 19 31 23.0 +1.2
baz=22,SNR=234
WMOK S Sb 19 31 53.0 -0.2
baz=22
WMOK Wichita Mounta 2.26 203 Pn Pn 19 31 22.9 +1.2
WMOK Wichita Mounta 2.26 203 P 19 31 22.9
baz=22,SNR=468
WMOK S 19 31 52.4
baz=22
KSU1 Kansas State U 2.43 21 P Pn 19 31 25.2 +1.1
baz=201,SNR=119
KSU1 Sb Sb 19 31 58.8 +0.7
baz=201
KSU1 Kansas State U 2.43 21 Pn Pn 19 31 25.3 +1.2
KSU1 Kansas State U 2.43 21 P 19 31 25.3
baz=201,SNR=70
KSU1 S 19 31 58.8
baz=201
CBKS Cedar Bluff 2.55 322 P Pn 19 31 26.9 +1.2
baz=140,SNR=23
CBKS Sb Sb 19 32 03.1 +1.6
baz=140
CBKS Cedar Bluff 2.55 322 Pn Pn 19 31 27.1 +1.4
CBKS Cedar Bluff 2.55 322 P 19 31 27.1
baz=140,SNR=12
CBKS Sb 19 32 03.4
baz=140
U38A Gravette 2.71 97 Pn Pn 19 31 29.1 +1.2
U38A Gravette 2.71 97 P 19 31 29.2
baz=280,SNR=118
X37A Clayton 2.94 139 Pn Pn 19 31 32.2 +1.2
X37A IAmb_Lg 19 32 25.0
comp=Z,743nm,0.8s
X37A Clayton 2.94 139 P 19 31 32.3
baz=321
X37A Sb 19 32 15.5
baz=321
HHAR Hobbs 3.09 99 Pn 19 31 34.4 +1.2
HHAR IAmb_Lg 19 32 29.9
comp=Z,366nm,0.8s
HHAR Hobbs 3.09 99 P 19 31 34.4
baz=282
Z35A Perchaven, San 3.51 174 Pn Pn 19 31 40.3 +1.4
Z35A IAmb_Lg 19 32 44.7
comp=Z,210nm,0.7s
Z35A Perchaven, San 3.51 174 P 19 31 40.0
baz=354,SNR=12
W39A Magazine 3.58 116 P Pn 19 31 40.8 +1.0
baz=299
W39A Sb Sb 19 32 34.6 +3.5
baz=299
W39A Magazine 3.58 116 Pn 19 31 41.0 +1.1
W39A IAmb_Lg 19 32 41.6
comp=Z,640nm,1.1s
W39A Magazine 3.58 116 P 19 31 40.8
baz=299
S39A Bolivar 3.61 75 Pn 19 31 40.9 +0.6
S39A IAmb_Lg 19 32 42.4
comp=Z,362nm,0.8s
S39A Bolivar 3.61 75 P 19 31 41.0
baz=258,SNR=58
AMTX Amarillo 3.76 240 P Pn 19 31 43.7 +1.3
baz=58
AMTX Amarillo 3.76 240 Pn Pn 19 31 43.9 +1.5
AMTX IAmb_Lg 19 32 45.1
comp=Z,494nm,0.8s
AMTX Amarillo 3.76 240 P 19 31 44.1
baz=58,SNR=33
N33B J Bar K, Exete 3.91 3 P 19 31 44.6
baz=183,SNR=28
N33A J Bar K, Exete 3.91 3 Pn 19 31 44.6 +0.2
U40A Yellville 3.94 95 P Pn 19 31 45.7 +0.9
baz=279,SNR=41
U40A Yellville 3.94 95 Pn Pn 19 31 45.7 +0.9
U40A Yellville 3.94 95 P 19 31 45.7
baz=279,SNR=84
U40A P 19 31 45.7
baz=279,SNR=84
MIAR Mount Ida 4.07 123 P Pn 19 31 47.6 +1.0
baz=306
MIAR Mount Ida 4.07 123 Pn Pn 19 31 47.8 +1.2
MIAR Mount Ida 4.07 123 P 19 31 47.7
baz=306,SNR=23
Z38A Mt. Pleasant 4.21 147 Pn Pn 19 31 50.0 +1.5
P38A Dawn 4.32 48 Pn Pn 19 31 51.0 +1.0
P38A Dawn 4.32 48 P 19 31 51.0
baz=231
N35A Tabor 4.34 21 Pn Pn 19 31 51.4 +1.1
MGMO Mountain Grove 4.37 84 Pn 19 31 51.9 +1.1
MGMO IAmb_Lg 19 33 03.5
comp=Z,365nm,0.8s
KSCO Kaye Shedlock’ 4.45 301 P Pn 19 31 53.0 +1.0
baz=118
KSCO Kaye Shedlock’ 4.45 301 Pn Pn 19 31 53.5 +1.5
KSCO IAmb_Lg 19 33 15.8
comp=Z,483nm,0.8s
KSCO Kaye Shedlock’ 4.45 301 P 19 31 53.5
baz=118,SNR=11
ABTX Abilene, Hawle 4.49 201 P Pn 19 31 53.2 +0.9
baz=20,SNR=16
ABTX Abilene, Hawle 4.49 201 Pn 19 31 53.2 +0.9
ABTX IAmb_Lg 19 33 08.1
comp=Z,257nm,1.0s
ABTX Abilene, Hawle 4.49 201 P 19 31 53.2
baz=20,SNR=19
R40A Maddies Statio 4.57 70 Pn 19 31 54.1 +0.6
R40A IAmb_Lg 19 33 14.5
comp=Z,252nm,0.8s
R40A Maddies Statio 4.57 70 P 19 31 54.1
baz=253,SNR=29
BGNE Belgrade 4.59 356 P Pn 19 31 54.3 +0.7
baz=176,SNR=11
BGNE S Sn 19 32 47.5 +0.7
baz=176
BGNE Belgrade 4.59 356 Pn 19 31 54.4 +0.7
BGNE Belgrade 4.59 356 P 19 31 54.5
baz=176,SNR=40
FCAR Ozark Folk Cen 4.61 100 Pn 19 31 54.6 +0.6
FCAR IAmb_Lg 19 33 09.5
comp=Z,433nm,0.9s
X40A Basin Creek Fa 4.61 119 Pn 19 31 54.6 +0.6
X40A IAmb_Lg 19 33 16.9
comp=Z,308nm,0.7s
WHAR Wooly Hollow 4.66 108 Pn Pn 19 31 55.2 +0.5
WHAR IAmb_Lg 19 33 18.4
comp=Z,376nm,1.0s
W41B Gary Mavity, V 4.73 109 P Pn 19 31 56.3 +0.6
baz=292
W41B Gary Mavity, V 4.73 109 P 19 31 56.3
baz=292,SNR=17
WHTX Lake Whitney, 4.83 177 P Pn 19 31 58.2 +1.2
baz=358,SNR=9.5
WHTX Lake Whitney, 4.83 177 Pn Pn 19 31 58.3 +1.2
WHTX Lake Whitney, 4.83 177 P 19 31 58.1
baz=358,SNR=45
WLAR White Oak Lake 4.90 128 Pn 19 31 58.5 +0.5
WLAR IAmb_Lg 19 33 21.0
comp=Z,219nm,0.8s
MSTX Muleshoe 5.02 237 P Pn 19 32 00.9 +1.1
baz=54
MSTX Muleshoe 5.02 237 Pn 19 32 00.6 +0.9
MSTX IAmb_Lg 19 33 36.3
comp=Z,170nm,0.8s
MSTX Muleshoe 5.02 237 P 19 32 01.1
baz=54,SNR=11
237A Washetta, Mont 5.07 161 Pn 19 32 00.8 +0.5
237A IAmb_Lg 19 33 29.8
comp=Z,120nm,0.8s
237A Washetta, Mont 5.07 161 P 19 32 00.7
baz=343,SNR=10
P40A Paris 5.22 57 Pn 19 32 02.3 0.0
P40A IAmb_Lg 19 33 31.5
comp=Z,338nm,0.8s
L34A Svendsen Farm, 5.24 11 Pn Pn 19 32 02.4 -0.2
N38A Joes South For 5.28 40 Pn Pn 19 32 03.8 +0.5
N38A Joes South For 5.28 40 P 19 32 03.7
baz=223,SNR=14
CCM Cathedral Cave 5.29 75 P Pn 19 32 03.6 +0.3
baz=259
CCM S Sn 19 33 03.4 -0.8
baz=259
CCM Cathedral Cave 5.29 75 Pn Pn 19 32 03.8 +0.4
CCM IAmb_Lg 19 33 33.4
comp=Z,261nm,0.8s
CCM Cathedral Cave 5.29 75 P 19 32 03.8
baz=259,SNR=19
T42A Van Buren 5.31 86 Pn Pn 19 32 04.4 +0.8
T42A Van Buren 5.31 86 P 19 32 04.2
baz=270,SNR=47
OGNE Ogallala 5.31 322 P Pn 19 32 05.6 +1.9
baz=139
OGNE Ogallala 5.31 322 Pn Pn 19 32 05.0 +1.3
OGNE IAmb_Lg 19 33 36.7
comp=Z,254nm,0.7s
OGNE Ogallala 5.31 322 P 19 32 05.8
baz=139,SNR=16
LCAR Lake Charles 5.34 96 Pn Pn 19 32 04.8 +0.7
LCAR IAmb_Lg 19 33 41.0
comp=Z,160nm,0.8s
T25A Trinidad 5.37 275 P Pn 19 32 05.3 +0.6
baz=91,SNR=12
Z41A Richland Creek 5.38 130 P Pn 19 32 05.5 +1.0
baz=313
NATX Nacogdoches 5.65 153 IAmb_Lg 19 33 57.6
comp=Z,319nm,0.9s
CCAR Cane Creek 5.66 119 IAmb_Lg 19 33 53.5
comp=Z,275nm,0.7s
K31A O'Neill 5.84 352 Pn Pn 19 32 11.9 +0.9
K31A O'Neill 5.84 352 P 19 32 12.1
baz=172,SNR=18
PBMO Poplar Bluff 5.85 88 Pn 19 32 12.0 +1.0
PBMO IAmb_Lg 19 33 50.8
comp=Z,275nm,0.8s
435B Jarrell 6.03 179 P Pn 19 32 12.8 -0.7
baz=359
435B Jarrell 6.03 179 Pn Pn 19 32 14.5 +1.0
435B IAmb_Lg 19 34 06.9
comp=Z,238nm,0.8s
SLM Saint Louis 6.20 71 IAmb_Lg 19 34 05.1
comp=Z,266nm,0.7s
Q24A Divide 6.25 292 P Pn 19 32 17.0 +0.1
baz=108
SDCO Great Sand Dun 6.27 281 P Pn 19 32 18.2 +1.1
baz=96,SNR=12
SDCO Great Sand Dun 6.27 281 Pn Pn 19 32 17.9 +0.7
SDCO Great Sand Dun 6.28 281 P 19 32 19.0
baz=96,SNR=22
CPRX Cap Rock 6.31 235 Pn Pn 19 32 18.9 +1.3
PVMO Portageville 6.46 91 IAmb_Lg 19 34 18.1
comp=Z,293nm,0.9s
PENMO Penman 6.51 91 IAmb_Lg 19 34 22.6
comp=Z,279nm,0.9s
MET Memphis--Engin 6.54 103 IAmb_Lg 19 34 17.3
comp=Z,235nm,0.8s
JCT Junction City 6.57 196 P Pn 19 32 21.3 +0.3
baz=15,SNR=6.7
JCT Junction City 6.57 196 Pn Pn 19 32 21.6 +0.6
JCT Junction City 6.57 196 P 19 32 21.3
baz=15,SNR=17
N41A Harden Midland 6.61 52 Pn 19 32 22.1 +0.5
143A Socs Landing, 6.63 127 IAmb_Lg 19 34 21.1
comp=Z,248nm,0.8s
S44A Carbondale 6.80 80 Pn 19 32 24.8 +0.7
S44A IAmb_Lg 19 34 23.3
comp=Z,214nm,0.7s
S44A Carbondale 6.80 80 P 19 32 23.7
baz=265,SNR=15
GLAT Glass 6.81 92 IAmb_Lg 19 34 36.6
comp=Z,278nm,0.7s
HALT Halls 6.82 95 IAmb_Lg 19 34 35.5
comp=Z,242nm,0.8s
ISCO Idaho Springs 6.88 298 P Pn 19 32 24.5 -1.0
baz=113,SNR=7.7
ISCO Idaho Springs 6.88 298 Pn Pn 19 32 26.2 +0.7
ISCO IAmb_Lg 19 34 27.0
comp=Z,152nm,0.8s
ECSD EROS Data Cent 6.95 7 P Pn 19 32 25.6 -0.5
baz=187,SNR=12
ECSD EROS Data Cent 6.95 7 Pn Pn 19 32 25.8 -0.3
ECSD EROS Data Cent 6.95 7 P 19 32 25.5
baz=187,SNR=61
K38A Parkersburg 6.95 32 Pn 19 32 26.7 +0.6
W45A Hickory Valley 7.11 101 IAmb_Lg 19 34 32.7
comp=Z,239nm,0.7s
OXF Oxford 7.14 106 Pn Pn 19 32 29.1 +0.3
OXF IAmb_Lg 19 34 45.8
comp=Z,118nm,0.7s
Q44A Meyer Farm, Va 7.19 71 Pn Pn 19 32 29.9 +0.6
Q44A Meyer Farm, Va 7.19 71 P 19 32 29.7
baz=256,SNR=7.3
L40A Anamosa 7.25 42 Pn 19 32 30.5 +0.2
L40A IAmb_Lg 19 34 37.5
comp=Z,276nm,0.8s
T45A Paducah 7.27 86 IAmb_Lg 19 34 54.4
comp=Z,128nm,0.8s
Y45A Yeager Farm, C 7.30 111 IAmb_Lg 19 34 46.3
comp=Z,147nm,0.8s
ANMO Albuquerque 7.34 258 Pn Pn 19 32 35.3 +3.6
comp=Z,0.2nm,0.3s,baz=79,slow=13,SNR=3.9
ANMO Pg Pg 19 33 01.0 -4.2
comp=Z,2.1nm,0.3s,baz=70,slow=15,SNR=9.4
ANMO Lg Lg 19 34 34.1
comp=Z,6.6nm,0.3s,baz=333,slow=21,SNR=9.5
ANMO Albuquerque 7.34 258 Pn 19 32 33.9 +2.2
ANMO IAmb_Lg 19 34 47.8
comp=Z,78nm,1.0s
PHWY Pilot Hill 7.50 309 Pn Pn 19 32 34.7 +0.7
PHWY IAmb_Lg 19 34 56.9
comp=Z,143nm,0.7s
VBMS Vicksburg 7.51 126 IAmb_Lg 19 35 02.8
comp=Z,130nm,1.2s
HDIL Hopedale 7.56 58 P Pn 19 32 34.8 +0.2
baz=243
HDIL Hopedale 7.56 58 Pn Pn 19 32 35.3 +0.7
HDIL Hopedale 7.56 58 P 19 32 35.2
baz=243,SNR=8.8
SUSD Miller 7.66 353 Pn Pn 19 32 36.4 +0.4
SUSD IAmb_Lg 19 34 58.3
comp=Z,198nm,0.8s
BNM Barren Site 7.74 252 Pn Pn 19 32 38.1 +0.8
OLIL Olney 7.85 73 IAmb_Lg 19 34 54.1
comp=Z,198nm,0.9s
344A Westbrook Farm 7.89 131 IAmb_Lg 19 35 13.9

	comp=Z,118nm,1.2s						
I37A	Lemond, Waseca	7.89	23	IAmb_Lg		19 35 15.2	
	comp=Z,160nm,0.9s						
735A	Kenedy	7.95	181	IAmb_Lg		19 35 12.7	
	comp=Z,81nm,0.8s						
O44A	Mansfield	7.97	63	IAmb_Lg		19 35 03.4	
	comp=Z,236nm,0.7s						
WVT	Waverly	8.00	92	P	Pn	19 32 40.3	-0.2
	baz=278						
WVT	Waverly	8.00	92		Pn	19 32 40.3	-0.2
WVT	Waverly	8.00	92	P		19 32 40.2	
	baz=278						
Y22D	IRIS PASSCAL I	8.00	253	IAmb_Lg		19 35 09.1	
	comp=Z,229nm,0.9s						
PLAL	Pickwick Lake	8.04	100	Pn	Pn	19 32 41.4	+0.3
PLAL				IAmb_Lg		19 34 56.9	
	comp=Z,71nm,0.8s						
USIN	University of	8.08	79	IAmb_Lg		19 35 15.2	
	comp=Z,145nm,0.8s						
L42A	Oliver, Polo	8.09	48	Pn	Pn	19 32 42.1	+0.3
MNTX	Cornudas Mount	8.15	233	P	Pn	19 32 43.5	+0.9
	baz=49,SNR=5.4						
MNTX	Cornudas Mount	8.15	233	Pn	Pn	19 32 43.7	+1.0
MNTX				IAmb_Lg		19 35 10.0	
	comp=Z,87nm,1.0s						
MNTX	Cornudas Mount	8.15	233	P		19 32 43.6	
	baz=49,SNR=21						
146A	Union	8.26	118	IAmb_Lg		19 35 28.1	
	comp=Z,77nm,0.8s						
JFWS	Jewell Farm	8.36	41	P	Pn	19 32 45.2	-0.2
	baz=226						
JFWS	Jewell Farm	8.36	41	Pn	Pn	19 32 45.5	0.0
JFWS	Jewell Farm	8.36	41	P		19 32 45.2	
	baz=226,SNR=18						
P46A	Rosedale	8.73	68		Pn	19 32 50.4	-0.1
RSSD	Black Hills	8.73	329	P	Pn	19 32 52.0	+1.2
	baz=144						
RSSD	Black Hills	8.73	329	Pn	Pn	19 32 52.4	+1.6
RSSD				IAmb_Lg		19 35 39.3	
	comp=Z,129nm,1.0s						
RSSD	Black Hills	8.73	329	P		19 32 52.3	
	baz=144,SNR=8.8						
RWWY	Rawlins	8.82	306	IAmb_Lg		19 35 37.2	
	comp=Z,164nm,1.1s						
I40A	Norwalk	8.89	35	Pn	Pn	19 32 52.6	-0.2
I40A				IAmb_Lg		19 35 37.7	
	comp=Z,161nm,0.9s						
I40A	Norwalk	8.89	35	P		19 32 52.6	
	baz=220,SNR=9.4						
K22A	Casper	8.93	313		Pn	19 32 54.5	+1.0
K22A				IAmb_Lg		19 35 47.5	
	comp=Z,142nm,0.9s						
TX31	Lajitas Ar. Si	8.99	215		Pn	19 32 54.7	+0.5
TX32	Lajitas Array	8.99	215	Pn	Pn	19 32 54.6	+0.4
TXAR	Lajitas Array	8.99	215	Pn	Pn	19 32 54.6	+0.4
	comp=Z,1.2nm,0.3s,baz=32,slow=11,SNR=19						
TXAR				Lg	Lg	19 35 26.6	
	comp=Z,4.4nm,0.3s,baz=45,slow=30,SNR=6.8						
TXAR	Lajitas Array	8.99	215		Pn	19 32 54.4	+0.2
SFIN	Lafayette	9.04	64	IAmb_Lg		19 35 31.6	
	comp=Z,197nm,0.7s						
F33A	5 Mile Ranch,	9.07	6	Pn	Pn	19 32 54.5	-0.7
SPMN	Marine on St.	9.17	22	IAmb_Lg		19 35 37.8	
	comp=Z,83nm,0.8s						
WCI	Wyandotte Cave	9.18	78	P	Pn	19 32 57.7	+0.9
	baz=265						
WCI	Wyandotte Cave	9.18	78	Pn	Pn	19 32 58.4	+1.6
WCI				IAmb_Lg		19 35 41.8	
	comp=Z,132nm,0.8s						
K43A	Burlington	9.30	48	Pn	Pn	19 32 58.5	+0.1
121A	Cookes Peak, D	9.33	246	IAmb_Lg		19 35 50.3	
	comp=Z,75nm,0.9s						
F36A	Milaca	9.56	18	Pn	Pn	19 33 00.7	-1.2
U49A	Red Boiling Sp	9.60	88	Pn	Pn	19 33 03.2	+0.8
SWET	Sewanee	9.68	96	Pn	Pn	19 33 03.8	+0.2
I42A	Draeger Farm,	9.74	41	IAmb_Lg		19 36 02.1	
	comp=Z,106nm,0.7s						
E28A	Huff	9.99	348	IAmb_Lg		19 36 08.4	
	comp=Z,81nm,0.8s						
P48A	Milroy	10.03	71	Pn	Pn	19 33 07.1	-1.3
G40A	Rib Lake	10.16	32	Pn	Pn	19 33 08.3	-1.9
N47A	Urbana	10.21	63	Pn	Pn	19 33 09.8	-1.1
T50A	Nancy	10.31	85	Pn	Pn	19 33 13.6	+1.3
R50A	Paris	10.73	78		Pn	19 33 17.8	-0.1
CPCT	Cooper Cave	10.76	93		Pn	19 33 19.1	+0.7
V51A	Loudon	10.83	91		Pn	19 33 20.0	+0.6
PD31	Pinedale Array	10.87	307		Pn	19 33 20.6	+0.6
PDAR	Pinedale Array	10.87	307	Pn	Pn	19 33 20.7	+0.6
	comp=Z,0.4nm,0.3s,baz=123,slow=14,SNR=16						
PDAR				Lg	Lg	19 36 23.7	
	comp=Z,1.5nm,0.3s,baz=93,slow=33,SNR=3.8						
BW06	Boulder Array	10.87	307	Pn	Pn	19 33 20.4	+0.4
S51A	Beattyville	11.29	82		Pn	19 33 26.2	+0.5
S51A	Beattyville	11.29	82	P		19 33 25.9	
	baz=270,SNR=8.0						
S51A				P		19 33 25.9	
	baz=270,SNR=8.0						
TKL	Tuckaleechee C	11.32	92	Pn	Pn	19 33 25.5	-0.6
	comp=Z,1.1nm,0.3s,baz=215,slow=6.3,SNR=9.4						
TKL				Lg	Lg	19 36 30.8	
	comp=Z,2.8nm,0.3s,baz=19,slow=18,SNR=2.4						
TKL	Tuckaleechee C	11.32	92	Pn	Pn	19 33 25.9	-0.2
TZTN	Tazewell	11.38	87	Pn	Pn	19 33 26.9	0.0
Q51A	Peebles	11.56	75		Pn	19 33 28.8	-0.6
EYMN	Ely	12.02	20	P	Pn	19 33 32.8	-2.8
	baz=205						
M50A	Fremont	12.28	64		Pn	19 33 38.7	-0.4
Q52A	Bidwell	12.39	75	Pn	Pn	19 33 40.0	-0.7
E43A	Lone Tree Farm	12.45	37	Pn	Pn	19 33 39.3	-2.2
DGMT	Dagmar	12.57	340	P	Pn	19 33 41.7	-1.4
	baz=155						
GLMI	Grayling	12.72	47	P	Pn	19 33 43.2	-2.1
	baz=236						
S54A	Dingess, Beckl	13.10	81	Pn	Pn	19 33 50.2	-0.2
ULM	Lac du Bonnet	13.48	5	Pn	Pn	19 33 50.6	-4.9
	comp=Z,1.2nm,0.3s,baz=185,slow=12,SNR=11						
ULM				Sn	Sn	19 36 14.0	-11
	comp=Z,1.7nm,0.3s,baz=160,slow=16,SNR=4.1						
ULM				Lg	Lg	19 37 39.7	
	comp=Z,0.6nm,0.3s,baz=292,slow=19,SNR=2.0						
SADO	Sadowa	16.12	55	Lg	Lg	19 38 58.7	
	comp=Z,0.9nm,0.3s,baz=150,slow=20,SNR=2.2						
YKA	Yellowknife Ar	27.74	343	P	P	19 36 33.2	+0.7
	comp=Z,0.3nm,0.8s,baz=145,slow=10,SNR=3.9						
ILAR	Eielson Array	40.17	330	P	P	19 38 21.6	+1.5
	comp=Z,1.1nm,0.7s,baz=108,slow=7.1,SNR=16						
ARCES	ARCESS Array B	66.17	19	P	P	19 41 29.9	-1.4
	comp=Z,4.5nm,1.1s,baz=303,slow=8.2,SNR=1.5						

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*IDC **26** 19:48:03.6±0.8, 12.°32N×144.°54E, h0^{km}, mb3.9/12, mb1 4.1/12, mb1mx3.9/34, mbtmp3.9/12, MS3.6/2, Ms1 3.6/2, ms1mx2.9/41, Error ellipse: s-maj=30.7km s-min=17.5km az=91.0*

ISC 26 19:48:08.3±0.8**, 12.°3N**±0.°1×**144.°5E**±0.°2**, h30^{km}, n14, σ0.^{s}70**/13**, mb3.9**/12**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	15.17	195	LR	LR	19 57 10.8	
	comp=Z,132nm,19.1s,baz=276,slow=36						
WRA	Warramunga Arr	33.55	197	P	P	19 54 45.5	-0.1
	1.8nm,0.6s,baz=21,slow=9.9,SNR=22						
ASAR	Alice Springs	37.20	196	P	P	19 55 17.1	0.0
	1.6nm,0.6s,baz=18,slow=10,SNR=37						
STKA	Stephens Creek	44.00	184	P	P	19 56 12.8	-0.2
	0.9nm,0.7s,baz=351,slow=12,SNR=2.8						
CMAR	Chiang Mai Arr	44.25	284	P	P	19 56 16.2	+0.9
	0.9nm,0.5s,baz=81,slow=6.5,SNR=17						
SONM	Songino Array	47.58	326	P	P	19 56 41.3	-0.1
	0.5nm,0.5s,baz=141,slow=7.4,SNR=6.7						
MKAR	Makanchi Array	62.17	317	P	P	19 58 26.9	+0.1
	0.5nm,0.5s,baz=91,slow=8.6,SNR=18						
ZALV	Zalesovo Beam	62.46	325	P	P	19 58 28.3	-0.3
	0.5nm,0.5s,baz=111,slow=6.3,SNR=2.7						
ZALV				PcP	PcP	19 59 07.3	-0.4
	0.8nm,0.4s,baz=117,slow=3.9,SNR=4.2						
KDAK	Kodiak Island	65.37	32	LR	LR	20 23 02.2	
	comp=Z,77nm,20.4s,baz=282,slow=32						
ILAR	Eielson Array	69.90	25	P	P	19 59 15.5	-0.7
	0.4nm,0.7s,baz=260,slow=6.3,SNR=4.3						
YKA	Yellowknife Ar	84.19	27	P	P	20 00 37.5	+1.0
	0.2nm,0.5s,baz=289,slow=5.3,SNR=3.7						
NVAR	Mina Array Bea	88.03	51	P	P	20 00 56.9	+0.6
	0.4nm,0.3s,baz=279,slow=1.7,SNR=2.1						
ARCES	ARCESS Array B	88.20	342	P	P	20 00 56.2	0.0
	1.6nm,0.6s,baz=70,slow=7.8,SNR=4.6						
FINES	FINESS Array B	92.18	335	P	P	20 01 13.5	-1.4
	1.0nm,0.4s,baz=64,slow=4.3,SNR=19						

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*IDC **26** 19:58:37.1±0.8, 56.°75S×150.°54W, h0^{km}, mb4.1/6, mb1 4.3/6, mb1mx4.1/22, mbtmp4.1/6, MS3.6/3, Ms1 3.6/3, ms1mx3.3/15, Error ellipse: s-maj=41.4km s-min=21.3km az=12.0*

*NEIC **26** 19:58:38.1±1.4, 56.°7S±0.°3×150.°4W±0.°2, h10^{km}±1^{km}, mb4.4/3, Error ellipse: s-maj=44.8km s-min=19.4km az=11.0*

ISC 26 19:58:38.6±0.7**, 56.°7S**±0.°2×**150.°5W**±0.°2**, h10^{km}, n39, σ0.^{s}71**/23**, mb4.3**/6**, MS3.5**/3**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.46	201	LR	LR	20 11 32.5	
	comp=Z,170nm,18.3s,baz=55,slow=29						
RPZ	Rata Peaks	27.45	282	LR	LR	20 12 24.2	
	comp=Z,91nm,18.4s,baz=178,slow=30						
QSPA	South Pole Qui	33.41	180	P	P	20 05 17.5	+0.4
	3.0nm,0.8s,baz=80,slow=3.4,SNR=5.4						
QSPA	South Pole Qui	33.41	180	P	P	20 05 17.0	0.0
QSPA				IAmb	IAmb	20 05 19.1	
	comp=Z,10nm,1.4s						
PLCA	Paso Flores	51.99	108	P	P	20 07 47.0	-0.9
	comp=Z,2.3nm,1.0s,baz=161,slow=5.6,SNR=3.7						
PLCA	Paso Flores	51.99	108	P	P	20 07 47.3	-0.6
PLCA				IAmb	IAmb	20 07 49.7	
	comp=Z,8.4nm,1.3s						
STKA	Stephens Creek	52.07	268	P	P	20 07 49.5	+1.0
	comp=Z,2.4nm,0.9s,baz=167,slow=5.2,SNR=3.4						
STKA				LR	LR	20 25 58.9	
	comp=Z,41nm,19.6s,baz=196,slow=32						
STKA	Stephens Creek	52.07	268	P	P	20 07 49.1	+0.6
STKA				IAmb	IAmb	20 07 49.8	
	comp=Z,1.2nm,1.2s						
H03S2	Juan Fernandez	52.57	96	T	T	21 04 50.0	
	baz=219,slow=74,SNR=14						
H03S1	Juan Fernandez	52.58	96	T	T	21 04 49.7	
	baz=219,slow=74,SNR=13						
H03S3	Juan Fernandez	52.59	96	T	T	21 04 48.1	
	baz=219,slow=74,SNR=15						
H03N3	Juan Fernandez	52.86	96	T	T	21 05 06.9	
	baz=222,slow=72,SNR=20						
H03N2	Juan Fernandez	52.87	96	T	T	21 05 07.2	
	baz=222,slow=72,SNR=21						
H03N1	Juan Fernandez	52.88	96	T	T	21 05 07.0	
	baz=222,slow=72,SNR=21						
ASAR	Alice Springs	62.71	268	P	P	20 09 02.8	-0.8
	comp=Z,1.3nm,0.7s,baz=139,slow=6.3,SNR=18						
ASAR	Alice Springs	62.71	268	P	P	20 09 02.2	-1.4
H01W1	Cape Leeuwin H	64.36	245	T	T	21 19 12.5	
	baz=141,slow=76,SNR=6.7						
H01W2	Cape Leeuwin H	64.36	245	T	T	21 19 13.6	
	baz=141,slow=76,SNR=6.4						
H01W3	Cape Leeuwin H	64.37	245	T	T	21 19 17.6	
	baz=141,slow=76,SNR=6.6						
WRA	Warramunga Arr	65.45	271	P	P	20 09 20.7	-1.0
	comp=Z,0.6nm,0.8s,baz=145,slow=5.1,SNR=4.0						
CPUP	Villa Florida	70.06	108	P	P	20 09 51.0	+0.5
	comp=Z,3.3nm,0.9s,baz=223,slow=6.0,SNR=7.8						
H10S3	ASCENSION HYDR	105.15	134	T	T	22 10 41.2	
	baz=204,slow=74,SNR=28						
H10S2	ASCENSION HYDR	105.15	134	T	T	22 10 41.2	
	baz=16,slow=74,SNR=9.5						
H10N3	ASCENSION HYDR	106.22	134	T	T	22 12 26.5	
	baz=203,slow=75,SNR=8.8						
H10N1	ASCENSION HYDR	106.23	134	T	T	22 12 28.2	
	baz=203,slow=75,SNR=9.0						
H10N2	ASCENSION HYDR	106.24	134	T	T	22 12 23.2	
	baz=203,slow=75,SNR=7.4						
ILAR	Eielson Array	121.22	2	PKP	PKPdf	20 17 30.2	+0.1
	comp=Z,0.9nm,0.8s,baz=244,slow=1.6,SNR=8.2						
ILAR	Eielson Array	121.22	2		PKiKP	20 17 30.6	+0.4
YKA	Yellowknife Ar	122.12	19	PKP	PKiKP	20 17 32.6	+0.5
	comp=Z,0.1nm,0.4s,baz=186,slow=1.7,SNR=3.3						
SONM	Songino Array	134.51	293	PKP	PKiKP	20 17 57.7	+0.1
	comp=Z,0.4nm,0.9s,baz=145,slow=5.3,SNR=2.9						
RAYN	Ar Rayn	144.83	206		PKPab	20 18 14.7	+0.2
MK31	Makanchi Array	146.66	276		PKPdf	20 18 18.3	+0.4
MKAR	Makanchi Array	146.66	276	PKPbc	PKPbc	20 18 19.2	-0.4
	comp=Z,4.2nm,0.8s,baz=118,slow=4.7,SNR=48						
MKAR	Makanchi Array	146.66	276		PKPdf	20 18 18.5	+0.6
MAKZ	Makanchi	146.84	275		PKPbc	20 18 19.6	-0.5
ZALV	Zalesovo Beam	149.16	289	PKPbc	PKPbc	20 18 25.1	-0.8
	comp=Z,1.6nm,0.7s,baz=113,slow=4.0,SNR=9.9						
ZALV	Zalesovo Beam	149.16	289		PKPdf	20 18 22.7	+1.0
KKAR	Karatay Array	150.79	260		PKPbc	20 18 30.0	-0.3
KURK	Kurchatov	150.88	279		PKPbc	20 18 29.7	-0.5

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*IDC **26** 21:08:38.8±0.8, 56.°69S×150.°81W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx4.0/40, mbtmp4.0/5, MS3.5/2, Ms1 3.6/2, ms1mx3.1/23, Error ellipse: s-maj=44.6km s-min=24.2km az=17.0*

*NEIC **26** 21:08:40.6±0.4, 56.°70S±0.°06×150.°7W±0.°3, h10^{km}±1^{km}, mb4.4/8, Error ellipse: s-maj=24.4km s-min=7.1km az=107.0*

ISC 26 21:08:40.5±0.8**, 56.°7S**±0.°2×**150.°7W**±0.°1**, h10^{km}, n44, σ0.^{s}66**/24**, mb4.3**/8**, MS3.4**/4**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	26.48	201	LR	LR	21 21 47.4	
	comp=Z,91nm,19.8s,baz=65,slow=30						
TBI	Tubuai	33.30	2	*e*LR	LR	21 23 56.5	
	comp=Z,90nm,29.2s						
QSPA	South Pole Qui	33.47	180	P	P	21 15 19.3	-0.1
	1.2nm,0.2s,baz=87,slow=5.7,SNR=5.4						
QSPA	South Pole Qui	33.47	180	P	P	21 15 19.4	-0.1
QSPA				IAmb	IAmb	21 15 20.5	
	comp=Z,5.9nm,1.1s						
TVO	Taravao	38.84	2	*e*T	T	21 56 57.9	
	comp=Z,2.8nm,0.3s						
PAE	Paea	38.96	2	*e*T	T	21 57 06.0	
	comp=Z,2.4nm,0.3s						
PPT2	Papeete2	39.03	2	*e*LR	LR	21 26 34.9	
	comp=Z,86nm,24.8s						
PPT	Papeete	39.05	2	LR	LR	21 27 25.4	
	comp=Z,92nm,20.6s,baz=204,slow=29						
VAH	Vaihoa	41.43	4	*e*T	T	22 00 09.9	
	comp=Z,18nm,0.2s						
STKA	Stephens Creek	51.95	268	P	P	21 17 50.5	+1.1
PLCA	Paso Flores	52.13	108	P	P	21 17 51.2	+0.5
	comp=Z,2.4nm,1.0s,baz=178,slow=8.0,SNR=3.5						
PLCA	Paso Flores	52.13	108	P	P	21 17 51.0	+0.3
PLCA				IAmb	IAmb	21 18 03.2	
	comp=Z,11nm,1.4s						
H03S2	Juan Fernandez	52.70	96	T	T	22 14 58.3	
	baz=219,slow=74,SNR=8.8						
H03S1	Juan Fernandez	52.71	96	T	T	22 14 59.5	
	baz=219,slow=74,SNR=8.1						
H03S3	Juan Fernandez	52.72	96	T	T	22 14 57.9	
	baz=219,slow=74,SNR=9.4						
H03N3	Juan Fernandez	52.99	96	T	T	22 15 10.5	
	baz=222,slow=72,SNR=11						
H03N2	Juan Fernandez	53.00	96	T	T	22 15 08.2	
	baz=222,slow=72,SNR=16						
H03N1	Juan Fernandez	53.01	96	T	T	22 15 11.2	
	baz=222,slow=72,SNR=9.3						
ASAR	Alice Springs	62.59	268	P	P	21 19 04.4	-0.3
	comp=Z,1.0nm,0.6s,baz=135,slow=6.5,SNR=13						
ASAR	Alice Springs	62.59	268	P	P	21 19 04.1	-0.6
AS31	Alice Springs	62.59	268	P	P	21 19 04.7	0.0
AS31				IAmb	IAmb	21 19 16.5	
	comp=Z,1.3nm,1.2s						
H01W1	Cape Leeuwin H	64.27	245	T	T	22 29 15.8	
	baz=141,slow=74,SNR=3.8						
H01W2	Cape Leeuwin H	64.28	245	T	T	22 29 17.8	
	baz=141						
H01W3	Cape Leeuwin H	64.29	245	T	T	22 29 18.3	
	baz=141,slow=74,SNR=4.3						
WRA	Warramunga Arr	65.33	271	P	P	21 19 20.6	-2.1
	comp=Z,0.7nm,0.9s,baz=152,slow=5.5,SNR=2.3						
WRA	Warramunga Arr	65.33	271	P	P	21 19 23.2	+0.4
WB0	Warramunga Arr	65.44	271	P	P	21 19 24.1	+0.6
MNMC	Minye Minye	69.36	94	P	P	21 19 49.0	+0.4
MNMC				IAmb	IAmb	21 19 49.6	
	comp=Z,5.9nm,0.7s						
PB16	IPOC Station P	70.06	93	P	P	21 19 53.4	+0.2
PB16				IAmb	IAmb	21 19 54.6	
	comp=Z,1.6nm,0.8s						
CPUP	Villa Florida	70.19	108	P	P	21 19 52.8	-0.5
	comp=Z,2.1nm,0.8s,baz=191,slow=4.7,SNR=4.6						
H10N3	ASCENSION HYDR	106.36	134	T	T	23 23 51.3	
	baz=203,slow=75,SNR=5.6						
H10N1	ASCENSION HYDR	106.36	134	T	T	23 23 49.3	
	baz=203,slow=75,SNR=18						
H10N2	ASCENSION HYDR	106.38	134	T	T	23 23 52.2	
	baz=203,slow=75,SNR=11						
ILAR	Eielson Array	121.16	2	PKP	PKiKP	21 27 31.9	-0.1
	comp=Z,0.8nm,0.8s,baz=241,slow=1.5,SNR=9.5						
ILAR	Eielson Array	121.16	2		PKiKP	21 27 32.1	+0.1
RAYN	Ar Rayn	144.83	206	PKPdf	PKPbc	21 28 16.3	-0.2
MK31	Makanchi Array	146.53	276		PKPbc	21 28 21.0	-0.1
MKAR	Makanchi Array	146.53	276	PKPbc	PKPbc	21 28 20.9	-0.1
	comp=Z,3.9nm,0.8s,baz=116,slow=4.4,SNR=42						
MKAR	Makanchi Array	146.53	276		PKPbc	21 28 20.4	-0.7
MAKZ	Makanchi	146.71	276		PKPbc	21 28 21.2	-0.3
ZALV	Zalesovo Beam	149.02	289	PKPbc	PKPbc	21 28 26.6	-0.9
	comp=Z,1.5nm,0.7s,baz=120,slow=4.1,SNR=7.9						
ZALV	Zalesovo Beam	149.02	289		PKPbc	21 28 27.4	0.0
KURK	Kurchatov	150.74	279		PKiKP	21 28 31.8	-0.6
KURBB	Kurchatov Arra	150.74	279	PKPbc	PKPbc	21 28 31.4	-0.3
	comp=Z,2.2nm,0.8s,baz=118,slow=1.8,SNR=20						

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*IDC **26** 21:15:50.8±3.0, 33.°55S×178.°68W, h0^{km}, mb3.8/2, mb1 4.1/3, mb1mx3.7/41, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=71.4km s-min=35.8km az=119.0*

ISC 26 21:15:56.7±2.4**, 33.°7S**±0.°2×**178.°6W**±0.°3**, h50^{km}, n11, σ0.^{s}77**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	Tauwhareparae	5.28	211	P	Pn	21 17 13.7	+0.6
CNGZ	Carnagh Statio	5.45	208	P	Pn	21 17 16.0	+0.7
TKGZ	Te Karaka	5.56	211	P	Pn	21 17 17.0	+0.3
MWZ	Matawai	5.61	213	P	Pn	21 17 16.2	-1.3
OPRZ	Ohinepanea	5.74	222	P	Pn	21 17 20.1	+0.9
URZ	Urewera	5.75	216	Pn	Pn	21 17 18.9	-0.5
	4.8nm,0.3s,baz=272,slow=4.2,SNR=43						
URZ				Sn	Sn	21 18 24.3	+0.2
	2.7nm,0.3s,baz=221,slow=18,SNR=7.2						
URZ	Urewera	5.75	216	P	Pn	21 17 18.5	-0.9
RIGZ	Rimuhau	5.82	210	P	Pn	21 17 19.6	-0.8
ASAR	Alice Springs	42.56	271	P	P	21 23 47.9	+0.1
	0.9nm,0.7s,baz=109,slow=7.6,SNR=10.0						
WRA	Warramunga Arr	43.85	276	P	P	21 23 57.9	-0.4
	1.0nm,0.5s,baz=116,slow=8.1,SNR=6.1						
FINES	FINESS Array B	148.03	338	PKPbc	PKPbc	21 35 36.1	+0.3
	4.3nm,1.1s,baz=57,slow=5.1,SNR=7.8						

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*IDC **26** 21:20:29.6±0.9, 24.°61N×127.°77E, h0^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.8/46, mbtmp3.9/12, ML3.8/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/54, Error ellipse: s-maj=36.8km s-min=16.4km az=83.0*

*NEIC **26** 21:20:31.4±1.9, 24.°57N±0.°08×127.°71E±0.°09, h10^{km}±1^{km}, mb4.5/10, Error ellipse: s-maj=15.4km s-min=11.8km az=141.0*

*JMA **26** 21:20:33.0±0.2, 24.°70N×127.°60E, h66^{km}, M3.7*

*NIED **26** 21:20:33.1, 24.°70N×127.°60E, h66^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.01; $M_{\theta\theta}$2.54; $M_{\phi\phi}$2.47; $M_{r\theta}$-2.79; $M_{\theta\phi}$2.56; $M_{\phi r}$-1.47; Fault plane solution: $M_0$5.95000×10^{14} NP1:ϕ_s54.00000°, δ61.00000°, λ-81.00000°. NP2:ϕ_s217.00000°, δ30.00000°, λ-105.00000°.*

ISC 26 21:20:31.1±3.4**, 24.°61N**±0.°05×**127.°69E**±0.°04**, h12^{km}**±21^{km}**, n61, σ2.^{s}61**/81**, mb4.1**/14**, MS3.8**/4**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.54	3	P	Pb	21 20 57.7	-1.9
JJT3				S	Sn	21 21 15.9	-2.4
JKE	Kume jima 2	1.90	335	P	Pn	21 21 02.7	-0.7
JKE				S	Sn	21 21 23.5	-3.8
JNTH	Nagotoyohara	1.93	9	P	Pn	21 21 02.6	-1.2
JNTH				S	Sn	21 21 25.9	-2.1
JAGN	Aguni-jima	2.02	349	P	Pn	21 21 04.5	-0.5
JAGN				S	Sn	21 21 26.7	-3.5
JOGS	Gusukube	2.08	275	P	Pn	21 21 05.4	-0.5
JOGS				S	Sn	21 21 28.8	-3.0
JMJ2	Miyako jima3	2.15	274	P	Pn	21 21 06.3	-0.6
JMJ2				S	Sn	21 21 29.8	-3.8
JIKM	Ikemajima	2.24	279	P	Pn	21 21 07.5	-0.6
JIKM				S	Sn	21 21 32.8	-3.0
JOW	Kunigami	2.28	13	Pn	Pn	21 21 07.3	-1.4
	40nm,0.3s,baz=136,slow=25,SNR=323						
JOW				Sn	Sn	21 21 31.8	-4.9
	60nm,0.3s,baz=108,slow=29,SNR=27						
JOW				LR	LR	21 22 13.1	
	comp=Z,132nm,19.0s,baz=328,slow=46						
JOW	Kunigami	2.28	13	P	Pn	21 21 07.7	-1.0
JOW				S	Sn	21 21 32.3	-4.4
JIRB	Irabujima	2.30	276	P	Pn	21 21 07.9	-1.0
JIRB				S	Sn	21 21 33.2	-4.0
JIH	Iheya	2.43	6	P	Pn	21 21 10.8	+0.1
JIH				S	Sn	21 21 37.2	-3.3
JYRO	Yoronjima	2.50	16	P	Pn	21 21 11.1	-0.6
JYRO				S	Sn	21 21 37.3	-5.0
JTJ	Tarama	2.72	271	P	Pn	21 21 14.2	-0.5
JTJ				S	Sn	21 21 42.8	-4.7
JOKE	Okinoerabujima	2.86	16	P	Pn	21 21 16.1	-0.5
JOKE				*e*S	Sn	21 21 48.7	-2.3
JISG	Ishigakijimahi	3.08	270	P	Pn	21 21 18.3	-1.3
JISG				S	Sn	21 21 50.4	-5.9
JIJ	Ishigaki jima	3.24	266	P	Pn	21 21 20.8	-1.1
JIJ				S	Sn	21 21 54.0	-6.4
JTK	Tokunoshima	3.36	19	P	Pn	21 21 23.4	-0.2
JTK				S	Sn	21 21 58.4	-5.1
JKRS	Kuro-shima	3.38	265	P	Pn	21 21 23.3	-0.4
JKRS				S	Sn	21 21 59.7	-4.0
JMZ	Minamidaito 2	3.42	69	P	Pn	21 21 22.4	-1.9
JMZ				S	Sn	21 22 00.7	-4.1
JMZ	Minamidaito 2	3.42	69	Pn	Pn	21 21 22.6	-1.7
JKDJ	Kitadaitoujima	3.53	67	P	Pn	21 21 24.2	-1.6
JKDJ				S	Sn	21 22 03.3	-4.2
IRIF	Iriomote-Funau	3.62	267	P	Pn	21 21 26.7	-0.3
IRIF				S	Sn	21 22 05.2	-4.5
JAMN	Amaminishikomi	3.86	20	P	Pn	21 21 30.1	-0.3
JAMN				S	Sn	21 22 12.2	-3.5
JAM	Amami Oshima	4.16	24	P	Pn	21 21 34.3	-0.2
JAM				S	Sn	21 22 17.0	-6.1
JZK	Kikaishima	4.22	28	P	Pn	21 21 35.9	+0.5
JZK				S	Sn	21 22 21.3	-3.4
JTAJ	Takarajima	4.73	16	P	Pn	21 21 41.8	-0.5
JTAJ				S	Sn	21 22 31.6	-5.5
NACB	Ninganchiao	5.57	267	Pn	Pn	21 21 51.8	-2.2
YHNB	Yeheng	5.75	272	Pn	Pn	21 21 57.4	+1.0
YULB	Yu-li	5.97	260	Pn	Pn	21 21 56.5	-2.9
SSLB	Suanglung	6.20	264	Pn	Pn	21 22 00.9	-1.8
TPUB	Ta-pu	6.59	260	Pn	Pn	21 22 06.9	-1.0
JNU	Nakatsue	8.93	17	Pn	Pn	21 22 40.1	0.0
	1.0nm,0.3s,baz=313,slow=1.0,SNR=6.9						
JNU				LR	LR	21 25 51.4	
	comp=Z,55nm,18.7s,baz=353,slow=36						
JNU	Nakatsue	8.93	17	Pn	Pn	21 22 40.7	+0.6
KSRS	Korea Array	12.81	1	LR	LR	21 29 10.9	
	comp=Z,90nm,19.6s,baz=252,slow=41						
USRK	Ussuriysk Ar.	19.86	9	P	Pn	21 25 02.9	-0.8
	baz=186,slow=12,SNR=4.1						
USRK	Ussuriysk Ar.	19.86	9	P	Pn	21 25 05.6	+2.0
KLR	Kul'dur	24.79	6	P	P	21 25 53.0	+0.1
	0.8nm,0.6s,baz=121,slow=3.0,SNR=4.2						
SIJI	Sorong	25.56	172	LR	LR	21 35 30.8	
	comp=Z,47nm,18.9s,baz=105,slow=35						
SONM	Songino Array	28.67	329	P	P	21 26 28.6	+0.6
	0.4nm,0.4s,baz=140,slow=10,SNR=7.1						
LSA	Lhasa	32.82	287	P	P	21 27 06.9	+1.7
ZALV	Zalesovo Beam	43.26	324	P	P	21 28 33.4	+1.1
	1.3nm,0.5s,baz=112,slow=9.4,SNR=5.8						
WB0	Warramunga Arr	44.59	171	P	P	21 28 43.6	+0.3
WB0				IAmb	IAmb	21 28 44.5	
	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	44.75	171	P	P	21 28 45.2	+0.5
	comp=Z,2.9nm,0.6s,baz=353,slow=8.7,SNR=17						
WRA	Warramunga Arr	44.75	171	P	P	21 28 45.2	+0.5
WB2	Warramunga Arr	44.75	171	P	P	21 28 44.8	+0.1
WR0	Warramunga Arr	44.80	171	P	P	21 28 45.8	+0.8
WR0				IAmb	IAmb	21 28 46.4	
	comp=Z,3.3nm,0.7s						
KURK	Kurchatov	45.68	318	P	P	21 28 51.5	-0.2

KURBB	Kurchatov Arra	45.70	318	P	P	21 28 51.8	-0.1
	comp=Z,0.5nm,0.6s,baz=107,slow=9.4,SNR=6.3						
TIXI	Tiksi	47.08	1	P	P	21 29 05.4	+3.0
TIXI				IAmb	IAmb	21 29 05.6	
	comp=Z,2.5nm,0.5s						
ASAR	Alice Springs	48.36	172	P	P	21 29 12.4	-0.5
	comp=Z,0.9nm,0.8s,baz=356,slow=8.0,SNR=7.3						
KKAR	Karatay Array	49.96	306	P	P	21 29 26.7	+1.5
KBL	Kabul	51.34	295	P	P	21 29 37.1	+1.2
KBL				IAmb	IAmb	21 29 37.7	
	comp=Z,3.9nm,0.7s						
ABKAR	Akbulak array	57.41	314	P	P	21 30 20.5	+0.9
ABKAR				IAmb	IAmb	21 30 20.9	
	comp=Z,2.8nm,0.6s						
ABKAR	Akbulak array	57.41	314	P	P	21 30 20.4	+0.9
ARU	Arti	58.37	322	P	P	21 30 26.6	+0.4
SPITS	Spitsbergen Ar	70.31	348	LR	LR	22 04 53.6	
	comp=Z,85nm,18.3s,baz=310,slow=38						
FINES	FINESS Array B	74.03	331	P	P	21 32 07.6	+1.0
	comp=Z,2.6nm,0.9s,baz=67,slow=4.6,SNR=10.0						
AKASG	Malin Array Be	76.45	320	P	P	21 32 21.0	+0.3
	comp=Z,0.2nm,0.3s,baz=52,slow=6.0,SNR=1.5						
YKA	Yellowknife Ar	80.20	25	P	P	21 32 41.5	+0.2
	comp=Z,0.6nm,1.0s,baz=289,slow=5.6,SNR=3.9						
PPT	Papeete	90.83	109	LR	LR	22 09 24.4	
	comp=Z,24nm,20.1s,baz=209,slow=32						
ULM	Lac du Bonnet	96.08	26	LR	LR	22 20 25.0	
	comp=Z,85nm,18.2s,baz=92,slow=37						

REN ***26*** *21:29:11.3±0.9, 39°.396N±0°.008×119°.82W±0°.02, h6^{km}±2^{km}, ML2.4/10, ML2.2/36(NEIC), Error ellipse: s-maj=2.5km s-min=1.1km az=75.0*

NEIC 26 21:29:11.2±1.1**, 39°.40N**±0°.01×**119°.84W**±0°.02**, h7**^{km}±1^{km}**, Error ellipse: s-maj=2.2km s-min=1.3km az=59.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCNR	Virginia City	0.18	125		Pg	21 29 14.8	-0.2
VCNR				Sg	Sg	21 29 17.3	-0.3
VCNR				IAML		21 29 17.9	
	comp=E,2µm,0.3s						
PEAR	Peavine Mounta	0.23	336		Pg	21 29 16.3	+0.4
KBF	Kyburz Flat	0.31	290		Pg	21 29 17.8	+0.4
IND	Independence	0.35	276		Pg	21 29 18.7	+0.5
PNTR	Pine Nut	0.36	149	Pg	Pg	21 29 18.4	0.0
PNTR				Sg	Sg	21 29 23.7	+0.5
PNTR				IAML		21 29 24.3	
	comp=E,705nm,0.4s						
LOY	Loyalton	0.40	310		Pg	21 29 19.4	+0.2
RUBR	Rubicon Trail	0.42	215		Pg	21 29 19.8	+0.3
RUBR				IAML		21 29 27.2	
	comp=N,244nm,0.2s						
RUBR				IAML		21 29 27.2	
	comp=E,340nm,0.2s						
PAHR	Pah Rah Range	0.47	49	Pg	Pg	21 29 19.9	-0.4
PAHR				Sg	Sg	21 29 26.6	+0.1
PAHR				IAML		21 29 27.1	
	comp=N,165nm,0.3s						
PAHR				IAML		21 29 27.5	
	comp=E,142nm,0.3s						
GNO	Genoa	0.47	181		Pg	21 29 20.4	0.0
BFC	Buffalo Canyon	0.54	160		Pg	21 29 21.5	-0.2
WVA	Winnemucca Val	0.54	1		Pg	21 29 21.8	0.0
BEKR	Beckworth	0.61	319	Pg	Pg	21 29 23.0	-0.1
BEKR				Sg	Sg	21 29 31.5	+0.3
BEKR				IAML		21 29 32.0	
	comp=N,124nm,0.6s						
BEKR				IAML		21 29 33.2	
	comp=E,101nm,0.4s						
WAKR	Walker	0.95	161	Pg	Pg	21 29 29.1	-0.4
WAKR				Sg	Sg	21 29 41.9	+0.1
WAKR				IAML		21 29 42.5	
	comp=E,52nm,0.6s						
WAKR				IAML		21 29 42.6	
	comp=N,64nm,0.2s						
AFDM	Forest Hills D	0.99	243		Pg	21 29 30.0	-0.2
AFDM				IAML		21 29 43.8	
	comp=N,69nm,0.2s						
AFDM				IAML		21 29 46.6	
	comp=E,67nm,0.3s						
RYN	Ryan	1.28	126		Pn	21 29 35.1	-0.5
RYN				Sg	Sg	21 29 51.7	-0.8
RYN				IAML		21 29 55.3	
	comp=E,26nm,0.4s						
RYN				IAML		21 29 57.3	
	comp=N,31nm,0.3s						
ORV	Oroville	1.29	277	Pn	Pn	21 29 35.1	-0.6
ORV				IAML		21 29 52.7	
	comp=N,43nm,0.2s						
CMB	Columbia Colle	1.43	198	Pn	Pn	21 29 37.2	-0.4
NVAR	Mina Array Bea	1.54	128	Pn	Pn	21 29 38.9	-0.4
LHV	Little Huntoon	1.55	137	Pn	Pb	21 29 39.9	-0.3
LHV				IAML		21 30 02.2	
	comp=E,27nm,0.6s						
LHV				IAML		21 30 06.5	
	comp=N,26nm,0.6s						
NV11	Mina Array Sit	1.63	126	Pn	Pn	21 29 40.7	+0.2
MDPB	Devils Postpil	1.86	161		Pb	21 29 45.6	-0.1
OMMB	Old Mammoth Mi	1.90	159		Pn	21 29 44.2	-0.2
K05A	Summer Lake	3.42	347	Pg	Pb	21 30 14.0	+1.8
I07A	Izee	4.69	3	Pn	Pn	21 30 21.1	-1.3

IDC 26 21:44:17.9±1.8**, 54°.21S**×**136°.42W, h0**^{km}**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.9**/31**, mbtmp4.0**/4**, Error ellipse: s-maj=63.8km s-min=31.4km az=9.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	35.96	180	P	P	21 51 19.8	-0.2
	1.3nm,0.6s,baz=90,slow=7.1,SNR=2.0						
H03S2	Juan Fernandez	44.66	87	T	T	22 39 53.7	
	baz=222,slow=74,SNR=12						
H03S1	Juan Fernandez	44.66	87	T	T	22 39 57.6	
	baz=222,slow=74,SNR=8.2						
H03S3	Juan Fernandez	44.67	87	T	T	22 39 55.9	
	baz=222,slow=74,SNR=12						
PLCA	Paso Flores	44.88	101	P	P	21 52 33.9	-0.1
	1.9nm,0.9s,baz=236,slow=7.3,SNR=3.1						
H03N3	Juan Fernandez	44.93	87	T	T	22 40 12.8	
	baz=226,slow=72,SNR=15						
H03N2	Juan Fernandez	44.94	87	T	T	22 40 11.3	
	baz=226,slow=72,SNR=19						
H03N1	Juan Fernandez	44.95	87	T	T	22 40 11.7	
	baz=226,slow=72,SNR=14						
ASAR	Alice Springs	70.97	256	P	P	21 55 37.9	+0.6
	1.7nm,0.9s,baz=134,slow=6.2,SNR=11						
WRA	Warramunga Arr	73.64	259	P	P	21 55 52.7	-0.6
	1.5nm,0.9s,baz=146,slow=5.5,SNR=8.8						

TUL ***26*** *21:45:13.9±1.2, 35°.81N±0°.02×97°.42W±0°.04, h6^{km}±6^{km}, ML3.2, mb_Lg3.2/64(NEIC), Error ellipse: s-maj=5.0km s-min=2.6km az=72.0*

NEIC ***26*** *21:45:14.1±1.5, 35°.83N±0°.02×97°.40W±0°.04, h7^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=2.7km az=75.0*

IDC ***26*** *21:45:15.1±2.4, 35°.88N×97°.68W, h0^{km}, mb3.1/1, mb1 3.5/3, mb1mx3.2/60, mbtmp3.1/3, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=30.1km s-min=16.2km az=93.0*

ISC 26 21:45:14.0±1.0**, 35°.82N**±0°.03×**97°.40W**±0°.03**, h4**^{km}±8^{km}**, n79,** σ**0^{s}.87**/61**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.05	246		Pg	21 45 15.2	0.0
OK029				Sg	Sg	21 45 16.0	-0.1
BCOK	Bluff Creek, N	0.24	227		Pg	21 45 18.4	-0.2
BCOK				Sg	Sg	21 45 21.0	-0.7
OK025	Westminster Rd	0.24	169		Pg	21 45 18.9	+0.2
OKCFA	Oklahoma City	0.40	186		Pg	21 45 21.8	0.0
OKCSW	OKLAHOMA CITY	0.41	185		Pg	21 45 21.9	-0.1
OK031	S. Brethren Rd	0.47	73		Pg	21 45 23.5	+0.4
OK030	Cody Creek RV	0.51	77		Pg	21 45 24.2	+0.4
OK030				Sg	Sg	21 45 31.0	+0.6
FNO	Franklin	0.56	180		Pg	21 45 24.6	-0.2
QUOK	Quay	0.66	57		Pg	21 45 27.0	+0.3
W35A	Tecumseh	0.79	147		Pg	21 45 28.6	-0.5
CROK	Carrier	0.83	325		Pg	21 45 29.7	-0.3
KAN13	South Haven SW	1.20	357		Pg	21 45 36.5	-0.5
KAN14	Manchester OK	1.23	338		Pg	21 45 36.6	-0.9
X34A	Smith Ranch, M	1.27	197		Pn	21 45 37.5	-1.0
TUL1	Leonard	1.31	85	Pn	Pn	21 45 37.6	-1.4
T35A	Sooner Cattle	1.31	33		Pn	21 45 38.2	-0.9
KAN01	Argonia South	1.36	348		Pn	21 45 39.2	-0.7
U32A	Winter Ranch,	1.42	294		Pn	21 45 39.5	-1.1
KAN10	Anthony SW Sta	1.42	337		Pn	21 45 40.0	-0.7
KAN08	Anthony NE Sta	1.48	342		Pn	21 45 41.3	-0.2
KS21	Milan North St	1.48	352	IAmb_Lg		21 46 02.2	
	comp=Z,140nm,0.9s						
KAN12	Harper NE Stat	1.55	342		Pb	21 45 42.8	-0.6
WMOK	Wichita Mounta	1.56	227		Pn	21 45 41.8	-0.8
X37A	Clayton	2.06	126	Pn	Pn	21 45 49.3	-0.1
X37A				IAmb_Lg		21 46 24.6	
	comp=Z,148nm,1.0s						
Z35A	Perchaven, San	2.48	177	Pn	Pn	21 45 55.0	-0.3
U38A	Gravette	2.51	75		Pn	21 45 56.1	+0.5
U38A				IAmb_Lg		21 46 38.1	
	comp=Z,78nm,0.7s						
R32A	Long Quarter,	2.81	338	Pn	Pn	21 46 01.5	+1.8
HHAR	Hobbs	2.84	80	Pn	Pn	21 46 00.9	+0.8
HHAR				IAmb_Lg		21 46 52.1	
	comp=Z,52nm,0.7s						
W39A	Magazine	3.01	101		Pn	21 46 02.2	-0.3
KSU1	Kansas State U	3.34	11	Pn	Pn	21 46 07.4	+0.4
MIAR	Mount Ida	3.38	111	Pn	Pn	21 46 08.3	+0.8
CBKS	Cedar Bluff	3.53	329	Pn	Pn	21 46 11.3	+1.6
CBKS				IAmb_Lg		21 47 11.8	
	comp=Z,98nm,0.9s						
AMTX	Amarillo	3.62	256	Pn	Pn	21 46 12.5	+1.4
AMTX				IAmb_Lg		21 47 16.4	
	comp=Z,49nm,0.7s						
ABTX	Abilene, Hawle	3.69	211	Pn	Pn	21 46 11.7	-0.2
ABTX				IAmb_Lg		21 47 12.7	
	comp=Z,46nm,0.8s						
U40A	Yellville	3.72	80	Pn	Pn	21 46 12.3	0.0
U40A				IAmb_Lg		21 47 13.7	
	comp=Z,94nm,0.8s						
S39A	Bolivar	3.77	59	Pn	Pn	21 46 12.9	0.0
WHTX	Lake Whitney,	3.82	181	Pn	Pn	21 46 13.8	+0.2
X40A	Basin Creek Fa	3.97	108	Pn	Pn	21 46 16.6	+0.9
X40A				IAmb_Lg		21 47 28.9	
	comp=Z,59nm,0.8s						
WLAR	White Oak Lake	4.12	120	IAmb_Lg		21 47 35.2	
	comp=Z,37nm,0.7s						
WHAR	Wooly Hollow	4.20	96	Pn	Pn	21 46 19.1	+0.3
WHAR				IAmb_Lg		21 47 37.2	
	comp=Z,59nm,0.9s						
UALR	University of	4.26	103	IAmb_Lg		21 47 38.8	
	comp=Z,55nm,0.8s						
FCAR	Ozark Folk Cen	4.28	87	Pn	Pn	21 46 20.9	+0.9
FCAR				IAmb_Lg		21 47 39.6	
	comp=Z,54nm,0.7s						
MGMO	Mountain Grove	4.34	71	IAmb_Lg		21 47 33.1	
	comp=Z,54nm,0.8s						
R40A	Maddies Statio	4.79	57	Pn	Pn	21 46 26.4	-0.6
R40A				IAmb_Lg		21 47 54.1	
	comp=Z,47nm,0.9s						
MSTX	Muleshoe	4.79	249	Pn	Pn	21 46 27.3	+0.3
MSTX				IAmb_Lg		21 47 51.8	
	comp=Z,34nm,1.0s						
P38A	Dawn	4.88	38	IAmb_Lg		21 48 00.3	
	comp=Z,40nm,0.9s						
435B	Jarrell	5.02	182	IAmb_Lg		21 47 52.8	
	comp=Z,60nm,0.8s						
LCAR	Lake Charles	5.07	85	IAmb_Lg		21 48 03.6	
	comp=Z,51nm,0.8s						
N35A	Tabor	5.22	15	Pn	Pn	21 46 32.5	-0.3
KSCO	Kaye Shedlock'	5.24	309	Pn	Pn	21 46 33.5	+0.1
CCM	Cathedral Cave	5.41	64	IAmb_Lg		21 48 14.4	
	comp=Z,26nm,0.7s						
BGNE	Belgrade	5.61	354	IAmb_Lg		21 48 21.2	
	comp=Z,68nm,0.8s						
P40A	Paris	5.63	47	IAmb_Lg		21 48 19.4	
	comp=Z,34nm,0.8s						
PBMO	Poplar Bluff	5.71	78	IAmb_Lg		21 48 29.7	
	comp=Z,44nm,0.8s						
OGNE	Ogallala	6.28	326	Pn	Pn	21 46 49.4	+1.8
OGNE				IAmb_Lg		21 48 36.9	
	comp=Z,26nm,0.8s						
OXF	Oxford	6.67	99	IAmb_Lg		21 48 53.0	
	comp=Z,47nm,1.0s						
SDCO	Great Sand Dun	6.78	289	Pn	Pn	21 46 55.9	+1.3
S44A	Carbondale	6.80	72	IAmb_Lg		21 48 49.3	
	comp=Z,57nm,1.1s						
N41A	Harden Midland	7.09	45	IAmb_Lg		21 49 04.1	
	comp=Z,42nm,0.9s						
P43A	Skaggs, Pawnee	7.31	56	IAmb_Lg		21 49 17.6	
	comp=Z,42nm,0.7s						
ANMO	Albuquerque	7.45	266	Pg	Pb	21 47 26.3	+2.3
	comp=Z,0.3nm,0.3s,baz=84,slow=14,SNR=2.4						
ANMO				Lg	Lg	21 49 05.5	
	comp=Z,0.7nm,0.3s,baz=346,slow=18,SNR=3.5						
ISCO	Idaho Springs	7.62	304	Pn	Pn	21 47 06.1	0.0
K38A	Parkersburg	7.71	26	IAmb_Lg		21 49 38.7	
	comp=Z,53nm,0.8s						
MNTX	Cornudas Mount	7.82	241	Pn	Pn	21 47 09.2	+0.7
ECSD	EROS Data Cent	7.93	4	Pn	Pn	21 47 08.4	-1.7
HDIL	Hopedale	7.94	51	Pn	Pn	21 47 11.7	+1.5
TX31	Lajitas Ar. Si	8.35	221	Pn	Pn	21 47 15.2	-0.9
TX32	Lajitas Array	8.35	221	Pn	Pn	21 47 15.4	-0.6
TXAR	Lajitas Array	8.35	221	Pn	Pn	21 47 14.3	-1.7
	comp=Z,0.1nm,0.3s,baz=41,slow=12,SNR=7.0						
TXAR				Lg	Lg	21 49 32.0	
	comp=Z,0.9nm,0.3s,baz=44,slow=25,SNR=6.8						
TXAR	Lajitas Array	8.35	221	Pn	Pn	21 47 15.3	-0.7
PHWY	Pilot Hill	8.36	313	Pn	Pn	21 47 16.6	+0.4
L42A	Oliver, Polo	8.62	42	Pn	Pn	21 47 19.0	-0.6
L42A				IAmb_Lg		21 49 50.7	
	comp=Z,32nm,1.0s						
I37A	Lemond, Waseca	8.74	19	IAmb_Lg		21 50 13.9	
	comp=Z,28nm,0.9s						
BLO	Bloomington	9.27	66	IAmb_Lg		21 50 10.6	
	comp=Z,33nm,0.8s						
TKL	Tuckaleechee C	11.07	87	Lg	Lg	21 51 01.3	
	comp=Z,0.5nm,0.3s,baz=356,slow=17,SNR=4.3						
PDAR	Pinedale Array	11.70	310	Pn	Pn	21 48 02.1	+0.2
	comp=Z,0.2nm,0.3s,baz=124,slow=13,SNR=5.4						
PDAR				Lg	Lg	21 51 10.8	
	comp=Z,0.1nm,0.3s,baz=119,slow=19,SNR=3.5						
ULM	Lac du Bonnet	14.47	4	Lg	Lg	21 52 40.3	
	comp=Z,0.2nm,0.3s,baz=248,slow=19,SNR=2.7						
NVAR	Mina Array Bea	16.88	285	LR	LR	21 55 42.6	
	comp=Z,94nm,18.1s,baz=351,slow=38						
ILAR	Eielson Array	41.18	330	P	P	21 52 60.0	+0.7
	comp=Z,0.2nm,0.7s,baz=105,slow=6.6,SNR=4.3						

REN ***26*** *21:57:10.9±1.2, 39°.39N±0°.01×119°.81W±0°.02, h7^{km}±3^{km}, ML2.6/10, ML2.4/42(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=45.0*

NEIC 26 21:57:11.0±1.1**, 39°.42N**±0°.01×**119°.81W**±0°.02**, h6**^{km}±4^{km}**, Error ellipse: s-maj=2.8km s-min=1.2km az=46.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCNR	Virginia City	0.18	135		Pg	21 57 14.5	-0.1
VCNR				Sg	Sg	21 57 16.9	0.0
PEAR	Peavine Mounta	0.22	328		Pg	21 57 16.0	+0.7
KBF	Kyburz Flat	0.32	286		Pg	21 57 17.5	+0.2
PNTR	Pine Nut	0.37	153		Pg	21 57 18.1	-0.2
PNTR				Sg	Sg	21 57 23.4	+0.3
IND	Independence	0.37	272		Pg	21 57 18.4	+0.1
LOY	Loyalton	0.41	306		Pg	21 57 19.1	+0.2
PAHR	Pah Rah Range	0.44	49		Pg	21 57 19.8	+0.3
PAHR				IAML		21 57 27.2	
	comp=E,342nm,0.3s						
PAHR				IAML		21 57 27.3	
	comp=N,328nm,0.1s						
RUBR	Rubicon Trail	0.46	216		Pg	21 57 19.5	-0.3
RUBR				Sg	Sg	21 57 25.8	+0.1
GNO	Genoa	0.49	184		Pg	21 57 20.1	-0.4
BFC	Buffalo Canyon	0.55	163		Pg	21 57 21.1	-0.4
BEKR	Beckworth	0.61	317		Pg	21 57 22.8	0.0
BEKR				IAML		21 57 31.7	
	comp=N,272nm,0.6s						
BEKR				IAML		21 57 32.1	
	comp=E,243nm,0.5s						
BMRR	Black Mountain	0.78	332		Pg	21 57 26.1	+0.1
WAKR	Walker	0.96	162		Pg	21 57 28.8	-0.6
WAKR				IAML		21 57 42.1	
	comp=E,107nm,0.5s						
WAKR				IAML		21 57 42.3	
	comp=N,134nm,0.2s						
AFDM	Forest Hills D	1.02	243		Pg	21 57 29.7	-0.8
AFDM				IAML		21 57 43.5	
	comp=N,153nm,0.2s						
AFDM				IAML		21 57 46.3	
	comp=E,157nm,0.3s						
RYN	Ryan	1.28	128		Pg	21 57 34.7	-0.8
RYN				IAML		21 57 55.0	
	comp=E,67nm,0.4s						
RYN				IAML		21 57 55.7	
	comp=N,81nm,0.2s						
ORV	Oroville	1.31	276		Pn	21 57 34.8	-1.1
ORV				IAML		21 57 52.4	
	comp=N,80nm,0.2s						
CMB	Columbia Colle	1.46	198	Pn	Pn	21 57 36.8	-1.1
NVAR	Mina Array Bea	1.54	130	Pn	Pn	21 57 38.7	-0.4
LHV	Little Huntoon	1.55	138	Pn	Pn	21 57 39.6	+0.4
LHV				IAML		21 58 01.9	
	comp=E,65nm,0.7s						
LHV				IAML		21 58 06.3	
	comp=N,71nm,0.6s						
NV11	Mina Array Sit	1.63	127	Pn	Pn	21 57 39.8	-0.5
MDPB	Devils Postpil	1.88	162		Pb	21 57 45.2	-0.7
MDPB				IAML		21 58 11.5	
	comp=E,27nm,0.7s						
OMMB	Old Mammoth Mi	1.92	160		Pb	21 57 46.0	-0.4
WDC	Whiskeytown Da	2.39	300		Pn	21 57 51.5	+0.7
MOD	Modoc Plateau	2.51	352	Pg	Pb	21 57 56.4	-0.1
MOD				IAML		21 58 32.0	
	comp=E,19nm,3.6s						
MOD				IAML		21 58 41.6	
	comp=N,19nm,3.6s						
WVOR	Wild Horse Val	3.14	16	Pg	Pb	21 58 08.5	+1.2
WVOR				IAML		21 58 57.9	
	comp=N,11nm,3.3s						
WVOR				IAML		21 59 07.6	
	comp=N,8.5nm,4.2s						
R11A	Troy Canyon, C	3.47	107	Pn	Pn	21 58 06.5	+0.8
R11A				IAML		21 59 01.6	
	comp=E,5.4nm,3.7s						
ELK	Elko	3.75	68	Pn	Pn	21 58 08.8	-0.8
ELK				IAML		21 59 11.1	
	comp=E,5.7nm,0.7s						
PSUT	Pine Spring	4.73	99	Pg	Pg	21 58 40.7	-0.8

IDC ***26*** *22:44:47.5±0.9, 41°.36N×117°.22W, h0^{km}, mb2.7/1, mb1 3.2/5, mb1mx3.1/32, mbtmp2.9/5, ML2.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/11, Error ellipse: s-maj=9.7km s-min=5.9km az=179.0*

NEIC ***26*** *22:44:49.4±1.1, 41°.21N±0°.05×117°.21W±0°.02, h0^{km}±2^{km}, ML2.6/48, Error ellipse: s-maj=7.9km s-min=3.0km az=192.0*

ISC 26 22:44:49.0±0.9**, 41°.22N**±0°.04×**117°.20W**±0°.04**, h0**^{km}**, n32,** σ**0^{s}.98**/35**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELK	Elko	1.56	107	Pg	Pn	22 45 17.1	-0.9
	3.3nm,0.3s,baz=293,slow=11,SNR=59						
ELK				Lg	Lg	22 45 39.0	
	4.5nm,0.3s,baz=202,slow=21,SNR=15						
ELK	Elko	1.56	107	Pn	Pn	22 45 17.2	-0.9
ELK				Sn	Sn	22 45 39.9	+0.7
WVOR	Wild Horse Val	1.62	319		Pn	22 45 18.4	-0.5
WVOR				Sn	Sg	22 45 41.4	+0.3
PAHR	Pah Rah Range	2.25	228	Pn	Pn	22 45 26.9	-0.7
MFID	Camas Ranch	2.42	24	Pn	Pn	22 45 30.0	+0.2
MFID				IAML		22 46 11.3	
	35nm,0.7s						
MFID				IAML		22 46 11.4	
	31nm,0.7s						
MOD	Modoc Plateau	2.43	287	Pn	Pn	22 45 29.9	-0.1
MOD				IAML		22 46 10.2	
	comp=E,33nm,0.8s						
MOD				IAML		22 46 22.3	
	comp=N,26nm,2.0s						
BEKR	Beckworth	2.77	242	Pn	Pn	22 45 34.4	-0.3
BEKR				IAML		22 46 20.3	
	comp=E,18nm,0.7s						
RYN	Ryan	2.79	202	Pn	Pn	22 45 34.7	-0.3
RYN				IAML		22 46 22.5	
	comp=E,26nm,1.1s						
RYN				IAML		22 46 26.7	
	comp=N,30nm,0.9s						
PNTR	Pine Nut	2.82	222	Pn	Pn	22 45 35.2	-0.3
NV11	Mina Array Sit	2.88	195	Pn	Pn	22 45 36.1	-0.2
NV11				IAML		22 46 26.9	
	comp=N,16nm,0.8s						
NV11				IAML		22 46 30.2	
	comp=E,17nm,3.9s						
NVAR	Mina Array Bea	2.92	197	Pn	Pn	22 45 36.9	+0.1
	comp=E,0.8nm,0.3s,baz=14,slow=12,SNR=5.0						
NVAR				Pg	Pb	22 45 43.1	+1.1
	comp=E,3.0nm,0.3s,baz=238,slow=22,SNR=12						
NVAR				Lg	Lg	22 46 23.2	
	comp=E,3.0nm,0.3s,baz=11,slow=24,SNR=2.3						
NVAR	Mina Array Bea	2.92	197	Pn	Pn	22 45 37.3	+0.5
R11A	Troy Canyon, C	3.13	156	Pn	Pn	22 45 40.0	+0.3
LHV	Little Huntoon	3.13	199	Pn	Pn	22 45 40.6	+1.0
K05A	Summer Lake	3.14	300	Pn	Pn	22 45 40.8	+0.9
BGU	Big Grassy Mou	3.16	94	Pn	Pn	22 45 39.8	-0.3
WAKR	Walker	3.22	213		Pn	22 45 40.9	0.0
WAKR				IAML		22 46 45.6	
	comp=N,14nm,3.6s						
WAKR				IAML		22 46 47.2	
	comp=E,13nm,2.9s						
I07A	Izee	3.33	330	Pn	Pn	22 45 43.4	+1.0
I07A				IAML		22 46 38.0	
	comp=N,19nm,4.3s						
I07A				IAML		22 46 45.8	
	comp=E,12nm,1.0s						
HVU	Hansel Valley	3.37	79	Pn	Pn	22 45 43.6	+0.7
DUG	Dugway, Tooele	3.49	106	Pn	Pn	22 45 44.6	0.0
DUG				IAML		22 46 48.0	
	comp=E,13nm,4.2s						
DUG				IAML		22 46 56.2	
	comp=E,13nm,3.0s						
SPUT	South Promonto	3.58	87	Pn	Pn	22 45 46.6	+0.7
ORV	Oroville	3.69	245	Pn	Pn	22 45 47.0	-0.2
ORV				IAML		22 46 46.7	
	comp=N,7.7nm,4.1s						
ORV				IAML		22 46 51.9	
	comp=E,7.6nm,2.4s						
PSUT	Pine Spring	3.72	135		Pn	22 45 48.9	+1.0
BCYI	Bear Canyon	4.16	41	Pn	Pn	22 45 57.1	+3.2
YBH	Yreka Blue Hor	4.17	279	Pn	Pn	22 45 52.8	-1.2
	comp=E,0.2nm,0.3s,baz=96,slow=9.3,SNR=4.2						
YBH				Lg	Lg	22 46 59.1	
	comp=E,0.2nm,0.3s,baz=210,slow=9.6,SNR=1.8						
YBH	Yreka Blue Hor	4.17	279	Pn	Pn	22 45 54.2	+0.2
YBH				IAML		22 47 04.2	
	comp=N,9.2nm,5.0s						
MSU	Marysvale	4.71	123	Pn	Pn	22 46 03.2	+1.7
MCMT	McKenzie Canyo	4.81	40		Pn	22 46 04.0	+1.2
PDAR	Pinedale Array	5.90	72	Pn	Pn	22 46 16.8	-1.0
	comp=N,0.1nm,0.3s,baz=234,slow=13,SNR=2.4						
PDAR				Pg	Pb	22 46 31.3	-1.5
	comp=N,0.0nm,0.3s,baz=259,slow=13,SNR=5.0						
BBB	Bella Bella	13.26	329	LR	LR	22 53 25.7	
	comp=N,123nm,19.1s,baz=150,slow=40						
ULM	Lac du Bonnet	17.36	51	P	Pn	22 48 51.9	-0.5
	comp=N,0.2nm,0.3s,baz=252,slow=6.4,SNR=1.5						
YKA	Yellowknife Ar	21.36	3	P	P	22 49 36.4	-1.1
	comp=N,0.3nm,0.7s,baz=180,slow=10,SNR=7.4						

WEL 26 22:46:13.7, 40°S±3°×**17°7E**±°**, h27**^{km}±4^{km}**, M2.1**/14**, ML2.3**/14**, MLv2.1**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=154.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPHZ	Waipukurau	0.12	203	P	Pb	22 46 19.3	+0.5
PNHZ	Pukenui	0.24	280	P	Pb	22 46 20.4	+0.3
PXZ	Pawanui	0.29	106	P	Pb	22 46 21.0	+0.3
KRHZ	Kereru	0.33	342	P	Pb	22 46 21.7	+0.4
KAHZ	Kahuranaki	0.33	61	P	Pb	22 46 21.9	+0.6
PRHZ	Porangahau	0.33	162	P	Pb	22 46 20.8	-0.6
TSZ	Takapari Road	0.43	256	P	Pb	22 46 22.0	-0.9
DVHZ	Dannevirke	0.43	217	P	Pb	22 46 21.6	-1.3
MCHZ	McNeill Hill	0.53	16	P	Pn	22 46 28.4	+2.8
KWHZ	Kaweka Forest	0.53	353	P	Pb	22 46 24.5	-0.1
BHHZ	Black Hill Sta	0.57	324	P	Pb	22 46 24.8	-0.5
MOVZ	Moawhango	0.80	313	P	Pb	22 46 28.3	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WNVZ	Wahianoa	0.94	312	P	Pn	22 46 30.6	-0.7
TUVZ	Tukino	0.95	316	P	Pn	22 46 31.0	-0.5
MTVZ	Mangateitei	0.98	305	P	Pn	22 46 31.2	-0.6
ETVZ	East Tongariro	1.02	323	P	Pn	22 46 31.8	-0.6
OTVZ	Oturere	1.02	320	P	Pn	22 46 32.0	-0.5
TMVZ	Te Maari	1.04	323	P	Pn	22 46 31.9	-0.8
NGZ	Ngauruhoe	1.04	318	P	Pn	22 46 32.0	-0.7

WEL 26 22:46:19.2, 38˚S±4˚×17˚6E±˚, h193^{km}±6^{km}, M3.1/33,
MLv3.1/33, Error ellipse: s-maj=0.0km s-min=0.0km
az=149.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.93	105	P	Pn	22 46 47.2	-0.5
URZ	Urewera	0.93	105	P	Pn	22 46 47.1	-0.5
URZ				S	Sn	22 47 08.1	-1.6
RTZ	Ruatahuna	0.99	127	P	Pn	22 46 47.8	-0.4
RTZ				S	Sn	22 47 09.9	-0.8
HIZ	Hauiti	1.01	241	P	Pn	22 46 48.6	+0.4
HIZ	Hauiti	1.01	241	P	Pn	22 46 48.6	+0.4
MTHZ	Maungataniwha	1.07	141	P	Pn	22 46 48.7	0.0
MTHZ				S	Sn	22 47 10.4	-1.3
MKAZ	Moumakai	1.12	325	P	Pn	22 46 49.2	+0.1
TWVZ	Taurewa	1.12	202	P	Pn	22 46 49.3	+0.1
WTVZ	West Tongariro	1.13	195	P	Pn	22 46 49.3	+0.1
BKZ	Black Stump Fm	1.21	161	P	Pn	22 46 49.6	-0.2
BKZ				S	Sn	22 47 11.5	-2.2
RAHZ	Arahi	1.25	136	P	Pn	22 46 50.5	+0.4
RAHZ				S	Sn	22 47 13.3	-0.8
MWZ	Matawai	1.26	105	P	Pn	22 46 50.1	-0.1
FWVZ	Far West T-bar	1.27	195	P	Pn	22 46 50.8	+0.3
RUGZ	Raukumara Rang	1.35	88	P	Pn	22 46 50.0	-1.0
PKVZ	Pokaka	1.35	201	P	Pn	22 46 51.1	+0.1
WIAZ	Waiheke Island	1.40	331	P	Pn	22 46 51.4	0.0
VRZ	Vera Road	1.45	221	P	Pn	22 46 52.4	+0.6
HAZ	Te Kaha	1.46	80	P	Pn	22 46 51.5	-0.3
RIGZ	Rimuhau	1.56	116	P	Pn	22 46 52.9	+0.1
RIGZ				S	Sn	22 47 17.7	-1.3
TWGZ	Tauwhareparae	1.59	96	P	Pn	22 46 53.3	+0.2
KNZ	Kokohu	1.66	127	P	Pn	22 46 53.6	-0.1
KNZ				S	Sn	22 47 18.7	-1.9
CNGZ	Carnagh Statio	1.82	105	P	Pn	22 46 55.8	+0.5
MHGZ	Mahia Peninsul	1.89	127	P	Pn	22 46 56.1	+0.1
MHGZ				S	Sn	22 47 22.5	-2.1
WAZ	Wanganui	1.89	204	P	Pn	22 46 56.6	+0.6
WAZ				S	Sn	22 47 24.8	0.0
PNHZ	Pukenui	1.89	175	P	Pn	22 46 55.5	-0.6
KAHZ	Kahuranaki	1.90	159	P	Pn	22 46 56.3	+0.1
KAHZ				S	Sn	22 47 23.6	-1.5
WMGZ	Waiomatatini S	1.94	85	P	Pn	22 46 56.5	0.0
PKE	Pukeiti	1.94	233	P	Pn	22 46 57.1	+0.5
TSZ	Takapari Road	2.03	180	P	Pn	22 46 56.7	-0.8
DVHZ	Dannevirke	2.27	176	P	Sn	22 47 28.1	-4.0
ANWZ	Angora Road	2.46	171	P	Sn	22 47 32.9	-2.9
PRWZ	Pori Road	2.52	180	P	Pn	22 47 01.8	-1.0
PRWZ				S	Sn	22 47 33.6	-3.5
PRWZ	Pori Road	2.52	180	P	Sn	22 47 33.7	-3.4
MRZ	Mangatainoka R	2.65	187	P	Sn	22 47 32.7	-7.0
TIWZ	Tintock	2.75	181	P	Pn	22 47 03.9	-1.6
OGWZ	Otaki Gorge	2.86	192	P	Pn	22 47 05.0	-1.7
OGWZ				S	Sn	22 47 39.4	-4.5
CPWZ	Castlepoint	2.88	177	P	Sn	22 47 39.1	-5.5
HOWZ	Holdsworth Sta	2.89	187	P	Pn	22 47 05.0	-2.1
HOWZ				S	Sn	22 47 39.4	-5.3
HOWZ	Holdsworth Sta	2.89	187	P	Sn	22 47 39.9	-4.8
KIW	Kapiti Island	2.95	196	P	Pn	22 47 05.6	-2.2
TMWZ	Te Maipa	3.08	181	P	Sn	22 47 42.7	-6.0
MTW	Mount Morrison	3.15	187	P	Pn	22 47 07.7	-2.5
MTW				S	Sn	22 47 45.2	-5.0
CAW	Cannon Point	3.16	193	P	Pn	22 47 08.1	-2.2
CAW				S	Sn	22 47 45.5	-4.9
DUWZ	D’Urville Isla	3.19	209	P	Pn	22 47 08.5	-2.3
DUWZ				S	Sn	22 47 47.9	-3.3
TRWZ	Traveller	3.38	184	P	Pn	22 47 10.6	-2.3
TRWZ				S	Sn	22 47 49.7	-5.5
TRWZ	Traveller	3.38	184	P	Sn	22 47 49.4	-5.7
PAWZ	Paruwai Farm	3.38	187	P	Pn	22 47 10.4	-2.5
PAWZ				S	Sn	22 47 49.7	-5.6
PAWZ	Paruwai Farm	3.38	187	P	Sn	22 47 47.6	-7.7
MSWZ	Moikau Station	3.43	189	P	Pn	22 47 10.8	-2.8
MSWZ				S	Sn	22 47 50.3	-6.1
MSWZ	Moikau Station	3.43	189	P	Sn	22 47 49.2	-7.2
TCW	Tory Channel	3.44	202	P	Pn	22 47 11.3	-2.4
TCW				S	Sn	22 47 52.0	-4.6
BHW	Baring Head	3.48	194	P	Pn	22 47 11.5	-2.7
PLWZ	Palliser	3.58	189	P	Pn	22 47 12.5	-3.0
TUWZ	Tuamarina	3.74	204	P	Pn	22 47 14.9	-2.5
NNZ	Nelson	3.76	211	P	Pn	22 47 15.9	-1.8
QRZ	Quartz Range	3.86	223	P	Pn	22 47 16.3	-2.6
BSWZ	Blackbirch Sta	4.02	203	P	Pn	22 47 18.6	-2.3
THZ	Tophouse	4.42	211	P	Pn	22 47 24.0	-2.0
KHZ	Kahutara	4.76	202	P	Pn	22 47 27.3	-3.0
KHZ	Kahutara	4.76	202	P	Sn	22 48 14.0	-12
GVZ	Greta Valley S	5.42	203	P	Pn	22 47 35.2	-3.6
LTZ	Lake Taylor	5.53	210	P	Pn	22 47 37.0	-3.2

*KRNET **26** 23:10:27.4±0.1, 39.˚51N×74.˚69E, mb3.0*
*SOME **26** 23:10:29.8, 39.˚82N×74.˚83E, h0^{km}*
*NNC **26** 23:10:33.1±2.2, 39.˚78N×74.˚57E, h0^{km}, mb3.5, mpv3.3,*
Error ellipse: s-maj=16.4km s-min=9.5km az=161.0
ISC 26 23:10:32.2±1.6, **39.˚59N**±0.˚07×**74.˚56E**±0.˚04, **h10^{km}, n39,**
σ1^{s}29/68, **32C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.92	298	⇓iP	Pg	23 10 47.7	-2.2
	baz=99						
SFK				⇓iS	Sb	23 11 03.0	+0.3
	baz=99						
OHH	Osh	1.65	305	⇑iP	Pn	23 11 00.6	-0.7
	baz=5.0						
OHH				⇑iS	Sg	23 11 24.7	-0.5
	baz=5.0						
ARSB	Arslanbob	2.11	326	⇑iP	Pn	23 11 07.6	-0.1
	baz=25						
ARSB				⇑iS	Sb	23 11 37.0	+0.1
	baz=25						
DRK	Karamyk	2.14	268	⇑iP	Pn	23 11 08.1	-0.1
	baz=70						
DRK				⇑iS	Sb	23 11 37.6	-0.3
	baz=70						
ARLS	Aral	2.27	356	⇑iP	Pn	23 11 09.8	-0.2
	baz=53						
ARLS				⇑iS	Sb	23 11 40.9	-0.7
	baz=53						
AML	Almayashu	2.62	346	⇓eP	Pn	23 11 14.6	-0.3
	baz=44						
AML				⇓iS	Sb	23 11 49.4	-2.4
	baz=44						
UCH	Uchtor	2.63	359	⇑iP	Pn	23 11 14.6	-0.6
	baz=57						
UCH				⇑iS	Sn	23 11 49.1	+1.7
	baz=57						
BTK	Batken	2.92	280	⇑iP	Pn	23 11 18.9	+0.1
	baz=82						
BTK				⇑iS	Sn	23 11 56.2	+2.3
	baz=82						
ULHL	Ulahol	2.94	25	⇑iP	Pn	23 11 18.7	-0.5
	baz=23						
ULHL				⇑iS	Sn	23 11 56.0	+1.3
	baz=23						
AAK	Ala-Archa	3.04	359	⇑iP	Pn	23 11 20.1	-0.4
	baz=57						
AAK				⇑iS	Sn	23 11 58.5	+1.4
	baz=57						
AAK	Ala-Archa	3.04	359	⇑Pn	Pn	23 11 18.6	-2.0
	10.0nm,0.8s						
AAK				⇑Lg	Lg	23 12 05.9	
	13nm,1.1s						
KBK	Karagaybulak	3.07	5	⇓iP	Pn	23 11 20.4	-0.6
	baz=3.0						
KBK				⇓iS	Sn	23 11 59.6	+1.7
	baz=3.0						
BOOM	Boomskoye usch	3.08	19	⇑iP	Pn	23 11 19.2	-1.8
	baz=17						
BOOM				⇑iS	Sn	23 11 58.9	+0.9
	baz=17						
EKS2	Erkin-Say	3.12	349	⇓iP	Pn	23 11 21.1	-0.5
	baz=48						
EKS2				⇓iS	Sn	23 12 00.4	+1.4
	baz=48						
TRKS	Terek-Say	3.24	308	⇓iP	Pn	23 11 23.4	+0.1
	baz=7.0						
TRKS				⇓iS	Sn	23 12 03.4	+1.3
	baz=7.0						
MNAS	Manas	3.28	332	⇑iP	Pn	23 11 24.0	+0.2
	baz=32						
MNAS				⇑iS	Sn	23 12 05.2	+2.2
	baz=32						
MRKS	Merke	3.31	343	eP	Pb	23 11 29.1	-1.9
	3.0nm,0.3s						
MRKS				eS	Sb	23 12 12.3	+1.0
	2.9nm,0.5s						
MRKS	Merke	3.31	343	Pg	Pb	23 11 29.5	-1.5
	6.5nm,0.4s						
MRKS				Lg	Lg	23 12 07.6	
	4.4nm,0.4s						
CHMS	Chumysh	3.41	2	⇑iP	Pn	23 11 25.1	-0.3
	baz=1.0						
CHMS				⇑iS	Sn	23 12 07.1	+1.2
	baz=1.0						
TKM2	Tokmak 2	3.42	13	⇑iP	Pn	23 11 25.3	-0.4
	baz=11						
TKM2				⇑iS	Sn	23 12 07.6	+1.2
	baz=11						
TKM2	Tokmak 2	3.42	13	⇑Pn	Pn	23 11 23.4	-2.3
	6.9nm,0.8s						
TKM2				⇓Sn	Sn	23 12 06.9	+0.5
	20nm,1.2s						
KST	Kastek	3.60	17	eP	Pn	23 11 29.5	+1.2
	3.5nm,0.3s						
KST				eS	Sn	23 12 11.3	+0.3
	13nm,0.8s						
KST	Kastek	3.60	17	Pg	Pb	23 11 37.0	+0.9
	4.7nm,0.4s						
KST				Lg	Lg	23 12 21.1	
	13nm,0.8s						
USP	Ospenovka	3.67	359	⇑iP	Pn	23 11 28.6	-0.5
	baz=58						
USP				⇑iS	Sn	23 12 13.6	+1.2
	baz=58						
DGS	Degeres	3.76	14	eP	Pb	23 11 37.2	-1.5
	5.9nm,0.6s						
DGS				eS	Sb	23 12 25.7	+1.4
	9.4nm,0.7s						
DGS	Degeres	3.76	14	Pg	Pb	23 11 39.9	+1.2
	5.9nm,0.6s						
DGS				Lg	Lg	23 12 25.7	
	9.4nm,0.7s						
IZV	Izvestkoviy	3.77	24	Pg	Pb	23 11 40.0	+1.0
	5.1nm,0.7s						
IZV				Lg	Lg	23 12 26.2	
	6.7nm,0.5s						
MTBS	Maitube	3.80	21	eP	Pb	23 11 37.8	-1.7
	0.8nm,0.2s						
MTBS				eS	Sb	23 12 26.9	+1.3
	6.2nm,0.6s						
MTBS	Maitube	3.80	21	Pg	Pb	23 11 40.5	+1.1
	2.0nm,0.2s						
MTBS				Lg	Lg	23 12 26.9	
	6.2nm,0.6s						
SGDS	Sogindy	3.85	1	Pg	Pb	23 11 42.2	+1.9
	4.6nm,0.4s						
SGDS				Lg	Lg	23 12 29.6	
	4.5nm,1.1s						
KOTS	Kotyrbulak	4.11	27	eP	Pb	23 11 43.1	-1.7
	1.3nm,0.6s						
KOTS				eS	Sb	23 12 35.5	+0.9
	22nm,1.0s						
KOTS	Kotyrbulak	4.11	27	Pg	Pb	23 11 45.4	+0.6
	5.2nm,0.4s						
KOTS				Lg	Lg	23 12 35.5	
	22nm,1.0s						
IUG	Iuzhnay	4.28	308	eP	Pg	23 11 52.4	-1.8
	4.0nm,0.3s						
IUG				eS	Sg	23 12 49.3	-0.2
	7.7nm,0.4s						
IUG	Iuzhnay	4.28	308	Pg	Pb	23 11 49.7	+2.2
	6.1nm,0.1s						
IUG				Lg	Lg	23 12 43.2	
	7.7nm,0.4s						
KTBS	Karatobe	4.41	20	eP	Pb	23 11 49.2	-0.6
	1.8nm,0.4s						
KTBS				eS	Sb	23 12 44.2	+1.1
	7.2nm,0.5s						
KTBS	Karatobe	4.41	20	Pg	Pb	23 11 50.5	+0.7
	1.8nm,0.4s						
KTBS				Lg	Lg	23 12 44.2	
	7.2nm,0.5s						
KUU	Kurty	4.50	17	eP	Pb	23 11 51.1	-0.2
	2.6nm,0.6s						
KUU				eS	Sb	23 12 48.3	+2.8
	7.7nm,0.7s						
KUU	Kurty	4.50	17	Pg	Pb	23 11 52.9	+1.7
	2.6nm,0.6s						
KUU				Lg	Lg	23 12 48.3	
	7.7nm,0.7s						
KK31	Karatay Array	4.64	320	⇑Pn	Pn	23 11 42.3	-0.1
	0.2nm,0.3s,baz=129,slow=13,SNR=4.0						
KK31				⇑Pg	Pb	23 11 54.4	+0.7
	2.0nm,0.8s,baz=142,slow=15,SNR=4.2						
KK31				⇓Sn	Sn	23 12 38.1	+1.7
	3.5nm,0.7s						
KK31				⇑Lg	Lg	23 12 59.0	
	1.8nm,0.5s						

*GCG **26** 23:18:15.1±0.6, 14.˚67N×89.˚06W, h1^{km}±7^{km}, MD3.7*
*SNET **26** 23:18:15.2±1.6, 14.˚53N×89.˚13W, h3^{km}±9^{km}, ML3.6*
*UCR **26** 23:18:15.4±1.6, 14.˚53N×89.˚13W, h3^{km}±9^{km}, ML3.6*
ISC 26 23:18:15.5±1.2, **14.˚53N**±0.˚04×**89.˚10W**±0.˚03, **h6^{km}**±10^{km},
n44, σ0^{s}70/70, **1C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.24	276	⇑iP	Pg	23 18 20.2	0.0
ESQI				eS	Sg	23 18 23.6	+0.3
ESQI				IAML		23 18 26.1	
	comp=Z,8µm,0.3s						
LFU	La Fuente	0.78	181	eP	Pb	23 18 30.9	-0.7
LFU	La Fuente	0.78	181	eP	Pb	23 18 30.9	-0.7
CEDA	San Andres	0.78	202	eP	Pb	23 18 30.7	-0.9
CEDA				eS	Sb	23 18 42.0	-0.5
CEDA				IAML		23 18 51.6	
	comp=Z,2µm,0.2s						
CEDA	San Andres	0.78	202	eP	Pb	23 18 30.7	-0.9
CEDA				eS	Sb	23 18 42.0	-0.5
CEDA				IAML		23 18 51.6	
	comp=Z,2µm,0.2s						
MRL	Marmol	0.79	314	⇓iP	Pb	23 18 30.7	-1.1
LBRS	Las Brisas	0.79	176	eP	Pg	23 18 30.9	+0.1
LBRS	Las Brisas	0.79	176	eP	Pg	23 18 30.9	+0.1
BOQS	Boqueron	0.81	192	eP	Pg	23 18 31.4	+0.2
BOQS	Boqueron	0.81	192	eP	Pg	23 18 31.4	+0.2
SNJE	San Jose	0.82	217	eP	Pb	23 18 31.5	-0.9
SNJE	San Jose	0.82	217	eP	Pb	23 18 31.5	-0.9
RTR	El Retiro	0.82	220	eP	Pb	23 18 31.9	-0.6
RTR	El Retiro	0.82	220	eP	Pb	23 18 31.9	-0.6
PAVA	Las Pavas	0.83	169	eP	Pg	23 18 31.6	+0.1
PAVA				eS	Sb	23 18 43.6	-0.3
PAVA	Las Pavas	0.83	169	eP	Pg	23 18 31.6	+0.1
PAVA				eS	Sb	23 18 43.6	-0.3
SBLS	San Blas	0.86	216	eP	Pb	23 18 32.1	-0.9
SBLS	San Blas	0.86	216	eP	Pb	23 18 32.1	-0.9
CEVE	Cerro Verde	0.87	216	eP	Pb	23 18 32.4	-0.8
CEVE				eS	Sn	23 18 46.4	-1.3
CEVE				IAML		23 18 50.9	
	comp=Z,2µm,0.3s						
CEVE	Cerro Verde	0.87	216	eP	Pb	23 18 32.4	-0.8
CEVE				eS	Sn	23 18 46.4	-1.3
CEVE				IAML		23 18 50.9	
	comp=Z,2µm,0.3s						
LFRS	El Faro	0.91	178	eP	Pg	23 18 32.8	-0.1
LFRS	El Faro	0.91	178	eP	Pg	23 18 32.8	-0.1
COEG	Centro de Oper	0.93	167	eP	Pg	23 18 33.4	0.0
COEG				eS	Sb	23 18 46.8	-0.1
COEG				IAML		23 18 57.5	
	comp=Z,3µm,0.5s						
COEG	Centro de Oper	0.93	167	eP	Pg	23 18 33.4	0.0
COEG				eS	Sb	23 18 46.8	-0.1
COEG				IAML		23 18 57.5	
	comp=Z,3µm,0.5s						
JAYA	Jayaque - finc	0.94	201	eP	Pb	23 18 33.5	-0.8
JAYA				eS	Sb	23 18 46.6	-0.5
JAYA				IAML		23 18 51.9	
	comp=Z,3µm,0.2s						
JAYA	Jayaque - finc	0.94	201	eP	Pb	23 18 33.5	-0.8
JAYA				eS	Sb	23 18 46.6	-0.5
JAYA				IAML		23 18 51.9	
	comp=Z,3µm,0.2s						
PQSS	Presa 15 de Se	1.04	150	eP	Pg	23 18 35.0	-0.6
PQSS				eS	Sg	23 18 49.8	+0.7
PQSS				IAML		23 18 53.4	
	comp=Z,2µm,0.3s						
LALI	Alcalda de L	1.06	192	eP	Pb	23 18 36.1	-0.3
LALI				eS	Sb	23 18 50.8	+0.3
LALI				IAML		23 18 55.5	
	comp=Z,741nm,0.6s						
LALI	Alcalda de L	1.06	192	eP	Pb	23 18 36.1	-0.3
LALI				eS	Sb	23 18 50.8	+0.3
LALI				IAML		23 18 55.5	
	comp=Z,741nm,0.6s						
COEB	Comit de Eme	1.17	152	eP	Pg	23 18 37.4	-0.6
COEB				eS	Sn	23 18 56.4	+1.5
COEB				IAML		23 18 59.5	
	comp=Z,2µm,0.4s						
COEB	Comit de Eme	1.17	152	eP	Pg	23 18 37.4	-0.6
COEB				eS	Sn	23 18 56.4	+1.5
COEB				IAML		23 18 59.5	
	comp=Z,2µm,0.4s						
TECA	Tecapa	1.18	151	eP	Pg	23 18 37.7	-0.6
TECA	Tecapa	1.18	151	eP	Pg	23 18 37.7	-0.6
NBG	Las Nubes	1.21	273	eP	Pn	23 18 38.9	-0.4
NBG				eS	Sn	23 18 57.1	+0.9
FAGO	Alcalda de S	1.27	131	eP	Pg	23 18 38.9	-1.1
FAGO				eS	Sg	23 18 56.2	-0.3
FAGO				IAML		23 19 01.7	
	comp=Z,535nm,0.4s						
FAGO	Alcalda de S	1.27	131	eP	Pg	23 18 38.9	-1.1
FAGO				eS	Sg	23 18 56.2	-0.3
FAGO				IAML		23 19 01.7	
	comp=Z,535nm,0.4s						
PACA	Pacayal	1.30	144	eP	Pg	23 18 40.2	-0.2
PACA				eS	Sb	23 18 57.9	+0.4
PACA	Pacayal	1.30	144	eP	Pg	23 18 40.2	-0.2
PACA				eS	Sb	23 18 57.9	+0.4
PCG	Pacaya	1.47	265	eP	Pb	23 18 44.0	+0.6
JUCU	Jucuar¡n	1.52	147	eP	Pn	23 18 43.5	+0.2
JUCU				eS	Sg	23 19 05.1	+0.8
JUCU				IAML		23 19 10.3	
	comp=Z,983nm,0.6s						
JUCU	Jucuar¡n	1.52	147	eP	Pn	23 18 43.5	+0.2
JUCU				eS	Sg	23 19 05.1	+0.8
JUCU				IAML		23 19 10.3	
	comp=Z,983nm,0.6s						
FUG	Fuego 3	1.69	267	eP	Pb	23 18 46.8	-0.4
FUG				eS	Sg	23 19 11.6	+1.7
LCND	La Caada	1.69	136	eP	Pn	23 18 46.2	+0.5
LCND				eS	Sb	23 19 09.5	+0.8
LCND				IAML		23 19 12.1	
	comp=Z,2µm,0.5s						
LCND	La Caada	1.69	136	eP	Pn	23 18 46.2	+0.5
LCND				eS	Sb	23 19 09.5	+0.8
LCND				IAML		23 19 12.1	
	comp=Z,2µm,0.5s						

*IDC **26** 23:23:35.7±1.2, 14.˚33N×123.˚89E, h0^{km}, mb3.8/6,*
mb1 4.0/7, mb1mx3.7/52, mbtmp3.9/7, ML3.5/1, MS3.2/6,
Ms1 3.2/6, ms1mx2.9/50, Error ellipse: s-maj=45.5km
s-min=19.5km az=68.0
*MAN **26** 23:23:38.2, 14.˚50N×124.˚13E, h15^{km}, MS3.6*
ISC 26 23:23:37.3±2.1, **14.˚44N**±0.˚06×**124.˚00E**±0.˚07, **h7^{km}**±13^{km},
n23, σ1^{s}41/21, **mb3.7**/6, **MS3.1**/4, **1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	0.85	170	eP	Pn	23 23 55.4	-0.3
PVCP				eS	Sn	23 24 09.3	+0.9
SCSP	San Jose Seism	0.91	211	eP	Pn	23 23 55.9	-0.6
SCSP				eS	Sn	23 24 12.1	+2.3
JCNP	Jose Panganiba	1.27	263	eP	Pn	23 24 01.1	-0.4
JCNP				eS	Sb	23 24 17.4	-0.7
GQP	Guinayangan	1.60	251	⇑eP	Pg	23 24 07.7	-0.3
GQP				eS	Sg	23 24 31.0	+2.3
POLP	Polilio Island	2.02	278	eP	Pb	23 24 13.6	-0.7
POLP				eS	Sg	23 24 41.0	-1.1
BOAC	Boac	2.31	245	eP	Pb	23 24 18.5	-0.8
BOAC				eS	Sb	23 24 48.5	+0.5
TGY	Tagaytay City	2.99	264	Pn	Pb	23 24 29.8	-1.1
	149nm,0.3s,baz=130,slow=4.5,SNR=8.3						
TGY				LR	LR	23 24 51.6	
	comp=Z,189nm,19.9s,baz=47,slow=26						
TGY				Sn	Sb	23 25 09.9	+2.2
	38nm,0.3s,baz=154,slow=19,SNR=1.4						
JOW	Kunigami	12.96	17	Pn	Pn	23 26 44.8	+2.8
	0.6nm,0.3s,baz=185,slow=11,SNR=2.8						
JOW				LR	LR	23 32 15.6	
	comp=Z,69nm,18.3s,baz=76,slow=40						
CMAR	Chiang Mai Arr	24.35	283	P	P	23 28 55.4	-0.7
	2.3nm,0.4s,baz=97,slow=8.3,SNR=12						
CMAR				LR	LR	23 38 07.3	
	comp=Z,25nm,20.3s,baz=171,slow=36						
MJAR	Matsushiro Arr	25.41	27	LR	LR	23 37 52.5	
	comp=Z,54nm,18.7s,baz=340,slow=34						
LEM	Lembang	26.65	219	LR	LR	23 41 31.1	
	comp=Z,62nm,18.7s,baz=44,slow=41						
PSI	Prapat	27.31	247	LR	LR	23 41 27.0	
	comp=Z,122nm,18.5s,baz=90,slow=39						
WRA	Warramunga Arr	35.65	163	P	P	23 30 35.3	-0.9
	0.6nm,0.9s,baz=349,slow=8.2,SNR=2.1						
SONM	Songino Array	36.37	340	P	P	23 30 41.9	-0.3
	1.6nm,0.9s,baz=157,slow=9.7,SNR=11						
ASAR	Alice Springs	39.09	166	P	P	23 31 03.9	-1.4
	1.4nm,0.9s,baz=360,slow=7.4,SNR=7.6						
H11S3	WAKE ISLAND Hy	41.07	78	T	T	00 15 10.6	
	baz=272,slow=75,SNR=465						
H11S1	WAKE ISLAND Hy	41.08	78	T	T	00 15 15.4	
	baz=272,slow=75,SNR=261						
H11S2	WAKE ISLAND Hy	41.09	78	T	T	00 15 10.3	
	baz=272,slow=75,SNR=242						
H11N1	WAKE ISLAND Hy	41.26	77	T	T	00 15 29.9	
	baz=269,slow=75,SNR=76						
H11N2	WAKE ISLAND Hy	41.26	76	T	T	00 15 29.9	
	baz=269,slow=75,SNR=116						
H11N3	WAKE ISLAND Hy	41.27	77	T	T	00 15 28.8	
	baz=269,slow=75,SNR=82						
MKAR	Makanchi Array	47.39	322	P	P	23 32 11.8	-0.5
	1.2nm,0.9s,baz=117,slow=8.7,SNR=9.8						
ZALV	Zalesovo Beam	49.93	331	P	P	23 32 31.0	-0.6
	0.4nm,0.6s,baz=217,slow=22,SNR=2.1						

*IDC **26** 23:23:48.9±5.2, 6.˚26S×154.˚91E, h67^{km}±47^{km}, mb3.5/8,*
mb1 3.8/10, mb1mx3.6/39, mbtmp3.9/10, ML3.1/2, MS3.1/1,
Ms1 3.1/1, ms1mx2.6/24, Error ellipse: s-maj=30.8km
s-min=26.6km az=16.0
ISC 26 23:23:45.6±0.9, **6.˚1S**±0.˚2×**155.˚0E**±0.˚1, **h35^{km}, n14,**
σ1^{s}03/12, **mb3.7**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.44	247	P	Pn	23 25 46.7	+1.2
	3.4nm,0.3s,baz=352,slow=22,SNR=6.7						
PMG				S	Sn	23 27 19.7	+0.1
	1.4nm,0.3s,baz=170,slow=23,SNR=2.2						
DZM	Mont Dzumac	19.32	146	P	P	23 28 08.4	+0.4
	0.5nm,0.3s,baz=339,slow=15,SNR=3.7						
WRA	Warramunga Arr	24.34	234	P	P	23 28 59.0	-1.4
	1.3nm,0.7s,baz=56,slow=9.6,SNR=9.3						
WRA				LR	LR	23 38 25.5	
	comp=Z,42nm,18.8s,baz=330,slow=36						
ASAR	Alice Springs	26.77	227	P	P	23 29 20.9	-1.6
	0.4nm,0.5s,baz=56,slow=9.0,SNR=5.2						
H11S3	WAKE ISLAND Hy	27.04	25	T	T	23 57 38.7	
	baz=205,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	27.04	25	T	T	23 57 34.2	
	baz=205,slow=76,SNR=7.3						
H11S1	WAKE ISLAND Hy	27.06	25	T	T	23 57 34.6	
	baz=205,slow=76,SNR=5.6						
CMAR	Chiang Mai Arr	60.44	295	P	P	23 33 52.3	0.0
	1.7nm,0.4s,baz=118,slow=5.1,SNR=11						
SONM	Songino Array	68.62	327	P	P	23 34 45.8	+0.4
	0.3nm,0.5s,baz=138,slow=5.1,SNR=4.2						
ILAR	Eielson Array	82.56	22	P	P	23 36 04.9	+0.2
	0.2nm,0.4s,baz=239,slow=5.7,SNR=1.9						
MKAR	Makanchi Array	82.77	319	P	P	23 36 05.8	-0.4
	1.5nm,0.8s,baz=100,slow=5.1,SNR=12						
ZALV	Zalesovo Beam	83.48	326	P	P	23 36 08.1	-1.6
	1.2nm,0.8s,baz=107,slow=5.1,SNR=4.8						

YKA	Yellowknife Ar	95.56	28	P	P	23 37 07.7	+0.7
	0.2nm,0.7s,baz=262,slow=3.8,SNR=4.5						
TORD	Torodi Ar. Bea	152.81	287	PKPbc	PKPbc	23 43 40.1	0.0
	0.4nm,0.3s,baz=90,slow=2.9,SNR=2.0						

NOU 26 23:51:17.1, 14°.94S×169°.50E, h199^{km}, MLv5.0, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.27	257	P	Pn	23 51 58.6	+0.2
DVP	Devils Point	3.04	204	P	Pn	23 52 07.2	0.0
MARNC	Mare, Loyalty	6.65	192	P	Pn	23 52 52.8	0.0
YATNC	Mamie plateau,	7.50	199	P	Pn	23 53 03.8	-0.1
DZM	Mont Dzumac	7.66	202	P	Pn	23 53 05.6	-0.4
NOUC	Port Laguerre	7.74	203	P	Pn	23 53 07.2	+0.2
OUENC	Ouen Island, N	7.85	198	P	Pn	23 53 08.6	+0.2

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*IDC **26** 23:59:18.8±1.2, 20°.36S×172°.51E, h0^{km}, mb4.2/13, mb1 4.3/14, mb1mx4.2/29, mbtmp4.1/14, ML3.5/1, MS3.6/9, Ms1 3.5/9, ms1mx3.3/28, Error ellipse: s-maj=58.1km s-min=17.8km az=154.0*

*NEIC **26** 23:59:28.9±1.9, 20°.5S±0°.1×172°.3E±0°.1, h65^{km}±15^{km}, mb4.3/13, Error ellipse: s-maj=20.7km s-min=18.1km az=144.0*

ISC 26 23:59:24.2±0.6**, 20°.3S**±0°.1×**172°.5E**±0°.1**, h35^{km}, n85,** σ**1^{s}04**/74**, mb4.3**/18**, MS3.5**/10**, 15C-2D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.92	252	*e*Pn	Pn	00 00 50.5	+1.0
	3.4nm,0.3s						
DZM				*e*LR	LR	00 02 10.8	
	comp=Z,716nm,26.6s						
DZM	Mont Dzumac	5.92	252	Pn	Pn	00 00 48.9	-0.6
	1.2nm,0.3s,baz=302,slow=22,SNR=15						
DZM	Mont Dzumac	5.92	252	Pn	Pn	00 00 50.4	+1.0
SANVU	Saraoutou	7.02	313	Pn	Pn	00 01 07.9	+3.4
FUNA	Funafuti	13.41	30	Pn	P	00 02 40.2	-0.8
HNR	Honiara	16.27	310	LR	LR	00 08 35.2	
	comp=Z,126nm,19.0s,baz=128,slow=34						
URZ	Urewera	18.29	168	LR	LR	00 08 41.3	
	comp=Z,229nm,19.6s,baz=34,slow=31						
EIDS	Eidsvold	20.37	252	P	P	00 03 58.1	+0.3
QRZ	Quartz Range	20.42	180	P	P	00 03 59.3	+1.0
QRZ				IAmb	IAmb	00 04 04.8	
	comp=Z,16nm,1.1s						
BFZ	Birch Farm	20.52	172	P	P	00 03 59.0	-0.4
BFZ				IAmb	IAmb	00 04 10.1	
	comp=Z,31nm,1.1s						
RPZ	Rata Peaks	23.34	183	LR	LR	00 11 09.0	
	comp=Z,135nm,20.7s,baz=338,slow=30						
MLZ	Mavora Lakes	25.22	187	P	P	00 04 44.7	-1.9
MLZ				IAmb	IAmb	00 04 45.6	
	comp=Z,16nm,1.2s						
WHZ	Wether Hill Ro	25.76	187	P	P	00 04 52.1	+0.6
WHZ				IAmb	IAmb	00 05 08.5	
	comp=Z,10nm,1.1s						
RAR	Rarotonga	25.91	97	LR	LR	00 15 00.8	
	comp=Z,57nm,18.1s,baz=253,slow=36						
PYZ	Puysegur Point	26.20	189	P	P	00 04 54.8	-0.7
PMG	Port Moresby	26.77	290	LR	LR	00 12 49.6	
	comp=Z,120nm,20.2s,baz=118,slow=30						
STKA	Stephens Creek	29.94	241	P	P	00 05 28.3	-0.9
	comp=Z,2.8nm,0.9s,baz=72,slow=16,SNR=4.7						
STKA				LR	LR	00 16 55.2	
	comp=Z,84nm,18.8s,baz=36,slow=35						
STKA	Stephens Creek	29.94	241	P	P	00 05 29.2	0.0
BBOO	Buckleboo	34.72	241	P	P	00 06 10.1	-0.9
TBI	Tubuai	35.35	102	*e*LR	LR	00 15 45.1	
	comp=Z,193nm,33.0s						
WR0	Warramunga Arr	35.60	264	P	P	00 06 17.8	-1.0
WR0				IAmb	IAmb	00 06 26.6	
	comp=Z,4.5nm,1.1s						
WB0	Warramunga Arr	35.76	264	P	P	00 06 19.9	-0.2
WB0				IAmb	IAmb	00 06 29.8	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	35.79	264	P	P	00 06 19.6	-0.8
	comp=Z,0.4nm,0.8s,baz=84,slow=7.9,SNR=2.9						
WRA				LR	LR	00 19 52.5	
	comp=Z,124nm,20.0s,baz=190,slow=34						
WRA	Warramunga Arr	35.79	264	P	P	00 06 18.9	-1.5
ASAR	Alice Springs	35.88	257	P	P	00 06 20.2	-0.9
	comp=Z,1.4nm,0.8s,baz=79,slow=8.6,SNR=10						
ASAR				LR	LR	00 20 02.1	
	comp=Z,65nm,20.3s,baz=95,slow=35						
ASAR	Alice Springs	35.88	257	P	P	00 06 19.4	-1.7
PPT2	Papeete2	35.90	92	*e*LR	LR	00 16 06.7	
	comp=Z,239nm,27.0s						
PPT	Papeete	35.91	92	LR	LR	00 17 02.9	
	comp=Z,185nm,21.5s,baz=232,slow=30						
FORT	Forrest	41.20	246	P	P	00 07 04.8	-0.8
FITZ	Fitzroy Crossi	44.21	265	P	P	00 07 30.6	+0.3
FITZ				IAmb	IAmb	00 07 43.5	
	comp=Z,6.5nm,1.1s						
TAOE	Nuku Hiva Isla	47.05	83	*e*LR	LR	00 21 16.4	
	comp=Z,117nm,26.0s						
PETK	Petropavlovsk-	74.26	351	P	P	00 10 57.5	+0.1
	comp=Z,4.3nm,0.9s,baz=163,slow=5.4,SNR=3.9						
CMAR	Chiang Mai Arr	81.77	293	P	P	00 11 41.2	+1.3
	comp=Z,0.9nm,0.3s,baz=133,slow=3.8,SNR=5.8						
YBH	Yreka Blue Hor	85.98	43	P	P	00 12 01.9	+0.9
	comp=Z,3.0nm,0.8s,baz=139,slow=1.3,SNR=8.2						
NVAR	Mina Array Bea	87.25	47	P	P	00 12 07.8	+0.3
	comp=Z,1.2nm,0.6s,baz=226,slow=9.0,SNR=6.2						
SONM	Songino Array	89.97	322	P	P	00 12 19.9	-0.1
	comp=Z,0.5nm,0.9s,baz=132,slow=4.4,SNR=3.7						
ILAR	Eielson Array	90.39	16	P	P	00 12 20.4	-1.0
	comp=Z,0.9nm,0.7s,baz=232,slow=5.3,SNR=5.9						
ELK	Elko	90.42	46	P	P	00 12 22.4	0.0
	comp=Z,2.1nm,0.9s,baz=194,slow=20,SNR=7.8						
DLBC	Dease Lake	91.63	26	P	P	00 12 28.0	+0.6
	comp=Z,2.3nm,0.8s,baz=148,slow=6.8,SNR=4.0						
TXAR	Lajitas Array	94.60	61	P	P	00 12 42.6	+0.8
	comp=Z,1.0nm,0.8s,baz=216,slow=5.3,SNR=14						
PDAR	Pinedale Array	95.12	46	P	P	00 12 43.1	-1.0
	comp=Z,0.2nm,0.6s,baz=184,slow=4.0,SNR=2.3						
FINES	FINESS Array B	132.75	339	PKP	PKPdf	00 18 34.8	-0.1
	comp=Z,2.0nm,0.9s,baz=234,slow=9.2,SNR=3.4						
TESR	Tescani	141.85	321	⇓P	PKiKP	00 18 59.0	+3.9
PGOR	Pogoanele	142.46	319	⇑P	PKiKP	00 18 59.1	+2.7
OZUR		142.57	321	⇑P	PKiKP	00 18 60.0	+3.3
MLR	Muntele Rosu	142.80	320	⇑P	PKPdf	00 18 54.1	0.0
MTUR	Matau	143.47	320	⇑P	PKiKP	00 19 00.0	+1.4
HUMR	Humele	143.88	319	⇑P	PKPbc	00 18 53.4	-0.2
DRGR		143.94	324	⇑P	PKPdf	00 18 54.3	-1.7
OSTC	Ostas	144.51	334	*e*PKP	PKPdf	00 18 56.1	-0.7
VLAD	Vladila	144.51	319	⇑P	PKPdf	00 18 56.5	-0.4
MORC	Moravsky Berou	144.52	332	⇑P	PKPdf	00 18 55.9	-1.0
MORC	Moravsky Berou	144.52	332	*e*PKP	PKPdf	00 18 55.8	-1.0
CHVC	Chvalec	144.55	334	*e*PKP	PKPdf	00 18 55.8	-1.1
DPC	Dobruska-Polom	144.62	333	*e*PKP	PKPdf	00 18 56.3	-0.7
DPC				*e*x	x	00 19 03.4	
DPC				*e*x	x	00 28 30.1	
UPC	Upice	144.63	334	*e*PKP	PKPdf	00 18 56.0	-1.0
KRLC	Kraliky	144.63	333	*e*PKP	PKPdf	00 18 56.4	-0.7
PLVB	Pleven	144.69	318	⇑P	PKPdf	00 18 57.2	-0.1
PSZ	Piszkesteto	144.71	328	⇑P	PKPdf	00 18 57.6	+0.3
GZR	Gura Zlata	144.72	322	⇓P	PKPbc	00 18 56.0	-0.3
SIRR	Siria	144.83	324	⇑P	PKPdf	00 18 57.4	-0.1
JAVC	Velka Javorina	145.13	331	*e*PKP	PKPdf	00 18 59.2	+1.2
CLL	Collm	145.16	337	*i* PKPbc	PKPdf	00 18 57.5	-0.3
	comp=Z,22nm,0.9s						
CLL				*i* PKiKP	PKiKP	00 19 00.1	-1.6
	comp=Z,20nm,1.1s						
CLL				*e*		00 19 09.0	
PVCC	Panska Ves	145.20	335	*e*PKP	PKPdf	00 18 58.2	+0.3
PVCC				*e*x	x	00 19 01.0	
HERR	Herculane	145.22	322	⇑P	PKPdf	00 18 58.2	0.0
BZS	Buzias	145.25	323	⇑P	PKPdf	00 18 58.2	0.0
VRAC	Vranov	145.29	332	⇑P	PKPdf	00 18 58.1	0.0
VRAC	Vranov	145.29	332	*e*PKP	PKPdf	00 18 58.2	0.0
VRAC				*e*		00 19 05.7	
KRUC	Moravsky	145.56	332	*e*PKP	PKPab	00 18 59.3	+0.2
KRUC				*e*		00 19 06.3	
PRU	Pruhonice	145.63	335	*e*PKP	PKPab	00 18 59.2	-0.1
MDVR	Moldovita	145.69	322	⇑P	PKPab	00 19 00.2	+0.4
TREC	Trest	145.78	333	*e*PKP	PKPab	00 18 59.6	-0.3
NKC	Novy Kostel	146.25	337	*e*PKP	PKPab	00 19 01.4	-0.3
CONA	Conrad Observa	146.63	331	*e*P	PKPab	00 19 02.9	-0.4
	comp=Z,5.9nm,0.9s						
KHC	Kasperske Hory	146.70	335	*e*PKP	PKPab	00 19 02.4	-1.1
KHC				*e*x	x	00 19 14.5	
KHC				*e*x	x	00 28 36.0	
GERES	GERESS Array B	146.87	334	PKPbc	PKPbc	00 19 02.7	-0.1
	comp=Z,4.7nm,0.7s,baz=46,slow=3.9,SNR=21						
ARSA	Arzberg	147.29	330	*e*P	PKPbc	00 19 03.2	-0.8
	comp=Z,3.3nm,1.2s						
SOKA	Soboth	147.94	330	*e*P	PKPbc	00 19 05.5	-0.4
	comp=Z,5.0nm,1.2s						
WATA	Walderalm	148.94	335	*e*P	PKPbc	00 19 08.2	-0.3
	comp=Z,4.1nm,1.0s						
ABTA	Abfaltersbach	149.01	333	*e*P	PKPbc	00 19 07.9	-0.8
	comp=Z,4.9nm,0.7s,SNR=4.3						
MOTA	Moosalm	149.12	335	*e*P	PKPbc	00 19 08.7	-0.3
	comp=Z,9.3nm,1.0s,SNR=7.0						
RETA	Reutte	149.14	336	*i* P	PKPbc	00 19 08.7	-0.2
	comp=Z,3.2nm,0.8s						
SQTA	Sankt Quirin	149.18	335	*i* P	PKPbc	00 19 09.0	-0.1
	comp=Z,6.5nm,0.7s,SNR=8.1						
FETA	Feichten	149.53	335	*i* P	PKiKP	00 19 10.1	-1.0
	comp=Z,5.7nm,0.9s						
ESDC	Sonseca Array	160.50	352	PKPab	PKPab	00 20 01.7	+0.1
	comp=Z,0.6nm,0.8s,baz=34,slow=2.8,SNR=3.4						

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*IDC **27** 00:53:16.7±0.4, 1°.22N×97°.17E, h0^{km}, mb5.0/30, mb1 5.1/34, mb1mx5.0/35, mbtmp5.0/34, ML4.9/4, MS5.4/38, Ms1 5.4/38, ms1mx5.3/49, Error ellipse: s-maj=13.5km s-min=9.9km az=41.0*

*BJI **27** 00:53:16.7±0.0, 1°.11N×97°.28E, h20^{km}, mB5.8/80, mb5.5/88, Ms6.1/98, Ms7 6.0/91*

*MOS **27** 00:53:18.6±1.1, 1°.33N×97°.25E, h23^{km}, mb5.6/86, MS5.5/39, Error ellipse: s-maj=6.2km s-min=3.6km az=111.9*

*NEIC **27** 00:53:19.1±2.2, 1°.34N±0°.06×97°.24E±0°.06, h13^{km}±2^{km}, mb5.6/185, Ms_20 5.6/325, Mwb5.7/59, Mww5.7, Mwc5.9(GCMT), Error ellipse: s-maj=9.4km s-min=8.2km az=59.0*

*NEIC **27** 00:53:20.9, 1°.37N×97°.13E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.91; $M_{\theta\theta}$-2.07; $M_{\phi\phi}$-0.84; $M_{r\theta}$2.43; $M_{\theta\phi}$0.71; $M_{\phi r}$-1.98; Fault plane solution: $M_0$4.13000×10^{17} NP1:ϕ_s125.27000°, δ70.00000°, λ95.56000°. NP2:ϕ_s289.39000°, δ20.72000°, λ75.10000°. Principal axes: T 4.3975, Plg65.0000°, Azm44.0000°; N -0.5904, Plg5.0000°, Azm303.0000°; P -3.8071, Plg25.0000°, Azm211.0000°;*

*DJA **27** 00:53:20.8±0.4, 1°N±2°×9°7E±°, h25^{km}±3^{km}, M5.5/79, mB5.9/67, mb5.5/79, MLv6.0/19, Mw5.6/22, Mw(mB)5.4/67, MwMwp5.5/41, Mwp5.7/41*

*KLM **27** 00:53:21, 1°.38N×97°.05E, h22^{km}, mb5.6*

*NEIC **27** 00:53:23, 1°.11N×97°.01E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.18; $M_{\theta\theta}$-0.81; $M_{\phi\phi}$-1.37; $M_{r\theta}$5.34; $M_{\theta\phi}$1.27; $M_{\phi r}$-5.52; Fault plane solution: $M_0$8.02000×10^{17} NP1:ϕ_s327.00000°, δ8.00000°, λ101.00000°. NP2:ϕ_s136.00000°, δ82.00000°, λ88.00000°. Principal axes: T 7.9184, Plg53.0000°, Azm44.0000°; N 0.1901, Plg2.0000°, Azm136.0000°; P -8.1085, Plg37.0000°, Azm228.0000°;*

*GCMT **27** 00:53:23.1±0.1, 1°.09N±0°.01×96°.95E±0°.01, h22^{km}, MW5.7/140, Moment Tensor Solution. s135,c249; s140,c267; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.53±.04; $M_{\theta\theta}$-0.95±.03; $M_{\phi\phi}$-1.57±.03; $M_{r\theta}$2.19±.07; $M_{\theta\phi}$1.21±.02; $M_{\phi r}$-2.65±.08; Best double couple: $M_0$4.26300×10^{17} NP1:ϕ_s323.00000°, δ18.00000°, λ93.00000°. NP2:ϕ_s141.00000°, δ72.00000°, λ89.00000°. Principal axes: T 4.2730, Plg63.0000°, Azm49.0000°; N -0.0150, Plg1.0000°, Azm141.0000°; P -4.2530, Plg27.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NOU **27** 00:53:28.4, 1°.47N×97°.47E, h66^{km}, mb5.5, Northern Sumatra, Indonesia*

*NEIC **27** 00:53:30, 1°.28N×97°.22E, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.61; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-1.91; $M_{r\theta}$1.82; $M_{\theta\phi}$1.48; $M_{\phi r}$-2.67; Fault plane solution: $M_0$4.25000×10^{17} NP1:ϕ_s326.00000°, δ20.00000°, λ91.00000°. NP2:ϕ_s146.00000°, δ70.00000°, λ90.00000°. Principal axes: T 4.0943, Plg65.0000°, Azm55.0000°; N 0.2916, Plg0.0000°, Azm146.0000°; P -4.3859, Plg25.0000°, Azm236.0000°;*

*BGR **27** 00:53:33.2±0.0, 0°.82N×95°.68E, h33^{km}, mb5.3*

ISC 27 00:53:21.5±0.4**, 1°.29N**±0°.03×**97°.25E**±0°.03**, h28**^{km}±2^{km}**, h28**^{km}**:pP-P, n1157,** σ**1^{s}81**/1123**, mb5.5**/261**, MS5.7**/250**, 89C-52D, Fault plane solution: NP1:**ϕ_s124.13179°, δ72.88574°, λ108.86077°. **NP2:**ϕ_s254.87473°**,** δ25.25684°, λ43.60624°. **Principal axes:** T Plg57.9512°, Azm59.6484°**;** N Plg17.9963°**,** Azm298.3912°**;** P Plg25.5580°**,** Azm199.4542°**; Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.32	87		Pn	00 53 30.6	+0.2
GSI	Gunungsitoli	0.32	87	P	Pn	00 53 30.5	+0.2
GSI				S	Sn	00 53 35.8	-0.3
PBSI	Pulau Batu	1.68	142	P	Pn	00 53 48.0	-1.1
PBSI				S	Sn	00 54 09.7	-0.1
TPTI		1.96	358	P	Pn	00 53 51.7	-1.2
RPSI	Rantau Prapat	2.18	50		Pn	00 53 57.7	+1.9
PSI	Prapat	2.25	48	Pn	Pn	00 53 57.7	+0.8
	159nm,0.3s,baz=180,slow=7.5,SNR=171						
PSI				Pg	Pb	00 54 05.8	+4.4
	322nm,0.3s,baz=180,slow=6.4,SNR=30						
PSI				LR	LR	00 54 25.4	
	comp=Z,30µm,21.6s,baz=270,slow=30						
PSI				Lg	Lg	00 54 34.7	
	328nm,0.3s,baz=180,slow=8.6,SNR=4.3						
MNSI	Mandailing Nat	2.38	102	P	Pn	00 53 59.7	+1.1
TSI	Tuntungan	2.56	31	P	Pn	00 54 02.4	+1.3
PDSI	Padang	3.88	124	P	Pn	00 54 19.2	-0.2
BKNI	Bangkinang	3.91	104	Pn	Pn	00 54 19.9	+0.3
BKNI	Bangkinang	3.91	104	P	Pn	00 54 20.4	+0.7
LHMI	Lhok Sumawe	3.92	356	Pn	Pn	00 54 19.8	-0.1
LHMI	Lhok Sumawe	3.92	356	P	Pn	00 54 19.9	0.0
SDSI	Sungai Dareh	4.72	118	P	Pn	00 54 31.3	+0.4
IPM	Ipoh	4.92	50	Pn	Pn	00 54 35.2	+1.5
IPM	Ipoh	4.92	50	P	Pn	00 54 36.0	+2.3
KULM	Kulim	5.22	40	Pn	Pn	00 54 38.9	+1.1
KULM	Kulim	5.22	40	P	Pn	00 54 39.0	+1.2
MYKOM	Kota Tinggi	6.61	86	Pn	Pn	00 54 58.9	+2.1
MYKOM	Kota Tinggi	6.61	86	P	Pn	00 54 59.0	+2.1
PKDT	Phuket	6.65	9	P	Pn	00 54 55.7	-1.7
	3.0nm11µm368nm,1.1s						
TRTT	Trang	6.94	20	P	Pn	00 54 59.9	-1.5
JMBI	JAMBI	7.02	114	P	Pn	00 55 03.5	+1.1
	9.2nm6µm288nm,0.6s						
KSI	Kapahiang	7.25	133	P	Pn	00 55 05.8	+0.1
	6.7nm13µm969nm,0.9s						
DSRI	Dabo	7.53	103	P	Pn	00 55 09.8	+0.3
	4.0nm2µm104nm,0.9s						
SURT	Suratani	7.77	11	P	Pn	00 55 18.4	+5.6
MNAI	Manna	8.00	135	Pn	Pn	00 55 15.7	-0.2
MNAI	Manna	8.00	135	P	Pn	00 55 15.3	-0.6
	17µm14µm741nm,0.5s						
LHSI	Lahat	8.07	129	P	Pn	00 55 17.5	+0.6
	11µm8µm890nm,1.1s						
LWLI	Liwa	9.24	133	P	Pn	00 55 34.3	+1.1
	546nm,0.7s						
PPBI	Pangkal Pinang	9.52	111	P	Pn	00 55 37.9	+1.1
	14µm118nm,0.9s						
KLSI		9.54	129	P	Pn	00 55 35.7	-1.4
	4µm1µm84nm,0.9s						
KASI	Kota Agung	9.91	133	P	Pn	00 55 39.1	-3.0
	6µm2µm221nm,0.8s						
TPI	Tanjungpandan	11.15	111	P	Pn	00 56 00.6	+1.5
	9µm3µm131nm,1.0s						
PHET	Kaeng Krachan	11.78	11	P	Pn	00 56 09.1	+1.3
	2µm205nm,0.9s						
PATY	Pattaya	12.10	17	P	Pn	00 56 15.3	+3.2
	113nm,0.7s						
DBJI	Dramaga	12.27	130	P	Pn	00 56 17.0	+2.5
	12µm184nm,1.1s						
SKJI	Sukabumi	12.41	132	P	P	00 56 31.4	+3.3
DGPR	DIGLIPUR	12.56	340	⇑*e*P	P	00 56 40.1	+10
KSM	Kuching	13.05	89	Pn	Pn	00 56 27.4	+2.2
KSM	Kuching	13.05	89	P	Pn	00 56 28.0	+2.8
LEM	Lembang	13.11	128	Pn	Pn	00 56 25.3	-0.9
	5.4nm,0.3s,baz=246,slow=2.6,SNR=8.4						
COCO	West Island	13.40	182	P	Pn	00 56 29.5	-0.4
COCO	West Island	13.40	182	Pn	Pn	00 56 29.5	-0.4
JCJI	Jatiwangi	13.44	125	P	P	00 56 48.9	+9.4
SRAK	Srakaew	13.50	20	P	Pn	00 56 34.7	+3.4
	21µm2µm,0.7s						
CISI	Cisompet, Garu	13.72	130	Pn	Pn	00 56 30.5	-3.8
CISI	Cisompet, Garu	13.72	130	P	Pn	00 56 30.6	-3.8
	4µm5µm251nm,1.1s						
UTHA	Uthaitani	14.34	9	P	Pn	00 56 43.0	+0.2
	1µm215nm,0.9s						
XMIS	Christmas Isla	14.37	145		Pn	00 56 46.0	+2.8
XMIS	Christmas Isla	14.37	145	P	P	00 56 49.8	-0.1
	92nm,1.0s						
PBKI	Pangkalan Bun	14.95	105	P	Pn	00 56 52.3	+1.3
	605nm,1.4s						
SBUM	Sibu	15.00	85	Pn	Pn	00 56 53.2	+1.5
SBUM				IAmb	IAmb	00 56 57.3	
	comp=Z,470nm,1.6s						
SBUM	Sibu	15.00	85	P	Pn	00 56 54.0	+2.2
CHAI	Chaiyaphum	15.25	18	P	Pn	00 56 54.8	-0.3
	comp=Z,2µmcomp=Z,214nm,0.9s						
DLV	T Lat	15.37	46		Pn	00 56 57.3	+0.5
DLV				IAmb	IAmb	00 57 04.1	
	comp=Z,281nm,0.9s						
SMRI	Semarang	15.55	122	Pn	Pn	00 56 58.7	-0.3
SMRI	Semarang	15.55	122	P	Pn	00 56 59.1	+0.1
	comp=Z,7µmcomp=Z,244nm,0.7s						
UGM	Wanagama	16.08	125		Pn	00 57 03.5	-2.4
UGM				IAmb	IAmb	00 57 59.0	
	comp=Z,631nm,1.8s						
UGM	Wanagama	16.08	125	P	Pn	00 57 03.9	-2.0
	comp=Z,8µmcomp=Z,149nm,1.2s						
PHIT	Phitsanulok	16.10	11	P	Pn	00 57 07.0	+0.9
	comp=Z,6µmcomp=Z,703nm,0.9s						
SUKH	Sukhothai	16.26	8	P	Pn	00 57 07.4	-0.6
	comp=Z,3µmcomp=Z,286nm,0.8s						
UTTA	Uttaradit	16.67	11	P	Pn	00 57 12.8	-0.4
	comp=Z,1µmcomp=Z,144nm,0.9s						
CM05	Chiang Mai Arr	17.09	5	P	Pn	00 57 17.9	-0.6
	comp=Z,496nmcomp=Z,70nm,0.9s						
CM04	Chiang Mai Arr	17.09	6	P	Pn	00 57 17.7	-0.8
	comp=Z,1µmcomp=Z,109nm,0.9s						
CM13	Chiang Mai Arr	17.10	5	P	Pn	00 57 18.2	-0.5
	comp=Z,652nmcomp=Z,62nm,0.6s						
CM01	Chiang Mai Arr	17.11	6	P	Pn	00 57 18.0	-0.8
	comp=Z,907nmcomp=Z,112nm,0.8s						
CM02	Chiang Mai Arr	17.12	5	P	Pn	00 57 18.4	-0.5
	comp=Z,655nmcomp=Z,74nm,1.1s						
CM09	Chiang Mai Arr	17.13	6	P	Pn	00 57 18.0	-1.1
	comp=Z,1µmcomp=Z,141nm,0.8s						
CM15	Chiang Mai Arr	17.14	5	P	P	00 57 20.3	-0.3
	comp=Z,65nm,0.6s						
CM31	Chiang Mai Arr	17.14	5	P	Pn	00 57 19.9	+0.7
	comp=Z,23µmcomp=Z,2µm,0.9s						
CM31	Chiang Mai Arr	17.14	5	Pn	Pn	00 57 18.3	-0.9
CMAR	Chiang Mai Arr	17.14	5	P	Pn	00 57 18.0	-1.2
	comp=Z,6.3nm,0.3s,baz=194,slow=12,SNR=26						
CMAR				PcP	PcP	01 02 04.4	+1.4
	comp=Z,0.1nm,0.3s,baz=214,slow=3.6,SNR=5.8						
CMAR				Lg	Lg	01 02 31.9	
	comp=Z,0.5nm,0.3s,baz=190,slow=30,SNR=4.1						
CMAR				LR	LR	01 05 22.7	
	comp=Z,26µm,18.3s,baz=235,slow=42						
CMAR				ScP	ScP	01 05 39.8	+3.6
	comp=Z,1.0nm,0.3s,baz=205,slow=4.0,SNR=3.0						
CMAR	Chiang Mai Arr	17.14	5	P	Pn	00 57 18.0	-1.2
CMAR	Chiang Mai Arr	17.14	5	Pn	Pn	00 57 18.1	-1.1
CM36	Chiang Mai Arr	17.22	6	P	Pn	00 57 19.0	-1.1
LAMP	Lampang	17.29	8	P	Pn	00 57 20.0	-1.0
	comp=Z,2µmcomp=Z,188nm,0.9s						
CM32	Chiang Mai Arr	17.33	5	P	Pn	00 57 21.0	-0.5
CM35	Chiang Mai Arr	17.38	6	P	Pn	00 57 21.0	-1.2
CMMT	Chiang Mai	17.49	5	P	Pn	00 57 21.0	-2.6
	comp=Z,2µmcomp=Z,60nm,0.8s						
CHTO	Chiang Mai	17.50	5	P	Pn	00 57 21.4	-2.2
CHTO				pmax	pmax		
	comp=Z,74nm,0.8s						
CHTO	Chiang Mai	17.50	5	Pn	Pn	00 57 21.4	-2.2
CHTO	Chiang Mai	17.50	5	P	Pn	00 57 21.1	-2.5
CHTO				P	Pn	00 57 21.1	-2.5
CM33	Chiang Mai Arr	17.50	5	P	Pn	00 57 22.0	-1.6
PALK	Pallekele	17.54	290	P	Pn	00 57 22.4	-1.8
	comp=Z,1.5nm,0.3s,baz=204,slow=12,SNR=7.2						
PALK				S	Sn	01 00 23.4	-15
	comp=Z,2.0nm,0.3s,baz=55,slow=9.5,SNR=2.5						
PALK				LR	LR	01 03 39.0	
	comp=Z,19µm,19.1s,baz=215,slow=36						
PALK	Pallekele	17.54	290	P	Pn	00 57 22.4	-1.8
PALK	Pallekele	17.54	290	P	P	00 57 26.9	+1.8
CM34	Chiang Mai Arr	17.55	6	P	Pn	00 57 23.0	-1.3
NONG	Nongkai	17.65	19	P	Pn	00 57 23.0	-2.4
	comp=Z,9µmcomp=Z,169nm,0.8s						
MTKI	Muara Teweh, K	17.78	97	P	P	00 57 28.1	+0.3
	comp=Z,10µmcomp=Z,134nm,1.2s						
BBKI	Banjar Baru	18.20	105	P	P	00 57 32.6	+0.2
	comp=Z,6µmcomp=Z,144nm,1.7s						
KMMI	Kalianget	18.62	117	P	P	00 57 36.8	-0.2
	comp=Z,10µmcomp=Z,5µmcomp=Z,231nm,1.1s						
JAGI	Jajag, Banyuwa	19.44	120	P	Pn	00 57 47.3	0.0
KBKI	Kotabaru	19.45	104	P	P	00 57 46.2	+0.1
	comp=Z,179nm,1.0s						
SPMM	Sapulut	19.48	80	P	Pn	00 57 51.0	+3.1
KKM	Kota Kinabalu	19.50	76	P	P	00 57 47.4	+0.7
KKM				IAmb	IAmb	00 57 52.1	
	comp=Z,343nm,1.2s						
BKB	Balikpapan	19.80	97		Pn	00 57 51.1	-0.6
BKB	Balikpapan	19.80	97	P	Pn	00 57 53.3	+1.6
	comp=Z,27µmcomp=Z,9µmcomp=Z,750nm,1.2s						
SMKI	Samarinda	20.03	95	P	Pn	00 57 54.6	+0.3
	comp=Z,13µmcomp=Z,268nm,0.8s						
SRBI	Singaraja	20.18	118	P	P	00 57 53.3	-0.8
	comp=Z,7µmcomp=Z,4µmcomp=Z,325nm,1.2s						
SGKI	Sangatta, Kali	20.43	95	P	P	00 57 55.5	-1.3
	comp=Z,22µmcomp=Z,12µmcomp=Z,882nm,1.2s						
MDRS	Chennai	20.51	306	IAmb	IAmb	00 58 12.4	
	comp=Z,90nm,1.1s						
SLVN	Son La	20.95	18	P	P	00 58 02.0	-0.4
SLVN				IAmb	IAmb	00 58 09.2	
	comp=Z,317nm,0.8s						
SLVN				IAMs_20	IAMs_20	01 07 11.8	
	comp=Z,29µm,18.0s						
VIS	Vishakhapatnam	21.30	321	*e*P	P	00 58 10.1	+3.9
SAIH	SAIHA	21.48	349	*e*P	P	00 58 07.2	-1.0
SAIH				IAmb	IAmb	00 58 12.9	
	comp=Z,204nm,0.5s						
QIZ	Qiongzhong	21.52	34	P	P	00 58 07.8	-0.7
QIZ				PP	PnPn	00 58 34.0	+4.6
QIZ				pmax	pmax		
	comp=Z,67nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,3µm,13.2s						
QIZ				LR	LR		
	comp=Z,17µm,13.2s						
QIZ				LR	LR		
	comp=Z,22µm,14.7s						
QIZ				LR	LR		
	comp=Z,20µm,12.5s						
QIZ	Qiongzhong	21.52	34	P	P	00 58 08.2	-0.3
MYLDM	Lahad Datu	21.56	79	P	P	00 58 10.3	+1.3
MYLDM				IAMs_20	IAMs_20	01 07 46.1	
	comp=Z,24µm,19.0s						
BATP	Bataraza	21.77	69	*e*P	P	00 58 10.8	-0.4
TWSI	Taliwang, Sumb	21.95	117	P	P	00 58 13.0	-0.2
	comp=Z,4µmcomp=Z,1µmcomp=Z,53nm,1.0s						
MPSI	Mapaga	22.66	92	P	P	00 58 21.4	+0.6
	comp=Z,16µmcomp=Z,3µmcomp=Z,218nm,0.9s						
PLAI	Plampang	22.79	117	P	P	00 58 21.7	-0.5
	comp=Z,5µmcomp=Z,1µmcomp=Z,100nm,1.1s						
TTSI	Tana Toraja	22.96	101	P	P	00 58 24.8	+0.8
	comp=Z,11µmcomp=Z,3µmcomp=Z,226nm,1.1s						
SPSI	Sidrap Palu	23.10	103	P	P	00 58 25.6	+0.2
	comp=Z,9µmcomp=Z,3µmcomp=Z,92nm,1.1s						
KAPI	Kappang	23.33	106	P	P	00 58 27.3	-0.3
	comp=Z,107nm,1.0s,baz=282,slow=8.5,SNR=22						
KAPI				S	S	01 02 37.4	-1.5
	comp=Z,9.5nm,0.8s,baz=191,slow=1.2,SNR=1.7						
KAPI	Kappang	23.33	106	P	P	00 58 24.9	-2.8
KAPI				pmax	pmax		
	comp=Z,164nm,1.2s						
KAPI				MLR	MLR		
	comp=Z,17µm,21.0s						
KAPI	Kappang	23.33	106	P	P	00 58 24.9	-2.8
KAPI				IAmb	IAmb	00 58 30.7	
	comp=Z,164nm,1.1s						
KAPI	Kappang	23.33	106	P	P	00 58 26.5	-1.2

KAPI				P	P	00 58 26.5	-1.2
KAPI				S	S	01 02 39.0	+0.1
KAPI				S	S	01 02 39.0	+0.1
BNSI	**Bone**	23.52	104	P	P	00 58 30.7	+1.1
	comp=Z,5µmcomp=Z,261nm,1.4s						
BKSI	**Bulukumba**	23.77	106	P	P	00 58 32.3	+0.4
	comp=Z,4µmcomp=Z,164nm,1.2s						
ENPP	**El Nido**	24.12	65	*e*P	P	00 58 34.7	-0.4
KMI	**Kunming**	24.28	12	⇑P	P	00 58 37.8	+1.0
KMI				pP	pP	00 58 46.0	+1.0
KMI				sP	sP	00 58 51.8	+3.4
KMI				S	S	01 02 56.8	+2.5
KMI				SS	SnSn	01 03 45.8	+7.5
KMI				pmax	pmax		
	comp=Z,3µm,5.4s						
KMI				LR	LR		
	comp=Z,49µm,16.1s						
KMI				LR	LR		
	comp=Z,18µm,13.3s						
KMI				LR	LR		
	comp=Z,54µm,15.9s						
KMI	**Kunming**	24.28	12	P	P	00 58 37.4	+0.6
KMI				pmax	pmax		
	comp=Z,568nm,1.2s						
KMI				MLR	MLR		
	comp=Z,37µm,20.0s						
KMI	**Kunming**	24.28	12	P	P	00 58 37.4	+0.6
BSSI	**Bau Bau, Buton**	24.35	108	P	P	00 58 37.7	+0.4
	comp=Z,2µmcomp=Z,241nm,1.1s						
HYB	**Hyderabad**	24.39	312	*i* P	P	00 58 37.0	-0.7
HYB				*e*S	S	01 02 58.0	+2.1
HYB	**Hyderabad**	24.39	312	*e*P	P	00 58 37.6	-0.1
HYB				IAmb	IAmb	00 58 48.9	
	comp=Z,120nm,0.9s						
KOHI	**KOHIMA**	24.48	353	*e*P	P	00 58 36.6	-2.0
KOHI				IAmb	IAmb	00 58 54.4	
	comp=Z,209nm,0.8s						
APSI	**Ampana**	24.49	95	P	P	00 58 40.2	+1.6
	comp=Z,6µmcomp=Z,4µmcomp=Z,394nm,1.0s						
WBSI	**Waikabubak, Su**	24.57	117	P	P	00 58 36.1	-3.3
	comp=Z,3µmcomp=Z,311nm,1.2s						
SHL	**Shillong**	24.69	348	*e*P	P	00 58 39.5	-1.0
SHL				IAmb	IAmb	00 58 42.6	
	comp=Z,384nm,0.9s						
MRSI	**Marisa**	24.70	92	P	P	00 58 40.2	-0.3
	comp=Z,9µmcomp=Z,4µmcomp=Z,342nm,0.9s						
BOK	**Bokaro**	24.94	335	⇑*e*P	P	00 58 42.8	+0.2
BOK				IAmb	IAmb	00 58 48.6	
	comp=Z,301nm,1.0s						
MOKO	**MOKOCHONG**	25.03	354	*e*P	P	00 58 42.7	-0.8
MOKO				IAmb	IAmb	00 58 47.9	
	comp=Z,268nm,0.8s						
MNCY	**Minicoy**	25.10	287	*e*P	P	00 58 35.6	-8.5
GUWA	**GUWAHATI**	25.33	348	*e*P	P	00 58 45.4	-0.7
GUWA				IAmb	IAmb	00 58 48.9	
	comp=Z,180nm,0.7s						
TEZP	**TEZPUR**	25.54	351	*e*P	P	00 58 46.5	-1.5
TEZP				IAmb	IAmb	00 58 52.0	
	comp=Z,116nm,0.9s						
GTOI	**Gorontalo**	25.76	91	P	P	00 58 48.4	-1.8
	comp=Z,2µmcomp=Z,146nm,1.1s						
BASI	**Baing, Sumba**	25.88	117	P	P	00 58 51.2	0.0
	comp=Z,2µmcomp=Z,144nm,1.3s						
LUBP	**Lubang**	25.89	60	*e*P	P	00 58 52.1	+0.8
LKP	**Lekhapani**	25.93	357	IAmb	IAmb	00 58 55.8	
	comp=Z,2µm,0.8s						
DGAR	**Diego Garcia**	26.21	250	P	P	00 58 52.9	-1.3
DGAR				pmax	pmax		
	comp=Z,541nm,1.6s						
DGAR				MLR	MLR		
	comp=Z,9µm,20.0s						
DGAR	**Diego Garcia**	26.21	250	P	P	00 58 52.9	-1.3
H08S2	**Diego Garcia H**	26.24	250	T	T	01 25 52.8	
	baz=71,slow=76						
H08S3	**Diego Garcia H**	26.25	250	T	T	01 25 53.1	
	baz=71,slow=76						
H08S1	**Diego Carcia H**	26.26	250	T	T	01 25 54.3	
	baz=71,slow=76,SNR=2944						
ZIRO	**ZIRO**	26.29	353	*e*P	P	00 58 54.9	-0.1
ZIRO				IAmb	IAmb	00 58 58.3	
	comp=Z,213nm,0.7s						
EDFI	**Ende, Flores**	26.32	113	P	P	00 58 52.1	-3.2
	comp=Z,584nmcomp=Z,33nm,0.8s						
MACP	**Maragondon, Ca**	26.54	60	*e*P	P	00 58 56.2	-1.0
GYA	**Guiyang**	26.61	19	⇓P	P	00 58 58.0	+0.2
GYA				pP	pP	00 59 06.3	+0.3
GYA				S	S	01 03 32.5	+1.3
GYA				pmax	pmax		
	comp=Z,62nm,1.5s						
GYA				LR	LR		
	comp=Z,24µm,13.4s						
GYA				LR	LR		
	comp=Z,17µm,13.5s						
GYA				LR	LR		
	comp=Z,27µm,16.8s						
TGY	**Tagaytay City**	26.66	60	P	P	00 58 59.2	+0.9
	comp=Z,148nm,0.3s,baz=294,slow=11,SNR=4.1						
TGY				LR	LR	01 09 12.5	
	comp=Z,7µm,20.8s,baz=258,slow=36						
GZH	**Guangzhou**	26.71	35	P	P	00 59 04.3	+5.7
GZH				PP	PP	00 59 49.5	-10
GZH				S	S	01 03 45.5	+13
GZH				LR	LR		
	comp=Z,21µm,13.5s						
GZH				LR	LR		
	comp=Z,18µm,13.6s						
KMSI	**Cibinong**	26.73	91	P	P	00 59 14.7	+16
MMRI	**Maumere**	26.78	112	P	P	00 58 57.3	-2.1
MMRI				IAmb	IAmb	00 59 24.3	
	comp=Z,248nm,1.2s						
MMRI				IAMs_20	IAMs_20	01 11 22.3	
	comp=Z,14µm,18.0s						
MMRI	**Maumere**	26.78	112	P	P	00 58 57.6	-1.8
	comp=Z,4µmcomp=Z,94nm,0.8s						
GUIM	**Jordan**	26.82	69	*e*P	P	00 58 57.8	-1.9
PAGZ	**Pagadian**	26.83	75	*e*P	P	00 59 01.1	+1.3
ODAN	**Odare**	27.13	340	*e*P	P	00 59 03.2	+0.5
	comp=Z,386nm,1.0s						
SMPP	**San Manuel, Pa**	27.41	56	*e*P	P	00 59 04.3	-0.7
TAPN	**Taplejung**	27.48	341	*e*P	P	00 59 06.5	+0.6
	comp=Z,761nm,0.9s						
RAMN	**Ramite**	27.49	339	*e*P	P	00 59 07.0	+1.1
	comp=Z,167nm,0.6s						
SKMP	**Bagumbayan, Su**	27.71	78	*e*P	P	00 59 07.7	0.0
CGP	**Cagayan de Oro**	28.23	75	⇓*e*P	P	00 59 14.0	+1.6
KCP	**Kidapawan**	28.33	78	⇓*i*P	P	00 59 13.7	+0.4
BUKP	**Musuan**	28.47	76	*e*P	P	00 59 15.8	+1.3
PKI	**Pulchoki**	28.49	338	*e*P	P	00 59 15.4	+0.5
	comp=Z,359nm,1.2s						
PKIN	**Phulchoki**	28.50	338	*e*P	P	00 59 14.9	0.0
	comp=Z,160nm,0.8s						
GUN	**Gumba**	28.62	339	*e*P	P	00 59 16.7	+0.6
	comp=Z,396nm,0.8s						
DMN	**Daman**	28.64	337	*e*P	P	00 59 16.4	+0.2
	comp=Z,194nm,0.8s						
BATI	**Baumata**	28.66	114	P	P	00 59 14.6	-1.6
	comp=Z,24nm,0.4s,baz=216,slow=4.6,SNR=6.5						
BATI				S	S	01 03 56.5	-7.1
	comp=Z,11nm,0.4s,baz=177,slow=6.7,SNR=1.9						
BATI				LR	LR	01 12 53.6	
	comp=Z,21µm,19.2s,baz=274,slow=41						
BATI	**Baumata**	28.66	114	P	P	00 59 13.9	-2.3
	comp=Z,5µmcomp=Z,863nmcomp=Z,63nm,1.5s						
KKN	**Kakani**	28.74	338	*e*P	P	00 59 17.1	+0.1
	comp=Z,300nm,0.9s						
DDMP	**Don Marcelino,**	28.79	80	*e*P	P	00 59 20.6	+3.2
DAV	**Davao City (W)**	28.82	78	P	P	00 59 19.1	+1.5
	comp=Z,68nm,0.3s,baz=274,slow=6.1,SNR=6.9						
DAV				LR	LR	01 12 40.7	
	comp=Z,8µm,18.9s,baz=204,slow=40						
LSA	**Lhasa**	28.84	349	P	P	00 59 18.5	+0.3
LSA				S	S	01 04 12.0	+5.0
LSA				pmax	pmax		
	comp=Z,5µm,12.1s						
LSA				LR	LR		
	comp=Z,19µm,24.2s						
LSA				LR	LR		
	comp=Z,24µm,23.5s						
LSA				LR	LR		
	comp=Z,27µm,23.5s						
LSA	**Lhasa**	28.84	349	IAmb	IAmb	00 59 29.6	
	comp=Z,76nm,1.0s						
LSA	**Lhasa**	28.84	349	P	P	00 59 18.0	-0.2
LSA				P	P	00 59 18.0	-0.2
SANI	**Sanana**	28.92	97	P	P	00 59 17.7	-0.8
	comp=Z,4µmcomp=Z,946nmcomp=Z,55nm,1.1s						
SOEI	**Soe**	29.05	113	P	P	00 59 16.9	-2.9
SOEI				IAMs_20	IAMs_20	01 10 33.4	
	comp=Z,18µm,22.0s						
SOEI	**Soe**	29.05	113	P	P	00 59 17.3	-2.5
	comp=Z,2µmcomp=Z,216nm,1.3s						
BHPL	**Bhopal**	29.09	320	*e*P	P	00 59 19.9	-0.1
BHPL				IAmb	IAmb	00 59 29.9	
	comp=Z,27nm,1.1s						
DANN	**Dangsing**	29.84	336	*e*P	P	00 59 27.2	+0.3
	comp=Z,188nm,0.6s						
GLSP	**General Luna,**	29.93	73	*e*P	P	00 59 23.4	-4.0
CD2	**Chengdu**	30.10	11	P	P	00 59 27.5	-1.3
CD2				sP	pP	00 59 34.5	-2.5
CD2				PP	PP	01 00 32.5	-4.6
CD2				S	S	01 04 17.5	-8.4
CD2				sS	pS	01 04 34.8	-0.4
CD2				pmax	pmax		
	comp=Z,100nm,1.0s						
CD2				pmax	pmax		
	comp=Z,2µm,12.0s						
CD2				LR	LR		
	comp=Z,38µm,15.8s						
CD2				LR	LR		
	comp=Z,42µm,17.2s						
CD2				LR	LR		
	comp=Z,58µm,14.9s						
NLAI	**Namlea**	30.17	99	P	P	00 59 29.7	+0.1
	comp=Z,2µmcomp=Z,99nm,0.7s						
KNMB	**Chin-men Tao**	30.80	40	P	P	00 59 33.5	-1.5
KNMB				IAmb	IAmb	00 59 35.7	
	comp=Z,79nm,1.0s						
KNMB				IAMs_20	IAMs_20	01 13 22.3	
	comp=Z,12µm,18.0s						
ENH	**Enshi**	31.08	21	IAMs_20	IAMs_20	01 13 35.6	
	comp=Z,11µm,19.0s						
QZH	**Quanzhou**	31.27	40	⇑*i*P	P	00 59 39.8	+0.6
QZH				sP	sP	00 59 50.5	-0.3
QZH				S	S	01 04 45.8	+1.5
QZH				pmax	pmax		
	comp=Z,990nm,5.3s						
QZH				LR	LR		
	comp=Z,17µm,13.1s						
QZH				LR	LR		
	comp=Z,9µm,15.2s						
QZH				LR	LR		
	comp=Z,22µm,13.9s						
MBWA	**Marble Bar**	31.32	137	IAMs_20	IAMs_20	01 14 22.8	
	comp=Z,12µm,21.0s						
TPUB	**Ta-pu**	31.51	44	P	P	00 59 39.9	-1.4
TWG	**Pinlang**	31.52	45	P	P	00 59 41.7	+0.3
PSAD1	**Pilbara Seismi**	31.59	137	IAMs_20	IAMs_20	01 13 32.7	
	comp=Z,16µm,21.0s						
PSAC1	**Pilbara Seismi**	31.63	137	IAMs_20	IAMs_20	01 13 31.9	
	comp=Z,17µm,21.0s						
PSAB1	**Pilbara Seismi**	31.66	137	IAMs_20	IAMs_20	01 13 33.8	
	comp=Z,16µm,21.0s						
PSAA2	**Pilbara Seismi**	31.68	137	IAMs_20	IAMs_20	01 13 33.1	
	comp=Z,17µm,21.0s						
PSAA1	**Pilbara Seismi**	31.68	137	IAMs_20	IAMs_20	01 13 58.2	
	comp=Z,13µm,19.0s						
PSAB2	**Pilbara Seismi**	31.68	137	IAMs_20	IAMs_20	01 13 35.3	
	comp=Z,16µm,21.0s						
PSA00	**Pilbara Seismi**	31.68	137	P	P	00 59 44.6	+1.8
PSA00	**Pilbara Seismi**	31.68	137	P	P	00 59 43.5	+0.6
PSA00				IAmb	IAmb	00 59 46.2	
	comp=Z,153nm,1.2s						
PSA00				IAMs_20	IAMs_20	01 13 44.3	
	comp=Z,16µm,21.0s						
PSAD3	**Pilbara Seismi**	31.68	137	IAMs_20	IAMs_20	01 13 45.4	
	comp=Z,16µm,20.0s						
PSAA3	**Pilbara Seismi**	31.69	137	IAMs_20	IAMs_20	01 13 45.6	
	comp=Z,16µm,21.0s						
PSAB3	**Pilbara Seismi**	31.70	137	IAMs_20	IAMs_20	01 13 44.8	
	comp=Z,17µm,21.0s						
PSAC3	**Pilbara Seismi**	31.70	137	IAMs_20	IAMs_20	01 13 34.9	
	comp=Z,13µm,20.0s						
PSAC2	**Pilbara Seismi**	31.71	137	IAMs_20	IAMs_20	01 13 46.1	
	comp=Z,16µm,21.0s						
PSAD2	**Pilbara Seismi**	31.79	137	IAMs_20	IAMs_20	01 13 38.2	
	comp=Z,16µm,21.0s						
MSAI	**Masohi**	31.99	98	P	P	00 59 45.4	-0.3
	comp=Z,20nm,0.7s						
YULB	**Yu-li**	32.04	45	P	P	00 59 46.2	+0.2
SSLB	**Suanglung**	32.05	44	P	P	00 59 46.5	+0.4
SSLB				IAmb	IAmb	00 59 52.7	
	comp=Z,129nm,1.2s						
SSLB				IAMs_20	IAMs_20	01 12 06.7	
	comp=Z,13µm,22.0s						
NACB	**Ninganchiao**	32.75	44	P	P	00 59 49.3	-2.9
NACB				IAmb	IAmb	00 59 55.7	
	comp=Z,101nm,1.3s						
NACB				IAMs_20	IAMs_20	01 12 29.1	
	comp=Z,12µm,21.0s						
YHNB	**Yeheng**	32.92	43	P	P	00 59 53.4	-0.4
YHNB				IAmb	IAmb	01 00 00.4	
	comp=Z,188nm,1.6s						
WHN	**Wuhan**	33.31	28	⇑P	P	00 59 57.3	+0.3
WHN				S	S	01 05 22.0	+6.0
WHN				pmax	pmax		
	comp=Z,52nm,0.9s						
WHN				pmax	pmax		
	comp=Z,2µm,5.7s						
WHN				LR	LR		
	comp=Z,18µm,13.1s						
WHN				LR	LR		
	comp=Z,29µm,13.6s						
WHN				LR	LR		
	comp=Z,42µm,14.5s						
FITZ	**Fitzroy Crossi**	33.94	126	P	P	01 00 01.3	-1.3
	baz=34,SNR=27						
FITZ	**Fitzroy Crossi**	33.94	126	P	P	01 00 01.4	-1.2
	comp=Z,21nm,0.7s,baz=322,slow=8.0						
FITZ				S	S	01 05 19.1	-6.8
	comp=Z,2.2nm,0.8s,baz=318,slow=14,SNR=1.2						
FITZ				LR	LR	01 16 04.2	
	comp=Z,6µm,20.0s,baz=308,slow=40						
FITZ	**Fitzroy Crossi**	33.94	126	P	P	01 00 01.1	-1.5
SWI	**Sorong**	34.07	93	P	P	01 00 01.2	-2.7
	comp=Z,4µmcomp=Z,1µmcomp=Z,48nm,0.9s						
XAN	**Xi'an**	34.36	17	P	P	01 00 05.0	-1.2
XAN				pP	pP	01 00 15.5	+1.1
XAN				sP	sP	01 00 18.0	+0.2
XAN				S	S	01 05 30.0	-2.3
XAN				pmax	pmax		
	comp=Z,200nm,0.9s						
XAN				pmax	pmax		
	comp=Z,430nm,10.1s						
XAN				LR	LR		
	comp=Z,11µm,17.4s						
XAN				LR	LR		
	comp=Z,24µm,14.1s						
XAN				LR	LR		
	comp=Z,32µm,13.0s						
MEEK	**Meekatharra**	34.57	145	P	P	01 00 11.4	+3.3
	baz=35,SNR=6.8						
MORW	**Morawa**	35.14	151	P	P	01 00 16.5	+3.6
	baz=35,SNR=5.7						
MORW	**Morawa**	35.14	151	P	P	01 00 13.9	+1.0
MORW				IAMs_20	IAMs_20	01 13 58.5	
	comp=Z,10µm,20.0s						
LZH	**Lanzhou**	35.16	9	*e*P	P	01 00 12.8	-0.4
LZH				pP	pP	01 00 18.0	-3.4
LZH				sP	sP	01 00 21.3	-3.5
LZH				S	S	01 05 42.8	-1.9
LZH				sS	sS	01 05 56.5	-1.9
LZH				pmax	pmax		
	comp=Z,68nm,1.2s						
LZH				pmax	pmax		
	comp=Z,1µm,5.5s						
LZH				LR	LR		
	comp=Z,18µm,13.0s						
LZH				LR	LR		
	comp=Z,18µm,14.1s						
LZH				LR	LR		
	comp=Z,18µm,17.3s						
FAKI	**Fak Fak**	35.23	97	P	P	01 00 12.9	-1.1
FAKI				IAmb	IAmb	01 00 45.3	
	comp=Z,62nm,1.1s						
FAKI	**Fak Fak**	35.23	97	P	P	01 00 14.6	+0.7
	comp=Z,5µmcomp=Z,958nmcomp=Z,54nm,1.3s						
SMLA	**Simla**	35.25	329	*e*P	P	01 00 13.4	-0.4
SMLA				IAmb	IAmb	01 00 18.0	
	comp=Z,63nm,0.5s						
MTN	**Manton Dam**	36.43	114	P	P	01 00 22.4	-1.8
	baz=36,SNR=9.5						
MTN	**Manton Dam**	36.43	114	IAmb	IAmb	01 00 24.7	
	comp=Z,169nm,1.4s						
DHRM	**DHARAMSHALA**	36.59	329	*e*P	P	01 00 24.6	-0.9
DHRM				IAmb	IAmb	01 00 40.2	
	comp=Z,144nm,0.9s						
NJ2	**Nanjing**	36.76	31	⇑P	P	01 00 27.0	+0.3
NJ2				pP	pP	01 00 29.0	-6.0
NJ2				PP	PnPn	01 01 53.8	+3.0
NJ2				PcP	PcP	01 02 44.5	-4.3
NJ2				S	S	01 06 12.5	+3.5
NJ2				sS	sS	01 06 21.8	-0.9
NJ2				ScS	ScS	01 10 33.5	-7.3
NJ2				pmax	pmax		
	comp=Z,42nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.1s						
NJ2				LR	LR		
	comp=Z,16µm,13.6s						
NJ2				LR	LR		
	comp=Z,12µm,15.0s						
NJ2				LR	LR		
	comp=Z,20µm,15.0s						
SSE	**Sheshan**	37.31	35	P	P	01 00 32.0	+0.6
SSE				PP	PnPn	01 01 58.5	+1.0
SSE				S	S	01 06 20.5	+3.1
SSE				pmax	pmax		
	comp=Z,21nm,1.3s						
SSE				pmax	pmax		
	comp=Z,610nm,4.0s						
SSE				LR	LR		
	comp=Z,6µm,15.1s						
SSE	**Sheshan**	37.31	35	P	P	01 00 31.0	-0.4
SSE	**Sheshan**	37.31	35	IAMs_20	IAMs_20	01 17 17.2	
	comp=Z,11µm,20.0s						
KDU	**Kakadu**	37.61	113	P	P	01 00 33.3	-0.8
	baz=38,SNR=10						
MUN	**Mundaring**	37.65	153	P	P	01 00 38.1	+3.8
	baz=38,SNR=5.6						
GTA	**Gaotai**	38.01	3	⇑P	P	01 00 36.8	-0.6
GTA				pP	pP	01 00 45.5	-0.2
GTA				sP	sP	01 00 49.3	+0.2
GTA				PP	PnPn	01 02 08.0	+1.9
GTA				PcP	PcP	01 02 54.5	+1.8
GTA				S	S	01 06 26.0	-2.2
GTA				sS	pS	01 06 37.8	+0.2
GTA				PcS	PcS	01 06 41.0	-0.6
GTA				SS	SS	01 09 12.0	-3.9
GTA				ScS	ScS	01 10 46.0	-2.0
GTA				pmax	pmax		
	comp=Z,40nm,1.5s						
GTA				pmax	pmax		
	comp=Z,1µm,5.3s						
GTA				LR	LR		
	comp=Z,8µm,16.4s						
GTA				LR	LR		
	comp=Z,8µm,16.0s						
GTA				LR	LR		
	comp=Z,11µm,15.3s						
KLBR	**Kellerberrin**	38.05	151	P	P	01 00 40.5	+2.8
	baz=38,SNR=7.0						
TIY	**Taiyuan**	38.85	19	*e*P	P	01 00 44.0	-0.4
TIY				PP	PnPn	01 02 21.8	+5.7
TIY				pmax	pmax		
	comp=Z,19nm,0.6s						
TIY				pmax	pmax		
	comp=Z,820nm,6.4s						
TIY				LR	LR		
	comp=Z,20µm,13.0s						
TIY				LR	LR		
	comp=Z,10µm,15.7s						
TIY				LR	LR		
	comp=Z,22µm,13.2s						
NWAO	**Narrogin (SRO)**	38.91	153	P	P	01 00 47.6	+2.7
	baz=39,SNR=7.8						
NWAO	**Narrogin (SRO)**	38.91	153	P	P	01 00 42.5	-2.4
	comp=Z,7.3nm,0.7s,baz=14,slow=4.2,SNR=2.1						
NWAO				S	S	01 06 38.2	-3.5
	comp=Z,5.3nm,0.8s,baz=127,slow=23,SNR=1.3						
NWAO				LR	LR	01 16 03.1	
	comp=Z,9µm,20.6s,baz=336,slow=35						
NWAO	**Narrogin (SRO)**	38.91	153	P	P	01 00 46.0	+1.1
NWAO				pmax	pmax		
	comp=Z,119nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,10µm,21.0s						
NWAO	**Narrogin (SRO)**	38.91	153	P	P	01 00 46.8	+1.8
NWAO				IAmb	IAmb	01 01 01.8	
	comp=Z,119nm,1.2s						
NWAO	**Narrogin (SRO)**	38.91	153	P	P	01 00 46.0	+1.1
NWAO				IAmb	IAmb	01 01 01.8	
	comp=Z,148nm,1.2s						
NWAO	**Narrogin (SRO)**	38.91	153	IAMs_20	IAMs_20	01 16 00.6	
	comp=Z,10µm,21.0s						
JOW	**Kunigami**	39.14	47	LR	LR	01 16 59.5	
	comp=Z,3µm,19.4s,baz=218,slow=36						
NIL	**Nilore**	39.27	328	P	P	01 00 47.5	-0.5
NIL				pmax	pmax		
	comp=Z,123nm,1.2s						
NIL				MLR	MLR		
	comp=Z,5µm,18.0s						
NIL	**Nilore**	39.27	328	P	P	01 00 47.5	-0.5
NIL				IAmb	IAmb	01 01 06.7	
	comp=Z,123nm,1.2s						
H01W3	**Cape Leeuwin H**	39.31	158	T	T	01 42 21.7	
	baz=333,slow=76						
H01W2	**Cape Leeuwin H**	39.32	158	T	T	01 42 22.7	
	baz=333,slow=76						
H01W1	**Cape Leeuwin H**	39.32	158	T	T	01 42 22.7	
	baz=333,slow=76						
TIA	**Tai'an**	39.33	26	P	P	01 00 47.0	-1.4
TIA				PP	PnPn	01 02 25.0	+3.2
TIA				pmax	pmax		
	comp=Z,26nm,1.6s						
TIA				pmax	pmax		
	comp=Z,1µm,11.0s						
TIA				LR	LR		
	comp=Z,11µm,19.6s						
TIA				LR	LR		
	comp=Z,13µm,15.7s						
TIA				LR	LR		
	comp=Z,21µm,15.2s						
KMBL	**Kambalda**	40.02	146	P	P	01 00 57.0	+2.8
	baz=40,SNR=16						
JMZ	**Minamidaito 2**	40.80	50	P	P	01 01 00.1	-0.6
JMZ				IAmb	IAmb	01 01 30.7	
	comp=Z,142nm,1.1s						
BTO	**Baotou**	40.81	15	*e*P	P	01 01 01.5	+0.8
BTO				PP	PP	01 02 37.3	+2.1
BTO				S	S	01 07 11.8	+1.6
HHC	**Hu-ho-hao-te**	41.46	16	*e*P	P	01 01 06.5	+0.5
HHC				PP	PP	01 02 42.5	+0.3
HHC				S	S	01 07 21.5	+1.8
HHC				SS	SS	01 10 20.0	-4.8
HHC				pmax	pmax		
	comp=Z,69nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1µm,8.9s						
HHC				LR	LR		
	comp=Z,21µm,15.3s						
HHC				LR	LR		
	comp=Z,10µm,16.2s						
HHC				LR	LR		
	comp=Z,22µm,17.0s						
SMPI	**Sarmi**	41.58	94	P	P	01 01 08.3	+1.0
WB0	**Warramunga Arr**	42.01	122	IAMs_20	IAMs_20	01 22 00.6	
	comp=Z,8µm,20.0s						
WB9	**Warramunga Arr**	42.01	122	IAMs_20	IAMs_20	01 22 00.7	
	comp=Z,8µm,20.0s						
WB8	**Warramunga Arr**	42.02	122	IAMs_20	IAMs_20	01 22 00.9	
	comp=Z,7µm,19.0s						
WB6	**Warramunga Arr**	42.02	122	IAMs_20	IAMs_20	01 22 02.0	
	comp=Z,7µm,20.0s						
WB7	**Warramunga Arr**	42.03	122	IAMs_20	IAMs_20	01 22 01.6	
	comp=Z,6µm,20.0s						
WC1	**Warramunga Arr**	42.03	122	IAMs_20	IAMs_20	01 22 02.2	
	comp=Z,6µm,20.0s						
WRA	**Warramunga Arr**	42.04	122	P	P	01 01 10.0	-1.0
	comp=Z,35nm,0.8s,baz=299,slow=9.1,SNR=105						
WRA				ScP	ScP	01 06 56.0	+1.4
	comp=Z,2.1nm,1.0s,baz=308,slow=3.9,SNR=6.3						
WRA				S	S	01 07 23.2	-5.5
	comp=Z,5.2nm,1.0s,baz=293,slow=16,SNR=5.6						
WRA				LR	LR	01 19 07.8	
	comp=Z,6µm,21.7s,baz=300,slow=37						
WRA	**Warramunga Arr**	42.04	122	P	P	01 01 10.2	-0.8
WRA	**Warramunga Arr**	42.04	122	P	P	01 01 10.2	-0.8
WB4	**Warramunga Arr**	42.04	122	IAMs_20	IAMs_20	01 22 01.4	

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          comp=Z,6µm,20.0s
WB3   Warramunga Arr    42.04 122   IAMs_20  IAMs_20  01 22 01.5
          comp=Z,6µm,20.0s
WRAB  Tennant Creek     42.04 122   P        P        01 01 11.0  0.0
WRAB                                pmax     pmax
          comp=Z,81nm,1.0s
WRAB                                MLR      MLR
          comp=Z,6µm,20.0s
WRAB  Tennant Creek     42.04 122   P        P        01 01 11.0  0.0
WRAB                                IAmb     IAmb     01 01 29.6
          comp=Z,81nm,0.9s
WRAB  Tennant Creek     42.04 122   IAMs_20  IAMs_20  01 22 02.8
          comp=Z,6µm,20.0s
WC4   Warramunga Arr    42.05 122   IAMs_20  IAMs_20  01 22 02.6
          comp=Z,7µm,21.0s
WB2   Warramunga Arr    42.05 122   P        P        01 01 10.2 -0.9
WB2                                 IAMs_20  IAMs_20  01 22 01.7
          comp=Z,6µm,20.0s
WB1   Warramunga Ar.    42.05 122   IAMs_20  IAMs_20  01 18 04.8
          comp=Z,7µm,22.0s
WC2   Warramunga Arr    42.05 122   IAMs_20  IAMs_20  01 22 02.8
          comp=Z,6µm,20.0s
WC3   Warramunga Arr    42.07 122   IAMs_20  IAMs_20  01 22 02.3
          comp=Z,6µm,20.0s
WR3   Warramunga Arr    42.08 122   IAMs_20  IAMs_20  01 18 57.5
          comp=Z,7µm,22.0s
WR7   Warramunga Arr    42.16 122   IAMs_20  IAMs_20  01 22 05.6
          comp=Z,6µm,20.0s
WR8   Warramunga Arr    42.18 122   IAMs_20  IAMs_20  01 22 07.2
          comp=Z,6µm,21.0s
WR9   Warramunga Arr    42.19 122   IAMs_20  IAMs_20  01 22 07.7
          comp=Z,6µm,20.0s
BJT   Baijiatuau        42.22  22   P        P        01 01 12.0 -0.1
BJT                                 pmax     pmax
          comp=Z,113nm,0.7s
BJT                                 MLR      MLR
          comp=Z,5µm,19.0s
BJT   Baijiatuau        42.22  22   P        P        01 01 12.0 -0.1
BJT                                 IAmb     IAmb     01 01 15.9
          comp=Z,113nm,0.7s
WR0   Warramunga Arr    42.22 122   P        P        01 01 11.4 -1.1
WR0                                 IAmb     IAmb     01 01 31.0
          comp=Z,75nm,0.8s
WR0                                 IAMs_20  IAMs_20  01 22 08.1
          comp=Z,6µm,20.0s
BJI   Beijing           42.24  22   P        P        01 01 12.8 +0.5
BJI                                 PP       PP       01 02 52.8 +2.4
BJI                                 S        S        01 07 32.8 +1.8
BJI                                 pmax     pmax
          comp=Z,150nm,0.7s
BJI                                 LR       LR
          comp=Z,4µm,14.5s
BJI                                 LR       LR
          comp=Z,6µm,17.1s
BJI                                 LR       LR
          comp=Z,4µm,22.1s
KBL   Kabul             42.28 325   P        P        01 01 12.2 -0.8
KBL                                 pmax     pmax
          comp=Z,22nm,0.9s
KBL                                 MLR      MLR
          comp=Z,4µm,19.0s
KBL   Kabul             42.28 325   P        P        01 01 12.2 -0.8
KBL   Kabul             42.28 325   P        P        01 01 11.3 -1.7
          SNR=10
KBL                                 S        S        01 07 26.9 -5.4
KSH   Kashi             42.71 336   P        P        01 01 15.5 -0.8
KSH                                 pP       pP       01 01 21.8 -2.9
KSH                                 S        S        01 07 37.3 -1.1
KSH                                 SS       SS       01 10 42.5 -7.1
KSH                                 pmax     pmax
          comp=Z,45nm,0.8s
KSH                                 pmax     pmax
          comp=Z,2µm,6.3s
KSH                                 LR       LR
          comp=Z,11µm,17.7s
KSH                                 LR       LR
          comp=Z,5µm,13.4s
KSH                                 LR       LR
          comp=Z,14µm,19.6s
WBK   Wadi Bani Khal    42.80 303   P        P        01 01 18.2 +1.0
AIS   Amsterdam Isla    42.94 203   IAMs_20  IAMs_20  01 15 11.1
          comp=Z,7µm,20.0s
GENI  Genyem            43.08  95   P        P        01 01 19.5  0.0
          comp=Z,3µmcomp=Z,103nm,0.9s
WMQ   Urumqi            43.20 350   P        P        01 01 20.5 +0.4
WMQ                                 sP       sP       01 01 34.0 +2.1
WMQ                                 PcP      PcP      01 03 11.0 +1.8
WMQ                                 S        S        01 07 44.5 -0.7
WMQ                                 ScS      ScS      01 11 18.8 +0.1
WMQ                                 pmax     pmax
          comp=Z,150nm,1.3s
WMQ                                 pmax     pmax
          comp=Z,2µm,4.7s
WMQ                                 LR       LR
          comp=Z,6µm,17.9s
WMQ                                 LR       LR
          comp=Z,7µm,19.5s
WMQ                                 LR       LR
          comp=Z,4µm,24.5s
WMQ   Urumqi            43.20 350   P        P        01 01 20.7 +0.6
WMQ                                 pmax     pmax
          comp=Z,151nm,1.1s
WMQ                                 MLR      MLR
          comp=Z,5µm,19.0s
WMQ   Urumqi            43.20 350   P        P        01 01 20.7 +0.6
WMQ                                 IAmb     IAmb     01 01 24.2
          comp=Z,151nm,1.1s
FORT  Forrest           43.31 140   P        P        01 01 22.0 +0.8
          baz=44,SNR=14
FORT  Forrest           43.31 140   P        P        01 01 22.7 +1.5
ASAR  Alice Springs     43.41 127   P        P        01 01 21.2 -0.9
          comp=Z,55nm,1.1s,baz=299,slow=6.8,SNR=131
ASAR                                PcP      PcP      01 03 11.0 +0.6
          comp=Z,9.1nm,0.9s,baz=306,slow=3.5,SNR=5.1
ASAR                                ScP      ScP      01 07 01.8 +1.7
          comp=Z,5.2nm,1.1s,baz=306,slow=3.2,SNR=5.8
ASAR                                S        S        01 07 44.7 -4.1
          comp=Z,5.0nm,0.9s,baz=293,slow=13,SNR=8.8
ASAR  Alice Springs     43.41 127   P        P        01 01 21.5 -0.6
JSU   Suzuyama          43.44  43   P        P        01 01 22.3 +0.1
JSU                                 IAmb     IAmb     01 01 25.7
          comp=Z,190nm,1.3s
DL2   Dalian            43.57  28   P        P        01 01 22.3 -0.8
DL2                                 sP       sP       01 01 35.5 +0.6
DL2                                 PP       PcP      01 03 11.0 +0.5
DL2                                 S        S        01 07 50.3 -0.4
DL2                                 pmax     pmax
          comp=Z,140nm,1.3s
DL2                                 pmax     pmax
          comp=Z,1µm,5.1s
DL2                                 LR       LR
          comp=Z,5µm,16.5s
DL2                                 LR       LR
          comp=Z,6µm,14.5s
DL2                                 LR       LR
          comp=Z,8µm,16.0s
JAY   Jayapura          43.60  95   P        P        01 01 22.5 -1.4
          comp=Z,570nmcomp=Z,20nm,0.9s
SMDO  Samad             43.76 303   P        P        01 01 28.0 +2.9
SMDO                                S        S        01 07 56.5 +2.4
BIDO  Bidbid            43.88 303   P        P        01 01 26.7 +0.8
          SNR=6.4
SHAO  Shalim            44.12 295   S        S        01 08 02.2 +2.9
BSY   Bisya             44.35 302   P        P        01 01 30.2 +0.5
HOQ   Hoqain            44.59 303   P        P        01 01 32.3 +0.7
HOQ                                 S        S        01 08 08.8 +2.7
SHLS  Shalkode          44.62 341 i P        P        01 01 30.1 -1.5
          comp=Z,45nm,1.5s,baz=342
SHLS                                eS       S        01 08 04.0 -2.1
          baz=342
SHLS  Shalkode          44.62 341 i P        P        01 01 30.1 -1.5
SHLS                                eS       S        01 08 04.0 -2.1
SHLS                                pmax     pmax
          comp=Z,45nm,1.5s
TJN   Taejon            44.67  35ceP       P        01 01 31.8 -0.2
JNU   Nakatsue          44.70  41   LR       LR       01 22 45.1
          comp=Z,8µm,18.0s,baz=234,slow=40
JNU   Nakatsue          44.70  41   P        P        01 01 31.3 -1.1
JNU                                 IAmb     IAmb     01 01 35.3
          comp=Z,126nm,1.0s
JNU                                 IAMs_20  IAMs_20  01 22 51.6
          comp=Z,9µm,18.0s
PDGK  Podgornoye        44.76 342 i P        P        01 01 31.9 -0.9
PDGK                                pmax     pmax
          comp=Z,51nm,0.9s
SATY  Saty              44.87 340 i P        P        01 01 33.2 -0.5
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          comp=Z,27nm,0.8s,baz=340
SATY                                eS       S        01 08 09.7 -0.1
          baz=340
SATY  Saty              44.87 340 i P        P        01 01 33.1 -0.5
SATY                                eS       S        01 08 09.7 -0.1
SATY                                pmax     pmax
          comp=Z,27nm,0.8s
INCN  Inchon            45.04  33   P        P        01 01 34.8 -0.2
INCN                                pmax     pmax
          comp=Z,74nm,1.0s
INCN                                MLR      MLR
          comp=Z,7µm,20.0s
INCN  Inchon            45.04  33   P        P        01 01 34.8 -0.2
INCN                                IAmb     IAmb     01 01 37.9
          comp=Z,74nm,0.9s
INCN  Inchon            45.04  33   IAMs_20  IAMs_20  01 21 17.9
          comp=Z,7µm,20.0s
KPKS  Kokpek            45.14 341 i P        P        01 01 35.0 -0.8
          comp=Z,12nm,0.8s,baz=341
KPKS  Kokpek            45.14 341 i P        P        01 01 35.0 -0.8
KPKS                                pmax     pmax
          comp=Z,12nm,0.8s
ARQ   Araqi             45.16 302   P        P        01 01 37.0 +0.9
ARQ                                 S        S        01 08 15.4 +1.0
TNSS  Tian-Shan         45.36 339 eP       P        01 01 38.3 +0.4
          baz=339
TNSS  Tian-Shan         45.36 339 eP       P        01 01 38.2 +0.4
MDOK  Medeo             45.43 339 eP       P        01 01 38.5 +0.3
          baz=339
MDOK                                eS       S        01 08 18.6 +0.6
          baz=339
MDOK                                LR       LR       01 24 44.4
          comp=Z,2µm,15.3s,baz=339
MDOK  Medeo             45.43 339 eP       P        01 01 38.4 +0.3
MDOK                                eS       S        01 08 18.6 +0.6
SOHO  SOHO              45.47 303   P        P        01 01 41.2 +2.7
AAA   Alma-Ata          45.52 339 i P        P        01 01 40.2 +1.5
          comp=Z,28nm,0.6s,baz=339
AAA                                 eS       S        01 08 20.8 +1.6
          baz=339
AAA                                 LR       LR       01 24 51.1
          comp=Z,2µm,15.2s,baz=339
AAA   Alma-Ata          45.52 339 i P        P        01 01 40.2 +1.5
AAA                                 eS       S        01 08 20.7 +1.6
AAA                                 pmax     pmax
          comp=Z,28nm,0.6s
UCH   Uchtor            45.59 336   P        P        01 01 40.9 +1.1
          SNR=32
MTBS  Maitube           45.63 339 i P        P        01 01 39.2 -0.5
          baz=338
MTBS  Maitube           45.63 339 i P        P        01 01 39.1 -0.5
KSAR  Wonju Array Be    45.72  35   P        P        01 01 39.6 -0.6
KSAR  Wonju Array Be    45.72  35   P        P        01 01 39.6 -0.6
KSRS  Korea Array       45.74  35   P        P        01 01 40.6 +0.2
          comp=Z,101nm,0.9s,baz=224,slow=8.9,SNR=83
KSRS                                LR       LR       01 21 25.6
          comp=Z,5µm,20.3s,baz=226,slow=37
TKM2  Tokmak 2          45.76 338   P        P        01 01 41.8 +1.0
          SNR=14
TKM2  Tokmak 2          45.76 338 i P        P        01 01 39.0 -1.8
TKM2                                pmax     pmax
          comp=Z,47nm,0.9s
WHFO  Wadi Hawf         45.77 294   P        P        01 01 41.4 +0.3
KBK   Karagaybulak      45.78 337   P        P        01 01 41.9 +1.0
          SNR=29
AML   Almayashu         45.84 336   P        P        01 01 42.9 +1.2
          SNR=17
AAK   Ala-Archa         45.94 337   P        P        01 01 43.0 +0.8
          SNR=9.4
AAK   Ala-Archa         45.94 337   P        P        01 01 42.7 +0.5
AAK                                 pmax     pmax
          comp=Z,46nm,1.0s
AAK                                 MLR      MLR
          comp=Z,6µm,19.0s
AAK   Ala-Archa         45.94 337   P        P        01 01 42.7 +0.5
AAK                                 IAmb     IAmb     01 02 08.8
          comp=Z,46nm,1.0s
AAK   Ala-Archa         45.94 337   IAMs_20  IAMs_20  01 23 54.1
          comp=Z,6µm,19.0s
AAK   Ala-Archa         45.94 337   P        P        01 01 42.0 -0.2
AAK                                 P        P        01 01 42.0 -0.2
CHKK  Chushkaly         46.06 340 i P        P        01 01 42.4 -0.6
          baz=339
CHKK  Chushkaly         46.06 340 i P        P        01 01 42.3 -0.6
UOSS  Minazif           46.07 304   P        P        01 01 43.6 +0.3
HATD  Hatta, Dubai      46.08 304   P        P        01 01 46.2 +2.8
          SNR=9.5
HATD                                P        P        01 01 46.2 +2.8
          SNR=9.5
ALNE  Al Ain            46.09 303   P        P        01 01 45.1 +1.7
          SNR=7.1
ALNE                                S        S        01 08 29.4 +1.6
CHMS  Chumysh           46.15 337   P        P        01 01 44.4 +0.8
          SNR=16
EKS2  Erkin-Say         46.25 336   P        P        01 01 45.8 +1.2
          SNR=6.6
MASF  Masafi            46.28 305   P        P        01 01 45.9 +0.9
          SNR=9.9
KUU   Kurty             46.32 339 eP       P        01 01 43.7 -1.4
          comp=Z,44nm,1.3s,baz=339
KUU   Kurty             46.32 339 eP       P        01 01 43.6 -1.4
KUU                                 pmax     pmax
          comp=Z,44nm,1.3s
HRA   Herat             46.39 319   P        P        01 01 44.7 -1.2
USP   Ospenovka         46.47 337   P        P        01 01 47.2 +1.0
          SNR=9.6
TDK   Taldyqorghan      46.61 342 eP       P        01 01 46.4 -0.9
          comp=Z,16nm,0.6s,baz=341
TDK                                 eS       S        01 08 34.2 -0.3
          baz=341
TDK                                 LR       LR       01 24 09.1
          comp=Z,2µm,17.3s,baz=341
TDK   Taldyqorghan      46.61 342 eP       P        01 01 46.3 -0.9
TDK                                 eS       S        01 08 34.2 -0.3
TDK                                 pmax     pmax
          comp=Z,15nm,0.6s
QIS   Mount Isa         46.80 120   P        P        01 01 48.4 -0.7
          baz=47,SNR=18
SNY   Shenyang          46.80  27 ⇑P       P        01 01 47.8 -0.9
SNY                                 pmax     pmax
          comp=Z,51nm,1.7s
SNY                                 pmax     pmax
          comp=Z,1µm,5.2s
SNY                                 LR       LR
          comp=Z,8µm,15.9s
SNY                                 LR       LR
          comp=Z,8µm,16.1s
SNY                                 LR       LR
          comp=Z,15µm,14.5s
SONM  Songino Array     47.04   8   P        P        01 01 51.0 +0.4
          comp=Z,44nm,0.7s,baz=192,slow=8.0,SNR=78
SONM                                PcP      PcP      01 03 22.6 +0.1
          comp=Z,22nm,1.1s,baz=182,slow=3.8,SNR=5.6
SONM                                LR       LR       01 24 16.7
          comp=Z,22µm,18.3s,baz=190,slow=40
SONM  Songino Array     47.04   8   P        P        01 01 50.7 +0.1
SONM                                pmax     pmax
          comp=Z,42nm,0.8s
SONM  Songino Array     47.04   8   P        P        01 01 50.7 +0.1
JMN   Monobe            47.08  43   P        P        01 01 51.5 +0.4
ULN   Ulaanbaatar       47.16   9   P        P        01 01 51.7  0.0
ULN                                 pmax     pmax
          comp=Z,46nm,1.0s
ULN                                 MLR      MLR
          comp=Z,18µm,18.0s
ULN   Ulaanbaatar       47.16   9   P        P        01 01 51.7  0.0
ULN                                 IAmb     IAmb     01 01 54.9
          comp=Z,46nm,0.9s
MK31  Makanchi Array    47.17 346 i P        P        01 01 50.8 -0.8
MK31                                pmax     pmax
          comp=Z,35nm,0.6s
MK31  Makanchi Array    47.17 346   IAmb     IAmb     01 02 12.5
          comp=Z,45nm,0.8s
MKAR  Makanchi Array    47.17 346   P        P        01 01 51.8 +0.3
          comp=Z,29nm,0.5s,baz=161,slow=8.8,SNR=540
MKAR                                S        S        01 08 43.2 +0.7
          comp=Z,0.2nm,0.6s,baz=191,slow=12,SNR=2.2
MKAR                                LR       LR       01 25 53.2
          comp=Z,4µm,20.4s,baz=154,slow=41
MKAR                                PKPPKP   P'P'df   01 33 00.9 -8.3
          comp=Z,0.5nm,1.0s,baz=352,slow=3.7,SNR=4.0
MKAR  Makanchi Array    47.17 346 i P        P        01 01 51.4 -0.2
MKAR                                pmax     pmax
          comp=Z,29nm,0.5s
MKAR  Makanchi Array    47.17 346   P        P        01 01 51.4 -0.2
MAKZ  Makanchi          47.26 346   P        P        01 01 51.9 -0.4
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MAKZ                                pmax     pmax
          comp=Z,43nm,0.7s
MAKZ                                MLR      MLR
          comp=Z,4µm,22.0s
MAKZ  Makanchi          47.26 346   P        P        01 01 51.9 -0.4
MAKZ                                IAmb     IAmb     01 02 07.5
          comp=Z,43nm,0.7s
JHS   Saijyo            47.32  41   IAMs_20  IAMs_20  01 22 41.8
          comp=Z,5µm,20.0s
IUG   Iuzhnay           47.46 333 eP       P        01 01 53.5 -0.5
          comp=Z,36nm,0.8s,baz=332
IUG                                 eS       S        01 08 46.5 -0.6
          baz=332
IUG   Iuzhnay           47.46 333 eP       P        01 01 53.5 -0.5
IUG                                 eS       S        01 08 46.4 -0.6
IUG                                 pmax     pmax
          comp=Z,36nm,0.8s
DZA   Taraz             47.47 334 eP       P        01 01 54.0  0.0
          comp=Z,20nm,0.7s,baz=334
DZA                                 eS       S        01 08 47.4 +0.4
          baz=334
DZA   Taraz             47.47 334 eP       P        01 01 54.0  0.0
DZA                                 eS       S        01 08 47.3 +0.4
DZA                                 pmax     pmax
          comp=Z,20nm,0.7s
CHM   Chimkent          47.80 332 eS       S        01 08 51.6 +0.1
          baz=332
COEN  Coen              47.95 110   P        P        01 01 58.0 -0.1
COEN                                IAmb     IAmb     01 01 59.7
          comp=Z,51nm,1.0s
KK31  Karatay Array     48.00 334 i P        P        01 01 57.3 -0.8
KK31                                pmax     pmax
          comp=Z,22nm,0.7s
KK31  Karatay Array     48.00 334   IAmb     IAmb     01 02 17.3
          comp=Z,40nm,0.9s
KKAR  Karatay Array     48.00 334   P        P        01 01 57.0 -1.1
KKAR  Karatay Array     48.00 334   P        P        01 01 57.0 -1.1
KKAR  Karatay Array     48.00 334   IAmb     IAmb     01 02 17.3
          comp=Z,40nm,0.9s
BTLS  Baital            48.15 338 eP       P        01 01 58.9 -0.2
          comp=Z,8.8nm,1.0s,baz=338
BTLS  Baital            48.15 338 eP       P        01 01 58.9 -0.2
BTLS                                pmax     pmax
          comp=Z,9.0nm,1.0s
JRN   Qarnain Island    48.87 303   P        P        01 02 06.6 +1.5
          SNR=6.4
JRN                                 S        S        01 09 05.2 -2.0
DGZ   Jazzator, Alta    48.96 352c iP       P        01 02 06.1 +0.6
DGZ                                 pmax     pmax
          comp=Z,30nm,0.8s
JWT   Wachi             49.00  42   IAMs_20  IAMs_20  01 25 27.3
          comp=Z,5µm,18.0s
ZAK   Zakamensk         49.18   5 eP       P        01 02 07.2 +0.1
ZAK                                 pmax     pmax
          comp=Z,35nm,1.2s
CN2   Changchun         49.20  27 eP       P        01 02 06.8 -0.5
CN2                                 S        S        01 09 11.8 +0.5
CN2                                 pmax     pmax
          comp=Z,40nm,0.9s
CN2                                 pmax     pmax
          comp=Z,1µm,4.0s
CN2                                 LR       LR
          comp=Z,12µm,14.0s
CN2                                 LR       LR
          comp=Z,5µm,14.0s
CN2                                 LR       LR
          comp=Z,14µm,15.0s
BBOO  Buckleboo         49.91 136   P        P        01 02 13.0 +0.2
          baz=50,SNR=13
BBOO  Buckleboo         49.91 136   P        P        01 02 13.5 +0.6
BBOO                                IAmb     IAmb     01 02 33.8
          comp=Z,53nm,1.0s
INU   Inuyama           50.13  43   P        P        01 02 14.6 +0.1
JCJ   Chichijima        50.13  55   LR       LR       01 21 01.9
          comp=Z,1µm,20.1s,baz=255,slow=33
JCJ   Chichijima        50.13  55   P        P        01 02 14.1 -0.6
MTSU  Mount Surprise    50.16 115   P        P        01 02 15.0  0.0
          baz=50,SNR=14
MOY   Mondy             50.30   3 eP       P        01 02 17.3 +1.7
MOY                                 pmax     pmax
          comp=Z,93nm,1.7s
TLY   Talaya            50.50   5   LR       LR       01 25 52.9
          comp=Z,13µm,18.1s,baz=171,slow=39
TLY   Talaya            50.50   5c iP       P        01 02 17.4 +0.4
TLY                                 e                 01 04 10.7
TLY                                 eS       S        01 09 31.8 +2.6
TLY                                 pmax     pmax
          comp=Z,105nm,0.9s
TLY                                 MLR      MLR
          comp=Z,26µm,14.0s
TLY   Talaya            50.50   5   P        P        01 02 17.5 +0.5
PMG   Port Moresby      50.82 103   P        P        01 02 21.0 +0.9
PMG                                 pmax     pmax
          comp=Z,52nm,0.9s
PMG                                 MLR      MLR
          comp=Z,4µm,21.0s
PMG   Port Moresby      50.82 103   P        P        01 02 21.0 +0.9
PMG                                 IAmb     IAmb     01 02 22.2
          comp=Z,52nm,0.9s
PMG   Port Moresby      50.82 103   P        P        01 02 21.8 +1.7
JHJ   Hachijo jima 2    50.92  47   LR       LR       01 24 05.2
          comp=Z,2µm,19.7s,baz=245,slow=36
SEM   Semipalatinsk     51.03 346 eP       P        01 02 19.6 -1.7
          comp=Z,26nm,0.9s,baz=346
SEM                                 eS       S        01 09 35.7 -1.3
          baz=346
SEM   Semipalatinsk     51.03 346 eP       P        01 02 19.6 -1.7
SEM                                 eS       S        01 09 35.7 -1.3
SEM                                 pmax     pmax
          comp=Z,26nm,0.9s
IRK   Irkutsk           51.12   6 eP       P        01 02 21.1 -0.6
IRK                                 pmax     pmax
          comp=Z,141nm,1.8s
GEYT  Alibeck           51.18 320   P        P        01 02 22.3 -0.2
          comp=Z,16nm,0.8s
HIA   Hailar            51.54  19   IAmb     IAmb     01 02 27.9
          comp=Z,46nm,0.8s
HIA   Hailar            51.54  19   IAMs_20  IAMs_20  01 26 53.8
          comp=Z,10µm,22.0s
MAJO  Matsushiro        51.59  42   P        P        01 02 26.8 +1.3
MAJO                                pmax     pmax
          comp=Z,84nm,1.7s
MAJO                                MLR      MLR
          comp=Z,4µm,21.0s
MAJO  Matsushiro        51.59  42   P        P        01 02 26.8 +1.3
MAJO                                IAmb     IAmb     01 02 43.7
          comp=Z,84nm,1.6s
MAT   Matsushiro        51.59  42   P        P        01 02 25.1 -0.4
MAT                                 S        S        01 09 43.4 -1.4
MJAR  Matsushiro Arr    51.59  42   P        P        01 02 26.6 +1.1
          comp=Z,14nm,0.7s,baz=217,slow=6.0,SNR=30
MJAR                                PcP      PcP      01 03 38.7 -0.5
          comp=Z,7.4nm,0.8s,baz=240,slow=4.5,SNR=2.0
MJAR                                LR       LR       01 24 32.5
          comp=Z,3µm,21.6s,baz=240,slow=36
MJAR  Matsushiro Arr    51.59  42   P        P        01 02 24.5 -1.0
MJAR                                pmax     pmax
          comp=Z,10.0nm,0.7s
MJAR  Matsushiro Arr    51.59  42   P        P        01 02 24.5 -1.0
KURBB Kurchatov Arra    51.66 345   PKPPKP   PKPPKPdf01 33 04.2
          comp=Z,1.1nm,1.2s,baz=346,slow=1.9,SNR=3.7
KURK  Kurchatov         51.72 345   P        P        01 02 25.9 -0.3
KURK                                pmax     pmax
          comp=Z,82nm,1.1s
KURK                                MLR      MLR
          comp=Z,7µm,19.0s
KURK  Kurchatov         51.72 345   P        P        01 02 25.9 -0.3
KURK                                IAmb     IAmb     01 02 48.0
          comp=Z,82nm,1.1s
KURK  Kurchatov         51.72 345   IAMs_20  IAMs_20  01 28 31.8
          comp=Z,7µm,19.0s
MDJ   Mudanjiang        51.76  29   P        P        01 02 27.5 +0.9
MDJ                                 pP       pP       01 02 31.8 -3.4
MDJ                                 sP       sP       01 02 33.5 -5.0
MDJ                                 PP       PP       01 04 25.5 +0.9
MDJ                                 PcS      PcS      01 07 39.5 +2.0
MDJ                                 S        S        01 09 50.5 +3.6
MDJ                                 sS       pS       01 09 58.0 +1.0
MDJ                                 pmax     pmax
          comp=Z,83nm,0.7s
MDJ                                 pmax     pmax
          comp=Z,2µm,4.7s
MDJ                                 LR       LR
          comp=Z,10µm,15.7s
MDJ                                 LR       LR
          comp=Z,7µm,17.3s
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MDJ                                 LR        LR
      comp=Z,18µm,15.7s
MDJ   Mudanjiang         51.76  29  IAmb      IAmb      01 02 31.5
      comp=Z,56nm,0.8s
HTT   Hallett            52.25 135  P         P         01 02 31.1 +0.6
      baz=52,SNR=17
CIT   Chita              52.37  13 eP         P         01 02 31.8 +0.7
CIT                                e                    01 02 42.6
CIT                                e                    01 13 30.4
CIT                                 pmax      pmax
      comp=Z,276nm,1.5s
JSD   Sado               52.45  41  IAMs_20   IAMs_20   01 26 56.3
      comp=Z,4µm,20.0s
CTAO  Charters Tower     52.49 117  P         P         01 02 32.1  -0.4
CTAO                                MLR       MLR
      comp=Z,6µm,19.0s
CTAO  Charters Tower     52.49 117  P         P         01 02 32.0  -0.4
CTAO  Charters Tower     52.49 117  IAMs_20   IAMs_20   01 28 56.7
      comp=Z,7µm,19.0s
USA0B Ussuriysk Arra     52.67  31c iP        P         01 02 33.6 +0.3
USRK  Ussuriysk Ar.      52.67  31  P         P         01 02 34.1 +0.8
      comp=Z,114nm,0.8s,baz=231,slow=6.7,SNR=66
USRK                                LR        LR        01 25 37.9
      comp=Z,8µm,21.6s,baz=212,slow=37
USRK  Ussuriysk Ar.      52.67  31  P         P         01 02 33.9 +0.5
USRK  Ussuriysk Ar.      52.67  31  P         P         01 02 33.9 +0.5
BRZS  Berezniki          52.84 340 eP         P         01 02 32.9  -1.7
      comp=Z,9.2nm,0.9s,baz=340
BRZS  Berezniki          52.84 340 eP         P         01 02 32.8  -1.7
BRZS                                pmax      pmax
      comp=Z,9.0nm,0.9s
ABPO  Ambohimpanom       53.10 245  P         P         01 02 37.0  -0.2
ABPO                                pmax      pmax
      comp=Z,55nm,1.3s
ABPO  Ambohimpanom       53.10 245  P         P         01 02 37.0  -0.2
ABPO  Ambohimpanom       53.10 245  IAMs_20   IAMs_20   01 20 48.2
      comp=Z,5µm,20.0s
STKA  Stephens Creek     53.38 132  P         P         01 02 39.0 +0.1
      baz=54,SNR=72
STKA  Stephens Creek     53.38 132  P         P         01 02 39.1 +0.3
      comp=Z,54nm,0.8s,baz=306,slow=7.6,SNR=84
STKA                                S         S         01 10 08.5  -0.9
      comp=Z,5.6nm,1.2s,baz=25,slow=24,SNR=1.2
STKA                                LR        LR        01 27 22.9
      comp=Z,8µm,21.7s,baz=295,slow=38
STKA  Stephens Creek     53.38 132⥣eP         P         01 02 38.7  -0.1
ZALV  Zalesovo Beam      53.48 351  P         P         01 02 38.8  -0.4
      comp=Z,73nm,0.5s,baz=176,slow=6.7,SNR=234
ZALV                                ScP       ScP       01 07 43.2 +1.2
      comp=Z,0.8nm,0.6s,baz=144,slow=5.2,SNR=1.5
ZALV                                S         S         01 10 11.0 +1.0
      comp=Z,1.6nm,0.9s,baz=167,slow=14,SNR=4.4
ZALV                                LR        LR        01 30 52.5
      comp=Z,4µm,18.4s,baz=171,slow=42
JMM   Marumori           54.04  42  P         P         01 02 43.6 +0.1
JMM                                 IAmb      IAmb      01 03 10.1
      comp=Z,69nm,1.0s
JMM                                 IAMs_20   IAMs_20   01 25 25.8
      comp=Z,6µm,21.0s
RAYN  Ar Rayn            54.76 298  P         P         01 02 49.3 +0.1
RAYN                                pmax      pmax
      comp=Z,95nm,1.8s
RAYN  Ar Rayn            54.76 298  P         P         01 02 49.3 +0.1
RAYN                                IAmb      IAmb      01 03 12.3
      comp=Z,95nm,1.8s
RAYN                                IAMs_20   IAMs_20   01 25 27.2
      comp=Z,8µm,20.0s
ATD   Arta Tunnel        54.92 283  P         P         01 02 51.3 +0.9
ATD                                 IAmb      IAmb      01 03 01.1
      comp=Z,60nm,1.4s
ATD   Arta Tunnel        54.92 283 eP         P         01 02 53.9 +3.5
ATD                                eS         S         01 10 37.2 +6.4
TEY   Ternei             55.67  33 eP         P         01 02 52.8  -2.4
TEY                                 MLR       MLR
      comp=E,300nm,20.0s
TEY                                 MLR       MLR
      comp=N,300nm,19.0s
TEY                                 MLR       MLR
      comp=Z,400nm,16.0s
JTM   Tenmabayashi       55.78  39  P         P         01 02 55.4  -0.7
JTM                                 IAmb      IAmb      01 03 22.0
      comp=Z,94nm,1.0s
KLR   Kul'dur            56.15  27ceP         P         01 02 59.0 +0.4
KLR                                 pmax      pmax
      comp=Z,100nm,1.0s
BRVK  Borovoye           56.25 341  P         P         01 02 57.9  -1.3
BRVK                                pmax      pmax
      comp=Z,50nm,0.9s
BRVK                                MLR       MLR
      comp=Z,4µm,20.0s
BRVK  Borovoye           56.25 341  P         P         01 02 57.9  -1.3
BRVK                                IAmb      IAmb      01 03 01.5
      comp=Z,50nm,0.8s
BRVK  Borovoye           56.25 341  IAMs_20   IAMs_20   01 30 24.3
      comp=Z,4µm,20.0s
BRVK  Borovoye           56.25 341  P         P         01 02 58.6  -0.6
CMSA  Cobar Meteorol     56.31 130  P         P         01 03 00.6 +0.5
      baz=56,SNR=31
TEND  Ethiopian Broa     56.74 283 eP         P         01 03 07.7 +4.2
TEND                               eS         S         01 11 01.8 +6.7
RMQ   Roma               56.78 123  P         P         01 03 04.9 +1.3
      baz=57,SNR=58
AB31  Akbulak array      57.46 332 i P        P         01 03 06.4  -1.5
AB31                                pmax      pmax
      comp=Z,41nm,0.6s
ABKAR Akbulak array      57.46 332  P         P         01 03 06.8  -1.1
ABKAR Akbulak array      57.46 332  IAmb      IAmb      01 03 17.3
      comp=Z,58nm,0.8s
ERM   Erimo              57.77  39  P         P         01 03 10.3 +0.1
ERM                                 pmax      pmax
      comp=Z,103nm,1.5s
ERM                                 MLR       MLR
      comp=Z,2µm,18.0s
ERM   Erimo              57.77  39  P         P         01 03 10.3 +0.1
ERM                                 IAmb      IAmb      01 03 34.9
      comp=Z,103nm,1.4s
JEM   Erimo              57.77  39  P         P         01 03 15.1 +5.0
JEM                                 IAmb      IAmb      01 03 34.9
      comp=Z,95nm,1.4s
ANKE  Ethiopia-Afar      57.78 280 eP         P         01 03 07.7  -3.5
ANKE                               eS         S         01 11 11.0 +1.5
ZEA   Zeya               57.84  21 eP         P         01 03 10.6 +0.2
ZEA                                e                    01 05 18.6
ZEA                                eS         S         01 11 08.6 +0.5
ZEA                                ePS        PnS       01 11 27.4 +5.7
ZEA                                e                    01 12 59.9
ZEA                                eSS        SS        01 15 04.7 +5.5
ZEA                                 pmax      pmax
      comp=N,20nm,1.0s
ZEA                                 pmax      pmax
      comp=E,20nm,0.9s
ZEA                                 pmax      pmax
      comp=Z,50nm,0.9s
ZEA                                 pmax      pmax
      comp=N,200nm,5.4s
ZEA                                 pmax      pmax
      comp=Z,300nm,6.1s
ZEA                                 pmax      pmax
      comp=Z,300nm,6.5s
ZEA                                 pmax      pmax
      comp=N,200nm,5.9s
ZEA                                 smax      smax
      comp=E,300nm,9.4s
ZEA                                 smax      smax
      comp=N,400nm,8.7s
ZEA                                 MLR       MLR
      comp=N,6µm,15.0s
ZEA                                 MLR       MLR
      comp=E,4µm,15.0s
ZEA                                 MLR       MLR
      comp=Z,5µm,15.0s
BOD   Bodaibo            57.91  10 eP         P         01 03 10.6  -0.3
BOD                                 pmax      pmax
      comp=Z,107nm,1.6s
EIDS  Eidsvold           58.38 121  P         P         01 03 15.1 +0.3
      baz=58,SNR=17
EIDS  Eidsvold           58.38 121  IAMs_20   IAMs_20   01 32 42.5
      comp=Z,4µm,18.0s
ASAJ  Asahikawa          58.56  37  P         P         01 03 14.7  -1.0
ASAJ                                pmax      pmax
      comp=Z,156nm,1.4s
JKA   Kamikawa-asahi     58.56  37  P         P         01 03 14.7  -1.0
AAE   Adis Abeba         58.69 280 eP         P         01 02 49.3   -28
AAE                                eS         S         01 11 24.8 +3.5
FURI  Furi               58.77 280 eP         P         01 03 18.4 +0.3
FURI                               eS         S         01 11 29.4 +7.1
TOO   Toolangi           58.97 136  P         P         01 03 20.2 +1.5
      baz=59,SNR=5.9
TOO   Toolangi           58.97 136  P         P         01 03 20.0 +1.2
TOO   Toolangi           58.97 136  P         P         01 03 19.9 +1.2
TOO                                 IAMs_20   IAMs_20   01 31 46.7
      comp=Z,5µm,21.0s
AKTO  Aktyubinsk         59.18 332 i P        P         01 03 18.2  -1.7
AKTO                                pmax      pmax
      comp=Z,34nm,0.9s
GRNR  Gornyy             59.37  28⥥iP         P         01 03 21.9 +0.7
GRNR                                pmax      pmax
      comp=Z,10.0nm,1.0s
GRNR                                MLR       MLR
      comp=E,3µm,16.0s
GRNR                                MLR       MLR
      comp=N,4µm,15.0s
GRNR                                MLR       MLR
      comp=Z,6µm,14.0s
YNG   Young              59.55 132  P         P         01 03 23.5 +0.6
      baz=60,SNR=9.8
KMBO  Kilima Mbogo       60.05 268  P         P         01 03 26.6  -0.3
      comp=Z,3.9nm,1.0s,baz=56,slow=5.7,SNR=6.8
KMBO                                LR        LR        01 28 22.1
      comp=Z,3µm,18.1s,baz=93,slow=35
YSS   Yuzh-Sakhalins     60.24  34 eP         P         01 03 26.6  -0.7
YSS                                eS         S         01 11 36.2  -3.4
YSS                                ePS        PnS       01 11 53.7  -1.2
YSS                                 pmax      pmax
      comp=Z,90nm,1.0s
YSS                                 MLR       MLR
      comp=Z,6µm,13.0s
YSS                                 MLR       MLR
      comp=E,5µm,12.0s
YSS   Yuzh-Sakhalins     60.24  34  P         P         01 03 26.9  -0.4
CAN   Canberra           60.44 132  P         P         01 03 29.4 +0.5
CAN                                 pmax      pmax
      comp=Z,206nm,1.6s
CAN                                 MLR       MLR
      comp=Z,11µm,21.0s
CAN   Canberra           60.44 132  P         P         01 03 29.4 +0.5
YUK   Yuzh-Kuril'sk      60.51  38c iP        P         01 03 24.3  -4.8
YUK                                i                    01 05 42.0
YUK                                ePPP       PPP       01 07 09.9
YUK                                eS         S         01 11 44.2 +1.1
YUK                                 pmax      pmax
      comp=Z,748nm,1.2s
YUK                                 pmax      pmax
      comp=E,163nm,0.6s
ARMA  Armidale           60.54 126  P         P         01 03 32.2 +2.4
      baz=61,SNR=7.6
ARMA  Armidale           60.54 126  P         P         01 03 32.6 +2.8
ARMA                                IAMs_20   IAMs_20   01 32 29.8
      comp=Z,6µm,21.0s
MAK   Makhachkala        60.70 320 eP         P         01 03 27.2  -3.2
MAK                                eS         S         01 11 42.6  -2.9
MAK                                eSSS       SSS       01 18 18.0
MAK                                 pmax      pmax
      comp=Z,534nm,1.6s
UGL   Uglegorsk          61.11  32 eP         P         01 03 32.8  -0.3
UGL                                eS         S         01 11 58.1 +7.6
UGL                                 pmax      pmax
      comp=Z,2µm,8.8s
UGL                                 smax      smax
      comp=E,1µm,10.0s
UGL                                 MLR       MLR
      comp=E,6µm,10.0s
UGL                                 MLR       MLR
      comp=N,5µm,12.0s
UGL                                 MLR       MLR
      comp=Z,4µm,17.0s
PATS  Pohnpei            61.12  83  P         P         01 03 29.9  -3.9
GNI   Garni              61.27 316  P         P         01 03 34.8 +0.2
GNI                                 pmax      pmax
      comp=Z,87nm,1.2s
GNI                                 MLR       MLR
      comp=Z,2µm,19.0s
GNI   Garni              61.27 316  P         P         01 03 34.8 +0.2
GNI                                 IAmb      IAmb      01 04 02.4
      comp=Z,87nm,1.2s
DVE   Vedeno             61.59 319 i P        P         01 03 37.0 +0.4
DVE                                 pmax      pmax
      comp=Z,63nm,1.1s
GEVA  Gevas              61.71 314  P         P         01 03 37.3  -0.4
LODK  Lodwar             61.87 273  P         P         01 03 40.1 +1.1
      SNR=6.9
GROC  Groznyy            61.92 320 eP         P         01 03 39.4 +0.7
GROC                                S         S         01 12 02.0 +1.0
GROC                                pmax      pmax
      comp=Z,93nm,1.1s
CRZF  Crozet Islands     62.00 214  IAMs_20   IAMs_20   01 26 29.1
      comp=Z,3µm,19.0s
KUR   Kuril'sk           62.35  38 eP         P         01 03 44.9 +3.4
KUR                                eS         S         01 12 13.6 +7.2
KUR                                 MLR       MLR
      comp=Z,2µm,14.0s
KUR                                 MLR       MLR
      comp=E,1µm,12.0s
KUR                                 MLR       MLR
      comp=N,1µm,15.0s
TYV   Tymovskoe          62.48  31 eP         P         01 03 43.4 +1.1
TYV                                eS         S         01 12 11.1 +3.3
TYV                                 pmax      pmax
      comp=Z,1µm,4.7s
TYV                                 pmax      pmax
      comp=Z,36nm,1.8s
TYV                                 smax      smax
      comp=E,800nm,8.4s
TYV                                 MLR       MLR
      comp=E,6µm,16.0s
TYV                                 MLR       MLR
      comp=Z,7µm,16.0s
MOO   Moorlands          62.53 140  P         P         01 03 47.0 +4.1
      baz=63,SNR=4.4
SVE   Sverdlovsk         62.62 338ceP         P         01 03 42.9  -0.3
SVE                                eS         S         01 12 13.2 +3.7
SVE                                 pmax      pmax
      comp=Z,114nm,1.5s
SVE                                 MLR       MLR
      comp=Z,3µm,17.0s
AKH   Akhalkalaki        62.66 317  P         P         01 03 44.0   0.0
AKH                                 pmax      pmax
      comp=Z,115nm,1.0s
AKH   Akhalkalaki        62.66 317  P         P         01 03 44.0   0.0
TAU   Tasmania Unive     62.85 141  P         P         01 03 43.3  -1.6
TAU                                 pmax      pmax
      comp=Z,83nm,1.3s
TAU   Tasmania Unive     62.85 141  P         P         01 03 43.3  -1.6
TAU                                 IAmb      IAmb      01 04 03.1
      comp=Z,83nm,1.2s
NKL   Nikolayevsk        62.92  28 eP         P         01 03 44.6  -0.6
NKL                                eS         S         01 12 28.4   +15
NKL                                 pmax      pmax
      comp=E,34nm,0.9s
NKL                                 pmax      pmax
      comp=N,11nm,1.3s
NKL                                 pmax      pmax
      comp=Z,54nm,1.2s
NKL                                 smax      smax
      comp=E,292nm,2.5s
NKL                                 smax      smax
      comp=N,19nm,2.1s
NKL                                 MLR       MLR
      comp=E,4µm,16.0s
NKL                                 MLR       MLR
      comp=N,105nm,10.0s
NKL                                 MLR       MLR
      comp=Z,4µm,17.0s
ZEI   Tsey               62.97 318 eP         P         01 03 44.3  -1.8
ZEI                                 pmax      pmax
      comp=Z,39nm,1.0s
MARD  Mardin             63.02 312  P         P         01 03 46.1  -0.2
MARD                                IAmb      IAmb      01 03 55.9
      comp=Z,40nm,0.9s
ARU   Arti               63.12 337c iP        P         01 03 45.0  -1.5
ARU                                                     01 04 19.5
ARU                                 S         S         01 12 15.9 +0.2
ARU                                 SS        SS        01 16 20.2  -1.8
ARU                                 pmax      pmax
      comp=Z,60nm,1.3s
ARU                                 MLR       MLR
      comp=Z,4µm,17.0s
ARU   Arti               63.12 337  P         P         01 03 44.8  -1.7
HNR   Honiara            63.33 101  P         P         01 03 48.4  -0.2
HNR                                 pmax      pmax
      comp=Z,376nm,1.1s
HNR                                 MLR       MLR
      comp=Z,2µm,22.0s
HNR   Honiara            63.33 101  P         P         01 03 48.4  -0.2
KBZ   Khabaz             64.04 319  P         P         01 03 52.4  -0.4
      comp=Z,15nm,0.9s,baz=120,slow=8.6,SNR=26
KBZ   Khabaz             64.04 319ceP         P         01 03 51.5  -1.3
KBZ                                 pmax      pmax
      comp=Z,13nm,0.8s
KOPT  Kop Dagi           64.20 314  P         P         01 03 53.4  -0.9
KIV   Kislovodsk         64.28 319 eP         P         01 03 53.5  -1.0
KIV                                e                    01 06 15.2
KIV                                eS         S         01 12 28.5  -2.2
KIV                                eSS        SS        01 16 39.8  -0.9
KIV                                 pmax      pmax
      comp=Z,219nm,1.1s
KIV                                 pmax      pmax
      comp=Z,133nm,3.7s
KIV   Kislovodsk         64.28 319  P         P         01 03 53.6  -1.0
GOF   Gofitskoye         64.52 320⥣eP         P         01 04 03.4 +7.4
GOF                                 pmax      pmax
      comp=Z,55nm,0.9s
MALT  Malatya            65.11 312  P         P         01 04 00.3 +0.2
YAK   Yakutsk            65.32  16c iP        P         01 04 00.2  -0.6
YAK                                e*PP       sP        01 04 12.5  -0.3
YAK                                e                    01 04 29.6
YAK                                e                    01 06 20.7
YAK                                ePPP       PPP       01 07 53.9
YAK                                eS         S         01 12 42.4  -0.3
YAK                                e*SS       sS        01 13 01.5 +4.4
YAK                                e                    01 13 52.7
YAK                                eSS        SS        01 16 56.1 +0.1
YAK                                 pmax      pmax
      comp=Z,95nm,1.1s
YAK                                 pmax      pmax
      comp=E,39nm,1.3s
YAK                                 pmax      pmax
      comp=N,51nm,1.4s
YAK                                 pmax      pmax
      comp=Z,90nm,2.3s
YAK                                 pmax      pmax
      comp=N,85nm,2.5s
YAK                                 pmax      pmax
      comp=E,141nm,2.5s
YAK                                 smax      smax
      comp=N,196nm,2.7s
YAK                                 smax      smax
      comp=E,100nm,2.8s
YAK                                 MLR       MLR
      comp=Z,8µm,16.0s
YAK                                 MLR       MLR
      comp=N,6µm,16.0s
YAK                                 MLR       MLR
      comp=E,5µm,17.0s
YAK   Yakutsk            65.32  16  P         P         01 03 59.8  -1.0
BELG  Belogornoye        65.51 329⥥iP         P         01 04 00.8  -1.4
BELG                                pmax      pmax
      comp=Z,12nm,0.9s
GAZ   Gaziantep          65.66 311  IAmb      IAmb      01 04 13.8
      comp=Z,45nm,0.9s
SOC   Sochi              66.09 318 eP         P         01 04 00.2  -5.9
SOC                                e*PP       pP        01 04 12.7  -2.2
SOC                                e                    01 06 26.5
SOC                                ePPP       PPP       01 08 01.8
SOC                                eS         S         01 12 43.6  -9.2
SOC                                eSS        SS        01 17 05.6  -3.2
SOC                                 pmax      pmax
      comp=Z,21nm,0.9s
SOC                                 MLR       MLR
      comp=Z,814nm,16.0s
MBAR  Mbarara            66.54 269  P         P         01 04 09.8   0.0
MBAR                                pmax      pmax
      comp=Z,36nm,1.2s
MBAR  Mbarara            66.54 269  P         P         01 04 09.8   0.0
MBAR                                IAmb      IAmb      01 04 20.9
      comp=Z,36nm,1.1s
TOKA  Tokat              67.19 314  P         P         01 04 12.5  -0.8
TOKA                                IAmb      IAmb      01 04 23.0
      comp=Z,28nm,0.9s
CSS   Mathiatis          68.06 307  P         P         01 04 18.2  -0.7
CSS                                 IAmb      IAmb      01 04 41.3
      comp=Z,49nm,1.2s
ANN   Anapa              68.07 318 eP         P         01 04 09.7  -9.0
ANN                                e*PP       pP        01 04 19.4  -8.0
ANN                                e                    01 04 39.7
ANN                                ePPP       PPP       01 08 21.7
ANN                                 pmax      pmax
      comp=Z,27nm,1.3s
ANN                                 MLR       MLR
      comp=Z,2µm,22.0s
ANN                                 MLR       MLR
      comp=N,678nm,17.0s
ANN                                 MLR       MLR
      comp=E,1µm,22.0s
VRH   Novokhopyorsk      68.08 326 eP         P         01 04 17.1  -1.5
VRH                                e*PP       pP        01 04 24.6  -2.8
VRH                                 pmax      pmax
      comp=Z,40nm,1.1s
CASY  Casey              68.09 174  P         P         01 04 21.2 +2.9
CASY  Casey              68.09 174  IAMs_20   IAMs_20   01 29 52.5
      comp=Z,4µm,20.0s
KIRV  Kirov              68.25 335  LR        LR        01 37 49.5
      comp=Z,2µm,18.4s,baz=129,slow=39
KIRV  Kirov              68.25 335ceP         P         01 04 19.2  -0.3
KOUNC Koumac, New Ca     69.04 112  P         P         01 04 28.1 +2.9
BRTR  Keskin Array B     69.09 312  P         P         01 04 24.0  -1.4
      comp=Z,5.4nm,0.9s,baz=132,slow=6.9,SNR=28
BRTR                                LR        LR        01 38 09.0
      comp=Z,401nm,18.1s,baz=122,slow=39
BRTR  Keskin Array B     69.09 312  P         P         01 04 23.4  -2.0
BRTR  Keskin Array B     69.09 312  P         P         01 04 23.4  -2.0
VORD  Divnogorie         69.35 325 eP         P         01 04 25.3  -1.2
VORD                               e*PP       pP        01 04 33.1  -2.2
VORD                                pmax      pmax
      comp=Z,10.0nm,0.8s
ILGA  Ilgaz              69.42 314  P         P         01 04 27.1  -0.3
VSR   Storozhevoye       69.53 325 eP         P         01 04 26.0  -1.6
VSR                                e*PP       pP        01 04 33.3  -3.1
VSR                                 pmax      pmax
      comp=Z,20nm,1.1s
VORR  Voronezh           69.70 326 eP         P         01 04 28.0  -0.7
VORR                                pmax      pmax
      comp=Z,250nm,1.4s
SKR   Severo-Kuril’s     69.75  35 eP         P         01 04 27.8  -1.2
SKR                                eS         S         01 13 43.1 +6.8
SKR                                 pmax      pmax
      comp=Z,29nm,1.2s
SKR                                 pmax      pmax
      comp=Z,700nm,5.4s
SKR                                 pmax      pmax
      comp=Z,500nm,13.9s
SKR                                 MLR       MLR
      comp=Z,1µm,16.0s
SKR                                 MLR       MLR
      comp=Z,1µm,18.0s
BR231 Keskin MP Arra     69.76 312  P         P         01 04 29.3  -0.2
LSZ   Lusaka             70.19 253  P         P         01 04 32.0  -0.6
LSZ                                 pmax      pmax
      comp=Z,24nm,1.3s
LSZ   Lusaka             70.19 253  P         P         01 04 31.9  -0.6
LSZ   Lusaka             70.19 253  IAMs_20   IAMs_20   01 32 08.9
      comp=Z,5µm,19.0s
LPSR  Galich'ya Gora     70.25 327 eP         P         01 04 31.0  -1.0
LPSR                               e*PP       pP        01 04 38.6  -2.3
LPSR                                pmax      pmax
      comp=Z,40nm,0.9s
SIM   Simferopol'        70.33 318 eP         P         01 04 31.9  -0.9
SIM                                 pmax      pmax
      comp=Z,59nm,1.1s
ISP   Isparta            70.95 310  P         P         01 04 36.0  -0.8
ISP                                 pmax      pmax
      comp=Z,173nm,1.9s
ISP                                 MLR       MLR
      comp=Z,2µm,20.0s
ISP   Isparta            70.95 310  P         P         01 04 36.0  -0.8
SANVU Saraoutou          71.06 107  P         P         01 04 38.1 +0.4
SANVU                               IAmb      IAmb      01 04 40.9
      comp=Z,70nm,1.0s
SANVU Saraoutou          71.06 107  P         P         01 04 40.5 +2.8
MDUB  Mudurnu            71.10 313  P         P         01 04 36.1  -1.6
NOUC  Port Laguerre      71.15 114  P         P         01 04 40.6 +2.5
ELL   Elmali             71.18 308  P         P         01 04 37.9  -0.4
ELL                                 pmax      pmax
      comp=Z,483nm,1.8s
ELL                                 MLR       MLR
      comp=Z,7µm,19.0s
ELL   Elmali             71.18 308  P         P         01 04 37.9  -0.4
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MA2	Magadan	71.23	26*c*	*e*P	P	01 04 37.5	-0.4
MA2				pmax	pmax		
	comp=Z,44nm,0.7s						
MA2	Magadan	71.23	26	P	P	01 04 38.0	+0.1
MA2				IAmb	IAmb	01 04 40.7	
	comp=Z,52nm,0.8s						
MA2				IAMs_20	IAMs_20	01 37 32.0	
	comp=Z,4µm,20.0s						
DZM	Mont Dzumac	71.27	114	*e*P	P	01 04 39.0	0.0
	comp=Z,114nm,1.2s						
DZM	Mont Dzumac	71.27	114	*e*LR	LR	01 26 26.9	
	comp=Z,4µm,21.9s						
DZM	Mont Dzumac	71.27	114	P	P	01 04 38.5	-0.5
DZM				IAmb	IAmb	01 04 42.6	
	comp=Z,63nm,1.2s						
DZM				IAMs_20	IAMs_20	01 40 06.1	
	comp=Z,3µm,20.0s						
PEA0B	Petropavlovsk-	71.63	34	P	P	01 04 40.6	+0.1
PEA0B				pmax	pmax		
	comp=Z,78nm,1.5s						
PEA0B	Petropavlovsk-	71.63	34	P	P	01 04 40.6	+0.1
PEA0B				IAmb	IAmb	01 06 16.6	
	comp=Z,78nm,1.5s						
PETK	Petropavlovsk-	71.63	34	P	P	01 04 40.3	-0.2
	comp=Z,9.1nm,0.8s,baz=180,slow=0.9,SNR=14						
PETK				LR	LR	01 40 02.5	
	comp=Z,3µm,18.6s,baz=244,slow=39						
YATNC	Mamie plateau,	71.68	114	P	P	01 04 44.7	+3.3
OUENC	Ouen Island, N	71.69	114	P	P	01 04 44.3	+2.9
PET	Petropavlovsk	72.13	34	*e*P	P	01 04 43.5	+0.1
PET				*e*		01 07 29.7	
PET				*e*PPP	PPP	01 09 04.9	
PET				*e*S	S	01 14 02.9	-0.9
PET				*e*PS		01 14 30.6	
PET				*e*PPS	PPS	01 14 43.7	
PET				pmax	pmax		
	comp=Z,100nm,1.0s						
PET				pmax	pmax		
	comp=Z,1µm,16.6s						
PET				pmax	pmax		
	comp=Z,1µm,14.4s						
PET				MLR	MLR		
	comp=Z,4µm,17.0s						
PET				MLR	MLR		
	comp=Z,4µm,16.0s						
PET	Petropavlovsk	72.13	34	P	P	01 04 43.9	+0.5
PET				IAmb	IAmb	01 04 46.0	
	comp=Z,70nm,1.0s						
MOS	Moscow	72.28	329	*e*P	P	01 04 41.8	-2.5
MOS				*i*		01 04 51.5	
MOS				*e*		01 07 27.5	
MOS				pmax	pmax		
	comp=Z,82nm,1.5s						
ITZ	Itezhi-Tezhi	72.33	253	*e*P	P	01 04 49.0	+3.6
ITZ				*i*		01 04 49.8	
	baz=277,slow=7.4						
ITZ				*e*S	S	01 14 02.7	-5.0
ITZ				Lg	Lg	01 28 11.9	
OBN	Obninsk	72.57	328	LR	LR	01 40 53.9	
	comp=Z,355nm,19.9s,baz=114,slow=39						
OBN	Obninsk	72.57	328	*i* P	P	01 04 44.3	-1.7
OBN				*i*		01 04 53.6	
OBN				*i*		01 05 00.2	
OBN				*i*		01 07 29.8	
OBN				*i* S	S	01 13 59.2	-10
OBN				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN	Obninsk	72.57	328	P	P	01 04 45.3	-0.6
OBN				IAmb	IAmb	01 04 55.9	
	comp=Z,96nm,1.3s						
MANT	Manisa	72.61	310	P	P	01 04 46.7	-0.2
MANT				IAmb	IAmb	01 04 55.8	
	comp=Z,49nm,0.9s						
MAW	Mawson	72.81	193	P	P	01 04 48.3	+1.2
	comp=Z,6.6nm,0.8s,baz=16,slow=7.4,SNR=1.6						
MAW				LR	LR	01 32 45.3	
	comp=Z,3µm,18.3s,baz=36,slow=33						
TIXI	Tiksi	73.09	10*c*	*i*P	P	01 04 47.4	-1.3
TIXI	Tiksi	73.09	10	P	P	01 04 47.5	-1.3
TIXI				IAmb	IAmb	01 04 50.7	
	comp=Z,51nm,0.8s						
TIXI				IAMs_20	IAMs_20	01 42 20.7	
	comp=Z,4µm,18.0s						
KARP	Karpathos	73.11	307	P	P	01 04 48.4	-1.3
KARP				IAMs_20	IAMs_20	01 43 12.6	
	comp=Z,3µm,18.0s						
SEY	Seymchan	73.66	23	*i* P	P	01 04 51.3	-1.0
KLMR	Klimovskoe	73.69	334	*e*P	P	01 04 50.5	-2.0
KLMR				*e*S	SKiKP	01 14 20.3	-0.2
KLMR				*e*SS	SS	01 19 05.7	+0.7
KLMR				pmax	pmax		
	comp=Z,58nm,1.4s						
KLMR	Klimovskoe	73.69	334	*e*P	P	01 04 50.5	-2.0
KLMR				AMP		01 05 02.6	
	comp=Z,58nm,1.4s						
KLMR				*e*S	SKiKP	01 14 20.4	-0.1
KLMR				*e*S	SKiKP	01 14 20.4	-0.1
KLMR				*e*SS	SS	01 19 05.8	+0.7
KLMR				*e*SS	SS	01 19 05.8	+0.7
KLMR				*e*SSS	SSS	01 22 30.6	
KLMR				*e*SSS	SSS	01 22 30.6	
KLMR				LQ	LQ	01 31 33.5	
KLMR				LQ	LQ	01 31 33.5	
KLMR				LR	LR	01 36 55.8	
LBTB	Lobatse	73.97	244	P	P	01 04 56.0	+0.9
LBTB				pmax	pmax		
	comp=Z,45nm,1.2s						
LBTB	Lobatse	73.97	244	P	P	01 04 56.0	+0.9
LBTB				IAmb	IAmb	01 05 05.0	
	comp=Z,44nm,1.1s						
TLCR		74.00	317	⇓P	P	01 04 54.6	0.0
TLCR		74.00	317	⇓P	P	01 04 54.6	0.0
TIRR	Tirgusor	74.10	316	⇓P	P	01 04 54.6	-0.6
TIRR	Tirgusor	74.10	316	⇓P	P	01 04 54.6	-0.6
TIRR	Tirgusor	74.10	316	IAmb	IAmb	01 05 04.3	
	comp=Z,77nm,1.0s						
TLBR	Topalu	74.37	316	⇓P	P	01 04 56.3	-0.5
CFR	Carcaliu	74.46	317	⇓P	P	01 04 56.0	-1.3
CFR	Carcaliu	74.46	317	⇓P	P	01 04 56.0	-1.3
HARR	Harsova	74.49	316	⇑P	P	01 04 56.9	-0.6
HARR	Harsova	74.49	316	⇑P	P	01 04 56.9	-0.6
SANT	Santorini	74.62	307	P	P	01 04 58.4	-0.1
SANT				IAmb	IAmb	01 05 36.4	
	comp=Z,41nm,1.1s						
BOSA	Boshof	74.87	240	P	P	01 04 59.5	-0.7
	comp=Z,3.8nm,0.8s,baz=68,slow=6.6,SNR=7.4						
BOSA				LR	LR	01 32 48.0	
	comp=Z,3µm,20.2s,baz=66,slow=32						
BOSA	Boshof	74.87	240	P	P	01 05 00.7	+0.5
BOSA				pmax	pmax		
	comp=Z,95nm,1.8s						
BOSA	Boshof	74.87	240	P	P	01 05 00.7	+0.5
BOSA				IAmb	IAmb	01 05 10.7	
	comp=Z,96nm,1.8s						
IDI	Anoyia	74.89	306	⇑P	P	01 04 59.4	-0.7
IDI	Anoyia	74.89	306	P	P	01 04 60.0	-0.2
VASR	Vaslui	75.06	318	⇑P	P	01 05 00.6	-0.2
SORM	Soroca	75.07	320	⇓P	P	01 04 59.7	-1.1
SORM	Soroca	75.07	320	⇓P	P	01 04 59.7	-1.1
AKASG	Malin Array Be	75.22	322	P	P	01 05 00.2	-1.3
	comp=Z,7.3nm,0.9s,baz=87,slow=4.7,SNR=29						
AKASG	Malin Array Be	75.22	322	P	P	01 05 00.4	-1.2
AKASG				pmax	pmax		
	comp=Z,16nm,1.1s						
AKASG	Malin Array Be	75.22	322	P	P	01 05 00.3	-1.3
AKBB	Malin Array Si	75.22	322*c*	*e*P	P	01 05 02.0	+0.4
RAZG	Razgrad	75.23	315	⇓P	P	01 05 01.0	-0.9
BISRR	Bisoca	75.53	317	⇓P	P	01 05 03.0	-0.6
VRI	Vrincioaia	75.59	317	⇓P	P	01 05 04.2	+0.3
VRI	Vrincioaia	75.59	317	⇓P	P	01 05 04.2	+0.3
PLOR	Plostina	75.64	317	⇓P	P	01 05 04.1	-0.1
PLOR	Plostina	75.64	317	⇓P	P	01 05 04.1	-0.1
TARA	Tarawa	75.65	89	P	P	01 05 04.8	-0.1
NEHR	Nehoiu	75.78	317	⇑P	P	01 05 04.5	-0.6
TESR	Tescani	75.79	318	⇓P	P	01 05 04.6	-0.5
TMCR	Tamitsa	75.86	337	*e*P	P	01 05 03.0	-2.0
TMCR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MLR	Muntele Rosu	76.04	317	⇑P	P	01 05 05.6	-1.0
MLR	Muntele Rosu	76.04	317	⇑P	P	01 05 05.6	-1.0
MLR	Muntele Rosu	76.04	317	IAmb	IAmb	01 05 40.3	
	comp=Z,63nm,1.2s						
BIZ	Bicaz	76.25	318	⇑P	P	01 05 07.2	-0.5
PRAR	RASCA	76.27	319	⇓P	P	01 05 06.9	-0.9
DOPR	Dopca	76.52	317	⇓P	P	01 05 09.6	+0.3
MTUR	Matau	76.59	316	⇑P	P	01 05 08.5	-1.2
MTUR	Matau	76.59	316	⇑P	P	01 05 08.5	-1.2
VOIR		76.64	316	⇓P	P	01 05 09.5	-0.5
VOIR		76.64	316	⇓P	P	01 05 09.5	-0.5
BURAR	Bucovina Array	76.99	319	⇑P	P	01 05 12.7	+0.8
BURAR	Bucovina Array	76.99	319	⇑P	P	01 05 12.7	+0.8
BURAR	Bucovina Array	76.99	319	P	P	01 05 11.5	-0.4
BUR08	Bucovina Ar. S	77.01	319	IAmb	IAmb	01 05 22.3	
	comp=Z,44nm,1.1s						
MNK	Minsk	77.08	326	*i* P	P	01 05 11.2	-0.9
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	01 05 11.2	-0.9
	comp=N,26nm,1.2s						
MNK				*i* P	P	01 05 11.2	-0.9
	comp=Z,25nm,1.0s						
MNK				*i* PP	PP	01 08 07.1	+1.2
MNK				*i* PPP	PPP	01 09 55.0	
MNK				*i* S	S	01 15 03.5	+4.3
MNK				*i* SS	SS	01 20 05.0	+8.3
MNK				*i* SSS	SSS	01 23 29.8	
MNK				*i* LQ	LQ	01 34 33.1	
MNK				*i* LR	LR	01 40 29.3	
MNK				*i* LRM	MLR	01 43 16.5	
	comp=Z,703nm,18.0s						
MNK				*i* LRM	MLR	01 43 19.7	
	comp=N,2µm,22.8s						
MNK				*i* LRM	MLR	01 43 31.2	
	comp=E,91nm,18.5s						
MNK	Minsk	77.08	326	*e*P	P	01 05 12.0	-0.1
VTS	Vitosha	77.39	313	⇑P	P	01 05 12.6	-1.8
VTS	Vitosha	77.39	313	⇑P	P	01 05 12.6	-1.8
ARCR	ARCALIA	77.45	318	⇓P	P	01 05 14.6	+0.2
LIT	Litokhoron	77.53	311	IAmb	IAmb	01 05 26.1	
	comp=Z,89nm,1.6s						
NACGM	Naroch	77.80	326	*i* P	P	01 05 15.6	-0.5
NACGM				*i* P	P	01 05 15.6	-0.5
NACGM				*i* P	P	01 05 15.6	-0.5
NACGM				*i* PP	PP	01 08 23.1	+11
NACGM				*i* PPP	PPP	01 09 53.9	
NACGM				*i* S	S	01 15 08.1	+1.1
NACGM				*i* SS	SS	01 20 10.1	+2.4
NACGM				*i* SSS	SSS	01 23 39.9	
NACGM				*i* LQ	LQ	01 34 30.2	
NACGM				*i* LR	LR	01 40 21.0	
IDID	Didziasalis	77.94	327	*e*P	P	01 05 17.3	+0.4
STIP	Stip	78.01	312	*i* Pn	P	01 05 16.0	-1.6
GZR	Gura Zlata	78.21	316	⇓P	P	01 05 18.0	-0.7
GZR	Gura Zlata	78.21	316	⇓P	P	01 05 18.0	-0.7
IIGN	Ignalina	78.23	327	*e*P	P	01 05 18.6	+0.1
LVV	L'vov	78.23	321	*e*P	P	01 05 16.9	-1.8
LVV				*e*		01 10 06.8	
LVV				*e*S	S	01 15 09.4	-2.4
LVV				*e*		01 15 55.5	
ISAL	Salakas	78.34	327	*e*P	P	01 05 18.9	-0.2
HERR	Herculane	78.37	316	⇓P	P	01 05 19.2	-0.4
DRGR		78.50	317	⇑P	P	01 05 19.8	-0.5
DRGR		78.50	317	⇑P	P	01 05 19.8	-0.5
LVZ	Lovozero	78.77	340	P	P	01 05 21.1	-0.2
LVZ				pmax	pmax		
	comp=Z,241nm,1.9s						
LVZ	Lovozero	78.77	340	P	P	01 05 21.1	-0.2
VSU	Vasula	78.80	330	*e*P	P	01 05 21.6	+0.1
MDVR	Moldovita	78.84	315	⇑P	P	01 05 20.9	-1.4
KWP	Kalwaria Pacla	79.04	320	*e*P	P	01 05 24.6	+1.5
KWP				*e*pP	PcP	01 05 31.1	-0.5
KWP	Kalwaria Pacla	79.04	320	IAmb	IAmb	01 05 56.9	
	comp=Z,87nm,1.4s						
BZS	Buzias	79.05	316	⇑P	P	01 05 22.0	-1.3
BZS	Buzias	79.05	316	⇑P	P	01 05 22.0	-1.3
APA	Apatity	79.06	339	⇓*i*P	P	01 05 20.2	-2.7
APA				*i* S	S	01 15 14.0	-6.0
APA				pmax	pmax		
	comp=Z,14nm,0.9s						
APA				MLR	MLR		
	comp=Z,3µm,19.0s						
UZH	Uzhgorod	79.12	319	*e*P	P	01 05 23.4	-0.1
UZH				*e*		01 05 32.4	
UZH				*e*		01 08 23.2	
UZH				*e*S	S	01 15 18.4	-2.9
UZH				*e*PS	PnS	01 16 01.0	-5.5
UZH				*e*SS	SS	01 20 21.2	-6.4
UZH				*e*SSS	SSS	01 23 49.0	
SIRR	Siria	79.13	317	⇓P	P	01 05 23.4	-0.3
LTVH	Ltavrtes, Hu	79.15	318	*e*P	P	01 05 23.9	+0.1
KOLS	Kolonicke sedl	79.18	320	*e*P	P	01 05 26.0	+2.0
KOLS				*e*		01 05 33.6	
KOLS				pmax	pmax		
	comp=Z,43nm,1.1s						
KOLS	Kolonicke sedl	79.18	320	*e*P	P	01 05 26.0	+2.0
KOLS				*e*		01 05 33.6	
ODZ	Otahua Downs	79.23	136	IAMs_20	IAMs_20	01 40 32.0	
	comp=Z,4µm,20.0s						
SUR	Sutherland	79.26	237	P	P	01 05 24.2	-0.8
SUR				IAmb	IAmb	01 05 35.9	
	comp=Z,37nm,0.9s						
SUR	Sutherland	79.26	237	IAMs_20	IAMs_20	01 39 12.2	
	comp=Z,4µm,18.0s						
PABE	Paberze	79.52	326	*e*P	P	01 05 25.8	+0.3
CRVS	Cervenica-Dubn	79.71	319	*e*P	P	01 05 28.3	+1.5
CRVS				*e*		01 05 36.7	
CRVS	Cervenica-Dubn	79.71	319	*e*P	P	01 05 28.3	+1.5
CRVS				*e*		01 05 36.7	
QRZ	Quartz Range	79.73	132	P	P	01 05 26.1	-0.9
QRZ				IAmb	IAmb	01 05 56.0	
	comp=Z,126nm,1.4s						
OXZ	Oxford	79.85	134	IAMs_20	IAMs_20	01 40 09.5	
	comp=Z,5µm,22.0s						
SJES	Sjenica	79.86	314	*e*P	P	01 05 29.2	+1.3
FINES	FINESS Array B	79.94	332	P	P	01 05 27.0	-0.8
	comp=Z,9.1nm,0.7s,baz=103,slow=4.8,SNR=18						
FINES				LR	LR	01 44 09.0	
	comp=Z,2µm,20.0s,baz=109,slow=38						
FINES	FINESS Array B	79.94	332	P	P	01 05 27.2	-0.6
FINES	FINESS Array B	79.94	332	P	P	01 05 27.2	-0.6
DIVS	Divibare	79.96	314	*e*P	P	01 05 27.4	-1.0
SYO	Syowa Base	80.11	198	⇑*e*PcP	PcP	01 05 38.2	+2.5
THZ	Tophouse	80.18	133	P	P	01 05 29.8	+0.2
THZ				IAmb	IAmb	01 05 54.7	
	comp=Z,50nm,1.1s						
FRGS	Fruska Gora	80.24	316	*e*P	P	01 05 28.1	-1.7
KECS	Kecovo	80.27	319	*e*P	pP	01 05 38.1	-0.7
KECS	Kecovo	80.27	319	*e*	pP	01 05 38.1	-0.7
PDG	Podgorica	80.27	313	⇑P	P	01 05 28.6	-1.4
PDG	Podgorica	80.27	313	*e*P	P	01 05 26.4	-3.6
PDG	Podgorica	80.27	313	P	P	01 05 27.9	-2.0
PDG				IAmb	IAmb	01 06 23.1	
	comp=Z,79nm,1.4s						
DRME	Dracevica, Mon	80.30	312	*e*P	P	01 05 27.6	-2.5
BBLS	Lazići	80.35	314	*e*P	P	01 05 29.1	-1.4
MQZ	McQueen's Vall	80.36	135	IAMs_20	IAMs_20	01 40 13.3	
	comp=Z,5µm,22.0s						
NIE	Niedzica	80.54	320	*e*P	P	01 05 31.7	+0.4
NIE				*e*pP	PcP	01 05 39.2	+1.0
PSZ	Piszkesteto	80.58	318	⇓P	P	01 05 31.2	-0.4
PSZ	Piszkesteto	80.58	318	*e*P	P	01 05 32.4	+0.8
PSZ	Piszkesteto	80.58	318	⇓P	P	01 05 31.2	-0.4
UPM	Unac-Piva	80.63	313	*e*P	P	01 05 28.0	-4.1
TSUM	Tsumeb	80.67	250	P	P	01 05 33.6	+0.9
HAPS	Han Pijesak,Bl	80.70	314	*e*P	P	01 05 32.1	-0.3
PBUR	Paburge	80.75	327	*e*P	P	01 05 31.8	-0.4
BRY	Bratogost	80.86	313	*e*P	P	01 05 31.5	-1.8
TREB	Trebinje	80.97	313	*e*P	P	01 05 32.3	-1.4
OJC	Ojcow	80.99	321	*e*P	P	01 05 34.4	+0.7
OJC				*e*pP	pP	01 05 41.7	-0.9
OJC				*e*S	S	01 15 39.2	-1.8
OJC	Ojcow	80.99	321	P	P	01 05 31.8	-1.9
OJC				pmax	pmax		
	comp=Z,16nm,1.0s						
OJC	Ojcow	80.99	321	P	P	01 05 31.8	-1.9
LANS	Liptovska Anna	81.04	319	*e*P	pP	01 05 42.8	-0.2
LANS	Liptovska Anna	81.04	319	*e*	pP	01 05 42.8	-0.2
BILL	Bilibino	81.06	21*c*	*i*P	P	01 05 32.4	-1.3
BILL				*i*		01 05 40.4	
BILL				*i*		01 08 36.3	
BILL				*i* S	S	01 15 32.5	-8.6
BILL				*i* SS	SS	01 20 54.0	-1.9
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
BILL				MLR	MLR		
	comp=Z,5µm,16.0s						
BILL	Bilibino	81.06	21	P	P	01 05 33.0	-0.7
BILL				IAmb	IAmb	01 05 35.2	
	comp=Z,66nm,1.8s						
BILL				IAMs_20	IAMs_20	01 42 56.5	
	comp=Z,2µm,21.0s						
BUD	Budapest	81.10	318	*e*P	P	01 05 38.2	+3.9
HIZ	Hauiti	81.11	129	IAMs_20	IAMs_20	01 42 13.2	
	comp=Z,4µm,20.0s						
MORH	Mrgy, Hungar	81.19	316	*e*P	P	01 05 34.0	-0.8
MORH	Mrgy, Hungar	81.19	316	*e*P	P	01 05 33.5	-1.3
VYHS	Vyhne	81.36	319	*e*P	P	01 05 35.1	-0.6
VYHS				*e*		01 05 44.3	
VYHS				pmax	pmax		
	comp=Z,35nm,1.7s						
VYHS	Vyhne	81.36	319	*e*P	P	01 05 35.0	-0.6
VYHS				*e*		01 05 44.3	
STON	Ston	81.47	313	*e*P	P	01 05 39.3	+3.0
MSVF	Nonsavu	81.63	108	P	P	01 05 37.6	-0.2
MSVF				pmax	pmax		
	comp=Z,43nm,1.1s						
MSVF	Nonsavu	81.63	108	P	P	01 05 37.6	-0.2
MSVF				IAmb	IAmb	01 05 41.8	
	comp=Z,43nm,1.1s						
TIH	Tihany	81.79	317	*e*P	P	01 05 40.6	+2.7
BLY	Banja Luka	82.04	315	*e*P	P	01 05 38.3	-1.0
MPLH	Magyarpolny	82.06	317	*e*P	P	01 05 38.5	-0.9
MGRS	Mrkonjic Grad	82.07	315	*e*P	P	01 05 38.2	-1.4
JAVC	Velka Javorina	82.17	319	*e*P	P	01 05 40.4	+0.4
EGYH	Egyhazaskeszo	82.23	318	*e*P	P	01 05 36.9	-3.4
SMOL	Smolenice	82.29	319	*e*P	P	01 05 41.2	+0.6
SMOL				*e*		01 05 49.5	
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SMOL	Smolenice	82.29	319	*e*P	P	01 05 41.2	+0.6
SMOL				*e*		01 05 49.5	
MORC	Moravsky Berou	82.37	320	⇑P	P	01 05 41.3	+0.3
MORC	Moravsky Berou	82.37	320	*e*P	P	01 05 39.7	-1.3
MORC	Moravsky Berou	82.37	320	⇑P	P	01 05 41.3	+0.3
MODS	Modra-Piesok	82.38	319	*e*P	P	01 05 40.7	-0.3
MODS				*e*		01 05 48.8	
MODS				pmax	pmax		
	comp=Z,21nm,1.0s						
MODS	Modra-Piesok	82.38	319	*e*P	P	01 05 40.7	-0.3
MODS				*e*		01 05 48.8	
CEL	Celeste	82.41	308	P	P	01 05 41.7	+0.1
CEL				IAmb	IAmb	01 05 51.7	
	comp=Z,67nm,1.2s						
BKZ	Black Stump Fm	82.47	130	P	P	01 05 42.0	+0.2
BKZ				IAmb	IAmb	01 06 05.0	
	comp=Z,57nm,0.9s						
ARA0	ARCESS Array S	82.47	340	*e*P	P	01 05 40.5	-0.5
ARCES	ARCESS Array B	82.47	340	P	P	01 05 40.9	-0.2
	comp=Z,8.9nm,0.7s,baz=102,slow=4.9,SNR=24						
ARCES				LR	LR	01 46 47.8	
	comp=Z,3µm,19.3s,baz=100,slow=39						
ARCES	ARCESS Array B	82.47	340	P	P	01 05 41.2	+0.1
ARCES				pmax	pmax		
	comp=Z,48nm,1.4s						
ARCES	ARCESS Array B	82.47	340	P	P	01 05 41.2	+0.1
ZST	Bratislava	82.47	318	*e*P	P	01 05 42.7	+1.2
ZST				*e*		01 05 50.7	
ZST				pmax	pmax		
	comp=Z,180nm,1.7s						
ZST	Bratislava	82.47	318	*e*P	P	01 05 42.7	+1.2
ZST				*e*		01 05 50.7	
BEHE	Becsehely	82.50	317	*e*P	P	01 05 44.0	+2.3
BEHE	Becsehely	82.50	317	*e*P	P	01 05 44.1	+2.3
SOP	Sopron	82.78	318	*e*P	P	01 05 44.0	+0.9
KOGS	Kog	82.86	317	*e*P	P	01 05 42.7	-0.9
KRLC	Kraliky	82.89	320	*e*P	P	01 05 43.2	-0.5
KRLC				*e*		01 05 52.8	
KRLC	Kraliky	82.89	320	*e*P	P	01 05 43.2	-0.5
KRLC				*e*x	x	01 05 52.8	
VRAC	Vranov	82.93	319	⇑P	P	01 05 43.1	-0.8
VRAC	Vranov	82.93	319	*e*P	P	01 05 41.8	-2.1
VRAC	Vranov	82.93	319	⇑P	P	01 05 43.1	-0.8
ZAG	Zagreb	82.99	316	*e*P	P	01 05 52.0	+7.8
KRUC	Moravsky	83.03	319	*e*P	P	01 05 43.8	-0.6
KTK1	Kautokeino	83.11	340	*e*P	P	01 05 43.9	-0.5
DPC	Dobruska-Polom	83.22	320	*e*P	P	01 05 45.7	+0.3
DPC				*e*		01 05 54.5	
DPC	Dobruska-Polom	83.22	320	*e*P	P	01 05 45.7	+0.3
DPC				*e*x	x	01 05 54.5	
CONA	Conrad Observa	83.27	318	*e*P	P	01 05 44.9	-0.9
	comp=Z,14nm,1.4s						
KSP	Ksiaz	83.29	321	*e*P	P	01 05 46.7	+1.0
KSP				*e*pP	pP	01 05 54.5	-0.1
CRES	Cresnjev	83.36	316	*e*P	P	01 05 46.4	+0.2
HAMF	Hammerfest	83.38	341	*e*P	P	01 05 44.4	-1.3
CHVC	Chvalec	83.41	321	*e*P	P	01 05 46.2	-0.2
CHVC				*e*x	x	01 05 55.5	
UPC	Upice	83.43	321	*e*P	P	01 05 47.8	+1.3
UPC				*e*		01 05 53.5	
UPC	Upice	83.43	321	*e*P	P	01 05 47.8	+1.3
UPC				*e*x	x	01 05 53.5	
ARSA	Arzberg	83.44	317	*e*P	P	01 05 45.7	-0.9
	comp=Z,28nm,1.3s,SNR=5.7						
BOJS	Bojanci	83.47	315	*e*P	P	01 05 46.1	-0.6
TREC	Trest	83.65	319	*e*P	P	01 05 47.6	0.0
TREC				*e*		01 05 56.1	
TREC	Trest	83.65	319	*e*P	P	01 05 47.6	0.0
TREC				*e*x	x	01 05 56.1	
MXZ	Matakaoa Point	83.69	128	IAMs_20	IAMs_20	01 45 59.0	
	comp=Z,4µm,20.0s						
SOKA	Soboth	83.72	317	P	P	01 05 48.0	-0.2
	comp=Z,44nm,1.3s,SNR=6.7						
LJU	Ljubljana	84.02	316	*e*P	P	01 05 49.1	-0.4
LJU	Ljubljana	84.02	316	*e*P	P	01 05 49.0	-0.6
OBKA	Obir	84.04	316	*e*P	P	01 05 49.4	-0.3
	comp=Z,25nm,1.2s						
PRU	Pruhonice	84.32	320	*e*P	P	01 05 50.4	-0.6
PRU				*e*		01 05 59.4	
PRU	Pruhonice	84.32	320	*e*P	P	01 05 50.4	-0.6
PRU				*e*x	x	01 05 59.4	
MOA	Molln	84.33	318	P	P	01 05 50.7	-0.4
	comp=Z,20nm,1.4s						
PVCC	Panska Ves	84.35	320	*e*P	P	01 05 52.5	+1.4
PVCC	Panska Ves	84.35	320	*e*P	P	01 05 52.5	+1.4
BSD	Bornholm Skovb	84.56	325	*i* P	pP	01 06 02.0	+1.0
BSD	Bornholm Skovb	84.56	325	*i* P	pP	01 06 02.0	+1.0
	comp=Z,2.2nm,0.5s						
BSD	Bornholm Skovb	84.56	325	IAmb	IAmb	01 06 03.3	
	comp=Z,2.2nm,0.5s						
BSD	Bornholm Skovb	84.56	325	*i* P	pP	01 06 02.1	+1.0
AQU	L'Aquila	84.58	312	P	P	01 05 51.7	-0.9
AQU				pmax	pmax		
	comp=Z,76nm,1.2s						
AQU	L'Aquila	84.58	312	P	P	01 05 51.7	-0.9
AQU				IAmb	IAmb	01 06 02.5	
	comp=Z,76nm,1.2s						
MYKA	Terra Mystica	84.67	317	P	P	01 05 52.9	0.0
	comp=Z,32nm,1.7s						
TRO	Tromso	84.73	340	*e*P	P	01 05 52.4	-0.3
BRG	Berggiesshubel	84.78	321	*e*P	P	01 05 53.4	+0.1
BRG				Amp		01 05 57.0	
	comp=Z,14nm,1.1s						
BRG				*i* x	x	01 06 02.0	
BRG				Amp		01 06 02.8	
	comp=Z,31nm,1.5s						
GEC2	GERESS Array S	84.78	319	P	P	01 05 52.9	-0.5
GEC2				IAmb	IAmb	01 06 04.0	
	comp=Z,58nm,1.4s						
GERES	GERESS Array B	84.78	319	P	P	01 05 53.0	-0.5
	comp=Z,6.9nm,0.9s,baz=98,slow=4.0,SNR=25						
GERES	GERESS Array B	84.78	319	P	P	01 05 53.4	-0.1
NRCA	Norcia	84.82	313	P	P	01 05 52.6	-1.2
NRCA				IAmb	IAmb	01 06 03.3	
	comp=Z,60nm,1.4s						
KHC	Kasperske Hory	84.88	319*c*	*e*P	P	01 05 55.1	+1.2
KHC				pmax	pmax		
	comp=Z,27nm,1.7s						
KHC	Kasperske Hory	84.88	319	*e*P	P	01 05 53.4	-0.5
KHC				*e*x	x	01 06 01.8	
KBA	Koelnbreinsper	84.90	317	*e*P	P	01 05 53.5	-0.8
CLL	Collm	85.40	321	*e*P	P	01 05 57.0	+0.6
	comp=Z,13nm,1.3s						
CLL				*i* (sP)	pP	01 06 04.5	-0.9
	comp=Z,13nm,1.1s						
CLL				*e*PP	PP	01 09 13.0	-1.6
CLL				*e*S	S	01 16 26.0	+0.4
CLL				*e*PS		01 17 20.0	
CLL				*e*PPS	PPS	01 17 37.0	
CLL				*e*		01 21 12.0	
CLL				*e*SS	SS	01 22 00.0	-0.8

CLL				*e*SSS	SSS	01 25 40.0	
CLL				*e*		01 28 00.0	
CLL				*e*SSSS		01 28 35.0	
CLL	**Collm**	**85.40**	**321**	*e*P	**P**	**01 05 57.0**	**+0.6**
CLL				*i*		01 06 04.5	
CLL				*e*S	**SKSac**	**01 16 21.0**	**+1.4**
CLL				pmax	pmax		
	comp=Z,13nm,1.3s						
CLL	**Collm**	**85.40**	**321**	P	**P**	**01 05 54.8**	**-1.5**
CLL				IAMs_20	IAMs_20	01 48 35.3	
	comp=Z,2µm,18.0s						
ABTA	**Abfaltersbach**	**85.45**	**317**	*e*P	**P**	**01 05 56.0**	**-0.9**
	comp=Z,16nm,1.2s						
NKC	**Novy Kostel**	**85.68**	**320**	*e*P	**P**	**01 05 59.0**	**+1.1**
NKC				*e*		01 06 06.4	
NKC	**Novy Kostel**	**85.68**	**320**	*e*P	**P**	**01 05 59.0**	**+1.1**
NKC				*e*x	x	01 06 06.4	
FAUS	**Fauske**	**85.72**	**337**	*e*P	**P**	**01 05 57.2**	**-0.4**
STEI	**Steigen**	**85.80**	**338**	*e*P	**P**	**01 05 58.0**	**0.0**
VNDA	**Vanda**	**85.90**	**169**	P	**P**	**01 05 58.9**	**+0.5**
	comp=Z,4.8nm,1.1s,baz=330,slow=3.5,SNR=9.1						
VNDA				LR	LR	01 41 57.3	
	comp=Z,2µm,18.2s,baz=312,slow=34						
VNDA	**Vanda**	**85.90**	**169**	P	**P**	**01 06 00.3**	**+1.9**
VNDA				pmax	pmax		
	comp=Z,44nm,1.6s						
VNDA	**Vanda**	**85.90**	**169**	P	**P**	**01 06 00.3**	**+1.9**
VNDA				IAmb	IAmb	01 06 25.0	
	comp=Z,44nm,1.6s						
MOR8	**Moi Rana**	**85.92**	**336**	*e*P	**P**	**01 05 56.4**	**-2.2**
TEOL	**Teolo**	**85.98**	**315**	P	**P**	**01 05 58.9**	**-0.6**
CTI	**Castel Tesino**	**86.02**	**316**	IAmb	IAmb	01 06 09.5	
	comp=Z,42nm,1.1s						
WATA	**Walderalm**	**86.12**	**317**	P	**P**	**01 05 59.1**	**-1.2**
	comp=Z,28nm,1.4s						
SQTA	**Sankt Quirin**	**86.37**	**317**	*e*P	**P**	**01 06 00.8**	**-0.6**
	comp=Z,14nm,1.1s						
ZCCA	**Zocca**	**86.44**	**314**	P	**P**	**01 06 02.8**	**+1.0**
MOTA	**Moosalm**	**86.44**	**317**	*e*P	**P**	**01 05 59.4**	**-2.5**
	comp=Z,23nm,1.3s						
GRF	**Grafenberg Arr**	**86.45**	**320**	*e*P	P	01 06 10.4	+8.7
	comp=Z,30nm,1.1s,baz=107,slow=4.3						
GRFO	**Grafenberg**	**86.45**	**320**	P	**P**	**01 06 02.4**	**+0.7**
GRFO				pmax	pmax		
	comp=Z,24nm,1.0s						
GRFO	**Grafenberg**	**86.45**	**320**	P	**P**	**01 06 02.4**	**+0.7**
LOF	**Lofoten**	**86.46**	**338**	*e*P	**P**	**01 06 00.8**	**-0.4**
RETA	**Reutte**	**86.68**	**317**	*e*P	**P**	**01 06 01.3**	**-1.7**
	comp=Z,30nm,1.5s						
FETA	**Feichten**	**86.69**	**317**	P	**P**	**01 06 01.6**	**-1.5**
	comp=Z,14nm,1.2s						
NC602	**NORSAR Array S**	**86.78**	**331**	*e*P	**P**	**01 06 03.1**	**+0.1**
SALO	**Salr**	**86.79**	**315**	P	**P**	**01 06 02.9**	**-0.6**
NSS	**Namsos**	**86.81**	**334**	*e*P	**P**	**01 06 02.3**	**-0.8**
SPA0	**Spitsbergen Ar**	**86.87**	**348**	*e*P	**P**	**01 06 02.0**	**-1.2**
SPITS	**Spitsbergen Ar**	**86.87**	**348**	LR	LR	01 52 05.7	
	comp=Z,4µm,19.8s,baz=115,slow=41						
HSPB	**Hornsund (broa**	**86.88**	**347**	*e*P	**P**	**01 06 02.1**	**-1.1**
NB2	**NORSAR Subarra**	**86.95**	**331**	P	**P**	**01 06 03.0**	**-0.9**
	comp=Z,16nm,1.1s,baz=94,slow=5.3						
NB2	**NORSAR Subarra**	**86.95**	**331**	P	**P**	**01 06 03.0**	**-0.9**
	baz=94,slow=5.3						
NOA	**NORSAR Array B**	**86.95**	**331**	P	**P**	**01 06 03.2**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=95,slow=4.9,SNR=16						
NOA				LR	LR	01 49 43.8	
	comp=Z,1µm,19.7s,baz=65,slow=39						
SBA	**Scott Base**	**87.00**	**169**	P	**P**	**01 06 07.0**	**+3.3**
SBA				pmax	pmax		
	comp=Z,40nm,1.3s						
SBA	**Scott Base**	**87.00**	**169**	P	**P**	**01 06 07.0**	**+3.3**
SBA				IAmb	IAmb	01 06 26.4	
	comp=Z,40nm,1.2s						
SBA	**Scott Base**	**87.00**	**169**	IAMs_20	IAMs_20	01 42 38.3	
	comp=Z,2µm,20.0s						
NAO01	**NORSAR Array S**	**87.11**	**331**	P	**P**	**01 06 04.4**	**-0.2**
OSL	**Oslo**	**87.15**	**330**	*e*P	**P**	**01 06 06.6**	**+1.9**
NBO00	**NORSAR Array S**	**87.17**	**331**	*e*P	**P**	**01 06 03.8**	**-1.1**
NC204	**NORSAR Array S**	**87.18**	**331**	P	**P**	**01 06 02.9**	**-2.1**
DAVA	**Damuels**	**87.27**	**317**	*e*P	**P**	**01 06 03.5**	**-2.5**
	comp=Z,40nm,1.1s						
KEST	**Kesra**	**87.55**	**306**	P	**P**	**01 06 08.6**	**+1.1**
	comp=Z,9.0nm,0.9s,baz=340,slow=5.1,SNR=4.8						
KEST				LR	LR	01 45 55.1	
	comp=Z,989nm,21.8s,baz=24,slow=36						
KONO	**Kongsberg**	**87.71**	**329**	*e*P	**P**	**01 06 06.0**	**-1.5**
DOMB	**Dombas**	**88.02**	**332**	*e*P	**P**	**01 06 08.4**	**-0.6**
BFO	**Black Forest**	**88.33**	**318**	P	**P**	**01 06 10.7**	**-0.1**
BFO				pmax	pmax		
	comp=Z,35nm,1.8s						
BFO	**Black Forest**	**88.33**	**318**	P	**P**	**01 06 10.7**	**-0.1**
BFO				IAmb	IAmb	01 06 50.3	
	comp=Z,35nm,1.8s						
SKAR	**Skarslia**	**88.37**	**331**	*e*P	**P**	**01 06 10.8**	**+0.1**
AKN	**Aaknes**	**88.99**	**332**	*e*P	**P**	**01 06 13.9**	**+0.4**
SENIN	**Lac Senin/Sane**	**89.05**	**316**	P	**P**	**01 06 13.2**	**-1.2**
SENIN				IAmb	IAmb	01 06 25.4	
	comp=Z,40nm,1.6s						
ECH	**Echery**	**89.11**	**318**	P	**P**	**01 06 12.6**	**-1.9**
ECH				pmax	pmax		
	comp=Z,29nm,1.4s						
ECH	**Echery**	**89.11**	**318**	P	**P**	**01 06 12.6**	**-1.9**
BLS5	**Blasjo**	**89.31**	**329**	*e*P	**P**	**01 06 14.9**	**-0.2**
GAMB	**Gambell**	**89.32**	**26**	IAmb	IAmb	01 06 18.0	
	comp=Z,28nm,1.2s						
GAMB				IAMs_20	IAMs_20	01 52 59.5	
	comp=Z,3µm,18.0s						
NVL	**N'lazarevskaya**	**89.69**	**199**	⇑*i*P	**pP**	**01 06 26.2**	**+0.6**
NVL				pmax	pmax		
	comp=Z,58nm,1.1s						
WLF	**Walferdange**	**89.74**	**319**	*d*PcP	**P**	**01 06 17.7**	**+0.4**
WLF	**Walferdange**	**89.74**	**319**	P	**P**	**01 06 16.7**	**-0.6**
WLF				pmax	pmax		
	comp=Z,47nm,1.3s						
WLF	**Walferdange**	**89.74**	**319**	P	**P**	**01 06 16.7**	**-0.6**
WLF				IAmb	IAmb	01 06 28.5	
	comp=Z,47nm,1.3s						
MEM	**Membach**	**89.81**	**320**	*d*PcP	**P**	**01 06 18.8**	**+1.1**
BER	**Bergen**	**89.84**	**330**	*e*P	**P**	**01 06 17.6**	**+0.1**
ASK	**Askoy**	**89.91**	**330**	*e*P	**P**	**01 06 16.2**	**-1.7**
FOO	**Floro**	**89.93**	**331**	*e*P	**P**	**01 06 18.0**	**+0.1**
BCLA	**Clavier**	**90.26**	**320**	*d*PcP	**P**	**01 06 21.7**	**+1.9**
BGES	**Gesves**	**90.40**	**320**	*d*PcP	**P**	**01 06 21.3**	**+0.9**
BMRD	**Maredsous**	**90.61**	**320**	*d*PcP	**P**	**01 06 22.2**	**+0.8**
DOU	**Dourbes**	**90.73**	**320**	*d*PcP	**P**	**01 06 23.4**	**+1.5**
SNF	**Seneffe**	**90.91**	**320**	*d*PcP	**P**	**01 06 24.4**	**+1.7**
SSB	**Saint Sauveur**	**91.01**	**315**	P	**P**	**01 06 20.3**	**-3.1**
SSB				pmax	pmax		
	comp=Z,21nm,1.2s						
SSB	**Saint Sauveur**	**91.01**	**315**	P	**P**	**01 06 20.3**	**-3.1**
TAM	**Tamanrasset**	**91.10**	**293**	IAmb	IAmb	01 06 35.5	
	comp=Z,19nm,1.0s						
QSPA	**South Pole Qui**	**91.23**	**180**	IAMs_20	IAMs_20	01 45 17.4	
	comp=Z,3µm,18.0s						
JMIC	**Jan Mayen**	**93.89**	**342**	LR	LR	01 52 49.4	
	comp=Z,750nm,18.7s,baz=66,slow=38						
A21K	**Barrow**	**93.92**	**18**	P	**P**	**01 06 36.1**	**-0.1**
	baz=286						
SNAA	**Sanae**	**94.39**	**198**	P	**P**	**01 06 40.4**	**+1.9**
SNAA	**Sanae**	**94.39**	**198**	P	**P**	**01 06 40.4**	**+1.9**
SNAA				IAMs_20	IAMs_20	01 44 33.8	
	comp=Z,2µm,19.0s						
DAG	**Danmarks Havn**	**94.52**	**348**	*i* P	**P**	**01 06 37.0**	**-1.9**
DAG	**Danmarks Havn**	**94.52**	**348**	*i* P	**P**	**01 06 37.0**	**-1.9**
DAG	**Danmarks Havn**	**94.52**	**348**	*i* P	**P**	**01 06 37.0**	**-1.9**
TOA0	**Torodi Ar. Sit**	**95.12**	**283**	P	**P**	**01 06 39.9**	**-3.0**
TORD	**Torodi Ar. Bea**	**95.12**	**283**	P	**P**	**01 06 41.6**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=78,slow=4.6,SNR=1.6						
TORD				LR	LR	01 45 54.1	
	comp=Z,2µm,21.8s,baz=95,slow=33						
TTA	**Tatalina**	**96.42**	**26**	IAMs_20	IAMs_20	01 57 35.0	
	comp=Z,2µm,18.0s						
COLD	**Coldfoot**	**97.39**	**21**	P	Pdif	01 06 52.2	0.0
	baz=291						
ESDC	**Sonseca Array**	**97.81**	**310**	P	**P**	**01 06 54.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=85,slow=3.8,SNR=5.0						
ESDC				PKKP	**PKKPdf**	**01 23 37.5**	**+4.3**
	comp=Z,1.3nm,1.2s,baz=300,slow=3.3,SNR=4.6						
ESDC				LR	LR	01 53 19.2	
	comp=Z,701nm,21.5s,baz=55,slow=37						
PPLA	**Purkeypile**	**98.10**	**26**	IAMs_20	IAMs_20	01 57 28.4	
	comp=Z,2µm,18.0s						
KTH	**Kantishna Hill**	**98.42**	**25**	IAMs_20	IAMs_20	01 59 15.7	
	comp=Z,2µm,19.0s						
SKT	**Skwentna**	**98.69**	**26**	IAMs_20	IAMs_20	01 57 12.1	
	comp=Z,2µm,21.0s						
EUNU	**Eureka**	**98.71**	**1**	IAmb	IAmb	01 07 51.0	
	comp=Z,45nm,1.8s						
TRF	**Thorofare Moun**	**98.72**	**25**	IAMs_20	IAMs_20	01 59 34.7	
	comp=Z,3µm,19.0s						
BWN	**Browne**	**98.80**	**24**	IAMs_20	IAMs_20	02 00 28.4	
	comp=Z,3µm,18.0s						
MDM	**Murphy Dome**	**98.99**	**23**	IAMs_20	IAMs_20	02 00 49.7	
	comp=Z,2µm,18.0s						
CUT	**Chulitna**	**99.10**	**26**	P	**Pdif**	**01 07 00.4**	**+0.5**
	baz=291						
TCOL	**CIGO, UAF Yank**	**99.17**	**23**	IAMs_20	IAMs_20	02 01 03.4	
	comp=Z,2µm,18.0s						
COLA	**College**	**99.18**	**23**	IAMs_20	IAMs_20	02 01 03.4	
	comp=Z,2µm,18.0s						
MCK	**McKinley**	**99.18**	**24**	P	**Pdif**	**01 07 00.9**	**+0.6**
	baz=292						
SUA	**Susitna One**	**99.22**	**27**	IAMs_20	IAMs_20	01 59 09.1	
	comp=Z,2µm,18.0s						
KDAK	**Kodiak Island**	**99.54**	**31**	IAMs_20	IAMs_20	01 59 56.9	
	comp=Z,2µm,19.0s						
ILAR	**Eielson Array**	**99.60**	**23**	P	**Pdif**	**01 07 00.8**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=288,slow=6.1,SNR=7.8						
ILAR				PP	**PP**	**01 11 01.6**	**-4.2**
	comp=Z,2.3nm,1.0s,baz=283,slow=7.4,SNR=6.6						
ILAR				PKKPbc	**PKKPbc**	**01 23 26.1**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=152,slow=3.0,SNR=7.1						
ILAR				LR	LR	01 58 43.0	
	comp=Z,2µm,19.1s,baz=318,slow=39						
CNPM	**China Poot**	**99.65**	**29**	IAMs_20	IAMs_20	01 54 27.6	
	comp=Z,2µm,20.0s						
HDA	**Harding Lake**	**99.72**	**23**	IAMs_20	IAMs_20	01 55 04.9	
	comp=Z,2µm,22.0s						
BRLK	**Bradley Lake**	**99.74**	**28**	IAMs_20	IAMs_20	01 56 24.8	
	comp=Z,2µm,18.0s						
RC01	**Rabbit Creek A**	**99.81**	**27**	P	**Pdif**	**01 07 03.8**	**+0.7**
	baz=291						
O22K	**Cooper Landing**	**100.03**	**28**	IAMs_20	IAMs_20	02 00 27.6	
	comp=Z,2µm,20.0s						
DHY	**Denali Highway**	**100.08**	**25**	IAMs_20	IAMs_20	01 58 09.7	
	comp=Z,2µm,18.0s						
SML	**Sawmill**	**100.17**	**26**	IAMs_20	IAMs_20	02 00 36.1	
	comp=Z,2µm,18.0s						
SEW	**Seward**	**100.29**	**28**	IAMs_20	IAMs_20	01 58 18.6	
	comp=Z,3µm,18.0s						
SCM	**Sheep Creek Mo**	**100.60**	**26**	IAMs_20	IAMs_20	01 58 58.4	
	comp=Z,2µm,20.0s						
RIDG	**Independent Ri**	**100.84**	**24**	IAMs_20	IAMs_20	02 00 13.6	
	comp=Z,2µm,18.0s						
PAX	**Paxson**	**100.92**	**24**	IAMs_20	IAMs_20	01 58 35.8	
	comp=Z,2µm,19.0s						
SCRK	**Sand Creek**	**101.08**	**23**	P	**Pdif**	**01 07 09.8**	**+0.9**
	baz=297						
KLU	**Klutina**	**101.35**	**26**	IAMs_20	IAMs_20	01 59 31.3	
	comp=Z,3µm,20.0s						
HIN	**Hinchinbrook I**	**101.54**	**27**	IAMs_20	IAMs_20	01 59 15.5	
	comp=Z,2µm,20.0s						
EYAK	**Cordova Ski Ar**	**101.82**	**27**	IAMs_20	IAMs_20	02 02 55.8	
	comp=Z,2µm,18.0s						
DBIC	**Dimbokro**	**101.87**	**277**	P	**Pdif**	**01 07 12.5**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=85,slow=6.4,SNR=3.2						
N25K	**Chitina, Valde**	**101.88**	**26**	IAMs_20	IAMs_20	02 00 46.2	
	comp=Z,2µm,18.0s						
GLB	**Gilahina Butte**	**102.29**	**25**	IAMs_20	IAMs_20	01 59 59.0	
	comp=Z,2µm,19.0s						
EPYK	**Eagle Plains**	**102.51**	**20**	P	**Pdif**	**01 07 15.6**	**+0.6**
	baz=304						
VRDI	**Verde Repeater**	**102.54**	**26**	IAMs_20	IAMs_20	02 00 06.6	
	comp=Z,2µm,18.0s						
MCARA	**McCarthy VSAT**	**102.65**	**25**	IAMs_20	IAMs_20	02 00 12.6	
	comp=Z,2µm,20.0s						
CRQM	**Cirque**	**102.89**	**26**	IAMs_20	IAMs_20	02 01 23.5	
	comp=Z,2µm,19.0s						
TGL	**Tana Glacier**	**103.02**	**26**	IAMs_20	IAMs_20	02 01 25.6	
	comp=Z,2µm,20.0s						
BALM	**Baldy**	**103.11**	**26**	IAMs_20	IAMs_20	02 00 26.6	
	comp=Z,2µm,18.0s						
ISLE	**Juniper Island**	**103.31**	**26**	IAMs_20	IAMs_20	01 54 29.3	
	comp=Z,2µm,22.0s						
BARN	**Barnard Glacie**	**103.39**	**25**	IAMs_20	IAMs_20	02 00 33.6	
	comp=Z,3µm,21.0s						
YAH	**Yahtse**	**103.68**	**26**	IAMs_20	IAMs_20	02 00 11.5	
	comp=Z,2µm,19.0s						
JIS	**Juneau Island**	**107.99**	**26**	IAMs_20	IAMs_20	02 04 15.8	
	comp=Z,3µm,19.0s						
TBI	**Tubuai**	**111.84**	**115**	*e*PP	**PP**	**01 12 30.3**	**-7.3**
	comp=Z,222nm,28.0s						
TBI				*e*Sdif	Sdif	01 20 17.2	+0.2
	comp=Z,769nm,27.0s						
TBI	**Tubuai**	**111.84**	**115**	*e*PS	PS	01 22 08.2	-2.8
	comp=Z,292nm,28.0s						
TBI				*e*SS	SS	01 28 08.7	-4.5
	comp=Z,1µm,25.8s						
TBI	**Tubuai**	**111.84**	**115**	*e*LQ	LQ	01 40 28.8	
	comp=Z,2µm,37.0s						
TBI				*e*LR	LR	01 45 13.0	
	comp=Z,3µm,24.0s						
YKA	**Yellowknife Ar**	**111.99**	**15**	Pdiff	**Pdif**	**01 07 58.6**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=330,slow=4.5,SNR=3.6						
YKA				PKiKP	**PKiKP**	**01 11 54.7**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=332,slow=1.6,SNR=11						
YKA				PP	**PP**	**01 12 30.0**	**-7.0**
	comp=Z,1.6nm,0.7s,baz=332,slow=7.7,SNR=6.8						
YKA				PKKPbc	**PKKPbc**	**01 22 46.9**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=143,slow=3.2,SNR=3.3						
PPT2	**Papeete2**	**112.45**	**108**	*e*Pdif	**Pdif**	**01 07 59.6**	**-0.7**
	comp=Z,74nm,25.8s						
PPT2	**Papeete2**	**112.45**	**108**	*e*PP	PP	01 12 30.9	-11
	comp=Z,245nm,25.5s						
PPT2	**Papeete2**	**112.45**	**108**	*e*Pdif	**Sdif**	**01 20 23.0**	**+0.6**
	comp=Z,862nm,25.0s						
PPT2	**Papeete2**	**112.45**	**108**	*e*PS	PS	01 22 15.3	-1.8
	comp=Z,557nm,26.0s						
PPT2	**Papeete2**	**112.45**	**108**	*e*LQ	LQ	01 40 50.5	
	comp=Z,3µm,38.2s						
PPT2				*e*LR	LR	01 45 30.0	
	comp=Z,2µm,23.8s						
MBO	**M'Bour**	**113.06**	**286**	IAMs_20	IAMs_20	01 59 56.8	
	comp=Z,2µm,20.0s						
B05A	**Bryant**	**120.00**	**29**	P	**PKiKP**	**01 12 10.0**	**+0.2**
	baz=313						
E04D	**Cinebar**	**120.91**	**31**	P	**PKPdf**	**01 12 11.5**	**0.0**
	baz=312						
LTY	**Liberty**	**121.39**	**29**	IAMs_20	IAMs_20	02 14 01.7	
	comp=Z,2µm,19.0s						
FFC	**Flin Flon**	**121.96**	**13**	PKIKP	**PKiKP**	**01 12 14.3**	**+0.9**
FFC	**Flin Flon**	**121.96**	**13**	PKPdf	**PKiKP**	**01 12 14.3**	**+0.9**
H04D	**Lebanon**	**122.16**	**33**	P	**PKiKP**	**01 12 14.6**	**+0.5**
	baz=311						
NEW	**Newport**	**122.33**	**27**	P	**PKPdf**	**01 12 14.3**	**0.0**
	baz=318						
I03D	**Drain, OR**	**122.36**	**34**	P	**PKiKP**	**01 12 14.5**	**0.0**
	baz=310						
J01E	**Myrtle Point**	**122.36**	**35**	P	**PKiKP**	**01 12 14.9**	**+0.3**
	baz=309						
K02D	**Willamette Mer**	**122.81**	**35**	P	**PKiKP**	**01 12 15.8**	**+0.3**
	baz=309						
I04A	**Tendick Farm,**	**122.81**	**33**	P	**PKiKP**	**01 12 15.7**	**+0.2**
	baz=311						
I05D	**Terrebonne, OR**	**123.03**	**32**	P	**PKiKP**	**01 12 16.1**	**+0.2**
	baz=312						
L02E	**Cave Junction**	**123.18**	**36**	P	**PKiKP**	**01 12 16.3**	**+0.1**
	baz=309						
HUMO	**Hull Mountain**	**123.27**	**35**	IAMs_20	IAMs_20	02 11 03.2	
	comp=Z,1µm,22.0s						
J04D	**Umpqua Nationa**	**123.34**	**34**	P	**PKPdf**	**01 12 16.3**	**-0.3**
	baz=311,SNR=6.6						
J05D	**Fort Rock, OR**	**123.79**	**33**	P	**PKPdf**	**01 12 17.1**	**-0.2**
	baz=312,SNR=7.9						
L04D	**Klamath Falls**	**123.89**	**35**	P	**PKPdf**	**01 12 17.3**	**-0.2**
	baz=310						
YBH	**Yreka Blue Hor**	**123.97**	**35**	IAMs_20	IAMs_20	02 13 03.7	
	comp=Z,1µm,18.0s						
M02C	**Callahan**	**124.10**	**36**	P	**PKPdf**	**01 12 18.0**	**+0.1**
	baz=309						
M04C	**Macdoel**	**124.44**	**35**	P	**PKPdf**	**01 12 18.6**	**0.0**
	baz=310						
N02D	**Trinity Center**	**124.45**	**36**	P	**PKiKP**	**01 12 18.7**	**-0.1**
	baz=309						
WDC	**Whiskeytown Da**	**124.79**	**36**	IAMs_20	IAMs_20	02 10 09.7	
	comp=Z,1µm,20.0s						
MSO	**Missoula**	**124.82**	**26**	P	**PKPdf**	**01 12 19.2**	**+0.1**
	baz=321						
O02D	**Mt. Diablo Mer**	**124.89**	**37**	P	**PKPdf**	**01 12 19.5**	**0.0**
	baz=308						
RKT	**Rikitea**	**124.92**	**117**	*e*LR	LR	01 51 23.7	
	comp=Z,2µm,25.0s						
O03E	**Paynes Creek**	**125.41**	**36**	P	**PKPdf**	**01 12 20.2**	**-0.2**
	baz=310						
EGMT	**Eagleton**	**125.55**	**22**	P	**PKPdf**	**01 12 20.6**	**+0.1**
	baz=326						
EFI	**East Falkland**	**125.67**	**199**	IAMs_20	IAMs_20	02 06 34.8	
	comp=Z,1µm,18.0s						
BOZ	**Bozeman (W)**	**126.78**	**25**	P	**PKPdf**	**01 12 23.2**	**+0.2**
	baz=323						
VCNR	**Virginia City**	**127.32**	**36**	IAMs_20	IAMs_20	02 12 14.5	
	comp=Z,960nm,19.0s						
ULM	**Lac du Bonnet**	**127.44**	**11**	PKP	**PKPdf**	**01 12 23.4**	**-0.5**
	comp=Z,11nm,0.9s,baz=338,slow=2.2,SNR=15						
CMB	**Columbia Colle**	**127.69**	**38**	IAMs_20	IAMs_20	02 15 28.7	
	comp=Z,1µm,19.0s						
LAO	**LASA Array**	**127.95**	**20**	P	**PKiKP**	**01 12 25.6**	**-0.1**
	baz=330						
RLMT	**Red Lodge**	**128.14**	**24**	P	**PKiKP**	**01 12 26.3**	**0.0**
	baz=326						
PMPB	**Monarch Peak**	**128.57**	**40**	IAMs_20	IAMs_20	02 03 18.3	
	comp=Z,1µm,19.0s						
NVAR	**Mina Array Bea**	**128.68**	**36**	PKP	**PKPdf**	**01 12 27.0**	**+0.1**
	comp=Z,6.2nm,0.9s,baz=281,slow=2.4,SNR=23						
NV11	**Mina Array Sit**	**128.76**	**36**	IAMs_20	IAMs_20	02 13 00.8	
	comp=Z,1µm,20.0s						
MDND	**Maddock**	**128.90**	**15**	P	**PKiKP**	**01 12 27.4**	**-0.1**
	baz=338						
MATQ	**Matagami**	**128.96**	**356**	P	**PKiKP**	**01 12 27.4**	**-0.1**
	baz=6.6						
AGMN	**Agassiz Nation**	**129.31**	**11**	P	**PKiKP**	**01 12 27.9**	**-0.4**
	baz=343						
LSQQ	**Lebel-sur-Quev**	**129.60**	**355**	P	**PKPdf**	**01 12 28.2**	**+0.1**
	baz=7.5						
BW06	**Boulder Array**	**129.94**	**26**	P	**PKPdf**	**01 12 29.4**	**+0.2**
	baz=324						
PDAR	**Pinedale Array**	**129.94**	**26**	PKP	**PKPdf**	**01 12 26.6**	**-2.6**
	comp=Z,2.3nm,0.8s,baz=88,slow=2.2,SNR=13						
PKM	**Mcpherson Peak**	**130.02**	**40**	P	**PKPdf**	**01 12 28.3**	**-1.2**
	baz=308						
CWC	**Cottonwood Cre**	**130.12**	**38**	P	**PKPdf**	**01 12 29.3**	**-0.4**
	baz=311						
D63A	**Stockholm**	**130.19**	**347**	P	**PKPdf**	**01 12 29.4**	**+0.2**
	baz=19						
R11A	**Troy Canyon, C**	**130.29**	**34**	P	**PKPdf**	**01 12 30.1**	**+0.2**
	baz=315,SNR=25						
EYMN	**Ely**	**130.37**	**8**	P	**PKPdf**	**01 12 29.2**	**-0.4**
	baz=348						
DUG	**Dugway, Tooele**	**130.42**	**30**	P	**PKPdf**	**01 12 30.3**	**+0.2**
	baz=319						
D61A	**St Aubert, Com**	**130.47**	**349**	P	**PKPdf**	**01 12 29.6**	**-0.1**
	baz=17						
E64A	**Bridgewater**	**130.71**	**346**	P	**PKPdf**	**01 12 30.2**	**0.0**
	baz=20						
MPMC	**Manual Prospec**	**130.74**	**38**	P	**PKiKP**	**01 12 31.7**	**-0.1**
	baz=311						
LATQ	**La Tuque**	**130.75**	**351**	P	**PKPdf**	**01 12 30.5**	**+0.2**
	baz=13						
E63A	**Oxbow**	**130.84**	**347**	P	**PKPdf**	**01 12 30.9**	**+0.4**
	baz=19						
TPNV	**Topopah Spring**	**130.88**	**36**	P	**PKiKP**	**01 12 31.6**	**-0.4**
	baz=313						
RSSD	**Black Hills**	**130.95**	**20**	P	**PKPdf**	**01 12 31.4**	**+0.3**
	baz=331						
D58A	**Chemin du LacG**	**131.04**	**351**	P	**PKPdf**	**01 12 31.3**	**+0.4**
	baz=13						
EDW2	**Edwards Air Fo**	**131.19**	**39**	P	**PKPdf**	**01 12 32.0**	**+0.4**
	baz=310						
E61A	**Lac Etchemin**	**131.27**	**349**	P	**PKPdf**	**01 12 31.8**	**+0.4**
	baz=16						
K22A	**Casper**	**131.29**	**23**	P	**PKPdf**	**01 12 32.0**	**+0.3**
	baz=328						
F64A	**Sherman**	**131.35**	**347**	P	**PKPdf**	**01 12 31.8**	**+0.4**
	baz=19						
D56A	**ZEC Mazanza, M**	**131.35**	**353**	P	**PKPdf**	**01 12 31.5**	**0.0**
	baz=11						
D55A	**Sainte-Anne-du**	**131.47**	**353**	P	**PKPdf**	**01 12 31.7**	**0.0**
	baz=9.7						
GSC	**Goldstone, Bar**	**131.65**	**38**	P	**PKPdf**	**01 12 31.8**	**-0.7**
	baz=312						
G65A	**Princeton**	**131.79**	**346**	P	**PKPdf**	**01 12 32.8**	**+0.5**
	baz=20						
F61A	**St Evariste**	**131.80**	**349**	P	**PKPdf**	**01 12 32.8**	**+0.5**
	baz=16						
E58A	**La Victoria**	**131.81**	**351**	P	**PKPdf**	**01 12 32.6**	**+0.3**
	baz=13						
E56A	**St. Veronique**	**131.89**	**353**	P	**PKPdf**	**01 12 32.6**	**+0.1**
	baz=10						
E57A	**Chemin Saint G**	**131.90**	**352**	P	**PKPdf**	**01 12 32.7**	**+0.2**
	baz=12						
F60A	**Warwick**	**131.99**	**350**	P	**PKPdf**	**01 12 33.0**	**+0.4**
	baz=15						
SCI2	**San Clemente I**	**132.02**	**41**	P	**PKPdf**	**01 12 33.3**	**+0.2**
	baz=308						
E55A	**Montcerf-Lytto**	**132.09**	**354**	P	**PKPdf**	**01 12 33.2**	**+0.4**
	baz=9.0						
F59A	**Saint Guilaume**	**132.24**	**351**	P	**PKiKP**	**01 12 33.8**	**-0.3**
	baz=14						
G63A	**Kingsbury**	**132.35**	**347**	P	**PKPdf**	**01 12 33.8**	**+0.4**
	baz=18						
H65A	**Eastbrook**	**132.43**	**346**	P	**PKiKP**	**01 12 34.1**	**-0.5**
	baz=20						
G61A	**St-Isidore-de-**	**132.57**	**349**	P	**PKPdf**	**01 12 33.8**	**0.0**
	baz=15						
O20A	**White River Ci**	**132.65**	**27**	P	**PKPdf**	**01 12 34.8**	**+0.4**
	baz=324						
G60A	**Masonville**	**132.90**	**350**	P	**PKPdf**	**01 12 34.8**	**+0.4**
	baz=14						
PFO	**Pinyon Flats O**	**132.98**	**39**	P	**PKPdf**	**01 12 35.4**	**+0.3**
	baz=311						
PFO	**Pinyon Flats O**	**132.98**	**39**	IAMs_20	IAMs_20	02 14 03.9	
	comp=Z,2µm,21.0s						
XPFO	**Pion Flat**	**132.98**	**39**	IAMs_20	IAMs_20	02 14 02.9	
	comp=Z,1µm,22.0s						
TPFO	**Pinon Flats**	**132.98**	**39**	P	**PKPdf**	**01 12 35.6**	**+0.5**
	baz=311						
N23A	**Red Feather La**	**133.00**	**24**	P	**PKPdf**	**01 12 35.5**	**+0.3**
	baz=328						
RCBR	**Riachuelo**	**133.04**	**263**	IAMs_20	IAMs_20	02 10 04.4	
	comp=Z,1µm,19.0s						
G57A	**Newington**	**133.30**	**352**	P	**PKPdf**	**01 12 34.7**	**-0.5**
	baz=11						
G54A	**Lake Saint Pet**	**133.33**	**355**	P	**PKPdf**	**01 12 35.1**	**-0.2**
	baz=6.4						
ECSD	**EROS Data Cent**	**133.49**	**14**	P	**PKiKP**	**01 12 36.3**	**-0.5**
	baz=341						
I64A	**Boothbay**	**133.49**	**347**	P	**PKPdf**	**01 12 36.1**	**+0.5**
	baz=18						
H59A	**Cadyville**	**133.56**	**351**	P	**PKPdf**	**01 12 36.2**	**+0.5**
	baz=12						
LONY	**Lake Ozonia**	**133.72**	**352**	P	**PKiKP**	**01 12 36.8**	**-0.5**
	baz=11						
RMX	**La Rumorosa**	**133.87**	**40**		**PKiKP**	**01 12 38.7**	**+0.5**
RMX				IAMs_20	IAMs_20	02 12 18.4	
	comp=Z,1µm,20.0s						
H57A	**Richville**	**133.98**	**353**	P	**PKPdf**	**01 12 37.1**	**+0.6**
	baz=10						
J63A	**Strafford**	**134.41**	**348**	P	**PKiKP**	**01 12 38.5**	**-0.2**
	baz=16						
CPBX	**Cerro Prieto**	**134.49**	**40**	IAMs_20	IAMs_20	02 20 01.9	
	comp=Z,1µm,18.0s						
WUAZ	**Wupatki**	**134.66**	**33**	P	**PKiKP**	**01 12 39.3**	**-0.4**
	baz=318,SNR=7.5						
J59A	**Piesco**	**134.84**	**352**	P	**PKiKP**	**01 12 39.4**	**-0.2**
	baz=12						
J58A	**Remsen**	**135.05**	**352**	P	**PKPdf**	**01 12 39.2**	**+0.6**
	baz=11						
S22A	**4UR Ranch, Cre**	**135.23**	**27**	P	**PKPdf**	**01 12 39.5**	**+0.1**
	baz=325						
BGNE	**Belgrade**	**135.26**	**16**	P	**PKPdf**	**01 12 39.7**	**+0.7**
	baz=338						
SPX	**San Pedro Mart**	**135.28**	**41**	IAMs_20	IAMs_20	02 06 49.1	
	comp=Z,1µm,22.0s						
J56A	**Wolcott**	**135.32**	**354**	P	**PKPdf**	**01 12 39.2**	**+0.2**
	baz=8.4						
BSFB	**Barra de Sao F**	**135.39**	**244**	*e*P	**PKiKP**	**01 12 45.4**	**+4.0**
X16A	**Lo Mia Camp, P**	**135.43**	**34**	IAMs_20	IAMs_20	02 23 33.1	
	comp=Z,2µm,20.0s						
JFWS	**Jewell Farm**	**135.48**	**8**	P	**PKPdf**	**01 12 39.4**	**+0.1**
	baz=349						
GDU01	**Guandu, BA**	**135.55**	**252**	*e*P	**PKiKP**	**01 12 46.1**	**+4.3**
SJMB	**Sao Joao De Ma**	**135.74**	**244**	*e*P	**PKiKP**	**01 12 46.1**	**+4.0**
W18A	**Petrified Fore**	**135.85**	**32**	P	**PKPdf**	**01 12 41.2**	**+0.6**
	baz=320,SNR=5.2						
M63A	**Gales Ferry**	**136.41**	**348**	P	**PKiKP**	**01 12 42.2**	**-0.6**
	baz=16						
L58A	**Harry Jones Me**	**136.42**	**353**	P	**PKiKP**	**01 12 42.2**	**-0.7**
	baz=10.0						
VAS01	**Vassouras-RJ**	**136.47**	**238**	*e*P	**PKiKP**	**01 12 47.7**	**+4.2**
L44A	**Lake County Fo**	**136.48**	**6**	P	**PKiKP**	**01 12 42.4**	**-0.5**
	baz=352						
L56A	**Greenwood**	**136.52**	**354**	P	**PKiKP**	**01 12 42.6**	**-0.5**

	baz=7.5						
L57A	Andrews Acres	136.58	354	P	PKiKP	01 12 42.9	-0.3
	baz=8.6						
MAN01	Angra dos Reis	136.67	237	*e*P	PKiKP	01 12 48.1	+4.1
ERPA	Erie	136.72	357	P	PKiKP	01 12 43.2	-0.3
	baz=4.0						
T25A	Trinidad	136.81	26	P	PKiKP	01 12 43.4	-0.6
	baz=328						
M59A	Waymart	136.85	352	P	PKiKP	01 12 43.8	0.0
	baz=11						
M60A	Port Jervis	136.95	351	P	PKiKP	01 12 43.6	-0.3
	baz=12						
PAL	Palisades	137.14	350	P	PKiKP	01 12 43.8	-0.4
	baz=13						
M58A	Price's Panora	137.16	353	P	PKPdf	01 12 43.1	+0.5
	baz=9.2						
M56A	Emporium	137.22	355	P	PKiKP	01 12 43.8	-0.8
	baz=6.7						
M57A	Sunshine Farm,	137.27	354	P	PKPdf	01 12 43.2	+0.4
	baz=8.3						
NBMO	Morrinhos-CE	137.29	267	*e*P	PKiKP	01 12 49.0	+3.7
M54A	Oil Creek Stat	137.31	357	P	PKPdf	01 12 43.1	+0.3
	baz=4.5						
TUC	Tucson	137.34	36	P	PKiKP	01 12 44.8	-0.3
	baz=316						
M53A	WI Miller and	137.43	358	P	PKPdf	01 12 43.1	+0.1
	baz=3.1						
ANMO	Albuquerque	137.66	29	PKIKP	PKPdf	01 12 44.5	+0.6
ANMO	Albuquerque	137.66	29	P	PKPdf	01 12 44.6	+0.6
	baz=324						
ANMO	Albuquerque	137.66	29	PKPdf	PKPdf	01 12 44.5	+0.6
N58A	Sunbury	137.71	353	P	PKiKP	01 12 45.0	-0.5
	baz=9.0						
KSU1	Kansas State U	137.84	16	P	PKiKP	01 12 45.4	-0.4
	baz=339						
P38A	Dawn	138.10	12	PKPdf	PKPdf	01 12 43.6	-0.7
O56A	Blue Knob Stat	138.47	355	P	PKiKP	01 12 46.6	-0.5
	baz=6.3						
P60A	Greenville	138.58	352	P	PKiKP	01 12 46.8	-0.5
	baz=11						
PET01	Itanhaem-SP	138.77	233	*e*P	PKiKP	01 12 52.1	+4.0
121A	Cookes Peak, D	138.87	33	P	PKiKP	01 12 48.2	-0.2
	baz=320						
P59A	Jarrettsville	138.89	353	P	PKiKP	01 12 47.8	-0.1
	baz=9.6						
PLTB	Pedras Altas	139.07	219	*e*P	PKiKP	01 12 52.3	+3.8
PLCA	Paso Flores	139.21	194	PKP	PKPdf	01 12 43.2	-3.2
	comp=Z,1.7nm,0.9s,baz=187,slow=8.1,SNR=2.5						
PLCA	Paso Flores	139.21	194	*e*P	PKiKP	01 12 52.4	+3.8
SPB	Sao Paulo	139.23	234	IAMs_20	IAMs_20	02 17 51.8	
	comp=Z,1µm,18.0s						
P56A	Dayton Farm, R	139.25	355	P	PKiKP	01 12 48.2	-0.4
	baz=6.0						
R40A	Maddies Statio	139.65	12	PKPdf	PKPdf	01 12 47.4	+0.3
S39A	Bolivar	140.00	13	PKPdf	PKPdf	01 12 48.2	+0.4
Q53A	Leroy	140.03	359	P	PKPdf	01 12 49.0	+1.1
	baz=1.9						
MSTX	Muleshoe	140.19	26	P	PKiKP	01 12 50.4	-0.5
	baz=328						
MSTX	Muleshoe	140.19	26	PKPdf	PKiKP	01 12 50.7	-0.2
R59A	King George, V	140.36	353	P	PKiKP	01 12 50.4	-0.6
	baz=8.8						
R58A	Rapidan	140.37	354	P	PKiKP	01 12 50.4	-0.6
	baz=7.4						
R56A	Bull Pasture M	140.38	356	P	PKiKP	01 12 50.5	-0.6
	baz=5.2						
R57A	Stanardsville	140.42	355	P	PKPdf	01 12 49.8	+1.2
	baz=6.6						
WCI	Wyandotte Cave	140.54	4	P	PKPdf	01 12 50.0	+1.2
	baz=354						
MNTX	Cornudas Mount	140.79	31	P	PKiKP	01 12 51.3	-0.8
	baz=323						
S59A	Mechanicsville	140.82	353	P	PKiKP	01 12 50.9	-1.0
	baz=8.6						
SDBA	SAO DESIDERIO	140.90	252	*e*P	PKiKP	01 12 55.7	+3.0
S57A	Dark Hollow, R	140.99	355	P	PKiKP	01 12 51.6	-0.7
	baz=6.0						
S58A	Poland Farm, P	141.05	354	P	PKiKP	01 12 51.8	-0.6
	baz=7.5						
T42A	Van Buren	141.09	11	PKPdf	PKPdf	01 12 44.0	-5.8
HHAR	Hobbs	141.19	14	PKPdf	PKPdf	01 12 51.4	+1.3
BB19B	Bebedouro	141.27	237	*e*P	PKiKP	01 12 56.2	+2.9
LC01	Cunco	141.27	194	PKPdf	PKiKP	01 12 52.1	-0.7
U40A	Yellville	141.38	13	P	PKiKP	01 12 52.1	-1.0
	baz=344						
U40A	Yellville	141.38	13	PKPdf	PKPdf	01 12 46.9	-3.5
T59A	Double "B" Far	141.63	353	P	PKiKP	01 12 53.0	-0.6
	baz=8.4						
T58A	Grand View Acr	141.76	355	P	PKiKP	01 12 52.5	-1.3
	baz=6.8						
T57A	Hurt	141.77	355	P	PKiKP	01 12 52.7	-1.2
	baz=5.6						
FCAR	Ozark Folk Cen	141.99	12	PKPdf	PKPdf	01 12 52.8	+1.3
LCAR	Lake Charles	142.01	11		PKPpre	01 12 44.8	
LCAR				PKPdf	PKPdf	01 12 50.7	-0.7
IPMB	Ipameri, GO	142.25	242	*e*P	PKiKP	01 12 57.7	+2.2
U58A	Oxford	142.31	354	P	PKiKP	01 12 53.8	-1.2
	baz=6.9						
U54A	Nelsons Funny	142.37	359	P	PKiKP	01 12 54.0	-1.3
	baz=1.5						
ITQB	Itaqui	142.39	219	*e*P	PKiKP	01 12 57.6	+2.3
WVT	Waverly	142.47	7	PKIKP	PKPdf	01 12 47.8	-4.5
WVT						01 12 50.9	
WVT	Waverly	142.47	7		PKPdf	01 12 47.8	-4.5
WVT				PKPdf	PKiKP	01 12 50.9	-4.5
W41B	Gary Mavity, V	142.65	13	P	PKiKP	01 12 55.6	-0.1
	baz=344						
V61A	Roper	142.66	352	P	PKiKP	01 12 55.8	+0.1
	baz=10						
BDFB	Brasilia	142.90	245	PKP	PKPdf	01 12 52.6	-1.1
	comp=Z,1.8nm,0.5s,baz=134,slow=8.0,SNR=4.9						
BDFB	Brasilia	142.90	245	PKPdf	PKiKP	01 12 56.5	-0.4
BI02	San Fabin de	143.24	195	PKPdf	PKPdf	01 12 55.2	+1.5
PCMB	Pacaembu	143.28	234	*e*P	PKiKP	01 12 59.4	+2.0
BI03	Tigo	143.50	193	IAMs_20	IAMs_20	02 11 43.5	
	comp=Z,2µm,20.0s						
TXAR	Lajitas Array	143.56	32	PKP	PKPbc	01 12 52.0	+0.1
	comp=Z,5.1nm,0.8s,baz=135,slow=0.5,SNR=44						
TXAR	Lajitas Array	143.56	32	PKIKP	PKPab	01 12 51.1	+0.1
TXAR	Lajitas Array	143.56	32		PKPab	01 12 51.1	+0.1
SLBS	Sierra La Lagu	143.73	45	PKPdf	PKPdf	01 12 54.8	-0.2
JCT	Junction City	144.47	26	P	PKPdf	01 12 57.3	+1.2
	baz=330						
JSC	Jenkinsville	144.59	358	PKIKP	PKPdf	01 12 56.1	0.0
JSC	Jenkinsville	144.59	358		PKPdf	01 12 56.1	0.0
BO02	Sierra Bellavi	144.85	197	PKPdf	PKPbc	01 12 55.8	+0.1
BO02				IAMs_20	IAMs_20	02 12 50.2	
	comp=Z,2µm,22.0s						
CPUP	Villa Florida	145.11	222	PKPbc	PKPbc	01 12 56.0	-0.7
	comp=Z,18nm,0.9s,baz=112,slow=2.6,SNR=32						
CPUP	Villa Florida	145.11	222	PKIKP	PKPbc	01 12 56.0	-0.7
435B	Jarrell	145.12	23		PKPdf	01 12 57.0	-0.2
NATX	Nacogdoches	145.24	18	P	PKPdf	01 12 58.0	+0.7
	baz=339,SNR=13						
GOGA	Godfrey	145.48	1	P	PKPab	01 12 59.2	+1.4
	baz=359,SNR=10						
Z59A	Georgetown, SC	145.50	355	P	PKiKP	01 13 00.1	-1.6
	baz=6.1						
NHSC	New Hope	145.70	356	P	PKiKP	01 13 00.6	-1.5
	baz=4.6						
VBMS	Vicksburg	145.87	12	P	PKiKP	01 13 01.7	-0.7
	baz=346						
833A	Chaparral WMA,	146.50	27	P	PKPab	01 13 02.8	+1.0
	baz=329						
HKT	Hockley	146.52	21		PKPbc	01 13 00.4	-0.4
PRPB	Parauapebas	146.79	261	*e*P	PKiKP	01 13 05.3	+0.4
TIGA	Tifton	147.44	1	P	PKPbc	01 13 04.1	+0.7
	baz=358						
BRAL	Brewton	147.46	7	P	PKPbc	01 13 04.2	+0.7
	baz=352						
KVTX	Kingsville	147.84	26		PKiKP	01 13 06.8	+0.2
PP1B	Ponte de Pedra	148.18	238	*e*P	PKPab	01 13 08.2	-0.5
CO02	Combarbal	148.24	199	IAMs_20	IAMs_20	02 17 39.1	
	comp=Z,2µm,20.0s						
CO03	El Pedregal	148.47	200	IAMs_20	IAMs_20	02 13 57.2	
	comp=Z,1µm,20.0s						
CO01	Juntas del Tor	149.04	202	IAMs_20	IAMs_20	02 17 22.4	
	comp=Z,2µm,20.0s						
GO04	Tololo Observa	149.11	200	IAMs_20	IAMs_20	02 17 59.4	
	comp=Z,1µm,20.0s						
ZAIG	Zacatecas	149.26	38	IAMs_20	IAMs_20	02 29 08.9	
	comp=Z,1µm,20.0s						
MCPB	Macapa, AP	149.30	271	*e*P	PKiKP	01 13 09.6	-0.5
LCO	Las Campanas	150.13	202	PKIKP	PKiKP	01 13 12.7	+1.0
LCO	Las Campanas	150.13	202		PKiKP	01 13 12.7	+1.0
LCO	Las Campanas	150.13	202	IAMs_20	IAMs_20	02 26 25.5	
	comp=Z,1µm,18.0s						
GO03	Copiap	151.23	204	IAMs_20	IAMs_20	02 18 08.6	
	comp=Z,1µm,21.0s						
ANWB	Willy Bob	152.05	313	IAMs_20	IAMs_20	02 29 19.1	
	comp=Z,822nm,21.0s						
NPGB	Novo Progresso	152.10	257	*e*P	PKPbc	01 13 14.5	-1.0
SKI	Saint Kitts	152.96	314	IAMs_20	IAMs_20	02 33 39.5	
	comp=Z,1µm,20.0s						
SEUS	St. Eustatius	153.03	315	IAMs_20	IAMs_20	02 33 05.2	
	comp=Z,1µm,21.0s						
SABA	Saba	153.12	315	IAMs_20	IAMs_20	02 27 50.8	
	comp=Z,1µm,22.0s						
FDF	Fort de France	153.35	307	IAMs_20	IAMs_20	02 32 39.7	
	comp=Z,1µm,21.0s						
UNM	Universidad Na	153.92	37	IAMs_20	IAMs_20	02 33 56.2	
	comp=Z,1µm,20.0s						
PB15	IPOC Station P	154.69	210	IAMs_20	IAMs_20	02 17 32.7	
	comp=Z,1µm,22.0s						
SJG	San Juan	154.73	320	IAMs_20	IAMs_20	02 23 24.6	
	comp=Z,839nm,20.0s						
VILB	Vilhena	154.84	242	*e*P	PKPbc	01 13 18.8	-2.6
LVC	Limon Verde	154.90	211	PKIKP	PKiKP	01 13 23.5	+1.7
LVC	Limon Verde	154.90	211		PKiKP	01 13 23.5	+1.7
LVC					PKPab	01 13 38.0	+1.1
LVC	Limon Verde	154.90	211	IAMs_20	IAMs_20	02 23 32.4	
	comp=Z,1µm,20.0s						
LVC	Limon Verde	154.90	211	*e*P	PKPbc	01 13 18.8	-3.0
PB06	IPOC Station P	155.16	210	IAMs_20	IAMs_20	02 30 56.3	
	comp=Z,1µm,21.0s						
GRGR	Grenville	155.17	303	IAMs_20	IAMs_20	02 38 44.6	
	comp=Z,896nm,19.0s						
TLIG	Tlapa	155.63	39	IAMs_20	IAMs_20	02 33 57.9	
	comp=Z,1µm,20.0s						
PB09	IPOC Station P	155.74	212	IAMs_20	IAMs_20	02 26 13.8	
	comp=Z,1µm,19.0s						
PB01	IPOC Station P	156.49	212	IAMs_20	IAMs_20	02 14 43.6	
	comp=Z,1µm,22.0s						
SDDR	Presa de Saban	156.92	331	PKPab	PKPab	01 13 46.7	+1.5
PB08	IPOC Station P	157.03	214	IAMs_20	IAMs_20	02 22 06.8	
	comp=Z,1µm,20.0s						
TA01	Diego Aracena	157.25	212	IAMs_20	IAMs_20	02 29 55.7	
	comp=Z,1µm,21.0s						
GTBY	Guantanamo Bay	157.62	341	IAMs_20	IAMs_20	02 31 41.7	
	comp=Z,1µm,21.0s						
TEIG	Tepich	157.94	14	IAMs_20	IAMs_20	02 35 52.2	
	comp=Z,1µm,19.0s						
PSGCX	Pisagua	158.00	213	IAMs_20	IAMs_20	02 22 06.9	
	comp=Z,890nm,20.0s						
SAML	Samuel	159.09	248	IAMs_20	IAMs_20	02 17 17.2	
	comp=Z,1µm,20.0s						
AP01	Chacalluta	159.11	215	IAMs_20	IAMs_20	02 26 24.0	
	comp=Z,1µm,19.0s						
ROSC	El Rosal	169.61	306	PKP	PKPdf	01 13 27.6	-0.5
	comp=Z,4.8nm,0.4s,baz=142,slow=5.3,SNR=4.0						
OTAV	Otavalo	175.44	289	PKIKP	PKPdf	01 13 30.9	+0.2
OTAV	Otavalo	175.44	289		PKPdf	01 13 30.9	+0.2

IDC ***27*** *01:02:19.9±0.5, 1°.23N×97°.18E, h0^{km}, mb4.6/31, mb1 4.7/34, mb1mx4.5/51, mbtmp4.6/34, ML4.5/3 Error ellipse: s-maj=12.8km s-min=11.6km az=32.0*

DJA ***27*** *01:02:20.1±1.2, 1°N±3°×9°7E±°, h13^{km}±6^{km}, M5.1/12, mb5.0/10, MLv5.2/12*

BJI ***27*** *01:02:21.8±0.0, 1°.12N×97°.29E, h31^{km}, mB5.5/26, mb5.0/58, Ms5.6/17, Ms7 5.4/17*

NEIC ***27*** *01:02:21.1±1.4, 1°.23N±0°.06×97°.20E±0°.04, h10^{km}±1^{km}, mb4.9/60, Error ellipse: s-maj=11.0km s-min=5.9km az=189.0*

MOS ***27*** *01:02:24.1±0.9, 1°.28N×97°.20E, h41^{km}, mb5.0/30, Error ellipse: s-maj=8.9km s-min=5.0km az=105.5*

NOU ***27*** *01:02:24.3, 1°.34N×97°.04E, h26^{km}, mb5.0, Northern Sumatra, Indonesia*

KLM ***27*** *01:02:24, 1°.30N×97°.12E, h23^{km}, mb5.0*

ISC 27 01:02:24.6±0.8, **1°.23N**±0°.04×**97°.18E**±0°.04, **h33**^{km}±4^{km}, **n315,** σ1^{s}.**36**/329, **mb4.9**/111, **22C-17D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.41	79	Pg	Pb	01 02 33.6	-0.1
GSI	Gunungsitoli	0.41	79	P	Pb	01 02 33.7	-0.1
GSI				S	Sb	01 02 39.4	-0.7
RPSI	Rantau Prapat	2.28	50		Pb	01 03 07.3	+2.2
PSI	Prapat	2.35	48	Pn	Pn	01 03 01.0	0.0
	57nm,0.3s,baz=359,slow=3.3,SNR=140						
PSI				Pg	Pb	01 03 07.3	+0.9
	101nm,0.3s,baz=180,slow=6.5,SNR=37						
PSI				Lg	Lg	01 03 40.0	
	64nm,0.3s,baz=0.5,slow=2.0,SNR=10						
MNSI	Mandailing Nat	2.44	100	P	Pn	01 03 02.1	-0.1
MNSI				S	Sn	01 03 31.7	+0.8
TSI	Tuntungan	2.65	32	P	Pn	01 03 04.1	-1.0
PDSI	Padang	3.91	123	P	Pn	01 03 21.5	-1.0
BKNI	Bangkinang	3.97	103	Pn	Pn	01 03 23.6	+0.4
BKNI				Sn	Sn	01 04 06.6	-2.0
BKNI	Bangkinang	3.97	103	P	Pn	01 03 23.2	0.0
LHMI	Lhok Sumawe	3.98	357		Pn	01 03 22.9	-0.6
LHMI	Lhok Sumawe	3.98	357	P	Pn	01 03 22.5	-0.9
SDSI	Sungai Dareh	4.76	117	P	Pn	01 03 34.0	-0.1
IPM	Ipoh	5.02	50	Pn	Pn	01 03 38.4	+0.7
IPM	Ipoh	5.02	50	P	Pn	01 03 39.0	+1.2
KULM	Kulim	5.32	41	Pn	Pn	01 03 41.6	-0.2
KULM	Kulim	5.32	41	P	Pn	01 03 42.0	+0.1
MYKOM	Kota Tinggi	6.70	85	Pn	Pn	01 04 01.4	+0.7
MYKOM	Kota Tinggi	6.70	85	P	Pn	01 04 02.0	+1.3
KSI	Kapahiang	7.27	132	P	Pn	01 04 07.1	-1.5
	1.1nm129nm,0.8s						
MNAI	Manna	8.01	134	Pn	Pn	01 04 18.4	-0.3
MNAI				Sn	Sn	01 05 46.0	-2.3
MNAI	Manna	8.01	134	P	Pn	01 04 18.0	-0.8
	168nm,0.5s						
LHSI	Lahat	8.09	128	P	Pn	01 04 17.9	-2.0
	81nm,0.8s						
PMBI	Palembang	8.64	119	P	Pn	01 04 16.9	-11
KLSI		9.57	128	P	Pn	01 04 39.4	-0.7
	12nm,2.4s						
KASI	Kota Agung	9.92	133	P	Pn	01 04 41.4	-3.6
	37nm,0.9s						
COCO	West Island	13.33	181	*i* P	Pn	01 05 34.4	+2.7
SRAK	Srakaew	13.59	21	P	P	01 05 46.0	+2.3
	824nm,0.7s						
UTHA	Uthaitani	14.42	9	P	P	01 05 55.3	+2.4
	60nm,0.9s						
SBUM	Sibu	15.09	85	P	Pn	01 05 57.6	+2.1
SBUM	Sibu	15.09	85	P	Pn	01 05 56.0	+0.5
CHAI	Chaiyaphum	15.34	18	P	P	01 06 03.2	+0.1
	67nm,0.8s						
DLV	T Lat	15.47	46	P	P	01 06 04.6	-0.3
DLV				IAmb	IAmb	01 06 05.4	
	comp=Z,77nm,0.9s						
PHIT	Phitsanulok	16.18	11	P	P	01 06 13.0	+0.5
	comp=Z,2µmcomp=Z,212nm,0.9s						
SUKH	Sukhothai	16.34	8	P	P	01 06 14.8	+0.6
	comp=Z,85nm,0.7s						
UTTA	Uttaradit	16.75	11	P	P	01 06 19.0	+0.2
	comp=Z,37nm,1.1s						
CM04	Chiang Mai Arr	17.16	6	P	P	01 06 25.8	+2.3
	comp=Z,25nm,0.8s						
CM09	Chiang Mai Arr	17.20	6	P	P	01 06 26.4	+2.5
	comp=Z,31nm,0.8s						
CMAR	Chiang Mai Arr	17.21	6	P	Pn	01 06 21.8	-0.9
	comp=Z,1.9nm,0.3s,baz=195,slow=13,SNR=24						
CMAR				PcP	PcP	01 11 07.7	+2.2
	comp=Z,0.2nm,0.3s,baz=224,slow=2.5,SNR=1.6						
CMAR	Chiang Mai Arr	17.21	6	P	Pn	01 06 22.5	-0.2
CM36	Chiang Mai Arr	17.29	6	P	P	01 06 26.0	+1.2
LAMP	Lampang	17.36	8	P	P	01 06 29.0	+3.4
	comp=Z,38nm,0.8s						
CM35	Chiang Mai Arr	17.45	6	P	P	01 06 28.0	+1.4
PALK	Pallekele	17.48	291	P	Pn	01 06 26.1	-0.1
	comp=Z,0.5nm,0.3s,baz=195,slow=6.1,SNR=5.2						
PALK	Pallekele	17.48	291		P	01 06 26.7	-0.4
CHTO	Chiang Mai	17.57	6	Pn	Pn	01 06 25.5	-1.6
NONG	Nongkai	17.73	19	P	P	01 06 29.9	+0.2
	comp=Z,112nm,1.3s						
KKM	Kota Kinabalu	19.59	75	Pn	P	01 06 50.6	+0.3
SLVN	Son La	21.04	18	P	P	01 07 05.6	-0.3
SAIH	SAIHA	21.52	349	*e*P	P	01 07 11.2	0.0
SAIH				IAmb	IAmb	01 07 12.9	
	comp=Z,38nm,0.7s						
QIZ	Qiongzhong	21.62	34	P	P	01 07 11.5	-0.6
QIZ				S	S	01 11 13.5	+3.5
QIZ				pmax	pmax		
	comp=Z,23nm,1.2s						
QIZ	Qiongzhong	21.62	34	P	P	01 07 11.9	-0.2
MYLDM	Lahad Datu	21.65	79	P	P	01 07 12.0	-0.5
MYLDM				IAmb	IAmb	01 07 15.1	
	comp=Z,33nm,0.7s						
KAPI	Kappang	23.39	106	P	P	01 07 30.1	-0.6
	comp=Z,22nm,1.0s,baz=271,slow=9.8,SNR=6.0						
KAPI	Kappang	23.39	106	*ce*P	P	01 07 31.9	+1.1
KAPI	Kappang	23.39	106	P	P	01 07 29.6	-1.2
KAPI				IAmb	IAmb	01 07 31.7	
	comp=Z,27nm,1.0s						
TOLI2	Tolitoli	23.60	90	P	P	01 07 32.1	-0.8
KMI	Kunming	24.36	12	⇑P	P	01 07 40.8	+0.8
KMI				pP	pP	01 07 48.5	-1.0
KMI				sP	sP	01 07 52.3	-1.2
KMI				pmax	pmax		
	comp=Z,98nm,1.1s						
KMI	Kunming	24.36	12	P	P	01 07 39.0	-1.0
HYB	Hyderabad	24.38	312	*i* P	P	01 07 42.0	+1.9
HYB	Hyderabad	24.38	312	⇑*e*P	P	01 07 41.1	+1.1
KOHI	KOHIMA	24.53	353	*e*P	P	01 07 38.8	-2.7
KOHI				IAmb	IAmb	01 07 46.3	
	comp=Z,24nm,0.7s						
SHL	Shillong	24.73	349	*e*P	P	01 07 43.4	0.0
SHL				IAmb	IAmb	01 07 44.6	
	comp=Z,91nm,0.9s						
BOK	Bokaro	24.96	335	*e*P	P	01 07 47.0	+1.7
BOK				IAmb	IAmb	01 07 49.7	
	comp=Z,75nm,0.8s						
MOKO	MOKOCHONG	25.08	354	*e*P	P	01 07 46.3	-0.2
GUWA	GUWAHATI	25.38	348	*e*P	P	01 07 49.1	+0.1
GUWA				IAmb	IAmb	01 07 50.0	
	comp=Z,60nm,0.7s						
TEZP	TEZPUR	25.59	351	*e*P	P	01 07 51.3	+0.4
TEZP				IAmb	IAmb	01 07 54.1	
	comp=Z,21nm,0.5s						
LKP	Lekhapani	25.99	357	*e*P	P	01 07 56.1	+1.6
H08S2	Diego Garcia H	26.15	250	T	T	01 34 51.5	
	baz=72,slow=76						
H08S3	Diego Garcia H	26.15	250	T	T	01 34 51.7	
	baz=72,slow=76						
H08S1	Diego Carcia H	26.16	250	T	T	01 34 52.8	
	baz=72,slow=76						
ZIRO	ZIRO	26.35	353	*e*P	P	01 07 58.4	+0.4
ZIRO				IAmb	IAmb	01 07 59.5	
	comp=Z,79nm,0.7s						
GYA	Guiyang	26.70	19	⇓P	P	01 08 01.0	-0.1
GYA				pmax	pmax		
	comp=Z,42nm,1.0s						
ODAN	Odare	27.17	341	*e*P	P	01 08 07.0	+1.6
	comp=Z,137nm,0.9s						
TAPN	Taplejung	27.52	342	*e*P	P	01 08 10.2	+1.5
	comp=Z,162nm,0.9s						
RAMN	Ramite	27.52	339	*e*P	P	01 08 10.3	+1.7
	comp=Z,50nm,0.7s						
PKI	Pulchoki	28.52	338	*e*P	P	01 08 18.8	+1.1
	comp=Z,55nm,0.9s						
PKIN	Phulchoki	28.53	338	*e*P	P	01 08 18.4	+0.7
	comp=Z,48nm,0.9s						
GUN	Gumba	28.66	339	*e*P	P	01 08 20.2	+1.3
	comp=Z,82nm,0.6s						
DMN	Daman	28.67	337	*e*P	P	01 08 20.1	+1.2
	comp=Z,44nm,0.8s						
KKN	Kakani	28.77	338	*e*P	P	01 08 20.9	+1.2
	comp=Z,43nm,0.8s						
LSA	Lhasa	28.89	349	P	P	01 08 20.9	-0.2
LSA				IAmb	IAmb	01 08 25.1	
	comp=Z,13nm,0.9s						
DANN	Dangsing	29.87	336	*e*P	P	01 08 30.7	+1.1
	comp=Z,68nm,0.9s						
CD2	Chengdu	30.18	11	P	P	01 08 32.5	+0.5
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
ENH	Enshi	31.16	21	P	P	01 08 39.9	-0.8
YULB	Yu-li	32.14	45	P	P	01 08 48.7	-0.6
YULB				IAmb	IAmb	01 08 50.9	
	comp=Z,18nm,0.7s						
FITZ	Fitzroy Crossi	33.96	126	P	P	01 09 04.6	-0.7
	baz=34,SNR=6.2						
FITZ	Fitzroy Crossi	33.96	126	P	P	01 09 04.5	-0.7
	comp=Z,4.7nm,0.7s,baz=299,slow=7.8,SNR=8.5						
FITZ	Fitzroy Crossi	33.96	126	P	P	01 09 04.4	-0.9
XAN	Xi'an	34.45	17	P	P	01 09 08.5	-0.9
XAN				pP	pP	01 09 14.8	-4.1
XAN				pmax	pmax		
	comp=Z,69nm,1.0s						
LZH	Lanzhou	35.23	9	*e*P	P	01 09 16.5	+0.2
LZH				pP	pP	01 09 23.5	-2.4
LZH				sP	sP	01 09 29.0	-0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
SMLA	Simla	35.26	329	*e*P	P	01 09 17.1	+0.8
SMLA				IAmb	IAmb	01 09 22.4	
	comp=Z,17nm,0.7s						
FAKI	Fak Fak	35.30	97	P	P	01 09 15.7	-1.3
FAKI				IAmb	IAmb	01 09 19.4	
	comp=Z,19nm,1.0s						
DHRM	DHARAMSHALA	36.60	330	*e*P	P	01 09 27.3	-0.8
DHRM				IAmb	IAmb	01 09 29.0	
	comp=Z,19nm,0.5s						
NJ2	Nanjing	36.86	32	*e*P	P	01 09 30.3	+0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KDU	Kakadu	37.66	113	P	P	01 09 35.3	-1.7
	baz=38,SNR=3.4						
GTA	Gaotai	38.08	3	⇑P	P	01 09 40.5	0.0
GTA				PcP	PcP	01 11 56.3	+1.0
GTA				pmax	pmax		
	comp=Z,29nm,1.0s						
JOW	Kunigami	39.24	47	P	P	01 09 50.0	-0.3
	baz=222,slow=9.0						
JOW	Kunigami	39.24	47	P	P	01 09 49.2	-1.0
H01W3	Cape Leeuwin H	39.28	158	T	T	01 51 25.0	
	baz=333,slow=76,SNR=21						
NIL	Nilore	39.28	328	P	P	01 09 50.0	-0.5
NIL				IAmb	IAmb	01 09 51.5	
	comp=Z,24nm,0.8s						
H01W2	Cape Leeuwin H	39.29	158	T	T	01 51 22.0	
	baz=333,slow=76,SNR=22						
H01W1	Cape Leeuwin H	39.29	158	T	T	01 51 16.0	
	baz=333,slow=76,SNR=25						
HHC	Hu-ho-hao-te	41.54	17	*e*P	P	01 10 09.5	+0.3
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.1s						
WB0	Warramunga Arr	42.04	122	P	P	01 10 12.5	-1.0
WB0				IAmb	IAmb	01 10 13.6	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	42.07	122	P	P	01 10 12.9	-0.7
	comp=Z,9.0nm,0.7s,baz=301,slow=9.1,SNR=60						
WRA				S	S	01 16 26.4	-4.8
	comp=Z,0.6nm,0.9s,baz=296,slow=14,SNR=3.9						
WRA	Warramunga Arr	42.07	122	P	P	01 10 13.0	-0.7
WRA	Warramunga Arr	42.07	122	P	P	01 10 12.5	-1.3
WRAB	Tennant Creek	42.08	122	*i* P	P	01 10 12.1	-1.7
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WB2	Warramunga Arr	42.08	122	P	P	01 10 13.2	-0.6
	baz=42						
WB2	Warramunga Arr	42.08	122	P	P	01 10 12.5	-1.3
WB2				IAmb	IAmb	01 10 14.2	
	comp=Z,11nm,0.6s						
WR0	Warramunga Arr	42.25	122	P	P	01 10 14.5	-0.6
KBL	Kabul	42.29	325	P	P	01 10 15.3	-0.2
BJT	Baijiatuau	42.30	22	P	P	01 10 15.0	-0.3
BJT				IAmb	IAmb	01 10 18.1	
	comp=Z,22nm,0.7s						
BJI	Beijing	42.33	22	P	P	01 10 16.0	+0.6
BJI				S	S	01 16 36.8	+2.5
BJI				pmax	pmax		
	comp=Z,29nm,0.8s						
BJI				LR	LR		
	comp=Z,5µm,17.9s						
BJI				LR	LR		
	comp=Z,4µm,15.1s						
BJI				LR	LR		
	comp=Z,3µm,14.3s						
KSH	Kashi	42.74	336	P	P	01 10 18.5	-0.5
KSH				pP	pP	01 10 30.0	+1.3
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,1µm,7.8s						
KSH				LR	LR		
	comp=Z,3µm,12.8s						

KSH				LR	LR		
	comp=Z,3µm,14.8s						
KSH				LR	LR		
	comp=Z,4µm,19.1s						
WMQ	**Urumqi**	**43.24**	**350**	P	**P**	**01 10 24.5**	**+1.5**
WMQ				pP	sP	01 10 34.8	-1.8
WMQ				sP	pP	01 10 37.5	+4.8
WMQ				pmax	pmax		
	comp=Z,36nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,340nm,6.1s						
WMQ	**Urumqi**	**43.24**	**350**	P	**P**	**01 10 22.5**	**-0.4**
WMQ				IAmb	IAmb	01 10 25.4	
	comp=Z,39nm,1.1s						
FORT	**Forrest**	**43.31**	**140**	P	**P**	**01 10 26.0**	**+2.4**
	baz=44,SNR=7.5						
FORT	**Forrest**	**43.31**	**140**	P	**P**	**01 10 25.5**	**+1.9**
ASAR	**Alice Springs**	**43.43**	**127**	P	**P**	**01 10 24.8**	**0.0**
	comp=Z,5.6nm,0.8s,baz=298,slow=7.7,SNR=28						
ASAR				PcP	**PcP**	**01 12 13.2**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=305,slow=3.3,SNR=4.1						
ASAR				S	**S**	**01 16 48.7**	**-2.5**
	comp=Z,1.0nm,0.9s,baz=297,slow=14,SNR=5.5						
ASAR	**Alice Springs**	**43.43**	**127**	P	**P**	**01 10 23.9**	**-0.8**
AS31	**Alice Springs**	**43.43**	**127**	P	**P**	**01 10 23.9**	**-0.8**
SHLS	**Shalkode**	**44.65**	**342**	*e*P	**P**	**01 10 34.4**	**0.0**
	comp=Z,7.3nm,0.8s,baz=342						
SHLS	**Shalkode**	**44.65**	**342**	*e*P	**P**	**01 10 34.3**	**0.0**
SHLS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TJN	**Taejon**	**44.77**	**35**	*i* P	**P**	**01 10 35.0**	**-0.2**
PDGK	**Podgornoye**	**44.80**	**342**	*i* P	**P**	**01 10 35.7**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,15nm,1.1s						
JNU	**Nakatsue**	**44.80**	**41**	P	**P**	**01 10 35.7**	**+0.1**
	comp=Z,22nm,0.8s,baz=206,slow=2.8,SNR=8.6						
JNU	**Nakatsue**	**44.80**	**41**	P	**P**	**01 10 35.1**	**-0.5**
SATY	**Saty**	**44.91**	**340**	*e*P	**P**	**01 10 37.5**	**+1.1**
	comp=Z,7.3nm,0.7s,baz=340						
SATY	**Saty**	**44.91**	**340**	*e*P	**P**	**01 10 37.5**	**+1.1**
SATY				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KPKS	**Kokpek**	**45.18**	**341**	*e*P	**P**	**01 10 38.9**	**+0.4**
	baz=341						
KPKS	**Kokpek**	**45.18**	**341**	*e*P	**P**	**01 10 38.9**	**+0.4**
TNSS	**Tian-Shan**	**45.39**	**339**	*e*P	**P**	**01 10 41.1**	**+0.6**
	baz=339						
TNSS	**Tian-Shan**	**45.39**	**339**	*e*P	**P**	**01 10 41.1**	**+0.6**
MDOK	**Medeo**	**45.47**	**339**	*e*P	**P**	**01 10 42.0**	**+1.1**
	baz=339						
MDOK	**Medeo**	**45.47**	**339**	*e*P	**P**	**01 10 41.9**	**+1.1**
AAA	**Alma-Ata**	**45.55**	**339**	*e*P	**P**	**01 10 42.5**	**+1.1**
	baz=339						
AAA	**Alma-Ata**	**45.55**	**339**	*e*P	**P**	**01 10 42.5**	**+1.1**
MTBS	**Maitube**	**45.66**	**339**	*e*P	**P**	**01 10 43.1**	**+0.8**
	baz=339						
MTBS	**Maitube**	**45.66**	**339**	*e*P	**P**	**01 10 43.0**	**+0.8**
TKM2	**Tokmak 2**	**45.78**	**338**	*i* P	**P**	**01 10 43.8**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,19nm,1.1s						
KSAR	**Wonju Array Be**	**45.81**	**35**	P	**P**	**01 10 42.6**	**-0.8**
KSRS	**Korea Array**	**45.84**	**35**	P	**P**	**01 10 43.8**	**+0.1**
	comp=Z,35nm,0.8s,baz=221,slow=9.0,SNR=62						
KS19	**Wonju Array Si**	**45.84**	**34**	P	**P**	**01 10 43.4**	**-0.4**
AAK	**Ala-Archa**	**45.97**	**337**	*i* P	**P**	**01 10 46.2**	**+1.3**
AAK				pmax	pmax		
	comp=Z,20nm,0.7s						
AAK	**Ala-Archa**	**45.97**	**337**	P	**P**	**01 10 45.1**	**+0.3**
AAK				IAmb	IAmb	01 10 56.4	
	comp=Z,7.5nm,0.8s						
CHKK	**Chushkaly**	**46.09**	**340**	*e*P	**P**	**01 10 45.4**	**-0.2**
	baz=340						
CHKK	**Chushkaly**	**46.09**	**340**	*e*P	**P**	**01 10 45.4**	**-0.2**
KUU	**Kurty**	**46.35**	**339**	*e*P	**P**	**01 10 47.8**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=339						
KUU	**Kurty**	**46.35**	**339**	*e*P	**P**	**01 10 47.8**	**+0.1**
KUU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TDK	**Taldyqorghan**	**46.64**	**342**	*e*P	**P**	**01 10 50.2**	**+0.3**
	baz=342						
TDK	**Taldyqorghan**	**46.64**	**342**	*e*P	**P**	**01 10 50.2**	**+0.3**
QIS	**Mount Isa**	**46.84**	**120**	P	**P**	**01 10 51.8**	**0.0**
	baz=47,SNR=3.4						
SONM	**Songino Array**	**47.11**	**8**	P	**P**	**01 10 54.1**	**+0.4**
	comp=Z,15nm,0.8s,baz=188,slow=9.0,SNR=52						
SONM				PcP	**PcP**	**01 12 25.9**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=187,slow=4.1,SNR=9.5						
SONM	**Songino Array**	**47.11**	**8**	P	**P**	**01 10 53.7**	**0.0**
SONM					**PcP**	**01 12 24.0**	**-1.2**
MK31	**Makanchi Array**	**47.21**	**346**	*i* P	**P**	**01 10 54.9**	**+0.6**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MK31	**Makanchi Array**	**47.21**	**346**	P	**P**	**01 10 54.6**	**+0.2**
MK31				IAmb	IAmb	01 10 55.5	
	comp=Z,9.4nm,0.7s						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**01 10 55.0**	**+0.7**
	comp=Z,14nm,0.6s,baz=158,slow=9.5,SNR=199						
MKAR	**Makanchi Array**	**47.21**	**346**	P	**P**	**01 10 54.5**	**+0.2**
ULN	**Ulaanbaatar**	**47.24**	**9**	*c i*P	**P**	**01 10 54.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
ULN	**Ulaanbaatar**	**47.24**	**9**	P	**P**	**01 10 54.5**	**-0.2**
ULN				IAmb	IAmb	01 10 57.5	
	comp=Z,10nm,0.8s						
ZSN	**Zaisan**	**47.27**	**349**	*e*P	**P**	**01 10 55.8**	**+1.0**
	comp=Z,11nm,0.9s,baz=349						
ZSN	**Zaisan**	**47.27**	**349**	*e*P	**P**	**01 10 55.7**	**+1.0**
ZSN				pmax	pmax		
	comp=Z,11nm,0.9s						
MAKZ	**Makanchi**	**47.30**	**346**	P	**P**	**01 10 55.2**	**+0.2**
MAKZ				IAmb	IAmb	01 11 09.3	
	comp=Z,10nm,0.8s						
JHS	**Saijyo**	**47.42**	**41**	P	**P**	**01 10 55.6**	**-0.5**
IUG	**Iuzhnay**	**47.48**	**333**	*e*P	**P**	**01 10 57.6**	**+1.0**
	comp=Z,11nm,0.8s,baz=333						
IUG	**Iuzhnay**	**47.48**	**333**	*e*P	**P**	**01 10 57.6**	**+1.0**
IUG				pmax	pmax		
	comp=Z,11nm,0.8s						
DZA	**Taraz**	**47.49**	**334**	*e*P	**P**	**01 10 57.1**	**+0.4**
	comp=Z,6.5nm,0.6s,baz=334						
DZA	**Taraz**	**47.49**	**334**	*e*P	**P**	**01 10 57.0**	**+0.4**
DZA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KK31	**Karatay Array**	**48.02**	**334**	P	**P**	**01 11 01.1**	**+0.4**
KK31				IAmb	IAmb	01 11 08.0	
	comp=Z,8.7nm,0.9s						
KKAR	**Karatay Array**	**48.02**	**334**	P	**P**	**01 11 01.1**	**+0.4**
KKAR				IAmb	IAmb	01 11 08.1	
	comp=Z,8.7nm,0.9s						
KKAR	**Karatay Array**	**48.02**	**334**	P	**P**	**01 11 01.1**	**+0.4**
BTLS	**Baital**	**48.18**	**338**	*e*P	**P**	**01 11 02.0**	**+0.1**
	baz=338						
BTLS	**Baital**	**48.18**	**338**	*e*P	**P**	**01 11 01.9**	**+0.1**
BRLS	**Borolday**	**48.27**	**333**	*e*P	**P**	**01 11 01.4**	**-1.3**
	comp=Z,10.0nm,0.8s,baz=333						
BRLS	**Borolday**	**48.27**	**333**	*e*P	**P**	**01 11 01.3**	**-1.3**
BRLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DGZ	**Jazzator, Alta**	**49.01**	**352**	*i* P	**P**	**01 11 08.9**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAK	**Zakamensk**	**49.25**	**5**	*e*P	**P**	**01 11 07.7**	**-2.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CN2	**Changchun**	**49.29**	**27**	*e*P	**P**	**01 11 10.0**	**-0.4**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
MTSU	**Mount Surprise**	**50.20**	**115**	P	**P**	**01 11 19.6**	**+1.8**
	baz=50,SNR=6.3						
TLY	**Talaya**	**50.57**	**5**	P	**P**	**01 11 20.7**	**+0.6**
	comp=Z,5.6nm,0.7s,baz=206,slow=12,SNR=5.0						
TLY	**Talaya**	**50.57**	**5**	*e*P	**P**	**01 11 20.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,14nm,0.8s						
TLY	**Talaya**	**50.57**	**5**	P	**P**	**01 11 20.2**	**+0.2**
SEM	**Semipalatinsk**	**51.07**	**346**	*e*P	**P**	**01 11 23.8**	**-0.3**
	baz=346						
SEM	**Semipalatinsk**	**51.07**	**346**	*e*P	**P**	**01 11 23.8**	**-0.3**
GEYT	**Alibeck**	**51.18**	**320**	P	**P**	**01 11 25.4**	**+0.6**
	comp=Z,6.6nm,0.7s						
HIA	**Hailar**	**51.62**	**19**	P	**P**	**01 11 27.9**	**-0.1**
HIA				IAmb	IAmb	01 11 29.1	
	comp=Z,14nm,0.8s						
MAT	**Matsushiro**	**51.69**	**42**	P	**P**	**01 11 27.6**	**-1.1**
MJAR	**Matsushiro Arr**	**51.69**	**42**	P	**P**	**01 11 29.4**	**+0.7**
	comp=Z,6.2nm,0.7s,baz=214,slow=6.1,SNR=11						
MJAR	**Matsushiro Arr**	**51.69**	**42**	P	**P**	**01 11 28.1**	**-0.6**
KURBB	**Kurchatov Arra**	**51.70**	**345**	P	**P**	**01 11 29.1**	**+0.6**
	comp=Z,10.0nm,0.8s,baz=165,slow=6.7,SNR=4.3						
KURK	**Kurchatov**	**51.76**	**345**	*c i*P	**P**	**01 11 29.5**	**+0.6**
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**51.76**	**345**	P	**P**	**01 11 29.4**	**+0.4**
KURK				IAmb	IAmb	01 11 30.6	
	comp=Z,16nm,1.0s						
MDJ	**Mudanjiang**	**51.86**	**29**	P	**P**	**01 11 30.5**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,24nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,310nm,3.3s						
MDJ	**Mudanjiang**	**51.86**	**29**	P	**P**	**01 11 29.5**	**-0.2**
MDJ				IAmb	IAmb	01 11 33.1	
	comp=Z,17nm,0.8s						
HTT	**Hallett**	**52.26**	**135**	P	**P**	**01 11 34.9**	**+1.8**
	baz=52,SNR=3.9						
USA0B	**Ussuriysk Arra**	**52.76**	**31**	*i* P	**P**	**01 11 37.1**	**+0.6**
USA0B	**Ussuriysk Arra**	**52.76**	**31**	P	**P**	**01 11 36.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**52.76**	**31**	P	**P**	**01 11 37.1**	**+0.7**
	comp=Z,34nm,0.8s,baz=233,slow=5.2,SNR=34						
USRK	**Ussuriysk Ar.**	**52.76**	**31**	P	**P**	**01 11 36.2**	**-0.2**
BRZS	**Berezniki**	**52.88**	**340**	*e*P	**P**	**01 11 37.4**	**+0.1**
	baz=340						
BRZS	**Berezniki**	**52.88**	**340**	*e*P	**P**	**01 11 37.4**	**+0.1**
OPO	**Ambohidratompo**	**52.91**	**246**	P	**P**	**01 11 39.5**	**+1.3**
	comp=Z,7.8nm,1.0s,baz=80,slow=2.1,SNR=3.5						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**01 11 42.8**	**+1.4**
	baz=54,SNR=9.1						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**01 11 42.7**	**+1.4**
	comp=Z,7.0nm,0.6s,baz=314,slow=7.9,SNR=15						
STKA	**Stephens Creek**	**53.39**	**132**	P	**P**	**01 11 41.1**	**-0.2**
ZAA0	**Zalesovo Array**	**53.53**	**351**	P	**P**	**01 11 42.3**	**+0.4**
ZALV	**Zalesovo Beam**	**53.53**	**351**	P	**P**	**01 11 42.4**	**+0.5**
	comp=Z,32nm,0.7s,baz=180,slow=6.2,SNR=73						
ZALV				S	**S**	**01 19 14.7**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=147,slow=11,SNR=2.2						
KLR	**Kul'dur**	**56.24**	**27**	P	**P**	**01 12 02.2**	**+0.6**
	comp=Z,23nm,0.9s,baz=253,slow=6.0,SNR=44						
BRVK	**Borovoye**	**56.28**	**341**	*i* P	**P**	**01 12 01.2**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRVK	**Borovoye**	**56.28**	**341**	P	**P**	**01 12 02.1**	**+0.2**
BRVK				IAmb	IAmb	01 12 16.9	
	comp=Z,10.0nm,0.8s						
CMSA	**Cobar Meteorol**	**56.33**	**130**	P	**P**	**01 12 04.1**	**+1.5**
	baz=56,SNR=10						
RMQ	**Roma**	**56.81**	**123**	P	**P**	**01 12 08.0**	**+1.8**
	baz=57,SNR=6.1						
AB31	**Akbulak array**	**57.48**	**332**	*i* P	**P**	**01 12 09.9**	**-0.6**
AB31				pmax	pmax		
	comp=Z,14nm,0.7s						
ABKAR	**Akbulak array**	**57.48**	**332**	P	**P**	**01 12 10.5**	**+0.1**
ZEA	**Zeya**	**57.92**	**21**	*e*P	**P**	**01 12 14.0**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOD	**Bodaibo**	**57.99**	**11**	*e*P	**P**	**01 12 13.9**	**0.0**
BOD				pmax	pmax		
	comp=Z,23nm,1.0s						
EIDS	**Eidsvold**	**58.41**	**121**	P	**P**	**01 12 18.5**	**+1.1**
	baz=58,SNR=7.0						
EIDS	**Eidsvold**	**58.41**	**121**	P	**P**	**01 12 17.1**	**-0.4**
ASAJ	**Asahikawa**	**58.66**	**37**	P	**P**	**01 12 19.3**	**+0.5**
	comp=Z,3.8nm,0.4s,baz=2.8,slow=5.5,SNR=4.0						
KMBO	**Kilima Mbogo**	**59.96**	**268**	P	**P**	**01 12 29.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=76,slow=12,SNR=2.1						
YSS	**Yuzh-Sakhalins**	**60.34**	**34**	⇓*e*P	**P**	**01 12 28.3**	**-2.1**
YSS				*e*S	**S**	**01 20 39.7**	**-3.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s						
UGL	**Uglegorsk**	**61.20**	**32**	*e*P	**P**	**01 12 39.6**	**+3.4**
UGL				*e*S	**S**	**01 21 00.4**	**+6.7**
UGL				MLR	MLR		
	comp=E,2µm,16.0s						
UGL				MLR	MLR		
	comp=N,1µm,12.0s						
UGL				MLR	MLR		
	comp=Z,3µm,16.0s						
AKH	**Akhalkalaki**	**62.65**	**317**	P	**P**	**01 12 46.6**	**+0.3**
SVE	**Sverdlovsk**	**62.66**	**338**	*e*P	**P**	**01 12 45.9**	**+0.1**
SVE				pmax	pmax		
	comp=Z,18nm,1.0s						
ZEI	**Tsey**	**62.97**	**319**	*e*P	**P**	**01 12 47.9**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MARD	**Mardin**	**63.00**	**312**	P	**P**	**01 12 49.0**	**+0.4**
MARD				IAmb	IAmb	01 12 50.4	
	comp=Z,9.0nm,0.8s						
ARU	**Arti**	**63.15**	**337**	*c i*P	**P**	**01 12 48.9**	**-0.2**
ARU						01 13 25.8	
ARU						01 15 03.4	
ARU				S	**S**	**01 21 19.1**	**+1.1**
ARU				SS	**SS**	**01 25 18.0**	**-6.5**
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
ARU	**Arti**	**63.15**	**337**	P	**P**	**01 12 49.1**	**0.0**
ARU				IAmb	IAmb	01 12 49.8	
	comp=Z,7.8nm,0.9s						
KBZ	**Khabaz**	**64.04**	**319**	P	**P**	**01 12 55.6**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=121,slow=7.8,SNR=13						
KIV	**Kislovodsk**	**64.27**	**319**	*e*P	**P**	**01 12 56.8**	**-0.1**
KIV				pmax	pmax		
	comp=Z,45nm,1.1s						
KIV	**Kislovodsk**	**64.27**	**319**	P	**P**	**01 12 56.4**	**-0.5**
KIV				IAmb	IAmb	01 13 10.8	
	comp=Z,13nm,0.9s						
YAK	**Yakutsk**	**65.40**	**16**	P	**P**	**01 13 03.5**	**-0.2**
	comp=Z,9.2nm,0.3s,baz=6.1,slow=1.6,SNR=11						
YAK	**Yakutsk**	**65.40**	**16**	*c i*P	**P**	**01 13 03.3**	**-0.4**
YAK				pmax	pmax		
	comp=Z,60nm,0.9s						
YAK	**Yakutsk**	**65.40**	**16**	P	**P**	**01 13 03.5**	**-0.2**
BELG	**Belogornoye**	**65.53**	**329**	*i* P	**P**	**01 13 04.2**	**-0.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GAZ	**Gaziantep**	**65.64**	**311**	P	**P**	**01 13 06.3**	**+0.4**
GAZ				IAmb	IAmb	01 13 08.7	
	comp=Z,6.4nm,0.8s						
SOC	**Sochi**	**66.08**	**318**	*e*P	**P**	**01 13 05.2**	**-3.3**
SOC				*e*		01 15 31.1	
SOC				*e*S	**S**	**01 21 49.3**	**-5.4**
SOC				pmax	pmax		
	comp=Z,15nm,1.0s						
SOC				MLR	MLR		
	comp=Z,847nm,14.0s						
TOKA	**Tokat**	**67.18**	**314**	P	**P**	**01 13 16.1**	**+0.4**
TOKA				IAmb	IAmb	01 13 17.9	
	comp=Z,5.0nm,0.7s						
ANN	**Anapa**	**68.06**	**318**	*e*P	**P**	**01 13 17.3**	**-3.8**
ANN				*e**PP	**pP**	**01 13 28.9**	**-2.3**
ANN				*e*		01 13 43.4	
ANN				*e*S	**S**	**01 22 12.9**	**-5.6**
ANN				pmax	pmax		
	comp=Z,25nm,0.8s						
BR131	**Keskin Array S**	**69.08**	**312**	P	**P**	**01 13 27.0**	**-0.7**
BR131				IAmb	IAmb	01 13 42.1	
	comp=Z,5.3nm,0.8s						
BRTR	**Keskin Array B**	**69.08**	**312**	P	**P**	**01 13 27.4**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=131,slow=7.2,SNR=21						
BRTR	**Keskin Array B**	**69.08**	**312**	*i* P	**P**	**01 13 27.3**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**69.08**	**312**	P	**P**	**01 13 26.9**	**-0.7**
MATP	**Matopo**	**70.51**	**248**	P	**P**	**01 13 37.4**	**+0.5**
	comp=Z,4.8nm,1.0s,baz=26,slow=0.5,SNR=5.8						
MA2	**Magadan**	**71.32**	**26**	*i* P	**P**	**01 13 41.7**	**+0.9**
MA2	**Magadan**	**71.32**	**26**	P	**P**	**01 13 40.3**	**-0.5**
PETK	**Petropavlovsk-**	**71.73**	**34**	P	**P**	**01 13 43.3**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=195,slow=4.6,SNR=4.5						
PETK	**Petropavlovsk-**	**71.73**	**34**	P	**P**	**01 13 42.9**	**-0.6**
PET	**Petropavlovsk**	**72.22**	**34**	*ce*P	**P**	**01 13 47.1**	**+0.7**
PET				pmax	pmax		
	comp=Z,114nm,1.3s						
TIXI	**Tiksi**	**73.17**	**10**	*i* P	**P**	**01 13 50.8**	**-0.8**
TIXI	**Tiksi**	**73.17**	**10**	P	**P**	**01 13 50.8**	**-0.8**
TIXI				IAmb	IAmb	01 13 51.9	
	comp=Z,11nm,0.7s						
KLMR	**Klimovskoe**	**73.72**	**334**	*e*P	**P**	**01 13 51.3**	**-3.8**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	**Klimovskoe**	**73.72**	**334**	*e*P	**P**	**01 13 51.4**	**-3.7**
KLMR				AMP		01 14 05.3	
	comp=Z,24nm,1.5s						
SEY	**Seymchan**	**73.75**	**23**	P	**P**	**01 13 55.0**	**-0.2**
	comp=Z,12nm,0.8s,baz=229,slow=4.9,SNR=22						
SEY	**Seymchan**	**73.75**	**23**	⇓*e*P	**P**	**01 13 54.8**	**-0.4**
TIRR	**Tirgusor**	**74.09**	**316**	⇑P	**P**	**01 13 57.8**	**+0.2**
TIRR	**Tirgusor**	**74.09**	**316**	⇑P	**P**	**01 13 57.8**	**+0.2**
TLBR	**Topalu**	**74.36**	**316**	⇓P	**P**	**01 13 58.0**	**-1.2**
HARR	**Harsova**	**74.48**	**316**	⇓P	**P**	**01 13 59.2**	**-0.7**
HARR	**Harsova**	**74.48**	**316**	⇓P	**P**	**01 13 59.2**	**-0.7**
BOSA	**Boshof**	**74.77**	**240**	P	**P**	**01 14 01.9**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=64,slow=2.5,SNR=5.6						
BOSA	**Boshof**	**74.77**	**240**	P	**P**	**01 14 02.0**	**-0.1**
SORM	**Soroca**	**75.07**	**320**	⇑P	**P**	**01 14 02.8**	**-0.4**
SORM	**Soroca**	**75.07**	**320**	⇑P	**P**	**01 14 02.8**	**-0.4**
AKASG	**Malin Array Be**	**75.22**	**322**	P	**P**	**01 14 03.4**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=88,slow=4.8,SNR=7.4						
BISRR	**Bisoca**	**75.52**	**317**	⇓P	**P**	**01 14 08.5**	**+2.5**
VRI	**Vrincioaia**	**75.58**	**317**	⇓P	**P**	**01 14 07.1**	**+0.9**
VRI	**Vrincioaia**	**75.58**	**317**	⇓P	**P**	**01 14 07.1**	**+0.9**
PLOR	**Plostina**	**75.63**	**317**	⇓P	**P**	**01 14 07.4**	**+0.8**
PLOR	**Plostina**	**75.63**	**317**	⇓P	**P**	**01 14 07.4**	**+0.8**
TESR	**Tescani**	**75.79**	**318**	⇓P	**P**	**01 14 08.0**	**+0.6**
MLR	**Muntele Rosu**	**76.03**	**317**	⇓P	**P**	**01 14 08.6**	**-0.4**
MLR	**Muntele Rosu**	**76.03**	**317**	⇓P	**P**	**01 14 08.6**	**-0.4**
BIZ	**Bicaz**	**76.25**	**318**	⇓P	**P**	**01 14 12.3**	**+2.3**
PRAR	**RASCA**	**76.26**	**319**	⇑P	**P**	**01 14 10.8**	**+0.7**
DOPR	**Dopca**	**76.52**	**317**	⇓P	**P**	**01 14 11.7**	**+0.1**
BURAR	**Bucovina Array**	**76.99**	**319**	⇑P	**P**	**01 14 15.4**	**+1.1**
BURAR	**Bucovina Array**	**76.99**	**319**	⇑P	**P**	**01 14 15.4**	**+1.1**
BURAR	**Bucovina Array**	**76.99**	**319**	P	**P**	**01 14 14.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**77.01**	**319**	P	**P**	**01 14 14.7**	**+0.3**
VTS	**Vitosha**	**77.38**	**313**	⇑P	**P**	**01 14 16.3**	**-0.4**
VTS	**Vitosha**	**77.38**	**313**	⇑P	**P**	**01 14 16.3**	**-0.4**
DRGR		**78.50**	**318**	⇑P	**P**	**01 14 23.6**	**+0.9**
DRGR		**78.50**	**318**	⇑P	**P**	**01 14 23.6**	**+0.9**
BZS	**Buzias**	**79.04**	**316**	⇓P	**P**	**01 14 26.0**	**+0.4**
SIRR	**Siria**	**79.12**	**317**	⇑P	**P**	**01 14 27.3**	**+1.2**
KOLS	**Kolonicke sedl**	**79.18**	**320**	*e*P	**P**	**01 14 27.9**	**+1.6**
KOLS				*e*		01 14 34.9	
KOLS				pmax	pmax		
	comp=Z,25nm,1.8s						
KOLS	**Kolonicke sedl**	**79.18**	**320**	*e*P	**P**	**01 14 27.9**	**+1.6**
KOLS				*e*		01 14 34.9	
FINES	**FINESS Array B**	**79.97**	**333**	P	**P**	**01 14 30.4**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=127,slow=5.0,SNR=6.6						
SYO	**Syowa Base**	**80.02**	**198**	⇑*e*P	**P**	**01 14 32.2**	**+1.8**
TSUM	**Tsumeb**	**80.58**	**250**	P	**P**	**01 14 34.7**	**+0.1**
BILL	**Bilibino**	**81.15**	**21**	*i* P	**P**	**01 14 34.4**	**-2.1**
BILL				*i*		01 14 54.4	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ARCES	**ARCESS Array B**	**82.50**	**340**	P	**P**	**01 14 44.3**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=96,slow=5.0,SNR=17						
DPC	**Dobruska-Polom**	**83.22**	**320**	*e*P	**P**	**01 14 49.1**	**+1.3**
DPC	**Dobruska-Polom**	**83.22**	**320**	*e*P	**P**	**01 14 49.1**	**+1.3**
GERES	**GERESS Array B**	**84.78**	**319**	P	**P**	**01 14 56.6**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=76,slow=5.6,SNR=6.9						
GERES	**GERESS Array B**	**84.78**	**319**	P	**P**	**01 14 56.2**	**+0.3**
KHC	**Kasperske Hory**	**84.88**	**319**	*e*P	**P**	**01 14 56.6**	**+0.3**
KHC	**Kasperske Hory**	**84.88**	**319**	*e*P	**P**	**01 14 56.6**	**+0.3**
NB2	**NORSAR Subarra**	**86.97**	**331**	P	**P**	**01 15 06.4**	**0.0**
	comp=Z,1.8nm,0.9s,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**86.97**	**331**	P	**P**	**01 15 06.0**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=94,slow=4.9,SNR=5.1						
IMAR	**Indian Mountai**	**96.57**	**23**	P	**P**	**01 15 50.8**	**0.0**
ILAR	**Eielson Array**	**99.69**	**23**	PP	**PP**	**01 20 07.4**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=299,slow=5.9,SNR=1.9						
ILAR	**Eielson Array**	**99.69**	**23**		**PP**	**01 20 05.7**	**-3.2**
YKA	**Yellowknife Ar**	**112.07**	**15**	PKiKP	**PKiKP**	**01 20 57.5**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=311,slow=1.7,SNR=4.0						
YKA				PP	**PP**	**01 21 36.0**	**-3.9**
	comp=Z,0.6nm,0.7s,baz=336,slow=7.0,SNR=6.2						
ULM	**Lac du Bonnet**	**127.52**	**11**	PKP	**PKPdf**	**01 21 26.2**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=310,slow=1.8,SNR=6.0						
ULM	**Lac du Bonnet**	**127.52**	**11**		**PKPdf**	**01 21 25.6**	**-0.8**
NVAR	**Mina Array Bea**	**128.78**	**36**	PKP	**PKiKP**	**01 21 30.9**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=196,slow=1.2,SNR=6.3						
NVAR	**Mina Array Bea**	**128.78**	**36**	PKPdf	**PKPdf**	**01 21 28.0**	**-1.5**
PDAR	**Pinedale Array**	**130.03**	**26**	PKP	**PKPdf**	**01 21 31.7**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=187,slow=1.5,SNR=7.8						
TXAR	**Lajitas Array**	**143.66**	**32**	PKP	PKPbc	01 21 55.3	+0.8
	comp=Z,1.3nm,0.8s,baz=91,slow=0.7,SNR=18						
TXAR	**Lajitas Array**	**143.66**	**32**	PKPdf	PKPbc	01 21 54.8	+0.3
CPUP	**Villa Florida**	**145.01**	**222**	PKPbc	**PKPdf**	**01 22 00.1**	**+0.7**
	comp=Z,5.2nm,1.1s,baz=134,slow=4.5,SNR=7.1						
CPUP	**Villa Florida**	**145.01**	**222**		**PKPab**	**01 21 57.9**	**-0.8**

ROM 27 01:05:01.1±0.1**, 43°.355N**±0°.003×**12°.615E**±0°.005**,**
h10^{km}, ML0.8/2**, 2C, Error ellipse: s-maj=0.3km**
s-min=0.3km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.03**	**291**	⇑P	Pg	01 05 03.2	+0.1
ATFO				S	Sg	01 05 04.3	-0.3
MURB	**Monte Urbino**	**0.11**	**216**	P	Pg	01 05 04.6	+0.7
MURB				S	Sg	01 05 06.7	+0.8
MURB				AML	AML		
	comp=E,161µm,0.3s						
MURB				AML	AML		
	comp=N,132µm,0.6s						
FOSV	**Fossato di Vic**	**0.12**	**119**	P	Pg	01 05 04.6	+0.6
FOSV				S	Sg	01 05 06.8	+0.6
FOSV				AML	AML		
	comp=E,42µm,1.6s						
FOSV				AML	AML		
	comp=N,31µm,1.3s						
SSFR	**Montelago di S**	**0.15**	**56**	P	Pg	01 05 05.0	+0.5
SSFR				S	Sg	01 05 07.6	+0.8
ATVO	**AVT- Monte Val**	**0.15**	**280**	P	Pg	01 05 05.2	+0.7
ATVO				S	Sg	01 05 08.0	+1.0
ATCC	**AVT- Casa Cast**	**0.17**	**174**	P	Pb	01 05 05.6	-0.7
ATCC				S	Sg	01 05 09.0	+1.6
ATPI	**Pietralunga -**	**0.18**	**302**	P	Pg	01 05 05.2	+0.2
ATPI				S	Sg	01 05 09.1	+1.3
FRON	**Frontone**	**0.18**	**26**	⇑P	Pg	01 05 05.6	+0.6
FRON				S	Sg	01 05 08.8	+1.1
PIEI	**Pieia**	**0.19**	**342**	P	Pg	01 05 05.8	+0.6
PIEI				S	Sg	01 05 09.3	+1.3
NARO	**Abbazia di Nar**	**0.26**	**354**	P	Pg	01 05 07.0	+0.7
NARO				S	Sb	01 05 11.2	-1.1
ARVD	**Arcevia**	**0.28**	**59**	P	Pb	01 05 07.4	-0.7
ARVD				S	Sb	01 05 12.0	-0.9
ASSB	**Assisi San Ben**	**0.31**	**174**	P	Pg	01 05 07.4	+0.1
ASSB				S	Sg	01 05 12.6	+1.0
FSSB	**Fossombrone**	**0.36**	**19**	P	Pb	01 05 08.9	-0.6
FSSB				S	Sb	01 05 14.7	-0.6

KRNET ***27*** *01:21:18.6±0.1, 39°.23N×71°.50E, h12^{km}, mb3.2*
NNC ***27*** *01:21:26.6±2.2, 39°.49N×71°.66E, h0^{km}, mb3.6, mpv3.2,*
Error ellipse: s-maj=19.1km s-min=12.7km az=170.0
ISC 27 01:21:19.8±2.5**, 39°.2N**±0°.1×**71°.49E**±0°.06**, h10^{km}, n24,**
σ2^{s}.83/41**, 19C-18D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.34**	**45**	⇑*i*P	**Pg**	**01 21 25.5**	**-1.2**
	baz=42						
DRK				⇑*i*S	**Sg**	**01 21 30.7**	**-0.6**
	baz=42						
BTK	**Batken**	**0.97**	**328**	⇓*i*P	**Pg**	**01 21 37.7**	**-0.8**
	baz=28						
BTK				⇓*i*S	**Sb**	**01 21 51.3**	**-0.4**
	baz=28						
OHH	**Osh**	**1.62**	**37**	⇓*i*P	**Pn**	**01 21 49.4**	**+0.8**
	baz=37						
OHH				⇓*i*S	**Sg**	**01 22 11.7**	**-0.3**
	baz=37						
SFK	**Sufi-Kurgan**	**1.73**	**63**	⇑*i*P	**Pn**	**01 21 51.0**	**+0.7**
	baz=62						
SFK				⇑*i*S	**Sg**	**01 22 14.8**	**-0.8**
	baz=62						
TRKS	**Terek-Say**	**2.30**	**353**	⇓*i*P	**Pn**	**01 21 59.3**	**+1.3**
	baz=54						
TRKS				⇓*i*S	**Sb**	**01 22 28.9**	**-1.3**
	baz=54						
ARSB	**Arslanbob**	**2.37**	**28**	⇓*i*P	**Pn**	**01 22 00.9**	**+1.9**
	baz=28						
ARSB				⇓*i*S	**Sb**	**01 22 32.1**	**-0.1**
	baz=28						
AML	**Almayashu**	**3.34**	**29**	⇑*i*P	**Pn**	**01 22 14.5**	**+2.0**

	baz=29						
AML				⇑*i*S	Sn	01 22 55.3	+2.9
	baz=29						
AML	Almayashu	3.34	29	P	Pb	01 22 16.9	-2.4
	SNR=7.2						
ARLS	Aral	3.39	39	⇑*i*P	Pn	01 22 15.4	+2.4
	baz=38						
ARLS				⇑*i*S	Sn	01 22 56.7	+3.3
	baz=38						
UCH	Uchtor	3.76	37	⇑*i*P	Pn	01 22 20.4	+2.0
	baz=36						
UCH				⇑*i*S	Sn	01 23 05.2	+2.2
	baz=36						
UCH	Uchtor	3.76	37	P	Pb	01 22 23.2	-3.5
	SNR=11						
EKS2	Erkin-Say	3.83	26	⇑*i*P	Pn	01 22 21.4	+2.4
	baz=26						
EKS2				⇑*i*S	Sn	01 23 07.5	+3.4
	baz=26						
EKS2	Erkin-Say	3.83	26	P	Pb	01 22 23.6	-4.0
	SNR=10						
KK31	Karatay Array	3.93	349	⇑Pn	Pn	01 22 24.3	+4.1
	1.4nm,0.3s,baz=164,slow=11,SNR=65						
KK31				Sn	Sb	01 23 12.4	-4.4
	1.9nm,0.3s,baz=175,slow=18,SNR=4.8						
KK31				⇑Lg	Lg	01 23 25.3	
	4.8nm,0.5s,baz=171,slow=30,SNR=6.6						
AAK	Ala-Archa	4.08	33	⇓*i*P	Pn	01 22 25.1	+2.6
	baz=33						
AAK				⇓*i*S	Sn	01 23 13.0	+2.6
	baz=33						
AAK	Ala-Archa	4.08	33	P	Pn	01 22 27.3	+4.8
	SNR=6.3						
AAK	Ala-Archa	4.08	33	⇑Pn	Pn	01 22 27.1	+4.5
	2.8nm,0.3s						
AAK				⇑Lg	Lg	01 23 25.8	
	6.8nm,0.6s						
KBK	Karagaybulak	4.30	36	⇓*i*P	Pn	01 22 27.9	+2.4
	baz=36						
KBK				⇓*i*S	Sn	01 23 18.1	+2.3
	baz=36						
CHMS	Chumysh	4.49	32	⇓*i*P	Pn	01 22 30.5	+2.6
	baz=32						
CHMS				⇓*i*S	Sn	01 23 22.4	+2.2
	baz=32						
CHMS	Chumysh	4.49	32	P	Pn	01 22 32.5	+4.5
	SNR=7.3						
USP	Ospenovka	4.62	28	⇓*i*P	Pn	01 22 32.3	+2.6
	baz=28						
USP				⇓*i*S	Sn	01 23 26.6	+3.2
	baz=28						
USP	Ospenovka	4.62	28	P	Pn	01 22 33.8	+4.1
	SNR=15						
TKM2	Tokmak 2	4.81	39	⇑*i*P	Pn	01 22 34.7	+2.2
	baz=39						
TKM2				⇑*i*S	Sn	01 23 29.6	+1.2
	baz=39						
TKM2	Tokmak 2	4.81	39	⇑Pn	Pn	01 22 37.1	+4.5
	3.0nm,0.6s						
TKM2				⇓Sn	Sn	01 23 31.1	+2.7
	1.9nm,0.6s						
TKM2				⇓Lg	Lg	01 23 51.2	
	3.5nm,0.7s						

IDC 27 01:33:42.5±1.7, 20°.57N×97°.40E, h0km, mb3.4/2, mb1 3.4/2, mb1mx3.0/53, mbtmp3.4/2, Error ellipse: s-maj=30.2km s-min=15.8km az=61.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	2.55	145	Pg	Pg	01 34 30.9	-0.6
	0.7nm,0.3s,baz=325,slow=19,SNR=4.2						
CMAR				Lg	Lg	01 35 01.9	
	1.1nm,0.3s,baz=322,slow=29,SNR=4.7						
MKAR	Makanchi Array	28.92	338	P	P	01 39 41.9	-1.4
	0.2nm,0.5s,baz=155,slow=9.4,SNR=5.2						
ZALV	Zalesovo Beam	34.69	347	P	P	01 40 35.0	+1.3
	0.3nm,0.3s,baz=147,slow=8.6,SNR=2.4						

IDC 27 01:52:21.0±56.0, 13°.72S×166°.98E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/25, mbtmp3.8/3, MS4.0/1, Ms1 4.0/1, ms1mx3.2/33, Error ellipse: s-maj=954.5km s-min=114.1km az=64.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	29.44	228	P	P	01 58 26.4	-0.1
	1.0nm,0.5s,baz=49,slow=14,SNR=3.8						
WRA	Warramunga Arr	31.81	254	P	P	01 58 47.9	+0.2
	0.4nm,0.4s,baz=85,slow=8.9,SNR=8.4						
ASAR	Alice Springs	32.78	248	P	P	01 58 56.0	-0.2
	0.5nm,0.4s,baz=77,slow=9.5,SNR=11						
JCJ	Chichijima	47.18	329	LR	LR	02 18 35.3	
	comp=Z,165nm,20.6s,baz=114,slow=33						

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*IDC **27** 02:08:15.7±4.6, 13°.29S×166°.30E, h50km±44km, mb4.0/13, mb1 4.1/14, mb1mx3.9/38, mbtmp4.2/14, ML3.2/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/27, Error ellipse: s-maj=26.9km s-min=23.3km az=83.0*

ISC 27 02:08:15.2±0.8, 13°.25S±0°.08×166°.3E±0°.2, h44km, n15, σ0s.90/16, mb4.2/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.78	179	P	Pn	02 10 20.9	+1.2
	0.3nm,0.3s,baz=206,slow=23,SNR=2.6						
DZM				S	Sn	02 11 56.5	-0.8
	baz=148,slow=18,SNR=1.5						
STKA	Stephens Creek	29.27	227	P	P	02 14 12.4	-0.9
	1.1nm,0.7s,baz=18,slow=9.4,SNR=3.0						
WRA	Warramunga Arr	31.30	253	P	P	02 14 30.9	-0.5
	0.8nm,0.7s,baz=83,slow=8.6,SNR=5.5						
ASAR	Alice Springs	32.34	247	P	P	02 14 39.8	-0.9
	2.5nm,0.7s,baz=72,slow=9.7,SNR=27						
ASAR				LR	LR	02 26 08.5	
	comp=Z,113nm,18.8s,baz=68,slow=33						
VNDA	Vanda	64.31	181	P	P	02 18 46.0	+0.3
	0.8nm,0.9s,baz=6.2,slow=6.2,SNR=3.5						
USRK	Ussuriysk Ar.	65.14	333	P	P	02 18 52.8	+1.2
	3.6nm,0.8s,baz=128,slow=6.4,SNR=5.8						
CMAR	Chiang Mai Arr	73.48	294	P	P	02 19 44.9	+1.2
	1.4nm,0.5s,baz=119,slow=5.1,SNR=6.6						
QSPA	South Pole Qui	76.77	180	P	P	02 20 02.2	+0.2
	5.6nm,1.0s,baz=12,slow=2.7,SNR=6.4						
SONM	Songino Array	80.75	324	P	P	02 20 24.3	+0.3
	2.2nm,1.3s,baz=119,slow=5.6,SNR=4.1						
ILAR	Eielson Array	85.42	18	P	P	02 20 46.0	-1.7
	0.6nm,0.7s,baz=236,slow=6.3,SNR=8.5						
NVAR	Mina Array Bea	87.04	50	P	P	02 20 56.3	-0.2
	0.1nm,0.3s,baz=230,slow=7.0,SNR=1.9						
MKAR	Makanchi Array	95.48	317	P	P	02 21 35.6	+0.2
	1.3nm,0.9s,baz=91,slow=6.0,SNR=10						
ZALV	Zalesovo Beam	95.64	324	P	P	02 21 35.1	-0.7
	2.2nm,0.9s,baz=113,slow=3.9,SNR=8.2						
KURBB	Kurchatov Arra	98.70	320	P	P	02 21 49.7	-0.1
	0.5nm,0.5s,baz=91,slow=4.7,SNR=3.9						
ESDC	Sonseca Array	152.31	344	PKPab	PKPab	02 28 16.6	+0.1
	0.9nm,0.7s,baz=17,slow=4.1,SNR=9.6						

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*NEIC **27** 02:09:08.5±0.7, 36°.81S±0°.05×73°.57W±0°.07, h23km±7km, Error ellipse: s-maj=7.7km s-min=7.3km az=50.0*

*GUC **27** 02:09:09.1±0.4, 36°.80S×73°.55W, h25km±2km, ML4.0*

ISC 27 02:09:08.5±1.5, 36°.82S±0°.04×73°.56W±0°.07, h23km±12km, n33, σ0s.79/43, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI03	Tigo	0.43	93	⇓*i*P	Pb	02 09 17.4	-0.1
BI03				*i* S	Sb	02 09 23.5	-0.1
BI03				IAML		02 09 25.0	
	comp=N,36μm,0.5s						
BI03	Tigo	0.43	93	Pg	Pb	02 09 17.4	-0.1
BI03				Sg	Sb	02 09 23.0	-0.5
LAJA	Laja	0.82	124	⇓*i*P	Pb	02 09 23.5	-0.5
LAJA				*i* S	Sb	02 09 34.2	-0.5
BI04	Isla Mocha	1.61	189	*e*P	Pn	02 09 36.2	+0.7
BI04				IAML		02 10 08.2	
	comp=N,2μm,0.5s						
BI02	San Fabin de	1.84	86	⇑*i*P	Pn	02 09 39.5	+0.6
BI02				*i* S	Sn	02 10 02.7	+1.1
BI02				IAML		02 10 11.3	
	comp=E,1μm,0.5s						
BI02	San Fabin de	1.84	86		Pn	02 09 39.0	+0.1
BI02				Sn	Sn	02 10 02.1	+0.6
LC01	Cunco	2.46	148	*e*P	Pn	02 09 48.2	+0.9
LC01				*e*S	Sn	02 10 18.6	+1.9
LC01				IAML		02 10 29.2	
	comp=E,803nm,0.5s						
LC01	Cunco	2.46	148		Pn	02 09 47.7	+0.4
LC01				Sn	Sn	02 10 17.0	+0.3
BO03	Pichilemu	2.66	30	*e*P	Pn	02 09 50.5	+0.5
BO02	Sierra Bellavi	3.04	49	⇑*e*P	Pn	02 09 56.3	+1.1
BO02				IAML		02 10 49.4	
	comp=N,639nm,0.7s						
BO02	Sierra Bellavi	3.04	49		Pn	02 09 56.0	+0.8
BO02				Sn	Sn	02 10 30.2	-0.7
VA05	Santo Domingo	3.54	27	⇑*e*P	Pn	02 10 02.5	+0.5
VA05				IAML		02 11 20.6	
	comp=N,258nm,0.3s						
MT09	Talagante	3.70	35	*e*P	Pn	02 10 05.2	+0.8
MT09				*i* S	Sb	02 11 00.1	+2.4
LMEL	Las Melosas	4.04	44	*e*P	Pn	02 10 10.5	+1.4
MT02	Curacav	4.07	30	⇑*i*P	Pn	02 10 08.9	-0.4
MT02	Curacav	4.07	30		Pn	02 10 09.0	-0.4
MT05	Renca	4.13	35	*e*P	Pn	02 10 10.8	+0.6
MT05				*i* S	Sb	02 11 10.8	+0.8
MT05	Renca	4.13	35		Pn	02 10 09.9	-0.4
PEL	Peldehue	4.36	34		Pn	02 10 13.4	-0.1
ROC1	El Roble	4.37	29		Pn	02 10 13.4	-0.4
ROCH	El Roble	4.38	29	*e*P	Pn	02 10 13.8	0.0
PLCA	Paso Flores	4.56	150		Pn	02 10 16.4	+0.2
VA03	San Esteban	4.75	32		Pn	02 10 18.6	-0.2
VA04	Juan Fernndez	5.35	305	Pn	Pn	02 10 27.1	+0.2
LL01	San Ignacio de	5.62	171		Pn	02 10 31.0	+0.4
CO02	Combarbal	5.99	22		Pn	02 10 35.3	-0.7
CO03	El Pedregal	6.43	23		Pn	02 10 41.8	-0.1
AC05	El Transito	8.43	20		Pn	02 11 09.1	-0.3
PB08	IPOC Station P	17.06	14	Pn	Pn	02 13 05.2	-0.8
PB08				IAmb	IAmb	02 13 19.1	
	comp=Z,3.6nm,0.8s						
PB16	IPOC Station P	18.76	12	P	P	02 13 25.3	-1.3
PB16				IAmb	IAmb	02 13 36.8	
	comp=Z,4.3nm,1.0s						
SAML	Samuel	29.30	21	P	P	02 15 09.6	+0.2
SDV	Santo Domingo	45.55	4	P	P	02 17 26.4	-0.5
TXAR	Lajitas Array	71.62	333	P	P	02 20 27.9	-0.2

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*IDC **27** 02:12:31.9±1.1, 39°.08S×176°.52E, h111km±7km, mb3.8/5, mb1 3.9/6, mb1mx3.7/29, mbtmp4.2/6, Error ellipse: s-maj=35.0km s-min=13.9km az=132.0*

*NOU **27** 02:12:33.1, 38°.75S×176°.20E, h118km, MLv4.3, North Island, New Zealand*

*NEIC **27** 02:12:33.9±1.9, 38°.79S±0°.08×176°.1E±0°.1, h122km±2km, mb4.3/11, Error ellipse: s-maj=15.6km s-min=10.5km az=58.0*

*WEL **27** 02:12:34.8, 38°.6S±0°.9×17°6E±°, h105km±2km, M3.8/48, MLv3.8/48, Error ellipse: s-maj=0.0km s-min=0.0km az=78.1*

ISC 27 02:12:33.8±0.7, 38°.70S±0°.03×176°.13E±0°.03, h120km±4km, n176, σ1s.25/205, mb4.2/10, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHTZ	Whakaora	0.14	285	P	Pn	02 12 50.0	-0.3
WPRZ	Whakapapatarin	0.18	7	P	Pn	02 12 49.6	-0.8
HATZ	Hinemaiaia	0.19	190	P	Pn	02 12 50.0	-0.5
HATZ				S	Sn	02 13 01.2	-1.8
ALRZ	Allen Road	0.22	50	P	Pn	02 12 49.6	-0.8
ALRZ				S	Sn	02 13 00.8	-2.3
MRHZ	Matea Rd	0.26	121	P	Pn	02 12 50.1	-0.5
MRHZ				S	Sn	02 13 01.1	-2.3
PRRZ	Plateau Road	0.29	45	P	Pn	02 12 49.9	-0.8
PRRZ				S	Sn	02 13 01.1	-2.3
WATZ	Wairara	0.31	269	P	Pn	02 12 50.4	-0.4
KUTZ	Kaahu Road	0.32	311	P	Pn	02 12 50.3	-0.6
RATZ	Rangitukua	0.33	240	P	Pn	02 12 50.6	-0.3
HRRZ	Handcock Road	0.33	21	P	Pn	02 12 50.1	-0.8
HRRZ				S	Sn	02 13 02.5	-1.3
RITZ	Rihia Road	0.35	218	P	Pn	02 12 51.2	+0.3
GRRZ	Galatos Road	0.35	357	P	Pn	02 12 50.5	-0.5
HSRZ	Hossack Road	0.40	13	P	Pn	02 12 50.5	-0.8
KATZ	Kakaramea	0.44	231	P	Pn	02 12 51.4	-0.1
RRRZ	Republican Roa	0.47	40	P	Pn	02 12 50.7	-0.9
HLRZ	Highlands Stat	0.48	21	P	Pn	02 12 51.5	-0.2
UTU	Utuhina	0.53	5	P	Pn	02 12 51.3	-0.6
TMVZ	Te Maari	0.53	219	P	Pn	02 12 52.2	+0.2
BKZ	Black Stump Fm	0.54	149	Pn	Pn	02 12 52.1	+0.1
BKZ				Sn	Sn	02 13 04.7	-1.2
BKZ	Black Stump Fm	0.54	149	P	Pn	02 12 52.2	+0.1
BKZ				S	Sn	02 13 04.9	-0.9
ETVZ	East Tongariro	0.54	217	P	Pn	02 12 52.4	+0.3
KRVZ	Karewarewa	0.55	224	P	Pn	02 12 52.3	+0.1
MUGZ	Murupara	0.55	66	P	Pn	02 12 51.1	-0.9
MUGZ				S	Sn	02 13 02.5	-3.3
TARZ	Mount Tarawera	0.55	32	P	Pn	02 12 51.3	-0.9
MTHZ	Maungataniwha	0.57	105	P	Pn	02 12 52.2	0.0
MTHZ				S	Sn	02 13 04.9	-1.3
OTVZ	Oturere	0.59	218	P	Pn	02 12 52.8	+0.3
WTVZ	West Tongariro	0.59	226	P	Pn	02 12 52.6	+0.2
TLZ	Tolley Road	0.60	308	P	Pn	02 12 51.9	-0.5
TLZ				S	Sn	02 13 04.8	-1.7
NGRZ	Ngongotaha	0.60	4	P	Pn	02 12 51.8	-0.7
MKRZ	Makatiti	0.62	25	P	Pn	02 12 52.3	-0.4
OMRZ	Omania	0.62	18	P	Pn	02 12 51.7	-0.9
NGZ	Ngauruhoe	0.63	221	P	Pn	02 12 53.0	+0.2
TWVZ	Taurewa	0.66	236	P	Pn	02 12 53.1	+0.2
NMHZ	Naumai	0.66	127	P	Pn	02 12 54.0	+1.1
NMHZ				S	Sn	02 13 08.2	+0.8
RTZ	Ruatahuna	0.67	83	P	Pn	02 12 52.6	-0.4
RTZ				S	Sn	02 13 06.3	-1.2
TUVZ	Tukino	0.68	213	P	Pn	02 12 53.7	+0.6
KARZ	Kaharoa	0.69	7	P	Pn	02 12 52.3	-0.8
FWVZ	Far West T-bar	0.71	219	P	Pn	02 12 53.7	+0.2
WHVZ	Whangaehu Hut	0.72	216	P	Pn	02 12 53.9	+0.4
WHVZ				S	Sn	02 13 08.4	-0.1
DRZ	Dome Shelter	0.72	218	P	Pn	02 12 54.1	+0.4
LIRZ	Lichensteins R	0.72	16	P	Pn	02 12 52.7	-0.7
WNVZ	Wahianoa	0.75	214	P	Pn	02 12 54.3	+0.6
KWHZ	Kaweka Forest	0.76	163	P	Pn	02 12 54.3	+0.7
KWHZ				S	Sn	02 13 09.3	+0.5
EDRZ	Edgecumbe	0.76	39	P	Pn	02 12 52.7	-1.0
MOVZ	Moawhango	0.76	203	P	Pn	02 12 54.1	+0.3
RAHZ	Arahi	0.78	106	P	Pn	02 12 54.2	+0.5
RAHZ				S	Sn	02 13 08.8	0.0
BHHZ	Black Hill Sta	0.79	184	P	Pn	02 12 54.4	+0.5
BHHZ				S	Sn	02 13 08.6	-0.6
MARZ	Manawahe	0.83	31	P	Pn	02 12 53.4	-0.9
PKVZ	Pokaka	0.85	226	P	Pn	02 12 55.1	+0.7
MTVZ	Mangateitei	0.85	217	P	Pn	02 12 55.4	+0.9
MCHZ	McNeill Hill	0.86	150	P	Pn	02 12 55.8	+1.4
KMRZ	Kaimai	0.87	350	P	Pn	02 12 53.9	-0.7
KMRZ				S	Sn	02 13 08.4	-1.9
ARHZ	Aropaoanui	0.88	130	P	Pn	02 12 55.5	+1.0
URZ	Urewera	0.89	60	P	Pn	02 12 53.6	-1.1
	529nm,0.3s,baz=246,slow=7.1,SNR=1781						
URZ				S	Sn	02 13 08.3	-2.2
	221nm,0.3s,baz=85,slow=15,SNR=6.3						
URZ	Urewera	0.89	60	P	Pn	02 12 53.8	-0.9
URZ				S	Sn	02 13 08.3	-2.2
OPRZ	Ohinepanea	0.92	21	P	Pn	02 12 54.1	-0.9
WHHZ	Waihua	0.94	114	P	Pn	02 12 56.0	+0.8
SNGZ	Shannon Statio	0.95	95	P	Pn	02 12 55.8	+0.5
KRHZ	Kereru	0.96	169	P	Pn	02 12 56.3	+0.9
TGRZ	Tauranga	0.98	6	P	Pn	02 12 54.9	-0.7
HIZ	Hauiti	1.02	280	Pn	Pn	02 12 56.1	+0.2
HIZ				Sn	Sn	02 13 12.7	-0.1
HIZ	Hauiti	1.02	280	P	Pn	02 12 56.1	+0.2
RAGZ	Rawiri	1.03	79	P	Pn	02 12 55.9	-0.2
WHRZ	Whale Island	1.07	38	P	Pn	02 12 55.9	-0.6
TOZ	Tahuroa Road	1.09	333	P	Pn	02 12 56.3	-0.4
VRZ	Vera Road	1.15	248	P	Pn	02 12 58.1	+0.8
MWZ	Matawai	1.15	72	P	Pn	02 12 56.9	-0.5
CKHZ	Cape Kidnapper	1.20	143	P	Pn	02 12 59.2	+1.4
PNHZ	Pukenui	1.21	178	P	Pn	02 12 58.6	+0.6
KAHZ	Kahuranaki	1.23	152	P	Pn	02 12 59.4	+1.2
KNZ	Kokohu	1.24	105	P	Pn	02 12 58.8	+0.5
RIGZ	Rimuhau	1.27	91	P	Pn	02 12 59.2	+0.5
TSZ	Takapari Road	1.36	186	P	Pn	02 13 00.3	+0.7
TKGZ	Te Karaka	1.37	79	P	Pn	02 13 00.4	+0.7
WAZ	Wanganui	1.38	220	P	Pn	02 13 01.1	+1.3
WPHZ	Waipukurau	1.38	170	P	Pn	02 13 00.6	+0.8
PRGZ	Paritu Road	1.39	100	P	Pn	02 13 00.5	+0.6
RUGZ	Raukumara Rang	1.42	59	P	Pn	02 12 59.1	-1.3
MYRZ	Mayor Island	1.42	3	P	Pn	02 13 00.2	-0.1
PXZ	Pawanui	1.44	157	P	Pn	02 13 01.3	+0.9
MHGZ	Mahia Peninsul	1.46	109	P	Pn	02 13 01.6	+0.9
MHEZ	Mangahewa	1.46	255	P	Pn	02 13 02.7	+2.0
TWGZ	Tauwhareparae	1.54	71	P	Pn	02 13 02.1	+0.4
LREZ	Lake Rotokare	1.54	240	P	Pn	02 13 03.2	+1.6
DREZ	Durham Road	1.58	252	P	Pn	02 13 03.7	+1.6
DVHZ	Dannevirke	1.59	179	P	Pn	02 13 02.7	+0.4
HAZ	Te Kaha	1.61	54	P	Pn	02 13 01.2	-1.2
PRHZ	Porangahau	1.61	166	P	Pn	02 13 03.2	+0.7
OHWZ	Ohakea	1.63	203	P	Pn	02 13 04.0	+1.3
CNGZ	Carnagh Statio	1.64	83	P	Pn	02 13 01.1	-1.7
PREZ	Palmer Road	1.67	247	P	Pn	02 13 05.0	+1.9
NEZ	North Egmont	1.69	250	P	Pn	02 13 05.1	+1.6
POWZ	Post Office Ro	1.71	189	P	Pn	02 13 04.0	+0.4
PKGZ	Pakihiroa	1.73	63	P	Pn	02 13 03.9	-0.1
PKE	Pukeiti	1.74	253	P	Pn	02 13 05.3	+1.3
KHEZ	Kahui Hut	1.75	250	P	Pn	02 13 05.7	+1.5
MKAZ	Moumakai	1.77	334	P	Pn	02 13 04.2	-0.2
ANWZ	Angora Road	1.77	172	P	Pn	02 13 05.2	+0.8
PUZ	Puketiti	1.78	70	P	Pn	02 13 04.4	-0.2
NBEZ	Newall Road No	1.85	252	P	Pn	02 13 06.7	+1.3
PRWZ	Pori Road	1.85	184	P	Pn	02 13 06.0	+0.6
NMEZ	Namu Road	1.89	247	P	Pn	02 13 07.3	+1.5
BFZ	Birch Farm	1.98	178		Pn	02 13 07.1	+0.2
BFZ				Sn	Sn	02 13 31.6	-0.8
BFZ	Birch Farm	1.98	178	P	Pn	02 13 07.2	+0.2
KUZ	Kuaotunu	1.98	350	P	Pn	02 13 06.5	-0.5
ETAZ	East Tamaki Re	1.99	331	P	Pn	02 13 07.0	0.0
WMGZ	Waiomatatini S	2.00	65	P	Pn	02 13 07.0	-0.2
MRZ	Mangatainoka R	2.00	192	P	Pn	02 13 07.2	-0.1
AWAZ	Awhitu Peninsu	2.02	324	P	Pn	02 13 06.9	-0.5
MXZ	Matakaoa Point	2.06	57	P	Pn	02 13 07.9	0.0
WIAZ	Waiheke Island	2.06	337	P	Pn	02 13 07.9	-0.1
TIWZ	Tintock	2.08	185	P	Pn	02 13 08.4	+0.2
WTAZ	Waiatarua	2.16	325	P	Pn	02 13 09.4	+0.2
MBAZ	Motutapu North	2.16	333	P	Pn	02 13 09.1	-0.2
CPWZ	Castlepoint	2.21	179	P	Pn	02 13 10.5	+0.8
OGWZ	Otaki Gorge	2.24	199	P	Pn	02 13 10.1	0.0
HOWZ	Holdsworth Sta	2.24	192	P	Pn	02 13 09.9	-0.3
KIW	Kapiti Island	2.35	203	P	Pn	02 13 11.3	-0.4
TMWZ	Te Maipa	2.41	184	P	Pn	02 13 12.1	-0.2
MTW	Mount Morrison	2.50	191	P	Pn	02 13 12.9	-0.6
CAW	Cannon Point	2.54	199	P	Pn	02 13 13.4	-0.6
DUWZ	D’Urville Isla	2.70	218	P	Pn	02 13 15.5	-0.6
TRWZ	Traveller	2.71	187	P	Pn	02 13 15.6	-0.7
PAWZ	Paruwai Farm	2.73	191	P	Pn	02 13 15.7	-0.9
WEL	Wellington	2.78	202	P	Pn	02 13 16.3	-0.8
MSWZ	Moikau Station	2.79	194		Pn	02 13 16.1	-1.2
MSWZ				Sn	Sn	02 13 48.4	-2.5
MSWZ	Moikau Station	2.79	194	P	Pn	02 13 16.3	-1.0
SNZO	South Karori	2.83	202	Pn	Pn	02 13 16.8	-0.9
SNZO				Sn	Sn	02 13 49.9	-1.7
BHW	Baring Head	2.87	199		Pn	02 13 17.1	-1.1
BHW				Sn	Sn	02 13 49.9	-2.8
BHW	Baring Head	2.87	199	P	Pn	02 13 17.2	-1.1
TCW	Tory Channel	2.88	209	P	Pn	02 13 17.6	-0.9
PLWZ	Palliser	2.94	193	Pn	Pn	02 13 17.8	-1.5
PLWZ				Sn	Sn	02 13 50.8	-3.6
PLWZ	Palliser	2.94	193	P	Pn	02 13 18.1	-1.1
TUWZ	Tuamarina	3.20	211		Pn	02 13 21.6	-1.0
TUWZ				Sn	Sn	02 13 58.6	-1.8
TUWZ	Tuamarina	3.20	211	P	Pn	02 13 21.5	-1.0
NNZ	Nelson	3.28	219	Pn	Pn	02 13 22.5	-1.2
NNZ				Sn	Sn	02 14 01.4	-1.0
NNZ	Nelson	3.28	219	P	Pn	02 13 22.6	-1.2
BSWZ	Blackbirch Sta	3.47	209		Pn	02 13 25.1	-1.1
BSWZ				Sn	Sn	02 14 05.4	-1.4
BSWZ	Blackbirch Sta	3.47	209	P	Pn	02 13 25.0	-1.2
QRZ	Quartz Range	3.49	232	Pn	Pn	02 13 25.7	-0.8
QRZ	Quartz Range	3.49	232	P	Pn	02 13 25.6	-0.8
THZ	Tophouse	3.93	218	Pn	Pn	02 13 31.1	-1.3
THZ	Tophouse	3.93	218	P	Pn	02 13 30.9	-1.4
OUZ	Omahuta	4.03	329	P	Pn	02 13 34.5	+0.9
KHZ	Kahutara	4.20	207	Pn	Pn	02 13 34.3	-1.6
KHZ	Kahutara	4.20	207	P	Pn	02 13 34.2	-1.6
DSZ	Denniston Nort	4.50	226	P	Pn	02 13 38.1	-1.9
LTZ	Lake Taylor	5.02	215		Pn	02 13 44.3	-2.6
AMCZ	Amberley	5.19	209	P	Pn	02 13 47.0	-2.2
OXZ	Oxford	5.56	213		Pn	02 13 50.4	-3.7
RPZ	Rata Peaks	6.30	216	P	Pn	02 14 01.5	-2.7
	7.6nm,0.3s,baz=50,slow=1.2,SNR=12						
RPZ				S	Sn	02 15 09.4	-5.4
	12nm,0.3s,baz=56,slow=3.7,SNR=4.7						
RPZ	Rata Peaks	6.30	216	P	Pn	02 14 02.4	-1.8
FOZ	Fox Glacier	6.78	223	Pn	Pn	02 14 06.7	-3.9
CTZ	Chatham Island	7.42	135	P	Pn	02 14 21.4	+2.1
LHI	Lord Howe Isla	15.69	292		Pn	02 16 08.8	+0.7
TOO	Toolangi	24.08	263	P	P	02 17 38.0	+0.1
TOO				IAmb	IAmb	02 17 41.9	
	comp=Z,6.9nm,0.8s						
STKA	Stephens Creek	28.88	273	P	P	02 18 23.9	+2.8
	comp=Z,1.3nm,0.7s,baz=90,slow=4.0,SNR=2.6						
STKA	Stephens Creek	28.88	273	P	P	02 18 21.9	+0.8
AS31	Alice Springs	38.76	280	P	P	02 19 47.1	+0.5
AS31				IAmb	IAmb	02 19 50.1	
	comp=Z,2.7nm,0.3s						
ASAR	Alice Springs	38.76	280	P	P	02 19 48.7	+2.1
	comp=Z,2.3nm,0.5s,baz=132,slow=9.2,SNR=26						
ASAR	Alice Springs	38.76	280	P	P	02 19 47.0	+0.4
FORT	Forrest	39.91	266	P	P	02 19 56.5	+0.6
FORT				IAmb	IAmb	02 20 16.3	
	comp=Z,17nm,0.9s						
WR0	Warramunga Arr	40.38	285	P	P	02 20 01.1	+1.1
WR0				IAmb	IAmb	02 20 12.5	
	comp=Z,3.5nm,1.1s						
WB2	Warramunga Arr	40.53	285	P	P	02 20 02.6	+1.4
WRA	Warramunga Arr	40.54	285	P	P	02 20 03.0	+1.6
	comp=Z,0.5nm,0.3s,baz=125,slow=8.2,SNR=16						
WB0	Warramunga Arr	40.60	286	P	P	02 20 02.9	+1.1
WB0				IAmb	IAmb	02 20 04.2	
	comp=Z,5.8nm,1.1s						
NWAO	Narrogin (SRO)	47.41	258	P	P	02 20 56.7	+0.7
	comp=Z,6.6nm,0.9s,baz=114,slow=7.8,SNR=2.0						
NWAO	Narrogin (SRO)	47.41	258	P	P	02 20 56.6	+0.6
NWAO				IAmb	IAmb	02 20 56.7	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	48.26	280	P	P	02 21 04.3	+1.6
	comp=Z,1.1nm,0.5s,baz=126,slow=10,SNR=5.2						
FITZ	Fitzroy Crossi	48.26	280	P	P	02 21 04.3	+1.6
FITZ				IAmb	IAmb	02 21 22.0	
	comp=Z,2.6nm,1.0s						
CISI	Cisompet, Garu	68.41	278	P	P	02 23 22.0	-0.9
YKA	Yellowknife Ar	115.02	29	PKP	PKPdf	02 30 58.5	-1.0
	comp=Z,0.1nm,0.5s,baz=251,slow=1.3,SNR=4.0						
MKAR	Makanchi Array	119.24	308	PKP	PKPdf	02 31 06.9	-1.3
	comp=Z,0.2nm,0.6s,baz=134,slow=4.2,SNR=2.1						
ARCES	ARCESS Array B	145.36	342	PKPbc	PKPdf	02 31 56.7	+0.5
	comp=Z,7.0nm,1.1s,baz=78,slow=1.8,SNR=9.9						
FINES	FINESS Array B	150.68	331	PKPbc	PKPbc	02 32 10.3	-0.3
	comp=Z,4.3nm,1.0s,baz=48,slow=2.8,SNR=7.9						
BRTR	Keskin Array B	151.06	284	PKPbc	PKiKP	02 32 13.6	+0.5
	comp=Z,0.4nm,0.8s,baz=66,slow=3.6,SNR=2.4						

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*SJA **27** 02:39:38.4±0.5, 37°.64S×75°.72W, h10km, ML4.7, MW4.3*

*IDC **27** 02:40:04.1±0.6, 36°.74S×73°.53W, h0km, mb4.2/11, mb1 4.3/14, mb1mx4.2/26, mbtmp4.1/14, ML4.0/3, Error ellipse: s-maj=20.7km s-min=15.7km az=79.0*

*NEIC **27** 02:40:05.4±0.8, 36°.84S±0°.06×73°.64W±0°.07, h28km±5km, Error ellipse: s-maj=8.3km s-min=7.6km az=214.0*

*GUC **27** 02:40:06.4±0.6, 36°.85S×73°.58W, h31km±2km, ML4.6*

*NEIC **27** 02:40:06, 36°.85S×73°.58W, h31km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.05; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$0.27; $M_{r\theta}$0.31; $M_{\theta\phi}$1.68; $M_{\phi r}$-8.16; Fault plane solution: $M_0$8.43000×10^{15} NP1:ϕ_s174.98000°, δ87.95000°, λ102.48000°. NP2:ϕ_s274.15000°, δ12.64000°, λ9.39000°. Principal axes: T 8.9170, Plg46.0000°, Azm98.0000°; N -1.0872, Plg12.0000°, Azm355.0000°; P -7.8298, Plg42.0000°, Azm253.0000°;*

*VAO **27** 02:40:14.3±6.1, 36°.20S×73°.37W, h56km±34km, mb4.6*

ISC 27 02:40:03.4±0.4, 36°.82S±0°.04×73°.75W±0°.03, h10km, n149, σ1s.72/169, mb4.5/34, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BI03	Tigo	0.58	93	⇓*i*P	Pb	02 40 15.2	-0.3
BI03				*i* S	Sg	02 40 21.7	-0.6

BI03				IAML		02 40 24.2	
	comp=E,117µm,0.3s						
BI03	Tigo	0.58	93		Pb	02 40 15.3	-0.3
BI03				Sg	Sg	02 40 21.7	-0.6
LAJA	Laja	0.95	120	⇓iP	Pg	02 40 21.2	-0.4
LAJA				iS	Sg	02 40 31.6	-2.4
BI04	Isla Mocha	1.60	184	eP	Pb	02 40 32.2	-0.8
BI04				IAML		02 41 03.4	
	comp=N,8µm,0.6s						
BI02	San Fabin de	1.99	86	⇑iP	Pn	02 40 37.2	0.0
BI02				iS	Sn	02 41 00.3	-2.0
BI02	San Fabin de	1.99	86		Pn	02 40 37.2	0.0
BI02				Sn	Sn	02 41 00.2	-2.0
LC01	Cunco	2.55	145	⇑iP	Pn	02 40 45.4	+0.6
LC01				eS	Sn	02 41 14.4	-1.6
LC01	Cunco	2.55	145	Pn	Pn	02 40 45.4	+0.6
BO03	Pichilemu	2.73	33	eP	Pn	02 40 48.1	+0.8
BO03				IAML		02 41 41.5	
	comp=E,2µm,0.7s						
BO02	Sierra Bellavi	3.15	51	eP	Pn	02 40 53.8	+0.8
BO02				eS	Sn	02 41 30.0	-0.7
BO02				IAML		02 41 45.4	
	comp=N,2µm,0.4s						
BO02	Sierra Bellavi	3.15	51	Pn	Pn	02 40 54.5	+1.4
VA05	Santo Domingo	3.60	30	eP	Pn	02 40 59.4	+0.1
EDS3	Malargue	3.66	75	iP	Pb	02 41 08.0	-0.3
COIS	El Sosneado	3.78	64	iP	Pn	02 41 04.2	+2.5
COIS				iS	Sb	02 41 56.9	+0.9
MT09	Talagante	3.78	37	⇑iP	Pn	02 41 02.7	+0.9
LAMA	Las Malvinas	4.13	64	iP	Pb	02 41 12.1	-4.2
LMEL	Las Melosas	4.14	45	eP	Pn	02 41 08.0	+1.1
MT02	Curacav	4.14	32	⇓iP	Pn	02 41 06.7	0.0
MT02	Curacav	4.14	32	Pn	Pn	02 41 06.7	0.0
MT05	Renca	4.21	37	eP	Pn	02 41 08.8	+1.0
MT05	Renca	4.21	37		Pn	02 41 07.3	-0.5
MT03	Universidad Ad	4.25	40	⇑iP	Pn	02 41 08.8	+0.6
ROC1	El Roble	4.44	31		Pn	02 41 10.8	-0.3
ROC1	El Roble	4.44	31	iP	Pn	02 41 11.6	+0.6
PEL	Peldehue	4.44	35	⇓iP	Pn	02 41 11.7	+0.8
PEL	Peldehue	4.44	35	Pn	Pn	02 41 10.5	-0.4
PEL	Peldehue	4.44	35	iP	Pn	02 41 11.7	+0.8
PEL				iS	Sb	02 42 21.4	+6.2
ROCH	El Roble	4.45	31	eP	Pn	02 41 11.5	+0.4
PLCA	Paso Flores	4.64	148	Pn	Pn	02 41 15.8	+2.2
	comp=N,2.6nm,0.3s,baz=321,slow=11,SNR=74						
PLCA				Pg	Pg	02 41 29.6	-2.7
	comp=N,9.3nm,0.3s,baz=327,slow=15,SNR=24						
PLCA				Lg	Lg	02 42 23.9	
	comp=N,7.4nm,0.3s,baz=9.9,slow=23,SNR=2.8						
PLCA	Paso Flores	4.64	148	Pn	Pn	02 41 12.4	-1.1
RFA	San Rafael	4.75	66	iP	Pn	02 41 18.0	+2.8
RFA				IAML		02 43 32.1	
	comp=Z,83nm,1.0s						
VA03	San Esteban	4.82	34	Pn	Pn	02 41 15.8	-0.4
H03S1	Juan Fernandez	5.16	304	Pn	Pn	02 41 23.0	+2.7
	baz=89,slow=12,SNR=17						
H03S1				Sn	Sn	02 42 16.4	-3.4
H03S1				T	T	02 46 45.1	
	baz=124,slow=74						
H03S3	Juan Fernandez	5.17	304	Pn	Pn	02 41 23.2	+2.7
	baz=89,slow=12,SNR=26						
H03S3				Sn	Sn	02 42 17.5	-2.6
H03S3				T	T	02 46 48.8	
	baz=124,slow=74						
H03S2	Juan Fernandez	5.17	304	Pn	Pn	02 41 23.1	+2.5
	baz=89,slow=12,SNR=24						
H03S2				Sn	Sn	02 42 17.2	-3.1
H03S2				T	T	02 46 46.1	
	baz=124,slow=74						
VA04	Juan Fernndez	5.23	306	Pn	Pn	02 41 23.9	+2.3
H03N3	Juan Fernandez	5.41	307	Pn	Pn	02 41 27.0	+3.2
	baz=142,slow=26,SNR=13						
H03N3				Sn	Sn	02 42 25.5	-0.5
H03N3				T	T	02 47 08.9	
	baz=121,slow=76						
H03N1	Juan Fernandez	5.41	307	Pn	Pn	02 41 27.2	+3.3
	baz=142,slow=26,SNR=40						
H03N1				Sn	Sn	02 42 25.5	-0.6
H03N1				T	T	02 47 07.8	
	baz=121,slow=76						
H03N2	Juan Fernandez	5.42	307	Pn	Pn	02 41 27.2	+3.1
	baz=142,slow=26,SNR=12						
H03N2				Sn	Sn	02 42 25.8	-0.6
H03N2				T	T	02 47 07.8	
	baz=121,slow=76						
AAGR	Agrelo	5.49	49	iP	Pn	02 41 27.6	+2.2
ARCO	CERRO ARCO	5.60	46	iP	Pn	02 41 32.0	+5.1
LL01	San Ignacio de	5.65	170		Pn	02 41 27.0	-0.4
AUSP	Uspallata	5.83	39	iP	Pn	02 41 32.2	+2.1
ASAL	Salagasta	5.84	45	iP	Pn	02 41 31.9	+1.8
CO02	Combarbal	6.04	23	Pn	Pn	02 41 32.9	-0.1
RTLS	Leoncito	6.21	38	iP	Pn	02 41 37.3	+1.9
GO07	Milladeo Hill,	6.29	179	Pn	Pn	02 41 35.9	-0.3
CO03	El Pedregal	6.48	24		Pn	02 41 38.4	-0.6
RTCV	Cerro Valdivia	6.55	43	iP	Pn	02 41 40.5	+0.6
RTCV				IAML		02 43 35.8	
	comp=Z,153nm,2.0s						
ZON	Zonda	6.73	40		Pn	02 41 41.9	-0.4
RTLL	Cerro Villicun	7.00	40	iP	Pn	02 41 46.7	+0.6
GO04	Tololo Observa	7.07	21	Pn	Pn	02 41 46.6	-0.5
CO01	Juntas del Tor	7.47	25		Pn	02 41 52.1	-0.6
LCO	Las Campanas	8.19	19	Pn	Pn	02 42 02.0	-0.6
AC05	El Transito	8.48	21	Pn	Pn	02 42 06.2	-0.2
AC04	Llanos de Chal	8.88	15	Pn	Pn	02 42 11.9	+0.2
AC02	Maricunga	10.70	23	Pn	Pn	02 42 36.2	-0.9
AC01	Pan de Azucar	10.97	15	Pn	Pn	02 42 40.4	-0.1
PB14	IPOC Station P	12.49	14	Pn	Pn	02 43 01.2	-0.2
LPA	La Plata	12.97	86	eP	Pn	02 43 08.2	+0.5
LPA				pPP		02 43 23.6	
LPA				PPP	PPP	02 43 57.1	
LPA				S	Sn	02 45 20.1	-12
LPA				SSS	SSS	02 45 47.0	
LPA				SS	SbSb	02 46 35.0	+9.4
LPA				PCP	PcP	02 48 37.2	-4.1
LPA				SCS	ScS	02 55 47.3	-3.7
LVC	Limon Verde	14.77	18	Pn	Pn	02 43 34.3	+1.7
	comp=Z,0.2nm,0.3s,baz=179,slow=18,SNR=2.3						
PB09	IPOC Station P	15.47	16	Pn	Pn	02 43 41.4	-0.5
PB09					P	02 43 41.6	-4.8
PLTB	Pedras Altas	17.38	79	eP	P	02 44 07.5	+0.1
CPUP	Villa Florida	17.44	58	P	Pn	02 44 06.0	-0.8
	comp=Z,0.2nm,0.3s,baz=241,slow=9.5,SNR=5.7						
CPUP				Lg	Lg	02 48 57.5	
	comp=Z,0.1nm,0.3s,baz=310,slow=19,SNR=1.4						
CPUP	Villa Florida	17.44	58	Pn	Pn	02 44 05.0	-1.8
MNMC	Minye Minye	17.99	13		Pn	02 44 13.6	-0.4
CPSB	Cacapava Do Su	18.07	75	eP	P	02 44 17.3	+2.3
EFI	East Falkland	18.56	148	P	P	02 44 18.6	-1.6
EFI				IAmb	IAmb	02 44 25.6	
	comp=Z,24nm,1.1s						
PB16	IPOC Station P	18.79	13		P	02 44 22.4	-1.1
ITAB	Concordia	20.63	69	eP	P	02 44 42.4	-0.6
PTGB	Pitanga	22.14	63	eP	P	02 44 59.4	0.0
AQDB	Aquidauana	22.65	49	eP	P	02 45 04.4	-0.3
TRCB	Terra Rica	22.97	58	eP	P	02 45 07.9	-0.2
SIV	San Ignacio	23.60	32	P	P	02 45 14.8	+0.3
	comp=Z,2.6nm,0.8s,baz=233,slow=9.5,SNR=15						
PCMB	Pacaembu	24.71	58	eP	P	02 45 24.7	-0.1
SPB	Sao Paulo	26.19	67	eP	P	02 45 38.9	+0.7
ITRB	Iturama	26.63	57	eP	P	02 45 42.4	+0.1
VILB	Vilhena	26.69	31	eP	P	02 45 41.9	-0.9
BDFB	Brasilia	31.09	54	P	P	02 46 23.6	+1.5
	comp=Z,1.6nm,0.6s,baz=198,slow=19,SNR=2.2						
SDBA	SAO DESIDERIO	35.50	54	eP	P	02 47 01.5	+1.0
PTGA	Pitinga	38.10	23	P	P	02 47 23.2	+0.6
	comp=Z,2.8nm,0.3s,baz=304,slow=22,SNR=8.9						
SDV	Santo Domingo	45.55	4	P	P	02 48 22.9	-0.8
SDV				IAmb	IAmb	02 48 36.4	
	comp=Z,5.4nm,0.8s						
VNA3	Neumayer Olymp	47.31	157	P	P	02 48 39.1	+2.4
VNA2	Neumayer--Watz	47.98	156	P	P	02 48 43.3	+1.4
SNAA	Sanae	49.53	157	P	P	02 48 55.8	+1.9
SNAA	Sanae	49.53	157	P	P	02 48 52.8	-1.1
SNAA				IAmb	IAmb	02 49 08.5	
	comp=Z,4.1nm,0.9s						
QSPA	South Pole Qui	53.42	180	P	P	02 49 26.0	+2.8
	comp=Z,7.8nm,0.8s,baz=154,slow=2.5,SNR=25						
QSPA	South Pole Qui	53.42	180	P	P	02 49 22.5	-0.7
QSPA				IAmb	IAmb	02 49 26.9	
	comp=Z,10nm,1.0s						
BANI	BANI	55.00	4	P	P	02 49 33.5	-1.6
TEIG	Tepich	58.37	344	P	P	02 49 58.6	-0.3
VNDA	Vanda	61.07	192	P	P	02 50 20.7	+3.8
	comp=Z,0.7nm,0.7s,baz=135,slow=7.1,SNR=2.0						
Z47A	Carrollton	70.93	347	P	P	02 51 20.3	-0.3
JCT	Junction City	71.26	336	P	P	02 51 22.5	-0.4
JCT				IAmb	IAmb	02 51 26.7	
	comp=Z,8.7nm,0.9s						
TX32	Lajitas Array	71.55	333	P	P	02 51 24.3	-0.4
TX32				IAmb	IAmb	02 51 28.9	
	comp=Z,4.9nm,0.9s						
TXAR	Lajitas Array	71.55	333	P	P	02 51 27.7	+3.0
	comp=Z,2.9nm,0.7s,baz=151,slow=8.5,SNR=40						
TXAR	Lajitas Array	71.55	333	P	P	02 51 24.2	-0.4
TX31	Lajitas Ar. Si	71.55	333	P	P	02 51 24.2	-0.5
WHTX	Lake Whitney,	71.96	339	P	P	02 51 26.7	-0.2
X48A	Hartselle	71.98	348	P	P	02 51 26.2	-0.8
X48A				IAmb	IAmb	02 51 32.1	
	comp=Z,12nm,1.1s						
SWET	Sewanee	72.56	350	P	P	02 51 30.1	-0.4
Z35A	Perchaven, San	73.16	340	P	P	02 51 33.4	-0.6
V48A	Smith Brothers	73.21	349	P	P	02 51 34.4	+0.1
WVT	Waverly	73.75	348	P	P	02 51 37.5	0.0
WVT				IAmb	IAmb	02 51 39.7	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	74.31	332	P	P	02 51 39.8	-1.1
MNTX				IAmb	IAmb	02 51 44.2	
	comp=Z,6.0nm,1.1s						
319A	Douglas	75.56	329	P	P	02 51 47.9	-0.4
319A				IAmb	IAmb	02 51 53.1	
	comp=Z,7.0nm,1.1s						
AMTX	Amarillo	75.93	337	P	P	02 51 49.8	-0.4
AMTX				IAmb	IAmb	02 51 53.9	
	comp=Z,7.9nm,0.9s						
CCM	Cathedral Cave	76.24	346	P	P	02 51 51.6	-0.2
CCM				IAmb	IAmb	02 51 54.3	
	comp=Z,8.5nm,0.8s						
TUC	Tucson	77.00	328	P	P	02 51 56.0	-0.3
LENM	Lemitar	77.11	332	P	P	02 51 56.8	-0.2
DBIC	Dimbokro	77.39	72	P	P	02 52 01.1	+2.2
	comp=Z,2.9nm,0.8s,baz=183,slow=6.8,SNR=4.2						
PIX	Pinacate	77.52	326	P	P	02 51 57.8	-1.3
PIX				IAmb	IAmb	02 52 02.9	
	comp=Z,5.0nm,1.1s						
214A	Organ Pipe Nat	77.56	327	P	P	02 51 58.1	-1.3
214A				IAmb	IAmb	02 52 04.6	
	comp=Z,4.2nm,1.1s						
ANMO	Albuquerque	77.62	333	P	P	02 51 59.1	-0.8
ANMO				IAmb	IAmb	02 52 04.5	
	comp=Z,4.1nm,0.9s						
P40A	Paris	77.82	346	P	P	02 52 00.5	-0.1
X16A	Lo Mia Camp, P	79.09	329	P	P	02 52 07.7	-0.4
X16A				IAmb	IAmb	02 52 13.1	
	comp=Z,4.0nm,1.1s						
N38A	Joes South For	79.28	345	P	P	02 52 08.4	-0.3
SDCO	Great Sand Dun	79.79	335	P	P	02 52 11.3	-0.6
MVCO	Mesa Verde	80.38	333	P	P	02 52 14.4	-0.7
U15A	North Rim	81.17	329	P	P	02 52 18.4	-0.9
SMCO	Snowmass	81.58	334	P	P	02 52 21.1	-0.6
SMCO				IAmb	IAmb	02 52 26.3	
	comp=Z,5.6nm,1.1s						
ISCO	Idaho Springs	81.69	336	P	P	02 52 21.4	-0.7
KNB	Kanab	81.90	329	P	P	02 52 22.6	-0.5
K31A	O'Neill	82.29	342	P	P	02 52 24.5	-0.3
LBTB	Lobatse	82.37	115	P	P	02 52 23.7	-2.3
LBTB				IAmb	IAmb	02 52 34.8	
	comp=Z,8.4nm,0.7s						
CCUT	Cedar City	82.58	329	P	P	02 52 26.1	-0.6
ECSD	EROS Data Cent	82.82	344	P	P	02 52 27.3	-0.2
ECSD				IAmb	IAmb	02 52 30.6	
	comp=Z,9.0nm,0.9s						
MVU	Marysvale	82.93	331	P	P	02 52 27.8	-0.7
KOWA	Kowa	83.06	66	P	P	02 52 27.8	-1.6
KOWA				IAmb	IAmb	02 52 46.4	
	comp=Z,3.2nm,0.9s						
PRN	Pahroc Range	83.16	328	P	P	02 52 29.1	-0.5
PRN				IAmb	IAmb	02 52 35.0	
	comp=Z,6.1nm,1.1s						
P17A	Butcher Ranch,	83.21	332	P	P	02 52 29.0	-0.8
PSUT	Pine Spring	83.62	329	P	P	02 52 31.5	-0.6
RDMU	Red Mountain	83.74	333	P	P	02 52 32.3	-0.3
MPU	Maple Canyon	84.02	332	P	P	02 52 33.4	-0.6
R11A	Troy Canyon, C	84.18	328	P	P	02 52 33.9	-0.9
R11A				IAmb	IAmb	02 52 39.4	
	comp=Z,2.9nm,1.1s						
SPR3	Spring Creek 3	84.21	329	P	P	02 52 34.4	-0.8
SPR3				IAmb	IAmb	02 52 38.8	
	comp=Z,3.1nm,1.0s						
RSSD	Black Hills	85.12	339	P	P	02 52 39.2	-0.3
RSSD				IAmb	IAmb	02 52 42.8	
	comp=Z,5.7nm,0.9s						
HWUT	Hardware Ranch	85.37	333	P	P	02 52 39.6	-1.2
HWUT				IAmb	IAmb	02 52 45.4	
	comp=Z,3.4nm,0.9s						
NVAR	Mina Array Bea	85.42	326	P	P	02 52 44.6	+3.4
	comp=Z,0.7nm,0.7s,baz=149,slow=6.1,SNR=7.6						
BW06	Boulder Array	85.67	334	P	P	02 52 41.7	-0.6
PD31	Pinedale Array	85.67	334	P	P	02 52 41.6	-0.7
PDAR	Pinedale Array	85.67	334	P	P	02 52 45.1	+2.8
	comp=Z,0.9nm,0.8s,baz=142,slow=5.1,SNR=8.2						
PDAR	Pinedale Array	85.67	334	P	P	02 52 41.8	-0.5
TORD	Torodi Ar. Bea	86.47	71	P	P	02 52 47.9	+1.3
	comp=Z,0.5nm,0.6s,baz=249,slow=4.0,SNR=1.1						
ULM	Lac du Bonnet	88.87	346	P	P	02 52 58.9	+1.6
	comp=Z,1.9nm,0.8s,baz=169,slow=5.2,SNR=3.7						
GERES	GERESS Array B	115.11	47	PKP	PKiKP	02 58 45.5	+1.1
	comp=Z,0.4nm,0.7s,baz=201,slow=5.2,SNR=2.2						
WRA	Warramunga Arr	117.63	210	PKP	PKiKP	02 58 50.7	+0.5
	comp=Z,0.5nm,0.8s,baz=171,slow=1.4,SNR=3.1						
BRTR	Keskin Array B	124.39	63	PKP	PKiKP	02 59 02.9	-0.1
	comp=Z,0.4nm,0.8s,baz=289,slow=4.4,SNR=2.3						
ZALV	Zalesovo Beam	157.34	34	PKP	PKPdf	02 59 59.7	+0.8
	comp=Z,0.8nm,0.6s,baz=242,slow=3.1,SNR=5.4						
MKAR	Makanchi Array	159.62	53	PKP	PKPdf	03 00 03.8	+1.8
	comp=Z,1.3nm,1.1s,baz=288,slow=1.2,SNR=5.4						
MKAR				PKPab	PKPab	03 00 41.6	+1.1
	comp=Z,0.7nm,0.8s,baz=283,slow=3.9,SNR=5.3						

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*IDC **27** 03:10:15.0±1.1, 2°.47S×139°.97E, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.7/23, mbtmp3.8/4, ML4.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/30, Error ellipse: s-maj=25.6km s-min=10.0km az=3.0*

ISC 27 03:10:18.2±1.0, **2°.5S**±0°.1×**140°.2E**±0°.2, **h25**^{km}, **n8,** σ**0^{s}.71**/7, **mb3.8**/3, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.53	91	Pg	Pn	03 10 30.3	+0.2
	172nm,0.3s,baz=243,slow=11,SNR=436						
JAY				Lg	Lg	03 10 38.6	
	361nm,0.3s,baz=288,slow=20,SNR=17						
PMG	Port Moresby	9.76	135	LR	LR	03 17 35.0	
	comp=Z,79nm,20.6s,baz=260,slow=44						
WRA	Warramunga Arr	18.25	198	P	P	03 14 30.0	0.0
	0.8nm,0.3s,baz=18,slow=12,SNR=32						
WRA				S	Sn	03 17 42.2	-11
	0.0nm,0.3s,baz=20,slow=23,SNR=1.7						
HNR	Honiara	20.82	110	LR	LR	03 23 39.7	
	comp=Z,74nm,19.7s,baz=350,slow=38						
ASAR	Alice Springs	21.90	196	P	P	03 15 08.8	-0.8
	1.0nm,0.6s,baz=28,slow=9.4,SNR=24						
ASAR				S	S	03 19 11.2	+0.7
	0.3nm,0.6s,baz=17,slow=26,SNR=2.0						
MKAR	Makanchi Array	70.53	322	P	P	03 21 31.6	+0.6
	0.7nm,0.6s,baz=110,slow=7.8,SNR=9.3						
ILAR	Eielson Array	85.04	24	P	P	03 22 51.1	-0.3
	0.6nm,0.9s,baz=255,slow=4.6,SNR=4.5						
DBIC	Dimbokro	144.91	278	PKP	PKPdf	03 29 53.7	-0.6
	1.6nm,0.5s,baz=82,slow=4.5,SNR=6.6						

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*INMG **27** 03:21:41.7±1.0, 36°.75N×7°.13W, h31^{km}±7^{km}, ML1.5, Error ellipse: s-maj=3.6km s-min=2.8km az=13.0*

*MDD **27** 03:21:41.2±0.9, 36°.75N×7°.13W, h41^{km}±24^{km}, mb3.8/2, Error ellipse: s-maj=9.4km s-min=5.1km az=8.0, PRXIMO*

*IGIL **27** 03:21:42.1, 36°.78N×7°.16W, h27^{km}, ML1.3*

ISC 27 03:21:40.1±1.5, **36°.76N**±0°.06×**7°.13W**±0°.03, **h35**^{km}±7^{km}, **n35,** σ**0^{s}.81**/65, **4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVAQ	Vaqueiros	0.80	324	P	Pb	03 21 55.6	-0.1
PVAQ				S	Sb	03 22 06.0	-0.3
	9.9nm,0.2s						
PVAQ	Vaqueiros	0.80	324	⇓iP	Pb	03 21 55.6	-0.1
PVAQ				eS	Sb	03 22 06.0	-0.3
PVAQ				A	A	03 22 06.6	
	9.9nm,0.2s						
PBDV	Barranco-do-Ve	0.81	307	P	Pb	03 21 55.7	-0.1
PBDV				S	Sb	03 22 06.1	-0.4
	5.9nm,0.3s						
PBDV	Barranco-do-Ve	0.81	307	⇓iP	Pb	03 21 55.7	-0.1
PBDV				eS	Sb	03 22 06.1	-0.4
PBDV				A	A	03 22 06.7	
	5.9nm,0.3s						
EGRO	El Granado	0.83	340	⇓P	Pb	03 21 56.0	-0.1
	3.7nm,0.1s,SNR=18						
EGRO				S	Sb	03 22 06.3	-0.7
	0.8nm,0.3s,SNR=7.9						
ESPR	Espera	1.02	83	P	Pn	03 21 58.8	+0.9
	0.9nm,0.1s,SNR=13						
ESPR				S	Sn	03 22 11.4	+0.3
	44nm,0.3s,SNR=5.0						
EMIN	Mina Concepcio	1.07	20	P	Pn	03 21 59.0	+0.4
	0.4nm,0.1s,SNR=7.7						
EMIN				S	Sn	03 22 11.7	-0.6
	1.2nm,0.2s,SNR=6.6						
PCVE	Castro Verde	1.14	320	P	Pn	03 22 00.1	+0.6
PCVE				S	Sn	03 22 14.3	+0.4
	2.7nm,0.2s						
PCVE	Castro Verde	1.14	320	eP	Pn	03 22 00.1	+0.6
PCVE				eS	Sn	03 22 14.3	+0.4
PCVE				A	A	03 22 15.0	
	2.7nm,0.2s						
MORF	Marmelete	1.34	295	eS	Sn	03 22 18.4	-0.6
MORF				AML	AML	03 22 20.0	
	comp=N,5.0nm,0.2s						
MORF	Marmelete	1.34	295	S	Sn	03 22 18.4	-0.6
	comp=N,5.0nm,0.2s						
MORF	Marmelete	1.34	295	eS	Sn	03 22 18.6	-0.3
MORF				A	A	03 22 19.0	
	comp=N,4.4nm,0.2s						
MESJ	Messejana	1.39	321	eP	Pn	03 22 03.7	+0.7
MESJ				eS	Sn	03 22 19.7	-0.4
MESJ				AML	AML	03 22 21.7	
	comp=N,3.4nm,0.1s						
MESJ	Messejana	1.39	321	P	Pn	03 22 03.7	+0.7
MESJ				S	Sn	03 22 19.7	-0.4
	comp=N,3.4nm,0.1s						
MESJ	Messejana	1.39	321	⇓iP	Pn	03 22 03.7	+0.7
MESJ				eS	Sn	03 22 20.0	-0.1
MESJ				A	A	03 22 24.6	
	comp=N,2.3nm,0.4s						
PBEJ	Beja	1.40	335	P	Pn	03 22 03.8	+0.7
PBEJ				S	Sn	03 22 20.2	-0.2
	comp=N,1.4nm,0.2s						
PBEJ	Beja	1.40	335	eP	Pn	03 22 03.8	+0.7
PBEJ				eS	Sn	03 22 20.2	-0.2
PBEJ				A	A	03 22 20.5	
	comp=N,2.9nm,0.2s						
PFVI	Vila Bisbo	1.41	286	P	Pn	03 22 02.5	-0.9
	comp=N,2.6nm,0.2s,SNR=7.9						
PFVI				S	Sn	03 22 20.1	-0.7
	comp=N,5.0nm,0.2s,SNR=7.9						
PBAR	Barrancos	1.42	3	P	Pn	03 22 04.1	+0.7
PBAR				S	Sn	03 22 20.8	0.0
	comp=N,2.1nm,0.6s						
PBAR	Barrancos	1.42	3	eP	Pn	03 22 04.1	+0.7
PBAR				eS	Sn	03 22 20.8	0.0
PBAR				A	A	03 22 25.8	
	comp=N,2.1nm,0.6s						
PTEO	Sao Teotonio	1.50	302	P	Pn	03 22 05.5	+1.0
PTEO				S	Sn	03 22 22.8	-0.1
	comp=N,2.1nm,0.6s						
PTEO	Sao Teotonio	1.50	302	eP	Pn	03 22 05.5	+1.0
PTEO				eS	Sn	03 22 22.8	-0.1
PTEO				A	A	03 22 30.2	
	comp=N,4.2nm,0.6s						
PNCL	Nicolau / Gran	1.75	321	P	Pn	03 22 08.7	+0.7
PNCL				S	Sn	03 22 28.6	-0.5
	comp=N,2.5nm,0.2s						
PNCL	Nicolau / Gran	1.75	321	eP	Pn	03 22 08.7	+0.7
PNCL				eS	Sn	03 22 28.6	-0.5
PNCL				A	A	03 22 30.0	
	comp=N,2.5nm,0.2s						
ECAB	El Cabril	1.89	45	P	Pb	03 22 15.2	+1.2
	comp=N,0.2nm,0.2s,SNR=6.0						
ECAB				S	Sn	03 22 30.7	-1.9
	comp=N,0.0nm,0.0s						
EVO	Evora	1.91	339	P	Pn	03 22 10.9	+0.8
EVO				S	Sn	03 22 33.2	+0.3
	comp=N,4.1nm,0.3s						
EVO	Evora	1.91	339	ePn	Pn	03 22 10.9	+0.8
EVO				eSn	Sn	03 22 33.2	+0.3
EVO				A	A	03 22 33.6	
	comp=N,4.1nm,0.3s						
PESTR	Estremoz	2.14	350	ePn	Pn	03 22 13.8	+0.5
PESTR				eSn	Sn	03 22 37.7	-1.0
PESTR				A	A	03 22 58.6	
	comp=N,1.7nm,0.6s						
PMTG	Montargil	2.47	340	P	Pn	03 22 18.5	+0.7
PMTG				S	Sn	03 22 46.5	-0.2
	comp=N,2.8nm,0.7s						
PMTG	Montargil	2.47	340	ePn	Pn	03 22 18.5	+0.7
PMTG				eSn	Sn	03 22 46.5	-0.2
PMTG				A	A	03 22 53.1	
	comp=N,2.8nm,0.7s						
EADA	Adamuz	2.47	54	S	Sn	03 22 45.8	-1.0
	comp=N,1.1nm,0.3s,SNR=7.9						
PMRV	Marv??o	2.67	356	P	Pn	03 22 21.4	+0.7
PMRV				S	Sn	03 22 51.8	-0.1
	comp=N,2.0nm,0.8s						
PMRV	Marv??o	2.67	356	ePn	Pn	03 22 21.4	+0.7
PMRV				eSn	Sn	03 22 51.8	-0.1
PMRV				A	A	03 23 07.3	
	comp=N,2.0nm,0.8s						
EPLA	Plasencia	3.40	14	P	Pn	03 22 31.5	+0.8
	comp=N,0.2nm,0.1s,SNR=7.9						
EPLA				S	Sn	03 23 08.5	-1.3
	comp=N,0.5nm,0.2s,SNR=7.9						
PAB	San Pablo	3.54	37	S	Sn	03 23 09.6	-3.8
	comp=N,0.4nm,0.4s,SNR=7.9						

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*TAP **27** 03:50:10.5, 25°.19N×122°.65E, h217^{km}, ML3.2, C*

*JMA **27** 03:50:12.3±0.4, 25°.22N×122°.55E, h199^{km}±5^{km}, M3.0*

ISC 27 03:50:09.8±2.7, **25°.2N**±0°.1×**122°.52E**±0°.04, **h218**^{km}±17^{km}, **n37,** σ**1^{s}.16**/64, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.52	251	eP	Pn	03 50 39.2	+0.1
	baz=244						
TIPB	Shuangxi	0.67	252	iP	Pn	03 50 40.3	+0.6
	baz=262						
TIPB				S	S	03 51 02.2	-0.7
	baz=262						
NWF	Wu-fen Shan	0.68	261	eS	S	03 51 02.1	-1.1
	baz=260						
NWLT	Wulai	1.01	247	eP	Pn	03 50 42.5	+0.9
	baz=246						
NWLT				S	S	03 51 04.7	-1.4
	baz=246						
ENTT	Nioudou	1.02	239	eP	Pn	03 50 42.8	+1.1
	baz=240						
ENTT				S	S	03 51 06.0	-0.3
	baz=240						
ENA	Nanau	1.03	224	iP	Pn	03 50 42.6	+0.9
	baz=226						
ENA				S	S	03 51 06.0	-0.5
	baz=226						
NDT	Datong Townshi	1.08	238	eP	Pn	03 50 43.2	+1.2
	baz=237						
NDT				eS	S	03 51 06.7	-0.3
	baz=237						
YHNB	Yeheng	1.16	244	eP	Pn	03 50 43.4	+0.7
	baz=245						
YHNB				S	S	03 51 06.8	-1.3
	baz=245						
NSK	Sanguang	1.17	245	P	Pn	03 50 43.4	+0.7
	baz=245						
NSK				eS	S	03 51 06.7	-1.5
	baz=245						
NNS	Nan Shan	1.28	235	eP	Pn	03 50 44.6	+1.0
	baz=242						
NNS				S	S	03 51 09.4	-0.3
	baz=242						
NNSB	Datong	1.28	234	eP	Pn	03 50 43.8	+0.2
	baz=241						
NNSB				eS	S	03 51 08.3	-1.3
	baz=241						
NNSH	Datong	1.28	234	P	Pn	03 50 44.0	+0.4

	baz=242						
NNSH				S	S	03 51 08.8	-0.8
	baz=242						
NACB	**Ninganchiao**	1.31	220	eP	Pn	03 50 44.2	+0.5
	baz=231						
NACB				eS	S	03 51 09.1	-0.8
	baz=231						
ETLH	**Xiulin Townshi**	1.35	225	eP	Pn	03 50 45.1	+1.0
	baz=227						
ETLH				S	S	03 51 10.5	-0.2
	baz=227						
IRIF	**Iriomote-Funau**	1.38	127	P	Pn	03 50 45.2	+1.0
IRIF				S	S	03 51 10.4	-0.4
TWD	**Chiawan**	1.38	218	P	Pn	03 50 45.4	+1.1
	baz=215						
TWD				eS	S	03 51 09.9	-0.9
	baz=215						
LIOB	**Emei**	1.47	249	P	Pn	03 50 45.7	+0.7
	baz=245						
LIOB				S	S	03 51 11.7	-0.4
	baz=245						
NSTT	**Nanjuang**	1.49	249	eS	S	03 51 11.4	-0.8
	baz=244						
FUSS	**Fushou**	1.49	232	P	Pn	03 50 46.9	+1.5
	baz=227						
FUSS				S	S	03 51 12.6	-0.2
	baz=227						
WHF	**Hehuan Shan**	1.54	228	eP	Pn	03 50 47.4	+1.4
	baz=226						
WHF				S	S	03 51 13.3	-0.7
	baz=226						
TDCB	**Techi**	1.55	234	eP	Pn	03 50 47.3	+1.6
	baz=241						
TDCB				eS	S	03 51 13.5	0.0
	baz=241						
HATJ	**Hateruma jima**	1.61	134	P	Pn	03 50 47.9	+1.8
HATJ				S	S	03 51 15.0	+0.8
JKRS	**Kuro-shima**	1.64	124	P	Pn	03 50 47.9	+1.5
JKRS				S	S	03 51 14.6	-0.1
JIJ	**Ishigaki jima**	1.68	119	P	Pn	03 50 47.6	+0.9
JIJ				S	S	03 51 14.0	-1.2
WHP	**Taichung City**	1.69	238	eP	Pn	03 50 48.5	+1.5
	baz=244						
WHP				eS	S	03 51 15.6	-0.1
	baz=244						
JISG	**Ishigakijimahi**	1.73	110	P	Pn	03 50 47.9	+0.8
JISG				S	S	03 51 15.4	-0.5
HGSD	**Ruisui**	1.96	211	eS	S	03 51 17.8	-2.1
	baz=211						
TYC	**Yuchr**	1.98	230	eS	S	03 51 18.8	-1.5
	baz=232						
SSLB	**Suanglung**	1.99	226	eP	Pn	03 50 50.3	+0.6
	baz=236						
SSLB				S	S	03 51 20.2	-0.3
	baz=236						
JTJ	**Tarama**	2.05	105	P	Pn	03 50 51.5	+1.3
JTJ				S	S	03 51 21.3	-0.1
YULB	**Yu-li**	2.10	212	eP	Pn	03 50 50.2	-0.6
	baz=216						
YULB				eS	S	03 51 18.9	-3.6
	baz=216						
CHN5	**Tsauling**	2.31	227	eP	Pn	03 50 54.3	+1.3
	baz=224						
CHN5				eS	S	03 51 25.8	-0.5
	baz=224						
JIRB	**Irabujima**	2.43	98	eS	S	03 51 27.3	-1.1
JIKM	**Ikemajima**	2.48	95	P	Pn	03 50 54.7	0.0
JMJ	**Miyako jima 2**	2.54	98	eS	S	03 51 27.0	-3.5
	baz=100						
TPUB	**Ta-pu**	2.55	223	eS	S	03 51 30.1	-0.7
	baz=225						
JMJ2	**Miyako jima3**	2.58	99	eS	S	03 51 30.5	-0.9

IDC ***27*** *03:52:42.6±1.9, 60°.36N×151°.45W, h70^{km}±36^{km}, mb3.4/1, mb1 3.7/5, mb1mx3.1/57, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=46.7km s-min=14.2km az=116.0*

NEIC ***27*** *03:52:43.2±0.9, 60°.43N±0°.03×151°.63W±0°.04, h71^{km}±7^{km}, Error ellipse: s-maj=4.7km s-min=2.8km az=200.0*

ANF ***27*** *03:52:43.5±0.4, 60°.41N×151°.45W, h76^{km}±5^{km}, ML3.5/11, Error ellipse: s-maj=5.9km s-min=3.7km az=113.0*

AEIC ***27*** *03:52:43.8±0.9, 60°.42N±0°.03×151°.61W±0°.06, h69^{km}±6^{km}, ML3.0/94, ML3.3/73(NEIC), Error ellipse: s-maj=4.8km s-min=3.9km az=216.0*

ISC 27 03:52:42.8±1.0, **60°.42N**±0°.03×**151°.61W**±0°.03, **h78**^{km}±7^{km}, **n123,** σ**0^{s}75**/131, **Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPN	**Captain Cook N**	0.42	32	P	Pn	03 52 56.6	+1.0
	baz=213,SNR=9.2						
CAPN				S	Sn	03 53 05.6	+0.4
	baz=213						
CAPN	**Captain Cook N**	0.42	32		Pn	03 52 56.6	+1.0
REF	**Redoubt East F**	0.55	278		Pn	03 52 56.2	-0.8
REF					Sn	03 53 06.4	-1.1
DFR	**Drift River**	0.56	289		Pn	03 52 55.4	-1.6
DFR					Sn	03 53 06.0	-1.6
RSO	**Redoubt South**	0.57	275		Pn	03 52 56.5	-0.7
RED	**Redoubt Volcan**	0.58	271		Pn	03 52 56.3	-0.8
RED					Sn	03 53 06.9	-0.9
NCT	**North Crescent**	0.67	283		Pn	03 52 57.5	-0.6
SLKM	**Skilak Lake**	0.69	82		Pn	03 52 57.8	-0.5
BRLK	**Bradley Lake**	0.75	151		Pn	03 52 58.8	-0.1
BRLK					Sn	03 53 11.0	+0.2
BRLK	**Bradley Lake**	0.75	151	IAML		03 53 12.1	
	comp=N,780nm,0.4s						
BRLK				IAML		03 53 12.2	
	comp=E,1μm,0.2s						
HOM	**Homer**	0.76	181	P	Pn	03 52 59.3	+0.3
	baz=1.5,SNR=11						
HOM				S	Sn	03 53 11.6	+0.7
	baz=1.5						
HOM	**Homer**	0.76	181		Pn	03 52 59.2	+0.3
BRSE	**Bradley Lake S**	0.81	147		Pn	03 52 59.5	0.0
BRSE					Sn	03 53 11.8	-0.1
IVE	**Iliamna Volcan**	0.81	241		Pn	03 52 59.3	-0.3
SPCN	**Chakachatna No**	0.86	341		Pn	03 52 59.9	-0.2
ILS	**Iliamna Low So**	0.86	238		Pn	03 52 59.9	-0.3
SPCP	**Crater Peak Br**	0.89	343		Pn	03 53 00.4	-0.2
SPCG	**Spurr Capps Gl**	0.90	347		Pn	03 53 00.4	-0.2
CNPM	**China Poot**	0.92	168		Pn	03 53 00.8	+0.1
CNPM					Sn	03 53 14.1	0.0
CNPM	**China Poot**	0.92	168	IAML		03 53 15.1	
	comp=N,660nm,0.4s						
SPBG	**Spurr Blockage**	0.92	337		Pn	03 52 59.8	-1.1
O22K	**Cooper Landing**	0.94	85	P	Pn	03 53 00.6	-0.3
	baz=267,SNR=52						
O22K				S	Sn	03 53 13.9	-0.5
	baz=267						
O22K	**Cooper Landing**	0.94	85		Pn	03 53 00.8	-0.1
O22K					Sn	03 53 14.3	-0.2
FIS	**Fire Island**	1.00	43		Pn	03 53 02.6	+1.0
STLK	**Strandline Lak**	1.09	354		Pn	03 53 02.8	-0.1
OPT	**Oil Point**	1.12	227		Pn	03 53 03.5	+0.3
SEW	**Seward**	1.12	105		Pn	03 53 02.7	-0.4
SEW					Sn	03 53 18.0	-0.3
SUA	**Susitna One**	1.13	21		Pn	03 53 03.3	-0.1
RC01	**Rabbit Creek A**	1.14	53	P	Pn	03 53 03.2	-0.2
	baz=235,SNR=26						
RC01				S	Sn	03 53 18.6	-0.3
	baz=235						
RC01	**Rabbit Creek A**	1.14	53		Pn	03 53 03.2	-0.2
AUCH	**Augustine Cone**	1.41	222		Pn	03 53 07.3	+0.5
SKT	**Skwentna**	1.57	1		Pn	03 53 09.1	+0.2
SKT					Sn	03 53 29.9	+1.2
SKT	**Skwentna**	1.57	1	IAML		03 53 30.4	
	comp=E,235nm,0.7s						
PWL	**Port Wells**	1.67	73		Pn	03 53 09.8	-0.5
PMR	**Palmer**	1.69	45		Pn	03 53 10.2	-0.2
KNK	**Knik Glacier**	1.83	56		Pn	03 53 12.3	-0.1
KNK					Sn	03 53 34.0	-0.9
GHO	**Glory Hole Cre**	1.88	43		Pn	03 53 12.9	-0.2
GHO	**Glory Hole Cre**	1.88	43	IAML		03 53 37.0	
	comp=E,250nm,0.6s						
GHO				IAML		03 53 43.8	
	comp=N,244nm,0.8s						
CUT	**Chulitna**	2.10	17	P	Pn	03 53 16.1	+0.3
	baz=199,SNR=13						
CUT				S	Sn	03 53 41.2	+0.2
	baz=199						
CUT	**Chulitna**	2.10	17		Pn	03 53 16.7	+0.9
SML	**Sawmill**	2.12	47		Pn	03 53 16.0	-0.1
SML					Sn	03 53 40.9	-0.7
SML	**Sawmill**	2.12	47	IAML		03 53 41.4	
	comp=E,273nm,0.5s						
SML				IAML		03 53 41.7	
	comp=N,183nm,0.8s						
KARR	**Katmai Rainbow**	2.49	221		Pn	03 53 22.7	+1.5
PPLA	**Purkeypile**	2.50	354		Pn	03 53 21.7	+0.3
SCM	**Sheep Creek Mo**	2.52	54		Pn	03 53 21.5	-0.1
SCM	**Sheep Creek Mo**	2.52	54	IAML		03 54 04.6	
	comp=N,165nm,0.8s						
SCM				IAML		03 54 07.3	
	comp=E,103nm,0.8s						
HIN	**Hinchinbrook I**	2.53	88		Pn	03 53 20.5	-1.2
HIN					Sn	03 53 50.2	-1.4
HIN	**Hinchinbrook I**	2.53	88	IAML		03 53 50.8	
	comp=N,96nm,1.5s						
HIN				IAML		03 53 51.0	
	comp=E,127nm,0.7s						
KDAK	**Kodiak Island**	2.69	191	P	Pn	03 53 23.0	-0.8
	comp=E,1.4nm,0.3s,baz=16,slow=7.4,SNR=89						
KDAK				S	Sn	03 53 54.5	-0.9
	comp=E,4.5nm,0.3s,baz=348,slow=20,SNR=8.3						
KDAK	**Kodiak Island**	2.69	191		Pn	03 53 23.4	-0.5
KDAK	**Kodiak Island**	2.69	191	IAML		03 54 07.6	
	comp=E,72nm,0.7s						
KDAK				IAML		03 54 07.8	
	comp=E,82nm,1.0s						
HUR	**Hurricane**	2.73	19		Pn	03 53 25.4	+0.9
WAT7	**Susitna Watana**	2.76	27		Pn	03 53 25.4	+0.5
WAT7					Sn	03 53 56.8	-0.4
WAT1	**Susitna Watana**	2.83	30		Pn	03 53 26.0	+0.3
WAT6	**Susitna Watana**	2.85	39		Pn	03 53 26.6	+0.5
WAT2	**Susitna Watana**	2.93	28		Pn	03 53 27.5	+0.3
KLU	**Klutina**	2.98	66		Pn	03 53 27.3	-0.4
KLU	**Klutina**	2.98	66	IAML		03 54 04.6	
	comp=E,98nm,0.4s						
TRF	**Thorofare Moun**	3.11	11		Pn	03 53 29.6	0.0
TRF	**Thorofare Moun**	3.11	11	IAML		03 54 27.3	
	comp=N,61nm,1.0s						
TRF				IAML		03 54 28.7	
	comp=E,61nm,1.3s						
M24K	**Tolsona, Glenn**	3.12	55	P	Pn	03 53 30.2	+0.4
	baz=240,SNR=27						
M24K				S	Sn	03 54 05.8	-0.1
	baz=240						
M24K	**Tolsona, Glenn**	3.12	55		Pn	03 53 30.2	+0.4
M24K	**Tolsona, Glenn**	3.12	55	IAML		03 54 21.0	
	comp=E,109nm,0.7s						
M24K				IAML		03 54 25.1	
	comp=N,93nm,1.8s						
KTH	**Kantishna Hill**	3.16	6		Pn	03 53 30.9	+0.6
KTH	**Kantishna Hill**	3.16	6	IAML		03 54 33.6	
	comp=N,55nm,0.9s						
TT01	**Tatalina**	3.27	322		Pn	03 53 31.7	+0.1
RND	**Reindeer**	3.27	22		Pn	03 53 32.1	+0.4
TTA	**Tatalina**	3.28	322		Pn	03 53 31.8	-0.1
OHAK	**Old Harbor**	3.32	196		Pn	03 53 31.6	-0.7
OHAK				IAML		03 55 29.0	
	comp=N,74nm,2.7s						
DHY	**Denali Highway**	3.34	35		Pn	03 53 33.5	+0.7
DHY	**Denali Highway**	3.34	35	IAML		03 54 14.7	
	comp=N,43nm,0.5s						
PS11	**TAPS Pump St11**	3.40	58		Pn	03 53 33.9	+0.4
RAGM	**Ragged Mountai**	3.44	88	Pn	Pn	03 53 34.8	+0.8
RAGM					Sn	03 54 11.9	-1.8
MCK	**McKinley**	3.56	20	P	Pn	03 53 36.0	+0.4
	baz=202,SNR=13						
MCK				S	Sn	03 54 15.7	-0.7
	baz=202						
MCK	**McKinley**	3.56	20		Pn	03 53 36.1	+0.6
N25K	**Chitina, Valde**	3.62	68	P	Pn	03 53 36.0	-0.5
	baz=254,SNR=5.7						
N25K				S	Sn	03 54 16.2	-1.7
	baz=254						
N25K	**Chitina, Valde**	3.62	68		Pn	03 53 36.0	-0.5
N25K	**Chitina, Valde**	3.62	68	IAML		03 54 18.1	
	comp=E,44nm,0.5s						
N25K				IAML		03 54 19.1	
	comp=N,45nm,0.5s						
BPAW	**Bear Paw Mtn.**	3.71	4		Pn	03 53 38.2	+0.6
PAX	**Paxson**	3.89	46		Pn	03 53 41.0	+0.8
BWN	**Browne**	3.90	14		Pn	03 53 40.9	+0.8
BWN	**Browne**	3.90	14	IAML		03 55 11.7	
	comp=N,45nm,2.1s						
BWN				IAML		03 55 27.6	
	comp=E,47nm,2.4s						
GLB	**Gilahina Butte**	3.94	72		Pn	03 53 40.1	-0.8
GLB	**Gilahina Butte**	3.94	72	IAML		03 54 47.4	
	comp=N,31nm,1.0s						
KHIT	**Khitrov Hills**	4.14	86		Pn	03 53 44.0	+0.4
NEA2	**Nenana**	4.35	15	P	Pn	03 53 46.5	+0.2
	baz=197,SNR=6.1						
NEA2	**Nenana**	4.35	15		Pn	03 53 46.8	+0.5
WRH	**Wood River Hil**	4.38	20		Pn	03 53 47.4	+0.6
MENT	**Mentasta**	4.53	53		Pn	03 53 47.9	-1.0
MENT				IAML		03 54 58.0	
	comp=N,24nm,0.6s						
HDA	**Harding Lake**	4.55	26	P	Pn	03 53 49.8	+0.7
	baz=210,SNR=56						
HDA				S	Sn	03 54 38.6	-2.0
	baz=210						
HDA				S	Sn	03 54 38.6	-2.0
	baz=210						
HDA	**Harding Lake**	4.55	26		Pn	03 53 49.7	+0.7
HDA	**Harding Lake**	4.55	26	IAML		03 54 41.9	
	comp=E,23nm,0.8s						
HDA				IAML		03 54 42.5	
	comp=N,27nm,0.5s						
KIAG	**Kiagna River**	4.58	80		Pn	03 53 49.2	-0.4
BALM	**Baldy**	4.59	78		Pn	03 53 49.5	-0.2
BALM	**Baldy**	4.59	78	IAML		03 54 41.0	
	comp=N,17nm,0.7s						
BALM				IAML		03 54 45.7	
	comp=E,18nm,1.1s						
CCB	**Clear Creek Bu**	4.59	21		Pn	03 53 50.2	+0.6
RIDG	**Independent Ri**	4.61	41		Pn	03 53 50.9	+1.0
RIDG	**Independent Ri**	4.61	41	IAML		03 54 44.0	
	comp=N,30nm,0.6s						
PS08	**TAPS Pump Stn8**	4.70	26		Pn	03 53 51.7	+0.7
TCOL	**CIGO, UAF Yank**	4.79	20	P	Pn	03 53 53.1	+0.8
	baz=203,SNR=18						
TCOL	**CIGO, UAF Yank**	4.79	20	Pn	Pn	03 53 53.3	+0.9
COLA	**College**	4.80	20		Pn	03 53 53.1	+0.7
DOT	**Dot Lake**	4.81	44		Pn	03 53 52.9	+0.3
MDM	**Murphy Dome**	4.81	17		Pn	03 53 53.2	+0.5
IL31		4.88	24		Pn	03 53 54.0	+0.5
ILAR	**Eielson Array**	4.88	24	P	Pn	03 53 53.7	+0.1
	comp=N,6.7nm,0.3s,baz=208,slow=14,SNR=354						
ILAR				S	Sn	03 54 46.8	-1.9
	comp=N,1.2nm,0.3s,baz=206,slow=20,SNR=5.2						
YAH	**Yahtse**	4.89	86	Pn	Pn	03 53 55.1	+1.1
SCRK	**Sand Creek**	5.05	42	P	Pn	03 53 55.9	-0.1
	baz=228,SNR=17						
SCRK				S	Sn	03 54 50.5	-2.4
	baz=228						
SCRK	**Sand Creek**	5.05	42		Pn	03 53 55.9	-0.1
CTGM	**Chitina Glacie**	5.08	79	Pn	Pn	03 53 56.6	+0.1
CTGM				IAML		03 54 54.5	
	comp=E,12nm,3.1s						
CTGM				IAML		03 55 24.6	
	comp=N,19nm,4.4s						
POKR	**Poker Plat Res**	5.09	20	P	Pn	03 53 57.1	+0.6
	baz=204,SNR=22						
POKR	**Poker Plat Res**	5.09	20		Pn	03 53 57.3	+0.8
POKR				IAML		03 54 44.7	
	comp=N,12nm,4.3s						
POKR				IAML		03 55 19.8	
	comp=E,14nm,4.8s						
LOGN	**Logan Glacier**	5.24	81		Pn	03 53 58.9	+0.3
BC03		5.37	56		Pn	03 54 00.3	+0.1
BVCY	**Beaver Creek**	5.54	64		Pn	03 54 03.1	+0.6
IM03		5.67	351		Pn	03 54 04.4	+0.1
PRP	**Porcupine Dome**	5.82	26		Pn	03 54 07.2	+0.7
EGAK	**Eagle**	6.51	43		Pn	03 54 15.9	+0.2
DAWY	**Dawson**	6.78	52		Pn	03 54 19.7	+0.2
BM03	**Burnt Mountain**	7.67	21		Pn	03 54 31.3	-0.3
INK	**Inuvik**	11.08	37	P	Pn	03 55 17.8	-0.3
	comp=E,0.4nm,0.3s,baz=239,slow=15,SNR=8.3						
YKA	**Yellowknife Ar**	17.65	67	P	Pn	03 56 43.0	0.0
	comp=E,0.1nm,0.3s,baz=278,slow=11,SNR=16						
SONM	**Songino Array**	55.10	307	P	P	04 02 07.8	+1.3
	comp=E,0.6nm,0.6s,baz=34,slow=7.9,SNR=5.0						

IDC ***27*** *03:54:27.4±4.7, 51°.90N×173°.59W, h0^{km}, mb3.3/3, mb1 3.8/5, mb1mx3.3/56, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=99.5km s-min=43.9km az=119.0*

NEIC ***27*** *03:54:46.7±1.2, 52°.6N±0°.3×173°.7W±0°.1, h174^{km}±7^{km}, Error ellipse: s-maj=41.8km s-min=6.1km az=170.0*

AEIC ***27*** *03:54:47.6±1.6, 52°.3N±0°.2×173°.8W±0°.1, h168^{km}±4^{km}, ML3.2/16, Error ellipse: s-maj=29.5km s-min=10.0km az=165.0*

ISC 27 03:54:46.5±0.8, **53°.0N**±0°.1×**173°.77W**±0°.08, **h150**^{km}, **n17,** σ**1^{s}80**/22, **mb3.2**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOWE	**Korovin West**	0.68	205		Pn	03 55 11.0	+2.0
KOKL	**Mount Kliuchef**	0.71	202		Pn	03 55 10.9	+1.7
KOFP	**Korovin Flat P**	0.74	196		Pn	03 55 10.6	+1.3
KOFP					Sn	03 55 29.5	+2.9
ATKA	**Atka Island**	0.82	199		Pn	03 55 10.3	+0.5
ATKA					Sn	03 55 28.4	+0.9
GSMY	**Great Sitkin M**	1.68	237		Pn	03 55 18.6	+0.6
GSTD	**Great Sitkin T**	1.72	238		Pn	03 55 19.2	+0.7
GSTD					Sn	03 55 43.4	+0.4
ADK	**Adak**	2.10	239		Pn	03 55 23.1	+0.4
KIMD	**Kanaga Island**	2.45	241		Pn	03 55 27.6	+0.7
KIMD					Sn	03 55 57.8	-0.3
TASE	**Tanaga Southea**	2.85	248		Pn	03 55 32.4	+0.4
CESW	**Semis' Southwe**	4.22	258		Pn	03 55 50.7	+1.2
AMKA	**Amchitka**	4.56	252		Pn	03 55 54.3	+0.4
KDAK	**Kodiak Island**	12.95	60	Pn	Pn	03 57 42.5	-2.2
	0.3nm,0.3s,baz=254,slow=7.4,SNR=7.7						
KDAK				Sn	Sn	04 00 08.1	+0.5
	0.2nm,0.3s,baz=204,slow=19,SNR=1.8						
KDAK	**Kodiak Island**	12.95	60		Pn	03 57 48.4	+3.7
ILAR	**Eielson Array**	18.05	39	P	P	03 58 48.2	+2.3
	0.1nm,0.3s,baz=225,slow=10,SNR=5.2						
NVAR	**Mina Array Bea**	40.34	88	P	P	04 02 06.4	-3.0
	0.2nm,0.6s,baz=283,slow=8.2,SNR=2.3						
PDAR	**Pinedale Array**	42.90	77	P	P	04 02 28.7	-1.4
	0.4nm,0.7s,baz=339,slow=2.3,SNR=4.1						
TXAR	**Lajitas Array**	55.40	86	P	P	04 04 02.8	-2.3
	0.2nm,0.6s,baz=304,slow=6.4,SNR=4.3						

NEIC ***27*** *03:58:41.8±1.4, 8°.0S±0°.1×114°.17E±0°.08, h200^{km}±7^{km}, mb4.3/15, Error ellipse: s-maj=18.1km s-min=11.5km az=184.0*

DJA ***27*** *03:58:42.7±0.2, 8°S±3°×11°4E±°, h198^{km}±2^{km}, M4.3/23, mb4.4/22, mB4.8/8, MLv4.3/23, Mw(mB)4.1/8*

IDC ***27*** *03:58:44.0±0.8, 7°.80S×114°.31E, h214^{km}±6^{km}, mb3.9/16, mb1 4.0/20, mb1mx3.8/37, mbtmp4.4/20, Error ellipse: s-maj=17.5km s-min=8.4km az=53.0*

NOU ***27*** *03:59:04.2, 8°.99S×115°.02E, h318^{km}, mb4.2, Bali Region, Indonesia*

ISC 27 03:58:42.1±0.5, **8°.10S**±0°.05×**114°.19E**±0°.04, **h208**^{km}±4^{km}, **n119,** σ**1^{s}46**/143, **mb4.3**/51, **1C, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABJI	**Asem Bagus**	0.31	7	P	Pn	03 59 10.5	+0.9
ABJI				S	S	03 59 31.6	+0.5
JAGI	**Jajag, Banyuwa**	0.37	186		Pn	03 59 09.4	-0.3
JAGI				Sn	S	03 59 29.5	-1.9
JAGI	**Jajag, Banyuwa**	0.37	186	P	Pn	03 59 09.6	-0.1
JAGI				S	S	03 59 29.0	-2.4
SRBI	**Singaraja**	1.01	89	P	Pn	03 59 13.9	+1.2
SRBI				S	S	03 59 36.7	+0.4
KMMI	**Kalianget**	1.07	348	P	Pn	03 59 14.6	+1.4
KMMI				S	S	03 59 38.7	+1.4
DNP	**Denpasar**	1.16	120	P	Pn	03 59 14.5	+0.8
DNP				S	S	03 59 38.7	+0.6
TBJI	**Tambak Boyo**	2.65	299	P	Pn	03 59 29.5	+1.3
TWSI	**Taliwang, Sumb**	2.73	104	P	Pn	03 59 28.6	-0.5
TWSI				S	S	04 00 06.4	+1.1
PLAI	**Plampang**	3.62	102	P	Pn	03 59 40.4	+0.9
PLAI				S	S	04 00 24.4	+0.4
UGM	**Wanagama**	3.64	273	Pn	Pn	03 59 39.7	-0.2
UGM				Sn	S	04 00 24.2	-0.4
UGM	**Wanagama**	3.64	273	P	Pn	03 59 39.9	+0.1
UGM				S	S	04 00 21.5	-3.1
SMRI	**Semarang**	3.87	285	Pn	Pn	03 59 43.4	+0.9
SMRI	**Semarang**	3.87	285	P	Pn	03 59 42.3	-0.3
BBKI	**Banjar Baru**	4.66	8	P	Pn	03 59 54.2	+1.8
KBKI	**Kotabaru**	5.16	22	P	Pn	04 00 00.6	+1.8
	0.3nm111nm,0.7s						
KAPI	**Kappang**	6.32	61	P	Pn	04 00 15.7	+2.1
	0.4nm,0.3s,baz=259,slow=11,SNR=5.3						
KAPI	**Kappang**	6.32	61	Pn	Pn	04 00 13.5	-0.1
CISI	**Cisompet, Garu**	6.34	274	Pn	Pn	04 00 13.2	-0.8
CISI	**Cisompet, Garu**	6.34	274	P	Pn	04 00 13.9	-0.1
	2.2nm5μm97nm,0.7s						
BKSI	**Bulukumba**	6.50	65	P	Pn	04 00 17.2	+1.2
	0.1nm26nm,1.7s						
LEM	**Lembang**	6.64	281	P	Pn	04 00 20.6	+2.6
	6.7nm,0.3s,baz=74,slow=20,SNR=4.3						
LEM				S	S	04 01 35.2	+1.3
	5.4nm,0.3s,baz=159,slow=20,SNR=3.6						
LEM	**Lembang**	6.64	281	P	Pn	04 00 18.5	+0.5
	0.2nm1μm43nm,0.8s						
BASI	**Baing, Sumba**	6.64	109	P	Pn	04 00 17.3	-0.5
	0.6nm3μm79nm,0.8s						
BNSI	**Bone**	6.93	58	P	Pn	04 00 24.1	+2.5
	0.1nm20nm,1.2s						
EDFI	**Ende, Flores**	7.44	95	P	Pn	04 00 29.9	+1.6
	0.1nm395nm12nm,0.5s						
CBJI	**Citeko**	7.47	282	P	Pn	04 00 27.2	-1.4
DBJI	**Dramaga**	7.54	281	P	Pn	04 00 29.2	-0.3
XMIS	**Christmas Isla**	8.76	254	Pn	Pn	04 00 44.5	-0.7
BATI	**Baumata**	9.58	103	S	S	04 02 37.7	-5.8
	3.0nm,0.3s,baz=360,slow=14,SNR=2.0						
PPBI	**Pangkal Pinang**	9.96	306	P	Pn	04 01 01.0	+0.2
KASI	**Kota Agung**	9.96	284	P	Pn	04 00 59.9	-1.0
	29nm,0.8s						
SOEI	**Soe**	10.09	100	P	Pn	04 01 03.1	+0.5
	41nm,0.8s						
MPSI	**Mapaga**	10.13	34	P	Pn	04 01 04.0	+1.0
	17nm,0.8s						
SBUM	**Sibu**	10.67	349		Pn	04 01 08.5	-1.4
TOLI2	**Tolitoli**	11.27	36		Pn	04 01 18.6	+1.0
MRSI	**Marisa**	11.50	43	P	P	04 01 27.1	+1.3
MNAI	**Manna**	11.77	288	P	Pn	04 01 21.7	-2.3
	160nm,1.2s						
GTOI	**Gorontalo**	12.36	46	P	P	04 01 33.7	-1.6
	470nm47nm,1.0s						
SANI	**Sanana**	13.19	64	P	P	04 01 44.7	+0.1
	707nm55nm,0.8s						
PSA00	**Pilbara Seismi**	14.46	158		P	04 01 59.1	+0.5
FITZ	**Fitzroy Crossi**	14.92	133	P	P	04 02 05.7	+2.0
	0.6nm,0.3s,baz=320,slow=8.0,SNR=15						
FITZ				S	S	04 04 45.4	-3.2
	0.3nm,0.3s,baz=287,slow=17,SNR=2.2						
FITZ	**Fitzroy Crossi**	14.92	133		P	04 02 04.6	+0.9
MSAI	**Masohi**	15.40	73	P	P	04 02 12.4	+3.3
MTN	**Manton Dam**	17.31	107	P	Pn	04 02 31.8	+0.1
SWI	**Sorong**	18.46	68	P	Pn	04 02 44.4	-0.9
	61nm,1.0s						
SIJI	**Sorong**	18.46	68	P	P	04 02 43.4	+0.8
	1.9nm,0.3s,baz=282,slow=5.9,SNR=6.9						
FAKI	**Fak Fak**	18.69	75	P	P	04 02 44.2	-0.9
PSI	**Prapat**	18.69	305	P	P	04 02 46.0	+0.8
	0.9nm,0.3s,baz=180,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	22.78	123	P	P	04 03 28.7	+1.7
	3.7nm,0.5s,baz=299,slow=12,SNR=44						
WRA				pP	pwP	04 04 07.0	-0.6
	1.6nm,0.6s,baz=298,slow=11,SNR=1.6						
WRA				PcP	PcP	04 07 12.7	+0.9
	0.3nm,0.4s,baz=318,slow=2.2,SNR=2.3						
WRA				S	S	04 07 20.1	-0.2
	0.7nm,0.9s,baz=294,slow=20,SNR=2.5						
WRA				ScP	ScP	04 10 29.1	-0.8
	0.5nm,0.5s,baz=303,slow=1.8,SNR=6.4						
WR0	**Warramunga Arr**	22.96	123	P	P	04 03 30.2	+1.6
WR0				IAmb	IAmb	04 03 38.9	
	comp=Z,7.0nm,0.9s						
ASAR	**Alice Springs**	24.42	132	P	P	04 03 44.1	+2.2
	comp=Z,8.1nm,0.6s,baz=305,slow=9.0,SNR=71						
ASAR				pP	pwP	04 04 23.9	-2.2
	comp=Z,3.6nm,0.8s,baz=310,slow=12,SNR=3.8						
ASAR				PcP	PcP	04 07 16.6	+1.3
	comp=Z,1.0nm,0.4s,baz=315,slow=2.0,SNR=10						
ASAR				S	S	04 07 45.8	-0.7
	comp=Z,2.1nm,0.9s,baz=307,slow=17,SNR=8.9						
ASAR				ScP	ScP	04 10 34.5	+0.2
	comp=Z,0.9nm,0.4s,baz=314,slow=2.5,SNR=8.5						
ASAR	**Alice Springs**	24.42	132	P	P	04 03 43.0	+1.2

AS31	Alice Springs	24.42	132	P	P	04 03 43.5	+1.6
SRAK	Srakaew	25.06	331	P	P	04 03 47.3	-0.4
	comp=Z,4µmcomp=Z,169nm,0.9s						
CHAI	Chaiyaphum	26.74	333	P	P	04 04 04.0	+1.3
	comp=Z,32nm,0.7s						
NONG	Nongkai	28.20	337	P	P	04 04 17.0	+1.4
	comp=Z,28nm,1.0s						
PHIT	Phitsanulok	28.59	332	P	P	04 04 21.6	+2.6
	comp=Z,8µmcomp=Z,66nm,0.9s						
SUKH	Sukhothai	29.21	331	P	P	04 04 26.9	+2.2
	comp=Z,14nm,0.7s						
CM05	Chiang Mai Arr	30.33	330	P	P	04 04 36.7	+2.2
	comp=Z,106nmcomp=Z,15nm,0.9s						
CM02	Chiang Mai Arr	30.36	330	P	P	04 04 37.1	+2.3
	comp=Z,154nmcomp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	30.38	330	P	P	04 04 36.1	+1.2
	comp=Z,8.3nm,0.5s,baz=160,slow=7.7,SNR=44						
CMMT	Chiang Mai	30.68	331	P	P	04 04 38.8	+1.2
	comp=Z,6.0nm,1.0s						
CHTO	Chiang Mai	30.69	331	P	P	04 04 37.2	-0.4
CHTO				IAmb	IAmb	04 04 40.5	
	comp=Z,7.8nm,0.8s						
CM33	Chiang Mai Arr	30.69	331	P	P	04 04 39.0	+1.3
PAYA	Payao	30.73	333	P	P	04 04 40.7	+2.7
SLVN	Son La	30.95	341	P	P	04 04 38.9	-1.1
SLVN				IAmb	IAmb	04 04 42.7	
	comp=Z,7.5nm,0.7s						
STKA	Stephens Creek	34.77	137	P	P	04 05 15.8	+2.8
	comp=Z,2.8nm,0.5s,baz=312,slow=10.0,SNR=9.4						
KMI	Kunming	34.86	342	⇑P	P	04 05 17.5	+3.5
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN	Xi'an	42.21	353	P	P	04 06 14.5	-0.3
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
ODAN	Odare	43.40	324	*e*P	P	04 06 23.6	-1.1
	comp=Z,19nm,0.7s						
TAPN	Taplejung	43.59	325	*e*P	P	04 06 26.4	+0.1
	comp=Z,9.5nm,0.7s						
LSA	Lhasa	43.64	330	P	P	04 06 26.0	-0.9
LSA				IAmb	IAmb	04 06 29.3	
	comp=Z,12nm,1.1s						
RAMN	Ramite	43.93	323	*e*P	P	04 06 27.9	-1.1
	comp=Z,8.0nm,0.5s						
GUN	Gumba	45.07	324	*e*P	P	04 06 38.3	+0.2
	comp=Z,18nm,0.5s						
PKI	Pulchoki	45.10	323	*e*P	P	04 06 37.7	-0.6
	comp=Z,4.2nm,0.2s						
DMN	Daman	45.31	323	*e*P	P	04 06 39.4	-0.5
	comp=Z,17nm,0.6s						
GKN	Gorkha	45.88	323	*e*P	P	04 06 44.1	-0.1
	comp=Z,10nm,0.3s						
KOLN	Koldanda	46.34	321	*e*P	P	04 06 47.4	-0.5
	comp=Z,19nm,0.7s						
DANN	Dangsing	46.66	322	*e*P	P	04 06 50.2	-0.2
	comp=Z,31nm,0.6s						
GTA	Gaotai	49.12	345	P	P	04 07 10.0	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MJAR	Matsushiro Arr	49.81	25	P	P	04 07 11.0	-3.0
	comp=Z,1.2nm,0.6s,baz=207,slow=8.6,SNR=1.9						
USRK	Ussuriysk Ar.	54.49	16	P	P	04 07 45.5	-2.8
	comp=Z,1.6nm,0.6s,baz=225,slow=3.9,SNR=3.8						
ULN	Ulaanbaatar	56.08	354	P	P	04 07 59.7	-0.1
ULN				IAmb	IAmb	04 08 00.6	
	comp=Z,4.8nm,0.9s						
SONM	Songino Array	56.12	354	P	P	04 07 59.9	-0.1
	comp=Z,2.5nm,0.3s,baz=174,slow=9.0,SNR=49						
SONM				pP	pP	04 08 47.8	+1.0
	comp=Z,0.7nm,0.9s,baz=176,slow=8.9,SNR=1.4						
SONM	Songino Array	56.12	354	P	P	04 08 00.0	0.0
NIL	Nilore	56.86	319	P	P	04 08 03.8	-1.7
SHLS	Shalkode	60.00	331	*e*P	P	04 08 25.6	-1.4
	comp=Z,3.0nm,0.7s,baz=331						
KPKS	Kokpek	60.60	331	*e*P	P	04 08 30.5	-0.6
	comp=Z,6.5nm,1.0s,baz=331						
ZSN	Zaisan	61.12	338	*e*P	P	04 08 34.1	-0.2
	comp=Z,2.5nm,0.8s,baz=338						
MK31	Makanchi Array	61.59	336	P	P	04 08 37.1	-0.4
MK31				IAmb	IAmb	04 08 38.1	
	comp=Z,4.5nm,0.9s						
MKAR	Makanchi Array	61.59	336	P	P	04 08 37.3	-0.2
	comp=Z,3.8nm,0.5s,baz=150,slow=7.1,SNR=85						
MKAR				PcP	PcP	04 09 16.8	-0.3
	comp=Z,1.1nm,0.6s,baz=153,slow=4.8,SNR=5.5						
MKAR				pP	pP	04 09 27.1	+1.9
	comp=Z,0.5nm,0.6s,baz=135,slow=5.9,SNR=1.7						
MKAR	Makanchi Array	61.59	336	P	P	04 08 37.1	-0.5
CHKK	Chushkaly	61.72	330	*e*P	P	04 08 37.4	-1.1
	baz=330						
MAKZ	Makanchi	61.73	335	P	P	04 08 37.4	-1.1
TDK	Taldyqorghan	61.89	332	*e*P	P	04 08 39.2	-0.4
	comp=Z,14nm,0.6s,baz=332						
KUU	Kurty	62.07	330	*e*P	P	04 08 39.9	-0.9
	baz=330						
AAK	Ala-Archa	62.12	328	P	P	04 08 41.6	+0.3
AAK				IAmb	IAmb	04 08 42.4	
	comp=Z,5.6nm,0.9s						
IUG	Iuzhnay	64.24	325	*e*P	P	04 08 54.8	-0.4
	comp=Z,3.2nm,0.7s,baz=325						
SEM	Semipalatinsk	65.29	337	*e*P	P	04 09 00.6	-1.3
	comp=Z,2.2nm,0.8s,baz=337						
KURK	Kurchatov	66.18	336	P	P	04 09 07.0	-0.3
ZAA0	Zalesovo Array	66.61	342	P	P	04 09 09.0	-1.0
ZAA0				IAmb	IAmb	04 09 09.6	
	comp=Z,3.6nm,0.7s						
ZALV	Zalesovo Beam	66.61	342	P	P	04 09 08.8	-1.1
	comp=Z,3.6nm,0.5s,baz=149,slow=4.5,SNR=20						
BRZS	Berezniki	68.18	333	*e*P	P	04 09 19.0	-1.0
	comp=Z,1.6nm,0.8s,baz=332						
VNDA	Vanda	73.63	170	P	P	04 09 55.4	+3.1
	comp=Z,1.2nm,0.9s,baz=324,slow=8.5,SNR=3.6						
SEY	Seymchan	76.62	17	P	P	04 10 08.9	-0.5
	comp=Z,2.2nm,0.4s,baz=253,slow=5.1,SNR=5.5						
QSPA	South Pole Qui	81.89	180	P	P	04 10 40.8	+2.6
	comp=Z,1.2nm,0.6s,baz=257,slow=4.6,SNR=4.1						
KBZ	Khabaz	82.32	316	P	P	04 10 39.9	-0.7
	comp=Z,2.5nm,0.9s,baz=117,slow=4.4,SNR=4.5						
BRTR	Keskin Array B	87.93	310	P	P	04 11 08.6	-0.2
	comp=Z,2.8nm,0.8s,baz=135,slow=6.3,SNR=23						
AKASG	Malin Array Be	93.03	321	P	P	04 11 30.8	-1.2
	comp=Z,0.4nm,0.4s,baz=96,slow=4.3,SNR=2.3						
FINES	FINESS Array B	96.15	331	P	P	04 11 44.7	-1.3
	comp=Z,1.5nm,0.7s,baz=94,slow=7.6,SNR=4.5						
ILAR	Eielson Array	101.09	26	P	Pdif	04 12 06.0	-2.0
	comp=Z,0.2nm,0.7s,baz=254,slow=4.6,SNR=4.3						
TORD	Torodi Ar. Bea	113.62	281	PKiKP	PKiKP	04 16 56.8	+0.1
	comp=Z,0.5nm,0.5s,baz=89,slow=1.4,SNR=1.6						
YKA	Yellowknife Ar	115.27	23	PKP	PKPdf	04 16 58.7	+0.2
	comp=Z,0.6nm,0.5s,baz=351,slow=1.2,SNR=18						
YKA				SKP		04 20 14.3	
	comp=Z,0.2nm,0.5s,baz=1.1,slow=1.3,SNR=5.6						
NVAR	Mina Array Bea	124.06	49	PKP	PKiKP	04 17 18.0	+1.3
	comp=Z,1.2nm,0.6s,baz=249,slow=1.8,SNR=14						
PDAR	Pinedale Array	128.42	41	PKP	PKiKP	04 17 25.9	+0.6
	comp=Z,0.2nm,0.4s,baz=140,slow=1.6,SNR=5.0						
ULM	Lac du Bonnet	131.11	25	SKPbc	SKPbc	04 20 34.1	-0.3
	comp=Z,2.7nm,0.8s,baz=326,slow=2.7,SNR=5.3						
TXAR	Lajitas Array	138.66	54	PKhKP	PKPpre	04 17 35.4	
	comp=Z,0.6nm,0.5s,baz=231,slow=3.1,SNR=14						
TXAR				PKP	PKiKP	04 17 45.5	-0.8
	comp=Z,0.2nm,0.5s,baz=292,slow=2.4,SNR=5.3						
TXAR				SKPbc	SKPbc	04 20 59.8	+0.5
	comp=Z,0.4nm,0.7s,baz=321,slow=1.5,SNR=4.9						
CPUP	Villa Florida	144.79	193	PKPbc	PKPdf	04 17 56.9	+1.9
	comp=Z,1.4nm,0.2s,baz=243,slow=4.1,SNR=2.9						
BDFB	Brasilia	150.55	217	PKPbc	PKiKP	04 18 12.0	+0.9
	comp=Z,2.1nm,0.5s,baz=125,slow=6.4,SNR=5.8						

NNC 27 04:07:18.5±13.0**, 37°.27N**×**71°.22E, h0$^{\text{km}}$, mb4.2, mpv3.6, 2C-3D, Error ellipse: s-maj=116.4km s-min=87.7km az=153.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	4.36	58	Sn	Sn	04 09 11.5	-6.1
KSH	Kashi	4.36	58	smax	smax		
	comp=N,39nm,0.4s						
KSH	Kashi	4.36	58	smax	smax		
	comp=E,28nm,0.3s						
KSH	Kashi	4.36	58	Pn	Pn	04 08 20.5	-5.6
KK31	Karatay Array	5.85	355	⇓P	Pn	04 08 46.9	+0.5
	comp=E,2.1nm,0.3s,baz=179,slow=13,SNR=105						
KK31				⇓S	Sn	04 09 56.7	+2.4
	comp=E,1.1nm,0.4s,baz=181,slow=22,SNR=9.8						
AAK	Ala-Archa	5.92	24	P	Pn	04 08 48.7	+1.2
	comp=E,3.7nm,0.6s						
AAK				⇑S	Sn	04 10 00.3	+4.1
	comp=E,5.5nm,0.7s						
TKM2	Tokmak 2	6.56	29	⇓P	Pn	04 08 55.8	-0.6
	comp=E,3.1nm,0.5s						
TKM2				⇑S	Sn	04 10 07.9	-4.2
	comp=E,1.0nm,0.5s						

TAP 27 04:18:55.1, 24°.30N×121°.72E, h23$^{\text{km}}$, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.13	9	*e*P	Pb	04 18 59.5	-0.2
	baz=12						
ENA				*e*S	Sb	04 19 02.9	+0.1
	baz=12						
ENAH	Nanao	0.17	30	*e*P	Pb	04 18 59.9	-0.3
	baz=29						
ENAH				*e*S	Sb	04 19 03.5	0.0
	baz=29						
NACB	Ninganchiao	0.17	221	P	Pb	04 19 00.4	+0.2
	baz=221						
NACB				*i* S	Sb	04 19 04.6	+1.0
	baz=221						
ETLH	Xiulin Townshi	0.24	246	*i* P	Pb	04 19 01.6	+0.5
	baz=246						
ETLH				*e*S	Sb	04 19 05.9	+0.7
	baz=246						
NNSH	Datong	0.33	292	*e*S	Sb	04 19 08.6	+1.0
	baz=292						
NNSB	Datong	0.33	292	*e*P	Pb	04 19 03.4	+0.8
	baz=292						
NNSB				*e*S	Sn	04 19 09.6	-1.2
	baz=292						
NDT	Datong Townshi	0.35	328	*e*P	Pb	04 19 03.4	+0.6
	baz=327						
NDT				*e*S	Sn	04 19 10.1	-1.1
	baz=327						
ESL	Shilin	0.55	208	*e*P	Pb	04 19 06.6	+0.5
	baz=207						
VWDT	VWDT	0.76	224	*e*P	Pn	04 19 11.2	+0.8
	baz=223						
VWDT				*e*S	Sn	04 19 21.7	+0.5
	baz=223						
VWDT	VWDT	0.76	224	*e*P	Pn	04 19 11.2	+0.8
	baz=18						
VWDT				*e*S	Sn	04 19 21.5	+0.3
	baz=18						

TAP 27 04:18:59.0, 23°.16N×120°.92E, h7$^{\text{km}}$, ML1.5, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	Lidau	0.09	69	P	Pg	04 19 02.1	+0.8
	baz=71						
ELDTW				S	Sg	04 19 03.9	+1.0
	baz=71						
STYT	Tauyuan	0.15	273	*i* P	Pg	04 19 02.9	+0.7
	baz=272						
STYT				S	Sg	04 19 05.3	+0.9
	baz=272						
WTP	Ta-pu	0.30	288	*i* P	Pb	04 19 06.2	-0.6
	baz=287						
WTP				*i* S	Sb	04 19 11.0	-0.9
	baz=287						
SLGT	Liugui	0.30	238	*i* P	Pb	04 19 06.3	-0.5
	baz=237						
SLGT				S	Sb	04 19 10.6	-1.4
	baz=237						
TPUB	Ta-pu	0.31	298	P	Pb	04 19 06.2	-0.6
	baz=298						
TPUB				S	Sb	04 19 11.0	-1.1
	baz=298						
LONT	Longtian	0.31	142	*e*P	Pb	04 19 06.3	-0.7
	baz=142						
LONT				*e*S	Sb	04 19 10.9	-1.3
	baz=142						
SGST	Jiashian	0.32	257	*e*S	Sb	04 19 11.2	-1.3
	baz=256						
FULB	Fuli	0.34	83	⇑*i*P	Pb	04 19 07.4	-0.1
	baz=82						
FULB				*i* S	Sb	04 19 12.8	-0.4
	baz=82						
TWG	Pinlang	0.36	158	P	Pb	04 19 07.3	-0.4
	baz=156						
TWG				S	Sb	04 19 12.5	-1.1
	baz=156						
CHN4	Tsaushan	0.36	303	*i* P	Pb	04 19 07.5	-0.3
	baz=302						
CHN4				S	Sb	04 19 13.2	-0.5
	baz=302						
CHN1	Nanshi	0.36	275	P	Pb	04 19 07.9	0.0
	baz=274						
CHN1				S	Sb	04 19 13.6	-0.2
	baz=274						
TWGBT	Beinan	0.37	157	P	Pb	04 19 07.4	-0.5
	baz=156						
TWGBT				*e*S	Sb	04 19 12.6	-1.2
	baz=156						
ALS	Alishan	0.37	343	*i* P	Pg	04 19 06.9	+0.5
	baz=344						
ALS				*e*S	Sg	04 19 12.3	+1.0
	baz=344						
EDH	Donghe	0.40	117	*e*P	Pb	04 19 08.2	-0.2
	baz=117						
TWF1	Yuli	0.40	60	*e*P	Pg	04 19 07.5	+0.8
	baz=61						
YULB	Yu-li	0.42	55	P	Pg	04 19 07.6	+0.5
	baz=55						
YULB				*e*S	Sb	04 19 15.3	-0.1
	baz=55						
CHN5	Tsauling	0.49	333	P	Pb	04 19 09.8	-0.3
	baz=332						
CHN5				S	Sb	04 19 17.3	-0.3
	baz=332						
HGSD	Ruisui	0.57	54	*e*P	Pb	04 19 11.5	+0.2
	baz=198						
HGSD	Ruisui	0.57	54	P	Pb	04 19 11.7	+0.4
	baz=53						
HGSD				*e*S	Sb	04 19 19.8	+0.1
	baz=53						
WGK	Gukeng	0.62	328	*e*P	Pb	04 19 12.4	+0.1
	baz=328						
WGK				*e*S	Sb	04 19 21.8	+0.5
	baz=328						

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*IDC **27** 04:43:57.8±3.2, 9°.55S×119°.46E, h0$^{\text{km}}$, mb3.1/1, mb1 3.7/3, mb1mx3.3/23, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=271.8km s-min=30.5km az=50.0*

*DJA **27** 04:44:02.1±0.3, 10°S±4°×12°0E±°, h26$^{\text{km}}$±3$^{\text{km}}$, M3.6/9, MLv3.6/9*

ISC 27 04:44:02.3±0.9**, 9°.65S**±0°.08×**119°.53E**±0°.04**, h32**$^{\text{km}}$±7$^{\text{km}}$**, n12, σ1$^{\text{s}}$.02**/19**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.14	275	P	Pb	04 44 08.4	+0.2
WBSI				S	Sb	04 44 11.7	-0.6
WSI	Waingapu	0.76	91	P	Pn	04 44 17.9	+1.0
WSI				S	Sn	04 44 28.7	+1.4
BASI	Baing, Sumba	1.18	119	P	Pb	04 44 23.9	-0.3
BASI				S	Sb	04 44 39.9	+0.8
PLAI	Plampang	1.91	295	P	Pn	04 44 33.0	+0.2
PLAI				S	Sn	04 44 54.9	-0.9
EDFI	Ende, Flores	2.32	67	P	Pn	04 44 38.3	-0.1
EDFI				S	Sn	04 45 03.6	-2.3
TWSI	Taliwang, Sumb	2.77	289	P	Pn	04 44 45.5	+1.0
TWSI				S	Sn	04 45 16.5	-0.3
BSSI	Bau Bau, Buton	3.62	15	P	Pn	04 44 58.0	+1.8
BSSI				S	Sn	04 45 38.2	+0.4
BATI	Baumata	4.11	98	P	Pn	04 45 02.5	-0.5
BKSI	Bulukumba	4.34	8	P	Pn	04 45 05.7	-0.5
WRA	Warramunga Arr	17.58	127	P	Pn	04 48 05.2	+0.1
	0.2nm,0.3s,baz=300,slow=13,SNR=9.7						
WRA				S	Sn	04 51 09.6	-11
	0.1nm,0.3s,baz=333,slow=45,SNR=1.7						
ASAR	Alice Springs	19.57	137	P	Pn	04 48 29.4	+0.2
	0.2nm,0.3s,baz=310,slow=10,SNR=7.2						
MKAR	Makanchi Array	65.27	333	P	P	04 54 40.6	-0.4
	0.1nm,0.6s,baz=132,slow=8.0,SNR=1.8						

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*IDC **27** 04:54:36.6±7.7, 10°.67N×93°.38E, h106$^{\text{km}}$±65$^{\text{km}}$, mb3.5/9, mb1 3.7/10, mb1mx3.4/39, mbtmp3.9/10, Error ellipse: s-maj=64.1km s-min=16.6km az=56.0*

ISC 27 04:54:35.6±1.2**, 10°.6N**±0°.1×**93°.4E**±0°.2**, h100**$^{\text{km}}$**, n20, σ1$^{\text{s}}$.11**/21**, mb4.0**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.52	34	P	Pn	04 56 49.6	-0.2
	1.7nm,0.3s,baz=218,slow=15,SNR=4.6						
ODAN	Odare	17.16	342	*e*P	Pn	04 58 31.8	+2.3
	5.6nm,0.2s						
RAMN	Ramite	17.50	340	*e*P	Pn	04 58 36.4	+2.8
	9.0nm,0.4s						
TAPN	Taplejung	17.53	343	*e*P	Pn	04 58 35.3	+1.3
	13nm,0.7s						
PKI	Pulchoki	18.50	337	*e*P	Pn	04 58 46.7	+1.0
	4.5nm,0.3s						
PKIN	Phulchoki	18.51	337	*e*P	Pn	04 58 46.7	+0.9
	7.2nm,0.3s						
GUN	Gumba	18.64	339	*e*P	Pn	04 58 48.3	+1.0
	15nm,0.4s						
KKN	Kakani	18.75	337	*e*P	Pn	04 58 49.1	+0.6
	9.9nm,0.3s						
GKN	Gorkha	19.19	336	*e*P	Pn	04 58 54.2	+0.5
	40nm,0.4s						
KOLN	Koldanda	19.43	333	*e*P	Pn	04 58 57.2	+0.7
	23nm,0.7s						
DANN	Dangsing	19.86	334	*e*P	Pn	04 59 01.6	0.0
	33nm,0.5s						
MKAR	Makanchi Array	37.31	347	P	P	05 01 37.7	-0.4
	0.8nm,0.3s,baz=164,slow=8.8,SNR=8.4						
MKAR				PcP	PcP	05 03 54.6	-0.8
	0.2nm,0.5s,baz=147,slow=2.9,SNR=2.0						
SONM	Songino Array	38.73	14	P	P	05 01 49.4	-0.8
	0.3nm,0.3s,baz=195,slow=9.4,SNR=3.6						
KURBB	Kurchatov Arra	41.77	346	P	P	05 02 14.1	-0.9
	0.3nm,0.4s,baz=165,slow=7.3,SNR=4.6						
ZALV	Zalesovo Beam	43.80	353	P	P	05 02 30.9	-0.5
	2.4nm,0.3s,baz=178,slow=7.4,SNR=11						
WRA	Warramunga Arr	50.45	127	P	P	05 03 24.3	+0.7
	0.6nm,0.4s,baz=307,slow=8.5,SNR=12						
ASAR	Alice Springs	52.23	131	P	P	05 03 37.4	+0.6
	0.3nm,0.5s,baz=316,slow=6.6,SNR=4.1						
BRTR	Keskin Array B	60.12	310	P	P	05 04 32.6	-0.3
	0.3nm,0.6s,baz=103,slow=6.5,SNR=2.2						
FINES	FINESS Array B	69.99	332	P	P	05 05 36.0	-0.1
	4.6nm,1.1s,baz=95,slow=7.4,SNR=4.7						
ARCES	ARCESS Array B	72.49	340	P	P	05 05 51.2	+0.1
	1.7nm,0.7s,baz=98,slow=6.6,SNR=11						

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*SJA **27** 05:27:27.6±0.5, 37°.32S×75°.22W, h19$^{\text{km}}$±48$^{\text{km}}$, ML4.7, MW4.8*

*IDC **27** 05:27:45.5±0.7, 36°.78S×73°.47W, h0$^{\text{km}}$, mb4.2/10, mb1 4.3/13, mb1mx4.2/31, mbtmp4.1/13, ML4.1/3, MS4.1/17, Ms1 4.1/17, ms1mx4.1/24, Error ellipse: s-maj=25.7km s-min=18.9km az=88.0*

*NEIC **27** 05:27:46.8±1.8, 36°.76S±0°.06×73°.59W±0°.03, h13$^{\text{km}}$±4$^{\text{km}}$, Error ellipse: s-maj=8.3km s-min=2.9km az=190.0*

*GUC **27** 05:27:46.7±0.6, 36°.85S×73°.64W, h11$^{\text{km}}$±2$^{\text{km}}$, ML4.8, MW4.8*

*VAO **27** 05:27:49.3±0.4, 36°.69S×73°.18W, h10$^{\text{km}}$, mb4.6*

*GCMT **27** 05:27:51.0±0.3, 36°.84S±0°.02×73°.83W±0°.04, h29$^{\text{km}}$±1$^{\text{km}}$, MW5.0/69, Moment Tensor Solution. s24,c28; s69,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.53±.18; $M_{\theta\theta}$-0.27±.10; $M_{\phi\phi}$-2.26±.12; $M_{r\theta}$-0.49±.14; $M_{\theta\phi}$-0.37±.06; $M_{\phi r}$-2.70±.20; Best double couple: $M_0$3.66500×10^{16} NP1:ϕ_s10.00000°,δ21.00000°,λ90.00000°. NP2: ϕ_s190.00000°,δ69.00000°,λ90.00000°. Principal axes: T 3.7660, Plg66.0000°, Azm100.0000°; N -0.1980, Plg0.0000°, Azm10.0000°; P -3.5630, Plg24.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 05:27:46.5±1.3**, 36°.83S**±0°.04×**73°.67W**±0°.04**, h12**$^{\text{km}}$±7$^{\text{km}}$**, n171, σ1$^{\text{s}}$.55**/170**, mb4.5**/18**, MS4.2**/19**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI03	Tigo	0.52	92	⇓*i*P	Pg	05 27 55.9	-0.7
BI03				*i* S	Sg	05 28 02.2	-1.3
BI03				IAML		05 28 04.7	
	comp=E,112µm,0.5s						
BI03	Tigo	0.52	92		Pg	05 27 56.0	-0.7
LAJA	Laja	0.89	121	⇑*i*P	Pg	05 28 02.0	-1.7
LAJA				*i* S	Sg	05 28 13.4	-1.9
BI04	Isla Mocha	1.59	186	*e*P	Pn	05 28 13.5	-0.9
BI04				*i* S	Sn	05 28 33.1	-1.9
BI02	San Fabin de	1.93	86	*e*P	Pn	05 28 18.5	-0.7
BI02				*i* S	Sn	05 28 42.9	-0.6
BI02	San Fabin de	1.93	86	Pn	Pn	05 28 18.2	-1.0
LC01	Cunco	2.51	146	*e*P	Pn	05 28 26.6	-0.5
LC01				*e*S	Sn	05 28 58.0	+0.4
LC01	Cunco	2.51	146	Pn	Pn	05 28 26.9	-0.1
BO03	Pichilemu	2.71	31	*e*P	Pn	05 28 29.1	-0.7
BO03				*e*S	Sn	05 29 03.9	+1.4
BO02	Sierra Bellavi	3.10	50	*e*P	Pn	05 28 34.7	-0.7
BO02				IAML		05 29 27.2	
	comp=N,3µm,0.2s						
BO02	Sierra Bellavi	3.10	50	Pn	Pn	05 28 35.6	+0.3
VA05	Santo Domingo	3.58	29	⇓*i*P	Pn	05 28 40.4	-1.5
EDS3	Malargue	3.61	74	*i* P	Pn	05 28 45.0	+2.6
EDS3				*i* S	Sg	05 29 41.4	-0.9
COIS	El Sosneado	3.73	64	*i* P	Pn	05 28 46.1	+2.3
COIS				*i* S	Sg	05 29 44.4	-1.7
MT09	Talagante	3.75	37	*e*P	Pn	05 28 43.5	-0.8
LMEL	Las Melosas	4.11	45	*e*P	Pn	05 28 49.8	+0.6
MT02	Curacav	4.12	31	⇑*i*P	Pn	05 28 47.6	-1.6
MT02	Curacav	4.12	31	Pn	Pn	05 28 47.7	-1.6
MT05	Renca	4.19	36	*e*P	Pn	05 28 49.9	-0.3
MT05	Renca	4.19	36	Pn	Pn	05 28 50.1	-0.1
MT03	Universidad Ad	4.21	39	*e*P	Pn	05 28 50.0	-0.6
FSR	Penalolen	4.22	39	*e*P	Pn	05 28 51.6	+0.9
PEL	Peldehue	4.42	35	*i* P	Pn	05 28 52.9	-0.5
PEL	Peldehue	4.42	35	Pn	Pn	05 28 52.6	-0.7
PEL	Peldehue	4.42	35	*i* P	Pn	05 28 53.3	-0.1
ROC1	El Roble	4.42	30	*i* P	Pn	05 28 53.0	-0.6
ROCH	El Roble	4.42	30	*e*P	Pn	05 28 52.4	-1.2
PLCA	Paso Flores	4.60	149	Pn	Pn	05 28 56.4	+0.5
	comp=N,2.6nm,0.3s,baz=324,slow=12,SNR=77						
PLCA				Lg	Lg	05 30 05.7	
	comp=N,3.1nm,0.3s,baz=252,slow=19,SNR=3.3						
PLCA	Paso Flores	4.60	149	*e*P	Pn	05 28 57.2	+1.3
RFA	San Rafael	4.70	66	*i* P	Pn	05 28 59.0	+1.6
RFA				IAML		05 30 50.9	
	comp=Z,299nm,2.5s						
VA03	San Esteban	4.80	33		Pn	05 28 57.3	-1.4
H03S1	Juan Fernandez	5.21	303	Pn	Pn	05 29 04.3	+0.4
	baz=88,slow=13,SNR=33						
H03S1				Sn	Sn	05 30 00.1	-3.8
H03S1				T	T	05 34 28.1	
	baz=123,slow=75,SNR=3587						
H03S3	Juan Fernandez	5.22	303	Pn	Pn	05 29 04.3	+0.2
	baz=88,slow=13,SNR=43						
H03S3				Sn	Sn	05 30 00.4	-3.8
H03S3				T	T	05 34 29.3	
	baz=123,slow=75,SNR=3558						
H03S2	Juan Fernandez	5.23	303	Pn	Pn	05 29 04.3	+0.1
	baz=88,slow=13,SNR=44						
H03S2				Sn	Sn	05 30 00.4	-3.8
H03S2				T	T	05 34 29.0	
	baz=123,slow=75,SNR=3398						
VA04	Juan Fernndez	5.28	305	Pn	Pn	05 29 05.4	+0.2
AAGR	Agrelo	5.45	48	*i* P	Pn	05 29 08.6	+0.9
H03N3	Juan Fernandez	5.46	306	Pn	Pn	05 29 07.9	+0.5
	baz=141,slow=26,SNR=22						
H03N3				Sn	Sn	05 30 07.5	-2.6
	baz=297,slow=74,SNR=3.5						
H03N1	Juan Fernandez	5.46	307	Pn	Pn	05 29 07.9	+0.5
	baz=141,slow=26,SNR=42						
H03N1				Sn	Sn	05 30 07.5	-2.6
	baz=297,slow=74,SNR=3.5						
H03N2	Juan Fernandez	5.48	307	Pn	Pn	05 29 07.9	+0.3
	baz=141,slow=26,SNR=21						
H03N2				Sn	Sn	05 30 07.5	-2.9
	baz=297,slow=74,SNR=6.0						
ARCO	CERRO ARCO	5.57	46	*i* P	Pn	05 29 10.0	+0.7
ARCO				IAML		05 30 58.7	
	comp=Z,133nm,0.7s						
LL01	San Ignacio de	5.63	170		Pn	05 29 10.2	+0.3
AUSP	Uspallata	5.80	39	*i* P	Pn	05 29 13.1	+0.6

ASAL	Salagasta	5.81	45	*i* P	Pn	05 29 13.0	+0.5
ASAL				IAML		05 30 57.8	
	comp=Z,117nm,0.8s						
CO02	Combarbal	6.03	22	Pn	Pn	05 29 14.2	-1.4
RTLS	Leoncito	6.18	37	*i* P	Pn	05 29 18.2	+0.4
GO07	Milladeo Hill,	6.28	180	Pn	Pn	05 29 17.8	-1.0
CO03	El Pedregal	6.47	23		Pn	05 29 20.9	-0.7
ZON	Zonda	6.70	40		Pn	05 29 24.5	-0.2
GO04	Tololo Observa	7.06	21	Pn	Pn	05 29 28.8	-1.0
CO01	Juntas del Tor	7.46	25		Pn	05 29 34.7	-0.6
LCO	Las Campanas	8.18	19	Pn	Pn	05 29 43.8	-1.5
AC04	Llanos de Chal	8.87	15	Pn	Pn	05 29 53.4	-1.2
GO03	Copiap	9.65	19		Pn	05 30 04.2	-1.1
AC02	Maricunga	10.68	22	Pn	Pn	05 30 17.4	-2.3
AC01	Pan de Azucar	10.96	15	Pn	Pn	05 30 21.1	-2.1
GO02	Mina Guanaco	12.14	18	Pn	Pn	05 30 38.0	-1.6
LPA	La Plata	12.91	86	*e*P	Pn	05 30 39.9	-10
LPA				PPP	PPP	05 31 04.1	
LPA				PP	PbPb	05 31 31.0	-0.9
LPA				pPP		05 31 53.1	
LPA				S	Sn	05 33 08.5	-4.8
LPA				SSS	SSS	05 33 42.9	
LPA				SS	SgSg	05 34 50.2	+9.1
LVC	Limon Verde	14.76	18	Pn	Pn	05 31 16.3	+1.0
	comp=Z,0.3nm,0.3s,baz=206,slow=6.5,SNR=2.6						
LVC				LR	LR	05 37 20.6	
	comp=Z,597nm,21.9s,baz=193,slow=39						
LVC	Limon Verde	14.76	18	P	Pn	05 31 16.2	+0.9
LVC	Limon Verde	14.76	18	*e*P	Pn	05 31 15.8	+0.4
PB07	IPOC Station P	15.40	13	IAmb	IAmb	05 31 30.9	
	comp=Z,30nm,1.5s						
PB09	IPOC Station P	15.46	16	P	Pn	05 31 25.1	+0.5
PB09				IAmb	IAmb	05 31 32.5	
	comp=Z,27nm,1.1s						
ITQB	Itaqui	15.94	68	*e*P	Pn	05 31 28.2	-2.3
PB01	IPOC Station P	16.14	14	P	Pn	05 31 32.4	-1.0
TA01	Diego Aracena	16.49	12	P	P	05 31 40.2	0.0
TA01				IAmb	IAmb	05 31 44.0	
	comp=Z,51nm,1.3s						
PLTB	Pedras Altas	17.33	79	*e*P	Pn	05 31 45.8	-2.4
CPUP	Villa Florida	17.39	58	P	Pn	05 31 47.5	-1.5
	comp=Z,0.2nm,0.3s,baz=234,slow=10,SNR=7.3						
CPUP				Lg	Lg	05 36 46.2	
	comp=Z,0.1nm,0.3s,baz=323,slow=20,SNR=2.4						
CPUP				LR	LR	05 39 02.7	
	comp=Z,1µm,19.9s,baz=235,slow=39						
CPUP	Villa Florida	17.39	58	P	Pn	05 31 47.7	-1.3
CPUP	Villa Florida	17.39	58	*e*P	Pn	05 31 47.5	-1.5
MNMC	Minye Minye	17.99	13	P	P	05 31 57.7	+0.5
CPSB	Cacapava Do Su	18.01	75	*e*P	Pn	05 31 53.3	-3.4
PB16	IPOC Station P	18.78	12	P	Pn	05 32 08.9	+2.2
CNLB	Canela	20.51	75	*e*P	P	05 32 23.3	-1.2
ITAB	Concordia	20.58	68	*e*P	P	05 32 23.7	-1.5
PTGB	Pitanga	22.09	63	*e*P	P	05 32 40.9	-0.7
AQDB	Aquidauana	22.61	49	*e*P	P	05 32 45.2	-2.0
TRCB	Terra Rica	22.93	58	*e*P	P	05 32 49.2	-1.3
SIV	San Ignacio	23.58	32	P	P	05 32 56.3	-0.8
	comp=Z,5.0nm,0.7s,baz=227,slow=9.9,SNR=14						
SIV				LR	LR	05 43 54.1	
	comp=Z,869nm,19.1s,baz=228,slow=41						
PCMB	Pacaembu	24.66	58	*e*P	P	05 33 05.2	-2.0
FRTB	Fartura	24.73	64	*e*P	P	05 33 07.3	-0.5
NNA	Nana	24.90	353	LR	LR	05 41 07.8	
	comp=Z,277nm,18.7s,baz=176,slow=32						
PP1B	Ponte de Pedra	25.33	46	*e*P	P	05 33 13.0	-0.3
PET01	Itanhaem-SP	25.85	69	*e*P	P	05 33 17.6	-0.3
SPB	Sao Paulo	26.14	67	*e*P	P	05 33 20.1	-0.4
ITRB	Iturama	26.58	56	*e*P	P	05 33 24.3	-0.3
VILB	Vilhena	26.67	30	*e*P	P	05 33 23.7	-1.7
BB19B	Bebedouro	26.92	61	*e*P	P	05 33 26.0	-1.6
PARB	Paraibuna	27.63	69	*e*P	P	05 33 33.8	-0.2
ETMB	Extrema	27.73	16	*e*P	P	05 33 35.7	+0.9
PMSA	Palmer Station	28.57	171	LR	LR	05 45 50.3	
	comp=Z,307nm,19.0s,baz=308,slow=38						
ESAR	Angra dos Reis	28.70	70	*e*P	P	05 33 43.2	-0.2
CZSB	Cruzeiro do Su	28.98	2	*e*P	P	05 33 47.4	+1.4
SAML	Samuel	29.34	22	*e*P	P	05 33 50.3	+1.1
BSCB	Bom Sucesso	29.66	66	*e*P	P	05 33 52.3	+0.2
ATAH	Atahualpa	29.87	351	LR	LR	05 43 41.5	
	comp=Z,161nm,19.3s,baz=202,slow=32						
VAS01	Vassouras-RJ	29.88	69	*e*P	P	05 33 54.5	+0.5
DUB01	Friburgo-RJ	30.80	70	*e*P	P	05 34 01.7	-0.4
BDFB	Brasilia	31.05	54	P	P	05 34 04.0	-0.5
	comp=Z,1.8nm,0.8s,baz=232,slow=15,SNR=3.8						
BDFB				LR	LR	05 47 45.8	
	comp=Z,781nm,20.5s,baz=229,slow=39						
CAM01	Campos-RJ	31.49	71	*e*P	P	05 34 08.1	0.0
SNDB	Serra Nova Dou	31.89	45	*e*P	P	05 34 11.0	-0.8
ALF01	Guarapari-ES	32.90	70	*e*P	P	05 34 20.1	-0.4
SJMB	Sao Joao De Ma	33.72	66	*e*P	P	05 34 27.2	-0.6
JANB	Januaria	33.93	58	*e*P	P	05 34 27.9	-1.8
NPGB	Novo Progresso	34.03	34	*e*P	P	05 34 29.7	-0.8
NAN01	Guarapari, ES	35.04	66	*e*P	P	05 34 38.8	-0.4
SDBA	SAO DESIDERIO	35.46	54	*e*P	P	05 34 42.1	-0.8
MACA	Manacapuru-AM	35.57	23	*e*P	P	05 34 44.3	+0.5
ITTB	Itaituba	36.26	31	*e*P	P	05 34 49.1	-0.6
SMTB	Santa Maria do	36.53	47	*e*P	P	05 34 51.5	-0.5
OTAV	Otavalo	37.14	352	*e*P	P	05 35 00.9	+3.2
PRPB	Parauapebas	37.50	41	*e*P	P	05 35 01.4	+1.1
PTGA	Pitinga	38.09	23	P	P	05 35 04.7	-0.5
PTGA				IAmb	IAmb	05 35 26.4	
	comp=Z,15nm,1.5s						
PTGA	Pitinga	38.09	23	*e*P	P	05 35 05.4	+0.2
GDU01	Guandu, BA	38.15	62	*e*P	P	05 35 05.2	-0.6
TMAB	Tom-Au,PA,Br	41.61	41	*e*P	P	05 35 35.1	+0.6
NBPA	Parau_RN	45.52	56	*e*P	P	05 36 06.3	+0.2
SDV	Santo Domingo	45.56	4	*e*P	P	05 36 07.1	+0.7
NBPV	Pedro Velho	46.26	59	*e*P	P	05 36 12.1	+0.1
RCBR	Riachuelo	46.27	57	*e*P	P	05 36 12.5	+0.4
VNA3	Neumayer Olymp	47.27	157	P	P	05 36 20.4	+1.2
VNA2	Neumayer--Watz	47.95	156	P	P	05 36 24.9	+0.4
SNAA	Sanae	49.50	157	P	P	05 36 36.6	+0.2
SNAA	Sanae	49.50	157	P	P	05 36 36.5	+0.2
SNAA				IAmb	IAmb	05 36 38.5	
	comp=Z,10nm,1.3s						
QSPA	South Pole Qui	53.41	180	P	P	05 37 07.3	+1.4
	comp=Z,5.0nm,0.8s,baz=143,slow=3.9,SNR=13						
QSPA				LR	LR	05 59 16.2	
	comp=Z,32nm,21.5s,baz=168,slow=35						
QSPA	South Pole Qui	53.41	180	P	P	05 37 07.5	+1.6
QSPA				IAmb	IAmb	05 37 08.6	
	comp=Z,10nm,1.1s						
MLPR	Magueyes Islan	54.86	8	P	P	05 37 15.5	-1.1
OBIP	Obispado Ponce	54.98	8	P	P	05 37 16.9	-0.6
VNDA	Vanda	61.07	192	LR	LR	06 01 24.3	
	comp=Z,83nm,19.4s,baz=120,slow=33						
SYO	Syowa Base	63.73	158⇑	*e*P	P	05 38 13.4	-4.1
TBI	Tubuai	65.40	258	*e*S	S	05 47 12.5	-0.9
	comp=Z,93nm,26.8s						
TBI	Tubuai	65.40	258	*e*LR	LR	05 58 08.1	
	comp=Z,355nm,26.8s,baz=129						
TAOE	Nuku Hiva Isla	65.94	277	*e*LR	LR	05 58 23.1	
	comp=Z,269nm,26.6s						
MEH	Mehetia	67.19	264	*e*T	T	06 51 51.6	
	comp=Z,31nm,0.2s						
TVO	Taravao	68.19	264	*e*T	T	06 53 03.1	
	comp=Z,0.9nm,0.2s						
TIAR	Tiarei	68.39	264	*e*T	T	06 53 21.7	
	comp=Z,4.3nm,0.3s						
PPT2	Papeete2	68.55	264	*e*S	S	05 47 49.5	-2.3
	comp=Z,135nm,23.8s						
PPT2	Papeete2	68.55	264	*e*LR	LR	05 59 35.6	
	comp=Z,416nm,24.5s,baz=120						
PPT	Papeete	68.56	264	LR	LR	06 02 13.2	
	comp=Z,304nm,18.0s,baz=101,slow=30						
MAW	Mawson	70.85	164	LR	LR	06 10 04.4	
	comp=Z,184nm,19.3s,baz=234,slow=36						
Z47A	Carrollton	70.95	347	P	P	05 39 05.2	+1.6
JCT	Junction City	71.30	336	IAmb	IAmb	05 39 08.6	
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	71.58	333	P	P	05 39 08.9	+1.3
	comp=Z,1.4nm,0.8s,baz=152,slow=8.7,SNR=14						
TXAR				LR	LR	06 05 47.3	
	comp=Z,240nm,18.3s,baz=0.0,slow=32						
TXAR	Lajitas Array	71.58	333	P	P	05 39 08.2	+0.6
TX31	Lajitas Ar. Si	71.59	333	P	P	05 39 09.4	+1.8
TX31				IAmb	IAmb	05 39 17.5	
	comp=Z,7.2nm,0.9s						
V48A	Smith Brothers	73.23	349	P	P	05 39 15.4	-1.7
WVT	Waverly	73.77	348	P	P	05 39 20.1	-0.2
WVT				IAmb	IAmb	05 39 22.8	
	comp=Z,20nm,1.4s						
LCAR	Lake Charles	74.32	345	P	P	05 39 24.4	+0.8
LCAR				IAmb	IAmb	05 39 25.0	
	comp=Z,7.7nm,1.1s						
DBIC	Dimbokro	77.34	72	P	P	05 39 41.5	+0.1
	comp=Z,4.0nm,0.8s,baz=184,slow=7.5,SNR=7.8						
DBIC				LR	LR	06 11 07.9	
	comp=Z,117nm,18.1s,baz=227,slow=34						
DBIC	Dimbokro	77.34	72	IAmb	IAmb	05 39 49.5	
	comp=Z,18nm,1.4s						
ANMO	Albuquerque	77.65	333	P	P	05 39 44.9	+2.1
ANMO				IAmb	IAmb	05 39 46.9	
	comp=Z,4.0nm,1.1s						
BOSA	Boshof	79.93	118	P	P	05 39 56.8	+1.1
	comp=Z,1.4nm,0.6s,baz=214,slow=6.5,SNR=2.1						
BOSA				LR	LR	06 16 30.9	
	comp=Z,75nm,18.3s,baz=188,slow=37						
BOSA	Boshof	79.93	118	IAmb	IAmb	05 40 20.2	
	comp=Z,21nm,1.5s						
SADO	Sadowa	81.37	356	P	P	05 40 03.2	+0.6
	comp=Z,4.9nm,0.9s,baz=166,slow=4.2,SNR=1.9						
ECSD	EROS Data Cent	82.85	343	P	P	05 40 11.1	+0.7
ECSD				IAmb	IAmb	05 40 12.1	
	comp=Z,4.5nm,0.8s						
NVAR	Mina Array Bea	85.47	326	P	P	05 40 26.4	+2.3
	comp=Z,0.3nm,0.6s,baz=156,slow=8.4,SNR=3.7						
NVAR				LR	LR	06 11 36.5	
	comp=Z,80nm,18.4s,baz=120,slow=31						
PDAR	Pinedale Array	85.70	334	P	P	05 40 25.9	+0.7
	comp=Z,0.7nm,0.9s,baz=157,slow=4.9,SNR=5.4						
PDAR	Pinedale Array	85.70	334	P	P	05 40 26.7	+1.5
TORD	Torodi Ar. Bea	86.41	71	P	P	05 40 28.7	-0.4
	comp=Z,0.8nm,0.7s,baz=224,slow=4.1,SNR=4.6						
TORD				LR	LR	06 17 53.0	
	comp=Z,143nm,18.2s,baz=270,slow=35						
TORD	Torodi Ar. Bea	86.41	71	P	P	05 40 28.2	-0.8
DZM	Mont Dzumac	98.50	234	*e*LR	LR	06 13 29.2	
	comp=Z,177nm,24.9s						
ESDC	Sonseca Array	99.48	47	LR	LR	06 25 10.9	
	comp=Z,82nm,20.0s,baz=295,slow=35						
WRA	Warramunga Arr	117.65	210	PKP	PKPdf	05 46 32.6	-0.3
	comp=Z,0.2nm,0.4s,baz=156,slow=1.6,SNR=4.9						
AKASG	Malin Array Be	125.06	49	PKP	PKPdf	05 46 45.4	-0.6
	comp=Z,0.3nm,0.4s,baz=279,slow=2.4,SNR=2.0						
RPSI	Rantau Prapat	145.35	167		PKPdf	05 47 25.4	+0.6
PSI	Prapat	145.46	167	PKPbc	PKPab	05 47 25.4	+0.1
	comp=Z,2.8nm,0.3s,baz=180,slow=8.0,SNR=3.9						
BVAR	Borovoye Array	150.23	46	PKPbc	PKPbc	05 47 36.1	-0.7
	comp=Z,0.5nm,0.7s,baz=276,slow=1.3,SNR=6.1						
KURBB	Kurchatov Arra	155.81	46	PKPbc	PKPbc	05 47 49.4	
	comp=Z,0.2nm,0.5s,baz=302,slow=3.2,SNR=4.1						
KURBB				PKPab	PKPab	05 48 06.3	-0.2
	comp=Z,0.3nm,0.5s,baz=291,slow=4.3,SNR=4.2						
KSH	Kashi	156.04	74	PKP	PKPdf	05 47 41.5	+0.8
ZALV	Zalesovo Beam	157.32	34	PKP	PKPdf	05 47 41.6	0.0
	comp=Z,0.3nm,0.3s,baz=298,slow=3.1,SNR=4.7						
ZALV				PKPab	PKPab	05 48 13.7	+0.8
	comp=Z,1.3nm,0.6s,baz=295,slow=4.2,SNR=4.1						
MKAR	Makanchi Array	159.57	53	PKPab	PKPab	05 48 23.4	+0.3
	comp=Z,1.3nm,0.7s,baz=298,slow=3.1,SNR=5.8						
SONM	Songino Array	169.00	360	PKPab	PKPab	05 49 05.9	+1.5
	comp=Z,1.0nm,1.1s,baz=1.4,slow=5.8,SNR=5.2						

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*ANF **27** 05:28:53.6±1.0, 37°.09N×97°.70W, h4^{km}±7^{km}, ML3.9/10, Error ellipse: s-maj=3.2km s-min=2.5km az=65.0*

*NEIC **27** 05:28:53.6±1.0, 37°.08N±0°.04×97°.67W±0°.06, h6^{km}±7^{km}, mb_Lg3.1/58, Error ellipse: s-maj=7.5km s-min=5.4km az=50.0*

ISC 27 05:28:53.2±0.9**, 37°.07N**±0°.02×**97°.66W**±0°.02**, h7**^{km}±8^{km}**, n76, σ1^{s}.22**/72**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.12	319		Pg	05 28 55.4	-0.4
KAN01				Sg	Sg	05 28 57.0	-0.6
KAN13	South Haven SW	0.15	109		Pg	05 28 56.9	+0.4
KAN13				Sg	Sg	05 28 59.5	+1.0
KS21	Milan North St	0.22	360		Pg	05 28 57.1	-0.5
KS21				Sg	Sg	05 28 59.9	-0.7
KAN14	Manchester OK	0.27	246	Pg	Pg	05 28 58.8	+0.4
KAN14				Sg	Sg	05 29 02.7	+0.8
KAN08	Anthony NE Sta	0.30	303		Pg	05 28 58.9	-0.2
KAN08				Sg	Sg	05 29 02.7	-0.2
KAN10	Anthony SW Sta	0.35	280	Pg	Pg	05 29 00.1	+0.1
KAN10				Sg	Sg	05 29 04.9	+0.2
KAN12	Harper NE Stat	0.36	311		Pg	05 28 59.8	-0.3
CROK	Carrier	0.62	205	Pg	Pg	05 29 05.6	+0.6
T35A	Sooner Cattle	0.93	99		Pg	05 29 11.0	0.0
T35B	Sooner Cattle	0.93	99	P		05 29 11.0	
	baz=281,SNR=96						
T35B				S		05 29 23.4	
	baz=281						
QUOK	Quay	1.18	139		Pb	05 29 15.8	0.0
OK029	Liberty Lake	1.28	172		Pb	05 29 17.6	+0.1
U32A	Winter Ranch,	1.28	238		Pn	05 29 17.2	-0.2
U32A	Winter Ranch,	1.28	238	P		05 29 17.1	
	baz=56						
U32A				S		05 29 35.1	
	baz=56						
OK031	S. Brethren Rd	1.29	149		Pn	05 29 17.8	+0.2
OK030	Cody Creek RV	1.34	148		Pb	05 29 18.8	+0.2
BCOK	Bluff Creek, N	1.41	178		Pb	05 29 19.8	+0.1
OK025	Westminster Rd	1.50	170	Pn	Pb	05 29 21.6	+0.2
R32A	Long Quarter,	1.59	329		Pn	05 29 21.7	0.0
R32A	Long Quarter,	1.59	329	P		05 29 21.9	
	baz=148,SNR=218						
R32A				S		05 29 42.7	
	baz=148						
OKCFA	Oklahoma City	1.66	174	Pn	Pb	05 29 23.6	-0.4
OKCSW	OKLAHOMA CITY	1.67	174	Pn	Pb	05 29 23.6	-0.6
TUL1	Leonard	1.90	127	P	Pn	05 29 27.0	+1.1
	baz=308						
TUL1				S	Sb	05 29 53.3	+1.3
	baz=308						
TUL1	Leonard	1.90	127	Pn	Pn	05 29 27.1	+1.1
TUL1				IAmb_Lg		05 29 55.4	
	comp=Z,125nm,0.8s						
TUL1	Leonard	1.90	127	P		05 29 26.9	
	baz=308,SNR=98						
TUL1				S		05 29 53.4	
	baz=308						
W35A	Tecumseh	2.01	161		Pb	05 29 29.0	-1.1
KSU1	Kansas State U	2.20	22	P	Pn	05 29 30.6	+0.6
	baz=203						
KSU1				S	Sb	05 29 60.0	-0.7
	baz=203						
KSU1	Kansas State U	2.20	22		Pn	05 29 30.7	+0.7
KSU1	Kansas State U	2.20	22	P		05 29 30.6	
	baz=203,SNR=36						
KSU1				S		05 30 00.0	
	baz=203						
CBKS	Cedar Bluff	2.40	317	P	Pn	05 29 34.0	+1.1
	baz=136						
CBKS				Sb	Sb	05 30 07.3	+0.8
	baz=136						
CBKS	Cedar Bluff	2.40	317		Pn	05 29 33.6	+0.8
CBKS	Cedar Bluff	2.40	317	P		05 29 33.7	
	baz=136,SNR=37						
X34A	Smith Ranch, M	2.46	183		Pn	05 29 35.5	+1.8
WMOK	Wichita Mounta	2.49	202	P	Pn	05 29 35.1	+1.0
	baz=21						
WMOK				S	Sb	05 30 07.4	-1.8
	baz=21						
WMOK	Wichita Mounta	2.49	202		Pn	05 29 35.2	+1.1
WMOK	Wichita Mounta	2.49	202	P		05 29 35.1	
	baz=21,SNR=23						
WMOK				S		05 30 07.3	
	baz=21						
U38A	Gravette	2.70	102	Pn	Pn	05 29 38.3	+1.2
U38A				IAmb_Lg		05 30 18.0	
	comp=Z,49nm,0.7s						
HHAR	Hobbs	3.09	104		Pn	05 29 43.7	+1.3
X37A	Clayton	3.09	142		Pn	05 29 43.7	+1.3
X37A				IAmb_Lg		05 30 39.2	
	comp=Z,42nm,0.7s						
X37A	Clayton	3.09	142	P		05 29 43.6	
	baz=324						
S39A	Bolivar	3.51	78		Pn	05 29 49.2	+1.1
S39A				IAmb_Lg		05 30 47.4	
	comp=Z,50nm,0.8s						
S39A	Bolivar	3.51	78	P		05 29 48.6	
	baz=261,SNR=14						
S39A				S		05 30 31.2	
	baz=261						
W39A	Magazine	3.65	120	Pb	Pb	05 29 59.3	+1.3
	baz=302						
W39A	Magazine	3.65	120	IAmb_Lg		05 30 56.6	
	comp=Z,35nm,0.8s						
N33B	J Bar K, Exete	3.67	2	S		05 30 33.2	
	baz=183						
N33A	J Bar K, Exete	3.67	2	Pn	Pn	05 29 50.9	+0.5
AMTX	Amarillo	3.92	237	Pn	Pn	05 29 55.3	+1.4
U40A	Yellville	3.93	99	P	Pn	05 29 55.3	+1.5
	baz=282						
U40A				S	Sn	05 30 41.0	+0.8
	baz=282						
U40A	Yellville	3.93	99	Pn	Pn	05 29 55.0	+1.1
U40A				IAmb_Lg		05 31 00.2	
	comp=Z,54nm,0.8s						
U40A	Yellville	3.93	99	P		05 29 55.2	
	baz=282,SNR=16						
U40A				P		05 29 55.2	
	baz=282,SNR=16						
N35A	Tabor	4.11	22	Pn	Pn	05 29 57.1	+0.8
P38A	Dawn	4.13	51	Pn	Pn	05 29 57.4	+0.7
P38A				IAmb_Lg		05 31 09.3	
	comp=Z,29nm,0.9s						
MIAR	Mount Ida	4.16	126	Pn	Pn	05 29 58.5	+1.4
MIAR				IAmb_Lg		05 31 06.7	
	comp=Z,32nm,0.8s						
MIAR	Mount Ida	4.16	126	P		05 29 58.3	
	baz=309,SNR=8.5						
MGMO	Mountain Grove	4.31	87	Pn	Pn	05 30 00.2	+1.1
MGMO				IAmb_Lg		05 31 12.1	
	comp=Z,38nm,0.7s						
BGNE	Belgrade	4.35	355	P	Pn	05 30 00.1	+0.3
	baz=175						
BGNE	Belgrade	4.35	355	Pn	Pn	05 29 59.3	-0.5
BGNE	Belgrade	4.35	355	P		05 30 00.1	
	baz=175,SNR=10						
KSCO	Kaye Shedlock'	4.38	298	P	Pn	05 30 00.6	+0.5
	baz=115						
KSCO	Kaye Shedlock'	4.38	298	Pn	Pn	05 30 00.1	-0.1
KSCO	Kaye Shedlock'	4.38	298	P		05 30 00.5	
	baz=115						
Z38A	Mt. Pleasant	4.38	149	Pn	Pn	05 30 01.2	+1.1
Z38A				IAmb_Lg		05 31 20.1	
	comp=Z,48nm,0.9s						
R40A	Maddies Statio	4.45	72	Pn	Pn	05 30 01.6	+0.6
R40A				IAmb_Lg		05 31 12.7	
	comp=Z,39nm,0.8s						
FCAR	Ozark Folk Cen	4.61	103	Pn	Pn	05 30 03.5	+0.2
FCAR				IAmb_Lg		05 31 19.4	
	comp=Z,38nm,0.8s						
X40A	Basin Creek Fa	4.69	122	Pn	Pn	05 30 05.1	+0.7
WHAR	Wooly Hollow	4.69	111	Pn	Pn	05 30 05.8	+1.4
W41B	Gary Mavity, V	4.77	112	Sb	Sg	05 31 21.2	-5.2
	baz=295						
W41B	Gary Mavity, V	4.77	112	P		05 30 06.2	
	baz=295						
L34A	Svendsen Farm,	5.00	11	Pn	Pn	05 30 08.4	-0.1
L34A				IAmb_Lg		05 31 32.7	
	comp=Z,51nm,0.7s						
WLAR	White Oak Lake	5.02	131	Pn	Pn	05 30 09.8	+0.9
WLAR				IAmb_Lg		05 31 43.5	
	comp=Z,23nm,1.0s						
P40A	Paris	5.05	59	IAmb_Lg		05 31 39.4	
	comp=Z,30nm,0.8s						
WHTX	Lake Whitney,	5.06	178	P	Pn	05 30 10.3	+0.8
	baz=358						
WHTX				Sb	Sg	05 31 31.0	-4.8
	baz=358						
WHTX	Lake Whitney,	5.06	178	Pn	Pn	05 30 10.1	+0.6
WHTX	Lake Whitney,	5.06	178	P		05 30 10.3	
	baz=358,SNR=10						
N38A	Joes South For	5.08	41	Pn	Pn	05 30 10.0	+0.4
N38A	Joes South For	5.08	41	P		05 30 10.1	
	baz=224						
OGNE	Ogallala	5.16	320	Pn	Pn	05 30 11.8	+1.0
CCM	Cathedral Cave	5.19	77	IAmb_Lg		05 31 52.0	
	comp=Z,22nm,0.7s						
T42A	Van Buren	5.25	88	Pn	Pn	05 30 13.2	+1.2
237A	Washetta, Mont	5.28	163	Pn	Pn	05 30 13.3	+0.9
LCAR	Lake Charles	5.33	99	IAmb_Lg		05 31 44.3	
	comp=Z,25nm,1.1s						
SCIA	State Center	5.93	34	IAmb_Lg		05 32 05.6	
	comp=Z,27nm,0.7s						
SLM	Saint Louis	6.08	73	IAmb_Lg		05 32 07.4	
	comp=Z,33nm,0.8s						
LPAR	Lepanto	6.12	102	IAmb_Lg		05 32 25.8	
	comp=Z,37nm,0.9s						
N41A	Harden Midland	6.43	53	IAmb_Lg		05 32 18.6	
	comp=Z,29nm,0.7s						
S44A	Carbondale	6.72	82	IAmb_Lg		05 32 28.1	
	comp=Z,34nm,0.8s						
JCT	Junction City	6.80	196	IAmb_Lg		05 32 47.5	
	comp=Z,23nm,0.8s						
T45A	Paducah	7.21	88	IAmb_Lg		05 32 58.2	
	comp=Z,31nm,0.8s						
Y45A	Yeager Farm, C	7.35	113	IAmb_Lg		05 32 53.8	
	comp=Z,14nm,0.8s						
HDIL	Hopedale	7.40	59	IAmb_Lg		05 33 08.3	
	comp=Z,30nm,0.7s						
F33A	5 Mile Ranch,	8.83	6	IAmb_Lg		05 33 36.2	
	comp=Z,14nm,1.0s						
V48A	Smith Brothers	8.84	95	IAmb_Lg		05 33 56.1	
	comp=Z,14nm,1.1s						
BLO	Bloomington	9.03	73	IAmb_Lg		05 33 47.9	
	comp=Z,24nm,0.8s						

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*IDC **27** 05:32:47.2±4.1, 23°.41S×179°.60E, h495^{km}±34^{km}, mb3.0/6, mb1 3.4/6, mb1mx3.1/32, mbtmp3.8/6, Error ellipse: s-maj=135.7km s-min=20.5km az=159.0*

ISC 27 05:32:47.3±2.0**, 23°.4S**±0°.7×**179°.6E**±0°.3**, h500**^{km}**, n12, σ0^{s}.67**/13**, mb3.3**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.73	260	P	P	05 39 52.5	+0.2
	0.4nm,0.4s,baz=93,slow=7.5,SNR=6.8						
WRA	Warramunga Arr	42.05	266	P	P	05 39 55.1	+0.3
	0.9nm,0.3s,baz=98,slow=8.3,SNR=28						
WRA				ScP	ScP	05 44 41.5	+0.5
	1.1nm,1.1s,baz=103,slow=4.0,SNR=5.1						
NVAR	Mina Array Bea	84.69	44	P	P	05 44 28.5	+0.2
	0.5nm,0.8s,baz=234,slow=7.7,SNR=3.8						
TXAR	Lajitas Array	90.51	58	P	P	05 44 55.9	0.0
	0.6nm,0.8s,baz=204,slow=6.5,SNR=7.2						
ILAR	Eielson Array	91.67	14	P	P	05 45 00.7	+0.5
	0.3nm,0.8s,baz=231,slow=5.7,SNR=2.4						
PDAR	Pinedale Array	92.62	44	P	P	05 45 06.2	+0.8
	0.2nm,0.6s,baz=234,slow=3.1,SNR=2.8						
ARCES	ARCESS Array B	131.35	348	PKP	PKPdf	05 51 01.7	0.0
	6.0nm,1.2s,baz=60,slow=2.9,SNR=1.2						
FINES	FINESS Array B	137.88	341	PKP	PKiKP	05 51 15.0	-1.1
	5.6nm,1.1s,baz=86,slow=4.3,SNR=3.7						
AKASG	Malin Array Be	144.37	327	PKP	PKPab	05 51 25.7	-0.3
	1.0nm,0.5s,baz=42,slow=4.2,SNR=4.5						
BRTR	Keskin Array B	146.98	308	PKPbc	PKPbc	05 51 33.4	-0.4
	0.4nm,0.6s,baz=124,slow=3.4,SNR=3.0						
MMAI	Mount Meron Ar	147.15	295	PKPbc	PKPbc	05 51 34.6	+0.2
	1.1nm,0.3s,baz=74,slow=6.2,SNR=2.1						
EKA	Eskdalemuir Ar	148.07	3	PKPbc	PKPbc	05 51 34.6	-1.3
	0.4nm,0.3s,baz=352,slow=2.5,SNR=4.2						

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*IDC **27** 05:50:57.3±4.9, 4°.87S×101°.58E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.5/36, mbtmp3.7/4, Error ellipse: s-maj=198.4km s-min=31.6km az=52.0*

*DJA **27** 05:51:08.0±0.5, 5°S±3°×10°2E±°, h16^{km}±6^{km}, M3.4/9, MLv3.4/9*

ISC 27 05:50:59.7±1.2**, 4°.87S**±0°.08×**102°.00E**±0°.08**, h10**^{km}**, n15, σ1^{s}.40**/14**, mb3.7**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.08	62	P	Pn	05 51 22.5	+1.6
MNAI				S	Sg	05 51 32.5	-2.0
KSI	Kapahiang	1.35	26	P	Pg	05 51 27.4	+1.8
MASI	Maura Aman, Be	1.73	8	P	Pg	05 51 33.7	+0.7
LHSI	Lahat	1.84	56	P	Pb	05 51 33.6	+0.1
LHSI				S	Sn	05 51 54.3	-0.4
LWLI	Liwa	2.06	94	P	Pg	05 51 39.5	+0.3
KASI	Kota Agung	2.57	105	P	Pb	05 51 46.0	+0.1
KLSI		2.73	86	P	Pb	05 51 47.8	-0.8
H08S2	Diego Garcia H	29.46	263	T	T	06 27 45.7	
	baz=86						
H08S3	Diego Garcia H	29.46	263	T	T	06 27 44.0	
	baz=86						
H08S1	Diego Carcia H	29.48	263	T	T	06 27 34.9	
	baz=86						

WRA	Warramunga Arr	34.85	118	P	P	05 57 53.2	+1.8
	0.5nm,1.1s,baz=292,slow=8.2,SNR=1.7						
SONM	Songino Array	52.62	4	P	P	06 00 13.3	-0.7
	0.5nm,0.6s,baz=193,slow=9.3,SNR=4.5						
MKAR	Makanchi Array	54.32	343	P	P	06 00 24.7	-1.7
	0.5nm,0.6s,baz=157,slow=7.4,SNR=6.2						
ZALV	Zalesovo Beam	60.35	348	P	P	06 01 06.8	-1.9
	0.8nm,0.4s,baz=153,slow=7.7,SNR=4.3						
TXAR	Lajitas Array	145.62	42	PKPbc	PKPbc	06 10 39.6	+0.1
	0.4nm,0.6s,baz=282,slow=0.8,SNR=5.5						

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*NNC **27** 06:30:30.3±3.9, 53°.88N×86°.36E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=39.3km s-min=24.9km az=168.0, Suspected Mining explosion.*

IDC 27 06:30:26.4±2.4**, 54°.13N×86°.45E, h0^{km}, mb1 3.2**/2**, mb1mx3.0**/37**, mbtmp3.2**/2**, ML3.0**/2**, 4C-3D, Error ellipse: s-maj=18.7km s-min=11.9km az=57.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.98	260	*i*		06 36 29.1	
	baz=78,slow=351,SNR=11						
ZALV	Zalesovo Beam	0.98	260	Pg	Pg	06 30 43.9	-1.1
	2.5nm,0.3s,baz=76,slow=17,SNR=12						
ZALV				Lg	Lg	06 30 58.3	
	3.9nm,0.3s,baz=80,slow=32,SNR=14						
ZALV				Rg	Rg	06 31 02.7	
	6.5nm,0.3s,baz=79,slow=31,SNR=9.9						
KURK	Kurchatov	5.88	238	⇑Pn	Pn	06 31 56.5	+1.8
	0.2nm,0.3s						
KURK				⇓Sn	Sn	06 33 02.0	-0.8
	0.5nm,0.6s						
KURK				⇑Lg	Lg	06 33 35.3	
	5.3nm,1.0s						
KURBB	Kurchatov Arra	5.99	237	Pn	Pn	06 31 57.0	+0.9
	0.2nm,0.3s,baz=55,slow=14,SNR=11						
KURBB				Sn	Sn	06 33 06.6	+1.3
	0.0nm,0.3s,baz=52,slow=22,SNR=2.1						
KURBB				Lg	Lg	06 33 36.9	
	0.1nm,0.3s,baz=54,slow=30,SNR=5.4						
KURBB	Kurchatov Arra	5.99	237	⇓Pn	Pn	06 31 56.9	+0.8
	0.9nm,0.3s						
KURBB				⇑Sn	Sn	06 33 06.6	+1.3
	3.2nm,0.8s						
KURBB				⇑Lg	Lg	06 33 36.9	
	4.6nm,0.7s						
MK31	Makanchi Array	7.81	201	Pn	Pn	06 32 22.6	+1.5
	0.1nm,0.2s,baz=28,slow=14,SNR=32						
MK31				Sn	Sn	06 33 49.0	-1.2
	0.2nm,0.5s,baz=29,slow=27,SNR=3.8						
MK31				⇓Lg	Lg	06 34 27.6	
	2.3nm,1.1s,baz=28,slow=29,SNR=4.2						
MKAR	Makanchi Array	7.81	201	Pn	Pn	06 32 22.4	+1.2
	0.4nm,0.3s,baz=26,slow=14,SNR=27						
MKAR				Sn	Sn	06 33 48.2	-2.0
	0.0nm,0.3s,baz=22,slow=27,SNR=4.6						
MKAR				Lg	Lg	06 34 33.4	
	0.0nm,0.3s,baz=22,slow=31,SNR=8.3						

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*IDC **27** 07:19:55.1±1.0, 15°.35S×176°.61W, h0^{km}, mb3.8/9, mb1 4.1/9, mb1mx3.9/37, mbtmp3.7/9, MS3.8/5, Ms1 3.8/5, ms1mx3.4/21, Error ellipse: s-maj=48.9km s-min=21.4km az=161.0*

ISC 27 07:19:56.6±1.1**, 15°.3S**±0°.3×**176°.7W**±0°.2**, h10^{km}, n16,** σ**1^{s}06**/12**, mb3.9**/10**, MS3.9**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	17.34	245	LR	LR	07 29 34.5	
	comp=Z,193nm,19.2s,baz=57,slow=33						
URZ	Urewera	23.48	192	LR	LR	07 33 00.6	
	comp=Z,458nm,21.7s,baz=31,slow=33						
HNR	Honiara	23.58	282	LR	LR	07 32 49.6	
	comp=Z,100nm,18.3s,baz=130,slow=33						
PPT	Papeete	26.06	99	P	P	07 25 29.2	-1.2
	20nm,0.6s,baz=261,slow=14,SNR=4.6						
WRA	Warramunga Arr	46.80	257	P	P	07 28 26.7	-0.1
	0.4nm,0.9s,baz=92,slow=7.7,SNR=3.3						
ASAR	Alice Springs	47.14	252	P	P	07 28 30.2	+0.7
	2.8nm,0.7s,baz=82,slow=8.6,SNR=17						
YBH	Yreka Blue Hor	75.48	39	P	P	07 31 42.2	+1.0
	1.6nm,1.0s,baz=260,slow=6.1,SNR=3.2						
NVAR	Mina Array Bea	76.42	43	P	P	07 31 46.4	-0.3
	0.7nm,0.7s,baz=227,slow=8.9,SNR=5.1						
ILAR	Eielson Array	83.03	12	P	P	07 32 20.6	-1.2
	1.2nm,0.9s,baz=224,slow=6.8,SNR=5.5						
TXAR	Lajitas Array	83.20	57	P	P	07 32 25.5	+1.9
	0.2nm,0.9s,baz=216,slow=4.5,SNR=1.9						
PDAR	Pinedale Array	84.34	43	P	P	07 32 30.2	+0.9
	0.2nm,0.5s,baz=228,slow=3.8,SNR=2.7						
PDAR				LR	LR	08 05 49.3	
	comp=Z,45nm,18.2s,baz=16,slow=33						
MAW	Mawson	86.83	199	LR	LR	08 09 28.8	
	comp=Z,105nm,19.5s,baz=66,slow=34						
YKA	Yellowknife Ar	91.31	24	P	P	07 33 01.9	-0.2
	0.2nm,0.7s,baz=244,slow=4.2,SNR=4.0						
SONM	Songino Array	92.72	319	P	P	07 33 09.0	-0.1
	0.4nm,0.8s,baz=123,slow=5.3,SNR=2.5						
BRTR	Keskin Array B	144.08	318	PKP	PKPdf	07 39 32.0	-1.0
	2.1nm,0.9s,baz=112,slow=1.3,SNR=6.8						
GERES	GERESS Array B	145.52	348	PKPbc	PKPab	07 39 35.4	-0.1
	0.4nm,0.6s,baz=328,slow=3.5,SNR=2.4						

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*IDC **27** 07:25:42.5±1.8, 16°.14S×69°.59W, h200^{km}±20^{km}, mb3.2/6, mb1 3.3/11, mb1mx3.2/44, mbtmp3.8/11, Error ellipse: s-maj=27.3km s-min=17.1km az=25.0*

*VAO **27** 07:25:45.5±0.9, 16°.16S×69°.53W, h216^{km}±8^{km}, mb3.9*

ISC 27 07:25:42.1±0.6**, 16°.24S**±0°.07×**69°.75W**±0°.08**, h200^{km}, n42,** σ**1^{s}23**/44**, mb3.2**/5**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	6.39	173	P	Pn	07 27 16.5	+1.7
	2.2nm,0.3s,baz=19,slow=11,SNR=23						
LVC				S	Sn	07 28 25.6	-2.5
	7.1nm,0.3s,baz=44,slow=22,SNR=18						
ETMB	Extrema	7.26	29	*e*P	Pn	07 27 26.9	+1.1
NNA	Nana	8.07	301	P	Pn	07 27 37.7	+1.3
	2.1nm,0.3s,baz=109,slow=9.7,SNR=6.1						
NNA				S	Sn	07 29 04.6	-2.8
	1.2nm,0.3s,baz=204,slow=21,SNR=1.8						
SIV	San Ignacio	8.35	90	P	Pn	07 27 37.7	-2.4
	0.4nm,0.3s,baz=297,slow=7.9,SNR=7.6						
SAML	Samuel	9.68	42	*e*P	Pn	07 27 56.6	-0.7
VILB	Vilhena	9.81	72	*e*P	Pn	07 27 59.9	+0.9
AQDB	Aquidauana	13.99	110	*e*P	Pn	07 28 53.1	+1.0
CPUP	Villa Florida	15.31	133	P	P	07 29 08.9	+0.4
	0.2nm,0.3s,baz=313,slow=11,SNR=5.3						
CPUP	Villa Florida	15.31	133	*e*P	P	07 29 09.4	+0.9
MACA	Manacapuru-AM	15.76	35	*e*P	P	07 29 14.3	+0.7
NPGB	Novo Progresso	16.79	59	*e*P	P	07 29 25.0	0.0
ARAG	Araguaiana, MT	17.26	91	*e*P	P	07 29 30.2	+0.2
TRCB	Terra Rica	17.40	115	*e*P	P	07 29 32.6	+1.0
ITQB	Itaqui	18.00	140	*e*P	P	07 29 39.5	+1.5
ITTB	Itaituba	18.13	51	*e*P	P	07 29 39.8	+0.2
PTGA	Pitinga	18.18	33	P	P	07 29 40.1	0.0
	1.0nm,0.3s,baz=278,slow=4.1,SNR=5.7						
PTGA	Pitinga	18.18	33	*e*P	P	07 29 40.5	+0.4
PCMB	Pacaembu	18.29	110	*e*P	P	07 29 41.2	+0.1
SNDB	Serra Nova Dou	18.40	79	*e*P	P	07 29 42.7	+0.3
PTGB	Pitanga	18.58	120	*e*P	P	07 29 45.4	+1.0
ITRB	Iturama	18.77	103	*e*P	P	07 29 47.5	+1.0
ITAB	Concordia	19.66	127	*e*P	P	07 29 55.8	-0.2
FRTB	Fartura	20.26	114	*e*P	P	07 30 02.7	+0.3
CPSB	Cacapava Do Su	20.54	136	*e*P	P	07 30 06.9	+1.6
IPMB	Ipameri, GO	20.66	98	*e*P	P	07 30 05.3	-1.5
BB19B	Bebedouro	20.67	107	*e*P	P	07 30 06.7	-0.2
MALB	Monte Alegre	20.91	48	*e*P	P	07 30 10.5	+1.1
BDFB	Brasilia	20.91	91	P	P	07 30 08.0	-1.5
	2.8nm,0.5s,baz=257,slow=15,SNR=5.6						
PLTB	Pedras Altas	21.32	139	*e*P	P	07 30 15.7	+2.1
CNLB	Canela	21.71	130	*e*P	P	07 30 17.7	+0.1
SMTB	Santa Maria do	22.83	74	*e*P	P	07 30 27.8	-0.4
MCPB	Macapa, AP	23.53	50	*e*P	P	07 30 34.8	+0.3
BSCB	Bom Sucesso	24.13	105	*e*P	P	07 30 41.1	+1.1
SDBA	SAO DESIDERIO	24.37	84	*e*P	P	07 30 41.3	-0.9
JANB	Januaria	24.52	91	*e*P	P	07 30 41.5	-2.1
NBPS	Pedro II - PI	30.18	70	*e*P	P	07 31 34.2	+0.1
TXAR	Lajitas Array	55.90	324	P	P	07 34 58.8	-0.8
	0.2nm,0.8s,baz=153,slow=6.7,SNR=1.5						
DBIC	Dimbokro	68.12	76	P	P	07 36 19.7	-1.3
	1.4nm,0.4s,baz=228,slow=6.0,SNR=4.9						
TORD	Torodi Ar. Bea	76.42	72	P	P	07 37 09.1	-1.1
	1.4nm,0.6s,baz=272,slow=4.6,SNR=5.9						
ESDC	Sonseca Array	82.69	45	P	P	07 37 44.0	+0.5
	0.2nm,0.4s,baz=213,slow=2.1,SNR=1.3						
YKA	Yellowknife Ar	85.98	341	P	P	07 38 00.8	+1.4
	0.1nm,0.6s,baz=131,slow=5.3,SNR=2.0						
WRA	Warramunga Arr	136.95	214	PKP	PKPdf	07 44 43.1	+1.1
	0.5nm,1.0s,baz=144,slow=1.7,SNR=2.5						

NNC 27 07:37:46.8±3.5**, 53°.48N×90°.55E, h0^{km}, mb3.7, mpv3.5, 5C-6D, Error ellipse: s-maj=29.5km s-min=21.2km az=81.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.44	280	⇑Pn	Pn	07 38 42.9	+1.4
	5.5nm,0.8s						
ZAA0				⇓Lg	Lg	07 39 35.0	
	24nm,0.9s						
KURK	Kurchatov	7.85	254	⇓Pn	Pn	07 39 39.1	-3.0
	4.0nm,0.9s						
KURK				⇑Sn	Sn	07 41 11.7	+0.1
	14nm,0.8s						
KURK				⇓Lg	Lg	07 41 59.4	
	71nm,1.0s						
MK31	Makanchi Array	8.54	222	Pn	Pn	07 39 50.6	-1.0
	0.5nm,0.5s,baz=41,slow=12,SNR=37						
MK31				⇓Pg	Pg	07 40 03.9	-26
	2.5nm,0.8s,baz=36,slow=13,SNR=5.0						
MK31				⇑Sn	Sn	07 41 32.5	+4.0
	9.7nm,0.9s,baz=45,slow=22,SNR=5.9						
MK31				⇓Lg	Lg	07 42 16.5	
	28nm,1.1s,baz=36,slow=22,SNR=3.8						
MAKZ	Makanchi	8.65	223	⇑Pn	Pn	07 39 52.3	-0.8
	3.0nm,1.1s						
MAKZ				⇑Sn	Sn	07 41 33.4	+2.1
	5.9nm,0.9s						
MAKZ				⇓Lg	Lg	07 42 21.1	
	22nm,1.0s						

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*BGR **27** 07:37:57.9±0.0, 22°.13S×174°.34E, h33^{km}*

*IDC **27** 07:37:58.3±0.9, 20°.46S×172°.57E, h0^{km}, mb4.3/11, mb1 4.5/13, mb1mx4.4/24, mbtmp4.3/13, ML3.4/1, MS3.9/17, Ms1 3.9/17, ms1mx3.7/31, Error ellipse: s-maj=33.5km s-min=18.4km az=148.0*

*GCMT **27** 07:38:02.7±0.2, 20°.56S±0°.02×172°.52E±0°.02, h19^{km}±1^{km}, MW4.9/90, Moment Tensor Solution. s29,c36; s90,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.27±.17; $M_{\theta\theta}$0.22±.11; $M_{\phi\phi}$2.05±.10; $M_{r\theta}$-0.49±.25; $M_{\theta\phi}$1.52±.06; $M_{\phi r}$0.35±.17; Best double couple: $M_0$2.68700×10^{16} NP1:ϕ_s47.00000°,δ47.00000°,λ-65.00000°. NP2: ϕ_s192.00000°,δ48.00000°,λ-114.00000°. Principal axes: T 2.9100, Plg1.0000°, Azm299.0000°; N -0.4450, Plg18.0000°, Azm209.0000°; P -2.4650, Plg72.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 07:38:03.7±1.2, 20°.5S±0°.1×172°.33E±0°.07, h35^{km}±2^{km}, mb4.9/44 Error ellipse: s-maj=21.1km s-min=11.7km az=176.0*

ISC 27 07:38:03.1±0.4**, 20°.59S**±0°.09×**172°.66E**±0°.08**, h35^{km}, n154,** σ**1^{s}41**/142**, mb4.9**/33**, MS4.0**/18**, 12C-5D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.84	62		Pn	07 39 34.9	+7.7
DZM	Mont Dzumac	5.97	255	*e*Pn	Pn	07 39 29.0	-0.1
	3.3nm,0.3s						
DZM				*e*LR	LR	07 40 39.8	
	comp=Z,2µm,25.9s						
DZM	Mont Dzumac	5.97	255	Pn	Pn	07 39 29.2	+0.1
	1.1nm,0.3s,baz=99,slow=19,SNR=18						
DZM				LR	LR	07 41 22.2	
	comp=Z,818nm,22.0s,baz=85,slow=34						
DZM	Mont Dzumac	5.97	255		Pn	07 39 29.6	+0.5
SANVU	Saraoutou	7.29	314		Pn	07 39 47.5	+0.4
RAO	Raoul Island	12.14	137	LR	LR	07 44 39.8	
	comp=Z,978nm,19.4s,baz=349,slow=33						
HNR	Honiara	16.53	310	LR	LR	07 47 13.8	
	comp=Z,385nm,18.8s,baz=154,slow=34						
URZ	Urewera	18.02	169	P	P	07 42 12.6	+1.6
	baz=358,slow=13,SNR=4.4						
URZ				LR	LR	07 47 31.3	
	comp=Z,551nm,19.0s,baz=31,slow=32						
RPZ	Rata Peaks	23.09	183	LR	LR	07 50 32.5	
	comp=Z,216nm,18.2s,baz=20,slow=32						
RAR	Rarotonga	25.75	96	LR	LR	07 51 28.1	
	comp=Z,201nm,20.2s,baz=264,slow=31						
STKA	Stephens Creek	29.94	242	P	P	07 44 08.2	+0.2
	4.6nm,0.8s,baz=58,slow=7.1,SNR=8.4						
TBI	Tubuai	35.17	102	*e*S	S	07 50 25.5	+0.6
	109nm,28.2s						
TBI				*e*LR	LR	07 54 26.3	
	comp=Z,532nm,31.2s						
PPT2	Papeete2	35.76	92	*e*LR	LR	07 54 48.0	
	comp=Z,636nm,27.0s						
PPT	Papeete	35.77	92	LR	LR	07 56 45.9	
	comp=Z,108nm,20.8s,baz=250,slow=32						
WRA	Warramunga Arr	35.90	264	P	P	07 44 58.5	-1.7
	1.5nm,1.0s,baz=91,slow=8.2,SNR=7.3						
WRA				LR	LR	07 59 34.0	
	comp=Z,258nm,18.9s,baz=85,slow=36						
WRA	Warramunga Arr	35.90	264	P	P	07 44 58.7	-1.4
ASAR	Alice Springs	35.95	258	P	P	07 44 59.5	-1.1
	1.1nm,0.7s,baz=96,slow=8.8,SNR=16						
ASAR				LR	LR	07 58 48.8	
	comp=Z,265nm,19.2s,baz=95,slow=35						
TAOE	Nuku Hiva Isla	46.95	83	*e*S	S	07 53 17.2	-3.1
	71nm,27.0s						
TAOE				*e*LR	LR	07 59 56.0	
	comp=Z,286nm,26.5s						
BATI	Baumata	48.19	275	LR	LR	08 06 33.0	
	comp=Z,325nm,19.5s,baz=158,slow=36						
RKT	Rikitea	48.46	103	*e*LR	LR	08 00 25.2	
	comp=Z,312nm,31.5s						
VNDA	Vanda	57.21	183	LR	LR	08 08 14.1	
	comp=Z,68nm,20.8s,baz=26,slow=32						
LEM	Lembang	64.28	272	LR	LR	08 17 10.1	
	comp=Z,71nm,19.3s,baz=58,slow=37						
MJAR	Matsushiro Arr	65.49	330	LR	LR	08 12 38.9	
	comp=Z,44nm,21.9s,baz=340,slow=32						
QSPA	South Pole Qui	69.47	180	P	P	07 49 07.9	+0.2
QSPA				IAmb	IAmb	07 49 46.8	
	comp=Z,27nm,1.9s						
KSRS	Korea Array	71.46	324	LR	LR	08 17 48.0	
	comp=Z,50nm,20.9s,baz=141,slow=34						
NJ2	Nanjing	73.43	314	*e*P	P	07 49 33.0	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	Petropavlovsk-	74.53	351	P	P	07 49 37.6	-0.3
	comp=Z,8.9nm,0.9s,baz=138,slow=3.6,SNR=7.0						
PETK				LR	LR	08 15 02.6	
	comp=Z,51nm,20.5s,baz=151,slow=30						
PSI	Prapat	75.81	279	LR	LR	08 25 27.4	
	comp=Z,69nm,18.7s,baz=165,slow=38						
KLR	Kul'dur	78.46	334	P	P	07 50 00.4	+0.2
	comp=Z,1.6nm,0.7s,baz=174,slow=3.2,SNR=5.2						
KMI	Kunming	81.72	301	⇑P	P	07 50 22.0	+3.3
CMAR	Chiang Mai Arr	81.99	293	P	P	07 50 21.4	+1.4
	comp=Z,1.6nm,0.3s,baz=127,slow=3.6,SNR=11						
HHC	Hu-ho-hao-te	83.36	318	*e*P	P	07 50 24.8	-1.9
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
WDC	Whiskeytown Da	85.57	44	P	P	07 50 39.4	+1.7
WDC				IAmb	IAmb	07 50 40.1	
	comp=Z,13nm,1.6s						
CMB	Columbia Colle	85.70	47	P	P	07 50 39.9	+1.3
ORV	Oroville	85.72	45	P	P	07 50 40.1	+1.5
ISA	Isabella, Lake	85.87	50	P	P	07 50 41.2	+1.7
LZH	Lanzhou	86.03	311	*e*P	P	07 50 42.0	+1.6
LZH				pP	pwP	07 50 58.0	+3.5
LZH				sP	sP	07 51 06.5	+12
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
YBH	Yreka Blue Hor	86.07	43	P	P	07 50 41.6	+1.3
YBH				IAmb	IAmb	07 50 43.2	
	comp=Z,9.8nm,1.1s						
MDPB	Devils Postpil	86.40	48	P	P	07 50 43.6	+1.3
OMMB	Old Mammoth Mi	86.44	48	P	P	07 50 44.1	+1.5
WAKR	Walker	86.58	47	P	P	07 50 44.1	+1.1
WAKR				IAmb	IAmb	07 50 46.0	
	comp=Z,7.6nm,1.1s						
BEKR	Beckworth	86.64	45	P	P	07 50 42.9	-0.4
PNTR	Pine Nut	86.76	46	P	P	07 50 45.8	+1.8
PNTR				IAmb	IAmb	07 50 46.7	
	comp=Z,12nm,1.1s						
PAHR	Pah Rah Range	87.21	46	P	P	07 50 47.2	+1.2
RYN	Ryan	87.27	47	P	P	07 50 47.4	+1.0
RYN				IAmb	IAmb	07 50 48.9	
	comp=Z,7.7nm,1.2s						
NVAR	Mina Array Bea	87.32	47	P	P	07 50 47.6	+0.9
	comp=Z,1.1nm,0.6s,baz=224,slow=7.5,SNR=7.1						
GLA	Glamis	87.33	53	P	P	07 50 48.9	+2.2
GLA				IAmb	IAmb	07 50 49.8	
	comp=Z,10nm,1.1s						
NV11	Mina Array Sit	87.42	47	P	P	07 50 48.6	+1.5
MOD	Modoc Plateau	87.70	43	P	P	07 50 49.9	+1.5
MOD				IAmb	IAmb	07 50 50.8	
	comp=Z,8.3nm,1.1s						
TPH	Tonopah	87.90	48	P	P	07 50 51.1	+1.6
PINE	Pine Mountain	88.26	42	P	P	07 50 52.8	+1.8
PINE				IAmb	IAmb	07 50 53.7	
	comp=Z,11nm,1.1s						
VNA3	Neumayer Olymp	88.39	179	P	P	07 50 50.5	-0.6
SHPR	Sheep Range	88.63	50	P	P	07 50 54.1	+1.2
SHPR				IAmb	IAmb	07 50 55.9	
	comp=Z,10nm,1.4s						
VNA2	Neumayer--Watz	88.73	180	P	P	07 50 52.5	-0.1
VNA1	Neumayer--Stat	89.00	180	P	P	07 50 46.6	-7.3
WVOR	Wild Horse Val	89.04	44	P	P	07 50 55.8	+1.1
WVOR				IAmb	IAmb	07 50 57.3	
	comp=Z,6.6nm,1.1s						
PRN	Pahroc Range	89.12	49	P	P	07 50 57.1	+1.9
I07A	Izee	89.30	42	P	P	07 50 56.3	+0.5
ULN	Ulaanbaatar	89.88	322	P	P	07 50 57.1	-1.4
TUC	Tucson	90.09	55	P	P	07 51 01.9	+2.1
G08A	Pilot Rock	90.23	41	P	P	07 51 00.5	+0.3
G08A				IAmb	IAmb	07 51 02.4	
	comp=Z,4.9nm,0.8s						
LCMT	Little Creek M	90.24	50	P	P	07 51 01.7	+1.3
SONM	Songino Array	90.25	322	P	P	07 50 59.9	-0.3
	comp=Z,1.9nm,1.0s,baz=122,slow=4.4,SNR=9.0						
SONM	Songino Array	90.25	322	P	P	07 51 00.1	-0.1
SPR3	Spring Creek 3	90.34	48	P	P	07 51 01.8	+0.7
SPR3				IAmb	IAmb	07 51 03.2	
	comp=Z,5.5nm,1.0s						
CCUT	Cedar City	90.39	50	P	P	07 51 02.4	+1.1
GTA	Gaotai	90.40	312	⇓P	P	07 51 01.5	+0.4
GTA				pP	sP	07 51 14.0	-0.8
GTA				sP	pwP	07 51 19.5	+4.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
X16A	Lo Mia Camp, P	90.46	53	P	P	07 51 02.9	+1.3
X16A				IAmb	IAmb	07 51 04.8	
	comp=Z,7.8nm,1.1s						
PSUT	Pine Spring	90.47	49	P	P	07 51 03.3	+1.7
ELK	Elko	90.49	46	P	P	07 51 03.1	+1.4
ELK				IAmb	IAmb	07 51 04.1	
	comp=Z,7.8nm,1.2s						
KNB	Kanab	90.55	50	P	P	07 51 03.9	+2.0
ILAR	Eielson Array	90.60	16	P	P	07 51 00.6	-0.7
	comp=Z,1.4nm,0.8s,baz=234,slow=4.9,SNR=14						
ILAR	Eielson Array	90.60	16	P	P	07 51 00.4	-0.8
U15A	North Rim	90.68	51	P	P	07 51 04.5	+1.9
E08A	Dider Farm, El	90.76	40	P	P	07 51 03.5	+1.1
319A	Douglas	90.88	57	P	P	07 51 04.7	+1.1
319A				IAmb	IAmb	07 51 06.8	
	comp=Z,7.6nm,1.1s						
WUAZ	Wupatki	90.97	52	P	P	07 51 06.3	+2.4
PKCU	Pink Cliffs	91.10	50	P	P	07 51 06.7	+2.0
MFID	Camas Ranch	91.32	44	P	P	07 51 06.7	+1.5
MFID				IAmb	IAmb	07 51 32.1	
	comp=Z,13nm,1.9s						
MTPU	Mount Pierson	91.44	50	P	P	07 51 08.1	+1.8
X18A	Snowflake	91.63	54	P	P	07 51 08.4	+1.4
X18A				IAmb	IAmb	07 51 09.9	
	comp=Z,4.7nm,0.9s						
EGAK	Eagle	92.18	18	P	P	07 51 08.7	+0.2
LENM	Lemitar	93.76	55	P	P	07 51 20.2	+3.4
TXAR	Lajitas Array	94.61	61	P	P	07 51 21.0	+0.2
	comp=Z,0.9nm,0.8s,baz=227,slow=5.7,SNR=11						
TXAR	Lajitas Array	94.61	61	P	P	07 51 22.9	+2.1
PDAR	Pinedale Array	95.20	46	P	P	07 51 23.3	0.0
	comp=Z,0.2nm,0.7s,baz=260,slow=4.4,SNR=3.7						
PLCA	Paso Flores	95.37	137	LR	LR	08 25 02.1	
	comp=Z,67nm,21.7s,baz=240,slow=30						
WMQ	Urumqi	100.47	313	*e*P	Pdif	07 51 47.3	+0.5
MKAR	Makanchi Array	104.96	315	Pdiff	Pdif	07 52 09.6	+3.0
	comp=Z,0.1nm,0.7s,baz=142,slow=4.9,SNR=3.0						
MNK	Minsk	136.92	330	*i* PKP	PKPdf	07 57 20.1	-1.7
	comp=E,3.0nm,1.2s						
MNK				*i* PKP	PKPdf	07 57 20.1	-1.7
	comp=N,9.0nm,0.6s						
MNK				*i* PKP	PKPdf	07 57 20.1	-1.7
	comp=Z,8.0nm,0.6s						
MNK				*i* PP	PP	08 00 03.4	-1.8
MNK				*i* SKP		08 00 49.6	
MNK				*i* PKS	PKSdf	08 00 56.3	-1.5
MNK				*i* PPP	PPP	08 03 02.0	
MNK				*i* SKS	SKSdf	08 04 25.5	-4.4
MNK				*i* PS	PS	08 10 28.9	-2.9
MNK				*i* SKKS	SKKSdf	08 14 03.8	-6.3
MNK				*i* SS	SS	08 18 05.4	-1.7
MNK				*i* SSS	SSS	08 23 08.8	
MNK				*i* LQ	LQ	08 50 28.5	
MNK				*i* LR	LR	08 57 46.5	
MNK				*i* LRM	MLR	09 00 11.2	
	comp=N,218nm,18.7s						
MNK				*i* LRM	MLR	09 00 13.8	
	comp=Z,254nm,14.5s						
MNK				*i* LRM	MLR	09 00 19.0	
	comp=E,30nm,17.1s						
AKASG	Malin Array Be	138.45	325	PKP	PKiKP	07 57 27.0	+0.1
	comp=E,0.2nm,0.3s,baz=62,slow=1.8,SNR=4.7						
MLR	Muntele Rosu	143.07	320	⇑P	PKPbc	07 57 31.1	+0.7
VOIR		143.64	320	⇑P	PKPbc	07 57 33.1	+1.2
DRGR		144.22	324	⇓P	PKPdf	07 57 35.7	+0.3
KSP	Ksiaz	144.54	334	*e*PKPdf	PKPdf	07 57 35.3	-0.4
OSTC	Ostas	144.79	334	*e*PKP	PKPbc	07 57 35.4	+0.2
MORC	Moravsky Berou	144.81	332	⇑P	PKPbc	07 57 35.8	+0.5
MORC	Moravsky Berou	144.81	332	*e*PKP	PKPbc	07 57 35.6	+0.3
CHVC	Chvalec	144.84	334	*e*PKP	PKPbc	07 57 35.7	+0.3
DPC	Dobruska-Polom	144.91	333	*e*PKP	PKPbc	07 57 35.7	+0.1
DPC				*e*pPKP	PKiKP	07 57 42.9	+2.7
UPC	Upice	144.92	334	*e*PKP	PKPdf	07 57 36.2	-0.2
KRLC	Kraliky	144.92	333	*e*PKP	PKPbc	07 57 35.9	+0.2
KRLC				*e*pPKP	PKiKP	07 57 43.1	+2.9
PLVB	Pleven	144.96	318	⇑P	PKPdf	07 57 37.1	+0.4
GZR	Gura Zlata	145.00	322	⇑P	PKPdf	07 57 36.6	-0.1
SIRR	Siria	145.11	324	⇑P	PKPdf	07 57 37.4	+0.6
VYHS	Vyhne	145.12	329	*e*PKP	PKPdf	07 57 37.2	+0.4
FLTG	Flechtingen	145.19	340	*e*PKPbc	PKPdf	07 57 37.2	+0.5
	baz=32,slow=2.6						
NRDL	Niedersach Rie	145.40	341	*e*PKPbc	PKPab	07 57 38.0	+0.8
	baz=32,slow=2.6						
JAVC	Velka Javorina	145.41	331	*e*PKP	PKPab	07 57 39.3	+1.8
CLL	Collm	145.45	337	⇓*i*PKPbc	PKPbc	07 57 37.4	+0.2
	comp=Z,36nm,0.9s						
CLL				*e*		07 57 48.0	
CLL	Collm	145.45	337	*e*PKPbc	PKPab	07 57 37.8	+0.4
	baz=32,slow=2.6						
BRG	Berggiesshubel	145.45	336	⇑*i*PKP	PKPab	07 57 38.0	+0.5
BRG				Amp		07 57 39.0	
	comp=Z,43nm,1.0s						
BRG				*e*x	x	07 57 50.1	
BRG				Amp		07 57 52.0	
	comp=Z,39nm,1.4s						
BRG	Berggiesshubel	145.45	336	*e*PKPbc	PKPab	07 57 38.2	+0.7
	baz=32,slow=2.6						
PVCC	Panska Ves	145.48	335	*e*PKP	PKPab	07 57 38.3	+0.7
HERR	Herculane	145.50	321	⇑P	PKPab	07 57 38.1	+0.3
BZS	Buzias	145.53	323	⇑P	PKPdf	07 57 35.6	-1.9
ASSE	Asse, Remlinge	145.54	340	*e*PKPbc	PKPab	07 57 38.4	+0.7
	baz=32,slow=2.6						
VRAC	Vranov	145.57	332	⇑P	PKPab	07 57 38.8	+0.8
VRAC	Vranov	145.57	332	*e*PKP	PKPab	07 57 38.2	+0.2
FBE	Freiberg	145.63	337	*e*PKPbc	PKPab	07 57 38.8	+0.7
	baz=32,slow=2.6						
SMOL	Smolenice	145.77	330	*e*PKP	PKPab	07 57 39.7	+0.9
KRUC	Moravsky	145.84	332	*e*PKP	PKPab	07 57 39.3	+0.3

CLZ	Clausthal	145.89	340	*e*PKPbc	PKPab	07 57 39.4	+0.3
	baz=32,slow=2.6						
PRU	Pruhonice	145.92	335	*e*PKP	PKPab	07 57 39.2	-0.1
MODS	Modra-Piesok	145.94	330	*e*PKP	PKPab	07 57 39.4	0.0
ZST	Bratislava	146.15	330	*e*PKP	PKPab	07 57 41.0	+0.8
GTTG	Gottingen	146.27	340	*e*PKPbc	PKPab	07 57 40.5	0.0
	baz=32,slow=2.6						
TANN	Tannenbergstha	146.37	337	*e*PKPbc	PKPab	07 57 40.9	-0.1
	baz=32,slow=2.6						
WERD	Werda	146.40	337	*e*PKPbc	PKPab	07 57 40.9	-0.2
	baz=32,slow=2.6						
GUNZ	Gunzen	146.46	337	*e*PKPbc	PKPab	07 57 41.4	0.0
	baz=32,slow=2.6						
MOX	Moxa	146.49	338	*e*PKPbc	PKPab	07 57 41.1	-0.4
	baz=32,slow=2.6						
WERN	Wernitzgruen	146.51	337	*e*PKPbc	PKPab	07 57 41.6	+0.1
	baz=32,slow=2.6						
CONA	Conrad Observa	146.92	331	*i* P	PKPab	07 57 43.0	-0.3
	comp=Z,19nm,1.4s						
KHC	Kasperske Hory	146.98	335	*e*PKP	PKPbc	07 57 42.4	+0.4
KHC				*e*pPKP	pPKPdf	07 57 49.4	-1.0
ROTZ	Rotzenmuhle	147.00	337	*e*PKPbc	PKPbc	07 57 42.7	+0.7
	baz=32,slow=2.6						
GEC2	GERESS Array S	147.15	334	*e*PKPbc	PKPbc	07 57 43.0	+0.5
	baz=32,slow=2.6						
GERES	GERESS Array B	147.15	334	PKPbc	PKPbc	07 57 42.9	+0.3
	comp=Z,7.3nm,0.8s,baz=45,slow=2.6,SNR=38						
GERES	GERESS Array B	147.15	334		PKPbc	07 57 42.4	-0.1
WET	Wettzell	147.25	335	*e*PKPbc	PKPbc	07 57 43.3	+0.6
	baz=32,slow=2.6						
ARSA	Arzberg	147.57	330	*i* P	PKPbc	07 57 44.0	+0.3
	comp=Z,4.1nm,0.8s						
MOA	Molln	147.69	332	*e*P	PKPbc	07 57 44.7	+0.7
IDI	Anoyia	148.15	304	⇑P	PKiKP	07 57 47.1	-0.3
SOKA	Soboth	148.22	330	*e*P	PKPbc	07 57 45.7	+0.2
	comp=Z,8.3nm,1.2s						
MEM	Membach	148.25	344	*d*PKiKP	PKPbc	07 57 46.1	+0.8
MEM				*d*pPKPdf	sPKPab	07 58 01.4	-0.7
KBA	Koelnbreinsper	148.68	332	*e*P	PKPbc	07 57 46.5	-0.3
	comp=Z,6.9nm,1.1s						
MYKA	Terra Mystica	148.89	331	*i* P	PKPbc	07 57 46.7	-0.5
	comp=Z,6.1nm,0.8s						
WATA	Walderalm	149.22	334	*i* P	PKPbc	07 57 48.3	+0.2
	comp=Z,6.7nm,0.7s						
ABTA	Abfaltersbach	149.30	333	*i* P	PKPbc	07 57 47.8	-0.5
	comp=Z,5.7nm,0.7s						
MOTA	Moosalm	149.40	335	*e*P	PKPbc	07 57 48.7	+0.2
	comp=Z,16nm,1.0s						
SQTA	Sankt Quirin	149.46	335	*i* P	PKPbc	07 57 49.1	+0.4
	comp=Z,13nm,0.9s						
UBR	Ueberruh	149.51	336	*e*PKPbc	PKPbc	07 57 49.1	+0.4
	baz=32,slow=2.6						
BFO	Black Forest	149.59	339	*e*PKPbc	PKPbc	07 57 49.1	+0.3
	baz=32,slow=2.6						
FETA	Feichten	149.81	335	*i* P	PKiKP	07 57 50.2	-0.4
	comp=Z,10nm,1.0s						
ESDC	Sonseca Array	160.76	352	PKPab	PKPab	07 58 42.4	+0.7
	comp=Z,1.5nm,1.0s,baz=359,slow=3.7,SNR=5.7						

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*ANF **27** 07:38:05.0±0.9, 37°.07N×97°.76W, h4^{km}±6^{km}, ML4.1/10, Error ellipse: s-maj=2.8km s-min=1.8km az=74.0*
*NEIC **27** 07:38:05.1±1.2, 37°.08N±0°.03×97°.66W±0°.03, h4^{km}±7^{km}, mb_Lg3.4/83, Error ellipse: s-maj=5.3km s-min=2.4km az=220.0*
*IDC **27** 07:38:08.6±5.0, 37°.18N×97°.82W, h33^{km}±59^{km}, mb1 3.6/3, mb1mx3.2/39, mbtmp3.3/3, ML3.9/2, Error ellipse: s-maj=34.9km s-min=12.3km az=95.0*
ISC 27 07:38:05.2±0.9, **37°.09N**±0°.03×**97°.71W**±0°.02, **h5**^{km}±7^{km}, **n110**, σ**1^{s}.05**/109, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.07	328	Pg	Pg	07 38 07.0	+0.1
KAN01				Sg	Sg	07 38 08.7	+0.7
KS21	Milan North St	0.20	12	Pg	Pg	07 38 08.8	-0.3
KS21				Sg	Sg	07 38 11.6	-0.1
KAN13	South Haven SW	0.20	113	Pg	Pg	07 38 08.6	-0.6
KAN13				Sg	Sg	07 38 11.3	-0.6
KAN14	Manchester OK	0.24	236		Pg	07 38 10.4	+0.5
KAN14				Sg	Sg	07 38 14.2	+1.2
KAN08	Anthony NE Sta	0.25	303		Pg	07 38 10.4	+0.4
KAN08				Sg	Sg	07 38 14.3	+1.1
KAN12	Harper NE Stat	0.31	312		Pg	07 38 11.5	+0.4
KAN12				Sg	Sb	07 38 16.4	-2.1
KAN10	Anthony SW Sta	0.31	276		Pb	07 38 11.7	-1.4
KAN10				Sg	Sb	07 38 16.8	-1.7
CROK	Carrier	0.63	200		Pg	07 38 17.3	+0.1
CROK				Sg	Sb	07 38 26.3	-1.3
T35A	Sooner Cattle	0.98	100		Pg	07 38 22.6	-1.3
T35A				Sg	Sg	07 38 35.0	-1.6
T35B	Sooner Cattle	0.98	100	P		07 38 22.6	
	baz=280,SNR=151						
T35B				S		07 38 35.2	
	baz=280						
QUOK	Quay	1.22	138	Pn	Pg	07 38 27.5	-1.2
QUOK				Sg	Sg	07 38 43.0	-1.5
U32A	Winter Ranch,	1.26	236		Pb	07 38 28.8	-0.5
U32A	Winter Ranch,	1.26	236	P		07 38 28.8	
	baz=56						
U32A				S		07 38 46.5	
	baz=56						
OK029	Liberty Lake	1.31	171		Pn	07 38 29.3	-0.8
OK031	S. Brethren Rd	1.34	148		Pn	07 38 29.6	-0.9
OK030	Cody Creek RV	1.38	147		Pn	07 38 30.2	-0.9
BCOK	Bluff Creek, N	1.44	177		Pn	07 38 31.5	-0.3
OK025	Westminster Rd	1.54	169		Pn	07 38 33.4	+0.1
R32A	Long Quarter,	1.54	329		Pn	07 38 33.5	+0.1
R32A	Long Quarter,	1.54	329	P		07 38 33.6	
	baz=148,SNR=122						
R32A				S		07 38 54.3	
	baz=148						
OKCFA	Oklahoma City	1.69	173		Pn	07 38 35.4	+0.1
OKCSW	OKLAHOMA CITY	1.70	172		Pn	07 38 35.6	+0.2
TUL1	Leonard	1.95	127	P	Pn	07 38 39.3	+0.5
	baz=308						
TUL1				S	Sn	07 39 04.9	+1.3
	baz=308						
TUL1	Leonard	1.95	127		Pn	07 38 39.4	+0.6
TUL1				IAmb_Lg		07 39 06.7	
	comp=Z,293nm,0.8s						
TUL1	Leonard	1.95	127	P		07 38 38.2	
	baz=308,SNR=100						
TUL1				S		07 39 05.0	
	baz=308						
W35A	Tecumseh	2.05	160		Pn	07 38 40.4	+0.1
KSU1	Kansas State U	2.19	23	P	Pn	07 38 43.0	+0.9
	baz=203						
KSU1				S	Sn	07 39 11.7	+2.1
	baz=203						
KSU1	Kansas State U	2.19	23		Pn	07 38 42.7	+0.5
KSU1				IAmb_Lg		07 39 13.9	
	comp=Z,177nm,0.8s						
KSU1	Kansas State U	2.19	23	P		07 38 42.2	
	baz=203,SNR=90						
KSU1				S		07 39 11.7	
	baz=203						
CBKS	Cedar Bluff	2.35	318	Sb	Sg	07 39 18.7	-1.9
	baz=136						
CBKS	Cedar Bluff	2.35	318		Pn	07 38 45.3	+0.8
CBKS	Cedar Bluff	2.35	318	P		07 38 44.7	
	baz=136,SNR=100						
CBKS				S		07 39 18.9	
	baz=136						
X34A	Smith Ranch, M	2.49	182		Pn	07 38 47.1	+0.8
WMOK	Wichita Mounta	2.50	201	P	Pn	07 38 46.8	+0.2
	baz=21						
WMOK				Sb	Sb	07 39 22.9	+1.1
	baz=21						
WMOK	Wichita Mounta	2.50	201		Pn	07 38 46.7	+0.1
WMOK	Wichita Mounta	2.50	201	P		07 38 46.7	
	baz=21,SNR=60						
U38A	Gravette	2.75	103		Pn	07 38 50.0	+0.1
U38A				IAmb_Lg		07 39 31.0	
	comp=Z,135nm,0.9s						
U38A	Gravette	2.75	103	P		07 38 49.9	
	baz=285,SNR=30						
HHAR	Hobbs	3.14	104		Pn	07 38 55.3	0.0
HHAR	Hobbs	3.14	104	P		07 38 55.6	
	baz=286						
X37A	Clayton	3.14	142		Pn	07 38 54.9	-0.4
X37A				IAmb_Lg		07 39 50.8	
	comp=Z,91nm,0.7s						
X37A	Clayton	3.14	142	P		07 38 55.3	
	baz=324						
S39A	Bolivar	3.55	79		Pn	07 39 01.7	+0.8
S39A	Bolivar	3.55	79	P		07 39 00.1	
	baz=261,SNR=21						
N33B	J Bar K, Exete	3.64	3	P		07 39 01.7	
	baz=183						
N33A	J Bar K, Exete	3.65	3		Pn	07 39 02.1	-0.1
W39A	Magazine	3.70	120		Pn	07 39 02.2	-0.7
W39A				IAmb_Lg		07 40 04.2	
	comp=Z,95nm,0.8s						
W39A	Magazine	3.70	120	P		07 39 03.7	
	baz=302						
Z35A	Perchaven, San	3.77	174	Pn	Pn	07 39 04.3	+0.3
Z35A	Perchaven, San	3.77	174	P		07 39 04.3	
	baz=355,SNR=8.0						
Z35A				S		07 39 49.3	
	baz=355						
AMTX	Amarillo	3.90	237		Pn	07 39 07.3	+1.5
AMTX	Amarillo	3.90	237	P		07 39 07.1	
	baz=55,SNR=7.1						
U40A	Yellville	3.97	99	P	Pn	07 39 06.7	0.0
	baz=282						
U40A	Yellville	3.97	99		Pn	07 39 06.4	-0.3
U40A				IAmb_Lg		07 40 12.3	
	comp=Z,118nm,0.8s						
U40A	Yellville	3.97	99	P		07 39 06.6	
	baz=282,SNR=20						
U40A				P		07 39 06.6	
	baz=282,SNR=20						
N35A	Tabor	4.09	23		Pn	07 39 09.8	+1.4
P38A	Dawn	4.14	51		Pn	07 39 09.1	0.0
P38A				IAmb_Lg		07 40 16.9	
	comp=Z,55nm,0.7s						
P38A	Dawn	4.14	51	P		07 39 08.6	
	baz=233,SNR=13						
MIAR	Mount Ida	4.21	126	P	Pn	07 39 10.2	+0.1
	baz=308						
MIAR	Mount Ida	4.21	126		Pn	07 39 10.4	+0.4
MIAR				IAmb_Lg		07 40 17.6	
	comp=Z,102nm,1.1s						
MIAR	Mount Ida	4.21	126	P		07 39 09.7	
	baz=308,SNR=14						
BGNE	Belgrade	4.32	356	P	Pn	07 39 11.4	-0.1
	baz=175						
BGNE	Belgrade	4.32	356		Pn	07 39 11.2	-0.4
BGNE				IAmb_Lg		07 40 22.7	
	comp=Z,60nm,0.7s						
BGNE	Belgrade	4.32	356	P		07 39 11.3	
	baz=175,SNR=21						
KSCO	Kaye Shedlock'	4.33	298	Pn	Pn	07 39 12.2	+0.5
KSCO				IAmb_Lg		07 40 33.7	
	comp=Z,53nm,0.8s						
MGMO	Mountain Grove	4.35	88		Pn	07 39 12.3	+0.3
MGMO				IAmb_Lg		07 40 20.1	
	comp=Z,64nm,0.7s						
Z38A	Mt. Pleasant	4.43	149		Pn	07 39 12.9	-0.1
Z38A				IAmb_Lg		07 40 31.8	
	comp=Z,121nm,1.1s						
R40A	Maddies Statio	4.48	73		Pn	07 39 13.6	-0.1
R40A	Maddies Statio	4.48	73	P		07 39 13.8	
	baz=256,SNR=19						
FCAR	Ozark Folk Cen	4.66	103		Pn	07 39 15.4	-0.7
FCAR				IAmb_Lg		07 40 31.0	
	comp=Z,80nm,0.8s						
ABTX	Abilene, Hawle	4.73	200		Pn	07 39 16.8	-0.4
ABTX	Abilene, Hawle	4.73	200	P		07 39 16.6	
	baz=19						
WHAR	Wooly Hollow	4.74	111		Pn	07 39 17.0	-0.2
WHAR				IAmb_Lg		07 40 41.8	
	comp=Z,73nm,0.9s						
X40A	Basin Creek Fa	4.74	122	Sb	Sb	07 40 30.3	+4.2
	baz=305						
X40A	Basin Creek Fa	4.74	122		Pn	07 39 16.8	-0.5
W41B	Gary Mavity, V	4.82	112	Sb	Sb	07 40 33.1	+4.7
	baz=295						
W41B	Gary Mavity, V	4.82	112	P		07 39 17.9	
	baz=295						
UALR	University of	4.93	116		Pn	07 39 21.1	+1.2
UALR				IAmb_Lg		07 40 47.5	
	comp=Z,68nm,1.0s						
L34A	Svendsen Farm,	4.98	12		Pn	07 39 19.9	-0.6
WLAR	White Oak Lake	5.07	131		Pn	07 39 20.3	-1.4
P40A	Paris	5.08	60	Pn	Pn	07 39 21.8	-0.1
P40A				IAmb_Lg		07 40 50.7	
	comp=Z,92nm,1.2s						
N38A	Joes South For	5.08	42		Pn	07 39 21.7	-0.3
N38A				IAmb_Lg		07 40 49.0	
	comp=Z,61nm,0.9s						
N38A	Joes South For	5.08	42	P		07 39 21.5	
	baz=224,SNR=9.0						
WHTX	Lake Whitney,	5.09	178	P	Pn	07 39 21.8	-0.4
	baz=358						
WHTX	Lake Whitney,	5.09	178	Pn	Pn	07 39 21.8	-0.4
WHTX				IAmb_Lg		07 40 55.0	
	comp=Z,45nm,1.1s						
WHTX	Lake Whitney,	5.09	178	P		07 39 21.6	
	baz=358,SNR=27						
OGNE	Ogallala	5.11	320		Pn	07 39 23.6	+1.1
OGNE				IAmb_Lg		07 40 56.8	
	comp=Z,53nm,0.8s						
OGNE	Ogallala	5.11	320	P		07 39 23.5	
	baz=137						
MSTX	Muleshoe	5.17	234		Pn	07 39 24.2	+0.9
CCM	Cathedral Cave	5.23	77		Pn	07 39 24.3	+0.4
CCM				IAmb_Lg		07 40 53.7	
	comp=Z,57nm,0.9s						
CCM	Cathedral Cave	5.23	77	P		07 39 23.6	
	baz=261,SNR=7.3						
T42A	Van Buren	5.29	89		Pn	07 39 26.4	+1.5
T42A				IAmb_Lg		07 41 00.1	
	comp=Z,52nm,0.8s						
237A	Washetta, Mont	5.32	162	Pn	Pn	07 39 24.5	-0.7
237A	Washetta, Mont	5.32	162	P		07 39 24.7	
	baz=344,SNR=10						
237A				S		07 40 24.7	
	baz=344						
LCAR	Lake Charles	5.38	99		Pn	07 39 25.1	-0.9
LCAR				IAmb_Lg		07 40 54.2	
	comp=Z,47nm,0.9s						
K31A	O'Neill	5.58	352		Pn	07 39 29.8	+1.0
K31A				IAmb_Lg		07 41 12.2	
	comp=Z,93nm,0.9s						
K31A	O'Neill	5.58	352	P		07 39 29.0	
	baz=171,SNR=7.1						
SCIA	State Center	5.93	34	IAmb_Lg		07 41 22.4	
	comp=Z,52nm,0.7s						
SLM	Saint Louis	6.11	73	IAmb_Lg		07 41 19.6	
	comp=Z,59nm,0.9s						
SDCO	Great Sand Dun	6.23	278	Pn	Pn	07 39 39.0	+0.9
435B	Jarrell	6.29	179	IAmb_Lg		07 41 35.6	
	comp=Z,49nm,0.8s						
GNAR	Gosnell	6.30	98	Pn	Pn	07 39 38.1	-0.6
GNAR				IAmb_Lg		07 41 30.3	
	comp=Z,76nm,0.9s						
N41A	Harden Midland	6.45	54		Pn	07 39 40.9	+0.1
ECSD	EROS Data Cent	6.69	7	Pn	Pn	07 39 43.4	-0.6
ECSD	EROS Data Cent	6.69	7	P		07 39 42.9	
	baz=187						
K38A	Parkersburg	6.72	33	Pn	Pn	07 39 44.9	+0.4
K38A				IAmb_Lg		07 41 39.0	
	comp=Z,44nm,0.9s						
S44A	Carbondale	6.76	82		Pn	07 39 45.8	+0.8
ISCO	Idaho Springs	6.76	296	Pn	Pn	07 39 45.9	+0.5
ISCO	Idaho Springs	6.76	296	P		07 39 45.8	
	baz=111						
JCT	Junction City	6.82	195	Pn	Pn	07 39 45.4	-0.5
JCT				IAmb_Lg		07 41 49.3	
	comp=Z,43nm,0.8s						
L40A	Anamosa	7.05	43		Pn	07 39 48.5	-0.5
L40A				IAmb_Lg		07 42 02.3	
	comp=Z,32nm,0.8s						
W45A	Hickory Valley	7.17	103	IAmb_Lg		07 41 55.7	
	comp=Z,64nm,1.1s						
OXF	Oxford	7.22	108	Pn	Pn	07 39 51.9	+0.6
PHWY	Pilot Hill	7.34	307	Pn	Pn	07 39 54.2	+1.1
GDL2	Guadalupe Moun	7.34	230	Pn	Pn	07 39 54.3	+1.2
ANMO	Albuquerque	7.40	256	IAmb_Lg		07 42 05.7	
	comp=Z,13nm,0.8s						
SUSD	Miller	7.40	353	IAmb_Lg		07 42 18.4	
	comp=Z,44nm,0.8s						
O44A	Mansfield	7.86	64	IAmb_Lg		07 42 18.4	
	comp=Z,55nm,0.8s						
L42A	Oliver, Polo	7.92	49	Pn	Pn	07 40 01.3	+0.5
Y22D	IRIS PASSCAL I	8.08	251	IAmb_Lg		07 42 39.0	
	comp=Z,41nm,0.8s						
JFWS	Jewell Farm	8.16	42	Pn	Pn	07 40 03.3	-0.9
MNTX	Cornudas Mount	8.31	232	Pn	Pn	07 40 07.2	+0.9
RSSD	Black Hills	8.51	328	Pn	Pn	07 40 10.6	+1.5
P46A	Rosedale	8.63	70	IAmb_Lg		07 42 40.6	
	comp=Z,54nm,0.8s						
K22A	Casper	8.76	312	Pn	Pn	07 40 13.4	+0.8
K22A				IAmb_Lg		07 43 06.7	
	comp=Z,36nm,1.2s						
F33A	5 Mile Ranch,	8.80	6	IAmb_Lg		07 42 41.2	
	comp=Z,26nm,1.1s						
SPMN	Marine on St.	8.93	23	Pn	Pn	07 40 15.2	+0.5
WCI	Wyandotte Cave	9.13	79	IAmb_Lg		07 43 03.0	
	comp=Z,44nm,0.9s						
TX31	Lajitas Ar. Si	9.20	214	Pn	Pn	07 40 18.3	-0.4
TX32	Lajitas Array	9.20	214	Pn	Pn	07 40 18.5	-0.1
TXAR	Lajitas Array	9.20	214	Pn	Pn	07 40 17.4	-1.3
	comp=Z,0.2nm,0.3s,baz=42,slow=12,SNR=16						
TXAR				Pg		07 40 51.9	
	comp=Z,0.4nm,0.3s,baz=45,slow=11,SNR=6.1						
TXAR				Lg	Lg	07 42 54.9	
	comp=Z,0.5nm,0.3s,baz=37,slow=32,SNR=1.7						
TXAR	Lajitas Array	9.20	214		Pn	07 40 16.9	-1.7
F36A	Milaca	9.31	18	Pn	Pn	07 40 19.3	-0.6
I42A	Draeger Farm,	9.54	42	Pn	Pn	07 40 22.4	-0.6
G40A	Rib Lake	9.93	32	Pn	Pn	07 40 28.2	-0.3
PDAR	Pinedale Array	10.71	306	Pn	Pn	07 40 38.8	-0.7
	comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=4.7						
PDAR				Lg	Lg	07 43 39.2	
	comp=Z,0.3nm,0.3s,baz=113,slow=36,SNR=1.8						
PDAR	Pinedale Array	10.71	306		Pn	07 40 39.0	-0.4
TKL	Tuckaleechee C	11.33	93	Lg	Lg	07 43 59.6	
	comp=Z,0.4nm,0.3s,baz=326,slow=14,SNR=9.3						
ULM	Lac du Bonnet	13.22	5	Pn	Pn	07 41 07.1	-6.3
	comp=Z,0.2nm,0.3s,baz=191,slow=17,SNR=2.3						
ULM				Sn	Sn	07 43 27.6	-13
	comp=Z,0.2nm,0.3s,baz=86,slow=19,SNR=1.4						
ULM				Lg	Lg	07 44 57.7	
	comp=Z,0.4nm,0.3s,baz=79,slow=19,SNR=5.2						
SADO	Sadowa	15.97	56	Lg	Lg	07 46 24.4	
	comp=Z,0.3nm,0.3s,baz=332,slow=17,SNR=3.9						

IDC 27 07:59:57.5±1.2, **25°.22N**×**141°.17E**, **h0**^{km}, **mb3.8**/3, **mb1 4.1**/3, **mb1mx3.5**/35, **mbtmp3.8**/3, **Error ellipse: s-maj=78.4km s-min=28.9km az=97.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.38	189	P	P	08 08 17.8	-0.1
	0.7nm,0.3s,baz=8.5,slow=8.5,SNR=20						
YKA	Yellowknife Ar	74.22	28	P	P	08 11 35.8	-0.2
	0.1nm,0.5s,baz=296,slow=5.2,SNR=6.8						
FINES	FINESS Array B	79.22	334	P	P	08 12 04.4	+0.2
	1.0nm,0.4s,baz=69,slow=5.1,SNR=10						

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*DJA **27** 08:05:10.7±0.4, 3°S±4°×12°9E±°, h62^{km}±13^{km}, M4.3/10, mB4.8/2, mb4.7/3, MLv4.1/10, Mw(mB)4.0/2*
*IDC **27** 08:05:13.1±2.9, 2°.75S×129°.06E, h65^{km}±28^{km}, mb3.4/5, mb1 3.8/8, mb1mx3.5/34, mbtmp3.8/8, ML3.9/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=26.5km s-min=9.9km az=85.0*
ISC 27 08:05:10.3±0.7, **2°.67S**±0°.06×**128°.78E**±0°.05, **h35**^{km}, **n18**, σ**1^{s}.76**/23, **mb3.8**/6, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.69	167	P	Pn	08 05 26.1	+2.5
NLAI	Namlea	1.77	251	P	Pn	08 05 39.9	+1.4
SANI	Sanana	2.85	282	P	Pn	08 05 53.6	+0.2
SANI				S	Sn	08 06 24.9	-1.7
SWI	Sorong	3.06	54	P	Pn	08 05 56.6	+0.3
SWI				S	Sn	08 06 31.2	-0.5
SIJI	Sorong	3.06	54	P	Pn	08 05 56.2	-0.1
	20nm,0.3s,baz=221,slow=22,SNR=37						
SIJI				S	Sn	08 06 30.8	-1.0
	50nm,0.3s,baz=180,slow=20,SNR=15						
FAKI	Fak Fak	3.48	94	P	Pn	08 06 02.1	+0.1
FAKI				S	Sn	08 06 39.7	-2.3
APSI	Ampana	7.34	284	P	Pn	08 06 56.2	+1.1
	0.4nm2µm85nm,0.4s						
MRSI	Marisa	7.52	294	P	Pn	08 06 59.0	+1.5
MRSI				S	Sn	08 08 19.9	-1.7
JAY	Jayapura	11.91	90	LR	LR	08 14 14.3	
	comp=Z,261nm,18.3s,baz=354,slow=46						
FITZ	Fitzroy Crossi	15.64	191	P	P	08 08 50.8	-1.2
	0.2nm,0.3s,baz=17,slow=11,SNR=2.0						
WRA	Warramunga Arr	18.01	163	P	Pn	08 09 16.5	-1.5
	0.8nm,0.3s,baz=338,slow=12,SNR=28						
WRA				S	Sn	08 12 35.0	-3.0
	0.2nm,0.3s,baz=340,slow=24,SNR=1.4						
PMG	Port Moresby	19.46	111	LR	LR	08 18 45.8	
	comp=Z,66nm,19.6s,baz=266,slow=42						
ASAR	Alice Springs	21.45	167	P	P	08 09 56.6	+0.7
	9.4nm,0.5s,baz=350,slow=12,SNR=78						
ASAR				S	S	08 13 49.0	-3.1
	4.4nm,0.9s,baz=346,slow=20,SNR=14						
STKA	Stephens Creek	31.46	159	P	P	08 11 32.2	+3.5
	1.7nm,0.7s,baz=349,slow=10.0,SNR=3.5						
MKAR	Makanchi Array	63.96	326	P	P	08 15 41.2	+1.0
	0.1nm,0.3s,baz=120,slow=5.7,SNR=2.3						
AAK	Ala-Archa	66.48	319	P	P	08 15 56.5	-0.2
	0.9nm,0.6s,baz=146,slow=5.5,SNR=1.2						
KURBB	Kurchatov Arra	68.21	328	P	P	08 16 08.6	+1.3
	0.3nm,0.7s,baz=125,slow=6.3,SNR=4.0						
ILAR	Eielson Array	89.97	25	P	P	08 18 05.5	-0.4
	0.3nm,0.7s,baz=243,slow=6.0,SNR=3.0						

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*ANF **27** 08:16:38.2±0.1, 34°.76N×118°.45W, h14^{km}±1^{km}, ML3.5/37, Error ellipse: s-maj=0.9km s-min=0.8km az=44.0*
*NEIC **27** 08:16:38.5±0.9, 34°.759N±0°.010×118°.436W±0°.008, h15^{km}±1^{km}, Error ellipse: s-maj=1.4km s-min=0.8km az=201.0*
*PAS **27** 08:16:39.1±1.2, 34°.751N±0°.008×118°.447W±0°.010, h10^{km}±2^{km}, ML3.5/199, ML3.1/88(NEIC), Error ellipse: s-maj=1.3km s-min=1.1km az=223.0*
*SCEDC **27** 08:16:39.1, 34°.75N×118°.45W, h10^{km}*
ISC 27 08:16:38.7±0.8, **34°.76N**±0°.01×**118°.44W**±0°.01, **h12**^{km}±6^{km}, **n175**, σ**0^{s}.94**/219, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTPC	Burnt Peak	0.13	235		Pb	08 16 44.2	+0.9
ALPC	Antelope	0.14	121		Pg	08 16 42.1	0.0
ALPC					Sg	08 16 44.5	-0.1
LEOC	Leona Valley	0.17	138		Pb	08 16 45.5	+1.6
THC	Tehachapi Micr	0.23	310		Pg	08 16 43.9	+0.1
OSI	Osito Audit: C	0.27	238	P	Pg	08 16 44.1	-0.2
	baz=59,SNR=332						
OSI				S	Sg	08 16 47.9	-0.2
	baz=59						
OSI	Osito Audit: C	0.27	238	Pg	Pg	08 16 44.2	-0.2
OSI				Sg	Sg	08 16 47.9	-0.2
OSI				IAML		08 16 48.3	
	comp=E,4µm,0.5s						
OSI				IAML		08 16 48.5	
	comp=N,5µm,0.5s						
PYR	Pyramid	0.31	232		Pg	08 16 44.9	-0.2
CJV	Casa Juvan	0.34	133		Pg	08 16 45.4	-0.2
PDE	Pardee, Santa	0.34	200		Pg	08 16 45.5	0.0
PDE					Sg	08 16 50.3	+0.3
TJR	Tejon Ranch	0.36	318		Pg	08 16 46.0	-0.1
EDW2	Edwards Air Fo	0.39	72	P	Pg	08 16 46.5	0.0
	baz=251,SNR=387						
EDW2				S	Sg	08 16 52.1	+0.3
	baz=251						
EDW2	Edwards Air Fo	0.39	72		Pg	08 16 46.5	0.0
EDW2					Sg	08 16 52.0	+0.3
LRRC	Littlerock Res	0.41	124		Pg	08 16 46.8	-0.1
LRRC					Sg	08 16 52.3	-0.1
OAT	Oat Mountain	0.44	199		Pg	08 16 47.7	+0.3
ARVC	Arvin	0.49	319	P	Pg	08 16 48.3	0.0
	baz=140,SNR=268						
ARVC				S	Sg	08 16 54.4	-0.3
	baz=140						
ARVC	Arvin	0.49	319		Pg	08 16 48.2	0.0
ARVC					Sg	08 16 54.9	+0.1
JNH	Juniper Hills	0.51	127		Pg	08 16 48.5	-0.3
JNH					Sg	08 16 55.2	-0.3
DECC	Green Verdugo	0.51	170	P	Pg	08 16 48.5	-0.3
	baz=349,SNR=62						
DECC				S	Sg	08 16 55.5	0.0
	baz=349						

DECC	Green Verdugo	0.51	170		Pg	08 16 48.5	-0.3
DECC					Sg	08 16 55.7	+0.1
TEJ	El Tejon	0.51	337		Pg	08 16 48.6	-0.2
TEJ					Sg	08 16 55.6	0.0
SBB	Saddle Back Bu	0.51	98		Pg	08 16 48.7	-0.1
SBB					Sg	08 16 55.5	-0.2
CCAC	Calif City Air	0.53	42		Pg	08 16 49.2	+0.2
CCAC					Sg	08 16 57.0	+1.0
CHFC	Chilao Flat St	0.55	141		Pg	08 16 49.0	-0.5
CHFC					Sg	08 16 56.4	-0.3
BLCC	Black Canyon	0.55	200		Pg	08 16 49.7	+0.3
MPI	Mount Pinos, F	0.58	276		Pg	08 16 49.8	-0.3
MPI					Sg	08 16 58.0	+0.1
HLLC	North Hollywoo	0.58	173		Pg	08 16 49.9	-0.2
HLLC					Sg	08 16 57.9	+0.1
MWC	Mount Wilson	0.62	149		Sg	08 16 58.7	-0.4
MWC	Mount Wilson	0.62	149	Pg	Pg	08 16 50.4	-0.5
MWC	Mount Wilson	0.62	149	IAML		08 16 59.0	
	comp=N,3µm,0.3s						
MWC				IAML		08 16 59.0	
	comp=E,2µm,0.1s						
PASC	Pasadena Art C	0.62	160		Pg	08 16 50.4	-0.5
PASC				IAML		08 16 58.9	
	comp=E,1µm,0.3s						
PASC				IAML		08 16 58.9	
	comp=N,1µm,0.4s						
PASC	Pasadena Art C	0.62	160		Sg	08 16 58.4	-0.6
ABL	Mount Abel	0.65	278		Pg	08 16 50.9	-0.5
GR2C	Griffith Obs.	0.65	169		Pg	08 16 50.9	-0.5
GR2C					Sg	08 16 59.5	-0.4
DJJ	Donna J Jenkin	0.65	181		Pg	08 16 51.0	-0.3
DJJ					Sg	08 16 59.9	-0.1
DJJ	Donna J Jenkin	0.65	181		Pg	08 16 51.1	-0.3
XTL	Crystal Lake,	0.67	134		Pg	08 16 51.2	-0.5
CBCC	Caltech Broad	0.67	157		Pg	08 16 51.3	-0.5
GSA	Caltech--GSA	0.67	157		Pg	08 16 51.4	-0.4
GSA					Sg	08 17 00.6	0.0
CACC	Caltech Cellar	0.68	157		Pg	08 16 51.4	-0.4
DTP	Desert Tortois	0.71	44		Pg	08 16 52.1	-0.3
MAGC	SCE Magundon P	0.72	327		Pg	08 16 52.6	-0.1
HYS	Haystack Butte	0.73	81		Pg	08 16 52.6	-0.2
HYS					Sg	08 17 02.1	-0.3
USC	University of	0.75	170		Pg	08 16 53.0	-0.2
GVRC	Garvey Reservo	0.76	159		Pg	08 16 53.0	-0.3
GVRC	Garvey Reservo	0.76	159		Sg	08 17 02.6	-0.6
RYS	Reyes Peak	0.76	262		Pg	08 16 53.4	0.0
PEM	Pine Mountain	0.76	141		Pg	08 16 52.6	-0.7
LCGC	La Cienega, Cu	0.76	176		Pg	08 16 53.7	+0.3
STCC	Santa Clara	0.76	234		Pb	08 16 54.5	+0.6
STCC					Sn	08 17 06.4	-0.3
BAKC	Calstate	0.80	317		Pg	08 16 53.6	-0.6
WOFM	Oak Flat	0.81	344		Pg	08 16 53.7	-0.6
PT2	Point Dume	0.81	202		Pg	08 16 53.6	-0.8
WBSM	Bird Springs	0.82	18		Pg	08 16 54.2	-0.4
WBSM					Sg	08 17 05.3	+0.1
BCW	Bitter Crk WRg	0.82	283		Pg	08 16 54.0	-0.6
WTT2	Watts, South G	0.82	169		Pg	08 16 54.9	+0.2
SSK	Sunset Peak	0.83	131		Pg	08 16 53.9	-0.8
BFSC	Mount Baldy Ra	0.83	128	P	Pg	08 16 53.9	-0.9
	baz=308,SNR=386						
BFSC				S	Sg	08 17 05.9	+0.2
	baz=308						
BFSC	Mount Baldy Ra	0.83	128		Pg	08 16 53.9	-0.9
RHC	Rose Hills Cem	0.83	155		Pg	08 16 54.4	-0.5
PSRC	Puddingstone R	0.85	141		Pg	08 16 54.4	-0.7
ADO	Adelanto Recei	0.86	104		Pg	08 16 55.3	0.0
ISA	Isabella, Lake	0.90	358	P	Pg	08 16 55.5	-0.6
	baz=179,SNR=197						
ISA				S	Sg	08 17 08.4	+0.4
	baz=179						
ISA	Isabella, Lake	0.90	358		Pg	08 16 55.7	-0.5
ISA				Sg	Sg	08 17 07.8	-0.2
VTV	Victorville	0.94	102		Pb	08 16 56.6	-0.4
VTV					Sg	08 17 08.8	-0.3
WHFM	Hanning Flat	0.94	5		Pb	08 16 56.2	-0.8
WORM	Onyx Ranch	0.95	10		Pb	08 16 56.5	-0.7
WORM					Sb	08 17 09.1	-0.7
DLAC	Del Amo	0.95	162		Pb	08 16 56.3	-0.9
LRMC	Laurel Mtn Rad	0.95	41	P	Pb	08 16 56.5	-0.7
	baz=221,SNR=501						
LRMC				S	Sg	08 17 09.8	+0.2
	baz=221						
LRMC	Laurel Mtn Rad	0.95	41		Pb	08 16 56.6	-0.7
SS2	San Sevaine	0.95	125		Pb	08 16 56.6	-0.6
WASM	Alta Sierra Ca	0.98	355		Pb	08 16 57.0	-0.8
WASM					Sb	08 17 10.2	-0.6
CHNC	Chino	0.99	140		Pb	08 16 57.1	-0.7
CSP	Cedar Springs	1.01	117		Pb	08 16 57.8	-0.3
RPV	Rancho Palos V	1.01	178		Pb	08 16 57.3	-0.9
RPV					Sb	08 17 10.6	-0.9
BREC	Barre Substati	1.02	158		Pb	08 16 58.7	+0.3
MLSC	Mira Loma	1.05	136		Pb	08 16 58.3	-0.5
FMP	Fort Macarthur	1.05	173	P	Pb	08 16 58.1	-0.7
	baz=353,SNR=13						
FMP				S	Sb	08 17 12.4	-0.1
	baz=353						
FMP	Fort Macarthur	1.05	173		Pb	08 16 58.4	-0.4
SRTC	Snort	1.09	31		Pb	08 16 59.5	-0.1
SBC	Santa Barbara	1.09	254	P	Pb	08 16 59.3	-0.3
	baz=73,SNR=11						
SBC	Santa Barbara	1.09	254		Pb	08 16 59.2	-0.3
PKM	Mcpherson Peak	1.14	277	P	Pb	08 16 59.7	-0.7
	baz=97,SNR=73						
PKM				S	Sb	08 17 15.2	0.0
	baz=97						
PKM	Mcpherson Peak	1.14	277		Pb	08 16 59.8	-0.7
WSHM	Spangler Hills	1.15	43		Pb	08 16 59.9	-0.6
CRGC	Crocker Grade	1.16	295		Pb	08 17 00.1	-0.6
WCHM	Chimney Peak	1.16	15		Pb	08 17 00.3	-0.6
RVR	Riverside	1.17	131		Pn	08 16 59.7	-1.1
WNMM	Nine Mile Cany	1.17	22		Pn	08 17 00.3	-0.6
CCCA	Chr Cany lake	1.17	49		Pn	08 17 00.4	-0.5
TOW	Tower One	1.19	28		Pn	08 17 01.1	-0.1
RRX	Edison Barstow	1.20	84	P	Pn	08 17 00.6	-0.7
	baz=264,SNR=11						
RRX				S	Sn	08 17 17.4	-0.1
	baz=264						
RRX	Edison Barstow	1.20	84		Pn	08 17 01.4	0.0
VES	Vestal, Richgr	1.20	334	P	Pn	08 17 00.8	-0.5
	baz=154,SNR=151						
VES				S	Sb	08 17 17.0	+0.1
	baz=154						
VES	Vestal, Richgr	1.20	334		Pn	08 17 01.2	-0.1
RSBC	Riverside Bore	1.21	130		Pn	08 17 01.2	-0.3
SCZ2	Santa Cruz Isl	1.25	233	P	Pn	08 17 00.7	-1.3
	baz=52						
SCZ2	Santa Cruz Isl	1.25	233		Pb	08 17 02.4	+0.3
CLC	China Lake	1.26	33		Pn	08 17 01.7	-0.6
FIGC	Figueroa Mtn.	1.27	269		Pn	08 17 02.6	+0.2
CARC	Carrizo Plain	1.27	296		Pn	08 17 01.8	-0.6
SYP	Santa Ynez Pea	1.29	260		Pn	08 17 02.6	0.0
SVD	Seven Oaks Dam	1.29	120		Pn	08 17 02.7	+0.1
BBRC	Big Bear Solar	1.35	111	Pb	Pn	08 17 03.8	+0.2
	baz=292,SNR=79						
BBRC				S	Sb	08 17 21.4	0.0
	baz=292						
BBRC	Big Bear Solar	1.35	111		Pn	08 17 03.8	+0.2
SMMC	Simmler	1.39	294	P	Pn	08 17 03.5	-0.5
	baz=114,SNR=40						
SMMC				S	Sn	08 17 21.9	-0.4
	baz=114						
ELS	Elsinore Mount	1.39	142		Pn	08 17 04.6	+0.6
GSC	Goldstone, Bar	1.45	68	P	Pn	08 17 04.1	-0.7
	baz=248,SNR=230						
GSC				Sb	Sg	08 17 25.2	-0.2
	baz=248						
GSC	Goldstone, Bar	1.45	68	Pn	Pn	08 17 04.4	-0.5
SPG2	Springville 2	1.46	350		Pn	08 17 05.5	+0.5
MPMC	Manual Prospec	1.51	31	P	Pn	08 17 05.4	-0.5
	baz=211,SNR=199						
MURC	Murrieta	1.55	138	P	Pn	08 17 05.4	-0.8
	baz=318,SNR=98						
CWC	Cottonwood Cre	1.70	10	Pb	Pb	08 17 09.6	-0.5
	baz=190						
CWC				Sb	Sb	08 17 32.4	+0.8
	baz=190						
HEC	Hector,Ludlow	1.74	87	P	Pn	08 17 07.9	-0.9
	baz=268,SNR=87						
HEC				Sb	Sb	08 17 33.8	+1.3
	baz=268						
VOG	Valley Oaks Go	1.74	334	Pb	Pn	08 17 09.7	+1.0
	baz=154						
SNCC	San Nicolas Is	1.75	211	P	Pn	08 17 08.1	-0.9
	baz=30						
SNCC	San Nicolas Is	1.75	211	Pn	Pn	08 17 09.5	+0.6
SNCC				IAML		08 17 37.3	
	comp=N,175nm,0.5s						
SNCC				IAML		08 17 40.6	
	comp=E,161nm,0.5s						
PAGB	Antelope Grade	1.77	304		Pn	08 17 09.7	+0.5
PAGB				IAML		08 17 40.0	
	comp=N,155nm,0.6s						
PAGB				IAML		08 17 40.4	
	comp=E,232nm,1.0s						
SCI2	San Clemente I	1.78	183	Sb	Sb	08 17 34.8	+1.3
	baz=2.7						
PFO	Pinyon Flats O	2.00	124	P	Pn	08 17 12.4	-0.1
	baz=305,SNR=48						
PFO				Sb	Sb	08 17 40.8	+0.7
	baz=305						
PFO	Pinyon Flats O	2.00	124	Pn	Pn	08 17 12.8	+0.2
PFO				IAML		08 17 44.3	
	comp=E,110nm,0.6s						
XPFO	Pion Flat	2.01	124	Pn	Pn	08 17 13.2	+0.7
XPFO				IAML		08 17 44.4	
	comp=E,109nm,0.6s						
TPFO	Pinon Flats	2.01	124	P	Pn	08 17 12.2	-0.4
	baz=305						
TPFO				Sb	Sb	08 17 41.1	+0.7
	baz=305						
SHOC	Shoshone, Teco	2.11	57	P	Pn	08 17 13.2	-0.7
	baz=238,SNR=67						
FURC	Furnace Creek,	2.14	37	Pb	Pb	08 17 17.8	+0.5
	baz=217						
BELC	Belle Mtn. Jos	2.16	110	P	Pn	08 17 14.0	-0.7
	baz=291,SNR=180						
BELC				Sb	Sb	08 17 45.4	+0.8
	baz=291						
109C	Camp Elliot, M	2.17	149	P	Pn	08 17 14.3	-0.3
	baz=330,SNR=30						
109C	Camp Elliot, M	2.17	149	Pn	Pn	08 17 14.4	-0.3
109C				IAML		08 17 47.1	
	comp=N,120nm,0.2s						
109C				IAML		08 17 48.3	
	comp=E,156nm,0.2s						
GRAC	Grapevine Rang	2.40	21	P	Pn	08 17 18.4	+0.6
	baz=202						
PMPB	Monarch Peak	2.41	308	Pn	Pn	08 17 18.6	+0.6
PMPB				IAML		08 18 08.1	
	comp=E,131nm,0.8s						
PMPB				IAML		08 18 13.8	
	comp=N,151nm,0.9s						
MONP2	Monument Peak	2.51	137	P	Pn	08 17 19.4	-0.1
	baz=318,SNR=30						
TJX	Tijuana	2.52	152	Pn	Pn	08 17 18.9	-0.6
BAR	Barrett	2.54	144		Pn	08 17 20.0	+0.1
BAR				IAML		08 17 57.8	
	comp=N,83nm,0.3s						
TKX	Tecate	2.67	144		Pn	08 17 20.8	-0.8
TKX				IAML		08 18 00.1	
	comp=E,88nm,0.4s						
TKX				IAML		08 18 00.6	
	comp=N,87nm,0.2s						
BC3	Big Chuckawall	2.71	113	P	Pn	08 17 21.6	-0.6
	baz=295,SNR=11						
IRM	Iron Mountain	2.79	101	P	Pn	08 17 22.3	-0.9
	baz=283						
TPNV	Topopah Spring	2.82	39	P	Pn	08 17 24.0	+0.3
	baz=220,SNR=38						
TPNV	Topopah Spring	2.82	39	Pn	Pn	08 17 24.1	+0.3
TPNV				IAML		08 18 15.4	
	comp=N,50nm,0.6s						
TPNV				IAML		08 18 16.2	
	comp=N,56nm,0.6s						
SWSC	Sam W. Stewart	2.85	129	P	Pn	08 17 23.0	-0.9
	baz=310						
CBX	Cerro Bola	2.86	148		Pn	08 17 24.5	+0.2
CBX				IAML		08 18 08.5	
	comp=E,54nm,0.5s						
IKP	In-Ko-Pah, Jac	2.87	137	P	Pn	08 17 24.3	0.0
	baz=318						
IKP				Sb	Sb	08 18 06.7	+1.8
	baz=318						
OMMB	Old Mammoth Mi	2.88	351	Pn	Pb	08 17 28.8	-1.5
OMMB				IAML		08 18 12.4	
	comp=N,97nm,0.8s						
MDPB	Devils Postpil	2.91	350		Pn	08 17 27.8	+2.6
RMX	La Rumorosa	2.92	137		Pn	08 17 27.8	+2.7
RMX				IAML		08 18 11.4	
	comp=E,53nm,0.5s						
SAO	San Andreas Ge	3.16	310	Pn	Pn	08 17 28.9	+0.6
SHPR	Sheep Range	3.19	56	Pn	Pn	08 17 29.5	+0.6
ESJX	Sierra Juarez	3.45	142		Pn	08 17 32.5	0.0
TPH	Tonopah	3.45	16		Pn	08 17 35.5	+3.0
GLA	Glamis	3.46	118	P	Pn	08 17 32.6	+0.2
	baz=300						
GLA	Glamis	3.46	118		Pn	08 17 32.2	-0.2
GLA				IAML		08 18 39.0	
	comp=N,57nm,0.8s						
LHV	Little Huntoon	3.49	359		Pb	08 17 37.2	-3.2
CMB	Columbia Colle	3.63	335	Pn	Pn	08 17 38.2	+3.5
CMB				IAML		08 18 41.2	
	comp=E,30nm,0.8s						
CMB				IAML		08 18 48.7	
	comp=N,26nm,0.8s						
NVAR	Mina Array Bea	3.67	2	Pn	Pn	08 17 36.8	+1.3
W13A	Hualapai Mount	3.76	84	Pn	Pn	08 17 36.0	-0.7
W13A				IAML		08 18 40.6	
	comp=E,32nm,0.7s						
PRN	Pahroc Range	3.81	45		Pn	08 17 37.8	+0.4
PRN				IAML		08 18 53.0	
	comp=N,32nm,0.6s						
PRN				IAML		08 18 53.2	
	comp=E,42nm,0.7s						
WAKR	Walker	3.82	348		Pn	08 17 39.8	+2.2
WAKR				IAML		08 18 41.5	
	comp=E,33nm,1.4s						
WAKR				IAML		08 18 49.2	
	comp=N,35nm,1.0s						
RYN	Ryan	3.86	359		Pn	08 17 40.2	+2.1
RYN				IAML		08 18 45.5	
	comp=E,24nm,1.1s						
R11A	Troy Canyon, C	4.26	32		Pn	08 17 42.7	-0.8
113A	Mohawk Valley,	4.37	116		Pn	08 17 47.8	+2.8
PNTR	Pine Nut	4.42	348		Pn	08 17 44.7	-1.1
SPX	San Pedro Mart	4.48	145	Pn	Pn	08 17 47.6	+0.9
LCMT	Little Creek M	4.78	60		Pn	08 17 50.6	-0.1
LCMT				IAML		08 19 16.8	
	comp=N,11nm,3.8s						
CCUT	Cedar City	4.97	54		Pn	08 17 55.1	+1.8
CCUT				IAML		08 18 47.8	
	comp=E,10nm,4.9s						
PAHR	Pah Rah Range	5.00	352		Pn	08 17 58.0	+4.3
PAHR				IAML		08 19 19.8	
	comp=N,14nm,1.1s						
PAHR				IAML		08 19 20.4	
	comp=E,12nm,2.7s						
KNB	Kanab	5.09	62		Pn	08 17 56.5	+1.5
KNB				IAML		08 18 45.9	
	comp=E,12nm,4.1s						
KNB				IAML		08 21 05.3	
	comp=N,14nm,5.0s						
PSUT	Pine Spring	5.27	43		Pn	08 17 56.7	-0.8
PSUT				IAML		08 18 41.9	
	comp=E,12nm,4.7s						
PSUT				IAML		08 18 47.7	
	comp=N,10nm,4.6s						
U15A	North Rim	5.28	70	Pn	Pn	08 17 59.7	+1.9
BEKR	Beckworth	5.32	344	Pn	Pn	08 17 59.0	+0.8
BEKR				IAML		08 19 33.8	
	comp=N,7.3nm,0.9s						
SPR3	Spring Creek 3	5.36	37		Pn	08 18 01.3	+2.4
SPR3				IAML		08 19 32.6	
	comp=E,8.2nm,3.5s						
ORV	Oroville	5.37	334	Pn	Pn	08 18 02.6	+3.9
ORV				IAML		08 19 28.4	
	comp=E,7.5nm,3.8s						
ORV				IAML		08 19 36.4	
	comp=N,7.0nm,3.7s						
X16A	Lo Mia Camp, P	5.79	91		Pn	08 18 03.9	-0.7
WUAZ	Wupatki	5.84	81		Pn	08 18 05.4	+0.1
MTPU	Mount Pierson	6.02	55		Pn	08 18 09.1	+1.2
MVU	Marysvale	6.25	51		Pn	08 18 13.9	+3.0
MSU	Marysvale	6.28	52		Pn	08 18 13.3	+2.0
ELK	Elko	6.49	22		Pn	08 18 15.4	+1.1

NOU ***27*** *08:40:12.9, 21°.40S×179°.08W, h614^{km}, mb4.2, Fiji Islands Region*

IDC ***27*** *08:40:12.9±1.7, 21°.28S×179°.44W, h588^{km}±19^{km}, mb3.4/11, mb1 3.6/13, mb1mx3.5/22, mbtmp4.3/13, Error ellipse: s-maj=19.0km s-min=11.5km az=159.0*

NEIC ***27*** *08:40:13.4±1.2, 21°.1S±0°.1×179°.2W±0°.2, h628^{km}±10^{km}, mb4.1/27, Error ellipse: s-maj=22.0km s-min=17.9km az=121.0*

ISC 27 08:40:12.9±0.5**, 21°.26S**±0°.09×**179°.22W**±0°.09**, h602**^{km}**, n56,** σ**1^{s}.53**/62**, mb4.0**/20**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.35	323	P	P	08 41 43.1	+1.9
MSVF	Nonsavu	4.35	323	P	P	08 41 43.2	+2.0
AFI	Afiamalu	10.19	45	P	P	08 42 33.7	-0.1
AFI	Afiamalu	10.19	45	P	P	08 42 33.3	-0.5
MARNC	Mare, Loyalty	11.88	267	P	P	08 42 51.7	+1.3
DZM	Mont Dzumac	13.35	264	P	P	08 43 04.4	-1.0
	0.3nm,0.3s,baz=99,slow=13,SNR=2.0						
DZM	Mont Dzumac	13.35	264	P	P	08 43 04.8	-0.6
DZM	Mont Dzumac	13.35	264	P	P	08 43 06.4	+1.0
SANVU	Saraoutou	14.12	292	P	P	08 43 11.9	-1.0
SANVU	Saraoutou	14.12	292	P	P	08 43 14.5	+1.5
OUZ	Omahuta	15.27	203	P	P	08 43 23.9	+0.6
URZ	Urewera	17.23	190	P	P	08 43 39.5	-1.7
	1.2nm,0.3s,baz=287,slow=7.2,SNR=16						
URZ	Urewera	17.23	190	P	P	08 43 40.5	-0.7
QRZ	Quartz Range	20.72	198	P	P	08 44 12.5	-0.3
TUWZ	Tuamarina	20.92	195	P	P	08 44 14.8	+0.2
THZ	Tophouse	21.49	196	P	P	08 44 19.2	-0.6
KHZ	Kahutara	21.95	194	P	P	08 44 23.5	-0.2
LTZ	Lake Taylor	22.61	196	P	P	08 44 29.4	-0.3
LTZ				IAmb	IAmb	08 44 57.0	
	comp=Z,4.7nm,0.9s						
WKZ	Wanaka	25.43	200	P	P	08 44 54.4	-0.2
MLZ	Mavora Lakes	26.20	200	P	P	08 45 02.4	+1.1
WHZ	Wether Hill Ro	26.72	200	P	P	08 45 05.9	+0.1
STKA	Stephens Creek	36.43	245	P	P	08 46 28.8	+0.3
	comp=Z,1.2nm,0.5s,baz=68,slow=12,SNR=5.9						
STKA	Stephens Creek	36.43	245	P	P	08 46 28.1	-0.3
WR0	Warramunga Arr	43.18	263	P	P	08 47 22.1	-0.4
WR0				IAmb	IAmb	08 47 26.2	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	43.23	258	P	P	08 47 22.2	-0.6
ASAR	Alice Springs	43.23	258	P	P	08 47 22.8	-0.1
	comp=Z,6.4nm,0.9s,baz=99,slow=7.8,SNR=61						
ASAR				PcP	PcP	08 48 58.6	+0.5
	comp=Z,0.6nm,0.6s,baz=108,slow=3.2,SNR=5.4						
ASAR				ScP	ScP	08 51 56.3	+3.4
	comp=Z,1.0nm,0.7s,baz=101,slow=4.4,SNR=9.0						
ASAR				S	S	08 53 05.8	-1.9
	comp=Z,1.2nm,0.8s,baz=94,slow=16,SNR=10.0						
ASAR	Alice Springs	43.23	258	P	P	08 47 22.1	-0.8
WB0	Warramunga Arr	43.35	263	P	P	08 47 22.9	-0.9
WB0				IAmb	IAmb	08 47 24.4	
	comp=Z,7.0nm,0.7s						
WB2	Warramunga Arr	43.36	263	P	P	08 47 23.3	-0.5
WB2				IAmb	IAmb	08 47 24.5	
	comp=Z,9.3nm,0.9s						
WRAB	Tennant Creek	43.36	263	P	P	08 47 23.4	-0.4
WRA	Warramunga Arr	43.37	263	P	P	08 47 23.5	-0.4
	comp=Z,4.4nm,0.8s,baz=93,slow=6.7,SNR=54						
WRA				PcP	PcP	08 48 59.5	+0.9
	comp=Z,0.9nm,0.9s,baz=95,slow=3.4,SNR=3.3						
WRA				ScP	ScP	08 51 56.6	+3.1
	comp=Z,0.8nm,0.7s,baz=94,slow=3.3,SNR=5.8						
WRA				S	S	08 53 06.4	-3.1
	comp=Z,0.7nm,0.9s,baz=96,slow=14,SNR=5.2						
WRA	Warramunga Arr	43.37	263	P	P	08 47 23.5	-0.4
VNDA	Vanda	57.05	185	P	P	08 49 03.6	+1.2
	comp=Z,2.1nm,0.8s,baz=0.6,slow=5.9,SNR=5.2						
VNDA	Vanda	57.05	185	P	P	08 49 02.0	-0.3
VNDA				IAmb	IAmb	08 49 19.7	
	comp=Z,12nm,1.5s						
QSPA	South Pole Qui	68.81	180	P	P	08 50 17.5	-0.4
MJAR	Matsushiro Arr	70.16	325	P	P	08 50 25.4	-0.8
	comp=Z,2.5nm,0.6s,baz=160,slow=5.9,SNR=6.5						
JHS	Saijyo	71.95	320		P	08 50 34.4	-2.3
PETK	Petropavlovsk-	76.72	346	P	P	08 51 04.7	+1.6
	comp=Z,2.0nm,0.7s,baz=114,slow=6.5,SNR=2.2						
MDPB	Devils Postpil	81.41	44	P	P	08 51 26.0	-2.5
PNTR	Pine Nut	81.92	43	P	P	08 51 28.8	-2.2
PNTR				IAmb	IAmb	08 51 34.5	
	comp=Z,6.7nm,0.8s						
HUMO	Hull Mountain	82.00	38	P	P	08 51 28.6	-2.5
HUMO				IAmb	IAmb	08 51 34.5	
	comp=Z,5.1nm,1.1s						
NVAR	Mina Array Bea	82.36	44	P	P	08 51 35.3	+2.1
	comp=Z,1.1nm,0.6s,baz=226,slow=8.3,SNR=7.3						
NVAR	Mina Array Bea	82.36	44	P	P	08 51 30.9	-2.3
PAHR	Pah Rah Range	82.41	42	P	P	08 51 30.4	-2.9
PAHR				IAmb	IAmb	08 51 36.7	
	comp=Z,3.5nm,0.9s						
G08A	Pilot Rock	85.92	38	P	P	08 51 47.9	-2.4
SNAA	Sanae	87.28	179	P	P	08 51 56.2	-0.1
SNAA				IAmb	IAmb	08 51 56.9	
	comp=Z,4.7nm,1.4s						
TX31	Lajitas Ar. Si	88.43	58	P	P	08 52 00.7	-1.8
TX32	Lajitas Array	88.43	58	P	P	08 52 01.2	-1.3
TX32				IAmb	IAmb	08 52 06.7	
	comp=Z,4.3nm,1.1s						
TXAR	Lajitas Array	88.43	58	P	P	08 52 05.1	+2.6
	comp=Z,2.1nm,0.8s,baz=215,slow=6.2,SNR=20						
CMAR	Chiang Mai Arr	89.30	290	P	P	08 52 07.9	+1.3
	comp=Z,0.7nm,0.3s,baz=129,slow=3.7,SNR=1.9						
PLCA	Paso Flores	89.58	134	P	P	08 52 08.7	+1.0
	comp=Z,1.3nm,0.7s,baz=214,slow=8.1,SNR=4.1						
PDAR	Pinedale Array	90.30	44	P	P	08 52 12.2	+1.2
	comp=Z,1.0nm,0.8s,baz=222,slow=2.0,SNR=7.5						
MKAR	Makanchi Array	110.89	313	PKKPbc	PKKPbc	09 08 39.6	+0.7
	comp=Z,0.5nm,0.8s,baz=299,slow=1.2,SNR=3.8						
AKASG	Malin Array Be	143.11	330	PKP	PKPdf	08 58 37.2	-1.8
	comp=Z,1.6nm,0.4s,baz=43,slow=4.4,SNR=7.6						
BRTR	Keskin Array B	146.49	311	PKPbc	PKiKP	08 58 48.3	-1.9
	comp=Z,0.7nm,0.8s,baz=143,slow=3.1,SNR=2.7						
GERES	GERESS Array B	150.60	342	PKP	PKPdf	08 58 53.4	+1.7
	comp=Z,0.4nm,0.3s,baz=72,slow=6.3,SNR=1.8						
GERES				PKPbc	PKiKP	08 58 58.5	+0.2
	comp=Z,0.6nm,0.5s,baz=52,slow=1.6,SNR=5.0						

IDC 27 09:36:10.9±3.0**, 54°.46N**×**86°.99E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.8**/45**, mbtmp3.0**/2**, ML2.6**/2**, Error ellipse: s-maj=24.2km s-min=16.2km az=63.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.38	249	*i*		09 45 30.0	
	baz=67,slow=353,SNR=3.8						
ZALV	Zalesovo Beam	1.38	249	Pg	Pg	09 36 34.9	-2.4
	0.9nm,0.3s,baz=68,slow=17,SNR=5.2						
ZALV				Lg	Lg	09 36 54.8	
	1.4nm,0.3s,baz=68,slow=25,SNR=6.3						
KURBB	Kurchatov Arra	6.43	237	Pn	Pn	09 37 47.9	+1.1
	0.1nm,0.3s,baz=54,slow=14,SNR=6.2						
KURBB				Sn	Sn	09 39 00.1	-0.8
	0.1nm,0.3s,baz=22,slow=19,SNR=2.0						
KURBB				Lg	Lg	09 39 36.2	
	0.0nm,0.3s,baz=49,slow=28,SNR=4.2						
MKAR	Makanchi Array	8.23	203	Pn	Pn	09 38 12.8	+1.2
	0.1nm,0.3s,baz=27,slow=14,SNR=1.8						
MKAR				Sn	Sn	09 39 45.1	-0.2
	0.1nm,0.3s,baz=19,slow=26,SNR=5.7						
MKAR				Lg	Lg	09 40 29.7	
	0.0nm,0.3s,baz=30,slow=30,SNR=2.7						

HEL ***27*** *10:00:36.1±0.1, 64°.66N×30°.62E, h0^{km}, ML2.0, Explosion*

IDC ***27*** *10:00:37.2±2.7, 64°.63N×31°.07E, h0^{km}, mb1 3.1/2, mb1mx2.8/28, mbtmp3.1/2, ML2.0/2, Error ellipse: s-maj=42.6km s-min=9.1km az=101.0*

KOLA ***27*** *10:00:38.1, 64°.74N×30°.45E, h0^{km}, ML2.2, Kostomuksha, Karelia*

ISC 27 10:00:34.9±0.9**, 64°.64N**±0°.03×**30°.49E**±0°.05**, h0**^{km}**, n24,** σ**1^{s}.68**/38**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	Riekki	1.41	350	PG	Pn	10 01 01.4	-0.5
KU6				MSG		10 01 18.6	
	comp=Z,14nm,0.2s						
KU6				SB	Sg	10 01 19.1	-1.1
MSF	Maaselka	1.41	335	PG	Pn	10 01 01.9	0.0

	baz=149						
MSF				SG	**Sg**	**10 01 19.8**	**-0.5**
OLKF	**Oulanka, Finla**	**1.75**	**345**	PG	**Pg**	**10 01 08.1**	**-0.2**
OLKF				SN	**Sg**	**10 01 32.8**	**+1.8**
JOF	**Joensuu**	**1.77**	**168**	PG	**Pg**	**10 01 08.1**	**-0.7**
OUL	**Oulu**	**2.01**	**285**	PG	**Pg**	**10 01 13.5**	**0.0**
OUL				SG	**Sg**	**10 01 40.0**	**+0.6**
OUF	**Merijarvi**	**2.51**	**266**	PG	**Pb**	**10 01 21.0**	**+0.2**
	baz=81						
OUF				MSG		10 01 51.8	
	comp=Z,12nm,0.2s						
OUF				SG	**Sg**	**10 01 55.3**	**0.0**
OBF0	**Syolatti, Pyha**	**2.70**	**270**	PG	**Pg**	**10 01 25.8**	**-0.8**
OBF0				SG	**Sg**	**10 02 02.4**	**+0.7**
RNF	**Rovaniemi**	**2.71**	**319**	PG	**Pb**	**10 01 25.4**	**+1.2**
RNF				SG	**Sb**	**10 01 59.6**	**+1.7**
SUF	**Sumiainen**	**2.73**	**227**	PG	**Pb**	**10 01 25.2**	**+0.6**
SUF				MSG		10 01 58.0	
	comp=Z,5.5nm,0.2s						
SUF				SG	**Sg**	**10 02 02.5**	**-0.1**
TOF	**Tornio**	**2.96**	**302**	PG	**Pb**	**10 01 29.2**	**+0.8**
TOF				MSG		10 02 04.2	
	comp=Z,4.1nm,0.2s						
TOF				SB	**Sb**	**10 02 05.4**	**+0.3**
VRF	**Varrio**	**3.14**	**354**	PB	**Pn**	**10 01 28.1**	**+2.5**
	baz=169						
VRF				SN	**Sn**	**10 02 06.1**	**+2.4**
VRF				MSG		10 02 08.1	
	comp=Z,3.4nm,0.2s						
APA0	**Apatity Array**	**3.15**	**18**	P	**Pn**	**10 01 26.9**	**+1.3**
APA0				S	**Sn**	**10 02 03.5**	**-0.4**
KAF	**Kangasniemi**	**3.16**	**218**	PG	**Pg**	**10 01 34.7**	**-0.7**
	baz=38						
APA	**Apatity**	**3.17**	**21**	S	**Sn**	**10 02 04.1**	**-0.3**
SGF	**Sodankyl**	**3.24**	**332**	PB	**Pb**	**10 01 31.3**	**-2.0**
KEF	**Keuruu**	**3.54**	**228**	PB	**Pb**	**10 01 36.0**	**-2.4**
FIA0	**FINESS Array S**	**3.79**	**214**	PB	**Pb**	**10 01 40.8**	**-1.8**
FIA0				SG	**Sg**	**10 02 35.3**	**-1.1**
FINES	**FINESS Array B**	**3.79**	**214**	Pn	**Pn**	**10 01 37.5**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=36,slow=14,SNR=6.9						
FINES				Pg	**Pg**	**10 01 47.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=29,slow=15,SNR=12						
FINES				Lg	Lg	10 02 38.5	
	comp=Z,0.6nm,0.3s,baz=38,slow=27,SNR=7.9						
VAF	**Ylistaro**	**3.82**	**249**	PB	**Pb**	**10 01 42.0**	**-1.0**
PAJU	**Pajala**	**3.86**	**312**	PB	**Pb**	**10 01 40.2**	**-3.7**
BURU	**Burvik**	**3.92**	**273**	PN	**Pb**	**10 01 40.8**	**-4.1**
ERTU	**Ertsjaerv**	**3.94**	**303**	PB	**Pb**	**10 01 41.2**	**-4.0**
ERTU				SG	**Sg**	**10 02 41.0**	**-0.4**
ARCES	**ARCESS Array B**	**5.28**	**341**	Pn	**Pn**	**10 01 56.0**	**+1.0**
	baz=152,slow=14,SNR=12						
ARCES				Sn	**Sn**	**10 02 56.5**	**-0.1**
	baz=156,slow=22,SNR=5.4						
ARCES				Lg	Lg	10 03 17.9	
	baz=155,slow=30,SNR=3.8						
I43RU	**DUBNA INFRASON**	**8.60**	**154**	*i*		10 51 50.0	
	baz=345,slow=331,SNR=1.2						

*NOU **27** 10:08:37.6, 38°.22S×178°.40E, h70^{km}, MLv3.5, Off E. Coast of N. Island, N.Z.*

WEL 27 10:08:44.6, 38°.3S±0°.8×**177°.7E**±1°.0, **h65**^{km}±1^{km}, **M2.9**/37, **ML3.1**/37, **MLv2.9**/37, **Error ellipse: s-maj=0.0km s-min=0.0km az=91.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.11**	**275**	P	Pn	10 08 54.2	-0.1
MWZ				S	Sn	10 09 00.9	-0.4
TKGZ	**Te Karaka**	**0.17**	**123**	P	Pn	10 08 54.6	+0.2
TKGZ				S	Sn	10 09 02.0	+0.4
RAGZ	**Rawiri**	**0.25**	**232**	P	Pn	10 08 55.2	+0.3
RAGZ				S	Sn	10 09 03.1	+0.6
TWGZ	**Tauwhareparae**	**0.30**	**56**	P	Pn	10 08 55.8	+0.6
TWGZ				S	Sn	10 09 04.6	+1.6
RIGZ	**Rimuhau**	**0.37**	**168**	P	Pn	10 08 56.2	+0.4
RIGZ				S	Sn	10 09 05.3	+1.3
RUGZ	**Raukumara Rang**	**0.38**	**2**	P	Pn	10 08 56.1	+0.2
RUGZ				S	Sn	10 09 04.5	+0.3
URZ	**Urewera**	**0.44**	**281**	P	Pn	10 08 56.5	+0.1
URZ				S	Sn	10 09 05.3	+0.4
CNGZ	**Carnagh Statio**	**0.45**	**108**	P	Pn	10 08 57.2	+0.8
SNGZ	**Shannon Statio**	**0.51**	**210**	P	Pn	10 08 57.5	+0.4
SNGZ				S	Sn	10 09 07.4	+1.2
PUZ	**Puketiti**	**0.54**	**60**	P	Pn	10 08 57.7	+0.3
PUZ				S	Sn	10 09 07.3	+0.6
PKGZ	**Pakihiroa**	**0.56**	**36**	P	Pn	10 08 58.2	+0.5
PKGZ				S	Sn	10 09 08.2	+1.1
HAZ	**Te Kaha**	**0.59**	**9**	P	Pn	10 08 58.3	+0.4
HAZ				S	Sn	10 09 08.3	+0.6
RTZ	**Ruatahuna**	**0.60**	**243**	P	Pn	10 08 58.3	+0.2
RTZ				S	Sn	10 09 09.0	+1.1
PRGZ	**Paritu Road**	**0.60**	**164**	P	Pn	10 08 58.4	+0.4
KNZ	**Kokohu**	**0.68**	**179**	P	Pn	10 08 58.9	0.0
MUGZ	**Murupara**	**0.71**	**259**	P	Pn	10 08 59.5	+0.2
RAHZ	**Arahi**	**0.73**	**218**	P	Pn	10 08 60.0	+0.5
RAHZ				S	Sn	10 09 11.9	+1.4
EDRZ	**Edgecumbe**	**0.77**	**288**	P	Pn	10 09 00.3	+0.3
WMGZ	**Waiomatatini S**	**0.79**	**49**	P	Pn	10 09 00.8	+0.6
WHHZ	**Waihua**	**0.81**	**205**	P	Pn	10 09 01.1	+0.7
WHHZ				S	Sn	10 09 13.8	+1.8
MTHZ	**Maungataniwha**	**0.82**	**232**	P	Pn	10 09 01.1	+0.5
MHGZ	**Mahia Peninsul**	**0.83**	**167**	P	Pn	10 09 01.0	+0.3
MARZ	**Manawahe**	**0.86**	**294**	P	Pn	10 09 01.3	+0.2
RRRZ	**Republican Roa**	**0.90**	**270**	P	Pn	10 09 01.9	+0.3
TARZ	**Mount Tarawera**	**0.92**	**276**	P	Pn	10 09 02.4	+0.5
MXZ	**Matakaoa Point**	**0.93**	**33**	P	Pn	10 09 02.8	+0.9
MKRZ	**Makatiti**	**0.96**	**282**	P	Pn	10 09 03.2	+0.7
OPRZ	**Ohinepanea**	**1.01**	**299**	P	Pn	10 09 02.8	-0.1
OPRZ				S	Sn	10 09 16.4	-0.1
NMHZ	**Naumai**	**1.01**	**221**	P	Pn	10 09 03.7	+0.7
PRRZ	**Plateau Road**	**1.01**	**261**	P	Pn	10 09 03.1	+0.1
HLRZ	**Highlands Stat**	**1.04**	**275**	P	Pn	10 09 03.8	+0.5
OMRZ	**Omania**	**1.04**	**283**	P	Pn	10 09 03.6	+0.1
ARHZ	**Aropaoanui**	**1.06**	**209**	P	Pn	10 09 04.1	+0.5
ALRZ	**Allen Road**	**1.06**	**258**	P	Pn	10 09 03.9	+0.3
LIRZ	**Lichensteins R**	**1.06**	**288**	P	Pn	10 09 03.8	+0.1
HRRZ	**Handcock Road**	**1.09**	**267**	P	Pn	10 09 04.2	+0.2
MRHZ	**Matea Rd**	**1.09**	**243**	P	Pn	10 09 04.3	+0.2
HSRZ	**Hossack Road**	**1.12**	**271**	P	Pn	10 09 04.9	+0.5
KARZ	**Kaharoa**	**1.17**	**286**	P	Pn	10 09 05.0	0.0
UTU	**Utuhina**	**1.17**	**278**	P	Pn	10 09 06.1	+1.0
NGRZ	**Ngongotaha**	**1.19**	**281**	P	Pn	10 09 06.2	+0.9
WPRZ	**Whakapapatarin**	**1.19**	**261**	P	Pn	10 09 06.0	+0.7
GRRZ	**Galatos Road**	**1.22**	**269**	P	Pn	10 09 06.3	+0.6
BKZ	**Black Stump Fm**	**1.23**	**228**	P	Pn	10 09 06.2	+0.3
TGRZ	**Tauranga**	**1.27**	**299**	P	Pn	10 09 06.3	0.0
MCHZ	**McNeill Hill**	**1.33**	**214**	P	Pn	10 09 07.6	+0.4
KMRZ	**Kaimai**	**1.45**	**290**	P	Pn	10 09 08.6	-0.2
KWHZ	**Kaweka Forest**	**1.45**	**222**	P	Pn	10 09 08.8	0.0
KUTZ	**Kaahu Road**	**1.45**	**264**	P	Pn	10 09 09.2	+0.4
RITZ	**Rihia Road**	**1.55**	**245**	P	Pn	10 09 10.5	+0.4
KAHZ	**Kahuranaki**	**1.57**	**203**	P	Pn	10 09 10.1	-0.3
KRHZ	**Kereru**	**1.64**	**217**	P	Pn	10 09 10.8	-0.5
KATZ	**Kakaramea**	**1.67**	**247**	P	Pn	10 09 12.1	+0.4
TLZ	**Tolley Road**	**1.67**	**270**	P	Pn	10 09 11.9	+0.1
BHHZ	**Black Hill Sta**	**1.69**	**227**	P	Pn	10 09 12.2	+0.2
TMVZ	**Te Maari**	**1.72**	**243**	P	Pn	10 09 12.6	+0.2
ETVZ	**East Tongariro**	**1.72**	**242**	P	Pn	10 09 12.5	0.0
OTVZ	**Oturere**	**1.76**	**242**	P	Pn	10 09 13.2	+0.2
PXZ	**Pawanui**	**1.80**	**200**	P	Pn	10 09 12.2	-1.2
WTVZ	**West Tongariro**	**1.80**	**244**	P	Pn	10 09 13.6	+0.2
NGZ	**Ngauruhoe**	**1.81**	**242**	P	Pn	10 09 13.9	+0.1
TOZ	**Tahuroa Road**	**1.81**	**289**	P	Pn	10 09 13.7	+0.1
TUVZ	**Tukino**	**1.82**	**239**	P	Pn	10 09 14.2	+0.3
WNVZ	**Wahianoa**	**1.89**	**238**	P	Pn	10 09 14.7	-0.1
PNHZ	**Pukenui**	**1.94**	**216**	P	Pn	10 09 14.3	-1.0
MTVZ	**Mangateitei**	**2.00**	**238**	P	Pn	10 09 16.4	+0.2
HIZ	**Hauiti**	**2.21**	**265**	P	Pn	10 09 20.0	+1.1
KUZ	**Kuaotunu**	**2.22**	**315**	P	Pn	10 09 18.7	-0.4
MKAZ	**Moumakai**	**2.34**	**301**	P	Pn	10 09 21.0	+0.3
ETAZ	**East Tamaki Re**	**2.58**	**302**	P	Pn	10 09 24.8	+0.8
BFZ	**Birch Farm**	**2.58**	**205**	P	Pn	10 09 22.3	-1.7
MBAZ	**Motutapu North**	**2.70**	**305**	P	Pn	10 09 26.5	+0.9
AWAZ	**Awhitu Peninsu**	**2.72**	**297**	P	Pn	10 09 26.8	+1.0
EPAZ	**Eden Park BICE**	**2.74**	**301**	P	Pn	10 09 27.4	+1.2
TIWZ	**Tintock**	**2.79**	**209**	P	Pn	10 09 25.5	-1.4
MRZ	**Mangatainoka R**	**2.82**	**214**	P	Pn	10 09 24.9	-2.4
RVAZ	**Riverhead Bore**	**2.91**	**302**	P	Pn	10 09 28.5	0.0
NEZ	**North Egmont**	**2.94**	**251**	P	Pn	10 09 30.7	+1.8
WCZ	**Waipu Caves**	**3.58**	**311**	P	Pn	10 09 38.5	+0.9

NNC 27 10:30:20.9±0.7, **47°.36N**×**81°.67E, h0**^{km}**, mpv1.5, 16C-5D, Error ellipse: s-maj=12.5km s-min=3.9km az=54.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**0.59**	**159**	⇑P	Pg	10 30 32.7	+0.6
	0.3nm,0.2s						
MAKZ				⇑S	Sg	10 30 40.6	+1.0
	1.9nm,0.2s						
MK31	**Makanchi Array**	**0.70**	**143**	P	Pg	10 30 34.9	+0.5
	0.2nm,0.2s,baz=191,slow=7.4,SNR=130						
MK31				⇑S	Sb	10 30 45.4	-0.9
	1.3nm,0.2s,baz=240,slow=24,SNR=35						
MK05	**Makanchi Array**	**0.70**	**143**	⇓P	Pg	10 30 35.2	+0.8
MK05				⇑S	Sb	10 30 45.3	-1.0
MK09	**Makanchi Array**	**0.71**	**144**	⇑P	Pg	10 30 34.8	+0.3
MK09				⇓S	Sg	10 30 44.8	+1.1
MK04	**Makanchi Array**	**0.72**	**144**	⇑P	Pg	10 30 35.0	+0.3
MK04				⇓S	Sg	10 30 45.1	+1.0
MK01	**Makanchi Array**	**0.73**	**144**	⇓P	Pg	10 30 35.0	+0.2
MK01				⇑S	Sg	10 30 45.2	+1.0
MK06	**Makanchi Array**	**0.73**	**143**	⇑P	Pg	10 30 35.2	+0.4
MK06				⇑S	Sg	10 30 45.2	+1.0
MK02	**Makanchi Array**	**0.73**	**143**	⇑P	Pg	10 30 35.0	+0.2
MK02				⇓S	Sg	10 30 45.3	+1.0
MK03	**Makanchi Array**	**0.73**	**144**	⇑P	Pg	10 30 34.9	+0.1
MK03				⇑S	Sg	10 30 45.2	+0.9
MK08	**Makanchi Array**	**0.73**	**145**	⇑P	Pg	10 30 34.8	-0.1
MK08				⇑S	Sg	10 30 44.7	+0.3
MK07	**Makanchi Array**	**0.75**	**144**	⇑P	Pg	10 30 35.0	-0.1
MK07				⇑S	Sg	10 30 45.1	+0.3

SOME 27 10:30:29.8, 45°.97N×**81°.07E, h10**^{km}**, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.38**	**241**	*e*P	Pb	10 30 55.6	-0.2
	1.0nm,0.1s						
KAPS				*e*S	Sn	10 31 13.8	+0.3
	6.7nm,0.4s						
DJR	**Jarkent**	**1.87**	**209**	*e*P	Pg	10 31 04.8	-0.8
	1.7nm,0.3s						
DJR				*e*S	Sg	10 31 30.1	+0.3
	3.0nm,0.2s						
KTMS	**Ketmen**	**2.57**	**192**	*e*P	Pb	10 31 16.6	+0.5
	0.2nm,0.1s						
KTMS				*e*S	Sg	10 31 50.3	-2.1
	1.1nm,0.0s						
MNBS	**Baschi**	**2.67**	**226**	*e*P	Pb	10 31 18.7	+0.9
	1.3nm,0.1s						
MNBS				*e*S	Sg	10 31 54.0	-1.6
	2.0nm,0.1s						
ARXS	**Arharly**	**2.89**	**234**	*e*P	Pg	10 31 23.3	-1.8
	1.4nm,0.3s						
ARXS				*e*S	Sg	10 32 02.1	-0.5
	3.0nm,0.4s						

*IDC **27** 10:31:44.1±2.2, 6°.12N×126°.82E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.4/32, mbtmp3.6/5, MS3.7/1, Ms1 3.7/1, ms1mx2.6/40, Error ellipse: s-maj=131.7km s-min=27.6km az=67.0*

*MAN **27** 10:31:54.8, 5°.76N×126°.37E, h51^{km}, mb4.3, ML3.1, MS2.8*

ISC 27 10:31:54.5±1.0, **5°.80N**±0°.08×**126°.4E**±0°.1, **h71**^{km}**, n11,** σ**1ˢ.09**/14**, mb3.5**/5**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.75**	**294**	*e*P	**Pn**	**10 32 10.3**	**+0.3**
DDMP				*e*S	**Sn**	**10 32 22.0**	**+0.4**
MATI	**Mati**	**1.15**	**353**	*e*P	**Pn**	**10 32 15.8**	**+0.7**
MATI				*e*S	**Sn**	**10 32 31.6**	**+1.4**
KCP	**Kidapawan**	**1.77**	**313**	⇑*i*P	**Pn**	**10 32 23.7**	**+0.5**
KCP				*i* S	**Sn**	**10 32 45.7**	**+0.7**
SKMP	**Bagumbayan, Su**	**1.98**	**291**	*e*P	**Pn**	**10 32 27.0**	**+1.1**
BUKP	**Musuan**	**2.46**	**327**	*e*P	**Pn**	**10 32 33.4**	**+1.0**
BUKP				*e*S	**Sn**	**10 32 59.5**	**-2.0**
FITZ	**Fitzroy Crossi**	**23.75**	**182**	P	**P**	**10 37 01.7**	**+1.1**
	0.8nm,0.4s,baz=6.7,slow=9.8,SNR=2.0						
WRA	**Warramunga Arr**	**26.74**	**163**	P	**P**	**10 37 27.2**	**-0.5**
	0.2nm,0.3s,baz=344,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**30.19**	**166**	P	**P**	**10 37 58.3**	**0.0**
	0.6nm,0.4s,baz=343,slow=7.0,SNR=15						
STKA	**Stephens Creek**	**40.17**	**160**	P	**P**	**10 39 23.6**	**-0.3**
	1.3nm,0.7s,baz=336,slow=12,SNR=3.2						
SONM	**Songino Array**	**45.25**	**341**	LR	LR	11 01 57.9	
	comp=Z,86nm,18.8s,baz=64,slow=40						
MKAR	**Makanchi Array**	**55.68**	**325**	P	**P**	**10 41 22.1**	**-1.5**
	0.1nm,0.4s,baz=115,slow=7.7,SNR=1.8						

*NNC **27** 11:08:39.8±6.6, 37°.67N×71°.19E, h0^{km}, mb3.8, mpv3.7, Error ellipse: s-maj=52.5km s-min=40.7km az=167.0*

ISC 27 11:08:38.0±3.7, **37°.3N**±0°.2×**71°.1E**±0°.1, **h68**^{km}**, n10,** σ**1ˢ.30**/13**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.25**	**21**	P	**Pn**	**11 09 54.9**	**+0.7**
	SNR=19						
UCH	**Uchtor**	**5.60**	**27**	P	**Pn**	**11 09 59.9**	**+0.8**
	SNR=6.9						
EKS2	**Erkin-Say**	**5.76**	**20**	P	**Pn**	**11 10 02.6**	**+1.6**
	SNR=6.5						
KK31	**Karatay Array**	**5.84**	**356**	⇓P	**Pn**	**11 10 03.8**	**+1.7**
	3.3nm,0.5s,baz=181,slow=13						
KK31				⇑S	**Sn**	**11 11 07.1**	**-0.6**
	1.6nm,0.3s,baz=170,slow=24						
AAK	**Ala-Archa**	**5.95**	**25**	P	**Pn**	**11 10 04.8**	**+1.1**
	SNR=9.8						
AAK	**Ala-Archa**	**5.95**	**25**	⇓P	**Pn**	**11 10 04.3**	**+0.6**
	3.7nm,0.3s						
AAK				⇑S	**Sn**	**11 11 08.5**	**-2.1**
	4.8nm,0.6s						
USP	**Ospenovka**	**6.52**	**22**	P	**Pn**	**11 10 11.7**	**+0.3**
	SNR=6.3						
TKM2	**Tokmak 2**	**6.60**	**30**	P	**Pn**	**11 10 12.8**	**+0.2**
	SNR=5.2						
TKM2	**Tokmak 2**	**6.60**	**30**	⇓P	**Pn**	**11 10 12.3**	**-0.4**
	3.7nm,0.6s						
TKM2				⇑S	**Sn**	**11 11 28.2**	**+1.6**
	1.6nm,0.5s						
AB31	**Akbulak array**	**14.46**	**329**	⇑P	**Pn**	**11 11 58.0**	**-1.0**
	0.1nm,0.4s,baz=134,slow=13,SNR=5.0						

*SOME **27** 11:15:22.8, 48°.75N×88°.17E, h0^{km}*

*NNC **27** 11:15:23.0±1.6, 49°.84N×87°.62E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=13.8km s-min=7.7km az=56.0*

ISC 27 11:15:19.6±3.7, **50°.2N**±0°.1×**88°.2E**±0°.2, **h11**^{km}**, n6,** σ**1ˢ.53**/12**, 6C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.48**	**220**	*e*P	**Pn**	**11 16 16.5**	**+2.8**
	8.5nm,0.3s						
ZSN				*e*S	**Sn**	**11 16 54.9**	**0.0**
	30nm,0.5s						
MK31	**Makanchi Array**	**5.16**	**231**	⇓Pn	**Pn**	**11 16 35.6**	**-1.1**
	0.6nm,0.3s,baz=61,slow=13,SNR=37						
MK31				Pg	**Pb**	**11 16 48.7**	**-1.1**
	1.3nm,0.3s,baz=53,slow=17,SNR=8.9						
MK31				⇑Lg	Lg	11 17 50.8	
	2.2nm,0.5s,baz=49,slow=29,SNR=3.5						
MAKZ	**Makanchi**	**5.30**	**233**	⇑Pn	**Pn**	**11 16 36.6**	**-2.1**
	0.4nm,0.3s						
MAKZ				⇑Pg	**Pb**	**11 16 50.8**	**-1.5**
	1.0nm,0.4s						
MAKZ				⇑Lg	Lg	11 17 57.2	
	2.6nm,0.6s						
KURK	**Kurchatov**	**6.11**	**279**	⇓Pn	**Pn**	**11 16 50.7**	**+1.0**
	2.3nm,0.6s						
KURK				⇓Sn	**Sn**	**11 17 59.3**	**-0.3**
	3.3nm,0.6s						
KURK				⇑Lg	Lg	11 18 27.0	
	4.3nm,0.7s						
KURBB	**Kurchatov Arra**	**6.17**	**278**	⇓Pn	**Pn**	**11 16 50.9**	**+0.3**
	3.6nm,0.6s						
KURBB				⇑Sn	**Sn**	**11 18 01.5**	**+0.5**
	11nm,0.8s						
KURBB				⇓Lg	Lg	11 18 28.0	
	15nm,0.8s						
KAPS	**Kapalarasan**	**7.68**	**234**	*e*P	**Pb**	**11 17 32.4**	**-0.3**
	0.7nm,0.5s						
KAPS				*e*S	**Sb**	**11 19 05.8**	**+1.5**
	1.0nm,0.3s						

*NEIC **27** 11:31:09.8, 36°.26N×97°.26W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.12; M$_{\theta\theta}$1.29; M$_{\phi\phi}$-1.17; M$_{r\theta}$-0.15; M$_{\theta\phi}$2.29; M$_{\phi r}$-0.07; Fault plane solution: M$_0$2.60000×10^{15} NP1:ϕ_s194.11000°, δ87.43000°, λ177.82000°. NP2:ϕ_s284.21000°, δ87.83000°, λ2.57000°. Principal axes: T 2.6651, Plg3.0000°, Azm149.0000°; N -0.1292, Plg87.0000°, Azm324.0000°; P -2.5359, Plg0.0000°, Azm59.0000°;*

*TUL **27** 11:31:09.8±1.9, 36°.26N±0°.01×97°.26W±0°.02, h3^{km}±6^{km}, ML4.1, mb4.1/31(NEIC), mb_Lg4.4/155(NEIC), Mwr4.2/131(NEIC) Error ellipse: s-maj=2.7km s-min=1.7km az=65.0*

*NEIC **27** 11:31:09.9±1.8, 36°.26N±0°.01×97°.27W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.8km s-min=1.6km az=66.0*

*IDC **27** 11:31:10.7±0.8, 36°.32N×97°.43W, h0^{km}, mb3.8/3, mb1 4.1/12, mb1mx3.9/47, mbtmp3.9/12, ML3.7/9, MS3.6/23, Ms1 3.7/23, ms1mx3.5/57, Error ellipse: s-maj=10.9km s-min=8.9km az=158.0*

*ANF **27** 11:31:12.9±0.2, 36°.29N×97°.26W, h57^{km}±15^{km}, ML5.3/18, Error ellipse: s-maj=2.4km s-min=2.0km az=170.0*

ISC 27 11:31:10.1±0.9, **36°.27N**±0°.02×**97°.26W**±0°.02, **h11**^{km}±7^{km}, **n317,** σ**1ˢ.25**/311**, mb4.2**/5**, MS3.8**/17**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	**Quay**	**0.45**	**103**	Pg	**Pg**	**11 31 19.1**	**+0.1**
QUOK				Sg	**Sg**	**11 31 25.6**	**+0.5**
OK031	**S. Brethren Rd**	**0.46**	**133**		**Pg**	**11 31 19.1**	**-0.1**
OK031				Sg	**Sg**	**11 31 25.6**	**+0.3**
OK029	**Liberty Lake**	**0.50**	**199**		**Pg**	**11 31 19.7**	**-0.3**
OK029				Sg	**Sg**	**11 31 26.4**	**-0.2**
OK030	**Cody Creek RV**	**0.51**	**132**		**Pg**	**11 31 20.1**	**0.0**
OK030				Sg	**Sg**	**11 31 27.1**	**+0.2**
CROK	**Carrier**	**0.63**	**292**		**Pg**	**11 31 22.2**	**-0.2**
CROK				Sg	**Sg**	**11 31 31.0**	**+0.3**
BCOK	**Bluff Creek, N**	**0.68**	**205**		**Pg**	**11 31 22.8**	**-0.5**
BCOK				IAmb_Lg		11 31 31.5	
	comp=Z,5µm,1.0s						
BCOK				Sg	**Sg**	**11 31 32.0**	**-0.2**
OK025	**Westminster Rd**	**0.69**	**186**		**Pg**	**11 31 22.9**	**-0.6**
OK025				Sg	**Sg**	**11 31 32.7**	**+0.1**
OK009	**Oakdale Elemen**	**0.70**	**191**		**Pg**	**11 31 23.6**	**-0.2**
KAN13	**South Haven SW**	**0.76**	**346**		**Pb**	**11 31 24.8**	**-0.6**
KAN13				Sg	**Sb**	**11 31 35.5**	**-0.2**
OKCFA	**Oklahoma City**	**0.87**	**191**		**Pg**	**11 31 26.3**	**-0.6**
OKCFA				Sg	**Sg**	**11 31 38.1**	**-0.2**
T35A	**Sooner Cattle**	**0.88**	**43**		**Pg**	**11 31 26.9**	**-0.1**
T35A				Sg	**Sb**	**11 31 39.1**	**0.0**
OKCSW	**OKLAHOMA CITY**	**0.88**	**190**		**Pg**	**11 31 26.5**	**-0.5**
OKCSW				Sg	**Sg**	**11 31 37.8**	**-0.7**
T35B	**Sooner Cattle**	**0.88**	**43**	P		11 31 27.0	
	baz=223,SNR=1000						
T35B				S		11 31 39.1	
	baz=223						
KAN14	**Manchester OK**	**0.89**	**320**		**Pg**	**11 31 27.0**	**-0.3**
KAN14				Sg	**Sb**	**11 31 39.4**	**0.0**
OK011	**Prague**	**0.91**	**149**		**Pg**	**11 31 27.4**	**-0.3**
KAN01	**Argonia South**	**0.97**	**335**		**Pg**	**11 31 28.5**	**-0.3**
KAN01				Sg	**Sb**	**11 31 41.9**	**+0.2**
FNO	**Franklin**	**1.02**	**187**		**Pg**	**11 31 28.9**	**-0.8**
FNO				Sg	**Sg**	**11 31 42.9**	**-0.2**
KS21	**Milan North St**	**1.06**	**342**		**Pb**	**11 31 30.3**	**-0.3**
KAN10	**Anthony SW Sta**	**1.08**	**322**		**Pg**	**11 31 30.5**	**-0.5**
KAN08	**Anthony NE Sta**	**1.11**	**329**		**Pg**	**11 31 31.0**	**-0.5**
W35A	**Tecumseh**	**1.16**	**164**		**Pg**	**11 31 30.9**	**-1.5**
KAN12	**Harper NE Stat**	**1.18**	**330**		**Pg**	**11 31 32.4**	**-0.6**
TUL1	**Leonard**	**1.24**	**107**	P	**Pb**	**11 31 32.9**	**-0.6**
	baz=287,SNR=170						
TUL1				S	**Sg**	**11 31 49.7**	**-0.3**
	baz=287						
TUL1	**Leonard**	**1.24**	**107**	Pg	**Pb**	**11 31 32.7**	**-0.8**
TUL1	**Leonard**	**1.24**	**107**	P		11 31 32.7	
	baz=287						
TUL1				S		11 31 49.8	
	baz=287						
U32A	**Winter Ranch,**	**1.42**	**275**		**Pn**	**11 31 35.8**	**0.0**
U32A	**Winter Ranch,**	**1.42**	**275**	P		11 31 35.8	
	baz=94						
U32A				S		11 31 55.1	
	baz=94						
X34A	**Smith Ranch, M**	**1.73**	**196**		**Pn**	**11 31 41.7**	**+1.6**
WMOK	**Wichita Mounta**	**1.97**	**220**	P	**Pn**	**11 31 44.4**	**+0.9**
	baz=39,SNR=1000						
WMOK	**Wichita Mounta**	**1.97**	**220**		**Pn**	**11 31 44.4**	**+0.9**
WMOK				IAmb_Lg		11 32 13.0	
	comp=Z,3µm,0.8s						
WMOK	**Wichita Mounta**	**1.97**	**220**	P		11 31 44.3	
	baz=39,SNR=1000						
WMOK				S		11 32 11.0	
	baz=39						
X37A	**Clayton**	**2.28**	**137**	Pn	**Pn**	**11 31 48.9**	**+1.3**
X37A				IAmb_Lg		11 32 23.2	
	comp=Z,911nm,0.8s						
X37A	**Clayton**	**2.28**	**137**	P		11 31 48.7	
	baz=318						
U38A	**Gravette**	**2.32**	**85**		**Pn**	**11 31 50.2**	**+1.9**
U38A	**Gravette**	**2.32**	**85**	P		11 31 49.9	
	baz=266,SNR=341						
R32A	**Long Quarter,**	**2.44**	**332**		**Pn**	**11 31 51.1**	**+1.2**
R32A				IAmb_Lg		11 32 26.8	
	comp=Z,1µm,0.7s						
R32A	**Long Quarter,**	**2.44**	**332**	P		11 31 51.0	
	baz=152,SNR=121						
R32A				S		11 32 21.9	
	baz=152						
HHAR	**Hobbs**	**2.68**	**89**		**Pn**	**11 31 54.6**	**+1.5**
HHAR	**Hobbs**	**2.68**	**89**	P		11 31 54.7	
	baz=271						
KSU1	**Kansas State U**	**2.87**	**10**	P	**Pn**	**11 31 56.6**	**+0.9**
	baz=191,SNR=53						
KSU1	**Kansas State U**	**2.87**	**10**	Pn	**Pn**	**11 31 57.3**	**+1.5**
KSU1				IAmb_Lg		11 32 42.5	
	comp=Z,785nm,0.9s						
KSU1	**Kansas State U**	**2.87**	**10**	P		11 31 57.0	
	baz=191,SNR=29						
Z35A	**Perchaven, San**	**2.94**	**180**		**Pn**	**11 31 58.1**	**+1.4**
Z35A	**Perchaven, San**	**2.94**	**180**	P		11 31 58.0	
	baz=360,SNR=40						
Z35A				S		11 32 34.0	
	baz=360						
W39A	**Magazine**	**3.02**	**110**	P	**Pn**	**11 31 58.8**	**+1.0**
	baz=292,SNR=16						
W39A	**Magazine**	**3.02**	**110**		**Pn**	**11 31 59.5**	**+1.6**
W39A				IAmb_Lg		11 32 49.4	
	comp=Z,1µm,0.8s						
W39A	**Magazine**	**3.02**	**110**	P		11 31 59.1	
	baz=292,SNR=18						
CBKS	**Cedar Bluff**	**3.21**	**323**	P	**Pn**	**11 32 01.5**	**+1.0**
	baz=142,SNR=25						
CBKS	**Cedar Bluff**	**3.21**	**323**	Pn	**Pn**	**11 32 01.5**	**+1.0**
CBKS				IAmb_Lg		11 32 57.7	
	comp=Z,751nm,0.8s						
CBKS	**Cedar Bluff**	**3.21**	**323**	P		11 32 01.5	
	baz=142,SNR=53						
S39A	**Bolivar**	**3.45**	**65**		**Pn**	**11 32 05.6**	**+1.8**
S39A	**Bolivar**	**3.45**	**65**	P		11 32 05.0	
	baz=247,SNR=315						
MIAR	**Mount Ida**	**3.46**	**119**	P	**Pn**	**11 32 05.1**	**+1.2**
	baz=301,SNR=21						
MIAR	**Mount Ida**	**3.46**	**119**	Pn	**Pn**	**11 32 05.4**	**+1.5**
MIAR	**Mount Ida**	**3.46**	**119**	P		11 32 05.1	
	baz=301,SNR=168						
Z38A	**Mt. Pleasant**	**3.54**	**147**	IAmb_Lg		11 33 11.3	
	comp=Z,1µm,0.8s						
Z38A	**Mt. Pleasant**	**3.54**	**147**	P		11 32 05.9	
	baz=329						
U40A	**Yellville**	**3.56**	**87**	P	**Pn**	**11 32 06.2**	**+1.0**
	baz=270,SNR=23						
U40A	**Yellville**	**3.56**	**87**	Pn	**Pn**	**11 32 06.7**	**+1.5**
U40A				IAmb_Lg		11 33 03.4	
	comp=Z,714nm,0.8s						
U40A	**Yellville**	**3.56**	**87**	P		11 32 06.3	
	baz=270,SNR=93						
U40A				P		11 32 06.3	
	baz=270,SNR=93						
AMTX	**Amarillo**	**3.87**	**250**	P	**Pn**	**11 32 10.7**	**+1.2**

	baz=68						
AMTX	Amarillo	3.87	250	Pn	Pn	11 32 10.5	+1.0
AMTX				IAmb_Lg		11 33 16.6	
	comp=Z,1µm,1.2s						
AMTX	Amarillo	3.87	250	P		11 32 10.8	
	baz=68,SNR=71						
X40A	Basin Creek Fa	4.03	115	P	Pn	11 32 12.9	+1.2
	baz=297,SNR=11						
X40A				S	Sn	11 32 59.4	+0.6
	baz=297						
X40A	Basin Creek Fa	4.03	115	Pn	Pn	11 32 13.3	+1.7
X40A				IAmb_Lg		11 33 24.5	
	comp=Z,672nm,0.9s						
X40A	Basin Creek Fa	4.03	115	P		11 32 12.8	
	baz=297,SNR=79						
X40A				P		11 32 12.8	
	baz=297,SNR=79						
MGMO	Mountain Grove	4.10	76		Pn	11 32 14.2	+1.5
MGMO				IAmb_Lg		11 33 27.1	
	comp=Z,598nm,1.1s						
ABTX	Abilene, Hawle	4.14	209	P	Pn	11 32 13.4	+0.1
	baz=28,SNR=62						
ABTX				S	Sn	11 33 02.1	+0.5
	baz=28						
ABTX	Abilene, Hawle	4.14	209		Pn	11 32 14.0	+0.7
ABTX	Abilene, Hawle	4.14	209	P		11 32 13.9	
	baz=28,SNR=11						
WHAR	Wooly Hollow	4.16	102	Pn	Pn	11 32 15.0	+1.6
WHAR				IAmb_Lg		11 33 27.7	
	comp=Z,1µm,0.9s						
FCAR	Ozark Folk Cen	4.17	94		Pn	11 32 14.9	+1.2
FCAR				IAmb_Lg		11 33 25.1	
	comp=Z,710nm,0.8s						
W41B	Gary Mavity, V	4.22	104	P	Pn	11 32 15.0	+0.7
	baz=286,SNR=7.7						
W41B				S	Sn	11 33 04.1	+0.6
	baz=286						
W41B	Gary Mavity, V	4.22	104	P		11 32 15.1	
	baz=286,SNR=48						
W41B				S		11 33 04.6	
	baz=286						
WLAR	White Oak Lake	4.27	126	Pn	Pn	11 32 15.9	+1.0
WLAR				IAmb_Lg		11 33 36.5	
	comp=Z,1µm,1.1s						
WHTX	Lake Whitney,	4.27	182	P	Pn	11 32 15.6	+0.6
	baz=2.1,SNR=11						
WHTX				S	Sn	11 33 04.3	-0.6
	baz=2.1						
WHTX	Lake Whitney,	4.27	182	Pn	Pn	11 32 15.9	+0.8
WHTX	Lake Whitney,	4.27	182	P		11 32 15.6	
	baz=2.1,SNR=23						
UALR	University of	4.28	109	Pn	Pn	11 32 16.1	+1.1
UALR				IAmb_Lg		11 33 29.6	
	comp=Z,1µm,1.0s						
237A	Washetta, Mont	4.43	164	Pn	Pn	11 32 17.5	+0.4
237A	Washetta, Mont	4.43	164	P		11 32 17.7	
	baz=345,SNR=40						
237A				S		11 33 09.4	
	baz=345						
P38A	Dawn	4.46	40	Pn	Pn	11 32 19.1	+1.6
P38A				IAmb_Lg		11 33 34.4	
	comp=Z,492nm,0.7s						
P38A	Dawn	4.46	40	P		11 32 19.1	
	baz=222,SNR=21						
R40A	Maddies Statio	4.46	62	Pn	Pn	11 32 18.9	+1.3
R40A				IAmb_Lg		11 33 32.5	
	comp=Z,1µm,1.3s						
R40A	Maddies Statio	4.46	62	P		11 32 18.9	
	baz=244,SNR=142						
N33B	J Bar K, Exete	4.46	358	P		11 32 18.7	
	baz=178,SNR=14						
N33A	J Bar K, Exete	4.46	358	Pn	Pn	11 32 18.3	+0.7
Z41A	Richland Creek	4.74	128	P	Pn	11 32 21.9	+0.4
	baz=311,SNR=9.6						
Z41A				S	Sn	11 33 16.0	-0.4
	baz=311						
Z41A	Richland Creek	4.74	128	P		11 32 22.1	
	baz=311,SNR=14						
Z41A				P		11 32 22.1	
	baz=311,SNR=14						
N35A	Tabor	4.75	15	Pn	Pn	11 32 22.9	+1.2
N35A	Tabor	4.75	15	P		11 32 22.9	
	baz=196,SNR=18						
LCAR	Lake Charles	4.94	91	Pn	Pn	11 32 25.7	+1.5
NATX	Nacogdoches	4.99	154	P	Pn	11 32 25.5	+0.6
	baz=335						
NATX				S	Sn	11 33 21.7	-0.8
	baz=335						
NATX	Nacogdoches	4.99	154	Pn	Pn	11 32 25.3	+0.4
NATX	Nacogdoches	4.99	154	P		11 32 25.5	
	baz=335						
T42A	Van Buren	5.01	79	Pn	Pn	11 32 26.6	+1.4
T42A				IAmb_Lg		11 33 58.6	
	comp=Z,708nm,1.0s						
T42A	Van Buren	5.01	80	P		11 32 26.3	
	baz=263,SNR=37						
KSCO	Kaye Shedlock’	5.07	304	P	Pn	11 32 26.7	+0.7
	baz=121,SNR=16						
KSCO				S	Sn	11 33 23.5	-1.1
	baz=121						
KSCO	Kaye Shedlock’	5.07	304	Pn	Pn	11 32 26.9	+0.8
KSCO				IAmb_Lg		11 34 03.4	
	comp=Z,678nm,0.7s						
KSCO	Kaye Shedlock’	5.07	304	P		11 32 26.9	
	baz=121,SNR=33						
CCAR	Cane Creek	5.07	116	IAmb_Lg		11 33 57.5	
	comp=Z,675nm,1.0s						
MSTX	Muleshoe	5.07	245	P	Pn	11 32 26.5	+0.4
	baz=62,SNR=19						
MSTX				S	Sn	11 33 24.3	-0.4
	baz=62						
MSTX	Muleshoe	5.07	245	Pn	Pn	11 32 26.6	+0.4
MSTX	Muleshoe	5.07	245	P		11 32 26.7	
	baz=62,SNR=28						
CCM	Cathedral Cave	5.12	68	P	Pn	11 32 27.1	+0.4
	baz=251						
CCM	Cathedral Cave	5.12	68		Pn	11 32 28.5	+1.8
CCM				IAmb_Lg		11 34 01.6	
	comp=Z,576nm,0.9s						
CCM	Cathedral Cave	5.12	68	P		11 32 27.9	
	baz=251,SNR=29						
BGNE	Belgrade	5.18	353	P	Pn	11 32 28.1	+0.6
	baz=172,SNR=20						
BGNE				S	Sn	11 33 26.5	-0.6
	baz=172						
BGNE	Belgrade	5.18	353	Pn	Pn	11 32 28.1	+0.6
BGNE	Belgrade	5.18	353	P		11 32 28.1	
	baz=172,SNR=58						
P40A	Paris	5.25	50	Pn	Pn	11 32 29.7	+1.3
P40A				IAmb_Lg		11 34 04.0	
	comp=Z,573nm,0.9s						
HBAR	Harrisburg	5.40	96	Pn	Pn	11 32 31.9	+1.3
435B	Jarrell	5.48	183	P	Pn	11 32 32.4	+0.7
	baz=2.7,SNR=6.0						
435B				S	Sn	11 33 33.7	-1.0
	baz=2.7						
435B	Jarrell	5.48	183	Pn	Pn	11 32 32.5	+0.7
435B	Jarrell	5.48	183	P		11 32 32.5	
	baz=2.7,SNR=7.2						
N38A	Joes South For	5.50	34	Pn	Pn	11 32 32.5	+0.6
N38A				IAmb_Lg		11 34 18.0	
	comp=Z,759nm,0.8s						
N38A	Joes South For	5.50	34	P		11 32 32.6	
	baz=216,SNR=10						
PBMO	Poplar Bluff	5.52	83	Pn	Pn	11 32 34.0	+1.8
PBMO				IAmb_Lg		11 34 12.3	
	comp=Z,606nm,0.8s						
LPAR	Lepanto	5.68	95	Pn	Pn	11 32 34.7	+0.3
L34A	Svendsen Farm,	5.73	7	Pn	Pn	11 32 35.3	+0.3
T25A	Trinidad	5.81	281	P	Pn	11 32 36.9	+0.5
	baz=96,SNR=14						
T25A				S	Sn	11 33 41.4	-1.8
	baz=96						
OGNE	Ogallala	5.98	323	P	Pn	11 32 39.4	+0.9
	baz=140,SNR=13						
OGNE				S	Sn	11 33 46.1	-1.0
	baz=140						
OGNE	Ogallala	5.98	323	Pn	Pn	11 32 39.6	+1.0
OGNE				IAmb_Lg		11 34 28.2	
	comp=Z,501nm,0.8s						
OGNE	Ogallala	5.98	323	P		11 32 39.9	
	baz=140						
143A	Socs Landing,	6.00	125	IAmb_Lg		11 34 35.9	
	comp=Z,670nm,0.9s						
PARMO	Parma	6.06	84	IAmb_Lg		11 34 39.2	
	comp=Z,759nm,0.8s						
SLM	Saint Louis	6.06	65		Pn	11 32 40.3	+0.7
SLM				IAmb_Lg		11 34 22.4	
	comp=Z,745nm,1.3s						
MET	Memphis--Engin	6.07	99	IAmb_Lg		11 34 35.8	
	comp=Z,682nm,1.0s						
JCT	Junction City	6.16	201	P	Pn	11 32 41.2	+0.2
	baz=19						
JCT				S	Sn	11 33 50.2	-1.2
	baz=19						
JCT	Junction City	6.16	201	P		11 32 41.1	
	baz=19,SNR=20						
HKT	Hockley	6.42	169	Pn	Pn	11 32 46.8	+2.4
HKT	Hockley	6.42	169	P		11 32 45.2	
	baz=350						
SCIA	State Center	6.44	28	P	Pn	11 32 45.5	+0.6
	baz=210						
SCIA				S	Sn	11 33 57.1	-1.3
	baz=210						
SCIA	State Center	6.44	28	Pn	Pn	11 32 47.0	+2.1
K31A	O'Neill	6.45	350	Pn	Pn	11 32 45.4	+0.4
K31A	O'Neill	6.45	350	P		11 32 45.8	
	baz=169,SNR=18						
HICK	Hickman	6.48	85	Pn	Pn	11 32 48.0	+2.7
S44A	Carbondale	6.56	75		Pn	11 32 47.6	+1.2
S44A				IAmb_Lg		11 34 51.9	
	comp=Z,638nm,0.8s						
S44A	Carbondale	6.56	75	P		11 32 47.0	
	baz=260,SNR=23						
OXF	Oxford	6.64	103	P	Pn	11 32 47.7	0.0
	baz=288						
OXF	Oxford	6.64	103		Pn	11 32 47.2	-0.4
W45A	Hickory Valley	6.66	97	Pn	Pn	11 32 48.9	+1.1
W45A				IAmb_Lg		11 34 56.1	
	comp=Z,436nm,0.8s						
W45A	Hickory Valley	6.66	97	P		11 32 48.9	
	baz=282						
N41A	Harden Midland	6.69	47	Pn	Pn	11 32 48.6	+0.4
SDCO	Great Sand Dun	6.76	285	P	Pn	11 32 49.4	-0.1
	baz=100,SNR=53						
SDCO	Great Sand Dun	6.76	285	Pn	Pn	11 32 51.3	+1.8
SDCO				IAmb_Lg		11 34 46.6	
	comp=Z,618nm,0.9s						
Y45A	Yeager Farm, C	6.76	109	Pn	Pn	11 32 49.9	+0.7
Y45A				IAmb_Lg		11 34 53.5	
	comp=Z,293nm,0.9s						
Q24A	Divide	6.82	296	P	Pn	11 32 50.6	+0.3
	baz=111,SNR=11						
P43A	Skaggs, Pawnee	6.97	59	Pn	Pn	11 32 52.6	+0.5
P43A				IAmb_Lg		11 34 54.2	
	comp=Z,590nm,0.9s						
P43A	Skaggs, Pawnee	6.97	59	P		11 32 53.0	
	baz=244,SNR=14						
Q44A	Meyer Farm, Va	7.05	66		Pn	11 32 53.8	+0.6
Q44A				IAmb_Lg		11 35 04.9	
	comp=Z,621nm,1.0s						
Q44A	Meyer Farm, Va	7.05	66	P		11 32 54.3	
	baz=251,SNR=24						
GDL2	Guadalupe Moun	7.15	237		Pn	11 32 55.3	+0.6
K38A	Parkersburg	7.25	27		Pn	11 32 55.6	-0.3
735A	Kenedy	7.41	184	Pn	Pn	11 32 59.7	+1.6
735A				IAmb_Lg		11 35 20.6	
	comp=Z,400nm,0.9s						
L40A	Anamosa	7.44	37		Pn	11 32 59.7	+1.2
L40A				IAmb_Lg		11 35 08.4	
	comp=Z,408nm,0.9s						
L40A	Anamosa	7.44	37	P		11 32 59.9	
	baz=221						
ECSD	EROS Data Cent	7.47	4	P	Pn	11 32 58.7	-0.2
	baz=184,SNR=22						
ECSD	EROS Data Cent	7.47	4	Pn	Pn	11 32 58.9	-0.1
ECSD				IAmb_Lg		11 35 11.6	
	comp=Z,298nm,0.9s						
ECSD	EROS Data Cent	7.47	4	P		11 32 58.7	
	baz=184,SNR=82						
ISCO	Idaho Springs	7.48	301	P	Pn	11 32 59.6	+0.3
	baz=116,SNR=27						
ISCO	Idaho Springs	7.48	301	Pn	Pn	11 33 00.1	+0.8
ISCO				IAmb_Lg		11 35 15.9	
	comp=Z,268nm,0.9s						
ISCO	Idaho Springs	7.48	301	P		11 32 59.9	
	baz=116,SNR=32						
PLAL	Pickwick Lake	7.58	97	IAmb_Lg		11 35 21.3	
	comp=Z,225nm,0.8s						
ANMO	Albuquerque	7.61	263	Pn	Pn	11 33 02.2	+1.1
	comp=Z,0.5nm,0.3s,baz=80,slow=15,SNR=12						
ANMO				Pg	Pb	11 33 29.4	+7.1
	comp=Z,3.3nm,0.3s,baz=55,slow=16,SNR=4.4						
ANMO				Lg	Lg	11 35 05.2	
	comp=Z,24nm,0.3s,baz=4.3,slow=16,SNR=8.0						
ANMO				LR	LR	11 36 27.6	
	comp=Z,291nm,20.8s,baz=76,slow=42						
ANMO	Albuquerque	7.61	263	P	Pn	11 33 01.9	+0.8
	baz=77						
ANMO	Albuquerque	7.61	263	Pn	Pn	11 33 02.5	+1.4
ANMO	Albuquerque	7.61	263	P		11 33 02.4	
	baz=77						
WVT	Waverly	7.62	88	P	Pn	11 33 01.9	+0.8
	baz=274						
WVT	Waverly	7.62	88	Pn	Pn	11 33 02.0	+1.0
146A	Union	7.68	116	IAmb_Lg		11 35 29.9	
	comp=Z,231nm,1.0s						
OLIL	Olney	7.68	69		Pn	11 33 03.8	+2.0
O44A	Mansfield	7.93	58		Pn	11 33 06.3	+1.1
O44A				IAmb_Lg		11 35 32.1	
	comp=Z,440nm,0.9s						
BNM	Barren Site	7.96	257	Pn	Pn	11 33 05.6	-0.3
833A	Chaparral WMA,	8.13	193	P	Pn	11 33 09.4	+1.4
	baz=12						
PHWY	Pilot Hill	8.14	311		Pn	11 33 09.3	+1.0
PHWY				IAmb_Lg		11 35 28.8	
	comp=Z,310nm,1.1s						
MNTX	Cornudas Mount	8.14	238	P	Pn	11 33 08.1	-0.1
	baz=54,SNR=22						
MNTX	Cornudas Mount	8.14	238	Pn	Pn	11 33 08.6	+0.3
MNTX				IAmb_Lg		11 35 35.0	
	comp=Z,252nm,1.1s						
MNTX	Cornudas Mount	8.14	238	P		11 33 08.2	
	baz=54,SNR=50						
Z47A	Carrollton	8.16	109	Pn	Pn	11 33 09.9	+1.5
L42A	Oliver, Polo	8.21	44	Pn	Pn	11 33 10.9	+1.7
L42A				IAmb_Lg		11 35 47.7	
	comp=Z,328nm,0.9s						
N23A	Red Feather La	8.22	307	P	Pn	11 33 10.5	+1.0
	baz=122,SNR=22						
SMCO	Snowmass	8.23	294	Pn	Pn	11 33 11.2	+1.4
SUSD	Miller	8.26	351	P	Pn	11 33 10.0	+0.1
	baz=170						
SUSD	Miller	8.26	351	IAmb_Lg		11 35 50.5	
	comp=Z,472nm,1.0s						
I37A	Lemond, Waseca	8.28	20	Pn	Pn	11 33 10.0	0.0
V48A	Smith Brothers	8.47	91	IAmb_Lg		11 35 39.4	
	comp=Z,316nm,1.1s						
X48A	Hartselle	8.54	99	IAmb_Lg		11 35 40.5	
	comp=Z,343nm,1.1s						
JFWS	Jewell Farm	8.55	37	P	Pn	11 33 14.3	+0.5
	baz=221,SNR=8.4						
JFWS	Jewell Farm	8.55	37	Pn	Pn	11 33 14.1	+0.2
JFWS				IAmb_Lg		11 35 48.2	
	comp=Z,236nm,0.8s						
P46A	Rosedale	8.61	64		Pn	11 33 15.8	+1.2
TX31	Lajitas Ar. Si	8.77	220		Pn	11 33 16.3	-0.6
TX31	Lajitas Ar. Si	8.77	220	P		11 33 15.9	
	baz=36						
TXAR	Lajitas Array	8.77	220	Pn	Pn	11 33 16.4	-0.5
	comp=Z,0.6nm,0.3s,baz=44,slow=11,SNR=48						
TXAR				Lg	Lg	11 35 42.3	
	comp=Z,8.2nm,0.3s,baz=44,slow=22,SNR=8.1						
TXAR	Lajitas Array	8.77	220	Pn	Pn	11 33 16.1	-0.9
TX32	Lajitas Array	8.77	220		Pn	11 33 16.3	-0.6
M44A	Midewin, Midew	8.81	52	Pn	Pn	11 33 18.0	+0.6
CLTN	Cedars of Leba	8.83	88	IAmb_Lg		11 35 51.5	
	comp=Z,254nm,1.1s						
WCI	Wyandotte Cave	8.96	74	P	Pn	11 33 21.3	+1.9
	baz=261						
WCI	Wyandotte Cave	8.96	74	IAmb_Lg		11 36 00.5	
	comp=Z,248nm,0.8s						
SFIN	Lafayette	8.97	60	P	Pn	11 33 19.8	+0.2
	baz=246,SNR=5.8						
SFIN	Lafayette	8.97	60	Pn	Pn	11 33 21.2	+1.6
SFIN				IAmb_Lg		11 36 13.1	
	comp=Z,242nm,1.0s						
SFIN	Lafayette	8.97	60	P		11 33 20.1	
	baz=246						
BLO	Bloomington	8.98	68		Pn	11 33 22.0	+2.3
BLO				IAmb_Lg		11 36 09.1	
	comp=Z,390nm,0.8s						
LRAL	Lakeview Retre	9.04	108	P	Pn	11 33 21.7	+1.1
	baz=294						
LRAL	Lakeview Retre	9.04	108	Pn	Pn	11 33 21.6	+1.1
MVCO	Mesa Verde	9.07	279	IAmb_Lg		11 36 12.5	
	comp=Z,224nm,0.8s						
I40A	Norwalk	9.15	32		Pn	11 33 21.4	-0.6
I40A				IAmb_Lg		11 36 21.4	
	comp=Z,248nm,1.1s						
I40A	Norwalk	9.15	32	P		11 33 22.0	
	baz=216						
HQIL	Hanson Quary C	9.16	50	IAmb_Lg		11 36 09.9	
	comp=Z,392nm,1.0s						
Y49A	Blount Mountai	9.21	102	IAmb_Lg		11 36 03.1	
	comp=Z,222nm,1.0s						
PV01	Paradox Valley	9.22	285	Pn	Pn	11 33 23.3	+0.1
U49A	Red Boiling Sp	9.26	85	Pn	Pn	11 33 25.4	+1.9
U49A				IAmb_Lg		11 36 20.2	
	comp=Z,247nm,1.2s						
SWET	Sewanee	9.27	93	IAmb_Lg		11 36 00.2	
	comp=Z,380nm,1.1s						
L44A	Lake County Fo	9.34	48	P	Pn	11 33 24.6	0.0
	baz=234						
RSSD	Black Hills	9.40	329	P	Pn	11 33 26.4	+0.8
	baz=144						
RSSD	Black Hills	9.40	329	Pn	Pn	11 33 26.2	+0.6
RSSD				IAmb_Lg		11 36 22.5	
	comp=Z,290nm,1.1s						
RSSD	Black Hills	9.40	329	P		11 33 26.4	
	baz=144,SNR=23						
K43A	Burlington	9.42	44	Pn	Pn	11 33 25.8	+0.1
K43A				IAmb_Lg		11 36 12.3	
	comp=Z,288nm,1.0s						
PV12	Saucer Basin,	9.43	286	IAmb_Lg		11 36 29.7	
	comp=Z,291nm,1.3s						
RWWY	Rawlins	9.45	308		Pn	11 33 28.2	+1.9
PV03	Paradox Valley	9.45	286	Pn	Pn	11 33 26.4	0.0
121A	Cookes Peak, D	9.47	250	P	Pn	11 33 25.9	-0.7
	baz=64						
121A	Cookes Peak, D	9.47	250	Pn	Pn	11 33 26.4	-0.1
121A				IAmb_Lg		11 36 36.1	
	comp=Z,215nm,1.1s						
O20A	White River Ci	9.47	297	IAmb_Lg		11 36 37.9	
	comp=Z,240nm,1.2s						
PV11	David Mesa, Pa	9.48	286		Pn	11 33 28.8	+2.1
PV16	Nyswonger Mesa	9.51	286	Pn	Pn	11 33 30.6	+3.5
PV16				IAmb_Lg		11 36 18.2	
	comp=Z,246nm,1.1s						
PV04	Paradox Valley	9.52	286		Pn	11 33 29.5	+2.3
PV04				IAmb_Lg		11 36 32.1	
	comp=Z,210nm,1.1s						
PV17	East Wray Mesa	9.54	286		Pn	11 33 28.2	+0.6
PV17				IAmb_Lg		11 36 39.2	
	comp=Z,196nm,1.3s						
SPMN	Marine on St.	9.56	19	P	Pn	11 33 26.9	-0.6
	baz=202,SNR=8.9						
SPMN	Marine on St.	9.56	19	Pn	Pn	11 33 26.9	-0.6
SPMN				IAmb_Lg		11 36 31.4	
	comp=Z,380nm,1.1s						
K22A	Casper	9.58	314	P	Pn	11 33 27.6	-0.5
	baz=129,SNR=13						
K22A	Casper	9.58	314	Pn	Pn	11 33 27.7	-0.4
F33A	5 Mile Ranch,	9.59	4	Pn	Pn	11 33 26.5	-1.5
PV14	Lion Creek, Pa	9.61	286		Pn	11 33 27.6	-0.8
PV14				IAmb_Lg		11 36 40.4	
	comp=Z,182nm,1.3s						
PV23	Carpenter Ridg	9.61	287	IAmb_Lg		11 36 26.6	
	comp=Z,311nm,1.2s						
PV05	Paradox Valley	9.62	284	IAmb_Lg		11 36 20.9	
	comp=Z,327nm,1.3s						
FPAL	Fort Paine	9.66	97	IAmb_Lg		11 36 25.2	
	comp=Z,354nm,1.3s						
W50A	Signal Mountai	9.77	93	Pn	Pn	11 33 32.2	+1.6
W50A				IAmb_Lg		11 36 27.2	
	comp=Z,208nm,0.8s						
R49A	Shelbyville	9.84	75		Pn	11 33 33.6	+2.1
R49A				IAmb_Lg		11 36 25.5	
	comp=Z,258nm,1.2s						
P48A	Milroy	9.88	68	Pn	Pn	11 33 31.7	-0.3
I42A	Draeger Farm,	9.93	37	Pn	Pn	11 33 34.1	+1.4
I42A				IAmb_Lg		11 36 34.3	
	comp=Z,335nm,1.1s						
F36A	Milaca	9.98	15	Pn	Pn	11 33 31.9	-1.5
F36A				IAmb_Lg		11 36 24.6	
	comp=Z,329nm,1.1s						
T50A	Nancy	10.01	82	Pn	Pn	11 33 34.0	+0.3
N47A	Urbana	10.15	60		Pn	11 33 35.9	+0.2
L46A	Eue Claire	10.26	53		Pn	11 33 38.1	+0.9
CPCT	Cooper Cave	10.37	91	Pn	Pn	11 33 39.6	+0.9
P49A	Miami Univ. Ec	10.43	68	P	Pn	11 33 39.1	-0.4
	baz=256						
P49A	Miami Univ. Ec	10.43	68	P		11 33 38.8	
	baz=256,SNR=6.6						
G40A	Rib Lake	10.45	29	Pn	Pn	11 33 40.2	+0.3
V51A	Loudon	10.46	89	Pn	Pn	11 33 41.3	+1.3
R50A	Paris	10.50	75	Pn	Pn	11 33 41.9	+1.5
E28A	Huff	10.61	347	Pn	Pn	11 33 41.1	-0.9
O49A	Covington	10.89	65		Pn	11 33 46.8	+1.0
TKL	Tuckaleechee C	10.94	89	Pn	Pn	11 33 48.9	+2.3
	comp=Z,0.3nm,0.3s,baz=271,slow=12,SNR=1.4						
TKL				Sn	Sn	11 35 52.7	+3.7
	comp=Z,1.0nm,0.3s,baz=18,slow=19,SNR=1.9						
TKL				Lg	Lg	11 36 53.1	
	comp=Z,3.0nm,0.3s,baz=7.4,slow=22,SNR=14						
TKL				LR	LR	11 37 53.7	
	comp=Z,342nm,18.8s,baz=277,slow=36						
TKL	Tuckaleechee C	10.94	89		Pn	11 33 48.7	+2.1
S51A	Beattyville	11.02	79	Pn	Pn	11 33 48.0	+0.4
TZTN	Tazewell	11.05	85	Pn	Pn	11 33 49.3	+1.2
V52A	Sevierville	11.07	88	Pn	Pn	11 33 49.6	+1.4
319A	Douglas	11.13	247	Pn	Pn	11 33 48.6	-0.6
E38A	The Farm, Brul	11.17	21	Pn	Pn	11 33 49.5	-0.2
N49A	Columbus Grove	11.23	62		Pn	11 33 50.2	-0.3
Q51A	Peebles	11.37	72		Pn	11 33 53.1	+0.8
L48A	N Adams	11.45	56		Pn	11 33 53.4	-0.1
BW06	Boulder Array	11.50	308	Pn	Pn	11 33 55.0	+0.6
PD31	Pinedale Array	11.50	308		Pn	11 33 54.9	+0.6
PDAR	Pinedale Array	11.50	308	Pn	Pn	11 33 54.7	+0.4
	comp=Z,0.4nm,0.3s,baz=115,slow=15,SNR=14						
PDAR				Lg	Lg	11 37 05.5	
	comp=Z,2.0nm,0.3s,baz=110,slow=34,SNR=2.8						
PDAR				LR	LR	11 38 51.5	
	comp=Z,376nm,20.6s,baz=118,slow=41						
PDAR	Pinedale Array	11.50	308		Pn	11 33 55.0	+0.6
V53A	Saluda	11.72	89	Pn	Pn	11 33 58.4	+1.1
J47A	Sunmer	11.82	50		Pn	11 33 58.6	+0.1
ACSO	Alum Creek Sta	11.89	66	P	Pn	11 33 59.0	-0.6
	baz=255,SNR=7.9						
ACSO	Alum Creek Sta	11.89	66	Pn	Pn	11 33 58.6	-1.0
AGMN	Agassiz Nation	12.06	4	P	Pn	11 33 58.7	-3.1
	baz=185,SNR=5.7						
AGMN	Agassiz Nation	12.06	4	Pn	Pn	11 33 59.0	-2.8
Q52A	Bidwell	12.19	73		Pn	11 34 03.8	+0.2
HWUT	Hardware Ranch	12.35	300		Pn	11 34 08.2	+2.3
B35A	Bob, Littlefor	12.36	11		Pn	11 34 03.7	-2.1
R53A	Hurricane	12.36	76	Pn	Pn	11 34 05.7	-0.2
LAO	LASA Array	12.38	330	P	Pn	11 34 05.9	-0.4
	baz=144						
LAO	LASA Array	12.38	330	Pn	Pn	11 34 05.6	-0.7
P52A	Corning	12.40	70	P	Pn	11 34 06.5	0.0
	baz=259						
P52A	Corning	12.40	70	Pn	Pn	11 34 07.0	+0.6
G45A	Suttons Bay	12.41	42	Pn	Pn	11 34 06.8	+0.3
EYMN	Ely	12.42	18	P	Pn	11 34 04.2	-2.5
	baz=202,SNR=5.2						
EYMN	Ely	12.42	18	Pn	Pn	11 34 04.0	-2.7
N51A	Ashland	12.53	64	Pn	Pn	11 34 08.9	+0.7
D41A	Chassel	12.57	28		Pn	11 34 08.1	-0.7
LOHW	Long Hollow	12.59	310		Pn	11 34 10.3	+1.1
REDW	Red Top Meadow	12.62	308	Pn	Pn	11 34 09.9	+0.2
RLMT	Red Lodge	12.69	318		Pn	11 34 09.9	-0.7
E43A	Lone Tree Farm	12.69	34	Pn	Pn	11 34 08.7	-1.7
MOOW	Moose Ponds	12.74	310	Pn	Pn	11 34 10.8	-0.6
Q53A	Leroy	12.75	74	P	Pn	11 34 10.0	-1.2
	baz=263						
S54A	Dingess, Beckl	12.83	78	Pn	Pn	11 34 13.3	+0.9
GLMI	Grayling	12.85	44	P	Pn	11 34 11.3	-1.3
	baz=233						
P53A	Whipple	12.94	71	Pn	Pn	11 34 12.6	-1.3
IMW	Indian Meadow	12.94	310		Pn	11 34 15.5	+1.3
YMP	Mirror Lake Pl	12.95	315	Pn	Pn	11 34 13.7	-0.6
K50A	Casco	13.02	56		Pn	11 34 13.9	-1.1
YNE	Yellowstone No	13.02	316		Pn	11 34 13.5	-1.7
O53A	New Philadelph	13.22	68	P	Pn	11 34 16.3	-1.4
	baz=258						
O53A	New Philadelph	13.22	68	Pn	Pn	11 34 16.6	-1.0

DGMT	Dagmar	13.22	339	P	Pn	11 34 15.0	-2.7
	baz=155,SNR=11						
DGMT	Dagmar	13.22	339	Pn	Pn	11 34 16.1	-1.6
M52A	Chesterland	13.45	62	Pn	Pn	11 34 20.4	-0.4
N53A	Lisbon	13.62	66		Pn	11 34 22.2	-1.0
SPR3	Spring Creek 3	13.81	286		Pn	11 34 29.6	+3.6
ULM	Lac du Bonnet	14.01	4	Pn	Pn	11 34 24.5	-3.9
	comp=Z,1.3nm,0.3s,baz=179,slow=12,SNR=16						
ULM				Sn	Sn	11 36 53.2	-10
	comp=Z,1.4nm,0.3s,baz=270,slow=22,SNR=3.7						
ULM				Lg	Lg	11 38 22.8	
	comp=Z,0.7nm,0.3s,baz=258,slow=19,SNR=2.4						
ULM	Lac du Bonnet	14.01	4	Pn	Pn	11 34 24.9	-3.5
N54A	Moraine State	14.28	66	Pn	Pn	11 34 29.9	-2.4
I51A	Listowel	14.52	54	P	Pn	11 34 32.9	-2.5
	baz=244,SNR=5.2						
M54A	Oil Creek Stat	14.66	64	Pn	Pn	11 34 35.8	-1.5
ELK	Elko	14.77	293	Pn	Pn	11 34 40.1	+1.0
	comp=Z,0.1nm,0.3s,baz=104,slow=17,SNR=2.2						
ELK				LR	LR	11 39 50.1	
	comp=Z,70nm,21.8s,baz=98,slow=36						
EGMT	Eagleton	14.94	326		Pn	11 34 41.6	+0.5
O56A	Blue Knob Stat	15.21	69	Pn	Pn	11 34 45.1	+0.3
M55A	Ridgway	15.30	65	Pn	Pn	11 34 44.5	-1.5
MFID	Camas Ranch	15.93	302	Pn	Pn	11 34 54.6	+0.3
MFID				IAmb	IAmb	11 34 58.4	
	comp=Z,15nm,1.4s						
PFO	Pinyon Flats O	15.97	266	Lg	Lg	11 39 29.3	
	comp=Z,0.1nm,0.3s,baz=170,slow=19,SNR=2.0						
PFO				LR	LR	11 41 24.2	
	comp=Z,213nm,18.5s,baz=81,slow=39						
TPH	Tonopah	16.02	282	Pn	Pn	11 34 53.6	-1.9
TPH				IAmb	IAmb	11 35 04.2	
	comp=Z,24nm,1.2s						
ESJX	Sierra Juarez	16.05	260	P	Pn	11 34 58.0	+2.1
SADO	Sadowa	16.15	53	Pn	Pn	11 34 58.5	+1.5
	comp=Z,0.4nm,0.3s,baz=250,slow=15,SNR=3.4						
SADO				Sn	Sn	11 37 49.9	-6.1
	comp=Z,0.3nm,0.3s,baz=275,slow=11,SNR=2.5						
SADO				Lg	Lg	11 39 29.9	
	comp=Z,0.5nm,0.3s,baz=162,slow=20,SNR=2.6						
SADO				LR	LR	11 41 13.0	
	comp=Z,563nm,20.9s,baz=257,slow=37						
SADO	Sadowa	16.15	53	Pn	Pn	11 34 57.6	+0.7
SADO				IAmb	IAmb	11 35 04.8	
	comp=Z,17nm,1.1s						
L56A	Greenwood	16.34	63	Pn	Pn	11 34 58.8	-0.6
M57A	Sunshine Farm,	16.47	66	Pn	Pn	11 35 00.2	-0.9
M57A				IAmb	IAmb	11 35 13.9	
	comp=Z,18nm,1.1s						
LPIG	La Paz	16.55	226	LR	LR	11 41 41.9	
	comp=Z,292nm,21.0s,baz=38,slow=38						
NV11	Mina Array Sit	16.76	284		Pn	11 35 04.3	-0.6
NVAR	Mina Array Bea	16.87	284	Pn	P	11 35 10.0	+1.5
	comp=Z,0.1nm,0.3s,baz=87,slow=10,SNR=14						
LHV	Little Huntoon	17.03	283	P	P	11 35 12.4	+2.5
LHV				IAmb	IAmb	11 35 18.6	
	comp=Z,10nm,1.3s						
RYN	Ryan	17.05	284	P	P	11 35 11.5	+1.1
J56A	Wolcott	17.15	60	P	Pn	11 35 11.0	+1.4
BMO	Blue Mountains	17.45	306	P	P	11 35 17.1	+2.4
BMO				IAmb	IAmb	11 35 19.3	
	comp=Z,14nm,1.4s						
WVOR	Wild Horse Val	17.62	297	P	Pn	11 35 15.2	-0.5
WVOR				IAmb	IAmb	11 35 22.8	
	comp=Z,27nm,1.4s						
F10A	Beach Ranch, E	17.86	309	P	Pn	11 35 19.0	+0.5
F10A				IAmb	IAmb	11 35 24.4	
	comp=Z,13nm,0.9s						
L59A	Walton	18.17	64	P	Pn	11 35 21.7	-0.6
BRNJ	Basking Ridge	18.29	69	P	Pn	11 35 24.1	+0.4
ODNJ	Ogdensburg	18.31	68	P	Pn	11 35 24.2	+0.2
ODNJ				IAmb	IAmb	11 35 24.4	
	comp=Z,25nm,1.1s						
MOD	Modoc Plateau	18.73	294	P	P	11 35 26.5	-2.4
FFC	Flin Flon	18.74	351	P	Pn	11 35 29.6	+0.5
FFC				IAmb	IAmb	11 35 32.8	
	comp=Z,5.9nm,0.9s						
VLDQ	Val d'Or	18.79	45	P	P	11 35 27.9	-1.3
VLDQ				IAmb	IAmb	11 35 39.9	
	comp=Z,16nm,1.4s						
NEW	Newport	18.90	315	P	Pn	11 35 31.5	+0.3
	comp=Z,0.1nm,0.3s,baz=145,slow=12,SNR=5.6						
NEW				LR	LR	11 44 12.3	
	comp=Z,92nm,20.2s,baz=123,slow=42						
NEW	Newport	18.90	315	P	Pn	11 35 31.8	+0.6
CMIG	Matias Romero	19.22	173	P	Pn	11 35 37.4	+2.3
	comp=Z,0.3nm,0.3s,baz=7.1,slow=8.1,SNR=4.0						
CMIG				LR	LR	11 46 24.1	
	comp=Z,60nm,18.1s,baz=3.0,slow=47						
C09A	Chrisman Ranch	19.33	313	P	Pn	11 35 37.2	+0.8
C09A				IAmb	IAmb	11 35 38.7	
	comp=Z,11nm,1.3s						
PINE	Pine Mountain	19.59	300	P	P	11 35 39.2	+0.9
PINE				IAmb	IAmb	11 35 43.1	
	comp=Z,14nm,1.1s						
E07A	Sunnyside	19.76	308	P	P	11 35 40.4	+0.5
YBH	Yreka Blue Hor	20.49	293	P	P	11 35 48.8	+0.8
	comp=Z,1.7nm,0.9s,baz=93,slow=9.4,SNR=4.7						
YBH				LR	LR	11 44 30.7	
	comp=Z,163nm,18.5s,baz=94,slow=39						
YBH	Yreka Blue Hor	20.49	293	P	P	11 35 48.5	+0.5
YBH				IAmb	IAmb	11 35 55.2	
	comp=Z,14nm,1.1s						
LTY	Liberty	20.55	310	P	P	11 35 50.1	+1.5
H04A	Detroit Lake	20.68	302	P	P	11 35 50.6	+0.6
FCC	Fort Churchill	22.60	4	P	P	11 36 11.2	+0.8
FCC				IAmb	IAmb	11 36 33.4	
	comp=Z,17nm,1.5s						
BBB	Bella Bella	26.97	316	LR	LR	11 48 30.6	
	comp=Z,209nm,20.4s,baz=120,slow=39						
YKA	Yellowknife Ar	28.38	343	P	P	11 37 05.2	+1.2
	comp=Z,1.0nm,1.0s,baz=140,slow=9.4,SNR=15						
YKA				LR	LR	11 48 45.4	
	comp=Z,212nm,19.8s,baz=0.0,slow=37						
DLBC	Dease Lake	30.87	326	LR	LR	11 50 41.4	
	comp=Z,260nm,18.1s,baz=190,slow=38						
ROSC	El Rosal	37.72	141	LR	LR	11 54 45.5	
	comp=Z,38nm,21.6s,baz=4.0,slow=37						
BCAR	Beaver Creek A	38.12	329	P	P	11 38 27.3	-1.5
IL31		40.84	330	P	P	11 38 51.4	0.0
IL31				IAmb	IAmb	11 38 55.4	
	comp=Z,4.4nm,0.8s						
ILAR	Eielson Array	40.84	330	P	P	11 38 53.0	+1.6
	comp=Z,2.8nm,0.8s,baz=107,slow=7.2,SNR=28						
ILAR				LR	LR	11 57 19.8	
	comp=Z,207nm,18.3s,baz=120,slow=38						
ILAR	Eielson Array	40.84	330	P	P	11 38 53.0	+1.6
MDM	Murphy Dome	41.45	330	P	P	11 38 57.5	+1.1
MDM				IAmb	IAmb	11 39 07.4	
	comp=Z,6.1nm,1.3s						
TAOE	Nuku Hiva Isla	60.33	231	*e*LR	LR	11 59 05.9	
	comp=Z,86nm,22.0s						
PPT	Papeete	72.87	232	LR	LR	12 10 39.5	
	comp=Z,64nm,20.5s,baz=42,slow=32						
PPT2	Papeete2	72.89	232	*e*LR	LR	12 04 55.2	
	comp=Z,92nm,22.2s						
DAVOX	Davos/Dischmat	74.67	43	LR	LR	12 13 19.0	
	comp=Z,50nm,19.3s,baz=256,slow=34						
GERES	GERESS Array B	75.45	40	LR	LR	12 18 09.9	
	comp=Z,74nm,18.3s,baz=298,slow=37						
VRAC	Vranov	76.61	38	LR	LR	12 16 00.2	
	comp=Z,49nm,18.2s,baz=342,slow=35						
TBI	Tubuai	77.11	228	*e*LR	LR	12 06 51.6	
	comp=Z,56nm,30.0s						
OBN	Obninsk	80.76	25	LR	LR	12 17 10.9	
	comp=Z,16nm,19.5s,baz=348,slow=34						
KBZ	Khabaz	92.52	28	LR	LR	12 26 25.5	
	comp=Z,76nm,19.0s,baz=339,slow=36						
KSRS	Korea Array	95.55	325	LR	LR	12 32 16.8	
	comp=Z,20nm,18.2s,baz=280,slow=38						
GNI	Garni	96.30	28	LR	LR	12 28 02.5	
	comp=Z,26nm,19.2s,baz=333,slow=35						

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*TUL **27** 11:36:36.6±1.5, 36°.26N±0°.01×97°.28W±0°.02, h5^{km}±7^{km}, ML3.4, mb_Lg3.5/25(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=91.0*

NEIC 27 11:36:36.7±0.6**, 36°.27N**±0°.02×**97°.28W**±0°.03**, h15**^{km}±4^{km}**, Error ellipse: s-maj=3.4km s-min=2.4km az=88.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.47	101	Pg	Pg	11 36 46.1	0.0
QUOK				Sg	Sg	11 36 52.6	+0.2
OK031	S. Brethren Rd	0.47	131	Pg	Pg	11 36 46.1	0.0
OK031				Sg	Sg	11 36 52.7	+0.2
OK029	Liberty Lake	0.49	197	Pg	Pg	11 36 46.3	-0.1
OK029				Sg	Sg	11 36 53.1	+0.1
OK030	Cody Creek RV	0.52	130	Pg	Pg	11 36 47.0	0.0
OK030				Sg	Sb	11 36 54.5	-0.4
CROK	Carrier	0.62	293	Pg	Pg	11 36 48.6	-0.2
BCOK	Bluff Creek, N	0.66	204	Pg	Pg	11 36 49.6	-0.1
BCOK				Sg	Sg	11 36 58.6	+0.1
OK025	Westminster Rd	0.68	184	Pg	Pg	11 36 49.8	-0.3
KAN13	South Haven SW	0.76	348	Pg	Pg	11 36 51.5	-0.1
KAN13				Sg	Sb	11 37 02.2	+0.3
OKCFA	Oklahoma City	0.86	190	Pg	Pb	11 36 52.9	-0.4
OKCFA				Sg	Sg	11 37 05.0	+0.4
OKCSW	OKLAHOMA CITY	0.87	189		Pb	11 36 53.2	-0.2
OKCSW				Sg	Sg	11 37 05.4	+0.4
KAN14	Manchester OK	0.88	322	Pg	Pb	11 36 53.6	-0.2
T35A	Sooner Cattle	0.90	43	Pg	Pb	11 36 53.8	-0.1
T35A				Sg	Sg	11 37 05.9	0.0
KAN01	Argonia South	0.97	337	Pg	Pb	11 36 55.0	-0.2
FNO	Franklin	1.01	186	Pg	Pb	11 36 55.5	-0.4
KAN10	Anthony SW Sta	1.08	323	Pg	Pb	11 36 57.0	-0.1
KAN08	Anthony NE Sta	1.11	330	Pg	Pn	11 36 57.7	0.0
W35A	Tecumseh	1.16	163	Pg	Pn	11 36 57.7	-0.6
KAN12	Harper NE Stat	1.18	331	Pg	Pb	11 36 58.8	0.0
TUL1	Leonard	1.25	106	Pg	Pn	11 36 59.8	+0.1
U32A	Winter Ranch,	1.40	275	Pn	Pb	11 37 02.5	0.0
X34A	Smith Ranch, M	1.72	195	Pn	Pb	11 37 08.2	+0.2
X34A				IAmb_Lg		11 37 34.8	
	comp=Z,408nm,0.8s						
WMOK	Wichita Mounta	1.96	219	Pn	Pn	11 37 10.4	+1.1
X37A	Clayton	2.28	136	IAmb_Lg		11 37 50.0	
	comp=Z,200nm,0.8s						
U38A	Gravette	2.34	85	IAmb_Lg		11 37 54.8	
	comp=Z,125nm,0.7s						
MIAR	Mount Ida	3.48	118	IAmb_Lg		11 38 36.5	
	comp=Z,100nm,0.8s						
X40A	Basin Creek Fa	4.04	115	IAmb_Lg		11 38 54.2	
	comp=Z,82nm,0.7s						
WHAR	Wooly Hollow	4.17	102	IAmb_Lg		11 38 49.6	
	comp=Z,109nm,0.9s						
FCAR	Ozark Folk Cen	4.19	94	IAmb_Lg		11 38 51.6	
	comp=Z,79nm,0.9s						
WLAR	White Oak Lake	4.28	126	IAmb_Lg		11 38 59.1	
	comp=Z,103nm,0.9s						
UALR	University of	4.29	109	IAmb_Lg		11 38 54.7	
	comp=Z,120nm,0.8s						
LCAR	Lake Charles	4.96	90	IAmb_Lg		11 39 12.2	
	comp=Z,64nm,0.8s						
T42A	Van Buren	5.03	79	IAmb_Lg		11 39 16.3	
	comp=Z,86nm,0.8s						
P40A	Paris	5.26	50	IAmb_Lg		11 39 31.5	
	comp=Z,70nm,0.8s						
PBMO	Poplar Bluff	5.54	83	IAmb_Lg		11 39 32.2	
	comp=Z,87nm,0.8s						

GUC 27 11:41:24.3±0.6**, 24°.10S**×**67°.43W, h201**^{km}±9^{km}**, ML3.8, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.01	317	*i* P	Pn	11 42 03.2	-0.3
LVC				*e*S	S	11 42 32.8	-0.5
GO02	Mina Guanaco	2.23	241	*i* P	Pn	11 42 05.7	0.0
GO02				*e*S	S	11 42 37.8	+0.6
GO02				IAML		11 42 39.5	
	comp=N,557nm,0.3s						
PB14	IPOC Station P	2.76	258	*i* P	Pn	11 42 12.0	+0.4
PB14				*i* S	S	11 42 47.9	+0.2
PB05	IPOC Station P	2.83	295	⇑ *i*P	Pn	11 42 12.3	+0.1
PB05				*i* S	S	11 42 48.5	-0.4
PB05				IAML		11 42 56.8	
	comp=E,87nm,0.4s						
PB09	IPOC Station P	2.84	324	*i* P	Pn	11 42 12.8	+0.5
PB09				*e*S	S	11 42 49.2	+0.1
PB09				IAML		11 42 50.8	
	comp=E,117nm,0.4s						
PB10	IPOC Station P	2.92	281	*i* P	Pn	11 42 13.8	+0.7
PB10				*i* S	S	11 42 50.3	-0.2
PB10				IAML		11 42 56.7	
	comp=E,107nm,0.4s						
PB04	IPOC Station P	3.06	305	⇓ *i*P	Pn	11 42 15.3	+0.4
PB04				*i* S	S	11 42 53.7	0.0
PB04				IAML		11 42 59.2	
	comp=E,216nm,0.2s						
AC02	Maricunga	3.12	209	*e*P	Pn	11 42 15.8	-0.2
PB07	IPOC Station P	3.27	316	⇑ *i*P	Pn	11 42 17.2	-0.2
PB07				*i* S	S	11 42 57.6	-0.8
AC01	Pan de Azucar	3.52	234	*e*P	Pn	11 42 19.4	-0.9
AC01				*i* S	S	11 43 02.1	-1.3
PB08	IPOC Station P	4.25	338	*e*P	Pn	11 42 29.4	-0.4
PB08				*i* S	S	11 43 19.2	-1.3
PSGC	Pisagua	5.13	330	*e*P	Pn	11 42 39.3	-1.3

IDC 27 11:46:18.9±1.9**, 6°.87S**×**128°.50E, h0**^{km}**, mb3.6**/1**, mb1 3.8**/3**, mb1mx3.5**/21**, mbtmp3.6**/3**, ML3.6**/2**, Error ellipse: s-maj=120.0km s-min=30.5km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.17	157	Pn	Pn	11 49 41.5	+0.4
	0.2nm,0.3s,baz=336,slow=12,SNR=14						
WRA				Sn	Sn	11 52 03.0	-16
	0.3nm,0.3s,baz=335,slow=24,SNR=3.0						
ASAR	Alice Springs	17.49	163	P	Pn	11 50 24.0	-0.4
	0.3nm,0.3s,baz=344,slow=11,SNR=43						
ASAR				S	Sn	11 53 27.4	-12
	0.1nm,0.3s,baz=350,slow=22,SNR=2.4						
MKAR	Makanchi Array	67.31	327	P	P	11 57 15.7	0.0
	0.3nm,0.4s,baz=124,slow=7.3,SNR=10						

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*NEIC **27** 12:02:49.9±1.2, 24°.7S±0°.1×13°.34W±0°.09, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=23.9km s-min=13.4km az=184.0*

*IDC **27** 12:02:50.9±2.7, 24°.58S×13°.51W, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx3.9/43, mbtmp4.1/7, MS4.1/23, Ms1 4.1/23, ms1mx4.0/31, Error ellipse: s-maj=105.8km s-min=29.5km az=140.0*

*GCMT **27** 12:02:50.9±0.2, 24°.77S±0°.03×13°.28W±0°.02, h12^{km}, MW4.8/97, Moment Tensor Solution. s26,c29; s97,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.07±.07; M$_{\theta\theta}$0.02±.08; M$_{\phi\phi}$2.05±.06; M$_{r\theta}$0.66±.33; M$_{\theta\phi}$-0.42±.06; M$_{\phi r}$-0.72±.27; Best double couple: M$_0$2.31800×10^{16} NP1:φ$_s$181.00000°, δ35.00000°, λ-70.00000°. NP2: φ$_s$336.00000°, δ57.00000°, λ-104.00000°. Principal axes: T 2.2980, Plg11.0000°, Azm76.0000°; N 0.0420, Plg12.0000°, Azm344.0000°; P -2.3390, Plg74.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 12:02:50.4±0.7**, 24°.8S**±0°.1×**13°.3W**±0°.1**, h10**^{km}**, n42, σ1^{s}.19**/23**, mb4.4**/15**, MS4.2**/23**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	Dimbokro	32.38	16	P	P	12 09 20.7	+0.3
	4.8nm,0.9s,baz=191,slow=10,SNR=3.4						
DBIC				LR	LR	12 19 09.3	
	comp=Z,262nm,21.3s,baz=178,slow=30						
DBIC	Dimbokro	32.38	16	P	P	12 09 18.8	-1.5
DBIC				IAmb	IAmb	12 09 37.1	
	comp=Z,7.1nm,1.1s						
BDFB	Brasilia	33.72	279	LR	LR	12 21 35.2	
	comp=Z,674nm,18.2s,baz=120,slow=34						
BOSA	Boshof	34.57	105	LR	LR	12 21 43.6	
	comp=Z,442nm,18.3s,baz=266,slow=33						
CPUP	Villa Florida	39.57	258	P	P	12 10 23.1	+1.1
	comp=Z,0.7nm,0.3s,baz=106,slow=11,SNR=4.0						
CPUP				LR	LR	12 25 11.7	
	comp=Z,197nm,18.0s,baz=100,slow=34						
CPUP	Villa Florida	39.57	258	P	P	12 10 21.5	-0.5
LSZ	Lusaka	40.01	84	P	P	12 10 26.5	+0.6
KOWA	Kowa	40.13	14	P	P	12 10 26.7	+0.1
	comp=Z,2.8nm,0.8s,baz=202,slow=12,SNR=6.0						
KOWA	Kowa	40.13	14	P	P	12 10 25.2	-1.4
TOA0	Torodi Ar. Sit	40.50	23	P	P	12 10 29.7	+0.1
TOA0				IAmb	IAmb	12 10 44.1	
	comp=Z,16nm,1.0s						
TORD	Torodi Ar. Bea	40.50	23	P	P	12 10 30.4	+0.7
	comp=Z,6.9nm,1.1s,baz=203,slow=8.0,SNR=8.9						
TORD				LR	LR	12 24 32.0	
	comp=Z,234nm,18.4s,baz=205,slow=32						
TORD	Torodi Ar. Bea	40.50	23	P	P	12 10 29.2	-0.5
SIV	San Ignacio	45.41	272	LR	LR	12 27 34.8	
	comp=Z,240nm,20.9s,baz=76,slow=33						
SNAA	Sanae	47.25	175	P	P	12 11 23.8	+0.4
SNAA				IAmb	IAmb	12 11 41.7	
	comp=Z,3.5nm,1.0s						
MDP	Montagnes des	48.44	303	LR	LR	12 30 00.8	
	comp=Z,155nm,18.7s,baz=132,slow=34						
MBAR	Mbarara	48.92	67	P	P	12 11 34.8	-2.4
MBAR				IAmb	IAmb	12 11 50.1	
	comp=Z,5.5nm,1.1s						
PLCA	Paso Flores	49.81	237	LR	LR	12 31 28.8	
	comp=Z,298nm,19.0s,baz=109,slow=34						
SAML	Samuel	49.96	279	P	P	12 11 46.0	+1.1
SAML				IAmb	IAmb	12 11 54.2	
	comp=Z,3.8nm,0.9s						
BO02	Sierra Bellavi	50.24	244	P	P	12 11 46.0	-1.0
LVC	Limon Verde	50.63	260	LR	LR	12 32 54.8	
	comp=Z,182nm,19.0s,baz=119,slow=36						
GO02	Mina Guanaco	50.66	257	P	P	12 11 49.7	-0.9
GO02				IAmb	IAmb	12 12 06.3	
	comp=Z,6.4nm,1.1s						
PTGA	Pitinga	51.01	291	LR	LR	12 32 00.5	
	comp=Z,247nm,18.8s,baz=112,slow=34						
PB14	IPOC Station P	51.49	257	P	P	12 11 56.8	-0.1
PB14				IAmb	IAmb	12 12 09.1	
	comp=Z,5.2nm,1.1s						
PB08	IPOC Station P	51.50	263	P	P	12 11 55.0	-1.9
PB08				IAmb	IAmb	12 12 07.4	
	comp=Z,5.8nm,0.8s						
PB07	IPOC Station P	51.73	261	P	P	12 11 58.1	-0.4
PB07				IAmb	IAmb	12 12 13.2	
	comp=Z,7.6nm,1.1s						
PB04	IPOC Station P	51.81	260	P	P	12 11 58.4	-0.7
KMBO	Kilima Mbogo	54.20	72	LR	LR	12 33 53.6	
	comp=Z,222nm,19.1s,baz=272,slow=34						
MDT	Midelt	57.93	9	LR	LR	12 35 34.1	
	comp=Z,123nm,19.5s,baz=177,slow=34						
NNA	Nana	61.13	270	LR	LR	12 39 28.5	
	comp=Z,157nm,19.2s,baz=126,slow=36						
KEST	Kesra	63.94	20	LR	LR	12 39 32.8	
	comp=Z,163nm,19.7s,baz=257,slow=34						
ATAH	Atahualpa	64.42	274	LR	LR	12 41 07.1	
	comp=Z,219nm,19.7s,baz=126,slow=36						
ESDC	Sonseca Array	64.77	8	LR	LR	12 38 37.0	
	comp=Z,57nm,20.5s,baz=255,slow=33						
SDV	Santo Domingo	65.11	294	LR	LR	12 40 13.4	
	comp=Z,357nm,19.2s,baz=78,slow=35						
QSPA	South Pole Qui	65.38	180	P	P	12 13 33.2	+0.2
ROSC	El Rosal	66.16	288	LR	LR	12 40 51.3	
	comp=Z,394nm,20.7s,baz=149,slow=35						
BRTR	Keskin Array B	77.74	35	P	P	12 14 49.0	+1.2
	comp=Z,0.8nm,0.9s,baz=222,slow=1.9,SNR=4.4						
BRTR				LR	LR	12 47 38.7	
	comp=Z,15nm,20.2s,baz=282,slow=35						
VNDA	Vanda	77.84	179	LR	LR	12 46 05.1	
	comp=Z,63nm,18.3s,baz=178,slow=33						
MLR	Muntele Rosu	78.59	27	P	P	12 14 54.6	+2.4
	comp=Z,1.3nm,0.3s,baz=212,slow=9.5,SNR=3.0						
AKASG	Malin Array Be	84.07	26	P	P	12 15 22.0	+0.9
	comp=Z,0.2nm,0.3s,baz=231,slow=6.8,SNR=1.6						
NOA	NORSAR Array B	87.86	12	LR	LR	12 54 18.0	
	comp=Z,24nm,19.3s,baz=10.0,slow=35						
PALK	Pallekele	96.66	85	LR	LR	12 55 09.7	
	comp=Z,239nm,19.5s,baz=7.2,slow=32						
ARCES	ARCESS Array B	98.17	13	LR	LR	12 58 59.5	
	comp=Z,78nm,18.6s,baz=250,slow=34						

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*IDC **27** 12:32:28.9±1.0, 21°.03S×67°.21W, h183^{km}±13^{km}, mb3.5/8, mb1 3.7/11, mb1mx3.7/30, mbtmp4.1/11, Error ellipse: s-maj=25.4km s-min=14.8km az=161.0*

*NEIC **27** 12:32:29.2±2.1, 21°.15S±0°.07×67°.2W±0°.1, h188^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=18.8km s-min=10.7km az=83.0*

*VAO **27** 12:32:29.1±0.3, 21°.05S×67°.55W, h219^{km}±7^{km}, mb3.9*

*GUC **27** 12:32:30.9±0.7, 21°.16S×67°.45W, h210^{km}±7^{km}, ML3.9*

ISC 27 12:32:28.9±0.7**, 21°.14S**±0°.05×**67°.24W**±0°.06**, h193**^{km}±7^{km}**, n83, σ1^{s}.51**/99**, mb3.9**/9**, 12C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.98	250	⇑ *i*P	Pn	12 33 08.2	+1.5
PB09				IAML		12 33 39.3	
	comp=N,175nm,0.5s						
PB09	IPOC Station P	1.98	250		Pn	12 33 07.8	+1.0
PB08	IPOC Station P	2.05	299	⇑ *i*P	Pn	12 33 09.3	+1.4
PB08				*i* S	Sn	12 33 38.9	+0.8
PB08				IAML		12 33 41.1	
	comp=E,185nm,0.4s						
PB08	IPOC Station P	2.05	299		Pn	12 33 09.2	+1.4
PB08				Sn	Sn	12 33 38.8	+0.8
PB01	IPOC Station P	2.10	272		Pn	12 33 08.6	+0.6
PB01				Sn	Sn	12 33 39.2	+0.7
LVC	Limon Verde	2.13	226	P	Pn	12 33 09.8	+1.2
	comp=E,33nm,0.3s,baz=47,slow=9.8,SNR=148						
LVC				S	Sn	12 33 40.3	+0.7
	comp=E,15nm,0.3s,baz=230,slow=20,SNR=22						
LVC	Limon Verde	2.13	226	*e*P	Pn	12 33 09.8	+1.2
LVC				*i* S	Sn	12 33 39.7	+0.1
LVC	Limon Verde	2.13	226	*e*P	Pn	12 33 09.8	+1.2
LVC				*e*S	Sn	12 33 40.1	+0.5
PB03	IPOC Station P	2.51	248	⇑ *i*P	Pn	12 33 13.0	+0.4
PB03				*i* S	Sn	12 33 45.3	-1.4
PB03				IAML		12 33 45.9	
	comp=E,363nm,0.3s						
PB07	IPOC Station P	2.54	256	⇑ *i*P	Pn	12 33 13.3	+0.4
PB07				*i* S	Sn	12 33 45.8	-1.4
PB07				IAML		12 33 46.1	
	comp=N,434nm,0.2s						
PB07	IPOC Station P	2.54	256		Pn	12 33 13.4	+0.5
PB06	IPOC Station P	2.67	234	⇑ *i*P	Pn	12 33 15.0	+0.7
PB06				*i* S	Sn	12 33 49.4	-0.6
PB06				IAML		12 33 50.9	
	comp=E,341nm,0.3s						
PB06	IPOC Station P	2.67	234		Pn	12 33 15.1	+0.7
TA01	Diego Aracena	2.81	281	⇑ *i*P	Pn	12 33 15.8	-0.1
TA01				*i* S	Sn	12 33 50.2	-2.4
TA01	Diego Aracena	2.81	281		Pn	12 33 15.8	-0.1
TA02	Huaiquique	2.84	287	*e*P	Pn	12 33 16.0	-0.3
TA02				*i* S	Sn	12 33 50.8	-2.5
TA02				IAML		12 33 53.7	
	comp=N,772nm,0.1s						
PB15	IPOC Station P	2.92	225		Pn	12 33 18.1	+0.7
PB04	IPOC Station P	2.96	246	⇑ *i*P	Pn	12 33 18.1	+0.4
PB04				*i* S	Sn	12 33 53.9	-2.0
PB04				IAML		12 34 00.2	
	comp=N,179nm,0.3s						
PB04	IPOC Station P	2.96	246		Pn	12 33 18.2	+0.4
MNMC	Minye Minye	2.99	312	⇑ *i*P	Pn	12 33 19.4	+1.1
MNMC				*i* S	Sn	12 33 56.4	-0.4
MNMC				IAML		12 33 59.8	
	comp=N,538nm,0.1s						
MNMC	Minye Minye	2.99	312		Pn	12 33 19.4	+1.1
PSGC	Pisagua	3.11	299	⇑ *i*P	Pn	12 33 19.1	-0.5
PSGC				*i* S	Sn	12 33 56.4	-2.8
PSGCX	Pisagua	3.11	299	Pn	Pn	12 33 19.2	-0.4
PB05	IPOC Station P	3.24	238	⇑ *i*P	Pn	12 33 21.3	+0.2
PB05				*i* S	Sn	12 33 59.4	-2.5
PB16	IPOC Station P	3.52	322	⇑ *i*P	Pn	12 33 26.9	+1.9
PB16				*i* S	Sn	12 34 09.5	+0.6
PB16	IPOC Station P	3.52	322	Pn	Pn	12 33 26.4	+1.4
PB10	IPOC Station P	3.87	232	⇑ *i*P	Pn	12 33 28.5	-0.2
PB10	IPOC Station P	3.87	232	Pn	Pn	12 33 28.6	-0.2
PB14	IPOC Station P	4.53	220	Pn	Pn	12 33 37.3	-0.1
GO02	Mina Guanaco	4.55	208	Pn	Pn	12 33 38.0	+0.4
AC01	Pan de Azucar	5.86	211	Pn	Pn	12 33 52.8	-1.4
AC02	Maricunga	5.93	197	Pn	Pn	12 33 55.8	+0.3
GO03	Copiap	6.98	202		Pn	12 34 06.7	-2.1
SIV	San Ignacio	7.77	50	P	Pn	12 34 18.3	-1.0
	comp=N,6.9nm,0.3s,baz=261,slow=12,SNR=81						
SIV				S	Sn	12 35 39.3	-7.7
	comp=N,0.5nm,0.3s,baz=288,slow=24,SNR=4.3						
AC04	Llanos de Chal	7.85	206	Pn	Pn	12 34 16.9	-3.3
AC05	El Transito	8.14	199	Pn	Pn	12 34 22.0	-2.1
LCO	Las Campanas	8.44	201	Pn	Pn	12 34 25.8	-2.3
CO01	Juntas del Tor	9.17	196	Pn	Pn	12 34 36.7	-0.9
GO04	Tololo Observa	9.55	199	Pn	Pn	12 34 39.7	-2.9

CPUP	Villa Florida	10.44	122	eP	P	12 34 57.9	-3.6
VILB	Vilhena	10.56	41	eP	Pn	12 34 56.7	+1.1
ETMB	Extrema	11.30	5	eP	Pn	12 35 04.1	-1.0
PP1B	Ponte de Pedra	12.18	75	eP	P	12 35 19.5	-1.5
SAML	Samuel	12.74	18	eP	Pn	12 35 22.8	-0.6
PTGB	Pitanga	14.42	107	eP	P	12 35 48.7	+2.7
PCMB	Pacaembu	14.89	95	eP	P	12 35 51.4	+0.3
ARAG	Araguaiana, MT	15.60	72	eP	P	12 36 00.2	+1.3
ITRB	Iturama	15.89	88	eP	Pn	12 36 04.1	+1.8
FRTB	Fartura	16.51	101	eP	Pn	12 36 11.0	+1.2
BB19B	Bebedouro	17.46	93	eP	Pn	12 36 21.0	-0.1
SNDB	Serra Nova Dou	17.78	62	eP	P	12 36 23.4	+0.5
NPGB	Novo Progresso	18.12	41	eP	P	12 36 26.6	-0.1
IPMB	Ipameri, GO	18.20	83	eP	Pn	12 36 28.9	-0.9
PET01	Itanhaem-SP	18.68	103	eP	Pn	12 36 34.2	-1.1
MACA	Manacapuru-AM	18.98	21	eP	P	12 36 34.5	-1.4
BDFB	Brasilia	19.04	77	P	P	12 36 37.0	+0.3
	comp=N,1.2nm,0.3s,baz=244,slow=8.3,SNR=6.9						
BDFB	Brasilia	19.04	77	P	P	12 36 37.2	+0.5
BDFB				IAmb	IAmb	12 36 41.1	
	comp=Z,5.2nm,0.5s						
ITTB	Itaituba	20.07	35	eP	P	12 36 47.1	-0.6
BSCB	Bom Sucesso	20.96	94	eP	P	12 36 57.9	+0.7
PTGA	Pitinga	21.49	20	P	P	12 37 01.2	-1.5
	comp=Z,1.1nm,0.3s,baz=346,slow=19,SNR=1.9						
PTGA	Pitinga	21.49	20	eP	P	12 37 01.4	-1.3
PRPB	Parauapebas	22.50	51	eP	P	12 37 11.9	-0.7
SMTB	Santa Maria do	22.53	60	eP	P	12 37 13.2	+0.4
JANB	Januaria	22.60	78	eP	P	12 37 13.5	0.0
MALB	Monte Alegre	22.97	35	eP	P	12 37 15.7	-1.0
SDBA	SAO DESIDERIO	23.05	71	eP	P	12 37 17.6	0.0
GDU01	Guandu, BA	27.37	79	eP	P	12 37 55.5	-0.9
NBLI	Livramento-PB	32.31	69	eP	P	12 38 40.5	+0.5
TXAR	Lajitas Array	61.25	324	P	P	12 42 24.6	+0.7
	comp=Z,0.4nm,0.6s,baz=148,slow=7.0,SNR=7.6						
TXAR	Lajitas Array	61.25	324	P	P	12 42 24.1	+0.2
DBIC	Dimbokro	67.14	73	P	P	12 43 04.0	+1.6
	comp=Z,3.6nm,0.9s,baz=225,slow=7.1,SNR=3.1						
PDAR	Pinedale Array	74.59	329	P	P	12 43 48.3	+1.3
	comp=Z,0.3nm,0.5s,baz=122,slow=9.1,SNR=6.5						
HWUT	Hardware Ranch	74.72	327	P	P	12 43 49.7	+2.1
HWUT				IAmb	IAmb	12 44 11.6	
	comp=Z,3.4nm,1.5s						
SPUT	South Promonto	74.95	326	P	P	12 43 51.1	+2.1
ULM	Lac du Bonnet	75.46	341	P	P	12 43 52.0	+0.5
	comp=Z,2.8nm,0.6s,baz=149,slow=5.9,SNR=7.6						
ULM	Lac du Bonnet	75.46	341	P	P	12 43 51.8	+0.4
TORD	Torodi Ar. Bea	75.77	70	P	P	12 43 54.0	+0.1
	comp=Z,2.7nm,0.8s,baz=254,slow=5.2,SNR=8.6						
TORD	Torodi Ar. Bea	75.77	70	IAmb	IAmb	12 43 57.0	
	comp=Z,1.5nm,0.6s						
NVAR	Mina Array Bea	76.19	321	P	P	12 43 55.4	-0.7
	comp=Z,0.2nm,0.5s,baz=149,slow=7.2,SNR=2.8						
YKA	Yellowknife Ar	91.38	340	P	P	12 45 13.5	+1.2
	comp=Z,1.0nm,0.7s,baz=127,slow=4.8,SNR=20						
ASAR	Alice Springs	130.93	206	PKP	PKiKP	12 51 18.9	-0.2
	comp=Z,0.3nm,0.8s,baz=140,slow=1.8,SNR=5.9						
MKAR	Makanchi Array	144.42	37	PKP	PKPdf	12 51 42.5	+0.3
	comp=Z,0.4nm,0.4s,baz=340,slow=2.8,SNR=10						
MKAR	Makanchi Array	144.42	37	PKPdf	PKPdf	12 51 42.8	+0.7

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*IDC **27** 12:41:30.1±0.8, 23°.20N×96°.09E, h0^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.8/47, mbtmp3.8/11, ML4.6/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/45, Error ellipse: s-maj=43.7km s-min=12.4km az=63.0*

*NDI **27** 12:41:31.5±4.1, 22°.94N×95°.85E, h10^{km}, ML3.8, mb4.2(NEIC)*

*NEIC **27** 12:41:34.9±2.1, 23°.10N±0°.08×96°.0E±0°.1, h39^{km}±8^{km}, mb4.2/20, Error ellipse: s-maj=16.4km s-min=9.6km az=57.0*

ISC 27 12:41:32.4±0.5, **23°.22N**±0°.04×**95°.73E**±0°.06, **h10**^{km}, **n86**, σ**2^{s}47**/79, **mb4.1**/19, **MS3.4**/9, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	2.29	315	eP	Pn	12 42 14.5	+4.1
IMP				eS	Sn	12 42 43.4	+4.7
IMP				IAML		12 42 55.5	
	comp=E,410nm,0.6s						
IMP				IAML		12 42 57.6	
SAIH	SAIHA	2.63	255	eP	Pn	12 42 18.2	+3.1
SAIH				eS	Sn	12 42 47.1	-0.1
SAIH				IAML		12 43 05.3	
	comp=E,734nm,0.8s						
SAIH				IAML		12 43 06.8	
	comp=N,408nm,0.9s						
KOHI	KOHIMA	2.90	330	eP	Pn	12 42 21.8	+3.0
KOHI				eS	Sn	12 42 56.7	+2.9
KOHI				IAML		12 43 07.2	
	comp=E,363nm,0.7s						
KOHI				IAML		12 43 07.5	
	comp=N,497nm,0.8s						
MOKO	MOKOCHONG	3.28	341	eP	Pn	12 42 26.9	+2.9
MOKO				eS	Sb	12 43 10.8	-0.1
MOKO				IAML		12 43 14.0	
	comp=N,313nm,0.5s						
MOKO				IAML		12 43 14.4	
	comp=E,209nm,0.4s						
SHL	Shillong	4.21	304	eP	Pn	12 42 38.9	+1.9
SHL				eS	Sn	12 43 28.6	+2.2
SHL				IAML		12 43 33.8	
	comp=N,1µm,0.2s						
SHL				IAML		12 43 34.4	
	comp=E,1µm,0.3s						
TEZP	TEZPUR	4.30	322	eP	Pn	12 42 39.2	+1.2
ZIRO	ZIRO	4.62	339	eP	Pn	12 42 43.0	+0.5
GUWA	GUWAHATI	4.72	310	eP	Pn	12 42 44.4	+0.7
GUWA				eS	Sn	12 43 40.5	+2.0
CRAI	Chiangrai	5.24	124	P	Pn	12 42 45.4	-5.6
CHTO	Chiang Mai	5.31	145	Pn	Pn	12 42 47.2	-4.7
CHTO				Sn	Sn	12 43 47.1	-6.1
CMMT	Chiang Mai	5.32	145	P	Pn	12 42 46.3	-5.7
MHMT	Maesarieng	5.42	157	P	Pn	12 42 48.2	-5.2
PAYA	Payao	5.44	134	P	Sb	12 44 13.0	-0.1
	comp=E,62µmcomp=E,8µm,1.3s						
PAYA	Payao	5.44	134	P	Pn	12 42 48.6	-5.1
CM35	Chiang Mai Arr	5.54	144	P	Sb	12 44 19.0	+3.3
CM35	Chiang Mai Arr	5.54	144	P	Pn	12 42 49.6	-5.4
CM31	Chiang Mai Arr	5.61	147	P	Sb	12 44 24.1	+6.2
	comp=E,85µmcomp=E,11µm,0.8s						
CM31	Chiang Mai Arr	5.61	147	P	Pn	12 42 51.9	-4.1
CM31	Chiang Mai Arr	5.61	147	Pn	Pn	12 42 52.0	-4.0
CMAR	Chiang Mai Arr	5.61	147	Pn	Pn	12 42 52.0	-4.0
	comp=E,5.1nm,0.3s,baz=325,slow=14,SNR=78						
CMAR				Pg	Pb	12 43 09.4	-1.1
	comp=E,10.0nm,0.3s,baz=326,slow=18,SNR=15						
CMAR				Lg	Lg	12 44 22.4	
	comp=E,19nm,0.3s,baz=323,slow=30,SNR=13						
CMAR	Chiang Mai Arr	5.61	147	Pn	Pn	12 42 51.6	-4.3
CM13	Chiang Mai Arr	5.62	148	P	Sb	12 44 24.0	+5.8
	comp=E,2µmcomp=E,256nm,0.7s						
CM36	Chiang Mai Arr	5.64	145	P	Sb	12 44 22.0	+3.4
CM09	Chiang Mai Arr	5.64	147	P	Sb	12 44 23.0	+4.1
	comp=E,4µmcomp=E,623nm,0.9s						
CM01	Chiang Mai Arr	5.65	147	P	Sb	12 44 22.0	+3.0
	comp=E,5µmcomp=E,690nm,0.9s						
CM05	Chiang Mai Arr	5.66	147	P	Sb	12 44 24.0	+4.7
	comp=E,3µmcomp=E,431nm,0.9s						
CM04	Chiang Mai Arr	5.68	147	P	Sb	12 44 27.0	+7.2
	comp=E,4µmcomp=E,500nm,0.7s						
CM04	Chiang Mai Arr	5.68	147	P	Pn	12 42 52.6	-4.3
LAMP	Lampang	5.93	141	P	Pn	12 42 55.5	-4.9
KMI	Kunming	6.68	72	Pn	Pn	12 43 07.4	-3.5
SUKH	Sukhothai	6.78	147	P	Sn	12 44 28.9	-0.4
UTTA	Uttaradit	7.08	139	P	Pn	12 43 11.2	-4.9
LSA	Lhasa	7.65	329		Pn	12 43 27.3	+2.9
TAPN	Taplejung	8.34	301	ePn	Pn	12 43 36.6	+2.8
TAPN				eSn	Sn	12 45 09.9	+1.7
ODAN	Odare	8.39	297	ePn	Pn	12 43 36.4	+2.1
ODAN				eSn	Sn	12 45 09.7	+0.5
BOK	Bokaro	9.05	276	eP	Pn	12 43 43.7	+0.5
RAMN	Ramite	9.07	296	ePn	Pn	12 43 46.0	+2.3
GUN	Gumba	10.04	300	ePn	Pn	12 43 59.7	+2.5
GUN				eSn	Sn	12 45 49.3	-0.8
	comp=E,108nm,0.7s						
PKI	Pulchoki	10.29	297	ePn	Pn	12 44 01.5	+1.0
PKI				eSn	Sn	12 45 54.2	-1.9
	comp=E,55nm,0.8s						
PKIN	Phulchoki	10.30	297	ePn	Pn	12 44 01.4	+0.8
KKN	Kakani	10.48	298	ePn	Pn	12 44 03.4	+0.4
KKN				eSn	Sn	12 45 58.1	-2.5
	comp=E,37nm,0.8s						
DMN	Daman	10.55	297	ePn	Pn	12 44 05.3	+1.3
DMN				eSn	Sn	12 45 59.7	-2.7
	comp=E,52nm,0.7s						
DANN	Dangsing	11.93	298	ePn	Pn	12 44 23.3	+0.3
DANN				eSn	Sn	12 46 31.9	-4.4
	comp=E,47nm,0.7s						
SMLA	Simla	18.28	300	eP	Pn	12 45 47.2	+0.9
PSI	Prapat	20.53	171	P	P	12 46 10.7	-0.5
	comp=E,3.4nm,0.6s,baz=360,slow=10,SNR=4.2						
RPSI	Rantau Prapat	20.64	171	P	P	12 46 10.7	-1.5
WMQ	Urumqi	21.59	344	P	P	12 46 23.1	+0.7
WMQ				IAmb	IAmb	12 46 29.6	
	comp=Z,16nm,0.9s						
GSI	Gunungsitoli	21.86	175	P	P	12 46 23.7	-1.7
GSI				IAmb	IAmb	12 46 32.5	
	comp=Z,12nm,0.9s						
NIL	Nilore	22.29	303	P	P	12 46 32.3	+2.3
KBL	Kabul	25.87	302	P	P	12 47 05.7	+1.0
KBL				IAmb	IAmb	12 47 08.8	
	comp=Z,8.3nm,0.7s						
MK31	Makanchi Array	25.89	339	P	P	12 47 03.9	-0.6
MK31				IAmb	IAmb	12 47 07.3	
	comp=Z,5.8nm,0.9s						
MKAR	Makanchi Array	25.89	339	P	P	12 47 04.7	+0.2
	comp=Z,6.2nm,0.8s,baz=142,slow=9.4,SNR=46						
MKAR				PcP	PcP	12 50 32.6	-0.8
	comp=Z,0.2nm,0.5s,baz=168,slow=1.4,SNR=4.3						
MKAR	Makanchi Array	25.89	339	P	P	12 47 04.2	-0.3
SONM	Songino Array	26.00	17	P	P	12 47 04.9	-0.7
	comp=Z,1.1nm,0.9s,baz=202,slow=10,SNR=3.9						
SONM				LR	LR	12 58 32.1	
	comp=Z,98nm,18.5s,baz=329,slow=39						
SONM	Songino Array	26.00	17	P	P	12 47 04.9	-0.7
MAKZ	Makanchi	26.01	338	P	P	12 47 07.3	+1.7
MAKZ				IAmb	IAmb	12 47 18.6	
	comp=Z,4.5nm,0.8s						
AAK	Ala-Archa	26.19	323	P	P	12 47 09.1	+1.7
	comp=Z,7.1nm,0.9s,baz=128,slow=7.7,SNR=14						
AAK				LR	LR	12 57 28.6	
	comp=Z,89nm,18.4s,baz=298,slow=36						
AAK	Ala-Archa	26.19	323	P	P	12 47 08.5	+1.1
AAK				IAmb	IAmb	12 47 09.7	
	comp=Z,5.9nm,0.8s						
KK31	Karatay Array	28.78	320	P	P	12 47 30.6	+0.1
KKAR	Karatay Array	28.78	320	P	P	12 47 30.5	+0.1
TLY	Talaya	29.06	10	LR	LR	12 58 16.7	
	comp=Z,80nm,19.3s,baz=210,slow=35						
KURK	Kurchatov	30.51	338	P	P	12 47 44.9	-0.7
KSRS	Korea Array	31.03	55	LR	LR	12 59 50.3	
	comp=Z,32nm,19.6s,baz=230,slow=36						
ZAA0	Zalesovo Array	31.77	348	P	P	12 47 57.9	+1.2
ZAA0				IAmb	IAmb	12 48 03.4	
	comp=Z,3.6nm,1.4s						
ZALV	Zalesovo Beam	31.77	348	P	P	12 47 56.1	-0.6
	comp=Z,0.5nm,0.6s,baz=160,slow=9.1,SNR=2.7						
ZALV	Zalesovo Beam	31.77	348	P	P	12 47 57.2	+0.5
LEM	Lembang	32.04	157	LR	LR	13 01 37.3	
	comp=Z,93nm,21.6s,baz=275,slow=38						
DAV	Davao City (W)	32.87	114	LR	LR	13 02 51.3	
	comp=Z,36nm,18.1s,baz=182,slow=39						
BVAR	Borovoye Array	35.45	334	P	P	12 48 28.4	-0.4
	comp=Z,0.7nm,0.8s,baz=118,slow=12,SNR=5.0						
BRVK	Borovoye	35.52	333	P	P	12 48 29.8	+0.5
BRVK				IAmb	IAmb	12 48 31.0	
	comp=Z,1.6nm,0.8s						
ABKAR	Akbulak array	38.27	322	P	P	12 48 53.7	+0.9
ABKAR				IAmb	IAmb	12 48 53.8	
	comp=Z,3.8nm,0.9s						
BRTR	Keskin Array B	54.44	303	LR	LR	13 20 28.8	
	comp=Z,39nm,19.2s,baz=352,slow=43						
WB0	Warramunga Arr	56.99	135	P	P	12 51 15.1	-3.5
WRA	Warramunga Arr	57.09	136	P	P	12 51 16.4	-2.9
	comp=Z,0.7nm,0.6s,baz=324,slow=7.3,SNR=11						
WRA	Warramunga Arr	57.09	136	P	P	12 51 16.2	-3.0
WB2	Warramunga Arr	57.09	136	P	P	12 51 17.5	-1.7
WB2				IAmb	IAmb	12 51 26.7	
	comp=Z,5.0nm,1.1s						
WR0	Warramunga Arr	57.23	135	P	P	12 51 17.6	-2.6
AS31	Alice Springs	59.56	139	P	P	12 51 34.9	-1.6
ASAR	Alice Springs	59.56	139	P	P	12 51 34.6	-1.9
	comp=Z,0.5nm,0.4s,baz=319,slow=6.6,SNR=19						
ASAR	Alice Springs	59.56	139	P	P	12 51 33.1	-3.4
PMG	Port Moresby	59.85	117	LR	LR	13 19 10.2	
	comp=Z,51nm,19.7s,baz=258,slow=38						
NOA	NORSAR Array B	67.34	328	LR	LR	13 26 09.0	
	comp=Z,113nm,19.1s,baz=285,slow=40						
GERES	GERESS Array B	67.75	315	P	P	12 52 32.0	+1.5
	comp=Z,0.2nm,0.3s,baz=67,slow=2.6,SNR=1.9						
GERES	GERESS Array B	67.75	315	P	P	12 52 29.2	-1.2
ILAR	Eielson Array	80.05	23	P	P	12 53 40.4	-1.6
	comp=Z,0.3nm,0.8s,baz=312,slow=5.2,SNR=4.5						
YKA	Yellowknife Ar	91.23	14	P	P	12 54 37.1	-0.6
	comp=Z,0.2nm,0.7s,baz=336,slow=4.4,SNR=3.6						

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*IDC **27** 13:05:46.3±1.1, 35°.16S×108°.75W, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.9/27, mbtmp3.7/5, MS3.6/7, Ms1 3.6/7, ms1mx3.4/22, Error ellipse: s-maj=95.4km s-min=30.3km az=93.0*

*NEIC **27** 13:05:47.8±1.3, 35°.1S±0°.1×108°.7W±0°.7, h10^{km}±1^{km}, mb4.6/3, Error ellipse: s-maj=102.1km s-min=16.6km az=86.0*

ISC 27 13:05:47.8±1.0, **35°.2S**±0°.2×**108°.9W**±0°.7, **h10**^{km}, **n23**, σ**0^{s}59**/11, **mb3.9**/5, **MS3.7**/7, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	30.58	112	LR	LR	13 20 40.2	
	comp=Z,59nm,18.1s,baz=346,slow=29						
CPUP	Villa Florida	44.77	93	LR	LR	13 28 18.4	
	comp=Z,65nm,20.6s,baz=279,slow=30						
ROSC	El Rosal	51.38	46	LR	LR	13 32 09.7	
	comp=Z,72nm,18.6s,baz=273,slow=31						
QSPA	South Pole Qui	55.04	180	P	P	13 15 19.6	+0.2
	1.7nm,1.0s,baz=82,slow=7.1,SNR=2.9						
QSPA	South Pole Qui	55.04	180	IAmb	IAmb	13 15 45.6	
	comp=Z,10nm,1.5s						
VNDA	Vanda	55.81	195	LR	LR	13 33 11.2	
	comp=Z,67nm,20.4s,baz=338,slow=30						
BDFB	Brasilia	57.48	87	LR	LR	13 37 26.0	
	comp=Z,30nm,21.1s,baz=302,slow=33						
TXAR	Lajitas Array	64.34	5	P	P	13 16 24.0	+0.3
	comp=Z,0.1nm,0.5s,baz=177,slow=7.2,SNR=2.2						
NVAR	Mina Array Bea	73.74	352	P	P	13 17 22.3	+0.3
	comp=Z,0.3nm,0.6s,baz=191,slow=7.9,SNR=2.8						
NVAR	Mina Array Bea	73.74	352	P	P	13 17 21.1	-1.0
SRU	San Rafael Swe	73.92	359	P	P	13 17 23.1	0.0
PDAR	Pinedale Array	77.56	360	P	P	13 17 43.7	-0.2
	comp=Z,0.7nm,0.7s,baz=152,slow=6.7,SNR=6.3						
PDAR	Pinedale Array	77.56	360	P	P	13 17 43.0	-0.9
ULM	Lac du Bonnet	85.82	8	P	P	13 18 27.6	+0.6
	comp=Z,1.2nm,0.6s,baz=174,slow=10,SNR=1.8						
ULM	Lac du Bonnet	85.82	8	IAmb	IAmb	13 18 31.8	
	comp=Z,11nm,1.5s						
STKA	Stephens Creek	86.07	234	LR	LR	13 50 27.4	
	comp=Z,59nm,18.8s,baz=198,slow=31						
ASAR	Alice Springs	96.57	235	LR	LR	13 56 29.7	
	comp=Z,41nm,18.4s,baz=102,slow=32						
H01W1	Cape Leeuwin H	99.53	215	T	T	15 12 06.4	
	baz=144,slow=75,SNR=14						
H01W2	Cape Leeuwin H	99.54	215	T	T	15 12 06.5	
	baz=144,slow=75,SNR=16						
H01W3	Cape Leeuwin H	99.55	215	T	T	15 12 07.4	
	baz=144,slow=75,SNR=11						
BRTR	Keskin Array B	150.06	70	PKPbc	PKPbc	13 25 38.1	-0.6
	comp=Z,0.4nm,0.6s,baz=273,slow=2.5,SNR=1.7						
CMAR	Chiang Mai Arr	150.24	243	PKPbc	PKPbc	13 25 39.7	+0.1
	comp=Z,0.6nm,0.7s,baz=129,slow=1.3,SNR=2.6						
SONM	Songino Array	150.95	307	PKPbc	PKiKP	13 25 40.9	-0.3
	comp=Z,1.1nm,0.7s,baz=131,slow=2.3,SNR=6.3						

IDC 27 13:12:07.3±8.0, **55°.56S**×**151°.41W**, **h0**^{km}, **mb3.9**/1, **mb1 4.0**/1, **mb1mx3.6**/30, **mbtmp3.9**/1, **Error ellipse: s-maj=694.6km s-min=66.0km az=163.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	53.24	98	T	T	14 18 16.4	
	baz=219,slow=74,SNR=24						
H03S1	Juan Fernandez	53.25	98	T	T	14 18 17.6	
	baz=219,slow=74,SNR=21						
H03S3	Juan Fernandez	53.26	98	T	T	14 18 15.0	
	baz=219,slow=74,SNR=33						
H03N3	Juan Fernandez	53.52	97	T	T	14 18 37.1	
	baz=222,slow=72,SNR=77						
H03N2	Juan Fernandez	53.53	97	T	T	14 18 30.8	
	baz=222,slow=72,SNR=83						
H03N1	Juan Fernandez	53.54	97	T	T	14 18 38.8	
	baz=222,slow=72,SNR=79						
ASAR	Alice Springs	62.22	268	P	P	13 22 30.6	-0.1
	1.3nm,1.0s,baz=140,slow=6.4,SNR=8.3						
H01W1	Cape Leeuwin H	64.37	245	T	T	14 33 07.8	
	baz=142,slow=76,SNR=6.8						
H01W2	Cape Leeuwin H	64.38	245	T	T	14 33 04.0	
	baz=142,slow=76,SNR=7.0						
H01W3	Cape Leeuwin H	64.39	245	T	T	14 33 11.8	
	baz=142,slow=76,SNR=7.5						
ILAR	Eielson Array	120.05	2	PKP	PKPdf	13 30 58.0	-0.3
	0.7nm,1.0s,baz=188,slow=2.6,SNR=4.3						
MKAR	Makanchi Array	146.00	278	PKPbc	PKPdf	13 31 47.4	+0.2
	1.5nm,0.8s,baz=123,slow=4.1,SNR=15						
ZALV	Zalesovo Beam	148.26	291	PKPbc	PKPbc	13 31 53.4	-0.7
	0.4nm,0.4s,baz=96,slow=5.9,SNR=1.8						

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*NOU **27** 13:15:31.2, 23°.53S×179°.36W, h528^{km}, mb4.2, South of Fiji Islands*

*NEIC **27** 13:15:32.0±2.3, 23°.4S±0°.1×179°.8W±0°.1, h544^{km}±8^{km}, mb4.7/32, Error ellipse: s-maj=17.4km s-min=15.3km az=134.0*

*IDC **27** 13:15:35.1±1.8, 23°.40S×179°.89W, h569^{km}±20^{km}, mb3.7/19, mb1 3.8/21, mb1mx3.7/33, mbtmp4.6/21, Error ellipse: s-maj=12.9km s-min=11.2km az=172.0*

ISC 27 13:15:31.4±0.4, **23°.46S**±0°.05×**179°.70W**±0°.07, **h536**^{km}, **n127**, σ**1^{s}74**/137, **mb4.5**/32, **4C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.98	165	S	S	13 18 32.4	+3.4
	34nm,0.3s,baz=233,slow=20,SNR=1.6						
RAO	Raoul Island	5.98	165	P	P	13 17 10.0	+1.0
GLKZ	Green Lake	5.99	165	P	P	13 17 11.3	+2.2
GLKZ				S	S	13 18 29.5	+0.4
MSVF	Nonsavu	6.08	339	P	P	13 17 11.9	+1.6
MSVF	Nonsavu	6.08	339	P	P	13 17 12.3	+2.0
MARNC	Mare, Loyalty	11.52	277	P	P	13 18 07.0	+2.1
PINNC	Pines Island,	11.87	272	P	P	13 18 11.5	+2.9
	60nm,0.9s						
AFI	Afiamalu	12.10	40	P	P	13 18 08.1	-3.0
AFI	Afiamalu	12.10	40	P	P	13 18 09.2	-1.9
DZM	Mont Dzumac	12.86	273	P	P	13 18 20.5	+1.5
	0.2nm,0.3s,baz=98,slow=18,SNR=1.6						
DZM	Mont Dzumac	12.86	273	P	P	13 18 17.3	-1.7
DZM	Mont Dzumac	12.86	273	P	P	13 18 21.6	+2.6
OUZ	Omahuta	13.09	205	P	P	13 18 23.3	+2.3
OUZ	Omahuta	13.09	205	P	P	13 18 23.8	+2.8
WCZ	Waipu Caves	13.46	201	P	P	13 18 27.7	+2.8
HAZ	Te Kaha	14.41	188	P	P	13 18 36.1	+1.3
HAZ				S	S	13 21 03.1	-2.9
RUGZ	Raukumara Rang	14.63	188	P	P	13 18 38.0	+0.9
SANVU	Saraoutou	14.70	301	P	P	13 18 37.8	-0.2
SANVU	Saraoutou	14.70	301	P	P	13 18 41.6	+3.6
TWGZ	Tauwhareparae	14.80	187	P	P	13 18 40.2	+1.3
TOZ	Tahuroa Road	14.81	195	P	P	13 18 40.2	+1.3
URZ	Urewera	15.00	190	P	P	13 18 42.0	+1.2
	2.2nm,0.3s,baz=243,slow=5.3,SNR=20						
URZ				S	S	13 21 12.5	-4.5
	0.4nm,0.3s,baz=229,slow=20,SNR=1.6						
URZ	Urewera	15.00	190	P	P	13 18 39.3	-1.6
URZ				S	S	13 21 10.8	-6.2
MWZ	Matawai	15.01	188	P	P	13 18 41.1	0.0
MWZ				S	S	13 21 15.5	-1.9
TKGZ	Te Karaka	15.08	187	P	P	13 18 41.8	+0.2
TKGZ				S	S	13 21 16.3	-2.1
KOUNC	Koumac, New Ca	15.14	278	P	P	13 18 45.2	+2.6
MUGZ	Murupara	15.27	191	P	P	13 18 42.8	-0.9
MUGZ				S	S	13 21 17.9	-4.1
HIZ	Hauiti	15.71	196	P	P	13 18 47.4	-0.8
NMHZ	Naumai	15.87	190	P	P	13 18 49.2	-0.7
BKZ	Black Stump Fm	15.99	191	P	P	13 18 47.6	-3.4
BKZ				IAmb	IAmb	13 18 56.6	
	comp=Z,38nm,1.4s						
BKZ	Black Stump Fm	15.99	191	P	P	13 18 48.6	-2.5
BKZ				S	S	13 21 31.6	-3.0
OTVZ	Oturere	16.14	193	P	P	13 18 51.9	-0.8
BHW	Baring Head	18.47	193	P	P	13 19 12.0	-1.9
QRZ	Quartz Range	18.51	199	P	P	13 19 15.2	+0.9
NNZ	Nelson	18.63	197	P	P	13 19 15.7	+0.2
TUWZ	Tuamarina	18.69	195	P	P	13 19 16.1	+0.1
BSWZ	Blackbirch Sta	18.98	195	P	P	13 19 19.1	+0.4
THZ	Tophouse	19.27	197	P	P	13 19 21.4	+0.1
THZ				IAmb	IAmb	13 19 23.2	
	comp=Z,25nm,0.8s						
KHZ	Kahutara	19.72	195	P	P	13 19 25.0	-0.3
KHZ				IAmb	IAmb	13 19 39.6	
	comp=Z,17nm,1.0s						
LTZ	Lake Taylor	20.39	197	P	P	13 19 31.0	-0.5
OXZ	Oxford	20.96	197	P	P	13 19 35.9	-0.6
RPZ	Rata Peaks	21.59	198	P	P	13 19 44.2	+1.9
	comp=Z,24nm,0.7s,baz=39,slow=6.5,SNR=25						
RPZ	Rata Peaks	21.59	198	P	P	13 19 41.6	-0.8
WKZ	Wanaka	23.22	201	P	P	13 19 55.9	-1.0
MLZ	Mavora Lakes	24.00	201	P	P	13 20 04.2	+0.4
MLZ				IAmb	IAmb	13 20 28.0	
	comp=Z,25nm,1.2s						
WHZ	Wether Hill Ro	24.52	201	P	P	13 20 09.5	+1.1
CAN	Canberra	29.60	239	P	P	13 20 54.4	+1.2
TAU	Tasmania Unive	33.44	227	P	P	13 21 26.8	+1.1
TAU				IAmb	IAmb	13 21 28.2	
	comp=Z,43nm,1.3s						
PMG	Port Moresby	34.62	288	P	P	13 21 36.3	+0.2
	comp=Z,49nm,0.8s,baz=90,slow=6.1,SNR=14						
PMG	Port Moresby	34.62	288	P	P	13 21 36.0	-0.1
STKA	Stephens Creek	35.15	248	P	P	13 21 41.1	+0.8
	comp=Z,4.3nm,0.4s,baz=94,slow=11,SNR=18						
STKA	Stephens Creek	35.15	248	P	P	13 21 40.9	+0.6
AS31	Alice Springs	42.38	260	P	P	13 22 38.9	-0.1
ASAR	Alice Springs	42.38	260	P	P	13 22 39.0	0.0
	comp=Z,6.5nm,0.5s,baz=95,slow=7.2,SNR=188						
ASAR				PcP	PcP	13 24 20.2	+0.2
	comp=Z,0.6nm,0.5s,baz=89,slow=5.8,SNR=2.9						
ASAR				S	S	13 28 20.0	-1.8
	comp=Z,1.0nm,0.7s,baz=96,slow=15,SNR=8.9						
ASAR	Alice Springs	42.38	260	P	P	13 22 38.3	-0.7
WR0	Warramunga Arr	42.53	266	P	P	13 22 39.1	-1.0
WB2	Warramunga Arr	42.71	266	P	P	13 22 40.9	-0.6
WB2				IAmb	IAmb	13 22 41.8	
	comp=Z,15nm,0.7s						
WB0	Warramunga Arr	42.71	266	P	P	13 22 40.8	-0.8
WB0				IAmb	IAmb	13 22 41.7	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	42.71	266	P	P	13 22 40.9	-0.7
WRAB				IAmb	IAmb	13 22 41.7	
	comp=Z,16nm,0.9s						
WRA	Warramunga Arr	42.72	266	P	P	13 22 41.1	-0.5
	comp=Z,7.9nm,0.4s,baz=93,slow=8.5,SNR=230						
WRA				S	S	13 28 22.1	-4.5
	comp=Z,0.9nm,0.7s,baz=97,slow=12,SNR=7.0						
WRA	Warramunga Arr	42.72	266	P	P	13 22 40.1	-1.5
JAY	Jayapura	43.60	293	P	P	13 22 48.3	-0.3
	comp=Z,14nm,0.6s,baz=104,slow=2.7,SNR=9.8						
FAKI	Fak Fak	50.73	286	P	P	13 23 41.8	-0.4
FITZ	Fitzroy Crossi	51.14	265	P	P	13 23 45.2	+0.1
	comp=Z,9.6nm,0.7s,baz=96,slow=7.2,SNR=31						
SIJI	Sorong	52.56	288	P	P	13 23 55.2	-0.3
	comp=Z,49nm,0.8s,baz=150,slow=4.0,SNR=13						
SOEI	Soe	55.09	274	P	P	13 24 14.4	+1.0
SOEI				IAmb	IAmb	13 24 24.4	
	comp=Z,38nm,0.9s						
NWAO	Narrogin (SRO)	55.67	245	P	P	13 24 17.1	0.0
	comp=Z,6.9nm,0.7s,baz=122,slow=8.6,SNR=8.8						
NWAO	Narrogin (SRO)	55.67	245	P	P	13 24 16.5	-0.5
TOLI2	Tolitoli	62.74	284	P	P	13 25 03.5	-1.2
TOLI2				IAmb	IAmb	13 25 06.0	
	comp=Z,14nm,0.7s						
QSPA	South Pole Qui	66.62	180	P	P	13 25 30.0	+1.6
	comp=Z,1.8nm,0.6s,baz=307,slow=0.4,SNR=29						
QSPA	South Pole Qui	66.62	180	P	P	13 25 29.6	+1.2
KKM	Kota Kinabalu	69.05	287	P	P	13 25 44.1	0.0
KKM				IAmb	IAmb	13 26 01.1	
	comp=Z,37nm,1.2s						
MJAR	Matsushiro Arr	71.70	325	P	P	13 25 58.8	-0.4
	comp=Z,3.5nm,0.9s,baz=159,slow=6.6,SNR=6.7						
MJAR	Matsushiro Arr	71.70	325	IAmb	IAmb	13 26 02.6	
	comp=Z,1.7nm,1.0s						
MAT	Matsushiro	71.70	325	P	P	13 25 59.0	-0.2

KSRS	**Korea Array**	78.09	320	P	**P**	13 26 35.4	+0.6
	comp=Z,2.1nm,0.7s,baz=127,slow=6.3,SNR=6.3						
PETK	**Petropavlovsk-**	78.74	346	P	**P**	13 26 38.2	+0.2
	comp=Z,5.2nm,0.7s,baz=107,slow=8.4,SNR=15						
USRK	**Ussuriysk Ar.**	80.55	327	P	**P**	13 26 48.4	+0.7
	comp=Z,4.3nm,0.8s,baz=144,slow=4.1,SNR=6.3						
NJ2	**Nanjing**	80.58	311	*e*P	**P**	13 26 48.5	+0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SYO	**Syowa Base**	83.50	193	⇑*e*P	**P**	13 27 03.6	+1.2
NVAR	**Mina Array Bea**	84.24	44	P	**P**	13 27 07.5	+0.7
	comp=Z,0.2nm,0.5s,baz=231,slow=4.3,SNR=2.3						
NONG	**Nongkai**	85.86	292	P	**P**	13 27 16.2	+1.3
ENH	**Enshi**	86.42	305	P	**P**	13 27 17.4	+0.1
ENH				IAmb	IAmb	13 27 18.8	
	comp=Z,11nm,0.9s						
PLCA	**Paso Flores**	88.37	134	P	**P**	13 27 28.2	+1.8
	comp=Z,2.3nm,0.8s,baz=258,slow=5.5,SNR=3.6						
PLCA	**Paso Flores**	88.37	134	IAmb	IAmb	13 27 32.6	
	comp=Z,10nm,1.4s						
LAMP	**Lampang**	89.07	291	P	**P**	13 27 32.8	+2.9
PAYA	**Payao**	89.22	291	P	**P**	13 27 32.0	+1.4
CM36	**Chiang Mai Arr**	89.53	290	P	**P**	13 27 34.0	+1.9
CM04	**Chiang Mai Arr**	89.58	290	P	**P**	13 27 34.5	+2.2
CM09	**Chiang Mai Arr**	89.59	290	P	**P**	13 27 34.0	+1.7
CM01	**Chiang Mai Arr**	89.61	290	P	**P**	13 27 36.3	+3.9
CM05	**Chiang Mai Arr**	89.61	290	P	**P**	13 27 34.6	+2.2
CM34	**Chiang Mai Arr**	89.62	291	P	**P**	13 27 34.0	+1.5
CM02	**Chiang Mai Arr**	89.62	290	P	**P**	13 27 34.7	+2.2
CMAR	**Chiang Mai Arr**	89.64	290	P	**P**	13 27 34.0	+1.4
	comp=Z,3.5nm,0.9s,baz=133,slow=3.1,SNR=20						
CMAR	**Chiang Mai Arr**	89.64	290	P	**P**	13 27 32.4	-0.1
CM15	**Chiang Mai Arr**	89.65	290	P	**P**	13 27 35.0	+2.4
CM13	**Chiang Mai Arr**	89.65	290	P	**P**	13 27 34.7	+2.1
CMMT	**Chiang Mai**	89.78	291	P	**P**	13 27 33.7	+0.5
CM33	**Chiang Mai Arr**	89.78	291	P	**P**	13 27 34.0	+0.8
CHTO	**Chiang Mai**	89.79	291	P	**P**	13 27 31.7	-1.5
CHTO				IAmb	IAmb	13 27 35.3	
	comp=Z,7.5nm,0.9s						
TXAR	**Lajitas Array**	89.96	58	P	**P**	13 27 35.3	+1.3
	comp=Z,0.4nm,0.7s,baz=217,slow=6.4,SNR=5.9						
HHC	**Hu-ho-hao-te**	90.31	315	*e*P	**P**	13 27 32.0	-3.3
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,7.7s						
ILAR	**Eielson Array**	91.54	13	P	**P**	13 27 39.4	-0.9
	comp=Z,0.3nm,0.7s,baz=223,slow=6.7,SNR=5.2						
PDAR	**Pinedale Array**	92.18	44	P	**P**	13 27 44.6	+0.6
	comp=Z,0.2nm,0.6s,baz=225,slow=2.4,SNR=2.4						
MKAR	**Makanchi Array**	112.06	313	PKiKP	**PKiKP**	13 33 04.5	-1.2
	comp=Z,0.5nm,0.6s,baz=209,slow=0.9,SNR=5.6						
ARCES	**ARCESS Array B**	131.52	348	PKP	**PKPdf**	13 33 41.6	-0.7
	comp=Z,7.3nm,1.1s,baz=17,slow=1.3,SNR=7.4						
NB2	**NORSAR Subarra**	141.69	351	PKP	**PKPdf**	13 33 56.6	-4.7
	comp=Z,0.9nm,0.7s,baz=19,slow=3.6						
AKASG	**Malin Array Be**	144.75	328	PKP	**PKPdf**	13 34 06.3	-0.6
	comp=Z,4.3nm,0.6s,baz=46,slow=4.3,SNR=12						
AKASG	**Malin Array Be**	144.75	328		**PKPdf**	13 34 05.6	-1.3
AKBB	**Malin Array Si**	144.75	328		**PKPdf**	13 34 05.5	-1.4
BR131	**Keskin Array S**	147.53	308		**PKPdf**	13 34 13.9	+1.8
BRTR	**Keskin Array B**	147.53	308	PKPbc	**PKPbc**	13 34 15.1	-0.6
	comp=Z,1.5nm,0.7s,baz=137,slow=3.0,SNR=8.7						
BRTR	**Keskin Array B**	147.53	308		**PKPbc**	13 34 14.3	-1.4
KWP	**Kalwaria Pacla**	148.52	332	*e*PKP	**PKPbc**	13 34 17.6	-0.1
BURAR	**Bucovina Array**	148.76	327		**PKPbc**	13 34 17.9	-0.5
OJC	**Ojcow**	149.26	335	*e*PKP	**PKPbc**	13 34 19.0	-0.4
NIE	**Niedzica**	149.70	334	*e*PKP	**PKiKP**	13 34 21.1	-0.2
KSP	**Ksiaz**	149.98	340	*e*PKP	**PKPbc**	13 34 21.3	+0.2
OSTC	**Ostas**	150.25	339	⇑*e*PKP	**PKPbc**	13 34 21.8	0.0
UPC	**Upice**	150.36	340	⇑*e*PKP	**PKPbc**	13 34 22.1	+0.1
DPC	**Dobruska-Polom**	150.39	339	⇑*e*PKP	**PKPbc**	13 34 22.0	-0.2
CLL	**Collm**	150.52	344	*i* PKPbc	**PKPbc**	13 34 21.8	-0.5
	comp=Z,14nm,1.1s						
CLL				*e*PKPab	**PKPab**	13 34 31.0	-0.4
BRG	**Berggiesshubel**	150.66	342	*i* PKP	**PKPbc**	13 34 22.6	0.0
BRG				Amp		13 34 23.2	
	comp=Z,6.5nm,0.6s						
VYHS	**Vyhne**	151.02	334	*e*PKP	**PKPdf**	13 34 17.6	+0.4
VYHS				*e*		13 34 23.6	
KHC	**Kasperske Hory**	152.32	341	*e*PKPAB	**PKPab**	13 34 39.3	+0.2
GERES	**GERESS Array B**	152.54	341	PKPbc	**PKPbc**	13 34 26.4	-0.6
	comp=Z,0.4nm,0.5s,baz=90,slow=1.3,SNR=3.8						

IDC ***27*** *13:23:41.3±5.7, 61°.61S×155°.85E, h0^{km}, mb4.4/2, mb1 4.6/3, mb1mx4.1/14, mbtmp4.3/3, ML3.6/1, Error ellipse: s-maj=334.7km s-min=41.6km az=75.0*

NEIC ***27*** *13:23:42.8±0.7, 61°.6S±0°.1×155°.7E±0°.4, h12^{km}±7^{km}, mb4.4/7, Error ellipse: s-maj=31.2km s-min=18.1km az=112.0*

ISC 27 13:23:42.6±1.3**, 61°.6S**±0°.1×**155°.7E**±0°.3**, h10**^{km}**, n15, σ0^{s}.36**/7**, mb3.6**/3**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	16.11	175	Pn	**Pn**	13 27 28.7	0.0
	0.2nm,0.3s,baz=349,slow=13,SNR=2.1						
VNDA	**Vanda**	16.11	175	IAmb	IAmb	13 27 54.2	
	comp=Z,29nm,1.6s						
MQZ	**McQueen's Vall**	20.57	37	Pn	Pn	13 28 22.9	-0.5
OXZ	**Oxford**	20.74	36	P	**P**	13 28 23.2	+0.1
STKA	**Stephens Creek**	31.13	336	P	**P**	13 30 00.7	-0.4
H01W1	**Cape Leeuwin H**	37.40	296	T	T	14 10 03.5	
	baz=148,slow=75,SNR=7.6						
H01W2	**Cape Leeuwin H**	37.41	296	T	T	14 10 06.4	
	baz=148,slow=75,SNR=6.5						
H01W3	**Cape Leeuwin H**	37.42	296	T	T	14 10 05.2	
	baz=148,slow=75,SNR=6.7						
ASAR	**Alice Springs**	40.75	329	P	**P**	13 31 24.1	+0.5
	comp=Z,0.5nm,0.9s,baz=159,slow=8.5,SNR=6.9						
WR0	**Warramunga Arr**	44.16	331	P	**P**	13 31 51.2	-0.1
WB2	**Warramunga Arr**	44.22	331	P	**P**	13 31 51.8	0.0
WB2				IAmb	IAmb	13 32 36.4	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	44.22	331	P	**P**	13 31 52.1	+0.3
	comp=Z,0.5nm,0.5s,baz=165,slow=7.4,SNR=7.3						
H03S1	**Juan Fernandez**	75.14	135	T	T	14 59 09.7	
	baz=206						
H03S2	**Juan Fernandez**	75.14	135	T	T	14 59 12.4	
	baz=206						
H03S3	**Juan Fernandez**	75.16	135	T	T	14 59 16.7	
	baz=206						

CNRM ***27*** *13:24:32.7, 36°.40N×4°.44W, h3^{km}, ml3.0, Hypocentre not reviewed by the ISC*

LDG ***27*** *13:24:33.9±0.3, 36°.52N×4°.52W, h90^{km}±8^{km}, Ml3.8/4, Error ellipse: s-maj=7.4km s-min=4.1km az=178.0*

SFS ***27*** *13:24:34.0, 36°.30N×4°.50W, h96^{km}, ML3.4, ALBORAN W.*

INMG ***27*** *13:24:34.6±1.9, 36°.34N×4°.55W, h98^{km}±8^{km}, MD3.4, ML3.3, Error ellipse: s-maj=3.7km s-min=3.6km az=130.0*

MDD ***27*** *13:24:34.8±0.5, 36°.34N×4°.51W, h93^{km}±5^{km}, mb3.4/42, Error ellipse: s-maj=3.9km s-min=3.0km az=174.0, PRXIMO*

IGIL ***27*** *13:24:35.5, 36°.34N×4°.51W, h96^{km}, ML3.5*

ISC 27 13:24:32.1±1.0**, 36°.35N**±0°.03×**4°.53W**±0°.02**, h103**^{km}±6^{km}**, n119, σ2^{s}.26**/219**, 8C-13D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMAL	**Malaga-Limoner**	0.42	11	P	**Pn**	13 24 48.9	+1.2
EMAL				S	**Sn**	13 24 59.0	-0.4
EMAL	**Malaga-Limoner**	0.42	11	*e*P	**Pn**	13 24 48.9	+1.2
EMAL				*e*S	**Sn**	13 24 59.0	-0.4
REAL	**Reales**	0.56	284	P	**Pn**	13 24 51.1	+2.2
REAL				S	**Sn**	13 24 56.5	-5.1
REAL	**Reales**	0.56	284	⇑*i*P	**Pn**	13 24 51.1	+2.2
REAL				*e*S	**Sn**	13 24 56.5	-5.1
EJIF	**Jimena Fronter**	0.77	278	⇓P	**Pn**	13 24 52.2	+1.8
	SNR=18						
EJIF				S	**Sn**	13 25 06.7	+2.5
	SNR=7.9						
CEU	**Ceuta**	0.82	237	P	**Pn**	13 24 51.4	+0.5
CEU				S	**Sn**	13 24 59.0	-6.1
CEU	**Ceuta**	0.82	237	*e*P	**Pn**	13 24 51.4	+0.5
CEU				*e*S	**Sn**	13 24 59.0	-6.1
ECEU	**Ceuta**	0.82	237	P	**Pn**	13 24 52.7	+1.7
	14nm,0.1s,SNR=11						
ECEU				S	**Sn**	13 25 05.4	+0.2
	61nm,0.1s,SNR=10						
EGOR	**Sierra Gorda,**	0.83	24	⇑P	**Pn**	13 24 53.1	+1.9
	50nm,0.2s,SNR=18						
EGOR				S	**Sn**	13 25 07.2	+1.6
	178nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	0.89	54	⇑P	**Pn**	13 24 52.3	+0.6
	46nm,0.1s,SNR=18						
ELGU				S	**Sn**	13 25 05.2	-1.4
	388nm,0.2s,SNR=7.9						
LIJA	**Lijar**	0.90	308	P	**Pn**	13 24 55.1	+3.3
LIJA				S	**Sn**	13 25 04.3	-2.4
LIJA	**Lijar**	0.90	308	*e*P	**Pn**	13 24 55.1	+3.3
LIJA				*e*S	**Sn**	13 25 04.3	-2.4
ALJ	**Aljibe**	0.92	282	P	**Pn**	13 24 55.1	+3.1
ALJ				S	**Sn**	13 25 05.7	-1.3
ALJ	**Aljibe**	0.92	282	*e*P	**Pn**	13 24 55.1	+3.1
ALJ				*e*S	**Sn**	13 25 05.7	-1.3
ESPR	**Espera**	1.19	296	P	**Pn**	13 24 57.1	+2.2
	6.9nm,0.1s,SNR=27						
ESPR				S	**Sn**	13 25 12.6	+0.6
	211nm,0.2s,SNR=26						
PVLZ	**Peæn de**	1.19	171	P	**Pn**	13 24 55.9	+1.0
PVLZ				S	**Sn**	13 25 12.6	+0.5
PVLZ	**Peæn de**	1.19	171	*e*P	**Pn**	13 24 55.9	+1.0
PVLZ				*e*S	**Sn**	13 25 12.6	+0.5
EQUE	**Quentar**	1.22	45	⇑P	**Pn**	13 24 57.8	+2.4
	8.2nm,0.1s,SNR=18						
EQUE				S	**Sn**	13 25 13.8	+0.9
	167nm,0.3s,SNR=15						
PALE	**Palemas**	1.23	157	P		13 24 56.6	
CNIL	**Conil**	1.23	271	P	**Pn**	13 24 59.1	+3.8
CNIL	**Conil**	1.23	271	*e*P	**Pn**	13 24 59.1	+3.8
EALB	**Alboran**	1.28	108	P	**Pn**	13 24 56.7	+0.8
	3.2nm,0.1s,SNR=10.0						
EALB				S	**Sn**	13 25 12.7	-1.1
	133nm,0.2s,SNR=7.3						
SFS	**San Fernando**	1.36	275	S	**Sn**	13 25 14.4	-1.2
SFS	**San Fernando**	1.36	275	*e*S	**Sn**	13 25 14.4	-1.2
CHEFC	**Chefchaouen**	1.41	208	P		13 25 01.0	
EBER	**Berja**	1.43	67	⇑P	**Pn**	13 24 59.1	+1.3
	23nm,0.2s,SNR=18						
EBER				S	**Sn**	13 25 16.9	-0.5
	150nm,0.4s,SNR=13						
HORN	**Hornachuelos**	1.60	339	P		13 25 01.5	
GORA	**Gorafe**	1.64	46	P	**Pn**	13 25 03.0	+2.7
	50nm,0.2s,SNR=7.9						
GORA				S	**Sn**	13 25 23.3	+1.5
	176nm,0.1s,SNR=7.9						
EMEL	**Melilla**	1.65	129	P	**Pn**	13 25 01.6	+1.2
	450nm,0.1s,SNR=23						
EMEL				S	**Sn**	13 25 20.6	-1.3
	292nm,0.2s,SNR=7.9						
MELI	**Melilla**	1.67	129	P	**Pn**	13 25 02.1	+1.5
	54nm,0.1s,SNR=7.9						
MELI				S	**Sn**	13 25 21.3	-1.0
	130nm,0.2s,SNR=7.9						
MELI	**Melilla**	1.67	129	*e*P	**Pn**	13 25 01.9	+1.3
MELI				*e*S	**Sn**	13 25 20.8	-1.5
GOG	**Mont Gurugu**	1.68	132	P		13 25 02.1	
RSA	**Sarsar**	1.80	216	P		13 25 05.4	
EADA	**Adamuz**	1.81	359	⇓P	**Pn**	13 25 04.3	+1.8
	28nm,0.1s,SNR=18						
EADA				S	**Sn**	13 25 24.8	-0.8
	496nm,0.1s,SNR=43						
EQES	**Quesada**	1.86	38	⇑P	**Pn**	13 25 05.3	+2.2
	22nm,0.1s,SNR=18						
EQES				S	**Sn**	13 25 26.6	-0.2
	139nm,0.1s,SNR=22						
ECAB	**El Cabril**	1.86	338	⇓P	**Pn**	13 25 04.4	+1.3
	4.1nm,0.0s,SNR=18						
ECAB				S	**Sn**	13 25 25.5	-1.2
	133nm,0.1s,SNR=77						
ENIJ	**Nijar**	1.97	71	P	**Pn**	13 25 06.0	+1.6
	5.0nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	13 25 29.0	-0.1
	39nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	2.22	310	⇓P	**Pn**	13 25 09.2	+1.5
	40nm,0.1s,SNR=18						
EMIN				S	**Sn**	13 25 33.6	-1.3
	97nm,0.1s,SNR=26						
SESP	**Santiago Espad**	2.37	41	P	**Pn**	13 25 11.8	+2.0
	26nm,0.1s,SNR=7.9						
SESP				S	**Sn**	13 25 38.0	-0.7
	238nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	2.37	41	P		13 25 11.8	
EGRO	**El Granado**	2.65	297	⇓P	**Pn**	13 25 14.9	+1.7
	14nm,0.0s,SNR=18						
EGRO				S	**Sn**	13 25 43.4	-1.4
	138nm,0.1s,SNR=20						
PBAR	**Barrancos**	2.71	313	*e*P	**Pn**	13 25 15.6	+1.6
PBAR				*e*S	**Sn**	13 25 45.2	-1.1
PBAR				A	A	13 25 49.4	
	92nm,0.2s						
PVAQ	**Vaqueiros**	2.77	293	⇓*e*P	**Pn**	13 25 16.4	+1.6
PVAQ				*e*S	**Sn**	13 25 46.4	-1.2
PVAQ				A	A	13 25 48.4	
	136nm,0.2s						
IFR	**Ifrane**	2.87	190	*e*P	**Pn**	13 25 17.6	+1.1
IFR				*e*S	**Sn**	13 25 48.5	-1.9
PBDV	**Barranco-do-Ve**	2.87	289	⇓*i*P	**Pn**	13 25 18.2	+1.9
PBDV				*e*S	**Sn**	13 25 49.4	-0.9
PBDV				A	A	13 25 50.2	
	67nm,0.2s						
EMUR	**La Murta**	3.02	59	P	**Pn**	13 25 18.3	+0.1
	2.0nm,0.3s,SNR=7.6						
EMUR				S	**Sn**	13 25 53.9	+0.1
	7.5nm,0.3s						
CART	**Cartagena**	3.08	65	P	**Pn**	13 25 20.7	+1.7
CART				S	**Sn**	13 25 53.6	-1.5
CART	**Cartagena**	3.08	65	*e*P	**Pn**	13 25 20.7	+1.7
CART				*e*S	**Sn**	13 25 53.6	-1.5
PCVE	**Castro Verde**	3.09	296	*e*P	**Pn**	13 25 20.8	+1.7
PCVE				*e*S	**Sn**	13 25 54.2	-1.1
PCVE				A	A	13 25 55.2	
	116nm,0.2s						
PBEJ	**Beja**	3.15	303	*e*P	**Pn**	13 25 21.6	+1.7
PBEJ				*e*S	**Sn**	13 25 55.5	-1.2
PBEJ				A	A	13 25 57.4	
	82nm,0.1s						
PAB	**San Pablo**	3.19	2	P	**Pn**	13 25 22.1	+1.5
	3.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	13 25 56.1	-1.9
	42nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	3.29	45	⇑P	**Pn**	13 25 23.9	+2.0
	13nm,0.1s,SNR=18						
ETOB				S	**Sn**	13 25 58.5	-1.9
	24nm,0.1s,SNR=13						
MESJ	**Messejana**	3.31	298	*e*P	**Pn**	13 25 23.7	+1.7
MESJ				*e*S	**Sn**	13 25 58.9	-1.6
MESJ				AML	AML	13 26 00.5	
	comp=N,85nm,0.1s						
MESJ	**Messejana**	3.31	298	*e*P	**Pn**	13 25 23.7	+1.7
MESJ				*e*S	**Sn**	13 25 59.2	-1.3
ESDC	**Sonseca Array**	3.35	7	⇑P	**Pn**	13 25 24.3	+1.7
	comp=N,7.3nm,0.3s,baz=193,slow=13,SNR=18						
ESDC				S	**Sn**	13 25 59.9	-1.8
	comp=N,9.3nm,0.2s,baz=188,slow=22,SNR=4.1						
MORF	**Marmelete**	3.44	287	*e*P	**Pn**	13 25 25.4	+1.5
MORF				*e*S	**Sn**	13 26 02.1	-1.8
MORF				AML	AML	13 26 04.3	
	comp=N,250nm,0.2s						
MORF	**Marmelete**	3.44	287	⇓*i*P	**Pn**	13 25 25.4	+1.5
MORF				*e*S	**Sn**	13 26 02.3	-1.6
MORF				A	A	13 26 04.5	
	comp=N,108nm,0.1s						
PESTR	**Estremoz**	3.50	317	*e*P	**Pn**	13 25 26.3	+1.7
PESTR				*e*S	**Sn**	13 26 03.9	-1.2
PESTR				A	A	13 26 06.5	
	comp=N,37nm,0.3s						
EVO	**Evora**	3.53	309	⇓*i*P	**Pn**	13 25 26.9	+1.9
EVO				*i* S	**Sn**	13 26 04.5	-1.2
EVO	**Evora**	3.53	309	*e*P	**Pn**	13 25 26.9	+1.9
EVO				*e*S	**Sn**	13 26 04.6	-1.2
EVO				A	A	13 26 06.8	
	comp=N,120nm,0.5s						
PFVI	**Vila Bisbo**	3.54	284	P	**Pn**	13 25 26.6	+1.5
	comp=N,14nm,0.1s,SNR=24						
PFVI				S	**Sn**	13 26 04.1	-2.1
	comp=N,195nm,0.1s,SNR=6.6						
PFVI	**Vila Bisbo**	3.54	284	*e*P	**Pn**	13 25 26.6	+1.5
PFVI				*e*S	**Sn**	13 26 04.2	-1.9
PFVI				A	A	13 26 06.0	
	comp=N,76nm,0.1s						
PTEO	**Sao Teotonio**	3.57	291	*e*P	**Pn**	13 25 27.6	+2.1
PTEO				*e*S	**Sn**	13 26 05.5	-1.3
PTEO				A	A	13 26 07.3	
	comp=N,54nm,0.3s						
PNCL	**Nicolau / Gran**	3.65	300	⇓*i*P	**Pn**	13 25 28.2	+1.7
PNCL				*e*S	**Sn**	13 26 07.0	-1.6
PNCL				A	A	13 26 07.6	
	comp=N,37nm,0.4s						
PMRV	**Marv??o**	3.82	324	*e*P	**Pn**	13 25 30.9	+2.0
PMRV				*e*S	**Sn**	13 26 11.1	-1.7
PMRV				A	A	13 26 13.1	
	comp=N,39nm,0.2s						
AVE	**Averroes**	3.86	219	*e*S	**Sn**	13 26 09.9	-4.0
EPLA	**Plasencia**	3.90	342	⇓P	**Pn**	13 25 32.2	+2.2
	comp=N,14nm,0.2s,SNR=18						
EPLA				S	**Sn**	13 26 13.5	-1.5
	comp=N,56nm,0.1s,SNR=13						
AFON	**Font Roja**	3.92	53	P	**Pn**	13 25 32.9	+2.6
	comp=N,6.1nm,0.1s,SNR=8.3						
AFON				S	**Sn**	13 26 14.2	-1.4
	comp=N,13nm,0.4s,SNR=7.9						
PMTG	**Montargil**	4.00	314	⇓*e*P	**Pn**	13 25 32.8	+1.6
PMTG				*e*S	**Sn**	13 26 15.3	-1.8
PMTG				A	A	13 26 17.9	
	comp=N,22nm,0.3s						
UCM	**Universidad Co**	4.08	14	P	Pn	13 25 37.9	+5.5
UCM				S	**Sn**	13 26 17.8	-1.4
UCM	**Universidad Co**	4.08	14	*e*P	Pn	13 25 37.9	+5.5
UCM				*e*S	**Sn**	13 26 17.8	-1.4
EBEN2	**Beniarda presa**	4.16	55	P	**Pn**	13 25 35.4	+1.9
	comp=N,3.3nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	13 26 18.9	-2.2
	comp=N,18nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	4.19	327	*e*S	**Sn**	13 26 19.9	-1.9
PCBR				A	A	13 26 33.3	
	comp=N,23nm,0.3s						
ECHE	**Chera**	4.29	40	P	**Pn**	13 25 36.9	+1.6
	comp=N,2.4nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	13 26 21.4	-2.8
	comp=N,19nm,0.1s,SNR=7.9						
GUD	**Guadarrama**	4.30	4	P	**Pn**	13 25 37.3	+1.9
	comp=N,0.8nm,0.1s,SNR=12						
GUD				S	**Sn**	13 26 22.8	-1.8
	comp=N,7.3nm,0.1s,SNR=15						
PMAFR	**Mafra**	4.58	306	P	**Pn**	13 25 41.2	+2.0
	comp=N,6.4nm,0.1s,SNR=16						
PMAFR				S	**Sn**	13 26 28.6	-2.7
	comp=N,27nm,0.2s,SNR=8.6						
PMAFR	**Mafra**	4.58	306	*e*P	**Pn**	13 25 41.4	+2.2
PMAFR				*e*S	**Sn**	13 26 28.8	-2.5
PMAFR				A	A	13 26 33.5	
	comp=N,52nm,0.4s						
MTE	**Manteigas**	4.69	331	P	**Pn**	13 25 42.8	+2.2
MTE				S	**Sn**	13 26 31.8	-2.1
	comp=N,28nm,0.4s						
MTE	**Manteigas**	4.69	331	*e*P	**Pn**	13 25 42.8	+2.2
MTE				*e*S	**Sn**	13 26 31.8	-2.1
MTE				A	A	13 27 00.1	
	comp=N,57nm,0.4s						
PCAS	**Casmilo, Conde**	4.84	321	P	**Pn**	13 25 44.7	+2.0
PCAS				S	**Sn**	13 26 35.2	-2.4
	comp=N,24nm,0.5s						
PCAS	**Casmilo, Conde**	4.84	321	*e*P	**Pn**	13 25 44.7	+2.0
PCAS				*e*S	**Sn**	13 26 35.2	-2.4
PCAS				A	A	13 27 10.0	
	comp=N,24nm,0.5s						
ETOR	**Torete**	4.86	23	P	**Pn**	13 25 44.9	+1.8
	comp=N,22nm,0.2s,SNR=46						
ETOR				S	**Sn**	13 26 34.9	-3.3
	comp=N,121nm,0.2s,SNR=13						
COI	**Coimbra**	4.92	323	P	**Pn**	13 25 45.8	+2.1
COI				S	**Sn**	13 26 36.8	-2.5
	comp=N,22nm,0.4s						
COI	**Coimbra**	4.92	323	*e*P	**Pn**	13 25 45.8	+2.1
COI				*e*S	**Sn**	13 26 36.8	-2.5
COI				A	A	13 27 00.8	
	comp=N,45nm,0.4s						
PVIS	**Viseu**	5.09	330	P	**Pn**	13 25 48.0	+1.8
PVIS				S	**Sn**	13 26 41.9	-1.9
	comp=N,11nm,0.1s						
PVIS	**Viseu**	5.09	330	*e*P	**Pn**	13 25 48.0	+1.8
PVIS				*e*S	**Sn**	13 26 41.9	-1.9
PVIS				A	A	13 26 45.3	
	comp=N,21nm,0.1s						
EMOS	**Mosqueruela**	5.12	37	P	**Pn**	13 25 49.4	+2.7
	comp=N,2.0nm,0.1s,SNR=11						
EMOS				S	**Sn**	13 26 41.9	-2.7
	comp=N,25nm,0.2s,SNR=28						
MVO	**Moncorvo**	5.19	339	⇓P	**Pn**	13 25 49.3	+1.9
	comp=N,19nm,0.2s,SNR=18						
MVO				S	**Sn**	13 26 42.9	-3.2
	comp=N,11nm,0.1s,SNR=6.1						
MVO	**Moncorvo**	5.19	339	*e*P	**Pn**	13 25 49.4	+1.9
MVO				*e*S	**Sn**	13 26 43.7	-2.4
MVO				A	A	13 26 58.5	
	comp=N,34nm,0.5s						
EIBI	**Ibiza**	5.37	58	P	**Pn**	13 25 51.9	+2.1
	comp=N,1.2nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	13 26 48.7	-1.7
	comp=N,1.3nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	5.51	334	P	**Pn**	13 25 54.3	+2.5
PVRL				S	**Sn**	13 26 53.1	-0.8
	comp=N,22nm,0.2s						
PVRL	**Vila Real**	5.51	334	*e*P	**Pn**	13 25 54.3	+2.5
PVRL				*e*S	**Sn**	13 26 53.1	-0.8
PVRL				A	A	13 26 56.1	
	comp=N,44nm,0.2s						
POLO	**Lamas de Olo**	5.63	334	P	**Pn**	13 25 55.8	+2.4
POLO				S	**Sn**	13 26 54.9	-1.8
	comp=N,5.7nm,0.3s						
POLO	**Lamas de Olo**	5.63	334	*e*P	**Pn**	13 25 55.8	+2.4
POLO				*e*S	**Sn**	13 26 54.9	-1.8
POLO				A	A	13 27 24.9	
	comp=N,5.7nm,0.3s						
PBRG	**Braganca**	5.71	343	P	**Pn**	13 25 57.0	+2.5
PBRG				S	**Sn**	13 26 55.6	-3.1
	comp=N,5.1nm,0.2s						
PBRG	**Braganca**	5.71	343	*e*P	**Pn**	13 25 57.0	+2.5
PBRG				*e*S	**Sn**	13 26 55.6	-3.1
PBRG				A	A	13 27 00.3	
	comp=N,10nm,0.2s						
ECAL	**Calabor**	5.84	344	P	**Pn**	13 25 59.0	+2.7
	comp=N,1.7nm,0.1s,SNR=14						
ECAL				S	**Sn**	13 27 00.0	-1.9
	comp=N,17nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	5.97	38	P	**Pn**	13 26 00.8	+2.8
	comp=N,1.6nm,0.1s,SNR=7.9						
ERTA				S	**Sn**	13 27 02.9	-2.0
	comp=N,6.1nm,0.3s,SNR=7.9						
PCAB	**Cabril**	6.00	334	P	**Pn**	13 26 01.1	+2.6
PCAB				S	**Sn**	13 27 03.7	-2.1
	comp=N,6.9nm,0.1s						
PCAB	**Cabril**	6.00	334	*e*P	**Pn**	13 26 01.1	+2.6
PCAB				*e*S	**Sn**	13 27 03.7	-2.1
PCAB				A	A	13 27 07.6	
	comp=N,14nm,0.1s						
ELOB	**Lobios**	6.16	335	P	**Pn**	13 26 03.0	+2.5
	comp=N,1.6nm,0.1s,SNR=11						
ELOB				S	**Sn**	13 27 06.5	-3.0
	comp=N,8.8nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	6.32	334	P	**Pn**	13 26 05.4	+2.7
PGAV				S	**Sn**	13 27 11.2	-2.3
	comp=N,11nm,0.7s						
PGAV	**Gavieira, Arco**	6.32	334	*e*P	**Pn**	13 26 05.4	+2.7
PGAV				*e*S	**Sn**	13 27 11.2	-2.3
PGAV				A	A	13 27 16.5	
	comp=N,11nm,0.7s						
EZAM	**Zamans**	6.63	332	P	**Pn**	13 26 09.0	+2.1
	comp=N,1.7nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	13 27 17.7	-3.3
	comp=N,3.6nm,0.2s,SNR=7.9						
EPOB	**Poblet**	6.64	40	P	**Pn**	13 26 10.0	+2.9
	comp=N,2.7nm,0.2s,SNR=9.0						
EPOB				S	**Sn**	13 27 18.1	-3.2
	comp=N,2.6nm,0.2s,SNR=7.9						
EARA	**Aranguren**	6.80	19	S	**Sn**	13 27 22.1	-3.2
	comp=N,10nm,0.2s,SNR=4.7						
ELAN	**Lanestosa**	6.92	7	P	**Pn**	13 26 14.2	+3.2
	comp=N,1.4nm,0.2s,SNR=14						
ELAN				S	**Sn**	13 27 24.8	-3.4
	comp=N,1.4nm,0.1s,SNR=7.9						
EARI	**Arriondas**	6.96	356	P	**Pn**	13 26 14.4	+2.9
	comp=N,0.6nm,0.1s,SNR=9.1						
EARI				S	**Sn**	13 27 26.0	-3.1
	comp=N,1.3nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	6.99	20	P	**Pn**	13 26 13.5	+1.7
	comp=N,0.4nm,0.1s,SNR=6.1						
EORO				S	**Sn**	13 27 25.8	-4.0
	comp=N,5.5nm,0.2s,SNR=6.0						

EAGO	**Agolada(Pontev**	**7.00**	**338**	P	**Pn**	**13 26 14.8**	**+2.8**
	comp=N,2.3nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**13 27 26.9**	**-3.3**
	comp=N,2.8nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**7.22**	**20**	*e*P	**Pn**	**13 26 17.1**	**+2.2**
SJPF				*e*Sn	Sn	13 27 26.3	-9.0
	comp=N,8.4nm,0.2s						
ETSF	**Etsaut**	**7.22**	**24**	*e*P	**Pn**	**13 26 17.5**	**+2.5**
ETSF				*e*Sn	Sn	13 27 25.9	-10
	comp=N,11nm,0.4s						
EALK	**Alkurruntz**	**7.24**	**18**	S	**Sn**	**13 27 33.5**	**-2.5**
	comp=N,24nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**7.25**	**345**	P	**Pn**	**13 26 18.0**	**+2.6**
	comp=N,2.4nm,0.2s,SNR=7.6						
EPON				S	**Sn**	**13 27 33.2**	**-2.9**
	comp=N,2.7nm,0.1s,SNR=10.0						
ECHI	**Chisagues Biel**	**7.29**	**29**	P	**Pn**	**13 26 17.8**	**+1.8**
	comp=N,0.8nm,0.1s,SNR=4.0						
ECHI				S	**Sn**	**13 27 34.1**	**-3.0**
	comp=N,3.6nm,0.2s,SNR=7.9						
ATE	**Arette**	**7.34**	**22**	P	**Pn**	**13 26 20.3**	**+3.7**
	comp=N,1.4nm,0.1s,SNR=7.9						
ATE				S	**Sn**	**13 27 35.0**	**-3.3**
	comp=N,3.1nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**7.43**	**334**	P	**Pn**	**13 26 20.5**	**+2.7**
	comp=N,1.3nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**13 27 37.3**	**-3.1**
	comp=N,1.7nm,0.1s,SNR=7.9						
CSOR	**Sort**	**7.44**	**34**	P	**Pn**	**13 26 20.5**	**+2.4**
	comp=N,0.8nm,0.1s,SNR=7.9						
CSOR				S	**Sn**	**13 27 37.7**	**-3.2**
	comp=N,8.3nm,0.2s,SNR=11						
CFON	**Fontmartina**	**7.65**	**43**	P	**Pn**	**13 26 23.0**	**+2.1**
	comp=N,0.6nm,0.1s,SNR=7.9						
CFON				S	**Sn**	**13 27 42.2**	**-3.7**
	comp=N,3.5nm,0.2s,SNR=7.9						
EPF	**Esparros**	**7.65**	**28**	*e*P	**Pn**	**13 26 23.7**	**+2.8**
EPF				*e*Sn	Sn	13 27 36.2	-10
	comp=N,8.3nm,0.2s						
CLLI	**Llivia**	**7.92**	**37**	P	**Pn**	**13 26 27.8**	**+3.2**
	comp=N,1.8nm,0.2s,SNR=5.7						
CLLI				S	**Sn**	**13 27 49.4**	**-3.1**
	comp=N,1.7nm,0.2s,SNR=7.9						
MTLF	**Montolieu**	**8.70**	**35**	*e*Sn	Sn	13 28 01.5	-10
	comp=N,3.9nm,0.3s						
LASF	**Ste Croix**	**10.03**	**37**	*e*P	**Pn**	**13 26 56.1**	**+3.0**
PPNO	**Prainha do Nor**	**18.96**	**284**	*e*S	**Sn**	**13 32 22.5**	**+2.9**
PPNO				A	A	13 32 25.8	
	comp=N,10nm,0.2s						
CALA	**Caldeira**	**19.31**	**284**	*e*S	S	13 32 14.5	-7.5
CALA				A	A	13 32 18.5	
	comp=N,12nm,0.3s						

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*IDC **27** 13:42:10.6±10.0, 4°.55N×96°.29E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.3/48, mbtmp3.7/3, ML4.1/1, Error ellipse: s-maj=288.3km s-min=45.3km az=78.0*

*NEIC **27** 13:42:14.5±0.5, 4°.63N±0°.10×96°.2E±0°.3, h35km±16km, mb4.2/7, Error ellipse: s-maj=48.6km s-min=4.2km az=74.0*

ISC 27 13:42:14.4±1.4**, 4°.6N**±0°.1×**96°.2E**±0°.3**, h35km, n11, σ0s.28**/11**, mb4.1**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**3.56**	**156**	Pn	**Pn**	**13 43 07.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**14.05**	**11**	Pn	**Pn**	**13 45 31.6**	**+0.5**
	0.3nm,0.3s,baz=201,slow=12,SNR=9.3						
CMAR	**Chiang Mai Arr**	**14.05**	**11**		**Pn**	**13 45 30.8**	**-0.3**
KK31	**Karatay Array**	**44.58**	**333**	P	**P**	**13 50 23.1**	**0.0**
KK31				IAmb	IAmb	13 50 34.8	
	comp=Z,4.3nm,1.4s						
KKAR	**Karatay Array**	**44.58**	**333**	P	**P**	**13 50 23.1**	**-0.1**
KKAR				IAmb	IAmb	13 50 34.8	
	comp=Z,4.3nm,1.4s						
WB0	**Warramunga Arr**	**44.71**	**124**	P	**P**	**13 50 24.2**	**-0.4**
WB0				IAmb	IAmb	13 50 48.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**44.75**	**124**	P	**P**	**13 50 24.9**	**0.0**
	comp=Z,3.2nm,1.1s,baz=305,slow=8.6,SNR=12						
WB2	**Warramunga Arr**	**44.76**	**124**	P	**P**	**13 50 24.8**	**-0.2**
WB2				IAmb	IAmb	13 50 43.8	
	comp=Z,6.2nm,1.3s						
WR0	**Warramunga Arr**	**44.93**	**124**	P	**P**	**13 50 26.1**	**-0.2**
ASAR	**Alice Springs**	**46.30**	**129**	P	**P**	**13 50 37.4**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=300,slow=7.7,SNR=13						
AS31	**Alice Springs**	**46.30**	**129**	P	**P**	**13 50 37.1**	**0.0**

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*NOU **27** 13:44:52.0, 34°.71S×179°.62W, h315km, mb4.0, South of Kermadec Islands*

WEL 27 13:45:14.4, 36°S±9°×**17°9E**±1°2**, h237km**±14km**, M3.7**/26**, ML4.0**/8**, MLv3.7**/26**, Error ellipse: s-maj=0.0km s-min=0.0km az=102.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.77**	**186**	P	Pn	13 45 53.9	+0.3
MXZ				S	S	13 46 19.8	-4.7
WMGZ	**Waiomatatini S**	**2.02**	**183**	P	Pn	13 45 57.0	+1.1
WMGZ				S	S	13 46 27.8	-0.8
HAZ	**Te Kaha**	**2.05**	**197**	P	Pn	13 45 56.2	+0.1
HAZ				S	S	13 46 26.2	-2.8
PKGZ	**Pakihiroa**	**2.12**	**190**	P	Pn	13 45 57.6	+0.7
PKGZ				S	S	13 46 28.9	-1.4
RUGZ	**Raukumara Rang**	**2.27**	**197**	P	Pn	13 45 58.2	-0.2
RUGZ				S	S	13 46 29.5	-3.6
PUZ	**Puketiti**	**2.28**	**185**	P	Pn	13 45 59.0	+0.6
PUZ				S	S	13 46 30.8	-2.3
TWGZ	**Tauwhareparae**	**2.42**	**190**	P	Pn	13 46 01.2	+1.4
TWGZ				S	S	13 46 34.8	-0.8
OPRZ	**Ohinepanea**	**2.59**	**217**	P	Pn	13 46 02.4	+0.9
MARZ	**Manawahe**	**2.64**	**214**	P	Pn	13 46 03.5	+1.4
MWZ	**Matawai**	**2.66**	**197**	P	Pn	13 46 03.1	+0.7
TKGZ	**Te Karaka**	**2.69**	**191**	P	Pn	13 46 03.5	+0.9
TKGZ				S	S	13 46 38.6	-2.1
CNGZ	**Carnagh Statio**	**2.69**	**185**	P	Pn	13 46 04.1	+1.5
URZ	**Urewera**	**2.71**	**204**	P	Pn	13 46 02.9	+0.1
URZ				S	S	13 46 41.1	+0.2
RAGZ	**Rawiri**	**2.84**	**198**	P	Pn	13 46 05.5	+1.2
RAGZ				S	S	13 46 43.8	+0.1
KARZ	**Kaharoa**	**2.88**	**219**	P	Pn	13 46 06.9	+2.2
KMRZ	**Kaimai**	**2.92**	**225**	P	Pn	13 46 06.1	+1.0
RIGZ	**Rimuhau**	**2.97**	**192**	P	Pn	13 46 06.4	+0.7
RIGZ				S	S	13 46 45.9	-0.3
RRRZ	**Republican Roa**	**3.01**	**212**	P	Pn	13 46 07.5	+1.4
MUGZ	**Murupara**	**3.02**	**207**	P	Pn	13 46 06.8	+0.6
MUGZ				S	S	13 46 45.8	-1.3
TOZ	**Tahuroa Road**	**3.11**	**231**	P	Pn	13 46 08.0	+0.9
SNGZ	**Shannon Statio**	**3.13**	**197**	P	Pn	13 46 08.3	+0.8
SNGZ				S	S	13 46 49.0	-0.4
PRRZ	**Plateau Road**	**3.19**	**212**	P	Pn	13 46 09.3	+1.1
ALRZ	**Allen Road**	**3.27**	**212**	P	Pn	13 46 10.4	+1.4
KNZ	**Kokohu**	**3.29**	**192**	P	Pn	13 46 09.6	+0.4
RAHZ	**Arahi**	**3.32**	**200**	P	Pn	13 46 10.4	+0.8
RAHZ				S	S	13 46 52.5	-0.8
MTHZ	**Maungataniwha**	**3.33**	**203**	P	Pn	13 46 10.2	+0.5
MTHZ				S	S	13 46 53.1	-0.5
MHGZ	**Mahia Peninsul**	**3.39**	**188**	P	Pn	13 46 11.5	+1.1
WHHZ	**Waihua**	**3.43**	**197**	P	Pn	13 46 11.9	+1.0
WHHZ				S	S	13 46 55.4	-0.1
KUTZ	**Kaahu Road**	**3.45**	**218**	P	Pn	13 46 13.1	+2.0
MRHZ	**Matea Rd**	**3.47**	**208**	P	Pn	13 46 11.7	+0.3
HATZ	**Hinemaiaia**	**3.65**	**211**	P	Pn	13 46 14.0	+0.6
WATZ	**Wairara**	**3.67**	**217**	P	Pn	13 46 15.3	+1.7
ARHZ	**Aropaoanui**	**3.67**	**199**	P	Pn	13 46 14.3	+0.7
BKZ	**Black Stump Fm**	**3.73**	**205**	P	Pn	13 46 15.1	+0.6
MCHZ	**McNeill Hill**	**3.92**	**201**	P	Pn	13 46 17.5	+0.9
KWHZ	**Kaweka Forest**	**3.99**	**204**	P	Pn	13 46 18.2	+0.7
KWHZ				S	S	13 47 07.2	-0.2
HIZ	**Hauiti**	**4.00**	**226**	P	Pn	13 46 20.3	+2.9
TMVZ	**Te Maari**	**4.00**	**213**	P	Pn	13 46 18.6	+0.9
ETVZ	**East Tongariro**	**4.02**	**213**	P	Pn	13 46 18.7	+0.8
WTVZ	**West Tongariro**	**4.06**	**214**	P	Pn	13 46 19.2	+0.9
OTVZ	**Oturere**	**4.06**	**213**	P	Pn	13 46 19.3	+0.9
TWVZ	**Taurewa**	**4.09**	**216**	P	Pn	13 46 20.0	+1.3
NGZ	**Ngauruhoe**	**4.10**	**214**	P	Pn	13 46 20.0	+1.1
TUVZ	**Tukino**	**4.15**	**213**	P	Pn	13 46 20.0	+0.6
BHHZ	**Black Hill Sta**	**4.17**	**207**	P	Pn	13 46 18.7	-1.0
FWVZ	**Far West T-bar**	**4.19**	**214**	P	Pn	13 46 20.8	+0.8
KAHZ	**Kahuranaki**	**4.20**	**198**	P	Pn	13 46 20.6	+0.7
KRHZ	**Kereru**	**4.21**	**203**	P	Pn	13 46 20.0	0.0
WNVZ	**Wahianoa**	**4.22**	**213**	P	Pn	13 46 21.0	+0.6
PKVZ	**Pokaka**	**4.31**	**215**	P	Pn	13 46 22.4	+1.1
PXZ	**Pawanui**	**4.43**	**197**	P	Pn	13 46 22.8	+0.2
VRZ	**Vera Road**	**4.48**	**221**	P	Pn	13 46 29.2	+6.0
PNHZ	**Pukenui**	**4.50**	**203**	P	Pn	13 46 23.2	-0.4
WPHZ	**Waipukurau**	**4.57**	**201**	P	Pn	13 46 24.5	+0.1
PRHZ	**Porangahau**	**4.71**	**198**	P	Pn	13 46 26.1	+0.1
TSZ	**Takapari Road**	**4.71**	**205**	P	Pn	13 46 26.0	-0.2
WAZ	**Wanganui**	**4.85**	**214**	P	Pn	13 46 28.8	+0.9
DVHZ	**Dannevirke**	**4.87**	**202**	P	Pn	13 46 27.7	-0.4
ANWZ	**Angora Road**	**4.93**	**199**	P	Pn	13 46 28.8	0.0
NEZ	**North Egmont**	**4.94**	**224**	P	Pn	13 46 32.6	+3.5
POWZ	**Post Office Ro**	**5.08**	**205**	P	Pn	13 46 30.4	-0.2
PRWZ	**Pori Road**	**5.16**	**202**	P	Pn	13 46 31.3	-0.4
BFZ	**Birch Farm**	**5.20**	**200**	P	Pn	13 46 31.8	-0.3
MRZ	**Mangatainoka R**	**5.38**	**205**	P	Pn	13 46 33.3	-1.2
TIWZ	**Tintock**	**5.39**	**202**	P	Pn	13 46 34.1	-0.4
HOWZ	**Holdsworth Sta**	**5.62**	**204**	P	Pn	13 46 36.5	-0.9
OGWZ	**Otaki Gorge**	**5.67**	**207**	P	Pn	13 46 37.3	-0.7
TMWZ	**Te Maipa**	**5.69**	**201**	P	Pn	13 46 37.5	-0.9
KIW	**Kapiti Island**	**5.80**	**208**	P	Pn	13 46 38.6	-1.0
MTW	**Mount Morrison**	**5.86**	**203**	P	Pn	13 46 39.1	-1.2
CAW	**Cannon Point**	**5.96**	**206**	P	Pn	13 46 40.1	-1.5
TRWZ	**Traveller**	**6.02**	**201**	P	Pn	13 46 41.7	-0.7
PAWZ	**Paruwai Farm**	**6.08**	**203**	P	Pn	13 46 42.0	-1.2
MSWZ	**Moikau Station**	**6.17**	**204**	P	Pn	13 46 43.2	-1.1
DUWZ	**D'Urville Isla**	**6.17**	**215**	P	Pn	13 46 43.1	-1.2
WEL	**Wellington**	**6.22**	**207**	P	Pn	13 46 43.9	-1.0
BHW	**Baring Head**	**6.29**	**206**	P	Pn	13 46 44.2	-1.6
PLWZ	**Palliser**	**6.31**	**203**	P	Pn	13 46 44.9	-1.2
TCW	**Tory Channel**	**6.35**	**210**	P	Pn	13 46 45.2	-1.4
TUWZ	**Tuamarina**	**6.67**	**211**	P	Pn	13 46 49.1	-1.5
QRZ	**Quartz Range**	**6.89**	**221**	P	Pn	13 46 52.1	-1.3
BSWZ	**Blackbirch Sta**	**6.94**	**210**	P	Pn	13 46 53.3	-0.7
THZ	**Tophouse**	**7.40**	**215**	P	Pn	13 46 59.4	-0.6
KHZ	**Kahutara**	**7.66**	**209**	P	Pn	13 47 01.7	-1.5
DSZ	**Denniston Nort**	**7.93**	**219**	P	Pn	13 47 07.0	+0.4
GVZ	**Greta Valley S**	**8.33**	**209**	P	Pn	13 47 10.0	-1.7
LTZ	**Lake Taylor**	**8.49**	**213**	P	Pn	13 47 12.6	-1.3
OKCZ	**Okains Bay**	**8.97**	**206**	P	Pn	13 47 19.5	-0.3
AKCZ	**Akaroa Harbour**	**9.15**	**206**	P	Pn	13 47 21.3	-0.9

IDC 27 13:51:05.0±5.1**, 24°.13N**×**94°.11E, h0km, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.0**/46**, mbtmp3.2**/2**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/56**, Error ellipse: s-maj=432.9km s-min=31.4km az=60.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**24.52**	**340**	P	P	13 56 26.1	0.0
	0.3nm,0.8s,baz=146,slow=8.4,SNR=2.0						
AAK	**Ala-Archa**	**24.57**	**323**	LR	LR	14 07 23.0	
	comp=Z,326nm,20.0s,baz=133,slow=40						
WRA	**Warramunga Arr**	**58.78**	**135**	P	P	14 01 04.9	-0.4
	0.2nm,0.3s,baz=323,slow=7.6,SNR=5.1						
ASAR	**Alice Springs**	**61.23**	**138**	P	P	14 01 22.3	+0.2
	0.3nm,0.9s,baz=314,slow=6.4,SNR=5.9						

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*UPA **27** 14:07:05.9±1.3, 8°.77N×84°.14W, h0km±6km, MW3.9*

*UCR **27** 14:07:05.8±1.8, 8°.72N×84°.16W, h5km, MW3.6*

ISC 27 14:07:05.8±1.8**, 8°.76N**±0°.06×**84°.15W**±0°.06**, h5km**±12km**, n24, σ0s.52**/36**, 3C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDDO	**Dominical**	**0.56**	**30**	*e*P	**Pg**	**14 07 16.5**	**-0.2**
RIOS	**Rincon, Osa**	**0.63**	**96**	*e*P	**Pb**	**14 07 18.9**	**-0.5**
RIOS				*i* S	**Sb**	**14 07 28.6**	**+0.1**
EDPN	**Palmar Norte**	**0.71**	**74**	*e*P	**Pg**	**14 07 20.0**	**+0.4**
EDPN				*e*S	**Sb**	**14 07 31.5**	**+0.6**
PTJ1	**Puerto Jimnez**	**0.87**	**105**	*e*P	**Pb**	**14 07 23.9**	**+0.5**
PTJ1				*i* S	**Sn**	**14 07 37.2**	**-0.7**
CDM	**Cerro de Muert**	**0.87**	**26**	*e*P	**Pg**	**14 07 22.7**	**0.0**
CDM				*e*S	**Sb**	**14 07 35.8**	**-0.2**
PIRO	**Carate, Puerto**	**0.88**	**114**	⇑*e*P	**Pb**	**14 07 23.2**	**-0.4**
PIRO				*i* S	**Sn**	**14 07 37.2**	**-0.9**
PIRO	**Carate, Puerto**	**0.88**	**114**	*e*P	**Pg**	**14 07 22.9**	**+0.2**
PIRO				*e*S	**Sb**	**14 07 36.1**	**+0.4**
EDBA	**Buenos Aires**	**0.95**	**65**	*e*P	**Pg**	**14 07 23.6**	**-0.5**
LCR2	**La Lucha 2**	**0.98**	**8**	⇓*e*P	**Pg**	**14 07 24.6**	**-0.1**
LCR2				*e*S	**Sb**	**14 07 39.3**	**+0.3**
DRK0	**Durika**	**1.02**	**61**	⇓*i*P	**Pg**	**14 07 25.4**	**-0.1**
DRK0				*i* S	**Sb**	**14 07 40.8**	**+0.7**
DRK0	**Durika**	**1.02**	**61**	*e*P	**Pg**	**14 07 25.1**	**-0.3**
RIMA	**Rio Macho**	**1.04**	**16**	*e*P	**Pg**	**14 07 25.1**	**-0.6**
POTG	**Potrero Grande**	**1.06**	**74**	*e*P	**Pg**	**14 07 26.1**	**-0.1**
HDC	**Heredia**	**1.23**	**2**	*e*P	**Pg**	**14 07 29.1**	**-0.4**
HDC				*e*S	**Sn**	**14 07 47.8**	**+0.7**
MRVA	**Moravia de Chi**	**1.26**	**33**	*e*P	**Pg**	**14 07 29.2**	**-0.9**
CVTR	**Volcan Turrial**	**1.31**	**17**	*e*P	**Pg**	**14 07 30.4**	**-0.6**
BRU2	**Volcan**	**1.44**	**89**	⇓*i*P	**Pn**	**14 07 32.4**	**-0.4**
BRU2				*i* S	**Sn**	**14 07 53.0**	**+0.8**
BRU2	**Volcan**	**1.44**	**89**	*e*P	**Pn**	**14 07 32.2**	**-0.6**
BC3P	**Paso Ancho**	**1.52**	**88**	⇑*e*P	**Pn**	**14 07 33.7**	**-0.3**
BC3P				*e*S	**Sg**	**14 07 55.6**	**+0.8**
BCO2	**Palmira**	**1.60**	**91**	⇑*i*P	**Pn**	**14 07 34.6**	**-0.4**
BCO2				*i* S	**Sb**	**14 07 57.1**	**+0.4**
DVD	**David**	**1.71**	**101**	*e*P	**Pn**	**14 07 36.0**	**-0.3**
JTS	**Las Juntas de**	**1.71**	**333**	*e*P	**Pn**	**14 07 37.0**	**+0.6**
JTS	**Las Juntas de**	**1.71**	**333**	*e*P	**Pb**	**14 07 37.7**	**-0.2**
RGM0	**Gandoca**	**1.73**	**61**	*e*S	**Sb**	**14 08 00.3**	**+0.1**

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*IDC **27** 14:20:34.6±1.2, 33°.42S×178°.67W, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.0/33, mbtmp4.2/5, ML4.1/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=33.9km s-min=32.0km az=72.0*

*NEIC **27** 14:20:36.3±1.0, 33°.6S±0°.1×178°.7W±0°.2, h10km±2km, mb4.5/9, Error ellipse: s-maj=27.9km s-min=22.3km az=118.0*

*WEL **27** 14:21:40.0, 37°S±31°×17°8E±°, h62km±18km, M2.9/28, ML3.1/27, MLv2.9/28, Error ellipse: s-maj=0.0km s-min=0.0km az=7.5*

ISC 27 14:20:39.8±1.0**, 33°.72S**±0°.09×**178°.5W**±0°.1**, h41km, n74, σ1s.28**/68**, mb4.3**/7**, MS3.6**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKGZ	**Pakihiroa**	**5.01**	**213**	P	**Pn**	**14 21 52.9**	**+0.4**
HAZ	**Te Kaha**	**5.04**	**216**	P	**Pn**	**14 21 52.4**	**-0.5**
RUGZ	**Raukumara Rang**	**5.26**	**215**	P	**Pn**	**14 21 55.3**	**-0.7**
TWGZ	**Tauwhareparae**	**5.29**	**212**	P	**Pn**	**14 21 57.1**	**+0.7**
CNGZ	**Carnagh Statio**	**5.46**	**208**	P	**Pn**	**14 21 58.7**	**+0.2**
TKGZ	**Te Karaka**	**5.57**	**211**	P	**Pn**	**14 21 59.9**	**-0.2**
MWZ	**Matawai**	**5.62**	**214**	P	**Pn**	**14 21 59.2**	**-1.7**
OPRZ	**Ohinepanea**	**5.76**	**223**	P	**Pn**	**14 22 03.8**	**+1.1**
URZ	**Urewera**	**5.77**	**217**	Pn	**Pn**	**14 22 02.3**	**-0.5**
	4.7nm,0.3s,baz=171,slow=1.4,SNR=41						
URZ				Sn	**Sn**	**14 23 07.6**	**0.0**
	5.1nm,0.3s,baz=163,slow=20,SNR=7.1						
URZ	**Urewera**	**5.77**	**217**	P	**Pn**	**14 22 02.3**	**-0.5**
RAGZ	**Rawiri**	**5.81**	**214**	P	**Pn**	**14 22 04.0**	**+0.6**
RIGZ	**Rimuhau**	**5.83**	**210**	P	**Pn**	**14 22 03.9**	**+0.3**
TGRZ	**Tauranga**	**5.85**	**225**	P	**Pn**	**14 22 05.4**	**+1.4**
KARZ	**Kaharoa**	**6.06**	**223**	P	**Pn**	**14 22 09.0**	**+2.1**
SNGZ	**Shannon Statio**	**6.07**	**213**	P	**Pn**	**14 22 07.2**	**+0.1**
MUGZ	**Murupara**	**6.11**	**218**	P	**Pn**	**14 22 06.7**	**-0.8**
RTZ	**Ruatahuna**	**6.11**	**216**	P	**Pn**	**14 22 06.9**	**-0.7**
KMRZ	**Kaimai**	**6.12**	**226**	P	**Pn**	**14 22 08.8**	**+1.1**
KNZ	**Kokohu**	**6.13**	**209**	P	**Pn**	**14 22 06.2**	**-1.5**
RAHZ	**Arahi**	**6.30**	**213**	P	**Pn**	**14 22 10.5**	**+0.3**
TOZ	**Tahuroa Road**	**6.32**	**229**	P	**Pn**	**14 22 12.5**	**+2.2**
EPAZ	**Eden Park BICE**	**6.37**	**238**	P	Pn	14 22 23.2	+12
MRHZ	**Matea Rd**	**6.56**	**217**	P	**Pn**	**14 22 12.5**	**-1.2**
NMHZ	**Naumai**	**6.57**	**214**	P	**Pn**	**14 22 13.9**	**0.0**
ARHZ	**Aropaoanui**	**6.62**	**212**	P	**Pn**	**14 22 14.7**	**+0.1**
OUZ	**Omahuta**	**6.71**	**255**	Pn	**Pn**	**14 22 16.4**	**+0.7**
BKZ	**Black Stump Fm**	**6.78**	**215**		**Pn**	**14 22 15.7**	**-1.0**
BKZ	**Black Stump Fm**	**6.78**	**215**	P	**Pn**	**14 22 15.5**	**-1.2**
MCHZ	**McNeill Hill**	**6.90**	**213**	P	**Pn**	**14 22 18.4**	**0.0**
RITZ	**Rihia Road**	**6.95**	**219**	P	**Pn**	**14 22 19.3**	**+0.2**
KWHZ	**Kaweka Forest**	**7.01**	**214**	P	**Pn**	**14 22 19.3**	**-0.6**
KAHZ	**Kahuranaki**	**7.11**	**210**	P	**Pn**	**14 22 20.1**	**-1.2**
TMVZ	**Te Maari**	**7.14**	**219**	P	**Pn**	**14 22 21.2**	**-0.5**
ETVZ	**East Tongariro**	**7.15**	**219**	P	**Pn**	**14 22 21.7**	**-0.2**
OTVZ	**Oturere**	**7.19**	**219**	P	**Pn**	**14 22 21.8**	**-0.7**
WTVZ	**West Tongariro**	**7.20**	**220**	P	**Pn**	**14 22 25.0**	**+2.5**
HIZ	**Hauiti**	**7.21**	**226**	Pn	**Pn**	**14 22 21.6**	**-1.0**
HIZ	**Hauiti**	**7.21**	**226**	P	**Pn**	**14 22 23.5**	**+1.0**
KRHZ	**Kereru**	**7.21**	**213**	P	**Pn**	**14 22 21.3**	**-1.4**
BHHZ	**Black Hill Sta**	**7.24**	**216**	P	**Pn**	**14 22 22.7**	**-0.3**
WNVZ	**Wahianoa**	**7.35**	**219**	P	**Pn**	**14 22 24.5**	**-0.1**
MTVZ	**Mangateitei**	**7.46**	**219**	P	Pn	14 22 20.7	-5.3
WAZ	**Wanganui**	**7.98**	**219**	P	**Pn**	**14 22 31.7**	**-1.5**
BFZ	**Birch Farm**	**8.12**	**210**	Pn	**Pn**	**14 22 33.4**	**-1.7**
BFZ	**Birch Farm**	**8.12**	**210**	P	**Pn**	**14 22 33.6**	**-1.5**
MRZ	**Mangatainoka R**	**8.39**	**213**	P	**Pn**	**14 22 36.5**	**-2.2**
THZ	**Tophouse**	**10.53**	**218**	Pn	**Pn**	**14 23 06.6**	**-1.5**
KHZ	**Kahutara**	**10.71**	**214**	Pn	**Pn**	**14 23 09.8**	**-0.8**
RPZ	**Rata Peaks**	**12.88**	**216**	Pn	Pn	14 23 35.1	-5.1
	0.3nm,0.3s,baz=354,slow=16,SNR=1.3						
RPZ				Sn	Sn	14 25 49.8	-12
	0.3nm,0.3s,baz=77,slow=9.8,SNR=1.2						
FOZ	**Fox Glacier**	**13.39**	**220**	Pn	**Pn**	**14 23 46.3**	**-0.8**
DZM	**Mont Dzumac**	**17.64**	**307**	LR	LR	14 30 29.0	
	comp=Z,209nm,18.7s,baz=146,slow=34						
RAR	**Rarotonga**	**20.72**	**58**	LR	LR	14 31 08.6	
	comp=Z,16nm,21.6s,baz=302,slow=31						
STKA	**Stephens Creek**	**33.47**	**262**	LR	LR	14 40 28.3	
	comp=Z,114nm,18.2s,baz=31,slow=36						
CTAO	**Charters Tower**	**34.07**	**284**	P	**P**	**14 27 20.8**	**+0.4**
CTAO				IAmb	IAmb	14 27 30.7	
	comp=Z,9.7nm,1.2s						
PMG	**Port Moresby**	**39.77**	**299**	P	**P**	**14 28 05.9**	**-2.9**
AS31	**Alice Springs**	**42.63**	**271**	P	**P**	**14 28 31.7**	**-0.7**
ASAR	**Alice Springs**	**42.63**	**271**	P	**P**	**14 28 31.9**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=111,slow=7.4,SNR=34						
ASAR	**Alice Springs**	**42.63**	**271**	P	**P**	**14 28 31.3**	**-1.0**
WR0	**Warramunga Arr**	**43.74**	**276**	P	**P**	**14 28 40.5**	**-0.9**
WR0				IAmb	IAmb	14 28 41.5	
	comp=Z,7.6nm,1.1s						
WB2	**Warramunga Arr**	**43.91**	**276**	P	**P**	**14 28 41.5**	**-1.1**
WRAB	**Tennant Creek**	**43.91**	**276**	P	**P**	**14 28 40.7**	**-2.0**
WRA	**Warramunga Arr**	**43.92**	**276**	P	**P**	**14 28 41.6**	**-1.2**
	comp=Z,2.8nm,0.6s,baz=115,slow=7.7,SNR=22						
WRA	**Warramunga Arr**	**43.92**	**276**	P	**P**	**14 28 41.5**	**-1.2**
WB0	**Warramunga Arr**	**43.95**	**276**	P	**P**	**14 28 41.9**	**-1.1**
WB0				IAmb	IAmb	14 28 44.7	
	comp=Z,7.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.02**	**273**	P	**P**	**14 29 44.9**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=68,slow=5.4,SNR=1.9						
QSPA	**South Pole Qui**	**56.40**	**180**	P	**P**	**14 30 20.2**	**+3.3**
	comp=Z,1.4nm,0.8s,baz=71,slow=2.8,SNR=7.9						
QSPA	**South Pole Qui**	**56.40**	**180**	P	**P**	**14 30 20.0**	**+3.1**
QSPA				IAmb	IAmb	14 30 44.0	
	comp=Z,5.8nm,1.2s						
NNA	**Nana**	**92.90**	**106**	LR	LR	15 06 49.1	
	comp=Z,24nm,18.8s,baz=306,slow=30						
KURBB	**Kurchatov Arra**	**123.04**	**312**	PKP	**PKPdf**	**14 39 29.8**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=121,slow=0.1,SNR=3.6						
FINES	**FINESS Array B**	**148.08**	**338**	PKPbc	**PKPbc**	**14 40 20.8**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=59,slow=3.7,SNR=8.0						
NOA	**NORSAR Array B**	**151.95**	**350**	PKPbc	**PKPbc**	**14 40 28.5**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=14,slow=4.1,SNR=2.0						
AKASG	**Malin Array Be**	**153.59**	**318**	PKPbc	**PKiKP**	**14 40 35.0**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=64,slow=2.4,SNR=1.5						
BRTR	**Keskin Array B**	**153.65**	**292**	PKPbc	**PKiKP**	**14 40 35.5**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=147,slow=2.7,SNR=6.3						
BRTR	**Keskin Array B**	**153.65**	**292**		**PKPbc**	**14 40 35.0**	**+0.7**

KRNET 27 14:42:40.2±0.1**, 42°.30N**×**79°.47E, h12km, mb2.2, 8C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.82**	**283**	⇑*i*P	Pg	14 42 55.8	-0.2
	baz=84						
PRZ				⇑*i*S	Sb	14 43 07.7	+0.2
	baz=84						
ANVS	**Anan'yevo**	**1.42**	**290**	⇑*i*P	Pg	14 43 07.5	0.0
	baz=91						
ANVS				⇑*i*S	Sg	14 43 26.9	+1.0
	baz=91						
KDJ	**Kajisay**	**1.71**	**265**	⇑*i*P	Pb	14 43 12.1	+0.4
	baz=65						
KDJ				⇑*i*S	Sg	14 43 35.7	+0.4
	baz=65						
BOOM	**Boomskoye usch**	**2.62**	**275**	⇑*i*P	Pb	14 43 26.1	-1.1
	baz=75						
BOOM				⇑*i*S	Sb	14 43 59.7	+0.2
	baz=75						

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*NNC **27** 14:43:25.2±1.0, 43°.10N×78°.46E, h0km, mpv2.3, Error ellipse: s-maj=8.1km s-min=6.7km az=133.0*

SOME 27 14:43:20.9, 43°.05N×**78°.17E, h15km, 2C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.17**	**87**	*e*P	Pg	14 43 25.6	+0.3
	3.4nm,0.1s						
SATY				*e*S	Sb	14 43 29.0	-0.3
	22nm,0.1s						
SATY	**Saty**	**0.17**	**87**	P	Pg	14 43 25.5	+0.2
	3.4nm,0.1s						
SATY				S	Sb	14 43 29.0	-0.3
	22nm,0.1s						
ZHN	**Zhinishke**	**0.23**	**59**	*e*P	Pg	14 43 25.9	-0.2
	1.1nm,0.1s						
ZHN				*e*S	Sg	14 43 29.6	0.0
	12nm,0.1s						
ZHN	**Zhinishke**	**0.23**	**59**	P	Pg	14 43 25.9	-0.2
	67nm,0.5s						
ZHN				S	Sg	14 43 29.6	0.0
	10nm,0.1s						
KURS	**Kuram**	**0.44**	**0**	*e*P	Pg	14 43 29.6	-0.1
	1.1nm,0.1s						
KURS				*e*S	Sg	14 43 35.8	+0.1
	0.8nm,0.1s						
KPKS	**Kokpek**	**0.56**	**42**	*e*P	Pg	14 43 31.4	-0.6
	3.6nm,0.1s						
KPKS				*e*S	Sg	14 43 39.1	-0.5
	22nm,0.2s						
UZB	**Uzynbulak**	**0.63**	**81**	*e*P	Pg	14 43 32.7	-0.7
	1.2nm,0.1s						
UZB				*e*S	Sg	14 43 41.2	-0.6
	11nm,0.1s						
UZB	**Uzynbulak**	**0.63**	**81**	P	Pg	14 43 32.7	-0.7
	1.2nm,0.1s						
UZB				S	Sg	14 43 41.2	-0.6
	11nm,0.1s						
PDGK	**Podgornoye**	**1.01**	**73**	⇑P	Pb	14 43 38.8	-1.3
	0.2nm,0.2s						
PDGK				⇑S	Sb	14 43 51.7	-1.5
	0.9nm,0.6s						
MNBS	**Baschi**	**1.04**	**9**	*e*P	Pb	14 43 40.6	-0.1
	0.5nm,0.1s						
MNBS				*e*S	Sg	14 43 54.5	-0.2
	2.2nm,0.2s						
MNBS	**Baschi**	**1.04**	**9**	P	Pb	14 43 40.6	-0.1
	0.5nm,0.1s						
MNBS				S	Sg	14 43 54.5	-0.2
	2.2nm,0.2s						
KTMS	**Ketmen**	**1.65**	**75**	*e*P	Pb	14 43 50.5	-0.5
	1.0nm,0.1s						
KTMS				*e*S	Sb	14 44 11.8	+0.2
	1.2nm,0.2s						
KTMS	**Ketmen**	**1.65**	**75**	P	Pb	14 43 50.5	-0.5
	1.0nm,0.1s						
KTMS				S	Sb	14 44 11.8	+0.2
	1.2nm,0.2s						

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*SOME **27** 14:50:29.6, 42°.50N×64°.55E, h5km*

*IDC **27** 14:50:32.2±1.6, 41°.67N×64°.68E, h0km, mb3.7/2, mb1 3.7/8, mb1mx3.4/43, mbtmp3.6/8, ML3.3/6, Error ellipse: s-maj=22.3km s-min=13.4km az=26.0*

*NNC **27** 14:50:38.1±2.9, 42°.48N×65°.10E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=32.8km s-min=9.6km az=28.0*

ISC 27 14:50:38.6±1.3**, 42°.4N**±0°.1×**65°.01E**±0°.06**, h10km, n18, σ2s.06**/24**, 8C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHM	**Chimkent**	**3.40**	**90**	*e*P	**Pb**	**14 51 38.2**	**-0.8**
	6.8nm,1.0s						
CHM				*e*S	**Sg**	**14 52 27.5**	**-0.4**
	224nm,0.4s						
IUG	**Iuzhnay**	**3.73**	**92**	*e*P	**Pb**	**14 51 45.5**	**+0.9**
	32nm,0.4s						
IUG				*e*S	**Sg**	**14 52 40.2**	**+1.8**
	164nm,0.6s						
KK31	**Karatay Array**	**4.12**	**78**	Pn	**Pn**	**14 51 40.0**	**-1.5**

	1.6nm,0.3s,baz=4.5,slow=30,SNR=40						
KK31				⇑Pg	Pb	14 51 51.2	+0.2
	1.6nm,0.3s,baz=252,slow=18,SNR=14						
KK31				⇑Lg	Lg	14 52 50.1	
	12nm,0.5s,baz=253,slow=27,SNR=3.5						
AAK	Ala-Archa	7.01	85	Pn	Pn	14 52 21.6	+0.1
	0.3nm,0.3s,baz=198,slow=7.9,SNR=3.5						
AAK				Lg	Lg	14 54 21.7	
	0.7nm,0.3s,baz=11,slow=21,SNR=1.7						
AAK	Ala-Archa	7.01	85	Pg	Pb	14 52 44.5	+3.9
	2.1nm,0.6s						
AAK				⇓Lg	Lg	14 54 19.7	
	11nm,0.9s						
AB31	Akbulak array	7.73	335	⇑Pn	Pn	14 52 32.0	+1.0
	0.7nm,0.2s,baz=155,slow=14,SNR=100						
AB31				⇓Sn	Sn	14 53 58.0	-0.6
	4.2nm,0.6s,baz=141,slow=26,SNR=4.2						
AB31				⇑Lg	Lg	14 54 46.5	
	9.6nm,0.8s,baz=155,slow=26,SNR=3.5						
TKM2	Tokmak 2	7.82	82	⇑Lg	Lg	14 54 45.6	
AKTO	Aktyubinsk	9.39	331	Pn	Pn	14 52 56.0	+2.2
	0.6nm,0.3s,baz=125,slow=9.1,SNR=10						
AKTO				Sn	Sn	14 54 41.4	+2.1
	0.8nm,0.3s,baz=255,slow=23,SNR=9.3						
AKTO				Lg	Lg	14 55 49.0	
	0.4nm,0.3s,baz=40,slow=22,SNR=2.4						
AKTO	Aktyubinsk	9.39	331	⇓Pn	Pn	14 52 56.2	+2.4
	7.1nm,1.0s						
AKTO				⇑Sn	Sn	14 54 40.3	+1.0
	7.1nm,0.8s						
BVAR	Borovoye Array	11.24	17	Pn	Pn	14 53 21.7	+2.5
	1.3nm,0.3s,baz=90,slow=3.0,SNR=18						
BVAR				Sn	Sn	14 55 20.9	-3.9
	0.8nm,0.3s,baz=200,slow=24,SNR=4.2						
BRVK	Borovoye	11.25	17	⇑Pn	Pn	14 53 20.8	+1.5
BRVK				⇑Sn	Sn	14 55 23.3	-1.7
KURBB	Kurchatov Arra	12.42	44	Pn	Pn	14 53 34.7	-0.5
	0.0nm,0.3s,baz=234,slow=13,SNR=4.1						
KURBB				Lg	Lg	14 57 23.5	
	0.1nm,0.3s,baz=238,slow=38,SNR=5.3						
MK31	Makanchi Array	13.08	64	Pn	Pn	14 53 42.8	-1.6
	0.4nm,0.4s,baz=250,slow=13,SNR=9.9						
MKAR	Makanchi Array	13.08	64	Pn	Pn	14 53 41.4	-2.9
	0.2nm,0.3s,baz=248,slow=15,SNR=11						
MKAR				Lg	Lg	14 57 34.9	
	0.1nm,0.3s,baz=248,slow=29,SNR=4.3						
KBZ	Khabaz	16.22	282	Pn	Pn	14 54 23.0	-3.3
	0.1nm,0.3s,baz=76,slow=23,SNR=2.5						
ZALV	Zalesovo Beam	17.49	42	P	P	14 54 44.1	+0.5
	0.2nm,0.3s,baz=238,slow=12,SNR=5.4						
TORD	Torodi Ar. Bea	61.58	262	P	P	15 00 48.2	-8.1
	0.8nm,0.5s,baz=44,slow=9.4,SNR=1.7						
YKA	Yellowknife Ar	75.47	360	P	P	15 02 22.1	-0.2
	0.3nm,0.7s,baz=359,slow=6.3,SNR=6.1						

*ATH **27** 14:54:31.1, 34°.48N×26°.40E, h30^{km}±31^{km}, ML3.5/5, Error ellipse: s-maj=31.6km s-min=4.1km az=0.0*

*THE **27** 14:54:33.4, 34°.66N×26°.35E, h0^{km}±2^{km}, ML3.4/5, Error ellipse: s-maj=3.9km s-min=1.4km az=171.0*

*IDC **27** 14:55:04.1±4.7, 36°.01N×26°.68E, h235^{km}±35^{km}, mb3.0/6, mb1 3.0/9, mb1mx2.8/48, mbtmp3.5/9, MS2.5/1, Ms1 2.5/1, ms1mx2.3/15, Error ellipse: s-maj=59.5km s-min=20.9km az=1.0*

ISC 27 14:54:32.9±1.9**, 34°.68N**±0°.07×**26°.38E**±0°.05**, h13**^{km}±10^{km}**, n33, σ1^{s}.03**/41**, mb3.5**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.45	343	P	Pb	14 54 42.3	-0.5
ZKR				S	Sn	14 54 51.6	-1.6
ZKR				AML	AML	14 54 56.4	
	comp=N,4355µm,0.4s						
ZKR				AML	AML	14 54 58.3	
	comp=E,7984µm,0.4s						
ZKR	Zakros	0.45	343	P	Pb	14 54 42.4	-0.4
ZKR				S	Sb	14 54 50.5	+1.0
	comp=E,3µm,0.3s						
STIA	Sitia Lasithi	0.57	335	P	Pb	14 54 44.4	-0.4
STIA				S	Sn	14 54 54.7	-1.4
NPS	Neapolis	0.85	313	P	Pg	14 54 49.5	+0.1
NPS				S	Sn	14 55 03.5	+0.3
NPS				AML	AML	14 55 04.9	
	comp=E,8353µm,0.6s						
NPS				AML	AML	14 55 05.2	
	comp=N,5808µm,0.5s						
NPS	Neapolis	0.85	313	P	Pg	14 54 49.6	+0.1
NPS				S	Sn	14 55 03.5	+0.3
	comp=N,4µm,0.6s						
LAST	Lasithi	0.88	303	P	Pg	14 54 49.1	-0.9
LAST				S	Sn	14 55 04.4	+0.5
LAST				AML	AML	14 55 05.2	
	comp=N,5987µm,0.5s						
LAST				AML	AML	14 55 05.5	
	comp=E,2979µm,0.5s						
LAST	Lasithi	0.88	303	P	Pg	14 54 49.3	-0.7
LAST				S	Sn	14 55 04.3	+0.4
	comp=E,2µm,0.5s						
KARP	Karpathos	1.07	36	P	Pn	14 54 54.2	+0.4
KARP				AML	AML	14 55 19.8	
	comp=E,3102µm,0.8s						
KARP				AML	AML	14 55 21.2	
	comp=N,2806µm,0.6s						
KARP	Karpathos	1.07	36	P	Pn	14 54 54.2	+0.4
KARP				S	Sn	14 55 10.3	+1.7
	comp=N,1µm,0.8s						
HRKL	Herakleio	1.22	301	P	Pg	14 54 56.7	+0.2
SIVA	Sivas	1.33	285	P	Pn	14 54 56.8	-0.5
SIVA	Sivas	1.33	285	P	Pn	14 54 57.3	0.0
IDI	Anoyia	1.36	297	P	Pn	14 54 58.1	+0.3
IDI	Anoyia	1.36	297	P	Pn	14 54 58.1	+0.3
ANAF	Anafi Island	1.74	344	P	Pg	14 55 05.6	-0.8
ANAF				S	Sg	14 55 31.1	+2.1
ANAF	Anafi Island	1.74	344	P	Pb	14 55 05.0	+0.2
ANAF				S	Sg	14 55 28.1	-0.9
	comp=N,1µm,0.4s						
SANT	Santorini	1.84	336	P	Pg	14 55 07.4	-0.9
SANT	Santorini	1.84	336	P	Pb	14 55 05.9	-0.7
GVD	Gavdhos	1.89	275	P	Pn	14 55 06.2	+1.2
GVD				AML	AML	14 55 39.1	
	comp=E,1902µm,0.5s						
GVD				AML	AML	14 55 40.5	
	comp=N,1584µm,0.3s						
GVD	Gavdhos	1.89	275	P	Pn	14 55 06.0	+1.0
VAM	Vamos	1.93	293	P	Pn	14 55 07.2	+1.7
VAM	Vamos	1.93	293	P	Pn	14 55 06.4	+0.9
IMMV	Iera Moni Meta	2.12	292	P	Pb	14 55 10.3	-0.9
IMMV	Iera Moni Meta	2.12	292	P	Pn	14 55 08.6	+0.5
BRTR	Keskin Array B	7.67	47	P	Pb	14 56 39.9	-6.0
	comp=N,0.1nm,0.3s,baz=228,slow=13,SNR=4.6						
BRTR				LR	LR	15 00 19.1	
	comp=N,35nm,18.5s,baz=231,slow=48						
AKASG	Malin Array Be	16.14	7	P	P	14 58 23.4	+0.7
	comp=N,0.9nm,0.3s,baz=193,slow=11,SNR=4.2						
GERES	GERESS Array B	16.98	330	P	P	14 58 34.0	+1.9
	comp=N,0.2nm,0.3s,baz=141,slow=11,SNR=2.3						
ESDC	Sonseca Array	24.62	291	P	P	15 00 01.7	+8.6
	comp=N,0.3nm,0.5s,baz=83,slow=12,SNR=2.0						
ARCES	ARCESS Array B	34.91	359	P	P	15 01 21.5	-2.4
	comp=N,0.9nm,0.7s,baz=191,slow=8.3,SNR=1.9						
KURBB	Kurchatov Arra	40.64	51	P	P	15 02 14.2	+1.5
	comp=N,0.5nm,0.7s,baz=277,slow=9.0,SNR=4.6						
MKAR	Makanchi Array	43.20	56	P	P	15 02 33.2	-0.4
	comp=N,0.5nm,0.6s,baz=271,slow=6.1,SNR=6.1						
ZALV	Zalesovo Beam	44.61	46	P	P	15 02 44.6	-0.2
	comp=N,0.4nm,0.3s,baz=251,slow=9.0,SNR=2.1						
SONM	Songino Array	59.01	51	P	P	15 04 32.1	-0.5
	comp=N,0.2nm,0.4s,baz=282,slow=9.9,SNR=3.7						

IDC 27 15:03:06.2±3.8**, 25°.66S**×**29°.04E, h0**^{km}**, mb1 2.8**/3**, mb1mx2.8**/50**, mbtmp2.8**/3**, ML2.6**/2**, Error ellipse: s-maj=33.3km s-min=22.5km az=122.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.18	281	Pn	Pn	15 03 58.0	+0.5
	0.3nm,0.3s,baz=143,slow=5.1,SNR=2.0						
LBTB				Pg	Pb	15 04 02.6	-1.0
	0.4nm,0.3s,baz=108,slow=17,SNR=2.0						
LBTB				Lg	Lg	15 04 47.8	
	2.6nm,0.3s,baz=15,slow=21,SNR=17						
BOSA	Boshof	4.47	228	Pn	Pn	15 04 15.9	+0.5
	baz=243,slow=6.3,SNR=1.0						
BOSA				Lg	Lg	15 05 16.1	
	1.2nm,0.3s,baz=316,slow=22,SNR=8.9						
I47ZA	BOSHOF INFRASO	4.49	228	*i*		15 28 10.0	
	baz=53,slow=328,SNR=1.4						
MATP	Matopo	5.23	354	Pn	Pn	15 04 26.5	+0.7
	0.4nm,0.3s,baz=167,slow=12,SNR=1.4						
MATP				Sn	Sn	15 05 28.1	+1.2
	0.3nm,0.3s,baz=107,slow=7.9,SNR=2.3						
MATP				Lg	Lg	15 05 51.1	
	0.5nm,0.3s,baz=91,slow=14,SNR=3.5						
I35NA	TSUMEB INFRASO	12.39	299	*i*		16 20 40.0	
	baz=124,slow=317,SNR=1.6						

*IDC **27** 15:12:18.5±1.2, 27°.36N×56°.12E, h0^{km}, mb3.6/11, mb1 3.7/12, mb1mx3.5/52, mbtmp3.7/12, ML3.5/1, Error ellipse: s-maj=24.6km s-min=21.2km az=24.0*

*THR **27** 15:12:18.0±0.4, 27°.43N×56°.15E, h14^{km}±2^{km}, ML3.5*

*OMAN **27** 15:12:18.4±2.2, 27°.57N×56°.08E, h8^{km}, ml3.4/6, Error ellipse: s-maj=42.2km s-min=13.7km az=95.0*

*TEH **27** 15:12:18.5, 27°.45N×56°.17E, h8^{km}, ML3.5*

ISC 27 15:12:20.3±0.6**, 27°.43N**±0°.04×**56°.17E**±0°.04**, h10**^{km}**, n59, σ1^{s}.07**/63**, mb3.5**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.03	184	ePg	Pg	15 12 20.7	-1.6
BNDS	Bandar-Abbas	0.03	186	ePg	Pg	15 12 20.8	-1.5
BNDS				AML	AML	15 12 23.2	
	comp=N,28µm,0.2s						
BNDS	Bandar-Abbas	0.03	186	ePg	Pg	15 12 20.8	-1.5
IBND	Bandar-abas	0.33	86	ePg	Pg	15 12 24.7	-2.1
SHME	Shamm	1.37	181	ePg	Pn	15 12 45.9	+0.4
SHME	Shamm	1.37	181	P	Pn	15 12 45.9	+0.4
	SNR=19						
SHME				S	Sg	15 13 06.9	+2.5
KHNJ	Kahnooj	1.45	69	ePg	Pn	15 12 45.7	-1.0
BANOM	Banah	1.50	176	ePg	Pn	15 12 48.1	+0.8
BANOM	Banah	1.50	176	P	Pn	15 12 47.9	+0.6
	SNR=63						
BANOM				S	Sg	15 13 09.7	+1.1
LAR1	LAR	1.62	279	ePg	Pn	15 12 48.4	-0.5
LAR1				*e*		15 13 39.3	
	comp=Z,99nm,0.6s						
MASF	Masafi	2.05	180	P	Pn	15 12 55.9	+1.1
	SNR=15						
MSFE	Esma-Masafi	2.06	180	ePn	Pn	15 12 56.1	+1.1
MDH	Madha	2.12	177	ePn	Pb	15 12 58.0	-0.8
NGRK	Negar Kerman	2.26	12	ePn	Pn	15 12 58.5	+0.4
NGRK				*e*		15 13 05.6	
	comp=Z,99nm,0.3s						
UOSS	Minazif	2.47	179	ePn	Pn	15 13 01.0	+0.4
UOSS	Minazif	2.47	179	P	Pn	15 13 01.4	+0.8
NAZ	Nazwa, Dubai	2.47	191	ePn	Pn	15 13 02.0	+1.4
JHRM	Jahrom	2.54	296	ePn	Pn	15 13 02.5	+0.9
HATD	Hatta, Dubai	2.59	181	ePn	Pn	15 13 03.0	+0.7
HATD	Hatta, Dubai	2.59	181	P	Pn	15 13 03.7	+1.4
KRBR	Kerman	2.60	11	ePn	Pn	15 13 02.0	-0.6
KRBR				eSg	Sb	15 13 39.6	+0.3
KRBR				AML	AML	15 13 55.9	
	comp=N,154nm,0.5s						
KRBR	Kerman	2.60	11	ePn	Pn	15 13 02.1	-0.6
TVBK	TV Kerman	2.60	11	*e*		15 13 09.6	
	comp=Z,99nm,0.2s						
TVBK				ePn	Pn	15 13 04.7	+1.9
KBAM	BAM	2.63	49	ePn	Pn	15 13 03.5	+0.5
KBAM				*e*		15 13 45.1	
	comp=Z,99nm,0.4s						
CHMN	Cheshme madani	2.71	26	ePn	Pn	15 13 04.9	+0.7
FAQ	Al Faqa, Dubai	2.72	191	ePn	Pn	15 13 04.2	+0.1
FAQ	Al Faqa, Dubai	2.72	191	P	Pn	15 13 05.3	+1.2
	SNR=6.5						
ASHO	Ashiyiah	2.73	182	ePn	Pn	15 13 05.5	+1.2
ASHO	Ashiyiah	2.73	182	P	Pn	15 13 05.4	+1.2
	SNR=12						
ASUD	Al Ashush, Dub	2.89	195	ePn	Pn	15 13 04.8	-1.6
KHGB	Koh Gabri	2.95	5	ePn	Pn	15 13 08.5	+1.0
KHGB				*e*		15 14 03.3	
	comp=Z,99nm,0.8s						
SOHO	SOHO	3.29	174	ePn	Pn	15 13 13.2	+1.3
WSAR	Wadi Sarin	4.72	151	Pn	Pn	15 13 32.0	+0.4
	comp=Z,2.1nm,0.3s,baz=345,slow=12,SNR=18						
WSAR				Sn	Sn	15 14 26.6	+0.1
	comp=Z,1.5nm,0.3s,baz=13,slow=16,SNR=2.0						
BSRN	Basiran	5.20	29	ePn	Pn	15 13 38.0	-0.3
BSRN	Basiran	5.20	29	ePn	Pn	15 13 38.0	-0.3
NHDN	Nehbandan	5.20	40	ePn	Pn	15 13 39.3	+1.0
SLWR	Sila	5.25	231	ePn	Pn	15 13 37.7	-1.1
KLNJ	Kolanjah	5.37	313	ePn	Pn	15 13 41.7	+1.0
IRAM	Ramesheh	5.47	324	ePn	Pn	15 13 42.6	+0.5
IKOO	Kooshah	5.55	26	ePn	Pn	15 13 45.4	+2.1
TPRV	Parvadeh(Tabas	5.60	4	ePn	Pn	15 13 44.8	+1.0
JLN	Jalan Bani Buh	6.02	150	P	Pn	15 13 50.1	+0.7
IZEF	Zefreh	6.39	330	ePn	Pn	15 13 54.4	-0.3
IKLH	Kolahrood	7.09	327	ePn	Pn	15 14 04.9	+0.6
KRSH	Karshahi	7.39	333	ePn	Pn	15 14 09.8	+1.4
WHFO	Wadi Hawf	9.72	194	P	Pn	15 14 40.5	+0.3
	SNR=40						
DMTO	DMTO	9.73	187	P	Pn	15 14 41.2	+0.8
ABTO	Aybut	10.37	195	P	Pn	15 14 49.4	+0.2
AAK	Ala-Archa	21.27	40	P	P	15 17 07.1	+0.2
	comp=Z,0.8nm,0.6s,baz=153,slow=6.8,SNR=5.5						
BRTR	Keskin Array B	22.36	309	P	P	15 17 20.0	+1.3
	comp=Z,0.7nm,0.7s,baz=124,slow=13,SNR=4.9						
AKTO	Aktyubinsk	23.02	3	P	P	15 17 27.2	+1.8
	comp=Z,0.8nm,0.5s,baz=152,slow=8.9,SNR=4.6						
MKAR	Makanchi Array	28.20	40	P	P	15 18 12.9	-0.2
	comp=Z,0.2nm,0.5s,baz=219,slow=9.3,SNR=5.7						
ZALV	Zalesovo Beam	33.83	31	P	P	15 19 02.4	-0.2
	comp=Z,0.4nm,0.3s,baz=312,slow=16,SNR=1.8						
GERES	GERESS Array B	39.01	315	P	P	15 19 46.3	-0.7
	comp=Z,0.3nm,0.4s,baz=127,slow=6.5,SNR=2.0						
FINES	FINESS Array B	39.53	338	P	P	15 19 50.7	-0.3
	comp=Z,1.1nm,0.6s,baz=134,slow=9.9,SNR=6.4						
HFS	Hagfors	43.55	331	P	P	15 20 23.5	-0.6
	comp=Z,4.7nm,1.1s,baz=138,slow=11,SNR=4.8						
SONM	Songino Array	43.80	48	P	P	15 20 27.0	+0.6
	comp=Z,0.3nm,0.7s,baz=278,slow=8.1,SNR=3.6						
ARCES	ARCESS Array B	45.75	345	P	P	15 20 42.0	+0.5
	comp=Z,2.1nm,0.8s,baz=144,slow=12,SNR=1.6						
TORD	Torodi Ar. Bea	52.66	266	P	P	15 21 33.3	-1.8
	comp=Z,0.8nm,0.4s,baz=62,slow=7.9,SNR=2.3						

*NEIC **27** 15:15:42.9±0.9, 10°.94S±0°.03×165°.94E±0°.08, h66^{km}±9^{km}, mb4.5/13, Error ellipse: s-maj=12.1km s-min=3.5km az=102.0*

*IDC **27** 15:15:43.4±4.0, 10°.96S×165°.92E, h69^{km}±36^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.4/38, mbtmp3.8/6, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=37.9km s-min=32.9km az=133.0*

ISC 27 15:15:42.2±0.8**, 10°.9S**±0°.1×**165°.96E**±0°.09**, h61**^{km}**, n28, σ0^{s}.47**/23**, mb4.2**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.67	165		Pn	15 16 50.2	0.0
HNR	Honiara	6.10	283	P	Pn	15 17 10.6	+0.7
	9.9nm,0.3s,baz=310,slow=4.1,SNR=3.7						
HNR				S	Sn	15 18 17.7	-0.7
	2.5nm,0.3s,baz=120,slow=11,SNR=1.3						
HNR				LR	LR	15 19 35.1	
	comp=Z,113nm,18.3s,baz=93,slow=38						
DZM	Mont Dzumac	11.11	178	P	Pn	15 18 18.9	+0.5
	0.5nm,0.3s,baz=319,slow=17,SNR=14						
AFI	Afiamalu	21.94	100	P	P	15 20 30.5	-0.5
H11S2	WAKE ISLAND Hy	29.23	1	T	T	15 52 04.0	
	baz=181,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.23	1	T	T	15 52 03.8	
	baz=181,slow=76,SNR=6.6						
H11S1	WAKE ISLAND Hy	29.24	1	T	T	15 52 04.9	
	baz=181,slow=76,SNR=7.0						
BKZ	Black Stump Fm	29.66	163	P	P	15 21 42.0	-0.2
BKZ				IAmb	IAmb	15 21 54.5	
	comp=Z,19nm,1.5s						
H11N1	WAKE ISLAND Hy	30.45	2	T	T	15 53 35.1	
	baz=182,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	30.45	2	T	T	15 53 35.5	
	baz=182,slow=76,SNR=8.7						
H11N2	WAKE ISLAND Hy	30.46	2	T	T	15 53 36.4	
	baz=182,slow=76,SNR=8.4						
TUWZ	Tuamarina	31.20	168	P	P	15 21 56.0	+0.3
MSWZ	Moikau Station	31.46	167	P	P	15 21 57.2	-0.8
WB0	Warramunga Arr	31.64	250	P	P	15 21 59.9	0.0
WRAB	Tennant Creek	31.71	250	P	P	15 22 00.4	-0.1
WRAB				IAmb	IAmb	15 22 21.1	
	comp=Z,5.9nm,1.1s						
WB2	Warramunga Arr	31.72	250	P	P	15 21 59.7	-0.8
WB2				IAmb	IAmb	15 22 27.1	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	31.73	250	P	P	15 22 00.4	-0.2
	comp=Z,0.4nm,0.7s,baz=83,slow=9.2,SNR=5.7						
WRA	Warramunga Arr	31.73	250	P	P	15 21 60.0	-0.7
LTZ	Lake Taylor	32.22	171	P	P	15 22 04.8	+0.1
LTZ				IAmb	IAmb	15 22 27.8	
	comp=Z,38nm,1.5s						
RPZ	Rata Peaks	32.98	173	P	P	15 22 11.7	+0.5
RPZ				IAmb	IAmb	15 22 38.2	
	comp=Z,21nm,1.3s						
AS31	Alice Springs	33.04	243	P	P	15 22 11.9	-0.3
ASAR	Alice Springs	33.04	243	P	P	15 22 12.2	+0.1
	comp=Z,0.3nm,0.6s,baz=62,slow=10,SNR=8.2						
MQZ	McQueen's Vall	33.18	171	P	P	15 22 13.3	+0.3
PPTF	Pamatai, Papee	43.53	104	P	P	15 23 40.4	0.0
LHMI	Lhok Sumawe	70.53	280	P	P	15 26 50.7	-0.6
QSPA	South Pole Qui	79.09	180	P	P	15 27 39.9	-0.1
QSPA				IAmb	IAmb	15 27 43.0	
	comp=Z,4.4nm,1.5s						
ILAR	Eielson Array	83.32	18	P	P	15 28 02.6	+0.5
	comp=Z,0.4nm,0.6s,baz=239,slow=4.7,SNR=6.8						
MKAR	Makanchi Array	93.57	317	P	P	15 28 52.0	+0.2
	comp=Z,0.2nm,0.6s,baz=89,slow=6.5,SNR=2.6						

*IDC **27** 15:16:35.5±2.7, 29°.10N×80°.75E, h0^{km}, mb3.3/6, mb1 3.5/8, mb1mx3.3/54, mbtmp3.3/8, ML3.6/2, Error ellipse: s-maj=105.2km s-min=20.9km az=65.0*

ISC 27 15:16:41.5±2.3**, 29°.2N**±0°.3×**81°.0E**±0°.5**, h35**^{km}**, n8, σ0^{s}.65**/8**, mb3.3**/6**, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.56	3	P	Pn	15 20 43.0	-0.4
	0.1nm,0.3s,baz=172,slow=12,SNR=6.2						
CMAR	Chiang Mai Arr	19.60	119	P	P	15 21 06.9	+0.1
	0.1nm,0.3s,baz=290,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	21.44	356	P	P	15 21 26.4	-0.1
	0.9nm,0.8s,baz=179,slow=10,SNR=7.8						
ZALV	Zalesovo Beam	24.86	5	P	P	15 22 01.0	+0.5
	0.4nm,0.3s,baz=194,slow=12,SNR=3.5						
BVAR	Borovoye Array	25.02	345	P	P	15 22 01.6	-0.4
	0.2nm,0.6s,baz=248,slow=27,SNR=1.6						
WRA	Warramunga Arr	70.98	127	P	P	15 27 54.9	-1.0
	0.4nm,0.9s,baz=316,slow=6.1,SNR=2.9						
ASAR	Alice Springs	73.20	130	P	P	15 28 09.4	+0.4
	0.2nm,0.8s,baz=310,slow=6.1,SNR=4.2						
YKA	Yellowknife Ar	87.74	7	P	P	15 29 27.1	+0.7
	0.2nm,0.5s,baz=338,slow=4.5,SNR=3.1						

*IDC **27** 15:17:35.6±3.2, 13°.45S×166°.93E, h192^{km}±29^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.3/36, mbtmp3.7/7, Error ellipse: s-maj=37.1km s-min=24.6km az=122.0*

ISC 27 15:17:36.5±1.3**, 13°.48S**±0°.10×**167°.0E**±0°.3**, h200**^{km}**, n7, σ0^{s}.72**/9**, mb3.5**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.56	183	P	Pn	15 19 37.4	+0.2
	0.1nm,0.3s,baz=24,slow=23,SNR=1.3						
DZM				S	Sn	15 21 13.4	0.0
	0.0nm,0.3s,baz=39,slow=21,SNR=2.4						
STKA	Stephens Creek	29.59	228	P	P	15 23 23.0	0.0
	0.9nm,0.5s,baz=51,slow=13,SNR=2.1						
WRA	Warramunga Arr	31.86	254	P	P	15 23 42.5	-0.5
	0.4nm,0.5s,baz=85,slow=9.6,SNR=8.1						
ASAR	Alice Springs	32.86	247	P	P	15 23 51.0	-0.7
	1.2nm,0.5s,baz=75,slow=9.3,SNR=50						
ASAR				ScP	ScP	15 29 57.5	+0.6
	0.7nm,0.9s,baz=87,slow=4.7,SNR=4.6						
SONM	Songino Array	81.32	324	P	P	15 29 31.3	+0.6
	0.2nm,0.6s,baz=112,slow=11,SNR=1.9						
ILAR	Eielson Array	85.44	18	P	P	15 29 50.1	-1.0
	0.3nm,0.8s,baz=230,slow=5.5,SNR=4.7						
MKAR	Makanchi Array	96.10	317	P	P	15 30 42.2	+0.8
	0.2nm,0.6s,baz=83,slow=6.3,SNR=4.1						

*SOME **27** 15:42:58.9, 42°.28N×81°.77E, h15^{km}*

*NNC **27** 15:43:00.2±1.5, 42°.38N×81°.79E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=11.1km s-min=8.3km az=171.0*

ISC 27 15:43:00.6±2.4**, 42°.41N**±0°.08×**81°.69E**±0°.07**, h3**^{km}±12^{km}**, n37, σ1^{s}.81**/58**, 5C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.43	317	⇓eP	Pb	15 43 28.1	+0.2
	15nm,0.2s						
KTMS				eS	Sg	15 43 49.3	+2.8
	19nm,0.3s						
KTMS	Ketmen	1.43	317	P	Pb	15 43 28.1	+0.2
	15nm,0.2s						
KTMS				S	Sg	15 43 49.3	+2.8
	19nm,0.3s						
SHLS	Shalkode	1.80	295	eP	Pn	15 43 30.1	-2.6
	32nm,0.2s						
SHLS				eS	Sn	15 43 53.1	-3.1
	86nm,0.6s						
SHLS	Shalkode	1.80	295	P	Pn	15 43 30.1	-2.6
	32nm,0.2s						
SHLS				S	Sn	15 43 53.5	-2.7
	86nm,0.6s						
PDGK	Podgornoye	1.86	300	Pg	Pb	15 43 35.6	+0.3
	7.7nm,0.4s						
PDGK				Lg	Lg	15 44 02.6	
	17nm,0.3s						
PDGK	Podgornoye	1.86	300	⇑Pg	Pb	15 43 35.1	-0.2
	8.2nm,0.4s						
PDGK				⇑Lg	Lg	15 44 02.5	
	34nm,0.8s						
UZB	Uzynbulak	2.10	292	eP	Pb	15 43 39.4	0.0
	1.4nm,0.4s						
UZB				eS	Sg	15 44 09.0	+1.1
	19nm,0.3s						
UZB	Uzynbulak	2.10	292	Pg	Pb	15 43 39.5	+0.1
	3.1nm,0.3s						
UZB				Lg	Lg	15 44 09.5	
	31nm,0.2s						
DJR	Jarkent	2.37	325	eP	Pb	15 43 44.4	+0.4
	2.1nm,0.2s						
DJR				eS	Sg	15 44 17.7	+1.0
	11nm,0.3s						
DJR	Jarkent	2.37	325	Pg	Pb	15 43 44.4	+0.4
	4.3nm,0.2s						
DJR				Lg	Lg	15 44 18.0	
	27nm,0.5s						
KPKS	Kokpek	2.44	297	eP	Pb	15 43 46.1	+0.8
	19nm,0.2s						
KPKS				eS	Sg	15 44 20.5	+1.4
	175nm,0.3s						
SATY	Saty	2.50	286	eP	Pb	15 43 47.5	+1.3
	11nm,0.5s						
SATY				eS	Sg	15 44 22.7	+1.7
	40nm,0.4s						
SATY	Saty	2.50	286	Pg	Pb	15 43 47.5	+1.3
	11nm,0.5s						
SATY				Lg	Lg	15 44 22.7	
	40nm,0.4s						
ZHN	Zhinishke	2.51	289	eP	Pb	15 43 47.6	+1.2
	1.5nm,0.3s						
ZHN				eS	Sg	15 44 22.8	+1.5
	8.6nm,0.4s						
ZHN	Zhinishke	2.51	289	Pg	Pb	15 43 47.6	+1.2
	1.3nm,0.2s						
ZHN				Lg	Lg	15 44 22.8	
	15nm,0.2s						
MNBS	Baschi	2.92	306	eP	Pb	15 43 54.5	+1.0
	7.5nm,0.3s						
MNBS				eS	Sg	15 44 34.6	+0.1
	33nm,0.3s						
KAPS	Kapalarasan	3.33	330	eP	Pb	15 43 59.9	-0.5
	1.4nm,0.1s						
KAPS				eS	Sb	15 44 43.5	+2.1
	20nm,0.4s						
KAPS	Kapalarasan	3.33	330	Pg	Pb	15 43 58.8	-1.6
	3.2nm,0.3s						
KAPS				Lg	Lg	15 44 42.4	
	20nm,0.4s						
ARXS	Arharly	3.34	304	eP	Pb	15 44 00.7	+0.1
	5.5nm,0.4s						
ARXS				eS	Sb	15 44 45.4	+3.7

	13nm,0.4s						
KOTS	**Kotyrbulak** 6.1nm,0.3s	**3.46**	**285**	*e*P	**Pb**	**15 44 02.5**	**-0.1**
KOTS	28nm,0.4s			*e*S	**Sb**	**15 44 48.9**	**+3.7**
KOTS	**Kotyrbulak**	**3.46**	**285**	Pg	**Pb**	**15 44 02.4**	**-0.3**
KOTS	28nm,0.4s			Lg	Lg	15 44 48.9	
MDOK	**Medeo** 2.4nm,0.3s	**3.50**	**284**	*e*P	**Pb**	**15 44 04.9**	**+1.6**
MDOK	7.5nm,0.3s			*e*S	**Sg**	**15 44 52.5**	**-0.4**
MDOK	**Medeo** 2.3nm,0.4s	**3.50**	**284**	Pg	**Pb**	**15 44 04.9**	**+1.6**
MDOK	8.9nm,0.5s			Lg	Lg	15 44 51.7	
CHKK	**Chushkaly** 0.9nm,0.1s	**3.73**	**294**	*e*P	**Pb**	**15 44 08.2**	**+1.1**
CHKK	7.8nm,0.3s			*e*S	**Sg**	**15 44 58.6**	**-1.8**
IZV	**Izvestkoviy** 2.3nm,0.2s	**3.79**	**281**	*e*P	**Pb**	**15 44 09.8**	**+1.5**
IZV	9.8nm,0.5s			*e*S	**Sg**	**15 45 01.0**	**-1.3**
IZV	**Izvestkoviy** 4.3nm,0.5s	**3.79**	**281**	Pg	**Pb**	**15 44 09.8**	**+1.5**
IZV	14nm,0.5s			Lg	Lg	15 45 01.1	
KTBS	**Karatobe** 1.4nm,0.5s	**3.89**	**291**	*e*P	**Pb**	**15 44 11.7**	**+1.8**
KTBS	15nm,0.5s			*e*S	**Sg**	**15 45 04.1**	**-1.5**
KTBS	**Karatobe** 1.8nm,0.4s	**3.89**	**291**	Pg	**Pb**	**15 44 12.0**	**+2.1**
KTBS	19nm,0.5s			Lg	Lg	15 45 04.8	
KUU	**Kurty** 1.2nm,0.1s	**4.18**	**293**	*e*P	**Pb**	**15 44 16.6**	**+1.8**
KUU	3.7nm,0.5s			*e*S	**Sg**	**15 45 12.7**	**-2.3**
KUU	**Kurty** 1.5nm,0.6s	**4.18**	**293**	Pg	**Pb**	**15 44 16.6**	**+1.8**
KUU	6.3nm,0.6s			Lg	Lg	15 45 12.7	
KST	**Kastek** 1.5nm,0.3s	**4.26**	**280**	*e*P	**Pb**	**15 44 19.0**	**+2.7**
KST	6.8nm,0.7s			*e*S	**Sg**	**15 45 16.8**	**-0.7**
KST	**Kastek** 5.0nm,0.5s	**4.26**	**280**	Pg	**Pb**	**15 44 19.0**	**+2.7**
KST	5.3nm,0.7s			Lg	Lg	15 45 16.8	
MAKZ	**Makanchi** 0.2nm,0.2s	**4.41**	**3**	⇑Pn	**Pn**	**15 44 10.0**	**+1.6**
MAKZ	2.5nm,0.5s			⇓Lg	Lg	15 45 18.4	
MK31	**Makanchi Array** 0.1nm,0.2s,baz=201,slow=14,SNR=9.1	**4.41**	**5**	⇓Pn	**Pn**	**15 44 10.5**	**+2.0**
MK31	0.3nm,0.3s,baz=183,slow=14,SNR=4.1			⇓Pg	**Pg**	**15 44 22.6**	**-2.4**
MK31	3.7nm,0.6s,baz=176,slow=33,SNR=6.8			⇑Lg	Lg	15 45 18.2	
DGS	**Degeres** 3.9nm,0.5s	**4.43**	**283**	*e*P	**Pg**	**15 44 23.0**	**-2.5**
DGS	6.6nm,0.5s			*e*S	**Sg**	**15 45 24.3**	**+1.4**
DGS	**Degeres** 3.9nm,0.5s	**4.43**	**283**	Pg	**Pg**	**15 44 23.0**	**-2.5**
DGS	6.6nm,0.5s			Lg	Lg	15 45 24.3	
TKM2	**Tokmak 2** 1.4nm,0.5s	**4.52**	**279**	⇓Pg	**Pg**	**15 44 27.9**	**+0.7**
TKM2	2.8nm,0.6s			⇑Lg	Lg	15 45 26.5	

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*IDC **27** 15:56:33.1±2.8, 21°.07N×121°.68E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/45, mbtmp3.5/4, Error ellipse: s-maj=247.8km s-min=23.9km az=63.0*

*TAP **27** 15:56:33.9, 21°.32N×122°.12E, h88^{km}±1^{km}, ML3.5, D*

*JMA **27** 15:56:35.3±0.7, 21°.71N×122°.01E, h0^{km}, M3.5*

ISC 27 15:56:35.3±2.1, **21°.41N**±0°.06×**122°.08E**±0°.04, **h18**^{km}±9^{km}, **n54**, σ**0^{s}.95**/97, **mb3.4**/4, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu** baz=324	**0.80**	**322**	*e*P	**Pb**	**15 56 49.6**	**-1.1**
TSEB	**Hengchuen, Pin** baz=296	**1.20**	**294**	*e*P	**Pn**	**15 56 57.5**	**+0.3**
TSEB	baz=296			*e*S	**Sg**	**15 57 15.2**	**+0.9**
TWKBT	**Hengchun** baz=297	**1.29**	**294**	*e*P	**Pn**	**15 56 57.5**	**-1.0**
TWKBT	baz=297			*e*S	**Sb**	**15 57 16.7**	**+1.3**
TWK1	**Hengchun** baz=297	**1.30**	**294**	*e*P	**Pn**	**15 56 58.5**	**-0.1**
TWK1	baz=297			*e*S	**Sb**	**15 57 16.9**	**+1.3**
HEN	**Hengchun** baz=302	**1.38**	**296**	*e*P	**Pn**	**15 57 00.1**	**+0.3**
HEN	baz=302			*e*S	**Sb**	**15 57 19.6**	**+1.7**
SLIU	**Shizi** baz=312	**1.43**	**304**	*e*P	**Pn**	**15 57 00.2**	**-0.2**
SLIU	baz=312			*e*S	**Sb**	**15 57 19.8**	**+0.3**
TAW	**Tawu** baz=313	**1.45**	**311**	*e*P	**Pn**	**15 56 59.5**	**-1.2**
TAW	baz=313			*e*S	**Sn**	**15 57 19.6**	**+0.4**
EAST	**Anshuo** baz=312	**1.50**	**311**	*e*P	**Pn**	**15 57 00.5**	**-0.9**
EAST	baz=312			*e*S	**Sn**	**15 57 20.2**	**-0.3**
ECL	**Taimali** baz=320	**1.58**	**319**	*e*P	**Pn**	**15 57 01.6**	**-0.8**
ECL	baz=320			*e*S	**Sn**	**15 57 21.9**	**-0.5**
TTN	**Taitung** baz=331	**1.59**	**327**	*e*P	**Pn**	**15 57 02.8**	**+0.1**
TTN	baz=331			*e*S	**Sb**	**15 57 24.6**	**+0.6**
SCZT	**Fangliau** baz=307	**1.66**	**306**	*e*P	**Pn**	**15 57 03.9**	**+0.4**
SCZT	baz=307			*e*S	**Sn**	**15 57 24.8**	**+0.4**
TWGBT	**Beinan** baz=319	**1.68**	**327**	*e*P	**Pn**	**15 57 03.1**	**-0.7**
TWGBT	baz=319			*e*S	**Sn**	**15 57 25.8**	**+0.8**
TWG	**Pinlang** baz=319	**1.69**	**327**	*e*P	**Pn**	**15 57 03.7**	**-0.2**
TWG	baz=319			*e*S	**Sn**	**15 57 25.2**	**+0.1**
EDH	**Donghe** baz=340	**1.71**	**335**	*e*P	**Pn**	**15 57 03.0**	**-1.4**
EDH	baz=340			*e*S	**Sn**	**15 57 25.0**	**-0.8**
LONT	**Longtian** baz=319	**1.73**	**330**	*e*P	**Pn**	**15 57 04.3**	**-0.2**
LONT	baz=319			*e*S	**Sb**	**15 57 29.1**	**+1.0**
SSPT	**Xinbi** baz=309	**1.76**	**308**	*e*P	**Pn**	**15 57 04.3**	**-0.7**
SSPT	baz=309			*e*S	**Sn**	**15 57 26.4**	**-0.6**
MASBT	**Mashibuluo** baz=317	**1.80**	**312**	*e*P	**Pn**	**15 57 05.3**	**-0.2**
MASBT	baz=317			*e*S	**Sn**	**15 57 26.6**	**-1.3**
CHKT	**Chengkung** baz=346	**1.81**	**339**	*e*P	**Pn**	**15 57 05.3**	**-0.3**
CHKT	baz=346			*e*S	**Sn**	**15 57 27.9**	**-0.2**
TSMG	**Majia** baz=317	**1.85**	**314**	*e*P	**Pn**	**15 57 05.5**	**-0.8**
TSMG	baz=317			*e*S	**Sn**	**15 57 28.1**	**-1.1**
SSD	**Sandimen** baz=316	**1.89**	**315**	*e*P	**Pn**	**15 57 06.6**	**-0.1**
SSD	baz=316			*e*S	**Sn**	**15 57 29.7**	**-0.5**
FULB	**Fuli** baz=344	**1.92**	**338**	*e*P	**Pn**	**15 57 06.3**	**-1.0**
FULB	baz=344			*e*S	**Sn**	**15 57 31.6**	**+0.6**
EYUL	**Yuli** baz=345	**2.05**	**340**	*e*P	**Pn**	**15 57 06.5**	**-2.6**
SLGT	**Liugui** baz=321	**2.06**	**320**	*e*P	**Pn**	**15 57 09.3**	**+0.2**
TWF1	**Yuli** baz=344	**2.06**	**340**	*e*P	**Pn**	**15 57 10.1**	**+0.9**
SCST	**Cishan** baz=316	**2.08**	**315**	*e*P	**Pn**	**15 57 09.9**	**+0.6**
YULB	**Yu-li** baz=344	**2.10**	**340**	*e*P	**Pn**	**15 57 07.0**	**-2.7**
YULB	baz=344			*e*S	**Sn**	**15 57 35.9**	**+0.4**
STYT	**Tauyuan** baz=331	**2.13**	**325**	*e*P	**Pn**	**15 57 11.1**	**+0.9**
STYT	baz=331			*e*S	**Sn**	**15 57 36.6**	**+0.4**
HGSD	**Ruisui** baz=349	**2.16**	**344**	*e*P	**Pn**	**15 57 09.2**	**-1.3**
HGSD	baz=349			*e*S	**Sn**	**15 57 36.6**	**-0.2**
SGST	**Jiashian** baz=310	**2.17**	**321**	*e*P	**Pn**	**15 57 10.7**	**+0.1**
SGST	baz=310			*e*S	**Sn**	**15 57 39.1**	**+2.2**
EHY	**Hungye** baz=345	**2.20**	**342**	*e*P	**Pn**	**15 57 11.7**	**+0.6**
WTP	**Ta-pu** baz=313	**2.28**	**324**	*e*P	**Pn**	**15 57 12.1**	**-0.1**
WTP	baz=313			*e*S	**Sn**	**15 57 40.9**	**+1.1**
CHN1	**Nanshi** baz=322	**2.28**	**321**	*e*P	**Pn**	**15 57 12.8**	**+0.7**
CHN1	baz=322			*e*S	**Sn**	**15 57 40.5**	**+0.8**
TPUB	**Ta-pu** baz=313	**2.31**	**325**	*e*P	**Pn**	**15 57 12.6**	**+0.1**
TPUB	baz=313			*e*S	**Sb**	**15 57 43.2**	**-1.6**
TWK	**Hsinying** baz=322	**2.36**	**322**	*e*P	**Pn**	**15 57 13.8**	**+0.5**
TWK	baz=322			*e*S	**Sn**	**15 57 42.2**	**+0.3**
ALS	**Alishan** baz=323	**2.40**	**331**	*e*P	**Pn**	**15 57 14.2**	**+0.1**
ALS	baz=323			*e*S	**Sn**	**15 57 45.0**	**+1.8**
ESL	**Shilin** baz=350	**2.47**	**346**	*e*P	**Pn**	**15 57 14.6**	**-0.1**
ESL	baz=350			S	**Sn**	**15 57 43.6**	**-0.8**
VWDT	**VWDT** baz=340	**2.49**	**340**	*e*P	**Pn**	**15 57 14.6**	**-0.4**
VWDT	baz=340			S	**Sn**	**15 57 45.2**	**+0.2**
CHN5	**Tsauling** baz=318	**2.53**	**330**	*e*P	**Pn**	**15 57 15.7**	**0.0**
CHN5	baz=318			*e*S	**Sn**	**15 57 46.9**	**+0.7**
SSLB	**Suanglung** baz=336	**2.58**	**337**	*e*P	**Pn**	**15 57 17.5**	**+1.1**
SSLB	baz=336			*e*S	**Sn**	**15 57 47.9**	**+0.5**
TYC	**Yuchr** baz=324	**2.73**	**336**	*e*P	**Pn**	**15 57 18.8**	**+0.6**
TYC	baz=324			*e*S	**Sn**	**15 57 52.5**	**+1.7**
CHGB	**Renai** baz=342	**2.77**	**343**	*e*P	**Pn**	**15 57 18.6**	**-0.4**
CHGB	baz=342			*e*S	**Sn**	**15 57 52.5**	**+0.4**
NACB	**Ninganchiao** baz=356	**2.79**	**351**	*e*P	**Pn**	**15 57 18.8**	**-0.3**
NACB	baz=356			*e*S	**Sn**	**15 57 49.6**	**-2.7**
WHF	**Hehuan Shan** baz=344	**2.83**	**345**	*e*P	**Pn**	**15 57 18.2**	**-1.8**
WHF	baz=344			*e*S	**Sn**	**15 57 53.7**	**-0.2**
ETLH	**Xiulin Townshi** baz=348	**2.84**	**349**	*e*P	**Pn**	**15 57 19.8**	**-0.1**
ETLH	baz=348			*e*S	**Sn**	**15 57 54.1**	**+0.4**
HATJ	**Hateruma jima**	**3.08**	**31**	P	**Pn**	**15 57 23.7**	**+0.6**
HATJ				*e*S	**Sn**	**15 58 00.0**	**+0.5**
IRIF	**Iriomote-Funau**	**3.29**	**27**	P	**Pn**	**15 57 26.3**	**+0.3**
IRIF				*e*S	**Sn**	**15 58 04.2**	**-0.4**
JKRS	**Kuro-shima**	**3.33**	**32**	P	**Pn**	**15 57 27.7**	**+1.1**
JIJ	**Ishigaki jima**	**3.50**	**33**	P	**Pn**	**15 57 29.4**	**+0.4**
JIJ				*e*S	**Sn**	**15 58 09.7**	**-0.3**
JISG	**Ishigakijimahi**	**3.77**	**33**	P	**Pn**	**15 57 33.4**	**+0.7**
JISG				*e*S	**Sn**	**15 58 17.4**	**+0.8**
JTJ	**Tarama**	**4.02**	**36**	P	**Pn**	**15 57 37.4**	**+1.3**
JTJ				S	**Sn**	**15 58 23.1**	**+0.3**
MKAR	**Makanchi Array** 0.6nm,0.9s,baz=106,slow=9.8,SNR=4.5	**40.92**	**318**	P	**P**	**16 04 17.7**	**+1.0**
WRA	**Warramunga Arr** 0.7nm,0.8s,baz=342,slow=8.5,SNR=5.8	**42.81**	**163**	P	**P**	**16 04 30.4**	**-2.0**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=134,slow=6.5,SNR=2.5	**43.02**	**328**	P	**P**	**16 04 34.3**	**+0.6**
ASAR	**Alice Springs** 0.3nm,0.8s,baz=343,slow=6.6,SNR=2.7	**46.26**	**165**	P	**P**	**16 04 59.4**	**-0.4**

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*NEIC **27** 15:58:39.6±1.6, 36°.611N±0°.009×97°.69W±0°.04, h3^{km}±6^{km}, Error ellipse: s-maj=4.3km s-min=0.7km az=75.0*

*IDC **27** 15:58:39.4±0.9, 36°.71N×97°.73W, h0^{km}, mb3.4/1, mb1 3.9/7, mb1mx3.7/44, mbtmp3.6/7, ML3.8/5, MS3.4/13, Ms1 3.4/13, ms1mx3.3/25, Error ellipse: s-maj=12.8km s-min=11.3km az=163.0*

*ANF **27** 15:58:39.7±1.3, 36°.61N×97°.70W, h2^{km}±10^{km}, ML5.0/17, Error ellipse: s-maj=2.5km s-min=1.9km az=1.0*

*NEIC **27** 15:58:40, 36°.63N×97°.70W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.18; M$_{\theta\theta}$0.87; M$_{\phi\phi}$-0.68; M$_{r\theta}$-0.28; M$_{\theta\phi}$-0.59; M$_{\phi r}$0.32; Fault plane solution: M$_{0}$1.07000×10^{15} NP1:φ$_{s}$243.14000°, δ66.56000°, λ-178.60000°. NP2:φ$_{s}$152.59000°, δ88.72000°, λ-23.45000°. Principal axes: T 1.1663, Plg15.0000°, Azm200.0000°; N -0.2181, Plg67.0000°, Azm330.0000°; P -0.9482, Plg17.0000°, Azm105.0000°;*

*TUL **27** 15:58:40.1±1.6, 36°.63N±0°.02×97°.71W±0°.04, h5^{km}±5^{km}, ML4.0, mb_Lg4.2/156(NEIC), Mwr4.0/52(NEIC) Error ellipse: s-maj=4.2km s-min=1.7km az=72.0*

ISC 27 15:58:39.9±1.0, **36°.62N**±0°.02×**97°.68W**±0°.03, **h6**^{km}±8^{km}, **n225**, σ**0^{s}.99**/219, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.27**	**246**		**Pg**	**15 58 45.4**	**+0.2**
CROK				Sg	**Sg**	**15 58 48.9**	**+0.1**
KAN14	**Manchester OK**	**0.41**	**326**		**Pg**	**15 58 47.9**	**0.0**
KAN14				Sg	**Sg**	**15 58 52.9**	**-0.4**
KAN13	**South Haven SW**	**0.43**	**22**		**Pg**	**15 58 48.8**	**+0.5**
KAN13				Sg	**Sg**	**15 58 53.5**	**-0.3**
KAN01	**Argonia South**	**0.54**	**353**		**Pg**	**15 58 50.5**	**+0.2**
KAN01				Sg	**Sg**	**15 58 57.3**	**-0.1**
KAN10	**Anthony SW Sta**	**0.61**	**327**		**Pg**	**15 58 51.5**	**-0.1**
KAN08	**Anthony NE Sta**	**0.65**	**339**		**Pg**	**15 58 52.4**	**-0.1**
KAN08				Sg	**Sg**	**15 59 01.0**	**-0.1**
KS21	**Milan North St**	**0.67**	**1**		**Pg**	**15 58 52.8**	**0.0**
KAN12	**Harper NE Stat**	**0.73**	**339**		**Pg**	**15 58 53.8**	**-0.1**
KAN12				Sg	**Sg**	**15 59 02.9**	**-0.5**
OK029	**Liberty Lake**	**0.84**	**167**		**Pg**	**15 58 56.3**	**+0.3**
OK029				Sg	**Sg**	**15 59 06.7**	**-0.1**
QUOK	**Quay**	**0.90**	**119**		**Pb**	**15 58 57.7**	**-0.2**
OK031	**S. Brethren Rd**	**0.95**	**134**		**Pb**	**15 58 58.5**	**-0.1**
BCOK	**Bluff Creek, N**	**0.96**	**177**		**Pg**	**15 58 58.4**	**+0.1**
BCOK				Sg	**Sg**	**15 59 10.6**	**-0.1**
T35A	**Sooner Cattle**	**0.98**	**72**		**Pg**	**15 58 59.0**	**+0.2**
T35B	**Sooner Cattle** baz=254,SNR=559	**0.98**	**72**	P		15 58 59.1	
T35B	baz=254			S		15 59 12.7	
ADOK	**Arcadia Dam**	**0.99**	**165**	Pg	**Pb**	**15 58 59.2**	**-0.3**
OK030	**Cody Creek RV**	**1.00**	**133**		**Pb**	**15 58 59.3**	**-0.2**
OK030				Sg	**Sg**	**15 59 12.4**	**+0.4**
OK009	**Oakdale Elemen**	**1.05**	**169**		**Pg**	**15 59 00.2**	**+0.1**
OK025	**Westminster Rd**	**1.07**	**165**		**Pg**	**15 59 00.5**	**+0.1**
OK025				Sg	**Sg**	**15 59 14.4**	**+0.2**
U32A	**Winter Ranch,**	**1.09**	**258**		**Pg**	**15 59 00.0**	**-0.8**
U32A	**Winter Ranch,** baz=76	**1.09**	**258**	P		15 59 00.1	
U32A	baz=76			S		15 59 14.6	
OKCFA	**Oklahoma City**	**1.21**	**171**		**Pg**	**15 59 03.0**	**-0.1**
OKCFA				Sg	**Sg**	**15 59 18.7**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.22**	**171**		**Pg**	**15 59 03.1**	**-0.2**
FNO	**Franklin**	**1.37**	**170**		**Pn**	**15 59 05.7**	**+0.1**
W35A	**Tecumseh**	**1.60**	**156**		**Pb**	**15 59 09.4**	**-0.4**
TUL1	**Leonard** baz=296,SNR=264	**1.68**	**114**	P	**Pb**	**15 59 11.0**	**-0.2**
TUL1	baz=296			S	**Sg**	**15 59 33.7**	**-0.2**
TUL1	**Leonard**	**1.68**	**114**		**Pb**	**15 59 10.8**	**-0.4**
TUL1	comp=Z,1μm,0.9s			IAmb_Lg		15 59 35.3	
TUL1	**Leonard** baz=296,SNR=351	**1.68**	**114**	P		15 59 10.9	
TUL1	baz=296			S		15 59 33.8	
R32A	**Long Quarter,**	**1.98**	**336**		**Pn**	**15 59 14.7**	**+0.7**
R32A	comp=Z,2μm,0.8s			IAmb_Lg		15 59 46.2	
R32A	**Long Quarter,** baz=156,SNR=133	**1.98**	**336**	P		15 59 14.9	
R32A	baz=156			S		15 59 40.8	
X34A	**Smith Ranch, M**	**2.01**	**184**		**Pn**	**15 59 15.5**	**+1.1**
X34A	comp=Z,1μm,1.0s			IAmb_Lg		15 59 46.7	
WMOK	**Wichita Mounta** baz=24,SNR=293	**2.08**	**206**	P	**Pn**	**15 59 15.8**	**+0.5**
WMOK	baz=24			S	**Sb**	**15 59 43.1**	**-0.9**
WMOK	**Wichita Mounta**	**2.08**	**206**		**Pn**	**15 59 15.8**	**+0.5**
WMOK	**Wichita Mounta** baz=24,SNR=519	**2.08**	**206**	P		15 59 15.9	
WMOK	baz=24			S		15 59 43.6	
KSU1	**Kansas State U**	**2.62**	**18**		**Pn**	**15 59 23.5**	**+0.8**
KSU1	comp=Z,741nm,1.1s			IAmb_Lg		16 00 08.7	
KSU1	**Kansas State U** baz=200	**2.62**	**18**	P		15 59 23.6	
U38A	**Gravette**	**2.66**	**93**	Pn	**Pn**	**15 59 24.4**	**+1.1**
U38A	comp=Z,587nm,0.8s			IAmb_Lg		16 00 04.0	
U38A	**Gravette** baz=275,SNR=133	**2.66**	**93**	P		15 59 24.8	
CBKS	**Cedar Bluff** baz=143	**2.74**	**324**	P	**Pn**	**15 59 25.5**	**+1.1**
CBKS	**Cedar Bluff** comp=Z,380nm,0.8s	**2.74**	**324**	IAmb_Lg		16 00 09.7	
CBKS	**Cedar Bluff** baz=143	**2.74**	**324**	Sb		16 00 04.5	
X37A	**Clayton**	**2.76**	**136**	Pn	**Pn**	**15 59 25.6**	**+1.0**
X37A	comp=Z,942nm,0.9s			IAmb_Lg		16 00 15.0	
X37A	**Clayton** baz=318	**2.76**	**136**	P		15 59 26.1	
HHAR	**Hobbs**	**3.03**	**95**		**Pn**	**15 59 29.4**	**+0.9**
HHAR	comp=Z,478nm,0.7s			IAmb_Lg		16 00 21.8	
HHAR	**Hobbs** baz=278	**3.03**	**95**	P		15 59 29.9	
Z35A	**Perchaven, San**	**3.29**	**174**	Pn	**Pn**	**15 59 32.8**	**+0.8**
Z35A	**Perchaven, San** baz=354,SNR=51	**3.29**	**174**	P		15 59 33.2	
Z35A	baz=354			S		16 00 13.3	
W39A	**Magazine** baz=296	**3.46**	**113**	P	**Pn**	**15 59 35.1**	**+0.9**
W39A	**Magazine**	**3.46**	**113**		**Pn**	**15 59 35.2**	**+0.9**
W39A	comp=Z,545nm,0.7s			IAmb_Lg		16 00 34.5	
W39A	**Magazine** baz=296	**3.46**	**113**	P		15 59 35.5	
S39A	**Bolivar**	**3.64**	**72**		**Pn**	**15 59 37.6**	**+0.8**
S39A	comp=Z,1μm,0.9s			IAmb_Lg		16 00 38.9	
S39A	**Bolivar** baz=254,SNR=50	**3.64**	**72**	P		15 59 37.9	
AMTX	**Amarillo** baz=60	**3.69**	**243**	P	**Pn**	**15 59 38.1**	**+0.7**
AMTX	baz=60			S	**Sn**	**16 00 21.4**	**+0.1**
AMTX	**Amarillo**	**3.69**	**243**	Pn	**Pn**	**15 59 38.0**	**+0.6**
AMTX	comp=Z,444nm,0.8s			IAmb_Lg		16 00 45.9	
AMTX	**Amarillo** baz=60,SNR=31	**3.69**	**243**	P		15 59 38.2	
AMTX	baz=60			S		16 00 22.2	
U40A	**Yellville** baz=276,SNR=26	**3.90**	**92**	P	**Pn**	**15 59 41.0**	**+0.7**
U40A	baz=276			S	**Sn**	**16 00 27.8**	**+1.4**
U40A	**Yellville**	**3.90**	**92**	Pn	**Pn**	**15 59 40.9**	**+0.6**
U40A	comp=Z,902nm,0.9s			IAmb_Lg		16 00 46.6	
U40A	**Yellville** baz=276,SNR=47	**3.90**	**92**	P		15 59 41.2	
U40A	baz=276,SNR=47			P		15 59 41.2	
MIAR	**Mount Ida** baz=303	**3.93**	**120**	P	**Pn**	**15 59 41.7**	**+1.0**
MIAR	**Mount Ida**	**3.93**	**120**		**Pn**	**15 59 41.4**	**+0.6**
MIAR	comp=Z,767nm,0.8s			IAmb_Lg		16 00 49.5	
MIAR	**Mount Ida** baz=303,SNR=21	**3.93**	**120**	P		15 59 42.1	
Z38A	**Mt. Pleasant**	**4.01**	**146**	Pn	**Pn**	**15 59 42.4**	**+0.6**
N33B	**J Bar K, Exete** baz=183,SNR=13	**4.12**	**2**	P		15 59 43.0	
N33A	**J Bar K, Exete**	**4.12**	**2**	Pn	**Pn**	**15 59 42.8**	**-0.6**
N33A	comp=Z,587nm,1.1s			IAmb_Lg		16 00 57.2	
ABTX	**Abilene, Hawle** baz=21,SNR=23	**4.30**	**203**	P	**Pn**	**15 59 45.8**	**0.0**
ABTX	baz=21			S	**Sn**	**16 00 37.2**	**+0.9**
ABTX	**Abilene, Hawle**	**4.30**	**203**	Pn	**Pn**	**15 59 45.6**	**-0.2**
ABTX	comp=Z,260nm,0.9s			IAmb_Lg		16 00 59.0	
ABTX	**Abilene, Hawle** baz=21,SNR=14	**4.30**	**203**	P		15 59 46.0	
MGMO	**Mountain Grove**	**4.37**	**81**		**Pn**	**15 59 47.5**	**+0.6**
P38A	**Dawn**	**4.44**	**46**	Pn	**Pn**	**15 59 48.1**	**+0.4**
P38A	comp=Z,852nm,0.8s			IAmb_Lg		16 01 01.3	
P38A	**Dawn** baz=229,SNR=12	**4.44**	**46**	P		15 59 48.8	
X40A	**Basin Creek Fa** baz=300,SNR=24	**4.48**	**117**	P	**Pn**	**15 59 48.7**	**+0.4**
X40A	**Basin Creek Fa**	**4.48**	**117**		**Pn**	**15 59 48.7**	**+0.4**
X40A	comp=Z,441nm,0.9s			IAmb_Lg		16 01 13.4	
X40A	**Basin Creek Fa** baz=300,SNR=15	**4.48**	**117**	P		15 59 49.8	
X40A	baz=300,SNR=15			P		15 59 49.8	
N35A	**Tabor**	**4.53**	**20**		**Pn**	**15 59 47.9**	**-1.0**
FCAR	**Ozark Folk Cen**	**4.55**	**98**		**Pn**	**15 59 48.9**	**-0.3**
FCAR	comp=Z,360nm,0.8s			IAmb_Lg		16 01 13.6	
WHAR	**Wooly Hollow**	**4.57**	**105**	Pn	**Pn**	**15 59 49.8**	**+0.3**
WHAR	comp=Z,632nm,0.8s			IAmb_Lg		16 01 07.6	
KSCO	**Kaye Shedlock’** baz=120,SNR=14	**4.59**	**303**	P	**Pn**	**15 59 50.2**	**+0.3**
KSCO	**Kaye Shedlock’**	**4.59**	**303**	Pn	**Pn**	**15 59 49.3**	**-0.6**
KSCO	comp=Z,414nm,0.9s			IAmb_Lg		16 01 15.1	
KSCO	**Kaye Shedlock’** baz=120	**4.59**	**303**	P		15 59 50.4	
WHTX	**Lake Whitney,** baz=358,SNR=21	**4.62**	**178**	P	**Pn**	**15 59 50.7**	**+0.5**
WHTX	baz=358			Sb	**Sb**	**16 01 01.4**	**+4.3**
WHTX	**Lake Whitney,**	**4.62**	**178**	Pn	**Pn**	**15 59 50.3**	**+0.1**
WHTX	**Lake Whitney,** baz=358,SNR=112	**4.62**	**178**	P		15 59 50.7	
R40A	**Maddies Statio**	**4.62**	**67**		**Pn**	**15 59 50.5**	**+0.3**
R40A	comp=Z,768nm,0.7s			IAmb_Lg		16 01 11.5	
R40A	**Maddies Statio** baz=251,SNR=42	**4.62**	**67**	P		15 59 51.3	
W41B	**Gary Mavity, V** baz=290	**4.64**	**106**	P	**Pn**	**15 59 51.0**	**+0.6**
W41B	**Gary Mavity, V** baz=290	**4.64**	**106**	P		15 59 51.2	

UALR	University of	4.71	111	Pn	Pn	15 59 52.8	+1.3
UALR				IAmb_Lg		16 01 16.1	
	comp=Z,508nm,1.1s						
WLAR	White Oak Lake	4.75	127		Pn	15 59 53.1	+1.2
WLAR				IAmb_Lg		16 01 15.6	
	comp=Z,372nm,0.8s						
BGNE	Belgrade	4.80	356	P	Pn	15 59 52.8	0.0
	baz=176,SNR=14						
BGNE				Sb	Sb	16 01 07.4	+5.0
	baz=176						
BGNE	Belgrade	4.80	356	Pn	Pn	15 59 52.6	-0.2
BGNE				IAmb_Lg		16 01 15.4	
	comp=Z,759nm,0.8s						
BGNE	Belgrade	4.80	356	P		15 59 52.9	
	baz=176,SNR=19						
237A	Washetta, Mont	4.86	161		Pn	15 59 53.3	-0.1
237A				IAmb_Lg		16 01 12.6	
	comp=Z,224nm,0.8s						
MSTX	Muleshoe	4.93	239	P	Pn	15 59 54.8	+0.2
	baz=56						
MSTX				Sb	Sb	16 01 10.6	+4.3
	baz=56						
MSTX	Muleshoe	4.93	239	Pn	Pn	15 59 53.9	-0.7
MSTX				IAmb_Lg		16 01 22.8	
	comp=Z,197nm,0.7s						
Z41A	Richland Creek	5.22	128	P	Pn	15 59 58.7	+0.3
	baz=311						
LCAR	Lake Charles	5.29	94	Pn	Pn	15 59 59.3	-0.2
LCAR				IAmb_Lg		16 01 32.5	
	comp=Z,556nm,0.9s						
T42A	Van Buren	5.30	84	Pn	Pn	15 59 59.9	+0.3
T42A				IAmb_Lg		16 01 32.1	
	comp=Z,690nm,1.0s						
T42A	Van Buren	5.30	84	P		16 00 00.5	
	baz=268,SNR=24						
T42A				S		16 01 01.7	
	baz=268						
P40A	Paris	5.31	55	Pn	Pn	15 59 59.5	-0.2
P40A				IAmb_Lg		16 01 34.9	
	comp=Z,778nm,0.8s						
CCM	Cathedral Cave	5.33	72	P	Pn	16 00 00.2	+0.3
	baz=256						
CCM	Cathedral Cave	5.33	72	Pn	Pn	16 00 00.2	+0.3
CCM	Cathedral Cave	5.33	72	P		16 00 00.3	
	baz=256						
ETX02	Prairie Street	5.42	149	Pn	Pn	16 00 02.2	+1.0
T25A	Trinidad	5.42	278	P	Pn	16 00 01.5	+0.1
	baz=93,SNR=33						
N38A	Joes South For	5.43	38		Pn	16 00 01.2	-0.1
N38A	Joes South For	5.43	38	P		16 00 02.2	
	baz=221,SNR=16						
L34A	Svendsen Farm,	5.44	10	Pn	Pn	16 00 00.8	-0.7
NATX	Nacogdoches	5.45	152	IAmb_Lg		16 01 46.2	
	comp=Z,202nm,0.8s						
OGNE	Ogallala	5.50	323	P	Pn	16 00 03.3	+0.9
	baz=141						
OGNE	Ogallala	5.50	323	Pn	Pn	16 00 03.0	+0.6
OGNE				IAmb_Lg		16 01 46.1	
	comp=Z,528nm,0.9s						
CCAR	Cane Creek	5.53	117	Pn	Pn	16 00 03.7	+1.0
CCAR				IAmb_Lg		16 01 50.2	
	comp=Z,332nm,0.8s						
HBAR	Harrisburg	5.78	98		Pn	16 00 05.5	-0.7
435B	Jarrell	5.82	179	P	Pn	16 00 07.0	+0.3
	baz=359						
435B				S	Sn	16 01 12.8	-0.9
	baz=359						
435B	Jarrell	5.82	179		Pn	16 00 06.5	-0.2
435B				IAmb_Lg		16 01 59.4	
	comp=Z,280nm,0.8s						
PBMO	Poplar Bluff	5.83	86	Pn	Pn	16 00 06.3	-0.5
K31A	O'Neill	6.06	352		Pn	16 00 09.7	-0.3
CPRX	Cap Rock	6.22	237	Pn	Pn	16 00 12.6	+0.3
SCIA	State Center	6.32	32	P	Pn	16 00 14.4	+0.8
	baz=215,SNR=13						
SCIA				S	Sn	16 01 25.0	-1.0
	baz=215						
SCIA	State Center	6.32	32	Pn	Pn	16 00 13.4	-0.1
SCIA				IAmb_Lg		16 02 12.8	
	comp=Z,544nm,0.7s						
SDCO	Great Sand Dun	6.35	283	P	Pn	16 00 14.4	+0.2
	baz=98,SNR=24						
SDCO	Great Sand Dun	6.35	283	Pn	Pn	16 00 14.2	0.0
SDCO	Great Sand Dun	6.35	283	P		16 00 14.6	
	baz=98						
Q24A	Divide	6.36	294	P	Pn	16 00 14.3	-0.2
	baz=109						
JCT	Junction City	6.37	197	P	Pn	16 00 14.1	-0.3
	baz=15						
JCT	Junction City	6.37	197	Pn	Pn	16 00 13.4	-0.9
JCT				IAmb_Lg		16 02 18.0	
	comp=Z,254nm,0.9s						
PVMO	Portageville	6.43	89	IAmb_Lg		16 02 13.0	
	comp=Z,639nm,0.9s						
MET	Memphis--Engin	6.46	101	IAmb_Lg		16 02 04.7	
	comp=Z,331nm,0.8s						
143A	Socs Landing,	6.48	125	IAmb_Lg		16 02 24.7	
	comp=Z,237nm,1.2s						
N41A	Harden Midland	6.72	50	Pn	Pn	16 00 19.3	+0.2
S44A	Carbondale	6.81	78		Pn	16 00 20.2	-0.1
S44A	Carbondale	6.81	78	P		16 00 21.3	
	baz=264,SNR=11						
HKT	Hockley	6.82	166	IAmb_Lg		16 02 22.2	
	comp=Z,42nm,1.2s						
441A	DeRidder	6.94	146	IAmb_Lg		16 02 38.3	
	comp=Z,161nm,1.1s						
ISCO	Idaho Springs	7.01	299	P	Pn	16 00 23.5	+0.2
	baz=114,SNR=12						
ISCO	Idaho Springs	7.01	299	Pn	Pn	16 00 23.0	-0.3
ISCO				IAmb_Lg		16 02 25.7	
	comp=Z,125nm,0.8s						
ISCO	Idaho Springs	7.01	299	P		16 00 23.5	
	baz=114,SNR=20						
W45A	Hickory Valley	7.04	99	Pn	Pn	16 00 23.8	+0.2
W45A				IAmb_Lg		16 02 28.0	
	comp=Z,370nm,0.8s						
OXF	Oxford	7.06	105	P	Pn	16 00 23.8	+0.1
	baz=290						
OXF	Oxford	7.06	105		Pn	16 00 22.6	-1.1
OXF				IAmb_Lg		16 02 33.2	
	comp=Z,298nm,0.8s						
GDL2	Guadalupe Moun	7.06	233	Pn	Pn	16 00 24.3	+0.4
P43A	Skaggs, Pawnee	7.10	62	Pn	Pn	16 00 24.6	+0.3
K38A	Parkersburg	7.12	31		Pn	16 00 23.9	-0.5
ECSD	EROS Data Cent	7.16	6	P	Pn	16 00 24.0	-1.1
	baz=187,SNR=12						
ECSD	EROS Data Cent	7.16	6	Pn	Pn	16 00 23.7	-1.3
ECSD				IAmb_Lg		16 02 30.0	
	comp=Z,276nm,1.1s						
ECSD	EROS Data Cent	7.16	6	P		16 00 24.1	
	baz=187,SNR=45						
Y45A	Yeager Farm, C	7.20	110	Pn	Pn	16 00 25.6	-0.1
Q44A	Meyer Farm, Va	7.23	69	Pn	Pn	16 00 26.6	+0.5
Q44A	Meyer Farm, Va	7.23	69	P		16 00 27.1	
	baz=254,SNR=7.7						
T45B	Paducah	7.26	84	S		16 01 51.5	
	baz=270						
ANMO	Albuquerque	7.33	259	Pn	Pn	16 00 28.7	+1.1
	comp=Z,0.1nm,0.3s,baz=72,slow=9.6,SNR=3.8						
ANMO				Pg	Pg	16 00 55.1	-5.2
	comp=Z,10nm,0.3s,baz=77,slow=15,SNR=33						
ANMO				Lg	Lg	16 02 26.6	
	comp=Z,6.2nm,0.3s,baz=333,slow=20,SNR=6.8						
ANMO				LR	LR	16 03 33.8	
	comp=Z,194nm,19.3s,baz=72,slow=40						
ANMO	Albuquerque	7.33	259	IAmb_Lg		16 02 36.3	
	comp=Z,76nm,0.8s						
ANMO				IAmb_Lg		16 02 36.3	
	comp=Z,76nm,0.8s						
VBMS	Vicksburg	7.36	124	IAmb_Lg		16 02 55.5	
	comp=Z,123nm,1.1s						
L40A	Anamosa	7.39	41		Pn	16 00 27.8	-0.4
L40A				IAmb_Lg		16 02 35.1	
	comp=Z,360nm,0.9s						
PHWY	Pilot Hill	7.66	310		Pn	16 00 32.1	-0.1
PHWY				IAmb_Lg		16 02 51.1	
	comp=Z,125nm,0.9s						
BNM	Barren Site	7.71	254	Pn	Pn	16 00 33.4	+0.5
735A	Kenedy	7.74	181	IAmb_Lg		16 02 52.3	
	comp=Z,172nm,1.0s						
SMCO	Snowmass	7.78	292	Pn	Pn	16 00 33.8	-0.3
SUSD	Miller	7.88	353	Pn	Pn	16 00 34.0	-1.0
SUSD				IAmb_Lg		16 02 57.1	
	comp=Z,256nm,0.8s						
WVT	Waverly	7.96	91	P	Pn	16 00 35.5	-0.6
	baz=277						
WVT	Waverly	7.96	91		Pn	16 00 35.4	-0.7
WVT				IAmb_Lg		16 03 02.1	
	comp=Z,143nm,0.8s						
Y22D	IRIS PASSCAL I	7.97	254	IAmb_Lg		16 03 08.0	
	comp=Z,350nm,0.9s						
PLAL	Pickwick Lake	7.97	99	Pn	Pn	16 00 36.2	0.0
PLAL				IAmb_Lg		16 02 57.8	
	comp=Z,232nm,1.2s						
MNTX	Cornudas Mount	8.05	235	P	Pn	16 00 36.9	-0.5
	baz=50,SNR=7.7						
MNTX	Cornudas Mount	8.05	235	Pn	Pn	16 00 36.6	-0.7
MNTX	Cornudas Mount	8.05	235	P		16 00 37.2	
	baz=50,SNR=6.9						
O44A	Mansfield	8.05	61	Pn	Pn	16 00 36.6	-0.7
I37A	Lemond, Waseca	8.08	23	Pn	Pn	16 00 37.0	-0.7
I37A				IAmb_Lg		16 03 09.4	
	comp=Z,206nm,0.9s						
146A	Union	8.14	117	IAmb_Lg		16 03 17.9	
	comp=Z,105nm,0.9s						
L42A	Oliver, Polo	8.21	47	Pn	Pn	16 00 39.5	0.0
833A	Chaparral WMA,	8.39	190	P	Pn	16 00 42.5	+0.5
	baz=9.3						
JFWS	Jewell Farm	8.50	40	P	Pn	16 00 43.3	-0.2
	baz=225,SNR=10						
JFWS	Jewell Farm	8.50	40	Pn	Pn	16 00 43.1	-0.4
JFWS				IAmb_Lg		16 03 28.2	
	comp=Z,253nm,0.7s						
JFWS	Jewell Farm	8.50	40	P		16 00 43.3	
	baz=225,SNR=25						
Z47A	Carrollton	8.60	111	IAmb_Lg		16 03 29.3	
	comp=Z,102nm,0.9s						
MVCO	Mesa Verde	8.69	277	IAmb_Lg		16 03 32.3	
	comp=Z,103nm,1.3s						
P46A	Rosedale	8.78	67	Pn	Pn	16 00 47.5	+0.1
V48A	Smith Brothers	8.82	92	IAmb_Lg		16 03 21.1	
	comp=Z,261nm,1.0s						
TX31	Lajitas Ar. Si	8.83	216		Pn	16 00 46.7	-1.5
TX32	Lajitas Array	8.83	216		Pn	16 00 47.0	-1.2
TXAR	Lajitas Array	8.83	216	Pn	Pn	16 00 47.1	-1.1
	comp=Z,0.5nm,0.3s,baz=47,slow=11,SNR=16						
TXAR				Lg	Lg	16 03 17.3	
	comp=Z,5.1nm,0.3s,baz=21,slow=18,SNR=6.4						
TXAR				LR	LR	16 04 25.0	
	comp=Z,322nm,18.5s,baz=0.0,slow=39						
TXAR	Lajitas Array	8.83	216	Pn	Pn	16 00 46.6	-1.6
M44A	Midewin, Midew	8.88	55	Pn	Pn	16 00 49.7	+1.0
RSSD	Black Hills	8.93	329	P	Pn	16 00 49.9	+0.4
	baz=145						
RSSD	Black Hills	8.93	329	Pn	Pn	16 00 49.2	-0.4
RSSD				IAmb_Lg		16 03 25.5	
	comp=Z,182nm,1.0s						
X48A	Hartselle	8.93	101	Pn	Pn	16 00 49.6	+0.2
X48A				IAmb_Lg		16 03 22.2	
	comp=Z,199nm,1.1s						
RWWY	Rawlins	8.97	307	Pn	Pn	16 00 49.8	-0.4
RWWY				IAmb_Lg		16 03 45.0	
	comp=Z,221nm,1.1s						
PV13	Radium Mtn., P	9.00	283	Pn	Pn	16 00 51.1	+0.5
PV12	Saucer Basin,	9.01	284	Pn	Pn	16 00 50.6	-0.1
PV22	Blue Mesa, Par	9.03	286	Pn	Pn	16 00 52.1	+1.2
PV03	Paradox Valley	9.04	284	Pn	Pn	16 00 52.1	+1.0
I40A	Norwalk	9.05	34		Pn	16 00 50.2	-0.9
I40A				IAmb_Lg		16 03 28.9	
	comp=Z,205nm,0.8s						
PV11	David Mesa, Pa	9.06	284	Pn	Pn	16 00 52.4	+1.1
PV18	Skein Mesa, Pa	9.08	284	Pn	Pn	16 00 50.9	-0.8
PV16	Nyswonger Mesa	9.10	284	Pn	Pn	16 00 52.4	+0.5
PV04	Paradox Valley	9.10	285	Pn	Pn	16 00 52.1	+0.2
K22A	Casper	9.10	314	Pn	Pn	16 00 52.2	+0.4
K22A				IAmb_Lg		16 03 50.3	
	comp=Z,345nm,1.1s						
SFIN	Lafayette	9.11	62	P	Pn	16 00 52.0	+0.2
	baz=249						
SFIN	Lafayette	9.11	62	Pn	Pn	16 00 50.9	-0.9
SFIN				IAmb_Lg		16 03 39.5	
	comp=Z,327nm,0.8s						
PV17	East Wray Mesa	9.12	284	Pn	Pn	16 00 53.0	+0.8
PV20	West Nyswonger	9.14	284	Pn	Pn	16 00 52.1	-0.3
PV19	Morning Glory	9.15	284	Pn	Pn	16 00 52.5	-0.1
CLTN	Cedars of Leba	9.17	90	Pn	Pn	16 00 54.1	+1.5
CLTN				IAmb_Lg		16 03 37.1	
	comp=Z,267nm,1.0s						
BLO	Bloomington	9.18	70		Pn	16 00 53.9	+1.1
PV14	Lion Creek, Pa	9.19	284	Pn	Pn	16 00 52.2	-0.9
PV23	Carpenter Ridg	9.19	285	Pn	Pn	16 00 53.2	0.0
WCI	Wyandotte Cave	9.20	76	Pn	Pn	16 00 53.5	+0.4
WCI				IAmb_Lg		16 03 33.1	
	comp=Z,390nm,0.8s						
121A	Cookes Peak, D	9.27	247	Pn	Pn	16 00 52.4	-1.9
121A				IAmb_Lg		16 03 40.0	
	comp=Z,131nm,1.1s						
F33A	5 Mile Ranch,	9.28	6	Pn	Pn	16 00 52.3	-1.8
F33A				IAmb_Lg		16 03 39.7	
	comp=Z,133nm,1.0s						
SPMN	Marine on St.	9.36	22	Pn	Pn	16 00 52.6	-2.6
SPMN				IAmb_Lg		16 03 56.9	
	comp=Z,107nm,0.9s						
K43A	Burlington	9.43	47	Pn	Pn	16 00 55.7	-0.4
LRAL	Lakeview Retre	9.48	109	IAmb_Lg		16 03 58.5	
	comp=Z,124nm,1.2s						
U49A	Red Boiling Sp	9.57	87	Pn	Pn	16 00 58.6	+0.4
U49A				IAmb_Lg		16 03 43.0	
	comp=Z,206nm,1.0s						
Y49A	Blount Mountai	9.62	103	IAmb_Lg		16 04 02.8	
	comp=Z,92nm,0.8s						
SWET	Sewanee	9.63	95	IAmb_Lg		16 03 52.1	
	comp=Z,135nm,0.8s						
F36A	Milaca	9.75	17	Pn	Pn	16 00 59.5	-1.1
I42A	Draeger Farm,	9.88	40	Pn	Pn	16 01 01.3	-1.1
I42A				IAmb_Lg		16 03 52.6	
	comp=Z,171nm,0.9s						
FPAL	Fort Paine	10.04	98	Pn	Pn	16 01 06.0	+1.3
R49A	Shelbyville	10.09	77	Pn	Pn	16 01 05.5	+0.3
N47A	Urbana	10.28	62	Pn	Pn	16 01 08.0	+0.1
T50A	Nancy	10.30	84	Pn	Pn	16 01 09.1	+0.8
G40A	Rib Lake	10.32	31	Pn	Pn	16 01 07.8	-0.7
CPCT	Cooper Cave	10.72	92	Pn	Pn	16 01 13.8	-0.1
R50A	Paris	10.74	77	Pn	Pn	16 01 14.2	0.0
V51A	Loudon	10.80	90		Pn	16 01 14.8	-0.3
H43A	Windswept, Lux	10.87	41	Pn	Pn	16 01 15.2	-0.8
PD31	Pinedale Array	11.02	308		Pn	16 01 16.4	-1.8
PDAR	Pinedale Array	11.02	308	Pn	Pn	16 01 17.2	-1.0
	comp=Z,0.5nm,0.3s,baz=119,slow=15,SNR=16						
PDAR				Lg	Lg	16 04 29.1	
	comp=Z,2.9nm,0.3s,baz=98,slow=32,SNR=10						
PDAR				LR	LR	16 05 37.7	
	comp=Z,143nm,18.6s,baz=128,slow=38						
PDAR	Pinedale Array	11.02	308	Pn	Pn	16 01 17.4	-0.8
BW06	Boulder Array	11.02	308	Pn	Pn	16 01 17.6	-0.7
TKL	Tuckaleechee C	11.29	91	Pn	Pn	16 01 22.4	+0.7
	comp=Z,1.1nm,0.3s,baz=229,slow=8.6,SNR=7.8						
TKL				Sn	Sn	16 03 25.2	-3.0
	comp=Z,1.1nm,0.3s,baz=156,slow=18,SNR=2.8						
TKL				Lg	Lg	16 04 33.5	
	comp=Z,2.7nm,0.3s,baz=8.2,slow=21,SNR=6.3						
TKL				LR	LR	16 05 51.3	
	comp=Z,128nm,20.8s,baz=323,slow=38						
TKL	Tuckaleechee C	11.29	91	Pn	Pn	16 01 22.2	+0.5
S51A	Beattyville	11.29	81		Pn	16 01 21.8	+0.1
TZTN	Tazewell	11.36	86	Pn	Pn	16 01 22.9	+0.2
N49A	Columbus Grove	11.38	64	Pn	Pn	16 01 21.8	-1.1
Q51A	Peebles	11.59	74	Pn	Pn	16 01 24.9	-0.9
F42A	Maple Grove Fa	11.62	35	Pn	Pn	16 01 25.2	-0.9
LAO	LASA Array	11.91	330	Pn	Pn	16 01 31.2	+1.0
V53A	Saluda	12.06	90	Pn	Pn	16 01 32.9	+0.7
ACSO	Alum Creek Sta	12.08	68	Pn	Pn	16 01 32.1	-0.4
B35A	Bob, Littlefor	12.09	13	Pn	Pn	16 01 30.3	-2.3
RLMT	Red Lodge	12.20	318	Pn	Pn	16 01 33.0	-1.3
EYMN	Ely	12.21	20	Pn	Pn	16 01 31.1	-3.2
M50A	Fremont	12.34	63		Pn	16 01 35.5	-0.6
G45A	Suttons Bay	12.39	43	Pn	Pn	16 01 35.9	-0.8
H17A	Grant Village	12.51	312	Pn	Pn	16 01 37.4	-1.2
E43A	Lone Tree Farm	12.61	36		Pn	16 01 36.2	-3.5
P52A	Corning	12.61	71	Pn	Pn	16 01 38.5	-1.2
U54A	Nelsons Funny	12.75	86	Pn	Pn	16 01 41.7	-0.1
ULM	Lac du Bonnet	13.69	5	Pn	Pn	16 01 47.7	-6.7
	comp=Z,1.0nm,0.3s,baz=189,slow=13,SNR=12						
ULM				Sn	Sn	16 04 14.6	-12
	comp=Z,1.0nm,0.3s,baz=90,slow=16,SNR=2.5						
ULM				Lg	Lg	16 05 43.8	
	comp=Z,0.5nm,0.3s,baz=107,slow=5.2,SNR=5.9						
ULM				LR	LR	16 06 31.3	
	comp=Z,140nm,20.2s,baz=152,slow=35						
E46A	Sault Ste Mari	13.96	42	Pn	Pn	16 01 55.5	-2.6
R55A	Marlinton	14.05	78	Pn	Pn	16 01 58.2	-1.4
ELK	Elko	14.32	292	LR	LR	16 07 58.8	
	comp=Z,233nm,18.6s,baz=100,slow=39						
PFO	Pinyon Flats O	15.66	264	LR	LR	16 08 45.1	
	comp=Z,132nm,20.8s,baz=72,slow=39						
SADO	Sadowa	16.22	54	Lg	Lg	16 07 04.2	
	comp=Z,1.3nm,0.3s,baz=183,slow=22,SNR=7.2						
NVAR	Mina Array Bea	16.46	283	Pn	Pn	16 02 32.9	+1.2
	comp=Z,0.1nm,0.3s,baz=102,slow=11,SNR=2.2						
NVAR				LR	LR	16 09 24.2	
	comp=Z,150nm,20.8s,baz=73,slow=40						
LPIG	La Paz	16.54	225	LR	LR	16 09 12.7	
	comp=Z,165nm,21.7s,baz=32,slow=38						
NEW	Newport	18.42	315	LR	LR	16 10 40.3	
	comp=Z,138nm,18.6s,baz=150,slow=39						
CMIG	Matias Romero	19.60	172	LR	LR	16 12 12.3	
	comp=Z,36nm,20.1s,baz=17,slow=41						
YBH	Yreka Blue Hor	20.04	292	LR	LR	16 12 00.0	
	comp=Z,87nm,18.3s,baz=72,slow=40						
YKA	Yellowknife Ar	27.95	343	Lg	Lg	16 13 19.4	
	comp=Z,1.6nm,1.0s,baz=146,slow=27,SNR=2.7						
FRB	Frobisher Bay	32.39	24	LR	LR	16 18 18.3	
	comp=Z,232nm,18.5s,baz=202,slow=36						
ILAR	Eielson Array	40.38	330	P	P	16 06 19.2	+1.1
	comp=Z,0.4nm,0.7s,baz=108,slow=7.6,SNR=6.6						

IDC ***27*** *16:03:17.0±1.2, 21°.24N×122°.10E, h0^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.4/39, mbtmp3.4/7, ML3.3/1, Error ellipse: s-maj=45.1km s-min=20.5km az=67.0*

TAP ***27*** *16:03:16.0, 21°.18N×122°.20E, h78^{km}±1^{km}, ML3.9, D*

JMA ***27*** *16:03:19.4±0.2, 21°.71N×121°.93E, h0^{km}, M3.6*

ISC 27 16:03:20.0±1.8**, 21°.37N**±0°.06×**122°.08E**±0°.04**, h19**^{km}±7^{km}**,**
n83, σ1^{s}.25/139**, mb3.4**/6**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LAY	Lan-yu	0.83	324	*e*P	Pb	16 03 35.7	-0.2
	baz=325						
LAY				*e*S	Sn	16 03 49.8	+1.3
	baz=325						
TSEB	Hengchuen, Pin	1.22	296	*e*P	Pn	16 03 41.0	-1.1
	baz=300						
TSEB				*e*S	Sg	16 03 60.0	+0.3
	baz=300						
TWKBT	Hengchun	1.31	296	*e*P	Pn	16 03 41.5	-1.9
	baz=300						
TWKBT				*e*S	Sb	16 04 01.0	+0.5
	baz=300						
TWK1	Hengchun	1.32	296	*e*P	Pn	16 03 40.9	-2.6
	baz=300						
TWK1				*e*S	Sb	16 04 01.3	+0.6
	baz=300						
HEN	Hengchun	1.40	297	*e*P	Pn	16 03 43.7	-0.8
	baz=301						
HEN				*e*S	Sb	16 04 03.4	+0.3
	baz=301						
SLIU	Shizi	1.46	306	*e*P	Pn	16 03 43.6	-1.8
	baz=315						
SLIU				*e*S	Sb	16 04 05.7	+0.8
	baz=315						
TAW	Tawu	1.48	312	*e*P	Pn	16 03 43.7	-1.9
	baz=314						
TAW				*e*S	Sn	16 04 04.2	-0.2
	baz=314						
EAST	Anshuo	1.53	312	*e*P	Pn	16 03 44.5	-1.9
	baz=314						
EAST				*e*S	Sn	16 04 05.5	-0.2
	baz=314						
ECL	Taimali	1.61	320	*e*P	Pn	16 03 45.1	-2.4
	baz=321						
ECL				*e*S	Sn	16 04 06.8	-1.0
	baz=321						
SCZT	Fangliau	1.69	307	*e*P	Pn	16 03 46.7	-1.8
	baz=314						
SCZT				*e*S	Sn	16 04 10.2	+0.6
	baz=314						
TWGBT	Beinan	1.72	327	*e*P	Pn	16 03 46.6	-2.4
	baz=318						
TWGBT				*e*S	Sn	16 04 10.4	0.0
	baz=318						
TWG	Pinlang	1.73	327	*e*P	Pn	16 03 46.6	-2.4
	baz=318						
TWG				*e*S	Sn	16 04 09.9	-0.6
	baz=318						
EDH	Donghe	1.75	336	*e*P	Pn	16 03 47.6	-1.8
	baz=340						
EDH				*e*S	Sn	16 04 11.3	0.0
	baz=340						
LONT	Longtian	1.77	330	*e*P	Pn	16 03 48.8	-0.8
	baz=319						
LONT				*e*S	Sb	16 04 13.4	-0.3
	baz=319						
SSPT	Xinbi	1.79	309	*e*P	Pn	16 03 49.0	-0.9
	baz=311						
SSPT				*e*S	Sn	16 04 12.9	+0.7
	baz=311						
MASBT	Mashibuluo	1.83	313	*e*P	Pn	16 03 48.7	-1.8
	baz=320						
MASBT				*e*S	Sn	16 04 12.9	-0.2
	baz=320						
TSMG	Majia	1.89	315	*e*P	Pn	16 03 50.5	-0.7
	baz=316						
SSD	Sandimen	1.92	316	*e*P	Pn	16 03 50.5	-1.2
	baz=317						
FULB	Fuli	1.96	338	*e*P	Pn	16 03 49.1	-3.2
	baz=345						
ELDTW	Lidau	2.07	332	*e*P	Pn	16 03 52.5	-1.4
	baz=325						
ELDTW				*e*S	Sn	16 04 18.5	-0.6
	baz=325						
EYUL	Yuli	2.10	340	*e*P	Pn	16 03 52.6	-1.5
	baz=344						
EYUL				*e*S	Sn	16 04 19.7	0.0
	baz=344						
TWF1	Yuli	2.11	340	*e*P	Pn	16 03 52.1	-2.1
	baz=345						
SCST	Cishan	2.11	316	*e*P	Pn	16 03 53.0	-1.3
	baz=317						
YULB	Yu-li	2.14	340	*e*P	Pn	16 03 52.8	-2.0
	baz=344						
YULB				*e*S	Sn	16 04 21.6	+0.7
	baz=344						
STYT	Tauyuan	2.17	326	*e*P	Pn	16 03 55.6	+0.4
	baz=326						
STYT				*e*S	Sb	16 04 23.8	-1.5
	baz=326						
SGST	Jiashian	2.20	321	*e*P	Pn	16 03 54.9	-0.7
	baz=310						
SGST				*e*S	Sb	16 04 24.4	-1.8
	baz=310						
HGSD	Ruisui	2.20	344	*e*P	Pn	16 03 54.7	-0.9
	baz=349						
HGSD				*e*S	Sn	16 04 22.7	+0.4
	baz=349						
EHY	Hungye	2.24	342	*e*P	Pn	16 03 55.1	-1.0
	baz=344						
EHY				*e*S	Sn	16 04 23.9	+0.6
	baz=344						
CHN1	Nanshi	2.31	322	*e*P	Pn	16 03 57.7	+0.6
	baz=322						
CHN1				*e*S	Sb	16 04 28.1	-1.3
	baz=322						
WTP	Ta-pu	2.31	324	*e*P	Pn	16 03 57.3	+0.1
	baz=312						
WTP				*e*S	Sn	16 04 27.2	+2.1
	baz=312						
TPUB	Ta-pu	2.35	325	*e*P	Pn	16 03 57.0	-0.7
	baz=313						
TPUB				*e*S	Sn	16 04 27.1	+1.1
	baz=313						
TWK	Hsinying	2.40	322	*e*P	Pn	16 03 57.7	-0.6
	baz=323						
TWK				*e*S	Sn	16 04 28.0	+0.7
	baz=323						
CHN4	Tsaushan	2.41	325	*e*P	Pn	16 03 58.2	-0.3
	baz=313						
CHN4				*e*S	Sn	16 04 28.9	+1.4
	baz=313						
ALS	Alishan	2.44	331	*e*P	Pn	16 03 59.2	+0.1
	baz=331						
ESL	Shilin	2.51	346	*e*P	Pn	16 03 57.9	-1.9
	baz=350						
ESL				*e*S	Sn	16 04 28.0	-1.9
	baz=350						
VWDT	VWDT	2.53	340	*e*P	Pn	16 03 59.5	-0.6
	baz=339						
VWDT				*e*S	Sn	16 04 29.5	-0.9

```
       baz=339
CHN5   Tsauling            2.57 330  eP      Pn     16 04 01.8 +1.0
       baz=318
CHN5                                 eS      Sn     16 04 32.8 +1.2
       baz=318
SSLB   Suanglung           2.63 337  eP      Pn     16 04 01.6 +0.2
       baz=342
SSLB                                 eS      Sn     16 04 33.7 +0.9
       baz=342
WDLH   Douliu              2.72 329  eP      Pn     16 04 02.5 -0.1
       baz=317
WDLH                                 eS      Sn     16 04 36.4 +1.4
       baz=317
SMLT   Sun Moon Lake       2.73 337  eP      Pn     16 04 04.2 +1.2
       baz=323
SMLT                                 eS      Sn     16 04 37.8 +2.2
       baz=323
TYC    Yuchr               2.77 336  eP      Pn     16 04 04.2 +0.8
       baz=323
TYC                                  eS      Sn     16 04 38.1 +1.8
       baz=323
WTK    Tuku                2.79 326  eP      Pn     16 04 03.0 -0.7
       baz=326
WTK                                  eS      Sn     16 04 37.5 +0.6
       baz=326
CHGB   Renai               2.81 343  eP      Pn     16 04 03.7 -0.4
       baz=349
CHGB                                 eS      Sn     16 04 38.5 +0.9
       baz=349
WNT    Mingjian            2.81 333  eP      Pn     16 04 04.3 +0.3
       baz=321
WNT                                  eS      Sn     16 04 38.4 +0.9
       baz=321
NACB   Ninganchiao         2.83 351  eP      Pn     16 04 02.8 -1.4
       baz=356
NACB                                 eS      Sn     16 04 35.6 -2.2
       baz=356
DPDB   Guoxing             2.86 338  eP      Pn     16 04 03.4 -1.3
       baz=325
DPDB                                 eS      Sn     16 04 40.8 +2.1
       baz=325
WHF    Hehuan Shan         2.87 345  eP      Pn     16 04 04.6 -0.5
       baz=344
WHF                                  eS      Sn     16 04 40.2 +0.8
       baz=344
ETLH   Xiulin Townshi      2.88 349  eP      Pn     16 04 03.4 -1.6
       baz=347
ETLH                                  S      Sn     16 04 39.0 -0.3
       baz=347
FUSS   Fushou              2.97 345  eP      Pn     16 04 06.0 -0.4
       baz=352
FUSS                                 eS      Sn     16 04 43.2 +1.5
       baz=352
TWT    Tachien             2.99 344  eP      Pn     16 04 06.2 -0.5
       baz=350
TWT                                  eS      Sn     16 04 42.0 -0.1
       baz=350
TDCB   Techi               3.00 344  eP      Pn     16 04 05.5 -1.1
       baz=342
TDCB                                 eS      Sn     16 04 42.1  0.0
       baz=342
WHP    Taichung City       3.08 340  eP      Pn     16 04 07.8  0.0
       baz=345
WHP                                  eS      Sn     16 04 47.5 +3.4
       baz=345
HATJ   Hateruma jima       3.12  30   P      Pn     16 04 08.2 +0.1
HATJ                                 eS      Sn     16 04 44.5 -0.3
NNSB   Datong              3.12 348  eP      Pn     16 04 06.9 -1.4
       baz=355
NNSB                                 eS      Sn     16 04 44.1 -1.0
       baz=355
NNSH   Datong              3.12 348  eP      Pn     16 04 06.2 -2.1
       baz=354
NNSH                                 eS      Sn     16 04 44.2 -0.8
       baz=354
NNS    Nan Shan            3.13 348  eP      Pn     16 04 07.2 -1.2
       baz=355
NNS                                  eS      Sn     16 04 45.1 -0.2
       baz=355
PHUB   P'eng-hu            3.16 313  eS      Sn     16 04 44.4 -1.5
       baz=308
TWQ1   Liyutan             3.21 338  eP      Pn     16 04 11.0 +1.6
       baz=338
TWQ1                                 eS      Sn     16 04 48.8 +1.7
       baz=338
NDT    Datong Townshi      3.26 351  eP      Pn     16 04 08.4 -1.8
       baz=356
NDT                                  eS      Sn     16 04 47.4 -1.1
       baz=356
ENTT   Nioudou             3.29 352  eP      Pn     16 04 09.3 -1.3
       baz=357
ENTT                                 eS      Sn     16 04 48.1 -1.1
       baz=357
IRIF   Iriomote-Funau      3.32  27   P      Pn     16 04 10.3 -0.7
YHNB   Yeheng              3.35 349  eP      Pn     16 04 10.8 -0.7
       baz=356
YHNB                                 eS      Sn     16 04 49.8 -1.0
       baz=356
NSK    Sanguang            3.36 349  eP      Pn     16 04 10.8 -0.8
       baz=356
NSK                                  eS      Sn     16 04 50.1 -0.9
       baz=356
TWE    Neicheng            3.36 354  eP      Pn     16 04 10.2 -1.3
       baz=357
TWE                                  eS      Sn     16 04 49.4 -1.6
       baz=357
JKRS   Kuro-shima          3.37  32   P      Pn     16 04 12.2 +0.6
JKRS                                 eS      Sn     16 04 51.2 +0.2
LIOB   Emei                3.41 343  eP      Pn     16 04 13.4 +1.2
       baz=329
LIOB                                 eS      Sn     16 04 54.5 +2.3
       baz=329
NWLT   Wulai               3.44 351  eP      Pn     16 04 11.4 -1.2
       baz=350
NWLT                                 eS      Sn     16 04 52.1 -0.8
       baz=350
JIJ    Ishigaki jima       3.54  32   P      Pn     16 04 14.2 +0.3
JIJ                                  eS      Sn     16 04 54.4 -0.9
JISG   Ishigakijimahi      3.81  32   P      Pn     16 04 17.4 -0.2
JISG                                 eS      Sn     16 05 01.7 -0.2
JTJ    Tarama              4.06  36   P      Pn     16 04 22.6 +1.5
JTJ                                  eS      Sn     16 05 08.3 +0.3
KSRS   Korea Array        16.81  16  Pn      P      16 07 17.2 +0.8
       0.1nm,0.3s,baz=199,slow=12,SNR=1.6
CMAR   Chiang Mai Arr     21.94 266  P       P      16 08 13.2 +0.5
       0.2nm,0.3s,baz=68,slow=3.1,SNR=1.9
SONM   Songino Array      29.28 338  P       P      16 09 21.4 +0.3
       0.3nm,0.6s,baz=142,slow=6.2,SNR=2.5
MKAR   Makanchi Array     40.95 318  P       P      16 11 02.4 +0.9
       0.5nm,0.7s,baz=113,slow=9.5,SNR=7.0
H11N1  WAKE ISLAND Hy     41.89  84  T       T      16 56 05.5
       baz=282,slow=75,SNR=14
H11N2  WAKE ISLAND Hy     41.89  84  T       T      16 56 07.0
       baz=282,slow=75,SNR=23
H11N3  WAKE ISLAND Hy     41.90  84  T       T      16 56 06.8
       baz=282,slow=75,SNR=16
H11S3  WAKE ISLAND Hy     41.93  86  T       T      16 56 05.4
       baz=282,slow=75,SNR=36
H11S1  WAKE ISLAND Hy     41.94  86  T       T      16 56 06.3
       baz=282,slow=75,SNR=27
H11S2  WAKE ISLAND Hy     41.95  86  T       T      16 56 05.4
       baz=282,slow=75,SNR=23
WRA    Warramunga Arr     42.77 163  P       P      16 11 15.3 -1.2
       0.4nm,0.6s,baz=344,slow=9.1,SNR=2.5
ZALV   Zalesovo Beam      43.06 328  P       P      16 11 18.7 +0.2
       0.7nm,0.4s,baz=121,slow=8.3,SNR=4.0
ASAR   Alice Springs      46.22 165  P       P      16 11 42.8 -1.2
       0.3nm,0.7s,baz=347,slow=6.7,SNR=7.4
```

TAP ***27*** *16:05:58.0, 21°.24N×122°.20E, h18^{km}±1^{km}, ML4.7, D*

IDC ***27*** *16:05:59.2±0.6, 21°.24N×122°.02E, h0^{km}, mb4.3/22, mb1 4.4/25, mb1mx4.3/38, mbtmp4.3/25, ML4.2/3, MS4.2/36, Ms1 4.2/36, ms1mx4.2/40, Error ellipse: s-maj=17.8km s-min=12.3km az=87.0*

BJI ***27*** *16:06:00.5±0.0, 21°.29N×121°.93E, h8^{km}, mB5.0/52, mb4.3/61, Ms4.9/66, Ms7 4.6/62*

MOS ***27*** *16:06:01.3±1.6, 21°.18N×121°.93E, h15^{km}, mb4.8/37, Error ellipse: s-maj=10.3km s-min=5.9km az=113.1*

NEIC ***27*** *16:06:01.8±2.1, 21°.41N±0°.07×121°.90E±0°.09, h10^{km}±1^{km}, mb4.8/61, Error ellipse: s-maj=13.7km s-min=10.9km az=251.0*

GCMT ***27*** *16:06:02.8±0.2, 21°.35N±0°.01×121°.82E±0°.01, h12^{km}, MW4.9/105, Moment Tensor Solution. s21,c27; s105,c155; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.85±.07; M$_{\theta\theta}$0.36±.06; M$_{\phi\phi}$-1.21±.07; M$_{r\theta}$1.11±.19; M$_{\theta\phi}$-2.34±.05; M$_{\phi r}$-0.53±.19; Best double couple: M$_0$2.85300×10^{16} NP1:φ$_s$175.00000°, δ65.00000°, λ21.00000°. NP2:φ$_s$76.00000°, δ71.00000°, λ154.00000°. Principal axes: T 2.8000, Plg32.0000°, Azm34.0000°; N 0.1100, Plg58.0000°, Azm222.0000°; P -2.9060, Plg4.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NIED ***27*** *16:06:02.9, 21°.56N×121°.87E, h83^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.78; M$_{\theta\theta}$0.48; M$_{\phi\phi}$-1.26; M$_{r\theta}$1.53; M$_{\theta\phi}$-2.10; M$_{\phi r}$-0.39; Fault plane solution: M$_0$2.85000×10^{16} NP1:φ$_s$74.00000°, δ73.00000°, λ147.00000°. NP2:φ$_s$174.00000°, δ58.00000°, λ20.00000°.*

JMA ***27*** *16:06:02.9±0.6, 21°.56N×121°.87E, h83^{km}, M4.4*

ISC 27 16:06:00.8±0.9**, 21°.33N**±0°.02×**122°.05E**±0°.03**, h9**^{km}±5^{km}**, n432, σ2^{s}12**/440**, mb4.7**/110**, MS4.3**/41**, 10C-13D, Taiwan region**

```
Code   Station Name         Δ°   AZ°    Phase ID         Time      Res
                                      Op       ISC      h  m  s   ISC
LAY    Lan-yu              0.84 327  eP      Pg     16 06 14.4 -2.7
       baz=323
LAY                                   S      Sg     16 06 29.0 +0.9
       baz=323
BBP    Basco               0.89 185  eP      Pn     16 06 17.9 -1.6
TSEB   Hengchuen, Pin      1.21 298   P      Pn     16 06 22.4 -1.5
       baz=297
TSEB                                 eS      Sb     16 06 40.3 +0.7
       baz=297
TWKBT  Hengchun            1.30 298  eP      Pn     16 06 20.7 -4.5
       baz=298
TWKBT                                eS      Sn     16 06 42.6 -0.1
       baz=298
TWK1   Hengchun            1.31 298  eP      Pn     16 06 21.3 -4.0
       baz=298
TWK1                                 eS      Sn     16 06 42.1 -0.9
       baz=298
SNW    Nanwan              1.36 298  eP      Pn     16 06 25.0 -1.0
       baz=297
SNW                                  eS      Sn     16 06 40.6 -3.6
       baz=297
HEN    Hengchun            1.39 299  eP      Pn     16 06 23.9 -2.6
       baz=299
HEN                                  eS      Sn     16 06 44.4 -0.6
       baz=299
LDUT   Ludao               1.44 338  eP      Pn     16 06 23.0 -4.1
       baz=334
LDUT                                 eS      Sn     16 06 44.9 -1.3
       baz=334
SLIU   Shizi               1.46 307  eP      Pn     16 06 23.0 -4.4
       baz=306
TAW    Tawu                1.48 314  eP      Pn     16 06 24.1 -3.5
       baz=312
TAW                                  eS      Sn     16 06 44.4 -2.8
       baz=312
EAST   Anshuo              1.53 313  eP      Pn     16 06 24.9 -3.5
       baz=312
EAST                                 eS      Sn     16 06 46.0 -2.4
       baz=312
ECL    Taimali             1.62 321  eP      Pn     16 06 25.9 -3.7
       baz=319
TTN    Taitung             1.65 330  eP      Pn     16 06 27.8 -2.1
       baz=327
TTN                                  eS      Sn     16 06 50.9 -0.3
       baz=327
SCZT   Fangliau            1.68 308  eP      Pn     16 06 27.3 -3.2
       baz=307
SCZT                                 eS      Sn     16 06 53.5 +1.2
       baz=307
TWGBT  Beinan              1.73 329  eP      Pn     16 06 28.4 -2.7
       baz=326
TWGBT                                eS      Sn     16 06 51.2 -2.2
       baz=326
TWG    Pinlang             1.74 329  eP      Pn     16 06 28.1 -3.1
       baz=326
TWG                                  eS      Sn     16 06 51.2 -2.4
       baz=326
TWG    Pinlang             1.74 329          Pn     16 06 28.3 -2.9
EDH    Donghe              1.77 337  eP      Pn     16 06 27.3 -4.4
       baz=334
EDH                                  eS      Sn     16 06 51.7 -2.7
       baz=334
LONT   Longtian            1.78 332  eP      Pn     16 06 29.0 -2.9
       baz=329
LONT                                 eS      Sn     16 06 53.5 -1.3
       baz=329
SSPT   Xinbi               1.79 310  eP      Pn     16 06 30.4 -1.5
       baz=309
SSPT                                 eS      Sn     16 06 54.6 -0.2
       baz=309
MASBT  Mashibuluo          1.83 314  eP      Pn     16 06 29.8 -2.7
       baz=313
MASBT                                eS      Sn     16 06 55.4 -0.4
       baz=313
WLCH   Liuqiu              1.85 303  eP      Pn     16 06 32.7 -0.1
       baz=303
WLCH                                 eS      Sn     16 06 56.6 +0.2
       baz=303
TWP    Hsiaoliuchiu        1.86 303  eP      Pb     16 06 33.6 -1.5
       baz=302
TWP                                  eS      Sn     16 06 56.6 -0.1
       baz=302
TSMG   Majia               1.89 317  eP      Pn     16 06 33.0 -0.3
       baz=315
TSMG                                 eS      Sn     16 06 56.7 -0.6
       baz=315
SSD    Sandimen            1.93 317  eP      Pn     16 06 31.8 -2.0
       baz=315
SSD                                  eS      Sn     16 06 57.1 -1.1
       baz=315
FULB   Fuli                1.99 339  eP      Pn     16 06 32.6 -2.1
       baz=336
FULB                                 eS      Sn     16 06 57.7 -2.0
       baz=336
SGLT   Jiouru              2.00 314  eP      Pn     16 06 34.4 -0.4
       baz=313
ELDTW  Lidau               2.08 333  eP      Pn     16 06 32.7 -3.4
       baz=330
SLGT   Liugui              2.10 322  eP      Pn     16 06 35.2 -1.0
       baz=320
SLGT                                 eS      Sn     16 07 02.0 -0.6
       baz=320
SCST   Cishan              2.12 317  eP      Pn     16 06 34.1 -2.3
       baz=316
EYUL   Yuli                2.12 341  eP      Pn     16 06 34.4 -2.0
       baz=338
EYUL                                 eS      Sn     16 07 01.7 -1.2
       baz=338
TWM1   Shoushan            2.12 315  eP      Pn     16 06 37.3 +0.8
       baz=313
TWF1   Yuli                2.13 341  eP      Pn     16 06 33.0 -3.6
       baz=338
TWF1                                 eS      Sn     16 07 01.4 -1.8
       baz=338
SNJT   Kaohsiung City      2.13 312  eP      Pn     16 06 36.4 -0.2
       baz=311
YULB   Yu-li               2.17 341  eP      Pn     16 06 33.5 -3.6
       baz=338
YULB                                 eS      Sn     16 07 02.6 -1.6
       baz=338
YULB   Yu-li               2.17 341   Pn     Pn     16 06 33.9 -3.2
STYT   Tauyuan             2.18 327  eP      Pn     16 06 36.7 -0.7
       baz=325
STYT                                 eS      Sn     16 07 04.5  0.0
       baz=325
SGST   Jiashian            2.21 322  eP      Pn     16 06 36.7 -1.1
       baz=320
SGST                                 eS      Sn     16 07 04.0 -1.2
       baz=320
HGSD   Ruisui              2.23 345  eP      Pn     16 06 36.4 -1.6
       baz=342
EHY    Hungye              2.27 343  eP      Pn     16 06 35.2 -3.3
       baz=340
EHY                                  eS      Sn     16 07 05.1 -1.5
       baz=340
CHN1   Nanshi              2.32 323  eP      Pn     16 06 38.9 -0.3
       baz=321
CHN1                                 eS      Sn     16 07 08.8 +0.8
       baz=321
WTP    Ta-pu               2.32 325  eP      Pn     16 06 38.4 -1.0
       baz=323
WTP                                  eS      Sn     16 07 07.3 -0.8
       baz=323
CHN3   Shinhua             2.33 318  eP      Pn     16 06 40.5 +1.1
       baz=317
TPUB   Ta-pu               2.36 326  eP      Pn     16 06 38.6 -1.2
       baz=324
TPUB                                 eS      Sn     16 07 09.4 +0.4
       baz=324
TPUB   Ta-pu               2.36 326          Pn     16 06 38.4 -1.4
SNST   Tainan City         2.37 323  eP      Pn     16 06 40.4 +0.5
       baz=321
SNST                                 eS      Sn     16 07 08.8 -0.2
       baz=321
EGFH   Guangfu             2.40 346  eP      Pn     16 06 38.6 -1.6
       baz=343
TWK    Hsinying            2.41 323  eP      Pn     16 06 40.4 -0.1
       baz=322
TWK                                  eS      Sn     16 07 08.0 -2.2
       baz=322
CHN4   Tsaushan            2.42 326  eP      Pn     16 06 40.6  0.0
       baz=324
CHN4                                 eS      Sn     16 07 09.4 -1.0
       baz=324
ALS    Alishan             2.46 332   P      Pn     16 06 41.2 -0.2
       baz=330
ALS                                  eS      Sn     16 07 11.9 +0.3
       baz=330
ESL    Shilin              2.54 347  eP      Pn     16 06 39.5 -2.7
       baz=344
ESL                                  eS      Sn     16 07 09.1 -4.1
       baz=344
VWDT   VWDT                2.55 341  eP      Pn     16 06 40.9 -1.5
       baz=338
CHN5   Tsauling            2.59 331  eP      Pn     16 06 42.4 -0.6
       baz=329
CHN5                                 eS      Sn     16 07 13.4 -1.2
       baz=329
ICHU   Yijhu               2.60 321  eP      Pn     16 06 43.5 +0.4
       baz=319
ICHU                                 eS      Sn     16 07 13.1 -1.7
       baz=319
CHY    Chiayi              2.63 325  eP      Pn     16 06 43.2 -0.3
       baz=323
CHY                                  eS      Sn     16 07 15.7 +0.1
       baz=323
CHN2   Minshiung           2.63 327  eP      Pn     16 06 44.4 +0.9
       baz=325
CHN8   Yiju                2.63 320  eP      Pn     16 06 43.5  0.0
       baz=318
SSLB   Suanglung           2.65 338  eP      Pn     16 06 42.6 -1.1
       baz=335
SSLB   Suanglung           2.65 338          Pn     16 06 42.4 -1.4
WGK    Gukeng              2.72 330  eP      Pn     16 06 41.8 -2.9
       baz=328
WDLH   Douliu              2.73 329  eP      Pn     16 06 44.6 -0.2
       baz=327
SMLT   Sun Moon Lake       2.75 337  eP      Pn     16 06 45.5 +0.2
       baz=335
TYC    Yuchr               2.79 337  eP      Pn     16 06 44.1 -1.6
       baz=335
TYC                                  eS      Sn     16 07 17.6 -1.8
       baz=335
WTK    Tuku                2.80 327  eP      Pn     16 06 45.2 -0.7
       baz=325
WTK                                  eS      Sn     16 07 17.9 -1.9
       baz=325
WNT    Mingjian            2.83 334  eP      Pn     16 06 46.6 +0.4
       baz=332
WNT                                  eS      Sn     16 07 20.5  0.0
       baz=332
CHGB   Renai               2.83 344  eP      Pn     16 06 44.4 -2.1
       baz=341
CHGB                                 eS      Sn     16 07 19.6 -1.3
       baz=341
WPL    Puli Township       2.85 339  eP      Pn     16 06 46.9 +0.4
       baz=337
WNT1   Nantou City         2.86 334  eP      Pn     16 06 46.3 -0.3
       baz=332
WNT1                                 eS      Sn     16 07 21.9 +0.7
       baz=332
NACB   Ninganchiao         2.86 352  eP      Pn     16 06 44.1 -2.5
       baz=349
NACB                                 eS      Sn     16 07 17.6 -3.6
       baz=349
NACB   Ninganchiao         2.86 352          Pn     16 06 43.0 -3.6
DPDB   Guoxing             2.88 339  eP      Pn     16 06 46.6 -0.4
       baz=337
DPDB                                 eS      Sn     16 07 21.9  0.0
       baz=337
ETLH   Xiulin Townshi      2.91 350  eP      Pn     16 06 44.4 -3.1
       baz=347
WDGT   Dungji              2.93 311  eP      Pn     16 06 47.2 -0.4
       baz=310
WDGT                                 eS      Sn     16 07 20.2 -2.7
       baz=310
FUSS   Fushou              3.00 346  eP      Pn     16 06 48.0 -0.7
       baz=343
TWT    Tachien             3.02 345  eP      Pn     16 06 47.8 -1.2
       baz=342
TDCB   Techi               3.02 344  eP      Pn     16 06 46.9 -2.1
       baz=342
VCHM   Qimei               3.06 308  eP      Pn     16 06 46.9 -2.5
       baz=307
SGCP   Mt. Cagua           3.07 180  eP      Pb     16 06 49.7 -6.0
SGCP                                 eS      Sb     16 07 27.0 -6.4
TCU    Taichung            3.08 336  eP      Pn     16 06 50.6 +1.0
       baz=334
ENA    Nanau               3.10 355  eP      Pn     16 06 47.2 -2.7
       baz=352
ENA                                  eS      Sn     16 07 24.5 -2.6
       baz=352
WHP    Taichung City       3.10 341  eP      Pn     16 06 50.0 -0.1
       baz=339
NNSB   Datong              3.14 349  eP      Pn     16 06 49.5 -1.2
       baz=346
NNSH   Datong              3.14 349  eP      Pn     16 06 51.2 +0.5
       baz=346
NNS    Nan Shan            3.16 349  eP      Pn     16 06 50.0 -0.8
       baz=346
PHUB   P'eng-hu            3.16 314  eP      Pn     16 06 47.5 -3.3
       baz=313
PHUB                                 eS      Sn     16 07 25.0 -3.5
       baz=313
HATJ   Hateruma jima       3.16  31   P      Pn     16 06 50.3 -0.5
HATJ                                 eS      Sn     16 07 26.4 -2.2
PNG    Penghu              3.21 314  eP      Pn     16 06 51.7 +0.3
       baz=313
PNG                                  eS      Sn     16 07 27.3 -2.4
       baz=313
TWQ1   Liyutan             3.23 339  eP      Pn     16 06 52.0 +0.3
       baz=336
TWQ1                                 eS      Sn     16 07 30.7 +0.4
       baz=336
YOJ    Yonaguni jima       3.24  16   P      Pn     16 06 51.3 -0.6
YOJ                                  eS      Sn     16 07 28.2 -2.4
YOJ    Yonaguni jima       3.24  16  eP      Pn     16 06 48.3 -3.5
       baz=13
YOJ                                  eS      Sn     16 07 27.9 -2.7
       baz=13
YOJ    Yonaguni jima       3.24  16   P      Pn     16 06 51.6 -0.3
YOJ    Yonaguni jima       3.24  16   Pn     Pn     16 06 48.0 -3.9
TWC    Suao                3.27 357  eP      Pn     16 06 50.6 -1.6
       baz=354
TWC                                  eS      Sn     16 07 26.4 -4.8
       baz=354
WDJ    Dajia District      3.27 337  eS      Sn     16 07 31.9 +0.5
       baz=335
NSY    Sanyi               3.29 339  eP      Pn     16 06 51.5 -1.2
       baz=337
NSY                                  eS      Sn     16 07 31.3 -0.6
       baz=337
NDT    Datong Townshi      3.29 351  eP      Pn     16 06 54.0 +1.4
       baz=349
NDT                                  eS      Sn     16 07 29.9 -2.1
       baz=349
ENTT   Nioudou             3.32 352  eP      Pn     16 06 52.0 -1.0
       baz=350
ENTT                                 eS      Sn     16 07 30.4 -2.3
       baz=350
IRIF   Iriomote-Funau      3.37  27   P      Pn     16 06 53.1 -0.5
IRIF                                  S      Sn     16 07 31.7 -2.0
YHNB   Yeheng              3.38 350  eP      Pn     16 06 53.5 -0.4
       baz=347
YHNB                                 eS      Sn     16 07 31.9 -2.3
       baz=347
YHNB   Yeheng              3.38 350          Pn     16 06 51.7 -2.2
NSK    Sanguang            3.39 349  eP      Pn     16 06 52.6 -1.4
       baz=347
NSK                                  eS      Sn     16 07 30.7 -3.7
       baz=347
TWE    Neicheng            3.39 354  eP      Pn     16 06 52.6 -1.4
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	baz=352						
NMLH	**Miaoli**	**3.40**	**340**	*e*P	**Pn**	**16 06 53.5**	**-0.6**
	baz=338						
JKRS	**Kuro-shima**	**3.41**	**32**	P	**Pn**	**16 06 54.0**	**-0.2**
JKRS				*e*S	**Sn**	**16 07 32.6**	**-2.2**
NSTT	**Nanjuang**	**3.42**	**344**	*e*P	**Pn**	**16 06 53.6**	**-0.8**
	baz=342						
NSTT				*e*S	**Sn**	**16 07 33.9**	**-1.3**
	baz=342						
LIOB	**Emei**	**3.43**	**344**	*e*P	**Pn**	**16 06 55.2**	**+0.6**
	baz=342						
LIOB				*e*S	**Sn**	**16 07 34.4**	**-1.0**
	baz=342						
NWLT	**Wulai**	**3.47**	**352**	*e*P	**Pn**	**16 06 54.9**	**-0.2**
	baz=349						
APYP	**Conner**	**3.54**	**193**	*e*P	Pb	16 06 56.2	-7.4
APYP				*e*S	**Sb**	**16 07 38.9**	**-7.7**
JIJ	**Ishigaki jima**	**3.58**	**32**	P	**Pn**	**16 06 55.0**	**-1.6**
JIJ				*e*S	**Sn**	**16 07 36.2**	**-2.8**
TIPB	**Shuangxi**	**3.63**	**357**	*e*P	**Pn**	**16 06 57.4**	**+0.2**
	baz=354						
TIPB				*e*S	**Sn**	**16 07 38.4**	**-1.9**
	baz=354						
TWB1	**Santiao Chiao**	**3.66**	**359**	*e*P	**Pn**	**16 06 56.0**	**-1.6**
	baz=357						
TWB1				*e*S	**Sn**	**16 07 38.1**	**-2.8**
	baz=357						
TATO	**Taipei**	**3.66**	**352**		**Pn**	**16 06 55.7**	**-2.0**
WFSB	**Wu-fen Shan**	**3.73**	**356**	*e*P	**Pn**	**16 06 59.1**	**+0.5**
	baz=354						
TWS1	**Kuangyinshan**	**3.80**	**351**	*e*P	**Pn**	**16 06 58.3**	**-1.2**
	baz=349						
YM01	**YM01**	**3.82**	**353**	*e*P	**Pn**	**16 07 00.3**	**+0.3**
	baz=351						
YM04	**YM04**	**3.83**	**353**	*e*P	**Pn**	**16 06 59.7**	**-0.4**
	baz=351						
YM10	**YM10**	**3.83**	**353**	*e*P	**Pn**	**16 07 00.3**	**+0.2**
	baz=351						
YM10				*e*S	**Sn**	**16 07 41.8**	**-3.5**
	baz=351						
YM05	**YM05**	**3.84**	**353**	*e*P	**Pn**	**16 07 00.3**	**+0.1**
	baz=351						
JISG	**Ishigakijimahi**	**3.85**	**32**	P	**Pn**	**16 06 59.2**	**-1.1**
JISG				S	**Sn**	**16 07 43.3**	**-2.4**
YM03	**YM03**	**3.86**	**353**	*e*P	**Pn**	**16 07 00.8**	**+0.4**
	baz=351						
ANP	**Anpu**	**3.87**	**353**	*e*P	**Pn**	**16 07 00.3**	**-0.3**
	baz=351						
JTJ	**Tarama**	**4.10**	**36**	P	**Pn**	**16 07 03.7**	**0.0**
VWUC	**VWUC**	**4.36**	**327**	*e*P	**Pn**	**16 07 06.5**	**-0.7**
	baz=325						
CAUP	**Cauayan**	**4.37**	**183**	*e*P	Pb	16 07 10.2	-7.6
CAUP				*e*S	**Sg**	**16 08 23.7**	**+2.5**
JIRB	**Irabujima**	**4.51**	**39**	P	**Pn**	**16 07 08.5**	**-0.9**
JIRB				*e*S	**Sn**	**16 07 59.3**	**-2.7**
KNM	**Kinmen**	**4.53**	**313**	*e*P	**Pn**	**16 07 08.8**	**-0.8**
	baz=311						
JMJ2	**Miyako jima3**	**4.54**	**41**	P	**Pn**	**16 07 09.7**	**-0.1**
JMJ2				*e*S	**Sn**	**16 08 00.2**	**-2.5**
PTMZ	**Houxiangcun**	**4.57**	**324**	*e*P	**Pn**	**16 07 09.7**	**-0.5**
	baz=323						
PTMZ				*e*S	**Sn**	**16 08 00.9**	**-2.5**
	baz=323						
JMJ	**Miyako jima 2**	**4.58**	**40**	*e*P	**Pn**	**16 07 06.5**	**-3.7**
	baz=38						
KNMB	**Chin-men Tao**	**4.59**	**313**	*e*P	**Pn**	**16 07 08.5**	**-2.0**
	baz=312						
KNMB	**Chin-men Tao**	**4.59**	**313**		**Pn**	**16 07 08.5**	**-2.0**
JIKM	**Ikemajima**	**4.63**	**39**	P	**Pn**	**16 07 12.6**	**+1.6**
JIKM				*e*S	**Sn**	**16 08 03.2**	**-1.7**
PTTC	**Pingtan**	**4.65**	**334**	*e*P	**Pn**	**16 07 10.2**	**-1.0**
	baz=332						
QZH	**Quanzhou**	**4.80**	**319**	Pn	**Pn**	**16 07 15.5**	**+2.2**
QZH				Sn	**Sb**	**16 08 17.3**	**-5.8**
QZH				LR	LR		
	comp=N,4μm,13.3s						
QZH				LR	LR		
	comp=E,4μm,12.8s						
QZH				LR	LR		
	comp=Z,4μm,9.9s						
VDOS	**Pratas Island**	**5.01**	**264**	*e*P	**Pn**	**16 07 13.9**	**-2.3**
	baz=263						
AXDP	**Jialang**	**5.17**	**314**	*e*P	**Pn**	**16 07 15.9**	**-2.5**
	baz=313						
SMPP	**San Manuel, Pa**	**5.32**	**194**	*e*P	**Pn**	**16 07 21.3**	**+0.8**
BOLP	**Bolinao**	**5.32**	**203**	*e*P	**Pn**	**16 07 20.5**	**-0.1**
MHZQ	**Yeshan**	**5.49**	**330**	*e*P	**Pn**	**16 07 21.6**	**-1.2**
	baz=329						
BALP	**Baler**	**5.58**	**185**	*e*P	Pn	16 07 25.5	+1.4
BALP				*e*S	**Sn**	**16 08 28.4**	**+0.1**
LYJJ	**Jianjiangzhen**	**5.60**	**338**	*e*P	**Pn**	**16 07 23.1**	**-1.3**
	baz=337						
XPSS	**Dashiqiu**	**5.83**	**343**	*e*P	**Pn**	**16 07 25.9**	**-1.5**
	baz=342						
JCNP	**Jose Panganiba**	**7.03**	**175**	*e*P	Pn	16 07 45.5	+1.5
MACP	**Maragondon, Ca**	**7.14**	**190**	*e*P	Pn	16 07 47.9	+2.4
TGY	**Tagaytay City**	**7.27**	**189**	Pn	Pn	16 07 51.4	+4.1
	27nm,0.3s,baz=208,slow=13,SNR=1.7						
TGY				Sn	Sn	16 09 15.1	+5.0
	8.6nm,0.3s,baz=175,slow=19,SNR=0.8						
TGY				LR	LR	16 11 22.8	
	comp=Z,2μm,19.2s,baz=5.5,slow=45						
GQP	**Guinayangan**	**7.40**	**177**	⇑*e*P	Pn	16 07 51.6	+2.6
GQP				*e*S	**Sn**	**16 09 13.4**	**+0.2**
JNTH	**Nagotoyohara**	**7.52**	**45**	P	**Pn**	**16 07 51.6**	**+1.0**
SCSP	**San Jose Seism**	**7.76**	**169**	*e*P	Pn	16 07 56.6	+2.5
BOAC	**Boac**	**7.83**	**181**	*e*P	Pn	16 07 57.8	+2.8
PGP	**Puerto Galera**	**7.86**	**188**	⇑*e*P	Pb	16 08 03.1	-14
JOW	**Kunigami**	**7.89**	**45**	Pn	**Pn**	**16 07 54.6**	**-1.2**
	9.3nm,0.3s,baz=165,slow=18,SNR=11						
JOW	**Kunigami**	**7.89**	**45**	P	**Pn**	**16 07 56.0**	**+0.2**
SSE	**Sheshan**	**9.76**	**356**	⇑P	**Pn**	**16 08 23.8**	**+2.5**
SSE				S	**Sn**	**16 10 14.3**	**+3.2**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,220nm,4.9s						
SSE				LR	LR		
	comp=N,1μm,9.5s						
SSE				LR	LR		
	comp=E,2μm,9.6s						
GUIM	**Jordan**	**10.66**	**177**	*e*P	Pn	16 08 42.0	+8.2
NJ2	**Nanjing**	**11.05**	**346**	*e*P	**Pn**	**16 08 39.0**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,2μm,8.4s						
NJ2				LR	LR		
	comp=E,5μm,8.4s						
NJ2				LR	LR		
	comp=Z,3μm,11.7s						
CNOP	**Candoni, Negro**	**11.45**	**177**	*e*P	Pn	16 08 47.6	+2.9
MSLP	**Maasin**	**11.46**	**166**	*e*P	Pn	16 08 53.3	+8.6
WHN	**Wuhan**	**11.49**	**325**	⇑P	**Pn**	**16 08 48.8**	**+3.7**
WHN				S	**Sn**	**16 10 56.8**	**+3.1**
WHN				LR	LR		
	comp=N,10μm,8.7s						
WHN				LR	LR		
	comp=E,6μm,6.9s						
WHN				LR	LR		
	comp=Z,5μm,10.0s						
QIZ	**Qiongzhong**	**11.69**	**261**	P	**Pn**	**16 08 48.5**	**+0.6**
QIZ				S	**Sn**	**16 10 57.3**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,11nm,1.9s						
QIZ				LR	LR		
	comp=N,2μm,13.2s						
QIZ				LR	LR		
	comp=E,2μm,10.8s						
QIZ				LR	LR		
	comp=Z,2μm,10.3s						
JSU	**Suzuyama**	**12.62**	**35**	Pn	**Pn**	**16 08 59.2**	**-1.3**
PAGZ	**Pagadian**	**13.47**	**174**	*e*P	**P**	**16 09 17.9**	**-3.7**
JNU	**Nakatsue**	**14.12**	**32**	Pn	**Pn**	**16 09 20.3**	**-0.8**
	0.6nm,0.3s,baz=349,slow=20,SNR=4.2						
JNU				LR	LR	16 15 11.1	
	comp=Z,1μm,18.6s,baz=206,slow=39						
JNU	**Nakatsue**	**14.12**	**32**	Pn	**Pn**	**16 09 20.4**	**-0.6**
KCP	**Kidapawan**	**14.54**	**168**	⇑*i*P	P	16 09 38.7	+5.1
DAV	**Davao City (W)**	**14.58**	**166**	LR	LR	16 15 12.0	
	comp=Z,2μm,20.6s,baz=330,slow=38						
GYA	**Guiyang**	**14.97**	**293**	*e*P	**P**	**16 09 37.3**	**-1.1**
GYA				pmax	pmax		
	comp=Z,15nm,2.0s						
GYA				LR	LR		
	comp=N,1μm,11.9s						
GYA				LR	LR		
	comp=E,2μm,17.8s						
GYA				LR	LR		
	comp=Z,2μm,21.0s						
DLV	**T Lat**	**15.99**	**236**	Pn	**Pn**	**16 09 45.8**	**-0.6**
KKM	**Kota Kinabalu**	**16.21**	**201**	Pn	**P**	**16 09 50.5**	**-1.7**
KKM				IAmb	IAmb	16 10 05.9	
	comp=Z,127nm,1.4s						
MYLDM	**Lahad Datu**	**16.42**	**193**	P	**P**	**16 09 56.4**	**+1.9**
JHS	**Saijyo**	**16.73**	**33**	P	**P**	**16 09 59.7**	**+1.9**
KSAR	**Wonju Array Be**	**16.83**	**16**	P	**P**	**16 10 00.1**	**+1.2**
KSAR	**Wonju Array Be**	**16.83**	**16**	P	**P**	**16 10 00.1**	**+1.2**
UBPT	**Khong Chiam**	**16.85**	**252**	P	**P**	**16 10 01.0**	**+1.8**
	comp=Z,8.7nm,1.8s						
KSRS	**Korea Array**	**16.85**	**16**	Pn	**P**	**16 09 57.1**	**-2.0**
	comp=Z,1.0nm,0.3s,baz=196,slow=11,SNR=15						
KSRS				LR	LR	16 17 07.8	
	comp=Z,878nm,18.3s,baz=202,slow=40						
KSRS	**Korea Array**	**16.85**	**16**	*e*P	**P**	**16 10 00.7**	**+1.6**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KS19	**Wonju Array Si**	**16.89**	**16**	Pn	**P**	**16 09 56.8**	**-2.7**
XAN	**Xi'an**	**17.17**	**320**	P	**P**	**16 10 04.5**	**+1.8**
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
XAN				pmax	pmax		
	comp=Z,280nm,6.3s						
XAN				LR	LR		
	comp=Z,2μm,9.8s						
XAN				LR	LR		
	comp=Z,3μm,11.9s						
XAN				LR	LR		
	comp=Z,3μm,10.8s						
DL2	**Dalian**	**17.52**	**359**	*e*P	**P**	**16 10 09.0**	**+2.5**
DL2				PP	**PnPn**	**16 10 23.3**	**+7.5**
DL2				S	**S**	**16 13 28.0**	**-0.6**
DL2				pmax	pmax		
	comp=Z,38nm,1.3s						
DL2				pmax	pmax		
	comp=Z,180nm,5.1s						
DL2				LR	LR		
	comp=Z,1μm,10.4s						
DL2				LR	LR		
	comp=Z,2μm,13.8s						
DL2				LR	LR		
	comp=Z,1μm,13.6s						
NONG	**Nongkai**	**18.09**	**263**	P	P	16 10 19.0	+6.0
	comp=Z,26μmcomp=Z,22nm,1.0s						
KMI	**Kunming**	**18.14**	**286**	⇑P	**P**	**16 10 14.3**	**+0.6**
KMI				PP	**PnPn**	**16 10 31.5**	**+7.0**
KMI				S	**S**	**16 13 39.5**	**-2.4**
KMI				SS	**SnSn**	**16 13 54.0**	**+4.2**
KMI				pmax	pmax		
	comp=Z,11nm,1.4s						
KMI				pmax	pmax		
	comp=Z,260nm,3.6s						
KMI				LR	LR		
	comp=Z,2μm,17.8s						
KMI				LR	LR		
	comp=Z,550nm,15.8s						
KMI				LR	LR		
	comp=Z,2μm,11.4s						
TIY	**Taiyuan**	**18.32**	**335**	*e*P	Pn	16 10 21.5	+6.1
TIY				pmax	pmax		
	comp=Z,16nm,0.5s						
TIY				pmax	pmax		
	comp=Z,590nm,6.6s						
TIY				LR	LR		
	comp=Z,3μm,13.3s						
TIY				LR	LR		
	comp=Z,3μm,15.9s						
TIY				LR	LR		
	comp=Z,3μm,11.7s						
CD2	**Chengdu**	**18.97**	**304**	P	**P**	**16 10 20.5**	**-2.1**
CD2				S	**Sn**	**16 13 54.3**	**-1.6**
CD2				pmax	pmax		
	comp=Z,70nm,0.9s						
CD2				pmax	pmax		
	comp=Z,1μm,6.7s						
CD2				LR	LR		
	comp=Z,4μm,12.2s						
CD2				LR	LR		
	comp=Z,3μm,9.3s						
BJI	**Beijing**	**19.31**	**346**	P	**Pn**	**16 10 26.8**	**-0.4**
BJI				S	**Sn**	**16 14 00.3**	**-3.5**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BJI				LR	LR		
	comp=Z,1μm,11.8s						
BJI				LR	LR		
	comp=Z,1μm,13.3s						
JGF	**Kuroka**	**19.54**	**40**	P	**Pn**	**16 10 29.7**	**-0.4**
JGF				IAmb	IAmb	16 10 40.8	
	comp=Z,44nm,1.1s						
JHJ	**Hachijo jima 2**	**19.63**	**50**	LR	LR	16 17 22.1	
	comp=Z,662nm,20.8s,baz=246,slow=35						
CHAI	**Chaiyaphum**	**19.76**	**258**	P	Pn	16 10 41.2	+8.4
TOLI2	**Tolitoli**	**20.14**	**184**	P	Pn	16 10 36.2	-1.0
TOLI2				IAmb	IAmb	16 10 43.1	
	comp=Z,74nm,1.4s						
SRAK	**Srakaew**	**20.39**	**252**	P	**P**	**16 10 37.0**	**-1.2**
	comp=Z,3μmcomp=Z,303nm,1.4s						
GTOI	**Gorontalo**	**20.59**	**177**	P	Pn	16 10 39.4	-3.1
	comp=Z,702nmcomp=Z,30nm,0.8s						
MAJO	**Matsushiro**	**20.68**	**39**	⇓*e*P	Pn	16 10 47.3	+3.8
MAJO				pmax	pmax		
	comp=Z,83nm,2.4s						
MAT	**Matsushiro**	**20.68**	**39**	P	Pn	16 10 44.5	+1.0
MAT				S	Sn	16 14 36.8	-0.2
MJAR	**Matsushiro Arr**	**20.68**	**39**	P	Pn	16 10 44.0	+0.4
	comp=Z,7.2nm,0.8s,baz=230,slow=12,SNR=10						
MJA0	**Matsu Arr-Jizo**	**20.70**	**39**	*e*P	Pn	16 10 47.7	+3.9
MJA0				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MRSI	**Marisa**	**20.73**	**180**	P	Pn	16 10 44.2	+0.1
	comp=Z,813nmcomp=Z,52nm,1.0s						
PHIT	**Phitsanulok**	**20.83**	**262**	P	Pn	16 10 49.1	+3.7
	comp=Z,2μmcomp=Z,105nm,1.0s						
PAYA	**Payao**	**20.89**	**269**	P	**P**	**16 10 47.5**	**+3.9**
	comp=Z,3μmcomp=Z,226nm,1.2s						
MPSI	**Mapaga**	**20.97**	**186**	P	Pn	16 10 44.7	-2.3
	comp=Z,578nmcomp=Z,34nm,1.4s						
SBUM	**Sibu**	**21.07**	**208**	P	**P**	**16 10 45.5**	**+0.1**
SBUM				IAmb	IAmb	16 11 09.4	
	comp=Z,48nm,1.1s						
HHC	**Hu-ho-hao-te**	**21.40**	**338**	*e*P	**P**	**16 10 47.5**	**-1.5**
HHC				PP	**PnPn**	**16 11 09.8**	**+0.9**
HHC				S	**S**	**16 14 39.8**	**-6.8**
HHC				pmax	pmax		
	comp=Z,17nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,6.5s						
HHC				LR	LR		
	comp=Z,2μm,17.9s						
HHC				LR	LR		
	comp=Z,1μm,16.2s						
HHC				LR	LR		
	comp=Z,2μm,16.8s						
LZH	**Lanzhou**	**21.65**	**317**	*e*P	**P**	**16 10 57.0**	**+5.2**
LZH				pP	pwP	16 11 01.8	+4.0
LZH				sP	sP	16 11 04.8	+11
LZH				*e*PP	**PnPn**	**16 11 18.0**	**+5.5**
LZH				S	**S**	**16 14 53.8**	**+2.0**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,520nm,7.1s						
LZH				LR	LR		
	comp=Z,2μm,11.4s						
LZH				LR	LR		
	comp=Z,1μm,16.3s						
LZH				LR	LR		
	comp=Z,2μm,16.6s						
BTO	**Baotou**	**21.77**	**335**	*e*P	**P**	**16 10 51.8**	**-1.1**
CMMT	**Chiang Mai**	**21.84**	**267**	P	**P**	**16 10 55.0**	**+1.2**
	comp=Z,295nmcomp=Z,14nm,1.5s						
CHTO	**Chiang Mai**	**21.84**	**268**	P	**P**	**16 10 54.7**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,50nm,1.5s						
CHTO	**Chiang Mai**	**21.84**	**268**	P	**P**	**16 10 54.7**	**+0.8**
CHTO				IAmb	IAmb	16 11 10.0	
	comp=Z,50nm,1.5s						
CM09	**Chiang Mai Arr**	**21.87**	**267**	P	**P**	**16 10 58.0**	**+3.8**
	comp=Z,102nmcomp=Z,8.4nm,0.8s						
CM04	**Chiang Mai Arr**	**21.89**	**266**	P	**P**	**16 10 57.0**	**+2.6**
	comp=Z,115nmcomp=Z,12nm,1.2s						
CM01	**Chiang Mai Arr**	**21.91**	**266**	P	**P**	**16 10 57.8**	**+3.3**
	comp=Z,111nmcomp=Z,13nm,1.1s						
CM31	**Chiang Mai Arr**	**21.91**	**267**	P	**P**	**16 10 55.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**21.91**	**267**	P	**P**	**16 10 55.3**	**+0.7**
	comp=Z,2.1nm,1.0s,baz=71,slow=8.4,SNR=16						
CMAR				LR	LR	16 20 37.4	
	comp=Z,553nm,18.9s,baz=118,slow=40						
CMAR	**Chiang Mai Arr**	**21.91**	**267**	P	**P**	**16 10 55.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**21.91**	**267**	P	**P**	**16 10 55.1**	**+0.5**
CM02	**Chiang Mai Arr**	**21.91**	**267**	P	**P**	**16 10 57.0**	**+2.4**
	comp=Z,99nmcomp=Z,12nm,1.2s						
CM05	**Chiang Mai Arr**	**21.92**	**266**	P	**P**	**16 10 59.0**	**+4.3**
	comp=Z,71nmcomp=Z,7.4nm,1.4s						
CM15	**Chiang Mai Arr**	**21.93**	**267**	P	**P**	**16 10 57.9**	**+3.1**
	comp=Z,77nmcomp=Z,8.5nm,1.1s						
CM13	**Chiang Mai Arr**	**21.95**	**266**	P	**P**	**16 10 58.0**	**+3.0**
	comp=Z,74nmcomp=Z,9.3nm,1.0s						
APSI	**Ampana**	**22.11**	**181**	P	**P**	**16 10 58.9**	**+2.2**
	comp=Z,780nmcomp=Z,54nm,1.2s						
UTHA	**Uthaitani**	**22.19**	**259**	P	**P**	**16 11 00.9**	**+3.4**
	comp=Z,312nmcomp=Z,30nm,1.2s						
CN2	**Changchun**	**22.59**	**6**	*e*P	**P**	**16 11 03.3**	**+1.7**
CN2				*e*S	**S**	**16 15 07.0**	**-2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,16.0s						
KSM	**Kuching**	**22.82**	**212**	P	**P**	**16 11 04.2**	**0.0**
KSM				IAmb	IAmb	16 11 20.5	
	comp=Z,52nm,1.4s						
PHET	**Kaeng Krachan**	**22.98**	**252**	P	**P**	**16 11 10.6**	**+4.6**
	comp=Z,790nmcomp=Z,41nm,1.0s						
JMM	**Marumori**	**23.10**	**40**	P	**P**	**16 11 08.6**	**+1.5**
JMM				IAmb	IAmb	16 11 26.6	
	comp=Z,30nm,1.0s						
MTKI	**Muara Teweh, K**	**23.22**	**198**	P	**P**	**16 11 10.7**	**+2.3**
	comp=Z,47nm,1.5s						
SANI	**Sanana**	**23.55**	**170**	P	**P**	**16 11 10.2**	**-1.5**
	comp=Z,672nmcomp=Z,34nm,0.8s						
SIJI	**Sorong**	**23.83**	**157**	LR	LR	16 18 25.2	
	comp=Z,576nm,21.9s,baz=4.0,slow=31						
MDJ	**Mudanjiang**	**24.05**	**13**	P	**P**	**16 11 17.3**	**+1.1**
MDJ				pP	pwP	16 11 21.0	-1.3
MDJ				sP	sP	16 11 23.0	+4.4
MDJ				S	**S**	**16 15 38.0**	**+4.5**
MDJ				sS	sS	16 15 44.0	+7.8
MDJ				SS	**SnSn**	**16 16 22.5**	**+8.4**
MDJ				PcS	**PcS**	**16 18 35.0**	**-2.4**
MDJ				pmax	pmax		
	comp=Z,69nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,400nm,3.1s						
MDJ				LR	LR		
	comp=Z,1μm,15.7s						
MDJ				LR	LR		
	comp=Z,2μm,12.8s						
MDJ				LR	LR		
	comp=Z,2μm,15.7s						
MDJ	**Mudanjiang**	**24.05**	**13**	P	**P**	**16 11 17.0**	**+0.8**
USRK	**Ussuriysk Ar.**	**24.25**	**18**	P	**P**	**16 11 19.6**	**+1.5**
	comp=Z,5.4nm,0.7s,baz=196,slow=8.9,SNR=13						
USRK				LR	LR	16 21 13.4	
	comp=Z,519nm,18.9s,baz=197,slow=38						
USRK	**Ussuriysk Ar.**	**24.25**	**18**	P	**P**	**16 11 19.1**	**+1.0**
USRK	**Ussuriysk Ar.**	**24.25**	**18**	P	**P**	**16 11 19.1**	**+1.0**
TTSI	**Tana Toraja**	**24.32**	**185**	P	**P**	**16 11 21.0**	**+2.0**
	comp=Z,626nmcomp=Z,55nm,0.9s						
NLAI	**Namlea**	**24.91**	**168**	P	P	16 11 35.2	+11
KBKI	**Kotabaru**	**25.15**	**194**	P	P	16 11 36.4	+10
SPSI	**Sidrap Palu**	**25.24**	**185**	P	**P**	**16 11 27.9**	**+0.6**
	comp=Z,42nm,1.0s						
SURT	**Suratani**	**25.55**	**245**	P	P	16 11 41.1	+11
BBKI	**Banjar Baru**	**25.63**	**197**	P	**P**	**16 11 32.3**	**+1.4**
	comp=Z,3μmcomp=Z,1μmcomp=Z,74nm,1.1s						
BNSI	**Bone**	**25.64**	**184**	P	**P**	**16 11 32.3**	**+1.3**
	comp=Z,663nmcomp=Z,36nm,1.6s						
FAKI	**Fak Fak**	**26.09**	**156**	P	**P**	**16 11 35.5**	**+0.4**
KULM	**Kulim**	**26.17**	**235**	P	**P**	**16 11 36.1**	**+0.3**
KULM				IAmb	IAmb	16 11 52.3	
	comp=Z,36nm,1.5s						
GTA	**Gaotai**	**26.20**	**318**	*e*P	**P**	**16 11 38.5**	**+2.4**
GTA				pP	pwP	16 11 42.3	+0.2
GTA				sP	sP	16 11 45.0	+6.6
GTA				sS	sS	16 16 16.0	+4.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,130nm,4.9s						
GTA				LR	LR		
	comp=Z,880nm,19.6s						
GTA				LR	LR		
	comp=Z,740nm,21.1s						
GTA				LR	LR		
	comp=Z,980nm,21.4s						
KAPI	**Kappang**	**26.28**	**185**	P	P	16 11 40.7	+4.0
	comp=Z,16nm,0.8s,baz=359,slow=12,SNR=2.2						
KAPI				LR	LR	16 22 04.0	
	comp=Z,342nm,21.8s,baz=358,slow=37						
KAPI	**Kappang**	**26.28**	**185**	P	**P**	**16 11 38.1**	**+1.3**
KAPI				pmax	pmax		
	comp=Z,40nm,1.1s						
KAPI	**Kappang**	**26.28**	**185**	P	**P**	**16 11 38.1**	**+1.3**
IPM	**Ipoh**	**26.40**	**234**	P	**P**	**16 11 37.9**	**-0.1**
IPM				IAmb	IAmb	16 11 43.6	
	comp=Z,26nm,1.0s						
ASAJ	**Asahikawa**	**28.40**	**32**	P	P	16 11 60.0	+4.4
	comp=Z,6.6nm,0.7s,baz=228,slow=21,SNR=6.1						
ASAJ				LR	LR	16 22 25.0	
	comp=Z,597nm,21.6s,baz=112,slow=35						
ASAJ	**Asahikawa**	**28.40**	**32**	P	**P**	**16 11 56.7**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,112nm,1.5s						
JKA	**Kamikawa-asahi**	**28.40**	**32**	P	**P**	**16 11 56.7**	**+1.2**
KLR	**Kul'dur**	**28.89**	**13**	P	**P**	**16 12 01.4**	**+1.5**
	comp=Z,9.3nm,0.7s,baz=217,slow=5.4,SNR=24						
KLR	**Kul'dur**	**28.89**	**13**	⇓*e*P	P	16 12 02.2	+2.3
KLR				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**29.04**	**293**	P	**P**	**16 12 00.8**	**-1.2**
PSI	**Prapat**	**29.08**	**234**	P	**P**	**16 12 02.2**	**+0.1**
	comp=Z,3.6nm,0.4s,baz=180,slow=9.8,SNR=2.3						
PSI				LR	LR	16 22 30.9	
	comp=Z,494nm,20.8s,baz=88,slow=34						
ULN	**Ulaanbaatar**	**29.10**	**339**	⇑*e*P	**P**	**16 12 01.1**	**-0.9**
ULN				pmax	pmax		
	comp=Z,11nm,1.7s						
ULN	**Ulaanbaatar**	**29.10**	**339**	P	**P**	**16 12 00.7**	**-1.2**
SONM	**Songino Array**	**29.30**	**338**	P	**P**	**16 12 02.2**	**-1.5**
	comp=Z,1.5nm,0.8s,baz=147,slow=9.9,SNR=11						
SONM				LR	LR	16 25 43.3	
	comp=Z,820nm,18.5s,baz=148,slow=40						
SONM	**Songino Array**	**29.30**	**338**	P	**P**	**16 12 02.2**	**-1.5**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**29.30**	**338**	P	**P**	**16 12 02.2**	**-1.5**
EDFI	**Ende, Flores**	**29.90**	**181**	P	**P**	**16 12 09.9**	**+0.7**
	comp=Z,29nm,0.8s						
JAY	**Jayapura**	**29.92**	**140**	LR	LR	16 21 44.2	
	comp=Z,1μm,20.2s,baz=332,slow=32						
SDSI	**Sungai Dareh**	**29.93**	**225**	P	P	16 12 20.2	+11
MNSI	**Mandailing Nat**	**29.95**	**230**	P	P	16 12 16.1	+6.5
KLSI		**30.94**	**215**	P	**P**	**16 12 19.0**	**+0.7**
	comp=Z,9.8nm,1.6s						
GSI	**Gunungsitoli**	**31.07**	**233**	P	**P**	**16 12 19.2**	**-0.4**
GSI				IAmb	IAmb	16 12 34.5	
	comp=Z,10nm,0.9s						
KSI	**Kapahiang**	**31.30**	**220**	P	P	16 12 34.8	+13
LWLI	**Liwa**	**31.57**	**216**	P	P	16 12 31.5	+7.4
KASI	**Kota Agung**	**31.76**	**215**	P	**P**	**16 12 25.0**	**-0.6**
TAPN	**Taplejung**	**31.79**	**288**	*e*P	P	16 12 31.5	+5.3
	comp=Z,34nm,1.1s						
ODAN	**Odare**	**32.05**	**287**	*e*P	P	16 12 33.0	+4.6
	comp=Z,20nm,0.9s						
ZAK	**Zakamensk**	**32.55**	**337**	*e*P	**P**	**16 12 30.2**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ZEA	**Zeya**	**32.60**	**6**	*e*P	P	16 12 38.4	+5.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		

	comp=N,700nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,13.0s						
RAMN	**Ramite**	**32.76**	**287**	*e*P	P	16 12 39.4	+4.8
	comp=Z,16nm,0.8s						
GUN	**Gumba**	**33.44**	**289**	*e*P	P	16 12 45.5	+4.8
	comp=Z,45nm,1.0s						
TLY	**Talaya**	**33.51**	**339⇓**	*e*P	**P**	**16 12 40.5**	**-0.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PKI	**Pulchoki**	**33.84**	**288**	*e*P	P	16 12 48.5	+4.3
	comp=Z,30nm,1.2s						
PKIN	**Phulchoki**	**33.85**	**288**	*e*P	P	16 12 48.4	+4.2
	comp=Z,29nm,1.3s						
KKN	**Kakani**	**33.97**	**288**	*e*P	P	16 12 49.4	+4.3
	comp=Z,25nm,1.0s						
DMN	**Daman**	**34.11**	**288**	*e*P	P	16 12 50.6	+4.2
	comp=Z,20nm,1.0s						
DANN	**Dangsing**	**35.33**	**289**	*e*P	P	16 13 00.3	+3.3
	comp=Z,25nm,1.1s						
WMQ	**Urumqi**	**36.23**	**316**	*e*P	**P**	**16 13 06.0**	**+1.7**
WMQ				pP	pwP	16 13 10.5	+0.2
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.1s						
WMQ				LR	LR		
	comp=Z,500nm,14.7s						
WMQ				LR	LR		
	comp=Z,640nm,20.3s						
WMQ				LR	LR		
	comp=Z,450nm,21.5s						
FITZ	**Fitzroy Crossi**	**39.34**	**175**	P	**P**	**16 13 28.7**	**-1.9**
	comp=Z,4.2nm,1.0s,baz=332,slow=4.9,SNR=8.5						
DGZ	**Jazzator, Alta**	**39.36**	**324⇓**	*e*P	**P**	**16 13 32.4**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZSN	**Zaisan**	**39.67**	**320**	*e*P	**P**	**16 13 35.6**	**+2.3**
	comp=Z,7.7nm,1.3s,baz=320						
ZSN	**Zaisan**	**39.67**	**320**	*e*P	**P**	**16 13 35.5**	**+2.3**
ZSN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MK31	**Makanchi Array**	**40.96**	**318***c*	*i*P	**P**	**16 13 43.8**	**-0.1**
MK31	**Makanchi Array**	**40.96**	**318**	P	**P**	**16 13 43.7**	**-0.1**
MKAR	**Makanchi Array**	**40.96**	**318**	P	**P**	**16 13 44.0**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=109,slow=9.7,SNR=30						
MKAR				LR	LR	16 32 32.0	
	comp=Z,560nm,18.1s,baz=102,slow=39						
MKAR	**Makanchi Array**	**40.96**	**318**	P	**P**	**16 13 43.6**	**-0.3**
YAK	**Yakutsk**	**41.01**	**5**	*e*P	P	16 13 51.5	+7.5
YAK				*e**PP	pwP	16 13 56.5	+6.4
YAK				*e*		16 15 25.8	
YAK				*e*		16 15 47.4	
YAK				*e*PPP	PPP	16 16 00.2	
YAK				*e*S	S	16 20 04.8	+8.6
YAK				*e*		16 23 55.9	
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,59nm,2.5s						
YAK				pmax	pmax		
	comp=N,76nm,2.4s						
YAK				pmax	pmax		
	comp=E,108nm,2.8s						
YAK				smax	smax		
	comp=N,73nm,3.0s						
YAK				smax	smax		
	comp=E,111nm,3.4s						
YAK				MLR	MLR		
	comp=Z,608nm,17.0s						
YAK				MLR	MLR		
	comp=N,353nm,17.0s						
YAK				MLR	MLR		
	comp=E,163nm,17.0s						
YAK	**Yakutsk**	**41.01**	**5**	P	**P**	**16 13 44.4**	**+0.4**
YAK				IAmb	IAmb	16 13 58.3	
	comp=Z,14nm,0.6s						
MAKZ	**Makanchi**	**41.16**	**318**	P	**P**	**16 13 45.0**	**-0.6**
SHLS	**Shalkode**	**41.52**	**312**	*e*P	**P**	**16 13 48.8**	**+0.1**
	baz=312						
SHLS	**Shalkode**	**41.52**	**312**	*e*P	**P**	**16 13 48.7**	**+0.1**
PETK	**Petropavlovsk-**	**41.82**	**32**	P	P	16 13 53.0	+2.2
	comp=Z,6.2nm,1.0s,baz=222,slow=7.8,SNR=1.7						
PETK				LR	LR	16 31 40.3	
	comp=Z,351nm,19.3s,baz=224,slow=37						
PETK	**Petropavlovsk-**	**41.82**	**32**	P	P	16 13 53.1	+2.3
H11N1	**WAKE ISLAND Hy**	**41.92**	**84**	T	T	16 58 53.8	
	baz=282,slow=75,SNR=167						
H11N2	**WAKE ISLAND Hy**	**41.92**	**84**	T	T	16 58 48.2	
	baz=282,slow=75,SNR=232						
H11N3	**WAKE ISLAND Hy**	**41.94**	**84**	T	T	16 58 49.3	
	baz=282,slow=75,SNR=143						
H11S3	**WAKE ISLAND Hy**	**41.96**	**86**	T	T	16 58 49.7	
	baz=282,slow=74,SNR=238						
H11S1	**WAKE ISLAND Hy**	**41.97**	**86**	T	T	16 58 49.9	
	baz=282,slow=74,SNR=255						
H11S2	**WAKE ISLAND Hy**	**41.98**	**86**	T	T	16 58 48.8	
	baz=282,slow=74,SNR=162						
KPKS	**Kokpek**	**42.15**	**312**	*e*P	**P**	**16 13 56.0**	**+2.1**
	baz=312						
KPKS	**Kokpek**	**42.15**	**312**	*e*P	**P**	**16 13 55.9**	**+2.1**
SATY	**Saty**	**42.23**	**311**	*e*P	**P**	**16 13 57.5**	**+3.0**
	comp=Z,19nm,2.3s,baz=311						
SATY	**Saty**	**42.23**	**311**	*e*P	**P**	**16 13 57.4**	**+3.0**
SATY				pmax	pmax		
	comp=Z,19nm,2.3s						
PET	**Petropavlovsk**	**42.24**	**32**	P	**P**	**16 13 55.6**	**+1.4**
WRAB	**Tennant Creek**	**42.74**	**163⇓**	*e*P	**P**	**16 13 57.2**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,22nm,1.9s						
WRA	**Warramunga Arr**	**42.75**	**163**	P	**P**	**16 13 57.5**	**-1.3**
	comp=Z,7.6nm,0.7s,baz=343,slow=8.9,SNR=53						
WRA				LR	LR	16 32 02.3	
	comp=Z,136nm,21.3s,baz=350,slow=37						
WRA	**Warramunga Arr**	**42.75**	**163**	P	**P**	**16 13 57.4**	**-1.3**
WB2	**Warramunga Arr**	**42.75**	**163**	P	**P**	**16 13 57.3**	**-1.4**
WB2				IAmb	IAmb	16 14 05.7	
	comp=Z,12nm,0.8s						
TDK	**Taldyqorghan**	**42.82**	**314**	*e*P	**P**	**16 14 01.7**	**+2.5**
	comp=Z,7.8nm,1.4s,baz=314						
TDK	**Taldyqorghan**	**42.82**	**314**	*e*P	**P**	**16 14 01.6**	**+2.5**
TDK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
WR0	**Warramunga Arr**	**42.82**	**163**	P	**P**	**16 13 57.9**	**-1.3**
WR0				IAmb	IAmb	16 13 59.7	
	comp=Z,12nm,0.8s						
ZAA0	**Zalesovo Array**	**43.07**	**328**	P	**P**	**16 13 59.5**	**-1.5**
ZAA0				IAmb	IAmb	16 14 13.1	
	comp=Z,19nm,1.2s						
ZALV	**Zalesovo Beam**	**43.07**	**328**	P	**P**	**16 14 00.1**	**-0.8**
	comp=Z,6.6nm,0.6s,baz=120,slow=7.8,SNR=22						
ZALV				LR	LR	16 32 33.3	
	comp=Z,301nm,18.2s,baz=132,slow=37						
ZALV	**Zalesovo Beam**	**43.07**	**328**	P	**P**	**16 13 59.4**	**-1.6**
KSH	**Kashi**	**43.16**	**305**	P	**P**	**16 14 03.3**	**+1.2**
KSH				pP	pwP	16 14 07.8	-0.4
KSH				S	**S**	**16 20 29.5**	**+0.6**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,1µm,5.6s						
KSH				LR	LR		
	comp=Z,1µm,8.8s						
KSH				LR	LR		
	comp=Z,1µm,6.9s						
KSH				LR	LR		
	comp=Z,1µm,8.0s						
MDOK	**Medeo**	**43.21**	**311**	*e*P	P	16 14 05.9	+3.4
	baz=311						
MDOK	**Medeo**	**43.21**	**311**	*e*P	P	16 14 05.8	+3.3
SEM	**Semipalatinsk**	**43.73**	**322**	*e*P	**P**	**16 14 08.5**	**+1.9**
	comp=Z,5.8nm,1.4s,baz=322						
SEM	**Semipalatinsk**	**43.73**	**322**	*e*P	**P**	**16 14 08.5**	**+1.9**
SEM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KUU	**Kurty**	**43.90**	**312**	*e*P	**P**	**16 14 10.3**	**+2.4**
	comp=Z,13nm,1.9s,baz=312						
KUU	**Kurty**	**43.90**	**312**	*e*P	**P**	**16 14 10.3**	**+2.4**
KUU				pmax	pmax		
	comp=Z,13nm,1.9s						
NIL	**Nilore**	**44.62**	**297**	P	**P**	**16 14 14.1**	**+0.3**
NIL				pmax	pmax		
	comp=Z,13nm,1.1s						
NIL	**Nilore**	**44.62**	**297**	P	**P**	**16 14 14.1**	**+0.3**
NIL				IAmb	IAmb	16 14 23.2	
	comp=Z,13nm,1.1s						
KURK	**Kurchatov**	**44.80**	**322⇑**	*e*P	**P**	**16 14 15.6**	**+0.7**
KURK				pmax	pmax		
	comp=Z,22nm,1.3s						
KURK	**Kurchatov**	**44.80**	**322**	P	**P**	**16 14 15.3**	**+0.4**
AAK	**Ala-Archa**	**44.90**	**310⇑**	*e*P	**P**	**16 14 17.4**	**+1.3**
AAK				pmax	pmax		
	comp=Z,102nm,5.3s						
AS31	**Alice Springs**	**46.19**	**165**		**P**	**16 14 25.4**	**-0.9**
ASAR	**Alice Springs**	**46.19**	**165**	P	**P**	**16 14 25.6**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=337,slow=8.0,SNR=32						
ASAR				LR	LR	16 35 22.5	
	comp=Z,108nm,19.4s,baz=347,slow=38						
ASAR	**Alice Springs**	**46.19**	**165**	P	**P**	**16 14 25.3**	**-1.0**
KK31	**Karatay Array**	**47.86**	**309**	P	**P**	**16 14 38.7**	**-0.5**
KK31				IAmb	IAmb	16 15 00.4	
	comp=Z,6.2nm,1.0s						
KKAR	**Karatay Array**	**47.86**	**309**	P	**P**	**16 14 38.7**	**-0.5**
KKAR	**Karatay Array**	**47.86**	**309**	P	**P**	**16 14 38.6**	**-0.6**
KKAR				IAmb	IAmb	16 15 00.4	
	comp=Z,6.2nm,1.0s						
IUG	**Iuzhnay**	**48.05**	**308**	*e*P	**P**	**16 14 43.3**	**+2.5**
	baz=308						
IUG	**Iuzhnay**	**48.05**	**308**	*e*P	**P**	**16 14 43.3**	**+2.5**
KBL	**Kabul**	**48.15**	**298**	P	**P**	**16 14 40.6**	**-1.1**
BRVK	**Borovoye**	**50.46**	**322⇓**	*e*P	**P**	**16 14 58.3**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
BRVK	**Borovoye**	**50.46**	**322**	P	**P**	**16 14 58.8**	**-0.1**
BRVK				IAmb	IAmb	16 15 14.3	
	comp=Z,15nm,1.1s						
TIXI	**Tiksi**	**50.49**	**3⇓**	*e*P	P	16 15 03.8	+5.0
BILL	**Bilibino**	**54.10**	**19⇓**	*e*P	P	16 15 28.5	+2.8
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**54.10**	**19**	P	**P**	**16 15 26.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**54.15**	**185**	P	**P**	**16 15 25.9**	**-0.5**
AB31	**Akbulak array**	**56.02**	**316**	*e*P	**P**	**16 15 41.1**	**+1.3**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ABKAR	**Akbulak array**	**56.02**	**316**	P	**P**	**16 15 38.5**	**-1.3**
STKA	**Stephens Creek**	**56.12**	**160**	P	**P**	**16 15 40.4**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=324,slow=10,SNR=4.9						
STKA				LR	LR	16 41 26.5	
	comp=Z,168nm,20.6s,baz=11,slow=38						
STKA	**Stephens Creek**	**56.12**	**160**	*e*P	**P**	**16 15 41.4**	**+0.7**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
STKA	**Stephens Creek**	**56.12**	**160**	P	**P**	**16 15 40.4**	**-0.3**
ARU	**Arti**	**57.87**	**324***d*	*i*P	**P**	**16 15 53.5**	**+0.7**
ARU						16 16 50.1	
ARU				S	**S**	**16 23 54.2**	**+1.7**
ARU				SS	**SS**	**16 27 50.8**	**+7.8**
ARU				pmax	pmax		
	comp=Z,40nm,2.9s						
ARU	**Arti**	**57.87**	**324**	P	**P**	**16 15 53.2**	**+0.3**
DZM	**Mont Dzumac**	**61.13**	**132**	LR	LR	16 38 01.7	
	comp=Z,399nm,21.6s,baz=261,slow=32						
DZM	**Mont Dzumac**	**61.13**	**132**	P	P	16 16 17.0	+1.1
KIRV	**Kirov**	**63.01**	**326⇓**	*e*P	P	16 16 30.8	+2.9
ZEI	**Tsey**	**67.31**	**309**	*e*P	P	16 16 59.4	+2.9
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VRH	**Novokhopyorsk**	**67.69**	**318**	*e*P	**P**	**16 16 58.9**	**+0.5**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	**Khabaz**	**67.89**	**310**	P	**P**	**16 17 00.4**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=64,slow=5.4,SNR=5.6						
KBZ				LR	LR	16 50 30.9	
	comp=Z,324nm,18.8s,baz=70,slow=39						
KBZ	**Khabaz**	**67.89**	**310**	*e*P	P	16 17 03.2	+3.4
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLMR	**Klimovskoe**	**68.00**	**328**	*e*P	**P**	**16 16 56.6**	**-3.6**
KLMR				pmax	pmax		
	comp=Z,38nm,1.5s						
KLMR	**Klimovskoe**	**68.00**	**328**	*e*P	**P**	**16 16 56.7**	**-3.5**
KLMR				AMP		16 17 04.6	
	comp=Z,38nm,1.5s						
KIV	**Kislovodsk**	**68.01**	**310**	*e*P	**P**	**16 17 02.5**	**+1.8**
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV				MLR	MLR		
	comp=Z,530nm,17.0s						
LPSR	**Galich'ya Gora**	**69.23**	**320**	*e*P	**P**	**16 17 07.9**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	**Storozhevoye**	**69.28**	**318**	*e*P	**P**	**16 17 08.6**	**+0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PPLA	**Purkeypile**	**69.33**	**29**	P	**P**	**16 17 10.3**	**+1.6**
TRF	**Thorofare Moun**	**70.11**	**29**	P	P	16 17 15.4	+1.9
SUA	**Susitna One**	**70.18**	**31**	P	**P**	**16 17 15.6**	**+1.7**
OBN	**Obninsk**	**70.23**	**323**	*i* P	P	16 17 26.8	+13
OBN				pmax	pmax		
	comp=Z,13nm,1.4s						
RND	**Reindeer**	**70.76**	**28**	P	**P**	**16 17 17.6**	**+0.3**
RND				IAmb	IAmb	16 17 29.8	
	comp=Z,10nm,0.8s						
GHO	**Glory Hole Cre**	**70.99**	**30**	P	**P**	**16 17 20.0**	**+1.2**
GHO				IAmb	IAmb	16 17 48.0	
	comp=Z,15nm,1.4s						
POKR	**Poker Plat Res**	**71.09**	**27**	P	**P**	**16 17 20.8**	**+1.6**
SML	**Sawmill**	**71.26**	**30**	P	**P**	**16 17 21.2**	**+0.8**
SML				IAmb	IAmb	16 17 41.2	
	comp=Z,14nm,1.2s						
ILAR	**Eielson Array**	**71.38**	**27**	P	**P**	**16 17 19.7**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=226,slow=6.2,SNR=2.4						
ILAR				LR	LR	16 50 40.8	
	comp=Z,67nm,18.0s,baz=307,slow=38						
ILAR	**Eielson Array**	**71.38**	**27**	*e*P	P	16 17 23.9	+2.9
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HDA	**Harding Lake**	**71.42**	**27**	P	**P**	**16 17 21.6**	**+0.3**
HDA				IAmb	IAmb	16 17 46.6	
	comp=Z,6.4nm,1.0s						
DHY	**Denali Highway**	**71.47**	**29**	P	**P**	**16 17 22.9**	**+1.1**
DHY				IAmb	IAmb	16 17 34.3	
	comp=Z,7.5nm,1.2s						
SCM	**Sheep Creek Mo**	**71.73**	**30**	P	**P**	**16 17 24.8**	**+1.5**
PRP	**Porcupine Dome**	**71.80**	**26**	P	**P**	**16 17 24.4**	**+0.7**
PRP				IAmb	IAmb	16 17 48.0	
	comp=Z,8.0nm,1.4s						
ARCES	**ARCESS Array B**	**72.47**	**339**	P	**P**	**16 17 28.5**	**+1.0**
	comp=Z,6.3nm,0.9s,baz=45,slow=7.8,SNR=3.1						
ARCES				LR	LR	16 52 44.3	
	comp=Z,140nm,18.2s,baz=60,slow=39						
ARCES	**ARCESS Array B**	**72.47**	**339**	P	**P**	**16 17 28.6**	**+1.1**
MENT	**Mentasta**	**73.13**	**28**	P	**P**	**16 17 33.0**	**+1.5**
MENT				IAmb	IAmb	16 18 00.4	
	comp=Z,6.3nm,0.9s						
GLB	**Gilahina Butte**	**73.45**	**30**	P	P	16 17 35.3	+1.8
GLB				IAmb	IAmb	16 18 02.9	
	comp=Z,11nm,1.1s						
VRDI	**Verde Repeater**	**73.67**	**30**	P	**P**	**16 17 36.0**	**+1.0**
VRDI				IAmb	IAmb	16 18 03.1	
	comp=Z,14nm,1.4s						
EGAK	**Eagle**	**73.77**	**26**	P	**P**	**16 17 35.3**	**+0.1**
TGL	**Tana Glacier**	**74.09**	**31**	P	P	16 17 39.8	+2.5
TGL				IAmb	IAmb	16 17 48.9	
	comp=Z,8.4nm,1.0s						
FIA1	**FINESS Array S**	**74.30**	**330**	P	**P**	**16 17 39.0**	**+0.7**
FINES	**FINESS Array B**	**74.30**	**330**	P	**P**	**16 17 38.8**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=45,slow=5.9,SNR=6.1						
FINES				LR	LR	16 54 23.5	
	comp=Z,326nm,18.3s,baz=74,slow=39						
FINES	**FINESS Array B**	**74.30**	**330**	*e*P	P	16 17 42.5	+4.1
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTGM	**Chitina Glacie**	**74.73**	**30**	P	**P**	**16 17 42.7**	**+1.6**
CTGM				IAmb	IAmb	16 17 53.4	
	comp=Z,10nm,1.0s						
VSU	**Vasula**	**74.80**	**327⇓**	*e*P	P	16 17 44.4	+3.1
VSU				pmax	pmax		
	comp=Z,76nm,1.6s						
MNK	**Minsk**	**75.27**	**323**	*i* P	P	16 17 48.1	+4.0
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	16 17 48.1	+4.0
	comp=N,14nm,0.8s						
MNK				*i* P	P	16 17 48.1	+4.0
	comp=Z,22nm,1.1s						
MNK				*i* PcP	**PcP**	**16 18 01.2**	**+3.7**
MNK				*i* PP	**PP**	**16 20 36.5**	**+4.2**
MNK				*i* PPP	PPP	16 22 22.4	
MNK				*i* S	**S**	**16 27 28.1**	**+4.7**
MNK				*i* ScS	**ScS**	**16 28 01.0**	**+3.8**
MNK				*i* SS	**SS**	**16 32 18.9**	**+6.4**
MNK				*i* SSS	SSS	16 35 41.4	
MNK				*i* LQ	LQ	16 45 57.1	
MNK				*i* LR	LR	16 51 41.1	
MNK				*i* LRM	MLR	16 54 15.7	
	comp=Z,190nm,13.5s						
MNK				*i* LRM	MLR	16 54 25.4	
	comp=N,283nm,21.9s						
MNK				*i* LRM	MLR	16 54 34.4	
	comp=E,27nm,12.9s						
BRTR	**Keskin Array B**	**75.51**	**307**	P	**P**	**16 17 46.8**	**+0.8**
	comp=E,1.5nm,0.9s,baz=120,slow=3.2,SNR=5.8						
BRTR				LR	LR	16 53 30.7	
	comp=E,65nm,18.9s,baz=84,slow=38						
BRTR	**Keskin Array B**	**75.51**	**307**	P	**P**	**16 17 45.3**	**-0.7**
BRTR	**Keskin Array B**	**75.51**	**307**	P	**P**	**16 17 45.3**	**-0.7**
AKASG	**Malin Array Be**	**75.53**	**319**	P	**P**	**16 17 46.3**	**+0.7**
	comp=E,5.2nm,1.0s,baz=58,slow=6.1,SNR=7.1						
AKASG				LR	LR	16 52 40.7	
	comp=E,175nm,18.6s,baz=95,slow=37						
AKASG	**Malin Array Be**	**75.53**	**319**	*e*P	P	16 17 48.4	+2.7
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**75.53**	**319**	P	**P**	**16 17 46.1**	**+0.5**
AKBB	**Malin Array Si**	**75.53**	**319⇓**	*e*P	**P**	**16 17 47.4**	**+1.7**
AKBB				pmax	pmax		
	comp=Z,25nm,2.7s						
NACGM	**Naroch**	**75.77**	**324**	*i* P	P	16 17 50.6	+3.7
NACGM				*i* P	P	16 17 50.6	+3.7
NACGM				*i* P	P	16 17 50.6	+3.7
NACGM				*i* PcP	PcP	16 18 06.3	+6.7
NACGM				*i* PP	PP	16 20 49.9	+13
NACGM				*i* PPP	PPP	16 22 32.4	
NACGM				*i* S	**S**	**16 27 28.9**	**0.0**
NACGM				*i* PS		16 29 05.8	
NACGM				*i* SS	SS	16 32 33.4	+13
NACGM				*i* SSS	SSS	16 35 34.1	
NACGM				*i* LQ	LQ	16 45 11.6	
NACGM				*i* LR	LR	16 51 51.2	
RAO	**Raoul Island**	**76.64**	**129**	LR	LR	16 45 07.5	
	comp=Z,137nm,18.9s,baz=308,slow=31						
URZ	**Urewera**	**78.62**	**139**	LR	LR	16 47 18.3	
	comp=Z,111nm,21.1s,baz=31,slow=32						
RPZ	**Rata Peaks**	**78.79**	**146**	LR	LR	16 49 55.5	
	comp=Z,118nm,21.3s,baz=331,slow=34						
BURAR	**Bucovina Array**	**78.97**	**317**	P	**P**	**16 18 04.3**	**-0.9**
BURAR	**Bucovina Array**	**78.97**	**317**	P	**P**	**16 18 04.3**	**-0.9**
CRVS	**Cervenica-Dubn**	**80.87**	**319**	*e*P	P	16 18 20.7	+5.4
CRVS	**Cervenica-Dubn**	**80.87**	**319**	*e*P	P	16 18 20.7	+5.4
NOA	**NORSAR Array B**	**81.11**	**333**	P	**P**	**16 18 17.2**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=53,slow=2.1,SNR=4.0						
NOA				LR	LR	16 57 32.9	
	comp=Z,340nm,18.6s,baz=70,slow=38						
NOA	**NORSAR Array B**	**81.11**	**333**	*e*P	P	16 18 19.2	+2.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VYHS	**Vyhne**	**82.63**	**319**	*e*P	P	16 18 27.5	+2.8
VYHS	**Vyhne**	**82.63**	**319**	*e*P	P	16 18 27.5	+2.8
DPC	**Dobruska-Polom**	**83.35**	**322**	*e*P	P	16 18 37.0	+8.6
CLL	**Collm**	**84.81**	**323**	*e*P	**P**	**16 18 36.0**	**+0.3**
CLL	**Collm**	**84.81**	**323**	*e*P	**P**	**16 18 36.0**	**+0.3**
YKA	**Yellowknife Ar**	**85.28**	**23**	P	**P**	**16 18 37.9**	**+0.1**
	comp=Z,2.2nm,1.0s,baz=310,slow=4.5,SNR=8.8						
YKA				LR	LR	16 59 51.6	
	comp=Z,88nm,18.2s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**85.28**	**23**	*e*P	P	16 18 41.1	+3.3
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SUMG	**Summit**	**85.41**	**354**	*e*P	**P**	**16 18 38.3**	**-0.5**
SUMG	**Summit**	**85.41**	**354**	*i* P	**P**	**16 18 38.3**	**-0.5**
SUMG	**Summit**	**85.41**	**354**	*e*P	**P**	**16 18 38.4**	**-0.5**
KHC	**Kasperske Hory**	**85.49**	**321⇓**	*e*P	P	16 18 42.5	+3.3
KHC				pmax	pmax		
	comp=Z,14nm,1.7s						
KHC	**Kasperske Hory**	**85.49**	**321**	*e*P	P	16 18 42.8	+3.6
GERES	**GERESS Array B**	**85.55**	**321**	P	**P**	**16 18 38.5**	**-1.1**
	comp=Z,1.4nm,0.9s,baz=71,slow=4.5,SNR=11						
GERES				LR	LR	16 58 55.2	
	comp=Z,204nm,20.9s,baz=64,slow=37						
GERES	**GERESS Array B**	**85.55**	**321**	*e*P	**P**	**16 18 42.0**	**+2.4**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KEST	**Kesra**	**94.73**	**311**	LR	LR	17 09 17.1	
	comp=Z,85nm,19.5s,baz=309,slow=40						
PPT	**Papeete**	**94.78**	**107**	LR	LR	16 54 37.2	
	comp=Z,45nm,20.5s,baz=253,slow=31						
NVAR	**Mina Array Bea**	**97.95**	**44**	LR	LR	16 55 41.8	
	comp=Z,67nm,20.3s,baz=282,slow=30						
MAW	**Mawson**	**98.69**	**199**	LR	LR	17 01 45.0	
	comp=Z,90nm,18.1s,baz=56,slow=34						
SDV	**Santo Domingo**	**147.49**	**24**	*e*P	**PKPab**	**16 25 44.8**	**-3.7**
PAMC	**Pamplona, Colo**	**148.04**	**28**	*e*P	**PKPab**	**16 25 51.6**	**+0.6**
NORC	**Norcasia**	**148.54**	**34**	*e*P	**PKPab**	**16 25 53.6**	**+1.1**
GUY2C	**Guyana, Caldas**	**148.56**	**35**	*e*P	PKPab	16 25 57.9	+4.8
YOTC	**Yotoco, Valle**	**149.05**	**38**	*e*P	**PKPab**	**16 25 58.5**	**+3.8**
TOLC	**Tolima**	**149.12**	**35**	*e*P	**PKPab**	**16 25 54.8**	**-0.4**
ORTC	**Ortega, Tolima**	**149.72**	**36**	*e*P	**PKiKP**	**16 25 51.7**	**-1.5**
CHIC	**Chingaza**	**149.91**	**33**	*e*P	**PKPbc**	**16 25 50.1**	**-3.0**
MARP	**Paez Belalcaza**	**150.20**	**38**	*e*P	**PKPab**	**16 25 54.4**	**-5.1**
PCON	**Cinco Dias**	**150.35**	**40**	*e*P	**PKPab**	**16 25 59.6**	**-0.9**
GARC	**Garzon, Huila**	**151.00**	**38**	*e*P	**PKiKP**	**16 25 55.0**	**-1.1**

TAP 27 16:28:06.0,22°.97N×120°.93E,h13^{km}±1^{km},ML1.3,1D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONT	**Longtian**	**0.20**	**108**	P	Pg	16 28 10.3	-0.1
	baz=108						
TWG	**Pinlang**	**0.20**	**138**	*i* P	Pg	16 28 10.5	0.0
	baz=136						
TWGBT	**Beinan**	**0.21**	**137**	P	Pg	16 28 09.9	-0.7
	baz=136						
ELDTW	**Lidau**	**0.23**	**21**	*i* P	Pg	16 28 10.3	-0.9
	baz=22						
ELDTW				S	Sg	16 28 14.5	-0.2
	baz=22						
STYT	**Tauyuan**	**0.25**	**321⇓**	*i*P	Pg	16 28 10.5	-0.8
	baz=322						
STYT				*i* S	Sg	16 28 15.0	0.0
	baz=322						
SLGT	**Liugui**	**0.26**	**275**	*i* P	Pg	16 28 11.0	-0.6
	baz=275						
SLGT				*i* S	Sg	16 28 15.8	+0.5
	baz=275						
SGST	**Jiashian**	**0.34**	**290**	P	Pg	16 28 12.1	-0.8
	baz=289						
SGST				S	Sg	16 28 17.5	-0.1
	baz=289						
EDH	**Donghe**	**0.35**	**89**	*e*P	Pg	16 28 13.2	+0.1
	baz=89						
EDH				*e*S	Sb	16 28 18.9	-0.5
	baz=89						
SSD	**Sandimen**	**0.35**	**231**	*i* P	Pg	16 28 12.4	-0.8
	baz=229						
SSD				S	Sg	16 28 18.6	+0.6
	baz=229						
TSMG	**Majia**	**0.37**	**225**	*e*P	Pg	16 28 13.0	-0.4
	baz=224						
ECL	**Taimali**	**0.37**	**176**	P	Pg	16 28 13.3	-0.2
	baz=175						
ECL				S	Sb	16 28 19.7	-0.4
	baz=175						
WTP	**Ta-pu**	**0.40**	**314**	*i* P	Pg	16 28 14.0	0.0
	baz=314						
WTP				S	Sg	16 28 20.1	+0.6
	baz=314						
FULB	**Fuli**	**0.41**	**56**	*e*P	Pg	16 28 14.5	+0.3
	baz=55						
FULB				*e*S	Sb	16 28 21.1	-0.1
	baz=55						
CHKT	**Chengkung**	**0.42**	**72**	*e*S	Sb	16 28 21.6	-0.1
	baz=72						
CHN1	**Nanshi**	**0.43**	**300**	P	Pg	16 28 14.4	-0.1
	baz=300						
CHN1				S	Sg	16 28 20.9	+0.6
	baz=300						
TPUB	**Ta-pu**	**0.43**	**320**	P	Pg	16 28 14.4	-0.2
	baz=320						
TPUB				S	Sg	16 28 21.0	+0.6
	baz=320						

MASBT	**Mashibuluo** baz=217	**0.45**	**217**	*e*P	Pg	16 28 14.4	-0.5
MASBT	baz=217			*e*S	Sg	16 28 21.5	+0.6
CHN4	**Tsaushan** baz=321	**0.49**	**321**	P	Pg	16 28 14.9	-0.8
TWK	**Hsinying** baz=306	**0.50**	**306**	*e*P	Pg	16 28 15.7	-0.2
TWK	baz=306			S	Sg	16 28 23.2	+0.5
TWF1	**Yuli** baz=42	**0.51**	**42**	P	Pg	16 28 15.5	-0.6
EYUL	**Yuli** baz=43	**0.52**	**44**	*e*P	Pg	16 28 15.6	-0.7
EYUL	baz=43			*e*S	Sg	16 28 23.5	+0.2
YULB	**Yu-li** baz=38	**0.54**	**39**	*e*P	Pg	16 28 15.5	-1.2
YULB	baz=38			*e*S	Sg	16 28 24.4	+0.4
ALS	**Alishan** baz=348	**0.55**	**348**	P	Pg	16 28 16.2	-0.7
EAST	**Anshuo** baz=186	**0.59**	**187**	*e*S	Sg	16 28 25.5	+0.1
EHY	**Hungye** baz=34	**0.65**	**34**	P	Pg	16 28 18.5	-0.1
EHY	baz=34			S	Sg	16 28 27.6	+0.3
CHN5	**Tsauling** baz=339	**0.67**	**340**	*e*S	Sb	16 28 28.9	+0.2
HGSD	**Ruisui** baz=41	**0.69**	**41**	*e*P	Pg	16 28 19.3	-0.3
HGSD	baz=41			*e*S	Sb	16 28 29.1	-0.3

TAP 27 16:28:08.5, 22°.98N×120°.92E, h6^{km}±1^{km}, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONT	**Longtian** baz=111	**0.21**	**112**	P	Pg	16 28 13.5	+0.8
LONT	baz=111			S	Sg	16 28 17.8	+2.3
LONT	**Longtian** baz=108	**0.21**	**112**	S	Pg	16 28 13.7	+1.0
TWG	**Pinlang** baz=138	**0.21**	**139**	*i* P	Pg	16 28 13.9	+1.2
TWG	baz=138			S	Sg	16 28 18.0	+2.3
TWG	**Pinlang** baz=136	**0.21**	**139**	*i* S	Pg	16 28 14.0	+1.2
TWGBT	**Beinan** baz=138	**0.22**	**138**	P	Pg	16 28 14.1	+1.1
TWGBT	baz=138			S	Sg	16 28 18.0	+2.2
TWGBT	**Beinan** baz=136	**0.22**	**138**	S	Pg	16 28 14.1	+1.2
ELDTW	**Lidau** baz=25	**0.22**	**24**	P	Pg	16 28 13.1	+0.1
ELDTW	baz=25			*i* S	Sg	16 28 17.8	+1.8
STYT	**Tauyuan** baz=321	**0.23**	**320**	P	Pg	16 28 13.8	+0.6
STYT	baz=321			S	Sg	16 28 18.2	+2.0
SGST	**Jiashian** baz=287	**0.33**	**288**	P	Pb	16 28 16.1	-0.7
SGST	baz=287			S	Sb	16 28 21.9	-0.3
SSD	**Sandimen** baz=227	**0.35**	**228**	P	Pb	16 28 16.4	-0.9
SSD	baz=227			S	Sb	16 28 22.2	-0.9
TSMG	**Majia** baz=222	**0.38**	**222**	*e*P	Pb	16 28 17.2	-0.4
TSMG	baz=222			*e*S	Sb	16 28 23.4	-0.3
WTP	**Ta-pu** baz=313	**0.38**	**313**	P	Pb	16 28 16.9	-0.8
WTP	baz=313			S	Sb	16 28 23.5	-0.5
FULB	**Fuli** baz=58	**0.41**	**58**	S	Sb	16 28 25.6	+1.0
CHN1	**Nanshi** baz=299	**0.41**	**299**	P	Pb	16 28 17.6	-0.7
CHN1	baz=299			S	Sb	16 28 24.0	-0.8
TPUB	**Ta-pu** baz=319	**0.41**	**320**	P	Pb	16 28 18.9	+0.6
TPUB	baz=319			*e*S	Sb	16 28 25.0	+0.2
CHN4	**Tsaushan** baz=320	**0.47**	**321**	P	Pb	16 28 19.1	-0.2
CHN4	baz=320			S	Sb	16 28 26.2	-0.3
TWK	**Hsinying** baz=305	**0.49**	**305**	*e*P	Pb	16 28 18.8	-0.8
TWK	baz=305			S	Sb	16 28 27.4	+0.5
TWF1	**Yuli** baz=44	**0.51**	**43**	*i* P	Pb	16 28 19.9	0.0
EYUL	**Yuli** baz=45	**0.52**	**45**	*e*P	Pb	16 28 19.8	-0.3
ALS	**Alishan** baz=349	**0.53**	**349**	*e*P	Pb	16 28 20.9	+0.3
ALS	baz=349			*e*S	Sb	16 28 29.0	+0.4
YULB	**Yu-li** baz=40	**0.54**	**41**	*e*P	Pb	16 28 19.6	-0.7
YULB	baz=40			S	Sb	16 28 27.6	-0.8

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*IDC **27** 16:36:15.7±1.0, 16°.36S×173°.32W, h0^{km}, mb3.9/7, mb1 4.2/7, mb1mx3.9/31, mbtmp3.9/7, MS3.3/1, Ms1 3.3/1, ms1mx2.7/34, Error ellipse: s-maj=52.9km s-min=21.5km az=135.0*

*NEIC **27** 16:36:17.4±1.2, 16°.1S±0°.2×173°.4W±0°.2, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=42.2km s-min=18.3km az=125.0*

*NOU **27** 16:36:33.6, 13°.97S×171°.81W, h187^{km}, MLv2.0, Samoa Islands*

ISC 27 16:36:17.0±0.7**, 16°.2S**±0°.2×**173°.3W**±0°.2**, h10**^{km}**, n27, σ1s.00**/20**, mb4.0**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.69**	**34**		**Pn**	**16 36 58.8**	**-1.7**
AFI	**Afiamalu**	**2.69**	**34**	P	**Pn**	**16 36 58.5**	**-1.9**
URZ	**Urewera** 4.3nm,0.5s,baz=296,slow=5.6,SNR=5.7	**23.57**	**199**	P	**P**	**16 41 26.1**	**-1.7**
HNR	**Honiara** comp=Z,63nm,20.5s,baz=115,slow=32	**26.89**	**281**	LR	LR	16 50 28.3	
H11S2	**WAKE ISLAND Hy** baz=149	**39.65**	**329**	T	T	17 26 00.3	
H11S3	**WAKE ISLAND Hy** baz=149	**39.66**	**329**	T	T	17 25 58.5	
H11S1	**WAKE ISLAND Hy** baz=149	**39.66**	**329**	T	T	17 26 06.7	
H11N3	**WAKE ISLAND Hy** baz=150,slow=76,SNR=5.3	**40.60**	**331**	T	T	17 27 04.4	
H11N1	**WAKE ISLAND Hy** baz=150,slow=76,SNR=5.3	**40.61**	**331**	T	T	17 27 05.3	
H11N2	**WAKE ISLAND Hy** baz=150,slow=76,SNR=6.2	**40.62**	**331**	T	T	17 27 05.9	
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=99,slow=6.9,SNR=2.4	**49.75**	**257**	P	**P**	**16 45 09.6**	**-0.5**
AS31	**Alice Springs**	**49.95**	**253**	P	**P**	**16 45 10.7**	**-0.9**
AS31	comp=Z,1.0nm,0.8s			IAmb	IAmb	16 45 12.1	
ASAR	**Alice Springs** comp=Z,2.4nm,0.5s,baz=90,slow=8.2,SNR=29	**49.95**	**252**	P	**P**	**16 45 11.1**	**-0.5**
QSPA	**South Pole Qui**	**73.89**	**180**	P	**P**	**16 47 52.7**	**+0.5**
QSPA	comp=Z,2.2nm,0.8s			IAmb	IAmb	16 47 53.6	
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.7s,baz=228,slow=9.5,SNR=4.9	**74.84**	**42**	P	**P**	**16 47 59.3**	**+1.1**
SUA	**Susitna One**	**79.42**	**11**	P	**P**	**16 48 23.9**	**+0.6**
SUA	comp=Z,11nm,1.3s			IAmb	IAmb	16 48 36.7	
PDAR	**Pinedale Array** comp=Z,0.9nm,0.7s,baz=217,slow=3.2,SNR=9.5	**82.78**	**42**	P	**P**	**16 48 42.8**	**+1.0**
PDAR	**Pinedale Array**	**82.78**	**42**	P	**P**	**16 48 41.5**	**-0.2**
ILAR	**Eielson Array** comp=Z,0.6nm,0.7s,baz=231,slow=6.1,SNR=14	**83.17**	**11**	P	**P**	**16 48 43.5**	**+0.6**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.7s,baz=234,slow=3.8,SNR=5.0	**90.76**	**23**	P	**P**	**16 49 21.4**	**+1.4**
ARCES	**ARCESS Array B** comp=Z,7.1nm,1.0s,baz=2.9,slow=1.8,SNR=4.1	**125.36**	**352**	PKP	**PKPdf**	**16 55 18.0**	**+0.4**
BURAR	**Bucovina Array**	**145.09**	**338**		**PKPdf**	**16 55 55.0**	**+0.1**
BR131	**Keskin Array S**	**146.78**	**320**		**PKPbc**	**16 56 00.4**	**+0.5**
BRTR	**Keskin Array B** comp=Z,2.6nm,0.8s,baz=102,slow=3.1,SNR=18	**146.78**	**320**	PKPbc	**PKPab**	**16 56 01.0**	**-0.1**
BRTR	**Keskin Array B**	**146.78**	**320**		**PKPbc**	**16 56 00.4**	**+0.5**
GERES	**GERESS Array B** comp=Z,1.2nm,0.7s,baz=3.8,slow=4.0,SNR=8.9	**146.90**	**351**	PKPbc	**PKPab**	**16 56 00.8**	**-0.4**
GERES	**GERESS Array B**	**146.90**	**351**		**PKPbc**	**16 56 00.0**	**+0.2**

IDC 27 16:40:11.2±2.1**, 6°.77S**×**129°.34E, h0**^{km}**, mb3.9**/1**, mb1 3.9**/3**, mb1mx3.5**/29**, mbtmp3.7**/3**, ML3.7**/2**, Error ellipse: s-maj=148.8km s-min=30.5km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=342,slow=14,SNR=15	**13.96**	**160**	Pn	Pn	16 43 30.0	-0.6
WRA	1.1nm,0.3s,baz=330,slow=22,SNR=11			Sn	Sn	16 45 51.4	-15
ASAR	**Alice Springs** 0.3nm,0.3s,baz=345,slow=10,SNR=26	**17.36**	**166**	P	Pn	16 44 15.6	+0.5
ASAR	0.3nm,0.3s,baz=354,slow=26,SNR=5.6			S	Sn	16 47 16.0	-13
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=117,slow=7.7,SNR=13	**67.68**	**327**	P	P	16 51 10.3	0.0

WEL 27 16:42:22.7±0.3**, 45°S**±2°×**16°9E**±°**, h5**^{km}**, M3.5**/14**, ML3.7**/14**, MLv3.5**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=146.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WKZ	**Wanaka**	**0.42**	**222**	P	Pg	16 42 31.5	+0.8
WKZ				S	Sg	16 42 37.2	+1.0
LBZ	**Lake Benmore**	**0.57**	**77**	P	Pb	16 42 34.5	-0.6
LBZ				S	Sg	16 42 42.0	+0.9
JCZ	**Jackson Bay**	**0.63**	**314**	P	Pg	16 42 35.2	+0.4
JCZ				S	Sg	16 42 43.0	0.0
EAZ	**Earnscleugh**	**0.72**	**186**	P	Pg	16 42 36.9	+0.4
EAZ				S	Sg	16 42 46.7	+0.9
FOZ	**Fox Glacier**	**1.03**	**17**	P	Pg	16 42 41.3	-1.0
ODZ	**Otahua Downs**	**1.03**	**121**	P	Pg	16 42 42.4	+0.1
MSZ	**Milford Sound**	**1.07**	**261**	P	Pg	16 42 42.9	-0.3
MSZ				S	Sg	16 42 57.3	+0.2
TMZ	**Timaru**	**1.15**	**84**	P	Pb	16 42 45.2	+0.1
TMZ				S	Sg	16 42 59.9	+0.3
MLZ	**Mavora Lakes**	**1.25**	**227**	P	Pg	16 42 46.3	-0.3
MLZ				S	Sg	16 43 02.9	+0.1
GCSZ	**Gaunt Creek Bo**	**1.37**	**29**	P	Pn	16 42 47.2	-1.3
ARCZ	**Arundel**	**1.39**	**66**	P	Pn	16 42 48.4	-0.3
ARCZ				S	Sb	16 43 06.5	-0.7
RPZ	**Rata Peaks**	**1.43**	**56**	P	Pn	16 42 49.2	0.0
RPZ				S	Sb	16 43 07.4	-0.9
TUZ	**Tuapeka**	**1.45**	**174**	P	Pn	16 42 49.0	-0.5
TUZ				S	Sb	16 43 06.8	-2.0
HHSZ	**Highcliff Hill**	**1.61**	**149**	P	Pb	16 42 53.0	+0.2
HHSZ				S	Sn	16 43 11.4	-1.4
WHZ	**Wether Hill Ro**	**1.72**	**216**	P	Pn	16 42 52.9	-0.4
WVZ	**Waitaha Valley**	**1.73**	**34**	P	Pn	16 42 54.0	+0.6
WACZ	**Wakanui South**	**1.84**	**73**	P	Pn	16 42 54.4	-0.5
DCZ	**Deep Cove**	**1.86**	**239**	P	Pb	16 42 56.2	-0.9
DCZ				S	Sb	16 43 20.1	-0.6
SYZ	**Scrubby Hill**	**2.03**	**185**	P	Pn	16 42 56.8	-0.6
RACZ	**Rakaia**	**2.12**	**69**	P	Pg	16 43 03.6	+0.3
OXZ	**Oxford**	**2.24**	**59**	P	Pn	16 42 59.5	-0.9
INZ	**Inchbonnie**	**2.32**	**40**	P	Pn	16 43 01.5	0.0
MQZ	**McQueen's Vall**	**2.47**	**72**	P	Pn	16 43 02.7	-0.9
APZ	**The Paps**	**2.52**	**203**	P	Pn	16 43 03.9	-0.4
PYZ	**Puysegur Point**	**2.54**	**228**	P	Pn	16 43 05.1	+0.7
AKCZ	**Akaroa Harbour**	**2.60**	**77**	P	Pn	16 43 04.6	-0.7
AMCZ	**Amberley**	**2.70**	**61**	P	Pn	16 43 08.7	+2.0
LTZ	**Lake Taylor**	**2.71**	**51**	P	Pn	16 43 06.4	-0.4
OKCZ	**Okains Bay**	**2.75**	**74**	P	Pn	16 43 07.1	-0.3
GVZ	**Greta Valley S**	**3.05**	**61**	P	Pn	16 43 11.0	-0.5
DSZ	**Denniston Nort**	**3.28**	**33**	P	Pn	16 43 14.1	-0.6
KHZ	**Kahutara**	**3.67**	**57**	P	Pn	16 43 20.1	+0.1
THZ	**Tophouse**	**3.76**	**44**	P	Pn	16 43 20.5	-0.8
QRZ	**Quartz Range**	**4.35**	**33**	P	Pn	16 43 29.5	+0.1
NNZ	**Nelson**	**4.40**	**43**	P	Pn	16 43 33.7	+3.6
DUWZ	**D'Urville Isla**	**4.98**	**43**	P	Pn	16 43 41.5	+3.3
KHEZ	**Kahui Hut**	**6.25**	**35**	P	Pn	16 43 57.2	+1.6
NEZ	**North Egmont**	**6.30**	**35**	P	Pn	16 43 58.2	+1.9

IDC 27 16:44:36.7±4.3**, 17°.17S**×**173°.80W, h0**^{km}**, mb3.9**/2**, mb1 4.1**/2**, mb1mx3.6**/39**, mbtmp3.9**/2**, Error ellipse: s-maj=218.8km s-min=63.3km az=146.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=95,slow=7.3,SNR=6.1	**49.09**	**258**	P	P	16 53 25.8	-0.5
ASAR	**Alice Springs** 3.0nm,0.7s,baz=89,slow=8.4,SNR=46	**49.22**	**253**	P	P	16 53 27.6	+0.3
ASAR	0.2nm,0.5s,baz=108,slow=4.2,SNR=1.8			PcP	PcP	16 54 49.8	-0.7
BRTR	**Keskin Array B** 0.6nm,0.7s,baz=44,slow=3.8,SNR=3.9	**147.25**	**319**	PKPbc	PKPbc	17 04 22.0	-0.6

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*SKHL **27** 16:45:55.5±0.2, 43°.78N×147°.70E, h35^{km}±5^{km}, mb4.2/4*

*JMA **27** 16:45:56.2±0.4, 43°.59N×147°.45E, h16^{km}, M3.6*

ISC 27 16:45:53.3±4.1**, 43°.8N**±0°.1×**147°.6E**±0°.1**, h13**^{km}±20^{km}**, n13, σ1s.41**/19**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.29**	**280**	*i* P	**Pn**	**16 46 17.6**	**+0.6**
YUK	160nm,0.3s			AMB	AMB	16 46 19.0	
YUK				*e*S	**Sg**	**16 46 34.0**	**-0.8**
YUK	420nm,0.4s			A	A	16 46 35.0	
YUK	1μm,0.4s			A	A	16 46 35.0	
GRPR	**Tuman**	**1.35**	**277**	*e*P	**Pn**	**16 46 18.0**	**+0.2**
GRPR	97nm,0.4s			AMB	AMB	16 46 19.0	
GRPR				*e*S	**Sb**	**16 46 35.0**	**-0.6**
GRPR	776nm,0.4s			A	A	16 46 36.0	
GRPR	440nm,0.4s			A	A	16 46 36.0	
KUR	**Kuril'sk**	**1.41**	**7**	*e*P	**Pn**	**16 46 19.0**	**+0.4**
KUR	68nm,0.4s			AMB	AMB	16 46 21.0	
KUR				*e*S	**Sb**	**16 46 36.9**	**-0.5**
KUR	639nm,0.3s			A	A	16 46 41.0	
KUR	245nm,0.3s			A	A	16 46 41.0	
NEM2	**Nemuro 2**	**1.45**	**252**	P	**Pn**	**16 46 19.2**	**+0.1**
NEM2				*e*S	**Sn**	**16 46 35.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**1.45**	**252**	*i* P	**Pn**	**16 46 19.3**	**+0.1**
NMR				*i* S	**Sn**	**16 46 37.2**	**-0.9**
GLVR	**Golovnino**	**1.53**	**267**	*e*P	**Pn**	**16 46 21.2**	**+1.0**
GLVR	110nm,0.4s			AMB	AMB	16 46 22.0	
GLVR				*e*S	**Sn**	**16 46 40.3**	**+0.3**
GLVR	912nm,0.4s			A	A	16 46 42.0	
GLVR	462nm,0.4s			A	A	16 46 42.0	
JRA	**Rausu**	**1.81**	**274**	P	**Pn**	**16 46 25.8**	**+1.6**
JNSB	**Nemuroshibetsu**	**1.90**	**269**	P	**Pn**	**16 46 26.9**	**+1.6**
JNK	**Nakash**	**2.12**	**264**	P	**Pn**	**16 46 29.8**	**+1.4**
JAK	**Akkeshi**	**2.29**	**250**	P	**Pn**	**16 46 31.1**	**+0.4**
JTKR	**Abashiri--Toko**	**2.69**	**274**	P	**Pn**	**16 46 38.7**	**+2.5**
JAR	**Ashorobuto**	**2.85**	**261**	P	**Pn**	**16 46 40.5**	**+2.0**
JCH	**Churui**	**3.34**	**250**	P	**Pn**	**16 46 46.9**	**+1.7**

WEL 27 16:46:43.8, 40°S±2°×**17°7E**±1°0**, h8**^{km}±3^{km}**, M2.6**/30**, ML2.9**/29**, MLv2.6**/30**, Error ellipse: s-maj=0.0km s-min=0.0km az=84.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRHZ	**Porangahau**	**0.28**	**304**	P	Pg	16 46 49.1	-0.3
ANWZ	**Angora Road**	**0.36**	**264**	P	Pb	16 46 52.1	-0.4
PXZ	**Pawanui**	**0.40**	**351**	P	Pb	16 46 52.7	-0.4
WPHZ	**Waipukurau**	**0.53**	**313**	P	Pg	16 46 53.3	-0.7
BFZ	**Birch Farm**	**0.59**	**244**	P	Pb	16 46 57.1	+0.7
DVHZ	**Dannevirke**	**0.61**	**282**	P	Pg	16 46 55.1	-0.4
KAHZ	**Kahuranaki**	**0.63**	**355**	P	Pb	16 46 57.4	+0.3
PRWZ	**Pori Road**	**0.75**	**260**	P	Pb	16 46 59.0	-0.2
PNHZ	**Pukenui**	**0.77**	**312**	P	Pg	16 46 57.5	-1.0
TSZ	**Takapari Road**	**0.84**	**296**	P	Pg	16 46 58.6	-1.2
TIWZ	**Tintock**	**0.88**	**246**	P	Pb	16 47 01.5	+0.1
KRHZ	**Kereru**	**0.90**	**330**	P	Pg	16 47 00.1	-0.9
POWZ	**Post Office Ro**	**0.90**	**272**	P	Pg	16 47 00.8	-0.2
MCHZ	**McNeill Hill**	**1.00**	**349**	P	Pg	16 47 02.9	0.0
TMWZ	**Te Maipa**	**1.05**	**229**	P	Pn	16 47 04.8	-0.1
MRZ	**Mangatainoka R**	**1.07**	**257**	P	Pg	16 47 03.0	-1.3
KWHZ	**Kaweka Forest**	**1.08**	**338**	P	Pg	16 47 03.5	-0.9
BHHZ	**Black Hill Sta**	**1.15**	**324**	P	Pg	16 47 03.8	-2.1
BKZ	**Black Stump Fm**	**1.30**	**344**	P	Pn	16 47 06.5	-1.9
MTW	**Mount Morrison**	**1.32**	**236**	P	Pn	16 47 06.9	-1.7
NMHZ	**Naumai**	**1.33**	**355**	P	Pn	16 47 06.4	-2.4
OGWZ	**Otaki Gorge**	**1.41**	**253**	P	Pn	16 47 08.0	-1.8
WNVZ	**Wahianoa**	**1.51**	**316**	P	Pn	16 47 10.5	-0.8
TUVZ	**Tukino**	**1.52**	**319**	P	Pn	16 47 10.9	-0.6
MTVZ	**Mangateitei**	**1.54**	**312**	P	Pn	16 47 10.8	-0.8
WHVZ	**Whangaehu Hut**	**1.54**	**317**	P	Pn	16 47 11.2	-0.7
MTHZ	**Maungataniwha**	**1.57**	**357**	P	Pn	16 47 10.5	-1.5
FWVZ	**Far West T-bar**	**1.58**	**317**	P	Pn	16 47 11.7	-0.8
ETVZ	**East Tongariro**	**1.60**	**323**	P	Pn	16 47 12.4	-0.1
OTVZ	**Oturere**	**1.60**	**322**	P	Pn	16 47 12.2	-0.4
TMVZ	**Te Maari**	**1.62**	**323**	P	Pn	16 47 12.7	-0.1
NGZ	**Ngauruhoe**	**1.62**	**320**	P	Pn	16 47 12.6	-0.3
MRHZ	**Matea Rd**	**1.64**	**345**	P	Pn	16 47 12.3	-0.7
WAZ	**Wanganui**	**1.64**	**293**	P	Pn	16 47 13.2	+0.1
SNGZ	**Shannon Statio**	**1.67**	**11**	P	Pn	16 47 12.2	-1.2
WTVZ	**West Tongariro**	**1.67**	**321**	P	Pn	16 47 13.3	-0.3
TWVZ	**Taurewa**	**1.78**	**319**	P	Pn	16 47 14.7	-0.3
VRZ	**Vera Road**	**2.13**	**307**	P	Pb	16 47 21.9	-0.7

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*IDC **27** 16:49:42.7±0.7, 21°.22N×122°.11E, h0^{km}, mb3.8/18, mb1 3.9/20, mb1mx3.8/51, mbtmp3.8/20, ML3.9/2, MS3.3/6, Ms1 3.4/6, ms1mx3.0/34, Error ellipse: s-maj=22.4km s-min=15.0km az=77.0*

*TAP **27** 16:49:44.2, 21°.41N×122°.00E, h15^{km}±2^{km}, ML4.3, D*

*JMA **27** 16:49:45.3±0.3, 21°.39N×121°.89E, h95^{km}, M4.1*

*NIED **27** 16:49:45.3, 21°.39N×121°.89E, h95^{km}, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.59; M$_{θθ}$1.93; M$_{φφ}$-0.33; M$_{rθ}$1.14; M$_{θφ}$-0.28; M$_{φr}$-1.15; Fault plane solution: M$_0$2.42000×10^{15} NP1: φ$_s$301.00000°, δ67.00000°, λ-67.00000°. NP2: φ$_s$73.00000°, δ32.00000°, λ-133.00000°.*

*NEIC **27** 16:49:46.4±1.8, 21°.60N±0°.08×121°.98E±0°.08, h10^{km}±1^{km}, mb4.3/12 Error ellipse: s-maj=14.1km s-min=12.3km az=143.0*

*BJI **27** 16:49:47.6±0.0, 21°.82N×121°.97E, h5^{km}, mB4.5/6, mb4.1/22, Ms4.1/3, Ms7 3.8/2*

ISC 27 16:49:44.3±1.6**, 21°.47N**±0°.04×**121°.98E**±0°.03**, h2**^{km}±9^{km}**, n161, σ1s.24**/212**, mb3.8**/24**, MS3.1**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu** baz=326	**0.69**	**325**	*e*P	**Pg**	**16 49 58.9**	**+1.3**
LAY	baz=326			*e*S	**Sb**	**16 50 10.1**	**+0.9**
TSEB	**Hengchuen, Pin** baz=294	**1.09**	**293**	*e*P	**Pn**	**16 50 06.8**	**+0.1**
TSEB	baz=294			*e*S	**Sg**	**16 50 20.6**	**+1.1**
TWKBT	**Hengchun** baz=295	**1.18**	**293**	*e*P	**Pg**	**16 50 05.2**	**-1.8**
TWKBT	baz=295			*e*S	**Sb**	**16 50 23.6**	**+0.3**
TWK1	**Hengchun** baz=295	**1.19**	**293**	*e*P	**Pb**	**16 50 05.5**	**-2.1**
TWK1	baz=295			*e*S	**Sn**	**16 50 25.1**	**+0.3**
SNW	**Nanwan** baz=295	**1.25**	**293**	*e*S	**Sn**	**16 50 26.6**	**+0.5**
HEN	**Hengchun** baz=296	**1.27**	**295**	*e*P	**Pn**	**16 50 06.8**	**-2.3**
HEN	baz=296			*e*S	**Sb**	**16 50 25.6**	**-0.3**
LDUT	**Ludao** baz=338	**1.29**	**338**	*e*P	**Pn**	**16 50 07.3**	**-2.0**
LDUT	baz=338			*e*S	**Sb**	**16 50 25.6**	**-0.7**
SLIU	**Shizi** baz=305	**1.33**	**304**	*e*P	**Pn**	**16 50 08.1**	**-1.8**
SLIU	baz=305			*e*S	**Sb**	**16 50 26.1**	**-1.3**
TAW	**Tawu** baz=312	**1.34**	**311**	*e*P	**Pn**	**16 50 08.8**	**-1.2**
TAW	baz=312			*e*S	**Sb**	**16 50 27.4**	**-0.4**
EAST	**Anshuo** baz=312	**1.39**	**311**	*e*P	**Pn**	**16 50 09.3**	**-1.4**
EAST	baz=312			*e*S	**Sb**	**16 50 28.7**	**-0.6**
ECL	**Taimali** baz=320	**1.47**	**320**	*e*P	**Pn**	**16 50 10.9**	**-1.0**
ECL	baz=320			*e*S	**Sg**	**16 50 32.5**	**+0.9**
TTN	**Taitung** baz=329	**1.49**	**329**	*e*P	**Pn**	**16 50 12.7**	**+0.6**
TTN	baz=329			*e*S	**Sn**	**16 50 30.9**	**-1.3**
SCZT	**Fangliau** baz=306	**1.55**	**306**	*e*P	**Pn**	**16 50 11.1**	**-1.8**
SCZT	baz=306			*e*S	**Sn**	**16 50 33.0**	**-0.6**
TWGBT	**Beinan** baz=328	**1.58**	**328**	*e*P	**Pn**	**16 50 12.2**	**-1.2**
TWGBT	baz=328			*e*S	**Sn**	**16 50 34.3**	**0.0**
TWG	**Pinlang** baz=328	**1.59**	**328**	*e*P	**Pn**	**16 50 12.9**	**-0.5**
TWG	baz=328			*e*S	**Sn**	**16 50 34.6**	**0.0**
TWG	**Pinlang**	**1.59**	**328**		**Pn**	**16 50 12.5**	**-1.0**
EDH	**Donghe** baz=337	**1.62**	**337**	*e*P	**Pn**	**16 50 11.7**	**-2.2**
EDH	baz=337			*e*S	**Sn**	**16 50 33.5**	**-1.8**
LONT	**Longtian** baz=331	**1.63**	**331**	*e*P	**Pn**	**16 50 13.5**	**-0.6**
SSPT	**Xinbi** baz=308	**1.66**	**308**	*e*P	**Pn**	**16 50 15.0**	**+0.6**
SSPT	baz=308			*e*S	**Sn**	**16 50 34.3**	**-1.9**
MASBT	**Mashibuluo** baz=313	**1.69**	**312**	*e*P	**Pn**	**16 50 13.2**	**-1.7**
MASBT	baz=313			*e*S	**Sn**	**16 50 37.1**	**+0.1**
CHKT	**Chengkung** baz=340	**1.72**	**341**	*e*P	**Pn**	**16 50 12.9**	**-2.3**
CHKT	baz=340			*e*S	**Sn**	**16 50 35.4**	**-2.4**
TWP	**Hsiaoliuchiu** baz=301	**1.74**	**300**	*e*P	**Pn**	**16 50 14.1**	**-1.5**
TSMG	**Majia** baz=315	**1.75**	**315**	*e*P	**Pn**	**16 50 16.2**	**+0.5**
TSMG	baz=315			*e*S	**Sn**	**16 50 37.6**	**-0.9**
SSD	**Sandimen** baz=316	**1.78**	**316**	*e*P	**Pn**	**16 50 16.3**	**+0.2**
SSD	baz=316			*e*S	**Sb**	**16 50 40.5**	**0.0**
TSPT	**Pingtung City** baz=311	**1.83**	**311**	*e*P	**Pb**	**16 50 18.1**	**-0.4**
FULB	**Fuli** baz=339	**1.83**	**340**	*e*P	**Pn**	**16 50 15.3**	**-1.6**
FULB	baz=339			*e*S	**Sn**	**16 50 39.7**	**-0.9**
SGLT	**Jiouru** baz=313	**1.86**	**312**	*e*P	**Pn**	**16 50 17.1**	**-0.2**
SGLT	baz=313			*e*S	**Sn**	**16 50 41.3**	**-0.1**
ELDTW	**Lidau** baz=332	**1.93**	**333**	*e*P	**Pn**	**16 50 18.4**	**+0.1**

ELDTW				eS	Sn	16 50 43.1	-0.1
	baz=332						
SLGT	Liugui	1.96	321	eP	Pn	16 50 19.4	+0.8
	baz=321						
SLGT				eS	Sn	16 50 43.1	-0.6
	baz=321						
EYUL	Yuli	1.96	342	eP	Pn	16 50 18.1	-0.5
	baz=341						
EYUL				eS	Sn	16 50 43.3	-0.5
	baz=341						
SCST	Cishan	1.97	316	eP	Pn	16 50 18.6	-0.1
	baz=316						
SCST				eS	Sn	16 50 44.1	+0.1
	baz=316						
TWM1	Shoushan	1.98	313	eP	Pn	16 50 19.5	+0.7
	baz=313						
TWM1				eS	Sn	16 50 44.1	-0.1
	baz=313						
TWF1	Yuli	1.98	341	eP	Pn	16 50 17.3	-1.5
	baz=341						
TWF1				eS	Sn	16 50 44.1	-0.1
	baz=341						
YULB	Yu-li	2.01	342	eP	Pn	16 50 18.4	-1.0
	baz=341						
YULB				eS	Sn	16 50 45.4	+0.3
	baz=341						
YULB	Yu-li	2.01	342		Pn	16 50 17.9	-1.5
STYT	Tauyuan	2.03	326	eP	Pn	16 50 20.2	+0.6
	baz=326						
STYT				eS	Sn	16 50 46.2	+0.6
	baz=326						
SGST	Jiashian	2.06	321	eP	Pn	16 50 20.7	+0.7
	baz=321						
SGST				eS	Sn	16 50 45.3	-1.0
	baz=321						
HGSD	Ruisui	2.08	346	eP	Pn	16 50 18.9	-1.3
	baz=345						
HGSD				eS	Sn	16 50 45.4	-1.2
	baz=345						
EHY	Hungye	2.11	343	eP	Pn	16 50 19.1	-1.6
	baz=343						
EHY				eS	Sn	16 50 45.9	-1.7
	baz=343						
CHN1	Nanshi	2.17	322	eP	Pb	16 50 24.0	-0.4
	baz=322						
CHN1				eS	Sn	16 50 49.2	+0.2
	baz=322						
WTP	Ta-pu	2.17	325	eP	Pn	16 50 23.0	+1.4
	baz=324						
WTP				eS	Sn	16 50 50.0	+0.9
	baz=324						
CHN3	Shinhua	2.19	317	eP	Pn	16 50 21.4	-0.3
	baz=317						
CHN3				eS	Sn	16 50 48.0	-1.4
	baz=317						
TPUB	Ta-pu	2.21	326	eP	Pn	16 50 23.8	+1.7
	baz=325						
TPUB				eS	Sb	16 50 52.1	-0.8
	baz=325						
TPUB	Ta-pu	2.21	326	Pn	Pn	16 50 23.4	+1.3
SNST	Tainan City	2.22	322	eP	Pn	16 50 24.0	+1.9
	baz=322						
SNST				eS	Sn	16 50 49.5	-0.6
	baz=322						
YUS	Yu-Shan	2.22	335	eP	Pn	16 50 23.0	+0.4
	baz=334						
EGFH	Guangfu	2.25	347	eP	Pn	16 50 21.2	-1.3
	baz=346						
EGFH				eS	Sn	16 50 50.3	-0.5
	baz=346						
TWK	Hsinying	2.26	322	eP	Pn	16 50 24.3	+1.5
	baz=322						
TWK				eS	Sn	16 50 51.0	-0.2
	baz=322						
CHN4	Tsaushan	2.27	326	eP	Pb	16 50 25.1	-1.0
	baz=325						
CHN4				eS	Sn	16 50 50.8	-0.6
	baz=325						
ALS	Alishan	2.30	332	eP	Pn	16 50 24.5	+1.0
	baz=332						
ESL	Shilin	2.38	348	eP	Pn	16 50 23.2	-1.2
	baz=347						
ESL				eS	Sn	16 50 52.3	-1.9
	baz=347						
VWDT	VWDT	2.40	341	eP	Pn	16 50 25.1	+0.4
	baz=341						
CHN5	Tsauling	2.44	331	eP	Pn	16 50 27.4	+2.2
	baz=330						
CHN5				eS	Sn	16 50 53.9	-1.7
	baz=330						
WHYT	Xinyi Township	2.45	335	eP	Pn	16 50 27.5	+2.2
	baz=334						
CHY	Chiayi	2.48	325	eP	Pn	16 50 26.6	+0.9
	baz=325						
CHN2	Minshiung	2.48	326	eP	Pn	16 50 27.6	+1.9
	baz=326						
SSLB	Suanglung	2.49	338	eP	Pn	16 50 26.3	+0.4
	baz=337						
SSLB	Suanglung	2.49	338		Pn	16 50 26.0	+0.1
WLGB	Puzi	2.53	322	eP	Pn	16 50 26.1	-0.3
	baz=322						
WGK	Gukeng	2.56	329	eP	Pn	16 50 28.7	+1.8
	baz=329						
WDLH	Douliu	2.58	329	eP	Pn	16 50 29.2	+2.1
	baz=329						
SMLT	Sun Moon Lake	2.60	338	eP	Pn	16 50 28.7	+1.2
	baz=337						
SMLT				eS	Sn	16 51 01.1	+1.4
	baz=337						
WJS	Zhushan	2.61	334	eP	Pn	16 50 26.9	-0.7
	baz=333						
WJS				eS	Sn	16 50 59.5	-0.3
	baz=333						
TWD	Chiawan	2.62	352	eP	Pn	16 50 28.7	+1.0
	baz=352						
TWD				eS	Sn	16 51 00.3	+0.3
	baz=352						
TYC	Yuchr	2.63	337	eP	Pn	16 50 29.2	+1.3
	baz=337						
WTK	Tuku	2.65	327	eP	Pn	16 50 29.2	+1.1
	baz=326						
WNT	Mingjian	2.68	334	eP	Pn	16 50 28.2	-0.2
	baz=333						
WNT				eS	Sn	16 51 01.8	+0.3
	baz=333						
CHGB	Renai	2.68	344	eP	Pn	16 50 28.7	-0.1
	baz=343						
WNT1	Nantou City	2.71	334	eP	Pn	16 50 28.9	+0.1
	baz=333						
NACB	Ninganchiao	2.71	352	eP	Pn	16 50 27.1	-1.8
	baz=352						
NACB				eS	Sn	16 51 00.1	-2.3
	baz=352						
NACB	Ninganchiao	2.71	352		Pn	16 50 27.5	-1.4
DPDB	Guoxing	2.73	339	eP	Pn	16 50 31.2	+2.0
	baz=339						
WHF	Hehuan Shan	2.74	346	eP	Pn	16 50 29.9	+0.2
	baz=346						
ETLH	Xiulin Townshi	2.76	350	eP	Pn	16 50 30.2	+0.5
	baz=350						
ETLH				eS	Sn	16 51 03.1	-0.5
	baz=350						
FUSS	Fushou	2.84	346	eP	Pn	16 50 31.0	0.0
	baz=346						
TWT	Tachien	2.87	345	eP	Pn	16 50 32.3	+1.0
	baz=344						
TDCB	Techi	2.87	345	eP	Pn	16 50 32.0	+0.8
	baz=344						
TCU	Taichung	2.92	336	eP	Pn	16 50 31.9	+0.1
	baz=335						
WHP	Taichung City	2.95	341	eP	Pn	16 50 33.9	+1.6
	baz=341						
NNSB	Datong	2.99	349	eP	Pn	16 50 32.3	-0.7
	baz=349						
NNSH	Datong	2.99	349	eP	Pn	16 50 33.0	+0.1
	baz=349						
NNS	Nan Shan	3.01	349	eP	Pn	16 50 34.3	+1.2
	baz=349						
PHUB	P'eng-hu	3.02	313	eP	Pn	16 50 31.7	-1.4
	baz=313						
TWQ1	Liyutan	3.07	339	eP	Pn	16 50 35.4	+1.5
	baz=338						
TWQ1				eS	Sn	16 51 11.7	+0.4
	baz=338						
HATJ	Hateruma jima	3.07	33	P	Pn	16 50 34.6	+0.7
HATJ				eS	Sn	16 51 11.1	-0.1
JYNG	Yonagunijimaku	3.10	16	P	Pn	16 50 34.5	+0.3
JYNG				eS	Sn	16 51 11.0	-0.7
WDJ	Dajia District	3.12	337	eP	Pn	16 50 36.1	+1.6
	baz=336						
YOJ	Yonaguni jima	3.12	17	P	Pn	16 50 35.5	+0.9
YOJ				eS	Sn	16 51 13.1	+0.7
YOJ	Yonaguni jima	3.12	17	eP	Pn	16 50 35.4	+0.8
	baz=16						
YOJ				eS	Sn	16 51 12.2	-0.3
	baz=16						
YOJ	Yonaguni jima	3.12	17	Pn	Pn	16 50 34.6	+0.1
TWC	Suao	3.12	358	eP	Pn	16 50 34.6	0.0
	baz=357						
NSY	Sanyi	3.14	339	eP	Pn	16 50 36.1	+1.3
	baz=339						
ENTT	Nioudou	3.18	353	eP	Pn	16 50 35.6	+0.3
	baz=352						
YHNB	Yeheng	3.23	350	eP	Pn	16 50 36.9	+0.7
	baz=349						
YHNB	Yeheng	3.23	350		Pn	16 50 36.6	+0.5
NSK	Sanguang	3.24	350	eP	Pn	16 50 36.1	-0.1
	baz=349						
TWE	Neicheng	3.25	355	eP	Pn	16 50 36.4	+0.1
	baz=354						
IRIF	Iriomote-Funau	3.27	29	P	Pn	16 50 37.4	+0.8
IRIF				eS	Sn	16 51 16.6	+0.5
LIOB	Emei	3.28	344	eP	Pn	16 50 36.6	-0.1
	baz=344						
JKRS	Kuro-shima	3.33	34	P	Pn	16 50 38.1	+0.7
JKRS				S	Sn	16 51 17.9	+0.4
JIJ	Ishigaki jima	3.50	34	P	Pn	16 50 40.6	+0.9
JIJ				S	Sn	16 51 20.1	-1.6
TATO	Taipei	3.52	353	Pn	Pn	16 50 40.4	+0.4
JISG	Ishigakijimahi	3.77	34	P	Pn	16 50 43.8	+0.4
JISG				S	Sn	16 51 27.7	-0.7
JTJ	Tarama	4.03	38	P	Pn	16 50 47.1	+0.1
JTJ				eS	Sn	16 51 33.6	-1.1
JIRB	Irabujima	4.45	41	P	Pn	16 50 53.6	+0.8
JIRB				eS	Sn	16 51 43.9	-1.2
KNMB	Chin-men Tao	4.45	313	Pn	Pn	16 50 52.5	-0.4
JMJ2	Miyako jima3	4.48	43	P	Pn	16 50 53.9	+0.7
JMJ2				eS	Sn	16 51 45.7	-0.2
JIKM	Ikemajima	4.56	41	eS	Sn	16 51 48.3	+0.3
JNTH	Nagotoyohara	7.46	47	P	Pn	16 51 35.8	+1.6
JOW	Kunigami	7.84	46	Pn	Pn	16 51 39.6	+0.2
	2.6nm,0.3s,baz=141,slow=19,SNR=14						
JOW	Kunigami	7.84	46	P	Pn	16 51 41.0	+1.6
QIZ	Qiongzhong	11.65	260	Pn	Pn	16 52 33.7	+1.9
JSU	Suzuyama	12.54	35	Pn	Pn	16 52 41.7	-2.1
JNU	Nakatsue	14.03	32	Pn	Pn	16 52 60.0	-4.2
DLV	T Lat	16.02	236	Pn	P	16 53 33.9	-0.7
DLV				IAmb	IAmb	16 53 39.2	
	comp=Z,26nm,1.2s						
KKM	Kota Kinabalu	16.32	201	P	P	16 53 41.2	+3.3
KSRS	Korea Array	16.74	17	Pn	P	16 53 41.7	-0.6
	comp=Z,1.0nm,0.3s,baz=196,slow=11,SNR=22						
KSRS				LR	LR	17 00 42.0	
	comp=Z,109nm,19.2s,baz=202,slow=39						
MJAR	Matsushiro Arr	20.61	40	P	Pn	16 54 29.0	+1.8
	comp=Z,4.5nm,0.9s,baz=231,slow=8.2,SNR=7.2						
SBUM	Sibu	21.16	208	P	P	16 54 32.6	+1.7
SBUM				IAmb	IAmb	16 54 54.1	
	comp=Z,18nm,1.4s						
HHC	Hu-ho-hao-te	21.24	338	eP	P	16 54 32.3	+0.5
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
CMAR	Chiang Mai Arr	21.86	266	P	P	16 54 39.5	+1.0
	comp=Z,1.6nm,0.8s,baz=73,slow=8.6,SNR=15						
CMAR				LR	LR	17 04 17.5	
	comp=Z,78nm,18.9s,baz=48,slow=40						
CMAR	Chiang Mai Arr	21.86	266	P	P	16 54 39.2	+0.7
USRK	Ussuriysk Ar.	24.14	18	P	P	16 55 02.9	+1.3
	comp=Z,1.7nm,0.6s,baz=207,slow=8.8,SNR=6.9						
USRK				LR	LR	17 05 40.2	
	comp=Z,62nm,18.4s,baz=168,slow=39						
FAKI	Fak Fak	26.24	156	P	P	16 55 21.2	+0.3
KAPI	Kappang	26.41	185	LR	LR	17 06 35.9	
	comp=Z,42nm,19.6s,baz=13,slow=39						
ERM	Erimo	27.14	36	P	P	16 55 27.2	-1.6
KLR	Kul'dur	28.77	13	P	P	16 55 44.1	+0.7
	comp=Z,1.8nm,0.7s,baz=51,slow=17,SNR=3.9						
ULN	Ulaanbaatar	28.95	339	P	P	16 55 45.0	-0.1
PSI	Prapat	29.11	234	LR	LR	17 06 41.1	
	comp=Z,76nm,18.0s,baz=270,slow=35						
SONM	Songino Array	29.14	338	P	P	16 55 46.5	-0.4
	comp=Z,1.2nm,0.9s,baz=153,slow=8.4,SNR=7.2						
GSI	Gunungsitoli	31.11	233	P	P	16 56 08.1	+3.7
WMQ	Urumqi	36.09	316	eP	P	16 56 50.0	+2.4
FITZ	Fitzroy Crossi	39.49	175	P	P	16 57 11.8	-4.6
	comp=Z,2.2nm,1.1s,baz=238,slow=3.3,SNR=1.8						
MK31	Makanchi Array	40.81	318	P	P	16 57 27.8	+0.5
MK31				IAmb	IAmb	16 57 35.7	
	comp=Z,4.2nm,0.9s						
MKAR	Makanchi Array	40.81	318	P	P	16 57 28.1	+0.8
	comp=Z,0.8nm,0.5s,baz=112,slow=9.4,SNR=12						
MKAR	Makanchi Array	40.81	318	P	P	16 57 26.8	-0.4
MAKZ	Makanchi	41.01	318	P	P	16 57 29.5	+0.6
MAKZ				IAmb	IAmb	16 57 37.0	
	comp=Z,4.0nm,0.8s						
PETK	Petropavlovsk-	41.73	32	LR	LR	17 13 08.7	
	comp=Z,49nm,21.6s,baz=281,slow=34						
H11N1	WAKE ISLAND Hy	41.97	84	T	T	17 42 32.0	
	baz=282,slow=75,SNR=28						
H11N2	WAKE ISLAND Hy	41.97	84	T	T	17 42 31.7	
	baz=282,slow=75,SNR=47						
H11N3	WAKE ISLAND Hy	41.98	84	T	T	17 42 32.5	
	baz=282,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	42.01	86	T	T	17 42 37.3	
	baz=282,slow=75,SNR=95						
H11S1	WAKE ISLAND Hy	42.02	86	T	T	17 42 34.0	
	baz=282,slow=75,SNR=54						
H11S2	WAKE ISLAND Hy	42.03	86	T	T	17 42 33.8	
	baz=282,slow=75,SNR=59						
WRA	Warramunga Arr	42.90	163	P	P	16 57 40.7	-3.8
	comp=Z,0.5nm,0.4s,baz=344,slow=9.1,SNR=9.6						
ZAA0	Zalesovo Array	42.92	328	P	P	16 57 43.6	-0.7
ZAA0				IAmb	IAmb	16 57 53.3	
	comp=Z,5.2nm,0.8s						
ZALV	Zalesovo Beam	42.92	328	P	P	16 57 44.2	-0.1
	comp=Z,2.6nm,0.5s,baz=120,slow=7.9,SNR=12						
ZALV	Zalesovo Beam	42.92	328	P	P	16 57 43.5	-0.8
KURK	Kurchatov	44.65	322	P	P	16 57 58.0	-0.2
KURK				IAmb	IAmb	16 58 08.5	
	comp=Z,6.5nm,1.1s						
ASAR	Alice Springs	46.34	165	P	P	16 58 08.6	-3.4
	comp=Z,0.5nm,0.7s,baz=350,slow=7.6,SNR=7.9						
KKAR	Karatay Array	47.72	309	P	P	16 58 23.2	+0.6
BVAR	Borovoye Array	50.24	322	P	P	16 58 41.9	+0.1
	comp=Z,0.4nm,0.5s,baz=90,slow=8.6,SNR=5.7						
ABKAR	Akbulak array	55.87	316	P	P	16 59 23.4	0.0
ARU	Arti	57.72	324	P	P	16 59 36.8	+0.5
	comp=Z,0.6nm,0.3s,baz=117,slow=7.7,SNR=3.7						
KBZ	Khabaz	67.76	310	P	P	17 00 43.8	+0.2
	comp=Z,1.4nm,0.8s,baz=93,slow=12,SNR=2.9						
ILAR	Eielson Array	71.28	27	P	P	17 01 05.4	+0.5
	comp=Z,0.1nm,0.7s,baz=280,slow=5.3,SNR=1.6						
FINES	FINESS Array B	74.15	330	P	P	17 01 23.0	+0.9
	comp=Z,1.7nm,0.8s,baz=27,slow=9.4,SNR=2.0						
BRTR	Keskin Array B	75.38	307	P	P	17 01 31.6	+1.8
	comp=Z,0.4nm,0.8s,baz=46,slow=8.3,SNR=1.8						
AKASG	Malin Array Be	75.38	319	P	P	17 01 29.9	+0.5
	comp=Z,0.1nm,0.3s,baz=61,slow=6.2,SNR=1.6						
YKA	Yellowknife Ar	85.17	23	P	P	17 02 21.0	-0.9
	comp=Z,0.1nm,0.4s,baz=97,slow=16,SNR=2.4						
GERES	GERESS Array B	85.40	321	P	P	17 02 22.8	-0.7
	comp=Z,0.5nm,0.7s,baz=57,slow=3.8,SNR=2.5						

IDC 27 16:52:14.9±3.2, 3°.84S×133°.22E, h0km, mb3.1/1, mb1 3.3/4, mb1mx3.1/39, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=136.9km s-min=31.4km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.99	207	Pn	Pn	16 56 00.9	-0.5
	0.1nm,0.3s,baz=23,slow=15,SNR=1.0						
FITZ				Sn	Sn	16 58 45.8	-14
	0.0nm,0.3s,baz=24,slow=14,SNR=1.6						
WRA	Warramunga Arr	16.04	176	Pn	P	16 56 04.0	-1.6
	0.1nm,0.3s,baz=356,slow=13,SNR=2.9						
ASAR	Alice Springs	19.72	178	P	P	16 56 45.5	-0.6
	0.1nm,0.3s,baz=4.4,slow=12,SNR=6.5						
MKAR	Makanchi Array	67.44	325	P	P	17 03 12.5	+0.1
	0.1nm,0.6s,baz=134,slow=4.2,SNR=1.8						

MAN 27 17:01:21.4, 13°.72N×120°.93E, h137km, mb3.5, ML2.2, MS1.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.21	175	⇑eP	Pn	17 01 42.1	+1.9
PGP				i S	Sn	17 01 55.7	+1.3
MACP	Maragondon, Ca	0.58	339	eP	Pn	17 01 43.1	+1.4
MACP				eS	Sn	17 01 58.1	+1.0
LUBP	Lubang	0.67	272	eP	Pn	17 01 43.1	+0.9
LUBP				eS	Sn	17 01 55.3	-2.8
BUSP	Coron	1.85	203	eP	Pn	17 01 47.8	-6.2
BUSP				eS	Sn	17 02 17.0	-1.9
ENPP	El Nido	2.90	211	eP	Pn	17 02 07.6	+0.7
PVCP	Virac	3.13	92	eP	Pn	17 02 10.7	+0.8

DJA 27 17:02:46.0±0.4, 7°S±3°×12°9E±°, h282km±8km, M4.5/13, mb4.6/9, mB5.0/6, MLv4.6/13, Mw(mB)4.4/6

NEIC 27 17:02:46.3±1.9, 6°.56S±0°.07×128°.50E±0°.06, h289km±6km, mb4.2/17, Error ellipse: s-maj=11.6km s-min=7.7km az=152.0

IDC 27 17:02:46.1±1.2, 6°.58S×128°.50E, h286km±12km, mb3.4/11, mb1 3.6/16, mb1mx3.5/29, mbtmp4.2/16, Error ellipse: s-maj=14.3km s-min=10.6km az=95.0

ISC 27 17:02:46.6±0.4, 6°.62S±0°.05×128°.56E±0°.05, h300km, n72, σ1s.74/84, mb4.0/22, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.47	33	P	Pn	17 03 35.6	-1.8
SAUI	Saumlaki	3.04	117	Pn	Pn	17 03 43.0	+0.3
SAUI					S	17 04 22.6	-5.0
SAUI	Saumlaki	3.04	117	P	Pn	17 03 42.5	-0.2
SAUI				S	S	17 04 26.7	-0.9
MSAI	Masohi	3.27	7	P	Pn	17 03 42.0	-3.1
MSAI				S	S	17 04 29.4	-2.5
FAKI	Fak Fak	5.20	45		Pn	17 04 04.7	-1.8
FAKI	Fak Fak	5.20	45	P	Pn	17 04 05.6	-0.9
	1.3nm2μm58nm,0.7s						
SANI	Sanana	5.21	330	P	Pn	17 04 06.1	-0.5
	0.3nm1μm62nm,0.5s						
SOEI	Soe	5.27	233	Pn	Pn	17 04 06.6	-0.8
SOEI					S	17 05 08.2	-4.2
SOEI	Soe	5.27	233	P	Pn	17 04 05.7	-1.7
	2.5nm6μm221nm,0.8s						
SOEI				S	S	17 05 08.2	-4.2
	2.5nm6μm221nm,0.8s						
KMPI	Kaimana, Papua	5.91	60	P	Pn	17 04 14.3	-0.5
	3.1nm8μm323nm,0.5s						
BATI	Baumata	6.01	233	P	Pn	17 04 15.6	-0.5
	288nm,0.3s,baz=94,slow=1.7,SNR=264						
BATI				S	S	17 05 24.7	-3.6
	78nm,0.3s,baz=90,slow=20,SNR=15						
BATI	Baumata	6.01	233	P	Pn	17 04 15.4	-0.7
	2.9nm9μm718nm,0.5s						
SIJI	Sorong	6.32	25	P	Pn	17 04 17.6	-2.2
	7.2nm,0.3s,baz=297,slow=11,SNR=66						
SIJI				S	S	17 05 27.4	-7.6
	12nm,0.3s,baz=270,slow=20,SNR=16						
SWI	Sorong	6.32	25	P	Pn	17 04 17.4	-2.4
	0.4nm1μm45nm,0.5s						
MMRI	Maumere	6.58	252	Pn	Pn	17 04 23.2	+0.3
MMRI	Maumere	6.58	252	P	Pn	17 04 22.2	-0.7
	0.3nm61nm,1.1s						
EDFI	Ende, Flores	7.13	252	P	Pn	17 04 28.5	-1.2
	0.1nm10nm,0.5s						
TNTI	Ternate	7.43	351	Pn	Pn	17 04 32.6	-0.7
BASI	Baing, Sumba	8.67	245	P	Pn	17 04 47.5	-0.9
	64nm,1.1s						
BNSI	Bone	8.70	284	P	Pn	17 04 48.8	+0.1
TOLI2	Tolitoli	10.92	314		Pn	17 05 17.6	+1.6
FITZ	Fitzroy Crossi	11.76	194	P	Pn	17 05 25.7	-0.6
	6.4nm,0.3s,baz=28,slow=10,SNR=54						
FITZ				S	S	17 07 38.0	+0.6
	1.2nm,0.3s,baz=90,slow=20,SNR=3.2						
JAY	Jayapura	12.77	72	P	P	17 05 40.8	+1.5
	5.5nm,0.3s,baz=206,slow=9.9,SNR=26						
WB0	Warramunga Arr	14.25	157	P	Pn	17 05 56.6	+0.4
WRA	Warramunga Arr	14.39	158	P	Pn	17 05 58.2	+0.3
	0.8nm,0.3s,baz=334,slow=13,SNR=32						
WRA				S	S	17 08 32.0	-3.1
	0.1nm,0.3s,baz=338,slow=21,SNR=5.0						
WRA	Warramunga Arr	14.39	158	P	Pn	17 05 57.2	-0.6
WB2	Warramunga Arr	14.39	158	P	Pn	17 05 58.2	+0.3
JAGI	Jajag, Banyuwa	14.40	262	P	P	17 05 55.4	-1.8
WR0	Warramunga Arr	14.48	157	P	Pn	17 05 59.3	+0.4
KKM	Kota Kinabalu	17.60	315	P	P	17 06 31.3	-0.9
KKM				IAmb	IAmb	17 06 47.1	
	comp=Z,13nm,0.9s						
AS31	Alice Springs	17.71	164	P	Pn	17 06 35.0	-1.8
AS31				IAmb	IAmb	17 06 37.3	
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	17.71	164	P	Pn	17 06 35.6	-1.2
	comp=Z,1.0nm,0.3s,baz=344,slow=11,SNR=86						
ASAR				S	S	17 09 42.8	+1.4
	baz=345,slow=18,SNR=4.3						
ASAR				ScP	ScP	17 14 02.5	+0.2
	comp=Z,0.1nm,0.3s,baz=0.1,slow=1.6,SNR=4.2						
ASAR	Alice Springs	17.71	164	P	Pn	17 06 34.8	-2.0
UGM	Wanagama	17.94	265	P	P	17 06 35.5	-0.2
SBUM	Sibu	18.63	298	P	P	17 06 42.9	-0.2
SBUM				IAmb	IAmb	17 06 46.6	
	comp=Z,7.8nm,1.2s						
KSM	Kuching	19.91	293	P	P	17 06 57.2	+0.5
KSM				IAmb	IAmb	17 07 01.7	
	comp=Z,6.5nm,0.8s						
CISI	Cisompet, Garu	20.61	266	P	P	17 07 02.4	-1.5
LEM	Lembang	20.80	268	P	P	17 07 07.0	+1.1
	comp=Z,19nm,0.7s,baz=15,slow=20,SNR=5.6						
PSI	Prapat	31.03	287	P	P	17 08 37.0	-0.5
	comp=Z,5.9nm,0.8s,baz=180,slow=1.0,SNR=5.6						
GSI	Gunungsitoli	31.91	283	P	P	17 08 43.4	-1.6
GSI				IAmb	IAmb	17 09 08.5	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	38.39	311	P	P	17 09 40.5	+0.6
	comp=Z,0.7nm,0.4s,baz=145,slow=7.3,SNR=11						
CMAR				ScP	ScP	17 15 07.5	+1.8
	comp=Z,0.3nm,0.5s,baz=164,slow=3.1,SNR=6.1						
KSRS	Korea Array	43.84	359	P	P	17 10 24.5	+0.8
	comp=Z,0.9nm,0.6s,baz=177,slow=8.5,SNR=4.6						
MJAR	Matsushiro Arr	43.87	11	P	P	17 10 22.9	-1.1
	comp=Z,1.1nm,0.6s,baz=194,slow=9.0,SNR=2.1						
USRK	Ussuriysk Ar.	50.67	3	P	P	17 11 15.7	-0.2
	comp=Z,2.0nm,0.8s,baz=178,slow=9.1,SNR=4.9						
USRK	Ussuriysk Ar.	50.67	3	P	P	17 11 16.6	+0.6
ODAN	Odare	51.93	312	eP	P	17 11 26.1	+0.3
	comp=Z,7.5nm,0.5s						
TAPN	Taplejung	51.97	312	eP	P	17 11 26.7	+0.5
	comp=Z,11nm,0.4s						
RAMN	Ramite	52.57	311	eP	P	17 11 31.5	+1.0
	comp=Z,20nm,0.6s						
KHZ	Kahutara	53.33	139	P	P	17 11 37.0	+1.6
KHZ				IAmb	IAmb	17 12 05.5	
	comp=Z,37nm,1.3s						
GUN	Gumba	53.63	312	eP	P	17 11 38.9	+0.6
	comp=Z,14nm,0.4s						
PKI	Pulchoki	53.79	311	eP	P	17 11 39.9	+0.4
	comp=Z,5.3nm,0.5s						
PKIN	Phulchoki	53.81	311	eP	P	17 11 39.6	+0.1
	comp=Z,6.0nm,0.5s						
KKN	Kakani	54.01	311	eP	P	17 11 41.0	+0.1
	comp=Z,6.5nm,0.5s						
DMN	Daman	54.04	311	eP	P	17 11 41.5	+0.3
DANN	Dangsing	55.44	311	eP	P	17 11 51.3	+0.1
	comp=Z,6.7nm,0.8s						
ULN	Ulaanbaatar	57.47	343	P	P	17 12 06.3	+1.4
SONM	Songino Array	57.64	342	P	P	17 12 07.1	+1.1
	comp=Z,0.6nm,0.6s,baz=156,slow=7.7,SNR=4.2						
SONM	Songino Array	57.64	342	P	P	17 12 07.7	+1.7
WMQ	Urumqi	62.30	328	eP	P	17 12 39.8	+2.3
PEA0B	Petropavlovsk-	64.42	19	P	P	17 12 52.6	+1.6
PETK	Petropavlovsk-	64.42	19	P	P	17 12 52.3	+1.2
	comp=Z,2.7nm,0.9s,baz=170,slow=8.8,SNR=1.1						
PETK	Petropavlovsk-	64.42	19	P	P	17 12 52.6	+1.6
MK31	Makanchi Array	67.13	327	P	P	17 13 09.5	+1.1
MKAR	Makanchi Array	67.13	327	P	P	17 13 09.2	+0.7
	comp=Z,0.7nm,0.5s,baz=115,slow=8.6,SNR=21						
MAKZ	Makanchi	67.31	327	P	P	17 13 10.5	+1.0
SMY	Shemya	70.59	27	P	P	17 13 29.6	+0.1
ZALV	Zalesovo Beam	70.61	334	P	P	17 13 29.6	0.0
	comp=Z,0.6nm,0.5s,baz=89,slow=3.8,SNR=3.9						
KURK	Kurchatov	71.45	329	P	P	17 13 35.4	+0.8
KURK				IAmb	IAmb	17 13 37.1	
	comp=Z,5.3nm,1.4s						

ABKAR	Akbulak array	81.32	322	P	P	17 14 29.4	-0.5
ABKAR	Akbulak array	81.32	322	P	P	17 14 29.6	-0.2
ABKAR				IAmb	IAmb	17 14 58.8	
	comp=Z,1.3nm,0.8s						
QSPA	South Pole Qui	83.36	180	P	P	17 14 40.9	+0.7
QSPA				IAmb	IAmb	17 15 19.9	
	comp=Z,7.1nm,1.5s						
ILAR	Eielson Array	93.61	25	P	P	17 15 30.8	+2.1
	comp=Z,0.2nm,0.6s,baz=254,slow=4.8,SNR=2.2						

MRB **27** *17:12:14.8±0.3, 42°.78N×2°.10E, h5^{km}±3^{km}, ML1.9/26,*
Error ellipse: s-maj=1.0km s-min=0.8km az=259.0
STR **27** *17:12:14.9±0.3, 43°N±2°×°±°, h9^{km}±3^{km}, MLv2.5/5,*
smi:scs/0.6/LOCSAT earthModelID
smi:scs/0.6/pyrenees_taup-2.11 preliminary
LDG **27** *17:12:14.7±0.0, 42°.80N×2°.13E, h4^{km}, Md3.0/1, Ml2.9/24,*
Error ellipse: s-maj=0.8km s-min=0.7km az=128.0
MDD **27** *17:12:15.1±0.3, 42°.78N×2°.11E, h0^{km}, mbLg2.3/13, Error*
ellipse: s-maj=2.4km s-min=2.1km az=38.0, PRXIMO
ISC 27 17:12:14.9±0.8**, 42°.81N**±0°.01×**2°.13E**±0°.01**, h15**^{km}±5^{km}**,**
n114, σ1^{s}.96/190**, 1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNEB	Nbias	0.10	351	Pg	Pg	17 12 17.3	-1.0
FNEB				Sg	Sg	17 12 19.5	-1.0
FNEB	Nbias	0.10	351	Pg	Pg	17 12 17.3	-1.0
FNEB				Lg	Lg	17 12 19.1	
	291nm,0.1s						
FNEB	Nbias	0.10	351	P	Pg	17 12 17.3	-1.0
FNEB				S	Sg	17 12 19.1	-1.4
	291nm,0.1s						
CLLI	Llivia	0.35	199	⇓Pg	Pg	17 12 21.0	-1.1
	100nm,0.3s,SNR=18						
CLLI				Lg	Lg	17 12 25.4	
	50nm,0.1s						
CLLI	Llivia	0.35	199	P	Pg	17 12 21.0	-1.1
CLLI				S	Sg	17 12 25.5	-1.6
	57nm,0.2s						
FILF	Fillols	0.40	127	Pg	Pg	17 12 20.8	-2.2
FILF				Lg	Lg	17 12 25.2	
	63nm,0.2s						
FILF	Fillols	0.40	127	P	Pg	17 12 20.9	-2.2
FILF				S	Sg	17 12 25.2	-3.4
	63nm,0.2s						
FESP	Espira	0.51	88	P	Pg	17 12 24.9	-0.1
FESP				S	Sg	17 12 32.3	+0.4
	9.1nm,0.2s						
CBRU	Bruguera	0.52	176	Pg	Pg	17 12 24.5	-0.8
CBRU				Lg	Lg	17 12 31.2	
	23nm,0.2s						
CBRU	Bruguera	0.52	176	P	Pg	17 12 24.5	-0.8
CBRU				S	Sg	17 12 31.2	-1.1
	46nm,0.2s						
MTLF	Montolieu	0.54	7	Pg	Pg	17 12 25.4	-0.2
MTLF				Sg	Sg	17 12 33.2	+0.4
MTLF	Montolieu	0.54	7	ePg	Pg	17 12 25.1	-0.5
MTLF	Montolieu	0.54	7	ePn	Pb	17 12 28.0	+1.9
MTLF				eSg	Sg	17 12 32.1	-0.7
	34nm,0.2s						
MTLF				eSn	Sb	17 12 36.8	+3.1
	29nm,0.2s						
ARBS	La Rabassa	0.56	230	P	Pg	17 12 25.3	-0.8
ARBS				S	Sg	17 12 32.8	-0.7
	52nm,0.2s						
SJAF	Saint Jean de	0.64	120	Pg	Pg	17 12 26.7	-0.9
SJAF				Sg	Sg	17 12 34.8	-1.2
SJAF	Saint Jean de	0.64	120	Pg	Pg	17 12 26.7	-0.9
	2.1nm,0.5s,SNR=7.9						
SJAF				Lg	Lg	17 12 35.9	
	16nm,0.1s,SNR=7.9						
SJAF	Saint Jean de	0.64	120	P	Pg	17 12 26.6	-0.9
SJAF				S	Sg	17 12 35.9	-0.2
	23nm,0.1s						
EJON	La Jonquera	0.67	122	Pg	Pg	17 12 27.4	-0.5
	22nm,0.8s,SNR=27						
EJON				Lg	Lg	17 12 36.3	
	14nm,0.1s,SNR=8.8						
CEST	Esterri de Car	0.68	253	Pg	Pg	17 12 26.9	-1.3
CEST				Lg	Lg	17 12 35.7	
	110nm,0.2s						
CEST	Esterri de Car	0.68	253	P	Pg	17 12 27.0	-1.3
CEST				S	Sg	17 12 35.7	-1.4
	110nm,0.2s						
CBEU	Beuda	0.68	143	Pg	Pg	17 12 27.4	-0.9
CBEU				Lg	Lg	17 12 36.7	
	32nm,0.3s						
CBEU	Beuda	0.68	143	P	Pg	17 12 27.5	-0.9
CBEU				S	Sg	17 12 36.8	-0.6
	32nm,0.3s						
MLS	Moulis	0.78	282	Pg	Pg	17 12 28.9	-1.0
MLS				Sg	Sg	17 12 40.4	+0.1
MLS	Moulis	0.78	282	Pg	Pg	17 12 29.0	-1.0
MLS				Lg	Lg	17 12 39.3	
	40nm,0.3s						
MLS	Moulis	0.78	282	P	Pg	17 12 29.0	-1.0
MLS				S	Sg	17 12 39.4	-0.9
	40nm,0.3s						
CORG	Organya	0.83	226	Pg	Pg	17 12 29.8	-1.3
CORG				Lg	Lg	17 12 41.0	
	11nm,0.2s						
CORG	Organya	0.83	226	P	Pg	17 12 29.8	-1.3
CORG				S	Sg	17 12 41.1	-1.0
	22nm,0.2s						
CORI	Orista	0.83	184	Pg	Pg	17 12 29.8	-1.3
CORI				Lg	Lg	17 12 40.9	
	27nm,0.2s						
CORI	Orista	0.83	184	P	Pg	17 12 29.9	-1.3
CORI				S	Sg	17 12 41.0	-1.1
	27nm,0.2s						
CSOR	Sort	0.85	240	Pg	Pg	17 12 30.1	-1.3
	6.6nm,0.2s,SNR=83						
CSOR				Lg	Lg	17 12 40.9	
	37nm,0.2s,SNR=8.6						
CSOR	Sort	0.85	240	P	Pg	17 12 30.1	-1.3
CSOR				S	Sg	17 12 41.7	-1.0
	35nm,0.2s						
CPAL	Palau Saverder	0.91	123	Pg	Pg	17 12 31.6	-1.0
CPAL				Lg	Lg	17 12 44.2	
	29nm,0.1s						
CPAL	Palau Saverder	0.91	123	P	Pg	17 12 31.6	-1.0
CPAL				S	Sg	17 12 44.2	-0.3
	29nm,0.1s						
CARA	Val d'Aran	0.97	265	P	Pg	17 12 32.5	-1.2
CARA				S	Sg	17 12 45.2	-1.3
	111nm,0.2s						
EMIR	Miracle	1.00	207	Pg	Pg	17 12 33.3	-0.9
	8.6nm,0.4s,SNR=6.6						
EMIR				Lg	Lg	17 12 46.2	
	26nm,0.1s,SNR=7.9						
CFON	Fontmartina	1.07	168	Pg	Pg	17 12 34.8	-0.7
	13nm,0.3s,SNR=54						
CFON				Lg	Lg	17 12 48.8	
	72nm,0.2s,SNR=12						
CFON	Fontmartina	1.07	168	P	Pg	17 12 34.1	-1.5
CFON				S	Sg	17 12 48.5	-1.0
	93nm,0.2s						
CCAS	Cassa de la Se	1.09	148	Pg	Pg	17 12 34.9	-1.0
CCAS				Lg	Lg	17 12 49.3	
	26nm,0.2s						
CCAS	Cassa de la Se	1.09	148	P	Pg	17 12 34.6	-1.3
CCAS				S	Sg	17 12 49.4	-0.7
	26nm,0.2s						
CTRE	Tremp	1.11	245	Pg	Pg	17 12 35.0	-1.4
CTRE				Lg	Lg	17 12 49.8	
	28nm,0.2s						
CTRE	Tremp	1.11	245	P	Pg	17 12 35.0	-1.4
CTRE				S	Sg	17 12 49.8	-1.1
	28nm,0.2s						
FMON	Montouss	1.28	282	P	Pg	17 12 38.2	-1.5
FMON				S	Sg	17 12 55.1	-1.3
	20nm,0.2s						
EPF	Esparros	1.33	280	ePn	Pn	17 12 38.4	-0.6
EPF	Esparros	1.33	280	ePg	Pn	17 12 39.9	+0.9
EPF				eSg	Sg	17 12 56.2	-1.8
	27nm,0.2s						
CAVN	Les Avellanes	1.38	228	Pg	Pn	17 12 39.5	-0.1
CAVN				Lg	Lg	17 12 57.5	
	34nm,0.2s						
CAVN	Les Avellanes	1.38	228	P	Pn	17 12 39.5	-0.1
CAVN				S	Sb	17 12 57.5	-0.2
	68nm,0.2s						
ECHI	Chisagues Biel	1.43	265	Pn	Pn	17 12 40.9	+0.4
ECHI				Sn	Sb	17 12 59.7	+0.2
ECHI	Chisagues Biel	1.43	265	Pg	Pn	17 12 41.0	+0.5
	5.5nm,0.8s,SNR=7.9						
ECHI				Lg	Lg	17 12 59.8	
	32nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	1.43	265	P	Pn	17 12 40.6	+0.1
ECHI				S	Sb	17 12 59.8	+0.4
	38nm,0.3s						
PYLO	Lourdes	1.62	281	Pn	Pn	17 12 43.8	+0.8
PYLO				Sn	Sn	17 13 05.1	+1.4
PYLO	Lourdes	1.62	281	P	Pn	17 12 43.8	+0.8
PYLO				S	Sn	17 13 04.8	+1.2
	23nm,0.2s						
EPOB	Poblet	1.65	209	Pg	Pb	17 12 45.1	0.0
	6.6nm,0.5s,SNR=27						
EPOB				Lg	Lg	17 13 05.6	
	10nm,0.1s,SNR=12						
EPOB	Poblet	1.65	209	P	Pn	17 12 43.5	+0.1
EPOB				S	Sn	17 13 05.1	+0.8
	12nm,0.2s						
CGAR	Garraf	1.68	206	Pn	Pn	17 12 41.5	-2.3
CGAR				Sn	Sn	17 13 01.6	-3.5
	5.1nm,0.3s						
CGAR	Garraf	1.68	206	P	Pn	17 12 41.5	-2.3
CGAR				S	Sn	17 13 01.6	-3.5
	10nm,0.3s						
MONQ	Montcuq	1.70	337	Pn	Pn	17 12 44.3	+0.2
MONQ				Sn	Sn	17 13 06.5	+0.9
LASF	Ste Croix	1.79	44	ePn	Pn	17 12 44.7	-0.6
LASF	Ste Croix	1.79	44	eP	Pn	17 12 46.9	+1.6
LASF				eSn	Sn	17 13 06.8	-0.9
	24nm,0.2s						
LASF				eSg	Sb	17 13 10.6	+1.0
ETSF	Etsaut	1.98	274	ePn	Pn	17 12 48.2	+0.3
ETSF	Etsaut	1.98	274	ePg	Pb	17 12 52.0	+1.3
ETSF				eSn	Sn	17 13 11.6	-0.9
	26nm,0.3s						
ETSF				eSg	Sg	17 13 17.7	-0.9
ATE	Arette	2.10	279	Pg	Pb	17 12 53.3	+0.6
	0.5nm,0.1s,SNR=7.9						
ATE				Sn	Sn	17 13 16.4	+1.1
	6.9nm,1.5s,SNR=4.0						
ATE				Lg	Lg	17 13 21.7	
	8.4nm,0.1s,SNR=7.9						
ATE	Arette	2.10	279	P	Pn	17 12 49.9	+0.4
ATE				S	Sn	17 13 15.8	+0.5
	7.0nm,0.4s						
CAF	Calviac	2.12	359	ePg	Pb	17 12 54.4	+1.3
CAF				eSn	Sn	17 13 14.7	-1.2
	23nm,0.2s						
CAF				eSg	Sb	17 13 21.7	+2.5
ERTA	Horta de San J	2.28	217	Pg	Pb	17 12 56.9	+1.1
	0.2nm,0.6s,SNR=6.4						
ERTA				Sn	Sn	17 13 20.3	+0.4
	7.6nm,2.1s,SNR=7.9						
ERTA				Lg	Lg	17 13 26.5	
	7.0nm,0.2s,SNR=7.4						
ERTA	Horta de San J	2.28	217	P	Pn	17 12 52.4	+0.3
ERTA				S	Sn	17 13 20.1	+0.1
	12nm,0.3s						
LFF	La Frestale	2.36	335	ePn	Pn	17 12 52.9	-0.2
LFF	La Frestale	2.36	335	ePg	Pb	17 12 58.5	+1.4
LFF				eSn	Sn	17 13 20.3	-1.4
	48nm,0.3s						
LFF				eSg	Sb	17 13 29.1	+3.1
SJPF	Ste Jean	2.48	278	ePn	Pn	17 12 54.9	+0.1
SJPF	Ste Jean	2.48	278	ePg	Pb	17 13 01.0	+1.8
SJPF				eSn	Sn	17 13 23.8	-1.0
SJPF				eSg	Sb	17 13 31.8	+2.2
	5.0nm,0.3s						
EORO	Oroz-Betelu	2.53	273	Pg	Pb	17 13 01.1	+1.0
	0.7nm,0.7s,SNR=7.9						
EORO				Lg	Lg	17 13 34.0	
	9.5nm,0.3s,SNR=8.6						
RJF	Les Rejaudoux	2.54	350	ePn	Pn	17 12 54.8	-0.8
RJF	Les Rejaudoux	2.54	350	ePg	Pb	17 13 01.6	+1.5
RJF				eSn	Sn	17 13 24.8	-1.4
RJF				eSg	Sb	17 13 33.8	+2.6
	16nm,0.2s						
EALK	Alkurruntz	2.70	280	Pg	Pg	17 13 05.3	-1.4
	1.0nm,1.5s,SNR=7.9						
EALK				Lg	Lg	17 13 41.2	
	11nm,0.4s,SNR=7.9						
VIVF	Saint-Julien-l	2.75	41	ePn	Pn	17 12 58.7	+0.1
VIVF	Saint-Julien-l	2.75	41	eP	Pn	17 13 00.2	+1.6
VIVF	Saint-Julien-l	2.75	41	ePg	Pg	17 13 06.6	-1.1
VIVF				eSn	Sn	17 13 29.4	-2.2
	17nm,0.4s						
VIVF				eSg	Sb	17 13 41.3	+3.8
SMRF	Simiane la Rot	2.77	64	ePn	Pn	17 12 58.4	-0.4
SMRF	Simiane la Rot	2.77	64	ePg	Pb	17 13 05.1	+0.9
SMRF				eSn	Sn	17 13 29.8	-2.2
	6.0nm,0.3s						
PYM	Petit Puy Mans	3.01	12	Pn	Pn	17 13 02.5	+0.4
EMOS	Mosqueruela	3.12	220	Pn	Pn	17 13 04.7	+0.9
	0.5nm,1.8s,SNR=7.9						
EMOS				Pg	Pb	17 13 12.0	+1.7
	5.3nm,1.9s,SNR=7.9						
EMOS				Sn	Sn	17 13 40.2	-0.7
	18nm,2.4s,SNR=4.0						
EMOS				Lg	Lg	17 13 53.7	
	2.0nm,0.3s,SNR=7.9						
LMR	La Mourre	3.25	79	ePn	Pn	17 13 04.8	-0.6
LMR	La Mourre	3.25	79	eP	Pn	17 13 07.2	+1.8
LMR				eSn	Sn	17 13 41.9	-1.9
	2.3nm,0.2s						
LMR				eSg	Sb	17 13 55.5	+3.8
FRF	La Foret Royal	3.39	76	ePn	Pn	17 13 06.5	-0.8
FRF	La Foret Royal	3.39	76	ePg	Pb	17 13 17.5	+2.8
FRF				eSn	Sn	17 13 44.7	-2.5
FRF				eSg	Sb	17 14 00.4	+4.7
	4.6nm,0.4s						
ORIF	Oris-en-Rattie	3.44	51	ePn	Pn	17 13 07.6	-0.4
ORIF	Oris-en-Rattie	3.44	51	eP	Pn	17 13 10.3	+2.3
TCF	Toulx Ste Croi	3.48	1	ePn	Pn	17 13 08.2	-0.4
TCF	Toulx Ste Croi	3.48	1	ePg	Pb	17 13 19.5	+3.2
TCF				eSg	Sg	17 14 03.8	-2.9
	5.7nm,0.2s						
ETOR	Torete	3.70	239	Pn	Pn	17 13 13.1	+1.5
	1.9nm,0.5s,SNR=6.8						
ETOR				Pg	Pb	17 13 23.0	+2.9
	1.5nm,1.5s,SNR=7.9						
ETOR				Sn	Sn	17 13 55.2	+0.1
	1.5nm,2.4s,SNR=7.9						
ETOR				Lg	Lg	17 14 12.0	
	14nm,0.5s						
BGF	Bois d'Agland	3.79	8	ePn	Pn	17 13 11.7	-1.0
BGF	Bois d'Agland	3.79	8	eP	Pn	17 13 15.5	+2.8
BGF	Bois d'Agland	3.79	8	ePg	Pb	17 13 24.9	+3.5
BGF				eSg	Sb	17 14 12.3	+5.2
	18nm,0.3s						
MBDF	Montbardon	3.87	59	eSn	Sn	17 13 56.3	-3.0
	0.6nm,0.2s						
SBF	Sospel	4.01	73	ePn	Pn	17 13 15.1	-0.8
SBF	Sospel	4.01	73	eP	Pn	17 13 18.4	+2.5
SBF	Sospel	4.01	73	ePg	Pb	17 13 28.1	+2.8
SBF				eSn	Sn	17 13 59.6	-3.1
SBF				eSg	Sg	17 14 19.6	-4.2
	2.3nm,0.3s						
SMF	Signal de Mont	4.03	17	ePn	Pn	17 13 15.1	-1.0
SMF	Signal de Mont	4.03	17	ePg	Pg	17 13 29.6	-2.5
SMF				eSn	Sn	17 13 59.8	-3.1
	3.6nm,0.3s						
SMF				eSg	Sg	17 14 20.5	-3.7
AVF	Avril sur Loir	4.08	12	ePn	Pn	17 13 16.4	-0.3
AVF	Avril sur Loir	4.08	12	ePg	Pb	17 13 30.2	+3.8
AVF				eSg	Sg	17 14 21.9	-3.9
	2.0nm,0.2s						
MFF	Saint Martin d	4.13	338	ePn	Pn	17 13 17.2	-0.2
MFF	Saint Martin d	4.13	338	ePg	Pb	17 13 31.1	+3.9
MFF				eSn	Sn	17 14 02.6	-2.8
MFF				eSg	Sg	17 14 23.9	-3.5
	7.5nm,0.4s						
SSF	Saint Saulge	4.37	12	ePn	Pn	17 13 19.9	-0.8
SSF	Saint Saulge	4.37	12	ePg	Pg	17 13 35.6	-2.9
SSF				eSn	Sn	17 14 07.8	-3.5
SSF				eSg	Sg	17 14 31.2	-3.9
	3.0nm,0.3s						
CABF	La Chapelle	4.74	35	ePn	Pn	17 13 24.5	-1.4
CABF	La Chapelle	4.74	35	ePg	Pg	17 13 42.3	-3.3
CABF				eSg	Sb	17 14 41.5	+7.0
	6.2nm,0.6s						
PGF	Pioggiola	5.07	91	ePn	Pn	17 13 29.0	-1.5
PGF				eSn	Sn	17 14 24.9	-3.9
ESDC	Sonseca Array	5.56	238	Pn	Pn	17 13 38.6	+1.5
	0.8nm,0.5s,baz=56,slow=14,SNR=6.0						
PAB	San Pablo	5.87	238	Pn	Pn	17 13 42.5	+1.1
	0.7nm,0.8s,SNR=7.9						
GRR	Gorron	5.96	340	ePn	Pn	17 13 41.6	-1.0
GRR	Gorron	5.96	340	ePg	Pg	17 14 04.5	-4.5
GRR				eSn	Sn	17 14 46.6	-4.0
GRR				eSg	Sg	17 15 20.2	-6.0
	1.7nm,0.2s						
FLN	La Foliniere	6.23	344	ePn	Pn	17 13 45.6	-0.7
FLN	La Foliniere	6.23	344	eP	Pn	17 13 49.9	+3.6
QUIF	Quistinic	6.33	326	ePn	Pn	17 13 47.3	-0.3

VAO **27** *17:26:13.7±0.5, 20°.80S×68°.53W, h10^{km}, mb4.1*
SJA **27** *17:26:19.5±0.6, 21°.34S×68°.75W, h115^{km}±4^{km}, ML4.3,*
MW4.0
NEIC **27** *17:26:19.5±2.5, 21°.34S±0°.04×68°.66W±0°.08, h107^{km}±6^{km},*
mb4.2/7, ML4.1(GUC), Error ellipse: s-maj=11.1km
s-min=5.8km az=89.0
GUC **27** *17:26:20.7±0.7, 21°.36S×68°.66W, h106^{km}±3^{km}, ML4.1*
IDC **27** *17:26:20.9±0.5, 21°.42S×68°.41W, h112^{km}±5^{km}, mb3.8/6,*
mb1 4.1/7, mb1mx3.7/25, mbtmp4.2/7, Error ellipse:
s-maj=23.1km s-min=8.3km az=115.0
ISC 27 17:26:19.8±0.5**, 21°.32S**±0°.03×**68°.72W**±0°.04**, h110**^{km}±4^{km}**,**
n111, σ1^{s}.38/146**, mb4.1**/6**, 8C-2D, Chile-Bolivia border**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.68	226	⇑iP	Pn	17 26 38.9	+0.6
PB09				i S	Sn	17 26 52.8	+0.7
PB09				IAML		17 26 54.7	
	comp=E,8µm,0.3s						
PB09	IPOC Station P	0.68	226		Pn	17 26 38.0	-0.2
PB09				Sn	Sn	17 26 52.8	+0.7
PB09	IPOC Station P	0.68	226	eP	Pn	17 26 38.8	+0.6
PB09				eS	Sn	17 26 52.7	+0.7
PB09				IAML		17 26 53.5	
	comp=Z,8µm,0.3s						
PB01	IPOC Station P	0.77	291	⇑iP	Pn	17 26 39.3	+0.4
PB01				i S	Sn	17 26 53.6	+0.3
PB01				IAML		17 26 57.0	
	comp=E,6µm,0.3s						
PB01	IPOC Station P	0.77	291		Pn	17 26 38.9	0.0
PB01				Sn	Sn	17 26 53.4	+0.1
PB01	IPOC Station P	0.77	291	eP	Pn	17 26 39.3	+0.4
PB01				eS	Sn	17 26 54.1	+0.8
PB01				IAML		17 26 55.4	
	comp=Z,3µm,0.1s						
PB02	IPOC Station P	1.10	270	⇑iP	Pn	17 26 42.7	+0.5
PB02				i S	Sn	17 26 59.9	+0.8
PB02	IPOC Station P	1.10	270	eP	Pn	17 26 42.7	+0.5
PB02				eS	Sn	17 27 00.2	+1.1
PB02				IAML		17 27 04.5	
	comp=Z,8µm,0.3s						
PB07	IPOC Station P	1.16	250	⇑iP	Pn	17 26 43.4	+0.5
PB07				i S	Sn	17 27 00.9	+0.5
PB07				IAML		17 27 01.6	
	comp=N,6µm,0.5s						
PB07	IPOC Station P	1.16	250		Pn	17 26 42.8	-0.1
PB07				Sn	Sn	17 27 00.7	+0.3
PB07	IPOC Station P	1.16	250	eP	Pn	17 26 43.5	+0.5
PB07				eS	Sn	17 27 01.1	+0.7
PB07				IAML		17 27 04.1	
	comp=Z,4µm,0.4s						
PB03	IPOC Station P	1.21	233	⇑iP	Pn	17 26 43.8	+0.5
PB03				i S	Sn	17 27 01.6	+0.3
PB03				IAML		17 27 05.2	
	comp=E,5µm,0.3s						
PB03	IPOC Station P	1.21	233	eP	Pn	17 26 43.7	+0.3
PB03				eS	Sn	17 27 01.9	+0.7
PB03				IAML		17 27 03.3	
	comp=Z,3µm,0.4s						
PB08	IPOC Station P	1.25	341	⇑iP	Pn	17 26 45.4	+1.3
PB08				i S	Sn	17 27 03.9	+1.5
PB08	IPOC Station P	1.25	341		Pn	17 26 45.1	+1.0
PB08				Sn	Sn	17 27 03.8	+1.4
PB08	IPOC Station P	1.25	341	eP	Pn	17 26 45.2	+1.0
PB08				eS	Sn	17 27 04.4	+2.0
LVC	Limon Verde	1.29	188	P	Pn	17 26 45.0	+0.5
	comp=Z,502nm,0.3s,baz=33,slow=11,SNR=3424						
LVC				LR	LR	17 26 52.2	
	comp=Z,54nm,20.9s,baz=278,slow=25						
LVC				S	Sn	17 27 03.9	+0.6
	comp=Z,370nm,0.3s,baz=144,slow=18,SNR=72						
LVC	Limon Verde	1.29	188	eP	Pn	17 26 45.1	+0.5
LVC				eS	Sn	17 27 03.7	+0.3
LVC	Limon Verde	1.29	188		Pn	17 26 44.9	+0.3
LVC				Sn	Sn	17 27 03.5	+0.2
LVC	Limon Verde	1.29	188	eP	Pn	17 26 45.1	+0.6
LVC	Limon Verde	1.29	188	eP	Pn	17 26 45.2	+0.6
TA01	Diego Aracena	1.56	299	⇓iP	Pn	17 26 48.2	+0.8
TA01				i S	Sn	17 27 09.1	+0.8
TA01				IAML		17 27 15.9	
	comp=N,2µm,0.3s						
TA01	Diego Aracena	1.56	299		Pn	17 26 48.0	+0.6
TA01				Sn	Sn	17 27 08.7	+0.3
PB06	IPOC Station P	1.59	210	⇑iP	Pn	17 26 48.2	+0.4
PB06				i S	Sn	17 27 09.3	+0.2
PB06				IAML		17 27 17.0	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	1.59	210		Pn	17 26 48.1	+0.2
PB06				Sn	Sn	17 27 09.5	+0.3
PB06	IPOC Station P	1.59	210	eP	Pn	17 26 48.4	+0.4
PB06				eS	Sn	17 27 10.1	+0.9
PB06				IAML		17 27 19.3	
	comp=Z,1µm,0.3s						
PB04	IPOC Station P	1.67	233	⇑iP	Pn	17 26 48.9	0.0
PB04				i S	Sn	17 27 12.0	+1.1
PB04				IAML		17 27 19.2	
	comp=N,2µm,0.1s						
PB04	IPOC Station P	1.67	233		Pn	17 26 48.8	0.0
PB04	IPOC Station P	1.67	233	eP	Pn	17 26 49.2	+0.4
PB04				eS	Sn	17 27 12.1	+1.1
PB04				IAML		17 27 20.5	
	comp=Z,2µm,0.2s						
TA02	Huaiquique	1.69	308	eP	Pn	17 26 49.6	+0.7
TA02				i S	Sn	17 27 12.2	+1.1
TA02				IAML		17 27 18.6	
	comp=N,3µm,0.1s						
PB15	IPOC Station P	2.00	200	eP	Pn	17 26 53.3	+0.2
PB15				i S	Sn	17 27 18.7	+0.3
PB15	IPOC Station P	2.00	200		Pn	17 26 53.3	+0.2
PB15	IPOC Station P	2.00	200	eP	Pn	17 26 53.6	+0.6
PB15				eS	Sn	17 27 19.1	+0.7
PB15				IAML		17 27 28.7	
	comp=Z,5µm,0.2s						
PSGC	Pisagua	2.17	322	⇓iP	Pn	17 26 55.2	+0.1
PSGC				i S	Sn	17 27 22.4	+0.4
PSGC				IAML		17 27 28.8	
	comp=E,734nm,0.6s						
PSGCX	Pisagua	2.17	322		Pn	17 26 55.1	0.0
PSGCX	Pisagua	2.17	322	eP	Pn	17 26 55.2	+0.1
PSGCX				eS	Sn	17 27 22.6	+0.6
MNMC	Minye Minye	2.33	339	eP	Pn	17 26 58.7	+1.3
MNMC				i S	Sn	17 27 27.6	+1.5
MNMC				IAML		17 27 33.9	
	comp=N,892nm,0.5s						
MNMC	Minye Minye	2.33	339		Pn	17 26 58.5	+1.1
MNMCX	Minye Minye	2.33	339	eP	Pn	17 26 58.2	+0.8
MNMCX				eP	Pn	17 26 58.9	+1.5
PB10	IPOC Station P	2.77	218	eP	Pn	17 27 02.8	+0.1
PB10				i S	Sn	17 27 35.6	-0.1
PB10				IAML		17 27 47.8	
	comp=E,538nm,0.3s						
PB10	IPOC Station P	2.77	218		Pn	17 27 02.8	+0.1
PB10	IPOC Station P	2.77	218	eP	Pn	17 27 03.1	+0.4
PB10				eS	Sn	17 27 46.4	+11
PB10				IAML		17 27 53.4	
	comp=Z,439nm,0.4s						
PB16	IPOC Station P	3.07	346	eP	Pn	17 27 08.8	+1.5
PB16				IAML		17 27 58.2	
	comp=E,168nm,0.6s						
PB16	IPOC Station P	3.07	346		Pn	17 27 08.4	+1.1
PB16	IPOC Station P	3.07	346	eP	Pn	17 27 08.9	+1.6
PB16				eS	Sn	17 27 41.2	-2.5
YJA	Yavi	3.09	106	eP	Pn	17 27 09.5	+2.0
YJA				eS	Sn	17 27 47.4	+3.2
AP01	Chacalluta	3.31	332	eP	Pn	17 27 11.2	+1.2
AP01				i S	Sn	17 27 49.5	+0.8

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AP01                                IAML              17 28 03.9
         comp=E,722nm,0.1s
AP01  Chacalluta          3.31 332  Pn       Pn       17 27 11.0 +1.0
HJA   Humahuaca           3.59 122  eP       Pn       17 27 16.2 +2.2
PB14  IPOC Station P      3.64 205  eP       Pn       17 27 15.8 +1.2
PB14  IPOC Station P      3.64 205           Pn       17 27 14.2 -0.4
GO02  Mina Guanaco        3.91 192  eP       Pn       17 27 17.1 -1.1
GO02                                eS       Sn       17 28 03.1 -0.3
GO02  Mina Guanaco        3.91 192           Pn       17 27 17.0 -1.1
AZAP  Zapla               4.43 131  eP       Pn       17 27 26.4 +1.2
AC01  Pan de Azucar       5.10 199  eP       Pn       17 27 31.8 -2.2
AC01  Pan de Azucar       5.10 199           Pn       17 27 31.9 -2.2
FSA   Cafayete            5.38 153  eP       Pn       17 27 40.4 +2.4
AC02  Maricunga           5.50 184           Pn       17 27 36.8 -3.1
GO03  Copiap              6.39 192           Pn       17 27 48.7 -2.8
AC04  Llanos de Chal      7.18 197  Pn       Pn       17 27 57.5 -4.6
AC05  El Transito         7.61 190           Pn       17 28 03.5 -4.6
LCO   Las Campanas        7.86 193  Pn       Pn       17 28 06.2 -5.5
CO01  Juntas del Tor      8.71 188           Pn       17 28 19.9 -3.1
SIV   San Ignacio         8.98  55  P        Pn       17 28 23.8 -2.8
         comp=E,6.3nm,0.3s,baz=253,slow=12,SNR=254
SIV                                 S        Sn       17 29 59.3 -6.7
         comp=E,0.2nm,0.3s,baz=284,slow=19,SNR=1.9
GO04  Tololo Observa      9.01 192           Pn       17 28 22.1 -5.1
CO03  El Pedregal         9.64 190           Pn       17 28 29.0 -6.6
CO02  Combarbal          10.05 191  Pn       Pn       17 28 35.9 -5.3
MT02  Curacav            12.08 190  Pn       Pn       17 29 03.4 -4.9
SAML  Samuel             13.41  24  Pn       Pn       17 29 24.3 -1.5
BI02  San Fabin de       15.45 188           Pn       17 29 48.6 -3.1
BI02                                IAmb     IAmb     17 29 52.5
         comp=Z,8.2nm,0.8s
PTGB  Pitanga            15.70 106  eP       P        17 29 57.2 +0.5
ITAB  Concordia          16.22 115  eP       Pn       17 30 01.3  0.0
PCMB  Pacaembu           16.25  94  eP       Pn       17 30 00.8 -0.9
ARAG  Araguaiana, MT     16.97  74  eP       Pn       17 30 08.4 -2.2
ITRB  Iturama            17.27  88  eP       P        17 30 13.0 -1.1
CNLB  Canela             17.99 120  eP       Pn       17 30 26.4 +3.6
SNDB  Serra Nova Dou     19.09  64  eP       P        17 30 33.1 -0.8
NPGB  Novo Progresso     19.19  44  eP       P        17 30 32.0 -3.0
IPMB  Ipameri, GO        19.59  84  eP       P        17 30 38.4 -1.1
MACA  Manacapuru-AM      19.67  24  eP       P        17 30 37.5 -2.8
ITTB  Itaituba           21.05  39  eP       P        17 30 52.8 -2.3
PEXB  Peixe              21.57  68  eP       P        17 30 59.6 -1.2
PTGA  Pitinga            22.18  24  P        P        17 31 06.0 -1.1
         comp=Z,1.8nm,0.3s,baz=197,slow=15,SNR=4.6
PTGA  Pitinga            22.18  24  P        P        17 31 04.7 -2.4
PTGA                                IAmb     IAmb     17 31 22.1
         comp=Z,19nm,1.9s
BSCB  Bom Sucesso        22.33  94  eP       P        17 31 10.0 +1.2
ESAR  Angra dos Reis     22.54  99  eP       P        17 31 13.2 +2.5
SMTB  Santa Maria do     23.82  62  eP       P        17 31 22.3 -0.7
SDBA  SAO DESIDERIO      24.42  73  eP       P        17 31 28.3 -0.1
GDU01 Guandu, BA         28.76  80  eP       P        17 32 08.5 +1.2
SDV   Santo Domingo      30.08 356  eP       P        17 32 19.3 +0.2
GO10  Punta Arenas       31.83 183  P        P        17 32 34.4 +0.4
RCBR  Riachuelo          35.31  69  P        P        17 33 03.2 -1.4
FDF   Fort de France     36.59  12  P        P        17 33 15.4  0.0
SNAA  Sanae              62.39 161  P        P        17 36 30.6 +0.1
         comp=Z,1.8nm,0.7s,baz=268,slow=6.2,SNR=6.5
SNAA  Sanae              62.39 161  IAmb     IAmb     17 36 32.9
         comp=Z,15nm,1.8s
PDAR  Pinedale Array     74.05 330  P        P        17 37 45.4 +1.6
         comp=Z,0.7nm,0.8s,baz=95,slow=7.4,SNR=3.7
PDAR  Pinedale Array     74.05 330  P        P        17 37 44.6 +0.8
NVAR  Mina Array Bea     75.47 322  P        P        17 37 54.5 +2.3
         comp=Z,1.3nm,0.9s,baz=166,slow=7.3,SNR=6.9
TORD  Torodi Ar. Bea     77.12  70  P        P        17 38 01.6 -0.2
         comp=Z,2.0nm,0.5s,baz=254,slow=5.4,SNR=12
TORD                                pP       pP       17 38 30.5 -0.5
         comp=Z,0.9nm,0.6s,baz=262,slow=6.0,SNR=2.7
TORD  Torodi Ar. Bea     77.12  70  P        P        17 38 01.2 -0.6
YKA   Yellowknife Ar     91.08 341  P        P        17 39 12.8 +1.4
         comp=Z,1.4nm,0.6s,baz=130,slow=5.1,SNR=30
YKA                                 pP       pP       17 39 42.0 +0.4
         comp=Z,0.2nm,0.4s,baz=127,slow=5.5,SNR=2.6
ASAR  Alice Springs     130.15 207  PKP      PKPdf    17 45 17.6 -0.1
         comp=Z,0.5nm,0.9s,baz=143,slow=2.2,SNR=3.2
ASAR  Alice Springs     130.15 207           PKPdf    17 45 17.8 +0.1
WRA   Warramunga Arr    133.20 210  PKP      PKPdf    17 45 24.5 +1.0
         comp=Z,0.3nm,0.6s,baz=161,slow=2.1,SNR=4.7
WRA   Warramunga Arr    133.20 210           PKPdf    17 45 23.2 -0.3
ZALV  Zalesovo Beam     141.72  25  PKP      PKPdf    17 45 38.2 +0.1
         comp=Z,0.8nm,0.6s,baz=276,slow=3.9,SNR=2.6
MKAR  Makanchi Array    145.38  36  PKPbc    PKPdf    17 45 46.1 +1.4
         comp=Z,2.3nm,0.8s,baz=324,slow=3.1,SNR=24
MKAR                                pPKPbc   pPKPab   17 46 15.8 -0.1
         comp=Z,2.1nm,1.0s,baz=0.0,slow=2.4,SNR=6.2
MKAR  Makanchi Array    145.38  36           PKPdf    17 45 45.8 +1.0
SONM  Songino Array     153.26   7  PKP      PKPdf    17 45 58.8 +1.4
         comp=Z,0.2nm,0.6s,baz=328,slow=5.2,SNR=2.2
SONM                                PKPbc    PKPbc    17 46 05.6 +0.7
         comp=Z,0.4nm,0.8s,baz=295,slow=4.6,SNR=3.7
SONM                                pPKPbc   pPKPbc   17 46 36.6 +0.4
         comp=Z,0.3nm,0.8s,baz=336,slow=3.2,SNR=1.7
SONM  Songino Array     153.26   7           PKPdf    17 45 58.2 +0.8
CMAR  Chiang Mai Arr    168.04 102  PKP      PKPdf    17 46 14.9 +0.9
         comp=Z,0.8nm,1.1s,baz=112,slow=1.1,SNR=4.4
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*IDC **27** 17:56:40.3±0.7, 13°.19S×166°.34E, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.4/30, mbtmp4.3/17, ML4.2/2, MS3.8/18, Ms1 3.8/18, ms1mx3.7/26, Error ellipse: s-maj=24.3km s-min=17.8km az=115.0*

*NEIC **27** 17:56:46.6±2.6, 13°.29S±0°.08×166°.19E±0°.10, h46^{km}±6^{km}, mb4.8/32, Error ellipse: s-maj=15.7km s-min=9.4km az=51.0*

*GCMT **27** 17:56:46.6±0.3, 13°.09S±0°.04×166°.13E±0°.02, h23^{km}, MW4.9/57, Moment Tensor Solution. s38,c43; s57,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.13±.20; $M_{\theta\theta}$-0.81±.14; $M_{\phi\phi}$-2.32±.13; $M_{r\theta}$0.40±.24; $M_{\theta\phi}$0.58±.07; $M_{\phi r}$-0.69±.17; Best double couple: $M_0$2.93100×10^{16} NP1:ϕ_s343.00000°, δ37.00000°, λ94.00000°. NP2: ϕ_s159.00000°, δ53.00000°, λ87.00000°. Principal axes: T 3.2410, Plg82.0000°, Azm55.0000°; N -0.6180, Plg2.0000°, Azm160.0000°; P -2.6210, Plg8.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 17:56:44.3±0.4**, 13°.21S**±0°.06×**166°.13E**±0°.07**, h20**^{km}**, n92, σ1ˢ.77**/86**, mb4.7**/28**, MS4.0**/19**, Vanuatu Islands**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op       ISC      h  m  s    ISC
SANVU Saraoutou           2.45 155           Pn       17 57 21.9 -1.3
HNR   Honiara             7.13 301  Pn       Pn       17 58 29.3 +1.7
         8.3nm,0.3s,baz=173,slow=9.9,SNR=8.4
HNR                                 Sn       Sn       17 59 47.8 -0.3
         24nm,0.3s,baz=25,slow=22,SNR=6.3
HNR                                 LR       LR       18 01 21.4
         comp=Z,815nm,19.6s,baz=78,slow=38
HNR   Honiara             7.13 301           Pn       17 58 29.4 +1.8
DZM   Mont Dzumac         8.81 178  Pn       Pn       17 58 51.1 +0.3
         1.3nm,0.3s,baz=322,slow=23,SNR=23
DZM                                 Sn       Sn       18 00 27.8 -1.8
         baz=88,slow=20,SNR=1.1
DZM   Mont Dzumac         8.81 178           Pn       17 58 50.5 -0.3
MSVF  Nonsavu            12.34 113           Pn       17 59 39.9 +0.8
PMG   Port Moresby       18.98 280  LR       LR       18 07 37.4
         comp=Z,114nm,18.6s,baz=108,slow=34
CTAO  Charters Tower     20.22 248  P        P        18 01 19.6 +1.3
CTAO                                IAmb     IAmb     18 01 32.3
         comp=Z,51nm,1.8s
PATS  Pohnpei            21.38 338  P        P        18 01 31.0 +0.2
JAY   Jayapura           27.30 291  LR       LR       18 13 35.4
         comp=Z,89nm,20.3s,baz=106,slow=37
BKZ   Black Stump Fm     27.43 162  P        P        18 02 27.8 -1.1
BKZ                                 IAmb     IAmb     18 02 48.5
         comp=Z,38nm,1.6s
STKA  Stephens Creek     29.18 226  P        P        18 02 46.0 +1.5
         comp=Z,2.8nm,0.8s,baz=31,slow=5.9,SNR=4.0
STKA                                LR       LR       18 14 44.1
         comp=Z,383nm,18.4s,baz=47,slow=37
STKA  Stephens Creek     29.18 226  P        P        18 02 43.5 -1.1
WR0   Warramunga Arr     30.97 253  P        P        18 02 56.2 -4.3
WB0   Warramunga Arr     31.08 254  P        P        18 02 57.9 -3.7
WB0                                 IAmb     IAmb     18 03 03.1
         comp=Z,22nm,1.8s
WB2   Warramunga Arr     31.14 253  P        P        18 03 00.7 -1.4
WB2                                 IAmb     IAmb     18 03 25.4
         comp=Z,14nm,1.4s
WRA   Warramunga Arr     31.16 253  P        P        18 03 02.1 -0.1
         comp=Z,1.5nm,0.9s,baz=86,slow=8.4,SNR=7.5
WRA                                 PcP      PcP      18 05 56.1 -1.1
         comp=Z,1.1nm,0.9s,baz=88,slow=3.3,SNR=4.8
WRA                                 LR       LR       18 15 33.7
         comp=Z,552nm,18.1s,baz=80,slow=36
WKZ   Wanaka             31.60 176  P        P        18 03 07.0 +1.2
WKZ                                 IAmb     IAmb     18 03 32.1
         comp=Z,34nm,1.2s
AS31  Alice Springs      32.21 247  P        P        18 03 11.6 +0.1
ASAR  Alice Springs      32.22 247  P        P        18 03 11.8 +0.4
         comp=Z,4.6nm,0.6s,baz=73,slow=9.4,SNR=86
ASAR                                PcP      PcP      18 05 58.9 -1.1
         comp=Z,1.0nm,0.8s,baz=101,slow=3.6,SNR=5.4
ASAR                                ScP      ScP      18 09 44.7 +1.9
         comp=Z,0.3nm,0.8s,baz=64,slow=4.2,SNR=2.4
ASAR                                LR       LR       18 16 21.9
         comp=Z,578nm,18.2s,baz=74,slow=36
ASAR  Alice Springs      32.22 247  P        P        18 03 11.7 +0.2
WHZ   Wether Hill Ro     32.61 178  P        P        18 03 14.2 -0.4
FITZ  Fitzroy Crossi     39.23 258  P        P        18 04 11.1 -0.6
         comp=Z,1.3nm,0.9s,baz=87,slow=8.4,SNR=1.4
PPT2  Papeete2           42.86 102  eS       S        18 11 13.9 +8.4
         comp=Z,114nm,27.0s
PPT2                                eLQ      LQ       18 15 04.6
         comp=Z,475nm,27.0s
PPT2                                eLR      LR       18 16 50.7
         comp=Z,389nm,27.0s
TBI   Tubuai             43.21 110  eS       S        18 11 22.0  +12
         comp=Z,101nm,23.8s
TBI                                 eLR      LR       18 17 00.4
         comp=Z,178nm,24.0s
DAV   Davao City (W)     45.03 294  LR       LR       18 24 49.5
         comp=Z,63nm,18.6s,baz=302,slow=37
MYLDM Lahad Datu         50.70 288  P        P        18 05 44.6 +1.5
MYLDM                               IAmb     IAmb     18 05 47.3
         comp=Z,16nm,1.1s
TGY   Tagaytay City      52.34 300  LR       LR       18 30 02.6
         comp=Z,56nm,18.5s,baz=142,slow=38
TAOE  Nuku Hiva Isla     52.83  91  eLR      LR       18 21 24.9
         comp=Z,259nm,26.8s
JMN   Monobe             55.88 328  P        P        18 06 22.1 +1.3
MJAR  Matsushiro Arr     56.06 333  P        P        18 06 21.3 -0.8
         comp=Z,4.5nm,1.0s,baz=171,slow=7.4,SNR=4.8
MJAR                                LR       LR       18 32 37.9
         comp=Z,24nm,18.1s,baz=225,slow=38
MJAR  Matsushiro Arr     56.06 333  P        P        18 06 20.5 -1.5
TPUB  Ta-pu              57.43 309  P        P        18 06 31.6 -0.5
JTM   Tenmabayashi       58.53 338  P        P        18 06 39.7 +0.3
ERM   Erimo              58.89 340  P        P        18 06 39.1 -2.7
JKA   Kamikawa-asahi     60.95 341  P        P        18 06 57.0 +1.0
KSRS  Korea Array        61.87 326  P        P        18 07 02.0 -0.3
         comp=Z,3.0nm,1.0s,baz=141,slow=6.0,SNR=4.4
VNDA  Vanda              64.34 181  P        P        18 07 18.2  0.0
         comp=Z,2.3nm,1.0s,baz=27,slow=4.5,SNR=1.5
VNDA  Vanda              64.34 181  P        P        18 07 18.1 -0.1
VNDA                                IAmb     IAmb     18 07 45.3
         comp=Z,57nm,1.8s
USRK  Ussuriysk Ar.      65.04 334  P        P        18 07 24.4 +1.2
         comp=Z,5.8nm,0.8s,baz=114,slow=9.4,SNR=5.0
USRK                                LR       LR       18 36 00.6
         comp=Z,29nm,19.0s,baz=189,slow=36
CM36  Chiang Mai Arr     73.21 294  P        P        18 08 16.0 +1.5
CM35  Chiang Mai Arr     73.21 294  P        P        18 08 16.0 +1.5
CM04  Chiang Mai Arr     73.27 294  P        P        18 08 17.4 +2.5
CM09  Chiang Mai Arr     73.28 294  P        P        18 08 17.2 +2.3
CM34  Chiang Mai Arr     73.28 294  P        P        18 08 17.0 +2.1
CM01  Chiang Mai Arr     73.30 294  P        P        18 08 17.2 +2.2
CM05  Chiang Mai Arr     73.30 294  P        P        18 08 17.6 +2.6
CM02  Chiang Mai Arr     73.31 294  P        P        18 08 17.0 +1.9
CM31  Chiang Mai Arr     73.32 294  P        P        18 08 17.0 +1.9
CM31  Chiang Mai Arr     73.32 294  P        P        18 08 15.6 +0.5
CMAR  Chiang Mai Arr     73.32 294  P        P        18 08 16.9 +1.8
         comp=Z,3.7nm,0.9s,baz=125,slow=4.5,SNR=33
CMAR                                LR       LR       18 43 11.6
         comp=Z,25nm,18.4s,baz=152,slow=38
CMAR  Chiang Mai Arr     73.32 294  P        P        18 08 15.9 +0.7
CM15  Chiang Mai Arr     73.34 294  P        P        18 08 17.4 +2.1
CM13  Chiang Mai Arr     73.34 294  P        P        18 08 17.0 +1.8
CMMT  Chiang Mai         73.44 294  P        P        18 08 16.8 +0.9
CM33  Chiang Mai Arr     73.44 294  P        P        18 08 17.0 +1.1
CHTO  Chiang Mai         73.45 294  P        P        18 08 16.6 +0.7
CM32  Chiang Mai Arr     73.48 294  P        P        18 08 25.0 +9.0
HIA   Hailar             74.43 331  P        P        18 08 20.6 -0.4
HIA                                 IAmb     IAmb     18 08 23.2
         comp=Z,11nm,1.1s
QSPA  South Pole Qui     76.80 180  P        P        18 08 33.6 -0.9
QSPA                                IAmb     IAmb     18 08 37.5
         comp=Z,11nm,1.1s
ULN   Ulaanbaatar        80.27 324  P        P        18 08 54.1 +0.2
YAK   Yakutsk            80.27 343  P        P        18 08 52.6 -0.7
YAK                                 IAmb     IAmb     18 08 53.7
         comp=Z,15nm,0.8s
SONM  Songino Array      80.63 324  P        P        18 08 56.4 +0.6
         comp=Z,1.3nm,0.9s,baz=101,slow=27,SNR=8.4
SONM                                LR       LR       18 45 33.1
         comp=Z,24nm,18.4s,baz=314,slow=36
SONM  Songino Array      80.63 324  P        P        18 08 55.8  0.0
BILL  Bilibino           81.03   0  P        P        18 08 55.8 -1.6
BILL                                IAmb     IAmb     18 08 57.4
         comp=Z,9.2nm,1.0s
MAW   Mawson             82.86 202  LR       LR       18 39 51.2
         comp=Z,99nm,21.5s,baz=72,slow=31
IL31                     85.44  18  P        P        18 09 18.2 -1.9
ILAR  Eielson Array      85.44  18  P        P        18 09 17.5 -2.7
         comp=Z,2.7nm,0.8s,baz=236,slow=5.7,SNR=21
ILAR                                LR       LR       18 43 20.4
         comp=Z,66nm,19.7s,baz=204,slow=33
NVAR  Mina Array Bea     87.13  50  P        P        18 09 29.6 +0.2
         comp=Z,0.6nm,0.7s,baz=229,slow=7.9,SNR=6.6
NVAR                                LR       LR       18 41 06.4
         comp=Z,162nm,19.8s,baz=253,slow=31
NVAR  Mina Array Bea     87.13  50  P        P        18 09 28.4 -1.0
TIXI  Tiksi              88.28 349  P        P        18 09 31.0 -2.8
TIXI                                IAmb     IAmb     18 09 33.6
         comp=Z,4.6nm,1.1s
PDAR  Pinedale Array     94.74  47  LR       LR       18 49 15.3
         comp=Z,46nm,18.5s,baz=310,slow=33
MK31  Makanchi Array     95.35 317  P        P        18 10 06.7 -0.6
MK31                                IAmb     IAmb     18 10 12.2
         comp=Z,3.7nm,1.2s
MKAR  Makanchi Array     95.35 317  P        P        18 10 07.1 -0.1
         comp=Z,1.4nm,0.8s,baz=95,slow=7.0,SNR=12
MKAR  Makanchi Array     95.35 317  P        P        18 10 06.4 -0.9
ZAA0  Zalesovo Array     95.52 324  P        P        18 10 06.7 -1.1
ZAA0                                IAmb     IAmb     18 10 07.7
         comp=Z,11nm,1.6s
ZALV  Zalesovo Beam      95.52 324  P        P        18 10 06.9 -0.9
         comp=Z,1.3nm,0.7s,baz=132,slow=3.4,SNR=9.0
ZALV                                LR       LR       18 53 04.3
         comp=Z,24nm,18.5s,baz=360,slow=35
ZALV  Zalesovo Beam      95.52 324  P        P        18 10 06.1 -1.7
MAKZ  Makanchi           95.56 317  P        P        18 10 08.7 +0.5
MAKZ                                IAmb     IAmb     18 10 13.7
         comp=Z,4.0nm,1.1s
TXAR  Lajitas Array      96.53  62  LR       LR       18 45 14.2
         comp=Z,72nm,21.4s,baz=0.0,slow=30
YKA   Yellowknife Ar     96.72  27  P        P        18 10 10.4 -2.6
         comp=Z,0.1nm,0.3s,baz=253,slow=3.8,SNR=1.5
BRTR  Keskin Array B    130.68 311  PKP      PKPdf    18 15 53.2 -1.3
         comp=Z,0.6nm,0.9s,baz=57,slow=5.3,SNR=3.1
BURAR Bucovina Array    132.74 324           PKPdf    18 15 56.2 -1.9
CLL   Collm             136.23 336  ePKPdf   PKPdf    18 16 05.0 +0.6
GERES GERESS Array B    137.80 333  PKP      PKPdf    18 16 07.2 -0.3
         comp=Z,0.5nm,0.7s,baz=51,slow=1.9,SNR=4.2
GERES GERESS Array B    137.80 333           PKPdf    18 16 06.5 -1.0
BNI   Bardonecchia      143.76 335           PKPab    18 16 16.2 +0.9
SSB   Saint Sauveur     144.41 337           PKPab    18 16 17.6  0.0
KEST  Kesra             149.34 321  PKPbc    PKPdf    18 16 30.4 +2.4
         comp=Z,8.8nm,0.8s,baz=72,slow=13,SNR=6.4
ESDC  Sonseca Array     152.23 343  PKPbc    PKPbc    18 16 38.1 -1.0
         comp=Z,0.3nm,0.3s,baz=7.6,slow=1.9,SNR=2.6
ESDC                                PKPab    sPKPbc   18 16 48.1 +2.8
         comp=Z,1.5nm,0.6s,baz=8.0,slow=3.9,SNR=7.8
ESDC  Sonseca Array     152.23 343           PKPdf    18 16 37.1 +4.8
ESDC                                         sPKPbc   18 16 48.2 +2.9
TORD  Torodi Ar. Bea    164.84 272  PKP      PKPdf    18 16 46.6 -1.4
         comp=Z,1.4nm,0.8s,baz=38,slow=0.8,SNR=4.7
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*IDC **27** 18:14:29.3±0.8, 28°.56N×103°.81E, h0^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.6/43, mbtmp3.6/11, ML3.5/1, MS3.1/2, Ms1 3.2/2, ms1mx2.7/42, Error ellipse: s-maj=30.7km s-min=16.3km az=62.0*

*NEIC **27** 18:14:34.4±1.9, 28°.58N±0°.09×103°.8E±0°.1, h33^{km}±4^{km}, mb4.0/10, Error ellipse: s-maj=16.1km s-min=11.8km az=121.0*

ISC 27 18:14:34.4±0.7**, 28°.57N**±0°.09×**103°.79E**±0°.09**, h35**^{km}**, n32, σ0ˢ.93**/29**, mb3.7**/14**, Sichuan**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op       ISC      h  m  s    ISC
KMI   Kunming             3.55 196  Pn       Pn       18 15 28.0 +0.7
ENH   Enshi               5.25  70           Pn       18 15 51.2 +0.8
CMAR  Chiang Mai Arr     11.00 205  Pn       Pn       18 17 10.0 +0.7
         0.1nm,0.3s,baz=13,slow=12,SNR=6.0
CMAR                                LR       LR       18 21 44.4
         comp=Z,61nm,19.1s,baz=15,slow=40
CMAR  Chiang Mai Arr     11.00 205           Pn       18 17 08.8 -0.5
GUN   Gumba              15.80 272  eP       P        18 18 19.9 +1.7
         4.6nm,0.4s
PKI   Pulchoki           16.26 271  eP       P        18 18 22.0 -1.2
         6.5nm,0.6s
PKIN  Phulchoki          16.27 271  eP       P        18 18 21.8 -1.5
         6.7nm,0.5s
KKN   Kakani             16.34 272  eP       P        18 18 23.3 -0.7
         13nm,0.6s
DANN  Dangsing           17.62 274  eP       P        18 18 37.6 -0.6
         7.5nm,0.6s
SONM  Songino Array      19.35   5  P        Pn       18 18 57.4 -0.8
         baz=187,slow=13,SNR=6.2
SONM  Songino Array      19.35   5  P        Pn       18 18 57.3 -0.9
KSRS  Korea Array        22.05  60  P        P        18 19 25.9 -0.1
         1.0nm,0.4s,baz=242,slow=9.9,SNR=5.2
MK31  Makanchi Array     24.78 323  P        P        18 19 53.7 +0.8
MK31                                IAmb     IAmb     18 20 00.8
         comp=Z,4.0nm,1.4s
MKAR  Makanchi Array     24.78 323  P        P        18 19 53.6 +0.7
         comp=Z,1.4nm,0.7s,baz=122,slow=12,SNR=14
MKAR  Makanchi Array     24.78 323  P        P        18 19 54.2 +1.3
MAKZ  Makanchi           24.95 323  P        P        18 19 56.0 +1.5
MAKZ                                IAmb     IAmb     18 20 03.0
         comp=Z,2.2nm,1.0s
ZALV  Zalesovo Beam      28.91 337  P        P        18 20 29.1 -0.8
         comp=Z,0.7nm,0.5s,baz=152,slow=6.7,SNR=3.6
KURBB Kurchatov Arra     29.14 326  P        P        18 20 32.1 +0.1
         comp=Z,0.3nm,0.6s,baz=130,slow=10,SNR=8.0
KURK  Kurchatov          29.16 326  P        P        18 20 32.1  0.0
KURK  Kurchatov          29.16 326  IAmb     IAmb     18 20 42.4
         comp=Z,1.8nm,1.1s
PETK  Petropavlovsk-     46.22  42  P        P        18 22 56.5 +0.6
JAY   Jayapura           47.01 125  LR       LR       18 44 48.1
         comp=Z,32nm,18.2s,baz=252,slow=39
WB0   Warramunga Arr     56.42 145  P        P        18 24 10.8 -1.9
WB0                                 IAmb     IAmb     18 24 31.4
         comp=Z,7.8nm,1.3s
WRA   Warramunga Arr     56.54 145  P        P        18 24 12.8 -0.7
         comp=Z,0.7nm,0.5s,baz=336,slow=8.0,SNR=16
WB2   Warramunga Arr     56.55 145  P        P        18 24 12.9 -0.6
WB2                                 IAmb     IAmb     18 24 17.4
         comp=Z,3.6nm,1.0s
WR0   Warramunga Arr     56.66 145  P        P        18 24 13.6 -0.7
ANTO  Ankara             58.39 301  P        P        18 24 27.1 +0.5
AKASG Malin Array Be     58.94 314  P        P        18 24 29.9 -0.1
         comp=Z,0.2nm,0.3s,baz=67,slow=6.8,SNR=3.0
AKASG Malin Array Be     58.94 314  IAmb     IAmb     18 24 31.7
         comp=Z,2.2nm,1.2s
ASAR  Alice Springs      59.48 148  P        P        18 24 34.4 +0.3
         comp=Z,0.4nm,0.4s,baz=328,slow=6.5,SNR=13
FINES FINESS Array B     59.53 327  P        P        18 24 34.1 +0.1
         comp=Z,3.4nm,0.8s,baz=108,slow=4.5,SNR=3.6
YKA   Yellowknife Ar     84.19  17  P        P        18 27 02.0 +0.2
         comp=Z,0.2nm,0.6s,baz=333,slow=4.7,SNR=5.1
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GUC 27 18:25:43.8±0.5**, 23°.08S**×**66°.97W, h255**^{km}±7^{km}**, ML3.6, 12C, Jujuy Province**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op       ISC      h  m  s    ISC
LVC   Limon Verde         1.85 284  eP       Pn       18 26 25.3 -0.5
LVC                                 i S      S        18 26 57.1 -1.8
PB15  IPOC Station P      2.31 266⇑iP       Pn       18 26 29.9 +0.1
PB15                                eS       S        18 27 05.0 -1.1
PB06  IPOC Station P      2.43 278⇑iP       Pn       18 26 31.0 +0.1
PB06                                i S      S        18 27 07.0 -1.1
PB06                                 IAML             18 27 11.5
         comp=E,123nm,0.1s
PB09  IPOC Station P      2.46 301⇑iP       Pn       18 26 31.8 +0.5
PB09                                i S      S        18 27 07.9 -0.8
PB09                                 IAML             18 27 12.7
         comp=E,74nm,0.2s
PB03  IPOC Station P      2.77 291⇑iP       Pn       18 26 34.5 +0.1
PB03                                i S      S        18 27 13.0 -1.4
PB05  IPOC Station P      2.99 274⇑iP       Pn       18 26 37.1 +0.4
PB05                                i S      S        18 27 17.0 -1.4
PB07  IPOC Station P      3.02 296⇑iP       Pn       18 26 37.3 +0.3
PB07                                i S      S        18 27 17.3 -1.8
PB04  IPOC Station P      3.03 284  eP       Pn       18 26 37.5 +0.4
PB04                                i S      S        18 27 17.9 -1.4
PB01  IPOC Station P      3.10 310⇑iP       Pn       18 26 37.7 -0.1
PB01                                i S      S        18 27 19.0 -1.5
GO02  Mina Guanaco        3.17 229⇑iP       Pn       18 26 38.9 +0.2
GO02                                i S      S        18 27 21.4 -0.8
PB02  IPOC Station P      3.23 302⇑iP       Pn       18 26 39.3 +0.1
PB02                                i S      S        18 27 21.2 -2.0
PB10  IPOC Station P      3.33 262⇑iP       Pn       18 26 41.0 +0.8
PB10                                i S      S        18 27 23.6 -1.2
PB14  IPOC Station P      3.50 243⇑iP       Pn       18 26 42.9 +0.4
PB08  IPOC Station P      3.56 325⇑iP       Pn       18 26 43.8 +0.5
PB08                                i S      S        18 27 29.9 -0.6
TA01  Diego Aracena       3.90 309  eP       Pn       18 26 47.0 +0.3
PSGC  Pisagua             4.55 319  eP       Pn       18 26 53.0 -1.4
PSGC                                i S      S        18 27 47.4 -3.3
MNMC  Minye Minye         4.63 328  eP       Pn       18 26 55.5 -0.2
MNMC                                i S      S        18 27 50.5 -2.4
PB16  IPOC Station P      5.29 333  eP       Pn       18 27 04.6 +0.7
PB16                                i S      S        18 28 05.6 -2.1
GO03  Copiap              5.38 213  eP       Pn       18 27 02.8 -1.6
GO03                                i S      S        18 28 05.8 -2.9
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*NEIC **27** 18:30:17.7±1.4, 51°.04N±0°.05×1°.42W±0°.08, h13^{km}±5^{km}, Error ellipse: s-maj=10.2km s-min=2.4km az=46.0*

*STR **27** 18:30:17.5±0.4, 51°N±2°×°±°, h7^{km}±3^{km}, mB5.0/1, mb3.7/1, MLv3.1/7, Mw(mB)4.3/1, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/iasp91 preliminary*

*LDG **27** 18:30:17.4±0.1, 51°.10N×1°.31W, h3^{km}, Ml3.3/39, Error ellipse: s-maj=1.2km s-min=0.9km az=54.0*

*BGS **27** 18:30:17.6±0.8, 51°.07N×1°.30W, h3^{km}, ML2.9*

ISC 27 18:30:16.9±0.8**, 51°.02N**±0°.02×**1°.28W**±0°.02**, h13**^{km}±6^{km}**, n120, σ1ˢ.69**/204**, 13D, United Kingdom**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op       ISC      h  m  s    ISC
WOL   Wolverton           0.30   7  eP       Pg       18 30 22.1 -0.9
WOL                                 eS       Sg       18 30 26.2 -0.9
WOL                                  IAML             18 30 36.2
         comp=N,1μm,0.5s
WOL                                  IAML             18 30 36.9
         comp=E,993nm,0.5s
WOL   Wolverton           0.30   7  eP       Pg       18 30 22.1 -0.9
WOL                                 eS       Sg       18 30 26.2 -0.9
WOL                                  IAML             18 30 36.2
         comp=N,1μm,0.5s
WOL                                  IAML             18 30 36.9
         comp=E,993nm,0.5s
BUW   Bucklebury Wes      0.39   5  eP       Pg       18 30 24.4 -0.4
BUW                                 eS       Sg       18 30 29.7 -0.4
BUW   Bucklebury Wes      0.39   5  eP       Pg       18 30 24.4 -0.4
BUW                                 eS       Sg       18 30 29.7 -0.4
SWN1  Swindon             0.59 327  eP       Pg       18 30 27.8 -0.7
SWN1                                eS       Sg       18 30 36.3 -0.1
SWN1                                 IAML             18 30 44.6
         comp=N,622nm,0.4s
SWN1                                 IAML             18 30 52.2
         comp=E,717nm,0.6s
SWN1  Swindon             0.59 327  eP       Pg       18 30 27.8 -0.7
SWN1                                eS       Sg       18 30 36.3 -0.1
SWN1                                 IAML             18 30 44.6
         comp=N,622nm,0.4s
SWN1                                 IAML             18 30 52.2
         comp=E,717nm,0.6s
SWN1  Swindon             0.59 327   Pg      Pg       18 30 27.8 -0.7
SWN1                                 Sg      Sg       18 30 36.5 +0.1
SWN1  Swindon             0.59 327           Pg       18 30 28.3 -0.2
SWN1                                         Sg       18 30 36.4 -0.1
BATH  Bath                0.78 303  eP       Pg       18 30 31.2 -0.9
BATH                                 IAML             18 30 56.8
         comp=N,844nm,0.7s
```

BATH				IAML		18 31 00.9	
	comp=E,699nm,0.6s						
BATH	**Bath**	**0.78**	**303**	*e*P	**Pg**	**18 30 31.2**	**-0.9**
BATH				IAML		18 30 56.8	
	comp=N,844nm,0.7s						
BATH				IAML		18 31 00.9	
	comp=E,699nm,0.6s						
BATH	**Bath**	**0.78**	**303**		**Pg**	**18 30 31.3**	**-0.9**
STRD	**Stroud**	**0.94**	**324**	*e*P	**Pg**	**18 30 34.0**	**-1.1**
STRD				*e*S	**Sg**	**18 30 46.4**	**-0.9**
STRD				IAML		18 30 47.0	
	comp=N,290nm,0.5s						
STRD				IAML		18 30 47.1	
	comp=E,300nm,0.4s						
STRD	**Stroud**	**0.94**	**324**	*e*P	**Pg**	**18 30 34.0**	**-1.1**
STRD				*e*S	**Sg**	**18 30 46.4**	**-0.9**
STRD				IAML		18 30 47.0	
	comp=N,290nm,0.5s						
STRD				IAML		18 30 47.1	
	comp=E,300nm,0.4s						
STRD	**Stroud**	**0.94**	**324**		**Pg**	**18 30 34.3**	**-0.7**
STRD					**Sg**	**18 30 46.5**	**-0.9**
OLDB	**Oldbury-Upon-S**	**1.02**	**309**	*e*P	**Pg**	**18 30 35.3**	**-1.4**
OLDB				*e*S	**Sg**	**18 30 49.2**	**-0.8**
OLDB				IAML		18 30 50.6	
	comp=E,481nm,0.4s						
OLDB				IAML		18 30 51.8	
	comp=N,690nm,0.3s						
OLDB	**Oldbury-Upon-S**	**1.02**	**309**	*e*P	**Pg**	**18 30 35.3**	**-1.4**
OLDB				*e*S	**Sg**	**18 30 49.2**	**-0.8**
OLDB				IAML		18 30 50.6	
	comp=E,481nm,0.4s						
OLDB				IAML		18 30 51.8	
	comp=N,690nm,0.3s						
OLDB	**Oldbury-Upon-S**	**1.02**	**309**		**Pg**	**18 30 35.4**	**-1.4**
OLDB					**Sg**	**18 30 49.5**	**-0.5**
HMNX	**Herstmonceux**	**1.03**	**98**	*e*P	**Pg**	**18 30 37.7**	**+0.9**
HMNX				IAML		18 30 56.2	
	comp=E,529nm,0.4s						
HMNX				IAML		18 30 57.5	
	comp=N,444nm,0.4s						
HMNX	**Herstmonceux**	**1.03**	**98**	*e*P	**Pg**	**18 30 37.7**	**+0.9**
HMNX				IAML		18 30 56.2	
	comp=E,529nm,0.4s						
HMNX				IAML		18 30 57.5	
	comp=N,444nm,0.4s						
HMNX	**Herstmonceux**	**1.03**	**98**	Pg	**Pb**	**18 30 38.2**	**+1.5**
HMNX				Sg	**Sn**	**18 30 54.0**	**+2.5**
HMNX	**Herstmonceux**	**1.03**	**98**		**Pb**	**18 30 38.4**	**+1.7**
MCH1	**Michaelchurch**	**1.45**	**313**	*e*P	**Pn**	**18 30 42.8**	**-0.1**
MCH1				*e*S	**Sg**	**18 31 01.3**	**-2.5**
MCH1				IAML		18 31 01.6	
	comp=E,122nm,0.3s						
MCH1				IAML		18 31 02.8	
	comp=N,124nm,0.3s						
MCH1	**Michaelchurch**	**1.45**	**313**	*e*P	**Pn**	**18 30 42.8**	**-0.1**
MCH1				*e*S	**Sg**	**18 31 01.3**	**-2.5**
MCH1				IAML		18 31 01.6	
	comp=E,122nm,0.3s						
MCH1				IAML		18 31 02.8	
	comp=N,124nm,0.3s						
MCH1	**Michaelchurch**	**1.45**	**313**		**Pn**	**18 30 43.4**	**+0.5**
MCH1					**Sg**	**18 31 01.0**	**-2.7**
ELSH	**Elham, Standar**	**1.53**	**84**	Pn	**Pb**	**18 30 46.8**	**+1.6**
ELSH				Sn	**Sg**	**18 31 07.9**	**+1.7**
CWF	**Charnwood Fore**	**1.72**	**359**	*e*P	**Pn**	**18 30 46.1**	**-0.5**
CWF				IAML		18 31 08.8	
	comp=E,137nm,0.4s						
CWF				IAML		18 31 10.2	
	comp=N,78nm,0.4s						
CWF	**Charnwood Fore**	**1.72**	**359**	*e*P	**Pn**	**18 30 46.1**	**-0.5**
CWF				IAML		18 31 08.8	
	comp=E,137nm,0.4s						
CWF				IAML		18 31 10.2	
	comp=N,78nm,0.4s						
DYA	**Yadsworthy**	**1.78**	**252**	*e*P	**Pn**	**18 30 48.0**	**+0.6**
DYA				IAML		18 31 17.8	
	comp=E,52nm,0.3s						
DYA				IAML		18 31 18.7	
	comp=N,61nm,0.3s						
DYA	**Yadsworthy**	**1.78**	**252**	*e*P	**Pn**	**18 30 48.0**	**+0.6**
DYA				IAML		18 31 17.8	
	comp=E,52nm,0.3s						
DYA				IAML		18 31 18.7	
	comp=N,61nm,0.3s						
DYA	**Yadsworthy**	**1.78**	**252**	Pn	**Pn**	**18 30 48.0**	**+0.6**
DYA				Sn	**Sn**	**18 31 10.8**	**+0.9**
HLM1	**Long Mynd**	**1.80**	**327**	*e*P	**Pn**	**18 30 47.8**	**+0.1**
HLM1				*e*S	**Sn**	**18 31 10.2**	**-0.3**
HLM1				IAML		18 31 11.7	
	comp=E,124nm,0.3s						
HLM1				IAML		18 31 12.2	
	comp=N,116nm,0.5s						
HLM1	**Long Mynd**	**1.80**	**327**	*e*P	**Pn**	**18 30 47.8**	**+0.1**
HLM1				*e*S	**Sn**	**18 31 10.2**	**-0.3**
HLM1				IAML		18 31 11.7	
	comp=E,124nm,0.3s						
HLM1				IAML		18 31 12.2	
	comp=N,116nm,0.5s						
HLM1	**Long Mynd**	**1.80**	**327**		**Pn**	**18 30 48.5**	**+0.8**
HLM1					**Sn**	**18 31 10.1**	**-0.3**
JSA	**Saint Aubin**	**1.92**	**198**	Pn	**Pn**	**18 30 50.0**	**+0.7**
JSA				Pg	**Pg**	**18 30 55.3**	**+1.6**
JSA				Sg	**Sg**	**18 31 20.5**	**+1.9**
HTL	**Hartland**	**2.02**	**271**	Pn	**Pn**	**18 30 51.1**	**+0.3**
WACR	**West Acre**	**2.08**	**34**	*e*P	**Pn**	**18 30 52.4**	**+0.9**
WACR				IAML		18 31 24.4	
	comp=N,127nm,0.3s						
WACR				IAML		18 31 27.6	
	comp=E,102nm,0.2s						
WACR	**West Acre**	**2.08**	**34**	*e*P	**Pn**	**18 30 52.4**	**+0.9**
WACR				IAML		18 31 24.4	
	comp=N,127nm,0.3s						
WACR				IAML		18 31 27.6	
	comp=E,102nm,0.2s						
WACR	**West Acre**	**2.08**	**34**		**Pn**	**18 30 52.5**	**+1.0**
MENF	**Mencas**	**2.23**	**101**	Pn	**Pn**	**18 30 56.5**	**+3.0**
MENF				Sn	**Sn**	**18 31 25.1**	**+4.2**
SBD1	**Bryn Du**	**2.25**	**328**	*e*P	**Pn**	**18 30 53.5**	**-0.4**
SBD1				IAML		18 31 28.1	
	comp=N,44nm,0.5s						
SBD1				IAML		18 31 28.3	
	comp=E,31nm,0.5s						
SBD1	**Bryn Du**	**2.25**	**328**	*e*P	**Pn**	**18 30 53.5**	**-0.4**
SBD1				IAML		18 31 28.1	
	comp=N,44nm,0.5s						
SBD1				IAML		18 31 28.3	
	comp=E,31nm,0.5s						
FLN	**La Foliniere**	**2.32**	**167**	*e*Pn	**Pn**	**18 30 56.3**	**+1.5**
	baz=347						
FLN				*e*Sn	**Sn**	**18 31 23.6**	**+0.5**
	comp=E,57nm,0.3s,baz=349						
FLN				*e*Sg	**Sg**	**18 31 32.6**	**+1.3**
	baz=345						
LBWR	**Ladybower, Pea**	**2.40**	**354**	*e*P	**Pn**	**18 30 56.7**	**+0.7**
LBWR				IAML		18 31 32.1	
	comp=E,127nm,0.4s						
LBWR				IAML		18 31 32.2	
	comp=N,149nm,0.3s						
LBWR	**Ladybower, Pea**	**2.40**	**354**	*e*P	**Pn**	**18 30 56.7**	**+0.7**
LBWR				IAML		18 31 32.1	
	comp=E,127nm,0.4s						
LBWR				IAML		18 31 32.2	
	comp=N,149nm,0.3s						
LBWR	**Ladybower, Pea**	**2.40**	**354**		**Pn**	**18 30 57.6**	**+1.6**
LDF	**La Druitiere**	**2.54**	**162**	*e*Pn	**Pn**	**18 30 59.2**	**+1.4**
LDF	**La Druitiere**	**2.54**	**162**	*e*Pg	**Pb**	**18 31 05.6**	**+3.2**
LDF				*e*Sn	**Sn**	**18 31 29.0**	**+0.4**
LDF				*e*Sg	**Sg**	**18 31 39.3**	**+0.8**
	comp=N,48nm,0.4s						
GRR	**Gorron**	**2.65**	**174**	*e*P	**Pn**	**18 31 02.1**	**+2.8**
GRR	**Gorron**	**2.65**	**174**	*e*Pg	**Pg**	**18 31 08.2**	**+0.6**
GRR				*e*Sg	**Sg**	**18 31 42.3**	**+0.4**
	comp=N,56nm,0.3s						
CCA1	**Carnmenellis**	**2.65**	**253**	Pn	**Pn**	**18 30 59.6**	**+0.3**
SGMF	**Saint Gilles**	**2.89**	**197**	*e*Pn	**Pn**	**18 31 03.8**	**+1.2**
SGMF	**Saint Gilles**	**2.89**	**197**	*e*Pg	**Pg**	**18 31 12.3**	**+0.1**
SGMF				*e*Sn	**Sn**	**18 31 37.0**	**-0.2**
SGMF				*e*Sg	**Sg**	**18 31 50.1**	**+0.5**
	comp=N,46nm,0.4s						
WLF1	**Llynfaes**	**2.98**	**321**	*e*P	**Pn**	**18 31 03.5**	**-0.3**
WLF1	**Llynfaes**	**2.98**	**321**	*e*P	**Pn**	**18 31 03.5**	**-0.3**
ROSF	**Rostrenen**	**2.98**	**206**	Pn	**Pn**	**18 31 04.8**	**+0.9**
ROSF	**Rostrenen**	**2.98**	**206**	*e*Pn	**Pn**	**18 31 04.7**	**+0.9**
ROSF	**Rostrenen**	**2.98**	**206**	*e*Pg	**Pb**	**18 31 13.6**	**+3.8**
ROSF				*e*Sn	**Sn**	**18 31 39.2**	**-0.3**
ROSF				*e*Sg	**Sg**	**18 31 52.7**	**+0.1**
	comp=N,23nm,0.3s						
WPS	**Cemaes, Angles**	**3.10**	**322**	*e*P	**Pn**	**18 31 06.3**	**+0.8**
WPS	**Cemaes, Angles**	**3.10**	**322**	*e*P	**Pn**	**18 31 06.3**	**+0.8**
QUIF	**Quistinic**	**3.34**	**202**	*e*Pn	**Pn**	**18 31 09.8**	**+1.0**
QUIF	**Quistinic**	**3.34**	**202**	*e*Pg	**Pg**	**18 31 20.5**	**-0.4**
QUIF				*e*Sn	**Sn**	**18 31 47.7**	**-0.6**
QUIF				*e*Sg	**Sg**	**18 32 03.5**	**-0.6**
	comp=N,21nm,0.4s						
BAIF	**Baives**	**3.63**	**103**	*e*P	**Pn**	**18 31 15.6**	**+2.8**
BAIF				*e*Sn	**Sn**	**18 31 54.6**	**-0.9**
BAIF				*e*Sg	**Sg**	**18 32 12.5**	**-1.0**
	comp=N,14nm,0.4s						
CLF	**Chambon-Foret**	**3.78**	**141**	Pn	**Pn**	**18 31 17.4**	**+2.6**
DSB	**Dublin**	**3.85**	**307**	Pn	**Pn**	**18 31 15.9**	**+0.1**
DSB				Sn	**Sn**	**18 31 58.8**	**-2.1**
DOU	**Dourbes**	**3.86**	**102**	*d*Pn	**Pn**	**18 31 18.5**	**+2.5**
DOU	**Dourbes**	**3.86**	**102**	Pn	**Pn**	**18 31 18.4**	**+2.5**
DOU				Sn	**Sn**	**18 32 04.5**	**+3.3**
BMRD	**Maredsous**	**3.92**	**98**	*d*Pn	**Pn**	**18 31 18.8**	**+2.0**
BMRD				*d*Pb	**Pb**	**18 31 26.7**	**+0.9**
GIVF	**Givet**	**4.00**	**101**	*e*P	**Pn**	**18 31 21.0**	**+3.1**
GIVF				*e*Sn	**Sn**	**18 32 02.8**	**-1.8**
GIVF				*e*Sg	**Sg**	**18 32 23.7**	**-1.6**
	comp=N,13nm,0.3s						
BGES	**Gesves**	**4.10**	**96**	*d*Pn	**Pn**	**18 31 22.1**	**+2.8**
BCLA	**Clavier**	**4.23**	**96**	*d*Pn	**Pn**	**18 31 22.9**	**+1.9**
RCHB	**Rochefort**	**4.24**	**99**	*d*Pn	**Pn**	**18 31 23.3**	**+2.2**
BSTI	**Sart Tilman**	**4.37**	**93**	*d*Pn	**Pn**	**18 31 25.6**	**+2.7**
BEBN	**Eben Emael**	**4.41**	**90**	*d*Pn	**Pn**	**18 31 26.4**	**+2.9**
BEBN				*d*Pb	**Pb**	**18 31 34.9**	**+0.7**
BEBN				*d*SnSn	**Sb**	**18 32 28.2**	**+0.9**
EKR10	**Eskdalemuir Ar**	**4.43**	**347**	Pn	**Pn**	**18 31 23.0**	**-0.8**
EKR9	**Eskdalemuir Ar**	**4.44**	**347**	Pn	**Pn**	**18 31 23.6**	**-0.3**
ESK	**Eskdalemuir**	**4.46**	**346**	Pn	**Pn**	**18 31 24.5**	**+0.3**
EKB	**Eskdalemuir**	**4.47**	**346**	Pn	**Pn**	**18 31 24.4**	**0.0**
MFF	**Saint Martin d**	**4.48**	**170**	Pn	**Pn**	**18 31 24.8**	**+0.2**
MFF				Sn	**Sn**	**18 32 17.1**	**+0.5**
MFF	**Saint Martin d**	**4.48**	**170**	*e*Pn	**Pn**	**18 31 25.5**	**+1.0**
MFF				*e*Sn	**Sn**	**18 32 15.6**	**-0.9**
MFF				*e*Sg	**Sg**	**18 32 39.9**	**-0.9**
	comp=N,18nm,0.4s						
HYF	**Humbligny**	**4.55**	**144**	*e*Pn	**Pn**	**18 31 25.8**	**+0.3**
HYF	**Humbligny**	**4.55**	**144**	*e*Pg	**Pg**	**18 31 42.8**	**-1.2**
HYF				*e*Sg	**Sg**	**18 32 42.1**	**-0.8**
MEM	**Membach**	**4.64**	**92**	*d*Pn	**Pn**	**18 31 28.9**	**+2.3**
BTNL	**Ternell**	**4.72**	**92**	*d*Pn	**Pn**	**18 31 30.0**	**+2.2**
BTNL				*d*Sn	**Sn**	**18 32 22.9**	**+0.5**
SAVF	**Savonnieres en**	**4.79**	**118**	*e*Pn	**Pn**	**18 31 29.4**	**+0.6**
	baz=297						
SAVF				*e*Sg	**Sg**	**18 32 49.3**	**-1.4**
	comp=N,13nm,0.5s						
MEZF	**Maizieres J'vi**	**4.82**	**119**	*e*Pn	**Pn**	**18 31 29.7**	**+0.6**
	baz=299						
MEZF	**Maizieres J'vi**	**4.82**	**119**	*e*Pg	**Pg**	**18 31 47.4**	**-1.7**
	baz=300						
MEZF				*e*Sn	**Sn**	**18 32 22.9**	**-1.8**
MEZF				*e*Sg	**Sg**	**18 32 49.8**	**-1.6**
	comp=N,9.5nm,0.4s						
SFTF	**Sexfontaines**	**4.98**	**122**	*e*Pn	**Pn**	**18 31 32.0**	**+0.6**
	baz=301						
SFTF				*e*Sn	**Sn**	**18 32 27.3**	**-1.5**
SFTF				*e*Sg	**Sg**	**18 32 55.0**	**-1.7**
	comp=N,7.4nm,0.3s						
LOR	**Lormes**	**5.04**	**136**	*e*Pn	**Pn**	**18 31 33.0**	**+0.7**
	baz=316						
LOR				*e*Sn	**Sn**	**18 32 28.2**	**-2.2**
LOR				*e*Sg	**Sg**	**18 32 57.3**	**-1.5**
	comp=N,14nm,0.5s						
SSF	**Saint Saulge**	**5.06**	**140**	*e*Pn	**Pn**	**18 31 32.9**	**+0.4**
SSF	**Saint Saulge**	**5.06**	**140**	*e*Pg	**Pg**	**18 31 52.0**	**-1.7**
SSF				*e*Sn	**Sn**	**18 32 28.8**	**-1.9**
SSF				*e*Sg	**Sg**	**18 32 58.0**	**-1.2**
	comp=N,12nm,0.3s						
PAGF	**Fort de Pagny**	**5.17**	**116**	*e*Pn	**Pn**	**18 31 34.6**	**+0.7**
	baz=295						
PAGF				*e*Sn	**Sn**	**18 32 31.4**	**-1.9**
PAGF				*e*Sg	**Sg**	**18 32 59.9**	**-2.7**
	comp=N,9.7nm,0.4s						
AVF	**Avril sur Loir**	**5.22**	**142**	*e*Pn	**Pn**	**18 31 35.3**	**+0.7**
AVF				*e*Sn	**Sn**	**18 32 32.6**	**-2.0**
	comp=N,8.6nm,0.4s						
AVF				*e*Sg	**Sg**	**18 33 02.9**	**-1.4**
BGF	**Bois d'Agland**	**5.23**	**147**	*e*Pn	**Pn**	**18 31 35.3**	**+0.5**
BGF	**Bois d'Agland**	**5.23**	**147**	*e*P	Pn	18 31 39.6	+4.8
BGF				*e*Sn	**Sn**	**18 32 32.8**	**-2.2**
BGF				*e*Sg	**Sg**	**18 33 02.8**	**-1.9**
	comp=N,45nm,0.5s						
TCF	**Toulx Ste Croi**	**5.27**	**153**	*e*Pn	**Pn**	**18 31 35.9**	**+0.5**
TCF				*e*Sn	**Sn**	**18 32 34.4**	**-1.5**
TCF				*e*Sg	**Sg**	**18 33 04.4**	**-1.6**
	comp=N,22nm,0.6s						
SMF	**Signal de Mont**	**5.53**	**140**	*e*Pn	**Pn**	**18 31 39.4**	**+0.5**
SMF				*e*Sn	**Sn**	**18 32 39.8**	**-2.6**
SMF				*e*Sg	**Sg**	**18 33 12.6**	**-1.7**
	comp=N,14nm,0.5s						
HAU	**Haudompre**	**5.81**	**118**	*e*Pn	**Pn**	**18 31 43.2**	**+0.4**
HAU				*e*Sn	**Sn**	**18 32 46.9**	**-2.4**
HAU				*e*Sg	**Sg**	**18 33 19.9**	**-3.5**
	comp=N,8.3nm,0.4s						
RJF	**Les Rejaudoux**	**6.02**	**161**	*e*Pn	**Pn**	**18 31 46.1**	**+0.5**
RJF	**Les Rejaudoux**	**6.02**	**161**	*e*P	Pn	18 31 50.9	+5.3
RJF				*e*Sn	**Sn**	**18 32 52.0**	**-2.3**
	comp=N,58nm,1.2s						
RJF				*e*Sg	**Sg**	**18 33 27.5**	**-2.4**
CDF	**Champ du Feu**	**6.13**	**112**	*e*Pn	**Pn**	**18 31 47.3**	**0.0**
CDF				*e*Sn	**Sn**	**18 32 54.2**	**-3.1**
CDF				*e*Sg	**Sg**	**18 33 30.9**	**-2.7**
	comp=N,4.9nm,0.4s						
ECH	**Echery**	**6.16**	**114**	Pn	**Pn**	**18 31 49.8**	**+2.2**
ECH	**Echery**	**6.16**	**114**	Pn	**Pn**	**18 31 49.5**	**+1.9**
HINF	**Hinteralfeld**	**6.20**	**118**	*e*Pn	**Pn**	**18 31 48.3**	**+0.1**
HINF				*e*Sn	**Sn**	**18 32 56.6**	**-2.3**
HINF				*e*Sg	**Sg**	**18 33 33.9**	**-1.9**
	comp=N,3.4nm,0.3s						
LFF	**La Frestale**	**6.23**	**167**	*e*Pn	**Pn**	**18 31 49.1**	**+0.5**
LFF				*e*Sn	**Sn**	**18 32 57.2**	**-2.4**
LFF				*e*Sg	**Sg**	**18 33 34.2**	**-2.6**
	comp=N,21nm,0.7s						
CHMF	**Charmoille**	**6.43**	**123**	Pn	**Pn**	**18 31 52.8**	**+1.5**
CAF	**Calviac**	**6.50**	**158**	*e*Pn	**Pn**	**18 31 52.6**	**+0.4**
CAF	**Calviac**	**6.50**	**158**	*e*P	Pn	18 31 57.2	+5.0
CAF				*e*Sn	**Sn**	**18 33 03.3**	**-2.9**
	comp=N,2.4nm,0.2s						
CABF	**La Chapelle**	**6.56**	**129**	*e*Pn	**Pn**	**18 31 53.7**	**+0.5**
CABF	**La Chapelle**	**6.56**	**129**	*e*P	Pn	18 31 58.5	+5.3
CABF				*e*Sn	**Sn**	**18 33 05.1**	**-2.9**
CABF				*e*Sg	**Sg**	**18 33 45.1**	**-2.4**
	comp=N,1.4nm,0.3s						
BFO	**Black Forest**	**6.79**	**110**	Pn	**Pn**	**18 31 58.3**	**+2.0**
SSB	**Saint Sauveur**	**6.94**	**144**	Pn	**Pn**	**18 32 01.9**	**+3.6**
SENIN	**Lac Senin/Sane**	**7.34**	**126**	Pn	**Pn**	**18 32 05.7**	**+1.7**
VIVF	**Saint-Julien-l**	**7.35**	**145**	*e*Pn	**Pn**	**18 32 04.2**	**+0.3**
VIVF				*e*Sn	**Sn**	**18 33 23.8**	**-3.3**
	comp=N,7.5nm,0.6s						
LPG	**La Plagne**	**7.69**	**133**	*e*Pn	**Pn**	**18 32 09.0**	**+0.1**
LPG				*e*Sn	**Sn**	**18 33 32.4**	**-3.6**
	comp=N,1.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**7.76**	**139**	*e*Pn	**Pn**	**18 32 10.5**	**+0.8**
ORIF	**Oris-en-Rattie**	**7.76**	**139**	*e*P	Pn	18 32 15.7	+6.0
ORIF				*e*Sn	**Sn**	**18 33 33.7**	**-3.8**
	comp=N,2.1nm,0.3s						
SJPF	**Ste Jean**	**7.91**	**180**	*e*P	Pn	18 32 16.5	+4.9
SJPF				*e*Sn	**Sn**	**18 33 36.5**	**-4.4**
	comp=N,0.6nm,0.3s						
MTLF	**Montolieu**	**8.04**	**161**	*e*Pn	**Pn**	**18 32 14.1**	**+0.7**
MTLF				*e*Sn	**Sn**	**18 33 40.1**	**-4.0**
	comp=N,0.5nm,0.2s						
EPF	**Esparros**	**8.07**	**171**	*e*Pn	**Pn**	**18 32 14.3**	**+0.5**
EPF				*e*Sn	**Sn**	**18 33 40.7**	**-4.2**
	comp=N,1.3nm,0.3s						
MBDF	**Montbardon**	**8.30**	**136**	*e*Pn	**Pn**	**18 32 17.5**	**+0.4**
MBDF				*e*Sn	**Sn**	**18 33 46.6**	**-4.1**
	comp=N,0.7nm,0.3s						

NEIC ***27*** *18:30:41.1±2.0, 9°.14S±0°.04×127°.00E±0°.08, h50^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=11.1km s-min=4.5km az=77.0*

IDC ***27*** *18:30:43.2±2.1, 9°.27S×126°.99E, h77^{km}±24^{km}, mb3.8/5, mb1 4.0/10, mb1mx3.8/28, mbtmp4.1/10, Error ellipse: s-maj=20.7km s-min=14.9km az=26.0*

ISC 27 18:30:40.2±0.6**, 9°.13S**±0°.06×**127°.05E**±0°.07**, h35^{km}, n30, σ1^{s}.41**/33**, mb4.2**/9**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.81**	**257**		**Pn**	**18 31 23.1**	**+0.3**
SOEI				Sn	**Sn**	**18 31 57.8**	**+2.2**
BATI	**Baumata**	**3.50**	**252**	P	**Pn**	**18 31 33.5**	**+1.3**
	27nm,0.3s,baz=79,slow=3.6,SNR=28						
BATI				S	**Sn**	**18 32 14.3**	**+1.8**
	31nm,0.3s,baz=99,slow=3.3,SNR=7.4						
MMRI	**Maumere**	**4.78**	**276**	Pn	**Pn**	**18 31 49.1**	**-0.7**
FAKI	**Fak Fak**	**8.05**	**40**	Pn	**Pn**	**18 32 36.5**	**+1.7**
FITZ	**Fitzroy Crossi**	**9.02**	**189**	P	**Pn**	**18 32 49.9**	**+2.0**
	1.9nm,0.3s,baz=6.2,slow=8.7,SNR=37						
FITZ				S	**Sn**	**18 34 27.4**	**-0.8**
	3.3nm,0.3s,baz=296,slow=18,SNR=9.9						
SIJI	**Sorong**	**9.22**	**27**	P	Pn	18 32 55.0	+4.1
	1.9nm,0.3s,baz=167,slow=22,SNR=6.8						
TOLI2	**Tolitoli**	**11.94**	**328**	Pn	**Pn**	**18 33 29.2**	**+1.2**
WB0	**Warramunga Arr**	**12.74**	**147**	Pn	**Pn**	**18 33 39.7**	**+0.8**
WRA	**Warramunga Arr**	**12.85**	**148**	P	**Pn**	**18 33 41.3**	**+0.8**
	1.0nm,0.3s,baz=321,slow=15,SNR=48						
WRA				S	**Sn**	**18 36 00.5**	**-1.9**
	1.6nm,0.3s,baz=321,slow=24,SNR=9.8						
WRA	**Warramunga Arr**	**12.85**	**148**		**Pn**	**18 33 41.1**	**+0.6**
WB2	**Warramunga Arr**	**12.86**	**147**		**Pn**	**18 33 40.8**	**+0.2**
WR0	**Warramunga Arr**	**12.97**	**147**		**Pn**	**18 33 43.2**	**+1.1**
AS31	**Alice Springs**	**15.87**	**156**	P	**Pn**	**18 34 22.1**	**+1.1**
ASAR	**Alice Springs**	**15.87**	**156**	P	**Pn**	**18 34 22.1**	**+1.0**
	1.1nm,0.3s,baz=325,slow=9.9,SNR=83						
ASAR				S	**Sn**	**18 37 13.6**	**-2.4**
	0.7nm,0.3s,baz=332,slow=23,SNR=10						
ASAR	**Alice Springs**	**15.87**	**156**	P	**Pn**	**18 34 22.6**	**+1.5**
SBUM	**Sibu**	**18.73**	**307**		**Pn**	**18 34 55.9**	**-0.8**
SBUM				IAmb	IAmb	18 35 01.3	
	comp=Z,13nm,1.5s						
CISI	**Cisompet, Garu**	**19.09**	**273**	P	**P**	**18 34 58.2**	**-1.9**
CTAO	**Charters Tower**	**21.51**	**123**	P	**P**	**18 35 28.3**	**+2.0**
CTAO				IAmb	IAmb	18 35 49.9	
	comp=Z,15nm,1.4s						
CMAR	**Chiang Mai Arr**	**39.00**	**315**	P	**P**	**18 38 02.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=143,slow=6.9,SNR=6.3						
SONM	**Songino Array**	**59.60**	**344**	P	**P**	**18 40 40.0**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=174,slow=6.5,SNR=3.8						
SONM	**Songino Array**	**59.60**	**344**	IAmb	IAmb	18 40 41.0	
	comp=Z,0.4nm,0.8s						
PETK	**Petropavlovsk-**	**67.27**	**19**	P	**P**	**18 41 31.7**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=194,slow=5.3,SNR=4.4						
MK31	**Makanchi Array**	**68.46**	**329**	P	**P**	**18 41 37.5**	**-1.2**
MK31				IAmb	IAmb	18 41 46.9	
	comp=Z,1.8nm,1.2s						
MKAR	**Makanchi Array**	**68.46**	**329**	P	**P**	**18 41 37.5**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=126,slow=7.7,SNR=34						
MKAR	**Makanchi Array**	**68.46**	**329**	P	**P**	**18 41 37.3**	**-1.4**
MAKZ	**Makanchi**	**68.63**	**329**	P	**P**	**18 41 38.0**	**-1.8**
ZAA0	**Zalesovo Array**	**72.24**	**335**	P	**P**	**18 42 00.9**	**-0.7**
ZAA0				IAmb	IAmb	18 42 01.1	
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**72.24**	**335**	P	**P**	**18 41 60.0**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=135,slow=5.0,SNR=9.3						
KURK	**Kurchatov**	**72.85**	**330**	P	**P**	**18 42 04.2**	**-1.2**
KURK				IAmb	IAmb	18 42 06.5	
	comp=Z,3.3nm,1.1s						
ABKAR	**Akbulak array**	**82.38**	**322**	P	**P**	**18 42 57.8**	**-0.8**

CRAAG ***27*** *19:08:06.7, 36°.69N×3°.37E, Ml2.8*

MDD ***27*** *19:08:08.0±0.5, 36°.77N×3°.39E, h10^{km}±5^{km}, mb4.0/8, Error ellipse: s-maj=7.0km s-min=6.7km az=88.0, PRXIMO*

ISC 27 19:08:06.5±1.0**, 36°.82N**±0°.05×**3°.43E**±0°.04**, h12^{km}, n25, σ1^{s}.68**/33**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.08**	**149**	P	**Pg**	**19 08 10.0**	**+0.9**
ABMS	**Boumerdes**	**0.08**	**149**	P	**Pg**	**19 08 10.0**	**+0.9**
ABA	**Alger-Bouzarea**	**0.32**	**267**	P	**Pg**	**19 08 13.5**	**+0.6**
ABA	**Alger-Bouzarea**	**0.32**	**267**	P	**Pg**	**19 08 13.5**	**+0.6**
ADJB	**Djebel Djouab**	**0.66**	**179**	P	**Pg**	**19 08 19.2**	**-0.1**
ADJB	**Djebel Djouab**	**0.66**	**179**	P	**Pg**	**19 08 19.2**	**-0.1**
EMHD	**Djebel Mahouad**	**0.73**	**212**	P	**Pg**	**19 08 20.2**	**-0.4**
EMHD	**Djebel Mahouad**	**0.73**	**212**	P	**Pg**	**19 08 20.2**	**-0.4**
EBNR	**Beni Rached**	**1.62**	**252**	P	**Pg**	**19 08 39.0**	**+1.5**
ECHA	**Ech Chlef**	**1.79**	**249**	P	**Pg**	**19 08 42.0**	**+1.1**
ECHF	**Ech Chlef**	**1.81**	**249**	P	**Pg**	**19 08 42.0**	**+0.8**
EANR	**'Ain N'Sour**	**2.07**	**246**	P	**Pb**	**19 08 44.0**	**0.0**
EANR	**'Ain N'Sour**	**2.07**	**246**	P	**Pb**	**19 08 44.0**	**0.0**
EIBI	**Ibiza**	**2.75**	**324**	P	**Pn**	**19 08 51.4**	**+0.9**
	8.0nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**19 09 22.0**	**-1.7**
	1.2nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.98**	**351**	P	**Pn**	**19 08 55.2**	**+1.6**
	1.7nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**19 09 27.5**	**-1.9**
	1.1nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.42**	**304**	P	**Pn**	**19 09 00.3**	**+0.7**
	0.4nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**19 09 38.0**	**-2.1**
	0.9nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**3.86**	**287**	S	**Sn**	**19 09 48.7**	**-2.3**
	0.5nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	**4.34**	**296**	P	**Pn**	**19 09 13.8**	**+1.3**
	1.6nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**19 10 02.3**	**-0.8**
	SNR=7.9						
ECHE	**Chera**	**4.43**	**310**	P	**Pn**	**19 09 15.0**	**+1.4**
	2.4nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.68**	**320**	P	**Pn**	**19 09 17.7**	**+0.6**
	1.0nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**19 10 08.0**	**-3.4**
	0.2nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.88**	**339**	P	**Pn**	**19 09 21.7**	**+1.9**
	0.8nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**19 10 13.3**	**-2.9**
	0.3nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.00**	**351**	P	**Pn**	**19 09 22.5**	**+1.1**
	2.0nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**19 10 15.7**	**-3.5**
	1.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.27**	**283**	P	**Pn**	**19 09 27.0**	**+1.7**
	1.7nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**19 10 24.2**	**-1.8**
	0.1nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**5.30**	**344**	P	**Pn**	**19 09 28.2**	**+2.7**
	6.5nm,0.2s,SNR=7.9						
SJAF	**Saint Jean de**	**5.67**	**356**	P	**Pn**	**19 09 32.2**	**+1.6**
	1.0nm,0.2s,SNR=7.9						

IDC ***27*** *19:08:45.8±0.9, 16°.91S×175°.32E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx4.0/26, mbtmp3.9/10, MS3.6/17, Ms1 3.6/17, ms1mx3.5/31, Error ellipse: s-maj=35.8km s-min=23.3km az=143.0*

NEIC ***27*** *19:08:49.8±2.0, 16°.8S±0°.1×175°.76E±0°.06, h39^{km}±8^{km}, mb4.4/10, Error ellipse: s-maj=15.1km s-min=8.7km az=172.0*

ISC 27 19:08:50.5±0.6**, 16°.9S**±0°.1×**175°.68E**±0°.07**, h35^{km}, n47, σ1^{s}.77**/28**, mb4.0**/13**, MS3.6**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.40**	**110**		**Pn**	**19 09 26.7**	**-0.8**
MSVF				Sn	**Sn**	**19 09 53.2**	**-2.5**
SANVU	**Saraoutou**	**8.27**	**279**	Pn	**Pn**	**19 10 48.1**	**0.0**
DZM	**Mont Dzumac**	**10.10**	**238**	*e*P	**Pn**	**19 11 16.0**	**+2.7**
	60nm,1.2s						
DZM				*e*LR	LR	19 13 18.6	
	comp=Z,331nm,24.0s						
DZM	**Mont Dzumac**	**10.10**	**238**	Pn	**Pn**	**19 11 11.5**	**-1.7**
	0.1nm,0.3s,baz=300,slow=2.6,SNR=1.9						
DZM				LR	LR	19 14 25.8	
	comp=Z,245nm,21.0s,baz=75,slow=35						
DZM	**Mont Dzumac**	**10.10**	**238**	Pn	**Pn**	**19 11 15.0**	**+1.7**
HNR	**Honiara**	**17.02**	**294**	LR	LR	19 18 56.1	
	comp=Z,146nm,18.1s,baz=91,slow=36						
RAR	**Rarotonga**	**23.58**	**104**	LR	LR	19 23 42.8	
	comp=Z,65nm,18.1s,baz=272,slow=38						
MSWZ	**Moikau Station**	**24.41**	**181**	P	**P**	**19 14 05.4**	**-0.4**
LTZ	**Lake Taylor**	**25.94**	**186**	P	**P**	**19 14 22.3**	**+2.7**
LTZ				IAmb	IAmb	19 14 37.6	
	comp=Z,22nm,1.4s						
RPZ	**Rata Peaks**	**27.00**	**187**	LR	LR	19 24 03.2	
	comp=Z,153nm,19.8s,baz=3.0,slow=34						

PMG	Port Moresby	28.73	281	LR	LR	19 23 59.9	
	comp=Z,106nm,18.1s,baz=78,slow=32						
PPT2	Papeete2	33.16	96	*e*LR	LR	19 24 24.2	
	comp=Z,169nm,26.2s						
PPT	Papeete	33.16	96	LR	LR	19 25 33.7	
	comp=Z,62nm,21.1s,baz=188,slow=30						
TBI	Tubuai	33.29	107	*e*LR	LR	19 24 26.5	
	comp=Z,176nm,33.0s						
STKA	Stephens Creek	34.26	238	P	P	19 15 32.5	-0.9
	comp=Z,2.0nm,0.8s,baz=63,slow=9.1,SNR=3.4						
STKA				LR	LR	19 28 41.6	
	comp=Z,88nm,18.4s,baz=39,slow=35						
STKA	Stephens Creek	34.26	238	P	P	19 15 34.5	+1.1
H11S2	WAKE ISLAND Hy	36.28	346	T	T	19 53 49.4	
	baz=166,slow=76,SNR=439						
H11S3	WAKE ISLAND Hy	36.29	345	T	T	19 53 49.6	
	baz=166,slow=76,SNR=530						
H11S1	WAKE ISLAND Hy	36.30	346	T	T	19 53 49.9	
	baz=166,slow=76,SNR=678						
H11N3	WAKE ISLAND Hy	37.41	346	T	T	19 55 13.7	
	baz=166,slow=76,SNR=44						
H11N1	WAKE ISLAND Hy	37.42	346	T	T	19 55 15.7	
	baz=166,slow=76,SNR=42						
H11N2	WAKE ISLAND Hy	37.43	346	T	T	19 55 16.1	
	baz=166,slow=76,SNR=19						
WR0	Warramunga Arr	39.08	259	P	P	19 16 12.5	-2.1
WR0				IAmb	IAmb	19 16 21.1	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	39.22	259	P	P	19 16 13.9	-1.9
WB0				IAmb	IAmb	19 16 50.5	
	comp=Z,7.3nm,1.4s						
WRA	Warramunga Arr	39.27	259	P	P	19 16 13.7	-2.5
	comp=Z,0.9nm,0.8s,baz=90,slow=9.1,SNR=5.8						
AS31	Alice Springs	39.64	253	P	P	19 16 18.5	-0.8
ASAR	Alice Springs	39.65	253	P	P	19 16 15.4	-3.9
	comp=Z,2.0nm,0.8s,baz=89,slow=8.0,SNR=16						
ASAR				PcP	PcP	19 18 25.7	-0.3
	comp=Z,0.1nm,0.3s,baz=94,slow=4.1,SNR=3.4						
ASAR				LR	LR	19 32 01.6	
	comp=Z,93nm,18.1s,baz=94,slow=36						
ASAR	Alice Springs	39.65	253	P	P	19 16 17.9	-1.5
SIJI	Sorong	46.52	285	LR	LR	19 37 07.0	
	comp=Z,63nm,18.5s,baz=122,slow=37						
FITZ	Fitzroy Crossi	47.62	261	P	P	19 17 22.8	-0.7
BATI	Baumata	50.89	270	LR	LR	19 37 14.4	
	comp=Z,78nm,19.5s,baz=108,slow=34						
DAV	Davao City (W)	54.97	292	LR	LR	19 40 22.1	
	comp=Z,26nm,19.1s,baz=321,slow=35						
VNDA	Vanda	61.02	183	LR	LR	19 41 55.8	
	comp=Z,51nm,18.9s,baz=348,slow=33						
MJAR	Matsushiro Arr	63.87	327	P	P	19 19 19.7	-0.1
	comp=Z,2.2nm,0.9s,baz=144,slow=8.4,SNR=2.9						
SSLB	Suanglung	67.02	306	P	P	19 19 39.1	-1.3
QSPA	South Pole Qui	73.12	180	P	P	19 20 18.3	+1.0
	comp=Z,2.0nm,0.7s,baz=72,slow=2.5,SNR=4.8						
QSPA	South Pole Qui	73.12	180	P	P	19 20 17.7	+0.4
QSPA				IAmb	IAmb	19 20 24.2	
	comp=Z,5.8nm,1.1s						
NVAR	Mina Array Bea	82.73	46	P	P	19 21 12.5	+1.3
	comp=Z,0.3nm,0.7s,baz=67,slow=13,SNR=3.0						
NVAR				LR	LR	19 50 36.9	
	comp=Z,69nm,19.2s,baz=257,slow=30						
CMAR	Chiang Mai Arr	83.26	292	P	P	19 21 13.4	-0.6
	comp=Z,0.2nm,0.4s,baz=83,slow=30,SNR=2.4						
CMAR				LR	LR	19 56 29.5	
	comp=Z,14nm,21.9s,baz=118,slow=34						
ILAR	Eielson Array	86.31	15	P	P	19 21 28.0	-0.4
	comp=Z,0.1nm,0.5s,baz=318,slow=34,SNR=3.3						
ILAR				LR	LR	19 52 15.9	
	comp=Z,65nm,20.1s,baz=226,slow=30						
SONM	Songino Array	89.18	321	P	P	19 21 43.4	+0.7
	comp=Z,0.8nm,1.0s,baz=100,slow=4.0,SNR=5.0						
SONM	Songino Array	89.18	321	IAmb	IAmb	19 21 47.7	
	comp=Z,2.4nm,1.4s						
TXAR	Lajitas Array	90.30	59	P	P	19 21 51.6	+3.2
	comp=Z,0.1nm,0.4s,baz=356,slow=40,SNR=3.0						
PDAR	Pinedale Array	90.60	45	LR	LR	20 01 32.8	
	comp=Z,47nm,18.4s,baz=249,slow=35						
YKA	Yellowknife Ar	95.86	26	LR	LR	20 03 05.7	
	comp=Z,45nm,18.1s,baz=0.0,slow=34						
GERES	GERESS Array B	144.93	339	PKP	PKPdf	19 28 24.4	+0.3
	comp=Z,0.2nm,0.3s,baz=35,slow=4.9,SNR=4.8						
GERES	GERESS Array B	144.93	339		PKPbc	19 28 23.1	-0.3

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*IDC **27** 19:23:13.4±4.6, 10°.57S×166°.82E, h0^{km}, mb3.8/3, mb1 3.9/3, mb1mx3.6/39, mbtmp3.7/3, Error ellipse: s-maj=209.8km s-min=39.1km az=137.0*

*NEIC **27** 19:23:20.8±1.2, 10°.66S±0°.10×166°.9E±0°.1, h50^{km}±12^{km}, mb4.5/17, Error ellipse: s-maj=15.5km s-min=13.5km az=56.0*

ISC 27 19:23:19.5±0.8**, 10°.5S**±0°.1×**166°.9E**±0°.1**, h35^{km}, n28, σ1^{s}.00**/28**, mb4.5**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.90	176		Pn	19 24 32.5	+1.8
SANVU				Sn	Sn	19 25 14.2	-12
HNR	Honiara	6.92	278	Pn	Pn	19 24 59.9	+1.4
DZM	Mont Dzumac	11.49	182	Pn	Pn	19 26 00.3	-0.9
FUNA	Funafuti	12.31	82	Pn	Pn	19 26 12.5	+0.2
AS31	Alice Springs	34.02	243	P	P	19 30 00.3	-0.1
ASAR	Alice Springs	34.02	243	P	P	19 29 58.7	-1.7
	0.2nm,0.6s,baz=71,slow=9.9,SNR=1.4						
CNPM	China Poot	77.47	20	P	P	19 35 12.6	+1.5
TTA	Tatalina	78.61	16	P	P	19 35 18.9	+1.4
KNK	Knik Glacier	79.79	20	P	P	19 35 24.6	+0.7
SML	Sawmill	80.11	20	P	P	19 35 26.9	+1.3
SML				IAmb	IAmb	19 35 28.2	
	comp=Z,8.1nm,1.0s						
SCM	Sheep Creek Mo	80.47	20	P	P	19 35 28.4	+0.9
TRF	Thorofare Moun	80.68	18	P	P	19 35 28.5	-0.3
TRF				IAmb	IAmb	19 35 41.3	
	comp=Z,9.6nm,1.4s						
RND	Reindeer	81.09	19	P	P	19 35 31.1	+0.2
RND				IAmb	IAmb	19 35 41.4	
	comp=Z,5.6nm,1.5s						
VRDI	Verde Repeater	81.42	22	P	P	19 35 32.6	-0.2
VRDI				IAmb	IAmb	19 35 45.7	
	comp=Z,8.6nm,1.6s						
IMAR	Indian Mountai	81.63	15	P	P	19 35 34.9	+1.3
BALM	Baldy	81.71	22	P	P	19 35 33.8	-0.4
TABL	Table Mountain	81.79	23	P	P	19 35 35.2	+0.4
BARN	Barnard Glacie	81.98	23	P	P	19 35 36.2	+0.4
BARN				IAmb	IAmb	19 35 52.4	
	comp=Z,7.1nm,1.4s						
CTGM	Chitina Glacie	82.05	23	P	P	19 35 36.4	+0.4
CTGM				IAmb	IAmb	19 35 49.4	
	comp=Z,10nm,1.4s						
WRH	Wood River Hil	82.09	18	P	P	19 35 35.9	-0.1
WRH				IAmb	IAmb	19 35 48.4	
	comp=Z,4.7nm,1.3s						
CCB	Clear Creek Bu	82.30	18	P	P	19 35 37.0	-0.1
HDA	Harding Lake	82.40	18	P	P	19 35 37.7	+0.1
RIDG	Independent Ri	82.61	20	P	P	19 35 39.2	+0.4
RIDG				IAmb	IAmb	19 35 43.8	
	comp=Z,13nm,1.6s						
IL31		82.67	18	P	P	19 35 39.0	+0.1
ILAR	Eielson Array	82.67	18	P	P	19 35 38.8	-0.2
	comp=Z,1.8nm,0.7s,baz=239,slow=5.9,SNR=31						
IL18	Eielson Array	82.70	18	P	P	19 35 38.5	-0.7
MKAR	Makanchi Array	93.91	317	P	P	19 36 32.9	-0.7
	comp=Z,0.2nm,0.5s,baz=85,slow=5.4,SNR=4.6						
CLL	Collm	134.07	337	*e*PKPdf	PKPdf	19 42 31.0	-2.2

IDC 27 19:27:01.9±2.2**, 6°.14S**×**150°.50E, h0^{km}, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/35**, mbtmp3.6**/4**, Error ellipse: s-maj=111.3km s-min=30.5km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.85	227	P	P	19 31 45.6	+0.1
	0.7nm,0.6s,baz=53,slow=11,SNR=8.9						
ASAR	Alice Springs	23.63	221	P	P	19 32 14.9	0.0
	1.3nm,0.7s,baz=56,slow=9.4,SNR=17						
FITZ	Fitzroy Crossi	27.01	242	P	P	19 32 45.7	-0.1
	0.6nm,0.4s,baz=45,slow=10.0,SNR=1.4						
ILAR	Eielson Array	84.26	22	P	P	19 39 35.3	+0.1
	0.4nm,0.9s,baz=236,slow=6.4,SNR=2.3						

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*IDC **27** 19:28:12.5±3.5, 24°.40S×179°.97W, h479^{km}±33^{km}, mb3.5/8, mb1 3.7/8, mb1mx3.4/35, mbtmp4.4/8, Error ellipse: s-maj=31.4km s-min=25.5km az=176.0*

*NEIC **27** 19:28:14.9±2.0, 24°.5S±0°.1×179°.9W±0°.2, h519^{km}±9^{km}, mb4.5/19, Error ellipse: s-maj=21.9km s-min=18.4km az=89.0*

ISC 27 19:28:14.5±0.7**, 24°.5S**±0°.1×**179°.9W**±0°.1**, h505^{km}, n40, σ1^{s}.09**/38**, mb4.3**/15**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.03	344	P	P	19 30 00.2	-1.2
DZM	Mont Dzumac	12.76	278	P	P	19 31 02.0	+0.8
	0.5nm,0.3s,baz=67,slow=22,SNR=6.7						
DZM	Mont Dzumac	12.76	278	P	P	19 31 03.2	+2.0
BKZ	Black Stump Fm	14.89	191	P	P	19 31 22.7	-0.7
MSWZ	Moikau Station	17.30	192	P	P	19 31 46.9	-1.1
QRZ	Quartz Range	17.42	199	P	P	19 31 48.2	-0.9
PLWZ	Palliser	17.45	192	P	P	19 31 48.5	-0.9
THZ	Tophouse	18.18	197	P	P	19 31 55.5	-0.6
THZ				IAmb	IAmb	19 32 12.2	
	comp=Z,16nm,1.2s						
CAN	Canberra	28.88	241	P	P	19 33 32.7	+0.9
CTAO	Charters Tower	31.54	271	P	P	19 33 55.3	+0.3
TAU	Tasmania Unive	32.54	228	P	P	19 34 03.7	+0.5
STKA	Stephens Creek	34.54	249	P	P	19 34 20.5	+0.2
	comp=Z,3.0nm,0.4s,baz=96,slow=11,SNR=14						
STKA	Stephens Creek	34.54	249	P	P	19 34 19.9	-0.4
AS31	Alice Springs	41.99	261	P	P	19 35 20.6	-0.6
ASAR	Alice Springs	41.99	261	P	P	19 35 20.6	-0.6
	comp=Z,2.0nm,0.5s,baz=88,slow=6.4,SNR=60						
ASAR	Alice Springs	41.99	261	P	P	19 35 20.2	-0.9
WR0	Warramunga Arr	42.24	267	P	P	19 35 22.1	-1.0
WB2	Warramunga Arr	42.41	267	P	P	19 35 23.6	-0.9
WB2				IAmb	IAmb	19 35 23.9	
	comp=Z,8.5nm,0.5s						
WB0	Warramunga Arr	42.42	267	P	P	19 35 23.6	-1.0
WB0				IAmb	IAmb	19 35 24.3	
	comp=Z,9.3nm,0.7s						
WRA	Warramunga Arr	42.42	267	P	P	19 35 23.6	-1.0
	comp=Z,7.2nm,0.5s,baz=99,slow=7.4,SNR=117						
WRA				ScP	ScP	19 40 11.3	+2.6
	comp=Z,1.8nm,0.9s,baz=100,slow=3.6,SNR=10						
WRA	Warramunga Arr	42.42	267	P	P	19 35 23.2	-1.4
FAKI	Fak Fak	50.83	287	P	P	19 36 27.8	-0.6
FAKI				IAmb	IAmb	19 36 56.8	
	comp=Z,36nm,1.2s						
FITZ	Fitzroy Crossi	50.84	266	P	P	19 36 28.2	-0.1
	comp=Z,4.7nm,0.6s,baz=101,slow=6.3,SNR=19						
SIJI	Sorong	52.70	289	P	P	19 36 41.3	-0.6
	comp=Z,20nm,1.0s,baz=180,slow=2.0,SNR=5.3						
VNDA	Vanda	53.75	185	P	P	19 36 49.3	+0.9
	comp=Z,2.2nm,0.8s,baz=25,slow=6.5,SNR=1.8						
VNDA	Vanda	53.75	185	IAmb	IAmb	19 36 51.8	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	55.11	260	P	P	19 36 57.8	-1.1
PSA00				IAmb	IAmb	19 37 23.6	
	comp=Z,21nm,1.3s						
KKM	Kota Kinabalu	69.15	287	P	P	19 38 29.9	-0.6
KKM				IAmb	IAmb	19 38 58.2	
	comp=Z,23nm,1.5s						
GSI	Gunungsitoli	83.70	274	P	P	19 39 51.2	+0.7
GSI				IAmb	IAmb	19 39 55.8	
	comp=Z,10nm,1.2s						
SNAA	Sanae	84.03	179	P	P	19 39 50.5	-0.6
CMAR	Chiang Mai Arr	89.80	290	P	P	19 40 20.5	+1.2
	comp=Z,0.8nm,0.9s,baz=135,slow=2.9,SNR=7.7						
TX31	Lajitas Ar. Si	90.72	58		pP	19 42 16.3	+1.3
TX32	Lajitas Array	90.72	58		pP	19 42 16.3	+1.3
TXAR	Lajitas Array	90.72	58	P	P	19 40 24.6	+1.1
	comp=Z,0.5nm,0.8s,baz=214,slow=6.2,SNR=2.3						
BOZ	Bozeman (W)	93.31	41	P	P	19 40 33.0	-2.0
BOZ				IAmb	IAmb	19 40 44.7	
	comp=Z,5.1nm,0.8s						
WALA	Waterton Lakes	93.88	37	P	P	19 40 39.6	+2.1
HFS	Hagfors	143.19	349	PKP	PKPbc	19 46 47.8	-0.5
	comp=Z,1.7nm,0.4s,baz=45,slow=8.6,SNR=12						
AKASG	Malin Array Be	145.54	327	PKPbc	PKPbc	19 46 54.9	-1.0
	comp=Z,0.6nm,0.3s,baz=46,slow=4.4,SNR=5.0						
BRTR	Keskin Array B	148.01	306	PKPbc	PKPbc	19 47 02.6	-0.5
	comp=Z,0.5nm,0.4s,baz=143,slow=6.1,SNR=4.5						
BRTR				PKPab	PKPab	19 47 08.0	+0.3
	comp=Z,1.1nm,0.5s,baz=125,slow=3.3,SNR=6.4						
CLL	Collm	151.49	343	*e*PKPbc	PKiKP	19 47 11.0	-0.1

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*TAP **27** 19:47:05.5, 22°.15N×121°.33E, h3^{km}, ML3.1, C*

*JMA **27** 19:47:06.0±0.1, 22°.20N×121°.51E, h8^{km}, M3.5*

ISC 27 19:47:06.2±1.1**, 22°.15N**±0°.03×**121°.39E**±0°.03**, h19^{km}**±3^{km}**, n59, σ0^{s}.80**/79**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.19	126	⇓*i*P	Pg	19 47 11.4	+0.4
	baz=117						
LAY				*i* S	Sg	19 47 15.8	+1.5
	baz=117						
TSEB	Hengchuen, Pin	0.52	241	P	Pg	19 47 16.4	-0.2
	baz=240						
TSEB				S	Sb	19 47 25.3	+1.5
	baz=240						
LDUT	Ludao	0.53	8	S	Sn	19 47 26.2	-0.9
	baz=14						
SLIU	Shizi	0.55	277	P	Pg	19 47 16.8	-0.4
	baz=277						
SLIU				*e*S	Sg	19 47 24.0	-0.7
	baz=277						
EAST	Anshuo	0.55	295	*i* P	Pg	19 47 16.9	-0.3
	baz=298						
EAST				*i* S	Sg	19 47 24.5	-0.2
	baz=298						
TWKBT	Hengchun	0.57	249	P	Pg	19 47 17.1	-0.5
	baz=246						
TWKBT				S	Sg	19 47 25.3	0.0
	baz=246						
TWK1	Hengchun	0.58	249	*i* P	Pg	19 47 17.1	-0.6
	baz=246						
TWK1				*i* S	Sg	19 47 25.2	-0.3
	baz=246						
ECL	Taimali	0.60	318	*i* P	Pb	19 47 17.1	-0.9
	baz=322						
ECL				*i* S	Sb	19 47 27.2	+1.1
	baz=322						
HEN	Hengchun	0.62	257	*e*P	Pb	19 47 18.2	-0.1
	baz=254						
HEN				S	Sb	19 47 27.1	+0.5
	baz=254						
SNW	Nanwan	0.62	252	*e*S	Sb	19 47 28.1	+1.4
	baz=250						
TWGBT	Beinan	0.72	337	P	Pg	19 47 20.8	+0.3
	baz=341						
TWG	Pinlang	0.73	336	P	Pb	19 47 20.3	0.0
	baz=341						
SCZT	Fangliau	0.74	287	P	Pb	19 47 20.2	-0.3
	baz=288						
SCZT				S	Sg	19 47 31.1	+0.4
	baz=288						
LONT	Longtian	0.79	342	*e*P	Pb	19 47 21.1	-0.2
	baz=346						
LONT				S	Sn	19 47 33.2	-0.5
	baz=346						
EDH	Donghe	0.82	355	*e*P	Pb	19 47 21.9	0.0
	baz=358						
EDH				S	Sn	19 47 34.8	+0.3
	baz=358						
SSPT	Xinbi	0.83	294	*e*P	Pb	19 47 21.5	-0.5
	baz=295						
MASBT	Mashibuluo	0.84	303	P	Pb	19 47 21.3	-0.8
	baz=305						
TSMG	Majia	0.88	309	*e*P	Pb	19 47 23.2	+0.3
	baz=311						
SSD	Sandimen	0.92	310	*e*P	Pb	19 47 23.8	+0.2
	baz=313						
CHKT	Chengkung	0.94	359	*e*P	Pg	19 47 24.7	+0.1
	baz=2.0						
CHKT				*e*S	Sn	19 47 38.2	+0.7
	baz=2.0						
FULB	Fuli	1.05	355	*e*P	Pg	19 47 26.6	+0.1
	baz=358						
SLGT	Liugui	1.08	321	*e*P	Pg	19 47 27.6	+0.3
	baz=323						
SCST	Cishan	1.10	312	*e*P	Pn	19 47 26.6	-0.1
	baz=313						
STYT	Tauyuan	1.17	330	*e*P	Pb	19 47 28.1	+0.3
	baz=332						
SGST	Jiashian	1.19	321	*e*P	Pb	19 47 28.7	+0.5
	baz=323						
EYUL	Yuli	1.19	357	*e*P	Pb	19 47 28.5	+0.3
	baz=359						
TWF1	Yuli	1.20	356	*e*P	Pn	19 47 27.9	-0.1
	baz=359						
YULB	Yu-li	1.24	356	*e*P	Pn	19 47 28.5	-0.1
	baz=358						
CHN1	Nanshi	1.30	323	*e*P	Pb	19 47 30.2	+0.1
	baz=324						
CHN1				S	Sg	19 47 48.6	+0.2
	baz=324						
WTP	Ta-pu	1.30	327	P	Pg	19 47 31.5	+0.1
	baz=329						
TPUB	Ta-pu	1.34	329	P	Pg	19 47 31.9	-0.2
	baz=330						
TWK	Hsinying	1.39	323	*e*P	Pg	19 47 32.5	-0.5
	baz=325						
CHN4	Tsaushan	1.40	329	*e*P	Pb	19 47 32.5	+0.7
	baz=330						
ALS	Alishan	1.46	338	P	Pg	19 47 34.2	-0.1
	baz=340						
CHN5	Tsauling	1.58	336	*e*P	Pg	19 47 35.9	-0.8
	baz=337						
VWDT	VWDT	1.61	352	*e*P	Pb	19 47 35.3	0.0
	baz=353						
WHYT	Xinyi Township	1.62	342	*e*P	Pg	19 47 36.9	-0.5
	baz=344						
SSLB	Suanglung	1.68	346	*e*P	Pb	19 47 36.3	-0.2
	baz=348						
SMLT	Sun Moon Lake	1.78	345	*e*P	Pb	19 47 39.1	+0.8
	baz=347						
TYC	Yuchr	1.81	344	*e*P	Pb	19 47 38.9	+0.1
	baz=346						
WNT	Mingjian	1.84	339	*e*P	Pb	19 47 38.9	-0.3
	baz=341						
CHGB	Renai	1.91	354	*e*P	Pb	19 47 39.5	-1.1
	baz=355						
DPDB	Guoxing	1.92	347	*e*P	Pb	19 47 40.8	+0.1
	baz=348						
WHF	Hehuan Shan	1.99	357	*e*P	Pn	19 47 40.5	+1.2
	baz=358						
NACB	Ninganchiao	2.02	5	*e*P	Pn	19 47 40.5	+1.1
	baz=7.0						
ETLH	Xiulin Townshi	2.05	2	*e*P	Pn	19 47 40.1	+0.3
	baz=4.0						
FUSS	Fushou	2.09	356	*e*P	Pb	19 47 43.3	-0.4
	baz=357						
TWT	Tachien	2.10	355	*e*P	Pb	19 47 42.9	-0.9
	baz=355						
TDCB	Techi	2.10	354	*e*P	Pb	19 47 42.5	-1.3
	baz=355						
WHP	Taichung City	2.16	349	*e*P	Pb	19 47 44.1	-0.7
	baz=350						
NNSB	Datong	2.27	360	*e*P	Pn	19 47 44.8	+2.0
	baz=1.0						
HATJ	Hateruma jima	2.92	49	P	Pn	19 47 51.8	+0.1
HATJ				*e*S	Sn	19 48 24.6	-1.7
IRIF	Iriomote-Funau	3.06	44	P	Pn	19 47 53.9	+0.3
IRIF				S	Sn	19 48 28.7	-1.0
JKRS	Kuro-shima	3.18	49	P	Pn	19 47 55.7	+0.4
JKRS				*e*S	Sn	19 48 31.1	-1.6
JIJ	Ishigaki jima	3.36	48	P	Pn	19 47 57.5	-0.2
JIJ				*e*S	Sn	19 48 35.1	-1.9
JISG	Ishigakijimahi	3.62	47	P	Pn	19 48 01.0	-0.3
JISG				S	Sn	19 48 42.1	-1.4
JTJ	Tarama	3.93	50	P	Pn	19 48 05.8	+0.3
JTJ				*e*S	Sn	19 48 49.7	-1.4
JIRB	Irabujima	4.38	52	S	Sn	19 49 00.3	-1.9
JMJ2	Miyako jima3	4.44	54	P	Pn	19 48 13.6	+1.0
JMJ2				*e*S	Sn	19 49 03.2	-0.6

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*NEIC **27** 20:13:06.4±0.9, 5°.49S±0°.07×147°.4E±0°.1, h170^{km}±9^{km}, mb4.2/12, Error ellipse: s-maj=17.6km s-min=10.7km az=87.0*

*IDC **27** 20:13:06.5±1.4, 5°.62S×147°.30E, h164^{km}±11^{km}, mb3.5/4, mb1 3.8/7, mb1mx3.4/36, mbtmp4.1/7, Error ellipse: s-maj=18.8km s-min=11.1km az=99.0*

ISC 27 20:13:06.9±0.9**, 5°.58S**±0°.08×**147°.34E**±0°.10**, h170^{km}, n22, σ1^{s}.29**/26**, mb4.0**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.81	183	P	Pn	20 14 05.7	+0.4
	29nm,0.3s,baz=18,slow=5.1,SNR=56						
PMG				S	Sn	20 14 48.8	-2.1
	9.0nm,0.3s,baz=228,slow=22,SNR=6.1						
PMG	Port Moresby	3.81	183		Pn	20 14 06.0	+0.7
JAY	Jayapura	7.28	294	P	Pn	20 14 50.2	-0.7
	0.9nm,0.3s,baz=144,slow=7.8,SNR=6.4						
JAY				S	Sn	20 16 12.8	-0.1
	0.3nm,0.3s,baz=357,slow=20,SNR=1.3						
WB0	Warramunga Arr	18.91	221	P	P	20 17 15.5	+0.7
WB0				IAmb	IAmb	20 17 18.5	
	comp=Z,5.8nm,0.9s						
WR0	Warramunga Arr	18.95	220	P	P	20 17 15.8	+0.5
WR0				IAmb	IAmb	20 17 32.6	
	comp=Z,6.8nm,1.1s						
WRAB	Tennant Creek	19.06	220	P	P	20 17 17.2	+0.8
WRAB				IAmb	IAmb	20 17 20.2	
	comp=Z,8.1nm,0.6s						
WC3	Warramunga Arr	19.06	220	P	P	20 17 17.4	+0.9
WC3				IAmb	IAmb	20 17 20.3	
	comp=Z,6.5nm,0.6s						
WB2	Warramunga Arr	19.06	220	P	P	20 17 17.2	+0.7
WB2				IAmb	IAmb	20 17 20.3	
	comp=Z,7.4nm,0.6s						
WRA	Warramunga Arr	19.07	220	P	P	20 17 16.1	-0.5
	comp=Z,0.9nm,0.3s,baz=48,slow=12,SNR=49						
WRA				S	S	20 20 41.1	-2.9
	comp=Z,0.1nm,0.3s,baz=41,slow=20,SNR=6.8						
WRA	Warramunga Arr	19.07	220	IAmb	IAmb	20 17 21.6	
	comp=Z,0.2nm,0.8s						
SANVU	Saraoutou	21.83	118	P	P	20 17 46.5	+0.4
AS31	Alice Springs	22.15	214	P	P	20 17 49.4	+0.2
AS31					S	20 21 44.3	+3.2
ASAR	Alice Springs	22.16	214	P	P	20 17 49.9	+0.7
	comp=Z,6.7nm,0.8s,baz=41,slow=9.3,SNR=37						
ASAR				S	S	20 21 43.3	+2.3
	comp=Z,5.1nm,0.9s,baz=31,slow=22,SNR=23						
ASAR	Alice Springs	22.16	214	P	P	20 17 49.5	+0.2
ASAR					S	20 21 41.9	+0.8
FITZ	Fitzroy Crossi	24.57	238	P	P	20 18 11.6	+0.2
FITZ				IAmb	IAmb	20 18 12.7	
	comp=Z,16nm,1.5s						
DZM	Mont Dzumac	24.70	133	P	P	20 18 11.6	-1.0
DZM				IAmb	IAmb	20 18 47.6	
	comp=Z,14nm,1.3s						
SONM	Songino Array	64.20	331	P	P	20 23 24.7	+1.0
	comp=Z,0.2nm,0.4s,baz=123,slow=5.3,SNR=1.9						
VNDA	Vanda	72.31	177	P	P	20 24 14.1	+0.6
	comp=Z,2.2nm,0.9s,baz=16,slow=3.5,SNR=2.3						
VNDA	Vanda	72.31	177	IAmb	IAmb	20 24 15.4	
	comp=Z,12nm,1.4s						
IL31		84.96	23	P	P	20 25 21.5	-1.1
ILAR	Eielson Array	84.96	23	P	P	20 25 21.9	-0.9
	comp=Z,0.6nm,0.6s,baz=253,slow=5.2,SNR=9.6						
TORD	Torodi Ar. Bea	145.31	285	PKPbc	PKPdf	20 32 25.1	-0.4
	comp=Z,0.9nm,0.5s,baz=70,slow=3.8,SNR=1.8						

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*IDC **27** 20:17:33.3±4.3, 17°.71S×178°.13W, h605^{km}±52^{km}, mb3.4/14, mb1 3.6/14, mb1mx3.4/32, mbtmp4.3/14, Error ellipse: s-maj=37.6km s-min=16.8km az=151.0*

*NEIC **27** 20:17:36.3±1.2, 17°.6S±0°.1×178°.3W±0°.1, h637^{km}±8^{km}, mb4.2/58, Error ellipse: s-maj=22.7km s-min=16.1km az=130.0*

ISC 27 20:17:32.6±0.6**, 17°.8S**±0°.1×**178°.0W**±0°.1**, h600^{km}, n114, σ0^{s}.99**/112**, mb4.1**/40**, 13C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.79	270	P	P	20 18 59.5	+2.7
MSVF					S	20 20 12.5	+7.0
FUNA	Funafuti	9.60	343	P	P	20 19 48.4	+0.9
SANVU	Saraoutou	14.40	277	P	P	20 20 36.4	+1.0
KNTN	Kanton	16.11	23	P	P	20 20 51.3	+0.1
SNZO	South Karori	24.29	194	P	P	20 22 07.3	+2.9
STKA	Stephens Creek	39.06	241	P	P	20 24 09.2	-0.4
	1.7nm,0.6s,baz=106,slow=12,SNR=4.1						
STKA	Stephens Creek	39.06	241	P	P	20 24 09.7	0.0
HLK	Haleakala	43.82	30	P	P	20 24 46.8	-0.6
WR0	Warramunga Arr	44.88	259	P	P	20 24 54.7	-0.7
WR0				IAmb	IAmb	20 25 05.5	
	comp=Z,9.5nm,1.6s						
WB0	Warramunga Arr	45.04	260	P	P	20 24 54.6	-2.0
WB0				IAmb	IAmb	20 24 56.2	

	comp=Z,7.2nm,1.1s						
WB2	Warramunga Arr	45.06	259	P	P	20 24 55.8	-1.0
WRA	Warramunga Arr	45.07	259	P	P	20 24 55.9	-1.0
	comp=Z,0.9nm,0.4s,baz=95,slow=7.0,SNR=27						
WRA	Warramunga Arr	45.07	259	P	P	20 24 55.5	-1.4
AS31	Alice Springs	45.23	254	P	P	20 24 57.2	-0.9
ASAR	Alice Springs	45.23	254	P	P	20 24 57.2	-0.9
	comp=Z,3.0nm,0.6s,baz=90,slow=8.1,SNR=39						
ASAR				PcP	PcP	20 26 24.1	-0.9
	comp=Z,0.6nm,0.5s,baz=95,slow=5.2,SNR=5.9						
ASAR	Alice Springs	45.23	254	P	P	20 24 57.1	-1.0
FITZ	Fitzroy Crossi	53.47	260	P	P	20 25 57.2	-1.2
FITZ				IAmb	IAmb	20 26 04.5	
	comp=Z,12nm,1.6s						
MJAR	Matsushiro Arr	68.05	323	P	P	20 27 33.4	-0.2
	comp=Z,1.8nm,0.5s,baz=154,slow=6.2,SNR=4.6						
JHS	Saijyo	70.07	319	P	P	20 27 46.2	+0.4
PEA0B	Petropavlovsk-	73.66	345	P	P	20 28 05.3	-0.7
PETK	Petropavlovsk-	73.66	345	P	P	20 28 05.8	-0.2
	comp=Z,4.5nm,0.8s,baz=134,slow=6.4,SNR=6.6						
ISA	Isabella, Lake	77.42	46	P	P	20 28 28.6	+1.3
MDPB	Devils Postpil	78.09	44	P	P	20 28 32.3	+1.2
YBH	Yreka Blue Hor	78.15	39	P	P	20 28 32.1	+0.9
	comp=Z,2.4nm,0.7s,baz=117,slow=2.1,SNR=8.8						
WAKR	Walker	78.33	43	P	P	20 28 33.7	+1.3
WAKR				IAmb	IAmb	20 28 34.4	
	comp=Z,6.0nm,1.0s						
PNTR	Pine Nut	78.56	43	P	P	20 28 34.5	+0.9
PNTR				IAmb	IAmb	20 28 35.5	
	comp=Z,7.2nm,0.9s						
NVAR	Mina Array Bea	79.03	44	P	P	20 28 36.9	+0.8
	comp=Z,1.9nm,0.7s,baz=225,slow=8.4,SNR=17						
MOD	Modoc Plateau	79.71	40	P	P	20 28 40.9	+1.4
MOD				IAmb	IAmb	20 28 41.2	
	comp=Z,4.0nm,0.7s						
K05A	Summer Lake	79.83	39	P	P	20 28 41.2	+1.1
PINE	Pine Mountain	80.42	38	P	P	20 28 44.3	+1.1
PINE				IAmb	IAmb	20 28 45.4	
	comp=Z,6.6nm,0.8s						
PRN	Pahroc Range	80.68	46	P	P	20 28 45.9	+1.3
WVOR	Wild Horse Val	81.03	40	P	P	20 28 47.1	+0.9
GAMB	Gambell	81.43	3	P	P	20 28 48.5	+1.0
I07A	Izee	81.44	38	P	P	20 28 49.4	+1.2
I07A				IAmb	IAmb	20 28 50.2	
	comp=Z,5.6nm,0.8s						
X16A	Lo Mia Camp, P	81.77	50	P	P	20 28 51.8	+1.5
SUA	Susitna One	81.91	13	P	P	20 28 50.3	+0.1
SUA				IAmb	IAmb	20 28 57.0	
	comp=Z,17nm,1.5s						
CCUT	Cedar City	81.91	46	P	P	20 28 51.5	+0.5
U15A	North Rim	82.11	48	P	P	20 28 53.5	+1.4
U15A				IAmb	IAmb	20 28 54.3	
	comp=Z,4.3nm,0.8s						
SKT	Skwentna	82.21	12	P	P	20 28 51.2	-0.5
SKT				IAmb	IAmb	20 28 59.7	
	comp=Z,8.7nm,1.4s						
BELA	Belgrano 2	82.25	173	P	P	20 28 50.3	-1.4
TTA	Tatalina	82.27	10	P	P	20 28 52.4	+0.5
ELK	Elko	82.27	43	P	P	20 28 53.1	+0.3
	comp=Z,2.2nm,0.9s,baz=258,slow=6.0,SNR=6.4						
ELK	Elko	82.27	43	P	P	20 28 52.6	-0.1
KNK	Knik Glacier	82.36	14	P	P	20 28 52.5	+0.1
PMR	Palmer	82.37	13	P	P	20 28 51.3	-1.1
PMR				IAmb	IAmb	20 28 53.1	
	comp=Z,18nm,1.5s						
G08A	Pilot Rock	82.44	38	P	P	20 28 54.2	+0.8
G08A				IAmb	IAmb	20 28 54.9	
	comp=Z,11nm,1.4s						
GHO	Glory Hole Cre	82.58	13	P	P	20 28 53.5	0.0
PPLA	Purkeypile	82.92	12	P	P	20 28 54.7	-0.6
SCM	Sheep Creek Mo	82.99	14	P	P	20 28 55.6	0.0
YAH	Yahtse	83.18	17	P	P	20 28 57.1	+0.4
YAH				IAmb	IAmb	20 29 16.1	
	comp=Z,11nm,1.0s						
TGL	Tana Glacier	83.20	17	P	P	20 28 56.6	-0.1
TGL				IAmb	IAmb	20 29 31.1	
	comp=Z,11nm,1.2s						
TABL	Table Mountain	83.41	17	P	P	20 28 58.2	+0.3
TABL				IAmb	IAmb	20 28 58.8	
	comp=Z,7.8nm,0.7s						
VRDI	Verde Repeater	83.43	16	P	P	20 28 57.9	0.0
N25K	Chitina, Valde	83.46	15	P	P	20 28 58.1	+0.2
N25K				IAmb	IAmb	20 28 58.8	
	comp=Z,7.1nm,0.7s						
GLB	Gilahina Butte	83.52	16	P	P	20 28 58.3	0.0
GLB				IAmb	IAmb	20 28 58.9	
	comp=Z,4.4nm,0.7s						
BALM	Baldy	83.57	17	P	P	20 28 58.6	+0.1
BALM				IAmb	IAmb	20 29 01.7	
	comp=Z,13nm,1.6s						
KTH	Kantishna Hill	83.76	12	P	P	20 28 58.0	-1.3
KTH				IAmb	IAmb	20 28 58.9	
	comp=Z,4.5nm,0.9s						
BARN	Barnard Glacie	83.78	17	P	P	20 28 59.5	-0.2
BARN				IAmb	IAmb	20 29 00.3	
	comp=Z,6.2nm,0.8s						
CTGM	Chitina Glacie	83.79	17	P	P	20 29 00.0	+0.4
CTGM				IAmb	IAmb	20 29 01.1	
	comp=Z,4.2nm,1.0s						
TRF	Thorofare Moun	83.79	12	P	P	20 28 59.0	-0.7
RND	Reindeer	84.04	13	P	P	20 29 00.5	-0.3
WRH	Wood River Hil	85.15	13	P	P	20 29 05.9	-0.1
WRH				IAmb	IAmb	20 29 06.4	
	comp=Z,14nm,1.4s						
MDM	Murphy Dome	85.55	12	P	P	20 29 07.0	-1.0
MDM				IAmb	IAmb	20 29 09.2	
	comp=Z,3.9nm,0.8s						
TX31	Lajitas Ar. Si	85.57	57	P	P	20 29 10.4	+1.4
TX32	Lajitas Array	85.57	57	P	P	20 29 10.2	+1.2
TX32				IAmb	IAmb	20 29 11.7	
	comp=Z,4.7nm,1.1s						
TXAR	Lajitas Array	85.57	57	P	P	20 29 10.4	+1.4
	comp=Z,2.2nm,0.8s,baz=217,slow=6.1,SNR=18						
TXAR	Lajitas Array	85.57	57	P	P	20 29 10.2	+1.2
IL31		85.66	13	P	P	20 29 07.6	-0.8
ILAR	Eielson Array	85.66	13	P	P	20 29 07.5	-0.9
	comp=Z,1.2nm,0.4s,baz=221,slow=4.9,SNR=28						
ILAR	Eielson Array	85.66	13	P	P	20 29 07.8	-0.7
YHL	Hebgen Lake	86.91	41	P	P	20 29 16.6	+1.3
YMR	Madison River	86.96	41	P	P	20 29 16.7	+1.4
PDAR	Pinedale Array	86.96	43	P	P	20 29 15.7	+0.2
	comp=Z,1.4nm,0.7s,baz=200,slow=2.1,SNR=11						
COLD	Coldfoot	87.20	10	P	P	20 29 16.1	+0.4
COLD				IAmb	IAmb	20 29 17.3	
	comp=Z,8.2nm,1.3s						
BMAR	Burnt Mountain	88.44	12	P	P	20 29 21.3	-0.2
CMAR	Chiang Mai Arr	89.23	290	P	P	20 29 26.9	+0.6
	comp=Z,0.5nm,0.6s,baz=111,slow=3.8,SNR=5.7						
INK	Inuvik	91.64	15	P	P	20 29 35.6	-0.6
	comp=Z,2.2nm,0.7s,baz=194,slow=4.3,SNR=7.5						
INK	Inuvik	91.64	15	IAmb	IAmb	20 29 36.6	
	comp=Z,2.9nm,0.8s						
YKA	Yellowknife Ar	94.03	25	P	P	20 29 46.7	-0.6
	comp=Z,0.6nm,0.6s,baz=240,slow=3.5,SNR=11						
MKAR	Makanchi Array	109.34	314	PKiKP	PKiKP	20 34 53.9	-1.8
	comp=Z,0.1nm,0.4s,baz=114,slow=1.7,SNR=2.6						
ARCES	ARCESS Array B	126.25	350	PKP	PKPdf	20 35 26.4	-1.0
	comp=Z,8.6nm,1.1s,baz=332,slow=4.8,SNR=3.7						
SORM	Soroca	142.88	331	⇓P	PKPdf	20 35 56.1	-2.7
BURAR	Bucovina Array	144.69	333	⇑P	PKPab	20 36 02.6	-0.8
TLCR		144.69	327	⇑P	PKPab	20 36 03.1	-0.3
BIZ	Bicaz	144.79	331	⇑P	PKPbc	20 36 02.6	-0.2
GHRR		144.81	329	⇑P	PKPab	20 36 03.8	+0.1
TESR	Tescani	144.85	330	⇑P	PKPab	20 36 03.1	-0.8
BRTR	Keskin Array B	144.98	315	PKP	PKPbc	20 36 03.2	-0.6
	comp=Z,1.9nm,0.7s,baz=132,slow=3.7,SNR=11						
BRTR	Keskin Array B	144.98	315	PKPdf	PKPdf	20 36 02.4	-0.6
TPGR	Topolog	145.12	326	⇑P	PKPab	20 36 04.1	-1.0
VRI	Vrincioaia	145.28	329	⇑P	PKPdf	20 36 03.2	+0.1
CLL	Collm	145.42	348	*i* PKPbc	PKPbc	20 36 04.0	-0.5
	comp=Z,11nm,0.8s						
UPC	Upice	145.47	344	*e*PKP	PKPbc	20 36 04.9	+0.2
DPC	Dobruska-Polom	145.54	344	*e*PKP	PKPbc	20 36 04.8	-0.1
MORC	Moravsky Berou	145.71	342	⇑P	PKPbc	20 36 05.7	+0.3
DOPR	Dopca	145.85	330	⇑P	PKPab	20 36 06.4	-1.5
MLR	Muntele Rosu	145.93	329	⇑P	PKPab	20 36 07.1	-1.3
PRU	Pruhonice	146.32	345	*e*PKP	PKPbc	20 36 06.7	-0.4
VOIR		146.40	330	⇑P	PKPbc	20 36 07.8	+0.3
DRGR		146.40	334	⇑P	PKPbc	20 36 06.9	-0.6
ARR	Arges	146.65	330	⇓P	PKPbc	20 36 08.3	+0.1
KHC	Kasperske Hory	147.35	346	*e*PKP	PKPbc	20 36 08.1	-1.8
KHC	Kasperske Hory	147.35	346		PKPbc	20 36 09.0	-0.8
GERES	GERESS Array B	147.59	346	PKPbc	PKPbc	20 36 10.3	-0.2
	comp=Z,1.9nm,0.5s,baz=28,slow=3.3,SNR=21						
GERES	GERESS Array B	147.59	346		PKPbc	20 36 10.0	-0.6
CONA	Conrad Observa	147.86	342	*e*P	PKPbc	20 36 11.3	0.0
	comp=Z,3.2nm,0.7s						
HERR	Herculane	148.03	332	⇑P	PKPbc	20 36 11.1	-0.5
KBA	Koelnbreinsper	149.32	345	*e*P	PKPbc	20 36 14.1	-0.9
	comp=Z,2.4nm,0.5s						
MOTA	Moosalm	149.58	348	*e*P	PKPbc	20 36 15.0	-0.5
	comp=Z,6.0nm,1.0s						
MYKA	Terra Mystica	149.66	344	*e*P	PKPbc	20 36 13.4	-2.3
	comp=Z,3.7nm,0.5s						
SQTA	Sankt Quirin	149.67	348	*i* P	PKPbc	20 36 15.3	-0.4
	comp=Z,3.2nm,0.6s						
ABTA	Abfaltersbach	149.83	346	*i* P	PKPbc	20 36 15.2	-0.9
	comp=Z,5.4nm,0.6s						
DAVA	Damuels	149.86	349	*i* P	PKPbc	20 36 15.8	-0.5
	comp=Z,5.9nm,1.1s						
FETA	Feichten	149.96	348	*e*P	PKPbc	20 36 16.0	-0.5
	comp=Z,4.5nm,1.0s						

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*WEL **27** 20:22:00, 43°.02S×171°.26E, h10^{km}, ML3.6, Mw3.6, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M$_{rr}$1.32; M$_{\theta\theta}$0.33; M$_{\phi\phi}$-1.65; M$_{r\theta}$0.14; M$_{\theta\phi}$-2.54; M$_{\phi r}$0.04; Fault plane solution: M$_0$2.73000×10^{14} NP1: φ$_s$169.00000°, δ84.00000°, λ4.00000°. NP2: φ$_s$79.00000°, δ86.00000°, λ174.00000°. Principal axes: T -33.9000, Plg7.0000°, Azm34.0000°; N 20.7300, Plg83.0000°, Azm225.0000°; P 13.1700, Plg1.0000°, Azm124.0000°;*

WEL 27 20:22:31.8±0.3, **43°S**±3°×**17°1E**±°, **h5**^{km}, **M3.6**/17, **ML3.7**/17, **MLv3.6**/17 **Error ellipse: s-maj=0.0km s-min=0.0km az=149.8, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INZ	Inchbonnie	0.34	24	P	Pg	20 22 38.8	+0.5
INZ				S	Sg	20 22 43.2	+0.5
WVZ	Waitaha Valley	0.39	264	P	Pg	20 22 40.1	+0.9
WVZ				S	Sg	20 22 45.2	+0.9
MHCZ	Mount Hutt	0.55	156	P	Pg	20 22 42.7	+0.3
OXZ	Oxford	0.64	117	P	Pg	20 22 44.4	+0.3
OXZ				S	Sg	20 22 53.3	+0.9
RPZ	Rata Peaks	0.70	192	P	Pg	20 22 45.5	+0.3
RPZ				S	Sg	20 22 55.3	+1.0
GCSZ	Gaunt Creek Bo	0.74	247	P	Pg	20 22 46.3	+0.3
GCSZ				S	Sg	20 22 55.2	-0.4
LTZ	Lake Taylor	0.79	72	P	Pg	20 22 47.3	+0.4
LTZ				S	Sg	20 22 57.7	+0.7
ARCZ	Arundel	0.92	184	P	Pg	20 22 49.5	+0.1
ARCZ				S	Sg	20 23 01.5	+0.3
RACZ	Rakaia	0.94	138	P	Pb	20 22 50.3	-0.3
WACZ	Wakanui South	1.00	155	P	Pb	20 22 51.4	-0.2
AMCZ	Amberley	1.03	98	P	Pb	20 22 52.4	+0.3
FOZ	Fox Glacier	1.17	244	P	Pg	20 22 54.2	0.0
FOZ				S	Sn	20 23 10.6	-0.5
MQZ	McQueen's Vall	1.22	124	P	Pg	20 22 54.2	-1.0
GVZ	Greta Valley S	1.30	88	P	Pn	20 22 55.9	-0.7
DSZ	Denniston Nort	1.35	18	P	Pn	20 22 56.8	-0.5
TMZ	Timaru	1.36	188	P	Pn	20 22 56.8	-0.7
AKCZ	Akaroa Harbour	1.47	125	P	Pn	20 22 57.6	-1.3
OKCZ	Okains Bay	1.48	118	P	Pn	20 22 58.3	-0.8
LBZ	Lake Benmore	1.56	210	P	Pn	20 22 60.0	-0.3
THZ	Tophouse	1.76	44	P	Pn	20 23 02.9	-0.1
KHZ	Kahutara	1.79	71	P	Pn	20 23 02.9	-0.4
ODZ	Otahua Downs	2.06	192	P	Pn	20 23 06.2	-0.8
JCZ	Jackson Bay	2.08	239	P	Pn	20 23 07.6	+0.2
BSWZ	Blackbirch Sta	2.34	57	P	Pb	20 23 13.9	-0.6
QRZ	Quartz Range	2.40	24	P	Pn	20 23 11.9	+0.1
NNZ	Nelson	2.40	42	P	Pn	20 23 12.8	+1.0
WKZ	Wanaka	2.42	221	P	Pn	20 23 11.1	-0.9
CMWZ	Cape Campbell	2.54	61	P	Pb	20 23 18.9	+1.1
TUWZ	Tuamarina	2.56	52	P	Pn	20 23 14.5	+0.6
EAZ	Earnscleugh	2.61	212	P	Pn	20 23 13.5	-1.1
TCW	Tory Channel	2.89	52	P	Pn	20 23 19.0	+0.6
DUWZ	D'Urville Isla	2.99	43	P	Pn	20 23 21.4	+1.5
BHW	Baring Head	3.14	60	P	Pn	20 23 21.0	-0.8
TUZ	Tuapeka	3.14	201	P	Pn	20 23 21.3	-0.7
MLZ	Mavora Lakes	3.25	223	P	Pn	20 23 22.8	-0.6
CAW	Cannon Point	3.43	57	P	Pn	20 23 24.7	-1.1
KIW	Kapiti Island	3.48	53	P	Pn	20 23 26.2	-0.4
OGWZ	Otaki Gorge	3.66	54	P	Pn	20 23 28.1	-1.0
SYZ	Scrubby Hill	3.81	203	P	Pn	20 23 30.2	-0.9
HOWZ	Holdsworth Sta	3.82	58	P	Pb	20 23 38.0	-1.7
MRZ	Mangatainoka R	4.00	55	P	Pn	20 23 32.1	-1.6
NBEZ	Newall Road No	4.25	28	P	Pn	20 23 38.6	+1.5
KHEZ	Kahui Hut	4.28	30	P	Pn	20 23 39.2	+1.6
PREZ	Palmer Road	4.29	32	P	Pn	20 23 39.6	+1.9
NEZ	North Egmont	4.33	31	P	Pn	20 23 40.5	+2.2
PKE	Pukeiti	4.35	29	P	Pn	20 23 40.1	+1.5
VRZ	Vera Road	4.72	35	P	Pn	20 23 45.9	+2.4
WNVZ	Wahianoa	4.94	43	P	Pn	20 23 50.6	+3.8
OTVZ	Oturere	5.10	42	P	Pn	20 23 52.0	+3.0
WTVZ	West Tongariro	5.10	41	P	Pn	20 23 53.0	+4.0
TMVZ	Te Maari	5.16	42	P	Pn	20 23 55.3	+5.5
WTAZ	Waiatarua	6.60	24	P	Pn	20 24 11.3	+1.8
WCZ	Waipu Caves	7.47	20	P	Pn	20 24 22.3	+0.8

IDC 27 20:27:28.5±7.3, **18°.16S**×**176°.42W**, **h0**^{km}, **mb3.8**/3, **mb1 4.1**/3, **mb1mx3.6**/44, **mbtmp3.8**/3, **Error ellipse: s-maj=319.8km s-min=37.1km az=142.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	46.44	260	P	P	20 35 57.1	-0.4
	0.5nm,0.4s,baz=96,slow=7.0,SNR=22						
ASAR	Alice Springs	46.54	254	P	P	20 35 58.4	+0.1
	1.4nm,0.4s,baz=90,slow=8.1,SNR=24						
ILAR	Eielson Array	85.72	12	P	P	20 40 09.0	0.0
	0.1nm,0.4s,baz=219,slow=5.1,SNR=5.7						

JMA 27 20:36:17.2±0.2, **42°.41N**×**143°.88E**, **h84**^{km}±3^{km}, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	Churui	0.43	298	P	Pn	20 36 31.0	+0.2
JCH				*e*S	Sn	20 36 40.6	-0.3
JTHR	Tokachihiroo	0.45	255	P	Pn	20 36 30.9	0.0
JTHR				*e*S	Sn	20 36 40.6	-0.4
JOB	Onbets	0.49	356	P	Pn	20 36 31.7	+0.4
JEM	Erimo	0.67	234	P	Pn	20 36 33.8	+1.0
JAK	Akkeshi	0.84	45	P	Pn	20 36 34.5	-0.1
JAK				*e*S	Sn	20 36 47.4	-0.2
JNBK	Urakawa-nobuka	0.85	262	P	Pn	20 36 35.1	+0.4
JNBK				*e*S	Sn	20 36 48.3	+0.5
JAR	Ashorobuto	0.89	355	P	Pn	20 36 35.4	+0.2
JBT2	Biratori 2	1.18	289	P	Pn	20 36 38.7	+0.1
JFR	Furan	1.21	309	P	Pn	20 36 39.1	+0.1
JNK	Nakash	1.33	27	P	Pn	20 36 40.0	-0.5
JTKR	Abashiri--Toko	1.56	1	P	Pn	20 36 43.8	+0.4
JTKR				*e*S	Sn	20 37 04.1	+0.9
NEM2	Nemuro 2	1.67	54	P	Pn	20 36 43.7	-1.1
JRA	Rausu	1.78	30	P	Pn	20 36 46.6	+0.4

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*SKHL **27** 20:36:16.6±0.3, 42°.20N×144°.20E, h90^{km}±6^{km}, mb4.7/5, msh5.6/4*

*MOS **27** 20:36:17.8±0.9, 42°.38N×144°.08E, h91^{km}, mb4.4/1, Error ellipse: s-maj=20.9km s-min=10.6km az=71.3*

*IDC **27** 20:36:19.2±2.6, 42°.47N×144°.06E, h80^{km}±19^{km}, mb3.4/9, mb1 3.5/10, mb1mx3.3/50, mbtmp3.7/10, Error ellipse: s-maj=23.7km s-min=17.9km az=100.0*

*JMA **27** 20:36:20.0±0.1, 42°.40N×143°.88E, h83^{km}±2^{km}, M3.4*

ISC 27 20:36:19.0±0.8, **42°.36N**±0°.06×**144°.07E**±0°.04, **h84**^{km}±6^{km}, **n68**, σ**1**^{s}.**28**/66, **mb3.8**/9, **2C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOB	Onbets	0.57	343	⇓P	Pn	20 36 34.4	+0.7
JOB				*e*S	Sn	20 36 45.0	+0.3
JTHR	Tokachihiroo	0.57	264	P	Pn	20 36 33.7	0.0
JTHR				*e*S	Sn	20 36 43.4	-1.3
JCH	Churui	0.58	296	⇓P	Pn	20 36 33.7	-0.1
JCH				*e*S	Sn	20 36 43.3	-1.5
JAK	Akkeshi	0.79	36	⇓P	Pn	20 36 37.3	+1.4
JAR	Ashorobuto	0.96	347	⇓P	Pn	20 36 38.2	+0.3
JAR				*e*S	Sn	20 36 51.3	-0.7
JNBK	Urakawa-nobuka	0.98	266	P	Pn	20 36 37.8	-0.2
JNBK				*e*S	Sn	20 36 50.8	-1.4
JKHN	Kushirohamanak	1.08	48	P	Pn	20 36 41.1	+1.8
JKHN				*e*S	Sn	20 36 56.5	+2.0
JNK	Nakash	1.32	21	P	Pn	20 36 42.8	+0.7
JNK				*e*S	Sn	20 36 59.7	+0.1
JBT2	Biratori 2	1.32	289	⇓P	Pn	20 36 41.2	-1.0
JFR	Furan	1.35	307	P	Pn	20 36 41.9	-0.7
JFR				*e*S	Sn	20 36 58.1	-2.2
NMR	Nemuro--Hokkai	1.59	50	*i* P	Pn	20 36 43.8	-1.7
NMR	Nemuro--Hokkai	1.59	50	⇑*i*PN	Pn	20 36 43.8	-1.7
NMR				*i* S	Sn	20 37 03.7	-2.0
NMR	Nemuro--Hokkai	1.59	50	*i* S	Sn	20 37 03.0	-2.7
NEM2	Nemuro 2	1.59	50	P	Pn	20 36 46.6	+1.0
JIAM	Iburiatsuma	1.61	280	P	Pn	20 36 47.6	+1.8
JTKR	Abashiri--Toko	1.62	356	P	Pn	20 36 46.7	+0.8
JTKR				*e*S	Sn	20 37 06.7	+0.4
JMP	Maruseppu	1.73	343	P	Pn	20 36 47.4	0.0
JMP				*e*S	Sn	20 37 08.0	-1.0
GLVR	Golovnino	1.74	37	*i* P	Pn	20 36 49.0	+1.4
GLVR	Golovnino	1.74	37	⇑*i*PN	Pn	20 36 49.5	+1.9
GLVR				*i* S	Sn	20 37 10.6	+1.3
GLVR				pmax	pmax		
	comp=N,23nm,0.1s						
GLVR				pmax	pmax		
	comp=E,16nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,174nm,0.1s						
GLVR				smax	smax		
	comp=N,693nm,0.3s						
GLVR				smax	smax		
	comp=E,864nm,0.3s						
GLVR	Golovnino	1.74	37	A	A	20 37 13.0	
	comp=E,693nm,0.3s						
GLVR	Golovnino	1.74	37	A	A	20 37 13.0	
	comp=E,864nm,0.3s						
GLVR	Golovnino	1.74	37	*i* S	Sn	20 37 10.0	+0.7
GLVR	Golovnino	1.74	37	AMB	AMB	20 36 50.0	
	comp=E,174nm,0.3s						
JRA	Rausu	1.76	26	P	Pn	20 36 49.4	+1.6
JRA				*e*S	Sn	20 37 11.1	+1.5
JAB	Ashibetsu	1.77	311	P	Pn	20 36 48.2	+0.2
JKK2	Kamakawa 2	1.79	328	P	Pn	20 36 48.2	-0.1
JEW	Eniwo	1.99	285	P	Pn	20 36 51.8	+1.0
JEW				*e*S	Sn	20 37 14.8	-0.3
GRPR	Tuman	2.06	37	A	A	20 37 18.0	
	comp=E,899nm,0.4s						
GRPR	Tuman	2.06	37	*e*PN	Pn	20 36 50.3	-1.4
GRPR				*i* S	Sn	20 37 15.4	-1.3
GRPR				pmax	pmax		
	comp=Z,79nm,0.3s						
GRPR				pmax	pmax		
	comp=N,31nm,0.1s						
GRPR				smax	smax		
	comp=E,899nm,0.4s						
GRPR				smax	smax		
	comp=N,585nm,0.3s						
GRPR	Tuman	2.06	37	AMB	AMB	20 36 50.0	
	comp=N,79nm,0.3s						
GRPR	Tuman	2.06	37	*i* S	Sn	20 37 15.0	-1.7
GRPR	Tuman	2.06	37	A	A	20 37 18.0	
	comp=N,585nm,0.4s						
GRPR	Tuman	2.06	37	*e*P	Pn	20 36 50.0	-1.7
JKA	Kamikawa-asahi	2.06	329	*e*P	Pn	20 36 51.9	+0.2
ASAJ	Asahikawa	2.06	329	P	Pn	20 36 51.9	+0.2
	comp=N,7.1nm,0.3s,baz=182,slow=16,SNR=27						
ASAJ				S	Sn	20 37 14.9	-1.8
	comp=N,10nm,0.3s,baz=70,slow=24,SNR=5.9						
YUK	Yuzh-Kuril'sk	2.13	37	A	A	20 37 20.0	
	comp=N,374nm,0.5s						
YUK	Yuzh-Kuril'sk	2.13	37	*e*PN	Pn	20 36 51.7	-1.0
YUK				*e*S	Sn	20 37 16.8	-1.6
YUK				pmax	pmax		
	comp=Z,62nm,0.2s						
YUK				pmax	pmax		
	comp=E,34nm,0.1s						
YUK				pmax	pmax		
	comp=Z,229nm,1.4s						
YUK				smax	smax		
	comp=N,800nm,1.6s						
YUK				smax	smax		
	comp=E,793nm,1.6s						
YUK				smax	smax		
	comp=N,921nm,0.4s						
YUK				smax	smax		
	comp=E,374nm,0.5s						
YUK	Yuzh-Kuril'sk	2.13	37	*e*P	Pn	20 36 51.0	-1.7
YUK	Yuzh-Kuril'sk	2.13	37	AMB	AMB	20 36 52.0	
	comp=E,62nm,0.2s						
YUK	Yuzh-Kuril'sk	2.13	37	*e*S	Sn	20 37 17.0	-1.4
YUK	Yuzh-Kuril'sk	2.13	37	A	A	20 37 20.0	
	comp=E,921nm,0.5s						
KUR	Kuril'sk	3.98	42	*e*S	Sn	20 38 00.6	-2.4
KUR	Kuril'sk	3.98	42	A	A	20 38 09.0	
	comp=E,70nm,0.6s						
KUR	Kuril'sk	3.98	42	A	A	20 38 09.0	
	comp=E,60nm,0.6s						
KUR	Kuril'sk	3.98	42	*e*P	Pn	20 37 16.1	-1.5
KUR	Kuril'sk	3.98	42	AMB	AMB	20 37 21.1	
	comp=E,64nm,0.6s						
YSS	Yuzh-Sakhalins	4.69	349	AMB	AMB	20 37 30.9	
	comp=E,10.0nm,0.3s						
YSS	Yuzh-Sakhalins	4.69	349	*e*P	Pn	20 37 28.4	+1.2
MJAR	Matsushiro Arr	7.36	220	P	Pn	20 38 04.0	+0.2
	comp=E,0.1nm,0.3s,baz=32,slow=15,SNR=4.2						
MJAR	Matsushiro Arr	7.36	220	PN	Pn	20 38 04.0	+0.2
SEY	Seymchan	21.18	11	P	P	20 40 55.5	-1.7
	comp=E,2.2nm,0.3s,baz=51,slow=0.6,SNR=17						
SEY	Seymchan	21.18	11	*e*P	P	20 40 55.5	-1.7
SONM	Songino Array	26.96	295	P	P	20 41 52.7	+0.2
	comp=E,1.7nm,0.6s,baz=80,slow=8.9,SNR=9.4						
H11N2	WAKE ISLAND Hy	29.68	132	T	T	21 13 49.1	
	baz=326,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	29.69	132	T	T	21 13 48.0	
	baz=326,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	29.70	132	T	T	21 13 50.6	
	baz=326,slow=74,SNR=8.4						
H11S1	WAKE ISLAND Hy	30.57	134	T	T	21 15 02.2	
	baz=327,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	30.58	134	T	T	21 15 04.1	
	baz=327,slow=76,SNR=7.7						
H11S2	WAKE ISLAND Hy	30.59	134	T	T	21 14 57.6	
	baz=327,slow=76,SNR=7.1						
ZALV	Zalesovo Beam	40.05	308	P	P	20 43 45.6	+0.1
	comp=E,0.8nm,0.4s,baz=99,slow=9.2,SNR=5.3						
MKAR	Makanchi Array	43.23	298	P	P	20 44 12.0	+0.3
	comp=E,0.4nm,0.5s,baz=84,slow=10,SNR=10						
MKAR	Makanchi Array	43.23	298	*e*P	P	20 44 12.0	+0.3
MKAR	Makanchi Array	43.23	298	P	P	20 44 12.0	+0.3
ILAR	Eielson Array	43.94	35	P	P	20 44 16.8	-0.3
	comp=E,0.6nm,1.0s,baz=269,slow=6.7,SNR=5.6						
YKA	Yellowknife Ar	58.20	32	P	P	20 46 04.6	+0.7
	comp=E,0.1nm,0.4s,baz=332,slow=37,SNR=1.9						
ARCES	ARCESS Array B	59.75	339	P	P	20 46 15.4	+1.0
	comp=E,5.0nm,1.1s,baz=58,slow=8.8,SNR=1.0						
WRA	Warramunga Arr	62.63	190	P	P	20 46 36.2	+1.7
	comp=E,0.5nm,1.0s,baz=148,slow=46,SNR=1.2						
FINES	FINESS Array B	65.07	332	P	P	20 46 49.5	-0.5
	comp=E,1.7nm,0.6s,baz=57,slow=7.7,SNR=8.5						

JMA 27 20:39:37.7, 37°.33N×**139°.09E, h8**^{km}±2^{km}, **M2.6, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIZZ	Izumozaki	0.36	304	P	Pg	20 39 45.6	+0.8
JFY	Yanaizu	0.50	81	P	Pg	20 39 47.2	-0.1
JFY				S	Sg	20 39 53.9	+0.1
JNS	Sasagawa	0.52	20	P	Pg	20 39 47.5	-0.3
JNS				*e*S	Sg	20 39 54.4	-0.2
JKT	Katashina	0.58	167	P	Pg	20 39 48.5	-0.4
JKT				S	Sg	20 39 56.3	-0.1
JSB	Shiboa	0.76	118	P	Pb	20 39 52.8	-0.3
JSB				S	Sg	20 40 02.7	+0.6
JAG	Ashikaga	0.95	162	P	Pg	20 39 55.7	-0.2
JAG				S	Sg	20 40 07.8	-0.5
JSD	Sado	0.96	317	P	Pg	20 39 54.6	-1.6
JSD				S	Sb	20 40 09.3	-0.3
JFT	Otama	1.01	79	S	Sg	20 40 10.1	-0.1
MAT	Matsushiro	1.06	222	P	Pg	20 39 56.9	-1.1
MAT				S	Sg	20 40 10.2	-1.5

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*OMAN **27** 21:07:19.9±0.6, 27°.94N×56°.23E, h10^{km}, mb5.6/9,* *ml4.2/17, Error ellipse: s-maj=13.9km s-min=9.1km az=249.0*

THR ***27*** *21:07:23.9±0.5, 27°.43N×56°.22E, h14^{km}±3^{km}, ML4.2*

IDC ***27*** *21:07:23.9±0.9, 27°.35N×56°.13E, h0^{km}, mb4.0/18, mb1 4.1/23, mb1mx3.9/57, mbtmp4.0/23, ML3.8/4, MS3.5/17, Ms1 3.6/17, ms1mx3.3/44, Error ellipse: s-maj=19.2km s-min=15.0km az=7.0*

TEH ***27*** *21:07:24.4, 27°.46N×56°.19E, h10^{km}, ML4.4*

MOS ***27*** *21:07:25.2±1.1, 27°.24N×56°.05E, h22^{km}, mb4.4/15, Error ellipse: s-maj=8.3km s-min=5.6km az=94.8*

NEIC ***27*** *21:07:27.1±1.3, 27°.51N±0°.06×56°.18E±0°.05, h18^{km}±3^{km}, Error ellipse: s-maj=9.2km s-min=5.9km az=161.0*

ISC 27 21:07:25.6±0.7**, 27°.45N**±0°.03×**56°.18E**±0°.04**, h7**^{km}±4^{km}**, n238,** σ1^{s}.**33**/247**, mb4.2**/48**, MS3.5**/14**, 7C-6D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.05	189	Pg	Pg	21 07 26.5	-0.8
GENO	Geno	0.05	189	*e*Pg	Pg	21 07 26.5	-0.8
BNDS	Bandar-Abbas	0.05	190	*e*Pg	Pg	21 07 26.6	-0.7
BNDS				AML	AML	21 07 30.0	
	comp=N,86µm,0.3s						
BNDS	Bandar-Abbas	0.05	190	Pg	Pg	21 07 26.5	-0.7
BNDS	Bandar-Abbas	0.05	190	*e*Pg	Pg	21 07 26.6	-0.7
IBND	Bandar-abas	0.32	90	*e*Pg	Pg	21 07 30.5	-1.3
IBND				*e*		21 07 48.4	
	comp=Z,99nm,0.3s						
SHME	Shamm	1.39	181		Pn	21 07 51.6	+0.2
SHME	Shamm	1.39	181	*e*Pg	Pn	21 07 51.7	+0.3
SHME	Shamm	1.39	181	P	Pn	21 07 51.8	+0.3
	SNR=42						
SHME				S	Sg	21 08 12.1	+1.7
KHNJ	Kahnooj	1.44	69		Pn	21 07 51.3	-0.8
KHNJ	Kahnooj	1.44	69	*e*Pg	Pn	21 07 51.3	-0.8
BANOM	Banah	1.52	176	*e*Pn	Pn	21 07 53.7	+0.5
BANOM	Banah	1.52	176	P	Pb	21 07 53.9	-0.2
	SNR=238						
BANOM				S	Sg	21 08 15.8	+1.3
LAR1	LAR	1.62	278	Pn	Pn	21 07 54.3	-0.3
LAR1	LAR	1.62	278	*e*Pn	Pn	21 07 54.3	-0.3
LAR1				*e*		21 08 31.2	
	comp=Z,99nm,0.4s						
UMQ	Umm Al-Quwin	1.97	194	P	Pb	21 08 00.7	-1.1
UMQ				S	Sg	21 08 32.9	+4.0
MASF	Masafi	2.07	181	P	Pn	21 08 01.9	+1.2
	SNR=50						
MASF				S	Sg	21 08 33.8	+1.7
MSFE	Esma-Masafi	2.08	181	*e*Pn	Pn	21 08 01.8	+0.9
MDH	Madha	2.14	177	*e*Pn	Pn	21 08 02.4	+0.7
MDH	Madha	2.14	177	P	Pn	21 08 02.8	+1.0
	SNR=23						
MDH				S	Sg	21 08 35.9	+1.4
NGRK	Negar Kerman	2.24	12	*e*Pn	Pn	21 08 03.7	+0.3
NGRK				*e*		21 08 40.5	
	comp=Z,99nm,1.1s						
UOSS	Minazif	2.49	180		Pn	21 08 07.1	+0.5
UOSS	Minazif	2.49	180	*e*Pn	Pn	21 08 07.0	+0.5
UOSS	Minazif	2.49	180	P	Pn	21 08 07.5	+0.9
UOSS				S	Sg	21 08 45.4	-0.3
NAZ	Nazwa, Dubai	2.49	191	*e*Pn	Pn	21 08 07.8	+1.2
NAZ	Nazwa, Dubai	2.49	191	P	Pn	21 08 08.0	+1.5
	SNR=8.5						
NAZ				S	Sg	21 08 46.5	+0.8
JHRM	Jahrom	2.53	295	*e*Pn	Pn	21 08 07.8	+0.6
JHRM				*e*		21 09 05.6	
	comp=Z,99nm,0.6s						
KRBR	Kerman	2.58	11	*e*Pn	Pn	21 08 07.8	-0.2
KRBR				*e*Sg	Sb	21 08 44.9	+0.6
KRBR				AML	AML	21 08 52.9	
	comp=E,948nm,0.8s						
KRBR	Kerman	2.58	11	*e*Pn	Pn	21 08 07.8	-0.2
TVBK	TV Kerman	2.58	11	*e*		21 08 48.8	
	comp=Z,99nm,0.5s						
TVBK				*e*Pn	Pn	21 08 08.6	+0.5
HATD	Hatta, Dubai	2.61	181	*e*Pn	Pn	21 08 09.3	+1.1
HATD	Hatta, Dubai	2.61	181	P	Pn	21 08 09.4	+1.1
	SNR=22						
HATD				S	Sg	21 08 49.0	-0.5
KBAM	BAM	2.62	49	*e*		21 08 53.6	
	comp=Z,99nm,0.9s						
KBAM				*e*Pn	Pn	21 08 08.8	+0.5
CHMN	Cheshme madani	2.68	26	*e*Pn	Pn	21 08 10.0	+0.5
CHMN				*e*		21 08 53.4	
	comp=Z,99nm,0.8s						
LMD1	Lamerd	2.68	268	*e*Pn	Pn	21 08 09.1	-0.1
LMD1				*e*		21 09 18.9	
	comp=Z,99nm,0.8s						
FAQ	Al Faqa, Dubai	2.74	191	*e*Pn	Pn	21 08 11.0	+1.0
FAQ	Al Faqa, Dubai	2.74	191	P	Pn	21 08 11.6	+1.6
	SNR=25						
ASHO	Ashiyiah	2.76	182	*e*Pn	Pn	21 08 11.0	+0.8
ASHO	Ashiyiah	2.76	182	P	Pn	21 08 11.4	+1.1
	SNR=56						
ASUD	Al Ashush, Dub	2.91	195	P	Pn	21 08 14.0	+1.7
	SNR=20						
ASUD				S	Sb	21 08 55.6	+1.9
KHGB	Koh Gabri	2.93	5	*e*Pn	Pn	21 08 13.6	+0.8
KHGB				*e*		21 08 59.8	
	comp=Z,99nm,0.9s						
QIR1	Qir	2.96	291	*e*Pn	Pn	21 08 13.4	+0.4
QIR1				*e*		21 09 37.3	
	comp=Z,99nm,1.1s						
AJN	Ajban	3.07	201	*e*Pn	Pn	21 08 16.0	+1.5
AJN	Ajban	3.07	201	P	Pn	21 08 15.8	+1.3
SOHO	SOHO	3.32	174	*e*Pn	Pn	21 08 18.3	+0.4
SOHO	SOHO	3.32	174	P	Pn	21 08 18.5	+0.6
ALNE	Al Ain	3.40	187	*e*Pn	Pn	21 08 20.4	+1.3
ALNE	Al Ain	3.40	187	P	Pn	21 08 20.3	+1.2
SHI	Shiraz	3.90	305	*e*Pn	Pn	21 08 25.2	-0.8
HOQ	Hoqain	3.98	165	P	Pn	21 08 26.5	-0.5
	SNR=13						
ARQ	Araqi	4.11	176	P	Pn	21 08 30.0	+1.2
	SNR=24						
IMEH	Mehriz	4.16	341	*e*Pn	Pn	21 08 30.6	+0.9
MZWR	Madinat Zayed	4.22	210	P	Pn	21 08 30.8	+0.5
BIDO	Bidbid	4.29	155	*e*Pn	Pn	21 08 29.7	-1.6
AHBU	AHRAM	4.54	289	*e*Pn	Pn	21 08 34.9	+0.2
KAZ1	Kazerun	4.54	300	*e*Pn	Pn	21 08 34.5	-0.4
SMDO	Samad	4.69	158	P	Pn	21 08 38.4	+1.6
	SNR=9.8						
WSAR	Wadi Sarin	4.74	152	Pn	Pn	21 08 37.8	+0.3
	comp=Z,6.8nm,0.3s,baz=347,slow=10,SNR=65						
WSAR				Sn	Sn	21 09 30.9	-1.9
	comp=Z,4.3nm,0.3s,baz=212,slow=18,SNR=7.5						
BSY	Bisya	4.77	169	P	Pn	21 08 39.3	+1.3
ISAD	Sadrabad	4.95	335	*e*Pn	Pn	21 08 40.6	0.0
BSRN	Basiran	5.18	29	*e*Pn	Pn	21 08 43.3	-0.3
BSRN	Basiran	5.18	29	*e*Pn	Pn	21 08 43.3	-0.3
NHDN	Nehbandan	5.18	40	*e*Pn	Pn	21 08 44.4	+0.8
JMDO	Jabal Madar	5.35	161	P	Pn	21 08 47.4	+1.5
	SNR=12						
KLNJ	Kolanjah	5.35	313	*e*Pn	Pn	21 08 46.8	+0.6
WBK	Wadi Bani Khal	5.44	152	P	Pn	21 08 47.1	0.0
	SNR=22						
IRAM	Ramesheh	5.46	324	*e*Pn	Pn	21 08 48.0	+0.4
IKOO	Kooshah	5.53	26	*e*Pn	Pn	21 08 49.0	+0.4
TPRV	Parvadeh(Tabas	5.58	4	*e*Pn	Pn	21 08 49.8	+0.7
JLN	Jalan Bani Buh	6.04	150	P	Pn	21 08 54.8	-0.5
	SNR=21						
JLN				S	Sn	21 10 01.8	-2.9
ANAR	Anarak	6.10	340	*e*Pn	Pn	21 08 56.7	+0.4
IGAR	Gharneh	6.11	325	*e*Pn	Pn	21 08 57.0	+0.6
TKDS	Koohdasht(Taba	6.20	7	*e*Pn	Pn	21 08 58.5	+0.9
IZEF	Zefreh	6.37	329	*e*Pn	Pn	21 08 59.8	-0.3
TNSJ	Nastanj	6.50	3	*e*Pn	Pn	21 09 02.2	+0.4
MHTO	MHTO	6.64	165	P	Pn	21 09 04.5	+0.9
	SNR=19						
MHTO				S	Sn	21 10 20.2	+0.8
SHK1	Shahrekord	6.69	318	*e*Pn	Pn	21 09 04.3	-0.2
IPIR	Pirpir	6.94	320	*e*Pn	Pn	21 09 08.2	+0.2
AMIS	Naft Sefid	7.33	307	*e*Pn	Pn	21 09 11.5	-1.5
KRSH	Karshahi	7.37	333	*e*Pn	Pn	21 09 14.5	+0.7
QAM	Ghamsar	7.50	328	*e*Pn	Pn	21 09 15.6	0.0
DQM	DQM	7.59	170	P	Pn	21 09 16.1	-0.5
	SNR=10						
KBD	Kabd	7.68	285	*e*P		21 09 16.7	
UMR	Umm Al-Rimmam	7.74	288	*e*P		21 09 17.0	
RDF	Al-Radifah	7.76	283	*e*P		21 09 17.0	
IANJ	Anjilo	8.22	347	*e*Pn	Pn	21 09 27.4	+1.9
RST	Umm Al-Ruwaisa	8.34	286	*e*P		21 09 25.6	
IVRN	Varamin	8.43	334	*e*Pn	Pn	21 09 27.9	-0.3
IQOM	Qom	8.57	331	*e*Pn	Pn	21 09 31.4	+1.1
HRA	Herat	8.65	35		Pn	21 09 31.2	-0.2
IFIR	Firoozkooh	8.67	341	*e*Pn	Pn	21 09 30.7	-1.0
ISHM	Shahmirzad	8.69	344	*e*Pn	Pn	21 09 33.2	+1.3
DOK	Doka	8.99	193	P	Pn	21 09 35.5	-0.4
	SNR=9.9						
SBZV	Sabzevar	8.99	7	*e*Pn	Pn	21 09 36.9	+0.8
IGLO	Ghaloghah	9.24	348	*e*Pn	Pn	21 09 41.5	+2.0
IDOB	Doab	9.35	314	*e*Pn	Pn	21 09 38.2	-2.7
IPRN	Peran	9.36	341	*e*Pn	Pn	21 09 42.5	+1.6
SHAO	Shalim	9.40	183	P	Pn	21 09 40.6	-0.9
	SNR=24						
WHFO	Wadi Hawf	9.74	194	P	Pn	21 09 46.0	-0.2
	SNR=78						
DMTO	DMTO	9.75	187	P	Pn	21 09 45.9	-0.4
	SNR=27						
RBK	Rabkut	10.06	191	P	Pn	21 09 50.5	-0.1
	SNR=7.4						
QALM	Alamut, Qazvin	10.11	334	*e*Pn	Pn	21 09 53.7	+2.3
ABTO	Aybut	10.39	195	P	Pn	21 09 54.5	-0.7
	SNR=13						
RAYN	Ar Rayn	10.41	250	P	Pn	21 09 53.0	-2.3
RAYN	Ar Rayn	10.41	250	Pn	Pn	21 09 53.0	-2.3
IGHG	Ghaleghazi	10.73	312	*e*Pn	Pn	21 09 58.1	-1.8
IDHR	Dehrash	11.07	313	*e*Pn	Pn	21 10 03.1	-1.5
THW	Thamme Wali	14.48	65	P	Pn	21 10 50.7	-0.3
CEP	Cherat	14.95	61	P	Pn	21 10 57.4	-0.1
GEVA	Gevas	15.44	318	Pn	Pn	21 11 04.4	+0.4
GEVA				IAmb	IAmb	21 11 13.8	
	comp=Z,14nm,1.1s						
GNI	Garni	15.82	326	Pn	P	21 11 12.4	-0.4
	comp=Z,0.7nm,0.3s,baz=200,slow=3.0,SNR=7.5						
GNI				LR	LR	21 18 16.5	
	comp=Z,71nm,20.6s,baz=136,slow=41						
GNI	Garni	15.82	326	⇓*e*P	P	21 11 13.6	+0.8
GNI				pmax	pmax		
	comp=Z,17nm,1.0s						
GNI	Garni	15.82	326		P	21 11 12.4	-0.4
GNI				IAmb	IAmb	21 11 21.7	
	comp=Z,12nm,0.8s						
NIL	Nilore	15.95	63	P	Pn	21 11 10.7	+0.2
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
NIL	Nilore	15.95	63	P	Pn	21 11 10.7	+0.2
MARD	Mardin	16.29	311		Pn	21 11 12.8	-2.1
LGD	Lagodekhi	16.50	333	P	P	21 11 25.5	+5.3
AKH	Akhalkalaki	17.39	326	P	Pn	21 11 29.5	+0.6
AKH				pmax	pmax		
	comp=Z,13nm,0.8s						
AKH	Akhalkalaki	17.39	326	P	Pn	21 11 29.5	+0.6
AKH				IAmb	IAmb	21 11 47.3	
	comp=Z,12nm,0.8s						
ZEI	Tsey	18.27	330	*e*P	P	21 11 41.2	+1.2
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s						
MALT	Malatya	18.40	311	P	P	21 11 46.6	+5.3
EIL	Elat	18.78	282	P	P	21 11 45.4	0.0
	comp=Z,0.4nm,0.3s,baz=123,slow=3.7,SNR=4.3						
EIL				LR	LR	21 21 05.5	
	comp=Z,111nm,21.4s,baz=102,slow=44						
MMAI	Mount Meron Ar	18.78	292	P	P	21 11 45.7	+0.2
	comp=Z,0.6nm,0.3s,baz=99,slow=15,SNR=11						
MMAI				LR	LR	21 20 46.0	
	comp=Z,126nm,19.6s,baz=95,slow=43						
NCK	Nalchik	18.97	331	⇓*e*P	Pn	21 11 49.6	+1.5
NCK				pmax	pmax		
	comp=Z,15nm,0.7s						
NEY	Neytrino	19.17	329	⇑*e*P	Pn	21 11 52.6	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	19.47	330	P	Pn	21 11 54.9	+0.9
	comp=Z,0.1nm,0.3s,baz=206,slow=20,SNR=2.2						
KK31	Karatay Array	19.47	33	P	P	21 11 52.6	-0.3
KK31				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KK31	Karatay Array	19.47	33	P	P	21 11 52.6	-0.3
KKAR	Karatay Array	19.47	33	P	P	21 11 52.4	-0.5
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KKAR	Karatay Array	19.47	33	P	P	21 11 52.4	-0.5
KKAR	Karatay Array	19.47	33	P	P	21 11 52.6	-0.3
DZA	Taraz	19.72	35	*e*P	Pn	21 11 58.6	+1.5
	baz=35						
DZA	Taraz	19.72	35	*e*P	Pn	21 11 58.6	+1.5
KIV	Kislovodsk	19.74	330	*e*P	Pn	21 11 56.7	-0.7
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV	Kislovodsk	19.74	330	P	P	21 11 55.8	-0.1
KIV				IAmb	IAmb	21 12 10.3	
	comp=Z,8.1nm,0.8s						
CSS	Mathiatis	20.90	297	P	P	21 12 07.2	-1.4
CSS				IAmb	IAmb	21 12 15.5	
	comp=Z,16nm,1.2s						
AAK	Ala-Archa	21.25	40	P	P	21 12 12.6	+0.2
	comp=Z,2.8nm,0.5s,baz=216,slow=5.4,SNR=14						
AAK				LR	LR	21 20 42.0	
	comp=Z,127nm,18.3s,baz=251,slow=37						
AAK	Ala-Archa	21.25	40	P	P	21 12 11.2	-1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	21.25	40	P	P	21 12 11.2	-1.2
SGDS	Sogindy	21.85	38	*e*P	P	21 12 21.6	+2.8
	baz=38						
SGDS	Sogindy	21.85	38	*e*P	P	21 12 21.5	+2.8
ABKAR	Akbulak array	21.97	7	P	P	21 12 18.4	-1.5
ABKAR	Akbulak array	21.97	7	P	P	21 12 18.8	-1.1
ABKAR				IAmb	IAmb	21 12 24.0	
	comp=Z,9.9nm,0.8s						
BR131	Keskin Array S	22.35	309	P	P	21 12 24.2	0.0
BR131				pmax	pmax		
	comp=Z,12nm,0.8s						
BR131	Keskin Array S	22.35	309	P	P	21 12 24.2	0.0
BR131				IAmb	IAmb	21 12 29.3	
	comp=Z,12nm,0.8s						
BRTR	Keskin Array B	22.35	309	P	P	21 12 23.5	-0.7
	comp=Z,2.6nm,0.7s,baz=137,slow=12,SNR=22						
BRTR				LR	LR	21 23 04.5	
	comp=Z,76nm,18.1s,baz=121,slow=42						
BRTR	Keskin Array B	22.35	309	*e*P	P	21 12 25.9	+1.7
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKTO	Aktyubinsk	23.00	3	P	P	21 12 30.5	-0.3
	comp=Z,3.2nm,0.6s,baz=176,slow=7.0,SNR=8.5						
AKTO				LR	LR	21 23 21.9	
	comp=Z,251nm,19.3s,baz=169,slow=42						
MDOK	Medeo	23.05	42	*e*P	P	21 12 34.4	+2.7
	baz=42						
MDOK	Medeo	23.05	42	*e*P	P	21 12 34.3	+2.7
KUU	Kurty	23.09	39	*e*P	P	21 12 34.0	+2.1
	comp=Z,2.3nm,0.8s,baz=40						
KUU	Kurty	23.09	39	*e*P	P	21 12 33.9	+2.1
KUU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHKK	Chushkaly	23.43	40	*e*P	P	21 12 37.6	+2.3
	baz=40						
CHKK	Chushkaly	23.43	40	*e*P	P	21 12 37.6	+2.3
ELL	Elmali	24.05	299	P	P	21 12 41.6	+0.1
ELL				pmax	pmax		
	comp=Z,41nm,1.0s						
ELL	Elmali	24.05	299		P	21 12 41.6	+0.1
MDUB	Mudurnu	24.36	309	P	P	21 12 43.8	-0.5
DANN	Dangsing	24.37	81	*e*P	P	21 12 45.6	+0.8
	comp=Z,28nm,0.8s						
SHLS	Shalkode	24.51	44	*e*P	P	21 12 50.1	+4.3
	comp=Z,4.4nm,0.8s,baz=45						
SHLS	Shalkode	24.51	44	*e*P	P	21 12 50.0	+4.3
SHLS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TDK	Taldyqorghan	24.94	40	*e*P	P	21 12 50.9	+1.5
	baz=40						
TDK	Taldyqorghan	24.94	40	*e*P	P	21 12 50.9	+1.5
BELG	Belogornoye	25.73	348	P	P	21 12 56.9	+0.5
	comp=Z,8.8nm,0.7s,baz=286,slow=4.9,SNR=6.5						
BELG				LR	LR	21 24 47.7	
	comp=Z,84nm,21.3s,baz=130,slow=40						
BELG	Belogornoye	25.73	348	⇑*e*P	P	21 12 57.9	+1.5
BELG				pmax	pmax		
	comp=Z,22nm,6.1s						
KKN	Kakani	25.76	82	*e*P	P	21 12 59.3	+2.0
	comp=Z,4.3nm,0.4s						
BRZS	Berezniki	25.81	25	*e*P	P	21 12 58.8	+1.6
	baz=25						
BRZS	Berezniki	25.81	25	*e*P	P	21 12 58.8	+1.6
PKIN	Phulchoki	25.89	83	*e*P	P	21 13 02.0	+3.5
	comp=Z,5.3nm,0.5s						
VRH	Novokhopyorsk	26.13	339	*e*P	P	21 12 59.4	-0.7
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
GUN	Gumba	26.28	82	*e*P	P	21 13 03.1	+1.0
	comp=Z,22nm,1.0s						
VORD	Divnogorie	26.76	336	*e*P	P	21 13 06.5	+0.8
VORD				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSR	Storozhevoye	27.01	336	*e*P	P	21 13 07.8	-0.2
VSR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	Borovoye	27.65	18	⇑*e*P	P	21 13 15.0	+1.2
BRVK				pmax	pmax		
	comp=Z,32nm,5.2s						
MAKZ	Makanchi	28.01	40	P	P	21 13 16.3	-0.8
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MAKZ	Makanchi	28.01	40	P	P	21 13 16.3	-0.8
MAKZ				IAmb	IAmb	21 13 25.0	
	comp=Z,7.1nm,1.4s						
MK31	Makanchi Array	28.18	40	P	P	21 13 18.5	-0.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	28.18	40	P	P	21 13 18.5	-0.2
MKAR	Makanchi Array	28.18	40	P	P	21 13 19.3	+0.7
	comp=Z,0.6nm,0.6s,baz=231,slow=8.9,SNR=10						
MKAR				LR	LR	21 24 44.0	
	comp=Z,110nm,19.3s,baz=237,slow=37						
MKAR	Makanchi Array	28.18	40	*e*P	P	21 13 21.4	+2.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPSR	Galich'ya Gora	28.24	338	*e*P	P	21 13 18.4	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KURBB	Kurchatov Arra	28.72	30	P	P	21 13 24.2	+0.9
	comp=Z,1.3nm,0.8s,baz=231,slow=8.5,SNR=11						
KURK	Kurchatov	28.82	30	⇓*e*P	P	21 13 26.3	+2.1
KURK				pmax	pmax		
	comp=Z,8.0nm,2.0s						
KURK	Kurchatov	28.82	30	P	P	21 13 22.8	-1.4
ARU	Arti	29.01	3	LR	LR	21 27 17.7	
	comp=Z,104nm,18.2s,baz=182,slow=41						
SEM	Semipalatinsk	29.36	32	*e*P	P	21 13 30.9	+1.5
	baz=32						
SEM	Semipalatinsk	29.36	32	*e*P	P	21 13 30.8	+1.5
MLR	Muntele Rosu	30.00	315	P	P	21 13 34.5	-0.5
MLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MLR	Muntele Rosu	30.00	315	P	P	21 13 34.5	-0.5
MLR				IAmb	IAmb	21 13 42.8	
	comp=Z,6.1nm,1.3s						
ITM	Ithomi	30.39	297	P	P	21 13 37.7	-0.6
AGG	Agios Georgios	30.41	301	P	P	21 13 38.1	-0.4
AGG				pmax	pmax		
	comp=Z,13nm,1.4s						
AGG	Agios Georgios	30.41	301	P	P	21 13 38.1	-0.4
AKASG	Malin Array Be	30.95	326	P	P	21 13 41.3	-1.8
	comp=Z,1.2nm,0.5s,baz=132,slow=8.6,SNR=5.7						
AKASG	Malin Array Be	30.95	326	*e*P	P	21 13 43.2	+0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	30.95	326	⇓*e*P	P	21 13 42.8	-0.3
AKBB				pmax	pmax		
	comp=Z,90nm,6.2s						
OBN	Obninsk	31.10	338	*i* P	P	21 13 45.8	+1.5
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FNA	Florina	31.52	304	P	P	21 13 47.8	-0.5
FNA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FNA	Florina	31.52	304	P	P	21 13 47.8	-0.5
FNA				IAmb	IAmb	21 13 56.4	
	comp=Z,5.0nm,0.8s						
DGZ	Jazzator, Alta	32.65	39	⇓*e*P	P	21 13 59.7	+1.5
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ZAA0	Zalesovo Array	33.81	31	P	P	21 14 07.7	-0.4
ZAA0				IAmb	IAmb	21 14 18.2	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	33.81	31	P	P	21 14 08.0	-0.2
	comp=Z,1.3nm,0.3s,baz=244,slow=8.5,SNR=7.3						
ZALV				LR	LR	21 28 41.7	
	comp=Z,53nm,19.0s,baz=157,slow=38						
ZALV	Zalesovo Beam	33.81	31	*e*P	P	21 14 08.5	+0.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VSU	Vasula	37.17	335	⇑*e*P	P	21 14 37.9	+1.0
GERES	GERESS Array B	38.99	315	P	P	21 14 52.1	-0.5
	comp=Z,1.0nm,0.7s,baz=118,slow=7.5,SNR=7.9						
GERES	GERESS Array B	38.99	315	*e*P	P	21 14 52.7	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	38.99	315	P	P	21 14 51.8	-0.8
KHC	Kasperske Hory	39.16	315	⇓*e*P	P	21 14 54.1	+0.2
KHC				pmax	pmax		
	comp=Z,16nm,1.0s						
KHC	Kasperske Hory	39.16	315	*e*P	P	21 14 53.8	-0.1
KHC				*e*pP	sP	21 14 57.2	0.0
KHC	Kasperske Hory	39.16	315	P	P	21 14 53.5	-0.4
KHC				IAmb	IAmb	21 14 55.9	
	comp=Z,5.0nm,0.7s						
FIA1	FINESS Array S	39.51	338	P	P	21 14 56.6	+0.1
FINES	FINESS Array B	39.51	338	P	P	21 14 56.4	-0.2
	comp=Z,1.8nm,0.5s,baz=135,slow=8.8,SNR=11						
FINES				LR	LR	21 32 26.3	
	comp=Z,98nm,19.1s,baz=290,slow=38						
FINES	FINESS Array B	39.51	338	*e*P	P	21 14 56.9	+0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	39.51	338	P	P	21 14 56.5	0.0
WATA	Walderalm	39.96	312	*e*P	P	21 15 01.2	+0.4
	comp=Z,6.8nm,1.1s						
SQTA	Sankt Quirin	40.18	312	*e*P	P	21 15 01.4	-1.2
	comp=Z,3.4nm,0.5s						
CLL	Collm	40.21	318	*e*P	P	21 15 08.0	+5.5
CLL	Collm	40.21	318	*e*P	P	21 15 08.0	+5.5
CMAR	Chiang Mai Arr	40.22	94	LR	LR	21 36 00.4	
	comp=Z,57nm,19.9s,baz=354,slow=43						
MOTA	Moosalm	40.28	312	*e*P	P	21 15 02.7	-0.7
	comp=Z,2.0nm,0.6s						
FETA	Feichten	40.45	311	*e*P	P	21 15 04.1	-0.8
	comp=Z,4.1nm,0.6s						
DAVA	Damuels	41.08	311	*e*P	P	21 15 07.6	-2.4
	comp=Z,5.9nm,0.5s						
SENIN	Lac Senin/Sane	42.65	310	P	P	21 15 22.8	-0.2
SENIN				IAmb	IAmb	21 15 23.2	
	comp=Z,12nm,1.4s						
SONM	Songino Array	43.78	48	P	P	21 15 32.3	+0.4
	comp=Z,2.1nm,0.9s,baz=258,slow=8.5,SNR=13						
SONM				LR	LR	21 35 06.5	
	comp=Z,97nm,20.6s,baz=245,slow=38						
SONM	Songino Array	43.78	48	*e*P	P	21 15 33.3	+1.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	43.78	48	P	P	21 15 31.9	-0.1
ULN	Ulaanbaatar	44.22	48	⇑*e*P	P	21 15 38.0	+2.4
NOA	NORSAR Array B	45.04	331	P	P	21 15 41.1	-0.6
	comp=Z,1.0nm,0.7s,baz=116,slow=7.8,SNR=5.1						
NOA				LR	LR	21 35 32.4	
	comp=Z,54nm,19.2s,baz=350,slow=37						
NOA	NORSAR Array B	45.04	331	*e*P	P	21 15 42.4	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	45.73	345	P	P	21 15 47.8	+0.8
	comp=Z,2.1nm,0.8s,baz=39,slow=2.3,SNR=5.1						
ARCES				LR	LR	21 38 46.2	
	comp=Z,184nm,19.2s,baz=0.0,slow=41						
ESDC	Sonseca Array	50.73	300	P	P	21 16 25.9	-0.2
	comp=Z,0.5nm,0.6s,baz=69,slow=7.1,SNR=6.6						
TOA0	Torodi Ar. Sit	52.66	266	P	P	21 16 39.2	-1.6
TOA0				IAmb	IAmb	21 16 44.8	
	comp=Z,4.3nm,0.8s						
TORD	Torodi Ar. Bea	52.66	266	P	P	21 16 39.2	-1.7
	comp=Z,2.8nm,0.4s,baz=63,slow=7.2,SNR=15						
TORD				LR	LR	21 41 38.2	
	comp=Z,55nm,19.2s,baz=50,slow=39						
TORD	Torodi Ar. Bea	52.66	266	P	P	21 16 39.0	-1.9
KOWA	Kowa	57.19	270	P	P	21 17 13.0	-0.6
TIXI	Tiksi	58.76	21	⇑*e*P	P	21 17 20.8	-3.0
KLR	Kul'dur	60.56	47	⇑*e*P	P	21 17 37.7	+1.1
KLR				pmax	pmax		
	comp=Z,19nm,2.8s						
IMAR	Indian Mountai	84.08	12	P	P	21 19 56.8	+0.1
ILAR	Eielson Array	86.34	10	P	P	21 20 07.5	-0.6
	comp=Z,0.3nm,0.6s,baz=318,slow=4.4,SNR=5.4						
ILAR	Eielson Array	86.34	10	*e*P	P	21 20 10.8	+2.7

YKA	Yellowknife Ar	90.07	356	P	P	21 20 26.0	+0.2
	comp=Z,0.1nm,0.3s,baz=272,slow=16,SNR=2.8						
YKA	Yellowknife Ar	90.07	356	P	P	21 20 26.0	+0.2
ASAR	Alice Springs	90.56	116	P	P	21 20 27.8	-1.1
	comp=Z,0.2nm,0.4s,baz=308,slow=4.8,SNR=5.2						
RCBR	Riachuelo	94.50	266	LR	LR	22 04 11.4	
	comp=Z,36nm,20.8s,baz=332,slow=36						

IDC ***27*** *21:26:34.6±0.9, 20°.47S×172°.54E, h0^{km}, mb4.3/15, mb1 4.5/17, mb1mx4.4/32, mbtmp4.3/17, ML3.6/2, MS4.1/33, Ms1 4.1/33, ms1mx4.1/35, Error ellipse: s-maj=30.5km s-min=17.7km az=152.0*

NEIC ***27*** *21:26:35.7±1.6, 20°.6S±0°.1×172°.60E±0°.08, h10^{km}±1^{km}, mb5.0/44, Error ellipse: s-maj=17.5km s-min=12.8km az=172.0*

GCMT ***27*** *21:26:38.7±0.2, 20°.50S±0°.01×172°.56E±0°.01, h13^{km}±1^{km}, MW5.0/109, Moment Tensor Solution. s48,c58; s109,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.72±.14; $M_{\theta\theta}$-1.20±.12; $M_{\phi\phi}$2.91±.11; $M_{r\theta}$-0.38±.27; $M_{\theta\phi}$3.66±.09; $M_{\phi r}$0.95±.23; Best double couple: $M_0$4.39700×10^{16} NP1:ϕ_s74.00000°, δ70.00000°, λ-13.00000°. NP2:ϕ_s168.00000°, δ78.00000°, λ-160.00000°. Principal axes: T 5.1110, Plg5.0000°, Azm300.0000°; N -1.4390, Plg66.0000°, Azm197.0000°; P -3.6820, Plg23.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***27*** *21:26:39.2±1.4, 20°.48S×172°.61E, h35^{km}, mb5.3/11 Error ellipse: s-maj=11.7km s-min=10.2km az=173.7*

BGR ***27*** *21:26:40.8±0.0, 19°.92S×173°.34E, h54^{km}±2^{km}*

BJI ***27*** *21:26:41.5±0.0, 19°.88S×172°.48E, h32^{km}, mB5.4/21, mb4.7/39, Ms5.0/1, Ms7 4.7/5*

NOU ***27*** *21:26:56.1, 20°.40S×171°.02E, h158^{km}, MLv4.5, Vanuatu Islands Region*

ISC 27 21:26:39.2±0.3**, 20°.62S**±0°.06×**172°.65E**±0°.06**, h35^{km}, n297,** σ1^{s}**61**/276**, mb4.9**/51**, MS4.2**/35**, 23C-18D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.39	258	P	Pn	21 27 42.6	-0.9
DVP	Devils Point	5.10	304	P	Pn	21 27 54.7	+1.5
YATNC	Mamie plateau,	5.55	254	P	Pn	21 27 58.7	-0.7
OUENC	Ouen Island, N	5.69	251	P	Pn	21 28 01.8	+0.5
MSVF	Nonsavu	5.86	62	⇑eP	Pn	21 28 04.7	+1.0
MSVF	Nonsavu	5.86	62	Pn	Pn	21 28 04.0	+0.3
DZM	Mont Dzumac	5.96	255	ePn	Pn	21 28 04.9	-0.1
	160nm,1.6s						
DZM				eLR	LR	21 29 19.0	
	comp=Z,2μm,24.8s						
DZM	Mont Dzumac	5.96	255	Pn	Pn	21 28 04.9	-0.1
	1.1nm,0.3s,baz=99,slow=12,SNR=13						
DZM				LR	LR	21 29 58.2	
	comp=Z,1μm,21.7s,baz=94,slow=34						
DZM	Mont Dzumac	5.96	255	Pn	Pn	21 28 04.5	-0.6
DZM	Mont Dzumac	5.96	255	P	Pn	21 28 05.0	-0.1
NOUC	Port Laguerre	6.09	255	P	Pn	21 28 06.7	-0.1
SANVU	Saraoutou	7.30	314	Pn	Pn	21 28 22.8	-0.6
SANVU	Saraoutou	7.30	314	P	Pn	21 28 23.8	+0.4
KOUNC	Koumac, New Ca	7.83	269	P	Pn	21 28 26.6	-4.1
	78nm,1.4s						
RAO	Raoul Island	12.12	137	LR	LR	21 33 14.9	
	comp=Z,2μm,19.2s,baz=328,slow=32						
AFI	Afiamalu	16.30	68	P	P	21 30 27.2	-1.1
HNR	Honiara	16.54	310	LR	LR	21 35 49.3	
	comp=Z,905nm,19.0s,baz=136,slow=34						
HNR	Honiara	16.54	310	P	Pn	21 30 27.0	-1.7
HNR				pmax	pmax		
	comp=Z,392nm,1.1s						
HNR	Honiara	16.54	310	Pn	Pn	21 30 26.9	-1.7
HIZ	Hauiti	17.93	174	P	P	21 30 46.9	+0.8
URZ	Urewera	18.00	169	P	P	21 30 49.1	+2.3
	comp=Z,0.3nm,0.3s,baz=338,slow=5.8,SNR=4.5						
URZ				LR	LR	21 36 37.3	
	comp=Z,777nm,18.8s,baz=29,slow=33						
RPZ	Rata Peaks	23.07	183	LR	LR	21 39 33.2	
	comp=Z,759nm,18.6s,baz=12,slow=34						
CTAO	Charters Tower	24.74	267	P	P	21 31 57.5	-0.1
CTAO				pmax	pmax		
	comp=Z,114nm,1.8s						
CTAO	Charters Tower	24.74	267	P	P	21 31 57.5	-0.1
RAR	Rarotonga	25.76	96	LR	LR	21 40 02.5	
	comp=Z,412nm,21.2s,baz=256,slow=31						
PMG	Port Moresby	26.98	291	LR	LR	21 41 14.6	
	comp=Z,675nm,20.3s,baz=89,slow=33						
STKA	Stephens Creek	29.92	242	P	P	21 32 44.6	+0.7
	comp=Z,2.6nm,0.9s,baz=111,slow=5.7,SNR=2.6						
STKA				LR	LR	21 43 37.1	
	comp=Z,259nm,19.2s,baz=67,slow=34						
STKA	Stephens Creek	29.92	242	⇓eP	P	21 32 46.5	+2.5
STKA	Stephens Creek	29.92	242	P	P	21 32 44.9	+0.9
TBI	Tubuai	35.18	102	eS	S	21 39 00.7	-0.4
	comp=Z,132nm,27.0s						
TBI				eLR	LR	21 43 03.2	
	comp=Z,1μm,30.8s						
PPT2	Papeete2	35.77	92	eLQ	LQ	21 41 31.1	
	comp=Z,860nm,35.0s						
PPT2				eLR	LR	21 43 21.3	
	comp=Z,1μm,26.8s						
PPT	Papeete	35.78	92	LR	LR	21 44 27.8	
	comp=Z,317nm,20.0s,baz=245,slow=30						
WB0	Warramunga Arr	35.86	265	P	P	21 33 34.9	-1.1
WB2	Warramunga Arr	35.87	264	P	P	21 33 34.9	-1.3
WB2				IAmb	IAmb	21 33 45.2	
	comp=Z,36nm,1.6s						
WRAB	Tennant Creek	35.88	264	⇑eP	P	21 33 40.2	+4.1
WRAB				pmax	pmax		
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	35.88	264	P	P	21 33 34.0	-2.2
	comp=Z,3.0nm,1.0s,baz=92,slow=9.1,SNR=9.3						
WRA				LR	LR	21 47 07.4	
	comp=Z,586nm,21.4s,baz=110,slow=34						
AS31	Alice Springs	35.94	258	P	P	21 33 36.4	-0.3
ASAR	Alice Springs	35.94	258	P	P	21 33 36.0	-0.7
	comp=Z,4.7nm,1.0s,baz=85,slow=8.2,SNR=17						
ASAR				LR	LR	21 47 24.4	
	comp=Z,487nm,19.0s,baz=94,slow=35						
ASAR	Alice Springs	35.94	258	P	P	21 33 36.0	-0.7
FITZ	Fitzroy Crossi	44.30	265	P	P	21 34 46.8	+0.7
RKT	Rikitea	48.46	103	eS	S	21 42 17.2	-0.3
	comp=Z,314nm,29.5s						
RKT				eLR	LR	21 49 15.4	
	comp=Z,952nm,30.8s						
LUWI	Luwuk	52.42	285	P	P	21 35 49.5	+0.9
TOLI2	Tolitoli	55.14	287	P	P	21 36 08.3	-0.2
TOLI2				IAmb	IAmb	21 36 18.8	
	comp=Z,16nm,1.0s						
VNDA	Vanda	57.19	183	LR	LR	21 57 14.7	
	comp=Z,158nm,20.4s,baz=4.5,slow=32						
VNDA	Vanda	57.19	183	P	P	21 36 23.7	+1.4
VNDA				pmax	pmax		
	comp=Z,15nm,1.5s						
VNDA	Vanda	57.19	183	P	P	21 36 23.7	+1.4
MYLDM	Lahad Datu	59.00	290	P	P	21 36 35.6	-0.3
KKM	Kota Kinabalu	61.41	289	P	P	21 36 51.6	-0.9
CISI	Cisompet, Garu	63.85	272	P	P	21 37 08.7	-0.1
LEM	Lembang	64.28	272	P	P	21 37 13.8	+2.1
LEM				pmax	pmax		
	comp=Z,25nm,1.1s						
MJAR	Matsushiro Arr	65.51	330	P	P	21 37 18.6	-0.4
	comp=Z,3.0nm,0.9s,baz=166,slow=7.9,SNR=4.9						
MJAR				LR	LR	22 02 04.6	
	comp=Z,77nm,21.4s,baz=160,slow=33						
MAJO	Matsushiro	65.51	330	⇑eP	P	21 37 20.4	+1.4
MAJO				pmax	pmax		
	comp=Z,62nm,3.4s						
KSRS	Korea Array	71.48	324	P	P	21 37 56.0	-0.2
	comp=Z,0.5nm,0.4s,baz=311,slow=53,SNR=2.5						
KSRS				LR	LR	22 08 10.4	
	comp=Z,67nm,18.6s,baz=151,slow=35						
KSAR	Wonju Array Be	71.49	324	P	P	21 37 56.4	0.0
KSAR	Wonju Array Be	71.49	324	P	P	21 37 56.4	0.0
QIZ	Qiongzhong	73.05	298	P	P	21 38 08.5	+2.4
QIZ				S	S	21 47 33.3	+2.0
QIZ				LR	LR		
	comp=Z,150nm,39.7s						
NJ2	Nanjing	73.44	314	eP	P	21 38 10.3	+2.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
USA0B	Ussuriysk Arra	74.46	331	⇓eP	P	21 38 15.7	+1.9
USRK	Ussuriysk Ar.	74.46	331	P	P	21 38 14.7	+0.8
	comp=Z,3.3nm,1.0s,baz=184,slow=22,SNR=4.3						
USRK				LR	LR	22 06 35.2	
	comp=Z,89nm,21.6s,baz=135,slow=32						
USRK	Ussuriysk Ar.	74.46	331	P	P	21 38 14.1	+0.3
USRK	Ussuriysk Ar.	74.46	331	P	P	21 38 14.1	+0.3
PETK	Petropavlovsk-	74.56	351	P	P	21 38 14.4	+0.2
	comp=Z,8.4nm,1.0s,baz=96,slow=11,SNR=4.1						
PETK				LR	LR	22 08 54.5	
	comp=Z,77nm,18.7s,baz=173,slow=34						
GSI	Gunungsitoli	76.50	277	P	P	21 38 25.8	-0.5
GSI				IAmb	IAmb	21 38 29.4	
	comp=Z,17nm,1.0s						
CN2	Changchun	77.33	327	eP	P	21 38 31.5	+1.3
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
NONG	Nongkai	78.22	294	P	P	21 38 38.7	+3.0
MAW	Mawson	78.35	202	LR	LR	22 10 09.1	
	comp=Z,147nm,18.0s,baz=77,slow=33						
ENH	Enshi	79.03	308	P	P	21 38 40.3	+0.3
ENH				IAmb	IAmb	21 38 50.7	
	comp=Z,28nm,1.5s						
BJT	Baijiatuau	80.04	319	P	P	21 38 44.5	-0.7
BJT				pmax	pmax		
	comp=Z,11nm,1.2s						
BJT	Baijiatuau	80.04	319	P	P	21 38 44.5	-0.7
BJI	Beijing	80.05	319	P	P	21 38 46.0	+0.8
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
UTHA	Uthaitani	80.35	291	P	P	21 38 59.3	+12
BELA	Belgrano 2	80.43	174	P	P	21 38 46.5	-0.4
LAMP	Lampang	81.42	293	P	P	21 38 57.0	+3.9
KMI	Kunming	81.73	301	⇑P	P	21 38 57.3	+2.5
KMI				pP	sP	21 39 07.3	-1.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,190nm,22.5s						
CM35	Chiang Mai Arr	81.90	293	P	P	21 38 58.0	+2.4
CM04	Chiang Mai Arr	81.94	293	P	P	21 38 59.3	+3.5
CM09	Chiang Mai Arr	81.94	293	P	P	21 39 00.0	+4.1
CM01	Chiang Mai Arr	81.96	293	P	P	21 38 59.6	+3.7
CM05	Chiang Mai Arr	81.97	293	P	P	21 38 59.5	+3.5
CM02	Chiang Mai Arr	81.98	293	P	P	21 38 59.0	+3.0
CM34	Chiang Mai Arr	81.98	294	P	P	21 38 59.0	+3.0
CM31	Chiang Mai Arr	81.99	293	P	P	21 38 57.1	+1.0
CM31				IAmb	IAmb	21 39 09.0	
	comp=Z,18nm,1.3s						
CMAR	Chiang Mai Arr	81.99	293	P	P	21 38 57.2	+1.1
	comp=Z,3.2nm,0.9s,baz=126,slow=3.8,SNR=20						
CMAR				LR	LR	22 15 33.5	
	comp=Z,30nm,20.4s,baz=130,slow=36						
CMAR	Chiang Mai Arr	81.99	293	P	P	21 38 56.9	+0.8
CMAR	Chiang Mai Arr	81.99	293	P	P	21 38 56.9	+0.8
CM15	Chiang Mai Arr	82.00	293	P	P	21 39 00.0	+3.8
CM13	Chiang Mai Arr	82.01	293	P	P	21 38 59.6	+3.4
CMMT	Chiang Mai	82.14	293	P	P	21 38 58.4	+1.6
CHTO	Chiang Mai	82.14	293	P	P	21 38 57.6	+0.7
CHTO				pmax	pmax		
	comp=Z,12nm,1.2s						
CHTO	Chiang Mai	82.14	293	P	P	21 38 57.6	+0.7
CHTO				IAmb	IAmb	21 39 09.4	
	comp=Z,12nm,1.1s						
CM32	Chiang Mai Arr	82.16	293	P	P	21 39 03.0	+6.0
HHC	Hu-ho-hao-te	83.37	318	eP	P	21 39 04.8	+1.9
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,5.8s						
ZEA	Zeya	83.74	335	eP	P	21 39 03.7	-0.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.9s						
SYO	Syowa Base	84.48	195	⇓eP	P	21 39 06.0	-2.0
SEY	Seymchan	84.80	351	⇓eP	P	21 39 10.0	+0.5
GAMB	Gambell	85.00	7	P	P	21 39 10.5	0.0
O02D	Mt. Diablo Mer	85.22	44	P	P	21 39 14.4	+2.0
	baz=238						
WDC	Whiskeytown Da	85.60	44	P	P	21 39 14.9	+0.8
WDC				pmax	pmax		
	comp=Z,14nm,1.4s						
WDC	Whiskeytown Da	85.60	44	P	P	21 39 14.9	+0.8
WDC				IAmb	IAmb	21 39 18.3	
	comp=Z,14nm,1.4s						
N02D	Trinity Center	85.70	43	P	P	21 39 16.6	+2.0
	baz=238						
CMB	Columbia Colle	85.72	47	P	P	21 39 15.1	+0.3
CMB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMB	Columbia Colle	85.72	47	P	P	21 39 15.1	+0.3
ORV	Oroville	85.75	45	P	P	21 39 14.6	-0.2
ORV				pmax	pmax		
	comp=Z,14nm,1.6s						
ORV	Oroville	85.75	45	P	P	21 39 14.6	-0.2
ORV				IAmb	IAmb	21 39 18.2	
	comp=Z,14nm,1.6s						
M02C	Callahan	85.83	43	P	P	21 39 16.9	+1.6
	baz=238						
EDW2	Edwards Air Fo	85.86	50	P	P	21 39 17.4	+1.8
	baz=241						
ISA	Isabella, Lake	85.89	50	P	P	21 39 16.5	+0.7
ISA				pmax	pmax		
	comp=Z,20nm,1.2s						
ISA	Isabella, Lake	85.89	50	P	P	21 39 16.4	+0.7
	baz=241						
ISA	Isabella, Lake	85.89	50	P	P	21 39 16.5	+0.7
ISA				IAmb	IAmb	21 39 29.4	
	comp=Z,20nm,1.2s						
O03E	Paynes Creek	85.93	44	P	P	21 39 16.6	+0.7
	baz=239						
LZH	Lanzhou	86.04	311	eP	P	21 39 18.8	+2.2
LZH				pP	sP	21 39 29.0	-1.2
LZH				sP	pwP	21 39 33.5	+2.6
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,76nm,4.9s						
YBH	Yreka Blue Hor	86.10	43	P	P	21 39 17.3	+0.7
	comp=Z,2.7nm,0.9s,baz=177,slow=5.2,SNR=6.1						
YBH				LR	LR	22 09 58.7	
	comp=Z,53nm,21.9s,baz=249,slow=30						
YBH	Yreka Blue Hor	86.10	43	P	P	21 39 17.3	+0.7
YBH				pmax	pmax		
	comp=Z,15nm,1.5s						
YBH	Yreka Blue Hor	86.10	43	P	P	21 39 17.3	+0.7
YBH				IAmb	IAmb	21 39 29.3	
	comp=Z,15nm,1.4s						
RMX	La Rumorosa	86.21	53	P	P	21 39 18.4	+0.9
PFO	Pinyon Flats O	86.39	52	LR	LR	22 10 38.7	
	comp=Z,95nm,19.0s,baz=242,slow=31						
HUMO	Hull Mountain	86.41	42	P	P	21 39 18.6	+0.5
HUMO				IAmb	IAmb	21 39 22.0	
	comp=Z,8.9nm,1.1s						
MDPB	Devils Postpil	86.42	48	P	P	21 39 19.3	+0.7
MDPB				IAmb	IAmb	21 39 22.6	
	comp=Z,9.2nm,1.2s						
OMMB	Old Mammoth Mi	86.47	48	P	P	21 39 19.4	+0.5
CWC	Cottonwood Cre	86.55	49	P	P	21 39 19.8	+0.7
	baz=241						
WAKR	Walker	86.61	47	P	P	21 39 20.4	+1.0
WAKR				IAmb	IAmb	21 39 28.4	
	comp=Z,8.1nm,1.1s						
L04D	Klamath Falls	86.61	42	P	P	21 39 20.9	+1.7
	baz=238						
HEC	Hector,Ludlow	87.04	51	P	P	21 39 22.7	+1.3
	baz=242						
LPIG	La Paz	87.15	63	LR	LR	22 09 46.4	
	comp=Z,66nm,18.9s,baz=234,slow=30						
NVAR	Mina Array Bea	87.34	47	P	P	21 39 23.9	+0.9
	comp=Z,1.7nm,0.8s,baz=232,slow=5.8,SNR=9.5						
NVAR				LR	LR	22 11 00.7	
	comp=Z,121nm,19.9s,baz=254,slow=30						
NVAR	Mina Array Bea	87.34	47	P	P	21 39 23.1	+0.2
NV11	Mina Array Sit	87.45	47	P	P	21 39 24.5	+1.1
NV11				IAmb	IAmb	21 39 26.8	
	comp=Z,8.6nm,1.3s						
J05D	Fort Rock, OR	87.84	42	P	P	21 39 26.4	+1.3
	baz=239						
SNAA	Sanae	87.90	181	P	P	21 39 24.7	-0.2
SNAA	Sanae	87.90	181	P	P	21 39 23.7	-1.2
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SNAA	Sanae	87.90	181	P	P	21 39 23.7	-1.2
SNAA				IAmb	IAmb	21 39 30.7	
	comp=Z,9.3nm,1.0s						
VNA3	Neumayer Olymp	88.37	179	P	P	21 39 26.7	-0.4
BILL	Bilibino	88.52	358	⇓eP	P	21 39 27.2	-0.4
BILL				pmax	pmax		
	comp=Z,16nm,1.6s						
BILL	Bilibino	88.52	358	P	P	21 39 27.2	-0.4
SHPR	Sheep Range	88.66	50	P	P	21 39 30.0	+0.8
SHPR				IAmb	IAmb	21 39 42.5	
	comp=Z,9.9nm,1.5s						
VNA2	Neumayer--Watz	88.70	180	P	P	21 39 28.6	-0.1
	baz=180,slow=3.2						
VNA1	Neumayer--Stat	88.97	180	P	P	21 39 29.4	-0.5
PRN	Pahroc Range	89.14	49	P	P	21 39 32.4	+1.0
PRN				IAmb	IAmb	21 39 44.8	
	comp=Z,13nm,1.3s						
BARN	Barnard Glacie	89.29	20	P	P	21 39 31.4	-0.3
BARN				IAmb	IAmb	21 39 34.0	
	comp=Z,18nm,1.7s						
ULN	Ulaanbaatar	89.90	322	c iP	P	21 39 36.1	+1.4
ULN				pmax	pmax		
	comp=Z,14nm,1.6s						
ULN	Ulaanbaatar	89.90	322	P	P	21 39 35.3	+0.6
ULN				IAmb	IAmb	21 39 37.3	
	comp=Z,20nm,1.6s						
TUC	Tucson	90.11	55	P	P	21 39 36.5	+0.5
TUC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TUC	Tucson	90.11	55	P	P	21 39 36.5	+0.5
SONM	Songino Array	90.26	322	P	P	21 39 35.8	-0.5
	comp=Z,3.0nm,1.1s,baz=136,slow=4.4,SNR=12						
SONM				LR	LR	22 17 01.2	
	comp=Z,29nm,21.5s,baz=82,slow=34						
SONM	Songino Array	90.26	322	P	P	21 39 35.9	-0.5
SONM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SONM	Songino Array	90.26	322	P	P	21 39 35.9	-0.5
E07A	Sunnyside	90.35	40	P	P	21 39 36.6	0.0
GTA	Gaotai	90.41	312	⇑P	P	21 39 39.3	+2.0
GTA				pP	pP	21 39 44.5	-2.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HAWA	Hanford	90.46	40	P	P	21 39 37.7	+0.6
HAWA				IAmb	IAmb	21 39 42.3	
	comp=Z,7.7nm,1.1s						
COLA	College	90.46	16	⇑eP	P	21 39 36.1	-0.6
ELK	Elko	90.52	46	P	P	21 39 38.7	+0.8
	comp=Z,4.6nm,1.1s,baz=249,slow=4.4,SNR=7.6						
ILAR	Eielson Array	90.62	16	P	P	21 39 36.4	-1.2
	comp=Z,1.0nm,0.9s,baz=236,slow=6.0,SNR=7.8						
ILAR				LR	LR	22 13 25.3	
	comp=Z,192nm,19.7s,baz=227,slow=31						
SZCU	Shurtz Canyon	90.63	50	P	P	21 39 39.2	+0.8
WUAZ	Wupatki	91.00	52	P	P	21 39 40.8	+0.7
WUAZ				IAmb	IAmb	21 39 45.2	
	comp=Z,12nm,1.1s						
DLBC	Dease Lake	91.82	26	P	P	21 39 43.5	+0.2
	comp=Z,2.8nm,1.0s,baz=232,slow=4.9,SNR=3.3						
DLBC				LR	LR	22 13 53.7	
	comp=Z,103nm,19.2s,baz=188,slow=31						
EGAK	Eagle	92.21	18	P	P	21 39 45.4	+0.5
NEW	Newport	92.80	39	LR	LR	22 13 13.0	
	comp=Z,82nm,19.2s,baz=272,slow=30						
BMAR	Burnt Mountain	93.30	15	P	P	21 39 50.9	+1.0
ZAK	Zakamensk	93.30	323	eP	P	21 39 45.4	-5.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TLY	Talaya	93.73	324	LR	LR	22 17 02.0	
	comp=Z,97nm,21.2s,baz=116,slow=32						
TLY	Talaya	93.73	324	eP	P	21 39 54.6	+2.4
TLY				pmax	pmax		
	comp=Z,15nm,0.7s						
PALK	Pallekele	94.33	276	LR	LR	22 22 57.7	
	comp=Z,69nm,18.8s,baz=230,slow=36						
ANMO	Albuquerque	94.47	54	LR	LR	22 14 55.6	
	comp=Z,82nm,19.1s,baz=248,slow=31						
TXAR	Lajitas Array	94.63	61	P	P	21 39 57.4	+0.4
	comp=Z,1.0nm,1.0s,baz=242,slow=2.7,SNR=6.2						
TXAR				LR	LR	22 13 42.7	
	comp=Z,124nm,21.9s,baz=0.0,slow=30						
TXAR	Lajitas Array	94.63	61	P	P	21 39 57.3	+0.3
PDAR	Pinedale Array	95.22	46	LR	LR	22 13 38.7	
	comp=Z,68nm,20.3s,baz=278,slow=30						
PLCA	Paso Flores	95.36	137	LR	LR	22 13 26.1	
	comp=Z,140nm,21.8s,baz=266,slow=29						
CMIG	Matias Romero	98.10	75	LR	LR	22 14 53.6	
	comp=Z,83nm,19.1s,baz=196,slow=30						
WMQ	Urumqi	100.48	313	eP	Pdif	21 40 24.0	+1.0
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
HOPE	Hope Point	101.31	163	i P	Pdif	21 40 27.6	+1.1
MKAR	Makanchi Array	104.97	315	Pdiff	Pdif	21 40 45.2	+2.4
	comp=Z,1.0nm,0.9s,baz=130,slow=3.6,SNR=5.8						
ARU	Arti	120.23	324	⇑iPKIKP	PKiKP	21 45 27.2	+0.9
KIRV	Kirov	124.55	328	⇓iPKIKP	PKiKP	21 45 35.7	+1.0
BELG	Belogornoye	127.31	321	⇑iPKIKP	PKiKP	21 45 42.1	+1.7
KLMR	Klimovskoe	128.23	333	ePKIKP	PKPdf	21 45 39.7	-1.7
KLMR				pmax	pmax		
	comp=Z,35nm,1.5s						
KLMR	Klimovskoe	128.23	333	ePKPdf	PKPdf	21 45 39.7	-1.7
KLMR				AMP		21 45 43.4	
	comp=Z,35nm,1.5s						
KIV	Kislovodsk	132.58	311	ePKIKP	PKiKP	21 45 52.1	+0.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MNK	Minsk	136.94	330	i PKP	PKPdf	21 45 52.7	-5.3
	comp=E,3.0nm,1.8s						
MNK				i PKP	PKPdf	21 45 52.7	-5.3
	comp=N,4.0nm,0.6s						
MNK				i PKP	PKPdf	21 45 52.7	-5.3
	comp=Z,9.0nm,0.9s						
MNK				i PP	PP	21 48 37.1	-4.3
MNK				i PKS	PKSdf	21 49 28.9	-5.0
MNK				i PPP	PPP	21 51 36.2	
MNK				i SKS	SKSdf	21 53 00.1	-5.9
MNK				i PS	PS	21 59 03.0	-5.1
MNK				i SKKS	SKKSdf	22 02 37.3	-8.9
MNK				i SS	SS	22 06 37.5	-5.9
MNK				i SSS	SSS	22 11 46.7	
MNK				i LQ	LQ	22 39 07.8	
MNK				i LR	LR	22 44 30.9	
MNK				i LRM	MLR	22 46 52.8	
	comp=Z,89nm,12.4s						
MNK				i LRM	MLR	22 46 57.4	
	comp=N,148nm,15.6s						
MNK				i LRM	MLR	22 47 18.4	
	comp=E,22nm,12.4s						
MLR	Muntele Rosu	143.09	320	PKIKP	PKPdf	21 46 08.3	-1.3
MLR	Muntele Rosu	143.09	320		PKPbc	21 46 08.3	+1.7
KOLS	Kolonicke sedl	143.14	327	ePKIKP	PKiKP	21 46 15.9	+3.2
KOLS	Kolonicke sedl	143.14	327	e	PKiKP	21 46 15.9	+3.2
UZH	Uzhgorod	143.32	327	ePKIKP	PKPdf	21 46 08.9	-0.8
UZH				e		21 46 16.5	
UZH				e		21 46 20.9	
VOIR		143.65	320	⇑P	PKPdf	21 46 12.1	+1.5
VOIR		143.65	320	⇑PKIKP	PKPdf	21 46 12.1	+1.5
ARR	Arges	143.94	321	⇑P	PKPbc	21 46 09.5	+0.6
DRGR		144.23	324	⇓P	PKPbc	21 46 10.1	+0.3
DRGR		144.23	324	⇓PKIKP	PKPbc	21 46 10.1	+0.3
LTVH	Ltavrtes, Hu	144.31	325	eP	PKPdf	21 46 11.4	-0.1
LOT	Lotru	144.40	321	⇓P	PKPbc	21 46 11.0	+0.6
KSP	Ksiaz	144.56	334	ePKP	PKPbc	21 46 11.0	+0.4
VLAD	Vladila	144.80	319	⇑P	PKPdf	21 46 13.1	+0.6
OSTC	Ostas	144.81	334	ePKP	PKPab	21 46 11.2	-0.1
MORC	Moravsky Berou	144.82	332	⇓P	PKPdf	21 46 12.2	-0.2
MORC	Moravsky Berou	144.82	332	ePKP	PKPdf	21 46 12.8	+0.4
MORC	Moravsky Berou	144.82	332	⇓PKIKP	PKPdf	21 46 12.2	-0.2
MORC	Moravsky Berou	144.82	332	PKPdf	PKPbc	21 46 11.7	+0.2
CHVC	Chvalec	144.86	334	ePKP	PKPab	21 46 11.5	0.0
DPC	Dobruska-Polom	144.93	333	ePKIKP	PKPab	21 46 11.7	-0.1
DPC	Dobruska-Polom	144.93	333	ePKP	PKPab	21 46 11.7	-0.1
UPC	Upice	144.94	334	ePKIKP	PKPbc	21 46 12.0	+0.2
UPC	Upice	144.94	334	ePKP	PKPbc	21 46 12.0	+0.2
KRLC	Kraliky	144.94	333	ePKIKP	PKPdf	21 46 12.7	+0.1
KRLC	Kraliky	144.94	333	ePKP	PKPdf	21 46 12.7	+0.1
PLVB	Pleven	144.98	318	⇑P	PKPdf	21 46 13.5	+0.7
PSZ	Piszkesteto	145.01	328	⇓P	PKPdf	21 46 13.2	+0.4
PSZ	Piszkesteto	145.01	328	eP	PKPab	21 46 12.4	+0.2
PSZ	Piszkesteto	145.01	328	⇓PKIKP	PKPdf	21 46 13.2	+0.4
PSZ	Piszkesteto	145.01	328	PKPdf	PKPab	21 46 12.6	+0.4
GZR	Gura Zlata	145.01	322	⇑P	PKPab	21 46 12.5	+0.2
SIRR	Siria	145.13	324	⇑P	PKiKP	21 46 15.6	-1.3
VYHS	Vyhne	145.14	329	ePKIKP	PKPdf	21 46 13.7	+0.7
VYHS	Vyhne	145.14	329	ePKP	PKPdf	21 46 13.7	+0.7
FLTG	Flechtingen	145.21	340	ePKPbc	PKPdf	21 46 13.1	+0.1
	baz=32,slow=2.9						
NRDL	Niedersach Rie	145.42	341	ePKPbc	PKPab	21 46 13.9	+0.5

	baz=32,slow=2.9						
JAVC	Velka Javorina	145.43	331	*e*PKP	PKPab	21 46 14.7	+1.0
CLL	Collm	145.47	337	*e*PKPbc	PKPdf	21 46 13.0	-0.4
	comp=Z,12nm,1.0s						
CLL				*i* PKPbc(2)		21 46 15.2	
	comp=Z,38nm,1.1s						
CLL				⇓*i*PKiKP	PKiKP	21 46 19.7	+2.3
	comp=Z,26nm,1.0s						
CLL				*e*		21 46 24.0	
CLL				*i*		21 46 29.3	
CLL	Collm	145.47	337	*e*PKP2	PKPdf	21 46 13.0	-0.4
CLL				*i*		21 46 15.2	
CLL				*e*		21 46 24.0	
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL				pmax	pmax		
	comp=Z,38nm,1.1s						
CLL	Collm	145.47	337		PKPdf	21 46 13.0	-0.4
CLL	Collm	145.47	337	*e*PKPbc	PKPdf	21 46 13.3	-0.1
	baz=32,slow=2.9						
BRG	Berggiesshubel	145.47	336	*i* PKP	PKPdf	21 46 13.4	0.0
BRG				Amp		21 46 17.4	
	comp=Z,44nm,1.2s						
BRG	Berggiesshubel	145.47	336	*e*PKPbc	PKPdf	21 46 13.4	0.0
	baz=32,slow=2.9						
PVCC	Panska Ves	145.50	335	*e*PKIKP	PKPab	21 46 14.8	+1.0
PVCC	Panska Ves	145.50	335	*e*PKP	PKPab	21 46 14.8	+1.0
HERR	Herculane	145.51	321	⇑P	PKPab	21 46 14.8	+0.7
BZS	Buzias	145.54	323	⇑P	PKPdf	21 46 13.8	+0.1
BZS	Buzias	145.54	323	⇑PKIKP	PKPdf	21 46 13.8	+0.1
PUNG	Punghina	145.55	320	⇑P	PKPab	21 46 15.3	+1.1
ASSE	Asse, Remlinge	145.56	340	*e*PKPbc	PKPab	21 46 14.2	+0.3
	baz=32,slow=2.9						
AMBH	Ambrzfalva	145.59	325	*e*P	PKPab	21 46 15.6	+1.4
VRAC	Vranov	145.59	332	⇓P	PKPab	21 46 14.9	+0.7
VRAC	Vranov	145.59	332	*e*PKP	PKPbc	21 46 14.1	+0.2
VRAC	Vranov	145.59	332	⇓PKIKP	PKPab	21 46 14.9	+0.7
FBE	Freiberg	145.65	337	*e*PKPbc	PKPbc	21 46 14.3	+0.2
	baz=32,slow=2.9						
FBE				*e*pPKPbc	sPKPab	21 46 30.7	+2.5
BUD	Budapest	145.74	328	*e*P	PKPab	21 46 15.9	+1.1
SMOL	Smolenice	145.79	330	*e*PKP2	PKPab	21 46 16.3	+1.3
SMOL	Smolenice	145.79	330	*e*PKP	PKPab	21 46 16.2	+1.3
KRUC	Moravsky	145.86	332	*e*PKP	PKPbc	21 46 14.7	-0.1
CLZ	Clausthal	145.91	340	*e*PKPbc	PKPbc	21 46 15.3	+0.4
	baz=32,slow=2.9						
PRU	Pruhonice	145.94	335	*e*PKP2	PKPdf	21 46 14.5	+0.2
PRU	Pruhonice	145.94	335	*e*PKP	PKPdf	21 46 14.5	+0.2
MODS	Modra-Piesok	145.96	330	*e*PKP2	PKPdf	21 46 14.8	+0.4
MODS	Modra-Piesok	145.96	330	*e*PKP	PKPdf	21 46 14.8	+0.4
MDVR	Moldovita	145.98	322	⇑P	PKPab	21 46 16.2	+0.3
TREC	Trest	146.08	333	*e*PKP2	PKiKP	21 46 17.7	-1.1
TREC	Trest	146.08	333	*e*PKP	PKiKP	21 46 17.7	-1.1
ZST	Bratislava	146.17	330	*e*PKP2	PKiKP	21 46 18.3	-0.7
ZST	Bratislava	146.17	330	*e*PKP	PKiKP	21 46 18.2	-0.7
CSKK	Cskako	146.20	328	*e*P	PKPdf	21 46 15.1	+0.3
VTS	Vitosha	146.24	317	⇑P	PKPab	21 46 17.5	+0.4
VTS	Vitosha	146.24	317	⇑PKP2	PKPab	21 46 17.5	+0.4
IBBN	Ibbenburen	146.26	343	*e*PKPbc	PKPab	21 46 16.6	0.0
	baz=32,slow=2.9						
TANN	Tannenbergstha	146.40	337	*e*PKPbc	PKPbc	21 46 16.6	+0.2
	baz=32,slow=2.9						
TANN				*e*pPKPbc	sPKPab	21 46 32.5	+1.4
WERD	Werda	146.43	337	*e*PKPbc	PKPbc	21 46 16.9	+0.4
	baz=32,slow=2.9						
WERD				*e*pPKPbc	sPKPab	21 46 32.5	+1.3
GUNZ	Gunzen	146.49	337	*e*PKPbc	PKPbc	21 46 17.2	+0.6
	baz=32,slow=2.9						
GUNZ				*e*pPKPbc	sPKPab	21 46 32.8	+1.4
MOX	Moxa	146.51	338	*e*PKPbc	PKPbc	21 46 16.9	+0.3
	baz=32,slow=2.9						
WERN	Wernitzgruen	146.53	337	*e*PKPbc	PKPbc	21 46 17.1	+0.3
	baz=32,slow=2.9						
WERN				*e*pPKPbc	sPKPab	21 46 33.1	+1.5
NKC	Novy Kostel	146.55	337	*e*PKP2	PKPbc	21 46 17.3	+0.5
NKC	Novy Kostel	146.55	337	*e*PKP	PKPbc	21 46 17.3	+0.5
MPLH	Magyarpolny	146.69	328	*e*P	PKPab	21 46 18.6	+0.1
MORH	Mrgy, Hungar	146.78	326	*e*P	PKPbc	21 46 17.2	-0.3
UBBA	Unterbreizbach	146.91	340	*e*PKPbc	PKPbc	21 46 18.2	+0.5
	baz=32,slow=2.9						
CONA	Conrad Observa	146.94	331	*e*P	PKPbc	21 46 18.2	+0.1
	comp=Z,17nm,1.6s						
KHC	Kasperske Hory	147.00	334	*e*PKP2	PKPbc	21 46 18.2	0.0
KHC	Kasperske Hory	147.00	334	*e*PKP	PKPbc	21 46 18.2	0.0
KHC	Kasperske Hory	147.00	334	PKPdf	PKPbc	21 46 17.9	-0.3
ROTZ	Rotzenmuhle	147.02	336	*e*PKPbc	PKPbc	21 46 19.0	+0.8
	baz=32,slow=2.9						
GEC2	GERESS Array S	147.17	334		PKPbc	21 46 18.9	+0.2
GEC2	GERESS Array S	147.17	334	*e*PKPbc	PKPbc	21 46 19.0	+0.2
	baz=32,slow=2.9						
GERES	GERESS Array B	147.17	334	PKPbc	PKPbc	21 46 19.1	+0.4
	comp=Z,7.4nm,1.0s,baz=40,slow=2.3,SNR=21						
GERES	GERESS Array B	147.17	334	PKP2	PKPbc	21 46 18.7	-0.1
GERES	GERESS Array B	147.17	334		PKPbc	21 46 18.6	-0.1
WET	Wettzell	147.27	335	*e*PKPbc	PKPbc	21 46 19.0	+0.1
	baz=32,slow=2.9						
DIVS	Divibare	147.38	322	PKPdf	PKPdf	21 46 17.1	+0.1
ARSA	Arzberg	147.59	330	*e*P	PKPab	21 46 22.3	+0.3
	comp=Z,8.7nm,1.0s						
MOA	Molln	147.71	332	*e*P	PKPab	21 46 24.1	+1.7
	comp=Z,15nm,1.5s						
SOKA	Soboth	148.24	330	*e*P	PKPbc	21 46 20.7	-0.9
	comp=Z,4.9nm,1.2s						
BTNL	Ternell	148.26	344	*d*PKP	PKPbc	21 46 21.9	+0.4
FNA	Florina	148.38	316	PKIKP	PKPbc	21 46 20.9	-1.3
FNA	Florina	148.38	316		PKPbc	21 46 20.9	-1.3
OBKA	Obir	148.59	330	*e*P	PKPab	21 46 25.4	-0.8
	comp=Z,10nm,1.7s						
KBA	Koelnbreinsper	148.70	332	*e*P	PKPbc	21 46 22.0	-1.0
	comp=Z,5.2nm,1.2s						
MYKA	Terra Mystica	148.91	331	*e*P	PKPbc	21 46 24.1	+0.7
	comp=Z,5.0nm,1.0s						
WLF	Walferdange	149.09	343	*d*pPKP	pPKPdf	21 46 30.2	+0.3
WLF	Walferdange	149.09	343	*e*PKPbc	PKiKP	21 46 24.7	-0.2
	baz=32,slow=2.9						
WATA	Walderalm	149.24	334	*e*P	PKPbc	21 46 23.5	-0.8
	comp=Z,4.3nm,0.9s						
ABTA	Abfaltersbach	149.32	333	*e*P	PKPbc	21 46 23.2	-1.3
	comp=Z,11nm,1.6s						
MOTA	Moosalm	149.42	335	*e*P	PKPbc	21 46 24.0	-0.8
	comp=Z,9.5nm,1.1s						
RETA	Reutte	149.44	335	*e*P	PKPab	21 46 30.3	+0.8
	comp=Z,6.8nm,1.0s						
SQTA	Sankt Quirin	149.48	335	*e*P	PKPbc	21 46 25.5	+0.6
	comp=Z,4.9nm,0.8s						
UBR	Ueberruh	149.53	336	*e*PKPbc	PKiKP	21 46 25.7	-0.3
	baz=32,slow=2.9						
BFO	Black Forest	149.61	339	PKIKP	PKPdf	21 46 19.9	-0.5
BFO	Black Forest	149.61	339	PKPdf	PKPdf	21 46 19.9	-0.5
BFO	Black Forest	149.61	339	*e*PKPbc	PKPbc	21 46 25.7	+0.6
	baz=32,slow=2.9						
STAL	STALIGIAL	149.61	332		PKPdf	21 46 20.1	-0.4
FETA	Feichten	149.83	335	*e*P	PKPdf	21 46 23.5	+2.5
	comp=Z,6.2nm,1.3s						
DAVA	Damuels	149.94	336	*e*P	PKPbc	21 46 25.9	-0.2
	comp=Z,10nm,1.1s						

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*ISN **27** 21:37:36.7±1.1, 32°.63N×47°.72E, h14^{km}±7^{km}, ML2.8*

*TEH **27** 21:37:37.3, 32°.63N×47°.63E, h10^{km}, ML3.0*

ISC 27 21:37:38.3±1.0**, 32°.64N**±0°.05×**47°.61E**±0°.04**, h10**^{km}**, n21, σ1^{s}24**/25**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.90	12	*e*Pg	Pg	21 37 54.1	-1.6
IKFM				*e*Sg	Sn	21 38 09.0	-1.1
IKMR	Kamar-syah	1.09	36	*e*Pg	Pg	21 37 57.8	-1.4
IDOB	Doab	1.24	22	*e*Pg	Pb	21 38 01.4	-0.5
IBDR	Badra	1.49	289	*e*Pg	Pn	21 38 05.0	-0.1
IBDR				*e*Sg	Sg	21 38 27.0	+0.7
IBDR				AML	AML	21 38 31.2	
	comp=N,162nm,0.5s						
IBDR				AML	AML	21 38 33.9	
	comp=E,107nm,0.4s						
AHWZ	Ahwaz	1.57	146	*e*Pg	Pn	21 38 07.1	+0.9
KCHF	Cheshme Sefid,	1.70	344	*e*Pg	Pb	21 38 09.8	+0.1
AMIS	Naft Sefid	1.72	124	*e*Pg	Pn	21 38 09.4	+1.1
KER	Kermanshah	1.79	347	*e*Pn	Pb	21 38 10.3	-0.9
IGHG	Ghaleghazi	1.90	333	*e*Pn	Pb	21 38 12.7	-0.4
IGHG				*e*		21 38 53.4	
	comp=Z,99nm,0.7s						
NSR	Nassriya	2.05	218	*e*Pn	Pn	21 38 13.0	+0.2
NSR				*e*Sn	Sn	21 38 38.0	-0.5
NSR				AML	AML	21 38 48.0	
	comp=E,92nm,0.2s						
IDHR	Dehrash	2.29	334	*e*Pn	Pn	21 38 17.6	+1.2
IDHR				*e*		21 38 23.0	
	comp=Z,99nm,0.3s						
HSRG	Sareghieh	2.65	12	*e*Pn	Pn	21 38 23.4	+2.0
HSRG				*e*		21 39 08.2	
	comp=Z,99nm,0.6s						
IPIR	Pirpir	2.77	88	*e*Pn	Pn	21 38 24.6	+1.7
SHK1	Shahrekord	2.78	96	*e*Pn	Pn	21 38 23.8	+0.7
BHD	Baghdad	2.79	284	*e*Pn	Pn	21 38 24.0	+1.0
BHD				*e*Sn	Sn	21 38 59.0	+2.3
BHD				AML	AML	21 39 00.1	
	comp=E,79nm,0.5s						
IRAZ	Razeghan	3.36	34	*e*Pn	Pn	21 38 32.6	+1.5
QAM	Ghamsar	3.40	70	*e*Pn	Pn	21 38 32.8	+1.3
QABG	Abgarm-Qazvin	3.47	28	*e*Pn	Pn	21 38 33.1	+0.6
IQOM	Qom	3.62	52	*e*Pn	Pn	21 38 35.4	+0.7
IZEF	Zefreh	3.98	85	*e*Pn	Pn	21 38 41.0	+1.4
IVRN	Varamin	4.15	54	*e*Pn	Pn	21 38 43.3	+1.5

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*UCR **27** 21:44:15.0±2.2, 10°.56N×86°.57W, h10^{km}, MW4.4*

*IDC **27** 21:44:19.0±2.9, 11°.47N×84°.83W, h0^{km}, mb3.5/4, mb1 3.9/4, mb1mx3.5/49, mbtmp3.5/4, Error ellipse: s-maj=99.9km s-min=12.4km az=86.0*

ISC 27 21:44:17.8±2.0**, 10°.47N**±0°.07×**86°.33W**±0°.07**, h4**^{km}±12^{km}**, n27, σ1^{s}20**/34**, mb3.5**/4**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.76	72	*e*P	Pb	21 44 33.5	-0.1
HZTE				*e*S	Sn	21 44 47.6	+0.3
GUAI	GUAI	0.83	104	*i* P	Pg	21 44 32.7	-1.1
GUAI				*i* S	Sb	21 44 47.5	+1.2
DUNO	Dulce Nombre,	0.91	115	*e*P	Pg	21 44 35.9	+0.6
GBS3	Finca Las Img	0.91	70	*i* P	Pg	21 44 35.4	0.0
LAPC	Finca la Perla	0.93	71	*i* P	Pg	21 44 35.4	-0.3
BUEV	Buena Vista	0.96	70	*e*P	Pg	21 44 36.4	+0.1
BUEV				*e*S	Sn	21 44 52.4	+0.1
PLVR	Palo Verde	0.97	97	*e*P	Pg	21 44 36.3	-0.1
GB1A	Borinquen Arri	0.98	69	*e*P	Pg	21 44 36.4	-0.2
GB1A				*e*S	Sn	21 44 53.0	+0.2
GPS2	Hotel Rincn d	1.00	74	*e*P	Pg	21 44 36.5	-0.5
GPS2				*i* P	Pb	21 44 36.7	-1.0
GPS2				*i* S	Sn	21 44 53.4	+0.2
GPS1	Guardaparques	1.01	73	*i* P	Pg	21 44 36.8	-0.4
GPS1				*i* S	Sb	21 44 52.8	+1.2
BUAI	Buenos Aires	1.06	68	*i* P	Pg	21 44 38.1	-0.1
LIM1	Limonal	1.08	78	*i* P	Pg	21 44 37.4	-1.2
COLC	Colonia	1.12	80	*i* P	Pb	21 44 39.3	-0.5
HORNC	Hornillas	1.16	78	*i* P	Pn	21 44 38.6	-2.3
CUI	Cuipilapa	1.16	81	*e*P	Pn	21 44 38.9	-2.0
ACAL	Aguas Claras	1.28	83	*i* P	Pn	21 44 41.0	-1.6
ACAL				*i* S	Sg	21 45 01.3	+2.2
PTEN	Parque Tenorio	1.34	80	*i* P	Pb	21 44 43.7	+0.1
JTS	Las Juntas de	1.37	97	LR	LR	21 44 39.8	
	comp=Z,41nm,21.9s,baz=100,slow=18						
JTS				Pn	Pn	21 44 40.9	-2.7
	9.9nm,0.3s,baz=350,slow=8.0,SNR=25						
JTS				Lg	Lg	21 44 59.1	
	52nm,0.3s,baz=59,slow=23,SNR=6.0						
JTS	Las Juntas de	1.37	97	*e*P	Pn	21 44 42.9	-0.8
ARE1	Arenal 1	1.58	90	*e*P	Pb	21 44 47.6	-0.1
CEDE	Laguna Cedeo	1.60	89	*e*P	Pb	21 44 48.0	0.0
JACO	JACO, Garabito	1.83	116	*e*P	Pn	21 44 50.1	+0.1
CDM	Cerro de Muert	2.69	110	*e*P	Pb	21 45 05.2	-1.6
TXAR	Lajitas Array	24.79	322	P	P	21 49 43.6	+2.5
	0.9nm,0.6s,baz=141,slow=9.7,SNR=12						
PDAR	Pinedale Array	38.02	332	P	P	21 51 38.0	+0.6
	0.4nm,0.6s,baz=146,slow=11,SNR=4.3						
NVAR	Mina Array Bea	39.91	320	P	P	21 51 57.5	+4.3
	1.2nm,0.7s,baz=137,slow=7.2,SNR=8.1						
YKA	Yellowknife Ar	55.80	345	P	P	21 53 54.6	-1.1
	0.1nm,0.6s,baz=130,slow=9.1,SNR=4.1						

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*NEIC **27** 22:00:42.3±1.7, 43°.75N±0°.05×105°.28W±0°.04, h0^{km}±1^{km}, ML3.3/60, Error ellipse: s-maj=9.2km s-min=5.2km az=160.0*

*IDC **27** 22:00:42.4±1.8, 43°.82N×105°.56W, h0^{km}, mb1 3.6/5, mb1mx3.3/47, mbtmp3.3/5, ML3.0/4, Error ellipse: s-maj=55.8km s-min=8.6km az=147.0*

ISC 27 22:00:41.8±1.0**, 43°.79N**±0°.07×**105°.30W**±0°.07**, h0**^{km}**, n44, σ1^{s}10**/43**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	69	Pg	Pb	22 01 01.2	-0.5
K22A	Casper	1.45	219	Pn	Pn	22 01 07.6	-1.8
K22A				IAML		22 01 34.8	
	comp=E,351nm,0.3s						
PHWY	Pilot Hill	2.49	183	Pn	Pn	22 01 23.7	-0.2
RWWY	Rawlins	2.53	215	Pn	Pn	22 01 21.9	-2.5
RWWY				IAML		22 02 00.6	
	comp=E,129nm,0.9s						
RWWY				IAML		22 02 02.4	
	comp=E,150nm,0.7s						
LAO	LASA Array	2.98	348	Pn	Pn	22 01 30.6	+0.3
RLMT	Red Lodge	3.14	297		Pn	22 01 33.1	+0.3
RLMT				IAML		22 02 24.3	
	comp=E,56nm,0.4s						
RLMT				IAML		22 02 31.1	
	comp=E,57nm,0.3s						
PD31	Pinedale Array	3.27	253	Pn	Pn	22 01 34.6	0.0
PDAR	Pinedale Array	3.27	253	Pn	Pn	22 01 35.6	+1.0
	comp=E,5.1nm,0.3s,baz=66,slow=19,SNR=33						
PDAR				Lg	Lg	22 02 17.9	
	comp=E,9.9nm,0.3s,baz=112,slow=17,SNR=2.1						
BW06	Boulder Array	3.28	253	Pn	Pn	22 01 35.0	+0.3
BW06				IAML		22 02 22.9	
	comp=E,46nm,0.3s						
YNE	Yellowstone No	3.59	292		Pn	22 01 39.6	+0.6
YMP	Mirror Lake Pl	3.62	287	Pn	Pn	22 01 40.1	+0.6
OGNE	Ogallala	3.73	138	Pn	Pn	22 01 42.0	+1.3
LKWY	Lake	3.75	284		Pn	22 01 42.9	+1.6
LKWY				IAML		22 02 11.6	
	comp=E,31nm,2.5s						
H17A	Grant Village	3.85	281		Pn	22 01 44.2	+1.6
LOHW	Long Hollow	3.85	269		Pn	22 01 43.6	+1.0
LOHW				IAML		22 02 44.3	
	comp=E,28nm,4.6s						
FLWY	Flagg Ranch	3.92	276		Pn	22 01 43.8	+0.4
FLWY				IAML		22 02 54.0	
	comp=E,51nm,4.3s						
FLWY				IAML		22 02 56.1	
	comp=E,47nm,4.8s						
SNOW	Snow King Moun	3.98	267		Pn	22 01 44.8	+0.5
SNOW				IAML		22 03 10.7	
	comp=E,40nm,4.7s						
SNOW				IAML		22 03 19.8	
	comp=E,47nm,4.9s						
YNR	Norris Junctio	3.98	285		Pn	22 01 41.9	-2.4
REDW	Red Top Meadow	4.06	266		Pn	22 01 46.5	+1.0
REDW				IAML		22 02 52.6	
	comp=E,25nm,1.2s						
REDW				IAML		22 02 56.1	
	comp=E,42nm,2.5s						
YHH	Holmes Hill	4.11	286		Pn	22 01 45.8	-0.4
O20A	White River Ci	4.26	212	Pn	Pn	22 01 48.0	-0.2
E28A	Huff	4.28	48	Pn	Pn	22 01 50.0	+1.7
YHL	Hebgen Lake	4.36	286		Pn	22 01 50.1	+0.5
AHID	Auburn Hatcher	4.36	258	Pn	Pn	22 01 50.6	+1.1
AHID				IAML		22 02 48.9	
	comp=N,33nm,4.9s						
AHID				IAML		22 03 00.1	
	comp=E,40nm,4.2s						
RDMU	Red Mountain	4.52	226		Pn	22 01 52.2	+0.5
DGMT	Dagmar	4.75	9		Pn	22 01 57.1	+2.4
BOZ	Bozeman (W)	4.87	294		Pn	22 01 56.5	0.0
BOZ				IAML		22 03 17.1	
	comp=E,27nm,4.2s						
BOZ				IAML		22 03 25.9	
	comp=E,17nm,4.8s						
HWUT	Hardware Ranch	5.11	247		Pn	22 01 59.0	-0.7
KSCO	Kaye Shedlock'	5.18	156	Pn	Pn	22 02 00.2	-0.5
TCUT	Toone Canyon	5.25	242		Pn	22 02 02.8	+1.0
EGMT	Eagleton	5.26	325		Pn	22 02 01.9	+0.2
HRY	Holter Researc	5.46	305		Pn	22 02 05.0	+0.4
SPUT	South Promonto	5.83	247		Pn	22 02 11.0	+1.3
PV22	Blue Mesa, Par	5.87	208		Pn	22 02 11.3	+1.1
SDCO	Great Sand Dun	6.04	182	Pn	Pn	22 02 12.9	+0.2
ECSD	EROS Data Cent	6.29	87		Pn	22 02 16.5	+0.7
CBKS	Cedar Bluff	6.49	138	Pn	Pn	22 02 18.0	-0.7
ELK	Elko	7.98	251	Pn	Pn	22 02 40.8	+1.6
	comp=E,0.5nm,0.3s,baz=73,slow=9.8,SNR=11						
I10CA	LAC DU BONNET	9.01	41	*i*		22 58 20.0	
	baz=223,slow=320,SNR=2.9						
ULM	Lac du Bonnet	9.12	42	Pn	Pn	22 02 54.3	-0.3
	comp=E,0.9nm,0.3s,baz=236,slow=12,SNR=13						
ULM				Pg		22 03 29.1	
	comp=E,0.7nm,0.3s,baz=222,slow=14,SNR=6.6						
ULM				Lg	Lg	22 05 23.4	
	comp=E,0.3nm,0.3s,baz=151,slow=21,SNR=1.6						
B35A	Bob, Littlefor	9.25	56	Pn	Pn	22 02 55.4	-1.0
AMTX	Amarillo	9.32	161	Pn	Pn	22 02 57.3	-0.2
NVAR	Mina Array Bea	11.17	246	Pn	Pn	22 03 24.2	+1.2
	comp=E,0.1nm,0.3s,baz=46,slow=13,SNR=2.6						
YKA	Yellowknife Ar	19.52	347	P	Pn	22 05 11.4	-0.2
	comp=E,0.1nm,0.3s,baz=158,slow=13,SNR=4.1						

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*IDC **27** 22:41:10.2±1.2, 17°.59N×60°.78W, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.8/30, mbtmp3.8/8, ML4.0/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/40, Error ellipse: s-maj=33.8km s-min=25.7km az=22.0*

*TRN **27** 22:41:12.6, 17°.56N×60°.89W, h23^{km}, MD4.1*

ISC 27 22:41:11.8±2.0**, 17°.58N**±0°.05×**60°.87W**±0°.06**, h9**^{km}±11^{km}**, n36, σ0^{s}78**/52**, mb4.0**/7**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANBD	Bethesda, Anti	1.00	239	*e*P	Pn	22 41 32.2	+0.2
ANBD				*e*S	Sn	22 41 46.6	+0.3
ABD	La Joyeuse, An	1.25	208	*e*P	Pg	22 41 35.8	0.0
ABD				*e*S	Sg	22 41 53.0	+1.0
MLYT	Lee's Yard	1.52	236	*e*P	Pn	22 41 39.5	+0.2
MLYT				*e*S	Sg	22 42 00.6	-0.3
CBE	Ff, Capester	1.66	205	*e*P	Pb	22 41 42.7	+0.2
CBE				*e*S	Sb	22 42 03.6	+0.1
MAGL	Barre de l’ile	1.67	194	*e*P	Pb	22 41 42.1	-0.6
MAGL				*e*S	Sb	22 42 03.9	+0.2
SKI	Saint Kitts	1.80	263	*e*P	Pn	22 41 43.6	+0.5
TDBA	Terre de Bas,	1.87	203	*e*P	Pb	22 41 45.7	-0.5
TDBA				*e*S	Sn	22 42 07.3	-0.4
TBG	Guadaloupe-3	1.87	204	*e*P	Pb	22 41 45.5	-0.7
TBG				*e*S	Sb	22 42 09.0	-0.6
SEUS	St. Eustatius	2.02	268	*e*P	Pb	22 41 47.7	-1.0
SEUS				*e*S	Sn	22 42 10.9	-0.4
DSLB	Salisbury	2.19	194	*e*P	Pb	22 41 49.7	-2.0
DSLB				*e*S	Sn	22 42 15.6	-0.1
SABA	Saba	2.26	271	*e*P	Pn	22 41 50.1	+0.7
SABA				*e*S	Sn	22 42 16.6	-0.9
BAMF	Morne Balai	2.76	186	*e*P	Pn	22 41 57.2	+0.9
CXM	Morne La Croix	2.76	186	*e*P	Pn	22 41 57.3	+0.8
PCM	Pelee Case Pet	2.77	187	*e*P	Pn	22 41 57.0	+0.6
GBMF	Grand Be	2.78	186	*e*P	Pn	22 41 57.8	+1.2
ILAM	Ilet Lapin Mar	2.79	180	*e*P	Pn	22 41 57.0	+0.4
ILAM				*e*S	Sn	22 42 29.6	-0.8
PML	Morne Lenard	2.80	186	*e*P	Pn	22 41 57.8	+1.0
FDF	Fort de France	2.84	186	*e*P	Pn	22 41 57.8	+0.4
FDF				*e*S	Sn	22 42 31.8	0.0
LPMF	Morne Lapointe	2.99	182	*e*P	Pn	22 41 59.6	+0.2
ZAM	Aeronautique	2.99	183	*e*P	Pn	22 41 59.7	+0.3
MVM	Montagne Vaucl	3.00	180	*e*P	Pn	22 42 00.2	+0.6
TRMF	Trois Ilets	3.03	183	*e*P	Pn	22 42 00.4	+0.4
BIM	Bigot	3.05	184	*e*P	Pn	22 42 00.5	+0.2
BIM				*e*S	Sn	22 42 37.9	+1.0
MPOM	Morne Pois Mar	3.11	180	*e*P	Pn	22 42 01.8	+0.6
MPOM				*e*S	Sn	22 42 39.5	+1.0
SLBI	Saint Lucia, B	3.54	182	*e*P	Pn	22 42 07.6	+0.7
SLBI				*e*S	Sn	22 42 48.7	-0.1
CDVI	St. Croix	3.72	273	*e*P	Pn	22 42 10.2	+0.8
CDVI				*e*S	Sn	22 42 54.1	+0.7
SJG	San Juan	5.06	277	Pn	Pn	22 42 29.0	+1.1
	5.2nm,0.3s,baz=106,slow=14,SNR=10						
SJG				Sn	Sn	22 43 25.5	-0.9
	2.4nm,0.3s,baz=315,slow=22,SNR=2.1						
SJG				LR	LR	22 44 42.6	
	comp=Z,186nm,19.7s,baz=89,slow=41						
AOPR	Arecibo Observ	5.65	279	*e*P	Pn	22 42 37.7	+1.6
ROSC	El Rosal	18.26	228	LR	LR	22 53 16.4	
	comp=Z,107nm,18.6s,baz=51,slow=40						
TXAR	Lajitas Array	40.76	295	P	P	22 48 54.0	+0.4
	0.6nm,0.7s,baz=104,slow=8.2,SNR=5.1						
PDAR	Pinedale Array	48.18	312	P	P	22 49 53.6	+0.7
	0.4nm,0.6s,baz=116,slow=9.1,SNR=3.6						
YKA	Yellowknife Ar	58.14	334	P	P	22 51 04.6	-1.0
	0.7nm,0.5s,baz=107,slow=8.0,SNR=11						
PLCA	Paso Flores	58.70	189	P	P	22 51 09.9	+0.1
	2.2nm,0.8s,baz=6.9,slow=8.1,SNR=2.8						
TORD	Torodi Ar. Bea	60.27	85	P	P	22 51 19.8	-1.4
	1.0nm,0.8s,baz=287,slow=7.1,SNR=3.1						
ILAR	Eielson Array	72.57	333	P	P	22 52 39.0	-0.1
	0.2nm,0.5s,baz=98,slow=3.8,SNR=5.7						
FINES	FINESS Array B	73.28	30	P	P	22 52 44.6	+1.3
	3.2nm,1.0s,baz=291,slow=3.9,SNR=1.8						

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*IDC **27** 23:08:55.2±1.5, 20°.55S×172°.72E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx4.0/41, mbtmp4.0/9, ML3.2/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/33, Error ellipse: s-maj=70.4km s-min=21.4km az=151.0*

*NEIC **27** 23:09:02.4±1.6, 20°.6S±0°.1×172°.53E±0°.09, h45^{km}±6^{km}, mb4.1/4, Error ellipse: s-maj=19.4km s-min=10.3km az=156.0*

ISC 27 23:09:01.5±0.6**, 20°.5S**±0°.1×**172°.50E**±0°.10**, h35**^{km}**, n62, σ1^{s}06**/50**, mb4.1**/9**, MS3.6**/11**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.86	254	*e*Pn	Pn	23 10 27.2	+1.2
	55nm,1.6s						
DZM				*e*LR	LR	23 11 50.3	
	comp=Z,713nm,25.9s						
DZM	Mont Dzumac	5.86	254	Pn	Pn	23 10 27.2	+1.2
	0.7nm,0.3s,baz=80,slow=18,SNR=11						
DZM				LR	LR	23 12 31.4	
	comp=Z,505nm,21.6s,baz=122,slow=36						
MSVF	Nonsavu	5.93	63	Pn	Pn	23 10 28.3	+1.3
SANVU	Saraoutou	7.13	314	Pn	Pn	23 10 45.8	+2.5
RAO	Raoul Island	12.29	137	LR	LR	23 15 37.1	
	comp=Z,330nm,18.3s,baz=320,slow=33						
HNR	Honiara	16.37	310	LR	LR	23 18 00.8	
	comp=Z,297nm,21.2s,baz=139,slow=33						
EIDS	Eidsvold	20.30	252	P	P	23 13 32.5	-2.0
EIDS				IAmb	IAmb	23 13 50.9	
	comp=Z,11nm,1.2s						
PLWZ	Palliser	21.12	174		P	23 13 45.0	+1.8
LTZ	Lake Taylor	22.20	180	P	P	23 13 56.8	+2.0
RPZ	Rata Peaks	23.16	183	LR	LR	23 22 06.9	
	comp=Z,124nm,19.9s,baz=30,slow=34						
RAR	Rarotonga	25.91	96	LR	LR	23 22 23.7	
	comp=Z,111nm,20.0s,baz=222,slow=32						
STKA	Stephens Creek	29.85	241	P	P	23 15 06.0	+0.4
	comp=Z,4.0nm,0.8s,baz=40,slow=6.6,SNR=3.7						
STKA				LR	LR	23 25 39.7	
	comp=Z,46nm,18.0s,baz=13,slow=34						
STKA	Stephens Creek	29.85	241	P	P	23 15 05.4	-0.3
STKA				IAmb	IAmb	23 15 12.6	
	comp=Z,1.2nm,0.9s						
TBI	Tubuai	35.33	102	*e*LR	LR	23 25 08.5	
	comp=Z,215nm,31.8s						
WB0	Warramunga Arr	35.73	264	P	P	23 15 56.5	-0.7
WB0				IAmb	IAmb	23 15 59.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	35.76	264	P	P	23 15 56.8	-0.7
	comp=Z,0.6nm,0.9s,baz=92,slow=7.9,SNR=2.6						
WRA	Warramunga Arr	35.76	264	P	P	23 15 57.7	+0.2
ASAR	Alice Springs	35.83	258	P	P	23 15 58.1	+0.1
	comp=Z,0.4nm,0.5s,baz=88,slow=9.8,SNR=5.3						
ASAR	Alice Springs	35.83	258	P	P	23 15 57.5	-0.5
PPT2	Papeete2	35.91	92	*e*LR	LR	23 25 24.3	
	comp=Z,248nm,27.0s						
PPT	Papeete	35.92	92	LR	LR	23 26 37.1	
	comp=Z,168nm,19.8s,baz=292,slow=30						
BATI	Baumata	48.04	275	LR	LR	23 37 19.8	
	comp=Z,221nm,19.5s,baz=121,slow=35						
VNDA	Vanda	57.28	183	LR	LR	23 39 37.7	
	comp=Z,94nm,20.3s,baz=322,slow=32						
MJAR	Matsushiro Arr	65.35	330	LR	LR	23 44 24.8	
	comp=Z,20nm,21.3s,baz=330,slow=32						
KSRS	Korea Array	71.31	324	LR	LR	23 50 44.8	
	comp=Z,20nm,18.1s,baz=180,slow=35						
PETK	Petropavlovsk-	74.43	351	P	P	23 20 35.7	-0.1
	comp=Z,6.4nm,0.9s,baz=100,slow=7.7,SNR=3.0						

NVAR	Mina Array Bea	87.37	47	P	P	23 21 44.6	-0.8
	comp=Z,1.2nm,0.8s,baz=227,slow=5.7,SNR=4.5						
SONM	Songino Array	90.09	322	P	P	23 21 58.5	+0.6
	comp=Z,0.3nm,0.6s,baz=121,slow=5.4,SNR=2.6						
ILAR	Eielson Array	90.56	16	P	P	23 21 57.5	-2.0
	comp=Z,0.8nm,0.7s,baz=228,slow=5.3,SNR=12						
ILAR	Eielson Array	90.56	16	P	P	23 21 58.2	-1.3
TXAR	Lajitas Array	94.70	61	P	P	23 22 18.0	-1.6
	comp=Z,0.6nm,0.8s,baz=237,slow=5.4,SNR=7.4						
TXAR	Lajitas Array	94.70	61	P	P	23 22 19.9	+0.3
PLCA	Paso Flores	95.53	137	LR	LR	23 57 50.5	
	comp=Z,19nm,18.6s,baz=168,slow=31						
KSP	Ksiaz	144.41	334	*e*PKP	PKPab	23 28 31.8	-0.3
OSTC	Ostas	144.66	334	*e*PKP	PKPab	23 28 32.8	-0.3
MORC	Moravsky Berou	144.67	332	*e*PKP	PKPab	23 28 33.2	0.0
CHVC	Chvalec	144.70	334	*e*PKP	PKPab	23 28 32.2	-1.0
DPC	Dobruska-Polom	144.77	333	*e*PKP	PKPab	23 28 33.2	-0.3
DPC				*e*x	x	23 28 40.1	
UPC	Upice	144.78	334	*e*PKP	PKPab	23 28 32.9	-0.6
VYHS	Vyhne	144.98	329	*e*PKP	PKPdf	23 28 34.7	-0.3
VYHS				*e*		23 28 41.7	
JAVC	Velka Javorina	145.27	330	*e*PKP	PKPdf	23 28 36.5	+1.0
CLL	Collm	145.32	337	*i* PKPbc	PKPbc	23 28 34.8	-0.5
	comp=Z,18nm,1.0s						
CLL				*i*		23 28 41.7	
	comp=Z,12nm,1.1s						
CLL				*i*		23 28 46.0	
VRAC	Vranov	145.43	332	*e*PKP	PKPdf	23 28 35.8	+0.1
SMOL	Smolenice	145.63	330	*e*PKP	PKPab	23 28 37.1	+0.4
SMOL				*e*		23 28 43.9	
KRUC	Moravsky	145.70	332	*e*PKP	PKPbc	23 28 36.5	-0.1
KRUC				*e*		23 28 42.9	
MODS	Modra-Piesok	145.80	330	*e*PKP	PKPdf	23 28 36.4	0.0
ZST	Bratislava	146.01	330	*e*PKP	PKPbc	23 28 37.6	+0.1
CONA	Conrad Observa	146.78	331	*i* P	PKPbc	23 28 40.1	+0.2
	comp=Z,2.0nm,0.6s						
KHC	Kasperske Hory	146.85	334	*e*PKP	PKPbc	23 28 39.3	-0.7
KHC				*e*x	x	23 28 46.5	
GEC2	GERESS Array S	147.02	334		PKPbc	23 28 40.4	-0.2
GERES	GERESS Array B	147.02	334	PKPbc	PKPbc	23 28 40.4	-0.2
	comp=Z,2.8nm,0.7s,baz=29,slow=3.0,SNR=23						
MOA	Molln	147.55	332	*e*P	PKPbc	23 28 41.0	-1.0
	comp=Z,1.1nm,0.6s						
SOKA	Soboth	148.08	330	*i* P	PKPbc	23 28 42.2	-1.4
	comp=Z,0.5nm,0.4s						
OBKA	Obir	148.43	330	*e*P	PKPdf	23 28 42.6	+1.6
	comp=Z,0.7nm,0.5s						
MYKA	Terra Mystica	148.75	331	*e*P	PKPbc	23 28 44.1	-1.2
	comp=Z,1.1nm,0.4s						
WATA	Walderalm	149.09	334	*i* P	PKPbc	23 28 44.9	-1.3
	comp=Z,2.6nm,0.7s						
ABTA	Abfaltersbach	149.16	333	*i* P	PKPbc	23 28 44.5	-1.8
	comp=Z,0.7nm,0.3s						
MOTA	Moosalm	149.27	335	*e*P	PKPbc	23 28 45.3	-1.3
	comp=Z,3.9nm,0.8s						
SQTA	Sankt Quirin	149.33	335	*i* P	PKPbc	23 28 46.1	-0.7
	comp=Z,2.3nm,0.5s						
FETA	Feichten	149.68	335	*e*P	PKPbc	23 28 47.2	-0.5
	comp=Z,3.8nm,1.0s						
DAVA	Damuels	149.79	336	*e*P	PKPbc	23 28 47.9	0.0
	comp=Z,1.2nm,0.6s						
DAVOX	Davos/Dischmat	150.21	336	PKPbc	PKPbc	23 28 47.8	-1.3

IDC 27 23:13:39.7±2.1**, 3°.30S**×**140°.90E, h0^{km}, mb3.5**/2**, mb1 4.0**/3**, mb1mx3.4**/41**, mbtmp3.7**/3**, ML4.2**/1**, Error ellipse: s-maj=59.7km s-min=19.9km az=92.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.80	346	Pn	Pb	23 13 57.3	+0.8
	59nm,0.3s,baz=170,slow=9.2,SNR=163						
JAY				Sn	Sb	23 14 08.4	+0.4
	241nm,0.3s,baz=289,slow=18,SNR=22						
WRA	Warramunga Arr	17.74	201	P	Pn	23 17 48.0	-0.3
	0.8nm,0.3s,baz=22,slow=12,SNR=17						
ASAR	Alice Springs	21.35	198	P	P	23 18 27.8	-0.9
	0.9nm,0.5s,baz=28,slow=10,SNR=8.9						
MKAR	Makanchi Array	71.60	322	P	P	23 25 04.5	+1.5
	0.5nm,0.7s,baz=102,slow=6.1,SNR=6.3						

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*IDC **27** 23:18:34.1±3.0, 13°.49N×92°.86E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.6/65, mbtmp3.7/10, ML3.8/1, MS3.7/3, Ms1 3.7/3, ms1mx2.9/39, Error ellipse: s-maj=66.9km s-min=34.1km az=151.0*

ISC 27 23:18:35.6±1.4**, 13°.7N**±0°.2×**93°.4E**±0°.1**, h10^{km}, n29, σ1^{s}.74**/19**, mb3.5**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UTHA	Uthaitani	6.15	72	P	Pb	23 20 25.2	+2.4
MHMT	Maesarieng	6.25	44	P	Pb	23 20 24.9	+0.3
CM13	Chiang Mai Arr	7.09	48	P	Pb	23 20 38.0	-1.0
SUKH	Sukhothai	7.10	57	P	Pb	23 20 37.2	-1.9
CM01	Chiang Mai Arr	7.13	48	P	Pb	23 20 45.2	+5.7
CM02	Chiang Mai Arr	7.13	48	P	Pb	23 20 38.0	-1.6
CM04	Chiang Mai Arr	7.13	48	P	Pb	23 20 38.6	-1.0
CMAR	Chiang Mai Arr	7.14	48	Pn	Pn	23 20 29.1	+8.9
	0.3nm,0.3s,baz=286,slow=27,SNR=2.0						
CMAR				LR	LR	23 23 53.7	
	comp=Z,114nm,18.1s,baz=298,slow=42						
CM09	Chiang Mai Arr	7.17	48	P	Pb	23 20 39.6	-0.7
CM32	Chiang Mai Arr	7.20	46	P	Pb	23 20 39.0	-1.9
CMMT	Chiang Mai	7.38	46	P	Pb	23 20 42.3	-1.6
CM35	Chiang Mai Arr	7.43	47	P	Pb	23 20 38.0	-6.8
CM34	Chiang Mai Arr	7.55	46	P	Pb	23 20 49.0	+2.3
PHIT	Phitsanulok	7.62	62	P	Pb	23 20 44.1	-3.8
SRAK	Srakaew	8.41	87	P	Pg	23 21 06.0	-11
H08S3	Diego Garcia H	29.65	226	T	T	23 55 40.1	
	baz=37						
H08S2	Diego Garcia H	29.66	226	T	T	23 55 38.4	
	baz=37						
H08S1	Diego Carcia H	29.67	226	T	T	23 55 38.2	
	baz=37						
DAV	Davao City (W)	32.31	98	LR	LR	23 38 18.3	
	comp=Z,94nm,18.6s,baz=121,slow=36						
MKAR	Makanchi Array	34.30	346	P	P	23 25 22.6	+0.4
	0.5nm,0.7s,baz=159,slow=7.1,SNR=4.7						
SONM	Songino Array	35.73	15	P	P	23 25 35.9	+1.2
	0.5nm,0.9s,baz=188,slow=9.7,SNR=1.4						
KURBB	Kurchatov Arra	38.78	345	P	P	23 26 01.1	+0.8
	0.6nm,0.8s,baz=155,slow=8.1,SNR=5.6						
ZALV	Zalesovo Beam	40.74	352	P	P	23 26 17.0	+0.4
	0.3nm,0.3s,baz=164,slow=7.5,SNR=2.3						
BRTR	Keskin Array B	58.18	308	P	P	23 28 27.4	-2.9
	0.8nm,0.8s,baz=116,slow=6.2,SNR=4.8						
SEY	Seymchan	64.02	26	LR	LR	23 59 50.9	
	comp=Z,335nm,19.7s,baz=342,slow=38						
FINES	FINESS Array B	67.28	331	P	P	23 29 30.2	-0.1
	5.7nm,1.1s,baz=132,slow=5.7,SNR=5.1						
GERES	GERESS Array B	73.06	317	P	P	23 30 06.4	+0.3
	1.0nm,0.9s,baz=96,slow=7.0,SNR=3.0						
TORD	Torodi Ar. Bea	88.56	283	P	P	23 31 27.2	-2.3
	1.1nm,0.9s,baz=57,slow=5.3,SNR=2.3						
ILAR	Eielson Array	89.67	22	P	P	23 31 34.7	+1.1
	0.2nm,0.8s,baz=296,slow=6.9,SNR=2.3						

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*IDC **27** 23:20:49.4±1.0, 3°.29S×141°.05E, h0^{km}, mb3.9/9, mb1 4.3/13, mb1mx4.1/44, mbtmp4.1/13, ML4.4/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/31, Error ellipse: s-maj=26.2km s-min=15.7km az=84.0*

*DJA **27** 23:20:50.5±0.4, 3°S±3°×14°1E±°, h10^{km}, M4.5/12, mB5.2/1, mb4.5/12, MLv4.5/4, Mw(mB)4.5/1*

*NEIC **27** 23:20:57.4±1.7, 3°.5S±0°.1×140°.8E±0°.1, h47^{km}±8^{km}, mb4.4/18, Error ellipse: s-maj=15.7km s-min=13.8km az=138.0*

ISC 27 23:20:51.7±0.6**, 3°.36S**±0°.04×**140°.97E**±0°.08**, h10^{km}, n60, σ1^{s}.83**/60**, mb4.3**/19**, MS3.5**/4**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	0.88	343	Pn	Pg	23 21 06.8	-1.8
	227nm,0.3s,baz=167,slow=9.5,SNR=497						
JAY				Sn	Sg	23 21 17.6	-2.6
	429nm,0.3s,baz=312,slow=18,SNR=20						
JAY	Jayapura	0.88	343	P	Pg	23 21 06.5	-2.2
JAY				S	Sg	23 21 19.1	-1.1
GENI	Genyem	1.11	314	P	Pb	23 21 10.6	-2.3
BAKI	Biak	5.31	294	P	Pn	23 22 13.7	+2.5
PMG	Port Moresby	8.60	135	Pn	Pn	23 22 54.5	-1.8
	1.0nm,0.3s,baz=191,slow=14,SNR=2.3						
PMG				Sn	Sn	23 24 35.1	+1.8
	1.0nm,0.3s,baz=346,slow=21,SNR=1.0						
FAKI	Fak Fak	8.72	273	Pn	Pn	23 22 57.1	-0.8
FAKI	Fak Fak	8.72	273	P	Pn	23 22 57.1	-0.8
	34nm,1.1s						
SIJI	Sorong	10.01	284	Pn	Pn	23 23 16.2	+0.6
	2.0nm,0.3s,baz=197,slow=22,SNR=2.8						
COEN	Coen	10.75	168	Pn	Pn	23 23 28.0	+2.2
MTN	Manton Dam	13.54	225	Pn	Pn	23 24 03.5	-0.6
WB0	Warramunga Arr	17.52	201		Pn	23 24 55.9	-0.4
WB0				IAmb	IAmb	23 25 00.8	
	comp=Z,30nm,1.2s						
WR0	Warramunga Arr	17.65	200	P	Pn	23 24 57.9	0.0
WR0				IAmb	IAmb	23 25 03.9	
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	17.69	201	P	P	23 24 58.7	-0.6
WB2	Warramunga Arr	17.70	201	P	Pn	23 24 57.9	-0.6
WB2				IAmb	IAmb	23 25 16.2	
	comp=Z,39nm,1.2s						
WRA	Warramunga Arr	17.70	201	P	Pn	23 24 58.1	-0.4
	comp=Z,1.7nm,0.3s,baz=22,slow=12,SNR=36						
WRA				S	Sn	23 28 07.9	-8.1
	comp=Z,0.1nm,0.3s,baz=23,slow=23,SNR=2.3						
WRA				LR	LR	23 31 08.3	
	comp=Z,83nm,20.2s,baz=5.0,slow=35						
WRA	Warramunga Arr	17.70	201	P	Pn	23 24 57.8	-0.8
SOEI	Soe	17.76	248	P	P	23 25 00.7	+0.5
SOEI	Soe	17.76	248	P	P	23 25 02.0	+1.8
	comp=Z,77nm,0.7s						
GTOI	Gorontalo	18.38	282	P	Pn	23 25 09.9	+3.0
	comp=Z,17nm,0.9s						
BATI	Baumata	18.47	248	P	Pn	23 25 09.2	+1.1
	comp=Z,3.8nm,0.3s,baz=221,slow=10,SNR=2.0						
BATI	Baumata	18.47	248	P	Pn	23 25 09.7	+1.7
	comp=Z,30nm,0.7s						
MRSI	Marisa	19.40	281	P	Pn	23 25 31.1	+12
HNR	Honiara	19.79	109	LR	LR	23 32 41.0	
	comp=Z,79nm,19.0s,baz=332,slow=36						
BNSI	Bone	20.84	266	P	Pn	23 25 36.6	+0.3
	comp=Z,40nm,0.9s						
FITZ	Fitzroy Crossi	20.98	225	P	P	23 25 35.0	-0.2
	comp=Z,2.5nm,0.4s,baz=36,slow=16,SNR=8.6						
FITZ	Fitzroy Crossi	20.98	225	P	P	23 25 34.7	-0.5
TTSI	Tana Toraja	21.12	270	P	P	23 25 38.4	+1.6
	comp=Z,32nm,1.1s						
AS31	Alice Springs	21.31	198	P	P	23 25 38.1	-0.7
ASAR	Alice Springs	21.31	198	P	P	23 25 38.0	-0.9
	comp=Z,4.0nm,0.5s,baz=27,slow=11,SNR=26						
ASAR				S	S	23 29 34.7	-1.0
	comp=Z,0.8nm,0.9s,baz=4.0,slow=16,SNR=2.0						
ASAR				LR	LR	23 34 31.9	
	comp=Z,278nm,18.4s,baz=62,slow=38						
MPSI	Mapaga	21.38	280	P	P	23 25 42.2	+2.6
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	23.95	157	P	P	23 26 05.6	-0.6
EIDS				IAmb	IAmb	23 26 14.9	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	27.37	227	P	P	23 26 38.0	+0.7
PSA00				IAmb	IAmb	23 26 53.8	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	28.37	179	LR	LR	23 39 45.1	
	comp=Z,129nm,19.3s,baz=14,slow=40						
DZM	Mont Dzumac	30.94	129	LR	LR	23 39 39.2	
	comp=Z,95nm,20.7s,baz=270,slow=36						
MORW	Morawa	34.85	220	P	P	23 27 43.1	-0.1
MDSI	Maura Dua	36.72	267	P	P	23 27 58.7	-0.7
	comp=Z,14nm,1.2s						
MJAR	Matsushiro Arr	39.78	357	P	P	23 28 22.2	-2.7
	comp=Z,0.5nm,0.3s,baz=165,slow=9.9,SNR=1.7						
CMAR	Chiang Mai Arr	46.72	299	P	P	23 29 20.6	-0.7
	comp=Z,0.8nm,0.6s,baz=123,slow=6.3,SNR=5.6						
HHC	Hu-ho-hao-te	51.55	332	*e*P	P	23 30 00.3	+2.2
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,5.9s						
GTA	Gaotai	56.94	323	*e*P	P	23 30 39.8	+2.3
GTA				pP	sP	23 30 45.5	+3.4
GTA				sP	pP	23 30 48.8	+8.0
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	59.28	334	P	P	23 30 54.5	+0.8
	comp=Z,0.3nm,0.6s,baz=154,slow=6.9,SNR=1.7						
SONM				LR	LR	23 55 46.5	
	comp=Z,42nm,20.9s,baz=102,slow=35						
SONM	Songino Array	59.28	334	P	P	23 30 55.5	+1.8
WMQ	Urumqi	66.93	321	*e*P	P	23 31 47.3	+2.8
MK31	Makanchi Array	71.69	322	P	P	23 32 15.3	+1.4
MKAR	Makanchi Array	71.69	322	P	P	23 32 13.7	-0.2
	comp=Z,2.3nm,0.7s,baz=110,slow=6.9,SNR=24						
MKAR	Makanchi Array	71.69	322	P	P	23 32 14.1	+0.2
MAKZ	Makanchi	71.88	322	P	P	23 32 15.4	+0.3
MAKZ				IAmb	IAmb	23 32 17.6	
	comp=Z,4.0nm,0.8s						
KSH	Kashi	73.17	313	P	P	23 32 26.3	+3.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,700nm,5.7s						
NIL	Nilore	73.52	306	P	P	23 32 25.6	+0.5
ZALV	Zalesovo Beam	73.64	329	P	P	23 32 24.8	-0.5
	comp=Z,1.2nm,0.8s,baz=120,slow=8.5,SNR=4.3						
ZALV	Zalesovo Beam	73.64	329	P	P	23 32 27.0	+1.7
KURK	Kurchatov	75.55	324	P	P	23 32 38.0	+1.5
KBL	Kabul	77.13	306	P	P	23 32 45.5	-0.5
KBL				IAmb	IAmb	23 32 47.3	
	comp=Z,3.6nm,1.1s						
KK31	Karatay Array	78.17	315	P	P	23 32 51.9	+0.3
KK31				IAmb	IAmb	23 32 53.0	
	comp=Z,3.8nm,1.4s						
KKAR	Karatay Array	78.17	315	P	P	23 32 52.0	+0.5
BVAR	Borovoye Array	81.14	325	P	P	23 33 08.0	+0.6
	comp=Z,1.2nm,0.6s,baz=56,slow=11,SNR=5.0						
ILAR	Eielson Array	85.49	24	P	P	23 33 28.6	-0.9
	comp=Z,0.4nm,0.7s,baz=255,slow=4.3,SNR=6.3						
ILAR	Eielson Array	85.49	24	P	P	23 33 31.0	+1.4
DBIC	Dimbokro	145.81	277	PKPbc	PKPdf	23 40 31.2	-0.6
	comp=Z,2.2nm,0.5s,baz=70,slow=3.9,SNR=7.8						
DBIC	Dimbokro	145.81	277		PKPdf	23 40 31.6	-0.3

HEL 27 23:24:33.4±0.3**, 67°.14N**×**20°.57E, h0^{km}, ML1.3, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERTU	Ertsjaerv	0.87	132	PG	Pg	23 24 49.4	-0.7
PAJU	Pajala	1.00	95	PG	Pg	23 24 51.3	-1.3
	baz=287						
PAJU				SB	Sg	23 25 05.8	+0.2
LANU	Lannavaara	1.06	30	PG	Pg	23 24 50.4	-3.3
TOF	Tornio	1.84	124	PG	Pn	23 25 06.1	0.0
TOF				MSG		23 25 28.4	
	comp=Z,2.0nm,0.2s						
TOF				SN	Sb	23 25 31.0	-0.3
KIF	Kilpisjarvi	1.88	3	PG	Pb	23 25 07.9	-0.6
	baz=190						
KIF				MSG		23 25 30.4	
	comp=Z,1.3nm,0.2s						
KIF				SG	Sb	23 25 32.4	-0.1
RNF	Rovaniemi	2.21	101	SG	Sb	23 25 42.6	+0.5
SGF	Sodankyl	2.33	80	PG	Pb	23 25 15.1	-1.1
SGF				SG	Sb	23 25 44.4	-1.2
BURU	Burvik	2.59	172	PN	Pn	23 25 17.6	+1.2
	baz=359						
OLKF	Oulanka, Finla	3.60	99	SG	Sg	23 26 27.0	-1.9

UPP 27 23:25:21.8±0.1**, 67°.08N**×**20°.80E, h0^{km}, ML3.0, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.10	296	P	Pg	23 25 24.0	+0.3
MASU	Masugnsbyn	0.60	50	P	Pg	23 25 33.1	-0.1
MASU				S	Sg	23 25 41.9	+0.8
ERTU	Ertsjaerv	0.76	133	P	Pg	23 25 36.1	-0.3

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*UPP **27** 23:29:37.9±0.1, 67°.18N×20°.66E, h0^{km}, ML3.1, Explosion*

*IDC **27** 23:29:38.9±0.7, 67°.16N×21°.10E, h0^{km}, mb3.3/3, mb1 3.5/10, mb1mx3.3/41, mbtmp3.5/10, ML3.1/7, MS3.2/1, Ms1 3.2/1, ms1mx2.4/34, Error ellipse: s-maj=13.2km s-min=6.2km az=109.0*

*NAO **27** 23:29:38.3±0.7, 67°.13N×20°.95E, ML3.3*

*HEL **27** 23:29:38.9±0.1, 67°.20N×20°.68E, h0^{km}, ML2.7, ML3.1(UPP), Suspected explosion*

*BER **27** 23:29:40.4±3.7, 67°.16N×20°.56E, h0^{km}, ML2.7, ML3.3(NAO), Suspected explosion*

ISC 27 23:29:37.3±0.6**, 67°.13N**±0°.02×**20°.60E**±0°.02**, h0^{km}, n64, σ1^{s}.50**/97**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	Masugnsbyn	0.63	59	P	Pg	23 29 49.3	-0.1
MASU				S	Sg	23 29 56.7	-0.9
MASU	Masugnsbyn	0.63	59	*i* P	Pg	23 29 49.3	-0.1
MASU				*i* S	Sg	23 29 56.7	-0.9
RATU	Laukkuluspa	0.79	331	P	Pg	23 29 52.4	-0.1
RATU	Laukkuluspa	0.79	331	*i* P	Pg	23 29 52.4	-0.1
KUA	Kurravaara	0.83	353	P	Pg	23 29 52.5	-0.6
KUA	Kurravaara	0.83	353	*i* P	Pg	23 29 52.5	-0.6
SALU	Saltoluokta	0.85	288	P	Pb	23 29 54.5	-0.4
SALU	Saltoluokta	0.85	288	*e*P	Pb	23 29 54.5	-0.4
SALU				*e*S	Sb	23 30 06.5	-0.3
SALU	Saltoluokta	0.85	288	*i* P	Pb	23 29 54.5	-0.4
ERTU	Ertsjaerv	0.86	132	P	Pg	23 29 54.3	+0.6
ERTU	Ertsjaerv	0.86	132	*e*P	Pg	23 29 54.3	+0.6
ERTU				*e*S	Sg	23 30 06.2	+1.4
NIKU	Nikkaluokta	0.95	321	P	Pg	23 29 55.5	0.0
NIKU	Nikkaluokta	0.95	321	*e*P	Pg	23 29 55.5	0.0
HARU	Harads	0.99	171	P	Pg	23 29 56.3	+0.1
HARU	Harads	0.99	171	*e*P	Pg	23 29 56.3	+0.1
PAJU	Pajala	0.99	95	P	Pg	23 29 56.0	-0.2
PAJU	Pajala	0.99	95	*e*P	Pg	23 29 56.0	-0.2
PAJU				*e*S	Sg	23 30 09.5	+0.4
LANU	Lannavaara	1.06	29	P	Pg	23 29 56.5	-1.1
LANU	Lannavaara	1.06	29	*e*P	Pg	23 29 56.5	-1.1
LANU				*e*S	Sg	23 30 11.1	-0.3
SJUU	Sjulsmark	1.68	166	P	Pg	23 30 09.7	+0.1
SJUU	Sjulsmark	1.68	166	*e*P	Pg	23 30 09.7	+0.1
KALU	Kalix	1.69	138	P	Pb	23 30 09.1	-0.1
KALU	Kalix	1.69	138	*e*P	Pb	23 30 09.1	-0.1
TOF	Tornio	1.83	124	*e*P	Pb	23 30 11.3	-0.2
TOF				*e*S	Sb	23 30 35.6	+0.8
TOF				MSG		23 30 37.8	
	comp=Z,109nm,0.4s						
KIF	Kilpisjarvi	1.88	2	Pn	Pb	23 30 11.6	-0.9
KIF				Sn	Sg	23 30 37.8	+0.1
KIF	Kilpisjarvi	1.88	2	*e*P	Pb	23 30 11.5	-0.9
KIF				*e*S	Sg	23 30 36.6	-1.0
KIF	Kilpisjarvi	1.88	2	*e*P	Pb	23 30 11.6	-0.9
KIF				*e*S	Sg	23 30 37.1	-0.5
KIF				MSG		23 30 40.7	
	comp=Z,90nm,0.3s						
FAUS	Fauske	2.08	279	*e*Pg	Pb	23 30 15.9	+0.1
FAUS				*e*Sg	Sg	23 30 44.9	+0.9
FAUS				IAML		23 30 45.9	
	comp=Z,112nm,0.8s						
KTK1	Kautokeino	2.13	27	Pn	Pn	23 30 15.0	+0.9
KTK1				Sn	Sn	23 30 41.5	+0.3
KTK1	Kautokeino	2.13	27	*e*P	Pb	23 30 15.3	-1.4
KTK1				*e*S	Sn	23 30 41.6	+0.4
KTK1				IAML		23 30 44.1	
	comp=Z,120nm,0.4s						
STEI	Steigen	2.21	294	Pn	Pb	23 30 16.9	-1.1
STEI				Sn	Sg	23 30 48.9	+0.8
STEI	Steigen	2.21	294	*e*Pg	Pb	23 30 18.4	+0.4
STEI				*e*Sg	Sg	23 30 47.6	-0.4
STEI				IAML		23 30 49.2	
	comp=Z,104nm,0.5s						
STEI	Steigen	2.21	294	*e*P	Pb	23 30 17.2	-0.8
JETT	Jettan, Norway	2.43	358	Pn	Pn	23 30 19.0	+0.7
JETT				Sn	Sb	23 30 50.4	-2.1
BURU	Burvik	2.58	173	*e*P	Pb	23 30 22.7	-1.7
BURU				*e*S	Sn	23 30 54.5	+2.2
TRO	Tromso	2.58	347	*e*PB	Pb	23 30 23.5	-0.9
TRO				*e*SG	Sb	23 30 57.8	+1.1
OBF4	Vikkela, Lumij	2.97	140	MSG		23 31 18.4	
	comp=Z,15nm,0.3s						
ARA0	ARCESS Array S	3.02	35	Pn	Pn	23 30 26.5	+0.2
	baz=211,slow=14						
ARA0				Sn	Sn	23 31 03.2	0.0
	baz=216,slow=28						
ARA0	ARCESS Array S	3.02	35	Pn	Pn	23 30 26.5	+0.2
	baz=211,slow=14						
ARA0				*e*P	Pb	23 30 26.7	-5.2
ARA0				Sn	Sn	23 31 03.2	0.0
	baz=216,slow=28						
ARCES	ARCESS Array B	3.02	35	Pn	Pn	23 30 26.9	+0.5
	baz=212,slow=13,SNR=180						
ARCES				Sn	Sn	23 31 01.7	-1.5
	baz=222,slow=16,SNR=3.2						
ARCES				Lg	Lg	23 31 08.0	
	baz=212,slow=27,SNR=2.9						
OBF0	Syolatti, Pyha	3.04	149	MSG		23 31 15.5	
	comp=Z,30nm,0.4s						
OUF	Merijarvi	3.26	147	MSG		23 31 30.5	
	comp=Z,13nm,0.3s						
HAMF	Hammerfest	3.70	16	*e*P	Pn	23 30 36.7	+1.2
HAMF				IAML		23 31 32.7	
	comp=Z,36nm,0.5s						
APA0	Apatity Array	4.81	79	Pn	Pn	23 30 50.6	-0.2
	baz=282,slow=11						
APA0				Sn	Sn	23 31 44.9	-2.3
	baz=260,slow=28						
APA0				Lg	Lg	23 32 02.1	
	baz=275,slow=28						
APA0	Apatity Array	4.81	79	Pn	Pn	23 30 50.6	-0.2
	baz=282,slow=11						
APA0				Sn	Sn	23 31 44.9	-2.3
	baz=260,slow=28						
FIA0	FINESS Array S	6.19	155	Pn	Pn	23 31 11.3	+1.5
	baz=353,slow=16						
FIA0				Sn	Sn	23 32 20.9	-0.3
	baz=349,slow=28						
FIA0				Lg	Lg	23 32 48.7	
	baz=350,slow=28						
FIA0	FINESS Array S	6.19	155	Pn	Pn	23 31 11.3	+1.5
	baz=353,slow=16						
FIA0				Sn	Sn	23 32 20.9	-0.3
	baz=349,slow=28						
FINES	FINESS Array B	6.19	155	Pn	Pn	23 31 11.0	+1.2
	comp=Z,0.4nm,0.3s,baz=355,slow=13,SNR=15						
FINES				Sn	Sn	23 32 21.0	-0.1
	comp=Z,1.5nm,0.3s,baz=346,slow=23,SNR=15						
FINES				Lg	Lg	23 32 49.8	
	comp=Z,1.6nm,0.3s,baz=347,slow=25,SNR=4.6						
NB2	NORSAR Subarra	7.36	218	Pn	Pn	23 31 28.1	+2.2
	baz=26,slow=12						
NB2				Sn	Sn	23 32 49.3	-0.8
	baz=29,slow=28						
NB2				Lg	Lg	23 33 30.0	
	baz=32,slow=37						
NB2	NORSAR Subarra	7.36	218	Pn	Pn	23 31 28.1	+2.2
	baz=26,slow=12						
NB2				Sn	Sn	23 32 49.3	-0.8
	baz=29,slow=28						
NB2				Sg	Sg	23 33 30.0	-3.4
	baz=32,slow=37						
NOA	NORSAR Array B	7.36	218	Pn	Pn	23 31 28.3	+2.4
	comp=Z,0.1nm,0.3s,baz=28,slow=10,SNR=11						
NOA				Sn	Sn	23 32 43.4	-6.7
	comp=Z,0.1nm,0.3s,baz=136,slow=8.8,SNR=8.7						
NOA				Lg	Lg	23 33 24.8	
	comp=Z,0.2nm,0.3s,baz=232,slow=17,SNR=2.9						
NRA0	NORESS Array S	7.55	216	Pn	Pn	23 31 30.2	+1.7
	baz=39,slow=14						
NRA0				Sn	Sn	23 32 53.5	-1.1
	baz=22,slow=18						
NRA0				Lg	Lg	23 33 36.5	
	baz=18,slow=22						
NRA0	NORESS Array S	7.55	216	Pn	Pn	23 31 30.2	+1.7
	baz=39,slow=14						
NRA0				Sn	Sn	23 32 53.5	-1.1
	baz=22,slow=18						
HFS	Hagfors	7.66	207	Pn	Pn	23 31 30.9	+0.9
	comp=Z,0.4nm,0.3s,baz=24,slow=13,SNR=14						
HFS				Sn	Sn	23 32 56.3	-1.1
	comp=Z,1.4nm,0.3s,baz=31,slow=21,SNR=12						
HFS				Lg	Lg	23 33 36.1	
	comp=Z,1.0nm,0.3s,baz=28,slow=29,SNR=4.0						
HFS	Hagfors	7.66	207	Pn	Pn	23 31 30.7	+0.7
	baz=26,slow=12						
HFS				Sn	Sn	23 32 56.0	-1.4
	baz=25,slow=22						
HFS				Lg	Lg	23 33 35.6	
	baz=28,slow=37						
HFS	Hagfors	7.66	207	Pn	Pn	23 31 30.7	+0.7
	baz=26,slow=12						

HFS				Sn	Sn	23 32 56.0	-1.4
	baz=25,slow=22						
HFS				Sg	Sg	23 33 35.6	-7.5
	baz=28,slow=37						
SPA0	**Spitsbergen Ar**	11.17	356	Pn	Pn	23 32 17.1	-0.8
	baz=156,slow=14						
SPA0	**Spitsbergen Ar**	11.17	356	Pn	Pn	23 32 17.1	-0.8
	baz=156,slow=14						
SPITS	**Spitsbergen Ar**	11.17	356	Pn	Pn	23 32 17.1	-0.8
	baz=156,slow=16,SNR=16						
AKASG	**Malin Array Be**	17.04	161	P	P	23 33 38.2	-0.4
	comp=Z,0.5nm,0.3s,baz=347,slow=12,SNR=6.4						
GERES	**GERESS Array B**	18.68	194	P	Pn	23 33 59.8	+2.7
	comp=Z,0.1nm,0.3s,baz=8.4,slow=14,SNR=1.8						
GERES				LR	LR	23 41 50.4	
	comp=Z,66nm,18.6s,baz=58,slow=39						
ARU	**Arti**	20.52	103	P	P	23 34 17.3	+0.6
	comp=Z,0.6nm,0.5s,baz=315,slow=5.7,SNR=5.4						
AKTO	**Aktyubinsk**	25.02	113	P	P	23 35 03.4	+0.8
	comp=Z,1.2nm,0.5s,baz=320,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	37.24	92	P	P	23 36 50.3	+0.2
	comp=Z,0.1nm,0.4s,baz=336,slow=8.8,SNR=1.7						

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*LDG **28** 00:05:01.2±0.1, 48.°21N×8.°96E, h5^{km}, Md3.5/3, Ml3.5/46, Error ellipse: s-maj=1.1km s-min=1.0km az=102.0*
*ZUR **28** 00:05:01.1, 48.°20N×8.°97E, h13^{km}, MLh3.4/85, Error ellipse: s-maj=1.6km s-min=0.6km az=249.0*
*BGR **28** 00:05:01.5±0.1, 48.°20N×8.°93E, h10^{km}, ML3.4/16, Error ellipse: s-maj=2.2km s-min=2.2km az=58.0*
*BNS **28** 00:05:02.0±0.3, 48.°19N×8.°91E, h5^{km}, ML2.8*
*PRU **28** 00:05:02.1±0.0, 48.°24N×9.°11E, h0^{km}*
*STR **28** 00:05:03.7±0.5, 48°N±2°×°±°, h25^{km}±2^{km}, MLv3.2/5, MLv3.3/9, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*
ISC 28 00:04:59.5±0.9, **48.°20N**±0.°01×**8.°96E**±0.°01, **h14**^{km}±7^{km}, **n261**, σ**1.^{s}51**/518, **104C-51D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUT	**Gutenstein**	0.17	142	⇓Pg	Pb	00 05 04.2	-0.2
	6.0nm,SNR=192						
GUT				⇓Pg	Pb	00 05 04.2	-0.2
GUT				Sg	Sg	00 05 06.6	+0.4
GUT	**Gutenstein**	0.17	142	⇓*i*Pg	Pb	00 05 04.2	-0.2
GUT				Sg	Sg	00 05 06.7	+0.4
EMING	**Emmingen-Lipti**	0.32	194	Pg	Pb	00 05 07.4	+0.4
EMING				Pg	Pb	00 05 07.4	+0.4
	4.1nm,SNR=44						
EMING				Sg	Sg	00 05 11.8	+1.3
EMING	**Emmingen-Lipti**	0.32	194	⇑*i*Pg	Pb	00 05 07.4	+0.4
EMING				Sg	Sb	00 05 11.9	-0.1
TUBL	**Tuebingen-Lenn**	0.33	14	⇓*i*Pg	Pb	00 05 07.2	+0.1
TUBL				Sg	Sb	00 05 11.6	-0.7
BUCH	**Bad Urach**	0.36	47	⇑*i*Pg	Pb	00 05 07.9	+0.2
BUCH				Sg	Sb	00 05 12.9	-0.3
BFO	**Black Forest**	0.44	287	⇑Pg	Pb	00 05 09.8	+0.8
	1.5nm,SNR=16						
BFO				⇑Pg	Pb	00 05 09.8	+0.8
BFO				Sg	Sb	00 05 15.7	+0.2
BFO	**Black Forest**	0.44	287	⇑*i*Pg	Pb	00 05 09.8	+0.8
BFO				Sg	Sb	00 05 15.8	+0.2
WALHA	**Wallhausen, DE**	0.46	166	⇓Pg	Pb	00 05 10.0	+0.5
WALHA				⇓Pg	Pb	00 05 10.0	+0.5
	1.4nm,SNR=12						
WALHA				Sg	Sb	00 05 16.6	+0.5
WALHA	**Wallhausen, DE**	0.46	166	⇓*i*Pg	Pb	00 05 09.9	+0.5
WALHA				Sg	Sb	00 05 16.6	+0.5
LBG	**Lerchenberg**	0.47	347	⇓*i*Pg	Pb	00 05 10.2	+0.6
LBG				Sg	Sb	00 05 16.7	+0.2
SISB	**Singen-Schiene**	0.52	180	⇓Pg	Pb	00 05 11.1	+0.8
SISB				Sg	Sb	00 05 18.4	+0.7
SISB				SmS		00 05 23.1	
STEIN	**Stein am Rhein**	0.54	186	⇓Pg	Pb	00 05 11.5	+0.9
STEIN				⇓Pg	Pb	00 05 11.5	+0.9
	2.1nm,SNR=22						
SCHS	**Schaffhausen,**	0.54	204	⇑Pg	Pb	00 05 11.5	+0.8
	1.4nm,SNR=8.8						
SCHS				⇑Pg	Pb	00 05 11.5	+0.8
SLE	**Schleitheim**	0.54	216	⇑Pg	Pb	00 05 11.4	+0.7
SLE				⇑Pg	Pb	00 05 11.4	+0.7
	1.7nm,SNR=23						
SLE	**Schleitheim**	0.54	216	⇑Pg	Pb	00 05 11.4	+0.7
SLE				PmP		00 05 14.1	
SLE				Sg	Sb	00 05 18.9	+0.5
TRULL	**Truellikon**	0.58	199	⇑Pg	Pb	00 05 12.4	+0.9
	3.9nm,SNR=38						
TRULL				⇑Pg	Pb	00 05 12.4	+0.9
STU	**Stuttgart**	0.59	15	⇓Pg	Pb	00 05 12.1	+0.5
STU				PmP		00 05 14.3	
STU				Sg	Sb	00 05 19.8	0.0
STU				SmS		00 05 23.5	
OPP	**Oppenau**	0.59	300	P	Pb	00 05 12.5	+0.9
OPP				Pg	Pn	00 05 13.6	+0.1
OPP				Sg	Sb	00 05 20.4	+0.5
OPP	**Oppenau**	0.59	300	⇓Pg	Pb	00 05 12.5	+0.9
OPP				PmP		00 05 14.5	
OPP				Sg	Sb	00 05 20.4	+0.5
OPP				S*	Sn	00 05 22.1	-0.9
OPP				SmS		00 05 23.8	
BERGE	**Lenzkirch (DE)**	0.62	238	⇑Pg	Pb	00 05 13.1	+1.0
	2.0nm,SNR=26						
BERGE				⇑Pg	Pb	00 05 13.1	+1.0
BERGE	**Lenzkirch (DE)**	0.62	238	⇑Pg	Pb	00 05 13.1	+1.0
BERGE				PmP		00 05 15.0	
BERGE				Sg	Sb	00 05 21.9	+1.2
BERGE				SmS		00 05 25.1	
WEIN	**Weingarten**	0.68	178	⇓Pg	Pb	00 05 14.1	+1.1
	2.8nm,SNR=34						
WEIN				⇓Pg	Pb	00 05 14.1	+1.1
METMA	**Mettma DE**	0.68	224	⇑Pg	Pb	00 05 14.0	+0.9
METMA				⇑Pg	Pb	00 05 14.0	+0.9
	7.5nm,SNR=120						
METMA				PmP		00 05 15.8	
METMA	**Mettma DE**	0.68	224	⇑Pg	Pb	00 05 14.0	+0.9
METMA				⇓PmP		00 05 15.9	
METMA				Sg	Sb	00 05 23.8	+1.3
METMA				SmS		00 05 26.4	
FLACH	**Flaach**	0.68	203	⇑Pg	Pb	00 05 14.2	+1.0
FLACH				⇑Pg	Pb	00 05 14.2	+1.0
	4.4nm,SNR=42						
FELD	**Feldberg im Sc**	0.72	243	⇑Pg	Pb	00 05 14.9	+1.1
	2.4nm,SNR=37						
FELD				⇑Pg	Pb	00 05 14.9	+1.1
FELD	**Feldberg im Sc**	0.72	243	⇑Pg	Pb	00 05 14.9	+1.1
FELD				PmP		00 05 16.6	
FELD				Sg	Sb	00 05 24.9	+1.3
FELD				SmS		00 05 27.7	
STIEG	**Stiegenhof Hun**	0.73	196	⇑Pg	Pb	00 05 15.2	+1.1
STIEG				⇑Pg	Pb	00 05 15.2	+1.1
	2.2nm,SNR=3.8						
KIZ	**Kirchzarten**	0.74	251	⇑Pg	Pb	00 05 15.3	+1.1
	1.5nm,SNR=14						
KIZ				⇑Pg	Pb	00 05 15.3	+1.1
KIZ	**Kirchzarten**	0.74	251	P	Pb	00 05 15.3	+1.1
KIZ				Pg	Pn	00 05 16.2	+0.7
KIZ				Sg	Sb	00 05 25.9	+1.8
KIZ	**Kirchzarten**	0.74	251	⇑Pg	Pb	00 05 15.2	+1.1
KIZ				PmP		00 05 16.4	
KIZ				SmS		00 05 27.9	
SARE	**Arbon, Evangel**	0.76	155	⇓Pg	Pb	00 05 15.6	+1.1
	3.7nm,SNR=17						
SARE				⇓Pg	Pb	00 05 15.6	+1.1
FBB	**Freiburg im Br**	0.77	255	PmP		00 05 17.1	
FBB				SmS		00 05 29.0	
ACHB	**Acheberg**	0.78	218	⇑Pg	Pb	00 05 15.9	+1.1
ACHB				⇑Pg	Pb	00 05 15.9	+1.1
	7.7nm,SNR=84						
BOBI	**Bbikon, Wasse**	0.78	213	⇑Pg	Pb	00 05 16.0	+1.2
	1.1nm,SNR=2.5						
BOBI				⇑Pg	Pb	00 05 16.0	+1.2
WILA	**Wila**	0.79	183	⇓Pg	Pn	00 05 16.3	0.0
	2.1nm,SNR=20						
WILA				⇓Pg	Pn	00 05 16.3	0.0
WILA	**Wila**	0.79	183	⇓Pg	Pn	00 05 16.3	0.0
WILA				Sg	Sb	00 05 27.2	+1.6
BRET	**Bretten**	0.83	348	⇓Pg	Pn	00 05 17.0	+0.3
BRET				PmP		00 05 18.2	
BRET				Sg	Sn	00 05 28.2	-0.6
SGT05	**Eggersriet**	0.83	156	⇓Pg	Pn	00 05 17.0	+0.2
SGT05				⇓Pg	Pn	00 05 17.0	+0.2
	1.6nm,SNR=14						
SGT03	**Degersheim**	0.85	169	⇓Pg	Pn	00 05 17.4	+0.3
	2.1nm,SNR=30						
SGT03				⇓Pg	Pn	00 05 17.4	+0.3
ZUR	**Degenried**	0.87	197	⇑Pn	Pn	00 05 17.7	+0.4
ZUR				⇑Pn	Pn	00 05 17.7	+0.4
	1.8nm,SNR=22						
STR	**Strasbourg**	0.88	296	Pg	Pn	00 05 18.2	+0.7
STR				Sg	Sb	00 05 29.2	+1.0
SULZ	**Cheisacher**	0.89	220	⇑Pn	Pn	00 05 17.9	+0.4
SULZ				⇑Pn	Pn	00 05 17.9	+0.4
	2.9nm,SNR=39						
SULZ	**Cheisacher**	0.89	220	⇑Pg	Pn	00 05 17.9	+0.4
SULZ				PmP		00 05 18.4	
SULZ				Sg	Sn	00 05 30.3	+0.1
SGT04	**Schlatt-Haslen**	0.90	163	⇓Pn	Pn	00 05 18.3	+0.6
SGT04				⇓Pn	Pn	00 05 18.3	+0.6
	1.8nm,SNR=13						
HDH	**Heidenheim-Cha**	0.92	65	⇑Pg	Pn	00 05 17.8	-0.1
HDH				PmP		00 05 18.5	
HDH				Sg	Sb	00 05 30.2	+1.1
UBR	**Ueberruh**	0.93	124	⇓Pn	Pn	00 05 18.8	+0.6
	2.0nm,SNR=14						
UBR				⇓Pn	Pn	00 05 18.8	+0.6
UBR				Sn	Sn	00 05 31.4	0.0
UBR	**Ueberruh**	0.93	124	⇓Pg	Pn	00 05 18.8	+0.6
UBR				Sg	Sn	00 05 31.5	+0.1
UBR				SmS		00 05 33.7	
ENDD	**Endenburg**	0.95	240	⇑Pg	Pn	00 05 19.2	+0.7
ENDD				PmP		00 05 19.8	
ENDD				Sg	Sn	00 05 32.2	+0.3
ENDD				SmS		00 05 33.8	
LIENZ	**Kamor/St.Gall**	0.98	158	⇓Pn	Pn	00 05 19.8	+0.9
LIENZ				⇓Pn	Pn	00 05 19.8	+0.9
	0.8nm,SNR=5.5						
LIENZ	**Kamor/St.Gall**	0.98	158	⇓Pg	Pn	00 05 19.8	+0.9
EMMET	**Emmethof**	1.00	220	⇑Pn	Pn	00 05 20.0	+0.9
	2.4nm,SNR=31						
EMMET				⇑Pn	Pn	00 05 20.0	+0.9
ROTHE	**Rothenfluh**	1.01	224	⇑Pn	Pn	00 05 20.2	+0.9
	2.5nm,SNR=28						
ROTHE				⇑Pn	Pn	00 05 20.2	+0.9
SUBF	**Surbourg**	1.03	314	Pg	Pn	00 05 20.7	+1.3
SUBF				Sg	Sn	00 05 35.7	+2.1
HAMIK	**Hmikon, Dlik**	1.06	206	⇑Pn	Pn	00 05 21.2	+1.2
HAMIK				⇑Pn	Pn	00 05 21.2	+1.2
	1.7nm,SNR=3.4						
SKAF	**Kaiseraugst-Fr**	1.07	232	⇑Pn	Pn	00 05 20.6	+0.7
SKAF				⇑Pn	Pn	00 05 20.6	+0.7
	6.3nm,SNR=32						
SAUR	**Augst-Roemermu**	1.07	232	⇑Pn	Pn	00 05 20.7	+0.7
	11nm,SNR=65						
SAUR				⇑Pn	Pn	00 05 20.7	+0.7
SAUR				PmP		00 05 21.8	
SBEG	**Bettingen Gewe**	1.08	234	⇑Pn	Pn	00 05 20.8	+0.6
SBEG				⇑Pn	Pn	00 05 20.8	+0.6
	3.2nm,SNR=29						
SRHH	**Riehen, Zur Ho**	1.08	235	⇑Pn	Pn	00 05 20.7	+0.6
SRHH				⇑Pn	Pn	00 05 20.7	+0.6
	2.9nm,SNR=19						
WLS	**Welschbruch**	1.09	282	P	Pn	00 05 21.5	+1.1
WLS				Pg	Pg	00 05 22.1	+1.6
WLS				S	Sn	00 05 35.7	+0.4
WLS				Sg	Sb	00 05 36.8	+2.5
WLS	**Welschbruch**	1.09	282	Pn	Pn	00 05 21.4	+1.1
WLS				Pg	Pg	00 05 22.2	+1.6
SFRA	**Frenkendorf**	1.09	231	⇑Pn	Pn	00 05 21.2	+0.8
SFRA				⇑Pn	Pn	00 05 21.2	+0.8
	4.7nm,SNR=27						
SMZW	**Muttenz-Waldha**	1.10	234	⇑Pn	Pn	00 05 21.2	+0.7
	4.6nm,SNR=35						
SMZW				⇑Pn	Pn	00 05 21.2	+0.7
SMZW				PmP		00 05 22.4	
OTER2	**Otterbach 2 (B**	1.10	236	Pn	Pb	00 05 20.7	+0.3
	98nm,SNR=0.8						
OTER2				PmP		00 05 21.8	
SBIF2	**Birsfelden, Fr**	1.11	235	⇑Pn	Pn	00 05 21.3	+0.8
	2.3nm,SNR=16						
SBIF2				⇑Pn	Pn	00 05 21.3	+0.8
DAVA	**Damuels**	1.11	146	⇓Pn	Pn	00 05 22.1	+1.4
DAVA				⇓Pn	Pn	00 05 22.1	+1.4
	1.1nm,SNR=16						
DAVA	**Damuels**	1.11	146	*e*Pg	Pn	00 05 22.1	+1.4
	31nm,0.2s,SNR=45						
DAVA				*e*Sg	Sn	00 05 37.9	+2.1
	270nm,0.3s						
DAVA	**Damuels**	1.11	146	⇓Pg	Pn	00 05 22.1	+1.4
DAVA				PmP		00 05 24.3	
DAVA				Sg	Sn	00 05 38.0	+2.1
SBIS2	**Binningen**	1.14	235	⇑Pn	Pg	00 05 21.9	+0.5
	3.4nm,SNR=21						
SBIS2				⇑Pn	Pg	00 05 21.9	+0.5
MATTE	**Schuetzenmatte**	1.14	236	Pn	Pn	00 05 21.7	+0.7
	1.6nm,SNR=7.3						
CDF	**Champ du Feu**	1.14	281	*e*Pn	Pn	00 05 21.9	+0.8
CDF	**Champ du Feu**	1.14	281	*e*Pg	Pn	00 05 23.0	+1.9
CDF				*e*Sg	Sn	00 05 37.4	+0.8
	798nm,0.2s						
SRER	**Reinach, Raine**	1.15	233	⇑Pn	Pg	00 05 22.0	+0.4
SRER				⇑Pn	Pg	00 05 22.0	+0.4
	2.4nm,SNR=21						
SRER				PmP		00 05 23.4	
DAGMA	**Lutertal, Dagm**	1.16	214	⇑Pn	Pg	00 05 22.4	+0.5
DAGMA				⇑Pn	Pg	00 05 22.4	+0.5
	3.1nm,SNR=31						
DAGMA				PmP		00 05 23.8	
PLONS	**Plons/SG**	1.19	166	⇓Pn	Pg	00 05 23.4	+1.1
	0.9nm,SNR=12						
PLONS				⇓Pn	Pg	00 05 23.4	+1.1
PLONS	**Plons/SG**	1.19	166	*e*Pn	Pg	00 05 23.4	+1.1
PEB	**Petersbachel**	1.19	317	⇓Pn	Pg	00 05 22.9	+0.5
PEB				PmP		00 05 24.2	
PEB				Sg	Sn	00 05 40.5	+2.7
OBER	**Oberstdorf**	1.20	131	Pg	Pg	00 05 23.9	+1.3
OBER				PmP		00 05 24.4	
OBER				Sg	Sn	00 05 40.3	+2.3
OBER				SmS		00 05 41.3	
ECH	**Echery**	1.20	271	⇑Pn	Pg	00 05 22.7	+0.1
	2.0nm,SNR=35						
ECH				⇑Pn	Pg	00 05 22.7	+0.1
ECH	**Echery**	1.20	271	P	Pg	00 05 22.7	+0.1
ECH				Pg	Pb	00 05 24.0	+1.9
ECH				S	Sb	00 05 38.2	+0.7
ECH				Sg	Sn	00 05 40.2	+2.1
ECH	**Echery**	1.20	271	⇑Pn	Pg	00 05 22.7	+0.1
ECH				Pg	Pb	00 05 24.0	+1.9
ECH				Sn	Sb	00 05 38.0	+0.5
ECH				Sg	Sn	00 05 40.3	+2.2
BALST	**Balsthal**	1.22	225	⇑Pn	Pn	00 05 22.8	+0.7
BALST				⇑Pn	Pn	00 05 22.8	+0.7
	2.9nm,SNR=29						
BALST				PmP		00 05 24.5	
BALST	**Balsthal**	1.22	225	⇑Pn	Pn	00 05 22.8	+0.7
BALST				Pg	Pg	00 05 24.3	+1.4
BALST				Sg	Sn	00 05 41.0	+2.5
NORI	**Noerdlinger Ri**	1.22	64	*e*Sg	Sn	00 05 40.2	+1.6
SIND	**Sindeldorf**	1.22	20	⇓Pn	Pn	00 05 22.4	+0.2
SIND				Sg	Sn	00 05 40.2	+1.6
KTD	**Kalmit**	1.26	333	Pg	Pg	00 05 25.2	+1.5
KTD				Sg	Sn	00 05 41.8	+2.3
KTD	**Kalmit**	1.26	333	Pg	Pg	00 05 25.2	+1.5
KTD				Sg	Sn	00 05 42.3	+2.9
MOF	**Molkenrain**	1.27	255	Pn	Pn	00 05 23.7	+0.7
MOF				Pg	Pg	00 05 25.6	+1.7
MOF				Sg	Sg	00 05 42.8	+2.2
MOF	**Molkenrain**	1.27	255	Pn	Pn	00 05 23.7	+0.7
SWS	**Schriesheim-Wi**	1.29	353	⇓Pn	Pg	00 05 24.0	-0.3
SWS				Pg	Pb	00 05 25.4	+1.8
SWS				Sg	Sg	00 05 42.6	+1.4
PANIX	**Pigniu (Panix)**	1.38	176	⇓Pn	Pg	00 05 26.2	+0.1
PANIX				⇓Pn	Pg	00 05 26.2	+0.1
	0.7nm,SNR=8.2						
SOLZ	**Solothurn, Zeu**	1.38	224	⇑Pn	Pn	00 05 25.1	+0.7
SOLZ				⇑Pn	Pn	00 05 25.1	+0.7
	4.3nm,SNR=27						
TOD	**Tromm**	1.41	356	⇓Pn	Pb	00 05 25.5	0.0
TOD				Sg	Sg	00 05 46.2	+1.4
RETA	**Reutte**	1.41	120	*e*Pn	Pg	00 05 26.4	-0.1
	0.3nm,0.1s,SNR=7.6						
RETA				*e*Pg	Pb	00 05 27.7	+2.1
	14nm,0.1s						
RETA				*e*Sg	Sg	00 05 46.4	+1.5
	115nm,0.2s						
RETA	**Reutte**	1.41	120	Pn	Pg	00 05 26.4	-0.1
RETA				Pg	Pb	00 05 27.7	+2.1
RETA				Sg	Sg	00 05 46.5	+1.5
BOURR	**Bourrignon**	1.42	236	⇑Pn	Pn	00 05 25.5	+0.6
BOURR				Pg	Pg	00 05 27.9	+1.1
BOURR				Sg	Sg	00 05 47.5	+2.3
WBA	**Furth**	1.46	356	Pn	Pb	00 05 26.5	+0.1
WBA				Sg	Sg	00 05 47.6	+1.2
MTI02	**Mont Terri, (H**	1.46	236	⇑Pn	Pn	00 05 26.0	+0.6
MTI02				⇑Pn	Pn	00 05 26.0	+0.6
	1.3nm,SNR=10.0						
HINF	**Hinteralfeld**	1.47	255	*e*Pn	Pn	00 05 26.0	+0.5
HINF	**Hinteralfeld**	1.47	255	*e*P	Pg	00 05 28.5	+0.9
HINF				*e*Sn	Sn	00 05 45.5	+1.0
	413nm,0.3s						
BE1	**Monatshausen**	1.55	100	*e*Pn	Pg	00 05 28.6	-0.5
HASLI	**Hasliberg/Brie**	1.55	201	⇑Pn	Pn	00 05 27.8	+1.1
HASLI				⇑Pn	Pn	00 05 27.8	+1.1
	1.7nm,SNR=26						
FUR	**Furstenfeldbru**	1.55	91	*e*Pn	Pg	00 05 29.8	+0.6
FUR				*e*Sg	Sg	00 05 50.6	+1.2
DAVOX	**Davos/Dischmat**	1.55	156	⇓Pn	Pg	00 05 29.2	-0.2
	0.8nm,SNR=17						
DAVOX				⇓Pn	Pg	00 05 29.2	-0.2
IMS	**Imsbach**	1.56	334	⇓Pn	Pb	00 05 27.8	-0.2
IMS				Pg	Pg	00 05 30.3	+0.9
PART	**Garmisch-Parte**	1.61	115	*e*Pn	Pg	00 05 31.3	+0.8
WBB	**Darmstadt**	1.65	353	Pn	Pb	00 05 29.2	-0.5
WBB				Pg	Pg	00 05 32.1	+0.9
WBB				Sg	Sg	00 05 53.7	+1.0
MOTA	**Moosalm**	1.68	120	*e*Pn	Pb	00 05 31.0	+0.7
	1.5nm,0.1s						
MOTA				*e*Sg	Sg	00 05 54.2	+0.6
	367nm,0.2s						
FETA	**Feichten**	1.68	134	*e*Pn	Pb	00 05 30.8	+0.5
	6.1nm,0.1s,SNR=10						
FETA				*e*Sn	Sb	00 05 52.1	+0.7
	7.5nm,0.1s						
FETA				Sg	Sg	00 05 55.4	+1.8
	56nm,0.3s						
VDL	**Val di Lei**	1.75	169	⇓Pn	Pb	00 05 32.0	+0.5
	1.0nm,SNR=14						
VDL				⇓Pn	Pb	00 05 32.0	+0.5
HAU	**Haudompre**	1.76	265	*e*Pn	Pn	00 05 30.5	+0.9
HAU	**Haudompre**	1.76	265	*e*Pg	Pg	00 05 34.1	+0.9
HAU				*e*Sg	Sg	00 05 56.4	+0.3
	436nm,0.3s						
WIMIS	**Wimmis**	1.79	211	⇑Pn	Pn	00 05 30.9	+1.0
WIMIS				⇑Pn	Pn	00 05 30.9	+1.0
	0.8nm,SNR=11						
SQTA	**Sankt Quirin**	1.81	122	*e*Pn	Pb	00 05 32.9	+0.5
	0.9nm,0.2s,SNR=6.3						
SQTA				*e*Pg	Pg	00 05 34.9	+0.7
	13nm,0.1s						
SQTA				*e*Sg	Sg	00 05 58.0	+0.4
	272nm,0.3s						
CHMF	**Charmoille**	1.83	239	⇑Pn	Pn	00 05 31.0	+0.5
CHMF				⇑Pn	Pn	00 05 31.0	+0.5
	0.9nm,SNR=11						
CHMF	**Charmoille**	1.83	239	Pn	Pn	00 05 31.0	+0.5
CHMF				Pg	Pg	00 05 35.3	+0.8
CHMF				Sn	Sn	00 05 55.1	+1.6
CHMF				Sg	Sg	00 05 59.0	+0.8
CHMF	**Charmoille**	1.83	239	⇑Pn	Pn	00 05 31.0	+0.5
CHMF				Pg	Pg	00 05 35.1	+0.6
CHMF				Sg	Sg	00 05 59.1	+0.8
FIESA	**Fiescheralp**	1.86	198	⇑Pn	Pn	00 05 32.8	+1.7
	1.3nm,SNR=16						
FIESA				⇑Pn	Pn	00 05 32.8	+1.7
DUP	**Duppenweiler**	1.88	311	Pn	Pb	00 05 33.6	+0.1
DUP				Pg	Pg	00 05 37.0	+1.5
DUP				Sg	Sg	00 06 01.1	+1.3
GRC1	**Grafenberg Arr**	1.88	64	Pn	Pn	00 05 31.7	+0.6
GRC1				Pg	Pg	00 05 35.6	+0.1
ABH	**Alteburg**	1.92	332	Pn	Pb	00 05 33.4	-0.8
ABH				Pg	Pg	00 05 37.1	+0.9
ABH				Sn	Sn	00 05 56.5	+0.8
ABH	**Alteburg**	1.92	332	⇑Pn	Pb	00 05 33.4	-0.8
ABH				Pg	Pg	00 05 37.4	+1.1
MOSI	**Grossmontoni**	1.92	145	⇑Pn	Pb	00 05 34.6	+0.2
MOSI				⇑Pn	Pb	00 05 34.6	+0.2
	0.8nm,SNR=12						
LAUCH	**Lauchernalp**	1.96	205	⇑Pn	Pn	00 05 33.9	+1.3
	0.8nm,SNR=16						
LAUCH				⇑Pn	Pn	00 05 33.9	+1.3
WATA	**Walderalm**	1.97	115	*e*Pn	Pb	00 05 35.8	+0.7
	1.2nm,0.1s						
WATA				Sg	Sg	00 06 02.8	+0.1
	45nm,0.1s						
GWBE	**Wiesbaden**	1.97	345	Pn	Pb	00 05 34.7	-0.4
LKBD	**Leukerbad**	2.03	207	⇑Pn	Pn	00 05 34.7	+1.3
	0.6nm,SNR=9.7						
LKBD				⇑Pn	Pn	00 05 34.7	+1.3
GWBD	**Espenschied/He**	2.04	340	Pn	Pb	00 05 35.2	-1.0
TNS	**Taunus Mts**	2.05	351	⇓Pn	Pn	00 05 34.7	+1.1
SIMPL	**Simplonpass**	2.07	198	⇑Pn	Pn	00 05 35.6	+1.7
SIMPL				⇑Pn	Pn	00 05 35.6	+1.7
	2.1nm,SNR=34						
GRB2	**Grafenberg Arr**	2.09	58	Pn	Pn	00 05 34.6	+0.5
GRB2				Sn	Sn	00 05 59.6	-0.2
RIVT	**Riveris**	2.09	317	Pn	Pb	00 05 36.0	-1.0
RIVT				Pg	Pg	00 05 40.6	+1.1
RIVT				*e*Sg	Sg	00 06 06.6	+0.1
BRANT	**Les Verrieres**	2.11	234	⇑Pn	Pn	00 05 34.9	+0.5
BRANT				⇑Pn	Pn	00 05 34.9	+0.5
	0.9nm,SNR=6.4						
GRF	**Grafenberg Arr**	2.11	44	Pn	Pn	00 05 34.6	+0.3
GRF				Pg	Pg	00 05 40.3	+0.5
GRF				Sg	Sg	00 06 06.2	-1.1
NAST	**IGS Nastaetten**	2.12	341	*e*Pg	Pb	00 05 36.6	-1.0
EMBD	**Embd, Matterta**	2.13	202	⇑Pn	Pn	00 05 36.3	+1.6
	1.3nm,SNR=13						
EMBD				⇑Pn	Pn	00 05 36.3	+1.6
SENIN	**Lac Senin/Sane**	2.16	212	⇑Pn	Pn	00 05 36.1	+0.9
SENIN				⇑Pn	Pn	00 05 36.1	+0.9
	0.5nm,SNR=7.9						
PAGF	**Fort de Pagny**	2.18	280	*e*Pn	Pn	00 05 37.4	+2.0
	baz=101						
PAGF	**Fort de Pagny**	2.18	280	*e*Pg	Pg	00 05 42.5	+1.2
	baz=102						
PAGF				*e*Sn	Sn	00 06 02.8	+0.6
	baz=95						
PAGF				*e*Sg	Sg	00 06 09.8	+0.2
	139nm,0.3s,baz=99						
VANNI	**Vissoie, Val d**	2.20	205	⇑Pn	Pn	00 05 37.2	+1.5
	0.4nm,SNR=4.2						
VANNI				⇑Pn	Pn	00 05 37.2	+1.5
GWBC	**Aumenau**	2.24	349	Pn	Pn	00 05 37.9	+1.8
FACH	**Fachingen**	2.25	344	Pn	Pn	00 05 37.0	+0.8
FACH				Sg	Sg	00 06 13.6	+1.9
BGG	**Burgeitz**	2.27	333	*e*Pn	Pb	00 05 38.6	-1.6
WLF	**Walferdange**	2.36	309	Pn	Pb	00 05 40.1	-1.6
WLF				Pg	Pg	00 05 45.6	+0.9
WLF				Sg	Sg	00 06 15.5	+0.3
KOE	**Koeppel**	2.37	341	*e*Pn	Pb	00 05 40.2	-1.6
DIX	**Grande Dixence**	2.37	207	⇑Pn	Pn	00 05 39.6	+1.4
DIX				⇑Pn	Pn	00 05 39.6	+1.4
	0.3nm,SNR=4.0						
KW1	**Garching a.d.**	2.44	91	*e*Pn	Pb	00 05 41.8	-1.2
LAGB	**Langenfeld Gru**	2.48	331	Pn	Pn	00 05 41.1	+1.7
CABF	**La Chapelle**	2.52	232	*e*Pn	Pn	00 05 40.5	+0.5
CABF	**La Chapelle**	2.52	232	*e*Pg	Pg	00 05 47.9	+0.2
CABF				*e*Sg	Sg	00 06 20.2	-0.1
	54nm,0.3s						
HILG	**Hillesheim**	2.57	325	*e*Pn	Pn	00 05 43.0	+2.3
SAVF	**Savonnieres en**	2.59	281	*e*Pn	Pn	00 05 42.2	+1.3
	baz=101						
SAVF	**Savonnieres en**	2.59	281	*e*Pg	Pg	00 05 49.2	+0.2
	baz=102						
SAVF				*e*Sn	Sn	00 06 12.8	+0.7
SAVF				*e*Sg	Sg	00 06 22.3	-0.3
	71nm,0.3s,baz=114						
SFTF	**Sexfontaines**	2.62	271	*e*Pn	Pn	00 05 42.3	+0.9
	baz=96						
SFTF	**Sexfontaines**	2.62	271	*e*Pg	Pg	00 05 49.9	+0.2
	baz=95						
SFTF				*e*Sn	Sn	00 06 12.8	-0.2
SFTF				*e*Sg	Sg	00 06 23.7	0.0
	116nm,0.3s						
MEZF	**Maizieres J'vi**	2.62	278	*e*Pn	Pn	00 05 42.9	+1.5
	baz=94						
MEZF	**Maizieres J'vi**	2.62	278	*e*Pg	Pg	00 05 50.0	+0.3
	baz=95						
MEZF				*e*Sn	Sn	00 06 12.9	-0.1
	baz=92						

MEZF				eSg	Sg	00 06 23.5	-0.2
	97nm,0.4s,baz=97						
BIW	**Bindweide**	**2.63**	**344**	Pn	**Pn**	**00 05 43.3**	**+1.8**
AHRW	**Bad Neuenahr-A**	**2.64**	**333**	Pn	**Pn**	**00 05 43.7**	**+2.0**
ROTZ	**Rotzenmuhle**	**2.65**	**53**	ePn	**Pn**	**00 05 41.8**	**0.0**
BLI	**Bleialf**	**2.68**	**320**	Pn	**Pn**	**00 05 44.7**	**+2.5**
WET	**Wettzell**	**2.76**	**69**	ePn	**Pn**	**00 05 44.5**	**+1.2**
STB	**Steinbach**	**2.76**	**331**	ePn	**Pn**	**00 05 45.5**	**+2.2**
ABTA	**Abfaltersbach**	**2.82**	**120**	ePn	**Pb**	**00 05 48.1**	**-1.4**
	0.6nm,0.2s						
ABTA				eSg	Sg	00 06 29.5	-0.4
	23nm,0.3s						
TRAV	**Traversella**	**2.82**	**198**	P	**Pn**	**00 05 46.4**	**+2.2**
HOBG	**Hohbusch**	**2.98**	**340**	ePn	**Pn**	**00 05 48.4**	**+2.2**
RSL	**Roselend**	**2.98**	**213**	Pn	**Pn**	**00 05 47.3**	**+0.8**
RSL				Sn	Sn	00 06 24.2	+2.1
RSL				Sg	Sg	00 06 36.0	+0.8
MOX	**Moxa**	**3.00**	**34**	ePn	**Pn**	**00 05 46.4**	**-0.1**
LSD	**Lago del Serru**	**3.02**	**205**	P	**Pn**	**00 05 49.2**	**+2.2**
NKC	**Novy Kostel**	**3.06**	**47**	ePN	**Pn**	**00 05 47.8**	**+0.4**
NKC				ePG	Pg	00 05 57.7	-0.3
NKC				eSN	Sn	00 06 25.4	+1.6
NKC				eSG	Sg	00 06 35.1	-2.6
	comp=Z,84nm,0.3s						
MEM	**Membach**	**3.08**	**322**	Pn	**Pn**	**00 05 50.0**	**+2.3**
LPL	**La Plagne**	**3.09**	**210**	ePn	**Pn**	**00 05 49.3**	**+1.3**
LPL	**La Plagne**	**3.09**	**210**	ePg	**Pg**	**00 05 58.8**	**+0.1**
LPL				eSn	Sn	00 06 24.0	-0.9
LPL				eSg	Sg	00 06 37.8	-0.9
	31nm,0.3s						
LPG	**La Plagne**	**3.10**	**210**	ePn	**Pn**	**00 05 49.3**	**+1.1**
LPG	**La Plagne**	**3.10**	**210**	ePg	**Pg**	**00 05 58.3**	**-0.6**
LPG				eSg	Sg	00 06 38.2	-0.9
	29nm,0.3s						
KBA	**Koelnbreinsper**	**3.17**	**109**	ePn	**Pn**	**00 05 52.4**	**+3.3**
	2.8nm,0.1s,SNR=18						
KBA				eSg	Sg	00 06 39.9	-1.4
	23nm,0.3s						
KBA	**Koelnbreinsper**	**3.17**	**109**	ePn	**Pn**	**00 05 52.4**	**+3.3**
KHC	**Kasperske Hory**	**3.20**	**71**	ePN	**Pn**	**00 05 50.8**	**+1.5**
KHC				ePG	Pg	00 06 00.1	-0.6
KHC				eSN	Sn	00 06 27.2	-0.1
KHC				eSG	Sg	00 06 40.6	-1.6
	comp=Z,49nm,0.4s						
GEC2	**GERESS Array S**	**3.22**	**77**	ePn	**Pn**	**00 05 51.2**	**+1.5**
RSP	**Reno Superiore**	**3.27**	**202**	P	**Pn**	**00 05 52.4**	**+1.9**
GIVF	**Givet**	**3.31**	**307**	ePn	**Pn**	**00 05 52.5**	**+1.6**
GIVF	**Givet**	**3.31**	**307**	ePg	**Pg**	**00 06 02.7**	**-0.2**
GIVF				eSn	Sn	00 06 30.0	0.0
GIVF				eSg	Sg	00 06 45.3	-0.5
	74nm,0.6s						
MYKA	**Terra Mystica**	**3.55**	**115**	ePn	**Pn**	**00 05 57.6**	**+3.5**
	2.8nm,0.3s,SNR=6.2						
MYKA				eSn	Sn	00 06 39.4	+3.5
	5.8nm,0.3s						
BHB	**Bricherasio**	**3.56**	**200**	P	**Pn**	**00 05 56.6**	**+2.3**
LOR	**Lormes**	**3.57**	**257**	ePn	**Pn**	**00 05 55.5**	**+1.1**
	baz=77						
LOR	**Lormes**	**3.57**	**257**	ePg	**Pg**	**00 06 07.3**	**-0.5**
	baz=79						
LOR				eSn	Sn	00 06 35.5	-0.8
LOR				eSg	Sg	00 06 52.7	-1.2
	38nm,0.2s,baz=77						
MOA	**Molln**	**3.58**	**94**	ePn	**Pn**	**00 05 56.8**	**+2.2**
	2.4nm,0.1s,SNR=9.4						
MOA				ePg	Pg	00 06 07.9	-0.1
	11nm,0.4s						
MOA				i Sn	Sn	00 06 38.2	+1.6
	6.4nm,0.1s						
MOA				Sg	Sg	00 06 54.0	-0.3
	22nm,0.3s						
MOA	**Molln**	**3.58**	**94**	ePn	**Pn**	**00 05 56.7**	**+2.1**
BAIF	**Baives**	**3.63**	**303**	ePn	**Pn**	**00 05 56.8**	**+1.6**
BAIF	**Baives**	**3.63**	**303**	ePg	**Pg**	**00 06 08.5**	**-0.5**
BAIF				eSn	Sn	00 06 37.4	-0.4
BAIF				eSg	Sg	00 06 55.3	-0.7
	64nm,0.7s						
PBCC	**Pribram**	**3.64**	**64**	ePG	**Pg**	**00 06 07.6**	**-1.5**
PBCC				eSN	Sn	00 06 37.9	-0.1
PBCC				eSG	Sg	00 06 55.2	-1.0
	comp=Z,18nm,0.5s						
MBDF	**Montbardon**	**3.79**	**204**	ePn	**Pn**	**00 05 59.6**	**+2.0**
MBDF	**Montbardon**	**3.79**	**204**	ePg	**Pg**	**00 06 11.4**	**-0.7**
MBDF				eSg	Sg	00 06 59.5	-1.7
	58nm,0.7s						
SMF	**Signal de Mont**	**3.81**	**248**	ePn	**Pn**	**00 05 58.0**	**+0.3**
SMF	**Signal de Mont**	**3.81**	**248**	ePg	**Pg**	**00 06 11.9**	**-0.5**
SMF				eSn	Sn	00 06 41.0	-1.2
SMF				eSg	Sg	00 07 00.0	-1.7
	45nm,0.3s						
SSF	**Saint Saulge**	**3.86**	**255**	ePn	**Pn**	**00 05 59.5**	**+1.1**
SSF	**Saint Saulge**	**3.86**	**255**	ePg	**Pg**	**00 06 13.3**	**-0.1**
SSF				eSn	Sn	00 06 41.7	-1.8
SSF				eSg	Sg	00 07 02.0	-1.3
	51nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.91**	**214**	ePn	**Pn**	**00 05 59.3**	**+0.1**
ORIF	**Oris-en-Rattie**	**3.91**	**214**	ePg	**Pg**	**00 06 13.4**	**-1.0**
ORIF				eSn	Sn	00 06 43.5	-1.4
	35nm,0.5s						
ORIF				eSg	Sg	00 07 03.0	-2.0
	29nm,0.5s						
GBOS	**Grotte di Boss**	**4.04**	**191**	P	**Pn**	**00 06 01.4**	**+0.5**
AVF	**Avril sur Loir**	**4.05**	**252**	ePn	**Pn**	**00 06 01.3**	**+0.3**
AVF	**Avril sur Loir**	**4.05**	**252**	ePg	**Pg**	**00 06 16.7**	**-0.4**
AVF				eSn	Sn	00 06 47.3	-1.0
	8.8nm,0.2s						
AVF				eSg	Sg	00 07 08.1	-1.5
	19nm,0.4s						
CLL	**Collm**	**4.07**	**39**	ePn	**Pn**	**00 06 01.0**	**-0.2**
CLL				e		00 06 08.0	
CLL				i Pg	Pg	00 06 18.7	+1.4
CLL				eSg	Sg	00 07 08.0	-1.9
	comp=Z,49nm,0.6s						
PRU	**Pruhonice**	**4.08**	**62**	ePG	**Pg**	**00 06 15.2**	**-2.4**
PRU				eSG	Sg	00 07 07.1	-3.3
	comp=Z,32nm,0.6s						
OBKA	**Obir**	**4.16**	**112**	ePn	**Pn**	**00 06 05.8**	**+3.2**
	comp=Z,1.2nm,0.2s						
OBKA				eSn	Sn	00 06 56.3	+5.3
	comp=Z,6.7nm,0.3s						
BRG	**Berggiesshubel**	**4.20**	**49**	Pg	**Pg**	**00 06 20.2**	**+0.3**
BRG				Sg	Sg	00 07 12.3	-2.0
BRG				Amp		00 07 21.0	
	comp=Z,47nm,0.8s						
MGRO	**Montegrosso**	**4.24**	**191**	P	**Pn**	**00 06 01.7**	**-2.1**
PVCC	**Panska Ves**	**4.34**	**56**	eSG	**Sg**	**00 07 17.1**	**-1.7**
	comp=Z,39nm,0.6s						
HYF	**Humbligny**	**4.37**	**260**	ePn	**Pn**	**00 06 06.8**	**+1.5**
HYF	**Humbligny**	**4.37**	**260**	ePg	**Pg**	**00 06 23.2**	**+0.2**
HYF				eSn	Sn	00 06 54.7	-1.3
HYF				eSg	Sg	00 07 17.9	-1.6
SOKA	**Soboth**	**4.39**	**108**	i Pn	**Pn**	**00 06 08.1**	**+2.3**
	comp=Z,4.1nm,0.3s,SNR=12						
SOKA				i Sn	Sn	00 06 57.4	+0.6
	comp=Z,2.5nm,0.2s						
SOKA				Sg	Sg	00 07 19.7	-0.8
	comp=Z,9.0nm,0.5s						
BGF	**Bois d'Agland**	**4.47**	**251**	ePn	**Pn**	**00 06 07.2**	**+0.5**
BGF	**Bois d'Agland**	**4.47**	**251**	ePg	**Pg**	**00 06 23.6**	**-1.4**
BGF				eSn	Sn	00 06 57.5	-1.0
BGF				eSg	Sg	00 07 20.8	-2.0
	comp=Z,47nm,0.3s						
VIVF	**Saint-Julien-l**	**4.47**	**223**	ePn	**Pn**	**00 06 05.8**	**-1.0**
VIVF	**Saint-Julien-l**	**4.47**	**223**	ePg	**Pg**	**00 06 23.4**	**-1.6**
VIVF				eSn	Sn	00 06 56.8	-1.7
	comp=Z,18nm,0.3s						
VIVF				eSg	Sg	00 07 21.0	-1.8
SBF	**Sospel**	**4.47**	**194**	ePn	**Pn**	**00 06 08.0**	**+1.2**
SBF				eSn	Sn	00 06 57.0	-1.6
	comp=Z,14nm,0.3s						
CONA	**Conrad Observa**	**4.64**	**91**	i Pn	**Pn**	**00 06 11.0**	**+1.9**
	comp=Z,2.0nm,0.3s,SNR=6.7						
CONA				ePg	Pg	00 06 28.0	-0.2
	comp=Z,3.5nm,0.2s						
CONA				i Sn	Sn	00 07 02.9	+0.2
	comp=Z,9.0nm,0.2s						
CONA				eSg	Sg	00 07 29.8	+1.6
	comp=Z,38nm,0.5s						
SMRF	**Simiane la Rot**	**4.84**	**210**	ePn	**Pn**	**00 06 12.3**	**+0.4**
SMRF				eSn	Sn	00 07 05.6	-2.1
	comp=Z,6.3nm,0.4s						
FRF	**La Foret Royal**	**4.92**	**200**	ePn	**Pn**	**00 06 13.2**	**+0.3**
FRF	**La Foret Royal**	**4.92**	**200**	ePg	**Pg**	**00 06 31.5**	**-2.1**
FRF				eSn	Sn	00 07 07.2	-2.3
	comp=Z,4.7nm,0.2s						
TCF	**Toulx Ste Croi**	**4.98**	**250**	ePn	**Pn**	**00 06 14.1**	**+0.3**
TCF	**Toulx Ste Croi**	**4.98**	**250**	ePg	**Pg**	**00 06 33.5**	**-1.3**
TCF				eSn	Sn	00 07 09.1	-2.0
TCF				eSg	Sg	00 07 37.4	-1.8
	comp=Z,19nm,0.5s						
KRUC	**Moravsky**	**5.00**	**77**	ePN	**Pn**	**00 06 15.9**	**+1.8**
KRUC				ePG	Pg	00 06 32.5	-2.8
KRUC				eSN	Sn	00 07 10.7	-1.0
KRUC				eSG	Sg	00 07 40.3	+0.3
UPC	**Upice**	**5.15**	**61**	eSG	**Sg**	**00 07 43.2**	**-1.6**
	comp=Z,42nm,0.6s						
OZLJ	**Ozalj**	**5.16**	**118**	ePn	**Pn**	**00 06 18.6**	**+2.5**
LMR	**La Mourre**	**5.16**	**200**	ePn	**Pn**	**00 06 17.3**	**+1.0**
LMR				eSn	Sn	00 07 13.3	-2.3
	comp=Z,2.6nm,0.2s						
VRAC	**Vranov**	**5.17**	**75**	ePN	**Pn**	**00 06 17.7**	**+1.3**
VRAC				ePG	Pg	00 06 36.2	-2.2
VRAC				eSN	Sn	00 07 13.1	-2.7
VRAC				eSG	Sg	00 07 42.4	-2.9
DPC	**Dobruska-Polom**	**5.28**	**63**	eSG	**Sg**	**00 07 44.9**	**-3.8**
LASF	**Ste Croix**	**5.44**	**223**	ePn	**Pn**	**00 06 19.9**	**-0.2**
LASF	**Ste Croix**	**5.44**	**223**	ePg	**Pg**	**00 06 41.9**	**-1.7**
LASF				eSn	Sn	00 07 20.1	-2.4
LASF				eSg	Sg	00 07 51.7	-2.3
	comp=Z,24nm,0.6s						
ZST	**Bratislava**	**5.45**	**87**	ePN	**Pn**	**00 06 22.1**	**+2.0**
ZST				ePG	Pg	00 06 41.7	-2.0
KSP	**Ksiaz**	**5.46**	**58**	ePg	**Pg**	**00 06 43.7**	**-0.2**
KSP				eSg	Sg	00 07 54.9	+0.4
NVLJ	**Novalja**	**5.47**	**129**	ePn	**Pn**	**00 06 23.1**	**+2.5**
NVLJ				Sn	Sn	00 07 18.6	-4.7
MODS	**Modra-Piesok**	**5.56**	**85**	ePN	**Pn**	**00 06 22.9**	**+1.2**
MODS				ePG	Pg	00 06 45.6	-0.2
MODS				eSN	Sn	00 07 23.5	-1.8
MODS				eSG	Sg	00 07 55.7	-2.0
MODS				eLG	Lg	00 07 58.3	
SMOL	**Smolenice**	**5.66**	**84**	eSN	**Sn**	**00 07 27.5**	**-0.2**
SMOL				eSG	Sg	00 08 00.0	-0.8
SMOL				eLG	Lg	00 08 11.8	
CAF	**Calviac**	**5.77**	**238**	ePn	**Pn**	**00 06 25.7**	**+1.0**
CAF	**Calviac**	**5.77**	**238**	ePg	**Pg**	**00 06 47.9**	**-2.1**
CAF				eSn	Sn	00 07 28.1	-2.6
CAF				eSg	Sg	00 08 01.3	-3.4
	comp=Z,6.9nm,0.4s						
MORC	**Moravsky Berou**	**5.87**	**71**	ePN	**Pn**	**00 06 26.2**	**+0.2**
MORC				eSG	Sg	00 08 04.3	-3.3
RJF	**Les Rejaudoux**	**5.88**	**243**	ePn	**Pn**	**00 06 26.8**	**+0.7**
RJF	**Les Rejaudoux**	**5.88**	**243**	ePg	**Pg**	**00 06 49.6**	**-2.3**
RJF				eSn	Sn	00 07 31.7	-1.6
RJF				eSg	Sg	00 08 04.9	-3.1
	comp=Z,8.8nm,0.4s						
DUGI	**Dugi Otok**	**5.98**	**133**	ePn	**Pn**	**00 06 30.2**	**+2.7**
LDF	**La Druitiere**	**6.06**	**277**	ePn	**Pn**	**00 06 30.2**	**+1.6**
LDF	**La Druitiere**	**6.06**	**277**	ePg	**Pg**	**00 06 53.2**	**-2.2**
LDF				eSn	Sn	00 07 35.2	-2.5
LDF				eSg	Sg	00 08 11.2	-2.7
	comp=Z,24nm,0.6s						
FLN	**La Foliniere**	**6.30**	**279**	ePn	**Pn**	**00 06 32.8**	**+0.9**
	baz=101						
FLN	**La Foliniere**	**6.30**	**279**	eP	Pn	00 06 37.0	+5.1
	baz=100						
FLN				eSn	Sn	00 07 40.7	-3.0
	comp=Z,4.5nm,0.3s						
FLN				eSg	Sg	00 08 18.6	-3.0
	comp=Z,16nm,0.4s						
MFF	**Saint Martin d**	**6.38**	**259**	ePn	**Pn**	**00 06 33.9**	**+0.9**
MFF	**Saint Martin d**	**6.38**	**259**	ePg	**Pg**	**00 06 59.1**	**-2.5**
MFF				eSn	Sn	00 07 42.3	-3.4
	comp=Z,5.1nm,0.4s						
MFF				eSg	Sg	00 08 20.7	-3.5
	comp=Z,20nm,0.7s						
MORI	**Morici**	**6.39**	**130**	ePn	**Pn**	**00 06 36.7**	**+3.6**
MORI				Sn	Sn	00 07 40.6	-5.3
LFF	**La Frestale**	**6.54**	**243**	ePn	**Pn**	**00 06 36.0**	**+0.9**
LFF	**La Frestale**	**6.54**	**243**	ePg	**Pg**	**00 07 02.1**	**-2.5**
LFF				eSn	Sn	00 07 47.3	-2.2
LFF				eSg	Sg	00 08 26.3	-2.9
	comp=Z,25nm,0.7s						
GRR	**Gorron**	**6.55**	**275**	ePn	**Pn**	**00 06 36.5**	**+1.1**
GRR	**Gorron**	**6.55**	**275**	ePg	**Pg**	**00 07 03.0**	**-1.8**
GRR				eSn	Sn	00 07 44.7	-5.1
GRR				eSg	Sg	00 08 26.0	-3.6
	comp=Z,6.6nm,0.3s						
VYHS	**Vyhne**	**6.59**	**84**	ePN	**Pn**	**00 06 37.3**	**+1.4**
VYHS				eSN	Sn	00 07 47.0	-3.8
VYHS				eSG	Sg	00 08 30.2	-0.6
MTLF	**Montolieu**	**6.77**	**227**	ePn	**Pn**	**00 06 38.4**	**0.0**
MTLF	**Montolieu**	**6.77**	**227**	ePg	**Pg**	**00 07 08.2**	**-0.8**
MTLF				eSn	Sn	00 07 52.2	-3.0
MTLF				eSg	Sg	00 08 32.8	-3.8
	comp=Z,14nm,0.6s						
SGMF	**Saint Gilles**	**7.69**	**275**	ePn	**Pn**	**00 06 52.0**	**+1.0**
SGMF				eSg	Sg	00 09 01.8	-4.3
	comp=Z,5.8nm,0.5s						
EPF	**Esparros**	**7.95**	**233**	eSg	**Sg**	**00 09 09.9**	**-4.5**
	comp=Z,2.5nm,0.4s						
QUIF	**Quistinic**	**8.13**	**272**	ePn	**Pn**	**00 06 57.7**	**+0.7**
QUIF	**Quistinic**	**8.13**	**272**	ePg	**Pg**	**00 07 31.2**	**-3.8**
QUIF				eSn	Sn	00 08 22.9	-5.7
	comp=Z,1.4nm,0.2s						
ROSF	**Rostrenen**	**8.16**	**275**	ePn	**Pn**	**00 06 58.5**	**+1.0**
ROSF				eSn	Sn	00 08 24.7	-4.8

IDC ***28*** *00:13:43.0±1.0, 3°.99S×134°.12E, h0km, mb4.0/5, mb1 4.3/8, mb1mx4.0/38, mbtmp4.2/8, ML4.3/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/28, Error ellipse: s-maj=43.4km s-min=20.0km az=74.0*

NEIC ***28*** *00:13:47.4±2.7, 4°.08S±0°.04×133°.91E±0°.10, h30km±6km, mb4.1/10, Error ellipse: s-maj=14.3km s-min=5.0km az=77.0*

ISC 28 00:13:47.5±0.6**, 4°.18S**±0°.06×**133°.84E**±0°.08**, h35km, n33, σ2ˢ.45**/35**, mb4.0**/8**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.02**	**308**		**Pn**	**00 14 18.6**	**-0.5**
SIJI	**Sorong**	**4.17**	**322**	Pn	**Pn**	**00 14 47.9**	**-0.8**
	2.3nm,0.3s,baz=309,slow=22,SNR=8.8						
SIJI				Sn	**Sn**	**00 15 30.4**	**-5.9**
	8.7nm,0.3s,baz=90,slow=23,SNR=1.8						
MTN	**Manton Dam**	**9.02**	**197**	Pn	**Pn**	**00 15 56.3**	**+1.0**
SOEI	**Soe**	**11.00**	**239**	Pn	**Pn**	**00 16 26.2**	**+3.6**
BATI	**Baumata**	**11.74**	**239**	Pn	**Pn**	**00 16 35.1**	**+2.5**
	4.7nm,0.3s,baz=107,slow=4.6,SNR=2.2						
BATI				Sn	**Sn**	**00 18 39.9**	**-2.7**
	1.4nm,0.3s,baz=142,slow=19,SNR=1.4						
BATI				LR	LR	00 22 52.8	
	comp=Z,97nm,19.5s,baz=44,slow=46						
COEN	**Coen**	**13.39**	**137**	Pn	**Pn**	**00 16 54.2**	**-0.9**
MANU	**Manus Island**	**13.67**	**81**	Pn	**Pn**	**00 16 58.0**	**-1.0**
PMG	**Port Moresby**	**14.20**	**112**	LR	LR	00 22 57.5	
	comp=Z,65nm,20.9s,baz=180,slow=40						
WB0	**Warramunga Arr**	**15.51**	**178**	Pn	**Pn**	**00 17 21.4**	**-2.3**
WB0				IAmb	IAmb	00 17 30.9	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**15.68**	**178**	Pn	**Pn**	**00 17 22.9**	**-3.1**
	comp=Z,0.8nm,0.3s,baz=353,slow=14,SNR=24						
WRA				Sn	**Sn**	**00 20 11.6**	**-7.1**
	comp=Z,0.3nm,0.3s,baz=352,slow=24,SNR=5.3						
WRA	**Warramunga Arr**	**15.68**	**178**		**Pn**	**00 17 22.4**	**-3.6**
WB2	**Warramunga Arr**	**15.68**	**178**	Pn	**Pn**	**00 17 24.0**	**-1.9**
WB2				IAmb	IAmb	00 17 32.9	
	comp=Z,21nm,0.9s						
WR0	**Warramunga Arr**	**15.70**	**178**	Pn	**Pn**	**00 17 25.1**	**-1.1**
FITZ	**Fitzroy Crossi**	**16.00**	**209**	Pn	**Pn**	**00 17 28.8**	**-1.2**
	comp=Z,1.8nm,0.3s,baz=31,slow=9.2,SNR=33						
FITZ				Sn	Sn	00 20 15.1	-11
	comp=Z,0.6nm,0.3s,baz=181,slow=16,SNR=4.6						
FITZ				LR	LR	00 25 23.8	
	comp=Z,46nm,18.6s,baz=69,slow=43						
FITZ	**Fitzroy Crossi**	**16.00**	**209**	Pn	**Pn**	**00 17 29.5**	**-0.5**
AS31	**Alice Springs**	**19.38**	**180**	P	**Pn**	**00 18 13.6**	**+1.9**
AS31				IAmb	IAmb	00 18 17.2	
	comp=Z,5.3nm,0.6s						
ASAR	**Alice Springs**	**19.38**	**180**	P	**Pn**	**00 18 12.1**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=3.5,slow=11,SNR=160						
ASAR				S	S	00 21 37.6	-10
	comp=Z,0.0nm,0.3s,baz=2.4,slow=27,SNR=4.6						
ASAR	**Alice Springs**	**19.38**	**180**	P	**Pn**	**00 18 13.7**	**+1.9**
STKA	**Stephens Creek**	**28.50**	**166**	P	**P**	**00 19 41.1**	**+1.4**
	comp=Z,2.3nm,0.7s,baz=344,slow=8.0,SNR=4.5						
STKA	**Stephens Creek**	**28.50**	**166**	P	**P**	**00 19 41.1**	**+1.4**
HHC	**Hu-ho-hao-te**	**49.23**	**338**	eP	**P**	**00 22 34.0**	**+1.3**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,5.4s						
WMQ	**Urumqi**	**63.24**	**324**	eP	**P**	**00 24 15.8**	**+3.2**
MK31	**Makanchi Array**	**68.06**	**325**	P	**P**	**00 24 44.8**	**+1.2**
MK31				IAmb	IAmb	00 24 50.8	
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**68.06**	**325**	P	**P**	**00 24 44.9**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=114,slow=8.0,SNR=11						
MKAR	**Makanchi Array**	**68.06**	**325**	P	**P**	**00 24 44.8**	**+1.1**
MAKZ	**Makanchi**	**68.25**	**324**	P	**P**	**00 24 45.6**	**+0.8**
MAKZ				IAmb	IAmb	00 24 52.3	
	comp=Z,2.2nm,1.1s						
ZALV	**Zalesovo Beam**	**70.84**	**332**	P	**P**	**00 25 01.9**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=108,slow=3.2,SNR=1.9						
VNDA	**Vanda**	**74.80**	**174**	P	**P**	**00 25 25.6**	**+1.9**
	comp=Z,1.9nm,1.0s,baz=14,slow=3.8,SNR=1.4						
VNDA	**Vanda**	**74.80**	**174**	P	**P**	**00 25 26.1**	**+2.4**
ILAR	**Eielson Array**	**89.18**	**25**	P	**P**	**00 26 37.8**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=267,slow=3.7,SNR=7.6						
ILAR	**Eielson Array**	**89.18**	**25**	P	**P**	**00 26 38.5**	**-0.8**
CPUP	**Villa Florida**	**147.80**	**161**	PKPbc	**PKiKP**	**00 33 31.6**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=198,slow=3.2,SNR=3.7						
CPUP	**Villa Florida**	**147.80**	**161**		**PKPbc**	**00 33 30.4**	**+0.9**

DJA 28 00:46:08.1±0.4**, 1°S**±4°×**12°2E**±°**, h10km, M4.0**/9**, mb4.5**/1**, MLv3.8**/9**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	**Ampana**	**0.83**	**250**	P	Pg	00 46 23.8	-0.3
APSI				S	Sg	00 46 34.2	-0.8
GTOI	**Gorontalo**	**1.39**	**25**	P	Pg	00 46 34.6	-0.1
MPSI	**Mapaga**	**2.71**	**291**	P	Pn	00 46 52.8	+1.1
TTSI	**Tana Toraja**	**3.54**	**227**	P	Pn	00 47 03.6	+0.4
SPSI	**Sidrap Palu**	**4.25**	**219**	P	Pn	00 47 13.5	+0.6
BNSI	**Bone**	**4.41**	**212**	P	Pn	00 47 15.1	0.0

TEH ***28*** *00:50:46.3, 27°.22N×56°.20E, h11km, ML3.4*

THR ***28*** *00:50:47.7±0.4, 27°.44N×56°.17E, h17km±1km, ML3.2*

OMAN ***28*** *00:50:52.1±5.8, 27°.41N×56°.16E, h10km±53km, Error ellipse: s-maj=113.0km s-min=61.7km az=146.0*

ISC 28 00:50:49.8±1.0**, 27°.44N**±0°.03×**56°.14E**±0°.05**, h4km**±8km**, n28, σ1ˢ.32**/33**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.05**	**143**	ePg	**Pg**	**00 50 50.8**	**-0.5**
BNDS				eSg	**Sg**	**00 50 53.5**	**+1.2**
BNDS				AML	AML	00 50 55.5	
	comp=N,14μm,0.2s						
GENO	**Geno**	**0.05**	**141**	ePg	**Pg**	**00 50 50.6**	**-0.7**
SHME	**Shamm**	**1.39**	**180**	P	**Pb**	**00 51 15.7**	**-0.6**
	SNR=25						
SHME				S	**Sg**	**00 51 36.4**	**+2.1**
KHNJ	**Kahnooj**	**1.48**	**70**	ePg	**Pn**	**00 51 15.3**	**-2.0**
BANOM	**Banah**	**1.52**	**174**	P	**Pb**	**00 51 18.0**	**-0.6**
	SNR=51						
BANOM				S	**Sg**	**00 51 39.4**	**+0.8**
LAR1	**LAR**	**1.58**	**279**	ePg	**Pb**	**00 51 18.7**	**-0.9**
LAR1				e		00 52 03.8	
	comp=Z,99nm,0.5s						
MASF	**Masafi**	**2.06**	**179**	P	**Pn**	**00 51 25.7**	**+0.5**
MASF				S	**Sb**	**00 51 52.9**	**-0.9**
MDH	**Madha**	**2.14**	**176**	P	**Pb**	**00 51 28.5**	**-0.7**
NGRK	**Negar Kerman**	**2.26**	**13**	ePn	**Pn**	**00 51 28.5**	**+0.3**
NGRK				e		00 52 07.3	
	comp=Z,99nm,0.7s						
NAZ	**Nazwa, Dubai**	**2.48**	**190**	P	**Pb**	**00 51 32.6**	**-2.3**
UOSS	**Minazif**	**2.49**	**179**	P	**Pn**	**00 51 31.5**	**+0.4**
JHRM	**Jahrom**	**2.50**	**296**	ePn	**Pn**	**00 51 31.9**	**+0.6**
JHRM				e		00 52 47.1	
	comp=Z,99nm,0.5s						
KRBR	**Kerman**	**2.59**	**12**	ePn	**Pn**	**00 51 31.2**	**-1.6**
KRBR				eSg	**Sb**	**00 52 09.0**	**-0.3**
KRBR				AML	AML	00 52 20.1	
	comp=E,54nm,0.6s						
TVBK	**TV Kerman**	**2.59**	**12**	ePn	**Pn**	**00 51 32.3**	**-0.6**
TVBK				e		00 51 40.3	
	comp=Z,99nm,0.3s						
HATD	**Hatta, Dubai**	**2.60**	**180**	P	**Pn**	**00 51 33.5**	**+0.8**
LMD1	**Lamerd**	**2.64**	**268**	ePn	**Pn**	**00 51 31.2**	**-2.0**
LMD1				e		00 52 38.1	
	comp=Z,99nm,0.4s						
KBAM	**BAM**	**2.65**	**50**	ePn	**Pn**	**00 51 33.0**	**-0.4**
KBAM				e		00 51 43.5	
	comp=Z,99nm,0.3s						
CHMN	**Cheshme madani**	**2.71**	**27**	ePn	**Pn**	**00 51 34.7**	**+0.3**
CHMN				e		00 52 23.1	
	comp=Z,99nm,0.5s						
FAQ	**Al Faqa, Dubai**	**2.73**	**190**	P	**Pn**	**00 51 35.8**	**+1.5**
ASHO	**Ashiyiah**	**2.75**	**181**	P	**Pn**	**00 51 35.8**	**+1.1**
	SNR=8.9						
QIR1	**Qir**	**2.92**	**291**	e		00 52 45.7	
	comp=Z,99nm,0.7s						
KHGB	**Koh Gabri**	**2.94**	**6**	ePn	**Pn**	**00 51 38.1**	**+0.6**
KHGB				e		00 52 23.6	
	comp=Z,99nm,0.4s						
IMEH	**Mehriz**	**4.15**	**342**	ePn	**Pn**	**00 51 55.1**	**+0.9**
BSRN	**Basiran**	**5.21**	**29**	ePn	**Pn**	**00 52 07.1**	**-1.5**
BSRN				eSg	**Sb**	**00 53 28.3**	**+3.9**
NHDN	**Nehbandan**	**5.21**	**40**	ePn	**Pn**	**00 52 08.9**	**+0.2**
IRAM	**Ramesheh**	**5.44**	**324**	ePn	**Pn**	**00 52 12.2**	**+0.3**
IZEF	**Zefreh**	**6.36**	**330**	ePn	**Pn**	**00 52 24.3**	**-0.2**
IPIR	**Pirpir**	**6.92**	**320**	ePn	**Pn**	**00 52 32.9**	**+0.6**

IPEC ***28*** *01:10:41.4±0.4, 51°.56N×16°.17E, h0km±2km, ML3.8/3, Error ellipse: s-maj=4.6km s-min=2.5km az=68.0*

LDG ***28*** *01:10:42.2±0.1, 51°.49N×16°.24E, h1km, Ml4.1/11, Error ellipse: s-maj=4.4km s-min=3.4km az=171.0, Suspected Mining induced.*

NEIC ***28*** *01:10:42.8±2.5, 51°.54N±0°.04×16°.24E±0°.05, h5km±1km, mb4.3/10, ML3.7/15(VIE), Error ellipse: s-maj=7.9km s-min=4.1km az=22.0*

MOS ***28*** *01:10:42.3±0.9, 51°.53N×16°.20E, h12km, mb4.4/8, Error ellipse: s-maj=6.4km s-min=3.9km az=85.0*

VIE ***28*** *01:10:43.4±0.8, 51°.44N×16°.21E, h0km, mb3.3/16, ml3.7/15, ms4.0/3, Error ellipse: s-maj=8.9km s-min=4.3km az=31.0 68 km NW of Wroclaw Suspected Mining induced.*

DNK ***28*** *01:10:43.3±2.2, 51°.59N×16°.05E, h0km±108km, ML2.7*

BGR ***28*** *01:10:43.6±0.4, 51°.49N×16°.22E, h1km, ML3.7/9, Error ellipse: s-maj=5.6km s-min=3.3km az=23.0*

PRU ***28*** *01:10:43.9±0.0, 51°.45N×16°.18E, h0km, M4.3*

IDC ***28*** *01:10:43.3±0.4, 51°.47N×16°.11E, h0km, mb3.9/12, mb1 4.0/19, mb1mx3.8/40, mbtmp3.9/19, ML3.2/6, Error ellipse: s-maj=8.7km s-min=5.6km az=106.0*

UPP ***28*** *01:10:47.7±3.3, 51°.82N×15°.96E, h0km, ML2.1, Suspected explosion*

ISC 28 01:10:41.9±0.3**, 51°.55N**±0°.02×**16°.18E**±0°.02**, h0km, n300, σ2ˢ.05**/436**, mb4.2**/19**, 10C-58D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**174**	i Pg	**Pg**	**01 10 55.5**	**+0.1**
KSP				eSg	**Sg**	**01 11 03.9**	**-0.7**
KSP	**Ksiaz**	**0.71**	**174**	P	**Pg**	**01 10 55.7**	**+0.3**
KSP	**Ksiaz**	**0.71**	**174**	ePg	**Pg**	**01 10 55.5**	**+0.1**
KSP				eSg	**Sg**	**01 11 04.3**	**-0.3**
CHVC	**Chvalec**	**0.96**	**185**	⇓iPG	**Pg**	**01 11 00.5**	**+0.2**
CHVC				eSG	**Sg**	**01 11 12.3**	**-0.5**
OSTC	**Ostas**	**0.99**	**179**	⇓iPG	**Pg**	**01 11 01.0**	**+0.1**
OSTC				eSG	**Sg**	**01 11 13.2**	**-0.5**
	comp=Z,708nm,0.6s						
UPC	**Upice**	**1.04**	**186**	⇓iP	**Pg**	**01 11 01.7**	**-0.2**
UPC				e		01 11 14.7	
UPC				smax	smax		
	comp=N,1μm,0.4s						
UPC	**Upice**	**1.04**	**186**	⇓iPG	**Pg**	**01 11 01.7**	**-0.2**
UPC				eSG	**Sg**	**01 11 14.7**	**-0.7**
	comp=N,1μm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**176**	⇓iP	**Pg**	**01 11 04.4**	**-0.5**
DPC				e		01 11 19.0	
DPC				smax	smax		
	comp=N,596nm,0.6s						

DPC	**Dobruska-Polom**	1.20	176	⇓*i*PG	Pg	01 11 04.4	-0.5
DPC				*e*SG	Sg	01 11 19.0	-1.4
	comp=N,596nm,0.6s						
DPC	**Dobruska-Polom**	1.20	176	*e*Pg	Pg	01 11 04.4	-0.5
DPC				*e*Sg	Sb	01 11 21.3	-0.3
PVCC	**Panska Ves**	1.44	226	*e*P	Pb	01 11 09.5	-0.1
PVCC				*e*		01 11 29.4	
PVCC				smax	smax		
	comp=N,822nm,0.5s						
PVCC	**Panska Ves**	1.44	226	⇓*e*PG	Pb	01 11 09.5	-0.1
PVCC				*e*SG	Sn	01 11 29.4	+0.6
	comp=N,822nm,0.5s						
KRLC	**Kraliky**	1.52	165	⇓*i*P	Pn	01 11 09.9	-0.5
KRLC				*e*		01 11 29.2	
KRLC				smax	smax		
	comp=N,413nm,0.5s						
KRLC	**Kraliky**	1.52	165	⇓*i*PG	Pn	01 11 09.9	-0.5
KRLC				*e*SG	Sg	01 11 29.2	-1.5
	comp=N,412nm,0.5s						
BRG	**Berggiesshubel**	1.56	245	P	Pn	01 11 10.8	-0.1
BRG	**Berggiesshubel**	1.56	245	Pn	Pn	01 11 10.6	-0.3
BRG				Pg	Pg	01 11 12.8	+1.1
BRG				Sg	Sg	01 11 33.1	+1.2
BRG				Amp		01 11 36.0	
	comp=Z,408nm,0.6s						
BRG	**Berggiesshubel**	1.56	245	*e*Pn	Pn	01 11 10.7	-0.1
PRA	**Prague**	1.85	218	*e*P	Pn	01 11 14.9	+0.1
PRA				*e*		01 11 40.6	
PRA				smax	smax		
	comp=N,215nm,0.6s						
PRA	**Prague**	1.85	218	⇓*e*PN	Pn	01 11 14.9	+0.1
PRA				*e*PG	Pg	01 11 17.1	-0.2
PRA				*e*SG	Sg	01 11 40.6	-0.6
	comp=N,215nm,0.6s						
PRU	**Pruhonice**	1.87	214	*e*P	Pn	01 11 14.9	-0.3
PRU				*e*		01 11 40.8	
PRU				smax	smax		
	comp=N,381nm,0.6s						
PRU	**Pruhonice**	1.87	214	⇓*e*PN	Pn	01 11 14.9	-0.3
PRU				*e*PG	Pb	01 11 16.8	-0.2
PRU				*e*SG	Sb	01 11 40.8	-0.1
	comp=N,381nm,0.6s						
FBE	**Freiberg**	1.88	252	*e*Pn	Pn	01 11 15.6	+0.3
FBE				*e*Sg	Sg	01 11 43.6	+1.3
RAC	**Raciborz**	1.94	138	*e*P	Pn	01 11 15.3	-0.9
RAC				*e*		01 11 45.3	
MORC	**Moravsky Berou**	1.97	153	⇓P	Pn	01 11 16.3	-0.3
MORC				⇑S	Sb	01 11 44.5	+0.7
MORC	**Moravsky Berou**	1.97	153	*e*PN	Pn	01 11 16.0	-0.6
MORC				*e*SG	Sb	01 11 43.8	0.0
MORC	**Moravsky Berou**	1.97	153	P	Pn	01 11 16.1	-0.6
MORC				S	Sb	01 11 44.5	+0.7
MORC	**Moravsky Berou**	1.97	153	Pn	Pn	01 11 16.1	-0.6
MORC	**Moravsky Berou**	1.97	153	*e*Pn	Pn	01 11 15.9	-0.6
	baz=334						
MORC				*e*Sg	Sb	01 11 43.8	0.0
	comp=N,525nm,1.3s,baz=334						
MORC	**Moravsky Berou**	1.97	153	*e*Pn	Pn	01 11 16.2	-0.4
CLL	**Collm**	2.00	264	*e*Pn	Pn	01 11 17.0	0.0
CLL				*i* Pg	Pg	01 11 20.6	+0.3
CLL				*e*Sg	Sg	01 11 47.0	+0.8
	comp=Z,257nm,0.7s						
CLL	**Collm**	2.00	264	*e*P	Pn	01 11 17.0	0.0
CLL				*e*		01 11 47.0	
CLL	**Collm**	2.00	264	Pn	Pn	01 11 16.9	-0.1
CLL	**Collm**	2.00	264	*e*Pn	Pn	01 11 17.3	+0.3
CLL				*e*Sg	Sg	01 11 48.2	+2.0
OKC	**Ostrava-Krasne**	2.12	143	*e*P	Pb	01 11 21.4	+0.2
OKC				*e*		01 11 47.3	
OKC				smax	smax		
	comp=N,358nm,0.6s						
OKC	**Ostrava-Krasne**	2.12	143	⇓*e*PG	Pb	01 11 21.4	+0.2
OKC				*e*SG	Sb	01 11 47.3	-0.7
	comp=N,358nm,0.6s						
VRAC	**Vranov**	2.25	173	Pn	Pn	01 11 20.9	+0.4
	comp=N,13nm,0.3s,baz=340,slow=14,SNR=57						
VRAC				Lg	Lg	01 11 50.5	
	comp=N,25nm,0.3s,baz=72,slow=17,SNR=11						
VRAC	**Vranov**	2.25	173	⇓P	Pn	01 11 20.2	-0.3
VRAC				⇓S	Sb	01 11 52.8	+0.9
VRAC	**Vranov**	2.25	173	*e*PN	Pn	01 11 20.2	-0.3
VRAC				*e*SG	Sb	01 11 52.4	+0.5
VRAC	**Vranov**	2.25	173	P	Pn	01 11 20.2	-0.3
VRAC				S	Sb	01 11 51.8	-0.1
VRAC	**Vranov**	2.25	173	*e*Pn	Pn	01 11 20.1	-0.4
	baz=353						
VRAC				*e*Sg	Sb	01 11 52.3	+0.4
	comp=N,444nm,1.3s,baz=353						
PBCC	**Pribram**	2.32	218	⇓*e*PN	Pn	01 11 20.9	-0.5
PBCC				*e*PG	Pb	01 11 25.0	+0.3
KRUC	**Moravsky**	2.49	177	*e*PN	Pn	01 11 23.6	-0.1
KRUC				*e*SG	Sb	01 11 59.9	+1.2
KRUC	**Moravsky**	2.49	177	*e*Pn	Pn	01 11 23.6	-0.1
	baz=357						
KRUC				*e*Sg	Sb	01 11 59.8	+1.1
	comp=N,513nm,1.3s,baz=357						
TANN	**Tannenbergstha**	2.61	246	*e*Pn	Pn	01 11 25.8	+0.4
OJC	**Ojcow**	2.65	119	*e*Pn	Pn	01 11 24.5	-1.4
OJC				*e*Pg	Pg	01 11 31.6	-1.0
OJC				*e*Sg	Sg	01 12 06.5	-0.5
OJC	**Ojcow**	2.65	119	P	Pn	01 11 24.5	-1.4
OJC	**Ojcow**	2.65	119	Pn	Pn	01 11 24.5	-1.4
OJC	**Ojcow**	2.65	119	*e*Pn	Pn	01 11 24.4	-1.4
OJC				*e*Sg	Sg	01 12 06.6	-0.3
WERD	**Werda**	2.68	247	*e*Pn	Pn	01 11 27.1	+0.7
NKC	**Novy Kostel**	2.70	242	*e*P	Pn	01 11 27.3	+0.7
NKC	**Novy Kostel**	2.70	242	⇓*e*PN	Pn	01 11 27.3	+0.7
NKC				*e*PG	Pg	01 11 33.8	+0.1
NKC				*e*SG	Sg	01 12 09.8	+1.1
	comp=N,201nm,0.4s						
JAVC	**Velka Javorina**	2.85	160	*e*PN	Pn	01 11 28.6	-0.2
JAVC				*e*SG	Sb	01 12 11.4	+2.2
KHC	**Kasperske Hory**	2.94	216	*de*P	Pn	01 11 30.1	+0.3
KHC	**Kasperske Hory**	2.94	216	⇓*e*PN	Pn	01 11 29.7	-0.1
KHC				*e*PG	Pb	01 11 36.2	+1.1
KHC				*e*SN	Sn	01 12 04.9	-0.9
KHC				*e*SG	Sg	01 12 14.4	-1.8
	comp=N,198nm,0.7s						
KHC	**Kasperske Hory**	2.94	216	Pn	Pn	01 11 29.7	-0.1
MOX	**Moxa**	3.01	254	P	Pn	01 11 31.7	+0.8
MOX	**Moxa**	3.01	254	*e*Pn	Pn	01 11 31.3	+0.4
ROTZ	**Rotzenmuhle**	3.09	236	*e*Pn	Pn	01 11 32.2	+0.2
GEC2	**GERESS Array S**	3.14	211	Pn	Pn	01 11 33.2	+0.5
GEC2	**GERESS Array S**	3.14	211	*e*Pn	Pn	01 11 32.6	0.0
GERES	**GERESS Array B**	3.14	211	Pn	Pn	01 11 32.7	0.0
	comp=N,6.5nm,0.3s,baz=32,slow=13,SNR=134						
GERES				Pg	Pb	01 11 39.7	+1.1
	comp=N,36nm,0.3s,baz=32,slow=17,SNR=57						
GERES				Lg	Lg	01 12 19.0	
	comp=N,31nm,0.3s,baz=30,slow=29,SNR=7.6						
SMOL	**Smolenice**	3.14	165	*e*P	Pn	01 11 34.3	+1.7
SMOL				pmax	pmax		
	comp=N,75nm,0.6s						
SMOL	**Smolenice**	3.14	165	*e*PN	Pn	01 11 34.3	+1.7
SMOL				*e*PG	Pg	01 11 41.7	-0.4
SMOL				*e*SG	Sg	01 12 22.2	-0.5
SMOL				*e*LG	Lg	01 12 30.4	
LANS	**Liptovska Anna**	3.19	137	*e*P	Pn	01 11 33.8	+0.4
LANS				pmax	pmax		
	comp=N,122nm,0.8s						
LANS	**Liptovska Anna**	3.19	137	*e*PN	Pn	01 11 33.8	+0.4
LANS				*e*PG	Pg	01 11 42.3	-0.7
LANS				*e*SG	Sg	01 12 23.8	-0.6
LANS				*e*LG	Lg	01 12 38.1	
WET	**Wettzell**	3.20	223	*e*Pn	Pn	01 11 33.6	+0.1
WET				*e*Sg	Sg	01 12 23.0	-1.7
MODS	**Modra-Piesok**	3.25	167	*e*P	Pn	01 11 34.3	+0.1
MODS				pmax	pmax		
	comp=N,287nm,0.9s						
MODS	**Modra-Piesok**	3.25	167	*e*PN	Pn	01 11 34.3	+0.1
MODS				*e*PG	Pg	01 11 42.6	-1.6
MODS				*e*SG	Sg	01 12 24.8	-1.6
MODS				*e*LG	Lg	01 12 35.9	
NIE	**Niedzica**	3.39	127	*e*Pg	Pg	01 11 46.4	-0.4
NIE				*e*Sg	Sg	01 12 30.2	-0.4
ZST	**Bratislava**	3.41	170	*e*P	Pn	01 11 37.0	+0.8
ZST				pmax	pmax		
	comp=N,246nm,0.9s						
ZST	**Bratislava**	3.41	170	*e*PN	Pn	01 11 37.0	+0.8
ZST				*e*PG	Pg	01 11 45.7	-1.4
ZST				*e*SG	Sb	01 12 28.0	+3.0
ZST				*e*LG	Lg	01 12 35.5	
VYHS	**Vyhne**	3.50	150	*e*P	Pn	01 11 37.4	-0.2
VYHS	**Vyhne**	3.50	150	*e*PN	Pn	01 11 37.4	-0.2
VYHS				*e*PG	Pg	01 11 50.6	+1.6
VYHS				*e*SG	Sg	01 12 31.9	-2.5
CLZ	**Clausthal**	3.62	277	*e*Pn	Pn	01 11 41.0	+1.7
CONA	**Conrad Observa**	3.63	183	*i* Pn	Pn	01 11 39.7	+0.3
	comp=N,8.4nm,0.5s,SNR=7.7						
CONA				*e*Pg	Pg	01 11 49.7	-1.7
	comp=N,31nm,0.3s						
CONA				*e*Sn	Sn	01 12 24.9	+2.0
	comp=N,59nm,0.5s						
CONA				*e*Sg	Sg	01 12 36.6	-1.8
	comp=N,140nm,0.5s						
CONA	**Conrad Observa**	3.63	183		Pn	01 11 39.7	+0.3
CONA					Pg	01 11 49.7	-1.7
CONA					Sn	01 12 24.9	+2.0
CONA					Sg	01 12 36.6	-1.8
BSD	**Bornholm Skovb**	3.66	349	*i* P	Pn	01 11 40.4	+0.8
BSD				*i* S	Sn	01 12 22.9	-0.5
BSD	**Bornholm Skovb**	3.66	349	*i* P	Pn	01 11 40.4	+0.8
BSD				*i* S	Sn	01 12 22.9	-0.5
BSD	**Bornholm Skovb**	3.66	349	*i* P	Pn	01 11 39.0	-0.6
BSD				*e*		01 11 39.6	
	baz=176,slow=11						
BSD				*i* P	Pn	01 11 40.4	+0.8
BSD				*i* S	Sn	01 12 23.0	-0.5
BSD				IAML		01 12 47.1	
	comp=Z,8.4nm,0.4s						
GRA1	**Grafenberg Arr**	3.66	241	Pn	Pn	01 11 40.6	+0.8
GRF	**Grafenberg Arr**	3.66	241	P	Pn	01 11 40.6	+0.8
GRF	**Grafenberg Arr**	3.66	241	*e*Pn	Pn	01 11 40.5	+0.8
GRFO	**Grafenberg**	3.66	241	P	Pn	01 11 40.4	+0.6
GRFO	**Grafenberg**	3.66	241	Pn	Pn	01 11 40.4	+0.6
SOP	**Sopron**	3.87	176	*e*PN	Pb	01 11 51.5	+0.5
SOP				*e*SN	Sg	01 12 48.6	+2.3
MOA	**Molln**	3.90	199	*i* Pn	Pn	01 11 43.2	+0.1
	comp=Z,27nm,0.5s,SNR=21						
MOA				*e*Pg	Pg	01 11 55.6	-1.0
	comp=Z,56nm,0.4s						
MOA				Sg	Sg	01 12 45.0	-2.2
	comp=Z,174nm,0.7s						
MOA	**Molln**	3.90	199		Pn	01 11 43.2	+0.1
MOA					Pg	01 11 55.6	-1.0
MOA					Sg	01 12 45.0	-2.2
KECS	**Kecovo**	4.14	136	*e*P	Pn	01 11 45.5	-0.8
KECS				pmax	pmax		
	comp=N,30nm,1.0s						
KECS	**Kecovo**	4.14	136	*e*PN	Pn	01 11 45.5	-0.8
KECS				*e*PG	Pg	01 12 01.8	+0.7
KECS				*e*SG	Sg	01 12 52.6	-2.1
KECS				*e*LG	Lg	01 13 02.2	
CRVS	**Cervenica-Dubn**	4.30	126	*e*P	Pn	01 11 50.5	+1.9
CRVS	**Cervenica-Dubn**	4.30	126	*e*PN	Pn	01 11 50.5	+1.9
CRVS				*e*PG	Pg	01 12 04.9	+0.6
CRVS				*e*SG	Sg	01 13 00.7	+0.7
ARSA	**Arzberg**	4.32	186	*e*Pn	Pn	01 11 49.7	+0.8
	comp=N,7.0nm,0.4s,SNR=6.6						
ARSA				Sg	Sg	01 12 59.4	-1.2
	comp=N,147nm,0.8s						
ARSA	**Arzberg**	4.32	186		Pn	01 11 49.7	+0.8
ARSA					LR	01 12 59.4	
PSZ	**Piszkesteto**	4.36	145	⇑P	Pn	01 11 50.2	+0.8
PSZ	**Piszkesteto**	4.36	145	*e*PN	Pn	01 11 50.3	+0.9
PSZ	**Piszkesteto**	4.36	145	P	Pn	01 11 49.6	+0.2
PSZ	**Piszkesteto**	4.36	145	Pn	Pn	01 11 49.6	+0.2
CSKK	**Cskako**	4.40	161	*e*PN	Pn	01 11 50.6	+0.7
BUD	**Budapest**	4.47	154	*e*PN	Pn	01 11 51.5	+0.7
MPLH	**Magyarpolny**	4.47	168	*e*PN	Pn	01 11 51.2	+0.4
KWP	**Kalwaria Pacla**	4.58	112	P	Pn	01 11 50.8	-1.6
KWP	**Kalwaria Pacla**	4.58	112	Pn	Pn	01 11 50.8	-1.6
KOLS	**Kolonicke sedl**	4.71	121	*e*P	Pn	01 11 53.8	-0.3
KOLS	**Kolonicke sedl**	4.71	121	*e*PN	Pn	01 11 53.8	-0.3
KOLS				*e*PG	Pg	01 12 15.2	+3.2
KOLS				*e*SG	Sg	01 13 10.2	-2.8
BLEU	**Blekinge**	4.77	358	P	Pn	01 11 56.1	+1.1
BLEU				S	Sn	01 12 48.7	-2.3
KBA	**Koelnbreinsper**	4.84	204	*i* Pn	Pn	01 11 56.5	+0.4
	comp=N,15nm,0.4s,SNR=10						
KBA				Sg	Sg	01 13 17.0	-0.3
	comp=N,101nm,0.7s						
KBA	**Koelnbreinsper**	4.84	204		Pn	01 11 56.5	+0.4
KBA					LR	01 13 17.0	
UZH	**Uzhgorod**	4.90	124	*e*P	Pn	01 12 00.0	+3.2
UZH				*e*S	Sn	01 12 58.0	+3.9
UZH				MLR	MLR		
	comp=N,20nm,1.1s						
UZH				MLR	MLR		
	comp=E,10.0nm,1.1s						
UZH				MLR	MLR		
	comp=Z,10.0nm,1.1s						
BJUU	**Bjuv**	4.91	339	P	Pn	01 11 56.9	+0.1
SOKA	**Soboth**	4.93	189	*i* Pn	Pn	01 11 58.0	+0.8
	comp=Z,3.7nm,0.4s						
SOKA				Sg	Sg	01 13 17.0	-3.1
	comp=Z,25nm,0.6s						
SOKA	**Soboth**	4.93	189		Pn	01 11 58.0	+0.8
SOKA					Sg	01 13 17.0	-3.1
PERS	**Pernice**	4.96	188	*i* Pn	Pn	01 11 58.9	+1.2
BEHE	**Becsehely**	5.09	175	*e*PN	Pn	01 12 02.3	+2.8
DEL	**Delary**	5.12	345	P	Pn	01 12 00.3	+0.5
OBKA	**Obir**	5.15	193	*i* Pn	Pn	01 12 01.1	+0.8
	comp=Z,8.5nm,0.6s						
OBKA				Sg	Sb	01 13 21.2	+5.9
	comp=Z,78nm,0.8s						
OBKA	**Obir**	5.15	193		Pn	01 12 01.1	+0.8
OBKA					Sb	01 13 21.2	+5.9
WATA	**Walderalm**	5.17	217	*e*Pn	Pn	01 12 01.7	+1.0
	comp=Z,16nm,0.4s,SNR=9.0						
WATA				Sg	Sg	01 13 27.9	-0.1
	comp=Z,75nm,0.7s						
WATA	**Walderalm**	5.17	217	P	Pn	01 12 01.7	+1.0
WATA	**Walderalm**	5.17	217		Pn	01 12 01.7	+1.0
WATA					LR	01 13 27.9	
LVV	**L'vov**	5.28	106	*e*P	Pn	01 12 02.2	+0.2
LVV				*e*		01 13 02.0	
LVV				pmax	pmax		
	comp=Z,50nm,1.1s						
LVV				smax	smax		
	comp=N,100nm,0.8s						
LVV				smax	smax		
	comp=E,110nm,0.8s						
LVV				MLR	MLR		
	comp=N,500nm,4.0s						
LVV				MLR	MLR		
	comp=Z,500nm,4.0s						
LVV				MLR	MLR		
	comp=E,300nm,4.3s						
MOTA	**Moosalm**	5.35	220	*e*Pn	Pn	01 12 03.5	+0.4
	comp=E,6.6nm,0.5s						
MOTA				Sg	Sg	01 13 29.8	-3.9
	comp=E,47nm,0.6s						
MOTA	**Moosalm**	5.35	220	P	Pn	01 12 03.5	+0.4
MOTA	**Moosalm**	5.35	220		Pn	01 12 03.5	+0.4
MOTA					Sg	01 13 29.8	-3.9
ABTA	**Abfaltersbach**	5.37	208	*e*Pn	Pn	01 12 04.6	+1.3
	comp=E,7.7nm,0.5s,SNR=8.6						
ABTA				*e*Sn	Sn	01 13 05.2	-0.7
	comp=E,9.3nm,0.5s						
ABTA	**Abfaltersbach**	5.37	208		Pn	01 12 04.6	+1.3
ABTA					Sn	01 13 05.2	-0.7
RETA	**Reutte**	5.38	223	*e*Pn	Pn	01 12 03.2	-0.2
	comp=E,6.2nm,0.4s,SNR=6.6						
RETA				Sg	Sg	01 13 33.0	-1.6
	comp=E,92nm,1.0s						
RETA	**Reutte**	5.38	223		Pn	01 12 03.2	-0.2
RETA					LR	01 13 33.0	
SQTA	**Sankt Quirin**	5.41	219	*i* Pn	Pn	01 12 05.3	+1.4
	comp=E,16nm,0.4s,SNR=9.7						
SQTA				*e*Sg	Sg	01 13 34.5	-1.1
	comp=E,39nm,0.4s						
SQTA	**Sankt Quirin**	5.41	219	P	Pn	01 12 05.3	+1.4
SQTA	**Sankt Quirin**	5.41	219		Pn	01 12 05.3	+1.4
SQTA					LR	01 13 34.5	
ZOU	**Zoufplan**	5.42	204	Pn	Pn	01 12 04.7	+0.6
VXJU	**Vaexsjoe**	5.44	353	P	Pn	01 12 05.3	+1.2
VXJU	**Vaexsjoe**	5.44	353	P	Pn	01 12 05.3	+1.2
MORH	**Mrgy, Hungar**	5.58	162	*e*PN	Pn	01 12 07.0	+0.9
CRNS	**Crni Vrh**	5.61	194	*e*Pn	Pn	01 12 07.2	+0.6
PBUR	**Paburge**	5.63	35	*e*P	Pn	01 12 09.6	+2.8
PTJ	**Puntijarka**	5.64	181	*e*Pn	Pn	01 12 07.8	+0.7
FETA	**Feichten**	5.76	220	*e*Pn	Pn	01 12 09.5	+0.7
	comp=E,6.1nm,0.5s						
FETA				Sg	Sg	01 13 44.2	-2.7
	comp=E,34nm,0.6s						
FETA	**Feichten**	5.76	220		Pn	01 12 09.5	+0.7
FETA					Sg	01 13 44.2	-2.7
STAL	**STALIGIAL**	5.76	205	Pn	Pn	01 12 08.9	+0.2
FABU	**Falkenberg**	5.83	341	P	Pn	01 12 10.6	+1.1
DAVA	**Damuels**	5.92	226	*e*Pn	Pn	01 12 10.8	-0.2
	comp=E,9.2nm,0.4s						
DAVA				Sg	Sg	01 13 52.0	+0.1
	comp=E,120nm,1.0s						
DAVA	**Damuels**	5.92	226		Pn	01 12 10.8	-0.2
DAVA					LR	01 13 52.0	
OZLJ	**Ozalj**	5.95	185	*e*Pn	Pn	01 12 12.1	+0.9
BFO	**Black Forest**	6.00	241	P	Pn	01 12 12.0	0.0
BFO	**Black Forest**	6.00	241	Pn	Pn	01 12 12.0	0.0
BOJS	**Bojanci**	6.08	186	*i* Pn	Pn	01 12 13.8	+0.9
PABE	**Paberze**	6.11	46	*e*P	Pn	01 12 14.7	+1.4
CTI	**Castel Tesino**	6.26	210	P	Pn	01 12 16.1	+0.5
CTI	**Castel Tesino**	6.26	210	Pn	Pn	01 12 16.1	+0.5
DAVOX	**Davos/Dischmat**	6.31	223	Pn	Pn	01 12 16.6	+0.3
	comp=E,1.0nm,0.3s,baz=58,slow=15,SNR=16						
DAVOX				Sn	Sn	01 13 28.9	-0.2
	comp=E,1.2nm,0.3s,baz=202,slow=22,SNR=1.7						
DAVOX				Lg	Lg	01 13 59.4	
	comp=E,1.1nm,0.3s,baz=17,slow=16,SNR=4.8						
DRGR		6.40	135	⇑P	Pn	01 12 17.4	-0.1
BTNL	**Ternell**	6.41	265	*d*Pn	Pn	01 12 19.8	+2.3
BTNL				*d*Pg	Pg	01 12 43.6	-1.0
BTNL				*d*Sg	Sg	01 14 06.4	-1.1
BORU	**Boraas**	6.42	343	P	Pn	01 12 19.0	+1.4
MEM	**Membach**	6.48	266	*d*Pn	Pn	01 12 18.8	+0.4
MEM				*d*PnPn	PnPn	01 12 27.0	+1.4
MEM				*d*Sg	Sg	01 14 11.9	+2.0
CDF	**Champ du Feu**	6.54	245	*e*Pn	Pn	01 12 19.6	+0.2
CDF	**Champ du Feu**	6.54	245	*e*P	Pn	01 12 22.3	+2.9
CDF				*e*Sn	Sn	01 13 29.4	-5.3
	comp=E,7.6nm,0.3s						
WLF	**Walferdange**	6.65	257	*d*Pn	Pn	01 12 22.0	+1.1
WLF				*d*PnPn	PnPn	01 12 28.8	+0.7
WLF				*d*Sg	Sg	01 14 16.9	+1.4
WLF	**Walferdange**	6.65	257	P	Pn	01 12 22.9	+2.1
WLF	**Walferdange**	6.65	257	Pn	Pn	01 12 22.9	+2.1
ECH	**Echery**	6.71	244	P	Pn	01 12 21.9	+0.2
ECH	**Echery**	6.71	244	Pn	Pn	01 12 21.9	+0.2
BSTI	**Sart Tilman**	6.76	266	*d*Pn	Pn	01 12 24.6	+2.4
BSTI				*d*PnPn	PnPn	01 12 30.0	+0.5
TEOL	**Teolo**	6.88	208	Pn	Pn	01 12 24.2	+0.3
BZS	**Buzias**	6.94	147	⇑P	Pn	01 12 25.5	+0.7
BCLA	**Clavier**	6.96	265	*d*Pn	Pn	01 12 25.7	+0.6
BCLA				*d*PnPn	PnPn	01 12 33.0	+0.7
BCLA				*d*PbPb	PbPb	01 12 47.0	+0.2
BCLA				*d*Pg	Pg	01 12 56.2	+1.0
BCLA				*d*Sg	Sg	01 14 26.1	+0.9
SALO	**Salr**	7.01	214	Pn	Pn	01 12 27.1	+1.2
UDBI	**Udbina**	7.03	182	*e*Pn	Pn	01 12 27.8	+1.7
BUR08	**Bucovina Ar. S**	7.04	120	Pn	Pn	01 12 26.4	+0.1
BURAR	**Bucovina Array**	7.07	120	⇓P	Pn	01 12 27.1	+0.4
BURAR	**Bucovina Array**	7.07	120	Pn	Pn	01 12 26.9	+0.3
BGES	**Gesves**	7.10	265	*d*Pn	Pn	01 12 28.3	+1.3
BGES				*d*Sn	Sn	01 13 47.7	-0.6
BGES				*d*SnSn	SnSn	01 13 57.0	-2.3
BGES				*d*Sg	Sg	01 14 30.1	+0.2
IIGN	**Ignalina**	7.11	54	*e*P	Pn	01 12 28.8	+1.8
HINF	**Hinteralfeld**	7.11	242	*e*Pn	Pn	01 12 26.7	-0.4
HINF				*e*Sn	Sn	01 13 41.6	-7.0
	comp=E,76nm,1.1s						
ISAL	**Salakas**	7.17	52	*e*P	Pn	01 12 29.1	+1.3
ISAL				*e*S	Pg	01 12 59.5	+0.4
NACGM	**Naroch**	7.20	58	*i* P	Pn	01 12 30.2	+1.9
NACGM				*i* P	Pn	01 12 30.2	+1.9
NACGM				*i* P	Pn	01 12 30.2	+1.9
NACGM				*i* S	Sn	01 13 54.4	+3.7
NACGM				*i* SS	SnSn	01 14 06.8	+5.2
NACGM				*i* LQ	LQ	01 14 26.2	
NACGM				*i* LR	LR	01 15 14.8	
HAU	**Haudompre**	7.28	245	*e*Pn	Pn	01 12 29.1	-0.4
HAU				*e*Sn	Sn	01 13 45.4	-7.5
	comp=E,38nm,0.7s						
BMRD	**Maredsous**	7.32	265	*d*Pn	Pn	01 12 32.6	+2.6
BMRD				*d*PnPn	PnPn	01 12 38.2	+0.9
BMRD				*d*Pb	Pb	01 12 48.6	-1.1
GIVF	**Givet**	7.34	263	*e*P	Pn	01 12 34.0	+3.8
IDID	**Didziasalis**	7.35	55	*e*P	Pn	01 12 31.6	+1.2
IDID				*e*S	Pg	01 13 01.8	-0.8
PAGF	**Fort de Pagny**	7.37	250	*e*Pn	Pn	01 12 31.5	+0.9
	baz=82						
DOU	**Dourbes**	7.48	263	*d*Pn	Pn	01 12 34.9	+2.7
DOU				*d*PnPn	PnPn	01 12 43.2	+3.8
DOU				*d*PbPb	PbPb	01 12 57.9	+2.2
DOU				*d*Sg	Sg	01 14 45.6	+3.6
GZR	**Gura Zlata**	7.56	142	⇓P	Pn	01 12 34.6	+1.3
MNK	**Minsk**	7.65	63	*i* P	Pn	01 12 33.9	-0.7
	comp=E,4.0nm,2.4s						
MNK				*i* P	Pn	01 12 33.9	-0.7
	comp=N,12nm,1.2s						
MNK				*i* P	Pn	01 12 33.9	-0.7
	comp=Z,10.0nm,1.2s						
MNK				*i* PP	PnPn	01 12 41.5	-0.4
MNK				*i* PPP	PPP	01 12 49.0	
MNK				*i* S	Sn	01 14 01.0	-0.9
MNK				*i* SS	SnSn	01 14 14.6	+1.7
MNK				*i* SSS	SSS	01 14 26.9	
MNK				*i* LQ	LQ	01 14 44.9	
MNK				*i* LR	LR	01 15 06.8	
MNK				*i* LRM	MLR	01 15 27.5	
	comp=E,4.0nm,5.3s						
MNK				*i* LRM	MLR	01 15 28.0	
	comp=N,6.0nm,5.2s						
MNK				*i* LRM	MLR	01 15 28.9	
	comp=Z,11nm,4.8s						
MORI	**Morici**	7.69	183	*e*Pn	Pn	01 12 36.5	+1.4
SAVF	**Savonnieres en**	7.69	252	*e*Pn	Pn	01 12 36.0	+0.9
BAIF	**Baives**	7.73	264	*e*Pn	Pn	01 12 34.7	-0.9
BAIF	**Baives**	7.73	264	*e*P	Pn	01 12 38.8	+3.2
SFTF	**Sexfontaines**	7.93	249	*e*Pn	Pn	01 12 37.2	-1.2
	baz=79						
SFTF				*e*Sn	Sn	01 14 01.3	-7.6
	comp=Z,8.1nm,0.6s						
BIZ	**Bicaz**	7.96	121	⇓P	Pn	01 12 39.7	+0.9
ZCCA	**Zocca**	8.00	208	Pn	Pn	01 12 40.8	+1.4
AKASG	**Malin Array Be**	8.25	91	Pn	Pn	01 12 41.8	-1.0
	comp=Z,4.2nm,0.3s,baz=280,slow=12,SNR=19						
AKASG				Sn	Sn	01 14 11.3	-5.3
	comp=Z,3.5nm,0.3s,baz=268,slow=24,SNR=5.3						
AKASG				Lg	Lg	01 15 08.0	
	comp=Z,0.7nm,0.3s,baz=174,slow=28,SNR=1.4						
AKASG	**Malin Array Be**	8.25	91	Pn	Pn	01 12 40.6	-2.2
AKBB	**Malin Array Si**	8.25	91	⇓*e*P	Pn	01 12 41.8	-1.0
AKBB	**Malin Array Si**	8.25	91	Pn	Pn	01 12 42.0	-0.7
CABF	**La Chapelle**	8.26	237	*e*Pn	Pn	01 12 41.0	-2.0
CABF	**La Chapelle**	8.26	237	*e*Pg	Pg	01 13 25.5	+5.5
CABF				*e*Sn	Sn	01 14 09.2	-7.8
	comp=Z,15nm,0.7s						
MTSE	**Matsula**	8.41	28	*e*P	Pn	01 12 45.9	+1.1
VOIR		8.48	133	⇓P	Pn	01 12 46.4	+0.3
MSSA	**Maissana**	8.50	214	Pn	Pn	01 12 47.7	+1.4
SORM	**Soroca**	8.58	109	⇑P	Pn	01 12 44.9	-2.3
OSSC	**Osservatorio P**	8.69	204	Pn	Pn	01 12 47.9	-0.9
LPL	**La Plagne**	8.70	230	*e*P	Pn	01 12 49.9	+0.8
LPG	**La Plagne**	8.70	230	*e*P	Pn	01 12 50.7	+1.5
HFS	**Hagfors**	8.72	352	Pn	Pn	01 12 49.6	+0.4
	comp=Z,0.5nm,0.3s,baz=171,slow=13,SNR=14						
HFS				Sn	Sn	01 14 25.2	-2.9
	comp=Z,0.5nm,0.3s,baz=172,slow=21,SNR=2.1						
NRCA	**Norcia**	8.96	195	Pn	Pn	01 12 52.8	+0.2
BNI	**Bardonecchia**	9.07	228	P	Pn	01 12 55.4	+1.3
BNI	**Bardonecchia**	9.07	228	Pn	Pn	01 12 55.4	+1.3
LOR	**Lormes**	9.10	247	*e*Pn	Pn	01 12 53.2	-1.2
	baz=64						
LOR				*e*Sn	Sn	01 14 57.5	+20
	comp=Z,12nm,0.8s						
VSU	**Vasula**	9.20	37	*e*P	Pn	01 12 57.1	+1.4
VSU	**Vasula**	9.20	37	⇑*e*P	Pn	01 12 57.5	+1.8
VSU				pmax	pmax		
	comp=Z,247nm,3.5s						
MBDF	**Montbardon**	9.27	226	*e*P	Pn	01 12 57.0	+0.1
SSF	**Saint Saulge**	9.41	246	*e*Pn	Pn	01 12 58.3	-0.4
SSF				*e*Sn	Sn	01 14 36.6	-8.6
	comp=Z,62nm,1.3s						
SMF	**Signal de Mont**	9.46	244	*e*Pn	Pn	01 12 58.7	-0.6
SMF				*e*Sn	Sn	01 14 37.8	-8.5
	comp=Z,86nm,1.3s						
ORIF	**Oris-en-Rattie**	9.54	230	*e*P	Pn	01 13 01.0	+0.4

NC602	NORSAR Array S	9.57	346	Pn	Pn	01 13 00.3	-0.5
AVF	Avril sur Loir	9.65	245	ePn	Pn	01 13 01.3	-0.6
AVF	Avril sur Loir	9.65	245	ePg	Pn	01 13 42.2	+40
AVF				eSn	Sn	01 14 42.9	-8.1
	comp=Z,93nm,1.4s						
SBF	Sospel	9.68	221	eP	Pn	01 13 01.0	-1.4
NAO01	NORSAR Array S	9.77	345	Pn	Pn	01 13 02.7	-0.9
NB201	NORSAR Array S	9.90	346	Pn	Pn	01 13 05.0	-0.3
NC405	NORSAR Array S	9.90	347	Pn	Pn	01 13 04.3	-1.1
NOA	NORSAR Array B	9.91	346	Pn	Pn	01 13 03.9	-1.5
	comp=Z,0.0nm,0.3s,baz=195,slow=11,SNR=9.4						
NOA				Sn	Sn	01 14 51.8	-5.4
	comp=Z,0.0nm,0.3s,baz=308,slow=23,SNR=1.3						
NBO00	NORSAR Array S	9.97	345	Pn	Pn	01 13 05.4	-0.9
NC303	NORSAR Array S	10.06	347	Pn	Pn	01 13 08.2	+0.7
BGF	Bois d'Agland	10.07	246	ePn	Pn	01 13 06.8	-0.9
BGF	Bois d'Agland	10.07	246	ePg	Pn	01 13 49.0	+41
BGF				eSn	Sn	01 14 52.6	-8.7
	comp=Z,50nm,1.0s						
NC204	NORSAR Array S	10.20	345	Pn	Pn	01 13 08.7	-0.8
FRF	La Foret Royal	10.25	223	eP	Pn	01 13 09.0	-1.2
SMRF	Simiane la Rot	10.40	227	eP	Pn	01 13 12.8	+0.6
LMR	La Mourre	10.50	222	eP	Pn	01 13 12.8	-0.7
LDF	La Druitiere	10.89	261	ePn	Pn	01 13 21.1	+2.3
LASF	Ste Croix	11.15	233	eP	Pn	01 13 22.9	+0.4
FINES	FINESS Array B	11.31	25	Pn	Pn	01 13 23.7	-0.9
	comp=Z,0.5nm,0.3s,baz=206,slow=11,SNR=14						
FINES				Sn	Sn	01 15 24.2	-7.4
	comp=Z,0.4nm,0.3s,baz=218,slow=18,SNR=2.7						
FINES	FINESS Array B	11.31	25	Pn	Pn	01 13 23.8	-0.8
FIA1	FINESS Array S	11.31	25	Pn	Pn	01 13 23.8	-0.8
EKA	Eskdalemuir Ar	12.13	296	Pn	Pn	01 13 34.2	-1.6
	baz=102,slow=14,SNR=5.7						
ESK	Eskdalemuir	12.15	296	P	Pn	01 13 34.6	-1.5
ESK	Eskdalemuir	12.15	296		Pn	01 13 34.6	-1.5
SGMF	Saint Gilles	12.52	262	eP	Pn	01 13 47.0	+5.9
OBN	Obninsk	12.69	66⇑	eP	Pn	01 13 41.9	-1.5
OBN				eS	Sn	01 16 08.8	+3.5
OBN				MLR	MLR		
	comp=Z,56nm,7.0s						
MOS	Moscow	13.38	63	eP	Pn	01 13 48.3	-4.5
MOS				eS	Sn	01 16 15.6	-6.5
LPSR	Galich'ya Gora	14.02	77	eP	Pn	01 13 56.2	-5.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.6s						
VSR	Storozhevoye	14.35	82	eP	Pn	01 14 06.9	+0.7
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KLMR	Klimovskoe	15.90	45	eP	Pn	01 14 21.0	-5.7
KLMR				e		01 17 14.0	
KLMR				pmax	pmax		
	comp=Z,33nm,1.8s						
KLMR	Klimovskoe	15.90	45	ePn	Pn	01 14 21.0	-5.7
KLMR				AMP		01 14 38.7	
	comp=Z,33nm,1.8s						
KLMR				eSn	Sn	01 17 14.0	-9.4
KLMR				eSn	Sn	01 17 14.0	-9.4
VRH	Novokhopyorsk	15.93	81	eP	Pn	01 14 22.0	-5.2
VRH				pmax	pmax		
	comp=Z,20nm,1.6s						
BRTR	Keskin Array B	16.94	127	Pn	Pn	01 14 40.1	-0.2
	comp=Z,0.0nm,0.3s,baz=329,slow=16,SNR=1.6						
TMCR	Tamitsa	17.05	34	eP	Pn	01 14 38.1	-3.3
TMCR				pmax	pmax		
	comp=Z,19nm,0.9s						
ARCES	ARCESS Array B	18.58	10	P	P	01 14 58.2	-2.0
	baz=193,slow=12,SNR=12						
ARCES	ARCESS Array B	18.58	10	P	P	01 14 58.5	-1.7
ARCES				pmax	pmax		
	comp=Z,26nm,1.4s						
ARCES	ARCESS Array B	18.58	10		P	01 14 58.5	-1.7
KEV	Kevo	18.97	12	P	Pn	01 15 05.3	+0.4
KEV				pmax	pmax		
	comp=Z,52nm,1.3s						
KEV	Kevo	18.97	12	P	Pn	01 15 05.3	+0.4
KIV	Kislovodsk	19.30	103	eP	Pn	01 15 10.1	+0.8
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,90nm,14.0s						
BELG	Belogornoye	19.32	75	P	P	01 15 04.5	-3.9
	comp=Z,0.4nm,0.3s,baz=0.0,slow=3.0,SNR=2.3						
BELG	Belogornoye	19.32	75⇓	eP	Pn	01 15 10.1	+0.8
BELG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIRV	Kirov	20.13	57	P	P	01 15 16.0	-1.1
	comp=Z,8.6nm,0.5s,baz=252,slow=14,SNR=5.7						
KIRV	Kirov	20.13	57⇓	eP	Pn	01 15 18.8	-0.1
AKH	Akhalkalaki	21.25	108	P	P	01 15 29.9	+0.3
AKH				pmax	pmax		
	comp=Z,17nm,1.2s						
AKH	Akhalkalaki	21.25	108	P	P	01 15 29.9	+0.3
AKH				IAmb	IAmb	01 15 36.5	
	comp=Z,17nm,1.2s						
GNI	Garni	22.78	109⇑	eP	P	01 15 47.5	+1.5
ARU	Arti	25.08	62	P	P	01 16 07.9	+0.1
	comp=Z,1.5nm,0.5s,baz=275,slow=8.5,SNR=9.8						
ARU	Arti	25.08	62d	iP	P	01 16 08.2	+0.4
ARU						01 16 41.7	
ARU				S	S	01 20 35.4	+2.4
ARU				SS	SnSn	01 21 25.3	+4.1
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	25.08	62	P	P	01 16 08.1	+0.4
ARU				IAmb	IAmb	01 16 11.6	
	comp=Z,14nm,1.2s						
AKTO	Aktyubinsk	26.11	76	P	P	01 16 17.8	+0.7
	comp=Z,2.7nm,0.6s,baz=276,slow=10,SNR=8.1						
SPITS	Spitsbergen Ar	26.74	0	P	P	01 16 24.5	+1.8
	comp=Z,7.0nm,0.9s,baz=188,slow=8.7,SNR=1.4						
ABKAR	Akbulak array	27.68	77	P	P	01 16 32.9	+1.6
BRVK	Borovoye	32.47	66⇓	eP	P	01 17 15.4	+1.8
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BRVK	Borovoye	32.47	66	P	P	01 17 15.8	+2.2
BRVK				IAmb	IAmb	01 17 16.4	
	comp=Z,2.4nm,0.7s						
KURK	Kurchatov	38.13	66⇓	eP	P	01 18 03.1	+0.7
KURK				pmax	pmax		
	comp=Z,18nm,5.2s						
AAK	Ala-Archa	39.72	79⇑	eP	P	01 18 18.2	+2.2
TOA0	Torodi Ar. Sit	40.05	202	P	P	01 18 19.4	+0.7
TORD	Torodi Ar. Bea	40.05	202	P	P	01 18 19.2	+0.4
	comp=Z,1.9nm,0.8s,baz=10,slow=9.7,SNR=6.4						
TORD	Torodi Ar. Bea	40.05	202	P	P	01 18 19.7	+1.0
ZALV	Zalesovo Beam	40.14	59	P	P	01 18 20.9	+1.7
	comp=Z,0.9nm,0.7s,baz=297,slow=9.8,SNR=5.4						
ZALV	Zalesovo Beam	40.14	59	P	P	01 18 20.2	+1.0
ZALV	Zalesovo Beam	40.14	59		P	01 18 20.2	+1.0
MK31	Makanchi Array	42.16	69⇓	iP	P	01 18 37.1	+1.2
MKAR	Makanchi Array	42.16	69	P	P	01 18 37.3	+1.4
	comp=Z,0.4nm,0.6s,baz=301,slow=7.0,SNR=7.4						
MKAR	Makanchi Array	42.16	69	P	P	01 18 37.5	+1.6
DGZ	Jazzator, Alta	43.59	63⇑	eP	P	01 18 50.4	+2.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	Urumqi	46.98	70	eP	P	01 19 15.3	+0.8
SONM	Songino Array	54.86	55	P	P	01 20 16.2	+2.4
	comp=Z,0.7nm,0.8s,baz=287,slow=9.0,SNR=7.1						
SONM	Songino Array	54.86	55	P	P	01 20 14.4	+0.5
BILL	Bilibino	58.66	13⇓	eP	P	01 20 42.1	+1.7
BILL				e		01 21 37.8	
BILL				e		01 22 48.5	
BILL				pmax	pmax		
	comp=Z,8.0nm,2.2s						
YKA	Yellowknife Ar	59.84	336	P	P	01 20 50.5	+1.9
	comp=Z,1.2nm,0.7s,baz=31,slow=7.2,SNR=24						
HHC	Hu-ho-hao-te	62.33	59	eP	P	01 21 08.3	+2.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,280nm,6.0s						
CMAR	Chiang Mai Arr	71.31	84	P	P	01 22 05.1	+1.7
	comp=Z,0.9nm,0.4s,baz=309,slow=7.0,SNR=5.4						
CMAR	Chiang Mai Arr	71.31	84	P	P	01 22 04.7	+1.3
BW06	Boulder Array	74.94	322	P	P	01 22 26.8	+2.0
BW06				IAmb	IAmb	01 22 34.9	
	comp=Z,2.6nm,1.4s						
PDAR	Pinedale Array	74.94	322	P	P	01 22 26.5	+1.6
	comp=Z,0.4nm,0.6s,baz=78,slow=6.2,SNR=6.2						
PDAR	Pinedale Array	74.94	322	P	P	01 22 26.2	+1.4
BMO	Blue Mountains	75.92	328	P	P	01 22 30.7	+0.5
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BMO	Blue Mountains	75.92	328	P	P	01 22 30.7	+0.5
BMO				IAmb	IAmb	01 22 32.5	
	comp=Z,2.9nm,0.9s						
NVAR	Mina Array Bea	81.96	326	P	P	01 23 07.2	+3.5
	comp=Z,0.3nm,0.8s,baz=50,slow=4.8,SNR=2.0						
TXAR	Lajitas Array	83.72	310	P	P	01 23 14.2	+1.4
	comp=Z,0.3nm,0.6s,baz=100,slow=2.9,SNR=5.7						
TXAR	Lajitas Array	83.72	310	P	P	01 23 14.4	+1.6
TXAR	Lajitas Array	83.72	310	P	P	01 23 14.4	+1.6
ASAR	Alice Springs	125.32	84	PKP	PKiKP	01 29 45.2	+0.3
	comp=Z,0.2nm,0.5s,baz=324,slow=2.0,SNR=1.8						

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*IDC **28** 02:23:12.7±1.5, 6°.25S×146°.88E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/31, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=40.4km s-min=18.9km az=92.0*

ISC 28 02:23:19.2±1.4, **6°.4S**±0°.1×**146°.9E**±0°.2, **h49**^{km}, **n6**, σ**0^{s}97**/7, **mb3.5**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.04	174	Pn	Pn	02 24 03.7	-1.1
	3.0nm,0.3s,baz=0.0,slow=6.1,SNR=1.8						
PMG				Sn	Sn	02 24 41.1	+1.2
	4.3nm,0.3s,baz=317,slow=16,SNR=3.9						
PMG				Lg	Lg	02 24 53.3	
	8.0nm,0.3s,baz=122,slow=16,SNR=4.3						
WRA	Warramunga Arr	18.16	221	P	Pn	02 27 27.4	-0.6
	0.1nm,0.3s,baz=37,slow=11,SNR=2.4						
ASAR	Alice Springs	21.24	215	P	P	02 28 02.1	+0.8
	0.6nm,0.7s,baz=50,slow=8.7,SNR=5.4						
FITZ	Fitzroy Crossi	23.75	239	P	P	02 28 27.3	0.0
	1.1nm,0.6s,baz=48,slow=9.0,SNR=6.0						
ILAR	Eielson Array	85.87	23	P	P	02 35 53.7	+0.3
	0.3nm,0.6s,baz=248,slow=4.8,SNR=5.8						
TORD	Torodi Ar. Bea	145.04	284	PKPbc	PKPbc	02 42 51.7	0.0
	1.8nm,1.0s,baz=90,slow=4.3,SNR=2.8						

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*BJI **28** 02:43:17.9±0.0, 20°.53S×177°.79W, h482^{km}, mB6.0/69, mb5.9/83*

*IDC **28** 02:43:18.4±0.6, 20°.99S×178°.32W, h471^{km}±6^{km}, mb5.5/36, mb1 5.5/40, mb1mx5.3/48, mbtmp6.3/40, Error ellipse: s-maj=7.8km s-min=7.1km az=37.0*

*BGR **28** 02:43:19.5±0.0, 20°.70S×177°.35W, h478^{km}*

*NEIC **28** 02:43:19.4±2.2, 20°.97S±0°.08×178°.30W±0°.09, h484^{km}±3^{km}, mb6.0/495, Mwc6.2/57, Mww6.2, Mwc6.2(GCMT), Error ellipse: s-maj=11.8km s-min=11.5km az=131.0*

*NOU **28** 02:43:20.2, 21°.06S×178°.24W, h498^{km}, ML5.7, Fiji Islands Region*

*MOS **28** 02:43:20.4±1.0, 20°.91S×178°.42W, h498^{km}, mb6.1/44, Error ellipse: s-maj=9.2km s-min=6.5km az=119.3*

*NEIC **28** 02:43:22, 20°.99S×178°.16W, h490^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-1.53; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$1.64; M$_{r\theta}$-1.31; M$_{\theta\phi}$-0.62; M$_{\phi r}$-0.80; Fault plane solution: M$_0$2.30000×10^{18} NP1:φ$_s$136.00000°, δ46.00000°, λ-138.00000°. NP2:φ$_s$14.00000°, δ61.00000°, λ-52.00000°. Principal axes: T 1.8943, Plg8.0000°, Azm78.0000°; N 0.6586, Plg32.0000°, Azm173.0000°; P -2.5528, Plg56.0000°, Azm335.0000°;*

*GCMT **28** 02:43:23.4±0.1, 20°.97S±0°.01×178°.23W±0°.01, h488^{km}, MW6.2/170, Moment Tensor Solution. s170,c403; s151,c201; Duration: 3^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-1.51±.01; M$_{\theta\theta}$-0.15±.02; M$_{\phi\phi}$1.66±.02; M$_{r\theta}$-1.32±.01; M$_{\theta\phi}$-0.62±.01; M$_{\phi r}$-0.77±.01; Best double couple: M$_0$2.22100×10^{18} NP1:φ$_s$136.00000°, δ47.00000°, λ-138.00000°. NP2:φ$_s$15.00000°, δ61.00000°, λ-51.00000°. Principal axes: T 1.8990, Plg8.0000°, Azm78.0000°; N 0.6430, Plg33.0000°, Azm174.0000°; P -2.5420, Plg56.0000°, Azm336.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **28** 02:43:23, 21°.01S×178°.35W, h490^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-1.42; M$_{\theta\theta}$-0.15; M$_{\phi\phi}$1.57; M$_{r\theta}$-1.23; M$_{\theta\phi}$-0.79; M$_{\phi r}$-0.87; Fault plane solution: M$_0$2.27000×10^{18} NP1:φ$_s$130.00000°, δ47.00000°, λ-140.00000°. NP2:φ$_s$11.00000°, δ62.00000°, λ-50.00000°. Principal axes: T 1.9348, Plg8.0000°, Azm74.0000°; N 0.5601, Plg35.0000°, Azm170.0000°; P -2.4949, Plg54.0000°, Azm332.0000°;*

*NEIC **28** 02:43:36.5, 20°.98S×178°.12W, h481^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$-1.51; M$_{\theta\theta}$-0.25; M$_{\phi\phi}$1.76; M$_{r\theta}$-1.10; M$_{\theta\phi}$-0.59; M$_{\phi r}$-0.66; Fault plane solution: M$_0$2.15000×10^{18} NP1:φ$_s$137.55000°, δ47.19000°, λ-136.22000°. NP2:φ$_s$14.48000°, δ59.50000°, λ-52.06000°. Principal axes: T 1.9633, Plg7.0000°, Azm79.0000°; N 0.3713, Plg32.0000°, Azm173.0000°; P -2.3346, Plg57.0000°, Azm338.0000°;*

ISC 28 02:43:19.6±0.3, **21°.00S**±0°.03×**178°.36W**±0°.03, **h486**^{km}±2^{km}, **h486**^{km}**:pP-P, n1958,** σ**1^{s}74**/2145, **mb6.0**/324, **81C-225D, Fault plane solution: NP1:**φ$_s$36.77153°, δ61.00874°, λ-63.80677°. **NP2:**φ$_s$171.34689°, δ38.29117°, λ-128.54057°. **Principal axes:** T Plg12.2554°, Azm108.1452°; N Plg22.7114°, Azm203.3615°; P Plg63.8582°, Azm351.8763°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.70	313c	iP	P	02 44 45.7	+2.5
MSVF	Nonsavu	4.70	313	P	P	02 44 45.5	+2.3
MSVF	Nonsavu	4.70	313	P	P	02 44 45.3	+2.1
NIUE	Niue	8.15	78	P	P	02 45 16.1	-1.2
NIUE	Niue	8.15	78	P	P	02 45 16.4	-0.9
NIUE				S	S	02 46 53.4	-0.6
NIUE	Niue	8.15	78	P	P	02 45 16.2	-1.1
RIZ	Raoul Island	8.22	177	P	P	02 45 16.9	-0.9
RIZ				S	S	02 46 43.5	-11
RAO	Raoul Island	8.23	177	P	P	02 45 16.3	-1.6
	627nm,0.3s,baz=86,slow=8.6,SNR=24						
RAO				S	S	02 46 44.8	-10
	676nm,0.3s,baz=102,slow=10,SNR=5.4						
RAO	Raoul Island	8.23	177	P	P	02 45 16.8	-1.1
RAO	Raoul Island	8.23	177	P	P	02 45 17.2	-0.7
RAO	Raoul Island	8.23	177	P	P	02 45 17.0	-0.9
GLKZ	Green Lake	8.24	177	P	P	02 45 16.5	-1.5
AFI	Afiamalu	9.44	43	P	P	02 45 27.0	-4.0
AFI	Afiamalu	9.44	43	P	P	02 45 27.0	-4.0
AFI	Afiamalu	9.44	43	P	P	02 45 27.2	-3.9
AFI				S	S	02 47 08.9	-10
FUNA	Funafuti	12.62	349	P	P	02 46 04.4	-0.5
MARNC	Mare, Loyalty	12.70	265	P	P	02 46 07.2	+1.5
DVP	Devils Point	13.11	282	P	P	02 46 13.1	+3.0
	337μm,1.3s						
PINNC	Pines Island,	13.28	260	P	P	02 46 14.3	+2.4
YATNC	Mamie plateau,	13.77	263	P	P	02 46 18.6	+1.5
OUENC	Ouen Island, N	13.83	261	P	P	02 46 20.0	+2.3
DZM	Mont Dzumac	14.18	263	P	P	02 46 22.7	+1.1
	95nm,0.3s,baz=88,slow=14,SNR=320						
DZM				S	S	02 48 52.5	+0.9
	baz=66,slow=18,SNR=5.9						
DZM				ScP	ScP	02 53 52.6	+1.8
	0.3nm,0.3s,baz=85,slow=8.8,SNR=5.5						
DZM				ScS	ScS	02 57 34.5	+5.9
	0.3nm,0.3s,baz=333,slow=22,SNR=21						
DZM	Mont Dzumac	14.18	263	eP	P	02 46 23.1	+1.5
	6μm,0.9s						
DZM	Mont Dzumac	14.18	263	P	P	02 46 23.0	+1.5
DZM	Mont Dzumac	14.18	263	P	P	02 46 23.1	+1.5
NOUC	Port Laguerre	14.31	263	P	P	02 46 24.4	+1.6
SANVU	Saraoutou	14.78	290	P	P	02 46 28.5	+0.7
SANVU	Saraoutou	14.78	290	P	P	02 46 29.3	+1.5
OUZ	Omahuta	15.83	205	P	P	02 46 40.4	+1.8
OUZ	Omahuta	15.83	205	P	P	02 46 39.7	+1.1
WCZ	Waipu Caves	16.20	202	P	P	02 46 44.7	+2.2
KOUNC	Koumac, New Ca	16.24	268	P	P	02 46 44.3	+1.2
KUZ	Kuaotunu	16.52	197	P	P	02 46 47.3	+1.5
MXZ	Matakaoa Point	16.76	189	P	P	02 46 48.9	+0.6
TGRZ	Tauranga	17.31	194	P	P	02 46 56.0	+2.1
RAR	Rarotonga	17.35	94	P	P	02 46 53.6	-0.9
	7.0nm,0.3s,baz=257,slow=6.5,SNR=42						
RAR	Rarotonga	17.35	94	P	P	02 46 53.3	-1.2
RAR				pmax	pmax		
	comp=Z,4μm,1.7s						
RAR	Rarotonga	17.35	94	P	P	02 46 53.3	-1.2
RAR	Rarotonga	17.35	94	P	P	02 46 54.5	0.0
OPRZ	Ohinepanea	17.36	194	P	P	02 46 55.8	+1.5
TWGZ	Tauwhareparae	17.41	190	P	P	02 46 55.6	+0.7
TWGZ				S	S	02 49 53.7	+2.4
MARZ	Manawahe	17.46	193	P	P	02 46 56.1	+0.6
KMRZ	Kaimai	17.50	195	P	P	02 46 59.0	+3.2
KARZ	Kaharoa	17.59	194	P	P	02 46 57.5	+0.8
MWZ	Matawai	17.64	191	P	P	02 46 55.3	-1.8
URZ	Urewera	17.64	192	P	P	02 46 55.0	-2.0
	comp=Z,60nm,0.3s,baz=249,slow=2.9,SNR=93						
URZ				S	S	02 49 49.2	-5.9
	comp=Z,23nm,0.3s,baz=198,slow=20,SNR=2.2						
URZ				ScS	ScS	02 57 32.4	-5.3
	comp=Z,0.8nm,0.3s,baz=359,slow=23,SNR=7.8						
URZ	Urewera	17.64	192	P	P	02 46 54.7	-2.4
URZ				IAmb	IAmb	02 47 05.6	
	comp=Z,571nm,0.8s						
URZ	Urewera	17.64	192	P	P	02 46 55.1	-2.0
URZ				S	S	02 50 05.2	+10
OMRZ	Omania	17.65	194	P	P	02 46 58.2	+1.0
MKRZ	Makatiti	17.66	194	P	P	02 46 59.3	+1.9
CNGZ	Carnagh Statio	17.68	189	P	P	02 46 57.7	+0.3
NGRZ	Ngongotaha	17.68	194	P	P	02 46 59.6	+2.0
TKGZ	Te Karaka	17.69	190	P	P	02 46 57.3	-0.2
TKGZ				S	S	02 49 58.3	+2.5
UTU	Utuhina	17.75	194	P	P	02 47 03.4	+5.2
RAGZ	Rawiri	17.81	191	P	P	02 46 58.3	-0.5
RAGZ				S	S	02 50 03.1	+5.0
RRRZ	Republican Roa	17.84	193	P	P	02 46 59.2	+0.2
RRRZ				S	S	02 50 07.0	+8.5
HSRZ	Hossack Road	17.87	194	P	P	02 47 00.5	+1.2
MUGZ	Murupara	17.92	193	P	P	02 46 58.8	-1.0
MUGZ				S	S	02 50 09.4	+10
HRRZ	Handcock Road	17.94	194	P	P	02 47 00.2	+0.3
GRRZ	Galatos Road	17.94	194	P	P	02 47 02.4	+2.4
RIGZ	Rimuhau	17.96	190	P	P	02 46 59.1	-1.1
RIGZ				S	S	02 50 00.3	-0.1
RTZ	Ruatahuna	18.01	192	P	P	02 46 58.9	-1.8
RTZ				S	S	02 50 02.4	+1.1
PRRZ	Plateau Road	18.02	193	P	P	02 46 58.2	-2.5
PRRZ				S	S	02 50 15.3	+14
WPRZ	Whakapapatarin	18.09	194	P	P	02 47 01.9	+0.6
SNGZ	Shannon Statio	18.11	191	P	P	02 47 00.7	-0.8
SNGZ				S	S	02 50 15.6	+13
KUTZ	Kaahu Road	18.14	195	P	P	02 47 03.0	+1.2
PRGZ	Paritu Road	18.15	189	P	P	02 47 02.6	+0.7
PRGZ				S	S	02 50 13.9	+10
MTHZ	Maungataniwha	18.27	192	P	P	02 47 01.6	-1.4
WHTZ	Whakaora	18.28	194	P	P	02 47 07.2	+4.1
KNZ	Kokohu	18.28	190	P	P	02 47 02.3	-0.8
KNZ				S	S	02 50 10.8	+5.2
MRHZ	Matea Rd	18.34	193	P	P	02 47 02.7	-0.9
WATZ	Wairara	18.37	195	P	P	02 47 03.8	-0.2
MHGZ	Mahia Peninsul	18.38	189	P	P	02 47 04.0	0.0
HIZ	Hauiti	18.41	197	P	P	02 47 05.3	+1.0
HIZ	Hauiti	18.41	197	P	P	02 47 06.0	+1.7
WHHZ	Waihua	18.41	191	P	P	02 47 03.5	-0.8
HATZ	Hinemaiaia	18.46	194	P	P	02 47 04.6	-0.2
NMHZ	Naumai	18.51	192	P	P	02 47 05.1	-0.2
RATZ	Rangitukua	18.51	195	P	P	02 47 04.3	-0.9
RITZ	Rihia Road	18.59	194	P	P	02 47 07.4	+1.4
KATZ	Kakaramea	18.63	195	P	P	02 47 06.5	+0.1
ARHZ	Aropaoanui	18.64	191	P	P	02 47 06.0	-0.4
BKZ	Black Stump Fm	18.64	193	P	P	02 47 04.1	-2.4
BKZ				IAmb	IAmb	02 47 12.2	
	comp=Z,306nm,0.7s						
BKZ	Black Stump Fm	18.64	193	P	P	02 47 03.8	-2.7
KRVZ	Karewarewa	18.76	195	P	P	02 47 07.6	0.0
TMVZ	Te Maari	18.76	194	P	P	02 47 06.3	-1.3
ETVZ	East Tongariro	18.78	194	P	P	02 47 06.8	-1.0
TWVZ	Taurewa	18.78	195	P	P	02 47 07.3	-0.5
WTVZ	West Tongariro	18.79	195	P	P	02 47 07.3	-0.6
OTVZ	Oturere	18.82	195	P	P	02 47 05.9	-2.3
NGZ	Ngauruhoe	18.84	195	P	P	02 47 07.7	-0.7
MCHZ	McNeill Hill	18.87	192	P	P	02 47 06.9	-1.6
KWHZ	Kaweka Forest	18.90	193	P	P	02 47 07.4	-1.5
TUVZ	Tukino	18.92	194	P	P	02 47 07.3	-1.8
FWVZ	Far West T-bar	18.93	195	P	P	02 47 09.3	0.0
DRZ	Dome Shelter	18.95	195	P	P	02 47 11.2	+1.6
WHVZ	Whangaehu Hut	18.95	195	P	P	02 47 09.1	-0.4
WNVZ	Wahianoa	18.99	195	P	P	02 47 07.6	-2.2
CKHZ	Cape Kidnapper	19.00	191	P	P	02 47 10.1	+0.4
VRZ	Vera Road	19.01	197	P	P	02 47 11.8	+2.0
PKVZ	Pokaka	19.01	195	P	P	02 47 09.6	-0.3
MOVZ	Moawhango	19.03	194	P	P	02 47 09.5	-0.6
BHHZ	Black Hill Sta	19.04	193	P	P	02 47 06.9	-3.3
MTVZ	Mangateitei	19.07	195	P	P	02 47 11.1	+0.7
MHEZ	Mangahewa	19.08	198	P	P	02 47 15.2	+4.7
KRHZ	Kereru	19.12	193	P	P	02 47 08.9	-2.0
KAHZ	Kahuranaki	19.17	191	P	P	02 47 10.1	-1.2
DREZ	Durham Road	19.22	198	P	P	02 47 16.1	+4.4
KNTN	Kanton	19.24	21	P	P	02 47 10.4	-1.7
KNTN				IAmb	IAmb	02 47 11.8	
	comp=Z,579nm,0.9s						
KNTN	Kanton	19.24	21	P	P	02 47 10.7	-1.5
PKE	Pukeiti	19.29	198	P	P	02 47 15.3	+2.9
NEZ	North Egmont	19.33	198	P	P	02 47 16.1	+3.3
KHEZ	Kahui Hut	19.37	198	P	P	02 47 16.6	+3.4
PREZ	Palmer Road	19.38	198	P	P	02 47 17.7	+4.6
NBEZ	Newall Road No	19.39	198	P	P	02 47 17.3	+4.1
PXZ	Pawanui	19.40	191	P	P	02 47 12.4	-0.9
LREZ	Lake Rotokare	19.42	197	P	P	02 47 15.3	+1.8
PNHZ	Pukenui	19.42	193	P	P	02 47 11.7	-1.9
WPHZ	Waipukurau	19.52	192	P	P	02 47 14.3	-0.1
NMEZ	Namu Road	19.52	198	P	P	02 47 17.6	+3.1
WAZ	Wanganui	19.54	195	P	P	02 47 15.0	+0.3
TSZ	Takapari Road	19.61	193	P	P	02 47 14.3	-1.0
PRHZ	Porangahau	19.68	191	P	P	02 47 15.7	-0.1
DVHZ	Dannevirke	19.80	192	P	P	02 47 16.1	-0.9
ANWZ	Angora Road	19.89	192	P	P	02 47 18.0	+0.2
OHWZ	Ohakea	19.89	194	P	P	02 47 18.4	+0.6
POWZ	Post Office Ro	19.97	193	P	P	02 47 18.1	-0.4
PRWZ	Pori Road	20.08	193	P	P	02 47 19.7	+0.2
BFZ	Birch Farm	20.15	192	P	P	02 47 19.3	-0.9
BFZ	Birch Farm	20.15	192	P	P	02 47 18.9	-1.3
TIWZ	Tintock	20.31	193	P	P	02 47 21.7	0.0
CPWZ	Castlepoint	20.38	192	P	P	02 47 23.3	+1.1
HOWZ	Holdsworth Sta	20.51	193	P	P	02 47 21.4	-2.1
OGWZ	Otaki Gorge	20.51	194	P	P	02 47 21.9	-1.5
TMWZ	Te Maipa	20.63	192	P	P	02 47 24.1	-0.4
MTW	Mount Morrison	20.76	193	P	P	02 47 25.6	-0.1
CAW	Cannon Point	20.81	194	P	P	02 47 25.1	-1.0
TRWZ	Traveller	20.95	193	P	P	02 47 27.3	-0.2
PAWZ	Paruwai Farm	20.99	193	P	P	02 47 27.3	-0.5
WEL	Wellington	21.04	195	P	P	02 47 29.4	+1.2
MSWZ	Moikau Station	21.06	193	P	P	02 47 26.9	-1.5
MSWZ	Moikau Station	21.06	193	P	P	02 47 27.7	-0.7
SNZO	South Karori	21.08	195	P	P	02 47 27.7	-0.9
BHW	Baring Head	21.14	194	P	P	02 47 27.4	-1.7
PLWZ	Palliser	21.21	193	P	P	02 47 27.9	-1.9
QRZ	Quartz Range	21.23	199	P	P	02 47 30.3	+0.4
NNZ	Nelson	21.34	197	P	P	02 47 29.1	-1.9
CMWZ	Cape Campbell	21.62	195	P	P	02 47 35.2	+1.7
LHI	Lord Howe Isla	22.75	238	P	P	02 47 42.9	-1.0
	baz=23,SNR=4.4						
LHI	Lord Howe Isla	22.75	238	P	P	02 47 45.6	+1.8
LHI				IAmb	IAmb	02 48 11.2	
	comp=Z,392nm,1.2s						
LHI	Lord Howe Isla	22.75	238	P	P	02 47 45.3	+1.5
TARA	Tarawa	23.80	338	P	P	02 47 52.2	-1.2
TARA	Tarawa	23.80	338	P	P	02 47 53.4	0.0
HNR	Honiara	23.85	296	P	P	02 47 53.7	-0.1
	comp=Z,264nm,0.8s,baz=225,slow=8.2,SNR=11						
HNR				S	S	02 51 32.9	-2.1
	comp=Z,65nm,0.4s,baz=105,slow=19,SNR=1.7						
HNR	Honiara	23.85	296	P	P	02 47 53.1	-0.7
HNR				pmax	pmax		
	comp=Z,529nm,0.8s						
HNR	Honiara	23.85	296	P	P	02 47 53.1	-0.7
HNR				IAmb	IAmb	02 48 03.6	
	comp=Z,529nm,0.8s						
MQZ	McQueen's Vall	23.85	196	IAmb	IAmb	02 48 04.7	
	comp=Z,229nm,0.7s						
RPZ	Rata Peaks	24.31	199	P	P	02 47 55.6	-2.0
	comp=Z,58nm,0.3s,baz=188,slow=3.3,SNR=58						
RPZ				S	S	02 51 36.7	-4.9
	comp=Z,86nm,0.9s,baz=176,slow=19,SNR=2.2						
RPZ				ScS	ScS	02 58 00.1	-1.6
	comp=Z,60nm,1.1s,baz=103,slow=22,SNR=11						
RPZ	Rata Peaks	24.31	199	IAmb	IAmb	02 48 05.5	
	comp=Z,638nm,0.7s						
FOZ	Fox Glacier	24.54	201	P	P	02 47 58.2	-1.4

FOZ				IAmb	IAmb	02 48 05.4	
	comp=Z,469nm,0.8s						
WKZ	Wanaka	25.95	201	P	P	02 48 10.6	-1.5
WKZ				IAmb	IAmb	02 48 22.9	
	comp=Z,357nm,0.8s						
MLZ	Mavora Lakes	26.73	201	IAmb	IAmb	02 48 23.4	
	comp=Z,388nm,0.9s						
TBI	Tubuai	26.84	100	*e*P	P	02 48 20.4	+0.1
	comp=Z,653nm,1.0s						
TBI				*e*ScP	ScP	02 54 21.6	+0.3
	comp=Z,461nm,1.2s						
DCZ	Deep Cove	27.16	203	IAmb	IAmb	02 48 27.6	
	comp=Z,688nm,0.8s						
PAE	Paea	27.34	88	*e*P	P	02 48 24.2	-0.5
	comp=Z,167nm,1.1s						
PAE				*e*ScP	ScP	02 54 23.3	+0.4
	comp=Z,41nm,1.1s						
PPT2	Papeete2	27.36	88	*e*P	P	02 48 24.8	-0.2
	comp=Z,990nm,1.0s						
PPT2				*e*ScP	ScP	02 54 23.8	+0.8
	comp=Z,294nm,1.1s						
PPT	Papeete	27.36	88	P	P	02 48 24.7	-0.3
	comp=Z,1µm,0.9s,baz=17,slow=0.8,SNR=74						
PPT				ScP	ScP	02 54 24.6	+1.6
	comp=Z,289nm,1.0s,baz=302,slow=5.1,SNR=14						
PPTF	Pamatai, Papee	27.37	88	P	P	02 48 23.7	-1.4
TIAR	Tiarei	27.58	88	*e*P	P	02 48 26.6	-0.3
	comp=Z,219nm,0.9s						
TIAR				*e*ScP	ScP	02 54 24.2	+0.6
	comp=Z,34nm,0.9s						
TVO	Taravao	27.62	88	*e*P	P	02 48 26.8	-0.5
	comp=Z,96nm,0.9s						
TVO				*e*ScP	ScP	02 54 24.4	+0.6
	comp=Z,45nm,1.2s						
PYZ	Puysegur Point	27.93	203	P	P	02 48 28.7	-0.8
PYZ				IAmb	IAmb	02 48 37.8	
	comp=Z,268nm,0.9s						
EIDS	Eidsvold	28.39	255	P	P	02 48 34.5	+0.6
	baz=28,SNR=109						
EIDS	Eidsvold	28.39	255	P	P	02 48 33.9	0.0
EIDS				IAmb	IAmb	02 48 38.0	
	comp=Z,225nm,0.6s						
EIDS				PcP	PcP	02 51 32.3	+1.1
ARMA	Armidale	28.55	245	P	P	02 48 34.7	-0.6
	baz=29,SNR=59						
ARMA	Armidale	28.55	245	P	P	02 48 36.2	+0.9
ARMA				PcP	PcP	02 51 33.8	+2.2
MEH	Mehetia	28.71	89	*e*P	P	02 48 36.0	-0.8
	comp=Z,158nm,1.0s						
MEH				*e*ScP	ScP	02 54 27.3	+0.1
	comp=Z,55nm,1.2s						
MGCD	Mangrove Creek	29.66	239	P	P	02 48 44.7	-0.1
	baz=30,SNR=83						
VAH	Vaihoa	29.73	84	*e*P	P	02 48 44.8	-0.9
	comp=Z,758nm,1.0s						
VAH				*e*ScP	ScP	02 54 31.0	+0.5
	comp=Z,193nm,1.2s						
RIV	Riverview	29.80	238	P	P	02 48 46.6	+0.5
	baz=30,SNR=4.7						
RMQ	Roma	30.54	253	P	P	02 48 52.4	-0.2
	baz=31,SNR=153						
XMAS	Kiritimati	30.72	44	P	P	02 48 53.7	-0.5
XMAS				IAmb	IAmb	02 48 55.3	
	comp=Z,510nm,0.9s						
CNB	Canberra Magne	31.67	236	P	P	02 49 03.7	+1.5
	baz=32,SNR=194						
CAN	Canberra	31.95	236	P	P	02 49 05.5	+0.9
CAN				IAmb	IAmb	02 49 09.3	
	comp=Z,581nm,0.8s						
CAN				PcP	PcP	02 51 42.3	+1.7
YNG	Young	32.14	239	P	P	02 49 07.5	+1.3
	baz=32,SNR=29						
KWAJ	Kwajalein Atol	32.67	334	P	P	02 49 11.0	+0.2
KWAJ				pmax	pmax		
	comp=Z,5µm,1.4s						
KWAJ	Kwajalein Atol	32.67	334	P	P	02 49 11.0	+0.2
KWAJ	Kwajalein Atol	32.67	334	P	P	02 49 11.7	+0.9
RABL	Rabaul	33.16	296	P	P	02 49 14.0	-1.2
RABL				IAmb	IAmb	02 49 33.1	
	comp=Z,458nm,0.6s						
RABL					PcP	02 51 46.8	+2.5
RABL	Rabaul	33.16	296	P	P	02 49 16.0	+0.9
CMSA	Cobar Meteorol	33.77	244	P	P	02 49 20.6	+0.6
	baz=34,SNR=350						
QLP	Quilpie	34.59	253	P	P	02 49 27.5	+0.4
	baz=35,SNR=131						
PMG	Port Moresby	35.13	284	P	P	02 49 32.0	+0.3
	comp=Z,878nm,0.8s,baz=94,slow=5.8,SNR=123						
PMG				PcP	PcP	02 51 49.6	-0.4
	comp=Z,320nm,1.1s,baz=109,slow=3.2,SNR=5.9						
PMG				S	S	02 54 28.4	-1.2
	comp=Z,4.3nm,0.3s,baz=331,slow=21,SNR=6.3						
PMG				ScP	ScP	02 54 51.1	+1.8
	comp=Z,102nm,1.1s,baz=251,slow=20,SNR=3.8						
PMG	Port Moresby	35.13	284	*d i*P	P	02 49 32.2	+0.5
PMG				pmax	pmax		
	comp=Z,2µm,1.3s						
PMG	Port Moresby	35.13	284	P	P	02 49 31.8	+0.1
PMG	Port Moresby	35.13	284	P	P	02 49 32.4	+0.7
MTSU	Mount Surprise	35.23	268	P	P	02 49 33.2	+0.6
	baz=35,SNR=144						
TOO	Toolangi	35.33	234	P	P	02 49 34.1	+1.0
	baz=36,SNR=234						
TOO	Toolangi	35.33	234	IAmb	IAmb	02 49 37.5	
	comp=Z,605nm,0.8s						
PATS	Pohnpei	35.92	318	P	P	02 49 39.4	+1.1
	baz=36,SNR=18						
PATS	Pohnpei	35.92	318	P	P	02 49 39.0	+0.7
PATS				PcP	PcP	02 51 54.2	+1.9
TAU	Tasmania Unive	36.03	225	P	P	02 49 39.5	+0.6
TAU				pmax	pmax		
	comp=Z,303nm,1.1s						
TAU	Tasmania Unive	36.03	225	P	P	02 49 39.5	+0.6
STKA	Stephens Creek	37.27	245	P	P	02 49 50.1	+0.8
	baz=37,SNR=156						
STKA	Stephens Creek	37.27	245	P	P	02 49 49.9	+0.6
	comp=Z,218nm,0.9s,baz=85,slow=9.1,SNR=169						
STKA				PP	PP	02 51 25.3	-3.5
	comp=Z,77nm,1.0s,baz=89,slow=9.9,SNR=5.1						
STKA				PcP	PcP	02 51 56.7	+0.4
	comp=Z,72nm,0.5s,baz=96,slow=6.4,SNR=9.6						
STKA				ScP	ScP	02 54 59.0	+2.0
	comp=Z,119nm,1.0s,baz=92,slow=5.3,SNR=14						
STKA				ScS	ScS	02 59 08.3	+1.6
	comp=Z,15nm,0.9s,baz=227,slow=24,SNR=7.4						
STKA	Stephens Creek	37.27	245	P	P	02 49 49.9	+0.6
STKA				PcP	PcP	02 51 57.7	+1.4
COEN	Coen	37.28	274	P	P	02 49 50.0	+0.5
COEN				IAmb	IAmb	02 49 51.7	
	comp=Z,361nm,0.9s						
COEN				PcP	PcP	02 51 57.5	+0.9
MCQ	Macquarie Isla	37.60	202	P	P	02 49 53.8	+2.2
	baz=38,SNR=12						
MCQ	Macquarie Isla	37.60	202	P	P	02 49 53.6	+2.0
	comp=Z,298nm,1.1s						
ARPS	Mount Arapiles	37.93	237	P	P	02 49 55.0	+0.4
	baz=38,SNR=107						
JOHN	Johnston Islan	38.49	14	P	P	02 49 58.8	-0.5
TAOE	Nuku Hiva Isla	38.74	78	*e*P	P	02 50 01.4	-0.2
	comp=Z,2µm,0.9s						
TAOE	Nuku Hiva Isla	38.74	78	P	P	02 50 00.9	-0.7
TAOE				IAmb	IAmb	02 50 03.0	
	comp=Z,766nm,0.8s						
TAOE	Nuku Hiva Isla	38.74	78	P	P	02 50 01.3	-0.3
QIS	Mount Isa	39.22	263	P	P	02 50 05.1	-0.3
	baz=39,SNR=40						
HTT	Hallett	39.70	243	P	P	02 50 09.4	+0.3
	baz=40,SNR=144						
MMPI	Merauke	41.67	281	P	P	02 50 26.9	+1.8
	comp=Z,23µmcomp=Z,930nm,0.7s						
BBOO	Buckleboo	42.02	244	P	P	02 50 27.6	0.0
	baz=42,SNR=20						
BBOO	Buckleboo	42.02	244	P	P	02 50 27.4	-0.2
BBOO				IAmb	IAmb	02 50 29.3	
	comp=Z,399nm,0.9s						
WAKE	Wake Island	42.64	339	P	P	02 50 32.0	-0.6
H11N3	WAKE ISLAND Hy	42.96	339	P	P	02 50 34.9	+0.1
	baz=176,slow=8.9,SNR=8.5						
H11N1	WAKE ISLAND Hy	42.96	339	P	P	02 50 34.9	+0.1
	baz=176,slow=8.9,SNR=4.2						
H11N2	WAKE ISLAND Hy	42.98	339	P	P	02 50 35.3	+0.3
	baz=176,slow=8.9,SNR=4.6						
JAY	Jayapura	43.88	289	P	P	02 50 42.8	+0.3
	comp=Z,923nm,0.8s,baz=119,slow=2.4,SNR=185						
JAY				PcP	PcP	02 52 19.1	+0.7
	comp=Z,163nm,1.1s,baz=204,slow=4.6,SNR=4.5						
JAY				ScP	ScP	02 55 25.5	+2.0
	comp=Z,48nm,1.1s,baz=180,slow=2.5,SNR=3.7						
JAY				S	S	02 56 38.7	+0.6
	comp=Z,36nm,1.0s,baz=350,slow=21,SNR=3.8						
JAY	Jayapura	43.88	289	P	P	02 50 42.6	+0.1
	comp=Z,6µmcomp=Z,736nm,0.9s						
WR0	Warramunga Arr	44.01	263	P	P	02 50 42.9	-0.6
WR0				PcP	PcP	02 52 19.8	+1.1
WR0				IAmb	IAmb	02 52 20.4	
	comp=Z,344nm,0.9s						
AS31	Alice Springs	44.08	257	P	P	02 50 44.0	0.0
AS31				PcP	PcP	02 52 19.6	+0.7
ASAR	Alice Springs	44.08	257	P	P	02 50 44.0	+0.1
	comp=Z,511nm,0.9s,baz=86,slow=8.5,SNR=1456						
ASAR				PcP	PcP	02 52 19.6	+0.7
	comp=Z,287nm,0.8s,baz=105,slow=3.7,SNR=27						
ASAR				ScP	ScP	02 55 26.1	+1.9
	comp=Z,89nm,1.0s,baz=101,slow=3.9,SNR=9.6						
ASAR				S	S	02 56 37.9	-2.8
	comp=Z,36nm,1.0s,baz=96,slow=15,SNR=7.6						
ASAR				PKiKP	PKiKP	02 59 16.9	-1.3
	comp=Z,5.9nm,0.7s,baz=86,slow=1.3,SNR=8.5						
ASAR				ScS	ScS	02 59 50.8	+2.1
	comp=Z,60nm,1.0s,baz=55,slow=5.9,SNR=9.5						
ASAR	Alice Springs	44.08	257	P	P	02 50 43.3	-0.6
WB0	Warramunga Arr	44.18	263	IAmb	IAmb	02 50 45.4	
	comp=Z,514nm,1.0s						
WB2	Warramunga Arr	44.19	263	P	P	02 50 44.4	-0.4
WB2				IAmb	IAmb	02 50 45.6	
	comp=Z,510nm,0.9s						
WB2				PcP	pwP	02 52 20.8	+1.4
WRAB	Tennant Creek	44.19	263	P	P	02 50 43.8	-1.1
WRAB				pmax	pmax		
	comp=Z,481nm,1.0s						
WRAB	Tennant Creek	44.19	263	P	P	02 50 43.8	-1.1
WRAB				IAmb	IAmb	02 50 45.5	
	comp=Z,481nm,0.9s						
WRA	Warramunga Arr	44.20	263	P	P	02 50 44.3	-0.6
	comp=Z,304nm,0.9s,baz=95,slow=7.5,SNR=458						
WRA				PcP	pwP	02 52 19.9	+0.5
	comp=Z,303nm,1.1s,baz=98,slow=3.9,SNR=22						
WRA				ScP	ScP	02 55 26.3	+1.6
	comp=Z,55nm,1.1s,baz=94,slow=4.3,SNR=5.6						
WRA				S	S	02 56 40.0	-2.4
	comp=Z,15nm,1.0s,baz=92,slow=14,SNR=11						
WRA				PKiKP	PKiKP	02 59 16.9	-1.4
	comp=Z,9.5nm,0.9s,baz=83,slow=0.7,SNR=9.6						
WRA				ScS	ScS	02 59 51.2	+1.8
	comp=Z,101nm,1.3s,baz=95,slow=8.9,SNR=11						
WRA				PKPPKP	P'P'df	03 22 11.9	-8.8
	comp=Z,1.9nm,1.0s,baz=298,slow=3.1,SNR=5.3						
WRA	Warramunga Arr	44.20	263	P	P	02 50 43.5	-1.4
WRA	Warramunga Arr	44.20	263	P	P	02 50 43.5	-1.4
GENI	Genyem	44.32	289	P	P	02 50 46.6	+0.7
	comp=Z,6µmcomp=Z,16µmcomp=Z,1µm,0.9s						
KHU	Kahuku	45.78	31	IAmb	IAmb	02 50 58.2	
	comp=Z,469nm,1.1s						
AIN	Ainahou	45.96	31	P	P	02 50 58.6	0.0
AIN				IAmb	IAmb	02 51 01.4	
	comp=Z,816nm,1.1s						
HLP	Hilina Pali	45.97	31	IAmb	IAmb	02 51 31.8	
	comp=Z,350nm,0.9s						
MWH	Moku‘aweowe	45.99	30	IAmb	IAmb	02 51 01.8	
	comp=Z,439nm,0.9s						
MLOA	Mauna Loa Obse	46.05	30	IAmb	IAmb	02 51 00.5	
	comp=Z,577nm,1.0s						
HUH	Hualalai	46.05	30	IAmb	IAmb	02 51 00.6	
	comp=Z,575nm,0.8s						
SDHHI	Sand Hill	46.06	31	IAmb	IAmb	02 51 00.3	
	comp=Z,554nm,1.1s						
WRMHI	West Rim	46.07	31	IAmb	IAmb	02 51 00.4	
	comp=Z,476nm,1.0s						
KKO	Keanakako`i	46.08	31	P	P	02 50 59.2	-0.1
KKO				IAmb	IAmb	02 51 00.6	
	comp=Z,705nm,1.1s						
PUH	Pauahi	46.08	31	IAmb	IAmb	02 51 00.6	
	comp=Z,904nm,1.1s						
UWE	Uwekahuna	46.08	31	IAmb	IAmb	02 51 00.6	
	comp=Z,559nm,1.0s						
OBL	Observatory Le	46.09	31	IAmb	IAmb	02 51 02.0	
	comp=Z,571nm,1.0s						
UWB	Uwekahuna B	46.09	31	IAmb	IAmb	02 51 12.3	
	comp=Z,293nm,0.9s						
SBLHI	Steaming Bluff	46.10	31	P	P	02 50 59.4	-0.1
SBLHI				IAmb	IAmb	02 51 00.7	
	comp=Z,588nm,1.2s						
MLH	Mauna Loa	46.10	31	IAmb	IAmb	02 51 01.6	
	comp=Z,1µm,1.2s						
HMH	Humu‘ula Sheep	46.15	31	P	P	02 50 60.0	-0.1
POHA	Pohakuloa	46.26	30	P	P	02 51 00.7	-0.2
POHA				IAmb	IAmb	02 51 11.4	
	comp=Z,701nm,0.9s						
HON	Honolulu	46.53	27	P	P	02 51 02.8	+0.2
HON				pmax	pmax		
	comp=Z,2µm,1.0s						
HON	Honolulu	46.53	27	P	P	02 51 02.8	+0.2
KIP	Kipapa	46.61	26	*d i*P	P	02 51 03.4	+0.1
KIP				pmax	pmax		
	comp=Z,1µm,1.1s						
KIP	Kipapa	46.61	26	P	P	02 51 03.3	0.0
KIP				IAmb	IAmb	02 51 05.3	
	comp=Z,1µm,1.1s						
OPA	Opana	46.85	26	IAmb	IAmb	02 51 07.0	
	comp=Z,744nm,1.0s						
KDU	Kakadu	47.63	272	P	P	02 51 10.7	-0.4
	baz=48,SNR=140						
FORT	Forrest	48.79	247	P	P	02 51 19.3	-0.4
	baz=49,SNR=70						
FORT	Forrest	48.79	247	P	P	02 51 19.0	-0.6
FORT				IAmb	IAmb	02 51 20.8	
	comp=Z,802nm,0.8s						
MTN	Manton Dam	48.83	271	P	P	02 51 19.6	-0.6
	baz=49,SNR=120						
MTN	Manton Dam	48.83	271	IAmb	IAmb	02 51 20.8	
	comp=Z,356nm,0.8s						
MIDW	Midway	48.94	1	P	P	02 51 18.9	-1.7
MIDW				IAmb	IAmb	02 51 22.4	
	comp=Z,602nm,1.4s						
KNRA	Kununurra	50.29	267	P	P	02 51 31.8	+0.9
	baz=50,SNR=3.8						
ANA2	Anatahan	51.19	314	P	P	02 51 37.7	+0.3
ANA2				IAmb	IAmb	02 51 40.5	
	comp=Z,596nm,0.6s						
ANA2				PcP	PcP	02 52 43.3	-1.3
FAKI	Fak Fak	51.29	284	P	P	02 51 37.9	-0.4
FAKI				IAmb	IAmb	02 51 39.4	
	comp=Z,919nm,1.4s						
SARN	Sarigan	51.39	314	P	P	02 51 38.8	-0.1
FITZ	Fitzroy Crossi	52.63	263	P	P	02 51 48.1	+0.2
	baz=53,SNR=225						
FITZ	Fitzroy Crossi	52.63	263	IAmb	IAmb	02 51 49.6	
	comp=Z,581nm,1.3s						
KMBL	Kambalda	54.05	246	P	P	02 51 57.3	-0.5
	baz=54,SNR=30						
TNTI	Ternate	57.26	285	IAmb	IAmb	02 52 22.2	
	comp=Z,995nm,1.1s						
SBA	Scott Base	57.35	184	P	P	02 52 23.2	+3.1
SBA				pmax	pmax		
	comp=Z,1µm,1.5s						
SBA	Scott Base	57.35	184	P	P	02 52 23.1	+3.1
SBA				IAmb	IAmb	02 54 04.8	
	comp=Z,1µm,1.5s						
VNDA	Vanda	57.38	185	P	P	02 52 22.2	+2.0
	comp=Z,22nm,0.8s,baz=358,slow=7.7,SNR=43						
VNDA	Vanda	57.38	185	P	P	02 52 22.2	+2.0
VNDA				pmax	pmax		
	comp=Z,226nm,1.4s						
VNDA	Vanda	57.38	185	P	P	02 52 22.2	+2.0
MEEK	Meekatharra	57.44	251	P	P	02 52 20.9	-0.7
	baz=58,SNR=72						
KLBR	Kellerberrin	57.54	245	P	P	02 52 22.0	-0.2
	baz=58,SNR=266						
NWAO	Narrogin (SRO)	57.84	244	P	P	02 52 23.9	-0.3
NWAO				pmax	pmax		
	comp=Z,284nm,1.0s						
NWAO	Narrogin (SRO)	57.84	244	P	P	02 52 23.9	-0.3
NWAO	Narrogin (SRO)	57.84	244	P	P	02 52 24.3	+0.1
NWAO				S	S	02 59 43.2	-3.0
MMRI	Maumere	58.44	273	P	P	02 52 27.6	-0.9
MMRI				IAmb	IAmb	02 52 29.5	
	comp=Z,871nm,1.1s						
MMRI					PcP	02 53 14.8	+1.9
BLDU	Ballidu	58.54	246	P	P	02 52 28.7	-0.3
	baz=59,SNR=123						
MUN	Mundaring	58.81	245	P	P	02 52 30.9	+0.2
	baz=59,SNR=79						
MORW	Morawa	59.33	248	P	P	02 52 34.1	-0.2
	baz=59,SNR=86						
JCJ	Chichijima	61.20	320	P	P	02 52 46.5	-0.1
	comp=Z,328nm,0.9s,baz=259,slow=20,SNR=17						
JCJ	Chichijima	61.20	320	P	P	02 52 46.1	-0.6
JCJ				IAmb	IAmb	02 52 47.9	
	comp=Z,665nm,1.1s						
KAPI	Kappang	62.00	276	P	P	02 52 52.0	-0.2
KAPI				pmax	pmax		
	comp=Z,654nm,1.8s						
KAPI	Kappang	62.00	276	P	P	02 52 52.0	-0.2
KAPI				IAmb	IAmb	02 52 53.6	
	comp=Z,654nm,1.8s						
KAPI	Kappang	62.00	276	P	P	02 52 52.2	0.0
GIRL	Giralia	62.09	255	P	P	02 52 53.7	+1.1
	baz=62,SNR=52						
GIRL	Giralia	62.09	255	P	P	02 52 53.8	+1.1
RPN	Rapa Nui	62.63	110	P	P	02 52 56.1	-0.1
	comp=Z,180nm,1.0s,baz=286,slow=5.2,SNR=8.0						
RPN	Rapa Nui	62.63	110	P	P	02 52 56.8	+0.7
RPN				pmax	pmax		
	comp=Z,353nm,1.1s						
RPN	Rapa Nui	62.63	110	P	P	02 52 56.8	+0.7
RPN				IAmb	IAmb	02 52 58.8	
	comp=Z,353nm,1.1s						
CASY	Casey	63.37	205	P	P	02 53 00.8	+0.7
CASY				IAmb	IAmb	02 53 02.6	
	comp=Z,372nm,1.1s						
TOLI2	Tolitoli	63.38	282	P	P	02 53 00.4	-0.7
TOLI2				IAmb	IAmb	02 53 02.3	
	comp=Z,486nm,1.1s						
BKB	Balikpapan	66.02	278	P	P	02 53 20.0	+2.1
BKB				IAmb	IAmb	02 53 21.3	
	comp=Z,333nm,1.1s						
JAGI	Jajag, Banyuwa	66.04	270	P	P	02 53 16.7	-1.3
JAGI				IAmb	IAmb	02 53 18.2	
	comp=Z,685nm,0.9s						
JHJ	Hachijo jima 2	67.03	323	P	P	02 53 23.7	0.0
	comp=Z,2µm,1.0s,baz=187,slow=8.3,SNR=14						
MYLDM	Lahad Datu	67.14	285	IAmb	IAmb	02 53 28.9	
	comp=Z,1µm,1.8s						
SPMM	Sapulut	68.78	284	P	P	02 53 37.0	+2.1
TGY	Tagaytay City	69.06	295	P	P	02 53 37.4	+0.8
	comp=Z,627nm,0.8s,baz=284,slow=0.9,SNR=29						
QSPA	South Pole Qui	69.07	180	P	P	02 53 37.2	+1.4
	comp=Z,74nm,0.8s,baz=27,slow=1.5,SNR=186						
QSPA	South Pole Qui	69.07	180	P	P	02 53 37.1	+1.2
QSPA				IAmb	IAmb	02 55 23.6	
	comp=Z,616nm,1.4s						
JYT	Yasato	69.10	325	IAmb	IAmb	02 53 38.1	
	comp=Z,734nm,1.1s						
KKM	Kota Kinabalu	69.56	285	IAmb	IAmb	02 53 41.7	
	comp=Z,973nm,1.5s						
UGM	Wanagama	69.62	269	IAmb	IAmb	02 53 41.1	
	comp=Z,552nm,0.8s						
SMRI	Semarang	69.98	270	IAmb	IAmb	02 53 43.9	
	comp=Z,433nm,0.9s						
JMM	Marumori	70.02	327	IAmb	IAmb	02 53 43.4	
	comp=Z,606nm,1.1s						
JGF	Kuroka	70.20	323	P	P	02 53 42.7	-0.3
JGF				IAmb	IAmb	02 53 44.4	
	comp=Z,314nm,1.1s						
INU	Inuyama	70.22	322	P	P	02 53 42.7	-0.3
INU				IAmb	IAmb	02 53 44.7	
	comp=Z,304nm,1.1s						
JOW	Kunigami	70.23	310	P	P	02 53 43.9	+0.6
	comp=Z,327nm,0.8s,baz=152,slow=6.8,SNR=30						
MJAR	Matsushiro Arr	70.41	324	P	P	02 53 44.0	-0.2
	comp=Z,167nm,0.9s,baz=158,slow=6.3,SNR=120						
MJAR	Matsushiro Arr	70.41	324	P	P	02 53 43.5	-0.7
MJAR				pmax	pmax		
	comp=Z,102nm,0.9s						
MJAR	Matsushiro Arr	70.41	324	P	P	02 53 43.5	-0.7
MAJO	Matsushiro	70.41	324	*d i*P	P	02 53 44.3	+0.1
MAJO				pmax	pmax		
	comp=Z,627nm,1.7s						
MAJO	Matsushiro	70.41	324	P	P	02 53 43.9	-0.2
MAJO				IAmb	IAmb	02 53 45.6	
	comp=Z,1µm,1.8s						
MAT	Matsushiro	70.41	324	P	P	02 53 44.0	-0.2
MAT				S	S	03 02 15.8	-1.9
MJB9	Matsu-Tunnel	70.42	324	IAmb	IAmb	02 53 45.6	
	comp=Z,252nm,0.8s						
JMN	Monobe	70.94	319	IAmb	IAmb	02 53 49.8	
	comp=Z,701nm,1.2s						
JWT	Wachi	71.10	321	IAmb	IAmb	02 53 50.1	
	comp=Z,445nm,1.0s						
JSD	Sado	71.48	325	IAmb	IAmb	02 53 52.3	
	comp=Z,967nm,1.3s						
JSU	Suzuyama	71.64	315	IAmb	IAmb	02 53 53.4	
	comp=Z,674nm,1.0s						
SBUM	Sibu	71.76	280	P	P	02 53 54.0	+1.4
AMKA	Amchitka	72.09	358	P	P	02 53 53.1	-0.5
ERM	Erimo	72.09	331	P	P	02 53 54.9	+1.0
ERM				pmax	pmax		
	comp=Z,294nm,1.3s						
ERM	Erimo	72.09	331	P	P	02 53 54.9	+1.0
JTM	Tenmabayashi	72.12	329	IAmb	IAmb	02 53 56.0	
	comp=Z,382nm,0.9s						
CISI	Cisompet, Garu	72.27	269	IAmb	IAmb	02 53 56.0	
	comp=Z,499nm,0.9s						
JNU	Nakatsue	72.41	317	P	P	02 53 56.2	+0.2
	comp=Z,439nm,1.0s,baz=106,slow=3.1,SNR=71						
JNU	Nakatsue	72.41	317	IAmb	IAmb	02 53 57.7	
	comp=Z,988nm,1.2s						
YUK	Yuzh-Kuril'sk	72.55	334	*c i*P	P	02 53 55.9	-0.5
YUK				*e*S	S	03 02 40.5	-0.8
YUK				*e*		03 03 20.2	
YUK				pmax	pmax		
	comp=Z,1µm,1.5s						
YUK				pmax	pmax		
	comp=E,324nm,1.2s						
GRPR	Tuman	72.55	334	*i* P	P	02 53 57.4	+0.9
ADK	Adak	72.58	1	P	P	02 53 55.7	-0.8
ADK				pmax	pmax		
	comp=Z,3µm,1.4s						
ADK	Adak	72.58	1	P	P	02 53 55.7	-0.8
KUR	Kuril'sk	72.74	336	*d i*P	P	02 53 57.9	+0.4
KUR				*e*		02 54 11.8	
KUR				*e**PP	pP	02 55 41.1	+0.8
KUR				*e**SP	sP	02 56 31.4	+0.3
KUR						02 56 45.1	
KUR				S	SKiKP	03 02 40.0	+0.7
KUR				pmax	pmax		
	comp=Z,2µm,1.5s						
KUR				pmax	pmax		
	comp=N,446nm,1.1s						
KUR				pmax	pmax		
	comp=E,413nm,1.4s						
KUR				pmax	pmax		
	comp=Z,6µm,5.6s						
YOJ	Yonaguni jima	72.75	305	IAmb	IAmb	02 53 59.5	
	comp=Z,841nm,1.0s						
GSTR	Great Sitkin T	72.81	1	P	P	02 53 57.5	-0.3
ATKA	Atka Island	72.98	3	P	P	02 53 58.0	-0.8
KSM	Kuching	73.15	278	IAmb	IAmb	02 54 02.7	
	comp=Z,478nm,0.8s						
KSM	Kuching	73.15	278	P	P	02 54 01.0	+0.3
XMIS	Christmas Isla	73.33	265	IAmb	IAmb	02 54 03.0	
	comp=Z,302nm,0.9s						
XMIS	Christmas Isla	73.33	265	P	P	02 54 02.3	+0.6
TWG	Pinlang	73.37	303	IAmb	IAmb	02 54 01.8	
	comp=Z,267nm,0.6s						
YULB	Yu-li	73.49	304	IAmb	IAmb	02 54 07.0	
	comp=Z,307nm,1.0s						
NACB	Ninganchiao	73.68	304	IAmb	IAmb	02 54 04.4	
	comp=Z,747nm,1.0s						
SSLB	Suanglung	73.97	304	IAmb	IAmb	02 54 05.5	
	comp=Z,640nm,1.1s						
ASAJ	Asahikawa	74.00	332	P	P	02 54 06.1	+1.3
	comp=Z,583nm,1.1s,baz=214,slow=8.2,SNR=88						
YHNB	Yeheng	74.11	305	IAmb	IAmb	02 54 09.8	
	comp=Z,528nm,0.9s						
NIKH	Nikolski High	74.12	6	P	P	02 54 04.8	-0.4
TATO	Taipei	74.19	305	P	P	02 54 06.1	-0.2
TATO				IAmb	IAmb	02 54 07.4	
	comp=Z,681nm,0.9s						
TATO	Taipei	74.19	305	P	P	02 54 06.3	0.0
SKR	Severo-Kuril’s	74.84	344	*e*P	P	02 54 08.8	-0.6
SKR				*e**PP	sP	02 56 46.2	+2.3
SKR				*e*S	S	03 03 12.3	+6.0
SKR				pmax	pmax		
	comp=Z,800nm,4.4s						
SKR				pmax	pmax		
	comp=Z,450nm,1.4s						
SKR				MLR	MLR		
	comp=Z,700nm,14.0s						

AKUT	Akutan	75.61	8	IAmb	IAmb	02 54 14.7	
	comp=Z,798nm,1.0s						
YSS	Yuzh-Sakhalins	76.19	334	κ *i*P	P	02 54 18.3	+1.3
YSS				*e**PP	pwP	02 56 05.3	+1.1
YSS				*e**SP	sP	02 56 53.3	+2.3
YSS				*e*		02 57 16.2	
YSS				*e*S	S	03 03 21.7	+0.7
YSS				*e*		03 03 35.8	
YSS				*e*SS	SS	03 08 29.0	+0.6
YSS				pmax	pmax		
	comp=Z,570nm,1.3s						
YSS				pmax	pmax		
	comp=Z,4µm,6.0s						
YSS	Yuzh-Sakhalins	76.19	334	P	P	02 54 17.6	+0.6
YSS				IAmb	IAmb	02 54 19.7	
	comp=Z,1µm,1.3s						
KNMB	Chin-men Tao	76.32	303	IAmb	IAmb	02 54 20.3	
	comp=Z,440nm,1.0s						
PET	Petropavlovsk	76.37	346	κ *i*P	P	02 54 17.5	-0.3
PET				*e**SP	sP	02 56 54.5	+1.9
PET				*e*S	S	03 03 23.4	+0.7
PET				*e*SP	SPn	03 04 03.0	-1.0
PET				pmax	pmax		
	comp=Z,582nm,1.5s						
PET				pmax	pmax		
	comp=Z,2µm,15.1s						
PET				MLR	MLR		
	comp=Z,1µm,19.0s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET	Petropavlovsk	76.37	346	P	P	02 54 17.2	-0.6
PET				IAmb	IAmb	02 54 19.0	
	comp=Z,1µm,1.5s						
QZH	Quanzhou	76.41	304	⇓ *i*P	P	02 54 19.5	+0.8
QZH				S	S	03 03 26.0	+1.7
QZH				pmax	pmax		
	comp=Z,440nm,1.4s						
QZH				pmax	pmax		
	comp=Z,2µm,5.6s						
FALS	False Pass	76.62	9	IAmb	IAmb	02 54 22.8	
	comp=Z,670nm,0.8s						
PEA0B	Petropavlovsk-	76.67	345	*d* *i*P	P	02 54 19.2	-0.3
PETK	Petropavlovsk-	76.67	345	P	P	02 54 19.4	-0.1
	comp=Z,628nm,1.1s,baz=118,slow=7.4,SNR=109						
PETK				PKiKP	PKiKP	02 59 56.9	-0.8
	comp=Z,4.6nm,0.7s,baz=101,slow=3.8,SNR=4.8						
PETK	Petropavlovsk-	76.67	345	P	P	02 54 19.0	-0.5
PETK	Petropavlovsk-	76.67	345	P	P	02 54 19.0	-0.5
TJN	Taejon	76.71	318	*d* *i*P	P	02 54 20.4	+0.3
KSRS	Korea Array	77.04	319	P	P	02 54 22.7	+0.8
	comp=Z,99nm,0.9s,baz=140,slow=6.2,SNR=141						
KSAR	Wonju Array Be	77.06	319	P	P	02 54 22.0	0.0
KSAR	Wonju Array Be	77.06	319	P	P	02 54 22.0	0.0
KS19	Wonju Array Si	77.10	319	IAmb	IAmb	02 54 24.5	
	comp=Z,1µm,1.9s						
CNBA	Chernabura Isl	77.21	11	IAmb	IAmb	02 54 24.1	
	comp=Z,1µm,1.2s						
TEY	Ternei	77.47	329	⇓ *i*P	P	02 54 24.7	+0.6
TEY				*e*		02 54 36.4	
TEY				pmax	pmax		
	comp=Z,600nm,5.5s						
TEY				pmax	pmax		
	comp=Z,110nm,1.6s						
TEY				pmax	pmax		
	comp=N,50nm,1.5s						
SSE	Sheshan	77.75	310	P	P	02 54 26.3	+0.4
SSE				S	S	03 03 39.5	+1.2
SSE				pmax	pmax		
	comp=N,96nm,1.0s						
SSE				pmax	pmax		
	comp=N,1µm,11.2s						
SSE	Sheshan	77.75	310	P	P	02 54 26.6	+0.6
SNCC	San Nicolas Is	77.83	47	P	P	02 54 27.9	+1.5
	baz=235,SNR=12						
SNCC				S	S	03 03 46.1	+6.9
	baz=235						
INCN	Inchon	77.86	318	P	P	02 54 27.3	+0.9
INCN				pmax	pmax		
	comp=Z,704nm,1.3s						
INCN	Inchon	77.86	318	P	P	02 54 27.2	+0.9
INCN				IAmb	IAmb	02 54 28.8	
	comp=Z,704nm,1.3s						
INCN	Inchon	77.86	318	P	P	02 54 27.5	+1.1
MNAI	Manna	77.89	270	IAmb	IAmb	02 54 29.1	
	comp=Z,786nm,0.8s						
UGL	Uglegorsk	78.16	335	⇓ *i*P	P	02 54 28.5	+0.8
UGL				*e*S	S	03 03 36.6	-5.2
UGL				pmax	pmax		
	comp=E,340nm,1.0s						
UGL				pmax	pmax		
	comp=Z,700nm,1.1s						
UGL				pmax	pmax		
	comp=Z,3µm,2.5s						
UGL				smax	smax		
	comp=E,2µm,8.0s						
SCZ2	Santa Cruz Isl	78.19	47	P	P	02 54 29.7	+1.4
	baz=234,SNR=44						
SCZ2				S	S	03 03 48.9	+6.0
	baz=234						
SCI2	San Clemente I	78.35	48	P	P	02 54 30.3	+1.1
	baz=235,SNR=17						
SCI2				S	S	03 03 50.6	+6.0
	baz=235						
SBC	Santa Barbara	78.39	46	P	P	02 54 30.9	+1.6
	baz=234,SNR=8.5						
SBC				S	S	03 03 50.9	+6.0
	baz=234						
MSHR	Mys Shultsa	78.52	324	*d* *i*P	P	02 54 30.8	+1.0
MSHR				pmax	pmax		
	comp=Z,587nm,1.3s						
MCCM	Marconi Confer	78.56	42	IAmb	IAmb	02 54 32.7	
	comp=Z,466nm,1.1s						
PKM	Mcpherson Peak	78.58	46	P	P	02 54 31.9	+1.2
	baz=234,SNR=82						
PKM				S	S	03 03 52.2	+4.9
	baz=234						
SAO	San Andreas Ge	78.62	43	P	P	02 54 31.7	+1.2
SAO				pmax	pmax		
	comp=Z,422nm,1.1s						
SAO	San Andreas Ge	78.62	43	P	P	02 54 31.7	+1.2
SAO				IAmb	IAmb	02 54 33.3	
	comp=Z,422nm,1.1s						
SMMC	Simmler	78.71	45	P	P	02 54 32.5	+1.5
	baz=234,SNR=46						
SMMC				S	S	03 03 53.5	+5.1
	baz=234						
PMPB	Monarch Peak	78.71	44	P	P	02 54 32.3	+1.2
PMPB				IAmb	IAmb	02 54 34.1	
	comp=Z,404nm,1.2s						
PAGB	Antelope Grade	78.78	45	IAmb	IAmb	02 54 34.4	
	comp=Z,752nm,1.8s						
FMP	Fort Macarthur	78.94	47	P	P	02 54 33.4	+1.2
	baz=236						
FMP				S	S	03 03 55.0	+4.3
	baz=236						
DLV	T Lat	78.94	287	IAmb	IAmb	02 54 35.7	
	comp=Z,428nm,1.0s						
HOPS	Hopland Field	78.97	41	IAmb	IAmb	02 54 35.6	
	comp=Z,597nm,1.1s						
KCPM	Cahto Peak	79.09	40	IAmb	IAmb	02 54 36.0	
	comp=Z,651nm,1.1s						
TJX	Tijuana	79.14	49	IAmb	IAmb	02 54 36.2	
	comp=Z,384nm,1.1s						
OSI	Osito Audit: C	79.16	46	P	P	02 54 34.8	+1.3
	baz=235						
OSI				S	S	03 03 57.6	+4.6
	baz=235						
USA0B	Ussuriysk Arra	79.19	326	*d* *i*P	P	02 54 34.3	+1.0
USA0B	Ussuriysk Arra	79.19	326	IAmb	IAmb	02 54 36.1	
	comp=Z,849nm,1.2s						
USRK	Ussuriysk Ar.	79.19	326	P	P	02 54 34.2	+0.9
	comp=Z,257nm,1.0s,baz=127,slow=3.7,SNR=192						
USRK	Ussuriysk Ar.	79.19	326	P	P	02 54 33.6	+0.3
USRK	Ussuriysk Ar.	79.19	326	P	P	02 54 33.6	+0.3
DECC	Green Verdugo	79.22	47	P	P	02 54 34.6	+0.8
	baz=235,SNR=14						
DECC				S	S	03 03 58.5	+4.9
	baz=235						
109C	Camp Elliot, M	79.31	49	P	P	02 54 35.2	+0.9
	baz=236,SNR=21						
109C				S	S	03 03 59.6	+5.0
	baz=236						
TYV	Tymovskoe	79.36	336	*e*P	P	02 54 35.2	+1.1
TYV				*e*S	S	03 03 48.9	-5.3
TYV				pmax	pmax		
	comp=Z,828nm,1.4s						
TYV				pmax	pmax		
	comp=Z,2µm,2.3s						
TYV				smax	smax		
	comp=E,19nm,1.9s						
TYV				smax	smax		
	comp=N,2µm,6.9s						
ARVC	Arvin	79.38	46	P	P	02 54 35.6	+1.0
	baz=235,SNR=44						
ARVC				S	S	03 04 00.9	+5.7
	baz=235						
JCC	Jacoby Creek,	79.54	39	IAmb	IAmb	02 54 38.3	
	comp=Z,549nm,1.2s						
VES	Vestal, Richgr	79.62	45	P	P	02 54 36.6	+0.7
	baz=235,SNR=70						
VES				S	SKSac	03 04 02.5	-3.4
	baz=235						
MURC	Murrieta	79.64	48	P	P	02 54 37.1	+1.1
	baz=236,SNR=51						
MURC				S	SKSac	03 04 03.7	-2.5
	baz=236						
ESJX	Sierra Juarez	79.65	50	P	P	02 54 36.4	0.0
BFSC	Mount Baldy Ra	79.67	47	P	P	02 54 36.9	+0.6
	baz=236,SNR=72						
BFSC				S	SKSac	03 04 03.9	-2.7
	baz=236						
GZH	Guangzhou	79.67	300	P	P	02 54 38.0	+1.6
GZH				sP	sP	02 57 11.3	+0.4
GZH				S	SKSac	03 04 02.5	-4.2
GZH				pmax	pmax		
	comp=Z,3µm,1.4s						
VOG	Valley Oaks Go	79.70	45	P	P	02 54 37.0	+0.8
	baz=234,SNR=5.9						
VOG				S	SKSac	03 04 02.3	-4.0
	baz=234						
KHMM	Horse Mountain	79.75	39	IAmb	IAmb	02 54 39.8	
	comp=Z,464nm,1.0s						
MONP2	Monument Peak	79.79	49	P	P	02 54 38.4	+1.3
	baz=237,SNR=98						
MONP2				S	SKSac	03 04 05.4	-2.2
	baz=237						
EDW2	Edwards Air Fo	79.80	47	P	P	02 54 38.1	+1.1
	baz=236,SNR=251						
EDW2				S	SKSac	03 04 04.6	-2.7
	baz=236						
O02D	Mt. Diablo Mer	79.87	40	P	P	02 54 39.0	+1.8
	baz=231,SNR=356						
O02D				S	SKSac	03 04 05.7	-1.9
	baz=231						
IKP	In-Ko-Pah, Jac	79.88	49	P	P	02 54 38.7	+1.3
	baz=237,SNR=80						
IKP				S	SKSac	03 04 06.4	-1.5
	baz=237						
ISA	Isabella, Lake	79.92	46	P	P	02 54 38.7	+1.1
	baz=235,SNR=155						
ISA				S	SKSac	03 04 05.8	-2.3
	baz=235						
ISA	Isabella, Lake	79.92	46	IAmb	IAmb	02 54 40.3	
	comp=Z,427nm,1.4s						
SFX	San Felipe	79.92	51	P	P	02 54 38.8	+1.3
NJ2	Nanjing	79.94	310	⇓ *i*P	P	02 54 38.8	+1.2
NJ2				PcP	PcP	02 54 45.3	+2.0
NJ2				S	S	03 04 03.3	+2.2
NJ2				ScS	SKKSac	03 04 12.3	+1.4
NJ2				sS	sS	03 07 09.8	+1.7
NJ2				SS	SS	03 09 26.5	+1.7
NJ2				pmax	pmax		
	comp=Z,370nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,3µm,4.3s						
LPIG	La Paz	79.95	59	P	P	02 54 39.1	+1.3
	comp=Z,33nm,0.3s,baz=232,slow=2.1,SNR=6.1						
SLBS	Sierra La Lagu	80.05	60	P	P	02 54 39.3	+0.8
KRMB	Red Mountain	80.06	38	IAmb	IAmb	02 54 41.4	
	comp=Z,532nm,1.1s						
PFO	Pinyon Flats O	80.16	48	PKPPKP	PKPPKPdf	03 21 20.1	
	comp=Z,2.5nm,1.0s,baz=202,slow=0.6,SNR=4.2						
PFO	Pinyon Flats O	80.16	48	⇓ *i*P	P	02 54 39.5	+0.7
PFO				pmax	pmax		
	comp=Z,175nm,1.1s						
PFO	Pinyon Flats O	80.16	48	P	P	02 54 39.8	+0.9
	baz=237,SNR=55						
PFO				S	SKSac	03 04 10.0	+0.1
	baz=237						
PFO	Pinyon Flats O	80.16	48	P	P	02 54 39.6	+0.7
TPFO	Pinon Flats	80.16	48	P	P	02 54 39.8	+0.9
	baz=237,SNR=59						
TPFO				S	SKSac	03 04 09.4	-0.5
	baz=237						
BBRC	Big Bear Solar	80.19	48	P	P	02 54 40.1	+0.9
	baz=236,SNR=18						
BBRC				S	SKSac	03 04 09.3	-1.1
	baz=236						
SWSC	Sam W. Stewart	80.26	49	P	P	02 54 40.4	+1.2
	baz=237,SNR=67						
SWSC				S	SKSac	03 04 09.0	-1.3
	baz=237						
WDC	Whiskeytown Da	80.27	40	IAmb	IAmb	02 54 42.0	
	comp=Z,517nm,1.1s						
ORV	Oroville	80.27	41	IAmb	IAmb	02 54 41.6	
	comp=Z,346nm,1.1s						
KBO	Bosley Butte	80.32	38	IAmb	IAmb	02 54 42.7	
	comp=Z,582nm,1.2s						
LRMC	Laurel Mtn Rad	80.35	46	P	P	02 54 40.8	+0.9
	baz=236,SNR=75						
LRMC				S	SKSac	03 04 11.3	+0.2
	baz=236						
N02D	Trinity Center	80.42	39	P	P	02 54 41.8	+1.8
	baz=231,SNR=306						
N02D				S	SKSac	03 04 10.3	-1.0
	baz=231						
RRX	Edison Barstow	80.48	47	P	P	02 54 41.4	+1.0
	baz=236						
RRX				S	SKSac	03 04 11.1	-0.7
	baz=236						
O03E	Paynes Creek	80.54	40	P	P	02 54 41.6	+0.9
	baz=232,SNR=300						
O03E				S	SKSac	03 04 10.3	-1.8
	baz=232						
M02C	Callahan	80.59	39	P	P	02 54 42.8	+1.9
	baz=231,SNR=613						
M02C				S	SKSac	03 04 12.7	+0.3
	baz=231						
CWC	Cottonwood Cre	80.63	45	P	P	02 54 42.4	+1.1
	baz=235						
CWC				S	SKSac	03 04 13.1	0.0
	baz=235						
L02E	Cave Junction	80.64	38	P	P	02 54 42.5	+1.5
	baz=230,SNR=113						
L02E				S	SKSac	03 04 12.1	-0.5
	baz=230						
MDPB	Devils Postpil	80.66	44	IAmb	IAmb	02 54 44.1	
	comp=Z,325nm,1.1s						
KEBM	Edson Butte	80.68	37	P	P	02 54 42.5	+1.2
KEBM				IAmb	IAmb	02 54 44.3	
	comp=Z,549nm,1.1s						
BELC	Belle Mtn. Jos	80.69	48	P	P	02 54 43.0	+1.3
	baz=237,SNR=154						
BELC				S	SKSac	03 04 14.8	+1.3
	baz=237						
MDJ	Mudanjiang	80.73	325	P	P	02 54 42.3	+0.8
MDJ				pP	pwP	02 56 29.0	-1.4
MDJ				sP	sP	02 57 20.5	+4.0
MDJ				S	SKSac	03 04 13.8	+0.8
MDJ				pmax	pmax		
	comp=Z,610nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,4µm,7.1s						
MDJ	Mudanjiang	80.73	325	IAmb	IAmb	02 54 44.2	
	comp=Z,763nm,1.2s						
QIZ	Qiongzhong	80.75	294	P	P	02 54 43.0	+0.8
QIZ				pP	pP	02 56 27.0	-0.2
QIZ				sP	sP	02 57 18.8	+1.8
QIZ				S	S	03 04 12.8	+2.9
QIZ				SS	SS	03 09 39.0	+1.8
QIZ				pmax	pmax		
	comp=Z,110nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,1µm,11.8s						
QIZ	Qiongzhong	80.75	294	IAmb	IAmb	02 54 44.7	
	comp=Z,473nm,1.8s						
MPMC	Manual Prospec	80.81	46	P	P	02 54 43.2	+0.9
	baz=236,SNR=155						
MPMC				S	SKSac	03 04 15.5	+1.1
	baz=236						
RUBR	Rubicon Trail	80.81	42	IAmb	IAmb	02 54 47.8	
	comp=Z,515nm,1.2s						
MLAC	Mammoth, Mammo	80.81	44	P	P	02 54 43.7	+1.3
	baz=234,SNR=8.3						
MLAC				S	SKSac	03 04 16.5	+2.0
	baz=234						
GSC	Goldstone, Bar	80.85	47	P	P	02 54 43.2	+0.8
	baz=236,SNR=48						
GSC				S	SKSac	03 04 15.7	+1.3
	baz=236						
TIN	Tinemaha, Big	80.88	45	P	P	02 54 43.8	+1.2
	baz=235,SNR=15						
TIN				S	SKSac	03 04 16.8	+2.2
	baz=235						
BC3	Big Chuckawall	80.88	49	P	P	02 54 44.0	+1.3
	baz=237,SNR=101						
BC3				S	SKSac	03 04 17.0	+2.2
	baz=237						
YBH	Yreka Blue Hor	80.89	39	PKPPKP	PKPPKPdf	03 21 18.8	
	comp=Z,7.3nm,1.2s,baz=128,slow=4.0,SNR=5.0						
YBH	Yreka Blue Hor	80.89	39	IAmb	IAmb	02 54 45.5	
	comp=Z,529nm,1.0s						
HEC	Hector,Ludlow	80.91	47	P	P	02 54 43.6	+0.9
	baz=237,SNR=185						
HEC				S	SKSac	03 04 14.8	0.0
	baz=237						
WAKR	Walker	80.94	43	IAmb	IAmb	02 54 45.8	
	comp=Z,605nm,1.2s						
COCO	West Island	80.94	260	P	P	02 54 44.5	+1.2
COCO				pmax	pmax		
	comp=Z,1µm,1.4s						
COCO	West Island	80.94	260	P	P	02 54 44.5	+1.2
COCO				IAmb	IAmb	02 54 46.5	
	comp=Z,1µm,1.4s						
K02D	Willamette Mer	80.94	38	P	P	02 54 44.0	+1.3
	baz=230,SNR=142						
K02D				S	SKSac	03 04 14.5	-0.2
	baz=230						
MAW	Mawson	80.98	200	P	P	02 54 42.8	+0.4
	baz=81,SNR=12						
MAW	Mawson	80.98	200	P	P	02 54 42.7	+0.3
	comp=Z,88nm,1.0s,baz=106,slow=6.0,SNR=17						
MAW	Mawson	80.98	200	P	P	02 54 42.8	+0.3
GLA	Glamis	81.00	50	P	P	02 54 44.9	+1.7
	baz=238,SNR=54						
GLA				S	SKSac	03 04 17.3	+1.9
	baz=238						
GLA	Glamis	81.00	50	IAmb	IAmb	02 54 46.4	
	comp=Z,360nm,1.1s						
J01E	Myrtle Point	81.09	37	P	P	02 54 44.7	+1.4
	baz=230,SNR=64						
J01E				S	SKSac	03 04 17.7	+2.2
	baz=230						
BEKR	Beckworth	81.16	41	IAmb	IAmb	02 54 46.6	
	comp=Z,459nm,1.2s						
PNTR	Pine Nut	81.18	42	IAmb	IAmb	02 54 46.9	
	comp=Z,774nm,1.1s						
VCNR	Virginia City	81.27	42	IAmb	IAmb	02 54 47.3	
	comp=Z,388nm,1.2s						
HUMO	Hull Mountain	81.29	38	IAmb	IAmb	02 54 49.7	
	comp=Z,682nm,1.1s						
BKNI	Bangkinang	81.34	274	IAmb	IAmb	02 54 47.8	
	comp=Z,924nm,1.1s						
GMRC	Granite Mounta	81.35	48	P	P	02 54 46.1	+1.0
	baz=237,SNR=106						
GMRC				S	SKSac	03 04 19.4	+1.5
	baz=237						
IRM	Iron Mountain	81.37	48	P	P	02 54 46.5	+1.4
	baz=237,SNR=190						
IRM				S	SKSac	03 04 20.4	+2.6
	baz=237						
KDAK	Kodiak Island	81.38	14	*d* *i*P	P	02 54 44.5	0.0
KDAK				pmax	pmax		
	comp=Z,2µm,1.3s						
LHV	Little Huntoon	81.39	44	IAmb	IAmb	02 54 48.0	
	comp=Z,456nm,1.2s						
GRAC	Grapevine Rang	81.42	45	P	P	02 54 46.6	+1.3
	baz=236,SNR=232						
GRAC				S	SKSac	03 04 20.4	+2.4
	baz=236						
L04D	Klamath Falls	81.43	39	P	P	02 54 46.5	+1.2
	baz=232,SNR=472						
L04D				S	SKSac	03 04 20.6	+2.5
	baz=232						
M04C	Macdoel	81.43	39	P	P	02 54 46.7	+1.4
	baz=232,SNR=421						
M04C				S	SKSac	03 04 20.6	+2.5
	baz=232						
FURC	Furnace Creek,	81.45	46	P	P	02 54 46.4	+1.0
	baz=236,SNR=83						
FURC				S	SKSac	03 04 21.2	+3.1
	baz=236						
SHOC	Shoshone, Teco	81.54	46	P	P	02 54 46.7	+0.8
	baz=236,SNR=98						
SHOC				S	SKSac	03 04 22.8	+4.0
	baz=236						
RYN	Ryan	81.59	43	IAmb	IAmb	02 54 48.8	
	comp=Z,397nm,1.4s						
NVAR	Mina Array Bea	81.62	43	P	P	02 54 47.3	+0.8
	comp=Z,249nm,1.1s,baz=224,slow=8.0,SNR=512						
NVAR				PKiKP	PKiKP	03 00 06.6	+0.5
	comp=Z,0.9nm,0.7s,baz=194,slow=2.2,SNR=3.8						
NVAR				PKKPbc	PKKPbc	03 13 16.6	+0.2
	comp=Z,4.1nm,0.8s,baz=83,slow=2.7,SNR=12						
NVAR				PKPPKP	P'P'df	03 21 14.6	-4.3
	comp=Z,4.0nm,1.1s,baz=119,slow=1.1,SNR=7.1						
NVAR	Mina Array Bea	81.62	43	P	P	02 54 46.6	+0.1
PAHR	Pah Rah Range	81.67	42	IAmb	IAmb	02 54 49.2	
	comp=Z,423nm,1.1s						
NV11	Mina Array Sit	81.71	44	IAmb	IAmb	02 54 49.4	
	comp=Z,406nm,1.1s						
I02D	Swisshome	81.74	36	P	P	02 54 48.0	+1.3
	baz=230,SNR=33						
I02D				S	SKSac	03 04 22.8	+3.1
	baz=230						
I03D	Drain, OR	81.76	37	P	P	02 54 48.1	+1.3
	baz=231,SNR=116						
I03D				S	SKSac	03 04 22.9	+3.0
	baz=231						
GRNR	Gornyy	81.80	333	⇓ *i*P	P	02 54 48.1	+1.3
GRNR				*e*S	S	03 04 16.7	-2.5
GRNR				pmax	pmax		
	comp=E,60nm,1.1s						
GRNR				pmax	pmax		
	comp=N,100nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,330nm,1.2s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
DL2	Dalian	81.86	317	⇓ *i*P	P	02 54 45.5	-1.9
DL2				sP	sP	02 57 20.0	-2.9
DL2				S	S	03 04 18.5	-1.8
DL2				pmax	pmax		
	comp=N,320nm,1.4s						
DL2				pmax	pmax		
	comp=N,3µm,5.8s						
214A	Organ Pipe Nat	81.89	51	P	P	02 54 49.3	+1.5
	baz=239						
214A				S	SKKSac	03 04 26.0	+0.2
	baz=239						
K04D	Chiloquin, OR	82.00	38	P	P	02 54 49.5	+1.2
	baz=232,SNR=99						
K04D				S	SKKSac	03 04 25.9	-0.4
	baz=232						
NEE2	Needles Airpor	82.06	48	P	P	02 54 49.9	+1.3
	baz=238,SNR=19						
NEE2				S	SKKSac	03 04 27.2	+0.4
	baz=238						
TPNV	Topopah Spring	82.13	46	P	P	02 54 50.1	+1.0
	baz=236,SNR=220						
TPNV				S	SKKSac	03 04 27.6	0.0
	baz=236						
PDMCI	Parker Dam,Lak	82.15	49	P	P	02 54 50.4	+1.4
	baz=238,SNR=114						
PDMCI				S	SKKSac	03 04 28.0	+0.5
	baz=238						
J04D	Umpqua Nationa	82.17	38	P	P	02 54 50.5	+1.3
	baz=232,SNR=264						
J04D				S	SKKSac	03 04 26.2	-1.6
	baz=232						
COR	Corvallis	82.35	36	P	P	02 54 51.3	+1.5
COR				pmax	pmax		
	comp=Z,629nm,1.1s						
COR	Corvallis	82.35	36	P	P	02 54 51.3	+1.5
COR				IAmb	IAmb	02 54 52.7	
	comp=Z,629nm,1.1s						
I04A	Tendick Farm,	82.35	37	P	P	02 54 50.6	+0.8
	baz=231,SNR=176						
I04A				S	S	03 04 26.8	+1.6
	baz=231						
SNY	Shenyang	82.37	320	⇓P	P	02 54 50.3	+0.4

SNY				sP	**sP**	**02 57 24.0**	**-1.4**
SNY				SKS	**SKSac**	**03 04 24.8**	**+0.8**
SNY				S	**SKKSac**	**03 04 27.8**	**-1.0**
SNY				pmax	pmax		
	comp=Z,190nm,1.3s						
SNY				pmax	pmax		
	comp=Z,2µm,8.6s						
MOD	**Modoc Plateau**	**82.42**	**40**	IAmb	IAmb	02 54 52.9	
	comp=Z,554nm,1.1s						
WHN	**Wuhan**	**82.47**	**307**	⇓*i*P	**P**	**02 54 51.5**	**+0.8**
WHN				sP	**sP**	**02 57 27.5**	**+1.6**
WHN				S	**S**	**03 04 25.3**	**-1.4**
WHN				SS	**SS**	**03 10 08.8**	**+6.7**
WHN				pmax	pmax		
	comp=Z,2µm,1.5s						
CN2	**Changchun**	**82.49**	**323**	*e*P	**P**	**02 54 51.0**	**+0.5**
CN2				*e*sP	sP	02 57 25.5	-0.4
CN2				*e*S	**S**	**03 04 27.8**	**+1.4**
CN2				pmax	pmax		
	comp=Z,660nm,1.3s						
CN2				pmax	pmax		
	comp=Z,4µm,8.0s						
H04D	**Lebanon**	**82.62**	**37**	P	**P**	**02 54 52.4**	**+1.3**
	baz=231,SNR=144						
H04D				S	**SKKSac**	**03 04 30.2**	**-0.4**
	baz=231						
J05D	**Fort Rock, OR**	**82.70**	**38**	P	**P**	**02 54 53.3**	**+1.5**
	baz=232,SNR=750						
J05D				S	**SKKSac**	**03 04 33.0**	**+1.3**
	baz=232						
W13A	**Hualapai Mount**	**82.75**	**48**	P	**P**	**02 54 53.2**	**+0.9**
G03D	**McMinnville, O**	**82.77**	**36**	P	**P**	**02 54 53.2**	**+1.4**
	baz=230,SNR=66						
G03D				S	**SKKSac**	**03 04 32.7**	**+1.1**
	baz=230						
KLR	**Kul'dur**	**82.79**	**330**	P	**P**	**02 54 52.8**	**+0.9**
	comp=Z,201nm,1.1s,baz=110,slow=4.1,SNR=160						
KLR	**Kul'dur**	**82.79**	**330**	*d* *i*P	**P**	**02 54 52.4**	**+0.5**
KLR				pmax	pmax		
	comp=Z,448nm,1.4s						
IPM	**Ipoh**	**82.86**	**278**	IAmb	IAmb	02 54 55.3	
	comp=Z,677nm,0.9s						
IPM	**Ipoh**	**82.86**	**278**	P	**P**	**02 54 54.0**	**+0.9**
H04A	**Detroit Lake**	**83.03**	**37**	IAmb	IAmb	02 54 55.5	
	comp=Z,827nm,1.1s						
PRN	**Pahroc Range**	**83.18**	**46**	IAmb	IAmb	02 54 57.2	
	comp=Z,435nm,1.1s						
CNPM	**China Poot**	**83.26**	**14**	P	**P**	**02 54 54.0**	**0.0**
I05D	**Terrebonne, OR**	**83.29**	**37**	P	**P**	**02 54 55.8**	**+1.2**
	baz=232,SNR=240						
I05D				S	**SKKSac**	**03 04 36.8**	**+1.0**
	baz=232						
HOM	**Homer**	**83.29**	**13**	P	**P**	**02 54 54.6**	**+0.5**
	baz=205,SNR=25						
HOM				S	**S**	**03 04 34.1**	**+0.4**
	baz=205						
R11A	**Troy Canyon, C**	**83.34**	**45**	P	**P**	**02 54 55.7**	**+0.5**
	baz=237,SNR=166						
R11A				S	**SKKSac**	**03 04 37.9**	**+1.1**
	baz=237						
TIA	**Tai'an**	**83.36**	**313**	P	**P**	**02 54 55.5**	**+0.4**
TIA				sP	**sP**	**02 57 34.5**	**+3.6**
TIA				S	**SKSac**	**03 04 25.5**	**-5.2**
TIA				pmax	pmax		
	comp=Z,320nm,1.3s						
TIA				pmax	pmax		
	comp=Z,3µm,7.4s						
F04D	**Rainier, OR**	**83.46**	**35**	P	**P**	**02 54 57.0**	**+1.7**
	baz=231,SNR=39						
F04D				S	**SKKSac**	**03 04 40.1**	**+3.3**
	baz=231						
KULM	**Kulim**	**83.51**	**278**	IAmb	IAmb	02 54 58.7	
	comp=Z,445nm,1.0s						
KULM	**Kulim**	**83.51**	**278**	P	**P**	**02 54 58.0**	**+1.7**
TUC	**Tucson**	**83.55**	**52**	P	**P**	**02 54 57.2**	**+0.9**
TUC				pmax	pmax		
	comp=Z,291nm,1.2s						
TUC	**Tucson**	**83.55**	**52**	P	**P**	**02 54 58.1**	**+1.8**
	baz=240						
TUC				S	**SKKSac**	**03 04 40.9**	**+2.5**
	baz=240						
TUC	**Tucson**	**83.55**	**52**	P	**P**	**02 54 57.2**	**+0.9**
TUC				IAmb	IAmb	02 54 59.6	
	comp=Z,291nm,1.2s						
WVOR	**Wild Horse Val**	**83.73**	**40**	IAmb	IAmb	02 54 59.5	
	comp=Z,522nm,1.2s						
NLWA	**Neilton Lookou**	**83.84**	**34**	IAmb	IAmb	02 55 00.6	
	comp=Z,581nm,1.1s						
SVW2	**Sparrevohn**	**83.85**	**11**	P	**P**	**02 54 56.1**	**-0.8**
SVW2				IAmb	IAmb	02 54 58.1	
	comp=Z,441nm,1.2s						
G05D	**Wamic, OR**	**83.86**	**37**	P	**P**	**02 54 58.4**	**+1.0**
	baz=232,SNR=73						
G05D				S	**SKKSac**	**03 04 41.5**	**+1.5**
	baz=232						
DIB	**Dawson Inlet,**	**83.88**	**26**	IAmb	IAmb	02 55 01.3	
	comp=Z,328nm,1.0s						
E04D	**Cinebar**	**83.99**	**35**	P	**P**	**02 54 59.5**	**+1.5**
	baz=231						
E04D				S	**SKKSac**	**03 04 44.8**	**+4.0**
	baz=231						
MA2	**Magadan**	**84.17**	**345**	P	**P**	**02 54 58.1**	**-0.5**
	comp=Z,393nm,1.1s,baz=161,slow=6.5,SNR=42						
MA2	**Magadan**	**84.17**	**345**	*d* *i*P	**P**	**02 54 57.8**	**-0.8**
MA2				pmax	pmax		
	comp=Z,739nm,1.3s						
MA2	**Magadan**	**84.17**	**345**	P	**P**	**02 54 57.6**	**-1.0**
MA2				IAmb	IAmb	02 54 59.7	
	comp=Z,906nm,1.3s						
F05D	**White Salmon**	**84.18**	**36**	P	**P**	**02 54 60.0**	**+1.1**
	baz=232						
F05D				S	**S**	**03 04 43.6**	**+0.6**
	baz=232						
I07A	**Izee**	**84.19**	**38**	IAmb	IAmb	02 55 01.9	
	comp=Z,535nm,1.1s						
319A	**Douglas**	**84.22**	**53**	IAmb	IAmb	02 55 02.9	
	comp=Z,364nm,1.1s						
D04E	**Lakebay**	**84.28**	**34**	P	**P**	**02 55 01.2**	**+1.9**
	baz=231,SNR=26						
D04E				S	**S**	**03 04 47.4**	**+3.6**
	baz=231						
Q23K	**Middleton Isla**	**84.33**	**16**	P	**P**	**02 54 59.5**	**+0.2**
	baz=210						
Q23K				S	**S**	**03 04 45.4**	**+1.7**
	baz=210						
Q23K	**Middleton Isla**	**84.33**	**16**	P	**P**	**02 54 59.8**	**+0.5**
D03D	**Eldon**	**84.34**	**34**	P	**P**	**02 55 00.9**	**+1.2**
	baz=230,SNR=103						
D03D				S	**S**	**03 04 47.7**	**+3.3**
	baz=230						
CAPN	**Captain Cook N**	**84.41**	**13**	P	**P**	**02 55 00.6**	**+1.0**
	baz=205,SNR=26						
CAPN				S	**S**	**03 04 46.7**	**+2.3**
	baz=205						
U15A	**North Rim**	**84.55**	**48**	P	**P**	**02 55 02.5**	**+1.1**
U15A				IAmb	IAmb	02 55 04.2	
	comp=Z,308nm,1.1s						
WUAZ	**Wupatki**	**84.72**	**49**	P	**P**	**02 55 03.1**	**+1.0**
	baz=240,SNR=102						
PGC	**Sidney**	**84.86**	**33**	IAmb	IAmb	02 55 04.5	
	comp=Z,512nm,1.1s						
ELK	**Elko**	**84.88**	**43**	PKPPKP	PKPPKPdf	03 21 12.6	
	comp=Z,5.8nm,1.1s,baz=101,slow=4.9,SNR=6.7						
RC01	**Rabbit Creek A**	**85.00**	**14**	P	**P**	**02 55 02.4**	**-0.1**
	baz=207,SNR=277						
RC01				S	**S**	**03 04 49.9**	**-0.4**
	baz=207						
BBB	**Bella Bella**	**85.00**	**28**	IAmb	IAmb	02 55 05.1	
	comp=Z,504nm,1.2s						
G08A	**Pilot Rock**	**85.22**	**38**	IAmb	IAmb	02 55 06.7	
	comp=Z,583nm,1.1s						
X18A	**Snowflake**	**85.25**	**50**	P	**P**	**02 55 05.2**	**+0.5**
A04D	**Lummi Island**	**85.29**	**33**	P	**P**	**02 55 05.5**	**+1.3**
	baz=231,SNR=154						
A04D				S	**S**	**03 04 55.6**	**+2.1**
	baz=231						
CRAG	**Craig**	**85.31**	**24**	IAmb	IAmb	02 55 06.8	
	comp=Z,470nm,1.1s						
B05A	**Bryant**	**85.31**	**34**	P	**P**	**02 55 05.5**	**+1.1**
	baz=231,SNR=178						
B05A				S	**S**	**03 04 56.9**	**+3.1**
	baz=231						
TRTT	**Trang**	**85.33**	**280**	P	**P**	**02 55 05.0**	**-0.3**
	comp=Z,13µmcomp=Z,987nm,1.3s						
SKT	**Skwentna**	**85.43**	**12**	IAmb	IAmb	02 55 04.8	
	comp=Z,638nm,1.3s						
LTY	**Liberty**	**85.45**	**35**	IAmb	IAmb	02 55 07.3	
	comp=Z,371nm,1.1s						
E07A	**Sunnyside**	**85.47**	**36**	IAmb	IAmb	02 55 07.9	
	comp=Z,648nm,1.1s						
SRAK	**Srakaew**	**85.52**	**287**	P	**P**	**02 55 05.1**	**-1.1**
	comp=Z,29µmcomp=Z,3µm,1.3s						
HAWA	**Hanford**	**85.55**	**36**	IAmb	IAmb	02 55 08.2	
	comp=Z,784nm,1.2s						
RAGM	**Ragged Mountai**	**85.59**	**16**	P	**P**	**02 55 05.2**	**-0.3**
W18A	**Petrified Fore**	**85.69**	**50**	P	**P**	**02 55 07.7**	**+0.9**
	baz=241						
W18A				S	**S**	**03 05 04.8**	**+6.3**
	baz=241						
W18A	**Petrified Fore**	**85.69**	**50**	P	**P**	**02 55 07.3**	**+0.5**
SIT	**Sitka**	**85.71**	**22**	IAmb	IAmb	02 55 08.3	
	comp=Z,405nm,1.2s						
C06D	**Leavenworth**	**85.74**	**35**	P	**P**	**02 55 07.0**	**+0.5**
	baz=232,SNR=12						
C06D				S	**S**	**03 04 58.6**	**+0.6**
	baz=232						
B06A	**Marblemount**	**85.79**	**34**	IAmb	IAmb	02 55 10.6	
	comp=Z,350nm,1.0s						
E08A	**Dider Farm, El**	**85.87**	**37**	P	**P**	**02 55 08.1**	**+0.9**
E08A				IAmb	IAmb	02 55 09.6	
	comp=Z,531nm,1.2s						
121A	**Cookes Peak, D**	**85.88**	**53**	P	**P**	**02 55 09.4**	**+1.6**
	baz=242,SNR=58						
121A				S	**S**	**03 05 06.8**	**+6.4**
	baz=242						
BMO	**Blue Mountains**	**85.92**	**39**	IAmb	IAmb	02 55 09.7	
	comp=Z,270nm,1.1s						
SML	**Sawmill**	**85.95**	**14**	IAmb	IAmb	02 55 21.9	
	comp=Z,582nm,1.0s						
MFID	**Camas Ranch**	**85.98**	**40**	IAmb	IAmb	02 55 10.3	
	comp=Z,261nm,1.2s						
BJT	**Baijiatuau**	**86.00**	**316**	P	**P**	**02 55 08.5**	**+0.6**
BJT				pmax	pmax		
	comp=Z,1µm,1.7s						
BJT	**Baijiatuau**	**86.00**	**316**	P	**P**	**02 55 08.5**	**+0.6**
CUT	**Chulitna**	**86.07**	**13**	P	**P**	**02 55 07.4**	**-0.3**
	baz=206,SNR=96						
CUT				S	**S**	**03 04 59.5**	**-1.0**
	baz=206						
NONG	**Nongkai**	**86.13**	**291**	P	**P**	**02 55 10.0**	**+0.9**
PPLA	**Purkeypile**	**86.14**	**12**	IAmb	IAmb	02 55 08.0	
	comp=Z,458nm,1.3s						
DUG	**Dugway, Tooele**	**86.14**	**44**	P	**P**	**02 55 09.3**	**+0.5**
	baz=238						
DUG				S	**S**	**03 05 06.1**	**+3.6**
	baz=238						
PATY	**Pattaya**	**86.17**	**285**	P	**P**	**02 55 11.4**	**+2.2**
	comp=Z,5µmcomp=Z,458nm,1.3s						
SYO	**Syowa Base**	**86.17**	**193**	⇓*i*P	**P**	**02 55 07.7**	**-0.5**
SYO	**Syowa Base**	**86.17**	**193**	⇑*i*PcP	**PcP**	**02 55 09.4**	**-0.7**
SYO	**Syowa Base**	**86.17**	**193**	⇑*i*pP	pP	02 56 55.0	-0.7
KLU	**Klutina**	**86.23**	**15**	P	**P**	**02 55 08.3**	**-0.3**
KLU				IAmb	IAmb	02 55 10.1	
	comp=Z,739nm,1.2s						
D08A	**Wollman Farm,**	**86.28**	**36**	IAmb	IAmb	02 55 11.7	
	comp=Z,642nm,1.1s						
CHAI	**Chaiyaphum**	**86.30**	**288**	P	**P**	**02 55 10.7**	**+0.8**
	comp=Z,3µmcomp=Z,305nm,1.1s						
WRAK	**Wrangell Islan**	**86.31**	**24**	IAmb	IAmb	02 55 11.4	
	comp=Z,663nm,1.1s						
TGL	**Tana Glacier**	**86.39**	**17**	P	**P**	**02 55 09.3**	**-0.1**
E09A	**Wood Farm, Sta**	**86.39**	**37**	IAmb	IAmb	02 55 11.8	
	comp=Z,668nm,1.2s						
SURT	**Suratani**	**86.57**	**281**	P	**P**	**02 55 13.0**	**+1.8**
	comp=Z,153nmcomp=Z,19nm,1.2s						
PKDT	**Phuket**	**86.60**	**280**	P	**P**	**02 55 12.2**	**+0.9**
	comp=Z,10µmcomp=Z,533nm,1.4s						
GYA	**Guiyang**	**86.60**	**300**	⇓P	**P**	**02 55 12.0**	**+0.7**
GYA				sP	sP	02 57 46.5	-1.0
GYA				SKS	**SKSac**	**03 04 51.0**	**-0.6**
GYA				S	**S**	**03 05 05.8**	**-1.6**
GYA				sS	sS	03 08 17.3	-1.2
GYA				pmax	pmax		
	comp=Z,240nm,1.5s						
BCPM	**Bancas Point**	**86.62**	**18**	P	**P**	**02 55 10.7**	**+0.3**
N25K	**Chitina, Valde**	**86.65**	**15**	P	**P**	**02 55 10.9**	**+0.3**
	baz=211,SNR=311						
N25K				S	**S**	**03 05 06.7**	**+0.4**
	baz=211						
M24K	**Tolsona, Glenn**	**86.70**	**15**	P	**P**	**02 55 11.4**	**+0.6**
	baz=210,SNR=179						
M24K				S	**S**	**03 05 08.1**	**+1.4**
	baz=210						
BALM	**Baldy**	**86.75**	**17**	P	**P**	**02 55 11.2**	**+0.1**
SLVN	**Son La**	**86.78**	**294**	IAmb	IAmb	02 55 17.3	
	comp=Z,271nm,1.2s						
SEY	**Seymchan**	**86.78**	**347**	P	**P**	**02 55 11.1**	**0.0**
	comp=Z,781nm,1.1s,baz=148,slow=4.7,SNR=390						
SEY	**Seymchan**	**86.78**	**347**	*d* *i*P	**P**	**02 55 11.2**	**+0.1**
MPU	**Maple Canyon**	**86.83**	**45**	P	**P**	**02 55 12.7**	**+0.6**
B08A	**Colville Reser**	**86.83**	**35**	IAmb	IAmb	02 55 13.4	
	comp=Z,447nm,1.1s						
JIS	**Juneau Island**	**86.97**	**22**	P	**P**	**02 55 12.4**	**+0.4**
JIS				IAmb	IAmb	02 55 14.3	
	comp=Z,474nm,1.2s						
BESE	**Bessie Mountai**	**87.05**	**21**	P	**P**	**02 55 13.0**	**+0.5**
BESE				IAmb	IAmb	02 55 14.9	
	comp=Z,682nm,1.2s						
C09A	**Chrisman Ranch**	**87.08**	**36**	IAmb	IAmb	02 55 15.0	
	comp=Z,518nm,1.1s						
Y22D	**IRIS PASSCAL I**	**87.24**	**52**	P	**P**	**02 55 15.3**	**+1.1**
	baz=242						
Y22D				S	**S**	**03 05 21.3**	**+8.2**
	baz=242						
LENM	**Lemitar**	**87.24**	**52**	P	**P**	**02 55 14.7**	**+0.5**
PHET	**Kaeng Krachan**	**87.28**	**285**	P	**P**	**02 55 16.7**	**+2.2**
	comp=Z,8µmcomp=Z,900nm,1.1s						
DHY	**Denali Highway**	**87.28**	**14**	IAmb	IAmb	02 55 14.9	
	comp=Z,792nm,1.4s						
MNTX	**Cornudas Mount**	**87.31**	**55**	P	**P**	**02 55 15.6**	**+1.2**
	baz=243,SNR=136						
MNTX				S	**S**	**03 05 19.2**	**+5.6**
	baz=243						
MNTX	**Cornudas Mount**	**87.31**	**55**	P	**P**	**02 55 15.0**	**+0.6**
MNTX				IAmb	IAmb	02 55 17.0	
	comp=Z,219nm,1.2s						
PAF	**Port-aux-Franc**	**87.34**	**218**	IAmb	IAmb	02 55 16.5	
	comp=Z,415nm,1.0s						
TIY	**Taiyuan**	**87.36**	**312**	*e*P	**P**	**02 55 15.5**	**+1.0**
TIY				sP	**sP**	**02 57 46.5**	**-4.6**
TIY				SKS	**SKSac**	**03 04 52.5**	**-3.0**
TIY				S	**ScS**	**03 05 19.5**	**+0.7**
TIY				sS	**sS**	**03 08 24.8**	**-0.8**
TIY				pmax	pmax		
	comp=Z,630nm,1.3s						
TIY				pmax	pmax		
	comp=Z,1µm,4.4s						
BPAW	**Bear Paw Mtn.**	**87.46**	**12**	IAmb	IAmb	02 55 18.6	
	comp=Z,257nm,1.1s						
SNAA	**Sanae**	**87.52**	**179**	P	**P**	**02 55 14.0**	**-0.7**
SNAA	**Sanae**	**87.52**	**179**	PKKP	**PKKPdf**	**03 12 59.5**	**+5.0**
SNAA				SKS	SKSac	03 04 44.0	-12
SNAA				S	SKKSac	03 04 54.6	-12
SNAA	**Sanae**	**87.52**	**179**	pP	pP	02 57 03.3	+1.0
SNAA	**Sanae**	**87.52**	**179**	*d* *i*P	**P**	**02 55 13.8**	**-0.9**
SNAA				pmax	pmax		
	comp=Z,19nm,0.9s						
SNAA	**Sanae**	**87.52**	**179**	IAmb	IAmb	02 57 07.7	
	comp=Z,367nm,1.8s						
MCK	**McKinley**	**87.53**	**13**	P	**P**	**02 55 14.3**	**-0.4**
	baz=207,SNR=672						
MCK				S	**S**	**03 05 12.3**	**-2.0**
	baz=207						
SKAG	**Skagway**	**87.56**	**20**	IAmb	IAmb	02 55 17.7	
	comp=Z,675nm,1.4s						
MVCO	**Mesa Verde**	**87.58**	**49**	P	**P**	**02 55 16.2**	**+0.5**
	baz=241,SNR=15						
MVCO				S	**S**	**03 05 22.0**	**+5.7**
	baz=241						
TX31	**Lajitas Ar. Si**	**87.61**	**57**	IAmb	IAmb	02 55 18.8	
	comp=Z,582nm,1.2s						
TXAR	**Lajitas Array**	**87.61**	**57**	P	**P**	**02 55 17.1**	**+1.2**
	comp=Z,76nm,1.0s,baz=222,slow=5.0,SNR=263						
TXAR				PKiKP	**PKiKP**	**03 00 16.2**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=226,slow=2.4,SNR=2.3						
TXAR				PKKPbc	**PKKPbc**	**03 13 02.6**	**+0.9**
	comp=Z,23nm,0.9s,baz=114,slow=2.1,SNR=45						
TXAR				PKPPKP	**P'P'df**	**03 21 03.4**	**-5.4**
	comp=Z,5.5nm,1.1s,baz=98,slow=2.2,SNR=5.0						
TXAR	**Lajitas Array**	**87.61**	**57**	P	**P**	**02 55 16.5**	**+0.6**
TXAR	**Lajitas Array**	**87.61**	**57**	P	**P**	**02 55 16.5**	**+0.6**
PAX	**Paxson**	**87.62**	**14**	IAmb	IAmb	02 55 16.1	
	comp=Z,500nm,1.2s						
VNA3	**Neumayer Olymp**	**87.67**	**176**	P	**P**	**02 55 14.9**	**-0.4**
VNA3	**Neumayer Olymp**	**87.67**	**176**	PKKP	**PKKPdf**	**03 12 58.5**	**+4.3**
VNA3				SKS	**SKSac**	**03 04 54.5**	**-1.8**
VNA3				S	**SKKSac**	**03 05 10.0**	**+2.1**
VNA3	**Neumayer Olymp**	**87.67**	**176**	pP	pP	02 57 03.7	+0.9
HWUT	**Hardware Ranch**	**87.68**	**44**	IAmb	IAmb	02 55 18.0	
	comp=Z,365nm,2.0s						
PV18	**Skein Mesa, Pa**	**87.79**	**48**	P	**P**	**02 55 16.5**	**-0.2**
PV23	**Carpenter Ridg**	**87.82**	**47**	P	**P**	**02 55 17.0**	**+0.1**
PV11	**David Mesa, Pa**	**87.84**	**48**	IAmb	IAmb	02 55 18.9	
	comp=Z,226nm,1.5s						
AIS	**Amsterdam Isla**	**87.85**	**230**	IAmb	IAmb	02 55 18.2	
	comp=Z,469nm,1.1s						
PV12	**Saucer Basin,**	**87.89**	**48**	P	**P**	**02 55 17.5**	**+0.3**
PV12				IAmb	IAmb	02 55 19.3	
	comp=Z,192nm,1.2s						
ZEA	**Zeya**	**87.90**	**331**	⇓*e*P	**P**	**02 55 17.2**	**+0.7**
ZEA				*e*		02 57 58.4	
ZEA				*e*		03 05 01.1	
ZEA				pmax	pmax		
	comp=N,80nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,600nm,4.5s						
HYT	**Haines Junctio**	**87.95**	**19**	IAmb	IAmb	02 55 18.9	
	comp=Z,482nm,1.1s						
PAYG	**Puerto Ayora**	**87.96**	**90**	P	**P**	**02 55 19.8**	**+1.9**
NEW	**Newport**	**87.97**	**36**	P	**P**	**02 55 17.4**	**+0.3**
	baz=235,SNR=144						
NEW				S	**S**	**03 05 21.0**	**+1.9**
	baz=235						
NEW	**Newport**	**87.97**	**36**	IAmb	IAmb	02 55 18.9	
	comp=Z,210nm,1.1s						
ANMO	**Albuquerque**	**87.98**	**51**	P	**P**	**02 55 18.3**	**+0.6**
	comp=Z,80nm,1.1s,baz=223,slow=4.6,SNR=104						
ANMO				PKPPKP	**P'P'df**	**03 21 07.2**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=195,slow=1.0,SNR=4.5						
ANMO	**Albuquerque**	**87.98**	**51**	P	**P**	**02 55 18.2**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,150nm,1.2s						
ANMO	**Albuquerque**	**87.98**	**51**	P	**P**	**02 55 18.4**	**+0.8**
	baz=243						
ANMO				S	**S**	**03 05 22.1**	**+2.0**
	baz=243						
ANMO	**Albuquerque**	**87.98**	**51**	P	**P**	**02 55 18.2**	**+0.5**
MENT	**Mentasta**	**88.01**	**15**	IAmb	IAmb	02 55 18.7	
	comp=Z,557nm,1.1s						
VNA2	**Neumayer--Watz**	**88.10**	**177**	P	**P**	**02 55 17.1**	**-0.2**
	baz=171,slow=3.9						
VNA2	**Neumayer--Watz**	**88.10**	**177**	PKKP	**PKKPdf**	**03 12 58.0**	**+4.6**
VNA2				SKS	**SKSac**	**03 04 57.4**	**-1.5**
VNA2				S	**S**	**03 05 16.5**	**-3.2**
VNA2	**Neumayer--Watz**	**88.10**	**177**	pP	pP	02 57 06.2	+0.9
XAN	**Xi'an**	**88.17**	**308**	P	**P**	**02 55 19.5**	**+1.1**
XAN				pmax	pmax		
	comp=Z,770nm,1.3s						
XAN				pmax	pmax		
	comp=Z,520nm,7.5s						
PHIT	**Phitsanulok**	**88.19**	**289**	P	**P**	**02 55 20.5**	**+1.8**
	comp=Z,13µmcomp=Z,1µm,1.1s						
NVL	**N'lazarevskaya**	**88.20**	**183**	⇑*i*P	**P**	**02 55 16.4**	**-1.4**
NVL				*e**PP	**pP**	**02 57 06.8**	**+1.1**
NVL				pmax	pmax		
	comp=Z,88nm,1.0s						
SRDT	**SRDT**	**88.27**	**286**	P	**P**	**02 55 20.4**	**+1.2**
	comp=Z,230nm,1.6s						
NEA2	**Nenana**	**88.27**	**12**	P	**P**	**02 55 17.1**	**-0.9**
	baz=207,SNR=183						
NEA2				S	**S**	**03 05 18.1**	**-3.0**
	baz=207						
UTTA	**Uttaradit**	**88.28**	**290**	P	**P**	**02 55 20.7**	**+1.6**
	comp=Z,3µmcomp=Z,326nm,1.3s						
VNA1	**Neumayer--Stat**	**88.33**	**177**	P	**P**	**02 55 18.5**	**+0.1**
VNA1	**Neumayer--Stat**	**88.33**	**177**	PKKP	**PKKPdf**	**03 12 58.6**	**+5.6**
VNA1				SKS	**SKSac**	**03 05 01.1**	**+1.0**
VNA1				S	**S**	**03 05 22.3**	**+0.6**
VNA1	**Neumayer--Stat**	**88.33**	**177**	pP	pP	02 57 07.6	+1.7
WRH	**Wood River Hil**	**88.36**	**13**	P	**P**	**02 55 17.5**	**-0.9**
UTHA	**Uthaitani**	**88.43**	**287**	P	**P**	**02 55 21.6**	**+1.7**
	comp=Z,4µmcomp=Z,447nm,1.2s						
HDA	**Harding Lake**	**88.54**	**13**	P	**P**	**02 55 19.0**	**-0.3**
	baz=209,SNR=417						
HDA				S	**S**	**03 05 21.7**	**-1.9**
	baz=209						
HDA				S	**S**	**03 05 21.7**	**-1.9**
	baz=209						
NANT	**Nan**	**88.55**	**291**	P	**P**	**02 55 22.2**	**+1.8**
	comp=Z,31µmcomp=Z,3µm,1.2s						
AHID	**Auburn Hatcher**	**88.57**	**43**	IAmb	IAmb	02 55 22.5	
	comp=Z,315nm,1.3s						
WHY	**Whitehorse**	**88.63**	**20**	IAmb	IAmb	02 55 22.1	
	comp=Z,406nm,1.1s						
DLBC	**Dease Lake**	**88.64**	**23**	IAmb	IAmb	02 55 22.4	
	comp=Z,449nm,1.1s						
TCOL	**CIGO, UAF Yank**	**88.76**	**13**	P	**P**	**02 55 19.8**	**-0.5**
	baz=208,SNR=183						
TCOL				S	**S**	**03 05 24.8**	**-0.7**
	baz=208						
COLA	**College**	**88.77**	**13**	*d* *i*P	**P**	**02 55 19.6**	**-0.7**
COLA				pmax	pmax		
	comp=Z,1µm,1.2s						
COLA	**College**	**88.77**	**13**	P	**P**	**02 55 19.1**	**-1.2**
SCRK	**Sand Creek**	**88.83**	**14**	P	**P**	**02 55 21.0**	**+0.2**
	baz=212						
SCRK				S	**S**	**03 05 26.9**	**+0.4**
	baz=212						
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**02 55 20.1**	**-0.7**
	comp=Z,540nm,1.0s,baz=217,slow=4.9,SNR=877						
ILAR				PKKP	**PKKPdf**	**03 12 54.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=320,slow=2.0,SNR=6.2						
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**02 55 19.6**	**-1.3**
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**02 55 19.6**	**-1.3**
HIA	**Hailar**	**88.91**	**325**	*d* *i*P	**P**	**02 55 21.4**	**0.0**
HIA				pmax	pmax		
	comp=Z,245nm,1.1s						
HIA	**Hailar**	**88.91**	**325**	IAmb	IAmb	02 55 23.1	
	comp=Z,201nm,1.0s						
MSO	**Missoula**	**88.97**	**38**	P	**P**	**02 55 21.9**	**0.0**
	baz=237,SNR=96						
MSO				S	**S**	**03 05 31.6**	**+3.1**
	baz=237						
SUKH	**Sukhothai**	**88.99**	**289**	P	**P**	**02 55 24.0**	**+1.5**
	comp=Z,5µmcomp=Z,499nm,1.2s						
S22A	**4UR Ranch, Cre**	**89.00**	**49**	P	**P**	**02 55 23.4**	**+0.9**
	baz=242,SNR=98						
S22A				S	**S**	**03 05 35.5**	**+5.9**
	baz=242						
REDW	**Red Top Meadow**	**89.03**	**42**	IAmb	IAmb	02 55 25.3	
	comp=Z,470nm,1.2s						
POKR	**Poker Plat Res**	**89.06**	**13**	P	**P**	**02 55 21.1**	**-0.7**
	baz=209,SNR=240						
POKR				S	**S**	**03 05 24.7**	**-3.6**
	baz=209						
SNOW	**Snow King Moun**	**89.14**	**42**	IAmb	IAmb	02 55 25.4	
	comp=Z,360nm,1.1s						
O20A	**White River Ci**	**89.15**	**46**	P	**P**	**02 55 23.3**	**+0.3**
	baz=241,SNR=72						
O20A				S	**S**	**03 05 34.7**	**+4.1**
	baz=241						
O20A	**White River Ci**	**89.15**	**46**	IAmb	IAmb	02 55 25.1	
	comp=Z,214nm,1.2s						
PLCA	**Paso Flores**	**89.17**	**134**	P	**P**	**02 55 22.9**	**-0.2**
	comp=Z,7.9nm,0.9s,baz=248,slow=5.7,SNR=9.3						
PLCA				PKKPbc	**PKKPbc**	**03 12 57.9**	**-0.1**
	comp=Z,25nm,1.1s,baz=53,slow=3.0,SNR=18						
PLCA				PKPPKP	**P'P'df**	**03 21 01.8**	**-5.4**
	comp=Z,18nm,1.1s,baz=78,slow=3.8,SNR=6.0						
PLCA	**Paso Flores**	**89.17**	**134**	P	**P**	**02 55 23.9**	**+0.8**
PLCA				pmax	pmax		
	comp=Z,132nm,1.5s						
PLCA	**Paso Flores**	**89.17**	**134**	P	**P**	**02 55 23.9**	**+0.8**
PLCA	**Paso Flores**	**89.17**	**134**	*e*P	**P**	**02 55 23.0**	**-0.1**
IMW	**Indian Meadow**	**89.24**	**42**	P	**P**	**02 55 24.6**	**+1.1**
IMW				IAmb	IAmb	02 55 25.9	
	comp=Z,329nm,1.1s						
KMI	**Kunming**	**89.28**	**297**	⇓P	**P**	**02 55 25.8**	**+1.9**
KMI				sP	sP	02 58 03.3	+2.6
KMI				PP	**PP**	**02 59 04.0**	**+0.5**
KMI				SKS	**SKSac**	**03 05 08.5**	**+0.8**
KMI				S	**ScS**	**03 05 36.5**	**+0.9**
KMI				SS	**SS**	**03 11 46.5**	**+4.9**
KMI				pmax	pmax		
	comp=Z,400nm,1.4s						
KMI				pmax	pmax		
	comp=Z,2µm,3.5s						

MOOW	**Moose Ponds**	**89.29**	**42**	P	**P**	**02 55 23.9**	**+0.4**
LOHW	**Long Hollow**	**89.31**	**42**	IAmb	IAmb	02 55 26.0	
	comp=Z,185nm,1.1s						
LAMP	**Lampang**	**89.38**	**290**	P	**P**	**02 55 26.0**	**+1.7**
	comp=Z,7µmcomp=Z,836nm,1.2s						
HHC	**Hu-ho-hao-te**	**89.46**	**315**	*e*P	**P**	**02 55 25.3**	**+1.0**
HHC				sP	sP	02 58 05.8	+4.6
HHC				PP	**PP**	**02 59 02.0**	**-2.5**
HHC				SKS	**SKSac**	**03 05 08.5**	**+0.7**
HHC				S	**ScS**	**03 05 35.0**	**-1.2**
HHC				sS	sS	03 08 41.8	-5.4
HHC				pmax	pmax		
	comp=Z,280nm,1.2s						
HHC				pmax	pmax		
	comp=Z,930nm,6.6s						
FLWY	**Flagg Ranch**	**89.49**	**42**	IAmb	IAmb	02 55 27.2	
	comp=Z,419nm,1.1s						
PAYA	**Payao**	**89.49**	**291**	P	**P**	**02 55 26.0**	**+1.2**
	comp=Z,37µmcomp=Z,5µm,1.1s						
BILL	**Bilibino**	**89.50**	**354***c*	*i*P	**P**	**02 55 23.6**	**-0.1**
BILL				*e**PP	**pP**	**02 57 11.7**	**-0.7**
BILL				*e*		02 59 07.6	
BILL				*i* S	**SKSac**	**03 05 03.4**	**-3.1**
BILL				pmax	pmax		
	comp=Z,372nm,1.2s						
BILL	**Bilibino**	**89.50**	**354**	P	**P**	**02 55 23.1**	**-0.6**
BILL				IAmb	IAmb	02 55 25.3	
	comp=Z,379nm,1.2s						
RDOG	**Red Dog Mine**	**89.52**	**6**	IAmb	IAmb	02 55 26.1	
	comp=Z,522nm,1.2s						
BW06	**Boulder Array**	**89.56**	**43**	P	**P**	**02 55 25.0**	**+0.1**
	baz=240,SNR=107						
BW06				S	**S**	**03 05 35.4**	**+1.1**
	baz=240						
BW06	**Boulder Array**	**89.56**	**43**	IAmb	IAmb	02 55 26.5	
	comp=Z,239nm,1.2s						
PD31	**Pinedale Array**	**89.56**	**43**	IAmb	IAmb	02 55 26.5	
	comp=Z,217nm,1.2s						
PDAR	**Pinedale Array**	**89.56**	**43**	P	**P**	**02 55 24.9**	**0.0**
	comp=Z,214nm,1.1s,baz=211,slow=2.6,SNR=316						
PDAR				PKKPbc	**PKKPbc**	**03 12 56.6**	**-1.2**
	comp=Z,8.6nm,0.9s,baz=98,slow=3.7,SNR=17						
PDAR				PKPPKP	**P'P'df**	**03 21 04.2**	**-0.1**
	comp=Z,1.9nm,1.1s,baz=101,slow=1.5,SNR=5.0						
PDAR	**Pinedale Array**	**89.56**	**43**	P	**P**	**02 55 24.6**	**-0.2**
BOZ	**Bozeman (W)**	**89.69**	**40**	P	**P**	**02 55 26.2**	**+0.9**
	baz=239,SNR=221						
BOZ				S	**S**	**03 05 38.4**	**+3.3**
	baz=239						
BOZ	**Bozeman (W)**	**89.69**	**40**	IAmb	IAmb	02 55 27.7	
	comp=Z,338nm,1.2s						
H17A	**Grant Village**	**89.72**	**42**	P	**P**	**02 55 27.6**	**+2.0**
	baz=240,SNR=157						
H17A				S	S	03 05 45.1	+9.4
	baz=240						
H17A	**Grant Village**	**89.72**	**42**	IAmb	IAmb	02 55 29.1	
	comp=Z,257nm,1.2s						
YHH	**Holmes Hill**	**89.75**	**41**	P	**P**	**02 55 26.6**	**+0.8**
CM04	**Chiang Mai Arr**	**89.91**	**290**	P	**P**	**02 55 28.6**	**+1.8**
	comp=Z,5µmcomp=Z,523nm,1.2s						
LKWY	**Lake**	**89.92**	**41**	IAmb	IAmb	02 55 30.1	
	comp=Z,253nm,1.1s						
SDCO	**Great Sand Dun**	**89.94**	**49**	P	**P**	**02 55 27.3**	**+0.5**
	baz=243,SNR=57						
SDCO				S	**S**	**03 05 43.7**	**+5.6**
	baz=243						
CMAR	**Chiang Mai Arr**	**89.96**	**290**	P	**P**	**02 55 28.8**	**+1.8**
	comp=Z,425nm,1.1s,baz=119,slow=3.0,SNR=555						
CMAR				PKiKP	**PKiKP**	**03 00 20.4**	**+0.4**
	comp=Z,5.7nm,0.6s,baz=202,slow=0.8,SNR=5.3						
CMAR	**Chiang Mai Arr**	**89.96**	**290**	P	**P**	**02 55 28.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**89.96**	**290**	P	**P**	**02 55 28.4**	**+1.4**
CMMT	**Chiang Mai**	**90.09**	**290**	P	**P**	**02 55 27.7**	**+0.1**
	comp=Z,3µmcomp=Z,230nm,1.3s						
CHTO	**Chiang Mai**	**90.10**	**290**	P	**P**	**02 55 28.7**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,509nm,1.1s						
CHTO	**Chiang Mai**	**90.10**	**290**	P	**P**	**02 55 28.7**	**+1.1**
CHTO	**Chiang Mai**	**90.10**	**290**	P	**P**	**02 55 28.9**	**+1.3**
CMIG	**Matias Romero**	**90.14**	**72**	P	**P**	**02 55 28.7**	**+0.9**
	comp=Z,19nm,0.9s,baz=267,slow=4.7,SNR=13						
CMIG				PKKP	**PKKPbc**	**03 12 56.0**	**+1.1**
	comp=Z,14nm,1.0s,baz=76,slow=6.4,SNR=5.2						
WALA	**Waterton Lakes**	**90.19**	**36**	IAmb	IAmb	02 55 29.4	
	comp=Z,217nm,1.1s						
MSTX	**Muleshoe**	**90.28**	**54**	P	**P**	**02 55 28.6**	**+0.4**
	baz=245						
MSTX				S	**S**	**03 05 44.6**	**+3.7**
	baz=245						
MSTX	**Muleshoe**	**90.28**	**54**	IAmb	IAmb	02 55 30.0	
	comp=Z,186nm,1.2s						
YNE	**Yellowstone No**	**90.38**	**41**	P	**P**	**02 55 29.5**	**+0.9**
BTO	**Baotou**	**90.38**	**314**	*e*P	**P**	**02 55 29.0**	**+0.4**
COLD	**Coldfoot**	**90.43**	**11**	P	**P**	**02 55 28.7**	**+0.7**
	baz=206						
COLD				S	**S**	**03 05 40.8**	**+0.3**
	baz=206						
T25A	**Trinidad**	**90.44**	**50**	P	**P**	**02 55 29.3**	**+0.2**
	baz=244,SNR=33						
RWWY	**Rawlins**	**90.57**	**45**	IAmb	IAmb	02 55 30.3	
	comp=Z,241nm,1.1s						
833A	**Chaparral WMA,**	**90.60**	**60**	P	**P**	**02 55 30.2**	**+0.5**
	baz=246,SNR=8.9						
833A				S	**S**	**03 05 46.6**	**+2.8**
	baz=246						
Q24A	**Divide**	**90.73**	**48**	P	**P**	**02 55 31.1**	**+0.6**
	baz=243,SNR=21						
Q24A				S	**S**	**03 05 50.0**	**+4.8**
	baz=243						
MHMT	**Maesarieng**	**90.75**	**289**	P	**P**	**02 55 31.4**	**+0.8**
	comp=Z,6µmcomp=Z,482nm,1.3s						
CD2	**Chengdu**	**90.78**	**303**	P	**P**	**02 55 31.5**	**+1.0**
CD2				pP	pP	02 57 15.5	-2.9
CD2				sP	sP	02 58 09.3	+1.9
CD2				PP	**PP**	**02 59 14.5**	**-0.4**
CD2				SKS	**SKSac**	**03 05 13.0**	**-2.6**
CD2				S	**ScS**	**03 05 50.3**	**+2.8**
CD2				sS	sS	03 09 02.3	+3.8
CD2				SS	**SS**	**03 12 04.0**	**+1.5**
CD2				pmax	pmax		
	comp=Z,210nm,1.3s						
CD2				pmax	pmax		
	comp=Z,2µm,7.4s						
FYU	**Fort Yukon**	**90.78**	**13**	IAmb	IAmb	02 55 32.0	
	comp=Z,210nm,1.3s						
ISCO	**Idaho Springs**	**90.78**	**47**	P	**P**	**02 55 31.3**	**+0.6**
	baz=243,SNR=23						
RLMT	**Red Lodge**	**90.89**	**41**	P	**P**	**02 55 31.9**	**+0.9**
	baz=241,SNR=61						
RLMT				S	**S**	**03 05 50.8**	**+4.7**
	baz=241						
RLMT	**Red Lodge**	**90.89**	**41**	P	**P**	**02 55 31.4**	**+0.5**
RLMT				IAmb	IAmb	02 55 33.4	
	comp=Z,165nm,1.2s						
N23A	**Red Feather La**	**91.05**	**46**	P	**P**	**02 55 32.7**	**+0.8**
	baz=243,SNR=64						
N23A				S	**S**	**03 05 51.8**	**+3.9**
	baz=243						
JCT	**Junction City**	**91.13**	**58**	P	**P**	**02 55 32.2**	**0.0**
	baz=246,SNR=12						
JCT				S	**S**	**03 05 52.3**	**+3.8**
	baz=246						
K22A	**Casper**	**91.47**	**45**	P	**P**	**02 55 33.9**	**+0.3**
	baz=242,SNR=33						
K22A				S	**S**	**03 05 56.1**	**+4.8**
	baz=242						
K22A	**Casper**	**91.47**	**45**	IAmb	IAmb	02 55 35.4	
	comp=Z,219nm,1.2s						
AMTX	**Amarillo**	**91.48**	**53**	P	**P**	**02 55 33.9**	**+0.2**
	baz=245						
AMTX				S	**S**	**03 05 55.2**	**+3.6**
	baz=245						
EGMT	**Eagleton**	**92.02**	**39**	P	**P**	**02 55 36.4**	**+0.4**
	baz=240,SNR=41						
EGMT				S	**S**	**03 05 59.6**	**+3.9**
	baz=240						
EGMT	**Eagleton**	**92.02**	**39**	IAmb	IAmb	02 55 37.8	
	comp=Z,134nm,1.1s						
735A	**Kenedy**	**92.09**	**60**	IAmb	IAmb	02 55 39.3	
	comp=Z,201nm,1.4s						
ABTX	**Abilene, Hawle**	**92.11**	**56**	P	**P**	**02 55 36.9**	**+0.3**
	baz=246,SNR=37						
ABTX				S	**S**	**03 06 01.0**	**+4.0**
	baz=246						
ABTX	**Abilene, Hawle**	**92.11**	**56**	IAmb	IAmb	02 55 38.3	
	comp=Z,147nm,1.2s						
YAK	**Yakutsk**	**92.45**	**338***d*	*i*P	**P**	**02 55 36.6**	**-0.8**
YAK				*e**PP	**pwP**	**02 57 27.7**	**-0.5**
YAK				*e*		02 59 26.3	
YAK				*e*S	**SKSac**	**03 05 20.5**	**-2.8**
YAK				*e*		03 05 51.5	
YAK				pmax	pmax		
	comp=Z,512nm,1.1s						
YAK				pmax	pmax		
	comp=N,57nm,1.1s						
YAK				pmax	pmax		
	comp=E,96nm,1.2s						
YAK				pmax	pmax		
	comp=Z,457nm,3.5s						
YAK				pmax	pmax		
	comp=N,359nm,3.0s						
YAK				smax	smax		
	comp=N,395nm,2.0s						
YAK				smax	smax		
	comp=E,151nm,2.0s						
YAK	**Yakutsk**	**92.45**	**338**	P	**P**	**02 55 36.4**	**-1.0**
KSCO	**Kaye Shedlock'**	**92.52**	**49**	P	**P**	**02 55 39.1**	**+0.6**
	baz=245,SNR=36						
KSCO	**Kaye Shedlock'**	**92.52**	**49**	IAmb	IAmb	02 55 41.1	
	comp=Z,346nm,1.3s						
LZH	**Lanzhou**	**92.81**	**308**	*e*P	**P**	**02 55 41.0**	**+1.1**
LZH				pP	pP	02 57 26.0	-2.0
LZH				sP	sP	02 58 22.3	+5.4
LZH				SKS	**SKSac**	**03 05 24.0**	**-2.9**
LZH				S	**ScS**	**03 06 07.8**	**+3.4**
LZH				pmax	pmax		
	comp=Z,290nm,1.2s						
LZH				pmax	pmax		
	comp=Z,1µm,6.5s						
435B	**Jarrell**	**93.01**	**58**	P	**P**	**02 55 41.3**	**+0.5**
	baz=247,SNR=6.5						
435B				S	**S**	**03 06 08.4**	**+3.5**
	baz=247						
A21K	**Barrow**	**93.31**	**7**	P	**P**	**02 55 41.1**	**0.0**
	baz=200,SNR=129						
A21K				S	**S**	**03 06 03.5**	**-2.2**
	baz=200						
A21K	**Barrow**	**93.31**	**7**	P	**P**	**02 55 40.7**	**-0.4**
DGPR	**DIGLIPUR**	**93.45**	**283⇑**	*e*P	**P**	**02 55 43.5**	**+0.4**
LAO	**LASA Array**	**93.50**	**41**	P	**P**	**02 55 43.8**	**+1.1**
	baz=243,SNR=53						
LAO				S	**S**	**03 06 14.3**	**+5.7**
	baz=243						
LAO	**LASA Array**	**93.50**	**41**	P	**P**	**02 55 43.5**	**+0.8**
LAO				IAmb	IAmb	02 55 45.3	
	comp=Z,120nm,1.1s						
WHTX	**Lake Whitney,**	**93.57**	**57**	P	**P**	**02 55 43.1**	**-0.2**
	baz=248,SNR=6.1						
WHTX				S	**S**	**03 06 11.5**	**+1.8**
	baz=248						
WMOK	**Wichita Mounta**	**93.61**	**54**	P	**P**	**02 55 43.0**	**-0.4**
	baz=247						
WMOK				S	**S**	**03 06 14.1**	**+4.1**
	baz=247						
CIT	**Chita**	**93.71**	**325**	*e*P	**P**	**02 55 43.6**	**+0.1**
CIT				pmax	pmax		
	comp=Z,394nm,1.6s						
OGNE	**Ogallala**	**93.74**	**48**	P	**P**	**02 55 44.2**	**+0.3**
	baz=245						
OGNE	**Ogallala**	**93.74**	**48**	P	**P**	**02 55 44.3**	**+0.3**
RSSD	**Black Hills**	**93.75**	**44**	P	**P**	**02 55 43.8**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,113nm,1.1s						
RSSD	**Black Hills**	**93.75**	**44**	P	**P**	**02 55 44.2**	**+0.1**
	baz=244						
RSSD				S	**S**	**03 06 14.8**	**+3.6**
	baz=244						
RSSD	**Black Hills**	**93.75**	**44**	P	**P**	**02 55 43.8**	**-0.3**
RSSD				IAmb	IAmb	02 55 45.5	
	comp=Z,113nm,1.1s						
HKT	**Hockley**	**94.10**	**60**	P	**P**	**02 55 46.0**	**+0.3**
HKT				pmax	pmax		
	comp=Z,128nm,1.9s						
HKT	**Hockley**	**94.10**	**60**	P	**P**	**02 55 46.0**	**+0.3**
X34A	**Smith Ranch, M**	**94.28**	**55**	P	**P**	**02 55 47.3**	**+0.8**
CBKS	**Cedar Bluff**	**94.50**	**50**	P	**P**	**02 55 47.7**	**+0.2**
	baz=247,SNR=23						
CBKS	**Cedar Bluff**	**94.50**	**50**	IAmb	IAmb	02 55 49.8	
	comp=Z,159nm,1.3s						
ZON	**Zonda**	**94.77**	**126**	P	**P**	**02 55 48.9**	**-0.1**
ZON				pmax	pmax		
	comp=Z,70nm,1.7s						
ZON	**Zonda**	**94.77**	**126**	P	**P**	**02 55 48.9**	**-0.1**
INK	**Inuvik**	**94.84**	**15**	P	**P**	**02 55 47.7**	**-0.5**
	comp=Z,205nm,1.1s,baz=215,slow=5.2,SNR=204						
INK				PKiKP	**PKiKP**	**03 00 27.1**	**+0.3**
	comp=Z,18nm,1.0s,baz=190,slow=1.6,SNR=7.9						
INK				PKKPbc	**PKKPdf**	**03 12 42.9**	**-1.5**
	comp=Z,2.6nm,0.7s,baz=19,slow=5.4,SNR=5.2						
INK	**Inuvik**	**94.84**	**15**	P	**P**	**02 55 47.0**	**-1.2**
INK				pmax	pmax		
	comp=Z,267nm,1.1s						
INK	**Inuvik**	**94.84**	**15**	P	**P**	**02 55 47.0**	**-1.2**
INK				IAmb	IAmb	02 55 49.8	
	comp=Z,267nm,1.1s						
BCOK	**Bluff Creek, N**	**94.84**	**54**	P	**P**	**02 55 49.1**	**+0.1**
BCOK				IAmb	IAmb	02 57 45.7	
	comp=Z,223nm,1.6s						
FNO	**Franklin**	**94.85**	**54**	P	**P**	**02 55 49.4**	**+0.4**
OKCFA	**Oklahoma City**	**94.87**	**54**	P	**P**	**02 55 49.2**	**+0.1**
237A	**Washetta, Mont**	**94.88**	**58**	P	**P**	**02 55 49.6**	**+0.4**
237A				IAmb	IAmb	02 55 51.3	
	comp=Z,106nm,1.4s						
R32A	**Long Quarter,**	**95.08**	**51**	IAmb	IAmb	02 55 52.6	
	comp=Z,95nm,1.0s						
ULN	**Ulaanbaatar**	**95.52**	**319***d*	*i*P	**P**	**02 55 51.5**	**-0.5**
ULN				pmax	pmax		
	comp=Z,116nm,1.4s						
ULN	**Ulaanbaatar**	**95.52**	**319**	P	**P**	**02 55 51.0**	**-0.9**
ULN				IAmb	IAmb	02 55 53.2	
	comp=Z,106nm,1.2s						
ULN	**Ulaanbaatar**	**95.52**	**319**	P	**P**	**02 55 51.6**	**-0.4**
DGMT	**Dagmar**	**95.52**	**40**	P	**P**	**02 55 52.6**	**+0.8**
	baz=244,SNR=37						
DGMT				S	**S**	**03 06 31.1**	**+5.2**
	baz=244						
DGMT	**Dagmar**	**95.52**	**40**	IAmb	IAmb	02 55 54.0	
	comp=Z,214nm,1.1s						
OK031	**S. Brethren Rd**	**95.54**	**54**	IAmb	IAmb	02 57 47.1	
	comp=Z,58nm,0.5s						
OK030	**Cody Creek RV**	**95.57**	**54**	IAmb	IAmb	02 57 43.3	
	comp=Z,40nm,0.5s						
NATX	**Nacogdoches**	**95.70**	**58**	P	**P**	**02 55 52.9**	**-0.1**
	baz=249						
NATX				S	**S**	**03 06 31.2**	**+3.1**
	baz=249						
LKP	**Lekhapani**	**95.84**	**297**	*e*P	**P**	**02 55 54.0**	**+0.3**
SONM	**Songino Array**	**95.91**	**319**	P	**P**	**02 55 53.3**	**-0.4**
	comp=Z,30nm,1.1s,baz=126,slow=3.7,SNR=98						
SONM				PKiKP	**PKiKP**	**03 00 29.2**	**-0.4**
	comp=Z,2.7nm,0.3s,baz=85,slow=1.0,SNR=7.6						
SONM	**Songino Array**	**95.91**	**319**	P	**P**	**02 55 53.0**	**-0.7**
SONM				pmax	pmax		
	comp=Z,57nm,1.3s						
SONM	**Songino Array**	**95.91**	**319**	P	**P**	**02 55 53.0**	**-0.7**
TUL1	**Leonard**	**96.31**	**54**	P	**P**	**02 55 56.1**	**+0.4**
	baz=249						
BOD	**Bodaibo**	**96.36**	**330**	*e*P	**P**	**02 55 54.5**	**-0.8**
BOD				*e*		03 05 40.9	
BOD				pmax	pmax		
	comp=Z,81nm,1.6s						
IMP	**Imphal**	**96.58**	**294**	*e*P	**P**	**02 55 57.2**	**0.0**
IMP				IAmb	IAmb	02 56 01.5	
	comp=Z,67nm,1.0s						
MOKO	**MOKOCHONG**	**96.61**	**296**	*e*P	**P**	**02 55 57.9**	**+0.5**
SAIH	**SAIHA**	**96.61**	**291**	*e*P	**P**	**02 55 57.5**	**0.0**
SAIH				IAmb	IAmb	02 55 59.0	
	comp=Z,79nm,1.1s						
BGNE	**Belgrade**	**96.62**	**48**	P	**P**	**02 55 57.3**	**+0.4**
	baz=248,SNR=7.0						
K31A	**O'Neill**	**96.66**	**47**	IAmb	IAmb	02 55 58.8	
	comp=Z,193nm,1.4s						
KOHI	**KOHIMA**	**96.75**	**295**	*e*P	**P**	**02 55 57.7**	**-0.3**
KOHI				IAmb	IAmb	02 55 59.5	
	comp=Z,63nm,1.0s						
KSU1	**Kansas State U**	**96.86**	**51**	P	**P**	**02 55 58.2**	**+0.2**
	baz=249						
E28A	**Huff**	**96.91**	**43**	P	**P**	**02 55 57.9**	**-0.2**
E28A				IAmb	IAmb	02 56 00.8	
	comp=Z,46nm,0.9s						
GTA	**Gaotai**	**97.03**	**309**	⇓P	Pdif	02 55 59.3	+0.3
GTA				pP	pwP	02 57 53.5	+2.2
GTA				PP	**PP**	**03 00 00.5**	**-2.5**
GTA				SKS	**SKSac**	**03 05 46.0**	**-2.9**
GTA				S	**ScS**	**03 06 40.5**	**+1.1**
GTA				sS	sS	03 09 49.8	-6.6
GTA				SS	**SS**	**03 13 29.3**	**-1.3**
GTA				pmax	pmax		
	comp=Z,93nm,1.5s						
GTA				pmax	pmax		
	comp=Z,570nm,5.5s						
YKA	**Yellowknife Ar**	**97.11**	**25**	P	**P**	**02 55 58.1**	**-0.4**
	comp=Z,55nm,1.0s,baz=232,slow=3.8,SNR=211						
YKA				PKiKP	**PKiKP**	**03 00 30.5**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=264,slow=13,SNR=7.8						
YKA				PKPPKP	**P'P'df**	**03 20 43.2**	**-5.4**
	comp=Z,1.2nm,1.0s,baz=18,slow=2.4,SNR=5.7						
MIAR	**Mount Ida**	**97.53**	**56**	P	**P**	**02 56 01.2**	**+0.1**
	baz=250						
U38A	**Gravette**	**97.56**	**54**	P	Pdif	02 56 01.2	-0.1
ZIRO	**ZIRO**	**97.57**	**296**	*e*P	**P**	**02 56 02.6**	**+0.9**
W39A	**Magazine**	**97.59**	**55**	P	Pdif	02 56 01.3	-0.1
	baz=250						
C36M	**Paulatuk**	**98.03**	**17**	P	**P**	**02 56 03.0**	**+0.5**
	baz=230						
MDND	**Maddock**	**98.08**	**42**	P	Pdif	02 56 03.2	-0.1
	baz=248						
TEZP	**TEZPUR**	**98.16**	**295**	*e*P	Pdif	02 56 04.0	-0.1
ECSD	**EROS Data Cent**	**98.52**	**46**	P	Pdif	02 56 05.1	-0.3
	baz=249,SNR=15						
ECSD	**EROS Data Cent**	**98.52**	**46**	Pdif	Pdif	02 56 05.0	-0.3
SHL	**Shillong**	**98.59**	**294**	*e*P	Pdif	02 56 05.2	-1.1
SHL				IAmb	IAmb	02 56 08.0	
	comp=Z,111nm,1.4s						
U40A	**Yellville**	**98.69**	**54**	P	Pdif	02 56 06.0	-0.3
	baz=250						
W41B	**Gary Mavity, V**	**98.77**	**56**	P	Pdif	02 56 06.0	-0.6
	baz=250						
ZAK	**Zakamensk**	**98.80**	**321**	*e*P	Pdif	02 56 05.4	-1.1
ZAK				*e*		03 05 56.7	
ZAK				pmax	pmax		
	comp=Z,39nm,1.3s						
IRK	**Irkutsk**	**98.94**	**323**	*e*P	Pdif	02 56 05.0	-2.0
IRK				pmax	pmax		
	comp=Z,70nm,1.3s						
TLY	**Talaya**	**99.08**	**322**	P	**Pdif**	**02 56 06.8**	**-0.8**
	comp=Z,18nm,1.0s,baz=147,slow=6.1,SNR=18						
TLY	**Talaya**	**99.08**	**322**	*e*P	**Pdif**	**02 56 07.4**	**-0.2**
TLY				*e*		02 58 51.1	
TLY				*e*		03 00 20.6	
TLY				*e*		03 06 00.2	
TLY				pmax	pmax		
	comp=Z,87nm,1.5s						
TLY	**Talaya**	**99.08**	**322**	Pdif	**Pdif**	**02 56 07.2**	**-0.4**
TIXI	**Tiksi**	**99.14**	**345***d*	*i*P	**Pdif**	**02 56 06.3**	**-1.1**
FFC	**Flin Flon**	**99.36**	**35**	P	**Pdif**	**02 56 08.3**	**-0.4**
FFC				pmax	pmax		
	comp=Z,11nm,1.1s						
FFC	**Flin Flon**	**99.36**	**35**	Pdif	**Pdif**	**02 56 08.3**	**-0.4**
PB16	**IPOC Station P**	**100.10**	**114**		**Pdif**	**02 56 15.4**	**+1.7**
CCM	**Cathedral Cave**	**100.46**	**53**	P	**Pdif**	**02 56 14.6**	**+0.5**
	baz=252						
AGMN	**Agassiz Nation**	**100.59**	**42**	P	**Pdif**	**02 56 14.0**	**-0.4**
	baz=250						
MOY	**Mondy**	**100.61**	**321**	*e*P	**Pdif**	**02 56 13.7**	**-0.9**
MOY				pmax	pmax		
	comp=Z,38nm,2.3s						
GCUF	**Volcan Galeras**	**100.72**	**93**	*e*P	**PP**	**03 00 29.8**	**-1.8**
OXF	**Oxford**	**100.77**	**57**	P	**Pdif**	**02 56 15.8**	**+0.3**
	baz=252						
ULM	**Lac du Bonnet**	**101.23**	**40**	P	**Pdif**	**02 56 16.1**	**-1.1**
	comp=Z,8.1nm,1.1s,baz=252,slow=4.6,SNR=6.4						
ULM				PKiKP	**PKiKP**	**03 00 38.0**	**-0.8**
	comp=Z,13nm,1.0s,baz=311,slow=2.8,SNR=5.4						
SPMN	**Marine on St.**	**101.59**	**46**	P	**Pdif**	**02 56 19.7**	**+0.7**
	baz=252,SNR=8.5						
MARP	**Paez Belalcaza**	**102.59**	**92**	*e*P	**PKiKP**	**03 00 41.1**	**-1.6**
YOTC	**Yotoco, Valle**	**102.63**	**91**	*e*P	**PKiKP**	**03 00 43.5**	**+0.9**
JFWS	**Jewell Farm**	**102.66**	**49**	P	**Pdif**	**02 56 24.6**	**+0.9**
	baz=253						
TAPN	**Taplejung**	**102.70**	**295**	*e*P	**PKiKP**	**03 00 42.7**	**+0.1**
	comp=Z,160nm,1.0s						
PTLC	**Puerto Leguiza**	**102.72**	**95**	*e*P	**PKiKP**	**03 00 43.9**	**+1.2**
ODAN	**Odare**	**102.83**	**294**	*e*P	**PKiKP**	**03 00 42.7**	**-0.1**
	comp=Z,255nm,0.9s						
EYMN	**Ely**	**103.26**	**44**	P	**Pdif**	**02 56 27.1**	**+0.8**
	baz=253						
RAMN	**Ramite**	**103.53**	**294**	*e*P	**PKiKP**	**03 00 43.8**	**-0.3**
	comp=Z,118nm,0.8s						
CBOC	**Ciudad Bolivar**	**103.59**	**89**	*e*P	**PP**	**03 00 51.3**	**-1.1**
TOLC	**Tolima**	**103.80**	**90**	*e*P	**PP**	**03 00 53.4**	**-0.7**
GUY2C	**Guyana, Caldas**	**103.97**	**90**	*e*P	**PP**	**03 00 55.2**	**-0.4**
MACC	**Macarena, Meta**	**104.31**	**93**	*e*P	**PP**	**03 00 55.9**	**-1.6**
GUN	**Gumba**	**104.41**	**295**	*e*P	**PKiKP**	**03 00 45.1**	**-0.7**
PKI	**Pulchoki**	**104.72**	**294**	*e*P	**PKiKP**	**03 00 45.1**	**-1.2**
	comp=Z,153nm,0.9s						
PKIN	**Phulchoki**	**104.73**	**294**	*e*P	**PKiKP**	**03 00 44.8**	**-1.5**
	comp=Z,109nm,0.9s						
ROSC	**El Rosal**	**104.82**	**90**	PKKPbc	PKKPbc	03 12 16.6	+1.2
	comp=Z,25nm,0.7s,baz=150,slow=9.0,SNR=11						
KKN	**Kakani**	**104.89**	**294**	*e*P	**PKiKP**	**03 00 45.6**	**-0.9**
	comp=Z,162nm,1.0s						
DMN	**Daman**	**104.99**	**294**	*e*P	**PKiKP**	**03 00 45.6**	**-1.1**
	comp=Z,82nm,0.8s						
GKN	**Gorkha**	**105.49**	**294**	*e*P	**PKiKP**	**03 00 45.8**	**-1.7**
TKL	**Tuckaleechee C**	**105.52**	**57**	PKiKP	**PKiKP**	**03 00 46.6**	**-0.5**
	comp=Z,5.8nm,0.8s,baz=254,slow=1.4,SNR=5.5						
P49A	**Miami Univ. Ec**	**105.77**	**53**	P	**PKiKP**	**03 00 46.9**	**-0.6**
	baz=256						
CPUP	**Villa Florida**	**105.97**	**127**	PKKPbc	PKKPbc	03 12 09.2	-2.7
	comp=Z,8.4nm,1.0s,baz=66,slow=2.7,SNR=8.5						
CPUP				PKKP	**PKKPdf**	**03 12 23.6**	**+2.1**
	comp=Z,5.9nm,0.9s,baz=97,slow=2.3,SNR=5.6						
KOLN	**Koldanda**	**106.32**	**294**	*e*P	**PKiKP**	**03 00 47.5**	**-1.6**
	comp=Z,126nm,0.9s						
DANN	**Dangsing**	**106.33**	**295**	*e*P	**PKiKP**	**03 00 48.1**	**-1.2**
	comp=Z,146nm,0.8s						
PYUN	**Piuthan**	**106.92**	**294**	*e*P	**PKiKP**	**03 00 48.9**	**-1.4**
	comp=Z,295nm,1.1s						
WMQ	**Urumqi**	**107.00**	**311**	Pdif	**Pdif**	**02 56 43.8**	**+0.7**
WMQ				PP	**PP**	**03 01 15.5**	**-1.1**
WMQ				SS	SS	03 15 50.0	+3.4
WMQ				AMB	AMB		
	comp=Z,620nm,5.9s						
KMSC	**Kings Mountain**	**107.33**	**58**	P	**PKiKP**	**03 00 50.3**	**-0.2**
	baz=256						
W56A	**Indian Trail**	**107.92**	**59**	P	**PKiKP**	**03 00 51.4**	**-0.2**
	baz=257						
HYB	**Hyderabad**	**107.94**	**282**	*i* PKP	**PKiKP**	**03 00 51.0**	**-1.2**
HYB				*e*PP	**PP**	**03 01 24.0**	**+0.1**
S54A	**Dingess, Beckl**	**107.95**	**56**	P	**PKiKP**	**03 00 51.3**	**-0.4**
	baz=257						
M51A	**Elyria**	**108.07**	**52**	P	**PKiKP**	**03 00 51.5**	**-0.2**
	baz=258						
V56A	**Mocksville**	**108.15**	**58**	P	**PKiKP**	**03 00 52.4**	**+0.4**
	baz=257						
U56A	**King**	**108.36**	**57**	P	**PKiKP**	**03 00 52.2**	**-0.2**
	baz=257						
RES	**Resolute Bay**	**108.37**	**16**	PKiKP	**PKiKP**	**03 00 50.2**	**-1.1**
	comp=Z,22nm,0.9s,baz=260,slow=2.5,SNR=15						
RES				PKKPab	**PKKPab**	**03 12 18.2**	**+0.9**
	comp=Z,6.8nm,1.0s,baz=111,slow=4.5,SNR=5.5						
RES	**Resolute Bay**	**108.37**	**16**	PKiKP	**PKiKP**	**03 00 49.9**	**-1.4**
W57A	**Gilead**	**108.40**	**59**	P	**PKiKP**	**03 00 52.8**	**+0.3**
	baz=257						
O53A	**New Philadelph**	**108.56**	**53**	P	**PKiKP**	**03 00 52.4**	**-0.3**
	baz=258						
V57A	**Coltrane Farms**	**108.73**	**58**	P	**PKiKP**	**03 00 52.9**	**-0.3**
	baz=257						
T56A	**Rocky Mt**	**108.78**	**57**	P	**PKiKP**	**03 00 53.0**	**-0.2**
	baz=258						
W58A	**Raeford**	**108.98**	**59**	P	**PKiKP**	**03 00 53.3**	**-0.3**
	baz=257						
M53A	**WI Miller and**	**109.20**	**52**	P	**PKiKP**	**03 00 53.7**	**-0.1**
	baz=259						
T57A	**Hurt**	**109.38**	**57**	P	**PKiKP**	**03 00 54.1**	**-0.2**
	baz=258						
I51A	**Listowel**	**109.40**	**50**	P	**PKiKP**	**03 00 54.0**	**-0.1**
	baz=259						
MCWV	**Mont Chateau**	**109.47**	**54**	P	**PKiKP**	**03 00 54.9**	**+0.5**
	baz=258						
R56A	**Bull Pasture M**	**109.56**	**55**	P	**PKiKP**	**03 00 54.7**	**0.0**
	baz=258						
L53A	**Girard**	**109.60**	**52**	P	**PKiKP**	**03 00 53.9**	**-0.7**
	baz=259						
N54A	**Moraine State**	**109.61**	**53**	P	**PKiKP**	**03 00 54.2**	**-0.5**
	baz=259						
ZSN	**Zaisan**	**109.66**	**314**	*e*Pdif	**Pdif**	**02 56 54.7**	**-0.1**
	baz=314						

ZSN				ePKiKP	PKiKP	03 00 53.0	-1.6
	baz=314						
ZSN	Zaisan	109.66	314	eP	Pdif	02 56 54.7	-0.1
S57A	Dark Hollow, R	109.77	56	P	PKiKP	03 00 54.6	-0.4
	baz=258						
U58A	Oxford	109.81	58	P	PKiKP	03 00 54.7	-0.5
	baz=258						
ERPA	Erie	109.83	51	P	PKiKP	03 00 54.8	-0.2
	baz=259						
Q56A	Snyder Ridge,	109.85	55	P	PKiKP	03 00 54.7	-0.4
	baz=259						
T58A	Grand View Acr	109.94	57	P	PKiKP	03 00 54.9	-0.4
	baz=258						
M54A	Oil Creek Stat	109.96	52	P	PKiKP	03 00 54.8	-0.5
	baz=259						
P56A	Dayton Farm, R	110.20	54	P	PKiKP	03 00 55.9	+0.2
	baz=259						
U59A	Littleton	110.40	58	P	PKiKP	03 00 55.7	-0.6
	baz=258						
Q57A	Strasburg	110.44	55	P	PKiKP	03 00 56.1	-0.2
	baz=259						
S58A	Poland Farm, P	110.44	56	P	PKiKP	03 00 56.1	-0.2
	baz=259						
O56A	Blue Knob Stat	110.55	54	P	PKiKP	03 00 56.4	-0.1
	baz=260						
ZALV	Zalesovo Beam	110.67	321	Pdiff	Pdif	02 56 58.0	-1.0
	comp=Z,0.9nm,0.4s,baz=116,slow=3.4,SNR=14						
ZALV				PKiKP	PKiKP	03 00 54.9	-1.3
	comp=Z,44nm,0.6s,baz=141,slow=1.6,SNR=78						
ZALV				SKP		03 03 45.3	
	comp=Z,17nm,1.1s,baz=236,slow=1.6,SNR=3.7						
ZALV	Zalesovo Beam	110.67	321	Pdif	Pdif	02 56 57.6	-1.4
V60A	Jim Taylor Roa	110.71	59	P	PKiKP	03 00 56.6	-0.3
	baz=258						
T59A	Double "B" Far	110.71	57	P	PKiKP	03 00 56.5	-0.3
	baz=259						
P57A	Homestead Farm	110.83	55	P	PKiKP	03 00 56.5	-0.5
	baz=260						
N56A	West Decatur	110.87	53	P	PKiKP	03 00 56.8	-0.3
	baz=260						
NRIK	Noril'sk	110.90	338	Pdiff	Pdif	02 56 59.5	-0.2
	comp=Z,11nm,1.2s,baz=85,slow=4.7,SNR=9.2						
NRIK				PKiKP	PKiKP	03 00 55.6	-0.6
	comp=Z,17nm,0.6s,baz=94,slow=2.8,SNR=21						
Q58A	Fox Den Farm,	110.98	55	P	PKiKP	03 00 56.6	-0.7
	baz=260						
M56A	Emporium	111.05	52	P	PKiKP	03 00 57.2	-0.1
	baz=260						
H53A	Bobcaygeon	111.26	49	P	PKiKP	03 00 57.5	-0.1
	baz=261						
R59A	King George, V	111.28	56	P	PKiKP	03 00 57.6	-0.3
	baz=260						
MK31	Makanchi Array	111.30	313	⇑iP	Pdif	02 57 02.5	+0.4
MK31				i		03 00 56.8	
MKAR	Makanchi Array	111.30	313	Pdiff	Pdif	02 57 02.6	+0.5
	comp=Z,8.2nm,0.8s,baz=92,slow=6.1,SNR=26						
MKAR				PKiKP	PKiKP	03 00 56.9	-0.8
	comp=Z,39nm,0.6s,baz=135,slow=0.7,SNR=239						
MKAR				SKP		03 03 46.7	
	comp=Z,11nm,0.9s,baz=81,slow=3.8,SNR=4.2						
MKAR				PKKPbc	PKKPbc	03 11 55.0	-0.7
	comp=Z,1.9nm,0.5s,baz=268,slow=2.9,SNR=16						
MKAR	Makanchi Array	111.30	313	c iPKIKP	PKiKP	03 00 56.5	-1.2
MKAR				pmax	pmax		
	comp=Z,39nm,0.6s						
MKAR	Makanchi Array	111.30	313	Pdif	Pdif	02 57 02.1	0.0
P58A	Pank, Wackersv	111.37	55	P	PKiKP	03 00 57.9	0.0
	baz=260						
N57A	Milroy	111.39	53	P	PKiKP	03 00 57.5	-0.6
	baz=260						
U61A	Possum Corner	111.46	58	P	PKiKP	03 00 57.5	-0.8
	baz=259						
MAKZ	Makanchi	111.51	313	Pdif	Pdif	02 57 03.3	+0.2
L56A	Greenwood	111.61	52	P	PKiKP	03 00 58.0	-0.5
	baz=261						
G54A	Lake Saint Pet	111.73	48	P	PKiKP	03 00 57.3	-1.2
	baz=262						
O58A	Lewisberry	111.76	54	P	PKiKP	03 00 58.4	-0.4
	baz=260						
M57A	Sunshine Farm,	111.81	53	P	PKiKP	03 00 58.2	-0.5
	baz=261						
ALGO	Algonquin Park	111.83	48	P	PKiKP	03 00 58.3	-0.4
	baz=262						
K56A	Middlesex	111.87	51	P	PKiKP	03 00 58.7	-0.2
	baz=261						
NDI	New Delhi	112.00	293	eP	PKiKP	03 00 58.5	-1.0
N58A	Sunbury	112.03	53	P	PKiKP	03 00 59.2	0.0
	baz=261						
P59A	Jarrettsville	112.05	55	P	PKiKP	03 00 59.1	-0.2
	baz=260						
L57A	Andrews Acres	112.12	52	P	PKiKP	03 00 59.2	-0.1
	baz=261						
J56A	Wolcott	112.30	51	P	PKiKP	03 00 59.9	+0.3
	baz=262						
M58A	Price’s Panora	112.31	53	P	PKiKP	03 00 59.9	+0.2
	baz=261						
Q60A	Greensboro	112.40	55	P	PKiKP	03 00 57.4	-2.5
	baz=261						
K57A	Scipio Center	112.47	51	P	PKiKP	03 00 59.4	-0.6
	baz=262						
POO	Poona	112.55	282	⇑iP	PKiKP	03 00 59.0	-1.9
	comp=Z,140nm,1.0s						
MATQ	Matagami	112.58	44	P	PKiKP	03 00 59.0	-1.0
	baz=264						
P60A	Greenville	112.69	55	P	PKiKP	03 01 00.2	-0.2
	baz=261						
N59A	State Game Lan	112.75	53	P	PKiKP	03 01 00.4	-0.3
	baz=261						
SHLS	Shalkode	112.77	309	ePKiKP	PKiKP	03 00 59.0	-1.7
	baz=309						
SHLS	Shalkode	112.77	309	i PKIKP	PKiKP	03 00 59.0	-1.7
BINY	Binghamton	112.78	52	P	PKiKP	03 01 00.5	-0.1
	baz=262						
L58A	Harry Jones Me	112.86	52	P	PKiKP	03 01 00.3	-0.4
	baz=262						
LSQQ	Lebel-sur-Quev	112.93	44	P	PKiKP	03 01 00.2	-0.5
	baz=264						
J57A	Williamstown	112.94	51	P	PKiKP	03 01 00.7	-0.1
	baz=262						
O60A	Telford	112.94	54	P	PKiKP	03 01 00.7	-0.2
	baz=261						
SEM	Semipalatinsk	113.07	317	ePdif	Pdif	02 57 08.3	-1.9
	baz=317						
SEM				ePKiKP	PKiKP	03 00 58.8	-2.4
	baz=317						
SEM	Semipalatinsk	113.07	317	eP	Pdif	02 57 08.2	-1.9
SEM				i		03 00 58.8	
M59A	Waymart	113.10	53	P	PKiKP	03 01 01.4	+0.2
	baz=262						
K58A	Earlville	113.11	51	P	PKiKP	03 01 00.6	-0.6
	baz=262						
I57A	Carthage	113.25	50	P	PKiKP	03 01 00.4	-1.1
	baz=263						
N60A	Cedar Hill Far	113.25	53	P	PKiKP	03 01 00.5	-1.1
	baz=262						
E55A	Montcerf-Lytto	113.27	47	P	PKiKP	03 01 00.5	-0.9
	baz=264,SNR=6.1						
P61A	Hammonton	113.31	55	P	PKiKP	03 01 01.2	-0.5
	baz=262						
J58A	Remsen	113.45	51	P	PKiKP	03 01 01.0	-0.8
	baz=263						
L59A	Walton	113.47	52	P	PKiKP	03 01 01.6	-0.4
	baz=262						
H57A	Richville	113.51	50	P	PKiKP	03 01 01.5	-0.4
	baz=263						
SATY	Saty	113.53	309	ePKiKP	PKiKP	03 01 00.6	-1.7
	baz=309						
SATY				ePP	PP	03 02 01.4	-1.7
	baz=309						
SATY	Saty	113.53	309	i PKIKP	PKiKP	03 01 00.5	-1.7
SATY				e		03 02 01.4	
M60A	Port Jervis	113.67	53	P	PKiKP	03 01 02.0	-0.3
	baz=262						
K59A	Cooperstown	113.69	51	P	PKiKP	03 01 01.6	-0.8
	baz=263						
I58A	Old Forge	113.71	50	P	PKiKP	03 01 01.6	-0.8
	baz=263						
D55A	Sainte-Anne-du	113.73	47	P	PKiKP	03 01 01.3	-0.9
	baz=264,SNR=6.1						
TDK	Taldyqorghan	113.76	311	ePKiKP	PKiKP	03 01 00.5	-1.9
	baz=311						
TDK	Taldyqorghan	113.76	311	i PKIKP	PKiKP	03 01 00.5	-1.9
N61A	South Mountain	113.84	54	P	PKiKP	03 01 02.3	-0.3
	baz=262						
G57A	Newington	113.87	49	P	PKiKP	03 01 02.1	-0.5
	baz=264						
E56A	St. Veronique	113.98	47	P	PKiKP	03 01 02.0	-0.8
	baz=264						
J59A	Piesco	114.03	51	P	PKPdf	03 01 02.4	-0.6
	baz=263						
L60A	Shokan	114.05	52	P	PKPdf	03 01 03.1	0.0
	baz=263						
LONY	Lake Ozonia	114.10	49	P	PKPdf	03 01 02.5	-0.6
	baz=264						
KURK	Kurchatov	114.13	317	d iPKIKP	PKPdf	03 01 01.6	-1.3
KURK				pmax	pmax		
	comp=Z,202nm,1.3s						
KURK	Kurchatov	114.13	317	P	PKPdf	03 01 02.0	-0.9
PAL	Palisades	114.16	53	P	PKPdf	03 01 02.9	-0.3
	baz=263						
KURBB	Kurchatov Arra	114.18	317	PKiKP	PKPdf	03 01 01.7	-1.3
	comp=Z,62nm,0.7s,baz=108,slow=1.8,SNR=82						
KURBB				SKP		03 03 51.4	
	comp=Z,20nm,1.0s,baz=96,slow=1.7,SNR=7.1						
KURBB				PKKPbc	PKKPbc	03 11 45.2	-0.9
	comp=Z,1.5nm,0.8s,baz=270,slow=4.3,SNR=6.7						
D56A	ZEC Mazanza, M	114.22	47	P	PKPdf	03 01 02.4	-0.8
	baz=265,SNR=7.4						
M61A	Granite Spring	114.31	53	P	PKPdf	03 01 03.2	-0.3
	baz=263						
H58A	Gabriels	114.36	50	P	PKPdf	03 01 03.1	-0.5
	baz=264						
MDOK	Medeo	114.53	309	ePKP	PKPdf	03 01 02.5	-1.6
	baz=309						
MDOK	Medeo	114.53	309	ePKIKP	PKPdf	03 01 02.5	-1.6
G58A	Ormstown	114.53	49	P	PKPdf	03 01 03.3	-0.5
	baz=264						
L61A	Hillsdale 1, H	114.57	52	P	PKPdf	03 01 03.8	-0.2
	baz=263						
E57A	Chemin Saint G	114.58	48	P	PKPdf	03 01 03.0	-0.9
	baz=265,SNR=5.5						
TNSS	Tian-Shan	114.58	309	ePKP	PKPdf	03 01 03.5	-1.1
	baz=309						
TNSS	Tian-Shan	114.58	309	ePKIKP	PKPdf	03 01 03.5	-1.1
AAA	Alma-Ata	114.63	309	ePKP	PKPdf	03 01 02.9	-1.3
	baz=309						
AAA	Alma-Ata	114.63	309	ePKIKP	PKPdf	03 01 02.9	-1.3
CHKK	Chushkaly	114.64	310	ePKP	PKPdf	03 01 02.3	-1.8
	baz=310						
CHKK	Chushkaly	114.64	310	ePKIKP	PKPdf	03 01 02.3	-1.9
J60A	Lant Hill Farm	114.79	51	P	PKPdf	03 01 03.9	-0.5
	baz=264						
TULEG	Thule	114.81	14	i P	PKPdf	03 01 02.8	-0.7
TULEG				IAmb	IAmb	03 01 03.6	
	comp=Z,96nm,1.1s						
KSH	Kashi	114.90	305	PKP	PKiKP	03 01 05.5	+0.6
KSH				PP	PP	03 02 14.8	+2.0
KSH				SS	SS	03 17 36.5	+5.4
KSH				AMB	AMB		
	comp=Z,2μm,6.4s						
I60A	Shoreham	114.94	50	P	PKPdf	03 01 04.4	-0.2
	baz=264						
MTBS	Maitube	114.97	309	ePKP	PKPdf	03 01 03.8	-1.1
	baz=309						
MTBS	Maitube	114.97	309	ePKIKP	PKPdf	03 01 03.8	-1.1
ULHL	Ulahol	115.02	308	P	PKPdf	03 01 05.0	-0.2
	SNR=16						
KUU	Kurty	115.11	310	ePdif	Pdif	02 57 18.5	-0.6
	baz=310						
KUU				ePKP	PKPdf	03 01 03.0	-2.0
	baz=310						
KUU				ePP	PP	03 02 12.8	-1.2
	baz=310						
KUU	Kurty	115.11	310	eP	Pdif	02 57 18.5	-0.6
KUU				e		03 01 03.0	
KUU				e		03 02 12.7	
E58A	La Victoria	115.18	48	P	PKPdf	03 01 04.0	-1.0
	baz=266,SNR=11						
L61B	Northampton	115.24	52	P	PKPdf	03 01 04.9	-0.4
	baz=264						
J61A	Chester	115.43	51	P	PKiKP	03 01 05.7	0.0
	baz=264						
H60A	Morristown	115.43	50	P	PKPdf	03 01 05.5	-0.2
	baz=265						
F59A	Saint Guilaume	115.48	48	P	PKPdf	03 01 05.1	-0.5
	baz=266						
D58A	Chemin du LacG	115.50	47	P	PKPdf	03 01 04.7	-1.0
	baz=266,SNR=11						
TKM2	Tokmak 2	115.56	309	P	PKPdf	03 01 05.4	-0.8
	SNR=8.1						
LATQ	La Tuque	115.59	47	P	PKPdf	03 01 05.1	-0.7
	baz=266						
I61A	Oroboro, Fairl	115.73	50	P	PKiKP	03 01 06.2	0.0
	baz=265						
LBNH	Lisbon	115.96	50	P	PKPdf	03 01 06.5	-0.2
	baz=265						
KBK	Karagaybulak	116.01	308	P	PKPdf	03 01 06.5	-0.6
	SNR=30						
F60A	Warwick	116.07	48	P	PKPdf	03 01 06.7	-0.1
	baz=266						
HRV	Adam Dziewonsk	116.08	52	P	PKiKP	03 01 07.2	+0.3
	baz=265						
K63A	Dunstable	116.11	52	P	PKiKP	03 01 07.1	+0.1
	baz=265						
CHMS	Chumysh	116.18	309	P	PKPdf	03 01 06.4	-0.8
	SNR=40						
D59A	Saint-Raymond	116.21	47	P	PKPdf	03 01 06.7	-0.3
	baz=267						
M64A	Tiverton	116.25	53	P	PKPdf	03 01 06.9	-0.3
	baz=264						
NIL	Nilore	116.25	298	PKIKP	PKPdf	03 01 05.9	-1.7
NIL	Nilore	116.25	298	PKPdf	PKPdf	03 01 05.9	-1.7
UCH	Uchtor	116.29	308	P	PKPdf	03 01 07.8	-0.1
	SNR=12						
SGDS	Sogindy	116.31	309	ePKP	PKPdf	03 01 05.8	-1.7
	baz=309						
SGDS	Sogindy	116.31	309	ePKIKP	PKPdf	03 01 05.7	-1.7
G61A	St-Isidore-de-	116.32	49	P	PKPdf	03 01 06.8	-0.5
	baz=266						
AAK	Ala-Archa	116.34	308	PKP	PKPdf	03 01 06.6	-1.0
	comp=Z,44nm,0.9s,baz=152,slow=3.2,SNR=56						
AAK	Ala-Archa	116.34	308	P	PKPdf	03 01 07.1	-0.6
	SNR=7.2						
AAK	Ala-Archa	116.34	308	i PKPdf	PKPdf	03 01 06.9	-0.8
	SNR=26						
AAK	Ala-Archa	116.34	308	d iPKIKP	PKPdf	03 01 06.8	-0.8
AAK	Ala-Archa	116.34	308	PKPdf	PKPdf	03 01 06.8	-0.8
AAK	Ala-Archa	116.34	308	P	PKPdf	03 01 07.2	-0.5
I62A	Tamworth	116.35	51	P	PKPdf	03 01 06.9	-0.5
	baz=266						
E60A	Ste Agathe de	116.44	48	P	PKPdf	03 01 07.1	-0.4
	baz=267						
SJG	San Juan	116.49	80	PKP	PKPdf	03 01 06.9	-1.5
	comp=Z,27nm,0.8s,baz=354,slow=1.2,SNR=7.8						
SJG	San Juan	116.49	80		PKPdf	03 01 07.2	-1.1
J63A	Strafford	116.49	51	P	PKiKP	03 01 07.8	+0.1
	baz=265						
H62A	Milan	116.53	50	P	PKiKP	03 01 07.9	+0.1
	baz=266						
L64A	Middleborough	116.56	53	P	PKPdf	03 01 07.3	-0.5
	baz=265						
F61A	St Evariste	116.73	48	P	PKPdf	03 01 08.1	0.0
	baz=267						
D60A	Saint Jean D’O	116.83	47	P	PKPdf	03 01 07.7	-0.5
	baz=267						
BTLS	Baital	116.84	311	ePKP	PKPdf	03 01 06.5	-1.8
	baz=311						
BTLS	Baital	116.84	311	ePKIKP	PKPdf	03 01 06.5	-1.8
EKS2	Erkin-Say	116.87	308	P	PKPdf	03 01 08.3	-0.4
	SNR=34						
AML	Almayashu	116.89	307	P	PKPdf	03 01 08.5	-0.6
	SNR=79						
I63A	Otisfield	116.91	50	P	PKPdf	03 01 08.1	-0.4
	baz=266						
I63A	Otisfield	116.91	50		PKPdf	03 01 07.6	-0.8
G62A	West of Eustis	117.02	49	P	PKPdf	03 01 08.5	-0.2
	baz=267						
E61A	Lac Etchemin	117.11	48	P	PKPdf	03 01 07.7	-1.1
	baz=267,SNR=5.3						
D61A	St Aubert, Com	117.34	47	P	PKPdf	03 01 08.6	-0.6
	baz=268,SNR=7.9						
G63A	Kingsbury	117.66	49	P	PKPdf	03 01 09.2	-0.7
	baz=267						
PKME	Peaks-Kenny Pk	117.89	49	P	PKPdf	03 01 10.0	-0.4
	baz=268						
BRZS	Berezniki	117.91	316	ePKP	PKPdf	03 01 07.9	-2.3
	baz=316						
BRZS	Berezniki	117.91	316	ePKIKP	PKPdf	03 01 07.9	-2.3
H64A	Troy	117.92	50	P	PKPdf	03 01 10.0	-0.4
	baz=267						
F63A	Nahmakanta, Br	118.04	49	P	PKPdf	03 01 10.0	-0.6
	baz=268						
D62A	Allapoint, All	118.11	47	P	PKPdf	03 01 10.2	-0.5
	baz=269						
G64A	Maxfield	118.27	49	P	PKPdf	03 01 10.8	-0.3
	baz=268						
E63A	Oxbow	118.53	48	P	PKPdf	03 01 11.2	-0.4
	baz=269						
F64A	Sherman	118.57	48	P	PKPdf	03 01 11.0	-0.6
	baz=269						
H65A	Eastbrook	118.61	50	P	PKPdf	03 01 11.2	-0.5
	baz=268						
VOI	Vohitsoka	118.67	229	P	PKPdf	03 01 12.7	-0.1
	SNR=6.7						
DZA	Taraz	118.68	308	ePKP	PKPdf	03 01 10.7	-1.4
	baz=308						
DZA	Taraz	118.68	308	ePKIKP	PKPdf	03 01 10.6	-1.4
D63A	Stockholm	118.76	47	P	PKPdf	03 01 11.3	-0.7
	baz=270						
E64A	Bridgewater	118.94	48	P	PKPdf	03 01 11.4	-0.9
	baz=269						
G65A	Princeton	119.11	49	P	PKPdf	03 01 12.1	-0.6
	baz=269						
BDFB	Brasilia	119.17	123	PKP	PKPdf	03 01 12.9	-0.9
	comp=Z,2.9nm,0.4s,baz=111,slow=2.5,SNR=10						
BDFB				PKKPbc	PKKPbc	03 11 28.6	0.0
	comp=Z,23nm,0.8s,baz=89,slow=5.9,SNR=24						
BDFB	Brasilia	119.17	123	PKIKP	PKPdf	03 01 12.3	-1.5
BDFB	Brasilia	119.17	123	PKPdf	PKPdf	03 01 12.3	-1.5
UPNV	Upernavik	119.24	17	⇓iP	PKPdf	03 01 11.5	-0.6
UPNV				IAmb	IAmb	03 01 12.3	
	comp=Z,187nm,1.0s						
BVAR	Borovoye Array	119.24	320	PKP	PKPdf	03 01 11.6	-1.1
	comp=Z,90nm,0.3s,baz=69,slow=4.5,SNR=185						
BRVK	Borovoye	119.30	320	d iPKIKP	PKPdf	03 01 11.9	-0.9
BRVK				pmax	pmax		
	comp=Z,281nm,1.0s						
BRVK	Borovoye	119.30	320	PKPdf	PKPdf	03 01 11.9	-0.9
BRVK	Borovoye	119.30	320	P	PKPdf	03 01 12.3	-0.5
IUG	Iuzhnay	119.61	307	ePKP	PKPdf	03 01 11.7	-2.2
	baz=307						
IUG	Iuzhnay	119.61	307	ePKIKP	PKPdf	03 01 11.6	-2.3
BRLS	Borolday	119.78	308	ePKP	PKPdf	03 01 13.2	-1.0
	baz=308						
BRLS	Borolday	119.78	308	ePKIKP	PKPdf	03 01 13.1	-1.0
KBL	Kabul	119.83	299	PKIKP	PKPdf	03 01 14.5	-0.2
KBL	Kabul	119.83	299	PKPdf	PKPdf	03 01 14.4	-0.2
KBL	Kabul	119.83	299	P	PKPdf	03 01 14.7	0.0
	SNR=98						
ABPO	Ambohimpanom	120.22	231	PKIKP	PKiKP	03 01 16.2	+0.2
ABPO	Ambohimpanom	120.22	231	PKPdf	PKiKP	03 01 16.2	+0.2
OPO	Ambohidratompo	120.53	232	PKP	PKPdf	03 01 16.3	-0.2
	comp=Z,67nm,0.9s,baz=148,slow=1.7,SNR=40						
SBV	Sambava	121.50	238	P	PKiKP	03 01 18.9	+0.5
KBS	Kingsbay	121.82	358	PKIKP	PKPdf	03 01 16.6	-0.4
KBS	Kingsbay	121.82	358	PKPdf	PKPdf	03 01 16.6	-0.4
KBS	Kingsbay	121.82	358	ePKPdf	PKPdf	03 01 17.0	+0.1
KBS	Kingsbay	121.82	358	i P	PKPdf	03 01 17.1	+0.1
KBS				IAmb	IAmb	03 01 17.8	
	comp=Z,528nm,1.1s						
SPA0	Spitsbergen Ar	122.34	356	PKPdf	PKPdf	03 01 17.7	-0.3
SPA0	Spitsbergen Ar	122.34	356	ePKPdf	PKPdf	03 01 17.3	-0.6
SPITS	Spitsbergen Ar	122.34	356	PKP	PKPdf	03 01 17.4	-0.6
	comp=Z,251nm,0.8s,baz=61,slow=6.1,SNR=141						
HOPEN	Hopen	123.21	354	ePKPdf	PKPdf	03 01 19.6	-0.1
DAG	Danmarks Havn	123.27	5	⇓iPKIKP	PKPdf	03 01 18.3	-1.5
DAG	Danmarks Havn	123.27	5	⇓iP	PKPdf	03 01 18.3	-1.5
	comp=Z,125nm,1.0s						
DAG				i		03 03 04.0	
DAG	Danmarks Havn	123.27	5	⇓iP	PKPdf	03 01 18.3	-1.5
DAG				IAmb	IAmb	03 01 19.3	
	comp=Z,126nm,1.0s						
DAG				i		03 03 04.1	
HSPB	Hornsund (broa	123.53	356	ePKP	PKPdf	03 01 19.7	-0.5
HSPB	Hornsund (broa	123.53	356	ePKPdf	PKPdf	03 01 19.8	-0.5
SFJD	Kangerlussuaq	123.53	22	⇓iPKIKP	PKPdf	03 01 19.3	-1.2
SFJD	Kangerlussuaq	123.53	22	PKPdf	PKPdf	03 01 18.9	-1.6
SFJD	Kangerlussuaq	123.53	22	⇓iP	PKPdf	03 01 19.3	-1.2
	comp=Z,15nm,1.1s						
SFJD	Kangerlussuaq	123.53	22	⇓iP	PKPdf	03 01 19.4	-1.2
SFJD				IAmb	IAmb	03 01 21.1	
	comp=Z,15nm,1.1s						
SUMG	Summit	123.72	13	⇓iPKIKP	PKPdf	03 01 21.1	-0.2
SUMG	Summit	123.72	13	⇓iP	PKPdf	03 01 21.1	-0.2
	comp=Z,969nm,1.1s						
SUMG	Summit	123.72	13	⇓iP	PKPdf	03 01 21.1	-0.2
SUMG				IAmb	IAmb	03 01 23.8	
	comp=Z,970nm,1.1s						
SUR	Sutherland	123.84	200	PKP	PKPdf	03 01 22.1	-0.5
	comp=Z,88nm,1.0s,baz=149,slow=0.8,SNR=20						
SUR				PKKPbc	PKKPbc	03 11 10.5	-1.6
	comp=Z,55nm,1.1s,baz=314,slow=3.0,SNR=8.7						
SUR	Sutherland	123.84	200	PKPdf	PKPdf	03 01 22.5	-0.1
SVE	Sverdlovsk	124.21	325	ePKIKP	PKPdf	03 01 21.4	-0.7
SVE				pmax	pmax		
	comp=Z,383nm,1.1s						
NUUK	Nuuk	124.36	25	i P	PKPdf	03 01 21.9	-0.2
NUUK				IAmb	IAmb	03 01 23.3	
	comp=Z,265nm,1.1s						
DBG	Daneborg	125.37	7	i P	PKPdf	03 01 23.1	-0.8
DBG				IAmb	IAmb	03 01 24.0	
	comp=Z,133nm,1.0s						
ARU	Arti	125.42	325	PKP	PKPdf	03 01 24.1	-0.4
	comp=Z,80nm,0.4s,baz=91,slow=0.6,SNR=232						
ARU	Arti	125.42	325	i PKIKP	PKPdf	03 01 23.9	-0.5
ARU						03 03 17.5	
ARU						03 07 42.7	
ARU	Arti	125.42	325	PKPdf	PKPdf	03 01 23.3	-1.1
BOSA	Boshof	125.66	206	PKP	PKiKP	03 01 26.4	0.0
	comp=Z,58nm,1.0s,baz=151,slow=2.7,SNR=32						
ICESG	Greenland Ices	125.77	17	i P	PKPdf	03 01 24.3	-1.0
ICESG				IAmb	IAmb	03 01 27.3	
	comp=Z,427nm,1.1s						
AB31	Akbulak array	126.22	316	ePKIKP	PKPdf	03 01 24.9	-1.3
AB31				pmax	pmax		
	comp=Z,226nm,1.1s						
ABKAR	Akbulak array	126.22	316		PKPpre	03 01 18.6	
ABKAR				PKPdf	PKPdf	03 01 25.3	-0.9
JLN	Jalan Bani Buh	126.55	283	P	PKPdf	03 01 27.1	-0.5
	SNR=5.8						
WBK	Wadi Bani Khal	127.03	283	P	PKPdf	03 01 28.0	-0.6
	SNR=13						
AKTO	Aktyubinsk	127.21	318	PKP	PKPdf	03 01 27.7	-0.3
	comp=Z,151nm,0.9s,baz=75,slow=2.5,SNR=159						
MHTO	MHTO	127.66	281	P	PKPdf	03 01 28.8	-0.9
	SNR=11						
JMDO	Jabal Madar	127.78	283	P	PKPdf	03 01 29.9	-0.1
	SNR=35						
DQM	DQM	127.85	279	P	PKPdf	03 01 30.2	0.0
	SNR=5.6						
SMDO	Samad	127.94	283	P	PKiKP	03 01 30.9	-0.2
	SNR=49						
BIDO	Bidbid	127.95	284	P	PKiKP	03 01 31.0	0.0
	SNR=38						
NRS	Narsarsuaq	128.33	27	i PKIKP	PKPdf	03 01 28.8	-1.0
NRS	Narsarsuaq	128.33	27	i P	PKPdf	03 01 28.8	-1.0
	comp=Z,332nm,1.1s						
NRS	Narsarsuaq	128.33	27	i P	PKPdf	03 01 28.9	-1.0
NRS				IAmb	IAmb	03 01 30.3	
	comp=Z,333nm,1.1s						
ASHT	Ashkhabad	128.55	302	PKIKP	PKiKP	03 01 32.0	+0.2
ASHT	Ashkhabad	128.55	302	PKPdf	PKiKP	03 01 32.0	+0.2
SCO	Scoresbysund	128.56	10	⇓iPKIKP	PKPdf	03 01 30.0	0.0
SCO	Scoresbysund	128.56	10	⇓iP	PKPdf	03 01 30.0	0.0
	comp=Z,273nm,1.2s						
SCO	Scoresbysund	128.56	10	⇓iP	PKPdf	03 01 30.0	0.0
SCO				IAmb	IAmb	03 01 31.2	
	comp=Z,273nm,1.2s						
HAMF	Hammerfest	128.66	351	ePKPdf	PKPdf	03 01 30.1	-0.1
BSY	Bisya	128.67	283	P	PKPdf	03 01 31.4	-0.4
	SNR=34						
LBTB	Lobatse	128.68	208	PKP	PKPdf	03 01 31.4	-0.4
	comp=Z,20nm,0.6s,baz=143,slow=3.6,SNR=22						
HOQ	Hoqain	128.70	284	P	PKPdf	03 01 31.9	+0.2
	SNR=37						
GEYT	Alibeck	128.77	302	PKP	PKPdf	03 01 31.8	+0.3
LVZ	Lovozero	128.78	345	⇑iPKIKP	PKPdf	03 01 29.9	-0.7
LVZ				pmax	pmax		
	comp=Z,277nm,1.3s						
LVZ	Lovozero	128.78	345	PKPdf	PKPdf	03 01 29.6	-1.0
KEV	Kevo	128.89	349	PKIKP	PKPdf	03 01 30.5	-0.2
KEV	Kevo	128.89	349	PKPdf	PKPdf	03 01 30.5	-0.2
SHAO	Shalim	129.22	277	i PKPdf	PKPdf	03 01 32.3	-0.5
	SNR=15						
SHAO	Shalim	129.22	277	P	PKiKP	03 01 33.3	-0.3
	SNR=5.8						
KIRV	Kirov	129.23	330	PKP	PKPdf	03 01 31.2	-0.3
	comp=Z,309nm,0.7s,baz=76,slow=1.9,SNR=79						
KIRV				SKPbc	SKPbc	03 04 08.3	+1.1
	comp=Z,109nm,0.8s,baz=39,slow=1.6,SNR=10						

SOCY	Socotra	129.26	269	PKPdf	PKPdf	03 01 32.9	-0.2
SOCY	Socotra	129.26	269	P	PKPdf	03 01 33.0	-0.1
	SNR=9.7						
APA	Apatity	129.34	345	⇓*i*PKIKP	PKPdf	03 01 29.7	-1.9
APA				*i*		03 07 46.0	
APA				pmax	pmax		
	comp=Z,107nm,1.0s						
ARCES	ARCESS Array B	129.35	349	PKhKP	PKPpre	03 01 18.4	
	comp=Z,16nm,0.7s,baz=321,slow=1.0,SNR=8.3						
ARCES				PKP	PKPdf	03 01 31.0	-0.6
	comp=Z,64nm,0.4s,baz=89,slow=1.6,SNR=92						
ARCES				SKPbc	SKPbc	03 04 09.0	+1.5
	comp=Z,115nm,1.0s,baz=15,slow=5.0,SNR=12						
ARCES	ARCESS Array B	129.35	349	PKIKP	PKPdf	03 01 31.0	-0.6
ARCES	ARCESS Array B	129.35	349		PKPpre	03 01 18.6	
ARCES				PKPdf	PKPdf	03 01 30.5	-1.1
ARQ	Araqi	129.38	283	P	PKPdf	03 01 33.0	-0.1
	SNR=25						
SOHO	SOHO	129.48	284	*i* PKPdf	PKPdf	03 01 32.1	-1.0
	SNR=49						
JMIC	Jan Mayen	129.65	4	PKP	PKPdf	03 01 32.4	+0.3
	comp=Z,116nm,0.6s,baz=130,slow=3.4,SNR=5.0						
DMTO	DMTO	129.79	276	P	PKPdf	03 01 34.0	+0.1
	SNR=40						
MDH	Madha	129.84	286	PKPdf	PKPdf	03 01 32.3	-1.6
MDH	Madha	129.84	286	P	PKPdf	03 01 33.3	-0.5
	SNR=24						
UOSS	Minazif	129.88	285	*i* PKPdf	PKPdf	03 01 32.4	-1.5
	SNR=21						
UOSS	Minazif	129.88	285	PKPdf	PKPdf	03 01 32.3	-1.7
UOSS	Minazif	129.88	285	P	PKPdf	03 01 33.1	-0.8
BANOM	Banah	129.91	287	*i* PKPdf	PKPdf	03 01 33.2	-0.8
	SNR=10.0						
BANOM	Banah	129.91	287	P	PKPdf	03 01 33.8	-0.2
	SNR=9.7						
HATD	Hatta, Dubai	129.93	285	*i* PKPdf	PKPdf	03 01 33.1	-0.9
	SNR=54						
HATD	Hatta, Dubai	129.93	285	P	PKPdf	03 01 33.9	-0.2
	SNR=57						
MSFE	Esma-Masafi	129.97	286	*i* PKPdf	PKPdf	03 01 33.2	-0.9
	SNR=30						
MASF	Masafi	129.97	286	P	PKPdf	03 01 34.1	-0.1
	SNR=32						
ASHO	Ashiyiah	129.98	285	*i* PKPdf	PKPdf	03 01 33.2	-1.0
	SNR=25						
ASHO	Ashiyiah	129.98	285	P	PKPdf	03 01 34.2	0.0
	SNR=53						
SHME	Shamm	130.07	287	*i* PKPdf	PKPdf	03 01 33.3	-1.0
	SNR=15						
SHME	Shamm	130.07	287	P	PKPdf	03 01 34.2	0.0
	SNR=8.3						
ALNE	Al Ain	130.18	284	*i* PKPdf	PKPdf	03 01 33.5	-1.0
	SNR=23						
ALNE	Al Ain	130.18	284	P	PKPdf	03 01 34.7	+0.2
	SNR=36						
KTK1	Kautokeino	130.19	350	*e*PKPdf	PKPdf	03 01 32.8	-0.4
TRO	Tromso	130.25	352	*e*PKPdf	PKPdf	03 01 32.7	-0.5
TRO				IVmB_BB		03 01 33.5	
	comp=Z,9µm,3.9s						
TRO				*e*SKSac	SKSac	03 07 56.1	0.0
NAZ	Nazwa, Dubai	130.38	285	*i* PKPdf	PKPdf	03 01 33.7	-1.1
	SNR=30						
NAZ	Nazwa, Dubai	130.38	285	P	PKPdf	03 01 35.0	+0.1
	SNR=38						
FAQ	Al Faqa, Dubai	130.41	285	*i* PKPdf	PKPdf	03 01 33.8	-1.1
	SNR=13						
FAQ	Al Faqa, Dubai	130.41	285	P	PKPdf	03 01 35.0	0.0
	SNR=14						
RBK	Rabkut	130.43	275	P	PKPdf	03 01 35.6	+0.4
	SNR=19						
UMQ	Umm Al-Quwin	130.44	286	*i* PKPdf	PKPdf	03 01 34.7	-0.2
	SNR=7.7						
UMQ	Umm Al-Quwin	130.44	286	P	PKiKP	03 01 35.8	0.0
	SNR=6.8						
TMCR	Tamitsa	130.53	340	*e*PKIKP	PKPdf	03 01 30.9	-3.0
TMCR				pmax	pmax		
	comp=Z,140nm,1.4s						
ASUD	Al Ashush, Dub	130.63	285	*i* PKPdf	PKPdf	03 01 34.8	-0.5
	SNR=13						
ASUD	Al Ashush, Dub	130.63	285	P	PKiKP	03 01 36.0	-0.3
	SNR=23						
DOK	Doka	130.74	277	P	PKPdf	03 01 36.0	+0.3
	SNR=13						
WHFO	Wadi Hawf	130.92	276	P	PKPdf	03 01 36.5	+0.4
	SNR=56						
AJN	Ajban	130.93	285	*i* PKPdf	PKPdf	03 01 34.9	-1.0
	SNR=18						
AJN	Ajban	130.93	285	P	PKPdf	03 01 36.1	+0.2
	SNR=21						
MATP	Matopo	131.16	214	PKhKP	PKPpre	03 01 18.6	
	comp=Z,4.5nm,0.6s,baz=162,slow=1.8,SNR=8.2						
MATP				PKP	PKPdf	03 01 35.9	-0.8
	comp=Z,37nm,0.8s,baz=158,slow=1.6,SNR=26						
MATP				SKPbc	SKPab	03 04 17.3	+0.6
	comp=Z,84nm,0.8s,baz=153,slow=3.7,SNR=13						
ABTO	Aybut	131.24	275	P	PKPdf	03 01 36.9	+0.1
	SNR=15						
MZWR	Madinat Zayed	131.84	284	P	PKPdf	03 01 38.0	+0.3
KLMR	Klimovskoe	132.20	336	*e*PKIKP	PKPdf	03 01 36.9	-0.3
KLMR				*e*		03 04 10.7	
KLMR				pmax	pmax		
	comp=Z,481nm,1.2s						
KLMR	Klimovskoe	132.20	336	*e*PKPdf	PKPdf	03 01 36.9	-0.3
KLMR				AMP		03 01 39.5	
	comp=Z,481nm,1.2s						
KLMR				*e*PP	PP	03 04 10.7	+4.3
KLMR				*e*PKS	PKSdf	03 05 06.2	-7.0
KLMR				*e*PKS	PKSdf	03 05 06.2	-7.0
KLMR				*e*SKSac	SKSdf	03 07 43.2	-19
KLMR				*e*SKSac	SKSdf	03 07 43.3	-18
LOF	Lofoten	132.29	354	*e*PKPdf	PKPdf	03 01 34.8	-2.3
STEI	Steigen	132.30	353	*e*PKPdf	PKPdf	03 01 36.5	-0.7
BELG	Belogornoye	132.80	323	PKhKP	PKPpre	03 01 24.0	
	comp=Z,21nm,0.7s,baz=357,slow=3.1,SNR=8.3						
BELG				PKP	PKPdf	03 01 38.3	-0.2
	comp=Z,1µm,1.1s,baz=152,slow=0.9,SNR=6.0						
BELG				SKPbc	SKPbc	03 04 21.2	+1.0
	comp=Z,1µm,1.1s,baz=73,slow=0.9,SNR=24						
FAUS	Fauske	132.82	353	*e*PKPdf	PKPdf	03 01 37.5	-0.7
FAUS				IVmBBB		03 01 39.2	
	comp=Z,4µm,3.4s						
JRN	Qarnain Island	132.91	285	P	PKiKP	03 01 40.4	-0.5
	SNR=22						
BORG	Borgarnes	133.70	13	PKP	PKiKP	03 01 40.6	-0.6
	comp=Z,116nm,1.0s,baz=301,slow=3.5,SNR=7.0						
BORG	Borgarnes	133.70	13	PKIKP	PKPdf	03 01 40.2	+0.3
BORG	Borgarnes	133.70	13	PKPdf	PKPdf	03 01 40.2	+0.3
SLWR	Sila	133.86	284	P	PKPdf	03 01 41.6	+0.2
KONS	Konsvik	133.91	354	*e*PKPdf	PKPdf	03 01 40.4	+0.2
MOR8	Moi Rana	134.09	353	*e*PKPdf	PKPdf	03 01 39.7	-0.9
MOR8				IVmB_BB		03 01 45.4	
	comp=Z,5µm,5.0s						
MOR8				*e*PP	PP	03 04 18.3	+0.3
STOK	Stokkvaagen	134.09	354	*e*PKPdf	PKPdf	03 01 40.5	0.0
RCBR	Riachuelo	134.52	122	SKPbc	SKPbc	03 04 26.1	-1.1
	comp=Z,36nm,0.9s,baz=136,slow=2.5,SNR=9.4						
VALR	Valaam	134.83	341	*i* PKIKP	PKPdf	03 01 41.4	-0.7
LSZ	Lusaka	135.51	218	PKHKP	PKPpre	03 01 32.8	
LSZ	Lusaka	135.51	218	PKPpre	PKPpre	03 01 32.8	
LSZ	Lusaka	135.51	218	P	PKPpre	03 01 35.6	
NSS	Namsos	135.95	354	*e*PKPdf	PKPpre	03 01 33.0	
MAK	Makhachkala	136.02	311	*e*P	Pdif	02 58 50.0	-2.1
MAK				*e*		03 04 31.9	
MAK				*e*SS	SS	03 21 51.6	-0.5
MAK				*e*SSS	SSS	03 27 07.7	
FIA1	FINESS Array S	136.15	343		PKPpre	03 01 32.9	
FIA1				PKPdf	PKPdf	03 01 43.9	-0.7
FINES	FINESS Array B	136.15	343	PKhKP	PKPpre	03 01 31.6	
	comp=Z,11nm,0.5s,baz=41,slow=4.0,SNR=73						
FINES				PKP	PKPdf	03 01 44.5	0.0
	comp=Z,199nm,0.9s,baz=46,slow=0.9,SNR=30						
FINES				SKPbc	SKPbc	03 04 31.8	+1.1
	comp=Z,154nm,0.9s,baz=68,slow=5.1,SNR=16						
FINES	FINESS Array B	136.15	343		PKPpre	03 01 31.6	
FINES				PKPdf	PKPdf	03 01 44.0	-0.5
MOS	Moscow	136.17	331	*i* PKHKP	PKPpre	03 01 35.4	
MOS				*e*		03 16 46.7	
MOS				pmax	pmax		
	comp=Z,337nm,0.9s						
PUL	Pulkovo	136.22	339	*c i*PKIKP	PKPdf	03 01 44.9	+0.2
VRH	Novokhopyorsk	136.61	324	*e*PKIKP	PKPdf	03 01 45.2	-0.5
VRH				*e*		03 04 32.1	
VRH				pmax	pmax		
	comp=Z,230nm,0.6s						
OBN	Obninsk	137.03	331	PKhKP	PKPpre	03 01 35.5	
	comp=Z,8.3nm,0.4s,baz=46,slow=3.8,SNR=8.7						
OBN				PKP	PKPdf	03 01 45.8	-0.5
	comp=Z,35nm,0.6s,baz=45,slow=5.2,SNR=25						
OBN				SKPbc	SKPbc	03 04 34.3	+0.9
	comp=Z,26nm,0.9s,baz=41,slow=3.8,SNR=13						
OBN	Obninsk	137.03	331	*de*PKIKP	PKPdf	03 01 45.6	-0.7
OBN				*e*		03 04 33.1	
OBN				pmax	pmax		
	comp=Z,586nm,1.5s						
OBN	Obninsk	137.03	331		PKPpre	03 01 35.2	
OBN				PKPdf	PKPdf	03 01 46.1	-0.2
TSUM	Tsumeb	137.10	202	PKP	PKPdf	03 01 47.3	-0.6
	comp=Z,6.2nm,0.7s,baz=213,slow=6.9,SNR=6.3						
TSUM				SKPbc	SKPbc	03 04 35.6	+0.6
	comp=Z,13nm,0.9s,baz=64,slow=3.4,SNR=3.2						
TSUM	Tsumeb	137.10	202		PKPdf	03 01 47.1	-0.7
GROC	Groznyy	137.16	311	*e*PKHKP	PKPpre	03 01 36.3	
GROC				*e*		03 04 33.9	
GROC				pmax	pmax		
	comp=Z,197nm,1.2s						
TBLU	Trondheim	137.37	354	*e*PKPdf	PKPpre	03 01 34.9	
TBLU				IVmB_BB		03 01 41.4	
	comp=Z,4µm,5.1s						
TBLU				*e*SKSdf	SKSdf	03 08 10.6	-0.1
LPSR	Galich'ya Gora	137.37	327	*e*PKIKP	PKPdf	03 01 46.8	-0.3
LPSR				*e*		03 04 35.4	
LPSR				pmax	pmax		
	comp=Z,420nm,1.2s						
KIBK	Kibwezi	137.47	241	P	PKPpre	03 01 39.7	
	SNR=17						
VORR	Voronezh	137.73	326	*e*PKIKP	PKPdf	03 01 47.0	-0.8
VORR				pmax	pmax		
	comp=Z,550nm,1.6s						
RDF	Al-Radifah	137.85	290	*e*P		03 01 37.7	
RDF				IAmb		03 01 46.4	
	comp=Z,711nm,0.9s						
VSR	Storozhevoye	137.99	325	*e*PKIKP	PKPdf	03 01 47.6	-0.7
VSR				*e*		03 04 36.4	
VSR				pmax	pmax		
	comp=Z,420nm,1.2s						
MIB	Mutribah	138.02	292	*e*P		03 01 38.0	
MIB				IAmb		03 01 39.7	
	comp=Z,505nm,0.7s						
VORD	Divnogorie	138.06	325	*e*PKIKP	PKPdf	03 01 47.5	-0.9
VORD				*e*		03 04 36.6	
VORD				pmax	pmax		
	comp=Z,430nm,1.4s						
MOL	Molde	138.26	356	*e*PKPdf	PKPpre	03 01 38.1	
RST	Umm Al-Ruwaisa	138.32	291	*e*P		03 01 38.8	
RST				IAmb		03 01 44.5	
	comp=Z,459nm,0.8s						
VSU	Vasula	138.41	340	*e*P	PKPpre	03 01 40.3	
VSU	Vasula	138.41	340	*d i*PKIKP	PKPdf	03 01 48.2	-0.6
GOF	Gofitskoye	138.42	315	⇑*i*PKHKP	PKPpre	03 01 42.0	
GOF				pmax	pmax		
	comp=Z,106nm,1.0s						
NCK	Nalchik	138.59	313	*de*PKIKP	PKPdf	03 01 49.6	-0.1
ZEI	Tsey	138.61	312	*e*PKHKP	PKPpre	03 01 40.1	
ZEI				pmax	pmax		
	comp=Z,123nm,1.0s						
DOMB	Dombas	138.67	355	*e*PKPdf	PKPpre	03 01 39.5	
DOMB				IVmB_BB		03 01 53.7	
	comp=Z,6µm,5.3s						
DOMB				*e*SKPdf	SKPbc	03 04 38.2	+0.3
DOMB				*e*SKSac	SKSac	03 08 17.7	-0.1
AKN	Aaknes	138.69	356	*e*PKPdf	PKPpre	03 01 40.3	
GNI	Garni	138.74	307	PKhKP	PKPpre	03 01 39.2	
	comp=Z,18nm,0.9s,baz=212,slow=9.8,SNR=3.2						
GNI				PKP	PKPdf	03 01 49.9	-0.3
	comp=Z,164nm,1.0s,baz=152,slow=3.8,SNR=54						
GNI				SKP		03 04 39.9	
	comp=Z,89nm,1.3s,baz=151,slow=3.2,SNR=5.2						
GNI	Garni	138.74	307	⇓*e*PKIKP	PKPdf	03 01 49.5	-0.7
GNI	Garni	138.74	307	PKPpre	PKPpre	03 01 41.6	
GNI				PKPdf	PKPdf	03 01 50.7	+0.5
GNI	Garni	138.74	307	P	PKPdf	03 01 43.7	-6.5
AAL	Aland	138.75	346	*e*P	PKPpre	03 01 39.8	
KMBO	Kilima Mbogo	138.81	242	PKhKP	PKPpre	03 01 42.5	
	comp=Z,24nm,0.8s,baz=75,slow=3.2,SNR=36						
KMBO				PKP	PKPdf	03 01 51.4	+0.2
	comp=Z,107nm,0.9s,baz=25,slow=2.6,SNR=25						
KMBO				SKP		03 04 41.4	
	comp=Z,62nm,1.1s,baz=77,slow=1.1,SNR=14						
DAMY	Dhamar	138.89	268	P	PKPdf	03 01 44.6	-6.7
	SNR=18						
KBZ	Khabaz	138.99	313	PKhKP	PKPpre	03 01 41.6	
	comp=Z,19nm,1.0s,baz=85,slow=4.9,SNR=16						
KBZ				PKP	PKPdf	03 01 50.4	+0.1
	comp=Z,47nm,0.9s,baz=81,slow=1.5,SNR=18						
KBZ				SKP		03 04 39.1	
	comp=Z,25nm,1.1s,baz=66,slow=2.9,SNR=4.9						
KBZ				SKKPbc	SKKPbc	03 13 21.1	+0.8
	comp=Z,11nm,1.1s,baz=270,slow=3.9,SNR=7.6						
KBZ	Khabaz	138.99	313	*d i*PKIKP	PKPdf	03 01 49.8	-0.5
KIV	Kislovodsk	139.06	314	⇓P	PKPdf	03 01 43.4	-7.2
KIV	Kislovodsk	139.06	314	*i* PKPdf	PKPdf	03 01 49.6	-1.0
	SNR=8.5						
KIV	Kislovodsk	139.06	314	*i* PKIKP	PKPdf	03 01 49.9	-0.7
KIV				*e*		03 04 35.3	
KIV				*e*		03 04 46.3	
KIV				*e*SS	SS	03 22 23.0	-4.8
KIV				pmax	pmax		
	comp=Z,390nm,1.1s						
KIV	Kislovodsk	139.06	314		PKPpre	03 01 42.0	
KIV	Kislovodsk	139.06	314	P	PKPdf	03 01 43.4	-7.2
MTSE	Matsula	139.06	343	*e*P	PKPdf	03 01 42.2	-7.8
TASB	TASBURUN-IGDIR	139.16	307	*i* P	PKPdf	03 01 43.7	-7.2
NC303	NORSAR Array S	139.24	353		PKPpre	03 01 41.4	
NEY	Neytrino	139.28	313	*ce*PKIKP	PKPdf	03 01 46.8	-4.3
AKH	Akhalkalaki	139.31	310	⇑P	PKPdf	03 01 44.8	-6.5
FOO	Floro	139.37	358	*e*PKPdf	PKPdf	03 01 44.3	-6.1
FOO				*e*SKPdf	SKPbc	03 04 40.9	+1.2
NB2	NORSAR Subarra	139.43	353	PKP	PKPpre	03 01 41.8	
	comp=Z,83nm,1.2s,baz=16,slow=3.2						
NB2	NORSAR Subarra	139.43	353	PKPab	PKPpre	03 01 41.8	
	baz=16,slow=3.2						
NOA	NORSAR Array B	139.43	353	PKhKP	PKPpre	03 01 41.7	
	comp=Z,176nm,1.1s,baz=13,slow=2.4,SNR=74						
NOA				PKP	PKPdf	03 01 50.9	+0.2
	comp=Z,12nm,0.4s,baz=8.9,slow=3.2,SNR=5.8						
NOA				SKP		03 04 40.5	
	comp=Z,33nm,1.0s,baz=6.3,slow=4.0,SNR=11						
NOA				SKKPbc	SKKPbc	03 13 18.9	-0.8
	comp=Z,7.5nm,1.0s,baz=190,slow=4.3,SNR=5.3						
ATD	Arta Tunnel	139.44	263	PKhKP	PKPpre	03 01 44.7	
	comp=Z,103nm,1.0s,baz=286,slow=4.8,SNR=17						
ATD				SKPbc	SKiKP	03 04 44.7	+0.4
	comp=Z,117nm,1.0s,baz=75,slow=1.9,SNR=14						
RAYN	Ar Rayn	139.44	282	*i* PKPdf	PKPpre	03 01 43.9	
	SNR=75						
RAYN	Ar Rayn	139.44	282	PKHKP	PKPpre	03 01 43.5	
RAYN	Ar Rayn	139.44	282		PKPpre	03 01 43.5	
UPP	Uppsala	139.54	348	*e*P	PKPpre	03 01 42.4	
CLDR	Caldiran	139.61	306	*e*P	PKPpre	03 01 43.7	
NC602	NORSAR Array S	139.69	352	*e*PKPdf	PKPpre	03 01 42.9	
NC602				*e*SKSdf	SKSdf	03 08 14.7	0.0
HYA	Hoyanger	139.74	357	*e*PKPdf	PKPdf	03 01 43.9	-7.3
HYA				*e*SKPdf	SKPdf	03 04 36.1	-3.3
SUE	Sulen	139.92	358	*e*PKPdf	PKPdf	03 01 44.8	-6.7
HFS	Hagfors	139.98	351	PKhKP	PKPpre	03 01 43.5	
	comp=Z,96nm,0.4s,baz=36,slow=4.0,SNR=220						
HFS				SKPbc	SKPbc	03 04 41.9	+0.5
	comp=Z,73nm,1.0s,baz=270,slow=1.5,SNR=7.6						
HFS				SKKPbc	SKKPbc	03 13 15.7	-1.8
	comp=Z,8.1nm,0.8s,baz=132,slow=6.2,SNR=5.1						
SKAR	Skarslia	140.08	355	*e*PKPdf	PKPdf	03 01 44.8	-7.1
SKAR				IVmB_BB		03 01 50.6	
	comp=Z,3µm,3.5s						
VANB	Van	140.14	306	*e*P	PKPdf	03 01 47.8	-5.0
AGRB	Hanur-Agry	140.19	307	*e*P	PKPdf	03 01 46.5	-6.4
CUKT	Cukurca	140.27	303	*i* P	PKPdf	03 01 44.8	-8.3
SENK	Senkaya-Erzuru	140.39	309	*e*P	PKPdf	03 01 50.9	-2.4
SLIT	Slitere, Latvi	140.42	343	*e*P	PKPdf	03 01 46.5	-6.0
ASK	Askoy	140.47	357	*e*PKPdf	PKPdf	03 01 46.1	-6.4
AKDM	Akdamar-Van	140.51	305	*e*P	PKPdf	03 01 47.7	-5.8
BER	Bergen	140.57	357	*e*PKPdf	PKPdf	03 01 46.5	-6.1
OSL	Oslo	140.57	353	*e*PKPdf	PKPdf	03 01 46.1	-6.5
MLAZ	Malazgirt-MUS	140.64	307	*e*P	PKPdf	03 01 48.3	-5.4
IDID	Didziasalis	140.90	337	*e*P	PKPdf	03 01 48.3	-5.1
ISAL	Salakas	140.91	338	*e*P	PKPdf	03 01 48.3	-5.1
ODD1	Odda	140.96	356	*e*PKPdf	PKPdf	03 01 47.8	-5.6
KONO	Kongsberg	140.97	354	PKHKP	PKPdf	03 01 47.0	-6.4
KONO	Kongsberg	140.97	354		PKPdf	03 01 47.0	-6.4
KONO	Kongsberg	140.97	354	*e*PKPdf	PKPdf	03 01 47.1	-6.4
KONO				IVmB_BB		03 01 56.1	
	comp=Z,4µm,3.5s						
IIGN	Ignalina	141.05	338	*e*P	PKPdf	03 01 48.6	-5.1
MNK	Minsk	141.10	336	*i* LRM	MLR	04 05 23.6	
	comp=E,4.0nm,5.3s						
MNK	Minsk	141.10	336	⇑*i*PKHKP	PKPdf	03 01 49.0	-4.8
MNK				*e*		03 01 53.0	
MNK				*e*		03 03 44.0	
MNK				*e*		03 04 45.0	
MNK	Minsk	141.10	336	*i* PKP	PKPdf	03 01 47.2	-6.6
	comp=E,9.0nm,1.0s						
MNK	Minsk	141.10	336	*i* PKP	PKPdf	03 01 47.2	-6.6
	comp=N,89nm,1.0s						
MNK	Minsk	141.10	336	*i* PKP	PKPdf	03 01 47.2	-6.6
	comp=Z,212nm,1.0s						
MNK	Minsk	141.10	336	*i* pPKP	pPKPdf	03 03 41.7	-7.6
MNK	Minsk	141.10	336	*i* PP	PP	03 04 55.6	-5.7
MNK	Minsk	141.10	336	*i* PPP	PPP	03 08 07.5	
MNK	Minsk	141.10	336	*i* SKS	SKSdf	03 08 11.0	-6.2
MNK	Minsk	141.10	336	*i* SKKS		03 17 33.8	
MNK	Minsk	141.10	336	*i* SS	SS	03 22 40.9	-8.9
MNK	Minsk	141.10	336	*i* SSS	SSS	03 28 11.4	
MNK	Minsk	141.10	336	*i* LRM	MLR	04 05 16.2	
	comp=N,108nm,14.8s						
MNK	Minsk	141.10	336	*i* LRM	MLR	04 05 17.5	
	comp=Z,37nm,6.8s						
SIRT	Sirnak	141.13	304	*e*P	PKPdf	03 01 49.1	-5.4
GURO	Guroymak-BITLI	141.18	306	*e*P	PKPdf	03 01 49.5	-5.2
SOC	Sochi	141.19	314	*e*PKIKP	PKPdf	03 01 53.4	-0.9
SOC				*e*		03 03 50.2	
SOC				*e*		03 05 01.6	
SOC				*e*PPP	PPP	03 08 11.6	
SOC				*e*		03 08 23.2	
SOC				*e*SS	SS	03 22 49.5	-2.7
SOC				*e*SSS	SSS	03 28 08.8	
SOC				pmax	pmax		
	comp=Z,178nm,1.3s						
NACGM	Naroch	141.20	337	*i* SSS	SSS	03 27 08.0	
NACGM	Naroch	141.20	337	*i* PKP	PKPdf	03 01 47.1	-6.8
NACGM	Naroch	141.20	337	*i* PKP	PKPdf	03 01 47.1	-6.8
NACGM	Naroch	141.20	337	*i* PKP	PKPdf	03 01 47.1	-6.8
NACGM	Naroch	141.20	337	*i* pPKP	pPKPdf	03 03 39.1	-10
NACGM	Naroch	141.20	337	*i* sPKP		03 04 35.1	
NACGM	Naroch	141.20	337	*i* PP	PP	03 05 10.3	+8.4
NACGM	Naroch	141.20	337	*i* PPP	PPP	03 08 14.0	
NACGM	Naroch	141.20	337	*i* SKS	SKSdf	03 08 35.9	+19
NACGM	Naroch	141.20	337	*i* SKKS		03 17 32.9	
NACGM	Naroch	141.20	337	*i* SS	SS	03 22 42.6	-8.3
BLS5	Blasjo	141.46	356	*e*PKPdf	PKPdf	03 01 49.8	-4.6
BLS5				IVmB_BB		03 01 51.4	
	comp=Z,4µm,2.4s						
BLS5				*e*SKSac	SKSac	03 08 24.8	+0.7
PABE	Paberze	141.69	340	*e*P	PKPdf	03 01 51.0	-3.8
KARO	Karliova-Bingo	141.71	307	*e*P	PKPdf	03 01 51.2	-4.5
KMY	Karmoy	141.74	357	*e*PKPdf	PKPdf	03 01 50.6	-4.1
PBUR	Paburge	141.89	342	*e*P	PKPdf	03 01 51.4	-3.7
SVAN	Silvan-Diyarba	141.92	306	*e*P	PKPdf	03 01 51.7	-4.2
YEDI	Yedisu-Bingol	142.05	308	*e*P	PKPdf	03 01 51.9	-4.3
BNGB	Bingl	142.08	307	*e*P	PKPdf	03 01 52.6	-3.6
KTUT	Trabzon	142.11	310	⇓P	PKPdf	03 01 52.9	-3.2
KTUT	Trabzon	142.11	310	*e*P	PKPdf	03 01 51.8	-4.2
ANN	Anapa	142.16	317	*e*PKHKP	PKPdf	03 01 51.2	-4.8
ANN				*i*		03 01 57.9	
ANN				*e*		03 04 48.1	
ANN				*e*		03 05 04.0	
ANN				*e*		03 08 22.0	
ANN				*e*PPP	PPP	03 08 23.4	
ANN				pmax	pmax		
	comp=N,185nm,1.4s						
ANN				pmax	pmax		
	comp=Z,699nm,1.4s						
ANN				pmax	pmax		
	comp=E,132nm,1.4s						
ANN				pmax	pmax		
	comp=Z,457nm,1.2s						
ANN				pmax	pmax		
	comp=N,99nm,1.1s						
ANN				pmax	pmax		
	comp=E,89nm,1.2s						
ANN				pmax	pmax		
	comp=Z,266nm,1.2s						
FURI	Furi	142.35	257		PKPdf	03 01 56.8	-0.9
LEWI	Lewis, Hebride	142.38	7	*e*P	PKPdf	03 01 51.7	-4.3
HOMB	Homborsund	142.44	354	*e*PKPdf	PKPdf	03 01 52.6	-3.5
HOMB	Homborsund	142.44	354	*i* P	PKPdf	03 01 52.3	-3.7
SNART	Snartemo	142.49	355	*e*PKPdf	PKPdf	03 01 52.3	-3.9
SNART	Snartemo	142.49	355	*e*P	PKPdf	03 01 52.3	-3.9
SHEL	Horse Pasture	142.56	168	PKIKP	PKPdf	03 01 55.7	-2.0
SHEL	Horse Pasture	142.56	168	PKPdf	PKPdf	03 01 55.6	-2.0
MAZI	Mazidag	142.67	305	*i* P	PKPdf	03 01 53.8	-3.5
DYBB	Diyarbakir	142.78	306	*i* P	PKPdf	03 01 54.9	-2.5
LODK	Lodwar	142.84	247	P	PKPdf	03 01 56.7	-1.6
	SNR=205						
ESPY	Espiye-Giresun	142.88	311	*i* P	PKPdf	03 01 53.8	-3.6
KAC	Achnashellach	143.19	6	*e*P	PKPab	03 01 54.7	-0.4
AKASG	Malin Array Be	143.28	330	PKP	PKPab	03 01 55.1	-0.5
	comp=Z,273nm,0.4s,baz=40,slow=4.3,SNR=1143						
AKASG				SKPbc	SKiKP	03 04 50.8	-0.2
	comp=Z,81nm,1.1s,baz=38,slow=2.6,SNR=10						
AKBB	Malin Array Si	143.28	330	*d i*PKHKP	PKPab	03 01 54.8	-0.8
KPL	Plockton	143.31	7	*e*P	PKPab	03 01 54.6	-0.8
ILIC	ilic-Erzincan	143.49	309	*e*P	PKPab	03 01 56.9	-0.1
GOET	G??ttrup	143.58	353	⇓*i*P	PKPbc	03 01 56.6	0.0
	comp=Z,2µm,0.9s						
GOET	G??ttrup	143.58	353	⇓*i*P	PKPbc	03 01 56.7	+0.1
GOET				IAmb	IAmb	03 01 57.6	
	comp=Z,2µm,0.9s						
MALT	Malatya	143.96	307	*i* P	PKPbc	03 01 58.3	-0.4
DRUM	Mains of Drumt	144.00	4	*e*P	PKPbc	03 01 56.0	-2.0
RSDY	Resadiye-TOKAT	144.06	311	*i* P	PKPbc	03 01 58.4	-0.4
MUD	Monsted U'grnd	144.15	353	⇓*i*PKIKP	PKPbc	03 01 58.2	-0.3
MUD	Monsted U'grnd	144.15	353	⇓*i*P	PKPbc	03 01 58.2	-0.3
	comp=Z,4µm,1.2s						
MUD	Monsted U'grnd	144.15	353	⇓*i*P	PKPbc	03 01 58.3	-0.2
MUD				IAmb	IAmb	03 02 00.0	
	comp=Z,4µm,1.2s						
SIM	Simferopol'	144.15	319	*d i*PKIKP	PKPbc	03 01 57.9	-1.0
SIM				pmax	pmax		
	comp=Z,3µm,1.1s						
MBAR	Mbarara	144.36	237	PKP	PKPdf	03 02 01.7	+0.7
	comp=Z,1µm,1.1s,baz=100,slow=4.3,SNR=527						
INVG	Invergeldie, C	144.37	5	*e*P	PKPbc	03 01 57.9	-1.3
LAWE	Loch Awe, Argy	144.40	7	*e*P	PKPbc	03 01 58.6	-0.7
COP	Copenhagen	144.43	349	⇓*i*PKIKP	PKPbc	03 01 59.2	-0.2
COP	Copenhagen	144.43	349	⇓*i*P	PKPbc	03 01 59.2	-0.2
	comp=Z,2µm,1.1s						
COP	Copenhagen	144.43	349	⇓*i*P	PKPbc	03 01 59.2	-0.2
COP				IAmb	IAmb	03 02 00.2	
	comp=Z,2µm,1.1s						
BSD	Bornholm Skovb	144.50	347	*e*P	PKPbc	03 01 59.5	-0.1
BSD	Bornholm Skovb	144.50	347	⇓*i*PKIKP	PKPbc	03 01 59.1	-0.5
BSD	Bornholm Skovb	144.50	347	⇓*i*P	PKPbc	03 01 59.1	-0.5
	comp=Z,4µm,1.2s						
BSD	Bornholm Skovb	144.50	347	⇓*i*P	PKPbc	03 01 59.1	-0.5
BSD				IAmb	IAmb	03 02 00.8	
	comp=Z,4µm,1.2s						
EAB	Aberfoyle	144.58	6	*e*P	PKPbc	03 01 58.5	-1.3
DARE	Darende-Malaty	144.58	308	P	PKPdf	03 02 00.5	-0.1
TOKT	Tokat	144.64	311	*e*P	PKPdf	03 01 59.8	-0.8
KVT	Kavak	144.69	312	*e*P	PKPdf	03 02 00.2	-0.4
LLD	Lille Linde	144.81	350	*i* PKIKP	PKPdf	03 02 00.3	+0.1
LLD	Lille Linde	144.81	350	*i* P	PKPdf	03 02 00.3	+0.1
	comp=Z,38nm,1.4s						
LLD	Lille Linde	144.81	350	*i* P	PKPdf	03 02 00.3	+0.1
LLD				IAmb	IAmb	03 02 02.2	
	comp=Z,38nm,1.4s						
SNOP	Sinop	144.86	314	P	PKPdf	03 02 00.3	-0.5
PGBU	Glenifferbraes	144.94	6	*e*P	PKPdf	03 01 59.5	-1.0
EDI	Edinburgh	144.94	5	*e*P	PKPdf	03 01 58.3	-2.2
DIKM	Dikmen	144.99	314	⇓P	PKPdf	03 02 01.1	+0.1
DIKM	Dikmen	144.99	314	*i* P	PKPdf	03 02 00.6	-0.4
ESY	Stoneypath	144.99	4	*e*P	PKPdf	03 01 59.5	-1.1
EBL	Broad Law	145.10	5	*e*P	PKPdf	03 01 59.6	-1.2
GAZ	Gaziantep	145.23	305	*i* P	PKPdf	03 02 01.3	-0.4
RGN	Rugen	145.35	348	*e*PKPbc	PKPbc	03 02 02.6	+0.4
	baz=16,slow=2.5						
KMRS	Kahramanmaras	145.36	306	*i* P	PKPdf	03 02 01.2	-0.7
SARI	SarD1z-Kayseri	145.42	308	*i* P	PKPdf	03 02 00.9	-1.2
SORM	Soroca	145.45	328	⇓P	PKPdf	03 02 00.8	-0.8
SORM	Soroca	145.45	328	⇓PKIKP	PKPdf	03 02 00.8	-0.8
CLGH	Cloghs, Cushen	145.47	8	*e*P	PKPdf	03 02 00.1	-1.3
EKA	Eskdalemuir Ar	145.53	5	PKPbc	PKPdf	03 02 02.1	+0.6
	comp=Z,1µm,1.1s,baz=339,slow=2.6,SNR=250						
EKA				SKKPbc	SKKPbc	03 12 52.8	-2.1

	comp=Z,14nm,1.2s,baz=131,slow=4.6,SNR=5.5						
ESK	Eskdalemuir	145.54	5	eP	PKPdf	03 02 00.3	-1.2
ESK	Eskdalemuir	145.54	5	PKIKP	PKPdf	03 02 01.5	0.0
ESK	Eskdalemuir	145.54	5	PKPdf	PKPdf	03 02 01.5	0.0
GKP	Gorka Klasztor	145.63	343	ePKPdf	PKPdf	03 02 01.7	0.0
GKP				ePKPbc	PKPbc	03 02 03.0	-0.1
GKP	Gorka Klasztor	145.63	343	eP	PKPbc	03 02 02.6	-0.5
NEWG	New Galloway	145.65	6	eP	PKPdf	03 02 01.1	-0.6
BNN	Bunyan	145.69	309	i P	PKPdf	03 02 00.9	-1.6
BZK	Bozkurt	145.69	315	⇑P	PKPbc	03 02 03.4	-0.3
BZK	Bozkurt	145.69	315	eP	PKPbc	03 02 03.3	-0.3
BEL	Belsk	145.80	339	ePKPdf	PKPdf	03 02 02.1	0.0
BEL				ePKPbc	PKPbc	03 02 04.1	+0.4
SKMB	Sankelmark Bun	145.82	352	ePKPdf	PKPdf	03 02 02.5	+0.5
	baz=16,slow=2.5						
SKMB				ePKPbc	PKPbc	03 02 04.1	+0.5
	baz=16,slow=2.5						
GAL1	Galloway	145.85	7	eP	PKPdf	03 02 00.7	-1.4
KIS	Kishinev	145.96	326	esPKP		03 04 24.0	
KIS	Kishinev	145.96	326	⇓P	PKPbc	03 02 04.1	-0.2
KIS	Kishinev	145.96	326	d iPKIKP	PKPbc	03 02 03.7	-0.6
KIS				e		03 05 40.0	
KIS				pmax	pmax		
	comp=Z,2µm,1.3s						
KIS	Kishinev	145.96	326	⇓iPKP	PKPbc	03 02 03.7	-0.6
	comp=Z,2µm,1.2s						
KIS	Kishinev	145.96	326	epPKP	pPKPdf	03 03 53.0	-5.0
MILM	Milestii Mici	146.02	326	⇓P	PKPdf	03 02 02.2	-0.4
EDMD	Edmundbyers	146.11	4	eP	PKPdf	03 02 01.5	-1.0
KOZT	Kozan	146.18	307	eP	PKPdf	03 02 02.7	-0.5
LVV	L'vov	146.21	334	ePKIKP	PKPdf	03 02 02.2	-0.6
LVV				e		03 02 04.7	
LVV				e		03 03 56.6	
LVV				e		03 04 45.7	
LVV				e		03 05 31.6	
LVV				e		03 08 26.2	
LVV				e		03 08 50.3	
KESW	Keswick, Cumbr	146.27	5	eP	PKPdf	03 02 02.7	-0.1
CEYT	Ceyhan	146.39	306	i P	PKPdf	03 02 03.4	-0.1
H07N1	FLORES T-PHASE	146.40	49	ePKP	PKPdf	03 02 04.6	+1.1
BSEG	Bad Segeberg	146.46	351	ePKPdf	PKPdf	03 02 03.6	+0.5
	baz=16,slow=2.5						
BSEG				ePKPbc	PKPbc	03 02 05.5	+0.2
	baz=16,slow=2.5						
IOMK	Kirk Michael	146.46	7	eP	PKPdf	03 02 01.9	-1.2
H07S1	FLORES T-PHASE	146.47	50	ePKP	PKPbc	03 02 05.3	-0.7
IAS	Iasi	146.48	327	⇓P	PKPbc	03 02 04.7	-1.0
IAS	Iasi	146.48	327	⇓PKIKP	PKPbc	03 02 04.7	-1.0
HLG	Helgoland	146.53	353	ePKPbc	PKPbc	03 02 06.1	+0.5
	baz=16,slow=2.5						
CANT	Cankiri	146.56	313	i P	PKPdf	03 02 03.3	-0.5
WIM	Isle of Man	146.56	7	eP	PKPdf	03 02 03.0	-0.3
GDLE	Glaisdale, N Y	146.58	3	eP	PKPdf	03 02 02.8	-0.5
VASR	Vaslui	146.73	326	⇓P	PKPdf	03 02 04.4	+0.5
KRTS	Karatas	146.81	305	eP	PKPdf	03 02 04.0	-0.3
KARA	Karaisali	146.83	307	i P	PKPdf	03 02 03.7	-0.6
KWP	Kalwaria Pacla	146.89	335	ePKPdf	PKPdf	03 02 04.3	+0.3
KWP				ePKPbc	PKPbc	03 02 07.0	+0.2
KWP	Kalwaria Pacla	146.89	335	PKIKP	PKPdf	03 02 04.0	0.0
KWP	Kalwaria Pacla	146.89	335		PKPdf	03 02 04.0	0.0
BR131	Keskin Array S	146.92	312	dePKIKP	PKPdf	03 02 03.3	-1.3
BRTR	Keskin Array B	146.92	312	PKP	PKPdf	03 02 04.2	-0.3
	comp=Z,313nm,0.9s,baz=57,slow=0.9,SNR=176						
BRTR				PKPbc	PKPbc	03 02 07.0	-0.4
	comp=Z,315nm,0.9s,baz=136,slow=0.9,SNR=207						
BRTR				PKKP	PKKPdf	03 11 10.6	+5.9
	comp=Z,6.3nm,1.1s,baz=259,slow=1.5,SNR=3.8						
BRTR				SKKPbc	SKKPbc	03 12 46.7	-1.7
	comp=Z,12nm,1.1s,baz=197,slow=3.9,SNR=9.9						
MQOL	MQOL	146.94	276	i		03 02 03.3	
	baz=242,slow=18						
MQOL				i P		03 02 04.7	
MQOL				i S		03 07 01.5	
HPK	Haverah Park	147.00	4	eP	PKPdf	03 02 04.3	+0.3
HWQ	Hawqa	147.02	301	eP	PKPdf	03 02 03.8	-1.1
PRAR	RASCA	147.02	329	⇓P	PKPdf	03 02 04.4	+0.1
BIR	Birlad	147.06	326	⇑P	PKPbc	03 02 08.0	+0.7
BIR	Birlad	147.06	326	⇑PKP2	PKPbc	03 02 08.0	+0.7
TLCR		147.11	324	⇑P	PKPdf	03 02 04.2	-0.3
TLCR		147.11	324	⇑PKIKP	PKPdf	03 02 04.2	-0.3
VARL	Varlezi	147.19	325	⇑P	PKPbc	03 02 07.8	+0.2
RUE	Ruedersdorf	147.20	346	ePKPdf	PKPdf	03 02 04.6	+0.3
	baz=16,slow=2.5						
RUE				ePKPbc	PKPbc	03 02 07.6	+0.2
	baz=16,slow=2.5						
DSB	Dublin	147.22	9	PKPdf	PKPdf	03 02 03.6	-0.8
DSB				PKPbc	PKPbc	03 02 07.1	-0.4
ASCN	Ascension	147.23	150		PKPbc	03 02 07.6	-1.1
GIUM	Giurgiulesti	147.26	324	⇑P	PKPdf	03 02 05.5	+0.8
SERE	Sereflikochisa	147.29	310	eP	PKPbc	03 02 07.3	-1.0
RCY	Rachaya	147.30	300	eP	PKPdf	03 02 05.2	-0.1
GHRR		147.31	326	⇓P	PKPdf	03 02 05.3	+0.5
WPS	Cemaes, Angles	147.31	7	eP	PKPdf	03 02 03.9	-0.7
BURAR	Bucovina Array	147.33	330	⇑P	PKPdf	03 02 05.4	+0.5
BURAR	Bucovina Array	147.33	330	⇑PKIKP	PKPdf	03 02 05.4	+0.5
BURAR	Bucovina Array	147.33	330	PKPdf	PKPdf	03 02 04.4	-0.5
BURAR				PKPbc	PKPbc	03 02 08.5	+0.4
WME	Myndd Eilian	147.34	7	eP	PKPdf	03 02 04.2	-0.4
BHL	Bhannes	147.35	300	eP	PKPdf	03 02 04.9	-0.5
BIZ	Bicaz	147.38	328	⇓P	PKPdf	03 02 05.7	+0.8
TESR	Tescani	147.40	327	⇑P	PKPdf	03 02 04.8	-0.2
WLF1	Llynfaes	147.43	7	eP	PKPdf	03 02 04.0	-0.8
YRC	Rhoscolyn	147.45	7	eP	PKPdf	03 02 04.1	-0.7
SCHL	Schela	147.45	325	⇑P	PKiKP	03 02 09.2	-0.8
CFR	Carcaliu	147.49	324	⇓P	PKPdf	03 02 04.7	-0.4
CFR	Carcaliu	147.49	324	⇓PKIKP	PKPdf	03 02 04.7	-0.4
OJC	Ojcow	147.50	338	ePKPdf	PKPdf	03 02 04.6	-0.4
OJC				ePKPbc	PKPbc	03 02 08.1	-0.3
TPGR	Topolog	147.54	323	⇑P	PKPdf	03 02 05.5	+0.2
LBWR	Ladybower, Pea	147.55	4	eP	PKPdf	03 02 04.7	-0.3
LMK	Market Rasen	147.56	2	eP	PKPdf	03 02 04.8	-0.2
YLL	Llanberis	147.60	7	eP	PKPdf	03 02 04.8	-0.2
KOLS	Kolonicke sedl	147.62	334	ePKIKP	PKPdf	03 02 05.5	+0.3
KOLS				e		03 02 09.5	
KOLS	Kolonicke sedl	147.62	334	ePKP	PKPdf	03 02 05.5	+0.3
KOLS				e		03 02 09.5	
YESY	Yesilyurt	147.62	308	eP	PKPdf	03 02 04.1	-1.7
PETR	Petresti	147.63	326	⇓P	PKPdf	03 02 05.8	+0.5
ODBI	Odobesti	147.69	326	⇑P	PKPdf	03 02 06.4	+0.9
MMAI	Mount Meron Ar	147.76	299	PKPbc	PKiKP	03 02 10.6	-0.6
	comp=Z,1µm,0.9s,baz=45,slow=2.5,SNR=96						
MMAI				SKKPbc		03 12 41.4	
	comp=Z,1.9nm,0.5s,baz=255,slow=6.6,SNR=7.3						
TIRR	Tirgusor	147.79	323	⇑P	PKPdf	03 02 05.8	+0.2
TIRR	Tirgusor	147.79	323	⇑P	PKPdf	03 02 05.8	+0.2
TIRR	Tirgusor	147.79	323	⇑PKIKP	PKPdf	03 02 05.8	+0.2
VRI	Vrincioaia	147.80	326	⇑P	PKPdf	03 02 05.1	-0.5
VRI	Vrincioaia	147.80	326	⇑PKIKP	PKPdf	03 02 05.1	-0.5
UZH	Uzhgorod	147.85	334	dePKHKP	PKPdf	03 02 04.2	-1.4
UZH				i		03 02 10.0	
PLOR	Plostina	147.85	326	⇑P	PKPbc	03 02 08.8	-0.6
PLOR				⇓P	PKiKP	03 02 08.9	-2.0
PLOR	Plostina	147.85	326	⇑PKP2	PKPbc	03 02 08.8	-0.6
FLTG	Flechtingen	147.85	349	ePKPdf	PKPdf	03 02 06.0	+0.6
	baz=16,slow=2.5						
FLTG				ePKPbc	PKPbc	03 02 09.0	-0.2
	baz=16,slow=2.5						
NRDL	Niedersach Rie	147.89	350	ePKPbc	PKPbc	03 02 09.3	+0.2
	baz=16,slow=2.5						
HARR	Harsova	147.91	324	⇑P	PKPdf	03 02 07.1	+1.3
HARR	Harsova	147.91	324	⇑PKIKP	PKPdf	03 02 07.1	+1.3
TLBR	Topalu	147.94	323	⇓P	PKPdf	03 02 06.1	+0.3
MFTR	Murfatlar	147.95	322	⇓P	PKPdf	03 02 06.0	+0.1
CRVS	Cervenica-Dubn	147.97	335	ePKP	PKPdf	03 02 06.0	+0.2
CRVS				e		03 02 10.4	
SILI	Silifke-Mersin	147.99	306	i P	PKPbc	03 02 09.8	-0.2
NIE	Niedzica	147.99	337	ePKPdf	PKPdf	03 02 06.2	+0.3
NIE				ePKPbc	PKPbc	03 02 10.2	+0.6
GRER		147.99	325	⇓P	PKiKP	03 02 11.7	+0.6
BISRR	Bisoca	148.02	326	⇑P	PKPdf	03 02 06.0	-0.1
KSP	Ksiaz	148.06	342	ePKPdf	PKPdf	03 02 05.8	-0.1
KSP				ePKPbc	PKPbc	03 02 09.9	+0.2
BMR	Baia Mare	148.07	332	⇑P	PKPdf	03 02 05.9	-0.1
CVDA	Cernavoda	148.07	323	⇑P	PKPdf	03 02 07.0	+1.0
MANR	Mangalia	148.07	322	⇓P	PKPdf	03 02 06.9	+0.8
TSMN	Mangalia Port-	148.08	322	⇓P	PKiKP	03 02 11.0	-0.4
ARCR	ARCALIA	148.12	330	⇓P	PKPdf	03 02 06.0	-0.1
OZUR		148.12	327	⇑P	PKPdf	03 02 06.5	+0.3
ASSE	Asse, Remlinge	148.14	349	ePKPbc	PKPbc	03 02 09.8	0.0
	baz=16,slow=2.5						
CWF	Charnwood Fore	148.24	3	eP	PKPdf	03 02 03.5	-2.6
AMRR	Amara	148.29	324	⇓P	PKPdf	03 02 07.2	+0.8
PGOR	Pogoanele	148.29	325	⇑P	PKPbc	03 02 10.9	+0.4
NEHR	Nehoiu	148.32	326	⇓P	PKPdf	03 02 06.5	0.0
WACR	West Acre	148.32	1	eP	PKPdf	03 02 05.7	-0.5
AKKU	Akkuyu-Mersin	148.34	305	i P	PKPbc	03 02 10.2	-0.7
ICOR	Ion Corvin	148.34	323	⇑P	PKPdf	03 02 07.1	+0.5
OSTC	Ostas	148.34	342	ePKPDF	PKPdf	03 02 06.2	-0.2
OSTC				⇑ePKP	PKPbc	03 02 11.1	+0.6
HLM1	Long Mynd	148.34	5	eP	PKPdf	03 02 04.4	-1.9
CHVC	Chvalec	148.36	342	ePKPDF	PKPdf	03 02 06.0	-0.4
CHVC				⇑ePKP	PKPbc	03 02 11.0	+0.4
OKC	Ostrava-Krasne	148.38	339	ePKPDF	PKPdf	03 02 06.9	+0.5
OKC				⇑ePKP	PKPbc	03 02 11.2	+0.6
ISR	Istrita	148.39	325	⇓P	PKPbc	03 02 11.3	+0.5
ISR	Istrita	148.39	325	⇓PKP2	PKPbc	03 02 11.3	+0.5
IBBN	Ibbenburen	148.39	353	ePKPbc	PKPbc	03 02 10.8	+0.3
	baz=16,slow=2.5						
IBBN				ePKPab	PKPab	03 02 16.1	+0.6
	baz=16,slow=2.5						
DOPR	Dopca	148.41	328	⇑P	PKPdf	03 02 07.3	+0.7
KALB	Balgarevo	148.42	321	⇓P	PKPbc	03 02 11.1	+0.2
UPC	Upice	148.44	342	ePKPDF	PKPdf	03 02 06.5	0.0
UPC				⇑ePKP	PKPbc	03 02 11.2	+0.5
MLR	Muntele Rosu	148.46	326	PKPbc	PKPbc	03 02 11.1	0.0
	comp=Z,897nm,1.0s,baz=336,slow=5.4,SNR=152						
MLR	Muntele Rosu	148.46	326	⇑P	PKPdf	03 02 06.5	-0.4
MLR	Muntele Rosu	148.46	326	PKPdf	PKPdf	03 02 05.7	-1.2
MLR				PKPbc	PKPbc	03 02 11.1	0.0
CLL	Collm	148.47	346	ePKPdf	PKPdf	03 02 06.0	-0.5
CLL				⇓iPKPbc	PKPbc	03 02 11.0	+0.3
	comp=Z,1µm,1.0s						
CLL				ePKPlp		03 02 12.0	
	comp=Z,1µm,20.3s						
CLL				i PKPab	PKPab	03 02 15.8	-0.1
	comp=Z,932nm,1.1s						
CLL				epPKPbc	pPKPdf	03 04 01.0	-1.3
CLL				epPKPab	pPKPab	03 04 10.0	+3.6
CLL				eSKPdf	SKPdf	03 04 54.0	0.0
CLL				ePKSdf	PKSdf	03 05 40.0	-1.3
CLL				esPP		03 08 21.0	
CLL				ePPP	PPP	03 09 06.0	
CLL				ePPPP		03 11 24.0	
CLL				e		03 12 37.0	
CLL				epPPPP		03 12 48.0	
CLL				eSKSP		03 15 08.0	
CLL				ePSKS		03 15 56.0	
CLL				e(SPP)		03 17 54.0	
CLL				ePPS	PPS	03 18 36.0	
CLL				eSS	SS	03 24 14.0	+1.4
CLL				e		03 25 33.0	
CLL				esSS		03 27 18.0	
CLL				eSSS	SSS	03 29 54.0	
CLL				esSSS		03 32 42.0	
CLL	Collm	148.47	346	⇓ePKHKP	PKPdf	03 02 06.0	-0.5
CLL				i		03 02 15.8	
CLL				e		03 05 40.0	
CLL				pmax	pmax		
	comp=Z,1µm,1.0s						
CLL				pmax	pmax		
	comp=Z,932nm,1.1s						
CLL	Collm	148.47	346	ePKPdf	PKPdf	03 02 06.9	+0.4
	baz=16,slow=2.5						
CLL				ePKPbc	PKPbc	03 02 10.8	+0.1
	baz=16,slow=2.5						
CLZ	Clausthal	148.47	350	ePKPdf	PKPdf	03 02 06.7	+0.1
	baz=16,slow=2.5						
CLZ				ePKPbc	PKPbc	03 02 10.7	-0.1
	baz=16,slow=2.5						
DPC	Dobruska-Polom	148.50	342	ePKPDF	PKPdf	03 02 06.3	-0.4
DPC				⇑ePKP	PKiKP	03 02 11.6	-0.5
LANS	Liptovska Anna	148.51	337	ePKP	PKPdf	03 02 07.5	+0.8
LANS				e		03 02 12.5	
PCED	Cedros	148.55	49	ePKP	PKPbc	03 02 11.5	+0.1
CALA	Caldeira	148.57	49	ePKP	PKPdf	03 02 08.8	+1.6
KRLC	Kraliky	148.60	341	ePKPDF	PKPdf	03 02 07.0	+0.1
KRLC				⇑ePKP	PKPbc	03 02 11.5	+0.3
MORC	Moravsky Berou	148.63	340	⇑P	PKPdf	03 02 07.3	+0.4
MORC	Moravsky Berou	148.63	340	ePKP	PKPdf	03 02 06.6	-0.3
MORC				e		03 02 11.6	
HOR	Horta	148.65	49	ePKP	PKPdf	03 02 08.9	+1.7
RASA	Rasa	148.65	323	⇓P	PKPdf	03 02 06.9	-0.1
BRG	Berggiesshubel	148.66	345	⇓iPKP	PKPdf	03 02 06.9	+0.1
BRG				Amp		03 02 09.0	
	comp=Z,303nm,1.4s						
BRG				i x	x	03 02 11.6	
BRG				Amp		03 02 13.7	
	comp=Z,2µm,1.6s						
BRG				ex	x	03 02 17.2	
BRG				Amp		03 02 18.0	
	comp=Z,448nm,1.0s						
BRG				ex	x	03 02 29.5	
BRG				Amp		03 02 30.9	
	comp=Z,258nm,1.1s						
BRG				ex	x	03 04 09.2	
BRG				Amp		03 04 13.7	
	comp=Z,124nm,1.2s						
BRG				ex	x	03 05 42.0	
BRG				Amp		03 05 42.7	
	comp=Z,163nm,1.6s						
BRG				ex	x	03 15 27.0	
BRG				ex	x	03 18 38.0	
BRG				ex	x	03 24 18.0	
BRG	Berggiesshubel	148.66	345	ePKPdf	PKPdf	03 02 07.1	+0.3
	baz=16,slow=2.5						
BRG				ePKPbc	PKPbc	03 02 11.6	+0.4
	baz=16,slow=2.5						
LEHL	Lehliu	148.66	324	⇓P	PKPbc	03 02 11.9	+0.5
KECS	Kecovo	148.69	336	ePKP	PKPdf	03 02 07.1	+0.1
KECS				e		03 02 12.3	
KECS				e		03 02 18.0	
RSBS	Rosebush, Pemb	148.71	8	eP	PKPdf	03 02 06.2	-0.7
GULT	Gulveren	148.73	315	i P	PKPdf	03 02 09.3	+1.9
CJR	Cluj-Napoca	148.74	330	⇑P	PKPdf	03 02 07.4	+0.2
FBE	Freiberg	148.75	346	ePKPbc	PKPbc	03 02 11.7	+0.3
	baz=16,slow=2.5						
EIL	Elat	148.77	293	PKP	PKPdf	03 02 07.2	-0.5
	comp=Z,69nm,1.0s,baz=348,slow=1.0,SNR=41						
EIL				PKPbc	PKPbc	03 02 12.4	+0.2
	comp=Z,659nm,0.9s,baz=100,slow=1.6,SNR=110						
PCAN	Candelaria	148.78	49	ePKP	PKPbc	03 02 12.3	+0.3
MDB	Medias	148.78	329	⇓P	PKiKP	03 02 12.7	-0.1
MDB	Medias	148.78	329	⇓PKP2	PKiKP	03 02 12.7	-0.1
PLAR	PLOIESTI	148.80	326	⇓P	PKPbc	03 02 12.2	+0.5
PICO	Pico	148.80	49	ePKP	PKPdf	03 02 08.5	+0.9
PVCC	Panska Ves	148.82	344	ePKPDF	PKPdf	03 02 07.2	+0.1
PVCC				⇑ePKP	PKiKP	03 02 12.2	-0.5
NEUB	Neuenburg	148.82	348	ePKPdf	PKPdf	03 02 07.1	0.0
	baz=16,slow=2.5						
NEUB				ePKPbc	PKPbc	03 02 11.7	+0.1
	baz=16,slow=2.5						
GTTG	Gottingen	148.83	350	ePKPdf	PKPdf	03 02 07.3	+0.2
	baz=16,slow=2.5						
GTTG				ePKPbc	PKPbc	03 02 11.7	0.0
	baz=16,slow=2.5						
GTTG				ePKPab	PKPab	03 02 17.6	+0.2
	baz=16,slow=2.5						
SULR		148.84	325	⇓P	PKPdf	03 02 07.6	+0.3
ROSA	Rosais	148.84	49	ePKP	PKPbc	03 02 12.0	-0.1
MCH1	Michaelchurch	148.85	6	eP	PKPdf	03 02 05.9	-1.2
CIFT	Cifteler, Eski	148.87	313	eP	PKPdf	03 02 06.4	-1.3
PGRA	Graciosa	148.88	48	ePKP	PKPdf	03 02 07.3	-0.3
CSS	Mathiatis	148.90	303	PKPdf	PKPdf	03 02 06.9	-0.9
CSS				PKPbc	PKPbc	03 02 11.6	-0.8
VOIR		148.95	327	⇑P	PKPdf	03 02 07.6	-0.1
SSW	Stow on the Wo	148.97	4	eP	PKPdf	03 02 07.4	+0.1
PMAN	Manadas	148.98	49	ePKP	PKPbc	03 02 12.1	-0.3
LTVH	Ltavrtes, Hu	148.99	333	eP	PKPdf	03 02 08.7	+1.3
PID	Ribeirinha	149.04	49	ePKP	PKPdf	03 02 09.8	+1.9
DRGR		149.09	331	⇓P	PKPdf	03 02 07.3	-0.5
MTUR	Matau	149.09	327	⇑P	PKPbc	03 02 12.3	-0.3
STRD	Stroud	149.14	5	eP	PKPdf	03 02 07.0	-0.6
LEF	Lefka	149.19	304	⇓P	PKPdf	03 02 08.0	-0.2
ARR	Arges	149.21	327	⇓P	PKPdf	03 02 09.1	+1.1
OLDB	Oldbury-Upon-S	149.22	5	eP	PKPdf	03 02 06.9	-0.8
KLYT	Kilyos	149.26	317	eP	PKPbc	03 02 11.5	-1.5
PRA	Prague	149.27	344	ePKPDF	PKPdf	03 02 07.8	0.0
PRA				⇑ePKP	PKiKP	03 02 13.2	-0.4
SGRR	Singureni	149.29	325	⇓P	PKPbc	03 02 12.4	-0.6
VYHS	Vyhne	149.29	337	ePKP	PKPdf	03 02 07.7	-0.3
VYHS				e		03 02 13.5	
BUG	Bochum--Univer	149.30	353	ePKPbc	PKPbc	03 02 13.1	+0.4
	baz=16,slow=2.5						
PRU	Pruhonice	149.32	344	ePKIKP	PKPdf	03 02 07.4	-0.5
PRU				e		03 02 20.4	
PRU	Pruhonice	149.32	344	ePKPDF	PKPdf	03 02 07.4	-0.5
PRU				⇑ePKP	PKPbc	03 02 13.3	+0.4
PRU				ePKPAB	PKPab	03 02 20.4	+1.0
VRAC	Vranov	149.34	341	PKP	PKPdf	03 02 07.6	-0.4
	comp=Z,26nm,1.1s,baz=50,slow=1.0,SNR=24						
VRAC				PKPbc	PKPbc	03 02 13.0	0.0
	comp=Z,567nm,1.2s,baz=71,slow=1.8,SNR=113						
VRAC	Vranov	149.34	341	⇑P	PKPdf	03 02 08.2	+0.2
VRAC	Vranov	149.34	341	ePKP	PKPdf	03 02 07.5	-0.5
VRAC				e		03 02 13.2	
ISK	Istanbul-Kandi	149.35	317	P	PKPbc	03 02 12.2	-1.0
ISK	Istanbul-Kandi	149.35	317	eP	PKPdf	03 02 06.6	-1.7
KAVV	Kandilli-Istan	149.35	317	i P	PKPbc	03 02 12.6	-0.6
PSZ	Piszkesteto	149.38	336	⇓P	PKPdf	03 02 08.4	+0.2
PSZ	Piszkesteto	149.38	336	eP	PKPdf	03 02 08.5	+0.2
JAVC	Velka Javorina	149.38	339	ePKP	PKPdf	03 02 08.5	+0.3
JAVC				e		03 02 14.6	
MOX	Moxa	149.39	347	ePKPdf	PKPdf	03 02 08.2	+0.1
	baz=16,slow=2.5						
MOX				ePKPbc	PKPbc	03 02 13.1	0.0
	baz=16,slow=2.5						
KASTN	Kahler Asten	149.39	352	ePKPdf	PKPdf	03 02 08.2	+0.1
	baz=16,slow=2.5						
KASTN				ePKPbc	PKPbc	03 02 13.0	-0.1
	baz=16,slow=2.5						
STFAR	Stefanesti-Arg	149.39	326	⇑P	PKPbc	03 02 13.5	+0.2
RAZG	Razgrad	149.42	323	⇓P	PKPdf	03 02 07.7	-0.6
PLN	Plauen	149.43	347	ePKPdf	PKPdf	03 02 08.2	+0.1
	baz=16,slow=2.5						
PLN				ePKPbc	PKPbc	03 02 13.3	+0.1
	baz=16,slow=2.5						
PLN				ePKPab	PKPab	03 02 20.2	+0.3
	baz=16,slow=2.5						
TANN	Tannenbergstha	149.43	346	ePKPdf	PKPdf	03 02 08.2	0.0
	baz=16,slow=2.5						
TANN				ePKPbc	PKPbc	03 02 13.2	0.0
	baz=16,slow=2.5						
TANN				ePKPab	PKPab	03 02 20.2	+0.2
	baz=16,slow=2.5						
SWN1	Swindon	149.43	4	eP	PKPdf	03 02 07.9	-0.2
WERD	Werda	149.43	347	ePKPbc	PKPbc	03 02 13.1	-0.1
	baz=16,slow=2.5						
WERD				ePKPab	PKPab	03 02 20.6	+0.7
	baz=16,slow=2.5						
BATH	Bath	149.46	5	eP	PKPdf	03 02 07.0	-1.1
GUNZ	Gunzen	149.50	346	ePKPbc	PKPbc	03 02 13.2	-0.2
	baz=16,slow=2.5						
GUNZ				ePKPab	PKPab	03 02 20.9	+0.6
	baz=16,slow=2.5						
UBBA	Unterbreizbach	149.52	350	ePKPdf	PKPdf	03 02 08.2	+0.1
	baz=16,slow=2.5						
UBBA				ePKPbc	PKPbc	03 02 13.4	+0.2
	baz=16,slow=2.5						
PAGU	Agualva, Azore	149.56	48	ePKP	PKPdf	03 02 10.4	+1.7
WERN	Wernitzgruen	149.56	346	ePKPdf	PKPdf	03 02 08.1	-0.3
	baz=16,slow=2.5						
WERN				ePKPbc	PKPbc	03 02 13.6	+0.1
	baz=16,slow=2.5						
ADH	Angra Heroismo	149.57	48	ePKP	PKPdf	03 02 09.8	+1.1
LOT	Lotru	149.58	328	⇑P	PKPdf	03 02 07.9	-0.8
GEMT	Gemlik	149.60	316	i P	PKPbc	03 02 13.4	-0.5
NKC	Novy Kostel	149.60	346	ePKPDF	PKPdf	03 02 08.5	+0.1
NKC				⇑ePKP	PKiKP	03 02 14.0	-0.4
HUMR	Humele	149.61	326	⇑P	PKPbc	03 02 13.0	-0.8
KRUC	Moravsky	149.62	341	ePKP	PKPdf	03 02 07.7	-0.7
KRUC				e		03 02 13.8	
PSCM	Serra do Cume	149.63	48	ePKP	PKPdf	03 02 09.6	+0.8
WOL	Wolverton	149.66	4	eP	PKPdf	03 02 07.6	-0.8
DEV	Deva	149.68	330	⇑P	PKPdf	03 02 08.9	+0.3
TREC	Trest	149.68	342	ePKIKP	PKPdf	03 02 08.4	-0.2
TREC				e		03 02 20.9	
TREC	Trest	149.68	342	ePKPDF	PKPdf	03 02 08.4	-0.2
TREC				⇑ePKP	PKPbc	03 02 14.1	+0.3
TREC				ePKPAB	PKPab	03 02 20.9	-0.1
PBCC	Pribram	149.74	344	ePKPDF	PKPdf	03 02 08.5	-0.1
PBCC				⇑ePKP	PKPbc	03 02 14.0	+0.1
PBCC				ePKPAB	PKPab	03 02 22.1	+0.9
COPA	Copaceanca	149.75	325	⇑P	PKPdf	03 02 08.4	-0.4
SMOL	Smolenice	149.76	339	ePKP	PKPdf	03 02 08.8	+0.1
SMOL				e		03 02 15.1	
SMOL				e		03 02 22.6	
ELSH	Elham, Standar	149.91	1	eP	PKPdf	03 02 08.4	-0.3
MODS	Modra-Piesok	149.94	339	ePKIKP	PKPdf	03 02 08.4	-0.6
MODS	Modra-Piesok	149.94	339	ePKP	PKPdf	03 02 08.3	-0.7
MODS				e		03 02 14.6	
SIRR	Siria	149.96	332	⇓P	PKPdf	03 02 09.3	+0.2
ZIMR		149.99	324	⇑P	PKPbc	03 02 14.8	+0.2
SRO	Srobarova	150.05	337	ePKP	PKPdf	03 02 09.6	+0.5
SRO				e		03 02 15.1	
SRO				e		03 02 24.3	
BUD	Budapest	150.07	336	eP	PKPdf	03 02 09.5	+0.4
ROTZ	Rotzenmuhle	150.09	346	ePKPdf	PKPdf	03 02 09.1	0.0
	baz=16,slow=2.5						
ROTZ				ePKPbc	PKPbc	03 02 14.9	+0.2
	baz=16,slow=2.5						
BEBN	Eben Emael	150.09	355	dPKPdf	PKPdf	03 02 08.8	-0.3
BEBN				dPKiKP	PKPbc	03 02 14.6	0.0
BEBN				dPKPab	PKPab	03 02 22.6	0.0
GZR	Gura Zlata	150.10	329	⇑P	PKPdf	03 02 09.0	-0.4
GZR	Gura Zlata	150.10	329	⇑PKIKP	PKPdf	03 02 09.0	-0.4
ZST	Bratislava	150.15	339	ePKIKP	PKPdf	03 02 09.6	+0.3
ZST	Bratislava	150.15	339	ePKP	PKPdf	03 02 09.6	+0.3
ZST				e		03 02 15.4	
UCC	Uccle	150.19	357	dPKPdf	PKPdf	03 02 08.9	-0.3
UCC				dPKiKP	PKPbc	03 02 14.9	0.0
UCC				dPKPab	PKPab	03 02 22.1	-0.9
AHRW	Bad Neuenahr-A	150.21	353	ePKPdf	PKPdf	03 02 09.4	+0.1
	baz=16,slow=2.5						
AHRW				ePKPbc	PKPbc	03 02 15.2	+0.3
	baz=16,slow=2.5						
ANTB	Antalya	150.23	308	eP	PKPbc	03 02 14.0	-1.4
MEM	Membach	150.25	354	dPKPdf	PKPdf	03 02 08.9	-0.5
MEM				dPKiKP	PKPbc	03 02 15.1	0.0
MEM				dPKPab	PKPab	03 02 23.1	-0.2
BTNL	Ternell	150.26	354	dPKPdf	PKPdf	03 02 09.2	-0.2
BTNL				dPKiKP	PKPbc	03 02 15.2	+0.1
BTNL				dPKPab	PKPab	03 02 23.3	-0.1
VLAD	Vladila	150.28	326	⇓P	PKiKP	03 02 15.7	-0.2
AMBH	Ambrzfalva	150.30	333	eP	PKPdf	03 02 09.5	0.0
BSTI	Sart Tilman	150.31	355	dPKPdf	PKPdf	03 02 08.7	-0.8
BSTI				dPKiKP	PKPbc	03 02 15.3	+0.1
BSTI				dPKPab	PKPab	03 02 23.6	0.0
EDRB	Edirne	150.34	320	P	PKPbc	03 02 14.4	-1.2
TNS	Taunus Mts	150.34	351	ePKPbc	PKPbc	03 02 15.5	+0.1
	baz=16,slow=2.5						
TNS				ePKPab	PKPab	03 02 24.0	+0.3
	baz=16,slow=2.5						
KHC	Kasperske Hory	150.35	344	ePKIKP	PKPdf	03 02 09.4	-0.2
KHC				e		03 02 24.8	
KHC	Kasperske Hory	150.35	344	ePKPDF	PKPdf	03 02 09.4	-0.2
KHC				⇑ePKP	PKiKP	03 02 15.8	-0.2
KHC				ePKPAB	PKPab	03 02 24.8	+1.0
CCA1	Carnmenellis	150.37	9	eP	PKPdf	03 02 08.0	-1.6
GRF	Grafenberg Arr	150.37	347	ePKPdf	PKPdf	03 02 09.5	-0.2
	baz=16,slow=2.5						
GRF				ePKPbc	PKPbc	03 02 15.6	+0.2
	baz=16,slow=2.5						
GRFO	Grafenberg	150.37	347	PKIKP	PKPdf	03 02 08.3	-1.3
GRFO						03 02 24.1	
GRFO	Grafenberg	150.37	347		PKPdf	03 02 08.3	-1.3
GRFO				PKPbc	PKiKP	03 02 15.7	-0.3
GRFO				PKPab	PKPab	03 02 24.1	+0.3
SRE	Strehaia	150.42	328	⇓P	PKiKP	03 02 16.4	+0.2
SRE	Strehaia	150.42	328	⇓PKIKP	PKiKP	03 02 16.4	+0.2
CSKK	Cskako	150.45	337	eP	PKPdf	03 02 08.7	-1.1
BZS	Buzias	150.47	331	⇓P	PKPdf	03 02 09.0	-0.9
BZS	Buzias	150.47	331	⇓PKIKP	PKPdf	03 02 09.0	-0.9
SNF	Seneffe	150.48	357	dPKPdf	PKPdf	03 02 09.4	-0.3
SNF				dPKiKP	PKPbc	03 02 15.6	0.0
SNF				dPKPab	PKPab	03 02 22.1	-2.1
BCLA	Clavier	150.50	355	dPKPdf	PKPdf	03 02 09.2	-0.6
BCLA				dPKiKP	PKPbc	03 02 15.5	-0.1
BCLA				dPKPab	PKPab	03 02 22.6	-1.7
EDC	Edincik	150.50	317	i P	PKPbc	03 02 15.4	-0.6
BHOU	Houvegnez	150.50	354	dPKPdf	PKPdf	03 02 09.9	+0.1
BHOU				dPKiKP	PKiKP	03 02 16.1	-0.2
BHOU				dPKPab	PKPab	03 02 24.6	+0.2
WET	Wettzell	150.52	345	ePKPdf	PKPdf	03 02 09.7	-0.2
	baz=16,slow=2.5						
WET				ePKPbc	PKPbc	03 02 16.0	+0.2

	baz=16,slow=2.5						
WET				ePKPab	PKPab	03 02 25.3	+0.8
	baz=16,slow=2.5						
BGES	Gesves	150.55	356	dPKPdf	PKPdf	03 02 09.2	-0.7
BGES				dPKPbc	PKPbc	03 02 15.4	-0.4
BGES				dPKiKP	PKiKP	03 02 16.0	-0.2
BGES				dPKPab	PKPab	03 02 24.1	-0.4
PLVB	Pleven	150.57	325	⇑P	PKPdf	03 02 10.3	+0.2
GEC2	GERESS Array S	150.59	344	ePKPdf	PKPdf	03 02 09.9	-0.2
	baz=16,slow=2.5						
GEC2				ePKPbc	PKPbc	03 02 16.3	+0.2
	baz=16,slow=2.5						
GERES	GERESS Array B	150.59	344	PKP	PKPdf	03 02 09.9	-0.2
	comp=Z,32nm,1.0s,baz=75,slow=1.5,SNR=123						
GERES				PKPbc	PKPbc	03 02 16.1	0.0
	comp=Z,369nm,0.9s,baz=45,slow=2.1,SNR=133						
GERES	GERESS Array B	150.59	344	PKIKP	PKPdf	03 02 11.3	+1.2
GERES						03 02 25.1	
GERES	GERESS Array B	150.59	344		PKPdf	03 02 11.3	+1.2
GERES				PKPbc	PKPbc	03 02 16.0	0.0
GERES				PKPab	PKPab	03 02 25.1	+0.2
HERR	Herculane	150.65	329	⇓P	PKPdf	03 02 10.3	+0.2
BMRD	Maredsous	150.65	356	dPKPdf	PKPdf	03 02 09.7	-0.3
BMRD				dPKiKP	PKPbc	03 02 16.1	+0.1
BMRD				dPKPab	PKPab	03 02 24.9	-0.1
RMGR	Halanga-Turnu	150.68	328	⇓P	PKiKP	03 02 16.6	-0.1
EGYH	Egyhazaskeszo	150.74	338	eP	PKPdf	03 02 06.9	-3.3
RKY	Sarkoy-Tekirda	150.75	318	i P	PKPbc	03 02 15.8	-0.8
RCHB	Rochefort	150.77	355	dPKPdf	PKPdf	03 02 09.8	-0.3
RCHB				dPKiKP	PKPbc	03 02 16.0	-0.2
RCHB				dPKPab	PKPab	03 02 23.0	-2.5
RCHB				dpPKPdf	pPKPdf	03 04 05.9	-0.1
SOP	Sopron	150.78	339	eP	PKPdf	03 02 10.3	+0.1
CONA	Conrad Observa	150.79	340	i P	PKPdf	03 02 10.0	-0.5
	comp=Z,92nm,1.2s,SNR=35						
CONA				i P	PKiKP	03 02 16.8	-0.1
	comp=Z,1µm,1.3s						
CONA				i P	PKPab	03 02 27.2	+1.5
	comp=Z,574nm,1.2s						
BAIL	Bailesti	150.81	327	⇓P	PKiKP	03 02 16.9	-0.1
BANR	Banloc	150.87	331	⇑P	PKPdf	03 02 11.1	+0.6
DOU	Dourbes	150.87	356	dPKPdf	PKPdf	03 02 10.1	-0.3
DOU				dPKiKP	PKPbc	03 02 16.6	+0.1
DOU				dPKPab	PKPab	03 02 25.9	0.0
MPLH	Magyarpolny	150.88	337	eP	PKPdf	03 02 10.3	-0.1
KULA	Kula-Manisa	150.92	313	P	PKPbc	03 02 16.7	-0.4
TIH	Tihany	150.98	337	eP	PKPdf	03 02 09.3	-1.3
PSET	Sete Cidades	151.01	49	ePKP	PKPdf	03 02 11.7	+0.7
MDVR	Moldovita	151.06	330	⇑P	PKPdf	03 02 10.2	-0.7
PDA	Ponta Delgada	151.09	49	ePKP	PKPdf	03 02 12.9	+1.9
WLF	Walferdange	151.17	354	dPKPdf	PKPdf	03 02 10.9	+0.1
WLF				dPKiKP	PKiKP	03 02 17.8	+0.2
WLF				dPKPab	PKPab	03 02 26.8	-0.4
WLF	Walferdange	151.17	354	ePKPbc	PKiKP	03 02 17.5	-0.1
	baz=16,slow=2.5						
ERIK	Erikli-Kesan	151.17	318	eP	PKPbc	03 02 16.1	-1.4
CMLA	Cha da Macela	151.18	49	ePKP	PKPdf	03 02 12.8	+1.6
CMLA	Cha da Macela	151.18	49	PKIKP	PKPdf	03 02 12.1	+0.9
CMLA	Cha da Macela	151.18	49		PKPdf	03 02 12.1	+0.9
CMLA				PKPbc	PKiKP	03 02 18.4	+0.4
PCALD	Caldeiras da R	151.19	49	ePKP	PKPdf	03 02 12.4	+1.2
MORH	Mrgy, Hungar	151.26	335	eP	PKPdf	03 02 10.6	-0.4
MORH	Mrgy, Hungar	151.26	335	⇓iP	PKPdf	03 02 10.2	-0.8
AKAS	Kas	151.27	308	i P	PKPbc	03 02 16.2	-1.9
ALN	Alexandroupoli	151.33	319	P	PKPbc	03 02 16.5	-1.3
MOA	Molln	151.34	342	i P	PKPdf	03 02 10.4	-0.8
	comp=Z,67nm,1.4s,SNR=21						
MOA				i P	PKPbc	03 02 17.5	-0.2
	comp=Z,243nm,1.1s						
MOA				i P	PKPab	03 02 29.2	+1.2
	comp=Z,488nm,1.5s						
GELI	Tayfur-Gelibol	151.35	318	i P	PKPbc	03 02 17.1	-0.8
ENEZ	Enez	151.36	319	P	PKPbc	03 02 16.9	-1.0
BART	Pico Bartolome	151.42	48	ePKP	PKPdf	03 02 12.3	+0.6
FETY	Fethiye	151.48	309	P	PKPbc	03 02 16.8	-1.6
RDO	Rodhopi	151.49	320	P	PKPbc	03 02 17.4	-0.8
ARSA	Arzberg	151.49	340	i P	PKPdf	03 02 10.3	-1.1
	comp=Z,53nm,1.4s,SNR=18						
ARSA				i P	PKPbc	03 02 17.7	-0.4
	comp=Z,302nm,1.4s						
FRGS	Fruska Gora	151.63	332	⇓iP	PKPdf	03 02 10.5	-1.2
STU	Stuttgart	151.64	349	ePKPdf	PKPdf	03 02 11.3	-0.2
	baz=16,slow=2.5						
STU				ePKPbc	PKPbc	03 02 18.4	+0.1
	baz=16,slow=2.5						
JSA	Saint Aubin	151.71	5	eP	PKPdf	03 02 09.9	-1.7
DALY	Dalyan (Mula)	151.71	310	i P	PKPbc	03 02 18.5	-0.3
BEHE	Becsehely	151.75	338	eP	PKPdf	03 02 14.8	+3.1
BEHE	Becsehely	151.75	338	⇓iP	PKPdf	03 02 13.4	+1.6
EZN	Ezine	151.77	317	P	PKPbc	03 02 17.4	-1.5
FUR	Furstenfeldbru	151.81	346	ePKPbc	PKPbc	03 02 18.7	0.0
	baz=16,slow=2.5						
FUR				ePKPab	PKPab	03 02 30.3	+0.3
	baz=16,slow=2.5						
PSMA	Santa Maria	151.81	50	ePKP	PKPdf	03 02 13.1	+0.9
GADA	Gvkgeada	151.83	318	P	PKPbc	03 02 17.5	-1.5
YER	Yerkesik	151.84	311	P	PKPbc	03 02 18.3	-0.9
VTS	Vitosha	151.84	325	⇓P	PKPdf	03 02 11.6	-0.6
VTS	Vitosha	151.84	325	⇓PKIKP	PKPdf	03 02 11.6	-0.6
PSMN	Pico do Norte,	151.85	50	ePKP	PKPdf	03 02 12.0	-0.2
SMTH	Samothraki Isl	151.90	319	P	PKPbc	03 02 17.7	-1.5
BOZC	Bozcaada	151.94	317	i P	PKPbc	03 02 18.3	-1.0
PRK	Paraskevi	152.13	316	P	PKPbc	03 02 19.1	-0.6
KALN	Kalnik	152.15	338	P	PKPdf	03 02 11.4	-1.0
SOKA	Soboth	152.16	340	i P	PKPdf	03 02 11.4	-1.0
	comp=Z,95nm,1.2s,SNR=22						
SOKA				i P	PKPbc	03 02 19.0	-0.7
	comp=Z,454nm,1.2s						
SOKA				i P	PKPab	03 02 32.2	+0.6
	comp=Z,474nm,1.2s						
PERS	Pernice	152.17	340	ePKPdf	PKPdf	03 02 11.4	-1.0
PERS				i PKPbc	PKPbc	03 02 19.0	-0.7
KAVA	Kavala	152.19	321	P	PKPbc	03 02 19.0	-0.8
BFO	Black Forest	152.21	350	PKIKP	PKPdf	03 02 11.6	-0.8
BFO						03 02 18.5	
BFO						03 02 31.2	
BFO	Black Forest	152.21	350	PKPdf	PKPdf	03 02 11.6	-0.8
BFO				PKPbc	PKPbc	03 02 18.5	-1.2
BFO				PKPab	PKPab	03 02 31.2	-0.5
BFO	Black Forest	152.21	350	ePKPdf	PKPdf	03 02 11.9	-0.5
	baz=16,slow=2.5						
BFO				ePKPbc	PKPbc	03 02 19.6	0.0
	baz=16,slow=2.5						
BFO				ePKPab	PKPab	03 02 31.4	-0.2
	baz=16,slow=2.5						
TEKS	Tekeris	152.24	332	⇓iP	PKPdf	03 02 11.9	-0.7
GCAM	G?zelcaml?	152.30	313	i P	PKPbc	03 02 19.5	-0.6
KBA	Koelnbreinsper	152.30	343	i P	PKPdf	03 02 11.4	-1.5
	comp=Z,106nm,1.3s,SNR=35						
KBA				i P	PKPbc	03 02 19.2	-0.9
	comp=Z,359nm,0.9s						
KBA				i P	PKPab	03 02 32.8	+0.5
	comp=Z,345nm,1.1s						
THAS	Thassos island	152.31	320	P	PKPbc	03 02 18.8	-1.2
NVR	Nevrokopi	152.34	322	P	PKPbc	03 02 17.7	-2.5
ARG	Arkhangelos	152.36	309	P	PKPbc	03 02 17.6	-2.7
DIVS	Divibare	152.38	331	⇓iP	PKPdf	03 02 11.9	-1.0
SIGR	SIGRI	152.42	317	P	PKPbc	03 02 19.1	-1.2
LIA	Limnos Island	152.45	318	P	PKPbc	03 02 19.2	-1.2
OBKA	Obir	152.46	341	i P	PKPdf	03 02 12.4	-0.6
	comp=Z,60nm,1.6s,SNR=6.6						
OBKA				i P	PKPbc	03 02 19.4	-0.9
	comp=Z,216nm,1.6s						
OBKA				i P	PKPab	03 02 33.1	+0.2
	comp=Z,142nm,1.1s						
UBR	Ueberruh	152.51	348	ePKPdf	PKPdf	03 02 12.2	-0.8
	baz=16,slow=2.5						
UBR				ePKPbc	PKPbc	03 02 20.2	-0.1
	baz=16,slow=2.5						
PTJ	Puntijarka	152.52	338	P	PKPdf	03 02 11.8	-1.3
WATA	Walderalm	152.52	345	i P	PKPdf	03 02 12.2	-0.9
	comp=Z,146nm,1.4s,SNR=34						
WATA				i P	PKPbc	03 02 20.0	-0.5
	comp=Z,443nm,1.1s						
WATA				i P	PKPab	03 02 33.9	+0.7
	comp=Z,776nm,1.2s						
BODT	Bodrum	152.56	311	P	PKPbc	03 02 18.0	-2.7
RETA	Reutte	152.56	347	i P	PKPdf	03 02 12.3	-0.7
	comp=Z,64nm,1.5s,SNR=17						
RETA				i P	PKPbc	03 02 20.0	-0.5
	comp=Z,302nm,1.6s						
RETA				i P	PKPab	03 02 33.7	+0.4
	comp=Z,658nm,1.2s						
ZAG	Zagreb	152.58	338	P	PKPdf	03 02 12.2	-0.8
ZAG	Zagreb	152.58	338	⇓iP	PKPdf	03 02 12.3	-0.7
MOTA	Moosalm	152.62	346	i P	PKPdf	03 02 12.3	-0.9
	comp=Z,174nm,1.2s,SNR=42						
MOTA				i P	PKPbc	03 02 20.3	-0.4
	comp=Z,580nm,1.1s						
MOTA				i P	PKPab	03 02 34.1	+0.5
	comp=Z,493nm,1.1s						
MYKA	Terra Mystica	152.62	342	i P	PKPdf	03 02 12.5	-0.7
	comp=Z,76nm,1.4s,SNR=15						
MYKA				i P	PKPbc	03 02 19.6	-1.0
	comp=Z,249nm,1.0s						
MYKA				eP	PKPab	03 02 33.5	0.0
	comp=Z,399nm,1.3s						
SRS	Serrai	152.65	322	P	PKPbc	03 02 19.2	-1.6
GCIS	Gornji Cirnik	152.67	338	ePKPdf	PKPdf	03 02 12.7	-0.4
GCIS				i PKPbc	PKPbc	03 02 20.6	-0.1
LEGS	Legarje	152.71	339	i PKPdf	PKPdf	03 02 12.5	-0.7
LEGS				ePKPbc	PKPbc	03 02 20.4	-0.4
LEGS				i PKPab	PKPab	03 02 33.5	-0.4
SQTA	Sankt Quirin	152.71	346	i P	PKPdf	03 02 12.7	-0.7
	comp=Z,147nm,1.2s,SNR=41						
SQTA				i P	PKPbc	03 02 20.6	-0.3
	comp=Z,352nm,0.9s						
SQTA				i P	PKPab	03 02 34.7	+0.8
	comp=Z,456nm,1.1s						
CRES	Cresnjev	152.77	339	⇓iP	PKPdf	03 02 12.5	-0.8
BBLS	Lazići	152.83	331	⇓iP	PKPdf	03 02 12.8	-0.7
ABTA	Abfaltersbach	152.83	343	i P	PKPdf	03 02 12.3	-1.2
	comp=Z,230nm,1.1s,SNR=59						
ABTA				i P	PKPbc	03 02 20.2	-0.9
	comp=Z,634nm,1.0s						
ABTA				eP	PKPab	03 02 34.5	0.0
	comp=Z,527nm,1.4s						
HAPS	Han Pijesak,BI	152.85	332	⇓iP	PKPdf	03 02 12.2	-1.4
LJU	Ljubljana	152.88	340	ePKPdf	PKPdf	03 02 12.9	-0.6
LJU				i PKPbc	PKPbc	03 02 21.0	-0.2
LJU	Ljubljana	152.88	340	⇓iP	PKPdf	03 02 12.6	-0.9
OUR	Ouranopolis	152.92	320	P	PKPbc	03 02 19.8	-1.6
DAVA	Damuels	152.94	348	i P	PKPdf	03 02 13.1	-0.6
	comp=Z,89nm,1.3s,SNR=25						
DAVA				i P	PKPbc	03 02 21.1	-0.4
	comp=Z,384nm,1.2s						
DAVA				i P	PKPab	03 02 35.3	+0.4
	comp=Z,300nm,1.2s						
OZLJ	Ozalj	152.95	338	P	PKPdf	03 02 12.8	-0.7
SOH	Sokhos	152.97	322	P	PKPbc	03 02 18.3	-3.3
FETA	Feichten	153.01	346	i P	PKPdf	03 02 13.3	-0.5
	comp=Z,202nm,1.1s,SNR=72						
FETA				i P	PKPbc	03 02 21.5	-0.1
	comp=Z,445nm,1.1s						
FETA				i P	PKPab	03 02 35.6	+0.3
	comp=Z,406nm,1.3s						
KNT	Kendrikon	153.01	323	P	PKPbc	03 02 19.8	-1.8
SJES	Sjenica	153.03	330	⇓iP	PKPdf	03 02 13.3	-0.6
RUDO	Rudo	153.03	331	eP	PKPdf	03 02 11.1	-2.7
STIP	Stip	153.04	325	i P	PKPdf	03 02 11.8	-2.0
BLY	Banja Luka	153.05	335	⇓iP	PKPdf	03 02 13.0	-0.7
VAY	Valandovo	153.09	324	i P	PKPdf	03 02 12.0	-1.8
CEY	Cerknica	153.18	340	⇓iP	PKPdf	03 02 12.9	-1.0
PLG	Polygyros	153.21	321	P	PKPbc	03 02 20.2	-1.9
GBRS	Gornja Briga	153.24	339	i PKPdf	PKPdf	03 02 13.5	-0.5
GBRS				i PKPbc	PKPbc	03 02 21.8	-0.2
GBRS				ePKPab	PKPab	03 02 35.9	-0.2
SKO	Skopje	153.25	326	i P	PKPdf	03 02 13.1	-1.0
PLE	Pljevlja	153.25	330	⇓iPKP	PKPbc	03 02 22.0	-0.2
HORT	Hortiatis	153.27	322	P	PKPbc	03 02 20.8	-1.5
KARP	Karpathos	153.36	308	P	PKPbc	03 02 21.8	-0.8
KARP	Karpathos	153.36	308		PKPdf	03 02 13.2	-1.3
KARP				PKPbc	PKPbc	03 02 22.0	-0.5
KARP				PKPab	PKPab	03 02 37.9	+0.9
IVA	Berane	153.36	329	⇓iPKP	PKPbc	03 02 20.6	-1.8
MGRS	Mrkonjic Grad	153.37	335	eP	PKPdf	03 02 13.8	-0.4
DAVOX	Davos/Dischmat	153.42	347	PKP	PKPdf	03 02 14.1	-0.3
	comp=Z,72nm,1.0s,baz=330,slow=0.6,SNR=70						
DAVOX				PKPbc	PKiKP	03 02 22.6	+0.1
	comp=Z,213nm,0.6s,baz=359,slow=1.2,SNR=60						
GRG	Griva	153.43	323	P	PKPbc	03 02 21.3	-1.2
SKDS	Skadanscina	153.49	340	i PKPdf	PKPdf	03 02 13.5	-0.9
SKDS				i PKPbc	PKPbc	03 02 21.8	-0.7
RIY	Rijeka	153.53	339	P	PKPdf	03 02 13.2	-1.2
RIY	Rijeka	153.53	339	⇓iP	PKPdf	03 02 13.3	-1.1
PVY	Plav	153.54	329	⇑iPKP	PKPbc	03 02 20.9	-1.9
KOME	Kolasin	153.56	330	⇓iPKP	PKPbc	03 02 22.1	-0.7
UPM	Unac-Piva	153.57	331	eP	PKPdf	03 02 13.4	-1.4
UPM	Unac-Piva	153.57	331	⇓iPKP	PKPbc	03 02 22.5	-0.5
UDBI	Udbina	153.78	337	P	PKPdf	03 02 13.5	-1.3
NKY	Niksic	153.83	330	⇓iPKP	PKPbc	03 02 23.2	-0.2
KYMI	Kymi, Euboea I	153.87	317	P	PKPbc	03 02 21.5	-2.0
NKME	Niksic	153.89	330	⇓iPKP	PKPbc	03 02 22.9	-0.6
LIT	Litokhoron	153.94	322	P	PKPdf	03 02 14.9	-0.3
PHP	Peshkopia	153.97	327	P	PKPdf	03 02 14.2	-1.0
BRY	Bratogost	153.97	331	⇓iP	PKPdf	03 02 13.6	-1.7
BRY	Bratogost	153.97	331	⇓iPKP	PKPbc	03 02 22.8	-1.0
KIJV	Kijevo	153.98	335	P	PKPdf	03 02 14.0	-1.1
XOR	Xorichti	153.99	319	P	PKPbc	03 02 21.6	-2.2
KARY	Karystos	154.00	316	P	PKPbc	03 02 21.9	-1.9
PDG	Podgorica	154.00	329	⇑P	PKPdf	03 02 14.7	-0.4
PDG	Podgorica	154.00	329	⇓iP	PKPdf	03 02 13.6	-1.5
TTG	Podgorica	154.00	329	⇓iPKP	PKPbc	03 02 23.0	-0.6
NVLJ	Novalja	154.07	338	P	PKPdf	03 02 12.8	-2.4
CEME	Cevo	154.07	330	⇓iPKP	PKPbc	03 02 23.1	-0.8
EREA	Eretria	154.10	317	P	PKPbc	03 02 22.7	-1.3
RICI	Ricice	154.11	334	P	PKPdf	03 02 13.8	-1.5
FNA	Florina	154.11	324	P	PKPbc	03 02 22.5	-1.5
FNA	Florina	154.11	324	PKIKP	PKPdf	03 02 13.8	-1.7
FNA						03 02 40.5	
FNA	Florina	154.11	324		PKPdf	03 02 13.8	-1.7
FNA				PKPbc	PKPbc	03 02 22.9	-1.1
FNA				PKPab	PKPab	03 02 40.5	+0.4
THR8	Santorini-Mono	154.16	312	P	PKPbc	03 02 21.1	-3.0
OHR	Ohrid	154.20	325	i P	PKPdf	03 02 14.4	-1.1
TREB	Trebinje	154.20	331	eP	PKPdf	03 02 13.2	-2.2
THR3	Thira Island,	154.21	312	P	PKPbc	03 02 22.2	-2.1
KZN	Kozani	154.22	323	P	PKPbc	03 02 22.3	-2.0
DRME	Dracevica, Mon	154.22	329	eP	PKPdf	03 02 14.5	-1.0
DRME	Dracevica, Mon	154.22	329	⇓iPKP	PKPbc	03 02 22.3	-1.8
THR6	Thira Island,	154.24	312	P	PKPbc	03 02 21.9	-2.4
SMIA	Simia	154.28	319	P	PKiKP	03 02 23.1	-1.3
STIA	Sitia Lasithi	154.29	309	P	PKPdf	03 02 15.0	-0.8
DION	Dionisos Attik	154.30	316	P	PKiKP	03 02 22.5	-2.0
MAKA	Makarska	154.33	333	P	PKPdf	03 02 13.6	-1.9
DBRK	Dubrovnik	154.33	331	P	PKPdf	03 02 13.2	-2.5
HCY	Herceg Novi	154.35	330	eP	PKPdf	03 02 14.7	-0.9
HCY	Herceg Novi	154.35	330	⇓iPKP	PKiKP	03 02 22.1	-2.3
ULC	Ulcinj	154.36	329	⇓iPKP	PKiKP	03 02 23.4	-1.1
MORI	Morici	154.37	336	P	PKPdf	03 02 13.6	-1.9
STON	Ston	154.37	332	P	PKPdf	03 02 13.5	-2.1
STON	Ston	154.37	332	⇓iP	PKPdf	03 02 11.8	-3.8
SALO	Salr	154.38	345		PKPdf	03 02 14.6	-1.1
SALO				PKPbc	PKiKP	03 02 23.6	-0.8
SALO				PKPab	PKPab	03 02 40.3	-0.7
ATHU	Athens Univers	154.46	316	P	PKiKP	03 02 23.5	-1.3
DUGI	Dugi Otok	154.50	337	P	PKPdf	03 02 13.6	-2.2
TIR	Tirane	154.51	327	⇑P	PKPdf	03 02 15.9	0.0
TIR	Tirane	154.51	327	⇑PKIKP	PKPdf	03 02 15.9	0.0
ATAL	Atalanti	154.51	318	P	PKPdf	03 02 15.1	-0.9
VLY	Voula,Athens	154.52	316	P	PKiKP	03 02 23.0	-1.9
KBN	Korca	154.55	324	P	PKiKP	03 02 23.7	-1.3
NEST	Nestorio	154.55	324	P	PKPdf	03 02 16.2	+0.1
LKR	Lokris	154.55	318	P	PKPdf	03 02 14.8	-1.2
THL	Klokotos Trika	154.57	321	P	PKPdf	03 02 15.4	-0.6
ZIRJ	Zirje	154.57	336	P	PKPdf	03 02 14.1	-1.7
NPS	Neapolis	154.62	309	P	PKPdf	03 02 17.0	+0.7
VILL	Villia	154.65	317	P	PKiKP	03 02 22.9	-2.3
HVAR	Hvar	154.65	334	P	PKPdf	03 02 13.8	-2.2
KPRO	Kipourio	154.69	323	P	PKPdf	03 02 17.3	+1.0
AXAR	Agios Charalam	154.69	319	P	PKiKP	03 02 23.0	-2.2
AGG	Agios Georgios	154.73	320	P	PKPdf	03 02 15.2	-1.1
LAST	Lasithi	154.76	309	P	PKPdf	03 02 16.2	-0.3
MAKR	Makrakomi, Fth	154.86	320	P	PKPdf	03 02 16.6	+0.1
LTK	Loutraki	154.95	317	P	PKPdf	03 02 16.6	0.0
LSK	Leskovik	154.98	324	P	PKPdf	03 02 16.3	-0.4
IDI	Anoyia	155.12	310	PKP	PKPdf	03 02 16.6	-0.3
	comp=Z,134nm,1.0s,baz=147,slow=3.9,SNR=28						
IDI				PKPbc	PKPbc	03 02 26.0	
	comp=Z,186nm,1.0s,baz=158,slow=10,SNR=13						
IDI	Anoyia	155.12	310	P	PKPdf	03 02 16.7	-0.3
IDI	Anoyia	155.12	310	⇓P	PKPdf	03 02 16.7	-0.3
JAN	Janina	155.18	323	P	PKPdf	03 02 23.8	+6.9
KRND	KRANIDI	155.21	316	P	PKPdf	03 02 16.8	-0.1
ANX	Ano Chora	155.25	320	P	PKPdf	03 02 19.1	+2.0
SERG	Sergoula	155.28	319	P	PKPdf	03 02 16.8	-0.3
TRIZ	Trizonia	155.30	319	P	PKPdf	03 02 25.5	+8.5
ALIK	Aliki, Aigiali	155.34	319	P	PKPdf	03 02 26.7	+10
EFP	Efpalio	155.36	319	P	PKPdf	03 02 26.4	+9.3
KLV	Kalavryta, Ach	155.45	318	P	PKPdf	03 02 17.7	+0.3
IGT	Igoumenitsa	155.56	323	P	PKPdf	03 02 26.0	+8.6
VAM	Vamos	155.56	311	P	PKPdf	03 02 24.7	+7.2
IMMV	Iera Moni Meta	155.69	311	P	PKPdf	03 02 16.9	-0.8
PDO	Prodromos	155.69	320	P	PKPdf	03 02 18.0	+0.4
KEK	Kerkira	155.72	324	P	PKPdf	03 02 17.6	0.0
DRO	Drossia	155.78	319	P	PKPdf	03 02 27.4	+10
VLC	Villacollemand	155.79	345		PKPdf	03 02 15.6	-2.0
VLC				PKPab	PKPab	03 02 47.5	+0.4
AXS	Araxos	155.83	319	P	PKPdf	03 02 27.1	+9.4
RLS	Riolos of Patr	155.87	319	P	PKPdf	03 02 27.7	+10
LKD2	Lefkada island	155.87	321	P	PKPdf	03 02 27.3	+9.5
KTHA	Kythira Island	155.90	314	P	PKPdf	03 02 27.2	+9.3
EVGI	Lefkada island	155.99	321	P	PKPdf	03 02 27.4	+9.4
ITM	Ithomi	156.12	317	P	PKPdf	03 02 27.4	+9.2
SGRT	San Giovanni R	156.12	333	PKPdf	PKPdf	03 02 16.8	-1.4
SGRT				PKPab	PKPab	03 02 48.1	-0.6
SCTE	Santa Cesarea	156.17	327	PKPdf	PKPdf	03 02 17.6	-0.6
SCTE				PKPdif	PKPdf	03 02 27.7	+10
SCTE				PKPab	PKPab	03 02 48.4	-0.4
VLS	Valsamata	156.32	320	P	PKPdf	03 02 27.9	+9.5
MATE	Matera	156.59	330	⇑P	PKPdf	03 02 17.7	-0.9
CASP	Castiglione de	156.94	342	PKPdf	PKPdf	03 02 17.9	-1.1
CASP				PKPdif	PKPdf	03 02 28.4	+9.3
CASP				PKPab	PKPab	03 02 50.8	-1.2
PGAV	Gavieira, Arco	157.49	20	ePKPdf	PKPdf	03 02 19.7	-0.2
PGAV	Gavieira, Arco	157.49	20	ePKPab	PKPab	03 02 54.3	-0.3
TIP	Timpagrande	157.71	328	⇑P	PKPdf	03 02 20.1	-0.1
PCAB	Cabril	157.79	19	ePKPdf	PKPdf	03 02 20.2	0.0
PCAB	Cabril	157.79	19	ePKPab	PKPab	03 02 55.6	-0.2
PBRG	Braganca	158.08	17	⇓ePKPdf	PKPdf	03 02 20.0	-0.5
PBRG	Braganca	158.08	17	ePKPab	PKPab	03 02 56.9	-0.2
PTO	Porto	158.12	21	ePKPdf	PKPdf	03 02 20.7	+0.2
PTO	Porto	158.12	21	ePKPab	PKPab	03 02 56.9	-0.3
POLO	Lamas de Olo	158.17	19	⇓ePKPdf	PKPdf	03 02 21.0	+0.3
POLO	Lamas de Olo	158.17	19	ePKPab	PKPab	03 02 57.4	-0.2
PVRL	Vila Real	158.29	19	⇓ePKPdf	PKPdf	03 02 21.1	+0.3
PVRL	Vila Real	158.29	19	ePKPab	PKPab	03 02 57.9	-0.1
MVO	Moncorvo	158.59	18	⇓ePKPdf	PKPdf	03 02 21.6	+0.4
MVO	Moncorvo	158.59	18	ePKPab	PKPab	03 02 59.3	-0.1
PVIS	Viseu	158.74	20	⇓ePKPdf	PKPdf	03 02 21.3	-0.1
PVIS	Viseu	158.74	20	ePKPab	PKPab	03 02 59.8	-0.2
CEL	Celeste	158.85	328		PKPdf	03 02 20.7	-0.9
CEL					PKPab	03 03 00.7	+0.1
COI	Coimbra	159.02	22	⇓ePKPdf	PKPdf	03 02 21.4	-0.2
COI	Coimbra	159.02	22	ePKPab	PKPab	03 03 00.7	-0.5
PCAS	Casmilo, Conde	159.13	22	ePKPdf	PKPdf	03 02 21.2	-0.6
PCAS	Casmilo, Conde	159.13	22	ePKPab	PKPab	03 03 01.4	-0.3
MTE	Manteigas	159.14	20	⇓ePKPdf	PKPdf	03 02 22.0	+0.1
MTE	Manteigas	159.14	20	ePKPab	PKPab	03 03 01.5	-0.3
PSBE	So Bento	159.49	24	⇓ePKPdf	PKPdf	03 02 22.6	+0.4
PSBE	So Bento	159.49	24	ePKPab	PKPab	03 03 02.9	-0.4
PCBR	Castelo Branco	159.66	21	⇓ePKPdf	PKPdf	03 02 22.7	+0.3
PCBR	Castelo Branco	159.66	21	ePKPab	PKPab	03 03 03.5	-0.5
PMAFR	Mafra	159.79	25	⇓ePKPdf	PKPdf	03 02 22.2	-0.4
PMAFR	Mafra	159.79	25	ePKPab	PKPab	03 03 04.4	-0.2
FUL	Funchal	159.83	51	⇓ePKPdf	PKPdf	03 02 23.4	+0.6
PMPST	Porto Santo, M	160.01	49	ePKPdf	PKPdf	03 02 23.5	+0.5
PMPS	Porto Santo	160.02	49	ePKPdf	PKPdf	03 02 23.8	+0.8
LIS	Lisbon	160.05	25	ePKPdf	PKPdf	03 02 23.4	+0.6
PMRV	Marv??o	160.06	21	⇓ePKPdf	PKPdf	03 02 22.8	-0.1
PMRV	Marv??o	160.06	21	ePKPab	PKPab	03 03 05.4	-0.4
PMTG	Montargil	160.09	23	⇓ePKPdf	PKPdf	03 02 22.8	-0.1
PMTG	Montargil	160.09	23	ePKPab	PKPab	03 03 05.4	-0.5
UCM	Universidad Co	160.31	11	PP	PP	03 06 51.4	+1.5
RAFF	Raffo Rosso	160.42	328		PKPdf	03 02 22.5	-0.8
PESTR	Estremoz	160.50	22	⇓ePKPdf	PKPdf	03 02 23.6	+0.2
PESTR	Estremoz	160.50	22	ePKPab	PKPab	03 03 07.4	-0.3
EVO	Evora	160.65	23	PKP	PKPdf	03 02 23.1	-0.4
EVO	Evora	160.65	23	PP	PP	03 06 49.8	-2.1
EVO	Evora	160.65	23	⇓ePKPdf	PKPdf	03 02 23.9	+0.4
EVO	Evora	160.65	23	ePKPab	PKPab	03 03 07.9	-0.4
ESDC	Sonseca Array	160.78	13	PKP	PKPdf	03 02 23.5	-0.2
	comp=Z,34nm,1.1s,baz=349,slow=3.0,SNR=75						
ESDC				PKPab	PKPab	03 03 08.8	-0.1
	comp=Z,216nm,1.1s,baz=341,slow=4.1,SNR=46						
ESDC				PP	PP	03 06 52.0	-0.4
	comp=Z,52nm,1.2s,baz=346,slow=5.1,SNR=12						
ESDC	Sonseca Array	160.78	13		PKPdf	03 02 22.6	-1.1
ESDC				PKPab	PKPab	03 03 08.5	-0.5
PNCL	Nicolau / Gran	160.81	25	⇓ePKPdf	PKPdf	03 02 24.1	+0.4
PNCL	Nicolau / Gran	160.81	25	ePKPab	PKPab	03 03 08.9	-0.2
PAB	San Pablo	160.81	14	PKIKP	PKPdf	03 02 23.5	-0.3
PAB						03 03 08.9	
PAB	San Pablo	160.81	14	PKPdf	PKPdf	03 02 23.5	-0.3
PAB				PKPab	PKPab	03 03 08.9	-0.2
MAHO	Mahon	161.03	354	PKP	PKPdf	03 02 15.9	-7.9
MAHO	Mahon	161.03	354	PP	PP	03 06 57.9	+4.3
PBEJ	Beja	161.14	24	⇓ePKPdf	PKPdf	03 02 24.6	+0.6
PBEJ	Beja	161.14	24	ePKPab	PKPab	03 03 10.3	-0.2
MESJ	Messejana	161.17	25	ePKPdf	PKPdf	03 02 24.6	+0.6
MESJ	Messejana	161.17	25	⇓ePKPdf	PKPdf	03 02 24.8	+0.7
MESJ	Messejana	161.17	25	ePKPab	PKPab	03 03 10.3	-0.3
PTEO	Sao Teotonio	161.22	26	⇓ePKPdf	PKPdf	03 02 24.9	+0.8
PTEO	Sao Teotonio	161.22	26	ePKPab	PKPab	03 03 10.5	-0.4
PBAR	Barrancos	161.31	22	⇓ePKPdf	PKPdf	03 02 24.5	+0.3
PBAR	Barrancos	161.31	22	ePKPab	PKPab	03 03 11.2	0.0
PCVE	Castro Verde	161.42	25	⇓ePKPdf	PKPdf	03 02 24.8	+0.5
PCVE	Castro Verde	161.42	25	ePKPab	PKPab	03 03 11.5	-0.3
MORF	Marmelete	161.45	27	ePKPdf	PKPdf	03 02 24.9	+0.5
MORF	Marmelete	161.45	27	⇓ePKPdf	PKPdf	03 02 25.1	+0.6
MORF	Marmelete	161.45	27	ePKPab	PKPab	03 03 11.8	-0.2
PFVI	Vila Bisbo	161.53	27	⇓ePKPdf	PKPdf	03 02 25.2	+0.7
PFVI	Vila Bisbo	161.53	27	ePKPab	PKPab	03 03 12.3	+0.1
PVAQ	Vaqueiros	161.75	24	⇓ePKPdf	PKPdf	03 02 25.4	+0.7
PVAQ	Vaqueiros	161.75	24	ePKPab	PKPab	03 03 13.3	+0.1
PBDV	Barranco-do-Ve	161.80	25	⇓ePKPdf	PKPdf	03 02 25.9	+1.1
PBDV	Barranco-do-Ve	161.80	25	ePKPab	PKPab	03 03 13.6	+0.1
MACI	Morro de la Ar	162.00	63	PKPdf	PKPdf	03 02 26.9	+1.4
SFS	San Fernando	163.14	22	PKIKP	PKPdf	03 02 27.7	+1.7
SFS	San Fernando	163.14	22	PKP	PKPdf	03 02 23.8	-2.3
SFS	San Fernando	163.14	22	PP	PP	03 07 01.1	-3.8
SFS	San Fernando	163.14	22	PKPdf	PKPdf	03 02 27.7	+1.7
CART	Cartagena	163.31	7	PKP	PKPdf	03 02 21.5	-4.7
CART	Cartagena	163.31	7	PP	PP	03 07 03.0	-2.6
EMAL	Malaga-Limoner	163.43	17	PKP	PKPdf	03 02 25.7	-0.6
KEST	Kesra	163.84	337	PKP	PKPdf	03 02 27.2	+0.3
	comp=Z,39nm,1.0s,baz=272,slow=3.4,SNR=12						
KEST				PKPab	PKPab	03 03 22.8	+0.2
	comp=Z,136nm,1.1s,baz=234,slow=0.5,SNR=13						
KEST	Kesra	163.84	337	PKPdf	PKPdf	03 02 26.5	-0.4
KEST				PKPab	PKPab	03 03 22.4	-0.2
CEU	Ceuta	163.94	21	PKP	PKPdf	03 02 24.2	-2.5
CEU	Ceuta	163.94	21	PP	PP	03 07 07.2	-1.9
LIC	Lamto	163.95	155	ePKIKP	PKPdf	03 02 25.9	-1.6
	comp=Z,687nm,1.6s						
LIC	Lamto	163.95	155	eP	PKPab	03 03 23.7	+0.3
	comp=Z,52nm,1.0s						
DFRA	Djebel Bou Aff	164.07	347	P	PKPdf	03 02 27.9	+0.8
KIC	Kosan Boka	164.19	156	ePKIKP	PKPdf	03 02 26.1	-1.6
	comp=Z,684nm,1.6s						
KIC	Kosan Boka	164.19	156	eP	PKPab	03 03 25.2	+0.8
	comp=Z,28nm,0.8s						
CASM	Ain Smara	164.22	345	P	PKPdf	03 02 26.7	-0.4
TIC	Toumodi	164.34	155	ePKIKP	PKPdf	03 02 26.2	-1.6
TIC	Toumodi	164.34	155	eP	PKPab	03 03 25.8	+0.7
DBIC	Dimbokro	164.43	155	PKP	PKPdf	03 02 27.0	-0.9
	comp=Z,142nm,1.2s,baz=166,slow=1.2,SNR=35						
SET	Setif	164.50	349	P	PKPdf	03 02 27.0	-0.4
EBNR	Beni Rached	164.76	0	P	PKPab	03 03 27.0	+0.5
ECHA	Ech Chlef	164.90	1	P	PKPab	03 03 28.0	+1.0
PVLZ	Peæn de	164.94	19	PKP	PKPdf	03 02 21.2	-6.4
PVLZ	Peæn de	164.94	19	PP	PP	03 07 13.6	-0.6
OKGL	Djebel Kef Gue	164.99	3	P	PKPab	03 03 28.0	+0.5
EANR	'Ain N'Sour	165.10	2	P	PKPab	03 03 28.3	+0.3
USTO	Oran	165.19	7	P	PKPab	03 03 29.0	+0.7
MELI	Melilla	165.20	15	PKP	PKPdf	03 02 25.4	-2.5
AVE	Averroes	165.35	31	PKP	PKPdf	03 02 26.7	-1.4
AVE	Averroes	165.35	31	PP	PP	03 07 11.7	-5.0
OJBR	Djebel Berber	165.43	4	P	PKPab	03 03 31.0	+1.5
OJGS	Djebel Guires	165.53	3	P	PKPab	03 03 30.0	+0.1
ODJA	Bouhanifia	165.64	6	P	PKPab	03 03 32.0	+1.6
ETRT	Tiaret	165.66	1	P	PKPab	03 03 31.0	+0.4
IFR	Ifrane	166.16	24	PKP	PKPdf	03 02 29.0	0.0
IFR	Ifrane	166.16	24	PP	PP	03 07 21.2	+0.4
MDT	Midelt	166.99	24	PKP	PKPdf	03 02 30.3	+0.8

	comp=Z,115nm,1.1s,baz=2.5,slow=1.1,SNR=80						
MDT				PKPab	**PKPab**	**03 03 36.5**	**0.0**
	comp=Z,82nm,1.1s,baz=343,slow=3.8,SNR=12						
KOWA	**Kowa**	**171.58**	**139**	PKP	**PKPdf**	**03 02 31.4**	**-1.2**
	comp=Z,71nm,1.1s,baz=94,slow=0.4,SNR=66						
KOWA				PKPab	**PKPab**	**03 03 57.3**	**+0.1**
	comp=Z,10.0nm,0.7s,baz=229,slow=2.6,SNR=6.5						
KOWA	**Kowa**	**171.58**	**139**	PKPdf	**PKPdf**	**03 02 30.7**	**-2.0**
KOWA				PKPab	**PKPab**	**03 03 56.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**172.19**	**180**	PKP	**PKPdf**	**03 02 31.6**	**-1.4**
	comp=Z,154nm,1.2s,baz=328,slow=1.1,SNR=136						
TORD				PKPab	**PKPab**	**03 03 59.9**	**+0.1**
	comp=Z,20nm,0.9s,baz=173,slow=3.1,SNR=8.0						
TORD	**Torodi Ar. Bea**	**172.19**	**180**	PKPdf	**PKPdf**	**03 02 30.8**	**-2.1**
TORD				PKPab	**PKPab**	**03 03 59.3**	**-0.4**
TAM	**Tamanrasset**	**175.98**	**297**	PKIKP	**PKPdf**	**03 02 34.0**	**-0.2**
TAM						03 04 17.0	
TAM	**Tamanrasset**	**175.98**	**297**	PKPdf	**PKPdf**	**03 02 34.0**	**-0.2**
TAM				PKPab	**PKPab**	**03 04 16.9**	**-0.1**

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*GCG **28** 02:44:28.2±0.9, 13°.54N×92°.05W, h35^{km}±999^{km}, MD4.0*
*NEIC **28** 02:44:31.6±1.8, 13°.4N±0°.1×91°.77W±0°.05, h32^{km}±12^{km}, mb4.1/13, Error ellipse: s-maj=20.0km s-min=3.1km az=200.0*
*IDC **28** 02:44:34.7±2.3, 14°.31N×91°.38W, h0^{km}, mb3.6/6, mb1 4.0/9, mb1mx3.7/47, mbtmp3.7/9, ML3.8/3, MS3.9/1, Ms1 3.9/1, ms1mx2.8/42, Error ellipse: s-maj=60.2km s-min=21.6km az=32.0*
*UCR **28** 02:44:35.2±1.3, 13°.79N×91°.39W, h20^{km}±265^{km}, ML3.5, mb4.1(NEIC)*
*SSS **28** 02:44:35.1, 13°.80N×91°.37W, h14^{km}, ML3.7*
*SNET **28** 02:44:35.1±1.2, 13°.80N×91°.37W, h14^{km}±7^{km}, ML3.7*
ISC 28 02:44:32.0±2.1, **13°.58N**±0°.08×**91°.60W**±0°.04, **h16**^{km}±11^{km}, **n60**, σ**1^s.43**/71, **mb4.0**/11, **1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.95**	**355**	*e*P	**Pg**	**02 44 50.1**	**-0.3**
RTAL				*e*S	**Sg**	**02 45 00.3**	**-2.6**
RTAL	**Retalhuleu**	**0.95**	**355**		**Pg**	**02 44 50.5**	**0.0**
FUG	**Fuego 3**	**1.14**	**40**	*e*P	**Pb**	**02 44 52.7**	**-0.8**
PCG	**Pacaya**	**1.26**	**50**	*e*P	**Pn**	**02 44 54.8**	**-0.5**
THIG		**1.47**	**334**		**Pn**	**02 44 56.7**	**-1.2**
NBG	**Las Nubes**	**1.58**	**50**	*e*P	**Pn**	**02 45 00.3**	**+0.6**
NBG				*e*S	**Sg**	**02 45 24.5**	**+1.4**
HUEH	**Huehuetenango**	**1.73**	**3**	Pn	**Pn**	**02 45 01.4**	**-0.4**
RTR	**El Retiro**	**1.93**	**80**	*e*P	**Pn**	**02 45 04.0**	**-0.4**
RTR	**El Retiro**	**1.93**	**80**	*e*P	**Pn**	**02 45 04.0**	**-0.4**
CEVE	**Cerro Verde**	**1.94**	**82**	*e*P	**Pn**	**02 45 04.3**	**-0.3**
CEVE				*e*S	**Sn**	**02 45 27.6**	**-1.2**
CEVE				IAML		02 45 36.0	
	comp=Z,2µm,0.5s						
CEVE	**Cerro Verde**	**1.94**	**82**	*e*P	**Pn**	**02 45 04.3**	**-0.3**
CEVE				*e*S	**Sn**	**02 45 27.6**	**-1.2**
CEVE				IAML		02 45 36.0	
	comp=Z,2µm,0.5s						
SBLS	**San Blas**	**1.94**	**82**	*e*P	**Pn**	**02 45 04.2**	**-0.4**
SBLS	**San Blas**	**1.94**	**82**	*e*P	**Pn**	**02 45 04.2**	**-0.4**
JAYA	**Jayaque - finc**	**2.10**	**88**	*e*P	**Pn**	**02 45 06.4**	**-0.2**
JAYA				*e*S	**Sn**	**02 45 30.2**	**-2.3**
JAYA				IAML		02 45 37.9	
	comp=Z,1µm,0.2s						
JAYA	**Jayaque - finc**	**2.10**	**88**	*e*P	**Pn**	**02 45 06.4**	**-0.2**
JAYA				*e*S	**Sn**	**02 45 30.2**	**-2.3**
JAYA				IAML		02 45 37.9	
	comp=Z,1µm,0.2s						
TACO	**Tacachico**	**2.22**	**80**	*e*P	**Pn**	**02 45 07.7**	**-0.6**
TACO				*e*S	**Sn**	**02 45 33.7**	**-1.7**
TACO	**Tacachico**	**2.22**	**80**	*e*P	**Pn**	**02 45 07.7**	**-0.6**
TACO				*e*S	**Sn**	**02 45 33.7**	**-1.7**
LALI	**Alcalda de L**	**2.22**	**92**	*e*P	**Pn**	**02 45 08.3**	**+0.1**
LALI	**Alcalda de L**	**2.22**	**92**	*e*P	**Pn**	**02 45 08.3**	**+0.1**
SNET	**Serv Nac Est T**	**2.31**	**87**	Pn	**Pn**	**02 45 09.4**	**-0.2**
MTO3	**Montecristo**	**2.33**	**69**	*e*P	**Pn**	**02 45 10.2**	**+0.2**
MTO3				*e*S	**Sn**	**02 45 35.8**	**-2.6**
MTO3				IAML		02 45 42.8	
	comp=Z,265nm,0.6s						
MTO3	**Montecristo**	**2.33**	**69**	*e*P	**Pn**	**02 45 10.2**	**+0.2**
MTO3				*e*S	**Sn**	**02 45 35.8**	**-2.6**
MTO3				IAML		02 45 42.8	
	comp=Z,265nm,0.6s						
MTO3	**Montecristo**	**2.33**	**69**	Pn	**Pn**	**02 45 10.1**	**+0.2**
MRL	**Marmol**	**2.39**	**51**	*e*P	**Pn**	**02 45 11.4**	**+0.7**
MRL				*e*S	**Sb**	**02 45 44.6**	**+0.4**
ESQI	**Esquipulas**	**2.40**	**66**	*e*P	**Pn**	**02 45 10.7**	**-0.2**
ESQI				⇓*e*S	**Sn**	**02 45 37.3**	**-2.7**
ESQI				IAML		02 45 46.3	
	comp=Z,212nm,0.6s						
ESQI	**Esquipulas**	**2.40**	**66**	Pn	**Pn**	**02 45 11.6**	**+0.7**
PCIG		**2.63**	**324**		**Pn**	**02 45 12.3**	**-1.6**
CCIG	**Comitan**	**2.74**	**349**	Pn	**Pn**	**02 45 17.7**	**+2.1**
COEB	**Comit de Eme**	**2.99**	**91**	*e*P	**Pn**	**02 45 19.5**	**+0.5**
COEB				IAML		02 46 06.2	
	comp=Z,206nm,0.4s						
COEB	**Comit de Eme**	**2.99**	**91**	*e*P	**Pn**	**02 45 19.5**	**+0.5**
COEB				IAML		02 46 06.2	
	comp=Z,206nm,0.4s						
PETF	**Flores**	**3.72**	**27**	Pn	**Pn**	**02 45 30.0**	**+1.2**
TGUH	**Tegucigalpa,Un**	**4.23**	**83**	Pn	**Pn**	**02 45 38.6**	**+2.6**
CMIG	**Matias Romero**	**4.71**	**318**	Pn	**Pn**	**02 45 43.2**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=141,slow=12,SNR=16						
CMIG				Sn	**Sn**	**02 46 36.6**	**-0.4**
	comp=Z,4.4nm,0.3s,baz=86,slow=22,SNR=4.0						
CMIG				Lg	Lg	02 46 51.1	
	comp=Z,6.7nm,0.3s,baz=323,slow=17,SNR=5.8						
CMIG	**Matias Romero**	**4.71**	**318**		**Pn**	**02 45 41.4**	**-1.2**
JTS	**Las Juntas de**	**7.28**	**116**	Pn	Pn	02 46 25.5	+7.7
	comp=Z,0.9nm,0.3s,baz=56,slow=19,SNR=1.5						
JTS				Lg	Lg	02 48 14.7	
	comp=Z,0.7nm,0.3s,baz=166,slow=17,SNR=5.6						
TEIG	**Tepich**	**7.34**	**25**	Pn	**Pn**	**02 46 20.0**	**+1.4**
553A	**Crawfordville**	**17.81**	**21**	Pn	**P**	**02 48 42.1**	**+2.1**
BRAL	**Brewton**	**18.00**	**13**	P	**Pn**	**02 48 42.5**	**+0.8**
TX32	**Lajitas Array**	**19.26**	**326**	P	**Pn**	**02 48 59.4**	**+2.3**
TXAR	**Lajitas Array**	**19.26**	**326**	P	**P**	**02 48 57.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=31						
TXAR	**Lajitas Array**	**19.26**	**326**	P	**Pn**	**02 48 59.1**	**+2.0**
TX31	**Lajitas Ar. Si**	**19.26**	**326**	P	**Pn**	**02 48 58.7**	**+1.5**
TX31				IAmb	IAmb	02 48 59.7	
	comp=Z,10nm,1.1s						
GOGA	**Godfrey**	**21.09**	**19**	P	**P**	**02 49 16.9**	**+1.1**
GOGA				IAmb	IAmb	02 49 22.6	
	comp=Z,9.5nm,1.2s						
UALR	**University of**	**21.12**	**358**	P	**P**	**02 49 18.7**	**+2.6**
UALR				IAmb	IAmb	02 49 19.1	
	comp=Z,17nm,1.4s						
MNTX	**Cornudas Mount**	**22.03**	**327**	P	**P**	**02 49 27.6**	**+1.6**
MNTX				IAmb	IAmb	02 49 31.2	
	comp=Z,4.6nm,0.8s						
WMOK	**Wichita Mounta**	**22.05**	**344**		**P**	**02 49 27.6**	**+1.4**
LCAR	**Lake Charles**	**22.40**	**1**	P	**P**	**02 49 28.0**	**-1.9**
AMTX	**Amarillo**	**23.09**	**338**	P	**P**	**02 49 36.5**	**-0.7**
AMTX				IAmb	IAmb	02 49 45.1	
	comp=Z,3.8nm,0.6s						
TKL	**Tuckaleechee C**	**23.09**	**16**	P	**P**	**02 49 35.2**	**-2.0**
	comp=Z,2.5nm,0.6s,baz=176,slow=8.2,SNR=4.8						
TKL	**Tuckaleechee C**	**23.09**	**16**	P	**P**	**02 49 36.2**	**-0.9**
TKL				IAmb	IAmb	02 49 45.0	
	comp=Z,6.8nm,1.1s						
TZTN	**Tazewell**	**23.98**	**16**	P	**P**	**02 49 44.3**	**-1.7**
TZTN				IAmb	IAmb	02 49 54.9	
	comp=Z,9.9nm,1.2s						
S39A	**Bolivar**	**24.07**	**357**	P	**P**	**02 49 45.2**	**-1.5**
ATAH	**Atahualpa**	**24.40**	**147**	LR	LR	02 58 05.9	
	comp=Z,248nm,18.4s,baz=9.1,slow=33						
ANMO	**Albuquerque**	**25.16**	**330**	P	**P**	**02 49 58.6**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=117,slow=7.0,SNR=3.7						
ANMO	**Albuquerque**	**25.16**	**330**	P	**P**	**02 49 58.4**	**+1.5**
PV23	**Carpenter Ridg**	**29.19**	**331**		**P**	**02 50 31.1**	**-2.1**
PDAR	**Pinedale Array**	**32.96**	**335**	P	**P**	**02 51 07.0**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=122,slow=11,SNR=3.0						
NVAR	**Mina Array Bea**	**34.24**	**321**	P	**P**	**02 51 19.7**	**+2.1**
	comp=Z,1.3nm,0.7s,baz=129,slow=9.1,SNR=12						
YKA	**Yellowknife Ar**	**51.52**	**347**	P	**P**	**02 53 35.1**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=144,slow=7.2,SNR=14						
ILAR	**Eielson Array**	**63.38**	**337**	P	**P**	**02 55 00.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=117,slow=6.0,SNR=4.7						

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*NEIC **28** 02:56:26.7±1.1, 58°.75N±0°.03×152°.81W±0°.07, h57^{km}±10^{km}, Error ellipse: s-maj=5.3km s-min=4.4km az=101.0*
AEIC 28 02:56:27.4±1.0, **58°.73N**±0°.03×**152°.80W**±0°.08, **h56**^{km}±7^{km}, **ML3.3**/44, **ML3.6**/60(NEIC), **Error ellipse: s-maj=6.4km s-min=4.5km az=93.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AU22	**Augustine Moun**	**0.70**	**336**		Pn	02 56 40.6	-0.8
AU22					Sn	02 56 50.9	-0.7
AUCH	**Augustine Cone**	**0.71**	**333**		Pn	02 56 40.9	-0.8
AUL	**Augustine Lava**	**0.73**	**334**		Pn	02 56 41.0	-0.8
OPT	**Oil Point**	**0.95**	**347**		Pn	02 56 44.0	-0.7
KDAK	**Kodiak Island**	**0.96**	**173**		Pn	02 56 44.0	-0.8
KDAK	**Kodiak Island**	**0.96**	**173**		Sn	02 56 58.6	+1.1
CNPM	**China Poot**	**1.13**	**45**	Pn	Pn	02 56 46.6	-0.5
CNPM				Sn	Sn	02 57 02.3	+0.6
CNPM				IAML		02 57 03.6	
	comp=E,756nm,0.7s						
CNPM				IAML		02 57 04.4	
	comp=N,884nm,0.6s						
ILS	**Iliamna Low So**	**1.23**	**354**		Pn	02 56 47.6	-0.9
IVE	**Iliamna Volcan**	**1.29**	**355**		Pn	02 56 48.3	-1.0
IVE					Sn	02 57 05.1	-0.5
BRLK	**Bradley Lake**	**1.43**	**43**		Pn	02 56 50.1	-0.9
BRLK				IAML		02 57 13.2	
	comp=N,744nm,0.3s						
BRLK				IAML		02 57 13.5	
	comp=E,893nm,0.5s						
BRSE	**Bradley Lake S**	**1.47**	**45**		Pn	02 56 50.8	-0.8
ANCK	**Angle Creek**	**1.51**	**250**		Pn	02 56 51.4	-0.9
OHAK	**Old Harbor**	**1.54**	**190**	Pn	Pn	02 56 51.5	-0.9
OHAK				Sn	Sn	02 57 13.4	+2.1
OHAK				IAML		02 57 18.6	
	comp=N,508nm,0.5s						
RED	**Redoubt Volcan**	**1.69**	**1**		Pn	02 56 53.8	-0.8
RED					Sn	02 57 14.6	-0.6
RSO	**Redoubt South**	**1.73**	**1**	Pn	Pn	02 56 54.9	-0.5
DFR	**Drift River**	**1.86**	**2**		Pn	02 56 56.5	-0.5
DFR					Sn	02 57 19.2	-0.3
SEW	**Seward**	**2.20**	**50**	Pn	Pn	02 56 59.7	-1.7
CAPN	**Captain Cook N**	**2.21**	**22**		Pn	02 57 02.6	+1.1
SLKM	**Skilak Lake**	**2.21**	**35**		Pn	02 57 00.7	-1.0
SLKM					Sn	02 57 26.4	-1.4
PLK1	**Peulik 1**	**2.22**	**247**		Pn	02 57 01.1	-0.6
SII	**Sitkinak Islan**	**2.30**	**199**	Pn	Pn	02 57 01.9	-1.0
SII				IAML		02 57 42.6	
	comp=N,368nm,0.7s						
SPCR	**Spurr Chakacha**	**2.49**	**7**		Pn	02 57 05.1	-0.5
SPCN	**Chakachatna No**	**2.52**	**7**		Pn	02 57 06.0	+0.1
SPCG	**Spurr Capps Gl**	**2.60**	**8**		Pn	02 57 07.2	+0.2
SVW2	**Sparrevohn**	**2.75**	**331**	Pn	Pn	02 57 07.1	-1.9
STLK	**Strandline Lak**	**2.82**	**10**		Pn	02 57 10.1	+0.1
RC01	**Rabbit Creek A**	**2.82**	**32**		Pn	02 57 09.3	-0.7
SUA	**Susitna One**	**2.93**	**20**	Pn	Pn	02 57 10.6	-0.9
PWL	**Port Wells**	**3.11**	**45**		Pn	02 57 12.6	-1.3
SKT	**Skwentna**	**3.32**	**10**	Pn	Pn	02 57 15.8	-0.9
SKT				IAML		02 58 02.6	
	comp=E,86nm,0.6s						
Q23K	**Middleton Isla**	**3.40**	**75**	Pn	Pn	02 57 16.6	-1.3
Q23K				IAML		02 58 07.4	
	comp=N,150nm,3.0s						
PMR	**Palmer**	**3.40**	**31**	Pn	Pn	02 57 16.5	-1.4
MID	**Middleton Isla**	**3.41**	**75**	Pn	Pn	02 57 16.7	-1.3
MID				IAML		02 58 30.9	
	comp=N,133nm,2.5s						
KNK	**Knik Glacier**	**3.46**	**37**	Pn	Pn	02 57 17.2	-1.5
KNK				IAML		02 58 08.6	
	comp=N,90nm,0.6s						
KNK				IAML		02 58 13.7	
	comp=E,129nm,0.7s						
GLI	**Glacier Island**	**3.60**	**51**	Pn	Pn	02 57 18.8	-1.8
GLI				IAML		02 58 02.1	
	comp=E,96nm,0.4s						
GHO	**Glory Hole Cre**	**3.61**	**31**	Pn	Pn	02 57 19.6	-1.2
GHO				IAML		02 58 13.6	
	comp=N,104nm,0.4s						
HIN	**Hinchinbrook I**	**3.61**	**60**	Pn	Pn	02 57 19.9	-0.9
HIN				IAML		02 58 00.2	
	comp=E,132nm,0.8s						
SML	**Sawmill**	**3.80**	**34**	Pn	Pn	02 57 22.4	-1.1
SML				IAML		02 58 26.5	
	comp=E,84nm,1.1s						
SML				IAML		02 58 43.7	
	comp=N,67nm,1.0s						
EYAK	**Cordova Ski Ar**	**4.02**	**60**	Pn	Pn	02 57 24.5	-1.8
SCM	**Sheep Creek Mo**	**4.13**	**39**	Pn	Pn	02 57 27.1	-0.9
SCM				IAML		02 58 18.9	
	comp=N,67nm,1.1s						
PPLA	**Purkeypile**	**4.19**	**4**	Pn	Pn	02 57 29.4	+0.6
KLU	**Klutina**	**4.42**	**48**	Pn	Pn	02 57 30.6	-1.3
KLU				IAML		02 58 19.2	
	comp=N,49nm,0.4s						
RAGM	**Ragged Mountai**	**4.46**	**65**	Pn	Pn	02 57 31.5	-0.9
TTA	**Tatalina**	**4.49**	**341**	Pn	Pn	02 57 31.9	-1.0
HMT	**Hamilton**	**4.64**	**66**	Pn	Pn	02 57 33.7	-1.1
M24K	**Tolsona, Glenn**	**4.71**	**41**	Pn	Pn	02 57 35.5	-0.5
WAT2	**Susitna Watana**	**4.72**	**24**		Pn	02 57 35.0	-1.0
TRF	**Thorofare Moun**	**4.89**	**13**	Pn	Pn	02 57 37.8	-0.6
TRF				IAML		02 58 46.6	
	comp=E,42nm,1.9s						
TRF				IAML		02 58 59.2	
	comp=N,47nm,2.0s						
KTH	**Kantishna Hill**	**4.92**	**10**	Pn	Pn	02 57 38.6	-0.2
KTH				IAML		02 58 46.0	
	comp=N,44nm,1.1s						
KTH				IAML		02 58 47.5	
	comp=E,42nm,2.1s						
N25K	**Chitina, Valde**	**5.01**	**51**	Pn	Pn	02 57 38.7	-1.2
RND	**Reindeer**	**5.07**	**21**	Pn	Pn	02 57 40.1	-0.7
RND				IAML		02 58 49.7	
	comp=N,39nm,2.1s						
RND				IAML		02 58 56.3	
	comp=E,35nm,2.0s						
DHY	**Denali Highway**	**5.10**	**29**	Pn	Pn	02 57 40.3	-0.9
DHY				IAML		02 59 02.4	
	comp=E,36nm,3.3s						
DHY				IAML		02 59 05.3	
	comp=N,30nm,2.8s						
GLB	**Gilahina Butte**	**5.26**	**55**	Pn	Pn	02 57 41.5	-1.8
GLB				IAML		02 58 40.8	
	comp=N,24nm,1.2s						
GLB				IAML		02 58 43.9	
	comp=E,23nm,1.4s						
CRQM	**Cirque**	**5.29**	**63**	Pn	Pn	02 57 42.9	-1.1
CRQM				IAML		02 59 00.1	
	comp=E,29nm,1.8s						
VRDI	**Verde Repeater**	**5.32**	**58**	Pn	Pn	02 57 43.1	-1.2
VRDI				IAML		02 58 48.1	
	comp=N,30nm,1.3s						
SDPT	**Sand Point**	**5.39**	**234**	Pn	Pn	02 57 47.2	+2.1
TGL	**Tana Glacier**	**5.44**	**64**	Pn	Pn	02 57 44.8	-1.0
BPAW	**Bear Paw Mtn.**	**5.46**	**8**	Pn	Pn	02 57 47.0	+0.9
PAX	**Paxson**	**5.56**	**37**	Pn	Pn	02 57 46.2	-1.3
MCARA	**McCarthy VSAT**	**5.57**	**57**	Pn	Pn	02 57 45.9	-1.7
ISLE	**Juniper Island**	**5.62**	**66**	Pn	Pn	02 57 47.7	-0.8
BWN	**Browne**	**5.69**	**15**	Pn	Pn	02 57 48.7	-0.4
BALM	**Baldy**	**5.75**	**62**	Pn	Pn	02 57 48.9	-1.3
YAH	**Yahtse**	**5.86**	**69**	Pn	Pn	02 57 51.1	-0.6
GRNC	**Granite Creek**	**5.94**	**66**		Pn	02 57 51.8	-1.0
BARN	**Barnard Glacie**	**6.07**	**63**	Pn	Pn	02 57 53.9	-0.8
CHX	**Chaix Hills**	**6.12**	**72**		Pn	02 57 54.7	-0.5
TABL	**Table Mountain**	**6.17**	**69**	Pn	Pn	02 57 55.4	-0.5
WRH	**Wood River Hil**	**6.18**	**19**	Pn	Pn	02 57 54.5	-1.3
CTGM	**Chitina Glacie**	**6.20**	**64**	Pn	Pn	02 57 55.5	-0.8
RIDG	**Independent Ri**	**6.32**	**34**	Pn	Pn	02 57 57.5	-0.3
HDA	**Harding Lake**	**6.34**	**24**	Pn	Pn	02 57 57.2	-0.9
CCB	**Clear Creek Bu**	**6.39**	**20**	Pn	Pn	02 57 57.1	-1.6
PCA	**Pinnacle**	**6.55**	**73**	Pn	Pn	02 58 00.6	-0.5
MDM	**Murphy Dome**	**6.61**	**17**	Pn	Pn	02 58 00.9	-0.9
IL31		**6.67**	**22**	Pn	Pn	02 58 01.5	-1.2
BCPM	**Bancas Point**	**6.85**	**74**	Pn	Pn	02 58 04.4	-0.6
POKR	**Poker Plat Res**	**6.89**	**19**	Pn	Pn	02 58 05.0	-0.6
IMAR	**Indian Mountai**	**7.29**	**357**	Pn	Pn	02 58 10.9	-0.2
PRP	**Porcupine Dome**	**7.61**	**24**	Pn	Pn	02 58 15.7	+0.1
ANM	**Nome**	**8.35**	**320**	Pn	Pn	02 58 25.6	0.0
UNV	**Unalaska Valle**	**9.05**	**243**	Pn	Pn	02 58 33.4	-1.7
WHY	**Whitehorse**	**9.26**	**70**	Pn	Pn	02 58 37.2	-1.0
JIS	**Juneau Island**	**9.65**	**85**	Pn	Pn	02 58 43.8	+0.5
DLBC	**Dease Lake**	**11.88**	**82**	Pn	Pn	02 59 14.9	+1.1

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*IPEC **28** 02:59:39.0±0.2, 49°.86N×18°.54E, h0^{km}, ML1.4/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
PRU 28 02:59:40.2±0.0, **49°.84N**×**18°.48E**, **h0**^{km}, **Mining Induced Event Darkov, E=5.4e+04, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.21**	**269**	*e*PG	Pg	02 59 44.4	+0.1
OKC				*e*SG	Sg	02 59 48.1	+1.0
	comp=Z,21nm,0.3s						
MORC	**Moravsky Berou**	**0.61**	**264**	*e*PG	Pg	02 59 51.3	-0.6
MORC				*e*SG	Sg	02 59 59.6	-0.2
MORC	**Moravsky Berou**	**0.61**	**264**	*e*Pg	Pg	02 59 51.2	-0.7
	baz=82						
MORC				*e*Sg	Sg	02 59 59.6	-0.2
	6.4nm,0.3s,baz=82						
OJC	**Ojcow**	**0.93**	**65**	*e*Pg	Pg	02 59 56.6	-1.4
OJC				*e*Sg	Sb	03 00 11.4	-0.8
LANS	**Liptovska Anna**	**0.94**	**137**	*e*PG	Pg	02 59 57.6	-0.7
LANS				*e*SG	Sb	03 00 13.1	+0.6
LANS				*e*LG	Lg	03 00 14.4	
JAVC	**Velka Javorina**	**1.11**	**209**	*e*PG	Pg	03 00 01.7	+0.1
KRLC	**Kraliky**	**1.12**	**283**	*e*PG	Pg	02 59 59.9	-1.8
KRLC				*e*SG	Sg	03 00 15.5	-0.7
VRAC	**Vranov**	**1.34**	**247**	*e*PG	Pg	03 00 04.7	-1.1
VRAC				*e*SG	Sg	03 00 22.5	-0.7
VRAC	**Vranov**	**1.34**	**247**	*e*Pg	Pg	03 00 04.7	-1.1
	baz=66						
VRAC				*e*Sg	Sg	03 00 22.4	-0.8
	4.9nm,0.4s,baz=66						
VYHS	**Vyhne**	**1.37**	**170**	*e*PG	Pg	03 00 05.0	-1.4
VYHS				*e*SG	Sg	03 00 24.2	+0.1
DPC	**Dobruska-Polom**	**1.48**	**291**	*e*PG	Pn	03 00 06.3	-1.8
DPC				*e*SG	Sg	03 00 26.8	-0.9
SMOL	**Smolenice**	**1.50**	**208**	*e*PG	Pn	03 00 07.1	-1.2
SMOL				*e*SG	Sg	03 00 28.1	-0.1
KRUC	**Moravsky**	**1.57**	**241**	*e*PG	Pn	03 00 08.3	-1.0
KRUC				*e*SG	Sn	03 00 29.8	-0.5
KRUC	**Moravsky**	**1.57**	**241**	*e*Pg	Pn	03 00 08.2	-1.1
	baz=59						
KRUC				*e*Sg	Sn	03 00 29.7	-0.6
	3.2nm,0.3s,baz=59						
OSTC	**Ostas**	**1.62**	**297**	*e*PG	Pn	03 00 09.3	-0.8
OSTC				*e*SG	Sn	03 00 31.8	+0.1
MODS	**Modra-Piesok**	**1.67**	**209**	*e*PG	Pn	03 00 09.0	-1.7
MODS				*e*SG	Sn	03 00 30.9	-1.9
UPC	**Upice**	**1.72**	**294**	*e*PG	Pn	03 00 10.8	-0.6
UPC				*e*SG	Sb	03 00 34.9	0.0
CHVC	**Chvalec**	**1.73**	**297**	*e*PG	Pn	03 00 11.0	-0.5
KHC	**Kasperske Hory**	**3.27**	**259**	*e*PG	Pb	03 00 39.3	+0.1
KHC				*e*SG	Sg	03 01 23.1	-2.2

ATH 28 03:01:12.9, 38°.03N×23°.03E, h17^{km}±4^{km}, **ML0.7**/1, **Error ellipse: s-maj=10.4km s-min=1.4km az=327.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.05**	**259**	P	Pg	03 01 16.1	0.0
LTK				S	Sg	03 01 18.0	-0.1
LTK				AML	AML	03 01 18.4	
	comp=N,104µm,0.2s						
LTK				AML	AML	03 01 18.4	
	comp=E,99µm,0.2s						
LOUT	**Loutraki**	**0.06**	**225**	P	Pg	03 01 15.9	-0.2
LOUT				S	Sg	03 01 18.3	+0.1
VIL2	**Platees**	**0.26**	**46**	P	Pg	03 01 18.4	-0.2
VIL2				S	Sg	03 01 22.6	0.0

JMA 28 03:10:40.3, 36°.46N×139°.37E, h8^{km}±1^{km}, **M2.5, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.08**	**117**	P	Pg	03 10 42.4	+0.1
JAG				S	Sg	03 10 43.8	0.0
JKT	**Katashina**	**0.32**	**342**	P	Pg	03 10 46.4	-0.3
JKT				S	Sg	03 10 51.2	+0.2
JRY	**Ryogami san**	**0.58**	**221**	P	Pg	03 10 51.2	-0.4
JRY				S	Sg	03 10 59.0	-0.2
JHU	**Hanno**	**0.61**	**187**	P	Pg	03 10 51.8	-0.3
JHU				S	Sg	03 10 59.7	-0.4
MAT	**Matsushiro**	**0.94**	**275**	P	Pg	03 10 57.6	-0.8
MAT				S	Sg	03 11 09.6	-1.0

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*IDC **28** 03:20:17.8±0.7, 7°.60S×130°.23E, h0^{km}, mb4.3/8, mb1 4.5/10, mb1mx4.2/37, mbtmp4.4/10, ML4.4/2, Error ellipse: s-maj=39.1km s-min=16.0km az=79.0*
*NEIC **28** 03:20:19.6±1.9, 7°.54S±0°.07×130°.26E±0°.09, h52^{km}±16^{km}, mb4.4/7, Error ellipse: s-maj=13.7km s-min=9.5km az=59.0*
*DJA **28** 03:20:22.4±0.3, 8°S±3°×13°1E±°, h66^{km}±8^{km}, M4.5/8, mB5.0/3, mb4.5/7, MLv4.5/8, Mw(mB)4.3/3*
ISC 28 03:20:23.4±0.5, **7°.87S**±0°.05×**130°.42E**±0°.05, **h50**^{km}, **n39**, σ**1^s.99**/38, **mb4.3**/11, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**0.88**	**97**	Pn	**Pn**	**03 20 39.6**	**+0.1**
SAUI				Sn	**Sn**	**03 20 53.2**	**+1.9**
SAUI	**Saumlaki**	**0.88**	**97**	P	**Pn**	**03 20 40.0**	**+0.5**
SAUI				S	**Sn**	**03 20 51.8**	**+0.5**
BNDI	**Bandanaira**	**3.36**	**351**	P	Pn	03 21 09.2	-4.2
MSAI	**Masohi**	**4.73**	**342**	P	Pn	03 21 27.6	-4.6
MTN	**Manton Dam**	**4.99**	**172**	Pn	**Pn**	**03 21 38.6**	**+2.8**
FAKI	**Fak Fak**	**5.24**	**20**	Pn	Pn	03 21 32.1	-7.2
FAKI	**Fak Fak**	**5.24**	**20**	P	Pn	03 21 34.5	-4.8
NLAI	**Namlea**	**5.66**	**324**	P	**Pn**	**03 21 43.8**	**-1.2**
SOEI	**Soe**	**6.36**	**252**	P	**Pn**	**03 21 56.9**	**+2.2**
	0.4nm47nm,0.9s						
SIJI	**Sorong**	**7.00**	**7**	Pn	Pn	03 21 58.1	-5.3
	4.4nm,0.3s,baz=75,slow=3.4,SNR=8.0						
SIJI				Sn	Sn	03 23 13.4	-8.4
	3.1nm,0.3s,baz=233,slow=20,SNR=1.6						
SWI	**Sorong**	**7.01**	**7**	P	Pn	03 21 58.5	-5.0
	0.2nm34nm,0.5s						
BATI	**Baumata**	**7.07**	**250**	Pn	**Pn**	**03 22 07.8**	**+3.5**
	7.1nm,0.3s,baz=214,slow=2.0,SNR=5.2						
BATI				Sn	**Sn**	**03 23 27.1**	**+3.7**
	4.0nm,0.3s,baz=16,slow=21,SNR=1.4						
FITZ	**Fitzroy Crossi**	**11.18**	**204**	Pn	**Pn**	**03 23 00.4**	**-0.3**
	2.5nm,0.3s,baz=27,slow=9.0,SNR=85						
FITZ				Sn	**Sn**	**03 25 02.3**	**-2.0**
	1.7nm,0.3s,baz=134,slow=13,SNR=5.5						
FITZ	**Fitzroy Crossi**	**11.18**	**204**		**Pn**	**03 23 00.6**	**0.0**
JAY	**Jayapura**	**11.54**	**63**	Sn	**Sn**	**03 25 18.2**	**+5.1**
	0.8nm,0.3s,baz=358,slow=24,SNR=7.7						
WB0	**Warramunga Arr**	**12.44**	**162**		**Pn**	**03 23 16.8**	**-1.0**
WRA	**Warramunga Arr**	**12.59**	**163**	Pn	**Pn**	**03 23 17.8**	**-2.1**
	1.4nm,0.3s,baz=348,slow=13,SNR=51						
WRA				Sn	**Sn**	**03 25 35.8**	**-2.9**
	1.7nm,0.3s,baz=350,slow=21,SNR=7.2						
WB2	**Warramunga Arr**	**12.59**	**163**		**Pn**	**03 23 18.5**	**-1.4**
WR0	**Warramunga Arr**	**12.67**	**162**		**Pn**	**03 23 19.8**	**-1.1**
AS31	**Alice Springs**	**16.06**	**168**	Pn	**Pn**	**03 24 05.2**	**-0.8**
AS31				IAmb	IAmb	03 24 20.3	
	comp=Z,6.7nm,0.6s						
ASAR	**Alice Springs**	**16.06**	**168**	Pn	**Pn**	**03 24 04.3**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=337,slow=9.0,SNR=40						
ASAR				Sn	**Sn**	**03 27 01.2**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=355,slow=25,SNR=4.2						
ASAR	**Alice Springs**	**16.06**	**168**	Pn	**Pn**	**03 24 05.5**	**-0.5**
PSA00	**Pilbara Seismi**	**17.02**	**216**		**Pn**	**03 24 16.4**	**-1.6**
PSA00				IAmb	IAmb	03 24 23.8	
	comp=Z,15nm,0.8s						
SBUM	**Sibu**	**20.85**	**299**	P	P	03 24 53.4	-7.8
SBUM				IAmb	IAmb	03 25 03.8	
	comp=Z,13nm,0.8s						
FORT	**Forrest**	**22.90**	**185**	P	**P**	**03 25 23.0**	**+0.1**
FORT				IAmb	IAmb	03 25 38.5	
	comp=Z,23nm,0.8s						
BBOO	**Buckleboo**	**25.36**	**169**	P	**P**	**03 25 45.5**	**-0.3**
BBOO				IAmb	IAmb	03 25 51.3	
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**26.06**	**158**	P	**P**	**03 25 55.5**	**+3.3**
	comp=Z,4.7nm,0.6s,baz=327,slow=11,SNR=16						
STKA	**Stephens Creek**	**26.06**	**158**	P	**P**	**03 25 51.9**	**-0.3**
LHI	**Lord Howe Isla**	**35.58**	**135**	P	**P**	**03 27 15.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**40.61**	**310**	P	**P**	**03 27 57.2**	**-1.5**
	comp=Z,1.8nm,0.4s,baz=130,slow=7.3,SNR=6.8						
MJAR	**Matsushiro Arr**	**44.78**	**9**	P	**P**	**03 28 29.9**	**-2.3**
	comp=Z,3.0nm,0.8s,baz=183,slow=9.5,SNR=5.6						
GTA	**Gaotai**	**54.93**	**331**	*e*P	**P**	**03 29 49.5**	**+0.1**
GTA				pP	pP	03 29 55.0	-7.9

GTA				sP	sP	03 29 58.0	-11
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	59.39	341	P	P	03 30 20.5	-0.3
	comp=Z,0.7nm,0.5s,baz=156,slow=7.9,SNR=5.9						
PETK	Petropavlovsk-	65.02	18	P	P	03 30 59.4	+1.3
	comp=Z,7.7nm,1.0s,baz=203,slow=9.4,SNR=2.5						
MKAR	Makanchi Array	69.18	327	P	P	03 31 25.0	+0.3
	comp=Z,6.3nm,0.5s,baz=121,slow=7.7,SNR=90						
VNDA	Vanda	71.54	173	P	P	03 31 42.3	+3.6
	comp=Z,1.9nm,0.5s,baz=319,slow=8.0,SNR=16						
ZALV	Zalesovo Beam	72.54	334	P	P	03 31 43.5	-1.4
	comp=Z,1.0nm,0.5s,baz=138,slow=4.1,SNR=5.6						
TORD	Torodi Ar. Bea	129.38	281	PKP	PKPdf	03 39 26.7	-0.7
	comp=Z,0.6nm,0.7s,baz=64,slow=3.4,SNR=2.6						
CPUP	Villa Florida	145.18	168	PKPbc	PKiKP	03 39 59.2	-0.9
	comp=Z,5.5nm,0.9s,baz=199,slow=2.8,SNR=11						

ISK ***28*** *03:29:37.1, 34°.65N×45°.28E, h15^{km}, ML3.9/12*
ISN ***28*** *03:29:42.3±1.1, 35°.48N×45°.57E, h0^{km}±999^{km}, ML3.3*
TEH ***28*** *03:29:43.2, 35°.36N×45°.35E, h10^{km}, ML3.6*
ISC 28 03:29:45.6±1.1**, 35°.38N**±0°.04×**45°.39E**±0°.05**, h10**^{km}**, n54,**
σ**1^s.38**/57**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	1.06	129	e		03 30 25.0	
	comp=Z,99nm,0.3s						
IDHR				ePg	Pg	03 30 03.6	-2.4
ILIN	Lien	1.37	109	e		03 30 31.1	
	comp=Z,99nm,0.8s						
ILIN				ePg	Pn	03 30 08.7	-2.3
MAHB	Mahabad	1.41	10	ePg	Pn	03 30 09.4	-2.1
IGHG	Ghaleghazi	1.43	137	ePg	Pn	03 30 11.0	-0.8
IGHG				e		03 30 41.8	
	comp=Z,99nm,0.9s						
KER	Kermanshah	1.74	124	ePn	Pn	03 30 15.9	-0.1
KCHF	Cheshme Sefid,	1.75	128	ePg	Pn	03 30 16.7	+0.5
KCHF				e		03 30 47.8	
	comp=Z,99nm,0.6s						
IBZA	Bozab	2.22	113	ePn	Pn	03 30 23.4	+0.6
IBZA				e		03 30 25.9	
	comp=Z,99nm,0.7s						
BHD	Baghdad	2.26	202	ePn	Pn	03 30 25.0	+2.0
BHD				eSn	Sb	03 30 56.0	+1.5
BHD				AML	AML	03 31 00.5	
	comp=E,305nm,0.4s						
IBDR	Badra	2.30	169	ePn	Pn	03 30 24.0	+0.4
IBDR				eSn	Sb	03 30 55.0	-0.7
IBDR				AML	AML	03 31 04.4	
	comp=E,110nm,0.6s						
IBDR				AML	AML	03 31 10.0	
	comp=N,94nm,0.5s						
IALM	Almabolaq	2.34	102	ePn	Pn	03 30 25.8	+1.4
CUKT	Cukurca	2.36	323	PN	Pn	03 30 24.5	0.0
CUKT				SN	Sb	03 30 59.1	+1.6
CUKT	Cukurca	2.36	323	ePn	Pn	03 30 24.5	0.0
HSRG	Sareghieh	2.37	92	ePn	Pn	03 30 24.8	0.0
HSRG				e		03 31 04.5	
	comp=Z,99nm,1.0s						
IHSH	Hashtrud	2.45	38	ePn	Pn	03 30 26.3	-11
IHSH				e		03 31 08.4	
	comp=E,99nm,0.6s						
IKFM	Kafar-mosalman	2.75	132	ePn	Pn	03 30 30.0	+0.3
IKFM				e		03 31 21.2	
	comp=Z,99nm,0.4s						
IDOB	Doab	2.79	124	ePn	Pn	03 30 30.9	+0.3
ITBZ	Tabriz	2.92	12	ePn	Pn	03 30 32.6	+0.4
ITBZ				e		03 31 27.3	
	comp=Z,99nm,0.6s						
ISRB	Sarab	3.06	36	ePn	Pn	03 30 34.7	+0.5
IKMR	Kamar-syah	3.09	126	ePn	Pn	03 30 35.7	+1.3
SIRT	Sirnak	3.19	313	PN	Pn	03 30 35.3	-0.6
SIRT	Sirnak	3.19	313	ePn	Pn	03 30 34.7	-1.2
IHRS	Heris	3.22	24	ePn	Pn	03 30 36.5	0.0
IMRD	Marand	3.34	4	ePn	Pn	03 30 39.2	+1.1
QABG	Abgarm-Qazvin	3.44	83	ePn	Pn	03 30 39.3	-0.1
AKDM	Akdamar-Van	3.52	327	PN	Pn	03 30 41.4	+0.8
AKDM	Akdamar-Van	3.52	327	ePn	Pn	03 30 41.0	+0.4
VANB	Van	3.59	334	PN	Pn	03 30 41.7	+0.3
VANB	Van	3.59	334	ePn	Pn	03 30 41.8	+0.3
IRAZ	Razeghan	3.71	88	ePn	Pn	03 30 44.6	+1.4
CLDR	Caldiran	3.94	343	PN	Pn	03 30 48.5	+2.1
CLDR	Caldiran	3.94	343	ePn	Pn	03 30 48.5	+2.1
GURO	Guroymak-BITLI	4.16	321	PN	Pn	03 30 49.5	+0.3
GURO	Guroymak-BITLI	4.16	321	ePn	Pn	03 30 49.6	+0.3
SVAN	Silvan-Diyarba	4.36	311	PN	Pn	03 30 51.2	-0.7
SVAN	Silvan-Diyarba	4.36	311	ePn	Pn	03 30 51.2	-0.7
MLAZ	Malazgirt-MUS	4.39	330	PN	Pn	03 30 53.8	+1.4
MLAZ	Malazgirt-MUS	4.39	330	ePn	Pn	03 30 53.6	+1.2
NSR	Nassriya	4.40	172	ePn	Pn	03 30 54.0	+1.6
NSR				eSn	Sn	03 31 46.0	+2.3
NSR				AML	AML	03 31 47.4	
	comp=E,353nm,0.2s						
QALM	Alamut, Qazvin	4.40	75	ePn	Pn	03 30 53.0	+0.3
MAZI	Mazidag	4.49	299	PN	Pn	03 30 51.4	-2.4
MAZI	Mazidag	4.49	299	ePn	Pn	03 30 51.5	-2.4
AGRB	Hanur-Agry	4.61	336	PN	Pn	03 30 57.5	+2.0
TASB	TASBURUN-IGDIR	4.69	349	PN	Pn	03 30 59.5	+3.0
GNI	Garni	4.79	354	PN	Pn	03 31 01.2	+3.2
AMIS	Naft Sefid	4.93	138	ePn	Pn	03 31 00.6	+0.8
DYBB	Diyarbakir	4.94	303	PN	Pn	03 30 58.3	-1.7
BNGB	Bingl	5.21	315	PN	Pn	03 31 03.9	+0.2
BINT	Bingol	5.25	313	ePn	Pn	03 31 03.1	-1.1
IPIR	Pirpir	5.30	119	ePn	Pn	03 31 05.4	+0.3
IKLH	Kolahrood	5.52	110	ePn	Pn	03 31 08.9	+0.8
YEDI	Yedisu-Bingol	5.59	318	PN	Pn	03 31 09.6	+0.6
YEDI	Yedisu-Bingol	5.59	318	ePn	Pn	03 31 09.3	+0.3
RST	Umm Al-Ruwaisa	6.01	166	eP		03 31 15.5	
UMR	Umm Al-Rimmam	6.13	161	eP		03 31 16.6	
MALT	Malatya	6.30	300	PN	Pn	03 31 16.9	-1.8
RDF	Al-Radifah	6.69	163	eP		03 31 25.1	
KLNJ	Kolanjah	6.78	128	ePn	Pn	03 31 25.7	+0.2

ISK ***28*** *03:38:46.2, 40°.68N×32°.88E, h6^{km}, ML2.9/7*
ISC 28 03:38:47.0±1.1**, 40°.67N**±0°.07×**32°.88E**±0°.03**, h10**^{km}**, n11,**
σ**0^s.39**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRDE	Gerede-Bolu	0.52	285	PG	Pg	03 38 56.6	-0.6
GRDE				SG	Sg	03 39 04.5	+0.4
CANT	Cankiri	0.57	96	PG	Pg	03 38 57.7	-0.4
CANT				SG	Sg	03 39 05.9	+0.3
LOD	Lodumlu	0.78	186	PG	Pg	03 39 01.8	-0.3
LOD				SG	Sb	03 39 13.3	-0.1
YUVA	Yuva-Kibriscik	0.94	254	PG	Pg	03 39 04.7	-0.5
DELI	KIRIKKALE	1.04	129	i P	Pn	03 39 08.2	+0.4
BRTR	Keskin Array B	1.11	148	PN	Pb	03 39 08.2	-0.1
BRTR				SN	Sn	03 39 23.7	-0.4
AFSR	Afar-Bala (An	1.23	173	PN	Pb	03 39 10.2	-0.1
MDUB	Mudurnu	1.29	262	PN	Pg	03 39 11.9	+0.1
CDAG	Cicekdag	1.55	132	i P	Pb	03 39 16.0	+0.1
AUSIV	SIVRIHISAR	1.60	220	PN	Pn	03 39 15.8	+0.4
SVRH	Sivrihisar-ESK	1.60	221	PN	Pn	03 39 15.8	+0.4

IDC ***28*** *03:39:07.6±0.8, 41°.38N×32°.37E, h0^{km}, mb3.5/4, mb1 3.6/7, mb1mx3.4/50, mbtmp3.5/7, ML3.8/3, MS4.0/3, Ms1 4.0/3, ms1mx3.2/40, Error ellipse: s-maj=17.6km s-min=7.8km az=57.0*
ISK ***28*** *03:39:07.6, 41°.36N×32°.46E, h8^{km}, ML3.5/26*
DDA ***28*** *03:39:08.2, 41°.34N×32°.48E, h7^{km}±3^{km}, MW3.7*
ISC 28 03:39:08.2±1.0**, 41°.38N**±0°.02×**32°.45E**±0°.02**, h6**^{km}±8^{km}**,**
n126, σ**1^s.04**/178**, mb3.5**/3**, MS4.0**/3**, 32C-46D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBUK	KARABUK-Merkez	0.20	136	i P	Pg	03 39 11.7	-0.4
KBUK				IAML		03 39 14.0	
	comp=N,41μm,0.1s						
KBUK				IAML		03 39 14.0	
	comp=E,32μm,0.1s						
KBUK				i S	Sg	03 39 14.0	-0.7
BTIN	Bartın	0.30	330	i P	Pb	03 39 15.5	-0.4
BTIN				i P	Pb	03 39 15.5	-0.4
BTIN				i S	Sb	03 39 20.4	-0.7
BTIN				i S	Sg	03 39 20.5	+2.5
BTIN				IAML		03 39 21.0	
	comp=N,8μm,0.5s						
BTIN				IAML		03 39 21.0	
	comp=E,6μm,0.3s						
BTIN				IAML		03 39 21.0	
	comp=E,7μm,0.3s						
BTIN				IAML		03 39 21.0	
	comp=N,8μm,0.5s						
MASR	Amasra-Bartin	0.38	3	PG	Pb	03 39 16.9	-0.5
MASR				SG	Sb	03 39 22.8	-0.8
DEVR	Zonguldak/Devr	0.43	237	i P	Pg	03 39 16.4	-0.1
DEVR				i S	Sg	03 39 21.0	-1.1
DEVR				IAML		03 39 25.0	
	comp=N,1μm,0.4s						
DEVR				IAML		03 39 26.0	
	comp=E,2μm,0.6s						
KURC	Kurucasile-Bar	0.52	25	PG	Pg	03 39 17.8	-0.4
KURC				SG	Sg	03 39 26.1	+1.1
GRDE	Gerede-Bolu	0.60	197	PG	Pg	03 39 19.9	0.0
GRDE				SG	Sg	03 39 27.9	+0.1
CIDE	Kastamonu/Cide	0.63	37	i P	Pb	03 39 21.4	-0.1
CIDE				i S	Sb	03 39 29.7	-0.9
CIDE				IAML		03 39 32.0	
	comp=N,2μm,0.2s						
CIDE				IAML		03 39 35.0	
	comp=E,1μm,0.4s						
BCAM	Yenicaga	0.63	207	i P	Pb	03 39 20.9	-0.8
PELI	Kastamonı-Ara	0.66	97	i P	Pg	03 39 19.6	-1.3
PELI				i S	Sg	03 39 29.5	+0.1
PELI				IAML		03 39 31.0	
	comp=N,5μm,0.2s						
PELI				IAML		03 39 31.0	
	comp=E,5μm,0.5s						
KDZE	Karadeniz Ereo	0.76	265	⇓P	Pg	03 39 22.7	-0.1
KDZE	Karadeniz Ereo	0.76	265	PG	Pg	03 39 22.7	-0.1
KDZE				SG	Sb	03 39 33.5	-0.9
CMDR	Camlidere-ANKA	0.88	179	i P	Pg	03 39 22.9	-2.3
CMDR				i S	Sb	03 39 37.5	-0.6
CMDR				IAML		03 39 39.0	
	comp=E,2μm,0.3s						
CMDR				IAML		03 39 42.0	
	comp=N,2μm,0.3s						
KMON	Kastamonu	1.01	90	PG	Pg	03 39 26.8	-0.7
KMON				SG	Sg	03 39 40.9	+0.3
ILGA	Ilgaz	1.01	108	i P	Pg	03 39 26.6	-1.0
ILGA				i S	Sg	03 39 40.4	-0.3
ILGA				IAML		03 39 46.0	
	comp=E,2μm,0.5s						
KIBS	BOLU	1.06	205	i P	Pg	03 39 28.1	-0.4
KAST	KASTAMONU	1.12	84	i P	Pg	03 39 28.6	-1.1
KAST				i S	Sg	03 39 44.2	0.0
KAST				IAML		03 39 49.0	
	comp=E,1μm,0.3s						
YUVA	Yuva-Kibriscik	1.14	211	PN	Pg	03 39 29.7	-0.4
YUVA				SN	Sb	03 39 45.8	+0.3
CANT	Cankiri	1.18	131	PN	Pg	03 39 30.1	-0.7
CANT				SN	Sb	03 39 46.5	+0.1
BZK	Bozkurt	1.30	63	⇑P	Pg	03 39 33.9	+0.7
BZK				⇓S	Sn	03 39 53.2	+2.6
BZK	Bozkurt	1.30	63	PN	Pn	03 39 32.4	-0.5
BZK				SN	Sn	03 39 50.8	+0.2
MDUB	Mudurnu	1.31	227	PN	Pn	03 39 32.5	-0.6
MDUB				SN	Sn	03 39 51.0	+0.1
SAHE	Sakarya_HENDEK	1.31	247	i P	Pn	03 39 32.1	-0.9
SAHE				i S	Sn	03 39 51.8	+0.9
SAHE				IAML		03 39 55.0	
	comp=N,495nm,1.0s						
BTAS	Taskesti	1.36	234	i P	Pg	03 39 34.6	+0.3
LOD	Lodumlu	1.51	171	PN	Pn	03 39 35.6	-0.2
KAGI	orum-Kargı	1.55	98	i P	Pb	03 39 36.9	-0.4
KAYN	Sakarya, Kayna	1.64	256	i P	Pn	03 39 37.7	+0.1
AUMIH	MIHALICIK	1.68	206	PN	Pn	03 39 37.7	-0.5
BOYA	Sinop/Boyabat-	1.69	84	i P	Pn	03 39 38.4	+0.2
KAND	Kocaeli-Kandir	1.72	261	i P	Pn	03 39 39.2	+0.6
SAUV	Serdivan-Sakar	1.73	249	PN	Pn	03 39 38.6	-0.1
GULT	Gulveren	1.74	238	PN	Pn	03 39 39.5	+0.5
GEYV	SAKARYA_Geyve	1.86	242	i P	Pb	03 39 42.1	-0.4
BRTR	Keskin Array B	1.89	151	Pn	Pb	03 39 42.4	-0.7
	comp=N,25nm,0.3s,baz=329,slow=15,SNR=18						
BRTR				Lg	Lg	03 40 07.2	
	comp=N,14nm,0.3s,baz=315,slow=23,SNR=9.0						
BRTR	Keskin Array B	1.89	151	PN	Pn	03 39 40.8	-0.2
BBAL	Bala	1.91	164	i P	Pg	03 39 45.6	+0.9
BBAL				i S	Sg	03 40 10.2	+0.8
CTAK	Corum_Osmancik	1.92	112	i P	Pb	03 39 43.5	-0.1
SRCK	Saricakaya, Es	1.92	227	PN	Pn	03 39 41.7	+0.3
SRCK	Saricakaya, Es	1.92	227	i P	Pg	03 39 44.3	-0.7
SRCK				i S	Sb	03 40 08.6	+0.7
SRCK				IAML		03 40 13.0	
	comp=E,122nm,0.7s						
SRCK				IAML		03 40 13.0	
	comp=N,136nm,0.9s						
AFSR	Afar-Bala (An	1.99	166	PN	Pn	03 39 42.7	+0.3
CORM	Corum	2.05	125	PN	Pn	03 39 43.3	+0.1
SVRH	Sivrihisar-ESK	2.05	200	PN	Pn	03 39 42.7	-0.6
AUSIV	SIVRIHISAR	2.06	200	PN	Pn	03 39 43.3	-0.1
SILT	Sile	2.12	265	PN	Pn	03 39 44.5	+0.3
DIKM	Dikmen	2.13	82	⇓P	Pb	03 39 47.2	0.0
DIKM				⇓S	Sg	03 40 16.9	+0.4
DIKM	Dikmen	2.13	82	PN	Pn	03 39 44.9	+0.6
BORA	Eskisehir	2.13	226	PN	Pn	03 39 44.8	+0.4
BORA	Eskisehir	2.13	226	i P	Pb	03 39 47.9	+0.7
SINO	SINOP_Merkez	2.16	72	i P	Pb	03 39 47.2	-0.5
SNOP	Sinop	2.16	72	PN	Pn	03 39 45.5	+0.8
HRT	Hereke	2.17	256	PN	Pn	03 39 44.9	0.0
ADVT	Abdulvahap	2.26	246	PN	Pn	03 39 46.2	+0.2
CIFT	Cifteler, Eski	2.27	208	PN	Pn	03 39 46.8	+0.4
CAVI	Cavuskoy	2.30	240	PN	Pn	03 39 47.4	+0.8
AUBOZ	BOZOYUK	2.35	232	PN	Pn	03 39 47.7	+0.3
AUBOZ	BOZOYUK	2.35	232	i P	Pb	03 39 51.1	+0.2
KLYT	Kilyos	2.57	268	PN	Pn	03 39 50.1	-0.2
ISK	Istanbul-Kandi	2.57	264	PN	Pn	03 39 50.4	0.0
KAVV	Kandilli-Istan	2.57	264	PN	Pn	03 39 50.4	0.0
SERE	Sereflikochisa	2.58	160	PN	Pn	03 39 50.5	0.0
TRML	Termal-Yalova	2.59	254	PN	Pn	03 39 51.1	+0.5
CKRK	Yozgat, Cekere	2.66	118	i P	Pb	03 39 55.8	-0.5
KVT	Kavak	2.73	95	PN	Pn	03 39 53.0	+0.4
BGKT	Bogazkoy	2.78	267	PN	Pn	03 39 53.3	+0.2
ARMT	Armutlu	2.83	255	PN	Pn	03 39 54.2	+0.2
KDHN	Kadinhani	2.87	185	i P	Pn	03 39 52.7	-1.8
MDNY	Mudanya-Bursa	2.88	251	PN	Pn	03 39 55.3	+0.7
CTKS	Kestanelik-??a	2.97	269	PN	Pn	03 39 56.0	+0.2
CTYL	Yalikoy Yolu	3.13	273	PN	Pn	03 39 57.9	-0.1
YVAC	Isparta, Yalva	3.24	197	i P	Pn	03 40 00.0	+0.4
MANR	Mangalia	3.75	312	⇓P	Pn	03 40 06.5	0.0
MANR				⇓S	Sn	03 40 51.0	+0.1
ARMN	Kirklareli, Me	3.79	279	i P	Pn	03 40 06.8	-0.4
EFOR	EFORIE	3.90	315	⇓P	Pn	03 40 08.6	+0.1
EFOR				⇓S	Sn	03 40 54.4	-0.1
KIRK	Kırklareli	4.03	278	i P	Pn	03 40 10.1	-0.4
MFTR	Murfatlar	4.07	315	⇓S	Sn	03 40 58.4	-0.5
MFTR	Murfatlar	4.07	315	⇑P	Pn	03 40 11.3	+0.3
TIRR	Tirgusor	4.27	317	⇑P	Pn	03 40 13.5	-0.2
TIRR				⇓S	Sn	03 41 02.5	-1.3
ICOR	Ion Corvin	4.38	310	⇓S	Sn	03 41 05.7	-0.8
ICOR	Ion Corvin	4.38	310	⇓P	Pn	03 40 15.6	+0.4
CVDA	Cernavoda	4.38	314	⇑P	Pn	03 40 15.4	+0.2
CVDA				⇓S	Sn	03 41 06.5	-0.1
TLBR	Topalu	4.52	316	⇑P	Pn	03 40 17.0	-0.1
TLBR				⇓S	Sn	03 41 08.7	-1.2
TPGR	Topolog	4.56	321	⇓P	Pn	03 40 16.9	-0.7
TPGR				⇑S	Sn	03 41 07.7	-3.2
TLCR		4.64	326	⇑P	Pn	03 40 18.0	-0.7
TLCR				⇑S	Sn	03 41 10.5	-2.4
HARR	Harsova	4.68	317	⇓P	Pn	03 40 19.2	-0.1
RASA	Rasa	4.82	308	⇓P	Pn	03 40 21.6	+0.4
RASA				⇓S	Sn	03 41 16.5	-0.8
CFR	Carcaliu	4.93	322	⇓P	Pn	03 40 22.4	-0.4
CFR				⇓S	Sn	03 41 18.5	-1.5
SGRR	Singureni	5.54	303	⇓P	Pn	03 40 32.0	+0.9
SULR		5.61	308	⇑P	Pn	03 40 32.5	+0.4
SULR				⇑S	Sn	03 41 35.9	-0.9
VARL	Varlezi	5.62	325	⇓P	Pn	03 40 31.2	-1.0
VARL				⇑S	Sn	03 41 36.8	-0.1
ISR	Istrita	5.71	313	⇑P	Pn	03 40 33.7	+0.3
ISR				⇑S	Sn	03 41 38.9	-0.3
ODBI	Odobesti	5.88	320	⇓P	Pn	03 40 35.5	-0.2
ODBI				⇑S	Sn	03 41 42.6	-0.8
BISRR	Bisoca	5.90	317	⇓P	Pn	03 40 36.5	+0.4
BISRR				⇓S	Sn	03 41 44.2	+0.2
GHRR		5.94	324	⇓P	Pn	03 40 36.6	+0.1
GHRR				⇓S	Sn	03 41 44.6	-0.2
COPA	Copaceanca	5.99	300	⇓P	Pn	03 40 37.2	-0.1
BIR	Birlad	6.00	326	⇑P	Pn	03 40 36.6	-0.9
BIR				⇑S	Sn	03 41 45.3	-1.1
NEHR	Nehoiu	6.04	314	⇑P	Pn	03 40 38.5	+0.6
NEHR				⇓S	Sn	03 41 46.9	-0.5
VRI	Vrincioaia	6.11	319	⇓P	Pn	03 40 39.7	+0.7
VRI				⇓S	Sn	03 41 48.6	-0.5
MILM	Milestii Mici	6.12	336	⇑P	Pn	03 40 38.7	-0.5
PLVB	Pleven	6.13	292	⇑P	Pn	03 40 38.5	-0.7
PLOR	Plostina	6.14	319	⇓P	Pn	03 40 39.3	-0.1
VASR	Vaslui	6.24	329	⇑P	Pn	03 40 40.8	+0.1
VASR				⇑S	Sn	03 41 50.2	-2.1
MLR	Muntele Rosu	6.27	313	Pn	Pn	03 40 41.4	+0.1
	comp=N,1.5nm,0.3s,baz=193,slow=20,SNR=30						
MLR				Sn	Sn	03 41 51.9	-1.3
	comp=N,0.8nm,0.3s,baz=78,slow=18,SNR=1.0						
MLR	Muntele Rosu	6.27	313	⇑P	Pn	03 40 41.1	-0.2
MLR				⇑S	Sn	03 41 53.3	+0.1
HUMR	Humele	6.32	302	⇑P	Pn	03 40 41.7	-0.1
TESR	Tescani	6.62	323	⇓P	Pn	03 40 45.4	-0.5
TESR				⇓S	Sn	03 42 02.1	+0.4
VOIR		6.74	309	⇑P	Pn	03 40 47.9	+0.1
VOIR				⇑S	Sn	03 42 02.9	-2.0
OZUR		6.74	317	⇑P	Pn	03 40 47.5	-0.2
OZUR				⇑S	Sn	03 42 03.0	-1.9
DOPR	Dopca	6.87	314	⇓P	Pn	03 40 49.1	-0.4
DOPR				⇓S	Sn	03 42 07.0	-0.9
ARR	Arges	6.95	308	⇓P	Pn	03 40 51.0	+0.5
ARR				⇑S	Sn	03 42 09.7	-0.2
BIZ	Bicaz	7.19	323	⇓P	Pn	03 40 54.1	+0.4
BIZ				⇑S	Sn	03 42 15.2	-0.5
SORM	Soroca	7.36	338	⇑P	Pn	03 40 55.3	-0.7
LOT	Lotru	7.51	306	⇓P	Pn	03 40 58.6	+0.3
KBZ	Khabaz	8.06	70	Pn	Pn	03 41 09.1	+3.3
	comp=N,0.1nm,0.3s,baz=278,slow=7.1,SNR=1.9						
BURAR	Bucovina Array	8.10	323	⇑P	Pn	03 41 06.9	+0.6
BURAR				⇓S	Sn	03 42 37.0	-1.2
GZR	Gura Zlata	8.10	303	⇓P	Pn	03 41 06.0	-0.4
GZR				⇓S	Sn	03 42 37.1	-1.2
HERR	Herculane	8.13	299	⇓P	Pn	03 41 05.2	-1.4
MDVR	Moldovita	8.56	297	⇓P	Pn	03 41 11.1	-1.5
DRGR		8.85	311	⇓P	Pn	03 41 15.6	-1.0
BZS	Buzias	8.94	302	⇓P	Pn	03 41 17.2	-0.6
AKASG	Malin Array Be	9.59	348	Pn	Pn	03 41 24.2	-2.4
	comp=N,2.8nm,0.3s,baz=164,slow=12,SNR=8.8						
AKASG				Sn	Sn	03 43 06.8	-7.8
	comp=N,1.9nm,0.3s,baz=239,slow=32,SNR=2.3						
ASF	Jabal al Asfar	9.86	157	LR	LR	03 46 18.6	
	comp=N,6.4nm,21.3s,baz=81,slow=44						
KOLS	Kolonicke sedl	10.42	320	ePN	Pn	03 41 39.4	+1.4
FINES	FINESS Array B	20.46	351	P	P	03 43 46.8	+0.6
	comp=N,0.9nm,0.5s,baz=164,slow=12,SNR=1.2						
HFS	Hagfors	22.06	335	P	P	03 44 04.8	+1.4
	comp=N,1.5nm,0.8s,baz=144,slow=12,SNR=1.3						
HFS				LR	LR	03 52 21.9	
	comp=N,322nm,21.1s,baz=356,slow=36						
MKAR	Makanchi Array	35.72	64	P	P	03 46 08.1	+0.7
	comp=N,0.4nm,0.5s,baz=283,slow=7.3,SNR=6.3						
TORD	Torodi Ar. Bea	38.84	233	P	P	03 46 34.0	-0.2
	comp=N,1.1nm,0.9s,baz=39,slow=9.8,SNR=2.0						
TORD				LR	LR	04 03 03.0	
	comp=N,258nm,19.2s,baz=350,slow=37						
NRIK	Noril'sk	39.79	27	LR	LR	04 05 10.3	
	comp=N,226nm,20.4s,baz=334,slow=39						

IDC ***28*** *03:39:24.7±1.0, 16°.85N×85°.63W, h0^{km}, mb3.7/7, mb1 4.1/11, mb1mx3.8/45, mbtmp3.8/11, ML3.4/4, Error ellipse: s-maj=30.8km s-min=19.3km az=47.0*
INET ***28*** *03:39:24.0, 17°.47N×85°.22W, h15^{km}, MW3.7*
NEIC ***28*** *03:39:29.2±0.9, 16°.90N±0°.07×85°.78W±0°.08, h37^{km}±7^{km}, mb4.2/30, Error ellipse: s-maj=11.2km s-min=9.9km az=50.0*
ISC 28 03:39:28.2±0.6**, 16°.87N**±0°.06×**85°.76W**±0°.08**, h29**^{km}**, n61,**
σ**1^s.06**/63**, mb3.9**/7**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	3.16	208	Pn	Pn	03 40 16.7	+0.6
PETF	Flores	3.93	271	Pn	Pn	03 40 26.9	+0.2
TEIG	Tepich	4.10	325	Pn	Pn	03 40 29.2	+0.3
MTO3	Montecristo	4.25	235	Pn	Pn	03 40 32.3	+1.0
CRIN	San Cristobal	4.33	197	Pn	Pn	03 40 33.3	+1.0
ESPN	Las Esperanzas	4.86	163	Pn	Pn	03 40 40.7	+1.2
ACON	Acoyapa	4.91	173	Pn	Pn	03 40 41.1	+1.1
HUEH	Huehuetenango	5.73	255	Pn	Pn	03 40 52.2	+0.6
CCIG	Comitan	6.14	265	Pn	Pn	03 40 57.6	+0.4
JTS	Las Juntas de	6.59	173	Pn	Pn	03 41 04.0	+0.8
	1.3nm,0.3s,baz=149,slow=7.6,SNR=9.1						
JTS				Sn	Sn	03 42 15.9	-1.5
	3.8nm,0.3s,baz=29,slow=23,SNR=11						
JTS				Lg	Lg	03 42 44.7	
	2.7nm,0.3s,baz=261,slow=13,SNR=4.1						
JTS	Las Juntas de	6.59	173	Pn	Pn	03 41 03.9	+0.6
CMIG	Matias Romero	8.73	273	Pn	Pn	03 41 33.2	+0.5
	1.4nm,0.3s,baz=75,slow=12,SNR=9.9						
CMIG				Sn	Sn	03 43 00.0	-10
	0.8nm,0.3s,baz=66,slow=20,SNR=1.5						
061Z	Ochoppi	10.02	26	Pn	Pn	03 41 49.8	-0.5
060A	Indiantown	11.28	25	Pn	Pn	03 42 08.2	+0.7
TLIG	Tlapa	12.26	275	Pn	Pn	03 42 21.4	+0.4
656A	Willston	12.79	13	Pn	Pn	03 42 26.4	-1.6
553A	Crawfordville	13.31	5	Pn	Pn	03 42 34.2	-1.0
BRAL	Brewton	14.28	356	Pn	Pn	03 42 48.8	+0.3
352A	Blakely	14.56	3	Pn	Pn	03 42 51.5	-0.9
250A	Grady	15.05	358	Pn	Pn	03 42 58.6	-0.2
255A	Hazlehurst	15.28	11	Pn	Pn	03 43 02.1	+0.2
HKT	Hockley	15.95	326	Pn	Pn	03 43 10.6	0.0
146A	Union	15.98	350	Pn	Pn	03 43 11.5	+0.5
146A				IAmb	IAmb	03 43 25.7	
	comp=Z,28nm,0.8s						
LRAL	Lakeview Retre	16.13	356	Pn	Pn	03 43 13.1	+0.2
LRAL				IAmb	IAmb	03 43 15.1	
	comp=Z,14nm,1.1s						
Z51A	Franklin	16.38	2	Pn	Pn	03 43 16.1	0.0
Z47A	Carrollton	16.39	353	Pn	Pn	03 43 16.6	+0.4
Z47A				IAmb	IAmb	03 43 20.1	
	comp=Z,11nm,0.7s						
GOGA	Godfrey	16.60	7	Pn	Pn	03 43 18.4	-0.5
SDV	Santo Domingo	16.74	116	Pn	Pn	03 43 19.6	-1.3
	comp=Z,0.3nm,0.3s,baz=301,slow=5.0,SNR=2.2						
RGRS	Roger Stewart	16.74	16		Pn	03 43 21.2	+0.6
Y49A	Blount Mountai	16.92	358		Pn	03 43 23.5	+0.6
Y49A				IAmb	IAmb	03 43 38.9	
	comp=Z,21nm,1.4s						
NHSC	New Hope	16.93	16		Pn	03 43 23.5	+0.5
HODGE	Hodges	17.57	10		P	03 43 31.5	-0.3
HODGE				IAmb	IAmb	03 43 50.3	
	comp=Z,20nm,1.5s						
FPAL	Fort Paine	17.60	0		P	03 43 31.8	-0.4
JSC	Jenkinsville	17.80	12	P	P	03 43 35.1	+0.7
JSC				IAmb	IAmb	03 43 54.2	
	comp=Z,32nm,0.9s						
OXF	Oxford	17.87	350		P	03 43 35.3	+0.1
OXF				IAmb	IAmb	03 43 54.3	
	comp=Z,28nm,1.1s						
PLAL	Pickwick Lake	18.16	354	P	P	03 43 39.4	+1.1
WHTX	Lake Whitney,	18.42	327	P	Pn	03 43 42.0	+0.6
WHTX				IAmb	IAmb	03 43 49.8	
	comp=Z,38nm,1.1s						
CPCT	Cooper Cave	18.54	3	P	P	03 43 42.2	-0.3
TKL	Tuckaleechee C	18.79	5	P	Pn	03 43 45.9	-0.1
	comp=Z,0.2nm,0.3s,baz=166,slow=8.3,SNR=2.3						
TKL	Tuckaleechee C	18.79	5	P	P	03 43 45.2	-0.2
TKL				IAmb	IAmb	03 43 53.5	
	comp=Z,16nm,1.2s						
V53A	Saluda	18.91	7	P	P	03 43 46.4	-0.3
V53A				IAmb	IAmb	03 44 01.3	
	comp=Z,17nm,1.1s						
W57A	Gilead	18.92	15	P	P	03 43 46.8	0.0
W57A				IAmb	IAmb	03 43 52.8	
	comp=Z,20nm,1.1s						
V58A	Windy Hill, Pi	19.75	16	P	P	03 43 55.5	-0.4
V58A				IAmb	IAmb	03 44 04.0	
	comp=Z,17nm,1.1s						
TXAR	Lajitas Array	20.59	310	P	Pn	03 44 07.5	0.0
	comp=Z,3.9nm,0.7s,baz=130,slow=11,SNR=50						
TXAR				S	S	03 47 48.4	-5.5
	comp=Z,0.6nm,0.6s,baz=111,slow=22,SNR=5.4						
TXAR	Lajitas Array	20.59	310	P	P	03 44 04.7	-0.3
TXAR					S	03 47 51.8	-2.1
TX31	Lajitas Ar. Si	20.59	310	P	P	03 44 04.7	-0.3
TX31				IAmb	IAmb	03 44 08.6	
	comp=Z,20nm,0.9s						

TX32	Lajitas Array	20.59	310	P	P	03 44 04.4	-0.7
WCI	Wyandotte Cave	21.28	359	P	P	03 44 12.1	-0.2
R55A	Marlinton	21.90	12	P	P	03 44 18.9	-0.1
MNTX	Cornudas Mount	23.13	313	P	P	03 44 31.8	-0.4
M56A	Emporium	25.38	13	P	P	03 44 53.0	0.0
L56A	Greenwood	26.14	14	P	P	03 45 00.1	+0.2
L56A				IAmb	IAmb	03 45 03.9	
	comp=Z,9.0nm,1.1s						
NVAR	Mina Array Bea	35.66	314	P	P	03 46 25.8	+1.7
	comp=Z,0.5nm,0.7s,baz=114,slow=8.1,SNR=6.1						
SIV	San Ignacio	40.73	142	P	P	03 47 05.8	-1.0
	comp=Z,0.7nm,0.6s,baz=319,slow=9.3,SNR=2.5						
YKA	Yellowknife Ar	49.84	343	P	P	03 48 20.1	+1.7
	comp=Z,0.1nm,0.5s,baz=131,slow=8.4,SNR=2.0						
ILAR	Eielson Array	62.69	335	P	P	03 49 51.3	+1.2
	comp=Z,0.6nm,0.6s,baz=124,slow=5.3,SNR=8.8						
ILAR	Eielson Array	62.69	335	P	P	03 49 49.8	-0.3
ESDC	Sonseca Array	73.21	53	P	P	03 50 57.9	+1.1
	comp=Z,1.1nm,0.8s,baz=281,slow=5.9,SNR=6.2						
ESDC	Sonseca Array	73.21	53	P	P	03 50 56.2	-0.6
FINES	FINESS Array B	85.31	27	P	P	03 52 02.8	+0.6
	comp=Z,1.7nm,0.8s,baz=2.3,slow=7.0,SNR=3.4						
FINES	FINESS Array B	85.31	27	P	P	03 52 01.7	-0.5

IDC 28 04:05:58.1±4.4**, 7°.63S×119°.34E, h278^{km}**±42^{km}**, mb3.0**/2**, mb1 3.1**/5**, mb1mx2.9**/35**, mbtmp3.7**/5**, Error ellipse: s-maj=125.1km s-min=22.4km az=56.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.98	121	P	Pn	04 07 14.5	-0.1
	7.4nm,0.3s,baz=303,slow=4.1,SNR=2.7						
BATI				S	S	04 08 05.9	-10
	3.1nm,0.3s,baz=58,slow=11,SNR=1.3						
FITZ	Fitzroy Crossi	12.08	150	P	Pn	04 08 42.3	+0.2
	0.0nm,0.3s,baz=292,slow=5.4,SNR=2.1						
FITZ				S	S	04 10 54.7	-2.0
	0.1nm,0.3s,baz=136,slow=16,SNR=1.8						
WRA	Warramunga Arr	19.00	132	P	P	04 09 59.9	-0.1
	0.2nm,0.3s,baz=305,slow=13,SNR=18						
WRA				S	S	04 13 15.3	-5.4
	0.0nm,0.3s,baz=302,slow=18,SNR=2.7						
ASAR	Alice Springs	21.20	140	P	P	04 10 22.9	+0.2
	0.7nm,0.3s,baz=315,slow=9.3,SNR=8.3						
MKAR	Makanchi Array	63.40	332	P	P	04 15 58.2	-0.1
	0.4nm,0.6s,baz=154,slow=6.6,SNR=5.8						

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*IDC **28** 04:09:14.4±6.7, 34°.16N×70°.93E, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.3/41, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=135.4km s-min=51.6km az=158.0*

*NNC **28** 04:09:56.3±6.6, 37°.12N×71°.08E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=51.5km s-min=48.7km az=142.0*

ISC 28 04:09:30.5±3.3**, 34°.8N**±0°.3×**70°.9E**±0°.3**, h100^{km}, n13,** σ**0^s.78**/13**, mb3.5**/3**, 1C-4D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	7.64	16	P	Pn	04 11 19.7	+0.4
	SNR=58						
UCH	Uchtor	7.93	20	P	Pn	04 11 24.2	+0.8
	SNR=13						
EKS2	Erkin-Say	8.16	15	P	Pn	04 11 26.5	+0.3
	SNR=13						
KK31	Karatay Array	8.30	358	P	Pn	04 11 27.3	-0.7
	1.4nm,0.6s,baz=182,slow=12,SNR=12						
KK31				⇓S	Sn	04 12 36.1	-24
	8.3nm,0.6s,baz=185,slow=23,SNR=13						
AAK	Ala-Archa	8.31	18	P	Pn	04 11 28.8	+0.5
	SNR=9.8						
AAK	Ala-Archa	8.31	18	⇓P	Pn	04 11 27.7	-0.5
	4.3nm,0.5s						
AAK				⇓S	Sn	04 12 42.1	-18
	17nm,0.9s						
KBK	Karagaybulak	8.45	21	P	Pn	04 11 31.6	+1.4
	SNR=5.8						
TKM2	Tokmak 2	8.89	23	P	Pn	04 11 36.7	+0.6
	SNR=6.8						
TKM2	Tokmak 2	8.89	23	⇑P	Pn	04 11 36.3	+0.1
	8.5nm,0.9s						
TKM2				⇓S	Sn	04 12 53.7	-21
	7.9nm,1.1s						
MKAR	Makanchi Array	14.73	32	Pn	Pn	04 12 52.6	-1.0
	0.1nm,0.3s,baz=219,slow=15,SNR=3.9						
ZALV	Zalesovo Beam	21.49	23	P	P	04 14 10.1	-0.8
	0.8nm,0.3s,baz=214,slow=9.9,SNR=4.2						
FINES	FINESS Array B	38.88	327	P	P	04 16 45.6	-0.1
	1.1nm,0.6s,baz=116,slow=8.7,SNR=5.5						
YKA	Yellowknife Ar	82.95	3	P	P	04 21 44.2	+0.3
	0.1nm,0.4s,baz=1.5,slow=4.9,SNR=2.0						

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*IDC **28** 04:29:44.3±2.6, 23°.89S×179°.92W, h499^{km}±25^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/23, mbtmp4.2/6, Error ellipse: s-maj=26.8km s-min=23.3km az=52.0*

*NEIC **28** 04:29:46.4±1.4, 24°.1S±0°.2×179°.8E±0°.2, h502^{km}±14^{km}, mb4.3/18, Error ellipse: s-maj=25.7km s-min=16.1km az=222.0*

ISC 28 04:29:47.1±0.7**, 23°.98S**±0°.09×**179°.8E**±0°.1**, h526^{km}, n45,** σ**1^s.37**/50**, mb4.1**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.43	345	P	P	04 31 26.8	-2.1
NIUE	Niue	10.73	65	P	P	04 32 14.5	+2.1
URZ	Urewera	14.42	189	P	P	04 32 50.3	-0.4
	3.5nm,0.3s,baz=286,slow=1.6,SNR=16						
URZ				S	S	04 35 20.5	-1.6
	0.7nm,0.3s,baz=41,slow=22,SNR=7.7						
URZ	Urewera	14.42	189	P	P	04 32 50.0	-0.7
MTHZ	Maungataniwha	15.04	189	P	P	04 32 58.2	+0.9
NMHZ	Naumai	15.29	189	P	P	04 32 58.9	-1.0
BKZ	Black Stump Fm	15.40	190	P	P	04 32 59.3	-1.8
BKZ				IAmb	IAmb	04 33 04.2	
	comp=Z,6.9nm,0.8s						
BKZ	Black Stump Fm	15.40	190	P	P	04 32 59.9	-1.2
TMVZ	Te Maari	15.49	192	P	P	04 33 01.6	-0.4
ETVZ	East Tongariro	15.51	192	P	P	04 33 01.5	-0.8
OTVZ	Oturere	15.54	192	P	P	04 33 00.5	-2.1
MCHZ	McNeill Hill	15.64	189	P	P	04 33 03.2	-0.3
WNVZ	Wahianoa	15.71	192	P	P	04 33 03.7	-0.7
BHHZ	Black Hill Sta	15.79	191	P	P	04 33 03.0	-2.1
KAHZ	Kahuranaki	15.96	188	P	P	04 33 05.8	-1.0
BFZ	Birch Farm	16.92	189	P	P	04 33 13.7	-2.4
MSWZ	Moikau Station	17.80	191	P	P	04 33 23.5	-0.7
QRZ	Quartz Range	17.88	198	P	P	04 33 24.9	0.0
TUWZ	Tuamarina	18.08	194	P	P	04 33 26.1	-0.6
BSWZ	Blackbirch Sta	18.37	194	P	P	04 33 29.1	-0.3
THZ	Tophouse	18.65	196	P	P	04 33 31.8	-0.2
THZ				IAmb	IAmb	04 33 34.2	
	comp=Z,12nm,0.5s						
LTZ	Lake Taylor	19.77	197	P	P	04 33 40.6	-1.5
LTZ				IAmb	IAmb	04 33 44.5	
	comp=Z,11nm,0.6s						
OXZ	Oxford	20.34	196	P	P	04 33 46.3	-0.9
RPZ	Rata Peaks	20.96	198	P	P	04 33 52.4	-0.6
	comp=Z,7.1nm,0.7s,baz=289,slow=1.5,SNR=6.8						
RPZ	Rata Peaks	20.96	198	P	P	04 33 52.8	-0.1
DCZ	Deep Cove	23.77	202	P	P	04 34 17.7	-0.3
DCZ				IAmb	IAmb	04 34 34.2	
	comp=Z,4.8nm,0.9s						
BBOO	Buckleboo	39.25	247	P	P	04 36 31.1	+0.7
AS31	Alice Springs	41.85	261	P	P	04 36 51.0	-0.2
ASAR	Alice Springs	41.85	261	P	P	04 36 52.6	+1.4
	comp=Z,3.0nm,0.7s,baz=95,slow=7.7,SNR=25						
ASAR				ScP	ScP	04 41 38.9	+3.7
	comp=Z,0.2nm,0.4s,baz=119,slow=4.3,SNR=5.0						
ASAR	Alice Springs	41.85	261	P	P	04 36 50.7	-0.5
WR0	Warramunga Arr	42.04	266	P	P	04 36 53.2	+0.5
WR0				IAmb	IAmb	04 37 03.0	
	comp=Z,6.7nm,1.1s						
WB2	Warramunga Arr	42.21	266	P	P	04 36 54.9	+0.8
WB2				IAmb	IAmb	04 36 55.6	
	comp=Z,6.9nm,1.0s						
WB0	Warramunga Arr	42.22	267	P	P	04 36 54.7	+0.6
WB0				IAmb	IAmb	04 36 55.5	
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	42.22	266	P	P	04 36 55.0	+0.8
	comp=Z,2.9nm,0.3s,baz=96,slow=8.4,SNR=105						
WRA				ScP	ScP	04 41 40.8	+4.1
	comp=Z,0.4nm,0.6s,baz=95,slow=3.9,SNR=6.5						
WRA				S	S	04 42 36.8	+0.2
	comp=Z,0.5nm,0.9s,baz=98,slow=16,SNR=3.3						
WRA	Warramunga Arr	42.22	266	P	P	04 36 53.8	-0.4
FORT	Forrest	46.12	250	P	P	04 37 24.4	+0.2
MTN	Manton Dam	47.28	275	P	P	04 37 33.5	+0.4
FITZ	Fitzroy Crossi	50.65	266	P	P	04 37 59.4	+1.3
VNDA	Vanda	54.29	185	P	P	04 38 24.5	+1.3
	comp=Z,1.1nm,0.7s,baz=5.8,slow=7.6,SNR=2.2						
QSPA	South Pole Qui	66.11	180	P	P	04 39 42.4	+0.6
QSPA				IAmb	IAmb	04 39 45.2	
	comp=Z,4.4nm,0.8s						
BELA	Belgrano 2	76.38	173	P	P	04 40 41.4	-0.3
TXAR	Lajitas Array	90.62	58	P	P	04 41 52.2	-1.5
	comp=Z,0.2nm,0.7s,baz=201,slow=6.7,SNR=3.6						
MKAR	Makanchi Array	112.08	313	PKiKP	PKiKP	04 47 21.1	-1.5
	comp=Z,0.2nm,0.6s,baz=70,slow=1.7,SNR=2.1						
AKASG	Malin Array Be	144.94	327	PKPbc	PKPdf	04 48 22.5	-1.5
	comp=Z,0.5nm,0.3s,baz=36,slow=3.5,SNR=4.5						
BRTR	Keskin Array B	147.48	307	PKPbc	PKPbc	04 48 31.1	-1.3
	comp=Z,0.7nm,0.5s,baz=152,slow=4.7,SNR=3.5						
BRTR				PKPab	PKPab	04 48 36.7	+0.5
	comp=Z,0.8nm,0.6s,baz=160,slow=2.9,SNR=5.0						

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*IDC **28** 05:12:08.5±0.8, 56°.74S×150°.66W, h0^{km}, mb4.3/6, mb1 4.4/6, mb1mx4.2/24, mbtmp4.3/6, MS3.8/8, Ms1 3.7/8, ms1mx3.4/24, Error ellipse: s-maj=39.3km s-min=20.7km az=12.0*

ISC 28 05:12:09.9±0.8**, 56°.7S**±0°.3×**150°.7W**±0°.2**, h10^{km}, n38,** σ**0^s.58**/11**, mb4.4**/6**, MS3.8**/9**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	26.45	201	LR	LR	05 25 28.8	
	comp=Z,198nm,19.8s,baz=117,slow=30						
TBI	Tubuai	33.34	2	eT	T	05 53 51.0	
	28nm,0.3s						
QSPA	South Pole Qui	33.43	180	P	P	05 18 48.3	-0.3
	6.7nm,1.0s,baz=52,slow=2.8,SNR=10						
RAR	Rarotonga	36.09	345	LR	LR	05 31 24.1	
	comp=Z,83nm,19.2s,baz=218,slow=32						
TVO	Taravao	38.88	2	eT	T	06 00 47.4	
	0.6nm,0.3s						
PAE	Paea	38.99	2	eT	T	06 00 56.1	
	1.1nm,0.3s						
PPT2	Papeete2	39.06	2	eLR	LR	05 30 22.6	
	comp=Z,198nm,24.8s						
VAH	Vaihoa	41.46	4	eT	T	06 04 01.5	
	36nm,0.3s						
STKA	Stephens Creek	51.96	268	P	P	05 21 19.7	+0.8
	3.7nm,0.8s,baz=149,slow=12,SNR=3.4						
PLCA	Paso Flores	52.11	108	P	P	05 21 20.6	+0.6
	5.0nm,1.1s,baz=228,slow=6.8,SNR=5.1						
H03S2	Juan Fernandez	52.69	96	T	T	06 18 21.1	
	baz=219,slow=74,SNR=20						
H03S1	Juan Fernandez	52.70	96	T	T	06 18 21.7	
	baz=219,slow=74,SNR=22						
H03S3	Juan Fernandez	52.71	96	T	T	06 18 24.6	
	baz=219,slow=74,SNR=21						
H03N3	Juan Fernandez	52.98	96	T	T	06 18 45.7	
	baz=222,slow=72,SNR=70						
H03N2	Juan Fernandez	52.98	96	T	T	06 18 38.2	
	baz=222,slow=72,SNR=116						
H03N1	Juan Fernandez	52.99	96	T	T	06 18 39.0	
	baz=222,slow=72,SNR=80						
MAW	Mawson	53.53	195	LR	LR	05 41 46.5	
	comp=Z,91nm,19.0s,baz=220,slow=33						
ASAR	Alice Springs	62.60	268	P	P	05 22 34.4	+0.2
	3.0nm,0.9s,baz=138,slow=6.2,SNR=22						
H01W1	Cape Leeuwin H	64.27	245	T	T	06 32 44.8	
	baz=142,slow=76,SNR=14						
H01W2	Cape Leeuwin H	64.27	245	T	T	06 32 56.0	
	baz=142,slow=76,SNR=12						
H01W3	Cape Leeuwin H	64.28	245	T	T	06 32 50.6	
	baz=142,slow=76,SNR=12						
WRA	Warramunga Arr	65.34	271	P	P	05 22 52.1	-0.1
	1.2nm,0.9s,baz=148,slow=5.2,SNR=5.9						
CPUP	Villa Florida	70.17	108	P	P	05 23 22.6	0.0
	3.3nm,0.9s,baz=242,slow=1.9,SNR=7.4						
BDFB	Brasilia	83.85	109	LR	LR	05 59 41.8	
	comp=Z,45nm,19.0s,baz=75,slow=34						
JTS	Las Juntas de	85.69	64	LR	LR	05 55 40.2	
	comp=Z,59nm,19.7s,baz=336,slow=30						
PTGA	Pitinga	89.78	91	LR	LR	05 58 24.1	
	comp=Z,60nm,21.9s,baz=264,slow=31						
NVAR	Mina Array Bea	98.66	25	LR	LR	06 01 50.3	
	comp=Z,32nm,20.7s,baz=201,slow=30						
ANMO	Albuquerque	98.69	35	LR	LR	06 03 53.3	
	comp=Z,34nm,20.4s,baz=228,slow=32						
H10S3	ASCENSION HYDR	105.25	135	T	T	07 24 33.5	
	baz=204,slow=74,SNR=9.7						
H10S2	ASCENSION HYDR	105.25	135	T	T	07 24 33.8	
	baz=16,slow=74,SNR=4.9						
H10N3	ASCENSION HYDR	106.33	134	T	T	07 25 56.0	
	baz=203,slow=75,SNR=28						
H10N1	ASCENSION HYDR	106.33	134	T	T	07 25 54.1	
	baz=203,slow=75,SNR=27						
H10N2	ASCENSION HYDR	106.34	134	T	T	07 25 58.2	
	baz=203,slow=75,SNR=26						
ILAR	Eielson Array	121.19	2	PKP	PKiKP	05 31 01.8	+0.3
	1.8nm,0.9s,baz=235,slow=1.8,SNR=14						
YKA	Yellowknife Ar	122.13	19	PKP	PKPdf	05 31 02.5	-0.7
	0.1nm,0.4s,baz=163,slow=2.3,SNR=4.8						
MKAR	Makanchi Array	146.55	276	PKPbc	PKPab	05 31 50.9	-0.6
	7.8nm,0.8s,baz=116,slow=5.5,SNR=22						
ZALV	Zalesovo Beam	149.04	289	PKPbc	PKPbc	05 31 56.2	-0.7
	2.0nm,0.6s,baz=139,slow=5.5,SNR=4.0						
ESDC	Sonseca Array	152.40	114	PKPbc	PKiKP	05 32 05.4	-0.3
	0.6nm,0.9s,baz=216,slow=1.9,SNR=4.8						

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*IDC **28** 05:32:05.9±1.3, 1°.71N×127°.54E, h0^{km}, mb4.4/5, mb1 4.6/6, mb1mx3.9/34, mbtmp4.4/6, ML4.2/1, MS3.1/3, Ms1 3.1/3, ms1mx2.4/41, Error ellipse: s-maj=95.7km s-min=18.0km az=69.0*

*NEIC **28** 05:32:14.9±1.2, 1°.67N±0°.08×127°.65E±0°.08, h79^{km}±10^{km}, mb4.5/15, Error ellipse: s-maj=13.1km s-min=10.1km az=146.0*

*DJA **28** 05:32:18.5±0.4, 2°N±3°×12°7E±°, h114^{km}±4^{km}, M4.3/13, mb4.2/7, MLv4.3/13*

*NOU **28** 05:32:35.9, 0°.48N×127°.45E, h204^{km}, mb4.2, Halmahera, Indonesia*

ISC 28 05:32:16.8±0.8**, 1°.65N**±0°.06×**127°.57E**±0°.07**, h100^{km}, n40,** σ**1^s.60**/42**, mb4.5**/12**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.89	193	Pn	Pn	05 32 32.9	-3.2
TNTI	Ternate	0.89	193	P	Pn	05 32 39.2	+3.1
TNTI				S	Sn	05 32 55.5	+4.9
SGSI	Sangihe	2.87	315	P	Pn	05 33 02.5	+1.6
SGSI				S	Sn	05 33 33.4	-1.4
KMSI	Cibinong	3.74	254	P	Pn	05 33 11.5	-1.0
KMSI				S	Sn	05 33 55.4	-0.2
SANI	Sanana	4.00	203	P	Pn	05 33 17.0	+1.0
SANI				S	Sn	05 33 58.3	-3.5
GTOI	Gorontalo	4.66	258	P	Pn	05 33 27.5	+2.5
GTOI				S	Sn	05 34 18.7	+0.7
NLAI	Namlea	4.87	185	P	Pn	05 33 29.5	+1.6
LUWI	Luwuk	5.49	241	Pn	Pn	05 33 35.2	-1.0
MRSI	Marisa	5.74	258	P	Pn	05 33 40.4	+0.8
	0.2nm54nm,0.7s						
APSI	Ampana	6.44	247	P	Pn	05 33 49.3	+0.2
	0.2nm22nm,1.0s						
FAKI	Fak Fak	6.52	134	Pn	Pn	05 33 47.0	-3.2
TOLI2	Tolitoli	6.80	266		Pn	05 33 53.3	-0.8
MPSI	Mapaga	7.78	260	P	Pn	05 34 09.3	+2.0
	0.1nm6.1nm,0.8s						
SPSI	Sidrap Palu	9.58	234	P	Pn	05 34 32.9	+1.0
	10nm,0.6s						
MTN	Manton Dam	14.82	166	Pn	Pn	05 35 41.6	+0.2
FITZ	Fitzroy Crossi	19.71	185	P	P	05 36 38.1	-0.3
	0.5nm,0.3s,baz=22,slow=7.5,SNR=26						
FITZ	Fitzroy Crossi	19.71	185	P	P	05 36 38.4	-0.1
LEM	Lembang	21.61	247	LR	LR	05 45 42.6	
	comp=Z,88nm,19.2s,baz=220,slow=38						
WB0	Warramunga Arr	22.31	163	P	P	05 37 06.3	0.0
WB0				IAmb	IAmb	05 37 07.1	
	comp=Z,19nm,0.4s						
PMG	Port Moresby	22.39	120	LR	LR	05 47 25.1	
	comp=Z,54nm,21.2s,baz=238,slow=41						
WRA	Warramunga Arr	22.46	163	P	P	05 37 08.1	+0.2
	comp=Z,12nm,0.3s,baz=341,slow=11,SNR=146						
WRA	Warramunga Arr	22.46	163	P	P	05 37 07.2	-0.7
WB2	Warramunga Arr	22.46	163	P	P	05 37 08.2	+0.3
WB2				IAmb	IAmb	05 37 08.4	
	comp=Z,16nm,0.4s						
WR0	Warramunga Arr	22.54	163	P	P	05 37 08.8	+0.2
WR0				IAmb	IAmb	05 37 09.6	
	comp=Z,9.1nm,0.9s						
TPUB	Ta-pu	22.55	343	P	P	05 37 08.8	0.0
PSA00	Pilbara Seismi	24.28	198	P	P	05 37 23.8	-1.1
AS31	Alice Springs	25.90	167	P	P	05 37 39.8	+0.1
AS31				IAmb	IAmb	05 37 43.4	
	comp=Z,2.4nm,0.4s						
ASAR	Alice Springs	25.91	167	P	P	05 37 39.8	+0.1
	comp=Z,1.8nm,0.3s,baz=352,slow=7.4,SNR=45						
FORT	Forrest	32.25	179	P	P	05 38 34.6	-1.3
FORT				IAmb	IAmb	05 38 40.7	
	comp=Z,20nm,0.9s						
BBOO	Buckleboo	35.20	168	P	P	05 39 00.8	-0.6
BBOO				IAmb	IAmb	05 39 26.8	
	comp=Z,24nm,1.4s						
KSRS	Korea Array	35.63	0	LR	LR	05 54 25.8	
	comp=Z,13nm,20.8s,baz=160,slow=38						
STKA	Stephens Creek	35.90	159	P	P	05 39 08.2	+0.8
	comp=Z,9.2nm,0.4s,baz=340,slow=8.5,SNR=21						
STKA	Stephens Creek	35.90	159	P	P	05 39 07.9	+0.4
STKA				IAmb	IAmb	05 39 08.8	
	comp=Z,2.7nm,0.8s						
ARMA	Armidale	39.28	146	P	P	05 39 35.2	-0.9
LBZ	Lake Benmore	59.50	146	P	P	05 42 10.2	+0.7
MK31	Makanchi Array	59.73	326	P	P	05 42 11.8	+0.7
MKAR	Makanchi Array	59.73	326	P	P	05 42 11.8	+0.6
	comp=Z,0.8nm,0.3s,baz=117,slow=8.2,SNR=30						
MKAR	Makanchi Array	59.73	326	P	P	05 42 11.3	+0.1
ZALV	Zalesovo Beam	62.81	333	P	P	05 42 33.4	+1.7
	comp=Z,0.4nm,0.3s,baz=114,slow=3.5,SNR=1.9						
KURK	Kurchatov	63.94	328	P	P	05 42 39.5	+0.4
KURK				IAmb	IAmb	05 42 43.9	
	comp=Z,2.0nm,0.5s						

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*IDC **28** 05:36:37.6±1.8, 55°.54N×163°.52E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/37, mbtmp3.5/4, ML2.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/49, Error ellipse: s-maj=211.5km s-min=20.9km az=142.0*

*KRSC **28** 05:36:47.9±0.7, 55°.75N×161°.33E, h164^{km}±6^{km}, ML3.7*

ISC 28 05:36:48.6±1.0**, 55°.77N**±0°.05×**161°.30E**±0°.05**, h165^{km}**±7^{km}**, n37,** σ**0^s.69**/53**, mb3.2**/3**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZGR	Bezymyannyi-Gr	0.38	297	eP	Pn	05 37 11.3	0.0
BZGR				eS	Sn	05 37 28.7	+0.1
BZMR	Bezymyannaya	0.49	290	eP	Pn	05 37 12.2	+0.5
BZMR				eS	Sn	05 37 29.6	+0.1
BZWR	Bezymyannyi-We	0.50	294	eP	Pn	05 37 11.9	+0.1
BZWR				eS	Sn	05 37 30.2	+0.6
KIRR	Kirishev	0.57	289	eP	Pn	05 37 12.6	+0.5
KMNR	Kamenistaya	0.60	269	eP	Pn	05 37 12.6	+0.4
KMNR				eS	Sn	05 37 30.9	+0.6
KRSR	Krestovskiy	0.61	318	eP	Pn	05 37 12.0	-0.3
KRSR				eS	Sn	05 37 30.1	-0.4
KLY	Klyuchi	0.66	327	eP	Pn	05 37 12.2	-0.2
KLY				eS	Sn	05 37 29.8	-0.9
TUMD	Tumrok D	0.77	223	eP	Pn	05 37 13.5	+0.4
TUMD				eS	Sn	05 37 32.1	+0.3
TUMR	Tumrok	0.82	234	i P	Pn	05 37 14.5	+0.9
TUMR				eS	Sn	05 37 33.6	+0.9
SMKR	Semkarok	0.82	6	eP	Pn	05 37 13.6	+0.1
SMKR				eS	Sn	05 37 32.9	+0.1
KOZ	Kozyrevsk	0.86	290	eP	Pn	05 37 13.7	0.0
KOZ				eS	Sn	05 37 33.1	+0.1
KZV	Kizimen	0.87	222	eP	Pn	05 37 14.4	+0.4
KZV				eS	Sn	05 37 33.5	+0.1
SRKR	Sorokina	0.89	355	i P	Pn	05 37 14.3	+0.3
SRKR				eS	Sn	05 37 33.6	0.0
KBG	Krutoberegovo	0.93	58	eP	Pn	05 37 14.1	0.0
KBG				eS	Sn	05 37 33.2	-0.6
KBTR	Krutoberegovo	0.96	62	eP	Pn	05 37 14.3	-0.1
KBTR				eS	Sn	05 37 33.5	-0.8
SRDR	Sredinnyy	1.05	302	i P	Pn	05 37 15.0	-0.2
SRDR				eS	Sn	05 37 34.7	-1.0
MKZ	Mys Kozlova	1.24	168	eP	Pn	05 37 16.8	0.0
MKZ				eS	Sn	05 37 38.0	-0.4
ESO	Esso	1.48	277	eP	Pn	05 37 19.5	+0.5
BKI	Bering	2.72	100	eP	Pn	05 37 34.3	+1.3
BKI				eS	Sn	05 38 08.1	+0.7
SPN	Mys Shipunski	2.78	196	eP	Pn	05 37 33.0	-0.8
SPN				eS	Sn	05 38 06.4	-2.4
NLC	Nalytchevo	2.84	205	eP	Pn	05 37 34.4	-0.2
NLC				eS	Sn	05 38 09.3	-0.9
GNL	Ganaly	2.85	225	eP	Pn	05 37 35.2	+0.4
UGLR	Uglovaya	2.94	210	eP	Pn	05 37 37.0	+1.0
DALK	Dalny	3.12	210	eP	Pn	05 37 38.6	+0.6
DALK				eS	Sn	05 38 16.1	-0.3
PETK	Petropavlovsk-	3.40	220	Pn	Pn	05 37 42.5	+1.0
	1.4nm,0.3s,baz=57,slow=13,SNR=18						
PETK				Sn	Sn	05 38 33.1	+10
	0.2nm,0.3s,baz=68,slow=20,SNR=1.5						
KRMR	Karymshinskiy	3.48	214	eP	Pn	05 37 43.7	+1.1
RUS	Russkaya	3.72	207	eP	Pn	05 37 45.4	-0.2
GRL	Gorelyy	3.74	212	eP	Pn	05 37 46.7	+0.7
APC	Apacha	3.74	222	eP	Pn	05 37 46.8	+0.9
MTVR	Mutnovka	3.77	210	eP	Pn	05 37 46.9	+0.5
MTVR				eS	Sn	05 38 30.9	-0.4
MJAR	Matsushiro Arr	24.81	229	P	P	05 42 09.0	+14
	1.1nm,0.3s,baz=15,slow=9.1,SNR=1.6						
ILAR	Eielson Array	26.47	49	P	P	05 42 09.0	-1.1
	0.3nm,0.9s,baz=260,slow=8.2,SNR=2.1						
H11N2	WAKE ISLAND Hy	36.23	171	T	T	06 21 26.1	
	baz=355,SNR=4.8						
H11N3	WAKE ISLAND Hy	36.24	171	T	T	06 21 35.6	
	baz=355						
H11N1	WAKE ISLAND Hy	36.24	171	T	T	06 21 36.8	
	baz=355						
YKA	Yellowknife Ar	40.74	45	P	P	05 44 13.2	+0.4
	0.4nm,0.6s,baz=302,slow=7.7,SNR=4.7						
YBH	Yreka Blue Hor	49.49	73	LR	LR	06 01 45.7	
	comp=Z,50nm,19.2s,baz=166,slow=31						

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*IDC **28** 05:39:44.7±2.4, 36°.10N×97°.29W, h0^{km}, mb1 3.4/3, mb1mx3.2/40, mbtmp3.0/3, ML3.2/3, Error ellipse: s-maj=32.5km s-min=15.3km az=101.0*

*TUL **28** 05:39:46.2±1.5, 36°.13N±0°.02×97°.28W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg3.2/62(NEIC), Error ellipse: s-maj=2.4km s-min=1.8km az=139.0*

*NEIC **28** 05:39:46.4±1.2, 36°.13N±0°.01×97°.29W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=0.7km az=145.0*

ISC 28 05:39:46.3±0.8**, 36°.13N**±0°.03×**97°.29W**±0°.03**, h10^{km}, n58,** σ**0^s.91**/39**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.36	202		Pg	05 39 53.5	+0.1
OK031	S. Brethren Rd	0.41	116		Pg	05 39 54.2	-0.1
OK031				Sg	Sg	05 39 59.8	+0.1
OK030	Cody Creek RV	0.46	116		Pg	05 39 55.2	0.0
OK030				Sg	Sg	05 40 01.3	+0.1
QUOK	Quay	0.47	85	Pg	Pg	05 39 55.4	-0.1
QUOK				Sg	Sg	05 40 02.0	+0.3
BCOK	Bluff Creek, N	0.54	209		Pg	05 39 56.7	-0.1
BCOK				Sg	Sg	05 40 04.4	+0.5
OK025	Westminster Rd	0.55	184		Pg	05 39 57.0	0.0
CROK	Carrier	0.67	304		Pg	05 39 59.4	+0.1
OKCFA	Oklahoma City	0.73	191		Pg	05 40 00.0	-0.3
OKCSW	OKLAHOMA CITY	0.73	190		Pg	05 40 00.3	-0.2
FNO	Franklin	0.88	186		Pg	05 40 02.7	-0.5
KAN13	South Haven SW	0.89	350		Pg	05 40 03.3	-0.2
KAN14	Manchester OK	0.99	327		Pg	05 40 05.0	-0.2
T35A	Sooner Cattle	1.00	38		Pg	05 40 05.1	-0.5
W35A	Tecumseh	1.03	161	Pg	Pg	05 40 05.1	-1.1
W35A				IAmb_Lg		05 40 19.0	
	comp=Z,127nm,0.8s						
KAN01	Argonia South	1.09	340		Pb	05 40 06.8	-0.4
KAN10	Anthony SW Sta	1.18	327		Pb	05 40 08.5	-0.3
KAN08	Anthony NE Sta	1.22	334		Pn	05 40 09.2	-0.3
TUL1	Leonard	1.23	100	Pg	Pn	05 40 09.0	-0.6
KAN12	Harper NE Stat	1.30	334		Pn	05 40 10.5	0.0
U32A	Winter Ranch,	1.41	281	Pn	Pn	05 40 12.3	+0.3
X34A	Smith Ranch, M	1.59	196		Pb	05 40 15.6	-0.2
WMOK	Wichita Mounta	1.85	222		Pn	05 40 19.1	+1.1
WMOK				IAmb_Lg		05 40 47.2	
	comp=Z,151nm,0.8s						
X37A	Clayton	2.20	134		Pn	05 40 23.5	+0.7
U38A	Gravette	2.37	82		Pn	05 40 26.4	+1.3

R32A	Long Quarter,	2.55	334		Pn	05 40 28.8	+1.0
R32A				IAmb_Lg		05 41 08.3	
	comp=Z,59nm,0.8s						
Z35A	Perchaven, San	2.79	179		Pn	05 40 32.4	+1.4
W39A	Magazine	3.00	107		Pn	05 40 35.4	+1.5
W39A				IAmb_Lg		05 41 27.6	
	comp=Z,50nm,0.9s						
KSU1	Kansas State U	3.01	10	Pn	Pn	05 40 35.6	+1.5
KSU1				IAmb_Lg		05 41 28.7	
	comp=Z,80nm,0.9s						
CBKS	Cedar Bluff	3.31	325	IAmb_Lg		05 41 37.4	
	comp=Z,65nm,0.7s						
MIAR	Mount Ida	3.42	116		Sn	05 41 22.2	+1.9
Z38A	Mt. Pleasant	3.44	146		Pn	05 40 39.7	-0.2
Z38A				IAmb_Lg		05 41 41.8	
	comp=Z,99nm,0.9s						
U40A	Yellville	3.59	85	IAmb_Lg		05 41 41.8	
	comp=Z,43nm,0.7s						
AMTX	Amarillo	3.79	252	IAmb_Lg		05 41 55.1	
	comp=Z,41nm,0.8s						
X40A	Basin Creek Fa	3.99	113	IAmb_Lg		05 41 54.6	
	comp=Z,46nm,0.8s						
WHTX	Lake Whitney,	4.13	182	Pn	Pn	05 40 48.9	-0.6
WHAR	Wooly Hollow	4.15	100	IAmb_Lg		05 42 02.1	
	comp=Z,79nm,1.2s						
MGMO	Mountain Grove	4.16	74	IAmb_Lg		05 41 59.4	
	comp=Z,51nm,0.8s						
WLAR	White Oak Lake	4.21	124	IAmb_Lg		05 42 01.2	
	comp=Z,30nm,0.8s						
237A	Washetta, Mont	4.30	163	IAmb_Lg		05 42 13.0	
	comp=Z,33nm,1.0s						
R40A	Maddies Statio	4.55	60	Pn	Pn	05 40 52.7	-2.5
R40A				IAmb_Lg		05 42 12.1	
	comp=Z,67nm,1.0s						
P38A	Dawn	4.58	39	IAmb_Lg		05 42 17.9	
	comp=Z,28nm,0.8s						
N33A	J Bar K, Exete	4.60	358	IAmb_Lg		05 42 17.1	
	comp=Z,67nm,0.8s						
NATX	Nacogdoches	4.88	153	IAmb_Lg		05 42 31.3	
	comp=Z,25nm,0.9s						
N35A	Tabor	4.90	15		Pn	05 41 01.0	+1.0
T42A	Van Buren	5.07	78	IAmb_Lg		05 42 32.2	
	comp=Z,34nm,0.8s						
BGNE	Belgrade	5.31	353	IAmb_Lg		05 42 46.9	
	comp=Z,44nm,0.8s						
HBAR	Harrisburg	5.42	94	IAmb_Lg		05 42 48.8	
	comp=Z,68nm,0.8s						
FVM	French Village	5.79	69	IAmb_Lg		05 42 52.1	
	comp=Z,24nm,0.8s						
143A	Socs Landing,	5.94	123	IAmb_Lg		05 43 10.8	
	comp=Z,27nm,0.9s						
JCT	Junction City	6.02	201	IAmb_Lg		05 43 02.8	
	comp=Z,29nm,0.7s						
OGNE	Ogallala	6.08	324	IAmb_Lg		05 43 09.0	
	comp=Z,28nm,0.7s						
L40A	Anamosa	7.57	37	IAmb_Lg		05 43 45.0	
	comp=Z,35nm,0.9s						
L42A	Oliver, Polo	8.34	43	IAmb_Lg		05 44 15.6	
	comp=Z,28nm,0.9s						
TXAR	Lajitas Array	8.65	220	Pn	Pn	05 41 49.4	-2.2
	comp=Z,0.1nm,0.3s,baz=38,slow=11,SNR=4.2						
TXAR				Lg	Lg	05 44 11.9	
	comp=Z,0.4nm,0.3s,baz=55,slow=22,SNR=1.7						
SFIN	Lafayette	9.07	59	IAmb_Lg		05 44 30.9	
	comp=Z,26nm,0.8s						
RSSD	Black Hills	9.50	329	IAmb_Lg		05 44 52.9	
	comp=Z,11nm,0.9s						
PDAR	Pinedale Array	11.56	309	Pn	Pn	05 42 31.1	-0.5
	comp=Z,0.1nm,0.3s,baz=127,slow=15,SNR=2.8						
PDAR				Pg		05 43 16.8	
	comp=Z,0.1nm,0.3s,baz=112,slow=15,SNR=1.8						
PDAR				Lg	Lg	05 45 47.4	
	comp=Z,0.1nm,0.3s,baz=105,slow=35,SNR=4.0						
ULM	Lac du Bonnet	14.15	4	Pn	Pn	05 43 01.9	-4.8
	comp=Z,0.2nm,0.3s,baz=189,slow=12,SNR=2.1						
ULM				Lg	Lg	05 47 04.0	
	comp=Z,0.1nm,0.3s,baz=213,slow=9.5,SNR=2.8						

IDC 28 05:47:29.4±13.0**, 46°.24N**×**147°.71E, h0^{km}, mb3.4**/4**, mb1 3.8**/4**, mb1mx3.4**/44**, mbtmp3.4**/4**, MS3.1**/1**, Ms1 3.2**/1**, ms1mx2.4**/30**, Error ellipse: s-maj=414.0km s-min=114.5km az=93.0, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	39.26	38	P	P	05 54 59.1	-0.1
	0.2nm,0.6s,baz=262,slow=6.3,SNR=7.1						
ILAR				LR	LR	06 12 12.6	
	comp=Z,26nm,19.6s,baz=194,slow=38						
YKA	Yellowknife Ar	53.52	35	P	P	05 56 51.0	-0.2
	0.3nm,0.6s,baz=304,slow=6.9,SNR=5.2						
PDAR	Pinedale Array	68.01	51	P	P	05 58 30.6	0.0
	0.2nm,0.5s,baz=90,slow=0.9,SNR=3.0						
TXAR	Lajitas Array	80.94	57	P	P	05 59 46.0	+0.1
	0.2nm,0.6s,baz=305,slow=4.4,SNR=4.5						

*IDC **28** 05:56:11.6±5.7, 20°.46N×77°.65W, h0^{km}, mb2.8/1, mb1 3.7/2, mb1mx3.2/51, mbtmp3.5/2, ML3.0/1, Error ellipse: s-maj=346.2km s-min=39.8km az=44.0*

*SSNC **28** 05:56:16.9±1.0, 19°.57N×78°.48W, h6^{km}±7^{km}, MD3.3, ML2.8, MW3.3*

*JSN **28** 05:56:19.4±0.5, 19°.60N×78°.29W, h43^{km}±8^{km}, MD3.8*

ISC 28 05:56:15.3±1.8**, 19°.63N**±0°.05×**78°.48W**±0°.05**, h14**^{km}±12^{km}**, n18, σ1^{s}61**/27**, 2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMGC	Las Mercedes	1.46	72	*e*P	Pn	05 56 40.9	-0.3
LMGC				*e*S	Sn	05 56 58.5	-1.6
LMGC				IAML		05 57 00.4	
	comp=E,139nm,0.1s						
LMGC				IAML		05 57 00.7	
	comp=N,207nm,0.1s						
MTDJ	Mount Denham	1.66	147	*e*P	Pn	05 56 43.8	-0.3
MTDJ				*e*S	Sn	05 57 02.5	-2.7
BBJ	Bamboo Saint A	1.69	137	⇓*i*P	Pn	05 56 44.5	0.0
CCCC	Cccc	1.70	23	*e*P	Pg	05 56 47.2	-0.8
CCCC				*e*S	Sg	05 57 09.8	-0.3
CCCC				IAML		05 57 13.4	
	comp=N,39nm,0.3s						
CCCC				IAML		05 57 13.4	
	comp=E,62nm,0.5s						
MCJ	Malvern	1.85	156	*i* P	Pn	05 56 47.2	+0.4
MCJ				*i* S	Sn	05 57 08.1	-1.9
BNJ	Bonny Gate	1.95	132	*i* P	Pn	05 56 47.4	-0.5
STH	Stony Hill	2.21	134	⇓*i*P	Pn	05 56 51.3	-0.3
HOJ	Hope	2.30	134	*i* P	Pn	05 56 52.6	-0.2
CMJ	Castle Mountai	2.49	126	*i* P	Pn	05 56 54.9	-0.5
RCC	Rio Carpintero	2.65	82	*e*P	Pn	05 56 57.0	-0.6
RCC				*e*S	Sn	05 57 26.1	-3.4
RCC				IAML		05 57 29.5	
	comp=E,18nm,0.3s						
RCC				IAML		05 57 29.8	
	comp=N,9.0nm,0.2s						
MGV	Manicaragua	2.84	331	*e*P	Pn	05 57 00.4	+0.2
MGV				*e*S	Sn	05 57 33.7	-0.5
MGV				IAML		05 57 37.9	
	comp=N,20nm,0.3s						
MGV				IAML		05 57 38.1	
	comp=E,19nm,0.2s						
GTMO	Guantanamo	3.18	81	*e*P	Pn	05 57 06.3	+1.5
GTMO				*e*S	Sn	05 57 42.4	-0.2
GTMO				IAML		05 57 45.5	
	comp=E,58nm,0.3s						
GTMO				IAML		05 57 45.6	
	comp=N,100nm,0.3s						
MASC	Masc	4.04	82	*e*P	Pn	05 57 17.3	+0.6
MASC				*e*S	Sn	05 58 03.4	-0.3
SOR	Soroa	5.27	307	*e*P	Pn	05 57 34.4	+0.8
SOR				*e*S	Sn	05 58 29.5	-4.7
SOR				IAML		05 58 30.6	
	comp=E,3.6nm,0.3s						
SOR				IAML		05 58 31.0	
	comp=N,3.5nm,0.2s						
SDV	Santo Domingo	13.11	143	Pn	Pn	05 59 23.2	+1.9
	comp=N,0.8nm,0.3s,baz=335,slow=13,SNR=6.8						
TXAR	Lajitas Array	24.83	298	P	P	06 01 39.1	+1.7
	comp=N,0.1nm,0.5s,baz=102,slow=6.5,SNR=1.9						
WRA	Warramunga Arr	149.14	264	PKPbc	PKPbc	06 16 04.5	+0.4
	comp=N,0.4nm,0.5s,baz=84,slow=3.2,SNR=6.6						
ASAR	Alice Springs	149.67	257	PKPbc	PKPbc	06 16 05.8	+0.5
	comp=N,0.4nm,0.3s,baz=100,slow=2.2,SNR=8.5						

*RSPR **28** 06:22:04.8, 19°.31N×67°.11W, h48^{km}±9^{km}, MD3.4/12*

*NEIC **28** 06:22:04.1±1.2, 19°.26N±0°.08×67°.07W±0°.05, h25^{km}±17^{km}, Error ellipse: s-maj=12.5km s-min=6.5km az=168.0*

ISC 28 06:22:04.8±1.7**, 19°.23N**±0°.08×**67°.08W**±0°.05**, h29**^{km}**, n50, σ0^{s}62**/56**, 11C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.76	183	⇑*e*P	Pb	06 22 18.8	-0.6
AGPR	Aguadilla, PR	0.76	183	*e*S	Sn	06 22 31.4	+1.4
AGPR	Aguadilla, PR	0.76	183		Pb	06 22 18.8	-0.6
AGPR					Sn	06 22 31.4	+1.4
AGPR	Aguadilla, PR	0.76	183	IAML		06 22 31.9	
	comp=E,543nm,0.3s						
AGPR				IAML		06 22 32.8	
	comp=N,496nm,0.3s						
EMPR	Esperanza - Ma	0.91	145	⇑*e*P	Pn	06 22 21.7	+0.1
EMPR	Esperanza - Ma	0.91	145	*e*S	Sn	06 22 34.4	+0.7
EMPR	Esperanza - Ma	0.91	145		Pn	06 22 21.7	+0.1
EMPR					Sn	06 22 34.4	+0.7
EMPR	Esperanza - Ma	0.91	145	IAML		06 22 38.9	
	comp=E,396nm,0.6s						
EMPR				IAML		06 22 45.1	
	comp=N,333nm,0.6s						
AOPR	Arecibo Observ	0.93	161	⇓*e*P	Pn	06 22 21.1	-0.8
AOPR	Arecibo Observ	0.93	161	*e*S	Sb	06 22 34.7	+0.5
AOPR	Arecibo Observ	0.93	161		Pn	06 22 21.1	-0.8
AOPR					Sb	06 22 34.7	+0.5
MPR	Mayaguez	1.01	183		Pn	06 22 22.6	-0.4
MPR				IAML		06 22 38.6	
	comp=N,318nm,0.5s						
CRPR	Cabo Rojo, PR	1.21	182	⇑*e*P	Pn	06 22 25.7	-0.1
CRPR	Cabo Rojo, PR	1.21	182	*e*S	Sn	06 22 41.4	+0.1
CRPR	Cabo Rojo, PR	1.21	182		Pn	06 22 25.7	-0.1
CRPR					Sn	06 22 41.4	+0.1
CRPR	Cabo Rojo, PR	1.21	182	IAML		06 22 44.2	
	comp=N,229nm,0.3s						
CRPR				IAML		06 22 45.2	
	comp=E,126nm,0.2s						
CELP	Cerrillos	1.24	158	⇓*e*P	Pn	06 22 26.2	+0.1
CELP	Cerrillos	1.24	158	*e*S	Sb	06 22 42.8	-0.4
CELP	Cerrillos	1.24	158		Pn	06 22 26.2	+0.1
CELP					Sb	06 22 42.8	-0.4
MLPR	Magueyes Islan	1.25	179	⇑*e*P	Pn	06 22 25.6	-0.7
MLPR	Magueyes Islan	1.25	179	*e*S	Sn	06 22 42.9	+0.7
MLPR	Magueyes Islan	1.25	179		Pn	06 22 25.6	-0.7
MLPR					Sn	06 22 42.9	+0.7
GBPR	Guanica, Bosqu	1.26	171	⇑*e*P	Pn	06 22 26.6	+0.1
GBPR	Guanica, Bosqu	1.26	171	*e*S	Sb	06 22 43.4	-0.3
GBPR	Guanica, Bosqu	1.26	171		Pn	06 22 26.6	+0.1
GBPR					Sb	06 22 43.4	-0.3
OBIP	Obispado Ponce	1.26	159	⇑*e*P	Pn	06 22 25.7	-0.8
OBIP	Obispado Ponce	1.26	159	*e*S	Sn	06 22 42.9	+0.5
OBIP	Obispado Ponce	1.26	159		Pn	06 22 25.7	-0.8
OBIP					Sn	06 22 42.9	+0.5
OBIP	Obispado Ponce	1.26	159	IAML		06 22 44.6	
	comp=N,270nm,0.6s						
OBIP				IAML		06 22 46.1	
	comp=E,216nm,0.5s						
GCPR	Guaynabo City	1.31	134		Pn	06 22 26.9	-0.2
SJG	San Juan	1.41	141		Pn	06 22 28.9	+0.3
SJG				IAML		06 22 50.8	
	comp=E,139nm,0.5s						
SJG				IAML		06 22 55.0	
	comp=E,114nm,0.3s						
ICMP	Isla Caja de M	1.43	159	Pn	Pn	06 22 29.9	+1.1
ICMP				IAML		06 22 54.7	
	comp=N,113nm,0.6s						
ICMP				IAML		06 22 55.1	
	comp=E,172nm,0.8s						
CBYP	Canovanas	1.50	129	⇑*e*P	Pn	06 22 30.1	+0.4
CBYP	Canovanas	1.50	129		Pn	06 22 30.1	+0.4
IGPR	InterUniversit	1.56	144	⇑*e*P	Pn	06 22 30.9	+0.4
IGPR	InterUniversit	1.56	144	*e*S	Sn	06 22 49.8	+0.1
IGPR	InterUniversit	1.56	144		Sn	06 22 49.8	+0.1
PDPR	Patillas Dam,	1.56	140		Pn	06 22 29.9	-0.7
PDPR				IAML		06 22 54.1	
	comp=E,108nm,0.3s						
HUMP	Col San Antoni	1.59	133	⇑*e*P	Pn	06 22 31.3	+0.3
HUMP	Col San Antoni	1.59	133	*e*S	Sn	06 22 50.6	+0.2
HUMP	Col San Antoni	1.59	133		Pn	06 22 31.3	+0.3
HUMP					Sn	06 22 50.6	+0.2
HUMP	Col San Antoni	1.59	133	IAML		06 22 56.4	
	comp=N,97nm,0.3s						
HUMP				IAML		06 23 00.1	
	comp=E,105nm,0.2s						
MTP	Monte Pirata	1.83	128	⇑*e*P	Pn	06 22 34.2	-0.1
MTP	Monte Pirata	1.83	128	*e*S	Sn	06 22 57.2	+0.7
MTP	Monte Pirata	1.83	128		Pn	06 22 34.2	-0.1
MTP					Sn	06 22 57.2	+0.7
CUPR	Culebra, Puert	1.93	118	⇑*e*P	Pn	06 22 34.6	-1.0
CUPR	Culebra, Puert	1.93	118	*e*S	Sn	06 22 58.9	0.0
CUPR	Culebra, Puert	1.93	118		Pn	06 22 34.6	-1.0
CUPR					Sn	06 22 58.9	0.0
CDVI	St. Croix	2.64	123	Pn	Pn	06 22 47.1	+1.7
SDDR	Presa de Saban	3.99	267		Pn	06 23 04.3	+0.2
SDDR				IAML		06 24 16.5	
	comp=E,32nm,1.0s						

*NOU **28** 06:28:19.0, 40°.08S×173°.61E, h196^{km}, MLv3.7, Cook Strait, New Zealand*

WEL 28 06:28:20.6, 40°S±2°×**17°4E**±°**, h182**^{km}±4^{km}**, M3.5**/43**, MLv3.5**/43**, Error ellipse: s-maj=0.0km s-min=0.0km az=58.7, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.67	162	P	Pn	06 28 47.0	+0.6
DUWZ				S	Sn	06 29 05.2	-1.3
NMEZ	Namu Road	0.77	14	P	Pn	06 28 47.2	+0.2
NMEZ				S	Sn	06 29 07.4	+0.2
NBEZ	Newall Road No	0.91	11	P	Pn	06 28 48.1	+0.2
PREZ	Palmer Road	0.91	26	P	Pn	06 28 48.0	+0.1
PREZ				S	Sn	06 29 08.4	-0.5
KHEZ	Kahui Hut	0.91	18	P	Pn	06 28 48.2	+0.2
LREZ	Lake Rotokare	0.91	40	P	Pn	06 28 48.1	+0.3
LREZ				S	Sn	06 29 08.6	-0.2
NEZ	North Egmont	0.95	21	P	Pn	06 28 48.2	-0.1
NEZ				S	Sn	06 29 09.4	-0.2
PKE	Pukeiti	1.00	15	P	Pn	06 28 48.7	+0.2
PKE				S	Sn	06 29 09.2	-0.9
DREZ	Durham Road	1.06	24	P	Pn	06 28 49.0	+0.1
NNZ	Nelson	1.07	191	P	Pn	06 28 49.3	+0.3
NNZ				S	Sn	06 29 09.3	-1.8
QRZ	Quartz Range	1.08	232	P	Pn	06 28 49.0	0.0
QRZ				S	Sn	06 29 09.0	-2.1
WAZ	Wanganui	1.11	69	P	Pn	06 28 50.2	+0.9
WAZ				S	Sn	06 29 11.5	+0.1
TCW	Tory Channel	1.15	156	P	Pn	06 28 50.4	+0.8
TCW				S	Sn	06 29 11.0	-1.2
KIW	Kapiti Island	1.19	126	P	Pn	06 28 50.4	+0.5
KIW				S	Sn	06 29 10.6	-2.1
TUWZ	Tuamarina	1.29	170	P	Pn	06 28 51.2	+0.5
TUWZ				S	Sn	06 29 12.8	-1.4
OGWZ	Otaki Gorge	1.33	120	P	Pn	06 28 51.8	+0.6
OGWZ				S	Sn	06 29 13.1	-1.7
VRZ	Vera Road	1.35	40	P	Pn	06 28 51.0	-0.3
VRZ				S	Sn	06 29 14.0	-1.0
WEL	Wellington	1.41	143	P	Pn	06 28 52.4	+0.7
CAW	Cannon Point	1.44	132	P	Pn	06 28 52.7	+0.7
BHW	Baring Head	1.56	144	P	Pn	06 28 53.6	+0.4
MRZ	Mangatainoka R	1.56	109	P	Pn	06 28 53.6	+0.4
BSWZ	Blackbirch Sta	1.56	174	P	Pn	06 28 54.1	+0.8
PKVZ	Pokaka	1.57	57	P	Pn	06 28 53.4	-0.1
HOWZ	Holdsworth Sta	1.60	118	P	Pn	06 28 54.1	+0.4
MTVZ	Mangateitei	1.61	62	P	Pn	06 28 53.7	-0.1
POWZ	Post Office Ro	1.64	99	P	Pn	06 28 54.3	+0.3
CMWZ	Cape Campbell	1.64	165	P	Pn	06 28 55.3	+1.3
THZ	Tophouse	1.69	199	P	Pn	06 28 54.8	+0.2
WNVZ	Wahianoa	1.72	62	P	Pn	06 28 54.9	-0.2
DRZ	Dome Shelter	1.72	60	P	Pn	06 28 55.7	+0.4
FWVZ	Far West T-bar	1.73	59	P	Pn	06 28 54.9	-0.3
MTW	Mount Morrison	1.73	126	P	Pn	06 28 55.3	+0.4
WHVZ	Whangaehu Hut	1.74	60	P	Pn	06 28 55.1	-0.1
MSWZ	Moikau Station	1.75	136	P	Pn	06 28 55.4	+0.3
TWVZ	Taurewa	1.76	52	P	Pn	06 28 54.9	-0.5
TSZ	Takapari Road	1.78	87	P	Pn	06 28 55.5	+0.1
TUVZ	Tukino	1.79	61	P	Pn	06 28 55.7	0.0
MOVZ	Moawhango	1.79	66	P	Pn	06 28 55.2	-0.5
NGZ	Ngauruhoe	1.80	58	P	Pn	06 28 55.5	-0.3
TIWZ	Tintock	1.82	110	P	Pn	06 28 56.4	+0.5
PRWZ	Pori Road	1.82	103	P	Pn	06 28 56.6	+0.7
PAWZ	Paruwai Farm	1.82	133	P	Pn	06 28 56.2	+0.3
WTVZ	West Tongariro	1.83	56	P	Pn	06 28 55.7	-0.4
OTVZ	Oturere	1.85	58	P	Pn	06 28 56.2	-0.2
PLWZ	Palliser	1.86	140	P	Pn	06 28 56.5	+0.1
KRVZ	Karewarewa	1.87	56	P	Pn	06 28 56.2	-0.4
ETVZ	East Tongariro	1.90	58	P	Pn	06 28 56.7	-0.1
HIZ	Hauiti	1.90	30	P	Pn	06 28 56.1	-0.6
TMVZ	Te Maari	1.90	57	P	Pn	06 28 56.8	-0.1
DVHZ	Dannevirke	1.94	95	P	Pn	06 28 57.1	0.0
TMWZ	Te Maipa	1.95	120	P	Pn	06 28 57.7	+0.5
PNHZ	Pukenui	1.98	84	P	Pn	06 28 57.6	0.0
KATZ	Kakaramea	1.98	54	P	Pn	06 28 57.5	-0.1
BHHZ	Black Hill Sta	1.98	71	P	Pn	06 28 56.9	-0.7
TRWZ	Traveller	1.98	129	P	Pn	06 28 57.9	+0.3
BFZ	Birch Farm	2.05	106	P	Pn	06 28 58.6	+0.3
RITZ	Rihia Road	2.08	56	P	Pn	06 28 59.0	+0.3
RATZ	Rangitukua	2.09	53	P	Pn	06 28 58.9	+0.1
DSZ	Denniston Nort	2.11	221	P	Pn	06 28 58.9	0.0
WPHZ	Waipukurau	2.15	88	P	Pn	06 28 59.4	+0.1
KRHZ	Kereru	2.16	77	P	Pn	06 28 59.2	-0.3
WATZ	Wairara	2.17	49	P	Pn	06 28 59.6	-0.1
ANWZ	Angora Road	2.18	99	P	Pn	06 29 00.2	+0.4
KHZ	Kahutara	2.25	182	P	Pn	06 29 00.7	+0.2
KWHZ	Kaweka Forest	2.26	72	P	Pn	06 29 00.5	-0.2
PRHZ	Porangahau	2.29	94	P	Pn	06 29 01.2	+0.2
TLZ	Tolley Road	2.35	39	P	Pn	06 29 00.8	-0.9
KUTZ	Kaahu Road	2.38	46	P	Pn	06 29 02.1	+0.2
BKZ	Black Stump Fm	2.41	67	P	Pn	06 29 01.7	-0.8
MCHZ	McNeill Hill	2.46	74	P	Pn	06 29 03.1	+0.2
PXZ	Pawanui	2.47	88	P	Pn	06 29 03.0	0.0
KAHZ	Kahuranaki	2.51	83	P	Pn	06 29 03.5	0.0
MRHZ	Matea Rd	2.52	59	P	Pn	06 29 02.5	-1.2
NMHZ	Naumai	2.66	67	P	Pn	06 29 05.5	+0.1
CKHZ	Cape Kidnapper	2.69	80	P	Pn	06 29 06.3	+0.7
ARHZ	Aropaoanui	2.74	72	P	Pn	06 29 05.8	-0.3
MTHZ	Maungataniwha	2.80	63	P	Pn	06 29 05.9	-1.0
LTZ	Lake Taylor	2.81	201	P	Pn	06 29 06.7	-0.4
TOZ	Tahuroa Road	2.83	31	P	Pn	06 29 06.1	-1.1
GVZ	Greta Valley S	2.84	189	P	Pn	06 29 07.0	-0.4
NGRZ	Ngongotaha	2.85	45	P	Pn	06 29 05.8	-1.8
RAHZ	Arahi	2.94	66	P	Pn	06 29 08.0	-0.5
MUGZ	Murupara	2.95	56	P	Pn	06 29 07.2	-1.5
WHHZ	Waihua	2.98	70	P	Pn	06 29 08.5	-0.5
RTZ	Ruatahuna	3.01	60	P	Pn	06 29 08.1	-1.4
INZ	Inchbonnie	3.05	212	P	Pn	06 29 08.6	-1.2
TGRZ	Tauranga	3.17	41	P	Pn	06 29 11.0	-0.4
SNGZ	Shannon Statio	3.17	65	P	Pn	06 29 11.1	-0.4
MKAZ	Moumakai	3.27	22	P	Pn	06 29 12.5	-0.2
URZ	Urewera	3.29	56	P	Pn	06 29 11.0	-1.9
KNZ	Kokohu	3.31	71	P	Pn	06 29 12.2	-0.9
RAGZ	Rawiri	3.36	62	P	Pn	06 29 12.8	-1.0
OXZ	Oxford	3.38	200	P	Pn	06 29 12.9	-1.0
MHGZ	Mahia Peninsul	3.44	74	P	Pn	06 29 14.4	-0.3
PRGZ	Paritu Road	3.50	71	P	Pn	06 29 14.6	-0.9
RIGZ	Rimuhau	3.50	67	P	Pn	06 29 14.4	-1.1
MWZ	Matawai	3.52	60	P	Pn	06 29 14.2	-1.6
MBAZ	Motutapu North	3.53	17	P	Pn	06 29 16.2	+0.4
WIAZ	Waiheke Island	3.56	20	P	Pn	06 29 16.5	+0.3
OKCZ	Okains Bay	3.59	187	P	Pn	06 29 15.3	-1.2
MQZ	McQueen's Vall	3.62	191	P	Pn	06 29 15.2	-1.6
WVZ	Waitaha Valley	3.64	216	P	Pn	06 29 16.1	-1.0
TKGZ	Te Karaka	3.69	64	P	Pn	06 29 16.7	-1.1
RACZ	Rakaia	3.74	197	P	Pn	06 29 17.3	-1.0
AKCZ	Akaroa Harbour	3.75	188	P	Pn	06 29 17.6	-0.9
RUGZ	Raukumara Rang	3.83	56	P	Pn	06 29 17.3	-2.4
TWGZ	Tauwhareparae	3.91	61	P	Pn	06 29 19.4	-1.2
CNGZ	Carnagh Statio	3.92	66	P	Pn	06 29 19.6	-1.0
WACZ	Wakanui South	4.01	199	P	Pn	06 29 20.9	-0.9
GCSZ	Gaunt Creek Bo	4.01	217	P	Pn	06 29 20.5	-1.3
HAZ	Te Kaha	4.02	55	P	Pn	06 29 19.3	-2.6
RPZ	Rata Peaks	4.04	208	P	Pn	06 29 21.3	-0.9
PKGZ	Pakihiroa	4.13	58	P	Pn	06 29 22.0	-1.5
PUZ	Puketiti	4.15	61	P	Pn	06 29 21.6	-2.1
ARCZ	Arundel	4.21	205	P	Pn	06 29 23.0	-1.3
WMGZ	Waiomatatini S	4.39	59	P	Pn	06 29 24.7	-2.0
FOZ	Fox Glacier	4.42	219	P	Pn	06 29 25.4	-1.6
TMZ	Timaru	4.65	204	P	Pn	06 29 28.9	-1.1
JCZ	Jackson Bay	5.32	221	P	Pn	06 29 36.8	-2.0
ODZ	Otahua Downs	5.36	203	P	Pn	06 29 37.9	-1.2
WKZ	Wanaka	5.78	215	P	Pn	06 29 42.6	-2.1
MSZ	Milford Sound	6.18	221	P	Pn	06 29 48.1	-1.8
MLZ	Mavora Lakes	6.60	216	P	Pn	06 29 54.2	-1.3
WHZ	Wether Hill Ro	7.09	214	P	Pn	06 29 58.7	-3.0

IDC 28 06:28:32.6±7.8**, 6°.22S**×**148°.75E, h48**^{km}±66^{km}**, mb3.4**/2**, mb1 3.8**/4**, mb1mx3.3**/44**, mbtmp3.8**/4**, ML3.3**/2**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/19**, Error ellipse: s-maj=95.4km s-min=56.2km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	206	P	Pn	06 29 26.4	+1.3
	25nm,0.3s,baz=58,slow=6.0,SNR=14						
PMG				S	Sn	06 30 06.3	+0.6
	22nm,0.3s,baz=172,slow=19,SNR=15						
PMG				LR	LR	06 31 03.0	
	comp=Z,100nm,20.1s,baz=84,slow=42						
WRA	Warramunga Arr	19.55	224	P	P	06 32 56.0	-0.5
	0.3nm,0.3s,baz=50,slow=11,SNR=19						
ASAR	Alice Springs	22.47	218	P	P	06 33 27.9	-0.1
	0.5nm,0.4s,baz=54,slow=9.2,SNR=10						
FITZ	Fitzroy Crossi	25.45	240	P	P	06 33 55.5	-0.8
	1.0nm,0.4s,baz=43,slow=9.0,SNR=9.3						
TORD	Torodi Ar. Bea	146.83	284	PKPbc	PKPbc	06 48 10.8	+0.2
	0.4nm,0.3s,baz=98,slow=3.4,SNR=2.5						

*IDC **28** 06:31:29.2±1.4, 46°.73N×81°.17W, h0^{km}, mb2.9/3, mb1 3.5/5, mb1mx3.3/53, mbtmp3.2/5, ML2.9/2, Error ellipse: s-maj=41.5km s-min=6.6km az=43.0*

*ANF **28** 06:31:30.0±1.3, 46°.71N×81°.32W, h8^{km}±10^{km}, ML4.1/12, Error ellipse: s-maj=5.7km s-min=3.9km az=136.0*

*OTT **28** 06:31:30.6±0.0, 46°.67N×81°.34W, h1^{km}, MN3.6/21, Mining related event, Sudbury, On 8km northeast from Onaping Falls, On Mining induced.*

ISC 28 06:31:28.7±0.7**, 46°.72N**±0°.03×**81°.33W**±0°.03**, h0**^{km}**, n61, σ1^{s}24**/90**, Ontario**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUNO	Sudbury Onapin	0.07	190	PG	Pg	06 31 31.2	+1.1
SUNO				SG	Sg	06 31 31.6	+0.5
SUNO				Trac		06 31 31.6	
	comp=Z,6µm,0.0s						
EEO	Eldee	1.55	92	PG	Pg	06 31 58.8	+0.3
EEO				SG	Sg	06 32 19.0	+0.5
EEO				Trac		06 32 21.2	
	comp=Z,137nm,0.1s						
KLBO	Killbear Provi	1.56	150	PG	Pn	06 31 58.0	+0.2
KLBO				SG	Sn	06 32 17.9	-0.9
KLBO				Trac		06 32 18.8	
	comp=Z,403nm,0.3s						
BUKO	Buck Lake	1.85	133	PN	Pb	06 32 02.7	-0.7
BUKO				SG	Sb	06 32 27.3	+0.2
BUKO				Trac		06 32 29.1	
	comp=Z,153nm,0.2s						
KILO	Kirkland Lake	2.09	31	PN	Pb	06 32 07.1	-0.4
KILO				SN	Sn	06 32 33.4	+1.7
KILO				Trac		06 32 36.8	
	comp=Z,44nm,0.1s						
E46A	Sault Ste Mari	2.09	261	P		06 32 05.5	
	baz=80,SNR=113						
E46A				S		06 32 34.6	
	baz=80						
BMRO	Meriville Lake	2.12	178	PN	Pn	06 32 06.3	+0.9
BMRO				SN	Sn	06 32 32.9	+0.4
BMRO				Trac		06 32 36.8	
	comp=Z,67nm,0.2s						
CLWO	Collingwood	2.38	162	PN	Pn	06 32 10.3	+1.3
CLWO				SN	Sn	06 32 39.1	+0.3
CLWO				Trac		06 32 44.4	
	comp=Z,226nm,0.3s						
ALGO	Algonquin Park	2.39	107	P	Pn	06 32 10.6	+1.5
	baz=289						
ALGO				S	Sb	06 32 41.3	-1.4
	baz=289						
BRCO	Bruce Peninsul	2.47	182	PN	Pn	06 32 11.4	+1.1
BRCO				SN	Sn	06 32 40.9	-0.3

BRCO				Trac		06 32 59.5	
	comp=Z,164nm,0.2s						
SADO	**Sadowa**	**2.48**	**141**	Pn	**Pn**	**06 32 11.1**	**+0.8**
	12nm,0.3s,baz=336,slow=13,SNR=97						
SADO				Pg	**Pb**	**06 32 12.6**	**-1.5**
	12nm,0.3s,baz=329,slow=14,SNR=23						
SADO				Lg	Lg	06 32 44.0	
	67nm,0.3s,baz=62,slow=14,SNR=21						
SADO	**Sadowa**	**2.48**	**141**	PN	**Pn**	**06 32 11.2**	**+0.8**
SADO				SN	**Sn**	**06 32 41.3**	**+0.1**
SADO				Trac		06 32 45.9	
	comp=Z,122nm,0.2s						
BWLO	**Walkerton**	**2.60**	**177**	PN	**Pn**	**06 32 12.5**	**+0.5**
BWLO				SN	**Sn**	**06 32 44.1**	**-0.3**
BWLO				Trac		06 32 51.1	
	comp=Z,64nm,0.2s						
G54A	**Lake Saint Pet**	**2.61**	**119**	P	**Pn**	**06 32 13.3**	**+1.1**
	baz=301						
G54A				S	**Sn**	**06 32 45.7**	**+1.1**
	baz=301						
BASO	**Ashfield**	**2.71**	**185**	PN	**Pn**	**06 32 13.9**	**+0.3**
BASO				SN	**Sn**	**06 32 46.6**	**-0.5**
BASO				Trac		06 32 57.6	
	comp=Z,67nm,0.2s						
CRLO	**Chalk River**	**2.81**	**103**	PN	**Pn**	**06 32 16.6**	**+1.7**
CRLO				SN	**Sn**	**06 32 50.5**	**+1.0**
CRLO				Trac		06 33 05.0	
	comp=Z,61nm,0.2s						
KAPO	**Kapuskasing**	**2.85**	**344**	PN	**Pn**	**06 32 17.1**	**+1.7**
KAPO				SN	**Sn**	**06 32 53.5**	**+3.1**
KAPO				Trac		06 32 58.3	
	comp=Z,56nm,0.1s						
KAPO				LG	Lg	06 33 02.9	
I51A	**Listowel**	**2.92**	**176**	P	**Pn**	**06 32 16.9**	**+0.5**
	baz=356						
I51A				S	**Sn**	**06 32 53.1**	**+0.9**
	baz=356						
VLDQ	**Val d'Or**	**2.98**	**61**	PN	**Pn**	**06 32 16.3**	**-0.9**
VLDQ				SN	**Sn**	**06 32 53.2**	**-0.4**
VLDQ				Trac		06 32 59.6	
	comp=Z,65nm,0.2s						
GLMI	**Grayling**	**2.98**	**232**	P	**Pn**	**06 32 18.0**	**+0.7**
	baz=50						
GLMI				S	**Sn**	**06 32 54.1**	**+0.3**
	baz=50						
GLMI	**Grayling**	**2.98**	**232**	P		06 32 18.3	
	baz=50,SNR=8.0						
PEMO	**Pembroke**	**3.02**	**109**	PN	**Pn**	**06 32 19.1**	**+1.4**
PEMO				SN	**Sn**	**06 32 56.2**	**+1.7**
PEMO				Trac		06 33 10.7	
	comp=Z,77nm,0.2s						
TORO	**Toronto--Lesli**	**3.40**	**155**	PN	**Pn**	**06 32 25.5**	**+2.5**
TORO				SN	**Sn**	**06 33 03.3**	**-0.8**
TORO				LG	Lg	06 33 14.3	
DELO	**Deloro Mine**	**3.41**	**129**	PN	**Pn**	**06 32 23.7**	**+0.6**
DELO				SN	**Sn**	**06 33 03.4**	**-0.8**
DELO				LG	Lg	06 33 15.4	
DELO				Trac		06 33 19.6	
	comp=Z,60nm,0.3s						
ELFO	**Elginfield**	**3.52**	**180**	PN	**Pn**	**06 32 25.1**	**+0.4**
ELFO				SN	**Sn**	**06 33 05.5**	**-1.5**
ELFO				Trac		06 33 19.1	
	comp=Z,69nm,0.2s						
E55A	**Montcerf-Lytto**	**3.64**	**92**	P	**Pn**	**06 32 27.4**	**+1.1**
	baz=275						
GRQ	**Grand Remous**	**3.77**	**90**	PN	**Pn**	**06 32 28.8**	**+0.8**
GRQ				SN	**Sn**	**06 33 13.4**	**+0.4**
GRQ				Trac		06 33 31.6	
	comp=Z,28nm,0.2s						
EFO	**Effingham**	**3.90**	**158**	PN	**Pn**	**06 32 29.7**	**-0.1**
EFO				SN	**Sn**	**06 33 14.9**	**-1.3**
EFO				Trac		06 33 37.0	
	comp=Z,29nm,0.2s						
MATQ	**Matagami**	**3.92**	**38**	P	**Pn**	**06 32 31.0**	**+0.9**
	baz=220						
E43A	**Lone Tree Farm**	**3.93**	**267**	P		06 32 30.9	
	baz=84,SNR=38						
D55A	**Sainte-Anne-du**	**4.03**	**84**	P	**Pn**	**06 32 31.8**	**+0.2**
	baz=267						
D55A				S	**Sn**	**06 33 19.0**	**-0.5**
	baz=267						
VABQ	**Val Des Bois**	**4.04**	**100**	PN	**Pn**	**06 32 32.4**	**+0.5**
VABQ				Trac		06 33 38.0	
	comp=Z,42nm,0.2s						
GAC	**Glen Almond**	**4.18**	**102**	PN	**Pn**	**06 32 34.1**	**+0.3**
GAC				Trac		06 33 41.9	
	comp=Z,129nm,0.7s						
J47A	**Sunmer**	**4.27**	**217**	P		06 32 36.0	
	baz=34,SNR=6.2						
J47A				P		06 32 36.0	
	baz=34,SNR=6.2						
E56A	**St. Veronique**	**4.34**	**90**	P	**Pn**	**06 32 36.4**	**+0.5**
	baz=274						
E56A				S	**Sn**	**06 33 26.6**	**-0.6**
	baz=274						
D56A	**ZEC Mazanza, M**	**4.52**	**83**	P	**Pn**	**06 32 38.4**	**0.0**
	baz=268						
WBO	**Williamsburg**	**4.56**	**110**	PN	**Pn**	**06 32 39.4**	**+0.5**
WBO				SN	**Sn**	**06 33 31.4**	**-1.2**
WBO				Trac		06 33 51.4	
	comp=Z,48nm,0.5s						
J56A	**Wolcott**	**4.68**	**136**	P	**Pn**	**06 32 40.8**	**+0.3**
	baz=319						
J56A	**Wolcott**	**4.68**	**136**	P		06 32 41.0	
	baz=319,SNR=5.5						
J56A				P		06 32 41.0	
	baz=319,SNR=5.5						
F57A	**Harrington**	**4.69**	**99**	P	**Pn**	**06 32 41.0**	**+0.3**
	baz=283,SNR=20						
AAM	**Ann Arbor**	**4.72**	**202**	S	**Sn**	**06 33 36.1**	**-0.4**
	baz=20						
WVNY	**West Valley, N**	**4.73**	**155**	P		06 32 41.9	
	baz=336,SNR=6.1						
H57A	**Richville**	**4.74**	**116**	P	**Pn**	**06 32 41.0**	**-0.4**
	baz=300,SNR=19						
WCNY	**West Carthage**	**4.84**	**122**	P		06 32 42.4	
	baz=306,SNR=19						
I57A	**Carthage**	**4.87**	**123**	P	**Pn**	**06 32 42.8**	**-0.4**
	baz=306,SNR=36						
K56A	**Middlesex**	**4.93**	**143**	P	**Pn**	**06 32 43.8**	**-0.2**
	baz=326						
E57A	**Chemin Saint G**	**4.96**	**91**	P	**Pn**	**06 32 44.1**	**-0.4**
	baz=276						
D41A	**Chassel**	**4.98**	**277**	P		06 32 45.2	
	baz=92,SNR=24						
J57A	**Williamstown**	**5.02**	**129**	P	**Pn**	**06 32 45.1**	**-0.1**
	baz=313,SNR=16						
J57A	**Williamstown**	**5.02**	**129**	P		06 32 45.2	
	baz=313,SNR=14						
J57A				P		06 32 45.2	
	baz=313,SNR=14						
H43A	**Windswept, Lux**	**5.05**	**246**	P		06 32 46.5	
	baz=62						
BMNY	**Brushton-Moira**	**5.13**	**109**	P		06 32 46.2	
	baz=294,SNR=20						
LONY	**Lake Ozonia**	**5.17**	**111**	P	**Pn**	**06 32 46.6**	**-0.7**
	baz=296,SNR=13						
K57A	**Scipio Center**	**5.25**	**138**	P	**Pn**	**06 32 48.4**	**-0.1**
	baz=321						
G58A	**Ormstown**	**5.31**	**105**	P	**Pn**	**06 32 48.8**	**-0.4**
	baz=289,SNR=11						
I58A	**Old Forge**	**5.41**	**122**	P	**Pn**	**06 32 50.0**	**-0.7**
	baz=306,SNR=23						
J58A	**Remsen**	**5.44**	**126**	P	**Pn**	**06 32 50.4**	**-0.6**
	baz=310,SNR=17						
J58A	**Remsen**	**5.44**	**126**	P		06 32 50.5	
	baz=310,SNR=13						
J58A				P		06 32 50.5	
	baz=310,SNR=13						
H58A	**Gabriels**	**5.52**	**112**	P	**Pn**	**06 32 51.6**	**-0.6**
	baz=297,SNR=23						
E58A	**La Victoria**	**5.56**	**91**	P	**Pn**	**06 32 52.0**	**-0.7**
	baz=276						
K58A	**Earlville**	**5.65**	**132**	P	**Pn**	**06 32 53.6**	**-0.4**
	baz=316,SNR=9.4						
NCB	**Newcomb**	**5.71**	**116**	P		06 32 54.1	
	baz=301,SNR=20						
FRNY	**Flat Rock**	**5.73**	**106**	P		06 32 55.0	
	baz=292,SNR=18						
H59A	**Cadyville**	**5.74**	**108**	P	**Pn**	**06 32 54.8**	**-0.3**
	baz=294,SNR=17						
D58A	**Chemin du LacG**	**5.80**	**83**	P	**Pn**	**06 32 54.8**	**-1.2**
	baz=269						
J59A	**Piesco**	**5.82**	**121**	P	**Pn**	**06 32 55.4**	**-0.9**
	baz=306						
K59A	**Cooperstown**	**6.06**	**128**	P	**Pn**	**06 32 58.9**	**-0.7**
	baz=312,SNR=14						
G40A	**Rib Lake**	**6.35**	**260**	P		06 33 03.8	
	baz=74,SNR=5.8						
H60A	**Morristown**	**6.42**	**106**	P	**Pn**	**06 33 04.4**	**-0.1**
	baz=292						
G60A	**Masonville**	**6.48**	**101**	P	**Pn**	**06 33 05.4**	**0.0**
	baz=287,SNR=27						
G61A	**St-Isidore-de-**	**6.97**	**98**	P	**Pn**	**06 33 12.3**	**+0.2**
	baz=285,SNR=29						
EYMN	**Ely**	**7.02**	**284**	P	**Pn**	**06 33 12.2**	**-0.6**
	baz=97						
EYMN	**Ely**	**7.02**	**284**	P		06 33 12.3	
	baz=97,SNR=13						
JFWS	**Jewell Farm**	**7.39**	**242**	P		06 33 18.5	
	baz=56,SNR=7.6						
G62A	**West of Eustis**	**7.67**	**97**	P		06 33 22.1	
	baz=285,SNR=12						
G62A				P		06 33 22.1	
	baz=285,SNR=12						
D62A	**Allapoint, All**	**8.42**	**83**	P		06 33 30.7	
	baz=272,SNR=15						
D62A				P		06 33 30.7	
	baz=272,SNR=15						
ULM	**Lac du Bonnet**	**10.29**	**295**	Pn	**Pn**	**06 33 54.8**	**-2.7**
	0.7nm,0.3s,baz=109,slow=12,SNR=11						
ULM				Sn	**Sn**	**06 35 46.5**	**-6.9**
	0.7nm,0.3s,baz=155,slow=22,SNR=4.8						
ULM				Lg	Lg	06 36 42.7	
	0.6nm,0.3s,baz=180,slow=19,SNR=3.1						
PDAR	**Pinedale Array**	**20.39**	**269**	P	**P**	**06 36 08.2**	**+1.0**
	0.2nm,0.5s,baz=77,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**24.53**	**322**	P	**P**	**06 36 50.8**	**+1.2**
	0.2nm,0.5s,baz=111,slow=10,SNR=5.3						
TXAR	**Lajitas Array**	**24.58**	**233**	P	**P**	**06 36 52.9**	**+2.4**
	0.6nm,1.1s,baz=36,slow=8.1,SNR=2.2						

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*IDC **28** 06:34:04.7±1.1, 58°.52N×156°.08W, h135^{km}±10^{km}, mb3.6/15, mb1 3.8/18, mb1mx3.6/50, mbtmp4.1/18, Error ellipse: s-maj=17.1km s-min=11.3km az=27.0*

*NEIC **28** 06:34:06.1±1.8, 58°.24N±0°.05×155°.91W±0°.09, h157^{km}±4^{km}, Error ellipse: s-maj=9.3km s-min=2.0km az=134.0*

*AEIC **28** 06:34:07±2.0, 58°.22N±0°.06×155°.9W±0°.1, h150^{km}±4^{km}, ML3.8, ML4.0/33(NEIC), Error ellipse: s-maj=8.9km s-min=7.2km az=133.0*

ISC 28 06:34:06.0±0.6**, 58°.39N**±0°.06×**155°.99W**±0°.05**, h154**^{km}±5^{km}**, n138,** σ**1^{s}.36**/151**, mb3.9**/14**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELA	**Mount Kelaz**	**0.14**	**70**		**Pn**	**06 34 26.9**	**+0.2**
KELA					**Sn**	**06 34 42.4**	**-0.2**
ANCK	**Angle Creek**	**0.33**	**126**		**Pn**	**06 34 27.2**	**+0.1**
KVTA	**Katmai Vly 10**	**0.37**	**91**		**Pn**	**06 34 27.5**	**+0.2**
KVTA					**Sn**	**06 34 43.0**	**-0.4**
KBM	**Katmai Bkd Mtn**	**0.43**	**105**		**Pn**	**06 34 27.8**	**+0.3**
KCG	**Knife Ck. Glac**	**0.47**	**100**		**Pn**	**06 34 27.9**	**+0.2**
KCG					**Sn**	**06 34 44.2**	**-0.1**
KABR	**Katmai Barrier**	**0.60**	**115**		**Pn**	**06 34 28.1**	**-0.2**
PLK5	**Peulik 5**	**0.61**	**230**		**Pn**	**06 34 28.4**	**+0.1**
PLK2	**Peulik 2**	**0.65**	**196**		**Pn**	**06 34 28.2**	**-0.5**
PLK1	**Peulik 1**	**0.68**	**209**		**Pn**	**06 34 28.4**	**-0.3**
KARR	**Katmai Rainbow**	**0.69**	**81**		**Pn**	**06 34 29.3**	**+0.5**
KARR					**Sn**	**06 34 47.3**	**+1.0**
PLK3	**Peulik 3**	**0.72**	**192**		**Pn**	**06 34 28.6**	**-0.5**
PLK3					**Sn**	**06 34 46.1**	**-0.5**
AUCH	**Augustine Cone**	**1.64**	**53**		**Pn**	**06 34 38.9**	**+1.5**
AUL	**Augustine Lava**	**1.66**	**52**		**Pn**	**06 34 39.2**	**+1.7**
OHAK	**Old Harbor**	**1.86**	**128**		**Pn**	**06 34 38.6**	**-1.1**
OHAK	**Old Harbor**	**1.86**	**128**		**Sn**	**06 35 02.7**	**-3.0**
OHAK	**Old Harbor**	**1.86**	**128**	IAML		06 35 03.4	
	comp=N,2µm,0.7s						
OHAK				IAML		06 35 03.5	
	comp=E,2µm,0.5s						
OPT	**Oil Point**	**1.91**	**47**		**Pn**	**06 34 41.9**	**+1.7**
KDAK	**Kodiak Island**	**1.91**	**107**	P	**Pn**	**06 34 39.6**	**-0.7**
	comp=E,54nm,0.3s,baz=44,slow=0.7,SNR=1668						
KDAK				S	**Sn**	**06 35 04.7**	**-1.9**
	comp=E,111nm,0.3s,baz=158,slow=20,SNR=53						
KDAK	**Kodiak Island**	**1.91**	**107**	Pn	**Pn**	**06 34 39.8**	**-0.5**
SII	**Sitkinak Islan**	**2.08**	**151**		**Pn**	**06 34 40.7**	**-1.6**
ILS	**Iliamna Low So**	**2.18**	**43**		**Pn**	**06 34 45.0**	**+1.5**
IVE	**Iliamna Volcan**	**2.24**	**42**		**Pn**	**06 34 45.5**	**+1.4**
CHGN	**Chignik**	**2.47**	**213**	Pn	**Pn**	**06 34 45.4**	**-1.5**
CHGN				IAML		06 35 15.4	
	comp=N,582nm,0.3s						
RED	**Redoubt Volcan**	**2.62**	**38**		**Pn**	**06 34 50.3**	**+1.5**
RSO	**Redoubt South**	**2.66**	**37**		**Pn**	**06 34 51.0**	**+1.6**
NCT	**North Crescent**	**2.68**	**34**		**Pn**	**06 34 51.1**	**+1.6**
CNPM	**China Poot**	**2.71**	**63**		**Pn**	**06 34 51.0**	**+1.1**
SVW2	**Sparrevohn**	**2.72**	**4**		**Pn**	**06 34 51.8**	**+1.8**
DFR	**Drift River**	**2.78**	**36**		**Pn**	**06 34 52.4**	**+1.7**
BRLK	**Bradley Lake**	**2.97**	**60**	Pn	**Pn**	**06 34 53.9**	**+0.7**
BRSE	**Bradley Lake S**	**3.03**	**61**		**Pn**	**06 34 54.6**	**+0.8**
SPCR	**Spurr Chakacha**	**3.41**	**33**		**Pn**	**06 35 00.8**	**+2.2**
SPBG	**Spurr Blockage**	**3.41**	**31**		**Pn**	**06 35 00.3**	**+1.6**
SPCN	**Chakachatna No**	**3.43**	**32**		**Pn**	**06 35 01.3**	**+2.4**
SPCP	**Crater Peak Br**	**3.47**	**32**		**Pn**	**06 35 01.9**	**+2.3**
SPCG	**Spurr Capps Gl**	**3.53**	**33**		**Pn**	**06 35 02.4**	**+2.1**
SLKM	**Skilak Lake**	**3.63**	**52**		**Pn**	**06 35 02.4**	**+0.9**
STLK	**Strandline Lak**	**3.75**	**32**		**Pn**	**06 35 05.3**	**+2.2**
SEW	**Seward**	**3.77**	**60**	Pn	**Pn**	**06 35 04.4**	**+1.1**
SDPT	**Sand Point**	**3.92**	**221**	Pn	**Pn**	**06 35 03.0**	**-2.2**
SDPT				IAML		06 35 48.6	
	comp=E,239nm,1.0s						
SDPT				IAML		06 36 30.7	
	comp=N,216nm,3.7s						
SUA	**Susitna One**	**4.06**	**38**	Pn	**Pn**	**06 35 08.8**	**+1.7**
RC01	**Rabbit Creek A**	**4.16**	**47**		**Pn**	**06 35 09.1**	**+0.7**
SKT	**Skwentna**	**4.23**	**30**		**Pn**	**06 35 11.5**	**+2.2**
TT01	**Tatalina**	**4.53**	**360**		**Pn**	**06 35 15.5**	**+2.4**
TTA	**Tatalina**	**4.55**	**360**		**Pn**	**06 35 15.6**	**+2.0**
PWL	**Port Wells**	**4.61**	**54**		**Pn**	**06 35 14.5**	**+0.3**
PMR	**Palmer**	**4.71**	**44**		**Pn**	**06 35 16.3**	**+0.8**
DT1	**Dutton Round H**	**4.78**	**229**		**Pn**	**06 35 15.8**	**-0.6**
KNK	**Knik Glacier**	**4.85**	**48**	Pn	**Pn**	**06 35 17.9**	**+0.4**
PPLA	**Purkeypile**	**4.89**	**21**	Pn	**Pn**	**06 35 21.1**	**+3.1**
GHO	**Glory Hole Cre**	**4.90**	**43**		**Pn**	**06 35 17.9**	**-0.2**
Q23K	**Middleton Isla**	**5.11**	**74**	Pn	**Pn**	**06 35 21.6**	**+0.9**
MID	**Middleton Isla**	**5.11**	**74**	Pn	**Pn**	**06 35 21.7**	**+0.9**
SML	**Sawmill**	**5.14**	**45**	Pn	**Pn**	**06 35 20.7**	**-0.6**
GLI	**Glacier Island**	**5.16**	**57**	Pn	**Pn**	**06 35 21.0**	**-0.4**
HIN	**Hinchinbrook I**	**5.25**	**63**	Pn	**Pn**	**06 35 23.6**	**+0.9**
FID	**Port Fidalgo**	**5.38**	**60**		**Pn**	**06 35 24.1**	**-0.3**
FALS	**False Pass**	**5.42**	**232**	Pn	**Pn**	**06 35 23.7**	**-1.2**
SCM	**Sheep Creek Mo**	**5.54**	**48**		**Pn**	**06 35 27.2**	**+0.7**
EYAK	**Cordova Ski Ar**	**5.65**	**63**	Pn	**Pn**	**06 35 28.6**	**+0.6**
WAT7	**Susitna Watana**	**5.67**	**35**		**Pn**	**06 35 28.2**	**-0.2**
KTH	**Kantishna Hill**	**5.74**	**23**		**Pn**	**06 35 29.7**	**+0.6**
TRF	**Thorofare Moun**	**5.79**	**26**		**Pn**	**06 35 30.8**	**+0.9**
KLU	**Klutina**	**5.94**	**54**		**Pn**	**06 35 32.3**	**+0.4**
RND	**Reindeer**	**6.12**	**32**	Pn	**Pn**	**06 35 34.3**	**+0.2**
RAGM	**Ragged Mountai**	**6.12**	**66**		**Pn**	**06 35 35.0**	**+0.7**
M24K	**Tolsona, Glenn**	**6.14**	**49**		**Pn**	**06 35 35.4**	**+0.9**
KAIM	**Kayak Island**	**6.15**	**71**		**Pn**	**06 35 35.5**	**+0.9**
BPAW	**Bear Paw Mtn.**	**6.21**	**21**	Pn	**Pn**	**06 35 36.3**	**+0.8**
HMT	**Hamilton**	**6.31**	**67**		**Pn**	**06 35 37.7**	**+1.0**
HMT					**Sn**	**06 36 46.1**	**-1.7**
DHY	**Denali Highway**	**6.32**	**38**	Pn	**Pn**	**06 35 36.6**	**-0.3**
SUCK	**Suckling Hills**	**6.49**	**70**	Pn	**Pn**	**06 35 39.8**	**+0.7**
N25K	**Chitina, Valde**	**6.56**	**56**	Pn	**Pn**	**06 35 40.9**	**+0.8**
BWN	**Browne**	**6.59**	**26**		**Pn**	**06 35 41.5**	**+1.0**
GLB	**Gilahina Butte**	**6.84**	**58**	Pn	**Pn**	**06 35 44.3**	**+0.4**
PAX	**Paxson**	**6.91**	**44**		**Pn**	**06 35 45.1**	**+0.3**
AKUT	**Akutan**	**6.92**	**236**	Pn	**Pn**	**06 35 44.3**	**-0.5**
VRDI	**Verde Repeater**	**6.93**	**60**	Pn	**Pn**	**06 35 46.1**	**+0.9**
CRQM	**Cirque**	**6.95**	**65**		**Pn**	**06 35 46.3**	**+1.0**
TGL	**Tana Glacier**	**7.09**	**65**		**Pn**	**06 35 48.2**	**+1.0**
WRH	**Wood River Hil**	**7.18**	**28**	Pn	**Pn**	**06 35 46.7**	**-1.5**
MCARA	**McCarthy VSAT**	**7.18**	**60**		**Pn**	**06 35 49.9**	**+1.6**
ISLE	**Juniper Island**	**7.29**	**67**		**Pn**	**06 35 51.3**	**+1.4**
CCB	**Clear Creek Bu**	**7.39**	**28**	Pn	**Pn**	**06 35 50.2**	**-0.8**
BALM	**Baldy**	**7.39**	**63**		**Pn**	**06 35 52.2**	**+1.0**
HDA	**Harding Lake**	**7.43**	**32**		**Pn**	**06 35 50.5**	**-1.0**
UNV	**Unalaska Valle**	**7.43**	**237**	Pn	**Pn**	**06 35 49.7**	**-1.9**
YAH	**Yahtse**	**7.54**	**69**		**Pn**	**06 35 54.6**	**+1.3**
MDM	**Murphy Dome**	**7.55**	**26**	Pn	**Pn**	**06 35 52.0**	**-1.1**
MENT	**Mentasta**	**7.55**	**48**		**Pn**	**06 35 54.3**	**+1.0**
TCOL	**CIGO, UAF Yank**	**7.56**	**27**		**Pn**	**06 35 52.3**	**-1.0**
COLA	**College**	**7.57**	**27**		**Pn**	**06 35 52.3**	**-1.0**
RIDG	**Independent Ri**	**7.61**	**41**	Pn	**Pn**	**06 35 54.2**	**+0.2**
ANM	**Nome**	**7.64**	**328**	Pn	**Pn**	**06 35 56.6**	**+2.2**
IMAR	**Indian Mountai**	**7.69**	**7**		**Pn**	**06 35 56.5**	**+1.5**
BARN	**Barnard Glacie**	**7.72**	**64**		**Pn**	**06 35 57.0**	**+1.3**
IL31		**7.73**	**30**		**Pn**	**06 35 54.3**	**-1.2**
ILAR	**Eielson Array**	**7.73**	**30**	P	**Pn**	**06 35 54.0**	**-1.5**
	comp=N,3.0nm,0.3s,baz=222,slow=13,SNR=13						
ILAR				S	**Sn**	**06 37 17.8**	**-3.9**
	comp=N,3.4nm,0.3s,baz=199,slow=14,SNR=4.2						
ILAR	**Eielson Array**	**7.73**	**30**		**Pn**	**06 35 54.5**	**-1.1**
DOT	**Dot Lake**	**7.83**	**43**	Pn	**Pn**	**06 35 56.6**	**-0.3**
TABL	**Table Mountain**	**7.85**	**69**		**Pn**	**06 35 59.0**	**+1.6**
TABL					**Sn**	**06 37 23.2**	**-1.7**
CTGM	**Chitina Glacie**	**7.85**	**65**		**Pn**	**06 35 59.0**	**+1.6**
POKR	**Poker Plat Res**	**7.87**	**27**		**Pn**	**06 35 56.6**	**-0.8**
PCA	**Pinnacle**	**8.24**	**71**		**Pn**	**06 36 04.0**	**+1.5**
PCA					**Sn**	**06 37 34.8**	**+0.6**
BCAR	**Beaver Creek A**	**8.38**	**50**		**Pn**	**06 36 04.7**	**+0.4**
BCPM	**Bancas Point**	**8.55**	**73**		**Pn**	**06 36 07.9**	**+1.5**
PRP	**Porcupine Dome**	**8.67**	**30**	Pn	**Pn**	**06 36 06.7**	**-1.6**
COLD	**Coldfoot**	**9.25**	**14**	Pn	**Pn**	**06 36 14.9**	**-0.8**
EGAK	**Eagle**	**9.52**	**42**	Pn	**Pn**	**06 36 19.4**	**+0.1**
HYT	**Haines Junctio**	**9.68**	**68**		**Pn**	**06 36 24.1**	**+2.5**
DAWY	**Dawson**	**9.80**	**48**	Pn	**Pn**	**06 36 24.3**	**+1.2**
WHY	**Whitehorse**	**10.95**	**69**		**Pn**	**06 36 39.8**	**+1.5**
BESE	**Bessie Mountai**	**11.06**	**80**		**Pn**	**06 36 42.0**	**+2.3**
SIT	**Sitka**	**11.13**	**88**	Pn	**Pn**	**06 36 40.9**	**+0.3**
JIS	**Juneau Island**	**11.35**	**81**		**Pn**	**06 36 46.3**	**+2.8**
CRAG	**Craig**	**12.81**	**93**	Pn	**Pn**	**06 37 03.8**	**+1.5**
WRAK	**Wrangell Islan**	**12.88**	**89**	Pn	**P**	**06 37 06.2**	**-2.0**
A21K	**Barrow**	**12.99**	**359**		**Pn**	**06 37 04.9**	**+0.4**
DLBC	**Dease Lake**	**13.58**	**79**	P	**Pn**	**06 37 13.4**	**+1.1**
	comp=N,0.1nm,0.3s,baz=233,slow=9.7,SNR=2.4						
INK	**Inuvik**	**14.05**	**36**	P	**Pn**	**06 37 16.9**	**-1.0**
	comp=N,1.5nm,0.3s,baz=218,slow=12,SNR=32						
INK				S	**Sn**	**06 39 49.4**	**-4.1**
	comp=N,0.1nm,0.3s,baz=147,slow=17,SNR=1.8						
INK				ScP	**ScP**	**06 45 43.9**	**-0.6**
	comp=N,0.1nm,0.3s,baz=32,slow=2.1,SNR=3.7						
INK	**Inuvik**	**14.05**	**36**		**Pn**	**06 37 17.1**	**-0.9**
C36M	**Paulatuk**	**17.57**	**38**	P	**P**	**06 37 59.0**	**-0.8**
BILL	**Bilibino**	**19.21**	**316**	P	**P**	**06 38 18.6**	**+0.9**
YKA	**Yellowknife Ar**	**20.55**	**61**	P	**P**	**06 38 33.2**	**+1.1**
	comp=N,8.4nm,0.6s,baz=278,slow=9.6,SNR=140						
YKA				PcP	**PcP**	**06 42 36.9**	**+0.6**
	comp=N,0.3nm,0.5s,baz=256,slow=0.4,SNR=5.2						
YKA				ScP	**ScP**	**06 45 58.0**	**0.0**
	comp=N,0.1nm,0.6s,baz=278,slow=1.4,SNR=4.5						
NEW	**Newport**	**24.98**	**97**	P	**P**	**06 39 17.2**	**+2.1**
	comp=N,0.9nm,0.6s,baz=312,slow=15,SNR=1.5						
PETK	**Petropavlovsk-**	**26.16**	**279**	P	**P**	**06 39 26.1**	**+0.5**
	comp=N,2.2nm,0.5s,baz=83,slow=13,SNR=5.4						
PDAR	**Pinedale Array**	**32.60**	**98**	P	**P**	**06 40 24.8**	**+1.9**
	comp=N,0.2nm,0.6s,baz=309,slow=5.7,SNR=3.0						
KLR	**Kul'dur**	**41.66**	**290**	P	**P**	**06 41 38.2**	**-0.6**
	comp=N,1.7nm,0.5s,baz=53,slow=7.7,SNR=9.0						
NRIK	**Noril'sk**	**44.65**	**333**	P	**P**	**06 42 03.0**	**+0.6**
	comp=N,5.7nm,0.5s,baz=58,slow=5.8,SNR=10						
TXAR	**Lajitas Array**	**45.94**	**106**	P	**P**	**06 42 15.3**	**+1.9**
	comp=N,0.2nm,0.4s,baz=294,slow=7.3,SNR=8.2						
SADO	**Sadowa**	**47.00**	**72**	P	**P**	**06 42 22.7**	**+1.4**
	comp=N,5.3nm,0.9s,baz=14,slow=5.2,SNR=3.2						
ARCES	**ARCESS Array B**	**52.37**	**359**	P	**P**	**06 43 01.4**	**-0.1**
	comp=N,5.9nm,0.9s,baz=21,slow=7.8,SNR=1.6						
SONM	**Songino Array**	**54.47**	**305**	P	**P**	**06 43 18.0**	**+0.8**
	comp=N,0.7nm,0.7s,baz=64,slow=5.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**57.73**	**322**	P	**P**	**06 43 40.3**	**+0.2**
	comp=N,0.5nm,0.3s,baz=38,slow=6.0,SNR=6.1						
FINES	**FINESS Array B**	**60.49**	**359**	P	**P**	**06 43 58.2**	**-0.7**
	comp=N,3.5nm,0.9s,baz=17,slow=8.0,SNR=8.3						
MKAR	**Makanchi Array**	**64.69**	**320**	P	**P**	**06 44 25.3**	**-1.8**
	comp=N,0.7nm,0.7s,baz=50,slow=6.6,SNR=7.2						
AKASG	**Malin Array Be**	**71.18**	**356**	P	**P**	**06 45 06.1**	**-1.4**
	comp=N,1.3nm,0.4s,baz=8.2,slow=5.8,SNR=6.7						
GERES	**GERESS Array B**	**72.79**	**7**	P	**P**	**06 45 17.2**	**0.0**
	comp=N,0.7nm,0.6s,baz=339,slow=3.3,SNR=6.0						

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*REN **28** 06:35:49.8±2.0, 38°.34N±0°.04×118°.16W±0°.03, h12^{km}±5^{km}, ML2.5/2, ML2.4/44(NEIC), Error ellipse: s-maj=6.4km s-min=1.8km az=214.0*

NEIC 28 06:35:50.2±1.5**, 38°.33N**±0°.03×**118°.19W**±0°.02**, h8**^{km}±7^{km}**, Error ellipse: s-maj=3.9km s-min=2.2km az=202.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NV11	**Mina Array Sit**	**0.11**	**15**		Pg	06 35 52.9	0.0
NV11				Sg	Sg	06 35 54.9	+0.2
NV11				IAML		06 35 55.1	
	comp=E,1µm,0.5s						
NV11				IAML		06 35 55.6	
	comp=N,1µm,0.4s						
NVAR	**Mina Array Bea**	**0.14**	**319**		Pg	06 35 53.2	-0.1
LHV	**Little Huntoon**	**0.26**	**253**	Pg	Pg	06 35 56.0	+0.6
RYN	**Ryan**	**0.40**	**319**		Pg	06 35 58.2	+0.1
RYN				Sg	Sg	06 36 03.8	+0.5
RYN				IAML		06 36 04.5	
	comp=E,476nm,0.2s						
TPH	**Tonopah**	**0.80**	**108**		Pg	06 36 05.0	-0.7
TPH					Sg	06 36 16.2	0.0
OMMB	**Old Mammoth Mi**	**0.96**	**222**	Pg	Pg	06 36 08.3	-0.3
MDPB	**Devils Postpil**	**0.99**	**226**	Pn	Pg	06 36 08.8	-0.4
WAKR	**Walker**	**0.99**	**281**		Pg	06 36 08.7	-0.7
PNTR	**Pine Nut**	**1.34**	**305**		Pn	06 36 14.8	-0.7
PNTR				IAML		06 36 22.1	
	comp=N,58nm,0.6s						
PNTR				IAML		06 36 37.4	
	comp=E,71nm,0.5s						
VCNR	**Virginia City**	**1.50**	**311**		Pn	06 36 16.7	-0.8
PAHR	**Pah Rah Range**	**1.66**	**326**		Pn	06 36 19.1	-0.7
PAHR				IAML		06 36 43.9	
	comp=N,33nm,0.3s						
PAHR				IAML		06 36 44.0	
	comp=E,32nm,0.7s						
RUBR	**Rubicon Trail**	**1.70**	**296**		Pn	06 36 20.9	+0.5
RUBR				IAML		06 36 46.4	
	comp=N,56nm,0.8s						
RUBR				IAML		06 36 47.3	
	comp=E,57nm,0.7s						
CMB	**Columbia Colle**	**1.75**	**261**		Pb	06 36 22.6	-0.1
CMB				IAML		06 36 48.6	
	comp=N,31nm,0.6s						
R11A	**Troy Canyon, C**	**2.05**	**89**	Pn	Pb	06 36 27.9	+0.1
R11A				IAML		06 36 55.8	
	comp=N,35nm,0.3s						
R11A				IAML		06 36 56.0	
	comp=E,29nm,0.3s						
TPNV	**Topopah Spring**	**2.07**	**131**	Pn	Pb	06 36 26.8	-1.3
TPNV				IAML		06 36 58.5	
	comp=E,28nm,0.4s						
TPNV				IAML		06 37 03.7	
	comp=E,29nm,0.6s						
AFDM	**Forest Hills D**	**2.26**	**287**	Pn	Pn	06 36 29.4	+1.5
AFDM				IAML		06 37 02.7	
	comp=E,22nm,0.4s						
AFDM				IAML		06 37 03.5	
	comp=N,18nm,0.4s						
BEKR	**Beckworth**	**2.28**	**313**		Pn	06 36 29.1	+0.7
SHPR	**Sheep Range**	**3.02**	**126**	Pn	Pn	06 36 38.5	0.0
SHPR				IAML		06 37 37.3	
	comp=N,12nm,4.1s						
SHPR				IAML		06 37 47.7	
	comp=E,11nm,4.8s						
SPR3	**Spring Creek 3**	**3.10**	**76**	Pn	Pb	06 36 47.4	+1.7
ELK	**Elko**	**3.32**	**42**		Pn	06 36 42.4	-0.3

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*OMAN **28** 06:52:16.5±0.4, 28°.22N×57°.30E, h5^{km}, ml3.4/7, Error ellipse: s-maj=7.0km s-min=3.2km az=323.0*

*TEH **28** 06:52:19.4, 28°.05N×57°.21E, h17^{km}, ML3.8*

*THR **28** 06:52:19.5±0.3, 28°.03N×57°.26E, h18^{km}±4^{km}, ML4.0*

ISC 28 06:52:20.4±1.0**, 28°.01N**±0°.03×**57°.21E**±0°.05**, h10**^{km}**, n33,** σ**0^{s}.83**/37**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.45**	**98**	*e*Pg	**Pg**	**06 52 28.8**	**-0.4**
IBND	**Bandar-abas**	**0.81**	**227**	*e*Pg	**Pg**	**06 52 36.1**	**0.0**
IBND				*e*		06 53 01.9	
	comp=Z,99nm,0.6s						
GENO	**Geno**	**1.10**	**237**	*e*Pg	**Pg**	**06 52 40.6**	**-1.0**
BNDS	**Bandar-Abbas**	**1.10**	**237**	*e*Pg	**Pg**	**06 52 41.0**	**-0.6**
BNDS	**Bandar-Abbas**	**1.10**	**237**	*e*Pg	**Pg**	**06 52 41.0**	**-0.6**

NGRK	Negar Kerman	1.68	346	*e*Pg	Pn	06 52 49.6	-0.6
NGRK				*e*		06 53 15.6	
	comp=Z,99nm,0.2s						
CHMN	Cheshme madani	1.86	9	*e*Pn	Pn	06 52 52.4	-0.3
CHMN				*e*		06 53 23.1	
	comp=Z,99nm,0.3s						
KRBR	Kerman	2.00	349	*e*Pn	Pn	06 52 54.5	-0.1
KRBR				*e*Sg	Sb	06 53 22.6	+0.4
KRBR				IAML		06 53 26.3	
	comp=E,1μm,0.3s						
KRBR	Kerman	2.00	349	*e*Pn	Pn	06 52 54.5	-0.1
TVBK	TV Kerman	2.00	349	*e*Pn	Pn	06 52 54.7	+0.1
TVBK				*e*		06 53 26.6	
	comp=Z,99nm,0.2s						
SHME	Shamm	2.17	206	*e*Pn	Pn	06 52 55.3	-1.3
SHME	Shamm	2.17	206	P	Pn	06 52 55.6	-1.0
	SNR=9.7						
SHME				S	Sb	06 53 27.4	+0.6
BANOM	Banah	2.23	201	*e*Pn	Pn	06 52 57.4	-0.1
BANOM	Banah	2.23	201	P	Pn	06 52 56.6	-0.9
	SNR=15						
BANOM				S	Sb	06 53 28.8	+0.2
KHGB	Koh Gabri	2.44	345	*e*		06 53 06.4	
	comp=Z,99nm,0.5s						
KHGB				*e*Pn	Pn	06 53 01.4	+0.9
MSFE	Esma-Masafi	2.80	200	*e*Pn	Pn	06 53 05.3	0.0
MDH	Madha	2.82	197	*e*Pn	Pn	06 53 06.4	+0.8
MDH	Madha	2.82	197	P	Pn	06 53 05.8	+0.2
UOSS	Minazif	3.18	197	*e*Pn	Pn	06 53 11.4	+0.8
UOSS	Minazif	3.18	197	P	Pn	06 53 11.5	+1.0
HATD	Hatta, Dubai	3.32	197	*e*Pn	Pn	06 53 13.6	+1.2
ASHO	Ashiyiah	3.47	198	*e*Pn	Pn	06 53 15.8	+1.3
ASHO	Ashiyiah	3.47	198	P	Pn	06 53 16.6	+2.1
ASUD	Al Ashush, Dub	3.77	207	*e*Pn	Pn	06 53 18.5	-0.1
ASUD	Al Ashush, Dub	3.77	207	P	Pn	06 53 18.8	+0.2
	SNR=8.1						
CHBR	Chabahar	3.79	129	*e*Pn	Pn	06 53 18.8	-0.1
CHBR	Chabahar	3.79	129	*e*Pn	Pn	06 53 18.8	-0.1
SOHO	SOHO	3.91	189	P	Pn	06 53 18.9	-1.6
SOHO				S	Sn	06 54 07.3	+0.9
IMEH	Mehriz	4.05	327	*e*Pn	Pn	06 53 22.5	-0.2
HOQ	Hoqain	4.41	179	P	Pn	06 53 25.8	-1.7
	SNR=6.0						
YZKH	Yazd	4.91	333	*e*Pn	Pn	06 53 34.9	+0.5
YZKH	Yazd	4.91	333	*e*Pn	Pn	06 53 34.9	+0.5
KLNJ	Kolanjah	5.73	303	*e*Pn	Pn	06 53 45.8	-0.1

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*INET **28** 06:53:18.1, 11°.34N×85°.98W, h132^{km}, MW2.7*

UCR 28 06:53:29.5±1.0**, 10°.95N×85°.61W, h56**^{km}±57^{km}**, MW3.6, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS3	Finca Las Img	0.23	138	*i* P	Pn	06 53 39.3	+0.6
LAPC	Finca la Perla	0.26	136	*i* P	Pn	06 53 38.2	-0.8
GPS2	Hotel Rincn d	0.33	128	*i* P	Pn	06 53 40.1	+0.6
CUI	Cuipilapa	0.53	124	*i* P	Pn	06 53 41.2	-0.3
PTEN	Parque Tenorio	0.66	111	*i* P	Pn	06 53 43.2	+0.1
GUAI	GUAI	0.69	172	*i* P	Pn	06 53 43.2	-0.2

IDC 28 07:08:31.5±3.0**, 21°.21S×179°.84W, h0**^{km}**, mb3.9**/3**, mb1 4.3**/3**, mb1mx3.8**/21**, mbtmp3.9**/3**, Error ellipse: s-maj=287.8km s-min=36.1km az=162.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.68	258	P	P	07 16 29.6	-0.8
	1.3nm,0.5s,baz=99,slow=7.2,SNR=16						
WRA	Warramunga Arr	42.80	263	P	P	07 16 31.9	+0.5
	1.8nm,0.4s,baz=96,slow=8.4,SNR=31						
TXAR	Lajitas Array	88.89	58	P	P	07 21 28.2	0.0
	0.2nm,0.7s,baz=203,slow=6.5,SNR=2.5						

IDC 28 07:55:27.9±3.0**, 19°.30S×177°.22W, h0**^{km}**, mb3.6**/3**, mb1 4.0**/3**, mb1mx3.6**/42**, mbtmp3.6**/3**, Error ellipse: s-maj=320.6km s-min=35.8km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.50	261	P	P	08 03 48.8	-0.7
	0.4nm,0.6s,baz=97,slow=6.1,SNR=6.2						
ASAR	Alice Springs	45.52	255	P	P	08 03 49.8	+0.2
	1.8nm,0.6s,baz=90,slow=8.4,SNR=29						
TXAR	Lajitas Array	85.79	57	P	P	08 08 09.8	+0.1
	0.3nm,0.8s,baz=215,slow=6.2,SNR=2.4						

IDC 28 08:02:00.6±1.8**, 5°.73S×146°.60E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/5**, mb1mx3.3**/49**, mbtmp3.3**/5**, ML2.6**/2**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.2**/16**, Error ellipse: s-maj=45.1km s-min=26.7km az=103.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.70	171	Pn	Pn	08 02 59.8	+0.7
	6.5nm,0.3s,baz=346,slow=12,SNR=7.8						
PMG				Pg	Pb	08 03 07.5	+0.6
	10nm,0.3s,baz=339,slow=11,SNR=7.8						
PMG				Sn	Sn	08 03 35.6	-7.8
	11nm,0.3s,baz=169,slow=22,SNR=2.3						
PMG				Lg	Lg	08 03 48.8	
	14nm,0.3s,baz=42,slow=21,SNR=2.7						
PMG				LR	LR	08 04 41.5	
	comp=Z,81nm,21.5s,baz=358,slow=44						
WRA	Warramunga Arr	18.49	219	P	P	08 06 17.1	-1.4
	0.1nm,0.3s,baz=40,slow=12,SNR=1.8						
ASAR	Alice Springs	21.63	213	P	P	08 06 53.4	+0.7
	0.2nm,0.5s,baz=51,slow=9.2,SNR=2.1						
FITZ	Fitzroy Crossi	23.88	237	P	P	08 07 16.0	-0.1
	1.7nm,0.9s,baz=63,slow=9.0,SNR=2.4						
ILAR	Eielson Array	85.39	23	P	P	08 14 39.7	0.0
	0.3nm,0.8s,baz=240,slow=4.4,SNR=4.1						

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*IDC **28** 08:08:16.1±0.7, 47°.51N×81°.95E, h0^{km}, mb3.5/1, mb1 3.6/8, mb1mx3.4/51, mbtmp3.5/8, ML3.2/5, Error ellipse: s-maj=9.1km s-min=5.7km az=67.0*

*NNC **28** 08:08:16.9±0.5, 47°.47N×81°.88E, h0^{km}±6^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=4.0km s-min=3.3km az=146.0*

*SOME **28** 08:08:17.0, 47°.48N×81°.42E, h0^{km}*

*BJI **28** 08:08:18.0±0.0, 47°.40N×81°.70E, h11^{km}, ML3.6/7*

*ASRS **28** 08:08:26.4±0.4, 48°N±2°×8°2E±°, h10^{km}, MLh4.5/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*

ISC 28 08:08:17.4±0.6**, 47°.56N**±0°.02×**82°.04E**±0°.03**, h10**^{km}**, n93,** σ**2^{s}.30**/132**, 15C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKZ	Makanchi	0.75	183	⇓P	Pg	08 08 30.3	-1.6
	165nm,0.2s						
MAKZ				⇑S	Sg	08 08 38.8	-3.0
	484nm,0.5s						
MK31	Makanchi Array	0.79	167	P	Pg	08 08 31.6	-1.0
	52nm,0.2s,baz=342,slow=16,SNR=8660						
MK31				⇓S	Sg	08 08 41.3	-1.4
	126nm,0.2s,baz=343,slow=28,SNR=8.3						
MKAR	Makanchi Array	0.79	167	Pg	Pg	08 08 31.4	-1.2
	124nm,0.3s,baz=340,slow=17,SNR=3677						
MKAR				Lg	Lg	08 08 41.5	
	353nm,0.3s,baz=342,slow=27,SNR=25						
ZSN	Zaisan	1.92	92	*e*P	Pg	08 08 54.0	-0.3
	118nm,0.4s						
ZSN				*e*S	Sg	08 09 21.8	+2.6
	365nm,0.3s						
ZSN	Zaisan	1.92	92	Pg	Pg	08 08 54.0	-0.3
	118nm,0.4s						
ZSN				Lg	Lg	08 09 21.2	
	365nm,0.3s						
KAPS	Kapalarasan	2.93	220	*e*P	Pn	08 09 03.8	-0.4
	19nm,0.4s						
KAPS				*e*S	Sn	08 09 38.6	-0.9
	202nm,0.5s						
KAPS	Kapalarasan	2.93	220	Pg	Pn	08 09 03.8	-0.4
	19nm,0.4s						
KAPS				Lg	Lg	08 09 38.6	
	202nm,0.5s						
SEM	Semipalatinsk	3.08	338	*e*P	Pb	08 09 13.4	+0.9
	32nm,0.3s						
SEM				*e*S	Sg	08 09 54.7	-1.8
	283nm,0.3s						
SEM	Semipalatinsk	3.08	338	Pg	Pb	08 09 13.4	+0.9
	32nm,0.3s						
SEM				Lg	Lg	08 09 54.7	
	283nm,0.3s						
DJR	Jarkent	3.59	207	*e*P	Pb	08 09 18.7	-2.3
	22nm,0.4s						
DJR				*e*S	Sb	08 10 04.1	-0.5
	59nm,0.7s						
DJR	Jarkent	3.59	207	Pg	Pb	08 09 18.7	-2.3
	22nm,0.4s						
DJR				Lg	Lg	08 10 04.1	
	59nm,0.7s						
TDK	Taldyqorghan	3.59	226	*e*P	Pb	08 09 19.9	-1.0
	27nm,0.2s						
TDK				*e*S	Sb	08 10 05.0	+0.4
	462nm,0.8s						
TDK	Taldyqorghan	3.59	226	Pg	Pb	08 09 19.9	-1.0
	27nm,0.2s						
TDK				Lg	Lg	08 10 04.9	
	462nm,0.8s						
UKR	Ust'-Kan	3.83	27	Pn	Pb	08 09 20.7	-4.4
UKR				Pg	Pg	08 09 29.1	-1.6
UKR				Sg	Sg	08 10 19.7	-0.6
KURBB	Kurchatov Arra	3.83	324	Pn	Pn	08 09 16.6	+0.1
	0.3nm,0.3s,baz=142,slow=13,SNR=37						
KURBB				Pg	Pb	08 09 24.8	-0.3
	3.0nm,0.3s,baz=143,slow=18,SNR=164						
KURBB				Lg	Lg	08 10 17.0	
	11nm,0.3s,baz=142,slow=30,SNR=13						
KURBB	Kurchatov Arra	3.83	324	⇑Pg	Pb	08 09 25.9	+0.8
	46nm,0.6s						
KURBB				⇑Lg	Lg	08 10 19.2	
	618nm,0.7s						
TUNR	Tungur	3.85	46	Pn	Pb	08 09 22.0	-3.4
TUNR				Pg	Pg	08 09 30.9	-0.2
TUNR				Sg	Sg	08 10 23.3	+2.4
KURK	Kurchatov	3.87	326	Pn	Pb	08 09 28.2	+2.4
KURK				Sg	Sg	08 10 20.7	-1.1
KURK	Kurchatov	3.87	326	⇑Pg	Pb	08 09 27.8	+2.0
	22nm,0.4s						
KURK				⇑Lg	Lg	08 10 18.4	
	314nm,0.7s						
DGZ	Jazzator, Alta	4.17	57	Pn	Pn	08 09 25.5	+4.3
DGZ				Pg	Pg	08 09 36.7	-0.5
DGZ				Sg	Sg	08 10 31.4	+0.1
KTMS	Ketmen	4.28	197	*e*P	Pb	08 09 32.1	-0.7
	17nm,0.2s						
KTMS				*e*S	Sb	08 10 25.8	+1.2
	28nm,0.5s						
KTMS	Ketmen	4.28	197	Pg	Pb	08 09 32.1	-0.7
	17nm,0.2s						
KTMS				Lg	Lg	08 10 25.8	
	28nm,0.5s						
MNBS	Baschi	4.31	217	*e*P	Pb	08 09 32.8	-0.5
	7.6nm,0.1s						
MNBS				*e*S	Sb	08 10 27.3	+1.9
	172nm,0.5s						
MNBS	Baschi	4.31	217	Pg	Pb	08 09 32.8	-0.5
	7.6nm,0.1s						
MNBS				Lg	Lg	08 10 27.3	
	172nm,0.5s						
ARXS	Arharly	4.45	223	*e*P	Pb	08 09 33.9	-1.8
ARXS				*e*S	Sb	08 10 29.7	+0.2
ARXS	Arharly	4.45	223	Pg	Pb	08 09 33.9	-1.8
ARXS				Lg	Lg	08 10 29.7	
CHBI	Chibit, Altay	4.54	51	Pn	Pb	08 09 31.5	-5.6
CHBI				Sg	Sg	08 10 44.4	+1.4
PDGK	Podgornoye	4.59	204	Pg	Pb	08 09 37.2	-1.0
	4.7nm,0.2s						
PDGK				Lg	Lg	08 10 34.7	
	55nm,0.9s						
PDGK	Podgornoye	4.59	204	⇑Pn	Pn	08 09 27.0	0.0
	7.2nm,0.5s						
PDGK				⇑Lg	Lg	08 10 40.5	
	63nm,0.6s						
KPKS	Kokpek	4.72	211	*e*P	Pb	08 09 39.2	-1.1
	17nm,0.2s						
KPKS				*e*S	Sb	08 10 38.5	+1.3
	487nm,0.7s						
SHLS	Shalkode	4.76	203	*e*P	Pb	08 09 39.0	-2.0
	21nm,0.3s						
SHLS				*e*S	Sb	08 10 37.7	-0.7
	89nm,0.7s						
SHLS	Shalkode	4.76	203	Pg	Pb	08 09 39.0	-2.0
	21nm,0.3s						
SHLS				Lg	Lg	08 10 37.7	
	89nm,0.7s						
CUR	Chagan-Uzun	4.88	56	Pn	Pn	08 09 36.0	+5.0
CUR				Pg	Pg	08 09 48.4	-2.5
CUR				Sg	Sg	08 10 54.8	+0.6
KURS	Kuram	4.89	215	*e*P	Pb	08 09 44.2	+1.0
	3.4nm,0.3s						
KURS				*e*S	Sb	08 10 47.0	+4.9
	95nm,0.6s						
KURS	Kuram	4.89	215	Pg	Pb	08 09 44.2	+1.0
	3.4nm,0.3s						
KURS				Lg	Lg	08 10 47.0	
	95nm,0.6s						
UZB	Uzynbulak	4.90	207	*e*P	Pb	08 09 43.9	+0.6
	5.9nm,0.6s						
UZB				*e*S	Sb	08 10 46.1	+3.7
	45nm,0.4s						
UZB	Uzynbulak	4.90	207	Pg	Pb	08 09 43.9	+0.6
	5.9nm,0.6s						
UZB				Lg	Lg	08 10 46.1	
	45nm,0.4s						
ULGR	Ulagan, Altay	4.96	50	Pn	Pn	08 09 36.9	+4.9
ULGR				Sg	Sg	08 10 56.0	-0.4
ZHN	Zhinishke	5.07	211	*e*P	Pb	08 09 45.2	-1.1
	110nm,0.3s						
ZHN				*e*S	Sb	08 10 48.2	+0.9
	23nm,0.5s						
ZHN	Zhinishke	5.07	211	Pg	Pb	08 09 45.2	-1.1
	110nm,0.3s						
ZHN				Lg	Lg	08 10 48.2	
	23nm,0.5s						
GALT	Gorno-Altaysk,	5.08	28	Pn	Pn	08 09 38.1	+4.5
GALT				Sg	Sg	08 11 00.3	-0.2
CHKK	Chushkaly	5.12	225	*e*P	Pb	08 09 47.1	0.0
	6.0nm,0.3s						
CHKK				*e*S	Sb	08 10 52.1	+3.5
	60nm,0.5s						
CHKK	Chushkaly	5.12	225	Pg	Pb	08 09 47.1	0.0
	6.0nm,0.3s						
CHKK				Lg	Lg	08 10 52.1	
	60nm,0.5s						
SATY	Saty	5.18	211	*e*P	Pb	08 09 49.7	+1.6
	8.8nm,0.3s						
SATY				*e*S	Sb	08 10 56.1	+5.7
	56nm,0.5s						
SATY	Saty	5.18	211	Pg	Pb	08 09 49.7	+1.6
	8.8nm,0.3s						
SATY				Lg	Lg	08 10 56.1	
	56nm,0.5s						
KUU	Kurty	5.42	229	*e*P	Pb	08 09 52.3	+0.1
	3.8nm,0.2s						
KUU				*e*S	Sb	08 11 00.7	+3.6
	101nm,0.4s						
KUU	Kurty	5.42	229	Pg	Pb	08 09 52.3	+0.1
	3.8nm,0.2s						
KUU				Lg	Lg	08 11 00.7	
	101nm,0.4s						
ARTR	Artybash	5.44	37	Pn	Pn	08 09 42.5	+4.0
ARTR				Sg	Sg	08 11 09.5	-2.4
KOTS	Kotyrbulak	5.54	221	*e*P	Pb	08 09 56.2	+1.8
	13nm,0.5s						
KOTS				*e*S	Sb	08 11 07.6	+6.7
	72nm,0.7s						
KOTS	Kotyrbulak	5.54	221	Pg	Pb	08 09 56.2	+1.8
	13nm,0.5s						
KOTS				Lg	Lg	08 11 07.6	
	72nm,0.7s						
MDOK	Medeo	5.63	220	*e*P	Pb	08 09 57.6	+1.8
	6.8nm,0.5s						
MDOK				*e*S	Sb	08 11 09.9	+6.5
	63nm,1.1s						
MDOK	Medeo	5.63	220	Pn	Pn	08 09 39.7	-1.6
	6.4nm,0.5s						
MDOK				Lg	Lg	08 11 11.4	
	78nm,0.8s						
MDOK	Medeo	5.63	220	Pg	Pb	08 09 57.6	+1.8
	6.8nm,0.5s						
MDOK				Lg	Lg	08 11 09.9	
	63nm,1.1s						
TNSS	Tian-Shan	5.77	220	*e*P	Pb	08 09 59.2	+0.8
	3.9nm,0.2s						
TNSS				*e*S	Sb	08 11 12.3	+4.5
	32nm,0.7s						
TNSS	Tian-Shan	5.77	220	Pg	Pb	08 09 59.2	+0.8
	3.9nm,0.2s						
TNSS				Lg	Lg	08 11 12.3	
	32nm,0.7s						
MTBS	Maitube	5.94	224	*e*P	Pb	08 10 03.0	+2.1
	5.9nm,0.3s						
MTBS				*e*S	Sb	08 11 19.0	+6.9
	42nm,0.4s						
MTBS	Maitube	5.94	224	Pg	Pb	08 10 03.0	+2.1
	5.9nm,0.3s						
MTBS				Lg	Lg	08 11 19.0	
	42nm,0.4s						
BTLS	Baital	6.08	248	*e*P	Pb	08 10 03.8	+0.4
	5.5nm,0.5s						
BTLS				*e*S	Sb	08 11 20.9	+4.6
	15nm,0.7s						
BTLS	Baital	6.08	248	Pg	Pb	08 10 03.8	+0.4
	5.5nm,0.5s						
BTLS				Lg	Lg	08 11 20.8	
	15nm,0.7s						
KST	Kastek	6.22	226	Pg	Pb	08 10 09.1	+3.2
	7.5nm,0.6s						
KST				Lg	Lg	08 11 29.8	
	35nm,1.2s						
ELT	Eltsovka	6.31	24	Pn	Pn	08 09 53.9	+3.5
ELT				Sg	Sg	08 11 39.6	-0.2
TEL	Teeli	6.36	54	Pn	Pn	08 09 54.4	+3.1
TEL				Sg	Sg	08 11 44.0	+2.5
TASR	Tashtagol	6.42	34	Pn	Pn	08 09 58.9	+6.9
TASR				Sg	Sg	08 11 41.3	-2.0
TKM2	Tokmak 2	6.49	227	P	Pn	08 09 53.1	-0.1
	SNR=5.5						
TKM2	Tokmak 2	6.49	227	⇑Pn	Pn	08 09 50.8	-2.4
	1.5nm,0.3s						
TKM2				⇑Lg	Lg	08 11 36.6	
	36nm,0.8s						
ZAA0	Zalesovo Array	6.64	14	⇑Pn	Pn	08 09 59.5	+4.6
	2.1nm,0.6s						
ZAA0				⇑Lg	Lg	08 11 48.0	
	14nm,0.8s						
ZALV	Zalesovo Beam	6.64	14	Pn	Pn	08 09 57.5	+2.6
	4.4nm,0.3s,baz=200,slow=13,SNR=45						
ZALV				Sn	Sn	08 11 11.2	+0.7
	4.7nm,0.3s,baz=202,slow=28,SNR=5.4						
ZALV				Lg	Lg	08 11 45.9	
	7.2nm,0.3s,baz=191,slow=28,SNR=12						
ULHL	Ulahol	6.72	220	P	Pn	08 09 57.9	+1.6
	SNR=7.8						
USP	Ospenovka	6.82	234	P	Pn	08 09 56.7	-0.9
	SNR=20						
KBK	Karagaybulak	7.01	228	P	Pn	08 09 59.8	-0.5
	SNR=7.1						
BSTK	Bystrovka, Nov	7.03	3	Pn	Pn	08 10 02.0	+1.8
BSTK				Sg	Sg	08 12 00.5	-2.3
KHAR	Kharino, NSO,	7.13	7	Sg	Sg	08 12 03.7	-2.4
SALR	Pechorkino, Sa	7.25	17	Pn	Pn	08 10 09.1	+5.8
SALR				Sg	Sg	08 12 06.7	-3.0
AAK	Ala-Archa	7.26	230	Pn	Pn	08 10 02.7	-0.9
	0.8nm,0.3s,baz=78,slow=7.4,SNR=6.5						
AAK				Sn	Sn	08 11 23.5	-2.6
	1.0nm,0.3s,baz=77,slow=23,SNR=3.6						
AAK				Lg	Lg	08 12 01.5	
	2.1nm,0.3s,baz=176,slow=23,SNR=7.3						
AAK	Ala-Archa	7.26	230	⇓Pn	Pn	08 10 03.1	-0.5
	4.2nm,0.7s						
AAK				⇓Lg	Lg	08 12 00.4	
	39nm,0.8s						
NVS	Novosibirsk	7.33	5	Sg	Sg	08 12 11.2	-1.3
NVSII	Novosibirsk	7.33	5	Sg	Sg	08 12 13.8	+1.3
NHES	Novosibirsk, N	7.34	4	Sg	Sg	08 12 13.6	+0.9
POMOR	Pomortsevo, Ku	7.42	21	Pn	Pn	08 10 13.8	+8.2
POMOR				Sg	Sg	08 12 16.1	+0.8
LUZB	Luzhba, Kemero	7.51	33	Pn	Pn	08 10 16.0	+9.1
LUZB				Sg	Sg	08 12 15.6	-2.5
EKS2	Erkin-Say	7.62	233	P	Pn	08 10 07.8	-0.8
	SNR=12						
DJO	Djoy, Khakassi	7.88	45	Sg	Sg	08 12 27.2	-2.8
DJOS	Djoyskaya Sosn	7.97	45	Sg	Sg	08 12 30.4	-2.6
CERR	Cheremushki	8.01	45	Sg	Sg	08 12 31.9	-2.5
SHRR	Shira	8.62	33	Sg	Sg	08 12 47.8	-6.0
ARDR	Aradan	8.88	51	Sg	Sg	08 12 59.7	-2.5
BVAR	Borovoye Array	9.24	311	Pn	Pn	08 10 30.1	-0.6
	0.3nm,0.3s,baz=109,slow=12,SNR=2.9						
BVAR				Sn	Sn	08 12 12.8	-1.8
	1.7nm,0.3s,baz=113,slow=30,SNR=7.2						
BVAR				Lg	Lg	08 13 05.1	
	1.5nm,0.3s,baz=167,slow=29,SNR=7.8						
KK31	Karatay Array	9.26	245	⇓Pn	Pn	08 10 29.0	-1.9
	3.1nm,0.5s,baz=59,slow=13,SNR=14						
KK31				⇑Sn	Sn	08 12 13.9	-1.2
	6.9nm,0.8s,baz=57,slow=23,SNR=6.4						
KK31				⇓Lg	Lg	08 13 05.1	
	14nm,0.8s,baz=57,slow=28,SNR=6.5						
BRVK	Borovoye	9.31	311	⇑Pn	Pn	08 10 33.4	+1.7
	2.3nm,0.7s						
BRVK				⇑Sn	Sn	08 12 20.9	+4.5
	7.5nm,0.5s						
BRVK				⇑Lg	Lg	08 13 10.0	
	13nm,0.7s						
TLY	Talaya	14.59	66	Pn	Pn	08 11 44.5	+0.8
	baz=48,slow=8.3,SNR=3.6						
AKTO	Aktyubinsk	16.01	289	Pn	Pn	08 11 57.9	-4.6
	0.1nm,0.3s,baz=96,slow=24,SNR=2.5						
SONM	Songino Array	16.39	80	Pn	Pn	08 12 08.0	+0.5
	baz=275,slow=16,SNR=1.2						
SONM				Lg	Lg	08 17 00.2	
	0.3nm,0.3s,baz=269,slow=29,SNR=2.0						
ILAR	Eielson Array	61.71	22	P	P	08 18 34.2	-1.0
	0.3nm,0.6s,baz=322,slow=5.8,SNR=9.8						

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*JMA **28** 08:09:57.7±0.2, 33°.18N×138°.57E, h343^{km}, M3.3*

*IDC **28** 08:10:00.3±5.2, 32°.75N×137°.67E, h282^{km}±142^{km}, mb2.9/3, mb1 3.0/4, mb1mx2.7/50, mbtmp3.6/4, Error ellipse: s-maj=294.9km s-min=19.7km az=63.0*

ISC 28 08:10:01.0±1.0**, 33°.18N**±0°.10×**138°.38E**±0°.07**, h300**^{km}**, n19,** σ**1^{s}.84**/20**, mb3.1**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	Tokai 2	0.93	326	P	Pn	08 10 43.0	+2.3
JHJ	Hachijo jima 2	1.18	93	P	Pn	08 10 44.0	+1.8
	8.8nm,0.3s,baz=53,slow=17,SNR=1.5						
JHJ				S	S	08 11 19.3	+4.2
	10nm,0.3s,baz=57,slow=17,SNR=2.5						
JHJ2	Mitsune	1.20	93	P	Pn	08 10 43.9	+1.5
TTO1	TONANKAI O.B.S	1.41	289	P	Pn	08 10 45.4	+2.2
JIE	Ise	1.85	311	P	Pn	08 10 48.2	+1.6
JOD2	Odawara 2	2.16	15	S	S	08 11 29.2	+1.9
JTNC	Tanabenakahech	2.40	286	P	Pn	08 10 52.2	+1.0
JWY	Kouya	2.55	295	P	Pn	08 10 54.2	+1.7
BSO1	Boso 1	2.61	55	P	Pn	08 10 51.7	-0.7
JRY	Ryogami san	2.86	8	P	Pn	08 10 56.5	+1.1
JWT	Wachi	3.24	311	P	Pn	08 11 00.4	+1.3
JAI	Aioi	3.34	282	P	Pn	08 11 01.2	+1.0
JAG	Ashikaga	3.35	15	P	Pn	08 10 59.9	-0.4
JMN	Monobe	3.81	279	P	Pn	08 11 06.3	+1.1
JTO	Tosashimizu	4.70	268	P	Pn	08 11 15.5	+0.4
USRK	Ussuriysk Ar.	12.08	337	P	P	08 12 45.6	-0.1
	baz=152,slow=10,SNR=4.9						
SONM	Songino Array	28.15	311	P	P	08 15 25.6	-0.5
	0.2nm,0.4s,baz=101,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	44.18	305	P	P	08 17 39.5	-1.2
	0.5nm,0.5s,baz=92,slow=9.2,SNR=2.1						
WRA	Warramunga Arr	52.97	185	P	P	08 18 44.8	-2.6
	0.3nm,0.3s,baz=360,slow=7.7,SNR=11						

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*BGR **28** 08:36:53.0±0.0, 21°.92S×178°.36W, h591^{km}±1^{km}*

*BJI **28** 08:38:01.3±0.0, 21°.43S×178°.63W, h617^{km}, mB5.3/35, mb5.1/54*

*MOS **28** 08:38:01.8±0.9, 21°.63S×179°.29W, h607^{km}, mb4.9/19, Error ellipse: s-maj=10.4km s-min=9.4km az=109.7*

*NEIC **28** 08:38:03.0±2.1, 21°.61S±0°.10×179°.34W±0°.10, h608^{km}±5^{km}, mb5.0/200, Error ellipse: s-maj=14.3km s-min=13.3km az=158.0*

*NOU **28** 08:38:02.5, 21°.62S×179°.18W, h601^{km}, mb5.1, Fiji Islands Region*

*IDC **28** 08:38:03.9±0.6, 21°.60S×179°.35W, h609^{km}±6^{km}, mb4.4/40, mb1 4.4/43, mb1mx4.4/49, mbtmp5.3/43, Error ellipse:*

s-maj=7.9km s-min=7.4km az=141.0

GCMT ***28*** *08:38:03.0±0.6, 21°.72S±0°.07×179°.76W±0°.05, $h612^{km}\pm4^{km}$, MW5.3/45, Moment Tensor Solution. s45,c50; Duration: $1^{s}1$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21±.05; $M_{\theta\theta}$0.12±.09; $M_{\phi\phi}$0.08±.08; $M_{r\theta}$-0.27±.08; $M_{\theta\phi}$0.10±.09; $M_{\phi r}$-0.98±.07; Best double couple: $M_0$1.03100×10^{17} NP1:ϕ_s243.00000°, δ7.00000°, λ-44.00000°. NP2:ϕ_s16.00000°, δ85.00000°, λ-95.00000°. Principal axes: T 0.9960, Plg40.0000°, Azm111.0000°; N 0.0700, Plg5.0000°, Azm17.0000°; P -1.0670, Plg50.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 28 08:38:02.6±0.3**, 21°.70S**±0°.04×**179°.22W**±0°.05**, h608**$^{km}\pm3^{km}$**, h609**^{km}**:pP-P, n876,** σ$1^{s}52$/913**, mb5.0**/172**, 57C-131D, Fault plane solution: NP1:**ϕ_s241.56120°, δ30.98558°, λ-39.73732°. **NP2:**ϕ_s7.03813°**,** δ70.78524°, λ-114.78695°. **Principal axes:** T Plg21.9307°**,** Azm115.6755°**;** N Plg23.3215°**,** Azm15.6798°**;** P Plg57.0259°**,** Azm244.0349°**; Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.71	326	*c i*P	P	08 39 33.9	0.0
MSVF	Nonsavu	4.71	326	P	P	08 39 33.9	0.0
MSVF	Nonsavu	4.71	326	P	P	08 39 34.0	0.0
RAO	Raoul Island	7.61	171	P	P	08 39 58.9	+0.5
	319nm,0.3s,baz=150,slow=20,SNR=8.5						
RAO				S	S	08 41 30.1	-3.3
	205nm,0.3s,baz=113,slow=22,SNR=12						
RAO	Raoul Island	7.61	171	P	P	08 39 58.7	+0.3
RAO	Raoul Island	7.61	171	P	P	08 39 58.7	+0.3
GLKZ	Green Lake	7.62	171	P	P	08 39 58.7	+0.3
GLKZ				S	S	08 41 27.4	-6.1
NIUE	Niue	9.10	75	P	P	08 40 11.7	-1.1
	baz=9.0,SNR=5.5						
NIUE	Niue	9.10	75	P	P	08 40 12.3	-0.4
AFI	Afiamalu	10.50	44	P	P	08 40 24.2	-2.4
AFI				S	S	08 42 18.4	-6.4
AFI	Afiamalu	10.50	44	P	P	08 40 23.8	-2.8
AFI	Afiamalu	10.50	44	P	P	08 40 24.9	-1.7
MARNC	Mare, Loyalty	11.87	269	P	P	08 40 39.7	-0.3
DVP	Devils Point	12.50	286	P	P	08 40 46.5	+0.1
YATNC	Mamie plateau,	12.90	266	P	P	08 40 51.0	+0.7
DZM	Mont Dzumac	13.32	266	P	P	08 40 54.0	-0.7
	6.5nm,0.3s,baz=82,slow=20,SNR=54						
DZM	Mont Dzumac	13.32	266	*e*P	P	08 40 53.7	-0.9
	124nm,1.1s						
DZM	Mont Dzumac	13.32	266	P	P	08 40 54.3	-0.3
NOUC	Port Laguerre	13.45	266	P	P	08 40 55.7	-0.1
NFK	Norfolk Island	13.71	235	P	P	08 41 00.4	+2.1
	baz=14,SNR=4.9						
SANVU	Saraoutou	14.29	293	P	P	08 41 03.2	-0.9
SANVU	Saraoutou	14.29	293	P	P	08 41 04.0	-0.1
OUZ	Omahuta	14.87	204	P	P	08 41 12.2	+3.1
KOUNC	Koumac, New Ca	15.44	271	P	P	08 41 16.2	+1.7
KUZ	Kuaotunu	15.62	195	P	P	08 41 18.5	+2.6
WIAZ	Waiheke Island	15.82	197	P	P	08 41 19.7	+2.0
MXZ	Matakaoa Point	15.95	187	P	P	08 41 18.3	-0.6
MXZ				S	S	08 43 53.8	-5.0
MYRZ	Mayor Island	16.02	193	P	P	08 41 22.6	+3.0
MKAZ	Moumakai	16.11	196	P	P	08 41 22.7	+2.4
HAZ	Te Kaha	16.21	189	P	P	08 41 20.3	-0.9
HAZ				S	S	08 43 57.2	-5.8
PKGZ	Pakihiroa	16.30	188	P	P	08 41 21.3	-0.9
RUGZ	Raukumara Rang	16.43	189	P	P	08 41 22.3	-1.1
RUGZ				S	S	08 44 01.0	-6.0
TGRZ	Tauranga	16.45	193	P	P	08 41 26.2	+2.8
PUZ	Puketiti	16.46	187	P	P	08 41 22.7	-0.9
PUZ				S	S	08 43 58.2	-9.0
OPRZ	Ohinepanea	16.50	192	P	P	08 41 24.4	+0.5
TWGZ	Tauwhareparae	16.60	188	P	P	08 41 24.7	-0.2
TWGZ				S	S	08 44 03.8	-5.8
MARZ	Manawahe	16.61	191	P	P	08 41 26.4	+1.4
TOZ	Tahuroa Road	16.61	195	P	P	08 41 27.6	+2.7
KMRZ	Kaimai	16.62	194	P	P	08 41 27.8	+2.7
EDRZ	Edgecumbe	16.72	191	P	P	08 41 26.8	+0.8
KARZ	Kaharoa	16.73	193	P	P	08 41 27.1	+1.1
OMRZ	Omania	16.79	192	P	P	08 41 28.3	+1.7
MKRZ	Makatiti	16.80	192	P	P	08 41 30.4	+3.6
URZ	Urewera	16.80	190	P	P	08 41 24.8	-1.9
	33nm,0.3s,baz=281,slow=2.2,SNR=138						
URZ				S	S	08 44 08.1	-4.7
	3.8nm,0.3s,baz=37,slow=23,SNR=16						
URZ	Urewera	16.80	190	P	P	08 41 24.7	-1.9
URZ				S	S	08 44 05.2	-7.6
MWZ	Matawai	16.81	189	P	P	08 41 26.1	-0.8
MWZ				S	S	08 44 06.1	-7.0
NGRZ	Ngongotaha	16.82	193	P	P	08 41 30.0	+3.1
TKGZ	Te Karaka	16.87	188	P	P	08 41 27.2	-0.1
TKGZ				S	S	08 44 09.9	-4.0
CNGZ	Carnagh Statio	16.87	187	P	P	08 41 27.7	+0.4
CNGZ				S	S	08 44 09.5	-4.4
TARZ	Mount Tarawera	16.89	192	P	P	08 41 28.6	+1.0
RAGZ	Rawiri	16.99	189	P	P	08 41 28.3	-0.2
RAGZ				S	S	08 44 12.3	-3.7
HSRZ	Hossack Road	17.01	192	P	P	08 41 30.6	+1.9
MUGZ	Murupara	17.07	191	P	P	08 41 27.7	-1.5
MUGZ				S	S	08 44 13.0	-4.2
HRRZ	Handcock Road	17.08	192	P	P	08 41 30.3	+1.0
RIGZ	Rimuhau	17.15	188	P	P	08 41 29.3	-0.6
RIGZ				S	S	08 44 14.6	-3.8
PRRZ	Plateau Road	17.16	192	P	P	08 41 30.5	+0.5
RTZ	Ruatahuna	17.17	190	P	P	08 41 29.7	-0.5
RTZ				S	S	08 44 13.2	-5.7
WPRZ	Whakapapatarin	17.23	192	P	P	08 41 31.4	+0.8
KUTZ	Kaahu Road	17.27	193	P	P	08 41 32.7	+1.7
SNGZ	Shannon Statio	17.28	189	P	P	08 41 29.9	-1.2
PRGZ	Paritu Road	17.34	188	P	P	08 41 33.2	+1.5
MTHZ	Maungataniwha	17.43	190	P	P	08 41 31.3	-1.2
RAHZ	Arahi	17.45	190	P	P	08 41 31.6	-1.1
KNZ	Kokohu	17.47	188	P	P	08 41 32.4	-0.4
MRHZ	Matea Rd	17.48	191	P	P	08 41 32.4	-0.6
WATZ	Wairara	17.50	193	P	P	08 41 34.3	+1.2
HIZ	Hauiti	17.52	196	P	P	08 41 35.8	+2.6
HIZ	Hauiti	17.52	196	P	P	08 41 36.1	+2.8
MHGZ	Mahia Peninsul	17.57	187	P	P	08 41 34.4	+0.7
WHHZ	Waihua	17.59	189	P	P	08 41 33.8	-0.1
RATZ	Rangitukua	17.64	193	P	P	08 41 35.3	+0.8
NMHZ	Naumai	17.67	190	P	P	08 41 33.8	-0.9
RITZ	Rihia Road	17.73	193	P	P	08 41 36.0	+0.8
KATZ	Kakaramea	17.76	193	P	P	08 41 37.0	+1.4
BKZ	Black Stump Fm	17.79	191	P	P	08 41 34.1	-1.7
BKZ				IAmb	IAmb	08 41 38.9	
	comp=Z,24nm,0.6s						
BKZ	Black Stump Fm	17.79	191	P	P	08 41 34.0	-1.8
ARHZ	Aropaoanui	17.80	190	P	P	08 41 36.3	+0.5
KRVZ	Karewarewa	17.89	193	P	P	08 41 37.4	+0.7
TMVZ	Te Maari	17.90	193	P	P	08 41 36.3	-0.5
TWVZ	Taurewa	17.91	194	P	P	08 41 37.5	+0.5
WTVZ	West Tongariro	17.92	193	P	P	08 41 37.5	+0.5
OTVZ	Oturere	17.95	193	P	P	08 41 36.3	-1.1
NGZ	Ngauruhoe	17.98	193	P	P	08 41 38.1	+0.5
MCHZ	McNeill Hill	18.03	190	P	P	08 41 36.6	-1.3
TUVZ	Tukino	18.05	193	P	P	08 41 38.1	-0.2
KWHZ	Kaweka Forest	18.06	191	P	P	08 41 36.8	-1.4
WHVZ	Whangaehu Hut	18.08	193	P	P	08 41 38.4	-0.2
RAR	Rarotonga	18.11	92	P	P	08 41 39.8	+1.0
	comp=Z,3.5nm,0.3s,baz=239,slow=8.7,SNR=5.0						
RAR	Rarotonga	18.11	92	P	P	08 41 39.9	+1.0
RAR				pmax	pmax		
	comp=Z,273nm,1.6s						
RAR	Rarotonga	18.11	92	IAmb	IAmb	08 41 41.5	
	comp=Z,273nm,1.6s						
VRZ	Vera Road	18.12	195	P	P	08 41 41.6	+2.9
WNVZ	Wahianoa	18.12	193	P	P	08 41 38.0	-0.9
MOVZ	Moawhango	18.17	193	P	P	08 41 39.2	-0.1
CKHZ	Cape Kidnapper	18.18	189	P	P	08 41 39.8	+0.6
BHHZ	Black Hill Sta	18.18	192	P	P	08 41 37.4	-2.0
MTVZ	Mangateitei	18.20	193	P	P	08 41 39.8	+0.2
KRHZ	Kereru	18.28	191	P	P	08 41 39.6	-0.6
KAHZ	Kahuranaki	18.34	190	P	P	08 41 40.4	-0.4
PKE	Pukeiti	18.38	197	P	P	08 41 45.2	+4.0
NEZ	North Egmont	18.43	197	P	P	08 41 45.6	+4.0
KHEZ	Kahui Hut	18.47	197	P	P	08 41 45.9	+3.9
PREZ	Palmer Road	18.48	196	P	P	08 41 45.7	+3.7
NBEZ	Newall Road No	18.48	197	P	P	08 41 46.2	+4.2
LREZ	Lake Rotokare	18.52	196	P	P	08 41 44.9	+2.5
PNHZ	Pukenui	18.57	191	P	P	08 41 41.8	-1.1
PXZ	Pawanui	18.58	189	P	P	08 41 43.2	+0.4
NMEZ	Namu Road	18.62	197	P	P	08 41 47.1	+3.9
WAZ	Wanganui	18.66	194	P	P	08 41 43.6	-0.1
WPHZ	Waipukurau	18.68	190	P	P	08 41 44.5	+0.8
TSZ	Takapari Road	18.76	192	P	P	08 41 43.6	-1.0
PRHZ	Porangahau	18.84	190	P	P	08 41 45.5	+0.3
DVHZ	Dannevirke	18.95	191	P	P	08 41 46.3	0.0
OHWZ	Ohakea	19.02	193	P	P	08 41 47.2	+0.4
ANWZ	Angora Road	19.06	190	P	P	08 41 47.0	-0.2
POWZ	Post Office Ro	19.11	192	P	P	08 41 48.2	+0.5
PRWZ	Pori Road	19.23	191	P	P	08 41 49.7	+0.9
BFZ	Birch Farm	19.31	190	P	P	08 41 48.7	-0.8
BFZ				IAmb	IAmb	08 41 51.6	
	comp=Z,43nm,0.9s						
BFZ	Birch Farm	19.31	190	P	P	08 41 48.5	-1.0
MRZ	Mangatainoka R	19.41	192	P	P	08 41 48.8	-1.6
TIWZ	Tintock	19.46	191	P	P	08 41 50.8	-0.1
OGWZ	Otaki Gorge	19.64	193	P	P	08 41 52.0	-0.5
HOWZ	Holdsworth Sta	19.65	192	P	P	08 41 51.7	-0.9
MTW	Mount Morrison	19.91	192	P	P	08 41 54.2	-0.6
CAW	Cannon Point	19.94	193	P	P	08 41 54.5	-0.7
PAWZ	Paruwai Farm	20.14	192	P	P	08 41 56.6	-0.3
MSWZ	Moikau Station	20.20	192	P	P	08 41 57.3	-0.2
SNZO	South Karori	20.21	193	P	P	08 41 57.1	-0.5
BHW	Baring Head	20.27	193	P	P	08 41 57.5	-0.6
QRZ	Quartz Range	20.31	198	P	P	08 41 59.4	+0.9
PLWZ	Palliser	20.35	192	P	P	08 41 58.4	-0.6
NNZ	Nelson	20.44	196	P	P	08 41 59.8	+0.1
NNZ				IAmb	IAmb	08 42 02.0	
	comp=Z,98nm,1.3s						
BSWZ	Blackbirch Sta	20.79	195	P	P	08 42 03.7	+0.9
THZ	Tophouse	21.07	197	P	P	08 42 05.1	-0.3
LTZ	Lake Taylor	22.20	197	IAmb	IAmb	08 42 17.6	
	comp=Z,41nm,0.5s						
OXZ	Oxford	22.76	197	IAmb	IAmb	08 42 20.6	
	comp=Z,52nm,0.8s						
MQZ	McQueen’s Vall	22.96	195	P	P	08 42 21.8	-0.3
MQZ				IAmb	IAmb	08 42 29.8	
	comp=Z,42nm,1.2s						
RPZ	Rata Peaks	23.39	198	P	P	08 42 27.0	+1.0
	comp=Z,17nm,0.3s,baz=354,slow=3.0,SNR=24						
RPZ	Rata Peaks	23.39	198	IAmb	IAmb	08 42 30.6	
	comp=Z,22nm,0.5s						
HNR	Honiara	23.45	298	P	P	08 42 25.9	-0.9
	comp=Z,67nm,0.4s,baz=144,slow=6.2,SNR=4.1						
FOZ	Fox Glacier	23.61	200	P	P	08 42 27.5	-0.3
FOZ				IAmb	IAmb	08 42 30.3	
	comp=Z,57nm,0.9s						
LBZ	Lake Benmore	24.26	199	P	P	08 42 33.1	-0.5
LBZ				IAmb	IAmb	08 42 34.0	
	comp=Z,26nm,1.2s						
ODZ	Otahua Downs	24.73	197	P	P	08 42 37.2	-0.5
ODZ				IAmb	IAmb	08 42 53.8	
	comp=Z,43nm,1.3s						
WKZ	Wanaka	25.02	200	P	P	08 42 40.1	-0.3
WKZ				IAmb	IAmb	08 42 45.0	
	comp=Z,69nm,1.5s						
MLZ	Mavora Lakes	25.79	201	P	P	08 42 48.1	+1.0
MLZ				IAmb	IAmb	08 42 50.5	
	comp=Z,32nm,0.8s						
DCZ	Deep Cove	26.21	202	P	P	08 42 52.0	+1.3
DCZ				IAmb	IAmb	08 42 53.2	
	comp=Z,44nm,1.2s						
EIDS	Eidsvold	27.45	257	P	P	08 43 02.3	+0.4
	baz=28,SNR=43						
EIDS	Eidsvold	27.45	257	P	P	08 43 02.7	+0.8
TBI	Tubuai	27.52	99	*e*P	P	08 43 03.7	+1.2
	comp=Z,126nm,0.8s						
ARMA	Armidale	27.53	246	P	P	08 43 04.3	+1.7
	baz=28,SNR=35						
ARMA	Armidale	27.53	246	P	P	08 43 04.4	+1.7
PAE	Paea	28.17	87	*e*P	P	08 43 08.8	+0.6
	comp=Z,3.9nm,0.9s						
PPT2	Papeete2	28.19	87	*e*P	P	08 43 09.4	+0.9
	comp=Z,30nm,0.9s						
PPT	Papeete	28.20	87	P	P	08 43 10.3	+1.8
	comp=Z,33nm,0.7s,baz=30,slow=12,SNR=4.1						
TIAR	Tiarei	28.41	87	*e*P	P	08 43 10.9	+0.5
	comp=Z,8.9nm,0.7s						
TVO	Taravao	28.45	87	*e*P	P	08 43 11.2	+0.5
	comp=Z,14nm,0.7s						
MGCD	Mangrove Creek	28.62	240	P	P	08 43 13.7	+1.8
	baz=29,SNR=29						
RMQ	Roma	29.57	254	P	P	08 43 21.8	+1.5
	baz=30,SNR=43						
VAH	Vaihoa	30.61	83	*e*P	P	08 43 29.7	+0.5
	comp=Z,60nm,0.8s						
CNB	Canberra Magne	30.62	237	P	P	08 43 30.8	+1.7
	baz=31,SNR=59						
CAN	Canberra	30.90	237	P	P	08 43 31.9	+0.3
CAN				pmax	pmax		
	comp=Z,139nm,1.1s						
CAN	Canberra	30.90	237	P	P	08 43 31.9	+0.3
YNG	Young	31.09	239	P	P	08 43 34.6	+1.5
	baz=31,SNR=8.1						
CTAO	Charters Tower	32.26	266	P	P	08 43 43.7	+0.4
CTAO				pmax	pmax		
	comp=Z,91nm,0.6s						
CTAO	Charters Tower	32.26	266	P	P	08 43 43.7	+0.4
CMSA	Cobar Meteorol	32.74	245	P	P	08 43 48.0	+0.8
	baz=33,SNR=72						
QLP	Quilpie	33.63	254	P	P	08 43 55.2	+0.5
	baz=34,SNR=12						
TOO	Toolangi	34.28	235	P	P	08 44 01.1	+1.1
	baz=34,SNR=16						
TOO	Toolangi	34.28	235	P	P	08 44 00.2	+0.3
TOO				pmax	pmax		
	comp=Z,43nm,1.0s						
TOO	Toolangi	34.28	235	P	P	08 44 00.2	+0.3
TOO				IAmb	IAmb	08 44 02.1	
	comp=Z,43nm,0.9s						
MTSU	Mount Surprise	34.42	269	P	P	08 44 01.6	+0.3
	baz=34,SNR=180						
PMG	Port Moresby	34.53	285	P	P	08 44 02.2	-0.1
	comp=Z,98nm,0.7s,baz=89,slow=5.0,SNR=20						
PMG	Port Moresby	34.53	285	*ce*P	P	08 44 02.2	-0.1
PMG				pmax	pmax		
	comp=Z,148nm,1.0s						
PMG	Port Moresby	34.53	285	P	P	08 44 01.8	-0.5
PMG	Port Moresby	34.53	285	P	P	08 44 02.6	+0.3
STKA	Stephens Creek	36.25	245	P	P	08 44 17.2	+1.0
	baz=36,SNR=79						
STKA	Stephens Creek	36.25	245	P	P	08 44 17.3	+1.0
	comp=Z,40nm,0.5s,baz=94,slow=11,SNR=178						
STKA				ScP	ScP	08 49 14.3	+0.6
	comp=Z,6.1nm,0.7s,baz=66,slow=5.4,SNR=4.7						
STKA	Stephens Creek	36.25	245	P	P	08 44 17.3	+1.0
STKA				pmax	pmax		
	comp=Z,26nm,1.2s						
STKA	Stephens Creek	36.25	245	P	P	08 44 17.2	+1.0
STKA				IAmb	IAmb	08 44 18.4	
	comp=Z,26nm,1.2s						
ARPS	Mount Arapiles	36.88	237	P	P	08 44 22.2	+0.8
	baz=37,SNR=9.0						
MANU	Manus Island	37.93	296	P	P	08 44 30.5	+0.3
MANU				IAmb	IAmb	08 44 31.3	
	comp=Z,112nm,1.6s						
QIS	Mount Isa	38.35	264	P	P	08 44 33.1	-0.4
	baz=38,SNR=44						
HTT	Hallett	38.67	243	P	P	08 44 36.6	+0.6
	baz=39,SNR=28						
BBOO	Buckleboo	41.00	245	P	P	08 44 54.8	+0.3
	baz=41,SNR=72						
BBOO	Buckleboo	41.00	245	P	P	08 44 54.1	-0.3
AS31	Alice Springs	43.15	258	P	P	08 45 11.2	-0.3
AS31				IAmb	IAmb	08 45 13.0	
	comp=Z,40nm,0.5s						
ASAR	Alice Springs	43.15	258	P	P	08 45 11.6	+0.2
	comp=Z,123nm,0.7s,baz=93,slow=7.8,SNR=1678						
ASAR				PcP	PcP	08 46 47.6	+0.7
	comp=Z,12nm,0.5s,baz=108,slow=3.7,SNR=8.6						
ASAR				ScP	ScP	08 49 43.8	+2.7
	comp=Z,8.6nm,0.9s,baz=111,slow=5.0,SNR=12						
ASAR				S	S	08 50 52.8	-2.5
	comp=Z,15nm,0.8s,baz=95,slow=16,SNR=35						
ASAR				ScS	ScS	08 54 05.7	+1.5
	comp=Z,4.0nm,0.9s,baz=94,slow=7.0,SNR=4.4						
ASAR	Alice Springs	43.15	258	P	P	08 45 10.4	-1.1
ASAR	Alice Springs	43.15	258	P	P	08 45 10.4	-1.1
WRAB	Tennant Creek	43.31	264	P	P	08 45 12.2	-0.5
WRAB				pmax	pmax		
	comp=Z,158nm,1.0s						
WRAB	Tennant Creek	43.31	264	P	P	08 45 12.2	-0.5
WRA	Warramunga Arr	43.32	264	P	P	08 45 12.2	-0.6
	comp=Z,87nm,0.8s,baz=96,slow=6.5,SNR=634						
WRA				PcP	PcP	08 46 48.7	+1.2
	comp=Z,5.1nm,0.6s,baz=107,slow=2.7,SNR=2.5						
WRA				ScP	ScP	08 49 44.2	+2.4
	comp=Z,8.2nm,0.9s,baz=90,slow=4.2,SNR=10						
WRA				S	S	08 50 54.0	-3.9
	comp=Z,4.8nm,1.0s,baz=102,slow=18,SNR=8.6						
WRA				PKiKP	PKiKP	08 53 47.0	-1.1
	comp=Z,0.3nm,0.4s,baz=87,slow=0.6,SNR=5.0						
WRA				ScS	ScS	08 54 07.7	+2.3
	comp=Z,2.4nm,1.1s,baz=104,slow=6.1,SNR=5.3						
WRA	Warramunga Arr	43.32	264	P	P	08 45 11.2	-1.6
WRA				pmax	pmax		
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	43.32	264	P	P	08 45 11.2	-1.6
JAY	Jayapura	43.37	290	P	P	08 45 13.1	-0.1
	comp=Z,135nm,0.6s,baz=139,slow=4.1,SNR=56						
JAY	Jayapura	43.37	290	P	P	08 45 12.8	-0.5
	comp=Z,1µmcomp=Z,134nm,0.9s						
GENI	Genyem	43.80	290	P	P	08 45 16.5	0.0
	comp=Z,246nm,1.1s						
KDU	Kakadu	46.85	273	P	P	08 45 39.4	-0.3
	baz=47,SNR=9.2						
FORT	Forrest	47.78	248	P	P	08 45 46.4	-0.1
	baz=48,SNR=65						
FORT	Forrest	47.78	248	P	P	08 45 45.7	-0.7
BAKI	Biak	48.03	289	P	P	08 45 49.1	+0.6
	comp=Z,3µmcomp=Z,213nm,1.1s						
MTN	Manton Dam	48.05	272	P	P	08 45 47.9	-0.8
	baz=48,SNR=33						
FAKI	Fak Fak	50.68	285	P	P	08 46 08.3	+0.4
	comp=Z,85nm,1.3s						
ANA2	Anatahan	51.10	315	P	P	08 46 10.0	-0.8
ANA2	Anatahan	51.10	315	P	P	08 46 11.0	+0.2
	comp=Z,276nm,0.6s						
FITZ	Fitzroy Crossi	51.75	264	P	P	08 46 15.8	+0.2
	baz=52,SNR=56						
FITZ	Fitzroy Crossi	51.75	264	P	P	08 46 15.8	+0.2
	comp=Z,24nm,0.4s,baz=91,slow=4.4,SNR=113						
FITZ	Fitzroy Crossi	51.75	264	IAmb	IAmb	08 46 17.1	
	comp=Z,101nm,1.3s						
SIJI	Sorong	52.47	286	P	P	08 46 20.8	0.0
	comp=Z,341nm,0.7s,baz=91,slow=5.9,SNR=91						
SWI	Sorong	52.47	286	P	P	08 46 20.3	-0.5
	comp=Z,5µmcomp=Z,587nm,0.8s						
KMBL	Kambalda	53.04	246	P	P	08 46 24.4	-0.2
	baz=53,SNR=18						
MSAI	Masohi	53.50	282	P	P	08 46 27.7	-0.4
	comp=Z,44nm,0.6s						
NLAI	Namlea	55.21	282	P	P	08 46 39.8	-0.2
	comp=Z,2µmcomp=Z,108nm,0.8s						
BATI	Baumata	55.83	272	P	P	08 46 45.8	+1.5
	comp=Z,148nm,0.6s,baz=145,slow=1.7,SNR=18						
PSA00	Pilbara Seismi	56.30	258	P	P	08 46 46.0	-1.4
MEEK	Meekatharra	56.46	252	P	P	08 46 47.8	-0.6
	baz=56,SNR=45						
KLBR	Kellerberrin	56.52	246	P	P	08 46 48.9	+0.1
	baz=57,SNR=42						
SBA	Scott Base	56.61	184	P	P	08 46 49.9	+1.4
SBA				pmax	pmax		
	comp=Z,71nm,1.1s						
SBA	Scott Base	56.61	184	P	P	08 46 49.9	+1.4
SBA				IAmb	IAmb	08 46 53.6	
	comp=Z,71nm,1.1s						
VNDA	Vanda	56.62	185	P	P	08 46 51.6	+3.0
	comp=Z,8.8nm,0.6s,baz=358,slow=8.1,SNR=46						
VNDA	Vanda	56.62	185	P	P	08 46 50.0	+1.4
VNDA				pmax	pmax		
	comp=Z,46nm,1.6s						
VNDA	Vanda	56.62	185	P	P	08 46 50.0	+1.4
TNTI	Ternate	56.68	286	P	P	08 46 50.1	0.0
TNTI				IAmb	IAmb	08 46 51.0	
	comp=Z,108nm,1.0s						
SANI	Sanana	56.71	282	P	P	08 46 49.8	-0.5
	comp=Z,1µmcomp=Z,113nm,0.8s						
NWAO	Narrogin (SRO)	56.82	244	P	P	08 46 51.1	+0.4
	baz=57,SNR=12						
NWAO	Narrogin (SRO)	56.82	244	P	P	08 46 51.0	+0.2
	comp=Z,17nm,0.6s,baz=111,slow=6.7,SNR=15						
NWAO	Narrogin (SRO)	56.82	244	P	P	08 46 51.4	+0.6
NWAO				pmax	pmax		
	comp=Z,40nm,1.1s						
NWAO	Narrogin (SRO)	56.82	244	P	P	08 46 51.4	+0.6
NWAO	Narrogin (SRO)	56.82	244	IAmb	IAmb	08 46 52.2	
	comp=Z,32nm,1.1s						
BLDU	Ballidu	57.53	247	P	P	08 46 55.7	0.0
	baz=58,SNR=60						
MUN	Mundaring	57.79	245	P	P	08 46 57.7	+0.3
	baz=58,SNR=15						
EDFI	Ende, Flores	58.15	273	P	P	08 46 59.6	-0.6
MORW	Morawa	58.33	248	P	P	08 47 01.1	+0.1
	baz=58,SNR=16						
MORW	Morawa	58.33	248	IAmb	IAmb	08 47 02.2	
	comp=Z,92nm,1.3s						
LUWI	Luwuk	60.05	282	P	P	08 47 13.0	+0.3
LUWI				IAmb	IAmb	08 47 14.0	
	comp=Z,235nm,1.3s						
GIRL	Giralia	61.14	255	P	P	08 47 20.9	+1.2
	baz=61,SNR=6.9						
JCJ	Chichijima	61.22	321	P	P	08 47 20.0	-0.1
	comp=Z,129nm,0.5s,baz=270,slow=20						
JCJ	Chichijima	61.22	321	IAmb	IAmb	08 47 20.6	
	comp=Z,153nm,0.6s						
TOLI2	Tolitoli	62.75	283	P	P	08 47 29.7	-0.6
TOLI2				IAmb	IAmb	08 47 30.8	
	comp=Z,53nm,0.9s						
JAGI	Jajag, Banyuwa	65.25	271	P	P	08 47 45.0	-1.1
JHJ	Hachijo jima 2	67.10	323	P	P	08 47 57.3	+0.3
	comp=Z,154nm,0.5s,baz=105,slow=23,SNR=6.9						
SPMM	Sapulut	68.18	285	P	P	08 48 05.0	+0.9
QSPA	South Pole Qui	68.37	180	P	P	08 48 06.7	+2.3
	comp=Z,64nm,0.8s,baz=352,slow=0.6,SNR=300						
QSPA	South Pole Qui	68.37	180	P	P	08 48 05.7	+1.2
QSPA				IAmb	IAmb	08 48 07.8	
	comp=Z,79nm,0.9s						
UGM	Wanagama	68.81	270	P	P	08 48 06.0	-2.0
KKM	Kota Kinabalu	68.98	286	P	P	08 48 08.7	-0.2
KKM				IAmb	IAmb	08 48 09.7	
	comp=Z,41nm,0.6s						
MJAR	Matsushiro Arr	70.51	325	P	P	08 48 17.2	-0.2
	comp=Z,28nm,0.6s,baz=160,slow=5.7,SNR=70						
MJAR	Matsushiro Arr	70.51	325	P	P	08 48 17.3	-0.2
MJAR				pmax	pmax		
	comp=Z,17nm,0.6s						
MJAR	Matsushiro Arr	70.51	325	P	P	08 48 17.3	-0.2
MAJO	Matsushiro	70.52	325	*i* P	P	08 48 16.8	-0.7
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MAJO	Matsushiro	70.52	325	P	P	08 48 16.7	-0.8
MAJO				IAmb	IAmb	08 48 17.9	
	comp=Z,32nm,0.6s						
MAT	Matsushiro	70.52	325	P	P	08 48 17.3	-0.2
JMN	Monobe	70.95	320	IAmb	IAmb	08 48 21.5	
	comp=Z,35nm,0.8s						
SBUM	Sibu	71.10	281	IAmb	IAmb	08 48 23.2	
	comp=Z,30nm,1.2s						
SBUM	Sibu	71.10	281	P	P	08 48 22.0	+0.6
CISI	Cisompet, Garu	71.45	269	P	P	08 48 21.9	-1.7
JSU	Suzuyama	71.58	316	IAmb	IAmb	08 48 25.1	
	comp=Z,49nm,0.9s						
LEM	Lembang	71.89	270	P	P	08 48 26.8	+0.5
	comp=Z,137nm,0.8s,baz=97,slow=8.0,SNR=14						
JNU	Nakatsue	72.38	318	P	P	08 48 28.4	0.0
	comp=Z,31nm,0.9s,baz=304,slow=2.2,SNR=13						
JNU	Nakatsue	72.38	318	P	P	08 48 28.6	+0.2
JNU				IAmb	IAmb	08 48 29.6	
	comp=Z,59nm,1.1s						
KSM	Kuching	72.46	279	P	P	08 48 28.2	-1.1
KSM				IAmb	IAmb	08 48 30.7	
	comp=Z,69nm,0.8s						
KSM	Kuching	72.46	279	P	P	08 48 30.0	+0.7
TWG	Pinlang	73.08	304	P	P	08 48 31.2	-1.4
YULB	Yu-li	73.22	304	IAmb	IAmb	08 48 42.1	
	comp=Z,33nm,0.7s						
NACB	Ninganchiao	73.42	305	IAmb	IAmb	08 48 34.9	
	comp=Z,74nm,0.8s						
TPUB	Ta-pu	73.68	304	P	P	08 48 34.2	-1.8
SSLB	Suanglung	73.70	304	P	P	08 48 34.6	-1.5
YHNB	Yeheng	73.86	305	P	P	08 48 36.5	-0.6
JKA	Kamikawa-asahi	74.25	332	IAmb	IAmb	08 48 41.4	
	comp=Z,33nm,0.8s						
ASAJ	Asahikawa	74.25	332	P	P	08 48 40.5	+1.7
	comp=Z,35nm,0.8s,baz=197,slow=5.5,SNR=24						
NIKH	Nikolski High	74.90	6	P	P	08 48 42.3	+0.2
YSS	Yuzh-Sakhalins	76.47	334	⇓*e*P	P	08 48 52.0	+1.1
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS	Yuzh-Sakhalins	76.47	334	P	P	08 48 51.1	+0.2

YSS				IAmb	IAmb	08 48 54.6	
	comp=Z,31nm,0.7s						
TJN	**Taejon**	**76.69**	**318**	*ce*P	**P**	**08 48 51.1**	**-1.3**
KSRS	**Korea Array**	**77.04**	**319**	P	**P**	**08 48 55.2**	**+1.0**
	comp=Z,9.1nm,0.9s,baz=135,slow=5.8,SNR=19						
PEA0B	**Petropavlovsk-**	**77.14**	**346**	*ce*P	**P**	**08 48 54.5**	**0.0**
PEA0B	**Petropavlovsk-**	**77.14**	**346**	IAmb	IAmb	08 48 55.3	
	comp=Z,58nm,0.8s						
PETK	**Petropavlovsk-**	**77.14**	**346**	P	**P**	**08 48 54.6**	**+0.1**
	comp=Z,38nm,0.7s,baz=230,slow=3.7,SNR=75						
DLV	**T Lat**	**78.39**	**288**	IAmb	IAmb	08 49 04.5	
	comp=Z,39nm,0.7s						
BELA	**Belgrano 2**	**78.52**	**173**	P	**P**	**08 49 02.8**	**+1.2**
MYKOM	**Kota Tinggi**	**78.54**	**277**	P	**P**	**08 48 59.7**	**-3.1**
MSHR	**Mys Shultsa**	**78.63**	**325**	*i* P	**P**	**08 49 02.9**	**+0.2**
MSHR				pmax	pmax		
	comp=Z,31nm,1.0s						
USA0B	**Ussuriysk Arra**	**79.33**	**327**	*d i*P	**P**	**08 49 06.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**79.33**	**327**	IAmb	IAmb	08 49 08.6	
	comp=Z,40nm,0.9s						
USRK	**Ussuriysk Ar.**	**79.33**	**327**	P	**P**	**08 49 07.3**	**+1.0**
	comp=Z,23nm,0.8s,baz=120,slow=3.4,SNR=40						
USRK	**Ussuriysk Ar.**	**79.33**	**327**	P	**P**	**08 49 06.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**79.33**	**327**	P	**P**	**08 49 06.8**	**+0.6**
PKM	**Mcpherson Peak**	**79.64**	**46**	P	**P**	**08 49 09.8**	**+1.3**
	baz=234						
TYV	**Tymovskoe**	**79.67**	**337**	*e*P	**P**	**08 49 09.0**	**+1.0**
TYV				pmax	pmax		
	comp=Z,43nm,1.0s						
TYV				pmax	pmax		
	comp=Z,800nm,4.8s						
NJ2	**Nanjing**	**79.78**	**310**	*e*P	**P**	**08 49 10.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,42nm,0.8s						
HOPS	**Hopland Field**	**80.02**	**41**	P	**P**	**08 49 12.4**	**+2.4**
MAW	**Mawson**	**80.05**	**200**	P	**P**	**08 49 11.7**	**+1.9**
	comp=Z,7.0nm,0.8s,baz=140,slow=4.7,SNR=6.1						
MAW	**Mawson**	**80.05**	**200**	P	**P**	**08 49 11.2**	**+1.4**
MAW				pmax	pmax		
	comp=Z,70nm,2.0s						
MAW	**Mawson**	**80.05**	**200**	P	**P**	**08 49 11.2**	**+1.4**
MAW				IAmb	IAmb	08 51 24.6	
	comp=Z,70nm,2.0s						
KMRM	**Mail Ridge**	**80.40**	**40**	P	**P**	**08 49 12.1**	**0.0**
KMRM				IAmb	IAmb	08 49 15.7	
	comp=Z,28nm,0.8s						
PMSA	**Palmer Station**	**80.64**	**157**	P	**P**	**08 49 15.6**	**+2.8**
	comp=Z,25nm,0.6s,baz=170,slow=6.5,SNR=6.5						
VES	**Vestal, Richgr**	**80.68**	**46**	P	**P**	**08 49 14.9**	**+1.3**
	baz=235						
MURC	**Murrieta**	**80.70**	**48**	P	**P**	**08 49 15.2**	**+1.4**
	baz=236						
BFSC	**Mount Baldy Ra**	**80.73**	**48**	P	**P**	**08 49 15.5**	**+1.4**
	baz=236						
KHMM	**Horse Mountain**	**80.80**	**39**	P	**P**	**08 49 15.6**	**+1.3**
MONP2	**Monument Peak**	**80.85**	**49**	P	**P**	**08 49 16.2**	**+1.4**
	baz=237						
MDJ	**Mudanjiang**	**80.86**	**326**	P	**P**	**08 49 14.8**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,35nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,350nm,5.9s						
MDJ	**Mudanjiang**	**80.86**	**326**	IAmb	IAmb	08 49 15.9	
	comp=Z,22nm,0.7s						
EDW2	**Edwards Air Fo**	**80.86**	**47**	P	**P**	**08 49 16.1**	**+1.4**
	baz=236						
O02D	**Mt. Diablo Mer**	**80.92**	**40**	P	**P**	**08 49 17.5**	**+2.6**
	baz=232,SNR=11						
IKP	**In-Ko-Pah, Jac**	**80.94**	**50**	P	**P**	**08 49 16.9**	**+1.8**
	baz=237						
ISA	**Isabella, Lake**	**80.98**	**46**	P	**P**	**08 49 16.9**	**+1.7**
	baz=235						
KRMB	**Red Mountain**	**81.10**	**39**	P	**P**	**08 49 18.1**	**+2.4**
ORV	**Oroville**	**81.32**	**41**	P	**P**	**08 49 18.1**	**+1.3**
ORV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ORV	**Oroville**	**81.32**	**41**	P	**P**	**08 49 18.1**	**+1.3**
LRMC	**Laurel Mtn Rad**	**81.41**	**47**	P	**P**	**08 49 18.9**	**+1.3**
	baz=236						
N02D	**Trinity Center**	**81.47**	**40**	P	**P**	**08 49 20.1**	**+2.5**
	baz=232,SNR=10						
OHAK	**Old Harbor**	**81.58**	**14**	P	**P**	**08 49 18.1**	**+0.5**
O03E	**Paynes Creek**	**81.59**	**41**	P	**P**	**08 49 19.7**	**+1.5**
	baz=232,SNR=13						
M02C	**Callahan**	**81.64**	**39**	P	**P**	**08 49 20.8**	**+2.4**
	baz=232,SNR=14						
L02E	**Cave Junction**	**81.68**	**38**	P	**P**	**08 49 20.7**	**+2.1**
	baz=231						
CWC	**Cottonwood Cre**	**81.69**	**46**	P	**P**	**08 49 20.1**	**+1.2**
	baz=235						
BELC	**Belle Mtn. Jos**	**81.75**	**49**	P	**P**	**08 49 20.9**	**+1.6**
	baz=237						
MPMC	**Manual Prospec**	**81.87**	**46**	P	**P**	**08 49 21.4**	**+1.5**
	baz=236						
GSC	**Goldstone, Bar**	**81.91**	**47**	P	**P**	**08 49 21.3**	**+1.4**
	baz=236						
YBH	**Yreka Blue Hor**	**81.93**	**39**	P	**P**	**08 49 22.2**	**+2.2**
	comp=Z,4.8nm,0.5s,baz=211,slow=2.8,SNR=29						
HEC	**Hector,Ludlow**	**81.97**	**48**	P	**P**	**08 49 21.5**	**+1.2**
	baz=237						
K02D	**Willamette Mer**	**81.98**	**38**	P	**P**	**08 49 21.7**	**+1.5**
	baz=231						
GRNR	**Gornyy**	**82.06**	**333**	⇓*i*P	**P**	**08 49 21.5**	**+1.3**
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				MLR	MLR		
	comp=N,560nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,390nm,18.0s						
J01E	**Myrtle Point**	**82.13**	**37**	P	**P**	**08 49 22.3**	**+1.6**
	baz=230						
IPM	**Ipoh**	**82.16**	**278**	P	**P**	**08 49 21.6**	**-0.1**
IPM				IAmb	IAmb	08 49 23.3	
	comp=Z,70nm,0.8s						
IPM	**Ipoh**	**82.16**	**278**	P	**P**	**08 49 23.0**	**+1.3**
KDAK	**Kodiak Island**	**82.25**	**14**	P	**P**	**08 49 21.6**	**+0.6**
	comp=Z,12nm,0.8s,baz=104,slow=3.9,SNR=9.9						
WHN	**Wuhan**	**82.25**	**307**	⇓P	**P**	**08 49 22.5**	**+0.8**
WHN				pmax	pmax		
	comp=Z,38nm,0.9s						
HUMO	**Hull Mountain**	**82.33**	**38**	P	**P**	**08 49 23.6**	**+1.7**
GMRC	**Granite Mounta**	**82.41**	**48**	P	**P**	**08 49 24.2**	**+1.6**
	baz=237						
IRM	**Iron Mountain**	**82.43**	**49**	P	**P**	**08 49 24.3**	**+1.7**
	baz=238						
L04D	**Klamath Falls**	**82.47**	**39**	P	**P**	**08 49 24.4**	**+1.7**
	baz=232,SNR=7.6						
GRAC	**Grapevine Rang**	**82.47**	**45**	P	**P**	**08 49 24.4**	**+1.7**
	baz=236						
M04C	**Macdoel**	**82.48**	**39**	P	**P**	**08 49 24.5**	**+1.8**
	baz=232,SNR=5.8						
FURC	**Furnace Creek,**	**82.51**	**46**	P	**P**	**08 49 24.6**	**+1.8**
	baz=236						
CN2	**Changchun**	**82.56**	**323**	*e*P	**P**	**08 49 23.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,50nm,1.1s						
SHOC	**Shoshone, Teco**	**82.60**	**47**	P	**P**	**08 49 24.9**	**+1.6**
	baz=237						
NVAR	**Mina Array Bea**	**82.67**	**44**	P	**P**	**08 49 25.5**	**+1.6**
	comp=Z,2.8nm,0.7s,baz=227,slow=7.9,SNR=30						
NVAR				pP	**pwP**	**08 51 33.8**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=226,slow=9.2,SNR=5.3						
NVAR	**Mina Array Bea**	**82.67**	**44**	P	**P**	**08 49 25.4**	**+1.4**
NV11	**Mina Array Sit**	**82.77**	**44**	P	**P**	**08 49 26.0**	**+1.6**
I02D	**Swisshome**	**82.78**	**37**	P	**P**	**08 49 26.0**	**+2.1**
	baz=230						
I03D	**Drain, OR**	**82.80**	**37**	P	**P**	**08 49 25.7**	**+1.6**
	baz=231						
KULM	**Kulim**	**82.82**	**279**	IAmb	IAmb	08 49 26.3	
	comp=Z,29nm,0.7s						
KULM	**Kulim**	**82.82**	**279**	P	**P**	**08 49 26.0**	**+1.1**
KLR	**Kul'dur**	**82.99**	**330**	P	**P**	**08 49 26.1**	**+1.1**
	comp=Z,13nm,0.8s,baz=96,slow=3.9,SNR=42						
KLR	**Kul'dur**	**82.99**	**330**	*ce*P	**P**	**08 49 25.2**	**+0.3**
KLR				pmax	pmax		
	comp=Z,15nm,0.9s						
TPNV	**Topopah Spring**	**83.19**	**46**	P	**P**	**08 49 27.9**	**+1.4**
	baz=236						
PDMCI	**Parker Dam,Lak**	**83.21**	**49**	P	**P**	**08 49 27.8**	**+1.4**
	baz=238						
J04D	**Umpqua Nationa**	**83.22**	**38**	P	**P**	**08 49 28.5**	**+2.0**
	baz=232,SNR=8.1						
I04A	**Tendick Farm,**	**83.39**	**38**	P	**P**	**08 49 28.6**	**+1.5**
	baz=232						
K05A	**Summer Lake**	**83.61**	**39**	P	**P**	**08 49 30.1**	**+1.6**
H04D	**Lebanon**	**83.66**	**37**	P	**P**	**08 49 29.9**	**+1.6**
	baz=231						
J05D	**Fort Rock, OR**	**83.75**	**39**	P	**P**	**08 49 31.1**	**+2.1**
	baz=232,SNR=15						
PINE	**Pine Mountain**	**84.23**	**38**	IAmb	IAmb	08 49 34.6	
	comp=Z,27nm,1.2s						
PRN	**Pahroc Range**	**84.24**	**46**	P	**P**	**08 49 33.1**	**+1.5**
I05D	**Terrebonne, OR**	**84.33**	**38**	P	**P**	**08 49 33.4**	**+1.7**
	baz=232						
R11A	**Troy Canyon, C**	**84.40**	**45**	P	**P**	**08 49 33.2**	**+0.8**
	baz=237						
BRLK	**Bradley Lake**	**84.42**	**14**	P	**P**	**08 49 31.5**	**-0.3**
BRLK				IAmb	IAmb	08 49 33.0	
	comp=Z,35nm,0.9s						
E03A	**Lebam**	**84.48**	**35**	P	**P**	**08 49 34.3**	**+2.0**
E03A				IAmb	IAmb	08 51 10.3	
	comp=Z,48nm,1.5s						
SVW2	**Sparrevohn**	**84.69**	**11**	P	**P**	**08 49 33.2**	**+0.1**
SVW2				IAmb	IAmb	08 50 03.7	
	comp=Z,48nm,1.8s						
NLWA	**Neilton Lookou**	**84.86**	**34**	P	**P**	**08 49 36.0**	**+1.7**
NLWA				IAmb	IAmb	08 51 35.9	
	comp=Z,47nm,1.6s						
E04D	**Cinebar**	**85.02**	**35**	P	**P**	**08 49 36.7**	**+1.7**
	baz=231						
D04E	**Lakebay**	**85.31**	**35**	P	**P**	**08 49 38.3**	**+2.1**
	baz=231						
SYO	**Syowa Base**	**85.31**	**193**	⇓*e*P	**P**	**08 49 36.1**	**+0.1**
SYO	**Syowa Base**	**85.31**	**193**	⇑*e*pP	pP	08 51 44.5	-0.1
D03D	**Eldon**	**85.36**	**34**	P	**P**	**08 49 38.3**	**+1.7**
	baz=231						
U15A	**North Rim**	**85.61**	**48**	P	**P**	**08 49 39.9**	**+1.5**
D05A	**Enumclaw**	**85.73**	**35**	IAmb	IAmb	08 49 43.1	
	comp=Z,36nm,1.2s						
RC01	**Rabbit Creek A**	**85.86**	**14**	P	**P**	**08 49 39.0**	**+0.4**
	baz=207						
BJT	**Baijiatuau**	**85.94**	**316**	IAmb	IAmb	08 49 40.9	
	comp=Z,18nm,0.7s						
BJI	**Beijing**	**85.95**	**316**	P	**P**	**08 49 40.5**	**+1.0**
BJI				pmax	pmax		
	comp=Z,26nm,0.7s						
BBB	**Bella Bella**	**86.00**	**29**	P	**P**	**08 49 41.0**	**+1.6**
	comp=Z,15nm,0.9s,baz=227,slow=4.4,SNR=4.1						
BBB	**Bella Bella**	**86.00**	**29**	IAmb	IAmb	08 51 54.8	
	comp=Z,60nm,1.4s						
G08A	**Pilot Rock**	**86.26**	**38**	IAmb	IAmb	08 49 43.7	
	comp=Z,25nm,1.4s						
GYA	**Guiyang**	**86.26**	**300**	⇓P	**P**	**08 49 42.5**	**+1.0**
GYA				pmax	pmax		
	comp=Z,17nm,0.9s						
SKT	**Skwentna**	**86.28**	**13**	P	**P**	**08 49 39.5**	**-1.1**
A04D	**Lummi Island**	**86.31**	**34**	P	**P**	**08 49 42.9**	**+1.9**
	baz=231						
TTA	**Tatalina**	**86.32**	**10**	IAmb	IAmb	08 49 42.4	
	comp=Z,19nm,1.1s						
B05A	**Bryant**	**86.34**	**34**	P	**P**	**08 49 42.6**	**+1.4**
	baz=232,SNR=5.5						
E07A	**Sunnyside**	**86.50**	**36**	IAmb	IAmb	08 49 44.9	
	comp=Z,18nm,0.9s						
HAWA	**Hanford**	**86.58**	**37**	P	**P**	**08 49 42.5**	**+0.1**
SML	**Sawmill**	**86.82**	**14**	IAmb	IAmb	08 49 45.4	
	comp=Z,18nm,1.0s						
SNAA	**Sanae**	**86.84**	**179**	P	**P**	**08 49 43.6**	**+0.2**
SNAA	**Sanae**	**86.84**	**179**	P	**P**	**08 49 43.8**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,15nm,1.3s						
SNAA	**Sanae**	**86.84**	**179**	P	**P**	**08 49 43.8**	**+0.4**
CUT	**Chulitna**	**86.93**	**13**	P	**P**	**08 49 43.4**	**-0.2**
	baz=207,SNR=11						
PBKT	**Sadao Pong**	**86.93**	**289**		pP	08 51 54.4	+0.6
BMO	**Blue Mountains**	**86.96**	**39**	P	**P**	**08 49 43.8**	**-0.6**
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BMO	**Blue Mountains**	**86.96**	**39**	P	**P**	**08 49 43.8**	**-0.6**
VNA3	**Neumayer Olymp**	**87.02**	**177**	P	**P**	**08 49 44.6**	**+0.5**
KLU	**Klutina**	**87.11**	**15**	IAmb	IAmb	08 49 46.0	
	comp=Z,14nm,0.7s						
CRQM	**Cirque**	**87.20**	**17**	IAmb	IAmb	08 49 46.8	
	comp=Z,48nm,1.2s						
TIY	**Taiyuan**	**87.24**	**312**	*e*P	**P**	**08 49 47.3**	**+1.5**
TIY				pmax	pmax		
	comp=Z,43nm,0.6s						
YAH	**Yahtse**	**87.26**	**18**	IAmb	IAmb	08 49 47.5	
	comp=Z,37nm,0.7s						
TGL	**Tana Glacier**	**87.28**	**17**	IAmb	IAmb	08 49 47.1	
	comp=Z,28nm,1.0s						
SEY	**Seymchan**	**87.29**	**347**	P	**P**	**08 49 46.1**	**+0.8**
	comp=Z,23nm,0.6s,baz=152,slow=5.2,SNR=47						
SEY	**Seymchan**	**87.29**	**347**	*i* P	**P**	**08 49 43.9**	**-1.4**
ISLE	**Juniper Island**	**87.29**	**17**	IAmb	IAmb	08 49 47.1	
	comp=Z,25nm,0.9s						
D08A	**Wollman Farm,**	**87.32**	**36**	P	**P**	**08 49 46.8**	**+1.0**
D08A				IAmb	IAmb	08 49 48.5	
	comp=Z,20nm,1.1s						
VNA2	**Neumayer--Watz**	**87.45**	**177**	P	**P**	**08 49 46.9**	**+0.8**
	baz=188,slow=4.2						
NVL	**N'lazarevskaya**	**87.46**	**184**	*e*P	**P**	**08 49 46.0**	**-0.2**
NVL				pmax	pmax		
	comp=Z,17nm,0.6s						
VRDI	**Verde Repeater**	**87.52**	**16**	IAmb	IAmb	08 49 47.7	
	comp=Z,14nm,0.7s						
N25K	**Chitina, Valde**	**87.54**	**16**	P	**P**	**08 49 47.4**	**+0.8**
	baz=212						
N25K	**Chitina, Valde**	**87.54**	**16**	IAmb	IAmb	08 49 48.1	
	comp=Z,23nm,0.7s						
M24K	**Tolsona, Glenn**	**87.58**	**15**	P	**P**	**08 49 47.9**	**+1.1**
	baz=210						
M24K	**Tolsona, Glenn**	**87.58**	**15**	IAmb	IAmb	08 49 48.7	
	comp=Z,26nm,0.8s						
GLB	**Gilahina Butte**	**87.60**	**16**	IAmb	IAmb	08 49 48.3	
	comp=Z,19nm,0.6s						
F10A	**Beach Ranch, E**	**87.64**	**38**	P	**P**	**08 49 48.5**	**+1.0**
F10A				IAmb	IAmb	08 49 49.5	
	comp=Z,16nm,0.8s						
BALM	**Baldy**	**87.65**	**17**	IAmb	IAmb	08 49 48.8	
	comp=Z,27nm,0.6s						
VNA1	**Neumayer--Stat**	**87.68**	**177**	P	**P**	**08 49 46.0**	**-1.2**
MCARA	**McCarthy VSAT**	**87.76**	**17**	IAmb	IAmb	08 49 49.9	
	comp=Z,24nm,1.0s						
KTH	**Kantishna Hill**	**87.82**	**12**	IAmb	IAmb	08 49 48.4	
	comp=Z,28nm,0.9s						
BARN	**Barnard Glacie**	**87.86**	**17**	IAmb	IAmb	08 49 50.1	
	comp=Z,30nm,0.8s						
B08A	**Colville Reser**	**87.86**	**35**	IAmb	IAmb	08 49 50.2	
	comp=Z,12nm,0.8s						
CTGM	**Chitina Glacie**	**87.87**	**17**	IAmb	IAmb	08 49 50.0	
	comp=Z,27nm,0.8s						
RND	**Reindeer**	**88.12**	**13**	P	**P**	**08 49 48.8**	**-0.5**
RND				pmax	pmax		
	comp=Z,56nm,0.8s						
RND	**Reindeer**	**88.12**	**13**	P	**P**	**08 49 48.8**	**-0.5**
ZEA	**Zeya**	**88.13**	**331**	*e*P	**P**	**08 49 50.3**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
DHY	**Denali Highway**	**88.15**	**14**	IAmb	IAmb	08 49 50.6	
	comp=Z,26nm,1.5s						
MNTX	**Cornudas Mount**	**88.37**	**55**	P	**P**	**08 49 52.9**	**+1.8**
	baz=243						
MNTX	**Cornudas Mount**	**88.37**	**55**		pwP	08 52 04.8	+0.7
MCK	**McKinley**	**88.39**	**13**	P	**P**	**08 49 50.3**	**-0.2**
	baz=208,SNR=20						
TX31	**Lajitas Ar. Si**	**88.66**	**58**	P	**P**	**08 49 54.2**	**+1.6**
TXAR	**Lajitas Array**	**88.66**	**58**	P	**P**	**08 49 55.2**	**+2.5**
	comp=Z,1.4nm,0.7s,baz=213,slow=6.2,SNR=23						
TXAR				pP	**pwP**	**08 52 06.4**	**+0.6**
	comp=Z,1.6nm,1.1s,baz=216,slow=6.2,SNR=6.7						
TXAR				PKKPbc	**PKKPbc**	**09 07 31.3**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=138,slow=2.8,SNR=9.0						
TXAR	**Lajitas Array**	**88.66**	**58**	P	**P**	**08 49 54.7**	**+2.1**
TXAR					**pwP**	**08 52 06.5**	**+0.6**
LAMP	**Lampang**	**88.87**	**290**	P	**P**	**08 49 55.8**	**+2.1**
	comp=Z,100nm,0.8s						
KMI	**Kunming**	**88.89**	**298**	⇓P	**P**	**08 49 55.0**	**+1.0**
KMI				pmax	pmax		
	comp=Z,25nm,1.1s						
MENT	**Mentasta**	**88.89**	**15**	IAmb	IAmb	08 49 54.4	
	comp=Z,13nm,0.8s						
PAYA	**Payao**	**89.00**	**291**	P	**P**	**08 49 55.0**	**+0.7**
	comp=Z,5µmcomp=Z,507nm,0.7s						
NEW	**Newport**	**89.01**	**36**	P	**P**	**08 49 54.3**	**+0.6**
	baz=235						
ANMO	**Albuquerque**	**89.04**	**52**	*i* P	**P**	**08 49 51.4**	**-3.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ANMO	**Albuquerque**	**89.04**	**52**	P	**P**	**08 49 55.8**	**+1.4**
	baz=243						
NEA2	**Nenana**	**89.12**	**13**	P	**P**	**08 49 53.0**	**-0.9**
	baz=208,SNR=6.3						
WRH	**Wood River Hil**	**89.22**	**13**	IAmb	IAmb	08 49 54.9	
	comp=Z,25nm,0.8s						
LC01	**Cunco**	**89.22**	**132**	P	**P**	**08 49 57.2**	**+2.2**
LC01				IAmb	IAmb	08 49 57.9	
	comp=Z,23nm,0.8s						
PLCA	**Paso Flores**	**89.27**	**134**	P	**P**	**08 49 57.8**	**+2.4**
	comp=Z,9.5nm,0.6s,baz=231,slow=4.7,SNR=47						
PLCA				PKKPbc	**PKKPbc**	**09 07 28.2**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=27,slow=2.3,SNR=3.7						
PLCA	**Paso Flores**	**89.27**	**134**	P	**P**	**08 49 57.0**	**+1.6**
PLCA				pmax	pmax		
	comp=Z,13nm,0.9s						
PLCA	**Paso Flores**	**89.27**	**134**	P	**P**	**08 49 57.0**	**+1.6**
PLCA				IAmb	IAmb	08 49 58.7	
	comp=Z,13nm,0.8s						
RIDG	**Independent Ri**	**89.30**	**15**	IAmb	IAmb	08 49 56.0	
	comp=Z,13nm,0.9s						
CM36	**Chiang Mai Arr**	**89.34**	**290**	P	**P**	**08 49 57.0**	**+1.1**
CM35	**Chiang Mai Arr**	**89.35**	**290**	P	**P**	**08 49 57.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**89.38**	**315**	*e*P	**P**	**08 49 56.5**	**+0.8**
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,300nm,6.7s						
CM04	**Chiang Mai Arr**	**89.39**	**290**	P	**P**	**08 49 58.0**	**+1.8**
	comp=Z,430nmcomp=Z,55nm,0.9s						
CM09	**Chiang Mai Arr**	**89.40**	**290**	P	**P**	**08 49 58.4**	**+2.2**
	comp=Z,301nmcomp=Z,45nm,0.9s						
HDA	**Harding Lake**	**89.41**	**13**	P	**P**	**08 49 54.9**	**-0.2**
	baz=210,SNR=17						
HDA	**Harding Lake**	**89.41**	**13**	P	**P**	**08 49 54.8**	**-0.3**
HDA				IAmb	IAmb	08 49 55.8	
	comp=Z,18nm,0.6s						
CM01	**Chiang Mai Arr**	**89.42**	**290**	P	**P**	**08 49 58.4**	**+2.1**
	comp=Z,378nmcomp=Z,50nm,0.9s						
CM34	**Chiang Mai Arr**	**89.42**	**290**	P	**P**	**08 49 58.0**	**+1.7**
CM05	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**08 49 58.1**	**+1.8**
	comp=Z,302nmcomp=Z,37nm,0.9s						
CCB	**Clear Creek Bu**	**89.43**	**13**	IAmb	IAmb	08 49 55.6	
	comp=Z,31nm,1.0s						
CM02	**Chiang Mai Arr**	**89.44**	**290**	P	**P**	**08 49 58.5**	**+2.1**
	comp=Z,324nmcomp=Z,44nm,0.9s						
CM31	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**08 49 58.0**	**+1.6**
	comp=Z,920nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**08 49 58.4**	**+1.9**
	comp=Z,29nm,0.8s,baz=133,slow=3.3,SNR=117						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**08 49 58.2**	**+1.8**
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**08 49 58.2**	**+1.8**
CM15	**Chiang Mai Arr**	**89.46**	**290**	P	**P**	**08 49 58.0**	**+1.5**
	comp=Z,45nm,0.9s						
CM13	**Chiang Mai Arr**	**89.47**	**290**	P	**P**	**08 49 58.0**	**+1.5**
	comp=Z,319nmcomp=Z,42nm,0.9s						
BCAR	**Beaver Creek A**	**89.48**	**16**	P	**P**	**08 49 55.2**	**-0.4**
IMAR	**Indian Mountai**	**89.53**	**10**	P	**P**	**08 49 55.6**	**0.0**
CMMT	**Chiang Mai**	**89.58**	**290**	P	**P**	**08 49 57.5**	**+0.5**
	comp=Z,293nmcomp=Z,30nm,0.9s						
CM33	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**08 49 58.0**	**+0.9**
CHTO	**Chiang Mai**	**89.59**	**290**	P	**P**	**08 49 58.8**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,34nm,0.8s						
CHTO	**Chiang Mai**	**89.59**	**290**	P	**P**	**08 49 58.8**	**+1.7**
DLBC	**Dease Lake**	**89.60**	**23**	P	**P**	**08 49 58.0**	**+1.8**
	comp=Z,3.4nm,0.6s,baz=214,slow=6.4,SNR=6.4						
DLBC	**Dease Lake**	**89.60**	**23**	IAmb	IAmb	08 49 58.6	
	comp=Z,16nm,1.3s						
CM32	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**08 49 59.0**	**+1.8**
MDM	**Murphy Dome**	**89.62**	**13**	IAmb	IAmb	08 49 56.6	
	comp=Z,19nm,0.9s						
TCOL	**CIGO, UAF Yank**	**89.62**	**13**	P	**P**	**08 49 55.6**	**-0.4**
	baz=209,SNR=11						
TCOL	**CIGO, UAF Yank**	**89.62**	**13**	IAmb	IAmb	08 49 56.6	
	comp=Z,26nm,0.7s						
COLA	**College**	**89.62**	**13**	P	**P**	**08 49 55.7**	**-0.4**
COLA				pmax	pmax		
	comp=Z,26nm,0.7s						
COLA	**College**	**89.62**	**13**	P	**P**	**08 49 55.7**	**-0.4**
SCRK	**Sand Creek**	**89.70**	**15**	P	**P**	**08 49 56.9**	**+0.3**
	baz=212,SNR=12						
IL31		**89.73**	**13**	IAmb	IAmb	08 49 57.3	
	comp=Z,50nm,1.8s						
ILAR	**Eielson Array**	**89.73**	**13**	P	**P**	**08 49 56.1**	**-0.5**
	comp=Z,6.5nm,0.6s,baz=216,slow=5.0,SNR=144						
ILAR				pP	**pP**	**08 52 10.6**	**+3.2**
	comp=Z,2.0nm,1.0s,baz=235,slow=5.7,SNR=5.4						
ILAR				PKiKP	**PKiKP**	**08 54 48.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=275,slow=2.8,SNR=5.0						
ILAR	**Eielson Array**	**89.73**	**13**	P	**P**	**08 49 56.0**	**-0.6**
ILAR					**pP**	**08 52 13.1**	**+5.7**
POKR	**Poker Plat Res**	**89.92**	**13**	P	**P**	**08 49 56.8**	**-0.7**
	baz=209,SNR=11						
POKR	**Poker Plat Res**	**89.92**	**13**	IAmb	IAmb	08 49 57.9	
	comp=Z,12nm,0.6s						
S22A	**4UR Ranch, Cre**	**90.06**	**49**	P	**P**	**08 50 01.4**	**+2.2**
	baz=242						
REDW	**Red Top Meadow**	**90.08**	**43**	P	**P**	**08 49 59.9**	**+0.8**
BILL	**Bilibino**	**90.11**	**355**	*c i*P	**P**	**08 49 58.4**	**+0.1**
BILL				e*PP	**pP**	**08 52 06.8**	**-1.9**
BILL				*e*		08 53 44.9	
BILL				*e*PPP	PPP	08 55 49.2	
BILL				*e*S	**S**	**08 59 53.2**	**-7.3**
BILL				pmax	pmax		
	comp=Z,19nm,0.9s						
BILL	**Bilibino**	**90.11**	**355**	P	**P**	**08 49 58.8**	**+0.5**
BILL				IAmb	IAmb	08 49 59.7	
	comp=Z,18nm,0.8s						
SNOW	**Snow King Moun**	**90.19**	**43**	IAmb	IAmb	08 50 03.3	
	comp=Z,15nm,1.6s						
O20A	**White River Ci**	**90.21**	**46**	P	**P**	**08 50 01.4**	**+1.7**
	baz=242						
MHMT	**Maesarieng**	**90.23**	**289**	P	**P**	**08 50 01.3**	**+1.3**
	comp=Z,28nm,0.8s						
CD2	**Chengdu**	**90.48**	**303**	P	**P**	**08 50 02.5**	**+1.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
BW06	**Boulder Array**	**90.61**	**44**	P	**P**	**08 50 02.6**	**+1.0**
	baz=241						
PDAR	**Pinedale Array**	**90.61**	**44**	P	**P**	**08 50 02.5**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=191,slow=3.3,SNR=16						
PDAR	**Pinedale Array**	**90.61**	**44**	P	**P**	**08 50 02.2**	**+0.6**
PRP	**Porcupine Dome**	**90.67**	**13**	P	**P**	**08 50 00.7**	**-0.5**
PRP				IAmb	IAmb	08 50 04.1	
	comp=Z,13nm,1.3s						
BI02	**San Fabin de**	**90.68**	**130**	P	**P**	**08 50 03.8**	**+1.8**
BI02				IAmb	IAmb	08 50 04.6	
	comp=Z,17nm,0.8s						
H17A	**Grant Village**	**90.77**	**42**	P	**P**	**08 50 04.5**	**+2.2**
	baz=240						
DAWY	**Dawson**	**90.92**	**16**	IAmb	IAmb	08 50 03.3	
	comp=Z,7.2nm,0.6s						
SDCO	**Great Sand Dun**	**91.00**	**50**	P	**P**	**08 50 05.1**	**+1.6**
	baz=243						
EGAK	**Eagle**	**91.06**	**15**	IAmb	IAmb	08 50 04.0	
	comp=Z,12nm,0.8s						
COLD	**Coldfoot**	**91.26**	**11**	P	**P**	**08 50 04.9**	**+1.3**
	baz=207						
COLD	**Coldfoot**	**91.26**	**11**	P	**P**	**08 50 04.0**	**+0.4**
COLD				IAmb	IAmb	08 50 05.4	
	comp=Z,8.4nm,1.0s						
T25A	**Trinidad**	**91.50**	**50**	P	**P**	**08 50 07.1**	**+1.3**
	baz=244						
LZH	**Lanzhou**	**92.60**	**308**	*e*P	**P**	**08 50 12.3**	**+1.5**
LZH				pP	pP	08 52 22.5	+1.5
LZH				sP	sP	08 53 22.3	+1.4
LZH				pmax	pmax		
	comp=Z,32nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
YAK	**Yakutsk**	**92.80**	**338**	*e*P	**P**	**08 50 10.3**	**-0.5**
YAK				pmax	pmax		
	comp=Z,37nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**95.53**	**320**	P	**P**	**08 50 23.8**	**0.0**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ULN	**Ulaanbaatar**	**95.53**	**320**	P	**P**	**08 50 23.8**	**0.0**
ULN				IAmb	IAmb	08 50 25.8	
	comp=Z,5.0nm,0.7s						
INK	**Inuvik**	**95.72**	**16**	P	**P**	**08 50 23.6**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=231,slow=5.5,SNR=9.6						
INK	**Inuvik**	**95.72**	**16**	P	**P**	**08 50 23.4**	**-0.5**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**95.72**	**16**	P	**P**	**08 50 23.4**	**-0.5**

INK				IAmb	IAmb	08 50 24.7	
	comp=Z,6.2nm,1.2s						
SONM	Songino Array	95.91	319	P	P	08 50 25.4	-0.1
	comp=Z,1.0nm,0.4s,baz=100,slow=3.0,SNR=7.6						
SONM	Songino Array	95.91	319	P	P	08 50 25.1	-0.4
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	95.91	319	P	P	08 50 25.1	-0.4
GTA	Gaotai	96.86	310	⇑P	P	08 50 30.8	+0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YKA	Yellowknife Ar	98.08	25	P	P	08 50 35.0	+0.4
	comp=Z,1.2nm,0.8s,baz=239,slow=3.9,SNR=18						
YKA				PP	PP	08 54 42.4	-2.1
	comp=Z,0.7nm,1.0s,baz=236,slow=7.0,SNR=4.2						
YKA				PKiKP	PKiKP	08 55 03.4	-0.1
	comp=Z,0.2nm,0.5s,baz=227,slow=1.0,SNR=4.0						
YKA				PKKP	PKKPbc	09 07 04.2	-2.3
	comp=Z,0.1nm,0.4s,baz=40,slow=3.1,SNR=4.2						
YKA	Yellowknife Ar	98.08	25	P	P	08 50 35.0	+0.4
TLY	Talaya	99.14	322	PKKPbc	PKKPbc	09 07 04.3	+1.0
	comp=Z,2.7nm,0.6s,baz=322,slow=5.3,SNR=4.3						
TIXI	Tiksi	99.61	345	i P	Pdif	08 50 39.4	-1.8
TZTN	Tazewell	106.97	57	P	PKiKP	08 55 21.9	+1.3
	baz=255						
RES	Resolute Bay	109.26	16	PKiKP	PKiKP	08 55 23.4	-0.3
	comp=Z,1.2nm,0.6s,baz=266,slow=4.4,SNR=6.8						
ZALV	Zalesovo Beam	110.71	321	PKiKP	PKiKP	08 55 26.0	-1.0
	comp=Z,3.0nm,0.6s,baz=105,slow=0.8,SNR=15						
MK31	Makanchi Array	111.19	313	d iPKIKP	PKiKP	08 55 27.2	-1.0
MKAR	Makanchi Array	111.19	313	Pdiff	Pdif	08 51 33.8	+0.5
	comp=Z,0.8nm,0.6s,baz=96,slow=5.6,SNR=5.8						
MKAR				PKiKP	PKiKP	08 55 27.5	-0.7
	comp=Z,1.8nm,0.4s,baz=197,slow=0.9,SNR=32						
MKAR				PP	PP	08 56 21.2	+0.8
	comp=Z,0.9nm,0.8s,baz=91,slow=7.5,SNR=3.3						
MKAR				PKKPbc	PKKPbc	09 06 26.4	-0.6
	comp=Z,1.3nm,0.6s,baz=278,slow=4.3,SNR=12						
MKAR				PKKPab	PKKPab	09 06 38.5	+1.3
	comp=Z,1.4nm,0.8s,baz=270,slow=3.1,SNR=7.7						
NRIK	Noril'sk	111.24	338	PKiKP	PKiKP	08 55 27.2	-0.4
	comp=Z,1.1nm,0.4s,baz=108,slow=2.4,SNR=5.1						
SATY	Saty	113.34	309	ePKiKP	PKiKP	08 55 31.3	-1.2
	baz=309						
SATY	Saty	113.34	309	i PKIKP	PKiKP	08 55 31.3	-1.2
KURK	Kurchatov	114.10	317	c iPKIKP	PKPdf	08 55 31.8	-1.7
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURBB	Kurchatov Arra	114.15	317	PKiKP	PKPdf	08 55 32.8	-0.8
	comp=Z,3.3nm,0.5s,baz=99,slow=1.8,SNR=26						
KURBB				PP	PP	08 56 41.5	+0.7
	comp=Z,2.7nm,0.8s,baz=91,slow=7.2,SNR=11						
KURBB				PKKPbc	PKKPbc	09 06 18.2	+1.0
	comp=Z,0.9nm,0.6s,baz=267,slow=4.2,SNR=5.8						
KURBB				PKKPab	PKKPab	09 06 26.3	+2.3
	comp=Z,1.8nm,0.7s,baz=275,slow=5.1,SNR=10						
MDOK	Medeo	114.34	309	ePKP	PKPdf	08 55 33.8	-0.7
	baz=309						
MDOK	Medeo	114.34	309	ePKIKP	PKPdf	08 55 33.7	-0.8
TNSS	Tian-Shan	114.40	309	ePKP	PKPdf	08 55 34.4	-0.5
	baz=309						
TNSS	Tian-Shan	114.40	309	ePKIKP	PKPdf	08 55 34.4	-0.5
KSH	Kashi	114.64	305	PKP	PKiKP	08 55 36.5	+1.4
KUU	Kurty	114.94	309	ePKP	PKPdf	08 55 34.2	-1.3
	baz=310						
KUU	Kurty	114.94	309	ePKIKP	PKPdf	08 55 34.1	-1.4
AAK	Ala-Archa	116.14	308	PKP	PKPdf	08 55 37.7	-0.3
	comp=Z,1.9nm,0.6s,baz=156,slow=5.0,SNR=5.9						
AAK				PKKPbc	PKKPbc	09 06 11.0	+0.4
	comp=Z,1.8nm,0.4s,baz=283,slow=3.1,SNR=7.6						
AAK	Ala-Archa	116.14	308	PKIKP	PKPdf	08 55 37.0	-1.0
AAK	Ala-Archa	116.14	308	PKPdf	PKPdf	08 55 37.0	-1.0
BTLS	Baital	116.69	311	ePKP	PKPdf	08 55 38.1	-0.7
	baz=311						
BTLS	Baital	116.69	311	ePKIKP	PKPdf	08 55 38.0	-0.7
BRZS	Berezniki	117.86	316	ePKP	PKPdf	08 55 39.7	-1.2
	baz=316						
BRZS	Berezniki	117.86	316	ePKIKP	PKPdf	08 55 39.6	-1.2
DZA	Taraz	118.48	308	ePKP	PKPdf	08 55 41.8	-0.6
	baz=308						
DZA	Taraz	118.48	308	ePKIKP	PKPdf	08 55 41.7	-0.6
KK31	Karatay Array	119.10	308	PKIKP	PKPdf	08 55 43.4	-0.1
KK31	Karatay Array	119.10	308	PKPdf	PKPdf	08 55 43.4	-0.1
KKAR	Karatay Array	119.10	308	PKIKP	PKPdf	08 55 42.9	-0.6
KKAR	Karatay Array	119.10	308	PKPdf	PKPdf	08 55 42.9	-0.6
BVAR	Borovoye Array	119.26	320	PKP	PKPdf	08 55 42.8	-0.6
	comp=Z,6.1nm,0.3s,baz=105,slow=3.1,SNR=65						
BRVK	Borovoye	119.32	320	c iPKIKP	PKPdf	08 55 42.9	-0.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRVK	Borovoye	119.32	320	PKPdf	PKPdf	08 55 43.1	-0.4
IUG	Iuzhnay	119.39	307	ePKP	PKPdf	08 55 43.2	-1.1
	baz=307						
IUG	Iuzhnay	119.39	307	ePKIKP	PKPdf	08 55 43.1	-1.1
BDFB	Brasilia	119.45	124	PKKPbc	PKKPbc	09 05 59.5	+0.7
	comp=Z,2.1nm,0.6s,baz=195,slow=3.2,SNR=3.5						
KBL	Kabul	119.46	298	PKIKP	PKPdf	08 55 44.5	-0.2
KBL	Kabul	119.46	298	PKPdf	PKPdf	08 55 44.5	-0.2
UPNV	Upernavik	120.14	17	i P	PKPdf	08 55 44.0	-0.5
KBS	Kingsbay	122.48	357	ePKPdf	PKiKP	08 55 49.4	+0.2
KBS	Kingsbay	122.48	357	i P	PKiKP	08 55 49.2	0.0
DAG	Danmarks Havn	124.03	5	i PKIKP	PKPdf	08 55 51.1	-0.8
DAG	Danmarks Havn	124.03	5	i P	PKPdf	08 55 51.1	-0.8
DAG	Danmarks Havn	124.03	5	i P	PKPdf	08 55 51.1	-0.8
HSPB	Hornsund (broa	124.17	356	ePKPdf	PKPdf	08 55 50.6	-1.6
SFJD	Kangerlussuaq	124.47	22	i PKIKP	PKPdf	08 55 53.1	+0.1
SFJD	Kangerlussuaq	124.47	22	i P	PKPdf	08 55 53.1	+0.1
SFJD	Kangerlussuaq	124.47	22	i P	PKPdf	08 55 53.2	+0.1
SUMG	Summit	124.58	13	i PKIKP	PKPdf	08 55 53.7	+0.1
SUMG	Summit	124.58	13	i P	PKPdf	08 55 53.7	+0.1
SUMG	Summit	124.58	13	i P	PKPdf	08 55 53.8	+0.1
BOSA	Boshof	124.68	206	PKP	PKiKP	08 55 56.0	+0.8
	comp=Z,2.2nm,0.9s,baz=45,slow=1.4,SNR=1.7						
BOSA				PKKPbc	PKKPbc	09 05 39.2	-0.9
	comp=Z,2.1nm,1.0s,baz=105,slow=8.7,SNR=3.2						
ARU	Arti	125.53	325	PKP	PKiKP	08 55 55.7	-0.1
	comp=Z,7.3nm,0.4s,baz=99,slow=0.7,SNR=20						
ARU				PKKPbc	PKKPbc	09 05 36.7	+0.5
	comp=Z,2.7nm,0.2s,baz=290,slow=4.0,SNR=5.2						
ARU	Arti	125.53	325	i PKIKP	PKPdf	08 55 55.1	-0.2
ARU						08 57 54.0	
ARU						09 02 09.8	
ARU	Arti	125.53	325		PKPdf	08 55 55.2	-0.1
DBG	Daneborg	126.16	7	i P	PKPdf	08 55 56.0	-0.1
ABKAR	Akbulak array	126.16	316	PKPdf	PKPdf	08 55 56.2	-0.6
ICESG	Greenland Ices	126.67	17	i P	PKPdf	08 55 56.7	-1.0
AKTO	Aktyubinsk	127.19	318	PKP	PKPdf	08 55 59.0	+0.3
	comp=Z,6.0nm,0.7s,baz=114,slow=2.3,SNR=19						
GEYT	Alibeck	128.46	302	PKP	PKiKP	08 56 02.5	+0.2
	comp=Z,3.3nm,0.4s,baz=223,slow=6.1,SNR=9.5						
GEYT	Alibeck	128.46	302	PKPdf	PKiKP	08 56 02.6	+0.3
HAMF	Hammerfest	129.22	350	ePKPdf	PKPdf	08 56 01.5	-0.5
KIRV	Kirov	129.43	329	PKP	PKiKP	08 56 03.1	-0.4
	comp=Z,24nm,0.5s,baz=78,slow=0.8,SNR=8.7						
ARCES	ARCESS Array B	129.88	349	PKhKP	PKPpre	08 55 51.2	
	comp=Z,4.0nm,0.8s,baz=0.0,slow=1.8,SNR=6.3						
ARCES				PKP	PKPdf	08 56 03.5	+0.2
	comp=Z,10nm,0.6s,baz=27,slow=0.8,SNR=31						
KTK1	Kautokeino	130.74	350	ePKPdf	PKPdf	08 56 04.3	-0.6
TRO	Tromso	130.82	352	ePKPdf	PKPdf	08 56 04.6	-0.5
KLMR	Klimovskoe	132.51	335	ePKIKP	PKPdf	08 56 08.4	0.0
KLMR				e		08 58 38.9	
KLMR				pmax	pmax		
	comp=Z,27nm,1.5s						
KLMR	Klimovskoe	132.51	335	ePKPdf	PKPdf	08 56 08.4	0.0
KLMR				AMP		08 56 16.1	
	comp=Z,27nm,1.5s						
KLMR				ePP	PP	08 58 38.9	-2.6
BELG	Belogornoye	132.87	322	PKP	PKiKP	08 56 10.6	0.0
	comp=Z,26nm,0.6s,baz=290,slow=0.4,SNR=18						
BELG				SKPbc	SKPbc	08 58 41.9	+0.9
	comp=Z,39nm,0.9s,baz=32,slow=1.8,SNR=15						
BELG	Belogornoye	132.87	322	i PKIKP	PKPdf	08 56 08.6	-0.8
LOF	Lofoten	132.89	354	ePKPdf	PKPdf	08 56 05.8	-3.2
STEI	Steigen	132.90	353	ePKPdf	PKPdf	08 56 08.5	-0.5
FAUS	Fauske	133.41	352	ePKPdf	PKPdf	08 56 09.3	-0.6
KONS	Konsvik	134.51	353	ePKPdf	PKPdf	08 56 10.9	-1.1
MOR8	Moi Rana	134.67	352	ePKPdf	PKPdf	08 56 09.4	-3.0
FINES	FINESS Array B	136.59	343	PKhKP	PKPpre	08 56 03.6	
	comp=Z,1.7nm,0.4s,baz=34,slow=3.6,SNR=14						
FINES				PKP	PKiKP	08 56 17.8	-0.2
	comp=Z,8.6nm,0.6s,baz=88,slow=1.9,SNR=16						
FINES				SKPbc	SKPbc	08 58 53.2	+0.8
	comp=Z,4.3nm,0.7s,baz=90,slow=3.8,SNR=7.4						
VRH	Novokhopyorsk	136.69	323	ePKIKP	PKPdf	08 56 15.8	-0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	Galich'ya Gora	137.51	326	ePKIKP	PKPdf	08 56 16.9	-1.1
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMBO	Kilima Mbogo	137.78	242	PKP	PKiKP	08 56 23.1	+0.9
	comp=Z,1.3nm,0.3s,baz=77,slow=4.5,SNR=3.7						
KMBO				SKPbc	SKiKP	08 58 59.7	-1.8
	comp=Z,1.8nm,0.3s,baz=42,slow=4.5,SNR=6.6						
VSR	Storozhevoye	138.10	324	ePKIKP	PKPdf	08 56 17.2	-1.9
VSR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
DOMB	Dombas	139.28	354	ePKPdf	PKPdf	08 56 14.1	-6.9
AKN	Aaknes	139.32	356	ePKPdf	PKPdf	08 56 14.6	-6.5
NB2	NORSAR Subarra	140.02	352	PKP	PKPdf	08 56 15.4	-7.0
	comp=Z,4.8nm,0.7s,baz=10,slow=3.2						
NOA	NORSAR Array B	140.02	352	PKhKP	PKPpre	08 56 15.7	
	comp=Z,1.5nm,0.5s,baz=39,slow=0.9,SNR=20						
NOA				PKP	PKiKP	08 56 24.7	-0.4
	comp=Z,3.0nm,0.6s,baz=14,slow=4.1,SNR=6.1						
NOA				SKPbc	SKPbc	08 59 02.4	+0.4
	comp=Z,3.4nm,0.8s,baz=15,slow=4.3,SNR=5.5						
NC602	NORSAR Array S	140.27	352	ePKPdf	PKPdf	08 56 16.3	-6.5
HFS	Hagfors	140.53	350	PKhKP	PKPpre	08 56 17.1	
	comp=Z,12nm,0.3s,baz=68,slow=4.0,SNR=92						
HFS				SKPbc	SKPbc	08 59 04.0	+0.8
	comp=Z,7.1nm,0.8s,baz=35,slow=3.6,SNR=5.8						
SKAR	Skarslia	140.69	354	ePKPdf	PKPdf	08 56 19.1	-4.6
SKAR				IVmB_BB		08 56 26.3	
	comp=Z,4µm,4.4s						
MNK	Minsk	141.40	335	i PKP	PKPdf	08 56 22.1	-2.9
	comp=E,5.0nm,0.9s						
MNK				i PKP	PKPdf	08 56 22.1	-2.9
	comp=N,21nm,0.7s						
MNK				i PKP	PKPdf	08 56 22.1	-2.9
	comp=Z,28nm,0.6s						
MNK				i pPKP	pPKPdf	08 58 40.9	-3.8
MNK				i PP	PP	08 59 33.0	-2.9
MNK				i SKS	SKSdf	09 02 35.5	-2.4
MNK				i PPP	PPP	09 02 47.4	
MNK				i SKKS	SKKSdf	09 11 57.5	-4.7
MNK				i SS	SS	09 17 17.9	-0.2
MNK				i SSS	SSS	09 22 47.0	
MNK				i LRM	MLR	09 59 52.2	
	comp=E,3.0nm,6.5s						
MNK				i LRM	MLR	09 59 52.2	
	comp=N,18nm,5.1s						
MNK				i LRM	MLR	09 59 52.2	
	comp=Z,32nm,8.7s						
NACGM	Naroch	141.52	336	i PKP	PKPdf	08 56 21.3	-3.9
NACGM				i PKP	PKPdf	08 56 21.3	-3.9
NACGM				i PKP	PKPdf	08 56 21.3	-3.9
NACGM				i PP	sPKPdf	08 59 41.6	-1.1
NACGM				i PPP	PPP	09 02 24.4	
NACGM				i SKS		09 03 47.2	
NACGM				i SKKS	SKKSac	09 05 16.3	-13
NACGM				i SP	SKKPbc	09 07 53.2	+22
NACGM				i PS		09 08 28.2	
NACGM				i SS	SS	09 16 28.5	-51
NACGM				i SSS	SSS	09 21 19.2	
KONO	Kongsberg	141.57	353	ePKPdf	PKPdf	08 56 21.0	-4.2
ODD1	Odda	141.60	355	ePKPdf	PKPdf	08 56 21.2	-4.1
YEDI	Yedisu-Bingol	141.83	307	eP	PKPdf	08 56 23.2	-3.3
BNGB	Bingl	141.85	306	eP	PKPdf	08 56 23.2	-3.3
SHEL	Horse Pasture	142.03	170	PKIKP	PKPdf	08 56 26.4	-1.0
SHEL	Horse Pasture	142.03	170	PKPdf	PKPdf	08 56 26.4	-1.0
BLS5	Blasjo	142.10	355	ePKPdf	PKPdf	08 56 22.8	-3.3
BLS5				eSKSdf	SKSdf	09 02 38.0	-0.9
KMY	Karmoy	142.39	356	ePKPdf	PKPdf	08 56 23.3	-3.3
DYBB	Diyarbakir	142.52	305	eP	PKPdf	08 56 25.7	-1.9
HOMB	Homborsund	143.04	353	ePKPdf	PKPbc	08 56 26.2	+0.1
HOMB	Homborsund	143.04	353	i P	PKPbc	08 56 26.3	+0.2
SNART	Snartemo	143.11	354	ePKPab	PKPab	08 56 26.0	+0.1
SNART	Snartemo	143.11	354	i P	PKPbc	08 56 26.3	0.0
ILIC	ilic-Erzincan	143.29	307	eP	PKPdf	08 56 28.7	-0.3
MBAR	Mbarara	143.31	237	PKP	PKPdf	08 56 29.9	+0.1
	comp=Z,41nm,0.7s,baz=108,slow=5.0,SNR=59						
MBAR	Mbarara	143.31	237	PKIKP	PKPdf	08 56 29.4	-0.5
MBAR	Mbarara	143.31	237		PKPdf	08 56 29.4	-0.5
AKASG	Malin Array Be	143.49	329	PKP	PKPab	08 56 27.1	-0.6
	comp=Z,28nm,0.3s,baz=42,slow=4.4,SNR=351						
AKASG				SKPbc	SKiKP	08 59 11.5	-0.1
	comp=Z,2.9nm,0.8s,baz=41,slow=3.0,SNR=7.3						
AKASG	Malin Array Be	143.49	329	PKIKP	PKPab	08 56 27.2	-0.4
AKASG	Malin Array Be	143.49	329		PKPab	08 56 27.1	-0.5
AKBB	Malin Array Si	143.49	329	i PKIKP	PKPab	08 56 26.9	-0.7
MALT	Malatya	143.73	306	eP	PKPdf	08 56 29.9	+0.1
RSDY	Resadiye-TOKAT	143.89	309	eP	PKPdf	08 56 30.5	+0.6
SIM	Simferopol'	144.15	318	ePKIKP	PKPbc	08 56 29.6	-0.4
SIM				pmax	pmax		
	comp=Z,82µm,0.5s						
DARE	Darende-Malaty	144.36	306	eP	PKPab	08 56 32.2	+0.6
TOKT	Tokat	144.48	310	eP	PKPab	08 56 31.7	-0.2
KVT	Kavak	144.56	311	eP	PKPab	08 56 32.3	+0.1
MUD	Monsted U'grnd	144.74	352	i PKIKP	PKPbc	08 56 31.7	+0.4
MUD	Monsted U'grnd	144.74	352	i P	PKPbc	08 56 31.7	+0.4
MUD	Monsted U'grnd	144.74	352	i P	PKPbc	08 56 31.4	+0.1
MUD				i P	PKPab	08 56 31.8	-0.4
GAZ	Gaziantep	144.97	304	eP	PKPab	08 56 33.7	-0.2
BSD	Bornholm Skovb	144.99	346	i PKHKP	PKPdf	08 56 29.0	-2.2
BSD	Bornholm Skovb	144.99	346	i P	PKPdf	08 56 29.0	-2.2
BSD	Bornholm Skovb	144.99	346	i P	PKPdf	08 56 29.0	-2.2
SARI	SarD1z-Kayseri	145.21	307	eP	PKPbc	08 56 33.3	-0.3
LLD	Lille Linde	145.34	349	i PKP2	PKPbc	08 56 33.2	+0.1
LLD	Lille Linde	145.34	349	i P	PKPbc	08 56 33.2	+0.1
LLD	Lille Linde	145.34	349	i P	PKPbc	08 56 33.3	+0.1
BNN	Bunyan	145.49	308	eP	PKPbc	08 56 33.8	-0.6
BZK	Bozkurt	145.60	314	⇓P	PKPbc	08 56 35.2	+0.8
BZK	Bozkurt	145.60	314	eP	PKPbc	08 56 34.5	+0.1
SORM	Soroca	145.61	327	⇓P	PKPbc	08 56 34.2	+0.1
SORM	Soroca	145.61	327	⇓PKP2	PKPbc	08 56 34.2	+0.1
CORM	Corum	145.90	310	eP	PKPbc	08 56 35.5	+0.1
KOZT	Kozan	145.94	305	eP	PKPbc	08 56 35.9	+0.4
GKP	Gorka Klasztor	146.06	342	i PKPbcd		08 56 35.7	
GKP				ePKPab	PKiKP	08 56 38.0	+0.4
MILM	Milestii Mici	146.14	325	⇓P	PKPbc	08 56 35.5	-0.2
BEL	Belsk	146.15	338	i PKPbcd		08 56 36.3	
CANT	Cankiri	146.43	312	eP	PKPbc	08 56 37.4	+0.6
CMRD	Camardi-Nigde	146.51	306	eP	PKPbc	08 56 37.8	+0.6
BR131	Keskin Array S	146.77	310	PKP2	PKPbc	08 56 37.3	-0.6
BR131	Keskin Array S	146.77	310		PKPbc	08 56 37.3	-0.6
BRTR	Keskin Array B	146.77	310	PKPbc	PKPbc	08 56 37.9	0.0
	comp=Z,20nm,0.6s,baz=142,slow=4.0,SNR=99						
BRTR	Keskin Array B	146.77	310	PKIKP	PKPdf	08 56 34.9	-0.1
BRTR	Keskin Array B	146.77	310	PKPdf	PKPdf	08 56 34.9	-0.1
YAYX	Yaylak	146.95	309	eP	PKPab	08 56 42.2	+0.4
BSEG	Bad Segeberg	147.01	350	ePKPbc	PKPbc	08 56 38.5	+0.7
	baz=19,slow=2.5						
KWP	Kalwaria Pacla	147.17	333	i PKPbcd		08 56 39.0	
KWP				ePKPab	PKPab	08 56 42.1	0.0
TLCR		147.19	322	⇑P	PKPbc	08 56 39.1	+0.6
TLCR		147.19	322	⇑PKP2	PKPbc	08 56 39.1	+0.6
AFSR	Afar-Bala (An	147.28	310	eP	PKPbc	08 56 38.6	-0.6
LOD	Lodumlu	147.32	311	eP	PKPbc	08 56 38.6	-0.6
MMAI	Mount Meron Ar	147.39	298	PKPbc	PKiKP	08 56 40.6	-0.6
	comp=Z,44nm,0.6s,baz=70,slow=5.4,SNR=35						
GHRR		147.43	325	⇓P	PKiKP	08 56 40.4	-0.4
SULT	Sultanhani-AKS	147.43	308	eP	PKPbc	08 56 38.9	-0.7
MMLI	Mount Malkishu	147.48	297	eP	PKPdf	08 56 37.9	+1.7
BURAR	Bucovina Array	147.52	329	⇑P	PKPab	08 56 45.9	+2.1
BURAR	Bucovina Array	147.52	329	⇑PKP2	PKPab	08 56 45.9	+2.1
BURAR	Bucovina Array	147.52	329		PKPbc	08 56 40.2	+0.7
KIZK	Mersin	147.53	304	eP	PKPbc	08 56 39.9	+0.2
BIZ	Bicaz	147.54	327	⇓P	PKiKP	08 56 40.6	-0.4
TESR	Tescani	147.54	326	⇓P	PKPbc	08 56 39.9	+0.4
CFR	Carcaliu	147.57	323	⇓P	PKPbc	08 56 39.9	+0.4
CFR	Carcaliu	147.57	323	⇓PKP2	PKPbc	08 56 39.9	+0.4
TPGR	Topolog	147.61	322	⇓P	PKPbc	08 56 40.3	+0.6
RUE	Ruedersdorf	147.68	345	ePKPbc	PKPbc	08 56 40.2	+0.7
	baz=19,slow=2.5						
SILI	Silifke-Mersin	147.73	304	eP	PKPbc	08 56 40.5	+0.3
ODBI	Odobesti	147.81	324	⇑P	PKiKP	08 56 41.4	-0.1
OJC	Ojcow	147.84	337	i PKPbcd		08 56 40.5	
YUVA	Yuva-Kibriscik	147.86	312	eP	PKPbc	08 56 41.0	+0.4
KEBE	Keben-Mersin	147.87	305	eP	PKPbc	08 56 41.1	+0.4
KOLS	Kolonicke sedl	147.89	333	ePKP2	PKiKP	08 56 41.3	-0.3
KOLS	Kolonicke sedl	147.89	333	ePKP	PKiKP	08 56 41.3	-0.3
VRI	Vrincioaia	147.92	325	⇑P	PKPbc	08 56 39.9	-0.6
VRI	Vrincioaia	147.92	325	⇑PKIKP	PKPbc	08 56 39.9	-0.6
IKL	Isikli	147.95	304	eP	PKPbc	08 56 40.9	+0.1
PLOR	Plostina	147.97	325	⇑P	PKPbc	08 56 40.5	-0.1
PLOR	Plostina	147.97	325	⇑PKP2	PKPbc	08 56 40.5	-0.1
HARR	Harsova	147.99	322	⇓P	PKPbc	08 56 41.2	+0.6
HARR	Harsova	147.99	322	⇓PKP2	PKPbc	08 56 41.2	+0.6
MFTR	Murfatlar	148.00	321	⇑P	PKPbc	08 56 40.8	+0.1
TLBR	Topalu	148.00	322	⇓P	PKiKP	08 56 41.4	-0.5
TEVE	Tevekalti-Mers	148.08	305	eP	PKPbc	08 56 41.6	+0.4
AKKU	Akkuyu-Mersin	148.08	304	eP	PKPbc	08 56 41.0	-0.1
UZH	Uzhgorod	148.11	333	ePKP2	PKPbc	08 56 40.8	0.0
CVDA	Cernavoda	148.14	322	⇑P	PKPdf	08 56 37.8	+1.0
MDUB	Mudurnu	148.16	313	eP	PKPbc	08 56 40.4	-1.0
MDUB	Mudurnu	148.16	313		PKPbc	08 56 40.4	-1.0
HRFI	Mount Harif	148.17	292	eP	PKiKP	08 56 42.4	-0.4
AUMIH	MIHALICIK	148.23	312	eP	PKPbc	08 56 41.5	-0.1
CRVS	Cervenica-Dubn	148.25	334	ePKP2	PKiKP	08 56 42.0	-0.3
CRVS	Cervenica-Dubn	148.25	334	ePKP	PKiKP	08 56 42.0	-0.3
CRVS				e		08 56 47.4	
OZUR		148.27	326	⇑P	PKiKP	08 56 42.3	-0.2
BERE	Bereket-Mersin	148.27	305	eP	PKPbc	08 56 42.1	+0.3
LADK	Ladik-KONYA	148.27	308	eP	PKPbc	08 56 40.3	-1.4
EIL	Elat	148.29	292	PKPbc	PKiKP	08 56 42.5	-0.5
	comp=Z,18nm,0.6s,baz=329,slow=2.2,SNR=13						
NIE	Niedzica	148.30	335	i PKPbcd		08 56 42.5	
NIE				ePKPab	PKPab	08 56 46.9	0.0
ARCR	ARCALIA	148.31	329	⇑P	PKiKP	08 56 42.5	-0.1
AUSIV	SIVRIHISAR	148.37	311	eP	PKPbc	08 56 41.4	-0.5
KONT	Konya--Tatoy	148.37	308	eP	PKPbc	08 56 41.6	-0.3
FLTG	Flechtingen	148.37	348	ePKPbc	PKPbc	08 56 41.6	+0.3
	baz=19,slow=2.5						
SVRH	Sivrihisar-ESK	148.38	311	eP	PKPbc	08 56 41.7	-0.2
TEKE	Tekeli-Mersin	148.42	304	eP	PKPbc	08 56 41.8	-0.2
NRDL	Niedersach Rie	148.43	349	ePKPbc	PKiKP	08 56 42.1	-0.4
	baz=19,slow=2.5						
KSP	Ksiaz	148.48	341	i PKPbcd		08 56 42.6	
KSP				ePKPab	PKPab	08 56 48.3	+0.8
DOPR	Dopca	148.56	326	⇓P	PKiKP	08 56 43.0	-0.1
MLR	Muntele Rosu	148.58	325	PKPbc	PKPbc	08 56 42.2	-0.1
	comp=Z,18nm,0.7s,baz=3.4,slow=2.5,SNR=16						
MLR	Muntele Rosu	148.58	325	⇑P	PKPbc	08 56 41.8	-0.5
CSS	Mathiatis	148.60	302	eP	PKPbc	08 56 42.7	+0.2
CSS	Mathiatis	148.60	302		PKPbc	08 56 42.7	+0.2
CIFT	Cifteler, Eski	148.74	311	eP	PKPbc	08 56 42.7	-0.1
OSTC	Ostas	148.75	341	⇑ePKP	PKiKP	08 56 43.1	-0.2
OSTC				ePKPAB	PKPab	08 56 49.6	+0.9
CHVC	Chvalec	148.77	341	⇑ePKP	PKiKP	08 56 43.2	-0.2
CHVC				ePKPAB	PKPab	08 56 49.7	+0.9
LANS	Liptovska Anna	148.84	336	ePKP2	PKiKP	08 56 44.4	+0.8
LANS	Liptovska Anna	148.84	336	ePKP	PKiKP	08 56 44.4	+0.8
LANS				e		08 56 50.3	
UPC	Upice	148.86	341	ePKP2	PKiKP	08 56 43.5	0.0
UPC	Upice	148.86	341	⇑ePKP	PKiKP	08 56 43.5	0.0
UPC				ePKPAB	PKPab	08 56 50.1	+1.0
DPC	Dobruska-Polom	148.90	341	ePKP2	PKiKP	08 56 43.6	-0.1
DPC	Dobruska-Polom	148.90	341	⇑ePKP	PKiKP	08 56 43.6	-0.1
DPC				ePKPAB	PKPab	08 56 50.5	+1.2
LEF	Lefka	148.90	302	eP	PKPbc	08 56 43.4	+0.2
CJR	Cluj-Napoca	148.94	329	⇓P	PKiKP	08 56 43.8	-0.1
CJR	Cluj-Napoca	148.94	329	⇓PKP2	PKiKP	08 56 43.8	-0.1
CLL	Collm	148.95	345	ePKPdf	PKPdf	08 56 39.0	+1.1
CLL				⇓iPKPbc	PKiKP	08 56 43.3	-0.4
	comp=Z,78nm,1.2s						
CLL				i PKPab	PKPab	08 56 49.4	0.0
	comp=Z,34nm,0.8s						
CLL				e		08 59 07.0	
CLL	Collm	148.95	345	⇓iPKP2	PKiKP	08 56 43.3	-0.4
CLL				pmax	pmax		
	comp=Z,78nm,1.2s						
IBBN	Ibbenburen	148.97	352	ePKPbc	PKiKP	08 56 43.3	-0.4
	baz=19,slow=2.5						
KECS	Kecovo	148.98	334	ePKP2	PKiKP	08 56 44.3	+0.5
KECS	Kecovo	148.98	334	ePKP	PKiKP	08 56 44.3	+0.5
KRLC	Kraliky	149.00	340	ePKP2	PKiKP	08 56 43.8	-0.1
KRLC	Kraliky	149.00	340	⇑ePKP	PKiKP	08 56 43.8	-0.1
KRLC				ePKPAB	PKPab	08 56 50.6	+0.9
MORC	Moravsky Berou	149.00	339	⇓P	PKiKP	08 56 43.8	-0.1
MORC	Moravsky Berou	149.00	339	ePKP	PKiKP	08 56 43.7	-0.2
MORC				e		08 56 50.5	
MORC	Moravsky Berou	149.00	339	⇓PKP2	PKiKP	08 56 43.8	-0.1
GAZI	Gazipasa	149.00	305	eP	PKPbc	08 56 42.7	-0.7
CLZ	Clausthal	149.00	348	ePKPbc	PKiKP	08 56 43.5	-0.4
	baz=19,slow=2.5						
VOIR		149.09	326	⇑P	PKPbc	08 56 43.8	+0.3
BRG	Berggiesshubel	149.11	344	⇓iPKP	PKiKP	08 56 43.9	-0.2
BRG				Amp		08 56 44.5	
	comp=Z,36nm,0.8s						
BRG				i x	x	08 56 50.6	
BRG				Amp		08 56 51.3	
	comp=Z,19nm,0.7s						
BRG	Berggiesshubel	149.11	344	ePKPbc	PKiKP	08 56 43.7	-0.3
	baz=19,slow=2.5						
AUBOZ	BOZOYUK	149.21	313	eP	PKPbc	08 56 42.9	-1.0
FBE	Freiberg	149.22	344	ePKPbc	PKiKP	08 56 44.2	0.0
	baz=19,slow=2.5						
LTVH	Ltavrtes, Hu	149.23	331	⇓eP	PKiKP	08 56 45.3	+1.0
PVCC	Panska Ves	149.25	343	ePKP2	PKiKP	08 56 44.5	+0.2
PVCC	Panska Ves	149.25	343	⇑ePKP	PKiKP	08 56 44.5	+0.2
PVCC				ePKPAB	PKPab	08 56 51.8	+1.1
DRGR		149.30	330	⇓P	PKPbc	08 56 44.3	+0.4
NEUB	Neuenburg	149.32	346	ePKPbc	PKiKP	08 56 44.1	-0.3
	baz=19,slow=2.5						
ARR	Arges	149.35	326	⇑P	PKiKP	08 56 45.7	+0.9
GTTG	Gottingen	149.36	349	ePKPbc	PKiKP	08 56 44.3	-0.2
	baz=19,slow=2.5						
GTTG				epPKPbc	pPKPdf	08 58 59.4	+0.6
SHUT	Suhut-Afyon	149.44	310	eP	PKPbc	08 56 44.9	+0.4
VYHS	Vyhne	149.62	336	ePKP	PKiKP	08 56 45.1	-0.1
VYHS				e		08 56 53.1	
PSZ	Piszkesteto	149.67	334	⇓eP	PKPbc	08 56 44.7	0.0
PSZ	Piszkesteto	149.67	334		PKPbc	08 56 43.6	-1.1
ARMT	Armutlu	149.68	315	eP	PKPbc	08 56 44.8	-0.1
PRA	Prague	149.71	342	⇑ePKP	PKiKP	08 56 45.3	0.0
VRAC	Vranov	149.72	339	PKPbc	PKiKP	08 56 45.4	+0.1
	comp=Z,12nm,0.6s,baz=16,slow=2.1,SNR=12						
VRAC				PKPab	PKPab	08 56 53.8	+1.1
	comp=Z,22nm,0.6s,baz=61,slow=4.7,SNR=16						
VRAC	Vranov	149.72	339	⇓P	PKiKP	08 56 45.6	+0.2
VRAC	Vranov	149.72	339	ePKP	PKiKP	08 56 45.3	-0.1
VRAC				e		08 56 53.6	
JAVC	Velka Javorina	149.74	338	ePKP	PKiKP	08 56 46.4	+0.9
JAVC	Velka Javorina	149.74	338	ePKP	PKiKP	08 56 46.6	+1.1
JAVC				e		08 56 54.8	
LOT	Lotru	149.74	327	⇓P	PKPbc	08 56 44.7	-0.4
PRU	Pruhonice	149.75	342	⇑ePKP	PKiKP	08 56 45.2	-0.2
PRU				ePKPAB	PKPab	08 56 53.5	+0.7
TVSB	Tavsanli	149.81	312	eP	PKPbc	08 56 44.8	-0.6
MOX	Moxa	149.88	346	ePKPbc	PKiKP	08 56 45.5	-0.2
	baz=19,slow=2.5						
BUG	Bochum--Univer	149.89	352	ePKPbc	PKiKP	08 56 45.3	-0.3
	baz=19,slow=2.5						
TANN	Tannenbergstha	149.90	345	ePKPbc	PKiKP	08 56 45.6	-0.2
	baz=19,slow=2.5						
WERD	Werda	149.91	345	ePKPbc	PKiKP	08 56 45.8	+0.1
	baz=19,slow=2.5						
KASTN	Kahler Asten	149.96	350	ePKPbc	PKiKP	08 56 45.7	-0.1
	baz=19,slow=2.5						
GUNZ	Gunzen	149.98	345	ePKPbc	PKiKP	08 56 45.9	0.0
	baz=19,slow=2.5						
KRUC	Moravsky	150.00	339	ePKP	PKiKP	08 56 45.8	-0.1
KRUC				e		08 56 54.6	
WERN	Wernitzgruen	150.04	345	ePKPbc	PKiKP	08 56 46.3	+0.3
	baz=19,slow=2.5						
UBBA	Unterbreizbach	150.05	348	ePKPbc	PKiKP	08 56 45.6	-0.2
	baz=19,slow=2.5						
UBBA				epPKPbc	pPKPdf	08 59 01.4	+1.7
BASM	Basmaki-Afyon	150.06	309	eP	PKPbc	08 56 46.0	0.0
NKC	Novy Kostel	150.08	345	⇑ePKP	PKiKP	08 56 46.1	0.0
NKC				ePKPAB	PKPab	08 56 54.5	+0.3
SMOL	Smolenice	150.12	338	ePKIKP	PKiKP	08 56 47.0	+0.8
SMOL	Smolenice	150.12	338	ePKP	PKiKP	08 56 47.0	+0.8
SMOL				e		08 56 55.7	
KCTX	Karacabey (Bur	150.16	315	eP	PKPbc	08 56 45.9	-0.2
PBCC	Pribram	150.18	343	⇑ePKP	PKiKP	08 56 46.3	0.0
PBCC				ePKPAB	PKPab	08 56 55.1	+0.5
SIRR	Siria	150.18	330	⇓P	PKiKP	08 56 46.7	+0.3
KORT	Korkueli	150.21	307	eP	PKPbc	08 56 46.4	0.0
GZR	Gura Zlata	150.28	328	⇓P	PKPbc	08 56 46.3	+0.1
GZR	Gura Zlata	150.28	328	⇓PKIKP	PKPbc	08 56 46.3	+0.1
MODS	Modra-Piesok	150.29	338	ePKIKP	PKPbc	08 56 46.2	+0.1
MODS				e		08 56 55.6	
MODS	Modra-Piesok	150.29	338	ePKP	PKPbc	08 56 46.2	+0.1
MODS				e		08 56 55.6	
SIMA	Simav-Kutahya	150.31	312	eP	PKPbc	08 56 45.5	-1.0
EDC	Edincik	150.45	315	eP	PKPbc	08 56 46.5	-0.2
MRMT	Marmara Adasi	150.49	316	eP	PKPbc	08 56 46.8	-0.1

ZST	Bratislava	150.50	338	ePKIKP	PKiKP	08 56 47.5	+0.5
ZST	Bratislava	150.50	338	ePKP	PKiKP	08 56 47.5	+0.5
ZST				e		08 56 57.5	
AMBH	Ambrzfalva	150.54	331	⇓eP	PKiKP	08 56 47.1	0.0
ROTZ	Rotzenmuhle	150.57	345	ePKPbc	PKiKP	08 56 47.0	0.0
	baz=19,slow=2.5						
ELL	Elmali	150.63	307	eP	PKPbc	08 56 47.4	0.0
PLVB	Pleven	150.66	323	⇑P	PKiKP	08 56 47.9	+0.4
BZS	Buzias	150.68	329	⇓P	PKiKP	08 56 47.3	-0.1
BZS	Buzias	150.68	329	⇓PKIKP	PKiKP	08 56 47.3	-0.1
BEBN	Eben Emael	150.71	354	dPKPab	PKPab	08 56 56.7	0.0
CSKK	Cskako	150.76	335	⇓eP	PKPbc	08 56 47.1	-0.1
KULA	Kula-Manisa	150.79	311	eP	PKiKP	08 56 47.9	-0.1
AHRW	Bad Neuenahr-A	150.79	352	ePKPbc	PKiKP	08 56 47.6	+0.2
	baz=19,slow=2.5						
KHC	Kasperske Hory	150.79	343	ePKIKP	PKPdf	08 56 41.7	+0.8
KHC				e		08 56 58.1	
KHC	Kasperske Hory	150.79	343	ePKPDF	PKPdf	08 56 41.7	+0.8
KHC				⇑ePKP	PKiKP	08 56 47.7	+0.1
KHC				ePKPAB	PKPab	08 56 58.1	+0.8
KHC				epPKP	pPKPab	08 59 12.2	+2.3
HERR	Herculane	150.82	327	⇓P	PKPbc	08 56 47.6	+0.2
MEM	Membach	150.86	353	dPKiKP	PKPbc	08 56 47.4	+0.1
MEM				dPKPab	PKPab	08 56 57.2	-0.2
BTNL	Ternell	150.87	353	dPKiKP	PKiKP	08 56 47.8	+0.1
GRF	Grafenberg Arr	150.87	346	ePKPbc	PKiKP	08 56 47.9	+0.2
	baz=19,slow=2.5						
GRFO	Grafenberg	150.87	346	PKIKP	PKiKP	08 56 48.1	+0.4
GRFO						08 56 58.3	
GRFO	Grafenberg	150.87	346		PKiKP	08 56 48.1	+0.4
GRFO					PKPab	08 56 58.3	+0.8
TNS	Taunus Mts	150.90	350	ePKPbc	PKiKP	08 56 48.0	+0.2
	baz=19,slow=2.5						
BSTI	Sart Tilman	150.93	354	dPKiKP	PKiKP	08 56 47.8	0.0
WET	Wettzell	150.97	344	ePKPbc	PKiKP	08 56 48.2	+0.2
	baz=19,slow=2.5						
GEC2	GERESS Array S	151.02	342	ePKPbc	PKiKP	08 56 48.2	0.0
	baz=19,slow=2.5						
GERES	GERESS Array B	151.02	342	PKP	PKPdf	08 56 41.7	+0.3
	comp=Z,0.5nm,0.6s,baz=15,slow=4.1,SNR=4.6						
GERES				PKPbc	PKiKP	08 56 48.1	0.0
	comp=Z,14nm,0.7s,baz=48,slow=2.2,SNR=71						
GERES				PKPab	PKPab	08 56 58.6	+0.4
	comp=Z,5.6nm,0.7s,baz=31,slow=3.4,SNR=10						
EGYH	Egyhazaskeszo	151.07	336	⇓eP	PKPbc	08 56 44.7	-3.1
BHOU	Houvegnez	151.11	353	dPKiKP	PKiKP	08 56 48.5	+0.3
BHOU				dPKPab	PKPab	08 56 58.4	-0.1
SNF	Seneffe	151.12	355	dPKiKP	PKiKP	08 56 48.1	0.0
SNF				dPKPab	PKPab	08 56 58.3	-0.2
BCLA	Clavier	151.12	354	dPKPab	PKPab	08 56 58.3	-0.2
SOP	Sopron	151.13	338	⇓eP	PKiKP	08 56 48.5	+0.2
CONA	Conrad Observa	151.16	339	eP	PKiKP	08 56 48.9	+0.4
	comp=Z,28nm,0.7s,SNR=11						
CONA				i P	PKPab	08 57 00.2	+1.3
	comp=Z,24nm,0.7s						
BGES	Gesves	151.17	354	dPKiKP	PKPbc	08 56 48.0	0.0
BGES				dPKPab	PKPab	08 56 58.1	-0.6
MPLH	Magyarpolny	151.20	336	⇓eP	PKiKP	08 56 48.5	0.0
MDVR	Moldovita	151.24	328	⇓P	PKiKP	08 56 48.6	-0.1
BMRD	Maredsous	151.28	355	dPKiKP	PKiKP	08 56 48.6	+0.1
BMRD				dPKPab	PKPab	08 56 59.2	0.0
TIH	Tihany	151.29	335	⇓eP	PKPbc	08 56 48.5	+0.2
ALN	Alexandroupoli	151.32	318	PKIKP	PKPbc	08 56 47.8	-0.8
ALN	Alexandroupoli	151.32	318		PKPbc	08 56 47.8	-0.8
DOU	Dourbes	151.50	355	dPKiKP	PKiKP	08 56 49.2	+0.2
DOU				dPKPab	PKPab	08 56 60.0	-0.2
MORH	Mrgy, Hungar	151.54	333	⇓eP	PKPbc	08 56 48.9	0.0
AYDB	Zeytinkoy-Aydi	151.59	311	eP	PKPbc	08 56 49.6	+0.1
MOA	Molln	151.74	341	eP	PKPbc	08 56 49.5	+0.1
	comp=Z,8.3nm,0.7s						
MOA				eP	PKPab	08 57 02.2	+0.9
	comp=Z,16nm,1.1s						
WLF	Walferdange	151.77	353	dPKiKP	PKiKP	08 56 50.2	+0.7
WLF				dPKPab	PKPab	08 57 01.4	+0.1
WLF	Walferdange	151.77	353	ePKPbc	PKiKP	08 56 50.5	+1.0
	baz=19,slow=2.5						
ARSA	Arzberg	151.86	338	i P	PKPbc	08 56 49.7	0.0
	comp=Z,5.1nm,0.8s						
ARSA				eP	PKPab	08 57 02.5	+0.6
	comp=Z,10nm,0.7s						
VTS	Vitosha	151.94	323	⇓P	PKiKP	08 56 50.5	+0.1
VTS	Vitosha	151.94	323	⇓PKIKP	PKiKP	08 56 50.5	+0.1
FUR	Furstenfeldbru	152.28	345	ePKPbc	PKiKP	08 56 51.0	+0.3
	baz=19,slow=2.5						
SOKA	Soboth	152.53	338	i P	PKPbc	08 56 50.8	-0.4
	comp=Z,10.0nm,1.1s						
SOKA				eP	PKPab	08 57 05.2	+0.5
	comp=Z,10nm,0.7s						
PERS	Pernice	152.53	338	i PKPbc	PKPbc	08 56 50.9	-0.3
PERS				ePKPab	PKPab	08 57 04.8	+0.1
KBA	Koelnbreinsper	152.72	341	i P	PKiKP	08 56 51.9	+0.1
	comp=Z,16nm,1.0s						
KBA				eP	PKPab	08 57 06.3	+0.7
	comp=Z,12nm,0.5s						
BFO	Black Forest	152.75	349	PKIKP	PKPdf	08 56 43.2	-0.6
BFO						08 57 04.8	
BFO	Black Forest	152.75	349	PKPdf	PKPdf	08 56 43.2	-0.6
BFO					PKiKP	08 56 51.8	+0.1
BFO				PKPab	PKPab	08 57 04.8	-0.7
BFO	Black Forest	152.75	349	ePKPbc	PKiKP	08 56 52.2	+0.5
	baz=19,slow=2.5						
OBKA	Obir	152.84	339	i P	PKPbc	08 56 50.9	-1.0
	comp=Z,5.5nm,0.6s						
OBKA				i P	PKPab	08 57 06.6	+0.5
	comp=Z,9.3nm,0.6s						
WATA	Walderalm	152.98	344	eP	PKPbc	08 56 52.0	-0.2
	comp=Z,4.6nm,0.3s						
WATA				eP	PKPab	08 57 07.3	+0.6
	comp=Z,22nm,1.2s						
UBR	Ueberruh	153.01	346	ePKPbc	PKiKP	08 56 52.7	+0.5
	baz=19,slow=2.5						
MYKA	Terra Mystica	153.02	340	i P	PKPbc	08 56 51.6	-0.7
	comp=Z,5.6nm,0.5s						
MYKA				i P	PKPab	08 57 06.8	-0.1
	comp=Z,14nm,0.6s						
RETA	Reutte	153.04	345	i P	PKiKP	08 56 52.9	+0.6
	comp=Z,12nm,1.3s						
RETA				i P	PKPab	08 57 07.5	+0.6
	comp=Z,7.0nm,0.5s						
MOTA	Moosalm	153.09	344	eP	PKPbc	08 56 52.4	-0.1
	comp=Z,17nm,1.2s						
MOTA				eP	PKPab	08 57 07.7	+0.5
	comp=Z,16nm,1.0s						
STIP	Stip	153.13	323	i P	PKPab	08 57 07.2	-0.2
VAY	Valandovo	153.16	322	i P	PKPab	08 57 08.7	+1.2
SQTA	Sankt Quirin	153.18	344	i P	PKPbc	08 56 52.7	0.0
	comp=Z,5.1nm,0.6s						
SQTA				eP	PKPab	08 57 08.0	+0.5
	comp=Z,17nm,1.3s						
ABTA	Abfaltersbach	153.26	342	eP	PKPbc	08 56 52.3	-0.5
	comp=Z,13nm,0.6s						
ABTA				i P	PKPab	08 57 07.6	-0.2
	comp=Z,21nm,0.6s						
ZOU	Zoufplan	153.29	341	PKPbc	PKPbc	08 56 51.0	-2.0
CRNS	Crni Vrh	153.31	339	i PKPbc	PKPbc	08 56 52.6	-0.3
CRNS				i PKPab	PKPab	08 57 07.6	-0.4
DAVA	Damuels	153.43	346	i P	PKiKP	08 56 53.6	+0.3
	comp=Z,6.1nm,0.6s						
DAVA				i P	PKPab	08 57 09.0	+0.3
	comp=Z,19nm,0.9s						
BOJS	Bojanci	153.46	337	i PKPbc	PKiKP	08 56 53.6	+0.5
VOJS	Vojsko	153.48	339	i PKPbc	PKPbc	08 56 53.0	-0.3
FETA	Feichten	153.48	345	i P	PKiKP	08 56 53.6	+0.2
	comp=Z,11nm,1.0s						
FETA				i P	PKPab	08 57 08.1	-0.8
	comp=Z,7.5nm,0.9s						
DAVOX	Davos/Dischmat	153.91	346	PKP	PKPdf	08 56 46.2	+0.5
	comp=Z,2.8nm,0.7s,baz=324,slow=3.1,SNR=3.5						
DAVOX				PKPbc	PKiKP	08 56 54.9	+0.6
	comp=Z,8.4nm,0.5s,baz=258,slow=5.7,SNR=11						
DAVOX				PKPab	PKPab	08 57 11.4	+0.7
	comp=Z,15nm,0.6s,baz=16,slow=3.4,SNR=13						
OHR	Ohrid	154.30	323	i P	PKPab	08 57 12.8	+0.3
IDI	Anoyia	154.94	308	PKPbc	PKPbc	08 56 57.7	+1.0
	comp=Z,5.5nm,0.5s,baz=203,slow=5.9,SNR=6.5						
IDI				PKPab	PKPab	08 57 16.4	+0.9
	comp=Z,8.1nm,0.5s,baz=90,slow=1.0,SNR=6.7						
ESDC	Sonseca Array	161.63	12	PKPab	PKPab	08 57 44.6	+0.2
	comp=Z,4.6nm,0.9s,baz=340,slow=4.1,SNR=13						
LIC	Lamto	163.62	159	eP	PKPab	08 57 54.6	+1.0
	comp=Z,46nm,0.8s						
KIC	Kosan Boka	163.84	160	eP	PKPab	08 57 55.8	+1.2
	comp=Z,47nm,0.8s						
TIC	Toumodi	164.02	159	eP	PKPab	08 57 56.5	+1.1
DBIC	Dimbokro	164.09	159	PKP	PKPdf	08 56 57.5	-0.6
	comp=Z,2.0nm,0.6s,baz=113,slow=2.2,SNR=4.3						
DBIC				PKPab	PKPab	08 57 57.5	+1.9
	comp=Z,7.7nm,0.6s,baz=167,slow=5.3,SNR=17						
KEST	Kesra	164.14	334	PKPab	PKPab	08 57 56.1	+0.6
	comp=Z,16nm,0.8s,baz=259,slow=2.8,SNR=8.2						
MDT	Midelt	167.94	22	PKPab	PKPab	08 58 13.8	+1.3
	comp=Z,3.9nm,0.8s,baz=343,slow=6.5,SNR=5.4						
TORD	Torodi Ar. Bea	171.45	186	PKP	PKPdf	08 57 02.2	-0.9
	comp=Z,1.2nm,0.7s,baz=295,slow=1.0,SNR=6.1						
TORD				PKPab	PKPab	08 58 28.6	+0.5
	comp=Z,3.9nm,0.7s,baz=173,slow=3.5,SNR=14						
TORD				SKP		08 59 36.2	
	comp=Z,1.4nm,0.9s,baz=96,slow=1.4,SNR=4.0						
TORD				PP	PP	09 02 19.1	+0.5
	comp=Z,1.7nm,0.8s,baz=172,slow=5.1,SNR=4.2						

TAP 28 08:48:27.8, 24°.33N×121°.76E, h29^{km}, ML2.1, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.09	352	i P	Pb	08 48 33.5	+0.5
	baz=356						
ENA				i S	Sb	08 48 36.9	+0.3
	baz=356						
NACB	Ninganchiao	0.22	223	⇓P	Pb	08 48 34.0	-0.1
	baz=222						
NACB				S	Sb	08 48 39.8	+1.3
	baz=222						
ETLH	Xiulin Townshi	0.28	243	P	Pn	08 48 35.5	-0.5
	baz=243						
ETLH				S	Sn	08 48 40.8	-0.5
	baz=243						
TWC	Suao	0.29	17	i P	Pb	08 48 34.6	-0.4
	baz=19						
TWC				S	Sn	08 48 41.1	-0.2
	baz=19						
TWD	Chiawan	0.29	210	i P	Pb	08 48 35.4	+0.4
	baz=208						
TWD				S	Sb	08 48 40.5	+0.5
	baz=208						
NDT	Datong Townshi	0.35	321	i P	Pn	08 48 36.8	0.0
	baz=320						
NDT				i S	Sn	08 48 42.6	-0.2
	baz=320						
ENTT	Nioudou	0.35	331	i P	Pn	08 48 36.5	-0.4
	baz=331						
ENTT				i S	Sn	08 48 42.6	-0.3
	baz=331						
NNSB	Datong	0.35	286	P	Pn	08 48 37.1	+0.1
	baz=285						
NNSB				S	Sn	08 48 42.4	-0.7
	baz=285						
NNSH	Datong	0.35	286	eP	Pn	08 48 37.0	-0.1
	baz=285						
NNSH				S	Sn	08 48 42.5	-0.7
	baz=285						
NNS	Nan Shan	0.36	287	i P	Pb	08 48 36.7	+0.5
	baz=286						
NNS				i S	Sn	08 48 42.7	-0.7
	baz=286						
FUSS	Fushou	0.47	260	eP	Pb	08 48 37.5	-0.4
	baz=259						
FUSS				eS	Sn	08 48 46.0	-0.3
	baz=259						
YHNB	Yeheng	0.48	314	eP	Pb	08 48 37.8	-0.1
	baz=314						
YHNB				S	Sb	08 48 45.2	+0.3
	baz=314						
WHF	Hehuan Shan	0.48	247	P	Pn	08 48 39.0	-0.1
	baz=246						
WHF				i S	Sb	08 48 46.1	+0.7
	baz=246						
NSK	Sanguang	0.50	313	eP	Pb	08 48 38.4	+0.2
	baz=313						
NSK				i S	Sn	08 48 46.0	-0.6
	baz=313						
NWLT	Wulai	0.50	333	eP	Pb	08 48 38.2	+0.1
	baz=332						
NWLT				eS	Sn	08 48 46.6	+0.1
	baz=332						
TWT	Tachien	0.54	261	P	Pb	08 48 38.9	0.0
	baz=261						
TWT				eS	Sn	08 48 47.8	+0.1
	baz=261						
TDCB	Techi	0.55	262	eP	Pb	08 48 39.2	+0.1
	baz=261						
TDCB				S	Sb	08 48 46.9	+0.1
	baz=261						
CHGB	Renai	0.60	243	P	Pn	08 48 40.5	+0.1
	baz=242						
CHGB				eS	Sb	08 48 48.3	+0.1
	baz=242						
TIPB	Shuangxi	0.64	6	eP	Pb	08 48 40.5	0.0
	baz=5.0						
WHP	Taichung City	0.74	266	eP	Pb	08 48 41.4	-0.8
	baz=265						
WHP				eS	Sn	08 48 53.5	+0.9
	baz=265						
YM10	YM10	0.84	348	eP	Pb	08 48 43.8	0.0
	baz=347						

IDC 28 09:00:11.6±3.8, 52°.29N×35°.67E, h0^{km}, mb1 4.0/2, mb1mx3.1/47, mbtmp3.9/2, ML3.1/2, Error ellipse: s-maj=41.9km s-min=14.8km az=117.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OBN	Obninsk	2.88	10	Lg	Lg	09 01 37.5	
	1.2nm,0.3s,baz=6.8,slow=23,SNR=1.1						
AKASG	Malin Array Be	4.33	251	Pn	Pn	09 01 16.8	-1.8
	0.6nm,0.3s,baz=56,slow=12,SNR=2.6						
AKASG				Pg	Pb	09 01 27.4	-1.1
	1.3nm,0.3s,baz=56,slow=14,SNR=2.8						
AKASG				Sn	Sn	09 02 07.2	-2.6
	1.8nm,0.3s,baz=62,slow=23,SNR=4.8						
AKASG				Lg	Lg	09 02 24.4	
	2.9nm,0.3s,baz=66,slow=29,SNR=4.2						
I43RU	DUBNA INFRASON	4.53	11	i		09 27 50.0	
	baz=186,slow=325,SNR=3.7						
FINES	FINESS Array B	10.56	334	Pn	Pn	09 02 39.5	-4.5
	baz=153,slow=14,SNR=3.0						
FINES				Sn	Sn	09 04 32.4	-10
	0.3nm,0.3s,baz=152,slow=24,SNR=2.6						
I31KZ	AKTYUBINSK INF	14.10	89	i		10 22 20.0	
	baz=286,slow=310,SNR=3.6						
ARCES	ARCESS Array B	17.95	348	P	P	09 04 23.2	+0.4
	baz=165,slow=11,SNR=5.8						

NOU ***28*** *09:15:46.3, 37°.81S×178°.03E, h60^{km}, MLv4.0, Off E. Coast of N. Island, N.Z.*

WEL 28 09:15:50.1, 38°S±2°×17°8E±°, h38^{km}±2^{km}, M3.3/18, ML3.5/18, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=134.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.18	93	P	Pn	09 15 57.3	-1.7
HAZ				S	Sn	09 16 03.1	-4.1
RUGZ	Raukumara Rang	0.24	156	P	Pn	09 15 57.4	-1.1
RUGZ				S	Sn	09 16 03.3	-2.5
WIZ	White Island	0.36	307	P	Pn	09 16 00.7	+1.9
PKGZ	Pakihiroa	0.44	109	P	Pn	09 15 59.5	-0.4
PKGZ				S	Sn	09 16 10.1	+3.2
WHRZ	Whale Island	0.47	257	P	Pn	09 16 01.6	+1.2
TWGZ	Tauwhareparae	0.55	142	P	Pn	09 16 01.8	+0.3
MWZ	Matawai	0.59	182	P	Pn	09 16 01.9	-0.2
MWZ				S	Sn	09 16 10.6	+0.1
URZ	Urewera	0.62	214	P	Pn	09 16 02.5	+0.1
URZ				S	Sn	09 16 11.8	+0.6
MXZ	Matakaoa Point	0.63	73	P	Pn	09 16 02.3	-0.2
PUZ	Puketiti	0.64	120	P	Pn	09 16 02.9	0.0
PUZ				S	Sn	09 16 13.5	+1.7
WMGZ	Waiomatatini S	0.69	96	P	Pn	09 16 03.6	+0.3
WMGZ				S	Sn	09 16 15.3	+2.5
TKGZ	Te Karaka	0.73	161	P	Pn	09 16 04.6	+0.8
MARZ	Manawahe	0.73	251	S	Sn	09 16 15.4	+1.4
EDRZ	Edgecumbe	0.74	241	S	Sn	09 16 16.2	+2.1
RAGZ	Rawiri	0.76	188	P	Pn	09 16 04.8	+0.5
RAGZ				S	Sn	09 16 16.1	+1.6
OPRZ	Ohinepanea	0.80	263	P	Pn	09 16 05.1	+0.3
CNGZ	Carnagh Statio	0.90	145	P	Pn	09 16 06.6	+0.4
MKRZ	Makatiti	0.94	245	P	Pn	09 16 07.9	+1.0
MUGZ	Murupara	0.95	220	P	Pn	09 16 07.0	0.0
MUGZ				S	Sn	09 16 19.6	+0.2
LIRZ	Lichensteins R	0.96	254	P	Pn	09 16 07.8	+0.8
TARZ	Mount Tarawera	0.96	239	P	Pn	09 16 07.8	+0.7
RIGZ	Rimuhau	0.97	170	P	Pn	09 16 08.1	+0.8
OMRZ	Omania	1.00	249	P	Pn	09 16 08.2	+0.6
RRRZ	Republican Roa	1.01	234	P	Pn	09 16 08.1	+0.3
TGRZ	Tauranga	1.02	271	P	Pn	09 16 08.1	+0.2
SNGZ	Shannon Statio	1.05	189	P	Pn	09 16 09.3	+1.0
KARZ	Kaharoa	1.07	255	P	Pn	09 16 09.0	+0.5
HLRZ	Highlands Stat	1.07	242	P	Pn	09 16 09.3	+0.6
NGRZ	Ngongotaha	1.14	251	P	Pn	09 16 10.4	+0.9
UTU	Utuhina	1.16	248	P	Pn	09 16 11.2	+1.5
HSRZ	Hossack Road	1.18	241	P	Pn	09 16 11.0	+1.0
PRRZ	Plateau Road	1.18	230	P	Pn	09 16 10.3	+0.2
HRRZ	Handcock Road	1.19	237	P	Pn	09 16 10.9	+0.6
RAHZ	Arahi	1.22	197	P	Pn	09 16 11.3	+0.6
MTHZ	Maungataniwha	1.24	207	P	Pn	09 16 10.7	-0.2
ALRZ	Allen Road	1.25	229	P	Pn	09 16 11.4	+0.3
KMRZ	Kaimai	1.28	265	P	Pn	09 16 11.6	+0.2
GRRZ	Galatos Road	1.29	242	P	Pn	09 16 12.4	+0.8
WPRZ	Whakapapatarin	1.34	234	P	Pn	09 16 13.0	+0.7
WHHZ	Waihua	1.35	191	P	Pn	09 16 14.0	+1.6
MRHZ	Matea Rd	1.41	219	P	Pn	09 16 12.6	-0.6
MHGZ	Mahia Peninsul	1.43	169	P	Pn	09 16 14.1	+0.5
NMHZ	Naumai	1.47	203	P	Pn	09 16 14.8	+0.7
KUTZ	Kaahu Road	1.55	241	P	Pn	09 16 15.8	+0.6
ARHZ	Aropaoanui	1.58	196	P	Pn	09 16 16.6	+1.1
TOZ	Tahuroa Road	1.63	270	P	Pn	09 16 16.4	+0.2
BKZ	Black Stump Fm	1.64	210	P	Pn	09 16 16.3	-0.2
TLZ	Tolley Road	1.69	249	P	Pn	09 16 17.5	+0.4
KUZ	Kuaotunu	1.77	304	P	Pn	09 16 18.0	-0.1
RATZ	Rangitukua	1.79	231	P	Pn	09 16 19.2	+0.7
RITZ	Rihia Road	1.81	227	P	Pn	09 16 19.5	+0.7
MCHZ	McNeill Hill	1.82	201	P	Pn	09 16 19.7	+0.8
KWHZ	Kaweka Forest	1.89	208	P	Pn	09 16 20.6	+0.7
KATZ	Kakaramea	1.91	229	P	Pn	09 16 21.3	+1.2
TMVZ	Te Maari	1.99	226	P	Pn	09 16 21.7	+0.4
ETVZ	East Tongariro	2.00	226	P	Pn	09 16 21.9	+0.4
MKAZ	Moumakai	2.01	288	P	Pn	09 16 21.9	+0.5
KRVZ	Karewarewa	2.02	228	P	Pn	09 16 22.3	+0.6
OTVZ	Oturere	2.05	226	P	Pn	09 16 22.6	+0.4
WTVZ	West Tongariro	2.06	228	P	Pn	09 16 22.9	+0.7
NGZ	Ngauruhoe	2.09	226	P	Pn	09 16 23.5	+0.7
BHHZ	Black Hill Sta	2.10	213	P	Pn	09 16 22.8	+0.1
KRHZ	Kereru	2.11	206	P	Pn	09 16 23.2	+0.3
KAHZ	Kahuranaki	2.11	194	P	Pn	09 16 22.8	-0.1
TWVZ	Taurewa	2.12	231	P	Pn	09 16 24.4	+1.3
TUVZ	Tukino	2.13	224	P	Pn	09 16 23.5	+0.3
WIAZ	Waiheke Island	2.15	296	P	Pn	09 16 23.9	+0.5
WHVZ	Whangaehu Hut	2.17	225	P	Pn	09 16 25.7	+1.8
FWVZ	Far West T-bar	2.17	226	P	Pn	09 16 24.8	+0.9
MOVZ	Moawhango	2.18	220	P	Pn	09 16 23.7	-0.1
WNVZ	Wahianoa	2.20	224	P	Pn	09 16 24.6	+0.4
ETAZ	East Tamaki Re	2.24	290	P	Pn	09 16 25.4	+0.9
HIZ	Hauiti	2.26	249	P	Pn	09 16 26.1	+1.2
MTVZ	Mangateitei	2.31	224	P	Pn	09 16 26.3	+0.7
PKVZ	Pokaka	2.32	228	P	Pn	09 16 27.0	+1.2
MBAZ	Motutapu North	2.33	294	P	Pn	09 16 26.8	+0.9
EPAZ	Eden Park BICE	2.40	290	P	Pn	09 16 28.1	+1.2
PNHZ	Pukenui	2.41	206	P	Pn	09 16 26.6	-0.4
HBAZ	Herne Bay Bore	2.42	291	P	Pn	09 16 28.4	+1.3
WPHZ	Waipukurau	2.47	200	P	Pn	09 16 26.9	-0.9
RVAZ	Riverhead Bore	2.56	291	P	Pn	09 16 30.2	+1.2
VRZ	Vera Road	2.59	237	P	Pn	09 16 31.0	+1.6
PRHZ	Porangahau	2.62	196	P	Pn	09 16 28.8	-1.0
TSZ	Takapari Road	2.62	208	P	Pn	09 16 30.1	+0.2
DVHZ	Dannevirke	2.77	203	P	Pn	09 16 30.4	-1.5
ANWZ	Angora Road	2.84	197	P	Pn	09 16 31.6	-1.2
WAZ	Wanganui	2.84	224	P	Pn	09 16 34.0	+1.1
PRWZ	Pori Road	3.06	203	P	Pn	09 16 34.6	-1.3
BFZ	Birch Farm	3.10	199	P	Pn	09 16 34.7	-1.7
NEZ	North Egmont	3.11	240	P	Pn	09 16 39.8	+3.1
WCZ	Waipu Caves	3.14	304	P	Pn	09 16 37.9	+0.8
MRZ	Mangatainoka R	3.29	207	P	Pn	09 16 37.1	-1.9
HOWZ	Holdsworth Sta	3.52	206	P	Pn	09 16 39.9	-2.4
TMWZ	Te Maipa	3.59	200	P	Pn	09 16 40.8	-2.5
KIW	Kapiti Island	3.73	213	P	Pn	09 16 43.4	-1.6
CAW	Cannon Point	3.87	209	P	Pn	09 16 44.3	-2.7
OUZ	Omahuta	4.07	307	P	Pn	09 16 51.0	+1.3
DUWZ	D’Urville Isla	4.15	222	P	Pn	09 16 51.7	+0.7
TCW	Tory Channel	4.29	215	P	Pn	09 16 50.5	-2.2
TUWZ	Tuamarina	4.62	216	P	Pn	09 16 54.7	-2.6
NNZ	Nelson	4.74	222	P	Pn	09 17 00.9	+2.0
BSWZ	Blackbirch Sta	4.87	214	P	Pn	09 16 58.9	-1.9
QRZ	Quartz Range	4.96	230	P	Pn	09 17 01.1	-0.9
THZ	Tophouse	5.38	220	P	Pn	09 17 05.1	-2.6
DSZ	Denniston Nort	5.96	226	P	Pn	09 17 13.3	-2.5
LTZ	Lake Taylor	6.45	217	P	Pn	09 17 19.6	-2.8

NOU ***28*** *09:21:37.0, 37°.81S×177°.88E, h43^{km}, MLv3.9, Off E. Coast of N. Island, N.Z.*

WEL 28 09:21:39.1, 38°S±1°×17°8E±°, h39^{km}±2^{km}, M3.1/30, ML3.3/30, MLv3.1/30, Error ellipse: s-maj=0.0km s-min=0.0km az=134.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.18	89	P	Pn	09 21 46.4	-0.5
HAZ				S	Sn	09 21 52.0	-1.2
RUGZ	Raukumara Rang	0.23	155	P	Pn	09 21 46.5	-0.6
RUGZ				S	Sn	09 21 52.4	-1.0
PKGZ	Pakihiroa	0.43	107	P	Pn	09 21 48.6	-0.4
WHRZ	Whale Island	0.47	258	P	Pn	09 21 50.6	+1.2
TWGZ	Tauwhareparae	0.54	141	P	Pn	09 21 51.0	+0.5
MWZ	Matawai	0.57	182	P	Pn	09 21 50.9	-0.1
MWZ				S	Sn	09 21 59.7	+0.5
URZ	Urewera	0.61	215	P	Pn	09 21 51.7	+0.3
URZ				S	Sn	09 22 01.1	+1.0
MXZ	Matakaoa Point	0.63	72	P	Pn	09 21 51.5	-0.2
PUZ	Puketiti	0.64	120	P	Pn	09 21 51.9	+0.2
PUZ				S	Sn	09 22 02.4	+1.6
WMGZ	Waiomatatini S	0.68	95	P	Pn	09 21 52.7	+0.4
WMGZ				S	Sn	09 22 04.0	+2.2
TKGZ	Te Karaka	0.72	161	P	Pn	09 21 53.7	+0.9
MARZ	Manawahe	0.73	252	P	Pn	09 21 53.4	+0.4
EDRZ	Edgecumbe	0.73	241	P	Pn	09 21 53.7	+0.7
RAGZ	Rawiri	0.74	188	P	Pn	09 21 53.8	+0.6
OPRZ	Ohinepanea	0.80	264	P	Pn	09 21 54.2	+0.3
CNGZ	Carnagh Statio	0.89	145	P	Pn	09 21 55.6	+0.4
MKRZ	Makatiti	0.94	246	P	Pn	09 21 57.1	+1.2
MUGZ	Murupara	0.95	221	P	Pn	09 21 56.1	+0.1
TARZ	Mount Tarawera	0.96	240	P	Pn	09 21 56.8	+0.7
LIRZ	Lichensteins R	0.96	255	P	Pn	09 21 57.0	+0.9
RIGZ	Rimuhau	0.96	170	P	Pn	09 21 56.7	+0.6
RTZ	Ruatahuna	0.97	208	P	Pn	09 21 56.3	0.0
OMRZ	Omania	1.00	249	P	Pn	09 21 57.2	+0.6
RRRZ	Republican Roa	1.00	234	P	Pn	09 21 57.2	+0.5
TGRZ	Tauranga	1.03	271	P	Pn	09 21 57.3	+0.3
SNGZ	Shannon Statio	1.03	189	P	Pn	09 21 58.4	+1.2
KARZ	Kaharoa	1.07	255	P	Pn	09 21 58.2	+0.5
HLRZ	Highlands Stat	1.07	242	P	Pn	09 21 58.4	+0.7
NGRZ	Ngongotaha	1.13	252	P	Pn	09 21 59.4	+0.9
UTU	Utuhina	1.15	248	P	Pn	09 22 00.0	+1.2
HSRZ	Hossack Road	1.17	242	P	Pn	09 22 00.1	+1.0
PRRZ	Plateau Road	1.18	231	P	Pn	09 21 59.5	+0.3
HRRZ	Handcock Road	1.19	237	P	Pn	09 21 59.7	+0.5
RAHZ	Arahi	1.21	198	P	Pn	09 22 00.3	+0.6
MTHZ	Maungataniwha	1.23	207	P	Pn	09 21 59.9	0.0
ALRZ	Allen Road	1.25	230	P	Pn	09 22 00.5	+0.4
KNZ	Kokohu	1.26	176	P	Pn	09 22 00.1	-0.2
KMRZ	Kaimai	1.28	266	P	Pn	09 22 00.8	+0.2
GRRZ	Galatos Road	1.28	242	P	Pn	09 22 01.5	+0.8
WPRZ	Whakapapatarin	1.33	235	P	Pn	09 22 01.9	+0.6
WHHZ	Waihua	1.34	191	P	Pn	09 22 03.2	+1.8
MRHZ	Matea Rd	1.40	219	P	Pn	09 22 02.3	+0.1
MHGZ	Mahia Peninsul	1.42	169	P	Pn	09 22 02.9	+0.5
NMHZ	Naumai	1.46	204	P	Pn	09 22 03.9	+0.9
KUTZ	Kaahu Road	1.55	241	P	Pn	09 22 04.9	+0.7
ARHZ	Aropaoanui	1.56	196	P	Pn	09 22 06.3	+1.9
TOZ	Tahuroa Road	1.63	270	P	Pn	09 22 05.6	+0.3
BKZ	Black Stump Fm	1.63	210	P	Pn	09 22 05.4	0.0
TLZ	Tolley Road	1.69	250	P	Pn	09 22 06.7	+0.4
KUZ	Kuaotunu	1.78	304	P	Pn	09 22 07.2	-0.2
RATZ	Rangitukua	1.79	231	P	Pn	09 22 08.3	+0.8
RITZ	Rihia Road	1.81	227	P	Pn	09 22 08.5	+0.8
MCHZ	McNeill Hill	1.81	202	P	Pn	09 22 09.2	+1.3
KWHZ	Kaweka Forest	1.89	208	P	Pn	09 22 09.8	+0.9

KATZ	Kakaramea	1.90	230	P	Pn	09 22 10.3	+1.1
TMVZ	Te Maari	1.99	226	P	Pn	09 22 10.9	+0.5
ETVZ	East Tongariro	2.00	226	P	Pn	09 22 11.0	+0.5
KRVZ	Karewarewa	2.01	228	P	Pn	09 22 11.4	+0.7
MKAZ	Moumakai	2.02	288	P	Pn	09 22 11.0	+0.4
OTVZ	Oturere	2.04	226	P	Pn	09 22 11.7	+0.5
WTVZ	West Tongariro	2.05	228	P	Pn	09 22 12.1	+0.8
BHHZ	Black Hill Sta	2.09	214	P	Pn	09 22 12.2	+0.6
NGZ	Ngauruhoe	2.09	227	P	Pn	09 22 12.4	+0.7
KRHZ	Kereru	2.10	206	P	Pn	09 22 12.2	+0.4
KAHZ	Kahuranaki	2.10	194	P	Pn	09 22 12.1	+0.2
TWVZ	Taurewa	2.12	231	P	Pn	09 22 13.5	+1.4
TUVZ	Tukino	2.12	224	P	Pn	09 22 12.7	+0.5
WIAZ	Waiheke Island	2.16	296	P	Pn	09 22 13.0	+0.4
WHVZ	Whangaehu Hut	2.17	225	P	Pn	09 22 14.7	+1.8
FWVZ	Far West T-bar	2.17	226	P	Pn	09 22 14.3	+1.4
MOVZ	Moawhango	2.17	220	P	Pn	09 22 12.8	0.0
WNVZ	Wahianoa	2.19	224	P	Pn	09 22 13.6	+0.4
ETAZ	East Tamaki Re	2.24	290	P	Pn	09 22 14.6	+0.9
GRZ	Great Barrier	2.25	311	P	Pn	09 22 14.0	+0.1
HIZ	Hauiti	2.26	250	P	Pn	09 22 15.2	+1.3
MTVZ	Mangateitei	2.30	225	P	Pn	09 22 16.2	+1.6
MBAZ	Motutapu North	2.34	294	P	Pn	09 22 15.9	+0.8
PNHZ	Pukenui	2.40	206	P	Pn	09 22 15.6	-0.3
EPAZ	Eden Park BICE	2.41	291	P	Pn	09 22 17.2	+1.2
HBAZ	Herne Bay Bore	2.43	291	P	Pn	09 22 17.1	+0.9
WPHZ	Waipukurau	2.46	200	P	Pn	09 22 16.9	+0.1
RVAZ	Riverhead Bore	2.57	292	P	Pn	09 22 19.3	+1.1
VRZ	Vera Road	2.58	237	P	Pn	09 22 20.0	+1.5
PRHZ	Porangahau	2.60	196	P	Pn	09 22 17.7	-1.0
DVHZ	Dannevirke	2.76	203	P	Pn	09 22 19.4	-1.4
WAZ	Wanganui	2.83	224	P	Pn	09 22 23.1	+1.3
POWZ	Post Office Ro	2.97	207	P	Pn	09 22 24.4	+0.6
LREZ	Lake Rotokare	3.00	235	P	Pn	09 22 26.5	+2.4
PRWZ	Pori Road	3.05	203	P	Pn	09 22 24.9	+0.1
BFZ	Birch Farm	3.09	199	P	Pn	09 22 23.9	-1.5
NEZ	North Egmont	3.10	240	P	Pn	09 22 29.0	+3.4
PKE	Pukeiti	3.15	242	P	Pn	09 22 29.4	+3.2
WCZ	Waipu Caves	3.15	304	P	Pn	09 22 27.0	+0.8
KHEZ	Kahui Hut	3.17	240	P	Pn	09 22 29.8	+3.2
NBEZ	Newall Road No	3.26	241	P	Pn	09 22 30.8	+3.1
MRZ	Mangatainoka R	3.28	207	P	Pn	09 22 26.2	-1.8
TIWZ	Tintock	3.28	203	P	Pn	09 22 27.8	-0.2
OGWZ	Otaki Gorge	3.57	210	P	Pn	09 22 30.4	-1.6
TMWZ	Te Maipa	3.58	201	P	Pn	09 22 29.8	-2.4
KIW	Kapiti Island	3.72	213	P	Pn	09 22 32.6	-1.3
OUZ	Omahuta	4.07	307	P	Pn	09 22 40.1	+1.2
DUWZ	D'Urville Isla	4.14	222	P	Pn	09 22 38.4	-1.5
NNZ	Nelson	4.73	222	P	Pn	09 22 45.8	-2.1
BSWZ	Blackbirch Sta	4.86	215	P	Pn	09 22 48.0	-1.7
QRZ	Quartz Range	4.96	230	P	Pn	09 22 49.8	-1.2

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*TUL **28** 09:33:50±0.9, 35°.54N±0°.03×97°.23W±0°.03, h7^{km}±7^{km}, ML3.2, mb_Lg2.9/46(NEIC), Error ellipse: s-maj=5.1km s-min=2.0km az=145.0*

*NEIC **28** 09:33:50.4±1.0, 35°.56N±0°.03×97°.24W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=6.8km s-min=3.0km az=323.0*

*ANF **28** 09:33:51.4±1.1, 35°.69N×97°.31W, h27^{km}±8^{km}, ML3.5/8, Error ellipse: s-maj=12.9km s-min=2.9km az=156.0*

ISC 28 09:33:50.4±0.9**, 35°.55N**±0°.02×**97°.23W**±0°.02**, h10**^{km}±6^{km}**, n63,** σ**0^{s}.66**/62**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.05	281	Pg	Pg	09 33 51.6	-0.8
OK025	Westminster Rd	0.09	289		Pg	09 33 52.4	-0.5
OK005	Luther M Schoo	0.11	17		Pg	09 33 53.1	0.0
OK009	Oakdale Elemen	0.16	281		Pg	09 33 53.7	-0.2
OK009				Sg	Sg	09 33 56.3	0.0
OKCSW	OKLAHOMA CITY	0.22	230		Pg	09 33 54.6	-0.4
OKCSW				Sg	Sg	09 33 58.0	-0.1
OKCFA	Oklahoma City	0.23	233		Pg	09 33 54.7	-0.4
OKCFA				Sg	Sg	09 33 58.2	0.0
OK029	Liberty Lake	0.31	323		Pg	09 33 56.5	-0.1
OK029				Sg	Sg	09 34 01.1	+0.5
FNO	Franklin	0.33	206		Pg	09 33 56.4	-0.4
FNO				Sg	Sg	09 34 01.3	+0.1
BCOK	Bluff Creek, N	0.33	289	Pg	Pg	09 33 56.7	-0.2
BCOK				Sg	Sg	09 34 01.5	+0.2
OK031	S. Brethren Rd	0.51	38		Pg	09 34 00.0	-0.3
OK031				Sg	Sg	09 34 07.6	+0.5
OK030	Cody Creek RV	0.52	44		Pg	09 34 00.4	-0.2
OK030				Sg	Sg	09 34 07.9	+0.4
QUOK	Quay	0.75	34	Pg	Pg	09 34 04.3	-0.6
QUOK				Sg	Sg	09 34 14.9	+0.2
X34A	Smith Ranch, M	1.07	208	Pg	Pg	09 34 10.4	-0.6
CROK	Carrier	1.13	328		Pg	09 34 11.4	-0.7
TUL1	Leonard	1.22	73	P	Pg	09 34 12.1	-1.8
	baz=253						
TUL1				S	Sg	09 34 29.2	-0.6
	baz=253						
TUL1	Leonard	1.22	73		Pg	09 34 12.1	-1.8
TUL1	Leonard	1.22	73	P		09 34 12.1	
	baz=253						
TUL1				S		09 34 30.4	
	baz=253						
KAN13	South Haven SW	1.47	352		Pn	09 34 17.1	+0.1
T35A	Sooner Cattle	1.48	23	Pn	Pn	09 34 16.9	-0.3
T35B	Sooner Cattle	1.48	23	P		09 34 16.7	
	baz=203						
T35B				S		09 34 37.1	
	baz=203						
WMOK	Wichita Mounta	1.51	238	P	Pn	09 34 17.1	-0.5
	baz=57						
WMOK				S	Sn	09 34 37.0	-0.4
	baz=57						
WMOK	Wichita Mounta	1.51	238		Pn	09 34 17.1	-0.5
WMOK	Wichita Mounta	1.51	238	P		09 34 16.9	
	baz=57						
WMOK				S		09 34 37.3	
	baz=57						
KAN14	Manchester OK	1.52	337		Pn	09 34 18.1	+0.3
KAN01	Argonia South	1.66	345		Pn	09 34 20.0	+0.4
KAN01				IAmb_Lg		09 34 46.7	
	comp=Z,44nm,0.8s						
U32A	Winter Ranch,	1.66	300	Pn	Pn	09 34 20.1	+0.5
U32A	Winter Ranch,	1.66	300	P		09 34 20.0	
	baz=120						
U32A				S		09 34 42.9	
	baz=120						
KAN10	Anthony SW Sta	1.72	336		Pn	09 34 21.1	+0.6
KAN08	Anthony NE Sta	1.78	341		Pn	09 34 21.8	+0.5
KAN08				IAmb_Lg		09 34 47.4	
	comp=Z,45nm,0.7s						
X37A	Clayton	1.80	122		Pn	09 34 22.1	+0.5
X37A	Clayton	1.80	122	P		09 34 22.1	
	baz=303						
X37A				S		09 34 46.3	
	baz=303						
KAN12	Harper NE Stat	1.85	341		Pb	09 34 23.5	-0.9
Z35A	Perchaven, San	2.21	181		Pn	09 34 28.0	+0.7
Z35A	Perchaven, San	2.21	181	P		09 34 28.0	
	baz=0.6						
Z35A				S		09 34 57.9	
	baz=0.6						
U38A	Gravette	2.47	68		Pn	09 34 31.7	+0.9
U38A	Gravette	2.47	68	P		09 34 31.3	
	baz=250						
HHAR	Hobbs	2.77	74	Pn	Pn	09 34 35.4	+0.5
HHAR	Hobbs	2.77	74	P		09 34 35.6	
	baz=256						
W39A	Magazine	2.84	96	P	Pn	09 34 36.1	+0.3
	baz=278						
W39A	Magazine	2.84	96		Pn	09 34 36.0	+0.1
W39A				IAmb_Lg		09 35 22.1	
	comp=Z,35nm,1.1s						
W39A	Magazine	2.84	96	P		09 34 35.9	
	baz=278						
W39A				S		09 35 11.1	
	baz=278						
Z38A	Mt. Pleasant	2.94	140	Pn	Pn	09 34 38.2	+0.9
Z38A				IAmb_Lg		09 35 25.1	
	comp=Z,34nm,0.9s						
MIAR	Mount Ida	3.16	107	P	Pn	09 34 41.3	+1.1
	baz=290						
MIAR	Mount Ida	3.16	107		Pn	09 34 40.3	0.0
MIAR	Mount Ida	3.16	107	P		09 34 41.1	
	baz=290						
ABTX	Abilene, Hawle	3.54	215	Pb	Pb	09 34 54.7	+1.4
	baz=34						
ABTX	Abilene, Hawle	3.54	215	Pn	Pn	09 34 44.9	-0.6
WHTX	Lake Whitney,	3.56	183	P	Pn	09 34 46.2	+0.5
	baz=3.0						
WHTX	Lake Whitney,	3.56	183	Pn	Pn	09 34 46.0	+0.3
WHTX	Lake Whitney,	3.56	183	P		09 34 46.1	
	baz=3.0						
KSU1	Kansas State U	3.58	8		Pn	09 34 46.1	+0.1
KSU1				IAmb_Lg		09 35 51.2	
	comp=Z,29nm,0.9s						
U40A	Yellville	3.64	76	P	Pn	09 34 47.4	+0.5
	baz=258						
U40A	Yellville	3.64	76	Pn	Pn	09 34 47.5	+0.7
AMTX	Amarillo	3.71	261	Pn	Pn	09 34 47.8	-0.1
AMTX				IAmb_Lg		09 35 55.4	
	comp=Z,42nm,0.8s						
237A	Washetta, Mont	3.73	161	Pn	Pn	09 34 47.0	-1.1
237A				IAmb_Lg		09 35 54.6	
	comp=Z,26nm,1.1s						
237A	Washetta, Mont	3.73	161	P		09 34 48.5	
	baz=342						
X40A	Basin Creek Fa	3.76	105		Pn	09 34 49.1	+0.6
X40A				IAmb_Lg		09 35 59.7	
	comp=Z,22nm,0.8s						
S39A	Bolivar	3.80	55	IAmb_Lg		09 35 50.4	
	comp=Z,22nm,0.9s						
S39A	Bolivar	3.80	55	P		09 34 49.2	
	baz=237						
CBKS	Cedar Bluff	3.82	329	IAmb_Lg		09 35 54.7	
	comp=Z,30nm,0.8s						
WLAR	White Oak Lake	3.87	118	Pn	Pn	09 34 50.5	+0.4
WHAR	Wooly Hollow	4.04	92	Pn	Pn	09 34 53.0	+0.6
W41B	Gary Mavity, V	4.09	94	P	Pn	09 34 53.6	+0.6
	baz=277						
W41B				S	Sn	09 35 41.7	+0.7
	baz=277						
W41B	Gary Mavity, V	4.09	94	P		09 34 53.5	
	baz=277						
FCAR	Ozark Folk Cen	4.17	84		Pn	09 34 55.3	+1.2
FCAR				IAmb_Lg		09 36 04.2	
	comp=Z,28nm,0.9s						
MGMO	Mountain Grove	4.31	67	IAmb_Lg		09 36 07.8	
	comp=Z,25nm,0.9s						
435B	Jarrell	4.76	184	IAmb_Lg		09 36 31.2	
	comp=Z,18nm,0.8s						
R40A	Maddies Statio	4.82	54	IAmb_Lg		09 36 24.3	
	comp=Z,24nm,0.7s						
MSTX	Muleshoe	4.83	253	Pn	Pn	09 35 03.1	-0.2
T42A	Van Buren	5.17	72	IAmb_Lg		09 36 36.2	
	comp=Z,22nm,0.8s						
CCM	Cathedral Cave	5.41	61	IAmb_Lg		09 36 44.9	
	comp=Z,24nm,0.7s						
P40A	Paris	5.72	44	IAmb_Lg		09 36 53.6	
	comp=Z,20nm,0.8s						
FVM	French Village	5.98	64	IAmb_Lg		09 37 03.6	
	comp=Z,33nm,1.1s						
N38A	Joes South For	6.11	30	IAmb_Lg		09 37 09.5	
	comp=Z,28nm,0.9s						
OGNE	Ogallala	6.58	326	IAmb_Lg		09 37 22.0	
	comp=Z,29nm,0.8s						
WVT	Waverly	7.66	83	IAmb_Lg		09 38 03.6	
	comp=Z,11nm,1.2s						
I40A	Norwalk	9.76	29	IAmb_Lg		09 39 04.0	
	comp=Z,5.8nm,0.8s						

GUC 28 09:36:17.2±0.5**, 37°.45S**×**74°.22W, h32**^{km}±6^{km}**, ML3.7, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI03	Tigo	1.13	58	*e*P	Pb	09 36 39.2	+1.0
BI03				*i* S	Sb	09 36 56.7	+4.1
BI03				IAML		09 37 01.1	
	comp=E,5μm,0.4s						
BI03	Tigo	1.13	58	*e*P	Pn	09 36 36.4	-0.4
BI03				IAML		09 37 00.9	
	comp=E,5μm,0.3s						
LAJA	Laja	1.22	83	*e*P	Pb	09 36 39.1	-0.5
LAJA				*i* S	Sb	09 36 54.8	-0.2
LAJA				IAML		09 36 56.8	
	comp=N,697nm,0.8s						
LAJA	Laja	1.22	83	*e*P	Pn	09 36 37.9	-0.1
LAJA				*e*S	Sn	09 36 53.3	+0.1
LC01	Cunco	2.35	129	*e*P	Pn	09 36 56.0	+2.4
LC01				*i* S	Sb	09 37 26.7	-0.8
LC01				IAML		09 37 37.9	
	comp=E,380nm,0.7s						
LC01	Cunco	2.35	129	*e*P	Pn	09 36 54.4	+0.9
LC01				*e*S	Sn	09 37 22.8	+1.5
LC01				IAML		09 37 37.5	
	comp=E,329nm,0.8s						
BI02	San Fabin de	2.48	73	*e*P	Pb	09 37 01.6	+0.3
BI02				*i* S	Sb	09 37 33.5	+2.1
BI02	San Fabin de	2.48	73	⇑*i*P	Pn	09 36 56.1	+0.6
BI02				IAML		09 37 45.2	
	comp=N,164nm,0.7s						
LL01	San Ignacio de	5.12	165	*e*P	Pn	09 37 34.9	+3.3

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*IDC **28** 09:38:05.6±1.6, 64°.68N×17°.56W, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.4/47, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=46.7km s-min=14.5km az=0.0*

ISC 28 09:38:06.6±1.0**, 64°.6N**±0°.1×**17°.7W**±0°.1**, h9**^{km}**, n8,** σ**1^{s}.15**/8**,**
mb3.5/4**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	1.56	277	Pg	Pn	09 38 33.8	-0.6
	12nm,0.3s,baz=100,slow=8.0,SNR=31						
BORG				Lg	Lg	09 38 57.6	
	6.8nm,0.3s,baz=38,slow=23,SNR=9.9						
SCO	Scoresbysund	6.13	347	*i* P	Pn	09 39 37.0	-0.2
SCO	Scoresbysund	6.13	347	*i* P	Pn	09 39 37.0	-0.2
EKA	Eskdalemuir Ar	11.78	135	Pn	Pn	09 40 54.5	0.0
	baz=322,slow=13,SNR=2.6						
ILAR	Eielson Array	45.70	332	P	P	09 46 26.4	-0.8
	0.9nm,1.0s,baz=31,slow=5.4,SNR=5.7						
MKAR	Makanchi Array	52.84	58	P	P	09 47 21.6	-0.4
	0.3nm,0.7s,baz=347,slow=5.9,SNR=4.5						
PDAR	Pinedale Array	53.12	293	P	P	09 47 24.4	0.0
	0.4nm,0.8s,baz=46,slow=7.7,SNR=4.3						
NVAR	Mina Array Bea	60.25	297	P	P	09 48 17.4	+2.3
	0.4nm,0.9s,baz=54,slow=4.6,SNR=3.6						

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*IDC **28** 09:49:41.7±4.1, 20°.91S×177°.98W, h436^{km}±49^{km}, mb3.0/8, mb1 3.4/10, mb1mx3.3/23, mbtmp4.0/10, Error ellipse: s-maj=43.8km s-min=16.9km az=162.0*

ISC 28 09:49:38.9±0.8**, 20°.7S**±0°.2×**178°.1W**±0°.1**, h400**^{km}**, n11,**
σ**0^{s}.70**/12**, mb3.3**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	17.07	95	P	P	09 53 13.5	-0.1
	8.6nm,0.3s,baz=322,slow=17,SNR=6.0						
URZ	Urewera	17.95	192	P	P	09 53 23.1	+0.3
	0.7nm,0.3s,baz=339,slow=16,SNR=1.6						
ASAR	Alice Springs	44.42	257	P	P	09 57 12.4	+0.1
	1.0nm,0.8s,baz=98,slow=8.1,SNR=9.5						
ASAR				PcP	PcP	09 58 47.0	-1.0
	0.6nm,0.6s,baz=102,slow=4.0,SNR=9.4						
WRA	Warramunga Arr	44.52	262	P	P	09 57 13.1	-0.1
	0.2nm,0.3s,baz=97,slow=7.3,SNR=16						
WRA				PcP	PcP	09 58 47.7	-0.8
	0.3nm,0.9s,baz=96,slow=5.0,SNR=1.6						
KSRS	Korea Array	77.04	319	P	P	10 00 49.0	-0.1
	1.0nm,0.8s,baz=118,slow=4.3,SNR=2.4						
NVAR	Mina Array Bea	81.23	43	P	P	10 01 12.9	+1.2
	0.3nm,0.7s,baz=235,slow=7.6,SNR=3.5						
TXAR	Lajitas Array	87.22	57	P	P	10 01 41.6	0.0
	0.2nm,0.7s,baz=220,slow=5.4,SNR=2.6						
ILAR	Eielson Array	88.56	13	P	P	10 01 46.8	0.0
	0.5nm,0.4s,baz=213,slow=5.5,SNR=14						
PDAR	Pinedale Array	89.17	43	P	P	10 01 49.7	-0.9
	0.4nm,0.7s,baz=199,slow=4.1,SNR=3.7						
CMAR	Chiang Mai Arr	90.15	290	P	P	10 01 56.1	+0.7
	0.7nm,0.3s,baz=111,slow=4.9,SNR=5.6						
AKASG	Malin Array Be	143.20	331	PKP	PKPab	10 08 22.6	-0.6
	2.9nm,0.4s,baz=42,slow=4.3,SNR=12						

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*NNC **28** 10:34:13.7±3.0, 39°.80N×74°.59E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=21.4km s-min=11.8km az=172.0*

*KRNET **28** 10:34:15.5±0.1, 39°.75N×74°.38E, mb3.2*

*SOME **28** 10:34:19.9, 40°.10N×74°.18E, h5^{km}*

ISC 28 10:34:16.8±1.2**, 39°.83N**±0°.06×**74°.43E**±0°.03**, h10**^{km}**, n57,**
σ**1^{s}.98**/89**, 29C-14D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.44	299	⇑*i*P	Pn	10 34 43.0	-0.1
	baz=3.0						
OHH				⇑*i*S	Sb	10 35 02.8	+0.6
	baz=3.0						
ARSB	Arslanbob	1.86	324	⇑*i*P	Pb	10 34 50.9	0.0
	baz=26						
ARSB				⇑*i*S	Sg	10 35 16.8	+0.3
	baz=26						
ARLS	Aral	2.03	358	⇓*i*P	Pb	10 34 54.4	+0.5
	baz=59						
ARLS				⇓*i*S	Sg	10 35 22.7	+0.6
	baz=59						
DRK	Karamyk	2.06	261	⇓*i*P	Pb	10 34 53.4	-1.1
	baz=63						
DRK				⇓*i*S	Sb	10 35 20.2	-0.1
	baz=63						
AML	Almayashu	2.37	347	⇑*i*P	Pb	10 34 58.7	-1.1
	baz=48						
AML				⇑*i*S	Sb	10 35 30.7	+1.5
	baz=48						
AML	Almayashu	2.37	347	P	Pb	10 34 58.5	-1.3
	SNR=58						
UCH	Uchtor	2.40	1	⇑*i*P	Pb	10 34 59.7	-0.6
	baz=2.0						
UCH				⇑*i*S	Sb	10 35 32.0	+1.9
	baz=2.0						
UCH	Uchtor	2.40	1	P	Pb	10 34 59.6	-0.8
	SNR=38						
ULHL	Ulahol	2.77	29	⇑*i*P	Pb	10 35 05.0	-1.6
	baz=29						
ULHL				⇑*i*S	Sb	10 35 40.9	+0.1
	baz=29						
ULHL	Ulahol	2.77	29	P	Pb	10 35 07.2	+0.6
	SNR=11						
BTK	Batken	2.79	276	⇑*i*P	Pn	10 35 02.8	+1.2
	baz=78						
BTK				⇑*i*S	Sn	10 35 37.6	+2.3
	baz=78						
AAK	Ala-Archa	2.81	1	⇓*i*P	Pb	10 35 05.2	-1.9
	baz=2.0						
AAK				⇓*i*S	Sb	10 35 41.4	-0.2
	baz=2.0						
AAK	Ala-Archa	2.81	1	P	Pb	10 35 05.6	-1.5
	SNR=14						
AAK	Ala-Archa	2.81	1	Pg	Pb	10 35 04.9	-2.2
	16nm,0.7s						
AAK				Lg	Lg	10 35 46.2	
	15nm,0.5s						
KBK	Karagaybulak	2.85	8	⇓*i*P	Pb	10 35 05.6	-2.3
	baz=8.0						
KBK				⇓*i*S	Sb	10 35 42.4	-0.5
	baz=8.0						
KBK	Karagaybulak	2.85	8	P	Pb	10 35 06.6	-1.3
	SNR=6.9						
EKS2	Erkin-Say	2.87	350	⇑*i*P	Pb	10 35 06.0	-2.2
	baz=51						
EKS2				⇑*i*S	Sb	10 35 42.9	-0.6
	baz=51						
EKS2	Erkin-Say	2.87	350	P	Pb	10 35 09.4	+1.2
	SNR=11						
BOOM	Boomskoye usch	2.89	23	⇑*i*P	Pb	10 35 06.2	-2.4
	baz=23						
BOOM				⇑*i*S	Sb	10 35 43.3	-0.8
	baz=23						
TRKS	Terek-Say	3.02	305	⇑*i*P	Pn	10 35 06.4	+1.5
	baz=6.0						
TRKS				⇑*i*S	Sn	10 35 43.4	+2.1
	baz=6.0						
MNAS	Manas	3.03	332	⇑*i*P	Pb	10 35 07.9	-3.0
	baz=33						
MNAS				⇑*i*S	Sb	10 35 45.8	-2.2
	baz=33						
MRKS	Merke	3.05	343	*e*P	Pb	10 35 12.6	+1.3
	6.4nm,0.4s						
MRKS				*e*S	Sb	10 35 48.6	0.0
	9.6nm,0.5s						
MRKS	Merke	3.05	343	Pg	Pb	10 35 08.5	-2.8
	6.5nm,0.4s						
MRKS				Lg	Lg	10 35 49.9	
	9.6nm,0.5s						
KDJ	Kajisay	3.10	41	⇑*i*P	Pb	10 35 08.9	-3.3
	baz=41						
KDJ				⇑*i*S	Sb	10 35 48.4	-1.7
	baz=41						
CHMS	Chumysh	3.17	4	⇓*i*P	Pb	10 35 09.9	-3.5
	baz=5.0						
CHMS				⇓*i*S	Sb	10 35 49.8	-2.3
	baz=5.0						
TKM2	Tokmak 2	3.21	15	⇓*i*P	Pb	10 35 10.9	-3.2
	baz=16						
TKM2				⇓*i*S	Sb	10 35 51.4	-1.9
	baz=16						
TKM2	Tokmak 2	3.21	15	P	Pb	10 35 11.2	-2.9
	SNR=5.8						
TKM2	Tokmak 2	3.21	15	⇑Pg	Pb	10 35 10.7	-3.3
	4.5nm,0.5s						
TKM2				⇑Lg	Lg	10 35 59.7	
	16nm,0.6s						
KST	Kastek	3.41	19	*e*P	Pb	10 35 18.3	+0.9
	7.2nm,0.7s						
KST				*e*S	Sb	10 35 58.4	-0.6
	23nm,1.0s						
KST	Kastek	3.41	19	Pg	Pb	10 35 13.7	-3.7
	29nm,0.5s						
KST				Lg	Lg	10 35 58.6	
	23nm,1.0s						
USP	Ospenovka	3.43	1	⇑*i*P	Pn	10 35 13.8	+3.3
	baz=1.0						
USP				⇑*i*S	Sb	10 35 56.0	-3.6
	baz=1.0						
USP	Ospenovka	3.43	1	P	Pb	10 35 19.1	+1.3
	SNR=5.0						
DGS	Degeres	3.56	16	*e*P	Pg	10 35 25.1	+0.2
	11nm,0.6s						
DGS				*e*S	Sg	10 36 10.4	-0.5
	16nm,0.7s						
DGS	Degeres	3.56	16	Pg	Pn	10 35 15.6	+3.4
	15nm,0.6s						
DGS				Lg	Lg	10 36 02.0	
	16nm,0.7s						
IZV	Izvestkoviy	3.60	26	*e*P	Pg	10 35 25.5	-0.3
	11nm,0.7s						
IZV				*e*S	Sg	10 36 12.0	-0.4
	13nm,0.6s						
IZV	Izvestkoviy	3.60	26	Pg	Pb	10 35 20.7	+0.1
	16nm,0.6s						
IZV				Lg	Lg	10 36 11.3	
	13nm,0.6s						
MTBS	Maitube	3.62	24	*e*P	Pg	10 35 26.0	-0.2
	6.7nm,0.3s						
MTBS				*e*S	Sg	10 36 12.5	-0.6
	10nm,0.4s						
MTBS	Maitube	3.62	24	Pg	Pb	10 35 16.7	-4.3
	14nm,0.4s						
MTBS				Lg	Lg	10 36 03.8	
	10nm,0.4s						
TNSS	Tian-Shan	3.72	30	*e*P	Pg	10 35 28.2	0.0
	12nm,0.5s						
TNSS				*e*S	Sg	10 36 15.9	-0.5
	5.6nm,0.4s						
TNSS	Tian-Shan	3.72	30	Pg	Pb	10 35 19.6	-3.2
	21nm,0.5s						
TNSS				Lg	Lg	10 36 08.6	
	5.6nm,0.4s						
MDOK	Medeo	3.87	30	*e*P	Pg	10 35 29.3	-1.6
	3.9nm,0.6s						
MDOK				*e*S	Sg	10 36 17.6	-3.4
	14nm,1.1s						
MDOK	Medeo	3.87	30	Pg	Pb	10 35 26.5	+1.3
	4.6nm,0.5s						
MDOK				Lg	Lg	10 36 20.3	
	9.9nm,0.7s						
MDOK	Medeo	3.87	30	Pg	Pb	10 35 22.8	-2.4
	7.3nm,0.5s						
MDOK				Lg	Lg	10 36 14.0	
	14nm,1.1s						
KOTS	Kotyrbulak	3.95	30	*e*P	Pg	10 35 32.2	-0.4
	13nm,0.5s						
KOTS				*e*S	Sg	10 36 22.8	-0.9
	42nm,0.4s						
KOTS	Kotyrbulak	3.95	30	Pg	Pb	10 35 25.7	-1.0
	19nm,0.3s						
KOTS				Lg	Lg	10 36 18.9	
	42nm,0.4s						
IUG	Iuzhnay	4.05	306	*e*P	Pg	10 35 32.8	-1.8

	3.2nm,0.4s						
IUG				*e*S	**Sg**	**10 36 23.6**	**-3.4**
	17nm,0.6s						
IUG	**Iuzhnay**	**4.05**	**306**	Pg	**Pb**	**10 35 25.5**	**-2.9**
	2.4nm,0.2s						
IUG				Lg	Lg	10 36 18.3	
	12nm,0.6s						
KTBS	**Karatobe**	**4.23**	**23**	*e*P	**Pg**	**10 35 37.5**	**-0.3**
	4.4nm,0.6s						
KTBS				*e*S	**Sg**	**10 36 31.7**	**-0.9**
	21nm,0.7s						
KTBS	**Karatobe**	**4.23**	**23**	Pg	**Pb**	**10 35 28.8**	**-2.6**
	6.4nm,0.7s						
KTBS				Lg	Lg	10 36 23.6	
	21nm,0.7s						
KUU	**Kurty**	**4.30**	**19**	*e*P	**Pg**	**10 35 38.8**	**-0.5**
	2.1nm,0.8s						
KUU				*e*S	**Sg**	**10 36 34.2**	**-0.8**
	9.1nm,0.6s						
KUU	**Kurty**	**4.30**	**19**	Pg	**Pb**	**10 35 31.6**	**-0.9**
	1.4nm,0.1s						
KUU				Lg	Lg	10 36 28.7	
	10nm,0.6s						
KK31	**Karatay Array**	**4.40**	**319**	⇑Pg	**Pb**	**10 35 35.9**	**+1.7**
	0.8nm,0.5s,baz=124,slow=16,SNR=5.5						
KK31				⇑Sn	**Sn**	**10 36 19.1**	**+4.0**
	1.2nm,0.5s,baz=98,slow=30,SNR=4.5						
KK31				⇓Lg	Lg	10 36 39.0	
	4.1nm,0.6s,baz=133,slow=28,SNR=5.6						
CHKK	**Chushkaly**	**4.45**	**25**	*e*P	**Pg**	**10 35 41.4**	**-0.7**
	1.5nm,0.3s						
CHKK				*e*S	**Sg**	**10 36 37.9**	**-1.8**
	6.8nm,0.3s						
CHKK	**Chushkaly**	**4.45**	**25**	Pg	**Pb**	**10 35 35.7**	**+0.6**
	3.0nm,0.3s						
CHKK				Lg	Lg	10 36 37.1	
	6.8nm,0.3s						
ARXS	**Arharly**	**5.06**	**29**	*e*P	**Pg**	**10 35 51.3**	**-2.4**
	11nm,0.6s						
ARXS				*e*S	**Sg**	**10 36 55.7**	**-3.5**
	3.4nm,0.7s						
ARXS	**Arharly**	**5.06**	**29**	Pg	**Pb**	**10 35 46.6**	**+1.1**
	7.4nm,0.5s						
ARXS				Lg	Lg	10 36 55.7	
	3.9nm,0.9s						
PDGK	**Podgornoye**	**5.16**	**46**	⇑Pg	**Pb**	**10 35 50.1**	**+2.9**
	3.9nm,0.7s						
PDGK				⇓Lg	Lg	10 36 57.3	
	5.4nm,1.3s						

IDC ***28*** *10:35:12.2±0.4, 27°.49N×130°.09E, h0^{km}, mb4.3/26, mb1 4.5/30, mb1mx4.4/50, mbtmp4.4/30, ML4.4/3, MS3.7/23, Ms1 3.7/23, ms1mx3.5/47, Error ellipse: s-maj=15.0km s-min=10.2km az=88.0*

BJI ***28*** *10:35:12.1±0.0, 27°.29N×130°.10E, h18^{km}, mB4.9/33, mb4.4/47, Ms4.4/32, Ms7 4.2/32*

MOS ***28*** *10:35:14.7±1.2, 27°.53N×130°.02E, h29^{km}, mb4.8/43, Error ellipse: s-maj=8.4km s-min=5.2km az=109.1*

JMA ***28*** *10:35:15.0±0.1, 27°.48N×130°.13E, h56^{km}±5^{km}, M4.1*

NEIC ***28*** *10:35:15.4±1.6, 27°.43N±0°.05×130°.06E±0°.07, h20^{km}±5^{km}, mb4.8/82, Error ellipse: s-maj=9.6km s-min=7.2km az=77.0*

NIED ***28*** *10:35:15.1, 27°.48N×130°.13E, h56^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.66; $M_{\theta\theta}$1.72; $M_{\phi\phi}$3.94; $M_{r\theta}$3.37; $M_{\theta\phi}$3.02; $M_{\phi r}$1.01; Fault plane solution: $M_0$6.83000×10^{15} NP1: ϕ_s233.00000°, δ60.00000°, λ-71.00000°. NP2: ϕ_s18.00000°, δ35.00000°, λ-120.00000°.*

ISC 28 10:35:16.6±0.7**, 27°.50N**±0°.03×**130°.09E**±0°.03**, h30^{km}**±4^{km}**, n310,** σ1^{s}.**53**/347**, mb4.7**/104**, MS3.9**/26**, 3C-3D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.82**	**353**	P	**Pb**	**10 35 31.2**	**-1.3**
JZK				*e*S	**Sb**	**10 35 42.3**	**-0.9**
JAM	**Amami Oshima**	**1.01**	**335**	P	**Pb**	**10 35 33.6**	**-1.9**
JAM				*e*S	**Sb**	**10 35 46.4**	**-2.1**
JTK	**Tokunoshima**	**1.05**	**286**	P	**Pb**	**10 35 34.6**	**-1.6**
JTK				*e*S	**Sb**	**10 35 47.7**	**-2.0**
JAMN	**Amaminishikomi**	**1.10**	**313**	P	**Pn**	**10 35 34.9**	**-1.1**
JAMN				*e*S	**Sb**	**10 35 49.7**	**-1.4**
JOKE	**Okinoerabujima**	**1.35**	**265**	P	**Pn**	**10 35 38.9**	**-0.6**
JOKE				*e*S	**Sb**	**10 35 56.3**	**-2.1**
JYRO	**Yoronjima**	**1.53**	**253**	P	**Pn**	**10 35 41.2**	**-0.7**
JYRO				*e*S	**Sn**	**10 36 00.2**	**-0.6**
JOW	**Kunigami**	**1.75**	**248**	Pn	**Pn**	**10 35 43.8**	**-1.1**
	156nm,0.3s,baz=296,slow=28,SNR=481						
JOW				Sn	**Sn**	**10 36 04.6**	**-1.5**
	449nm,0.3s,baz=72,slow=27,SNR=11						
JOW	**Kunigami**	**1.75**	**248**	P	**Pn**	**10 35 44.1**	**-0.8**
JOW				*e*S	**Sn**	**10 36 05.2**	**-0.9**
JTAJ	**Takarajima**	**1.83**	**335**	P	**Pn**	**10 35 44.8**	**-1.2**
JTAJ				*e*S	**Sn**	**10 36 06.8**	**-1.3**
JKDJ	**Kitadaitoujima**	**1.88**	**145**	P	**Pn**	**10 35 44.5**	**-2.2**
JKDJ				*e*S	**Sn**	**10 36 06.7**	**-2.7**
JIH	**Iheya**	**1.94**	**257**	P	**Pn**	**10 35 47.0**	**-0.6**
JIH				*e*S	**Sn**	**10 36 10.3**	**-0.7**
JMZ	**Minamidaito 2**	**1.95**	**148**	P	**Pn**	**10 35 45.5**	**-2.2**
JMZ				*e*S	**Sn**	**10 36 08.0**	**-3.2**
JMZ	**Minamidaito 2**	**1.95**	**148**	Pn	**Pn**	**10 35 45.9**	**-1.9**
JMZ				Sn	**Sn**	**10 36 08.1**	**-3.2**
JNTH	**Nagotoyohara**	**2.08**	**243**	P	**Pn**	**10 35 48.9**	**-0.6**
JNTH				*e*S	**Sn**	**10 36 13.4**	**-1.0**
JNN	**Nakanoshima**	**2.35**	**355**	P	**Pn**	**10 35 52.5**	**-0.7**
JNN				*e*S	**Sn**	**10 36 19.7**	**-1.3**
JJT3	**Tamagusuku3**	**2.46**	**237**	P	**Pn**	**10 35 54.1**	**-0.6**
JJT3				*e*S	**Sn**	**10 36 23.1**	**-0.7**
JAGN	**Aguni-jima**	**2.69**	**251**	P	**Pn**	**10 35 57.4**	**-0.5**
JAGN				*e*S	**Sn**	**10 36 28.1**	**-1.4**
JYAK	**Yakushimahirau**	**2.76**	**8**	P	**Pn**	**10 35 58.2**	**-0.6**
JYAK				*e*S	**Sn**	**10 36 28.5**	**-2.6**
JKC	**Kuchinoerabu**	**2.96**	**2**	P	**Pn**	**10 36 00.6**	**-0.9**
JKC				*e*S	**Sn**	**10 36 34.5**	**-1.5**
JMTN	**Minamitane**	**2.98**	**14**	P	**Pn**	**10 36 00.5**	**-1.4**
JMTN				*e*S	**Sn**	**10 36 35.0**	**-1.6**
JKE	**Kume jima 2**	**3.17**	**249**	P	**Pn**	**10 36 03.1**	**-1.4**
JKE				*e*S	**Sn**	**10 36 39.7**	**-1.6**
JTN	**Tanegashima 3**	**3.24**	**14**	P	**Pn**	**10 36 04.4**	**-1.1**
JTN				*e*S	**Sn**	**10 36 41.8**	**-1.3**
JSU	**Suzuyama**	**4.01**	**4**	Pn	**Pn**	**10 36 15.5**	**-0.5**
JNU	**Nakatsue**	**5.65**	**7**	Pn	**Pn**	**10 36 38.7**	**+0.1**
	6.1nm,0.3s,baz=189,slow=13,SNR=27						
JNU				Sn	**Sn**	**10 37 40.3**	**-2.2**
	1.8nm,0.3s,baz=213,slow=14,SNR=0.8						
JNU	**Nakatsue**	**5.65**	**7**	Pn	**Pn**	**10 36 39.3**	**+0.7**
JMN	**Monobe**	**7.02**	**27**	Pn	**Pn**	**10 36 55.8**	**-1.7**
JHS	**Saijyo**	**7.92**	**18**	Pn	**Pn**	**10 37 09.1**	**-0.6**
YHNB	**Yeheng**	**8.32**	**252**	Pn	**Pn**	**10 37 14.9**	**-0.5**
NACB	**Ninganchiao**	**8.34**	**249**	Pn	**Pn**	**10 37 15.7**	**+0.2**
YULB	**Yu-li**	**8.93**	**245**	Pn	**Pn**	**10 37 21.2**	**-2.5**
JWT	**Wachi**	**8.99**	**29**	Pn	**Pn**	**10 37 23.8**	**-0.7**
SSLB	**Suanglung**	**9.03**	**248**	Pn	**Pn**	**10 37 21.9**	**-3.2**
TPUB	**Ta-pu**	**9.52**	**246**	Pn	**Pn**	**10 37 28.9**	**-2.8**
INU	**Inuyama**	**9.81**	**35**	Pn	**Pn**	**10 37 36.9**	**+1.2**
JHJ	**Hachijo jima 2**	**10.08**	**54**	Pn	**Pn**	**10 37 39.7**	**+0.3**
	31nm,0.3s,baz=118,slow=10,SNR=5.8						
JHJ				LR	LR	10 40 55.8	
	comp=Z,233nm,19.9s,baz=241,slow=34						
KSRS	**Korea Array**	**10.10**	**350**	Pn	**Pn**	**10 37 40.1**	**+0.6**
	0.2nm,0.3s,baz=174,slow=13,SNR=3.5						
KSRS				LR	LR	10 42 00.5	
	comp=Z,126nm,19.6s,baz=168,slow=40						
JHJ2	**Mitsune**	**10.10**	**54**	Pn	**Pn**	**10 37 40.4**	**+0.8**
JGF	**Kuroka**	**10.18**	**36**	Pn	**Pn**	**10 37 42.3**	**+1.5**
NJ2	**Nanjing**	**10.76**	**298**	*e*P	**Pn**	**10 37 50.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,910nm,9.6s						
NJ2				LR	LR		
	comp=E,660nm,6.6s						
NJ2				LR	LR		
	comp=Z,860nm,10.1s						
JCJ	**Chichijima**	**10.77**	**89**	Pn	**Pn**	**10 37 47.5**	**-1.3**
	4.7nm,0.3s,baz=284,slow=19,SNR=1.2						
JCJ				LR	LR	10 41 05.7	
	comp=Z,265nm,19.8s,baz=12,slow=33						
MAJO	**Matsushiro**	**11.35**	**35**	*i* P	**Pn**	**10 37 56.2**	**-0.5**
MJAR	**Matsushiro Arr**	**11.35**	**35**	Pn	**Pn**	**10 37 57.0**	**+0.3**
	0.1nm,0.3s,baz=245,slow=15,SNR=4.6						
MJAR				LR	LR	10 42 04.9	
	comp=Z,151nm,21.1s,baz=215,slow=36						
MJAR	**Matsushiro Arr**	**11.35**	**35**	P	**Pn**	**10 37 57.0**	**+0.3**
WHN	**Wuhan**	**14.10**	**286**	P	**P**	**10 38 41.5**	**-0.1**
TGY	**Tagaytay City**	**15.82**	**214**	LR	LR	10 43 36.8	
	comp=Z,140nm,21.6s,baz=332,slow=32						
CN2	**Changchun**	**16.70**	**348**	*e*P	**P**	**10 39 13.0**	**+2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,900nm,12.0s						
CN2				LR	LR		
	comp=E,600nm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
USRK	**Ussuriysk Ar.**	**16.74**	**5**	Pn	**P**	**10 39 11.7**	**+0.8**
	baz=178,slow=13,SNR=5.0						
USRK	**Ussuriysk Ar.**	**16.74**	**5**	P	**Pn**	**10 39 07.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**16.74**	**5**		**Pn**	**10 39 07.7**	**-1.1**
BJT	**Baijiatuau**	**17.00**	**321**	P	**Pn**	**10 39 12.4**	**+0.3**
BJT				pmax	pmax		
	comp=Z,27nm,1.1s						
BJT	**Baijiatuau**	**17.00**	**321**	P	**Pn**	**10 39 12.4**	**+0.3**
BJI	**Beijing**	**17.01**	**321**	P	**P**	**10 39 15.8**	**+1.9**
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
TIY	**Taiyuan**	**18.00**	**309**	*e*P	**P**	**10 39 26.0**	**+1.0**
TIY				pmax	pmax		
	comp=Z,22nm,0.6s						
TIY				LR	LR		
	comp=Z,550nm,11.0s						
TIY				LR	LR		
	comp=Z,790nm,14.3s						
TIY				LR	LR		
	comp=Z,1µm,14.1s						
ENH	**Enshi**	**18.25**	**284**	P	**Pn**	**10 39 26.2**	**-1.5**
XAN	**Xi'an**	**19.31**	**295**	P	**P**	**10 39 39.5**	**+0.2**
XAN				pP	sP	10 39 47.0	-3.4
ASAJ	**Asahikawa**	**19.40**	**28**	LR	LR	10 47 36.1	
	comp=Z,221nm,19.0s,baz=192,slow=38						
HHC	**Hu-ho-hao-te**	**20.25**	**316**	*e*P	**P**	**10 39 50.8**	**+1.2**
HHC				PP	**PnPn**	**10 40 11.5**	**+4.8**
HHC				S	**S**	**10 43 35.3**	**0.0**
HHC				SS	**SnSn**	**10 43 59.5**	**+5.9**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,6.3s						
HHC				LR	LR		
	comp=Z,550nm,14.9s						
HHC				LR	LR		
	comp=Z,450nm,13.5s						
HHC				LR	LR		
	comp=Z,610nm,15.5s						
QIZ	**Qiongzhong**	**20.40**	**250**	P	**P**	**10 39 50.3**	**-0.9**
QIZ				S	**S**	**10 43 37.8**	**-0.5**
QIZ				LR	LR		
	comp=Z,280nm,11.8s						
QIZ				LR	LR		
	comp=Z,220nm,13.2s						
QIZ				LR	LR		
	comp=Z,200nm,11.8s						
GYA	**Guiyang**	**20.90**	**273**	⇓P	**P**	**10 39 57.3**	**+0.5**
GYA				S	**S**	**10 43 45.0**	**-3.4**
GYA				pmax	pmax		
	comp=Z,14nm,1.4s						
GYA				LR	LR		
	comp=Z,360nm,10.8s						
GYA				LR	LR		
	comp=Z,560nm,12.1s						
GYA				LR	LR		
	comp=Z,650nm,12.2s						
KLR	**Kul'dur**	**21.74**	**3**	P	**P**	**10 40 04.5**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=165,slow=5.5,SNR=4.6						
KLR	**Kul'dur**	**21.74**	**3**	*i* P	**P**	**10 40 04.0**	**-1.4**
KLR				pmax	pmax		
	comp=Z,29nm,2.8s						
YSS	**Yuzh-Sakhalins**	**21.83**	**24**	*i* P	**P**	**10 40 06.7**	**+0.3**
YSS				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH	**Lanzhou**	**23.84**	**298**	*e*P	**P**	**10 40 27.0**	**-0.4**
LZH				pP	pP	10 40 31.0	-4.5
LZH				sP	sP	10 40 33.0	-5.9
LZH				pmax	pmax		
	comp=Z,19nm,0.9s						
LZH				pmax	pmax		
	comp=Z,54nm,4.3s						
LZH				LR	LR		
	comp=Z,680nm,13.6s						
LZH				LR	LR		
	comp=Z,750nm,11.9s						
LZH				LR	LR		
	comp=Z,690nm,12.5s						
KMI	**Kunming**	**24.61**	**271**	⇑P	**P**	**10 40 35.3**	**+0.6**
KMI				pP	pP	10 40 39.3	-3.2
KMI				sP	sP	10 40 41.5	-4.4
KMI				PP	**PnPn**	**10 41 04.0**	**-2.6**
KMI				S	**S**	**10 44 55.0**	**+0.7**
KMI				sS	pS	10 45 00.8	-2.3
KMI				SS	**SnSn**	**10 45 45.5**	**+4.7**
KMI				pmax	pmax		
	comp=Z,47nm,1.0s						
KMI				pmax	pmax		
	comp=Z,180nm,3.5s						
KMI				LR	LR		
	comp=Z,190nm,9.7s						
KMI				LR	LR		
	comp=Z,460nm,13.4s						
KMI				LR	LR		
	comp=Z,390nm,13.6s						
KMI	**Kunming**	**24.61**	**271**	P	**P**	**10 40 34.3**	**-0.4**
KMI				pmax	pmax		
	comp=Z,41nm,0.9s						
KMI	**Kunming**	**24.61**	**271**	P	**P**	**10 40 34.3**	**-0.4**
KMI				IAmb	IAmb	10 40 37.1	
	comp=Z,41nm,0.9s						
ZEA	**Zeya**	**26.30**	**356**	*e*P	**P**	**10 40 49.9**	**+0.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	**Ulaanbaatar**	**27.13**	**325**	*i* P	**P**	**10 40 57.4**	**+0.2**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ULN	**Ulaanbaatar**	**27.13**	**325**	P	**P**	**10 40 57.7**	**+0.6**
SONM	**Songino Array**	**27.45**	**324**	P	**P**	**10 41 00.9**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=138,slow=11,SNR=11						
SONM				PcP	**PcP**	**10 44 17.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=132,slow=2.1,SNR=3.5						
SONM				LR	LR	10 53 52.8	
	comp=Z,229nm,18.5s,baz=129,slow=41						
SONM	**Songino Array**	**27.45**	**324**	P	**P**	**10 41 01.0**	**+1.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**27.45**	**324**	P	**P**	**10 41 01.0**	**+1.0**
TOLI2	**Tolitoli**	**27.71**	**200**	P	**P**	**10 41 01.9**	**-0.5**
TOLI2				IAmb	IAmb	10 41 03.7	
	comp=Z,16nm,0.9s						
GTA	**Gaotai**	**27.78**	**303**	⇑P	**P**	**10 41 01.8**	**-1.3**
GTA				pP	pP	10 41 06.5	-4.8
GTA				sP	sP	10 41 08.8	-5.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,160nm,5.5s						
GTA				LR	LR		
	comp=Z,550nm,17.8s						
GTA				LR	LR		
	comp=Z,360nm,18.9s						
GTA				LR	LR		
	comp=Z,570nm,16.4s						
CHAI	**Chaiyaphum**	**28.47**	**252**	P	P	10 41 14.1	+4.8
	comp=Z,14nm,1.1s						
UTTA	**Uttaradit**	**28.87**	**257**	P	**P**	**10 41 17.2**	**+4.4**
	comp=Z,6.9nm,0.8s						
LAMP	**Lampang**	**29.36**	**259**	P	**P**	**10 41 20.4**	**+3.3**
	comp=Z,17nm,0.8s						
CM34	**Chiang Mai Arr**	**29.65**	**260**	P	**P**	**10 41 21.0**	**+1.3**
CM36	**Chiang Mai Arr**	**29.83**	**259**	P	P	10 41 26.0	+4.7
CM33	**Chiang Mai Arr**	**29.84**	**260**	P	**P**	**10 41 22.0**	**+0.6**
CHTO	**Chiang Mai**	**29.84**	**260**	P	**P**	**10 41 21.8**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	**Chiang Mai**	**29.84**	**260**	P	**P**	**10 41 21.8**	**+0.3**
CHTO				IAmb	IAmb	10 41 25.6	
	comp=Z,7.0nm,0.8s						
CM04	**Chiang Mai Arr**	**29.98**	**259**	P	**P**	**10 41 25.0**	**+2.4**
	comp=Z,4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.98**	**259**	P	**P**	**10 41 24.1**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=52,slow=7.4,SNR=10						
CMAR				PcP	**PcP**	**10 44 25.8**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=56,slow=0.9,SNR=8.8						
CMAR				LR	LR	10 55 10.2	
	comp=Z,96nm,18.8s,baz=98,slow=40						
CMAR	**Chiang Mai Arr**	**29.98**	**259**	P	**P**	**10 41 23.9**	**+1.3**
CM32	**Chiang Mai Arr**	**29.99**	**260**	P	P	10 41 34.0	+11
CM13	**Chiang Mai Arr**	**30.03**	**259**	P	**P**	**10 41 27.1**	**+4.1**
JAY	**Jayapura**	**31.54**	**159**	LR	LR	10 54 17.5	
	comp=Z,125nm,18.6s,baz=326,slow=36						
PETK	**Petropavlovsk-**	**32.76**	**31**	P	**P**	**10 41 46.8**	**0.0**
	comp=Z,12nm,1.0s,baz=238,slow=8.3,SNR=3.8						
SHL	**Shillong**	**34.15**	**276**	P	**P**	**10 41 59.6**	**+0.2**
SHL				pmax	pmax		
	comp=Z,18nm,1.0s						
SHL	**Shillong**	**34.15**	**276**	P	**P**	**10 41 59.6**	**+0.2**
SHL				IAmb	IAmb	10 42 13.2	
	comp=Z,18nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**34.50**	**95**	T	T	11 18 35.0	
	baz=290,slow=75,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**34.50**	**95**	T	T	11 18 38.0	
	baz=290,slow=75,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**34.52**	**95**	T	T	11 18 35.9	
	baz=290,slow=75,SNR=6.3						
YAK	**Yakutsk**	**34.53**	**360**	P	**P**	**10 42 01.1**	**-0.9**
	comp=Z,2.9nm,0.3s,baz=202,slow=5.4,SNR=1.5						
YAK	**Yakutsk**	**34.53**	**360**	*e*P	**P**	**10 42 00.4**	**-1.6**
YAK				*e*S	**S**	**10 47 30.3**	**+1.6**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	**Yakutsk**	**34.53**	**360**	P	**P**	**10 42 02.0**	**-0.1**
WMQ	**Urumqi**	**37.65**	**307**	*e*P	**P**	**10 42 30.5**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.9s						
BATI	**Baumata**	**37.99**	**190**	P	**P**	**10 42 30.6**	**-1.4**
	comp=Z,21nm,0.5s,baz=342,slow=6.4,SNR=4.5						
GUN	**Gumba**	**38.98**	**281**	*e*P	**P**	**10 42 42.4**	**+1.6**
PKI	**Pulchoki**	**39.45**	**281**	*e*P	**P**	**10 42 45.4**	**+0.7**
PKIN	**Phulchoki**	**39.46**	**281**	*e*P	**P**	**10 42 45.3**	**+0.6**
	comp=Z,17nm,0.4s						
DMN	**Daman**	**39.71**	**281**	*e*P	**P**	**10 42 47.9**	**+1.1**
GKN	**Gorkha**	**40.05**	**282**	*e*P	**P**	**10 42 50.1**	**+0.7**
	comp=Z,23nm,0.6s						
DANN	**Dangsing**	**40.75**	**282**	*e*P	**P**	**10 42 55.5**	**+0.1**
	comp=Z,25nm,0.6s						
MK31	**Makanchi Array**	**41.95**	**310**	*i* P	**P**	**10 43 03.1**	**-1.7**
MK31	**Makanchi Array**	**41.95**	**310**	P	**P**	**10 43 03.0**	**-1.7**
MKAR	**Makanchi Array**	**41.95**	**310**	P	**P**	**10 43 03.5**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=97,slow=10,SNR=15						
MKAR				LR	LR	11 02 33.1	
	comp=Z,95nm,21.5s,baz=100,slow=39						
MKAR	**Makanchi Array**	**41.95**	**310**	*ce*P	**P**	**10 43 05.6**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**41.95**	**310**	P	**P**	**10 43 03.3**	**-1.4**
MAKZ	**Makanchi**	**42.17**	**310**	P	**P**	**10 43 05.6**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAKZ	**Makanchi**	**42.17**	**310**	P	**P**	**10 43 05.6**	**-0.9**
ZAA0	**Zalesovo Array**	**42.27**	**321**	P	**P**	**10 43 09.1**	**+1.9**
ZALV	**Zalesovo Beam**	**42.27**	**321**	P	**P**	**10 43 05.6**	**-1.6**
	comp=Z,1.2nm,0.6s,baz=115,slow=10.0,SNR=5.9						
ZALV				LR	LR	11 03 20.7	
	comp=Z,99nm,18.9s,baz=88,slow=40						
ZALV	**Zalesovo Beam**	**42.27**	**321**	P	**P**	**10 43 08.2**	**+1.0**
ZALV	**Zalesovo Beam**	**42.27**	**321**	P	**P**	**10 43 08.2**	**+1.0**
SHLS	**Shalkode**	**43.50**	**305**	*e*P	**P**	**10 43 13.8**	**-3.6**
	baz=305						
SHLS				*e*S	**S**	**10 49 38.8**	**-5.7**
	baz=305						
SHLS	**Shalkode**	**43.50**	**305**	*e*P	**P**	**10 43 13.8**	**-3.6**
SHLS				*e*S	**S**	**10 49 38.7**	**-5.7**
SEM	**Semipalatinsk**	**43.99**	**315**	*e*P	**P**	**10 43 19.4**	**-2.0**
	baz=315						
SEM	**Semipalatinsk**	**43.99**	**315**	*e*P	**P**	**10 43 19.4**	**-2.0**
KPKS	**Kokpek**	**44.09**	**305**	*e*P	**P**	**10 43 20.9**	**-1.3**
	baz=305						
KPKS	**Kokpek**	**44.09**	**305**	*e*P	**P**	**10 43 20.8**	**-1.4**
TIXI	**Tiksi**	**44.20**	**359**	*i* P	**P**	**10 43 21.9**	**-0.6**
TIXI	**Tiksi**	**44.20**	**359**	P	**P**	**10 43 23.6**	**+1.1**
SATY	**Saty**	**44.27**	**305**	*e*P	**P**	**10 43 22.5**	**-1.2**
	baz=304						
SATY	**Saty**	**44.27**	**305**	*e*P	**P**	**10 43 22.4**	**-1.2**
TDK	**Taldyqorghan**	**44.41**	**307**	*e*P	**P**	**10 43 23.9**	**-0.7**
	comp=Z,6.0nm,0.6s,baz=307						
TDK	**Taldyqorghan**	**44.41**	**307**	*e*P	**P**	**10 43 23.9**	**-0.7**
TDK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURK	**Kurchatov**	**45.07**	**315**	*i* P	**P**	**10 43 27.7**	**-2.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KURK	**Kurchatov**	**45.07**	**315**	P	**P**	**10 43 28.6**	**-1.1**
CHKK	**Chushkaly**	**45.34**	**306**	*e*P	**P**	**10 43 31.3**	**-0.7**
	baz=306						
CHKK	**Chushkaly**	**45.34**	**306**	*e*P	**P**	**10 43 31.3**	**-0.7**
AAA	**Alma-Ata**	**45.36**	**305**	*e*P	**P**	**10 43 30.4**	**-1.9**
	comp=Z,14nm,0.6s,baz=305						
AAA	**Alma-Ata**	**45.36**	**305**	*e*P	**P**	**10 43 30.4**	**-1.9**
AAA				pmax	pmax		
	comp=Z,14nm,0.6s						
FITZ	**Fitzroy Crossi**	**45.53**	**186**	P	**P**	**10 43 33.1**	**-0.5**
	comp=Z,5.8nm,0.8s,baz=12,slow=4.5,SNR=11						
FITZ	**Fitzroy Crossi**	**45.53**	**186**	P	**P**	**10 43 34.5**	**+0.9**
FITZ				IAmb	IAmb	10 43 35.2	
	comp=Z,6.5nm,0.8s						
BILL	**Bilibino**	**45.96**	**18**	⇓*e*P	**P**	**10 43 34.8**	**-1.7**
BILL				*e*		10 45 13.5	
BILL				*e*S	S	10 50 10.7	-8.4
BILL				pmax	pmax		
	comp=Z,17nm,2.1s						
BILL				MLR	MLR		
	comp=Z,89nm,16.0s						
KSH	**Kashi**	**46.07**	**300**	P	**P**	**10 43 41.5**	**+3.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,810nm,6.3s						
AAK	**Ala-Archa**	**47.13**	**304**	LR	LR	11 06 38.1	
	comp=Z,132nm,18.6s,baz=92,slow=40						
AAK	**Ala-Archa**	**47.13**	**304**	*i* P	**P**	**10 43 44.6**	**-1.7**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WB0	**Warramunga Arr**	**47.17**	**174**	P	**P**	**10 43 46.8**	**+0.3**
WB0				IAmb	IAmb	10 43 47.1	
	comp=Z,8.9nm,0.7s						
WRAB	**Tennant Creek**	**47.33**	**175**	*i* P	**P**	**10 43 46.9**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**47.33**	**175**	P	**P**	**10 43 48.1**	**+0.3**
WRAB				IAmb	IAmb	10 43 48.4	
	comp=Z,8.4nm,0.8s						
WRA	**Warramunga Arr**	**47.34**	**175**	P	**P**	**10 43 47.9**	**0.0**
	comp=Z,6.1nm,0.7s,baz=353,slow=8.5,SNR=53						
WRA				PcP	**PcP**	**10 45 18.2**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=348,slow=4.0,SNR=3.1						
WRA	**Warramunga Arr**	**47.34**	**175**	P	**P**	**10 43 48.3**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.4s						
WRA	**Warramunga Arr**	**47.34**	**175**	P	**P**	**10 43 48.3**	**+0.5**
WB2	**Warramunga Arr**	**47.34**	**175**	P	**P**	**10 43 48.1**	**+0.3**
WB2				IAmb	IAmb	10 43 48.5	
	comp=Z,9.3nm,0.8s						
WR0	**Warramunga Arr**	**47.37**	**174**	P	**P**	**10 43 48.3**	**+0.2**
BTLS	**Baital**	**47.49**	**307**	*e*P	**P**	**10 43 47.6**	**-1.4**
	baz=307						
BTLS	**Baital**	**47.49**	**307**	*e*P	**P**	**10 43 47.5**	**-1.4**
NRIK	**Noril'sk**	**48.57**	**341**	P	**P**	**10 43 57.1**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=117,slow=7.7,SNR=6.9						
NRIK	**Noril'sk**	**48.57**	**341**	P	**P**	**10 43 58.7**	**+1.8**
NRIK				IAmb	IAmb	10 44 08.4	
	comp=Z,6.1nm,0.8s						
PSA00	**Pilbara Seismi**	**49.77**	**193**	P	**P**	**10 44 07.1**	**+0.5**
PSA00	**Pilbara Seismi**	**49.77**	**193**	P	**P**	**10 44 07.3**	**+0.8**
PSA00				IAmb	IAmb	10 44 08.2	
	comp=Z,45nm,0.8s						
CTAO	**Charters Tower**	**49.83**	**160**	P	**P**	**10 44 07.8**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,21nm,0.8s						
CTAO	**Charters Tower**	**49.83**	**160**	P	**P**	**10 44 07.8**	**+0.8**
KK31	**Karatay Array**	**50.05**	**305**	P	**P**	**10 44 08.1**	**-0.5**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						

KK31	**Karatay Array**	**50.05**	**305**	P	**P**	**10 44 08.1**	**-0.5**
KKAR	**Karatay Array**	**50.05**	**305**	P	**P**	**10 44 08.1**	**-0.5**
KKAR	**Karatay Array**	**50.05**	**305**	P	**P**	**10 44 08.1**	**-0.5**
IUG	**Iuzhnay**	**50.45**	**303**	eP	**P**	**10 44 09.7**	**-2.1**
	baz=303						
IUG	**Iuzhnay**	**50.45**	**303**	eP	**P**	**10 44 09.6**	**-2.1**
BRVK	**Borovoye**	**50.52**	**317**	i P	**P**	**10 44 10.3**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	**Borovoye**	**50.52**	**317**	P	**P**	**10 44 11.7**	**-0.3**
BRVK				IAmb	IAmb	10 44 14.5	
	comp=Z,4.8nm,0.8s						
AS31	**Alice Springs**	**50.99**	**175**	P	**P**	**10 44 16.0**	**+0.2**
ASAR	**Alice Springs**	**51.00**	**175**	P	**P**	**10 44 16.4**	**+0.5**
	comp=Z,4.6nm,0.7s,baz=7.3,slow=13,SNR=67						
ASAR				PcP	**PcP**	**10 45 32.2**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=360,slow=4.2,SNR=6.7						
ASAR				LR	LR	11 05 38.2	
	comp=Z,22nm,19.5s,baz=323,slow=36						
ASAR	**Alice Springs**	**51.00**	**175**	P	**P**	**10 44 15.9**	**+0.1**
KBL	**Kabul**	**52.11**	**294**	P	**P**	**10 44 25.5**	**+1.1**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBL	**Kabul**	**52.11**	**294**	P	**P**	**10 44 25.5**	**+1.1**
KBL				IAmb	IAmb	10 44 44.6	
	comp=Z,6.0nm,0.8s						
ANM	**Nome**	**54.61**	**29**	P	**P**	**10 44 42.3**	**+0.2**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ANM	**Nome**	**54.61**	**29**	P	**P**	**10 44 42.3**	**+0.2**
ANM				IAmb	IAmb	10 44 44.2	
	comp=Z,9.9nm,1.1s						
RDOG	**Red Dog Mine**	**56.22**	**25**	P	**P**	**10 44 54.3**	**+0.7**
RDOG				IAmb	IAmb	10 44 57.3	
	comp=Z,4.8nm,0.8s						
ABKAR	**Akbulak array**	**57.00**	**313**	P	**P**	**10 44 59.0**	**-0.4**
ABKAR	**Akbulak array**	**57.00**	**313**	P	**P**	**10 44 58.9**	**-0.6**
ARU	**Arti**	**57.44**	**321**	d iP	**P**	**10 45 01.9**	**-0.5**
ARU				*PP	**pwP**	**10 45 15.6**	**+1.4**
ARU						10 45 51.6	
ARU						10 47 09.0	
ARU				S	**S**	**10 52 57.0**	**-0.3**
ARU				SS	**SS**	**10 56 45.7**	**-1.1**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MORW	**Morawa**	**57.83**	**195**	P	**P**	**10 45 05.2**	**-0.2**
MORW				IAmb	IAmb	10 45 06.7	
	comp=Z,14nm,1.1s						
TTA	**Tatalina**	**58.60**	**31**	P	**P**	**10 45 11.2**	**+0.7**
TTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TTA	**Tatalina**	**58.60**	**31**	P	**P**	**10 45 11.2**	**+0.7**
TTA				IAmb	IAmb	10 45 22.9	
	comp=Z,6.6nm,1.1s						
STKA	**Stephens Creek**	**60.05**	**169**	P	**P**	**10 45 21.0**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=11,slow=3.9,SNR=7.7						
STKA				LR	LR	11 10 15.4	
	comp=Z,25nm,21.8s,baz=12,slow=35						
STKA	**Stephens Creek**	**60.05**	**169**	P	**P**	**10 45 19.8**	**-0.9**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
STKA	**Stephens Creek**	**60.05**	**169**	P	**P**	**10 45 19.8**	**-0.9**
BBOO	**Buckleboo**	**60.24**	**174**	P	**P**	**10 45 22.2**	**+0.2**
PPLA	**Purkeypile**	**60.35**	**31**	P	**P**	**10 45 23.8**	**+1.1**
DZM	**Mont Dzumac**	**60.52**	**141**	P	**P**	**10 45 24.5**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=333,slow=21,SNR=2.1						
DZM				LR	LR	11 11 59.4	
	comp=Z,46nm,18.5s,baz=238,slow=36						
SKT	**Skwentna**	**60.71**	**32**	P	**P**	**10 45 25.4**	**+0.4**
SKT				IAmb	IAmb	10 45 36.2	
	comp=Z,7.2nm,0.9s						
KTH	**Kantishna Hill**	**60.88**	**30**	P	**P**	**10 45 26.6**	**+0.4**
KTH				IAmb	IAmb	10 45 28.9	
	comp=Z,17nm,1.4s						
SUA	**Susitna One**	**61.12**	**33**	P	**P**	**10 45 28.2**	**+0.3**
TRF	**Thorofare Moun**	**61.17**	**30**	P	**P**	**10 45 29.7**	**+1.4**
TRF				IAmb	IAmb	10 45 55.3	
	comp=Z,4.7nm,0.9s						
NWAO	**Narrogin (SRO)**	**61.32**	**192**	P	**P**	**10 45 29.3**	**-0.1**
	comp=Z,12nm,0.9s,baz=41,slow=5.4,SNR=4.1						
NWAO	**Narrogin (SRO)**	**61.32**	**192**	P	**P**	**10 45 30.3**	**+0.9**
NWAO				pmax	pmax		
	comp=Z,17nm,1.1s						
NWAO	**Narrogin (SRO)**	**61.32**	**192**	P	**P**	**10 45 30.2**	**+0.9**
RND	**Reindeer**	**61.82**	**30**	P	**P**	**10 45 33.1**	**+0.5**
RND				pmax	pmax		
	comp=Z,15nm,0.9s						
RND	**Reindeer**	**61.82**	**30**	P	**P**	**10 45 33.1**	**+0.5**
MDM	**Murphy Dome**	**61.95**	**29**	P	**P**	**10 45 34.4**	**+1.0**
MDM				IAmb	IAmb	10 45 35.4	
	comp=Z,14nm,1.2s						
KNK	**Knik Glacier**	**62.22**	**33**	P	**P**	**10 45 35.6**	**+0.4**
ILAR	**Eielson Array**	**62.54**	**29**	P	**P**	**10 45 36.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=268,slow=5.9,SNR=7.8						
ILAR	**Eielson Array**	**62.54**	**29**	P	**P**	**10 45 37.2**	**-0.1**
ILAR	**Eielson Array**	**62.54**	**29**	P	**P**	**10 45 37.2**	**-0.1**
HDA	**Harding Lake**	**62.55**	**29**	P	**P**	**10 45 37.7**	**+0.4**
HDA				IAmb	IAmb	10 45 54.1	
	comp=Z,11nm,1.2s						
BMAR	**Burnt Mountain**	**63.16**	**26**	P	**P**	**10 45 41.1**	**-0.3**
M24K	**Tolsona, Glenn**	**63.20**	**32**	P	**P**	**10 45 43.0**	**+1.2**
MENT	**Mentasta**	**64.19**	**30**	P	**P**	**10 45 48.0**	**-0.3**
MENT				IAmb	IAmb	10 46 00.5	
	comp=Z,14nm,1.2s						
GLB	**Gilahina Butte**	**64.42**	**32**	P	**P**	**10 45 50.6**	**+0.8**
GLB				IAmb	IAmb	10 45 52.1	
	comp=Z,17nm,1.3s						
VRDI	**Verde Repeater**	**64.63**	**32**	P	**P**	**10 45 51.5**	**+0.2**
VRDI				IAmb	IAmb	10 46 18.0	
	comp=Z,12nm,1.2s						
MSVF	**Nonsavu**	**64.67**	**128**	i P	**P**	**10 45 51.3**	**-0.7**
MSVF				pmax	pmax		
	comp=Z,18nm,1.1s						
BCAR	**Beaver Creek A**	**65.03**	**30**	P	**P**	**10 45 54.9**	**+1.1**
EPYK	**Eagle Plains**	**66.40**	**26**	P	**P**	**10 46 03.5**	**+1.0**
EPYK				IAmb	IAmb	10 46 21.4	
	comp=Z,13nm,1.2s						
TMCR	**Tamitsa**	**66.49**	**331**	eP	**P**	**10 46 02.5**	**-0.5**
TMCR				pmax	pmax		
	comp=Z,18nm,1.1s						
KLMR	**Klimovskoe**	**66.66**	**328**	eP	**P**	**10 46 02.9**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,21nm,1.5s						
KLMR	**Klimovskoe**	**66.66**	**328**	eP	**P**	**10 46 02.9**	**-1.3**
KLMR				AMP		10 46 05.8	
	comp=Z,21nm,1.5s						
INK	**Inuvik**	**67.07**	**24**	P	**P**	**10 46 08.8**	**+2.1**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**67.07**	**24**	P	**P**	**10 46 08.8**	**+2.1**
ZEI	**Tsey**	**69.25**	**308**	eP	**P**	**10 46 20.4**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,16nm,1.4s						
LPSR	**Galich'ya Gora**	**69.33**	**319**	eP	**P**	**10 46 18.4**	**-2.7**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARCES	**ARCESS Array B**	**69.44**	**339**	P	**P**	**10 46 22.2**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=72,slow=6.5,SNR=8.1						
ARCES				LR	LR	11 22 48.5	
	comp=Z,73nm,19.0s,baz=250,slow=41						
ARCES	**ARCESS Array B**	**69.44**	**339**	P	**P**	**10 46 23.5**	**+2.0**
ARCES				pmax	pmax		
	comp=Z,15nm,1.2s						
ARCES	**ARCESS Array B**	**69.44**	**339**	P	**P**	**10 46 23.5**	**+2.0**
VSR	**Storozhevoye**	**69.63**	**318**	eP	**P**	**10 46 21.8**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORD	**Divnogorie**	**69.64**	**318**	eP	**P**	**10 46 23.8**	**+0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KBZ	**Khabaz**	**69.64**	**309**	P	**P**	**10 46 24.6**	**+1.4**
	comp=Z,5.7nm,0.8s,baz=200,slow=3.3,SNR=8.0						
KBZ				LR	LR	11 22 42.4	
	comp=Z,83nm,18.3s,baz=28,slow=41						
KBZ	**Khabaz**	**69.64**	**309**	i P	**P**	**10 46 22.5**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIV	**Kislovodsk**	**69.71**	**310**	eP	**P**	**10 46 22.9**	**-0.9**
KIV				pmax	pmax		
	comp=Z,42nm,1.1s						
KIV				MLR	MLR		
	comp=Z,147nm,17.0s						
KIV	**Kislovodsk**	**69.71**	**310**	P	**P**	**10 46 26.0**	**+2.2**
NEY	**Neytrino**	**69.92**	**309**	i P	**P**	**10 46 24.8**	**-0.4**
NEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
C36M	**Paulatuk**	**69.92**	**21**	P	**P**	**10 46 25.5**	**+1.0**
FIA1	**FINESS Array S**	**72.58**	**331**	P	**P**	**10 46 41.3**	**+0.7**
FINES	**FINESS Array B**	**72.58**	**331**	P	**P**	**10 46 40.9**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=57,slow=6.2,SNR=34						
FINES				LR	LR	11 23 52.0	
	comp=Z,207nm,18.9s,baz=36,slow=40						
FINES	**FINESS Array B**	**72.58**	**331**	i P	**P**	**10 46 41.2**	**+0.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FINES	**FINESS Array B**	**72.58**	**331**	P	**P**	**10 46 41.4**	**+0.7**
RES	**Resolute Bay**	**73.99**	**11**	P	**P**	**10 46 49.4**	**+0.6**
RES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RES	**Resolute Bay**	**73.99**	**11**	P	**P**	**10 46 49.4**	**+0.6**
RES				IAmb	IAmb	10 47 06.9	
	comp=Z,5.2nm,1.1s						
MNK	**Minsk**	**74.72**	**324**	i P	**P**	**10 46 51.5**	**-1.9**
	comp=E,2.0nm,0.9s						
MNK				i P	**P**	**10 46 51.5**	**-1.9**
	comp=N,24nm,0.9s						
MNK				i P	**P**	**10 46 51.5**	**-1.9**
	comp=Z,6.0nm,0.7s						
MNK				i PcP	**pwP**	**10 47 05.1**	**-0.2**
MNK				i PP	**PP**	**10 49 38.8**	**-1.4**
MNK				i PPP	PPP	10 51 24.8	
MNK				i S	**S**	**10 56 24.5**	**-3.1**
MNK				i SS	**SS**	**11 01 15.1**	**+0.5**
MNK				i SSS	SSS	11 04 30.1	
MNK				i LQ	LQ	11 14 52.2	
MNK				i LR	LR	11 20 34.0	
MNK				i LRM	MLR	11 22 53.3	
	comp=E,11nm,16.3s						
MNK				i LRM	MLR	11 22 54.4	
	comp=Z,214nm,19.5s						
MNK				i LRM	MLR	11 22 55.4	
	comp=N,34nm,6.5s						
RAYN	**Ar Rayn**	**74.98**	**289**	P	**P**	**10 46 53.3**	**-2.2**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAYN	**Ar Rayn**	**74.98**	**289**	P	**P**	**10 46 53.2**	**-2.2**
RAYN				IAmb	IAmb	10 47 04.0	
	comp=Z,7.4nm,1.1s						
NACGM	**Naroch**	**75.12**	**324**	i P	**P**	**10 46 57.5**	**+1.8**
NACGM				i P	**P**	**10 46 57.5**	**+1.8**
NACGM				i P	**P**	**10 46 57.5**	**+1.8**
NACGM				i PcP	**PcP**	**10 47 16.4**	**+7.2**
NACGM				i PP	**PP**	**10 49 43.5**	**-0.1**
NACGM				i PPP	PPP	10 51 34.9	
NACGM				i S	**SKiKP**	**10 56 14.9**	**-2.1**
NACGM				i PS	PnS	10 57 37.4	+28
NACGM				i SS	SS	11 00 57.5	-23
NACGM				i SSS	SSS	11 04 26.4	
NACGM				i LR	LR	11 16 49.0	
AKASG	**Malin Array Be**	**75.64**	**320**	P	**P**	**10 46 58.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=56,slow=6.7,SNR=5.9						
AKASG				LR	LR	11 23 26.4	
	comp=Z,161nm,18.5s,baz=280,slow=38						
YKA	**Yellowknife Ar**	**76.68**	**26**	P	**P**	**10 47 05.0**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=304,slow=4.9,SNR=30						
YKA	**Yellowknife Ar**	**76.68**	**26**	i P	**P**	**10 47 04.0**	**-0.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BR131	**Keskin Array S**	**77.56**	**308**	P	**P**	**10 47 10.3**	**+0.3**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BR131	**Keskin Array S**	**77.56**	**308**	P	**P**	**10 47 10.3**	**+0.3**
BR131				IAmb	IAmb	10 47 15.0	
	comp=Z,6.7nm,0.8s						
BRTR	**Keskin Array B**	**77.56**	**308**	P	**P**	**10 47 11.2**	**+1.1**
	comp=Z,3.8nm,0.8s,baz=91,slow=5.0,SNR=15						
BRTR				LR	LR	11 26 50.0	
	comp=Z,39nm,18.4s,baz=20,slow=40						
NB2	**NORSAR Subarra**	**78.91**	**334**	P	**P**	**10 47 18.5**	**+1.6**
	comp=Z,24nm,1.2s,baz=52,slow=5.9						
NB2	**NORSAR Subarra**	**78.91**	**334**	P	**P**	**10 47 18.5**	**+1.6**
	baz=52,slow=5.9						
NOA	**NORSAR Array B**	**78.91**	**334**	P	**P**	**10 47 16.6**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=50,slow=5.4,SNR=7.1						
BURAR	**Bucovina Array**	**79.40**	**318**	P	**P**	**10 47 20.6**	**+0.6**
SUMG	**Summit**	**79.89**	**357**	P	**P**	**10 47 23.1**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SUMG	**Summit**	**79.89**	**357**	P	**P**	**10 47 23.1**	**+0.6**
SUMG				IAmb	IAmb	10 47 50.6	
	comp=Z,9.0nm,1.2s						
SUMG	**Summit**	**79.89**	**357**	i P	**P**	**10 47 23.5**	**+1.0**
SUMG	**Summit**	**79.89**	**357**	i P	**P**	**10 47 23.6**	**+1.0**
KOLS	**Kolonicke sedl**	**80.44**	**320**	eP	**P**	**10 47 28.4**	**+2.9**
KOLS	**Kolonicke sedl**	**80.44**	**320**	eP	**P**	**10 47 28.4**	**+2.9**
B08A	**Colville Reser**	**82.30**	**39**	P	**P**	**10 47 36.4**	**+1.0**
VYHS	**Vyhne**	**82.61**	**321**	eP	**P**	**10 47 38.5**	**+1.6**
VYHS	**Vyhne**	**82.61**	**321**	eP	**P**	**10 47 38.5**	**+1.6**
DPC	**Dobruska-Polom**	**82.92**	**324**	eP	**P**	**10 47 39.3**	**+0.7**
DPC	**Dobruska-Polom**	**82.92**	**324**	eP	**P**	**10 47 39.3**	**+0.7**
D08A	**Wollman Farm,**	**83.25**	**40**	P	**P**	**10 47 41.6**	**+1.3**
D08A				IAmb	IAmb	10 47 42.1	
	comp=Z,7.6nm,1.0s						
RAR	**Rarotonga**	**83.32**	**118**	LR	LR	11 15 26.0	
	comp=Z,26nm,21.8s,baz=242,slow=29						
MODS	**Modra-Piesok**	**83.53**	**322**	eP	P	10 47 46.5	+4.8
MODS	**Modra-Piesok**	**83.53**	**322**	eP	P	10 47 46.5	+4.8
PINE	**Pine Mountain**	**83.83**	**44**	P	**P**	**10 47 44.1**	**+0.5**
PINE				IAmb	IAmb	10 47 46.1	
	comp=Z,8.9nm,1.1s						
CLL	**Collm**	**84.05**	**326**	eP	**P**	**10 47 45.0**	**+0.7**
CLL	**Collm**	**84.05**	**326**	eP	**P**	**10 47 42.0**	**-2.3**
CONA	**Conrad Observa**	**84.56**	**322**	eP	**P**	**10 47 49.1**	**+2.0**
	comp=Z,12nm,1.3s						
KHC	**Kasperske Hory**	**85.08**	**324**	eP	**P**	**10 47 51.0**	**+1.4**
KHC	**Kasperske Hory**	**85.08**	**324**	eP	**P**	**10 47 51.0**	**+1.4**
GERES	**GERESS Array B**	**85.18**	**324**	P	**P**	**10 47 50.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=36,slow=3.7,SNR=3.0						
GERES				LR	LR	11 30 13.9	
	comp=Z,149nm,19.9s,baz=48,slow=39						
GERES	**GERESS Array B**	**85.18**	**324**	P	**P**	**10 47 50.7**	**+0.5**
MOD	**Modoc Plateau**	**85.24**	**45**	P	**P**	**10 47 51.0**	**+0.3**
MOD				IAmb	IAmb	10 47 52.8	
	comp=Z,6.2nm,1.1s						
BMO	**Blue Mountains**	**85.42**	**41**	P	**P**	**10 47 51.9**	**+0.4**
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMO	**Blue Mountains**	**85.42**	**41**	P	**P**	**10 47 51.9**	**+0.4**
BEKR	**Beckworth**	**86.31**	**47**	P	**P**	**10 47 56.4**	**+0.3**
KBA	**Koelnbreinsper**	**86.44**	**322**	eP	**P**	**10 47 57.2**	**+0.6**
	comp=Z,6.8nm,1.7s						
FCC	**Fort Churchill**	**86.57**	**21**	P	**P**	**10 47 57.3**	**+0.6**
FCC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FCC	**Fort Churchill**	**86.57**	**21**	P	**P**	**10 47 57.2**	**+0.6**
FCC				IAmb	IAmb	10 47 57.4	
	comp=Z,5.4nm,0.9s						
FFC	**Flin Flon**	**86.72**	**27**	P	**P**	**10 47 58.3**	**+0.8**
FFC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FFC	**Flin Flon**	**86.72**	**27**	P	**P**	**10 47 58.3**	**+0.8**
FFC				IAmb	IAmb	10 47 59.1	
	comp=Z,5.8nm,0.9s						
ABTA	**Abfaltersbach**	**87.10**	**322**	eP	**P**	**10 48 02.9**	**+3.2**
	comp=Z,10nm,1.1s						
MFID	**Camas Ranch**	**87.11**	**42**	P	**P**	**10 48 00.5**	**+0.6**
MFID				IAmb	IAmb	10 48 01.5	
	comp=Z,4.5nm,1.1s						
CMB	**Columbia Colle**	**87.29**	**48**	P	**P**	**10 48 00.9**	**+0.2**
CMB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMB	**Columbia Colle**	**87.29**	**48**	P	**P**	**10 48 00.9**	**+0.2**
HRY	**Holter Researc**	**87.39**	**37**	P	**P**	**10 48 02.1**	**+1.0**
MOTA	**Moosalm**	**87.48**	**323**	eP	P	10 48 06.8	+5.2
	comp=Z,3.5nm,0.6s						
DLMT	**Dillon**	**87.81**	**39**	P	**P**	**10 48 04.2**	**+1.0**
FETA	**Feichten**	**87.88**	**323**	eP	**P**	**10 48 07.5**	**+4.0**
	comp=Z,4.9nm,1.1s						
MCMT	**McKenzie Canyo**	**87.99**	**39**	P	**P**	**10 48 04.2**	**-0.1**
DAVA	**Damuels**	**88.16**	**324**	eP	**P**	**10 48 08.1**	**+3.3**
	comp=Z,7.1nm,1.2s						
BOZ	**Bozeman (W)**	**88.19**	**38**	P	**P**	**10 48 05.4**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BOZ	**Bozeman (W)**	**88.19**	**38**	P	**P**	**10 48 05.4**	**+0.3**
BOZ				IAmb	IAmb	10 48 06.7	
	comp=Z,3.8nm,1.1s						
NVAR	**Mina Array Bea**	**88.43**	**47**	P	**P**	**10 48 07.2**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=274,slow=5.4,SNR=6.4						
NVAR	**Mina Array Bea**	**88.43**	**47**	P	**P**	**10 48 07.6**	**+1.2**
QLMT	**Earthquake Lak**	**88.78**	**39**	P	**P**	**10 48 09.3**	**+1.3**
YHB	**Horse Butte**	**88.96**	**39**	P	**P**	**10 48 10.7**	**+1.9**
YMR	**Madison River**	**89.14**	**39**	P	**P**	**10 48 10.7**	**+1.0**
FLWY	**Flagg Ranch**	**89.66**	**39**	P	**P**	**10 48 12.2**	**+0.1**
FLWY				IAmb	IAmb	10 48 15.4	
	comp=Z,6.8nm,1.1s						
PPT	**Papeete**	**89.74**	**110**	LR	LR	11 26 38.9	
	comp=Z,29nm,18.9s,baz=210,slow=34						
MOOW	**Moose Ponds**	**89.84**	**39**	P	**P**	**10 48 13.3**	**+0.3**
PD31	**Pinedale Array**	**91.14**	**39**	P	**P**	**10 48 19.6**	**+0.6**
PD31				IAmb	IAmb	10 48 30.9	
	comp=Z,2.8nm,0.9s						
PDAR	**Pinedale Array**	**91.14**	**39**	P	**P**	**10 48 19.9**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=314,slow=1.5,SNR=16						
NLU	**North Lily Min**	**91.44**	**43**	P	**P**	**10 48 21.2**	**+0.8**
MSU	**Marysvale**	**92.27**	**44**	P	**P**	**10 48 25.3**	**+1.0**
MSU	**Marysvale**	**92.27**	**44**	P	**P**	**10 48 25.3**	**+1.0**
LCMT	**Little Creek M**	**92.52**	**46**	P	**P**	**10 48 26.9**	**+1.5**
ULM	**Lac du Bonnet**	**92.54**	**28**	P	**P**	**10 48 25.0**	**0.0**
	comp=Z,3.6nm,0.9s,baz=299,slow=5.9,SNR=6.3						
P17A	**Butcher Ranch,**	**92.54**	**43**	P	**P**	**10 48 25.8**	**+0.3**
KNB	**Kanab**	**92.78**	**46**	P	**P**	**10 48 27.4**	**+0.8**
KNB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KNB	**Kanab**	**92.78**	**46**	P	**P**	**10 48 27.4**	**+0.8**
SRU	**San Rafael Swe**	**92.90**	**43**	P	**P**	**10 48 27.7**	**+0.5**
SRU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SRU	**San Rafael Swe**	**92.90**	**43**	P	**P**	**10 48 27.7**	**+0.5**
PV14	**Lion Creek, Pa**	**94.28**	**43**	P	**P**	**10 48 33.6**	**+0.1**

IDC 28 10:49:33.6±1.9**,4°.52S**×**150°.97E,h0**^{km}**,mb3.6**/3**,**
mb1 3.9/4**,mb1mx3.5**/33**,mbtmp3.7**/4**,Error ellipse:**
s-maj=123.0km s-min=23.8km az=124.0,New Britain
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.16**	**218**	Pn	Pn	10 51 05.3	-0.6
	baz=171,slow=22,SNR=1.1						
PMG				Sn	Sn	10 52 17.7	+0.6
	1.4nm,0.3s,baz=127,slow=7.7,SNR=3.1						
WRA	**Warramunga Arr**	**22.31**	**225**	P	P	10 54 33.4	+0.5
	1.2nm,0.5s,baz=51,slow=10,SNR=14						
ASAR	**Alice Springs**	**25.17**	**219**	P	P	10 55 00.8	-0.2
	1.2nm,0.7s,baz=52,slow=9.3,SNR=19						
ILAR	**Eielson Array**	**82.59**	**22**	P	P	11 01 58.4	+0.1
	0.3nm,0.6s,baz=253,slow=5.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**148.49**	**288**	PKPbc	PKPbc	11 09 22.9	-0.6
	0.5nm,0.5s,baz=71,slow=2.3,SNR=2.2						

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*SOME **28** 10:52:43.6, 43°.80N×69°.55E*
*KRNET **28** 10:52:46.8±0.1, 43°.59N×69°.48E, mb3.0*
*NNC **28** 10:52:47.0±1.8, 43°.71N×69°.80E, h0^{km}, mb3.5, mpv3.0,*
Error ellipse: s-maj=11.1km s-min=9.7km az=62.0,
Suspected Mining explosion.
ISC 28 10:52:44.0±3.0**,43°.82N**±0°.10×**69°.8E**±0°.1**,h0**^{km}**,n15,**
σ**1**^{s}**.24**/25**,18C-2D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.91**	**142**	⇓P	**Pb**	**10 53 02.4**	**-0.2**
	1.4nm,0.5s,baz=317,slow=16,SNR=55						
KK31				S	**Sg**	**10 53 13.4**	**+0.3**
	11nm,0.6s,baz=306,slow=29,SNR=92						
IUG	**Iuzhnay**	**1.68**	**173**	P	**Pb**	**10 53 15.5**	**-0.4**
	3.5nm,0.2s						
IUG				S	**Sg**	**10 53 38.5**	**+0.5**
	34nm,0.6s						
MNAS	**Manas**	**2.42**	**122**	⇑iP	**Pg**	**10 53 30.6**	**+0.3**
	baz=15						
MNAS				⇑iS	**Sg**	**10 54 02.8**	**+1.2**
	baz=15						
TRKS	**Terek-Say**	**2.51**	**155**	⇑iP	**Pb**	**10 53 30.6**	**+0.6**
	baz=49						
TRKS				⇑iS	**Sb**	**10 54 02.6**	**+1.1**
	baz=49						
MRKS	**Merke**	**2.76**	**112**	Pg	**Pg**	**10 53 36.7**	**-0.1**
	4.4nm,0.5s						
MRKS				Lg	Lg	10 54 15.7	
	6.3nm,0.7s						
EKS2	**Erkin-Say**	**3.17**	**110**	⇑iP	**Pb**	**10 53 42.1**	**+0.9**
	baz=5.0						
EKS2				⇑iS	**Sb**	**10 54 22.3**	**+2.0**
	baz=5.0						
AML	**Almayashu**	**3.35**	**119**	⇑iP	**Pb**	**10 53 44.3**	**-0.2**
	baz=14						
AML				⇑iS	**Sb**	**10 54 25.6**	**-0.4**
	baz=14						
USP	**Ospenovka**	**3.50**	**97**	⇑iP	**Pb**	**10 53 47.3**	**+0.5**
	baz=93						
USP				⇑iS	**Sb**	**10 54 31.4**	**+1.5**
	baz=93						
AAK	**Ala-Archa**	**3.67**	**107**	⇑iP	**Pb**	**10 53 49.2**	**-0.5**
	baz=3.0						
AAK				⇑iS	**Sb**	**10 54 34.4**	**-0.4**
	baz=3.0						
AAK	**Ala-Archa**	**3.67**	**107**	⇓Pg	**Pb**	**10 53 51.6**	**+1.9**
	3.5nm,0.7s						
AAK				Lg	Lg	10 54 43.4	
	4.4nm,1.0s						
UCH	**Uchtor**	**3.84**	**113**	⇑iP	**Pb**	**10 53 51.3**	**-1.6**
	baz=9.0						
UCH				⇑iS	**Sb**	**10 54 38.5**	**-1.6**
	baz=9.0						
ARLS	**Aral**	**3.89**	**119**	⇑iP	**Pb**	**10 53 51.4**	**-2.2**
	baz=14						
ARLS				⇑iS	**Sb**	**10 54 38.6**	**-2.7**
	baz=14						
TKM2	**Tokmak 2**	**4.36**	**100**	⇑Pg	**Pb**	**10 54 01.6**	**+0.1**
	2.8nm,0.7s						
TKM2				⇑Lg	Lg	10 55 05.5	
	6.4nm,1.2s						
DGS	**Degeres**	**4.42**	**95**	Pg	**Pg**	**10 54 08.3**	**-0.3**
	2.8nm,0.6s						
DGS				Lg	Lg	10 55 09.3	
	6.1nm,0.8s						
KST	**Kastek**	**4.59**	**98**	Pg	**Pg**	**10 54 11.0**	**-1.0**
	3.2nm,0.5s						
KST				Lg	Lg	10 55 14.1	
	7.1nm,0.7s						

IDC 28 11:04:32.5±2.7**,7°.33S**×**156°.07E,h0**^{km}**,mb3.8**/5**,**
mb1 4.0/5**,mb1mx3.6**/36**,mbtmp3.8**/5**,Error ellipse:**
s-maj=81.9km s-min=35.0km az=127.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.51**	**237**	P	P	11 09 53.6	-0.3
	2.6nm,0.8s,baz=60,slow=9.2,SNR=17						
H11S3	**WAKE ISLAND Hy**	**27.72**	**22**	T	T	11 38 48.2	
	baz=203,slow=76,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**27.73**	**22**	T	T	11 38 44.6	
	baz=203,slow=76,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**27.74**	**22**	T	T	11 38 45.8	
	baz=203,slow=76,SNR=4.1						
CMAR	**Chiang Mai Arr**	**61.89**	**295**	P	P	11 14 54.1	-0.2
	0.6nm,0.3s,baz=129,slow=7.1,SNR=2.2						
SONM	**Songino Array**	**70.20**	**327**	P	P	11 15 48.6	+1.2
	0.5nm,0.6s,baz=132,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**83.30**	**21**	P	P	11 16 59.9	-1.0
	0.4nm,0.9s,baz=246,slow=5.3,SNR=1.6						
MKAR	**Makanchi Array**	**84.36**	**318**	P	P	11 17 07.0	+0.2
	0.9nm,0.9s,baz=99,slow=5.5,SNR=6.4						

GUC 28 11:05:16.1±0.6**,24°.09S**×**67°.35W,h201**^{km}±8^{km}**,ML3.5,9C,**
Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.06**	**315**	⇑iP	Pn	11 05 55.5	-0.2
LVC				eS	S	11 06 25.1	-0.7
PB15	**IPOC Station P**	**2.13**	**294**	i P	Pn	11 05 56.5	+0.2
PB15				eS	S	11 06 27.1	+0.2
GO02	**Mina Guanaco**	**2.30**	**242**	⇑iP	Pn	11 05 58.3	+0.1
GO02				i S	S	11 06 30.6	+0.3
GO02				IAML		11 06 31.1	
	comp=N,220nm,0.3s						
PB06	**IPOC Station P**	**2.46**	**304**	⇑iP	Pn	11 06 00.1	+0.2
PB06				eS	S	11 06 32.7	-0.6
PB06				IAML		11 06 34.8	

	comp=E,229nm,0.1s						
PB14	IPOC Station P	2.84	259	*e*P	Pn	11 06 04.2	0.0
PB09	IPOC Station P	2.87	322	⇑*e*P	Pn	11 06 05.1	+0.6
PB09				*e*S	S	11 06 42.0	+0.3
PB09				IAML		11 06 44.2	
	comp=N,71nm,0.5s						
PB05	IPOC Station P	2.90	295	*e*P	Pn	11 06 04.8	+0.1
PB05				*e*S	S	11 06 40.4	-1.6
PB05				IAML		11 06 45.1	
	comp=N,39nm,0.2s						
PB10	IPOC Station P	2.99	280	*e*P	Pn	11 06 06.2	+0.5
PB10				*e*S	S	11 06 43.9	+0.1
PB10				IAML		11 06 49.0	
	comp=N,29nm,0.3s						
PB03	IPOC Station P	3.01	312	⇑*i*P	Pn	11 06 06.0	-0.1
PB03				*e*S	S	11 06 42.9	-1.5
PB03				IAML		11 06 44.0	
	comp=E,150nm,0.3s						
PB04	IPOC Station P	3.11	304	*e*P	Pn	11 06 07.4	+0.1
PB04				*e*S	S	11 06 45.2	-1.5
AC02	Maricunga	3.17	210	⇑*i*P	Pn	11 06 08.5	+0.2
AC02				*i* S	S	11 06 48.8	+0.3
AC02				IAML		11 07 06.0	
PB07	IPOC Station P	3.32	315	⇑*i*P	Pn	11 06 09.7	-0.1
PB07				*i* S	S	11 06 49.1	-2.0
AC01	Pan de Azucar	3.59	235	⇑*i*P	Pn	11 06 12.1	-0.8
AC01				*i* S	S	11 06 55.1	-1.6
PB08	IPOC Station P	4.27	337	*e*P	Pn	11 06 22.0	+0.2
PB08				*i* S	S	11 07 11.4	-1.3
GO03	Copiap	4.35	216	⇑*i*P	Pn	11 06 21.3	-1.0
GO03				*i* S	S	11 07 11.8	-2.1
TA01	Diego Aracena	4.38	323	*e*P	Pn	11 06 21.7	-1.0
PSGC	Pisagua	5.16	330	*e*P	Pn	11 06 30.8	-2.0
AC04	Llanos de Chal	5.29	218	*e*P	Pn	11 06 32.4	-1.9
AC05	El Transito	5.40	208	*e*P	Pn	11 06 34.6	-1.2

IDC 28 11:06:26.7±355.0, 56°.62N×30°.89E, h0^{km}, Error ellipse: s-maj=89.5km s-min=50.0km az=156.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	3.49	86	*i*		11 28 10.0	
	baz=272,slow=324,SNR=1.5						
I37NO	I37NO	13.66	341	*i*		12 38 10.0	
	baz=150,slow=330,SNR=1.0						
I31KZ	AKTYUBINSK INF	17.23	100	*i*		12 49 30.0	
	baz=303,slow=342,SNR=5.7						
I34MN	SONGINO INFRAS	44.88	68	*i*		15 40 20.0	
	baz=308,slow=335,SNR=0.8						

NOU 28 11:09:50.5, 17°.13S×167°.62E, h0^{km}, MLv4.3, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.80	138	P	Pg	11 10 05.7	-0.2
MARNC	Mare, Loyalty	4.34	175	P	Pn	11 10 59.2	+1.4
KOUNC	Koumac, New Ca	4.64	222	P	Pn	11 11 01.7	-0.2
YATNC	Mamie plateau,	4.95	188	P	Pn	11 11 05.0	-1.2
DZM	Mont Dzumac	5.04	193	P	Pn	11 11 07.0	-0.5
OUENC	Ouen Island, N	5.31	188	P	Pn	11 11 11.5	+0.4
PINNC	Pines Island,	5.46	182	P	Pn	11 11 12.7	-0.4

IDC 28 11:33:18.1±999.0, 57°.89N×32°.94E, h0^{km}, Error ellipse: s-maj=767.9km s-min=61.3km az=114.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	2.60	115	*i*		11 51 00.0	
	baz=298,slow=322,SNR=0.5						
I31KZ	AKTYUBINSK INF	16.43	106	*i*		13 12 10.0	
	baz=307,slow=346,SNR=5.0						
I34MN	SONGINO INFRAS	43.38	70	*i*		15 57 20.0	
	baz=310,slow=329,SNR=0.3						

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*AEIC **28** 11:34:49.0±2.4, 53°.14N±0°.07×167°.64W±0°.06, h13^{km}±6^{km}, ML3.8/26, mb4.0/14(NEIC), Error ellipse: s-maj=10.2km s-min=4.2km az=160.0*

*NEIC **28** 11:34:50.5±2.1, 53°.24N±0°.09×167°.77W±0°.09, h35^{km}±8^{km}, Error ellipse: s-maj=14.7km s-min=3.9km az=149.0*

*IDC **28** 11:34:57.5±5.9, 53°.43N×166°.74W, h60^{km}±53^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.2/52, mbtmp3.7/6, ML3.6/2, Error ellipse: s-maj=57.1km s-min=25.2km az=172.0*

ISC 28 11:34:49.8±1.5, 53°.2N±0°.1×167°.62W±0°.06, h26^{km}±12^{km}, n72, σ1ˢ.57/65, mb3.7/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	0.30	324		Pb	11 34 56.7	-0.1
OKSO	Okmok South	0.38	300		Pb	11 34 57.5	-0.6
OKSO					Sb	11 35 03.9	+0.2
OKSP	Okmok Steeple	0.41	282		Pb	11 34 58.7	+0.1
MAPS	Pakushin South	0.76	32		Pb	11 35 04.0	-0.4
MGOD	Makushin Gods	0.77	35		Pb	11 35 04.0	-0.5
MGOD					Sb	11 35 14.8	+0.1
NIKH	Nikolski High	0.77	256		Pb	11 35 03.1	-1.5
NIKH	Nikolski High	0.77	256		Sb	11 35 13.4	-1.3
MREP	Makushin Rep't	0.83	39		Pb	11 35 05.2	-0.3
MSW	Makushin Switc	0.90	33		Pb	11 35 06.2	-0.6
MNAT	Makushin Natee	0.91	37		Pb	11 35 06.4	-0.5
MNAT					Sb	11 35 18.8	+0.2
UNV	Unalaska Valle	0.95	44		Pn	11 35 07.0	-0.3
UNV	Unalaska Valle	0.95	44		Sb	11 35 19.9	+0.2
AKMO	Akutan Morgan	1.33	45		Pn	11 35 13.3	+0.6
AKRB	Akutan Reef Bi	1.33	43		Pn	11 35 13.5	+0.8
AKBBA	Akutan Broad B	1.37	46		Pn	11 35 13.5	+0.4
AKLV	Akutan Long Va	1.40	44		Pn	11 35 14.3	+0.6
AKGG	Akutan Green G	1.42	42		Pn	11 35 13.7	-0.1
AKUT	Akutan	1.47	48		Pn	11 35 14.9	+0.4
AKSA	Akutan Strait	1.50	49		Pn	11 35 15.0	+0.1
WESP	Westdahl Peak	2.17	51		Pn	11 35 25.3	+1.0
WEBT	Westdahl Beart	2.21	49		Pn	11 35 26.3	+1.5
FALS	False Pass	3.00	54		Pn	11 35 36.7	+1.2
DT1	Dutton Round H	3.69	56		Pn	11 35 47.3	+2.3
ATKA	Atka Island	4.12	259	Pn	Pn	11 35 51.5	+0.6
SPIA	Saint Paul Isl	4.29	340	Pn	Pn	11 35 54.2	+0.9
OHAK	Old Harbor	9.14	58	Pn	Pn	11 36 59.0	-0.7
KDAK	Kodiak Island	9.70	56	P	Pn	11 37 06.0	-1.4
	1.1nm,0.3s,baz=247,slow=9.2,SNR=30						
KDAK				S	Sn	11 38 49.2	-6.2
	0.1nm,0.3s,baz=288,slow=13,SNR=0.9						
KDAK	Kodiak Island	9.70	56		Pn	11 37 06.7	-0.8
SVW2	Sparrevohn	10.28	35	Pn	Pn	11 37 16.4	+1.0
BRLK	Bradley Lake	11.35	48	Pn	Pn	11 37 30.4	+0.4
TTA	Tatalina	11.54	27	Pn	Pn	11 37 33.7	+1.1
SEW	Seward	12.15	48	Pn	Pn	11 37 40.3	-0.6
SUA	Susitna One	12.30	41	Pn	Pn	11 37 44.4	+1.3
PMR	Palmer	13.02	42	Pn	Pn	11 37 53.8	+1.1
GHO	Glory Hole Cre	13.20	42	Pn	Pn	11 37 55.0	-0.4
KNK	Knik Glacier	13.20	44	Pn	Pn	11 37 55.1	-0.2
KTH	Kantishna Hill	13.55	33	Pn	Pn	11 38 01.8	+1.7
HIN	Hinchinbrook I	13.61	49	Pn	Pn	11 37 59.3	-1.5
SCM	Sheep Creek Mo	13.88	43	Pn	Pn	11 38 02.9	-1.7
MCARA	McCarthy VSAT	15.55	48	Pn	Pn	11 38 27.7	+0.7
ILAR	Eielson Array	15.69	34	P	Pn	11 38 27.4	-1.4
	0.2nm,0.3s,baz=226,slow=11,SNR=9.7						
ILAR	Eielson Array	15.69	34		Pn	11 38 29.4	+0.6
MENT	Mentasta	15.89	43		Pn	11 38 31.9	+0.6
MENT				IAmb	IAmb	11 38 41.1	
	comp=Z,10nm,1.3s						
BARN	Barnard Glacie	16.07	50	Pn	Pn	11 38 33.6	-0.2
BARN				IAmb	IAmb	11 38 41.8	
	comp=Z,20nm,1.4s						
PRP	Porcupine Dome	16.61	33	Pn	Pn	11 38 42.1	+1.5
BCAR	Beaver Creek A	16.74	44	Pn	Pn	11 38 41.9	-0.3
EGAK	Eagle	17.75	39	Pn	Pn	11 38 54.6	-0.1
HYT	Haines Junctio	17.97	53		P	11 39 00.3	+2.4
BMAR	Burnt Mountain	18.11	29	Pn	Pn	11 38 56.9	-2.3
DAWY	Dawson	18.13	42		Pn	11 38 59.4	+0.1
SKAG	Skagway	18.84	58	P	Pn	11 39 10.6	+2.6
SKAG				IAmb	IAmb	11 39 30.3	
	comp=Z,11nm,1.1s						
WHY	Whitehorse	19.21	54	P	Pn	11 39 13.9	+1.4
WHY				IAmb	IAmb	11 39 16.5	
	comp=Z,6.8nm,0.8s						
JIS	Juneau Island	19.27	61	P	Pn	11 39 13.7	+0.6
JIS				IAmb	IAmb	11 39 18.4	
	comp=Z,20nm,1.3s						
EPYK	Eagle Plains	20.12	37	P	P	11 39 20.4	-1.0
CRAG	Craig	20.13	70	P	Pn	11 39 23.9	+0.6
PETK	Petropavlovsk-	20.69	284	P	Pn	11 39 37.5	+7.5
	comp=Z,5.1nm,0.9s,baz=91,slow=12,SNR=1.8						
DLBC	Dease Lake	21.56	61	P	P	11 39 41.3	+4.3
	comp=Z,3.6nm,0.8s,baz=293,slow=9.7,SNR=9.2						
DLBC	Dease Lake	21.56	61	P	P	11 39 41.8	+4.8
DLBC				IAmb	IAmb	11 40 03.3	
	comp=Z,7.2nm,1.2s						
INK	Inuvik	22.09	34	P	P	11 39 40.7	-1.8
	comp=Z,2.0nm,0.6s,baz=231,slow=7.3,SNR=12						
INK	Inuvik	22.09	34	P	P	11 39 40.6	-1.8
INK				IAmb	IAmb	11 39 41.1	
	comp=Z,7.0nm,1.4s						
YKA	Yellowknife Ar	28.91	50	P	P	11 40 45.7	-0.4
	comp=Z,0.5nm,0.5s,baz=271,slow=7.5,SNR=14						
B08A	Colville Reser	30.44	79	P	P	11 41 01.6	+1.7
B08A				IAmb	IAmb	11 41 03.8	
	comp=Z,1.4nm,1.1s						
H11N2	WAKE ISLAND Hy	38.75	220	T	T	12 23 18.0	
	baz=24,slow=76,SNR=319						
H11N3	WAKE ISLAND Hy	38.76	220	T	T	12 23 18.5	
	baz=24,slow=76,SNR=293						
H11N1	WAKE ISLAND Hy	38.77	220	T	T	12 23 19.0	
	baz=24,slow=76,SNR=259						
H11S1	WAKE ISLAND Hy	39.93	220	T	T	12 24 46.5	
	baz=24,slow=76,SNR=537						
H11S2	WAKE ISLAND Hy	39.95	220	T	T	12 24 45.6	
	baz=24,slow=76,SNR=415						
H11S3	WAKE ISLAND Hy	39.95	220	T	T	12 24 47.7	
	baz=24,slow=76,SNR=138						
TXAR	Lajitas Array	51.68	91	P	P	11 43 54.3	-0.1
	comp=Z,0.3nm,0.5s,baz=298,slow=5.3,SNR=5.9						
H03N2	Juan Fernandez	115.24	112	T	T	13 58 45.1	
	baz=322,slow=77,SNR=11						
H03N1	Juan Fernandez	115.25	112	T	T	13 58 47.7	
	baz=322,slow=77,SNR=14						
H03N3	Juan Fernandez	115.25	112	T	T	13 58 46.0	
	baz=322,slow=77,SNR=20						

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*SJA **28** 11:34:49.9±0.3, 37°.33S×76°.00W, h10^{km}, ML4.0, MW4.0*

*IDC **28** 11:34:51.5±0.6, 37°.98S×75°.29W, h0^{km}, mb4.4/11, mb1 4.5/14, mb1mx4.4/23, mbtmp4.3/14, ML4.1/3, MS3.5/4, Ms1 3.5/4, ms1mx3.1/18, Error ellipse: s-maj=20.9km s-min=17.6km az=67.0*

*GUC **28** 11:34:52.3±0.5, 37°.89S×75°.30W, h20^{km}±13^{km}, ML4.1*

*NEIC **28** 11:34:53.2±1.7, 37°.91S±0°.06×75°.33W±0°.09, h10^{km}±1^{km}, mb4.8/78, ML4.3(GUC), Error ellipse: s-maj=12.7km s-min=10.5km az=257.0*

*VAO **28** 11:34:58.0±3.6, 37°.45S×75°.04W, h10^{km}, mb4.5*

ISC 28 11:34:53.1±0.4, 37°.89S±0°.05×75°.24W±0°.05, h10^{km}, n176, σ1ˢ.08/186, mb4.8/46, 4C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI04	Isla Mocha	1.19	116	*e*P	Pb	11 35 12.7	-3.0
BI04				*i* S	Sb	11 35 28.7	-2.4
BI04				IAML		11 35 29.9	
	comp=N,4µm,0.2s						
BI03	Tigo	2.05	60	*e*P	Pn	11 35 26.5	-1.1
BI03				IAML		11 35 56.8	
	comp=E,8µm,0.2s						
BI03	Tigo	2.05	60		Pn	11 35 26.8	-0.8
LAJA	Laja	2.10	74	*e*P	Pn	11 35 27.7	-0.6
LAJA				IAML		11 35 56.4	
	comp=N,931nm,0.4s						
LC01	Cunco	2.83	112	⇑*i*P	Pn	11 35 38.3	-0.1
LC01				*i* S	Sn	11 36 10.0	-2.4
LC01				IAML		11 36 14.4	
	comp=E,485nm,0.7s						
LC01	Cunco	2.83	112	Pn	Pn	11 35 38.2	-0.1
BI02	San Fabin de	3.39	70	⇑*i*P	Pn	11 35 46.4	+0.2
BI02				*i* S	Sn	11 36 25.6	-0.9
BI02				IAML		11 36 28.2	
	comp=N,400nm,0.1s						
BI02	San Fabin de	3.39	70		Pn	11 35 46.3	+0.2
BO03	Pichilemu	4.30	39	⇑*i*P	Pn	11 35 57.8	-0.8
BO03				*i* S	Sn	11 36 46.4	-2.5
PLCA	Paso Flores	4.61	129	Pn	Pn	11 36 03.0	+0.1
	comp=N,2.6nm,0.3s,baz=308,slow=11,SNR=39						
PLCA				Sn	Sn	11 36 59.4	+2.8
	comp=N,12nm,0.3s,baz=357,slow=20,SNR=4.1						
PLCA				LR	LR	11 37 52.4	
	comp=N,470nm,21.9s,baz=320,slow=40						
PLCA	Paso Flores	4.61	129		Pn	11 36 02.9	-0.1
BO02	Sierra Bellavi	4.75	51	*e*P	Pn	11 36 04.7	-0.1
BO02				*i* S	Sn	11 36 58.6	-1.3
BO02	Sierra Bellavi	4.75	51	Pn	Pn	11 36 04.7	-0.1
LL01	San Ignacio de	4.98	155	*e*P	Pn	11 36 06.8	-1.1
LL01	San Ignacio de	4.98	155		Pn	11 36 06.6	-1.2
H03S1	Juan Fernandez	5.02	323	Pn	Pn	11 36 06.8	-1.3
	baz=117,slow=8.4,SNR=24						
H03S1				T	T	11 41 31.6	
	baz=146,slow=72,SNR=17						
H03S2	Juan Fernandez	5.03	322	Pn	Pn	11 36 06.8	-1.6
	baz=117,slow=8.4,SNR=31						
H03S2				T	T	11 41 31.0	
	baz=146,slow=72,SNR=14						
H03S3	Juan Fernandez	5.04	323	Pn	Pn	11 36 06.8	-1.6
	baz=117,slow=8.4,SNR=31						
H03S3				T	T	11 41 32.1	
	baz=146,slow=72,SNR=14						
VA04	Juan Fernndez	5.15	324		Pn	11 36 07.6	-2.6
H03N3	Juan Fernandez	5.35	325	Pn	Pn	11 36 10.8	-1.9
GO07	Milladeo Hill,	5.35	168	Pn	Pn	11 36 10.9	-2.1
H03N1	Juan Fernandez	5.35	325	Pn	Pn	11 36 10.8	-2.0
H03N2	Juan Fernandez	5.36	325	Pn	Pn	11 36 10.8	-2.1
MT09	Talagante	5.37	41	⇑*i*P	Pn	11 36 13.0	-0.3
MT02	Curacav	5.70	37		Pn	11 36 16.2	-1.6
LMEL	Las Melosas	5.75	47	*e*P	Pn	11 36 19.0	+0.4
MT05	Renca	5.80	41		Pn	11 36 18.8	-0.4
ROC1	El Roble	6.00	36		Pn	11 36 21.7	-0.4
ROC1	El Roble	6.00	36	*i* P	Pn	11 36 21.7	-0.4
ROC1				*e*S	Sn	11 37 30.1	-0.8
PEL	Peldehue	6.02	39	Pn	Pn	11 36 22.2	-0.1
RFA	San Rafael	6.29	62	*i* P	Pn	11 36 27.0	+1.0
VA03	San Esteban	6.39	38		Pn	11 36 26.9	-0.5
AUSP	Uspallata	7.42	42	*i* P	Pn	11 36 42.7	+1.0
ASAL	Salagasta	7.44	47	*i* P	Pn	11 36 43.2	+1.3
ASAL				*e*S	Sn	11 38 06.9	+0.5
ASAL				IAML		11 38 14.0	
	comp=Z,18nm,0.8s						
RTLS	Leoncito	7.80	41	*i* P	Pn	11 36 47.8	+0.9
CO03	El Pedregal	7.98	29		Pn	11 36 48.2	-1.0
ZON	Zonda	8.32	42		Pn	11 36 53.7	-0.1
GO04	Tololo Observa	8.54	27		Pn	11 36 54.7	-2.2
GO04	Tololo Observa	8.54	27	*i* P	Pn	11 36 54.0	-3.0
CO01	Juntas del Tor	8.98	30		Pn	11 37 02.2	-0.9
LCO	Las Campanas	9.63	24	Pn	Pn	11 37 09.7	-2.3
AC05	El Transito	9.94	26	Pn	Pn	11 37 14.6	-1.5
AC04	Llanos de Chal	10.27	21	Pn	Pn	11 37 18.1	-2.4
AC02	Maricunga	12.17	27		Pn	11 37 46.1	-0.8
GO09	Cerro Castillo	13.53	172	Pn	Pn	11 38 03.8	-1.2
GO02	Mina Guanaco	13.57	22	Pn	Pn	11 38 05.4	-0.5
LVC	Limon Verde	16.18	21	Pn	Pn	11 38 41.4	+0.6
	comp=Z,0.2nm,0.3s,baz=172,slow=7.5,SNR=3.4						
CPUP	Villa Florida	19.02	58	P	Pn	11 39 17.0	+1.2
	comp=Z,0.3nm,0.3s,baz=245,slow=11,SNR=6.6						
CPUP				LR	LR	11 47 16.1	
	comp=Z,88nm,20.1s,baz=234,slow=39						
CPUP	Villa Florida	19.02	58	P	P	11 39 13.1	-2.0
CPSB	Cacapava Do Su	19.50	74	*e*P	Pn	11 39 22.1	+0.5
CNLB	Canela	21.99	74	*e*P	P	11 39 48.5	+1.1
PTGB	Pitanga	23.68	63	*e*P	P	11 40 08.2	+3.1
AQDB	Aquidauana	24.25	50	*e*P	P	11 40 10.8	+0.4
TRCB	Terra Rica	24.55	59	*e*P	P	11 40 14.1	+1.0
SIV	San Ignacio	25.14	34	P	P	11 40 20.3	+1.8
	comp=Z,5.1nm,0.9s,baz=223,slow=8.0,SNR=18						
PCMB	Pacaembu	26.28	59	*e*P	P	11 40 29.6	+0.8
FRTB	Fartura	26.32	64	*e*P	P	11 40 31.6	+2.5
PMSA	Palmer Station	27.72	170	LR	LR	11 49 56.1	
	comp=Z,79nm,18.0s,baz=67,slow=33						
ITRB	Iturama	28.21	57	*e*P	P	11 40 48.6	+2.5
ETMB	Extrema	29.11	19	*e*P	P	11 40 55.1	+1.0
BDFB	Brasilia	32.68	55	P	P	11 41 25.5	-0.3
	comp=Z,1.1nm,0.3s,baz=189,slow=13,SNR=1.8						
NPGB	Novo Progresso	35.61	35	*e*P	P	11 41 51.6	+0.5
SMTB	Santa Maria do	38.17	48	*e*P	P	11 42 13.5	+0.6
PTGA	Pitinga	39.56	24	P	P	11 42 24.4	-0.1
	comp=Z,0.9nm,0.3s,baz=230,slow=6.7,SNR=4.4						
VNA2	Neumayer--Watz	47.49	156	P	P	11 43 28.3	+0.5
	baz=281,slow=6.8						
NBPV	Pedro Velho	47.88	59	*e*P	P	11 43 33.3	+1.8
SNAA	Sanae	49.01	156	P	P	11 43 38.8	-0.8
SNAA	Sanae	49.01	156	P	P	11 43 39.8	+0.1
SNAA				IAmb	IAmb	11 43 40.9	
	comp=Z,13nm,1.0s						
QSPA	South Pole Qui	52.35	180	P	P	11 44 04.6	-0.4
	comp=Z,10nm,0.9s,baz=166,slow=1.0,SNR=28						
QSPA	South Pole Qui	52.35	180	P	P	11 44 04.8	-0.2
QSPA				IAmb	IAmb	11 44 07.4	
	comp=Z,10nm,0.9s						
SVB	Belmont	52.56	17	P	P	11 44 05.7	-1.2
MLPR	Magueyes Islan	56.10	9	P	P	11 44 32.0	-0.5
CCIG	Comitan	56.18	340	P	P	11 44 33.5	+0.2
PPT	Papeete	67.22	265	LR	LR	12 09 19.9	
	comp=Z,57nm,18.3s,baz=219,slow=31						
JCT	Junction City	71.79	338	P	P	11 46 16.1	+0.4
JCT				IAmb	IAmb	11 46 17.2	
	comp=Z,8.4nm,1.1s						
TX32	Lajitas Array	71.98	334	P	P	11 46 17.2	+0.3
TXAR	Lajitas Array	71.98	334	P	P	11 46 17.9	+1.0
	comp=Z,2.8nm,0.8s,baz=153,slow=8.0,SNR=32						
TXAR	Lajitas Array	71.98	334	P	P	11 46 17.2	+0.3
TX31	Lajitas Ar. Si	71.98	334	P	P	11 46 17.9	+1.0
TX31				IAmb	IAmb	11 46 18.7	
	comp=Z,13nm,0.9s						
WHTX	Lake Whitney,	72.55	340	P	P	11 46 21.2	+1.1
WHTX				IAmb	IAmb	11 46 21.8	
	comp=Z,11nm,1.2s						
W50A	Signal Mountai	73.32	351	P	P	11 46 25.2	+0.5
SWET	Sewanee	73.42	351	P	P	11 46 24.5	-0.8
SWET				IAmb	IAmb	11 46 26.2	
	comp=Z,11nm,0.8s						
CPCT	Cooper Cave	73.48	352	P	P	11 46 25.2	-0.4
CPCT				IAmb	IAmb	11 46 26.7	
	comp=Z,6.6nm,0.8s						
ABTX	Abilene, Hawle	73.75	339	P	P	11 46 27.9	+0.7
V48A	Smith Brothers	74.05	350	P	P	11 46 29.5	+0.6
V48A				IAmb	IAmb	11 46 30.1	
	comp=Z,11nm,0.8s						
TZTN	Tazewell	74.47	353	P	P	11 46 30.9	-0.4
TZTN				IAmb	IAmb	11 46 37.6	
	comp=Z,24nm,1.5s						
WHAR	Wooly Hollow	74.51	346	P	P	11 46 31.6	-0.1
WHAR				IAmb	IAmb	11 46 40.1	
	comp=Z,22nm,1.3s						
WVT	Waverly	74.57	349	P	P	11 46 31.9	0.0
WVT				IAmb	IAmb	11 46 33.0	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	74.73	334	P	P	11 46 33.3	+0.3
W39A	Magazine	74.73	344	P	P	11 46 34.0	+1.1
W39A				IAmb	IAmb	11 46 35.2	
	comp=Z,12nm,1.1s						
LCAR	Lake Charles	75.06	347	P	P	11 46 34.5	-0.3
LCAR				IAmb	IAmb	11 46 35.1	
	comp=Z,7.6nm,1.0s						
FCAR	Ozark Folk Cen	75.06	346	P	P	11 46 34.8	0.0
FCAR				IAmb	IAmb	11 46 35.5	
	comp=Z,6.3nm,0.8s						
TUL1	Leonard	75.86	343	P	P	11 46 39.6	+0.2
TUL1				IAmb	IAmb	11 46 41.0	
	comp=Z,14nm,1.1s						
319A	Douglas	75.89	330	P	P	11 46 41.6	+1.8
319A				IAmb	IAmb	11 46 43.3	
	comp=Z,7.6nm,0.9s						
T35A	Sooner Cattle	76.99	343	P	P	11 46 46.7	+0.9
T35A				IAmb	IAmb	11 46 47.4	
	comp=Z,14nm,1.1s						
CCM	Cathedral Cave	77.00	347	P	P	11 46 46.1	+0.3
S39A	Bolivar	77.04	345	P	P	11 46 46.3	+0.3
TUC	Tucson	77.31	330	P	P	11 46 49.0	+1.3
P48A	Milroy	77.55	352	P	P	11 46 48.4	-0.4
P48A				IAmb	IAmb	11 46 48.9	
	comp=Z,8.4nm,0.7s						
214A	Organ Pipe Nat	77.83	328	P	P	11 46 50.4	-0.2
ANMO	Albuquerque	78.05	334	P	P	11 46 53.3	+1.3
P43A	Skaggs, Pawnee	78.27	349	P	P	11 46 51.5	-1.3
LIC	Lamto	78.44	73	*e*P	P	11 46 55.2	+0.8
	comp=Z,8.8nm,0.6s						
P40A	Paris	78.58	347	P	P	11 46 54.8	+0.3
N51A	Ashland	78.71	354	P	P	11 46 55.1	-0.1
TIC	Toumodi	78.72	72	*e*P	P	11 46 56.7	+0.7
KIC	Kosan Boka	78.74	73	*e*P	P	11 46 56.9	+0.8
	comp=Z,14nm,0.8s						
DBIC	Dimbokro	78.86	72	P	P	11 46 57.1	+0.4
	comp=Z,3.5nm,0.6s,baz=207,slow=4.0,SNR=6.8						
DBIC	Dimbokro	78.86	72	P	P	11 46 57.7	+1.0
P38A	Dawn	78.95	346	P	P	11 46 57.0	+0.4
P38A				IAmb	IAmb	11 46 57.3	
	comp=Z,6.9nm,0.8s						
M55A	Ridgway	79.05	357	P	P	11 46 57.7	+0.6
M55A				IAmb	IAmb	11 46 58.0	
	comp=Z,14nm,1.0s						
M54A	Oil Creek Stat	79.13	357	P	P	11 46 57.9	+0.3
M54A				IAmb	IAmb	11 47 03.4	
	comp=Z,13nm,1.1s						
BOSA	Boshof	80.52	119	P	P	11 47 05.8	0.0
	comp=Z,4.7nm,0.8s,baz=181,slow=2.6,SNR=4.4						
BOSA	Boshof	80.52	119	P	P	11 47 05.8	0.0
BOSA				IAmb	IAmb	11 47 25.5	
	comp=Z,15nm,1.3s						
KNB	Kanab	82.23	330	P	P	11 47 16.4	+1.9
SADO	Sadowa	82.36	357	P	P	11 47 15.2	+0.4
SADO				IAmb	IAmb	11 47 22.2	
	comp=Z,6.1nm,1.1s						
SZCU	Shurtz Canyon	82.84	331	P	P	11 47 18.5	+0.8
K31A	O'Neill	82.95	343	P	P	11 47 18.2	+0.3
LBTB	Lobatse	82.98	116	P	P	11 47 18.9	+0.1
LBTB				IAmb	IAmb	11 47 20.7	
	comp=Z,8.3nm,1.2s						
ECSD	EROS Data Cent	83.53	345	P	P	11 47 21.4	+0.5
P17A	Butcher Ranch,	83.61	333	P	P	11 47 22.5	+0.9
TMUT	Trail Mountain	83.62	333	P	P	11 47 22.7	+0.9
E46A	Sault Ste Mari	84.28	354	P	P	11 47 24.6	0.0
SPR3	Spring Creek 3	84.54	330	P	P	11 47 27.1	+0.6
SPR3				IAmb	IAmb	11 47 28.6	
	comp=Z,5.9nm,1.1s						
E43A	Lone Tree Farm	84.55	352	P	P	11 47 26.6	+0.6
E43A				IAmb	IAmb	11 47 26.8	
	comp=Z,4.6nm,0.7s						
KOWA	Kowa	84.58	67	P	P	11 47 27.8	+0.9
KOWA				IAmb	IAmb	11 47 28.5	
	comp=Z,5.4nm,0.8s						
TPH	Tonopah	84.92	328	P	P	11 47 30.1	+1.8
F36A	Milaca	84.98	347	P	P	11 47 28.3	+0.1
DUG	Dugway, Tooele	85.00	332	P	P	11 47 29.7	+1.1
DUG				IAmb	IAmb	11 47 31.0	
	comp=Z,7.3nm,1.1s						
K22A	Casper	85.07	337	P	P	11 47 29.1	+0.2
K22A				IAmb	IAmb	11 47 30.7	
	comp=Z,8.1nm,1.1s						
OMMB	Old Mammoth Mi	85.29	327	P	P	11 47 31.5	+1.2
TCUT	Toone Canyon	85.30	333	P	P	11 47 30.9	+0.7
NVAR	Mina Array Bea	85.68	327	P	P	11 47 33.5	+1.3
	comp=Z,1.0nm,0.7s,baz=159,slow=6.2,SNR=10.0						
NVAR	Mina Array Bea	85.68	327	P	P	11 47 32.1	0.0
RSSD	Black Hills	85.70	340	P	P	11 47 31.4	-0.7
RSSD				IAmb	IAmb	11 47 33.1	
	comp=Z,5.5nm,1.0s						
HWUT	Hardware Ranch	85.79	334	P	P	11 47 33.0	+0.4
HWUT				IAmb	IAmb	11 47 34.3	
	comp=Z,7.7nm,1.1s						
BW06	Boulder Array	86.14	335	P	P	11 47 33.6	-0.7
PD31	Pinedale Array	86.14	335	P	P	11 47 33.9	-0.5
PDAR	Pinedale Array	86.14	335	P	P	11 47 34.5	+0.1
	comp=Z,2.3nm,0.9s,baz=152,slow=6.7,SNR=13						
PDAR	Pinedale Array	86.14	335	P	P	11 47 33.8	-0.5
HVU	Hansel Valley	86.37	333	P	P	11 47 35.1	-0.3
ELK	Elko	86.40	331	P	P	11 47 36.1	+0.4
PNTR	Pine Nut	86.78	327	P	P	11 47 38.2	+0.7
PNTR				IAmb	IAmb	11 47 40.3	
	comp=Z,6.1nm,0.9s						
D32A	Dogwood Acres,	86.86	345	P	P	11 47 37.9	+0.4
REDW	Red Top Meadow	87.10	335	P	P	11 47 39.2	+0.2
E28A	Huff	87.13	343	P	P	11 47 38.8	-0.1
LOHW	Long Hollow	87.24	335	P	P	11 47 39.5	-0.2
MOOW	Moose Ponds	87.40	335	P	P	11 47 40.7	+0.3
B35A	Bob, Littlefor	87.44	348	P	P	11 47 40.4	+0.1
B35A				IAmb	IAmb	11 47 40.6	
	comp=Z,6.1nm,0.7s						
IMW	Indian Meadow	87.60	335	P	P	11 47 41.5	0.0
IMW				IAmb	IAmb	11 47 43.7	
	comp=Z,4.2nm,0.9s						

FLWY	Flagg Ranch	87.69	335	P	P	11 47 41.9	+0.1
AGMN	Agassiz Nation	87.76	346	P	P	11 47 42.2	+0.5
TORD	Torodi Ar. Bea	87.94	72	P	P	11 47 43.3	-0.1
	comp=Z,1.7nm,0.7s,baz=232,slow=4.2,SNR=6.0						
TORD	Torodi Ar. Bea	87.94	72	P	P	11 47 43.3	-0.1
ORV	Oroville	88.00	326	P	P	11 47 45.1	+2.0
ORV				IAmb	IAmb	11 47 45.9	
	comp=Z,7.3nm,1.2s						
RLMT	Red Lodge	88.15	337	P	P	11 47 44.3	+0.3
YHH	Holmes Hill	88.36	335	P	P	11 47 46.5	+1.4
MCMT	McKenzie Canyo	89.07	334	P	P	11 47 48.6	+0.2
ULM	Lac du Bonnet	89.64	347	P	P	11 47 50.3	-0.2
	comp=Z,4.8nm,0.8s,baz=183,slow=5.3,SNR=8.9						
YKA	Yellowknife Ar	104.93	342	Pdiff	Pdif	11 48 58.9	-0.6
	comp=Z,0.2nm,0.8s,baz=142,slow=4.9,SNR=4.4						
ILAR	Eielson Array	116.48	333	PKP	PKPdf	11 53 35.9	-0.2
	comp=Z,0.4nm,0.8s,baz=173,slow=2.6,SNR=4.7						
BRTR	Keskin Array B	125.93	64	PKP	PKPdf	11 53 55.6	+0.3
	comp=Z,0.7nm,0.5s,baz=211,slow=1.7,SNR=2.8						
AKTO	Aktyubinsk	144.78	54	PKP	PKPab	11 54 28.2	-0.3
	comp=Z,3.1nm,0.8s,baz=242,slow=3.4,SNR=4.0						
NRIK	Noril'sk	147.14	11	PKPbc	PKPbc	11 54 35.4	+0.1
	comp=Z,3.5nm,0.8s,baz=24,slow=2.4,SNR=5.8						
NRIK	Noril'sk	147.14	11	PKPbc	PKPbc	11 54 35.6	+0.3
YAK	Yakutsk	151.36	336	PKPbc	PKPbc	11 54 45.9	-0.1
	comp=Z,17nm,0.6s,baz=157,slow=1.7,SNR=13						
YAK				PKPab	PKPab	11 54 53.0	-1.2
	comp=Z,8.8nm,0.5s,baz=280,slow=1.4,SNR=5.9						
YAK	Yakutsk	151.36	336		PKPbc	11 54 46.0	-0.1
BVAR	Borovoye Array	151.87	46	PKPbc	PKPbc	11 54 47.8	+0.3
	comp=Z,1.9nm,0.6s,baz=360,slow=18,SNR=9.6						
AAK	Ala-Archa	156.49	69	PKPab	PKPab	11 55 16.4	-0.6
	comp=Z,2.1nm,0.7s,baz=211,slow=2.3,SNR=5.5						
KURBB	Kurchatov Arra	157.45	47	PKP	PKPdf	11 54 48.9	0.0
	comp=Z,1.2nm,1.2s,baz=310,slow=2.7,SNR=3.7						
KURBB				PKPab	PKPab	11 55 19.9	-0.7
	comp=Z,0.9nm,0.8s,baz=294,slow=4.9,SNR=4.9						
KSH	Kashi	157.51	77	PKP	PKPdf	11 54 51.5	+2.0
ZALV	Zalesovo Beam	158.90	34	PKP	PKPdf	11 54 49.9	-0.6
	comp=Z,0.3nm,0.3s,baz=201,slow=2.9,SNR=4.6						
ZALV				PKPab	PKPab	11 55 27.6	+1.0
	comp=Z,3.6nm,0.8s,baz=306,slow=5.3,SNR=11						
CMAR	Chiang Mai Arr	159.98	164	PKPab	PKPab	11 55 30.9	-1.3
	comp=Z,0.3nm,0.3s,baz=238,slow=3.6,SNR=4.2						
CMAR	Chiang Mai Arr	159.98	164		PKPab	11 55 30.8	-1.4
MKAR	Makanchi Array	161.21	55	PKP	PKPdf	11 54 52.0	-1.5
	comp=Z,1.3nm,1.1s,baz=8.1,slow=1.7,SNR=5.0						
MKAR				PKPab	PKPab	11 55 37.1	0.0
	comp=Z,0.5nm,0.8s,baz=313,slow=2.5,SNR=2.4						
KSRS	Korea Array	161.66	276	PKPab	PKPab	11 55 39.7	+0.4
	comp=Z,1.1nm,0.7s,baz=98,slow=5.4,SNR=3.2						

ANF ***28*** *11:36:01.8±0.3, 32°.81N×115°.46W, h24^{km}±2^{km}, ML2.9/15, Error ellipse: s-maj=3.1km s-min=1.6km az=145.0*

NEIC ***28*** *11:36:01.7±2.3, 32°.76N±0°.02×115°.43W±0°.02, h19^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=206.0*

SCEDC ***28*** *11:36:02.8, 32°.80N×115°.45W, h14^{km}*

PAS ***28*** *11:36:02.9±3.2, 32°.81N±0°.01×115°.46W±0°.01, h10^{km}±2^{km}, ML3.2/76, ML3.0/50(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=161.0*

ECX ***28*** *11:36:03.2±0.8, 32°.79N×115°.46W, h14^{km}±2^{km}, MD2.8, ML3.1*

ISC 28 11:36:01.8±0.8**, 32°.76N**±0°.02×**115°.45W**±0°.01**, h18**^{km}±3^{km}**, n116, σ1^{s}07**/159**, 12C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DREC	Desert Rsrch C	0.05	8		Pg	11 36 04.8	-0.3
DREC					Sg	11 36 07.4	+0.1
DREC	Desert Rsrch C	0.05	8	⇓eP	Pg	11 36 04.8	-0.3
DREC				eS	Sg	11 36 07.4	+0.1
SNR	Schaffner Ranc	0.10	8		Pg	11 36 05.3	-0.2
UABX	UABC, Campus M	0.13	175		Pg	11 36 07.0	+1.2
UABX				IAML		11 36 11.2	
	comp=E,3μm,0.9s						
UABX				IAML		11 36 11.3	
	comp=N,3μm,0.3s						
UABX	UABC, Campus M	0.13	175	eP	Pg	11 36 07.0	+1.2
WESC	Westside Schoo	0.23	270		Pg	11 36 08.1	+0.8
WESC					Sg	11 36 12.7	+1.7
WESC	Westside Schoo	0.23	270	⇑iP	Pg	11 36 08.1	+0.8
COK2	Cook Ranch 2	0.25	292		Pg	11 36 08.1	+0.6
COK2	Cook Ranch 2	0.25	292	⇑iP	Pg	11 36 08.1	+0.6
SGL	Mount Signal	0.25	244		Pb	11 36 08.3	+0.5
SGL					Sg	11 36 12.5	+1.0
SGL	Mount Signal	0.25	244	⇑iP	Pb	11 36 08.3	+0.5
COA	Coachella	0.30	69		Pb	11 36 09.0	+0.4
COA					Sg	11 36 14.3	+1.5
COA	Coachella	0.30	69	⇑iP	Pb	11 36 09.0	+0.4
WEMD	Westmorland, C	0.30	339		Pb	11 36 08.7	+0.1
WEMD					Sb	11 36 14.1	+0.9
WEMD	Westmorland, C	0.30	339	eP	Pb	11 36 08.7	+0.1
SWSC	Sam W. Stewart	0.34	303	P	Pg	11 36 09.3	+0.2
	baz=117,SNR=400						
SWSC				S	Sg	11 36 14.4	+0.3
	baz=117						
SWSC	Sam W. Stewart	0.34	303		Pg	11 36 09.3	+0.2
SWSC					Sg	11 36 14.6	+0.5
SWSC	Sam W. Stewart	0.34	303	⇑eP	Pg	11 36 09.4	+0.2
SWSC				eS	Sg	11 36 14.5	+0.5
CPBX	Cerro Prieto	0.36	160		Pn	11 36 10.8	-1.4
CPBX				IAML		11 36 23.3	
	comp=N,2μm,0.3s						
CPBX	Cerro Prieto	0.36	160	eP	Pn	11 36 10.7	-1.4
CPBX				IAML		11 36 27.0	
	comp=N,4μm,0.6s						
SUP	Superstition M	0.37	302		Pg	11 36 09.8	+0.3
CTLX	Tlaxcala, TLX	0.39	138	eP	Pn	11 36 12.1	-0.4
EMSC	East Mesa	0.40	93		Pn	11 36 11.1	-1.6
EMSC	East Mesa	0.40	93	eP	Pn	11 36 11.0	-1.6
YUH	Yuha Desert	0.41	254		Pb	11 36 10.7	+0.1
YUH					Sb	11 36 16.8	+0.3
SALX	Saltillo	0.43	141	eP	Pn	11 36 14.9	+1.7
SALX				eS	Sn	11 36 24.5	+4.0
CRR	Carrizo Plain	0.45	286		Pg	11 36 11.3	+0.2
CRR					Sg	11 36 17.7	+0.5
CRR	Carrizo Plain	0.45	286	⇑iP	Pg	11 36 11.3	+0.2
RUN	Ruthven	0.45	62		Pb	11 36 11.0	-0.3
RUN					Sb	11 36 17.4	-0.4
ERRC	Elmore Ranch	0.47	319		Pb	11 36 12.1	+0.5
ERRC					Sb	11 36 19.6	+1.3
RMX	La Rumorosa	0.55	254		Pb	11 36 13.0	0.0
RMX					Sb	11 36 20.2	-0.3
RMX				IAML		11 36 21.6	
	comp=E,1μm,0.3s						
RMX	La Rumorosa	0.55	254	⇑eP	Pb	11 36 12.9	0.0
RMX				eS	Sb	11 36 20.3	-0.2
IKP	In-Ko-Pah, Jac	0.56	259	P	Pg	11 36 13.5	+0.4
	baz=75,SNR=158						
IKP				S	Sg	11 36 21.2	+0.5
	baz=75						
IKP	In-Ko-Pah, Jac	0.56	259		Pg	11 36 13.5	+0.4
IKP					Sg	11 36 21.2	+0.5
IKP	In-Ko-Pah, Jac	0.56	259	⇑eP	Pg	11 36 13.5	+0.4
IKP				eS	Sg	11 36 21.2	+0.5
GLA	Glamis	0.60	61	P	Pg	11 36 13.5	-0.3
	baz=244,SNR=88						
GLA				S	Sg	11 36 21.3	-0.7
	baz=244						
GLA	Glamis	0.60	61		Pg	11 36 13.6	-0.3
GLA	Glamis	0.60	61		Sg	11 36 21.3	-0.7
GLA	Glamis	0.60	61	IAML		11 36 22.8	
	comp=E,2μm,0.3s						
GLA				IAML		11 36 23.4	
	comp=N,2μm,0.4s						
GLA	Glamis	0.60	61	⇑eP	Pg	11 36 13.5	-0.3
GLA				eS	Sg	11 36 21.2	-0.7
FRK	Frink	0.66	346		Pb	11 36 14.1	-0.7
SALN	Salton City	0.69	319		Pb	11 36 15.1	-0.1
CBKC	Canebrake	0.69	282		Pg	11 36 15.5	+0.1
YMD	Yuma Desert	0.79	105		Pg	11 36 16.9	-0.4
SLH	Sleepy Hollow	0.80	303		Pb	11 36 16.6	-0.6
SLH					Sg	11 36 29.0	+0.9
MONP2	Monument Peak	0.83	279	P	Pb	11 36 17.6	-0.2
	baz=96,SNR=93						
MONP2				S	Sb	11 36 28.6	-0.1
	baz=96						
MONP2	Monument Peak	0.83	279		Pb	11 36 17.6	-0.2
MONP2					Sb	11 36 29.0	+0.4
MONP2	Monument Peak	0.83	279	⇑eP	Pb	11 36 17.6	-0.2
MONP2				eS	Sb	11 36 28.9	+0.2
ESJX	Sierra Juarez	0.86	209		Pb	11 36 18.0	-0.4
ESJX				IAML		11 36 30.1	
	comp=E,282nm,0.6s						
BC3	Big Chuckawall	0.89	0	P	Pb	11 36 18.1	-0.8
	baz=180,SNR=267						
BC3				S	Sb	11 36 29.4	-1.1
	baz=180						
BC3	Big Chuckawall	0.89	0		Pb	11 36 18.1	-0.8
BORC	Borrego Spring	0.95	302		Pb	11 36 18.7	-1.2
BORC					Sb	11 36 32.7	+0.6
HAY	Hayfield	0.96	349		Pb	11 36 18.9	-1.2
CTW	Cottonwood Mou	0.98	339		Pb	11 36 19.6	-0.7
TKX	Tecate	0.99	259		Pb	11 36 19.9	-0.6
CTCC	Cactus City	1.00	333		Pb	11 36 20.0	-0.7
BAR	Barrett	1.03	266	Pg	Pb	11 36 20.8	-0.4
BAR				IAML		11 36 36.0	
	comp=E,528nm,0.2s						
BAR	Barrett	1.03	266		Sb	11 36 34.3	-0.1
BAR	Barrett	1.03	266	eP	Pb	11 36 20.8	-0.4
BAR				IAML		11 36 35.5	
	comp=N,547nm,0.2s						
BAR				⇓e		11 36 35.5	
SJX	San Joaquin	1.08	203	eP	Pn	11 36 17.9	-4.1
SJX				eS	Sb	11 36 29.8	-6.0
MATG	Mataguay Scout	1.09	294		Pn	11 36 21.4	-0.9
MATG					Sb	11 36 35.6	-0.7
CBX	Cerro Bola	1.11	247		Pb	11 36 23.0	+0.4
CBX					Sn	11 36 37.8	+0.2
CBX				IAML		11 36 38.7	
	comp=E,347nm,0.5s						
CBX				IAML		11 36 41.4	
	comp=N,286nm,0.4s						
CBX	Cerro Bola	1.11	247	eP	Pb	11 36 22.7	+0.1
CBX				eS	Sn	11 36 37.5	-0.1
CBX				⇑e		11 36 39.2	
CBX				IAML		11 36 39.2	
	comp=E,637nm,0.5s						
PMD	Palm Desert	1.18	319		Pn	11 36 21.8	-1.6
XPFO	Pion Flat	1.19	316		Pn	11 36 22.2	-1.6
XPFO					Sn	11 36 40.0	+0.4
PFO	Pinyon Flats O	1.20	316	P	Pn	11 36 22.1	-1.7
	baz=134,SNR=97						
PFO	Pinyon Flats O	1.20	316		Pn	11 36 22.4	-1.4
PFO	Pinyon Flats O	1.20	316	Pn	Pn	11 36 22.9	-0.9
PFO				IAML		11 36 40.8	
	comp=E,411nm,0.5s						
PFO				IAML		11 36 40.8	
	comp=E,248nm,0.8s						
FRD	Ford Ranch, An	1.21	308		Pn	11 36 22.8	-1.2
FRD					Sg	11 36 40.8	-0.3
FRD	Ford Ranch, An	1.21	308		Pn	11 36 22.7	-1.2
BZNA	Buzz No.'s Pla	1.25	306		Pn	11 36 23.4	-1.1
BZNA					Sg	11 36 42.2	-0.3
SNDA	J Saunders Pla	1.25	309		Pn	11 36 23.5	-1.1
SDRC	San Diego Road	1.25	269		Pn	11 36 24.1	-0.4
SDRC					Sn	11 36 40.3	-0.5
SDRC	San Diego Road	1.25	269	⇑eP	Pn	11 36 24.0	-0.4
DNR	Dunn Ranch,Anz	1.27	310		Pn	11 36 23.9	-0.9
DNR					Sn	11 36 40.1	-1.5
DPP	Dos Picos Cty	1.27	281		Pn	11 36 24.2	-0.6
DPP					Sb	11 36 42.1	+0.7
HWB	Hans Werner Br	1.29	282		Pn	11 36 24.4	-0.6
HWB					Sn	11 36 41.3	-0.6
BELC	Belle Mtn. Jos	1.32	340	P	Pn	11 36 24.3	-1.2
	baz=159,SNR=57						
BELC	Belle Mtn. Jos	1.32	340		Pn	11 36 24.4	-1.2
PLM	Palomar	1.32	297		Pn	11 36 24.9	-0.7
ECBX	El Chinero	1.33	165	eP	Pg	11 36 26.7	-0.7
ECBX				eS	Sg	11 36 44.8	0.0
CRY	Cary Ranch	1.34	307		Pn	11 36 25.1	-0.7
CRY					Sg	11 36 44.8	-0.6
CCX	Cicese	1.36	229		Pg	11 36 27.9	-0.1
CCX				IAML		11 36 46.3	
	comp=N,292nm,0.8s						
CCX	Cicese	1.36	229	eS	Sb	11 36 44.8	+1.1
TJX	Tijuana	1.37	260		Pb	11 36 26.7	-0.3
TJX	Tijuana	1.37	260	eP	Pb	11 36 26.6	-0.3
TJX				eS	Sb	11 36 44.8	+0.6
109C	Camp Elliot, M	1.40	276	P	Pn	11 36 26.2	-0.2
	baz=93,SNR=26						
109C	Camp Elliot, M	1.40	276	Pn	Pn	11 36 25.9	-0.5
109C				IAML		11 36 47.1	
	comp=E,292nm,0.3s						
CPE	Camp Elliot	1.40	276		Sb	11 36 45.2	+0.4
IRM	Iron Mountain	1.42	10	P	Pn	11 36 25.7	-1.0
	baz=191,SNR=139						
IRM	Iron Mountain	1.42	10		Pb	11 36 27.2	-0.5
113A	Mohawk Valley,	1.42	89	Pn	Pn	11 36 26.2	-0.5
EW2	E Wide Canyon	1.42	326		Pb	11 36 27.4	-0.5
POB	Polly Butte	1.54	307		Pn	11 36 27.9	-0.6
POB					Sb	11 36 50.4	+1.3
GORC	Green Oak Ranc	1.54	285		Pn	11 36 27.8	-0.6
GORC					Sn	11 36 47.2	-0.8
DGR	Domenigoni Val	1.58	305		Pn	11 36 28.4	-0.6
DGR					Sb	11 36 51.5	+1.3
BACC	Bachelor Mtn.	1.58	303		Pn	11 36 28.4	-0.5
HMTC	Hemet	1.61	307		Pn	11 36 28.7	-0.7
MURC	Murrieta	1.68	300	P	Pn	11 36 29.7	-0.7
	baz=118,SNR=29						
SPX	San Pedro Mart	1.72	180		Pn	11 36 31.5	+0.3
SFX	San Felipe	1.79	163		Pb	11 36 34.6	+0.5
PDMCI	Parker Dam,Lak	1.89	35	Sb	Sb	11 36 59.5	+0.4
	baz=216						
BTL	Butler Peak	1.98	320		Pb	11 36 37.9	+0.4
GMRC	Granite Mounta	2.03	355	P	Pn	11 36 34.1	-1.2
	baz=175						
PIX	Pinacate	2.07	125		Pn	11 36 33.6	-2.1
BFSC	Mount Baldy Ra	2.36	309	S	Sn	11 37 07.6	-0.8
	baz=128						
214A	Organ Pipe Nat	2.38	109	P	Pn	11 36 39.0	-0.9
	baz=291,SNR=7.1						
214A	Organ Pipe Nat	2.38	109		Pn	11 36 39.0	-0.9
214A				IAML		11 37 29.0	
	comp=N,44nm,0.9s						
214A				IAML		11 37 32.7	
	comp=E,37nm,0.6s						
FMP	Fort Macarthur	2.56	293	Sb	Sb	11 37 20.0	+1.6
	baz=110						
W13A	Hualapai Mount	2.67	29	Pn	Pn	11 36 45.2	+1.0
W13A				IAML		11 37 28.8	
	comp=N,56nm,0.3s						
W13A				IAML		11 37 35.6	
	comp=E,54nm,0.5s						
X16A	Lo Mia Camp, P	3.73	63		Pn	11 37 00.4	+1.6
X16A				IAML		11 38 09.4	
	comp=N,30nm,1.0s						
X16A				IAML		11 38 12.9	
	comp=E,26nm,1.3s						
SHPR	Sheep Range	3.75	4	Pn	Pn	11 37 00.3	+1.4
TUC	Tucson	3.97	95		Pn	11 37 03.6	+1.8
TUC				IAML		11 38 23.9	
	comp=E,15nm,4.2s						
U15A	North Rim	4.49	35	Pn	Pn	11 37 10.6	+1.3
U15A				IAML		11 38 37.5	
	comp=E,19nm,2.4s						
U15A				IAML		11 38 41.3	
	comp=N,17nm,2.0s						
X18A	Snowflake	4.92	67	Pn	Pn	11 37 16.8	+1.7
X18A				IAML		11 38 43.2	
	comp=E,15nm,0.8s						
CCUT	Cedar City	5.08	19	Pn	Pn	11 37 19.0	+1.7
CCUT				IAML		11 39 59.1	
	comp=N,13nm,4.9s						
CCUT				IAML		11 40 04.1	
	comp=E,13nm,4.9s						

IDC 28 11:44:32.7±1.4**, 21°.34N**×**144°.25E, h0**^{km}**, mb3.6**/7**, mb1 3.7**/7**, mb1mx3.5**/41**, mbtmp3.6**/7**, Error ellipse: s-maj=54.5km s-min=22.1km az=85.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.29	94	T	T	12 11 18.4	
	baz=281,slow=75,SNR=7.6						
H11S1	WAKE ISLAND Hy	21.30	94	T	T	12 11 18.9	
	baz=281,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	21.30	94	T	T	12 11 20.7	
	baz=281,slow=75,SNR=6.6						
KLR	Kul'dur	29.55	343	P	P	11 50 39.8	+0.7
	1.2nm,0.5s,baz=179,slow=8.6,SNR=5.4						
WRA	Warramunga Arr	42.16	194	P	P	11 52 27.3	+0.1
	0.4nm,0.5s,baz=16,slow=8.9,SNR=6.7						
ASAR	Alice Springs	45.86	193	P	P	11 52 56.7	-0.2
	0.3nm,0.6s,baz=17,slow=9.7,SNR=1.7						
ZALV	Zalesovo Beam	55.10	322	P	P	11 54 06.0	-0.4
	0.3nm,0.4s,baz=108,slow=6.7,SNR=2.1						
MKAR	Makanchi Array	55.66	313	P	P	11 54 10.8	+0.1
	0.2nm,0.6s,baz=93,slow=7.3,SNR=2.7						
KURBB	Kurchatov Arra	58.46	317	P	P	11 54 30.1	-0.3
	1.0nm,0.6s,baz=94,slow=7.5,SNR=15						
YKA	Yellowknife Ar	76.30	28	P	P	11 56 23.1	-0.1
	0.3nm,0.8s,baz=294,slow=4.5,SNR=3.0						

ISN ***28*** *12:00:25.8±1.5, 32°.74N×47°.64E, h15^{km}±10^{km}, ML3.1*

TEH ***28*** *12:00:26.2, 32°.78N×47°.61E, h9^{km}, ML3.3*

THR ***28*** *12:00:27.3±0.4, 32°.82N×47°.58E, h18^{km}±3^{km}, ML3.3*

ISC 28 12:00:27.0±1.0**, 32°.74N**±0°.04×**47°.57E**±0°.03**, h10**^{km}**, n38, σ1^{s}09**/45**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.82	16	ePg	Pg	12 00 40.5	-2.3
IKFM				e		12 01 02.9	
	comp=Z,99nm,0.3s						
IKMR	Kamar-syah	1.03	41	ePg	Pg	12 00 46.2	-0.7
IKMR				eSg	Sg	12 00 59.4	-0.9
IKMR				e		12 01 03.1	
	comp=Z,99nm,0.3s						
IDOB	Doab	1.16	26	ePg	Pg	12 00 48.1	-1.3
SHGR	Shooshtar-Gavs	1.22	121	ePg	Pn	12 00 50.5	+0.4
SHGR				eSg	Sn	12 01 07.5	+1.0
SHGR	Shooshtar-Gavs	1.22	121	ePg	Pn	12 00 50.5	+0.4
IBDR	Badra	1.43	285	ePg	Pn	12 00 53.0	0.0
IBDR				eSg	Sn	12 01 13.0	+1.1
IBDR				AML	AML	12 01 18.5	
	comp=E,295nm,0.4s						
KCHF	Cheshme Sefid,	1.59	344	ePg	Pn	12 00 55.7	+0.2
KCHF				e		12 01 22.1	
	comp=Z,99nm,0.3s						
AHWZ	Ahwaz	1.67	147	ePg	Pn	12 00 57.5	+1.1
KER	Kermanshah	1.68	348	ePn	Pn	12 00 57.3	+0.6
IBZA	Bozab	1.74	8	ePg	Pn	12 00 59.0	+1.4
IBZA				e		12 01 02.1	
	comp=Z,99nm,0.4s						
IGHG	Ghaleghazi	1.79	332	ePn	Pn	12 00 59.9	+1.6
IGHG				e		12 01 38.2	
	comp=Z,99nm,0.8s						
AMIS	Naft Sefid	1.81	126	ePn	Pn	12 00 59.1	+0.9
AMIS				e		12 01 43.4	
	comp=Z,99nm,0.4s						
NSR	Nassriya	2.11	216	ePn	Pn	12 01 03.0	+0.6
NSR				eSn	Sn	12 01 28.0	-0.7
NSR				AML	AML	12 01 29.7	
	comp=Z,228nm,0.2s						
IDHR	Dehrash	2.19	334	ePn	Pn	12 01 04.1	+0.4
IDHR				e		12 01 43.5	
	comp=Z,99nm,0.5s						
ILIN	Lien	2.23	347	ePn	Pn	12 01 04.9	+0.6
ILIN				e		12 01 47.0	
	comp=Z,99nm,0.4s						
KHMZ	Khomeyn	2.24	63	ePn	Pn	12 01 05.0	+0.7
KHMZ				eSg	Sb	12 01 36.7	+1.2
KHMZ	Khomeyn	2.24	63	ePn	Pn	12 01 05.0	+0.7
ASAO	Ashtian	2.73	48	ePn	Pn	12 01 12.1	+0.9
ASAO	Ashtian	2.73	48	ePn	Pn	12 01 12.1	+0.9
BHD	Baghdad	2.73	282	ePn	Pn	12 01 11.0	0.0
BHD				eSn	Sn	12 01 46.0	+2.0
IPIR	Pirpir	2.80	90	ePn	Pn	12 01 13.0	+0.8
IPIR				e		12 02 01.3	
	comp=Z,99nm,0.6s						
SHK1	Shahrekord	2.83	97	ePn	Pn	12 01 13.2	+0.7
SHK1				e		12 01 26.4	
	comp=Z,99nm,0.4s						
IRAZ	Razeghan	3.30	36	ePn	Pn	12 01 21.5	+2.5
QABG	Abgarm-Qazvin	3.40	29	ePn	Pn	12 01 21.2	+0.8
IKLH	Kolahrood	3.42	79	ePn	Pn	12 01 22.3	+1.7
IKLH				e		12 01 24.0	
	comp=Z,99nm,0.4s						
GHVR	GHOM	3.56	60	ePn	Pn	12 01 22.8	+0.4
GHVR				eS	Sn	12 02 03.2	-1.4
GHVR				IAML		12 02 13.2	
	comp=E,47nm,0.6s						
GHVR	GHOM	3.56	60	ePn	Pn	12 01 22.8	+0.4
IQOM	Qom	3.59	53	ePn	Pn	12 01 23.9	+0.9
IGAR	Gharneh	3.79	94	ePn	Pn	12 01 26.3	+0.6
IGAR				e		12 01 40.7	
	comp=Z,99nm,0.4s						
KLNJ	Kolanjah	3.83	116	ePn	Pn	12 01 26.8	+0.4
KLNJ				e		12 02 44.9	
	comp=Z,99nm,0.6s						
IZEF	Zefreh	4.01	86	ePn	Pn	12 01 29.8	+1.0
KRSH	Karshahi	4.01	71	ePn	Pn	12 01 29.9	+1.2
IVRN	Varamin	4.13	56	ePn	Pn	12 01 31.9	+1.7
IRAM	Ramesheh	4.18	102	ePn	Pn	12 01 31.0	-0.1
QALM	Alamut, Qazvin	4.47	34	ePn	Pn	12 01 36.5	+1.4
ANAR	Anarak	5.20	83	ePn	Pn	12 01 45.4	+0.4
ISHM	Shahmirzad	5.64	56	ePn	Pn	12 01 51.1	-0.1
IANJ	Anjilo	5.92	61	ePn	Pn	12 01 56.1	+1.0

ISK ***28*** *13:07:51.0, 39°.17N×23°.26E, h11^{km}, ML3.5/21*

DDA ***28*** *13:07:52.3, 39°.09N×23°.28E, h6^{km}±1^{km}, ML3.3*

ATH ***28*** *13:07:52.8, 39°.14N×23°.23E, h15^{km}±1^{km}, ML3.4/19, Error ellipse: s-maj=1.5km s-min=0.8km az=353.0*

THE ***28*** *13:07:52.7, 39°.14N×23°.24E, h8^{km}, ML3.4/19, Error ellipse: s-maj=0.6km s-min=0.3km az=27.0*

ISC 28 13:07:52.7±0.8**, 39°.14N**±0°.01×**23°.25E**±0°.01**, h13**^{km}±5^{km}**, n123, σ0^{s}79**/163**, 10C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.17	354	P	Pg	13 07 56.8	+0.1
NEO				S	Sg	13 07 59.6	+0.1
NEO				AML	AML	13 08 00.5	
	comp=E,87981μm,0.2s						
NEO				AML	AML	13 08 00.8	
NEO	Neokhori	0.17	354	P	Pg	13 07 56.7	0.0
NEO				S	Sg	13 07 58.6	-0.9
	comp=E,49μm,0.2s						
XOR	Xorichti	0.23	350	P	Pg	13 07 57.7	0.0
XOR				S	Sg	13 08 01.1	0.0
XOR				AML	AML	13 08 01.6	
	comp=N,52412μm,0.4s						
XOR				AML	AML	13 08 01.9	
	comp=E,44597μm,0.3s						
XOR	Xorichti	0.23	350	P	Pg	13 07 57.7	0.0
XOR				S	Sg	13 08 00.5	-0.6
	comp=E,25μm,0.3s						
SMIA	Simia	0.26	186	P	Pg	13 07 58.6	+0.3
SMIA				AML	AML	13 08 05.7	
	comp=N,83755μm,0.4s						
SMIA				AML	AML	13 08 09.6	
	comp=E,53083μm,0.6s						
SMIA	Simia	0.26	186	P	Pg	13 07 58.6	+0.3
SMIA				S	Sg	13 08 01.8	-0.3
	comp=E,35μm,0.5s						
VOL2	Volos	0.32	315	P	Pb	13 08 01.7	+1.4
VOL2				S	Sn	13 08 07.8	-1.7
ATAL	Atalanti	0.48	201	P	Pg	13 08 02.1	-0.1
ATAL				S	Sg	13 08 08.7	0.0
ATAL				AML	AML	13 08 10.1	
	comp=N,9290μm,0.5s						
ATAL				AML	AML	13 08 10.2	
	comp=E,6678μm,0.3s						
ATAL	Atalanti	0.48	201	P	Pg	13 08 02.0	-0.2
ATAL				S	Sg	13 08 09.2	+0.6
	comp=E,4μm,0.4s						
ALNA	Alonissos	0.48	89	P	Pg	13 08 02.4	+0.1
ALNA				AML	AML	13 08 11.8	
	comp=E,4948μm,0.3s						
ALNA				AML	AML	13 08 12.5	
	comp=N,5396μm,0.3s						
LKR	Lokris	0.53	201	P	Pg	13 08 02.9	-0.2
LKR				AML	AML	13 08 11.5	
	comp=N,8781μm,0.4s						
LKR				AML	AML	13 08 12.8	
	comp=E,6643μm,0.4s						
LKR	Lokris	0.53	201	P	Pg	13 08 02.9	-0.2
LKR				S	Sg	13 08 10.6	+0.5
	comp=E,4μm,0.3s						
AXAR	Agios Charalam	0.59	231	P	Pg	13 08 04.0	-0.3
AXAR				AML	AML	13 08 15.2	
	comp=E,13084μm,0.3s						
AXAR				AML	AML	13 08 16.4	

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       comp=N,10936µm,0.3s
AXAR   Agios Charalam    0.59 231    P      Pg     13 08 04.0 -0.3
AXAR                                 S      Sg     13 08 12.3 +0.2
       comp=N,6µm,0.3s
AGG    Agios Georgios    0.72 261    P      Pg     13 08 05.9 -0.9
AGG                                  AML    AML    13 08 18.0
       comp=E,6702µm,0.7s
AGG                                  AML    AML    13 08 21.5
       comp=N,5653µm,0.6s
AGG    Agios Georgios    0.72 261    P      Pg     13 08 05.8 -0.9
AGG                                  S      Sb     13 08 16.9  0.0
       comp=N,3µm,0.6s
AGG    Agios Georgios    0.72 261    PG     Pg     13 08 05.7 -1.0
AGG                                  SG     Sg     13 08 16.1 -0.2
AGG    Agios Georgios    0.72 261  i P      Pg     13 08 06.0 -0.7
AGG                                i S      Sg     13 08 16.5 +0.3
KYMI   Kymi, Euboea I    0.84 127    P      Pg     13 08 08.9 -0.1
KYMI                                 AML    AML    13 08 21.6
       comp=E,10778µm,0.7s
KYMI                                 AML    AML    13 08 21.8
       comp=N,6926µm,0.4s
KYMI   Kymi, Euboea I    0.84 127    P      Pg     13 08 08.7 -0.2
KYMI                                 S      Sb     13 08 20.5 +0.3
       comp=N,5µm,0.5s
LRSO   Larissa Observ    0.85 309    P      Pg     13 08 08.8 -0.3
PAIG   Paliouri          0.85  23    P      Pg     13 08 09.3 +0.1
PAIG                                 AML    AML    13 08 23.0
       comp=E,5167µm,0.5s
PAIG                                 AML    AML    13 08 23.4
       comp=N,3305µm,0.4s
PAIG   Paliouri          0.85  23    P      Pg     13 08 09.3 +0.1
PAIG                                 S      Sb     13 08 21.5 +0.8
       comp=N,2µm,0.4s
MAKR   Makrakomi, Fth    0.88 262    P      Pg     13 08 08.9 -0.8
MAKR                                 AML    AML    13 08 24.3
       comp=N,4258µm,1.1s
MAKR                                 AML    AML    13 08 24.5
       comp=E,2655µm,0.5s
MAKR   Makrakomi, Fth    0.88 262    P      Pg     13 08 08.9 -0.8
MAKR                                 S      Sb     13 08 22.0 +0.6
       comp=E,5µm,0.7s
EREA   Eretria           0.90 143    P      Pg     13 08 09.7 -0.4
EREA                                 S      Sg     13 08 21.5 -0.4
EREA                                 AML    AML    13 08 24.7
       comp=N,16737µm,0.7s
EREA                                 AML    AML    13 08 25.4
       comp=E,17264µm,0.7s
EREA   Eretria           0.90 143    P      Pg     13 08 09.9 -0.2
EREA                                 S      Sb     13 08 22.5 +0.5
       comp=E,9µm,0.7s
VIL2   Platees           0.93 179    P      Pg     13 08 10.6 -0.1
VIL2                                 AML    AML    13 08 28.9
       comp=E,14003µm,0.8s
VIL2                                 AML    AML    13 08 30.1
       comp=N,7213µm,0.7s
VILL   Villia            0.98 177    P      Pb     13 08 10.6 -0.9
VILL                                 S      Sb     13 08 25.0 +0.7
       comp=N,6µm,0.6s
THL    Klokotos Trika    1.04 294    P      Pb     13 08 11.3 -1.3
THL                                  AML    AML    13 08 33.1
       comp=E,1298µm,0.7s
THL                                  AML    AML    13 08 33.3
       comp=N,955µm,0.7s
THL    Klokotos Trika    1.04 294    P      Pb     13 08 11.8 -0.8
SKY    Skiros Island     1.05 104    P      Pb     13 08 12.5 -0.2
SKY                                  AML    AML    13 08 29.6
       comp=N,6581µm,0.3s
SKY                                  AML    AML    13 08 33.4
       comp=E,6344µm,0.3s
SKY    Skiros Island     1.05 104    P      Pb     13 08 12.6 -0.2
LIT    Litokhoron        1.12 329    P      Pb     13 08 13.3 -0.6
LIT                                  AML    AML    13 08 31.9
       comp=N,2336µm,0.5s
LIT                                  AML    AML    13 08 34.4
       comp=E,2156µm,0.6s
LIT    Litokhoron        1.12 329    P      Pb     13 08 13.3 -0.6
LIT                                  S      Sn     13 08 29.7 +0.3
       comp=E,1µm,0.5s
LIT    Litokhoron        1.12 329  i P      Pb     13 08 13.7 -0.3
LIT                                i S      Sn     13 08 29.5 +0.1
LTK    Loutraki          1.14 191    P      Pb     13 08 13.6 -0.6
EVR    Evrytania         1.14 259    P      Pb     13 08 13.6 -0.7
EVR                                  AML    AML    13 08 38.5
       comp=N,1215µm,0.8s
EVR                                  AML    AML    13 08 42.0
       comp=E,1192µm,1.4s
EVR    Evrytania         1.14 259    P      Pb     13 08 14.0 -0.3
EVR                                  S      Sn     13 08 30.1 +0.2
       comp=E,618nm,1.1s
ANX    Ano Chora         1.17 243    P      Pb     13 08 14.0 -0.7
ANX                                  AML    AML    13 08 40.6
       comp=E,2133µm,0.6s
ANX                                  AML    AML    13 08 40.9
       comp=N,2486µm,0.7s
ANX    Ano Chora         1.17 243    P      Pb     13 08 14.1 -0.7
ANX                                  S      Sn     13 08 30.8 +0.2
       comp=N,1µm,0.7s
LOUT   Loutraki          1.17 191    P      Pb     13 08 14.3 -0.5
SERG   Sergoula          1.18 232    P      Pn     13 08 14.4 -0.5
SERG                                 AML    AML    13 08 35.5
       comp=E,2012µm,0.7s
SERG                                 AML    AML    13 08 36.2
       comp=N,2338µm,0.5s
SERG   Sergoula          1.18 232    P      Pn     13 08 14.2 -0.7
SERG                                 S      Sn     13 08 31.6 +0.8
       comp=N,982nm,0.7s
DION   Dionisos Attik    1.19 153    P      Pb     13 08 15.2 +0.1
THAL   Thalero           1.19 203    P      Pn     13 08 14.9 -0.1
PTL    Penteli           1.19 156    P      Pg     13 08 15.6 -0.1
TRIZ   Trizonia          1.20 230    P      Pn     13 08 14.6 -0.5
TRIZ                                 S      Sg     13 08 31.9 +0.5
       comp=N,1µm,0.7s
ATH    Athens Observa    1.23 162    P      Pn     13 08 15.5  0.0
PLG    Polygyros         1.24   7    P      Pn     13 08 14.9 -0.8
EFP    Efpalio           1.27 236    P      Pn     13 08 15.9 -0.1
EFP                                  S      Sg     13 08 33.9 +0.3
       comp=N,818nm,0.9s
OUR    Ouranopolis       1.32  25    PN     Pn     13 08 16.1 -0.7
OUR                                  SN     Sb     13 08 33.0 -1.1
VLY    Voula,Athens      1.36 161    P      Pb     13 08 17.7 -0.2
VLY                                  S      Sg     13 08 36.3 -0.2
       comp=N,4µm,0.4s
KLV    Kalavryta, Ach    1.39 218    P      Pn     13 08 17.9 +0.1
KARY   Karystos          1.45 139    P      Pn     13 08 18.7 +0.1
HORT   Hortiatis         1.46 356    P      Pn     13 08 18.3 -0.5
HORT   Hortiatis         1.46 356    PN     Pn     13 08 17.7 -1.1
HORT                                 SN     Sn     13 08 36.9 -0.9
KPRO   Kipourio          1.67 300    P      Pn     13 08 21.9 +0.3
LIA    Limnos Island     1.68  63    P      Pn     13 08 21.1 -0.6
SOH    Sokhos            1.68   3    P      Pn     13 08 21.9 +0.1
DRO    Drossia           1.69 226    P      Pn     13 08 22.4 +0.5
KRND   KRANIDI           1.76 182    P      Pn     13 08 22.9 +0.1
VLX    Vlachokerasia     1.90 201    P      Pn     13 08 25.2 +0.4
GRG    Griva             1.93 341    PN     Pn     13 08 24.4 -0.7
SRS    Serrai            1.99   8    P      Pn     13 08 25.8 -0.2
SIGR   SIGRI             2.03  87    PN     Pn     13 08 25.9 -0.6
KNT    Kendrikon         2.04 353    P      Pn     13 08 27.1 +0.5
KNT    Kendrikon         2.04 353    PN     Pn     13 08 26.5 -0.1
FNA    Florina           2.18 319    PN     Pn     13 08 28.5 -0.2
FNA    Florina           2.18 319  i P      Pn     13 08 29.1 +0.4
FNA                                i S      Sg     13 09 04.5 +1.7
ITM    Ithomi            2.22 208    PN     Pn     13 08 30.2 +1.1
VAY    Valandovo         2.24 347  i Pn     Pn     13 08 29.7 +0.3
KOCA   Canakkale, Ayv    2.27  80  i P      Pn     13 08 30.2 +0.3
KOCA                               i S      Sg     13 09 05.8  0.0
KOCA                                 IAML          13 09 09.0
       comp=E,148nm,0.7s
KOCA                                 IAML          13 09 10.0
       comp=N,152nm,0.9s
BOZC   Bozcaada          2.28  71    PN     Pn     13 08 29.5 -0.5
BOZC   Bozcaada          2.28  71  i P      Pb     13 08 34.9 +1.2
BOZC                               i S      Sg     13 09 06.3 +0.2
BOZC                                 IAML          13 09 07.0
       comp=N,295nm,0.7s
BOZC                                 IAML          13 09 12.0
       comp=E,141nm,0.9s
GADA   Gvkgeada          2.30  62    PN     Pn     13 08 29.9 -0.4
GOKA   anakkale-Gk       2.31  62  i P      Pb     13 08 33.6 -0.6
GOKA                               i S      Sg     13 09 07.1 +0.3
ECEA   Canakkale, Ece    2.44  67  i P      Pb     13 08 37.1 +0.8
ECEA                                 IAML          13 09 12.0
       comp=N,286nm,0.7s
ECEA                               i S      Sg     13 09 12.2 +1.2
ECEA                                 IAML          13 09 14.0
       comp=E,317nm,0.9s
EZN    Ezine             2.48  73    PN     Pn     13 08 32.3 -0.4
BAYC   CANAKKALE_Bayr    2.63  76  i S      Sg     13 09 16.1 -1.0
STIP   Stip              2.67 343  i Pn     Pn     13 08 35.8 +0.4
OHR    Ohrid             2.72 317  i Pn     Pn     13 08 38.8 +2.7
CAVK   Edirne/Enez-Ca    2.73  55  i P      Pn     13 08 35.4 -0.7
CAVK                               i S      Sg     13 09 19.9 -0.4
CAVK                                 IAML          13 09 29.0
       comp=N,129nm,0.6s
CAVK                                 IAML          13 09 30.0
       comp=E,129nm,0.8s
URLA   Izmir             2.73 106    PN     Pn     13 08 35.9 -0.3
URLA   Izmir             2.73 106  i P      Pn     13 08 34.9 -1.4
URLA                               i S      Sg     13 09 20.6 +0.1
APE    Apeiranthos       2.75 138  ⇑P      Pn     13 08 36.8 +0.4
APE    Apeiranthos       2.75 138    PN     Pn     13 08 36.7 +0.3
APE    Apeiranthos       2.75 138  i P      Pg     13 08 45.7 +0.3
APE                                i S      Sg     13 09 18.5 -2.4
ENEZ   Enez              2.75  54    PN     Pn     13 08 36.3 -0.1
ALN    Alexandroupoli    2.77  50    PN     Pn     13 08 36.4 -0.4
ALN    Alexandroupoli    2.77  50  i P      Pn     13 08 36.0 -0.8
ALN                                i S      Sg     13 09 22.7 +0.8
GELI   Tayfur-Gelibol    2.79  62    PN     Pn     13 08 36.6 -0.3
DKL    Dikili            2.85  90    PN     Pn     13 08 37.6 -0.2
KTHA   Kythira Island    2.88 183    PN     Pn     13 08 38.6 +0.3
ERIK   Erikli-Kesan      2.94  58    PN     Pn     13 08 38.8 -0.3
LPK    Lapseki           2.98  64    PN     Pn     13 08 38.5 -1.0
BUHA   Balikesir, Bur    2.99  82  i P      Pb     13 08 45.1 -0.8
BUHA                               i S      Sg     13 09 30.2 +1.3
BUHA                                 IAML          13 09 38.0
       comp=E,83nm,0.7s
PLD    Plovdiv           3.16  20    PN     Pn     13 08 41.8 -0.3
KRBG   Karabiga-Canak    3.36  67    PN     Pn     13 08 44.8 -0.1
BALY   Balya             3.44  79  i P      Pn     13 08 49.0 +3.0
BALY                               i S      Sg     13 09 39.4 -3.8
BALY                                 IAML          13 09 49.0
       comp=N,90nm,0.7s
VTS    Vitosha           3.47 360  ⇑P      Pn     13 08 47.4 +0.9
STEP   BALIKESIR_Sava    3.48  85  i P      Pb     13 08 55.6 +1.5
STEP                               i S      Sg     13 09 43.8 -0.7
KNL    Balıkesir         3.49  70  i P      Pn     13 08 37.0  -10
GZKV   Gazikoy-Tekird    3.52  62    PN     Pn     13 08 46.5 -0.6
BALB   Balikesir         3.63  81    PN     Pn     13 08 48.4 -0.1
MRMT   Marmara Adasi     3.65  65    PN     Pn     13 08 48.8 -0.1
IMMV   Iera Moni Meta    3.72 171    PN     Pn     13 08 50.6 +0.8
EDC    Edincik           3.76  70    PN     Pn     13 08 50.6 +0.3
EDRB   Edirne            3.80  44    PN     Pn     13 08 50.9 +0.1
BODT   Bodrum            3.82 122    PN     Pn     13 08 51.1 -0.1
IDI    Anoyia            4.06 161  ⇓P      Pn     13 08 56.0 +1.4
IDI    Anoyia            4.06 161    PN     Pn     13 08 55.5 +0.9
PLVB   Pleven            4.37  13  ⇑P      Pn     13 08 58.2 -0.5
PDG    Podgorica         4.47 319  ⇑P      Pn     13 09 01.3 +1.2
TIP    Timpagrande       5.04 272  ⇑P      Pn     13 09 09.3 +1.3
MDVR   Moldovita         5.75 349  ⇓P      Pn     13 09 17.6 -0.1
HERR   Herculane         5.77 354  ⇑P      Pn     13 09 17.6 -0.3
LOT    Lotru             6.31   3  ⇑P      Pn     13 09 25.5  0.0
VOIR                     6.43  11  ⇑P      Pn     13 09 27.7 +0.6
BZS    Buzias            6.58 350  ⇑P      Pn     13 09 27.8 -1.2
MLR    Muntele Rosu      6.65  17  ⇓P      Pn     13 09 31.3 +1.1
DOPR   Dopca             7.00  12  ⇓P      Pn     13 09 36.1 +1.2
VRI    Vrincioaia        7.20  20  ⇑P      Pn     13 09 38.4 +0.8
```

TUL ***28*** *13:22:37.8±0.8, 36°.81N±0°.02×98°.36W±0°.04, h4^{km}±7^{km}, ML3.0, mb_Lg2.9/46(NEIC), Error ellipse: s-maj=5.1km s-min=2.9km az=90.0*

ANF ***28*** *13:22:38.4±0.2, 36°.81N×98°.37W, h0^{km}, ML3.6/11, Error ellipse: s-maj=3.2km s-min=2.4km az=76.0*

NEIC ***28*** *13:22:38.4±0.7, 36°.81N±0°.03×98°.34W±0°.03, h9^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=2.9km az=145.0*

IDC ***28*** *13:22:39.0±1.9, 36°.99N×98°.73W, h0^{km}, mb1 3.4/3, mb1mx3.3/38, mbtmp3.1/3, ML3.7/2, Error ellipse: s-maj=40.8km s-min=12.2km az=103.0*

ISC 28 13:22:37.9±1.3**, 36°.81N**±0°.02×**98°.36W**±0°.03**, h1**^{km}±14^{km}**, n67, σ0^{s}.89**/58**, Oklahoma**

```
Code   Station Name      Δ°    AZ°    Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
KAN14  Manchester OK     0.35  66          Pg      13 22 45.0 +0.4
KAN14                               Sg     Sg      13 22 49.2 -0.1
KAN10  Anthony SW Sta    0.38  35          Pg      13 22 45.6 +0.5
CROK   Carrier           0.43 135          Pg      13 22 46.5 +0.3
CROK                                Sg     Sg      13 22 51.3 -0.5
KAN08  Anthony NE Sta    0.52  37          Pg      13 22 48.3 +0.4
KAN12  Harper NE Stat    0.56  31          Pg      13 22 49.0 +0.2
KAN12                               Sg     Sg      13 22 56.0 -0.1
KAN01  Argonia South     0.59  55          Pg      13 22 49.5 +0.2
U32A   Winter Ranch,     0.67 230   Pg     Pg      13 22 50.8  0.0
U32A   Winter Ranch,     0.67 230   P              13 22 50.9
       baz=50
KAN13  South Haven SW    0.74  74          Pg      13 22 52.0  0.0
KAN13                               Sg     Sg      13 23 01.6  0.0
OK029  Liberty Lake      1.25 144          Pg      13 23 01.0 -0.9
OK029                               Sg     Sg      13 23 17.7 -0.4
BCOK   Bluff Creek, N    1.30 152          Pg      13 23 01.8 -1.1
QUOK   Quay              1.48 115   Pn     Pn      13 23 04.8 -0.9
OK025  Westminster Rd    1.48 146          Pn      13 23 04.9 -0.9
T35A   Sooner Cattle     1.49  85          Pn      13 23 05.1 -0.8
T35B   Sooner Cattle     1.49  85   P              13 23 05.3
       baz=266,SNR=71
T35B                                S              13 23 25.5
       baz=266
OK031  S. Brethren Rd    1.50 124          Pn      13 23 05.2 -0.8
OK030  Cody Creek RV     1.55 124          Pn      13 23 06.1 -0.6
OKCFA  Oklahoma City     1.58 152   Pn     Pn      13 23 06.1 -1.0
OKCSW  OKLAHOMA CITY     1.59 152          Pn      13 23 06.7 -0.6
R32A   Long Quarter,     1.63 350   Pn     Pn      13 23 07.7 -0.2
R32A   Long Quarter,     1.63 350   P              13 23 07.9
       baz=170,SNR=49
R32A                                S              13 23 29.9
       baz=170
FNO    Franklin          1.74 153          Pn      13 23 08.9 -0.3
WMOK   Wichita Mounta    2.10 189   P      Pn      13 23 14.4 +0.1
       baz=9.2
WMOK                                S      Sb      13 23 42.7 -0.7
       baz=9.2
WMOK   Wichita Mounta    2.10 189          Pn      13 23 13.9 -0.3
WMOK   Wichita Mounta    2.10 189   P              13 23 14.3
       baz=9.2,SNR=54
TUL1   Leonard           2.26 113   P      Pn      13 23 17.7 +1.2
       baz=294
TUL1                                S      Sb      13 23 48.0 -0.1
       baz=294
TUL1   Leonard           2.26 113          Pn      13 23 15.9 -0.5
TUL1                                IAmb_Lg        13 23 54.6
       comp=Z,65nm,1.0s
TUL1   Leonard           2.26 113   P              13 23 17.7
       baz=294,SNR=8.4
TUL1                                S              13 23 47.9
       baz=294
CBKS   Cedar Bluff       2.27 332   P      Pn      13 23 17.2 +0.5
       baz=151
CBKS                                S      Sb      13 23 47.8 -0.7
       baz=151
CBKS   Cedar Bluff       2.27 332   Pn     Pn      13 23 16.3 -0.4
CBKS                                IAmb_Lg        13 23 51.4
       comp=Z,63nm,0.7s
CBKS   Cedar Bluff       2.27 332   P              13 23 17.1
       baz=151,SNR=22
CBKS                                S              13 23 49.1
       baz=151
KSU1   Kansas State U    2.67  31   P      Pn      13 23 22.8 +0.7
       baz=212
KSU1   Kansas State U    2.67  31          Pn      13 23 21.8 -0.4
U38A   Gravette          3.22  95   P              13 23 30.0
       baz=278
X37A   Clayton           3.29 131   Pn     Pn      13 23 30.4 -0.3
X37A                                IAmb_Lg        13 24 28.9
       comp=Z,27nm,0.8s
X37A   Clayton           3.29 131   P              13 23 30.6
       baz=313
AMTX   Amarillo          3.31 235   Pb     Pb      13 23 38.5 +1.0
       baz=53
HHAR   Hobbs             3.60  97          Pn      13 23 34.3 -0.6
N33B   J Bar K, Exete    3.98  10   P              13 23 39.6
       baz=191,SNR=6.9
N33A   J Bar K, Exete    3.98  10   Pn     Pn      13 23 39.3 -0.9
KSCO   Kaye Shedlock’    4.02 304   Pn     Pn      13 23 40.1 -0.8
W39A   Magazine          4.05 112   P      Pn      13 23 41.5 +0.4
       baz=295
W39A   Magazine          4.05 112   Pn     Pn      13 23 40.8 -0.2
W39A                                IAmb_Lg        13 24 51.5
       comp=Z,26nm,0.9s
S39A   Bolivar           4.12  76   P              13 23 42.0
       baz=259
U40A   Yellville         4.46  94   P      Pn      13 23 46.8 +0.1
       baz=278
U40A   Yellville         4.46  94   Pn     Pn      13 23 46.2 -0.5
U40A                                IAmb_Lg        13 25 07.9
       comp=Z,28nm,0.9s
U40A   Yellville         4.46  94   P              13 23 46.3
       baz=278
U40A                                P              13 23 46.3
       baz=278
Z38A   Mt. Pleasant      4.50 141   IAmb_Lg        13 25 10.4
       comp=Z,22nm,0.7s
MIAR   Mount Ida         4.50 119   P      Pn      13 23 47.6 +0.3
       baz=302
MIAR   Mount Ida         4.50 119   Pn     Pn      13 23 46.8 -0.5
MIAR                                IAmb_Lg        13 25 12.3
       comp=Z,18nm,0.8s
MIAR   Mount Ida         4.50 119   P              13 23 46.8
       baz=302,SNR=12
MSTX   Muleshoe          4.58 233   IAmb_Lg        13 25 09.0
       comp=Z,16nm,1.0s
BGNE   Belgrade          4.59   2   P      Pn      13 23 48.6 +0.1
       baz=182
BGNE   Belgrade          4.59   2   Pn     Pn      13 23 48.1 -0.4
BGNE                                IAmb_Lg        13 25 09.6
       comp=Z,37nm,0.7s
BGNE   Belgrade          4.59   2   P              13 23 48.6
       baz=182,SNR=7.3
WHTX   Lake Whitney,     4.87 171   Sb     Sb      13 25 07.6 +4.5
       baz=351
WHTX   Lake Whitney,     4.87 171   Pn     Pn      13 23 51.9 -0.5
MGMO   Mountain Grove    4.89  84   IAmb_Lg        13 25 19.8
       comp=Z,22nm,0.8s
OGNE   Ogallala          5.02 326   Pn     Pn      13 23 53.6 -0.9
X40A   Basin Creek Fa    5.07 116   P      Pn      13 23 55.4 +0.4
       baz=299
X40A   Basin Creek Fa    5.07 116          Pn      13 23 54.5 -0.5
X40A                                IAmb_Lg        13 25 29.8
       comp=Z,13nm,0.8s
FCAR   Ozark Folk Cen    5.12  99   IAmb_Lg        13 25 34.4
       comp=Z,13nm,1.0s
WHAR   Wooly Hollow      5.15 105   Pn     Pn      13 23 55.6 -0.5
237A   Washetta, Mont    5.24 156   Pn     Pn      13 23 56.2 -1.3
L34A   Svendsen Farm,    5.37  16   IAmb_Lg        13 25 30.4
       comp=Z,28nm,0.8s
N38A   Joes South For    5.64  44   IAmb_Lg        13 25 52.9
       comp=Z,27nm,0.8s
P40A   Paris             5.67  59   IAmb_Lg        13 25 43.3
       comp=Z,28nm,0.9s
CCM    Cathedral Cave    5.80  76   IAmb_Lg        13 25 45.6
       comp=Z,30nm,0.9s
K31A   O'Neill           5.81 357   Pn     Pn      13 24 04.4 -0.9
T42A   Van Buren         5.83  86   IAmb_Lg        13 25 56.1
       comp=Z,22nm,0.8s
435B   Jarrell           6.05 174   IAmb_Lg        13 26 05.4
       comp=Z,19nm,0.8s
PBMO   Poplar Bluff      6.37  88   IAmb_Lg        13 26 11.1
       comp=Z,26nm,0.7s
FVM    French Village    6.43  77   IAmb_Lg        13 26 04.4
       comp=Z,24nm,0.9s
SIUC   Southern Illin    7.35  80   IAmb_Lg        13 26 34.4
       comp=Z,18nm,0.8s
Y22D   IRIS PASSCAL I    7.50 251   IAmb_Lg        13 26 39.9
       comp=Z,13nm,0.8s
RSSD   Black Hills       8.48 331   IAmb_Lg        13 27 27.3
       comp=Z,8.7nm,0.9s
TXAR   Lajitas Array     8.68 212   Pn     Pn      13 24 44.5 -0.3
       comp=Z,0.3nm,0.3s,baz=36,slow=11,SNR=22
TXAR                                Pg     Pg      13 25 16.2 -8.0
       comp=Z,0.4nm,0.3s,baz=28,slow=16,SNR=7.3
TXAR                                Lg     Lg      13 27 05.5
       comp=Z,0.2nm,0.3s,baz=27,slow=22,SNR=1.9
W18A   Petrified Fore    9.37 263   IAmb_Lg        13 27 28.6
       comp=Z,10nm,0.9s
PDAR   Pinedale Array   10.46 308   Pn     Pn      13 25 07.8 -1.5
       comp=Z,0.1nm,0.3s,baz=118,slow=17,SNR=2.2
PDAR                                Lg     Lg      13 28 06.3
       comp=Z,0.3nm,0.3s,baz=79,slow=30,SNR=7.5
ULM    Lac du Bonnet    13.55   7   Pn     Pn      13 25 44.5 -6.7
       comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=1.3
ULM                                 Sn     Sn      13 28 09.2  -13
       comp=Z,0.1nm,0.3s,baz=329,slow=5.9,SNR=2.1
ULM                                 Lg     Lg      13 29 42.1
       comp=Z,0.1nm,0.3s,baz=142,slow=22,SNR=2.1
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IDC ***28*** *13:25:31.5±0.7, 41°.67S×85°.45W, h0^{km}, mb4.6/15, mb1 4.6/15, mb1mx4.6/22, mbtmp4.6/15, MS4.4/21, Ms1 4.4/21, ms1mx4.3/23, Error ellipse: s-maj=23.4km s-min=18.8km az=97.0*

BJI ***28*** *13:25:32.4±0.0, 42°.07S×85°.76W, h10^{km}, mB5.6/5, Ms7 5.1/2*

MOS ***28*** *13:25:32.4±1.0, 41°.29S×85°.35W, h10^{km}, mb5.2/31, Error ellipse: s-maj=15.8km s-min=8.3km az=88.7*

NEIC ***28*** *13:25:33.7±1.7, 41°.35S±0°.06×85°.41W±0°.10, h10^{km}±1^{km}, mb5.1/197, Error ellipse: s-maj=16.2km s-min=2.7km az=228.0*

GCMT ***28*** *13:25:34.7±0.1, 41°.34S±0°.01×85°.67W±0°.01, h12^{km}, MW5.1/133, Moment Tensor Solution. s71,c100; s133,c210; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.88±.10; $M_{\theta\theta}$-0.07±.10; $M_{\phi\phi}$5.95±.09; $M_{r\theta}$1.01±.34; $M_{\theta\phi}$-1.03±.08; $M_{\phi r}$-0.97±.25; Best double couple: $M_0$6.16500×10^{16} NP1:ϕ_s179.00000°, δ40.00000°, λ-78.00000°. NP2:ϕ_s343.00000°, δ51.00000°, λ-100.00000°. Principal axes: T 6.2270, Plg5.0000°, Azm80.0000°; N -0.1260, Plg8.0000°, Azm349.0000°; P -6.1030, Plg80.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 13:25:34.3±0.3**, 41°.38S**±0°.07×**85°.28W**±0°.06**, h14**^{km}**, n399, σ1^{s}.24**/383**, mb5.1**/110**, MS4.5**/24**, 1C, West Chile Rise**

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Code   Station Name      Δ°    AZ°    Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
H03S2  Juan Fernandez    9.06  36   T      T       13 37 22.3
       baz=211,slow=72,SNR=960
H03S1  Juan Fernandez    9.06  36   T      T       13 37 26.1
       baz=211,slow=72,SNR=702
H03S3  Juan Fernandez    9.08  36   T      T       13 37 21.2
       baz=211,slow=72,SNR=1235
LL01   San Ignacio de    9.65 100          Pn      13 27 54.4 +1.8
LC01   Cunco            10.56  81   Pn     Pn      13 28 07.8 +2.6
PLCA   Paso Flores      11.14  92   Pn     Pn      13 28 19.0 +5.7
       0.2nm,0.3s,baz=274,slow=9.6,SNR=7.5
PLCA                                LR     LR      13 31 50.9
       comp=Z,5µm,19.6s,baz=316,slow=34
PLCA   Paso Flores      11.14  92   P      Pn      13 28 17.2 +4.0
PLCA   Paso Flores      11.14  92   Pn     Pn      13 28 17.2 +4.0
BI02   San Fabin de     11.87  71   Pn     Pn      13 28 21.9 -1.2
BO02   Sierra Bellavi   13.17  65   Pn     Pn      13 28 39.3 -1.6
MT05   Renca            14.03  60   Pn     Pn      13 28 51.8 -0.9
ROC1   El Roble         14.12  58          Pn      13 28 53.4 -0.7
PEL    Peldehue         14.22  59   P      Pn      13 28 54.7 -0.6
PEL    Peldehue         14.22  59   Pn     Pn      13 28 54.7 -0.6
VA03   San Esteban      14.55  58          Pn      13 28 59.4 -0.5
CO03   El Pedregal      15.78  53   Pn     P       13 29 18.1 -1.9
CO03                                IAmb   IAmb    13 29 32.7
       comp=Z,128nm,1.4s
GO04   Tololo Observa   16.20  51          Pn      13 29 21.9 +0.2
GO04                                IAmb   IAmb    13 29 37.1
       comp=Z,154nm,1.4s
ZON    Zonda            16.55  59   P      P       13 29 30.5 +2.0
ZON                                 pmax   pmax
       comp=Z,52nm,1.1s
ZON    Zonda            16.55  59   P      P       13 29 30.5 +2.0
CO01   Juntas del Tor   16.75  52          P       13 29 30.0 -1.0
LCO    Las Campanas     17.12  48   P      P       13 29 33.8 -1.3
LCO                                 pmax   pmax
       comp=Z,44nm,1.3s
LCO    Las Campanas     17.12  48          P       13 29 33.8 -1.3
USHA   Ushuaia          17.47 146   LR     LR      13 35 20.3
       comp=Z,7µm,21.4s,baz=320,slow=34
AC05   El Transito      17.50  49   Pn     Pn      13 29 37.2 -0.8
AC04   Llanos de Chal   17.54  46   Pn     Pn      13 29 38.0 -0.4
AC01   Pan de Azucar    19.45  43   P      Pn      13 30 00.8 -0.8
AC02   Maricunga        19.68  48   P      P       13 30 03.2 -0.3
GO02   Mina Guanaco     20.77  44   P      Pn      13 30 16.2 -1.3
PB14   IPOC Station P   20.80  41   P      Pn      13 30 16.7 -1.3
PB10   IPOC Station P   21.67  39   P      P       13 30 26.3 +1.8
LPA    La Plata         22.40  82  eP      P       13 30 32.8 +0.5
LPA                                 sP     pwP     13 30 43.6 +3.7
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LPA				PP	**PnPn**	**13 30 56.2**	**+1.0**
LPA				PPP	PPP	13 32 36.5	
LPA				S	**S**	**13 34 38.4**	**+0.4**
LPA				SSS	SSS	13 35 24.3	
LPA				SCS	ScS	13 42 01.3	+12
LPA				PKIKS		13 45 40.8	
LPA				SKIKP		13 49 14.2	
PB15	**IPOC Station P**	**22.45**	**41**	P	**P**	**13 30 34.8**	**+1.7**
PB15				IAmb	IAmb	13 30 45.4	
	comp=Z,103nm,1.4s						
PB06	**IPOC Station P**	**22.82**	**40**	P	**P**	**13 30 38.5**	**+1.4**
LVC	**Limon Verde**	**23.23**	**41**	P	**P**	**13 30 44.0**	**+2.5**
	comp=Z,2.9nm,0.6s,baz=218,slow=9.4,SNR=15						
LVC				LR	LR	13 37 35.8	
	comp=Z,1µm,19.6s,baz=226,slow=31						
LVC	**Limon Verde**	**23.23**	**41**	P	**P**	**13 30 43.2**	**+1.7**
LVC				pmax	pmax		
	comp=Z,70nm,1.5s						
LVC	**Limon Verde**	**23.23**	**41**	P	**P**	**13 30 43.1**	**+1.7**
LVC				IAmb	IAmb	13 30 53.6	
	comp=Z,70nm,1.5s						
PB07	**IPOC Station P**	**23.51**	**38**	P	**P**	**13 30 44.9**	**+0.9**
PB09	**IPOC Station P**	**23.76**	**40**	P	**P**	**13 30 47.7**	**+1.2**
PB01	**IPOC Station P**	**24.29**	**38**	P	**P**	**13 30 51.5**	**+0.1**
RPN	**Rapa Nui**	**24.34**	**298**	LR	LR	13 37 40.9	
	comp=Z,2µm,20.1s,baz=147,slow=30						
TA01	**Diego Aracena**	**24.39**	**36**	P	**P**	**13 30 52.6**	**+0.4**
MNMC	**Minye Minye**	**25.91**	**36**	P	**P**	**13 31 06.0**	**-0.2**
PMSA	**Palmer Station**	**26.41**	**160**	P	**P**	**13 31 07.9**	**-2.2**
	comp=Z,29nm,0.8s,baz=45,slow=20,SNR=10						
PMSA				LR	LR	13 38 36.4	
	comp=Z,351nm,21.0s,baz=284,slow=30						
PMSA	**Palmer Station**	**26.41**	**160**	P	**P**	**13 31 07.8**	**-2.2**
PB16	**IPOC Station P**	**26.65**	**35**	P	**P**	**13 31 11.5**	**-1.7**
CPUP	**Villa Florida**	**27.49**	**66**	P	**P**	**13 31 21.7**	**+1.5**
	comp=Z,1.2nm,0.4s,baz=248,slow=7.2,SNR=2.8						
CPUP				LR	LR	13 41 51.8	
	comp=Z,2µm,18.8s,baz=242,slow=35						
CPUP	**Villa Florida**	**27.49**	**66**	P	**P**	**13 31 18.3**	**-1.8**
CPUP				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CPUP	**Villa Florida**	**27.49**	**66**	P	**P**	**13 31 18.3**	**-1.8**
NNA	**Nana**	**30.20**	**17**	P	**P**	**13 31 44.9**	**+0.6**
	comp=Z,4.8nm,0.3s,baz=170,slow=5.5,SNR=4.5						
NNA				LR	LR	13 40 21.6	
	comp=Z,535nm,21.2s,baz=196,slow=29						
NNA	**Nana**	**30.20**	**17**	IAmb	IAmb	13 31 49.0	
	comp=Z,15nm,1.0s						
SIV	**San Ignacio**	**32.81**	**47**	P	**P**	**13 32 08.8**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=247,slow=10,SNR=9.2						
ATAH	**Atahualpa**	**34.65**	**12**	P	**P**	**13 32 27.0**	**+3.2**
	comp=Z,5.5nm,0.7s,baz=197,slow=7.8,SNR=9.2						
SAML	**Samuel**	**37.75**	**37**	P	**P**	**13 32 49.0**	**-0.8**
SAML				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SAML	**Samuel**	**37.75**	**37**	P	**P**	**13 32 49.0**	**-0.8**
BDFB	**Brasilia**	**41.11**	**63**	P	**P**	**13 33 20.0**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=216,slow=12,SNR=2.3						
BDFB				LR	LR	13 50 19.0	
	comp=Z,1µm,19.3s,baz=214,slow=36						
BELA	**Belgrano 2**	**41.88**	**166**	P	**P**	**13 33 24.3**	**+0.7**
OTAV	**Otavalo**	**41.89**	**10**	P	**P**	**13 33 22.8**	**-1.9**
OTAV				pmax	pmax		
	comp=Z,14nm,1.1s						
OTAV	**Otavalo**	**41.89**	**10**	P	**P**	**13 33 22.8**	**-1.9**
OTAV	**Otavalo**	**41.89**	**10**	*e*P	**P**	**13 33 27.0**	**+2.3**
PTLC	**Puerto Leguiza**	**42.44**	**16**	*e*P	**P**	**13 33 28.2**	**-0.6**
RKT	**Rikitea**	**45.15**	**278**	*e*LR	LR	13 46 31.2	
	comp=Z,2µm,25.5s						
PTGA	**Pitinga**	**46.48**	**36**	P	**P**	**13 34 01.9**	**+0.9**
	comp=Z,11nm,1.0s,baz=214,slow=10,SNR=10						
PTGA	**Pitinga**	**46.48**	**36**	P	**P**	**13 34 01.2**	**+0.1**
PTGA				IAmb	IAmb	13 34 03.9	
	comp=Z,19nm,1.1s						
PLMC	**San Jos del P**	**46.79**	**12**	*e*P	**P**	**13 34 04.9**	**+1.4**
VNA3	**Neumayer Olymp**	**46.87**	**155**	P	**P**	**13 34 04.3**	**+0.8**
RREF	**El Recreo**	**46.95**	**14**	*e*P	**P**	**13 34 08.3**	**+2.9**
CHIC	**Chingaza**	**46.99**	**16**	*e*P	P	13 34 09.5	+4.0
ROSC	**El Rosal**	**47.08**	**15**	P	**P**	**13 34 08.8**	**+2.7**
	comp=Z,6.5nm,0.3s,baz=127,slow=11,SNR=4.8						
ROSC				LR	LR	13 52 00.6	
	comp=Z,593nm,20.0s,baz=210,slow=34						
ROSC	**El Rosal**	**47.08**	**15**	P	**P**	**13 34 04.7**	**-1.4**
ROSC				pmax	pmax		
	comp=Z,45nm,1.3s						
ROSC	**El Rosal**	**47.08**	**15**	P	**P**	**13 34 04.7**	**-1.4**
GUY2C	**Guyana, Caldas**	**47.26**	**14**	*e*P	**P**	**13 34 09.5**	**+1.8**
VNA2	**Neumayer--Watz**	**47.63**	**154**	P	**P**	**13 34 10.4**	**+0.9**
	baz=267,slow=8.7						
SPBC	**San Pablo de B**	**47.92**	**15**	*e*P	**P**	**13 34 12.9**	**+0.6**
HELC	**Santa Helena**	**48.18**	**13**	*e*P	**P**	**13 34 16.2**	**+1.5**
RUSC	**La Rusia**	**48.35**	**16**	*e*P	**P**	**13 34 16.5**	**+0.4**
PTBC	**PUERTO BERRIO,**	**48.71**	**14**	*e*P	**P**	**13 34 18.6**	**+0.2**
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**13 34 19.3**	**+0.2**
	comp=Z,9.3nm,0.9s,baz=137,slow=4.5,SNR=25						
QSPA				PcP	**PcP**	**13 35 43.2**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=66,slow=1.3,SNR=6.5						
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**13 34 18.8**	**-0.3**
QSPA				IAmb	IAmb	13 34 22.6	
	comp=Z,33nm,1.2s						
SNAA	**Sanae**	**49.00**	**155**	P	**P**	**13 34 20.5**	**+0.5**
SNAA	**Sanae**	**49.00**	**155**	P	**P**	**13 34 20.7**	**+0.7**
	comp=Z,7.4nm,1.0s,baz=277,slow=9.0,SNR=14						
SNAA	**Sanae**	**49.00**	**155**	P	**P**	**13 34 20.2**	**+0.1**
SNAA				pmax	pmax		
	comp=Z,31nm,1.2s						
SNAA	**Sanae**	**49.00**	**155**	P	**P**	**13 34 20.1**	**+0.1**
SNAA				IAmb	IAmb	13 34 29.1	
	comp=Z,31nm,1.2s						
ZARC	**Zaragoza, Cauc**	**49.57**	**14**	*e*P	**P**	**13 34 26.2**	**+1.3**
MOTC	**Monteria, Cord**	**50.69**	**12**	*e*P	**P**	**13 34 34.3**	**+0.9**
SDV	**Santo Domingo**	**51.80**	**19**	P	**P**	**13 34 40.9**	**-1.1**
SDV				IAmb	IAmb	13 35 00.1	
	comp=Z,26nm,1.4s						
NVL	**N'lazarevskaya**	**53.81**	**156**	*e*P	**P**	**13 34 56.5**	**+0.5**
NVL				pmax	pmax		
	comp=Z,23nm,1.0s						
VNDA	**Vanda**	**54.61**	**194**	P	**P**	**13 35 01.9**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=96,slow=8.6,SNR=2.5						
VNDA				LR	LR	13 53 18.6	
	comp=Z,341nm,21.8s,baz=126,slow=31						
VNDA	**Vanda**	**54.61**	**194**	P	**P**	**13 35 02.6**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,23nm,1.4s						
VNDA	**Vanda**	**54.61**	**194**	P	**P**	**13 35 02.5**	**+0.9**
VNDA				IAmb	IAmb	13 35 11.2	
	comp=Z,23nm,1.4s						
MTO3	**Montecristo**	**55.63**	**355**	P	**P**	**13 35 09.2**	**-0.8**
MTO3				IAmb	IAmb	13 35 14.6	
	comp=Z,14nm,0.9s						
ESQI	**Esquipulas**	**55.78**	**355**	P	**P**	**13 35 09.0**	**-2.0**
TBI	**Tubuai**	**55.89**	**268**	*e*S	**S**	**13 43 03.1**	**+4.1**
	comp=Z,241nm,30.2s						
TBI				*e*LR	LR	13 51 24.3	
	comp=Z,2µm,29.8s,baz=131						
TAOE	**Nuku Hiva Isla**	**58.09**	**288**	*e*S	**S**	**13 43 31.3**	**+3.0**
	comp=Z,232nm,25.6s						
TAOE				*e*LR	LR	13 52 33.7	
	comp=Z,838nm,26.2s,baz=145						
PPT2	**Papeete2**	**59.40**	**273**	*e*S	**S**	**13 43 49.7**	**+4.5**
	comp=Z,485nm,27.0s						
PPT2				*e*LR	LR	13 52 57.8	
	comp=Z,2µm,27.2s,baz=136						
PPT	**Papeete**	**59.41**	**273**	LR	LR	13 54 45.2	
	comp=Z,432nm,18.2s,baz=109,slow=30						
TLIG	**Tlapa**	**59.92**	**345**	P	**P**	**13 35 39.4**	**-0.7**
BANI	**BANI**	**61.06**	**16**	P	**P**	**13 35 47.6**	**-0.2**
SYO	**Syowa Base**	**62.66**	**161**⇑	*e*pP	pP	13 35 59.2	-1.9
ZAIG	**Zacatecas**	**65.81**	**342**	P	**P**	**13 36 18.6**	**-0.7**
ZAIG				IAmb	IAmb	13 36 35.4	
	comp=Z,25nm,1.3s						
MAW	**Mawson**	**68.69**	**167**	LR	LR	14 05 27.7	
	comp=Z,134nm,18.8s,baz=238,slow=35						
HPIG		**70.55**	**341**	P	**P**	**13 36 48.4**	**-0.6**
833A	**Chaparral WMA,**	**70.58**	**347**	P	**P**	**13 36 50.1**	**+1.3**
	baz=169						
735A	**Kenedy**	**70.84**	**348**	P	**P**	**13 36 50.5**	**+0.1**
WHZ	**Wether Hill Ro**	**71.36**	**225**	P	**P**	**13 36 53.0**	**-0.6**
TX31	**Lajitas Ar. Si**	**72.39**	**343**	P	**P**	**13 37 00.2**	**+0.4**
TX32	**Lajitas Array**	**72.39**	**343**	P	**P**	**13 36 59.9**	**0.0**
TX32				IAmb	IAmb	13 37 08.8	
	comp=Z,19nm,1.1s						
TXAR	**Lajitas Array**	**72.39**	**343**	P	**P**	**13 37 00.9**	**+1.1**
	comp=Z,8.8nm,0.8s,baz=164,slow=8.8,SNR=49						
TXAR				LR	LR	14 03 39.0	
	comp=Z,118nm,18.3s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**72.39**	**343**	P	**P**	**13 37 01.0**	**+1.1**
TXAR	**Lajitas Array**	**72.39**	**343**	P	**P**	**13 36 60.0**	**+0.1**
344A	**Westbrook Farm**	**72.65**	**355**	P	**P**	**13 37 01.5**	**+0.3**
342A	**Flagon Creek P**	**72.69**	**354**	P	**P**	**13 37 01.3**	**-0.2**
435B	**Jarrell**	**72.70**	**349**	P	**P**	**13 37 01.1**	**-0.4**
JCT	**Junction City**	**72.75**	**347**	P	**P**	**13 37 01.9**	**0.0**
JCT				pmax	pmax		
	comp=Z,39nm,1.4s						
JCT	**Junction City**	**72.75**	**347**	P	**P**	**13 37 02.6**	**+0.7**
	baz=169						
JCT	**Junction City**	**72.75**	**347**	P	**P**	**13 37 01.9**	**0.0**
NATX	**Nacogdoches**	**73.29**	**352**	P	**P**	**13 37 04.4**	**-0.6**
237A	**Washetta, Mont**	**73.66**	**351**	P	**P**	**13 37 07.3**	**+0.1**
237A				IAmb	IAmb	13 37 22.7	
	comp=Z,22nm,1.0s						
152A	**Waverly Hall**	**73.69**	**0**	P	**P**	**13 37 07.5**	**+0.1**
152A				IAmb	IAmb	13 37 08.9	
	comp=Z,26nm,1.1s						
146A	**Union**	**73.74**	**357**	P	**P**	**13 37 07.0**	**-0.6**
WHTX	**Lake Whitney,**	**73.87**	**349**	P	**P**	**13 37 09.4**	**+1.0**
	baz=171						
WHTX	**Lake Whitney,**	**73.87**	**349**	P	**P**	**13 37 07.9**	**-0.5**
WHTX				IAmb	IAmb	13 37 10.1	
	comp=Z,20nm,0.8s						
143A	**Socs Landing,**	**73.94**	**355**	P	**P**	**13 37 07.8**	**-0.9**
HSIG		**73.97**	**337**	P	**P**	**13 37 08.5**	**-0.5**
LRAL	**Lakeview Retre**	**74.07**	**358**	P	**P**	**13 37 09.1**	**-0.5**
LRAL				IAmb	IAmb	13 37 12.7	
	comp=Z,18nm,1.1s						
Z47A	**Carrollton**	**74.26**	**358**	P	**P**	**13 37 10.7**	**0.0**
Z51A	**Franklin**	**74.33**	**0**	P	**P**	**13 37 11.3**	**+0.2**
Z51A				IAmb	IAmb	13 37 26.0	
	comp=Z,34nm,1.4s						
GOGA	**Godfrey**	**74.44**	**2**	P	**P**	**13 37 11.8**	**+0.1**
GOGA				pmax	pmax		
	comp=Z,25nm,1.2s						
GOGA	**Godfrey**	**74.44**	**2**	P	**P**	**13 37 13.0**	**+1.2**
	baz=181						
GOGA	**Godfrey**	**74.44**	**2**	P	**P**	**13 37 11.8**	**+0.1**
GOGA				IAmb	IAmb	13 37 26.5	
	comp=Z,25nm,1.2s						
ABTX	**Abilene, Hawle**	**74.82**	**347**	P	**P**	**13 37 15.1**	**+1.1**
	baz=169						
ABTX	**Abilene, Hawle**	**74.82**	**347**	P	**P**	**13 37 12.7**	**-1.3**
ABTX				IAmb	IAmb	13 37 28.7	
	comp=Z,34nm,1.4s						
Y52A	**Lilburn**	**74.89**	**1**	P	**P**	**13 37 14.0**	**-0.3**
Y52A				IAmb	IAmb	13 37 16.1	
	comp=Z,26nm,1.1s						
MNTX	**Cornudas Mount**	**75.05**	**342**	P	**P**	**13 37 15.7**	**+0.4**
	baz=165						
MNTX	**Cornudas Mount**	**75.05**	**342**	P	**P**	**13 37 14.4**	**-0.9**
WLAR	**White Oak Lake**	**75.05**	**353**	P	**P**	**13 37 14.4**	**-0.8**
WLAR				IAmb	IAmb	13 37 23.8	
	comp=Z,20nm,1.0s						
Z35A	**Perchaven, San**	**75.16**	**350**	P	**P**	**13 37 15.8**	**-0.1**
Z35A				IAmb	IAmb	13 37 30.5	
	comp=Z,34nm,1.1s						
CCAR	**Cane Creek**	**75.17**	**354**	P	**P**	**13 37 15.8**	**-0.1**
GDL2	**Guadalupe Moun**	**75.31**	**343**	P	**P**	**13 37 16.7**	**-0.2**
JSC	**Jenkinsville**	**75.39**	**3**	P	**P**	**13 37 16.8**	**-0.3**
JSC				pmax	pmax		
	comp=Z,31nm,1.4s						
JSC	**Jenkinsville**	**75.39**	**3**	P	**P**	**13 37 16.8**	**-0.3**
JSC				IAmb	IAmb	13 37 31.8	
	comp=Z,31nm,1.4s						
X48A	**Hartselle**	**75.48**	**358**	P	**P**	**13 37 17.6**	**-0.1**
X48A				IAmb	IAmb	13 37 19.2	
	comp=Z,18nm,0.8s						
319A	**Douglas**	**75.71**	**339**	P	**P**	**13 37 18.1**	**-1.1**
X40A	**Basin Creek Fa**	**75.82**	**354**	P	**P**	**13 37 19.3**	**-0.3**
PAULI	**Pauline**	**75.90**	**3**	P	**P**	**13 37 19.8**	**-0.3**
PAULI				IAmb	IAmb	13 37 34.8	
	comp=Z,30nm,1.1s						
MIAR	**Mount Ida**	**75.94**	**353**	P	**P**	**13 37 19.8**	**-0.5**
MIAR				pmax	pmax		
	comp=Z,25nm,1.4s						
MIAR	**Mount Ida**	**75.94**	**353**	P	**P**	**13 37 20.5**	**+0.2**
	baz=174						
MIAR	**Mount Ida**	**75.94**	**353**	P	**P**	**13 37 19.8**	**-0.5**
MIAR				IAmb	IAmb	13 37 35.7	
	comp=Z,25nm,1.4s						
BG3	**Lake Jocassee**	**76.03**	**2**	P	**P**	**13 37 20.9**	**0.0**
BG3				IAmb	IAmb	13 37 22.6	
	comp=Z,24nm,1.3s						
PLAL	**Pickwick Lake**	**76.04**	**358**	P	**P**	**13 37 20.5**	**-0.4**
PLAL				IAmb	IAmb	13 37 34.9	
	comp=Z,28nm,1.2s						
UALR	**University of**	**76.06**	**354**	P	**P**	**13 37 20.7**	**-0.3**
UALR				IAmb	IAmb	13 37 22.1	
	comp=Z,29nm,1.4s						
W52A	**Murphy**	**76.11**	**1**	P	**P**	**13 37 20.3**	**-1.0**
W52A				IAmb	IAmb	13 37 23.2	
	comp=Z,20nm,0.9s						
W50A	**Signal Mountai**	**76.21**	**360**	P	**P**	**13 37 21.5**	**-0.4**
W50A				IAmb	IAmb	13 37 23.7	
	comp=Z,20nm,1.0s						
SWET	**Sewanee**	**76.23**	**359**	P	**P**	**13 37 21.1**	**-0.9**
KMSC	**Kings Mountain**	**76.24**	**3**	P	**P**	**13 37 22.9**	**+0.9**
	baz=183						
KMSC	**Kings Mountain**	**76.24**	**3**	P	**P**	**13 37 22.7**	**+0.6**
KMSC				IAmb	IAmb	13 37 23.4	
	comp=Z,21nm,1.1s						
W45A	**Hickory Valley**	**76.25**	**357**	P	**P**	**13 37 21.7**	**-0.4**
121A	**Cookes Peak, D**	**76.42**	**341**	P	**P**	**13 37 25.4**	**+2.0**
	baz=163						
W41B	**Gary Mavity, V**	**76.45**	**354**	P	**P**	**13 37 24.1**	**+0.9**
	baz=175						
CPCT	**Cooper Cave**	**76.46**	**1**	P	**P**	**13 37 23.6**	**+0.3**
X34A	**Smith Ranch, M**	**76.49**	**349**	P	**P**	**13 37 23.9**	**+0.4**
X34A				IAmb	IAmb	13 37 39.0	
	comp=Z,26nm,1.1s						
WHAR	**Wooly Hollow**	**76.57**	**354**	P	**P**	**13 37 23.8**	**-0.1**
W39A	**Magazine**	**76.61**	**353**	P	**P**	**13 37 25.5**	**+1.4**
	baz=174						
W39A	**Magazine**	**76.61**	**353**	P	**P**	**13 37 24.2**	**+0.1**
MSTX	**Muleshoe**	**76.69**	**345**	P	**P**	**13 37 25.6**	**+0.9**
	baz=167						
MSTX	**Muleshoe**	**76.69**	**345**	P	**P**	**13 37 24.7**	**-0.1**
WMOK	**Wichita Mounta**	**76.76**	**349**	P	**P**	**13 37 24.2**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,22nm,1.5s						
WMOK	**Wichita Mounta**	**76.76**	**349**	P	**P**	**13 37 25.8**	**+0.8**
	baz=170						
WMOK	**Wichita Mounta**	**76.76**	**349**	P	**P**	**13 37 24.2**	**-0.8**
WMOK				IAmb	IAmb	13 37 39.6	
	comp=Z,22nm,1.4s						
V48A	**Smith Brothers**	**76.76**	**359**	P	**P**	**13 37 24.7**	**-0.3**
V48A				IAmb	IAmb	13 37 39.2	
	comp=Z,33nm,1.3s						
V56A	**Mocksville**	**76.94**	**4**	P	**P**	**13 37 26.8**	**+0.8**
	baz=184						
CLTN	**Cedars of Leba**	**77.11**	**359**	P	**P**	**13 37 26.1**	**-0.7**
FCAR	**Ozark Folk Cen**	**77.16**	**354**	P	**P**	**13 37 26.7**	**-0.5**
FCAR				IAmb	IAmb	13 37 41.4	
	comp=Z,20nm,1.3s						
WVT	**Waverly**	**77.17**	**358**	P	**P**	**13 37 26.8**	**-0.4**
WVT				pmax	pmax		
	comp=Z,24nm,1.4s						
WVT	**Waverly**	**77.17**	**358**	P	**P**	**13 37 27.5**	**+0.3**
	baz=178						
WVT	**Waverly**	**77.17**	**358**	P	**P**	**13 37 26.8**	**-0.4**
WVT				IAmb	IAmb	13 37 28.1	
	comp=Z,24nm,1.4s						
LCAR	**Lake Charles**	**77.27**	**355**	P	**P**	**13 37 26.3**	**-1.5**
LCAR				IAmb	IAmb	13 37 41.8	
	comp=Z,15nm,1.1s						
214A	**Organ Pipe Nat**	**77.27**	**336**	P	**P**	**13 37 28.8**	**+0.8**
	baz=159						
214A	**Organ Pipe Nat**	**77.27**	**336**	P	**P**	**13 37 27.1**	**-0.8**
214A				IAmb	IAmb	13 37 37.4	
	comp=Z,17nm,1.2s						
AMTX	**Amarillo**	**77.38**	**346**	P	**P**	**13 37 29.6**	**+1.0**
	baz=168						
AMTX	**Amarillo**	**77.38**	**346**	P	**P**	**13 37 27.8**	**-0.8**
AMTX				IAmb	IAmb	13 37 37.2	
	comp=Z,18nm,0.9s						
TUL1	**Leonard**	**77.52**	**351**	P	**P**	**13 37 30.5**	**+1.3**
	baz=172						
TUL1	**Leonard**	**77.52**	**351**	P	**P**	**13 37 28.8**	**-0.4**
U49A	**Red Boiling Sp**	**77.52**	**360**	P	**P**	**13 37 28.9**	**-0.3**
TZTN	**Tazewell**	**77.57**	**1**	P	**P**	**13 37 30.4**	**+0.9**
	baz=181						
TZTN	**Tazewell**	**77.57**	**1**	P	**P**	**13 37 29.0**	**-0.5**
OK029	**Liberty Lake**	**77.61**	**350**	P	**P**	**13 37 29.4**	**-0.4**
OK029				IAmb	IAmb	13 37 33.3	
	comp=Z,28nm,1.2s						
OK030	**Cody Creek RV**	**77.66**	**350**	P	**P**	**13 37 29.0**	**-1.0**
OK030				IAmb	IAmb	13 37 44.5	
	comp=Z,23nm,1.0s						
U40A	**Yellville**	**77.67**	**354**	P	**P**	**13 37 30.9**	**+0.8**
	baz=174						
U40A	**Yellville**	**77.67**	**354**	P	**P**	**13 37 30.0**	**-0.1**
U40A				IAmb	IAmb	13 37 44.5	
	comp=Z,30nm,1.3s						
BNM	**Barren Site**	**77.69**	**342**	P	**P**	**13 37 30.4**	**-0.1**
OK031	**S. Brethren Rd**	**77.69**	**350**	P	**P**	**13 37 30.0**	**-0.2**
HHAR	**Hobbs**	**77.70**	**353**	P	**P**	**13 37 29.6**	**-0.6**
HHAR				IAmb	IAmb	13 37 31.3	
	comp=Z,13nm,1.1s						
QUOK	**Quay**	**77.89**	**351**	P	**P**	**13 37 31.4**	**+0.1**
U38A	**Gravette**	**77.90**	**352**	P	**P**	**13 37 31.0**	**-0.3**
U38A				IAmb	IAmb	13 37 34.0	
	comp=Z,16nm,1.1s						
T47A	**Sharon Grove**	**78.01**	**359**	P	**P**	**13 37 31.5**	**-0.4**
T50A	**Nancy**	**78.03**	**0**	P	**P**	**13 37 31.6**	**-0.4**
ESJX	**Sierra Juarez**	**78.31**	**334**	P	**P**	**13 37 33.1**	**-0.9**
113A	**Mohawk Valley,**	**78.32**	**336**	P	**P**	**13 37 33.1**	**-0.6**
U32A	**Winter Ranch,**	**78.40**	**349**	P	**P**	**13 37 34.5**	**+0.4**
ANMO	**Albuquerque**	**78.41**	**342**	P	**P**	**13 37 34.9**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,20nm,1.1s						
ANMO	**Albuquerque**	**78.41**	**342**	P	**P**	**13 37 36.4**	**+1.9**
	baz=164						
ANMO	**Albuquerque**	**78.41**	**342**	P	**P**	**13 37 34.9**	**+0.5**
ANMO				IAmb	IAmb	13 37 38.9	
	comp=Z,20nm,1.1s						
T35A	**Sooner Cattle**	**78.60**	**351**	P	**P**	**13 37 34.9**	**-0.3**
S51A	**Beattyville**	**78.66**	**1**	P	**P**	**13 37 35.7**	**+0.2**
S51A				IAmb	IAmb	13 37 50.3	
	comp=Z,40nm,1.4s						
S44A	**Carbondale**	**78.78**	**357**	P	**P**	**13 37 35.8**	**-0.4**
S44A				IAmb	IAmb	13 37 50.5	
	comp=Z,17nm,0.9s						
SIUC	**Southern Illin**	**78.80**	**357**	P	**P**	**13 37 35.4**	**-0.8**
SIUC				IAmb	IAmb	13 37 50.4	
	comp=Z,19nm,0.9s						
KAN14	**Manchester OK**	**78.82**	**350**	P	**P**	**13 37 35.7**	**-0.8**
X18A	**Snowflake**	**78.87**	**339**	P	**P**	**13 37 36.0**	**-1.0**
RMX	**La Rumorosa**	**78.91**	**334**	P	**P**	**13 37 36.9**	**-0.3**
GLA	**Glamis**	**78.91**	**335**	P	**P**	**13 37 35.5**	**-1.6**
GLA				pmax	pmax		
	comp=Z,13nm,1.1s						
GLA	**Glamis**	**78.91**	**335**	P	**P**	**13 37 35.5**	**-1.6**
USIN	**University of**	**79.00**	**358**	P	**P**	**13 37 37.5**	**+0.1**
FVM	**French Village**	**79.13**	**356**	P	**P**	**13 37 38.3**	**+0.2**
FVM				pmax	pmax		
	comp=Z,27nm,1.4s						
FVM	**French Village**	**79.13**	**356**	P	**P**	**13 37 38.3**	**+0.2**
FVM				IAmb	IAmb	13 37 40.3	
	comp=Z,27nm,1.4s						
X16A	**Lo Mia Camp, P**	**79.17**	**338**	P	**P**	**13 37 39.3**	**+0.6**
CCM	**Cathedral Cave**	**79.25**	**355**	P	**P**	**13 37 38.4**	**-0.3**
CCM				pmax	pmax		
	comp=Z,36nm,1.2s						
CCM	**Cathedral Cave**	**79.25**	**355**	P	**P**	**13 37 39.8**	**+1.1**
	baz=176						
CCM	**Cathedral Cave**	**79.25**	**355**	P	**P**	**13 37 38.4**	**-0.3**
CCM				IAmb	IAmb	13 37 53.3	
	comp=Z,36nm,1.1s						
BC3	**Big Chuckawall**	**79.67**	**335**	P	**P**	**13 37 42.8**	**+1.5**
	baz=158						
PDMCI	**Parker Dam,Lak**	**79.86**	**336**	P	**P**	**13 37 44.1**	**+2.0**
	baz=158						
Q53A	**Leroy**	**79.94**	**3**	P	**P**	**13 37 45.0**	**+2.5**
	baz=183						
PFO	**Pinyon Flats O**	**79.96**	**334**	P	**P**	**13 37 41.8**	**-1.1**
PFO				pmax	pmax		
	comp=Z,18nm,1.5s						
PFO	**Pinyon Flats O**	**79.96**	**334**	P	**P**	**13 37 41.8**	**-1.1**
Q44A	**Meyer Farm, Va**	**79.98**	**357**	P	**P**	**13 37 41.9**	**-0.7**
IRM	**Iron Mountain**	**80.03**	**335**	P	**P**	**13 37 45.2**	**+2.0**
	baz=158						
T25A	**Trinidad**	**80.08**	**345**	P	**P**	**13 37 45.8**	**+2.2**
	baz=166						
BELC	**Belle Mtn. Jos**	**80.16**	**334**	P	**P**	**13 37 45.7**	**+1.7**
	baz=157						
BLO	**Bloomington**	**80.18**	**359**	P	**P**	**13 37 42.7**	**-1.1**
BLO				pmax	pmax		
	comp=Z,33nm,1.0s						
BLO	**Bloomington**	**80.18**	**359**	P	**P**	**13 37 42.7**	**-1.1**
BLO				IAmb	IAmb	13 37 44.6	
	comp=Z,33nm,0.9s						
WUAZ	**Wupatki**	**80.19**	**339**	P	**P**	**13 37 45.9**	**+1.8**
	baz=160						
WUAZ	**Wupatki**	**80.19**	**339**	P	**P**	**13 37 44.1**	**0.0**
MURC	**Murrieta**	**80.19**	**333**	P	**P**	**13 37 46.3**	**+2.3**
	baz=156						
W13A	**Hualapai Mount**	**80.52**	**337**	P	**P**	**13 37 46.9**	**+0.9**
P49A	**Miami Univ. Ec**	**80.54**	**0**	P	**P**	**13 37 46.1**	**+0.4**
	baz=180						
P52A	**Corning**	**80.69**	**2**	P	**P**	**13 37 46.7**	**+0.3**
	baz=182						
P52A	**Corning**	**80.69**	**2**	P	**P**	**13 37 45.7**	**-0.8**
P43A	**Skaggs, Pawnee**	**80.74**	**357**	P	**P**	**13 37 45.5**	**-1.2**
P43A				IAmb	IAmb	13 37 49.7	
	comp=Z,27nm,1.0s						
P40A	**Paris**	**80.77**	**355**	P	**P**	**13 37 45.2**	**-1.7**
P40A				IAmb	IAmb	13 37 50.0	
	comp=Z,32nm,1.4s						
GMRC	**Granite Mounta**	**80.78**	**335**	P	**P**	**13 37 49.2**	**+2.0**
	baz=157						
SDCO	**Great Sand Dun**	**80.89**	**344**	P	**P**	**13 37 49.7**	**+1.7**
	baz=165						
SDCO	**Great Sand Dun**	**80.89**	**344**	P	**P**	**13 37 47.0**	**-1.0**
CBKS	**Cedar Bluff**	**80.90**	**349**	P	**P**	**13 37 47.2**	**-0.5**
CBKS				pmax	pmax		
	comp=Z,33nm,1.2s						
CBKS	**Cedar Bluff**	**80.90**	**349**	P	**P**	**13 37 49.2**	**+1.5**
	baz=169						
CBKS	**Cedar Bluff**	**80.90**	**349**	P	**P**	**13 37 47.1**	**-0.5**
CBKS				IAmb	IAmb	13 37 51.9	
	comp=Z,34nm,1.1s						
BFSC	**Mount Baldy Ra**	**80.93**	**333**	P	**P**	**13 37 50.7**	**+2.6**
	baz=156						
MVCO	**Mesa Verde**	**81.05**	**341**	P	**P**	**13 37 50.8**	**+2.0**
	baz=163						
MVCO	**Mesa Verde**	**81.05**	**341**	P	**P**	**13 37 48.7**	**-0.1**
MVCO				IAmb	IAmb	13 38 05.6	
	comp=Z,21nm,1.5s						
S22A	**4UR Ranch, Cre**	**81.18**	**343**	P	**P**	**13 37 51.9**	**+2.4**
	baz=164						
U15A	**North Rim**	**81.30**	**338**	P	**P**	**13 37 50.4**	**+0.2**
U15A				IAmb	IAmb	13 37 54.4	
	comp=Z,15nm,1.2s						
GSC	**Goldstone, Bar**	**81.62**	**334**	P	**P**	**13 37 53.6**	**+1.9**
	baz=157						
PV01	**Paradox Valley**	**81.95**	**342**	P	**P**	**13 37 54.0**	**+0.5**
PV01				IAmb	IAmb	13 37 56.2	
	comp=Z,27nm,1.3s						
Q24A	**Divide**	**81.99**	**344**	P	**P**	**13 37 55.6**	**+1.8**
	baz=165						
SHOC	**Shoshone, Teco**	**82.00**	**335**	P	**P**	**13 37 55.5**	**+1.9**
	baz=157						
KNB	**Kanab**	**82.00**	**338**	P	**P**	**13 37 54.1**	**+0.4**
KNB				pmax	pmax		
	comp=Z,24nm,1.2s						
KNB	**Kanab**	**82.00**	**338**	P	**P**	**13 37 54.1**	**+0.4**
PV05	**Paradox Valley**	**82.02**	**341**	P	**P**	**13 37 52.8**	**-1.1**
PV05				IAmb	IAmb	13 38 03.7	
	comp=Z,27nm,1.4s						
PV13	**Radium Mtn., P**	**82.03**	**341**	P	**P**	**13 37 54.7**	**+0.8**
LCMT	**Little Creek M**	**82.11**	**338**	P	**P**	**13 37 54.8**	**+0.5**
PV15	**Paradox Valley**	**82.12**	**342**	P	**P**	**13 37 54.0**	**-0.5**
PV15				IAmb	IAmb	13 38 17.0	
	comp=Z,13nm,1.1s						
PV18	**Skein Mesa, Pa**	**82.14**	**341**	P	**P**	**13 37 54.8**	**+0.3**
PV18				IAmb	IAmb	13 37 56.9	
	comp=Z,26nm,1.3s						
PV11	**David Mesa, Pa**	**82.18**	**341**	P	**P**	**13 37 53.3**	**-1.3**
PV11				IAmb	IAmb	13 38 04.4	
	comp=Z,20nm,1.2s						
PV16	**Nyswonger Mesa**	**82.20**	**341**	P	**P**	**13 37 54.2**	**-0.6**
PV16				IAmb	IAmb	13 38 04.5	
	comp=Z,16nm,1.3s						
SHPR	**Sheep Range**	**82.21**	**336**	P	**P**	**13 37 54.7**	**-0.2**
SHPR				IAmb	IAmb	13 38 11.0	
	comp=Z,16nm,1.3s						
PV19	**Morning Glory**	**82.21**	**341**	P	**P**	**13 37 54.6**	**-0.3**

PV19				IAmb	IAmb	13 37 59.2	
	comp=Z,13nm,1.2s						
PV04	Paradox Valley	82.28	341	P	P	13 37 55.5	+0.4
PV04				IAmb	IAmb	13 38 04.3	
	comp=Z,28nm,1.3s						
ISA	Isabella, Lake	82.50	333	P	P	13 37 56.8	+0.5
ISA				pmax	pmax		
	comp=Z,19nm,1.5s						
ISA	Isabella, Lake	82.50	333	P	P	13 37 58.4	+2.2
	baz=156						
ISA	Isabella, Lake	82.50	333	P	P	13 37 56.8	+0.5
ISA				IAmb	IAmb	13 38 00.4	
	comp=Z,19nm,1.5s						
SMCO	Snowmass	82.58	343	P	P	13 37 57.7	+0.7
SMCO				IAmb	IAmb	13 38 04.7	
	comp=Z,21nm,1.2s						
SZCU	Shurtz Canyon	82.61	338	P	P	13 37 58.2	+1.2
CCUT	Cedar City	82.65	338	P	P	13 37 58.1	+0.9
MTPU	Mount Pierson	82.78	339	P	P	13 37 57.8	-0.3
VES	Vestal, Richgr	82.87	333	P	P	13 37 60.0	+1.9
	baz=155						
ISCO	Idaho Springs	82.89	344	P	P	13 37 57.8	-0.7
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ISCO	Idaho Springs	82.89	344	P	P	13 37 57.8	-0.7
CWC	Cottonwood Cre	83.08	334	P	P	13 38 01.1	+1.8
	baz=156						
MSU	Marysvale	83.22	339	P	P	13 38 00.9	+0.8
MSU	Marysvale	83.22	339	P	P	13 38 00.9	+0.8
MVU	Marysvale	83.22	339	P	P	13 38 00.5	+0.3
GRAC	Grapevine Rang	83.35	335	P	P	13 38 03.0	+2.4
	baz=156						
SRU	San Rafael Swe	83.35	340	P	P	13 38 01.3	+0.6
SRU				pmax	pmax		
	comp=Z,12nm,1.1s						
SRU	San Rafael Swe	83.35	340	P	P	13 38 01.3	+0.6
TMUT	Trail Mountain	83.70	340	P	P	13 38 03.4	+0.7
PSUT	Pine Spring	83.70	338	P	P	13 38 03.7	+1.1
P17A	Butcher Ranch,	83.75	340	P	P	13 38 03.4	+0.7
O20A	White River Ci	83.78	342	P	P	13 38 05.1	+2.2
	baz=163						
O20A	White River Ci	83.78	342	P	P	13 38 04.0	+1.1
O20A				IAmb	IAmb	13 38 12.2	
	comp=Z,25nm,1.2s						
N23A	Red Feather La	84.02	344	P	P	13 38 06.4	+2.2
	baz=165						
R11A	Troy Canyon, C	84.04	336	P	P	13 38 06.4	+2.1
	baz=158						
R11A	Troy Canyon, C	84.04	336	P	P	13 38 04.6	+0.3
R11A				IAmb	IAmb	13 38 08.7	
	comp=Z,15nm,1.2s						
SPR3	Spring Creek 3	84.27	338	P	P	13 38 05.7	+0.1
SPR3				IAmb	IAmb	13 38 08.0	
	comp=Z,28nm,1.4s						
TPH	Tonopah	84.29	335	P	P	13 38 06.1	+0.5
TPH				pmax	pmax		
	comp=Z,69nm,1.1s						
TPH	Tonopah	84.29	335	P	P	13 38 06.1	+0.5
MLAC	Mammoth, Mammo	84.41	334	P	P	13 38 08.6	+2.3
	baz=155						
MPU	Maple Canyon	84.49	340	P	P	13 38 07.5	+0.9
K31A	O'Neill	84.50	350	P	P	13 38 06.5	+0.2
LHV	Little Huntoon	84.86	334	P	P	13 38 08.8	+0.7
LHV				IAmb	IAmb	13 38 24.7	
	comp=Z,15nm,1.3s						
NVAR	Mina Array Bea	84.96	335	P	P	13 38 10.3	+1.3
	comp=Z,1.9nm,0.9s,baz=173,slow=5.9,SNR=12						
NVAR				LR	LR	14 08 15.9	
	comp=Z,49nm,18.4s,baz=225,slow=30						
NVAR	Mina Array Bea	84.96	335	P	P	13 38 08.7	-0.3
DUG	Dugway, Tooele	84.97	339	P	P	13 38 08.2	-0.7
DUG				pmax	pmax		
	comp=Z,11nm,1.1s						
DUG	Dugway, Tooele	84.97	339	P	P	13 38 10.6	+1.8
	baz=160						
DUG	Dugway, Tooele	84.97	339	P	P	13 38 08.2	-0.7
DUG				IAmb	IAmb	13 38 19.0	
	comp=Z,11nm,1.1s						
CMB	Columbia Colle	85.30	333	P	P	13 38 10.6	+0.2
CMB				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CMB	Columbia Colle	85.30	333	P	P	13 38 10.6	+0.2
BOSA	Boshof	85.31	124	P	P	13 38 11.1	-0.1
	comp=Z,3.5nm,0.8s,baz=180,slow=6.7,SNR=3.0						
BOSA				LR	LR	14 09 12.3	
	comp=Z,198nm,20.8s,baz=209,slow=31						
BOSA	Boshof	85.31	124	IAmb	IAmb	13 38 26.8	
	comp=Z,20nm,1.4s						
ECSD	EROS Data Cent	85.34	352	P	P	13 38 11.2	+0.7
	baz=172						
ECSD	EROS Data Cent	85.34	352	P	P	13 38 09.7	-0.8
ECSD				IAmb	IAmb	13 38 18.4	
	comp=Z,15nm,1.1s						
K22A	Casper	85.82	344	P	P	13 38 15.2	+2.1
	baz=164						
K22A	Casper	85.82	344	P	P	13 38 13.8	+0.7
SPUT	South Promonto	85.91	340	P	P	13 38 14.0	+0.4
HWUT	Hardware Ranch	85.97	341	P	P	13 38 13.9	+0.1
ELK	Elko	86.15	338	P	P	13 38 15.2	+0.3
ELK				pmax	pmax		
	comp=Z,19nm,1.4s						
ELK	Elko	86.15	338	P	P	13 38 15.2	+0.3
ELK				IAmb	IAmb	13 38 17.5	
	comp=Z,19nm,1.4s						
G40A	Rib Lake	86.38	357	P	P	13 38 15.3	-0.3
G40A				IAmb	IAmb	13 38 23.5	
	comp=Z,13nm,1.1s						
HVU	Hansel Valley	86.44	340	P	P	13 38 15.9	-0.3
HVU				pmax	pmax		
	comp=Z,12nm,1.4s						
HVU	Hansel Valley	86.44	340	P	P	13 38 15.8	-0.3
BW06	Boulder Array	86.58	342	P	P	13 38 18.4	+1.4
	baz=162						
PDAR	Pinedale Array	86.58	342	P	P	13 38 17.9	+0.9
	comp=Z,4.2nm,0.9s,baz=163,slow=5.2,SNR=20						
PDAR				LR	LR	14 11 32.9	
	comp=Z,88nm,18.2s,baz=147,slow=32						
G54A	Lake Saint Pet	86.64	5	P	P	13 38 18.6	+1.8
	baz=185						
RSSD	Black Hills	86.77	347	P	P	13 38 17.5	-0.3
RSSD				pmax	pmax		
	comp=Z,23nm,1.4s						
RSSD	Black Hills	86.77	347	P	P	13 38 19.2	+1.4
	baz=166						
RSSD	Black Hills	86.77	347	P	P	13 38 17.5	-0.3
RSSD				IAmb	IAmb	13 38 27.0	
	comp=Z,23nm,1.4s						
AHID	Auburn Hatcher	86.95	341	P	P	13 38 19.1	+0.4
ORV	Oroville	87.04	333	P	P	13 38 19.7	+0.7
ORV				pmax	pmax		
	comp=Z,12nm,1.5s						
ORV	Oroville	87.04	333	P	P	13 38 19.7	+0.7
ORV				IAmb	IAmb	13 38 28.1	
	comp=Z,12nm,1.4s						
DBIC	Dimbokro	87.23	79	P	P	13 38 21.2	+0.7
	comp=Z,3.5nm,0.9s,baz=266,slow=6.7,SNR=4.1						
DBIC				LR	LR	14 13 07.2	
	comp=Z,260nm,18.9s,baz=202,slow=33						
DBIC	Dimbokro	87.23	79	IAmb	IAmb	13 38 35.8	
	comp=Z,14nm,1.4s						
ECR	Eagle Creek	87.28	341	P	P	13 38 20.8	+0.5
E46A	Sault Ste Mari	87.37	1	P	P	13 38 19.8	-0.6
E43A	Lone Tree Farm	87.39	359	P	P	13 38 19.6	-0.8
IMW	Indian Meadow	87.98	342	P	P	13 38 22.5	-1.2
DZM	Mont Dzumac	88.45	242	*e*S	S	13 49 14.3	+2.3
	comp=Z,92nm,25.4s						
DZM	Mont Dzumac	88.45	242	*e*LR	LR	14 06 35.6	
	comp=Z,998nm,29.4s						
LKWY	Lake	88.48	342	P	P	13 38 26.9	+0.8
LKWY				pmax	pmax		
	comp=Z,12nm,1.4s						
LKWY	Lake	88.48	342	P	P	13 38 26.9	+0.8
LKWY				IAmb	IAmb	13 38 33.0	
	comp=Z,12nm,1.4s						
YNR	Norris Junctio	88.69	342	P	P	13 38 29.3	+2.2
WVOR	Wild Horse Val	88.71	336	P	P	13 38 27.5	+0.5
WVOR				pmax	pmax		
	comp=Z,11nm,1.5s						
WVOR	Wild Horse Val	88.71	336	P	P	13 38 27.4	+0.5
WVOR				IAmb	IAmb	13 38 56.1	
	comp=Z,11nm,1.5s						
YMR	Madison River	88.71	342	P	P	13 38 28.4	+1.3
MOD	Modoc Plateau	88.75	335	P	P	13 38 27.8	+0.5
RLMT	Red Lodge	88.76	343	P	P	13 38 28.5	+1.1
	baz=162						
RLMT	Red Lodge	88.76	343	P	P	13 38 28.4	+1.0
RLMT				IAmb	IAmb	13 38 43.6	
	comp=Z,12nm,1.4s						
MFID	Camas Ranch	88.78	338	P	P	13 38 27.8	+0.5
MFID				IAmb	IAmb	13 38 46.1	
	comp=Z,9.9nm,1.4s						
YHH	Holmes Hill	88.80	342	P	P	13 38 29.4	+1.7
YNE	Yellowstone No	88.81	343	P	P	13 38 27.8	+0.1
YHB	Horse Butte	88.84	342	P	P	13 38 29.8	+2.1
YHL	Hebgen Lake	88.94	342	P	P	13 38 29.6	+1.3
BCYI	Bear Canyon	88.97	340	P	P	13 38 29.2	+0.8
QLMT	Earthquake Lak	88.97	342	P	P	13 38 29.3	+1.0
MCMT	McKenzie Canyo	89.31	341	P	P	13 38 31.5	+1.5
VLDQ	Val d'Or	89.38	5	P	P	13 38 30.0	+0.2
VLDQ				IAmb	IAmb	13 38 39.9	
	comp=Z,13nm,1.1s						
YBH	Yreka Blue Hor	89.40	333	LR	LR	14 08 49.3	
	comp=Z,53nm,20.2s,baz=272,slow=29						
BOZ	Bozeman (W)	89.74	342	P	P	13 38 31.6	-0.3
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BOZ	Bozeman (W)	89.74	342	P	P	13 38 33.5	+1.6
	baz=161						
BOZ	Bozeman (W)	89.74	342	P	P	13 38 31.6	-0.3
DLMT	Dillon	89.75	341	P	P	13 38 31.9	0.0
DLMT				IAmb	IAmb	13 38 36.9	
	comp=Z,18nm,1.3s						
J05D	Fort Rock, OR	90.29	335	P	P	13 38 36.7	+2.2
	baz=154						
MSO	Missoula	91.46	341	P	P	13 38 40.9	+1.2
ULM	Lac du Bonnet	91.72	353	P	P	13 38 39.4	-1.3
	comp=Z,2.5nm,0.9s,baz=177,slow=8.4,SNR=3.6						
ULM				LR	LR	14 14 25.7	
	comp=Z,65nm,18.4s,baz=130,slow=32						
ULM	Lac du Bonnet	91.72	353	P	P	13 38 39.4	-1.3
ULM				pmax	pmax		
	comp=Z,12nm,1.3s						
ULM	Lac du Bonnet	91.72	353	IAmb	IAmb	13 38 53.6	
	comp=Z,12nm,1.3s						
JTMT	Jette	92.40	341	P	P	13 38 46.0	+1.9
KOWA	Kowa	93.04	73	P	P	13 38 48.3	+0.6
KOWA				IAmb	IAmb	13 38 57.9	
	comp=Z,8.8nm,1.0s						
STKA	Stephens Creek	95.25	219	LR	LR	14 12 11.4	
	comp=Z,96nm,21.3s,baz=194,slow=30						
TOA0	Torodi Ar. Sit	96.32	78	P	P	13 39 00.4	-2.4
TORD	Torodi Ar. Bea	96.32	78	P	P	13 39 03.1	+0.3
	comp=Z,1.7nm,0.9s,baz=226,slow=3.8,SNR=6.5						
TORD				LR	LR	14 19 37.7	
	comp=Z,221nm,19.1s,baz=200,slow=34						
TORD	Torodi Ar. Bea	96.32	78	IAmb	IAmb	13 39 12.6	
	comp=Z,10nm,1.4s						
YKA	Yellowknife Ar	106.18	346	Pdiff	Pdif	13 39 47.1	+1.6
	comp=Z,0.3nm,0.9s,baz=137,slow=3.5,SNR=5.3						
ILAR	Eielson Array	116.21	335	PKP	PKiKP	13 44 14.7	-1.3
	comp=Z,0.8nm,1.0s,baz=182,slow=2.2,SNR=5.1						
GERES	GERESS Array B	124.89	53	PKP	PKPdf	13 44 31.9	-1.5
	comp=Z,1.6nm,0.8s,baz=259,slow=2.0,SNR=5.4						
MJAR	Matsushiro Arr	146.11	276	PKPbc	PKPbc	13 45 12.2	-1.5
	comp=Z,0.7nm,0.5s,baz=213,slow=37,SNR=2.9						
BELG	Belogornoye	146.55	55	PKPbc	PKPbc	13 45 13.3	-1.1
	comp=Z,25nm,0.9s,baz=140,slow=2.7,SNR=8.0						
KIRV	Kirov	146.95	43	PKPbc	PKPbc	13 45 13.8	-1.6
	comp=Z,9.4nm,0.6s,baz=294,slow=7.2,SNR=5.9						
YAK	Yakutsk	150.64	327	*e*PKIKP	PKiKP	13 45 23.9	-1.5
YAK				*e*		13 45 30.6	
YAK				pmax	pmax		
	comp=Z,52nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,70nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
NRIK	Noril'sk	151.73	5	PKPbc	PKiKP	13 45 27.3	-0.2
	comp=E,1.5nm,0.6s,baz=121,slow=1.4,SNR=2.9						
GEYT	Alibeck	151.74	85	PKPbc	PKiKP	13 45 28.3	-0.3
	comp=E,1.2nm,0.5s,baz=143,slow=37,SNR=2.3						
ARU	Arti	152.27	45	PKPbc	PKiKP	13 45 29.3	+0.3
	comp=E,1.9nm,0.6s,baz=306,slow=3.0,SNR=9.5						
ARU	Arti	152.27	45		PKiKP	13 45 28.8	-0.2
UBPT	Khong Chiam	152.37	203		PKPbc	13 45 28.8	-1.4
USRK	Ussuriysk Ar.	152.66	289	PKPbc	PKiKP	13 45 29.9	-0.4
	comp=E,3.2nm,0.8s,baz=106,slow=4.2,SNR=5.8						
AKTO	Aktyubinsk	153.14	58	PKPbc	PKiKP	13 45 31.0	0.0
	comp=E,2.1nm,0.9s,baz=282,slow=2.9,SNR=4.1						
ABKAR	Akbulak array	154.49	60	PKPdf	PKPdf	13 45 23.7	-1.7
ABKAR	Akbulak array	154.49	60	PKPdf	PKPdf	13 45 24.4	-1.0
CMAR	Chiang Mai Arr	156.87	190	PKP	PKPdf	13 45 28.9	-0.7
	comp=E,0.4nm,0.4s,baz=206,slow=28,SNR=1.3						
CMAR	Chiang Mai Arr	156.87	190	PKPdf	PKPdf	13 45 28.3	-1.3
NJ2	Nanjing	158.59	252	*e*PKP	PKPdf	13 45 32.0	+0.7
AAK	Ala-Archa	164.91	79	PKIKP	PKPdf	13 45 38.0	+0.3
AAK	Ala-Archa	164.91	79	PKPdf	PKPdf	13 45 38.0	+0.3
AAK				PKPab	pPKPab	13 46 35.6	-2.2
KSH	Kashi	165.60	91	PKP	PKPdf	13 45 39.3	+1.0
ZALV	Zalesovo Beam	165.79	24	PKP	PKPdf	13 45 34.8	-3.0
	comp=E,0.9nm,0.6s,baz=343,slow=4.6,SNR=5.3						
ZALV	Zalesovo Beam	165.79	24	PKIKP	PKPdf	13 45 35.5	-2.3
ZALV	Zalesovo Beam	165.79	24		PKPdf	13 45 35.5	-2.3
CD2	Chengdu	167.26	218	PKP	PKPdf	13 45 38.5	-1.3
HHC	Hu-ho-hao-te	167.28	273	*e*PKP	PKPdf	13 45 40.5	+0.9
SONM	Songino Array	169.48	312	PKP	PKPdf	13 45 38.1	-2.8
	comp=E,1.3nm,1.1s,baz=16,slow=7.1,SNR=5.5						
LZH	Lanzhou	171.13	236	*e*PKP	PKPdf	13 45 39.3	-2.9
WMQ	Urumqi	174.27	62	*e*PKP	PKPdf	13 45 43.8	+0.7
WMQ				AMB	AMB		
	comp=E,370nm,5.3s						
WMQ				LR	LR		
	comp=E,190nm,21.1s						
GTA	Gaotai	175.64	245	*e*PKP	PKPdf	13 45 43.3	-0.5
GTA				pPKP	sPKPdf	13 45 47.8	-0.9
GTA				sPKP		13 45 50.5	

NOU 28 14:18:26.6, 15.°70S×167.°42E, h22km, MLv4.6, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.33	320	P	Pn	14 18 35.1	-1.0
DVP	Devils Point	2.14	160	P	Pn	14 19 01.1	0.0
KOUNC	Koumac, New Ca	5.67	211	P	Pn	14 19 49.6	0.0
YATNC	Mamie plateau,	6.34	184	P	Pn	14 19 57.9	-1.0
DZM	Mont Dzumac	6.40	188	P	Pn	14 19 59.9	+0.1
NOUC	Port Laguerre	6.45	189	P	Pn	14 20 00.2	-0.1
ONTNC	Ouen Toro	6.64	188	P	Pn	14 20 03.2	+0.4
OUENC	Ouen Island, N	6.71	185	P	Pn	14 20 04.1	+0.3
PINNC	Pines Island,	6.88	180	P	Pn	14 20 06.4	+0.3

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*ISK **28** 14:25:34.3, 38.°11N×38.°47E, h9km, ML3.5/27*
*DDA **28** 14:25:34.4, 38.°10N×38.°47E, h11km±2km, MW3.6*

ISC 28 14:25:34.8±1.0, 38.°11N±0.°02×38.°46E±0.°02, h8km±8km, n62, σ0ˢ83/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.21	352	PG	Pg	14 25 39.3	+0.2
MALT				SG	Sg	14 25 42.5	+0.5
AKCD	Akcadag	0.47	294	*i* P	Pg	14 25 44.0	+0.1
AKCD				*i* S	Sg	14 25 50.8	+0.7
ELZG	Elazig	0.57	46	*i* P	Pg	14 25 45.3	-0.5
ELZG				*i* S	Sg	14 25 53.4	+0.1
ATAB	Bozova	0.65	192	*i* P	Pg	14 25 47.3	0.0
ATAB				*i* S	Sg	14 25 55.6	-0.2
HEKM	Malatya_Hekimh	0.87	333	*i* P	Pg	14 25 51.1	-0.4
HEKM				*i* S	Sb	14 26 03.8	-0.3
DARE	Darende-Malaty	0.90	301	PG	Pg	14 25 51.9	-0.2
DARE				SG	Sb	14 26 05.1	+0.2
ARPR	Arapgir-MALATY	0.99	354	PG	Pg	14 25 53.5	-0.4
SANL	SANLIURFA_Merk	1.02	156	*i* P	Pb	14 25 54.0	-0.7
SANL				*i* S	Sb	14 26 08.2	-0.2
GZT	Gaziantep	1.03	224	*i* P	Pb	14 25 54.6	-0.5
GZT				*i* S	Sn	14 26 10.4	-0.1
ELBS	KAHRAMANMARAS	1.07	282	*i* P	Pg	14 25 54.7	-0.7
ELBS				*i* S	Sn	14 26 11.6	+0.2
CUGUR	Gurin_SVAS	1.12	304	*i* P	Pg	14 25 55.8	-0.5
CUGUR				*i* S	Sn	14 26 11.8	-0.8
KEMA	Kemaliye	1.16	1	*i* P	Pb	14 25 55.8	-1.4
KEMA				*i* S	Sb	14 26 11.8	-0.6
KOVA	Elazig, Kovanc	1.22	60	*i* P	Pb	14 25 57.4	-0.8
KOVA				*i* S	Sn	14 26 16.9	+2.0
SURC	SANLIURFA_SURC	1.23	174	*i* P	Pg	14 25 58.3	-0.1
SURC				*i* S	Sn	14 26 15.4	+0.3
KHMN	Narli-Kahraman	1.26	236	PN	Pg	14 25 58.7	-0.2
KHMN				SN	Sn	14 26 16.4	+0.6
REFA	Refahiye_ERZN	1.31	10	*i* P	Pg	14 26 08.1	+8.2
REFA				*i* S	Sg	14 26 31.5	+15
TNCL	Tunceli-Merkez	1.31	40	*i* P	Pn	14 25 58.3	-1.3
TNCL				*i* S	Sg	14 26 18.9	+1.8
DIYA	Diyarbakir	1.32	97	*i* P	Pg	14 25 59.6	-0.6
DIYA				*i* S	Sg	14 26 18.5	+1.2
DYBB	Diyarbakir	1.33	96	PN	Pg	14 25 59.7	-0.7
DYBB				SN	Sg	14 26 17.9	+0.3
ILIC	ilic-Erzincan	1.35	3	PN	Pb	14 25 59.6	-0.8
ILIC				SN	Sg	14 26 18.7	+0.5
GAZ	Gaziantep	1.36	227	PN	Pb	14 26 00.1	-0.5
KMRS	Kahramanmaras	1.38	245	PN	Pb	14 26 00.3	-0.5
CUKAN	kangal_SIVAS	1.44	327	*i* P	Pn	14 26 00.7	-0.6
CUKAN				*i* S	Sg	14 26 21.0	-0.1
HCB	Kahramanmara	1.45	239	*i* P	Pn	14 26 01.1	-0.2
HCB				*i* S	Sg	14 26 21.6	+0.2
HANI	Diyarbakir_Han	1.55	78	*i* P	Pb	14 26 03.3	-0.6
HANI				*i* S	Sg	14 26 25.0	+0.2
SARI	SarD1z-Kayseri	1.64	281	PN	Pn	14 26 04.0	-0.1
KAMA	Osmaniye	1.70	238	*i* P	Pn	14 26 04.3	-0.5
KAMA				*i* S	Sn	14 26 26.4	-0.3
MAZI	Mazidag	1.70	112	PN	Pb	14 26 04.9	-1.5
ANDN	Andirin	1.76	253	*i* P	Pn	14 26 05.7	0.0
ANDN				*i* S	Sg	14 26 31.4	+0.1
ERZN	Erzincan	1.77	33	PN	Pn	14 26 05.9	0.0
CUALT	Altinyayla-SIV	1.78	312	*i* P	Pg	14 26 08.1	-0.8
CUALT				*i* S	Sg	14 26 32.4	+0.4
CUZAR	Zara_SIVAS	1.86	343	*i* P	Pg	14 26 09.7	-0.8
CUZAR				*i* S	Sg	14 26 37.4	+2.8
EUZM	Uzumlu	1.87	31	*i* P	Pb	14 26 08.9	-0.3
EUZM				*i* S	Sg	14 26 37.2	+2.4
MARD	Mardin	2.00	113	*i* P	Pn	14 26 09.3	+0.3
MARD				*i* S	Sg	14 26 38.6	-0.4
SCER	sogukcermik	2.04	330	*i* P	Pb	14 26 12.2	+0.1
YEDI	Yedisu-Bingol	2.10	50	PN	Pn	14 26 10.6	+0.2
SUSE	Susehri	2.11	355	*i* P	Pb	14 26 11.6	-1.8
SUSE				*i* S	Sb	14 26 40.2	+0.4
KELT	Kelkit	2.13	17	*i* P	Pb	14 26 12.4	-1.4
KELT				*i* S	Sg	14 26 41.6	-1.7
SVAN	Silvan-Diyarba	2.16	88	PN	Pn	14 26 10.9	-0.2
SVAN	Silvan-Diyarba	2.16	88	*i* P	Pn	14 26 11.1	0.0
SVAN				*i* S	Sb	14 26 41.0	0.0
CUSAR	Sarkisla-SIVAS	2.17	308	*i* P	Pb	14 26 14.1	-0.4
KOZT	Kozan	2.18	254	PN	Pn	14 26 12.0	+0.6
SLHN	Bingol, Solhan	2.18	66	*i* P	Pb	14 26 13.7	-0.9
BNN	Bunyan	2.19	291	PN	Pn	14 26 11.6	0.0
BTMN	Batman	2.23	95	*i* P	Pn	14 26 12.4	+0.3
BTMN				*i* S	Sb	14 26 43.9	+0.7
ALUC	Giresun/Alucra	2.25	6	*i* P	Pb	14 26 14.8	-1.0
MIDY	Mardin/Midyat-	2.43	106	*i* P	Pb	14 26 18.7	-0.1
RSDY	Resadiye-TOKAT	2.45	339	PN	Pn	14 26 15.7	+0.6
KOPT	Kop Dagi	2.48	39	*i* P	Pb	14 26 18.5	-1.3
BAYT	Aydıntepe-Bayb	2.63	29	PN	Pn	14 26 18.1	+0.4
TOKT	Tokat	2.67	327	PN	Pn	14 26 18.5	+0.4
SRTM	Siirt_Merkez	2.73	91	*i* P	Pn	14 26 19.1	+0.1
CMRD	Camardi-Nigde	2.78	262	PN	Pn	14 26 21.3	+1.5
ESPY	Espiye-Giresun	2.81	4	PN	Pn	14 26 20.9	+0.8
KARA	Karaisali	2.83	254	PN	Pn	14 26 21.3	+0.9
GURO	Guroymak-BITLI	2.84	80	PN	Pn	14 26 21.3	+0.7
KRTS	Karatas	2.90	239	PN	Pn	14 26 21.9	+0.7
KTUT	Trabzon	3.05	19	PN	Pn	14 26 24.2	+0.9
SIRT	Sirnak	3.21	100	PN	Pn	14 26 26.4	+0.8
KVT	Kavak	3.51	329	PN	Pn	14 26 30.6	+0.9
AKDM	Akdamar-Van	3.56	85	PN	Pn	14 26 31.5	+0.9
CORM	Corum	3.63	306	PN	Pn	14 26 32.2	+0.8

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*IDC **28** 14:43:40.8±0.7, 28.°33N×104.°88E, h0km, mb3.9/16, mb1 4.1/17, mb1mx3.9/42, mbtmp3.9/17, ML4.0/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/29, Error ellipse: s-maj=26.5km s-min=14.4km az=54.0*
*NEIC **28** 14:43:42.4±1.5, 28.°44N±0.°04×104.°88E±0.°10, h10km±1km, mb4.6/20, Error ellipse: s-maj=15.7km s-min=4.7km az=247.0*

ISC 28 14:43:42.8±0.5, 28.°60N±0.°08×105.°24E±0.°09, h10km, n59, σ1ˢ43/57, mb4.2/22, MS3.8/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENH	Enshi	4.06	65		Pb	14 44 51.5	-2.9
PAYA	Payao	10.42	209	P	Pn	14 46 16.2	+3.8
CM34	Chiang Mai Arr	11.19	211	P	Pn	14 46 24.0	+1.2
CM33	Chiang Mai Arr	11.31	212	P	Pn	14 46 25.0	+0.5
CMMT	Chiang Mai	11.31	212	P	Pn	14 46 25.0	+0.4
CHTO	Chiang Mai	11.32	212		Pn	14 46 20.8	-3.8
CM35	Chiang Mai Arr	11.34	211	P	Pn	14 46 27.0	+2.1
CM32	Chiang Mai Arr	11.50	212	P	Pn	14 46 29.0	+1.9
CM36	Chiang Mai Arr	11.50	211	P	Pn	14 46 28.0	+0.8
CM09	Chiang Mai Arr	11.62	211	P	Pn	14 46 30.0	+1.3
CM31	Chiang Mai Arr	11.63	211	P	Pn	14 46 30.2	+1.4
CMAR	Chiang Mai Arr	11.63	211	Pn	Pn	14 46 29.3	+0.5
	baz=19,slow=12,SNR=40						
CMAR				LR	LR	14 51 12.9	
	comp=Z,77nm,19.4s,baz=285,slow=40						
CMAR	Chiang Mai Arr	11.63	211		Pn	14 46 25.8	-3.0
CM15	Chiang Mai Arr	11.64	211	P	Pn	14 46 30.2	+1.2
CM02	Chiang Mai Arr	11.64	211	P	Pn	14 46 30.2	+1.2
CM01	Chiang Mai Arr	11.65	211	P	Pn	14 46 30.4	+1.3
CM04	Chiang Mai Arr	11.66	211	P	Pn	14 46 30.2	+0.9
CM05	Chiang Mai Arr	11.67	211	P	Pn	14 46 30.6	+1.2
CM13	Chiang Mai Arr	11.67	211	P	Pn	14 46 30.0	+0.5
SONM	Songino Array	19.23	2	P	Pn	14 48 10.9	+2.8
	0.4nm,0.3s,baz=179,slow=10,SNR=9.1						
SONM	Songino Array	19.23	2	P	Pn	14 48 07.3	-0.7
KS19	Wonju Array Si	20.90	59	P	Pn	14 48 29.5	+1.7
KS19				IAmb	IAmb	14 48 36.3	
	comp=Z,17nm,1.2s						
KSRS	Korea Array	20.93	59	P	Pn	14 48 28.7	+0.6
	comp=Z,2.0nm,0.6s,baz=243,slow=9.8,SNR=8.9						
MK31	Makanchi Array	25.53	322	P	P	14 49 10.8	-0.7
MKAR	Makanchi Array	25.53	322	P	P	14 49 12.0	+0.5
	comp=Z,3.4nm,0.9s,baz=126,slow=11,SNR=22						
MKAR				PcP	PcP	14 52 42.3	-0.5
	comp=Z,0.8nm,1.0s,baz=137,slow=1.0,SNR=3.5						
MKAR	Makanchi Array	25.53	322	P	P	14 49 11.1	-0.4
MAKZ	Makanchi	25.71	321	P	P	14 49 12.8	-0.3
ZALV	Zalesovo Beam	29.40	335	P	P	14 49 46.8	+0.7
	comp=Z,1.9nm,0.7s,baz=136,slow=8.8,SNR=7.7						
ZALV	Zalesovo Beam	29.40	335	P	P	14 49 46.2	+0.2
KURBB	Kurchatov Arra	29.84	325	P	P	14 49 49.2	-0.8
	comp=Z,0.8nm,0.8s,baz=130,slow=9.2,SNR=6.4						
KURBB				PcP	PcP	14 52 52.3	-0.7
	comp=Z,0.4nm,0.6s,baz=119,slow=2.1,SNR=4.9						
KURK	Kurchatov	29.85	325	P	P	14 49 48.6	-1.5
TOLI2	Tolitoli	31.11	149	P	P	14 50 01.5	0.0
TOLI2				IAmb	IAmb	14 50 11.0	
	comp=Z,7.4nm,1.1s						
ABKAR	Akbulak array	40.09	314	P	P	14 51 18.2	-0.1
GEYT	Alibeck	40.13	296	P	P	14 51 17.1	-1.7
	comp=Z,2.8nm,0.7s,baz=186,slow=8.6,SNR=4.9						
GEYT	Alibeck	40.13	296	IAmb	IAmb	14 51 21.0	
	comp=Z,3.9nm,1.0s						
TIXI	Tiksi	45.02	10	P	P	14 51 59.3	+1.2
TIXI				IAmb	IAmb	14 52 00.3	
	comp=Z,3.9nm,1.2s						
PETK	Petropavlovsk-	45.34	42	P	P	14 52 04.1	+3.2
	comp=Z,6.2nm,0.9s,baz=247,slow=5.8,SNR=2.2						
WRAB	Tennant Creek	55.85	146	P	P	14 53 19.4	-1.1
WRAB				IAmb	IAmb	14 53 33.7	
	comp=Z,19nm,0.5s						
WRA	Warramunga Arr	55.85	146	P	P	14 53 19.9	-0.8
	comp=Z,2.5nm,0.5s,baz=337,slow=8.2,SNR=53						
WRA	Warramunga Arr	55.85	146	P	P	14 53 19.3	-1.3
WB2	Warramunga Arr	55.85	146	P	P	14 53 19.7	-0.9
WB2				IAmb	IAmb	14 53 20.7	
	comp=Z,8.6nm,1.1s						
WR0	Warramunga Arr	55.96	146	P	P	14 53 20.3	-1.1
WR0				IAmb	IAmb	14 53 48.2	
	comp=Z,9.3nm,1.4s						
AS31	Alice Springs	58.84	149	P	P	14 53 41.5	-0.2
ASAR	Alice Springs	58.84	149	P	P	14 53 41.2	-0.5
	comp=Z,1.3nm,0.6s,baz=327,slow=6.8,SNR=41						
ASAR	Alice Springs	58.84	149	P	P	14 53 41.4	-0.3
KEV	Kevo	59.41	337	P	P	14 53 46.0	+1.0

AKASG	**Malin Array Be**	**59.83**	**314**	P	**P**	**14 53 47.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=70,slow=5.6,SNR=2.4						
AKASG				LR	LR	15 24 10.1	
	comp=Z,63nm,20.2s,baz=40,slow=41						
ARCES	**ARCESS Array B**	**59.94**	**336**	P	**P**	**14 53 48.0**	**-0.7**
	comp=Z,4.6nm,0.9s,baz=270,slow=0.6,SNR=5.3						
ARCES				LR	LR	15 20 13.4	
	comp=Z,63nm,19.0s,baz=240,slow=36						
FINES	**FINESS Array B**	**60.20**	**327**	P	**P**	**14 53 50.9**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=112,slow=5.1,SNR=5.8						
FINES				LR	LR	15 22 13.3	
	comp=Z,231nm,18.6s,baz=338,slow=38						
NC405	**NORSAR Array S**	**67.04**	**328**	P	**P**	**14 54 35.0**	**-0.9**
NOA	**NORSAR Array B**	**67.30**	**328**	P	**P**	**14 54 37.0**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=70,slow=5.4,SNR=1.8						
NC204	**NORSAR Array S**	**67.43**	**329**	P	**P**	**14 54 38.2**	**-0.1**
STKA	**Stephens Creek**	**69.38**	**147**	P	**P**	**14 54 49.9**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=338,slow=11,SNR=1.3						
GERES	**GERESS Array B**	**70.01**	**315**	P	**P**	**14 54 54.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=66,slow=7.9,SNR=2.5						
SKT	**Skwentna**	**71.05**	**29**	P	**P**	**14 55 02.5**	**+1.7**
SKT				IAmb	IAmb	14 55 10.4	
	comp=Z,7.5nm,1.3s						
ILAR	**Eielson Array**	**71.67**	**25**	P	**P**	**14 55 06.6**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=285,slow=4.3,SNR=2.4						
MENT	**Mentasta**	**73.80**	**26**	P	**P**	**14 55 18.4**	**+1.3**
MENT				IAmb	IAmb	14 55 21.1	
	comp=Z,5.0nm,0.6s						
CORL	**Corleone**	**74.47**	**305**	P	**P**	**14 55 18.9**	**-2.7**
YKA	**Yellowknife Ar**	**83.78**	**17**	P	**P**	**14 56 13.3**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=299,slow=3.6,SNR=3.7						

IDC ***28*** *15:21:30.9±2.5, 44°.89N×150°.51E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.6/28, mbtmp3.8/5, Error ellipse: s-maj=103.2km s-min=27.8km az=77.0*

SKHL ***28*** *15:21:37.4±0.2, 44°.47N×150°.14E, h60^{km}±9^{km}, mb4.4/2*

MOS ***28*** *15:21:40.0±1.1, 44°.71N×149°.70E, h73^{km}, mb4.0/1, Error ellipse: s-maj=28.4km s-min=24.0km az=173.9*

ISC 28 15:21:37.1±1.2**, 44°.65N**±0°.10×**150°.02E**±0°.09**, h34^{km}, n19, σ1^{s}32**/19**, mb3.6**/5**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.64**	**292**	*e*P	**Pn**	**15 22 05.0**	**+1.6**
KUR				AMB	AMB	15 22 07.0	
	90nm,0.4s						
KUR				*i* S	**Sb**	**15 22 25.7**	**-1.2**
KUR				A	A	15 22 26.0	
	170nm,0.3s						
KUR				A	A	15 22 26.0	
	170nm,0.3s						
KUR	**Kuril'sk**	**1.64**	**292**	*de*PN	**Pb**	**15 22 05.3**	**-1.4**
KUR				*i* S	**Sn**	**15 22 25.6**	**+2.3**
KUR				pmax	pmax		
	comp=Z,72nm,0.5s						
KUR				pmax	pmax		
	comp=E,37nm,0.2s						
KUR				pmax	pmax		
	comp=N,33nm,0.3s						
KUR				smax	smax		
	comp=N,156nm,0.2s						
KUR				smax	smax		
	comp=E,70nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.05**	**260**	*e*P	**Pn**	**15 22 24.0**	**+1.2**
YUK				AMB	AMB	15 22 26.0	
	comp=E,60nm,0.3s						
YUK				*i* S	**Sn**	**15 22 59.0**	**+0.9**
YUK				A	A	15 23 03.0	
	comp=E,190nm,0.5s						
YUK				A	A	15 23 03.0	
	comp=E,110nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.05**	**260**	*e*PN	**Pn**	**15 22 24.6**	**+1.8**
YUK				*i* S	**Sn**	**15 22 59.7**	**+1.6**
YUK				pmax	pmax		
	comp=Z,56nm,0.2s						
YUK				smax	smax		
	comp=N,60nm,0.2s						
YUK				smax	smax		
	comp=E,69nm,0.2s						
GRPR	**Tuman**	**3.12**	**259**	*i* S	**Sn**	**15 23 00.0**	**+0.1**
NMR	**Nemuro--Hokkai**	**3.35**	**249**	*e*P	**Pn**	**15 22 27.5**	**+0.5**
NMR				*e*S	**Sn**	**15 23 04.9**	**-0.7**
NMR	**Nemuro--Hokkai**	**3.35**	**249**	*e*PN	**Pn**	**15 22 27.3**	**+0.3**
NMR				S	**Sn**	**15 23 04.4**	**-1.2**
GLVR	**Golovnino**	**3.36**	**256**	*i* S	**Sn**	**15 23 06.0**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**28.54**	**145**	T	T	15 58 23.7	
	baz=333,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.56**	**145**	T	T	15 58 24.8	
	baz=333						
H11N3	**WAKE ISLAND Hy**	**28.56**	**145**	T	T	15 58 23.7	
	baz=333,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.57**	**146**	T	T	15 59 39.4	
	baz=335,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**29.57**	**147**	T	T	15 59 38.8	
	baz=335,slow=76,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**29.59**	**147**	T	T	15 59 40.5	
	baz=335,slow=76,SNR=4.1						
MKAR	**Makanchi Array**	**45.99**	**298**	P	**P**	**15 29 57.5**	**+0.5**
	comp=E,0.5nm,0.7s,baz=83,slow=8.6,SNR=6.1						
FINES	**FINESS Array B**	**64.99**	**334**	P	**P**	**15 32 11.4**	**-1.8**
	comp=E,5.2nm,1.0s,baz=43,slow=8.4,SNR=2.6						
WRA	**Warramunga Arr**	**65.86**	**196**	P	**P**	**15 32 19.8**	**+0.7**
	comp=E,0.4nm,0.7s,baz=13,slow=6.9,SNR=4.5						
ASAR	**Alice Springs**	**69.56**	**196**	P	**P**	**15 32 44.1**	**+1.6**
	comp=E,0.6nm,1.0s,baz=9.7,slow=7.1,SNR=5.1						
AKASG	**Malin Array Be**	**72.05**	**325**	P	**P**	**15 32 56.8**	**-0.6**
	comp=E,0.4nm,0.4s,baz=41,slow=6.2,SNR=1.7						

WEL 28 15:41:29.5±0.5**, 34°S**±8°×**17°9W**±1°8**, h149^{km}**±13^{km}**, M4.1**/32**, mB4.6**/13**, ML4.8**/22**, MLv4.7**/32**, Mw(mB)3.8**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.34**	**204**	P	Pn	15 42 34.9	+0.8
MXZ				S	Sn	15 43 24.2	-0.2
GLKZ	**Green Lake**	**4.54**	**17**	P	Pn	15 42 34.2	-2.6
GLKZ				S	Sn	15 43 26.4	-2.8
WMGZ	**Waiomatatini S**	**4.54**	**202**	P	Pn	15 42 37.5	+0.8
WMGZ				S	Sn	15 43 29.7	+0.6
HAZ	**Te Kaha**	**4.70**	**208**	P	Pn	15 42 40.4	+1.5
HAZ				S	Sn	15 43 36.0	+3.1
PKGZ	**Pakihiroa**	**4.71**	**204**	P	Pn	15 42 39.7	+0.7
PKGZ				S	Sn	15 43 33.4	+0.1
PUZ	**Puketiti**	**4.82**	**202**	P	Pn	15 42 42.5	+2.0
PUZ				S	Sn	15 43 35.6	-0.2
RUGZ	**Raukumara Rang**	**4.92**	**207**	P	Pn	15 42 42.7	+0.7
RUGZ				S	Sn	15 43 40.2	+1.8
TWGZ	**Tauwhareparae**	**5.00**	**204**	P	Pn	15 42 43.4	+0.4
TWGZ				S	Sn	15 43 40.9	+0.7
CNGZ	**Carnagh Statio**	**5.21**	**200**	P	Pn	15 42 45.7	0.0
TKGZ	**Te Karaka**	**5.28**	**203**	P	Pn	15 42 47.1	+0.5
TKGZ				S	Sn	15 43 44.2	-2.6
MWZ	**Matawai**	**5.30**	**206**	P	Pn	15 42 46.9	0.0
MWZ				S	Sn	15 43 46.9	-0.5
MARZ	**Manawahe**	**5.37**	**215**	S	Sn	15 43 51.7	+2.8
URZ	**Urewera**	**5.40**	**210**	P	Pn	15 42 48.9	+0.7
URZ				S	Sn	15 43 50.8	+1.2
RAGZ	**Rawiri**	**5.49**	**206**	P	Pn	15 42 49.7	+0.3
RAGZ				S	Sn	15 43 52.1	+0.3
RIGZ	**Rimuhau**	**5.55**	**203**	P	Pn	15 42 50.2	0.0
RIGZ				S	Sn	15 43 53.1	-0.2
PRGZ	**Paritu Road**	**5.71**	**201**	P	Pn	15 42 51.7	-0.6
SNGZ	**Shannon Statio**	**5.76**	**206**	P	Pn	15 42 53.4	+0.3
SNGZ				S	Sn	15 43 57.7	-0.7
KNZ	**Kokohu**	**5.87**	**202**	P	Pn	15 42 53.1	-1.3
MHGZ	**Mahia Peninsul**	**5.92**	**200**	P	Pn	15 42 54.0	-1.0
MHGZ				S	Sn	15 43 56.5	-5.6
RAHZ	**Arahi**	**5.98**	**207**	P	Pn	15 42 58.2	+2.3
MTHZ	**Maungataniwha**	**6.02**	**209**	P	Pn	15 42 57.8	+1.3
WHHZ	**Waihua**	**6.07**	**205**	P	Pn	15 42 58.6	+1.6
MRHZ	**Matea Rd**	**6.18**	**211**	P	Pn	15 43 00.1	+1.5
NMHZ	**Naumai**	**6.24**	**208**	P	Pn	15 43 01.9	+2.4
ARHZ	**Aropaoanui**	**6.32**	**206**	P	Pn	15 43 02.3	+1.9
BKZ	**Black Stump Fm**	**6.42**	**209**	P	Pn	15 43 02.1	+0.2
MCHZ	**McNeill Hill**	**6.58**	**207**	P	Pn	15 43 05.1	+1.1
KWHZ	**Kaweka Forest**	**6.67**	**208**	P	Pn	15 43 06.9	+1.7
TMVZ	**Te Maari**	**6.73**	**214**	P	Pn	15 43 07.8	+1.9
ETVZ	**East Tongariro**	**6.74**	**214**	P	Pn	15 43 08.5	+2.4
OTVZ	**Oturere**	**6.78**	**214**	P	Pn	15 43 08.3	+1.5
KAHZ	**Kahuranaki**	**6.83**	**204**	P	Pn	15 43 06.2	-1.1
BHHZ	**Black Hill Sta**	**6.88**	**210**	P	Pn	15 43 09.7	+1.8
KRHZ	**Kereru**	**6.88**	**208**	P	Pn	15 43 08.4	+0.4
MTVZ	**Mangateitei**	**7.05**	**214**	P	Pn	15 43 11.1	+0.8
TSZ	**Takapari Road**	**7.40**	**208**	P	Pn	15 43 14.6	-0.3
ANWZ	**Angora Road**	**7.56**	**204**	P	Pn	15 43 17.8	+0.9
BFZ	**Birch Farm**	**7.84**	**205**	P	Pn	15 43 18.5	-2.2
TIWZ	**Tintock**	**8.05**	**206**	P	Pn	15 43 22.9	-0.7
MRZ	**Mangatainoka R**	**8.07**	**208**	P	Pn	15 43 22.3	-1.5
HOWZ	**Holdsworth Sta**	**8.29**	**207**	P	Pn	15 43 25.6	-1.2
OGWZ	**Otaki Gorge**	**8.36**	**209**	P	Pn	15 43 27.1	-0.6
KIW	**Kapiti Island**	**8.51**	**210**	P	Pn	15 43 28.4	-1.2
CAW	**Cannon Point**	**8.65**	**209**	P	Pn	15 43 30.3	-1.2
CAW				S	Sn	15 45 03.0	-4.6
TCW	**Tory Channel**	**9.06**	**211**	P	Pn	15 43 36.8	-0.3
TUWZ	**Tuamarina**	**9.39**	**212**	P	Pn	15 43 41.7	+0.4
KHZ	**Kahutara**	**10.37**	**210**	P	Pn	15 43 54.3	0.0
FOZ	**Fox Glacier**	**12.96**	**217**	P	P	15 44 31.6	-1.4
FOZ				S	Sn	15 46 44.2	-7.1

TUL ***28*** *15:48:35.1±1.3, 36°.62N±0°.01×97°.71W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg2.9/51(NEIC), Error ellipse: s-maj=2.9km s-min=1.7km az=63.0*

NEIC ***28*** *15:48:35.1±0.6, 36°.60N±0°.01×97°.71W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=3.0km s-min=0.9km az=63.0*

ANF ***28*** *15:48:36.2±0.9, 36°.67N×97°.71W, h13^{km}±6^{km}, ML3.6/9, Error ellipse: s-maj=2.8km s-min=2.5km az=103.0*

ISC 28 15:48:35.3±1.0**, 36°.60N**±0°.02×**97°.71W**±0°.02**, h6^{km}**±11^{km}**, n61, σ0^{s}72**/58**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.24**	**246**		**Pg**	**15 48 40.3**	**+0.3**
CROK				Sg	**Sg**	**15 48 44.1**	**+0.9**
KAN14	**Manchester OK**	**0.41**	**330**		**Pg**	**15 48 43.1**	**0.0**
KAN14				Sg	**Sg**	**15 48 48.7**	**+0.3**
KAN13	**South Haven SW**	**0.45**	**25**		**Pg**	**15 48 43.9**	**-0.1**
KAN13				Sg	**Sg**	**15 48 49.6**	**-0.2**
KAN01	**Argonia South**	**0.55**	**356**		**Pg**	**15 48 45.7**	**-0.2**
KAN01				Sg	**Sg**	**15 48 53.1**	**0.0**
KAN10	**Anthony SW Sta**	**0.60**	**330**		**Pg**	**15 48 46.8**	**-0.1**
KAN10				Sg	**Sg**	**15 48 54.9**	**+0.2**
KAN08	**Anthony NE Sta**	**0.66**	**342**		**Pg**	**15 48 47.8**	**-0.1**
KAN08				Sg	**Sg**	**15 48 56.6**	**+0.2**
KAN12	**Harper NE Stat**	**0.73**	**342**		**Pg**	**15 48 49.1**	**-0.2**
KAN12				Sg	**Sg**	**15 48 58.7**	**-0.1**
OK029	**Liberty Lake**	**0.83**	**165**		**Pg**	**15 48 51.1**	**-0.2**
QUOK	**Quay**	**0.92**	**118**		**Pg**	**15 48 52.5**	**-0.4**
QUOK				Sg	**Sg**	**15 49 04.4**	**-0.4**
BCOK	**Bluff Creek, N**	**0.95**	**175**		**Pg**	**15 48 53.1**	**-0.3**
OK031	**S. Brethren Rd**	**0.96**	**132**		**Pg**	**15 48 53.4**	**-0.3**
OK030	**Cody Creek RV**	**1.01**	**132**		**Pg**	**15 48 54.3**	**-0.4**
OK030				Sg	**Sg**	**15 49 07.4**	**-0.4**
T35A	**Sooner Cattle**	**1.01**	**72**		**Pg**	**15 48 54.1**	**-0.7**
U32A	**Winter Ranch,**	**1.06**	**258**		**Pg**	**15 48 55.1**	**-0.6**
OK025	**Westminster Rd**	**1.06**	**163**		**Pg**	**15 48 55.3**	**-0.4**
OKCFA	**Oklahoma City**	**1.21**	**170**		**Pg**	**15 48 57.7**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**1.22**	**169**		**Pg**	**15 48 57.8**	**-0.8**
FNO	**Franklin**	**1.37**	**169**		**Pn**	**15 49 00.6**	**-0.3**
W35A	**Tecumseh**	**1.60**	**155**	Pn	**Pn**	**15 49 04.1**	**0.0**
W35A				IAmb_Lg		15 49 25.0	
	comp=Z,39nm,0.8s						
TUL1	**Leonard**	**1.70**	**113**	P	**Pn**	**15 49 05.8**	**+0.3**
	baz=295						
TUL1				S	**Sb**	**15 49 28.7**	**+0.1**
	baz=295						
TUL1	**Leonard**	**1.70**	**113**		**Pn**	**15 49 05.6**	**+0.1**
TUL1				IAmb_Lg		15 49 29.3	
	comp=Z,60nm,0.8s						
R32A	**Long Quarter,**	**1.98**	**337**		**Pb**	**15 49 10.4**	**-1.3**
X34A	**Smith Ranch, M**	**2.00**	**183**		**Pn**	**15 49 10.2**	**+0.6**
X34A				IAmb_Lg		15 49 43.1	
	comp=Z,41nm,0.8s						
WMOK	**Wichita Mounta**	**2.06**	**205**	P	**Pn**	**15 49 10.9**	**+0.5**
	baz=25						
WMOK				S	**Sb**	**15 49 38.3**	**-0.5**
	baz=25						
WMOK	**Wichita Mounta**	**2.06**	**205**		**Pn**	**15 49 10.7**	**+0.3**
WMOK				IAmb_Lg		15 49 42.8	
	comp=Z,46nm,0.7s						
KSU1	**Kansas State U**	**2.64**	**19**	P	**Pg**	**15 49 24.4**	**-1.5**
	baz=200						
KSU1				Sb	**Sb**	**15 49 56.2**	**+0.5**
	baz=200						
KSU1	**Kansas State U**	**2.64**	**19**	Pn	**Pn**	**15 49 18.8**	**+0.4**
U38A	**Gravette**	**2.69**	**93**		**Pn**	**15 49 19.4**	**+0.4**
CBKS	**Cedar Bluff**	**2.73**	**325**	Sb	**Sb**	**15 49 59.0**	**+0.8**
	baz=143						
CBKS	**Cedar Bluff**	**2.73**	**325**	Pn	**Pn**	**15 49 20.5**	**+0.9**
X37A	**Clayton**	**2.77**	**136**	Pn	**Pn**	**15 49 21.5**	**+1.2**
X37A				IAmb_Lg		15 50 06.5	
	comp=Z,46nm,0.8s						
HHAR	**Hobbs**	**3.06**	**95**	Pn	**Pn**	**15 49 24.8**	**+0.6**
W39A	**Magazine**	**3.49**	**113**	Pb	**Pb**	**15 49 38.3**	**+0.9**
	baz=295						
AMTX	**Amarillo**	**3.66**	**243**	Sb	**Sg**	**15 50 30.0**	**-2.7**
	baz=61						
AMTX	**Amarillo**	**3.66**	**243**	IAmb_Lg		15 50 39.9	
	comp=Z,26nm,0.8s						
S39A	**Bolivar**	**3.67**	**72**	Pn	**Pn**	**15 49 32.4**	**-0.2**
U40A	**Yellville**	**3.92**	**92**	P	**Pn**	**15 49 36.9**	**+0.8**
	baz=275						
U40A	**Yellville**	**3.92**	**92**	Pn	**Pn**	**15 49 36.1**	**0.0**
U40A				IAmb_Lg		15 50 46.5	
	comp=Z,27nm,0.7s						
MIAR	**Mount Ida**	**3.95**	**120**	Pb	**Pb**	**15 49 46.3**	**+1.0**
	baz=303						
MIAR	**Mount Ida**	**3.95**	**120**	IAmb_Lg		15 50 40.9	
	comp=Z,30nm,0.8s						
MGMO	**Mountain Grove**	**4.40**	**81**	Pn	**Pn**	**15 49 43.1**	**+0.5**
MGMO				IAmb_Lg		15 50 55.8	
	comp=Z,46nm,0.9s						
P38A	**Dawn**	**4.47**	**46**	IAmb_Lg		15 50 55.2	
	comp=Z,29nm,0.7s						
X40A	**Basin Creek Fa**	**4.50**	**117**	IAmb_Lg		15 50 57.5	
	comp=Z,14nm,0.7s						
WHAR	**Wooly Hollow**	**4.59**	**105**	Pn	**Pn**	**15 49 46.2**	**+1.0**
WHAR				IAmb_Lg		15 51 02.2	
	comp=Z,25nm,1.0s						
WHTX	**Lake Whitney,**	**4.61**	**177**	P	**Pn**	**15 49 45.7**	**+0.3**
	baz=358						
WHTX	**Lake Whitney,**	**4.61**	**177**	Pn	**Pn**	**15 49 45.7**	**+0.3**
R40A	**Maddies Statio**	**4.65**	**67**	Pn	**Pn**	**15 49 45.1**	**-0.9**
R40A				IAmb_Lg		15 51 04.5	
	comp=Z,27nm,0.8s						
BGNE	**Belgrade**	**4.81**	**356**	Pn	**Pn**	**15 49 48.0**	**-0.3**
BGNE				IAmb_Lg		15 51 08.4	
	comp=Z,28nm,0.8s						
LCAR	**Lake Charles**	**5.32**	**94**	IAmb_Lg		15 51 26.2	
	comp=Z,16nm,0.7s						
T42A	**Van Buren**	**5.33**	**83**	Pn	**Pn**	**15 49 56.0**	**+0.6**
T42A				IAmb_Lg		15 51 30.2	
	comp=Z,16nm,0.7s						
P40A	**Paris**	**5.34**	**55**	IAmb_Lg		15 51 28.8	
	comp=Z,27nm,0.8s						
CCM	**Cathedral Cave**	**5.36**	**72**	IAmb_Lg		15 51 26.2	
	comp=Z,37nm,1.1s						
L34A	**Svendsen Farm,**	**5.46**	**11**	IAmb_Lg		15 51 39.6	
	comp=Z,27nm,0.8s						
N38A	**Joes South For**	**5.46**	**39**	IAmb_Lg		15 51 28.6	
	comp=Z,34nm,0.8s						
435B	**Jarrell**	**5.81**	**179**	IAmb_Lg		15 51 52.9	
	comp=Z,16nm,0.8s						
PBMO	**Poplar Bluff**	**5.86**	**86**	IAmb_Lg		15 51 47.1	
	comp=Z,31nm,0.7s						
SDCO	**Great Sand Dun**	**6.32**	**283**	Pn	**Pn**	**15 50 10.7**	**+1.4**
N41A	**Harden Midland**	**6.75**	**51**	IAmb_Lg		15 52 08.5	
	comp=Z,21nm,0.7s						
SIUC	**Southern Illin**	**6.88**	**78**	IAmb_Lg		15 52 14.5	
	comp=Z,24nm,0.7s						
ECSD	**EROS Data Cent**	**7.17**	**6**	IAmb_Lg		15 52 25.6	
	comp=Z,7.1nm,1.1s						
RSSD	**Black Hills**	**8.92**	**329**	IAmb_Lg		15 53 39.2	
	comp=Z,6.2nm,0.7s						

DDA ***28*** *15:49:13.4, 36°.97N×36°.61E, h3^{km}±2^{km}, ML2.9*

ISK ***28*** *15:49:13.5, 37°.00N×36°.65E, h13^{km}, ML2.8/21*

ISC 28 15:49:13.4±1.0**, 37°.00N**±0°.03×**36°.65E**±0°.02**, h19^{km}**±2^{km}**, n44, σ1^{s}64**/68**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.19**	**5**	*i* P	**Pb**	**15 49 18.4**	**+0.8**
KAMA				*i* S	**Sg**	**15 49 20.7**	**-0.9**
HCB	**Kahramanmara**	**0.40**	**31**	*i* P	**Pb**	**15 49 22.3**	**+0.3**
HCB				*i* S	**Sg**	**15 49 26.3**	**-1.1**
KUZU	**Kuzuini**	**0.41**	**123**	*i* P	**Pb**	**15 49 22.2**	**0.0**
KUZU				*i* S	**Sg**	**15 49 26.2**	**-1.4**
GAZ	**Gaziantep**	**0.48**	**69**	PG	**Pb**	**15 49 23.6**	**+0.3**
GAZ				SG	**Sb**	**15 49 30.5**	**+0.4**
KMRS	**Kahramanmaras**	**0.54**	**22**	PG	**Pb**	**15 49 25.1**	**+0.8**
KMRS				SG	**Sb**	**15 49 32.6**	**+0.9**
KHMN	**Narli-Kahraman**	**0.56**	**46**	PG	**Pb**	**15 49 25.3**	**+0.7**
KHMN				SG	**Sb**	**15 49 33.1**	**+0.8**
KAHM	**Kahramanmaras,**	**0.58**	**28**	*i* P	**Pb**	**15 49 25.6**	**+0.7**
KAHM				*i* S	**Sg**	**15 49 30.9**	**-1.9**
ANDN	**Andirin**	**0.63**	**337**	*i* P	**Pb**	**15 49 26.4**	**+0.6**
ANDN				*i* S	**Sg**	**15 49 32.8**	**-1.5**
CEYT	**Ceyhan**	**0.72**	**271**	PG	**Pb**	**15 49 28.0**	**+0.7**
GZT	**Gaziantep**	**0.81**	**64**	*i* P	**Pb**	**15 49 29.7**	**+0.7**
GZT				*i* S	**Sg**	**15 49 37.5**	**-2.6**
GZT				IAML		15 49 44.0	
	comp=N,616nm,0.7s						
GZT				IAML		15 49 44.0	
	comp=E,459nm,0.4s						
KOZT	**Kozan**	**0.81**	**306**	PG	**Pb**	**15 49 29.9**	**+1.0**
KRTD	**Karatas-Adana**	**1.07**	**248**	PG	**Pn**	**15 49 34.3**	**+0.9**
SAIM	**ADANA**	**1.07**	**335**	*i* P	**Pg**	**15 49 34.2**	**0.0**
SAIM				*i* S	**Sb**	**15 49 43.3**	**-3.9**
SAIM				IAML		15 49 55.0	
	comp=E,342nm,0.3s						
KRTS	**Karatas**	**1.11**	**248**	PN	**Pg**	**15 49 35.4**	**+0.6**
KARA	**Karaisali**	**1.30**	**282**	PN	**Pn**	**15 49 37.2**	**+0.6**
ELBS	**KAHRAMANMARAS**	**1.38**	**16**	*i* P	**Pg**	**15 49 41.6**	**+1.7**
ELBS				*i* S	**Sn**	**15 49 53.0**	**-2.6**
ELBS				IAML		15 50 04.0	
	comp=E,180nm,0.7s						
ATAB	**Bozova**	**1.40**	**70**	*i* P	**Pg**	**15 49 41.2**	**+0.9**
ATAB				*i* S	**Sn**	**15 49 53.5**	**-2.3**
SARI	**SarD1z-Kayseri**	**1.42**	**353**	PN	**Pb**	**15 49 39.7**	**+0.4**
CMRD	**Camardi-Nigde**	**1.48**	**297**	PN	**Pn**	**15 49 40.4**	**+1.3**
DED	**Mersin**	**1.48**	**269**	*i* P	**Pb**	**15 49 41.0**	**+0.7**
DED				*i* S	**Sn**	**15 49 56.7**	**-1.3**
YAHY	**KAYSERI_Yahyal**	**1.50**	**317**	*i* P	**Pg**	**15 49 42.7**	**+0.4**
YAHY				*i* S	**Sn**	**15 49 55.2**	**-3.2**
GULE	**Gulek**	**1.52**	**281**	*i* P	**Pb**	**15 49 42.0**	**+0.9**
GULE				*i* S	**Sn**	**15 49 58.0**	**-1.2**
SURC	**SANLIURFA_SURC**	**1.58**	**94**	*i* P	**Pg**	**15 49 43.2**	**-0.6**
SURC				*i* S	**Sn**	**15 49 58.1**	**-2.3**
AKCD	**Akcadag**	**1.64**	**38**	*i* P	**Pb**	**15 49 44.2**	**+1.1**
AKCD				*i* S	**Sn**	**15 49 59.0**	**-3.1**
AKCD				IAML		15 50 09.0	
	comp=N,300nm,0.4s						
AKCD				IAML		15 50 10.0	
	comp=E,269nm,0.6s						
DARE	**Darende-Malaty**	**1.70**	**23**	PN	**Pn**	**15 49 43.7**	**+1.5**
CUGUR	**Gurin_SVAS**	**1.79**	**16**	*i* P	**Pg**	**15 49 48.7**	**+0.8**
CUGUR				*i* S	**Sn**	**15 50 04.8**	**-1.0**
CUGUR				IAML		15 50 24.0	
	comp=N,109nm,0.4s						
CUGUR				IAML		15 50 28.0	
	comp=E,122nm,0.6s						
NIDE	**Nigde/Merkez-G**	**1.79**	**304**	*i* P	**Pb**	**15 49 46.4**	**+0.7**
NIDE				*i* S	**Sn**	**15 50 06.0**	**+0.1**
SANL	**SANLIURFA_Merk**	**1.88**	**84**	*i* P	**Pb**	**15 49 47.2**	**+0.1**
SANL				*i* S	**Sn**	**15 50 08.1**	**+0.3**
SANL				IAML		15 50 20.0	
	comp=N,122nm,0.6s						
MALT	**Malatya**	**1.93**	**47**	PN	**Pn**	**15 49 47.2**	**+1.9**
BNN	**Bunyan**	**1.96**	**341**	PN	**Pn**	**15 49 47.7**	**+2.0**
KERG	**Konya-Eregli**	**2.06**	**282**	*i* P	**Pb**	**15 49 50.5**	**+0.3**
KERG				*i* S	**Sn**	**15 50 09.9**	**-2.4**
KIZK	**Mersin**	**2.08**	**256**	PN	**Pn**	**15 49 48.6**	**+1.4**
HEKM	**Malatya_Hekimh**	**2.14**	**29**	*i* P	**Pg**	**15 49 53.7**	**-0.9**
HEKM				*i* S	**Sn**	**15 50 16.9**	**+2.4**
HEKM				IAML		15 50 26.0	
	comp=N,98nm,0.7s						
HEKM				IAML		15 50 26.0	
	comp=E,162nm,0.4s						
ELZG	**Elazig**	**2.38**	**50**	*i* P	**Pb**	**15 49 54.9**	**-0.8**
ELZG				*i* S	**Sn**	**15 50 19.1**	**-1.3**
KEBE	**Keben-Mersin**	**2.42**	**258**	PN	**Pn**	**15 49 54.1**	**+2.1**
CUSAR	**Sarkisla-SIVAS**	**2.44**	**353**	*i* P	**Pb**	**15 49 58.7**	**+2.0**
CUSAR				*i* S	**Sn**	**15 50 18.6**	**-3.2**
EREN	**Erenkoy**	**2.48**	**235**	PN	**Pn**	**15 49 55.0**	**+2.2**
IKL	**Isikli**	**2.50**	**253**	PN	**Pn**	**15 49 54.8**	**+1.7**
AKKU	**Akkuyu-Mersin**	**2.63**	**252**	PN	**Pn**	**15 49 57.1**	**+2.3**
TEVE	**Tevekalti-Mers**	**2.64**	**259**	PN	**Pn**	**15 49 57.0**	**+2.0**
SULT	**Sultanhani-AKS**	**2.76**	**297**	PN	**Pn**	**15 49 58.8**	**+2.1**
ILIC	**ilic-Erzincan**	**2.88**	**31**	PN	**Pn**	**15 50 00.7**	**+2.3**
DYBB	**Diyarbakir**	**2.94**	**70**	PN	**Pn**	**15 50 01.4**	**+2.3**
MAZI	**Mazidag**	**3.07**	**80**	PN	**Pn**	**15 50 03.3**	**+2.3**

IDC 28 15:49:23.9±6.5**, 3°.56S**×**152°.91E, h189^{km}**±37^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.2**/33**, mbtmp4.2**/4**, Error ellipse: s-maj=81.1km s-min=56.3km az=138.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.15**	**224**	P	Pn	15 51 19.5	+0.3
	2.5nm,0.3s,baz=64,slow=7.1,SNR=5.6						
PMG				S	Sn	15 52 50.8	+0.1
	4.3nm,0.3s,baz=184,slow=22,SNR=7.2						
WRA	**Warramunga Arr**	**24.36**	**227**	P	P	15 54 25.7	+1.0
	8.4nm,0.5s,baz=48,slow=9.0,SNR=55						
WRA				PcP	PcP	15 57 59.0	-0.2
	0.2nm,0.5s,baz=57,slow=2.8,SNR=1.6						
WRA				ScP	ScP	16 01 19.5	-0.7
	0.7nm,0.9s,baz=45,slow=3.3,SNR=3.1						
ASAR	**Alice Springs**	**27.15**	**221**	P	P	15 54 49.4	-0.4
	0.7nm,0.4s,baz=55,slow=9.0,SNR=42						
STKA	**Stephens Creek**	**30.11**	**199**	P	P	15 55 14.9	-1.0
	2.5nm,0.9s,baz=29,slow=10,SNR=3.3						

BJI ***28*** *15:54:33.9±0.0, 34°.31N×24°.78E, h29^{km}, mB5.4/49, mb5.1/78, Ms5.0/27, Ms7 4.7/18*

ISK ***28*** *15:54:33.9, 34°.25N×25°.18E, h11^{km}, ML5.0/26*

NIC ***28*** *15:54:34.0±0.0, 34°.21N×25°.08E, h30^{km}±31^{km}, Ml5.4/5*

THE ***28*** *15:54:35.3, 34°.25N×25°.14E, h0^{km}, ML5.0/9, Error ellipse: s-maj=1.8km s-min=0.5km az=166.0*

MED_RC ***28*** *15:54:37.0±0.8, 34°.84N×25°.02E, h30^{km}, MW5.0/15, Moment Tensor Solution.Mantle waves: s15,c19; Duration: 1^{s}4 Moment tensor: Scale 10^{16}Nm; M_{rr}2.20±.35; $M_{\theta\theta}$-3.32±.21; $M_{\phi\phi}$1.12±.28; $M_{r\theta}$3.70±.17; $M_{\theta\phi}$-0.36±.19; $M_{\phi r}$0.47±.23; Best double couple: $M_0$4.65000×10^{16} NP1:ϕ_s270.00000°,δ18.00000°, λ97.00000°. NP2:ϕ_s83.00000°,δ72.00000°,λ88.00000°. Principal axes: T 4.0800, Plg63.0000°, Azm349.0000°; N 1.1400, Plg2.0000°, Azm83.0000°; P -5.2200, Plg27.0000°, Azm175.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ATH ***28*** *15:54:37.2, 34°.36N×25°.09E, h10^{km}±4^{km}, ML4.9/10 Error ellipse: s-maj=5.4km s-min=1.7km az=342.0*

PDG ***28*** *15:54:38.2±0.1, 34°.50N×24°.27E, h16^{km}±2^{km}, ML5.2/14, Error ellipse: s-maj=2.8km s-min=1.5km az=90.0*

NEIC ***28*** *15:54:38.6, 34°.44N×25°.09E, h37^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.39; $M_{\theta\theta}$-3.46; $M_{\phi\phi}$-0.94; $M_{r\theta}$7.78; $M_{\theta\phi}$-2.68; $M_{\phi r}$-1.12; Fault plane solution: $M_0$9.22000×10^{16} NP1:ϕ_s89.83000°, δ76.32000°,λ108.22000°. NP2:ϕ_s215.52000°,δ22.65000°, λ37.90000°. Principal axes: T 9.7118, Plg55.0000°, Azm23.0000°; N -1.0786, Plg18.0000°, Azm265.0000°; P -8.6332, Plg29.0000°, Azm165.0000°;*

MOS ***28*** *15:54:38.2±1.1, 34°.50N×25°.06E, h44^{km}, mb5.5/76, MS4.6/23 Error ellipse: s-maj=4.4km s-min=2.5km az=81.2*

GCMT ***28*** *15:54:39.0±0.2, 34°.19N±0°.01×25°.05E±0°.02, h24^{km}, MW5.3/90, Moment Tensor Solution. s82,c124; s90,c120; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.42±.02; $M_{\theta\theta}$-0.48±.01; $M_{\phi\phi}$0.06±.01; $M_{r\theta}$0.97±.02; $M_{\theta\phi}$0.08±.01; $M_{\phi r}$-0.42±.03; Best double couple: $M_0$1.14900×10^{17} NP1:ϕ_s261.00000°,δ13.00000°, λ59.00000°. NP2:ϕ_s112.00000°,δ79.00000°,λ97.00000°. Principal axes: T 1.1310, Plg56.0000°, Azm31.0000°; N 0.0350, Plg7.0000°, Azm291.0000°; P -1.1670, Plg33.0000°, Azm197.0000°; nsta1 refers to body waves,* *cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***28*** *15:54:39.4±1.1, 34.52N×25.10E, h38km±8km, mb4.7/35, mb1 4.8/45, mb1mx4.8/52, mbtmp4.9/45, ML4.1/7, MS4.4/38, Ms1 4.4/38, ms1mx4.3/55 Error ellipse: s-maj=10.0km s-min=8.5km az=135.0*

NEIC ***28*** *15:54:39.0±1.6, 34.46N±0.06×25.09E±0.07, h37km±1km, mb5.3/257, Ms_20 4.7/58, Mwb5.2/34, Mww5.1, ML5.0(THE), ML4.9(ATH), Error ellipse: s-maj=10.1km s-min=9.4km az=223.0*

BGR ***28*** *15:54:39.2±0.0, 34.40N×25.27E, h33km, mb5.0, Ms4.3*

NEIC ***28*** *15:54:42, 34.44N×25.10E, h36km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; Mrr3.65; Mθθ-3.60; Mφφ-0.05; Mrθ3.31; Mθφ-0.56; Mφr-0.57; Fault plane solution: M0 4.98000×10^{16} NP1:φs250.00000°, δ25.00000°, λ68.00000°. NP2:φs93.00000°, δ66.00000°, λ100.00000°. Principal axes: T 5.0409, Plg67.0000°, Azm22.0000°; N -0.1333, Plg9.0000°, Azm269.0000°; P -4.9076, Plg21.0000°, Azm176.0000°;*

HLW ***28*** *15:54:46.3, 33.71N×25.73E, h23km±17km, Md4.6*

SGS ***28*** *15:54:46.6, 33.74N×25.56E, h9km, Ml4.2*

ISC 28 15:54:38.8±0.3**, 34.45N**±0.03×**25.09E**±0.03**, h35**km±3km**, h36**km**:pP-P, n1331, σ1.73**/1393**, mb5.3**/283**, MS4.5**/75**, 185C-113D, Fault plane solution: NP1:**φs173.71285°**,** δ36.96103°**,** λ21.13650°. **NP2:**φs66.54636°**,** δ77.47807°**,** λ125.06363°. **Principal axes:** T Plg45.9160°**,** Azm12.2713°**;** N Plg34.1126°**,** Azm237.8939°**;** P Plg24.3117°**,** Azm130.0749°**; Fault plane solution: NP1:**φs118.42497°**,** δ84.38287°**,** λ99.96045°. **NP2:** φs237.55843°**,** δ11.42121°**,** λ29.62332°. **Principal axes:** T Plg49.6689°**,** Azm39.3181°**;** N Plg9.9121°**,** Azm297.4402°**;** P Plg38.6010°**,** Azm199.4211°**; Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.61	338	P	Pn	15 54 50.8	-0.3
SIVA				S	Sn	15 55 00.1	+0.4
SIVA				AML	AML	15 55 07.3	
SIVA				AML	AML	15 55 09.6	
SIVA	Sivas	0.61	338	P	Pn	15 54 50.8	-0.3
SIVA				S	Sn	15 55 04.0	+4.3
	454μm,0.6s						
TMBK	Timbaki Herakl	0.68	337	P	Pn	15 54 52.3	+0.4
TMBK				S	Sn	15 55 05.6	+4.4
	68μm,0.7s						
LAST	Lasithi	0.78	24	P	Pn	15 54 53.5	+0.1
LAST				S	Sn	15 55 04.4	+0.4
LAST				AML	AML	15 55 17.8	
	comp=E,81614μm,0.9s						
LAST				AML	AML	15 55 21.3	
LAST	Lasithi	0.78	24	P	Pn	15 54 53.8	+0.4
LAST				S	Sn	15 55 08.4	+4.4
	comp=E,44μm,0.8s						
IDI	Anoyia	0.85	349	Pn	Pn	15 54 54.7	+0.3
	comp=E,2μm,0.3s,baz=174,slow=16,SNR=3905						
IDI				Sn	Sn	15 55 06.8	+1.0
	comp=E,2μm,0.3s,baz=297,slow=16,SNR=12						
IDI	Anoyia	0.85	349	P	Pn	15 54 54.7	+0.3
IDI				AML	AML	15 55 15.1	
	comp=E,96823μm,0.8s						
IDI				AML	AML	15 55 17.0	
	comp=N,65631μm,0.4s						
IDI	Anoyia	0.85	349	P	Pn	15 54 54.7	+0.3
IDI				S	Sn	15 55 11.7	+5.9
	comp=N,40μm,0.9s						
IDI	Anoyia	0.85	349	PG	Pn	15 54 54.7	+0.3
IDI				SG	Sn	15 55 09.8	+4.0
IDI	Anoyia	0.85	349		Pn	15 54 54.5	+0.1
IDI					Sn	15 55 04.7	-1.1
IDI	Anoyia	0.85	349	⇑P	Pn	15 54 54.3	-0.2
KSTL	Kastelli Herak	0.85	359	P	Pn	15 54 54.0	-0.4
IACM	Heraklion	0.86	359	P	Pn	15 54 55.1	+0.7
IACM				AML	AML	15 55 22.0	
IACM				AML	AML	15 55 24.3	
IACM	Heraklion	0.86	359	P	Pn	15 54 55.3	+0.9
HRKL	Herakleio	0.86	1	P	Pn	15 54 55.4	+0.9
HRKL				S	Sn	15 55 11.1	+5.3
	comp=N,114μm,1.0s						
HRKL	Herakleio	0.86	1	PG	Pn	15 54 54.8	+0.3
GVD	Gavdhos	0.91	296	P	Pn	15 54 55.4	+0.3
GVD				S	Sn	15 55 07.4	+0.4
GVD				AML	AML	15 55 16.7	
GVD				AML	AML	15 55 22.2	
GVD	Gavdhos	0.91	296	P	Pn	15 54 55.4	+0.3
GVD				S	Sn	15 55 11.2	+4.2
	comp=N,157μm,0.6s						
GVD	Gavdhos	0.91	296	PN	Pn	15 54 55.1	0.0
GVD				SN	Sn	15 55 10.3	+3.3
GVDS	Gavdos	0.91	296	P	Pn	15 54 55.7	+0.6
GVDS				S	Sn	15 55 12.0	+5.0
	comp=N,83μm,0.5s						
GVDS	Gavdos	0.91	296	PN	Pn	15 54 55.3	+0.2
GVDS				SN	Sn	15 55 10.9	+3.9
NPS	Neapolis	0.92	28	P	Pn	15 54 55.8	+0.5
NPS				AML	AML	15 55 23.8	
	comp=N,57741μm,0.9s						
NPS				AML	AML	15 55 24.2	
	comp=E,56811μm,1.1s						
NPS	Neapolis	0.92	28	P	Pn	15 54 55.9	+0.6
STIA	Sitia Lasithi	1.12	47	P	Pn	15 54 58.4	+0.4
STIA				S	Sn	15 55 16.5	+4.4
ZKR	Zakros	1.15	54	P	Pn	15 54 59.1	+0.8
ZKR				S	Sn	15 55 16.3	+3.5
ZKR				AML	AML	15 55 26.9	
	comp=N,36187μm,1.4s						
ZKR				AML	AML	15 55 36.5	
	comp=E,73815μm,1.0s						
ZKR	Zakros	1.15	54	PN	Pn	15 54 57.8	-0.6
VAM	Vamos	1.20	323	P	Pn	15 55 00.2	+1.0
VAM				AML	AML	15 55 30.7	
VAM				AML	AML	15 55 31.9	
VAM	Vamos	1.20	323	P	Pn	15 55 00.4	+1.3
VAM				S	Sn	15 55 21.0	+6.8
	comp=E,55μm,0.6s						
IMMV	Iera Moni Meta	1.36	318	P	Pn	15 55 02.9	+1.6
IMMV				AML	AML	15 55 39.5	
IMMV				AML	AML	15 55 39.6	
	comp=E,87063μm,1.5s						
IMMV	Iera Moni Meta	1.36	318	P	Pn	15 55 02.6	+1.3
IMMV				S	Sn	15 55 24.1	+6.0
	comp=E,64μm,0.6s						
IMMV	Iera Moni Meta	1.36	318	PN	Pn	15 55 02.4	+1.1
SANT	Santorini	1.94	9	P	Pn	15 55 10.9	+1.5
SANT	Santorini	1.94	9	PN	Pn	15 55 10.0	+0.6
SANT	Santorini	1.94	9	Pn	Pn	15 55 10.6	+1.3
SANT	Santorini	1.94	9	⇑P	Pn	15 55 10.7	+1.3
THR3	Thira Island,	1.98	7	P	Pn	15 55 11.8	+2.1
THR5	Thira Island,	1.98	6	P	Pn	15 55 11.9	+2.1
THR8	Santorini-Mono	1.98	9	P	Pn	15 55 11.8	+2.0
SNT1	Gialos, Santor	1.98	8	P	Pn	15 55 11.6	+1.7
ANAF	Anafi Island	1.99	16	P	Pn	15 55 12.1	+2.2
SAP3	Santorini-Thir	2.00	6	P	Pn	15 55 12.1	+2.1
KARP	Karpathos	2.03	57	P	Pn	15 55 13.5	+3.0
KARP				AML	AML	15 55 58.4	
	comp=N,30718μm,1.0s						
KARP				AML	AML	15 56 01.5	
	comp=E,26991μm,0.9s						
KARP	Karpathos	2.03	57	PN	Pn	15 55 10.2	-0.3
KARP	Karpathos	2.03	57	Pn	Pn	15 55 13.2	+2.7
KARP	Karpathos	2.03	57	⇑P	Pn	15 55 13.3	+2.8
MHLO	Agia Marina, M	2.31	346	P	Pn	15 55 15.6	+1.3
KTHA	Kythira Island	2.45	318	P	Pn	15 55 18.5	+2.2
KTHA	Kythira Island	2.45	318	PN	Pn	15 55 18.0	+1.7
KTHR	Kythira	2.48	317	P	Pn	15 55 19.3	+2.5
APE	Apeiranthos	2.64	8	P	Pn	15 55 20.5	+1.5
APE	Apeiranthos	2.64	8	PN	Pn	15 55 20.3	+1.3
APE	Apeiranthos	2.64	8	*c i*P	Pn	15 55 20.3	+1.3
APE	Apeiranthos	2.64	8	⇑P	Pn	15 55 20.4	+1.3
NISR	Nisiros	2.73	37	P	Pn	15 55 21.7	+1.6
KOSK	Kos Island	2.77	33	PN	Pn	15 55 21.3	+0.7
VLI	Veliai	2.86	323	P	Pn	15 55 22.4	+0.4
SLUM	Salum	2.95	178	P	Pn	15 55 22.1	-1.1
	baz=192						
SLUM				S	Sn	15 55 47.9	-9.5
	baz=192						
ARG	Arkhangelos	3.05	54	PN	Pn	15 55 24.9	+0.4
ARG	Arkhangelos	3.05	54	⇑P	Pn	15 55 26.8	+2.2
DATC	Datca-Mugla	3.12	42	PN	Pn	15 55 25.9	+0.4
BODT	Bodrum	3.17	34	P	Pn	15 55 26.7	+0.4
BODT	Bodrum	3.17	34	PN	Pn	15 55 26.9	+0.6
YKAV	Yalikavak-Bodr	3.21	33	PN	Pn	15 55 27.5	+0.7
KRND	KRANIDI	3.32	332	P	Pn	15 55 29.7	+1.4
MRSB	Marmaris-Mugla	3.40	47	PN	Pn	15 55 29.6	+0.2
TURN	Turunc	3.47	47	PN	Pn	15 55 30.6	+0.4
EPID	Epidavros	3.54	334	P	Pn	15 55 33.6	+2.3
ATHU	Athens Univers	3.67	344	P	Pn	15 55 34.5	+1.5
GCAM	G?zelcaml?	3.68	28	PN	Pn	15 55 34.5	+1.3
ATH	Athens Observa	3.69	343	P	Pn	15 55 35.0	+1.7
PTL	Penteli	3.73	345	P	Pn	15 55 35.6	+1.7
YER	Yerkesik	3.73	43	P	Pn	15 55 36.1	+2.1
YER	Yerkesik	3.73	43	PN	Pn	15 55 34.7	+0.7
YER	Yerkesik	3.73	43	P	Pn	15 55 35.6	+1.6
DION	Dionisos Attik	3.74	346	P	Pn	15 55 35.9	+1.8
ITM	Ithomi	3.75	318	P	Pn	15 55 35.0	+0.9
ITM	Ithomi	3.75	318	PN	Pn	15 55 36.9	+2.8
ITM	Ithomi	3.75	318	Pn	Pn	15 55 35.0	+0.9
ITM	Ithomi	3.75	318	⇓P	Pn	15 55 35.1	+1.0
DALY	Dalyan (Mula)	3.75	50	PN	Pn	15 55 34.3	+0.2
FETY	Fethiye	3.92	55	P	Pn	15 55 36.4	-0.2
FETY	Fethiye	3.92	55	PN	Pn	15 55 36.6	0.0
LOUT	Loutraki	3.92	335	P	Pn	15 55 38.4	+1.8
KSL	Kastellorizon	4.05	64	⇑P	Pn	15 55 37.9	-0.3
KSL				S	Sn	15 56 24.3	-0.2
EREA	Eretria	4.07	347	P	Pn	15 55 40.4	+1.8
URLA	Izmir	4.09	17	PN	Pn	15 55 39.6	+0.7
AKAS	Kas	4.10	63	PN	Pn	15 55 38.3	-0.8
AKAS	Kas	4.10	63	Pn	Pn	15 55 38.7	-0.4
AYDB	Zeytinkoy-Aydi	4.16	32	PN	Pn	15 55 41.3	+1.3
KYMI	Kymi, Euboea I	4.25	350	P	Pn	15 55 42.6	+1.5
DEMR	Demre-Antalya	4.33	64	PN	Pn	15 55 42.3	+0.2
DRO	Drossia	4.44	323	P	Pn	15 55 46.2	+2.6
ELL	Elmali	4.55	58	PN	Pn	15 55 45.6	+0.3
ELL	Elmali	4.55	58	P	Pn	15 55 46.8	+1.5
ELL	Elmali	4.55	58	Pn	Pn	15 55 46.8	+1.5
AXS	Araxos	4.79	322	P	Pn	15 55 51.2	+2.7
SIGR	SIGRI	4.79	7	PN	Pn	15 55 50.2	+1.7
DKL	Dikili	4.84	17	PN	Pn	15 55 51.1	+2.0
MANT	Manisa	4.91	34	Pn	Pn	15 55 52.3	+2.0
KEMT	Kemer-ANTALYA	4.95	63	PN	Pn	15 55 51.2	+0.5
KULA	Kula-Manisa	4.98	34	PN	Pn	15 55 53.0	+1.9
KORT	Korkueli	4.98	58	PN	Pn	15 55 52.1	+0.9
AGG	Agios Georgios	5.07	335	PN	Pn	15 55 54.8	+2.4
AGG	Agios Georgios	5.07	335	P	Pn	15 55 53.7	+1.3
AGG	Agios Georgios	5.07	335	Pn	Pn	15 55 53.7	+1.3
AGG	Agios Georgios	5.07	335	⇑P	Pn	15 55 53.7	+1.3
ANTB	Antalya	5.15	60	PN	Pn	15 55 54.1	+0.7
SWA2		5.20	176	P	Pn	15 55 52.5	-1.6
	baz=184						
OSC1	CSNet OBS 1	5.23	99	P	Pn	15 55 51.4	-3.1
BASM	Basmaki-Afyon	5.30	48	PN	Pn	15 55 56.5	+0.9
BCK	Bucak	5.38	54	PN	Pn	15 55 57.5	+0.8
ISP	Isparta	5.54	51	PN	Pn	15 55 59.9	+1.0
ISP	Isparta	5.54	51	P	Pn	15 55 58.6	-0.3
ISP	Isparta	5.54	51	Pn	Pn	15 55 58.6	-0.3
SIMA	Simav-Kutahya	5.58	33	PN	Pn	15 56 01.1	+1.6
GEDZ	Gediz	5.75	36	PN	Pn	15 56 03.8	+2.0
AKMS	Akamas	6.00	82	P	Pn	15 56 03.0	-2.0
AKMS				S	Sn	15 57 10.8	-1.7
AKMS				AML	AML	15 57 12.2	
	comp=E,3.4nm,0.5s						
AKMS				AML	AML	15 57 12.2	
	comp=E,3.4nm,0.5s						
AKMS				AML	AML	15 57 19.4	
	comp=E,4.3nm,0.8s						
AKMS				AML	AML	15 57 19.4	
	comp=E,4.3nm,0.8s						
SHUT	Suhut-Afyon	6.01	45	PN	Pn	15 56 06.6	+1.2
ALAN	Alanya-ANTALYA	6.04	68	PN	Pn	15 56 06.1	+0.4
OSC2	CSNet OBS 4	6.14	101	P	Pn	15 56 03.9	-3.0
GAZI	Gazipasa	6.17	71	PN	Pn	15 56 07.1	-0.4
NATA	Nata	6.18	85	P	Pn	15 56 05.1	-2.5
ALFC	Alefka	6.22	81	⇑P	Pn	15 56 06.3	-1.9
ALFC				AML	AML	15 57 14.7	
	comp=E,4.7nm,0.8s						
ALFC				AML	AML	15 57 19.1	
	comp=E,4.4nm,0.8s						
SZAC	Souni	6.44	85	⇓P	Pn	15 56 08.9	-2.2
SZAC				S	Sn	15 57 22.8	-0.6
SZAC				AML	AML	15 57 25.6	
	comp=E,3.1nm,0.9s						
SZAC				AML	AML	15 57 25.6	
	comp=E,3.1nm,0.9s						
SZAC				AML	AML	15 57 25.7	
	comp=E,4.7nm,1.0s						
SZAC				AML	AML	15 57 25.7	
	comp=E,4.7nm,1.0s						
LEF	Lefka	6.46	82	PN	Pn	15 56 10.9	-0.5
ALN	Alexandroupoli	6.48	6	P	Pn	15 56 13.2	+1.5
ALN	Alexandroupoli	6.48	6	Pn	Pn	15 56 13.2	+1.5
ALN	Alexandroupoli	6.48	6	⇑P	Pn	15 56 13.9	+2.3
AKDN	Akdeniz- Kıbrı	6.54	80	PN	Pn	15 56 12.5	+0.1
RDO	Rodhopi	6.70	3	⇑P	Pn	15 56 16.6	+1.9
HMYD	Mayadein	6.71	132	P	Pn	15 56 11.9	-2.9
	baz=130						
HNAT	Natroun	6.71	134	P	Pn	15 56 11.2	-3.8
	baz=133						
ASGA	Asgata	6.74	85	P	Pn	15 56 13.1	-2.1
ASGA				S	Sn	15 57 29.6	-1.1
ASGA				AML	AML	15 57 30.7	
	comp=E,5.7nm,0.7s						
ASGA				AML	AML	15 57 30.7	
	comp=E,5.7nm,0.7s						
ASGA				AML	AML	15 57 33.5	
	comp=E,4.2nm,0.7s						
ASGA				AML	AML	15 57 33.5	
	comp=E,4.2nm,0.7s						
KEK	Kerkira	6.74	323	⇑P	Pn	15 56 14.9	-0.4
TEKE	Tekeli-Mersin	6.78	73	PN	Pn	15 56 15.5	-0.3
CSS	Mathiatis	6.81	83	PN	Pn	15 56 15.4	-0.8
CSS	Mathiatis	6.81	83	Pn	Pn	15 56 13.7	-2.5
CSS	Mathiatis	6.81	83	⇑P	Pn	15 56 14.4	-1.8
CSS	Mathiatis	6.81	83	⇑P	Pn	15 56 14.2	-2.0
KONT	Konya--Tatoy	6.84	57	PN	Pn	15 56 17.8	+1.2
CIFT	Cifteler, Eski	6.85	43	PN	Pn	15 56 18.2	+1.3
BERE	Bereket-Mersin	6.91	72	PN	Pn	15 56 17.6	-0.1
AKIN	Akıncılar- Kıb	6.92	83	PN	Pn	15 56 17.6	-0.2
LADK	Ladik-KONYA	6.97	55	PN	Pn	15 56 19.4	+0.9
FNA	Florina	6.98	336	P	Pn	15 56 18.9	+0.4
FNA	Florina	6.98	336		Pn	15 56 18.9	+0.4
FNA	Florina	6.98	336	⇓P	Pn	15 56 19.3	+0.7
MVOU	Mavrovouni	7.06	83	⇑P	Pn	15 56 17.7	-1.9
TEVE	Tevekalti-Mers	7.10	71	PN	Pn	15 56 20.5	+0.2
AKKU	Akkuyu-Mersin	7.13	74	PN	Pn	15 56 20.5	-0.1
VAY	Valandovo	7.14	345	*i* Pn	Pn	15 56 23.3	+2.6
IKL	Isikli	7.25	73	PN	Pn	15 56 21.9	-0.3
KARG	Kargicak-Mersi	7.26	74	PN	Pn	15 56 22.7	+0.3
KOT	Kottamia	7.28	126	P	Pn	15 56 20.4	-2.3
	baz=124						
HSAF	As Saff	7.30	129	P	Pn	15 56 20.4	-2.6
	baz=127						
KEBE	Keben-Mersin	7.32	72	PN	Pn	15 56 23.4	+0.2
GLL	Jalalah	7.43	129	P	Pn	15 56 22.1	-2.6
	baz=127						
HHAG	Hagoal	7.44	125	P	Pn	15 56 21.8	-3.1
	baz=123						
OHR	Ohrid	7.47	334	*i* Pn	Pn	15 56 27.0	+1.8
SILI	Silifke-Mersin	7.47	73	PN	Pn	15 56 25.4	+0.2
SLFK	Silifke-Mersin	7.49	72	PN	Pn	15 56 25.6	+0.1
CHBY	Cihanbeyli	7.52	54	PN	Pn	15 56 26.7	+0.7
EREN	Erenkoy	7.53	79	PN	Pn	15 56 25.9	-0.2
KIZK	Mersin	7.66	72	PN	Pn	15 56 27.9	0.0
SCTE	Santa Cesarea	7.70	319	Pn	Pn	15 56 28.3	-0.2
MDUB	Mudurnu	7.73	37	Pn	Pn	15 56 29.4	+0.5
SULT	Sultanhani-AKS	7.76	59	PN	Pn	15 56 30.1	+0.7
NBNS	Bani Suef	7.86	136	P	Pn	15 56 28.1	-2.6
	baz=135						
SUZ	Suez	8.01	123	P	Pn	15 56 30.7	-2.1
	baz=120						
TIR	Tirane	8.03	331	⇑P	Pn	15 56 32.5	-0.4
TIR	Tirane	8.03	331	P	Pn	15 56 33.7	+0.8
TIR	Tirane	8.03	331		Pn	15 56 33.7	+0.8
TIR	Tirane	8.03	331	⇑P	Pn	15 56 35.7	+2.8
SKO	Skopje	8.04	340	*i* Pn	Pn	15 56 34.5	+1.5
BR231	Keskin MP Arra	8.16	47		Pn	15 56 36.0	+1.1
ZAF	Zafarana	8.17	127	P	Pn	15 56 32.5	-2.4
	baz=125						
VTS	Vitosha	8.29	350	⇑P	Pn	15 56 37.4	+0.8
VTS	Vitosha	8.29	350	⇑P	Pn	15 56 37.4	+0.8
VTS	Vitosha	8.29	350	⇑P	Pn	15 56 38.4	+1.9
ZNM	Zenema	8.33	125	P	Pn	15 56 35.0	-2.0
	baz=123						
CEL	Celeste	8.33	300		Pn	15 56 37.0	-0.2
CEL	Celeste	8.33	300	⇑P	Pn	15 56 37.6	+0.5
TAMRE	El Minia	8.39	142	P	Pn	15 56 35.3	-2.7
	baz=142						
BR131	Keskin Array S	8.63	50	*c i*P	Pn	15 56 41.4	+0.1
BR131	Keskin Array S	8.63	50	Pn	Pn	15 56 41.2	0.0
BRTR	Keskin Array B	8.63	50	Pn	Pn	15 56 42.2	+1.0
	comp=E,0.8nm,0.3s,baz=226,slow=12,SNR=48						
BRTR				Sn	Sn	15 58 16.1	-1.3
	comp=E,0.6nm,0.3s,baz=220,slow=22,SNR=0.5						
BRTR				LR	LR	16 01 02.5	
	comp=E,2μm,19.8s,baz=242,slow=45						
BRTR				ScP	ScP	16 06 38.1	+0.4
	comp=E,0.1nm,0.3s,baz=186,slow=2.9,SNR=7.2						
BRTR	Keskin Array B	8.63	50	Pn	Pn	15 56 41.2	0.0
MMAI	Mount Meron Ar	8.71	97	Pn	Pn	15 56 39.8	-2.6
	comp=E,6.8nm,0.3s,baz=263,slow=12,SNR=20						
MMAI				Sn	Sn	15 58 12.8	-6.7
	baz=284,slow=13,SNR=1.1						
DQRL	Deir Qamar	8.73	92	*e*P	Pn	15 56 42.8	+0.1
ULC	Ulcinj	8.80	330	⇑*i*Pn	Pn	15 56 41.9	-1.6
ULC				*i* Sn	Sn	15 58 14.1	-7.3
QRWL	Qaraoun	8.85	93	*e*P	Pn	15 56 40.9	-3.3
PLVB	Pleven	8.94	358	⇑P	Pn	15 56 46.7	+1.4
RCY	Rachaya	8.98	93	*e*P	Pn	15 56 43.5	-2.6
HWQ	Hawqa	8.98	88	*e*P	Pn	15 56 44.6	-1.5
DRME	Dracevica, Mon	9.01	331	*e*Pn	Pn	15 56 44.5	-1.8
DRME	Dracevica, Mon	9.01	331	⇑*i*Pn	Pn	15 56 44.9	-1.4
DRME				*i* Sn	Sn	15 58 19.3	-7.2
GRB	Gharib	9.01	131	P	Pn	15 56 43.3	-3.2
	baz=130						
PVY	Plav	9.07	335	⇓*i*Pn	Pn	15 56 46.3	-1.0
PVY				*i* Sn	Sn	15 58 21.7	-6.5
RAFF	Raffo Rosso	9.14	291		Pn	15 56 47.8	-0.3
VAE	Valguarnera	9.17	292	Pn	Pn	15 56 48.2	-0.4
	comp=E,2.8nm,0.3s,baz=67,slow=5.0,SNR=7.3						
VAE				Sn	Sn	15 58 26.8	-3.7
	comp=E,14nm,0.3s,baz=217,slow=20,SNR=1.6						
RAZG	Razgrad	9.17	6	⇓P	Pn	15 56 49.9	+1.3
PDG	Podgorica	9.19	332	⇑P	Pn	15 56 47.0	-1.7
PDG	Podgorica	9.19	332	*e*Pn	Pn	15 56 46.5	-2.3
PDG	Podgorica	9.19	332	Pn	Pn	15 56 46.3	-2.4
PDG	Podgorica	9.19	332	⇑P	Pn	15 56 46.8	-1.9
TTG	Podgorica	9.19	332	⇓*i*Pn	Pn	15 56 47.4	-1.4
TTG				*i* Sn	Sn	15 58 23.8	-7.0
ZIMR		9.20	1	⇑P	Pn	15 56 50.7	+1.8
ZIMR		9.20	1	⇑P	Pn	15 56 50.7	+1.8
BUM	Brajici-Budva	9.22	330	⇓*i*Pn	Pn	15 56 47.7	-1.6
BUM				*i* Sn	Sn	15 58 24.2	-7.7
IVA	Berane	9.34	336	⇑*i*Pn	Pn	15 56 50.0	-0.9
IVA				*i* Sn	Sn	15 58 28.2	-6.5
CEME	Cevo	9.42	331	⇓*i*Pn	Pn	15 56 50.6	-1.4
CEME				*i* Sn	Sn	15 58 29.1	-7.6
KOME	Kolasin	9.45	334	⇓*i*Pn	Pn	15 56 51.4	-1.1
KOME				*i* Sn	Sn	15 58 30.6	-6.9
HCY	Herceg Novi	9.51	329	*e*Pn	Pn	15 56 50.9	-2.3
HCY	Herceg Novi	9.51	329	⇓*i*Pn	Pn	15 56 51.4	-1.8
HCY				*i* Sn	Sn	15 58 30.8	-8.0
NKME	Niksic	9.59	332	*e*Pn	Pn	15 56 53.0	-1.4
NKME				*i* Sn	Sn	15 58 33.4	-7.5
NKY	Niksic	9.61	332	⇑*i*Pn	Pn	15 56 53.3	-1.4
NKY				*i* Sn	Sn	15 58 33.9	-7.6
HKAT	Jabal Katrina	9.62	125	P	Pn	15 56 51.6	-3.4
	baz=124						
EIL	Elat	9.63	117	Pn	Pn	15 56 53.0	-1.9
	comp=E,19nm,0.3s,baz=290,slow=6.3,SNR=71						
EIL				Sn	Sn	15 58 33.5	-8.4
	comp=E,3.7nm,0.3s,baz=273,slow=13,SNR=2.9						
EIL	Elat	9.63	117	⇓P	Pn	15 56 52.8	-2.1
HDK1	Dakhla	9.63	156	P	Pn	15 56 51.5	-3.4
	baz=157						
MRVN	Minervino Murg	9.65	316	⇑P	Pn	15 56 53.9	-1.3
SJES	Sjenica	9.66	337	*e*Pn	Pn	15 56 53.7	-1.7
COPA	Copaceanca	9.68	1	⇑P	Pn	15 56 57.4	+1.9
HBST	Basata	9.72	120	P	Pn	15 56 53.2	-3.0
	baz=117						
TREB	Trebinje	9.79	329	*e*Pn	Pn	15 56 53.6	-3.5
DBRK	Dubrovnik	9.84	329	*e*Pn	Pn	15 56 54.0	-3.8
DBRK				Sn	Sn	15 58 36.0	-11
BRY	Bratogost	9.87	331	*e*Pn	Pn	15 56 56.4	-1.8
BRY	Bratogost	9.87	331	⇑*i*Pn	Pn	15 56 56.6	-1.6
BRY				*i* Sn	Sn	15 58 39.8	-8.0
ICOR	Ion Corvin	9.88	11	⇓P	Pn	15 56 59.6	+1.3
HQLS		9.91	118	P	Pn	15 56 57.0	-1.8
PLE	Pljevlja	9.92	335	⇓*i*Pn	Pn	15 56 57.8	-1.1
PLE				*i* Sn	Sn	15 58 41.8	-7.1
TR1	Tor 1	9.94	128	P	Pn	15 56 55.8	-3.3
	baz=126						
HAQS	Haql	9.95	120	S	Sn	15 58 35.6	-14
HAQS				P	Pn	15 56 56.5	-2.8
PUNG	Punghina	9.96	351	⇑P	Pn	15 57 00.5	+1.2
UPM	Unac-Piva	9.98	333	*e*Pn	Pn	15 56 58.1	-1.7
UPM	Unac-Piva	9.98	333	⇑*i*Pn	Pn	15 56 58.4	-1.4
UPM				*i* Sn	Sn	15 58 43.0	-7.6
HUMR	Humele	10.07	360	⇓P	Pn	15 57 01.9	+1.1
AKRG	Al Kharijah	10.07	151	P	Pn	15 56 57.5	-3.5
	baz=151						
GTR	Jabal at Tayr	10.09	151	P	Pn	15 56 57.8	-3.4
	baz=151						
CORL	Corleone	10.13	293		Pn	15 57 02.9	+1.2
STON	Ston	10.20	328	*e*Pn	Pn	15 56 58.5	-4.1
STON				Sn	Sn	15 58 42.9	-13
STON	Ston	10.20	328	*e*Pn	Pn	15 56 57.8	-4.8
GAZ	Gaziantep	10.22	71		Pn	15 57 01.0	-2.0
HHRG	Al Ghardaqah	10.25	132	P	Pn	15 57 01.8	-1.5
	baz=132						
SULR		10.26	5	⇑P	Pn	15 57 05.2	+1.8
BZK	Bozkurt	10.27	40	⇑P	Pn	15 57 05.6	+2.1
SRE	Strehaia	10.30	352	⇑P	Pn	15 57 05.0	+0.9
SRE	Strehaia	10.30	352	⇑P	Pn	15 57 05.0	+0.9
RSHS		10.31	124	P	Pn	15 57 02.1	-2.2
TIRR	Tirgusor	10.32	13	⇑P	Pn	15 57 06.7	+2.4
TIRR	Tirgusor	10.32	13	⇑P	Pn	15 57 06.7	+2.4
TIRR	Tirgusor	10.32	13	⇑P	Pn	15 57 06.7	+2.4
TIRR	Tirgusor	10.32	13	Pn	Pn	15 57 04.4	+0.1
TLBR	Topalu	10.34	12	⇑P	Pn	15 57 06.2	+1.7
BBLS	Lazići	10.38	337	*e*Pn	Pn	15 57 03.1	-2.1
DIVS	Divibare	10.41	339	*e*Pn	Pn	15 57 03.9	-1.7
DIVS	Divibare	10.41	339	Pn	Pn	15 57 03.7	-1.9
DIVS	Divibare	10.41	339	⇓P	Pn	15 57 04.2	-1.5
BDAS	Al Bad`	10.44	122	P	Pn	15 57 03.8	-2.3
HERR	Herculane	10.62	350	⇑P	Pn	15 57 09.2	+0.8
MDVR	Moldovita	10.64	347	⇑P	Pn	15 57 09.4	+0.7
DIKM	Dikmen	10.77	45	⇑P	Pn	15 57 12.4	+2.0
MTUR	Matau	10.77	360	⇑P	Pn	15 57 12.3	+1.8
MTUR	Matau	10.77	360	⇑P	Pn	15 57 12.3	+1.8
MAKA	Makarska	10.83	327	*e*Pn	Pn	15 57 08.4	-2.8
MAKA				Sn	Sn	15 58 58.9	-12
QREAT	Al Qurrayyat	10.89	102	P	Pn	15 57 12.6	+0.4
ARR	Arges	10.91	358	⇓P	Pn	15 57 14.2	+1.8
RICI	Ricice	10.95	328	*e*Pn	Pn	15 57 10.7	-2.2
RICI				Sn	Sn	15 59 02.7	-11
TEKS	Tekeris	10.96	339	*e*Pn	Pn	15 57 09.2	-3.9
VOIR		10.98	360	⇑P	Pn	15 57 14.3	+0.9
VOIR		10.98	360	⇑P	Pn	15 57 14.3	+0.9
NEHR	Nehoiu	11.01	4	⇓P	Pn	15 57 15.1	+1.4
HVAR	Hvar	11.01	325	*e*Pn	Pn	15 57 10.7	-3.0
HVAR				Sn	Sn	15 59 05.0	-11
MLR	Muntele Rosu	11.05	3	Pn	Pn	15 57 15.1	+0.7
	comp=E,0.4nm,0.3s,baz=189,slow=9.9,SNR=13						
MLR	Muntele Rosu	11.05	3	⇑P	Pn	15 57 16.2	+1.8
MLR	Muntele Rosu	11.05	3	⇑P	Pn	15 57 16.2	+1.8
GZR	Gura Zlata	11.07	352	⇑P	Pn	15 57 16.2	+1.5
GZR	Gura Zlata	11.07	352	⇑P	Pn	15 57 16.2	+1.5
TLCR		11.10	14	⇑P	Pn	15 57 17.4	+2.5
TLCR		11.10	14	⇑P	Pn	15 57 17.4	+2.5
BISRR	Bisoca	11.16	6	⇑P	Pn	15 57 17.7	+1.9
WTBKS	WTBKS	11.22	121	P	Pn	15 57 13.9	-2.9
PETR	Petresti	11.38	8	⇑P	Pn	15 57 20.5	+1.7
FRGS	Fruska Gora	11.44	341	*e*Pn	Pn	15 57 18.2	-1.4
PLOR	Plostina	11.45	6	⇑P	Pn	15 57 21.4	+1.6
PLOR	Plostina	11.45	6	⇑P	Pn	15 57 21.4	+1.6
BZS	Buzias	11.47	348	⇓P	Pn	15 57 20.0	0.0
BZS	Buzias	11.47	348	⇓P	Pn	15 57 20.0	0.0
VRI	Vrincioaia	11.47	6	⇑P	Pn	15 57 22.2	+2.1
VRI	Vrincioaia	11.47	6	⇑P	Pn	15 57 22.2	+2.1
DOPR	Dopca	11.51	1	⇑P	Pn	15 57 21.4	+0.9
DEV	Deva	11.54	352	⇑P	Pn	15 57 21.8	+0.8
DEV	Deva	11.54	352	⇑P	Pn	15 57 21.8	+0.8
INTR	Introdacqua	11.58	314	Pn	Pn	15 57 21.6	0.0
TBKS	Tabuk	11.59	119	P	Pn	15 57 19.8	-1.9

OZUR		11.65	2	⇑P	Pn	15 57 23.5	+1.0
KIJV	Kijevo	11.67	327	ePn	Pn	15 57 21.4	-1.4
KIJV				Sn	Sn	15 59 21.0	-11
MGRS	Mrkonjic Grad	11.71	331	ePn	Pn	15 57 22.1	-1.3
ZIRJ	Zirje	11.76	324	ePn	Pn	15 57 22.1	-1.8
ZIRJ				Sn	Sn	15 59 22.5	-11
MORI	Morici	11.88	325	ePn	Pn	15 57 22.9	-2.8
MORI				Sn	Sn	15 59 25.6	-11
BLY	Banja Luka	11.95	332	ePn	Pn	15 57 25.1	-1.5
BLY	Banja Luka	11.95	332	⇑P	Pn	15 57 24.9	-1.7
AQU	L'Aquila	12.09	314	P	Pn	15 57 29.0	+0.5
AQU	L'Aquila	12.09	314	ePn	P	15 57 35.1	-5.7
AQU	L'Aquila	12.09	314	Pn	Pn	15 57 29.0	+0.5
SIRR	Siria	12.09	349	⇑P	Pn	15 57 29.0	+0.5
TESR	Tescani	12.11	5	⇓P	Pn	15 57 31.2	+2.5
NADB	Abo Dabab	12.20	136	P	Pn	15 57 27.2	-3.0
	baz=135						
DUGI	Dugi Otok	12.29	324	ePn	Pn	15 57 29.0	-2.2
DUGI				Sn	Sn	15 59 37.0	-10
AMBH	Ambrzfalva	12.34	346	eP	Pn	15 57 32.2	+0.3
UDBI	Udbina	12.37	327	ePn	Pn	15 57 31.3	-1.1
UDBI				Sn	Sn	15 59 37.7	-11
DRGR		12.46	352	⇑P	Pn	15 57 34.2	+0.6
DRGR		12.46	352	⇑P	Pn	15 57 34.2	+0.6
BIZ	Bicaz	12.50	3	⇑P	Pn	15 57 36.7	+2.6
NNMR	NNMR	12.51	147	P	Pn	15 57 31.6	-2.7
	baz=147						
ASHG	Umm Shaghir	12.54	151	P	Pn	15 57 31.0	-3.7
	baz=152						
SIM	Simferopol'	12.57	31	eP	P	15 57 45.4	-0.8
SIM				pmax	pmax		
	comp=Z,77nm,1.2s						
ARCR	ARCALIA	12.64	358	⇓P	Pn	15 57 37.6	+1.6
MORH	Mrgy, Hungar	12.73	339	eP	Pn	15 57 36.9	-0.3
MORH	Mrgy, Hungar	12.73	339	ePn	Pn	15 57 34.6	-2.7
NVLJ	Novalja	12.80	325	ePn	Pn	15 57 35.9	-2.4
NVLJ				Sn	Sn	15 59 46.9	-13
MOSL	Moslavina	12.84	333	ePn	Pn	15 57 35.1	-3.7
MOSL				Sn	Sn	15 59 46.1	-14
KIS	Kishinev	12.85	12	eP	P	15 57 48.0	-1.2
KIS				eS	S	16 00 17.0	-8.7
KIS				eLR	LR	16 02 13.0	
	comp=Z,2µm,11.0s						
KIS	Kishinev	12.85	12	eP	P	15 57 48.0	-1.2
KIS				MLR	MLR		
	comp=Z,2µm,11.0s						
KIS				MLR	MLR		
	comp=N,2µm,13.0s						
KEST	Kesra	12.96	280	Pn	Pn	15 57 40.8	+0.3
	comp=N,0.5nm,0.3s,baz=13,slow=2.1,SNR=5.9						
KEST				Sn	Sn	15 59 57.8	-5.7
	comp=N,0.9nm,0.3s,baz=207,slow=18,SNR=1.2						
KEST				LR	LR	16 04 25.9	
	comp=N,899nm,18.5s,baz=26,slow=45						
HMSM	Jabal Masmas	12.97	151	P	Pn	15 57 36.9	-3.8
	baz=151						
MARD	Mardin	13.04	73	Pn	Pn	15 57 41.4	-0.3
LTVH	Ltavrtes, Hu	13.15	350	eP	Pn	15 57 44.2	+1.4
BURAR	Bucovina Array	13.16	0	⇑P	Pn	15 57 45.9	+2.8
BURAR	Bucovina Array	13.16	0	⇑P	Pn	15 57 45.9	+2.8
BURAR	Bucovina Array	13.16	0	Pn	Pn	15 57 42.9	-0.2
BUR08	Bucovina Ar. S	13.19	0		Pn	15 57 43.4	-0.1
KTUT	Trabzon	13.32	56	⇑P	Pn	15 57 47.5	+2.1
OZLJ	Ozalj	13.36	329	ePn	Pn	15 57 42.7	-3.0
PTJ	Puntijarka	13.39	331	ePn	Pn	15 57 43.5	-2.9
KALN	Kalnik	13.39	333	ePn	Pn	15 57 42.7	-3.6
KOPT	Kop Dagi	13.47	61		Pn	15 57 48.8	+1.1
CRES	Cresnjev	13.53	330	ePn	Pn	15 57 44.5	-3.7
BEHE	Becsehely	13.56	335	eP	P	15 58 01.6	+4.4
GBRS	Gornja Briga	13.57	328	ePn	Pn	15 57 46.9	-1.9
GBRS				i		15 57 58.5	
TIH	Tihany	13.57	339	eP	P	15 57 56.9	-0.4
CSKK	Cskako	13.89	340	eP	P	15 58 02.6	+1.8
SORM	Soroca	13.89	9	⇑P	Pn	15 57 55.5	+2.5
SORM	Soroca	13.89	9	⇑P	Pn	15 57 55.5	+2.5
CEY	Cerknica	13.90	327	ePn	Pn	15 57 50.8	-2.5
MPLH	Magyarpolny	13.93	338	eP	Pn	15 57 57.0	+3.5
PSZ	Piszkesteto	14.01	345	eP	Pn	15 57 57.1	+2.3
PSZ	Piszkesteto	14.01	345	P	Pn	15 57 52.5	-2.3
PSZ	Piszkesteto	14.01	345		Pn	15 57 52.5	-2.3
PSZ	Piszkesteto	14.01	345	⇑P	Pn	15 57 56.8	+2.0
ANN	Anapa	14.03	39	eP	Pn	15 57 56.0	+1.0
ANN				eS	Sn	16 00 32.8	+3.4
ANN				pmax	pmax		
	comp=Z,338nm,1.4s						
VNDS	Vrh nad Dolski	14.07	329	i Pn	Pn	15 57 52.8	-2.8
LJU	Ljubljana	14.10	328	ePn	Pn	15 57 53.0	-2.9
EGYH	Egyhazaskeszo	14.21	338	eP	P	15 58 01.5	-2.8
UZH	Uzhgorod	14.32	352	eP	Pn	15 58 00.4	+1.5
UZH				eS	Sn	16 00 40.0	+3.5
UZH				MLR	MLR		
	comp=N,680nm,14.0s						
UZH				MLR	MLR		
	comp=E,290nm,14.0s						
UZH				MLR	MLR		
	comp=Z,560nm,14.0s						
PERS	Pernice	14.32	331	i Pn	Pn	15 57 55.6	-3.5
SOKA	Soboth	14.39	331	i Pn	Pn	15 57 56.6	-3.4
	comp=Z,64nm,1.1s,SNR=11						
SOKA				eSn	Sn	16 00 36.8	-1.6
	comp=Z,9.6nm,0.7s						
OBKA	Obir	14.46	330	ePn	Pn	15 58 01.3	+0.4
	comp=Z,65nm,1.1s,SNR=12						
OBKA				eSn	Sn	16 00 36.2	-3.7
	comp=Z,28nm,0.8s						
SOC	Sochi	14.56	47	eP	Pn	15 58 00.4	-1.8
SOC				e		16 00 39.3	
SOC				MLR	MLR		
	comp=Z,2µm,17.0s						
KOLS	Kolonicke sedl	14.62	353	eP	Pn	15 58 03.9	+0.8
KOLS	Kolonicke sedl	14.62	353	ePN	Pn	15 58 03.9	+0.8
ARSA	Arzberg	14.68	333	i Pn	Pn	15 58 01.8	-2.0
	comp=Z,23nm,0.5s,SNR=16						
SOP	Sopron	14.69	337	eP	P	15 58 10.2	+0.5
CRVS	Cervenica-Dubn	14.69	351	eP	P	15 58 07.0	-2.7
CRVS	Cervenica-Dubn	14.69	351	ePN	P	15 58 07.0	-2.7
VYHS	Vyhne	14.79	344	eP	Pn	15 58 05.3	0.0
VYHS	Vyhne	14.79	344	ePN	Pn	15 58 05.2	0.0
PTCC	Patocco-Chiusa	14.89	327	⇑P	Pn	15 58 05.7	-1.0
MYKA	Terra Mystica	14.94	328	ePn	Pn	15 58 06.7	-0.7
	comp=Z,13nm,0.6s						
PGF	Pioggiola	14.95	307	P	P	15 58 10.5	-2.2
ZST	Bratislava	14.97	339	eP	P	15 58 13.9	+1.1
ZST	Bratislava	14.97	339	eP	P	15 58 13.9	+1.1
MODS	Modra-Piesok	15.08	340	eP	Pn	15 58 06.7	-2.5
MODS	Modra-Piesok	15.08	340	ePN	Pn	15 58 06.7	-2.5
MODS	Modra-Piesok	15.08	340	eP	P	15 58 13.6	-0.5
STAL	STALIGIAL	15.08	325	IAmb	IAmb	15 58 28.7	
	comp=Z,126nm,0.9s						
CONA	Conrad Observa	15.14	336	ePn	P	15 58 12.8	-2.0
	comp=Z,15nm,0.9s						
SMOL	Smolenice	15.17	340	eP	P	15 58 16.5	+1.5
SMOL	Smolenice	15.17	340	eP	P	15 58 16.5	+1.5
ZOU	Zoufplan	15.18	326		Pn	15 58 09.9	-0.8
LANS	Liptovska Anna	15.27	346	eP	P	15 58 19.8	+3.6
LANS	Liptovska Anna	15.27	346	eP	P	15 58 19.8	+3.6
KWP	Kalwaria Pacla	15.28	354	eP	Pn	15 58 13.1	+1.4
KWP	Kalwaria Pacla	15.28	354	⇑P	Pn	15 58 13.3	+1.6
NIE	Niedzica	15.37	348	eP	Pn	15 58 14.7	+1.7
LVV	L'vov	15.38	357	eP	P	15 58 15.4	-1.9
LVV				eS	Sn	16 01 05.1	+2.9
LVV				pmax	pmax		
	comp=Z,300nm,1.4s						
LVV				MLR	MLR		
	comp=N,4µm,13.0s						
LVV				MLR	MLR		
	comp=E,1µm,13.0s						
LVV				MLR	MLR		
	comp=Z,5µm,13.0s						
KBA	Koelnbreinsper	15.41	328	i Pn	Pn	15 58 11.7	-2.0
	comp=Z,55nm,0.6s						
KBA				eSn	Sn	16 01 03.3	0.0
	comp=Z,8.1nm,0.8s						
JAVC	Velka Javorina	15.42	341	ePN	Pn	15 58 15.1	+1.5
CTI	Castel Tesino	15.45	323	IAmb	IAmb	15 58 26.6	
	comp=Z,133nm,0.8s						
ABTA	Abfaltersbach	15.54	326	i Pn	Pn	15 58 14.1	-1.1
	comp=Z,84nm,0.6s,SNR=16						
ABTA				eSn	Sn	16 01 00.4	-5.7
	comp=Z,23nm,0.7s						
MOA	Molln	15.65	332	ePn	Pn	15 58 14.3	-2.3
	comp=Z,40nm,0.8s,SNR=20						
MOA				eSn	Sn	16 01 10.0	+1.2
	comp=Z,11nm,0.8s						
SALO	Salr	15.75	319	⇓P	Pn	15 58 19.6	+1.7
BOB	Bobbio (Coli)	15.83	315	⇓P	P	15 58 22.7	+0.2
KRUC	Moravsky	15.96	339	ePN	Pn	15 58 20.8	+0.2
KRUC	Moravsky	15.96	339	eSN	S	16 01 26.4	-2.9
AKH	Akhalkalaki	16.09	59	⇓P	Pn	15 58 23.8	+1.4
AKH	Akhalkalaki	16.09	59	P	P	15 58 24.0	-1.4
VRAC	Vranov	16.12	340	Pn	Pn	15 58 23.1	+0.4
	comp=Z,3.0nm,0.3s,baz=155,slow=9.9,SNR=37						
VRAC				LR	LR	16 06 17.3	
	comp=Z,2µm,18.1s,baz=168,slow=44						
VRAC	Vranov	16.12	340	⇑P	Pn	15 58 23.9	+1.2
VRAC	Vranov	16.12	340	ePN	Pn	15 58 22.0	-0.6
VRAC	Vranov	16.12	340	eSN	S	16 01 29.7	-3.0
VRAC	Vranov	16.12	340	⇑P	Pn	15 58 23.9	+1.2
OKC	Ostrava-Krasne	16.20	344	AMS	AMS	16 05 50.0	
	comp=Z,2µm,9.1s						
OJC	Ojcow	16.23	348	eP	Pn	15 58 23.4	-0.6
OJC				epP	P	15 58 28.7	+1.9
OJC	Ojcow	16.23	348	⇓P	Pn	15 58 23.5	-0.6
NEY	Neytrino	16.29	52	d iP	P	15 58 27.0	-0.6
MORC	Moravsky Berou	16.29	342	⇓P	Pn	15 58 24.7	-0.2
MORC	Moravsky Berou	16.29	342	ePN	Pn	15 58 24.1	-0.8
MORC	Moravsky Berou	16.29	342	⇓P	Pn	15 58 24.7	-0.2
MORC	Moravsky Berou	16.29	342	⇑P	Pn	15 58 24.7	-0.2
WATA	Walderalm	16.40	326	i Pn	P	15 58 30.1	+1.3
	comp=Z,160nm,0.9s,SNR=48						
TREC	Trest	16.45	337	eP	P	15 58 29.4	+0.2
TREC				MLR	MLR		
	comp=Z,2µm,12.9s						
TREC	Trest	16.45	337	eP	P	15 58 29.4	+0.2
TREC				AMS	AMS	16 05 40.0	
	comp=Z,2µm,12.9s						
SQTA	Sankt Quirin	16.49	325	i Pn	Pn	15 58 27.8	+0.4
	comp=Z,66nm,0.8s,SNR=41						
SQTA				eSn	Sn	16 01 22.3	-7.1
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	16.52	9	Pn	Pn	15 58 26.6	-1.0
	comp=Z,21nm,0.3s,baz=201,slow=11,SNR=105						
AKASG				Sn	Sn	16 01 35.3	+5.5
	baz=191,slow=21,SNR=9.1						
AKASG				ScP	ScP	16 06 49.0	-0.3
	comp=Z,0.4nm,0.3s,baz=223,slow=1.5,SNR=12						
AKASG	Malin Array Be	16.52	9	i P	Pn	15 58 27.1	-0.6
AKASG				pmax	pmax		
	comp=Z,154nm,0.7s						
AKASG	Malin Array Be	16.52	9		Pn	15 58 26.5	-1.2
AKBB	Malin Array Si	16.52	9	ceP	Pn	15 58 25.7	-2.0
AKBB	Malin Array Si	16.52	9	IAmb	IAmb	15 58 37.9	
	comp=Z,361nm,1.1s						
FETA	Feichten	16.58	324	i Pn	Pn	15 58 29.7	+1.1
	comp=Z,127nm,1.2s,SNR=93						
FETA				eSn	Sn	16 01 25.3	-6.4
	comp=Z,8.1nm,0.7s						
KIV	Kislovodsk	16.59	50	i P	P	15 58 31.4	+0.4
	SNR=44						
KIV	Kislovodsk	16.59	50	eP	P	15 58 30.8	-0.1
KIV				eS	Sn	16 01 33.2	+1.4
KIV				pmax	pmax		
	comp=Z,1µm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,13.0s						
KIV	Kislovodsk	16.59	50		P	15 58 30.0	-0.9
KIV	Kislovodsk	16.59	50	P	P	15 58 29.9	-0.9
KIV				S	S	16 01 38.8	-3.7
KIV	Kislovodsk	16.59	50	⇓P	P	15 58 30.1	-0.9
KVAR	Kislovodsk Arr	16.60	50	Pn	P	15 58 31.0	0.0
	baz=270,slow=20,SNR=13						
KBZ	Khabaz	16.62	51	Pn	P	15 58 30.8	-0.3
	comp=Z,1.8nm,0.3s,baz=244,slow=8.5,SNR=46						
KBZ				LR	LR	16 06 40.5	
	comp=Z,1µm,20.3s,baz=257,slow=44						
KBZ	Khabaz	16.62	51	ceP	Pn	15 58 29.8	+0.9
MOTA	Moosalm	16.63	325	i Pn	Pn	15 58 29.3	+0.1
	comp=Z,14nm,0.6s,SNR=32						
MOTA				eSn	Sn	16 01 27.0	-5.8
	comp=Z,18nm,0.9s						
GNI	Garni	16.63	64	Pn	P	15 58 30.6	-0.9
	comp=Z,0.7nm,0.3s,baz=64,slow=2.4,SNR=25						
GNI				LR	LR	16 06 16.7	
	comp=Z,4µm,18.1s,baz=274,slow=42						
GNI	Garni	16.63	64	P	P	15 58 30.5	-0.9
GNI	Garni	16.63	64		Pn	15 58 30.4	+1.0
GNI				IAmb	IAmb	15 58 57.2	
	comp=Z,365nm,1.5s						
GNI	Garni	16.63	64	P	P	15 58 30.6	-0.9
GNI				P	P	15 58 30.6	-0.9
GNI	Garni	16.63	64	⇑P	P	15 58 30.5	-0.9
GEC2	GERESS Array S	16.68	333		Pn	15 58 28.9	-1.0
GEC2	GERESS Array S	16.68	333	eP	Pn	15 58 29.8	0.0
	comp=Z,77nm,0.7s,baz=140,slow=11						
GERES	GERESS Array B	16.68	333	Pn	Pn	15 58 29.2	-0.6
	comp=Z,6.9nm,0.3s,baz=148,slow=13,SNR=42						
GERES				PcP	PcP	16 03 18.3	+0.4
	comp=Z,0.1nm,0.3s,baz=134,slow=2.8,SNR=1.5						
GERES				ScP	ScP	16 06 49.5	-0.3
	comp=Z,0.2nm,0.3s,baz=142,slow=4.6,SNR=12						
GERES				LR	LR	16 06 50.6	
	comp=Z,2µm,18.8s,baz=150,slow=44						
GERES	GERESS Array B	16.68	333	Pn	Pn	15 58 28.7	-1.1
KRLC	Kraliky	16.77	341	eP	Pn	15 58 31.4	+0.6
KRLC	Kraliky	16.77	341	eP	Pn	15 58 31.4	+0.6
DAVOX	Davos/Dischmat	16.85	322	Pn	Pn	15 58 32.6	+0.6
	comp=Z,0.7nm,0.3s,baz=141,slow=14,SNR=16						
DAVOX				Sn	Sn	16 01 27.2	-11
	comp=Z,0.6nm,0.3s,baz=325,slow=22,SNR=1.8						
DAVOX				LR	LR	16 07 08.7	
	comp=Z,1µm,18.7s,baz=124,slow=45						
ZEI	Tsey	16.88	55	eP	Pn	15 58 32.5	+0.1
ZEI				pmax	pmax		
	comp=Z,219nm,1.2s						
RETA	Reutte	16.89	325	ePn	Pn	15 58 33.1	+0.6
	comp=Z,34nm,0.7s,SNR=30						
KHC	Kasperske Hory	16.97	333	eP	Pn	15 58 32.6	-0.7
KHC				MLR	MLR		
	comp=Z,5µm,16.3s						
KHC	Kasperske Hory	16.97	333	eP	Pn	15 58 32.6	-0.7
KHC				epP	pP	15 58 41.5	-2.0
KHC				AMS	AMS	16 05 50.0	
	comp=Z,5µm,16.3s						
KHC	Kasperske Hory	16.97	333	⇓P	Pn	15 58 32.8	-0.6
NCK	Nalchik	16.97	52	i P	P	15 58 34.8	-0.2
NCK				pmax	pmax		
	comp=Z,195nm,1.3s						
NCK				MLR	MLR		
	comp=Z,1µm,17.0s						
DPC	Dobruska-Polom	17.14	341	eP	Pn	15 58 34.8	-0.7
DPC	Dobruska-Polom	17.14	341	eP	Pn	15 58 34.8	-0.7
FUR	Furstenfeldbru	17.15	327	eP	Pn	15 58 35.9	+0.3
	comp=Z,270nm,1.0s,baz=140,slow=11						
DAVA	Damuels	17.19	323	i Pn	P	15 58 37.0	-0.5
	comp=Z,61nm,0.9s,SNR=47						
DAVA				eSn	Sn	16 01 39.2	-7.1
	comp=Z,2.1nm,0.3s						
WET	Wettzell	17.24	332	eP	P	15 58 37.7	-0.3
	baz=140,slow=11						
PBCC	Pribram	17.28	335	eP	P	15 58 39.2	+0.8
UBR	Ueberruh	17.35	324	eP	Pn	15 58 38.4	+0.3
	comp=Z,64nm,0.8s,baz=140,slow=11						
PRU	Pruhonice	17.35	337	eP	Pn	15 58 37.7	-0.4
PRU	Pruhonice	17.35	337	eP	Pn	15 58 37.7	-0.4
OSTC	Ostas	17.36	341	eP	Pn	15 58 36.8	-1.3
UPC	Upice	17.37	340	eP	Pn	15 58 38.4	+0.1
UPC				MLR	MLR		
	comp=Z,2µm,12.6s						
UPC	Upice	17.37	340	eP	Pn	15 58 38.4	+0.1
UPC				AMS	AMS	16 06 20.0	
	comp=Z,2µm,12.6s						
GOF	Gofitskoye	17.37	47	⇑iP	P	15 58 39.1	-0.3
GOF				pmax	pmax		
	comp=Z,434nm,1.6s						
CHVC	Chvalec	17.43	340	eP	Pn	15 58 39.2	+0.2
PRA	Prague	17.46	337	eP	P	15 58 41.0	+0.7
PRA	Prague	17.46	337	eP	P	15 58 41.0	+0.7
KSP	Ksiaz	17.59	341	eP	Pn	15 58 40.6	-0.4
KSP	Ksiaz	17.59	341	⇑P	P	15 58 42.6	+0.8
BEL	Belsk	17.66	351	eP	P	15 58 43.4	+0.9
PVCC	Panska Ves	17.81	338	eP	P	15 58 44.5	+0.3
PVCC	Panska Ves	17.81	338	eP	P	15 58 44.5	+0.3
GANJ	Ganja	17.92	64	P	P	15 58 47.1	+1.5
DDFL	Dedoflistskaro	17.98	61	P	P	15 58 48.9	+2.7
ROTZ	Rotzenmuhle	18.00	332	eP	Pn	15 58 45.8	-0.3
	baz=140,slow=11						
LGD	Lagodekhi	18.18	60	P	P	15 58 49.5	+1.1
MANZ	Manzenberg	18.22	332	eP	P	15 58 48.7	-0.1
	comp=Z,57nm,0.9s,baz=140,slow=11						
NKC	Novy Kostel	18.29	333	eP	P	15 58 49.3	-0.2
NKC				MLR	MLR		
	comp=Z,4µm,12.1s						
NKC	Novy Kostel	18.29	333	eP	P	15 58 49.3	-0.2
NKC				AMS	AMS	16 06 40.0	
	comp=Z,4µm,12.1s						
BRG	Berggiesshubel	18.31	337	i P	P	15 58 49.5	-0.3
BRG				Amp		15 58 53.0	
	comp=Z,68nm,1.2s						
BRG	Berggiesshubel	18.31	337	eP	P	15 58 48.6	-1.1
	baz=140,slow=11						
GROC	Groznyy	18.32	55	eP	P	15 58 47.9	-2.0
GROC				pmax	pmax		
	comp=Z,110nm,1.3s						
GRFO	Grafenberg	18.34	330	P	P	15 58 49.2	-0.8
GRFO				pmax	pmax		
	comp=Z,560nm,1.3s						
GRFO	Grafenberg	18.34	330	P	P	15 58 49.2	-0.8
GRF	Grafenberg Arr	18.34	330	ePKPbc	ScP	16 06 53.4	+0.3
	baz=153,slow=2.8						
GRF	Grafenberg Arr	18.34	330	eP	P	15 58 50.2	+0.1
	baz=140,slow=11						
GRF				eL	L	16 07 50.8	
	comp=Z,2µm,19.9s						
WERN	Wernitzgruen	18.36	333	eP	Pn	15 58 51.2	+0.7
	comp=Z,40nm,0.9s,baz=140,slow=11						
ZKTA	Zakatala	18.39	61	P	Pn	15 58 53.0	+2.0
TANN	Tannenbergstha	18.43	334	eP	Pn	15 58 52.2	+0.8
	baz=140,slow=11						
GUNZ	Gunzen	18.44	333	eP	Pn	15 58 52.1	+0.6
	baz=140,slow=11						
MNGR	Mingechevir, A	18.52	64	P	Pn	15 58 54.4	+2.0
WERD	Werda	18.52	334	eP	Pn	15 58 53.1	+0.6
	baz=140,slow=11						
STU	Stuttgart	18.55	325	eP	Pn	15 58 54.3	+1.6
	baz=140,slow=11						
BFO	Black Forest	18.66	323	P	P	15 58 53.5	-0.2
BFO				pmax	pmax		
	comp=Z,83nm,1.1s						
BFO	Black Forest	18.66	323	P	P	15 58 53.5	-0.2
BFO	Black Forest	18.66	323	eP	Pn	15 58 54.3	+0.2
	baz=140,slow=11						
BFO	Black Forest	18.66	323	P	Pn	15 58 54.6	+0.4
SEKA	Sheki	18.70	62	P	Pn	15 58 57.4	+2.6
MOX	Moxa	18.94	333	P	Pn	15 58 59.8	+2.3
MOX	Moxa	18.94	333	eP	Pn	15 58 57.6	+0.2
	comp=Z,40nm,0.8s,baz=140,slow=11						
MOX				eL	L	16 08 19.4	
	comp=Z,1µm,19.8s						
CLL	Collm	18.99	336	i P	P	15 58 57.3	+0.1
	comp=Z,117nm,1.3s						
CLL				i pP	pP	15 59 04.3	-1.5
CLL				ePPP	PPP	15 59 15.0	
CLL				eS	Sn	16 02 24.0	-5.6
CLL				i sS	sS	16 02 41.3	-2.9
CLL				eSSS	SSS	16 02 53.0	
CLL				e		16 04 33.0	
CLL				LmV		16 06 00.0	
	comp=Z,900nm,20.7s						
CLL	Collm	18.99	336	i P	P	15 58 57.3	+0.1
CLL				eS	Sn	16 02 24.0	-5.6
CLL				pmax	pmax		
	comp=Z,117nm,1.3s						
CLL				MLR	MLR		
	comp=Z,900nm,20.7s						
CLL	Collm	18.99	336	eP	Pn	15 58 57.7	-0.4
	comp=Z,28nm,0.8s,baz=140,slow=11						
SSB	Saint Sauveur	19.07	311	⇑P	Pn	15 58 59.8	+0.6
ECH	Echery	19.18	321	⇑P	Pn	15 59 00.1	-0.4
NEUB	Neuenburg	19.34	334	eP	Pn	15 59 02.1	-0.1
	baz=140,slow=11						
MAK	Makhachkala	19.41	57	eP	P	15 59 02.3	+0.5
MAK				eS	Sn	16 02 41.9	+2.1
MAK				pmax	pmax		
	comp=Z,783nm,1.1s						
VORD	Divnogorie	19.48	28	eP	P	15 59 02.6	+0.1
VORD				pmax	pmax		
	comp=Z,240nm,1.0s						
LKRN	Lenkeran, Azer	19.48	71	P	Pn	15 59 04.8	+0.7
GKP	Gorka Klasztor	19.63	346	eP	P	15 59 04.6	+0.5
GKP				epP	pP	15 59 10.9	-1.9
GKP	Gorka Klasztor	19.63	346	eP	P	15 59 04.4	+0.3
VSR	Storozhevoye	19.63	27	eP	P	15 59 03.6	-0.5
VSR				pmax	pmax		
	comp=Z,70nm,0.7s						
UBBA	Unterbreizbach	19.71	331	eP	Pn	15 59 06.2	-0.3
	baz=140,slow=11						
TNS	Taunus Mts	19.92	327	eP	Pn	15 59 08.4	-0.8
	baz=140,slow=11						
VORR	Voronezh	20.01	26	eP	P	15 59 08.0	-0.3
VORR				pmax	pmax		
	comp=Z,350nm,1.6s						
MNK	Minsk	20.15	5	i P	P	15 59 07.5	-2.3
	comp=E,2.0nm,0.7s						
MNK				i P	P	15 59 07.5	-2.3
	comp=N,50nm,0.9s						
MNK				i P	P	15 59 07.5	-2.3
	comp=Z,48nm,0.9s						
MNK				i PP	sP	15 59 23.9	+1.2
MNK				i S	S	16 02 51.0	-2.9
MNK				i SS	SnSn	16 03 09.7	-2.4
MNK				i LQ	LQ	16 05 12.7	
MNK				i LR	LR	16 06 21.8	
MNK				i LRM	MLR	16 08 07.2	
	comp=E,24nm,16.3s						
MNK				i LRM	MLR	16 08 07.2	
	comp=N,844nm,14.0s						
MNK				i LRM	MLR	16 08 07.2	
	comp=Z,490nm,12.7s						
MNK				i ScS	ScS	16 10 38.7	-0.7
MNK	Minsk	20.15	5	⇑eP	P	15 59 07.0	-2.8
MNK				e		15 59 32.0	
MNK				eS	S	16 02 40.0	-14
MNK				pmax	pmax		
	comp=Z,620nm,1.5s						
MNK				pmax	pmax		
	comp=N,770nm,1.5s						
GTTG	Gottingen	20.29	332	eP	Pn	15 59 12.9	-0.6
	comp=N,828nm,1.2s,baz=140,slow=11						
CLZ	Clausthal	20.36	333	eP	P	15 59 12.6	+0.4
	baz=140,slow=11						
FLTG	Flechtingen	20.45	335	eP	P	15 59 13.1	+0.1
	baz=140,slow=11						
FLTG	Flechtingen	20.45	335	P	P	15 59 12.7	-0.3
ASSE	Asse, Remlinge	20.49	334	eP	P	15 59 13.8	+0.4
	comp=N,40nm,1.0s,baz=140,slow=11						
NACGM	Naroch	20.49	3	i P	P	15 59 11.5	-2.0
NACGM				i P	P	15 59 11.5	-2.0
NACGM				i P	P	15 59 11.5	-2.0
NACGM				i PP	PnPn	15 59 35.5	+4.1
NACGM				i S	Sn	16 03 05.5	-0.1
NACGM				i SS	SnSn	16 03 50.2	+30
NACGM				i SSS	SSS	16 04 26.2	
NACGM				i LQ	LQ	16 05 41.5	
NACGM				i LR	LR	16 06 54.6	
CAF	Calviac	20.51	308	eP	P	15 59 15.0	+1.1
CAF				pmax	pmax		
	comp=Z,113nm,1.6s						
WLF	Walferdange	20.62	323	bP	P	15 59 16.0	+1.1
WLF	Walferdange	20.62	323	P	P	15 59 15.4	+0.5
WLF				pmax	pmax		
	comp=Z,155nm,0.9s						
WLF	Walferdange	20.62	323	P	P	15 59 15.4	+0.5
WLF				IAmb	IAmb	15 59 33.3	
	comp=Z,155nm,0.9s						
WLF	Walferdange	20.62	323	eP	P	15 59 15.5	+0.5
	baz=140,slow=11						
WLF	Walferdange	20.62	323	⇑P	P	15 59 16.1	+1.1
VRH	Novokhopyorsk	20.64	31	eP	P	15 59 14.6	-0.5
VRH				pmax	pmax		
	comp=Z,280nm,0.9s						
KASTN	Kahler Asten	20.65	329	eP	P	15 59 16.1	+0.7
	comp=Z,121nm,1.0s,baz=140,slow=11						
LPSR	Galich'ya Gora	20.67	24	eP	P	15 59 14.3	-1.1
LPSR				pmax	pmax		
	comp=Z,220nm,1.4s						
TAM	Tamanrasset	20.69	241	P	P	15 59 16.4	+0.3
TAM				pmax	pmax		
	comp=Z,130nm,1.1s						
TAM				MLR	MLR		
	comp=Z,900nm,21.0s						
TAM	Tamanrasset	20.69	241	P	P	15 59 16.4	+0.3
TAM				IAmb	IAmb	15 59 19.9	
	comp=Z,130nm,1.1s						

TAM	Tamanrasset	20.69	241	⇓P	P	15 59 17.1	+1.0
AHRW	Bad Neuenahr-A	20.77	326	eP	P	15 59 17.7	+1.2
	baz=140,slow=11						
RAYN	Ar Rayn	20.88	116	i P	P	15 59 19.0	+1.0
	SNR=37						
RAYN	Ar Rayn	20.88	116	P	P	15 59 18.8	+0.8
RAYN				pmax	pmax		
	comp=Z,67nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,600nm,22.0s						
RAYN	Ar Rayn	20.88	116	P	P	15 59 18.8	+0.8
IDID	Didziasalis	20.90	3	eP	P	15 59 16.5	-1.4
NRDL	Niedersach Rie	20.99	334	eP	P	15 59 19.1	+0.3
	baz=140,slow=11						
PABE	Paberze	21.07	358	eP	P	15 59 18.1	-1.6
ISAL	Salakas	21.14	2	eP	P	15 59 18.9	-1.5
BHOU	Houvegnez	21.14	325	dP	P	15 59 22.2	+1.6
BHOU				dpP	pP	15 59 28.6	-0.7
BTNL	Ternell	21.24	325	dP	P	15 59 22.8	+1.2
BTNL				dpPn	pwP	15 59 32.5	-0.6
CART	Cartagena	21.31	286	P	P	15 59 22.2	-0.3
CART				IAmb	IAmb	15 59 27.1	
	comp=Z,102nm,1.0s						
CART	Cartagena	21.31	286	⇑P	P	15 59 23.5	+1.1
MEM	Membach	21.31	325	bP	P	15 59 23.6	+1.2
MEM				dpP	pP	15 59 30.4	-0.7
BUG	Bochum--Univer	21.32	328	eP	P	15 59 23.0	+0.6
	baz=140,slow=11						
LFF	La Frestale	21.39	307	eP	P	15 59 24.5	+1.2
LFF				pmax	pmax		
	comp=Z,50nm,0.7s						
RCHB	Rochefort	21.39	323	dP	P	15 59 23.6	+0.3
RCHB				dpP	pP	15 59 30.6	-1.4
BSTI	Sart Tilman	21.51	324	dP	P	15 59 25.8	+1.4
BSTI				dpP	pP	15 59 32.5	-0.7
BCLA	Clavier	21.53	324	dP	P	15 59 25.4	+0.7
BEBN	Eben Emael	21.59	325	dP	P	15 59 26.9	+1.5
BEBN				dsP	sP	15 59 40.9	+2.4
BGES	Gesves	21.61	324	bP	P	15 59 26.0	+0.4
BGES				dsP	sP	15 59 47.4	+8.9
DOU	Dourbes	21.67	322	bP	P	15 59 26.5	+0.2
DOU				dsP	sP	15 59 40.5	+1.3
PBUR	Paburge	21.69	355	eP	P	15 59 25.2	-1.1
BMRD	Maredsous	21.72	323	dP	P	15 59 27.0	+0.3
BMRD				dpP	pP	15 59 35.1	-0.3
IBBN	Ibbenburen	21.75	330	eP	P	15 59 27.4	+0.4
	comp=Z,114nm,0.9s,baz=140,slow=11						
CLF	Chambon-Foret	21.77	315	IAmb	IAmb	15 59 42.7	
	comp=Z,138nm,1.0s						
CLF	Chambon-Foret	21.77	315	⇓P	P	15 59 28.8	+1.5
BSD	Bornholm Skovb	21.84	344	eP	P	15 59 25.6	-2.5
BSD	Bornholm Skovb	21.84	344	eP	P	15 59 25.5	-2.5
BSD	Bornholm Skovb	21.84	344	i P	P	15 59 25.5	-2.5
	comp=Z,6.0nm,0.4s						
BSD	Bornholm Skovb	21.84	344	eP	P	15 59 25.6	-2.5
BSD				IAmb	IAmb	15 59 27.2	
	comp=Z,6.0nm,0.4s						
SNF	Seneffe	22.09	323	dP	P	15 59 31.3	+0.6
BSEG	Bad Segeberg	22.09	336	eP	P	15 59 29.4	-1.2
	comp=Z,161nm,0.9s,baz=140,slow=11						
OBN	Obninsk	22.16	18	P	P	15 59 29.1	-2.2
	comp=Z,13nm,0.7s,baz=129,slow=5.4,SNR=7.5						
OBN				S	S	16 03 28.0	-5.2
	comp=Z,6.0nm,0.7s,baz=3.3,slow=21,SNR=4.1						
OBN				LR	LR	16 08 50.8	
	comp=Z,304nm,20.2s,baz=201,slow=39						
OBN	Obninsk	22.16	18	ceP	P	15 59 28.9	-2.5
OBN				e		15 59 58.9	
OBN				pmax	pmax		
	comp=Z,278nm,2.5s						
OBN				MLR	MLR		
	comp=Z,1µm,14.0s						
OBN	Obninsk	22.16	18	P	P	15 59 29.4	-1.9
OBN	Obninsk	22.16	18	⇑P	P	15 59 32.5	+1.2
UCC	Uccle	22.23	324	dP	P	15 59 33.3	+1.1
UCC				dPnPn	PnPn	15 59 54.6	-0.7
MFF	Saint Martin d	22.59	310	eP	P	15 59 37.3	+1.1
MFF				pmax	pmax		
	comp=Z,437nm,1.5s						
TAF	Taforalt	22.61	279	P		15 59 40.0	
LLD	Lille Linde	22.72	341	eP	P	15 59 37.3	0.0
LLD	Lille Linde	22.72	341	i P	P	15 59 37.3	0.0
LLD	Lille Linde	22.72	341	eP	P	15 59 37.4	0.0
MOS	Moscow	22.99	18	eP	P	15 59 37.4	-2.7
MOS				e		16 00 02.6	
MOS				eS	S	16 03 44.0	-3.9
MOS				pmax	pmax		
	comp=Z,187nm,1.4s						
MOS				MLR	MLR		
	comp=Z,1µm,7.0s						
ESBB	Sonseca Array	23.70	291	IAmb	IAmb	16 00 08.9	
	comp=Z,70nm,0.9s						
ESDC	Sonseca Array	23.70	291	P	P	15 59 47.7	+0.2
	comp=Z,42nm,1.0s,baz=82,slow=9.2,SNR=9.4						
ESDC				ScP	ScP	16 07 06.8	+0.4
	comp=Z,2.2nm,1.0s,baz=9.7,slow=5.2,SNR=5.4						
ESDC				LR	LR	16 09 51.3	
	comp=Z,390nm,20.4s,baz=90,slow=38						
ESDC	Sonseca Array	23.70	291	P	P	15 59 47.8	+0.4
PAB	San Pablo	24.00	291	P	P	15 59 50.2	0.0
PAB				pmax	pmax		
	comp=Z,91nm,1.3s						
PAB	San Pablo	24.00	291	P	P	15 59 50.2	0.0
PAB				IAmb	IAmb	16 00 06.0	
	comp=Z,91nm,1.3s						
PAB	San Pablo	24.00	291	⇓P	P	15 59 51.2	+0.9
PAB	San Pablo	24.00	291	P		15 59 51.0	
VSU	Vasula	24.05	2	eP	P	15 59 49.6	-0.7
VSU	Vasula	24.05	2	i P	P	15 59 49.2	-1.2
VSU				pmax	pmax		
	comp=Z,119nm,1.3s						
VSU	Vasula	24.05	2	⇓P	P	15 59 49.7	-0.7
BELG	Belogornoye	24.12	35	P	P	15 59 50.5	-0.6
	comp=Z,390nm,1.1s,baz=47,slow=2.8,SNR=81						
BELG				S	S	16 04 04.1	-2.2
	comp=Z,51nm,0.9s,baz=146,slow=14,SNR=5.7						
BELG				LR	LR	16 11 12.1	
	comp=Z,498nm,19.0s,baz=207,slow=41						
MUD	Monsted U'grnd	24.56	339	i P	P	15 59 55.2	+0.2
MUD	Monsted U'grnd	24.56	339	i P	P	15 59 55.2	+0.2
	comp=Z,132nm,0.9s						
MUD	Monsted U'grnd	24.56	339	i P	P	15 59 55.2	+0.2
MUD				IAmb	IAmb	16 00 02.5	
	comp=Z,133nm,0.9s						
MUD	Monsted U'grnd	24.56	339	⇓P	P	15 59 55.4	+0.3
HORN	Hornachuelos	24.68	287	P		15 59 56.7	
ARF	Arif	24.74	271	P		16 00 01.1	
MDT	Midelt	24.74	275	P	P	15 59 58.0	+0.9
	comp=Z,26nm,0.8s,baz=100,slow=9.5,SNR=36						
MDT	Midelt	24.74	275	P		15 59 59.1	
LCRM	LCR	24.78	277	P		16 00 01.0	
JSA	Saint Aubin	24.91	314	eP	P	15 59 56.6	-1.8
JSA				IAmb	IAmb	15 59 57.9	
	comp=Z,40nm,0.8s						
GOET	G??ttrup	25.03	339	i P	P	16 00 01.6	+2.3
GOET	G??ttrup	25.03	339	i P	P	16 00 01.7	+2.3
GOLM	Goulmima	25.28	272	P		16 00 05.0	
RSA	Sarsar	25.38	280	P		16 00 05.0	
PUL	Pulkovo	25.57	6	ceP	P	16 00 03.2	-1.0
PUL				pmax	pmax		
	comp=Z,497nm,1.7s						
JRN	Qarnain Island	25.84	104	P	P	16 00 07.8	+0.8
JRN				P	P	16 00 07.8	+0.8
JRN				S	S	16 04 34.2	-0.1
JRN				S	S	16 04 34.2	-0.1
UPP	Uppsala	25.89	351	eP	P	16 00 06.8	-0.3
AAL	Aland	25.96	354	eP	P	16 00 06.6	-1.1
PBRG	Braganca	25.99	296	eP	P	16 00 09.0	+0.7
	comp=Z,114nm,1.6s						
TZRR	Tazzarine	26.03	271	P		16 00 12.0	
PBAR	Barrancos	26.08	288	eP	P	16 00 10.0	+0.9
	comp=Z,130nm,1.5s						
MVO	Moncorvo	26.14	294	eP	P	16 00 10.7	+1.0
	comp=Z,169nm,1.1s						
STRD	Stroud	26.15	320	eP	P	16 00 07.6	-1.9
STRD				IAmb	IAmb	16 00 11.3	
	comp=Z,178nm,1.0s						
CWF	Charnwood Fore	26.22	322	eP	P	16 00 08.4	-1.8
CWF				IAmb	IAmb	16 00 08.6	
	comp=Z,100nm,0.8s						
ZGR	Zagora	26.26	269	P		16 00 15.0	
HOMB	Homborsund	26.29	340	eP	P	16 00 10.4	-0.3
HOMB	Homborsund	26.29	340	eP	P	16 00 09.9	-0.7
HOMB				i P	P	16 00 10.0	-0.7
ZHG	ZHG	26.29	277	P		16 00 14.0	
PMRV	Marv??o	26.34	290	eP	P	16 00 12.1	+0.6
	comp=Z,118nm,1.4s						
PCBR	Castelo Branco	26.42	291	eP	P	16 00 12.7	+0.6
	comp=Z,77nm,1.4s						
MTE	Manteigas	26.49	293	eP	P	16 00 13.3	+0.5
	comp=Z,98nm,1.4s						
MTE	Manteigas	26.49	293	⇑P	P	16 00 15.8	+3.0
PESTR	Estremoz	26.50	289	P	P	16 00 12.3	-0.6
PESTR	Estremoz	26.50	289	⇓P	P	16 00 13.6	+0.7
PESTR	Estremoz	26.50	289	P		16 00 13.8	
PVAQ	Vaqueiros	26.65	286	eP	P	16 00 14.7	+0.4
	comp=Z,141nm,1.3s						
PVAQ	Vaqueiros	26.65	286	IAmb	IAmb	16 00 29.5	
	comp=Z,101nm,1.1s						
PVAQ	Vaqueiros	26.65	286	P		16 00 14.9	
MCH1	Michaelchurch	26.70	320	eP	P	16 00 14.3	-0.3
MCH1				IAmb	IAmb	16 00 17.7	
	comp=Z,421nm,2.0s						
MCH1	Michaelchurch	26.70	320	⇓P	P	16 00 16.4	+1.8
SNART	Snartemo	26.72	339	eP	P	16 00 15.4	+0.8
SNART	Snartemo	26.72	339	i P	P	16 00 15.0	+0.4
SNART				eP	P	16 00 15.9	+1.3
POLO	Lamas de Olo	26.73	295	eP	P	16 00 16.1	+1.0
	comp=Z,40nm,1.4s						
PBEJ	Beja	26.74	287	eP	P	16 00 15.8	+0.8
	comp=Z,43nm,1.2s						
HFS	Hagfors	26.76	347	P	P	16 00 13.8	-1.1
	comp=Z,15nm,0.6s,baz=153,slow=10.0,SNR=58						
HFS				LR	LR	16 11 38.4	
	comp=Z,648nm,20.8s,baz=160,slow=38						
PVIS	Viseu	26.77	293	eP	P	16 00 16.4	+1.0
	comp=Z,65nm,1.1s						
LBWR	Ladybower, Pea	26.80	323	eP	P	16 00 14.4	-0.9
LBWR				IAmb	IAmb	16 00 14.8	
	comp=Z,201nm,0.8s						
GEYT	Alibeck	26.81	73	P	P	16 00 15.9	+0.2
	comp=Z,6.7nm,0.6s,baz=262,slow=10,SNR=13						
GYA0B	ALIBECK ARRAY	26.81	73	IAmb	IAmb	16 00 42.8	
	comp=Z,83nm,1.2s						
PBDV	Barranco-do-Ve	26.84	286	eP	P	16 00 16.6	+0.7
	comp=Z,155nm,1.8s						
EVO	Evora	26.84	288	eP	P	16 00 16.8	+0.9
	comp=Z,125nm,1.4s						
PCVE	Castro Verde	26.89	286	eP	P	16 00 17.0	+0.6
	comp=Z,102nm,1.3s						
HLM1	Long Mynd	26.91	321	eP	P	16 00 15.6	-0.8
HLM1				IAmb	IAmb	16 00 16.6	
	comp=Z,53nm,1.0s						
PCAB	Cabril	26.94	295	eP	P	16 00 18.0	+1.2
	comp=Z,84nm,1.0s						
OUZM	OUZ	26.98	271	P		16 00 22.0	
PMTG	Montargil	26.99	290	eP	P	16 00 19.5	+2.2
	comp=Z,69nm,1.3s						
FIA1	FINESS Array S	27.02	1	P	P	16 00 15.2	-2.1
FIA1				IAmb	IAmb	16 00 17.1	
	comp=Z,87nm,1.2s						
FINES	FINESS Array B	27.02	1	P	P	16 00 15.8	-1.4
	comp=Z,19nm,0.8s,baz=156,slow=11,SNR=47						
FINES				PcP	PcP	16 03 38.6	+0.7
	comp=Z,3.9nm,0.5s,baz=176,slow=3.3,SNR=5.9						
FINES				ScP	ScP	16 07 13.6	-1.7
	comp=Z,5.5nm,0.9s,baz=165,slow=5.8,SNR=2.4						
FINES				LR	LR	16 11 24.3	
	comp=Z,1µm,21.8s,baz=191,slow=37						
FINES	FINESS Array B	27.02	1	P	P	16 00 15.2	-2.1
MESJ	Messejana	27.03	287	eP	P	16 00 18.2	+0.6
MESJ				AMb	AMB	16 00 33.0	
	comp=Z,67nm,1.2s						
MESJ	Messejana	27.03	287	eP	P	16 00 18.2	+0.6
MESJ				pmax	pmax		
	comp=Z,67nm,1.2s						
MESJ	Messejana	27.03	287	eP	P	16 00 18.1	+0.5
	comp=Z,87nm,1.5s						
HPK	Haverah Park	27.07	324	eP	P	16 00 17.6	-0.2
HPK				IAmb	IAmb	16 00 17.9	
	comp=Z,115nm,1.1s						
PGAV	Gavieira, Arco	27.14	296	eP	P	16 00 21.5	+2.8
	comp=Z,52nm,1.9s						
OSL	Oslo	27.18	344	eP	P	16 00 18.8	+0.1
VALR	Valaam	27.19	6	i P	P	16 00 16.5	-2.2
VALR				pmax	pmax		
	comp=Z,100nm,0.9s						
KONO	Kongsberg	27.19	343	P	P	16 00 17.4	-1.4
KONO				pmax	pmax		
	comp=Z,152nm,1.4s						
KONO	Kongsberg	27.19	343	P	P	16 00 17.4	-1.4
KONO				IAmb	IAmb	16 00 19.9	
	comp=Z,152nm,1.4s						
KONO	Kongsberg	27.19	343	eP	P	16 00 17.8	-1.0
KONO	Kongsberg	27.19	343	⇓P	P	16 00 18.1	-0.7
PNCL	Nicolau / Gran	27.26	288	eP	P	16 00 22.3	+2.6
	comp=Z,90nm,1.2s						
FOEL	Foel Wylfa	27.27	321	eP	P	16 00 17.8	-1.9
FOEL				IAmb	IAmb	16 00 19.8	
	comp=Z,43nm,0.9s						
PTEO	Sao Teotonio	27.44	286	eP	P	16 00 20.3	-1.1
NC602	NORSAR Array S	27.73	346	IAmb	IAmb	16 00 24.1	
	comp=Z,150nm,1.4s						
NC602	NORSAR Array S	27.73	346	eP	P	16 00 23.5	-0.1
EDMD	Edmundbyers	27.74	326	eP	P	16 00 23.2	-0.6
EDMD				IAmb	IAmb	16 00 25.3	
	comp=Z,48nm,1.1s						
BLS5	Blasjo	27.84	340	eP	P	16 00 25.0	+0.3
ATD	Arta Tunnel	27.97	140	P	P	16 00 28.5	+2.2
	comp=Z,20nm,0.8s,baz=314,slow=8.2,SNR=3.9						
ATD				LR	LR	16 12 16.3	
	comp=Z,214nm,18.5s,baz=346,slow=38						
ASUD	Al Ashush, Dub	27.98	102	P	P	16 00 27.0	+0.7
SHME	Shamm	28.02	99	P	P	16 00 27.1	+0.5
SHME	Shamm	28.02	99	P	P	16 00 27.4	+0.8
SHME				P	P	16 00 27.4	+0.8
SHME				S	S	16 05 08.9	+0.2
SHME				S	S	16 05 08.9	+0.2
KLMR	Klimovskoe	28.02	15	eP	P	16 00 23.9	-2.3
KLMR				eS	S	16 05 06.1	-2.0
KLMR				pmax	pmax		
	comp=Z,134nm,1.1s						
KLMR	Klimovskoe	28.02	15	eP	P	16 00 24.0	-2.3
KLMR				AMP		16 00 34.6	
	comp=Z,134nm,1.1s						
KLMR				eS	S	16 05 06.2	-1.9
KLMR				eS	S	16 05 06.2	-1.9
KLMR				LQ	LQ	16 09 32.7	
KLMR				LQ	LQ	16 09 32.7	
KLMR				LR	LR	16 10 18.7	
NB201	NORSAR Array S	28.07	346	IAmb	IAmb	16 00 34.1	
	comp=Z,64nm,0.9s						
NB2	NORSAR Subarra	28.07	346	P	P	16 00 26.0	-0.8
	comp=Z,103nm,1.7s,baz=156,slow=9.3						
NB2	NORSAR Subarra	28.07	346	P	P	16 00 26.0	-0.8
	baz=156,slow=9.3						
NOA	NORSAR Array B	28.07	346	P	P	16 00 26.0	-0.8
	comp=Z,12nm,1.0s,baz=264,slow=5.7,SNR=36						
NOA				LR	LR	16 13 31.7	
	comp=Z,830nm,18.9s,baz=160,slow=40						
KESW	Keswick, Cumbr	28.14	324	eP	P	16 00 26.8	-0.6
KESW				IAmb	IAmb	16 00 26.8	
	comp=Z,106nm,0.9s						
FAQ	Al Faqa, Dubai	28.14	102	P	P	16 00 28.5	+0.7
BANOM	Banah	28.20	99	P	P	16 00 28.2	-0.1
BANOM	Banah	28.20	99	P	P	16 00 29.1	+0.8
	SNR=7.0						
NC303	NORSAR Array S	28.21	346	IAmb	IAmb	16 00 30.3	
	comp=Z,126nm,1.4s						
MSFE	Esma-Masafi	28.33	100	P	P	16 00 29.2	-0.3
NC204	NORSAR Array S	28.38	345	IAmb	IAmb	16 00 51.8	
	comp=Z,126nm,1.2s						
SKAR	Skarslia	28.41	343	eP	P	16 00 30.6	+0.7
MDH	Madha	28.47	100	P	P	16 00 30.8	+0.2
TTIG	Tnine Tigouga,	28.47	272	P		16 00 34.0	
HATD	Hatta, Dubai	28.54	101	i P	P	16 00 31.6	+0.3
	SNR=8.0						
HATD	Hatta, Dubai	28.54	101	P	P	16 00 32.1	+0.7
	SNR=8.2						
HATD				P	P	16 00 32.1	+0.7
	SNR=8.2						
HATD				S	S	16 05 16.4	-0.7
HATD				S	S	16 05 16.4	-0.7
ASHO	Ashiyiah	28.55	102	i P	P	16 00 31.5	+0.1
	SNR=14						
ASHO	Ashiyiah	28.55	102	P	P	16 00 31.0	-0.4
	SNR=6.0						
ASHO				P	P	16 00 31.0	-0.4
	SNR=6.0						
ASHO				S	S	16 05 16.7	-0.5
ASHO				S	S	16 05 16.7	-0.5
UOSS	Minazif	28.55	101	i P	P	16 00 31.7	+0.3
	SNR=6.6						
UOSS	Minazif	28.55	101	P	P	16 00 31.3	-0.1
UOSS	Minazif	28.55	101	P	P	16 00 31.6	+0.3
UOSS				P	P	16 00 31.6	+0.3
UOSS				S	S	16 05 16.4	-0.7
UOSS				S	S	16 05 16.4	-0.7
UOSS	Minazif	28.55	101	⇑P	P	16 00 31.4	+0.1
EKA	Eskdalemuir Ar	28.59	326	P	P	16 00 31.6	+0.2
	comp=Z,16nm,0.8s,baz=131,slow=9.0,SNR=15						
EKA				ScP	ScP	16 07 20.6	+0.3
	comp=Z,2.9nm,0.7s,baz=99,slow=3.7,SNR=2.3						
EKA				LR	LR	16 14 27.5	
	comp=Z,796nm,19.7s,baz=120,slow=42						
ALNE	Al Ain	28.59	103	P	P	16 00 32.7	+0.9
	SNR=7.9						
ALNE				P	P	16 00 32.7	+0.9
	SNR=7.9						
ALNE				S	S	16 05 17.1	-0.7
ALNE				S	S	16 05 17.1	-0.7
ESK	Eskdalemuir	28.60	326	eP	P	16 00 30.7	-0.7
ESK	Eskdalemuir	28.60	326	P	P	16 00 31.5	0.0
ESK				pmax	pmax		
	comp=Z,192nm,1.5s						
ESK	Eskdalemuir	28.60	326	P	P	16 00 31.5	0.0
ESK	Eskdalemuir	28.60	326	⇑P	P	16 00 32.2	+0.7
UMZA	Um Al Zommool	28.77	106	P	P	16 00 34.0	+0.6
UMZA				S	S	16 05 19.6	-1.1
AKTO	Aktyubinsk	28.78	46	P	P	16 00 33.1	-0.1
	comp=Z,5.8nm,0.4s,baz=240,slow=10,SNR=20						
AKTO				S	S	16 05 35.2	+15
	comp=Z,4.9nm,1.0s,baz=334,slow=19,SNR=1.6						
EBL	Broad Law	28.79	326	eP	P	16 00 32.6	-0.6
BER	Bergen	28.95	340	eP	P	16 00 35.3	+0.8
KIRV	Kirov	29.07	26	P	P	16 00 34.5	-1.1
	comp=Z,23nm,0.6s,baz=223,slow=9.1,SNR=13						
KIRV				S	S	16 05 21.6	-3.0
	comp=Z,25nm,0.8s,baz=102,slow=23,SNR=12						
KIRV				LR	LR	16 14 08.5	
	comp=Z,539nm,18.9s,baz=230,slow=40						
SOHO	SOHO	29.18	102	i P	P	16 00 37.4	+0.4
	SNR=14						
SOHO	SOHO	29.18	102	P	P	16 00 37.5	+0.5
SOHO				P	P	16 00 37.5	+0.5
SOHO				S	S	16 05 27.9	+0.8
SOHO				S	S	16 05 27.9	+0.8
HYA	Hoyanger	29.37	341	eP	P	16 00 38.4	+0.2
DOMB	Dombas	29.43	345	eP	P	16 00 39.6	+0.8
AB31	Akbulak array	29.58	49	i P	P	16 00 40.1	-0.1
AB31				pmax	pmax		
	comp=Z,35nm,1.0s						
ABKAR	Akbulak array	29.58	49	P	P	16 00 39.9	-0.3
ABKAR	Akbulak array	29.58	49	⇑P	P	16 00 40.4	+0.1
INVG	Invergeldie, C	29.63	327	eP	P	16 00 40.3	-0.3
SUE	Sulen	29.67	340	eP	P	16 00 41.5	+0.6
TOC2	Torodi Ar. Sit	29.96	231	IAMs_20	IAMs_20	16 14 20.4	
	comp=Z,1µm,20.0s						
TOC1	Torodi Ar. Sit	29.96	231	IAMs_20	IAMs_20	16 14 20.4	
	comp=Z,1µm,21.0s						
TOB1	Torodi Ar. Sit	29.98	231	IAMs_20	IAMs_20	16 14 20.8	
	comp=Z,1µm,20.0s						
TOC3	Torodi Ar. Sit	29.98	231	IAMs_20	IAMs_20	16 14 21.8	
	comp=Z,1µm,20.0s						
TOA2	Torodi Ar. Sit	29.98	231	IAMs_20	IAMs_20	16 14 21.9	
	comp=Z,1µm,21.0s						
TOC7	Torodi Ar. Sit	29.99	231	IAMs_20	IAMs_20	16 13 48.0	
	comp=Z,1µm,22.0s						
TOA0	Torodi Ar. Sit	29.99	231	P	P	16 00 43.8	-0.4
TOA0				IAMs_20	IAMs_20	16 13 49.0	
	comp=Z,1µm,22.0s						
TORD	Torodi Ar. Bea	29.99	231	P	P	16 00 44.2	0.0
	comp=Z,127nm,0.5s,baz=37,slow=9.5,SNR=82						
TORD				S	S	16 05 39.0	-0.8
	comp=Z,1.2nm,0.7s,baz=36,slow=7.6,SNR=2.4						
TORD				ScP	ScP	16 07 25.0	-0.5
	comp=Z,2.9nm,1.0s,baz=12,slow=2.1,SNR=4.5						
TORD				LR	LR	16 15 54.6	
	comp=Z,2µm,18.3s,baz=25,slow=42						
TORD	Torodi Ar. Bea	29.99	231	P	P	16 00 43.4	-0.8
TOB5	Torodi Ar. Sit	29.99	231	IAMs_20	IAMs_20	16 14 22.1	
	comp=Z,1µm,20.0s						
TOC5	Torodi Ar. Sit	30.02	231	IAMs_20	IAMs_20	16 13 48.7	
	comp=Z,1µm,22.0s						
AKN	Aaknes	30.02	343	eP	P	16 00 44.6	+0.6
FOO	Floro	30.03	341	eP	P	16 00 44.1	+0.1
HOQ	Hoqain	30.07	102	P	P	16 00 45.5	+0.6
	SNR=6.8						
HOQ				P	P	16 00 45.5	+0.6
	SNR=6.8						
MOL	Molde	30.23	344	eP	P	16 00 45.8	0.0
TBLU	Trondheim	30.27	347	eP	P	16 00 46.4	+0.1
BSY	Bisya	30.39	104	P	P	16 00 48.4	+0.7
	SNR=14						
BSY				P	P	16 00 48.4	+0.7
	SNR=14						
TMCR	Tamitsa	30.79	11	eP	P	16 00 48.5	-2.2
TMCR				eS	S	16 05 49.3	-2.2
TMCR				pmax	pmax		
	comp=Z,69nm,1.3s						
SMDO	Samad	30.92	103	P	P	16 00 53.1	+0.7
	SNR=7.0						
SMDO				P	P	16 00 53.1	+0.7
	SNR=7.0						
NSS	Namsos	31.16	349	eP	P	16 00 53.1	-0.9
JMDO	Jabal Madar	31.30	104	P	P	16 00 55.9	+0.2
	SNR=5.2						
JMDO				P	P	16 00 55.9	+0.2
	SNR=5.2						
DMTO	DMTO	31.41	114	P	P	16 00 57.2	+0.5
	SNR=9.5						
DMTO				P	P	16 00 57.2	+0.5
	SNR=9.5						
ARU	Arti	31.66	36	d iP	P	16 00 58.5	-0.1
ARU						16 02 01.3	
ARU				S	S	16 06 07.0	+1.6
ARU				SS	SnSn	16 07 49.7	-3.5
ARU				pmax	pmax		
	comp=Z,171nm,1.5s						
ARU				MLR	MLR		
	comp=Z,561nm,13.0s						
ARU	Arti	31.66	36	P	P	16 00 57.8	-0.8
ARU				IAmb	IAmb	16 01 00.8	
	comp=Z,57nm,0.9s						
ARU	Arti	31.66	36	⇑P	P	16 00 58.0	-0.6
MHTO	MHTO	31.90	106	P	P	16 01 02.2	+1.3
	SNR=12						
LODK	Lodwar	32.32	161	P	P	16 01 05.4	+0.7
	SNR=13						
MOR8	Moi Rana	32.38	352	eP	P	16 01 05.0	+0.2
JLN	Jalan Bani Buh	32.46	103	P	P	16 01 07.1	+1.2
	SNR=7.6						
JLN				P	P	16 01 07.1	+1.2
	SNR=7.6						
KONS	Konsvik	32.86	351	i P	P	16 01 08.8	-0.1
SVE	Sverdlovsk	32.86	36	eP	P	16 01 09.2	+0.1
SVE				pmax	pmax		
	comp=Z,113nm,0.8s						
KOWA	Kowa	32.92	240	LR	LR	16 15 44.7	
	comp=Z,554nm,21.4s,baz=40,slow=38						
KOWA	Kowa	32.92	240	P	P	16 01 09.2	-0.7
KOWA				IAmb	IAmb	16 01 10.7	
	comp=Z,28nm,0.7s						
FAUS	Fauske	33.47	353	eP	P	16 01 13.7	-0.4
APA	Apatity	33.51	6	⇓iP	P	16 01 12.2	-2.4
APA				i		16 02 21.0	
APA				i S	S	16 06 31.0	-2.8
APA				pmax	pmax		
	comp=Z,31nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
N2TV	T¥rnvik	33.66	353	eP	P	16 01 15.9	+0.1
N2IH	Innhavet	33.97	354	eP	P	16 01 18.2	-0.4
STEI	Steigen	34.00	353	eP	P	16 01 19.0	+0.2
N2SV	S¸rv¥gen	34.20	352	eP	P	16 01 20.0	-0.6
KTK1	Kautokeino	34.63	359	eP	P	16 01 23.4	-0.9
ARA0	ARCESS Array S	35.14	0	eP	P	16 01 27.9	-0.8
ARCES	ARCESS Array B	35.14	0	P	P	16 01 27.4	-1.3
	comp=Z,8.7nm,0.5s,baz=178,slow=7.4,SNR=100						
ARCES				PcP	PcP	16 03 59.8	+0.4
	comp=Z,2.6nm,0.5s,baz=184,slow=3.2,SNR=3.8						
ARCES				LR	LR	16 16 39.3	
	comp=Z,1µm,20.1s,baz=175,slow=38						
ARCES	ARCESS Array B	35.14	0	P	P	16 01 26.8	-1.9

ARCES				pmax	pmax		
	comp=Z,45nm,1.4s						
ARCES	**ARCESS Array B**	**35.14**	**0**	P	**P**	**16 01 26.8**	**-1.9**
TRO	**Tromso**	**35.40**	**356**	*e*P	**P**	**16 01 29.7**	**-1.2**
BRLS	**Borolday**	**35.59**	**63**	*i* S	**S**	**16 07 04.0**	**-2.5**
	baz=63						
BRLS				*i* LR	LR	16 16 04.8	
	baz=63						
BRLS				*i* LRM	MLR	16 17 24.2	
	baz=63						
IUG	**Iuzhnay**	**35.77**	**64**	*e*P	**P**	**16 01 33.5**	**-1.1**
	comp=Z,17nm,1.3s,baz=64						
IUG				*i* S	**S**	**16 07 08.7**	**-0.7**
	baz=64						
IUG				*e*S	**S**	**16 07 08.8**	**-0.7**
	baz=64						
IUG				*i* LR	LR	16 16 15.2	
	baz=64						
IUG				*i* LRM	MLR	16 17 35.8	
	baz=64						
IUG	**Iuzhnay**	**35.77**	**64**	*e*P	**P**	**16 01 33.4**	**-1.1**
IUG				*e*S	**S**	**16 07 08.7**	**-0.7**
IUG				pmax	pmax		
	comp=Z,17nm,1.3s						
KBL	**Kabul**	**36.01**	**77**	P	**P**	**16 01 36.2**	**-0.7**
KBL				pmax	pmax		
	comp=Z,13nm,1.1s						
KBL	**Kabul**	**36.01**	**77**	P	**P**	**16 01 36.2**	**-0.7**
KK31	**Karatay Array**	**36.08**	**62**	P	**P**	**16 01 37.1**	**0.0**
KK31				pmax	pmax		
	comp=Z,70nm,1.2s						
KK31	**Karatay Array**	**36.08**	**62**	P	**P**	**16 01 37.1**	**0.0**
KK31				IAmb	IAmb	16 01 39.7	
	comp=Z,70nm,1.2s						
KKAR	**Karatay Array**	**36.08**	**62**	P	**P**	**16 01 37.2**	**+0.1**
KKAR	**Karatay Array**	**36.08**	**62**	P	**P**	**16 01 37.2**	**+0.1**
KKAR	**Karatay Array**	**36.08**	**62**	⇑P	**P**	**16 01 37.6**	**+0.5**
HAMF	**Hammerfest**	**36.26**	**359**	*e*P	**P**	**16 01 39.0**	**+0.7**
DZA	**Taraz**	**36.69**	**63**	*e*P	**P**	**16 01 41.7**	**-0.6**
	comp=Z,16nm,0.9s,baz=63						
DZA				*i* S	**S**	**16 07 22.4**	**-0.9**
	baz=63						
DZA				*i* LR	LR	16 16 48.7	
	baz=63						
DZA				*i* LRM	MLR	16 18 14.5	
	baz=63						
DZA	**Taraz**	**36.69**	**63**	*e*P	**P**	**16 01 41.7**	**-0.6**
DZA				pmax	pmax		
	comp=Z,17nm,0.9s						
BRVK	**Borovoye**	**36.83**	**46***c*	*e*P	**P**	**16 01 43.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,459nm,18.0s						
BRVK	**Borovoye**	**36.83**	**46**	P	**P**	**16 01 42.8**	**-0.5**
BRVK				IAmb	IAmb	16 02 01.6	
	comp=Z,38nm,1.1s						
BRVK	**Borovoye**	**36.83**	**46**	⇑P	**P**	**16 01 43.6**	**+0.3**
KMBO	**Kilima Mbogo**	**37.18**	**160**	P	**P**	**16 01 47.4**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=322,slow=7.4,SNR=7.4						
KMBO				ScP	**ScP**	**16 07 51.5**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=190,slow=2.8,SNR=4.3						
KMBO				LR	LR	16 16 42.5	
	comp=Z,671nm,21.9s,baz=54,slow=36						
BRZS	**Berezniki**	**37.83**	**51**	*e*P	**P**	**16 01 51.1**	**-0.9**
	comp=Z,10nm,1.1s,baz=51						
BRZS				*i* S	**S**	**16 07 39.0**	**-1.5**
	baz=51						
BRZS				*i* LR	LR	16 17 28.4	
	baz=51						
BRZS				*i* LRM	MLR	16 19 01.8	
	baz=51						
BRZS	**Berezniki**	**37.83**	**51**	*e*P	**P**	**16 01 51.0**	**-0.9**
BRZS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AML	**Almayashu**	**38.48**	**64**	P	**P**	**16 01 58.6**	**+0.7**
	SNR=12						
EKS2	**Erkin-Say**	**38.50**	**63**	P	**P**	**16 01 58.8**	**+1.1**
	SNR=32						
KIBK	**Kibwezi**	**38.57**	**159**	P	**P**	**16 01 60.0**	**+1.5**
	SNR=5.9						
BTLS	**Baital**	**38.58**	**59**	*e*P	**P**	**16 01 57.4**	**-0.9**
	comp=Z,31nm,1.6s,baz=59						
BTLS				*i* S	**S**	**16 07 50.8**	**-1.1**
	baz=59						
BTLS				*i* LR	LR	16 17 56.6	
	baz=59						
BTLS				*i* LRM	MLR	16 19 35.4	
	baz=59						
BTLS	**Baital**	**38.58**	**59**	*e*P	**P**	**16 01 57.3**	**-0.9**
BTLS				pmax	pmax		
	comp=Z,31nm,1.6s						
USP	**Ospenovka**	**38.99**	**62**	P	**P**	**16 02 01.8**	**0.0**
	SNR=12						
AAK	**Ala-Archa**	**39.03**	**63**	P	**P**	**16 02 03.5**	**+1.2**
	SNR=34						
AAK	**Ala-Archa**	**39.03**	**63**	*i* P	**P**	**16 02 03.5**	**+1.2**
	SNR=40						
AAK	**Ala-Archa**	**39.03**	**63**	P	**P**	**16 02 02.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,39nm,1.0s						
AAK				MLR	MLR		
	comp=Z,600nm,19.0s						
AAK	**Ala-Archa**	**39.03**	**63**	P	**P**	**16 02 02.2**	**0.0**
AAK				IAmb	IAmb	16 02 25.2	
	comp=Z,39nm,1.0s						
AAK	**Ala-Archa**	**39.03**	**63**	⇑P	**P**	**16 02 03.4**	**+1.2**
SGDS	**Sogindy**	**39.07**	**62**	*e*P	**P**	**16 02 01.8**	**-0.6**
	baz=62						
SGDS				*i* S	**S**	**16 07 58.4**	**-1.1**
	baz=62						
SGDS				*i* LR	LR	16 18 14.9	
	baz=62						
SGDS				*i* LRM	MLR	16 19 56.9	
	baz=62						
SGDS	**Sogindy**	**39.07**	**62**	*e*P	**P**	**16 02 01.8**	**-0.6**
DBIC	**Dimbokro**	**39.08**	**232**	P	**P**	**16 02 01.9**	**-0.7**
	comp=Z,42nm,0.8s,baz=21,slow=9.4,SNR=50						
DBIC				LR	LR	16 21 20.6	
	comp=Z,1µm,18.4s,baz=20,slow=41						
DBIC	**Dimbokro**	**39.08**	**232**	P	**P**	**16 02 01.5**	**-1.2**
DBIC				pmax	pmax		
	comp=Z,174nm,1.5s						
DBIC	**Dimbokro**	**39.08**	**232**	P	**P**	**16 02 01.5**	**-1.2**
UCH	**Uchtor**	**39.08**	**63**	P	**P**	**16 02 03.9**	**+0.9**
	SNR=19						
CHMS	**Chumysh**	**39.19**	**62**	P	**P**	**16 02 04.3**	**+0.9**
	SNR=29						
TIC	**Toumodi**	**39.20**	**232**	*e*P	**P**	**16 02 01.8**	**-1.9**
KIC	**Kosan Boka**	**39.23**	**231**	*e*P	**P**	**16 02 02.2**	**-1.8**
	comp=Z,210nm,0.9s						
KBK	**Karagaybulak**	**39.36**	**63**	P	**P**	**16 02 06.1**	**+1.0**
	SNR=36						
LIC	**Lamto**	**39.52**	**232**	*e*P	**P**	**16 02 04.7**	**-1.7**
	comp=Z,433nm,1.4s						
NIL	**Nilore**	**39.62**	**77**	P	**P**	**16 02 07.5**	**+0.4**
NIL				pmax	pmax		
	comp=Z,49nm,0.9s						
NIL	**Nilore**	**39.62**	**77**	P	**P**	**16 02 07.5**	**+0.4**
NIL				IAmb	IAmb	16 02 28.9	
	comp=Z,49nm,0.8s						
NIL	**Nilore**	**39.62**	**77**	P	**P**	**16 02 07.5**	**+0.4**
TKM2	**Tokmak 2**	**39.82**	**62**	P	**P**	**16 02 09.6**	**+0.8**
	SNR=27						
KUU	**Kurty**	**40.27**	**61**	*e*P	**P**	**16 02 11.9**	**-0.5**
	comp=Z,50nm,1.0s,baz=61						
KUU				*i* S	**S**	**16 08 16.4**	**-1.0**
	baz=61						
KUU				*i* LR	LR	16 18 58.6	
	baz=61						
KUU				*i* LRM	MLR	16 20 45.5	
	baz=61						
KUU	**Kurty**	**40.27**	**61**	*e*P	**P**	**16 02 11.9**	**-0.5**
KUU				pmax	pmax		
	comp=Z,49nm,1.0s						
ULHL	**Ulahol**	**40.36**	**63**	P	**P**	**16 02 15.0**	**+1.7**
	SNR=14						
MTBS	**Maitube**	**40.41**	**62**	*e*P	**P**	**16 02 14.3**	**+0.7**
	baz=62						
MTBS				*i* S	**S**	**16 08 18.4**	**-1.1**
	baz=62						
MTBS				*i* LR	LR	16 19 03.5	
	baz=62						
MTBS				*i* LRM	MLR	16 20 50.7	
	baz=62						
MTBS	**Maitube**	**40.41**	**62**	*e*P	**P**	**16 02 14.3**	**+0.7**
KSH	**Kashi**	**40.53**	**67**	P	**P**	**16 02 13.8**	**-0.9**

KSH				pP	pP	16 02 23.5	-1.1
KSH				pmax	pmax		
	comp=Z,64nm,1.2s						
KSH				pmax	pmax		
	comp=Z,770nm,4.7s						
CHKK	**Chushkaly**	**40.75**	**61**	*e*P	**P**	**16 02 15.9**	**-0.4**
	baz=61						
CHKK				*i* S	**S**	**16 08 23.5**	**-0.9**
	baz=61						
CHKK				*i* LR	LR	16 19 15.9	
	baz=61						
CHKK				*i* LRM	MLR	16 21 03.6	
	baz=61						
CHKK	**Chushkaly**	**40.75**	**61**	*e*P	**P**	**16 02 15.9**	**-0.4**
AAA	**Alma-Ata**	**40.75**	**62**	*e*P	**P**	**16 02 16.4**	**-0.1**
	comp=Z,37nm,1.2s,baz=62						
AAA				*i* S	**S**	**16 08 23.6**	**-1.1**
	baz=62						
AAA				*i* LR	LR	16 19 16.0	
	baz=62						
AAA				*i* LRM	MLR	16 21 03.7	
	baz=62						
AAA	**Alma-Ata**	**40.75**	**62**	*e*P	**P**	**16 02 16.3**	**-0.1**
AAA				pmax	pmax		
	comp=Z,37nm,1.2s						
TNSS	**Tian-Shan**	**40.79**	**62**	*e*P	**P**	**16 02 16.5**	**-0.7**
	baz=62						
TNSS				*i* S	**S**	**16 08 24.2**	**-1.8**
	baz=62						
TNSS				*i* LR	LR	16 19 17.5	
	baz=62						
TNSS				*i* LRM	MLR	16 21 05.2	
	baz=62						
TNSS	**Tian-Shan**	**40.79**	**62**	*e*P	**P**	**16 02 16.4**	**-0.7**
MDOK	**Medeo**	**40.85**	**62**	*e*P	**P**	**16 02 15.6**	**-1.8**
	baz=62						
MDOK				*i* S	**S**	**16 08 24.8**	**-1.6**
	baz=62						
MDOK				*i* LR	LR	16 19 19.7	
	baz=62						
MDOK				*i* LRM	MLR	16 21 07.5	
	baz=62						
MDOK	**Medeo**	**40.85**	**62**	*e*P	**P**	**16 02 15.5**	**-1.8**
TDK	**Taldyqorghan**	**41.66**	**59**	*e*P	**P**	**16 02 23.4**	**-0.5**
	comp=Z,34nm,1.1s,baz=59						
TDK				*i* S	**S**	**16 08 36.9**	**-1.1**
	baz=59						
TDK				*i* LR	LR	16 19 48.8	
	baz=59						
TDK				*i* LRM	MLR	16 21 36.3	
	baz=59						
TDK	**Taldyqorghan**	**41.66**	**59**	*e*P	**P**	**16 02 23.3**	**-0.5**
TDK				pmax	pmax		
	comp=Z,34nm,1.1s						
KURK	**Kurchatov**	**41.68**	**50***c*	*e*P	**P**	**16 02 24.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,74nm,1.3s						
KURK	**Kurchatov**	**41.68**	**50**	P	**P**	**16 02 23.9**	**+0.1**
KURK				IAmb	IAmb	16 02 33.1	
	comp=Z,36nm,0.8s						
KURK	**Kurchatov**	**41.68**	**50**	P	**P**	**16 02 22.4**	**-1.4**
KURK				P	**P**	**16 02 22.4**	**-1.4**
KURK	**Kurchatov**	**41.68**	**50**	⇑P	**P**	**16 02 24.2**	**+0.3**
SATY	**Saty**	**41.85**	**62**	*e*P	**P**	**16 02 24.7**	**-0.9**
	comp=Z,52nm,1.5s,baz=62						
SATY				*i* S	**S**	**16 08 40.5**	**-0.6**
	baz=62						
SATY				*e*S	**S**	**16 08 40.7**	**-0.4**
	baz=62						
SATY				*i* LR	LR	16 19 56.1	
	baz=62						
SATY				*i* LRM	MLR	16 21 43.3	
	baz=62						
SATY	**Saty**	**41.85**	**62**	*e*P	**P**	**16 02 24.6**	**-0.9**
SATY				*e*S	**S**	**16 08 40.7**	**-0.4**
SATY				pmax	pmax		
	comp=Z,52nm,1.5s						
KPKS	**Kokpek**	**42.01**	**61**	*e*P	**P**	**16 02 25.7**	**-1.1**
	comp=Z,35nm,1.7s,baz=61						
KPKS				*i* S	**S**	**16 08 42.1**	**-1.2**
	baz=61						
KPKS				*i* LR	LR	16 20 01.6	
	baz=61						
KPKS				*i* LRM	MLR	16 21 48.7	
	baz=61						
KPKS	**Kokpek**	**42.01**	**61**	*e*P	**P**	**16 02 25.6**	**-1.1**
KPKS				pmax	pmax		
	comp=Z,35nm,1.7s						
HOPEN	**Hopen**	**42.16**	**360**	*e*P	**P**	**16 02 27.8**	**+0.4**
SHLS	**Shalkode**	**42.61**	**61**	*e*P	**P**	**16 02 34.4**	**+2.6**
	comp=Z,13nm,0.8s,baz=62						
SHLS				*i* S	**S**	**16 08 57.1**	**+4.9**
	baz=62						
SHLS				*e*S	**S**	**16 08 57.5**	**+5.2**
	baz=62						
SHLS				*i* LR	LR	16 20 34.6	
	baz=62						
SHLS				*i* LRM	MLR	16 22 20.2	
	baz=62						
SHLS	**Shalkode**	**42.61**	**61**	*e*P	**P**	**16 02 34.3**	**+2.6**
SHLS				*e*S	**S**	**16 08 57.4**	**+5.2**
SHLS				pmax	pmax		
	comp=Z,13nm,0.8s						
SEM	**Semipalatinsk**	**42.71**	**51**	*e*P	**P**	**16 02 31.7**	**-0.8**
	comp=Z,44nm,1.5s,baz=51						
SEM				*i* S	**S**	**16 08 52.9**	**-0.9**
	baz=51						
SEM				*e*S	**S**	**16 08 53.4**	**-0.4**
	baz=51						
SEM				*i* LR	LR	16 20 25.7	
	baz=51						
SEM				*i* LRM	MLR	16 22 11.7	
	baz=51						
SEM	**Semipalatinsk**	**42.71**	**51**	*e*P	**P**	**16 02 31.7**	**-0.8**
SEM				*e*S	**S**	**16 08 53.3**	**-0.4**
SEM				pmax	pmax		
	comp=Z,44nm,1.5s						
BHK	**Bhakra**	**42.82**	**79**	*e*x	**P**	**16 02 34.0**	**+0.6**
HSPB	**Hornsund (broa**	**42.87**	**357**	*e*P	**P**	**16 02 34.0**	**+0.8**
SCO	**Scoresbysund**	**43.98**	**339**	*i* P	**P**	**16 02 43.4**	**+1.3**
SCO	**Scoresbysund**	**43.98**	**339**	*i* P	**P**	**16 02 43.4**	**+1.3**
	comp=Z,79nm,1.2s						
SCO	**Scoresbysund**	**43.98**	**339**	*i* P	**P**	**16 02 43.4**	**+1.3**
SCO				IAmb	IAmb	16 02 46.0	
	comp=Z,79nm,1.2s						
SCO	**Scoresbysund**	**43.98**	**339**	⇓P	**P**	**16 02 44.0**	**+1.9**
MAKZ	**Makanchi**	**44.01**	**56**	P	**P**	**16 02 42.8**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,20nm,0.9s						
MAKZ	**Makanchi**	**44.01**	**56**	P	**P**	**16 02 42.8**	**0.0**
MAKZ	**Makanchi**	**44.01**	**56**	⇑P	**P**	**16 02 43.4**	**+0.6**
MK31	**Makanchi Array**	**44.22**	**56**	P	**P**	**16 02 44.8**	**+0.3**
MK31				pmax	pmax		
	comp=Z,31nm,0.7s						
MK31	**Makanchi Array**	**44.22**	**56**	P	**P**	**16 02 44.8**	**+0.3**
MK31				IAmb	IAmb	16 03 09.3	
	comp=Z,30nm,0.7s						
MKAR	**Makanchi Array**	**44.22**	**56**	P	**P**	**16 02 45.1**	**+0.6**
	comp=Z,22nm,0.7s,baz=278,slow=6.6,SNR=180						
MKAR				ScP	**ScP**	**16 08 17.0**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=268,slow=4.3,SNR=2.4						
MKAR				LR	LR	16 25 04.4	
	comp=Z,233nm,18.1s,baz=267,slow=41						
MKAR	**Makanchi Array**	**44.22**	**56**	*i* P	**P**	**16 02 45.0**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,23nm,0.7s						
MKAR	**Makanchi Array**	**44.22**	**56**	P	**P**	**16 02 44.8**	**+0.2**
KBS	**Kingsbay**	**44.93**	**356***c*	*e*P	**P**	**16 02 49.8**	**+0.2**
KBS				pmax	pmax		
	comp=Z,118nm,2.5s						
KBS	**Kingsbay**	**44.93**	**356**	P	**P**	**16 02 49.6**	**0.0**
KBS	**Kingsbay**	**44.93**	**356**	*i* P	**P**	**16 02 50.4**	**+0.7**
KBS	**Kingsbay**	**44.93**	**356**	⇑P	**P**	**16 02 50.1**	**+0.4**
ZAA0	**Zalesovo Array**	**45.54**	**46**	P	**P**	**16 02 54.3**	**-0.6**
ZAA0				IAmb	IAmb	16 03 03.6	
	comp=Z,40nm,0.9s						
ZALV	**Zalesovo Beam**	**45.54**	**46**	P	**P**	**16 02 54.8**	**-0.1**
	comp=Z,27nm,0.4s,baz=269,slow=8.7,SNR=156						
ZALV				LR	LR	16 27 09.3	
	comp=Z,224nm,18.0s,baz=274,slow=43						
ZALV	**Zalesovo Beam**	**45.54**	**46**	P	**P**	**16 02 54.5**	**-0.4**
DBG	**Daneborg**	**45.57**	**344**	*i* P	**P**	**16 02 56.7**	**+1.9**
ZSN	**Zaisan**	**45.91**	**55**	*e*P	**P**	**16 02 57.3**	**-0.6**
	comp=Z,28nm,1.6s,baz=55						
ZSN				*i* S	**S**	**16 09 38.6**	**-1.3**
	baz=55						

ZSN				*i* LR	LR	16 22 22.3	
	baz=55						
ZSN				*i* LRM	MLR	16 24 09.5	
	baz=55						
ZSN	**Zaisan**	**45.91**	**55**	*e*P	**P**	**16 02 57.3**	**-0.6**
ZSN				pmax	pmax		
	comp=Z,28nm,1.6s						
DAG	**Danmarks Havn**	**46.73**	**347**	*i* P	**P**	**16 03 04.4**	**+0.5**
DAG	**Danmarks Havn**	**46.73**	**347**	*i* P	**P**	**16 03 04.4**	**+0.5**
	comp=Z,39nm,0.8s						
DAG	**Danmarks Havn**	**46.73**	**347**	*i* P	**P**	**16 03 04.5**	**+0.5**
DAG				IAmb	IAmb	16 03 05.0	
	comp=Z,39nm,0.8s						
DAG	**Danmarks Havn**	**46.73**	**347**	⇑P	**P**	**16 03 03.9**	**0.0**
DGZ	**Jazzator, Alta**	**47.37**	**51***c*	*i*P	**P**	**16 03 10.1**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,35nm,1.0s						
WMQ	**Urumqi**	**48.42**	**59**	P	**P**	**16 03 19.0**	**+1.4**
WMQ				pP	pP	16 03 25.3	-2.3
WMQ				sP	sP	16 03 31.8	+0.2
WMQ				pmax	pmax		
	comp=Z,54nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.3s						
WMQ				LR	LR		
	comp=Z,750nm,25.5s						
WMQ	**Urumqi**	**48.42**	**59**	IAmb	IAmb	16 03 20.8	
	comp=Z,47nm,1.1s						
ISOG	**Isortoq, Green**	**48.52**	**330**	*e*P	**P**	**16 03 18.9**	**+1.0**
NRIK	**Noril'sk**	**48.55**	**25**	P	**P**	**16 03 18.9**	**+0.8**
	comp=Z,28nm,0.8s,baz=240,slow=4.6,SNR=66						
NRIK				LR	LR	16 26 09.9	
	comp=Z,396nm,19.2s,baz=256,slow=39						
NRIK	**Noril'sk**	**48.55**	**25***c*	*e*P	**P**	**16 03 18.8**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,35nm,0.9s						
NRIK	**Noril'sk**	**48.55**	**25**	P	**P**	**16 03 18.4**	**+0.3**
ICESG	**Greenland Ices**	**49.30**	**335**	*i* P	**P**	**16 03 24.8**	**+0.6**
LSZ	**Lusaka**	**49.53**	**176**	P	**P**	**16 03 25.9**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSZ				MLR	MLR		
	comp=Z,700nm,20.0s						
LSZ	**Lusaka**	**49.53**	**176**	P	**P**	**16 03 25.9**	**-0.5**
LSZ	**Lusaka**	**49.53**	**176**	IAMs_20	IAMs_20	16 26 08.2	
	comp=Z,696nm,20.0s						
LSZ	**Lusaka**	**49.53**	**176**	⇓P	**P**	**16 03 26.6**	**+0.3**
SUMG	**Summit**	**49.62**	**339**	P	**P**	**16 03 27.1**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,83nm,1.1s						
SUMG	**Summit**	**49.62**	**339**	P	**P**	**16 03 27.1**	**+0.4**
SUMG	**Summit**	**49.62**	**339**	*i* P	**P**	**16 03 27.8**	**+1.1**
	comp=Z,41nm,0.6s						
SUMG				*i*		16 03 37.4	
SUMG	**Summit**	**49.62**	**339**	*i* P	**P**	**16 03 27.8**	**+1.1**
SUMG				IAmb	IAmb	16 03 28.7	
	comp=Z,41nm,0.6s						
SUMG				*i*		16 03 37.4	
SUMG	**Summit**	**49.62**	**339**	⇓P	**P**	**16 03 27.9**	**+1.1**
DANN	**Dangsing**	**49.86**	**80**	*e*P	**P**	**16 03 29.7**	**+0.6**
	comp=Z,181nm,0.7s						
HYB	**Hyderabad**	**50.42**	**96**	*i* P	**P**	**16 03 33.0**	**-0.1**
DMN	**Daman**	**51.24**	**80**	*e*P	**P**	**16 03 39.6**	**+0.1**
	comp=Z,193nm,0.9s						
KKN	**Kakani**	**51.31**	**80**	*e*P	**P**	**16 03 39.5**	**-0.5**
	comp=Z,82nm,0.7s						
PKIN	**Phulchoki**	**51.49**	**80**	*e*P	**P**	**16 03 41.0**	**-0.4**
	comp=Z,209nm,1.1s						
PKI	**Pulchoki**	**51.51**	**80**	*e*P	**P**	**16 03 41.5**	**0.0**
	comp=Z,144nm,1.0s						
GUN	**Gumba**	**51.75**	**80**	*e*P	**P**	**16 03 43.5**	**+0.1**
	comp=Z,197nm,1.0s						
SFJD	**Kangerlussuaq**	**53.28**	**332**	P	**P**	**16 03 53.9**	**+0.3**
SFJD				pmax	pmax		
	comp=Z,20nm,0.9s						
SFJD	**Kangerlussuaq**	**53.28**	**332**	P	**P**	**16 03 53.9**	**+0.3**
SFJD				IAmb	IAmb	16 04 03.7	
	comp=Z,20nm,0.8s						
SFJD	**Kangerlussuaq**	**53.28**	**332**	*i* P	**P**	**16 03 54.1**	**+0.5**
	comp=Z,1.7nm,0.9s						
SFJD	**Kangerlussuaq**	**53.28**	**332**	*i* P	**P**	**16 03 54.1**	**+0.5**
SFJD				IAmb	IAmb	16 04 04.0	
	comp=Z,1.7nm,0.9s						
ILULI	**Ilulissat**	**53.39**	**334**	P	**P**	**16 03 54.4**	**0.0**
ILULI				pmax	pmax		
	comp=Z,33nm,1.0s						
ILULI	**Ilulissat**	**53.39**	**334**	P	**P**	**16 03 54.4**	**0.0**
ILULI				IAmb	IAmb	16 04 04.8	
	comp=Z,33nm,1.0s						
TAPN	**Taplejung**	**53.47**	**79**	*e*P	**P**	**16 03 55.8**	**-0.2**
	comp=Z,75nm,0.8s						
TSUM	**Tsumeb**	**53.83**	**189**	P	**P**	**16 03 57.9**	**-0.5**
TSUM				IAmb	IAmb	16 03 59.2	
	comp=Z,55nm,1.3s						
TSUM	**Tsumeb**	**53.83**	**189**	⇓P	**P**	**16 03 58.0**	**-0.4**
UPNV	**Upernavik**	**54.90**	**339**	*i* P	**P**	**16 04 06.0**	**+0.7**
LSA	**Lhasa**	**55.30**	**75**	P	**P**	**16 04 10.0**	**+0.5**
LSA				pmax	pmax		
	comp=Z,69nm,1.2s						
LSA	**Lhasa**	**55.30**	**75**	P	**P**	**16 04 09.8**	**+0.2**
LSA	**Lhasa**	**55.30**	**75**	IAmb	IAmb	16 04 13.9	
	comp=Z,16nm,0.7s						
MOY	**Mondy**	**55.54**	**47**	*e*P	**P**	**16 04 12.0**	**+1.5**
MOY				pmax	pmax		
	comp=Z,77nm,1.5s						
TLY	**Talaya**	**57.13**	**47**	*e*P	**P**	**16 04 23.2**	**+1.4**
TLY				*e*		16 04 32.1	
TLY				*e*S	**S**	**16 12 11.9**	**-2.5**
TLY				pmax	pmax		
	comp=Z,161nm,1.4s						
TLY				MLR	MLR		
	comp=Z,687nm,19.0s						
TLY	**Talaya**	**57.13**	**47**	P	**P**	**16 04 22.2**	**+0.5**
TLY	**Talaya**	**57.13**	**47**	P	**P**	**16 04 23.1**	**+1.3**
ABPO	**Ambohimpanom**	**57.19**	**155**	P	**P**	**16 04 23.0**	**+0.4**
ABPO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ABPO	**Ambohimpanom**	**57.19**	**155**	P	**P**	**16 04 23.0**	**+0.4**
ZAK	**Zakamensk**	**57.26**	**48**	*e*P	**P**	**16 04 23.6**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,72nm,1.0s						
IRK	**Irkutsk**	**57.36**	**46**	*e*P	**P**	**16 04 23.3**	**0.0**
IRK				*e*		16 04 31.1	
IRK				pmax	pmax		
	comp=Z,124nm,1.4s						
SHL	**Shillong**	**57.61**	**79**	IAmb	IAmb	16 04 43.6	
	comp=Z,27nm,0.9s						
SHL	**Shillong**	**57.61**	**79**	P	**P**	**16 04 23.8**	**-1.8**
	SNR=10.0						
TULEG	**Thule**	**57.71**	**344**	*i* P	**P**	**16 04 25.0**	**-0.4**
PALK	**Pallekele**	**57.74**	**104**	LR	LR	16 30 43.1	
	comp=Z,312nm,21.5s,baz=61,slow=38						
GTA	**Gaotai**	**58.35**	**61**	⇑P	**P**	**16 04 31.3**	**+0.6**
GTA				pP	pP	16 04 39.0	-1.9
GTA				sP	sP	16 04 42.0	-2.9
GTA				S	**S**	**16 12 32.3**	**+1.3**
GTA				pmax	pmax		
	comp=Z,24nm,1.4s						
GTA				pmax	pmax		
	comp=Z,160nm,4.9s						
GTA				LR	LR		
	comp=Z,190nm,17.5s						
GTA				LR	LR		
	comp=Z,200nm,18.5s						
GTA				LR	LR		
	comp=Z,430nm,18.5s						
LBTB	**Lobatse**	**59.14**	**179**	P	**P**	**16 04 36.3**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,123nm,1.5s						
LBTB	**Lobatse**	**59.14**	**179**	P	**P**	**16 04 36.3**	**+0.3**
EUNU	**Eureka**	**59.88**	**349**	P	**P**	**16 04 40.9**	**+0.4**
SONM	**Songino Array**	**59.99**	**50**	P	**P**	**16 04 42.9**	**+1.0**
	comp=Z,46nm,1.1s,baz=278,slow=7.7,SNR=126						
SONM				LR	LR	16 34 45.9	
	comp=Z,347nm,21.1s,baz=308,slow=40						
SONM	**Songino Array**	**59.99**	**50**	P	**P**	**16 04 41.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,40nm,1.0s						
SONM	**Songino Array**	**59.99**	**50**	P	**P**	**16 04 41.9**	**0.0**
ULN	**Ulaanbaatar**	**60.39**	**50***c*	*i*P	**P**	**16 04 45.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,56nm,1.1s						
ULN	**Ulaanbaatar**	**60.39**	**50**	P	**P**	**16 04 45.0**	**+0.3**
BOD	**Bodaibo**	**61.05**	**38**	*e*P	**P**	**16 04 48.5**	**-0.2**
BOD				pmax	pmax		

	comp=Z,45nm,1.1s						
FRB	Frobisher Bay	61.25	330	P	P	16 04 50.1	+0.2
	comp=Z,24nm,1.0s,baz=76,slow=6.4,SNR=20						
TIXI	Tiksi	61.85	20	*i* P	P	16 04 52.9	-1.0
TIXI	Tiksi	61.85	20	P	P	16 04 53.3	-0.7
LZH	Lanzhou	62.57	64	*e*P	P	16 05 00.5	+1.0
LZH				pP	pP	16 05 10.0	+0.2
LZH				sP	sP	16 05 13.0	-0.8
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
LZH				LR	LR		
	comp=Z,320nm,15.4s						
LZH				LR	LR		
	comp=Z,420nm,14.8s						
LZH				LR	LR		
	comp=Z,320nm,15.2s						
BOSA	Boshof	62.72	180	P	P	16 05 00.7	+0.3
	comp=Z,27nm,0.6s,baz=359,slow=7.0,SNR=66						
BOSA				LR	LR	16 34 32.9	
	comp=Z,466nm,19.0s,baz=0.5,slow=38						
BOSA	Boshof	62.72	180	P	P	16 05 00.4	+0.1
BOSA				pmax	pmax		
	comp=Z,37nm,0.8s						
BOSA	Boshof	62.72	180	P	P	16 05 00.4	+0.1
CIT	Chita	62.85	44	*e*P	P	16 04 56.6	-4.4
CIT				*e*		16 05 09.1	
CIT				*e*		16 05 18.4	
CIT				*e*		16 05 37.8	
CIT				*e*		16 07 27.8	
CIT				pmax	pmax		
	comp=Z,75nm,1.4s						
RES	Resolute Bay	64.34	345	P	P	16 05 10.2	-0.1
RES				pmax	pmax		
	comp=Z,16nm,1.0s						
RES	Resolute Bay	64.34	345	P	P	16 05 10.2	-0.1
CD2	Chengdu	64.70	69	P	P	16 05 14.5	+1.0
CD2				pmax	pmax		
	comp=Z,80nm,1.2s						
BTO	Baotou	65.13	57	*e*P	P	16 05 14.8	-1.4
MHMT	Maesarieng	66.03	84	P	P	16 05 21.8	-0.4
	comp=Z,41nm,0.8s						
HHC	Hu-ho-hao-te	66.09	56	*e*P	P	16 05 23.8	+1.4
HHC				pP	pP	16 05 32.8	0.0
HHC				S	S	16 14 12.5	+4.2
HHC				pmax	pmax		
	comp=Z,68nm,1.2s						
HHC				pmax	pmax		
	comp=Z,260nm,5.0s						
HHC				LR	LR		
	comp=Z,370nm,13.8s						
HHC				LR	LR		
	comp=Z,430nm,14.6s						
HHC				LR	LR		
	comp=Z,420nm,15.0s						
BATG	Bathurst New B	66.35	312	P	P	16 05 24.5	+0.6
YAK	Yakutsk	66.52	30	*e*P	P	16 05 23.7	-1.0
YAK				*e**PP	pP	16 05 32.7	-2.2
YAK				*e*		16 05 53.5	
YAK				*e*		16 07 52.7	
YAK				*e*S	S	16 14 13.6	+0.9
YAK				*e**SS	sS	16 14 27.9	-2.0
YAK				*e*		16 15 19.5	
YAK				pmax	pmax		
	comp=Z,30nm,1.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				pmax	pmax		
	comp=Z,357nm,5.1s						
YAK				pmax	pmax		
	comp=N,193nm,4.0s						
YAK				smax	smax		
	comp=N,349nm,3.7s						
YAK				smax	smax		
	comp=E,169nm,4.3s						
YAK				MLR	MLR		
	comp=Z,406nm,18.0s						
YAK				MLR	MLR		
	comp=E,236nm,17.0s						
YAK	Yakutsk	66.52	30	P	P	16 05 23.6	-1.1
CM33	Chiang Mai Arr	66.54	83	P	P	16 05 25.0	-0.5
CM32	Chiang Mai Arr	66.54	83	P	P	16 05 26.0	+0.5
CMMT	Chiang Mai	66.54	83	P	P	16 05 24.7	-0.8
	comp=E,246nmcomp=E,9.3nm,1.1s						
KMI	Kunming	66.55	75	⇑P	P	16 05 25.8	0.0
KMI				pP	pP	16 05 35.3	-0.8
KMI				sP	pwP	16 05 39.0	+0.8
KMI				S	S	16 14 13.5	-1.2
KMI				sS	sS	16 14 31.0	-0.9
KMI				SS	SS	16 18 32.5	+0.6
KMI				pmax	pmax		
	comp=E,13nm,1.0s						
KMI				pmax	pmax		
	comp=E,220nm,5.7s						
KMI				LR	LR		
	comp=E,200nm,16.8s						
KMI				LR	LR		
	comp=E,190nm,24.8s						
KMI				LR	LR		
	comp=E,300nm,32.4s						
CM34	Chiang Mai Arr	66.69	83	P	P	16 05 26.0	-0.5
CM15	Chiang Mai Arr	66.70	83	P	P	16 05 27.1	+0.5
	comp=E,102nmcomp=E,13nm,0.9s						
CM13	Chiang Mai Arr	66.70	83	P	P	16 05 27.1	+0.6
	comp=E,79nmcomp=E,9.4nm,0.8s						
CM31	Chiang Mai Arr	66.72	83	P	P	16 05 27.4	+0.7
	comp=E,258nm,0.9s						
CM31	Chiang Mai Arr	66.72	83	P	P	16 05 25.5	-1.2
CMAR	Chiang Mai Arr	66.72	83	P	P	16 05 26.4	-0.3
	comp=E,2.9nm,0.8s,baz=301,slow=7.6,SNR=35						
CMAR				LR	LR	16 40 35.3	
	comp=E,129nm,21.5s,baz=336,slow=41						
CM02	Chiang Mai Arr	66.73	83	P	P	16 05 27.2	+0.5
	comp=E,105nmcomp=E,13nm,0.8s						
CM05	Chiang Mai Arr	66.75	83	P	P	16 05 27.0	+0.2
	comp=E,98nmcomp=E,13nm,1.1s						
CM01	Chiang Mai Arr	66.75	83	P	P	16 05 27.6	+0.8
	comp=E,88nmcomp=E,13nm,0.9s						
CM09	Chiang Mai Arr	66.76	83	P	P	16 05 27.7	+0.8
	comp=E,103nmcomp=E,14nm,0.9s						
CM04	Chiang Mai Arr	66.78	83	P	P	16 05 27.0	0.0
	comp=E,118nmcomp=E,15nm,0.9s						
CM35	Chiang Mai Arr	66.78	83	P	P	16 05 27.0	0.0
PAYA	Payao	67.03	82	P	P	16 05 28.9	+0.3
	comp=E,4µmcomp=E,518nm,0.8s						
XAN	Xi'an	67.21	64	P	P	16 05 30.0	+0.4
XAN				pP	pP	16 05 38.5	-1.4
XAN				sP	sP	16 05 44.5	+0.5
XAN				pmax	pmax		
	comp=E,27nm,1.2s						
LAMP	Lampang	67.25	83	P	P	16 05 31.4	+1.4
	comp=E,437nmcomp=E,48nm,0.9s						
D63A	Stockholm	67.71	312	P	P	16 05 32.0	-0.5
	baz=63						
SUKH	Sukhothai	67.77	84	P	P	16 05 34.5	+1.2
	comp=E,26nm,1.0s						
E64A	Bridgewater	67.82	312	P	P	16 05 33.3	+0.1
	baz=63						
TIY	Taiyuan	68.08	59	*e*P	P	16 05 35.5	+0.4
TIY				pmax	pmax		
	comp=E,22nm,0.9s						
E63A	Oxbow	68.18	312	P	P	16 05 35.7	+0.2
	baz=63						
G65A	Princeton	68.21	310	P	P	16 05 36.6	+0.9
	baz=63						
H66A	Whiting	68.24	310	P	P	16 05 37.1	+1.3
	baz=63						
F64A	Sherman	68.40	311	P	P	16 05 38.1	+1.3
	baz=62						
UTTA	Uttaradit	68.40	83	P	P	16 05 38.3	+1.1
	comp=E,250nmcomp=E,29nm,0.9s						
PHIT	Phitsanulok	68.57	83	P	P	16 05 40.2	+1.9
	comp=E,100nm,1.0s						
UTHA	Uthaitani	68.60	85	P	P	16 05 39.8	+1.2
	comp=E,208nmcomp=E,20nm,0.9s						
D61A	St Aubert, Com	68.89	313	P	P	16 05 39.2	-0.7
	baz=62						
F63A	Nahmakanta, Br	68.94	312	P	P	16 05 40.0	-0.2
	baz=62						
GYA	Guiyang	69.02	72	⇓P	P	16 05 41.5	+0.3
GYA				S	S	16 14 42.0	-2.0
GYA				SS	SS	16 19 07.3	-2.5
GYA				pmax	pmax		
	comp=E,26nm,1.2s						
ENH	Enshi	69.38	67	IAmb	IAmb	16 05 53.0	
	comp=Z,34nm,0.9s						
ZEA	Zeya	69.54	38	*e*P	P	16 05 44.9	+1.1
ZEA				*e*		16 05 53.0	
ZEA				pmax	pmax		
	comp=Z,20nm,1.6s						
BJI	Beijing	69.59	55	P	P	16 05 45.0	+0.7
BJI				PcP	PcP	16 06 07.5	+0.3
BJI				pmax	pmax		
	comp=Z,25nm,1.4s						
BJT	Baijiatuau	69.59	55	IAmb	IAmb	16 05 47.0	
	comp=Z,26nm,1.0s						
RCBR	Riachuelo	70.00	248	P	P	16 05 47.0	-0.2
RCBR				pmax	pmax		
	comp=Z,31nm,0.9s						
RCBR				MLR	MLR		
	comp=Z,800nm,21.0s						
RCBR	Riachuelo	70.00	248	P	P	16 05 47.0	-0.2
RCBR				IAmb	IAmb	16 05 54.7	
	comp=Z,31nm,0.8s						
RCBR	Riachuelo	70.00	248	IAMs_20	IAMs_20	16 37 20.4	
	comp=Z,836nm,21.0s						
RCBR	Riachuelo	70.00	248	*e*P	P	16 05 50.4	+3.2
G62A	West of Eustis	70.05	312	P	P	16 05 46.1	-1.1
	baz=61						
E60A	Ste Agathe de	70.05	313	P	P	16 05 46.6	-0.4
	baz=61						
PHET	Kaeng Krachan	70.14	88	P	P	16 05 49.0	+0.9
	comp=Z,458nmcomp=Z,29nm,0.9s						
NONG	Nongkai	70.36	81	P	P	16 05 49.8	+0.5
	comp=Z,22nm,1.2s						
CHAI	Chaiyaphum	70.52	84	P	P	16 05 50.7	+0.4
	comp=Z,437nmcomp=Z,45nm,0.9s						
D58A	Chemin du LacG	70.56	314	P	P	16 05 50.3	+0.2
	baz=60						
F60A	Warwick	70.56	313	P	P	16 05 51.3	+1.1
	baz=60						
G61A	St-Isidore-de-	70.64	312	P	P	16 05 51.6	+0.9
	baz=60						
F59A	Saint Guilaume	71.12	313	P	P	16 05 53.9	+0.4
	baz=60						
E58A	La Victoria	71.15	314	P	P	16 05 55.3	+1.5
	baz=60						
I62A	Tamworth	71.21	311	P	P	16 05 54.9	+0.7
	baz=60						
G60A	Masonville	71.22	312	P	P	16 05 53.8	-0.4
	baz=60						
SRAK	Srakaew	71.55	85	P	P	16 05 59.7	+3.1
	comp=Z,4µmcomp=Z,527nm,0.8s						
E57A	Chemin Saint G	71.65	314	P	P	16 05 58.1	+1.2
	baz=59						
D56A	ZEC Mazanza, M	71.69	315	P	P	16 05 57.1	+0.1
	baz=59,SNR=6.0						
PKDT	Phuket	71.78	93	P	P	16 06 07.0	+9.0
	comp=Z,16nm,1.0s						
MATQ	Matagami	71.91	318	P	P	16 05 58.7	+0.4
	baz=58						
LSQQ	Lebel-sur-Quev	71.91	317	P	P	16 05 59.0	+0.7
	baz=58						
TIA	Tai'an	72.10	58	P	P	16 06 00.0	+0.3
TIA				pmax	pmax		
	comp=Z,30nm,1.5s						
E56A	St. Veronique	72.11	314	P	P	16 05 59.6	+0.1
	baz=59						
D55A	Sainte-Anne-du	72.12	315	P	P	16 05 59.2	-0.4
	baz=58,SNR=7.4						
J61A	Chester	72.24	311	P	P	16 06 00.2	-0.2
	baz=59						
G58A	Ormstown	72.25	313	P	P	16 06 00.8	+0.4
	baz=59						
H59A	Cadyville	72.28	312	P	P	16 06 00.4	-0.2
	baz=59						
M64A	Tiverton	72.30	308	P	P	16 06 02.6	+1.9
	baz=60						
K62A	Royalston	72.39	310	P	P	16 06 02.3	+1.0
	baz=59						
L63A	North Scituate	72.40	309	P	P	16 06 02.3	+1.0
	baz=59						
I60A	Shoreham	72.45	311	P	P	16 06 01.7	+0.1
	baz=59						
H58A	Gabriels	72.70	312	P	P	16 06 02.6	-0.5
	baz=59						
L61B	Northampton	72.78	310	P	P	16 06 02.6	-1.0
	baz=59						
G57A	Newington	72.83	313	P	P	16 06 03.4	-0.4
	baz=58						
LONY	Lake Ozonia	72.84	313	P	P	16 06 03.7	-0.2
	baz=58						
TRTT	Trang	72.92	92	P	P	16 06 26.8	+22
J59A	Piesco	73.40	311	P	P	16 06 06.8	-0.5
	baz=58						
TPTI		73.41	98	P	P	16 06 07.4	-0.3
	comp=Z,14nm,0.7s						
H57A	Richville	73.42	313	P	P	16 06 07.1	-0.2
	baz=58						
M62A	Hamden	73.44	309	P	P	16 06 07.9	+0.4
	baz=58						
L61A	Hillsdale 1, H	73.47	310	P	P	16 06 09.3	+1.6
	baz=58						
I58A	Old Forge	73.57	312	P	P	16 06 08.6	+0.3
	baz=58						
CN2	Changchun	73.70	48	*e*P	P	16 06 09.3	+0.3
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
UBPT	Khong Chiam	73.70	82	P	P	16 06 10.6	+1.2
BILL	Bilibino	73.77	14	*c i*P	P	16 06 08.6	-0.4
BILL				*e*		16 06 21.8	
BILL				*e*		16 08 49.3	
BILL				*e*S	S	16 15 40.6	+3.3
BILL				pmax	pmax		
	comp=Z,16nm,1.3s						
BILL	Bilibino	73.77	14	P	P	16 06 08.0	-0.9
I57A	Carthage	73.86	312	P	P	16 06 10.0	+0.1
	baz=58						
J58A	Remsen	73.94	312	P	P	16 06 10.5	+0.1
	baz=58						
K59A	Cooperstown	73.98	311	P	P	16 06 10.2	-0.5
	baz=58						
C36M	Paulatuk	74.06	349	P	P	16 06 10.6	0.0
	baz=26						
C36M	Paulatuk	74.06	349	IAmb	IAmb	16 06 12.9	
	comp=Z,61nm,1.3s						
M61A	Granite Spring	74.07	309	P	P	16 06 12.5	+1.3
	baz=58						
PLVO	Plevna	74.12	314	IAmb	IAmb	16 06 15.0	
	comp=Z,33nm,1.2s						
ALGO	Algonquin Park	74.19	315	P	P	16 06 12.2	+0.4
	baz=57						
SEY	Seymchan	74.24	22	*i* P	P	16 06 11.8	0.0
KLR	Kul'dur	74.34	41	*i* P	P	16 06 12.4	-0.3
KLR				pmax	pmax		
	comp=Z,33nm,1.1s						
J57A	Williamstown	74.35	312	P	P	16 06 14.1	+1.3
	baz=57						
L59A	Walton	74.41	311	P	P	16 06 13.0	-0.3
	baz=58						
K58A	Earlville	74.48	311	P	P	16 06 13.1	-0.5
	baz=57						
A21K	Barrow	74.52	1	P	P	16 06 13.0	-0.2
	baz=358,SNR=11						
A21K	Barrow	74.52	1	IAmb	IAmb	16 06 16.4	
	comp=Z,58nm,1.2s						
G54A	Lake Saint Pet	74.52	315	P	P	16 06 15.0	+1.1
	baz=56,SNR=5.9						
GSI	Gunungsitoli	74.85	99	P	P	16 06 16.9	+0.7
J56A	Wolcott	74.95	312	P	P	16 06 16.7	+0.4
	baz=57						
L58A	Harry Jones Me	74.99	311	P	P	16 06 15.8	-0.8
	baz=57						
BINY	Binghamton	75.00	311	P	P	16 06 16.4	-0.2
	baz=57						
M59A	Waymart	75.00	310	P	P	16 06 16.2	-0.5
	baz=57						
K57A	Scipio Center	75.03	312	P	P	16 06 15.7	-1.1
	baz=57						
N60A	Cedar Hill Far	75.16	309	P	P	16 06 17.3	-0.2
	baz=57						
H53A	Bobcaygeon	75.27	314	P	P	16 06 17.3	-0.8
	baz=56						
QIZ	Qiongzhong	75.29	77	P	P	16 06 18.0	-0.6
QIZ				S	S	16 15 55.5	-0.3
QIZ				LR	LR		
	comp=Z,210nm,12.3s						
QIZ				LR	LR		
	comp=Z,170nm,18.1s						
NJ2	Nanjing	75.45	61	*e*P	P	16 06 19.8	+0.5
NJ2				pmax	pmax		
	comp=Z,18nm,1.1s						
SADO	Sadowa	75.49	315	P	P	16 06 19.5	+0.1
	comp=Z,5.4nm,0.5s,baz=71,slow=3.9,SNR=9.0						
SADO	Sadowa	75.49	315	IAmb	IAmb	16 06 31.7	
	comp=Z,47nm,1.3s						
K56A	Middlesex	75.55	312	P	P	16 06 18.7	-1.1
	baz=56						
N59A	State Game Lan	75.56	310	P	P	16 06 20.2	+0.3
	baz=57						
L57A	Andrews Acres	75.64	311	P	P	16 06 21.2	+0.8
	baz=56						
O60A	Telford	75.65	309	P	P	16 06 19.9	-0.4
	baz=57						
MDJ	Mudanjiang	75.74	46	P	P	16 06 19.5	-1.3
MDJ				pP	pP	16 06 31.3	0.0
MDJ				pmax	pmax		
	comp=Z,11nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,330nm,5.0s						
M58A	Price’s Panora	75.74	310	P	P	16 06 20.4	-0.5
	baz=57						
GRNR	Gornyy	75.88	38	⇑*i*P	P	16 06 22.1	+0.6
GRNR				*e*S	S	16 16 04.5	+3.2
GRNR				pmax	pmax		
	comp=E,6.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,260nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,300nm,16.0s						
L56A	Greenwood	76.01	312	P	P	16 06 21.9	-0.6
	baz=56						
L56A	Greenwood	76.01	312	IAmb	IAmb	16 06 45.1	
	comp=Z,33nm,0.8s						
P60A	Greenville	76.08	309	P	P	16 06 22.1	-0.7
	baz=57						
O59A	Robesonia	76.15	309	P	P	16 06 23.1	-0.2
	baz=56						
M57A	Sunshine Farm,	76.18	311	P	P	16 06 22.9	-0.5
	baz=56						
M57A	Sunshine Farm,	76.18	311	IAmb	IAmb	16 06 36.1	
	comp=Z,57nm,1.3s						
N58A	Sunbury	76.20	310	P	P	16 06 23.9	+0.4
	baz=56						
N58A	Sunbury	76.20	310	IAmb	IAmb	16 06 41.4	
	comp=Z,56nm,1.4s						
INK	Inuvik	76.31	352	P	P	16 06 23.8	+0.2
	comp=Z,17nm,1.1s,baz=20,slow=11,SNR=20						
INK	Inuvik	76.31	352	P	P	16 06 23.5	-0.1
INK				pmax	pmax		
	comp=Z,25nm,1.2s						
INK	Inuvik	76.31	352	P	P	16 06 23.5	-0.1
WVNY	West Valley, N	76.50	312	IAmb	IAmb	16 06 43.0	
	comp=Z,21nm,0.8s						
P59A	Jarrettsville	76.70	309	P	P	16 06 26.2	-0.2
	baz=56						
O58A	Lewisberry	76.73	310	P	P	16 06 26.6	+0.1
	baz=56						
N57A	Milroy	76.77	310	P	P	16 06 26.6	-0.2
	baz=56						
MNSI	Mandailing Nat	76.78	98	P	P	16 06 24.6	-2.6
	comp=Z,14nm,0.8s						
M55A	Ridgway	77.13	312	IAmb	IAmb	16 06 55.0	
	comp=Z,56nm,1.2s						
O57A	Amberson	77.13	310	P	P	16 06 27.1	-1.7
	baz=56						
N56A	West Decatur	77.15	311	P	P	16 06 28.1	-0.8
	baz=56						
I51A	Listowel	77.15	314	P	P	16 06 28.3	-0.5
	baz=54						
P58A	Pank, Wackersv	77.32	309	P	P	16 06 29.1	-0.7
	baz=56						
USA0B	Ussuriysk Arra	77.39	45	*i* P	P	16 06 29.6	-0.5
USRK	Ussuriysk Ar.	77.39	45	P	P	16 06 30.2	+0.1
	comp=Z,21nm,0.7s,baz=294,slow=4.7,SNR=70						
USRK				LR	LR	16 45 43.3	
	comp=Z,122nm,19.3s,baz=309,slow=40						
USRK	Ussuriysk Ar.	77.39	45	P	P	16 06 29.9	-0.2
ERPA	Erie	77.51	313	P	P	16 06 30.4	-0.5
	baz=55						
ERPA	Erie	77.51	313	P	P	16 06 30.9	+0.1
ERPA				IAmb	IAmb	16 06 45.6	
	comp=Z,43nm,0.9s						
E46A	Sault Ste Mari	77.51	318	IAmb	IAmb	16 06 45.2	
	comp=Z,31nm,1.0s						
RDOG	Red Dog Mine	77.64	3	IAmb	IAmb	16 06 33.5	
	comp=Z,37nm,1.3s						
M54A	Oil Creek Stat	77.66	312	P	P	16 06 31.5	-0.2
	baz=55						
M54A	Oil Creek Stat	77.66	312	IAmb	IAmb	16 06 49.6	
	comp=Z,38nm,1.1s						
O56A	Blue Knob Stat	77.69	310	P	P	16 06 31.7	-0.3
	baz=55						
L53A	Girard	77.77	313	P	P	16 06 30.6	-1.7
	baz=54						
P57A	Homestead Farm	77.78	310	P	P	16 06 33.2	+0.8
	baz=55						
P57A	Homestead Farm	77.78	310	IAmb	IAmb	16 06 40.4	
	comp=Z,25nm,0.9s						
Q58A	Fox Den Farm,	77.88	309	P	P	16 06 33.1	+0.1
	baz=55						
YKA	Yellowknife Ar	78.11	342	P	P	16 06 33.8	0.0
	comp=Z,2.3nm,0.6s,baz=38,slow=5.9,SNR=28						
YKA				PP	PP	16 09 29.3	-0.4
	comp=Z,2.6nm,1.0s,baz=27,slow=7.9,SNR=4.0						
YKA				PKPPKP	P'P'df	16 33 43.0	+1.6
	comp=Z,0.2nm,0.5s,baz=179,slow=2.3,SNR=3.9						
YKA				LR	LR	16 43 04.4	
	comp=Z,156nm,19.9s,baz=0.0,slow=37						
N54A	Moraine State	78.17	312	P	P	16 06 35.0	+0.4
	baz=54						
S59A	Mechanicsville	78.29	308	P	P	16 06 36.3	+1.0
	baz=55						
P56A	Dayton Farm, R	78.29	310	P	P	16 06 34.5	-0.8
	baz=55						
M53A	WI Miller and	78.32	312	P	P	16 06 35.7	+0.4
	baz=54						
PDSI	Padang	78.48	99	P	P	16 06 37.3	+0.6
	comp=Z,21nm,0.9s						
R58B	Mineral	78.56	308	P	P	16 06 38.9	+2.2
	baz=55						
COLD	Coldfoot	78.58	358	P	P	16 06 37.2	+0.8
	baz=4.0,SNR=21						
COLD	Coldfoot	78.58	358	P	P	16 06 36.9	+0.5
COLD				IAmb	IAmb	16 06 38.7	
	comp=Z,37nm,1.3s						
V62A	Hyde County Ai	78.64	305	P	P	16 06 39.4	+2.2
	baz=56						
M52A	Chesterland	78.67	313	IAmb	IAmb	16 06 49.4	
	comp=Z,20nm,0.8s						
KSAR	Wonju Array Be	78.75	52	P	P	16 06 38.1	+0.3
KSAR	Wonju Array Be	78.75	52	P	P	16 06 38.1	+0.3
KSRS	Korea Array	78.77	52	P	P	16 06 38.4	+0.5
	comp=Z,34nm,1.1s,baz=301,slow=5.0,SNR=41						
KSRS				LR	LR	16 46 46.9	
	comp=Z,336nm,18.1s,baz=312,slow=40						
Q56A	Snyder Ridge,	78.78	310	P	P	16 06 37.8	-0.2
	baz=55						
Q56A	Snyder Ridge,	78.78	310	IAmb	IAmb	16 06 46.4	
	comp=Z,47nm,1.1s						
R57A	Stanardsville	78.78	309	P	P	16 06 36.9	-1.1
	baz=55						
MCWV	Mont Chateau	78.84	311	P	P	16 06 38.4	+0.1
	baz=54						
S58A	Poland Farm, P	78.87	308	P	P	16 06 38.6	+0.1
	baz=55						
S58A	Poland Farm, P	78.87	308	IAmb	IAmb	16 06 46.6	
	comp=Z,56nm,1.2s						
T59A	Double "B" Far	78.91	307	P	P	16 06 39.7	+1.0
	baz=55						
E43A	Lone Tree Farm	78.98	319	IAmb	IAmb	16 06 53.5	
	comp=Z,27nm,1.1s						
G45A	Suttons Bay	79.07	318	IAmb	IAmb	16 06 54.2	
	comp=Z,32nm,0.8s						
SDSI	Sungai Dareh	79.28	99	P	P	16 06 40.3	-0.7
	comp=Z,412nmcomp=Z,23nm,1.1s						
R56A	Bull Pasture M	79.28	309	P	P	16 06 40.8	0.0
	baz=54						
O53A	New Philadelph	79.35	312	P	P	16 06 40.8	-0.2
	baz=54						
S57A	Dark Hollow, R	79.37	309	P	P	16 06 39.3	-1.9
	baz=54						

T58A	Grand View Acr	79.57	308	P	P	16 06 42.7	+0.4
	baz=55						
UGL	Uglegorsk	79.77	37	eP	P	16 06 42.7	-0.4
O52A	Adamsville	79.81	312	IAmb	IAmb	16 06 52.5	
	comp=Z,28nm,1.0s						
S56A	Natural Bridge	79.81	309	P	P	16 06 43.4	-0.2
	baz=54						
R55A	Marlinton	79.82	310	P	P	16 06 43.7	0.0
	baz=54						
R55A	Marlinton	79.82	310	IAmb	IAmb	16 06 56.8	
	comp=Z,44nm,1.1s						
U58A	Oxford	79.89	307	P	P	16 06 44.5	+0.4
	baz=54						
P53A	Whipple	79.91	311	IAmb	IAmb	16 07 01.3	
	comp=Z,32nm,1.1s						
T57A	Hurt	80.01	308	P	P	16 06 45.2	+0.6
	baz=54						
V59A	Middlesex	80.05	307	P	P	16 06 44.2	-0.7
	baz=55						
PRP	Porcupine Dome	80.09	356	P	P	16 06 45.4	+0.6
PRP				IAmb	IAmb	16 06 47.9	
	comp=Z,34nm,1.4s						
EYMN	Ely	80.32	322	P	P	16 06 44.1	-2.0
	baz=48						
Q53A	Leroy	80.36	311	P	P	16 06 47.6	+1.0
	baz=53						
U57A	Blanch	80.39	308	P	P	16 06 46.6	-0.2
	baz=54						
R54A	Victor	80.43	310	P	P	16 06 46.7	-0.3
	baz=54						
ACSO	Alum Creek Sta	80.44	312	IAmb	IAmb	16 07 04.2	
	comp=Z,26nm,1.1s						
T56A	Rocky Mt	80.49	308	P	P	16 06 47.4	+0.1
	baz=54						
POKR	Poker Plat Res	80.59	357	P	P	16 06 47.4	+0.1
	baz=6.2,SNR=16						
POKR	Poker Plat Res	80.59	357	IAmb	IAmb	16 06 49.7	
	comp=Z,47nm,1.4s						
V58A	Windy Hill, Pi	80.62	307	P	P	16 06 48.1	+0.1
	baz=54						
HUMP	Col San Antoni	80.71	286	IAmb	IAmb	16 07 01.2	
	comp=Z,65nm,1.4s						
COLA	College	80.85	357	P	P	16 06 49.5	+0.9
COLA				pmax	pmax		
	comp=Z,24nm,1.1s						
COLA	College	80.85	357	P	P	16 06 49.5	+0.9
COLA				IAmb	IAmb	16 06 50.9	
	comp=Z,24nm,1.1s						
TCOL	CIGO, UAF Yank	80.85	357	P	P	16 06 49.1	+0.4
	baz=5.9						
ULM	Lac du Bonnet	80.86	326	P	P	16 06 48.6	-0.4
	comp=Z,3.0nm,0.5s,baz=23,slow=4.7,SNR=6.8						
ULM				LR	LR	16 43 02.1	
	comp=Z,427nm,21.0s,baz=38,slow=36						
ILAR	Eielson Array	80.91	357	P	P	16 06 49.0	-0.1
	comp=Z,4.7nm,0.9s,baz=354,slow=4.3,SNR=35						
ILAR				PKKPbc	PKKPbc	16 25 25.1	-1.9
	comp=Z,0.7nm,0.7s,baz=234,slow=2.5,SNR=9.0						
ILAR				LR	LR	16 43 25.0	
	comp=Z,134nm,21.7s,baz=14,slow=36						
ILAR	Eielson Array	80.91	357	P	P	16 06 49.1	+0.1
ILAR	Eielson Array	80.91	357	P	P	16 06 49.1	+0.1
PDPR	Patillas Dam,	80.92	286	IAmb	IAmb	16 06 57.9	
	comp=Z,27nm,0.8s						
ANM	Nome	80.97	5	IAmb	IAmb	16 06 51.7	
	comp=Z,51nm,1.3s						
V57A	Coltrane Farms	81.00	307	P	P	16 06 49.8	-0.2
	baz=54						
CCB	Clear Creek Bu	81.08	357	IAmb	IAmb	16 06 51.5	
	comp=Z,31nm,1.2s						
U56A	King	81.12	308	P	P	16 06 48.4	-2.3
	baz=54						
W58A	Raeford	81.15	306	P	P	16 06 50.9	+0.1
	baz=54						
NEA2	Nenana	81.18	357	P	P	16 06 50.9	+0.5
	baz=4.9,SNR=8.3						
WRH	Wood River Hil	81.26	357	P	P	16 06 50.5	-0.4
WRH				IAmb	IAmb	16 07 14.4	
	comp=Z,34nm,0.9s						
HDA	Harding Lake	81.27	357	P	P	16 06 50.8	-0.1
	baz=6.6,SNR=17						
HDA	Harding Lake	81.27	357	IAmb	IAmb	16 06 52.5	
	comp=Z,61nm,1.3s						
O49A	Covington	81.29	313	IAmb	IAmb	16 07 05.5	
	comp=Z,24nm,0.9s						
Q51A	Peebles	81.40	312	IAmb	IAmb	16 07 08.8	
	comp=Z,20nm,0.8s						
G40A	Rib Lake	81.41	320	IAmb	IAmb	16 07 06.0	
	comp=Z,26nm,1.1s						
V56A	Mocksville	81.52	308	P	P	16 06 50.5	-2.2
	baz=54						
SCRK	Sand Creek	81.53	355	P	P	16 06 52.9	+0.5
	baz=9.1,SNR=21						
YSS	Yuzh-Sakhalins	81.53	38	eP	P	16 06 53.6	+1.0
YSS				e		16 07 13.2	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS	Yuzh-Sakhalins	81.53	38	P	P	16 06 54.1	+1.5
W57A	Gilead	81.57	307	P	P	16 06 51.7	-1.3
	baz=54						
BWN	Browne	81.62	358	IAmb	IAmb	16 07 06.1	
	comp=Z,20nm,0.8s						
N47A	Urbana	81.67	314	IAmb	IAmb	16 07 05.7	
	comp=Z,32nm,1.1s						
RIDG	Independent Ri	81.82	355	IAmb	IAmb	16 06 56.2	
	comp=Z,54nm,1.4s						
DOT	Dot Lake	81.86	355	IAmb	IAmb	16 07 24.1	
	comp=Z,28nm,1.1s						
P49A	Miami Univ. Ec	81.92	313	P	P	16 06 54.3	-0.5
	baz=52						
U54A	Nelsons Funny	81.95	309	P	P	16 06 55.4	+0.3
	baz=53						
U54A	Nelsons Funny	81.95	309	IAmb	IAmb	16 07 24.8	
	comp=Z,27nm,1.0s						
W56A	Indian Trail	81.97	307	P	P	16 06 54.4	-0.8
	baz=53						
BSFB	Barra de Sao F	82.04	241	eP	P	16 06 56.5	+0.9
MCK	McKinley	82.04	357	P	P	16 06 55.2	+0.1
	baz=5.0,SNR=12						
Z59A	Georgetown, SC	82.22	305	P	P	16 06 57.5	+1.0
	baz=54						
AGMN	Agassiz Nation	82.22	325	P	P	16 06 55.2	-1.1
	baz=46						
KTH	Kantishna Hill	82.28	358	P	P	16 06 55.7	-0.6
KTH				IAmb	IAmb	16 06 59.2	
	comp=Z,53nm,1.3s						
TRF	Thorofare Moun	82.37	358	IAmb	IAmb	16 07 12.4	
	comp=Z,19nm,0.8s						
KMSC	Kings Mountain	82.46	308	P	P	16 06 58.1	+0.4
	baz=53						
DHY	Denali Highway	82.62	357	P	P	16 06 58.5	+0.2
DHY				IAmb	IAmb	16 07 14.0	
	comp=Z,22nm,0.7s						
SFIN	Lafayette	82.82	315	P	P	16 06 59.3	-0.2
	baz=50						
TTA	Tatalina	82.95	1	IAmb	IAmb	16 07 03.1	
	comp=Z,46nm,1.4s						
PPLA	Purkeypile	82.97	359	IAmb	IAmb	16 07 11.4	
	comp=Z,29nm,0.7s						
R49A	Shelbyville	82.97	312	IAmb	IAmb	16 07 12.9	
	comp=Z,56nm,1.5s						
JFWS	Jewell Farm	82.98	318	P	P	16 07 00.7	+0.4
JFWS				pmax	pmax		
	comp=Z,16nm,0.8s						
JFWS	Jewell Farm	82.98	318	P	P	16 07 00.7	+0.4
	baz=49						
JFWS	Jewell Farm	82.98	318	P	P	16 07 00.7	+0.4
JFWS				IAmb	IAmb	16 07 24.0	
	comp=Z,16nm,0.8s						
TZTN	Tazewell	83.04	310	P	P	16 07 00.5	-0.3
	baz=52						
L42A	Oliver, Polo	83.25	317	IAmb	IAmb	16 07 26.9	
	comp=Z,26nm,1.0s						
CUT	Chulitna	83.41	358	P	P	16 07 01.5	-0.6
	baz=3.9						
PEXB	Peixe	83.47	251	eP	P	16 07 04.2	+1.0
M24K	Tolsona, Glenn	83.53	356	P	P	16 07 01.5	-1.3
	baz=7.2						
T50A	Nancy	83.56	311	IAmb	IAmb	16 07 16.9	
	comp=Z,28nm,1.2s						
MDSI	Maura Dua	83.56	100	P	P	16 07 02.8	-0.9
	comp=Z,17nm,1.1s						
PETK	Petropavlovsk-	83.58	27	P	P	16 06 59.1	-4.1
	comp=Z,18nm,1.1s,baz=352,slow=8.9,SNR=3.0						
PETK				LR	LR	16 49 06.9	
	comp=Z,192nm,18.4s,baz=300,slow=39						
PETK	Petropavlovsk-	83.58	27	P	P	16 07 00.7	-2.5
PETK	Petropavlovsk-	83.58	27	P	P	16 07 00.7	-2.5
WCI	Wyandotte Cave	83.70	312	P	P	16 07 04.1	0.0
WCI				pmax	pmax		
	comp=Z,35nm,1.0s						
WCI	Wyandotte Cave	83.70	312	P	P	16 07 04.8	+0.7
	baz=51						
WCI	Wyandotte Cave	83.70	312	P	P	16 07 04.1	0.0
WCI				IAmb	IAmb	16 07 21.5	
	comp=Z,35nm,1.0s						
TKL	Tuckaleechee C	83.73	309	P	P	16 07 03.9	-0.4
	comp=Z,12nm,1.2s,baz=96,slow=9.2,SNR=3.5						
SC01	Santiago de lo	83.85	289	IAMs_20	IAMs_20	16 49 20.8	
	comp=Z,743nm,19.0s						
N25K	Chitina, Valde	83.92	355	P	P	16 07 04.5	-0.3
	baz=8.5						
HDIL	Hopedale	83.99	316	P	P	16 07 05.4	-0.1
	baz=49						
GHO	Glory Hole Cre	84.00	357	IAMs_20	IAMs_20	16 38 58.2	
	comp=Z,377nm,19.0s						
HYT	Haines Junctio	84.00	352	P	P	16 07 06.5	+1.2
HYT				IAmb	IAmb	16 07 08.0	
	comp=Z,45nm,1.3s						
KLSI		84.13	100	P	P	16 07 06.4	-0.2
	comp=Z,178nmcomp=Z,7.3nm,1.2s						
F33A	5 Mile Ranch,	84.16	323	IAmb	IAmb	16 07 08.6	
	comp=Z,21nm,1.2s						
PMR	Palmer	84.19	357	IAmb	IAmb	16 07 08.1	
	comp=Z,41nm,1.2s						
MDND	Maddock	84.30	326	P	P	16 07 07.1	+0.2
	baz=43						
BALM	Baldy	84.31	354	IAmb	IAmb	16 07 09.3	
	comp=Z,34nm,1.3s						
CPCT	Cooper Cave	84.34	309	IAmb	IAmb	16 07 15.5	
	comp=Z,22nm,1.0s						
SUA	Susitna One	84.37	358	P	P	16 07 07.8	+0.6
U49A	Red Boiling Sp	84.47	311	IAmb	IAmb	16 07 25.0	
	comp=Z,19nm,0.9s						
OLIL	Olney	84.47	314	IAmb	IAmb	16 07 22.1	
	comp=Z,26nm,0.8s						
SDDR	Presa de Saban	84.53	289	eP	P	16 07 11.2	+2.5
RC01	Rabbit Creek A	84.71	357	P	P	16 07 08.8	0.0
	baz=4.3						
GOGA	Godfrey	84.91	307	P	P	16 07 10.4	+0.1
	baz=52						
T47A	Sharon Grove	84.99	312	P	P	16 07 11.5	+0.8
W50A	Signal Mountai	85.00	310	IAmb	IAmb	16 07 23.9	
	comp=Z,39nm,1.4s						
CLTN	Cedars of Leba	85.08	311	IAmb	IAmb	16 07 28.7	
	comp=Z,21nm,1.1s						
BDFB	Brasilia	85.38	248	P	P	16 07 13.5	+0.6
	comp=Z,6.1nm,0.7s,baz=52,slow=7.6,SNR=9.0						
BDFB				LR	LR	16 45 45.2	
	comp=Z,539nm,21.3s,baz=91,slow=36						
BDFB	Brasilia	85.38	248	P	P	16 07 13.9	+1.0
BDFB				pmax	pmax		
	comp=Z,22nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,700nm,21.0s						
BDFB	Brasilia	85.38	248	P	P	16 07 13.9	+1.0
BDFB				IAmb	IAmb	16 07 20.7	
	comp=Z,22nm,0.8s						
BDFB				IAMs_20	IAMs_20	16 45 33.9	
	comp=Z,661nm,21.0s						
FPAL	Fort Paine	85.60	309	IAmb	IAmb	16 07 36.9	
	comp=Z,22nm,1.1s						
V48A	Smith Brothers	85.61	311	IAmb	IAmb	16 07 30.4	
	comp=Z,17nm,0.9s						
ECSD	EROS Data Cent	85.81	322	P	P	16 07 15.2	+0.6
	baz=45,SNR=10						
ECSD	EROS Data Cent	85.81	322	IAmb	IAmb	16 07 28.5	
	comp=Z,17nm,0.9s						
MAJO	Matsushiro	85.84	48	i P	P	16 07 13.9	-1.1
MAJO				pmax	pmax		
	comp=Z,50nm,1.2s						
MAJO	Matsushiro	85.84	48	P	P	16 07 13.5	-1.4
MAT	Matsushiro	85.84	48	P	P	16 07 13.8	-1.2
MAT				S	S	16 17 42.2	-3.5
MJAR	Matsushiro Arr	85.85	48	P	P	16 07 15.6	+0.7
	comp=Z,43nm,1.1s,baz=306,slow=5.3,SNR=33						
MJAR				LR	LR	16 51 12.5	
	comp=Z,139nm,18.1s,baz=280,slow=40						
MJAR	Matsushiro Arr	85.85	48	P	P	16 07 14.8	-0.2
MJAR				pmax	pmax		
	comp=Z,31nm,1.0s						
MJAR	Matsushiro Arr	85.85	48	P	P	16 07 14.8	-0.2
WVT	Waverly	85.98	312	P	P	16 07 15.3	-0.3
WVT				pmax	pmax		
	comp=Z,18nm,1.0s						
WVT	Waverly	85.98	312	P	P	16 07 16.5	+0.9
	baz=50						
WVT	Waverly	85.98	312	P	P	16 07 15.3	-0.3
WVT				IAmb	IAmb	16 07 31.7	
	comp=Z,18nm,0.9s						
P40A	Paris	86.25	316	IAmb	IAmb	16 07 18.7	
	comp=Z,18nm,1.1s						
BSCB	Bom Sucesso	86.25	242	eP	P	16 07 19.1	+1.9
SBUM	Sibu	86.26	90	P	P	16 07 17.9	+0.6
SBUM				IAmb	IAmb	16 07 39.2	
	comp=Z,24nm,1.2s						
PTGA	Pitinga	86.32	267	P	P	16 07 18.6	+0.9
PTGA				IAmb	IAmb	16 07 25.4	
	comp=Z,18nm,0.9s						
PTGA	Pitinga	86.32	267	eP	P	16 07 19.0	+1.4
PTGA	Pitinga	86.32	267	eP	P	16 07 19.0	+1.4
TNG	Tangerang	86.53	100	P	P	16 07 19.6	+1.0
	comp=Z,922nm,0.5s						
Y49A	Blount Mountai	86.55	309	IAmb	IAmb	16 07 26.0	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	86.77	315	P	P	16 07 20.3	+0.9
CCM				pmax	pmax		
	comp=Z,23nm,0.8s						
CCM	Cathedral Cave	86.77	315	P	P	16 07 20.4	+0.9
	baz=48						
CCM	Cathedral Cave	86.77	315	P	P	16 07 20.3	+0.9
CCM				IAmb	IAmb	16 07 36.8	
	comp=Z,23nm,0.8s						
PLAL	Pickwick Lake	86.88	311	IAmb	IAmb	16 07 32.6	
	comp=Z,35nm,1.2s						
PBMO	Poplar Bluff	87.14	313	IAmb	IAmb	16 07 43.5	
	comp=Z,17nm,0.9s						
T42A	Van Buren	87.37	314	P	P	16 07 22.9	+0.6
LRAL	Lakeview Retre	87.45	309	P	P	16 07 24.6	+1.8
	baz=50						
OXF	Oxford	88.02	311	P	P	16 07 26.1	+0.6
	baz=49						
LCAR	Lake Charles	88.05	313	IAmb	IAmb	16 07 43.1	
	comp=Z,21nm,1.1s						
LAO	LASA Array	88.12	329	P	P	16 07 26.0	+0.1
	baz=38,SNR=6.7						
BGNE	Belgrade	88.26	321	P	P	16 07 26.9	+0.3
	baz=44						
CISI	Cisompet, Garu	88.27	100	P	P	16 07 28.2	+1.1
	comp=Z,874nmcomp=Z,62nm,1.3s						
EGMT	Eagleton	88.50	332	P	P	16 07 27.6	-0.1
	baz=36,SNR=8.3						
EGMT	Eagleton	88.50	332	IAmb	IAmb	16 07 53.7	
	comp=Z,18nm,1.1s						
U40A	Yellville	88.87	314	P	P	16 07 29.8	+0.2
	baz=47						
KSU1	Kansas State U	89.09	319	P	P	16 07 30.3	-0.3
	baz=45						
RSSD	Black Hills	89.14	326	P	P	16 07 31.6	+0.7
RSSD				pmax	pmax		
	comp=Z,17nm,1.2s						
RSSD	Black Hills	89.14	326	P	P	16 07 31.7	+0.7
	baz=40						
RSSD	Black Hills	89.14	326	P	P	16 07 31.6	+0.7
RSSD				IAmb	IAmb	16 07 55.8	
	comp=Z,17nm,1.1s						
W41B	Gary Mavity, V	89.31	313	P	P	16 07 31.0	-0.6
	baz=47						
SDV	Santo Domingo	89.71	281	P	P	16 07 35.0	+1.0
	comp=Z,19nm,0.8s,baz=46,slow=3.7,SNR=11						
SDV	Santo Domingo	89.71	281	eP	P	16 07 38.6	+4.6
SDV	Santo Domingo	89.71	281	eP	P	16 07 35.1	+1.0
SPB	Sao Paulo	89.79	241	IAMs_20	IAMs_20	16 46 59.7	
	comp=Z,377nm,19.0s						
MTDJ	Mount Denham	89.80	292	IAMs_20	IAMs_20	16 49 21.4	
	comp=Z,576nm,20.0s						
W39A	Magazine	90.21	314	P	P	16 07 36.4	+0.6
	baz=46						
MIAR	Mount Ida	90.54	314	P	P	16 07 37.0	-0.3
	baz=46						
MIAR	Mount Ida	90.54	314	IAmb	IAmb	16 07 50.4	
	comp=Z,11nm,0.9s						
RLMT	Red Lodge	90.65	330	P	P	16 07 38.1	+0.2
	baz=36,SNR=5.5						
CBKS	Cedar Bluff	90.98	320	P	P	16 07 38.7	-0.7
	baz=43						
CBKS	Cedar Bluff	90.98	320	IAmb	IAmb	16 08 03.1	
	comp=Z,17nm,1.1s						
NEW	Newport	91.00	336	P	P	16 07 39.7	+0.4
	baz=30,SNR=5.6						
NEW	Newport	91.00	336	IAmb	IAmb	16 07 59.6	
	comp=Z,9.6nm,1.0s						
YNE	Yellowstone No	91.05	330	P	P	16 07 40.8	+0.9
MSO	Missoula	91.09	333	P	P	16 07 39.4	-0.5
	baz=33						
BOZ	Bozeman (W)	91.23	331	P	P	16 07 39.7	-0.9
	baz=34						
K22A	Casper	91.42	327	P	P	16 07 40.9	-0.7
	baz=38						
K22A	Casper	91.42	327	IAmb	IAmb	16 08 05.5	
	comp=Z,20nm,1.1s						
OK030	Cody Creek RV	91.44	316	IAMs_20	IAMs_20	16 35 27.0	
	comp=Z,365nm,18.0s						
YHH	Holmes Hill	91.58	330	P	P	16 07 43.6	+1.2
H17A	Grant Village	91.79	330	P	P	16 07 43.4	+0.1
	baz=35						
C09A	Chrisman Ranch	91.79	336	IAmb	IAmb	16 08 03.3	
	comp=Z,12nm,1.2s						
DLMT	Dillon	91.80	332	IAMs_20	IAMs_20	16 55 05.5	
	comp=Z,411nm,21.0s						
N23A	Red Feather La	92.53	325	P	P	16 07 45.1	-1.7
	baz=38						
SMLC	San Martn de	92.55	282	eP	P	16 07 47.8	+0.9
PDAR	Pinedale Array	92.68	328	P	P	16 07 47.2	-0.2
	comp=Z,0.9nm,0.7s,baz=57,slow=5.5,SNR=8.6						
PDAR				PP	PP	16 11 27.3	-1.2
	comp=Z,1.3nm,0.9s,baz=51,slow=5.9,SNR=4.1						
PDAR	Pinedale Array	92.68	328	P	P	16 07 46.2	-1.2
BW06	Boulder Array	92.68	328	P	P	16 07 46.1	-1.3
	baz=36						
ISCO	Idaho Springs	93.22	324	P	P	16 07 49.8	-0.3
	baz=39						
D03D	Eldon	93.54	339	P	P	16 07 50.5	-0.5
	baz=26						
SAML	Samuel	93.57	262	P	P	16 07 52.1	+0.4
SAML				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SAML				MLR	MLR		
	comp=Z,200nm,20.0s						
SAML	Samuel	93.57	262	P	P	16 07 52.1	+0.4
SAML				IAMs_20	IAMs_20	16 51 02.9	
	comp=Z,219nm,20.0s						
SAML	Samuel	93.57	262	eP	P	16 07 52.8	+1.1
MPSI	Mapaga	93.79	87	P	P	16 07 54.5	+1.8
ZARC	Zaragoza, Cauc	93.93	282	eP	P	16 07 58.1	+4.8
PTBC	PUERTO BERRIO,	94.15	281	eP	P	16 07 54.6	+0.2
O20A	White River Ci	94.20	326	P	P	16 07 54.3	-0.2
	baz=37						
E04D	Cinebar	94.26	338	P	P	16 07 54.4	+0.1
	baz=26						
UREC	San Jos de Ur	94.33	282	eP	P	16 08 02.2	+7.0
SDCO	Great Sand Dun	94.76	323	P	P	16 07 57.0	-0.2
	baz=39						
NORC	Norcasia	95.05	280	eP	P	16 07 58.9	+0.4
DBBC	Dabeiba	95.30	282	eP	P	16 08 06.6	+6.8
S22A	4UR Ranch, Cre	95.42	324	P	P	16 07 59.9	-0.2
	baz=38						
GUY2C	Guyana, Caldas	95.64	280	eP	P	16 08 07.9	+6.1
PV22	Blue Mesa, Par	95.73	325	IAmb	IAmb	16 08 03.4	
	comp=Z,11nm,1.4s						
RREF	El Recreo	95.81	280	eP	P	16 08 04.1	+1.3
PV04	Paradox Valley	95.90	325	IAmb	IAmb	16 08 26.0	
	comp=Z,14nm,1.4s						
PV12	Saucer Basin,	95.91	325	IAmb	IAmb	16 08 26.6	
	comp=Z,19nm,1.3s						
PV11	David Mesa, Pa	95.96	325	IAmb	IAmb	16 08 31.4	
	comp=Z,7.9nm,0.9s						
PV14	Lion Creek, Pa	95.97	325	P	P	16 08 03.0	+0.4
PV14				IAmb	IAmb	16 08 26.2	
	comp=Z,12nm,1.4s						
TOLC	Tolima	95.97	280	eP	P	16 08 04.0	+0.9
PV17	East Wray Mesa	96.02	325	IAmb	IAmb	16 08 27.0	
	comp=Z,15nm,1.4s						
MVCO	Mesa Verde	96.65	324	P	P	16 08 04.5	-1.2
	baz=37						
I04A	Tendick Farm,	96.68	337	P	P	16 08 05.9	+0.4
	baz=26						
ANMO	Albuquerque	97.42	322	i P	P	16 08 07.0	-2.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
K02D	Willamette Mer	98.07	337	P	P	16 08 11.0	-0.8
	baz=26						
CPUP	Villa Florida	98.66	244	LR	LR	16 55 10.6	
	comp=Z,318nm,19.4s,baz=50,slow=37						
M02C	Callahan	98.98	336	P	P	16 08 15.3	-0.6
	baz=26						
RYN	Ryan	99.85	332	IAMs_20	IAMs_20	16 53 54.3	
	comp=Z,305nm,21.0s						
NVAR	Mina Array Bea	99.93	332	P	Pdif	16 08 21.4	+1.0
	comp=Z,0.4nm,0.7s,baz=19,slow=6.7,SNR=2.3						
NVAR				PKKPbc	PKKPbc	16 24 39.3	0.0
	comp=Z,0.1nm,0.4s,baz=193,slow=3.7,SNR=2.3						
NVAR				LR	LR	16 56 43.6	
	comp=Z,390nm,19.3s,baz=16,slow=37						
NVAR	Mina Array Bea	99.93	332		Pdif	16 08 20.9	+0.5
TXAR	Lajitas Array	100.21	316	P	Pdif	16 08 22.2	+0.6
	comp=Z,0.7nm,0.9s,baz=35,slow=3.1,SNR=4.8						
TXAR				PP	PP	16 12 27.5	+0.6
	comp=Z,0.8nm,1.0s,baz=52,slow=5.8,SNR=2.5						
AFDM	Forest Hills D	100.49	334	IAMs_20	IAMs_20	16 59 27.3	
	comp=Z,241nm,19.0s						
MTO3	Montecristo	101.08	296	IAMs_20	IAMs_20	16 39 34.0	
	comp=Z,553nm,19.0s						
SPX	San Pedro Mart	105.00	326	IAMs_20	IAMs_20	17 03 30.1	
	comp=Z,275nm,20.0s						
TA01	Diego Aracena	105.53	256	IAMs_20	IAMs_20	16 42 13.7	
	comp=Z,413nm,20.0s						
SNAA	Sanae	107.64	189	IAMs_20	IAMs_20	16 55 08.9	
	comp=Z,478nm,19.0s						
WB9	Warramunga Arr	116.53	97	IAMs_20	IAMs_20	16 49 11.2	
	comp=Z,295nm,19.0s						
WB4	Warramunga Arr	116.57	97	IAMs_20	IAMs_20	17 03 36.1	
	comp=Z,356nm,21.0s						
WRA	Warramunga Arr	116.57	97	PKP	PKPdf	16 13 19.1	-0.4
	comp=Z,0.8nm,0.5s,baz=310,slow=1.9,SNR=11						
WRA	Warramunga Arr	116.57	97		PKPdf	16 13 18.9	-0.6
WR1	Warramunga Arr	116.57	97	IAMs_20	IAMs_20	17 03 23.2	
	comp=Z,192nm,21.0s						
ASAR	Alice Springs	117.98	101	PKP	PKPdf	16 13 21.6	-0.6
	comp=Z,1.1nm,0.7s,baz=318,slow=1.5,SNR=13						
ASAR				SKP		16 16 54.2	
	comp=Z,1.1nm,0.8s,baz=338,slow=2.1,SNR=4.6						
ASAR				PKKPbc	PKKPbc	16 23 41.8	+0.5
	comp=Z,0.5nm,0.7s,baz=121,slow=3.4,SNR=2.3						
ASAR	Alice Springs	117.98	101	PKPdf	PKPdf	16 13 21.2	-0.9
QSPA	South Pole Qui	124.30	180	PKP	PKPdf	16 13 33.0	0.0
	comp=Z,3.7nm,0.8s,baz=273,slow=1.1,SNR=20						
QSPA	South Pole Qui	124.30	180	PKPdf	PKPdf	16 13 31.9	-1.1
STKA	Stephens Creek	127.57	106	PKP	PKPdf	16 13 40.6	+0.3
	comp=Z,2.2nm,0.7s,baz=327,slow=15,SNR=2.1						
VNDA	Vanda	132.89	168	SKPbc	SKPbc	16 17 12.9	-0.9
	comp=Z,12nm,1.1s,baz=247,slow=4.1,SNR=6.2						
DZM	Mont Dzumac	144.01	80	PKP	PKPdf	16 14 11.5	+0.4
	comp=Z,4.8nm,0.9s,baz=155,slow=19,SNR=2.1						
DZM	Mont Dzumac	144.01	80	ePKIKP	PKiKP	16 14 14.9	+0.3
	comp=Z,48nm,1.5s						
DZM	Mont Dzumac	144.01	80	eLR	LR	17 01 27.3	
	comp=Z,165nm,22.6s						
DZM	Mont Dzumac	144.01	80		PKPdf	16 14 11.0	-0.1
WKZ	Wanaka	150.57	122		PKPab	16 14 33.4	-0.2
PPT2	Papeete2	162.55	343	eLR	LR	17 10 00.0	
	comp=Z,195nm,23.8s						
TBI	Tubuai	167.96	335	eLR	LR	17 12 33.7	
	comp=Z,240nm,25.5s						

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*IDC **28** 16:12:00.1±0.7, 8°.38S×157°.31E, h0^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.9/33, mbtmp4.0/10, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/35 Error ellipse: s-maj=22.5km s-min=14.0km az=19.0*

*NEIC **28** 16:12:04.7±2.3, 8°.4S±0°.2×157°.45E±0°.09, h31^{km}±5^{km}, mb4.2/8, Error ellipse: s-maj=22.3km s-min=12.7km az=185.0*

ISC 28 16:12:01.1±0.6, **8°.4S**±0°.1×**157°.57E**±0°.07, **h10**^{km}**, n23,** σ**1**^{s}**21**/25, **mb4.2**/13, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.55	113	Pn	Pb	16 12 45.9	-1.0

	12nm,0.3s,baz=228,slow=9.0,SNR=6.0						
HNR				Pg	Pg	16 12 50.6	+0.6
	58nm,0.3s,baz=262,slow=1.0,SNR=23						
HNR				Lg	Lg	16 13 30.9	
	80nm,0.3s,baz=203,slow=21,SNR=14						
HNR				LR	LR	16 13 34.1	
	comp=Z,136nm,20.5s,baz=170,slow=34						
HNR	Honiara	2.55	113	Pn	Pb	16 12 46.1	-0.9
PMG	Port Moresby	10.34	264	LR	LR	16 18 16.3	
	comp=Z,160nm,18.3s,baz=206,slow=37						
PMG	Port Moresby	10.34	264	Pn	Pn	16 14 30.1	+0.5
CTAO	Charters Tower	15.95	222	P	P	16 15 50.1	+0.7
CTAO				IAmb	IAmb	16 16 05.5	
	comp=Z,13nm,1.5s						
WR0	Warramunga Arr	25.06	240	P	P	16 17 24.8	-1.1
WR0				IAmb	IAmb	16 17 28.5	
	comp=Z,7.7nm,1.1s						
WB0	Warramunga Arr	25.11	241	P	P	16 17 24.2	-2.2
WB0				IAmb	IAmb	16 17 40.6	
	comp=Z,8.0nm,1.2s						
WB2	Warramunga Arr	25.22	241	P	P	16 17 25.1	-2.3
WB2				IAmb	IAmb	16 17 27.9	
	comp=Z,14nm,1.4s						
WRA	Warramunga Arr	25.23	241	P	P	16 17 25.0	-2.5
	comp=Z,1.9nm,0.5s,baz=66,slow=9.5,SNR=22						
WRA				PcP	PcP	16 21 01.3	+0.2
	comp=Z,1.3nm,0.7s,baz=67,slow=2.6,SNR=12						
WRA	Warramunga Arr	25.23	241	P	P	16 17 25.8	-1.7
ASAR	Alice Springs	27.27	233	P	P	16 17 43.9	-2.0
	comp=Z,0.7nm,0.9s,baz=64,slow=9.2,SNR=4.6						
ASAR				PcP	PcP	16 21 06.2	+0.3
	comp=Z,0.5nm,0.7s,baz=85,slow=2.2,SNR=4.9						
STKA	Stephens Creek	27.67	210	P	P	16 17 50.3	+1.0
	comp=Z,4.5nm,0.8s,baz=50,slow=15,SNR=5.0						
STKA	Stephens Creek	27.67	210	P	P	16 17 50.3	+1.0
CMAR	Chiang Mai Arr	63.70	295	P	P	16 22 33.1	-0.2
	comp=Z,1.4nm,0.9s,baz=124,slow=5.4,SNR=7.6						
SONM	Songino Array	71.92	326	P	P	16 23 25.3	+0.5
	comp=Z,0.9nm,0.9s,baz=133,slow=6.9,SNR=5.5						
QSPA	South Pole Qui	81.56	180	P	P	16 24 19.4	+0.4
	comp=Z,3.7nm,0.9s,baz=21,slow=4.6,SNR=8.4						
QSPA	South Pole Qui	81.56	180	P	P	16 24 19.7	+0.7
ILAR	Eielson Array	83.78	21	P	P	16 24 29.5	-0.7
	comp=Z,0.4nm,0.8s,baz=262,slow=4.5,SNR=2.3						
ILAR	Eielson Array	83.78	21	P	P	16 24 31.1	+0.8
MK31	Makanchi Array	86.16	318	P	P	16 24 42.4	-0.3
MK31				IAmb	IAmb	16 24 47.0	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	86.16	318	P	P	16 24 42.6	-0.1
	comp=Z,1.4nm,0.9s,baz=106,slow=6.4,SNR=9.4						
YKA	Yellowknife Ar	96.40	28	P	P	16 25 30.0	-0.1
	comp=Z,0.4nm,0.8s,baz=263,slow=4.9,SNR=4.1						
BDFB	Brasilia	145.16	133	PKPbc	PKPdf	16 31 40.8	+0.7
	comp=Z,3.5nm,0.7s,baz=248,slow=3.9,SNR=4.9						

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*NOU **28** 16:15:04.2, 15°.69S×169°.05E, h200km, mb4.1, Vanuatu Islands*

*NEIC **28** 16:15:11.4±1.8, 16°.30S±0°.06×167°.9E±0°.2, h163km±8km, mb4.3/20, Error ellipse: s-maj=25.5km s-min=6.1km az=78.0*

*IDC **28** 16:15:16.0±3.6, 16°.39S×167°.76E, h203km±31km, mb3.7/9, mb1 3.7/10, mb1mx3.4/40, mbtmp4.2/10, Error ellipse: s-maj=28.2km s-min=22.7km az=58.0*

ISC 28 16:15:14.0±1.0**, 16°.21S**±0°.07×**167°.9E**±0°.1**, h200**km**, n40, σ1ˢ.62**/42**, mb4.2**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.03	317	Pn	Pn	16 15 40.4	-3.6
SANVU	Saraoutou	1.03	317	P	Pn	16 15 40.6	-3.4
DVP	Devils Point	1.53	171	P	Pn	16 15 44.4	-3.5
MARNC	Mare, Loyalty	5.25	179	P	Pn	16 16 28.3	-3.2
DZM	Mont Dzumac	6.00	193	P	Pn	16 16 42.5	+1.1
	0.8nm,0.3s,baz=61,slow=19,SNR=1.7						
DZM				S	Sn	16 17 46.2	-4.3
	0.1nm,0.3s,baz=307,slow=23,SNR=1.3						
DZM	Mont Dzumac	6.00	193	Pn	Pn	16 16 41.5	+0.1
DZM	Mont Dzumac	6.00	193	P	Pn	16 16 42.5	+1.1
NOUC	Port Laguerre	6.06	194	P	Pn	16 16 43.0	+1.0
PINNC	Pines Island,	6.39	184	P	Pn	16 16 46.4	+0.1
HNR	Honiara	10.29	310	Pn	P	16 17 42.6	-2.0
LHI	Lord Howe Isla	17.25	206	P	P	16 18 59.6	-2.0
CTAO	Charters Tower	20.95	256	P	P	16 19 41.6	-0.1
COEN	Coen	24.00	272	P	P	16 20 11.4	+0.7
COEN				IAmb	IAmb	16 20 13.4	
	comp=Z,7.2nm,0.9s						
THZ	Tophouse	25.83	171	P	P	16 20 28.1	+1.2
LTZ	Lake Taylor	26.75	173	P	P	16 20 35.2	+0.1
RPZ	Rata Peaks	27.55	175	P	P	16 20 42.3	+0.2
	comp=Z,3.7nm,0.7s,baz=32,slow=9.8,SNR=1.6						
RPZ	Rata Peaks	27.55	175	P	P	16 20 42.4	+0.2
RPZ				IAmb	IAmb	16 20 51.1	
	comp=Z,9.7nm,1.2s						
STKA	Stephens Creek	28.56	232	P	P	16 20 51.5	+0.2
	comp=Z,0.9nm,0.3s,baz=73,slow=12,SNR=5.6						
STKA	Stephens Creek	28.56	232	P	P	16 20 51.5	+0.2
WR0	Warramunga Arr	31.93	258	P	P	16 21 20.6	-0.5
WR0				IAmb	IAmb	16 21 34.6	
	comp=Z,7.2nm,1.4s						
WB0	Warramunga Arr	32.06	259	P	P	16 21 21.6	-0.7
WB0				IAmb	IAmb	16 21 22.0	
	comp=Z,8.6nm,1.3s						
WB2	Warramunga Arr	32.10	258	P	P	16 21 21.7	-0.9
WB2				IAmb	IAmb	16 21 32.0	
	comp=Z,5.2nm,1.2s						
WRA	Warramunga Arr	32.12	258	P	P	16 21 21.8	-1.0
	comp=Z,0.6nm,0.3s,baz=84,slow=8.2,SNR=18						
WRA				PcP	PcP	16 24 07.1	-0.1
	comp=Z,0.2nm,0.6s,baz=103,slow=3.3,SNR=1.8						
WRA	Warramunga Arr	32.12	258	P	P	16 21 22.0	-0.8
AS31	Alice Springs	32.77	251	P	P	16 21 28.2	-0.2
AS31				IAmb	IAmb	16 21 28.7	
	comp=Z,5.6nm,0.5s						
ASAR	Alice Springs	32.77	251	P	P	16 21 28.4	-0.1
	comp=Z,10nm,0.5s,baz=77,slow=8.8,SNR=330						
ASAR	Alice Springs	32.77	251	P	P	16 21 27.9	-0.6
BBOO	Buckleboo	33.21	234	P	P	16 21 32.0	-0.1
FAKI	Fak Fak	37.49	287	P	P	16 22 09.0	+0.2
FORT	Forrest	39.12	241	P	P	16 22 22.3	+0.1
FITZ	Fitzroy Crossi	40.39	261	P	P	16 22 33.2	+0.4
	comp=Z,4.0nm,0.3s,baz=77,slow=7.3,SNR=24						
FITZ	Fitzroy Crossi	40.39	261	P	P	16 22 33.1	+0.3
FITZ				IAmb	IAmb	16 22 33.8	
	comp=Z,5.6nm,0.8s						
PSA00	Pilbara Seismi	45.67	256	P	P	16 23 15.9	+0.8
PSA00				IAmb	IAmb	16 23 23.0	
	comp=Z,15nm,1.4s						
TOLI2	Tolitoli	49.61	286		P	16 23 44.9	-0.6
TOLI2				IAmb	IAmb	16 23 45.8	
	comp=Z,4.8nm,0.8s						
MJAR	Matsushiro Arr	59.50	332	P	P	16 24 58.3	+2.1
ASAJ	Asahikawa	64.34	340	P	P	16 25 30.4	+2.2
	comp=Z,3.2nm,0.6s,baz=163,slow=19,SNR=5.0						
QSPA	South Pole Qui	73.83	180	P	P	16 26 27.0	+0.5
	comp=Z,1.9nm,1.0s,baz=12,slow=1.4,SNR=2.9						
QSPA	South Pole Qui	73.83	180	P	P	16 26 27.0	+0.5
QSPA				IAmb	IAmb	16 26 28.1	
	comp=Z,6.0nm,1.3s						
CMAR	Chiang Mai Arr	76.13	294	P	P	16 26 42.4	+2.0
	comp=Z,0.5nm,0.6s,baz=132,slow=5.8,SNR=5.6						
SONM	Songino Array	84.06	323	P	P	16 27 24.4	+2.1
	comp=Z,0.2nm,0.5s,baz=127,slow=4.2,SNR=2.0						

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*GCG **28** 16:20:09.1±0.9, 15°.25N×88°.92W, h0km±19km, MD3.8*

*SNET **28** 16:20:12.9±1.2, 15°.52N×89°.50W, h20km±11km, ML3.5*

ISC 28 16:20:08.4±3.7**, 15°.7N**±0°.2×**89°.24W**±0°.10**, h10**km**, n12, σ0ˢ.40**/16**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	Marmol	0.77	214	*e*P	Pg	16 20 22.7	-0.6
NBG	Las Nubes	1.55	223	*e*P	Pb	16 20 37.6	+0.2
TACO	Tacachico	1.75	183	*e*P	Pb	16 20 41.0	+0.4
TACO				*e*S	Sb	16 21 03.3	+0.6
RTR	El Retiro	1.86	192	*e*P	Pb	16 20 42.8	+0.1
PCG	Pacaya	1.87	225	*e*P	Pb	16 20 43.2	+0.3
SNJE	San Jose	1.88	191	*e*P	Pb	16 20 43.1	+0.1
SBLS	San Blas	1.91	191	*e*P	Pb	16 20 43.5	-0.1
SBLS				*e*S	Sb	16 21 08.2	+0.6
CEVE	Cerro Verde	1.92	191	*e*P	Pb	16 20 43.9	+0.1
CEVE				*e*S	Sg	16 21 09.7	-0.6
CEVE				IAML		16 21 25.6	
	comp=Z,309nm,0.4s						
BOQS	Boqueron	1.98	181	*e*P	Pg	16 20 46.0	-0.4
FUG	Fuego 3	2.00	231	*e*P	Pb	16 20 45.0	0.0
FUG				*e*S	Sg	16 21 13.0	+0.3
PAVA	Las Pavas	2.02	172	*e*P	Pg	16 20 47.2	0.0
PAVA				IAML		16 21 15.3	
	comp=Z,591nm,0.4s						
JAYA	Jayaque - finc	2.07	186	*e*P	Pb	16 20 46.0	-0.2

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*DJA **28** 16:21:19.3±1.3, 8°S±2°×10°7E±°, h18km±12km, M4.8/23, mb4.9/14, mB5.3/8, MLv4.7/23, Mw(mB)4.7/8*

*NEIC **28** 16:21:20.6±2.6, 7°.61S±0°.07×106°.88E±0°.05, h59km±6km, mb4.4/22, Error ellipse: s-maj=9.9km s-min=7.7km az=193.0*

*IDC **28** 16:21:24.9±1.1, 7°.29S×107°.04E, h105km±9km, mb3.6/12, mb1 3.7/12, mb1mx3.5/38, mbtmp4.0/12, MS3.4/3, Ms1 3.4/3, ms1mx2.8/49, Error ellipse: s-maj=26.3km s-min=12.6km az=48.0*

ISC 28 16:21:21.0±0.9**, 7°.72S**±0°.05×**106°.88E**±0°.05**, h71**km±8km**, n95, σ1ˢ.77**/96**, mb4.2**/21**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.94	80		Pn	16 21 37.9	-1.1
CISI				Sn	Sn	16 21 49.9	-2.4
CISI	Cisompet, Garu	0.94	80	P	Pn	16 21 37.9	-1.1
CISI				S	Sn	16 21 49.4	-2.9
LEM	Lembang	1.15	40	P	Pn	16 21 42.3	+0.7
	2μm,0.3s,baz=295,slow=3.9,SNR=742						
LEM				LR	LR	16 21 56.9	
	comp=Z,155nm,18.4s,baz=209,slow=43						
LEM				S	Sn	16 21 58.6	+1.6
	653nm,0.3s,baz=343,slow=22,SNR=9.8						
LEM	Lembang	1.15	40	P	Pn	16 21 41.1	-0.6
LEM				S	Sn	16 21 59.3	+2.3
DBJI	Dramaga	1.16	354	P	Pn	16 21 41.4	-0.3
DBJI				S	Sn	16 21 56.2	-0.9
TNG	Tangerang	1.55	352	P	Pn	16 21 46.9	+0.1
TNG				S	Sn	16 22 07.6	+1.4
BLSI	Bandar Lampung	2.84	325	P	Pn	16 22 05.1	+0.9
XMIS	Christmas Isla	3.00	204		Pn	16 22 05.7	-0.6
XMIS				Sn	Sn	16 22 37.8	-3.3
KASI	Kota Agung	3.22	313	P	Pn	16 22 09.8	+0.6
SMRI	Semarang	3.60	80	Pn	Pn	16 22 15.9	+1.5
SMRI	Semarang	3.60	80	P	Pn	16 22 15.2	+0.8
UGM	Wanagama	3.62	93		Pn	16 22 14.9	+0.1
UGM	Wanagama	3.62	93	P	Pn	16 22 14.5	-0.2
KLSI		3.69	325	P	Pn	16 22 16.7	+1.0
LWLI	Liwa	3.88	314	P	Pn	16 22 19.5	+1.1
MDSI	Maura Dua	4.18	320	P	Pn	16 22 23.2	+0.7
PWJI	Pagerwojo	4.89	94	P	Pn	16 22 32.0	-0.1
TPI	Tanjungpandan	4.99	9	P	Pn	16 22 33.3	-0.2
	0.3nm607nm43nm,0.8s						
LHSI	Lahat	5.11	319	P	Pn	16 22 34.7	-0.4
	0.5nm2μm103nm,0.7s						
MNAI	Manna	5.13	310	Pn	Pn	16 22 35.9	+0.5
MNAI	Manna	5.13	310	P	Pn	16 22 35.2	-0.2
PMBI	Palembang	5.20	336	P	Pn	16 22 37.4	+1.0
	1.4nm196nm,0.6s						
PPBI	Pangkal Pinang	5.57	352	P	Pn	16 22 42.6	+1.2
	0.6nm4μm56nm,0.8s						
KSI	Kapahiang	5.87	313	P	Pn	16 22 47.0	+1.4
JMBI	JAMBI	6.85	332	P	Pn	16 23 01.6	+2.7
KMMI	Kalianget	7.06	85	P	Pn	16 23 04.2	+2.4
	0.4nm80nm,1.8s						
JAGI	Jajag, Banyuwa	7.24	96	Pn	Pn	16 23 05.9	+1.6
JAGI	Jajag, Banyuwa	7.24	96	P	Pn	16 23 06.2	+1.9
	1.0nm5μm131nm,0.5s						
SRBI	Singaraja	8.27	93	P	Pn	16 23 18.8	+0.5
	2μm152nm,0.7s						
RGRI	Rengat	8.61	328	P	Pn	16 23 18.7	-4.3
SDSI	Sungai Dareh	8.66	321	P	Pn	16 23 23.5	-0.1
	444nm7.3nm,0.6s						
MYKOM	Kota Tinggi	9.92	342	Pn	Pn	16 23 44.6	+3.8
TWSI	Taliwang, Sumb	9.96	97	P	Pn	16 23 39.4	-2.0
	567nm20nm,0.9s						
PLAI	Plampang	10.84	97	P	Pn	16 23 50.2	-3.3
	54nm,0.9s						
GSI	Gunungsitoli	12.90	314	Pn	Pn	16 24 14.6	-6.9
GSI	Gunungsitoli	12.90	314	P	Pn	16 24 14.1	-7.5
MMRI	Maumere	15.23	94	Pn	Pn	16 24 51.7	-0.5
MMRI	Maumere	15.23	94	P	Pn	16 24 51.2	-1.0
GIRL	Giralia	16.44	155	Pn	Pn	16 25 06.6	-0.8
KKM	Kota Kinabalu	16.54	35	P	P	16 25 11.7	+1.5
BATI	Baumata	16.76	100	P	Pn	16 25 08.5	-3.0
	1.7nm,0.3s,baz=91,slow=22,SNR=2.0						
BATI				S	Sn	16 28 17.5	+0.3
	1.0nm,0.3s,baz=0.0,slow=18,SNR=1.4						
SOEI	Soe	17.31	98	Pn	Pn	16 25 16.6	-1.7
SOEI				IAmb	IAmb	16 25 34.9	
	comp=Z,42nm,1.3s						
PSA00	Pilbara Seismi	18.61	139	Pn	Pn	16 25 36.0	+2.1
PSA00				IAmb	IAmb	16 25 47.7	
	comp=Z,32nm,1.5s						
FITZ	Fitzroy Crossi	20.98	121	P	P	16 26 00.6	+2.0
	comp=Z,2.7nm,0.7s,baz=312,slow=10,SNR=3.8						
FITZ				S	S	16 29 44.7	-3.8
	comp=Z,0.8nm,0.5s,baz=170,slow=19,SNR=1.4						
FITZ	Fitzroy Crossi	20.98	121		P	16 26 00.6	+2.0
MTN	Manton Dam	24.39	104	P	P	16 26 33.6	+0.6
NWAO	Narrogin (SRO)	26.86	160	LR	LR	16 38 11.8	
	comp=Z,47nm,21.8s,baz=359,slow=37						
CMAR	Chiang Mai Arr	27.16	343	P	P	16 26 54.5	-3.5
	comp=Z,0.4nm,0.7s,baz=178,slow=8.9,SNR=9.9						
CMAR				PcP	PcP	16 30 16.5	-0.6
	comp=Z,0.2nm,0.3s,baz=190,slow=3.5,SNR=4.1						
H01W3	Cape Leeuwin H	27.85	167	T	T	16 56 42.8	
	baz=347,slow=76,SNR=46						
H01W1	Cape Leeuwin H	27.86	167	T	T	16 56 44.7	
	baz=347,slow=76,SNR=30						
H01W2	Cape Leeuwin H	27.86	167	T	T	16 56 42.7	
	baz=347,slow=76,SNR=50						
WB0	Warramunga Arr	29.23	117	P	P	16 27 17.4	+0.9
WB0				IAmb	IAmb	16 27 22.5	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	29.25	117	P	P	16 27 17.0	+0.4
	comp=Z,0.5nm,0.3s,baz=296,slow=11,SNR=16						
WRA				PcP	PcP	16 30 22.4	+0.2
	comp=Z,0.4nm,0.6s,baz=299,slow=2.2,SNR=4.7						
WRA	Warramunga Arr	29.25	117	P	P	16 27 17.6	+1.0
WB2	Warramunga Arr	29.26	117	P	P	16 27 17.4	+0.7
WB2				IAmb	IAmb	16 27 24.5	
	comp=Z,6.8nm,1.2s						
WR0	Warramunga Arr	29.43	117	P	P	16 27 19.3	+1.1
WR0				IAmb	IAmb	16 27 32.2	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	30.38	125	P	P	16 27 27.6	+1.0
ASAR	Alice Springs	30.38	125	P	P	16 27 27.7	+1.1
	comp=Z,0.4nm,0.5s,baz=305,slow=9.0,SNR=16						
ASAR				PcP	PcP	16 30 25.7	+0.6
	comp=Z,0.7nm,0.8s,baz=318,slow=2.6,SNR=5.3						
H08S2	Diego Garcia H	34.07	268	T	T	17 03 38.1	
	baz=92,slow=76,SNR=25						
H08S3	Diego Garcia H	34.08	268	T	T	17 03 39.0	
	baz=92,slow=76,SNR=38						
H08S1	Diego Carcia H	34.09	268	T	T	17 03 37.9	
	baz=92,slow=76,SNR=17						
COEN	Coen	36.15	103	P	P	16 28 17.5	+0.5
COEN				IAmb	IAmb	16 28 24.1	
	comp=Z,11nm,1.3s						
STKA	Stephens Creek	40.26	131	P	P	16 28 52.9	+1.7
	comp=Z,3.7nm,0.4s,baz=310,slow=7.0,SNR=16						
STKA				PcP	PcP	16 30 54.0	+0.1
	comp=Z,0.9nm,0.4s,baz=333,slow=4.5,SNR=4.0						
STKA	Stephens Creek	40.26	131	P	P	16 28 53.0	+1.8
JNU	Nakatsue	46.59	28	LR	LR	16 51 23.7	
	comp=Z,164nm,18.5s,baz=313,slow=39						
WMQ	Urumqi	54.16	343	*e*P	P	16 30 42.8	+3.6
SONM	Songino Array	55.31	360	P	P	16 30 47.2	-0.3
	comp=Z,0.3nm,0.4s,baz=169,slow=7.8,SNR=3.0						
SONM				PcP	PcP	16 31 46.3	-1.1
	comp=Z,2.1nm,0.5s,baz=171,slow=4.1,SNR=15						
WSAR	Wadi Sarin	56.31	304	P	P	16 30 55.5	+0.6
	comp=Z,2.3nm,0.9s,baz=153,slow=2.3,SNR=2.1						
MK31	Makanchi Array	58.52	340	P	P	16 31 06.9	-3.1
MKAR	Makanchi Array	58.52	340	P	P	16 31 06.5	-3.5
	comp=Z,0.7nm,0.5s,baz=151,slow=8.6,SNR=14						
MKAR	Makanchi Array	58.52	340	P	P	16 31 06.2	-3.8
OPO	Ambohidratompo	58.89	253	P	P	16 31 15.0	+1.6
	comp=Z,2.0nm,0.7s,baz=90,slow=12,SNR=1.8						
ZALV	Zalesovo Beam	64.19	346	P	P	16 31 46.3	-1.9
	comp=Z,0.5nm,0.4s,baz=151,slow=3.4,SNR=3.6						
ZALV	Zalesovo Beam	64.19	346	P	P	16 31 47.2	-1.0
BRVK	Borovoye	68.04	337	P	P	16 32 11.4	-1.5
BRVK				IAmb	IAmb	16 32 12.1	
	comp=Z,2.8nm,1.2s						
BKZ	Black Stump Fm	69.37	129	P	P	16 32 22.9	+1.3
ABKAR	Akbulak array	69.97	329	P	P	16 32 23.5	-1.3
ABKAR				IAmb	IAmb	16 32 28.7	
	comp=Z,3.8nm,0.7s						
VNDA	Vanda	75.29	169	P	P	16 32 58.1	+2.1
	comp=Z,2.0nm,1.0s,baz=307,slow=9.0,SNR=2.2						
VNDA	Vanda	75.29	169	P	P	16 32 58.3	+2.3
VNDA				IAmb	IAmb	16 33 10.3	
	comp=Z,9.3nm,1.4s						
LSZ	Lusaka	77.14	256	P	P	16 33 10.4	+2.5
LSZ				IAmb	IAmb	16 33 10.8	
	comp=Z,3.6nm,0.8s						
BOSA	Boshof	79.02	242	P	P	16 33 19.8	+1.7
	comp=Z,4.2nm,1.1s,baz=95,slow=4.0,SNR=5.1						
BOSA	Boshof	79.02	242	P	P	16 33 20.6	+2.5
BRTR	Keskin Array B	82.21	312	P	P	16 33 34.2	-0.7
	comp=Z,1.0nm,0.8s,baz=134,slow=5.3,SNR=3.7						
BRTR	Keskin Array B	82.21	312	P	P	16 33 33.7	-1.1
QSPA	South Pole Qui	82.28	180	P	P	16 33 36.7	+2.0
QSPA				IAmb	IAmb	16 33 37.5	
	comp=Z,5.9nm,0.9s						
OBN	Obninsk	85.26	327	LR	LR	17 14 35.7	
	comp=Z,10nm,21.0s,baz=307,slow=38						
AKASG	Malin Array Be	88.18	322	P	P	16 34 00.6	-3.6
	comp=Z,0.2nm,0.3s,baz=93,slow=4.4,SNR=1.9						
YKA	Yellowknife Ar	117.57	20	PKP	PKPdf	16 39 56.8	-1.8
	comp=Z,0.3nm,0.7s,baz=341,slow=1.9,SNR=4.1						
NVAR	Mina Array Bea	129.14	46	PKP	PKiKP	16 40 22.1	-0.4
	comp=Z,0.1nm,0.4s,baz=262,slow=4.5,SNR=2.4						
PDAR	Pinedale Array	132.64	36	PKP	PKPdf	16 40 27.6	-0.8
	comp=Z,0.2nm,0.6s,baz=338,slow=2.1,SNR=2.0						
TXAR	Lajitas Array	144.13	49	PKP	PKPbc	16 40 48.2	+0.5
	comp=Z,0.3nm,0.5s,baz=266,slow=2.0,SNR=3.4						
TXAR	Lajitas Array	144.13	49		PKPdf	16 40 48.7	-0.9
BDFB	Brasilia	145.98	227	PKPbc	PKiKP	16 40 55.6	-1.6
	comp=Z,3.4nm,0.5s,baz=85,slow=5.5,SNR=5.1						
LCAR	Lake Charles	147.32	28		PKPbc	16 40 56.2	-0.8
MIAR	Mount Ida	147.33	32		PKPbc	16 40 56.6	-0.6

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*NEIC **28** 16:28:50.1±1.4, 2°.5N±0°.1×123°.69E±0°.09, h392km±12km, mb4.1/13, Error ellipse: s-maj=19.0km s-min=10.0km az=212.0*

*IDC **28** 16:28:51.2±2.1, 2°.57N×123°.82E, h407km±27km, mb2.9/7, mb1 3.1/10, mb1mx2.9/37, mbtmp3.9/10, Error ellipse: s-maj=27.8km s-min=14.2km az=75.0*

ISC 28 16:28:50.7±0.6**, 2°.52N**±0°.08×**123°.73E**±0°.10**, h400**km**, n30, σ1ˢ.14**/31**, mb3.4**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	3.27	245	Pn	Pn	16 29 54.2	-2.0
LUWI	Luwuk	3.67	195	Pn	Pn	16 29 57.8	-2.0
TNTI	Ternate	4.03	116	Pn	Pn	16 30 02.1	-1.0
MYLDM	Lahad Datu	5.85	297	Pn	Pn	16 30 21.2	-0.6
SIJI	Sorong	8.25	114	P	P	16 30 49.1	+0.1
	1.1nm,0.3s,baz=312,slow=18,SNR=4.8						
KKM	Kota Kinabalu	8.27	295		Pn	16 30 47.7	-1.3
FAKI	Fak Fak	10.09	122		Pn	16 31 10.2	+0.4
BATI	Baumata	12.65	180	P	Pn	16 31 38.7	-0.8
	2.6nm,0.3s,baz=218,slow=1.5,SNR=4.8						
JAGI	Jajag, Banyuwa	14.51	221	P	P	16 32 00.4	+2.4
MTN	Manton Dam	16.94	154	P	P	16 32 24.4	+0.3
MTN				IAmb	IAmb	16 32 42.7	
	comp=Z,30nm,1.3s						
LEM	Lembang	18.57	240	P	P	16 32 43.1	+1.4
	comp=Z,2.3nm,0.3s,baz=143,slow=22,SNR=4.0						
FITZ	Fitzroy Crossi	20.58	175	P	P	16 33 01.1	+0.5
	comp=Z,1.2nm,0.3s,baz=14,slow=9.2,SNR=7.7						
FITZ	Fitzroy Crossi	20.58	175	P	P	16 33 02.0	+1.5
FITZ				IAmb	IAmb	16 33 16.2	
	comp=Z,12nm,1.4s						
TPUB	Ta-pu	20.87	352	P	P	16 33 04.1	+0.9
YULB	Yu-li	20.88	354	P	P	16 33 06.2	+2.9
XMIS	Christmas Isla	22.16	234		P	16 33 13.5	-1.5
PSA00	Pilbara Seismi	24.25	189	P	P	16 33 34.4	+0.6
PSA00				IAmb	IAmb	16 33 39.2	
	comp=Z,14nm,1.1s						
WB0	Warramunga Arr	24.50	155	P	P	16 33 35.7	-0.4
WB0				IAmb	IAmb	16 33 42.5	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	24.64	155	P	P	16 33 36.8	-0.5
	comp=Z,0.3nm,0.4s,baz=336,slow=10.0,SNR=7.7						
WRA	Warramunga Arr	24.64	155	P	P	16 33 36.4	-0.9
WB2	Warramunga Arr	24.64	155	P	P	16 33 37.0	-0.2
WB2				IAmb	IAmb	16 33 55.8	
	comp=Z,7.0nm,1.4s						
WR0	Warramunga Arr	24.73	155	P	P	16 33 37.5	-0.6
WR0				IAmb	IAmb	16 33 40.1	
	comp=Z,5.0nm,1.2s						
ASAR	Alice Springs	27.85	160	P	P	16 34 06.0	+0.2
	comp=Z,0.2nm,0.5s,baz=336,slow=8.0,SNR=2.2						
USRK	Ussuriysk Ar.	42.14	9	P	P	16 36 05.2	-0.5
	comp=Z,1.0nm,0.7s,baz=204,slow=13,SNR=1.7						
SONM	Songino Array	47.56	344	P	P	16 36 48.0	0.0
	comp=Z,0.6nm,0.7s,baz=160,slow=9.3,SNR=1.7						
MK31	Makanchi Array	56.88	327	P	P	16 37 55.6	0.0
MKAR	Makanchi Array	56.88	327	P	P	16 37 55.4	-0.2
	comp=Z,0.7nm,0.3s,baz=124,slow=7.8,SNR=29						
MKAR				ScP	ScP	16 42 05.8	-0.6
	comp=Z,0.3nm,0.7s,baz=134,slow=6.2,SNR=3.2						
MAKZ	Makanchi	57.06	327	P	P	16 37 56.9	0.0
ZALV	Zalesovo Beam	60.34	335	P	P	16 38 18.7	-0.3
	comp=Z,0.3nm,0.4s,baz=123,slow=5.3,SNR=2.2						
KURK	Kurchatov	61.19	329	P	P	16 38 24.3	-0.3

IDC 28 16:45:08.9±3.1**, 33°.41S**×**178°.69W, h0**km**, mb3.5**/2**, mb1 3.9**/3**, mb1mx3.7**/30**, mbtmp3.7**/3**, ML3.6**/1**, Error ellipse: s-maj=73.0km s-min=46.0km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.92	214	Pn	Pn	16 46 36.4	-1.4
	1.6nm,0.3s,baz=260,slow=5.0,SNR=16						
URZ				Sn	Sn	16 47 41.5	-4.8
	1.6nm,0.3s,baz=161,slow=20,SNR=1.9						
ASAR	Alice Springs	42.45	271	P	P	16 53 05.8	0.0
	0.5nm,0.7s,baz=106,slow=7.5,SNR=7.3						
WRA	Warramunga Arr	43.72	276	P	P	16 53 16.2	+0.1
	0.3nm,0.3s,baz=114,slow=8.2,SNR=10						
FINES	FINESS Array B	147.74	338	PKPbc	PKPbc	17 04 54.2	-0.7
	2.6nm,0.8s,baz=62,slow=3.3,SNR=4.9						

IDC 28 16:48:12.3±1.1**, 31°.29N**×**140°.33E, h0**km**, mb3.3**/7**, mb1 3.6**/8**, mb1mx3.4**/36**, mbtmp3.3**/8**, ML2.1**/1**, MS3.1**/1**, Ms1 3.2**/1**, ms1mx2.6**/36**, Error ellipse: s-maj=31.6km s-min=20.9km az=94.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.89	346	Pn	Pn	16 48 45.2	-0.5
	7.4nm,0.3s,baz=39,slow=23,SNR=1.6						
MJAR	Matsushiro Arr	5.53	342	Pn	Pn	16 49 37.7	+1.8
	0.1nm,0.3s,baz=169,slow=12,SNR=2.9						
H11N2	WAKE ISLAND Hy	26.52	109	T	T	17 21 49.4	
	baz=302,slow=75,SNR=57						
H11N1	WAKE ISLAND Hy	26.53	109	T	T	17 21 49.2	
	baz=302,slow=75,SNR=68						
H11N3	WAKE ISLAND Hy	26.54	109	T	T	17 21 50.8	
	baz=302,slow=75,SNR=53						
H11S3	WAKE ISLAND Hy	27.01	112	T	T	17 22 25.4	
	baz=304,slow=76,SNR=1379						
H11S1	WAKE ISLAND Hy	27.01	112	T	T	17 22 25.0	
	baz=304,slow=76,SNR=918						
H11S2	WAKE ISLAND Hy	27.03	112	T	T	17 22 25.8	
	baz=304,slow=76,SNR=1029						
SONM	Songino Array	30.64	312	P	P	16 54 27.9	-0.4
	0.3nm,0.7s,baz=99,slow=8.9,SNR=2.2						
CMAR	Chiang Mai Arr	39.44	261	P	P	16 55 45.0	+0.6
	0.8nm,0.8s,baz=48,slow=6.9,SNR=11						
MKAR	Makanchi Array	46.62	307	P	P	16 56 40.7	-1.5
	0.2nm,0.6s,baz=80,slow=10,SNR=2.5						
WRA	Warramunga Arr	51.26	187	P	P	16 57 17.8	-0.2
	0.2nm,0.5s,baz=2.1,slow=7.8,SNR=2.4						
ILAR	Eielson Array	54.87	30	P	P	16 57 44.0	-0.1
	0.4nm,1.0s,baz=263,slow=5.4,SNR=2.4						
ILAR				LR	LR	17 20 36.2	
	comp=Z,20nm,21.7s,baz=191,slow=35						
ASAR	Alice Springs	54.98	187	P	P	16 57 45.2	-0.2

	0.4nm,0.9s,baz=7.1,slow=9.0,SNR=1.9						
YKA	Yellowknife Ar	69.25	29	P	P	16 59 21.0	+0.3
	0.4nm,0.9s,baz=283,slow=5.6,SNR=2.5						
H03N2	Juan Fernandez	146.90	104	T	T	19 52 18.7	
	baz=281,slow=75,SNR=286						
H03N3	Juan Fernandez	146.91	104	T	T	19 52 19.9	
	baz=281,slow=75,SNR=259						
H03N1	Juan Fernandez	146.91	104	T	T	19 52 19.8	
	baz=281,slow=75,SNR=260						

IDC 28 16:48:13.6±3.4**,33°.71S×178°.67W,h0^{km},mb3.3**/2**, mb1 3.6**/3**,mb1mx3.5**/33**,mbtmp3.5**/3**,ML3.4**/1**,Error ellipse: s-maj=80.4km s-min=37.5km az=117.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.68	216	Pn	Pn	16 49 39.9	+0.7
	1.1nm,0.3s,baz=270,slow=2.9,SNR=11						
URZ				Sn	Sn	16 50 44.7	-0.4
	3.0nm,0.3s,baz=336,slow=3.9,SNR=8.9						
ASAR	Alice Springs	42.47	271	P	P	16 56 10.4	-0.2
	0.3nm,0.7s,baz=110,slow=7.3,SNR=5.2						
WRA	Warramunga Arr	43.76	276	P	P	16 56 20.9	-0.2
	0.5nm,0.8s,baz=119,slow=7.4,SNR=2.3						
FINES	FINESS Array B	148.02	338	PKPbc	PKPbc	17 07 59.4	-0.8
	2.3nm,0.9s,baz=90,slow=1.9,SNR=3.3						

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*IDC **28** 16:56:45.9±1.6,8°.61N×121°.44E,h0^{km},mb3.2/5, mb1 3.4/5,mb1mx3.1/66,mbtmp3.2/5,MS3.2/5,Ms1 3.3/5, ms1mx2.9/29,Error ellipse: s-maj=102.4km s-min=23.0km az=58.0*

*MAN **28** 16:56:47.2,8°.58N×121°.44E,h32^{km},MS3.9*

ISC 28 16:56:49.8±0.9**,8°.59N**±0°.04×**121°.46E**±0°.06**,h35^{km},n20, σ1^{s}69**/26**,mb3.3**/5**,MS3.1**/4**,1C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNOP	Candoni, Negro	1.69	43	eP	Pn	16 57 14.0	-2.9
CNOP				eS	Sn	16 57 34.2	-3.1
ZCP	Zamboanga City	1.76	160	⇓iP	Pn	16 57 16.7	-1.2
ZCP				i S	Sn	16 57 37.1	-1.9
PAGZ	Pagadian	2.04	111	eP	Pn	16 57 19.8	-1.9
PAGZ				eS	Sn	16 57 44.0	-2.0
CUYO	Cuyo Island	2.28	349	eP	Pn	16 57 24.3	-0.8
CUYO				eS	Sn	16 57 50.4	-1.6
GUIM	Jordan	2.31	29	eP	Pn	16 57 23.6	-1.8
LLP	Lapu-Lapu	3.01	55	⇓eP	Pn	16 57 34.9	-0.1
LLP				i S	Sn	16 58 09.7	-0.2
CGP	Cagayan de Oro	3.20	92	⇑eP	Pn	16 57 37.7	+0.1
CGP				eS	Sn	16 58 14.7	+0.1
BUSP	Coron	3.61	340	eP	Pn	16 57 41.8	-1.4
BUSP				eS	Sn	16 58 21.4	-3.2
SKMP	Bagumbayan, Su	3.69	124	eP	Pn	16 57 43.2	-1.1
SKMP				eS	Sn	16 58 24.0	-2.6
MSLP	Maasin	3.69	65	eP	Pn	16 57 44.5	+0.1
MSLP				eS	Sn	16 58 27.9	+1.3
SJMP	San Jose	3.86	355	eP	Pn	16 57 46.6	-0.1
SJMP				eS	Sn	16 58 31.0	+0.2
DAV	Davao City (W)	4.35	110	LR	LR	16 59 52.8	
	comp=Z,247nm,18.4s,baz=292,slow=43						
LEM	Lembang	20.62	222	LR	LR	17 10 33.4	
	comp=Z,115nm,18.1s,baz=43,slow=40						
CMAR	Chiang Mai Arr	23.96	296	P	P	17 02 01.7	+0.6
	0.7nm,1.0s,baz=138,slow=7.3,SNR=2.8						
CMAR				LR	LR	17 11 06.9	
	comp=Z,49nm,20.0s,baz=163,slow=36						
KSRS	Korea Array	29.32	11	LR	LR	17 15 08.1	
	comp=Z,28nm,18.8s,baz=145,slow=38						
WRA	Warramunga Arr	31.06	156	P	P	17 03 05.9	+1.1
	0.4nm,0.8s,baz=336,slow=9.8,SNR=2.4						
MJAR	Matsushiro Arr	31.72	26	LR	LR	17 14 01.8	
	comp=Z,69nm,20.7s,baz=320,slow=33						
ASAR	Alice Springs	34.29	159	P	P	17 03 34.7	+1.7
	0.3nm,0.8s,baz=347,slow=7.6,SNR=1.6						
MKAR	Makanchi Array	50.61	326	P	P	17 05 46.3	+1.0
	0.2nm,0.6s,baz=125,slow=8.7,SNR=4.3						
KURBB	Kurchatov Arra	54.85	328	P	P	17 06 17.9	+1.3
	0.2nm,0.6s,baz=124,slow=6.4,SNR=1.0						

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*IDC **28** 17:04:14.1±1.4,33°.24N×75°.21E,h0^{km},mb3.7/9, mb1 3.8/12,mb1mx3.5/80,mbtmp3.7/12,ML3.2/3,Error ellipse: s-maj=39.7km s-min=17.2km az=59.0*

*NDI **28** 17:04:18.0±2.5,33°.21N×75°.33E,h5^{km},ML3.5*

*NNC **28** 17:04:19.9±5.1,33°.53N×74°.54E,h0^{km},mb4.1,Error ellipse: s-maj=69.5km s-min=39.8km az=88.0*

ISC 28 17:04:16.0±0.8**,33°.32N**±0°.05×**75°.4E**±0°.1**,h10^{km},n19, σ1^{s}86**/30**,mb3.5**/8**,3C-3D,Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	0.92	164	eP	Pb	17 04 33.7	-0.3
THN				eP	Pb	17 04 33.7	-0.3
THN				eS	Sb	17 04 46.0	-0.3
THN				eS	Sb	17 04 46.0	-0.3
DHRM	DHARAMSHALA	1.30	145	eP	Pb	17 04 40.7	0.0
DHRM				eS	Sn	17 04 59.2	+1.2
DHRM				IAML		17 05 03.1	
	comp=N,1µm,0.2s						
DHRM				IAML		17 05 03.3	
	comp=E,684nm,0.2s						
BHK	Bhakra	2.08	156	eP	Pb	17 04 53.2	-0.6
BHK				eS	Sg	17 05 22.6	-0.3
SMLA	Simla	2.65	145	eP	Pb	17 05 01.0	-2.4
SMLA				eS	Sb	17 05 35.0	-1.0
SMLA				IAML		17 05 41.4	
	comp=E,220nm,0.2s						
SMLA				IAML		17 05 42.0	
	comp=N,350nm,0.3s						
AAK	Ala-Archa	9.33	356	Pn	Pn	17 06 33.0	+2.4
	comp=N,0.4nm,0.3s,baz=154,slow=8.7,SNR=8.6						
AAK				Sn	Sn	17 08 14.1	-1.6
	comp=N,0.1nm,0.3s,baz=270,slow=19,SNR=1.5						
AAK	Ala-Archa	9.33	356	⇓P	Pn	17 06 33.4	+2.7
	comp=N,2.1nm,0.6s						
AAK				⇑S	Sn	17 08 18.6	+2.9
	comp=N,2.0nm,0.9s						
TKM2	Tokmak 2	9.59	1	⇑P	Pn	17 06 36.0	+1.8
	comp=N,2.1nm,0.6s						
TKM2				⇓S	Sn	17 08 23.7	+1.7
	comp=N,1.9nm,0.8s						
KK31	Karatay Array	10.50	340	⇑P	Pn	17 06 46.1	-0.4
	comp=N,1.2nm,0.3s,baz=163,slow=12,SNR=30						
KK31				⇓S	Sn	17 08 40.2	-3.9
	comp=N,1.6nm,0.5s,baz=170,slow=24,SNR=7.1						
MKAR	Makanchi Array	14.44	19	Pn	Pn	17 07 42.5	+2.1
	comp=N,0.1nm,0.3s,baz=192,slow=13,SNR=6.0						
MKAR				Sn	Sn	17 10 15.3	-5.2
	comp=N,0.1nm,0.3s,baz=203,slow=27,SNR=3.7						
KURBB	Kurchatov Arra	17.44	7	P	Pn	17 08 18.4	-0.9
	comp=N,0.0nm,0.3s,baz=194,slow=11,SNR=8.9						
BVAR	Borovoye Array	20.02	351	P	P	17 08 49.3	+0.5
	comp=N,1.4nm,0.3s,baz=134,slow=10,SNR=11						
AKTO	Aktyubinsk	21.36	328	P	P	17 09 02.6	-0.7
	comp=N,3.2nm,0.5s,baz=131,slow=11,SNR=12						
ZALV	Zalesovo Beam	21.68	15	P	P	17 09 06.4	-0.3
	comp=N,1.2nm,0.6s,baz=209,slow=10,SNR=5.6						
CMAR	Chiang Mai Arr	25.75	119	P	P	17 09 48.0	+1.1
	comp=N,0.4nm,0.5s,baz=310,slow=9.9,SNR=8.1						
ARU	Arti	25.87	338	P	P	17 09 47.7	+0.1
	comp=N,0.7nm,0.4s,baz=121,slow=15,SNR=4.2						
SONM	Songino Array	27.42	49	P	P	17 10 03.6	+1.8
	comp=N,0.7nm,0.6s,baz=241,slow=10.0,SNR=9.3						
ARCES	ARCESS Array B	45.45	338	P	P	17 12 34.7	0.0
	comp=N,3.3nm,0.8s,baz=99,slow=7.5,SNR=10						
WRA	Warramunga Arr	77.22	124	P	P	17 16 11.3	+0.9
	comp=N,0.3nm,0.8s,baz=320,slow=5.5,SNR=1.6						
ASAR	Alice Springs	79.46	127	P	P	17 16 21.9	-0.9
	comp=N,0.5nm,1.1s,baz=317,slow=5.2,SNR=1.6						

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*IDC **28** 17:06:42.6±1.1,43°.74N×105°.25W,h0^{km},mb4.2/8, mb1 4.1/14,mb1mx3.8/71,mbtmp4.0/14,ML3.7/6,Error ellipse: s-maj=28.1km s-min=7.4km az=151.0*

*NEIC **28** 17:06:44.2±1.3,44°.01N±0°.05×105°.23W±0°.07,h0^{km}±2^{km}, ML3.7/72,Error ellipse: s-maj=9.2km s-min=7.8km az=237.0*

*ANF **28** 17:06:45.4±0.9,43°.95N×105°.23W,h15^{km}±8^{km},ML4.0/11, Error ellipse: s-maj=5.2km s-min=3.6km az=75.0*

ISC 28 17:06:43.3±0.5**,43°.93N**±0°.04×**105°.23W**±0°.04**,h0^{km},n148, σ1^{s}36**/150**,mb4.2**/8**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.88	77	P	Pb	17 07 01.7	+0.1
	baz=259						
RSSD				S	Sb	17 07 14.5	+0.4
	baz=259						
RSSD	Black Hills	0.88	77		Pb	17 07 01.8	+0.1
K22A	Casper	1.59	217	P	Pn	17 07 13.2	+0.3
	baz=36,SNR=1000						
K22A				S	Sn	17 07 34.3	+0.1
	baz=36						
K22A	Casper	1.59	217		Pn	17 07 13.1	+0.3
K22A				IAML		17 07 39.1	
	comp=E,1µm,0.4s						
K22A				IAML		17 07 40.2	
	comp=N,2µm,0.4s						
PHWY	Pilot Hill	2.63	184		Pn	17 07 28.6	+1.4
PHWY				IAML		17 08 10.4	
	comp=N,230nm,0.4s						
RWWY	Rawlins	2.67	214	Pn	Pn	17 07 30.2	+2.4
RWWY				IAML		17 08 09.7	
	comp=N,351nm,0.8s						
RWWY				IAML		17 08 09.8	
	comp=N,399nm,0.6s						
LAO	LASA Array	2.85	346	P	Pn	17 07 30.6	+0.5
	baz=165						
LAO				S	Sn	17 08 05.3	+0.1
	baz=165						
LAO	LASA Array	2.85	346		Pn	17 07 29.5	-0.6
LAO				IAML		17 08 16.0	
	comp=N,472nm,0.9s						
N23A	Red Feather La	3.08	190	P	Pn	17 07 35.7	+2.3
	baz=9.5,SNR=48						
RLMT	Red Lodge	3.13	294	P	Pn	17 07 34.6	+0.6
	baz=111						
RLMT	Red Lodge	3.13	294		Pn	17 07 34.2	+0.2
RLMT				IAML		17 08 29.3	
	comp=N,157nm,0.5s						
RLMT				IAML		17 08 29.8	
	comp=N,227nm,0.4s						
PD31	Pinedale Array	3.36	251		Pn	17 07 38.2	+0.9
PDAR	Pinedale Array	3.36	251	Pn	Pn	17 07 38.6	+1.3
	comp=N,5.1nm,0.3s,baz=69,slow=17,SNR=49						
PDAR				Lg	Lg	17 08 24.2	
	comp=N,45nm,0.3s,baz=65,slow=36,SNR=8.7						
PDAR	Pinedale Array	3.36	251	Pn	Pn	17 07 37.8	+0.5
BW06	Boulder Array	3.36	251	P	Pn	17 07 38.4	+1.1
	baz=68						
BW06	Boulder Array	3.36	251	Pn	Pn	17 07 38.6	+1.3
BW06				IAML		17 08 28.9	
	comp=N,156nm,0.6s						
BW06				IAML		17 08 30.5	
	comp=N,181nm,0.7s						
YNE	Yellowstone No	3.59	289		Pn	17 07 40.5	0.0
YMP	Mirror Lake Pl	3.63	285		Pn	17 07 41.3	+0.3
GCMT	Greycliff	3.67	302		Pn	17 07 42.1	+0.7
LKWY	Lake	3.77	282		Pn	17 07 43.9	+1.0
LKWY				IAML		17 08 10.6	
	comp=N,118nm,0.6s						
OGNE	Ogallala	3.80	140	Pn	Pn	17 07 45.0	+1.8
OGNE				IAML		17 09 04.4	
	comp=N,196nm,0.6s						
H17A	Grant Village	3.88	279	P	Pn	17 07 46.0	+1.6
	baz=95						
H17A	Grant Village	3.88	279		Pn	17 07 45.7	+1.3
LOHW	Long Hollow	3.91	267		Pn	17 07 46.0	+1.2
FLWY	Flagg Ranch	3.95	274	Pn	Pn	17 07 46.0	+0.7
FLWY				IAML		17 08 55.1	
	comp=N,136nm,1.7s						
FLWY				IAML		17 08 55.5	
	comp=N,90nm,0.9s						
YNR	Norris Junctio	3.99	283		Pn	17 07 45.0	-0.9
MOOW	Moose Ponds	4.00	269		Pn	17 07 46.7	+0.7
YPP	Pitchstone Pla	4.03	277		Pn	17 07 47.7	+1.1
SNOW	Snow King Moun	4.03	265		Pn	17 07 47.5	+0.9
SNOW				IAML		17 08 52.9	
	comp=N,84nm,0.6s						
SNOW				IAML		17 09 02.1	
	comp=N,78nm,1.1s						
REDW	Red Top Meadow	4.12	264		Pn	17 07 48.5	+0.8
REDW				IAML		17 08 56.7	
	comp=N,111nm,0.8s						
REDW				IAML		17 09 00.5	
	comp=N,90nm,0.6s						
YHH	Holmes Hill	4.12	284	Pn	Pn	17 07 48.0	+0.1
IMW	Indian Meadow	4.13	272		Pn	17 07 48.2	+0.3
IMW				IAML		17 08 20.6	
	comp=N,108nm,0.5s						
IMW				IAML		17 08 57.0	
	comp=N,80nm,0.6s						
ISCO	Idaho Springs	4.13	184	P	Pn	17 07 50.3	+2.3
	baz=3.8,SNR=15						
ISCO	Idaho Springs	4.13	184	Pn	Pn	17 07 50.4	+2.4
YMR	Madison River	4.18	282	Pn	Pn	17 07 49.8	+1.2
YHB	Horse Butte	4.36	283	Pn	Pn	17 07 49.2	-1.8
YHL	Hebgen Lake	4.37	284		Pn	17 07 51.2	0.0
O20A	White River Ci	4.40	212	P	Pn	17 07 53.6	+2.1
	baz=29						
O20A	White River Ci	4.40	212	Pn	Pn	17 07 53.3	+1.8
O20A				IAML		17 09 08.1	
	comp=N,99nm,1.1s						
AHID	Auburn Hatcher	4.44	257		Pn	17 07 53.9	+1.9
AHID				IAML		17 09 08.6	
	comp=N,88nm,0.4s						
AHID				IAML		17 09 10.7	
	comp=E,62nm,0.7s						
QLMT	Earthquake Lak	4.54	284		Pn	17 07 54.6	+1.2
SUSD	Miller	4.54	81		Pn	17 07 54.4	+1.1
ECR	Eagle Creek	4.55	261		Pn	17 07 56.0	+2.4
DGMT	Dagmar	4.60	9		Pn	17 07 55.4	+1.3
RDMU	Red Mountain	4.65	225		Pn	17 07 55.7	+0.7
BOZ	Bozeman (W)	4.86	292	P	Pn	17 07 57.5	-0.2
	baz=108						
BOZ				Sb	Sb	17 09 11.2	+2.9
	baz=108						
BOZ	Bozeman (W)	4.86	292		Pn	17 07 57.5	-0.2
BOZ				IAML		17 09 21.9	
	comp=E,40nm,0.6s						
K31A	O'Neill	4.90	103		Pn	17 07 59.6	+1.4
SMCO	Snowmass	4.92	196	Pn	Pn	17 08 02.1	+3.2
SMCO				IAML		17 09 29.1	
	comp=E,31nm,1.0s						
SMCO				IAML		17 09 37.0	
	comp=E,40nm,0.6s						
EGMT	Eagleton	5.17	324	P	Pn	17 08 01.8	-0.2
	baz=141						
EGMT				S	Sn	17 09 01.1	-1.3
	baz=141						
EGMT	Eagleton	5.17	324	Pn	Pn	17 08 01.8	-0.2
HWUT	Hardware Ranch	5.21	246		Pn	17 08 03.8	+1.1
HWUT				IAML		17 09 28.7	
	comp=E,59nm,0.7s						
HWUT				IAML		17 09 34.9	
	comp=E,68nm,0.8s						
KSCO	Kaye Shedlock'	5.28	157		Pn	17 08 05.5	+1.9
TCUT	Toone Canyon	5.36	241		Pn	17 08 05.8	+1.1
HRY	Holter Researc	5.42	303		Pn	17 08 05.6	+0.1
DLMT	Dillon	5.45	288		Pn	17 08 06.6	+0.7
MCMT	McKenzie Canyo	5.54	282		Pn	17 08 08.7	+1.5
MDND	Maddock	5.55	43	P	Pn	17 08 07.9	+0.7
	baz=227						
MDND	Maddock	5.55	43		Pn	17 08 08.3	+1.1
JLU	Jordanelle	5.69	236		Pn	17 08 10.5	+1.3
BGNE	Belgrade	5.79	113		Pn	17 08 11.7	+1.2
CTU	Camp Tracy	5.81	238		Pn	17 08 11.7	+0.8
BCYI	Bear Canyon	5.90	277	Pn	Pn	17 08 13.2	+1.0
SPUT	South Promonto	5.93	246		Pn	17 08 13.5	+0.9
HVU	Hansel Valley	5.95	251		Pn	17 08 13.3	+0.5
PV07	Paradox Valley	6.06	206	Pn	Pn	17 08 16.6	+2.3
P17A	Butcher Ranch,	6.07	225		Pn	17 08 16.4	+2.0
PV15	Paradox Valley	6.09	205		Pn	17 08 16.0	+1.2
MPU	Maple Canyon	6.17	233		Pn	17 08 16.4	+0.6
SDCO	Great Sand Dun	6.18	182	P	Pn	17 08 17.4	+1.4
	baz=1.8,SNR=6.7						
SDCO	Great Sand Dun	6.18	182	Pn	Pn	17 08 18.0	+2.0
PV04	Paradox Valley	6.18	208		Pn	17 08 17.8	+1.8
PV12	Saucer Basin,	6.22	207		Pn	17 08 17.9	+1.3
ECSD	EROS Data Cent	6.24	89	P	Pn	17 08 17.6	+1.1
	baz=275						
ECSD	EROS Data Cent	6.24	89	Pn	Pn	17 08 18.1	+1.6
SRU	San Rafael Swe	6.24	221		Pn	17 08 17.8	+1.1
PV14	Lion Creek, Pa	6.24	209		Pn	17 08 18.6	+1.7
PV10	Paradox Valley	6.24	209		Pn	17 08 19.8	+2.8
PV20	West Nyswonger	6.25	208		Pn	17 08 18.8	+1.8
PV11	David Mesa, Pa	6.26	207		Pn	17 08 19.1	+2.1
PV16	Nyswonger Mesa	6.26	208		Pn	17 08 19.3	+2.1
PV19	Morning Glory	6.29	208		Pn	17 08 18.6	+1.1
PV03	Paradox Valley	6.29	207		Pn	17 08 19.5	+2.0
PV02	Paradox Valley	6.30	206		Pn	17 08 20.2	+2.6
PV17	East Wray Mesa	6.30	208		Pn	17 08 19.2	+1.6
PV01	Paradox Valley	6.31	205		Pn	17 08 20.0	+2.2
PV18	Skein Mesa, Pa	6.32	207	Pn	Pn	17 08 19.4	+1.6
PV13	Radium Mtn., P	6.37	206		Pn	17 08 20.6	+2.1
TMUT	Trail Mountain	6.44	226		Pn	17 08 21.4	+1.8
NLU	North Lily Min	6.46	234		Pg	17 08 44.8	-2.3
BGU	Big Grassy Mou	6.50	245	Pn	Pn	17 08 20.8	+0.4
PV05	Paradox Valley	6.53	208		Pn	17 08 21.4	+0.5
CBKS	Cedar Bluff	6.57	139	P	Pn	17 08 22.5	+1.4
	baz=323						
CBKS	Cedar Bluff	6.57	139	Pn	Pn	17 08 22.2	+1.1
F33A	5 Mile Ranch,	6.63	70		Pn	17 08 21.5	-0.4
Q16A	Castle Valley	6.71	224		Pn	17 08 24.8	+1.6
DUG	Dugway, Tooele	6.76	239	P	Pn	17 08 25.0	+1.1
	baz=54						
DUG	Dugway, Tooele	6.76	239		Pn	17 08 24.3	+0.3
L34A	Svendsen Farm,	6.79	104	Pb	Pb	17 08 47.8	+5.7
MSO	Missoula	6.79	298	P	Pn	17 08 24.4	+0.2
	baz=112						
MSO				S	Sn	17 09 41.3	-0.9
	baz=112						
MSO	Missoula	6.79	298	Pn	Pn	17 08 24.6	+0.4
T25A	Trinidad	6.81	174	P	Pn	17 08 26.1	+1.5
	baz=355						
MVCO	Mesa Verde	7.15	201	Pn	Pn	17 08 30.8	+1.4
JTMT	Jette	7.39	304		Pn	17 08 32.8	+0.4
MSU	Marysvale	7.53	226	Pn	Pn	17 08 35.8	+1.4
MVU	Marysvale	7.55	227		Pn	17 08 36.1	+1.2
TCRU	Three Creeks R	7.60	228	Pn	Pn	17 08 36.7	+1.2
MFID	Camas Ranch	7.70	270		Pg	17 09 11.1	+0.3
AGMN	Agassiz Nation	7.84	53	P	Pn	17 08 37.9	-0.6
	baz=240						
AGMN	Agassiz Nation	7.84	53	Pn	Pn	17 08 38.9	+0.3
MTPU	Mount Pierson	7.89	224		Pn	17 08 40.5	+0.9
WALA	Waterton Lakes	7.89	314	Pn	Pn	17 08 38.9	-0.4
KSU1	Kansas State U	8.06	124		Pg	17 09 12.1	-5.6
ELK	Elko	8.07	250	Pn	Pn	17 08 43.6	+1.7
	comp=E,0.2nm,0.3s,baz=55,slow=12,SNR=4.9						
ELK				Lg	Lg	17 10 52.8	
	comp=E,0.2nm,0.3s,baz=190,slow=18,SNR=2.3						
ELK	Elko	8.07	250		Pn	17 08 43.4	+1.5
PSUT	Pine Spring	8.44	233	Pn	Pn	17 08 50.0	+3.0
F36A	Milaca	8.53	73	Pn	Pn	17 08 47.4	-0.6
I37A	Lemond, Waseca	8.53	85	Sg	Sg	17 11 20.2	+3.0
KAN08	Anthony NE Sta	8.67	138	Pn	Pn	17 08 51.6	+1.6
F10A	Beach Ranch, E	8.75	288	Pn	Pn	17 08 52.3	+1.1
CCUT	Cedar City	8.87	227	Pn	Pn	17 08 55.6	+2.8
I10CA	LAC DU BONNET	8.88	42	i		17 59 30.0	
	baz=220,slow=323,SNR=0.6						
KAN14	Manchester OK	8.89	139		Pg	17 09 32.0	-1.6
ULM	Lac du Bonnet	8.98	42	Pn	Pn	17 08 53.7	-0.5
	comp=E,5.6nm,0.3s,baz=226,slow=12,SNR=49						
ULM				Pg	Pg	17 09 20.2	-15
	comp=E,1.4nm,0.3s,baz=235,slow=16,SNR=3.3						
ULM				Lg	Lg	17 11 19.5	
	comp=E,1.4nm,0.3s,baz=315,slow=19,SNR=2.1						
KNB	Kanab	9.00	223	Pn	Pn	17 08 56.5	+1.8
B35A	Bob, Littlefor	9.13	57	Pn	Pn	17 08 55.9	-0.4
U15A	North Rim	9.23	218	Pn	Pn	17 08 58.7	+0.7
NEW	Newport	9.33	302	Pn	Pn	17 08 59.0	0.0
	comp=E,0.8nm,0.3s,baz=89,slow=11,SNR=5.5						
NEW				Lg	Lg	17 11 29.3	
	comp=E,0.8nm,0.3s,baz=258,slow=19,SNR=3.0						
NEW	Newport	9.33	302	P	Pn	17 08 58.5	-0.5
	baz=113						
NEW	Newport	9.33	302		Pn	17 08 59.4	+0.4
WUAZ	Wupatki	9.64	211	P	Pn	17 09 04.0	+0.6
	baz=27						
WUAZ	Wupatki	9.64	211	Pn	Pn	17 09 04.1	+0.7
C09A	Chrisman Ranch	9.89	298	Pn	Pn	17 09 06.2	-0.4
FFC	Flin Flon	11.01	10		Pn	17 09 20.8	-1.2
NVAR	Mina Array Bea	11.28	245	Pn	Pn	17 09 27.6	+1.8
	comp=E,0.1nm,0.3s,baz=55,slow=11,SNR=7.5						
HDIL	Hopedale	12.28	100		Pn	17 09 38.4	-1.0
P46A	Rosedale	14.12	102	Pn	Pn	17 10 02.7	-1.8
TXAR	Lajitas Array	14.62	175	Pg	P	17 11 10.8	+53
	baz=5.3,slow=14,SNR=1.6						
TXAR				Lg	Lg	17 14 19.2	
	comp=E,0.0nm,0.3s,baz=358,slow=27,SNR=1.6						
BLO	Bloomington	14.78	102	P	P	17 10 26.2	+6.4
YKA	Yellowknife Ar	19.39	347	Pn	P	17 11 09.4	-1.1
	comp=E,0.3nm,0.3s,baz=152,slow=13,SNR=12						
YKA				Lg	Lg	17 16 40.5	
	comp=E,0.0nm,0.3s,baz=152,slow=28,SNR=3.2						
FRB	Frobisher Bay	28.73	34	P	P	17 12 42.6	+0.7
	comp=E,0.8nm,0.2s,baz=337,slow=4.8,SNR=5.6						
ILAR	Eielson Array	31.13	327	P	P	17 13 04.5	+1.2
	comp=E,0.3nm,0.7s,baz=99,slow=7.5,SNR=4.3						
ILAR				PcP	PcP	17 15 57.6	-0.7
	comp=E,0.3nm,0.6s,baz=124,slow=2.4,SNR=4.2						
ARCES	ARCESS Array B	61.23	18	P	P	17 16 59.1	-0.4
	comp=E,7.0nm,0.9s,baz=334,slow=8.0,SNR=2.3						
FINES	FINESS Array B	67.85	23	P	P	17 17 42.6	-0.2
	comp=E,4.4nm,1.0s,baz=325,slow=3.9,SNR=3.8						
AKASG	Malin Array Be	77.78	28	P	P	17 18 41.7	-0.3
	comp=E,0.9nm,0.5s,baz=326,slow=5.1,SNR=5.7						
ZALV	Zalesovo Beam	82.12	354	P	P	17 19 05.1	-0.3
	comp=E,0.9nm,0.5s,baz=0.9,slow=6.1,SNR=4.2						
KURBB	Kurchatov Arra	85.78	358	P	P	17 19 24.1	-0.1
	comp=E,0.4nm,0.4s,baz=2.1,slow=4.9,SNR=12						
MKAR	Makanchi Array	89.42	355	P	P	17 19 41.8	0.0
	comp=E,1.2nm,0.7s,baz=7.8,slow=4.5,SNR=14						

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*IDC **28** 17:15:50.5±0.9,21°.52N×144°.37E,h0^{km},mb3.5/8, mb1 3.7/8,mb1mx3.5/46,mbtmp3.5/8,Error ellipse: s-maj=37.8km s-min=21.4km az=94.0*

ISC 28 17:16:04.3±0.9**,21°.5N**±0°.1×**144°.3E**±0°.2**,h114^{km},n16, σ1^{s}02**/11**,mb3.3**/9**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11N1	WAKE ISLAND Hy	21.24	91	T	T	17 42 35.1	
	baz=278,slow=75,SNR=9.5						
H11N2	WAKE ISLAND Hy	21.24	91	T	T	17 42 33.0	
	baz=278,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	21.25	91	T	T	17 42 35.6	
	baz=278,slow=75,SNR=9.3						
H11S3	WAKE ISLAND Hy	21.26	94	T	T	17 42 34.7	
	baz=281,slow=75,SNR=9.6						
H11S1	WAKE ISLAND Hy	21.27	94	T	T	17 42 37.8	
	baz=281,slow=75,SNR=9.9						
H11S2	WAKE ISLAND Hy	21.28	94	T	T	17 42 37.3	
	baz=281,slow=75,SNR=9.4						
KSRS	Korea Array	21.31	322	P	P	17 20 43.4	+1.6
	0.9nm,0.8s,baz=121,slow=11,SNR=3.2						
KLR	Kul'dur	29.43	343	P	P	17 21 55.9	-1.1
	0.7nm,0.6s,baz=155,slow=19,SNR=2.2						
SONM	Songino Array	40.16	320	P	P	17 23 29.1	-0.2
	0.3nm,0.6s,baz=121,slow=6.0,SNR=2.7						
WRA	Warramunga Arr	42.30	194	P	P	17 23 47.1	+0.2
	0.9nm,0.8s,baz=17,slow=8.7,SNR=6.4						
ASAR	Alice Springs	46.00	193	P	P	17 24 15.6	-0.8
	0.3nm,0.7s,baz=13,slow=6.8,SNR=5.6						
MKAR	Makanchi Array	55.59	313	P	P	17 25 27.5	-0.7
	0.4nm,0.9s,baz=97,slow=7.4,SNR=2.7						
MKAR				PcP	PcP	17 26 27.2	+0.7
	0.2nm,0.5s,baz=83,slow=5.7,SNR=1.7						
ILAR	Eielson Array	61.76	27	P	P	17 26 09.9	-0.6
	0.3nm,0.7s,baz=260,slow=5.4,SNR=2.9						
YKA	Yellowknife Ar	76.17	28	P	P	17 27 40.7	+1.2
	0.2nm,0.6s,baz=289,slow=4.8,SNR=1.8						
NVAR	Mina Array Bea	82.47	52	P	P	17 28 14.3	-0.4
	0.4nm,0.8s,baz=282,slow=4.3,SNR=2.1						
PLCA	Paso Flores	144.85	131	PKP	PKPdf	17 35 29.1	+1.0
	2.1nm,0.8s,baz=231,slow=7.1,SNR=5.0						

IDC 28 17:28:14.8±13.0**,0°.37N×92°.70E,h0^{km},mb3.3**/2**, mb1 3.4**/3**,mb1mx3.2**/34**,mbtmp3.3**/3**,Error ellipse: s-maj=266.9km s-min=113.5km az=152.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	18.99	18	P	P	17 32 37.9	-0.3
	baz=214,slow=11,SNR=4.6						
MKAR	Makanchi Array	47.12	350	P	P	17 36 48.9	+0.1
	0.3nm,0.7s,baz=169,slow=6.8,SNR=3.8						

SONM	Songino Array	48.75	12	P	P	17 37 01.3	-0.2
	0.3nm,0.6s,baz=192,slow=9.4,SNR=3.7						

*IDC **28** 17:39:20.2±1.1, 5°.99S×128°.52E, h325km±15km, mb2.6/3, mb1 2.9/8, mb1mx2.7/40, mbtmp3.5/8, Error ellipse: s-maj=22.5km s-min=12.3km az=108.0*

ISC 28 17:39:19.6±0.8, **6°.09S**±0°.06×**128°.7E**±0°.1, **h322**km, **n8**, σ**2s.20**/13, **mb2.9**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.79	27	P	Pn	17 40 49.0	+1.8
	0.5nm,0.3s,baz=17,slow=22,SNR=8.2						
SIJI				S	S	17 41 57.9	0.0
	1.1nm,0.3s,baz=237,slow=23,SNR=12						
BATI	Baumata	6.44	230	P	Pn	17 40 56.1	+1.3
	2.0nm,0.3s,baz=202,slow=20,SNR=2.1						
BATI				S	S	17 42 10.8	-1.0
	3.8nm,0.3s,baz=22,slow=22,SNR=6.5						
FITZ	Fitzroy Crossi	12.30	194	P	P	17 42 05.1	-0.8
	0.1nm,0.3s,baz=15,slow=16,SNR=1.2						
FITZ				S	S	17 44 25.9	+3.7
	0.1nm,0.3s,baz=74,slow=7.6,SNR=1.6						
WRA	Warramunga Arr	14.83	159	P	Pn	17 42 35.3	-0.1
	0.2nm,0.3s,baz=334,slow=13,SNR=14						
WRA				S	S	17 45 10.8	-4.1
	0.1nm,0.3s,baz=345,slow=26,SNR=1.6						
ASAR	Alice Springs	18.18	165	P	P	17 43 12.0	+1.9
	0.3nm,0.3s,baz=343,slow=11,SNR=32						
ASAR				S	S	17 46 19.9	-1.5
	0.1nm,0.3s,baz=346,slow=22,SNR=7.6						
CMAR	Chiang Mai Arr	38.15	310	P	P	17 46 07.5	-1.6
	0.4nm,0.6s,baz=138,slow=6.1,SNR=5.0						
MKAR	Makanchi Array	66.75	327	P	P	17 49 35.5	-1.5
	0.1nm,0.5s,baz=127,slow=7.6,SNR=2.0						
KURBB	Kurchatov Arra	71.06	329	P	P	17 50 03.5	+0.4
	0.1nm,0.4s,baz=110,slow=9.9,SNR=2.0						

IDC 28 17:53:10.8±1.6, **34°.27N**×**11°.15E**, **h0**km, **mb3.3**/4, **mb1 3.3**/5, **mb1mx3.1**/61, **mbtmp3.3**/5, **ML2.9**/1, **MS2.7**/1, **Ms1 2.7**/1, **ms1mx2.5**/21, **Error ellipse: s-maj=28.4km s-min=28.2km az=145.0**, **Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEST	Kesra	2.08	315	Pn	Pn	17 53 46.7	-0.3
	3.9nm,0.3s,baz=90,slow=16,SNR=30						
KEST				Sn	Sb	17 54 14.9	-0.9
	8.1nm,0.3s,baz=306,slow=23,SNR=6.7						
KEST				LR	LR	17 54 15.8	
	comp=Z,170nm,18.0s,baz=7.5,slow=31						
AKASG	Malin Array Be	21.05	33	P	P	17 57 57.3	+1.1
	0.3nm,0.4s,baz=228,slow=8.5,SNR=3.2						
TORD	Torodi Ar. Bea	22.72	204	P	P	17 58 14.5	+0.2
	1.7nm,1.0s,baz=36,slow=9.6,SNR=2.5						
KURBB	Kurchatov Arra	50.58	50	P	P	18 02 10.8	-0.2
	0.2nm,0.8s,baz=270,slow=6.9,SNR=2.3						
ZALV	Zalesovo Beam	53.86	45	P	P	18 02 34.7	-0.7
	0.5nm,0.5s,baz=310,slow=9.2,SNR=2.3						

IDC 28 17:54:25.2±7.3, **54°.87S**×**151°.48W**, **h0**km, **mb3.5**/1, **mb1 3.7**/1, **mb1mx3.5**/24, **mbtmp3.5**/1, **Error ellipse: s-maj=655.8km s-min=99.5km az=165.0**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	Juan Fernandez	53.38	98	T	T	19 00 39.1	
	baz=219,slow=74,SNR=7.3						
H03S1	Juan Fernandez	53.38	98	T	T	19 00 40.2	
	baz=219,slow=74,SNR=6.3						
H03S3	Juan Fernandez	53.39	98	T	T	19 00 37.3	
	baz=219,slow=74,SNR=8.1						
H03N3	Juan Fernandez	53.65	98	T	T	19 00 52.2	
	baz=222,slow=72,SNR=27						
H03N2	Juan Fernandez	53.66	98	T	T	19 00 56.0	
	baz=222,slow=72,SNR=23						
H03N1	Juan Fernandez	53.67	98	T	T	19 00 55.5	
	baz=222,slow=72,SNR=39						
ASAR	Alice Springs	62.21	268	P	P	18 04 48.5	-0.1
	0.3nm,0.5s,baz=138,slow=6.7,SNR=7.6						
H01W1	Cape Leeuwin H	64.63	245	T	T	19 15 09.3	
	baz=142,slow=76,SNR=5.9						
H01W2	Cape Leeuwin H	64.64	245	T	T	19 15 14.6	
	baz=142,slow=76,SNR=4.8						
H01W3	Cape Leeuwin H	64.65	245	T	T	19 15 10.0	
	baz=142,slow=76,SNR=4.9						
MKAR	Makanchi Array	145.86	279	PKPbc	PKPdf	18 14 05.2	+0.3
	1.5nm,0.8s,baz=118,slow=4.8,SNR=16						
ZALV	Zalesovo Beam	147.97	292	PKPbc	PKPbc	18 14 09.8	-1.4
	0.5nm,0.5s,baz=116,slow=3.4,SNR=2.3						

*IDC **28** 17:55:52.1±1.6, 12°.78N×88°.36W, h0km, mb3.9/9, mb1 4.2/10, mb1mx3.9/52, mbtmp3.9/10, ML3.7/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/41, Error ellipse: s-maj=43.7km s-min=35.8km az=58.0*

*UCR **28** 17:56:04.7±1.0, 13°.03N×89°.05W, h53km±8km, ML4.4, MW4.6, mb4.3(NEIC)*

*NEIC **28** 17:56:04.8±2.4, 13°.01N±0°.09×89°.07W±0°.08, h71km±4km, mb4.3/20, Md4.4(SNET), Error ellipse: s-maj=15.5km s-min=7.3km az=222.0*

*SNET **28** 17:56:04.5±1.0, 13°.02N×89°.05W, h53km±8km, ML4.4, MW4.8*

*INET **28** 17:56:05.0, 13°.00N×89°.02W, h27km, MW3.8*

*GCG **28** 17:56:05.9±0.5, 13°.04N×89°.05W, h50km, MD4.3*

ISC 28 17:56:03.9±0.9, **13°.05N**±0°.07×**89°.02W**±0°.04, **h63**km±6km, **n124**, σ**1s.21**/167, **mb4.3**/16, **2C-27D**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.53	326	⇓*i*P	Pn	17 56 16.5	+0.1
LALI	Alcalda de L	0.53	326	⇓*i*P	Pn	17 56 16.5	+0.1
LFRS	El Faro	0.57	355	*i* P	Pn	17 56 17.2	+0.1
LFRS	El Faro	0.57	355	*i* P	Pn	17 56 17.2	+0.1
COEG	Centro de Oper	0.58	13	⇓*i*P	Pn	17 56 17.5	+0.4
COEG				*e*S	Sn	17 56 27.8	+1.1
COEG				IAML		17 56 31.8	
	comp=Z,20µm,0.3s						
COEG	Centro de Oper	0.58	13	⇓*i*P	Pn	17 56 17.5	+0.4
COEG				*e*S	Sn	17 56 27.8	+1.1
COEG				IAML		17 56 31.8	
	comp=Z,20µm,0.3s						
UESV	Universidad de	0.63	21	*e*P	Pn	17 56 18.1	+0.6
UESV				IAML		17 56 18.6	
	comp=Z,11µm,0.1s						
UESV				*e*S	Sn	17 56 28.8	+1.4
UESV	Universidad de	0.63	21	*e*P	Pn	17 56 18.1	+0.6
UESV				IAML		17 56 18.6	
	comp=Z,11µm,0.1s						
UESV				*e*S	Sn	17 56 28.8	+1.4
COEB	Comit de Eme	0.65	46	*e*P	Pn	17 56 18.4	+0.6
COEB				*e*S	Sn	17 56 29.2	+1.1
COEB				IAML		17 56 32.2	
	comp=Z,19µm,0.2s						
COEB	Comit de Eme	0.65	46	*e*P	Pn	17 56 18.4	+0.6
COEB				*e*S	Sn	17 56 29.2	+1.1
COEB				IAML		17 56 32.2	
	comp=Z,19µm,0.2s						
CIGS	Centro de Inve	0.67	347	⇓*i*P	Pn	17 56 18.4	+0.4
CIGS				*e*S	Sn	17 56 28.9	+0.7
CIGS				AML	AML	17 56 30.4	
	comp=Z,14µm,0.1s						
PAVA	Las Pavas	0.67	7	⇓*i*P	Pn	17 56 18.8	+0.7
PAVA				*e*S	Sn	17 56 29.8	+1.4
PAVA				IAML		17 56 31.9	
	comp=Z,9µm,0.3s						
PAVA	Las Pavas	0.67	7	⇓*i*P	Pn	17 56 18.8	+0.7
PAVA				*e*S	Sn	17 56 29.8	+1.4
PAVA				IAML		17 56 31.9	
	comp=Z,9µm,0.3s						
TECA	Tecapa	0.67	48	⇓*i*P	Pn	17 56 18.8	+0.7
TECA	Tecapa	0.67	48	⇓*i*P	Pn	17 56 18.8	+0.7
SNET	Serv Nac Est T	0.67	342	*i* P	Pn	17 56 18.4	+0.3
SNET				IAML		17 56 29.9	
	comp=Z,15µm,0.2s						
SNET	Serv Nac Est T	0.67	342	*i* P	Pn	17 56 18.4	+0.3
SNET				IAML		17 56 29.9	
	comp=Z,15µm,0.2s						
SNET	Serv Nac Est T	0.67	342	Pn	Pn	17 56 18.4	+0.3
ITCA	Escuela Especi	0.67	338	*e*P	Pn	17 56 18.5	+0.4
ITCA				*e*S	Sn	17 56 29.5	+0.9
ITCA	Escuela Especi	0.67	338	*e*P	Pn	17 56 18.5	+0.4
ITCA				*e*S	Sn	17 56 29.5	+0.9
UTEC	Universidad Te	0.67	344	*e*P	Pn	17 56 18.6	+0.5
UTEC	Universidad Te	0.67	344	*e*P	Pn	17 56 18.6	+0.5
UDBS	Universidad Do	0.68	348	*e*P	Pn	17 56 18.6	+0.5
UDBS				*e*S	Sn	17 56 29.8	+1.3
UDBS	Universidad Do	0.68	348	*e*P	Pn	17 56 18.6	+0.5
UDBS				*e*S	Sn	17 56 29.8	+1.3
IGN	Direccin Gen	0.68	347	*e*P	Pn	17 56 18.6	+0.5
IGN				*e*P	Pn	17 56 18.6	+0.5
IGN				*e*S	Sn	17 56 29.4	+0.8
IGN	Direccin Gen	0.68	347	*e*P	Pn	17 56 18.6	+0.5
IGN				*e*P	Pn	17 56 18.6	+0.5
IGN				*e*S	Sn	17 56 29.4	+0.8
OPAM	Oficina de Pla	0.68	345	*e*P	Pn	17 56 18.7	+0.5
OPAM				⇓*e*S	Sn	17 56 30.0	+1.3
OPAM				IAML		17 56 31.2	
	comp=Z,13µm,0.2s						
OPAM	Oficina de Pla	0.68	345	*e*P	Pn	17 56 18.7	+0.5
OPAM				⇓*e*S	Sn	17 56 30.0	+1.3
OPAM				IAML		17 56 31.2	
	comp=Z,13µm,0.2s						
LBRS	Las Brisas	0.69	358	⇓*i*P	Pn	17 56 19.1	+0.8
LBRS	Las Brisas	0.69	358	⇓*i*P	Pn	17 56 19.1	+0.8
CLUB	Club Campestre	0.69	340	*e*P	Pn	17 56 18.9	+0.5
CLUB				*e*S	Sn	17 56 29.7	+0.8
CLUB				AML	AML	17 56 30.7	
	comp=Z,10µm,0.2s						
CLUB	Club Campestre	0.69	340	*e*P	Pn	17 56 18.9	+0.5
CLUB				*e*S	Sn	17 56 29.7	+0.8
CLUB				AML	AML	17 56 30.7	
	comp=Z,10µm,0.2s						
UESS	Universidad de	0.69	345	*e*P	Pn	17 56 18.8	+0.5
UESS				IAML		17 56 33.0	
	comp=Z,20µm,0.2s						
UESS	Universidad de	0.69	345	*e*P	Pn	17 56 18.8	+0.5
UESS				IAML		17 56 33.0	
	comp=Z,20µm,0.2s						
CRW	Hotel Crowe Pl	0.69	342	*e*P	Pn	17 56 18.8	+0.4
CRW				*e*S	Sn	17 56 29.8	+0.9
CRW				AML	AML	17 56 30.7	
	comp=Z,14µm,0.2s						
LFU	La Fuente	0.70	352	⇑*i*P	Pn	17 56 19.1	+0.7
LFU	La Fuente	0.70	352	⇑*i*P	Pn	17 56 19.1	+0.7
BOQS	Boqueron	0.73	339	⇓*i*P	Pn	17 56 19.5	+0.6
BOQS	Boqueron	0.73	339	⇓*i*P	Pn	17 56 19.5	+0.6
JAYA	Jayaque - finc	0.74	325	*i* P	Pn	17 56 19.2	+0.3
JAYA	Jayaque - finc	0.74	325	*i* P	Pn	17 56 19.2	+0.3
JUCU	Jucuar¡n	0.77	75	*e*P	Pn	17 56 19.5	+0.3
JUCU	Jucuar¡n	0.77	75	*e*P	Pn	17 56 19.5	+0.3
PACA	Pacayal	0.79	58	*e*P	Pn	17 56 20.9	+1.4
PACA				*e*S	Sn	17 56 33.6	+2.5
PACA				IAML		17 56 34.9	
	comp=Z,7µm,0.3s						
PACA	Pacayal	0.79	58	*e*P	Pn	17 56 20.9	+1.4
PACA				*e*S	Sn	17 56 33.6	+2.5
PACA				IAML		17 56 34.9	
	comp=Z,7µm,0.3s						
LCY	Lacayo	0.80	62	*e*P	Pn	17 56 20.4	+0.8
LCY	Lacayo	0.80	62	*e*P	Pn	17 56 20.4	+0.8
RANC	El Ranchito	0.81	61	*e*P	Pn	17 56 20.7	+0.9
RANC	El Ranchito	0.81	61	*e*P	Pn	17 56 20.7	+0.9
VSM	San Miguel	0.81	62	*e*P	Pn	17 56 20.7	+0.7
VSM	San Miguel	0.81	62	*e*P	Pn	17 56 20.7	+0.7
CEDA	San Andres	0.84	334	⇓*i*P	Pn	17 56 20.6	+0.6
CEDA				*e*S	Sn	17 56 33.4	+1.5
CEDA	San Andres	0.84	334	⇓*i*P	Pn	17 56 20.6	+0.6
CEDA				*e*S	Sn	17 56 33.4	+1.5
TACO	Tacachico	0.97	340	*i* P	Pn	17 56 22.3	+0.5
TACO	Tacachico	0.97	340	*i* P	Pn	17 56 22.3	+0.5
CEVE	Cerro Verde	0.98	323	⇓*i*P	Pn	17 56 22.7	+0.7
CEVE				*e*P	Pn	17 56 23.0	+1.0
CEVE				IAML		17 56 39.0	
	comp=Z,17µm,0.4s						
CEVE	Cerro Verde	0.98	323	⇓*i*P	Pn	17 56 22.7	+0.7
CEVE				*e*P	Pn	17 56 23.0	+1.0
CEVE				IAML		17 56 39.0	
	comp=Z,17µm,0.4s						
SBLS	San Blas	0.98	323	*e*P	Pn	17 56 22.7	+0.6
SBLS	San Blas	0.98	323	*e*P	Pn	17 56 22.7	+0.6
SNJE	San Jose	1.00	325	⇓*i*P	Pn	17 56 23.0	+0.7
SNJE	San Jose	1.00	325	⇓*i*P	Pn	17 56 23.0	+0.7
RTR	El Retiro	1.04	324	*e*P	Pn	17 56 23.8	+1.0
RTR	El Retiro	1.04	324	*e*P	Pn	17 56 23.8	+1.0
UNIC	Universidad Ca	1.06	331	*i* P	Pn	17 56 24.0	+1.0
UNIC				*e*S	Sn	17 56 39.2	+2.1
UNIC	Universidad Ca	1.06	331	*i* P	Pn	17 56 24.0	+1.0
UNIC				*e*S	Sn	17 56 39.2	+2.1
FAGO	Alcalda de S	1.09	54	⇓*i*P	Pn	17 56 24.2	+0.9
FAGO				*e*S	Sn	17 56 39.5	+1.8
FAGO	Alcalda de S	1.09	54	⇓*i*P	Pn	17 56 24.2	+0.9
FAGO				*e*S	Sn	17 56 39.5	+1.8
LLGN	La Laguna	1.11	4	*e*P	Pn	17 56 24.5	+0.8
LLGN				*e*S	Sn	17 56 40.6	+2.3
LLGN	La Laguna	1.11	4	*e*P	Pn	17 56 24.5	+0.8
LLGN				*e*S	Sn	17 56 40.6	+2.3
LCND	La Caada	1.13	77	*e*P	Pn	17 56 25.1	+1.4
MTO3	Montecristo	1.39	346	⇓*i*P	Pn	17 56 28.3	+1.0
MTO3				*e*S	Sn	17 56 46.2	+1.3
MTO3	Montecristo	1.39	346	⇓*i*P	Pn	17 56 28.3	+1.0
MTO3				*e*S	Sn	17 56 46.2	+1.3
MTO3	Montecristo	1.39	346	Pn	Pn	17 56 28.2	+0.8
IXG	Ixpaco	1.78	309	*e*P	Pn	17 56 34.5	+1.9
CRIN	San Cristobal	1.95	100	Pn	Pn	17 56 36.0	+1.2
TGUH	Tegucigalpa,Un	1.97	59	⇓*i*P	Pn	17 56 36.4	+1.2
TGUH	Tegucigalpa,Un	1.97	59	⇓*i*P	Pn	17 56 36.4	+1.2
TGUH	Tegucigalpa,Un	1.97	59	Pn	Pn	17 56 36.3	+1.2
NBG	Las Nubes	2.00	320	*e*P	Pn	17 56 38.1	+2.4
PCG	Pacaya	2.04	311	*e*P	Pn	17 56 39.4	+3.2
MRL	Marmol	2.12	342	*e*P	Pn	17 56 39.9	+2.5
FUG	Fuego 3	2.26	308	*e*P	Pn	17 56 41.3	+2.2
FUG				*e*S	Sn	17 57 08.8	+2.9
ACON	Acoyapa	3.90	106	Pn	Pn	17 57 03.6	+2.2
GUAI	GUAI	4.41	128	*i* P	Pn	17 57 10.1	+1.8
GUAI				*i* S	Sn	17 58 00.4	+2.1
CCIG	Comitan	4.41	317	Pn	Pn	17 57 09.1	+0.6
JTS	Las Juntas de	4.83	124	Pn	Pn	17 57 15.6	+1.5
CMIG	Matias Romero	6.95	306	Pn	Pn	17 57 45.2	+2.1
	comp=Z,1.2nm,0.3s,baz=101,slow=8.8,SNR=8.9						
CMIG				Sn	Sn	17 58 60.0	-0.8
	comp=Z,3.8nm,0.3s,baz=260,slow=21,SNR=6.5						
TEIG	Tepich	7.17	6	Pn	Pn	17 57 49.0	+2.9
GOGA	Godfrey	20.89	13	P	P	18 00 41.1	0.0
GOGA				IAmb	IAmb	18 00 45.6	
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	21.16	322	P	P	18 00 45.4	+1.3
	comp=Z,1.3nm,0.5s,baz=143,slow=11,SNR=16						
TXAR				LR	LR	18 11 10.0	
	comp=Z,45nm,18.5s,baz=0.0,slow=42						
TXAR	Lajitas Array	21.16	322		P	18 00 45.8	+1.7
TX31	Lajitas Ar. Si	21.16	322	P	P	18 00 46.2	+2.1
TX32	Lajitas Array	21.16	322	P	P	18 00 46.3	+2.2
FCAR	Ozark Folk Cen	22.92	354	P	P	18 01 04.2	+1.5
PBMO	Poplar Bluff	23.66	357	P	P	18 01 10.1	+0.3
PBMO				IAmb	IAmb	18 01 27.9	
	comp=Z,15nm,0.8s						
T42A	Van Buren	23.95	356	P	P	18 01 12.8	+0.5
MGMO	Mountain Grove	24.18	354	P	P	18 01 16.1	+1.7
MGMO				IAmb	IAmb	18 01 18.5	
	comp=Z,11nm,0.8s						
S39A	Bolivar	24.84	352	P	P	18 01 22.0	+1.6
S39A				IAmb	IAmb	18 01 24.5	
	comp=Z,7.5nm,0.8s						
CCM	Cathedral Cave	24.98	356	P	P	18 01 21.4	-0.3
CCM				IAmb	IAmb	18 01 38.8	
	comp=Z,13nm,0.9s						
PV12	Saucer Basin,	30.70	329	P	P	18 02 13.3	+0.1
PV12				IAmb	IAmb	18 02 17.0	
	comp=Z,5.6nm,0.7s						
PV17	East Wray Mesa	30.76	328	P	P	18 02 14.4	+0.8
PV17				IAmb	IAmb	18 02 17.1	
	comp=Z,4.4nm,0.7s						
MTPU	Mount Pierson	32.32	324	P	P	18 02 27.6	+0.1
SADO	Sadowa	32.72	13	LR	LR	18 15 32.6	
	comp=Z,101nm,18.8s,baz=204,slow=36						
SAML	Samuel	33.70	129	P	P	18 02 38.7	-0.7
SAML				IAmb	IAmb	18 02 39.6	
	comp=Z,3.8nm,0.7s						
TCUT	Toone Canyon	34.13	329	P	P	18 02 44.6	+1.4
PDAR	Pinedale Array	34.54	333	P	P	18 02 47.3	+0.7
	comp=Z,0.4nm,0.7s,baz=149,slow=13,SNR=3.0						
PDAR				PcP	PcP	18 05 19.5	-0.8
	comp=Z,0.6nm,0.7s,baz=144,slow=4.9,SNR=5.5						
REDW	Red Top Meadow	35.59	332	P	P	18 02 56.4	+0.8
LOHW	Long Hollow	35.67	333	P	P	18 02 57.0	+0.6
NVAR	Mina Array Bea	36.26	319	P	P	18 03 02.5	+1.1
	comp=Z,0.7nm,0.7s,baz=139,slow=7.0,SNR=1.9						
NVAR				PcP	PcP	18 05 26.3	+0.9
	comp=Z,0.7nm,0.7s,baz=136,slow=3.3,SNR=4.5						
NVAR				ScP	ScP	18 09 08.1	+1.4
	comp=Z,0.9nm,0.8s,baz=131,slow=4.4,SNR=6.1						
NVAR				LR	LR	18 20 20.9	
	comp=Z,60nm,21.6s,baz=220,slow=40						
NVAR	Mina Array Bea	36.26	319	P	P	18 03 02.0	+0.6
DGMT	Dagmar	37.50	343	P	P	18 03 11.9	+0.3
ULM	Lac du Bonnet	37.52	353	P	P	18 03 10.5	-1.2
	comp=Z,1.1nm,0.3s,baz=172,slow=9.9,SNR=2.9						
ULM				LR	LR	18 21 32.6	
	comp=Z,81nm,18.6s,baz=162,slow=41						
BBB	Bella Bella	50.03	330	LR	LR	18 28 57.5	
	comp=Z,78nm,18.1s,baz=268,slow=39						
FRB	Frobisher Bay	52.63	11	P	P	18 05 08.4	-2.8
	comp=Z,2.2nm,0.5s,baz=206,slow=8.7,SNR=6.8						
YKA	Yellowknife Ar	52.65	345	P	P	18 05 10.8	-0.6
	comp=Z,3.1nm,0.7s,baz=138,slow=8.2,SNR=48						
YKA				PcP	PcP	18 06 18.8	-1.8
	comp=Z,0.2nm,0.3s,baz=143,slow=3.9,SNR=2.0						
RES	Resolute Bay	61.71	358	P	P	18 06 13.8	-1.3
	comp=Z,1.3nm,0.6s,baz=182,slow=6.4,SNR=6.6						
RES	Resolute Bay	61.71	358	P	P	18 06 13.9	-1.3
RES				IAmb	IAmb	18 06 14.3	
	comp=Z,1.6nm,0.8s						
INK	Inuvik	62.19	343	P	P	18 06 18.1	-0.4
	comp=Z,2.5nm,0.7s,baz=98,slow=4.5,SNR=5.1						
INK	Inuvik	62.19	343	P	P	18 06 17.6	-0.8
INK				IAmb	IAmb	18 06 22.4	
	comp=Z,1.6nm,0.8s						
ILAR	Eielson Array	64.86	336	P	P	18 06 35.5	-0.7
	comp=Z,0.6nm,0.7s,baz=169,slow=5.3,SNR=5.7						
WRA	Warramunga Arr	137.96	255	PKP	PKiKP	18 15 23.5	-0.8
	comp=Z,0.3nm,0.7s,baz=91,slow=2.6,SNR=7.2						
WRA				SKPbc	SKiKP	18 18 55.5	+0.2
	comp=Z,0.9nm,1.0s,baz=94,slow=3.0,SNR=3.0						
ASAR	Alice Springs	138.06	249	PKP	PKPdf	18 15 19.8	-2.7
	comp=Z,0.6nm,1.1s,baz=98,slow=4.8,SNR=2.1						
ASAR				SKPbc	SKiKP	18 18 55.8	+0.3
	comp=Z,0.8nm,1.1s,baz=89,slow=2.8,SNR=5.8						
CMAR	Chiang Mai Arr	147.73	346	PKPbc	PKPdf	18 15 40.6	+0.9
	comp=Z,1.0nm,0.8s,baz=348,slow=3.7,SNR=9.1						
CMAR	Chiang Mai Arr	147.73	346		PKPdf	18 15 39.7	+0.1

*IDC **28** 18:11:48.8±1.2, 53°.78N×169°.28E, h0km, mb3.9/16, mb1 4.2/17, mb1mx3.9/72, mbtmp3.9/17, ML3.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/57, Error ellipse: s-maj=35.8km s-min=15.1km az=175.0*

*MOS **28** 18:11:50.9±1.1, 53°.53N×169°.24E, h36km, mb4.5/3, Error ellipse: s-maj=11.4km s-min=9.7km az=40.2*

*NEIC **28** 18:11:52.3±1.5, 53°.6N±0°.2×169°.3E±0°.1, h30km±6km, mb4.4/13, Error ellipse: s-maj=23.1km s-min=10.2km az=190.0*

*KRSC **28** 18:11:53.1±1.5, 53°.14N×168°.61E, h40km±53km, ML4.6*

ISC 28 18:11:52.1±0.7, **53°.4N**±0°.1×**169°.17E**±0°.05, **h35**km, **n84**, σ**1s.59**/82, **mb4.1**/22, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.60	315	PN	Pn	18 12 33.6	+2.1
BKI	Bering	2.60	315	P	Pn	18 12 33.6	+2.1
SMY	Shemya	3.05	101	PN	Pn	18 12 37.0	-0.7
SMY	Shemya	3.05	101	Pn	Pn	18 12 37.0	-0.7
TUMD	Tumrok D	5.44	293	S	Sn	18 14 11.9	-0.1
TUMR	Tumrok	5.61	293	S	Sn	18 14 17.4	+1.3
SDLR	Sedlovina	6.17	273	PN	Pn	18 13 22.3	+1.6
SDLR	Sedlovina	6.17	273	*e*P	Pn	18 13 22.3	+1.6
SDLR				*e*S	Sn	18 14 28.0	-1.9
UGLR	Uglovaya	6.21	272	PN	Pn	18 13 22.8	+1.6
UGLR	Uglovaya	6.21	272	*e*P	Pn	18 13 22.8	+1.6
UGLR				S	Sn	18 14 29.0	-2.0
KRER	Koryakskii	6.24	273	S	Sn	18 14 30.3	-1.7
AVH	Avacha	6.25	273	S	Sn	18 14 30.3	-1.7
PET	Petropavlovsk	6.33	271	PN	Pn	18 13 23.3	+0.5
PET	Petropavlovsk	6.33	271	Pn	Pn	18 13 23.3	+0.5
RUS	Russkaya	6.52	266	S	Sn	18 14 34.7	-3.8
KRMR	Karymshinskiy	6.67	269	PN	Pn	18 13 29.2	+1.7
KRMR	Karymshinskiy	6.67	269	*e*P	Pn	18 13 29.2	+1.7
KRMR				*e*S	Sn	18 14 39.9	-2.3
GNL	Ganaly	6.70	277	PN	Pn	18 13 30.7	+2.7
GNL	Ganaly	6.70	277	*e*P	Pn	18 13 30.7	+2.7
MTVR	Mutnovka	6.71	266	PN	Pn	18 13 29.3	+1.2
MTVR	Mutnovka	6.71	266	P	Pn	18 13 29.3	+1.2
MTVR				S	Sn	18 14 40.1	-3.2
GRL	Gorelyy	6.76	267	S	Sn	18 14 41.6	-2.9
PEA0B	Petropavlovsk-	6.89	272	PN	Pn	18 13 32.5	+2.0
PEA0B	Petropavlovsk-	6.89	272	Pn	Pn	18 13 32.5	+2.0
PETK	Petropavlovsk-	6.89	272	Pn	Pn	18 13 32.1	+1.6
	1.6nm,0.3s,baz=98,slow=19,SNR=14						
PETK				Sn	Sn	18 14 46.3	-1.4
	2.8nm,0.3s,baz=320,slow=29,SNR=10						
PETK	Petropavlovsk-	6.89	272	PN	Pn	18 13 32.6	+2.1
PETK	Petropavlovsk-	6.89	272		Pn	18 13 32.6	+2.1
SKR	Severo-Kuril's	8.50	257	S	Sn	18 15 22.4	-4.7
BILL	Bilibino	14.75	356	P	Pn	18 15 15.5	-2.2
BILL	Bilibino	14.75	356	Pn	Pn	18 15 15.5	-2.2
YAK	Yakutsk	22.45	308	LR	LR	18 26 00.8	
	comp=Z,36nm,19.4s,baz=355,slow=38						
YAK	Yakutsk	22.45	308	*e*P	P	18 16 47.7	+0.1
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
TRF	Thorofare Moun	23.07	48	P	P	18 16 53.2	-1.1
TRF				IAmb	IAmb	18 16 57.9	
	comp=Z,36nm,1.7s						
IL31		24.71	45	P	P	18 17 07.8	-1.6
ILAR	Eielson Array	24.71	45	P	P	18 17 07.8	-1.8
	comp=Z,1.8nm,0.6s,baz=251,slow=7.4,SNR=39						
ILAR	Eielson Array	24.71	45	P	P	18 17 08.3	-1.3
ILAR	Eielson Array	24.71	45	P	P	18 17 08.2	-1.3
TIXI	Tiksi	25.26	331	P	P	18 17 14.4	-0.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIXI	Tiksi	25.26	331	P	P	18 17 14.4	-0.1
TIXI				IAmb	IAmb	18 17 16.4	
	comp=Z,7.1nm,0.8s						
BMAR	Burnt Mountain	26.01	39	P	P	18 17 17.9	-3.4
BCAR	Beaver Creek A	26.90	49	P	P	18 17 29.2	-0.2
EGAK	Eagle	27.16	46	P	P	18 17 30.3	-1.4
INK	Inuvik	30.25	38	P	P	18 17 58.8	-0.2
	comp=Z,0.8nm,0.5s,baz=256,slow=9.2,SNR=3.1						
INK	Inuvik	30.25	38	P	P	18 17 58.7	-0.4
INK	Inuvik	30.25	38	P	P	18 17 58.7	-0.4
H11N2	WAKE ISLAND Hy	33.66	184	T	T	18 54 48.2	
	baz=2.7,slow=76,SNR=86						
H11N3	WAKE ISLAND Hy	33.67	184	T	T	18 54 55.4	
	baz=2.7,slow=76,SNR=44						
H11N1	WAKE ISLAND Hy	33.68	184	T	T	18 54 57.0	
	baz=2.7,slow=76,SNR=51						
H11S1	WAKE ISLAND Hy	34.88	184	T	T	18 56 25.6	
	baz=2.8,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	34.90	184	T	T	18 56 26.8	
	baz=2.8,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	34.90	184	T	T	18 56 27.2	
	baz=2.8,slow=76,SNR=45						
SONM	Songino Array	39.07	288	P	P	18 19 17.2	+1.7
	comp=Z,0.5nm,0.6s,baz=53,slow=8.2,SNR=3.7						
YKA	Yellowknife Ar	39.14	46	P	P	18 19 15.1	-0.7
	comp=Z,0.9nm,0.7s,baz=296,slow=7.1,SNR=9.8						
RES	Resolute Bay	40.91	24	P	P	18 19 30.0	-0.3
	comp=Z,1.4nm,0.7s,baz=310,slow=7.9,SNR=2.4						
RES	Resolute Bay	40.91	24	P	P	18 19 29.9	-0.4
RES				IAmb	IAmb	18 20 27.1	
	comp=Z,2.8nm,0.4s						
YBH	Yreka Blue Hor	45.72	76	P	P	18 20 10.7	+1.1
	comp=Z,0.9nm,0.5s,baz=263,slow=5.7,SNR=2.7						
NVAR	Mina Array Bea	50.43	76	P	P	18 20 47.0	+0.8
	comp=Z,1.2nm,0.8s,baz=294,slow=6.5,SNR=8.2						
NVAR				LR	LR	18 39 12.4	
	comp=Z,55nm,18.4s,baz=351,slow=33						
NVAR	Mina Array Bea	50.43	76	P	P	18 20 45.7	-0.5
KURK	Kurchatov	52.08	306	P	P	18 20 58.3	+0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	52.08	306	P	P	18 20 58.2	+0.2
KURK				IAmb	IAmb	18 20 59.1	
	comp=Z,3.9nm,1.1s						
PDAR	Pinedale Array	52.49	67	P	P	18 21 01.7	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.3nm,0.9s,baz=311,slow=3.3,SNR=2.7						
PDAR	Pinedale Array	52.49	67	P	P	18 21 01.6	0.0
TPNV	Topopah Spring	52.63	76	P	P	18 21 03.6	+1.0
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TPNV	Topopah Spring	52.63	76	P	P	18 21 03.6	+1.0
MKAR	Makanchi Array	52.82	301	P	P	18 21 03.3	-0.4
	comp=Z,0.5nm,0.7s,baz=53,slow=7.0,SNR=6.7						
BRVK	Borovoye	54.35	313	P	P	18 21 14.9	+0.1
BRVK	Borovoye	54.35	313	P	P	18 21 14.9	+0.1
BRVK				IAmb	IAmb	18 21 15.9	
	comp=Z,3.7nm,0.7s						
ARCES	ARCESS Array B	54.54	345	P	P	18 21 15.9	0.0
	comp=Z,3.3nm,0.7s,baz=26,slow=9.0,SNR=4.0						
ARCES	ARCESS Array B	54.54	345	P	P	18 21 15.1	-0.8
ARCES	ARCESS Array B	54.54	345	P	P	18 21 15.1	-0.8
FRB	Frobisher Bay	54.89	27	P	P	18 21 17.3	-1.1
	comp=Z,2.8nm,0.6s,baz=310,slow=6.2,SNR=5.7						
KKAR	Karatay Array	61.36	304	P	P	18 22 04.0	-0.1
KKAR	Karatay Array	61.36	304	P	P	18 22 04.0	-0.1
ABKAR	Akbulak array	61.58	315	P	P	18 22 05.7	+0.3
FINES	FINESS Array B	61.81	341	P	P	18 22 06.5	-0.3
	comp=Z,6.0nm,1.1s,baz=333,slow=6.4,SNR=4.3						
CMAR	Chiang Mai Arr	63.62	266	P	P	18 22 22.6	+3.1
	comp=Z,0.4nm,0.3s,baz=21,slow=5.8,SNR=5.4						
TX31	Lajitas Ar. Si	65.40	74	P	P	18 22 32.2	+1.1
TX32	Lajitas Array	65.40	74	P	P	18 22 32.3	+1.2
TX32				IAmb	IAmb	18 22 44.0	
	comp=Z,4.4nm,1.2s						
TXAR	Lajitas Array	65.40	74	P	P	18 22 32.0	+0.9
	comp=Z,1.6nm,0.6s,baz=308,slow=4.9,SNR=23						
TXAR	Lajitas Array	65.40	74	P	P	18 22 32.2	+1.1
TXAR	Lajitas Array	65.40	74	P	P	18 22 32.1	+1.1
AKASG	Malin Array Be	70.93	334	P	P	18 23 05.3	+0.1
	comp=Z,1.1nm,0.5s,baz=27,slow=5.7,SNR=2.5						
GERES	GERESS Array B	76.02	344	P	P	18 23 36.2	+0.8
	comp=Z,0.6nm,0.5s,baz=29,slow=6.1,SNR=3.7						
GERES	GERESS Array B	76.02	344	P	P	18 23 35.9	+0.4

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*IDC **28** 18:16:22.1±1.1, 33°.57S×178°.88W, h0^{km}, mb4.4/3, mb1 4.6/5, mb1mx4.1/39, mbtmp4.5/5, ML4.1/2, Error ellipse: s-maj=42.1km s-min=25.4km az=146.0*

*WEL **28** 18:16:23.4±1.0, 33°S±14°×17°9W±3°5, h151^{km}±32^{km}, M4.4/11, mB4.8/7, ML5.0/8, MLv4.8/11, Mw(mB)4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.7*

ISC 28 18:16:22.8±0.8**, 33°.50S**±0°.09×**178°.9W**±0°.2**, h10**^{km}**, n23, σ1^{s}30**/36**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.31	12	P	Pn	18 17 26.0	-2.3
GLKZ				S	Sn	18 18 17.9	-0.7
PKGZ	Pakihiroa	5.02	208	P	Pn	18 17 39.0	+0.8
PKGZ				S	Sn	18 18 36.3	0.0
HAZ	Te Kaha	5.03	211	P	Pn	18 17 38.9	+0.7
HAZ				S	Sn	18 18 38.9	+2.6
PUZ	Puketiti	5.11	206	P	Pn	18 17 40.3	+0.8
PUZ				S	Sn	18 18 36.7	-1.7
RUGZ	Raukumara Rang	5.25	211	P	Pn	18 17 41.1	-0.3
CNGZ	Carnagh Statio	5.49	204	P	Pn	18 17 42.5	-2.2
CNGZ				S	Sn	18 18 48.4	+0.5
TKGZ	Te Karaka	5.58	207	P	Pn	18 17 45.3	-0.6
TKGZ				S	Sn	18 18 49.3	-0.9
URZ	Urewera	5.74	213	Pn	Pn	18 17 48.7	+0.6
	8.5nm,0.3s,baz=35,slow=6.0,SNR=45						
URZ				Sn	Sn	18 18 52.5	-1.5
	12nm,0.3s,baz=160,slow=21,SNR=2.5						
URZ	Urewera	5.74	213	P	Pn	18 17 48.1	+0.1
URZ				S	Sn	18 18 52.3	-1.7
RIGZ	Rimuhau	5.85	206	P	Pn	18 17 48.3	-1.4
RIGZ				S	Sn	18 18 55.6	-1.2
SNGZ	Shannon Statio	6.08	209	P	Pn	18 17 52.7	0.0
SNGZ				S	Sn	18 19 02.8	+0.4
MTHZ	Maungataniwha	6.35	211	P	Pn	18 17 56.0	-0.5
MTHZ				S	Sn	18 19 09.0	-0.1
ARHZ	Aropaoanui	6.63	209	P	Pn	18 17 59.6	-0.7
ARHZ				S	Sn	18 19 14.2	-1.7
BKZ	Black Stump Fm	6.76	212	P	Pn	18 18 00.1	-2.0
BKZ				S	Sn	18 19 17.1	-2.1
RPZ	Rata Peaks	12.86	215	Pn	Pn	18 19 24.1	-1.4
	0.6nm,0.3s,baz=56,slow=3.6,SNR=1.9						
RPZ				Sn	Sn	18 21 34.9	-14
	1.5nm,0.3s,baz=3.8,slow=23,SNR=6.9						
RAR	Rarotonga	20.91	59	P	P	18 21 06.9	+1.4
	26nm,0.9s,baz=279,slow=23,SNR=2.0						
ASAR	Alice Springs	42.26	271	P	P	18 24 17.3	+0.7
	5.0nm,0.6s,baz=313,slow=11,SNR=8.4						
WRA	Warramunga Arr	43.53	276	P	P	18 24 28.8	+1.9
	4.4nm,0.7s,baz=120,slow=7.5,SNR=7.9						
MKAR	Makanchi Array	119.13	309	PKP	PKiKP	18 35 12.3	+0.6
	0.2nm,0.6s,baz=139,slow=1.2,SNR=2.5						
FINES	FINESS Array B	147.74	338	PKPbc	PKPbc	18 36 06.8	-0.2
	2.0nm,0.5s,baz=46,slow=4.0,SNR=16						
AKASG	Malin Array Be	153.18	318	PKPbc	PKiKP	18 36 21.7	+1.1
	1.9nm,0.9s,baz=55,slow=2.3,SNR=5.1						
BRTR	Keskin Array B	153.23	293	PKPbc	PKiKP	18 36 22.2	+1.0
	1.6nm,0.8s,baz=104,slow=6.1,SNR=7.4						
TORD	Torodi Ar. Bea	159.74	182	PKPab	PKPab	18 37 01.6	+0.6
	0.9nm,0.8s,baz=191,slow=2.9,SNR=1.9						

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*IDC **28** 18:17:15.9±1.2, 33°.14S×178°.59W, h0^{km}, mb4.8/2, mb1 4.9/4, mb1mx4.1/40, mbtmp4.7/4, ML4.3/2, MS3.8/2, Ms1 3.8/2, ms1mx3.1/20, Error ellipse: s-maj=44.0km s-min=30.7km az=135.0*

*WEL **28** 18:18:33.2±1.0, 36°S±7°×18°0E±1°1, h154^{km}±9^{km}, M4.0/13, mB4.6/7, ML4.8/5, MLv4.2/13, Mw(mB)3.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.2*

ISC 28 18:17:16.9±1.2**, 33°.5S**±0°.1×**178°.3W**±0°.2**, h10**^{km}**, n53, σ2^{s}36**/52**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.92	214	S	Sn	18 19 29.6	+1.6
WMGZ	Waiomatatini S	5.09	211	S	Sn	18 19 35.5	+3.5
PKGZ	Pakihiroa	5.29	213	S	Sn	18 19 39.0	+1.7
HAZ	Te Kaha	5.33	216	S	Sn	18 19 42.2	+4.2
RUGZ	Raukumara Rang	5.54	216	S	Sn	18 19 46.3	+2.8
TWGZ	Tauwhareparae	5.57	212	P	Sn	18 19 46.9	+2.8
CNGZ	Carnagh Statio	5.74	209	P	Pg	18 19 16.6	+10
CNGZ				S	Sn	18 19 51.2	+3.2
TKGZ	Te Karaka	5.85	212	S	Sn	18 19 51.9	+1.1
KUZ	Kuaotunu	5.90	235	P	Pg	18 19 26.7	+17
MWZ	Matawai	5.91	214	S	Sn	18 19 53.6	+1.3
URZ	Urewera	6.05	217	Pn	Pn	18 18 48.6	+2.1
	11nm,0.3s,baz=45,slow=8.6,SNR=6.4						
URZ				Sn	Sn	18 19 57.2	+1.3
	5.1nm,0.3s,baz=14,slow=21,SNR=1.7						
URZ	Urewera	6.05	217	P	Pg	18 19 18.3	+5.4
URZ				S	Sn	18 19 56.4	+0.5
RAGZ	Rawiri	6.09	214	S	Sn	18 19 57.9	+1.0
RIGZ	Rimuhau	6.11	211	S	Sn	18 19 58.7	+1.4
EDRZ	Edgecumbe	6.13	220	S	Sn	18 19 57.6	-0.4
PRGZ	Paritu Road	6.24	209	S	Sn	18 20 00.0	-0.5
KARZ	Kaharoa	6.35	223	P	Pg	18 19 25.6	+7.1
TARZ	Mount Tarawera	6.35	221	S	Sn	18 20 07.5	+4.1
SNGZ	Shannon Statio	6.36	213	P	Pg	18 19 20.1	+1.5
SNGZ				S	Sn	18 20 05.7	+2.3
MUGZ	Murupara	6.39	218	P	Pg	18 19 25.1	+5.7
MUGZ				S	Sn	18 20 04.1	-0.1
RTZ	Ruatahuna	6.39	216	S	Sn	18 20 05.9	+1.5
KNZ	Kokohu	6.41	210	S	Sn	18 20 05.4	+0.8
MHGZ	Mahia Peninsul	6.43	208	S	Sn	18 20 04.0	-1.1
RAHZ	Arahi	6.58	214	S	Sn	18 20 10.2	+1.3
WHHZ	Waihua	6.65	212	P	Pg	18 19 27.9	+3.7
WHHZ				S	Sn	18 20 09.2	-1.2
MTHZ	Maungataniwha	6.65	215	S	Sn	18 20 11.3	+0.7
MRHZ	Matea Rd	6.84	218	S	Sn	18 20 15.1	-0.3
NMHZ	Naumai	6.86	214	S	Sn	18 20 17.3	+1.5
ARHZ	Aropaoanui	6.91	212	S	Sn	18 20 17.3	+0.5
BKZ	Black Stump Fm	7.06	215	S	Sn	18 20 19.7	-1.1
PXZ	Pawanui	7.60	210	S	Sn	18 20 33.1	-0.7
PRHZ	Porangahau	7.89	210	S	Sn	18 20 40.6	-0.5
DVHZ	Dannevirke	8.12	212	S	Sn	18 20 42.8	-4.0
ANWZ	Angora Road	8.12	210	P	Pb	18 19 43.6	+5.9
ANWZ				S	Sn	18 20 46.1	-0.6
POWZ	Post Office Ro	8.37	213	P	Pb	18 19 48.5	+6.5
POWZ				S	Sn	18 20 50.7	-2.2
BFZ	Birch Farm	8.40	210	S	Sn	18 20 50.6	-3.0
PRWZ	Pori Road	8.41	212	P	Pb	18 19 49.5	+6.9
PRWZ				S	Sn	18 20 51.6	-2.3
MRZ	Mangatainoka R	8.67	213	P	Pg	18 19 52.9	-10
MRZ				S	Sn	18 20 55.4	-4.9
HOWZ	Holdsworth Sta	8.89	212	P	Pg	18 19 56.8	-10
HOWZ				S	Sn	18 20 60.0	-5.8
TMWZ	Te Maipa	8.90	210	P	Pg	18 19 58.3	-9.0
TMWZ				S	Sn	18 21 02.7	-3.3
KIW	Kapiti Island	9.14	215	P	Pn	18 20 02.5	+34
PAWZ	Paruwai Farm	9.33	211	P	Pn	18 20 08.2	+37
PAWZ				S	Sn	18 21 11.3	-5.1
RPZ	Rata Peaks	13.17	216	Pn	Pn	18 20 25.1	+1.1
	0.9nm,0.3s,baz=18,slow=16,SNR=1.8						
RPZ				Sn	Sn	18 22 41.0	-10
	0.8nm,0.3s,baz=327,slow=23,SNR=1.4						
DZM	Mont Dzumac	17.68	306	LR	LR	18 26 47.4	
	comp=Z,236nm,20.0s,baz=124,slow=33						
ASAR	Alice Springs	42.83	270	P	P	18 25 13.6	-1.8
	9.8nm,0.6s,baz=111,slow=7.4,SNR=14						
WRA	Warramunga Arr	44.09	275	P	P	18 25 23.6	-2.0
	4.7nm,0.4s,baz=116,slow=7.6,SNR=8.7						
WRA				LR	LR	18 42 08.7	
	comp=Z,135nm,20.3s,baz=90,slow=34						
MKAR	Makanchi Array	119.58	309	PKP	PKPdf	18 36 06.1	-0.6
	0.1nm,0.4s,baz=75,slow=1.6,SNR=2.0						
FINES	FINESS Array B	147.97	338	PKPbc	PKPdf	18 36 59.9	+1.2
	2.8nm,0.5s,baz=46,slow=4.0,SNR=8.4						
NOA	NORSAR Array B	151.78	350	PKPbc	PKPbc	18 37 10.9	-0.2
	0.9nm,0.8s,baz=16,slow=4.1,SNR=2.3						
HFS	Hagfors	152.23	347	PKPbc	PKPbc	18 37 12.3	+0.2
	6.8nm,1.0s,baz=68,slow=3.9,SNR=4.9						
AKASG	Malin Array Be	153.57	319	PKPbc	PKPbc	18 37 14.9	-0.4
	0.4nm,0.3s,baz=50,slow=3.2,SNR=5.3						
BRTR	Keskin Array B	153.75	293	PKPbc	PKPbc	18 37 15.4	-1.0
	1.5nm,0.7s,baz=157,slow=4.5,SNR=7.1						
TORD	Torodi Ar. Bea	159.73	180	PKPab	PKPab	18 37 57.5	+2.3
	0.8nm,0.7s,baz=189,slow=3.2,SNR=2.4						

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*NOU **28** 18:19:17.9, 10°.09S×118°.34E, h0^{km}, mb4.7, South of Sumbawa, Indonesia*

*IDC **28** 18:19:18.8±2.3, 9°.77S×118°.16E, h35^{km}±18^{km}, mb4.3/23, mb1 4.4/27, mb1mx4.2/47, mbtmp4.5/27, ML4.3/4, MS3.7/20, Ms1 3.7/20, ms1mx3.6/37, Error ellipse: s-maj=19.1km s-min=12.3km az=54.0*

*DJA **28** 18:19:20.8±0.4, 10°S±4°×11°8E±°, h44^{km}±12^{km}, M4.7/20, mb4.9/17, mB5.1/12, MLv5.0/20, Mw(mB)4.5/12, MwMwp4.4/1, Mwp4.8/1*

*NEIC **28** 18:19:20.9±1.8, 9°.93S±0°.06×118°.05E±0°.07, h63^{km}±7^{km}, mb4.4/37, Error ellipse: s-maj=10.3km s-min=7.3km az=61.0*

ISC 28 18:19:18.3±0.3**, 10°.02S**±0°.05×**118°.12E**±0°.05**, h38**^{km}**, n167, σ1^{s}98**/175**, mb4.5**/60**, MS3.7**/18**, 2C, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.23	344	P	Pn	18 19 39.5	+0.4
PLAI				S	Sn	18 19 53.1	-1.4
TWSI	Taliwang, Sumb	1.77	316	P	Pn	18 19 48.0	+1.7
TWSI				S	Sn	18 20 09.7	+2.2
WSI	Waingapu	2.18	81	P	Pn	18 19 54.7	+2.7
BASI	Baing, Sumba	2.43	95	P	Pn	18 19 58.6	+3.1
DNP	Denpasar	3.16	295	P	Pn	18 20 09.2	+3.6
SRBI	Singaraja	3.45	304	P	Pn	18 20 12.7	+3.1
EDFI	Ende, Flores	3.75	71	P	Pn	18 20 15.7	+2.0
JAGI	Jajag, Banyuwa	4.21	291	Pn	Pn	18 20 21.3	+1.3
JAGI	Jajag, Banyuwa	4.21	291	P	Pn	18 20 21.2	+1.3
MMRI	Maumere	4.30	72		Pn	18 20 24.2	+3.0
MMRI	Maumere	4.30	72	P	Pn	18 20 24.3	+3.1
BSSI	Bau Bau, Buton	4.52	32	P	Pn	18 20 26.4	+2.2
KMMI	Kalianget	5.06	305	P	Pn	18 20 35.5	+3.9
	0.7nm106nm,1.0s						
BKSI	Bulukumba	5.08	23	P	Pn	18 20 34.2	+2.3
	2.3nm2μm7μm574nm,0.5s						
KAPI	Kappang	5.24	18	Pn	Pn	18 20 35.6	+1.5
	19nm,0.3s,baz=196,slow=9.2,SNR=30						
KAPI				Sn	Sn	18 21 32.1	-1.1
	64nm,0.3s,baz=273,slow=18,SNR=15						
KAPI				LR	LR	18 22 50.1	
	comp=Z,2μm,20.3s,baz=174,slow=42						
KAPI	Kappang	5.24	18	Pn	Pn	18 20 36.3	+2.3
KAPI					Sn	18 21 32.0	-1.2
BATI	Baumata	5.47	92	Pn	Pn	18 20 38.3	+1.0
	14nm,0.3s,baz=258,slow=3.8,SNR=31						
BATI				Sn	Sn	18 21 42.5	+3.6
	16nm,0.3s,baz=22,slow=23,SNR=1.8						
BATI	Baumata	5.47	92	P	Pn	18 20 39.9	+2.6
	0.3nm1μm69nm,0.5s						
BNSI	Bone	5.93	20	P	Pn	18 20 47.4	+3.8
	0.7nm2μm159nm,0.8s						
SOEI	Soe	6.07	88	Pn	Pn	18 20 48.3	+2.7
SOEI	Soe	6.07	88	P	Pn	18 20 48.7	+3.1
	0.9nm2μm147nm,0.9s						
SPSI	Sidrap Palu	6.24	15	P	Pn	18 20 51.0	+3.1
	0.4nm789nm86nm,0.9s						
KBKI	Kotabaru	6.96	344	P	Pn	18 21 00.8	+3.1
	0.2nm571nm30nm,0.4s						
TTSI	Tana Toraja	7.14	14	P	Pn	18 21 04.6	+4.4
	0.5nm1μm109nm,0.6s						
BBKI	Banjar Baru	7.28	333	P	Pn	18 21 06.9	+4.7
	0.4nm108nm,1.2s						
UGM	Wanagama	7.79	285	Pn	Pn	18 21 11.4	+2.3
UGM	Wanagama	7.79	285	P	Pn	18 21 12.9	+3.7
	1.2nm171nm,1.5s						
MTKI	Muara Teweh, K	9.57	340	P	Pn	18 21 34.3	+0.6
APSI	Ampana	9.71	21	P	Pn	18 21 39.2	+3.7
	415nm27nm,0.8s						
MPSI	Mapaga	10.45	10	P	Pn	18 21 48.5	+2.9
	14nm,1.0s						
CISI	Cisompet, Garu	10.47	283		Pn	18 21 45.9	-0.2
CISI	Cisompet, Garu	10.47	283	P	Pn	18 21 47.1	+1.1
	1μm43nm,0.5s						
FITZ	Fitzroy Crossi	10.85	139	Pn	Pn	18 21 52.4	+1.3
	2.8nm,0.3s,baz=326,slow=8.9,SNR=91						
FITZ				Sn	Sn	18 23 43.6	-7.6
	1.4nm,0.3s,baz=95,slow=19,SNR=1.9						
FITZ				LR	LR	18 26 10.9	
	comp=Z,414nm,21.5s,baz=314,slow=37						
FITZ	Fitzroy Crossi	10.85	139		Pn	18 21 52.1	+1.0
LEM	Lembang	10.86	286	LR	LR	18 27 02.2	
	comp=Z,167nm,20.2s,baz=57,slow=43						
MRSI	Marisa	11.11	20	P	Pn	18 21 59.0	+4.4
	526nm46nm,1.2s						
TOLI2	Tolitoli	11.38	14	Pn	Pn	18 22 02.1	+3.8
PSAD1	Pilbara Seismi	11.48	172	Pn	Pn	18 22 01.3	+1.4
PSAC1	Pilbara Seismi	11.56	172	Pn	Pn	18 22 01.5	+0.6
PSAC2	Pilbara Seismi	11.60	172	Pn	Pn	18 22 02.4	+1.0
PSA00	Pilbara Seismi	11.60	172		Pn	18 22 02.9	+1.5
PSA00	Pilbara Seismi	11.60	172		Pn	18 22 02.9	+1.5
MTN	Manton Dam	13.06	104		Pn	18 22 20.4	-1.0
GIRL	Giralia	13.09	196		Pn	18 22 23.8	+2.1
SBUM	Sibu	13.71	334	P	P	18 22 43.0	+4.7
KSM	Kuching	13.81	325	P	P	18 22 39.0	-0.4
KSM	Kuching	13.81	325	P	P	18 22 43.0	+3.5
SPMM	Sapulut	14.73	354	P	P	18 22 53.0	+3.4
LWLI	Liwa	14.79	289	P	Pn	18 22 46.8	+1.7
	4μm30nm,0.6s						
FAKI	Fak Fak	15.71	64	Pn	Pn	18 22 56.0	-1.0
FAKI				IAmb	IAmb	18 23 17.2	
	comp=Z,75nm,1.5s						
SIJI	Sorong	15.93	56	Pn	Pn	18 22 58.5	-1.3
	comp=Z,0.6nm,0.3s,baz=341,slow=23,SNR=2.2						
SIJI				LR	LR	18 29 36.1	
	comp=Z,168nm,20.2s,baz=240,slow=39						
MNAI	Manna	16.05	289	Pn	Pn	18 22 58.7	-2.7
KKM	Kota Kinabalu	16.07	353	P	P	18 23 05.0	+0.3
KKM				IAmb	IAmb	18 23 09.3	
	comp=Z,18nm,0.7s						
MYKOM	Kota Tinggi	18.43	309	P	Pn	18 23 34.0	+3.1
WB0	Warramunga Arr	18.46	124	P	Pn	18 23 32.3	+1.0
WRA	Warramunga Arr	18.50	124	P	Pn	18 23 32.4	+0.6
	comp=Z,0.8nm,0.3s,baz=303,slow=12,SNR=27						
WRA				S	Sn	18 26 44.5	-13
	comp=Z,0.4nm,0.3s,baz=292,slow=22,SNR=4.2						
WRA				LR	LR	18 31 17.0	
	comp=Z,271nm,19.7s,baz=295,slow=39						
WRA	Warramunga Arr	18.50	124	P	Pn	18 23 32.8	+0.9
WRAB	Tennant Creek	18.50	124	P	P	18 23 31.4	-0.1
WRAB				IAmb	IAmb	18 23 59.8	
	comp=Z,15nm,0.6s						
WB2	Warramunga Arr	18.51	124	P	Pn	18 23 32.6	+0.7
WC3	Warramunga Arr	18.53	124	P	Pn	18 23 32.8	+0.6
WR0	Warramunga Arr	18.67	124	P	Pn	18 23 34.7	+0.8
SDSI	Sungai Dareh	18.89	298	P	Pn	18 23 36.2	-0.4
MORW	Morawa	19.05	186		Pn	18 23 40.3	+2.0
MORW				IAmb	IAmb	18 23 59.5	
	comp=Z,28nm,1.1s						
ASAR	Alice Springs	20.28	134	P	Pn	18 23 53.8	+0.7
	comp=Z,11nm,0.7s,baz=310,slow=10,SNR=161						
ASAR				S	S	18 27 29.2	-7.2
	comp=Z,6.2nm,0.9s,baz=309,slow=24,SNR=11						
ASAR				ScP	ScP	18 31 38.6	+1.3
	comp=Z,0.6nm,0.8s,baz=332,slow=5.2,SNR=3.4						
ASAR				LR	LR	18 31 54.7	
	comp=Z,259nm,21.2s,baz=310,slow=37						
ASAR	Alice Springs	20.28	134	P	Pn	18 23 53.9	+0.9
AS31	Alice Springs	20.28	134	P	Pn	18 23 54.1	+1.1
IPM	Ipoh	22.30	309	P	P	18 24 13.7	+1.0
IPM				IAmb	IAmb	18 24 15.9	
	comp=Z,7.6nm,0.7s						
IPM	Ipoh	22.30	309	P	P	18 24 14.0	+1.3
NWAO	Narrogin (SRO)	22.81	182	P	P	18 24 22.0	+4.1
	comp=Z,4.8nm,0.5s,baz=359,slow=7.7,SNR=7.0						
NWAO				S	S	18 28 24.5	0.0
	comp=Z,7.6nm,0.3s,baz=232,slow=6.4,SNR=2.7						
NWAO				LR	LR	18 33 15.6	
	comp=Z,255nm,21.0s,baz=25,slow=36						
NWAO	Narrogin (SRO)	22.81	182	P	P	18 24 17.4	-0.5
NWAO	Narrogin (SRO)	22.81	182	P	P	18 24 20.3	+2.4
NWAO				IAmb	IAmb	18 24 34.8	
	comp=Z,37nm,1.2s						
RPSI	Rantau Prapat	22.91	302	P	P	18 24 19.5	+0.3
PSI	Prapat	22.97	303	P	P	18 24 19.5	-0.4
	comp=Z,8.0nm,0.4s,baz=180,slow=6.9,SNR=18						
PSI				LR	LR	18 34 24.4	
	comp=Z,168nm,19.4s,baz=91,slow=40						
KULM	Kulim	23.11	310	P	P	18 24 18.7	-2.4
KULM				IAmb	IAmb	18 24 37.9	
	comp=Z,12nm,1.2s						
KULM	Kulim	23.11	310	P	P	18 24 21.0	-0.2
GSI	Gunungsitoli	23.34	298	P	P	18 24 22.3	-1.2
GSI				IAmb	IAmb	18 24 31.3	
	comp=Z,11nm,1.1s						
COEN	Coen	24.82	102	P	P	18 24 37.8	+0.6
COEN				IAmb	IAmb	18 24 52.1	
	comp=Z,20nm,1.4s						
QIZ	Qiongzhong	30.00	344	P	P	18 25 21.0	-2.5
QIZ				S	S	18 30 23.3	+4.2
QIZ				LR	LR		
	comp=N,210nm,8.6s						
QIZ				LR	LR		
	comp=E,150nm,8.8s						
QIZ				LR	LR		
	comp=Z,160nm,17.6s						
STKA	Stephens Creek	30.75	138	P	P	18 25 32.6	+2.6
	comp=Z,2.1nm,0.4s,baz=316,slow=8.1,SNR=7.5						
STKA				LR	LR	18 37 55.1	
	comp=Z,316nm,21.2s,baz=342,slow=36						
STKA	Stephens Creek	30.75	138	P	P	18 25 31.7	+1.6
UTTA	Uttaradit	32.59	328	P	P	18 25 47.7	+1.3
	comp=Z,0.1nmcomp=Z,146nmcomp=Z,12nm,0.6s						
CM04	Chiang Mai Arr	33.98	326	P	P	18 25 59.0	+0.5
	comp=Z,0.0nmcomp=Z,49nmcomp=Z,4.6nm,1.2s						
CM05	Chiang Mai Arr	34.00	326	P	P	18 26 00.0	+1.3
	comp=Z,0.0nmcomp=Z,2.8nm,1.0s						
CM01	Chiang Mai Arr	34.00	326	P	P	18 26 00.6	+1.8
	comp=Z,0.0nmcomp=Z,4.7nm,1.0s						
CM09	Chiang Mai Arr	34.01	326	P	P	18 26 00.0	+1.3
	comp=Z,0.0nmcomp=Z,42nmcomp=Z,3.9nm,0.5s						
CM36	Chiang Mai Arr	34.01	326	P	P	18 26 00.0	+1.2
CM02	Chiang Mai Arr	34.02	326	P	P	18 26 00.7	+1.8
	comp=Z,0.0nmcomp=Z,3.5nm,1.1s						
CM13	Chiang Mai Arr	34.03	326	P	P	18 26 00.7	+1.7
	comp=Z,0.0nmcomp=Z,3.0nm,1.1s						
CM31	Chiang Mai Arr	34.04	326	P	P	18 25 50.5	-8.6
CMAR	Chiang Mai Arr	34.04	326	P	P	18 26 00.0	+0.9
	comp=Z,1.0nm,0.4s,baz=151,slow=6.5,SNR=13						
CMAR				PcP	PcP	18 28 38.5	+2.1
	comp=Z,0.4nm,0.4s,baz=178,slow=2.5,SNR=2.9						
CMAR				ScP	ScP	18 32 18.9	+0.4
	comp=Z,0.5nm,0.3s,baz=169,slow=2.5,SNR=8.1						
CMAR				LR	LR	18 40 47.9	
	comp=Z,145nm,18.9s,baz=190,slow=38						
CMAR	Chiang Mai Arr	34.04	326	P	P	18 25 57.0	-2.0
CM35	Chiang Mai Arr	34.11	327	P	P	18 26 00.0	+0.4
SLVN	Son La	34.15	336	P	P	18 25 59.9	-0.1
SLVN				IAmb	IAmb	18 26 01.6	
	comp=Z,8.2nm,1.1s						
CM34	Chiang Mai Arr	34.25	327	P	P	18 26 02.0	+1.1
CMMT	Chiang Mai	34.33	327	P	P	18 26 01.9	+0.3
	comp=Z,0.0nmcomp=Z,1.5nm,1.2s						
CHTO	Chiang Mai	34.33	327	P	P	18 26 00.8	-0.8
CM33	Chiang Mai Arr	34.33	327	P	P	18 26 02.0	+0.4
KMI	Kunming	38.01	337	⇑P	P	18 26 34.5	+1.3
KMI				pP	sP	18 26 50.5	+3.0
KMI				sP	pwP	18 26 57.0	+10
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI				LR	LR		
	comp=Z,170nm,45.5s						
ENH	Enshi	40.91	349	P	P	18 26 55.9	-1.2
PALK	Pallekele	41.03	293	P	P	18 26 58.9	+0.5
	comp=Z,4.9nm,0.6s,baz=107,slow=17,SNR=5.1						
PALK	Pallekele	41.03	293	P	P	18 26 58.4	0.0
CD2	Chengdu	42.97	342	P	P	18 27 13.0	-0.9
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
JNU	Nakatsue	44.60	15	LR	LR	18 45 06.7	
	comp=Z,99nm,19.6s,baz=206,slow=35						
XAN	Xi'an	44.68	349	P	P	18 27 26.5	-1.1
XAN				pP	pP	18 27 36.3	-1.6
XAN				pmax	pmax		
	comp=Z,14nm,1.3s						
LSA	Lhasa	47.27	328	P	P	18 27 46.7	-1.9
LSA				IAmb	IAmb	18 27 53.8	
	comp=Z,2.5nm,0.5s						
DZM	Mont Dzumac	47.78	111	LR	LR	18 48 36.0	
	comp=Z,118nm,18.4s,baz=254,slow=37						
TIY	Taiyuan	47.78	354	*e*P	P	18 27 51.0	-1.0
TIY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSAR	Wonju Array Be	48.10	10	P	P	18 27 53.8	-0.5
KSRS	Korea Array	48.11	10	P	P	18 27 53.8	-0.6
	comp=Z,9.1nm,0.8s,baz=184,slow=8.0,SNR=32						
KSRS				LR	LR	18 49 13.9	
	comp=Z,30nm,19.7s,baz=198,slow=38						
KS19	Wonju Array Si	48.15	10	P	P	18 27 54.5	-0.2
GUN	Gumba	48.95	321	*e*P	P	18 28 00.3	-1.2
	comp=Z,8.4nm,0.4s						
PKI	Pulchoki	49.00	321	*e*P	P	18 28 00.5	-1.3
	comp=Z,5.1nm,0.4s						
PKIN	Phulchoki	49.01	321	*e*P	P	18 28 00.9	-1.0
	comp=Z,5.8nm,0.4s						
DMN	Daman	49.22	320	*e*P	P	18 28 02.3	-1.1
	comp=Z,7.7nm,0.4s						
KKN	Kakani	49.23	321	*e*P	P	18 28 02.7	-0.8
	comp=Z,8.0nm,0.8s						
MAT	Matsushiro	50.03	21	P	P	18 28 06.7	-2.5
MJAR	Matsushiro Arr	50.03	21	P	P	18 28 07.0	-2.1
	comp=Z,4.5nm,0.9s,baz=183,slow=7.1,SNR=7.7						
MJAR				LR	LR	18 50 07.7	
	comp=Z,25nm,19.8s,baz=220,slow=37						
DANN	Dangsing	50.58	320	*e*P	P	18 28 11.9	-1.9
	comp=Z,20nm,0.6s						
HHC	Hu-ho-hao-te	50.98	354	*e*P	P	18 28 17.0	+0.6
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,5.8s						
GTA	Gaotai	52.04	342	⇑P	P	18 28 23.8	-0.6
GTA				pP	pP	18 28 34.5	-0.1
GTA				sP	sP	18 28 39.3	+0.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MDJ	Mudanjiang	55.37	10	P	P	18 28 46.9	-1.6
USA0B	Ussuriysk Arra	55.42	12	P	P	18 28 48.2	-0.6
USRK	Ussuriysk Ar.	55.42	12	P	P	18 28 47.7	-1.2
	comp=Z,11nm,0.4s,baz=192,slow=6.9,SNR=101						
USRK				LR	LR	18 54 00.0	
	comp=Z,35nm,18.3s,baz=188,slow=38						
RPZ	Rata Peaks	56.67	136	LR	LR	18 52 23.7	
	comp=Z,96nm,19.2s,baz=324,slow=35						
ULN	Ulaanbaatar	58.46	351	P	P	18 29 08.9	-1.7
ULN				IAmb	IAmb	18 29 11.4	
	comp=Z,3.5nm,0.8s						
SONM	Songino Array	58.53	351	P	P	18 29 10.0	-1.1
	comp=Z,3.4nm,0.4s,baz=168,slow=8.3,SNR=47						
SONM				LR	LR	18 55 28.8	
	comp=Z,77nm,21.9s,baz=220,slow=37						
SONM	Songino Array	58.53	351	P	P	18 29 09.4	-1.6
WMQ	Urumqi	60.30	335	*e*P	P	18 29 24.3	+1.1

KSH	Kashi	62.91	324	P	P	18 29 41.0	0.0
KSH				pP	sP	18 29 59.8	+4.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,780nm,5.7s						
SHLS	Shalkode	63.58	329	*e*P	P	18 29 43.4	-2.0
	baz=329						
KPKS	Kokpek	64.19	329	*e*P	P	18 29 48.4	-1.0
	baz=329						
ZSN	Zaisan	64.40	336	*e*P	P	18 29 49.7	-0.9
	baz=335						
MK31	Makanchi Array	64.97	334	P	P	18 29 52.7	-1.5
MK31				IAmb	IAmb	18 29 54.3	
	comp=Z,7.8nm,1.5s						
MKAR	Makanchi Array	64.97	334	P	P	18 29 53.3	-1.0
	comp=Z,3.0nm,0.5s,baz=147,slow=6.1,SNR=70						
MKAR				PcP	PcP	18 30 27.7	+0.6
	comp=Z,1.4nm,0.5s,baz=141,slow=5.4,SNR=5.3						
MKAR				LR	LR	19 00 01.2	
	comp=Z,58nm,20.0s,baz=109,slow=38						
MKAR	Makanchi Array	64.97	334	P	P	18 29 52.7	-1.5
MAKZ	Makanchi	65.12	333	P	P	18 29 54.8	-0.4
MTBS	Maitube	65.12	328	*e*P	P	18 29 54.0	-1.4
	baz=327						
CHKK	Chushkaly	65.33	328	*e*P	P	18 29 56.5	-0.2
	baz=328						
TDK	Taldyqorghan	65.44	330	*e*P	P	18 29 56.9	-0.5
	comp=Z,2.8nm,0.5s,baz=330						
KUU	Kurty	65.70	328	*e*P	P	18 29 57.3	-1.7
	comp=Z,5.5nm,1.2s,baz=328						
AAK	Ala-Archa	65.83	326	P	P	18 29 59.5	-0.5
AAK				IAmb	IAmb	18 30 14.9	
	comp=Z,2.5nm,0.9s						
WSAR	Wadi Sarin	66.91	301	P	P	18 30 07.2	0.0
	comp=Z,4.0nm,0.5s,baz=135,slow=5.7,SNR=19						
IUG	Iuzhnay	68.06	323	*e*P	P	18 30 14.7	+0.5
	comp=Z,3.2nm,0.7s,baz=323						
KURK	Kurchatov	69.53	334	P	P	18 30 21.6	-1.5
KURK				IAmb	IAmb	18 30 22.6	
	comp=Z,2.8nm,0.5s						
ZAA0	Zalesovo Array	69.69	340	P	P	18 30 21.9	-2.0
ZAA0				IAmb	IAmb	18 30 23.2	
	comp=Z,2.6nm,0.7s						
ZALV	Zalesovo Beam	69.69	340	P	P	18 30 22.4	-1.5
	comp=Z,3.5nm,0.5s,baz=142,slow=5.1,SNR=17						
ZALV				PcP	PcP	18 30 46.0	-0.6
	comp=Z,1.4nm,0.5s,baz=127,slow=4.2,SNR=3.6						
ZALV	Zalesovo Beam	69.69	340	P	P	18 30 21.7	-2.2
VNDA	Vanda	71.12	171	P	P	18 30 34.1	+1.7
	comp=Z,3.0nm,1.0s,baz=304,slow=7.3,SNR=3.0						
VNDA				LR	LR	18 59 46.0	
	comp=Z,88nm,20.6s,baz=286,slow=34						
PETK	Petropavlovsk-	71.36	24	P	P	18 30 34.3	+0.2
	comp=Z,5.2nm,0.6s,baz=256,slow=1.5,SNR=10.0						
BRZS	Berezniki	71.69	331	*e*P	P	18 30 34.9	-1.4
	baz=331						
GEYT	Alibeck	73.53	314	P	P	18 30 47.0	-0.4
	comp=Z,1.8nm,0.5s,baz=199,slow=8.8,SNR=5.2						
GEYT	Alibeck	73.53	314	P	P	18 30 46.6	-0.8
BVAR	Borovoye Array	74.79	332	P	P	18 30 53.5	-0.9
	comp=Z,0.9nm,0.6s,baz=33,slow=6.0,SNR=7.5						
BRVK	Borovoye	74.86	332	P	P	18 30 54.0	-0.8
BRVK				IAmb	IAmb	18 30 57.7	
	comp=Z,7.7nm,1.4s						
ABKAR	Akbulak array	77.90	325	P	P	18 31 11.2	-0.9
AKTO	Aktyubinsk	79.57	326	P	P	18 31 20.6	-0.7
	comp=Z,2.0nm,0.5s,baz=118,slow=4.6,SNR=12						
TIXI	Tiksi	81.81	3	P	P	18 31 31.5	-1.4
TIXI				IAmb	IAmb	18 31 33.1	
	comp=Z,6.1nm,1.1s						
NRIK	Noril'sk	81.99	350	P	P	18 31 33.3	-0.5
	comp=Z,0.5nm,0.3s,baz=189,slow=6.3,SNR=1.9						
NRIK	Noril'sk	81.99	350	P	P	18 31 32.5	-1.3
NRIK				IAmb	IAmb	18 31 35.2	
	comp=Z,5.0nm,1.2s						
BELG	Belogornoye	86.28	325	P	P	18 31 55.7	-0.3
	comp=Z,16nm,0.9s,baz=92,slow=4.0,SNR=10						
KBZ	Khabaz	86.39	315	P	P	18 31 57.9	+1.1
	comp=Z,4.3nm,0.8s,baz=138,slow=7.5,SNR=6.9						
BRTR	Keskin Array B	92.12	310	P	P	18 32 24.1	-0.1
	comp=Z,1.0nm,0.9s,baz=81,slow=7.6,SNR=4.7						
BRTR	Keskin Array B	92.12	310	P	P	18 32 23.7	-0.4
AKASG	Malin Array Be	96.97	320	P	P	18 32 45.0	-0.9
	comp=Z,0.2nm,0.3s,baz=88,slow=4.3,SNR=4.2						
MNK	Minsk	98.21	324	*i* P	P	18 32 50.0	-1.3
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	18 32 50.0	-1.3
	comp=N,18nm,1.2s						
MNK				*i* P	P	18 32 50.0	-1.3
	comp=Z,8.0nm,0.7s						
MNK				*i* PP	PP	18 36 49.9	-1.4
MNK				*i* PPP	PPP	18 38 54.9	
MNK				*i* S	SKSac	18 43 22.2	-3.9
MNK				*i* SS	SS	18 50 57.3	-2.5
MNK				*i* SSS	SSS	18 54 44.6	
MNK				*i* LQ	LQ	19 10 59.3	
MNK				*i* LR	LR	19 15 39.0	
MNK				*i* LRM	MLR	19 18 15.3	
	comp=N,132nm,12.3s						
MNK				*i* LRM	MLR	19 18 18.2	
	comp=Z,48nm,8.0s						
MNK				*i* LRM	MLR	19 18 29.0	
	comp=E,11nm,6.5s						
FINES	FINESS Array B	99.70	331	LR	LR	19 26 40.9	
	comp=E,202nm,20.1s,baz=266,slow=41						
YKA	Yellowknife Ar	115.48	24	PKP	PKiKP	18 37 55.7	-0.1
	comp=E,0.2nm,0.3s,baz=321,slow=1.0,SNR=4.1						

ISK ***28*** *18:21:47.4, 39°.59N×25°.96E, h10^{km}, ML2.7/31*
ATH ***28*** *18:21:47.9, 39°.55N×25°.92E, h33^{km}±6^{km}, ML2.3/5, Error ellipse: s-maj=7.0km s-min=1.2km az=186.0*
DDA ***28*** *18:21:48.2, 39°.62N×26°.05E, h7^{km}±3^{km}, ML2.5*
THE ***28*** *18:21:48.4, 39°.61N×25°.95E, h4^{km}±2^{km}, ML2.5/4, Error ellipse: s-maj=2.0km s-min=0.4km az=127.0*
ISC 28 18:21:47.3±0.8**, 39°.59N**±0°.02×**26°.01E**±0°.02**, h17**^{km}±7^{km}**, n68, σ1^{s}.24**/96**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.13	129	*i* P	Pb	18 21 51.7	+0.3
KOCA				*i* S	Sg	18 21 53.4	-0.4
KOCA				IAML		18 21 54.0	
	comp=N,1μm,0.5s						
KOCA				IAML		18 21 54.0	
	comp=E,1μm,0.5s						
BOZC	Bozcaada	0.26	8	PG	Pb	18 21 53.6	0.0
BOZC				SG	Sb	18 21 57.5	-0.3
BOZC	Bozcaada	0.26	8	*i* P	Pg	18 21 53.2	+0.1
BOZC				*i* S	Sg	18 21 55.7	-1.3
EZN	Ezine	0.34	46	P	Pb	18 21 55.3	+0.3
EZN				S	Sb	18 22 00.6	+0.4
	comp=E,1μm,0.3s						
EZN	Ezine	0.34	46	PG	Pb	18 21 55.3	+0.3
EZN				SG	Sb	18 22 00.7	+0.5
SIGR	SIGRI	0.39	197	P	Pg	18 21 55.6	+0.2
SIGR				S	Sb	18 22 01.4	-0.2
SIGR				AML	AML	18 22 02.9	
	comp=N,1422μm,0.4s						
SIGR				AML	AML	18 22 03.0	
	comp=E,1318μm,0.4s						
SIGR	SIGRI	0.39	197	P	Pg	18 21 55.6	+0.2
SIGR				S	Sb	18 22 01.9	+0.3
	comp=E,682nm,0.4s						
SIGR	SIGRI	0.39	197	PG	Pg	18 21 55.6	+0.2
SIGR				SG	Sb	18 22 01.6	0.0
PRK	Paraskevi	0.40	149	P	Pb	18 21 57.4	+1.5
PRK				S	Sb	18 22 02.9	+1.2
PRK				AML	AML	18 22 03.6	
	comp=N,2311μm,0.2s						
PRK				AML	AML	18 22 03.9	
	comp=E,2567μm,0.2s						
PRK	Paraskevi	0.40	149	P	Pb	18 21 57.3	+1.4
PRK				S	Sb	18 22 03.4	+1.7
	comp=E,1μm,0.2s						
BAYC	CANAKKALE_Bayr	0.45	69	*i* P	Pb	18 21 57.2	+0.5
BAYC				*i* S	Sg	18 22 02.2	-0.2
ECEA	Canakkale, Ece	0.48	16	*i* P	Pb	18 21 57.3	0.0
ECEA				*i* S	Sg	18 22 02.5	-0.8
ECEA				IAML		18 22 05.0	
	comp=N,297nm,0.6s						
AYVA	Ayvalik	0.60	117	*i* P	Pb	18 21 59.8	+0.5
AYVA				*i* S	Sg	18 22 07.3	+0.2
AYVA				IAML		18 22 13.0	
	comp=N,212nm,0.4s						
GOKA	anakkale-Gk	0.61	353	*i* P	Pb	18 21 59.5	0.0
GOKA				*i* S	Sg	18 22 05.9	-1.6
GADA	Gvkgeada	0.61	352	P	Pb	18 21 59.6	0.0
GADA				S	Sb	18 22 08.1	+0.2
GADA	Gvkgeada	0.61	352	PG	Pb	18 21 59.5	0.0
GADA				SG	Sb	18 22 07.9	0.0
LIA	Limnos Island	0.71	296	P	Pb	18 22 01.4	+0.2
LIA				S	Sb	18 22 10.7	0.0
LIA				AML	AML	18 22 13.9	
	comp=E,826μm,0.3s						
LIA				AML	AML	18 22 16.4	
	comp=N,354μm,0.4s						
LIA	Limnos Island	0.71	296	P	Pb	18 22 01.4	+0.2
LIA				S	Sb	18 22 10.8	+0.1
	comp=N,270nm,0.2s						
BUHA	Balikesir, Bur	0.83	96	*i* P	Pb	18 22 04.1	+0.8
BUHA				*i* S	Sg	18 22 13.3	-1.2
BUHA				IAML		18 22 20.0	
	comp=E,139nm,0.3s						
DKL	Dikili	0.87	126	PG	Pn	18 22 05.2	+0.5
GELI	Tayfur-Gelibol	0.89	24	PG	Pb	18 22 04.9	+0.6
SMTH	Samothraki Isl	0.96	338	P	Pb	18 22 06.0	+0.5
SMTH				S	Sg	18 22 18.3	-0.2
SMTH				AML	AML	18 22 20.4	
	comp=N,206μm,0.2s						
SMTH				AML	AML	18 22 21.4	
	comp=E,158μm,0.2s						
SMTH	Samothraki Isl	0.96	338	P	Pb	18 22 06.0	+0.5
SMTH				S	Sb	18 22 19.2	+1.3
LPK	Lapseki	0.98	36	PG	Pg	18 22 05.6	-0.7
ZEDA	zmir-Bergama	1.04	126	*i* P	Pn	18 22 08.1	+1.0
ZEDA				*i* S	Sb	18 22 17.6	-2.5
CAVK	Edirne/Enez-Ca	1.11	6	*i* P	Pg	18 22 08.8	0.0
CAVK				*i* S	Sb	18 22 22.0	-0.3
ERIK	Erikli-Kesan	1.15	20	PN	Pg	18 22 09.6	0.0
ENEZ	Enez	1.15	6	P	Pg	18 22 09.7	+0.1
ENEZ	Enez	1.15	6	PN	Pg	18 22 09.8	+0.1
BALY	Balya	1.25	82	*i* P	Pn	18 22 10.9	+0.7
BALY				*i* S	Sb	18 22 22.4	-4.0
BALY				IAML		18 22 29.0	
	comp=N,73nm,0.6s						
KRBG	Karabiga-Canak	1.28	50	PN	Pg	18 22 11.9	-0.1
URLA	Izmir	1.31	159	*i* P	Pn	18 22 10.7	-0.2
URLA				*i* S	Sb	18 22 24.2	-3.8
ALN	Alexandroupoli	1.31	1	P	Pg	18 22 12.3	-0.3
ALN				S	Sg	18 22 30.3	+0.6
ALN	Alexandroupoli	1.31	1	P	Pg	18 22 12.2	-0.3
ALN	Alexandroupoli	1.31	1	PN	Pg	18 22 12.3	-0.3
STEP	BALIKESIR_Sava	1.34	98	*i* P	Pg	18 22 13.3	+0.2
STEP				*i* S	Sb	18 22 28.2	-0.7
ZEYE	Izmir, Urla-Ze	1.40	164	*i* P	Pn	18 22 12.4	+0.3
ZEYE				*i* S	Sn	18 22 26.9	-3.3
ZEYE				IAML		18 22 36.0	
	comp=E,65nm,0.2s						
ZEYE				IAML		18 22 37.0	
	comp=N,60nm,0.3s						
THAS	Thassos island	1.42	316	P	Pn	18 22 13.2	+0.8
THAS				AML	AML	18 22 30.7	
	comp=N,111μm,0.4s						
THAS				AML	AML	18 22 35.4	
	comp=E,93μm,0.3s						
THAS	Thassos island	1.42	316	P	Pn	18 22 13.0	+0.6
RKY	Sarkoy-Tekirda	1.42	39	PN	Pb	18 22 13.9	+0.5
BALB	Balikesir	1.45	87	PN	Pb	18 22 14.4	+0.6
GZKV	Gazikoy-Tekird	1.54	41	PN	Pb	18 22 15.8	+0.4
MRMT	Marmara Adasi	1.59	50	PN	Pb	18 22 17.2	+0.9
RDO	Rodhopi	1.60	347	P	Pb	18 22 16.6	+0.2
RDO	Rodhopi	1.60	347	P	Pb	18 22 16.2	-0.2
RDO	Rodhopi	1.60	347	PN	Pb	18 22 16.1	-0.3
UKOP	Uzunkopru-Edir	1.61	17	PN	Pb	18 22 16.6	-0.1
EDC	Edincik	1.62	61	PN	Pb	18 22 16.8	+0.1
OUR	Ouranopolis	1.73	296	P	Pn	18 22 17.5	+0.9
OUR	Ouranopolis	1.73	296	PN	Pn	18 22 17.5	+0.9
KAVA	Kavala	1.81	321	P	Pn	18 22 18.9	+1.1
KAVA	Kavala	1.81	321	P	Pn	18 22 18.7	+0.9
TKR	Tekirdag	1.83	39	PN	Pb	18 22 19.7	-0.6
KCTX	Karacabey (Bur	1.93	69	PN	Pb	18 22 21.3	-0.8
GCAM	G?zelcaml?	2.11	153	PN	Pn	18 22 23.7	+1.8
AYDB	Zeytinkoy-Aydi	2.20	137	PN	Pn	18 22 25.1	+1.8
EDRB	Edirne	2.33	14	PN	Pn	18 22 26.7	+1.8
KULA	Kula-Manisa	2.33	117	PN	Pn	18 22 26.7	+1.8
MDNY	Mudanya-Bursa	2.34	70	PN	Pn	18 22 27.3	+2.2
SLVT	Silivri	2.35	45	PN	Pn	18 22 27.2	+2.0
SIMA	Simav-Kutahya	2.36	101	PN	Pn	18 22 27.6	+2.2
ARMT	Armutlu	2.40	65	PN	Pn	18 22 28.0	+2.1
CTKS	Kestanelik-??a	2.52	48	PN	Pn	18 22 29.8	+2.3
TRML	Termal-Yalova	2.63	66	PN	Pn	18 22 31.4	+2.3
BGKT	Bogazkoy	2.65	52	PN	Pn	18 22 31.4	+2.2
TVSB	Tavsanli	2.67	92	PN	Pn	18 22 32.0	+2.3
KAVV	Kandilli-Istan	2.76	57	PN	Pn	18 22 33.2	+2.4
ISK	Istanbul-Kandi	2.76	57	PN	Pn	18 22 33.2	+2.4

MOS ***28*** *18:32:19.8±0.0, 42°.51N×45°.40E, h19^{km}, MPVA4.2*
DRS ***28*** *18:32:20.4±0.0, 42°.63N×45°.34E, h14^{km}, ML3.0/7*
NORS ***28*** *18:32:20.0±0.0, 42°.49N×45°.41E, h12^{km}, MPVA4.2*
TIF ***28*** *18:32:20.3, 42°.53N×45°.40E, h8^{km}±2^{km}*
ISC 28 18:32:20.4±1.0**, 42°.54N**±0°.02×**45°.40E**±0°.02**, h11**^{km}±9^{km}**, n42, σ0^{s}.85**/79**, 11C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNSH	Pansheti	0.59	279	P	Pg	18 32 31.3	-0.6
PNSH				S	Sg	18 32 38.1	-1.6
BTLR	Botlikh	0.62	78	⇑*i*Pg	Pg	18 32 32.5	0.0
	110nm,0.3s						
BTLR				⇑*e*Sg	Sg	18 32 40.5	-0.1
	753nm,0.2s						
KMGR	Komgaron	0.65	323	*i* Pg	Pg	18 32 33.0	0.0
KMGR				*e*Sg	Sb	18 32 43.3	+0.5
DVE	Vedeno	0.68	52	*i* Pg	Pg	18 32 33.0	-0.6
GROC	Groznyy	0.72	24	*e*Pg	Pg	18 32 34.6	+0.2
GROC				*e*Sg	Sb	18 32 45.4	+0.6
VLKR	Vladikavkaz	0.73	314	*e*Pg	Pg	18 32 34.8	+0.2
VLKR				*e*Sg	Sb	18 32 45.3	+0.1
LACR	Lac	0.86	290	*e*Pg	Pg	18 32 36.2	-0.9
LACR				*e*Sg	Sg	18 32 47.6	-0.7
LGD	Lagodekhi	0.94	138	P	Pn	18 32 38.9	-0.7
LGD				S	Sn	18 32 52.4	-0.6
LGD	Lagodekhi	0.94	138	*e*Pg	Pn	18 32 38.8	-0.7
LGD				*e*Sg	Sn	18 32 51.7	-1.3
XNZR	Khunzakh	0.96	90	*e*Pg	Pn	18 32 39.6	-0.4
XNZR				*e*Sg	Sg	18 32 52.0	+0.4
BTNK	Botanikuri	0.97	208	P	Pn	18 32 42.2	+2.3
ARNR	Ardon	1.04	308	*e*Pg	Pn	18 32 40.7	-0.2
ARNR				*e*Sg	Sn	18 32 56.0	+0.6
BTKR	Batakoyurt	1.04	323	*e*Pg	Pn	18 32 41.2	+0.3
DLMR	Dylym	1.05	59	⇑*i*Pg	Pb	18 32 40.0	-0.5
	258nm,0.2s						
DLMR				⇑*e*Sg	Sg	18 32 54.4	+0.3
	933nm,0.5s						
KORR	Kora	1.12	299	*e*Pg	Pg	18 32 41.9	-0.1
KORR				*e*Sg	Sn	18 32 57.7	+0.3
ZEI	Tsey	1.13	283	*e*Pg	Pb	18 32 40.5	-1.5
KRNR	Karanay	1.15	75	⇑*i*Pg	Pn	18 32 42.0	-0.4
	71nm,0.4s						
KRNR				⇑*e*Sg	Sb	18 32 56.4	-0.7
	118nm,0.3s						
DBC	Dubki	1.16	65	⇑*e*Pg	Pn	18 32 41.8	-0.7
	65nm,0.4s						
DBC				⇑*e*Sg	Sg	18 32 57.8	+0.2
	107nm,0.4s						
GNBR	Gunib	1.17	97	⇑*i*Pg	Pg	18 32 42.9	+0.1
	64nm,0.4s						
GNBR				⇓*e*Sg	Sg	18 32 58.0	0.0
	449nm,0.5s						
ARKR	Arakani	1.18	87	⇓*e*Pg	Pg	18 32 42.9	-0.1
	36nm,0.5s						
ARKR				⇓*e*Sg	Sg	18 32 58.7	+0.3
	284nm,0.5s						
DDFL	Dedoflistskaro	1.22	154	P	Pg	18 32 47.2	+3.3
DDFL				S	Sg	18 33 09.9	+10
TRKR	Terskaya	1.28	338	*e*Pg	Pb	18 32 44.7	+0.2
TRKR				*e*Sg	Sg	18 33 03.3	+1.7
STDR	Stavd-Durt	1.28	310	*e*Pg	Pg	18 32 45.0	-0.1
STDR				*e*Sg	Sg	18 33 03.3	+1.6
BUJR	Buynaksk	1.29	77	⇑*e*Pg	Pg	18 32 45.3	+0.1
	68nm,0.3s						
BUJR				⇑*e*Sg	Sg	18 33 02.2	+0.3
	362nm,0.5s						
LSNR	Lesken	1.37	303	*e*Pg	Pb	18 32 46.2	+0.1
LSNR				*e*Sg	Sg	18 33 05.5	+1.0
DIGR	Digorskoe uzhe	1.39	285	*i* Pg	Pn	18 32 45.7	-0.1
DIGR				*e*Sg	Sn	18 33 03.3	-1.0
PRTR	Priterechnaya	1.46	326	*i* Pg	Pb	18 32 47.4	-0.2
PRTR				*e*Sg	Sg	18 33 08.6	+1.2
BRNG	Burnasheti	1.49	232	P	Pg	18 32 49.1	+0.1
BRNG				S	Sg	18 33 09.6	+1.2
DMNI	Dmanisi	1.51	217	P	Pg	18 32 48.9	-0.6
DMNI				S	Sg	18 33 10.0	+0.9
BKRG	Bakuriani	1.60	241	P	Pg	18 32 50.4	-0.7
BKRG				S	Sg	18 33 12.3	+0.4
NCK	Nalchik	1.63	306	*e*Pg	Pb	18 32 50.7	+0.2
NCK				*e*Sg	Sg	18 33 13.6	+0.7
TKB	Tkibuli	1.79	265	P	Pb	18 32 53.3	+0.1
TKB				S	Sg	18 33 18.1	+0.1
AKH	Akhalkalaki	1.82	232	P	Pb	18 32 53.9	+0.2
AKH				S	Sg	18 33 18.0	-0.9
AKH	Akhalkalaki	1.82	232	*e*Pg	Pb	18 32 53.9	+0.2
AKH				*e*Sg	Sg	18 33 17.3	-1.6
BGD	Bogdanovka	1.85	227	P	Pb	18 32 54.8	+0.3
BGD				S	Sg	18 33 19.8	-0.2
KBTC	Kuba-Taba	1.94	312	*e*Pg	Pn	18 32 54.0	+0.8
KBTC				*e*Sg	Sb	18 33 19.4	-0.4
AKT	Akhty	2.03	121	*e*Pg	Pn	18 32 55.3	+0.7
AKT				*e*Sg	Sn	18 33 20.2	+0.1
NEY	Neytrino	2.09	291	*e*Pg	Pb	18 32 58.0	-0.4
NEY				*e*Sg	Sb	18 33 24.6	+0.1
KBZ	Khabaz	2.18	304	*e*Pg	Pb	18 32 58.3	-1.5
KBZ				*e*Sg	Sb	18 33 26.6	-0.2
BEYR	Belyy Ugol+	2.39	309	*e*Pn	Pn	18 32 59.1	-0.4
BEYR				*e*Sn	Sn	18 33 29.4	+0.6
KIV	Kislovodsk	2.44	306	*e*Pn	Pn	18 33 00.1	0.0
KIV				*e*Sn	Sn	18 33 31.1	+1.2
GNI	Garni	2.44	192	*e*Pn	Pb	18 33 02.9	-1.5
GNI				*e*Sn	Sb	18 33 34.5	0.0

IDC ***28*** *18:45:20.9±4.6, 54°.99N×160°.66W, h60^{km}±39^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.2/49, mbtmp3.6/9, ML3.2/2, Error ellipse: s-maj=42.1km s-min=22.9km az=177.0*
NEIC ***28*** *18:45:20.9±1.4, 54°.78N±0°.06×160°.66W±0°.06, h78^{km}±9^{km}, Error ellipse: s-maj=9.5km s-min=4.2km az=197.0*
AEIC ***28*** *18:45:21±2.4, 54°.76N±0°.07×160°.75W±0°.06, h65^{km}±7^{km}, ML3.6, Error ellipse: s-maj=10.9km s-min=5.1km az=174.0*
ISC 28 18:45:19.5±0.8**, 54°.69N**±0°.09×**160°.65W**±0°.05**, h50**^{km}**, n42, σ1^{s}.94**/45**, mb3.6**/7**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.63	77		Sn	18 45 46.5	+5.1
CNBA	Chernabura Isl	0.63	77		Pn	18 45 36.1	+3.9
SDPT	Sand Point	0.67	8		Sn	18 45 45.8	+3.3
SDPT	Sand Point	0.67	8		Pn	18 45 35.7	+2.8
PVV	Pavlof Volcano	0.95	317		Pn	18 45 38.1	+1.6
PS4A	Pavlof South-4	0.96	314		Pn	18 45 38.3	+1.7
HAG	Hague Volcano	0.96	312		Pn	18 45 38.5	+1.9
DT1	Dutton Round H	1.03	295		Pn	18 45 39.2	+1.6
PN6	Pavlof North-6	1.06	317		Pn	18 45 40.2	+2.1
PN6					Sn	18 45 53.9	+2.1
FALS	False Pass	1.61	277		Sn	18 46 06.1	+1.0
FALS	False Pass	1.61	277		Pn	18 45 47.1	+1.6
SSLS	Shishaldin Sou	1.95	272		Pn	18 45 52.5	+2.4
SSLS					Sn	18 46 14.7	+1.3
SSLW	Shishaldin Wes	2.02	274		Pn	18 45 53.4	+2.4
CHGN	Chignik	2.06	37		Pn	18 45 53.8	+2.3
WESP	Westdahl Peak	2.38	267		Pn	18 45 58.4	+2.4
WEBT	Westdahl Beart	2.39	269		Pn	18 45 58.5	+2.4
AKUT	Akutan	3.05	262	Pn	Pn	18 46 07.3	+2.2
CHIR	Chirikof Islan	3.09	66	Pn	Pn	18 46 05.7	0.0
UNV	Unalaska Valle	3.54	259	Pn	Pn	18 46 13.1	+1.3
MSW	Makushin Switc	3.68	260		Pn	18 46 15.5	+1.8
OHAK	Old Harbor	4.85	55	Pn	Pn	18 46 30.7	+0.9
KDAK	Kodiak Island	5.46	52	P	Pn	18 46 39.1	+0.9
	2.2nm,0.3s,baz=333,slow=13,SNR=41						
KDAK				S	Sn	18 47 36.5	-3.1
	1.1nm,0.3s,baz=27,slow=23,SNR=7.5						
KDAK	Kodiak Island	5.46	52		Pn	18 46 39.0	+0.8
SEW	Seward	8.12	44	Pn	Pn	18 47 15.8	+1.3
SUA	Susitna One	8.58	34	Pn	Pn	18 47 21.5	+0.6
SKT	Skwentna	8.74	30	Pn	Pn	18 47 24.0	+1.0
KNK	Knik Glacier	9.33	39	Pn	Pn	18 47 30.6	-0.5
GHO	Glory Hole Cre	9.40	36	Pn	Pn	18 47 31.0	-1.2
HIN	Hinchinbrook I	9.51	47	Pn	Pn	18 47 34.0	+0.5
GLI	Glacier Island	9.52	44	Pn	Pn	18 47 33.1	-0.7
FID	Port Fidalgo	9.70	46	Pn	Pn	18 47 35.7	-0.5
EYAK	Cordova Ski Ar	9.90	48	Pn	Pn	18 47 38.8	-0.2
SCM	Sheep Creek Mo	10.01	39	Pn	Pn	18 47 40.3	-0.2
KLU	Klutina	10.34	43		Pn	18 47 45.0	0.0
ILAR	Eielson Array	12.23	29	P	Pn	18 48 07.3	-3.4
	0.1nm,0.3s,baz=221,slow=14,SNR=2.0						
ILAR				S	Sn	18 50 15.1	-10
	0.1nm,0.3s,baz=216,slow=27,SNR=2.6						
PETK	Petropavlovsk-	24.34	284	P	P	18 50 31.5	-0.7
	4.8nm,0.9s,baz=82,slow=12,SNR=4.8						
YKA	Yellowknife Ar	24.74	53	P	P	18 50 35.6	-0.2
	0.1nm,0.3s,baz=268,slow=7.3,SNR=2.2						
NVAR	Mina Array Bea	32.75	102	P	P	18 51 48.2	+0.6
	0.1nm,0.4s,baz=315,slow=8.9,SNR=1.7						
SONM	Songino Array	54.45	304	P	P	18 54 41.1	-0.4
	0.2nm,0.7s,baz=51,slow=7.0,SNR=2.0						
FINES	FINESS Array B	64.09	356	P	P	18 55 46.0	-1.6
	1.3nm,0.6s,baz=19,slow=6.5,SNR=5.2						
AKASG	Malin Array Be	74.66	354	P	P	18 56 51.5	-1.5
	0.8nm,0.5s,baz=8.8,slow=5.7,SNR=3.2						
CMAR	Chiang Mai Arr	80.99	289	P	P	18 57 28.3	-0.4
	0.4nm,0.5s,baz=26,slow=6.4,SNR=2.4						

ATH ***28*** *18:46:33.5, 34°.29N×25°.07E, h10^{km}±3^{km}, ML3.7/8, Error ellipse: s-maj=4.1km s-min=1.8km az=345.0*
ISK ***28*** *18:46:33.8, 34°.30N×25°.12E, h60^{km}, ML3.7/18*
THE ***28*** *18:46:33.8, 34°.34N×25°.10E, h0^{km}, ML3.6/5, Error ellipse: s-maj=1.4km s-min=0.5km az=169.0*
IDC ***28*** *18:46:35.0±2.1, 34°.46N×25°.10E, h30^{km}±13^{km}, mb3.9/19, mb1 3.9/26, mb1mx3.8/49, mbtmp4.0/26, ML4.1/7, MS3.3/4, Ms1 3.3/4, ms1mx2.8/50, Error ellipse: s-maj=15.9km s-min=13.8km az=179.0*
HLW ***28*** *18:46:45.2, 33°.58N×25°.66E, h25^{km}±23^{km}, Md4.1*
NIC ***28*** *18:46:47.9±0.0, 34°.45N×26°.65E, h4^{km}±3^{km}, Ml4.1/4*
DDA ***28*** *18:46:48.2, 35°.38N×25°.67E, h6^{km}±5^{km}, MW3.9*
ISC 28 18:46:32.3±1.3**, 34°.27N**±0°.04×**25°.12E**±0°.03**, h16**^{km}±8^{km}**, n159, σ1^{s}.58**/172**, mb4.3**/25**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	Sivas	0.79	341	P	Pg	18 46 47.8	+0.1
SIVA				AML	AML	18 47 06.5	
	comp=N,31957μm,0.5s						
SIVA				AML	AML	18 47 08.2	
	comp=E,65305μm,0.8s						
SIVA	Sivas	0.79	341	P	Pg	18 46 47.9	+0.1
SIVA				S	Sb	18 46 59.0	+0.8
	comp=E,25μm,0.6s						
TMBK	Timbaki Herakl	0.85	340	P	Pg	18 46 49.2	+0.2
TMBK				S	Sb	18 47 01.4	+1.4
	comp=E,3μm,0.6s						
LAST	Lasithi	0.94	18	P	Pg	18 46 50.8	+0.1
LAST				S	Sg	18 47 04.0	+0.9
LAST				AML	AML	18 47 11.0	
	comp=E,4781μm,0.6s						
LAST				AML	AML	18 47 19.2	
	comp=N,5519μm,0.9s						
LAST	Lasithi	0.94	18	P	Pg	18 46 50.8	+0.1
GVD	Gavdhos	1.02	304	P	Pb	18 46 52.5	+0.8
GVD				S	Sg	18 47 05.4	-0.2
GVD				AML	AML	18 47 15.0	
	comp=N,15779μm,0.6s						
GVD				AML	AML	18 47 16.7	
	comp=E,17153μm,0.5s						
GVD	Gavdhos	1.02	304	P	Pb	18 46 52.5	+0.8
GVD				S	Sn	18 47 07.1	+1.1
	comp=E,7μm,0.6s						
GVD	Gavdhos	1.02	304	PG	Pb	18 46 52.5	+0.8
GVD				SG	Sn	18 47 06.8	+0.8
GVDS	Gavdos	1.02	304	P	Pb	18 46 52.8	+1.1
GVDS				S	Sn	18 47 07.7	+1.6
	comp=E,5μm,0.7s						
GVDS	Gavdos	1.02	304	PG	Pb	18 46 52.6	+0.9
IDI	Anoyia	1.04	350	Pg	Pg	18 46 51.4	-1.1
	comp=E,80nm,0.3s,baz=312,slow=20,SNR=799						
IDI				Lg	Lg	18 47 03.4	

	comp=E,136nm,0.3s,baz=131,slow=20,SNR=10						
IDI	Anoyia	1.04	350	P	Pg	18 46 51.8	-0.7
IDI				S	Sb	18 47 06.6	+1.3
IDI				AML	AML	18 47 11.9	
	comp=N,4550µm,0.5s						
IDI				AML	AML	18 47 13.2	
	comp=E,4808µm,0.5s						
IDI	Anoyia	1.04	350	P	Pg	18 46 51.8	-0.7
IDI	Anoyia	1.04	350	PG	Pg	18 46 52.1	-0.3
IDI				SG	Sg	18 47 06.2	+0.2
KSTL	Kastelli Herak	1.04	358	P	Pg	18 46 51.2	-1.2
KSTL				S	Sg	18 47 04.5	-1.5
HRKL	Herakleio	1.04	359	P	Pg	18 46 52.8	+0.3
HRKL	Herakleio	1.04	359	PG	Pg	18 46 52.4	-0.1
HRKL				SG	Sg	18 47 06.5	+0.3
NPS	Neapolis	1.07	22	P	Pg	18 46 53.3	+0.1
NPS				S	Sb	18 47 08.5	+2.2
NPS				AML	AML	18 47 16.6	
	comp=N,3816µm,0.7s						
NPS				AML	AML	18 47 22.2	
	comp=E,6444µm,0.6s						
NPS	Neapolis	1.07	22	P	Pg	18 46 53.0	-0.1
STIA	Sitia Lasithi	1.23	40	P	Pn	18 46 55.9	+1.1
ZKR	Zakros	1.24	47	P	Pn	18 46 57.1	+2.1
ZKR				AML	AML	18 47 25.1	
	comp=N,1812µm,0.7s						
ZKR				AML	AML	18 47 27.6	
	comp=E,3799µm,0.9s						
ZKR	Zakros	1.24	47	P	Pn	18 46 56.7	+1.7
ZKR				S	Sg	18 47 13.7	+1.2
	comp=E,1µm,0.6s						
ZKR	Zakros	1.24	47	PN	Pn	18 46 55.9	+0.9
VAM	Vamos	1.37	327	P	Pn	18 46 57.7	+1.0
VAM				S	Sb	18 47 15.7	+1.0
VAM				AML	AML	18 47 25.0	
	comp=E,6453µm,0.4s						
VAM				AML	AML	18 47 31.9	
	comp=N,6475µm,0.6s						
VAM	Vamos	1.37	327	P	Pn	18 46 57.3	+0.6
IMMV	Iera Moni Meta	1.51	322	P	Pn	18 47 00.1	+1.4
IMMV				AML	AML	18 47 36.3	
	comp=N,5595µm,0.5s						
IMMV				AML	AML	18 47 36.8	
	comp=E,6370µm,0.9s						
IMMV	Iera Moni Meta	1.51	322	P	Pn	18 47 00.0	+1.2
IMMV	Iera Moni Meta	1.51	322	PN	Pn	18 46 59.4	+0.6
THR6	Thira Island,	2.10	6	P	Pn	18 47 08.4	+1.6
KARP	Karpathos	2.11	52	P	Pn	18 47 10.5	+3.5
KARP				AML	AML	18 47 56.1	
	comp=E,1.5nm,0.8s						
KARP				AML	AML	18 48 02.4	
	comp=E,1.2nm,0.7s						
SANT	Santorini	2.12	7	P	Pn	18 47 07.8	+0.6
SANT	Santorini	2.12	7	PN	Pn	18 47 07.7	+0.6
SANT	Santorini	2.12	7	*i* P	Pn	18 47 07.6	+0.5
SANT				*i* S	Sn	18 47 22.0	-11
THR3	Thira Island,	2.15	6	P	Pn	18 47 08.8	+1.3
ANAF	Anafi Island	2.15	14	P	Pn	18 47 09.0	+1.4
THR5	Thira Island,	2.15	5	P	Pn	18 47 09.1	+1.5
THR8	Santorini-Mono	2.16	8	P	Pn	18 47 09.0	+1.4
ANKY	Antikythira Is	2.18	318	P	Pn	18 47 10.8	+2.8
KTHA	Kythira Island	2.60	320	PN	Pn	18 47 15.3	+1.6
SLUM	Salum	2.77	178	P	Pn	18 47 18.8	+2.8
	baz=191						
APE	Apeiranthos	2.82	7	P	Pn	18 47 17.5	+0.8
APE	Apeiranthos	2.82	7	PN	Pn	18 47 17.1	+0.4
APE	Apeiranthos	2.82	7	*i* P	Pn	18 47 17.1	+0.4
APE				*i* S	Sn	18 47 37.3	-13
KOSK	Kos Island	2.91	31	PN	Pn	18 47 19.1	+1.2
ARG	Arkhangelos	3.14	51	PN	Pn	18 47 22.9	+1.8
ARG	Arkhangelos	3.14	51	P	Pn	18 47 23.9	+2.8
ARG				S	Sn	18 47 52.6	-5.6
DATC	Datca-Mugla	3.24	39	PN	Pn	18 47 23.4	+0.9
BODT	Bodrum	3.31	32	PN	Pn	18 47 23.9	+0.4
BDRM	Kayabasi	3.38	33	*i* P	Pn	18 47 25.9	+1.5
BDRM				*i* S	Sn	18 47 41.9	-22
MRSB	Marmaris-Mugla	3.50	45	PN	Pn	18 47 27.4	+1.2
TURN	Turunc	3.57	45	PN	Pn	18 47 28.7	+1.6
TURN	Turunc	3.57	45	*i* P	Pn	18 47 29.1	+2.1
TURN				*i* S	Sn	18 47 49.7	-19
MLSB	Milas	3.72	35	PN	Pn	18 47 30.4	+1.3
GCAM	G?zelcaml?	3.83	26	PN	Pn	18 47 31.9	+1.3
GCAM	G?zelcaml?	3.83	26	*i* P	Pn	18 47 30.4	-0.2
GCAM				*i* S	Sn	18 47 49.1	-26
DALY	Dalyan (Mula)	3.85	48	PN	Pn	18 47 32.5	+1.7
YER	Yerkesik	3.85	41	PN	Pn	18 47 32.6	+1.7
ITM	Ithomi	3.90	319	PN	Pn	18 47 32.6	+1.1
DION	Dionisos Attik	3.92	346	P	Pn	18 47 32.8	+0.9
MULA	Mugla, Merkez-	3.96	40	*i* P	Pn	18 47 34.9	+2.4
MULA				*i* S	Sn	18 47 57.7	-21
FETY	Fethiye	4.01	53	PN	Pn	18 47 33.8	+0.7
DGB	zmir	4.04	20	*i* P	Pn	18 47 32.5	-0.9
DGB				*i* S	Sn	18 47 57.7	-23
KSL	Kastellorizon	4.11	62	P	Pn	18 47 35.6	+1.1
KSL				S	Sn	18 48 12.5	-10
AKAS	Kas	4.16	61	PN	Pn	18 47 35.9	+0.6
AKAS	Kas	4.16	61	*i* P	Pn	18 47 36.1	+0.7
URLA	Izmir	4.26	16	PN	Pn	18 47 37.2	+0.7
URLA	Izmir	4.26	16	*i* P	Pn	18 47 36.4	-0.1
URLA				*i* S	Pb	18 47 51.2	+4.4
AYDB	Zeytinkoy-Aydi	4.30	31	PN	Pn	18 47 39.2	+2.0
TAVA	DENIZLI_Tavas	4.44	43	*i* P	Pn	18 47 41.9	+2.9
TAVA				*i* S	Sn	18 48 12.3	-18
CAEL	Denizli, Camel	4.45	49	*i* P	Pn	18 47 41.0	+1.7
CAEL				*i* S	Sn	18 48 09.7	-21
ELL	Elmali	4.63	56	PN	Pn	18 47 43.7	+2.0
ELL	Elmali	4.63	56	P	Pn	18 47 42.8	+1.2
GOLH	Golhisar	4.67	49	*i* P	Pn	18 47 44.9	+2.6
AKUM	Antalya-Kumluc	4.74	63	*i* P	Pn	18 47 44.8	+1.7
ZEDA	zmir-Bergama	4.95	18	*i* P	Pn	18 47 46.7	+0.7
ZEDA				*i* S	Pb	18 48 09.1	+11
SWA2		5.02	177	P	Pn	18 47 48.9	+2.0
	baz=183						
MANT	Manisa	5.05	32	*i* P	Pn	18 47 49.4	+1.8
MANT				*i* S	Sn	18 48 18.5	-27
KORT	Korkueli	5.06	56	PN	Pn	18 47 49.3	+1.7
KORT	Korkueli	5.06	56	*i* P	Pn	18 47 50.8	+3.1
AKHS	Akhisar	5.09	24	*i* P	Pn	18 47 49.2	+1.3
KULA	Kula-Manisa	5.11	33	PN	Pn	18 47 50.0	+1.7
OSC1	CSNet OBS 1	5.18	97	P	Pn	18 47 50.1	+1.0
AGG	Agios Georgios	5.25	336	PN	Pn	18 47 51.1	+1.0
AGG	Agios Georgios	5.25	336	*i* P	Pn	18 47 51.3	+1.1
BRDR	BURDUR-Merkez	5.27	48	*i* P	Pn	18 47 52.6	+2.1
KHAL	Karahalli	5.41	40	*i* P	Pn	18 47 54.1	+1.7
USAK	Uak-Merkez	5.44	34	*i* P	Pn	18 47 54.9	+2.2
BUHA	Balikesir, Bur	5.46	16	*i* P	Pn	18 47 54.4	+1.4
STEP	BALIKESIR_Sava	5.51	21	*i* P	Pn	18 47 55.6	+1.9
BAYC	CANAKKALE_Bayr	5.58	11	*i* P	Pn	18 47 55.4	+0.7
AKMS	Akamas	6.00	81	P	Pn	18 48 00.1	-0.3
AKMS				AML	AML	18 49 07.6	
	comp=E,0.6nm,0.2s						
AKMS				AML	AML	18 49 10.7	
	comp=E,0.4nm,0.3s						
OSC2	CSNet OBS 4	6.08	99	P	Pn	18 48 02.6	+1.2
ALFC	Alefka	6.23	80	P	Pn	18 48 03.1	-0.4
ALFC				AML	AML	18 49 13.5	
	comp=E,0.6nm,0.3s						
ALFC				AML	AML	18 49 16.0	
	comp=E,0.5nm,0.6s						
SZAC	Souni	6.43	83	P	Pn	18 48 06.4	+0.1
SZAC				AML	AML	18 49 20.5	
	comp=E,0.4nm,0.5s						
SZAC				AML	AML	18 49 23.0	
	comp=E,0.5nm,0.5s						
ASGA	Asgata	6.73	83	P	Pn	18 48 10.7	+0.2
CSS	Mathiatis	6.81	82	P	Pn	18 48 11.7	+0.2
MVOU	Mavrovouni	7.06	82	P	Pn	18 48 15.6	+0.7
KOT	Kottamia	7.15	125	P	Pn	18 48 18.3	+2.0
	baz=123						
KOT				S	Sn	18 49 25.9	-11
	baz=123						
HSAF	As Saff	7.17	129	P	Pn	18 48 18.3	+1.8
	baz=126						
GLL	Jalalah	7.29	128	P	Pn	18 48 20.1	+1.8
	baz=126						
HHAG	Hagoal	7.32	124	P	Pn	18 48 21.0	+2.4
	baz=121						
NBNS	Bani Suef	7.71	135	P	Pn	18 48 25.6	+1.7
	baz=134						
SUZ	Suez	7.89	122	P	Pn	18 48 27.8	+1.3
	baz=119						
MMAI	Mount Meron Ar	8.67	95	Pn	Pn	18 48 37.3	+0.2
	comp=E,2.1nm,0.3s,baz=278,slow=12,SNR=13						
MMAI				Sn	Sn	18 50 09.8	-4.7
	comp=E,4.2nm,0.3s,baz=234,slow=14,SNR=3.5						
BRTR	Keskin Array B	8.72	49	Pn	Pn	18 48 38.5	+0.6
	comp=E,0.2nm,0.3s,baz=235,slow=15,SNR=7.3						
BRTR				Sn	Sn	18 50 15.3	-0.7
	comp=E,0.1nm,0.3s,baz=218,slow=27,SNR=1.2						
BRTR				LR	LR	18 52 59.5	
	comp=E,90nm,18.2s,baz=251,slow=45						
EIL	Elat	9.53	116	Pn	Pn	18 48 49.8	+1.0
	comp=E,1.3nm,0.3s,baz=250,slow=2.1,SNR=32						
EIL				Sn	Sn	18 50 28.9	-6.6
	comp=E,1.4nm,0.3s,baz=16,slow=18,SNR=2.7						
DBRK	Dubrovnik	10.01	329	*e*Pn	Pn	18 48 51.6	-3.7
DBRK				Sn	Sn	18 50 33.9	-13
STON	Ston	10.37	328	*e*Pn	Pn	18 48 57.3	-3.0
STON				Sn	Sn	18 50 42.4	-14
MAKA	Makarska	11.00	327	*e*Pn	Pn	18 49 06.2	-2.6
MAKA				Sn	Sn	18 50 58.6	-13
RICI	Ricice	11.11	328	*e*Pn	Pn	18 49 07.2	-3.3
RICI				Sn	Sn	18 51 01.0	-13
HVAR	Hvar	11.17	325	*e*Pn	Pn	18 49 09.2	-2.1
HVAR				Sn	Sn	18 51 05.3	-11
MLR	Muntele Rosu	11.23	3	LR	LR	18 54 48.5	
	comp=E,182nm,18.6s,baz=266,slow=45						
KIJV	Kijevo	11.84	328	*e*Pn	Pn	18 49 18.1	-2.3
KIJV				Sn	Sn	18 51 18.8	-13
ZIRJ	Zirje	11.92	325	*e*Pn	Pn	18 49 20.0	-1.4
ZIRJ				Sn	Sn	18 51 23.1	-11
MORI	Morici	12.05	325	*e*Pn	Pn	18 49 20.8	-2.5
MORI				Sn	Sn	18 51 25.3	-12
DUGI	Dugi Otok	12.45	324	*e*Pn	Pn	18 49 27.5	-1.3
DUGI				Sn	Sn	18 51 36.5	-11
UDBI	Udbina	12.53	328	*e*Pn	Pn	18 49 27.8	-2.2
UDBI				Sn	Sn	18 51 36.2	-13
NVLJ	Novalja	12.97	325	*e*Pn	Pn	18 49 34.3	-1.6
NVLJ				Sn	Sn	18 51 48.2	-11
KEST	Kesra	13.02	281	LR	LR	18 55 47.9	
	comp=E,116nm,18.1s,baz=333,slow=43						
KALN	Kalnik	13.56	333	*e*Pn	Pn	18 49 39.8	-4.2
KALN				Sn	Sn	18 51 58.5	-16
ARSA	Arzberg	14.85	334	*e*Pn	P	18 50 06.3	-1.0
	comp=E,1.4nm,0.5s						
KBA	Koelnbreinsper	15.58	329	*e*Pn	P	18 50 17.1	+1.5
	comp=E,1.6nm,0.4s						
ABTA	Abfaltersbach	15.70	326	*e*Pn	P	18 50 17.6	+0.8
	comp=E,3.4nm,0.5s						
VRAC	Vranov	16.30	340	Pn	Pn	18 50 20.0	-0.4
	comp=E,0.2nm,0.3s,baz=169,slow=11,SNR=4.6						
GNI	Garni	16.69	64	LR	LR	18 58 13.8	
	comp=E,113nm,18.3s,baz=301,slow=42						
AKASG	Malin Array Be	16.70	9	Pn	Pn	18 50 22.1	-3.3
	comp=E,3.1nm,0.3s,baz=198,slow=11,SNR=21						
KBZ	Khabaz	16.71	50	Pn	Pn	18 50 26.6	+0.9
	comp=E,0.4nm,0.3s,baz=149,slow=1.0,SNR=12						
FETA	Feichten	16.74	324	*e*Pn	P	18 50 31.2	+2.7
	comp=E,3.8nm,0.8s						
GERES	GERESS Array B	16.86	333	Pn	Pn	18 50 27.2	-0.5
	comp=E,0.6nm,0.3s,baz=145,slow=12,SNR=11						
KRLC	Kraliky	16.94	341	*e*P	Pn	18 50 28.8	+0.2
DAVOX	Davos/Dischmat	17.00	322	Pn	Pn	18 50 28.2	-1.4
	comp=E,0.2nm,0.3s,baz=155,slow=17,SNR=1.4						
KHC	Kasperske Hory	17.14	334	*e*P	Pn	18 50 32.5	+1.4
DPC	Dobruska-Polom	17.32	341	*e*P	Pn	18 50 35.3	+2.0
DAVA	Damuels	17.35	323	*e*Pn	P	18 50 36.7	+1.6
	comp=E,0.7nm,0.2s						
ESDC	Sonseca Array	23.80	292	P	P	18 51 44.7	+0.3
	comp=E,0.9nm,0.7s,baz=86,slow=9.0,SNR=5.0						
BELG	Belogornoye	24.25	35	P	P	18 51 47.4	-1.0
	comp=E,14nm,0.9s,baz=14,slow=3.5,SNR=6.3						
HFS	Hagfors	26.94	347	P	P	18 52 11.8	-0.8
	comp=E,2.4nm,0.7s,baz=151,slow=9.5,SNR=1.8						
FINES	FINESS Array B	27.20	1	P	P	18 52 13.3	-1.7
	comp=E,6.9nm,1.0s,baz=172,slow=10,SNR=6.0						
NOA	NORSAR Array B	28.25	346	P	P	18 52 22.8	-1.7
	comp=E,0.3nm,0.5s,baz=146,slow=8.8,SNR=1.8						
EKA	Eskdalemuir Ar	28.75	326	P	P	18 52 27.6	-1.3
	comp=E,1.4nm,0.6s,baz=129,slow=11,SNR=2.3						
AKTO	Aktyubinsk	28.89	46	P	P	18 52 30.1	-0.1
	comp=E,0.9nm,0.4s,baz=242,slow=12,SNR=2.9						
TORD	Torodi Ar. Bea	29.89	231	P	P	18 52 41.0	+1.6
	comp=E,3.4nm,0.5s,baz=34,slow=8.6,SNR=18						
ARU	Arti	31.80	36	P	P	18 52 54.7	-1.1
	comp=E,0.5nm,0.3s,baz=227,slow=2.8,SNR=5.9						
ARCES	ARCESS Array B	35.32	0	P	P	18 53 24.7	-1.7
	comp=E,4.0nm,0.9s,baz=171,slow=8.4,SNR=7.9						
AAK	Ala-Archa	39.09	63	P	P	18 53 59.9	+1.0
	comp=E,0.9nm,0.4s,baz=259,slow=13,SNR=6.6						
MKAR	Makanchi Array	44.30	56	P	P	18 54 41.6	+0.3
	comp=E,2.0nm,0.7s,baz=276,slow=7.1,SNR=23						
ZALV	Zalesovo Beam	45.65	46	P	P	18 54 51.8	-0.1
	comp=E,4.9nm,0.4s,baz=271,slow=8.6,SNR=28						
DANN	Dangsing	49.86	80	*e*P	P	18 55 26.7	+1.4
	comp=E,19nm,0.6s						
DMN	Daman	51.25	80	*e*P	P	18 55 36.5	+0.8
	comp=E,6.2nm,0.5s						
KKN	Kakani	51.32	80	*e*P	P	18 55 36.8	+0.6
	comp=E,7.7nm,0.7s						
PKIN	Phulchoki	51.50	80	*e*P	P	18 55 38.0	+0.4
	comp=E,7.1nm,0.8s						
PKI	Pulchoki	51.51	80	*e*P	P	18 55 38.3	+0.5
	comp=E,5.9nm,0.8s						
GUN	Gumba	51.76	79	*e*P	P	18 55 40.3	+0.6
	comp=E,14nm,0.8s						
SONM	Songino Array	60.08	50	P	P	18 56 39.7	+1.0
	comp=E,1.2nm,0.6s,baz=288,slow=7.3,SNR=16						
BOSA	Boshof	62.54	180	P	P	18 56 57.8	+2.4
	comp=E,2.2nm,0.8s,baz=355,slow=11,SNR=2.5						
CMAR	Chiang Mai Arr	66.71	83	P	P	18 57 23.0	+0.1
	comp=E,0.2nm,0.3s,baz=301,slow=6.0,SNR=1.7						
USRK	Ussuriysk Ar.	77.50	45	P	P	18 58 26.6	-0.5
	comp=E,1.9nm,0.5s,baz=285,slow=5.2,SNR=12						
YKA	Yellowknife Ar	78.29	342	P	P	18 58 30.7	-0.4
	comp=E,0.1nm,0.3s,baz=45,slow=5.3,SNR=4.5						
ILAR	Eielson Array	81.09	357	P	P	18 58 46.3	0.0
	comp=E,0.2nm,0.6s,baz=352,slow=5.8,SNR=2.6						

IDC ***28*** *19:19:56.3±0.8, 48.°36S×165.°00E, h0^{km}, mb4.6/6, mb1 4.8/8, mb1mx4.6/20, mbtmp4.6/8, ML4.0/2, MS4.1/16, Ms1 4.1/16, ms1mx4.0/21, Error ellipse: s-maj=27.8km s-min=22.0km az=10.0*

BJI ***28*** *19:19:57.0±0.0, 49.°03S×164.°15E, h11^{km}, mB5.6/3, mb5.1/11*

WEL ***28*** *19:20:00, 48.°43S×165.°34E, h3^{km}, ML5.3, Mw5.1, Moment Tensor Solution. s5 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.88; M$_{\theta\theta}$0.61; M$_{\phi\phi}$0.27; M$_{r\theta}$-1.13; M$_{\theta\phi}$0.48; M$_{\phi r}$-5.02; Fault plane solution: M$_0$5.22000×10^{16} NP1: ϕ$_s$250.00000°, δ7.00000°, λ-34.00000°. NP2: ϕ$_s$14.00000°, δ86.00000°, λ-96.00000°. Principal axes: T 5027.5900, Plg41.0000°, Azm109.0000°; N 375.7900, Plg6.0000°, Azm14.0000°; P -5403.3800, Plg49.0000°, Azm278.0000°;*

NEIC ***28*** *19:20:01.6±1.9, 48.°5S±0.°1×165.°0E±0.°2, h40^{km}±6^{km}, mb4.7/19 Error ellipse: s-maj=17.4km s-min=13.9km az=217.0*

NOU ***28*** *19:20:02.1, 48.°61S×165.°15E, h45^{km}, mb5.0, Off W. Coast of S. Island, N.Z.*

ISC 28 19:20:01.1±0.5**, 48.°54S**±0.°06×**165.°03E**±0.°06**, h35**^{km}**, n161,** σ1^{s}**45**/150**, mb4.7**/11**, MS4.2**/18**, 1C, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	2.63	26	Pn	Pn	19 20 39.7	-1.3
PYZ	Puysegur Point	2.63	26	P	Pn	19 20 40.8	-0.2
PYZ				S	Sn	19 21 11.6	0.0
APZ	The Paps	2.63	50	P	Pn	19 20 40.6	-0.5
APZ				S	Sn	19 21 11.6	-0.2
WHZ	Wether Hill Ro	3.31	38		Pn	19 20 50.1	-0.3
WHZ	Wether Hill Ro	3.31	38	P	Pn	19 20 50.0	-0.4
WHZ				S	Sn	19 21 29.8	+1.3
DCZ	Deep Cove	3.40	26	Pn	Pn	19 20 51.2	-0.5
DCZ	Deep Cove	3.40	26	P	Pn	19 20 51.8	+0.1
DCZ				S	Sn	19 21 31.7	+0.9
SYZ	Scrubby Hill	3.43	56	P	Pn	19 20 52.1	+0.1
SYZ				S	Sn	19 21 31.2	-0.2
MLZ	Mavora Lakes	3.82	35		Pn	19 20 57.9	+0.4
MLZ	Mavora Lakes	3.82	35	P	Pn	19 20 57.8	+0.4
MLZ				S	Sn	19 21 43.1	+2.1
TUZ	Tuapeka	4.06	52	P	Pn	19 21 01.3	+0.5
MSZ	Milford Sound	4.35	28	P	Pn	19 21 07.0	+2.3
EAZ	Earnscleugh	4.42	43	P	Pn	19 21 05.2	-0.5
WKZ	Wanaka	4.62	38	Pn	Pn	19 21 09.2	+0.7
WKZ	Wanaka	4.62	38	P	Pn	19 21 09.8	+1.3
HHSZ	Highcliff Hill	4.63	57	P	Pn	19 21 09.7	+1.1
JCZ	Jackson Bay	5.17	32	P	Pn	19 21 17.5	+1.5
ODZ	Otahua Downs	5.21	50		Pn	19 21 15.1	-1.4
ODZ	Otahua Downs	5.21	50	P	Pn	19 21 15.0	-1.4
LBZ	Lake Benmore	5.47	42	Pn	Pn	19 21 18.1	-2.0
LBZ	Lake Benmore	5.47	42	P	Pn	19 21 18.2	-2.0
TMZ	Timaru	5.86	47	P	Pn	19 21 24.3	-1.2
FOZ	Fox Glacier	6.01	35		Pn	19 21 28.2	+0.7
FOZ	Fox Glacier	6.01	35	P	Pn	19 21 28.8	+1.2
ARCZ	Arundel	6.27	45	P	Pn	19 21 29.1	-1.9
RPZ	Rata Peaks	6.39	43	Pn	Pn	19 21 29.7	-3.0
	7.0nm,0.3s,baz=225,slow=4.6,SNR=42						
RPZ				Sn	Sn	19 22 42.4	-2.0
	22nm,0.3s,baz=38,slow=23,SNR=2.6						
RPZ	Rata Peaks	6.39	43	Pn	Pn	19 21 29.4	-3.3
RPZ	Rata Peaks	6.39	43	P	Pn	19 21 29.7	-3.0
GCSZ	Gaunt Creek Bo	6.40	37	P	Pn	19 21 33.1	+0.3
WACZ	Wakanui South	6.59	48	P	Pn	19 21 34.6	-0.9
WVZ	Waitaha Valley	6.77	38	P	Pn	19 21 38.1	+0.3
RACZ	Rakaia	6.89	48	P	Pn	19 21 38.8	-0.9
MCQ	Macquarie Isla	7.07	210	P	Pn	19 21 38.9	-2.9
	baz=7.0,SNR=39						
MCQ	Macquarie Isla	7.07	210	Pn	Pn	19 21 38.7	-3.2
MCQ	Macquarie Isla	7.07	210	P	Pn	19 21 43.1	+1.2
	198nm,1.2s						
OXZ	Oxford	7.14	46		Pn	19 21 41.5	-1.6
OXZ	Oxford	7.14	46	P	Pn	19 21 41.7	-1.4
MQZ	McQueen's Vall	7.17	50	Pn	Pn	19 21 41.5	-1.9
MQZ	McQueen's Vall	7.17	50	P	Pn	19 21 42.3	-1.1
AKCZ	Akaroa Harbour	7.19	52	P	Pn	19 21 43.6	-0.1
INZ	Inchbonnie	7.35	40	P	Pn	19 21 46.1	+0.2
OKCZ	Okains Bay	7.37	52	P	Pn	19 21 47.6	+1.5
LTZ	Lake Taylor	7.67	44	Pn	Pn	19 21 47.9	-2.4
LTZ	Lake Taylor	7.67	44	P	Pn	19 21 48.3	-2.1
GVZ	Greta Valley S	7.90	48	P	Pn	19 21 56.0	+2.7
DSZ	Denniston Nort	8.31	38	P	Pn	19 21 58.5	-0.6
KHZ	Kahutara	8.55	47		Pn	19 22 01.4	-1.0
KHZ	Kahutara	8.55	47	P	Pn	19 22 01.9	-0.5
THZ	Tophouse	8.77	42	Pn	Pn	19 22 04.7	-0.6
THZ	Tophouse	8.77	42	P	Pn	19 22 06.0	+0.7
BSWZ	Blackbirch Sta	9.25	46	Pn	Pn	19 22 13.0	+1.1
BSWZ	Blackbirch Sta	9.25	46	P	Pn	19 22 15.3	+3.3
QRZ	Quartz Range	9.38	37	Pn	Pn	19 22 12.7	-1.0
QRZ	Quartz Range	9.38	37	P	Pn	19 22 13.7	0.0
TUWZ	Tuamarina	9.50	45		Pn	19 22 14.1	-1.3
SNZO	South Karori	9.96	47		Pn	19 22 23.2	+1.5
BHW	Baring Head	9.97	48	Pn	Pn	19 22 23.5	+1.8
PLWZ	Palliser	10.04	50		Pn	19 22 22.4	-0.3
PLWZ	Palliser	10.04	50	P	Pn	19 22 25.1	+2.3
BFZ	Birch Farm	11.20	50	Pn	Pn	19 22 39.7	+1.1
HIZ	Hauiti	12.29	39		Pn	19 22 52.5	-1.1
BKZ	Black Stump Fm	12.49	46		Pn	19 22 55.3	-1.0
URZ	Urewera	13.50	45	Pn	Pn	19 23 07.8	-2.3
	0.4nm,0.3s,baz=117,slow=7.3,SNR=3.3						
URZ				Sn	Sn	19 25 32.9	-5.8
	0.8nm,0.3s,baz=38,slow=8.3,SNR=2.3						
TAU	Tasmania Unive	13.59	288	Pn	Pn	19 23 06.6	-4.6
OUZ	Omahuta	14.75	29	Pn	Pn	19 23 27.5	+0.5
CNB	Canberra Magne	17.58	313	P	Pn	19 24 01.9	-1.4
	baz=18,SNR=5.3						
CAN	Canberra	17.75	312	P	Pn	19 24 04.9	-0.5
TOO	Toolangi	17.95	300	P	P	19 24 07.7	-0.5
	baz=18,SNR=21						
TOO	Toolangi	17.95	300		Pn	19 24 07.0	-0.9
TOO				IAmb	IAmb	19 24 09.1	
	comp=Z,61nm,1.0s						
RAO	Raoul Island	23.29	40	LR	LR	19 34 05.2	
	comp=Z,121nm,19.9s,baz=164,slow=37						
STKA	Stephens Creek	24.30	305	P	P	19 25 15.9	+0.7
	baz=24,SNR=10						
STKA	Stephens Creek	24.30	305	P	P	19 25 15.3	+0.1
	comp=Z,26nm,1.0s,baz=133,slow=10,SNR=21						
STKA				LR	LR	19 33 51.8	
	comp=Z,739nm,18.4s,baz=145,slow=35						
STKA	Stephens Creek	24.30	305	P	P	19 25 15.9	+0.7
HTT	Hallett	24.66	298	P	P	19 25 18.9	+0.3
	baz=25,SNR=3.6						
RMQ	Roma	25.42	324	P	P	19 25 26.6	+1.3
	baz=25,SNR=29						
EIDS	Eidsvold	25.59	330	P	P	19 25 27.6	+0.7
	baz=26,SNR=4.9						
EIDS	Eidsvold	25.59	330	P	P	19 25 27.6	+0.7
DZM	Mont Dzumac	26.44	3	P	P	19 25 33.5	-1.2
	comp=Z,9.4nm,1.0s,baz=286,slow=23,SNR=2.2						
DZM				LR	LR	19 34 57.7	
	comp=Z,269nm,18.4s,baz=204,slow=34						
DZM	Mont Dzumac	26.44	3	*e*LR	LR	19 31 55.8	
	comp=Z,336nm,21.6s						
VNDA	Vanda	29.11	181	LR	LR	19 35 08.6	
	comp=Z,186nm,19.3s,baz=34,slow=31						
FORT	Forrest	33.13	289	P	P	19 26 33.4	-0.5
QIS	Mount Isa	34.59	315	P	P	19 26 46.4	-0.2
	baz=35,SNR=7.4						
MTSU	Mount Surprise	34.69	324	P	P	19 26 48.1	+0.6
	baz=35,SNR=7.3						
ASAR	Alice Springs	34.93	304	P	P	19 26 48.8	-0.8
	comp=Z,9.4nm,0.8s,baz=135,slow=8.6,SNR=139						
ASAR				PcP	PcP	19 29 21.0	-0.7
	comp=Z,1.0nm,0.9s,baz=143,slow=3.4,SNR=2.6						
ASAR				LR	LR	19 41 03.4	
	comp=Z,989nm,18.1s,baz=154,slow=36						
AS31	Alice Springs	34.93	304	P	P	19 26 49.0	-0.6
AS31				IAmb	IAmb	19 26 50.5	
	comp=Z,8.2nm,1.1s						
WRA	Warramunga Arr	37.73	308	P	P	19 27 12.0	-1.5
	comp=Z,9.7nm,1.0s,baz=143,slow=9.0,SNR=51						
WRA				PcP	PcP	19 29 29.9	-0.1
	comp=Z,1.0nm,0.8s,baz=147,slow=3.2,SNR=5.2						
WRA				LR	LR	19 41 59.6	
	comp=Z,406nm,19.2s,baz=165,slow=35						
COEN	Coen	38.93	325	P	P	19 27 22.4	-1.2
COEN				IAmb	IAmb	19 27 25.9	
	comp=Z,23nm,1.4s						
KLBR	Kellerberrin	39.26	278	P	P	19 27 25.5	-0.7
	baz=39,SNR=5.3						
H01W1	Cape Leeuwin H	39.63	271	T	T	20 09 25.5	
	baz=126,slow=75,SNR=26						
H01W2	Cape Leeuwin H	39.64	271	T	T	20 09 22.4	
	baz=126,slow=75,SNR=30						
H01W3	Cape Leeuwin H	39.65	271	T	T	20 09 24.0	
	baz=126,slow=75,SNR=24						
MORW	Morawa	42.02	279	P	P	19 27 48.7	-0.3
	baz=42,SNR=5.9						
MORW	Morawa	42.02	279	P	P	19 27 48.8	-0.3
TBI	Tubuai	43.74	71	*e*LR	LR	19 40 32.6	
	comp=Z,265nm,23.0s,baz=213						
FITZ	Fitzroy Crossi	44.01	300	P	P	19 28 04.9	-0.3
	baz=44,SNR=7.6						
FITZ	Fitzroy Crossi	44.01	300	P	P	19 28 04.9	-0.3
KNRA	Kununurra	44.21	305	P	P	19 28 08.0	+1.1
PSA00	Pilbara Seismi	44.84	291	P	P	19 28 11.3	-0.5
PSAA1	Pilbara Seismi	44.84	291	P	P	19 28 10.6	-1.2
PSAB2	Pilbara Seismi	44.84	291	P	P	19 28 10.6	-1.2
PSAA2	Pilbara Seismi	44.84	291	P	P	19 28 10.0	-1.9
PSAB1	Pilbara Seismi	44.86	291	P	P	19 28 10.6	-1.3
MTN	Manton Dam	45.33	310	P	P	19 28 15.6	-0.1
	baz=45,SNR=4.7						
MTN	Manton Dam	45.33	310	P	P	19 28 15.2	-0.6
PPT2	Papeete2	47.97	66	*e*S	S	19 35 45.7	+14
	comp=Z,90nm,25.8s						
PPT2				*e*LR	LR	19 42 30.9	
	comp=Z,285nm,22.8s,baz=222						
PPT	Papeete	47.98	66	LR	LR	19 46 32.9	
	comp=Z,228nm,18.3s,baz=207,slow=33						
MAW	Mawson	50.47	209	LR	LR	19 48 44.6	
	comp=Z,153nm,18.5s,baz=65,slow=34						
SNAA	Sanae	59.78	184	P	P	19 30 02.4	+0.3
SNAA	Sanae	59.78	184	P	P	19 30 02.4	+0.3
VNA2	Neumayer--Watz	60.72	183	P	P	19 30 09.3	+0.9
STKI	Sintang	66.80	299	P	P	19 30 49.9	+0.7
PLCA	Paso Flores	78.45	140	P	P	19 32 00.4	+2.1
	comp=Z,2.8nm,1.0s,baz=221,slow=10,SNR=5.0						
PLCA				LR	LR	20 00 04.2	
	comp=Z,115nm,19.5s,baz=224,slow=31						
PLCA	Paso Flores	78.45	140	P	P	19 31 57.6	-0.7
PLCA				IAmb	IAmb	19 32 24.0	
	comp=Z,9.9nm,1.4s						
JOW	Kunigami	81.94	327	LR	LR	20 07 15.9	
	comp=Z,118nm,19.6s,baz=38,slow=35						
JHJ	Hachijo jima 2	84.37	339	LR	LR	20 03 44.0	
	comp=Z,82nm,19.6s,baz=133,slow=31						
H08S2	Diego Garcia H	86.01	263	T	T	21 07 05.2	

	baz=139,slow=76,SNR=12						
H08S1	**Diego Carcia H**	**86.02**	**263**	T	T	21 07 05.8	
	baz=139,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**86.03**	**263**	T	T	21 07 06.5	
	baz=139,slow=76,SNR=25						
JNU	**Nakatsue**	**86.84**	**332**	LR	LR	20 08 34.0	
	comp=Z,90nm,20.3s,baz=137,slow=34						
CM04	**Chiang Mai Arr**	**88.76**	**300**	P	**P**	**19 32 52.9**	**+1.8**
CM05	**Chiang Mai Arr**	**88.78**	**300**	P	**P**	**19 32 52.9**	**+1.7**
CM36	**Chiang Mai Arr**	**88.78**	**300**	P	**P**	**19 32 52.0**	**+0.8**
CM01	**Chiang Mai Arr**	**88.79**	**300**	P	**P**	**19 32 53.0**	**+1.8**
CM09	**Chiang Mai Arr**	**88.79**	**300**	P	**P**	**19 32 53.0**	**+1.7**
CM02	**Chiang Mai Arr**	**88.81**	**300**	P	**P**	**19 32 53.4**	**+2.0**
CM13	**Chiang Mai Arr**	**88.82**	**300**	P	**P**	**19 32 53.0**	**+1.7**
CM31	**Chiang Mai Arr**	**88.83**	**300**	P	**P**	**19 32 53.5**	**+2.1**
CMAR	**Chiang Mai Arr**	**88.83**	**300**	P	**P**	**19 32 52.1**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=156,slow=3.7,SNR=21						
CMAR				LR	LR	20 14 46.0	
	comp=Z,43nm,18.7s,baz=175,slow=37						
CMAR	**Chiang Mai Arr**	**88.83**	**300**	P	**P**	**19 32 52.0**	**+0.6**
CM15	**Chiang Mai Arr**	**88.83**	**300**	P	**P**	**19 32 53.5**	**+2.1**
CM35	**Chiang Mai Arr**	**88.88**	**300**	P	**P**	**19 32 53.0**	**+1.3**
CM34	**Chiang Mai Arr**	**89.02**	**300**	P	**P**	**19 32 53.0**	**+0.7**
CM32	**Chiang Mai Arr**	**89.03**	**300**	P	**P**	**19 32 55.0**	**+2.6**
CMMT	**Chiang Mai**	**89.10**	**300**	P	**P**	**19 32 53.4**	**+0.7**
CHTO	**Chiang Mai**	**89.11**	**300**	P	**P**	**19 32 53.4**	**+0.7**
CHTO				IAmb	IAmb	19 32 54.8	
	comp=Z,8.2nm,1.4s						
CM33	**Chiang Mai Arr**	**89.11**	**300**	P	**P**	**19 32 54.0**	**+1.2**
MHMT	**Maesarieng**	**89.19**	**299**	P	**P**	**19 32 54.5**	**+1.4**
NJ2	**Nanjing**	**90.22**	**322**	*e*P	**P**	**19 33 00.3**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSAR	**Wonju Array Be**	**91.76**	**331**	P	**P**	**19 33 07.0**	**+2.3**
KMI	**Kunming**	**92.03**	**307**	⇑P	**P**	**19 33 06.3**	**-0.2**
KMI				pP	pP	19 33 17.5	+0.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ASAJ	**Asahikawa**	**94.36**	**344**	LR	LR	20 09 02.9	
	comp=Z,129nm,21.4s,baz=160,slow=31						
BOSA	**Boshof**	**95.17**	**215**	LR	LR	20 12 56.7	
	comp=Z,56nm,18.6s,baz=184,slow=33						
CPUP	**Villa Florida**	**96.37**	**143**	LR	LR	20 10 25.8	
	comp=Z,93nm,19.4s,baz=220,slow=31						
HHC	**Hu-ho-hao-te**	**100.77**	**322**	*e*P	**Pdif**	**19 33 47.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WMQ	**Urumqi**	**114.21**	**309**	*e*PKP	**PKiKP**	**19 38 37.8**	**+1.6**
WMQ				AMB	AMB		
	comp=Z,150nm,3.9s						
ILAR	**Eielson Array**	**119.00**	**21**	PKP	**PKiKP**	**19 38 45.2**	**+0.5**
	comp=Z,0.8nm,1.0s,baz=296,slow=3.2,SNR=5.4						
MKAR	**Makanchi Array**	**119.03**	**309**	PKP	**PKPdf**	**19 38 45.0**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=151,slow=3.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**122.41**	**316**	PKP	**PKiKP**	**19 38 52.1**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=113,slow=3.3,SNR=1.4						
YKA	**Yellowknife Ar**	**127.60**	**35**	PKP	**PKiKP**	**19 39 02.7**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=217,slow=1.0,SNR=5.5						
TORD	**Torodi Ar. Bea**	**142.10**	**207**	PKhKP	PKPpre	19 39 24.0	
	comp=Z,0.7nm,0.6s,baz=153,slow=2.4,SNR=2.6						
BRTR	**Keskin Array B**	**144.54**	**274**	PKP	PKPbc	19 39 32.1	0.0
	comp=Z,5.1nm,0.9s,baz=139,slow=4.3,SNR=21						
BRTR	**Keskin Array B**	**144.54**	**274**		**PKPab**	**19 39 31.4**	**-0.6**
KLMR	**Klimovskoe**	**147.20**	**313**	*e*	**PKPbc**	**19 39 38.7**	**-0.7**
KLMR				AMP		19 39 53.7	
	comp=Z,37nm,1.4s						
ARCES	**ARCESS Array B**	**151.32**	**332**	PKPbc	**PKiKP**	**19 39 49.5**	**-0.4**
	comp=Z,9.5nm,1.0s,baz=29,slow=2.8,SNR=9.3						
ARCES	**ARCESS Array B**	**151.32**	**332**		**PKPbc**	**19 39 49.4**	**-0.1**
AKASG	**Malin Array Be**	**151.61**	**291**	PKPbc	**PKiKP**	**19 39 50.7**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=84,slow=2.5,SNR=12						
AKASG	**Malin Array Be**	**151.61**	**291**		**PKPbc**	**19 39 50.1**	**-0.5**
DAG	**Danmarks Havn**	**151.63**	**2**	*i* P	**PKPbc**	**19 39 50.0**	**0.0**
DAG	**Danmarks Havn**	**151.63**	**2**	*i* P	**PKPbc**	**19 39 50.0**	**0.0**
FINES	**FINESS Array B**	**153.66**	**315**	PKPbc	**PKiKP**	**19 39 55.4**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=134,slow=5.5,SNR=5.8						
GERES	**GERESS Array B**	**161.12**	**282**	PKPab	**PKPab**	**19 40 40.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=76,slow=4.1,SNR=3.9						

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*JMA **28** 19:49:00.7±0.6, 45°.32N×150°.14E, h30^{km}, M4.1*

*SKHL **28** 19:49:01.7±0.8, 44°.99N×150°.15E, h36^{km}±5^{km}, mb4.5/3*

ISC 28 19:49:00.2±4.3**, 44°.7N**±0°.1×**150°.4E**±0°.2**, h35**^{km}**, n19, σ2^{s}.05**/28**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.87**	**286**	*e*P	**Pn**	**19 49 27.0**	**-2.6**
KUR				AMB	AMB	19 49 27.9	
	140nm,0.4s						
KUR				*i* S	Sn	19 49 46.0	-5.9
KUR				A	A	19 49 48.0	
	630nm,0.3s						
KUR				A	A	19 49 48.0	
	790nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.33**	**259**	*e*P	**Pn**	**19 49 50.3**	**+0.6**
YUK				AMB	AMB	19 49 55.0	
	110nm,0.3s						
YUK				*i* S	**Sn**	**19 50 26.2**	**-1.8**
YUK				A	A	19 50 32.0	
	376nm,0.5s						
YUK				A	A	19 50 32.0	
	320nm,0.5s						
GRPR	**Tuman**	**3.40**	**259**	*e*P	**Pn**	**19 49 52.5**	**+1.8**
GRPR				AMB	AMB	19 49 56.0	
	30nm,0.3s						
GRPR				*e*S	**Sn**	**19 50 30.0**	**+0.2**
GRPR				A	A	19 50 35.0	
	139nm,0.3s						
GRPR				A	A	19 50 35.0	
	98nm,0.3s						
NEM2	**Nemuro 2**	**3.63**	**249**	P	**Pn**	**19 49 55.0**	**+1.2**
NEM2				*e*S	**Sn**	**19 50 34.8**	**-0.5**
NMR	**Nemuro--Hokkai**	**3.64**	**250**	*e*P	**Pn**	**19 49 55.3**	**+1.4**
NMR				*i* S	**Sn**	**19 50 35.5**	**0.0**
JRA	**Rausu**	**3.87**	**260**	P	**Pn**	**19 49 59.7**	**+2.6**
JNK	**Nakash**	**4.25**	**256**	P	**Pn**	**19 50 04.7**	**+2.4**
JAK	**Akkeshi**	**4.48**	**249**	P	**Pn**	**19 50 06.6**	**+1.1**
JAK				*e*S	**Sn**	**19 50 54.8**	**-1.5**
JTKR	**Abashiri--Toko**	**4.72**	**263**	P	**Pn**	**19 50 10.8**	**+2.0**
JAR	**Ashorobuto**	**5.00**	**256**	P	**Pn**	**19 50 15.4**	**+2.8**
JAR				*e*S	**Sn**	**19 51 10.7**	**+1.6**
JOB	**Onbets**	**5.09**	**251**	P	**Pn**	**19 50 16.0**	**+2.1**
JOB				*e*S	**Sn**	**19 51 11.7**	**+0.2**
JMP	**Maruseppu**	**5.10**	**264**	P	**Pn**	**19 50 16.3**	**+2.2**
JCH	**Churui**	**5.53**	**250**	P	**Pn**	**19 50 21.7**	**+1.8**
JCH				*e*S	**Sn**	**19 51 22.2**	**0.0**
JNBK	**Urakawa-nobuka**	**6.08**	**249**	P	**Pn**	**19 50 28.7**	**+1.2**
JNBK				*e*S	**Sn**	**19 51 34.9**	**-0.9**
JKB	**Kayabe**	**7.40**	**251**	P	**Pn**	**19 50 47.0**	**+1.4**
JANG	**Nango**	**7.88**	**239**	*e*S	**Sn**	**19 52 16.4**	**-3.6**
JTH	**Tanohata**	**7.93**	**236**	*e*S	**Sn**	**19 52 18.0**	**-3.4**
OFUJ	**Ofunato**	**8.62**	**232**	*e*S	**Sn**	**19 52 36.1**	**-2.2**
JIO	**Ouri**	**9.24**	**230**	*e*S	**Sn**	**19 52 50.0**	**-3.4**

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*IDC **28** 19:54:16.5±0.8, 20°.42S×172°.62E, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.2/36, mbtmp4.2/12, ML3.8/2, MS3.7/16, Ms1 3.7/16, ms1mx3.6/27, Error ellipse: s-maj=27.3km s-min=19.1km az=137.0*

*GCMT **28** 19:54:21.7±0.4, 20°.48S±0°.03×172°.49E±0°.02, h27^{km}±1^{km}, MW4.9/68, Moment Tensor Solution. s19,c21; s68,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.36±.24; M$_{\theta\theta}$0.72±.15; M$_{\phi\phi}$1.64±.13; M$_{r\theta}$0.35±.26; M$_{\theta\phi}$1.46±.07; M$_{\phi r}$0.63±.17; Best double couple: M$_0$2.63700×10^{16} NP1:φ$_s$39.00000°, δ37.00000°, λ-86.00000°. NP2: φ$_s$214.00000°, δ53.00000°, λ-93.00000°. Principal axes: T 2.8110, Plg8.0000°, Azm306.0000°; N -0.3450, Plg2.0000°, Azm216.0000°; P -2.4630, Plg82.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 19:54:22.7±1.1, 20°.6S±0°.1×172°.55E±0°.09, h38^{km}±8^{km}, mb4.8/59 Error ellipse: s-maj=18.0km s-min=10.9km az=163.0*

ISC 28 19:54:22.0±0.5**, 20°.62S**±0°.09×**172°.60E**±0°.07**, h35**^{km}**, n136, σ0^{s}.85**/123**, mb4.8**/40**, MS3.8**/16**, 3C-1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YATNC	**Mamie plateau,**	**5.51**	**254**	P	**Pn**	**19 55 41.3**	**-0.3**
OUENC	**Ouen Island, N**	**5.65**	**250**	P	**Pn**	**19 55 43.5**	**-0.1**
MSVF	**Nonsavu**	**5.90**	**62**	Pn	**Pn**	**19 55 47.5**	**+0.5**
DZM	**Mont Dzumac**	**5.92**	**255**	Pn	**Pn**	**19 55 47.1**	**-0.2**
	1.1nm,0.3s,baz=94,slow=17,SNR=4.3						
DZM				Sn	**Sn**	**19 56 54.5**	**+0.5**
	0.4nm,0.3s,baz=37,slow=24,SNR=1.4						
DZM				LR	LR	19 57 52.5	
	comp=Z,538nm,20.8s,baz=100,slow=36						
DZM	**Mont Dzumac**	**5.92**	**255**	*e*Pn	**Pn**	**19 55 47.6**	**+0.3**
	5.1nm,0.4s						
DZM				*e*LR	LR	19 57 02.9	
	comp=Z,805nm,26.8s						
DZM	**Mont Dzumac**	**5.92**	**255**		**Pn**	**19 55 47.4**	**+0.1**
DZM					**Sn**	**19 56 53.9**	**0.0**
DZM	**Mont Dzumac**	**5.92**	**255**	P	**Pn**	**19 55 47.0**	**-0.2**
NOUC	**Port Laguerre**	**6.05**	**255**	P	**Pn**	**19 55 49.3**	**+0.3**
SANVU	**Saraoutou**	**7.26**	**314**		**Pn**	**19 56 05.3**	**-0.4**
RAO	**Raoul Island**	**12.16**	**137**	LR	LR	20 00 58.0	
	comp=Z,540nm,20.2s,baz=304,slow=33						
HNR	**Honiara**	**16.50**	**310**	LR	LR	20 03 32.9	
	comp=Z,256nm,18.9s,baz=146,slow=34						
URZ	**Urewera**	**18.01**	**168**	P	**P**	**19 58 30.2**	**+0.4**
	0.7nm,0.3s,baz=5.2,slow=11,SNR=2.7						
URZ				LR	LR	20 03 39.3	
	comp=Z,278nm,20.5s,baz=30,slow=31						
MSWZ	**Moikau Station**	**20.86**	**174**	P	**P**	**19 59 01.1**	**+0.2**
PLWZ	**Palliser**	**21.01**	**174**	P	**P**	**19 59 02.6**	**0.0**
RPZ	**Rata Peaks**	**23.07**	**183**	P	**P**	**19 59 25.7**	**+1.3**
	4.9nm,0.7s,baz=22,slow=14,SNR=1.6						
RAR	**Rarotonga**	**25.81**	**96**	LR	LR	20 07 33.4	
	comp=Z,200nm,21.2s,baz=244,slow=31						
PMG	**Port Moresby**	**26.93**	**291**	LR	LR	20 09 07.8	
	comp=Z,216nm,18.2s,baz=124,slow=33						
STKA	**Stephens Creek**	**29.88**	**242**	P	**P**	**20 00 27.9**	**+1.5**
	5.1nm,0.9s,baz=78,slow=6.5,SNR=6.1						
STKA				LR	LR	20 10 53.8	
	comp=Z,113nm,20.8s,baz=57,slow=33						
STKA	**Stephens Creek**	**29.88**	**242**	P	**P**	**20 00 27.8**	**+1.4**
TBI	**Tubuai**	**35.23**	**102**	*e*LR	LR	20 10 45.3	
	comp=Z,366nm,31.2s						
PPT2	**Papeete2**	**35.82**	**92**	*e*LR	LR	20 11 01.7	
	comp=Z,406nm,26.5s						
PPT	**Papeete**	**35.82**	**92**	LR	LR	20 12 11.0	
	comp=Z,118nm,20.8s,baz=244,slow=30						
WRA	**Warramunga Arr**	**35.84**	**264**	P	**P**	**20 01 17.1**	**-1.6**
	1.2nm,1.0s,baz=102,slow=8.2,SNR=4.0						
WRA				LR	LR	20 14 51.2	
	comp=Z,199nm,21.9s,baz=100,slow=34						
ASAR	**Alice Springs**	**35.90**	**258**	P	**P**	**20 01 18.6**	**-0.5**
	1.0nm,0.8s,baz=84,slow=8.5,SNR=11						
ASAR				LR	LR	20 14 47.5	
	comp=Z,159nm,21.3s,baz=92,slow=34						
VNDA	**Vanda**	**57.19**	**183**	LR	LR	20 25 36.1	
	comp=Z,83nm,20.4s,baz=346,slow=33						
MJAR	**Matsushiro Arr**	**65.48**	**330**	LR	LR	20 28 11.9	
	comp=Z,32nm,21.7s,baz=120,slow=31						
KSRS	**Korea Array**	**71.45**	**324**	P	**P**	**20 05 38.8**	**-0.1**
	1.7nm,0.8s,baz=143,slow=5.6,SNR=5.0						
KSRS				LR	LR	20 35 24.7	
	comp=Z,18nm,19.6s,baz=135,slow=35						
KSAR	**Wonju Array Be**	**71.46**	**324**	P	**P**	**20 05 38.9**	**-0.1**
NJ2	**Nanjing**	**73.41**	**314**	*e*P	**P**	**20 05 51.3**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PETK	**Petropavlovsk-**	**74.54**	**351**	LR	LR	20 33 23.5	
	comp=Z,52nm,21.5s,baz=124,slow=32						
MAW	**Mawson**	**78.34**	**202**	LR	LR	20 37 34.1	
	comp=Z,58nm,18.5s,baz=228,slow=33						
KMI	**Kunming**	**81.68**	**301**	⇑P	**P**	**20 06 38.8**	**+1.4**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				LR	LR		
	comp=Z,150nm,37.2s						
CM31	**Chiang Mai Arr**	**81.95**	**293**	P	**P**	**20 06 37.2**	**-1.5**
CMAR	**Chiang Mai Arr**	**81.95**	**293**	P	**P**	**20 06 38.8**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=128,slow=4.3,SNR=14						
CMAR	**Chiang Mai Arr**	**81.95**	**293**	P	**P**	**20 06 37.3**	**-1.4**
CHTO	**Chiang Mai**	**82.09**	**293**	P	**P**	**20 06 39.7**	**+0.3**
HHC	**Hu-ho-hao-te**	**83.33**	**318**	*e*P	**P**	**20 06 46.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,6.3s						
SYO	**Syowa Base**	**84.47**	**195**	⇑*e*X	P	20 06 59.2	+8.4
KMRM	**Mail Ridge**	**84.68**	**44**	P	**P**	**20 06 53.3**	**+0.9**
KMRM				IAmb	IAmb	20 06 53.8	
	comp=Z,7.7nm,0.9s						
SEY	**Seymchan**	**84.78**	**351**	P	**P**	**20 06 51.1**	**-1.2**
	comp=Z,3.6nm,0.9s,baz=160,slow=5.2,SNR=4.5						
GAMB	**Gambell**	**85.00**	**7**	P	**P**	**20 06 53.7**	**+0.4**
KHMM	**Horse Mountain**	**85.02**	**43**	P	**P**	**20 06 53.7**	**-0.5**
KHMM				IAmb	IAmb	20 07 02.3	
	comp=Z,9.1nm,1.2s						
WDC	**Whiskeytown Da**	**85.62**	**44**		**P**	**20 06 57.4**	**+0.4**
CMB	**Columbia Colle**	**85.75**	**47**		**P**	**20 06 58.0**	**+0.3**
CMB				IAmb	IAmb	20 06 59.0	
	comp=Z,4.9nm,0.9s						
ORV	**Oroville**	**85.78**	**45**		**P**	**20 06 58.1**	**+0.4**
ORV				IAmb	IAmb	20 06 59.1	
	comp=Z,8.3nm,1.2s						
AFDM	**Forest Hills D**	**85.82**	**46**	P	**P**	**20 06 58.1**	**0.0**
AFDM				IAmb	IAmb	20 06 59.2	
	comp=Z,10nm,1.2s						
ISA	**Isabella, Lake**	**85.92**	**50**		**P**	**20 06 59.2**	**+0.5**
YBH	**Yreka Blue Hor**	**86.12**	**43**		**P**	**20 07 00.1**	**+0.6**
YBH				IAmb	IAmb	20 07 01.3	
	comp=Z,6.8nm,1.0s						
HUMO	**Hull Mountain**	**86.43**	**42**	P	**P**	**20 07 01.8**	**+0.8**
HUMO				IAmb	IAmb	20 07 02.8	
	comp=Z,9.0nm,1.1s						
MDPB	**Devils Postpil**	**86.45**	**48**	P	**P**	**20 07 02.2**	**+0.7**
MDPB				IAmb	IAmb	20 07 02.9	
	comp=Z,6.2nm,1.1s						
OMMB	**Old Mammoth Mi**	**86.50**	**48**		**P**	**20 07 01.7**	**-0.1**
WAKR	**Walker**	**86.63**	**47**	P	**P**	**20 07 03.1**	**+0.8**
WAKR				IAmb	IAmb	20 07 04.0	
	comp=Z,9.1nm,1.1s						
BEKR	**Beckworth**	**86.69**	**45**	P	**P**	**20 07 02.7**	**+0.1**
BEKR				IAmb	IAmb	20 07 03.7	
	comp=Z,5.1nm,0.9s						
PNTR	**Pine Nut**	**86.81**	**46**	P	**P**	**20 07 03.4**	**+0.2**
GSC	**Goldstone, Bar**	**86.95**	**51**	P	**P**	**20 07 02.5**	**-1.3**
LHV	**Little Huntoon**	**87.15**	**47**	P	**P**	**20 07 05.5**	**+0.9**
LHV				IAmb	IAmb	20 07 06.3	
	comp=Z,6.2nm,1.1s						
PAHR	**Pah Rah Range**	**87.26**	**46**	P	**P**	**20 07 03.9**	**-1.3**
RYN	**Ryan**	**87.32**	**47**	P	**P**	**20 07 05.9**	**+0.3**
RYN				IAmb	IAmb	20 07 06.8	
	comp=Z,6.7nm,1.2s						
NVAR	**Mina Array Bea**	**87.37**	**47**	P	**P**	**20 07 04.6**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=231,slow=8.7,SNR=13						
NV11	**Mina Array Sit**	**87.48**	**47**	P	**P**	**20 07 06.4**	**0.0**
MOD	**Modoc Plateau**	**87.75**	**43**	P	**P**	**20 07 07.8**	**+0.2**
MOD				IAmb	IAmb	20 07 08.8	
	comp=Z,5.4nm,0.9s						
K05A	**Summer Lake**	**87.79**	**43**	P	**P**	**20 07 08.1**	**+0.3**
K05A				IAmb	IAmb	20 07 09.4	
	comp=Z,8.1nm,0.9s						
SNAA	**Sanae**	**87.90**	**181**	P	**P**	**20 07 05.9**	**-1.9**
TPH	**Tonopah**	**87.95**	**48**	P	**P**	**20 07 08.0**	**-0.7**
TPNV	**Topopah Spring**	**88.11**	**49**		**P**	**20 07 09.7**	**+0.2**
PINE	**Pine Mountain**	**88.31**	**42**		**P**	**20 07 10.8**	**+0.6**
VNA3	**Neumayer Olymp**	**88.37**	**179**	P	**P**	**20 07 07.0**	**-2.9**
VNA2	**Neumayer--Watz**	**88.71**	**180**	P	**P**	**20 07 10.9**	**-0.6**
VNA1	**Neumayer--Stat**	**88.98**	**180**	P	**P**	**20 07 11.1**	**-1.7**
W13A	**Hualapai Mount**	**88.99**	**52**	P	**P**	**20 07 13.7**	**0.0**
WVOR	**Wild Horse Val**	**89.09**	**44**	P	**P**	**20 07 14.1**	**+0.3**
WVOR				IAmb	IAmb	20 07 15.4	
	comp=Z,7.0nm,1.2s						
PRN	**Pahroc Range**	**89.17**	**49**	P	**P**	**20 07 14.8**	**+0.4**
I07A	**Izee**	**89.35**	**42**	P	**P**	**20 07 15.6**	**+0.6**
I07A				IAmb	IAmb	20 07 16.4	
	comp=Z,7.2nm,1.2s						
PGC	**Sidney**	**89.38**	**37**	P	**P**	**20 07 15.3**	**+0.5**
PGC				IAmb	IAmb	20 07 15.6	
	comp=Z,5.9nm,0.8s						
TUC	**Tucson**	**90.15**	**55**	P	**P**	**20 07 19.8**	**+0.8**
LTY	**Liberty**	**90.24**	**39**	P	**P**	**20 07 19.1**	**0.0**
LTY				IAmb	IAmb	20 07 19.7	
	comp=Z,5.5nm,1.0s						
G08A	**Pilot Rock**	**90.28**	**41**	P	**P**	**20 07 19.4**	**0.0**
G08A				IAmb	IAmb	20 07 20.4	
	comp=Z,4.7nm,0.8s						
LCMT	**Little Creek M**	**90.29**	**50**	P	**P**	**20 07 19.9**	**+0.3**
CCB	**Clear Creek Bu**	**90.30**	**16**	P	**P**	**20 07 17.1**	**-1.6**
CCB				IAmb	IAmb	20 07 19.3	
	comp=Z,6.0nm,1.4s						
E07A	**Sunnyside**	**90.37**	**40**	P	**P**	**20 07 20.2**	**+0.6**
E07A				IAmb	IAmb	20 07 20.9	
	comp=Z,6.0nm,0.8s						
GTA	**Gaotai**	**90.37**	**312**	⇑P	**P**	**20 07 20.5**	**+0.6**
GTA				pP	pP	20 07 27.5	-2.5
GTA				sP	sP	20 07 31.8	-1.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,4.9s						
GTA				smax	smax		
	comp=N,6.0nm,1.8s						
GTA				smax	smax		
	comp=E,6.0nm,1.8s						
GTA				LR	LR		
	comp=N,260nm,11.3s						
GTA				LR	LR		
	comp=E,610nm,12.7s						
GTA				LR	LR		
	comp=Z,280nm,14.9s						
SPR3	**Spring Creek 3**	**90.39**	**48**	P	**P**	**20 07 20.2**	**-0.1**
SPR3				IAmb	IAmb	20 07 21.3	
	comp=Z,4.8nm,1.0s						
CCUT	**Cedar City**	**90.44**	**50**	P	**P**	**20 07 21.4**	**+1.0**
HAWA	**Hanford**	**90.48**	**40**	P	**P**	**20 07 20.3**	**+0.2**
PSUT	**Pine Spring**	**90.52**	**49**	P	**P**	**20 07 20.8**	**+0.1**
X16A	**Lo Mia Camp, P**	**90.52**	**53**	P	**P**	**20 07 21.8**	**+1.0**
X16A				IAmb	IAmb	20 07 22.8	
	comp=Z,5.1nm,0.9s						
DOT	**Dot Lake**	**90.53**	**18**	P	**P**	**20 07 20.6**	**+0.6**
ELK	**Elko**	**90.55**	**46**	P	**P**	**20 07 20.4**	**-0.5**
ELK				IAmb	IAmb	20 07 22.1	
	comp=Z,5.9nm,1.1s						
KNB	**Kanab**	**90.60**	**51**		**P**	**20 07 22.2**	**+1.1**
IL31		**90.63**	**16**	P	**P**	**20 07 18.3**	**-2.0**
IL31				IAmb	IAmb	20 07 21.4	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**90.63**	**16**	P	**P**	**20 07 18.2**	**-2.2**
	comp=Z,1.3nm,0.7s,baz=233,slow=5.0,SNR=13						
SZCU	**Shurtz Canyon**	**90.66**	**50**	P	**P**	**20 07 22.0**	**+0.6**
U15A	**North Rim**	**90.73**	**51**	P	**P**	**20 07 22.7**	**+0.8**
E08A	**Dider Farm, El**	**90.81**	**40**	P	**P**	**20 07 22.0**	**+0.4**
WUAZ	**Wupatki**	**91.03**	**52**	P	**P**	**20 07 23.9**	**+0.8**
PKCU	**Pink Cliffs**	**91.15**	**50**		**P**	**20 07 25.4**	**+1.6**
MFID	**Camas Ranch**	**91.37**	**44**	P	**P**	**20 07 24.8**	**+0.3**
MFID				IAmb	IAmb	20 07 25.5	
	comp=Z,8.8nm,1.4s						
MTPU	**Mount Pierson**	**91.50**	**50**		**P**	**20 07 26.5**	**+1.0**
MVU	**Marysvale**	**91.67**	**49**	P	**P**	**20 07 27.1**	**+1.0**
F10A	**Beach Ranch, E**	**91.68**	**41**	P	**P**	**20 07 25.3**	**-0.5**
MSU	**Marysvale**	**91.70**	**49**	P	**P**	**20 07 27.1**	**+0.9**
TXAR	**Lajitas Array**	**94.67**	**61**	P	**P**	**20 07 40.7**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=212,slow=4.4,SNR=8.4						
PLCA	**Paso Flores**	**95.39**	**137**	LR	LR	20 42 20.1	
	comp=Z,33nm,21.2s,baz=246,slow=30						
TIXI	**Tiksi**	**96.75**	**347**	P	**P**	**20 07 49.2**	**+0.9**
WMQ	**Urumqi**	**100.44**	**313**	*e*P	**Pdif**	**20 08 07.5**	**+1.9**
KSP	**Ksiaz**	**144.54**	**334**	*e*PKP	**PKPab**	**20 13 53.2**	**+0.1**
OSTC	**Ostas**	**144.79**	**334**	*e*PKP	PKPbc	20 13 54.7	+0.5
OSTC				*e*x	x	20 14 01.9	
MORC	**Moravsky Berou**	**144.80**	**332**	*e*PKP	**PKPab**	**20 13 53.7**	**-0.5**
CHVC	**Chvalec**	**144.83**	**334**	*e*PKP	**PKPab**	**20 13 54.3**	**+0.1**
DPC	**Dobruska-Polom**	**144.90**	**333**	*e*PKP	PKPbc	20 13 54.7	+0.1
DPC				*e*x	x	20 14 01.7	
UPC	**Upice**	**144.91**	**334**	*e*PKP	**PKPab**	**20 13 54.6**	**+0.1**
KRLC	**Kraliky**	**144.91**	**333**	*e*PKP	PKPbc	20 13 54.8	+0.2
VYHS	**Vyhne**	**145.11**	**329**	*e*PKP	**PKPbc**	**20 13 55.2**	**-0.1**
KOLL	**Kolacno**	**145.26**	**330**	*e*PKP	**PKPab**	**20 13 56.0**	**+0.2**
JAVC	**Velka Javorina**	**145.40**	**330**	*e*PKP	**PKPab**	**20 13 56.6**	**+0.2**
CLL	**Collm**	**145.44**	**337**	⇓*i*PKPbc	**PKPbc**	**20 13 55.6**	**-0.6**
	comp=Z,27nm,0.9s						
CLL				*i* (PKiKP)		20 14 02.8	
CLL				*e*pPKPbc	**pPKPdf**	**20 14 08.0**	**+1.4**
CLL				*e*		20 17 01.0	
PVCC	**Panska Ves**	**145.48**	**335**	*e*PKP	**PKPbc**	**20 13 56.5**	**+0.2**
VRAC	**Vranov**	**145.56**	**332**	*e*PKP	**PKPdf**	**20 13 56.2**	**-0.3**
SMOL	**Smolenice**	**145.76**	**330**	*e*PKP	**PKPab**	**20 13 57.8**	**+0.1**
KRUC	**Moravsky**	**145.83**	**332**	*e*PKP	**PKPdf**	**20 13 56.6**	**-0.3**
PRU	**Pruhonice**	**145.91**	**335**	*e*PKP	**PKPbc**	**20 13 57.6**	**-0.1**
MODS	**Modra-Piesok**	**145.93**	**330**	*e*PKP	**PKPdf**	**20 13 57.4**	**+0.2**
CONA	**Conrad Observa**	**146.91**	**331**	*e*P	**PKPbc**	**20 14 01.3**	**+0.4**
	comp=Z,4.0nm,0.8s						
KHC	**Kasperske Hory**	**146.97**	**334**	*e*PKP	**PKPbc**	**20 14 00.7**	**-0.2**
KHC				*e*x	x	20 14 07.8	
GERES	**GERESS Array B**	**147.15**	**334**	PKPbc	**PKPbc**	**20 14 01.1**	**-0.4**
	comp=Z,5.6nm,0.8s,baz=46,slow=3.9,SNR=20						
GERES	**GERESS Array B**	**147.15**	**334**		**PKPbc**	**20 14 00.6**	**-0.9**
SOKA	**Soboth**	**148.21**	**330**	*e*P	**PKPbc**	**20 14 03.4**	**-1.1**
	comp=Z,1.9nm,0.6s						
KBA	**Koelnbreinsper**	**148.67**	**332**	*e*P	**PKPbc**	**20 14 04.8**	**-1.0**
	comp=Z,3.4nm,0.8s						
MYKA	**Terra Mystica**	**148.88**	**331**	*e*P	**PKPbc**	**20 14 04.8**	**-1.4**
	comp=Z,2.3nm,0.5s						
ABTA	**Abfaltersbach**	**149.29**	**333**	*e*P	**PKPbc**	**20 14 06.0**	**-1.2**
	comp=Z,3.4nm,0.6s						
MOTA	**Moosalm**	**149.40**	**335**	*e*P	**PKPbc**	**20 14 06.7**	**-0.8**
	comp=Z,3.7nm,0.6s						
SQTA	**Sankt Quirin**	**149.46**	**335**	*e*P	**PKPbc**	**20 14 07.1**	**-0.5**
	comp=Z,3.5nm,0.4s						
FETA	**Feichten**	**149.81**	**335**	*e*P	**PKPbc**	**20 14 08.1**	**-0.4**
	comp=Z,4.7nm,0.8s						
DAVA	**Damuels**	**149.92**	**336**	*e*P	**PKPbc**	**20 14 08.6**	**-0.2**
	comp=Z,1.3nm,0.3s						
ESDC	**Sonseca Array**	**160.78**	**352**	PKPab	**PKPab**	**20 14 59.4**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=352,slow=4.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**168.56**	**231**	PKPab	**PKPab**	**20 15 35.0**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=100,slow=4.2,SNR=3.6						

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*NEIC **28** 19:59:02.5±1.4, 56°.14N±0°.10×114°.6E±0°.1, h18^{km}±6^{km}, mb4.0/5, Error ellipse: s-maj=14.3km s-min=11.3km az=157.0*

*MOS **28** 19:59:03.3±1.3, 56°.11N×113°.81E, h16^{km}, mb4.2/4, Error ellipse: s-maj=10.2km s-min=6.7km az=60.5*

MOS Felt (III-IV) at Severomuysk.

*BYKL **28** 19:59:04.3±0.1, 56°.14N×113°.75E, h4^{km}±2^{km}, FELT I=III-IV MSK at Severomuisk*

*IDC **28** 19:59:04.5±0.9, 56°.22N×113°.79E, h0^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.7/50, mbtmp3.9/11, ML3.7/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/45, Error ellipse: s-maj=25.6km s-min=12.9km az=151.0*

ISC 28 19:59:02.9±0.9**, 56°.17N**±0°.02×**113°.84E**±0°.02**, h1**^{km}±6^{km}**, n99, σ2^{s}.56**/147**, mb4.0**/12**, MS3.4**/4**, 7C-10D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.16**	**253**	⇓*i*Pg	**Pg**	**19 59 06.2**	**+0.2**
SVKR				Pmax		19 59 06.8	
	14μm,0.1s						
SVKR				*e*Sg	**Sg**	**19 59 08.2**	**+0.1**
SVKR				Smax		19 59 10.8	
	180μm,0.7s						
SVKR	**Severomuysk**	**0.16**	**253**	⇓*i*PG	**Pg**	**19 59 06.2**	**+0.2**
UKT	**Uakit**	**0.69**	**190**	⇑*i*Pg	**Pg**	**19 59 15.5**	**-0.5**
UKT				Pmax		19 59 17.9	
	424nm,0.3s						
UKT				*e*Sg	**Sg**	**19 59 24.7**	**-0.2**
UKT				Smax		19 59 34.8	
	2μm,0.3s						
UKT	**Uakit**	**0.69**	**190**	⇑*i*PG	**Pg**	**19 59 15.5**	**-0.5**
UKT				*e*		19 59 24.2	
UKT				pmax	pmax		
	comp=Z,165nm,0.2s						
UKT				smax	smax		
	comp=N,497nm,0.2s						
NLYR	**Nelyaty**	**1.09**	**72**	⇓*i*Pg	**Pb**	**19 59 25.0**	**+0.5**
NLYR				*e*Pb	**Pn**	**19 59 27.3**	**+2.0**
NLYR				max		19 59 27.8	
	comp=N,2μm,0.3s						
NLYR				*e*		19 59 28.9	
NLYR				*e*Sg	**Sb**	**19 59 40.2**	**+0.9**
NLYR				*e*		19 59 44.6	
NLYR				max		19 59 45.5	
	comp=N,9μm,1.1s						
NLYR	**Nelyaty**	**1.09**	**72**	*e*PG	**Pb**	**19 59 24.8**	**+0.3**
NLYR				*e*		19 59 38.8	
NLYR				pmax	pmax		
	comp=Z,2μm,0.6s						
NLYR				smax	smax		
	comp=E,9μm,1.3s						

YOA	**Uoyan**	**1.18**	**269**	*e*Pg	**Pb**	**19 59 24.9**	**-1.2**
YOA				*e*Pb	**Pn**	**19 59 27.4**	**+0.8**
YOA				max		19 59 27.7	
	comp=E,1µm,0.2s						
YOA				*e*Sg	**Sb**	**19 59 40.0**	**-2.0**
YOA				*e*		19 59 45.9	
YOA				max		19 59 55.6	
	comp=E,8µm,1.0s						
YOA	**Uoyan**	**1.18**	**269**	*e*PG	**Pb**	**19 59 25.0**	**-1.2**
YOA				*e*		19 59 41.0	
YOA				pmax	pmax		
	comp=Z,1µm,0.2s						
YOA				smax	smax		
	comp=E,8µm,0.5s						
KMO	**Kumora**	**1.51**	**260**	⇓*i*Pg	**Pn**	**19 59 30.4**	**-0.7**
KMO				*e*Pb	**Pg**	**19 59 32.0**	**+0.3**
KMO				max		19 59 33.9	
	comp=E,1µm,0.5s						
KMO				*e*Sg	**Sb**	**19 59 50.2**	**-1.1**
KMO				*e*Sb	**Sg**	**19 59 53.0**	**+1.8**
KMO				max		19 59 54.3	
	comp=E,4µm,0.8s						
KMO	**Kumora**	**1.51**	**260**	⇓*i*PN	**Pn**	**19 59 30.3**	**-0.8**
KMO				*e*		19 59 50.3	
KMO				pmax	pmax		
	comp=Z,1µm,0.5s						
KMO				smax	smax		
	comp=N,4µm,0.8s						
BOD	**Bodaibo**	**1.66**	**3**	⇓*i*Pg	**Pb**	**19 59 34.7**	**+0.4**
BOD				Pmax		19 59 36.9	
	comp=N,1µm,0.7s						
BOD				*e*Sg	**Sb**	**19 59 57.0**	**+1.3**
BOD				Smax		19 59 59.4	
	comp=N,4µm,1.2s						
BOD	**Bodaibo**	**1.66**	**3**	*e*PN	**Pn**	**19 59 34.3**	**+1.1**
BOD				*e*		19 59 57.2	
BOD				pmax	pmax		
	comp=Z,1µm,1.1s						
BOD				smax	smax		
	comp=E,3µm,1.0s						
YLYR	**Ulyunkhan**	**2.00**	**231**	⇓*i*Pg	**Pb**	**19 59 38.8**	**-1.2**
YLYR				*e*		19 59 40.7	
YLYR				max		19 59 41.4	
	comp=E,1µm,0.3s						
YLYR				*e*Sg	**Sb**	**20 00 05.0**	**-0.4**
YLYR				Smax		20 00 09.6	
	comp=E,2µm,0.3s						
YLYR	**Ulyunkhan**	**2.00**	**231**	*e*PN	**Pb**	**19 59 38.9**	**-1.1**
YLYR				*e*		19 59 40.3	
YLYR				*e*S	**Sb**	**20 00 03.8**	**-1.6**
YLYR				*e*		20 00 05.1	
YLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
YLYR				smax	smax		
	comp=E,3µm,1.0s						
NIZ	**Nizh Angarsk**	**2.45**	**263**	*e*Pn	**Pn**	**19 59 45.1**	**+1.1**
NIZ				*e*Pg	**Pb**	**19 59 47.3**	**-0.4**
NIZ				*e*Sn	**Sn**	**20 00 13.0**	**-1.6**
NIZ				*e*Sg	**Sb**	**20 00 19.0**	**+0.7**
NIZ				Pmax			
	comp=E,312nm,0.8s						
NIZ				Smax			
	comp=E,1µm,0.4s						
CRS	**Chara**	**2.56**	**71**	⇓*i*Pn	**Pn**	**19 59 47.8**	**+2.2**
CRS				*e*Pg	**Pb**	**19 59 52.2**	**+2.6**
CRS				Pmax		19 59 52.7	
	comp=E,2µm,1.0s						
CRS				*e*PgPg	Pg	19 59 57.7	+5.8
CRS				*e*		20 00 05.4	
CRS				*e*Sg	**Sg**	**20 00 26.4**	**+1.3**
CRS				Smax		20 00 28.9	
	comp=E,3µm,1.6s						
CRS	**Chara**	**2.56**	**71**	*e*PN	**Pn**	**19 59 47.7**	**+2.2**
CRS				*e*		19 59 51.8	
CRS				*e*		20 00 25.4	
CRS				pmax	pmax		
	comp=Z,2µm,0.6s						
CRS				smax	smax		
	comp=E,3µm,1.6s						
SYVR	**Suvo**	**3.35**	**223**	*e*Pn	**Pn**	**19 59 56.8**	**+0.4**
SYVR				*e*Pg	**Pb**	**20 00 03.3**	**+0.2**
SYVR				*e*PgPg	**PbPb**	**20 00 06.3**	**+0.1**
SYVR				max		20 00 08.3	
	comp=E,419nm,0.9s						
SYVR				*e*Sg	**Sb**	**20 00 46.5**	**+2.2**
SYVR				*e*SgSg	**Sg**	**20 00 53.7**	**+3.3**
SYVR				max		20 00 57.6	
	comp=E,2µm,1.2s						
VTMR	**Vitim**	**3.35**	**349**	*e*Pn	**Pn**	**19 59 57.5**	**+1.1**
VTMR				*e*Pg	**Pb**	**20 00 05.0**	**+1.9**
VTMR				*e*Sn	**Sn**	**20 00 38.3**	**+1.4**
VTMR				*e*Sg	**Sb**	**20 00 48.5**	**+4.1**
TUP	**Tupik**	**3.91**	**114**	⇓*i*Pn	**Pn**	**20 00 05.2**	**+1.2**
TUP				*e*		20 00 07.6	
TUP				*e*Pg	**Pb**	**20 00 15.4**	**+2.9**
TUP				Pmax		20 00 21.0	
	comp=E,114nm,0.9s						
TUP				*e*Sn	**Sn**	**20 00 50.8**	**+0.2**
TUP				*e*Sg	**Sg**	**20 01 07.1**	**-1.2**
TUP				*e*		20 01 11.0	
TUP				max		20 01 14.9	
	comp=E,2µm,1.0s						
TUP	**Tupik**	**3.91**	**114**	*e*PN	**Pn**	**20 00 05.3**	**+1.2**
TUP				*e*		20 00 15.4	
TUP				*e*S	**Sn**	**20 00 51.1**	**+0.5**
TUP				*e*		20 01 07.2	
TUP				pmax	pmax		
	comp=Z,92nm,0.4s						
TUP				smax	smax		
	comp=N,2µm,1.0s						
MXMB	**Maximikha**	**4.14**	**228**	*e*Pn	**Pn**	**20 00 07.8**	**+0.5**
MXMB				*e*Pg	**Pb**	**20 00 16.9**	**+0.3**
MXMB				*e*Sg	**Sg**	**20 01 10.8**	**-5.1**
CIT	**Chita**	**4.16**	**182**	*e*Pn	**Pn**	**20 00 08.0**	**+0.5**
CIT				*e*Pg	**Pb**	**20 00 17.6**	**+0.8**
CIT				Pmax		20 00 19.1	
	comp=N,122nm,0.5s						
CIT				*e*Sg	**Sg**	**20 01 12.6**	**-3.7**
CIT				Smax		20 01 17.8	
	comp=N,410nm,0.3s						
CIT	**Chita**	**4.16**	**182**	*e*PN	**Pn**	**20 00 07.6**	**+0.1**
CIT				*e*		20 00 17.7	
CIT				*e*S	**Sn**	**20 00 54.6**	**-2.2**
CIT				*e*		20 01 11.1	
CIT				pmax	pmax		
	comp=Z,140nm,1.2s						
CIT				smax	smax		
	comp=E,1µm,2.0s						
YKLR	**Yuktali**	**4.37**	**81**	*e*Pn	**Pn**	**20 00 12.2**	**+1.9**
YKLR				*e*Pg	**Pb**	**20 00 23.1**	**+2.8**
YKLR				*e*Sg	**Sg**	**20 01 21.3**	**-1.7**
OGRR	**Ongureny**	**4.40**	**238**	*e*Pn	**Pn**	**20 00 12.3**	**+1.5**
OGRR				*e*Pg	**Pb**	**20 00 23.1**	**+2.1**
OGRR				Pmax		20 00 25.9	
	comp=E,212nm,1.4s						
OGRR				*e*Sg	**Sb**	**20 01 18.3**	**+3.8**
OGRR				Smax		20 01 25.8	
	comp=E,474nm,0.7s						
OGRR	**Ongureny**	**4.40**	**238**	*e*PN	**Pn**	**20 00 11.8**	**+1.0**
OGRR				*e*		20 00 23.0	
OGRR				*e*		20 01 18.3	
OGRR				pmax	pmax		
	comp=Z,211nm,1.6s						
OGRR				smax	smax		
	comp=E,508nm,2.0s						
TRG	**Tyrgan**	**5.54**	**235**	*e*Pn	**Pn**	**20 00 28.4**	**+1.9**
TRG				*e*Pg	**Pb**	**20 00 41.9**	**+1.5**
TRG				*e*		20 00 48.0	
TRG				max		20 00 49.8	
	comp=E,78nm,1.4s						
TRG				*e*Sg	**Sb**	**20 01 53.0**	**+5.6**
TRG				Smax		20 02 10.2	
	comp=E,216nm,0.9s						
TRG	**Tyrgan**	**5.54**	**235**	*e*PN	**Pn**	**20 00 26.5**	**0.0**
TRG				*e*		20 00 42.7	
TRG				*e*S	**Sn**	**20 01 28.6**	**-2.3**
TRG				*e*		20 01 53.4	
TRG				pmax	pmax		
	comp=Z,78nm,1.4s						
TRG				smax	smax		
	comp=N,217nm,0.9s						
FFNB	**Fofonovo**	**5.86**	**228**	*e*Pn	**Pn**	**20 00 33.2**	**+2.3**
FFNB				*e*Pg	**Pb**	**20 00 49.6**	**+3.8**
FFNB				*e*Sg	**Sg**	**20 02 05.3**	**-5.6**
KAB	**Kabansk**	**5.90**	**229**	*e*Pg	**Pb**	**20 00 51.0**	**+4.5**
KAB				Pmax		20 01 14.0	
	comp=N,224nm,1.3s						
KAB				*e*Sg	**Sg**	**20 02 06.3**	**-6.0**
KAB				Smax		20 02 36.8	
	comp=N,1µm,1.4s						
HRMR	**Khuramsha**	**6.10**	**225**	*e*Pn	**Pn**	**20 00 35.0**	**+0.8**
HRMR				*e*Pg	**Pb**	**20 00 53.0**	**+3.1**
HRMR				Pmax		20 00 56.8	
	comp=N,108nm,0.7s						
HRMR				*e*Sg	**Sg**	**20 02 13.2**	**-5.4**
HRMR				Smax		20 02 36.8	
	comp=N,1µm,1.3s						
IENR	**Iengra**	**6.15**	**85**	*e*Sg	**Sg**	**20 02 17.9**	**-2.4**
CLNS	**Chul'man**	**6.16**	**79**	*e*Pn	**Pn**	**20 00 37.2**	**+2.2**
CLNS				*e*Pg	**Pb**	**20 00 55.3**	**+4.4**
CLNS				*e*Sg	**Sg**	**20 02 15.9**	**-4.6**
BGT	**Bolshoye Golou**	**6.45**	**234**	*e*Pg	**Pb**	**20 00 58.5**	**+2.7**
BGT				Pmax		20 01 01.8	
	comp=N,35nm,1.2s						
BGT				*e*Sg	**Sb**	**20 02 20.7**	**+7.3**
BGT				Smax		20 02 35.5	
	comp=N,157nm,1.3s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*Pn	**Pn**	**20 00 39.6**	**-0.6**
KPC				*e*Pg	**Pb**	**20 01 01.8**	**+4.5**
KPC				Pmax		20 01 05.5	
	comp=N,20nm,0.4s						
KPC				*e*Sn	**Sn**	**20 01 53.0**	**-2.3**
KPC				*e*Sg	**Sg**	**20 02 25.1**	**-7.4**
KPC				Smax		20 02 42.7	
	comp=N,541nm,2.0s						
KPC	**Khapcheranga**	**6.53**	**188**	*e*PN	**Pn**	**20 00 39.6**	**-0.6**
KPC				*e*		20 01 01.2	
KPC				*e*		20 02 23.9	
KPC				pmax	pmax		
	comp=Z,20nm,0.4s						
KPC				smax	smax		
	comp=E,539nm,1.8s						
LSTR	**Listvyanka**	**6.83**	**235**	*e*Pn	**Pn**	**20 00 45.5**	**+1.3**
LSTR				*e*Pg	**Pb**	**20 01 05.4**	**+3.1**
LSTR				Pmax		20 01 09.8	
	comp=E,34nm,1.4s						
LSTR				*e*Sg	**Sg**	**20 02 34.6**	**-7.5**
LSTR				Smax		20 02 42.7	
	comp=E,379nm,1.7s						
IRK	**Irkutsk**	**6.85**	**239**	*e*Pg	**Pb**	**20 01 06.4**	**+3.8**
IRK				Pmax		20 01 14.0	
	comp=E,29nm,0.3s						
IRK				*e*Sg	Sg	20 02 33.1	-10
IRK				Smax		20 02 42.9	
	comp=E,350nm,0.8s						
IRK	**Irkutsk**	**6.85**	**239**	*e*PN	**Pn**	**20 00 43.1**	**-1.3**
IRK				*e*		20 01 05.5	
IRK				*e*		20 02 33.8	
IRK				pmax	pmax		
	comp=Z,41nm,0.7s						
IRK				smax	smax		
	comp=E,422nm,1.6s						
TLY	**Talaya**	**7.51**	**237**	Pg	**Pb**	**20 01 13.3**	**-0.6**
	comp=E,0.0nm,0.3s,baz=60,slow=14,SNR=1.7						
TLY				Sn	**Sn**	**20 02 19.8**	**+0.6**
	comp=E,0.0nm,0.3s,baz=79,slow=20,SNR=3.1						
TLY				Lg	Lg	20 02 53.5	
	comp=E,0.0nm,0.3s,baz=247,slow=6.5,SNR=8.1						
TLY				LR	LR	20 03 31.5	
	comp=E,156nm,20.1s,baz=42,slow=36						
TLY	**Talaya**	**7.51**	**237**	*i* PN	**Pn**	**20 00 54.1**	**+0.6**
TLY	**Talaya**	**7.51**	**237**		**Pn**	**20 00 56.9**	**+3.5**
HIA	**Hailar**	**7.78**	**150**	PN	Pn	20 00 52.1	-5.1
HIA	**Hailar**	**7.78**	**150**		Pn	20 00 52.1	-5.1
ARS	**Arshan**	**7.95**	**242**	*e*Pn	**Pn**	**20 01 00.3**	**+0.7**
ARS				*e*Pg	Pb	20 01 26.6	+5.2
ARS				Pmax		20 01 30.2	
	comp=E,33nm,0.7s						
ARS				*e*Sg	Sg	20 03 07.3	-11
ARS				Smax		20 03 19.1	
	comp=E,268nm,1.5s						
ARS	**Arshan**	**7.95**	**242**	*e*PG	**Pb**	**20 01 25.4**	**+4.0**
ARS				*e*		20 03 06.1	
ARS				pmax	pmax		
	comp=Z,33nm,0.7s						
ARS				smax	smax		
	comp=N,241nm,0.7s						
ZEA	**Zeya**	**8.10**	**102**	*e*PN	**Pn**	**20 01 02.3**	**+0.8**
ZEA				*e*		20 01 32.1	
ZEA				*e*S	**Sn**	**20 02 35.9**	**+2.3**
ZEA				*e*		20 03 21.9	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				smax	smax		
	comp=N,300nm,1.1s						
ZAK	**Zakamensk**	**8.57**	**232**	*e*	Pn	20 01 13.2	+5.0
ZAK				*e*Pg	Pg	20 01 38.0	-9.0
ZAK				Pmax		20 01 50.2	
	comp=N,15nm,1.4s						
ZAK				*e*Sg	Sg	20 03 28.8	-9.1
ZAK				Smax		20 03 47.3	
	comp=N,157nm,1.6s						
ZAK	**Zakamensk**	**8.57**	**232**	*e*PN	Pn	20 01 12.6	+4.4
ZAK				*e*		20 03 28.2	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MOY	**Mondy**	**8.82**	**245**	*e*Pn	**Pn**	**20 01 13.6**	**+2.1**
MOY				*e*		20 01 22.2	
MOY				max		20 01 26.5	
	comp=Z,53nm,1.3s						
MOY				*e*		20 03 11.1	
MOY				*e*Sg	Sg	20 03 34.5	-11
MOY				*e*		20 03 49.4	
MOY				max		20 03 59.8	
	comp=Z,240nm,2.2s						
MOY	**Mondy**	**8.82**	**245**	*e*PN	**Pn**	**20 01 12.7**	**+1.2**
MOY				*e*		20 01 42.2	
MOY				*e*S	**Sn**	**20 02 50.3**	**-1.2**
MOY				*e*		20 03 36.2	
ORL	**Orlik**	**8.96**	**252**	*e*Pn	**Pn**	**20 01 13.9**	**+0.5**
ORL				*e*		20 01 24.2	
ORL				max		20 01 27.9	
	comp=Z,33nm,1.2s						
ORL				*e*Sn	**Sn**	**20 02 50.8**	**-4.2**
ORL				*e*Sg	Sg	20 03 39.1	-11
ORL				Smax		20 03 56.7	
	comp=Z,140nm,1.9s						
ORL	**Orlik**	**8.96**	**252**	*e*PN	**Pn**	**20 01 14.0**	**+0.5**
ORL				*e*		20 01 44.8	
ORL				*e*		20 03 41.1	
ORL				pmax	pmax		
	comp=Z,37nm,1.1s						
ORL				smax	smax		
	comp=N,140nm,1.7s						
ULN	**Ulaanbaatar**	**9.30**	**209**	*i* P	**Pn**	**20 01 19.5**	**+1.3**
ULN	**Ulaanbaatar**	**9.30**	**209**	Pn	**Pn**	**20 01 18.3**	**+0.1**
SONM	**Songino Array**	**9.52**	**212**	Pn	**Pn**	**20 01 22.5**	**+1.4**
	comp=N,0.3nm,0.3s,baz=19,slow=14,SNR=14						
SONM				Pg		20 01 55.7	
	comp=N,0.6nm,0.3s,baz=18,slow=15,SNR=4.6						
SONM				Lg	Lg	20 04 00.7	
	comp=N,1.3nm,0.3s,baz=23,slow=26,SNR=3.7						
YAK	**Yakutsk**	**10.03**	**48**	Pn	**Pn**	**20 01 25.1**	**-2.9**
	comp=N,0.0nm,0.3s,baz=66,slow=4.5,SNR=1.5						
YAK				Sn	**Sn**	**20 03 14.7**	**-6.3**
	comp=N,0.1nm,0.3s,baz=228,slow=23,SNR=1.6						
YAK				Lg	Lg	20 04 14.6	
	comp=N,0.1nm,0.3s,baz=160,slow=24,SNR=12						
YAK				LR	LR	20 05 23.0	
	comp=N,140nm,21.0s,baz=226,slow=38						
YAK	**Yakutsk**	**10.03**	**48**	*e*P	Pn	20 01 34.0	+6.1
YAK				*e*S	Sn	20 03 32.5	+12
YAK				MLR	MLR		
	comp=Z,113nm,16.0s						
YAK	**Yakutsk**	**10.03**	**48**	Pn	Pn	20 01 21.8	-6.2
KLR	**Kul'dur**	**12.87**	**115**	Pn	**Pn**	**20 02 07.6**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=307,slow=14,SNR=9.2						
KLR				Lg	Lg	20 05 48.1	
	comp=Z,0.1nm,0.3s,baz=36,slow=19,SNR=8.2						
KLR	**Kul'dur**	**12.87**	**115**	*ce*P	**Pn**	**20 02 05.9**	**-0.9**
CN2	**Changchun**	**14.43**	**144**	*e*P	**Pn**	**20 02 30.0**	**+1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,600nm,11.0s						
CN2				LR	LR		
	comp=E,700nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
USRK	**Ussuriysk Ar.**	**16.62**	**128**	Lg	Lg	20 07 48.6	
	baz=328,slow=27,SNR=7.3						
ZALV	**Zalesovo Beam**	**16.72**	**275**	Pn	**Pn**	**20 02 56.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=77,slow=9.2,SNR=3.8						
ZALV				LR	LR	20 09 46.4	
	comp=Z,91nm,19.2s,baz=38,slow=38						
ZALV	**Zalesovo Beam**	**16.72**	**275**	P	**Pn**	**20 02 56.1**	**-2.0**
ZALV	**Zalesovo Beam**	**16.72**	**275**	P	**Pn**	**20 02 56.1**	**-2.0**
TIXI	**Tiksi**	**16.79**	**17**	*ce*P	**Pn**	**20 02 54.6**	**-4.4**
TIXI				pmax	pmax		
	comp=Z,50nm,1.0s						
TIXI	**Tiksi**	**16.79**	**17**	P	**Pn**	**20 02 56.7**	**-2.2**
TIXI				IAmb	IAmb	20 03 02.1	
	comp=Z,9.7nm,0.9s						
DGZ	**Jazzator, Alta**	**17.11**	**259**	*i* P	**Pn**	**20 03 02.7**	**-0.6**
NRIK	**Noril'sk**	**17.64**	**329**	P	**Pn**	**20 03 05.8**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=117,slow=12,SNR=4.2						
NRIK				LR	LR	20 10 27.9	
	comp=Z,191nm,20.6s,baz=130,slow=39						
NRIK	**Noril'sk**	**17.64**	**329**	*ce*P	**Pn**	**20 03 04.6**	**-5.0**
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	**Noril'sk**	**17.64**	**329**	P	**Pn**	**20 03 02.9**	**-6.8**
NRIK				IAmb	IAmb	20 03 29.5	
	comp=Z,6.1nm,0.6s						
GTA	**Gaotai**	**19.16**	**215**	⇓P	**Pn**	**20 03 29.5**	**+0.9**
GTA				pP		20 03 39.5	
GTA				sP		20 03 42.8	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,69nm,4.6s						
GTA				LR	LR		
	comp=N,260nm,12.0s						
GTA				LR	LR		
	comp=E,610nm,12.7s						
GTA				LR	LR		
	comp=Z,280nm,14.9s						
SEY	**Seymchan**	**20.41**	**55**	P	**P**	**20 03 39.8**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=278,slow=15,SNR=3.0						
SEY				Lg	Lg	20 09 47.8	
	comp=Z,3.4nm,0.9s,baz=48,slow=15,SNR=3.6						
KURK	**Kurchatov**	**21.51**	**270**	P	**P**	**20 03 53.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s						
KURK	**Kurchatov**	**21.51**	**270**	P	**P**	**20 03 53.3**	**+0.4**
MK31	**Makanchi Array**	**21.59**	**258**	P	**P**	**20 03 55.3**	**+1.3**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**21.59**	**258**	P	**P**	**20 03 55.3**	**+1.3**
MKAR	**Makanchi Array**	**21.59**	**258**	P	**P**	**20 03 56.1**	**+2.1**
	comp=Z,3.0nm,0.8s,baz=55,slow=10,SNR=17						
MKAR				LR	LR	20 12 24.5	
	comp=Z,205nm,18.8s,baz=30,slow=37						
MKAR	**Makanchi Array**	**21.59**	**258**	P	**P**	**20 03 55.3**	**+1.3**
KURBB	**Kurchatov Arra**	**21.60**	**270**	P	**P**	**20 03 55.6**	**+1.6**
	comp=Z,9.2nm,1.0s,baz=67,slow=12,SNR=23						
KURBB				Lg	Lg	20 10 19.9	
	comp=Z,0.9nm,1.1s,baz=64,slow=32,SNR=2.8						
MAKZ	**Makanchi**	**21.76**	**258**	P	**P**	**20 03 56.5**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAKZ	**Makanchi**	**21.76**	**258**	P	**P**	**20 03 56.5**	**+0.8**
MAKZ				IAmb	IAmb	20 04 00.9	
	comp=Z,7.3nm,1.1s						
BVAR	**Borovoye Array**	**25.05**	**281**	P	**P**	**20 04 30.5**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=215,slow=25,SNR=3.6						
BRVK	**Borovoye**	**25.10**	**281**	*ce*P	**P**	**20 04 27.4**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PET	**Petropavlovsk**	**25.80**	**78**	*ce*P	**P**	**20 04 31.5**	**-3.7**
AAK	**Ala-Archa**	**28.52**	**258**	LR	LR	20 16 58.0	
	comp=Z,130nm,21.6s,baz=24,slow=38						
ARU	**Arti**	**29.98**	**294**	LR	LR	20 19 51.8	
	comp=Z,68nm,20.7s,baz=238,slow=42						
KKAR	**Karatay Array**	**30.41**	**263**	P	**P**	**20 05 17.3**	**+0.8**
KKAR	**Karatay Array**	**30.41**	**263**	P	**P**	**20 05 17.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**39.29**	**203**	LR	LR	20 23 41.7	
	comp=Z,36nm,18.7s,baz=185,slow=38						
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**20 06 59.6**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=45,slow=8.4,SNR=7.5						
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**20 06 59.2**	**+0.1**
FINES	**FINESS Array B**	**42.48**	**315**	P	**P**	**20 06 59.2**	**+0.1**
YKA	**Yellowknife Ar**	**55.81**	**25**	P	**P**	**20 08 42.2**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=336,slow=6.7,SNR=12						
ESDC	**Sonseca Array**	**70.99**	**314**	P	**P**	**20 10 22.9**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=25,slow=6.4,SNR=7.4						
NVAR	**Mina Array Bea**	**75.91**	**40**	P	**P**	**20 10 53.9**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=318,slow=4.0,SNR=4.4						
WRA	**Warramunga Arr**	**77.77**	**160**	P	**P**	**20 11 03.7**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=349,slow=5.5,SNR=3.1						

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*IDC **28** 20:00:41.3±0.8,30°.91N×142°.09E,h0^{km},mb3.8/9,*
mb1 4.0/11,mb1mx3.7/45,mbtmp3.8/11,ML3.5/2,MS3.9/1,
Ms1 3.9/1,ms1mx2.7/41,Error ellipse: s-maj=28.8km
s-min=17.7km az=82.0

*NEIC **28** 20:00:41.1±1.7,30°.96N±0°.05×143°.0E±0°.2,h40^{km}±8^{km},*
mb4.4/6,Error ellipse: s-maj=27.4km s-min=7.0km
az=85.0

ISC 28 20:00:44.1±0.7,**30°.91N**±0°.07×**142°.1E**±0°.1,**h24**^{km},**n27,**
σ**1^{s}47**/28,**mb3.9**/13,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.80**	**179**	Pn	**Pn**	**20 01 41.8**	**+0.6**
	7.1nm,0.3s,baz=72,slow=20,SNR=1.7						
JCJ				Sn	**Sn**	**20 02 23.2**	**-1.9**
	17nm,0.3s,baz=59,slow=22,SNR=5.9						
JCJ	**Chichijima**	**3.80**	**179**	Pn	**Pn**	**20 01 37.9**	**-3.2**
JYT	**Yasato**	**5.55**	**344**	Pn	**Pn**	**20 02 04.6**	**-0.6**
JGF	**Kuroka**	**6.15**	**321**	Pn	**Pn**	**20 02 16.4**	**+2.9**
MJAR	**Matsushiro Arr**	**6.50**	**331**	Pn	**Pn**	**20 02 18.3**	**+0.1**
	0.4nm,0.3s,baz=158,slow=11,SNR=21						
MJAR				Sn	**Sn**	**20 03 28.5**	**-3.1**
	0.1nm,0.3s,baz=136,slow=22,SNR=2.8						
MJAR	**Matsushiro Arr**	**6.50**	**331**		**Pn**	**20 02 18.0**	**-0.3**
MAJO	**Matsushiro**	**6.50**	**331**		**Pn**	**20 02 18.6**	**+0.3**
MAT	**Matsushiro**	**6.50**	**331**	P	**Pn**	**20 02 18.7**	**+0.4**
MAT				S	**Sn**	**20 03 30.1**	**-1.6**
JMM	**Marumori**	**7.03**	**351**	Pn	**Pn**	**20 02 23.2**	**-2.3**
JMM				Sn	Sn	20 03 36.8	-7.9
ZALV	**Zalesovo Beam**	**46.63**	**317**	P	**P**	**20 09 10.8**	**+0.5**
	0.6nm,0.5s,baz=83,slow=15,SNR=1.9						
MK31	**Makanchi Array**	**48.08**	**307**	P	**P**	**20 09 21.0**	**-0.7**
MKAR	**Makanchi Array**	**48.08**	**307**	P	**P**	**20 09 22.1**	**+0.3**
	1.5nm,0.7s,baz=91,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**48.08**	**307**	P	**P**	**20 09 21.8**	**0.0**
NRIK	**Noril'sk**	**49.11**	**338**	LR	LR	20 30 35.6	
	comp=Z,110nm,19.3s,baz=122,slow=37						
KURK	**Kurchatov**	**50.34**	**312**	P	**P**	**20 09 39.2**	**+0.3**
KURK				IAmb	IAmb	20 09 41.6	
	comp=Z,2.6nm,0.8s						
KURBB	**Kurchatov Arra**	**50.40**	**312**	P	**P**	**20 09 39.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=89,slow=7.5,SNR=22						
WRA	**Warramunga Arr**	**51.11**	**189**	P	**P**	**20 09 45.5**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=5.4,slow=7.5,SNR=17						
ILAR	**Eielson Array**	**54.42**	**30**	P	**P**	**20 10 09.8**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=256,slow=6.6,SNR=5.2						
ASAR	**Alice Springs**	**54.83**	**189**	P	**P**	**20 10 13.3**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=353,slow=5.3,SNR=9.9						
KK31	**Karatay Array**	**56.87**	**304**		**P**	**20 10 27.0**	**+0.1**
KK31				IAmb	IAmb	20 10 28.4	
	comp=Z,4.0nm,1.1s						
KKAR	**Karatay Array**	**56.87**	**304**		**P**	**20 10 25.6**	**-1.4**
KKAR	**Karatay Array**	**56.87**	**304**	P	**P**	**20 10 25.8**	**-1.2**
KKAR				IAmb	IAmb	20 10 28.5	
	comp=Z,4.0nm,1.1s						
ABKAR	**Akbulak array**	**62.44**	**313**	P	**P**	**20 11 04.5**	**-0.7**
ABKAR				IAmb	IAmb	20 11 23.6	
	comp=Z,4.4nm,1.4s						
YKA	**Yellowknife Ar**	**68.83**	**29**	P	**P**	**20 11 47.1**	**+1.0**
	comp=Z,0.6nm,1.0s,baz=298,slow=4.5,SNR=3.5						
NVAR	**Mina Array Bea**	**78.22**	**52**	P	**P**	**20 12 43.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=308,slow=5.5,SNR=2.3						
BRTR	**Keskin Array B**	**83.39**	**313**	P	**P**	**20 13 11.4**	**+1.8**
	comp=Z,0.9nm,0.9s,baz=31,slow=1.2,SNR=4.3						
R40A	**Maddies Statio**	**94.50**	**40**	P	P	20 13 54.6	-8.0

DJA 28 20:08:14.5±0.6,**10°S**±4°×**11°8E**±°,**h10**^{km},**M3.7**/8,**mb3.9**/1,
MLv3.5/8,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.05**	**343**	P	Pg	20 08 34.4	-0.4
PLAI				S	Sg	20 08 48.4	-0.1
TWSI	**Taliwang, Sumb**	**1.62**	**312**	P	Pn	20 08 42.9	-0.2
TWSI				S	Sn	20 09 04.5	+0.4
SRBI	**Singaraja**	**3.33**	**301**	P	Pn	20 09 07.9	+1.2
EDFI	**Ende, Flores**	**3.71**	**73**	P	Pn	20 09 11.8	-0.3
JAGI	**Jajag, Banyuwa**	**4.12**	**289**	P	Pn	20 09 16.1	-1.5
BKSI	**Bulukumba**	**4.92**	**24**	P	Pn	20 09 29.1	+0.5
BNSI	**Bone**	**5.76**	**20**	P	Pn	20 09 39.3	-0.8

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*REY **28** 20:33:22.7, 64.°66N×17.°52W, h2^{km}*

*IDC **28** 20:33:24.8±0.8, 64.°57N×17.°90W, h0^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.6/42, mbtmp3.6/9, ML4.3/1, Error ellipse: s-maj=26.9km s-min=12.0km az=18.0*

ISC 28 20:33:23.6±0.6, **64.°70N**±0.°02×**17.°63W**±0.°03, **h10**^{km}, **n55**, σ**2.^{s}14**/66, **mb3.4**/7, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals** baz=26	**0.15**	**50**	P	**Pg**	**20 33 26.1**	**-0.8**
IDYN	baz=26			S	**Sg**	**20 33 29.0**	**-0.3**
IHAM	**Hamarinn** baz=217	**0.23**	**201**	P	**Pg**	**20 33 27.2**	**-1.2**
IURH	**Urdarhals** baz=44	**0.24**	**59**	P	**Pg**	**20 33 27.5**	**-1.0**
IDJK	**Dyngjujokull** baz=141	**0.26**	**139**	P	**Pg**	**20 33 27.0**	**-1.9**
IDJK	baz=141			S	**Sg**	**20 33 31.1**	**-1.3**
IGRF	**Grimsfjall** baz=156	**0.33**	**152**	P	**Pg**	**20 33 28.2**	**-2.0**
ISKR	**Skrokkalda** baz=256	**0.35**	**247**	P	**Pb**	**20 33 30.2**	**-1.7**
IJOK	**Jokulheimar** baz=222	**0.46**	**214**	P	**Pg**	**20 33 30.7**	**-1.9**
IJOK	baz=222			S	**Sg**	**20 33 36.7**	**-2.0**
IVOT	**Vottur** baz=159	**0.47**	**156**	P	**Pg**	**20 33 30.7**	**-2.1**
THOR	**Thorvaldshraun** baz=52	**0.47**	**60**	P	**Pg**	**20 33 31.2**	**-1.6**
THOR	baz=52			S	**Sg**	**20 33 38.1**	**-0.8**
IKRE	**Kreppuhraun** baz=75	**0.54**	**80**	P	**Pg**	**20 33 31.9**	**-2.2**
IKRE	baz=75			S	**Sg**	**20 33 40.3**	**-0.9**
IASK	**Askja** baz=43	**0.55**	**49**	P	**Pg**	**20 33 32.6**	**-1.6**
IASK	baz=43			S	**Sg**	**20 33 40.4**	**-1.1**
IMKO	**Mokollar** baz=57	**0.62**	**62**	P	**Pg**	**20 33 33.7**	**-1.9**
IMKO	baz=57			S	**Sg**	**20 33 42.8**	**-0.8**
IIEY	**Innrieyrar** baz=205	**0.64**	**200**	P	**Pg**	**20 33 34.0**	**-2.0**
ISVA	**Svartarkot** baz=9.3	**0.66**	**14**	P	**Pg**	**20 33 35.2**	**-1.2**
ISVA	baz=9.3			S	**Sb**	**20 33 45.0**	**-1.4**
IKSK	**Karasker** baz=137	**0.74**	**137**	P	**Pg**	**20 33 34.5**	**-3.2**
IKAL	**Kalfafell** baz=186	**0.75**	**182**	P	**Pg**	**20 33 35.7**	**-2.4**
IVSH	**V-Sauoahnukur** baz=78	**0.82**	**81**	P	**Pg**	**20 33 36.5**	**-2.9**
IVSH	baz=78			S	**Sg**	**20 33 47.8**	**-2.3**
IHVE	**Hveravellir** baz=285	**0.85**	**283**	P	**Pb**	**20 33 38.6**	**-1.8**
IFAG	**Fagurholsmyri** baz=154	**0.93**	**152**	P	**Pg**	**20 33 38.5**	**-2.9**
IADA	**Aoalbol** baz=65	**0.94**	**69**	P	**Pg**	**20 33 38.7**	**-2.8**
IMEL	**Melhnausar** baz=21	**0.97**	**25**	P	**Pg**	**20 33 40.0**	**-2.2**
IMEL	baz=21			S	**Sb**	**20 33 53.9**	**-1.4**
IREN	**Reynihlio** baz=14	**1.00**	**17**	P	**Pg**	**20 33 40.8**	**-2.0**
ISNB	**Snabyli** baz=208	**1.06**	**205**	P	**Pg**	**20 33 41.5**	**-2.4**
ISNB	baz=208			S	**Sg**	**20 33 55.9**	**-1.8**
IKVO	**Krokottuvotn** baz=14	**1.07**	**17**	P	**Pg**	**20 33 41.9**	**-2.2**
IFED	**Fedgar** baz=237	**1.12**	**234**	P	**Pb**	**20 33 43.3**	**-1.8**
IGRS	**Grimsstaoir** baz=30	**1.14**	**33**	P	**Pb**	**20 33 42.7**	**-2.6**
IRJU	**Rjupnafell** baz=206	**1.18**	**203**	P	**Pb**	**20 33 43.9**	**-2.1**
IGYG	**Gygjarholskot** baz=253	**1.20**	**251**	P	**Pb**	**20 33 44.3**	**-2.0**
ISKI	**Skildingahlsh** baz=9.4	**1.20**	**12**	P	**Pb**	**20 33 44.3**	**-2.1**
IGHA	**Grjothals** baz=16	**1.22**	**19**	P	**Pn**	**20 33 44.4**	**-2.3**
IGRA	**Granastaoir** baz=359	**1.23**	**1**	P	**Pn**	**20 33 44.6**	**-2.1**
IGRA	baz=359			S	**Sn**	**20 34 01.9**	**-1.3**
IHLA	**Hella** baz=345	**1.29**	**346**	P	**Pn**	**20 33 46.3**	**-1.3**
IDIM	**Dimmadalss** baz=10	**1.30**	**13**	P	**Pn**	**20 33 45.8**	**-2.0**
IHED	**Heoinshofoi** baz=3.4	**1.40**	**5**	P	**Pn**	**20 33 47.3**	**-1.7**
ISAU	**Saurbar** baz=243	**1.41**	**241**	P	**Pn**	**20 33 47.9**	**-1.2**
ISIG	**Siglufjorour** baz=339	**1.54**	**340**	P	**Pn**	**20 33 49.8**	**-1.2**
BORG	**Borgarnes** 34nm,0.3s,baz=97,slow=8.5,SNR=65	**1.59**	**273**	Pg	**Pn**	**20 33 50.3**	**-1.4**
BORG	12nm,0.3s,baz=266,slow=23,SNR=6.9			Lg	Lg	20 34 13.8	
IKRO	**Krokur** baz=252	**1.63**	**250**	P	**Pn**	**20 33 51.3**	**-0.9**
ISOL	**Solvholt** baz=246	**1.64**	**243**	P	**Pn**	**20 33 51.5**	**-0.8**
IHRN	**Hraun** baz=324	**1.76**	**325**	P	**Pb**	**20 33 53.5**	**-2.4**
ILEI	**Leirhofn** baz=13	**1.78**	**15**	P	**Pn**	**20 33 53.2**	**-1.1**
SCO	**Scoresbysund**	**6.04**	**346**	*i* P	**Pn**	**20 34 54.0**	**+1.2**
SCO	**Scoresbysund**	**6.04**	**346**	*i* P	**Pn**	**20 34 54.0**	**+1.2**
SCO				*i* P	**Pn**	**20 34 54.0**	**+1.2**
EKA	**Eskdalemuir Ar** baz=322,slow=14,SNR=11	**11.82**	**136**	Pn	**Pn**	**20 36 12.6**	**+0.6**
FINES	**FINESS Array B** baz=291,slow=12,SNR=2.1	**19.75**	**79**	P	**Pn**	**20 37 58.1**	**+3.5**
CLL	**Collm** comp=Z,26nm,1.7s	**20.77**	**116**	*i* (P)	Pn	20 38 08.1	+1.4
BRG	**Berggiesshubel**	**21.48**	**115**	*e*P	**P**	**20 38 16.2**	**+4.3**
BRG	comp=Z,6.3nm,1.0s			Amp		20 38 18.3	
KHC	**Kasperske Hory**	**22.74**	**118**	*e*P	**P**	**20 38 29.5**	**+4.0**
GERES	**GERESS Array B** comp=Z,0.4nm,0.4s,baz=324,slow=9.3,SNR=2.7	**23.02**	**119**	P	**P**	**20 38 31.6**	**+3.2**
ESDC	**Sonseca Array** comp=Z,0.6nm,0.8s,baz=343,slow=12,SNR=2.5	**26.31**	**156**	P	**P**	**20 39 00.8**	**+1.7**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.7s,baz=46,slow=9.2,SNR=4.8	**39.15**	**313**	P	**P**	**20 40 52.4**	**+1.6**
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=355,slow=4.5,SNR=4.6	**45.63**	**332**	P	P	20 41 47.5	+4.1
ILAR	comp=Z,0.2nm,0.8s,baz=20,slow=2.9,SNR=4.3			PcP	**PP**	**20 43 24.6**	**-5.2**
MKAR	**Makanchi Array** comp=Z,0.7nm,1.0s,baz=331,slow=6.3,SNR=4.8	**52.76**	**58**	P	P	20 42 42.0	+3.8
PDAR	**Pinedale Array** comp=Z,1.1nm,0.9s,baz=67,slow=8.2,SNR=6.2	**53.11**	**293**	P	**P**	**20 42 42.6**	**+1.5**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.7s,baz=339,slow=7.9,SNR=3.6	**53.19**	**156**	P	**P**	**20 42 45.2**	**+3.5**

IDC 28 20:35:31.2±2.9, **33.°29S**×**178.°56W**, **h0**^{km}, **mb4.3**/2, **mb1 4.5**/3, **mb1mx4.0**/27, **mbtmp4.3**/3, **ML3.8**/1, **MS3.4**/3, **Ms1 3.4**/3, **ms1mx3.0**/33, **Error ellipse: s-maj=68.7km s-min=36.2km az=119.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera** 2.3nm,0.3s,baz=35,slow=12,SNR=4.7	**6.08**	**214**	Pn	Pn	20 37 01.9	-0.5
URZ	3.9nm,0.3s,baz=6.3,slow=18,SNR=2.2			Sn	Sn	20 38 13.4	+0.7
DZM	**Mont Dzumac** comp=Z,150nm,20.7s,baz=47,slow=34	**17.34**	**306**	LR	LR	20 45 13.1	
STKA	**Stephens Creek** comp=Z,92nm,18.8s,baz=81,slow=36	**33.47**	**261**	LR	LR	20 55 18.8	
ASAR	**Alice Springs** 4.0nm,0.7s,baz=110,slow=7.4,SNR=47	**42.57**	**270**	P	P	20 43 29.1	+0.1
ASAR	comp=Z,35nm,20.0s,baz=70,slow=34			LR	LR	20 59 41.3	
WRA	**Warramunga Arr** 2.4nm,0.6s,baz=115,slow=7.7,SNR=32	**43.82**	**275**	P	P	20 43 38.9	-0.2
FINES	**FINESS Array B** 3.4nm,0.8s,baz=50,slow=3.0,SNR=8.4	**147.66**	**338**	PKPbc	PKPbc	20 55 16.2	-0.7

IDC 28 20:38:04.1±3.1, **33.°28S**×**178.°56W**, **h0**^{km}, **mb4.2**/2, **mb1 4.5**/3, **mb1mx4.0**/25, **mbtmp4.2**/3, **ML4.2**/1, **Error ellipse: s-maj=70.3km s-min=36.6km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera** 5.3nm,0.3s,baz=98,slow=14,SNR=7.5	**6.09**	**214**	Pn	Pn	20 39 36.0	+0.7
URZ	1.1nm,0.3s,baz=85,slow=14,SNR=1.5			Sn	Sn	20 40 44.7	-1.0
ASAR	**Alice Springs** 2.7nm,0.6s,baz=110,slow=7.5,SNR=20	**42.56**	**270**	P	P	20 46 01.9	+0.1
WRA	**Warramunga Arr** 2.1nm,0.6s,baz=116,slow=7.6,SNR=18	**43.81**	**275**	P	P	20 46 11.7	-0.3
FINES	**FINESS Array B** 4.1nm,0.9s,baz=56,slow=3.5,SNR=6.0	**147.65**	**338**	PKPbc	PKPbc	20 57 48.8	-0.9

IDC 28 20:38:38.3±10.0, **50.°20N**×**114.°23W**, **h0**^{km}, **mb1 3.8**/1, **mb1mx3.1**/41, **mbtmp3.4**/1, **ML3.3**/1, **Error ellipse: s-maj=144.6km s-min=58.2km az=46.0, Alberta**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	**NEWPORT INFRAS** baz=43,slow=326,SNR=7.4	**2.71**	**226**	*i*		20 57 00.0	
I10CA	**LAC DU BONNET** baz=272,slow=313,SNR=2.0	**11.67**	**83**	*i*		21 52 50.0	
YKA	**Yellowknife Ar** 0.2nm,0.3s,baz=177,slow=13,SNR=9.6	**12.33**	**359**	Pn	Pn	20 41 30.9	-3.9

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*BJI **28** 21:08:49.8±0.0, 39.°66N×124.°32W, h27^{km}, mB5.6/20, mb4.7/29, Ms5.3/18, Ms7 4.9/17*

*IDC **28** 21:08:51.8±0.6, 40.°35N×124.°39W, h0^{km}, mb4.3/21, mb1 4.5/27, mb1mx4.4/56, mbtmp4.4/27, ML4.0/6, MS4.8/33, Ms1 4.8/33, ms1mx4.7/42, Error ellipse: s-maj=9.0km s-min=7.8km az=16.0*

*MOS **28** 21:08:52.5±1.3, 40.°31N×124.°47W, h17^{km}, mb4.9/20, MS5.1/20, Error ellipse: s-maj=5.7km s-min=4.8km az=111.0*

*NEIC **28** 21:08:53.8, 40.°32N×124.°61W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.43; $M_{\theta\theta}$-2.28; $M_{\phi\phi}$1.84; $M_{r\theta}$0.31; $M_{\theta\phi}$-3.97; $M_{\phi r}$-1.19; Fault plane solution: $M_0$4.65000×10^{17} NP1:ϕ_s195.00000°, δ82.00000°, λ14.00000°. NP2:ϕ_s103.00000°, δ76.00000°, λ172.00000°. Principal axes: T 4.5906, Plg16.0000°, Azm59.0000°; N 0.1268, Plg74.0000°, Azm224.0000°; P -4.7174, Plg4.0000°, Azm328.0000°;*

*NEIC **28** 21:08:53.7, 40.°32N×124.°61W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.46; $M_{\theta\theta}$-2.59; $M_{\phi\phi}$2.13; $M_{r\theta}$0.37; $M_{\theta\phi}$-3.35; $M_{\phi r}$-0.69; Fault plane solution: $M_0$4.20000×10^{17} NP1:ϕ_s106.90000°, δ81.37000°, λ171.09000°. NP2:ϕ_s198.25000°, δ81.19000°, λ8.73000°. Principal axes: T 4.0450, Plg12.0000°, Azm63.0000°; N 0.2895, Plg78.0000°, Azm243.0000°; P -4.3345, Plg0.0000°, Azm153.0000°;*

*NCEDC **28** 21:08:53.7±3.0, 40.°32N±0.°04×124.°61W±0.°08, h17^{km}±4^{km}, Mwr5.7/13, mb5.1/134(NEIC), ML5.1/68(NEIC), Ms_20 5.2/427(NEIC), Mwb5.7/31(NEIC), Mwc5.8(GCMT), Mww5.7(NEIC) Error ellipse: s-maj=0.0km s-min=0.0km az=158.0*

*ANF **28** 21:08:53.1±1.2, 40.°47N×124.°39W, h0^{km}, ML5.3/8, Error ellipse: s-maj=8.9km s-min=5.0km az=47.0*

*NEIC **28** 21:08:55.0±2.9, 40.°36N±0.°03×124.°49W±0.°07, h19^{km}±3^{km}, Error ellipse: s-maj=9.0km s-min=3.6km az=65.0*

*NEIC **28** 21:08:58, 40.°22N×124.°73W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.02; $M_{\theta\theta}$-2.48; $M_{\phi\phi}$2.46; $M_{r\theta}$-0.62; $M_{\theta\phi}$-4.39; $M_{\phi r}$0.07; Fault plane solution: $M_0$5.07000×10^{17} NP1:ϕ_s15.00000°, δ83.00000°, λ-1.00000°. NP2:ϕ_s105.00000°, δ89.00000°, λ-173.00000°. Principal axes: T 5.0524, Plg4.0000°, Azm239.0000°; N 0.0388, Plg83.0000°, Azm113.0000°; P -5.0912, Plg6.0000°, Azm330.0000°;*

*GCMT **28** 21:09:01.7±0.1, 40.°31N±0.°01×124.°31W±0.°01, h30^{km}, MW5.8/160, Moment Tensor Solution. s136, c240; s160, c333; Duration: 1.^{s}8 Moment tensor: Scale 10^{17} Nm; M_{rr}0.24±.05; $M_{\theta\theta}$-2.58±.05; $M_{\phi\phi}$2.35±.05; $M_{r\theta}$0.26±.09; $M_{\theta\phi}$-4.74±.04; $M_{\phi r}$-0.91±.08; Best double couple: $M_0$5.43000×10^{17} NP1:ϕ_s103.00000°, δ81.00000°, λ175.00000°. NP2:ϕ_s194.00000°, δ85.00000°, λ9.00000°. Principal axes: T 5.3910, Plg10.0000°, Azm59.0000°; N 0.0840, Plg80.0000°, Azm225.0000°; P -5.4690, Plg3.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 21:09:01, 40.°29N×124.°36W, h27^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.10; $M_{\theta\theta}$-2.71; $M_{\phi\phi}$2.61; $M_{r\theta}$-0.60; $M_{\theta\phi}$-5.03; $M_{\phi r}$-0.93; Fault plane solution: $M_0$5.80000×10^{17} NP1:ϕ_s104.00000°, δ80.00000°, λ-177.00000°. NP2:ϕ_s14.00000°, δ87.00000°, λ-10.00000°. Principal axes: T 5.6844, Plg5.0000°, Azm59.0000°; N 0.2189, Plg79.0000°, Azm177.0000°; P -5.9033, Plg9.0000°, Azm329.0000°;*

ISC 28 21:08:54.0±0.6, **40.°30N**±0.°03×**124.°47W**±0.°02, **h18**^{km}±3^{km}, **n977**, σ**1.^{s}57**/772, **mb5.0**/114, **MS5.2**/268, **4C-3D**, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FS08D	**FS08D**	**0.03**	**12**	S	Sg	21 09 06.9	+7.8
FS04D	**FS04D**	**0.06**	**206**	S	**Sg**	**21 08 58.4**	**-0.9**
FS07D	**FS07D**	**0.14**	**284**	S	**Sb**	**21 09 04.5**	**+3.6**
FS10D	**FS10D**	**0.21**	**308**	S	**Sg**	**21 08 59.6**	**-2.7**
FS02D	**FS02D**	**0.25**	**275**	S	**Sb**	**21 09 03.9**	**-0.1**
KSMM	**Slide Mountain**	**0.26**	**117**		**Pn**	**21 09 01.5**	**-1.6**
FS06D	**FS06D**	**0.26**	**285**	S	**Sn**	**21 09 07.5**	**-0.8**
FS09D	**FS09D**	**0.29**	**298**	S	**Sn**	**21 09 05.7**	**-3.1**
FS16D	**FS16D**	**0.31**	**319**	S	**Sb**	**21 09 05.7**	**-0.1**
FS13D	**FS13D**	**0.32**	**307**	S	**Sn**	**21 09 08.1**	**-1.4**
G01D	**G01D**	**0.32**	**198**	S	**Sb**	**21 09 05.7**	**-0.2**
FS41D	**FS41D**	**0.37**	**328**	S	**Sg**	**21 09 01.4**	**-5.3**
G09D	**G09D**	**0.41**	**332**	P	**Pb**	**21 09 02.1**	**-0.7**
G09D				S	Sn	21 09 27.6	+15
FS44D	**FS44D**	**0.49**	**339**	S	**Sg**	**21 09 03.9**	**-6.6**
KCRM	**Chalk Rock**	**0.52**	**76**		**Pn**	**21 09 05.7**	**-0.9**
KMRM	**Mail Ridge**	**0.59**	**98**		**Pn**	**21 09 07.3**	**-0.3**
JCC	**Jacoby Creek,**	**0.62**	**33**		**Pn**	**21 09 05.7**	**-2.2**
JCC	comp=N,64μm,1.0s			IAML		21 09 18.3	
JCC	comp=E,87μm,0.6s			IAML		21 09 19.4	
KBSM	**Bell Springs**	**0.78**	**119**		**Pn**	**21 09 09.4**	**-0.8**
KHMM	**Horse Mountain**	**0.80**	**44**		**Pn**	**21 09 09.3**	**-1.4**
KHMM	comp=E,84μm,0.7s			IAML		21 09 27.7	
KCPM	**Cahto Peak**	**0.92**	**132**		**Pn**	**21 09 11.2**	**-1.0**
G10D	**G10D**	**0.96**	**301**	P	**Pb**	**21 09 08.8**	**-3.1**
G10D				S	Sn	21 09 39.8	+15
KOMM	**Orleans Mounta**	**1.25**	**38**		**Pn**	**21 09 15.3**	**-1.4**
GNAM	**Navarro Ridge**	**1.28**	**149**		**Pn**	**21 09 15.6**	**-1.5**
KRMB	**Red Mountain**	**1.29**	**19**		**Pn**	**21 09 15.2**	**-2.1**
O02D	**Mt. Diablo Mer** baz=276,SNR=1000	**1.30**	**95**	P	**Pg**	**21 09 17.1**	**-2.0**
O02D	baz=276			S	**Sg**	**21 09 34.5**	**-1.5**
G03D7	**G03D7**	**1.31**	**260**	S	Sn	21 09 21.5	-12
M16D	**M16D**	**1.38**	**350**	S	Sn	21 09 24.0	-12
GASB	**Alder Springs**	**1.50**	**115**		**Pb**	**21 09 19.4**	**-2.1**
WDC	**Whiskeytown Da**	**1.50**	**79**	P	**Pb**	**21 09 19.4**	**-2.0**
WDC	**Whiskeytown Da**	**1.50**	**79**	Pn	**Pb**	**21 09 19.4**	**-2.0**
WDC	comp=N,27μm,1.1s			IAML		21 09 55.3	
WDC	comp=E,19μm,1.1s			IAML		21 09 59.4	
N02D	**Trinity Center** baz=246,SNR=1000	**1.50**	**63**	P	**Pb**	**21 09 19.4**	**-2.1**
N02D	baz=246			S	**Sb**	**21 09 39.7**	**-0.6**
M02C	**Callahan** baz=232,SNR=1000	**1.64**	**48**	P	**Pn**	**21 09 21.0**	**-1.1**
M02C	baz=232			S	**Sn**	**21 09 41.5**	**-1.4**
HOPS	**Hopland Field**	**1.70**	**140**		**Pn**	**21 09 21.7**	**-1.1**
HOPS	**Hopland Field** comp=N,20μm,1.3s	**1.70**	**140**	IAML		21 10 13.6	
HOPS	comp=E,21μm,1.4s			IAML		21 10 14.4	
G04D	**G04D**	**1.77**	**266**	S	Sn	21 09 29.4	-16
LTCM	**Tuscan Springs**	**1.80**	**92**		**Pb**	**21 09 24.1**	**-2.3**
GPMM	**Pine Mountain**	**1.87**	**140**		**Pn**	**21 09 24.7**	**-0.6**
KBO	**Bosley Butte**	**1.92**	**6**		**Pn**	**21 09 23.0**	**-2.9**
YBH	**Yreka Blue Hor** comp=E,496nm,0.3s,baz=239,slow=12,SNR=1000	**1.96**	**42**	Pn	**Pn**	**21 09 25.5**	**-1.0**
YBH	comp=E,523nm,0.3s,baz=274,slow=10,SNR=78			Pg	**Pb**	**21 09 28.8**	**-0.4**
YBH	comp=E,1μm,0.3s,baz=162,slow=19,SNR=18			Lg	Lg	21 09 50.4	
YBH	**Yreka Blue Hor**	**1.96**	**42**	P	**Pn**	**21 09 25.6**	**-0.8**
YBH	**Yreka Blue Hor**	**1.96**	**42**		**Pn**	**21 09 25.6**	**-0.8**
L02E	**Cave Junction** baz=203,SNR=626	**1.97**	**19**	P	**Pn**	**21 09 24.9**	**-1.7**
L02E	baz=203			S	**Sn**	**21 09 47.2**	**-3.5**
GDXM	**Geysers**	**1.98**	**138**		**Pn**	**21 09 26.0**	**-0.8**
GSGM	**Seigler Mounta**	**1.98**	**136**		**Pn**	**21 09 26.1**	**-0.6**
LGBM	**Gray Butte**	**2.02**	**58**		**Pb**	**21 09 27.5**	**-2.9**
O03E	**Paynes Creek** baz=272	**2.04**	**89**	P	**Pn**	**21 09 27.2**	**-0.4**
GCRM	**Castle Rock Sp**	**2.04**	**138**		**Pn**	**21 09 27.0**	**-0.7**
FTR	**Fort Ross**	**2.05**	**150**		**Pn**	**21 09 26.2**	**-1.4**
MNRC	**McLaughlin Min**	**2.12**	**132**		**Pn**	**21 09 28.4**	**-0.3**
G20D	**G20D**	**2.15**	**303**	P	Pn	21 09 21.5	-7.0
G20D				S	**Sn**	**21 09 54.4**	**-0.2**
LMEM	**Manzanita Entr**	**2.23**	**83**		**Pn**	**21 09 30.5**	**+0.2**
LCMM	**Colby Mountain**	**2.27**	**93**		**Pn**	**21 09 30.7**	**-0.1**
SUTB	**Sutter Butte**	**2.33**	**116**		**Pn**	**21 09 30.1**	**-1.4**
HATC	**Hat Creek Radi**	**2.35**	**76**		**Pb**	**21 09 32.4**	**-3.5**
G33D	**G33D**	**2.37**	**354**	P	**Pg**	**21 09 40.4**	**+0.9**
G33D				S	**Sg**	**21 10 15.1**	**+4.8**
G21D	**G21D**	**2.40**	**291**	P	**Pn**	**21 09 28.8**	**-3.3**
G21D				S	**Sb**	**21 10 06.0**	**+0.3**
ORV	**Oroville**	**2.41**	**107**	P	**Pn**	**21 09 31.5**	**-1.1**
ORV	**Oroville**	**2.41**	**107**		**Pn**	**21 09 31.5**	**-1.1**
ORV	**Oroville** comp=N,14μm,0.6s	**2.41**	**107**	IAML		21 10 05.6	
ORV	comp=E,13μm,0.4s			IAML		21 10 06.4	
K02D	**Willamette Mer** baz=197,SNR=231	**2.47**	**14**	P	**Pn**	**21 09 31.9**	**-1.5**
M04C	**Macdoel** baz=236,SNR=1000	**2.48**	**53**	P	**Pn**	**21 09 33.4**	**-0.3**
MCCM	**Marconi Confer**	**2.48**	**150**		**Pn**	**21 09 32.2**	**-1.4**
MCCM	**Marconi Confer** comp=E,6μm,2.0s	**2.48**	**150**	IAML		21 10 40.7	
MCCM	comp=N,6μm,2.6s			IAML		21 10 41.1	
CVS	**Carmenet Viney**	**2.50**	**141**		**Pn**	**21 09 32.9**	**-1.0**
L04D	**Klamath Falls** baz=223,SNR=1000	**2.52**	**40**	P	**Pn**	**21 09 34.5**	**+0.2**
L04D	baz=223			S	**Sn**	**21 10 05.3**	**+0.8**
HUMO	**Hull Mountain**	**2.57**	**26**		**Pn**	**21 09 33.7**	**-1.2**
KEBM	**Edson Butte**	**2.57**	**2**		**Pn**	**21 09 32.7**	**-2.1**
G05D7	**G05D7**	**2.57**	**268**	P	Pn	21 09 27.6	-6.6
G05D7				S	**Sn**	**21 10 04.7**	**0.0**
G35D	**G35D**	**2.68**	**328**	S	**Sb**	**21 10 14.5**	**+0.9**
G35D				P	**Pn**	**21 09 34.9**	**-1.0**
G13D	**G13D**	**2.68**	**281**	S	**Sn**	**21 10 08.4**	**+0.8**
G13D				P	**Pn**	**21 09 35.5**	**-0.3**
G36D	**G36D**	**2.82**	**321**	P	**Pn**	**21 09 33.7**	**-4.1**
G36D				S	**Sn**	**21 10 09.6**	**-1.5**
J01E	**Myrtle Point** baz=190,SNR=46	**2.89**	**8**	P	**Pn**	**21 09 37.4**	**-1.7**
G22D	**G22D**	**2.91**	**294**	P	**Pn**	**21 09 38.6**	**-0.6**
G22D				S	**Sn**	**21 10 12.7**	**-0.8**
BL67	**Building 67, L**	**2.98**	**144**		**Pn**	**21 09 39.5**	**-0.9**
VAK	**Adit at Lawren**	**2.98**	**144**		**Pn**	**21 09 39.3**	**-1.1**
BKS	**Berkeley--Byer**	**2.98**	**144**		**Pn**	**21 09 39.4**	**-1.1**
AFDM	**Forest Hills D**	**3.02**	**115**	Pn	**Pn**	**21 09 40.4**	**-0.7**
AFDM	comp=E,4μm,0.6s			IAML		21 10 28.8	
AFDM	comp=N,3μm,2.1s			IAML		21 10 48.9	
G29D	**G29D**	**3.04**	**310**	P	**Pn**	**21 09 38.6**	**-2.3**
G29D				S	**Sn**	**21 10 12.7**	**-3.9**
K04D	**Chiloquin, OR** baz=224,SNR=22	**3.09**	**40**	P	**Pn**	**21 09 41.9**	**-0.2**
BDM	**Black Diamond**	**3.10**	**138**		**Pn**	**21 09 41.4**	**-0.7**
G37D	**G37D**	**3.15**	**318**	P	**Pn**	**21 09 39.8**	**-2.6**
G37D				S	**Sg**	**21 10 39.4**	**+4.4**
BEKR	**Beckworth**	**3.19**	**97**		**Pn**	**21 09 44.2**	**+0.8**
JRSC	**Jasper Ridge**	**3.38**	**148**		**Pn**	**21 09 44.2**	**-1.7**
WENL	**Wente Vineyard**	**3.41**	**141**		**Pn**	**21 09 46.4**	**0.0**
J04D	**Umpqua Nationa** baz=213,SNR=244	**3.43**	**30**	P	**Pn**	**21 09 46.7**	**-0.1**
I03D	**Drain, OR** baz=196,SNR=71	**3.49**	**14**	P	**Pn**	**21 09 45.9**	**-1.6**
J11D	**J11D**	**3.53**	**337**	P	**Pn**	**21 09 49.5**	**+1.9**
J11D				S	**Sg**	**21 10 44.9**	**-2.4**
MOD	**Modoc Plateau**	**3.53**	**62**	Pn	**Pn**	**21 09 47.4**	**-0.8**
MOD	comp=N,2μm,2.1s			IAML		21 11 07.7	
MOD	comp=E,3μm,1.4s			IAML		21 11 16.0	
RUBR	**Rubicon Trail**	**3.56**	**109**		**Pn**	**21 09 49.6**	**+1.0**
K05A	**Summer Lake**	**3.62**	**47**		**Pn**	**21 09 49.5**	**+0.1**
K05A	comp=E,3μm,1.8s			IAML		21 11 12.7	
K05A	comp=N,3μm,2.2s			IAML		21 11 27.3	
MHC	**Mount Hamilton**	**3.69**	**142**	P	**Pn**	**21 09 49.6**	**-0.8**
MHC	**Mount Hamilton**	**3.69**	**142**		**Pn**	**21 09 49.6**	**-0.8**
I04A	**Tendick Farm,** baz=206,SNR=84	**3.81**	**23**	P	**Pn**	**21 09 51.6**	**-0.3**
I04A	baz=206			S	**Sn**	**21 10 34.4**	**-1.9**
I02D	**Swisshome** baz=189,SNR=26	**3.83**	**7**	P	**Pn**	**21 09 51.2**	**-0.9**
J05D	**Fort Rock, OR** baz=221,SNR=131	**3.84**	**38**	P	**Pn**	**21 09 52.6**	**+0.2**
VCNR	**Virginia City**	**3.85**	**104**		**Pn**	**21 09 53.4**	**+0.8**
CMB	**Columbia Colle**	**3.90**	**124**	P	**Pn**	**21 09 53.6**	**+0.4**
CMB	**Columbia Colle**	**3.90**	**124**	Pn	**Pn**	**21 09 53.6**	**+0.4**
CMB	comp=N,2μm,1.5s			IAML		21 11 16.6	
CMB	comp=E,3μm,1.7s			IAML		21 11 28.3	
PNTR	**Pine Nut**	**3.95**	**106**		**Pn**	**21 09 54.9**	**+0.9**
PAHR	**Pah Rah Range**	**3.95**	**97**	Pn	**Pn**	**21 09 54.2**	**+0.2**
PAHR	comp=E,4μm,1.5s			IAML		21 10 57.7	
PAHR	comp=N,5μm,2.4s			IAML		21 11 16.3	
GHS	**Gilroy Hot Spr**	**3.98**	**143**		**Pn**	**21 09 53.1**	**-1.2**
HCOM	**Corn Cob Canyo**	**4.04**	**147**		**Pn**	**21 09 54.0**	**-1.0**
HFEM	**San Felipe**	**4.09**	**143**		**Pn**	**21 09 54.9**	**-0.9**
J19D	**J19D**	**4.10**	**342**	P	**Pb**	**21 10 04.1**	**-1.2**
J19D				S	**Sg**	**21 11 02.6**	**-2.9**
PACP	**Pacheco Peak**	**4.13**	**142**		**Pn**	**21 09 55.8**	**-0.5**
HSFM	**Saint Francis**	**4.19**	**145**		**Pn**	**21 09 56.1**	**-1.0**
SAO	**San Andreas Ge**	**4.26**	**145**	P	**Pn**	**21 09 56.3**	**-1.7**
SAO	**San Andreas Ge**	**4.26**	**145**	Pn	**Pn**	**21 09 56.3**	**-1.7**
WAKR	**Walker**	**4.29**	**113**		**Pn**	**21 09 59.7**	**+1.0**
WAKR	comp=E,3μm,2.2s			IAML		21 11 29.8	
WAKR	comp=N,2μm,3.5s			IAML		21 11 54.8	
COR	**Corvallis**	**4.37**	**11**	P	**Pn**	**21 10 01.5**	**+2.0**

COR	Corvallis	4.37	11	Pn	Pn	21 10 01.5	+2.0
COR				IAML		21 11 07.4	
	comp=N,1µm,1.2s						
PINE	Pine Mountain	4.37	36	Pn	Pn	21 10 00.1	+0.4
H04D	Lebanon	4.41	16	P	Pn	21 09 59.7	-0.3
	baz=199,SNR=13						
SCZ	Santa Cruz	4.42	146		Pn	21 09 58.0	-2.2
BJCM	Johnson Can.	4.46	146		Pn	21 09 58.8	-2.0
J20D	J20D	4.50	335	P	Pb	21 10 05.4	-6.9
J20D				S	Sg	21 11 13.5	-4.9
HAST	Hastings Reser	4.53	149		Pn	21 09 59.6	-2.2
BSMM	Soledad Missio	4.59	148		Pn	21 10 00.9	-1.7
I05D	Terrebonne, OR	4.66	29	P	Pn	21 10 03.2	-0.3
	baz=212,SNR=39						
H04A	Detroit Lake	4.69	20	Pn	Pn	21 10 04.3	+0.3
J27D	J27D	4.74	344	P	Pn	21 10 06.6	+2.3
J27D				S	Sg	21 11 19.6	-6.5
WVOR	Wild Horse Val	4.88	62	P	Pn	21 10 06.1	-0.6
WVOR	Wild Horse Val	4.88	62		Pn	21 10 06.1	-0.6
WVOR				IAML		21 11 57.5	
	comp=N,1µm,3.2s						
WVOR				IAML		21 12 03.9	
	comp=N,1µm,2.6s						
RYN	Ryan	4.90	108		Pn	21 10 07.8	+0.8
RYN				IAML		21 11 57.3	
	comp=E,2µm,2.4s						
RYN				IAML		21 11 58.0	
	comp=N,2µm,4.6s						
MDPB	Devils Postpil	4.98	121		Pn	21 10 09.8	+1.6
MDPB				IAML		21 11 53.4	
	comp=E,2µm,2.0s						
MDPB				IAML		21 11 57.7	
	comp=N,2µm,1.7s						
PMPB	Monarch Peak	5.00	144	Pn	Pn	21 10 07.6	-0.7
PMPB				IAML		21 12 44.2	
	comp=N,2µm,2.7s						
PMPB				IAML		21 12 52.1	
	comp=E,2µm,2.8s						
OMMB	Old Mammoth Mi	5.04	120	Pn	Pn	21 10 10.7	+1.7
OMMB				IAML		21 12 06.4	
	comp=N,1µm,1.8s						
OMMB				IAML		21 12 34.5	
	comp=E,1µm,3.1s						
LHV	Little Huntoon	5.07	112		Pn	21 10 10.0	+0.9
J28D	J28D	5.12	338	P	Pb	21 10 18.1	-4.7
J28D				S	Sg	21 11 31.2	-7.1
NVAR	Mina Array Bea	5.13	109	Pn	Pn	21 10 11.3	+1.1
	comp=E,71nm,0.3s,baz=293,slow=14,SNR=248						
NVAR				Lg	Lg	21 11 29.5	
	comp=E,62nm,0.3s,baz=311,slow=22,SNR=7.4						
MLAC	Mammoth, Mammo	5.14	119	P	Pn	21 10 11.6	+1.2
	baz=303						
NV11	Mina Array Sit	5.24	109	Pn	Pn	21 10 12.5	+0.8
G05D	Wamic, OR	5.46	24	P	Pn	21 10 14.0	-0.4
	baz=207,SNR=21						
VOG	Valley Oaks Go	5.64	133	P	Pn	21 10 17.9	+0.8
	baz=316						
PAGB	Antelope Grade	5.65	143		Pn	21 10 16.3	-0.9
TIN	Tinemaha, Big	5.86	122	P	Pn	21 10 21.8	+1.6
	baz=305						
F04D	Rainier, OR	5.88	10	P	Pn	21 10 18.8	-1.4
	baz=192						
TPH	Tonopah	6.06	109	P	Pn	21 10 23.6	+0.7
TPH	Tonopah	6.06	109		Pn	21 10 23.6	+0.7
SMMC	Simmler	6.11	143	P	Pn	21 10 22.5	-1.1
	baz=325						
VES	Vestal, Richgr	6.16	135	P	Pn	21 10 24.8	+0.7
	baz=318						
E03A	Lebam	6.28	6	Pn	Pn	21 10 27.0	+1.3
CWC	Cottonwood Cre	6.33	125	P	Pn	21 10 29.0	+2.3
	baz=309						
E04D	Cinebar	6.40	12	P	Pn	21 10 27.5	0.0
	baz=194						
G08A	Pilot Rock	6.42	37		Pn	21 10 29.4	+1.6
PKM	Mcpherson Peak	6.55	144	P	Pn	21 10 28.9	-0.8
	baz=326						
PKM				S	Sn	21 11 44.9	+0.9
	baz=326						
ISA	Isabella, Lake	6.62	132	P	Pn	21 10 32.2	+1.6
ISA	Isabella, Lake	6.62	132	P	Pn	21 10 32.2	+1.6
	baz=316						
ISA	Isabella, Lake	6.62	132	Pn	Pn	21 10 32.2	+1.6
LON	Longmire	6.73	16	P	Pn	21 10 33.2	+1.2
LON	Longmire	6.73	16		Pn	21 10 33.2	+1.2
ARVC	Arvin	6.83	137	P	Pn	21 10 34.7	+1.3
	baz=320						
MPMC	Manual Prospec	6.94	125	P	Pn	21 10 36.5	+1.4
	baz=310						
SBC	Santa Barbara	6.97	146	P	Pn	21 10 36.0	+0.8
	baz=328						
BMO	Blue Mountains	6.97	47	P	Pn	21 10 36.7	+1.3
BMO	Blue Mountains	6.97	47	Pn	Pn	21 10 36.7	+1.3
ELK	Elko	7.05	83	Pn	Pn	21 10 37.5	+0.9
	comp=E,2.5nm,0.3s,baz=283,slow=15,SNR=62						
ELK				Sn	Sn	21 11 54.3	-2.1
	comp=E,2.6nm,0.3s,baz=132,slow=15,SNR=1.2						
ELK				Lg	Lg	21 12 31.1	
	comp=E,8.0nm,0.3s,baz=159,slow=22,SNR=11						
ELK				LR	LR	21 13 29.4	
	comp=E,18µm,21.3s,baz=262,slow=40						
ELK	Elko	7.05	83	P	Pn	21 10 37.2	+0.6
ELK	Elko	7.05	83	Pn	Pn	21 10 37.2	+0.6
HAWA	Hanford	7.07	29	Pn	Pn	21 10 37.4	+0.8
E07A	Sunnyside	7.10	27		Pn	21 10 39.2	+2.2
NLWA	Neilton Lookou	7.10	3	Pn	Pn	21 10 39.2	+2.1
R11A	Troy Canyon, C	7.16	103	P	Pn	21 10 38.8	+0.8
	baz=289						
R11A	Troy Canyon, C	7.16	103		Pn	21 10 39.2	+1.1
LRMC	Laurel Mtn Rad	7.21	130	P	Pn	21 10 40.1	+1.4
	baz=314						
TPNV	Topopah Spring	7.26	115	P	Pn	21 10 42.0	+2.6
TPNV	Topopah Spring	7.26	115	P	Pn	21 10 40.4	+1.0
	baz=300						
TPNV	Topopah Spring	7.26	115	Pn	Pn	21 10 42.0	+2.6
OSI	Osito Audit: C	7.29	139	P	Pn	21 10 42.2	+2.5
	baz=322						
OSI	Osito Audit: C	7.29	139		Pn	21 10 41.1	+1.4
D03D	Eldon	7.30	7	P	Pn	21 10 39.9	+0.2
	baz=189						
SCZ2	Santa Cruz Isl	7.38	147	P	Pn	21 10 41.1	+0.1
	baz=329						
EDW2	Edwards Air Fo	7.46	134	P	Pn	21 10 43.4	+1.2
	baz=318						
LTY	Liberty	7.48	20		Pn	21 10 42.4	+0.1
DECC	Green Verdugo	7.77	139	P	Pn	21 10 48.0	+1.8
	baz=322						
SHOC	Shoshone, Teco	7.81	122	P	Pn	21 10 48.6	+1.7
	baz=306						
GSC	Goldstone, Bar	7.86	127	P	Pn	21 10 49.5	+2.0
GSC	Goldstone, Bar	7.86	127	P	Pn	21 10 49.3	+1.8
	baz=312						
GSC	Goldstone, Bar	7.86	127	Pn	Pn	21 10 49.5	+2.0
D08A	Wollman Farm,	7.86	29	Pn	Pn	21 10 48.8	+1.4
PRN	Pahroc Range	7.90	108		Pn	21 10 50.4	+2.3
PASC	Pasadena Art C	7.91	139	Pn	Pn	21 10 49.3	+1.1
MWC	Mount Wilson	7.93	138	P	Pn	21 10 49.8	+1.1
MWC	Mount Wilson	7.93	138		Pn	21 10 49.8	+1.1
SPR3	Spring Creek 3	7.93	96	Pn	Pn	21 10 50.9	+2.1
RRX	Edison Barstow	8.03	130	P	Pn	21 10 51.8	+1.9
	baz=314						
C06D	Leavenworth	8.04	17	P	Pn	21 10 49.1	-0.8
	baz=201						
BFSC	Mount Baldy Ra	8.13	136	P	Pn	21 10 52.7	+1.4
	baz=320						
FMP	Fort Macarthur	8.22	141	P	Pn	21 10 55.6	+3.1
	baz=324						
SHPR	Sheep Range	8.23	114	Pn	Pn	21 10 55.8	+3.1
PGC	Sidney	8.38	5	Pn	Pn	21 10 56.3	+1.8
PSUT	Pine Spring	8.41	99		Pn	21 10 57.3	+2.1
HEC	Hector,Ludlow	8.46	128	P	Pn	21 10 57.9	+2.1
	baz=312						
BBRC	Big Bear Solar	8.52	133	P	Pn	21 10 57.8	+1.1
	baz=317						
C09A	Chrisman Ranch	8.72	29	Pn	Pn	21 10 59.8	+0.5
SCI2	San Clemente I	8.72	145	P	Pn	21 11 01.7	+2.5
	baz=328						
BGU	Big Grassy Mou	8.73	82		Pn	21 11 01.3	+1.8
B08A	Colville Reser	8.85	23	Pn	Pn	21 11 02.5	+1.4
MURC	Murrieta	8.87	137	P	Pn	21 11 02.6	+1.2
	baz=321						
GMRC	Granite Mounta	8.90	125	P	Pn	21 11 03.9	+2.0
	baz=311						
DUG	Dugway, Tooele	8.92	87	P	Pn	21 11 04.1	+2.0
DUG	Dugway, Tooele	8.92	87	P	Pn	21 11 03.7	+1.5
	baz=275						
DUG	Dugway, Tooele	8.92	87	Pn	Pn	21 11 04.1	+2.0
HVU	Hansel Valley	8.96	77	P	Pn	21 11 05.0	+2.2
HVU	Hansel Valley	8.96	77		Pn	21 11 05.0	+2.2
BCYI	Bear Canyon	9.13	60	Pn	Pn	21 11 06.8	+1.8
BELC	Belle Mtn. Jos	9.23	130	P	Pn	21 11 07.6	+1.1
	baz=315						
PFO	Pinyon Flats O	9.26	134	Pn	Pn	21 11 08.3	+1.6
	comp=E,26nm,0.3s,baz=318,slow=10.0,SNR=158						
PFO				Lg	Lg	21 13 46.4	
	comp=E,0.7nm,0.3s,baz=279,slow=13,SNR=3.1						
PFO				LR	LR	21 14 56.4	
	comp=E,12µm,19.1s,baz=16,slow=39						
PFO	Pinyon Flats O	9.26	134	P	Pn	21 11 08.1	+1.4
PFO	Pinyon Flats O	9.26	134	P	Pn	21 11 08.2	+1.4
	baz=318						
PFO	Pinyon Flats O	9.26	134	Pn	Pn	21 11 08.1	+1.4
109C	Camp Elliot, M	9.47	139	Pn	Pn	21 11 12.5	+2.9
NEW	Newport	9.54	31	Pn	Pn	21 11 11.3	+0.8
	comp=E,1.2nm,0.3s,baz=194,slow=12,SNR=8.3						
NEW	Newport	9.54	31	P	Pn	21 11 12.4	+1.8
NEW	Newport	9.54	31	P	Pn	21 11 09.2	-1.4
	baz=217						
NEW	Newport	9.54	31	Pn	Pn	21 11 12.4	+1.8
NEE2	Needles Airpor	9.58	122	P	Pn	21 11 12.8	+1.7
	baz=308						
IRM	Iron Mountain	9.64	127	P	Pn	21 11 13.3	+1.4
	baz=312						
MVU	Marysvale	9.66	97	Pn	Pn	21 11 15.0	+2.6
MCMT	McKenzie Canyo	9.69	58		Pn	21 11 14.4	+1.6
CTU	Camp Tracy	9.70	84		Pn	21 11 14.9	+2.0
BC3	Big Chuckawall	9.80	130	P	Pn	21 11 15.1	+0.9
	baz=315						
MTPU	Mount Pierson	9.81	99	Pn	Pn	21 11 17.2	+2.7
MONP2	Monument Peak	9.82	136	P	Pn	21 11 16.2	+1.6
	baz=321						
HWUT	Hardware Ranch	9.85	78		Pn	21 11 17.4	+2.4
BAR	Barrett	9.86	138		Pn	21 11 16.3	+1.4
W13A	Hualapai Mount	9.87	118	Pn	Pn	21 11 18.9	+3.7
JLU	Jordanelle	9.93	84		Pn	21 11 18.6	+2.5
TCUT	Toone Canyon	9.96	81		Pn	21 11 19.2	+2.8
TKX	Tecate	9.98	138		Pn	21 11 17.9	+1.3
MSO	Missoula	10.04	46	P	Pn	21 11 18.8	+1.3
	baz=234						
MSO	Missoula	10.04	46	Pn	Pn	21 11 19.4	+2.0
DLMT	Dillon	10.08	56		Pn	21 11 19.5	+1.5
SWSC	Sam W. Stewart	10.12	134	P	Pn	21 11 19.3	+0.9
	baz=319						
CBX	Cerro Bola	10.16	139		Pn	21 11 20.6	+1.5
PDMCI	Parker Dam,Lak	10.17	123	P	Pn	21 11 22.3	+3.1
	baz=309						
IKP	In-Ko-Pah, Jac	10.18	136	P	Pn	21 11 20.8	+1.4
	baz=321						
ECR	Eagle Creek	10.18	70		Pn	21 11 21.6	+2.1
RMX	La Rumorosa	10.23	136		Pn	21 11 22.4	+2.3
TMUT	Trail Mountain	10.26	91		Pn	21 11 24.0	+3.3
U15A	North Rim	10.32	108	Pn	Pn	21 11 24.8	+3.4
AHID	Auburn Hatcher	10.33	72		Pn	21 11 24.4	+2.9
JTMT	Jette	10.44	41		Pn	21 11 23.7	+0.7
GLA	Glamis	10.60	130	P	Pn	21 11 25.7	+0.7
GLA	Glamis	10.60	130	P	Pn	21 11 25.8	+0.7
	baz=316						
GLA	Glamis	10.60	130		Pn	21 11 25.7	+0.7
QLMT	Earthquake Lak	10.63	61		Pn	21 11 27.9	+2.3
IMW	Indian Meadow	10.68	66	Pn	Pn	21 11 29.1	+2.7
YHB	Horse Butte	10.76	61		Pn	21 11 29.4	+2.0
ESJX	Sierra Juarez	10.77	138		Pn	21 11 29.2	+1.7
BOZ	Bozeman (W)	10.79	56	P	Pn	21 11 28.7	+0.9
BOZ	Bozeman (W)	10.79	56	P	Pn	21 11 28.2	+0.4
	baz=246						
BOZ	Bozeman (W)	10.79	56		Pn	21 11 28.7	+0.9
YHL	Hebgen Lake	10.80	61		Pn	21 11 29.0	+1.0
H17A	Grant Village	11.07	64	P	Pn	21 11 33.4	+1.8
	baz=253						
HRY	Holter Researc	11.19	51		Pn	21 11 34.5	+1.4
LKWY	Lake	11.24	63	P	Pn	21 11 36.6	+2.6
LKWY	Lake	11.24	63		Pn	21 11 36.6	+2.6
WUAZ	Wupatki	11.39	111	P	Pn	21 11 38.2	+2.1
	baz=299						
WUAZ	Wupatki	11.39	111	Pn	Pn	21 11 39.7	+3.6
113A	Mohawk Valley,	11.43	128	Pn	Pn	21 11 38.0	+1.6
BW06	Boulder Array	11.45	73	P	Pn	21 11 37.9	+1.1
	baz=263						
BW06	Boulder Array	11.45	73	Pn	Pn	21 11 38.7	+1.9
PDAR	Pinedale Array	11.45	73	Pn	Pn	21 11 40.2	+3.3
	comp=E,0.3nm,0.3s,baz=251,slow=12,SNR=32						
PDAR				Lg	Lg	21 14 56.4	
	baz=298,slow=38,SNR=1.5						
PDAR				LR	LR	21 16 56.4	
	comp=E,3µm,20.2s,baz=260,slow=43						
WALA	Waterton Lakes	11.53	37	Pn	Pn	21 11 39.0	+1.2
YNE	Yellowstone No	11.64	61		Pn	21 11 41.2	+1.7
SPX	San Pedro Mart	11.79	139	Pn	Pn	21 11 44.6	+3.0
SFX	San Felipe	12.10	137		Pn	21 11 49.5	+3.9
PV23	Carpenter Ridg	12.11	94		Pn	21 11 49.7	+3.8
BBB	Bella Bella	12.15	349	Pn	Pn	21 11 47.0	+0.9
	comp=E,0.3nm,0.3s,baz=183,slow=15,SNR=6.8						
BBB	Bella Bella	12.15	349		Pn	21 11 47.4	+1.3
RLMT	Red Lodge	12.18	62	P	Pn	21 11 48.0	+1.3
	baz=252						
RLMT	Red Lodge	12.18	62	Pn	Pn	21 11 49.6	+2.9
O20A	White River Ci	12.41	86	P	Pn	21 11 50.1	+0.1
	baz=276						
O20A	White River Ci	12.41	86	Pn	Pn	21 11 52.6	+2.6
214A	Organ Pipe Nat	12.57	128	P	Pn	21 11 54.5	+2.5
	baz=315						
214A	Organ Pipe Nat	12.57	128	Pn	Pn	21 11 55.0	+2.9
W18A	Petrified Fore	12.76	109	P	Pn	21 11 56.5	+1.7
	baz=298						
W18A	Petrified Fore	12.76	109		Pn	21 11 58.0	+3.2
MVCO	Mesa Verde	12.85	99	P	Pn	21 11 57.3	+1.3
	baz=289						
MVCO	Mesa Verde	12.85	99	Pn	Pn	21 11 58.0	+2.0
EGMT	Eagleton	13.07	49	P	Pn	21 11 58.3	-0.6
	baz=240						
EGMT	Eagleton	13.07	49	Pn	Pn	21 11 59.0	+0.2
TUC	Tucson	13.61	122	P	Pn	21 12 08.9	+2.7
TUC	Tucson	13.61	122	P	Pn	21 12 09.0	+2.7
	baz=310						
TUC	Tucson	13.61	122	Pn	Pn	21 12 08.9	+2.7
K22A	Casper	13.66	74	P	Pn	21 12 06.8	-0.3
	baz=266						
K22A	Casper	13.66	74		Pn	21 12 07.3	+0.2
S22A	4UR Ranch, Cre	13.96	95	P	Pn	21 12 12.1	+1.0
	baz=286						
N23A	Red Feather La	14.10	82	P	Pn	21 12 13.0	0.0
	baz=274						
ISCO	Idaho Springs	14.46	86	P	Pn	21 12 19.8	+1.7
ISCO	Idaho Springs	14.46	86	P	Pn	21 12 18.3	+0.2
	baz=278						
ISCO	Idaho Springs	14.46	86	Pn	Pn	21 12 19.8	+1.7
LAO	LASA Array	14.69	58	P	Pn	21 12 20.1	-0.8
	baz=251						
LAO	LASA Array	14.69	58		Pn	21 12 19.6	-1.3
Q24A	Divide	14.95	89	P	Pn	21 12 24.8	0.0
	baz=281						
SDCO	Great Sand Dun	14.97	94	P	Pn	21 12 25.7	+0.7
	baz=286						
SDCO	Great Sand Dun	14.97	94	Pn	P	21 12 26.9	-3.5
SDCO				IAmb	IAmb	21 12 32.9	
	comp=Z,125nm,1.2s						
319A	Douglas	15.19	121	Pn	P	21 12 30.9	-1.8
319A				IAmb	IAmb	21 12 48.7	
	comp=Z,164nm,1.2s						
ANMO	Albuquerque	15.24	105	Pn	Pn	21 12 29.3	+0.8
	comp=Z,0.1nm,0.3s,baz=296,slow=12,SNR=13						
ANMO				Lg	Lg	21 16 55.2	
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=3.3						
ANMO				LR	LR	21 19 04.0	
	comp=Z,8µm,18.4s,baz=294,slow=40						
ANMO	Albuquerque	15.24	105	*i* P	P	21 12 30.1	-3.3
ANMO	Albuquerque	15.24	105	P	P	21 12 29.5	-3.8
	baz=296						
ANMO	Albuquerque	15.24	105	Pn	P	21 12 30.1	-3.3
121A	Cookes Peak, D	15.50	115	P	P	21 12 33.0	-3.2
	baz=305						
121A	Cookes Peak, D	15.50	115		P	21 12 34.6	-1.6
RSSD	Black Hills	15.61	69	P	Pn	21 12 31.3	-2.0
RSSD				pmax	pmax		
	comp=Z,57nm,0.6s						
RSSD	Black Hills	15.61	69	P	Pn	21 12 31.0	-2.3
	baz=263						
RSSD	Black Hills	15.61	69	Pn	Pn	21 12 31.3	-2.0
RSSD				IAmb	IAmb	21 12 39.9	
	comp=Z,57nm,0.6s						
HSIG		15.81	131		P	21 12 38.4	-1.1
T25A	Trinidad	15.97	95	P	P	21 12 39.6	-1.9
	baz=288						
SRIG	Santa Rosalia	16.44	138	P	P	21 12 46.5	0.0
DGMT	Dagmar	16.60	54	P	Pn	21 12 44.3	-1.5
	baz=248						
DGMT	Dagmar	16.60	54	Pn	Pn	21 12 44.2	-1.5
DGMT				IAmb	IAmb	21 12 48.7	
	comp=Z,117nm,0.7s						
KSCO	Kaye Shedlock’	16.87	87	P	P	21 12 49.2	-2.2
	baz=281						
KSCO	Kaye Shedlock’	16.87	87	Pn	P	21 12 50.3	-1.1
KSCO				IAmb	IAmb	21 12 57.2	
	comp=Z,185nm,0.8s						
OGNE	Ogallala	17.05	81	P	Pn	21 12 50.2	-1.4
	baz=275						
OGNE	Ogallala	17.05	81	Pn	P	21 12 51.4	-1.9
MNTX	Cornudas Mount	17.65	113	P	P	21 13 00.4	+0.5
	baz=304						
MNTX	Cornudas Mount	17.65	113	P	P	21 13 01.4	+1.5
E28A	Huff	18.34	62	P	Pn	21 13 05.0	-2.4
MSTX	Muleshoe	18.40	103	P	Pn	21 13 09.0	+0.6
	baz=296						
MSTX	Muleshoe	18.40	103		Pn	21 13 08.2	-0.2
DLBC	Dease Lake	18.50	351	P	Pn	21 13 10.5	+1.3
	comp=Z,0.1nm,0.3s,baz=192,slow=11,SNR=10.0						
DLBC	Dease Lake	18.50	351		Pn	21 13 08.8	-0.4
AMTX	Amarillo	18.84	99	P	Pn	21 13 13.7	+0.1
	baz=294						
CBKS	Cedar Bluff	19.12	86	P	Pn	21 13 15.3	-1.6
CBKS				pmax	pmax		
	comp=Z,156nm,0.6s						
CBKS	Cedar Bluff	19.12	86	P	Pn	21 13 16.3	-0.7
	baz=282						
CBKS	Cedar Bluff	19.12	86	P	Pn	21 13 15.3	-1.6
SUSD	Miller	19.27	69	P	P	21 13 15.8	-1.9
	baz=267						
SUSD	Miller	19.27	69	P	P	21 13 16.2	-1.4
SUSD				IAmb	IAmb	21 13 17.4	
	comp=Z,144nm,0.9s						
MDND	Maddock	19.34	59	P	P	21 13 17.2	-1.1
	baz=256						
BGNE	Belgrade	19.92	78	P	P	21 13 23.8	-1.0
	baz=276						
BGNE	Belgrade	19.92	78	P	P	21 13 24.0	-0.8
BGNE				IAmb	IAmb	21 13 28.7	
	comp=Z,68nm,0.7s						
LPIG	La Paz	20.07	139	LR	LR	21 21 34.6	
	comp=Z,7µm,18.3s,baz=330,slow=38						
TXAR	Lajitas Array	20.24	116	P	Pn	21 13 31.1	+0.8
	comp=Z,33nm,0.8s,baz=301,slow=8.2,SNR=189						
TXAR				S	Sn	21 17 21.1	+3.3
	comp=Z,0.2nm,0.7s,baz=186,slow=24,SNR=0.8						
TXAR				Lg	Lg	21 19 45.1	
	comp=Z,0.1nm,0.4s,baz=312,slow=12,SNR=0.6						
HPIG		20.51	125	IAMs_20	IAMs_20	21 21 51.3	
	comp=Z,8µm,18.0s						
N33A	J Bar K, Exete	20.52	80	P	P	21 13 28.5	-2.8
SLBS	Sierra La Lagu	20.60	139		Pn	21 13 33.2	-1.4
SLBS				IAmb	IAmb	21 13 42.1	
	comp=Z,97nm,1.1s						
SLBS	Sierra La Lagu	20.60	139	IAMs_20	IAMs_20	21 21 31.3	
	comp=Z,7µm,18.0s						
KAN10	Anthony SW Sta	20.80	90	P	Pn	21 13 35.1	-1.7
KAN10				IAmb	IAmb	21 14 13.4	
	comp=Z,54nm,0.9s						
FFC	Flin Flon	20.82	39	P	P	21 13 33.3	-1.1
FFC				pmax	pmax		
	comp=Z,50nm,0.7s						
FFC				MLR	MLR		
	comp=Z,2µm,18.0s						
FFC	Flin Flon	20.82	39	P	P	21 13 33.3	-1.1
FFC				IAmb	IAmb	21 13 46.2	
	comp=Z,50nm,0.7s						
D32A	Dogwood Acres,	20.92	62	IAMs_20	IAMs_20	21 22 19.4	
	comp=Z,12µm,22.0s						
ECSD	EROS Data Cent	20.94	71	P	P	21 13 32.8	-3.0
	baz=270						
ECSD	EROS Data Cent	20.94	71	IAMs_20	IAMs_20	21 22 12.3	
	comp=Z,8µm,21.0s						
CROK	Carrier	21.07	92	P	P	21 13 36.3	-1.0
CROK				IAMs_20	IAMs_20	21 22 06.2	
	comp=Z,11µm,21.0s						
WMOK	Wichita Mounta	21.09	97	P	P	21 13 36.6	-0.9
WMOK				pmax	pmax		
	comp=Z,104nm,1.8s						
WMOK				MLR	MLR		
	comp=Z,5µm,21.0s						
WMOK	Wichita Mounta	21.09	97	P	P	21 13 37.7	+0.2
	baz=293						
WMOK	Wichita Mounta	21.09	97	P	P	21 13 36.6	-0.9
WMOK				IAmb	IAmb	21 14 18.0	
	comp=Z,104nm,1.8s						
L34A	Svendsen Farm,	21.19	76	P	P	21 13 36.9	-1.6
L34A				IAMs_20	IAMs_20	21 22 40.1	
	comp=Z,6µm,18.0s						
F33A	5 Mile Ranch,	21.26	66	P	P	21 13 36.4	-2.8
F33A				IAMs_20	IAMs_20	21 22 27.5	
	comp=Z,10µm,19.0s						
ABTX	Abilene, Hawle	21.34	103	P	P	21 13 40.5	+0.3
	baz=298						
ABTX	Abilene, Hawle	21.34	103	P	P	21 13 40.9	+0.7
ABTX				IAmb	IAmb	21 13 45.6	
	comp=Z,55nm,0.9s						
WHY	Whitehorse	21.38	346	P	P	21 13 40.2	-0.2
KSU1	Kansas State U	21.44	84	P	P	21 13 41.8	+0.6
	baz=282						
KSU1	Kansas State U	21.44	84	P	P	21 13 41.5	+0.3
BCOK	Bluff Creek, N	21.64	94	IAMs_20	IAMs_20	21 21 56.3	
	comp=Z,12µm,21.0s						
OK029	Liberty Lake	21.71	93	IAMs_20	IAMs_20	21 22 00.1	
	comp=Z,8µm,20.0s						
OKCFA	Oklahoma City	21.85	94	IAMs_20	IAMs_20	21 21 39.7	
	comp=Z,7µm,21.0s						
X34A	Smith Ranch, M	21.86	97	P	P	21 13 47.5	+1.8
X34A				IAmb	IAmb	21 14 27.3	
	comp=Z,126nm,1.5s						
X34A				IAMs_20	IAMs_20	21 21 19.1	
	comp=Z,10µm,21.0s						
N35A	Tabor	21.87	79	P	P	21 13 45.6	-0.2
N35A				IAMs_20	IAMs_20	21 22 15.0	
	comp=Z,7µm,22.0s						
AGMN	Agassiz Nation	21.89	59	P	P	21 13 43.8	-2.1
	baz=259						
AGMN	Agassiz Nation	21.89	59	P	P	21 13 44.0	-1.9
AGMN				IAMs_20	IAMs_20	21 23 14.0	
	comp=Z,13µm,19.0s						
HYT	Haines Junctio	22.07	343	P	P	21 13 49.0	+1.1
OK031	S. Brethren Rd	22.13	92	IAMs_20	IAMs_20	21 22 11.2	
	comp=Z,7µm,20.0s						
JCT	Junction City	22.31	108	P	P	21 13 51.1	+0.5
JCT				pmax	pmax		
	comp=Z,32nm,0.8s						
JCT				MLR	MLR		
	comp=Z,15µm,19.0s						
JCT	Junction City	22.31	108	P	P	21 13 50.6	-0.1
	baz=303						
JCT	Junction City	22.31	108	P	P	21 13 51.1	+0.5
ULM	Lac du Bonnet	22.32	54	P	P	21 13 48.3	-2.2
	comp=Z,29nm,0.6s,baz=265,slow=8.8,SNR=26						
ULM				S	S	21 17 59.4	+4.2
	comp=Z,1.2nm,0.4s,baz=310,slow=17,SNR=1.5						
ULM				Lg	Lg	21 20 35.0	
	comp=Z,0.5nm,0.3s,baz=246,slow=19,SNR=1.0						
ULM				LR	LR	21 23 44.7	
	comp=Z,7µm,18.0s,baz=256,slow=40						
ULM	Lac du Bonnet	22.32	54	*i* P	P	21 13 48.2	-2.4
Z35A	Perchaven, San	22.82	99	P	P	21 13 57.7	+1.6
Z35A				IAmb	IAmb	21 14 01.9	
	comp=Z,54nm,1.2s						
TUL1	Leonard	22.94	92	P	P	21 13 56.1	-1.2
	baz=290						
TUL1	Leonard	22.94	92	P	P	21 13 58.8	+1.5
TUL1				IAmb	IAmb	21 14 50.3	
	comp=Z,77nm,1.5s						
TUL1				IAMs_20	IAMs_20	21 22 49.7	
	comp=Z,8µm,20.0s						
YKA	Yellowknife Ar	23.00	12	P	P	21 13 57.5	-0.1
	comp=Z,5.8nm,1.0s,baz=196,slow=11,SNR=34						
YKA				LR	LR	21 24 35.7	
	comp=Z,3µm,19.5s,baz=0.0,slow=41						
F36A	Milaca	23.19	66	IAMs_20	IAMs_20	21 23 35.6	
	comp=Z,10µm,20.0s						
I37A	Lemond, Waseca	23.26	71	P	P	21 13 59.4	-1.1
I37A				IAmb	IAmb	21 14 06.4	
	comp=Z,52nm,0.6s						

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I37A                                IAMs_20 IAMs_20  21 23 32.6
       comp=Z,9µm,22.0s
WHTX   Lake Whitney,      23.27 102 P       P        21 14 00.6 -0.1
       baz=299
WHTX   Lake Whitney,      23.27 102 P       P        21 14 01.0 +0.4
WHTX                                IAMs_20 IAMs_20  21 23 28.6
       comp=Z,9µm,20.0s
BARN   Barnard Glacie     23.32 339 P       P        21 14 02.5 +1.4
SCIA   State Center       23.55  76 IAMs_20 IAMs_20  21 24 04.4
       comp=Z,6µm,18.0s
P38A   Dawn               23.67  82 P       P        21 14 04.8 +0.3
P38A                                IAmb    IAmb     21 14 14.1
       comp=Z,44nm,0.6s
P38A                                IAMs_20 IAMs_20  21 23 26.8
       comp=Z,6µm,18.0s
SPMN   Marine on St.      23.68  68 P       P        21 14 03.0 -1.6
       baz=269
SPMN   Marine on St.      23.68  68 IAMs_20 IAMs_20  21 23 42.6
       comp=Z,11µm,21.0s
N38A   Joes South For     23.68  79 P       P        21 14 05.4 +0.8
N38A                                IAMs_20 IAMs_20  21 23 33.1
       comp=Z,6µm,20.0s
X37A   Clayton            23.74  95 IAMs_20 IAMs_20  21 23 22.8
       comp=Z,10µm,18.0s
435B   Jarrell            23.78 105 P       P        21 14 05.8 +0.1
       baz=301
435B   Jarrell            23.78 105 P       P        21 14 06.9 +1.3
435B                                IAmb    IAmb     21 14 18.5
       comp=Z,56nm,0.7s
435B                                IAMs_20 IAMs_20  21 23 42.9
       comp=Z,11µm,20.0s
K38A   Parkersburg        23.80  74 IAMs_20 IAMs_20  21 24 01.0
       comp=Z,9µm,20.0s
833A   Chaparral WMA,     23.83 112 P       P        21 14 07.5 +1.4
       baz=307
U38A   Gravette           23.85  90 IAMs_20 IAMs_20  21 24 09.6
       comp=Z,7µm,19.0s
VRDI   Verde Repeater     23.97 337 P       P        21 14 08.2 +0.8
VRDI                                IAmb    IAmb     21 14 12.6
       comp=Z,103nm,2.0s
HHAR   Hobbs              24.24  90 IAMs_20 IAMs_20  21 24 27.9
       comp=Z,8µm,19.0s
S39A   Bolivar            24.29  86 IAMs_20 IAMs_20  21 24 07.3
       comp=Z,6µm,18.0s
237A   Washetta, Mont     24.50 101 IAMs_20 IAMs_20  21 23 15.1
       comp=Z,8µm,19.0s
Z38A   Mt. Pleasant       24.57  97 IAMs_20 IAMs_20  21 23 07.8
       comp=Z,6µm,20.0s
E38A   The Farm, Brul     24.59  64 P       P        21 14 13.4 +0.3
E38A                                IAmb    IAmb     21 14 15.4
       comp=Z,29nm,0.8s
E38A                                IAMs_20 IAMs_20  21 24 28.7
       comp=Z,8µm,19.0s
N25K   Chitina, Valde     24.61 337 P       P        21 14 14.1 +1.0
       baz=141
W39A   Magazine           24.73  92 P       P        21 14 14.4  0.0
       baz=291
W39A   Magazine           24.73  92 IAMs_20 IAMs_20  21 23 53.9
       comp=Z,9µm,21.0s
EYMN   Ely                24.73  61 P       P        21 14 14.6 +0.3
       baz=264
EYMN   Ely                24.73  61 P       P        21 14 13.8 -0.5
R40A   Maddies Statio     24.93  84 IAMs_20 IAMs_20  21 23 17.3
       comp=Z,6µm,21.0s
L40A   Anamosa            25.00  75 IAMs_20 IAMs_20  21 24 47.9
       comp=Z,5µm,19.0s
BCAR   Beaver Creek A     25.03 341 P       P        21 14 19.0 +2.2
U40A   Yellville          25.04  89 P       P        21 14 16.6 -0.6
       baz=289
U40A   Yellville          25.04  89 IAMs_20 IAMs_20  21 24 54.3
       comp=Z,7µm,18.0s
MIAR   Mount Ida          25.12  93 P       P        21 14 19.0 +1.1
MIAR                                pmax    pmax
       comp=Z,67nm,1.8s
MIAR                                MLR     MLR
       comp=Z,8µm,20.0s
MIAR   Mount Ida          25.12  93 P       P        21 14 19.4 +1.5
       baz=292
MIAR   Mount Ida          25.12  93 P       P        21 14 19.0 +1.1
MIAR                                IAmb    IAmb     21 14 44.6
       comp=Z,67nm,1.8s
MIAR                                IAMs_20 IAMs_20  21 24 18.5
       comp=Z,8µm,20.0s
MGMO   Mountain Grove     25.25  87 P       P        21 14 18.9 -0.1
MGMO                                IAMs_20 IAMs_20  21 23 53.6
       comp=Z,6µm,21.0s
I40A   Norwalk            25.27  71 P       P        21 14 18.9 -0.3
I40A                                IAmb    IAmb     21 14 29.6
       comp=Z,36nm,0.6s
I40A                                IAMs_20 IAMs_20  21 24 44.9
       comp=Z,10µm,21.0s
KVTX   Kingsville         25.36 112 IAMs_20 IAMs_20  21 25 56.7
       comp=Z,9µm,19.0s
MENT   Mentasta           25.42 339 P       P        21 14 21.3 +0.9
ZAIG   Zacatecas          25.46 127 P       P        21 14 23.3 +1.9
NATX   Nacogdoches        25.48 100 IAMs_20 IAMs_20  21 24 07.0
       comp=Z,9µm,18.0s
HKT    Hockley            25.50 105 P       P        21 14 23.5 +2.2
HKT                                 pmax    pmax
       comp=Z,62nm,1.5s
HKT                                 MLR     MLR
       comp=Z,5µm,22.0s
HKT    Hockley            25.50 105 P       P        21 14 23.5 +2.2
HKT                                 IAmb    IAmb     21 14 27.5
       comp=Z,62nm,1.4s
G40A   Rib Lake           25.52  67 P       P        21 14 20.5 -0.9
G40A                                IAmb    IAmb     21 14 24.9
       comp=Z,31nm,0.7s
G40A                                IAMs_20 IAMs_20  21 24 49.2
       comp=Z,11µm,21.0s
JFWS   Jewell Farm        25.62  73 P       P        21 14 21.9 -0.5
JFWS                                pmax    pmax
       comp=Z,25nm,0.6s
JFWS                                MLR     MLR
       comp=Z,9µm,18.0s
JFWS   Jewell Farm        25.62  73 P       P        21 14 22.0 -0.4
       baz=276
JFWS   Jewell Farm        25.62  73 P       P        21 14 21.9 -0.5
JFWS                                IAmb    IAmb     21 14 58.4
       comp=Z,25nm,0.6s
JFWS   Jewell Farm        25.62  73 IAMs_20 IAMs_20  21 25 06.2
       comp=Z,9µm,18.0s
X40A   Basin Creek Fa     25.71  93 P       P        21 14 25.8 +2.5
       baz=292
X40A   Basin Creek Fa     25.71  93 IAMs_20 IAMs_20  21 24 13.1
       comp=Z,7µm,22.0s
FCAR   Ozark Folk Cen     25.75  89 P       P        21 14 23.9 +0.3
FCAR                                IAmb    IAmb     21 15 12.1
       comp=Z,72nm,1.7s
CCM    Cathedral Cave     25.77  84 P       P        21 14 24.3 +0.5
CCM                                 pmax    pmax
       comp=Z,18nm,0.6s
CCM                                 MLR     MLR
       comp=Z,5µm,19.0s
CCM    Cathedral Cave     25.77  84 P       P        21 14 24.6 +0.8
       baz=286
CCM    Cathedral Cave     25.77  84 P       P        21 14 24.3 +0.5
CCM                                 IAmb    IAmb     21 14 26.8
       comp=Z,18nm,0.6s
WLAR   White Oak Lake     25.82  95 IAMs_20 IAMs_20  21 24 10.8
       comp=Z,6µm,21.0s
WHAR   Wooly Hollow       25.84  91 P       P        21 14 24.5 +0.1
WHAR                                IAmb    IAmb     21 15 13.1
       comp=Z,120nm,1.9s
WHAR                                IAMs_20 IAMs_20  21 24 27.3
       comp=Z,7µm,19.0s
W41B   Gary Mavity, V     25.91  91 P       P        21 14 26.2 +1.2
       baz=291
RC01   Rabbit Creek A     25.95 332 P       P        21 14 25.4 +0.2
       baz=132
PMR    Palmer             26.07 333 P       P        21 14 26.8 +0.6
PMR                                 pmax    pmax
       comp=Z,39nm,1.2s
PMR    Palmer             26.07 333 P       P        21 14 26.8 +0.6
PMR                                 IAmb    IAmb     21 14 29.6
       comp=Z,39nm,1.2s
L42A   Oliver, Polo       26.16  75 IAMs_20 IAMs_20  21 25 25.5
       comp=Z,6µm,20.0s
T42A   Van Buren          26.18  86 P       P        21 14 27.1 -0.4
T42A                                IAmb    IAmb     21 14 31.4
       comp=Z,20nm,0.6s
SCRK   Sand Creek         26.34 341 P       P        21 14 29.2 +0.4
       baz=145
SLM    Saint Louis        26.39  82 IAMs_20 IAMs_20  21 25 09.8
       comp=Z,8µm,21.0s
LCAR   Lake Charles       26.44  88 P       P        21 14 30.3 +0.5
I42A   Draeger Farm,      26.50  70 P       P        21 14 30.8 +0.5
I42A                                IAmb    IAmb     21 14 32.9
       comp=Z,79nm,1.4s
I42A                                IAMs_20 IAMs_20  21 25 32.4
       comp=Z,9µm,20.0s
SUA    Susitna One        26.56 332 P       P        21 14 31.5 +0.7
SUA                                 IAmb    IAmb     21 14 49.9
       comp=Z,51nm,1.4s
D41A   Chassel            26.66  63 IAMs_20 IAMs_20  21 25 53.4
       comp=Z,9µm,19.0s
FCC    Fort Churchill     26.66  36 P       P        21 14 32.2 +0.6
FCC                                 pmax    pmax
       comp=Z,36nm,0.9s
FCC                                 MLR     MLR
       comp=Z,3µm,18.0s
FCC    Fort Churchill     26.66  36 P       P        21 14 32.2 +0.6
FCC                                 IAmb    IAmb     21 14 37.6
       comp=Z,36nm,0.8s
P43A   Skaggs, Pawnee     26.69  80 IAMs_20 IAMs_20  21 26 39.8
       comp=Z,5µm,19.0s
CCAR   Cane Creek         26.75  93 IAMs_20 IAMs_20  21 25 19.4
       comp=Z,8µm,19.0s
EPYK   Eagle Plains       27.01 349 P       P        21 14 35.3 +0.6
CUT    Chulitna           27.02 334 P       P        21 14 34.6 -0.2
       baz=133
K43A   Burlington         27.05  73 IAMs_20 IAMs_20  21 25 50.9
       comp=Z,7µm,20.0s
X43A   Marvell            27.19  91 P       P        21 14 36.1 -0.5
       baz=292
Q44A   Meyer Farm, Va     27.25  81 P       P        21 14 38.2 +1.1
Q44A                                IAmb    IAmb     21 15 22.0
       comp=Z,22nm,0.7s
Q44A                                IAMs_20 IAMs_20  21 25 47.5
       comp=Z,7µm,20.0s
RND    Reindeer           27.27 336 P       P        21 14 38.7 +1.6
RND                                 pmax    pmax
       comp=Z,76nm,2.0s
RND                                 MLR     MLR
       comp=Z,2µm,22.0s
RND    Reindeer           27.27 336 P       P        21 14 38.7 +1.6
RND                                 IAmb    IAmb     21 15 00.8
       comp=Z,76nm,2.0s
H43A   Windswept, Lux     27.28  69 IAMs_20 IAMs_20  21 25 54.9
       comp=Z,8µm,22.0s
PARMO  Parma              27.32  86 IAMs_20 IAMs_20  21 26 42.4
       comp=Z,5µm,19.0s
S44A   Carbondale         27.39  84 IAMs_20 IAMs_20  21 24 44.2
       comp=Z,5µm,19.0s
342A   Flagon Creek P     27.42  99 IAMs_20 IAMs_20  21 24 49.4
       comp=Z,5µm,18.0s
L44A   Lake County Fo     27.43  74 P       P        21 14 38.9 +0.2
       baz=279
L44A   Lake County Fo     27.43  74 IAMs_20 IAMs_20  21 26 03.0
       comp=Z,6µm,21.0s
PVMO   Portageville       27.44  87 IAMs_20 IAMs_20  21 25 12.6
       comp=Z,6µm,21.0s
M44A   Midewin, Midew     27.46  76 IAMs_20 IAMs_20  21 26 14.9
       comp=Z,6µm,21.0s
PENMO  Penman             27.48  87 IAMs_20 IAMs_20  21 25 11.7
       comp=Z,6µm,21.0s
143A   Socs Landing,      27.53  95 IAMs_20 IAMs_20  21 25 17.1
       comp=Z,5µm,20.0s
HQIL   Hanson Quary C     27.53  75 IAMs_20 IAMs_20  21 26 16.9
       comp=Z,7µm,19.0s
MCK    McKinley           27.53 337 P       P        21 14 40.2 +0.8
       baz=137
IL18   Eielson Array      27.69 340 P       P        21 14 42.2 +1.4
LNXT   Lenox              27.70  87 IAMs_20 IAMs_20  21 25 19.5
       comp=Z,5µm,22.0s
IL31                      27.73 339 P       P        21 14 42.3 +1.2
ILAR   Eielson Array      27.73 339 P       P        21 14 42.3 +1.1
       comp=Z,5.5nm,1.0s,baz=157,slow=8.4,SNR=18
E43A   Lone Tree Farm     27.74  65 P       P        21 14 41.8 +0.4
E43A                                IAmb    IAmb     21 14 45.8
       comp=Z,31nm,0.8s
E43A                                IAMs_20 IAMs_20  21 26 16.9
       comp=Z,8µm,20.0s
TRF    Thorofare Moun     27.75 335 P       P        21 14 43.2 +1.6
TRF                                 IAmb    IAmb     21 15 10.1
       comp=Z,41nm,1.5s
HICK   Hickman            27.75  86 IAMs_20 IAMs_20  21 26 57.0
       comp=Z,6µm,20.0s
GLAT   Glass              27.80  87 IAMs_20 IAMs_20  21 25 23.1
       comp=Z,6µm,21.0s
HALT   Halls              27.88  88 IAMs_20 IAMs_20  21 25 23.2
       comp=Z,5µm,21.0s
OLIL   Olney              27.98  81 IAMs_20 IAMs_20  21 27 13.0
       comp=Z,7µm,19.0s
PPLA   Purkeypile         28.01 333 P       P        21 14 45.3 +1.4
PPLA                                IAmb    IAmb     21 14 51.1
       comp=Z,65nm,1.4s
COLA   College            28.07 339 i P     P        21 14 43.4 -0.8
COLA                                pmax    pmax
       comp=Z,18nm,2.4s
POKR   Poker Plat Res     28.15 340 P       P        21 14 45.9 +1.0
       baz=141
POKR   Poker Plat Res     28.15 340 P       P        21 14 46.7 +1.8
NEA2   Nenana             28.21 338 P       P        21 14 46.1 +0.6
       baz=138
W45A   Hickory Valley     28.26  89 IAMs_20 IAMs_20  21 26 04.3
       comp=Z,4µm,18.0s
OXF    Oxford             28.32  91 P       P        21 14 45.7 -1.1
       baz=292
OXF    Oxford             28.32  91 IAMs_20 IAMs_20  21 25 54.1
       comp=Z,6µm,20.0s
SFIN   Lafayette          28.35  78 P       P        21 14 47.2 +0.2
       baz=282
VBMS   Vicksburg          28.41  96 IAMs_20 IAMs_20  21 27 29.5
       comp=Z,5µm,19.0s
I45A   Fountain           28.41  70 IAMs_20 IAMs_20  21 26 50.0
       comp=Z,7µm,20.0s
BPAW   Bear Paw Mtn.      28.43 336 P       P        21 14 48.3 +0.8
Y45A   Yeager Farm, C     28.47  92 IAMs_20 IAMs_20  21 27 15.0
       comp=Z,7µm,18.0s
INK    Inuvik             28.49 353 P       P        21 14 48.6 +0.8
       comp=Z,8.0nm,1.1s,baz=141,slow=12,SNR=4.8
INK                                 LR      LR       21 27 11.8
       comp=Z,3µm,18.9s,baz=156,slow=39
INK    Inuvik             28.49 353 P       P        21 14 48.8 +1.0
INK                                 pmax    pmax
       comp=Z,14nm,1.2s
INK                                 MLR     MLR
       comp=Z,4µm,19.0s
INK    Inuvik             28.49 353 P       P        21 14 48.8 +1.0
USIN   University of      28.52  83 IAMs_20 IAMs_20  21 26 25.1
       comp=Z,6µm,19.0s
L46A   Eue Claire         28.64  74 IAMs_20 IAMs_20  21 26 50.2
       comp=Z,7µm,20.0s
WVT    Waverly            28.96  86 P       P        21 14 51.9 -0.5
WVT                                 pmax    pmax
       comp=Z,9.0nm,0.6s
WVT                                 MLR     MLR
       comp=Z,5µm,19.0s
WVT    Waverly            28.96  86 P       P        21 14 52.2 -0.2
       baz=290
WVT    Waverly            28.96  86 P       P        21 14 51.9 -0.5
WVT    Waverly            28.96  86 IAMs_20 IAMs_20  21 27 53.8
       comp=Z,5µm,19.0s
MLY    Manley             29.02 337 P       P        21 14 54.0 +1.3
       baz=136
BLO    Bloomington        29.06  80 IAMs_20 IAMs_20  21 27 53.5
       comp=Z,5µm,19.0s
146A   Union              29.34  94 IAMs_20 IAMs_20  21 27 02.2
       comp=Z,6µm,20.0s
BMAR   Burnt Mountain     29.36 344 P       P        21 14 57.7 +2.0
TTA    Tatalina           29.41 331 P       P        21 14 57.5 +1.3
TTA                                 pmax    pmax
       comp=Z,46nm,1.8s
TTA    Tatalina           29.41 331 P       P        21 14 57.5 +1.3
TTA                                 IAmb    IAmb     21 16 00.0
       comp=Z,46nm,1.8s
GLMI   Grayling           29.49  68 IAMs_20 IAMs_20  21 27 11.4
       comp=Z,8µm,21.0s
346A   Big Creek Wild     29.59  96 IAMs_20 IAMs_20  21 28 49.6
       comp=Z,7µm,20.0s
E46A   Sault Ste Mari     29.60  65 P       P        21 14 58.8 +0.9
E46A                                IAMs_20 IAMs_20  21 27 36.2
       comp=Z,8µm,20.0s
P48A   Milroy             29.82  79 IAMs_20 IAMs_20  21 28 33.4
       comp=Z,4µm,18.0s
V48A   Smith Brothers     29.86  87 IAMs_20 IAMs_20  21 26 33.7
       comp=Z,5µm,21.0s
Z47A   Carrollton         29.86  92 IAMs_20 IAMs_20  21 26 51.9
       comp=Z,5µm,22.0s
L48A   N Adams            30.02  74 IAMs_20 IAMs_20  21 27 42.7
       comp=Z,8µm,19.0s
CLTN   Cedars of Leba     30.11  86 IAMs_20 IAMs_20  21 27 06.4
       comp=Z,4µm,19.0s
UNM    Universidad Na     30.12 126 IAMs_20 IAMs_20  21 27 31.9
       comp=Z,5µm,19.0s
R49A   Shelbyville        30.32  81 IAMs_20 IAMs_20  21 27 43.6
       comp=Z,7µm,20.0s
P49A   Miami Univ. Ec     30.33  78 P       P        21 15 03.9 -0.6
       baz=284
P49A   Miami Univ. Ec     30.33  78 P       P        21 15 05.0 +0.5
O49A   Covington          30.46  77 IAMs_20 IAMs_20  21 28 38.3
       comp=Z,5µm,21.0s
COLD   Coldfoot           30.50 341 P       P        21 15 05.4 -0.3
       baz=139
AAM    Ann Arbor          30.52  73 IAMs_20 IAMs_20  21 27 58.0
       comp=Z,7µm,19.0s
LRAL   Lakeview Retre     30.75  92 P       P        21 15 09.0 +0.7
       baz=295
LRAL   Lakeview Retre     30.75  92 IAMs_20 IAMs_20  21 27 20.4
       comp=Z,5µm,21.0s
Y49A   Blount Mountai     30.87  90 IAMs_20 IAMs_20  21 28 38.5
       comp=Z,4µm,18.0s
T50A   Nancy              30.95  83 IAMs_20 IAMs_20  21 26 56.4
       comp=Z,5µm,21.0s
R50A   Paris              30.95  81 IAMs_20 IAMs_20  21 28 03.6
       comp=Z,8µm,21.0s
W50A   Signal Mountai     31.20  87 IAMs_20 IAMs_20  21 27 26.3
       comp=Z,4µm,22.0s
ACSO   Alum Creek Sta     31.45  76 P       P        21 15 14.3 -0.1
       baz=284
ACSO   Alum Creek Sta     31.45  76 P       P        21 15 14.8 +0.4
ACSO                                IAMs_20 IAMs_20  21 27 52.7
       comp=Z,6µm,22.0s
BRAL   Brewton            31.52  95 IAMs_20 IAMs_20  21 27 30.9
       comp=Z,5µm,19.0s
CPCT   Cooper Cave        31.71  86 P       P        21 15 17.4 +0.6
CPCT                                IAmb    IAmb     21 16 21.7
       comp=Z,47nm,1.6s
CPCT                                IAMs_20 IAMs_20  21 27 43.8
       comp=Z,5µm,20.0s
250A   Grady              31.76  93 IAMs_20 IAMs_20  21 28 12.1
       comp=Z,6µm,22.0s
TLIG   Tlapa              31.84 128 IAMs_20 IAMs_20  21 28 32.4
       comp=Z,4µm,21.0s
Z51A   Franklin           32.03  90 IAMs_20 IAMs_20  21 28 10.2
       comp=Z,4µm,21.0s
TZTN   Tazewell           32.08  83 P       P        21 15 20.8 +0.9
       baz=290
TZTN   Tazewell           32.08  83 IAMs_20 IAMs_20  21 27 31.4
       comp=Z,5µm,22.0s
I51A   Listowel           32.18  69 P       P        21 15 21.2 +0.4
       baz=279,SNR=11
TKL    Tuckaleechee C     32.21  85 P       P        21 15 21.4 +0.3
       comp=Z,4.5nm,0.5s,baz=204,slow=3.2,SNR=7.5
TKL                                 LR      LR       21 28 31.3
       comp=Z,3µm,18.1s,baz=298,slow=37
P52A   Corning            32.23  77 IAMs_20 IAMs_20  21 28 17.4
       comp=Z,4µm,22.0s
W52A   Murphy             32.30  86 IAMs_20 IAMs_20  21 28 00.2
       comp=Z,5µm,22.0s
Q52A   Bidwell            32.31  78 IAMs_20 IAMs_20  21 27 55.5
       comp=Z,4µm,21.0s
O52A   Adamsville         32.33  76 IAMs_20 IAMs_20  21 29 47.9
       comp=Z,6µm,20.0s
M52A   Chesterland        32.36  73 IAMs_20 IAMs_20  21 29 04.5
       comp=Z,7µm,20.0s
152A   Waverly Hall       32.65  91 IAMs_20 IAMs_20  21 29 55.6
       comp=Z,4µm,18.0s
Y52A   Lilburn            32.66  88 IAMs_20 IAMs_20  21 29 21.9
       comp=Z,4µm,19.0s
R53A   Hurricane          32.73  79 IAMs_20 IAMs_20  21 27 54.5
       comp=Z,5µm,21.0s
O53A   New Philadelph     32.76  76 P       P        21 15 26.0 +0.1
       baz=284
O53A   New Philadelph     32.76  76 IAMs_20 IAMs_20  21 29 06.3
       comp=Z,5µm,19.0s
451A   Vernon             32.77  95 IAMs_20 IAMs_20  21 28 21.0
       comp=Z,6µm,21.0s
M53A   WI Miller and      32.88  73 P       P        21 15 26.3 -0.6
       baz=283
M53A   WI Miller and      32.88  73 IAMs_20 IAMs_20  21 29 21.3
       comp=Z,6µm,20.0s
Q53A   Leroy              32.90  78 P       P        21 15 27.2 +0.1
       baz=286
N53A   Lisbon             32.90  75 IAMs_20 IAMs_20  21 29 23.0
       comp=Z,7µm,20.0s
V53A   Saluda             32.94  85 P       P        21 15 28.8 +1.2
V53A                                IAmb    IAmb     21 15 31.7
       comp=Z,46nm,1.4s
V53A                                IAMs_20 IAMs_20  21 29 25.2
       comp=Z,5µm,19.0s
352A   Blakely            33.00  93 IAMs_20 IAMs_20  21 28 50.1
       comp=Z,6µm,22.0s
L53A   Girard             33.07  72 P       P        21 15 27.7 -0.9
       baz=282
BG3    Lake Jocassee      33.09  86 P       P        21 15 30.4 +1.5
ERPA   Erie               33.23  72 P       P        21 15 28.5 -1.5
       baz=282
GOGA   Godfrey            33.30  89 P       P        21 15 31.6 +1.0
       baz=294
SADO   Sadowa             33.37  67 P       P        21 15 30.9 -0.3
       comp=Z,13nm,0.8s,baz=298,slow=9.8,SNR=7.1
SADO                                LR      LR       21 29 39.7
       comp=Z,7µm,20.2s,baz=306,slow=38
SADO   Sadowa             33.37  67 P       P        21 15 31.9 +0.7
SADO                                IAMs_20 IAMs_20  21 29 29.0
       comp=Z,7µm,21.0s
S54A   Dingess, Beckl     33.37  80 P       P        21 15 29.8 -1.5
       baz=288
Q54A   Coxs Mills         33.38  78 P       P        21 15 32.4 +1.0
Q54A                                IAmb    IAmb     21 15 37.6
       comp=Z,54nm,1.5s
U54A   Nelsons Funny      33.40  83 P       P        21 15 31.1 -0.5
       baz=290
U54A   Nelsons Funny      33.40  83 IAMs_20 IAMs_20  21 29 29.3
       comp=Z,6µm,20.0s
N54A   Moraine State      33.49  74 P       P        21 15 32.1 -0.2
       baz=284
R54A   Victor             33.50  79 P       P        21 15 32.8 +0.4
       baz=288
M54A   Oil Creek Stat     33.60  73 P       P        21 15 33.3  0.0
       baz=283
M54A   Oil Creek Stat     33.60  73 IAMs_20 IAMs_20  21 29 43.5
       comp=Z,6µm,22.0s
H53A   Bobcaygeon         33.79  67 P       P        21 15 34.7 -0.1
       baz=279,SNR=12
ANM    Nome               33.82 329 P       P        21 15 36.7 +1.8
ANM                                 pmax    pmax
       comp=Z,24nm,1.4s
ANM                                 MLR     MLR
       comp=Z,1µm,21.0s
ANM    Nome               33.82 329 P       P        21 15 36.7 +1.8
ANM                                 IAmb    IAmb     21 15 38.2
       comp=Z,24nm,1.4s
HODGE  Hodges             33.90  87 IAMs_20 IAMs_20  21 30 46.6
       comp=Z,4µm,18.0s
MATQ   Matagami           33.93  58 P       P        21 15 35.7 -0.3
       baz=272,SNR=6.9
MCWV   Mont Chateau       33.93  76 P       P        21 15 35.9 -0.2
       baz=286
ALGO   Algonquin Park     33.96  65 P       P        21 15 36.3  0.0
       baz=278,SNR=8.2
553A   Crawfordville      33.97  95 IAMs_20 IAMs_20  21 30 04.8
       comp=Z,4µm,22.0s
J54A   Appleton           33.98  70 P       P        21 15 37.1 +0.7
PAULI  Pauline            34.01  85 P       P        21 15 37.5 +0.7
PAULI                               IAMs_20 IAMs_20  21 29 04.6
       comp=Z,5µm,21.0s
G54A   Lake Saint Pet     34.01  66 P       P        21 15 36.4 -0.4
       baz=278,SNR=12
V55A   Taylorsville       34.09  83 P       P        21 15 38.0 +0.5
V55A                                IAmb    IAmb     21 15 39.6
       comp=Z,31nm,1.1s
V55A                                IAMs_20 IAMs_20  21 28 43.6
       comp=Z,5µm,22.0s
R55A   Marlinton          34.12  79 P       P        21 15 37.8  0.0
       baz=288,SNR=8.4
R55A   Marlinton          34.12  79 P       P        21 15 38.2 +0.4
R55A                                IAmb    IAmb     21 15 41.4
       comp=Z,33nm,0.9s
R55A                                IAMs_20 IAMs_20  21 28 50.3
       comp=Z,5µm,20.0s
MEDO   Medina             34.13  70 P       P        21 15 38.2 +0.4
VLDQ   Val d'Or           34.15  61 P       P        21 15 36.0 -1.9
VLDQ                                IAMs_20 IAMs_20  21 29 43.8
       comp=Z,6µm,22.0s
BLA    Blacksburg         34.23  81 P       P        21 15 38.8  0.0
       baz=289
BLA    Blacksburg         34.23  81 IAMs_20 IAMs_20  21 29 53.3
       comp=Z,6µm,20.0s
KMSC   Kings Mountain     34.26  85 P       P        21 15 39.2 +0.2
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	baz=292						
LSQQ	**Lebel-sur-Quev**	**34.39**	**59**	P	**P**	**21 15 40.3**	**+0.3**
	baz=274						
CMIG	**Matias Romero**	**34.49**	**123**	LR	LR	21 30 49.4	
	comp=Z,2µm,19.8s,baz=288,slow=38						
U56A	**King**	**34.55**	**82**	P	**P**	**21 15 41.9**	**+0.4**
	baz=290						
U56A	**King**	**34.55**	**82**	IAMs_20	IAMs_20	21 30 14.9	
	comp=Z,6µm,18.0s						
J55A	**Hilton**	**34.57**	**69**	P	**P**	**21 15 41.9**	**+0.4**
T56A	**Rocky Mt**	**34.58**	**81**	P	**P**	**21 15 42.0**	**+0.2**
	baz=290						
Q56A	**Snyder Ridge,**	**34.59**	**77**	P	**P**	**21 15 41.0**	**-0.9**
	baz=287						
Q56A	**Snyder Ridge,**	**34.59**	**77**	IAMs_20	IAMs_20	21 31 15.8	
	comp=Z,4µm,21.0s						
R56A	**Bull Pasture M**	**34.62**	**78**	P	**P**	**21 15 42.5**	**+0.3**
	baz=288						
V56A	**Mocksville**	**34.65**	**83**	P	**P**	**21 15 42.3**	**-0.1**
	baz=291						
255A	**Hazlehurst**	**34.68**	**90**	IAMs_20	IAMs_20	21 29 42.4	
	comp=Z,5µm,22.0s						
RDOG	**Red Dog Mine**	**34.69**	**336**	P	**P**	**21 15 43.9**	**+1.5**
M56A	**Emporium**	**34.69**	**73**	P	**P**	**21 15 42.6**	**-0.1**
	baz=284,SNR=6.8						
M56A	**Emporium**	**34.69**	**73**	P	**P**	**21 15 43.3**	**+0.5**
O56A	**Blue Knob Stat**	**34.72**	**75**	P	**P**	**21 15 42.8**	**-0.1**
	baz=285						
O56A	**Blue Knob Stat**	**34.72**	**75**	P	**P**	**21 15 43.7**	**+0.7**
O56A				IAmb	IAmb	21 15 44.5	
	comp=Z,36nm,1.4s						
O56A				IAMs_20	IAMs_20	21 30 28.9	
	comp=Z,6µm,21.0s						
P56A	**Dayton Farm, R**	**34.72**	**76**	P	**P**	**21 15 43.2**	**+0.2**
	baz=286						
N56A	**West Decatur**	**34.75**	**74**	P	**P**	**21 15 43.0**	**-0.2**
	baz=285,SNR=9.6						
PLVO	**Plevna**	**34.78**	**66**	P	**P**	**21 15 43.8**	**+0.4**
PLVO				IAMs_20	IAMs_20	21 30 21.2	
	comp=Z,7µm,20.0s						
W56A	**Indian Trail**	**34.83**	**84**	P	**P**	**21 15 44.3**	**+0.3**
	baz=292						
L56A	**Greenwood**	**34.99**	**71**	P	**P**	**21 15 45.7**	**+0.4**
	baz=283,SNR=11						
L56A	**Greenwood**	**34.99**	**71**	P	**P**	**21 15 45.8**	**+0.5**
PECO	**Prince Edward**	**35.03**	**68**	IAMs_20	IAMs_20	21 30 31.1	
	comp=Z,6µm,20.0s						
K56A	**Middlesex**	**35.04**	**70**	P	**P**	**21 15 45.9**	**+0.2**
	baz=283						
A21K	**Barrow**	**35.06**	**343**	P	**P**	**21 15 45.0**	**-0.4**
	baz=135						
A21K	**Barrow**	**35.06**	**343**	P	**P**	**21 15 46.7**	**+1.2**
A21K				IAmb	IAmb	21 15 57.4	
	comp=Z,32nm,1.2s						
BIRD	**Birdtown, Kers**	**35.11**	**85**	IAMs_20	IAMs_20	21 29 49.8	
	comp=Z,4µm,22.0s						
S57A	**Dark Hollow, R**	**35.16**	**79**	P	**P**	**21 15 47.2**	**+0.4**
	baz=289,SNR=9.8						
S57A	**Dark Hollow, R**	**35.16**	**79**	IAMs_20	IAMs_20	21 30 57.8	
	comp=Z,6µm,19.0s						
Q57A	**Strasburg**	**35.17**	**77**	P	**P**	**21 15 47.2**	**+0.4**
	baz=287						
T57A	**Hurt**	**35.18**	**81**	P	**P**	**21 15 47.4**	**+0.5**
	baz=290						
T57A	**Hurt**	**35.18**	**81**	IAMs_20	IAMs_20	21 30 35.4	
	comp=Z,6µm,20.0s						
J56A	**Wolcott**	**35.25**	**69**	P	**P**	**21 15 47.7**	**+0.2**
	baz=282						
W57A	**Gilead**	**35.27**	**84**	P	**P**	**21 15 48.8**	**+1.0**
	baz=292						
W57A	**Gilead**	**35.27**	**84**	IAMs_20	IAMs_20	21 31 24.0	
	comp=Z,5µm,21.0s						
U57A	**Blanch**	**35.31**	**81**	P	**P**	**21 15 48.4**	**+0.4**
	baz=290						
R57A	**Stanardsville**	**35.31**	**78**	P	**P**	**21 15 48.7**	**+0.7**
	baz=288						
N57A	**Milroy**	**35.34**	**74**	P	**P**	**21 15 47.8**	**-0.4**
	baz=285,SNR=7.2						
P57A	**Homestead Farm**	**35.34**	**76**	P	**P**	**21 15 48.8**	**+0.5**
	baz=287						
O57A	**Amberson**	**35.42**	**75**	P	**P**	**21 15 48.7**	**-0.3**
	baz=286,SNR=12						
M57A	**Sunshine Farm,**	**35.50**	**73**	P	**P**	**21 15 50.2**	**+0.5**
	baz=284						
L57A	**Andrews Acres**	**35.54**	**71**	P	**P**	**21 15 50.3**	**+0.3**
	baz=284						
456A	**Hilliard**	**35.56**	**92**	IAMs_20	IAMs_20	21 32 22.9	
	comp=Z,5µm,19.0s						
D55A	**Sainte-Anne-du**	**35.59**	**63**	P	**P**	**21 15 50.6**	**+0.2**
	baz=278,SNR=12						
K57A	**Scipio Center**	**35.61**	**70**	P	**P**	**21 15 50.7**	**0.0**
	baz=283						
R58A	**Rapidan**	**35.70**	**78**	P	**P**	**21 15 51.4**	**0.0**
	baz=288						
V58A	**Windy Hill, Pi**	**35.70**	**82**	P	**P**	**21 15 52.0**	**+0.6**
	baz=291,SNR=6.1						
V58A	**Windy Hill, Pi**	**35.70**	**82**	P	**P**	**21 15 52.5**	**+1.1**
V58A				IAmb	IAmb	21 15 55.4	
	comp=Z,29nm,0.8s						
V58A				IAMs_20	IAMs_20	21 29 45.4	
	comp=Z,5µm,20.0s						
T58A	**Grand View Acr**	**35.74**	**80**	P	**P**	**21 15 51.8**	**0.0**
	baz=290,SNR=7.0						
Q58A	**Fox Den Farm,**	**35.74**	**77**	P	**P**	**21 15 52.1**	**+0.4**
	baz=288						
656A	**Willston**	**35.81**	**94**	IAMs_20	IAMs_20	21 31 01.5	
	comp=Z,4µm,20.0s						
J57A	**Williamstown**	**35.84**	**69**	P	**P**	**21 15 52.1**	**-0.4**
	baz=282						
J57A	**Williamstown**	**35.84**	**69**	IAMs_20	IAMs_20	21 31 07.5	
	comp=Z,6µm,20.0s						
P58A	**Pank, Wackersv**	**35.87**	**76**	P	**P**	**21 15 52.9**	**+0.1**
	baz=287						
S58A	**Poland Farm, P**	**35.88**	**79**	P	**P**	**21 15 52.4**	**-0.5**
	baz=289						
S58A	**Poland Farm, P**	**35.88**	**79**	P	**P**	**21 15 53.8**	**+0.8**
S58A				IAmb	IAmb	21 15 56.2	
	comp=Z,18nm,0.8s						
S58A				IAMs_20	IAMs_20	21 31 20.0	
	comp=Z,4µm,20.0s						
R58B	**Mineral**	**35.90**	**78**	P	**P**	**21 15 52.8**	**-0.3**
	baz=289						
W58A	**Raeford**	**35.90**	**84**	P	**P**	**21 15 52.9**	**-0.2**
	baz=292						
U58A	**Oxford**	**35.92**	**81**	P	**P**	**21 15 53.9**	**+0.6**
	baz=291						
N58A	**Sunbury**	**35.92**	**73**	P	**P**	**21 15 52.9**	**-0.4**
	baz=285						
N58A	**Sunbury**	**35.92**	**73**	P	**P**	**21 15 53.7**	**+0.4**
N58A				IAmb	IAmb	21 15 56.6	
	comp=Z,20nm,0.8s						
NHSC	**New Hope**	**35.94**	**87**	IAMs_20	IAMs_20	21 32 04.6	
	comp=Z,3µm,20.0s						
E56A	**St. Veronique**	**35.96**	**63**	P	**P**	**21 15 53.8**	**+0.3**
	baz=278,SNR=12						
O58A	**Lewisberry**	**35.97**	**74**	P	**P**	**21 15 52.8**	**-0.8**
	baz=286						
I57A	**Carthage**	**35.97**	**68**	P	**P**	**21 15 54.0**	**+0.3**
	baz=282,SNR=6.6						
M58A	**Price’s Panora**	**35.98**	**72**	P	**P**	**21 15 54.0**	**+0.2**
	baz=285						
H57A	**Richville**	**36.06**	**67**	P	**P**	**21 15 54.3**	**0.0**
	baz=281,SNR=12						
D56A	**ZEC Mazanza, M**	**36.08**	**62**	P	**P**	**21 15 54.6**	**0.0**
	baz=278,SNR=9.7						
GAMB	**Gambell**	**36.10**	**326**	P	**P**	**21 15 56.0**	**+1.5**
BINY	**Binghamton**	**36.12**	**71**	P	**P**	**21 15 54.9**	**-0.1**
	baz=284						
BINY	**Binghamton**	**36.12**	**71**	P	**P**	**21 15 56.0**	**+1.0**
CBN	**Corbin Frederi**	**36.20**	**78**	IAMs_20	IAMs_20	21 30 06.4	
	comp=Z,4µm,21.0s						
G57A	**Newington**	**36.22**	**66**	P	**P**	**21 15 56.0**	**+0.2**
	baz=280,SNR=7.1						
K58A	**Earlville**	**36.23**	**70**	P	**P**	**21 15 55.9**	**0.0**
	baz=283,SNR=12						
L58A	**Harry Jones Me**	**36.25**	**71**	P	**P**	**21 15 56.4**	**+0.3**
	baz=284,SNR=8.2						
F57A	**Harrington**	**36.30**	**64**	P	**P**	**21 15 56.2**	**-0.3**
	baz=280						
TRQ	**Mont Tremblant**	**36.33**	**64**	P	**P**	**21 15 57.4**	**+0.5**
J58A	**Remsen**	**36.36**	**69**	P	**P**	**21 15 56.8**	**-0.1**
	baz=283						
J58A	**Remsen**	**36.36**	**69**	IAMs_20	IAMs_20	21 31 33.2	
	comp=Z,6µm,20.0s						
V59A	**Middlesex**	**36.38**	**82**	P	**P**	**21 15 57.3**	**+0.1**
	baz=292						
R59A	**King George, V**	**36.39**	**78**	P	**P**	**21 15 57.6**	**+0.3**
	baz=289						
W59A	**Clinton**	**36.44**	**83**	P	**P**	**21 15 58.5**	**+0.7**
	baz=292						
O59A	**Robesonia**	**36.46**	**74**	P	**P**	**21 15 57.3**	**-0.6**
	baz=286						
T59A	**Double "B" Far**	**36.47**	**80**	P	**P**	**21 15 58.3**	**+0.3**
	baz=290,SNR=7.4						
T59A	**Double "B" Far**	**36.47**	**80**	IAMs_20	IAMs_20	21 31 47.6	
	comp=Z,5µm,20.0s						
P59A	**Jarrettsville**	**36.47**	**75**	P	**P**	**21 15 58.2**	**+0.2**
	baz=287						
U59A	**Littleton**	**36.51**	**81**	P	**P**	**21 15 58.6**	**+0.4**
	baz=291						
U59A	**Littleton**	**36.51**	**81**	IAMs_20	IAMs_20	21 31 46.5	
	comp=Z,5µm,20.0s						
I58A	**Old Forge**	**36.51**	**68**	P	**P**	**21 15 58.8**	**+0.5**
	baz=282						
E57A	**Chemin Saint G**	**36.58**	**63**	P	**P**	**21 15 59.0**	**+0.1**
	baz=279,SNR=19						
LONY	**Lake Ozonia**	**36.59**	**66**	P	**P**	**21 15 58.3**	**-0.7**
	baz=281						
LONY	**Lake Ozonia**	**36.59**	**66**	IAMs_20	IAMs_20	21 31 18.4	
	comp=Z,5µm,22.0s						
N59A	**State Game Lan**	**36.60**	**73**	P	**P**	**21 15 59.1**	**+0.1**
	baz=286						
M59A	**Waymart**	**36.68**	**72**	P	**P**	**21 16 00.1**	**+0.3**
	baz=285						
R60A	**Leonardtown, M**	**36.77**	**77**	P	**P**	**21 16 01.1**	**+0.5**
	baz=289						
TEIG	**Tepich**	**36.77**	**112**	P	**P**	**21 16 02.5**	**+1.8**
TEIG				IAmb	IAmb	21 16 05.0	
	comp=Z,27nm,1.0s						
K59A	**Cooperstown**	**36.80**	**69**	P	**P**	**21 16 00.6**	**-0.2**
	baz=284						
L59A	**Walton**	**36.80**	**70**	P	**P**	**21 16 00.7**	**-0.1**
	baz=284						
L59A	**Walton**	**36.80**	**70**	P	**P**	**21 16 01.8**	**+1.0**
L59A				IAmb	IAmb	21 16 04.8	
	comp=Z,57nm,1.2s						
CNNC	**Cliffs of the**	**36.84**	**83**	IAMs_20	IAMs_20	21 32 21.4	
	comp=Z,5µm,18.0s						
CCIG	**Comitan**	**36.86**	**121**	IAMs_20	IAMs_20	21 30 34.4	
	comp=Z,3µm,20.0s						
G58A	**Ormstown**	**36.86**	**65**	P	**P**	**21 16 01.5**	**+0.3**
	baz=281						
J59A	**Piesco**	**36.89**	**68**	P	**P**	**21 16 01.5**	**0.0**
	baz=283						
F58A	**St-Lin Laurent**	**36.90**	**64**	P	**P**	**21 16 01.4**	**-0.2**
	baz=280						
H58A	**Gabriels**	**36.92**	**67**	P	**P**	**21 16 02.2**	**+0.4**
	baz=282,SNR=8.9						
NCB	**Newcomb**	**36.98**	**67**	IAMs_20	IAMs_20	21 31 38.6	
	comp=Z,5µm,22.0s						
WUPA	**West Chester U**	**36.99**	**74**	IAMs_20	IAMs_20	21 31 49.1	
	comp=Z,4µm,20.0s						
X60A	**Albert Glenn T**	**37.02**	**84**	P	**P**	**21 16 03.3**	**+0.6**
	baz=293						
W60A	**Pink Hill**	**37.04**	**83**	P	**P**	**21 16 03.7**	**+0.8**
	baz=292						
Y60A	**Bolivia**	**37.07**	**85**	IAMs_20	IAMs_20	21 30 48.5	
	comp=Z,5µm,22.0s						
RES	**Resolute Bay**	**37.07**	**13**	P	**P**	**21 16 02.9**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=229,slow=7.9,SNR=7.9						
RES	**Resolute Bay**	**37.07**	**13**	P	**P**	**21 16 03.6**	**+1.0**
RES				pmax	pmax		
	comp=Z,13nm,1.0s						
RES				MLR	MLR		
	comp=Z,3µm,21.0s						
RES	**Resolute Bay**	**37.07**	**13**	P	**P**	**21 16 03.6**	**+1.0**
Q60A	**Greensboro**	**37.09**	**76**	IAMs_20	IAMs_20	21 31 41.9	
	comp=Z,5µm,20.0s						
N60A	**Cedar Hill Far**	**37.10**	**73**	P	**P**	**21 16 04.1**	**+0.8**
	baz=286						
V60A	**Jim Taylor Roa**	**37.12**	**82**	IAMs_20	IAMs_20	21 31 53.7	
	comp=Z,5µm,19.0s						
E58A	**La Victoria**	**37.18**	**63**	P	**P**	**21 16 04.2**	**+0.2**
	baz=280,SNR=9.7						
H59A	**Cadyville**	**37.22**	**66**	P	**P**	**21 16 04.8**	**+0.5**
	baz=282						
FRNY	**Flat Rock**	**37.25**	**66**	P	**P**	**21 16 04.8**	**+0.2**
FRNY				IAmb	IAmb	21 16 07.9	
	comp=Z,56nm,1.3s						
DWPF	**Disney Wildern**	**37.27**	**95**	IAMs_20	IAMs_20	21 31 00.3	
	comp=Z,4µm,21.0s						
M60A	**Port Jervis**	**37.32**	**72**	P	**P**	**21 16 05.6**	**+0.4**
	baz=286,SNR=5.9						
D58A	**Chemin du LacG**	**37.34**	**62**	P	**P**	**21 16 05.2**	**-0.1**
	baz=279,SNR=9.6						
LATQ	**La Tuque**	**37.36**	**61**	P	**P**	**21 16 05.4**	**0.0**
	baz=279,SNR=5.6						
L60A	**Shokan**	**37.44**	**71**	P	**P**	**21 16 06.4**	**+0.2**
	baz=285						
G59A	**Clarenceville**	**37.48**	**65**	P	**P**	**21 16 06.2**	**-0.3**
	baz=281						
ACCN	**Adirondack Com**	**37.50**	**68**	IAMs_20	IAMs_20	21 32 18.4	
	comp=Z,6µm,21.0s						
U61A	**Possum Corner**	**37.53**	**80**	P	**P**	**21 16 08.6**	**+1.6**
	baz=291						
U61A	**Possum Corner**	**37.53**	**80**	IAMs_20	IAMs_20	21 32 19.6	
	comp=Z,4µm,21.0s						
F59A	**Saint Guilaume**	**37.61**	**64**	P	**P**	**21 16 07.9**	**+0.4**
	baz=281						
V61A	**Roper**	**37.62**	**81**	IAMs_20	IAMs_20	21 32 08.2	
	comp=Z,5µm,22.0s						
S61A	**Accomac**	**37.64**	**78**	IAMs_20	IAMs_20	21 30 59.5	
	comp=Z,6µm,22.0s						
I60A	**Shoreham**	**37.66**	**67**	P	**P**	**21 16 08.4**	**+0.4**
	baz=283,SNR=5.7						
R61A	**Willards**	**37.68**	**77**	IAMs_20	IAMs_20	21 31 15.4	
	comp=Z,6µm,20.0s						
J60A	**Lant Hill Farm**	**37.71**	**68**	P	**P**	**21 16 08.6**	**+0.2**
	baz=284,SNR=6.0						
L61A	**Hillsdale 1, H**	**37.87**	**70**	P	**P**	**21 16 09.7**	**-0.1**
	baz=285						
H60A	**Morristown**	**37.93**	**66**	P	**P**	**21 16 10.8**	**+0.5**
	baz=282						
VT1	**Waterbury**	**37.94**	**66**	IAMs_20	IAMs_20	21 32 09.0	
	comp=Z,4µm,20.0s						
K61A	**Williamstown**	**37.96**	**69**	P	**P**	**21 16 11.3**	**+0.7**
	baz=284						
KSCT	**Kent School, K**	**38.04**	**71**	P	**P**	**21 16 12.6**	**+1.3**
D59A	**Saint-Raymond**	**38.06**	**62**	P	**P**	**21 16 11.2**	**-0.1**
	baz=280						
G60A	**Masonville**	**38.07**	**65**	P	**P**	**21 16 10.7**	**-0.8**
	baz=282						
MOQ	**Mont Orford**	**38.08**	**65**	P	**P**	**21 16 12.4**	**+0.8**
F60A	**Warwick**	**38.16**	**64**	P	**P**	**21 16 12.4**	**+0.2**
	baz=281						
V62A	**Hyde County Ai**	**38.18**	**81**	IAMs_20	IAMs_20	21 32 26.9	
	comp=Z,5µm,19.0s						
J61A	**Chester**	**38.30**	**68**	P	**P**	**21 16 13.4**	**0.0**
	baz=284						
HNH	**Hanover**	**38.41**	**67**	IAMs_20	IAMs_20	21 32 23.3	
	comp=Z,5µm,21.0s						
E60A	**Ste Agathe de**	**38.43**	**63**	P	**P**	**21 16 14.8**	**+0.3**
	baz=281,SNR=11						
H61A	**Lyndonville**	**38.47**	**66**	P	**P**	**21 16 15.5**	**+0.6**
	baz=283,SNR=6.9						
LBNH	**Lisbon**	**38.54**	**66**	P	**P**	**21 16 15.5**	**+0.1**
	baz=283						
G61A	**St-Isidore-de-**	**38.59**	**65**	P	**P**	**21 16 15.3**	**-0.5**
	baz=282						
060A	**Indiantown**	**38.64**	**96**	IAMs_20	IAMs_20	21 34 24.5	
	comp=Z,5µm,22.0s						
D60A	**Saint Jean D’O**	**38.69**	**62**	P	**P**	**21 16 16.8**	**+0.1**
	baz=280,SNR=13						
K62A	**Royalston**	**38.70**	**69**	P	**P**	**21 16 17.0**	**+0.3**
	baz=285						
QUA2	**Belchertown**	**38.71**	**69**	IAMs_20	IAMs_20	21 32 56.5	
	comp=Z,6µm,21.0s						
F61A	**St Evariste**	**38.82**	**63**	P	**P**	**21 16 18.4**	**+0.6**
	baz=282,SNR=15						
061Z	**Ochoppi**	**38.85**	**98**	IAMs_20	IAMs_20	21 35 12.0	
	comp=Z,4µm,20.0s						
H62A	**Milan**	**39.00**	**66**	P	**P**	**21 16 19.9**	**+0.6**
	baz=283						
H62A	**Milan**	**39.00**	**66**	P	**P**	**21 16 20.3**	**+1.0**
H62A				IAmb	IAmb	21 16 23.1	
	comp=Z,47nm,1.0s						
I62A	**Tamworth**	**39.03**	**67**	P	**P**	**21 16 19.5**	**-0.1**
	baz=284						
E61A	**Lac Etchemin**	**39.07**	**63**	P	**P**	**21 16 20.0**	**+0.1**
	baz=281,SNR=8.9						
D61A	**St Aubert, Com**	**39.13**	**61**	P	**P**	**21 16 21.0**	**+0.6**
	baz=280,SNR=19						
G62A	**West of Eustis**	**39.29**	**64**	P	**P**	**21 16 20.9**	**-0.8**
	baz=283						
L63A	**North Scituate**	**39.35**	**70**	P	**P**	**21 16 21.7**	**-0.5**
	baz=286						
WES	**Weston**	**39.42**	**69**	IAMs_20	IAMs_20	21 33 06.2	
	comp=Z,5µm,21.0s						
I63A	**Otisfield**	**39.52**	**66**	P	**P**	**21 16 24.0**	**+0.4**
	baz=284						
BCX	**Boston College**	**39.54**	**69**	IAMs_20	IAMs_20	21 32 23.4	
	comp=Z,5µm,22.0s						
FRB	**Frobisher Bay**	**39.86**	**35**	P	**P**	**21 16 25.0**	**-1.2**
	comp=Z,12nm,1.1s,baz=266,slow=7.9,SNR=10.0						
G63A	**Kingsbury**	**39.94**	**64**	P	**P**	**21 16 27.6**	**+0.4**
	baz=283						
MTO3	**Montecristo**	**40.06**	**120**	P	**P**	**21 16 30.2**	**+1.6**
MTO3				IAmb	IAmb	21 17 53.6	
	comp=Z,21nm,0.7s						
MTO3				IAMs_20	IAMs_20	21 32 40.1	
	comp=Z,3µm,20.0s						
PKME	**Peaks-Kenny Pk**	**40.13**	**64**	P	**P**	**21 16 29.6**	**+0.9**
	baz=283						
PKME	**Peaks-Kenny Pk**	**40.13**	**64**	P	**P**	**21 16 30.0**	**+1.3**
PKME				IAmb	IAmb	21 16 30.8	
	comp=Z,68nm,1.2s						
F63A	**Nahmakanta, Br**	**40.17**	**63**	P	**P**	**21 16 29.4**	**+0.4**
	baz=283						
F63A	**Nahmakanta, Br**	**40.17**	**63**	P	**P**	**21 16 30.4**	**+1.4**
F63A				IAmb	IAmb	21 16 32.9	
	comp=Z,42nm,0.9s						
E63A	**Oxbow**	**40.47**	**62**	P	**P**	**21 16 32.0**	**+0.4**
	baz=282						
E63A	**Oxbow**	**40.47**	**62**	IAMs_20	IAMs_20	21 32 54.8	
	comp=Z,4µm,22.0s						
G64A	**Maxfield**	**40.51**	**64**	P	**P**	**21 16 32.0**	**+0.2**
	baz=284						
D63A	**Stockholm**	**40.56**	**61**	P	**P**	**21 16 32.2**	**0.0**
	baz=282						
F64A	**Sherman**	**40.65**	**63**	P	**P**	**21 16 33.1**	**+0.2**
	baz=283						
F64A	**Sherman**	**40.65**	**63**	P	**P**	**21 16 34.0**	**+1.1**
SNET	**Serv Nac Est T**	**40.66**	**121**	IAMs_20	IAMs_20	21 32 57.1	
	comp=Z,4µm,22.0s						
E64A	**Bridgewater**	**40.88**	**62**	P	**P**	**21 16 35.2**	**+0.4**
	baz=283,SNR=14						
H65A	**Eastbrook**	**40.99**	**65**	P	**P**	**21 16 37.7**	**+1.9**
	baz=284						
G65A	**Princeton**	**41.34**	**64**	P	**P**	**21 16 39.5**	**+0.9**
	baz=284						
TGUH	**Tegucigalpa,Un**	**41.70**	**118**	IAMs_20	IAMs_20	21 36 29.6	
	comp=Z,4µm,20.0s						
BATG	**Bathurst New B**	**41.87**	**60**	P	**P**	**21 16 44.0**	**+0.9**
EUNU	**Eureka**	**42.34**	**9**	P	**P**	**21 16 48.8**	**+2.3**
CRIN	**San Cristobal**	**42.83**	**119**	IAMs_20	IAMs_20	21 35 08.5	
	comp=Z,3µm,22.0s						
ACON	**Acoyapa**	**44.61**	**118**	IAMs_20	IAMs_20	21 38 27.9	
	comp=Z,2µm,18.0s						
BILL	**Bilibino**	**45.66**	**331⇑**	*e*P	**P**	**21 17 12.5**	**-0.7**
BILL				*e*		21 18 55.1	
BILL				*e*PPP	PPP	21 19 36.7	
BILL				*i* S	S	21 24 04.6	+10
BILL				pmax	pmax		
	comp=Z,14nm,1.4s						
BILL				MLR	MLR		
	comp=Z,687nm,17.0s						
BILL	**Bilibino**	**45.66**	**331**	P	**P**	**21 17 13.8**	**+0.6**
GTBY	**Guantanamo Bay**	**46.62**	**101**	IAMs_20	IAMs_20	21 38 17.8	
	comp=Z,3µm,20.0s						
HDC	**Heredia**	**46.75**	**119**	IAMs_20	IAMs_20	21 39 46.5	
	comp=Z,2µm,18.0s						
SFJD	**Kangerlussuaq**	**47.47**	**31**	P	**P**	**21 17 25.3**	**-2.0**
	comp=Z,6.5nm,0.8s,baz=213,slow=6.1,SNR=2.5						
SFJD	**Kangerlussuaq**	**47.47**	**31**	P	**P**	**21 17 28.4**	**+1.1**
SFJD				pmax	pmax		
	comp=Z,20nm,1.0s						
SFJD	**Kangerlussuaq**	**47.47**	**31**	P	**P**	**21 17 28.4**	**+1.1**
SFJD				IAmb	IAmb	21 17 43.6	
	comp=Z,20nm,0.9s						
GRTK	**Grand Turk**	**48.70**	**96**	IAMs_20	IAMs_20	21 39 11.8	
	comp=Z,3µm,21.0s						
SDDR	**Presa de Saban**	**50.06**	**99**	IAMs_20	IAMs_20	21 42 09.1	
	comp=Z,2µm,19.0s						
SUMG	**Summit**	**50.92**	**23**	P	**P**	**21 17 54.6**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,63nm,1.5s						
SUMG	**Summit**	**50.92**	**23**	P	**P**	**21 17 54.6**	**+0.4**
SUMG	**Summit**	**50.92**	**23**	*i* P	**P**	**21 17 54.0**	**-0.2**
	comp=Z,30nm,0.7s						
SUMG	**Summit**	**50.92**	**23**	*i* P	**P**	**21 17 54.0**	**-0.2**
SUMG				IAmb	IAmb	21 17 58.7	
	comp=Z,30nm,0.7s						
TAOE	**Nuku Hiva Isla**	**51.01**	**200**	*e*LR	LR	21 32 25.6	
	comp=Z,1µm,24.3s						
TAOE	**Nuku Hiva Isla**	**51.01**	**200**	*e*T	T	22 12 35.4	
	comp=Z,1µm,0.2s						
ICESG	**Greenland Ices**	**51.24**	**27**	*i* P	**P**	**21 17 55.9**	**-0.7**
DR12	**Loma Pena Alta**	**51.62**	**98**	P	**P**	**21 18 01.0**	**+1.3**
SEY	**Seymchan**	**52.07**	**325**	P	**P**	**21 18 03.4**	**+0.9**
	comp=Z,3.3nm,0.7s,baz=69,slow=8.9,SNR=3.8						
SEY	**Seymchan**	**52.07**	**325**	*i* P	**P**	**21 18 00.7**	**-1.7**
PETK	**Petropavlovsk-**	**52.32**	**312**	P	**P**	**21 18 05.6**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=148,slow=14,SNR=1.8						
PETK				LR	LR	21 37 34.9	
	comp=Z,300nm,21.1s,baz=72,slow=33						
SJG	**San Juan**	**54.48**	**96**	P	**P**	**21 18 20.2**	**-0.5**
SJG				pmax	pmax		
	comp=Z,51nm,1.3s						
SJG				MLR	MLR		
	comp=Z,2µm,21.0s						
SJG	**San Juan**	**54.48**	**96**	P	**P**	**21 18 20.2**	**-0.5**
SJG	**San Juan**	**54.48**	**96**	IAMs_20	IAMs_20	21 42 16.2	
	comp=Z,2µm,21.0s						
SMLC	**San Martn de**	**54.57**	**111**	*e*P	**P**	**21 18 24.2**	**+2.7**
DAG	**Danmarks Havn**	**54.62**	**16**	*i* P	**P**	**21 18 21.3**	**+0.3**
DAG	**Danmarks Havn**	**54.62**	**16**	*i* P	**P**	**21 18 21.3**	**+0.3**
DAG	**Danmarks Havn**	**54.62**	**16**	*i* P	**P**	**21 18 21.3**	**+0.3**
PTBC	**PUERTO BERRIO,**	**55.87**	**113**	*e*P	**P**	**21 18 33.0**	**+2.2**
GUY2C	**Guyana, Caldas**	**56.16**	**115**	*e*P	**P**	**21 18 34.0**	**+0.6**
NORC	**Norcasia**	**56.26**	**114**	*e*P	**P**	**21 18 34.1**	**+0.4**
YOTC	**Yotoco, Valle**	**56.38**	**117**	*e*P	**P**	**21 18 36.6**	**+2.1**
RREF	**El Recreo**	**56.40**	**115**	*e*P	P	21 18 38.9	+3.6
PAMC	**Pamplona, Colo**	**56.55**	**111**	*e*P	P	21 18 40.0	+3.7
TOLC	**Tolima**	**56.65**	**115**	*e*P	**P**	**21 18 37.6**	**+0.8**
ANIL	**Santa Ana**	**56.66**	**116**	*e*P	**P**	**21 18 39.9**	**+3.1**
SPBC	**San Pablo de B**	**56.76**	**114**	*e*P	**P**	**21 18 38.0**	**+0.7**
SABA	**Saba**	**56.98**	**94**	IAMs_20	IAMs_20	21 44 12.4	
	comp=Z,3µm,22.0s						
SDV	**Santo Domingo**	**56.99**	**108**	IAMs_20	IAMs_20	21 46 52.9	
	comp=Z,2µm,20.0s						
ROSC	**El Rosal**	**57.16**	**114**	LR	LR	21 47 14.3	
	comp=Z,877nm,19.5s,baz=345,slow=40						
ORTC	**Ortega, Tolima**	**57.19**	**116**	*e*P	**P**	**21 18 43.4**	**+3.2**
TIXI	**Tiksi**	**57.20**	**339**	*ce*P	**P**	**21 18 39.8**	**+0.2**
TIXI	**Tiksi**	**57.20**	**339**	P	**P**	**21 18 39.7**	**+0.2**
SEUS	**St. Eustatius**	**57.26**	**94**	IAMs_20	IAMs_20	21 44 20.7	
	comp=Z,3µm,22.0s						
RUSC	**La Rusia**	**57.29**	**112**	*e*P	**P**	**21 18 43.8**	**+2.3**
MARP	**Paez Belalcaza**	**57.47**	**117**	*e*P	P	21 18 45.9	+3.4
PCON	**Cinco Dias**	**57.55**	**118**	*e*P	P	21 18 47.6	+4.2
CHIC	**Chingaza**	**57.72**	**114**	*e*P	P	21 18 48.1	+3.6
OTAV	**Otavalo**	**57.74**	**122**	P	**P**	**21 18 45.8**	**+1.2**
OTAV				pmax	pmax		
	comp=Z,44nm,1.7s						
OTAV				MLR	MLR		
	comp=Z,1µm,20.0s						
OTAV	**Otavalo**	**57.74**	**122**	P	**P**	**21 18 45.8**	**+1.2**
OTAV				IAmb	IAmb	21 19 02.2	
	comp=Z,44nm,1.6s						
OTAV	**Otavalo**	**57.74**	**122**	*e*P	**P**	**21 18 44.0**	**-0.6**
ANWB	**Willy Bob**	**58.07**	**93**	IAMs_20	IAMs_20	21 43 06.0	
	comp=Z,3µm,22.0s						
VAH	**Vaihoa**	**59.30**	**206**	*e*T	T	22 22 59.8	
	comp=Z,89nm,0.3s						
MACC	**Macarena, Meta**	**59.42**	**116**	*e*P	**P**	**21 18 58.0**	**+2.2**
FDF	**Fort de France**	**60.33**	**96**	IAMs_20	IAMs_20	21 48 14.1	
	comp=Z,2µm,21.0s						
GRGR	**Grenville**	**61.56**	**98**	IAMs_20	IAMs_20	21 44 38.8	
	comp=Z,2µm,21.0s						
MEH	**Mehetia**	**61.91**	**206**	*e*T	T	22 26 14.6	
	comp=Z,681nm,0.3s						
YAK	**Yakutsk**	**61.98**	**329**	*e*P	**P**	**21 19 12.9**	**+0.3**
YAK				*e**PP	**pP**	**21 19 17.1**	**-1.0**
YAK				*e*		21 19 53.1	
YAK				*e*		21 21 35.0	
YAK				*e*PPP	PPP	21 22 55.4	
YAK				*e*S	**S**	**21 27 36.7**	**+1.0**
YAK				*e**SS	**sS**	**21 27 49.3**	**+4.5**
YAK				*e*		21 29 00.4	
YAK				*e*SS	**SS**	**21 31 40.0**	**+2.6**
YAK				pmax	pmax		

	comp=Z,13nm,1.1s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,434nm,4.4s						
YAK				pmax	pmax		
	comp=N,410nm,4.1s						
YAK				pmax	pmax		
	comp=E,259nm,4.7s						
YAK				smax	smax		
	comp=N,348nm,4.9s						
YAK				smax	smax		
	comp=E,246nm,4.4s						
YAK				MLR	MLR		
	comp=Z,852nm,22.0s						
YAK				MLR	MLR		
	comp=N,302nm,20.0s						
YAK				MLR	MLR		
	comp=E,606nm,23.0s						
YAK	**Yakutsk**	**61.98**	**329**	P	**P**	**21 19 12.5**	**-0.1**
YAK				IAmb	IAmb	21 19 23.5	
	comp=Z,21nm,1.0s						
TIAR	**Tiarei**	**62.05**	**207**	*e*T	T	22 26 25.4	
	comp=Z,68nm,0.3s						
PPT	**Papeete**	**62.14**	**207**	LR	LR	21 39 52.8	
	comp=Z,546nm,19.7s,baz=14,slow=30						
PPT2	**Papeete2**	**62.16**	**207**	*e*S	**S**	**21 27 32.5**	**-6.5**
	comp=Z,2µm,28.5s						
PPT2				*e*LQ	LQ	21 34 43.5	
	comp=Z,2µm,29.0s						
PPT2				*e*LR	LR	21 37 29.2	
	comp=Z,2µm,29.5s,baz=17						
PPT2	**Papeete2**	**62.16**	**207**	*e*T	T	22 26 32.2	
	comp=Z,66nm,0.3s						
TVO	**Taravao**	**62.22**	**207**	*e*T	T	22 26 39.3	
	comp=Z,27nm,0.3s						
PAE	**Paea**	**62.23**	**207**	*e*T	T	22 26 36.8	
	comp=Z,10nm,0.2s						
YSS	**Yuzh-Sakhalins**	**63.64**	**310**	*i* P	**P**	**21 19 23.2**	**-0.7**
YSS				pmax	pmax		
	comp=Z,15nm,1.1s						
RKT	**Rikitea**	**63.85**	**191**	*e*S	**S**	**21 27 54.1**	**-5.7**
	comp=Z,604nm,32.5s						
RKT				*e*LQ	LQ	21 35 40.5	
	comp=Z,6µm,34.5s						
TBI	**Tubuai**	**67.47**	**205**	*e*S	**S**	**21 28 38.6**	**-5.5**
	comp=Z,924nm,34.5s						
TBI				*e*LQ	LQ	21 37 01.7	
	comp=Z,3µm,33.8s						
TBI				*e*LR	LR	21 39 49.6	
	comp=Z,904nm,31.5s,baz=18						
TBI	**Tubuai**	**67.47**	**205**	*e*T	T	22 33 11.3	
	comp=Z,47nm,0.3s						
NRIK	**Noril'sk**	**68.15**	**348**	P	**P**	**21 19 53.5**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=96,slow=4.7,SNR=2.9						
NRIK				LR	LR	21 52 05.8	
	comp=Z,693nm,19.4s,baz=23,slow=38						
NRIK	**Noril'sk**	**68.15**	**348**	*i* P	**P**	**21 19 52.3**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**68.27**	**11**	LR	LR	21 50 47.9	
	comp=Z,738nm,20.3s,baz=330,slow=37						
KLR	**Kul'dur**	**68.46**	**317**	LR	LR	21 47 07.5	
	comp=Z,211nm,21.9s,baz=60,slow=34						
KLR	**Kul'dur**	**68.46**	**317**	*i* P	**P**	**21 19 53.9**	**-0.9**
KLR				pmax	pmax		
	comp=Z,23nm,3.9s						
BOD	**Bodaibo**	**70.71**	**331**	*e*P	**P**	**21 20 11.6**	**+3.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
LVZ	**Lovozero**	**70.98**	**8**	P	**P**	**21 20 11.7**	**+1.6**
LVZ	**Lovozero**	**70.98**	**8**	P	**P**	**21 20 11.7**	**+1.6**
APA	**Apatity**	**71.15**	**9**	⇓*i*P	P	21 20 17.9	+6.8
APA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PTGA	**Pitinga**	**71.28**	**108**	P	**P**	**21 20 14.3**	**+1.7**
PTGA				IAmb	IAmb	21 20 45.8	
	comp=Z,17nm,1.0s						
PTGA	**Pitinga**	**71.28**	**108**	*e*P	P	21 20 16.6	+3.9
MJAR	**Matsushiro Arr**	**72.33**	**303**	LR	LR	21 46 29.6	
	comp=Z,244nm,21.3s,baz=110,slow=31						
NC303	**NORSAR Array S**	**72.64**	**21**	P	**P**	**21 20 21.0**	**+0.9**
NB2	**NORSAR Subarra**	**72.75**	**21**	P	**P**	**21 20 22.0**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=324,slow=5.9						
NOA	**NORSAR Array B**	**72.75**	**21**	P	**P**	**21 20 20.7**	**-0.2**
	comp=Z,4.0nm,1.0s,baz=327,slow=6.2,SNR=4.1						
NOA				LR	LR	21 52 42.8	
	comp=Z,1µm,19.9s,baz=325,slow=36						
ETMB	**Extrema**	**73.30**	**119**	*e*P	**P**	**21 20 24.1**	**-0.6**
JHJ	**Hachijo jima 2**	**73.37**	**299**	LR	LR	21 46 04.0	
	comp=Z,175nm,21.4s,baz=64,slow=30						
SAML	**Samuel**	**74.73**	**116**	P	**P**	**21 20 34.5**	**+1.5**
SAML				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SAML				MLR	MLR		
	comp=Z,1µm,20.0s						
SAML	**Samuel**	**74.73**	**116**	P	**P**	**21 20 34.5**	**+1.5**
SAML	**Samuel**	**74.73**	**116**	IAMs_20	IAMs_20	21 55 52.0	
	comp=Z,994nm,20.0s						
SAML	**Samuel**	**74.73**	**116**	*e*P	**P**	**21 20 35.3**	**+2.2**
JCJ	**Chichijima**	**75.39**	**293**	LR	LR	21 47 21.8	
	comp=Z,566nm,20.8s,baz=92,slow=31						
MALB	**Monte Alegre**	**76.22**	**104**	*e*P	P	21 20 46.8	+5.1
ITTB	**Itaituba**	**76.83**	**107**	*e*P	P	21 20 50.2	+5.1
PB16	**IPOC Station P**	**77.55**	**127**	P	**P**	**21 20 50.4**	**+0.7**
PB16				IAmb	IAmb	21 21 12.7	
	comp=Z,29nm,1.7s						
KSRS	**Korea Array**	**78.11**	**309**	P	**P**	**21 20 53.3**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=56,slow=6.1,SNR=3.8						
KSRS				LR	LR	21 49 46.3	
	comp=Z,196nm,21.7s,baz=52,slow=31						
MNMC	**Minye Minye**	**78.11**	**128**	P	**P**	**21 20 53.6**	**+1.3**
MNMC				IAmb	IAmb	21 21 04.8	
	comp=Z,15nm,0.7s						
KLMR	**Klimovskoe**	**78.35**	**8**	*e*P	**P**	**21 20 50.6**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	**Klimovskoe**	**78.35**	**8**	*e*P	**P**	**21 20 50.6**	**-2.2**
KLMR				AMP		21 20 52.6	
	comp=Z,22nm,1.5s						
KLMR				LQ	LQ	21 47 11.7	
KLMR				LQ	LQ	21 47 11.7	
KLMR				LR	LR	21 49 58.6	
NPGB	**Novo Progresso**	**78.92**	**109**	*e*P	P	21 21 01.8	+5.0
TLY	**Talaya**	**79.26**	**332**	*e*P	P	21 21 05.1	+7.0
TLY				*e*S	**SKSac**	**21 31 11.3**	**-2.0**
TLY				pmax	pmax		
	comp=Z,15nm,1.2s						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s						
VILB	**Vilhena**	**79.62**	**117**	*e*P	**P**	**21 21 01.6**	**+1.1**
DL2	**Dalian**	**80.72**	**314**	*e*P	**P**	**21 21 08.0**	**+1.8**
DL2				S	**S**	**21 31 17.5**	**+4.5**
DL2				pmax	pmax		
	comp=Z,16nm,0.8s						
DL2				LR	LR		
	comp=Z,360nm,17.3s						
DL2				LR	LR		
	comp=Z,300nm,18.7s						
DL2				LR	LR		
	comp=Z,400nm,20.4s						
COI	**Coimbra**	**80.97**	**44**	IAMs_20	IAMs_20	21 52 26.9	
	comp=Z,2µm,19.0s						
ULN	**Ulaanbaatar**	**81.03**	**328**	*i* P	**P**	**21 21 06.1**	**-1.8**
ULN				pmax	pmax		
	comp=Z,8.0nm,2.1s						
LVC	**Limon Verde**	**81.18**	**130**	*e*P	**P**	**21 21 09.2**	**+0.1**
SONM	**Songino Array**	**81.32**	**328**	P	**P**	**21 21 10.5**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=50,slow=2.7,SNR=4.8						
CLL	**Collm**	**81.50**	**25**	*e*(P)	P	21 21 14.0	+3.9
CLL				*e*		21 21 26.0	
	comp=Z,11nm,1.0s						
CLL				*e*(SS)		21 37 18.0	
CLL				*e*		21 39 42.0	
CLL				*e*SSSS		21 42 42.0	
CLL				LmV		21 58 00.0	
	comp=Z,1µm,20.1s						
CLL	**Collm**	**81.50**	**25**	*e*P	P	21 21 14.0	+3.9
CLL				*e*		21 21 26.0	
CLL				MLR	MLR		
	comp=Z,1µm,20.1s						
BRG	**Berggiesshubel**	**82.18**	**25**	*e*P	**P**	**21 21 15.1**	**+1.4**
BRG				Amp		21 21 19.9	
	comp=Z,10nm,1.0s						
GRFO	**Grafenberg**	**82.27**	**27**	IAMs_20	IAMs_20	21 56 45.7	
	comp=Z,890nm,20.0s						
MNK	**Minsk**	**82.63**	**16**	*i* P	**P**	**21 21 13.6**	**-2.4**
	comp=E,3.0nm,1.4s						
MNK				*i* P	**P**	**21 21 13.6**	**-2.4**
	comp=N,23nm,1.2s						
MNK				*i* P	**P**	**21 21 13.6**	**-2.4**
	comp=Z,6.0nm,1.0s						
MNK				*i* PP	**PP**	**21 24 23.4**	**-1.3**
MNK				*i* PPP	PPP	21 26 14.7	
MNK				*i* S	**S**	**21 31 30.4**	**-1.9**
MNK				*i* SS	**SS**	**21 36 56.1**	**+3.5**
MNK				*i* SSS	SSS	21 40 24.7	
MNK				*i* LQ	LQ	21 52 40.7	
MNK				*i* LR	LR	21 54 12.2	
MNK				*i* LRM	MLR	21 59 03.8	
	comp=N,585nm,17.4s						
MNK				*i* LRM	MLR	21 59 08.1	
	comp=Z,630nm,19.6s						
MNK				*i* LRM	MLR	21 59 13.9	
	comp=E,24nm,15.2s						
ZAA0	**Zalesovo Array**	**82.79**	**343**	P	**P**	**21 21 15.4**	**-1.4**
ZAA0				IAmb	IAmb	21 21 56.7	
	comp=Z,26nm,1.8s						
ZALV	**Zalesovo Beam**	**82.79**	**343**	P	**P**	**21 21 17.5**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=23,slow=4.8,SNR=6.8						
ZALV				LR	LR	22 01 00.1	
	comp=Z,500nm,20.5s,baz=12,slow=38						
ZALV	**Zalesovo Beam**	**82.79**	**343**	*i* P	**P**	**21 21 17.7**	**+0.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	**Obninsk**	**83.58**	**11**	⇓*i*P	**P**	**21 21 19.5**	**-1.3**
OBN				*e*		21 21 25.1	
OBN				*e*		21 24 34.4	
OBN				*e*PPP	PPP	21 26 24.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**83.60**	**358**	P	**P**	**21 21 21.0**	**+0.1**
ARU				S	**S**	**21 31 43.0**	**+1.0**
ES17	**SONSECA Array**	**83.66**	**42**	IAMs_20	IAMs_20	21 51 00.9	
	comp=Z,1µm,22.0s						
ESDC	**Sonseca Array**	**83.68**	**42**	P	**P**	**21 21 20.8**	**-1.0**
	comp=Z,3.3nm,1.0s,baz=318,slow=5.2,SNR=10						
ESDC				LR	LR	21 54 17.9	
	comp=Z,867nm,21.3s,baz=310,slow=33						
DAVA	**Damuels**	**83.80**	**29**	P	P	21 21 28.2	+5.8
	comp=Z,9.5nm,1.1s						
GERES	**GERESS Array B**	**83.84**	**26**	P	**P**	**21 21 22.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=351,slow=3.2,SNR=1.8						
GERES				LR	LR	21 59 42.3	
	comp=Z,1µm,18.7s,baz=324,slow=36						
MORC	**Moravsky Berou**	**84.27**	**24**	*e*P	**P**	**21 21 24.8**	**+0.2**
FETA	**Feichten**	**84.34**	**29**	*e*P	**P**	**21 21 27.3**	**+2.2**
	comp=Z,8.1nm,1.5s						
WATA	**Walderalm**	**84.39**	**28**	P	**P**	**21 21 27.1**	**+1.7**
	comp=Z,5.5nm,0.8s						
VRAC	**Vranov**	**84.39**	**24**	*e*P	**P**	**21 21 26.3**	**+1.1**
BNI	**Bardonecchia**	**84.39**	**32**	P	**P**	**21 21 26.4**	**+1.0**
BNI				pmax	pmax		
	comp=Z,18nm,1.3s						
BNI	**Bardonecchia**	**84.39**	**32**	P	**P**	**21 21 26.4**	**+1.0**
BNI				IAmb	IAmb	21 21 43.4	
	comp=Z,18nm,1.3s						
ROSB	**Rosrio**	**84.51**	**98**	*e*P	P	21 21 32.7	+6.5
HHC	**Hu-ho-hao-te**	**84.51**	**321**	*e*P	**P**	**21 21 26.0**	**0.0**
HHC				sP	sP	21 21 39.0	+5.1
HHC				S	**S**	**21 31 49.3**	**-2.6**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,4.9s						
HHC				LR	LR		
	comp=Z,320nm,13.3s						
HHC				LR	LR		
	comp=Z,610nm,18.4s						
HHC				LR	LR		
	comp=Z,380nm,17.8s						
KRUC	**Moravsky**	**84.54**	**25**	*e*P	**P**	**21 21 26.3**	**+0.4**
OJC	**Ojcow**	**84.55**	**22**	*e*P	**P**	**21 21 23.1**	**-2.9**
JOW	**Kunigami**	**85.03**	**301**	LR	LR	21 53 17.8	
	comp=Z,159nm,21.1s,baz=68,slow=31						
SMOL	**Smolenice**	**85.35**	**24**	*e*P	P	21 21 34.3	+4.3
SMOL	**Smolenice**	**85.35**	**24**	*e*P	P	21 21 34.2	+4.2
CONA	**Conrad Observa**	**85.36**	**26**	*e*P	P	21 21 34.6	+4.5
	comp=Z,3.1nm,0.7s						
LANS	**Liptovska Anna**	**85.41**	**23**	*e*P	**P**	**21 21 32.7**	**+2.4**
LANS	**Liptovska Anna**	**85.41**	**23**	*e*P	**P**	**21 21 32.7**	**+2.4**
MODS	**Modra-Piesok**	**85.43**	**24**	*e*P	**P**	**21 21 31.5**	**+1.1**
MODS				pmax	pmax		
	comp=Z,17nm,1.3s						
MODS	**Modra-Piesok**	**85.43**	**24**	*e*P	**P**	**21 21 31.5**	**+1.1**
SALO	**Salr**	**85.44**	**30**	P	**P**	**21 21 32.1**	**+1.5**
LVV	**L'vov**	**86.07**	**20**	*e*P	P	21 21 28.3	-5.2
LVV				*e*		21 32 00.6	
LVV				MLR	MLR		
	comp=N,1µm,21.0s						
LVV				MLR	MLR		
	comp=E,900nm,21.0s						
LVV				MLR	MLR		
	comp=Z,2µm,21.0s						
DGZ	**Jazzator, Alta**	**86.08**	**340**	*i* P	**P**	**21 21 32.1**	**-1.7**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PRMA	**PARMA**	**86.08**	**30**	P	**P**	**21 21 34.9**	**+1.3**
BRVK	**Borovoye**	**86.14**	**351**	*i* P	**P**	**21 21 32.1**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBKA	**Obir**	**86.15**	**27**	*e*P	**P**	**21 21 34.9**	**+0.8**
	comp=Z,14nm,1.5s						
SOKA	**Soboth**	**86.17**	**27**	*e*P	**P**	**21 21 35.4**	**+1.2**
	comp=Z,10nm,1.2s						
LPSR	**Galich'ya Gora**	**86.36**	**10**	*e*P	**P**	**21 21 36.3**	**+1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKASG	**Malin Array Be**	**86.49**	**16**	P	**P**	**21 21 34.2**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=343,slow=4.0,SNR=5.7						
AKASG				LR	LR	22 01 20.5	
	comp=Z,782nm,20.3s,baz=330,slow=36						
AKBB	**Malin Array Si**	**86.49**	**16**	P	**P**	**21 21 33.1**	**-2.4**
AKBB				pmax	pmax		
	comp=Z,19nm,1.5s						
AKBB	**Malin Array Si**	**86.49**	**16**	P	**P**	**21 21 33.1**	**-2.4**
AKBB				IAmb	IAmb	21 21 38.9	
	comp=Z,19nm,1.4s						
PSZ	**Piszkesteto**	**86.64**	**23**	P	**P**	**21 21 37.0**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,28nm,1.6s						
PSZ	**Piszkesteto**	**86.64**	**23**	P	**P**	**21 21 37.0**	**+0.5**
PSZ				IAmb	IAmb	21 21 55.3	
	comp=Z,28nm,1.6s						
UZH	**Uzhgorod**	**86.69**	**21**	*e*P	**P**	**21 21 38.8**	**+2.2**
UZH				*e*		21 21 48.8	
KURK	**Kurchatov**	**87.13**	**346**	P	**P**	**21 21 39.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURK	**Kurchatov**	**87.13**	**346**	P	**P**	**21 21 39.0**	**+0.4**
NJ2	**Nanjing**	**87.21**	**311**	*e*P	**P**	**21 21 39.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURBB	**Kurchatov Arra**	**87.23**	**346**	P	**P**	**21 21 38.7**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=17,slow=5.1,SNR=9.8						
ARAG	**Araguaiana, MT**	**87.35**	**113**	*e*P	P	21 21 44.0	+3.9
BELG	**Belogornoye**	**87.42**	**5**	*i* P	**P**	**21 21 40.9**	**+0.9**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PEXB	**Peixe**	**87.45**	**108**	*e*P	P	21 21 45.3	+4.6
VSR	**Storozhevoye**	**87.74**	**10**	*e*P	**P**	**21 21 43.1**	**+1.5**
VSR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VORD	**Divnogorie**	**88.00**	**10**	*e*P	**P**	**21 21 44.0**	**+1.1**
VORD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SACV	**Santiago Islan**	**88.51**	**72**	IAMs_20	IAMs_20	21 56 21.3	
	comp=Z,2µm,22.0s						
DZM	**Mont Dzumac**	**89.28**	**240**	*e*S	SKSac	21 32 30.4	+12
	comp=Z,341nm,28.9s						
DZM	**Mont Dzumac**	**89.28**	**240**	*e*LR	LR	21 50 06.2	
	comp=Z,2µm,32.5s						
BDFB	**Brasilia**	**90.01**	**111**	LR	LR	22 07 27.0	
	comp=Z,652nm,19.8s,baz=313,slow=39						
MK31	**Makanchi Array**	**90.06**	**342**	*ce*P	**P**	**21 21 52.1**	**-0.6**
MKAR	**Makanchi Array**	**90.06**	**342**	P	**P**	**21 21 52.0**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=24,slow=4.2,SNR=4.7						
MKAR				LR	LR	22 05 03.6	
	comp=Z,388nm,18.9s,baz=352,slow=38						
MAKZ	**Makanchi**	**90.12**	**342**	P	**P**	**21 21 53.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAKZ	**Makanchi**	**90.12**	**342**	P	**P**	**21 21 53.1**	**+0.1**
PAOL	**Paolisi**	**90.89**	**30**	IAMs_20	IAMs_20	21 58 07.1	
	comp=Z,936nm,22.0s						
GTA	**Gaotai**	**90.96**	**327**	*e*P	**P**	**21 21 57.8**	**+0.7**
GTA				pP	sP	21 22 02.8	-2.2
GTA				sP	pP	21 22 06.0	+3.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,190nm,6.4s						
GTA				LR	LR		
	comp=Z,430nm,18.9s						
GTA				LR	LR		
	comp=Z,450nm,18.9s						
GTA				LR	LR		
	comp=Z,580nm,20.0s						
CPUP	**Villa Florida**	**91.01**	**124**	LR	LR	22 06 08.9	
	comp=Z,370nm,19.9s,baz=325,slow=38						
WMQ	**Urumqi**	**91.38**	**337**	*e*P	**P**	**21 22 00.0**	**+1.1**
WMQ				pP	sP	21 22 06.5	-0.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				LR	LR		
	comp=Z,1µm,23.7s						
WMQ				LR	LR		
	comp=Z,710nm,21.7s						
LZH	**Lanzhou**	**91.95**	**323**	*e*P	P	21 22 06.3	+4.4
LZH				pP	sP	21 22 12.5	+2.8
LZH				sP	pP	21 22 16.5	+8.9
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,62nm,4.7s						
LZH				LR	LR		
	comp=N,560nm,17.3s						
LZH				LR	LR		
	comp=E,570nm,16.5s						
LZH				LR	LR		
	comp=Z,620nm,17.3s						
JANB	**Januaria**	**92.30**	**108**	*e*P	P	21 22 08.5	+5.0
RCBR	**Riachuelo**	**92.64**	**95**	IAMs_20	IAMs_20	22 08 42.3	
	comp=Z,642nm,19.0s						
KEST	**Kesra**	**93.22**	**36**	LR	LR	22 02 09.9	
	comp=Z,600nm,20.4s,baz=284,slow=34						
FNA	**Florina**	**93.52**	**25**	IAMs_20	IAMs_20	22 03 21.3	
	comp=Z,1µm,20.0s						
CEL	**Celeste**	**93.81**	**30**	IAMs_20	IAMs_20	22 07 50.2	
	comp=Z,729nm,21.0s						
PMG	**Port Moresby**	**94.77**	**262**	IAMs_20	IAMs_20	21 57 07.5	
	comp=Z,610nm,20.0s						
KIV	**Kislovodsk**	**95.33**	**9**	*e*P	**P**	**21 22 14.8**	**-2.3**
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,20.0s						
KBZ	**Khabaz**	**95.58**	**9**	LR	LR	22 08 02.8	
	comp=Z,833nm,19.3s,baz=334,slow=37						
SPB	**Sao Paulo**	**95.69**	**116**	IAMs_20	IAMs_20	22 08 14.5	
	comp=Z,1µm,22.0s						
ILGA	**Ilgaz**	**96.63**	**16**	IAMs_20	IAMs_20	22 05 55.8	
	comp=Z,1µm,21.0s						
BRTR	**Keskin Array B**	**97.88**	**17**	LR	LR	22 10 24.0	
	comp=Z,169nm,18.0s,baz=344,slow=38						
TOKA	**Tokat**	**97.90**	**15**	IAMs_20	IAMs_20	22 09 03.1	
	comp=Z,819nm,21.0s						
KSH	**Kashi**	**98.39**	**344**	P	Pdif	21 22 32.3	+1.1
KSH				pmax	pmax		
	comp=Z,11nm,1.5s						
KSH				pmax	pmax		
	comp=Z,630nm,6.4s						
SANT	**Santorini**	**98.85**	**24**	IAMs_20	IAMs_20	22 08 17.1	
	comp=Z,638nm,20.0s						
KOPT	**Kop Dagi**	**98.89**	**12**	IAMs_20	IAMs_20	22 07 53.2	
	comp=Z,685nm,22.0s						
ISP	**Isparta**	**98.94**	**20**	IAMs_20	IAMs_20	22 12 39.6	
	comp=Z,797nm,18.0s						
GNI	**Garni**	**99.33**	**8**	IAMs_20	IAMs_20	22 11 04.5	
	comp=Z,761nm,18.0s						
IDI	**Anoyia**	**99.66**	**25**	IAMs_20	IAMs_20	22 07 02.7	
	comp=Z,631nm,20.0s						
KARP	**Karpathos**	**100.13**	**23**	IAMs_20	IAMs_20	22 05 36.0	
	comp=Z,1µm,22.0s						
GAZ	**Gaziantep**	**101.09**	**15**	IAMs_20	IAMs_20	22 14 38.6	
	comp=Z,556nm,19.0s						
TAM	**Tamanrasset**	**101.86**	**46**	IAMs_20	IAMs_20	22 10 13.4	
	comp=Z,711nm,21.0s						
QIZ	**Qiongzhong**	**102.31**	**308**	P	**Pdif**	**21 22 47.0**	**-1.7**
QIZ				PP	**PP**	**21 27 00.5**	**0.0**
QIZ				S	**Sdif**	**21 34 32.8**	**+0.9**
QIZ				SS	**SS**	**21 41 41.0**	**+4.4**
QIZ				LR	LR		
	comp=Z,400nm,32.7s						
QIZ				LR	LR		
	comp=Z,280nm,40.2s						
QIZ				LR	LR		
	comp=Z,240nm,34.3s						
CSS	**Mathiatis**	**102.36**	**19**	IAMs_20	IAMs_20	22 07 54.6	
	comp=Z,616nm,20.0s						
HRA	**Herat**	**105.42**	**354**	IAMs_20	IAMs_20	22 16 47.1	
	comp=Z,975nm,21.0s						
SHL	**Shillong**	**106.25**	**326**	IAMs_20	IAMs_20	22 16 06.4	
	comp=Z,694nm,21.0s						
SOCY	**Socotra**	**127.76**	**2**	IAMs_20	IAMs_20	22 24 43.4	
	comp=Z,389nm,19.0s						
MBAR	**Mbarara**	**134.51**	**36**	IAMs_20	IAMs_20	22 31 59.1	
	comp=Z,700nm,20.0s						
LSZ	**Lusaka**	**145.52**	**52**	PKIKP	**PKiKP**	**21 28 32.4**	**-3.3**
LSZ				MLR	MLR		
	comp=Z,900nm,21.0s						
LSZ	**Lusaka**	**145.52**	**52**		**PKiKP**	**21 28 32.4**	**-3.3**
SYO	**Syowa Base**	**150.00**	**169**	⇑*e*PKPdf	**PKPdf**	**21 28 34.8**	**-2.4**
SYO	**Syowa Base**	**150.00**	**169**	⇓*e*PKPab	**PKPab**	**21 28 47.6**	**-0.4**

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*NEIC **28** 21:09:07.1±1.1, 26°.33N±0°.06×128°.48E±0°.07, h25^{km}±7^{km}, mb4.2/10, Error ellipse: s-maj=10.7km s-min=7.3km az=54.0*

*JMA **28** 21:09:09.6±0.1, 26°.45N×128°.48E, h35^{km}±2^{km}, M3.8*

JMA Felt I J1.

*NIED **28** 21:09:09.7, 26°.45N×128°.48E, h35^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.08; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-0.71; $M_{r\theta}$0.15; $M_{\theta\phi}$1.33; $M_{\phi r}$0.23; Fault plane solution: $M_0$1.52000×10^{15} NP1:ϕ_s13.00000°, δ86.00000°, λ170.00000°. NP2:ϕ_s104.00000°, δ80.00000°, λ4.00000°.*

*IDC **28** 21:09:10.0±0.7, 26°.45N×128°.20E, h36^{km}±6^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/49, mbtmp4.0/13, ML3.6/2 Error ellipse: s-maj=23.3km s-min=10.9km az=89.0*

ISC 28 21:09:08.8±0.7**, 26°.40N**±0°.04×**128°.54E**±0°.04**, h35**^{km}±2^{km}**, n49, σ1^s.26**/66**, mb4.0**/16**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.48**	**285**	P	**Pb**	**21 09 18.6**	**-0.6**
JNTH				S	**Sb**	**21 09 25.0**	**-1.3**
JOW	**Kunigami**	**0.49**	**331**	Pn	**Pb**	**21 09 18.9**	**-0.5**
	2µm,0.3s,baz=149,slow=14						
JOW				Sn	**Sb**	**21 09 25.4**	**-1.4**
	3µm,0.3s,baz=109,slow=24,SNR=33						
JOW	**Kunigami**	**0.49**	**331**	P	**Pb**	**21 09 18.9**	**-0.5**
JOW				S	**Sb**	**21 09 25.5**	**-1.3**
JOW	**Kunigami**	**0.49**	**331**		**Pb**	**21 09 19.2**	**-0.3**
JOW					**Sb**	**21 09 26.0**	**-0.8**
JYRO	**Yoronjima**	**0.63**	**353**	P	**Pn**	**21 09 20.9**	**-0.4**
JYRO				S	**Sn**	**21 09 28.8**	**-1.3**
JJT3	**Tamagusuku3**	**0.72**	**250**	P	**Pb**	**21 09 23.1**	**0.0**
JIH	**Iheya**	**0.82**	**321**	P	**Pn**	**21 09 23.8**	**-0.1**
JIH				S	**Sn**	**21 09 34.0**	**-0.7**
JOKE	**Okinoerabujima**	**0.96**	**2**	P	**Pn**	**21 09 25.9**	**0.0**
JOKE				S	**Sn**	**21 09 38.2**	**-0.2**
JAGN	**Aguni-jima**	**1.18**	**280**	P	**Pn**	**21 09 29.5**	**+0.7**
JAGN				S	**Sn**	**21 09 44.0**	**+0.3**
JTK	**Tokunoshima**	**1.43**	**15**	P	**Pn**	**21 09 32.6**	**+0.2**
JTK				S	**Sn**	**21 09 49.2**	**-0.8**
JKE	**Kume jima 2**	**1.57**	**268**	P	**Pn**	**21 09 34.1**	**-0.2**
JKE				*e*S	**Sn**	**21 09 52.9**	**-0.6**
JMZ	**Minamidaito 2**	**2.48**	**103**	P	**Pn**	**21 09 46.2**	**-0.6**
JMZ				S	**Sn**	**21 10 12.9**	**-2.9**
JMZ	**Minamidaito 2**	**2.48**	**103**		**Pn**	**21 09 46.1**	**-0.6**
JKDJ	**Kitadaitoujima**	**2.52**	**100**	P	**Pn**	**21 09 47.0**	**-0.3**
JKDJ				S	**Sn**	**21 10 15.0**	**-1.8**

JSU	Suzuyama	5.36	18	Pn	Pn	21 10 27.0	+0.6
NACB	Ninganchiao	6.66	252	Pn	Pn	21 10 42.4	-1.9
YHNB	Yeheng	6.70	257	Pn	Pn	21 10 45.4	+0.6
JNU	Nakatsue	7.00	16	Pn	Pn	21 10 50.5	+1.5
	3.1nm,0.3s,baz=188,slow=14,SNR=15						
JNU				Sn	Sn	21 12 05.4	-2.0
	0.9nm,0.3s,baz=219,slow=18,SNR=1.1						
YULB	Yu-li	7.22	247		Pn	21 10 48.7	-3.3
SSLB	Suanglung	7.35	251		Pn	21 10 51.6	-2.1
TWG	Pinlang	7.67	244		Pn	21 10 54.0	-4.1
JMN	Monobe	8.65	31	Pn	Pn	21 11 11.5	0.0
JHS	Saijyo	9.43	24	Pn	Pn	21 11 22.7	+0.4
USRK	Ussuriysk Ar.	17.98	8	P	P	21 13 17.4	+1.2
	baz=190,slow=10,SNR=5.5						
ULN	Ulaanbaatar	27.27	327	P	P	21 14 51.0	+1.0
ULN				IAmb	IAmb	21 14 52.5	
	comp=Z,3.8nm,1.0s						
SONM	Songino Array	27.57	327	P	P	21 14 50.8	-1.9
	comp=Z,1.2nm,0.5s,baz=140,slow=9.8,SNR=14						
YAK	Yakutsk	35.64	1	P	P	21 16 03.1	0.0
SEY	Seymchan	39.78	17	P	P	21 16 38.7	+0.6
	comp=Z,2.0nm,0.8s,baz=238,slow=12,SNR=4.7						
MK31	Makanchi Array	41.63	312	P	P	21 16 53.4	-0.3
MKAR	Makanchi Array	41.63	312	P	P	21 16 52.5	-1.1
	comp=Z,1.3nm,0.6s,baz=90,slow=9.6,SNR=24						
MKAR				PcP	PcP	21 18 50.6	+0.4
	comp=Z,0.5nm,0.8s,baz=100,slow=5.0,SNR=3.6						
MKAR	Makanchi Array	41.63	312	P	P	21 16 53.2	-0.5
MAKZ	Makanchi	41.84	312	P	P	21 16 55.2	-0.3
MAKZ				IAmb	IAmb	21 16 56.3	
	comp=Z,3.7nm,1.1s						
ZAA0	Zalesovo Array	42.28	323	P	P	21 16 58.0	-0.9
ZALV	Zalesovo Beam	42.28	323	P	P	21 16 57.2	-1.6
	comp=Z,0.8nm,0.4s,baz=106,slow=8.4,SNR=5.6						
ZALV				pP	pP	21 17 08.9	+0.2
	comp=Z,0.6nm,0.4s,baz=110,slow=8.4,SNR=2.5						
ZALV	Zalesovo Beam	42.28	323	P	P	21 16 57.8	-1.0
KURBB	Kurchatov Arra	44.92	316	P	P	21 17 19.0	-1.1
	comp=Z,1.0nm,0.6s,baz=104,slow=8.9,SNR=5.4						
WB0	Warramunga Arr	46.24	172	P	P	21 17 31.7	+0.8
WRA	Warramunga Arr	46.41	172	P	P	21 17 33.4	+1.2
	comp=Z,1.4nm,0.6s,baz=353,slow=8.4,SNR=13						
WRA				pP	pwP	21 17 44.1	-0.4
	comp=Z,1.2nm,0.6s,baz=352,slow=8.3,SNR=5.7						
WB2	Warramunga Arr	46.41	172	P	P	21 17 32.8	+0.6
WB2				IAmb	IAmb	21 17 34.2	
	comp=Z,4.2nm,0.9s						
KKAR	Karatay Array	49.54	305	P	P	21 17 57.1	+0.8
ASAR	Alice Springs	50.04	174	P	P	21 18 01.4	+1.3
	comp=Z,0.7nm,0.6s,baz=5.3,slow=12,SNR=17						
ASAR				pP	pwP	21 18 12.8	+0.2
	comp=Z,1.0nm,0.6s,baz=6.3,slow=14,SNR=5.7						
ABKAR	Akbulak array	56.73	313	P	P	21 18 48.6	-0.5
ABKAR				IAmb	IAmb	21 18 50.1	
	comp=Z,2.0nm,0.8s						
ABKAR	Akbulak array	56.73	313	P	P	21 18 48.8	-0.3
ARU	Arti	57.43	322	P	P	21 18 53.1	-0.8
ARU				IAmb	IAmb	21 18 54.8	
	comp=Z,8.5nm,1.5s						
ILAR	Eielson Array	64.16	28	P	P	21 19 42.7	+3.2
	comp=Z,0.3nm,0.8s,baz=284,slow=7.3,SNR=1.4						
FINES	FINESS Array B	72.86	331	P	P	21 20 33.9	0.0
	comp=Z,2.2nm,0.5s,baz=72,slow=4.4,SNR=12						
FINES	FINESS Array B	72.86	331	P	P	21 20 33.9	-5.1
AKASG	Malin Array Be	75.58	320	P	P	21 20 49.5	-0.4
	comp=Z,1.8nm,0.4s,baz=57,slow=6.6,SNR=7.0						
AKASG				pP	pP	21 21 00.8	+0.5
	comp=Z,0.2nm,0.3s,baz=72,slow=6.7,SNR=2.2						
BRTR	Keskin Array B	77.15	308	P	P	21 20 59.9	+0.7
	comp=Z,1.7nm,0.8s,baz=108,slow=3.2,SNR=7.3						

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*FUNV **28** 21:13:28.9, 12°.56N×70°.52W, h5^{km}, MW3.5*
*RSNC **28** 21:13:29.4±0.6, 12°.49N×70°.55W, h6^{km}±17^{km}, ML3.1, Mw3.4*

ISC 28 21:13:28.0±2.0**, 12°.56N**±0°.09×**70°.54W**±0°.04**, h14**^{km}±11^{km}**, n22,** σ0^{s}.**89**/40**, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MONV	Montecano	0.82	137	⇓eP	Pg	21 13 43.5	-0.4
MONV				eS	Sg	21 13 55.1	+0.5
DABV	Dabajuro	1.63	183	eP	Pn	21 13 56.7	+0.4
DABV				eS	Sn	21 14 17.1	-0.1
DABV	Dabajuro	1.63	183	⇑eP	Pn	21 13 56.8	+0.4
DABV				eS	Sn	21 14 18.3	+1.1
SIQV	Siquisique	2.03	159	⇑eP	Pn	21 14 02.9	+1.0
SIQV				eS	Sn	21 14 28.2	+1.1
JACV	Jacura	2.22	131	eP	Pn	21 14 05.8	+1.2
JACV				eS	Sn	21 14 32.7	+0.9
CURV	Curarigua	2.59	167	eP	Pn	21 14 10.1	+0.4
CURV				eS	Sn	21 14 42.2	+1.1
CRJC	Cerrejon, Guaj	2.76	237	eP	Pn	21 14 11.8	-0.2
CRJC				eS	Sn	21 14 45.8	+0.6
TORV	Torococo	3.00	174	eP	Pn	21 14 16.3	+1.0
TORV				eS	Sn	21 14 51.6	+0.5
SANV	Sanarito	3.19	162	eP	Pn	21 14 19.1	+1.1
SANV				eS	Sn	21 14 55.5	-0.5
TURV	Turiamo	3.37	128	eP	Pn	21 14 20.8	+0.5
TURV				eS	Sn	21 14 58.6	-1.7
MAPV	Macapo	3.39	143	eP	Pn	21 14 21.9	+1.2
MAPV				eS	Sn	21 14 59.6	-1.2
SDV	Santo Domingo	3.65	181	eP	Pn	21 14 25.1	+0.7
SMRC	Santa Marta, M	3.87	249	eP	Pn	21 14 27.8	+0.7
SMRC				eS	Sn	21 15 13.1	+0.7
SMRC				i		21 15 23.7	
	comp=Z,28nm,0.3s						
SOCV	Socops	4.26	184	eP	Pn	21 14 33.6	+1.0
SOCV				eS	Sn	21 15 20.9	-1.3
BAUV	El Baul	4.35	145	eP	Pn	21 14 34.6	+0.8
BAUV				eS	Sn	21 15 22.9	-1.5
ARGC	Ariguani, Magd	4.52	234	eP	Pn	21 14 37.1	+1.0
ARGC				eS	Sn	21 15 29.0	+0.4
BIRV	Birongo	4.67	116	eP	Pn	21 14 37.7	-0.5
OCAC	Ocana	5.09	213	eP	Pn	21 14 44.0	-0.1
OCAC				eS	Sn	21 15 42.0	-0.8
SMLC	San Martn de	5.10	223	eP	Pn	21 14 43.4	-0.8
SMLC				eS	Sn	21 15 42.2	-0.6
SMLC				i		21 15 44.7	
	comp=Z,24nm,0.5s						
PAMC	Pamplona, Colo	5.61	203	eP	Pn	21 14 51.0	-0.5
PAMC				eS	Sn	21 15 55.3	-0.8
PAMC				i		21 16 13.0	
	comp=Z,8.4nm,0.2s						
RUSC	La Rusia	7.08	201	eP	Pn	21 15 10.8	-1.1
PAYV	Puerto Ayacuch	7.64	158	eP	Pn	21 15 19.0	-0.1

SKO 28 21:29:30.7, 41°.17N×20°.76E, h15^{km}**, 2C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.07	153	⇑iPg	Pg	21 29 33.7	0.0
OHR				i Sg	Sg	21 29 36.2	+0.6
OHR				eLg	Lg	21 29 36.3	
	comp=E,608nm,0.4s						
FNA	Florina	0.60	129	⇑iPg	Pg	21 29 42.6	+0.1
FNA				i Sg	Sb	21 29 52.6	+1.3
TIR	Tirane	0.70	285	i Pg	Pb	21 29 44.5	0.0
VAY	Valandovo	1.37	83	i Pg	Pg	21 29 57.1	0.0
VAY				i Sg	Sg	21 30 15.4	+0.5
VAY				eLg	Lg	21 30 16.5	
	comp=E,8.2nm,0.6s						

ATH 28 21:29:56.5, 40°.40N×21°.30E, h30^{km}±6^{km}**, ML1.8**/2**, Error ellipse: s-maj=6.8km s-min=1.7km az=243.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEST	Nestorio	0.19	274	P	Pb	21 30 02.0	-0.7
PENT	Pentalofos	0.24	211	P	Pb	21 30 02.9	-0.5
PENT				S	Sb	21 30 08.2	+0.3
KZN	Kozani	0.37	105	P	Pb	21 30 04.9	-0.2
KZN				S	Sb	21 30 11.1	+0.1
KZN				AML	AML	21 30 11.4	
	comp=N,316µm,0.2s						
KZN				AML	AML	21 30 12.0	
	comp=E,622µm,0.2s						
FNA	Florina	0.39	9	P	Pb	21 30 05.1	-0.2
FNA				S	Sb	21 30 11.2	0.0
FNA				AML	AML	21 30 11.6	
	comp=E,266µm,0.3s						
FNA				AML	AML	21 30 13.4	
	comp=N,230µm,0.3s						
KPRO	Kipourio	0.45	174	P	Pb	21 30 06.5	+0.3
OHR	Ohrid	0.80	332	i Pg	Pn	21 30 08.0	-3.9
OHR				i Sg	Sb	21 30 10.5	-12
OHR				eLg	Lg	21 30 10.6	
	comp=E,142nm,0.4s						

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*IDC **28** 21:45:29.3±0.8, 51°.34N×179°.24W, h0^{km}, mb3.8/11, mb1 4.2/12, mb1mx3.9/42, mbtmp3.9/12, ML4.1/1, Error ellipse: s-maj=32.5km s-min=14.8km az=169.0*
*AEIC **28** 21:45:33.1±2.5, 51°.1N±0°.1×179°.24W±0°.07, h29^{km}±6^{km}, ML4.1/12, mb4.3/43(NEIC), Error ellipse: s-maj=20.5km s-min=5.7km az=186.0*
*NEIC **28** 21:45:36.1±1.8, 51°.4N±0°.1×179°.27W±0°.06, h43^{km}±9^{km}, Error ellipse: s-maj=18.7km s-min=5.9km az=181.0*

ISC 28 21:45:35.5±0.7**, 51°.3N**±0°.1×**179°.29W**±0°.04**, h45**^{km}**, n82,** σ1^{s}.**16**/82**, mb4.3**/24**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERAA	Semis' Rag'd T	0.89	314		Pn	21 45 51.0	-0.6
AMKA	Amchitka	0.89	276		Pn	21 45 49.9	-1.6
AMKA					Sn	21 46 02.2	-1.1
CESW	Semis' Southwe	0.94	311		Pn	21 45 51.6	-0.6
CEAP	Semis' Anvil P	1.00	316		Pn	21 45 52.9	-0.1
CETU	Semis' Tuman	1.01	312		Pn	21 45 53.2	0.0
LSPA	Little Sitkin	1.49	297		Pn	21 46 00.6	+0.9
LSPA					Sn	21 46 20.5	+2.6
LSSA	Little Sitkin	1.52	296		Pn	21 46 00.5	+0.3
ADK	Adak	1.73	69		Pn	21 46 01.0	-2.0
ATKA	Atka Island	3.29	72		Pn	21 46 23.0	-1.4
ATKA					Sn	21 47 02.9	+0.5
KOFP	Korovin Flat P	3.37	71		Pn	21 46 25.2	-0.4
SMY	Shemya	4.33	292	Pn	Pn	21 46 38.7	0.0
AKUT	Akutan	8.69	66	Pn	Pn	21 47 39.8	+1.4
SDPT	Sand Point	11.95	63	Pn	Pn	21 48 22.2	-0.8
GAMB	Gambell	13.15	15	Pn	Pn	21 48 39.4	+0.2
ANM	Nome	15.16	23	Pn	Pn	21 49 06.3	0.0
OHAK	Old Harbor	16.25	58	Pn	Pn	21 49 16.5	-3.7
OHAK				IAmb	IAmb	21 49 29.1	
	comp=Z,39nm,1.4s						
KDAK	Kodiak Island	16.73	57	Pn	Pn	21 49 22.3	-3.9
	comp=Z,0.7nm,0.3s,baz=246,slow=1.2,SNR=18						
KDAK	Kodiak Island	16.73	57		Pn	21 49 22.9	-3.4
CNPM	China Poot	17.82	52		P	21 49 40.0	-0.1
CNPM				IAmb	IAmb	21 49 42.2	
	comp=Z,32nm,1.2s						
BRLK	Bradley Lake	18.05	51		Pn	21 49 42.4	-0.3
BRLK				IAmb	IAmb	21 49 47.7	
	comp=Z,33nm,1.3s						
SKT	Skwentna	18.48	44	P	Pn	21 49 48.1	+0.3
SKT				IAmb	IAmb	21 49 58.7	
	comp=Z,32nm,1.5s						
PPLA	Purkeypile	18.58	41	P	Pn	21 49 49.5	+0.3
PPLA				IAmb	IAmb	21 50 02.5	
	comp=Z,16nm,0.9s						
SUA	Susitna One	18.64	46	P	P	21 49 48.6	-0.6
SEW	Seward	18.84	51	P	P	21 49 50.9	-0.3
SEW				IAmb	IAmb	21 50 08.3	
	comp=Z,41nm,1.3s						
KTH	Kantishna Hill	19.39	40		P	21 49 57.5	+0.2
KTH				IAmb	IAmb	21 50 04.5	
	comp=Z,15nm,0.9s						
TRF	Thorofare Moun	19.60	41	P	P	21 49 59.7	0.0
TRF				IAmb	IAmb	21 50 07.3	
	comp=Z,10nm,0.9s						
IMAR	Indian Mountai	19.61	32	P	Pn	21 50 01.7	+0.4
KNK	Knik Glacier	19.66	47	P	Pn	21 50 02.0	0.0
RND	Reindeer	20.17	41	P	P	21 50 06.0	+0.2
SCM	Sheep Creek Mo	20.30	46	P	P	21 50 05.7	-1.6
SCM				IAmb	IAmb	21 50 12.8	
	comp=Z,38nm,1.5s						
DHY	Denali Highway	20.67	43	P	P	21 50 10.6	-0.7
DHY				IAmb	IAmb	21 50 15.9	
	comp=Z,10nm,0.7s						
MDM	Murphy Dome	21.06	38	P	P	21 50 16.2	+0.9
MDM				IAmb	IAmb	21 50 23.5	
	comp=Z,14nm,1.2s						
CCB	Clear Creek Bu	21.09	39	P	P	21 50 15.4	-0.2
HDA	Harding Lake	21.34	40	P	P	21 50 16.6	-1.7
ILAR	Eielson Array	21.50	39	P	P	21 50 18.9	-1.2
	comp=Z,0.4nm,0.6s,baz=247,slow=8.2,SNR=7.0						
BMAR	Burnt Mountain	23.48	33	P	P	21 50 41.7	+1.0
KLR	Kul'dur	30.91	286	P	P	21 51 48.4	+0.9
	comp=Z,1.6nm,0.4s,baz=60,slow=7.9,SNR=9.1						
H11S1	WAKE ISLAND Hy	34.55	204	T	T	22 28 59.8	
	baz=18						
H11S2	WAKE ISLAND Hy	34.56	204	T	T	22 28 59.4	
	baz=18						
H11S3	WAKE ISLAND Hy	34.56	204	T	T	22 28 59.7	
	baz=18						
YKA	Yellowknife Ar	35.51	46	P	P	21 52 26.4	-1.1
	comp=Z,0.8nm,0.8s,baz=283,slow=7.6,SNR=7.4						
LON	Longmire	37.14	74	P	P	21 52 42.9	+1.3
LON				IAmb	IAmb	21 52 50.4	
	comp=Z,2.9nm,0.7s						
LTY	Liberty	37.58	72	P	P	21 52 46.7	+1.3
LTY				IAmb	IAmb	21 52 48.7	
	comp=Z,4.2nm,1.1s						
B08A	Colville Reser	37.85	70		P	21 52 48.7	+1.0
B08A				IAmb	IAmb	21 52 51.3	
	comp=Z,4.7nm,0.8s						
H04A	Detroit Lake	37.94	77	P	P	21 52 49.6	+1.2
HAWA	Hanford	38.68	73	P	P	21 52 55.8	+1.3
HAWA				IAmb	IAmb	21 52 58.7	
	comp=Z,5.6nm,0.7s						
PINE	Pine Mountain	39.17	77	P	P	21 52 59.8	+0.9
PINE				IAmb	IAmb	21 53 07.8	
	comp=Z,12nm,1.4s						
NEW	Newport	39.20	69	P	P	21 52 59.8	+0.8
NEW				IAmb	IAmb	21 53 02.2	
	comp=Z,5.6nm,0.8s						
K05A	Summer Lake	39.77	79	P	P	21 53 04.9	+1.0
K05A				IAmb	IAmb	21 53 10.1	
	comp=Z,9.9nm,1.2s						
I07A	Izee	39.89	76	P	P	21 53 06.4	+1.6
I07A				IAmb	IAmb	21 53 08.6	
	comp=Z,5.1nm,0.7s						
WVOR	Wild Horse Val	41.32	78	P	P	21 53 17.6	+0.9
WVOR				IAmb	IAmb	21 53 24.8	
	comp=Z,7.9nm,0.9s						
MSO	Missoula	41.78	69	P	P	21 53 21.8	+1.4
BCYI	Bear Canyon	43.45	72	P	P	21 53 34.7	+0.6
MCMT	McKenzie Canyo	43.50	71	P	P	21 53 34.9	+0.5
BOZ	Bozeman (W)	43.80	70	P	P	21 53 36.9	+0.2
BOZ				IAmb	IAmb	21 53 39.8	
	comp=Z,6.5nm,0.7s						
NVAR	Mina Array Bea	43.87	82	P	P	21 53 38.1	+0.7
	comp=Z,2.1nm,0.9s,baz=297,slow=6.5,SNR=4.5						
NVAR	Mina Array Bea	43.87	82	P	P	21 53 38.3	+0.8
ELK	Elko	44.38	78	P	P	21 53 42.4	+0.9
ELK				IAmb	IAmb	21 53 45.4	
	comp=Z,4.3nm,0.8s						
YHL	Hebgen Lake	44.47	70	P	P	21 53 42.9	+0.6
YHH	Holmes Hill	44.70	70	P	P	21 53 44.6	+0.5
HVU	Hansel Valley	45.27	75	P	P	21 53 50.0	+1.5
RLMT	Red Lodge	45.45	69	P	P	21 53 51.3	+1.3
ULN	Ulaanbaatar	46.02	296	P	P	21 53 55.2	+0.8
ULN				IAmb	IAmb	21 53 56.2	
	comp=Z,2.2nm,0.6s						
DUG	Dugway, Tooele	46.19	77	P	P	21 53 56.8	+1.0
SONM	Songino Array	46.41	296	P	P	21 53 58.5	+1.1
	comp=Z,1.8nm,0.7s,baz=56,slow=7.8,SNR=17						
SONM	Songino Array	46.41	296	P	P	21 53 58.6	+1.2
PD31	Pinedale Array	46.63	72	P	P	21 53 59.6	+0.3
PDAR	Pinedale Array	46.63	72	P	P	21 53 59.0	-0.4
	comp=Z,6.9nm,0.8s,baz=306,slow=3.7,SNR=33						
PDAR	Pinedale Array	46.63	72	P	P	21 53 59.5	+0.2
MSU	Marysvale	47.61	78	P	P	21 54 07.4	+0.5
PV04	Paradox Valley	49.68	76	P	P	21 54 23.5	+0.7
TXAR	Lajitas Array	58.97	81	P	P	21 55 30.1	-0.3
	comp=Z,0.9nm,0.8s,baz=310,slow=5.2,SNR=9.0						
TXAR	Lajitas Array	58.97	81	P	P	21 55 30.5	+0.1
MK31	Makanchi Array	59.84	308	P	P	21 55 35.4	-0.7
MKAR	Makanchi Array	59.84	308	P	P	21 55 35.2	-0.8
	comp=Z,0.2nm,0.4s,baz=54,slow=5.4,SNR=7.4						
MKAR	Makanchi Array	59.84	308	P	P	21 55 35.6	-0.5
MAKZ	Makanchi	59.99	308	P	P	21 55 36.6	-0.5
NRS	Narsarsuaq	61.98	23	P	P	21 55 49.6	-0.6
CMAR	Chiang Mai Arr	70.71	276	P	P	21 56 46.8	0.0
	comp=Z,0.6nm,0.3s,baz=24,slow=6.8,SNR=5.2						
CMAR	Chiang Mai Arr	70.71	276	P	P	21 56 47.8	+1.1
WRA	Warramunga Arr	81.74	223	P	P	21 57 49.4	+0.3
	comp=Z,0.2nm,0.5s,baz=38,slow=6.3,SNR=5.3						
ASAR	Alice Springs	85.22	222	P	P	21 58 08.0	+1.0
	comp=Z,0.3nm,0.9s,baz=22,slow=4.9,SNR=4.1						

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*IDC **28** 21:55:19.3±0.7, 24°.37S×116°.18W, h0^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.4/22, mbtmp4.2/12, MS4.6/18, Ms1 4.6/18, ms1mx4.4/32, Error ellipse: s-maj=26.5km s-min=21.6km az=90.0*
*MOS **28** 21:55:20.5±1.1, 24°.28S×116°.15W, h10^{km}, mb5.3/4, Error ellipse: s-maj=11.8km s-min=9.3km az=87.9*
*NEIC **28** 21:55:22.2±1.0, 24°.4S±0°.1×116°.1W±0°.1, h10^{km}±1^{km}, mb5.0/97, Error ellipse: s-maj=19.8km s-min=17.3km az=146.0*
*BJI **28** 21:55:23.0±0.0, 24°.40S×116°.20W, h10^{km}, mB5.7/14, Ms5.4/12, Ms7 5.2/12*
*GCMT **28** 21:55:25.2±0.1, 24°.64S±0°.01×116°.14W±0°.01, h18^{km}, MW5.3/137, Moment Tensor Solution. s71,c100; s137,c228; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.22±.02; $M_{\theta\theta}$-0.70±.02; $M_{\phi\phi}$0.91±.02; $M_{r\theta}$-0.28±.04; $M_{\theta\phi}$0.69±.02; $M_{\phi r}$0.29±.04; Best double couple: $M_0$1.15000×10^{17} NP1:ϕ_s63.00000°, δ69.00000°, λ-11.00000°. NP2:ϕ_s158.00000°, δ80.00000°, λ-159.00000°. Principal axes: T 1.1950, Plg7.0000°, Azm289.0000°; N -0.0900, Plg66.0000°, Azm182.0000°; P -1.1050, Plg22.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 21:55:22.0±0.3**, 24°.32S**±0°.08×**116°.18W**±0°.06**, h10**^{km}**, n265,** σ1^{s}.**23**/252**, mb5.0**/66**, MS4.8**/27**, 3C-1D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	6.77	116	LR	LR	21 58 59.2	
	comp=Z,17µm,18.1s,baz=343,slow=33						
RPN	Rapa Nui	6.77	116	P	Pn	21 57 03.1	+1.6
RKT	Rikitea	17.26	270	eLQ	LQ	22 02 37.7	
	5µm,27.0s						
RKT				eLR	LR	22 03 23.9	
	comp=Z,11µm,26.0s						
TAOE	Nuku Hiva Isla	27.58	300	eS	S	22 05 51.5	+0.3
	586nm,28.9s						
TAOE				eLR	LR	22 08 01.9	
	comp=Z,6µm,26.0s						
TBI	Tubuai	30.42	265	eS	S	22 06 35.6	-0.1
	326nm,24.2s						
TBI				eLQ	LQ	22 08 10.8	
	925nm,32.5s						
TBI				eLR	LR	22 09 20.5	
	comp=Z,3µm,28.0s,baz=91						
PAE	Paea	31.83	276	eP	P	22 01 47.4	+0.2
	14nm,1.2s						
PPTF	Pamatai, Papee	31.84	276	P	P	22 01 47.7	+0.3
PPT2	Papeete2	31.85	276	eP	P	22 01 47.7	+0.2
	51nm,1.3s						
PPT2				eLQ	LQ	22 08 46.4	
	831nm,23.5s						
PPT2				eLR	LR	22 09 57.5	
	comp=Z,5µm,27.5s,baz=109						
PPT	Papeete	31.86	276	LR	LR	22 11 39.3	
	comp=Z,436nm,18.1s,baz=115,slow=31						
H03N2	Juan Fernandez	33.70	114	T	T	22 37 30.8	
	baz=280,slow=75,SNR=107						
H03N3	Juan Fernandez	33.71	114	T	T	22 37 30.9	
	baz=280,slow=75,SNR=197						
H03N1	Juan Fernandez	33.72	114	T	T	22 37 38.4	
	baz=280,slow=75,SNR=348						
NNA	Nana	39.20	79	i P	P	22 02 48.6	-2.1
NNA				pmax	pmax		
	comp=Z,27nm,1.2s						
ATAH	Atahualpa	40.00	71	P	P	22 02 56.0	-1.7
	comp=Z,4.7nm,0.8s,baz=215,slow=5.1,SNR=4.0						
AC04	Llanos de Chal	40.46	106	P	P	22 03 03.3	+2.3
BO02	Sierra Bellavi	40.54	116	P	P	22 03 02.4	+0.7
LCO	Las Campanas	40.72	107	P	P	22 03 05.9	+2.5
LCO				pmax	pmax		
	comp=Z,32nm,1.6s						
LCO	Las Campanas	40.72	107	P	P	22 03 05.9	+2.5
GO03	Copiap	41.26	105	P	P	22 03 09.6	+2.0
PLCA	Paso Flores	41.32	125	P	P	22 03 08.1	+0.1
	comp=Z,3.8nm,1.0s,baz=250,slow=15,SNR=3.0						
PLCA				LR	LR	22 15 49.4	
	comp=Z,2µm,20.9s,baz=300,slow=30						
PLCA	Paso Flores	41.32	125	P	P	22 03 07.9	-0.1
PLCA				pmax	pmax		
	comp=Z,17nm,1.2s						
PLCA	Paso Flores	41.32	125	P	P	22 03 07.9	-0.1
GO02	Mina Guanaco	42.15	101	P	P	22 03 16.0	+0.8
GO02				IAmb	IAmb	22 03 31.7	
	comp=Z,55nm,1.9s						
ZON	Zonda	42.31	111	P	P	22 03 16.1	-0.1
ZON				pmax	pmax		
	comp=Z,45nm,1.5s						
ZON	Zonda	42.31	111	P	P	22 03 16.1	-0.1
ZON				IAmb	IAmb	22 03 22.6	
	comp=Z,45nm,1.5s						
PB07	IPOC Station P	42.53	96	P	P	22 03 19.3	+1.0
PB06	IPOC Station P	42.61	98	P	P	22 03 17.5	-1.4
PB01	IPOC Station P	43.05	95	P	P	22 03 21.8	-0.6
LVC	Limon Verde	43.23	98	P	P	22 03 23.5	-0.6
LVC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LVC	Limon Verde	43.23	98	P	P	22 03 23.5	-0.6
MNMC	Minye Minye	43.42	93	P	P	22 03 24.8	-0.9
PB16	IPOC Station P	43.72	92	P	P	22 03 27.8	-0.6
OTAV	Otavalo	43.95	62	P	P	22 03 30.3	+0.2
OTAV				pmax	pmax		
	comp=Z,14nm,1.2s						
OTAV	Otavalo	43.95	62	P	P	22 03 30.3	+0.2
TLIG	Tlapa	45.04	24	P	P	22 03 38.7	+0.5
TLIG				IAmb	IAmb	22 03 46.1	
	comp=Z,56nm,1.8s						
JTS	Las Juntas de	45.97	45	P	P	22 03 46.1	+0.5
JTS				pmax	pmax		
	comp=Z,52nm,1.4s						
JTS	Las Juntas de	45.97	45	P	P	22 03 46.1	+0.5
CMIG	Matias Romero	46.11	29	LR	LR	22 19 01.1	
	comp=Z,892nm,20.0s,baz=172,slow=31						
ZAIG	Zacatecas	48.64	17	P	P	22 04 06.6	0.0
ROSC	El Rosal	50.00	60	LR	LR	22 20 04.7	
	comp=Z,518nm,21.2s,baz=231,slow=30						
ROSC	El Rosal	50.00	60	P	P	22 04 18.2	+0.9
ROSC				pmax	pmax		
	comp=Z,77nm,2.0s						
ROSC	El Rosal	50.00	60	P	P	22 04 18.2	+0.9
SAML	Samuel	52.71	83	P	P	22 04 35.9	-1.3
SAML				pmax	pmax		
	comp=Z,34nm,1.5s						
SAML	Samuel	52.71	83	P	P	22 04 35.9	-1.3
SAML				IAmb	IAmb	22 04 49.2	
	comp=Z,34nm,1.4s						
CPUP	Villa Florida	52.83	105	LR	LR	22 22 53.4	
	comp=Z,1µm,20.8s,baz=264,slow=31						
HSIG		53.27	6	P	P	22 04 42.2	+1.2
HSIG				IAmb	IAmb	22 04 55.4	
	comp=Z,30nm,1.5s						
TX32	Lajitas Array	54.69	13	P	P	22 04 52.3	+0.8
TXAR	Lajitas Array	54.69	13	P	P	22 04 50.9	-0.6
	comp=Z,0.7nm,0.8s,baz=191,slow=9.4,SNR=5.2						
TXAR				LR	LR	22 24 00.4	
	comp=Z,304nm,18.4s,baz=0.0,slow=31						
TXAR	Lajitas Array	54.69	13	P	P	22 04 52.2	+0.7
TXAR	Lajitas Array	54.69	13	P	P	22 04 52.2	+0.7
SDV	Santo Domingo	55.35	59	LR	LR	22 26 16.3	
	comp=Z,319nm,18.7s,baz=238,slow=34						
SDV	Santo Domingo	55.35	59	P	P	22 04 57.2	+0.5
SDV				IAmb	IAmb	22 05 29.2	
	comp=Z,25nm,1.6s						
PIX	Pinacate	55.63	3	P	P	22 04 59.4	+1.3
319A	Douglas	55.78	7	P	P	22 04 59.8	+0.5
319A				IAmb	IAmb	22 05 14.5	
	comp=Z,32nm,1.2s						
214A	Organ Pipe Nat	56.05	3	P	P	22 05 02.6	+1.4
	baz=184						
214A	Organ Pipe Nat	56.05	3	P	P	22 05 02.2	+1.0
214A				IAmb	IAmb	22 05 16.4	
	comp=Z,20nm,1.4s						
TUC	Tucson	56.55	5	P	P	22 05 05.9	+1.1
TUC				pmax	pmax		
	comp=Z,17nm,1.4s						

TUC	Tucson	56.55	5	P	P	22 05 06.0	+1.2
	baz=186						
TUC	Tucson	56.55	5	P	P	22 05 05.9	+1.1
TUC				IAmb	IAmb	22 05 13.5	
	comp=Z,17nm,1.4s						
IKP	In-Ko-Pah, Jac	56.66	0	P	P	22 05 07.4	+1.9
	baz=180						
MNTX	Cornudas Mount	56.66	11	P	P	22 05 05.8	+0.4
	baz=192						
MNTX	Cornudas Mount	56.66	11	P	P	22 05 05.3	-0.1
MNTX				IAmb	IAmb	22 05 20.3	
	comp=Z,18nm,1.1s						
JCT	Junction City	56.71	17	P	P	22 05 05.9	0.0
JCT				pmax	pmax		
	comp=Z,24nm,0.9s						
JCT	Junction City	56.71	17	P	P	22 05 06.4	+0.5
	baz=198						
JCT	Junction City	56.71	17	P	P	22 05 05.9	0.0
121A	Cookes Peak, D	57.10	8	P	P	22 05 10.1	+1.3
	baz=189						
121A	Cookes Peak, D	57.10	8	P	P	22 05 09.5	+0.7
121A				IAmb	IAmb	22 05 23.1	
	comp=Z,30nm,1.4s						
HKT	Hockley	57.39	21	P	P	22 05 10.8	+0.2
HKT				pmax	pmax		
	comp=Z,31nm,1.6s						
HKT	Hockley	57.39	21		P	22 05 10.8	+0.2
HKT				IAmb	IAmb	22 05 18.6	
	comp=Z,31nm,1.6s						
PFO	Pinyon Flats O	57.62	360	i P	P	22 05 12.5	+0.1
PFO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BELC	Belle Mtn. Jos	58.00	0	P	P	22 05 16.9	+1.8
	baz=180						
BFSC	Mount Baldy Ra	58.26	359	P	P	22 05 18.3	+1.5
	baz=178						
X18A	Snowflake	58.83	6	P	P	22 05 21.5	+0.6
X18A				IAmb	IAmb	22 05 35.4	
	comp=Z,24nm,1.4s						
BNM	Barren Site	58.85	9	P	P	22 05 22.2	+1.0
W13A	Hualapai Mount	59.14	2	P	P	22 05 24.3	+1.2
PTGA	Pitinga	59.17	75	LR	LR	22 27 18.8	
	comp=Z,562nm,20.0s,baz=238,slow=32						
PTGA	Pitinga	59.17	75	P	P	22 05 23.7	+0.2
PTGA				IAmb	IAmb	22 05 35.7	
	comp=Z,9.9nm,1.0s						
MSTX	Muleshoe	59.36	13	P	P	22 05 24.2	-0.3
	baz=194						
MSTX	Muleshoe	59.36	13	P	P	22 05 24.0	-0.5
NATX	Nacogdoches	59.44	21	P	P	22 05 25.4	+0.4
LRMC	Laurel Mtn Rad	59.49	359	P	P	22 05 26.5	+1.0
	baz=178						
ANMO	Albuquerque	59.66	9	LR	LR	22 26 53.9	
	comp=Z,452nm,18.0s,baz=232,slow=32						
ANMO	Albuquerque	59.66	9	P	P	22 05 27.0	+0.3
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ANMO	Albuquerque	59.66	9	P	P	22 05 27.5	+0.8
	baz=190						
ANMO	Albuquerque	59.66	9	P	P	22 05 27.0	+0.3
WUAZ	Wupatki	59.69	5	P	P	22 05 28.1	+1.3
	baz=185						
WUAZ	Wupatki	59.69	5	P	P	22 05 27.3	+0.5
WUAZ				IAmb	IAmb	22 05 42.2	
	comp=Z,14nm,1.4s						
ISA	Isabella, Lake	59.70	358	P	P	22 05 25.6	-1.2
ISA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ISA	Isabella, Lake	59.70	358	P	P	22 05 27.9	+1.1
	baz=178						
ISA	Isabella, Lake	59.70	358	P	P	22 05 25.6	-1.2
MPMC	Manual Prospec	60.07	359	P	P	22 05 30.2	+0.8
	baz=179						
THZ	Tophouse	60.34	234	P	P	22 05 31.1	-0.1
CWC	Cottonwood Cre	60.46	358	P	P	22 05 33.2	+1.1
	baz=178						
AMTX	Amarillo	60.47	14	P	P	22 05 32.9	+0.8
	baz=195						
SHPR	Sheep Range	60.51	1	P	P	22 05 33.8	+1.3
SHPR				IAmb	IAmb	22 05 48.0	
	comp=Z,28nm,1.4s						
U15A	North Rim	60.53	4	P	P	22 05 33.8	+1.0
U15A				IAmb	IAmb	22 05 48.0	
	comp=Z,22nm,1.3s						
TPNV	Topopah Spring	60.94	360	P	P	22 05 36.6	+1.2
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TPNV	Topopah Spring	60.94	360	P	P	22 05 37.3	+1.9
	baz=180						
TPNV	Topopah Spring	60.94	360	P	P	22 05 36.6	+1.2
WMOK	Wichita Mounta	61.01	16	P	P	22 05 36.3	+0.6
	baz=198						
LCMT	Little Creek M	61.07	3	P	P	22 05 37.4	+1.2
KNB	Kanab	61.09	3	P	P	22 05 37.2	+0.8
KNB				pmax	pmax		
	comp=Z,13nm,1.3s						
KNB	Kanab	61.09	3	P	P	22 05 37.2	+0.8
MSVF	Nonsavu	61.27	262	P	P	22 05 38.0	0.0
MSVF				pmax	pmax		
	comp=Z,78nm,2.0s						
MSVF	Nonsavu	61.27	262	P	P	22 05 38.0	0.0
PRN	Pahroc Range	61.41	1	P	P	22 05 39.4	+0.9
PRN				IAmb	IAmb	22 05 53.6	
	comp=Z,18nm,1.3s						
CCUT	Cedar City	61.60	3	P	P	22 05 40.7	+0.8
MVCO	Mesa Verde	61.63	7	P	P	22 05 40.8	+0.7
	baz=188						
MVCO	Mesa Verde	61.63	7	P	P	22 05 40.5	+0.4
SZCU	Shurtz Canyon	61.66	3	P	P	22 05 41.1	+0.9
OMMB	Old Mammoth Mi	61.66	357	P	P	22 05 40.7	+0.2
LBZ	Lake Benmore	61.98	231	P	P	22 05 42.5	+0.2
CMB	Columbia Colle	62.15	356	P	P	22 05 44.3	+0.9
CMB				pmax	pmax		
	comp=Z,13nm,1.5s						
CMB	Columbia Colle	62.15	356	P	P	22 05 44.3	+0.9
CMB				IAmb	IAmb	22 05 51.0	
	comp=Z,13nm,1.4s						
LHV	Little Huntoon	62.28	358	P	P	22 05 45.5	+1.4
LHV				IAmb	IAmb	22 05 58.6	
	comp=Z,9.1nm,1.0s						
R11A	Troy Canyon, C	62.34	1	P	P	22 05 46.1	+1.3
	baz=181						
FOZ	Fox Glacier	62.36	232	P	P	22 05 45.0	+0.2
S22A	4UR Ranch, Cre	62.36	8	P	P	22 05 46.8	+1.7
	baz=190						
PV05	Paradox Valley	62.43	6	P	P	22 05 46.5	+1.0
NV11	Mina Array Sit	62.45	358	P	P	22 05 46.5	+0.9
NV11				IAmb	IAmb	22 05 59.9	
	comp=Z,14nm,1.1s						
NVAR	Mina Array Bea	62.45	358	P	P	22 05 46.5	+0.8
	comp=Z,2.8nm,0.7s,baz=188,slow=9.5,SNR=16						
NVAR				LR	LR	22 27 03.3	
	comp=Z,657nm,18.8s,baz=172,slow=30						
NVAR	Mina Array Bea	62.45	358	P	P	22 05 46.3	+0.7
SDCO	Great Sand Dun	62.55	10	P	P	22 05 47.1	+0.7
	baz=191						
SDCO	Great Sand Dun	62.55	10	P	P	22 05 46.6	+0.3
MVU	Marysvale	62.61	4	P	P	22 05 48.1	+1.5
RYN	Ryan	62.66	358	P	P	22 05 48.3	+1.4
RYN				IAmb	IAmb	22 06 01.4	
	comp=Z,13nm,1.5s						
PV23	Carpenter Ridg	62.80	6	P	P	22 05 48.3	+0.3
SPR3	Spring Creek 3	63.01	2	P	P	22 05 50.1	+0.6
SPR3				IAmb	IAmb	22 06 04.4	
	comp=Z,11nm,1.1s						
GDXM	Geysers	63.10	354	P	P	22 05 52.1	+2.3
GDXM				IAmb	IAmb	22 06 05.3	
	comp=Z,17nm,1.5s						
PNTR	Pine Nut	63.16	357	P	P	22 05 51.2	+0.9
PNTR				IAmb	IAmb	22 06 04.8	
	comp=Z,19nm,1.2s						
P17A	Butcher Ranch,	63.67	5	P	P	22 05 54.1	+0.5
SMCO	Snowmass	63.75	8	P	P	22 05 54.7	+0.3
SMCO				IAmb	IAmb	22 06 09.9	
	comp=Z,11nm,1.1s						
BEKR	Beckworth	63.98	356	P	P	22 05 56.4	+0.8
BEKR				IAmb	IAmb	22 06 09.9	
	comp=Z,18nm,1.6s						
BDFB	Brasilia	64.11	96	P	P	22 05 56.3	-0.7
	comp=Z,2.1nm,0.7s,baz=279,slow=5.2,SNR=2.7						
BDFB				LR	LR	22 30 08.9	
	comp=Z,654nm,21.6s,baz=270,slow=33						
BDFB	Brasilia	64.11	96	P	P	22 05 56.6	-0.4
BDFB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BDFB	Brasilia	64.11	96	P	P	22 05 56.6	-0.4
BDFB				IAmb	IAmb	22 06 09.5	
	comp=Z,9.2nm,1.0s						
U40A	Yellville	64.25	21	P	P	22 05 57.2	-0.1
	baz=204						
DUG	Dugway, Tooele	64.26	3	P	P	22 05 58.6	+1.1
	baz=183						
O02D	Mt. Diablo Mer	64.46	354	P	P	22 06 00.1	+1.4
	baz=173						
ISCO	Idaho Springs	64.55	9	P	P	22 06 00.1	+0.6
ISCO				pmax	pmax		
	comp=Z,14nm,1.3s						
ISCO	Idaho Springs	64.55	9	P	P	22 06 01.1	+1.6
	baz=191						
ISCO	Idaho Springs	64.55	9	P	P	22 06 00.1	+0.6
ISCO				IAmb	IAmb	22 06 15.0	
	comp=Z,14nm,1.2s						
BELA	Belgrano 2	64.62	167	P	P	22 06 00.9	+1.7
VNDA	Vanda	64.69	194	P	P	22 05 58.6	-1.1
	comp=Z,2.6nm,1.0s,baz=114,slow=6.0,SNR=2.0						
VNDA				LR	LR	22 27 37.7	
	comp=Z,435nm,19.1s,baz=96,slow=30						
VNDA	Vanda	64.69	194	P	P	22 05 59.5	-0.2
VNDA				pmax	pmax		
	comp=Z,13nm,1.3s						
VNDA	Vanda	64.69	194	P	P	22 05 59.5	-0.2
VNDA				IAmb	IAmb	22 06 10.1	
	comp=Z,12nm,1.3s						
ELK	Elko	64.74	1	P	P	22 06 01.3	+0.6
ELK				pmax	pmax		
	comp=Z,17nm,1.6s						
ELK	Elko	64.74	1	P	P	22 06 01.3	+0.6
ELK				IAmb	IAmb	22 06 15.0	
	comp=Z,17nm,1.6s						
BGU	Big Grassy Mou	64.98	3	P	P	22 06 02.5	+0.3
SPUT	South Promonto	65.39	3	P	P	22 06 05.3	+0.5
N23A	Red Feather La	65.58	9	P	P	22 06 07.0	+0.8
	baz=190						
M02C	Callahan	65.67	354	P	P	22 06 08.4	+1.9
	baz=173						
QSPA	South Pole Qui	65.83	180	P	P	22 06 06.4	-1.0
MOD	Modoc Plateau	66.00	357	P	P	22 06 09.1	+0.3
WVOR	Wild Horse Val	66.46	358	P	P	22 06 12.4	+0.7
WVOR				pmax	pmax		
	comp=Z,13nm,1.4s						
WVOR	Wild Horse Val	66.46	358	P	P	22 06 12.4	+0.7
WVOR				IAmb	IAmb	22 06 20.4	
	comp=Z,13nm,1.4s						
AHID	Auburn Hatcher	66.92	4	P	P	22 06 15.3	+0.6
AHID				IAmb	IAmb	22 06 27.2	
	comp=Z,12nm,1.1s						
BW06	Boulder Array	67.03	5	P	P	22 06 15.2	-0.3
	baz=186						
PD31	Pinedale Array	67.03	5	P	P	22 06 14.8	-0.6
PD31				IAmb	IAmb	22 06 28.6	
	comp=Z,10nm,1.1s						
PDAR	Pinedale Array	67.03	5	P	P	22 06 14.6	-0.8
	comp=Z,2.3nm,0.7s,baz=174,slow=6.8,SNR=23						
PDAR				LR	LR	22 30 28.0	
	comp=Z,151nm,20.9s,baz=175,slow=31						
ECR	Eagle Creek	67.19	4	P	P	22 06 18.3	+1.9
K22A	Casper	67.23	8	P	P	22 06 16.5	-0.1
	baz=190						
K22A	Casper	67.23	8	P	P	22 06 16.6	-0.1
J05D	Fort Rock, OR	67.43	356	P	P	22 06 18.7	+0.8
	baz=175						
BCYI	Bear Canyon	68.34	2	P	P	22 06 24.5	+0.8
L34A	Svendsen Farm,	68.45	16	P	P	22 06 24.0	-0.1
BMO	Blue Mountains	68.85	359	P	P	22 06 27.2	+0.6
BMO				pmax	pmax		
	comp=Z,19nm,1.6s						
BMO	Blue Mountains	68.85	359	P	P	22 06 27.2	+0.6
BMO				IAmb	IAmb	22 06 44.9	
	comp=Z,19nm,1.6s						
MCMT	McKenzie Canyo	68.88	3	P	P	22 06 28.1	+1.0
QLMT	Earthquake Lak	68.95	4	P	P	22 06 28.4	+1.0
RSSD	Black Hills	69.01	9	P	P	22 06 27.7	-0.1
RSSD				pmax	pmax		
	comp=Z,16nm,1.3s						
RSSD	Black Hills	69.01	9	P	P	22 06 28.3	+0.5
	baz=192						
RSSD	Black Hills	69.01	9	P	P	22 06 27.7	-0.1
RSSD				IAmb	IAmb	22 06 40.5	
	comp=Z,16nm,1.2s						
YNE	Yellowstone No	69.22	5	P	P	22 06 29.2	0.0
G08A	Pilot Rock	69.32	358	P	P	22 06 30.4	+0.8
G08A				IAmb	IAmb	22 06 43.9	
	comp=Z,14nm,1.3s						
RLMT	Red Lodge	69.40	5	P	P	22 06 30.0	-0.2
	baz=187						
RLMT	Red Lodge	69.40	5	P	P	22 06 30.3	+0.1
RLMT				IAmb	IAmb	22 06 42.5	
	comp=Z,8.6nm,1.0s						
ECSD	EROS Data Cent	70.06	15	P	P	22 06 35.6	+1.5
	baz=199						
DZM	Mont Dzumac	70.25	254	eLR	LR	22 28 03.3	
	comp=Z,1μm,26.4s						
E09A	Wood Farm, Sta	70.52	359	P	P	22 06 37.4	+0.6
E09A				IAmb	IAmb	22 06 50.6	
	comp=Z,13nm,1.2s						
MSO	Missoula	70.85	2	P	P	22 06 39.5	+0.5
MSO				IAmb	IAmb	22 06 52.2	
	comp=Z,9.5nm,1.1s						
JTMT	Jette	71.75	1	P	P	22 06 44.7	+0.2
JTMT				IAmb	IAmb	22 06 58.4	
	comp=Z,18nm,1.2s						
C09A	Chrisman Ranch	71.81	359	P	P	22 06 45.2	+0.6
C09A				IAmb	IAmb	22 06 59.9	
	comp=Z,25nm,1.6s						
NEW	Newport	72.26	359	P	P	22 06 47.5	+0.2
NEW				pmax	pmax		
	comp=Z,20nm,1.4s						
NEW	Newport	72.26	359	P	P	22 06 48.0	+0.7
	baz=179						
NEW	Newport	72.26	359	P	P	22 06 47.5	+0.2
NEW				IAmb	IAmb	22 07 00.8	
	comp=Z,20nm,1.4s						
VNA3	Neumayer Olymp	72.32	161	P	P	22 06 50.8	+3.3
F36A	Milaca	72.82	16	P	P	22 06 50.4	-0.3
VNA2	Neumayer--Watz	73.13	161	P	P	22 06 53.5	+1.2
SNAA	Sanae	74.08	162	P	P	22 06 56.8	-1.2
SNAA	Sanae	74.08	162	P	P	22 06 58.0	0.0
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SNAA	Sanae	74.08	162	P	P	22 06 58.0	0.0
ULM	Lac du Bonnet	76.39	13	P	P	22 07 10.3	-0.9
	comp=Z,1.8nm,0.5s,baz=155,slow=5.0,SNR=3.9						
ULM				LR	LR	22 36 36.2	
	comp=Z,283nm,19.6s,baz=188,slow=32						
FFC	Flin Flon	79.67	8	P	P	22 07 29.1	-0.3
FFC				pmax	pmax		
	comp=Z,14nm,1.4s						
FFC	Flin Flon	79.67	8	P	P	22 07 29.1	-0.3
DLBC	Dease Lake	83.25	353	P	P	22 07 49.2	+0.9
DLBC				IAmb	IAmb	22 08 01.5	
	comp=Z,20nm,1.1s						
FCC	Fort Churchill	84.78	11	P	P	22 07 55.0	-1.0
FCC				pmax	pmax		
	comp=Z,23nm,1.1s						
FCC	Fort Churchill	84.78	11	P	P	22 07 55.0	-1.0
H11S2	WAKE ISLAND Hy	86.34	292	T	T	23 43 33.6	
	baz=118,slow=75,SNR=52						
H11S1	WAKE ISLAND Hy	86.35	292	T	T	23 43 39.2	
	baz=118,slow=75,SNR=62						
H11S3	WAKE ISLAND Hy	86.36	292	T	T	23 43 39.4	
	baz=118,slow=75,SNR=60						
YKA	Yellowknife Ar	86.52	1	P	P	22 08 03.3	-1.3
	comp=Z,2.7nm,0.7s,baz=167,slow=5.6,SNR=38						
YKA				LR	LR	22 42 21.2	
	comp=Z,324nm,18.3s,baz=0.0,slow=33						
STKA	Stephens Creek	87.08	236	i P	P	22 08 06.7	-1.7
MAW	Mawson	88.35	180	LR	LR	22 42 35.9	
	comp=Z,554nm,22.0s,baz=220,slow=32						
SEW	Seward	88.42	344	P	P	22 08 15.0	+1.2
BCAR	Beaver Creek A	89.43	349	P	P	22 08 19.4	+0.8
ILAR	Eielson Array	91.94	347	P	P	22 08 29.9	-0.4
	comp=Z,0.4nm,0.8s,baz=188,slow=4.2,SNR=4.0						
COLA	College	92.23	347	i P	P	22 08 33.5	+2.0
COLA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDM	Murphy Dome	92.38	347	P	P	22 08 32.8	+0.5
INK	Inuvik	93.24	354	LR	LR	22 46 30.4	
	comp=Z,390nm,18.2s,baz=145,slow=33						
COLD	Coldfoot	94.76	347	P	P	22 08 45.0	+1.8
	baz=149						
ASAR	Alice Springs	96.98	240	P	P	22 08 53.2	-1.3
	comp=Z,0.8nm,1.0s,baz=141,slow=4.7,SNR=2.9						
WRA	Warramunga Arr	98.48	244	P	P	22 09 01.2	-0.1
	comp=Z,0.5nm,0.9s,baz=108,slow=5.1,SNR=2.0						
TORD	Torodi Ar. Bea	120.53	89	PKP	PKPdf	22 14 12.4	-2.3
	comp=Z,2.1nm,1.1s,baz=289,slow=2.7,SNR=4.1						
KLR	Kul'dur	122.28	314	i PKIKP	PKiKP	22 14 18.1	+0.9
YAK	Yakutsk	122.49	329	i PKIKP	PKPdf	22 14 17.4	+0.4
NJ2	Nanjing	131.32	292	ePKP	PKPdf	22 14 35.3	+0.4
QIZ	Qiongzhong	137.06	272	PKP	PKPdf	22 14 43.3	-2.7
QIZ				PP	PP	22 17 28.5	-1.7
QIZ				SS	SS	22 35 40.8	+4.2
QIZ				LR	LR		
	comp=Z,220nm,17.7s						
QIZ				LR	LR		
	comp=Z,300nm,20.6s						
QIZ				LR	LR		
	comp=Z,310nm,20.1s						
HHC	Hu-ho-hao-te	137.08	304	ePKP	PKiKP	22 14 47.5	+0.1
HHC				LR	LR		
	comp=Z,350nm,18.8s						
HHC				LR	LR		
	comp=Z,390nm,18.8s						
HHC				LR	LR		
	comp=Z,470nm,18.4s						
ULN	Ulaanbaatar	138.63	316	i PKIKP	PKPdf	22 14 47.3	-1.0
SONM	Songino Array	139.05	316	PKP	PKPdf	22 14 48.7	-0.3
	comp=Z,1.0nm,0.9s,baz=76,slow=2.0,SNR=6.2						
SONM	Songino Array	139.05	316	PKIKP	PKPdf	22 14 47.2	-1.8
SONM	Songino Array	139.05	316	PKPdf	PKPdf	22 14 47.2	-1.8
MNK	Minsk	139.77	32	i PKP	PKPdf	22 14 48.9	-1.0
	comp=E,2.0nm,0.9s						
MNK				i PKP	PKPdf	22 14 48.9	-1.0
	comp=N,13nm,1.0s						
MNK				i PKP	PKPdf	22 14 48.9	-1.0
	comp=Z,8.0nm,0.8s						
MNK				i PP	PP	22 17 44.5	-1.0
MNK				i PPP	PPP	22 20 47.6	
MNK				i SKS	SKSdf	22 21 59.3	-0.9
MNK				i SS	SS	22 36 06.1	+0.1
MNK				i SSS	SSS	22 41 18.0	
MNK				i LQ	LQ	23 09 18.2	
MNK				i LR	LR	23 12 23.5	
MNK				i LRM	MLR	23 15 55.5	
	comp=Z,75nm,8.0s						
MNK				i LRM	MLR	23 15 59.1	
	comp=E,4.0nm,8.0s						
MNK				i LRM	MLR	23 16 08.0	
	comp=N,61nm,8.7s						
KLMR	Klimovskoe	139.83	18	ePKIKP	PKPdf	22 14 46.5	-3.3
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
KLMR	Klimovskoe	139.83	18	ePKPdf	PKPdf	22 14 46.5	-3.3
KLMR				AMP		22 14 49.5	
	comp=Z,20nm,1.4s						
AKASG	Malin Array Be	142.53	36	PKP	PKPdf	22 14 53.4	-1.6
	comp=Z,0.5nm,0.5s,baz=359,slow=3.7,SNR=1.9						
AKASG	Malin Array Be	142.53	36c	i PKIKP	PKiKP	22 15 00.1	+2.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKBB	Malin Array Si	142.53	36	i PKIKP	PKiKP	22 14 58.5	+0.5
OBN	Obninsk	143.24	26	⇓ePKIKP	PKPdf	22 14 55.4	-0.7
OBN				e		22 18 09.9	
OBN				pmax	pmax		
	comp=Z,119nm,3.5s						
LZH	Lanzhou	143.72	298	ePKP	PKPbc	22 14 55.5	+0.2
LZH				pPKP	PKiKP	22 15 05.8	+4.6
LZH				LR	LR		
	comp=Z,430nm,18.1s						
LZH				LR	LR		
	comp=Z,530nm,17.9s						
LZH				LR	LR		
	comp=Z,670nm,17.9s						
KMBO	Kilima Mbogo	143.88	131	PKP	PKPab	22 14 55.8	-0.1
	comp=Z,0.9nm,0.5s,baz=222,slow=7.6,SNR=4.3						
CD2	Chengdu	144.16	290	ePKP	PKPab	22 14 53.8	-2.4
IDI	Anoyia	144.69	63	PKPdf	PKPab	22 14 57.5	-0.6
KMI	Kunming	144.72	280	⇑PKP	PKPab	22 14 58.8	+0.1
KMI				pPKP	sPKPdf	22 15 03.0	-0.2
KMI				sPKP		22 15 05.3	
KMI				LR	LR		
	comp=Z,190nm,20.3s						
KMI				LR	LR		
	comp=Z,200nm,20.1s						
KMI				LR	LR		
	comp=Z,390nm,31.6s						
LPSR	Galich'ya Gora	146.03	27	ePKP2	PKPdf	22 15 00.7	-0.3
LPSR				pmax	pmax		
	comp=Z,30nm,1.1s						
GTA	Gaotai	146.19	305	⇑PKPbc	PKPdf	22 15 02.0	+0.1
GTA				LR	LR		
	comp=Z,220nm,18.9s						
GTA				LR	LR		
	comp=Z,280nm,18.5s						
GTA				LR	LR		
	comp=Z,400nm,19.6s						
LAMP	Lampang	146.24	267	P	PKiKP	22 15 11.3	+4.6
	comp=Z,14nm,0.7s						
ZALV	Zalesovo Beam	146.49	337	PKPbc	PKPdf	22 15 01.6	-0.2
	comp=Z,4.5nm,0.6s,baz=19,slow=2.8,SNR=15						
CM35	Chiang Mai Arr	146.71	267	P	PKPbc	22 15 05.0	+0.1
CM04	Chiang Mai Arr	146.80	267	P	PKPab	22 15 06.7	+0.3
	comp=Z,93nmcomp=Z,12nm,1.2s						
CM09	Chiang Mai Arr	146.80	267	P	PKPab	22 15 07.3	+0.9
	comp=Z,89nmcomp=Z,10nm,0.9s						
CM01	Chiang Mai Arr	146.82	267	P	PKPab	22 15 06.8	+0.3
	comp=Z,110nmcomp=Z,14nm,1.3s						
CM02	Chiang Mai Arr	146.84	267	P	PKPab	22 15 07.2	+0.6
	comp=Z,98nmcomp=Z,12nm,1.1s						
CM31	Chiang Mai Arr	146.84	267	P	PKiKP	22 15 13.5	+5.5
CMAR	Chiang Mai Arr	146.84	267	PKPbc	PKPdf	22 15 03.7	+0.2
	comp=Z,12nm,1.2s,baz=99,slow=1.6,SNR=26						
CM15	Chiang Mai Arr	146.86	267	P	PKPab	22 15 07.0	+0.4
	comp=Z,11nm,1.2s						
CM13	Chiang Mai Arr	146.87	267	P	PKPab	22 15 06.9	+0.2
	comp=Z,82nmcomp=Z,10nm,1.3s						
CMMT	Chiang Mai	146.94	267	P	PKPbc	22 15 05.2	-0.4
	comp=Z,9.6nm,1.3s						
CM33	Chiang Mai Arr	146.94	267	P	PKPbc	22 15 06.0	+0.4
CHTO	Chiang Mai	146.94	267	PKP2	PKPdf	22 15 04.7	+1.1
CHTO	Chiang Mai	146.94	267		PKPdf	22 15 04.7	+1.1
CM32	Chiang Mai Arr	146.99	267	P	PKPab	22 15 07.0	-0.1
VSR	Storozhevoye	147.13	29	ePKP2	PKPbc	22 15 04.9	-0.2
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
MHMT	Maesarieng	147.69	266	P	PKPab	22 15 14.4	+4.5
ARU	Arti	147.70	5	i PKP2	PKPbc	22 15 06.3	-0.2
ARU						22 18 30.7	
ARU				SS	SS	22 37 36.3	+0.1
ARU	Arti	147.70	5	PKPdf	PKPdf	22 15 04.2	+0.4
VRH	Novokhopyorsk	148.23	27	ePKP2	PKPdf	22 15 06.6	+1.9
VRH				pmax	pmax		
	comp=Z,30nm,1.0s						
BRTR	Keskin Array B	150.33	52	PKPbc	PKPbc	22 15 11.7	-2.2
	comp=Z,6.9nm,1.2s,baz=198,slow=2.3,SNR=11						
BRTR				PKPab	PKPab	22 15 19.0	-1.2
	comp=Z,12nm,1.1s,baz=222,slow=1.7,SNR=16						
WMQ	Urumqi	152.43	321	ePKPbc	PKPdf	22 15 11.5	-0.2
WMQ				AMB	AMB		
	comp=Z,510nm,6.5s						
WMQ				LR	LR		
	comp=Z,320nm,16.3s						
WMQ				LR	LR		
	comp=Z,310nm,21.5s						
MKAR	Makanchi Array	153.14	331	PKPbc	PKPbc	22 15 16.6	-3.3
	comp=Z,1.5nm,0.7s,baz=36,slow=1.6,SNR=15						
MAKZ	Makanchi	153.27	332	PKIKP	PKPdf	22 15 15.2	+2.5
MAKZ	Makanchi	153.27	332	PKPdf	PKPdf	22 15 15.2	+2.5
KSH	Kashi	161.71	329	PKP	PKPdf	22 15 27.0	+3.4
HRA	Herat	169.88	7		PKPdf	22 15 30.7	+0.1

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*IDC **28** 22:16:15.9±1.0, 19°.35N×68°.22W, h0^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.7/60, mbtmp3.7/10, ML3.4/2, Error ellipse: s-maj=31.2km s-min=18.9km az=26.0*

*NEIC **28** 22:16:16.4±1.7, 19°.29N±0°.04×68°.27W±0°.02, h7^{km}±5^{km}, mb4.1/6, ML4.0/14, Md3.8/24(RSPR), Error ellipse: s-maj=6.2km s-min=2.3km az=172.0*

*RSPR **28** 22:16:16.8, 19°.33N×68°.41W, h95^{km}±8^{km}, MD3.8/11*

*OSPL **28** 22:16:18.8±2.4, 19°.22N×68°.11W, h142^{km}±38^{km}, ML4.0*

ISC 28 22:16:17.0±1.3, **19°.24N**±0°.05×**68°.25W**±0°.02, **h14**^{km}±8^{km}, **n85**, σ1^{s}**32**/102, **mb3.9**/12, **13C-1D**, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	1.16	247	Pn	Pb	22 16 37.4	-1.6
DR12				Sg	Sb	22 16 52.8	-1.2
AGPR	Aguadilla, PR	1.32	125	⇑eP	Pb	22 16 41.1	-0.5
AGPR	Aguadilla, PR	1.32	125		Pb	22 16 41.1	-0.5
AGPR					Sg	22 17 02.3	+2.5
AGPR	Aguadilla, PR	1.32	125	i P	Pg	22 16 43.8	+1.3
AGPR				eS	Sg	22 17 02.2	+2.5
AGPR				IAML		22 17 11.3	
	comp=Z,800nm,0.3s						
MPR	Mayaguez	1.47	134	i P	Pg	22 16 45.2	0.0
MPR				eS	Sg	22 17 04.0	-0.3
MPR				IAML		22 17 09.4	
	comp=Z,541nm,1.4s						
LSP	Las Mesas	1.53	134	⇑eP	Pn	22 16 43.8	-0.1
LSP	Las Mesas	1.53	134		Pn	22 16 43.8	-0.1
AOPR	Arecibo Observ	1.67	122	⇑eP	Pb	22 16 46.7	-0.9
AOPR	Arecibo Observ	1.67	122	eS	Sg	22 17 09.8	-1.1
AOPR	Arecibo Observ	1.67	122		Pb	22 16 46.7	-0.9
AOPR					Sg	22 17 09.8	-1.1
MLPR	Magueyes Islan	1.70	138	⇑eP	Pn	22 16 46.5	+0.2
MLPR	Magueyes Islan	1.70	138	eS	Sb	22 17 09.7	+0.3
MLPR	Magueyes Islan	1.70	138		Pn	22 16 46.5	+0.2
MLPR					Sb	22 17 09.7	+0.3
SDD	Santo Domingo	1.76	244		Pb	22 16 48.3	-0.8
SDD				IAML		22 17 19.0	
	comp=E,2μm,0.8s						
SDD				IAML		22 17 21.0	
	comp=N,2μm,0.6s						
SDD	Santo Domingo	1.76	244	i P	Pb	22 16 48.8	-0.3
SDD				IAML		22 17 16.4	
	comp=Z,309nm,0.9s						
EMPR	Esperanza - Ma	1.79	115	⇑eP	Pb	22 16 48.8	-0.9
EMPR	Esperanza - Ma	1.79	115	eS	Sg	22 17 13.1	-1.8
EMPR	Esperanza - Ma	1.79	115		Pb	22 16 48.8	-0.9
EMPR					Sg	22 17 13.1	-1.8
GBPR	Guanica, Bosqu	1.81	134	⇑eP	Pb	22 16 48.9	-1.1
GBPR	Guanica, Bosqu	1.81	134	eS	Sb	22 17 13.4	+1.0
GBPR	Guanica, Bosqu	1.81	134		Pb	22 16 48.9	-1.1
GBPR					Sb	22 17 13.4	+1.0
LOSC1	San Cristbal	1.95	245	i P	Pb	22 16 51.7	-0.6
LOSC1				eS	Sb	22 17 17.6	+1.1
OBIP	Obispado Ponce	1.96	127	⇑eP	Pn	22 16 50.3	+0.5
OBIP	Obispado Ponce	1.96	127	eS	Sb	22 17 16.6	-0.2
OBIP	Obispado Ponce	1.96	127		Pn	22 16 50.3	+0.5
OBIP					Sb	22 17 16.6	-0.2
CELP	Cerrillos	1.96	126	⇑eP	Pb	22 16 51.2	-1.3
CELP	Cerrillos	1.96	126	eS	Sb	22 17 17.1	+0.3
CELP	Cerrillos	1.96	126		Pb	22 16 51.2	-1.3
CELP					Sb	22 17 17.1	+0.3
BON1	Bonao	2.05	262	i P	Pb	22 16 53.4	-0.7
BON1				eS	Sb	22 17 20.5	+1.0
BON1				IAML		22 17 24.9	
	comp=Z,2μm,0.6s						
ICMP	Isla Caja de M	2.12	129	Pn	Pb	22 16 55.5	+0.3
BANI	BANI	2.17	247	Pn	Pb	22 16 54.8	-1.4
GCPR	Guaynabo City	2.25	114	⇑eP	Pn	22 16 54.4	+0.5
GCPR	Guaynabo City	2.25	114	eS	Sb	22 17 23.5	-1.6
GCPR	Guaynabo City	2.25	114		Pn	22 16 54.4	+0.5
GCPR					Sb	22 17 23.5	-1.6
SJG	San Juan	2.28	119	Pn	Pn	22 16 55.5	+1.2
	comp=Z,30nm,0.3s,baz=323,slow=9.2,SNR=19						
SJG				Sn	Sn	22 17 22.9	+0.7
	comp=Z,30nm,0.3s,baz=243,slow=14,SNR=5.8						
SJG	San Juan	2.28	119		Pn	22 16 55.2	+1.0
SJG				IAML		22 17 34.9	
	comp=Z,617nm,0.5s						
SC01	Santiago de lo	2.35	275		Pn	22 16 56.2	+1.0
SC01	Santiago de lo	2.35	275	i P	Pb	22 16 59.1	0.0
SC01				IAML		22 17 46.3	
	comp=Z,905nm,0.4s						
IGPR	InterUniversit	2.39	122	⇑eP	Pn	22 16 56.9	+1.1
IGPR	InterUniversit	2.39	122	eS	Sb	22 17 27.8	-1.4
CBYP	Canovanas	2.46	113	⇑eP	Pn	22 16 57.4	+0.6
CBYP	Canovanas	2.46	113		Pn	22 16 57.4	+0.6
HUMP	Col San Antoni	2.52	115	⇑eP	Pn	22 16 58.3	+0.7
HUMP	Col San Antoni	2.52	115	eS	Sb	22 17 30.3	-2.7
HUMP	Col San Antoni	2.52	115		Pn	22 16 58.3	+0.7
HUMP					Sb	22 17 30.3	-2.7
MTP	Monte Pirata	2.80	114	⇓eP	Pn	22 17 01.6	+0.2
MTP	Monte Pirata	2.80	114		Pn	22 17 01.6	+0.2
SJM1	San Juan de la	2.85	262	i P	Pb	22 17 04.9	-2.7
SDDR	Presa de Saban	2.89	265	Pn	Pb	22 17 05.0	-3.4
SDDR				IAML		22 17 53.7	
	comp=Z,935nm,0.9s						
SDDR	Presa de Saban	2.89	265	i P	Pb	22 17 05.2	-3.2
SDDR				IAML		22 17 55.2	
	comp=Z,559nm,0.5s						
CUPR	Culebra, Puert	2.96	108	⇑eP	Pn	22 17 03.6	0.0
CUPR	Culebra, Puert	2.96	108		Pn	22 17 03.6	0.0
GRTK	Grand Turk	3.52	310		Pn	22 17 10.7	-0.7
GRTK				IAML		22 18 05.2	
	comp=Z,302nm,0.5s						
GRTK				IAML		22 18 13.9	
	comp=Z,226nm,0.5s						
GRTK	Grand Turk	3.52	310	i P	Pn	22 17 10.9	-0.4
LGNH	Logne	4.19	261	Pn	Pn	22 17 22.7	+2.2
LGNH				IAML		22 18 31.4	
	comp=N,214nm,1.1s						
LGNH				IAML		22 18 38.0	
	comp=E,236nm,1.0s						
GTBY	Guantanamo Bay	6.51	277	Pn	Pn	22 17 53.3	+1.0
SDV	Santo Domingo	10.55	193	Pn	Pn	22 18 50.6	+2.5
	comp=E,1.1nm,0.3s,baz=31,slow=4.7,SNR=6.1						
SDV				Sn	Sn	22 20 41.1	-5.2
	comp=E,0.7nm,0.3s,baz=350,slow=17,SNR=2.1						
SDV	Santo Domingo	10.55	193		Pn	22 18 49.8	+1.7
SMLC	San Martn de	11.81	209	eP	Pn	22 19 04.8	-0.4
PAMC	Pamplona, Colo	12.60	201	eP	Pn	22 19 14.5	-1.8
ZARC	Zaragoza, Cauc	13.33	210	eP	Pn	22 19 26.1	+0.2
BBSR	BB Station	13.46	13	Pn	Pn	22 19 26.1	-1.4
PTBC	PUERTO BERRIO,	14.00	206	eP	Pn	22 19 34.9	-0.2
RUSC	La Rusia	14.08	200	eP	Pn	22 19 36.6	0.0
SPBC	San Pablo de B	14.65	204	eP	P	22 19 51.0	+0.6
NORC	Norcasia	15.05	206	eP	P	22 19 52.0	-2.7
GUY2C	Guyana, Caldas	15.57	207	eP	P	22 19 59.4	-1.5
RREF	El Recreo	15.85	207	eP	P	22 20 03.4	-0.8
TOLC	Tolima	16.12	206	eP	P	22 20 06.3	-0.6
OTAV	Otavalo	21.38	209	P	P	22 21 04.3	-0.4
OTAV				IAmb	IAmb	22 21 07.8	
	comp=Z,11nm,1.4s						
TX31	Lajitas Ar. Si	33.70	294	P	P	22 22 57.9	-0.1
TX31				IAmb	IAmb	22 23 13.4	
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	33.70	294	P	P	22 22 58.4	+0.4
	comp=Z,0.5nm,0.7s,baz=112,slow=9.3,SNR=8.1						
TXAR				PcP	PcP	22 25 38.7	+1.0
	comp=Z,0.3nm,0.8s,baz=53,slow=3.5,SNR=3.6						
TXAR	Lajitas Array	33.70	294	P	P	22 22 58.2	+0.2
ANMO	Albuquerque	37.19	303	P	P	22 23 29.4	+1.3
	comp=Z,0.8nm,0.5s,baz=90,slow=10,SNR=2.7						
SDCO	Great Sand Dun	37.26	308		P	22 23 29.6	+0.8
SDCO				IAmb	IAmb	22 23 31.2	
	comp=Z,2.6nm,0.7s						
FRB	Frobisher Bay	44.47	360	P	P	22 24 28.0	+0.6
	comp=Z,1.3nm,0.6s,baz=219,slow=3.0,SNR=3.7						
NVAR	Mina Array Bea	47.22	305	P	P	22 24 51.4	+1.5
	comp=Z,0.6nm,0.8s,baz=96,slow=8.3,SNR=3.5						
NVAR	Mina Array Bea	47.22	305	P	P	22 24 50.4	+0.6
YKA	Yellowknife Ar	53.64	335	P	P	22 25 37.4	-0.3
	comp=Z,0.3nm,0.5s,baz=112,slow=7.9,SNR=4.6						
ESDC	Sonseca Array	58.35	55	P	P	22 26 13.4	+1.4
	comp=Z,0.2nm,0.3s,baz=262,slow=6.7,SNR=5.6						
KOWA	Kowa	61.36	84	P	P	22 26 33.6	+0.6
TOA0	Torodi Ar. Sit	67.06	84	P	P	22 27 10.4	0.0
TOA0				IAmb	IAmb	22 27 26.4	
	comp=Z,3.3nm,1.4s						
TORD	Torodi Ar. Bea	67.06	84	P	P	22 27 10.7	+0.3
	comp=Z,1.0nm,0.6s,baz=291,slow=7.2,SNR=6.0						
TORD	Torodi Ar. Bea	67.06	84	P	P	22 27 11.0	+0.6
ILAR	Eielson Array	67.93	333	P	P	22 27 15.1	+0.1
	comp=Z,0.2nm,0.6s,baz=92,slow=6.2,SNR=4.2						

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*IDC **28** 22:20:55.6±1.3, 45°.73N×106°.69W, h0^{km}, mb1 3.3/3, mb1mx3.1/57, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=42.8km s-min=9.5km az=131.0*

*NEIC **28** 22:20:58.0±2.5, 45°.90N±0°.03×106°.69W±0°.05, h0^{km}±2^{km}, ML3.0/48, Error ellipse: s-maj=8.0km s-min=3.2km az=49.0*

ISC 28 22:20:55.9±1.1, **45°.97N**±0°.05×**106°.61W**±0°.06, **h0^{km}, n31, σ1^{s}28**/31**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAO	LASA Array	0.77	20		Pn	22 21 14.8	+0.7
RLMT	Red Lodge	2.05	246	Pn	Pn	22 21 31.6	-0.2
RLMT				IAML		22 21 59.8	
	94nm,0.4s						
RLMT				IAML		22 22 02.2	
	116nm,0.4s						
GCMT	Greycliff	2.14	266		Pn	22 21 32.6	-0.4
YNE	Yellowstone No	2.58	249		Pn	22 21 38.8	-0.3
RSSD	Black Hills	2.60	134	Pn	Pn	22 21 41.0	+1.6
YMP	Mirror Lake Pl	2.79	245		Pn	22 21 42.4	+0.3
EGMT	Eagleton	2.97	315	Pn	Pb	22 21 48.2	-1.6
EGMT				IAML		22 22 52.4	
	56nm,0.5s						
DGMT	Dagmar	2.99	32		Pb	22 21 49.6	-0.4
LKWY	Lake	3.02	244		Pn	22 21 47.3	+2.0
LKWY				IAML		22 22 41.4	
	30nm,2.5s						
LKWY				IAML		22 22 54.3	
	39nm,2.3s						
YNR	Norris Junctio	3.13	248	Pn	Pn	22 21 48.2	+1.5
YHH	Holmes Hill	3.21	250		Pn	22 21 49.6	+1.7
H17A	Grant Village	3.22	242		Pn	22 21 50.3	+2.4
K22A	Casper	3.32	179		Pn	22 21 48.7	-0.6
K22A				IAML		22 22 53.1	
	comp=N,47nm,0.6s						
YMR	Madison River	3.34	249		Pn	22 21 51.7	+2.2
YHL	Hebgen Lake	3.41	252		Pn	22 21 50.2	-0.4
YPP	Pitchstone Pla	3.42	242		Pn	22 21 52.4	+1.7
FLWY	Flagg Ranch	3.46	238		Pn	22 21 51.9	+0.7
FLWY				IAML		22 23 12.0	
	comp=N,37nm,3.6s						
BOZ	Bozeman (W)	3.53	266		Pn	22 21 51.7	-0.4
BOZ				IAML		22 22 50.5	
	comp=N,20nm,2.0s						
BOZ				IAML		22 22 50.8	
	comp=N,42nm,3.0s						
MOOW	Moose Ponds	3.69	234		Pn	22 21 54.5	+0.2
LOHW	Long Hollow	3.69	232		Pn	22 21 56.1	+1.7
LOHW				IAML		22 23 59.1	
	comp=N,23nm,4.1s						
LOHW				IAML		22 24 01.2	
	comp=N,24nm,4.1s						
IMW	Indian Meadow	3.71	238	Pn	Pn	22 21 55.5	+0.9
IMW				IAML		22 22 56.1	
	comp=N,35nm,0.6s						
PD31	Pinedale Array	3.84	214		Pn	22 21 56.5	+0.1
PDAR	Pinedale Array	3.84	214	Pn	Pn	22 21 56.4	-0.1
	comp=N,0.5nm,0.3s,baz=43,slow=14,SNR=12						
PDAR				Pg	Pb	22 22 03.3	-1.3
	comp=N,1.2nm,0.3s,baz=38,slow=18,SNR=20						
PDAR				Lg	Lg	22 22 46.8	
	comp=N,2.3nm,0.3s,baz=41,slow=33,SNR=8.6						
PDAR	Pinedale Array	3.84	214		Pn	22 21 57.7	+1.3
BW06	Boulder Array	3.84	214		Pn	22 21 56.7	+0.3
BW06				IAML		22 22 58.6	
	comp=N,16nm,0.9s						
BW06				IAML		22 24 05.1	
	comp=N,18nm,4.7s						
RWWY	Rawlins	4.30	186		Pn	22 22 03.4	+0.6
MCMT	McKenzie Canyo	4.54	258		Pn	22 22 08.5	+2.5
JTMT	Jette	5.55	291	Pn	Pn	22 22 21.5	+1.6
I10CA	LAC DU BONNET	8.25	55	i		23 12 40.0	
	baz=236,slow=320,SNR=2.9						
ULM	Lac du Bonnet	8.36	55	Pn	Pn	22 22 58.2	-0.1
	comp=N,0.2nm,0.3s,baz=249,slow=8.6,SNR=2.3						
ULM				Lg	Lg	22 25 20.3	
	comp=N,0.5nm,0.3s,baz=138,slow=20,SNR=2.5						
YKA	Yellowknife Ar	17.18	347	P	P	22 24 58.5	-0.3
	comp=N,0.1nm,0.3s,baz=159,slow=13,SNR=4.6						

ROM 28 22:23:51.8±0.1, **44°.154N**±0°.007×**11°.11E**±0°.01, **h9^{km}, ML1.4**/1**, 1C-1D, Error ellipse: s-maj=1.3km s-min=0.7km az=115.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	Fontana Vidola	0.01	28	⇓P	Pg	22 23 53.5	-0.1
FNVD				S	Sg	22 23 54.7	-0.2
FNVD				AML	AML		
	comp=N,3540μm,0.2s						
FNVD				AML	AML		
	comp=E,2735μm,0.9s						
MTCR	Monte La Croce	0.15	213	⇑P	Pg	22 23 55.9	+0.7
MTCR				S	Sg	22 23 58.7	+1.1
MTCR				AML	AML		
	comp=E,312μm,0.9s						
MTCR				AML	AML		
	comp=N,398μm,0.2s						
PTF	Prato	0.20	189	P	Pg	22 23 56.6	+0.6
PTF				S	Sg	22 24 00.0	+1.3
ZCCA	Zocca	0.22	334	P	Pg	22 23 57.7	+1.3
POPM	Popiglio	0.28	247	P	Pg	22 23 58.1	+0.7
POPM				S	Sb	22 24 02.7	-1.1
POPM				AML	AML		
	comp=E,71μm,0.2s						
POPM				AML	AML		
	comp=N,114μm,1.1s						
MTRZ	Monterenzio	0.34	49	P	Pg	22 23 58.3	-0.2
BDI	Bagni Di Lucca	0.38	256	P	Pg	22 23 59.8	+0.4
BDI				S	Sb	22 24 05.8	-1.0
ATFO	Monte Foce - G	1.32	126	END			
MURB	Monte Urbino	1.36	131	END			
ATCC	AVT- Casa Cast	1.47	131	END			
FOSV	Fossato di Vic	1.47	125	END			
ASSB	Assisi San Ben	1.58	134	END			
SNTG	Esanatoglia	1.60	124	END			

VIE 28 22:23:59.2±0.3, **47°.34N×11°.05E, h6^{km}**±2^{km}**, ml1.4**/8**, Error ellipse: s-maj=1.9km s-min=1.3km az=41.0 4 km NNW of Telfs, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOTA	Moosalm	0.04	87	i Pg	Pg	22 24 01.0	+0.4
	77nm,0.1s						
MOTA				i Sg	Sg	22 24 02.1	+0.4
	61nm,0.1s						
SQTA	Sankt Quirin	0.16	139	i Pg	Pg	22 24 03.0	+0.5
	7.6nm,0.1s						
SQTA				eSg	Sg	22 24 05.4	+0.7
	53nm,0.1s						
RETA	Reutte	0.24	306	i Pg	Pg	22 24 03.9	-0.1
	1.9nm,0.1s						
RETA				i Sg	Sg	22 24 07.4	+0.2
	4.4nm,0.1s						
WATA	Walderalm	0.36	91	i Pg	Pg	22 24 06.1	-0.1
	1.4nm,0.1s						
WATA				eSg	Sg	22 24 11.7	+0.8
	6.2nm,0.2s						
FETA	Feichten	0.39	214	i Pg	Pg	22 24 07.0	+0.3
	0.2nm,0.1s						
FETA				eSg	Sg	22 24 12.2	+0.3
	1.4nm,0.1s						

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*IDC **28** 22:25:51.5±2.0, 52°.66N×0°.88W, h0^{km}, mb3.6/3, mb1 3.7/9, mb1mx3.4/56, mbtmp3.6/9, ML3.4/6, MS4.2/1, Ms1 4.2/1, ms1mx2.9/47, Error ellipse: s-maj=34.9km s-min=14.7km az=51.0*

*DNK **28** 22:25:51.1±2.7, 52°.73N×1°.90W, h80^{km}±947^{km}, ML3.3*

*BGS **28** 22:25:53.7±0.8, 52°.73N×0°.72W, h3^{km}, ML3.8*

*NEIC **28** 22:25:53.1±1.3, 52°.74N±0°.03×0°.73W±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=4.7km s-min=4.3km az=93.0*

*LDG **28** 22:25:53.5±0.1, 52°.73N×0°.79W, h8^{km}, Md3.8/3, Ml3.9/63, Error ellipse: s-maj=1.8km s-min=1.3km az=52.0*

*NAO **28** 22:25:57.7±4.6, 53°.10N×0°.34W, h23^{km}±26^{km}, ML2.9*

ISC 28 22:25:51.7±0.5, **52°.69N**±0°.02×**0°.72W**±0°.02, **h10^{km}, n247, σ2^{s}24**/398**, 12C-60D, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CWF	Charnwood Fore	0.36	278	⇓iP	Pg	22 25 59.1	+0.2
CWF				eS	Sg	22 26 03.8	+0.1
CWF				IAML		22 26 03.9	
	comp=E,2μm,0.3s						
CWF				IAML		22 26 04.2	
	comp=N,5μm,0.2s						
CWF	Charnwood Fore	0.36	278	⇓iP	Pg	22 25 59.1	+0.2
CWF				eS	Sg	22 26 03.8	+0.1
CWF				IAML		22 26 03.9	
	comp=E,2μm,0.3s						
CWF				IAML		22 26 04.2	
	comp=N,5μm,0.2s						
CWF	Charnwood Fore	0.36	278	⇓iP	Pg	22 25 59.1	+0.2
CWF				eS	Sg	22 26 03.8	+0.1
CWF				IAML		22 26 03.9	
	comp=E,2μm,0.3s						
CWF				IAML		22 26 04.2	
	comp=N,5μm,0.2s						
LMK	Market Rasen	0.80	17	⇑iP	Pg	22 26 08.1	+0.9
LMK				eS	Sg	22 26 18.9	+1.2
LMK				IAML		22 26 21.1	
	comp=N,5μm,0.3s						
LMK				IAML		22 26 23.4	
	comp=E,4μm,0.4s						
LMK	Market Rasen	0.80	17	⇑iP	Pg	22 26 08.1	+0.9
LMK				eS	Sg	22 26 18.9	+1.2
LMK				IAML		22 26 21.1	
	comp=N,5μm,0.3s						
LMK				IAML		22 26 23.4	
	comp=E,4μm,0.4s						
LMK	Market Rasen	0.80	17		Pg	22 26 08.1	+0.9
LMK					Sg	22 26 18.8	+1.2
LMK	Market Rasen	0.80	17	⇑iP	Pg	22 26 08.1	+0.9
LMK				eS	Sg	22 26 18.9	+1.2
LMK				IAML		22 26 21.1	
	comp=N,5μm,0.3s						
LMK				IAML		22 26 23.4	
	comp=E,4μm,0.4s						
WACR	West Acre	0.82	87	eP	Pg	22 26 08.8	+1.3
WACR				IAML		22 26 21.0	
	comp=E,2μm,0.6s						
WACR				IAML		22 26 21.1	
	comp=N,4μm,0.2s						
WACR	West Acre	0.82	87	eP	Pg	22 26 08.8	+1.3
WACR				IAML		22 26 21.0	
	comp=E,2μm,0.6s						
WACR				IAML		22 26 21.1	
	comp=N,4μm,0.2s						
WACR	West Acre	0.82	87		Pg	22 26 08.6	+1.2
WACR					Sg	22 26 19.3	+1.2
WACR	West Acre	0.82	87	eP	Pg	22 26 08.8	+1.3
WACR				IAML		22 26 21.0	
	comp=E,2μm,0.6s						
WACR				IAML		22 26 21.1	
	comp=N,4μm,0.2s						
LBWR	Ladybower, Pea	0.94	320	⇓iP	Pg	22 26 10.4	+0.6
LBWR				eS	Sg	22 26 22.5	+0.5
LBWR				IAML		22 26 26.3	
	comp=E,3μm,0.3s						
LBWR				IAML		22 26 26.8	
	comp=N,5μm,0.3s						
LBWR	Ladybower, Pea	0.94	320	⇓iP	Pg	22 26 10.4	+0.6
LBWR				eS	Sg	22 26 22.5	+0.5
LBWR				IAML		22 26 26.3	
	comp=E,3μm,0.3s						
LBWR				IAML		22 26 26.8	
	comp=N,5μm,0.3s						
LBWR	Ladybower, Pea	0.94	320		Pg	22 26 10.4	+0.6
LBWR					Sg	22 26 22.8	+0.9
LBWR	Ladybower, Pea	0.94	320	⇓iP	Pg	22 26 10.4	+0.6
LBWR				eS	Sg	22 26 22.5	+0.5
LBWR				IAML		22 26 26.3	
	comp=E,3μm,0.3s						
LBWR				IAML		22 26 26.8	
	comp=N,5μm,0.3s						
SSW	Stow on the Wo	1.00	224		Pg	22 26 12.9	+1.9
STRD	Stroud	1.28	225	⇑iP	Pn	22 26 17.4	+1.8
STRD				IAML		22 26 36.5	
	comp=N,1μm,0.3s						
STRD				IAML		22 26 40.2	
	comp=E,1μm,0.6s						
STRD	Stroud	1.28	225	⇑iP	Pn	22 26 17.4	+1.8
STRD				IAML		22 26 36.5	
	comp=N,1μm,0.3s						
STRD				IAML		22 26 40.2	
	comp=E,1μm,0.6s						
STRD	Stroud	1.28	225		Pn	22 26 17.4	+1.8
STRD					Sb	22 26 34.4	+2.1
STRD	Stroud	1.28	225	⇑iP	Pn	22 26 17.4	+1.8
STRD				IAML		22 26 36.5	
	comp=N,1μm,0.3s						
STRD				IAML		22 26 40.2	
	comp=E,1μm,0.6s						
BUW	Bucklebury Wes	1.32	194	eP	Pn	22 26 18.4	+2.2
BUW				IAML		22 26 42.6	
	comp=N,4μm,0.7s						
BUW				IAML		22 26 44.6	
	comp=E,2μm,0.5s						
BUW	Bucklebury Wes	1.32	194	eP	Pn	22 26 18.4	+2.2
BUW				IAML		22 26 42.6	
	comp=N,4μm,0.7s						
BUW				IAML		22 26 44.6	
	comp=E,2μm,0.5s						
BUW	Bucklebury Wes	1.32	194	eP	Pn	22 26 18.4	+2.2
BUW				IAML		22 26 42.6	
	comp=N,4μm,0.7s						
BUW				IAML		22 26 44.6	
	comp=E,2μm,0.5s						
HLM1	Long Mynd	1.33	263	eP	Pn	22 26 17.4	+1.0
HLM1				IAML		22 26 37.1	
	comp=E,2μm,0.4s						
HLM1				IAML		22 26 37.8	
	comp=N,2μm,0.3s						
HLM1	Long Mynd	1.33	263	eP	Pn	22 26 17.4	+1.0
HLM1				IAML		22 26 37.1	
	comp=E,2μm,0.4s						
HLM1				IAML		22 26 37.8	
	comp=N,2μm,0.3s						
HLM1	Long Mynd	1.33	263		Pn	22 26 17.4	+1.0
HLM1					Sb	22 26 34.1	+0.2
HLM1	Long Mynd	1.33	263	eP	Pn	22 26 17.4	+1.0
HLM1				IAML		22 26 37.1	
	comp=E,2μm,0.4s						
HLM1				IAML		22 26 37.8	
	comp=N,2μm,0.3s						
SWN1	Swindon	1.35	210	⇑iP	Pn	22 26 19.1	+2.5
SWN1				eS	Sb	22 26 36.9	+2.4
SWN1				IAML		22 26 40.9	
	comp=N,2μm,0.3s						
SWN1				IAML		22 26 42.8	
	comp=E,1μm,0.6s						
SWN1	Swindon	1.35	210	⇑iP	Pn	22 26 19.1	+2.5
SWN1				eS	Sb	22 26 36.9	+2.4
SWN1				IAML		22 26 40.9	
	comp=N,2μm,0.3s						
SWN1				IAML		22 26 42.8	
	comp=E,1μm,0.6s						
SWN1	Swindon	1.35	210		Pn	22 26 19.1	+2.5
SWN1	Swindon	1.35	210	⇑iP	Pn	22 26 19.1	+2.5
SWN1				eS	Sb	22 26 36.9	+2.4
SWN1				IAML		22 26 40.9	
	comp=N,2μm,0.3s						
SWN1				IAML		22 26 42.8	
	comp=E,1μm,0.6s						
HPK	Haverah Park	1.38	337	eP	Pn	22 26 17.9	+0.8
HPK				eS	Sb	22 26 36.0	+0.6
HPK				IAML		22 26 37.2	
	comp=E,3μm,0.2s						
HPK				IAML		22 26 38.1	
	comp=N,4μm,0.4s						
HPK	Haverah Park	1.38	337	eP	Pn	22 26 17.9	+0.8
HPK				eS	Sb	22 26 36.0	+0.6
HPK				IAML		22 26 37.2	
	comp=E,3μm,0.2s						
HPK				IAML		22 26 38.1	
	comp=N,4μm,0.4s						
HPK	Haverah Park	1.38	337		Pn	22 26 18.0	+1.0
HPK					Sb	22 26 35.9	+0.6
HPK	Haverah Park	1.38	337	eP	Pn	22 26 17.9	+0.8
HPK				eS	Sb	22 26 36.0	+0.6
HPK				IAML		22 26 37.2	
	comp=E,3μm,0.2s						
HPK				IAML		22 26 38.1	
	comp=N,4μm,0.4s						
WOL	Wolverton	1.41	193	eP	Pn	22 26 20.2	+2.7
WOL				IAML		22 26 42.5	
	comp=E,535nm,0.3s						
WOL	Wolverton	1.41	193	eP	Pn	22 26 20.2	+2.7
WOL				IAML		22 26 42.5	
	comp=E,535nm,0.3s						
WOL	Wolverton	1.41	193	eP	Pn	22 26 20.2	+2.7
WOL				IAML		22 26 42.5	
	comp=E,535nm,0.3s						

FOEL	**Foel Wylfa**	**1.52**	**279**	⇓*i*P	**Pn**	**22 26 20.2**	**+1.2**
FOEL				*e*S	**Sn**	**22 26 39.3**	**+0.5**
FOEL				IAML		22 26 41.3	
	comp=N,1µm,0.5s						
FOEL				IAML		22 26 44.0	
	comp=E,1µm,0.4s						
FOEL	**Foel Wylfa**	**1.52**	**279**	⇓*i*P	**Pn**	**22 26 20.2**	**+1.2**
FOEL				*e*S	**Sn**	**22 26 39.3**	**+0.5**
FOEL				IAML		22 26 41.3	
	comp=N,1µm,0.5s						
FOEL				IAML		22 26 44.0	
	comp=E,1µm,0.4s						
FOEL	**Foel Wylfa**	**1.52**	**279**		**Pn**	**22 26 19.5**	**+0.6**
FOEL					**Sn**	**22 26 39.0**	**+0.1**
FOEL	**Foel Wylfa**	**1.52**	**279**	⇓*i*P	**Pn**	**22 26 20.2**	**+1.2**
FOEL				*e*S	**Sn**	**22 26 39.3**	**+0.5**
FOEL				IAML		22 26 41.3	
	comp=N,1µm,0.5s						
FOEL				IAML		22 26 44.0	
	comp=E,1µm,0.4s						
OLDB	**Oldbury-Upon-S**	**1.53**	**228**	*e*P	**Pn**	**22 26 21.1**	**+2.1**
OLDB				IAML		22 26 42.5	
	comp=N,1µm,0.3s						
OLDB				IAML		22 26 46.8	
	comp=E,2µm,0.4s						
OLDB	**Oldbury-Upon-S**	**1.53**	**228**	*e*P	**Pn**	**22 26 21.1**	**+2.1**
OLDB				IAML		22 26 42.5	
	comp=N,1µm,0.3s						
OLDB				IAML		22 26 46.8	
	comp=E,2µm,0.4s						
OLDB	**Oldbury-Upon-S**	**1.53**	**228**		**Pn**	**22 26 21.1**	**+2.1**
OLDB	**Oldbury-Upon-S**	**1.53**	**228**	*e*P	**Pn**	**22 26 21.1**	**+2.1**
OLDB				IAML		22 26 42.5	
	comp=N,1µm,0.3s						
OLDB				IAML		22 26 46.8	
	comp=E,2µm,0.4s						
MCH1	**Michaelchurch**	**1.56**	**245**	⇑*i*P	**Pn**	**22 26 21.6**	**+2.1**
MCH1				*e*S	**Sn**	**22 26 41.6**	**+1.8**
MCH1				IAML		22 26 42.2	
	comp=N,2µm,0.8s						
MCH1				IAML		22 26 42.3	
	comp=E,954nm,0.5s						
MCH1	**Michaelchurch**	**1.56**	**245**	⇑*i*P	**Pn**	**22 26 21.6**	**+2.1**
MCH1				*e*S	**Sn**	**22 26 41.6**	**+1.8**
MCH1				IAML		22 26 42.2	
	comp=N,2µm,0.8s						
MCH1				IAML		22 26 42.3	
	comp=E,954nm,0.5s						
MCH1	**Michaelchurch**	**1.56**	**245**		**Pn**	**22 26 21.6**	**+2.1**
MCH1	**Michaelchurch**	**1.56**	**245**	⇑*i*P	**Pn**	**22 26 21.6**	**+2.1**
MCH1				*e*S	**Sn**	**22 26 41.6**	**+1.8**
MCH1				IAML		22 26 42.2	
	comp=N,2µm,0.8s						
MCH1				IAML		22 26 42.3	
	comp=E,954nm,0.5s						
GDLE	**Glaisdale, N Y**	**1.74**	**358**	*e*P	**Pn**	**22 26 23.0**	**+1.1**
GDLE				IAML		22 26 49.9	
	comp=N,3µm,0.3s						
GDLE				IAML		22 26 50.1	
	comp=E,1µm,0.5s						
GDLE	**Glaisdale, N Y**	**1.74**	**358**	*e*P	**Pn**	**22 26 23.0**	**+1.1**
GDLE				IAML		22 26 49.9	
	comp=N,3µm,0.3s						
GDLE				IAML		22 26 50.1	
	comp=E,1µm,0.5s						
GDLE	**Glaisdale, N Y**	**1.74**	**358**		**Pn**	**22 26 23.0**	**+1.1**
GDLE	**Glaisdale, N Y**	**1.74**	**358**	*e*P	**Pn**	**22 26 22.9**	**+1.1**
GDLE				*e*P	**Pn**	**22 26 23.0**	**+1.1**
GDLE				*e*S	**Sn**	**22 26 44.5**	**+0.4**
GDLE				IAML		22 26 49.9	
	comp=N,3µm,0.3s						
GDLE				IAML		22 26 50.1	
	comp=E,1µm,0.5s						
ELSH	**Elham, Standar**	**1.92**	**143**	*e*P	**Pn**	**22 26 27.3**	**+2.9**
ELSH				IAML		22 26 54.7	
	comp=E,727nm,0.4s						
ELSH				IAML		22 26 57.4	
	comp=N,698nm,0.3s						
ELSH	**Elham, Standar**	**1.92**	**143**	*e*P	**Pn**	**22 26 27.3**	**+2.9**
ELSH				IAML		22 26 54.7	
	comp=E,727nm,0.4s						
ELSH				IAML		22 26 57.4	
	comp=N,698nm,0.3s						
ELSH	**Elham, Standar**	**1.92**	**143**		**Pn**	**22 26 27.3**	**+2.9**
ELSH	**Elham, Standar**	**1.92**	**143**	*e*P	**Pn**	**22 26 27.3**	**+2.9**
ELSH				IAML		22 26 54.7	
	comp=E,727nm,0.4s						
ELSH				IAML		22 26 57.4	
	comp=N,698nm,0.3s						
HMNX	**Herstmonceux**	**1.94**	**160**	*e*P	**Pn**	**22 26 26.5**	**+1.9**
HMNX				*e*S	**Sn**	**22 26 52.0**	**+2.9**
HMNX				IAML		22 26 57.2	
	comp=N,1µm,0.4s						
HMNX				IAML		22 27 00.5	
	comp=E,882nm,0.4s						
HMNX	**Herstmonceux**	**1.94**	**160**	*e*P	**Pn**	**22 26 26.5**	**+1.9**
HMNX				*e*S	**Sn**	**22 26 52.0**	**+2.9**
HMNX				IAML		22 26 57.2	
	comp=N,1µm,0.4s						
HMNX				IAML		22 27 00.5	
	comp=E,882nm,0.4s						
HMNX	**Herstmonceux**	**1.94**	**160**		**Pn**	**22 26 26.9**	**+2.2**
HMNX	**Herstmonceux**	**1.94**	**160**	*e*P	**Pn**	**22 26 26.5**	**+1.9**
HMNX				*e*S	**Sn**	**22 26 52.0**	**+2.9**
HMNX				IAML		22 26 57.2	
	comp=N,1µm,0.4s						
HMNX				IAML		22 27 00.5	
	comp=E,882nm,0.4s						
YLL	**Llanberis**	**2.14**	**284**	*e*P	**Pn**	**22 26 28.7**	**+1.3**
YLL	**Llanberis**	**2.14**	**284**	*e*P	**Pn**	**22 26 28.7**	**+1.3**
YLL	**Llanberis**	**2.14**	**284**	*e*P	**Pn**	**22 26 28.7**	**+1.3**
EDMD	**Edmundbyers**	**2.27**	**341**	*e*P	**Pn**	**22 26 29.8**	**+0.5**
EDMD				IAML		22 27 08.0	
	comp=E,681nm,0.3s						
EDMD				IAML		22 27 08.2	
	comp=N,592nm,0.3s						
EDMD	**Edmundbyers**	**2.27**	**341**	*e*P	**Pn**	**22 26 29.8**	**+0.5**
EDMD				IAML		22 27 08.0	
	comp=E,681nm,0.3s						
EDMD				IAML		22 27 08.2	
	comp=N,592nm,0.3s						
EDMD	**Edmundbyers**	**2.27**	**341**	*e*P	**Pn**	**22 26 29.8**	**+0.5**
EDMD				*e*P	**Pn**	**22 26 29.8**	**+0.5**
EDMD				*e*S	**Sn**	**22 26 56.3**	**-1.0**
EDMD				IAML		22 27 08.0	
	comp=E,681nm,0.3s						
EDMD				IAML		22 27 08.2	
	comp=N,592nm,0.3s						
WME	**Myndd Eilian**	**2.28**	**290**	*e*P	**Pn**	**22 26 30.5**	**+1.2**
WME	**Myndd Eilian**	**2.28**	**290**	*e*P	**Pn**	**22 26 30.5**	**+1.2**
WME	**Myndd Eilian**	**2.28**	**290**	*e*P	**Pn**	**22 26 30.5**	**+1.2**
WLF1	**Llynfaes**	**2.30**	**287**	⇓*i*P	**Pn**	**22 26 30.9**	**+1.2**
WLF1				*e*S	**Sn**	**22 26 58.3**	**+0.3**
WLF1				IAML		22 27 03.2	
	comp=N,564nm,0.5s						
WLF1				IAML		22 27 08.4	
	comp=E,378nm,0.3s						
WLF1	**Llynfaes**	**2.30**	**287**	⇓*i*P	**Pn**	**22 26 30.9**	**+1.2**
WLF1				*e*S	**Sn**	**22 26 58.3**	**+0.3**
WLF1				IAML		22 27 03.2	
	comp=N,564nm,0.5s						
WLF1				IAML		22 27 08.4	
	comp=E,378nm,0.3s						
WLF1	**Llynfaes**	**2.30**	**287**	⇓*i*P	**Pn**	**22 26 30.9**	**+1.2**
WLF1				*e*S	**Sn**	**22 26 58.3**	**+0.3**
WLF1				IAML		22 27 03.2	
	comp=N,564nm,0.5s						
WLF1				IAML		22 27 08.4	
	comp=E,378nm,0.3s						
KESW	**Keswick, Cumbr**	**2.37**	**324**	*e*P	**Pn**	**22 26 31.4**	**+0.7**
KESW				IAML		22 27 09.5	
	comp=E,283nm,0.3s						
KESW				IAML		22 27 14.7	
	comp=N,278nm,0.4s						
KESW	**Keswick, Cumbr**	**2.37**	**324**	*e*P	**Pn**	**22 26 31.4**	**+0.7**
KESW				IAML		22 27 09.5	
	comp=E,283nm,0.3s						
KESW				IAML		22 27 14.7	
	comp=N,278nm,0.4s						
KESW	**Keswick, Cumbr**	**2.37**	**324**		**Pn**	**22 26 31.3**	**+0.7**
KESW	**Keswick, Cumbr**	**2.37**	**324**	*e*P	**Pn**	**22 26 31.4**	**+0.7**
KESW				IAML		22 27 09.5	
	comp=E,283nm,0.3s						
KESW				IAML		22 27 14.7	
	comp=N,278nm,0.4s						
WPS	**Cemaes, Angles**	**2.39**	**289**	*e*P	**Pn**	**22 26 32.1**	**+1.2**
WPS				*e*S	**Sn**	**22 27 00.6**	**+0.4**
WPS				IAML		22 27 02.8	
	comp=E,152nm,0.3s						
WPS				IAML		22 27 07.2	
	comp=N,277nm,0.3s						
WPS	**Cemaes, Angles**	**2.39**	**289**	*e*P	**Pn**	**22 26 32.1**	**+1.2**
WPS				*e*S	**Sn**	**22 27 00.6**	**+0.4**
WPS				IAML		22 27 02.8	
	comp=E,152nm,0.3s						
WPS				IAML		22 27 07.2	
	comp=N,277nm,0.3s						
WPS	**Cemaes, Angles**	**2.39**	**289**	*e*P	**Pn**	**22 26 32.1**	**+1.2**
WPS				*e*S	**Sn**	**22 27 00.6**	**+0.4**
WPS				IAML		22 27 02.8	
	comp=E,152nm,0.3s						
WPS				IAML		22 27 07.2	
	comp=N,277nm,0.3s						
YRC	**Rhoscolyn**	**2.40**	**285**	*e*P	**Pn**	**22 26 32.4**	**+1.4**
YRC	**Rhoscolyn**	**2.40**	**285**	*e*P	**Pn**	**22 26 32.4**	**+1.4**
YRC	**Rhoscolyn**	**2.40**	**285**	*e*P	**Pn**	**22 26 32.4**	**+1.4**
RSBS	**Rosebush, Pemb**	**2.58**	**255**	*e*P	**Pn**	**22 26 35.2**	**+1.7**
RSBS	**Rosebush, Pemb**	**2.58**	**255**	*e*P	**Pn**	**22 26 35.2**	**+1.7**
RSBS	**Rosebush, Pemb**	**2.58**	**255**	*e*P	**Pn**	**22 26 35.2**	**+1.7**
IOMK	**Kirk Michael**	**2.79**	**306**	*e*P	**Pn**	**22 26 37.2**	**+0.8**
IOMK	**Kirk Michael**	**2.79**	**306**	*e*P	**Pn**	**22 26 37.2**	**+0.8**
IOMK	**Kirk Michael**	**2.79**	**306**	*e*P	**Pn**	**22 26 37.2**	**+0.8**
HTL	**Hartland**	**2.89**	**235**	*e*P	**Pn**	**22 26 39.8**	**+2.1**
HTL				IAML		22 27 27.2	
	comp=N,197nm,0.6s						
HTL				IAML		22 27 28.1	
	comp=E,374nm,0.4s						
HTL	**Hartland**	**2.89**	**235**	*e*P	**Pn**	**22 26 39.8**	**+2.1**
HTL				IAML		22 27 27.2	
	comp=N,197nm,0.6s						
HTL				IAML		22 27 28.1	
	comp=E,374nm,0.4s						
HTL	**Hartland**	**2.89**	**235**	*e*P	**Pn**	**22 26 39.8**	**+2.1**
HTL				IAML		22 27 27.2	
	comp=N,197nm,0.6s						
HTL				IAML		22 27 28.1	
	comp=E,374nm,0.4s						
ESK	**Eskdalemuir**	**3.01**	**332**	*e*P	**Pn**	**22 26 40.0**	**+0.6**
ESK				IAML		22 27 31.5	
	comp=E,157nm,0.3s						
ESK				IAML		22 27 31.7	
	comp=N,100nm,0.3s						
ESK	**Eskdalemuir**	**3.01**	**332**	*e*P	**Pn**	**22 26 40.0**	**+0.6**
ESK				IAML		22 27 31.5	
	comp=E,157nm,0.3s						
ESK				IAML		22 27 31.7	
	comp=N,100nm,0.3s						
ESK	**Eskdalemuir**	**3.01**	**332**	Pn	**Pn**	**22 26 40.1**	**+0.6**
ESK	**Eskdalemuir**	**3.01**	**332**	*e*P	**Pn**	**22 26 40.0**	**+0.6**
ESK				IAML		22 27 31.5	
	comp=E,157nm,0.3s						
ESK				IAML		22 27 31.7	
	comp=N,100nm,0.3s						
EKA	**Eskdalemuir Ar**	**3.02**	**332**	Pn	**Pn**	**22 26 40.1**	**+0.6**
	baz=159,slow=13,SNR=44						
EKA				Pg	**Pb**	**22 26 48.0**	**+2.5**
	baz=153,slow=18,SNR=61						
EKA				Sn	**Sn**	**22 27 14.1**	**-1.6**
	baz=147,slow=20,SNR=3.0						
EKA				Lg	Lg	22 27 25.5	
	baz=152,slow=30,SNR=12						
EKA	**Eskdalemuir Ar**	**3.02**	**332**	Pn	**Pn**	**22 26 40.1**	**+0.6**
EKA				Pg	**Pb**	**22 26 47.8**	**+2.4**
EKA				Sn	**Sn**	**22 27 14.0**	**-1.6**
EKA				Lg	Lg	22 27 27.2	
EKA	**Eskdalemuir Ar**	**3.02**	**332**	Pn	**Pn**	**22 26 40.1**	**+0.6**
EKA				Pg	**Pb**	**22 26 47.8**	**+2.4**
EKA				Sn	**Sn**	**22 27 14.0**	**-1.6**
EKA				Sg	**Sg**	**22 27 27.2**	**-1.2**
DYA	**Yadsworthy**	**3.02**	**223**	*e*P	**Pn**	**22 26 41.0**	**+1.4**
DYA				IAML		22 27 32.6	
	comp=N,119nm,0.5s						
DYA				IAML		22 27 34.8	
	comp=E,151nm,0.4s						
DYA	**Yadsworthy**	**3.02**	**223**	*e*P	**Pn**	**22 26 41.0**	**+1.4**
DYA				IAML		22 27 32.6	
	comp=N,119nm,0.5s						
DYA				IAML		22 27 34.8	
	comp=E,151nm,0.4s						
DYA	**Yadsworthy**	**3.02**	**223**	*e*P	**Pn**	**22 26 41.0**	**+1.4**
DYA				IAML		22 27 32.6	
	comp=N,119nm,0.5s						
DYA				IAML		22 27 34.8	
	comp=E,151nm,0.4s						
NEWG	**New Galloway**	**3.20**	**321**	*e*P	**Pn**	**22 26 42.8**	**+0.8**
NEWG	**New Galloway**	**3.20**	**321**	*e*P	**Pn**	**22 26 42.8**	**+0.8**
NEWG	**New Galloway**	**3.20**	**321**	*e*P	**Pn**	**22 26 42.8**	**+0.8**
DSB	**Dublin**	**3.47**	**281**	Pn	**Pn**	**22 26 47.1**	**+1.4**
EDI	**Edinburgh**	**3.55**	**337**	*e*S	**Sn**	**22 27 27.7**	**-1.0**
EDI	**Edinburgh**	**3.55**	**337**	*i* P	**Pn**	**22 26 48.5**	**+1.7**
EDI				*e*S	**Sn**	**22 27 29.2**	**+0.5**
UCC	**Uccle**	**3.68**	**119**	*d*Pn	**Pn**	**22 26 51.3**	**+2.7**
UCC				*d*PbPb	**PbPb**	**22 27 02.4**	**+2.5**
UCC				*d*Sn	**Sn**	**22 27 33.5**	**+1.5**
UCC	**Uccle**	**3.68**	**119**	Pn	**Pn**	**22 26 49.6**	**+1.0**
SNF	**Seneffe**	**3.81**	**123**	*d*Pn	**Pn**	**22 26 52.8**	**+2.5**
SNF				*d*x	x	22 26 53.5	
SNF				*d*pPb	**pPb**	**22 27 03.0**	**+2.6**
SNF				*d*sPb	**sPb**	**22 27 03.9**	**+1.8**
FLN	**La Foliniere**	**3.94**	**178**	*e*Pn	**Pn**	**22 26 53.2**	**+1.1**
	baz=358						
FLN	**La Foliniere**	**3.94**	**178**	*e*Pg	**Pg**	**22 27 07.7**	**+0.6**
	baz=355						
FLN				*e*Sn	**Sn**	**22 27 36.7**	**-1.6**
	comp=E,10.0nm,0.1s,baz=1.8						
FLN				*e*Sg	**Sg**	**22 27 59.2**	**+1.2**
	comp=E,112nm,0.4s,baz=12						
BAIF	**Baives**	**4.06**	**129**	*e*P	**Pn**	**22 26 57.5**	**+3.7**
BAIF	**Baives**	**4.06**	**129**	*e*Pg	Pb	22 27 09.3	+6.1
BAIF				*e*Sn	**Sn**	**22 27 38.8**	**-2.5**
	comp=E,18nm,0.2s						
BAIF				*e*Sg	**Sg**	**22 28 02.4**	**+0.5**
	comp=E,58nm,0.4s						
LDF	**La Druitiere**	**4.12**	**174**	*e*Pn	**Pn**	**22 26 54.8**	**+0.1**
LDF	**La Druitiere**	**4.12**	**174**	*e*Pg	**Pg**	**22 27 11.3**	**+0.7**
LDF				*e*Sn	**Sn**	**22 27 42.1**	**-0.8**
	comp=E,77nm,0.4s						
BMRD	**Maredsous**	**4.18**	**123**	*d*Pn	**Pn**	**22 26 57.8**	**+2.4**
BMRD				*d*PnPn	**PnPn**	**22 27 05.8**	**+3.2**
DOU	**Dourbes**	**4.22**	**126**	*d*P	**Pn**	**22 26 58.2**	**+2.2**
DOU				*d*PbPb	**PbPb**	**22 27 11.9**	**+2.8**
DOU				*d*Pg	**Pg**	**22 27 15.2**	**+2.7**
DOU				*d*sSn	**Sn**	**22 27 51.5**	**+6.1**
DOU				*d*sSb	**sSb**	**22 28 02.0**	**+2.6**
DOU				*d*Sg	**Sg**	**22 28 08.3**	**+1.1**
BGES	**Gesves**	**4.30**	**120**	*d*Pn	**Pn**	**22 26 58.6**	**+1.5**
BGES				*d*Pb	**Pb**	**22 27 10.5**	**+3.2**
BGES				*d*PbPb	**PbPb**	**22 27 13.8**	**+3.4**
BGES				*d*Sn	**Sn**	**22 27 48.0**	**+0.8**
GRR	**Gorron**	**4.31**	**181**	*e*Pn	**Pn**	**22 26 58.2**	**+1.0**
GRR				*e*Sn	**Sn**	**22 27 45.6**	**-1.9**
	comp=E,60nm,0.3s						
GRR				*e*Sg	**Sg**	**22 28 08.9**	**-1.0**
	comp=E,50nm,0.3s						
GIVF	**Givet**	**4.33**	**125**	*e*Pn	**Pn**	**22 26 58.4**	**+0.8**
GIVF	**Givet**	**4.33**	**125**	*e*Pg	Pb	22 27 13.9	+6.0
GIVF				*e*Sn	**Sn**	**22 27 45.5**	**-2.6**
	comp=E,26nm,0.2s						
GIVF				*e*Sg	**Sg**	**22 28 09.5**	**-1.2**
	comp=E,132nm,0.3s						
DRUM	**Mains of Drumt**	**4.35**	**347**	*e*P	**Pn**	**22 26 58.9**	**+1.1**
DRUM				*e*S	**Sn**	**22 27 45.4**	**-3.2**
BCLA	**Clavier**	**4.39**	**119**	*d*P	**Pn**	**22 27 00.5**	**+2.1**
BCLA				*d*S	**Sn**	**22 27 50.6**	**+1.0**
BEBN	**Eben Emael**	**4.40**	**113**	*d*Pn	**Pn**	**22 27 00.3**	**+1.8**
BEBN				*d*PnPn	**PnPn**	**22 27 09.3**	**+3.7**
BEBN				*d*PbPb	**PbPb**	**22 27 14.4**	**+2.2**
BEBN				*d*Sn	**Sn**	**22 27 51.0**	**+1.2**
BSTI	**Sart Tilman**	**4.45**	**116**	*d*Pn	**Pn**	**22 27 01.3**	**+2.1**
RCHB	**Rochefort**	**4.50**	**122**	*d*Pn	**Pn**	**22 27 02.0**	**+2.1**
RCHB				*d*Pg	**Pg**	**22 27 20.2**	**+2.3**
RCHB				*d*Sn	**Sn**	**22 27 54.3**	**+2.0**
RCHB				*d*SnSn	**SnSn**	**22 28 06.2**	**+3.2**
RCHB				*d*SbSb	**SbSb**	**22 28 12.1**	**+1.9**
SGMF	**Saint Gilles**	**4.59**	**196**	*e*Pn	**Pn**	**22 27 01.9**	**+0.7**
SGMF	**Saint Gilles**	**4.59**	**196**	*e*Pg	**Pg**	**22 27 20.0**	**+0.4**
SGMF				*e*Sn	**Sn**	**22 27 53.0**	**-1.5**
	comp=E,59nm,0.5s						
ROSF	**Rostrenen**	**4.65**	**202**	*e*Pn	**Pn**	**22 27 02.7**	**+0.7**
ROSF				*e*Sn	**Sn**	**22 27 54.0**	**-2.0**
	comp=E,38nm,0.3s						
ROSF				*e*Sg	**Sg**	**22 28 20.1**	**-0.9**
	comp=E,39nm,0.3s						
MEM	**Membach**	**4.68**	**114**	*d*Pn	**Pn**	**22 27 04.6**	**+2.3**
MEM				*d*pPn	**pPn**	**22 27 06.8**	**+2.2**
MEM				*d*sPb	**sPb**	**22 27 18.7**	**+1.7**
MEM				*d*Pg	**Pg**	**22 27 24.2**	**+3.0**
MEM				*d*Sn	**Sn**	**22 27 57.4**	**+0.9**
MEM				*d*SbSb	**SbSb**	**22 28 16.6**	**+1.4**
MEM				*d*Sg	**Sg**	**22 28 23.2**	**+1.4**
BTNL	**Ternell**	**4.76**	**114**	*d*Pn	**Pn**	**22 27 05.4**	**+2.0**
BTNL				*d*PbPb	**PbPb**	**22 27 20.6**	**+2.3**
BTNL				*d*Sn	**Sn**	**22 27 59.1**	**+0.5**
BHOU	**Houvegnez**	**4.80**	**116**	*d*Pn	**Pn**	**22 27 06.6**	**+2.5**
BHOU				*d*PbPb	**PbPb**	**22 27 21.6**	**+2.5**
BHOU				*d*Sn	**Sn**	**22 27 59.6**	**-0.2**
QUIF	**Quistinic**	**5.03**	**199**	*e*Pn	**Pn**	**22 27 08.0**	**+0.9**
QUIF				*e*Sn	**Sn**	**22 28 03.5**	**-1.8**
	comp=E,37nm,0.3s						
QUIF				*e*Sg	**Sg**	**22 28 31.6**	**-1.5**
	comp=E,46nm,0.4s						
CLF	**Chambon-Foret**	**5.04**	**157**	Pn	**Pn**	**22 27 10.3**	**+3.0**
WLF	**Walferdange**	**5.28**	**122**	*d*x	x	22 27 32.5	
WLF				*d*Sn	**Sn**	**22 28 14.0**	**+2.6**
WLF				*d*SnSn	**SnSn**	**22 28 26.0**	**+3.8**
WLF				*d*Sg	**Sg**	**22 28 44.2**	**+3.2**
WLF	**Walferdange**	**5.28**	**122**	Pn	**Pn**	**22 27 12.9**	**+2.3**
KPL	**Plockton**	**5.46**	**331**	*e*P	**Pn**	**22 27 14.5**	**+1.5**
KPL				*e*S	**Sn**	**22 28 12.9**	**-2.8**
SAVF	**Savonnieres en**	**5.52**	**135**	*e*Pn	**Pn**	**22 27 14.9**	**+1.0**
	baz=314						
SAVF	**Savonnieres en**	**5.52**	**135**	*e*Pg	**Pg**	**22 27 36.7**	**-0.6**
	baz=334						
SAVF				*e*Sn	**Sn**	**22 28 15.0**	**-2.3**
	comp=E,30nm,0.4s,baz=333						
SAVF				*e*Sg	**Sg**	**22 28 47.9**	**-0.8**
	comp=E,68nm,0.6s,baz=320						
MEZF	**Maizieres J’vi**	**5.57**	**136**	*e*Pn	**Pn**	**22 27 15.6**	**+1.0**
	baz=314						
MEZF				*e*Sn	**Sn**	**22 28 16.0**	**-2.7**
	comp=E,26nm,0.3s,baz=316						
MEZF				*e*Sg	**Sg**	**22 28 48.8**	**-1.7**
	comp=E,76nm,0.5s,baz=325						
SFTF	**Sexfontaines**	**5.80**	**138**	*e*Pn	**Pn**	**22 27 19.1**	**+1.3**
	baz=317						
SFTF				*e*Sn	**Sn**	**22 28 21.6**	**-2.7**
	comp=E,47nm,0.4s,baz=316						
SFTF				*e*Sg	**Sg**	**22 28 56.5**	**-1.4**
	comp=E,21nm,0.3s						
PAGF	**Fort de Pagny**	**5.83**	**133**	*e*Pn	**Pn**	**22 27 19.5**	**+1.4**
PAGF	**Fort de Pagny**	**5.83**	**133**	*e*Pg	Pb	22 27 41.3	+8.0
	baz=325						
PAGF				*e*Sn	**Sn**	**22 28 22.0**	**-2.9**
	comp=E,25nm,0.4s,baz=300						
PAGF				*e*Sg	**Sg**	**22 28 57.9**	**-0.7**
	comp=E,49nm,0.6s						
HYF	**Humbligny**	**5.84**	**157**	*e*Pn	**Pn**	**22 27 19.8**	**+1.5**
HYF				*e*Sn	**Sn**	**22 28 23.2**	**-2.2**
HYF				*e*Sg	**Sg**	**22 28 57.6**	**-1.6**
BIGH	**Upper Bighouse**	**6.09**	**344**	*e*P	**Pn**	**22 27 21.7**	**0.0**
BIGH				*e*S	**Sn**	**22 28 25.9**	**-5.4**
MFF	**Saint Martin d**	**6.11**	**176**	*e*Pn	**Pn**	**22 27 22.9**	**+1.0**
MFF				*e*Sn	**Sn**	**22 28 28.7**	**-3.1**
	comp=E,18nm,0.3s						
MFF				*e*Sg	**Sg**	**22 29 05.7**	**-1.9**
	comp=E,15nm,0.3s						
LOR	**Lormes**	**6.18**	**150**	*e*Pn	**Pn**	**22 27 23.8**	**+0.9**
	baz=329						
LOR				*e*Sn	**Sn**	**22 28 30.7**	**-2.9**
	comp=E,24nm,0.3s,baz=331						
LOR				*e*Sg	**Sg**	**22 29 07.4**	**-2.5**
	comp=E,35nm,0.4s,baz=335						
SSF	**Saint Saulge**	**6.26**	**152**	*e*Pn	**Pn**	**22 27 24.4**	**+0.3**
SSF				*e*Sn	**Sn**	**22 28 32.0**	**-3.6**
	comp=E,12nm,0.3s						
SSF				*e*Sg	**Sg**	**22 29 09.8**	**-2.7**
	comp=E,31nm,0.4s						
AVF	**Avril sur Loir**	**6.47**	**154**	*e*Pn	**Pn**	**22 27 27.5**	**+0.6**
AVF				*e*Sn	**Sn**	**22 28 36.5**	**-4.2**
AVF				*e*Sg	**Sg**	**22 29 16.2**	**-3.0**
	comp=E,54nm,0.7s						
HAU	**Haudompre**	**6.51**	**133**	*e*Pn	**Pn**	**22 27 28.3**	**+0.7**
HAU	**Haudompre**	**6.51**	**133**	*e*Pg	**Pg**	**22 27 55.1**	**-1.2**
HAU				*e*Sn	**Sn**	**22 28 38.6**	**-3.3**
	comp=E,20nm,0.3s						
BGF	**Bois d'Agland**	**6.56**	**158**	*e*Pn	**Pn**	**22 27 28.4**	**+0.2**
BGF				*e*Sn	**Sn**	**22 28 39.3**	**-3.7**
BGF				*e*Sg	**Sg**	**22 29 21.8**	**-0.3**
	comp=E,136nm,0.5s						
CDF	**Champ du Feu**	**6.65**	**127**	*e*Pn	**Pn**	**22 27 30.6**	**+1.1**
CDF				*e*Sn	**Sn**	**22 28 41.9**	**-3.5**
	comp=E,11nm,0.4s						
CDF				*e*Sg	**Sg**	**22 29 23.5**	**-1.6**
	comp=E,24nm,0.5s						
TCF	**Toulx Ste Croi**	**6.69**	**162**	*e*Pn	**Pn**	**22 27 30.3**	**+0.4**
TCF	**Toulx Ste Croi**	**6.69**	**162**	*e*Pg	Pg	22 27 57.4	-2.3
TCF				*e*Sn	**Sn**	**22 28 42.3**	**-3.8**
	comp=E,15nm,0.3s						
TCF				*e*Sg	**Sg**	**22 29 24.2**	**-2.0**
	comp=E,35nm,0.5s						
ECH	**Echery**	**6.73**	**129**	Pn	**Pn**	**22 27 32.7**	**+2.2**
SMF	**Signal de Mont**	**6.73**	**152**	*e*Pn	**Pn**	**22 27 30.7**	**+0.1**
SMF				*e*Sn	**Sn**	**22 28 43.7**	**-3.6**
	comp=E,52nm,0.7s						
MUD	**Monsted U'grnd**	**6.88**	**53**	*e*P	**Pn**	**22 27 36.2**	**+3.7**
MUD				*e*S	**Sn**	**22 28 49.2**	**-1.5**
MUD				IAML		22 29 08.2	
	comp=Z,6.4nm,0.4s						
MUD	**Monsted U'grnd**	**6.88**	**53**	*i* P	**Pn**	**22 27 36.1**	**+3.7**
MUD				*e*S	**Sn**	**22 28 49.1**	**-1.5**
MUD	**Monsted U'grnd**	**6.88**	**53**	*e*P	**Pn**	**22 27 36.2**	**+3.7**
MUD				*e*S	**Sn**	**22 28 49.2**	**-1.5**
MUD				IAML		22 29 08.2	
	comp=Z,6.4nm,0.4s						
HINF	**Hinteralfeld**	**6.88**	**132**	*e*Pn	**Pn**	**22 27 33.5**	**+0.9**
HINF				*e*Sn	**Sn**	**22 28 47.2**	**-3.7**
	comp=Z,10nm,0.3s						
HINF				*e*Sg	**Sg**	**22 29 29.4**	**-3.0**
	comp=Z,18nm,0.4s						
STAV	**Stavanger**	**7.23**	**27**	Pn	**Pn**	**22 27 35.0**	**-2.3**
STAV				Sn	**Sn**	**22 28 53.2**	**-6.1**
SNART	**Snartemo**	**7.23**	**35**	*e*P	**Pn**	**22 27 36.4**	**-0.9**
SNART				*e*S	**Sn**	**22 28 53.1**	**-6.3**
SNART				IAML		22 28 57.0	
	comp=Z,40nm,0.6s						
SNART	**Snartemo**	**7.23**	**35**	*i* P	**Pn**	**22 27 36.5**	**-0.9**
SNART				*e*S	**Sn**	**22 28 52.9**	**-6.4**
SNART				IAML		22 28 56.3	
	comp=Z,29nm,0.3s						
BFO	**Black Forest**	**7.23**	**124**	Pn	**Pn**	**22 27 38.9**	**+1.5**
KMY	**Karmoy**	**7.34**	**25**	Pn	Pn	22 27 36.2	-2.7
KMY				Sn	Sn	22 28 54.8	-7.3
KMY	**Karmoy**	**7.34**	**25**	*e*P	**Pn**	**22 27 36.5**	**-2.4**
KMY				IAML		22 29 00.1	
	comp=Z,15nm,0.6s						
CABF	**La Chapelle**	**7.52**	**141**	*e*Pn	**Pn**	**22 27 42.6**	**+1.2**
CABF				*e*Sn	**Sn**	**22 29 02.2**	**-4.4**
	comp=Z,11nm,0.3s						
RJF	**Les Rejaudoux**	**7.54**	**168**	*e*Pn	**Pn**	**22 27 41.7**	**+0.1**
RJF				*e*Sn	**Sn**	**22 29 03.1**	**-3.9**
	comp=Z,20nm,0.3s						
RJF				*e*Sg	**Sg**	**22 29 50.9**	**-2.5**
	comp=Z,7.2nm,0.3s						
HOMB	**Homborsund**	**7.66**	**39**	*e*P	**Pn**	**22 27 42.2**	**-0.9**
HOMB				*e*		22 27 42.3	
	baz=218,slow=16						
HOMB				IAML		22 29 08.8	
	comp=Z,16nm,0.7s						
HOMB	**Homborsund**	**7.66**	**39**	*e*	**Pn**	**22 27 42.3**	**-0.9**
	baz=218,slow=16						
HOMB				*i* P	**Pn**	**22 27 43.0**	**-0.2**
HOMB				*e*S	**Sn**	**22 29 03.8**	**-6.0**
HOMB				IAML		22 29 09.9	
	comp=Z,9.8nm,0.3s						
LFF	**La Frestale**	**7.82**	**172**	*e*Pn	**Pn**	**22 27 45.5**	**+0.1**
LFF				*e*Sn	**Sn**	**22 29 09.4**	**-4.5**
	comp=Z,32nm,0.4s						
BLS5	**Blasjo**	**7.85**	**28**	*e*P	**Pn**	**22 27 45.3**	**-0.5**
BLS5				*e*S	Sn	22 29 06.9	-7.7
BLS5				IAML		22 29 11.7	
	comp=Z,10nm,0.4s						
CAF	**Calviac**	**7.98**	**166**	*e*Pn	**Pn**	**22 27 47.7**	**-0.1**
CAF				*e*Sn	**Sn**	**22 29 13.7**	**-4.4**
	comp=Z,33nm,0.4s						

SSB	Saint Sauveur	8.18	153	Pn	Pn	22 27 50.5	0.0
SENIN	Lac Senin/Sane	8.20	137	Pn	Pn	22 27 52.0	+1.2
ODD1	Odda	8.31	26	*e*P	Pn	22 27 50.8	-1.3
ODD1				*e*S	Sn	22 29 17.8	-8.1
ODD1				IAML		22 29 25.6	
	comp=Z,8.1nm,0.3s						
BER	Bergen	8.40	21	*e*P	Pn	22 27 50.3	-3.0
BER				*e*S	Sn	22 29 19.0	-9.2
BER				IAML		22 29 33.4	
	comp=Z,7.1nm,0.4s						
ASK	Askoy	8.46	20	*e*P	Pn	22 27 51.9	-2.3
ASK				*e*S	Sn	22 29 20.4	-9.2
ASK				IAML		22 29 26.2	
	comp=Z,21nm,0.8s						
VIVF	Saint-Julien-l	8.61	153	*e*Pn	Pn	22 27 56.4	+0.1
VIVF				*e*Sn	Sn	22 29 28.7	-4.7
	comp=Z,9.9nm,0.4s						
ONAU	Onsala	8.65	52	*i* P	Pn	22 27 58.6	+1.9
ONAU				*e*S	Sn	22 29 28.7	-5.5
LPL	La Plagne	8.68	143	*e*Pn	Pn	22 27 58.4	+0.9
LPL				*e*Sn	Sn	22 29 30.7	-4.8
	comp=Z,3.2nm,0.3s						
LPG	La Plagne	8.70	143	*e*Pn	Pn	22 27 59.2	+1.3
LPG				*e*Sn	Sn	22 29 31.5	-4.6
	comp=Z,5.1nm,0.3s						
DAVA	Damuels	8.71	124	*i* Pn	Pn	22 28 01.2	+3.4
	comp=Z,6.1nm,0.5s						
DAVA				*e*Sg	Sn	22 29 33.8	-2.2
	comp=Z,5.5nm,0.3s						
LUNU	Lund	8.82	65	*i* P	Pn	22 27 59.6	+0.6
LUNU				*i* S	Sn	22 29 34.6	-3.7
FABU	Falkenberg	8.87	56	*i* S	Sn	22 29 33.9	-5.8
SUE	Sulen	8.90	17	*e*P	Pn	22 27 58.1	-2.1
SUE				*e*S	Sn	22 29 31.8	-8.7
SUE				IAML		22 29 38.3	
	comp=Z,8.7nm,0.4s						
ORIF	Oris-en-Rattie	8.91	148	*e*Pn	Pn	22 28 00.4	-0.1
ORIF				*e*Sn	Sn	22 29 36.1	-4.8
	comp=Z,6.7nm,0.3s						
KONO	Kongsberg	9.03	35	*e*P	Pn	22 28 01.3	-0.7
DAVOX	Davos/Dischmat	9.05	127	Pn	Pn	22 28 05.4	+2.9
	comp=Z,1.3nm,0.3s,baz=284,slow=12,SNR=16						
DAVOX				Sn	Sn	22 29 41.4	-3.2
	comp=Z,0.9nm,0.3s,baz=124,slow=18,SNR=3.0						
BNI	Bardonecchia	9.06	145	Pn	Pn	22 28 05.3	+2.7
LASF	Ste Croix	9.14	159	*e*Pn	Pn	22 28 04.1	+0.5
LASF				*e*Sn	Sn	22 29 41.3	-5.1
	comp=Z,4.3nm,0.4s						
BORU	Boraas	9.17	52	*i* P	Pn	22 28 03.5	-0.3
BORU				*e*S	Sn	22 29 42.1	-4.8
STRU	Stroemstad	9.22	42	*e*P	Pn	22 28 03.4	-1.1
DEL	Delary	9.28	60	*i* P	Pn	22 28 06.2	+0.9
DEL				*e*S	Sn	22 29 45.3	-4.3
HYA	Hoyanger	9.29	21	*e*P	Pn	22 28 04.1	-1.4
HYA				IAML		22 29 51.0	
	comp=Z,5.1nm,0.5s						
MOTA	Moosalm	9.30	120	*i* Pn	Pn	22 28 10.0	+4.1
	comp=Z,1.0nm,0.4s						
FETA	Feichten	9.31	123	*e*Pn	Pn	22 28 09.8	+3.7
	comp=Z,1.2nm,0.4s						
FETA				*e*Sg	Sn	22 29 52.2	+1.2
	comp=Z,2.7nm,0.7s						
MBDF	Montbardon	9.38	145	*e*Pn	Pn	22 28 07.8	+0.9
MBDF				*e*Sn	Sn	22 29 47.5	-4.9
	comp=Z,7.4nm,0.5s						
SKAR	Skarslia	9.41	28	*e*P	Pn	22 28 05.4	-1.9
SKAR				*e*S	Sn	22 29 44.5	-8.7
SKAR				IAML		22 30 07.3	
	comp=Z,5.6nm,0.5s						
FOO	Floro	9.46	17	Pn	Pn	22 28 05.8	-2.1
FOO				Sn	Sn	22 29 45.9	-8.2
FOO	Floro	9.46	17	*e*P	Pn	22 28 05.6	-2.2
FOO				*e*S	Sn	22 29 45.2	-8.9
FOO				IAML		22 29 54.9	
	comp=Z,6.1nm,1.1s						
BSD	Bornholm Skovb	9.54	69	*e*P	Pn	22 28 08.9	-0.1
BSD	Bornholm Skovb	9.54	69	*i* P	Pn	22 28 08.8	-0.1
BSD	Bornholm Skovb	9.54	69	*e*P	Pn	22 28 08.9	-0.1
MTLF	Montolieu	9.56	167	*e*Pn	Pn	22 28 09.2	-0.1
MTLF				*e*Sn	Sn	22 29 51.2	-5.5
	comp=Z,6.6nm,0.3s						
SJPF	Ste Jean	9.59	182	*e*Pn	Pn	22 28 09.7	0.0
SJPF				*e*Sn	Sn	22 29 52.4	-5.1
	comp=Z,4.6nm,0.2s						
SMRF	Simiane la Rot	9.67	152	*e*Pn	Pn	22 28 11.3	+0.4
SMRF				*e*Sn	Sn	22 29 54.1	-5.4
	comp=Z,1.4nm,0.5s						
EPF	Esparros	9.69	175	*e*Pn	Pn	22 28 10.9	-0.3
EPF				*e*Sn	Sn	22 29 54.4	-5.6
	comp=Z,8.3nm,0.2s						
KHC	Kasperske Hory	9.71	106	*e*PN	Pn	22 28 15.6	+4.3
KHC				*e*x	x	22 28 30.5	
KHC				*e*SN	Sn	22 30 00.2	-0.2
KHC				*e*x	x	22 30 31.5	
ETSF	Etsaut	9.80	179	*e*Pn	Pn	22 28 12.5	-0.2
ETSF				*e*Sn	Sn	22 29 57.5	-5.2
	comp=Z,5.5nm,0.3s						
GEC2	GERESS Array S	9.91	107	Pn	Pn	22 28 16.3	+2.1
GERES	GERESS Array B	9.91	107	Pn	Pn	22 28 16.1	+1.9
	comp=Z,0.3nm,0.3s,baz=290,slow=13,SNR=5.2						
GERES				Sn	Sn	22 30 03.0	-2.5
	comp=Z,0.2nm,0.3s,baz=299,slow=24,SNR=2.4						
NAO01	NORSAR Array S	10.35	33	Pn	Pn	22 28 19.8	-0.2
NAO01	NORSAR Array S	10.35	33	*e*P	Pn	22 28 17.8	-2.2
SBF	Sospel	10.36	145	*e*Pn	Pn	22 28 20.5	+0.1
SBF	Sospel	10.36	145	*e*P	Pn	22 28 26.0	+5.6
SBF				*e*Sn	Sn	22 30 11.0	-5.5
	comp=Z,3.1nm,0.3s						
FRF	La Foret Royal	10.37	149	*e*Pn	Pn	22 28 20.2	-0.2
FRF				*e*Sn	Sn	22 30 11.6	-5.0
	comp=Z,4.4nm,0.4s						
AKN	Aaknes	10.37	20	Pn	Pn	22 28 18.3	-2.1
AKN				Sn	Sn	22 30 07.9	-8.7
AKN	Aaknes	10.37	20	Pn	Pn	22 28 18.3	-2.1
AKN				Sn	Sn	22 30 07.9	-8.7
AKN				IAML		22 30 13.2	
	comp=Z,3.8nm,0.2s						
ABTA	Abfaltersbach	10.42	120	Sg	Sn	22 30 16.4	-1.6
	comp=Z,1.9nm,0.5s						
NBO00	NORSAR Array S	10.45	32	Pn	Pn	22 28 20.9	-0.5
NRA0	NORESS Array S	10.49	35	Pn	Pn	22 28 20.1	-1.9
	baz=226,slow=12						
NRA0				Sn	Sn	22 30 13.3	-6.1
	baz=230,slow=22						
NRA0	NORESS Array S	10.49	35	Pn	Pn	22 28 20.1	-1.9
	baz=226,slow=12						
NRA0				Sn	Sn	22 30 13.3	-6.1
	baz=230,slow=22						
LMR	La Mourre	10.53	150	*e*Pn	Pn	22 28 22.7	+0.1
LMR				*e*Sn	Sn	22 30 14.5	-6.1
	comp=Z,0.7nm,0.2s						
NB2	NORSAR Subarra	10.60	33	Pn	Pn	22 28 22.5	-1.0
	baz=224,slow=14						
NB2	NORSAR Subarra	10.60	33	Pn	Pn	22 28 22.5	-1.0
	baz=224,slow=14						
NOA	NORSAR Array B	10.60	33	Pn	Pn	22 28 20.9	-2.6
	comp=Z,0.0nm,0.3s,baz=237,slow=12,SNR=4.9						
NOA				Sn	Sn	22 30 09.5	-13
	comp=Z,0.0nm,0.3s,baz=235,slow=17,SNR=1.6						
NB201	NORSAR Array S	10.63	33	Pn	Pn	22 28 24.6	+0.7
KBA	Koelnbreinsper	10.66	116	*i* Pn	Pn	22 28 30.2	+5.6
	comp=Z,2.0nm,0.4s						
MOA	Molln	10.74	111	*e*Pn	Pn	22 28 30.6	+5.2
	comp=Z,0.5nm,0.2s						
DOMB	Dombas	10.75	25	*e*P	Pn	22 28 24.2	-1.3
DOMB				IAML		22 30 17.2	
	comp=Z,1.9nm,0.7s						
ZOU	Zoufplan	10.79	119	Pn	Pn	22 28 30.7	+4.4
HFS	Hagfors	10.90	41	Pn	Pn	22 28 26.5	-1.2
	comp=Z,0.1nm,0.3s,baz=220,slow=15,SNR=1.7						
HFS				Sn	Sn	22 30 21.5	-8.1
	comp=Z,1.0nm,0.3s,baz=237,slow=25,SNR=8.8						
HFS	Hagfors	10.90	41	P	Pn	22 28 26.6	-1.0
	baz=232,slow=14						
HFS	Hagfors	10.90	41	P	Pn	22 28 26.6	-1.0
	baz=232,slow=14						
PGF	Pioggiola	12.07	143	*e*Pn	Pn	22 28 44.1	+0.4
ESDC	Sonseca Array	13.21	191	Pn	Pn	22 28 58.7	-0.6
	comp=Z,0.1nm,0.3s,baz=7.4,slow=12,SNR=1.9						
ESDC				Sn	Sn	22 31 14.2	-12
	comp=Z,0.2nm,0.3s,baz=12,slow=23,SNR=5.1						
FINES	FINESS Array B	16.89	48	Pn	Pn	22 29 43.1	-4.7
	comp=Z,0.1nm,0.3s,baz=250,slow=11,SNR=2.2						
FINES				Sn	Sn	22 32 45.1	-10
	comp=Z,0.1nm,0.3s,baz=251,slow=20,SNR=1.3						
FINES	FINESS Array B	16.89	48	Pn	Pn	22 29 47.2	-0.6
ARCES	ARCESS Array B	20.81	26	P	P	22 30 33.6	+0.7
	comp=Z,12nm,1.3s,baz=221,slow=11,SNR=4.2						
DBIC	Dimbokro	46.00	186	LR	LR	22 56 08.4	
	comp=Z,245nm,18.8s,baz=223,slow=40						
ZALV	Zalesovo Beam	48.09	52	P	P	22 34 32.9	+1.8
	comp=Z,0.5nm,0.5s,baz=298,slow=8.2,SNR=2.4						
MKAR	Makanchi Array	51.14	61	P	P	22 34 56.0	+1.5
	comp=Z,0.2nm,0.6s,baz=309,slow=7.0,SNR=2.3						

IDC 28 22:27:42.1±2.5**,3°.04S×129°.05E,h0**^{km}**,mb3.5**/2**,**
mb1 3.8/3**,mb1mx3.5**/33**,mbtmp3.5**/3**,ML3.6**/1**,Error**
ellipse: s-maj=175.4km s-min=28.1km az=69.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.57	163	P	Pn	22 31 46.8	-1.9
	0.2nm,0.3s,baz=346,slow=13,SNR=7.0						
WRA				S	Sn	22 34 55.9	-9.3
	0.1nm,0.3s,baz=342,slow=23,SNR=2.4						
ASAR	Alice Springs	21.03	168	P	P	22 32 28.7	+1.0
	2.7nm,0.5s,baz=344,slow=10.0,SNR=31						
ASAR				S	S	22 36 19.0	-3.9
	0.2nm,0.3s,baz=349,slow=24,SNR=2.0						
MKAR	Makanchi Array	64.42	326	P	P	22 38 20.3	-0.1
	0.1nm,0.4s,baz=122,slow=7.7,SNR=4.5						

IDC ***28*** *22:30:13.9±1.0,5°.68S×28°.68E,h0*^{km}*,mb3.9/8,*
mb1 4.0/12,mb1mx3.8/42,mbtmp4.0/12,ML1.7/1,Error
ellipse: s-maj=31.8km s-min=20.9km az=112.0
ISC 28 22:30:14.9±0.7**,5°.75S**±0°.06×**28°.7E**±0°.1**,h10**^{km}**,n14,**
σ**2^{s}.22**/16**,mb3.9**/8**,Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	Mbarara	5.52	22	Pn	Pn	22 31 37.4	+0.1
	9.5nm,0.3s,baz=240,slow=7.7,SNR=33						
MBAR				Sn	Sn	22 32 37.2	-3.8
	28nm,0.3s,baz=253,slow=15,SNR=4.3						
MBAR				Lg	Lg	22 33 01.9	
	46nm,0.3s,baz=308,slow=21,SNR=8.1						
KMBO	Kilima Mbogo	9.73	62	Pn	Pn	22 32 34.4	-0.8
	1.0nm,0.3s,baz=222,slow=18,SNR=11						
KMBO				Sn	Sn	22 34 14.9	-10
	4.0nm,0.3s,baz=35,slow=23,SNR=9.6						
KMBO				Lg	Lg	22 35 21.0	
	4.2nm,0.3s,baz=326,slow=17,SNR=7.0						
ZOMB	Zomba	11.61	146	*i* P	Pn	22 33 03.6	+2.7
ZOMB				S	Pn	22 33 07.3	+6.4
MATP	Matopo	14.59	181	Pn	Pn	22 33 42.2	+0.6
	0.5nm,0.3s,baz=360,slow=13,SNR=9.1						
MATP				Sn	Sn	22 36 19.4	-4.3
	0.3nm,0.3s,baz=299,slow=19,SNR=2.0						
MATP				Lg	Lg	22 37 58.2	
	0.7nm,0.3s,baz=254,slow=20,SNR=4.6						
TSUM	Tsumeb	17.18	218	Pn	P	22 34 18.6	+1.7
	0.2nm,0.3s,baz=49,slow=19,SNR=2.1						
TSUM				Sn	Sn	22 37 13.0	-14
	0.3nm,0.3s,baz=79,slow=19,SNR=2.4						
TSUM				Lg	Lg	22 39 22.6	
	0.3nm,0.3s,baz=114,slow=18,SNR=2.6						
LBTB	Lobatse	19.38	188	S	Sn	22 38 15.6	-4.2
	0.2nm,0.3s,baz=207,slow=19,SNR=1.7						
BOSA	Boshof	22.97	188	P	P	22 35 20.9	+1.1
	1.7nm,0.7s,baz=0.0,slow=4.0,SNR=2.2						
TORD	Torodi Ar. Bea	32.71	305	P	P	22 36 47.4	-0.5
	0.4nm,0.7s,baz=115,slow=7.4,SNR=2.3						
BRTR	Keskin Array B	45.48	5	P	P	22 38 35.2	+0.7
	0.9nm,0.7s,baz=169,slow=7.2,SNR=5.3						
MKAR	Makanchi Array	70.54	36	P	P	22 41 30.5	+0.3
	1.7nm,1.1s,baz=243,slow=5.7,SNR=8.3						
CMAR	Chiang Mai Arr	73.30	69	P	P	22 41 47.6	+0.4
	0.8nm,0.2s,baz=258,slow=4.5,SNR=6.2						
ARCES	ARCESS Array B	75.15	359	P	P	22 41 57.3	+0.3
	8.9nm,1.0s,baz=165,slow=7.2,SNR=3.6						
ZALV	Zalesovo Beam	75.68	30	P	P	22 42 00.3	0.0
	0.7nm,0.6s,baz=246,slow=6.1,SNR=2.7						
SONM	Songino Array	86.05	41	P	P	22 42 56.6	+0.6
	0.2nm,0.8s,baz=276,slow=2.0,SNR=2.0						

JMA 28 22:45:44.4±0.2**,30°.54N**×**142°.60E,h49**^{km}**,M4.3,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.45	186	P	Pn	22 46 37.2	+1.5
JHO	Hitachi	6.29	345	P	Pn	22 47 16.6	+2.1

SIGU ***28*** *22:51:58.1,45°.71N×26°.52E,h145*^{km}*,mb3.6*
NEIC ***28*** *22:51:59.7±1.5,45°.66N±0°.03×26°.48E±0°.04,h132*^{km}*±4*^{km}*,*
Error ellipse: s-maj=5.3km s-min=3.8km az=144.0
IDC ***28*** *22:51:59.8±0.7,45°.80N×26°.19E,h132*^{km}*±7*^{km}*,mb3.2/8,*
mb1 3.2/11,mb1mx3.1/37,mbtmp3.7/11,Error ellipse:
s-maj=30.8km s-min=13.2km az=143.0
BUC ***28*** *22:51:59.8±0.3,45°.64N×26°.49E,h129*^{km}*±2*^{km}*,ml4.1/52,*
Error ellipse: s-maj=1.9km s-min=1.6km az=164.0
SOF ***28*** *22:52:00.4,45°.66N×26°.42E,h89*^{km}*,MD3.7*
ISC 28 22:51:59.9±0.6**,45°.67N**±0°.02×**26°.49E**±0°.02**,h137**^{km}±4^{km}**,**
n228,σ**1^{s}.17**/355**,mb3.7**/10**,132C-72D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BISRR	Bisoca	0.20	127	⇑P	Pn	22 52 18.6	-0.1
BISRR				⇑S	Sn	22 52 32.3	-0.6
BISRR	Bisoca	0.20	127	⇑P	Pn	22 52 18.6	-0.1
BISRR				⇑S	Sn	22 52 32.3	-0.6
BISRR	Bisoca	0.20	127		Pn	22 52 18.6	-0.1
BISRR					Sn	22 52 29.5	-3.4
PLOR	Plostina	0.22	32	⇑P	Pn	22 52 18.1	-0.6
PLOR				⇑S	Sn	22 52 31.1	-1.9
PLOR	Plostina	0.22	32	⇑P	Pn	22 52 18.1	-0.6
PLOR				⇑S	Sn	22 52 31.1	-1.9
PLOR	Plostina	0.22	32		Pn	22 52 18.1	-0.6
PLOR					Sn	22 52 31.1	-1.9
VRI	Vrincioaia	0.26	40	⇑P	Pn	22 52 18.3	-0.5
VRI				⇑S	Sn	22 52 31.9	-1.3
VRI	Vrincioaia	0.26	40	⇑P	Pn	22 52 18.3	-0.5
VRI				⇑S	Sn	22 52 31.9	-1.3
VRI	Vrincioaia	0.26	40		Pn	22 52 18.4	-0.5
VRI					Sn	22 52 31.9	-1.3
NEHR	Nehoiu	0.27	209	⇑P	Pn	22 52 18.7	-0.2
NEHR				⇑S	Sn	22 52 32.4	-0.8
NEHR	Nehoiu	0.27	209	⇑P	Pn	22 52 18.7	-0.2
NEHR				⇑S	Sn	22 52 32.4	-0.8
NEHR	Nehoiu	0.27	209		Pn	22 52 18.7	-0.2
NEHR					Sn	22 52 32.4	-0.8
MLR	Muntele Rosu	0.42	246	⇓P	Pn	22 52 19.3	-0.2
MLR				⇑S	Sn	22 52 33.1	-1.3
MLR	Muntele Rosu	0.42	246	P	Pn	22 52 19.2	-0.3
	53nm,0.3s,baz=90,slow=1.0,SNR=1174						
MLR				S	Sn	22 52 32.1	-2.3
	218nm,0.3s,baz=281,slow=18,SNR=42						
MLR	Muntele Rosu	0.42	246	⇓P	Pn	22 52 19.3	-0.3
MLR				⇑S	Sn	22 52 33.1	-1.3
MLR	Muntele Rosu	0.42	246		Pn	22 52 19.3	-0.3
MLR				Sn	Sn	22 52 34.0	-0.4
ISR	Istrita	0.55	176	⇓P	Pn	22 52 20.0	-0.2
ISR	Istrita	0.55	176	⇓P	Pn	22 52 20.0	-0.2
OZUR		0.65	312	⇓P	Pn	22 52 20.0	-0.7
OZUR				⇓S	Sn	22 52 34.6	-2.0
OZUR		0.65	312	⇓P	Pn	22 52 20.0	-0.7
OZUR				⇓S	Sn	22 52 34.6	-2.0
OZUR		0.65	312		Pn	22 52 20.0	-0.7
OZUR					Sn	22 52 34.6	-2.0
GHRR		0.76	58	⇑P	Pn	22 52 21.3	-0.1
GHRR				⇑S	Sn	22 52 36.8	-1.0
GHRR		0.76	58	⇑P	Pn	22 52 21.3	-0.1
GHRR				⇑S	Sn	22 52 36.8	-1.0
GHRR		0.76	58		Pn	22 52 21.3	-0.1
GHRR					Sn	22 52 36.8	-1.0
PLAR	PLOIESTI	0.82	203	⇑P	Pn	22 52 22.1	+0.1
PLAR	PLOIESTI	0.82	203	⇑P	Pn	22 52 22.1	+0.1
PLAR	PLOIESTI	0.82	203		Pn	22 52 22.1	+0.1
DOPR	Dopca	0.82	292	⇓P	Pn	22 52 21.6	-0.4
DOPR				⇓S	Sn	22 52 37.0	-1.8
DOPR	Dopca	0.82	292	⇓P	Pn	22 52 21.6	-0.4
DOPR				⇓S	Sn	22 52 37.0	-1.8
DOPR	Dopca	0.82	292		Pn	22 52 21.6	-0.4
DOPR					Sn	22 52 37.0	-1.8
TUDR		0.83	95	⇓P	Pn	22 52 21.4	-0.6
TUDR				⇑S	Sn	22 52 37.5	-1.2
TUDR		0.83	95	⇓P	Pn	22 52 21.4	-0.6
TUDR				⇑S	Sn	22 52 37.5	-1.2
TUDR		0.83	95		Pn	22 52 21.4	-0.6
TUDR					Sn	22 52 37.5	-1.2
TESR	Tescani	0.85	8	⇑P	Pn	22 52 21.5	-0.7
TESR				⇑S	Sn	22 52 37.0	-2.3
TESR	Tescani	0.85	8	⇑P	Pn	22 52 21.5	-0.7
TESR				⇑S	Sn	22 52 37.0	-2.3
TESR	Tescani	0.85	8		Pn	22 52 21.5	-0.7
TESR					Sn	22 52 37.0	-2.3
SCHL	Schela	0.96	99	⇑P	Pn	22 52 22.3	-0.7
SCHL				⇓S	Sn	22 52 38.9	-1.7
SCHL	Schela	0.96	99	⇑P	Pn	22 52 22.3	-0.7
SCHL				⇓S	Sn	22 52 38.9	-1.7
SCHL	Schela	0.96	99		Pn	22 52 22.3	-0.7
SCHL					Sn	22 52 38.9	-1.7
VARL	Varlezi	0.98	76	⇑P	Pn	22 52 22.9	-0.3
VARL				⇑S	Sn	22 52 39.7	-1.3
VARL	Varlezi	0.98	76	⇑P	Pn	22 52 22.9	-0.3
VARL				⇑S	Sn	22 52 39.7	-1.3
VARL	Varlezi	0.98	76		Pn	22 52 22.9	-0.3
VARL					Sn	22 52 39.7	-1.3
BIR	Birlad	1.00	53	⇑P	Pn	22 52 23.2	-0.2
BIR				⇑S	Sn	22 52 40.3	-1.0
BIR	Birlad	1.00	53	⇑P	Pn	22 52 23.2	-0.2
BIR				⇑S	Sn	22 52 40.3	-1.0
SULR		1.00	189	⇑P	Pn	22 52 23.4	0.0
SULR				⇓S	Sn	22 52 40.9	-0.4
SULR		1.00	189	⇑P	Pn	22 52 23.4	0.0
SULR				⇓S	Sn	22 52 40.9	-0.4
VOIR		1.03	258	⇓P	Pn	22 52 23.2	-0.6
VOIR				⇑S	Sn	22 52 40.7	-1.4
VOIR		1.03	258	⇓P	Pn	22 52 23.2	-0.6
VOIR				⇑S	Sn	22 52 40.7	-1.4
VOIR		1.03	258		Pn	22 52 23.2	-0.6
VOIR					Sn	22 52 40.7	-1.4
MTUR	Matau	1.09	247	⇑P	Pn	22 52 24.4	0.0
MTUR	Matau	1.09	247	⇑P	Pn	22 52 24.4	0.0
MTUR	Matau	1.09	247		Pn	22 52 24.4	0.0
GISR	Galati	1.12	101	⇓P	Pn	22 52 24.2	-0.4
GISR				⇑S	Sn	22 52 42.0	-1.3
GISR	Galati	1.12	101	⇓P	Pn	22 52 24.2	-0.4
GISR				⇑S	Sn	22 52 42.0	-1.3
AMRR	Amara	1.21	150	⇑P	Pn	22 52 25.3	-0.2
AMRR				⇑S	Sn	22 52 44.2	-0.8
AMRR	Amara	1.21	150	⇑P	Pn	22 52 25.3	-0.2
AMRR				⇑S	Sn	22 52 44.2	-0.8
AMRR	Amara	1.21	150		Pn	22 52 25.3	-0.2
AMRR					Sn	22 52 44.1	-0.8
LEHL	Lehliu	1.22	169	⇑P	Pn	22 52 25.4	-0.1
LEHL				⇓S	Sn	22 52 44.5	-0.4
LEHL	Lehliu	1.22	169	⇑P	Pn	22 52 25.4	-0.1
LEHL				⇓S	Sn	22 52 44.5	-0.4
LEHL	Lehliu	1.22	169		Pn	22 52 25.4	-0.1
LEHL					Sn	22 52 44.5	-0.4
GIUM	Giurgiulesti	1.22	98	⇓P	Pn	22 52 25.4	-0.1
GIUM				⇓S	Sn	22 52 44.2	-0.9
GIUM	Giurgiulesti	1.22	98	⇓P	Pn	22 52 25.4	-0.1
GIUM				⇓S	Sn	22 52 44.2	-0.9
GIUM	Giurgiulesti	1.22	98		Pn	22 52 25.4	-0.1
GIUM					Sn	22 52 44.1	-0.9
JOSR	Joseni	1.24	327	⇑P	Pn	22 52 25.3	-0.5
JOSR	Joseni	1.24	327	⇑P	Pn	22 52 25.3	-0.5
JOSR	Joseni	1.24	327		Pn	22 52 25.3	-0.5
INCR	INCERC-Sediu C	1.25	191	⇑P	Pn	22 52 25.5	-0.3
INCR				⇑S	Sn	22 52 44.7	-0.8
INCR	INCERC-Sediu C	1.25	191	⇑P	Pn	22 52 25.5	-0.3
INCR				⇑S	Sn	22 52 44.7	-0.8
INCR	INCERC-Sediu C	1.25	191		Pn	22 52 25.5	-0.3
INCR					Sn	22 52 44.7	-0.8
CFR	Carcaliu	1.26	112	⇑P	Pn	22 52 25.1	-0.8
CFR				⇑S	Sn	22 52 43.6	-2.1
CFR	Carcaliu	1.26	112	⇑P	Pn	22 52 25.1	-0.8
CFR				⇑S	Sn	22 52 43.6	-2.1
CFR	Carcaliu	1.26	112		Pn	22 52 25.1	-0.8
CFR					Sn	22 52 43.6	-2.1
GIRR	Girov	1.29	0	⇑P	Pn	22 52 26.3	+0.1
GIRR	Girov	1.29	0	⇑P	Pn	22 52 26.3	+0.1
GIRR	Girov	1.29	0		Pn	22 52 26.3	+0.1
BIZ	Bicaz	1.30	348	⇑P	Pn	22 52 27.0	+0.6
BIZ				⇓S	Sn	22 52 46.7	+0.1
BIZ	Bicaz	1.30	348	⇑P	Pn	22 52 27.0	+0.6
BIZ				⇓S	Sn	22 52 46.7	+0.1
BIZ	Bicaz	1.30	348		Pn	22 52 27.0	+0.6
BIZ					Sn	22 52 46.7	+0.1
VASR	Vaslui	1.33	42	⇑P	Pn	22 52 26.4	-0.3
VASR				⇑S	Sn	22 52 45.6	-1.6
VASR	Vaslui	1.33	42	⇑P	Pn	22 52 26.4	-0.3
VASR				⇑S	Sn	22 52 45.6	-1.6
VASR	Vaslui	1.33	42		Pn	22 52 26.4	-0.3
VASR					Sn	22 52 45.6	-1.6
ARR	Arges	1.34	258	⇓P	Pn	22 52 26.5	-0.3
ARR				⇑S	Sn	22 52 45.6	-1.7
ARR	Arges	1.34	258	⇓P	Pn	22 52 26.5	-0.3
ARR				⇑S	Sn	22 52 45.6	-1.7
ARR	Arges	1.34	258		Pn	22 52 26.5	-0.3
ARR					Sn	22 52 45.6	-1.7
STFAR	Stefanesti-Arg	1.34	234	⇓P	Pn	22 52 26.9	+0.1
STFAR				⇑S	Sn	22 52 46.9	-0.5
STFAR	Stefanesti-Arg	1.34	234	⇓P	Pn	22 52 26.9	+0.1
STFAR				⇑S	Sn	22 52 46.9	-0.5
STFAR	Stefanesti-Arg	1.34	234		Pn	22 52 26.9	+0.1
STFAR					Sn	22 52 46.9	-0.5
BUC1	Bucharest	1.36	194	⇑P	Pn	22 52 26.7	-0.2
BUC1				⇓S	Sn	22 52 46.6	-0.9
BUC1	Bucharest	1.36	194	⇑P	Pn	22 52 26.7	-0.2
BUC1				⇓S	Sn	22 52 46.6	-0.9
BUC1	Bucharest	1.36	194		Pn	22 52 26.7	-0.2
BUC1					Sn	22 52 46.6	-0.9
HARR	Harsova	1.41	133	⇑P	Pn	22 52 27.1	-0.4
HARR	Harsova	1.41	133	⇑P	Pn	22 52 27.1	-0.4
HARR	Harsova	1.41	133		Pn	22 52 27.1	-0.4
MDB	Medias	1.55	289	⇓P	Pn	22 52 29.1	+0.1
MDB	Medias	1.55	289	⇓P	Pn	22 52 29.1	+0.1
MDB	Medias	1.55	289		Pn	22 52 29.1	+0.1
HUMR	Humele	1.56	224	⇑P	Pn	22 52 28.6	-0.5
HUMR				⇑S	Sn	22 52 50.0	-1.4
HUMR	Humele	1.56	224	⇑P	Pn	22 52 28.6	-0.5
HUMR				⇑S	Sn	22 52 50.0	-1.4
TLBR	Topalu	1.57	135	⇑P	Pn	22 52 28.9	-0.4
TLBR				⇑S	Sn	22 52 49.9	-1.8
TLBR	Topalu	1.57	135	⇑P	Pn	22 52 28.9	-0.4
TLBR				⇑S	Sn	22 52 49.9	-1.8
TLBR	Topalu	1.57	135		Pn	22 52 28.9	-0.4
TLBR					Sn	22 52 49.3	-2.4
TPGR	Topolog	1.59	120	⇑P	Pn	22 52 28.6	-0.8
TPGR	Topolog	1.59	120	⇑P	Pn	22 52 28.6	-0.8
TPGR	Topolog	1.59	120		Pn	22 52 28.6	-0.8
IAS	Iasi	1.70	26	⇑P	Pn	22 52 30.3	-0.4
IAS				⇓S	Sn	22 52 52.4	-1.8
IAS	Iasi	1.70	26	⇑P	Pn	22 52 30.3	-0.4
IAS				⇓S	Sn	22 52 52.4	-1.8
IAS	Iasi	1.70	26		Pn	22 52 30.3	-0.4
IAS					Sn	22 52 52.5	-1.8
TLCR		1.71	105	⇑P	Pn	22 52 30.3	-0.4
TLCR				⇓S	Sn	22 52 53.2	-1.2
TLCR		1.71	105	⇑P	Pn	22 52 30.3	-0.4
TLCR				⇓S	Sn	22 52 53.2	-1.2
TLCR		1.71	105		Pn	22 52 30.3	-0.4
TLCR					Sn	22 52 53.2	-1.2
COPA	Copaceanca	1.78	211	⇑P	Pn	22 52 31.0	-0.6
COPA				⇑S	Sn	22 52 54.2	-1.6
COPA	Copaceanca	1.78	211	⇑P	Pn	22 52 31.0	-0.6
COPA				⇑S	Sn	22 52 54.2	-1.6
ICOR	Ion Corvin	1.81	148	⇑P	Pn	22 52 31.8	-0.2
ICOR	Ion Corvin	1.81	148	⇑P	Pn	22 52 31.8	-0.2
TIRR	Tirgusor	1.82	131		Pn	22 52 31.6	-0.5
TIRR				Sn	Sn	22 52 54.4	-2.4
LOT	Lotru	1.92	264	⇑P	Pn	22 52 33.4	0.0
LOT	Lotru	1.92	264	⇑P	Pn	22 52 33.4	0.0
LOT	Lotru	1.92	264		Pn	22 52 33.4	0.0
MFTR	Murfatlar	2.03	137	⇓S	Sn	22 52 58.8	-2.2
MFTR	Murfatlar	2.03	137	⇓S	Sn	22 52 58.8	-2.2
MFTR	Murfatlar	2.03	137		Sn	22 52 58.8	-2.2
ARCR	ARCALIA	2.05	315	⇑P	Pn	22 52 34.3	-0.5
ARCR	ARCALIA	2.05	315	⇑P	Pn	22 52 34.3	-0.5
ARCR	ARCALIA	2.05	315		Pn	22 52 34.3	-0.5

KIS	**Kishinev**	**2.09**	**50**	⇓P	**Pn**	**22 52 35.2**	**-0.1**
KIS				⇑S	**Sn**	**22 53 00.4**	**-2.1**
KIS	**Kishinev**	**2.09**	**50**	*e*P	**Pn**	**22 52 35.0**	**-0.3**
	8.0nm,0.1s						
KIS				*e*S	**Sn**	**22 53 00.0**	**-2.6**
	400nm,0.2s						
KIS	**Kishinev**	**2.09**	**50**	⇓P	**Pn**	**22 52 35.2**	**-0.1**
KIS				⇑S	**Sn**	**22 53 00.4**	**-2.1**
KIS	**Kishinev**	**2.09**	**50**		**Pn**	**22 52 35.2**	**-0.1**
KIS					**Sn**	**22 53 00.4**	**-2.1**
KIS	**Kishinev**	**2.09**	**50**	*e*P	**Pn**	**22 52 35.0**	**-0.3**
KIS				Pm		22 52 35.3	
KIS				*e*S	**Sn**	**22 53 00.0**	**-2.6**
KIS				Sm		22 53 00.1	
KIS				m		22 53 02.0	
RAZG	**Razgrad**	**2.10**	**180**	⇑P	**Pn**	**22 52 34.9**	**-0.5**
RAZG				⇓S	**Sn**	**22 53 00.7**	**-2.0**
RAZG	**Razgrad**	**2.10**	**180**	⇑P	**Pn**	**22 52 34.9**	**-0.5**
RAZG				⇓S	**Sn**	**22 53 00.7**	**-2.0**
RAZG	**Razgrad**	**2.10**	**180**		**Pn**	**22 52 34.9**	**-0.5**
RAZG					**Sn**	**22 53 00.7**	**-2.0**
BURAR	**Bucovina Array**	**2.14**	**336**		**Pn**	**22 52 36.9**	**+0.9**
TSCT	**Constanta Port**	**2.15**	**134**	⇓P	**Pn**	**22 52 35.2**	**-0.9**
TSCT				⇑S	**Sn**	**22 53 01.6**	**-2.2**
TSCT	**Constanta Port**	**2.15**	**134**	⇓P	**Pn**	**22 52 35.2**	**-0.9**
TSCT				⇑S	**Sn**	**22 53 01.6**	**-2.2**
TSCT	**Constanta Port**	**2.15**	**134**		**Pn**	**22 52 35.2**	**-0.9**
TSCT					**Sn**	**22 53 01.6**	**-2.2**
ZIMR		**2.16**	**202**	⇓P	**Pn**	**22 52 35.7**	**-0.5**
ZIMR				⇓S	**Sn**	**22 53 01.9**	**-2.1**
ZIMR		**2.16**	**202**	⇓P	**Pn**	**22 52 35.7**	**-0.5**
ZIMR				⇓S	**Sn**	**22 53 01.9**	**-2.1**
BUR08	**Bucovina Ar. S**	**2.17**	**336**		**Pn**	**22 52 37.4**	**+1.0**
EFOR	**EFORIE**	**2.20**	**135**	⇑P	**Pn**	**22 52 36.3**	**-0.3**
EFOR				⇑S	**Sn**	**22 53 02.9**	**-2.0**
EFOR	**EFORIE**	**2.20**	**135**	⇑P	**Pn**	**22 52 36.3**	**-0.3**
EFOR				⇑S	**Sn**	**22 53 02.9**	**-2.0**
VLAD	**Vladila**	**2.23**	**222**	⇑P	**Pn**	**22 52 36.2**	**-0.8**
VLAD				⇓S	**Sn**	**22 53 03.0**	**-2.5**
VLAD	**Vladila**	**2.23**	**222**	⇑P	**Pn**	**22 52 36.2**	**-0.8**
VLAD				⇓S	**Sn**	**22 53 03.0**	**-2.5**
VLAD	**Vladila**	**2.23**	**222**		**Pn**	**22 52 36.2**	**-0.8**
VLAD					**Sn**	**22 53 03.0**	**-2.5**
CJR	**Cluj-Napoca**	**2.26**	**299**	⇓P	**Pn**	**22 52 37.2**	**-0.3**
CJR	**Cluj-Napoca**	**2.26**	**299**	⇓P	**Pn**	**22 52 37.2**	**-0.3**
CJR	**Cluj-Napoca**	**2.26**	**299**		**Pn**	**22 52 37.2**	**-0.3**
PSN	**Preselentsi**	**2.32**	**148**	P	**Pn**	**22 52 38.2**	**0.0**
TSSL	**Sulina**	**2.34**	**101**	⇑S	**Sn**	**22 53 07.2**	**-0.6**
TSSL	**Sulina**	**2.34**	**101**	⇑S	**Sn**	**22 53 07.2**	**-0.6**
TSSL	**Sulina**	**2.34**	**101**		**Sn**	**22 53 07.2**	**-0.6**
MANR	**Mangalia**	**2.38**	**140**	⇑P	**Pn**	**22 52 38.4**	**-0.4**
MANR				⇓S	**Sn**	**22 53 06.7**	**-2.1**
MANR	**Mangalia**	**2.38**	**140**	⇑P	**Pn**	**22 52 38.4**	**-0.4**
MANR				⇓S	**Sn**	**22 53 06.7**	**-2.1**
MANR	**Mangalia**	**2.38**	**140**		**Pn**	**22 52 38.4**	**-0.4**
MANR					**Sn**	**22 53 06.7**	**-2.1**
SZH	**Strazhica**	**2.43**	**190**	P	**Pn**	**22 52 39.0**	**-0.5**
DEV	**Deva**	**2.52**	**276**	⇓P	**Pn**	**22 52 41.1**	**+0.5**
DEV	**Deva**	**2.52**	**276**	⇓P	**Pn**	**22 52 41.1**	**+0.5**
DEV	**Deva**	**2.52**	**276**		**Pn**	**22 52 41.1**	**+0.5**
SRE	**Strehaia**	**2.53**	**248**	⇓P	**Pn**	**22 52 40.2**	**-0.5**
SRE				⇑S	**Sn**	**22 53 10.6**	**-1.6**
SRE	**Strehaia**	**2.53**	**248**	⇓P	**Pn**	**22 52 40.2**	**-0.5**
SRE				⇑S	**Sn**	**22 53 10.6**	**-1.6**
SRE	**Strehaia**	**2.53**	**248**		**Pn**	**22 52 40.2**	**-0.5**
SRE					**Sn**	**22 53 10.4**	**-1.7**
PVL	**Pavlikeni**	**2.58**	**199**	P	**Pn**	**22 52 42.4**	**+1.0**
GZR	**Gura Zlata**	**2.62**	**265**	⇑P	**Pn**	**22 52 42.0**	**+0.1**
GZR	**Gura Zlata**	**2.62**	**265**	⇑P	**Pn**	**22 52 42.0**	**+0.1**
GZR	**Gura Zlata**	**2.62**	**265**		**Pn**	**22 52 42.0**	**+0.1**
PLVB	**Pleven**	**2.64**	**211**	⇑P	**Pn**	**22 52 41.6**	**-0.6**
PLVB	**Pleven**	**2.64**	**211**	⇑P	**Pn**	**22 52 41.6**	**-0.6**
PLVB	**Pleven**	**2.64**	**211**		**Pn**	**22 52 41.6**	**-0.6**
ROIA	**ROIAK**	**2.65**	**166**	P	**Pn**	**22 52 42.1**	**-0.2**
BAIL	**Bailesti**	**2.77**	**235**	⇓P	**Pn**	**22 52 42.8**	**-1.1**
BAIL				⇑S	**Sn**	**22 53 16.5**	**-1.2**
BAIL	**Bailesti**	**2.77**	**235**	⇓P	**Pn**	**22 52 42.8**	**-1.1**
BAIL				⇑S	**Sn**	**22 53 16.5**	**-1.2**
BAIL	**Bailesti**	**2.77**	**235**		**Pn**	**22 52 42.8**	**-1.1**
BAIL					**Sn**	**22 53 15.9**	**-1.8**
SORM	**Soroca**	**2.78**	**27**	⇓P	**Pn**	**22 52 43.1**	**-0.8**
SORM	**Soroca**	**2.78**	**27**	⇓P	**Pn**	**22 52 43.1**	**-0.8**
SORM	**Soroca**	**2.78**	**27**		**Pn**	**22 52 43.1**	**-0.8**
DRGR		**2.85**	**295**	⇓P	**Pn**	**22 52 44.0**	**-0.9**
DRGR		**2.85**	**295**	⇓P	**Pn**	**22 52 44.0**	**-0.9**
DRGR		**2.85**	**295**		**Pn**	**22 52 44.0**	**-0.9**
RMGR	**Halanga-Turnu**	**2.87**	**251**	⇑S	**Sn**	**22 53 17.5**	**-2.2**
RMGR	**Halanga-Turnu**	**2.87**	**251**	⇑S	**Sn**	**22 53 17.5**	**-2.2**
KMPD	**K-Podol'skiy**	**2.90**	**360**	*e*P	**Pn**	**22 52 44.7**	**-0.7**
KMPD				*i* S	**Sn**	**22 53 17.6**	**-2.9**
HERR	**Herculane**	**2.98**	**256**	⇓P	**Pn**	**22 52 45.5**	**-1.0**
HERR	**Herculane**	**2.98**	**256**	⇓P	**Pn**	**22 52 45.5**	**-1.0**
HERR	**Herculane**	**2.98**	**256**		**Pn**	**22 52 45.5**	**-1.0**
NDNU	**Novodnistrovsk**	**2.99**	**11**	*i* P	**Pn**	**22 52 45.7**	**-0.9**
NDNU				Pm		22 52 46.7	
NDNU				*i* S	**Sn**	**22 53 19.9**	**-2.8**
NDNU				Sm		22 53 27.1	
JMB	**Yambol**	**3.20**	**179**	P	**Pn**	**22 52 48.5**	**-0.8**
MDVR	**Moldovita**	**3.49**	**257**	⇑P	**Pn**	**22 52 52.2**	**-0.9**
MDVR	**Moldovita**	**3.49**	**257**	⇑P	**Pn**	**22 52 52.2**	**-0.9**
MDVR	**Moldovita**	**3.49**	**257**		**Pn**	**22 52 52.2**	**-0.9**
MDVR					**Sn**	**22 53 31.6**	**-2.7**
PGB	**Panagyurishte**	**3.53**	**209**	P	**Pn**	**22 52 54.2**	**+0.5**
HORU	**Horodok**	**3.55**	**359**	*e*P	**Pn**	**22 52 53.4**	**-0.4**
HORU				Pm		22 52 54.1	
HORU				*i* S	**Sn**	**22 53 35.1**	**-0.6**
HORU				Sm		22 53 49.3	
EDRB	**Edirne**	**3.82**	**177**	P	**Pn**	**22 52 56.9**	**-0.6**
VTS	**Vitosha**	**3.84**	**219**	P	**Pn**	**22 52 57.6**	**-0.3**
RZN	**Rozhen**	**4.18**	**199**	P	**Pn**	**22 53 02.1**	**-0.2**
KOLS	**Kolonicke sedl**	**4.35**	**320**	*e*P	**Pn**	**22 53 05.2**	**+0.9**
RDO	**Rodhopi**	**4.57**	**189**	P	**Pn**	**22 53 07.0**	**-0.3**
NVR	**Nevrokopi**	**4.72**	**205**	P	**Pn**	**22 53 09.1**	**-0.2**
ALN	**Alexandroupoli**	**4.78**	**184**	Pn	**Pn**	**22 53 10.7**	**+0.6**
DIVS	**Divibare**	**4.87**	**254**		**Pn**	**22 53 10.3**	**-1.2**
KAVA	**Kavala**	**4.88**	**198**	P	**Pn**	**22 53 11.0**	**-0.5**
SRS	**Serrai**	**5.01**	**206**	P	**Pn**	**22 53 12.7**	**-0.5**
VAY	**Valandovo**	**5.19**	**215**	*i* Pn	**Pn**	**22 53 16.4**	**+0.8**
KNT	**Kendrikon**	**5.21**	**211**	P	**Pn**	**22 53 15.7**	**-0.1**
SEV	**Sevastopol'**	**5.21**	**100**	*e*P	**Pn**	**22 53 14.7**	**-1.0**
SEV				Pm		22 53 14.9	
SEV				*e*S	**Sn**	**22 54 12.9**	**-2.0**
SEV				Sm		22 54 14.3	
SMTH	**Samothraki Isl**	**5.24**	**188**	P	**Pn**	**22 53 16.7**	**+0.4**
SOH	**Sokhos**	**5.35**	**206**	P	**Pn**	**22 53 17.4**	**-0.5**
AKASG	**Malin Array Be**	**5.36**	**19**	P	**Pn**	**22 53 17.1**	**-0.7**
	3.6nm,0.3s,baz=200,slow=11,SNR=9.2						
AKASG				S	**Sn**	**22 54 14.0**	**-4.6**
	4.0nm,0.3s,baz=200,slow=21,SNR=8.6						
VYHS	**Vyhne**	**5.94**	**301**	*e*P	**Pn**	**22 53 25.2**	**-0.4**
SUDU	**Sudak**	**6.06**	**94**	*e*P	**Pn**	**22 53 26.2**	**-0.9**
SUDU				Pm		22 53 30.2	
SUDU				*e*S	**Sn**	**22 54 32.7**	**-2.6**
SUDU				Sm		22 54 36.3	
PDG	**Podgorica**	**6.13**	**241**	Pn	**Pn**	**22 53 28.6**	**+0.4**
FNA	**Florina**	**6.14**	**219**	Pn	**Pn**	**22 53 28.8**	**+0.4**
MNK	**Minsk**	**8.89**	**5**	*i* P	**Pn**	**22 54 03.4**	**-1.7**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**Pn**	**22 54 03.4**	**-1.7**
	comp=N,12nm,0.8s						
MNK				*i* P	**Pn**	**22 54 03.4**	**-1.7**
	comp=Z,4.0nm,0.8s						
MNK				*i* S	**Sn**	**22 55 41.3**	**-2.2**
MNK				*i* LRM	MLR	22 57 39.0	
	comp=N,88nm,9.9s						
MNK				*i* LRM	MLR	22 57 39.9	
	comp=Z,65nm,7.3s						
MNK				*i* LRM	MLR	22 57 42.4	
	comp=E,8.0nm,11.2s						
SENIN	**Lac Senin/Sane**	**13.36**	**280**		**P**	**22 55 08.7**	**-0.1**
BELG	**Belogornoye**	**15.38**	**56**	P	**P**	**22 55 30.6**	**-0.3**
	comp=E,0.9nm,0.3s,baz=228,slow=15,SNR=4.5						
FINES	**FINESS Array B**	**15.81**	**359**	P	**Pn**	**22 55 34.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=165,slow=11,SNR=4.1						
AKTO	**Aktyubinsk**	**21.51**	**66**	P	**P**	**22 56 38.1**	**+0.4**
	comp=E,0.6nm,0.5s,baz=264,slow=9.1,SNR=2.2						
ABKAR	**Akbulak array**	**22.79**	**69**	P	**P**	**22 56 51.4**	**+0.9**
ABKAR	**Akbulak array**	**22.79**	**69**	P	**P**	**22 56 51.6**	**+1.0**
ESDC	**Sonseca Array**	**23.09**	**266**	P	**P**	**22 56 52.1**	**-1.4**
	comp=E,0.4nm,1.0s,baz=63,slow=9.5,SNR=4.4						
GEYT	**Alibeck**	**24.70**	**97**	P	**P**	**22 57 12.1**	**+4.0**
	comp=E,1.2nm,0.4s,baz=286,slow=10,SNR=2.9						
KURK	**Kurchatov**	**34.52**	**62**	P	**P**	**22 58 35.9**	**+1.3**
KURK				IAmb	IAmb	22 58 43.8	
	comp=Z,2.8nm,1.4s						
ZALV	**Zalesovo Beam**	**37.57**	**56**	P	**P**	**22 59 01.7**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=280,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	**37.93**	**68**	P	**P**	**22 59 04.8**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=280,slow=6.7,SNR=2.7						
TOA0	**Torodi Ar. Sit**	**38.62**	**221**	P	**P**	**22 59 10.0**	**+0.2**
TOA0				IAmb	IAmb	22 59 28.6	
	comp=Z,6.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**38.62**	**221**	P	**P**	**22 59 10.1**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=35,slow=9.0,SNR=6.2						
DBIC	**Dimbokro**	**47.38**	**225**	P	**P**	**23 00 19.7**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=22,slow=11,SNR=9.8						
DBIC	**Dimbokro**	**47.38**	**225**	P	**P**	**23 00 19.8**	**-0.3**
SONM	**Songino Array**	**52.44**	**57**	P	**P**	**23 00 58.9**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=284,slow=8.6,SNR=2.5						

SOF ***28*** *23:25:39.4, 42°.87N×21°.03E, h2^{km}, MD3.1*
PDG ***28*** *23:25:41.5±0.4, 42°.91N×21°.00E, h9^{km}, ML2.7/13, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
RHSSO ***28*** *23:25:41.3±0.7, 42°.90N×21°.03E, h4^{km}±2^{km}, ML2.8/11*
BEO ***28*** *23:25:42.1±0.2, 42°.87N×21°.02E, h13^{km}±7^{km}, ML2.8/14*
ISC 28 23:25:41.1±1.1, **42°.88N**±0°.02×**21°.03E**±0°.02, **h4**^{km}±9^{km}, **n102,** σ**0^{s}93**/163, **32C-19D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BEY	**Berane**	**0.83**	**270**	*i* Pg	**Pg**	**23 25 56.3**	**-0.9**
IVA	**Berane**	**0.83**	**270**	⇑*i*Pg	**Pg**	**23 25 56.2**	**-0.9**
IVA				*i* Sg	**Sg**	**23 26 08.5**	**+0.6**
PVY	**Plav**	**0.84**	**250**	⇓*i*Pg	**Pg**	**23 25 56.5**	**-0.7**
PVY				*i* Sg	**Sg**	**23 26 09.1**	**+1.1**
SJES	**Sjenica**	**0.86**	**297**	*e*Pg	**Pg**	**23 25 57.0**	**-0.6**
SJES				*e*Sg	**Sg**	**23 26 08.2**	**-0.6**
SJES	**Sjenica**	**0.86**	**297**	⇑*i*Pg	**Pg**	**23 25 57.0**	**-0.6**
SJES				*e*Sg	**Sg**	**23 26 08.8**	**0.0**
BOVS	**Bovan**	**0.90**	**33**	*e*Pg	**Pb**	**23 25 59.5**	**+0.2**
BOVS				*e*Sg	**Sb**	**23 26 10.6**	**-1.1**
IVAS	**Ivanjica**	**0.94**	**318**	*e*Pg	**Pg**	**23 25 58.7**	**-0.5**
IVAS				*e*Sg	**Sb**	**23 26 12.3**	**-0.7**
SKO	**Skopje**	**0.96**	**161**	*i* Pg	**Pg**	**23 25 58.6**	**-0.9**
GRUS	**Gruza**	**1.03**	**347**	*e*Pg	**Pg**	**23 26 00.9**	**0.0**
GRUS				*e*Sg	**Sn**	**23 26 16.5**	**-0.8**
KOME	**Kolasin**	**1.11**	**269**	⇑*i*Pg	**Pg**	**23 26 01.5**	**-0.9**
KOME				*i* Sg	**Sg**	**23 26 15.5**	**-1.3**
BOSS	**Bosilegrad**	**1.14**	**109**	*e*Pg	**Pb**	**23 26 02.5**	**-0.9**
BOSS				*e*Sg	**Sg**	**23 26 17.6**	**-0.1**
ZAPS	**Zavoj**	**1.24**	**71**	*e*Pg	**Pg**	**23 26 05.6**	**+0.7**
ZAPS				*e*Sg	**Sn**	**23 26 22.5**	**0.0**
PHP	**Peshkopia**	**1.27**	**200**	P	**Pn**	**23 26 03.9**	**-1.8**
PLE	**Pljevlja**	**1.28**	**291**	⇑*i*Pg	**Pn**	**23 26 04.5**	**-1.4**
PLE				*i* Sg	**Sn**	**23 26 23.1**	**-0.5**
ZAGS	**Zajecar**	**1.28**	**43**	*e*Pg	**Pn**	**23 26 05.4**	**-0.4**
ZAGS				*e*Sg	**Sn**	**23 26 23.0**	**-0.4**
PDG	**Podgorica**	**1.38**	**252**	⇑P	**Pn**	**23 26 06.7**	**-0.5**
PDG				⇑S	**Sg**	**23 26 26.3**	**+0.8**
PDG	**Podgorica**	**1.38**	**252**	*e*Pg	**Pn**	**23 26 07.0**	**-0.2**
PDG				*e*Sg	**Sg**	**23 26 26.9**	**+1.4**
PDG	**Podgorica**	**1.38**	**252**	⇑*i*Pg	**Pn**	**23 26 06.0**	**-1.2**
PDG				*e*Sg	**Sn**	**23 26 25.6**	**-0.3**
TTG	**Podgorica**	**1.38**	**252**	⇓*i*Pg	**Pn**	**23 26 07.0**	**-0.2**
TTG				*i* Sg	**Sg**	**23 26 27.4**	**+1.9**
SVIS	**Svilajnac**	**1.39**	**6**	*e*Pg	**Pn**	**23 26 06.4**	**-0.9**
SVIS				*e*Sg	**Sg**	**23 26 27.5**	**+1.7**
BLKB	**Belogradchik**	**1.41**	**58**	⇑S	**Sg**	**23 26 27.9**	**+1.3**
TRUS	**Trudelj**	**1.41**	**342**	*e*Pg	**Pn**	**23 26 07.0**	**-0.7**
TRUS				*e*Sg	**Sg**	**23 26 28.4**	**+1.8**
RUDO	**Rudo**	**1.42**	**302**	*e*Pg	**Pn**	**23 26 06.0**	**-1.7**
DIVS	**Divibare**	**1.43**	**329**	*e*Pg	**Pn**	**23 26 07.4**	**-0.6**
DIVS				*e*Sg	**Sg**	**23 26 27.1**	**0.0**
DIVS	**Divibare**	**1.43**	**329**	⇑*i*Pg	**Pn**	**23 26 07.1**	**-0.8**
DIVS				*e*Sg	**Sn**	**23 26 26.4**	**-0.9**
NKY	**Niksic**	**1.50**	**268**	⇓*i*Pg	**Pn**	**23 26 08.8**	**-0.1**
NKY				*i* Sg	**Sg**	**23 26 30.8**	**+1.6**
DRME	**Dracevica, Mon**	**1.53**	**244**	*e*Pn	**Pn**	**23 26 09.3**	**+0.1**
DRME				*e*Sn	**Sb**	**23 26 29.8**	**+0.1**
DRME	**Dracevica, Mon**	**1.53**	**244**	⇑*i*Pg	**Pb**	**23 26 09.8**	**-0.2**
DRME				*i* Sg	**Sg**	**23 26 32.5**	**+2.3**
BBLS	**Lazići**	**1.54**	**310**	*e*Pg	**Pn**	**23 26 09.5**	**+0.1**
BBLS				*e*Sg	**Sg**	**23 26 31.3**	**+0.8**
BBLS	**Lazići**	**1.54**	**310**	⇑*i*Pn	**Pn**	**23 26 08.7**	**-0.7**
BBLS				*e*Sn	**Sg**	**23 26 30.2**	**-0.3**
UPM	**Unac-Piva**	**1.59**	**282**	*e*Pn	**Pn**	**23 26 10.0**	**-0.2**
UPM	**Unac-Piva**	**1.59**	**282**	⇓*i*Pg	**Pn**	**23 26 10.4**	**+0.2**
UPM				*i* Sg	**Sg**	**23 26 33.3**	**+1.2**
CEME	**Cevo**	**1.59**	**259**	⇓*i*Pg	**Pb**	**23 26 10.7**	**-0.4**
CEME				*i* Sg	**Sg**	**23 26 33.8**	**+1.6**
KUBS	**Kucevo**	**1.60**	**17**	*e*Pg	**Pb**	**23 26 10.5**	**-0.8**
KUBS				*e*Sg	**Sg**	**23 26 33.0**	**+0.5**
ULC	**Ulcinj**	**1.61**	**236**	⇓*i*Pn	**Pb**	**23 26 11.2**	**-0.2**
ULC				*i* Sn	**Sg**	**23 26 34.7**	**+2.0**
VTS	**Vitosha**	**1.65**	**98**	⇓P	**Pn**	**23 26 10.6**	**-0.4**
VTS				⇓S	**Sb**	**23 26 33.1**	**-0.2**
VTS	**Vitosha**	**1.65**	**98**	*e*Pg	**Pn**	**23 26 10.9**	**-0.1**
VTS				*e*Sg	**Sb**	**23 26 33.7**	**+0.3**
VTS	**Vitosha**	**1.65**	**98**	P	**Pn**	**23 26 10.8**	**-0.2**
BUM	**Brajici-Budva**	**1.68**	**250**	⇑*i*Pn	**Pb**	**23 26 12.0**	**-0.6**
BUM				*i* Sn	**Sg**	**23 26 36.1**	**+1.1**
TIR	**Tirane**	**1.76**	**210**	⇑P	**Pn**	**23 26 10.8**	**-1.6**
OHR	**Ohrid**	**1.78**	**186**	*i* Pn	**Pb**	**23 26 14.5**	**+0.2**
BRY	**Bratogost**	**1.83**	**271**	⇑*i*Pn	**Pn**	**23 26 13.7**	**+0.2**
BRY				*e*Sn	**Sn**	**23 26 36.8**	**-0.3**
BRY	**Bratogost**	**1.83**	**271**	⇑*i*Pn	**Pn**	**23 26 13.9**	**+0.4**
BRY				*i* Sn	**Sg**	**23 26 39.5**	**-0.3**
KKB	**Krupnik**	**1.83**	**123**	P	**Pn**	**23 26 13.7**	**+0.3**
HCY	**Herceg Novi**	**1.92**	**258**	⇑*i*Pn	**Pn**	**23 26 15.4**	**+0.8**
HCY	**Herceg Novi**	**1.92**	**258**	*e*Pn	**Pn**	**23 26 15.3**	**+0.7**
HCY				*i* Sn	**Sb**	**23 26 41.8**	**+0.9**
VAY	**Valandovo**	**1.94**	**143**	*i* Pn	**Pn**	**23 26 14.4**	**-0.4**
MDVR	**Moldovita**	**1.96**	**14**	⇓P	**Pb**	**23 26 16.7**	**-0.7**
MDVR				⇑S	**Sg**	**23 26 44.3**	**+0.1**
PUNG	**Punghina**	**1.97**	**44**	⇑P	**Pb**	**23 26 16.3**	**-1.1**
PUNG				⇓S	**Sb**	**23 26 42.4**	**0.0**
TREB	**Trebinje**	**1.98**	**266**	*e*Pn	**Pn**	**23 26 16.1**	**+0.7**
TREB				*e*Sn	**Sn**	**23 26 41.3**	**+0.7**
TEKS	**Tekeris**	**1.99**	**327**	*e*Pg	**Pg**	**23 26 18.9**	**-0.3**
TEKS				*e*Sg	**Sg**	**23 26 45.5**	**+0.5**
TEKS	**Tekeris**	**1.99**	**327**	*e*Pn	**Pn**	**23 26 15.4**	**-0.2**
TEKS				*e*Sn	**Sn**	**23 26 40.9**	**0.0**
BAIL	**Bailesti**	**2.04**	**55**	⇑P	**Pn**	**23 26 15.8**	**-0.3**
FNA	**Florina**	**2.11**	**173**	P	**Pn**	**23 26 16.3**	**-1.0**
DBRK	**Dubrovnik**	**2.13**	**265**	*e*Pn	**Pn**	**23 26 17.6**	**+0.2**
DBRK				Sn	**Sb**	**23 26 45.7**	**-1.4**
RMGR	**Halanga-Turnu**	**2.15**	**34**	⇓S	**Sb**	**23 26 48.4**	**+0.8**
GRG	**Griva**	**2.18**	**151**	P	**Pn**	**23 26 18.1**	**-0.1**
KNT	**Kendrikon**	**2.21**	**140**	P	**Pn**	**23 26 18.3**	**-0.3**
HERR	**Herculane**	**2.24**	**26**	⇓P	**Pn**	**23 26 19.4**	**+0.4**
HERR				⇑S	**Sb**	**23 26 50.6**	**+0.5**
SRE	**Strehaia**	**2.38**	**41**	⇑P	**Pn**	**23 26 21.4**	**+0.5**
MMB	**Musomiste**	**2.39**	**122**	P	**Pb**	**23 26 23.2**	**-1.5**
FRGS	**Fruska Gora**	**2.44**	**339**	*e*Pn	**Pn**	**23 26 21.0**	**-0.7**
FRGS	**Fruska Gora**	**2.44**	**339**	⇑*i*Pn	**Pn**	**23 26 21.3**	**-0.4**
FRGS				*e*Sn	**Sn**	**23 26 52.1**	**+0.1**
STON	**Ston**	**2.44**	**271**	*e*Pn	**Pn**	**23 26 21.8**	**0.0**
STON				Sn	**Sn**	**23 26 53.3**	**+1.2**
STON	**Ston**	**2.44**	**271**	*e*Pn	**Pn**	**23 26 21.9**	**+0.1**
STON				*e*Sn	**Sn**	**23 26 52.7**	**+0.6**
NEST	**Nestorio**	**2.47**	**180**	P	**Pn**	**23 26 22.1**	**-0.1**
BANR	**Banloc**	**2.50**	**2**	⇓P	**Pn**	**23 26 23.8**	**+1.2**
SRS	**Serrai**	**2.60**	**132**	P	**Pn**	**23 26 23.6**	**-0.4**
NVR	**Nevrokopi**	**2.61**	**125**	P	**Pn**	**23 26 24.0**	**-0.1**
PLVB	**Pleven**	**2.68**	**78**	⇑P	**Pn**	**23 26 26.0**	**+1.0**
PLVB				⇓S	**Sn**	**23 26 59.3**	**+1.4**
VLAD	**Vladila**	**2.70**	**64**	⇑S	**Sn**	**23 26 59.9**	**+1.5**
BZS	**Buzias**	**2.77**	**9**	⇑P	**Pn**	**23 26 26.6**	**+0.3**
BZS				⇑S	**Sb**	**23 27 04.1**	**-1.3**
RICI	**Ricice**	**2.91**	**283**	*e*Pn	**Pn**	**23 26 29.5**	**+1.3**
RICI				Sn	**Sn**	**23 27 04.3**	**+0.6**
MAKA	**Makarska**	**2.96**	**279**	*e*Pn	**Pn**	**23 26 30.3**	**+1.4**
MAKA				Sn	**Sn**	**23 27 06.6**	**+1.7**
LOT	**Lotru**	**3.24**	**37**	⇑P	**Pn**	**23 26 33.9**	**+1.1**
HUMR	**Humele**	**3.31**	**59**	⇓P	**Pn**	**23 26 34.5**	**+0.9**
BLY	**Banja Luka**	**3.35**	**305**	⇑*i*Pn	**Pn**	**23 26 34.5**	**+0.3**
BLY				*e*Sn	**Sn**	**23 27 13.4**	**-1.0**
HVAR	**Hvar**	**3.37**	**277**	*e*Pn	**Pn**	**23 26 35.2**	**+0.7**
HVAR				Sn	**Sn**	**23 27 15.2**	**+0.2**
KIJV	**Kijevo**	**3.55**	**290**	*e*Pn	**Pn**	**23 26 38.0**	**+1.1**
KIJV				Sn	**Sn**	**23 27 20.2**	**+0.8**
ARR	**Arges**	**3.59**	**45**	⇓P	**Pn**	**23 26 38.5**	**+0.8**
MORH	**Mrgy, Hungar**	**3.74**	**334**	⇓*e*PN	**Pn**	**23 26 39.2**	**-0.4**
MORH				*e*SN	**Sn**	**23 27 23.3**	**-0.8**
MORH	**Mrgy, Hungar**	**3.74**	**334**	⇑*i*Pn	**Pn**	**23 26 38.9**	**-0.7**
MORH				*e*Sn	**Sn**	**23 27 23.3**	**-0.8**
VOIR		**3.86**	**47**	⇑P	**Pn**	**23 26 42.0**	**+0.6**
MORI	**Morici**	**4.00**	**286**	*e*Pn	**Pn**	**23 26 43.4**	**+0.2**
ZIRJ	**Zirje**	**4.00**	**283**	*e*Pn	**Pn**	**23 26 43.7**	**+0.4**
ZIRJ				Sn	**Sn**	**23 27 31.3**	**+0.7**
DRGR		**4.09**	**16**	⇑P	**Pn**	**23 26 45.2**	**+0.7**
MOSL	**Moslavina**	**4.11**	**313**	*e*Pn	**Pn**	**23 26 45.1**	**+0.4**
MLR	**Muntele Rosu**	**4.39**	**52**	⇑P	**Pn**	**23 26 49.0**	**+0.2**
DUGI	**Dugi Otok**	**4.49**	**286**	*e*Pn	**Pn**	**23 26 50.1**	**+0.3**
DUGI				Sn	**Sn**	**23 27 43.1**	**+0.7**
TIH	**Tihany**	**4.59**	**332**	⇓*e*PN	**Pn**	**23 26 51.1**	**-0.2**
TIH				*e*SN	**Sn**	**23 27 46.3**	**+1.3**
MPLH	**Magyarpolny**	**4.95**	**331**	*e*SN	**Sn**	**23 27 54.6**	**+0.8**
CRES	**Cresnjev**	**4.96**	**308**	⇓*i*Pn	**Pn**	**23 26 56.3**	**-0.1**
SOKA	**Soboth**	**5.71**	**314**	*i* Pn	**Pn**	**23 27 06.9**	**+0.2**
	0.4nm,0.2s						
SOKA				*e*Sn	**Sn**	**23 28 13.8**	**+1.1**
	0.9nm,0.5s						
VYHS	**Vyhne**	**5.82**	**345**	*e*PN	**Pn**	**23 27 09.0**	**+0.8**
VYHS				*e*SN	**Sn**	**23 28 14.7**	**-0.6**
ARSA	**Arzberg**	**5.85**	**320**	*e*Pn	**Pn**	**23 27 08.9**	**+0.2**
	2.6nm,0.3s						
ARSA				*e*Sn	**Sn**	**23 28 16.2**	**0.0**
	1.0nm,0.3s						
OBKA	**Obir**	**5.87**	**310**	*e*Pn	**Pn**	**23 27 09.4**	**+0.4**
	1.3nm,0.4s						
MODS	**Modra-Piesok**	**6.09**	**336**	*e*PN	**Pn**	**23 27 11.3**	**-0.6**
MODS				*e*SN	**Sn**	**23 28 19.3**	**-2.7**
MYKA	**Terra Mystica**	**6.46**	**308**	*e*Pn	**Pn**	**23 27 18.2**	**+1.3**
	1.3nm,0.3s						
KBA	**Koelnbreinsper**	**6.87**	**310**	*e*Pn	**Pn**	**23 27 23.5**	**+0.6**
	0.7nm,0.4s						
ABTA	**Abfaltersbach**	**7.18**	**305**	*e*Pn	**Pn**	**23 27 28.5**	**+1.5**
	0.8nm,0.3s						
MOTA	**Moosalm**	**8.31**	**306**	*e*Pn	**Pn**	**23 27 45.2**	**+2.6**
	1.7nm,0.5s						
FETA	**Feichten**	**8.39**	**303**	*e*Pn	**Pn**	**23 27 47.0**	**+3.3**
	0.5nm,0.4s						

MAN ***28*** *23:53:15.8, 7°.40N×126°.90E, h66^{km}, MS3.2*
IDC ***28*** *23:53:21.3±2.4, 7°.49N×126°.64E, h83^{km}±22^{km}, mb3.7/13, mb1 3.9/13, mb1mx3.6/34, mbtmp4.0/13, MS3.3/2, Ms1 3.3/2, ms1mx2.8/37, Error ellipse: s-maj=33.9km s-min=13.9km az=77.0*
ISC 28 23:53:19.2±1.5, **7°.43N**±0°.04×**126°.8E**±0°.1, **h65**^{km}±14^{km}, **n29,** σ**1^{s}10**/39, **mb4.0**/13, **2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.25**	**253**	P	**Pn**	**23 53 41.1**	**+0.5**
	110nm,0.3s,baz=82,slow=5.8,SNR=15						
DAV				S	**Sn**	**23 53 58.5**	**+1.8**
	131nm,0.3s,baz=108,slow=20,SNR=3.7						
DDMP	**Don Marcelino,**	**1.69**	**219**	*e*P	**Pn**	**23 53 45.2**	**-1.4**
DDMP				*e*S	**Sn**	**23 54 07.0**	**-0.4**
KCP	**Kidapawan**	**1.73**	**256**	⇓*i*P	**Pn**	**23 53 47.0**	**-0.1**
KCP				*i* S	**Sn**	**23 54 07.9**	**-0.5**
BUKP	**Musuan**	**1.76**	**285**	*e*P	**Pn**	**23 53 47.1**	**-0.5**
BUKP				*e*S	**Sn**	**23 54 10.4**	**+1.3**
BUTP	**Butuan**	**1.91**	**323**	*e*P	**Pn**	**23 53 49.0**	**-0.5**
BUTP				*e*S	**Sn**	**23 54 14.2**	**+1.5**
CGP	**Cagayan de Oro**	**2.31**	**296**	⇑*i*P	**Pn**	**23 53 54.6**	**-0.3**
CGP				*i* S	**Sn**	**23 54 21.7**	**-0.5**
SKMP	**Bagumbayan, Su**	**2.40**	**248**	*e*P	**Pn**	**23 53 54.8**	**-1.4**
SKMP				*e*S	**Sn**	**23 54 24.6**	**+0.1**
GLSP	**General Luna,**	**2.43**	**345**	*e*P	**Pn**	**23 53 53.9**	**-2.6**
GLSP				*e*S	**Sn**	**23 54 24.3**	**-0.9**
MSLP	**Maasin**	**3.29**	**325**	*e*P	**Pn**	**23 54 08.3**	**-0.1**
MSLP				*e*S	Sn	23 54 55.8	+9.4
PAGZ	**Pagadian**	**3.40**	**277**	*e*P	**Pn**	**23 54 08.3**	**-1.4**
PAGZ				*e*S	Sn	23 54 32.9	-16
LLP	**Lapu-Lapu**	**4.00**	**316**	⇑*e*P	**Pn**	**23 54 18.6**	**+0.6**
LLP				*e*S	**Sn**	**23 55 03.8**	**+0.1**
OCLP	**Ormoc**	**4.19**	**329**	*e*P	**Pn**	**23 54 23.1**	**+2.5**
CNOP	**Candoni, Negro**	**4.74**	**300**	*e*P	**Pn**	**23 54 27.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**25.39**	**183**	P	**P**	**23 58 41.6**	**+1.0**
	1.7nm,0.6s,baz=358,slow=10,SNR=2.7						
WRA	**Warramunga Arr**	**28.20**	**165**	P	**P**	**23 59 06.0**	**0.0**
	0.4nm,0.6s,baz=347,slow=9.6,SNR=1.8						
WRA				PcP	**PcP**	**00 02 19.1**	**+0.7**
	0.3nm,0.5s,baz=335,slow=2.6,SNR=5.4						
CMAR	**Chiang Mai Arr**	**29.21**	**295**	LR	LR	00 11 14.7	
	comp=Z,18nm,20.3s,baz=310,slow=37						
ASAR	**Alice Springs**	**31.68**	**168**	P	**P**	**23 59 37.4**	**+0.6**
	0.3nm,0.4s,baz=340,slow=7.3,SNR=7.3						
ASAR				PcP	**PcP**	**00 02 28.4**	**+0.9**
	0.8nm,0.5s,baz=348,slow=2.6,SNR=12						
USRK	**Ussuriysk Ar.**	**36.91**	**6**	P	**P**	**00 00 21.7**	**0.0**
	2.3nm,0.7s,baz=194,slow=8.6,SNR=5.1						
STKA	**Stephens Creek**	**41.57**	**161**	P	**P**	**00 01 01.6**	**+0.9**
	2.9nm,0.9s,baz=333,slow=11,SNR=2.2						
SONM	**Songino Array**	**43.84**	**340**	P	**P**	**00 01 18.1**	**-1.0**
	0.2nm,0.4s,baz=154,slow=10,SNR=2.0						
PETK	**Petropavlovsk-**	**52.02**	**23**	P	**P**	**00 02 23.2**	**+1.2**
	7.1nm,1.1s,baz=245,slow=3.0,SNR=1.9						
MKAR	**Makanchi Array**	**54.59**	**324**	P	**P**	**00 02 39.7**	**-1.3**
	1.6nm,0.7s,baz=122,slow=8.5,SNR=14						
MKAR				PcP	**PcP**	**00 03 42.9**	**-0.5**
	0.3nm,0.6s,baz=125,slow=5.3,SNR=1.7						
ZALV	**Zalesovo Beam**	**57.35**	**332**	P	**P**	**00 02 59.2**	**-1.4**
	0.4nm,0.3s,baz=121,slow=7.7,SNR=2.0						
AAK	**Ala-Archa**	**57.70**	**316**	LR	LR	00 32 02.8	
	comp=Z,71nm,18.3s,baz=341,slow=40						
ILAR	**Eielson Array**	**81.76**	**26**	P	**P**	**00 05 30.9**	**+0.1**
	0.6nm,0.6s,baz=239,slow=5.1,SNR=14						
ARCES	**ARCESS Array B**	**87.02**	**340**	P	**P**	**00 05 57.0**	**-0.2**
	3.9nm,0.9s,baz=94,slow=6.3,SNR=1.6						
FINES	**FINESS Array B**	**88.62**	**332**	P	**P**	**00 06 03.4**	**-1.6**
	7.3nm,1.0s,baz=354,slow=1.9,SNR=4.5						
YKA	**Yellowknife Ar**	**96.13**	**24**	P	**P**	**00 06 39.7**	**0.0**
	0.2nm,0.4s,baz=298,slow=3.7,SNR=5.2						
TXAR	**Lajitas Array**	**119.26**	**51**	PKP	**PKiKP**	**00 12 02.9**	**+1.0**
	0.1nm,0.6s,baz=336,slow=2.0,SNR=1.9						

VAO ***29*** *00:08:06.8±1.0, 31°.40S×70°.16W, h34^{km}±8^{km}, mb4.6*
SJA ***29*** *00:08:11.6±0.8, 31°.54S×70°.26W, h101^{km}±5^{km}, ML4.7, MW4.5*
GUC ***29*** *00:08:11.6±0.7, 31°.59S×70°.56W, h114^{km}±4^{km}, ML4.9*
NEIC ***29*** *00:08:12.1±1.8, 31°.51S±0°.03×70°.26W±0°.04, h111^{km}±3^{km}, mb4.6/29, Md4.5(SJA), Error ellipse: s-maj=6.1km s-min=3.2km az=121.0*
IDC ***29*** *00:08:13.0±0.6, 31°.57S×70°.13W, h114^{km}±3^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.9/24, mbtmp4.3/8, MS2.5/1, Ms1 2.4/1, ms1mx2.3/15, Error ellipse: s-maj=22.7km s-min=20.5km az=14.0*
ISC 29 00:08:12.1±0.4, **31°.50S**±0°.03×**70°.26W**±0°.03, **h110**^{km}±3^{km}, **n180,** σ**1^{s}54**/213, **mb4.5**/19, **4C-7D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.70**	**295**	⇑*i*P	**Pn**	**00 08 30.3**	**-0.2**
CO02				*i* S	**Sn**	**00 08 44.3**	**-0.2**
CO02				IAML		00 08 45.8	
	comp=E,81µm,0.3s						
CO02	**Combarbal**	**0.70**	**295**		**Pn**	**00 08 30.4**	**-0.2**
CO02				Sn	**Sn**	**00 08 45.0**	**+0.5**
CO03	**El Pedregal**	**0.75**	**331**	⇑*i*P	**Pn**	**00 08 31.1**	**0.0**
CO03				*i* S	**Sn**	**00 08 46.0**	**+0.7**
CO03				IAML		00 08 47.6	
	comp=E,60µm,0.1s						
CO03	**El Pedregal**	**0.75**	**331**	Pn	**Pn**	**00 08 31.2**	**+0.2**
CO03				Sn	**Sn**	**00 08 46.3**	**+1.0**
RTLS	**Leoncito**	**0.88**	**110**	*e*P	**Pn**	**00 08 32.5**	**+0.1**
RTLS				*e*S	**Sn**	**00 08 47.5**	**-0.2**
RTLS				IAML		00 08 50.0	
	comp=Z,18µm,0.3s						
AUSP	**Uspallata**	**1.04**	**134**	*e*P	**Pn**	**00 08 33.7**	**-0.3**
AUSP				*e*S	**Sn**	**00 08 49.4**	**-1.1**
VA03	**San Esteban**	**1.28**	**191**	*i* P	**Pn**	**00 08 36.0**	**-0.5**
VA03				*i* S	**Sn**	**00 08 54.5**	**-0.5**
VA03				IAML		00 08 56.2	
	comp=N,47µm,0.6s						
VA03	**San Esteban**	**1.28**	**191**	Pn	**Pn**	**00 08 36.1**	**-0.4**

VA03				Sn	Sn	00 08 55.0	0.0
ZON	Zonda	1.35	92		Pn	00 08 37.2	0.0
ZON				Sn	Sn	00 08 56.6	+0.3
ZON	Zonda	1.35	92	eP	Pn	00 08 36.9	-0.3
ZON				eS	Sn	00 08 55.3	-1.1
ZON				IAML		00 08 57.3	
	comp=Z,5µm,0.3s						
ACCO	Cerro Coronel	1.37	49	eP	Pn	00 08 38.2	+0.4
GO04	Tololo Observa	1.40	341	⇑iP	Pn	00 08 37.9	-0.1
GO04				iS	Sn	00 08 58.1	+0.4
GO04	Tololo Observa	1.40	341	Pn	Pn	00 08 38.2	+0.2
GO04				Sn	Sn	00 08 58.4	+0.7
GO04	Tololo Observa	1.40	341	eP	Pn	00 08 38.2	+0.2
GO04				eS	Sn	00 08 58.5	+0.9
AROD	Rodeo	1.49	27	eP	Pn	00 08 40.4	+1.2
AROD				eS	Sn	00 09 02.8	+3.1
RTCV	Cerro Valdivia	1.51	104	eP	Pn	00 08 38.7	-0.4
CO01	Juntas del Tor	1.53	6	⇑iP	Pn	00 08 40.5	+1.0
CO01				iS	Sn	00 09 01.7	+1.5
CO01				IAML		00 09 03.8	
	comp=E,9µm,0.5s						
CO01	Juntas del Tor	1.53	6	Pn	Pn	00 08 40.8	+1.3
RTLL	Cerro Villicun	1.54	84	eP	Pn	00 08 38.8	-0.6
RTLL				eS	Sn	00 08 59.9	-0.3
RTLL				IAML		00 09 02.1	
	comp=Z,10µm,0.3s						
ROCH	El Roble	1.60	203	iP	Pn	00 08 39.0	-1.3
ROCH				iS	Sn	00 09 00.6	-1.2
ROCH				IAML		00 09 02.9	
	comp=E,10µm,0.2s						
ROC1	El Roble	1.60	203	eP	Pn	00 08 39.2	-1.2
ROC1				eS	Sn	00 09 01.7	-0.2
ASAL	Salagasta	1.63	132	eP	Pn	00 08 40.7	+0.1
ASAL				eS	Sn	00 09 01.9	-0.4
ACDV	Cuesta del Vie	1.65	37	eP	Pn	00 08 42.0	+1.1
ACDV				eS	Sn	00 09 05.4	+2.6
PEL	Peldehue	1.68	192	eP	Pn	00 08 39.7	-1.4
PEL				iS	Sn	00 09 01.9	-1.3
PEL	Peldehue	1.68	192	Pn	Pn	00 08 40.2	-0.8
PEL	Peldehue	1.68	192	eP	Pn	00 08 40.3	-0.8
PEL				eS	Sn	00 09 02.0	-1.2
ARCO	CERRO ARCO	1.75	140	eP	Pn	00 08 42.5	+0.4
ARCO				eS	Sn	00 09 06.6	+1.6
ARCO				IAML		00 09 07.7	
	comp=Z,8µm,0.4s						
MT02	Curacav	1.90	203	⇓iP	Pn	00 08 42.3	-1.6
MT02				iS	Sn	00 09 05.9	-2.2
MT02	Curacav	1.90	203	Pn	Pn	00 08 42.5	-1.4
MT05	Renca	1.93	192	⇓iP	Pn	00 08 43.5	-0.8
MT05				iS	Sn	00 09 08.0	-0.8
MT05				IAML		00 09 09.0	
	comp=N,24µm,0.4s						
MT05	Renca	1.93	192	Pn	Pn	00 08 43.5	-0.8
AAGR	Agrelo	1.99	143	eP	Pn	00 08 45.5	+0.5
AAGR				eS	Sn	00 09 08.1	-2.2
MT03	Universidad Ad	2.00	186	⇓iP	Pn	00 08 44.9	-0.3
MT03				iS	Sn	00 09 10.0	-0.4
MT03				IAML		00 09 12.4	
	comp=E,15µm,0.4s						
LMEL	Las Melosas	2.34	179	⇓iP	Pn	00 08 49.5	-0.1
LMEL				iS	Sn	00 09 18.6	+0.2
LMEL				IAML		00 09 22.8	
	comp=E,5µm,0.5s						
MT09	Talagante	2.35	195	⇓iP	Pn	00 08 48.1	-1.6
MT09				iS	Sn	00 09 17.0	-1.5
MT09				IAML		00 09 21.4	
	comp=E,8µm,0.3s						
VA05	Santo Domingo	2.43	208	eP	Pn	00 08 48.6	-2.0
VA05				iS	Sn	00 09 16.7	-3.5
VA05				IAML		00 09 29.4	
	comp=E,10µm,0.3s						
AVIZ	Vizcacheras	2.46	144	eP	Pn	00 08 51.2	+0.1
LCO	Las Campanas	2.51	351	Pn	Pn	00 08 48.5	-3.4
AGUA	GUANDACOL	2.52	38	eP	Pn	00 08 53.0	+1.1
AGUA				eS	Sn	00 09 23.2	+0.7
AGUA				IAML		00 09 25.6	
	comp=Z,4µm,0.3s						
AVFE	Valle Fertil	2.55	72	eP	Pn	00 08 51.7	-0.6
AVFE				eS	Sn	00 09 21.7	-1.4
AVFE				IAML		00 09 24.0	
	comp=Z,2µm,0.8s						
AC05	El Transito	2.66	360	eP	Pn	00 08 54.5	+0.8
AC05				iS	Sn	00 09 22.9	-2.7
AC05	El Transito	2.66	360		Pn	00 08 54.8	+1.0
ACHE	Chepes	3.10	85	eP	Pn	00 08 58.8	-0.8
VCA	Vinchina	3.28	33	eP	Pn	00 09 02.8	+0.7
VCA				IAML		00 09 55.4	
	comp=Z,2µm,0.6s						
BO03	Pichilemu	3.31	205	⇓iP	Pn	00 08 59.0	-3.1
BO03				IAML		00 09 49.4	
	comp=N,3µm,0.9s						
BO02	Sierra Bellavi	3.31	187	⇓iP	Pn	00 09 00.7	-1.5
BO02				iS	Sn	00 09 38.0	-3.1
BO02	Sierra Bellavi	3.31	187	Pn	Pn	00 09 00.8	-1.5
AC04	Llanos de Chal	3.36	348	Pn	Pn	00 09 03.2	+0.3
APLL	PUNTA DE LOS L	3.39	72	eP	Pn	00 09 02.8	-0.6
ACLC	CERRO LA CRUZ	3.53	55	eP	Pn	00 09 04.4	-0.9
ACLC				eS	Sn	00 09 46.7	+0.3
ACLC				IAML		00 09 48.3	
	comp=Z,1µm,0.6s						
RFA	San Rafael	3.59	156	eP	Pn	00 09 04.8	-1.2
RFA				IAML		00 10 12.3	
	comp=Z,861nm,0.5s						
GO03	Copiap	3.89	0	Pn	Pn	00 09 09.1	-1.0
MRA	San Martin	3.97	105	eP	Pn	00 09 09.9	-1.3
MRA				IAML		00 10 18.1	
	comp=Z,2µm,0.7s						
EDS3	Malargue	4.32	171	eP	Pn	00 09 15.5	-0.3
AC02	Maricunga	4.75	12	Pn	Pn	00 09 22.1	0.0
TCA	Tanti	4.85	90	eP	Pn	00 09 21.1	-1.8
TCA				IAML		00 10 50.2	
	comp=Z,2µm,0.9s						
CYA	Choya	4.93	53	eP	Pn	00 09 21.7	-2.3
CYA				IAML		00 11 03.4	
	comp=Z,275nm,1.0s						
BI02	San Fabin de	5.22	189	Pn	Pn	00 09 25.7	-2.2
AC01	Pan de Azucar	5.34	357		Pn	00 09 27.4	-2.1
GO02	Mina Guanaco	6.34	6	Pn	Pn	00 09 41.1	-2.3
AHML	Horco Molle	6.38	44	eP	Pn	00 09 40.7	-2.9
FSA	Cafayete	6.55	36	eP	Pn	00 09 44.6	-1.5
PB14	IPOC Station P	6.85	359		Pn	00 09 46.9	-3.4
PB14	IPOC Station P	6.85	359	eP	Pn	00 09 46.9	-3.4
VA04	Juan Fernndez	7.54	251	Pn	Pn	00 09 59.6	+0.3
SLA	San Lorenzo	7.95	33	IAML		00 11 37.0	
	comp=Z,61nm,0.9s						
PB10	IPOC Station P	7.96	358	Pn	Pn	00 10 02.0	-3.0
PB10	IPOC Station P	7.96	358	IAML		00 11 58.6	
	comp=Z,83nm,2.7s						
PB15	IPOC Station P	8.29	5		Pn	00 10 06.5	-3.2
PB06	IPOC Station P	8.78	4	eP	Pn	00 10 11.8	-4.5
LVC	Limon Verde	8.94	8	P	Pn	00 10 14.7	-3.9
	comp=Z,6.2nm,0.3s,baz=190,slow=9.6,SNR=39						
LVC				S	Sn	00 11 51.3	-6.4
	comp=Z,2.0nm,0.3s,baz=354,slow=19,SNR=1.5						
LVC	Limon Verde	8.94	8	eP	Pn	00 10 14.5	-4.2
LVC	Limon Verde	8.94	8	eP	Pn	00 10 12.3	-6.4
PB04	IPOC Station P	9.13	1	eP	Pn	00 10 15.3	-5.8
PLCA	Paso Flores	9.22	181	P	Pn	00 10 19.4	-2.7
	comp=Z,1.9nm,0.3s,baz=357,slow=11,SNR=65						
PLCA				LR	LR	00 13 51.7	
	comp=Z,29nm,21.6s,baz=6.0,slow=37						
PLCA	Paso Flores	9.22	181	Pn	Pn	00 10 18.5	-3.5
PLCA	Paso Flores	9.22	181	eP	Pn	00 10 18.7	-3.3
PB03	IPOC Station P	9.43	3	eP	Pn	00 10 19.4	-5.7
YJA	Yavi	10.21	26	eP	Pn	00 10 34.6	-1.3
PB01	IPOC Station P	10.44	4	eP	Pn	00 10 33.2	-5.5
ITQB	Itaqui	11.89	85	eP	Pn	00 10 53.6	-4.5
CPUP	Villa Florida	12.44	69	P	Pn	00 11 01.9	-3.5
	comp=Z,0.2nm,0.3s,baz=241,slow=14,SNR=19						
CPUP	Villa Florida	12.44	69	Pn	Pn	00 11 01.7	-3.7
CPUP	Villa Florida	12.44	69	eP	Pn	00 11 00.3	-5.0
PB16	IPOC Station P	13.13	3	Pn	Pn	00 11 15.8	+0.9
PLTB	Pedras Altas	14.20	95	eP	Pn	00 11 23.2	-4.9
CPSB	Cacapava Do Su	14.48	90	eP	Pn	00 11 26.9	-4.8
ITAB	Concordia	16.37	80	eP	Pn	00 11 52.2	-3.1
CNLB	Canela	16.89	88	eP	Pn	00 11 60.0	-1.9
AQDB	Aquidauana	17.07	53	eP	P	00 12 01.4	-2.6
PTGB	Pitanga	17.41	72	eP	P	00 12 06.8	-1.1
SIV	San Ignacio	17.57	31	P	P	00 12 08.4	-1.1
	baz=229,slow=13						
TRCB	Terra Rica	17.91	65	eP	P	00 12 12.4	-0.9
PCMB	Pacaembu	19.62	64	eP	P	00 12 32.1	+0.1
PP1B	Ponte de Pedra	19.65	49	eP	P	00 12 31.9	-0.4
GO09	Cerro Castillo	19.81	184	P	P	00 12 34.0	+0.2
GO09				IAmb	IAmb	00 12 39.5	
	comp=Z,38nm,1.3s						
FRTB	Fartura	20.07	71	eP	P	00 12 36.2	-0.6
VILB	Vilhena	20.65	29	eP	P	00 12 42.9	-0.2
ITRB	Iturama	21.41	61	eP	P	00 12 50.0	-1.2
PET01	Itanhaem-SP	21.53	76	eP	P	00 12 52.7	+0.3
SPB	Sao Paulo	21.70	74	P	P	00 12 53.9	-0.3
SPB				IAmb	IAmb	00 12 56.1	
	comp=Z,22nm,0.8s						
SPB	Sao Paulo	21.70	74	eP	P	00 12 54.8	+0.7
ETMB	Extrema	21.90	11	eP	P	00 12 56.5	+0.1
BB19B	Bebedouro	22.05	67	eP	P	00 12 58.1	+0.1
EFI	East Falkland	22.07	159	P	P	00 12 57.0	-0.8
VAO	Valinhos	22.34	73	eP	P	00 12 59.6	-1.5
ARAG	Araguaiana, MT	23.03	51	eP	P	00 13 07.7	-0.1
SAML	Samuel	23.39	18	P	P	00 13 10.9	-0.2
SAML				IAmb	IAmb	00 13 22.0	
	comp=Z,11nm,0.7s						
CZSB	Cruzeiro do Su	23.76	354	eP	P	00 13 14.8	+0.4
IPMB	Ipameri, GO	24.07	61	eP	P	00 13 18.3	+1.0
BDFB	Brasilia	25.71	57	P	P	00 13 32.0	-0.3
	comp=Z,6.5nm,0.8s,baz=225,slow=8.6,SNR=8.1						
BDFB	Brasilia	25.71	57	P	P	00 13 32.5	+0.2
BDFB				IAmb	IAmb	00 13 33.2	
	comp=Z,13nm,1.2s						
PEXB	Peixe	27.98	51	eP	P	00 13 51.9	-0.6
JANB	Januaria	28.81	61	eP	P	00 13 59.3	-0.6
SJMB	Sao Joao De Ma	29.15	71	eP	P	00 14 02.3	-0.6
ITTB	Itaituba	30.25	30	eP	P	00 14 14.3	+1.7
SMTB	Santa Maria do	30.86	48	eP	P	00 14 20.1	+2.1
PTGA	Pitinga	32.12	20	P	P	00 14 28.8	-0.3
PTGA	Pitinga	32.12	20	eP	P	00 14 28.6	-0.4
MCPB	Macapa, AP	35.45	33	eP	P	00 14 58.0	+0.2
ORTC	Ortega, Tolima	35.53	351	eP	P	00 15 01.2	+2.6
CHIC	Chingaza	36.08	354	eP	P	00 15 05.1	+1.4
RREF	El Recreo	36.52	351	eP	P	00 15 11.5	+3.8
PLMC	San Jos del P	36.66	350	eP	P	00 15 10.1	+1.9
GUY2C	Guyana, Caldas	36.84	352	eP	P	00 15 12.5	+2.3
RUSC	La Rusia	37.28	355	eP	P	00 15 15.5	+1.5
SDV	Santo Domingo	40.16	359	P	P	00 15 37.4	-0.2
SDV				IAmb	IAmb	00 15 38.3	
	comp=Z,7.1nm,0.9s						
SDV	Santo Domingo	40.16	359	eP	P	00 15 37.7	+0.1
NBPV	Pedro Velho	41.12	60	eP	P	00 15 45.5	+0.1
BELA	Belgrano 2	49.08	171	P	P	00 16 48.5	+0.9
ICMP	Isla Caja de M	49.23	5	P	P	00 16 49.5	+0.1
MLPR	Magueyes Islan	49.28	4	P	P	00 16 48.8	-1.0
OBIP	Obispado Ponce	49.38	5	P	P	00 16 50.1	-0.4
PDPR	Patillas Dam,	49.40	5	P	P	00 16 50.1	-0.6
PDPR				IAmb	IAmb	00 16 50.8	
	comp=Z,17nm,1.2s						
HUMP	Col San Antoni	49.54	6	P	P	00 16 52.7	+1.0
HUMP				IAmb	IAmb	00 16 55.2	
	comp=Z,10nm,0.8s						
CBYP	Canovanas	49.67	5	P	P	00 16 51.8	-1.0
CBYP				IAmb	IAmb	00 16 53.3	
	comp=Z,12nm,0.8s						
GCPR	Guaynabo City	49.69	5	P	P	00 16 52.3	-0.5
VNA3	Neumayer Olymp	51.12	159	P	P	00 17 03.1	0.0
VNA2	Neumayer--Watz	51.75	158	P	P	00 17 08.1	+0.4
	baz=286,slow=8.6						
SNAA	Sanae	53.34	159	P	P	00 17 19.9	+0.3
SNAA	Sanae	53.34	159	P	P	00 17 19.7	+0.1
VNDA	Vanda	66.83	191	P	P	00 18 51.9	+0.4
	comp=Z,1.3nm,0.8s,baz=146,slow=7.3,SNR=2.1						
V58A	Windy Hill, Pi	67.45	352		P	00 18 56.4	+0.6
V58A				IAmb	IAmb	00 18 56.4	
	comp=Z,13nm,1.1s						
TX32	Lajitas Array	68.33	329	P	P	00 19 03.2	+1.6
TXAR	Lajitas Array	68.33	329	P	P	00 19 03.2	+1.6
	comp=Z,0.8nm,0.6s,baz=155,slow=8.0,SNR=12						
TXAR				pP	pP	00 19 30.4	+0.3
	comp=Z,0.9nm,0.7s,baz=157,slow=8.0,SNR=4.6						
WVT	Waverly	69.27	345	P	P	00 19 07.3	+0.3
MNTX	Cornudas Mount	71.11	329	P	P	00 19 19.1	+0.6
R40A	Maddies Statio	72.40	342	P	P	00 19 26.6	+0.6
DBIC	Dimbokro	72.96	71	P	P	00 19 29.8	-0.1
	comp=Z,4.5nm,0.6s,baz=206,slow=6.1,SNR=11						
DBIC	Dimbokro	72.96	71	P	P	00 19 29.6	-0.2
DBIC				IAmb	IAmb	00 19 43.7	
	comp=Z,18nm,1.4s						
ECSD	EROS Data Cent	78.66	341	P	P	00 20 01.9	+0.3
ECSD				IAmb	IAmb	00 20 09.9	
	comp=Z,12nm,1.5s						
BOSA	Boshof	79.89	117	P	P	00 20 08.8	-0.3
	comp=Z,4.4nm,0.8s,baz=253,slow=4.0,SNR=7.2						
BOSA	Boshof	79.89	117	P	P	00 20 08.8	-0.3
TOA0	Torodi Ar. Sit	81.94	69	P	P	00 20 19.8	-0.1
TOA0				IAmb	IAmb	00 20 20.5	
	comp=Z,4.6nm,0.8s						
TORD	Torodi Ar. Bea	81.94	69	P	P	00 20 19.9	0.0
	comp=Z,3.5nm,0.7s,baz=251,slow=4.4,SNR=13						
TORD				pP	pP	00 20 48.7	-0.9
	comp=Z,2.7nm,0.7s,baz=262,slow=4.9,SNR=5.5						
TORD	Torodi Ar. Bea	81.94	69	P	P	00 20 19.7	-0.2
LBTB	Lobatse	81.98	114	P	P	00 20 19.8	-0.4
LBTB				IAmb	IAmb	00 20 20.5	
	comp=Z,7.7nm,0.7s						
PDAR	Pinedale Array	82.24	332	P	P	00 20 22.4	+1.2
	comp=Z,0.3nm,0.6s,baz=133,slow=6.5,SNR=4.3						
PDAR				pP	pP	00 20 50.5	0.0
	comp=Z,0.5nm,0.6s,baz=132,slow=6.6,SNR=3.2						
PDAR	Pinedale Array	82.24	332	P	P	00 20 21.9	+0.8
PINE	Pine Mountain	88.08	326	P	P	00 20 52.0	+1.8
PINE				IAmb	IAmb	00 20 53.1	
	comp=Z,4.0nm,0.8s						
LSZ	Lusaka	89.14	107	P	P	00 20 56.3	+0.5
LSZ				IAmb	IAmb	00 20 58.0	
	comp=Z,6.1nm,0.8s						
YKA	Yellowknife Ar	100.19	341	P	Pdif	00 21 45.3	+0.5
	comp=Z,0.1nm,0.4s,baz=127,slow=4.7,SNR=2.1						
ASAR	Alice Springs	120.46	206	PKP	PKPdf	00 26 50.5	-0.7
	comp=Z,0.5nm,0.5s,baz=147,slow=1.8,SNR=4.7						
WRA	Warramunga Arr	123.67	208	PKP	PKiKP	00 26 56.9	-0.7
	comp=Z,1.4nm,0.5s,baz=161,slow=1.7,SNR=36						
WRA				pPKP	pPKPdf	00 27 27.5	-1.1
	comp=Z,0.4nm,0.4s,baz=158,slow=1.6,SNR=2.8						
H11S2	WAKE ISLAND Hy	127.28	270	T	T	02 46 30.2	
	baz=116,slow=74,SNR=47						
H11S1	WAKE ISLAND Hy	127.30	270	T	T	02 46 16.1	
	baz=116,slow=74,SNR=49						
H11S3	WAKE ISLAND Hy	127.30	270	T	T	02 46 39.3	
	baz=116,slow=74,SNR=31						
H11N3	WAKE ISLAND Hy	127.63	272	T	T	02 47 05.4	
	baz=116,slow=76,SNR=3.5						
H11N1	WAKE ISLAND Hy	127.65	272	T	T	02 47 05.6	
	baz=116						
H11N2	WAKE ISLAND Hy	127.65	272	T	T	02 47 05.4	
	baz=116,slow=76,SNR=18						
BVAR	Borovoye Array	144.43	41	PKP	PKPdf	00 27 34.5	-0.3
	comp=Z,1.5nm,0.5s,baz=24,slow=3.9,SNR=23						
BVAR				pPKP	pPKPdf	00 28 05.5	-0.7
	comp=Z,1.5nm,0.6s,baz=232,slow=3.3,SNR=6.6						
HYB	Hyderabad	148.47	109	i PKP	PKiKP	00 27 47.0	-0.9
AAK	Ala-Archa	149.97	58	PKPbc	PKiKP	00 27 50.5	0.0
	comp=Z,4.3nm,0.7s,baz=202,slow=2.8,SNR=20						
AAK				pPKPbc	pPKPbc	00 28 20.6	-0.3
	comp=Z,4.7nm,0.7s,baz=183,slow=1.9,SNR=5.3						
AAK	Ala-Archa	149.97	58		PKiKP	00 27 50.8	+0.3
KURBB	Kurchatov Arra	150.02	41	PKPbc	PKiKP	00 27 50.0	0.0
	comp=Z,2.2nm,0.6s,baz=303,slow=3.0,SNR=20						
KURBB				pPKPbc	pPKPbc	00 28 20.8	+0.3
	comp=Z,3.7nm,0.8s,baz=302,slow=3.1,SNR=7.1						
KURK	Kurchatov	150.03	41		PKiKP	00 27 49.9	-0.2
ZALV	Zalesovo Beam	151.32	31	PKPbc	PKiKP	00 27 53.0	+0.3
	comp=Z,7.8nm,0.4s,baz=315,slow=3.1,SNR=38						
ZALV				pPKPbc	pPKPbc	00 28 23.4	0.0
	comp=Z,8.5nm,0.5s,baz=320,slow=2.9,SNR=9.5						
KSH	Kashi	151.50	64	PKPbc	PKPdf	00 27 49.3	+2.3
KSH				sPKP		00 28 24.5	
KSH				PP	PP	00 31 39.3	+5.2
KSH				AMB	AMB		
	comp=Z,770nm,8.3s						
MKAR	Makanchi Array	153.98	46	PKPbc	PKiKP	00 27 58.8	+0.3
	comp=Z,0.8nm,0.7s,baz=323,slow=2.8,SNR=8.4						
MKAR				PKPab	PKPab	00 28 12.6	+0.4
	comp=Z,3.2nm,0.7s,baz=298,slow=2.9,SNR=20						
MKAR				pPKPbc	pPKPbc	00 28 29.8	-0.1
	comp=Z,1.6nm,0.7s,baz=309,slow=2.9,SNR=5.5						
MKAR				pPKPab	pPKPab	00 28 43.3	+0.7
	comp=Z,2.9nm,0.6s,baz=296,slow=3.9,SNR=8.3						
MKAR	Makanchi Array	153.98	46		PKiKP	00 27 58.4	0.0
MKAR				PKPab	PKPab	00 28 12.9	+0.7

IDC 29 00:10:15.3±2.8**, 5°.64S**×**147°.88E, h158**^{km}±45^{km}**, mb3.2**/3**, mb1 3.4**/5**, mb1mx3.1**/38**, mbtmp3.7**/5**, Error ellipse: s-maj=97.4km s-min=21.4km az=113.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.81	191	P	Pn	00 11 15.2	+2.0
	3.8nm,0.3s,baz=4.2,slow=11,SNR=5.9						
PMG				S	Sn	00 11 57.7	-0.7
	11nm,0.3s,baz=37,slow=21,SNR=9.7						
WRA	Warramunga Arr	19.38	222	P	P	00 14 30.0	+0.9
	0.3nm,0.3s,baz=45,slow=10,SNR=13						
WRA				S	S	00 17 59.9	0.0
	0.0nm,0.3s,baz=47,slow=21,SNR=1.1						
ASAR	Alice Springs	22.41	216	P	P	00 15 01.8	+0.8
	0.4nm,0.4s,baz=51,slow=8.5,SNR=6.5						
FITZ	Fitzroy Crossi	25.00	238	P	P	00 15 25.1	+0.5
	2.6nm,0.4s,baz=55,slow=10,SNR=22						
MKAR	Makanchi Array	77.78	320	P	P	00 21 53.6	-1.4
	0.2nm,0.4s,baz=101,slow=6.9,SNR=2.4						

IDC 29 00:17:48.9±4.4**, 21°.06S**×**170°.45E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.4**/35**, mbtmp3.5**/2**, Error ellipse: s-maj=273.0km s-min=52.4km az=158.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	33.80	265	P	P	00 24 32.8	-0.2
	0.2nm,0.5s,baz=97,slow=8.5,SNR=1.7						
ASAR	Alice Springs	33.84	259	P	P	00 24 33.3	0.0
	0.7nm,0.6s,baz=88,slow=9.2,SNR=6.5						
ARCES	ARCESS Array B	127.11	345	PKP	PKPdf	00 36 54.2	-0.3
	7.2nm,1.1s,baz=29,slow=2.8,SNR=5.0						

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*HEL **29** 00:42:24.3, 67°.81N×20°.09E, h0^{km}, ML1.7, Explosion*

UPP 29 00:42:24.5±0.0**, 67°.82N**×**20°.20E, h0**^{km}**, ML2.8, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	21	P	Pg	00 42 27.6	+0.3
KUA				S	Sg	00 42 29.5	+0.4
KUA	Kurravaara	0.14	21	iP	Pg	00 42 27.6	+0.3
KUA				iS	Sg	00 42 29.5	+0.4
RATU	Laukkuluspa	0.23	271	P	Pg	00 42 29.1	+0.2
RATU	Laukkuluspa	0.23	271	iP	Pg	00 42 29.1	+0.2
KOVU	Salmi	0.41	358	P	Pg	00 42 32.3	+0.1
KOVU	Salmi	0.41	358	iP	Pg	00 42 32.3	+0.1
NIKU	Nikkaluokta	0.44	277	P	Pg	00 42 33.1	+0.1
NIKU	Nikkaluokta	0.44	277	iP	Pg	00 42 33.1	+0.1
LANU	Lannavaara	0.71	70	P	Pg	00 42 38.0	-0.1
LANU	Lannavaara	0.71	70	eP	Pg	00 42 37.8	-0.3
LANU				eS	Sg	00 42 48.0	+0.6
DUNU	Dundret	0.72	168	P	Pg	00 42 38.0	-0.2
DUNU	Dundret	0.72	168	iP	Pg	00 42 38.0	-0.2
SALU	Saltoluokta	0.78	236	P	Pg	00 42 39.4	-0.1
SALU	Saltoluokta	0.78	236	iP	Pg	00 42 39.4	-0.1
KIF	Kilpisjarvi	1.21	10	ePN	Pn	00 42 48.8	+0.2
KIF				MSG		00 43 02.7	
	comp=Z,6.1nm,0.2s						
KIF				eSB	Sb	00 43 04.0	-0.3
PAJU	Pajala	1.38	124	P	Pg	00 42 49.8	-1.2
PAJU	Pajala	1.38	124	eP	Pg	00 42 49.6	-1.3
ERTU	Ertsjaerv	1.49	148	P	Pn	00 42 51.8	-0.7
ERTU	Ertsjaerv	1.49	148	eP	Pn	00 42 51.5	-0.9
	baz=324						
ERTU				eSB	Sg	00 43 11.7	-0.5
TOF	Tornio	2.39	135	ePB	Pn	00 43 06.1	+1.4
TOF				MSG		00 43 35.6	
	comp=Z,3.0nm,0.2s						
TOF				eSG	Sb	00 43 38.3	+0.1
SGF	Sodankyl	2.45	96	ePB	Pb	00 43 07.7	-1.7
RNF	Rovaniemi	2.57	116	ePB	Pb	00 43 09.5	-1.9
RNF				eSG	Sb	00 43 43.4	-0.1
BURU	Burvik	3.29	171	eP	Pn	00 43 19.3	+2.1
	baz=355						
KU6	Riekki	4.22	111	ePG	Pg	00 43 43.2	-2.1

UPP 29 00:42:29.7±0.2**, 67°.82N**×**20°.22E, h0**^{km}**, ML2.9, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	18	P	Pg	00 42 32.7	+0.2
KUA				S	Sg	00 42 34.7	+0.4
RATU	Laukkuluspa	0.24	272	P	Pg	00 42 34.4	+0.2
KOVU	Salmi	0.41	357	S	Sg	00 42 43.0	+0.2
PAJU	Pajala	1.37	124	P	Pg	00 42 54.9	-1.0

IDC 29 01:23:54.5±2.8**, 6°.40S**×**128°.52E, h196**^{km}±40^{km}**, mb2.6**/1**, mb1 3.1**/5**, mb1mx2.9**/33**, mbtmp3.6**/5**, Error ellipse: s-maj=58.9km s-min=19.4km az=91.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.14	27	P	Pn	01 25 23.8	+0.2
	3.1nm,0.3s,baz=222,slow=19,SNR=9.2						
SIJI				S	Sn	01 26 30.4	-3.6
	1.6nm,0.3s,baz=240,slow=22,SNR=1.4						
FITZ	Fitzroy Crossi	11.96	193	P	Pn	01 26 39.1	+0.1
	0.5nm,0.3s,baz=24,slow=12,SNR=16						
FITZ				S	Sn	01 28 47.2	-5.2
	0.1nm,0.3s,baz=131,slow=20,SNR=1.6						
WRA	Warramunga Arr	14.60	158	P	Pn	01 27 10.7	-1.3
	0.1nm,0.3s,baz=337,slow=13,SNR=7.3						
WRA				S	S	01 29 41.5	-13
	0.2nm,0.3s,baz=339,slow=22,SNR=5.9						
ASAR	Alice Springs	17.93	164	P	P	01 27 50.8	+0.9
	0.3nm,0.3s,baz=340,slow=9.5,SNR=16						
MKAR	Makanchi Array	66.93	327	P	P	01 34 25.7	-0.2
	0.1nm,0.5s,baz=124,slow=7.6,SNR=1.7						

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*IDC **29** 01:30:25.7±1.6, 61°.74N×151°.59W, h84^{km}±25^{km}, mb3.1/4, mb1 3.4/8, mb1mx3.2/42, mbtmp3.6/8, Error ellipse: s-maj=34.3km s-min=9.9km az=112.0*

*NEIC **29** 01:30:27.4±1.1, 61°.81N±0°.04×151°.57W±0°.05, h94^{km}±4^{km}, ML3.5/94, ML3.2/137(AEIC), Error ellipse: s-maj=6.0km s-min=2.4km az=148.0*

*AEIC **29** 01:30:28.3±1.3, 61°.80N±0°.03×151°.61W±0°.07, h92^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=3.9km az=62.0*

ISC 29 01:30:27.4±0.8**, 61°.80N**±0°.03×**151°.59W**±0°.03**, h99**^{km}±5^{km}**, n160, σ0^{s}.80**/163**, mb3.2**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	Skwentna	0.18	9		Pn	01 30 40.8	-0.7
SKT					Sn	01 30 51.0	-0.9
STLK	Strandline Lak	0.32	201		Pn	01 30 41.5	-0.6
STLK					Sn	01 30 52.1	-0.9
SUA	Susitna One	0.53	129		Pn	01 30 43.5	+0.1
SUA					Sn	01 30 55.9	+0.5
SUA	Susitna One	0.53	129	IAML		01 30 56.3	
	comp=N,1µm,0.8s						
SUA				IAML		01 30 56.6	
	comp=E,1µm,0.6s						
SPCG	Spurr Capps Gl	0.55	202		Pn	01 30 42.9	-0.7
SPCG					Sn	01 30 54.5	-1.2
CRP	Crater Peak	0.60	207		Pn	01 30 43.5	-0.5
CRP					Sn	01 30 55.5	-0.9
SPCP	Crater Peak Br	0.60	207		Pn	01 30 43.5	-0.6
SPCP					Sn	01 30 55.0	-1.5
CP2	Crater Peak Tw	0.62	210		Pn	01 30 43.9	-0.3
CP2					Sn	01 30 56.5	-0.4
SPCN	Chakachatna No	0.64	206		Pn	01 30 43.8	-0.4
CKN	Chakachatna No	0.64	206		Pn	01 30 43.9	-0.4
BGL	Barrier Glacie	0.66	216		Pn	01 30 44.1	-0.4
BGL					Sn	01 30 56.8	-0.5
CUT	Chulitna	0.87	45		Pn	01 30 46.5	+0.2
FIS	Fire Island	0.93	134		Pn	01 30 48.5	+1.6
CAPN	Captain Cook N	1.06	168		Pn	01 30 50.0	+1.7
PPLA	Purkeypile	1.14	346		Pn	01 30 49.0	-0.3
RC01	Rabbit Creek A	1.14	128		Pn	01 30 49.2	0.0
PMR	Palmer	1.19	99		Pn	01 30 49.3	-0.5
PMR	Palmer	1.19	99	IAML		01 31 07.6	
	comp=N,464nm,0.2s						
GHO	Glory Hole Cre	1.27	90		Pn	01 30 50.6	-0.2

GHO					Sn	01 31 08.7	+0.1
GHO	Glory Hole Cre	1.27	90	IAML		01 31 10.6	
	comp=N,726nm,0.7s						
RDT	Redoubt	1.29	198		Pn	01 30 50.9	-0.2
DFR	Drift River	1.32	204		Pn	01 30 51.4	-0.1
NCT	North Crescent	1.40	208		Pn	01 30 52.4	0.0
RSO	Redoubt South	1.46	203		Pn	01 30 53.4	+0.2
SLKM	Skilak Lake	1.46	152		Pn	01 30 52.6	-0.4
HUR	Hurricane	1.49	37		Pn	01 30 53.5	+0.1
HUR					Sn	01 31 12.6	-0.6
RED	Redoubt Volcan	1.50	203		Pn	01 30 53.4	-0.2
RED					Sn	01 31 14.1	+0.5
KNK	Knik Glacier	1.55	103		Pn	01 30 53.8	-0.3
SML	Sawmill	1.55	88		Pn	01 30 53.8	-0.4
SML	Sawmill	1.55	88	IAML		01 31 15.8	
	comp=E,714nm,0.3s						
SML				IAML		01 31 15.8	
	comp=N,665nm,0.4s						
WAT7	Susitna Watana	1.65	50		Pn	01 30 55.4	-0.1
WAT1	Susitna Watana	1.76	53		Pn	01 30 56.7	-0.1
TRF	Thorofare Moun	1.76	19		Pn	01 30 57.1	+0.1
TRF					Sn	01 31 20.0	+0.4
TRF	Thorofare Moun	1.76	19	IAML		01 31 20.6	
	comp=N,471nm,0.6s						
TRF				IAML		01 31 21.5	
	comp=E,413nm,0.6s						
KTH	Kantishna Hill	1.79	10		Pn	01 30 57.2	+0.1
KTH	Kantishna Hill	1.79	10	IAML		01 31 20.9	
	comp=E,315nm,0.5s						
KTH				IAML		01 31 21.0	
	comp=N,280nm,0.5s						
WAT2	Susitna Watana	1.82	49		Pn	01 30 57.6	-0.1
PWL	Port Wells	1.83	120		Pn	01 30 56.9	-0.8
IVE	Iliamna Volcan	1.92	202		Pn	01 30 58.5	-0.5
WAT6	Susitna Watana	1.97	65		Pn	01 30 59.3	-0.3
WAT6					Sn	01 31 23.5	-0.7
ILS	Iliamna Low So	1.98	202		Pn	01 30 59.8	0.0
SEW	Seward	2.00	148		Pn	01 30 59.8	0.0
SCM	Sheep Creek Mo	2.02	87		Pn	01 30 59.9	-0.4
SCM					Sn	01 31 25.6	+0.3
SCM	Sheep Creek Mo	2.02	87	IAML		01 31 26.6	
	comp=E,486nm,0.6s						
SVW2	Sparrevohn	2.04	252		Pn	01 30 59.8	-0.6
RND	Reindeer	2.05	37		Pn	01 31 00.5	-0.1
BRLK	Bradley Lake	2.07	170		Pn	01 31 00.3	-0.6
BRSE	Bradley Lake S	2.11	168		Pn	01 31 00.6	-0.6
CHUM	Lake Minchumin	2.12	351		Pn	01 31 01.1	-0.3
CHUM					Sn	01 31 25.8	-1.5
HOM	Homer	2.15	181		Pn	01 31 01.6	-0.2
HOM					Sn	01 31 27.8	-0.3
CNPM	China Poot	2.29	175		Pn	01 31 02.8	-0.8
CNPM	China Poot	2.29	175	IAML		01 31 32.6	
	comp=E,208nm,0.6s						
CNPM				IAML		01 31 36.6	
	comp=N,201nm,0.4s						
MCK	McKinley	2.29	31		Pn	01 31 03.9	+0.2
OPT	Oil Point	2.30	201		Pn	01 31 04.2	+0.4
BPAW	Bear Paw Mtn.	2.33	7		Pn	01 31 03.6	-0.5
BPAW	Bear Paw Mtn.	2.33	7	IAML		01 31 33.2	
	comp=N,158nm,0.6s						
DHY	Denali Highway	2.34	55		Pn	01 31 04.5	0.0
DHY					Sn	01 31 32.6	-0.2
DHY	Denali Highway	2.34	55	IAML		01 31 33.9	
	comp=N,238nm,0.7s						
DHY				IAML		01 31 34.6	
	comp=E,269nm,0.4s						
TT01	Tatalina	2.34	300		Pn	01 31 03.6	-0.7
TTA	Tatalina	2.35	301		Pn	01 31 03.6	-0.9
GLI	Glacier Island	2.36	111		Pn	01 31 03.1	-1.4
GLI					Sn	01 31 31.6	-1.4
GLI	Glacier Island	2.36	111	IAML		01 31 35.4	
	comp=N,267nm,0.3s						
GLI				IAML		01 31 38.5	
	comp=E,276nm,0.4s						
BWN	Browne	2.57	21		Pn	01 31 07.5	+0.2
BWN	Browne	2.57	21	IAML		01 31 59.7	
	comp=E,113nm,1.0s						
BWN				IAML		01 32 04.6	
	comp=N,136nm,1.1s						
M24K	Tolsona, Glenn	2.58	81		Pn	01 31 07.9	+0.4
M24K	Tolsona, Glenn	2.58	81	IAML		01 31 53.8	
	comp=E,281nm,1.1s						
AUL	Augustine Lava	2.59	201		Pn	01 31 08.1	+0.5
AUCH	Augustine Cone	2.61	201		Pn	01 31 08.2	+0.3
FID	Port Fidalgo	2.69	111		Pn	01 31 06.9	-1.9
FID					Sn	01 31 38.7	-2.0
FID	Port Fidalgo	2.69	111	IAML		01 31 42.0	
	comp=N,185nm,0.4s						
FID				IAML		01 31 42.0	
	comp=E,285nm,0.3s						
KLU	Klutina	2.72	94		Pn	01 31 08.7	-0.8
KLU					Sn	01 31 40.7	-1.1
KLU	Klutina	2.72	94	IAML		01 31 42.5	
	comp=E,218nm,0.3s						
HIN	Hinchinbrook I	2.84	117		Pn	01 31 09.8	-1.2
HIN	Hinchinbrook I	2.84	117	Sn	Sn	01 31 44.2	-0.4
HIN				IAML		01 31 44.7	
	comp=N,133nm,1.6s						
HIN				IAML		01 31 45.4	
	comp=E,154nm,0.6s						
DIV	Divide	2.87	101		Pn	01 31 10.5	-0.9
PS11	TAPS Pump St11	2.91	82		Pn	01 31 12.1	+0.3
NEA2	Nenana	3.03	21		Pn	01 31 12.5	-0.8
PAX	Paxson	3.08	65		Pn	01 31 14.5	+0.2
EYAK	Cordova Ski Ar	3.10	111		Pn	01 31 13.1	-1.2
PS12	TAPS Pump St12	3.10	93		Pn	01 31 13.1	-1.2
WRH	Wood River Hil	3.12	29		Pn	01 31 13.9	-0.6
MLY	Manley	3.27	6		Pn	01 31 16.2	-0.4
CCB	Clear Creek Bu	3.33	29		Pn	01 31 16.6	-0.8
N25K	Chitina, Valde	3.34	90		Pn	01 31 17.0	-0.6
N25K	Chitina, Valde	3.34	90	IAML		01 31 58.3	
	comp=N,79nm,0.5s						
N25K				IAML		01 31 58.4	
	comp=E,90nm,0.7s						
HDA	Harding Lake	3.36	37		Pn	01 31 17.5	-0.3
HDA					Sn	01 31 54.9	-2.0
HDA	Harding Lake	3.36	37	IAML		01 32 19.3	
	comp=N,70nm,0.8s						
BMRM	Bremner River	3.46	101		Pn	01 31 17.6	-1.6
PS08	TAPS Pump Stn8	3.50	36		Pn	01 31 19.4	-0.4
Q23K	Middleton Isla	3.51	130		Pn	01 31 20.1	+0.3
MDM	Murphy Dome	3.51	24		Pn	01 31 19.5	-0.4
TCOL	CIGO, UAF Yank	3.51	27		Pn	01 31 19.7	-0.2
TCOL	CIGO, UAF Yank	3.51	27	IAML		01 32 18.2	
	comp=N,114nm,0.5s						
TCOL				IAML		01 32 28.3	
	comp=E,102nm,0.5s						
COLA	College	3.52	27		Pn	01 31 19.6	-0.3
COLA	College	3.52	27	IAML		01 32 04.2	
	comp=E,118nm,0.5s						
COLA				IAML		01 32 18.2	
	comp=E,123nm,0.5s						
GOAT	Goat Mountain	3.54	107		Pn	01 31 18.8	-1.5
RAGM	Ragged Mountai	3.65	110		Sn	01 32 04.4	+0.6
RAGM	Ragged Mountai	3.65	110		Pn	01 31 20.4	-1.3
IL31		3.66	33		Pn	01 31 21.2	-0.6
ILAR	Eielson Array	3.66	33	P	Pn	01 31 21.2	-0.6
	comp=E,4.5nm,0.3s,baz=219,slow=14,SNR=108						
ILAR				S	Sn	01 32 03.0	-1.0
	comp=E,4.1nm,0.3s,baz=216,slow=24,SNR=3.9						
ILAR	Eielson Array	3.66	33	Pn	Pn	01 31 20.3	-1.6
RIDG	Independent Ri	3.66	55		Pn	01 31 22.8	+0.8
RIDG	Independent Ri	3.66	55	IAML		01 32 19.4	
	comp=E,66nm,0.5s						
RIDG				IAML		01 32 25.6	
	comp=N,63nm,1.3s						
GLB	Gilahina Butte	3.73	92		Pn	01 31 22.5	-0.4
GLB	Gilahina Butte	3.73	92	IAML		01 32 07.1	
	comp=N,60nm,0.6s						
POKR	Poker Plat Res	3.82	27		Pn	01 31 24.1	+0.1
MENT	Mentasta	3.84	69		Pn	01 31 24.9	+0.6
MENT				IAML		01 32 25.7	
	comp=N,91nm,0.6s						
HMT	Hamilton	3.85	109	Pn	Pn	01 31 24.2	-0.3
HMT					Sn	01 32 08.0	-0.7
KVTA	Katmai Vly 10	3.90	210		Pn	01 31 25.8	+0.7
KCG	Knife Ck. Glac	3.92	208		Pn	01 31 25.7	+0.3
DOT	Dot Lake	3.93	59		Pn	01 31 25.6	+0.1
VRDI	Verde Repeater	3.94	95	Pn	Pn	01 31 24.7	-1.2
VRDI					Sn	01 32 10.2	-0.9
VRDI				IAML		01 32 12.5	
	comp=N,43nm,2.0s						
KBM	Katmai Bkd Mtn	3.97	209		Pn	01 31 26.7	+0.6
KDAK	Kodiak Island	4.06	188	P	Pn	01 31 25.4	-1.8
	comp=N,0.5nm,0.3s,baz=68,slow=8.2,SNR=17						
KDAK				S	Sn	01 32 10.4	-3.3
	comp=N,2.1nm,0.3s,baz=196,slow=16,SNR=9.0						
KDAK	Kodiak Island	4.06	188	Pn	Pn	01 31 26.1	-1.2
KDAK				IAML		01 33 16.9	
	comp=N,76nm,4.1s						
ANCK	Angle Creek	4.11	210		Pn	01 31 28.5	+0.5
SCRK	Sand Creek	4.11	55		Pn	01 31 27.9	-0.2
MCARA	McCarthy VSAT	4.12	92		Pn	01 31 28.0	0.0
MCARA	McCarthy VSAT	4.12	92	IAML		01 32 20.0	
	comp=N,76nm,0.9s						
PS06	TAPS Pump Stn6	4.15	11		Pn	01 31 28.8	+0.3
CRQM	Cirque	4.21	101		Pn	01 31 28.5	-1.0
CRQM	Cirque	4.21	101	IAML		01 32 20.1	
	comp=N,69nm,1.0s						
CRQM				IAML		01 32 22.2	
	comp=E,64nm,0.7s						
KHIT	Khitrov Hills	4.27	105		Pn	01 31 28.9	-1.2
IM03		4.31	348		Pn	01 31 30.1	-0.4
IMAR	Indian Mountai	4.31	348		Pn	01 31 30.3	-0.2
TGL	Tana Glacier	4.36	100		Sn	01 32 21.2	+0.2
TGL	Tana Glacier	4.36	100		Pn	01 31 30.5	-0.9
PTPK	Patty Peak	4.42	94		Pn	01 31 31.7	-0.6
KIAG	Kiagna River	4.53	97		Pn	01 31 32.6	-1.1
KULT	Kultieth River	4.59	106		Pn	01 31 33.2	-1.2
PRP	Porcupine Dome	4.61	33		Pn	01 31 33.9	-0.8
ISLE	Juniper Island	4.63	101	Pn	Pn	01 31 34.2	-0.9
ISLE					Sn	01 32 27.4	-0.4
ISLE				IAML		01 33 29.4	
	comp=E,53nm,3.7s						
BC03		4.73	70		Pn	01 31 36.3	0.0
BCAR	Beaver Creek A	4.73	70		Pn	01 31 35.9	-0.5
BARN	Barnard Glacie	4.83	94	Pn	Pn	01 31 37.8	0.0
BARN					Sn	01 32 32.3	-0.3
BARN				IAML		01 32 35.5	
	comp=E,43nm,0.4s						
BARN				IAML		01 32 44.7	
	comp=N,30nm,2.1s						
GRNC	Granite Creek	4.87	98		Pn	01 31 37.3	-1.1
YAH	Yahtse	4.99	102		Sn	01 32 35.8	-0.8
YAH	Yahtse	4.99	102		Pn	01 31 39.5	-0.6
CTGM	Chitina Glacie	5.00	95		Sn	01 32 36.3	-0.5
CTGM				IAML		01 32 39.6	
	comp=N,40nm,0.8s						
CTGM				IAML		01 33 09.5	
	comp=E,26nm,3.3s						
CTGM	Chitina Glacie	5.00	95		Pn	01 31 39.8	-0.3
YUK2	White River	5.10	85		Pn	01 31 41.4	0.0
LOGN	Logan Glacier	5.20	96		Pn	01 31 42.1	-0.7
TABL	Table Mountain	5.25	100		Pn	01 31 42.7	-0.8
TABL	Table Mountain	5.25	100	IAML		01 33 08.0	
	comp=E,38nm,2.4s						
YUK3	Moose Creek	5.29	85		Pn	01 31 44.1	+0.1
COLD	Coldfoot	5.48	6		Pn	01 31 46.7	+0.2
FYU	Fort Yukon	5.53	27	Pn	Pn	01 31 46.9	-0.2
EGAK	Eagle	5.57	53		Pn	01 31 47.4	-0.3
PCA	Pinnacle	5.78	102		Pn	01 31 49.9	-0.7
BM03	Burnt Mountain	6.39	25		Pn	01 31 58.5	-0.3
HYT	Haines Junctio	6.85	92		Pn	01 32 05.3	+0.1
INK	Inuvik	10.01	42	P	Pn	01 32 47.6	-0.2
	comp=E,0.7nm,0.3s,baz=235,slow=13,SNR=23						
INK	Inuvik	10.01	42	Pn	Pn	01 32 48.0	+0.2
YKA	Yellowknife Ar	17.15	71	P	P	01 34 20.6	+0.1
	comp=E,0.1nm,0.3s,baz=284,slow=11,SNR=16						
RES	Resolute Bay	23.41	34	P	P	01 35 27.1	+0.2
	comp=E,0.4nm,0.5s,baz=270,slow=10,SNR=1.9						
RES	Resolute Bay	23.41	34	P	P	01 35 27.4	+0.5
SONM	Songino Array	54.29	306	P	P	01 39 44.3	+1.3
	comp=E,0.2nm,0.6s,baz=34,slow=7.6,SNR=3.8						
ZALV	Zalesovo Beam	56.33	324	P	P	01 39 57.3	0.0
	comp=E,0.7nm,0.6s,baz=28,slow=7.3,SNR=3.6						
ZALV	Zalesovo Beam	56.33	324	P	P	01 39 58.9	+1.5
MKAR	Makanchi Array	63.45	322	P	P	01 40 45.5	-0.7
	comp=E,0.1nm,0.5s,baz=38,slow=5.9,SNR=2.2						

IDC 29 01:43:23.5±11.0, 19°.74S×177°.66W, h411^{km}±131^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.2/23, mbtmp4.1/5, Error ellipse: s-maj=49.7km s-min=29.2km az=28.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	19.01	193	P	P	01 47 17.8	-0.1
	1.2nm,0.3s,baz=0.0,slow=11,SNR=3.7						
ASAR	Alice Springs	45.01	256	P	P	01 51 00.7	0.0
	1.9nm,0.7s,baz=88,slow=8.5,SNR=18						
WRA	Warramunga Arr	45.02	261	P	P	01 51 00.5	-0.3
	0.5nm,0.3s,baz=96,slow=6.9,SNR=25						
VNDA	Vanda	58.69	185	P	P	01 52 39.2	-0.1
	2.6nm,1.1s,baz=1.9,slow=6.7,SNR=2.3						
ILAR	Eielson Array	87.50	13	P	P	01 55 25.6	0.0
	0.7nm,0.6s,baz=221,slow=5.0,SNR=20						

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*IDC **29** 02:06:04.7±1.1, 53°.66N×35°.42W, h0^{km}, mb3.5/7, mb1 3.8/7, mb1mx3.5/39, mbtmp3.5/7, MS3.7/11, Ms1 3.8/11, ms1mx3.4/36, Error ellipse: s-maj=42.3km s-min=20.8km az=24.0*

ISC 29 02:06:07.0±0.9, 53°.7N±0°.3×35°.4W±0°.2, h16^{km}, n15, σ1^{s}.00/7, mb3.5/7, MS3.8/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	Kangerlussuaq	15.28	337	LR	LR	02 14 20.8	
	comp=Z,137nm,18.1s,baz=152,slow=32						
FRB	Frobisher Bay	19.71	314	LR	LR	02 17 13.2	
	comp=Z,244nm,20.2s,baz=40,slow=34						
ESDC	Sonseca Array	25.47	110	P	P	02 11 35.0	+0.8
	0.9nm,0.9s,baz=306,slow=8.9,SNR=4.8						
ESDC				LR	LR	02 20 22.6	
	comp=Z,173nm,18.0s,baz=5.0,slow=34						
NOA	NORSAR Array B	25.73	55	LR	LR	02 21 07.1	
	comp=Z,106nm,18.3s,baz=325,slow=35						
HFS	Hagfors	27.05	56	LR	LR	02 20 42.4	
	comp=Z,247nm,20.4s,baz=286,slow=32						
SADO	Sadowa	29.49	270	LR	LR	02 23 52.2	
	comp=Z,275nm,18.7s,baz=74,slow=36						
ULM	Lac du Bonnet	36.43	290	LR	LR	02 26 42.2	
	comp=Z,137nm,18.9s,baz=92,slow=34						
YKA	Yellowknife Ar	40.22	315	P	P	02 13 41.0	-1.3
	0.2nm,0.8s,baz=65,slow=10.0,SNR=2.6						
YKA				LR	LR	02 28 34.4	
	comp=Z,61nm,20.4s,baz=0.0,slow=34						
PDAR	Pinedale Array	48.44	289	P	P	02 14 48.5	0.0
	0.5nm,0.6s,baz=60,slow=8.1,SNR=5.6						
TORD	Torodi Ar. Bea	49.91	130	P	P	02 14 58.9	-0.9
	0.8nm,0.9s,baz=335,slow=8.9,SNR=2.7						
ILAR	Eielson Array	50.76	329	P	P	02 15 06.3	+0.7
	0.6nm,1.1s,baz=31,slow=5.5,SNR=3.0						
DBIC	Dimbokro	53.00	141	LR	LR	02 36 03.8	
	comp=Z,81nm,18.4s,baz=334,slow=34						
TXAR	Lajitas Array	54.25	272	P	P	02 15 32.8	+0.7
	0.4nm,0.8s,baz=69,slow=6.9,SNR=4.5						
TXAR				LR	LR	02 38 54.9	
	comp=Z,111nm,18.8s,baz=0.0,slow=36						
NVAR	Mina Array Bea	56.27	290	LR	LR	02 37 49.2	
	comp=Z,88nm,18.8s,baz=8.0,slow=34						
MKAR	Makanchi Array	66.82	41	P	P	02 16 57.7	+0.1
	0.6nm,0.9s,baz=344,slow=4.0,SNR=5.5						

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*IDC **29** 02:14:36.1±9.3, 12°.09N×91°.96W, h0^{km}, mb3.3/2, mb1 3.9/2, mb1mx3.4/23, mbtmp3.4/2, Error ellipse: s-maj=635.0km s-min=62.5km az=68.0*

*GCG **29** 02:14:36.2±0.7, 13°.12N×89°.97W, h17^{km}±81^{km}, MD3.8*

*SNET **29** 02:14:37.2±1.1, 13°.23N×89°.94W, h33^{km}±2^{km}, ML3.3*

ISC 29 02:14:36.0±1.6, 13°.16N±0°.07×89°.88W±0°.05, h18^{km}±6^{km}, n29, σ0^{s}.85/42, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.64	59	*e*P	Pb	02 14 49.9	+1.4
LALI				*e*S	Sn	02 14 59.2	-0.5
JAYA	Jayaque - finc	0.65	41	*e*P	Pb	02 14 50.1	+1.3
JAYA				IAML		02 15 03.4	
	comp=Z,2µm,0.2s						
CEVE	Cerro Verde	0.71	21	*e*P	Pb	02 14 50.8	+0.8
CEVE				*e*S	Sn	02 15 02.8	+0.9
SBLS	San Blas	0.72	21	*e*P	Pb	02 14 50.8	+0.7
SNJE	San Jose	0.75	21	*e*P	Pb	02 14 51.5	+0.9
RTR	El Retiro	0.77	17	*e*P	Pb	02 14 51.5	+0.6
PMON	Piamonte	0.78	45	*e*P	Pb	02 14 52.2	+1.1
PMON				*e*S	Sn	02 15 03.6	+0.1
CEDA	San Andres	0.79	37	*e*P	Pb	02 14 52.2	+0.9
CEDA				IAML		02 15 10.2	
	comp=Z,968nm,0.4s						
BOQS	Boqueron	0.82	46	*e*P	Pb	02 14 52.8	+1.0
BOQS				*e*S	Sn	02 15 05.2	+0.6
SNET	Serv Nac Est T	0.82	50	*e*S	Sn	02 15 04.5	0.0
QUEZ	Alcaldia de Qu	0.89	42	*e*S	Sn	02 15 06.3	0.0
LFRS	El Faro	0.92	60	*e*P	Pg	02 14 54.0	+0.1
LFRS				*e*S	Sn	02 15 07.7	+0.7
LFU	La Fuente	0.95	52	*e*S	Sn	02 15 08.9	+1.3
TACO	Tacachico	0.95	33	*e*P	Pb	02 14 54.2	+0.2
TACO				*e*S	Sb	02 15 07.2	+0.9
COEG	Centro de Oper	1.08	65	*e*P	Pb	02 14 56.6	+0.5
COEG				IAML		02 15 17.6	
	comp=Z,685nm,0.3s						
UESV	Universidad de	1.17	66	*e*P	Pb	02 14 58.3	+0.7
MTO3	Montecristo	1.33	22	*e*P	Pn	02 14 59.2	-0.6
MTO3				*e*S	Sb	02 15 16.8	-0.6
MTO3				IAML		02 15 19.6	
	comp=Z,227nm,0.4s						
LLGN	La Laguna	1.35	42	*e*S	Sb	02 15 16.9	-0.9
COEB	Comit de Eme	1.36	76	*e*P	Pn	02 15 00.5	+0.4
COEB				*e*S	Sn	02 15 19.1	+1.4
COEB				IAML		02 15 22.4	
	comp=Z,533nm,0.5s						
TECA	Tecapa	1.38	76	*e*P	Pn	02 15 01.3	+0.7
PCG	Pacaya	1.41	330	*e*P	Pn	02 15 01.8	+0.7
PCG				*e*S	Sg	02 15 21.7	0.0
ESQI	Esquipulas	1.48	21	*e*P	Pn	02 15 02.0	+0.1
ESQI				*e*S	Sn	02 15 20.4	-0.5
NBG	Las Nubes	1.49	342	*e*P	Pn	02 15 02.8	+0.7
NBG				*e*S	Sg	02 15 23.7	-0.4
FUG	Fuego 3	1.58	324	*e*P	Pn	02 15 03.9	+0.6
FUG				*e*S	Sn	02 15 24.6	+1.2
FAGO	Alcalda de S	1.81	73	*e*P	Pn	02 15 06.8	+0.6
MRL	Marmol	1.92	6	*e*P	Pn	02 15 09.2	+1.2
MRL				*e*S	Sb	02 15 35.4	+1.2
TXAR	Lajitas Array	20.56	324	P	P	02 19 13.8	-0.1
	comp=Z,0.4nm,0.5s,baz=151,slow=12,SNR=6.9						
NVAR	Mina Array Bea	35.62	320	P	P	02 21 32.4	-0.7
	comp=Z,0.6nm,0.7s,baz=130,slow=8.3,SNR=7.7						
WRA	Warramunga Arr	137.18	255	PKP	PKPdf	02 33 57.7	-1.4
	comp=Z,0.3nm,0.9s,baz=100,slow=2.1,SNR=2.7						

RSNC 29 02:35:27.3±1.3, 6°.74N×73°.14W, h141^{km}±9^{km}, ML1.2, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.15	195	*e*P	Pn	02 35 46.1	-0.6
BARC				*e*S	Sn	02 36 01.3	-0.1
BARC				*i*		02 36 03.8	
	comp=Z,4.6nm,0.3s						
BARC	Barichara	0.15	195	*e*P	Pn	02 35 46.1	-0.6
BARC				*e*S	Sn	02 36 01.4	0.0
BARC				*i*		02 36 03.7	
	comp=Z,4.6nm,0.3s						
BRRC	Barranca, Sant	0.67	303	*e*P	Pn	02 35 47.2	-1.4
BRRC				*e*S	Sn	02 36 04.5	-0.3
BRRC				*i*		02 36 05.3	
	comp=N,12nm,0.3s						
BRRC	Barranca, Sant	0.67	303	*e*S	Sn	02 36 04.7	-0.1
PAMC	Pamplona, Colo	0.74	37⇓	*e*P	Pn	02 35 49.0	-0.7
PAMC				*e*S	Sn	02 36 05.5	-1.1
PAMC				*i*		02 36 08.1	
	comp=Z,4.1nm,0.5s						
RUSC	La Rusia	0.85	176	*e*P	Pn	02 35 50.0	-0.5
RUSC				*e*S	Sn	02 36 08.8	+0.7
RUSC				*i*		02 36 09.8	
	comp=Z,1.7nm,0.3s						
RUSC	La Rusia	0.85	176	*e*P	Pn	02 35 50.4	-0.2
RUSC				*e*S	Sn	02 36 06.9	-1.2
RUSC				*i*		02 36 09.7	
	comp=Z,1.7nm,0.3s						
PTBC	PUERTO BERRIO,	1.32	261	*e*P	Pn	02 35 52.7	-1.6
PTBC				*e*S	Sn	02 36 12.8	-2.0
PTBC				*i*		02 36 15.7	
	comp=Z,2.5nm,0.2s						
PTBC	PUERTO BERRIO,	1.32	261	*e*P	Pn	02 35 53.1	-1.2
PTBC				*e*S	Sn	02 36 14.2	-0.7
PTBC				*i*		02 36 15.7	
	comp=Z,2.5nm,0.2s						
SPBC	San Pablo de B	1.42	220	*e*S	Sn	02 36 16.9	-0.1
SPBC	San Pablo de B	1.42	220	*e*S	Sn	02 36 16.9	-0.1
CHIC	Chingaza	2.18	196	*e*P	Pn	02 36 04.6	+0.1
CHIC				*e*S	Sn	02 36 33.3	+0.3
CHIC				*i*		02 36 38.5	
	comp=Z,1.6nm,0.6s						
CHIC	Chingaza	2.18	196	*e*P	Pn	02 36 04.6	+0.1
CHIC				*e*S	Sn	02 36 33.1	+0.1
CHIC				*i*		02 36 38.5	
	comp=Z,1.6nm,0.6s						

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*IDC **29** 02:46:53.6±5.1, 35°.16N×141°.62E, h0^{km}, mb3.8/3, mb1 3.7/5, mb1mx3.4/52, mbtmp3.8/5, ML3.0/2, MS2.6/2, Ms1 2.6/2, ms1mx2.4/44, Error ellipse: s-maj=98.9km s-min=36.0km az=94.0*

*JMA **29** 02:46:58.6±0.1, 35°.23N×141°.23E, h36^{km}±3^{km}, M3.4*

ISC 29 02:46:58.6±1.6, 35°.17N±0°.05×141°.3E±0°.1, h27^{km}, n21, σ1^{s}.17/18, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	0.56	204	P	Pn	02 47 10.5	+0.1
CHOJ	Chosi	0.63	328	P	Pb	02 47 10.0	-1.0
CHOJ				S	Sb	02 47 18.3	-1.1
BSO3	Boso 3	0.72	240	P	Pb	02 47 12.5	+0.2
BSO4	Boso 4	0.78	257	P	Pn	02 47 13.3	-0.4
JSMT	Sammumatsuo	0.81	306	P	Pn	02 47 13.3	-1.0
JKUC	kamogawauchiur	0.87	270	P	Pn	02 47 14.1	-1.0
JKUC				S	Sb	02 47 25.2	-1.1
JCN	Nagara	0.90	286	P	Pn	02 47 15.1	-0.4
JYT	Yasato	1.37	321	P	Pn	02 47 21.1	-0.8
JHJ	Hachijo jima 2	2.38	211	Pn	Pn	02 47 36.0	+0.1
	18nm,0.3s,baz=90,slow=20,SNR=3.8						
JHJ				Sn	Sn	02 48 02.4	-1.8
	63nm,0.3s,baz=297,slow=21,SNR=6.9						
MJAR	Matsushiro Arr	2.83	300	Pn	Pn	02 47 43.3	+1.2
	0.8nm,0.3s,baz=95,slow=14,SNR=12						
MJAR				LR	LR	02 48 48.8	
	comp=Z,52nm,21.7s,baz=125,slow=38						
MAT	Matsushiro	2.83	300	P	Pn	02 47 43.8	+1.7
MAT				*e*S	Sn	02 48 17.4	+2.0
KSRS	Korea Array	11.00	286	LR	LR	02 53 49.5	
	comp=Z,59nm,18.9s,baz=90,slow=37						
H11N2	WAKE ISLAND Hy	27.35	117	T	T	03 21 37.0	
	baz=310,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	27.36	118	T	T	03 21 36.9	
	baz=310,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	27.37	117	T	T	03 21 39.7	
	baz=310,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	28.00	120	T	T	03 22 28.3	
	baz=312,slow=75,SNR=224						
H11S3	WAKE ISLAND Hy	28.00	120	T	T	03 22 30.3	
	baz=312,slow=75,SNR=215						
H11S2	WAKE ISLAND Hy	28.01	120	T	T	03 22 31.4	
	baz=312,slow=75,SNR=175						
ZALV	Zalesovo Beam	43.10	314	P	P	02 54 57.0	+0.8
	0.5nm,0.5s,baz=94,slow=6.7,SNR=3.8						
MKAR	Makanchi Array	45.03	304	P	P	02 55 12.8	+1.0
	0.5nm,0.6s,baz=86,slow=9.7,SNR=7.1						
KURBB	Kurchatov Arra	47.07	309	P	P	02 55 28.5	+0.7
	1.4nm,0.6s,baz=84,slow=7.7,SNR=17						

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*MOS **29** 02:48:52.4±0.7, 1°.65N×126°.25E, h42^{km}, mb5.2/58, Error ellipse: s-maj=9.0km s-min=4.6km az=111.7*

*BJI **29** 02:48:52.6±0.0, 1°.25N×126°.52E, h72^{km}, mB5.3/44, mb4.9/68, Ms4.6/26, Ms7 4.3/28*

*NEIC **29** 02:48:54.2±1.1, 1°.62N±0°.07×126°.34E±0°.06, h45^{km}±4^{km}, mb5.1/99, Error ellipse: s-maj=11.2km s-min=7.5km az=210.0*

*KLM **29** 02:48:54, 1°.80N×126°.66E, h38^{km}, mb5.3*

*DJA **29** 02:48:55.1±0.2, 2°N±2°×12°6E±°, h62^{km}±2^{km}, M4.8/49, mb5.1/49, mB5.3/22, MLv5.0/19, Mw(mB)4.7/22, MwMwp5.0/4, Mwp5.3/4*

*GCMT **29** 02:48:56.2±0.2, 1°.80N±0°.01×126°.31E±0°.02, h32^{km}, MW5.1/80, Moment Tensor Solution. s64,c79; s80,c106;*

Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.33±.19; $M_{\theta\theta}$-1.45±.12; $M_{\phi\phi}$-2.88±.14; $M_{r\theta}$-1.79±.17; $M_{\theta\phi}$-2.52±.09; $M_{\phi r}$0.31±.18; Best double couple: $M_0$4.92100×10^{16} NP1:ϕ_s19.00000°,δ43.00000°,λ61.00000°. NP2: ϕ_s236.00000°,δ53.00000°,λ114.00000°. Principal axes: T 4.9770, Plg70.0000°, Azm204.0000°; N -0.1130, Plg19.0000°, Azm41.0000°; P -4.8640, Plg5.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*IDC **29** 02:48:56.3±1.8, 1.°61N×126.°37E, h58km±15km, mb4.6/38, mb1 4.7/42, mb1mx4.6/48, mbtmp4.9/42, MS4.0/19, Ms1 4.0/19, ms1mx3.8/41 Error ellipse: s-maj=13.4km s-min=7.3km az=77.0*

*NOU **29** 02:48:57.9, 1.°57N×126.°45E, h52km, mb5.1, Northern Molucca Sea*

ISC 29 02:48:56.1±0.5**, 1.°64N**±0.°03×**126.°40E**±0.°04**, h60**km±4km**, n472, σ1.s51**/490**, mb5.0**/159**, MS4.0**/27**, 17C-8D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.29	132	Pn	Pn	02 49 16.1	-2.0
TNTI				Sn	Sn	02 49 32.4	-2.0
TNTI	Ternate	1.29	132	P	Pn	02 49 16.0	-2.0
SGSI	Sangihe	2.21	337	P	Pn	02 49 28.0	-2.5
SGSI				S	Sn	02 49 54.5	-2.2
KMSI	Cibinong	2.64	246	P	Pn	02 49 36.2	-0.1
KMSI				S	Sn	02 50 09.1	+2.0
GTOI	Gorontalo	3.53	254	P	Pn	02 49 48.8	+0.3
SANI	Sanana	3.69	186	P	Pn	02 49 49.7	-0.9
DDMP	Don Marcelino,	4.49	351	eP	Pn	02 49 59.4	-2.2
LUWI	Luwuk	4.50	234		Pn	02 50 02.1	+0.4
LUWI	Luwuk	4.50	234	P	Pn	02 50 03.5	+1.8
MRSI	Marisa	4.61	256	P	Pn	02 50 04.3	+1.1
NLAI	Namlea	4.89	172	P	Pn	02 50 07.2	0.0
SKMP	Bagumbayan, Su	5.19	339	eP	Pn	02 50 08.0	-3.3
APSI	Ampana	5.38	242	P	Pn	02 50 15.6	+1.8
	2.8nm7μm727nm,1.0s						
DAV	Davao City (W)	5.46	351	P	Pn	02 50 15.5	+0.6
	95nm,0.3s,baz=72,slow=3.2,SNR=1.6						
SWI	Sorong	5.46	117	P	Pn	02 50 13.6	-1.3
	0.4nm5μm2μm110nm,1.1s						
SIJI	Sorong	5.47	117	P	Pn	02 50 14.9	-0.1
	2.8nm,0.3s,baz=310,slow=7.0,SNR=11						
SIJI				LR	LR	02 52 48.4	
	comp=Z,3μm,20.3s,baz=300,slow=42						
KCP	Kidapawan	5.49	346	⇓eP	Pn	02 50 15.7	+0.2
KCP				iS	Sn	02 51 15.2	-2.2
MSAI	Masohi	5.56	153	P	Pn	02 50 14.5	-1.8
	0.3nm3μm64nm,0.8s						
TOLI2	Tolitoli	5.64	265	Pn	Pn	02 50 16.0	-1.4
BUKP	Musuan	6.34	348	eP	Pn	02 50 27.1	+0.1
MPSI	Mapaga	6.63	259	P	Pn	02 50 32.2	+1.3
	0.7nm3μm199nm,0.9s						
PAGZ	Pagadian	6.86	334	eP	Pn	02 50 31.5	-2.6
CGP	Cagayan de Oro	6.98	346	⇓eP	Pn	02 50 43.5	+7.7
FAKI	Fak Fak	7.39	128	Pn	Pn	02 50 38.2	-3.2
FAKI	Fak Fak	7.39	128	P	Pn	02 50 42.7	+1.3
	0.5nm3μm2μm129nm,1.1s						
TTSI	Tana Toraja	8.06	235	P	Pn	02 50 50.8	+0.3
	2μm223nm,0.7s						
MYLDM	Lahad Datu	8.63	294	Pn	Pn	02 50 57.8	-0.6
SPSI	Sidrap Palu	8.65	230	P	Pn	02 50 59.0	+0.3
	1μm149nm,0.9s						
BNSI	Bone	8.69	226	P	Pn	02 50 58.9	-0.3
	2μm173nm,0.9s						
BKSI	Bulukumba	9.33	222	P	Pn	02 51 08.0	0.0
	1μm93nm,0.7s						
KAPI	Kappang	9.37	225	P	Pn	02 51 10.0	+1.6
	8.6nm,0.3s,baz=38,slow=3.6,SNR=30						
KAPI	Kappang	9.37	225	P	Pn	02 51 06.6	-1.9
KAPI	Kappang	9.37	225	Pn	Pn	02 51 06.6	-1.9
BSSI	Bau Bau, Buton	9.72	217	P	Pn	02 51 13.4	+0.1
	936nm80nm,0.6s						
BAKI	Biak	10.11	106	P	Pn	02 51 26.7	+8.2
SPMM	Sapulut	10.38	287	P	Pn	02 51 29.0	+6.7
CUYO	Cuyo Island	10.60	330	eP	Pn	02 51 24.7	-0.6
KKM	Kota Kinabalu	11.06	294	Pn	Pn	02 51 29.2	-2.5
EDFI	Ende, Flores	11.34	204	P	Pn	02 51 33.7	-1.8
	9.9nm,1.0s						
KBKI	Kotabaru	11.34	244	P	Pn	02 51 34.9	-0.6
	4μm48nm,1.3s						
SOEI	Soe	11.52	191	P	Pn	02 51 43.4	+5.5
ENPP	El Nido	11.76	324	eP	Pn	02 51 38.9	-2.2
MTKI	Muara Teweh, K	11.79	258	P	Pn	02 51 43.3	+1.8
BATI	Baumata	12.08	193	P	Pn	02 51 49.7	+4.2
	4.2nm,0.3s,baz=281,slow=16,SNR=1.6						
BATI	Baumata	12.08	193	P	Pn	02 51 43.8	-1.7
	74nm,1.0s						
SMPI	Sarmi	12.82	106	P	Pn	02 51 59.4	+3.7
LQP	Lukban	13.29	339	eP	P	02 52 07.1	-2.9
PLAI	Plampang	13.49	219	P	Pn	02 52 05.0	+0.3
	2μm268nm,1.1s						
TGY	Tagaytay City	13.51	337	LR	LR	02 57 34.3	
	comp=Z,777nm,21.7s,baz=138,slow=38						
TWSI	Taliwang, Sumb	14.01	222	P	Pn	02 52 13.0	+1.3
	1μm154nm,1.1s						
SBUM	Sibu	14.19	273	Pn	Pn	02 52 14.8	+0.6
SBUM	Sibu	14.19	273	P	P	02 52 20.0	+0.1
GENI	Genyem	14.39	107	P	Pn	02 52 19.2	+2.4
	110nm,0.7s						
SRBI	Singaraja	14.76	229	P	P	02 52 24.7	-1.4
	73nm,1.0s						
JAY	Jayapura	14.88	106	P	P	02 52 27.9	+0.2
	0.8nm,0.3s,baz=307,slow=15,SNR=4.3						
JAY				LR	LR	02 57 44.4	
	comp=Z,753nm,20.5s,baz=335,slow=35						
KMMI	Kalianget	15.11	235	P	Pn	02 52 27.2	+1.1
	90nm,1.1s						
MTN	Manton Dam	15.13	162	P	Pn	02 52 25.7	-0.7
	baz=15,SNR=5.8						
MTN	Manton Dam	15.13	162	Pn	Pn	02 52 24.3	-2.1
DNP	Denpasar	15.15	227	P	P	02 52 31.3	+0.8
KDU	Kakadu	15.46	157	P	Pn	02 52 30.0	-0.5
	baz=16,SNR=34						
KSM	Kuching	16.09	270	P	Pn	02 52 39.0	+0.5
KSM				IAmb	IAmb	02 52 49.6	
	comp=Z,104nm,1.1s						
KSM	Kuching	16.09	270	P	P	02 52 46.0	+5.1
FITZ	Fitzroy Crossi	19.63	182	P	P	02 53 19.2	-0.6
	baz=20,SNR=12						
FITZ	Fitzroy Crossi	19.63	182	P	P	02 53 19.6	-0.3
	comp=Z,1.1nm,0.3s,baz=13,slow=11,SNR=23						
FITZ	Fitzroy Crossi	19.63	182	P	P	02 53 19.5	-0.3
DLV	T Lat	20.50	301		P	02 53 28.8	-0.9
LEM	Lembang	20.55	246	LR	LR	03 03 07.7	
	comp=Z,438nm,21.5s,baz=47,slow=42						
PPBI	Pangkal Pinang	20.61	260	P	Pn	02 53 33.0	-0.4
CISI	Cisompet, Garu	20.67	244	P	Pn	02 53 39.6	+5.5
TWG	Pinlang	21.68	347	P	P	02 53 39.4	-2.6
DSRI	Dabo	21.92	265	P	P	02 53 53.5	+8.8
YULB	Yu-li	22.18	348	P	P	02 53 43.7	-3.7
YULB				IAmb	IAmb	02 53 52.3	
	comp=Z,36nm,0.7s						
TPUB	Ta-pu	22.25	346	P	P	02 53 46.0	-2.1
KLSI		22.55	254	P	P	02 53 49.3	-2.1
	comp=Z,12nm,0.9s						
SSLB	Suanglung	22.64	347	P	P	02 53 50.6	-1.7
SSLB				IAmb	IAmb	02 53 53.1	
	comp=Z,42nm,0.7s						
WB0	Warramunga Arr	22.67	160	P	P	02 53 51.9	-0.8
WB0				IAmb	IAmb	02 53 59.2	
	comp=Z,75nm,0.7s						
COEN	Coen	22.73	134	P	P	02 53 52.5	-0.8
WRAB	Tennant Creek	22.81	160	P	P	02 53 52.8	-1.3
WRAB				pmax	pmax		
	comp=Z,95nm,0.8s						
WRAB	Tennant Creek	22.81	160	P	P	02 53 52.8	-1.3
WRA	Warramunga Arr	22.82	160	P	P	02 53 53.0	-1.1
	comp=Z,42nm,0.5s,baz=339,slow=11,SNR=181						
WRA				S	S	02 57 57.7	-1.4
	comp=Z,7.2nm,1.0s,baz=330,slow=19,SNR=8.2						
WRA	Warramunga Arr	22.82	160	P	P	02 53 52.3	-1.9
WRA					PcP	02 57 44.6	+0.8
WB2	Warramunga Arr	22.82	160	P	P	02 53 53.3	-0.9
	baz=23						
WB2	Warramunga Arr	22.82	160	P	P	02 53 53.4	-0.9
WR0	Warramunga Arr	22.90	160	P	P	02 53 54.2	-0.8
WR0				IAmb	IAmb	02 54 01.2	
	comp=Z,105nm,1.0s						
KASI	Kota Agung	23.00	252	P	P	02 53 58.0	+1.9
MDSI	Maura Dua	23.02	255	P	P	02 53 53.9	-2.4
	comp=Z,30nm,1.1s						
LWLI	Liwa	23.28	253	P	P	02 53 58.7	-0.3
	comp=Z,6μmcomp=Z,54nm,0.6s						
PMG	Port Moresby	23.41	118	LR	LR	03 04 39.8	
	comp=Z,407nm,19.2s,baz=12,slow=40						
QIZ	Qiongzhong	23.70	318	P	P	02 54 02.0	-0.7
QIZ				S	S	02 58 19.8	+6.2
QIZ				pmax	pmax		
	comp=Z,12nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,180nm,9.0s						
QIZ				LR	LR		
	comp=Z,430nm,21.6s						
QIZ				LR	LR		
	comp=Z,410nm,17.7s						
QIZ				LR	LR		
	comp=Z,560nm,22.6s						
XMI	Christmas Isla	23.85	239	P	P	02 54 06.4	+2.2
	comp=Z,88nm,1.0s						
XMIS	Christmas Isla	23.90	239	P	P	02 54 03.0	-1.6
XMIS				IAmb	IAmb	02 54 06.8	
	comp=Z,106nm,1.1s						
XMIS	Christmas Isla	23.90	239	P	P	02 54 06.6	+2.0
	comp=Z,86nm,1.1s						
PSA00	Pilbara Seismi	23.94	195	P	P	02 54 04.4	-0.4
PSA00	Pilbara Seismi	23.94	195	P	P	02 54 03.0	-1.9
PSA00				IAmb	IAmb	02 54 09.4	
	comp=Z,14nm,0.8s						
UBPT	Khong Chiam	24.70	304	P	P	02 54 13.7	+1.9
	comp=Z,14nm,1.1s						
UBPT	Khong Chiam	24.70	304	P	P	02 54 11.7	-0.2
SDSI	Sungai Dareh	25.10	264	P	P	02 54 16.4	+0.9
	comp=Z,37nm,0.9s						
JOW	Kunigami	25.11	4	P	P	02 54 16.2	+0.7
	comp=Z,85nm,0.8s,baz=190,slow=10.0,SNR=10						
QIS	Mount Isa	25.57	150	P	P	02 54 20.2	+0.5
	baz=26,SNR=16						
PDSI	Padang	26.06	265	P	P	02 54 35.5	+11
AS31	Alice Springs	26.19	164	P	P	02 54 24.3	-1.0
AS31					S	02 58 54.8	+1.5
ASAR	Alice Springs	26.19	164	P	P	02 54 25.9	+0.5
	comp=Z,7.6nm,0.5s,baz=344,slow=6.6,SNR=49						
ASAR				PcP	PcP	02 57 52.2	+1.0
	comp=Z,5.5nm,0.7s,baz=344,slow=2.1,SNR=7.8						
ASAR				S	S	02 58 54.7	+1.4
	comp=Z,10nm,1.0s,baz=349,slow=21,SNR=13						
ASAR	Alice Springs	26.19	164	P	P	02 54 24.8	-0.5
ASAR					PcP	02 57 51.9	+0.7
MTSU	Mount Surprise	26.40	139	P	P	02 54 27.9	+0.6
	baz=26,SNR=8.4						
GIRL	Giralia	26.89	205	P	P	02 54 33.3	+1.7
	baz=27,SNR=6.8						
GIRL	Giralia	26.89	205	P	P	02 54 32.4	+0.8
SRAK	Srakaew	27.04	298	P	P	02 54 30.0	-2.9
	comp=Z,1μmcomp=Z,147nm,0.7s						
RPSI	Rantau Prapat	27.48	273	P	P	02 54 37.3	+0.3
RPSI					PcP	02 57 55.4	+1.1
PSI	Prapat	27.48	273	P	P	02 54 37.3	+0.2
	comp=Z,7.7nm,0.7s,baz=180,slow=2.2,SNR=6.5						
PSI				PcP	PcP	02 57 55.4	+0.9
	comp=Z,3.5nm,0.5s,baz=180,slow=6.0,SNR=4.1						
CHAI	Chaiyaphum	27.93	302	P	P	02 54 40.6	-0.4
	comp=Z,728nmcomp=Z,28nm,0.8s						
NONG	Nongkai	28.06	307	P	P	02 54 44.6	+2.4
	comp=Z,28nm,0.8s						
GSI	Gunungsitoli	28.82	270	P	P	02 54 48.1	-0.8
GSI	Gunungsitoli	28.82	270	P	P	02 54 46.3	-2.6
	comp=Z,28nm,0.9s						
MEEK	Meekatharra	29.10	194	P	P	02 54 52.1	+0.9
	baz=29,SNR=14						
JCJ	Chichijima	29.50	30	P	P	02 54 54.4	-0.3
	comp=Z,63nm,0.6s,baz=281,slow=19,SNR=1.4						
PHIT	Phitsanulok	29.86	303	P	P	02 54 59.0	+0.9
	comp=Z,3μmcomp=Z,75nm,0.8s						
UTHA	Uthaitani	29.96	299	P	P	02 55 00.1	+1.1
	comp=Z,15nm,0.7s						
UTTA	Uttaradit	30.01	304	P	P	02 55 02.5	+3.1
	comp=Z,8.3nm,0.6s						
SUKH	Sukhothai	30.66	303	P	P	02 55 05.7	+0.6
	comp=Z,20nm,0.7s						
WHN	Wuhan	30.94	339	⇑P	P	02 55 13.0	+5.6
NJ2	Nanjing	31.08	348	eP	P	02 55 10.0	+1.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
GYA	Guiyang	31.13	324	eP	P	02 55 13.8	+4.5
GYA				pP	pP	02 55 23.0	-0.7
GYA				pmax	pmax		
	comp=Z,12nm,0.7s						
GYA				LR	LR		
	comp=Z,310nm,20.0s						
CM36	Chiang Mai Arr	31.60	304	P	P	02 55 16.0	+2.6
JNU	Nakatsue	31.60	7	P	P	02 55 13.2	-0.1
	comp=Z,22nm,0.9s,baz=60,slow=2.0,SNR=5.1						
JNU				LR	LR	03 11 10.7	
	comp=Z,108nm,18.6s,baz=172,slow=42						
JNU	Nakatsue	31.60	7	P	P	02 55 13.2	-0.1
JNU				IAmb	IAmb	02 55 16.9	
	comp=Z,28nm,1.0s						
CM04	Chiang Mai Arr	31.64	304	P	P	02 55 18.0	+4.2
	comp=Z,4.6nm,1.0s						
CM02	Chiang Mai Arr	31.68	304	P	P	02 55 18.5	+4.3
	comp=Z,7.7nm,0.9s						
CMAR	Chiang Mai Arr	31.69	304	P	P	02 55 14.6	+0.3
	comp=Z,2.5nm,0.3s,baz=119,slow=6.2,SNR=13						
CMAR				PcP	PcP	02 58 06.8	+1.7
	comp=Z,3.0nm,0.9s,baz=161,slow=1.2,SNR=10						
CMAR				LR	LR	03 07 53.6	
	comp=Z,232nm,21.3s,baz=180,slow=36						
CMAR	Chiang Mai Arr	31.69	304	P	P	02 55 13.4	-0.9
CMAR					PcP	02 58 05.5	+0.4
CMMT	Chiang Mai	31.86	304	P	P	02 55 17.2	+1.4
CHTO	Chiang Mai	31.86	304	P	P	02 55 14.7	-1.1
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	Chiang Mai	31.86	304	P	P	02 55 14.7	-1.1
CM32	Chiang Mai Arr	31.87	304	P	P	02 55 19.0	+3.2
MORW	Morawa	32.10	197	P	P	02 55 18.7	+0.9
	baz=32,SNR=6.1						
MORW	Morawa	32.10	197	P	P	02 55 17.2	-0.5
FORT	Forrest	32.28	177	P	P	02 55 19.7	+0.5
	baz=32,SNR=12						
FORT	Forrest	32.28	177	P	P	02 55 19.2	0.0
KMI	Kunming	32.65	318	⇓P	P	02 55 25.0	+2.1
KMI				S	S	03 00 38.5	+3.4
KMI				pmax	pmax		
	comp=Z,21nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,3.8s						
KMI				LR	LR		
	comp=Z,310nm,23.0s						
KMI				LR	LR		
	comp=Z,320nm,21.5s						
KMI				LR	LR		
	comp=Z,700nm,23.1s						
ENH	Enshi	32.69	332	P	P	02 55 22.0	-0.9
ENH				IAmb	IAmb	02 55 29.2	
	comp=Z,32nm,0.9s						
KMBL	Kambalda	33.10	187	P	P	02 55 27.7	+1.2
	baz=33,SNR=7.4						
BLDU	Ballidu	33.38	195	P	P	02 55 29.6	+0.8
	baz=34,SNR=7.9						
JHJ	Hachijo jima 2	33.74	20	LR	LR	03 08 25.2	
	comp=Z,128nm,21.1s,baz=268,slow=35						
KLBR	Kellerberrin	34.05	193	P	P	02 55 35.3	+0.6
	baz=34,SNR=13						
MUN	Mundaring	34.80	195	P	P	02 55 42.4	+1.2
	baz=35,SNR=3.0						
INU	Inuyama	34.96	15	P	P	02 55 42.7	+0.2
INU				IAmb	IAmb	02 55 48.3	
	comp=Z,37nm,1.0s						
NWAO	Narrogin (SRO)	35.45	193	P	P	02 55 47.6	+0.8
	baz=36,SNR=7.5						
BBOO	Buckleboo	35.46	166	P	P	02 55 47.1	+0.3
	baz=36,SNR=24						
BBOO	Buckleboo	35.46	166	P	P	02 55 46.7	-0.1
BBOO				IAmb	IAmb	02 55 53.2	
	comp=Z,36nm,1.1s						
KSAR	Wonju Array Be	35.66	2	P	P	02 55 48.4	0.0
KSAR	Wonju Array Be	35.66	2	P	P	02 55 48.4	0.0
KSRS	Korea Array	35.67	2	P	P	02 55 49.6	+1.1
	comp=Z,4.9nm,0.6s,baz=180,slow=9.6,SNR=18						
EIDS	Eidsvold	35.94	140	P	P	02 55 50.2	-0.9
	baz=36,SNR=5.3						
EIDS	Eidsvold	35.94	140	P	P	02 55 51.0	-0.1
EIDS				IAmb	IAmb	02 55 56.6	
	comp=Z,24nm,1.0s						
XAN	Xi'an	36.14	335	P	P	02 55 52.0	-0.7
XAN				pP	pP	02 55 59.3	-7.9
XAN				sP	pwP	02 56 04.8	-4.5
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN	Xi'an	36.14	335	P	P	02 55 51.8	-0.9
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
CD2	Chengdu	36.15	326	P	P	02 55 52.5	-0.4
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				LR	LR		
	comp=Z,400nm,17.1s						
CD2				LR	LR		
	comp=Z,510nm,11.6s						
CD2				LR	LR		
	comp=Z,400nm,11.7s						
STKA	Stephens Creek	36.31	158	P	P	02 55 54.5	+0.4
	baz=36,SNR=19						
STKA	Stephens Creek	36.31	158	P	P	02 55 54.4	+0.3
	comp=Z,22nm,0.7s,baz=334,slow=7.7,SNR=14						
STKA				PcP	PcP	02 58 19.2	+1.2
	comp=Z,2.5nm,0.5s,baz=342,slow=5.6,SNR=3.1						
STKA				LR	LR	03 12 40.9	
	comp=Z,186nm,20.6s,baz=340,slow=39						
STKA	Stephens Creek	36.31	158	P	P	02 55 54.3	+0.1
STKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	36.31	158	P	P	02 55 54.2	+0.1
MAJO	Matsushiro	36.41	16	P	P	02 55 54.8	-0.1
MAJO				pmax	pmax		
	comp=Z,29nm,1.1s						
MAJO	Matsushiro	36.41	16	P	P	02 55 54.8	-0.1
MAJO				IAmb	IAmb	02 55 59.7	
	comp=Z,29nm,1.1s						
MAT	Matsushiro	36.41	16	P	P	02 55 54.4	-0.5
MAT				eS	S	03 01 32.4	+0.1
MJAR	Matsushiro Arr	36.41	16	P	P	02 55 54.4	-0.5
	comp=Z,13nm,0.8s,baz=183,slow=9.4,SNR=19						
MJAR				LR	LR	03 10 19.0	
	comp=Z,187nm,21.9s,baz=205,slow=35						
MJAR	Matsushiro Arr	36.41	16	P	P	02 55 54.8	-0.1
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	Matsushiro Arr	36.41	16	P	P	02 55 54.8	-0.1
HTT	Hallett	36.83	162	P	P	02 55 58.7	+0.2
	baz=37,SNR=8.7						
DL2	Dalian	37.35	354	P	P	02 56 03.8	+1.0
DL2				pmax	pmax		
	comp=Z,63nm,0.7s						
DL2				pmax	pmax		
	comp=Z,170nm,4.7s						
DL2				LR	LR		
	comp=Z,290nm,22.7s						
DL2				LR	LR		
	comp=Z,320nm,20.7s						
DL2				LR	LR		
	comp=Z,400nm,24.0s						
CMSA	Cobar Meteorol	37.74	153	P	P	02 56 07.0	+0.8
	baz=38						
JMM	Marumori	38.40	18	P	P	02 56 12.1	+0.3
BJT	Baijiatuau	39.32	348	P	P	02 56 19.2	-0.2
BJT				pmax	pmax		
	comp=Z,19nm,0.8s						
BJT	Baijiatuau	39.32	348	P	P	02 56 19.2	-0.2
BJT				IAmb	IAmb	02 56 24.9	
	comp=Z,19nm,0.8s						
BJI	Beijing	39.34	348	P	P	02 56 19.5	0.0
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,230nm,5.5s						
ARMA	Armidale	39.93	145	P	P	02 56 25.0	+0.3
	baz=40,SNR=8.4						
ARMA	Armidale	39.93	145	P	P	02 56 24.7	0.0
ARMA				IAmb	IAmb	02 56 32.1	
	comp=Z,30nm,0.9s						
SNY	Shenyang	40.09	357	⇓P	P	02 56 26.5	+0.8
SNY				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	Lanzhou	40.15	331	eP	P	02 56 26.8	+0.3
LZH				PcP	PcP	02 58 32.5	+2.5
LZH				pmax	pmax		
	comp=Z,37nm,1.1s						
LZH				pmax	pmax		
	comp=Z,200nm,4.3s						
LZH				LR	LR		
	comp=Z,500nm,14.3s						
LZH				LR	LR		
	comp=Z,290nm,17.7s						
LZH				LR	LR		
	comp=Z,500nm,18.7s						
ARPS	Mount Arapiles	40.82	161	P	P	02 56 30.3	-1.6
	baz=41,SNR=5.9						
SHL	Shillong	40.88	309	P	P	02 56 31.7	-1.1
SHL				pmax	pmax		
	comp=Z,23nm,0.9s						
SHL	Shillong	40.88	309	P	P	02 56 31.7	-1.1
SHL				IAmb	IAmb	02 56 36.5	
	comp=Z,23nm,0.9s						
MSHR	Mys Shultsa	40.98	5	ceP	P	02 56 33.3	+0.2
MSHR				pmax	pmax		
	comp=Z,24nm,1.3s						
HHC	Hu-ho-hao-te	41.28	343	eP	P	02 56 35.8	+0.1
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,6.1s						
CN2	Changchun	41.99	359	eP	P	02 56 45.0	+3.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USA0B	Ussuriysk Arra	42.67	6	P	P	02 56 46.5	-0.3
USA0B				pmax	pmax		
	comp=Z,20nm,1.0s						
USA0B	Ussuriysk Arra	42.67	6	P	P	02 56 46.5	-0.3
USRK	Ussuriysk Ar.	42.67	6	P	P	02 56 48.0	+1.2
	comp=Z,17nm,0.9s,baz=192,slow=7.0,SNR=30						
USRK				LR	LR	03 13 02.8	
	comp=Z,102nm,21.4s,baz=186,slow=34						
USRK	Ussuriysk Ar.	42.67	6	P	P	02 56 46.8	-0.1
MDJ	Mudanjiang	42.89	3	P	P	02 56 49.5	+0.9
MDJ				pmax	pmax		
	comp=Z,240nm,7.1s						
LSA	Lhasa	43.59	313	P	P	02 56 55.3	+0.1
LSA				pmax	pmax		
	comp=Z,46nm,1.0s						
LSA	Lhasa	43.59	313	P	P	02 56 53.6	-1.5
LSA				pmax	pmax		
	comp=Z,14nm,1.0s						
LSA	Lhasa	43.59	313	P	P	02 56 53.6	-1.5
TEY	Ternei	44.15	10	⇑eP	P	02 56 59.6	+0.9
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
TEY				pmax	pmax		
	comp=Z,70nm,0.6s						
ASAJ	Asahikawa	44.68	17	P	P	02 57 03.8	+0.8
	comp=Z,13nm,0.5s,baz=246,slow=14,SNR=7.6						
ASAJ				LR	LR	03 14 58.8	
	comp=Z,178nm,21.0s,baz=180,slow=35						
ASAJ	Asahikawa	44.68	17	P	P	02 57 03.1	+0.1
ASAJ				pmax	pmax		
	comp=Z,19nm,0.9s						
JKA	Kamikawa-asahi	44.68	17	P	P	02 57 03.1	+0.1
JKA				IAmb	IAmb	02 57 05.3	
	comp=Z,19nm,0.9s						
GTA	Gaotai	44.73	330	⇑P	P	02 57 03.0	-0.7
GTA				PcP	PP	02 58 47.5	-1.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,100nm,4.9s						
GTA				LR	LR		
	comp=Z,270nm,19.6s						
GTA				LR	LR		
	comp=Z,260nm,19.3s						
GTA				LR	LR		
	comp=Z,330nm,21.4s						
TAPN	Taplejung	45.01	308	eP	P	02 57 06.2	-0.1
	comp=Z,36nm,0.9s						
PALK	Pallekele	45.88	278	P	P	02 57 13.8	+0.7
	comp=Z,3.5nm,0.5s,baz=222,slow=7.9,SNR=3.3						
GUN	Gumba	46.71	308	eP	P	02 57 18.8	-1.0
	comp=Z,68nm,0.8s						
PKI	Pulchoki	46.93	307	eP	P	02 57 20.2	-1.3
PKIN	Phulchoki	46.95	307	eP	P	02 57 20.5	-1.0
KKN	Kakani	47.13	307	eP	P	02 57 21.7	-1.2

DMN	Daman	47.19	307	eP	P	02 57 22.5	-0.9
	comp=Z,39nm,0.9s						
YSS	Yuzh-Sakhalins	47.33	15	eP	P	02 57 24.3	+0.5
YSS				pmax	pmax		
	comp=Z,20nm,1.5s						
KLR	Kul'dur	47.63	5	P	P	02 57 27.0	+0.8
	comp=Z,9.0nm,0.7s,baz=194,slow=4.4,SNR=34						
KLR	Kul'dur	47.63	5	ceP	P	02 57 25.6	-0.6
KLR				pmax	pmax		
	comp=Z,17nm,1.1s						
GKN	Gorkha	47.74	307	eP	P	02 57 26.3	-1.2
	comp=Z,34nm,0.9s						
HIA	Hailar	47.79	354	i P	P	02 57 28.3	+0.9
HIA				pmax	pmax		
	comp=Z,15nm,0.9s						
HIA	Hailar	47.79	354	P	P	02 57 27.5	+0.1
HIA				IAmb	IAmb	02 57 33.6	
	comp=Z,31nm,1.1s						
KOLN	Koldanda	48.47	306	eP	P	02 57 32.0	-1.2
	comp=Z,117nm,0.9s						
DANN	Dangsing	48.58	307	eP	P	02 57 33.0	-1.2
	comp=Z,46nm,0.6s						
ULN	Ulaanbaatar	49.00	343	ceP	P	02 57 36.8	-0.1
ULN				pmax	pmax		
	comp=Z,16nm,1.3s						
ULN	Ulaanbaatar	49.00	343	P	P	02 57 36.4	-0.5
ULN				IAmb	IAmb	02 57 39.4	
	comp=Z,10nm,0.8s						
ULN					PcP	02 59 00.2	+0.1
SONM	Songino Array	49.17	342	P	P	02 57 38.6	+0.4
	comp=Z,9.0nm,1.0s,baz=160,slow=5.4,SNR=36						
SONM				PcP	PcP	02 59 02.6	+1.9
	comp=Z,7.1nm,1.0s,baz=160,slow=2.8,SNR=6.4						
SONM				LR	LR	03 21 20.1	
	comp=Z,173nm,21.8s,baz=160,slow=40						
SONM	Songino Array	49.17	342	P	P	02 57 38.5	+0.3
SONM					PcP	02 59 01.0	+0.2
HYB	Hyderabad	49.54	292	i P	P	02 57 41.5	+0.1
GRNR	Gornyy	49.69	8	⇓iP	P	02 57 43.6	+1.7
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				MLR	MLR		
	comp=N,220nm,16.0s						
ZEA	Zeya	51.93	1	eP	P	02 57 57.5	-1.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAK	Zakamensk	52.38	341	eP	P	02 58 02.2	-0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY	Talaya	53.41	343	P	P	02 58 12.6	+2.9
	comp=Z,8.7nm,0.7s,baz=180,slow=1.0,SNR=3.0						
TLY				LR	LR	03 22 15.1	
	comp=Z,96nm,18.7s,baz=139,slow=37						
TLY	Talaya	53.41	343	i P	P	02 58 09.9	+0.2
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MOY	Mondy	54.23	341	eP	P	02 58 17.2	+1.4
MOY				pmax	pmax		
	comp=Z,32nm,2.1s						
WMQ	Urumqi	54.25	326	P	P	02 58 18.0	+1.9
WMQ				pmax	pmax		
	comp=Z,29nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.9s						
WMQ				LR	LR		
	comp=Z,490nm,16.9s						
WMQ				LR	LR		
	comp=Z,310nm,26.3s						
MSVF	Nonsavu	54.37	113	i P	P	02 58 18.0	+0.6
MSVF				pmax	pmax		
	comp=Z,20nm,1.1s						
BOD	Bodaibo	56.88	352	eP	P	02 58 35.3	+0.8
BOD				pmax	pmax		
	comp=Z,30nm,1.5s						
PETK	Petropavlovsk-	57.48	22	P	P	02 58 40.5	+1.6
	comp=Z,11nm,0.5s,baz=182,slow=4.3,SNR=34						
PETK				LR	LR	03 23 34.5	
	comp=Z,40nm,20.1s,baz=205,slow=36						
ZSN	Zaisan	58.08	328	eP	P	02 58 42.1	-1.2
	comp=Z,2.8nm,0.9s,baz=328						
ZSN	Zaisan	58.08	328	eP	P	02 58 42.1	-1.2
ZSN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DGZ	Jazzator, Alta	58.25	331	i P	P	02 58 44.7	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SHLS	Shalkode	58.75	321	eP	P	02 58 45.6	-2.6
	comp=Z,9.3nm,1.0s,baz=321						
SHLS				eS	S	03 06 46.6	-2.3
	baz=321						
SHLS	Shalkode	58.75	321	eP	P	02 58 45.5	-2.6
SHLS				eS	S	03 06 46.6	-2.3
SHLS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	Nilore	58.95	309	P	P	02 58 48.7	-0.9
NIL				pmax	pmax		
	comp=Z,28nm,1.1s						
NIL	Nilore	58.95	309	P	P	02 58 48.7	-0.9
MK31	Makanchi Array	59.09	326	P	P	02 58 50.1	-0.2
MK31				pmax	pmax		
	comp=Z,15nm,1.1s						
MK31	Makanchi Array	59.09	326	P	P	02 58 50.0	-0.2
MK31				IAmb	IAmb	02 58 53.8	
	comp=Z,15nm,1.1s						
MKAR	Makanchi Array	59.09	326	P	P	02 58 50.5	+0.2
	comp=Z,8.2nm,0.4s,baz=120,slow=8.1,SNR=142						
MKAR				PcP	PcP	02 59 38.9	+0.4
	comp=Z,6.3nm,0.8s,baz=124,slow=6.6,SNR=3.8						
MKAR				LR	LR	03 24 42.4	
	comp=Z,312nm,20.7s,baz=110,slow=36						
MKAR				PKP2bc		03 28 35.4	
	comp=Z,0.4nm,0.8s,baz=337,slow=3.3,SNR=3.6						
MKAR	Makanchi Array	59.09	326	ceP	P	02 58 49.9	-0.4
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MKAR	Makanchi Array	59.09	326	P	P	02 58 49.6	-0.6
MAKZ	Makanchi	59.27	326	P	P	02 58 51.3	-0.2
MAKZ				pmax	pmax		
	comp=Z,15nm,0.8s						
MAKZ	Makanchi	59.27	326	P	P	02 58 51.3	-0.2
MAKZ				IAmb	IAmb	02 58 56.4	
	comp=Z,15nm,0.8s						
KSH	Kashi	59.30	316	P	P	02 58 54.0	+2.0
KSH				S	S	03 07 01.5	+5.3
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
KSH				pmax	pmax		
	comp=Z,610nm,7.2s						
SATY	Saty	59.36	321	eP	P	02 58 51.8	-0.6
	comp=Z,9.7nm,0.9s,baz=320						
SATY	Saty	59.36	321	eP	P	02 58 51.8	-0.6
SATY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KPKS	Kokpek	59.39	321	eP	P	02 58 51.2	-1.4
	comp=Z,12nm,1.0s,baz=321						
KPKS	Kokpek	59.39	321	eP	P	02 58 51.2	-1.4
KPKS				pmax	pmax		
	comp=Z,12nm,1.0s						
MDOK	Medeo	60.28	320	eP	P	02 58 58.0	-0.7
	baz=320						
MDOK	Medeo	60.28	320	eP	P	02 58 58.0	-0.7
TNSS	Tian-Shan	60.28	320	eP	P	02 58 58.0	-1.1
	baz=320						
TNSS	Tian-Shan	60.28	320	eP	P	02 58 57.9	-1.1
YAK	Yakutsk	60.30	2	P	P	02 58 58.2	0.0
	comp=Z,26nm,0.6s,baz=181,slow=1.7,SNR=13						
YAK	Yakutsk	60.30	2	eP	P	02 58 58.5	+0.3
YAK				e*PP	pP	02 59 10.1	-3.6
YAK				e		03 01 14.8	
YAK				eS	S	03 07 09.5	+1.6
YAK				e*SS	sS	03 07 40.3	+6.3
YAK				e		03 08 35.5	
YAK				eSSS	SSS	03 13 43.9	
YAK				pmax	pmax		
	comp=Z,81nm,1.0s						
YAK				pmax	pmax		
	comp=N,31nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,1.4s						
YAK				pmax	pmax		
	comp=Z,277nm,6.8s						
YAK				pmax	pmax		
	comp=E,293nm,5.4s						
YAK				pmax	pmax		
	comp=N,291nm,5.4s						
YAK				smax	smax		
	comp=N,426nm,5.6s						
YAK				smax	smax		
	comp=E,128nm,3.5s						
YAK	Yakutsk	60.30	2	P	P	02 58 58.5	+0.3
TDK	Taldyqorghan	60.36	323	eP	P	02 58 58.3	-0.7
	comp=E,10nm,0.8s,baz=322						
TDK	Taldyqorghan	60.36	323	eP	P	02 58 58.3	-0.7
TDK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAA	Alma-Ata	60.38	320	eP	P	02 58 57.9	-1.5
	baz=320						
AAA	Alma-Ata	60.38	320	eP	P	02 58 57.8	-1.5
CHKK	Chushkaly	60.65	321	eP	P	02 59 00.5	-0.6
	baz=321						
CHKK	Chushkaly	60.65	321	eP	P	02 59 00.5	-0.6
MA2	Magadan	60.80	14	P	P	02 59 03.1	+1.3
	comp=Z,28nm,0.6s,baz=184,slow=17,SNR=5.6						
MA2	Magadan	60.80	14	ceP	P	02 59 02.5	+0.8
MA2				pmax	pmax		
	comp=Z,129nm,2.5s						
MA2	Magadan	60.80	14	P	P	02 59 02.3	+0.6
KUU	Kurty	61.08	321	eP	P	02 59 03.1	-0.9
	comp=Z,23nm,0.9s,baz=320						
KUU	Kurty	61.08	321	eP	P	02 59 03.1	-0.9
KUU				pmax	pmax		
	comp=Z,23nm,0.9s						
TKM2	Tokmak 2	61.10	319	P	P	02 59 04.2	-0.1
	SNR=9.3						
BKZ	Black Stump Fm	61.27	137	P	P	02 59 05.5	+0.1
BKZ				IAmb	IAmb	02 59 12.2	
	comp=Z,12nm,1.0s						
UCH	Uchtor	61.49	318	P	P	02 59 07.7	+0.4
	SNR=17						
AAK	Ala-Archa	61.69	319	P	P	02 59 07.7	-0.6
	comp=Z,4.8nm,0.8s,baz=150,slow=5.6,SNR=11						
AAK	Ala-Archa	61.69	319	i P	P	02 59 07.0	-1.3
AAK				pmax	pmax		
	comp=Z,20nm,1.1s						
AAK	Ala-Archa	61.69	319	P	P	02 59 07.8	-0.6
USP	Ospenovka	61.97	319	P	P	02 59 09.6	-0.4
	SNR=14						
AML	Almayashu	62.00	318	P	P	02 59 10.9	+0.3
	SNR=12						
EKS2	Erkin-Say	62.17	318	P	P	02 59 11.6	+0.1
	SNR=7.5						
ZAA0	Zalesovo Array	62.30	334	P	P	02 59 11.5	-0.5
ZALV	Zalesovo Beam	62.30	334	P	P	02 59 11.3	-0.6
	comp=Z,4.2nm,0.6s,baz=123,slow=6.8,SNR=15						
ZALV				PKP2bc		03 28 24.2	
	comp=Z,0.9nm,0.8s,baz=273,slow=2.5,SNR=5.6						
ZALV	Zalesovo Beam	62.30	334	i P	P	02 59 11.1	-0.8
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	62.54	308	P	P	02 59 13.4	-0.8
KBL				pmax	pmax		
	comp=Z,16nm,0.8s						
KBL	Kabul	62.54	308	P	P	02 59 13.4	-0.8
KBL				IAmb	IAmb	02 59 18.9	
	comp=Z,16nm,0.8s						
BTLS	Baital	63.07	321	eP	P	02 59 16.1	-1.3
	baz=321						
BTLS	Baital	63.07	321	eP	P	02 59 16.0	-1.3
KURBB	Kurchatov Arra	63.32	328	P	P	02 59 18.6	-0.2
	comp=Z,10.0nm,0.5s,baz=127,slow=6.2,SNR=192						
KURK	Kurchatov	63.32	328	P	P	02 59 18.5	-0.3
KURK				pmax	pmax		
	comp=Z,23nm,0.6s						
KURK	Kurchatov	63.32	328	P	P	02 59 18.5	-0.3
SEY	Seymchan	64.13	13	P	P	02 59 25.6	+1.7
	comp=Z,10nm,0.9s,baz=202,slow=6.6,SNR=11						
SEY	Seymchan	64.13	13	i P	P	02 59 25.2	+1.3
IUG	Iuzhnay	64.49	317	eP	P	02 59 25.9	-0.9
	comp=Z,4.8nm,1.0s,baz=316						
IUG	Iuzhnay	64.49	317	eP	P	02 59 25.9	-0.9
IUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KK31	Karatay Array	64.54	318	eP	P	02 59 26.3	-0.7
KK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KK31	Karatay Array	64.54	318	IAmb	IAmb	02 59 28.7	
	comp=Z,12nm,1.0s						
KKAR	Karatay Array	64.54	318	P	P	02 59 26.3	-0.7
KKAR	Karatay Array	64.54	318	P	P	02 59 26.3	-0.7
KKAR	Karatay Array	64.54	318	IAmb	IAmb	02 59 28.7	
	comp=Z,12nm,1.0s						
BRZS	Berezniki	66.20	325	eP	P	02 59 36.6	-1.0
	comp=Z,2.4nm,0.5s,baz=325						
BRZS	Berezniki	66.20	325	eP	P	02 59 36.6	-1.0
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR	Borovoye Array	68.89	328	P	P	02 59 54.1	-0.4
	comp=Z,3.4nm,0.5s,baz=168,slow=22,SNR=34						
BRVK	Borovoye	68.96	328	i P	P	02 59 54.4	-0.5
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s						
BRVK	Borovoye	68.96	328	P	P	02 59 54.8	-0.1
BRVK				IAmb	IAmb	02 59 57.1	
	comp=Z,14nm,0.8s						
TIXI	Tiksi	69.92	1	ceP	P	02 59 59.6	-0.9
TIXI	Tiksi	69.92	1	P	P	03 00 00.7	+0.3
TIXI				IAmb	IAmb	03 00 02.1	
	comp=Z,27nm,1.1s						
BILL	Bilibino	71.65	15	eP	P	03 00 10.4	-0.6
BILL				i		03 00 22.5	
BILL				i		03 00 30.6	
BILL				e		03 02 49.3	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GEYT	Alibeck	71.95	309	P	P	03 00 13.4	-0.2
	comp=Z,9.3nm,1.1s,baz=121,slow=7.1,SNR=9.2						
GEYT	Alibeck	71.95	309	P	P	03 00 12.9	-0.7
NRIK	Noril'sk	72.37	346	P	P	03 00 16.1	+0.8
	comp=Z,33nm,0.7s,baz=124,slow=6.0,SNR=91						
NRIK				LR	LR	03 35 19.4	
	comp=Z,128nm,18.7s,baz=140,slow=38						
NRIK	Noril'sk	72.37	346	P	P	03 00 15.1	-0.2
NRIK				pmax	pmax		
	comp=Z,38nm,0.7s						
NRIK	Noril'sk	72.37	346	P	P	03 00 15.1	-0.2
AB31	Akbulak array	73.56	321	eP	P	03 00 22.3	-0.5
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	73.56	321	P	P	03 00 22.5	-0.2
ABKAR	Akbulak array	73.56	321	IAmb	IAmb	03 00 26.1	
	comp=Z,5.7nm,0.7s						
AKTO	Aktyubinsk	75.09	322	P	P	03 00 31.8	+0.1
	comp=Z,6.7nm,0.6s,baz=107,slow=8.0,SNR=23						
SVE	Sverdlovsk	75.56	329	eP	P	03 00 34.4	+0.2
SVE				pmax	pmax		
	comp=Z,48nm,1.0s						
ARU	Arti	76.52	328	P	P	03 00 39.5	-0.2
	comp=Z,7.1nm,0.7s,baz=111,slow=2.0,SNR=20						
ARU	Arti	76.52	328	d iP	P	03 00 39.4	-0.2
ARU				PPP	PPP	03 05 15.0	
ARU				S	S	03 10 23.8	+2.9
ARU				pmax	pmax		
	comp=Z,22nm,0.8s						
ARU	Arti	76.52	328	P	P	03 00 39.2	-0.4
ARU				IAmb	IAmb	03 00 42.8	
	comp=Z,22nm,0.7s						
ABPO	Ambohimpanom	80.30	251	P	P	03 01 00.1	-1.4
ABPO				pmax	pmax		
	comp=Z,12nm,1.0s						
ABPO	Ambohimpanom	80.30	251	P	P	03 01 00.1	-1.4
MAK	Makhachkala	80.76	313	eP	P	03 01 00.9	-2.3
MAK				e		03 04 05.7	
MAK				eS	S	03 11 03.4	-3.3
MAK				eSS	SS	03 16 23.0	+1.9
MAK				MLR	MLR		
	comp=Z,115nm,17.0s						
RAYN	Ar Rayn	81.00	293	P	P	03 01 03.6	-1.5
RAYN				pmax	pmax		
	comp=Z,15nm,1.0s						
RAYN	Ar Rayn	81.00	293	P	P	03 01 03.6	-1.5
RAYN				IAmb	IAmb	03 01 07.2	
	comp=Z,15nm,0.9s						
RDOG	Red Dog Mine	81.34	21	IAmb	IAmb	03 01 09.8	
	comp=Z,18nm,0.8s						
VNDA	Vanda	81.41	173	P	P	03 01 06.8	+0.7
	comp=Z,6.9nm,0.6s,baz=316,slow=6.8,SNR=24						
VNDA	Vanda	81.41	173	P	P	03 01 06.1	+0.1
VNDA				pmax	pmax		
	comp=Z,12nm,0.9s						
VNDA	Vanda	81.41	173	P	P	03 01 06.1	+0.1
VNDA				IAmb	IAmb	03 01 08.2	
	comp=Z,12nm,0.9s						
MAW	Mawson	81.69	200	LR	LR	03 36 23.3	
	comp=Z,86nm,18.9s,baz=19,slow=35						
KIRV	Kirov	81.83	329	P	P	03 01 08.9	+0.4
	comp=Z,17nm,0.6s,baz=103,slow=1.4,SNR=7.2						
BELG	Belogornoye	81.86	323	c iP	P	03 01 07.6	-1.2
BELG				pmax	pmax		
	comp=Z,11nm,1.0s						
SVW2	Sparrevohn	82.78	29	IAmb	IAmb	03 01 17.2	
	comp=Z,24nm,1.2s						
TTA	Tatalina	82.90	27	P	P	03 01 14.3	0.0
TTA				pmax	pmax		
	comp=Z,15nm,0.7s						
TTA	Tatalina	82.90	27	P	P	03 01 14.3	0.0
TTA				IAmb	IAmb	03 01 16.9	
	comp=Z,15nm,0.7s						
ZEI	Tsey	83.38	313	eP	P	03 01 16.9	-0.4
ZEI				pmax	pmax		
	comp=Z,38nm,0.9s						
NCK	Nalchik	83.65	313	i P	P	03 01 17.9	-0.5
NCK				pmax	pmax		
	comp=Z,15nm,0.8s						
GEVA	Gevas	83.76	308	P	P	03 01 18.5	-0.9
RSO	Redoubt South	84.06	29	P	P	03 01 20.5	+0.1
KBZ	Khabaz	84.17	314	P	P	03 01 22.0	+1.0
	comp=Z,8.2nm,0.8s,baz=98,slow=6.1,SNR=12						
KBZ	Khabaz	84.17	314	ceP	P	03 01 21.3	+0.3
KBZ				pmax	pmax		
	comp=Z,11nm,1.0s						
NEY	Neytrino	84.27	313	i P	P	03 01 21.3	-0.5
NEY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
A21K	Barrow	84.29	18	P	P	03 01 23.4	+2.4
	baz=258						
A21K	Barrow	84.29	18	P	P	03 01 21.4	+0.3
KIV	Kislovodsk	84.34	314	eP	P	03 01 20.9	-1.1
KIV				pmax	pmax		
	comp=Z,41nm,1.1s						
IMAR	Indian Mountai	84.38	24	P	P	03 01 22.3	+0.7
SKT	Skwentna	84.83	28	P	P	03 01 24.7	+0.7
SKT				IAmb	IAmb	03 01 26.1	
	comp=Z,13nm,0.8s						
BRLK	Bradley Lake	84.91	30	P	P	03 01 25.0	+0.5
SUA	Susitna One	85.15	29	P	P	03 01 26.1	+0.4
VRH	Novokhopyorsk	85.39	321	eP	P	03 01 26.4	-0.6
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
MLY	Manley	85.50	25	P	P	03 01 29.1	+1.8
	baz=264						
RC01	Rabbit Creek A	85.60	29	P	P	03 01 29.2	+1.4
	baz=266						
PMR	Palmer	85.93	29	IAmb	IAmb	03 01 31.5	
	comp=Z,12nm,0.8s						
COLD	Coldfoot	85.94	23	P	P	03 01 31.4	+2.1
	baz=265						
COLD	Coldfoot	85.94	23	P	P	03 01 30.0	+0.6
COLD				IAmb	IAmb	03 01 32.3	
	comp=Z,9.5nm,0.8s						
MCK	McKinley	86.17	26	P	P	03 01 31.5	+0.8
	baz=266						
NEA2	Nenana	86.17	25	P	P	03 01 32.2	+1.6
	baz=266						
RND	Reindeer	86.18	27	P	P	03 01 31.2	+0.4
RND				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RND	Reindeer	86.18	27	P	P	03 01 31.2	+0.4
RND				IAmb	IAmb	03 01 31.8	
	comp=Z,9.9nm,0.9s						
KNK	Knik Glacier	86.24	29	P	P	03 01 31.2	+0.2
MDM	Murphy Dome	86.56	25	P	P	03 01 33.1	+0.5
WRH	Wood River Hil	86.59	26	P	P	03 01 33.0	+0.3
COLA	College	86.71	25	i P	P	03 01 33.9	+0.7
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CCB	Clear Creek Bu	86.72	25	P	P	03 01 33.5	+0.2
CCB				IAmb	IAmb	03 01 34.7	
	comp=Z,6.7nm,0.8s						
VORD	Divnogorie	86.91	321	eP	P	03 01 34.0	-0.5
VORD				pmax	pmax		
	comp=Z,60nm,1.4s						
VSR	Storozhevoye	87.00	321	eP	P	03 01 34.6	-0.3
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	Klimovskoe	87.06	331	eP	P	03 01 34.3	-0.7
KLMR				pmax	pmax		
	comp=Z,40nm,1.3s						
KLMR	Klimovskoe	87.06	331	eP	P	03 01 34.4	-0.6
KLMR				AMP		03 01 38.6	
	comp=Z,40nm,1.3s						
HDA	Harding Lake	87.08	26	P	P	03 01 35.0	0.0
	baz=268						
HDA	Harding Lake	87.08	26	P	P	03 01 34.8	-0.3
HDA				IAmb	IAmb	03 01 36.0	
	comp=Z,12nm,1.1s						
IL31		87.12	25	P	P	03 01 35.2	0.0
ILAR	Eielson Array	87.12	25	P	P	03 01 34.6	-0.7
	comp=Z,1.9nm,0.6s,baz=242,slow=5.2,SNR=37						
ILAR	Eielson Array	87.12	25	P	P	03 01 34.9	-0.4
ILAR	Eielson Array	87.12	25	P	P	03 01 34.9	-0.4
LPSR	Galich'ya Gora	87.17	322	eP	P	03 01 35.9	+0.2
LPSR				pmax	pmax		
	comp=Z,60nm,1.3s						
PAX	Paxson	87.70	27	P	P	03 01 38.6	+0.4
PAX				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PAX	Paxson	87.70	27	P	P	03 01 38.6	+0.4
PAX				IAmb	IAmb	03 01 48.3	
	comp=Z,9.8nm,1.0s						
TMCR	Tamitsa	87.82	334	eP	P	03 01 37.1	-1.5
TMCR				pmax	pmax		
	comp=Z,36nm,1.1s						
FYU	Fort Yukon	87.86	24	P	P	03 01 39.4	+0.7
FYU				IAmb	IAmb	03 01 42.6	
	comp=Z,13nm,1.0s						
MOS	Moscow	87.97	326	eP	P	03 01 38.3	-1.1
RIDG	Independent Ri	87.99	26	IAmb	IAmb	03 01 41.0	
	comp=Z,14nm,0.9s						
ANN	Anapa	88.12	315	eP	P	03 01 42.9	+2.5
ANN				pmax	pmax		
	comp=Z,59nm,0.8s						
SCRK	Sand Creek	88.37	26	P	P	03 01 42.9	+1.5
	baz=270						
GAZ	Gaziantep	88.37	307	P	P	03 01 41.2	-0.7
OBN	Obninsk	88.57	325	ceP	P	03 01 41.6	-0.7
OBN				pmax	pmax		
	comp=Z,28nm,1.3s						
OBN				MLR	MLR		
	comp=Z,141nm,9.0s						
KMBO	Kilima Mbogo	89.18	269	P	P	03 01 46.3	-0.1
	comp=Z,4.5nm,0.9s,baz=66,slow=6.8,SNR=7.8						
KMBO				LR	LR	03 40 13.0	
	comp=Z,96nm,18.1s,baz=94,slow=34						
BCAR	Beaver Creek A	89.38	27	P	P	03 01 46.7	+0.7
BR131	Keskin Array S	91.09	310	P	P	03 01 54.3	-0.4
BR131				pmax	pmax		
	comp=Z,13nm,1.1s						
BR131	Keskin Array S	91.09	310	P	P	03 01 54.3	-0.4
BR131				IAmb	IAmb	03 01 56.6	
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	91.09	310	P	P	03 01 54.5	-0.2
	comp=Z,6.8nm,1.1s,baz=116,slow=4.0,SNR=13						
BRTR	Keskin Array B	91.09	310	ceP	P	03 01 54.2	-0.4
BRTR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRTR	Keskin Array B	91.09	310	P	P	03 01 54.1	-0.6
INK	Inuvik	92.22	21	P	P	03 01 59.5	+0.4
	comp=Z,5.4nm,1.0s,baz=280,slow=6.8,SNR=8.9						
INK	Inuvik	92.22	21	IAmb	IAmb	03 02 01.9	
	comp=Z,6.4nm,1.1s						
ARCES	ARCESS Array B	92.28	340	P	P	03 01 59.3	-0.1
	comp=Z,8.6nm,0.8s,baz=57,slow=4.5,SNR=7.8						
WHY	Whitehorse	92.86	29	P	P	03 02 02.8	+0.4
WHY				IAmb	IAmb	03 02 05.2	
	comp=Z,14nm,1.1s						
AKASG	Malin Array Be	93.30	321	P	P	03 02 04.1	-0.4
	comp=Z,2.2nm,0.7s,baz=69,slow=4.5,SNR=10						
AKASG	Malin Array Be	93.30	321	P	P	03 02 04.0	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	93.30	321	P	P	03 02 04.0	-0.4
AKBB	Malin Array Si	93.30	321	i P	P	03 02 02.8	-1.6
FINES	FINESS Array B	93.51	332	P	P	03 02 04.2	-0.9
	comp=Z,3.2nm,1.0s,baz=78,slow=4.4,SNR=6.8						
FINES	FINESS Array B	93.51	332	i P	P	03 02 05.6	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						

MNK	Minsk	93.63	325	*i* P	P	03 02 01.1	-4.7
	comp=E,3.0nm,1.2s						
MNK				*i* P	P	03 02 01.1	-4.7
	comp=N,10.0nm,1.0s						
MNK				*i* P	P	03 02 01.1	-4.7
	comp=Z,6.0nm,0.9s						
MNK				*i* PP	PP	03 05 45.5	-5.7
MNK				*i* PPP	PPP	03 07 46.8	
MNK				*i* S	SKSac	03 12 32.6	-2.6
MNK				*i* SS	SS	03 19 27.2	-1.2
MNK				*i* SSS	SSS	03 23 08.4	
MNK				*i* LQ	LQ	03 38 23.6	
MNK				*i* LR	LR	03 43 03.8	
MNK				*i* LRM	MLR	03 45 43.8	
	comp=E,17nm,12.3s						
MNK				*i* LRM	MLR	03 45 46.7	
	comp=Z,126nm,10.9s						
MNK				*i* LRM	MLR	03 45 48.8	
	comp=N,120nm,14.5s						
SORM	Soroca	94.17	318	⇓P	P	03 02 08.2	-0.3
NACGM	Naroch	94.20	325	*i* P	P	03 02 05.4	-3.1
NACGM				*i* P	P	03 02 05.4	-3.1
NACGM				*i* P	P	03 02 05.4	-3.1
NACGM				*i* PP	PP	03 05 50.7	-4.9
NACGM				*i* PPP	PPP	03 08 03.4	
NACGM				*i* SKS	SKiKP	03 10 50.9	+29
NACGM				*i* PS	PS	03 14 17.6	-20
NACGM				*i* SS	SS	03 19 38.7	+2.2
NACGM				*i* SSS	SSS	03 23 27.1	
NACGM				*i* LQ	LQ	03 39 15.7	
NACGM				*i* LR	LR	03 45 59.4	
C36M	Paulatuk	95.28	20	P	P	03 02 13.9	+0.8
	baz=289						
C36M	Paulatuk	95.28	20	P	P	03 02 13.9	+0.8
C36M				IAmb	IAmb	03 02 14.2	
	comp=Z,6.8nm,0.7s						
TESR	Tescani	95.53	317	⇑P	P	03 02 15.3	+0.6
VRI	Vrincioaia	95.57	316	⇑P	P	03 02 20.9	+5.9
PLOR	Plostina	95.62	316	⇑P	P	03 02 18.4	+3.2
MLR	Muntele Rosu	96.17	316	P	P	03 02 16.6	-1.3
MLR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MLR	Muntele Rosu	96.17	316	P	P	03 02 16.6	-1.3
MLR				IAmb	IAmb	03 02 25.5	
	comp=Z,7.0nm,1.0s						
BURAR	Bucovina Array	96.33	318	⇓P	P	03 02 19.1	+0.6
BUR08	Bucovina Ar. S	96.34	318	P	P	03 02 18.1	-0.5
KOLS	Kolonicke sedl	98.02	320	*e*P	Pdif	03 02 29.4	+3.4
KOLS	Kolonicke sedl	98.02	320	*e*PDIFF	Pdif	03 02 29.3	+3.3
UZH	Uzhgorod	98.07	319	*e*P	P	03 02 24.6	-1.6
UZH				*e*		03 02 34.0	
UZH				*e*		03 02 42.8	
DRGR		98.16	318	⇑P	Pdif	03 02 30.3	+3.6
CRVS	Cervenica-Dubn	98.55	320	*e*P	Pdif	03 02 32.6	+4.2
CRVS	Cervenica-Dubn	98.55	320	*e*PDIFF	Pdif	03 02 32.6	+4.2
DAG	Danmarks Havn	99.27	352	*i* P	Pdif	03 02 30.5	-0.5
DAG	Danmarks Havn	99.27	352	*i* P	Pdif	03 02 30.5	-0.5
DAG	Danmarks Havn	99.27	352	*i* P	Pdif	03 02 30.5	-0.5
YKA	Yellowknife Ar	101.53	24	P	Pdif	03 02 42.2	+0.9
	comp=Z,1.5nm,0.9s,baz=302,slow=4.0,SNR=12						
YKA				PKiKP	PKiKP	03 07 05.6	+0.7
	comp=Z,0.3nm,0.8s,baz=320,slow=1.4,SNR=5.0						
YKA				PKKPbc	PKKPbc	03 18 47.7	-3.7
	comp=Z,0.6nm,0.9s,baz=109,slow=2.5,SNR=5.7						
G03D	McMinnville, O	103.03	43	P	Pdif	03 02 45.5	-2.9
	baz=286						
NVAR	Mina Array Bea	108.53	48	Pdiff	Pdif	03 03 15.4	+2.1
	comp=Z,0.1nm,0.6s,baz=290,slow=5.4,SNR=2.2						
NVAR				PP	PP	03 07 44.7	+0.3
	comp=Z,0.5nm,0.8s,baz=274,slow=8.8,SNR=3.7						
NVAR				PKKP	PKKPab	03 18 42.9	+0.5
	comp=Z,1.3nm,0.9s,baz=126,slow=5.6,SNR=8.2						
PDAR	Pinedale Array	113.13	42	PKiKP	PKiKP	03 07 28.5	+1.1
	comp=Z,0.4nm,0.7s,baz=85,slow=1.9,SNR=3.9						
PDAR				PKKPab	PKKPab	03 18 20.2	-1.8
	comp=Z,1.9nm,1.0s,baz=125,slow=5.3,SNR=9.3						
LAO	LASA Array	113.40	37	P	PKiKP	03 07 29.2	+1.6
	baz=300						
O20A	White River Ci	115.17	44	P	PKPdf	03 07 33.6	+2.2
	baz=296						
K22A	Casper	115.18	41	P	PKPdf	03 07 32.3	+1.1
	baz=298						
RSSD	Black Hills	116.03	38	P	PKPdf	03 07 34.0	+1.1
	baz=301						
ULM	Lac du Bonnet	116.94	29	PKP	PKPdf	03 07 33.3	-0.9
	comp=Z,1.5nm,0.7s,baz=334,slow=5.3,SNR=3.6						
121A	Cookes Peak, D	118.61	51	P	PKiKP	03 07 40.7	+2.4
	baz=293						
ANMO	Albuquerque	118.66	48	*i* PKIKP	PKPdf	03 07 36.7	-1.5
ANMO	Albuquerque	118.66	48	P	PKiKP	03 07 40.4	+2.1
	baz=295						
ANMO	Albuquerque	118.66	48	PKPdf	PKPdf	03 07 36.0	-2.2
ECSD	EROS Data Cent	120.68	35	P	PKiKP	03 07 42.7	+1.0
	baz=308						
ECSD	EROS Data Cent	120.68	35	PKPdf	PKPdf	03 07 40.8	-0.8
MNTX	Cornudas Mount	120.82	51	P	PKiKP	03 07 44.5	+2.1
	baz=294						
F36A	Milaca	121.02	32	PKPdf	PKPdf	03 07 41.9	-0.3
MSTX	Muleshoe	121.83	48	P	PKiKP	03 07 45.8	+1.4
	baz=297						
MSTX	Muleshoe	121.83	48	PKPdf	PKPdf	03 07 43.7	-0.5
TXAR	Lajitas Array	123.12	53	PKP	PKiKP	03 07 48.8	+1.7
	comp=Z,1.2nm,0.8s,baz=235,slow=1.4,SNR=13						
TXAR				PKKPab	PKKPbc	03 17 39.8	+1.5
	comp=Z,0.7nm,0.9s,baz=133,slow=13,SNR=5.8						
TXAR	Lajitas Array	123.12	53	PKPdf	PKPdf	03 07 45.8	-1.0
TOA0	Torodi Ar. Sit	123.23	287	PKPdf	PKPdf	03 07 46.1	-1.1
TORD	Torodi Ar. Bea	123.23	287	PKP	PKiKP	03 07 47.9	+0.4
	comp=Z,6.4nm,1.0s,baz=49,slow=1.5,SNR=12						
TORD	Torodi Ar. Bea	123.23	287		PKPdf	03 07 46.0	-1.3
KSU1	Kansas State U	123.43	39	P	PKiKP	03 07 48.2	+0.9
	baz=305						
JFWS	Jewell Farm	124.75	32	P	PKiKP	03 07 50.2	+0.5
	baz=314						
JCT	Junction City	125.66	50	P	PKiKP	03 07 53.2	+1.2
	baz=298						
U38A	Gravette	126.41	41		PKPdf	03 07 52.6	-0.2
R40A	Maddies Statio	126.63	38	PKPdf	PKPdf	03 07 53.2	+0.1
CCM	Cathedral Cave	127.40	37	PKIKP	PKPdf	03 07 54.6	0.0
CCM	Cathedral Cave	127.40	37	P	PKiKP	03 07 56.2	+1.0
	baz=310						
CCM	Cathedral Cave	127.40	37		PKPdf	03 07 54.6	0.0
U40A	Yellville	127.45	40	P	PKiKP	03 07 56.1	+0.8
	baz=307						
U40A	Yellville	127.45	40	PKPdf	PKPdf	03 07 53.7	-1.1
MIAR	Mount Ida	128.04	42	P	PKiKP	03 07 58.0	+1.5
	baz=306						
KOWA	Kowa	128.36	290	PKPdf	PKPdf	03 07 56.2	-0.9
E56A	St. Veronique	128.44	19	P	PKiKP	03 07 57.5	+0.5
	baz=332						
HKT	Hockley	128.92	49	*i* PKIKP	PKPdf	03 07 57.4	-0.3
DBIC	Dimbokro	130.65	280	PKP	PKiKP	03 08 03.5	+1.1
	comp=Z,13nm,1.2s,baz=6.0,slow=4.0,SNR=3.2						
WVT	Waverly	130.72	37	PKIKP	PKPdf	03 08 00.8	-0.2
WVT	Waverly	130.72	37	P	PKiKP	03 08 02.8	+0.9
	baz=312						
WVT	Waverly	130.72	37		PKPdf	03 08 00.8	-0.2
PLCA	Paso Flores	138.17	161	PKP	PKiKP	03 08 17.2	+0.2
	comp=Z,8.4nm,1.0s,baz=244,slow=2.2,SNR=10						
PLCA	Paso Flores	138.17	161	PKPdf	PKPdf	03 08 14.7	-0.2
LC01	Cunco	139.32	158	PKPdf	PKPdf	03 08 12.4	-4.6
MT05	Renca	144.56	155	PKPdf	PKPbc	03 08 25.6	+0.3
PEL	Peldehue	144.79	155	PKIKP	PKPbc	03 08 26.5	+0.5
PEL	Peldehue	144.79	155	PKPdf	PKPbc	03 08 26.5	+0.4
LCO	Las Campanas	148.27	151	PKP2	PKiKP	03 08 38.9	+0.6
LCO	Las Campanas	148.27	151	PKPab	PKiKP	03 08 38.9	+0.6
LVC	Limon Verde	154.39	146	PKIKP	PKPbc	03 08 50.5	-0.7
LVC	Limon Verde	154.39	146		PKPbc	03 08 50.5	-0.7
CPUP	Villa Florida	155.19	172	PKP	PKPdf	03 08 45.3	+2.0
	comp=Z,3.4nm,1.0s,baz=205,slow=4.3,SNR=3.3						
CPUP				PKPbc	PKPbc	03 08 53.7	
	comp=Z,7.4nm,0.9s,baz=292,slow=1.3,SNR=9.2						
CPUP				PKPab	PKPab	03 09 07.0	-1.0
	comp=Z,2.6nm,0.8s,baz=202,slow=2.0,SNR=3.4						
CPUP	Villa Florida	155.19	172	PKPdf	PKPdf	03 08 42.8	-0.6
SDV	Santo Domingo	160.06	58	PKPdf	PKPdf	03 08 48.0	-2.0
BDFB	Brasilia	165.03	201	PKPab	PKPab	03 09 52.3	+1.0
	comp=Z,1.9nm,0.6s,baz=135,slow=1.4,SNR=5.1						
BDFB	Brasilia	165.03	201		PKPab	03 09 49.1	-2.1

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*WEL **29** 03:14:00, 39°.27S×175°.57E, h15^{km}, ML4.0, Mw4.1, Moment Tensor Solution. s5 Moment tensor: Scale 10^{15} Nm; M_{rr}-0.03; $M_{\theta\theta}$-1.36; $M_{\phi\phi}$1.39; $M_{r\theta}$0.08; $M_{\theta\phi}$0.39; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.43000×10^{15} NP1: ϕ_s323.00000°, δ85.00000°, λ179.00000°. NP2: ϕ_s53.00000°, δ89.00000°, λ5.00000°. Principal axes: T -141.7100, Plg4.0000°, Azm279.0000°; N 145.1500, Plg85.0000°, Azm64.0000°; P -3.4400, Plg3.0000°, Azm188.0000°;*

*NOU **29** 03:14:16.4, 39°.23S×175°.59E, h1^{km}, MLv4.1, North Island, New Zealand*

WEL 29 03:14:15.0, 39°.3S±0°.5×**175°.6E**±0°.6**, h6^{km}, M4.0**/24**, ML4.3**/24**, MLv4.0**/24**, Error ellipse: s-maj=0.0km s-min=0.0km az=59.1, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRZ	Dome Shelter	0.01	227	P	Pg	03 14 16.7	+0.1
WHVZ	Whangaehu Hut	0.02	133	P	Pg	03 14 16.6	0.0
FWVZ	Far West T-bar	0.02	317	P	Pg	03 14 16.5	-0.1
FWVZ				S	Sg	03 14 17.2	-0.4
WNVZ	Wahianoa	0.06	160	P	Pg	03 14 17.4	+0.5
TUVZ	Tukino	0.07	88	P	Pg	03 14 17.5	+0.7
NGZ	Ngauruhoe	0.10	14	P	Pg	03 14 18.1	+0.8
OTVZ	Oturere	0.13	34	P	Pg	03 14 18.8	+1.0
OTVZ				S	Sg	03 14 21.1	+1.3
MTVZ	Mangateitei	0.14	214	P	Pg	03 14 18.9	+0.9
WTVZ	West Tongariro	0.15	5	P	Pg	03 14 19.2	+1.0
ETVZ	East Tongariro	0.17	39	P	Pg	03 14 19.6	+1.1
ETVZ				S	Sg	03 14 22.2	+1.3
PKVZ	Pokaka	0.17	264	P	Pg	03 14 19.8	+1.2
KRVZ	Karewarewa	0.18	17	P	Pg	03 14 19.7	+1.0
KRVZ				S	Sg	03 14 22.8	+1.6
TMVZ	Te Maari	0.19	34	P	Pg	03 14 19.8	+1.0
TMVZ				S	Sg	03 14 22.3	+1.0
MOVZ	Moawhango	0.20	134	P	Pg	03 14 19.8	+0.8
TWVZ	Taurewa	0.22	332	P	Pg	03 14 20.4	+0.9
KATZ	Kakaramea	0.31	18	P	Pb	03 14 22.2	-0.8
RITZ	Rihia Road	0.37	38	P	Pb	03 14 23.4	-0.6
RATZ	Rangitukua	0.43	21	P	Pb	03 14 24.7	-0.4
BHHZ	Black Hill Sta	0.44	120	P	Pb	03 14 24.5	-0.7
HATZ	Hinemaiaia	0.56	47	P	Pg	03 14 26.2	+0.4
HATZ				S	Sg	03 14 34.0	+1.0
WATZ	Wairara	0.57	13	P	Pb	03 14 27.1	-0.4
VRZ	Vera Road	0.65	283	P	Pb	03 14 28.7	0.0
WAZ	Wanganui	0.66	223	P	Pb	03 14 28.9	-0.1
WHTZ	Whakaora	0.67	27	P	Pb	03 14 29.9	+0.7
KWHZ	Kaweka Forest	0.68	103	P	Pb	03 14 29.5	+0.2
KRHZ	Kereru	0.72	121	P	Pb	03 14 30.1	+0.1
KRHZ				S	Sb	03 14 40.2	+0.1
BKZ	Black Stump Fm	0.72	82	P	Pb	03 14 29.8	-0.2
MRHZ	Matea Rd	0.79	57	P	Pg	03 14 30.5	+0.3
KUTZ	Kaahu Road	0.80	14	P	Pb	03 14 31.2	-0.2
PNHZ	Pukenui	0.81	143	P	Pb	03 14 31.7	+0.3
TSZ	Takapari Road	0.84	159	P	Pb	03 14 32.4	+0.3
TSZ				S	Sb	03 14 43.7	0.0
WPRZ	Whakapapatarin	0.88	32	P	Pn	03 14 34.5	+0.6
MCHZ	McNeill Hill	0.89	102	P	Pn	03 14 34.7	+0.6
LREZ	Lake Rotokare	0.93	258	P	Pn	03 14 35.1	+0.6
ALRZ	Allen Road	0.93	41	P	Pg	03 14 33.1	+0.3
TLZ	Tolley Road	0.94	358	P	Pg	03 14 33.1	0.0
TLZ				S	Sg	03 14 45.6	+0.4
HIZ	Hauiti	0.94	323	P	Pb	03 14 33.6	-0.1
OHWZ	Ohakea	0.95	192	P	Pb	03 14 34.4	+0.5
NMHZ	Naumai	0.98	80	P	Pn	03 14 35.6	+0.3
MHEZ	Mangahewa	0.99	281	P	Pn	03 14 36.4	+1.0
PRRZ	Plateau Road	1.00	40	P	Pb	03 14 34.7	0.0
GRRZ	Galatos Road	1.01	25	P	Pn	03 14 36.1	+0.4
WPHZ	Waipukurau	1.04	140	P	Pn	03 14 37.0	+0.9
HRRZ	Handcock Road	1.04	33	P	Pn	03 14 36.5	+0.3
MTHZ	Maungataniwha	1.07	68	P	Pb	03 14 36.2	+0.2
HSRZ	Hossack Road	1.09	29	P	Pn	03 14 37.9	+1.0
PREZ	Palmer Road	1.10	266	P	Pn	03 14 38.6	+1.7
ARHZ	Aropaoanui	1.11	90	P	Pn	03 14 38.7	+1.7
DVHZ	Dannevirke	1.12	156	P	Pn	03 14 38.0	+0.7
POWZ	Post Office Ro	1.13	172	P	Pn	03 14 37.6	+0.3
KAHZ	Kahuranaki	1.14	118	P	Pn	03 14 39.4	+1.9
NEZ	North Egmont	1.15	270	P	Pn	03 14 38.6	+1.0
HLRZ	Highlands Stat	1.19	31	P	Pn	03 14 39.6	+1.4
RRRZ	Republican Roa	1.19	39	P	Pn	03 14 38.2	+0.1
UTU	Utuhina	1.20	24	P	Pn	03 14 39.2	+1.0
KHEZ	Kahui Hut	1.21	268	P	Pn	03 14 39.8	+1.3
MUGZ	Murupara	1.23	50	P	Pn	03 14 38.6	0.0
CKHZ	Cape Kidnapper	1.23	109	P	Pn	03 14 41.3	+2.6
RAHZ	Arahi	1.23	74	P	Pn	03 14 39.8	+1.1
PKE	Pukeiti	1.23	273	P	Pn	03 14 40.5	+1.7
PXZ	Pawanui	1.25	128	P	Pg	03 14 41.1	+2.0
NGRZ	Ngongotaha	1.26	23	P	Pg	03 14 40.3	+1.0
TARZ	Mount Tarawera	1.27	36	P	Pg	03 14 40.3	+1.0
RTZ	Ruatahuna	1.28	60	P	Pg	03 14 39.7	+0.1
PRHZ	Porangahau	1.29	141	P	Pg	03 14 41.8	+2.0
WHHZ	Waihua	1.31	82	P	Pg	03 14 42.1	+2.0
OMRZ	Omania	1.32	29	P	Pg	03 14 41.4	+1.1
PRWZ	Pori Road	1.32	167	P	Pg	03 14 41.6	+1.3
NMEZ	Namu Road	1.32	263	P	Pg	03 14 41.8	+1.4
NBEZ	Newall Road No	1.32	270	P	Pg	03 14 41.9	+1.5
MKRZ	Makatiti	1.33	32	P	Pg	03 14 41.3	+0.8
KARZ	Kaharoa	1.35	23	P	Pg	03 14 42.3	+1.3
ANWZ	Angora Road	1.38	150	P	Pg	03 14 43.5	+2.1
MRZ	Mangatainoka R	1.39	180	P	Pg	03 14 42.2	+0.5
KMRZ	Kaimai	1.45	12	P	Pg	03 14 43.3	+0.5
SNGZ	Shannon Statio	1.46	71	P	Pg	03 14 43.7	+0.6
EDRZ	Edgecumbe	1.48	39	P	Pg	03 14 46.0	+2.7
BFZ	Birch Farm	1.50	160	P	Pg	03 14 44.8	+1.0
TIWZ	Tintock	1.52	171	P	Pg	03 14 45.1	+0.9
TOZ	Tahuroa Road	1.54	358	P	Pn	03 14 43.2	+0.3
MARZ	Manawahe	1.55	34	P	Pg	03 14 44.7	0.0
URZ	Urewera	1.57	51	P	Pn	03 14 43.7	+0.3
OGWZ	Otaki Gorge	1.57	191	P	Pg	03 14 44.9	-0.3
OPRZ	Ohinepanea	1.62	29	P	Pg	03 14 48.0	+1.9
HOWZ	Holdsworth Sta	1.63	181	P	Pg	03 14 46.4	+0.2
TGRZ	Tauranga	1.63	20	P	Pg	03 14 46.7	+0.4
RAGZ	Rawiri	1.63	62	P	Pb	03 14 45.2	-0.4
KNZ	Kokohu	1.65	82	P	Pg	03 14 46.5	-0.2
KIW	Kapiti Island	1.67	198	P	Pb	03 14 45.9	-0.2
CPWZ	Castlepoint	1.71	164	P	Pg	03 14 49.2	+1.4
MWZ	Matawai	1.79	59	P	Pn	03 14 46.9	+0.4
RIGZ	Rimuhau	1.80	72	P	Pg	03 14 49.8	+0.3
MHGZ	Mahia Peninsul	1.82	87	P	Pg	03 14 50.5	+0.7
PRGZ	Paritu Road	1.83	80	P	Pg	03 14 50.5	+0.3
TMWZ	Te Maipa	1.85	173	P	Pg	03 14 51.3	+0.8
CAW	Cannon Point	1.88	192	P	Pb	03 14 50.0	+0.4
MTW	Mount Morrison	1.89	182	P	Pb	03 14 49.8	0.0
TKGZ	Te Karaka	1.96	66	P	Pb	03 14 51.8	+0.6
DUWZ	D'Urville Isla	1.99	219	P	Pb	03 14 50.9	-0.7
RUGZ	Raukumara Rang	2.10	52	P	Pn	03 14 51.2	+0.4
WEL	Wellington	2.10	197	P	Pb	03 14 53.5	0.0
PAWZ	Paruwai Farm	2.11	183	P	Pb	03 14 52.6	-1.1
TRWZ	Traveller	2.13	178	P	Pb	03 14 53.0	-0.9
MSWZ	Moikau Station	2.16	186	P	Pb	03 14 53.2	-1.2
TCW	Tory Channel	2.18	207	P	Pb	03 14 53.7	-1.1
TWGZ	Tauwhareparae	2.18	61	P	Pb	03 14 54.4	-0.4
MKAZ	Moumakai	2.19	351	P	Pn	03 14 52.6	+0.8
BHW	Baring Head	2.20	194	P	Pb	03 14 54.1	-1.1
HAZ	Te Kaha	2.30	50	P	Pn	03 14 54.3	+0.9
PLWZ	Palliser	2.31	186	P	Pn	03 14 55.0	+1.4
AWAZ	Awhitu Peninsu	2.32	341	P	Pn	03 14 55.3	+1.6
ETAZ	East Tamaki Re	2.37	347	P	Pn	03 14 55.9	+1.6
PKGZ	Pakihiroa	2.40	56	P	Pb	03 14 57.4	-1.2
WTAZ	Waiatarua	2.46	341	P	Pn	03 14 57.5	+1.8
EPAZ	Eden Park BICE	2.48	344	P	Pn	03 14 57.5	+1.6
WIAZ	Waiheke Island	2.50	352	P	Pn	03 14 57.2	+1.1
HBAZ	Herne Bay Bore	2.50	344	P	Pn	03 14 58.1	+1.9
MBAZ	Motutapu North	2.55	348	P	Pn	03 14 58.0	+1.1
RVAZ	Riverhead Bore	2.62	342	P	Pn	03 14 59.6	+1.9
WMGZ	Waiomatatini S	2.66	58	P	Pn	03 15 00.6	+2.2
ABAZ	Army Bay	2.73	347	P	Pn	03 15 01.0	+1.7
MXZ	Matakaoa Point	2.74	52	P	Pb	03 15 02.6	-1.8
BSWZ	Blackbirch Sta	2.76	207	P	Pb	03 15 02.8	-2.0
QRZ	Quartz Range	2.80	235	P	Pn	03 15 02.1	+1.8
THZ	Tophouse	3.21	218	P	Pb	03 15 09.3	-3.2
WCZ	Waipu Caves	3.46	343	P	Pn	03 15 11.0	+1.6
KHZ	Kahutara	3.50	205	P	Pn	03 15 11.7	+1.8
GVZ	Greta Valley S	4.16	207	P	Pn	03 15 21.2	+2.2
LTZ	Lake Taylor	4.30	214	P	Pn	03 15 22.4	+1.3
MQZ	McQueen's Vall	4.94	205	P	Pn	03 15 30.4	+0.6

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*ATH **29** 03:15:53.9, 41°.32N×20°.76E, h10^{km}±5^{km}, ML2.7/9, Error ellipse: s-maj=5.1km s-min=2.0km az=294.0*

*TIR **29** 03:15:54.6, 41°.28N×20°.84E, h2^{km}±1^{km}, Md2.9*

*THE **29** 03:15:55.6, 41°.27N×20°.83E, h0^{km}±3^{km}, ML2.3/2, Error ellipse: s-maj=3.8km s-min=0.7km az=58.0*

*SKO **29** 03:15:55.1, 41°.23N×20°.74E, h15^{km}*

*BEO **29** 03:15:56.4±0.3, 41°.23N×20°.83E, h4^{km}±2^{km}, ML2.5/13*

*PDG **29** 03:15:56.0±0.2, 41°.27N×20°.83E, h0^{km}±11^{km}, ML3.1/14, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*

ISC 29 03:15:55.9±1.1**, 41°.26N**±0°.02×**20°.83E**±0°.02**, h2^{km}**±9^{km}**, n118, σ1^s.02**/167**, 18C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.14	189	*i* Pg	Pg	03 15 58.4	-0.3
OHR				*i* Sg	Sg	03 16 01.2	+0.6
OHR				*e*Lg	Lg	03 16 01.3	
	comp=E,6µm,0.5s						
PHP	Peshkopia	0.52	326	P	Pg	03 16 05.0	-0.9
PHP	Peshkopia	0.52	326	P	Pg	03 16 05.3	-0.5
	baz=324						
PHP				S	Sg	03 16 13.4	+0.8
	baz=324						
FNA	Florina	0.63	138	P	Pg	03 16 07.6	-0.3
FNA				AML	AML	03 16 19.5	
	comp=E,3107µm,0.4s						
FNA				AML	AML	03 16 21.2	
	comp=N,2618µm,0.4s						
FNA	Florina	0.63	138	P	Pg	03 16 07.7	-0.2
FNA	Florina	0.63	138	P	Pg	03 16 07.9	0.0
	baz=140						
FNA				S	Sb	03 16 18.0	-0.9
	baz=140						
FNA	Florina	0.63	138	⇑*i*Pg	Pg	03 16 07.6	-0.3
FNA				*i* Sg	Sb	03 16 17.6	-1.2
KBN	Korca	0.63	183	P	Pg	03 16 08.3	+0.3
KBN				S	Sb	03 16 17.9	-1.1
	comp=N,362nm,0.6s						
KBN	Korca	0.63	183	P	Pg	03 16 08.5	+0.5
	baz=184						
KBN				S	Sb	03 16 18.7	-0.3
	baz=184						
TIR	Tirane	0.73	278	P	Pg	03 16 06.5	-3.4
TIR				AML	AML	03 16 23.4	
	comp=E,1459µm,0.3s						
TIR				AML	AML	03 16 25.9	
	comp=N,1118µm,0.3s						
TIR	Tirane	0.73	278	P	Pg	03 16 09.4	-0.6
TIR				S	Sg	03 16 20.4	+1.0
	comp=N,248nm,0.2s						
TIR	Tirane	0.73	278	⇓P	Pg	03 16 09.3	-0.6
TIR				⇑S	Sb	03 16 20.6	-1.2
TIR	Tirane	0.73	278	*e*Pg	Pg	03 16 09.1	-0.8
TIR				*e*Sg	Sb	03 16 20.9	-0.9
TIR	Tirane	0.73	278	P	Pg	03 16 09.6	-0.3
	baz=276						
TIR				S	Sb	03 16 21.2	-0.6
	baz=276						
TIR	Tirane	0.73	278	⇑*i*Pg	Pg	03 16 09.1	-0.8
SKO	Skopje	0.85	32	*e*Pg	Pg	03 16 11.6	-0.6
SKO				*e*Sg	Sb	03 16 25.0	-0.3
SKO	Skopje	0.85	32	*i* Pg	Pb	03 16 13.0	-0.4
SKO				*i* Sg	Sb	03 16 25.1	-0.2
SKO				*e*Lg	Lg	03 16 26.2	
	comp=N,25nm,0.3s						
NEST	Nestorio	0.86	169	P	Pg	03 16 11.1	-1.2
NEST				AML	AML	03 16 29.4	
	comp=E,1015µm,0.5s						
NEST				AML	AML	03 16 32.5	
	comp=N,787µm,0.7s						
NEST	Nestorio	0.86	169	P	Pg	03 16 11.5	-0.8
PUK	Puka	1.05	319	P	Pg	03 16 15.3	-0.9
	baz=318						
PUK				S	Sb	03 16 31.9	+0.6
	baz=318						
PENT	Pentalofos	1.08	167	P	Pg	03 16 16.1	-0.6
PENT				AML	AML	03 16 37.6	
	comp=N,526µm,0.4s						
PENT				AML	AML	03 16 38.3	
	comp=E,475µm,0.4s						
PENT	Pentalofos	1.08	167	P	Pg	03 16 16.3	-0.4
LSK	Leskovik	1.12	189	P	Pg	03 16 17.0	-0.3
LSK	Leskovik	1.12	189	P	Pg	03 16 17.2	-0.1
	baz=190						
LSK				S	Sn	03 16 35.5	+0.9
	baz=190						
KZN	Kozani	1.19	143	P	Pg	03 16 17.4	-1.3
KZN				AML	AML	03 16 39.0	
	comp=E,742µm,0.4s						
KZN				AML	AML	03 16 39.7	
	comp=N,525µm,0.5s						
KZN	Kozani	1.19	143	P	Pg	03 16 17.9	-0.8
GRG	Griva	1.23	104	P	Pg	03 16 18.8	-0.6
GRG	Griva	1.23	104	⇓*i*Pg	Pg	03 16 18.8	-0.6
GRG				*i* Sg	Sn	03 16 37.8	+0.6
BCI	Bajram Curri	1.25	333	P	Pg	03 16 19.8	0.0
	baz=333						
BCI				S	Sn	03 16 38.9	+1.1
	baz=333						
GJIK	Gjilan	1.29	20	⇓*i*Pg	Pg	03 16 20.4	-0.2
GJIK				*i* Sg	Sn	03 16 39.6	+0.7
VAY	Valandovo	1.31	87	*e*Pg	Pg	03 16 19.7	-1.4
VAY				*e*Sg	Sb	03 16 38.6	0.0
VAY	Valandovo	1.31	87	⇓*i*Pg	Pg	03 16 20.3	-0.8
VAY				*i* Sg	Sn	03 16 40.6	+1.2
VAY				*e*Lg	Lg	03 16 41.4	
	comp=E,66nm,0.5s						
KPRO	Kipourio	1.36	162	P	Pn	03 16 21.1	-0.9
KPRO				AML	AML	03 16 45.6	
	comp=N,524µm,0.5s						
KPRO				AML	AML	03 16 51.5	
	comp=E,391µm,0.5s						
ULC	Ulcinj	1.38	301	⇓*i*Pg	Pn	03 16 21.1	-1.1
ULC				*i* Sg	Sn	03 16 42.6	+1.5
PVY	Plav	1.49	334	*e*Pg	Pn	03 16 23.0	-0.8
PVY				*i* Sg	Sn	03 16 46.0	+2.1
SRN	Sarande	1.51	205	P	Pg	03 16 25.5	+0.7
	baz=205						
SRN				S	Sg	03 16 47.8	+3.4
	baz=205						
DRME	Dracevica, Mon	1.54	308	*e*Pn	Pn	03 16 23.7	-0.7
DRME	Dracevica, Mon	1.54	308	⇓*i*Pg	Pn	03 16 24.1	-0.3
DRME				*i* Sg	Sg	03 16 48.0	+2.5
KNT	Kendrikon	1.56	93	P	Pn	03 16 24.1	-0.7
KNT				AML	AML	03 16 49.8	
	comp=N,164µm,0.6s						
KNT				AML	AML	03 16 52.5	
	comp=E,124µm,0.4s						
KNT	Kendrikon	1.56	93	P	Pn	03 16 24.5	-0.2
KNT	Kendrikon	1.56	93	⇓*i*Pg	Pn	03 16 25.0	+0.3
KNT				*i* Sg	Sg	03 16 48.4	+2.2
JAN	Janina	1.60	179	P	Pn	03 16 25.4	+0.2
JAN				AML	AML	03 16 55.6	
	comp=E,247µm,0.4s						
JAN				AML	AML	03 17 01.6	
	comp=N,196µm,0.6s						
PDG	Podgorica	1.66	315	⇓P	Pn	03 16 26.1	+0.1
PDG				⇑S	Sn	03 16 47.0	-0.9
PDG	Podgorica	1.66	315	*e*Pn	Pn	03 16 26.1	+0.1
PDG				*e*Sg	Sg	03 16 49.3	0.0
PDG	Podgorica	1.66	315	*e*Pn	Pn	03 16 25.9	-0.1
PDG	Podgorica	1.66	315	*i* Pn	Pn	03 16 25.9	-0.1
TTG	Podgorica	1.66	315	⇑*i*Pn	Pn	03 16 26.1	+0.1
TTG				*i* Sn	Sg	03 16 52.0	+2.7
LIT	Litokhoron	1.71	132	P	Pn	03 16 26.7	-0.1
KEK	Kerkira	1.73	207	P	Pn	03 16 26.8	-0.2
BOSS	Bosilegrad	1.75	44	*e*Pn	Pn	03 16 27.5	+0.2
BOSS				*e*Sn	Sb	03 16 50.8	-0.3
IVA	Berane	1.76	337	⇑*i*Pn	Pn	03 16 28.1	+0.6
IVA				*i* Sn	Sg	03 16 54.7	+2.3
IGT	Igoumenitsa	1.76	193	P	Pn	03 16 25.1	-2.3
BUM	Brajici-Budva	1.79	306	⇑*i*Pn	Pb	03 16 28.6	-0.8
BUM				*i* Sn	Sg	03 16 55.3	+2.1
HORT	Hortiatis	1.84	110	P	Pn	03 16 27.9	-0.7
KOME	Kolasin	1.87	329	⇑*i*Pn	Pb	03 16 30.1	-0.7
KOME				*i* Sn	Sg	03 16 57.3	+1.3
THL	Klokotos Trika	1.92	151	P	Pn	03 16 29.5	0.0
THL				AML	AML	03 16 56.4	
	comp=E,234µm,0.6s						
THL				AML	AML	03 16 56.5	
	comp=N,283µm,0.7s						
CEME	Cevo	1.92	313	⇓*i*Pn	Pb	03 16 30.8	-0.9
CEME				*i* Sn	Sg	03 16 58.6	+0.9
SOH	Sokhos	1.96	102	P	Pn	03 16 29.9	-0.2
SOH	Sokhos	1.96	102	*i* Pn	Pb	03 16 31.8	-0.6
NKME	Niksic	2.06	318	⇑*i*Pn	Pn	03 16 32.7	+1.1
NKME				*i* Sn	Sg	03 17 01.9	-0.1

NKY	Niksic	2.07	319	ePn	Pn	03 16 32.9	+1.1
NKY				i Sn	Sg	03 17 02.3	-0.2
SRS	Serrai	2.09	93	P	Pn	03 16 31.5	-0.4
SRS	Serrai	2.09	93	⇓iPn	Pb	03 16 34.1	-0.4
SJES	Sjenica	2.10	343	ePn	Pn	03 16 33.0	+0.8
SJES				eSg	Sg	03 17 04.5	+1.0
SJES	Sjenica	2.10	343	⇑iPn	Pn	03 16 33.1	+0.8
HCY	Herceg Novi	2.11	305	ePn	Pn	03 16 33.4	+1.2
HCY	Herceg Novi	2.11	305	⇑iPn	Pn	03 16 33.5	+1.2
HCY				i Sn	Sg	03 17 03.3	-0.4
SCTE	Santa Cesarea	2.15	237	P	Pn	03 16 32.1	-0.7
PLG	Polygyros	2.17	113	P	Pn	03 16 33.2	+0.1
VTS	Vitosha	2.25	52	⇑P	Pn	03 16 35.0	+0.6
VTS				⇓S	Sn	03 17 03.4	+0.6
VTS	Vitosha	2.25	52	ePn	Pn	03 16 35.1	+0.8
NVR	Nevrokopi	2.29	87	P	Pn	03 16 35.5	+0.8
PLE	Pljevlja	2.33	333	⇓iPn	Pn	03 16 36.5	+1.1
PLE				i Sn	Sb	03 17 08.4	+0.4
TREB	Trebinje	2.35	309	eSn	Pn	03 16 36.2	+0.6
TREB	Trebinje	2.35	309	ePn	Sn	03 17 07.0	+1.9
TREB	Trebinje	2.35	309	ePn	Pb	03 16 37.7	-1.3
BRY	Bratogost	2.37	315	ePn	Pb	03 16 37.6	-1.8
BRY	Bratogost	2.37	315	⇓iPn	Pn	03 16 37.1	+1.2
BRY				i Sn	Sb	03 17 09.4	+0.3
IVAS	Ivanjica	2.37	348	ePn	Pn	03 16 35.8	-0.1
IVAS				eSg	Sg	03 17 11.8	-0.3
UPM	Unac-Piva	2.41	324	ePn	Pb	03 16 40.2	0.0
UPM	Unac-Piva	2.41	324	⇑iPn	Pn	03 16 37.7	+1.1
UPM				i Sn	Sb	03 17 10.4	-0.1
ZAPS	Zavoj	2.42	33	ePn	Pn	03 16 36.7	+0.2
ZAPS				eSg	Sg	03 17 13.9	+0.2
DBRK	Dubrovnik	2.45	306	ePn	Pn	03 16 38.5	+1.7
MAKR	Makrakomi, Fth	2.45	156	P	Pn	03 16 37.4	+0.5
EVR	Evrytania	2.45	162	P	Pn	03 16 38.3	+1.2
LKD2	Lefkada island	2.47	183	P	Pn	03 16 39.0	+1.9
AGG	Agios Georgios	2.51	152	P	Pn	03 16 37.9	+0.2
NYDR	Nydri-Lefkada	2.54	182	P	Pn	03 16 38.9	+0.8
GRUS	Gruza	2.63	358	ePn	Pn	03 16 39.4	0.0
PDO	Prodromos	2.67	174	P	Pb	03 16 42.3	-2.1
BLKB	Belogradchik	2.73	29	⇑S	Sn	03 17 14.6	+0.2
ZAGS	Zajecar	2.76	22	ePn	Pn	03 16 41.3	+0.2
BBLS	Lazići	2.81	339	ePn	Pn	03 16 42.6	+0.6
BBLS	Lazići	2.81	339	ePn	Pn	03 16 42.2	+0.2
STON	Ston	2.83	306	ePn	Pn	03 16 43.7	+1.6
STON	Ston	2.83	306	ePn	Pn	03 16 41.6	-0.5
AXAR	Agios Charalam	2.86	150	P	Pn	03 16 44.0	+1.6
NOCI	Noci	2.88	262	P	Pn	03 16 42.7	-0.2
DIVS	Divibare	2.91	348	ePn	Pn	03 16 43.8	+0.5
DIVS	Divibare	2.91	348	ePn	Pn	03 16 43.1	-0.2
TRUS	Trudelj	2.98	354	ePn	Pn	03 16 44.4	+0.2
ATAL	Atalanti	3.06	146	P	Pn	03 16 47.2	+1.8
PLVB	Pleven	3.53	52	⇑P	Pn	03 16 50.9	-0.8
PLVB				⇑S	Sn	03 17 34.6	+0.6
RICI	Ricice	3.54	310	ePn	Pn	03 16 53.5	+1.6
RICI				Sn	Sn	03 17 35.1	+0.9
HVAR	Hvar	3.78	302	ePn	Pn	03 16 55.1	0.0
HVAR				Sn	Sn	03 17 39.0	-1.2
FRGS	Fruska Gora	3.97	350	ePn	Pn	03 16 56.4	-1.4
KIJV	Kijevo	4.27	312	ePn	Pn	03 17 03.6	+1.7
KIJV				Sn	Sn	03 17 53.0	+0.7
GZR	Gura Zlata	4.37	18	⇓P	Pn	03 17 03.9	+0.5
GZR				⇓S	Sn	03 17 55.0	+0.1
BLY	Banja Luka	4.40	324	ePn	Pn	03 17 03.9	+0.3
BZS	Buzias	4.40	7	⇑P	Pn	03 17 03.1	-0.6
BZS				⇑S	Sn	03 17 53.6	-1.8
ZIRJ	Zirje	4.52	304	ePn	Pn	03 17 05.8	+0.5
ZIRJ				Sn	Sn	03 17 57.8	-0.7
MORI	Morici	4.59	306	ePn	Pn	03 17 06.8	+0.5
UDBI	Udbina	4.95	313	ePn	Pn	03 17 13.6	+2.3
DUGI	Dugi Otok	5.06	305	ePn	Pn	03 17 13.6	+0.9
MORH	Mrgy, Hungar	5.20	343	ePn	Pn	03 17 14.4	-0.3
NVLJ	Novalja	5.48	309	ePn	Pn	03 17 19.2	+0.6
CRES	Cresnjev	6.01	321	ePn	Pn	03 17 26.4	+0.6
CEY	Cerknica	6.46	316	ePn	Pn	03 17 31.6	-0.4

NEIC **29** *03:33:26.9±0.7, 37°.08N±0°.02×97°.63W±0°.02, h5^{km}±2^{km}, mb_Lg3.1/50, Error ellipse: s-maj=3.9km s-min=3.0km az=32.0*

ANF **29** *03:33:27.2±0.3, 37°.08N×97°.63W, h0^{km}, ML3.9/8, Error ellipse: s-maj=4.1km s-min=3.7km az=78.0*

ISC 29 03:33:27.1±1.0**, 37°.09N**±0°.02×**97°.64W**±0°.02**, h6**^{km}±8^{km}**, n66,** σ0^{s}.**51**/62**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.11	303		Pg	03 33 29.1	-0.4
KAN01				Sg	Sg	03 33 30.8	-0.4
KAN13	South Haven SW	0.15	121		Pg	03 33 30.4	+0.2
KAN13				Sg	Sg	03 33 32.9	+0.6
KS21	Milan North St	0.20	355		Pg	03 33 30.7	-0.3
KS21					Sg	03 33 33.6	0.0
KAN14	Manchester OK	0.29	243		Pg	03 33 32.6	-0.2
KAN14				Sg	Sg	03 33 36.9	+0.3
KAN08	Anthony NE Sta	0.30	297		Pg	03 33 32.6	-0.2
KAN08				Sg	Sg	03 33 36.7	-0.1
KAN12	Harper NE Stat	0.35	306		Pg	03 33 33.6	-0.3
KAN12				Sg	Sg	03 33 39.5	+1.0
KAN10	Anthony SW Sta	0.36	275		Pg	03 33 33.9	-0.3
KAN10				Sg	Sg	03 33 39.0	0.0
CROK	Carrier	0.65	205		Pg	03 33 39.4	-0.1
CROK				Sg	Sg	03 33 48.4	+0.4
T35A	Sooner Cattle	0.92	101		Pg	03 33 44.4	-0.3
T35A				Sg	Sg	03 33 56.8	+0.1
T35B	Sooner Cattle	0.92	101	P		03 33 44.4	
	baz=281,SNR=112						
T35B				S		03 33 56.8	
	baz=281						
QUOK	Quay	1.19	140		Pg	03 33 49.2	-0.6
QUOK				Sg	Sg	03 34 04.7	-0.5
OK029	Liberty Lake	1.30	173		Pg	03 33 51.4	-0.7
OK029				Sn	Sb	03 34 08.9	+0.1
U32A	Winter Ranch,	1.30	237		Pg	03 33 50.9	-1.1
U32A	Winter Ranch,	1.30	237	P		03 33 50.9	
	baz=57						
OK031	S. Brethren Rd	1.31	150		Pg	03 33 51.3	-0.8
OK030	Cody Creek RV	1.35	149		Pg	03 33 52.0	-0.9
BCOK	Bluff Creek, N	1.43	179		Pn	03 33 53.6	+0.1
OK025	Westminster Rd	1.53	171		Pn	03 33 55.3	+0.5
R32A	Long Quarter,	1.58	328		Pn	03 33 55.5	0.0
R32A	Long Quarter,	1.58	328	P		03 33 55.7	
	baz=147,SNR=301						
R32A				S		03 34 17.1	
	baz=147						
OKCFA	Oklahoma City	1.68	175	Pn	Pn	03 33 57.0	0.0
OKCSW	OKLAHOMA CITY	1.69	174	Pn	Pn	03 33 57.3	+0.2
FNO	Franklin	1.84	174	Pn	Pn	03 33 59.4	+0.2
TUL1	Leonard	1.90	128	P	Pn	03 34 01.1	+1.2
	baz=309						
TUL1				S	Sb	03 34 26.6	+0.6
	baz=309						
TUL1	Leonard	1.90	128	Pn	Pn	03 34 00.3	+0.4
TUL1				IAmb_Lg		03 34 28.4	
	comp=Z,132nm,0.8s						
TUL1	Leonard	1.90	128	P		03 34 00.5	
	baz=309,SNR=41						
TUL1				S		03 34 26.4	
	baz=309						
KSU1	Kansas State U	2.17	22	P	Pn	03 34 04.4	+0.7
	baz=202						
KSU1				S	Sb	03 34 33.6	-0.1
	baz=202						
KSU1	Kansas State U	2.17	22	Pn	Pn	03 34 03.6	0.0
KSU1	Kansas State U	2.17	22	P		03 34 04.2	
	baz=202,SNR=20						
KSU1				S		03 34 33.7	
	baz=202						
CBKS	Cedar Bluff	2.39	317	P	Pn	03 34 07.7	+0.9
	baz=136						
CBKS	Cedar Bluff	2.39	317	Pn	Pn	03 34 07.3	+0.6
CBKS	Cedar Bluff	2.39	317	P		03 34 06.4	
	baz=136,SNR=42						
X34A	Smith Ranch, M	2.49	184	Pn	Pn	03 34 08.7	+0.6
WMOK	Wichita Mounta	2.52	202	P	Pn	03 34 08.8	+0.2
	baz=21						
WMOK	Wichita Mounta	2.52	202		Pn	03 34 08.8	+0.2
WMOK	Wichita Mounta	2.52	202	P		03 34 08.8	
	baz=21,SNR=60						
U38A	Gravette	2.69	103	Pn	Pn	03 34 10.9	0.0
U38A				IAmb_Lg		03 34 52.1	
	comp=Z,56nm,0.7s						
X37A	Clayton	3.10	143	Pn	Pn	03 34 16.4	-0.1
X37A	Clayton	3.10	143	P		03 34 17.3	
	baz=324						
S39A	Bolivar	3.49	79	Pn	Pn	03 34 21.8	0.0
S39A	Bolivar	3.49	79	P		03 34 21.9	
	baz=261,SNR=14						
N33A	J Bar K, Exete	3.65	2	Pn	Pn	03 34 23.9	-0.1
W39A	Magazine	3.65	120	IAmb_Lg		03 35 31.1	
	comp=Z,47nm,0.9s						
Z35A	Perchaven, San	3.77	175	S		03 35 11.2	
	baz=355						
U40A	Yellville	3.92	99	S	Sn	03 35 14.4	+0.4
	baz=282						
U40A	Yellville	3.92	99	Pn	Pn	03 34 27.5	-0.2
U40A				IAmb_Lg		03 35 33.5	
	comp=Z,67nm,0.7s						
U40A	Yellville	3.92	99	S		03 35 14.3	
	baz=282						
U40A				S		03 35 14.3	
	baz=282						
AMTX	Amarillo	3.95	237	P	Pn	03 34 29.8	+1.6
	baz=55						
AMTX	Amarillo	3.95	237	Pn	Pn	03 34 28.2	0.0
AMTX				IAmb_Lg		03 35 39.2	
	comp=Z,30nm,0.7s						
P38A	Dawn	4.10	51	Pn	Pn	03 34 30.3	+0.1
P38A				IAmb_Lg		03 35 36.8	
	comp=Z,30nm,0.8s						
P38A	Dawn	4.10	51	P		03 34 30.6	
	baz=233,SNR=7.6						
MIAR	Mount Ida	4.17	126	P	Pn	03 34 32.0	+0.9
	baz=309						
MIAR	Mount Ida	4.17	126	Pn	Pn	03 34 31.2	+0.1
MIAR	Mount Ida	4.17	126	P		03 34 31.4	
	baz=309						
MGMO	Mountain Grove	4.29	88	Pn	Pn	03 34 32.8	-0.1
KSCO	Kaye Shedlock'	4.38	297	IAmb_Lg		03 35 53.5	
	comp=Z,27nm,0.7s						
Z38A	Mt. Pleasant	4.40	150	IAmb_Lg		03 35 50.0	
	comp=Z,45nm,0.8s						
R40A	Maddies Statio	4.43	73	Pn	Pn	03 34 34.5	-0.2
X40A	Basin Creek Fa	4.69	122	IAmb_Lg		03 35 56.2	
	comp=Z,26nm,0.8s						
P40A	Paris	5.03	59	IAmb_Lg		03 36 05.7	
	comp=Z,25nm,0.8s						
N38A	Joes South For	5.05	42	IAmb_Lg		03 36 09.9	
	comp=Z,30nm,0.7s						
WHTX	Lake Whitney,	5.09	178	P	Pn	03 34 44.0	+0.2
	baz=358						
WHTX	Lake Whitney,	5.09	178	P		03 34 43.8	
	baz=358,SNR=10						
CCM	Cathedral Cave	5.17	77	Pn	Pn	03 34 45.4	+0.4
CCM				IAmb_Lg		03 36 15.8	
	comp=Z,35nm,1.1s						
MSTX	Muleshoe	5.22	235	Pn	Pn	03 34 45.8	+0.1
MSTX	Muleshoe	5.22	235	P		03 34 45.8	
	baz=52						
T42A	Van Buren	5.24	89	Pn	Pn	03 34 45.9	+0.1
T42A					Sn	03 35 46.2	-0.3
T42A				IAmb_Lg		03 36 22.2	
	comp=Z,29nm,0.9s						
PBMO	Poplar Bluff	5.79	91	IAmb_Lg		03 36 31.1	
	comp=Z,33nm,0.7s						
435B	Jarrell	6.29	180	IAmb_Lg		03 36 51.8	
	comp=Z,18nm,0.7s						
ECSD	EROS Data Cent	6.68	6	Pn	Pn	03 35 05.2	-0.5
ECSD	EROS Data Cent	6.68	6	P		03 35 05.0	
	baz=187						
S44A	Carbondale	6.70	82	Pn	Pn	03 35 05.8	-0.2
SIUC	Southern Illin	6.74	82	IAmb_Lg		03 37 02.6	
	comp=Z,31nm,0.7s						
JCT	Junction City	6.83	196	IAmb_Lg		03 37 20.7	
	comp=Z,21nm,0.7s						
W45A	Hickory Valley	7.11	103	IAmb_Lg		03 37 13.9	
	comp=Z,29nm,0.9s						
T45A	Paducah	7.20	88	IAmb_Lg		03 37 24.4	
	comp=Z,33nm,0.7s						
HDIL	Hopedale	7.38	59	IAmb_Lg		03 37 41.9	
	comp=Z,30nm,0.8s						
I37A	Lemond, Waseca	7.63	24	IAmb_Lg		03 37 38.2	
	comp=Z,20nm,1.0s						
WVT	Waverly	7.95	94	IAmb_Lg		03 37 38.1	
	comp=Z,17nm,1.1s						
T47A	Sharon Grove	8.43	88	IAmb_Lg		03 37 55.3	
	comp=Z,18nm,0.8s						
P46A	Rosedale	8.58	70	IAmb_Lg		03 38 02.2	
	comp=Z,24nm,0.8s						
WCI	Wyandotte Cave	9.07	79	IAmb_Lg		03 38 24.7	
	comp=Z,23nm,0.9s						

BJI **29** *03:49:31.8±0.0, 18°.85S×173°.98W, h16^{km}, mB5.7/35, mb5.2/45, Ms5.3/21, Ms7 4.9/23*

MOS **29** *03:49:33.3±1.1, 19°.20S×174°.26W, h30^{km}, mb5.4/48, Error ellipse: s-maj=9.5km s-min=7.9km az=53.6*

IDC **29** *03:49:34.2±4.3, 19°.17S×174°.32W, h21^{km}±26^{km}, mb5.1/28, mb1 5.2/28, mb1mx5.2/29, mbtmp5.2/28, MS4.7/36, Ms1 4.7/36, ms1mx4.6/42, Error ellipse: s-maj=13.9km s-min=12.1km az=144.0*

NEIC **29** *03:49:35.2, 19°.29S×174°.16W, h43^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.13; M$_{θθ}$-0.26; M$_{φφ}$-1.87; M$_{rθ}$0.13; M$_{θφ}$-0.31; M$_{φr}$-1.91; Fault plane solution: M$_0$2.80000×10^{17} NP1:φ$_s$181.04000°, δ66.76000°, λ83.31000°. NP2:φ$_s$17.59000°, δ24.13000°, λ105.17000°. Principal axes: T 2.9187, Plg68.0000°, Azm79.0000°; N -0.2575, Plg6.0000°, Azm184.0000°; P -2.6612, Plg21.0000°, Azm276.0000°;*

NEIC **29** *03:49:35.2±1.4, 19°.29S±0°.07×174°.17W±0°.08, h40^{km}±4^{km}, mb5.2/386, Ms_20 5.1/147, Mwb5.6/46, Mwc5.5(GCMT) Error ellipse: s-maj=11.4km s-min=9.7km az=99.0*

NEIC **29** *03:49:40, 19°.18S×173°.78W, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.10; M$_{θθ}$0.62; M$_{φφ}$-1.72; M$_{rθ}$0.21; M$_{θφ}$0.25; M$_{φr}$-1.32; Fault plane solution: M$_0$2.03000×10^{17} NP1:φ$_s$359.00000°, δ24.00000°, λ98.00000°. NP2:φ$_s$171.00000°, δ67.00000°, λ87.00000°. Principal axes: T 1.6327, Plg68.0000°, Azm74.0000°; N 0.6412, Plg3.0000°, Azm172.0000°; P -2.2739, Plg22.0000°, Azm263.0000°;*

NOU **29** *03:49:40.1, 19°.09S×173°.63W, h116^{km}, mb5.4, Tonga Islands*

GCMT **29** *03:49:41.2±0.1, 19°.18S±0°.01×173°.79W±0°.01, h58^{km}, MW5.5/144, Moment Tensor Solution. s132,c244; s144,c267; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.12±.03; M$_{θθ}$0.45±.02; M$_{φφ}$-1.57±.02; M$_{rθ}$0.22±.02; M$_{θφ}$0.22±.02; M$_{φr}$-1.33±.02; Best double couple: M$_0$1.91400×10^{17} NP1:φ$_s$359.00000°, δ23.00000°, λ98.00000°. NP2:φ$_s$171.00000°, δ67.00000°, λ87.00000°. Principal axes: T 1.6790, Plg67.0000°, Azm75.0000°; N 0.4740, Plg3.0000°, Azm172.0000°; P -2.1490, Plg22.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR **29** *03:49:47.9±0.0, 14°.18S×172°.74W, h33^{km}*

ISC 29 03:49:34.3±0.5**, 19°.34S**±0°.04×**174°.15W**±0°.04**, h30**^{km}±2^{km}**, h30**^{km}**:pP-P, n946,** σ1^{s}.**54**/811**, mb5.2**/235**, MS5.0**/116**, 133C-68D, Fault plane solution: NP1:**φ$_s$175.91467°**,** δ40.24123°**,** λ83.54325°. **NP2:**φ$_s$4.34788°**,** δ50.06564°**,** λ95.43642°. **Principal axes:** T Plg83.5424°, Azm310.9073°**;** N Plg4.1660°**,** Azm180.8520°**;** P Plg4.9254°**,** Azm90.4924°**; Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.00	87	P	Pn	03 50 31.6	-2.1
	baz=3.6,SNR=368						
NIUE				S	Sn	03 51 11.4	-8.2
	baz=3.6						
NIUE	Niue	4.00	87		Pn	03 50 32.0	-1.7
NIUE	Niue	4.00	87	P	Pn	03 50 32.0	-1.7
AFI	Afiamalu	5.86	23	P	Pn	03 50 57.5	-1.8
AFI	Afiamalu	5.86	23		Pn	03 50 57.5	-1.8
AFI	Afiamalu	5.86	23	P	Pn	03 50 57.2	-2.1
MSVF	Nonsavu	7.57	281	d iP	Pn	03 51 32.7	+10
MSVF	Nonsavu	7.57	281		Pn	03 51 31.2	+8.4
MSVF	Nonsavu	7.57	281	P	Pn	03 51 32.7	+10
RAO	Raoul Island	10.45	198	Pn	Pn	03 51 59.6	-2.5
	55nm,0.3s,baz=270,slow=20,SNR=3.9						
RAO				Sn	Sn	03 53 58.6	+0.4
	81nm,0.3s,baz=248,slow=21,SNR=3.6						
RAO	Raoul Island	10.45	198		Pn	03 52 02.8	+0.6
RAO					Sn	03 53 58.4	+0.2
GLKZ	Green Lake	10.46	198	P	Pn	03 52 04.3	+2.0
GLKZ				S	Sn	03 53 58.0	-0.5
RAR	Rarotonga	13.62	100	Pn	Pn	03 52 43.9	-1.7
	80nm,0.3s,baz=253,slow=7.0,SNR=53						
RAR				Sn	Sn	03 55 00.3	-16
	5.4nm,0.3s,baz=344,slow=20,SNR=2.0						
RAR				LR	LR	03 56 43.0	
	comp=Z,4µm,20.5s,baz=251,slow=31						
RAR	Rarotonga	13.62	100	P	Pn	03 52 44.0	-1.6
RAR	Rarotonga	13.62	100	Pn	Pn	03 52 44.0	-1.6
RAR	Rarotonga	13.62	100	P	Pn	03 52 44.6	-1.0
KNTN	Kanton	16.64	9	P	Pn	03 53 24.6	-0.9
	160nm,1.8s						
DVP	Devils Point	16.83	273	P	P	03 53 36.2	+6.4
	502µm,0.8s						
MARNC	Mare, Loyalty	16.84	260	P	P	03 53 35.1	+5.2
PINNC	Pines Island,	17.49	256	P	P	03 53 42.2	+5.1
YATNC	Mamie plateau,	17.94	258	P	P	03 53 46.9	+4.8
OUENC	Ouen Island, N	18.02	257	P	P	03 53 49.2	+6.2
SANVU	Saraoutou	18.21	279		P	03 53 44.2	-0.9
SANVU				IAmb	IAmb	03 53 54.3	
	comp=Z,120nm,0.8s						
SANVU	Saraoutou	18.21	279	P	P	03 53 51.3	+6.2
DZM	Mont Dzumac	18.36	258	P	P	03 53 51.0	+4.2
	comp=Z,8.2nm,0.3s,baz=79,slow=18,SNR=63						
DZM				LR	LR	03 59 57.2	
	comp=Z,6µm,20.1s,baz=86,slow=34						
DZM	Mont Dzumac	18.36	258	eP	P	03 53 50.1	+3.3
	comp=Z,369nm,0.8s						
DZM				eS	Sn	03 57 11.0	-0.2
	comp=Z,3µm,28.1s						
DZM				eLR	LR	03 58 02.0	
	comp=Z,13µm,24.9s						
DZM	Mont Dzumac	18.36	258		Pn	03 53 46.0	-0.9
DZM				IAmb	IAmb	03 53 59.3	
	comp=Z,188nm,0.8s						
DZM	Mont Dzumac	18.36	258	P	P	03 53 51.5	+4.7
ONTNC	Ouen Toro	18.37	257	P	P	03 53 51.7	+4.9
NOUC	Port Laguerre	18.49	258	P	Pn	03 53 53.0	+4.6
NFK	Norfolk Island	18.96	236	P	Pn	03 53 57.1	+3.0
	baz=20						
OUZ	Omahuta	19.18	212	P	P	03 53 56.3	+0.8
MXZ	Matakaoa Point	19.32	198	P	Pn	03 54 02.1	+3.8
MXZ				S	Sn	03 57 26.8	-7.2
HAZ	Te Kaha	19.65	199	P	Pn	03 54 04.5	+2.2
KOUNC	Koumac, New Ca	20.31	263	P	Pn	03 54 14.0	+3.8
EDRZ	Edgecumbe	20.31	201	P	P	03 54 10.3	+2.2
URZ	Urewera	20.33	200	P	P	03 54 10.8	+2.7
	comp=Z,82nm,0.3s,baz=338,slow=2.2,SNR=84						
URZ				S	S	03 57 49.6	-4.9
	comp=Z,11nm,0.5s,baz=3.4,slow=24,SNR=7.3						
TOZ	Tahuroa Road	20.43	204	P	Pn	03 54 13.9	+2.5
OMRZ	Omania	20.44	202	P	Pn	03 54 13.9	+2.2
TARZ	Mount Tarawera	20.51	201	P	P	03 54 11.9	+1.8
HLRZ	Highlands Stat	20.58	202	P	Pn	03 54 15.9	+2.7
RRRZ	Republican Roa	20.60	201	P	Pn	03 54 15.9	+2.5
MUGZ	Murupara	20.64	201	P	Pn	03 54 15.0	+1.1
HSRZ	Hossack Road	20.67	202	P	Pn	03 54 17.2	+2.9
RTZ	Ruatahuna	20.69	200	P	P	03 54 15.2	+3.0
HRRZ	Handcock Road	20.72	202	P	Pn	03 54 17.0	+2.1
SNGZ	Shannon Statio	20.73	199	P	Pn	03 54 17.5	+2.5
SNGZ				S	S	03 57 57.8	-4.7
PRRZ	Plateau Road	20.78	201	P	Pn	03 54 17.4	+1.8
RAHZ	Arahi	20.93	199	P	P	03 54 17.5	+2.8
RAHZ				S	S	03 57 57.0	-10
TLZ	Tolley Road	20.94	203	P	P	03 54 19.4	+4.7
MTHZ	Maungataniwha	20.95	200	P	P	03 54 18.4	+3.4
MTHZ				S	S	03 57 59.6	-7.4
WHHZ	Waihua	21.04	199	P	P	03 54 19.2	+3.4
WHHZ				S	S	03 58 02.1	-6.4
NMHZ	Naumai	21.19	200	P	P	03 54 19.4	+1.9
NMHZ				S	S	03 58 01.5	-10
WATZ	Wairara	21.20	202	P	P	03 54 20.8	+3.2
ARHZ	Aropaoanui	21.28	199	P	P	03 54 22.6	+4.2
ARHZ				S	S	03 58 00.3	-13
RATZ	Rangitukua	21.33	202	P	P	03 54 21.6	+2.6
BKZ	Black Stump Fm	21.35	200	P	P	03 54 19.2	0.0
BKZ				IAmb	IAmb	03 54 28.7	
	comp=Z,42nm,0.5s						
BKZ	Black Stump Fm	21.35	200	P	P	03 54 21.3	+2.0
BKZ				S	S	03 58 05.9	-8.9
HIZ	Hauiti	21.36	204	P	P	03 54 19.9	+0.7
HIZ	Hauiti	21.36	204	P	P	03 54 23.4	+4.2
KATZ	Kakaramea	21.45	202	P	P	03 54 23.3	+2.9
MCHZ	McNeill Hill	21.54	200	P	P	03 54 24.3	+3.1
MCHZ				S	S	03 58 10.7	-7.8
KRVZ	Karewarewa	21.58	202	P	P	03 54 23.4	+1.7
KWHZ	Kaweka Forest	21.61	200	P	P	03 54 25.0	+3.0
KWHZ				S	S	03 58 10.5	-9.4
WTVZ	West Tongariro	21.61	202	P	P	03 54 23.8	+1.7
TWVZ	Taurewa	21.63	202	P	P	03 54 24.6	+2.3
OTVZ	Oturere	21.63	202	P	P	03 54 22.6	+0.3
OTVZ				S	S	03 58 17.7	-2.8
NGZ	Ngauruhoe	21.66	202	P	P	03 54 25.3	+2.6
TUVZ	Tukino	21.73	202	P	P	03 54 24.6	+1.2
FWVZ	Far West T-bar	21.75	202	P	P	03 54 26.3	+2.6
BHHZ	Black Hill Sta	21.79	201	P	P	03 54 24.8	+0.9
BHHZ				S	S	03 58 17.3	-6.1
WNVZ	Wahianoa	21.80	202	P	P	03 54 25.7	+1.5
KAHZ	Kahuranaki	21.80	199	P	P	03 54 28.0	+4.0
KAHZ				S	S	03 58 23.1	-0.5
MOVZ	Moawhango	21.82	201	P	P	03 54 26.2	+1.9
MOVZ				S	S	03 58 14.3	-10
KRHZ	Kereru	21.82	200	P	P	03 54 26.4	+2.1
KRHZ				S	S	03 58 17.1	-6.9
PKVZ	Pokaka	21.86	202	P	P	03 54 26.3	+1.6
MTVZ	Mangateitei	21.90	202	P	P	03 54 26.7	+1.6
VRZ	Vera Road	21.93	204	P	P	03 54 28.8	+3.5
PXZ	Pawanui	22.02	199	P	P	03 54 30.8	+4.5
PXZ				S	S	03 58 18.1	-10
PNHZ	Pukenui	22.12	200	P	P	03 54 28.1	+0.6
PNHZ				S	S	03 58 22.3	-7.5
WPHZ	Waipukurau	22.18	199	P	P	03 54 31.8	+3.7
WPHZ				S	S	03 58 24.3	-6.5
PKE	Pukeiti	22.29	205	P	P	03 54 33.8	+4.6
PRHZ	Porangahau	22.31	199	P	P	03 54 33.3	+3.9
NEZ	North Egmont	22.31	205	P	P	03 54 34.4	+4.8
TSZ	Takapari Road	22.33	200	P	P	03 54 31.2	+1.4
KHEZ	Kahui Hut	22.36	205	P	P	03 54 35.9	+5.8
DVHZ	Dannevirke	22.48	200	P	P	03 54 33.2	+1.9
ANWZ	Angora Road	22.54	199	P	P	03 54 36.4	+4.5
POWZ	Post Office Ro	22.70	200	P	P	03 54 34.9	+1.3
PRWZ	Pori Road	22.78	200	P	P	03 54 36.8	+2.4
BFZ	Birch Farm	22.81	199	P	P	03 54 35.5	+0.7
BFZ				IAmb	IAmb	03 54 44.1	
	comp=Z,81nm,0.6s						
BFZ	Birch Farm	22.81	199	P	P	03 54 35.9	+1.1
MRZ	Mangatainoka R	23.00	200	P	P	03 54 37.2	+0.5
HOWZ	Holdsworth Sta	23.24	200	P	P	03 54 40.3	+1.2
OGWZ	Otaki Gorge	23.28	201	P	P	03 54 40.0	+0.5
TMWZ	Te Maipa	23.31	199	P	P	03 54 42.8	+3.0
TBI	Tubuai	23.33	104	eP	P	03 54 40.5	+0.3
	comp=Z,275nm,1.2s						
TBI				eS	S	03 58 46.2	-4.9
	comp=Z,2µm,31.2s						
TBI				eLQ	LQ	03 59 18.5	
	comp=Z,5µm,31.8s						
TBI				eLR	LR	04 00 08.8	
	comp=Z,8µm,29.5s,baz=281						
TBI	Tubuai	23.33	104	eT	T	04 18 34.4	
	comp=Z,140nm,0.3s						
PAE	Paea	23.36	90	eP	P	03 54 41.5	+1.0
	comp=Z,20nm,1.0s						
PAE	Paea	23.36	90	eT	T	04 18 41.2	
	comp=Z,111nm,0.3s						
PPT2	Papeete2	23.37	90	eP	P	03 54 41.9	+1.1
	comp=Z,106nm,1.1s						
PPT2				eS	S	03 58 47.8	-4.2
	comp=Z,3µm,27.8s						
PPT2				eLR	LR	04 00 19.7	
	comp=Z,13µm,26.0s,baz=259						
PPT2	Papeete2	23.37	90	eT	T	04 18 42.8	
	comp=Z,59nm,0.3s						
PPT	Papeete	23.38	90	P	P	03 54 42.0	+1.3
	comp=Z,118nm,1.0s,baz=332,slow=11,SNR=7.5						
PPT				LR	LR	04 01 12.0	
	comp=Z,4µm,21.8s,baz=253,slow=30						
PPTF	Pamatai, Papee	23.38	90	P	P	03 54 40.2	-0.6
PPTF				IAmb	IAmb	03 54 46.0	
	comp=Z,168nm,1.1s						
KIW	Kapiti Island	23.41	201	P	P	03 54 40.8	0.0

CAW	Cannon Point	23.57	201	P	P	03 54 44.1	+1.7
TIAR	Tiarei	23.59	90	*e*P	P	03 54 43.8	+0.9
	comp=Z,31nm,1.0s						
TIAR	Tiarei	23.59	90	*e*T	T	04 18 54.9	
	comp=Z,17nm,0.3s						
TVO	Taravao	23.65	90	*e*P	P	03 54 44.6	+1.1
	comp=Z,40nm,1.1s						
TVO	Taravao	23.65	90	*e*T	T	04 18 57.7	
	comp=Z,25nm,0.3s						
MSWZ	Moikau Station	23.79	200	P	P	03 54 45.4	+0.9
MSWZ	Moikau Station	23.79	200	P	P	03 54 46.7	+2.2
SNZO	South Karori	23.88	201	P	P	03 54 46.0	+0.8
SNZO				IAmb	IAmb	03 54 53.2	
	comp=Z,80nm,0.8s						
BHW	Baring Head	23.91	201	P	P	03 54 46.5	+0.9
BHW	Baring Head	23.91	201	P	P	03 54 47.6	+2.1
PLWZ	Palliser	23.93	200	P	P	03 54 46.5	+0.7
TUWZ	Tuamarina	24.25	202	P	P	03 54 48.3	-0.4
QRZ	Quartz Range	24.26	205	P	P	03 54 49.3	+0.5
QRZ				IAmb	IAmb	03 54 55.8	
	comp=Z,56nm,0.8s						
NNZ	Nelson	24.27	203		P	03 54 49.0	+0.1
NNZ				IAmb	IAmb	03 55 00.9	
	comp=Z,42nm,0.8s						
BSWZ	Blackbirch Sta	24.52	202	P	P	03 54 51.2	0.0
MEH	Mehetia	24.76	91	*e*P	P	03 54 55.1	+1.5
	comp=Z,54nm,1.2s						
MEH	Mehetia	24.76	91	*e*T	T	04 20 25.8	
	comp=Z,194nm,0.2s						
THZ	Tophouse	24.92	203		P	03 54 54.2	-0.6
THZ				IAmb	IAmb	03 55 08.5	
	comp=Z,44nm,0.8s						
KHZ	Kahutara	25.26	202		P	03 54 57.5	-0.3
KHZ				IAmb	IAmb	03 55 05.5	
	comp=Z,75nm,0.7s						
VAH	Vaihoa	25.64	85	*e*P	P	03 55 00.9	-0.7
	comp=Z,207nm,1.4s						
VAH	Vaihoa	25.64	85	*e*T	T	04 21 33.6	
	comp=Z,19nm,0.2s						
LTZ	Lake Taylor	26.03	203		P	03 55 04.8	-0.2
OXZ	Oxford	26.59	203	P	P	03 55 09.8	-0.1
MQZ	McQueen's Vall	26.70	202		P	03 55 11.1	+0.2
MQZ				IAmb	IAmb	03 55 24.2	
	comp=Z,35nm,0.8s						
HNR	Honiara	26.92	288	LR	LR	04 04 47.1	
	comp=Z,1µm,18.6s,baz=114,slow=34						
RPZ	Rata Peaks	27.29	204	P	P	03 55 18.5	+2.3
	comp=Z,87nm,0.5s,baz=309,slow=1.4,SNR=70						
RPZ				S	S	04 00 05.6	+12
	comp=Z,4.7nm,0.6s,baz=322,slow=18,SNR=2.5						
RPZ	Rata Peaks	27.29	204		P	03 55 16.1	-0.2
FOZ	Fox Glacier	27.63	206		P	03 55 19.1	-0.1
LBZ	Lake Benmore	28.19	204		P	03 55 24.3	0.0
LBZ				IAmb	IAmb	03 55 31.8	
	comp=Z,23nm,0.5s						
ODZ	Otahua Downs	28.58	203	P	P	03 55 27.8	0.0
WKZ	Wanaka	29.02	205	P	P	03 55 31.5	-0.2
WKZ				IAmb	IAmb	03 55 42.8	
	comp=Z,36nm,0.7s						
MLZ	Mavora Lakes	29.83	206	P	P	03 55 38.8	-0.1
MLZ				IAmb	IAmb	03 55 46.5	
	comp=Z,33nm,0.8s						
DCZ	Deep Cove	30.31	207	P	P	03 55 43.1	0.0
DCZ				IAmb	IAmb	03 55 50.6	
	comp=Z,40nm,0.9s						
WHZ	Wether Hill Ro	30.33	205	P	P	03 55 43.1	-0.2
WHZ				IAmb	IAmb	03 55 51.2	
	comp=Z,54nm,0.7s						
EIDS	Eidsvold	32.65	253	P	P	03 56 03.3	-0.6
	baz=33,SNR=9.5						
EIDS	Eidsvold	32.65	253	P	P	03 56 03.4	-0.6
EIDS				IAmb	IAmb	03 56 09.1	
	comp=Z,23nm,0.8s						
ARMA	Armidale	32.83	244	P	P	03 56 06.2	+0.7
	baz=33,SNR=18						
ARMA	Armidale	32.83	244	P	P	03 56 04.9	-0.7
ARMA				IAmb	IAmb	03 56 07.4	
	comp=Z,15nm,0.6s						
MGCD	Mangrove Creek	33.90	239	P	P	03 56 15.2	+0.5
	baz=34,SNR=24						
TAOE	Nuku Hiva Isla	34.52	77	*e*S	S	04 01 49.0	+1.3
	comp=Z,477nm,31.0s						
TAOE				*e*LR	LR	04 05 21.5	
	comp=Z,6µm,25.8s,baz=250						
RMQ	Roma	34.80	251	P	P	03 56 23.0	+0.3
	baz=35,SNR=22						
CNB	Canberra Magne	35.87	236	P	P	03 56 31.9	0.0
	baz=36,SNR=18						
CAN	Canberra	36.16	236	P	P	03 56 33.7	-0.6
CAN				pmax	pmax		
	comp=Z,19nm,0.6s						
CAN	Canberra	36.16	236	P	P	03 56 33.7	-0.6
CAN				IAmb	IAmb	03 56 36.9	
	comp=Z,19nm,0.6s						
RKT	Rikitea	36.64	103	*e*S	S	04 02 18.9	-1.0
	comp=Z,265nm,26.0s						
RKT				*e*LQ	LQ	04 04 58.2	
	comp=Z,759nm,26.5s						
RKT				*e*LR	LR	04 06 24.6	
	comp=Z,7µm,27.0s						
CTAO	Charters Tower	37.22	262	P	P	03 56 42.5	-0.9
CTAO				pmax	pmax		
	comp=Z,130nm,0.8s						
CTAO	Charters Tower	37.22	262	P	P	03 56 42.5	-0.9
CTAO	Charters Tower	37.22	262	IAMs_20	IAMs_20	04 09 46.9	
	comp=Z,3µm,22.0s						
CMSA	Cobar Meteorol	38.04	243	P	P	03 56 49.6	-0.6
	baz=38,SNR=32						
PMG	Port Moresby	38.67	279	P	P	03 56 56.5	+0.8
	comp=Z,59nm,0.9s,baz=90,slow=5.5,SNR=6.1						
PMG				LR	LR	04 11 17.8	
	comp=Z,2µm,18.5s,baz=84,slow=34						
PMG	Port Moresby	38.67	279	P	P	03 56 55.6	-0.2
PMG				pmax	pmax		
	comp=Z,68nm,1.0s						
PMG	Port Moresby	38.67	279	P	P	03 56 55.6	-0.2
PMG				IAmb	IAmb	03 57 02.1	
	comp=Z,68nm,1.0s						
PMG	Port Moresby	38.67	279	IAMs_20	IAMs_20	04 11 06.4	
	comp=Z,2µm,19.0s						
PMG	Port Moresby	38.67	279	P	P	03 56 57.8	+2.1
	comp=Z,70nm,0.9s						
QLP	Quilpie	38.86	251	P	P	03 56 57.2	+0.1
	baz=39,SNR=7.4						
MTSU	Mount Surprise	39.28	265	P	P	03 57 00.1	-0.7
	baz=40,SNR=90						
TOO	Toolangi	39.50	234	P	P	03 57 02.4	-0.1
	baz=40,SNR=11						
TOO	Toolangi	39.50	234	P	P	03 57 02.2	-0.3
TOO				pmax	pmax		
	comp=Z,14nm,0.7s						
TOO	Toolangi	39.50	234	P	P	03 57 02.2	-0.3
COEN	Coen	41.16	271	P	P	03 57 15.3	-1.1
COEN				IAmb	IAmb	03 57 21.8	
	comp=Z,29nm,0.8s						
STKA	Stephens Creek	41.55	244	P	P	03 57 18.9	-0.5
	baz=42,SNR=18						
STKA	Stephens Creek	41.55	244	P	P	03 57 18.9	-0.5
	comp=Z,8.3nm,0.4s,baz=92,slow=9.6,SNR=23						
STKA				LR	LR	04 12 24.1	
	comp=Z,2µm,20.6s,baz=77,slow=33						
STKA	Stephens Creek	41.55	244	P	P	03 57 19.2	-0.2
STKA	Stephens Creek	41.55	244	P	P	03 57 19.2	-0.2
ARPS	Mount Arapiles	42.14	236	P	P	03 57 23.7	-0.5
	baz=43,SNR=14						
QIS	Mount Isa	43.37	260	P	P	03 57 31.1	-3.3
	baz=44,SNR=15						
HTT	Hallett	43.96	242	P	P	03 57 38.1	-0.9
	baz=44,SNR=15						
BBOO	Buckleboo	46.30	243	P	P	03 57 56.2	-1.4
	baz=47,SNR=27						
BBOO	Buckleboo	46.30	243	P	P	03 57 56.0	-1.6
BBOO				IAmb	IAmb	03 58 12.2	
	comp=Z,12nm,0.7s						
BBOO				IAMs_20	IAMs_20	04 15 10.1	
	comp=Z,2µm,19.0s						
JAY	Jayapura	47.18	285	P	P	03 58 04.1	-0.6
	comp=Z,13nm,0.5s,baz=353,slow=19,SNR=6.5						
JAY				LR	LR	04 16 58.4	
	comp=Z,611nm,21.5s,baz=147,slow=35						
JAY	Jayapura	47.18	285	P	P	03 58 03.6	-1.1
	comp=Z,23nm,0.7s						
GENI	Genyem	47.63	285	P	P	03 58 07.2	-1.0
	comp=Z,86nm,0.8s						
WR0	Warramunga Arr	48.17	260	P	P	03 58 11.2	-1.1
WR0				IAmb	IAmb	03 58 15.7	
	comp=Z,32nm,0.9s						
WR4	Warramunga Arr	48.29	260	IAMs_20	IAMs_20	04 17 16.7	
	comp=Z,2µm,20.0s						
AS31	Alice Springs	48.31	255	P	P	03 58 13.1	-0.3
AS31				IAmb	IAmb	03 58 20.7	
	comp=Z,25nm,0.8s						
WR3	Warramunga Arr	48.31	260	IAMs_20	IAMs_20	04 17 17.2	
	comp=Z,2µm,20.0s						
ASAR	Alice Springs	48.31	255	P	P	03 58 12.1	-1.3
	comp=Z,44nm,0.4s,baz=96,slow=8.3,SNR=158						
ASAR				PcP	PcP	03 59 40.5	+0.5
	comp=Z,24nm,0.7s,baz=107,slow=3.8,SNR=9.0						
ASAR				S	S	04 05 04.0	-7.8
	comp=Z,2.6nm,0.6s,baz=92,slow=15,SNR=9.7						
ASAR				LR	LR	04 17 46.2	
	comp=Z,2µm,20.9s,baz=94,slow=35						
ASAR	Alice Springs	48.31	255	P	P	03 58 12.3	-1.1
WC3	Warramunga Arr	48.32	260	P	P	03 58 12.1	-1.5
	baz=49						
WC3	Warramunga Arr	48.32	260	IAMs_20	IAMs_20	04 17 17.5	
	comp=Z,3µm,20.0s						
WB0	Warramunga Arr	48.33	260	P	P	03 58 11.8	-1.8
WB0				IAMs_20	IAMs_20	04 17 17.7	
	comp=Z,2µm,20.0s						
WB7	Warramunga Arr	48.33	260	IAMs_20	IAMs_20	04 17 17.5	
	comp=Z,2µm,20.0s						
WC2	Warramunga Arr	48.33	260	IAMs_20	IAMs_20	04 17 17.8	
	comp=Z,2µm,20.0s						
WB8	Warramunga Arr	48.34	260	IAMs_20	IAMs_20	04 17 17.8	
	comp=Z,2µm,20.0s						
WB9	Warramunga Arr	48.34	260	IAMs_20	IAMs_20	04 17 17.9	
	comp=Z,2µm,20.0s						
WB6	Warramunga Arr	48.34	260	IAMs_20	IAMs_20	04 17 18.0	
	comp=Z,2µm,20.0s						
WB2	Warramunga Arr	48.34	260	P	P	03 58 12.2	-1.5
WRAB	Tennant Creek	48.35	260	P	P	03 58 12.1	-1.6
WRAB				pmax	pmax		
	comp=Z,43nm,0.6s						
WRAB	Tennant Creek	48.35	260	P	P	03 58 12.1	-1.6
WRAB	Tennant Creek	48.35	260	IAMs_20	IAMs_20	04 17 17.9	
	comp=Z,2µm,20.0s						
WR1	Warramunga Arr	48.35	260	IAMs_20	IAMs_20	04 17 28.4	
	comp=Z,2µm,19.0s						
WRA	Warramunga Arr	48.36	260	P	P	03 58 12.2	-1.6
	comp=Z,34nm,0.5s,baz=97,slow=8.7,SNR=363						
WRA				PcP	PcP	03 59 40.8	+0.6
	comp=Z,9.8nm,0.7s,baz=91,slow=3.5,SNR=3.7						
WRA				ScP	ScP	04 03 33.6	+0.7
	comp=Z,3.8nm,1.2s,baz=102,slow=3.5,SNR=8.3						
WRA				S	S	04 05 03.4	-9.1
	comp=Z,2.9nm,0.8s,baz=100,slow=14,SNR=8.4						
WRA				LR	LR	04 17 39.4	
	comp=Z,2µm,19.3s,baz=100,slow=35						
WRA	Warramunga Arr	48.36	260	P	P	03 58 11.9	-1.9
WRA					PcP	03 59 39.2	-1.0
WRA					ScP	04 03 31.2	-1.7
WC1	Warramunga Arr	48.36	260	IAMs_20	IAMs_20	04 17 18.4	
	comp=Z,3µm,21.0s						
KDU	Kakadu	51.57	269	P	P	03 58 37.3	-0.9
	baz=52,SNR=4.9						
MTN	Manton Dam	52.79	268	P	P	03 58 45.8	-1.5
	baz=53,SNR=68						
MTN	Manton Dam	52.79	268	P	P	03 58 46.0	-1.3
FORT	Forrest	53.07	246	P	P	03 58 48.3	-0.9
SWI	Sorong	56.49	282	P	P	03 59 13.0	-1.2
	comp=Z,1µmcomp=Z,159nm,0.9s						
FITZ	Fitzroy Crossi	56.78	261	P	P	03 59 15.4	-0.8
	comp=Z,16nm,0.5s,baz=89,slow=3.7,SNR=89						
FITZ				LR	LR	04 24 04.4	
	comp=Z,391nm,18.0s,baz=96,slow=36						
FITZ	Fitzroy Crossi	56.78	261	P	P	03 59 15.8	-0.3
FITZ				IAmb	IAmb	03 59 19.9	
	comp=Z,14nm,0.7s						
SBA	Scott Base	59.29	185	P	P	03 59 33.7	+0.9
SBA				pmax	pmax		
	comp=Z,30nm,1.0s						
SBA	Scott Base	59.29	185	P	P	03 59 33.7	+0.9
SBA				IAmb	IAmb	03 59 43.7	
	comp=Z,30nm,1.0s						
VNDA	Vanda	59.41	186	P	P	03 59 37.5	+3.9
	comp=Z,6.6nm,0.7s,baz=356,slow=7.1,SNR=25						
VNDA				LR	LR	04 23 47.0	
	comp=Z,94nm,19.2s,baz=33,slow=34						
VNDA	Vanda	59.41	186	P	P	03 59 34.7	+1.1
VNDA				pmax	pmax		
	comp=Z,13nm,0.9s						
VNDA	Vanda	59.41	186	P	P	03 59 34.7	+1.1
VNDA				IAmb	IAmb	03 59 53.1	
	comp=Z,13nm,0.8s						
SOEI	Soe	60.11	270	P	P	03 59 39.1	-0.5
BATI	Baumata	60.55	269	P	P	03 59 43.5	+1.0
	comp=Z,64nm,0.7s,baz=166,slow=2.2,SNR=8.5						
BATI				LR	LR	04 25 54.4	
	comp=Z,931nm,21.0s,baz=139,slow=36						
PSAC2	Pilbara Seismi	61.41	255	IAMs_20	IAMs_20	04 25 38.3	
	comp=Z,1µm,18.0s						
PSAB3	Pilbara Seismi	61.45	255	IAMs_20	IAMs_20	04 27 05.2	
	comp=Z,1µm,19.0s						
PSAA3	Pilbara Seismi	61.45	255	IAMs_20	IAMs_20	04 25 38.3	
	comp=Z,1µm,18.0s						
PSA00	Pilbara Seismi	61.46	255	P	P	03 59 47.5	-1.1
PSAC3	Pilbara Seismi	61.47	255	IAMs_20	IAMs_20	04 21 45.8	
	comp=Z,1µm,19.0s						
PSAD1	Pilbara Seismi	61.49	256	IAMs_20	IAMs_20	04 26 42.5	
	comp=Z,1µm,18.0s						
PSAC1	Pilbara Seismi	61.50	255	IAMs_20	IAMs_20	04 26 32.6	
	comp=Z,1µm,19.0s						
MEEK	Meekatharra	61.72	250	P	P	03 59 48.7	-1.6
	baz=62,SNR=5.9						
NWAO	Narrogin (SRO)	62.12	242	P	P	03 59 52.7	-0.1
	comp=Z,5.7nm,0.7s,baz=132,slow=16,SNR=2.0						
NWAO				LR	LR	04 24 42.9	
	comp=Z,1µm,21.9s,baz=96,slow=34						
NWAO	Narrogin (SRO)	62.12	242	P	P	03 59 53.0	+0.2
NWAO				pmax	pmax		
	comp=Z,14nm,1.0s						
NWAO	Narrogin (SRO)	62.12	242	P	P	03 59 53.0	+0.2
NWAO				IAmb	IAmb	04 00 03.4	
	comp=Z,14nm,0.9s						
NWAO	Narrogin (SRO)	62.12	242	IAMs_20	IAMs_20	04 24 09.8	
	comp=Z,2µm,21.0s						
MMRI	Maumere	62.35	270	P	P	03 59 54.5	-0.2
JCJ	Chichijima	62.62	316	LR	LR	04 22 56.4	
	comp=Z,739nm,20.7s,baz=106,slow=32						
BLDU	Ballidu	62.83	245	P	P	03 59 56.3	-1.3
	baz=63,SNR=12						
MUN	Mundaring	63.08	243	P	P	03 59 58.6	-0.7
	baz=64,SNR=4.1						
MORW	Morawa	63.61	247	IAMs_20	IAMs_20	04 26 35.1	
	comp=Z,1µm,19.0s						
DAV	Davao City (W)	64.88	288	LR	LR	04 24 08.4	
	comp=Z,403nm,22.0s,baz=145,slow=32						
GIRL	Giralia	66.35	253	P	P	04 00 18.7	-2.0
	baz=67,SNR=12						
TOLI2	Tolitoli	66.94	280	P	P	04 00 23.4	-1.3
TOLI2				IAmb	IAmb	04 00 30.9	
	comp=Z,16nm,0.8s						
JHJ	Hachijo jima 2	68.23	319	P	P	04 00 32.4	+0.1
	comp=Z,89nm,0.4s,baz=240,slow=20,SNR=5.8						
JHJ				LR	LR	04 24 36.4	
	comp=Z,196nm,21.7s,baz=64,slow=31						
JAGI	Jajag, Banyuwa	70.03	268	P	P	04 00 42.6	-1.4
JMM	Marumori	70.93	324	P	P	04 00 48.4	-0.5
JMM				IAmb	IAmb	04 00 49.5	
	comp=Z,19nm,0.7s						
JMM				IAMs_20	IAMs_20	04 29 14.2	
	comp=Z,943nm,18.0s						
JGF	Kuroka	71.39	320	P	P	04 00 50.8	-0.9
MJAR	Matsushiro Arr	71.50	321	P	P	04 00 51.8	-0.7
	comp=Z,16nm,0.7s,baz=158,slow=6.4,SNR=34						
MJAR				LR	LR	04 27 00.7	
	comp=Z,336nm,21.9s,baz=100,slow=32						
MJAR	Matsushiro Arr	71.50	321	P	P	04 00 51.3	-1.1
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR	Matsushiro Arr	71.50	321	P	P	04 00 51.3	-1.1
MAJO	Matsushiro	71.51	321	P	P	04 00 52.2	-0.3
MAJO				pmax	pmax		
	comp=Z,19nm,0.8s						
MAJO	Matsushiro	71.51	321	P	P	04 00 52.2	-0.3
MAJO				IAmb	IAmb	04 00 52.9	
	comp=Z,19nm,0.8s						
MAT	Matsushiro	71.51	321	P	P	04 00 51.5	-0.9
MAT				S	S	04 10 08.2	-1.2
TGY	Tagaytay City	72.02	293	LR	LR	04 28 03.6	
	comp=Z,392nm,21.5s,baz=109,slow=32						
JOW	Kunigami	72.26	308	LR	LR	04 29 39.0	
	comp=Z,341nm,19.1s,baz=142,slow=33						
SPMM	Sapulut	72.27	282	P	P	04 00 59.0	+1.4
JTM	Tenmabayashi	72.86	326	IAMs_20	IAMs_20	04 27 11.6	
	comp=Z,1µm,20.0s						
YUK	Yuzh-Kuril'sk	72.92	331	*e*P	P	04 00 59.6	-1.0
YUK				*i* S	S	04 10 24.6	-0.5
YUK				pmax	pmax		
	comp=E,66nm,0.7s						
UGM	Wanagama	73.62	267	P	P	04 01 04.4	-1.2
JHS	Saijyo	73.65	317	P	P	04 01 04.2	-1.0
JHS				IAmb	IAmb	04 01 15.2	
	comp=Z,23nm,0.8s						
SNCC	San Nicolas Is	73.83	45	P	P	04 01 07.8	+1.4
	baz=233						
JNU	Nakatsue	73.99	314	P	P	04 01 06.8	-0.5
	baz=95,slow=4.8						
JNU				LR	LR	04 28 24.9	
	comp=Z,447nm,21.4s,baz=130,slow=32						
JNU	Nakatsue	73.99	314	P	P	04 01 06.2	-1.1
JNU				IAmb	IAmb	04 01 09.2	
	comp=Z,24nm,0.8s						
SCZ2	Santa Cruz Isl	74.21	45	P	P	04 01 09.6	+1.1
	baz=233,SNR=5.7						
SCI2	San Clemente I	74.34	46	P	P	04 01 10.6	+1.3
	baz=234						
SBC	Santa Barbara	74.42	44	P	P	04 01 11.0	+1.3
	baz=233						
JKA	Kamikawa-asahi	74.51	329	P	P	04 01 08.9	-1.1
JKA				IAmb	IAmb	04 01 14.3	
	comp=Z,20nm,0.8s						
ASAJ	Asahikawa	74.51	329	LR	LR	04 29 01.5	
	comp=Z,286nm,21.8s,baz=170,slow=32						
ASAJ	Asahikawa	74.51	329	P	P	04 01 08.9	-1.1
ASAJ				pmax	pmax		
	comp=Z,21nm,0.8s						
PKM	Mcpherson Peak	74.63	44	P	P	04 01 12.3	+1.1
	baz=233,SNR=15						
SAO	San Andreas Ge	74.73	41	P	P	04 01 11.6	+0.1
SAO				pmax	pmax		
	comp=Z,62nm,1.2s						
SAO	San Andreas Ge	74.73	41	P	P	04 01 11.6	+0.1
SAO				IAmb	IAmb	04 01 14.3	
	comp=Z,62nm,1.1s						
SMMC	Simmler	74.77	43	P	P	04 01 13.1	+1.3
	baz=232,SNR=13						
PMPB	Monarch Peak	74.80	42	P	P	04 01 11.8	-0.2
PMPB				IAmb	IAmb	04 01 13.6	
	comp=Z,22nm,1.2s						
PAGB	Antelope Grade	74.86	43	P	P	04 01 10.5	-1.8
FMP	Fort Macarthur	74.94	46	P	P	04 01 13.5	+0.8
	baz=234						
CCX	Cicese	75.00	48	P	P	04 01 12.4	-0.7
CCX				IAmb	IAmb	04 01 15.8	
	comp=Z,48nm,1.2s						
TJX	Tijuana	75.09	47	IAMs_20	IAMs_20	04 27 01.6	
	comp=Z,897nm,20.0s						
OSI	Osito Audit: C	75.18	45	P	P	04 01 15.1	+0.9
	baz=234						
GDXM	Geysers	75.21	39	P	P	04 01 13.6	-0.7
DECC	Green Verdugo	75.23	45	P	P	04 01 15.0	+0.5
	baz=234						
CBX	Cerro Bola	75.25	48	P	P	04 01 13.7	-1.1
109C	Camp Elliot, M	75.27	47	P	P	04 01 15.3	+0.6
	baz=235						
PASC	Pasadena Art C	75.28	45	P	P	04 01 14.6	-0.2
PASC				IAmb	IAmb	04 01 17.0	
	comp=Z,39nm,1.1s						
KCPM	Cahto Peak	75.32	38	P	P	04 01 14.9	-0.1
SPX	San Pedro Mart	75.38	49	P	P	04 01 15.1	-0.7
SPX				IAMs_20	IAMs_20	04 24 24.6	
	comp=Z,806nm,21.0s						
MWC	Mount Wilson	75.39	45	P	P	04 01 15.5	-0.1
MWC				pmax	pmax		
	comp=Z,40nm,1.1s						
MWC	Mount Wilson	75.39	45	P	P	04 01 15.5	-0.1
MWC				IAmb	IAmb	04 01 17.9	
	comp=Z,40nm,1.1s						
ARVC	Arvin	75.42	44	P	P	04 01 16.4	+0.9
	baz=233,SNR=7.9						
TKX	Tecate	75.43	47	IAMs_20	IAMs_20	04 40 44.7	
	comp=Z,721nm,20.0s						
BAR	Barrett	75.45	47	P	P	04 01 15.6	-0.2
ESJX	Sierra Juarez	75.58	48	P	P	04 01 16.4	-0.3
KMRM	Mail Ridge	75.60	38	P	P	04 01 16.4	-0.2
MURC	Murrieta	75.62	46	P	P	04 01 17.3	+0.6
	baz=235,SNR=15						
BFSC	Mount Baldy Ra	75.67	45	P	P	04 01 17.5	+0.4
	baz=234,SNR=13						
VES	Vestal, Richgr	75.67	43	P	P	04 01 17.6	+0.6
	baz=233,SNR=33						
MONP2	Monument Peak	75.74	47	P	P	04 01 18.7	+1.0
	baz=235,SNR=16						
VOG	Valley Oaks Go	75.77	43	P	P	04 01 18.3	+0.9
	baz=233						
SLBS	Sierra La Lagu	75.81	58	P	P	04 01 17.5	-0.6
JCC	Jacoby Creek,	75.81	37	P	P	04 01 17.6	+0.1
JCC				IAMs_20	IAMs_20	04 25 38.1	
	comp=Z,1µm,21.0s						
RMX	La Rumorosa	75.82	48	P	P	04 01 17.7	-0.3
RMX				IAmb	IAmb	04 01 20.8	
	comp=Z,56nm,1.2s						
RMX				IAMs_20	IAMs_20	04 26 54.2	
	comp=Z,1µm,20.0s						
EDW2	Edwards Air Fo	75.82	45	P	P	04 01 18.6	+0.7
	baz=234,SNR=56						
IKP	In-Ko-Pah, Jac	75.83	48	P	P	04 01 18.9	+0.9
	baz=236,SNR=16						
SFX	San Felipe	75.83	50	P	P	04 01 17.8	-0.1
SFX				IAmb	IAmb	04 01 20.2	
	comp=Z,32nm,1.0s						
ISA	Isabella, Lake	75.97	44	P	P	04 01 18.5	-0.2
ISA				pmax	pmax		
	comp=Z,23nm,1.2s						
ISA	Isabella, Lake	75.97	44	P	P	04 01 19.9	+1.2
	baz=233,SNR=44						
ISA	Isabella, Lake	75.97	44	P	P	04 01 18.5	-0.2
ISA				IAmb	IAmb	04 01 24.0	
	comp=Z,23nm,1.1s						
ISA				IAMs_20	IAMs_20	04 27 30.7	
	comp=Z,937nm,22.0s						
KHMM	Horse Mountain	76.02	37	P	P	04 01 18.7	-0.3
KHMM				IAmb	IAmb	04 01 26.6	
	comp=Z,18nm,1.0s						
O02D	Mt. Diablo Mer	76.10	38	P	P	04 01 21.0	+1.6
	baz=229,SNR=36						
PFO	Pinyon Flats O	76.13	47	*i* P	P	04 01 21.2	+1.4
PFO				pmax	pmax		
	comp=Z,36nm,1.1s						
PFO	Pinyon Flats O	76.13	47	P	P	04 01 20.6	+0.9
	baz=235,SNR=16						
PFO	Pinyon Flats O	76.13	47	P	P	04 01 19.5	-0.3
TPFO	Pinon Flats	76.13	47	P	P	04 01 20.4	+0.7
	baz=235,SNR=15						
PETK	Petropavlovsk-	76.15	343	P	P	04 01 19.2	-0.1
	comp=Z,14nm,0.7s,baz=110,slow=9.4,SNR=29						
PETK				LR	LR	04 27 39.2	
	comp=Z,494nm,21.2s,baz=159,slow=30						
BBRC	Big Bear Solar	76.18	46	P	P	04 01 20.7	+0.5
	baz=235						
CMB	Columbia Colle	76.19	41	P	P	04 01 19.2	-0.7
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMB	Columbia Colle	76.19	41	P	P	04 01 19.2	-0.7
CMB				IAMs_20	IAMs_20	04 26 00.3	
	comp=Z,928nm,22.0s						
SWSC	Sam W. Stewart	76.21	47	P	P	04 01 20.7	+0.7
	baz=236,SNR=14						
CISI	Cisompet, Garu	76.28	267	P	P	04 01 19.6	-1.5
UABX	UABC, Campus M	76.28	48	IAMs_20	IAMs_20	04 35 05.2	
	comp=Z,991nm,19.0s						
KRMB	Red Mountain	76.35	36	P	P	04 01 20.6	-0.2
KRMB				IAmb	IAmb	04 01 39.5	
	comp=Z,24nm,1.1s						
LRMC	Laurel Mtn Rad	76.38	44	P	P	04 01 21.9	+0.7
	baz=234,SNR=32						
AFDM	Forest Hills D	76.40	40	P	P	04 01 20.8	-0.2
AFDM				IAMs_20	IAMs_20	04 25 42.8	
	comp=Z,890nm,22.0s						
ORV	Oroville	76.46	39	P	P	04 01 20.2	-1.2
ORV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ORV	Oroville	76.46	39	P	P	04 01 20.1	-1.2
RRX	Edison Barstow	76.48	45	P	P	04 01 22.3	+0.7
	baz=235						
WDC	Whiskeytown Da	76.51	38	P	P	04 01 20.6	-1.0
WDC				pmax	pmax		

	comp=Z,8.0nm,1.0s						
WDC	**Whiskeytown Da**	**76.51**	**38**	P	**P**	**04 01 20.6**	**-1.0**
YSS	**Yuzh-Sakhalins**	**76.55**	**331**	*e*P	**P**	**04 01 22.1**	**+0.5**
YSS				*e*		04 11 03.8	
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
KBO	**Bosley Butte**	**76.63**	**36**	P	**P**	**04 01 21.2**	**-1.2**
KBO				IAmb	IAmb	04 01 29.4	
	comp=Z,19nm,1.1s						
BELC	**Belle Mtn. Jos**	**76.66**	**46**	P	**P**	**04 01 23.7**	**+0.9**
	baz=235,SNR=24						
N02D	**Trinity Center**	**76.67**	**37**	P	**P**	**04 01 24.0**	**+1.4**
	baz=229,SNR=28						
CWC	**Cottonwood Cre**	**76.68**	**43**	P	**P**	**04 01 24.1**	**+1.2**
	baz=234						
LEM	**Lembang**	**76.69**	**267**	LR	LR	04 34 31.4	
	comp=Z,428nm,22.0s,baz=114,slow=35						
O03E	**Paynes Creek**	**76.75**	**38**	P	**P**	**04 01 23.8**	**+0.6**
	baz=230,SNR=26						
MDPB	**Devils Postpil**	**76.76**	**42**	P	**P**	**04 01 22.2**	**-1.3**
MDPB				IAmb	IAmb	04 01 26.0	
	comp=Z,40nm,1.1s						
MDPB				IAMs_20	IAMs_20	04 27 56.5	
	comp=Z,960nm,19.0s						
OMMB	**Old Mammoth Mi**	**76.80**	**42**	P	**P**	**04 01 22.2**	**-1.5**
OMMB				IAMs_20	IAMs_20	04 28 27.5	
	comp=Z,1µm,18.0s						
BC3	**Big Chuckawall**	**76.84**	**47**	P	**P**	**04 01 24.8**	**+1.0**
	baz=236,SNR=23						
MPMC	**Manual Prospec**	**76.84**	**44**	P	**P**	**04 01 25.2**	**+1.3**
	baz=234,SNR=66						
M02C	**Callahan**	**76.86**	**37**	P	**P**	**04 01 25.2**	**+1.6**
	baz=229,SNR=36						
GSC	**Goldstone, Bar**	**76.86**	**45**	P	**P**	**04 01 23.4**	**-0.4**
GSC				pmax	pmax		
	comp=Z,11nm,0.9s						
GSC	**Goldstone, Bar**	**76.86**	**45**	P	**P**	**04 01 24.8**	**+1.0**
	baz=235,SNR=19						
GSC	**Goldstone, Bar**	**76.86**	**45**	P	**P**	**04 01 23.4**	**-0.4**
GSC				IAMs_20	IAMs_20	04 26 53.3	
	comp=Z,832nm,20.0s						
KSM	**Kuching**	**76.86**	**276**	P	**P**	**04 01 24.0**	**-0.2**
HEC	**Hector,Ludlow**	**76.90**	**46**	P	**P**	**04 01 24.8**	**+0.7**
	baz=235,SNR=13						
MLAC	**Mammoth, Mammo**	**76.91**	**42**	P	**P**	**04 01 25.8**	**+1.6**
	baz=233,SNR=12						
L02E	**Cave Junction**	**76.94**	**36**	P	**P**	**04 01 25.6**	**+1.6**
	baz=228,SNR=12						
GLA	**Glamis**	**76.94**	**48**	P	**P**	**04 01 23.0**	**-1.3**
GLA				pmax	pmax		
	comp=Z,16nm,1.1s						
GLA	**Glamis**	**76.94**	**48**	P	**P**	**04 01 25.7**	**+1.4**
	baz=236,SNR=9.6						
GLA	**Glamis**	**76.94**	**48**	P	**P**	**04 01 23.0**	**-1.3**
TIN	**Tinemaha, Big**	**76.95**	**43**	P	**P**	**04 01 25.6**	**+1.3**
	baz=233,SNR=11						
KEBM	**Edson Butte**	**77.01**	**35**	P	**P**	**04 01 23.2**	**-1.3**
WAKR	**Walker**	**77.06**	**41**	P	**P**	**04 01 23.6**	**-1.5**
WAKR				IAmb	IAmb	04 01 39.2	
	comp=Z,19nm,1.2s						
WAKR				IAMs_20	IAMs_20	04 27 25.5	
	comp=Z,1µm,21.0s						
PIX	**Pinacate**	**77.11**	**50**	P	**P**	**04 01 23.9**	**-1.2**
PIX				IAmb	IAmb	04 01 28.0	
	comp=Z,19nm,1.1s						
YBH	**Yreka Blue Hor**	**77.16**	**37**	P	**P**	**04 01 25.1**	**-0.3**
YBH				pmax	pmax		
	comp=Z,14nm,1.1s						
YBH	**Yreka Blue Hor**	**77.16**	**37**	P	**P**	**04 01 25.1**	**-0.3**
K02D	**Willamette Mer**	**77.26**	**36**	P	**P**	**04 01 27.3**	**+1.4**
	baz=228,SNR=14						
PNTR	**Pine Nut**	**77.32**	**41**	P	**P**	**04 01 26.1**	**-0.4**
PNTR				IAMs_20	IAMs_20	04 27 45.3	
	comp=Z,1µm,21.0s						
GMRC	**Granite Mounta**	**77.34**	**46**	P	**P**	**04 01 27.6**	**+1.0**
	baz=236,SNR=19						
IRM	**Iron Mountain**	**77.34**	**47**	P	**P**	**04 01 27.7**	**+1.2**
	baz=236,SNR=42						
BEKR	**Beckworth**	**77.34**	**40**	P	**P**	**04 01 26.2**	**-0.3**
BEKR				IAMs_20	IAMs_20	04 27 22.8	
	comp=Z,696nm,20.0s						
VCNR	**Virginia City**	**77.42**	**40**	P	**P**	**04 01 25.7**	**-1.3**
VCNR				IAmb	IAmb	04 01 45.0	
	comp=Z,16nm,1.0s						
VCNR				IAMs_20	IAMs_20	04 28 08.9	
	comp=Z,907nm,21.0s						
J01E	**Myrtle Point**	**77.43**	**35**	P	**P**	**04 01 28.0**	**+1.3**
	baz=228,SNR=5.9						
GRAC	**Grapevine Rang**	**77.47**	**43**	P	**P**	**04 01 28.5**	**+1.3**
	baz=234,SNR=56						
FURC	**Furnace Creek,**	**77.49**	**44**	P	**P**	**04 01 28.1**	**+1.0**
	baz=234,SNR=23						
LHV	**Little Huntoon**	**77.49**	**42**	P	**P**	**04 01 26.0**	**-1.1**
LHV				IAmb	IAmb	04 01 33.8	
	comp=Z,46nm,1.2s						
LHV				IAMs_20	IAMs_20	04 27 57.9	
	comp=Z,1µm,21.0s						
113A	**Mohawk Valley,**	**77.54**	**49**	P	**P**	**04 01 26.3**	**-1.2**
SHOC	**Shoshone, Teco**	**77.56**	**45**	P	**P**	**04 01 28.7**	**+1.1**
	baz=235,SNR=6.2						
HUMO	**Hull Mountain**	**77.59**	**36**	P	**P**	**04 01 27.6**	**-0.1**
HSIG		**77.64**	**53**	P	**P**	**04 01 28.0**	**-0.2**
M04C	**Macdoel**	**77.69**	**37**	P	**P**	**04 01 29.6**	**+1.2**
	baz=230,SNR=26						
L04D	**Klamath Falls**	**77.71**	**37**	P	**P**	**04 01 29.3**	**+0.8**
	baz=229,SNR=26						
RYN	**Ryan**	**77.71**	**41**	P	**P**	**04 01 27.3**	**-1.3**
RYN				IAMs_20	IAMs_20	04 26 37.6	
	comp=Z,989nm,22.0s						
NVAR	**Mina Array Bea**	**77.73**	**42**	P	**P**	**04 01 29.7**	**+0.9**
	comp=Z,31nm,1.1s,baz=225,slow=8.6,SNR=120						
NVAR				LR	LR	04 29 32.6	
	comp=Z,701nm,19.5s,baz=232,slow=31						
NVAR	**Mina Array Bea**	**77.73**	**42**	P	**P**	**04 01 28.4**	**-0.3**
214A	**Organ Pipe Nat**	**77.78**	**50**	P	**P**	**04 01 30.3**	**+1.3**
	baz=238						
214A	**Organ Pipe Nat**	**77.78**	**50**	P	**P**	**04 01 27.8**	**-1.2**
214A				IAMs_20	IAMs_20	04 27 40.1	
	comp=Z,783nm,19.0s						
NV11	**Mina Array Sit**	**77.82**	**42**	P	**P**	**04 01 27.9**	**-1.3**
NV11				IAmb	IAmb	04 01 33.6	
	comp=Z,35nm,1.1s						
NV11				IAMs_20	IAMs_20	04 29 01.6	
	comp=Z,1µm,20.0s						
PAHR	**Pah Rah Range**	**77.83**	**40**	P	**P**	**04 01 28.0**	**-1.2**
NEE2	**Needles Airpor**	**78.04**	**46**	P	**P**	**04 01 31.3**	**+1.0**
	baz=236						
I03D	**Drain, OR**	**78.10**	**35**	P	**P**	**04 01 31.4**	**+1.0**
	baz=228,SNR=11						
I02D	**Swisshome**	**78.10**	**35**	P	**P**	**04 01 31.6**	**+1.2**
	baz=228						
PDMCI	**Parker Dam,Lak**	**78.11**	**47**	P	**P**	**04 01 31.9**	**+1.2**
	baz=237,SNR=22						
TPNV	**Topopah Spring**	**78.17**	**44**	P	**P**	**04 01 29.8**	**-1.4**
TPNV				pmax	pmax		
	comp=Z,15nm,0.8s						
TPNV	**Topopah Spring**	**78.17**	**44**	P	**P**	**04 01 32.3**	**+1.0**
	baz=235,SNR=31						
TPNV	**Topopah Spring**	**78.17**	**44**	P	**P**	**04 01 29.8**	**-1.4**
TPNV				IAmb	IAmb	04 01 37.1	
	comp=Z,15nm,0.8s						
TPNV				IAMs_20	IAMs_20	04 28 43.1	
	comp=Z,822nm,20.0s						
TPH	**Tonopah**	**78.20**	**43**	P	**P**	**04 01 30.1**	**-1.3**
TPH				pmax	pmax		
	comp=Z,61nm,0.9s						
TPH	**Tonopah**	**78.20**	**43**	P	**P**	**04 01 30.1**	**-1.3**
K04D	**Chiloquin, OR**	**78.28**	**37**	P	**P**	**04 01 32.3**	**+0.7**
	baz=230						
J04D	**Umpqua Nationa**	**78.48**	**36**	P	**P**	**04 01 33.8**	**+1.0**
	baz=229,SNR=21						
KSRS	**Korea Array**	**78.48**	**317**	P	**P**	**04 01 33.8**	**+1.1**
	comp=Z,8.2nm,0.8s,baz=133,slow=5.8,SNR=26						
KSRS				LR	LR	04 31 12.5	
	comp=Z,267nm,19.5s,baz=130,slow=32						
SHPR	**Sheep Range**	**78.64**	**45**	P	**P**	**04 01 33.5**	**-0.4**
MOD	**Modoc Plateau**	**78.65**	**38**	P	**P**	**04 01 32.4**	**-1.4**
I04A	**Tendick Farm,**	**78.67**	**35**	P	**P**	**04 01 34.2**	**+0.5**
	baz=229,SNR=12						
COR	**Corvallis**	**78.71**	**34**	P	**P**	**04 01 33.9**	**+0.1**
COR				pmax	pmax		
	comp=Z,14nm,1.0s						
COR	**Corvallis**	**78.71**	**34**	P	**P**	**04 01 33.9**	**+0.1**
W13A	**Hualapai Mount**	**78.72**	**47**	P	**P**	**04 01 33.9**	**-0.5**
K05A	**Summer Lake**	**78.83**	**37**	P	**P**	**04 01 34.7**	**-0.1**
H04D	**Lebanon**	**78.98**	**35**	P	**P**	**04 01 36.6**	**+1.3**
	baz=229,SNR=11						
J05D	**Fort Rock, OR**	**79.00**	**36**	P	**P**	**04 01 36.5**	**+0.9**
	baz=230,SNR=41						
G03D	**McMinnville, O**	**79.15**	**34**	P	**P**	**04 01 37.3**	**+1.1**
	baz=228,SNR=11						
PRN	**Pahroc Range**	**79.22**	**44**	IAmb	IAmb	04 01 41.5	
	comp=Z,27nm,1.1s						
R11A	**Troy Canyon, C**	**79.41**	**43**	P	**P**	**04 01 38.7**	**+0.7**
	baz=235,SNR=38						
TUC	**Tucson**	**79.44**	**50**	P	**P**	**04 01 38.1**	**-0.1**
TUC				pmax	pmax		
	comp=Z,15nm,1.0s						
TUC	**Tucson**	**79.44**	**50**	P	**P**	**04 01 39.9**	**+1.7**
	baz=239						
TUC	**Tucson**	**79.44**	**50**	P	**P**	**04 01 38.1**	**-0.1**
I05D	**Terrebonne, OR**	**79.61**	**36**	P	**P**	**04 01 39.8**	**+1.0**
	baz=230,SNR=15						
F04D	**Rainier, OR**	**79.86**	**33**	P	**P**	**04 01 41.1**	**+1.1**
	baz=228						
E03A	**Lebam**	**79.89**	**33**	IAmb	IAmb	04 01 58.9	
	comp=Z,38nm,1.1s						
WVOR	**Wild Horse Val**	**79.95**	**38**	IAMs_20	IAMs_20	04 29 53.8	
	comp=Z,1µm,21.0s						
X16A	**Lo Mia Camp, P**	**80.06**	**48**	IAmb	IAmb	04 02 01.0	
	comp=Z,24nm,1.1s						
X16A				IAMs_20	IAMs_20	04 29 04.2	
	comp=Z,873nm,20.0s						
319A	**Douglas**	**80.07**	**52**	IAmb	IAmb	04 02 01.8	
	comp=Z,32nm,1.1s						
USA0B	**Ussuriysk Arra**	**80.11**	**324**	*i* P	**P**	**04 01 41.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**80.11**	**324**	IAMs_20	IAMs_20	04 35 41.9	
	comp=Z,778nm,21.0s						
USRK	**Ussuriysk Ar.**	**80.11**	**324**	P	**P**	**04 01 42.9**	**+1.5**
	comp=Z,4.3nm,0.7s,baz=62,slow=4.5,SNR=9.1						
USRK				LR	LR	04 34 47.3	
	comp=Z,489nm,18.5s,baz=123,slow=34						
USRK	**Ussuriysk Ar.**	**80.11**	**324**	P	**P**	**04 01 41.5**	**+0.2**
G05D	**Wamic, OR**	**80.21**	**35**	P	**P**	**04 01 43.0**	**+1.0**
	baz=230,SNR=8.4						
BELA	**Belgrano 2**	**80.22**	**172**	P	**P**	**04 01 42.5**	**+0.9**
E04D	**Cinebar**	**80.41**	**33**	P	**P**	**04 01 44.3**	**+1.3**
	baz=229,SNR=15						
F05D	**White Salmon**	**80.55**	**34**	P	**P**	**04 01 44.8**	**+1.0**
	baz=230,SNR=5.8						
PMBI	**Palembang**	**80.62**	**270**	IAMs_20	IAMs_20	04 37 09.3	
	comp=Z,916nm,22.0s						
WUAZ	**Wupatki**	**80.68**	**47**	P	**P**	**04 01 46.6**	**+1.7**
	baz=238						
WUAZ	**Wupatki**	**80.68**	**47**	IAmb	IAmb	04 01 49.5	
	comp=Z,25nm,1.1s						
D04E	**Lakebay**	**80.72**	**33**	P	**P**	**04 01 46.3**	**+1.7**
	baz=228,SNR=5.1						
HPIG		**80.75**	**57**	IAmb	IAmb	04 01 48.4	
	comp=Z,20nm,0.8s						
D03D	**Eldon**	**80.79**	**32**	P	**P**	**04 01 46.4**	**+1.4**
	baz=228,SNR=12						
BRLK	**Bradley Lake**	**81.08**	**12**	IAmb	IAmb	04 01 47.0	
	comp=Z,42nm,1.0s						
D05A	**Enumclaw**	**81.12**	**33**	IAmb	IAmb	04 02 00.8	
	comp=Z,40nm,1.2s						
X18A	**Snowflake**	**81.17**	**49**	IAmb	IAmb	04 01 51.6	
	comp=Z,31nm,1.1s						
X18A				IAMs_20	IAMs_20	04 29 12.6	
	comp=Z,705nm,21.0s						
G08A	**Pilot Rock**	**81.53**	**36**	IAmb	IAmb	04 02 08.1	
	comp=Z,24nm,1.1s						
W18A	**Petrified Fore**	**81.62**	**48**	P	**P**	**04 01 51.6**	**+1.6**
	baz=239						
MDJ	**Mudanjiang**	**81.71**	**323**	P	**P**	**04 01 50.8**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,17nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.0s						
MDJ	**Mudanjiang**	**81.71**	**323**	IAMs_20	IAMs_20	04 36 06.4	
	comp=Z,609nm,19.0s						
121A	**Cookes Peak, D**	**81.75**	**51**	P	**P**	**04 01 52.4**	**+1.7**
	baz=241,SNR=20						
121A	**Cookes Peak, D**	**81.75**	**51**	IAmb	IAmb	04 01 57.8	
	comp=Z,30nm,1.1s						
A04D	**Lummi Island**	**81.77**	**32**	P	**P**	**04 01 51.2**	**+1.1**
	baz=228,SNR=9.8						
B05A	**Bryant**	**81.78**	**32**	P	**P**	**04 01 51.1**	**+0.9**
	baz=229,SNR=16						
CAPN	**Captain Cook N**	**81.96**	**11**	P	**P**	**04 01 51.7**	**+0.9**
	baz=202						
NJ2	**Nanjing**	**81.98**	**308**	*e*P	**P**	**04 01 52.0**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
C06D	**Leavenworth**	**82.16**	**33**	P	**P**	**04 01 52.9**	**+0.6**
	baz=230						
GRNR	**Gornyy**	**82.20**	**331**	⇓*i*P	**P**	**04 01 53.2**	**+0.8**
GRNR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
E08A	**Dider Farm, El**	**82.22**	**35**	IAmb	IAmb	04 01 57.6	
	comp=Z,22nm,1.0s						
DUG	**Dugway, Tooele**	**82.22**	**43**	P	**P**	**04 01 53.8**	**+0.9**
	baz=237						
B06A	**Marblemount**	**82.25**	**32**	IAmb	IAmb	04 01 56.5	
	comp=Z,16nm,1.0s						
RC01	**Rabbit Creek A**	**82.52**	**12**	P	**P**	**04 01 53.7**	**-0.2**
	baz=203						
SUA	**Susitna One**	**82.68**	**11**	IAmb	IAmb	04 01 55.6	
	comp=Z,23nm,0.6s						
E09A	**Wood Farm, Sta**	**82.73**	**35**	IAmb	IAmb	04 02 00.3	
	comp=Z,20nm,1.0s						
GAMB	**Gambell**	**82.86**	**1**	IAmb	IAmb	04 01 57.8	
	comp=Z,36nm,1.2s						
F10A	**Beach Ranch, E**	**82.91**	**36**	IAmb	IAmb	04 01 59.9	
	comp=Z,24nm,1.0s						
SKT	**Skwentna**	**83.02**	**11**	IAmb	IAmb	04 01 56.1	
	comp=Z,22nm,1.2s						
KNK	**Knik Glacier**	**83.07**	**12**	IAmb	IAmb	04 02 00.1	
	comp=Z,23nm,0.7s						
PMR	**Palmer**	**83.10**	**12**	IAmb	IAmb	04 02 14.0	
	comp=Z,12nm,0.7s						
Y22D	**IRIS PASSCAL I**	**83.12**	**50**	P	**P**	**04 01 59.9**	**+2.2**
	baz=241						
MNTX	**Cornudas Mount**	**83.15**	**53**	P	**P**	**04 01 59.2**	**+1.4**
	baz=242,SNR=66						
MNTX	**Cornudas Mount**	**83.15**	**53**	IAmb	IAmb	04 02 03.8	
	comp=Z,22nm,1.1s						
TTA	**Tatalina**	**83.23**	**8**	IAmb	IAmb	04 01 58.9	
	comp=Z,19nm,0.8s						
GHO	**Glory Hole Cre**	**83.31**	**12**	IAmb	IAmb	04 01 58.6	
	comp=Z,29nm,0.6s						
GHO				IAMs_20	IAMs_20	04 37 46.2	
	comp=Z,643nm,18.0s						
TX31	**Lajitas Ar. Si**	**83.40**	**56**	IAmb	IAmb	04 02 20.3	
	comp=Z,28nm,1.1s						
TXAR	**Lajitas Array**	**83.40**	**56**	P	**P**	**04 02 01.4**	**+2.1**
	comp=Z,18nm,1.1s,baz=221,slow=5.0,SNR=86						
TXAR				LR	LR	04 31 11.2	
	comp=Z,482nm,21.8s,baz=0.0,slow=30						
TXAR	**Lajitas Array**	**83.40**	**56**	P	**P**	**04 01 58.8**	**-0.4**
DL2	**Dalian**	**83.42**	**315**	P	**P**	**04 02 02.5**	**+3.5**
DL2				SKS	**S**	**04 12 17.3**	**-1.1**
DL2				S	**SKKSac**	**04 12 24.0**	**+0.1**
DL2				pmax	pmax		
	comp=Z,25nm,1.4s						
DL2				pmax	pmax		
	comp=Z,380nm,5.1s						
DL2				LR	LR		
	comp=Z,440nm,15.2s						
DL2				LR	LR		
	comp=Z,260nm,12.7s						
DL2				LR	LR		
	comp=Z,450nm,26.0s						
KLR	**Kul'dur**	**83.43**	**328**	P	**P**	**04 01 59.1**	**+0.3**
	comp=Z,3.9nm,1.0s,baz=107,slow=4.5,SNR=9.8						
KLR				LR	LR	04 32 15.6	
	comp=Z,445nm,21.3s,baz=132,slow=31						
KLR	**Kul'dur**	**83.43**	**328**	*ce*P	**P**	**04 01 57.8**	**-1.0**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MVCO	**Mesa Verde**	**83.54**	**47**	P	**P**	**04 02 00.9**	**+1.0**
	baz=240,SNR=14						
MVCO	**Mesa Verde**	**83.54**	**47**	IAmb	IAmb	04 02 07.0	
	comp=Z,18nm,1.1s						
H03S2	**Juan Fernandez**	**83.64**	**123**	T	T	05 34 34.1	
	baz=249,slow=75,SNR=319						
CUT	**Chulitna**	**83.64**	**11**	P	**P**	**04 01 59.2**	**-0.4**
	baz=203,SNR=14						
CN2	**Changchun**	**83.65**	**321**	*e*P	**P**	**04 02 00.5**	**+0.5**
CN2				*e*S	**S**	**04 12 16.5**	**-4.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
H03S1	**Juan Fernandez**	**83.65**	**123**	T	T	05 34 35.2	
	baz=249,slow=75,SNR=1805						
CRQM	**Cirque**	**83.65**	**15**	IAmb	IAmb	04 02 00.8	
	comp=Z,19nm,0.7s						
H03S3	**Juan Fernandez**	**83.65**	**123**	T	T	05 34 33.9	
	baz=249,slow=75,SNR=385						
MA2	**Magadan**	**83.69**	**343**	*i* P	**P**	**04 01 58.6**	**-1.3**
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ	**Qiongzhong**	**83.72**	**293**	P	**P**	**04 02 02.5**	**+1.5**
QIZ				sP	**sP**	**04 02 16.0**	**+2.1**
QIZ				S	**S**	**04 12 21.3**	**-1.0**
QIZ				sS	**ScS**	**04 12 39.5**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,230nm,7.5s						
QIZ				LR	LR		
	comp=Z,190nm,22.1s						
QIZ				LR	LR		
	comp=Z,250nm,21.6s						
QIZ				LR	LR		
	comp=Z,300nm,30.4s						
H03N2	**Juan Fernandez**	**83.76**	**123**	T	T	05 34 38.5	
	baz=257,slow=72,SNR=210						
PV19	**Morning Glory**	**83.76**	**46**	IAmb	IAmb	04 02 08.4	
	comp=Z,29nm,1.1s						
PV17	**East Wray Mesa**	**83.76**	**46**	IAmb	IAmb	04 02 07.1	
	comp=Z,29nm,1.0s						
H03N3	**Juan Fernandez**	**83.76**	**123**	T	T	05 34 37.2	
	baz=257,slow=72,SNR=136						
H03N1	**Juan Fernandez**	**83.77**	**123**	T	T	05 34 39.2	
	baz=257,slow=72,SNR=152						
PV13	**Radium Mtn., P**	**83.79**	**46**	IAmb	IAmb	04 02 07.0	
	comp=Z,36nm,1.2s						
PV16	**Nyswonger Mesa**	**83.80**	**46**	IAmb	IAmb	04 02 06.2	
	comp=Z,30nm,1.2s						
PV16				IAMs_20	IAMs_20	04 32 30.3	
	comp=Z,827nm,21.0s						
PV03	**Paradox Valley**	**83.82**	**46**	IAmb	IAmb	04 02 18.5	
	comp=Z,13nm,1.0s						
PV03				IAMs_20	IAMs_20	04 30 21.7	
	comp=Z,891nm,22.0s						
PV11	**David Mesa, Pa**	**83.83**	**46**	IAmb	IAmb	04 02 11.2	
	comp=Z,37nm,1.1s						
MAW	**Mawson**	**83.85**	**199**	P	**P**	**04 02 02.8**	**+2.1**
	comp=Z,14nm,0.9s,baz=127,slow=10,SNR=2.5						
MAW				LR	LR	04 36 09.1	
	comp=Z,252nm,21.6s,baz=84,slow=33						
MAW	**Mawson**	**83.85**	**199**	P	**P**	**04 02 01.4**	**+0.6**
MAW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MAW	**Mawson**	**83.85**	**199**	P	**P**	**04 02 01.4**	**+0.6**
PV04	**Paradox Valley**	**83.85**	**46**	IAmb	IAmb	04 02 06.2	
	comp=Z,24nm,1.0s						
PV02	**Paradox Valley**	**83.87**	**46**	IAmb	IAmb	04 02 07.2	
	comp=Z,28nm,1.1s						
ANMO	**Albuquerque**	**83.88**	**50**	*ce*P	**P**	**04 02 03.3**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,125nm,1.3s						
ANMO	**Albuquerque**	**83.88**	**50**	P	**P**	**04 02 03.5**	**+1.8**
	baz=241						
ANMO	**Albuquerque**	**83.88**	**50**	P	**P**	**04 02 01.4**	**-0.3**
ANMO				IAmb	IAmb	04 02 06.3	
	comp=Z,25nm,1.0s						
ANM	**Nome**	**83.91**	**4**	IAmb	IAmb	04 02 02.4	
	comp=Z,17nm,1.0s						
PV01	**Paradox Valley**	**83.95**	**46**	IAmb	IAmb	04 02 08.5	
	comp=Z,23nm,1.1s						
PV01				IAMs_20	IAMs_20	04 30 48.6	
	comp=Z,835nm,22.0s						
PV22	**Blue Mesa, Par**	**84.00**	**46**	IAmb	IAmb	04 02 18.5	
	comp=Z,18nm,1.1s						
PV07	**Paradox Valley**	**84.05**	**46**	IAmb	IAmb	04 02 08.6	
	comp=Z,21nm,1.1s						
N25K	**Chitina, Valde**	**84.06**	**14**	P	**P**	**04 02 02.4**	**+0.5**
	baz=208						
N25K	**Chitina, Valde**	**84.06**	**14**	IAmb	IAmb	04 02 02.8	
	comp=Z,18nm,0.6s						
BALM	**Baldy**	**84.09**	**15**	IAmb	IAmb	04 02 03.0	
	comp=Z,19nm,0.7s						
GLB	**Gilahina Butte**	**84.09**	**14**	IAmb	IAmb	04 02 04.4	
	comp=Z,30nm,1.0s						
PV15	**Paradox Valley**	**84.11**	**46**	IAmb	IAmb	04 02 09.3	
	comp=Z,19nm,0.9s						
M24K	**Tolsona, Glenn**	**84.17**	**13**	P	**P**	**04 02 02.9**	**+0.6**
	baz=206						
CTGM	**Chitina Glacie**	**84.27**	**15**	IAmb	IAmb	04 02 04.1	
	comp=Z,19nm,0.8s						
BARN	**Barnard Glacie**	**84.28**	**15**	IAmb	IAmb	04 02 04.3	
	comp=Z,28nm,0.9s						
NEW	**Newport**	**84.35**	**34**	P	**P**	**04 02 03.8**	**+0.2**
	baz=233,SNR=13						
NEW	**Newport**	**84.35**	**34**	IAmb	IAmb	04 02 05.3	
	comp=Z,22nm,1.1s						
KTH	**Kantishna Hill**	**84.59**	**10**	IAmb	IAmb	04 02 06.9	
	comp=Z,19nm,1.0s						
SKAG	**Skagway**	**84.68**	**19**	IAmb	IAmb	04 02 10.5	
	comp=Z,46nm,1.2s						
DHY	**Denali Highway**	**84.80**	**12**	IAmb	IAmb	04 02 10.2	
	comp=Z,9.0nm,0.7s						
RND	**Reindeer**	**84.82**	**11**	IAmb	IAmb	04 02 11.1	
	comp=Z,20nm,0.7s						
S22A	**4UR Ranch, Cre**	**84.96**	**47**	P	**P**	**04 02 08.6**	**+1.3**
	baz=241,SNR=70						
PAX	**Paxson**	**85.09**	**13**	IAmb	IAmb	04 02 07.4	
	comp=Z,18nm,1.1s						
BPAW	**Bear Paw Mtn.**	**85.09**	**10**	IAmb	IAmb	04 02 08.4	
	comp=Z,11nm,0.7s						
MCK	**McKinley**	**85.11**	**11**	P	**P**	**04 02 06.7**	**-0.3**
	baz=204,SNR=24						
HYT	**Haines Junctio**	**85.17**	**17**	IAmb	IAmb	04 02 11.5	
	comp=Z,13nm,1.0s						
REDW	**Red Top Meadow**	**85.17**	**41**	IAmb	IAmb	04 02 15.4	
	comp=Z,13nm,0.9s						
O20A	**White River Ci**	**85.17**	**45**	P	**P**	**04 02 09.0**	**+0.8**
	baz=240,SNR=17						
O20A	**White River Ci**	**85.17**	**45**	IAmb	IAmb	04 02 13.0	
	comp=Z,21nm,1.0s						
MSO	**Missoula**	**85.25**	**37**	P	**P**	**04 02 08.6**	**+0.3**
	baz=235,SNR=19						
MSO	**Missoula**	**85.25**	**37**	IAmb	IAmb	04 02 23.1	
	comp=Z,16nm,1.1s						
SNOW	**Snow King Moun**	**85.28**	**41**	IAmb	IAmb	04 02 11.8	
	comp=Z,30nm,0.9s						
IMW	**Indian Meadow**	**85.40**	**40**	IAmb	IAmb	04 02 16.6	
	comp=Z,8.8nm,0.7s						
LOHW	**Long Hollow**	**85.45**	**41**	IAmb	IAmb	04 02 14.4	
	comp=Z,10nm,0.9s						
LL01	**San Ignacio de**	**85.48**	**133**	IAmb	IAmb	04 02 15.9	
	comp=Z,12nm,1.1s						
LL01				IAMs_20	IAMs_20	04 31 01.2	
	comp=Z,741nm,21.0s						
SMCO	**Snowmass**	**85.55**	**46**	IAmb	IAmb	04 02 16.2	
	comp=Z,11nm,0.9s						
FLWY	**Flagg Ranch**	**85.65**	**40**	IAmb	IAmb	04 02 18.3	
	comp=Z,29nm,1.1s						
BW06	**Boulder Array**	**85.66**	**42**	P	**P**	**04 02 10.8**	**+0.2**
	baz=239,SNR=24						
BW06	**Boulder Array**	**85.66**	**42**	IAmb	IAmb	04 02 12.5	
	comp=Z,34nm,1.1s						
PD31	**Pinedale Array**	**85.66**	**42**	IAmb	IAmb	04 02 15.4	
	comp=Z,18nm,1.0s						
PDAR	**Pinedale Array**	**85.66**	**42**	P	**P**	**04 02 11.4**	**+0.9**
	comp=Z,16nm,1.0s,baz=208,slow=2.9,SNR=62						
PDAR				PKKPbc	**PKKPbc**	**04 20 12.8**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=108,slow=2.9,SNR=2.3						
PDAR				LR	LR	04 33 13.3	
	comp=Z,477nm,21.3s,baz=240,slow=31						
PDAR	**Pinedale Array**	**85.66**	**42**	P	**P**	**04 02 10.6**	**0.0**
WHY	**Whitehorse**	**85.78**	**18**	IAmb	IAmb	04 02 29.2	
	comp=Z,15nm,1.1s						
NEA2	**Nenana**	**85.87**	**11**	P	**P**	**04 02 10.1**	**-0.7**
	baz=204,SNR=25						
SDCO	**Great Sand Dun**	**85.88**	**48**	P	**P**	**04 02 12.9**	**+1.1**
	baz=242,SNR=19						
H17A	**Grant Village**	**85.89**	**40**	P	**P**	**04 02 13.6**	**+1.9**
	baz=238,SNR=17						
H17A	**Grant Village**	**85.89**	**40**	IAmb	IAmb	04 02 15.8	
	comp=Z,17nm,1.1s						
BOZ	**Bozeman (W)**	**85.90**	**39**	P	**P**	**04 02 12.6**	**+1.1**
	baz=237,SNR=59						
BOZ	**Bozeman (W)**	**85.90**	**39**	IAmb	IAmb	04 02 17.0	
	comp=Z,15nm,0.9s						
BCAR	**Beaver Creek A**	**85.98**	**14**	P	**P**	**04 02 11.6**	**+0.2**
MLY	**Manley**	**86.00**	**10**	P	**P**	**04 02 11.0**	**-0.5**

	baz=202,SNR=41						
LKWY	Lake	86.08	40	IAmb	IAmb	04 02 25.9	
	comp=Z,14nm,1.1s						
HDA	Harding Lake	86.09	11	P	P	04 02 11.9	0.0
	baz=206,SNR=42						
SEY	Seymchan	86.12	345	*i* P	P	04 02 10.9	-1.1
MSTX	Muleshoe	86.13	52	P	P	04 02 14.3	+1.4
	baz=244,SNR=76						
UBPT	Khong Chiam	86.21	288	IAmb	IAmb	04 02 17.1	
	comp=Z,8.7nm,0.8s						
SCRK	Sand Creek	86.29	13	P	P	04 02 13.6	+0.5
	baz=208,SNR=18						
TCOL	CIGO, UAF Yank	86.34	11	P	P	04 02 12.8	-0.3
	baz=205,SNR=30						
COLA	College	86.34	11	P	P	04 02 13.3	+0.2
COLA				pmax	pmax		
	comp=Z,109nm,0.7s						
COLA	College	86.34	11	P	P	04 02 13.2	+0.2
833A	Chaparral WMA,	86.36	58	P	P	04 02 15.3	+1.2
	baz=246,SNR=7.9						
T25A	Trinidad	86.37	49	P	P	04 02 15.1	+0.9
	baz=242,SNR=5.4						
ILAR	Eielson Array	86.43	11	P	P	04 02 13.2	-0.4
	comp=Z,30nm,0.5s,baz=228,slow=5.9,SNR=616						
ILAR				PKKP	PKKPdf	04 20 10.6	+3.2
	comp=Z,0.3nm,0.6s,baz=344,slow=3.0,SNR=5.2						
ILAR				LR	LR	04 35 33.8	
	comp=Z,112nm,21.0s,baz=213,slow=32						
IMAR	Indian Mountai	86.45	8	P	P	04 02 14.0	+0.3
WALA	Waterton Lakes	86.54	35	IAmb	IAmb	04 02 20.3	
	comp=Z,20nm,1.0s						
YNE	Yellowstone No	86.55	40	P	P	04 02 14.7	-0.2
RWWY	Rawlins	86.62	44	IAmb	IAmb	04 02 19.7	
	comp=Z,14nm,1.0s						
POKR	Poker Plat Res	86.64	11	P	P	04 02 14.5	-0.1
	baz=205,SNR=48						
Q24A	Divide	86.70	47	P	P	04 02 16.7	+0.8
	baz=242						
ISCO	Idaho Springs	86.77	46	P	P	04 02 17.1	+0.9
	baz=242,SNR=6.3						
JCT	Junction City	86.92	56	P	P	04 02 17.2	+0.4
	baz=246,SNR=7.5						
RLMT	Red Lodge	87.06	40	P	P	04 02 18.4	+1.0
	baz=239,SNR=10.0						
N23A	Red Feather La	87.07	45	P	P	04 02 18.8	+1.2
	baz=241,SNR=18						
AMTX	Amarillo	87.34	52	P	P	04 02 20.0	+1.2
	baz=244						
AMTX	Amarillo	87.34	52	IAmb	IAmb	04 02 37.9	
	comp=Z,31nm,1.1s						
PLCA	Paso Flores	87.41	132	P	P	04 02 21.7	+2.6
	comp=Z,8.1nm,0.9s,baz=248,slow=5.7,SNR=14						
PLCA				LR	LR	04 34 03.5	
	comp=Z,241nm,20.2s,baz=224,slow=30						
PLCA	Paso Flores	87.41	132	P	P	04 02 19.3	+0.1
PLCA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PLCA	Paso Flores	87.41	132	P	P	04 02 19.3	+0.1
K22A	Casper	87.54	43	P	P	04 02 20.2	+0.5
	baz=241,SNR=5.4						
EGAK	Eagle	87.60	14	IAmb	IAmb	04 02 20.5	
	comp=Z,32nm,1.1s						
BJI	Beijing	87.66	314	P	P	04 02 20.5	+0.5
BJI				S	S	04 13 03.0	+3.0
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,340nm,3.7s						
ABTX	Abilene, Hawle	87.93	54	P	P	04 02 23.0	+1.4
	baz=246,SNR=28						
ABTX	Abilene, Hawle	87.93	54	IAmb	IAmb	04 02 40.9	
	comp=Z,25nm,0.9s						
COLD	Coldfoot	88.12	9	P	P	04 02 22.5	+0.9
	baz=203						
COLD	Coldfoot	88.12	9	IAmb	IAmb	04 02 23.3	
	comp=Z,18nm,1.0s						
HUEH	Huehuetenango	88.27	73	IAMs_20	IAMs_20	04 33 18.2	
	comp=Z,560nm,20.0s						
EGMT	Eagleton	88.28	37	P	P	04 02 23.4	+0.4
	baz=238						
EGMT	Eagleton	88.28	37	IAmb	IAmb	04 02 26.5	
	comp=Z,17nm,1.1s						
BILL	Bilibino	88.30	353	*ce*P	P	04 02 22.0	-0.5
BILL				*e*		04 02 37.8	
BILL				*i*		04 05 52.8	
BILL				*i* S	SKSac	04 12 50.0	+1.3
BILL				*i* SS	SS	04 19 01.2	+5.8
BILL				pmax	pmax		
	comp=Z,34nm,1.7s						
BILL	Bilibino	88.30	353	P	P	04 02 22.6	+0.1
BILL				IAmb	IAmb	04 02 23.2	
	comp=Z,12nm,0.7s						
BILL				IAMs_20	IAMs_20	04 38 35.0	
	comp=Z,689nm,19.0s						
FYU	Fort Yukon	88.35	11	IAmb	IAmb	04 02 24.4	
	comp=Z,7.5nm,0.8s						
ENH	Enshi	88.42	303	IAmb	IAmb	04 02 41.5	
	comp=Z,19nm,0.8s						
ZEA	Zeya	88.43	330	*e*P	P	04 02 24.0	+0.6
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
KSCO	Kaye Shedlock'	88.47	48	P	P	04 02 25.0	+0.9
	baz=244						
BI02	San Fabin de	88.48	128	P	P	04 02 24.3	-0.1
BI02				IAmb	IAmb	04 02 27.1	
	comp=Z,23nm,1.1s						
435B	Jarrell	88.79	57	P	P	04 02 26.7	+1.1
	baz=247						
435B	Jarrell	88.79	57	IAmb	IAmb	04 02 44.9	
	comp=Z,16nm,1.1s						
GSI	Gunungsitoli	88.80	272	IAmb	IAmb	04 02 42.1	
	comp=Z,19nm,0.8s						
VNA3	Neumayer Olymp	89.02	175	P	P	04 02 28.3	+2.2
SNAA	Sanae	89.03	177	P	P	04 02 28.4	+2.2
SNAA	Sanae	89.03	177	*ce*P	P	04 02 27.2	+0.9
SNAA				pmax	pmax		
	comp=Z,32nm,1.7s						
SNAA	Sanae	89.03	177	P	P	04 02 27.1	+0.9
SNAA				IAmb	IAmb	04 02 34.9	
	comp=Z,12nm,1.0s						
BMAR	Burnt Mountain	89.23	11	P	P	04 02 25.1	-1.8
GYA	Guiyang	89.26	298	*e*P	P	04 02 36.0	+7.9
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
WHTX	Lake Whitney,	89.36	56	P	P	04 02 29.1	+0.8
	baz=247,SNR=5.7						
WHTX	Lake Whitney,	89.36	56	IAMs_20	IAMs_20	04 33 56.0	
	comp=Z,843nm,21.0s						
WMOK	Wichita Mounta	89.45	53	P	P	04 02 29.2	+0.5
	baz=246,SNR=10.0						
VNA2	Neumayer--Watz	89.50	176	P	P	04 02 30.4	+2.0
	baz=176,slow=2.8						
BO02	Sierra Bellavi	89.58	127	IAmb	IAmb	04 02 32.4	
	comp=Z,20nm,0.9s						
LAO	LASA Array	89.69	40	P	P	04 02 31.1	+1.5
	baz=241						
LAO	LASA Array	89.69	40	IAmb	IAmb	04 02 33.2	
	comp=Z,22nm,1.0s						
VNA1	Neumayer--Stat	89.71	175	P	P	04 02 32.0	+2.7
OGNE	Ogallala	89.73	46	P	P	04 02 30.3	+0.4
	baz=244						
RSSD	Black Hills	89.83	43	P	P	04 02 30.3	-0.3
RSSD				pmax	pmax		
	comp=Z,21nm,1.0s						
RSSD	Black Hills	89.83	43	P	P	04 02 30.9	+0.4
	baz=243						
RSSD	Black Hills	89.83	43	P	P	04 02 30.3	-0.3
RSSD				IAmb	IAmb	04 02 32.8	
	comp=Z,21nm,1.0s						
HKT	Hockley	89.86	58	*c i*P	P	04 02 31.6	+1.0
HKT				pmax	pmax		
	comp=Z,22nm,1.5s						
HKT	Hockley	89.86	58	P	P	04 02 30.4	-0.2
HKT				IAmb	IAmb	04 02 36.1	
	comp=Z,9.9nm,1.1s						
HIA	Hailar	89.90	323	*i* P	P	04 02 29.1	-1.4
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HIA	Hailar	89.90	323	IAMs_20	IAMs_20	04 35 17.0	
	comp=Z,634nm,21.0s						
Z35A	Perchaven, San	90.05	55	IAmb	IAmb	04 02 50.5	
	comp=Z,15nm,1.1s						
MT05	Renca	90.17	126	IAmb	IAmb	04 02 45.6	
	comp=Z,18nm,1.0s						
MT05				IAMs_20	IAMs_20	04 39 30.7	
	comp=Z,814nm,20.0s						
PETF	Flores	90.30	72	IAmb	IAmb	04 02 53.3	
	comp=Z,7.8nm,0.9s						
PETF				IAMs_20	IAMs_20	04 32 56.8	
	comp=Z,706nm,22.0s						
PEL	Peldehue	90.31	125	IAmb	IAmb	04 02 51.5	
	comp=Z,16nm,1.1s						
XAN	Xi'an	90.35	306	P	P	04 02 34.0	+1.0
XAN				pP	sP	04 02 46.5	+0.7
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CBKS	Cedar Bluff	90.42	49	P	P	04 02 33.4	+0.2
	baz=245						
CBKS	Cedar Bluff	90.42	49	IAmb	IAmb	04 02 37.1	
	comp=Z,24nm,0.9s						
VA03	San Esteban	90.56	125	IAmb	IAmb	04 02 40.9	
	comp=Z,11nm,1.0s						
237A	Washetta, Mont	90.66	56	IAmb	IAmb	04 02 38.7	
	comp=Z,23nm,1.0s						
OK029	Liberty Lake	90.86	52	IAMs_20	IAMs_20	04 34 50.6	
	comp=Z,755nm,21.0s						
OK025	Westminster Rd	90.87	53	IAmb	IAmb	04 02 42.0	
	comp=Z,7.6nm,1.0s						
HHC	Hu-ho-hao-te	91.17	313	*e*P	P	04 02 37.8	+1.1
HHC				SKS	SKSac	04 13 05.8	-1.2
HHC				S	ScS	04 13 38.0	+1.8
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,6.6s						
HHC				LR	LR		
	comp=Z,430nm,19.2s						
CO03	El Pedregal	91.21	123	IAmb	IAmb	04 02 40.1	
	comp=Z,18nm,0.9s						
A21K	Barrow	91.23	6	P	P	04 02 36.5	+0.4
	baz=196						
A21K	Barrow	91.23	6	IAmb	IAmb	04 02 36.9	
	comp=Z,15nm,0.9s						
OK031	S. Brethren Rd	91.38	52	IAmb	IAmb	04 02 44.5	
	comp=Z,7.6nm,1.0s						
NATX	Nacogdoches	91.47	57	P	P	04 02 39.4	+1.2
	baz=248						
LCO	Las Campanas	91.92	122	P	P	04 02 40.4	-0.4
LCO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LCO	Las Campanas	91.92	122	P	P	04 02 40.4	-0.4
LCO				IAmb	IAmb	04 02 47.4	
	comp=Z,10nm,0.8s						
X37A	Clayton	91.97	54	IAmb	IAmb	04 02 52.2	
	comp=Z,7.0nm,0.8s						
CO01	Juntas del Tor	92.03	123	IAmb	IAmb	04 02 46.0	
	comp=Z,15nm,1.1s						
KMI	Kunming	92.08	296	⇓P	P	04 02 43.0	+1.6
KMI				pP	sP	04 02 52.8	-1.5
KMI				sP	pP	04 02 57.0	+6.1
KMI				SKS	SKSac	04 13 12.0	-1.0
KMI				S	S	04 13 39.8	-2.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,260nm,7.4s						
KMI				LR	LR		
	comp=Z,270nm,22.0s						
KMI				LR	LR		
	comp=Z,410nm,20.8s						
KMI				LR	LR		
	comp=Z,600nm,24.4s						
KMI	Kunming	92.08	296	IAMs_20	IAMs_20	04 38 17.3	
	comp=Z,565nm,22.0s						
BTO	Baotou	92.14	312	*e*P	P	04 02 39.8	-1.4
TUL1	Leonard	92.15	53	P	P	04 02 42.2	+1.0
	baz=248,SNR=13						
TUL1	Leonard	92.15	53	IAmb	IAmb	04 02 47.1	
	comp=Z,11nm,0.8s						
YAK	Yakutsk	92.43	337	*ce*P	P	04 02 39.3	-2.5
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
ZON	Zonda	92.50	125	IAmb	IAmb	04 02 50.3	
	comp=Z,13nm,1.2s						
BGNE	Belgrade	92.58	47	P	P	04 02 44.2	+1.1
	baz=246						
JTS	Las Juntas de	92.61	80	P	P	04 02 43.4	-0.5
JTS				pmax	pmax		
	comp=Z,22nm,1.1s						
JTS	Las Juntas de	92.61	80	P	P	04 02 43.4	-0.5
JTS				IAmb	IAmb	04 03 02.2	
	comp=Z,22nm,1.1s						
JTS				IAMs_20	IAMs_20	04 33 55.2	
	comp=Z,530nm,20.0s						
KSU1	Kansas State U	92.77	50	P	P	04 02 45.1	+1.1
	baz=247						
CMAR	Chiang Mai Arr	93.16	288	P	P	04 02 47.9	+1.6
	comp=Z,8.6nm,1.0s,baz=112,slow=2.9,SNR=22						
CMAR				PKKP	PKKPdf	04 19 53.9	+0.4
	comp=Z,1.0nm,0.3s,baz=268,slow=3.4,SNR=4.7						
CMAR				LR	LR	04 42 24.0	
	comp=Z,128nm,20.7s,baz=146,slow=34						
CMAR	Chiang Mai Arr	93.16	288	P	P	04 02 45.9	-0.4
CD2	Chengdu	93.24	301	*e*P	P	04 02 46.0	-0.5
CD2				S	S	04 13 53.0	+1.0
CD2				pmax	pmax		
	comp=Z,160nm,5.9s						
CD2				LR	LR		
	comp=Z,420nm,15.7s						
CD2				LR	LR		
	comp=Z,380nm,22.6s						
CD2				LR	LR		
	comp=Z,360nm,21.6s						
CHTO	Chiang Mai	93.28	289	P	P	04 02 46.4	-0.4
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	93.28	289	P	P	04 02 46.4	-0.4
CHTO				IAmb	IAmb	04 02 53.6	
	comp=Z,9.2nm,0.8s						
MIAR	Mount Ida	93.34	55	P	P	04 02 46.9	+0.2
	baz=249						
MIAR	Mount Ida	93.34	55	IAmb	IAmb	04 02 52.7	
	comp=Z,6.3nm,0.9s						
W39A	Magazine	93.41	54	P	P	04 02 48.0	+0.9
	baz=249,SNR=8.4						
W39A	Magazine	93.41	54	IAmb	IAmb	04 02 55.2	
	comp=Z,7.3nm,1.1s						
Z41A	Richland Creek	93.48	56	P	P	04 02 48.5	+1.1
	baz=249						
ESPN	Las Esperanzas	93.83	78	IAMs_20	IAMs_20	04 33 46.5	
	comp=Z,679nm,19.0s						
PB14	IPOC Station P	93.89	118	P	P	04 02 49.4	-0.7
YKA	Yellowknife Ar	93.98	24	P	P	04 02 49.6	+0.7
	comp=Z,6.8nm,1.0s,baz=230,slow=3.9,SNR=51						
YKA				PKKPbc	PKKPdf	04 19 49.1	-4.6
	comp=Z,0.2nm,0.8s,baz=44,slow=3.0,SNR=1.9						
YKA				LR	LR	04 37 17.4	
	comp=Z,187nm,21.8s,baz=0.0,slow=30						
MDND	Maddock	94.24	41	P	P	04 02 52.2	+1.6
	baz=246						
U40A	Yellville	94.53	53	P	P	04 02 53.0	+0.8
	baz=249						
U40A	Yellville	94.53	53	IAmb	IAmb	04 03 11.5	
	comp=Z,20nm,1.1s						
ECSD	EROS Data Cent	94.53	45	P	P	04 02 52.5	+0.4
	baz=248,SNR=31						
ECSD	EROS Data Cent	94.53	45	IAmb	IAmb	04 02 55.6	
	comp=Z,21nm,1.1s						
W41B	Gary Mavity, V	94.58	54	P	P	04 02 53.5	+1.1
	baz=250						
S39A	Bolivar	94.65	52	IAmb	IAmb	04 03 11.3	
	comp=Z,6.9nm,0.8s						
PB04	IPOC Station P	95.00	116	IAmb	IAmb	04 03 15.0	
	comp=Z,15nm,1.0s						
P38A	Dawn	95.18	50	IAmb	IAmb	04 03 13.2	
	comp=Z,7.1nm,0.9s						
C36M	Paulatuk	95.33	16	P	P	04 02 54.8	-0.2
	baz=227						
PB06	IPOC Station P	95.34	116	IAMs_20	IAMs_20	04 34 56.2	
	comp=Z,724nm,22.0s						
PB07	IPOC Station P	95.46	115	IAmb	IAmb	04 03 07.8	
	comp=Z,7.7nm,1.1s						
F33A	5 Mile Ranch,	95.54	43	IAmb	IAmb	04 03 03.9	
	comp=Z,6.8nm,1.1s						
R40A	Maddies Statio	95.64	52	IAmb	IAmb	04 03 01.1	
	comp=Z,20nm,1.1s						
FFC	Flin Flon	95.77	34	P	P	04 02 57.7	+0.3
FFC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FFC	Flin Flon	95.77	34	P	P	04 02 57.7	+0.3
LVC	Limon Verde	95.94	116	P	P	04 02 59.0	-0.5
LVC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LVC	Limon Verde	95.94	116	P	P	04 02 59.0	-0.5
LVC				IAmb	IAmb	04 03 12.7	
	comp=Z,6.7nm,1.1s						
PB01	IPOC Station P	96.07	115	IAmb	IAmb	04 03 03.4	
	comp=Z,12nm,1.1s						
SCIA	State Center	96.20	48	P	P	04 03 00.3	+0.6
	baz=250						
SCIA	State Center	96.20	48	IAmb	IAmb	04 03 05.5	
	comp=Z,15nm,1.1s						
CCM	Cathedral Cave	96.32	52	P	P	04 03 00.2	-0.1
CCM				pmax	pmax		
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	96.32	52	P	P	04 03 00.4	+0.1
	baz=250						
CCM	Cathedral Cave	96.32	52	P	P	04 03 00.2	-0.1
CCM				IAmb	IAmb	04 03 02.4	
	comp=Z,11nm,1.1s						
OXF	Oxford	96.56	56	P	P	04 03 01.5	+0.1
	baz=251						
AGMN	Agassiz Nation	96.72	41	P	P	04 03 01.5	-0.3
	baz=249,SNR=12						
AGMN	Agassiz Nation	96.72	41	IAmb	IAmb	04 03 06.8	
	comp=Z,5.5nm,0.8s						
K38A	Parkersburg	96.77	47	IAmb	IAmb	04 03 06.6	
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	96.88	318	*i* P	P	04 03 01.1	-1.7
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FVM	French Village	96.90	52	IAmb	IAmb	04 03 07.1	
	comp=Z,8.4nm,0.8s						
PB16	IPOC Station P	97.11	112	IAmb	IAmb	04 03 11.9	
	comp=Z,8.6nm,1.1s						
SONM	Songino Array	97.28	318	P	P	04 03 04.1	-0.5
	comp=Z,0.6nm,0.5s,baz=135,slow=6.0,SNR=7.8						
SONM				LR	LR	04 43 01.9	
	comp=Z,192nm,21.9s,baz=128,slow=33						
BRAL	Brewton	97.39	60	P	P	04 03 05.2	-0.1
	baz=252						
ULM	Lac du Bonnet	97.42	39	P	P	04 03 04.5	-0.5
	comp=Z,7.3nm,0.9s,baz=244,slow=5.1,SNR=9.4						
ULM				LR	LR	04 40 49.2	
	comp=Z,1µm,20.8s,baz=266,slow=32						
ULM	Lac du Bonnet	97.42	39	*i* P	P	04 03 03.3	-1.7
SPMN	Marine on St.	97.61	45	P	P	04 03 06.5	+0.5
	baz=250,SNR=10						
TIXI	Tiksi	98.58	344	*ce*P	P	04 03 08.2	-1.5
TIXI				pmax	pmax		
	comp=Z,27nm,1.7s						
JFWS	Jewell Farm	98.61	48	P	P	04 03 11.5	+1.0
	baz=252						
EYMN	Ely	99.36	43	P	Pdif	04 03 14.3	+0.6
	baz=252						
EYMN	Ely	99.36	43	IAmb	IAmb	04 03 19.2	
	comp=Z,7.0nm,1.1s						
SDV	Santo Domingo	105.58	86	IAMs_20	IAMs_20	04 42 14.4	
	comp=Z,419nm,20.0s						
SAML	Samuel	106.44	106	IAMs_20	IAMs_20	04 47 25.8	
	comp=Z,423nm,19.0s						
ZALV	Zalesovo Beam	111.86	321	PKiKP	PKiKP	04 08 05.9	-0.2
	comp=Z,3.4nm,0.6s,baz=42,slow=2.0,SNR=16						
SPB	Sao Paulo	112.76	127	IAMs_20	IAMs_20	04 47 23.1	
	comp=Z,579nm,22.0s						
MK31	Makanchi Array	113.03	313	*c i*PKIKP	PKiKP	04 08 08.2	-0.5
MKAR	Makanchi Array	113.03	313	Pdiff	Pdif	04 04 17.4	+2.7
	comp=Z,0.3nm,0.6s,baz=65,slow=4.3,SNR=3.7						
MKAR				PKiKP	PKiKP	04 08 08.1	-0.7
	comp=Z,2.2nm,0.6s,baz=86,slow=0.9,SNR=19						
MKAR				PKKPbc	PKKPbc	04 18 57.1	+0.6
	comp=Z,0.3nm,0.5s,baz=279,slow=2.6,SNR=5.8						
SEM	Semipalatinsk	114.55	317	*e*PKP	PKPdf	04 08 10.1	-1.7
	baz=317						
SEM	Semipalatinsk	114.55	317	*e*PKIKP	PKPdf	04 08 10.0	-1.7
KPKS	Kokpek	115.38	310	*e*PKP	PKiKP	04 08 12.5	-1.0
	baz=310						
KPKS	Kokpek	115.38	310	*e*PKIKP	PKiKP	04 08 12.4	-1.0
KURK	Kurchatov	115.59	318	*c i*PKIKP	PKiKP	04 08 13.1	-0.3
KURK				pmax	pmax		
	comp=Z,14nm,2.5s						
KSH	Kashi	117.19	305	PKP	PKiKP	04 08 18.3	+1.2
AAK	Ala-Archa	118.42	309	*i* PKIKP	PKPdf	04 08 16.8	-2.6
AAK	Ala-Archa	118.42	309		PKPdf	04 08 18.9	-0.5
BTLS	Baital	118.74	311	*e*PKP	PKPdf	04 08 18.5	-1.2
	baz=311						
BTLS	Baital	118.74	311	*e*PKIKP	PKPdf	04 08 18.5	-1.2
BRZS	Berezniki	119.42	317	*e*PKP	PKPdf	04 08 19.6	-1.3
	baz=317						
BRZS	Berezniki	119.42	317	*e*PKIKP	PKPdf	04 08 19.5	-1.3
BRVK	Borovoye	120.56	321	*i* PKIKP	PKPdf	04 08 21.6	-1.3
BRVK	Borovoye	120.56	321	PKPdf	PKPdf	04 08 23.1	+0.2
KKAR	Karatay Array	121.34	309	PKIKP	PKPdf	04 08 24.6	-0.2
KKAR	Karatay Array	121.34	309	PKPdf	PKPdf	04 08 24.6	-0.2
IUG	Iuzhnay	121.73	308	*e*PKP	PKPdf	04 08 24.9	-0.8
	baz=308						
IUG	Iuzhnay	121.73	308	*e*PKIKP	PKPdf	04 08 24.9	-0.8
KBL	Kabul	122.50	299	PKIKP	PKPdf	04 08 27.0	-0.5
KBL	Kabul	122.50	299	PKPdf	PKPdf	04 08 27.0	-0.5
ARU	Arti	126.26	327	*i* PKIKP	PKPdf	04 08 34.2	+0.4
ARU						04 10 32.3	
ARU						04 15 42.6	
ARU	Arti	126.26	327	PKPdf	PKPdf	04 08 34.1	+0.4
ABKAR	Akbulak array	127.70	318	PKPdf	PKPdf	04 08 36.6	-0.2
ARCES	ARCESS Array B	128.38	351	PKP	PKPdf	04 08 37.4	-0.1
	comp=Z,3.3nm,0.7s,baz=39,slow=1.1,SNR=15						
BOSA	Boshof	128.77	202	PKP	PKPdf	04 08 40.2	+0.5
	comp=Z,2.9nm,0.7s,baz=199,slow=1.9,SNR=7.6						
KIRV	Kirov	129.70	332	*i* PKIKP	PKPdf	04 08 39.8	-0.4
KLMR	Klimovskoe	132.20	339	*e*PKIKP	PKPdf	04 08 44.7	-0.2
KLMR				pmax	pmax		
	comp=Z,37nm,1.7s						
KLMR	Klimovskoe	132.20	339	*e*PKPdf	PKPdf	04 08 44.7	-0.2
KLMR				AMP		04 09 02.9	
	comp=Z,37nm,1.7s						
FINES	FINESS Array B	135.60	346	PKhKP	PKPpre	04 08 42.8	
	comp=Z,2.0nm,0.7s,baz=344,slow=4.2,SNR=4.8						
FINES				PKP	PKPdf	04 08 51.4	+0.2
	comp=Z,1.8nm,0.4s,baz=88,slow=3.9,SNR=15						
OBN	Obninsk	137.38	334	*i* PKIKP	PKPdf	04 08 54.8	+0.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRH	Novokhopyorsk	137.50	327	*e*PKIKP	PKPdf	04 08 54.2	-0.9
VRH				pmax	pmax		
	comp=Z,20nm,0.4s						
LPSR	Galich'ya Gora	138.03	330	*e*PKIKP	PKPdf	04 08 55.3	-0.7
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NOA	NORSAR Array B	138.17	356	PKhKP	PKPpre	04 08 49.3	
	comp=Z,0.4nm,0.5s,baz=345,slow=2.2,SNR=1.2						
NOA				PKP	PKPdf	04 08 57.8	+1.6
	comp=Z,1.1nm,0.7s,baz=15,slow=3.8,SNR=3.8						
VSR	Storozhevoye	138.78	328	*e*PKIKP	PKPdf	04 08 56.0	-1.5
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	140.63	316	PKhKP	PKPpre	04 08 54.6	
	comp=Z,2.3nm,0.8s,baz=216,slow=8.0,SNR=4.1						
KIV	Kislovodsk	140.67	317	*i* PKIKP	PKPdf	04 09 01.8	+0.5
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,863nm,24.0s						
NACGM	Naroch	141.09	341	*i* PKP	PKPdf	04 09 02.8	+1.2
NACGM				*i* PKP	PKPdf	04 09 02.8	+1.2
NACGM				*i* PKP	PKPdf	04 09 02.8	+1.2
NACGM				*i* PP	PP	04 11 22.9	-40
NACGM				*i* PPP	PPP	04 14 04.9	
NACGM				*i* SKS	SKSdf	04 16 33.5	+24
NACGM				*i* SKKS		04 17 53.0	
NACGM				*i* SS	SS	04 28 36.4	-112
NACGM				*i* SSS	SSS	04 34 25.7	
SOC	Sochi	142.74	318	*e*PKIKP	PKPdf	04 09 03.5	-1.4
SOC				*e*		04 12 12.6	
SOC				*e*PPP	PPP	04 15 19.1	
SOC				*e*SSS	SSS	04 36 02.0	
SOC				MLR	MLR		
	comp=Z,190nm,17.0s						
RAYN	Ar Rayn	142.93	284	PKIKP	PKPdf	04 09 04.8	-1.1
RAYN	Ar Rayn	142.93	284	PKPdf	PKPdf	04 09 04.8	-1.1
KMBO	Kilima Mbogo	143.07	240	PKhKP	PKPbc	04 09 03.3	-0.2
	comp=Z,3.2nm,0.7s,baz=58,slow=5.4,SNR=7.9						
SHEL	Horse Pasture	143.12	161	PKIKP	PKPbc	04 09 05.5	+2.3
SHEL	Horse Pasture	143.12	161		PKPbc	04 09 05.5	+2.3
AKASG	Malin Array Be	143.63	335	PKhKP	PKPbc	04 09 03.5	-0.1
	comp=Z,5.5nm,0.5s,baz=40,slow=4.4,SNR=31						
MARD	Mardin	144.68	308	IAMs_20	IAMs_20	05 20 49.8	
	comp=Z,254nm,21.0s						

PICO	**Pico**	**144.72**	**50**	*e*PKP	**PKPab**	**04 09 08.2**	**+0.8**
ROSA	**Rosais**	**144.77**	**49**	PKPdf	**PKPab**	**04 09 08.4**	**+0.9**
PMAN	**Manadas**	**144.91**	**50**	*e*PKP	**PKPab**	**04 09 07.0**	**-1.0**
PAGU	**Agualva, Azore**	**145.50**	**49**	*e*PKP	**PKPdf**	**04 09 08.2**	**-1.7**
ADH	**Angra Heroismo**	**145.51**	**49**	*e*PKP	**PKPdf**	**04 09 11.0**	**+1.2**
BEL	**Belsk**	**145.51**	**344**	*e*PKP	**PKPdf**	**04 09 10.5**	**+1.1**
PSCM	**Serra do Cume**	**145.58**	**49**	*e*PKP	**PKPdf**	**04 09 08.0**	**-2.0**
SORM	**Soroca**	**145.97**	**333**	⇑P	**PKPdf**	**04 09 11.0**	**+0.7**
SORM	**Soroca**	**145.97**	**333**	⇑PKP2	**PKPdf**	**04 09 11.0**	**+0.7**
LVV	**L'vov**	**146.29**	**339**	*e*PKP2	**PKPbc**	**04 09 12.4**	**+0.4**
DIKM	**Dikmen**	**146.56**	**318**	⇑P	**PKPab**	**04 09 14.8**	**+0.7**
MILM	**Milestii Mici**	**146.68**	**331**	⇑P	**PKPdf**	**04 09 13.0**	**+1.4**
KWP	**Kalwaria Pacla**	**146.90**	**340**	*e*PKP	**PKPbc**	**04 09 14.5**	**+0.7**
PSET	**Sete Cidades**	**146.94**	**49**	*e*PKP	**PKPdf**	**04 09 14.5**	**+2.1**
IAS	**Iasi**	**147.04**	**332**	⇓P	**PKPbc**	**04 09 14.9**	**+0.7**
IAS	**Iasi**	**147.04**	**332**	⇓PKP2	**PKPbc**	**04 09 14.9**	**+0.7**
GRON	**Grota Negra**	**147.10**	**49**	*e*PKP	**PKPbc**	**04 09 15.0**	**+0.2**
CMLA	**Cha da Macela**	**147.11**	**49**	*e*PKP	**PKPdf**	**04 09 13.8**	**+1.2**
CMLA	**Cha da Macela**	**147.11**	**49**	PKP2	**PKPdf**	**04 09 14.0**	**+1.4**
CMLA	**Cha da Macela**	**147.11**	**49**	PKPbc	**PKPdf**	**04 09 14.0**	**+1.4**
OJC	**Ojcow**	**147.24**	**343**	*e*PKP	**PKPbc**	**04 09 15.2**	**+0.5**
VASR	**Vaslui**	**147.36**	**331**	⇑P	**PKPbc**	**04 09 16.1**	**+0.9**
KSP	**Ksiaz**	**147.49**	**348**	*e*PKP	**PKPbc**	**04 09 16.4**	**+1.1**
CLL	**Collm**	**147.60**	**352**	*e*PKPdf	**PKPdf**	**04 09 14.0**	**+1.0**
CLL				*e*PKPbc	**PKPbc**	**04 09 16.0**	**+0.3**
	comp=Z,66nm,1.3s						
CLL				*i* PKiKP	**pPKPdf**	**04 09 20.4**	**-2.4**
CLL				*i* pPKiKP	**sPKPab**	**04 09 32.8**	**+2.1**
CLL	**Collm**	**147.60**	**352**	*e*PKP2	**PKPbc**	**04 09 16.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,66nm,1.3s						
KOLS	**Kolonicke sedl**	**147.64**	**340**	*e*PKP2	**PKPbc**	**04 09 16.7**	**+0.8**
KOLS	**Kolonicke sedl**	**147.64**	**340**	*e*PKP	**PKPbc**	**04 09 16.7**	**+0.8**
BURAR	**Bucovina Array**	**147.68**	**335**	⇓P	**PKPbc**	**04 09 17.0**	**+0.8**
BURAR	**Bucovina Array**	**147.68**	**335**	⇓PKP2	**PKPbc**	**04 09 17.0**	**+0.8**
BURAR	**Bucovina Array**	**147.68**	**335**	PKPdf	**PKPdf**	**04 09 13.4**	**+0.1**
PSMA	**Santa Maria**	**147.72**	**50**	*e*PKP	**PKPdf**	**04 09 14.3**	**+0.7**
PSMN	**Pico do Norte,**	**147.76**	**50**	*e*PKP	**PKPbc**	**04 09 17.3**	**+0.7**
OSTC	**Ostas**	**147.78**	**348**	*e*PKP	**PKPbc**	**04 09 17.1**	**+0.9**
OSTC				*e*x	x	04 09 31.0	
CHVC	**Chvalec**	**147.78**	**348**	*e*PKP	**PKPbc**	**04 09 16.7**	**+0.5**
NIE	**Niedzica**	**147.83**	**342**	*e*PKP	**PKPbc**	**04 09 17.6**	**+1.2**
BIZ	**Bicaz**	**147.86**	**334**	⇑P	**PKPbc**	**04 09 17.8**	**+1.2**
UPC	**Upice**	**147.87**	**348**	*e*PKP2	**PKPbc**	**04 09 17.0**	**+0.6**
UPC	**Upice**	**147.87**	**348**	*e*PKP	**PKPbc**	**04 09 17.0**	**+0.6**
UPC				*e*x	x	04 09 34.4	
BRG	**Berggiesshubel**	**147.89**	**350**	*i* PKP	**PKPbc**	**04 09 17.3**	**+0.8**
BRG				Amp		04 09 19.6	
	comp=Z,88nm,1.7s						
BRG				*i* x	x	04 09 33.8	
BRG				Amp		04 09 34.6	
	comp=Z,48nm,1.5s						
UZH	**Uzhgorod**	**147.90**	**339**	*e*PKP2	**PKPbc**	**04 09 16.8**	**+0.3**
CRVS	**Cervenica-Dubn**	**147.93**	**340**	*e*PKP2	**PKPbc**	**04 09 17.1**	**+0.4**
CRVS	**Cervenica-Dubn**	**147.93**	**340**	*e*PKP	**PKPbc**	**04 09 17.1**	**+0.4**
TLCR		**147.95**	**329**	⇑P	**PKPbc**	**04 09 17.3**	**+0.5**
TLCR		**147.95**	**329**	⇑PKP2	**PKPbc**	**04 09 17.3**	**+0.5**
DPC	**Dobruska-Polom**	**147.95**	**347**	*e*PKP2	**PKPbc**	**04 09 17.1**	**+0.4**
DPC	**Dobruska-Polom**	**147.95**	**347**	*e*PKP	**PKPbc**	**04 09 17.1**	**+0.4**
TESR	**Tescani**	**147.96**	**332**	⇓P	**PKPbc**	**04 09 17.2**	**+0.4**
GHRR		**147.97**	**331**	⇑P	**PKPbc**	**04 09 18.3**	**+1.5**
KRLC	**Kraliky**	**148.12**	**347**	*e*PKP2	**PKPbc**	**04 09 17.7**	**+0.5**
KRLC	**Kraliky**	**148.12**	**347**	*e*PKP	**PKPbc**	**04 09 17.7**	**+0.5**
KRLC				*e*pPKP	**sPKPab**	**04 09 32.2**	**-0.7**
PVCC	**Panska Ves**	**148.12**	**349**	*e*PKP2	**PKPbc**	**04 09 18.1**	**+1.0**
PVCC	**Panska Ves**	**148.12**	**349**	*e*PKP	**PKPbc**	**04 09 18.1**	**+1.0**
PVCC				*e*x	x	04 09 34.5	
JURR	**Jurilovca**	**148.22**	**328**	⇓P	**PKPbc**	**04 09 18.0**	**+0.5**
MORC	**Moravsky Berou**	**148.22**	**346**	⇓P	**PKPbc**	**04 09 18.5**	**+1.0**
MORC	**Moravsky Berou**	**148.22**	**346**	*e*PKP	**PKPbc**	**04 09 18.1**	**+0.6**
MORC	**Moravsky Berou**	**148.22**	**346**	⇓PKP2	**PKPbc**	**04 09 18.5**	**+1.0**
CFR	**Carcaliu**	**148.28**	**329**	⇑P	**PKPbc**	**04 09 17.3**	**-0.4**
BMR	**Baia Mare**	**148.29**	**337**	⇓P	**PKPdf**	**04 09 11.7**	**-2.6**
LANS	**Liptovska Anna**	**148.30**	**343**	*e*PKP2	**PKiKP**	**04 09 19.5**	**+0.1**
LANS	**Liptovska Anna**	**148.30**	**343**	*e*PKP	**PKiKP**	**04 09 19.5**	**+0.1**
ODBI	**Odobesti**	**148.35**	**331**	⇓P	**PKPbc**	**04 09 17.0**	**-0.9**
TPGR	**Topolog**	**148.38**	**329**	⇓P	**PKPbc**	**04 09 19.1**	**+1.1**
VRI	**Vrincioaia**	**148.43**	**332**	⇑P	**PKPbc**	**04 09 18.4**	**+0.3**
VRI	**Vrincioaia**	**148.43**	**332**	⇑PKP2	**PKPbc**	**04 09 18.4**	**+0.3**
ARCR	**ARCALIA**	**148.46**	**336**	⇑P	**PKPbc**	**04 09 19.2**	**+1.1**
PLOR	**Plostina**	**148.47**	**332**	⇓P	**PKPdf**	**04 09 13.0**	**-1.7**
PLOR	**Plostina**	**148.47**	**332**	⇓PKIKP	**PKPdf**	**04 09 13.0**	**-1.7**
MBAR	**Mbarara**	**148.55**	**234**	PKP2	**PKPdf**	**04 09 18.2**	**+2.3**
MBAR	**Mbarara**	**148.55**	**234**		**PKPdf**	**04 09 18.2**	**+2.3**
PRA	**Prague**	**148.58**	**349**	*e*PKP2	**PKPbc**	**04 09 18.8**	**+0.5**
PRA	**Prague**	**148.58**	**349**	*e*PKP	**PKPbc**	**04 09 18.8**	**+0.5**
BRTR	**Keskin Array B**	**148.63**	**316**	PKPbc	**PKPbc**	**04 09 19.1**	**+0.2**
	comp=Z,8.9nm,0.7s,baz=5.7,slow=2.5,SNR=3.8						
BRTR	**Keskin Array B**	**148.63**	**316**		**PKPbc**	**04 09 18.4**	**-0.6**
PRU	**Pruhonice**	**148.64**	**349**	*e*PKP2	**PKPbc**	**04 09 18.6**	**+0.1**
PRU	**Pruhonice**	**148.64**	**349**	*e*PKP	**PKPbc**	**04 09 18.6**	**+0.1**
PRU				*e*pPKP	**sPKPab**	**04 09 35.3**	**+0.4**
OZUR		**148.66**	**333**	⇑P	**PKPbc**	**04 09 19.8**	**+1.1**
BISRR	**Bisoca**	**148.68**	**331**	⇑P	**PKPbc**	**04 09 19.5**	**+0.7**
NKC	**Novy Kostel**	**148.73**	**352**	*e*PKP2	**PKPbc**	**04 09 19.2**	**+0.5**
NKC	**Novy Kostel**	**148.73**	**352**	*e*PKP	**PKPbc**	**04 09 19.2**	**+0.5**
HARR	**Harsova**	**148.74**	**329**	⇑P	**PKPbc**	**04 09 19.2**	**+0.3**
HARR	**Harsova**	**148.74**	**329**	⇑PKP2	**PKPbc**	**04 09 19.2**	**+0.3**
MEM	**Membach**	**148.80**	**360**	*d*PKiKP	**PKPbc**	**04 09 19.7**	**+0.8**
MEM				*d*PKPab	**pPKPdf**	**04 09 22.2**	**-2.5**
BTNL	**Ternell**	**148.82**	**360**	*d*PKiKP	**PKPbc**	**04 09 19.8**	**+0.8**
BTNL				*d*pPKP	**pPKPbc**	**04 09 26.4**	**-2.3**
BSTI	**Sart Tilman**	**148.82**	**0**	*d*PKiKP	**PKPbc**	**04 09 19.8**	**+0.8**
BSTI				*d*PKPab	**pPKPdf**	**04 09 22.2**	**-2.5**
SNF	**Seneffe**	**148.88**	**2**	*d*PKPab	**PKiKP**	**04 09 21.8**	**+1.4**
VRAC	**Vranov**	**148.88**	**346**	⇓P	**PKPbc**	**04 09 20.1**	**+1.0**
VRAC	**Vranov**	**148.88**	**346**	*e*PKP	**PKPbc**	**04 09 19.9**	**+0.8**
VRAC	**Vranov**	**148.88**	**346**	⇓PKP2	**PKPbc**	**04 09 20.1**	**+1.0**
DOPR	**Dopca**	**148.93**	**333**	⇓P	**PKPbc**	**04 09 20.6**	**+1.2**
NEHR	**Nehoiu**	**148.96**	**332**	⇑P	**PKPbc**	**04 09 20.0**	**+0.5**
BCLA	**Clavier**	**148.99**	**1**	*d*PKPab	**PKPab**	**04 09 22.9**	**-0.5**
PBCC	**Pribram**	**149.03**	**350**	*e*PKP	**PKPbc**	**04 09 20.1**	**+0.6**
JAVC	**Velka Javorina**	**149.04**	**345**	*e*PKP	**PKiKP**	**04 09 21.4**	**+0.5**
CJR	**Cluj-Napoca**	**149.06**	**336**	⇓P	**PKPbc**	**04 09 19.1**	**-0.6**
CJR	**Cluj-Napoca**	**149.06**	**336**	⇓PKP2	**PKPbc**	**04 09 19.1**	**-0.6**
MLR	**Muntele Rosu**	**149.06**	**332**	⇑P	**PKPbc**	**04 09 19.9**	**0.0**
MLR	**Muntele Rosu**	**149.06**	**332**	⇑PKP2	**PKPbc**	**04 09 19.9**	**0.0**
VYHS	**Vyhne**	**149.07**	**343**	*e*PKP2	**PKPbc**	**04 09 20.6**	**+0.9**
VYHS	**Vyhne**	**149.07**	**343**	*e*PKP	**PKPbc**	**04 09 20.6**	**+0.9**
ISR	**Istrita**	**149.08**	**331**	⇑P	**PKPbc**	**04 09 18.6**	**-1.2**
ISR	**Istrita**	**149.08**	**331**	⇑PKP2	**PKPbc**	**04 09 18.6**	**-1.2**
BMRD	**Maredsous**	**149.09**	**1**	*d*PKiKP	**PKPbc**	**04 09 20.2**	**+0.6**
BMRD				*d*pPKP	**sPKPdf**	**04 09 25.7**	**-2.9**
LTVH	**Ltavrtes, Hu**	**149.11**	**339**	*e*P	**PKiKP**	**04 09 22.6**	**+1.6**
TREC	**Trest**	**149.13**	**348**	*e*PKP2	**PKPbc**	**04 09 20.3**	**+0.5**
TREC	**Trest**	**149.13**	**348**	*e*PKP	**PKPbc**	**04 09 20.3**	**+0.5**
KRUC	**Moravsky**	**149.15**	**346**	*e*PKP	**PKPbc**	**04 09 20.3**	**+0.5**
PSZ	**Piszkesteto**	**149.29**	**341**	⇓P	**PKPbc**	**04 09 20.6**	**+0.3**
PSZ	**Piszkesteto**	**149.29**	**341**	*e*P	**PKiKP**	**04 09 22.8**	**+1.3**
PSZ	**Piszkesteto**	**149.29**	**341**	⇓PKP2	**PKPbc**	**04 09 20.6**	**+0.3**
DOU	**Dourbes**	**149.30**	**2**	*d*PKiKP	**PKPbc**	**04 09 20.8**	**+0.7**
DOU				*d*PKPab	**pPKPdf**	**04 09 23.3**	**-2.3**
DRGR		**149.32**	**337**	⇑P	**PKPbc**	**04 09 20.8**	**+0.4**
DRGR		**149.32**	**337**	⇑PKP2	**PKPbc**	**04 09 20.8**	**+0.4**
GRF	**Grafenberg Arr**	**149.41**	**353**	*e*PKPdf	**PKPbc**	**04 09 21.3**	**+0.8**
	baz=6.6,slow=1.8						
GRF	**Grafenberg Arr**	**149.41**	**353**	*e*PKPdf	**PKPbc**	**04 09 21.3**	**+0.8**
	baz=8.5,slow=1.7						
GRFO	**Grafenberg**	**149.41**	**353**	PKPdf	**PKPdf**	**04 09 16.0**	**0.0**
SMOL	**Smolenice**	**149.43**	**345**	*e*PKP2	**PKPbc**	**04 09 21.8**	**+1.3**
SMOL	**Smolenice**	**149.43**	**345**	*e*PKP	**PKPbc**	**04 09 21.8**	**+1.3**
VOIR		**149.50**	**333**	⇑P	**PKPbc**	**04 09 22.1**	**+1.2**
VOIR		**149.50**	**333**	⇑PKP2	**PKPbc**	**04 09 22.1**	**+1.2**
MODS	**Modra-Piesok**	**149.59**	**345**	*e*PKP2	**PKPbc**	**04 09 21.4**	**+0.5**
MODS	**Modra-Piesok**	**149.59**	**345**	*e*PKP	**PKPbc**	**04 09 21.4**	**+0.5**
KHC	**Kasperske Hory**	**149.63**	**350**	*e*PKP2	**PKPbc**	**04 09 21.3**	**+0.2**
KHC	**Kasperske Hory**	**149.63**	**350**	*e*PKP	**PKPbc**	**04 09 21.3**	**+0.2**
KHC				*e*x	x	04 09 26.4	
KHC				*e*pPKP	**sPKPab**	**04 09 37.9**	**-1.1**
ARR	**Arges**	**149.73**	**333**	⇓P	**PKPdf**	**04 09 18.0**	**+1.3**
WLF	**Walferdange**	**149.74**	**360**	*d*PKiKP	**PKPbc**	**04 09 22.3**	**+1.0**
WLF				*d*PKPab	**pPKPdf**	**04 09 25.0**	**-1.3**
ZST	**Bratislava**	**149.80**	**345**	*e*PKP2	**PKiKP**	**04 09 22.9**	**+0.5**
ZST	**Bratislava**	**149.80**	**345**	*e*PKP	**PKiKP**	**04 09 22.9**	**+0.5**
GERES	**GERESS Array B**	**149.89**	**350**	PKPbc	**PKPbc**	**04 09 22.4**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=31,slow=2.3,SNR=5.5						
GERES	**GERESS Array B**	**149.89**	**350**	PKPdf	**PKPdf**	**04 09 16.9**	**0.0**
LOT	**Lotru**	**150.03**	**334**	⇑P	**PKPdf**	**04 09 14.8**	**-2.5**
SIRR	**Siria**	**150.15**	**338**	⇑P	**PKPbc**	**04 09 22.6**	**+0.2**
CSKK	**Cskako**	**150.27**	**343**	*e*P	**PKiKP**	**04 09 23.8**	**+0.4**
CONA	**Conrad Observa**	**150.34**	**346**	*i* P	**PKPbc**	**04 09 23.8**	**+0.9**
	comp=Z,8.4nm,0.7s,SNR=10						
AMBH	**Ambrzfalva**	**150.41**	**339**	*e*P	**PKiKP**	**04 09 24.8**	**+1.1**
SOP	**Sopron**	**150.41**	**345**	*e*P	**PKiKP**	**04 09 24.4**	**+0.7**
COPA	**Copaceanca**	**150.44**	**331**	⇓P	**PKPbc**	**04 09 23.9**	**+0.8**
EGYH	**Egyhazaskeszo**	**150.47**	**344**	*e*P	**PKPbc**	**04 09 21.4**	**-1.6**
GZR	**Gura Zlata**	**150.47**	**335**	⇑P	**PKPbc**	**04 09 23.5**	**+0.3**
GZR	**Gura Zlata**	**150.47**	**335**	⇑PKIKP	**PKPbc**	**04 09 23.5**	**+0.3**
MPLH	**Magyarpolny**	**150.64**	**344**	*e*P	**PKPbc**	**04 09 24.2**	**+0.7**
BZS	**Buzias**	**150.72**	**337**	⇑P	**PKPbc**	**04 09 24.1**	**+0.4**
BZS	**Buzias**	**150.72**	**337**	⇑PKIKP	**PKPbc**	**04 09 24.1**	**+0.4**
MOA	**Molln**	**150.75**	**348**	*e*P	**PKPbc**	**04 09 24.5**	**+0.7**
	comp=Z,7.1nm,0.7s						
SRE	**Strehaia**	**150.90**	**334**	⇓P	**PKPbc**	**04 09 22.3**	**-1.9**
SRE	**Strehaia**	**150.90**	**334**	⇓PKIKP	**PKPbc**	**04 09 22.3**	**-1.9**
HERR	**Herculane**	**151.04**	**335**	⇑P	**PKPbc**	**04 09 24.7**	**+0.2**
ARSA	**Arzberg**	**151.06**	**346**	*e*P	**PKPbc**	**04 09 24.5**	**0.0**
	comp=Z,8.4nm,1.0s						
BANR	**Banloc**	**151.10**	**337**	⇑P	**PKiKP**	**04 09 25.7**	**+0.6**
CSS	**Mathiatis**	**151.14**	**308**	PKPdf	**PKPdf**	**04 09 18.8**	**-0.4**
CSS				IAMs_20	IAMs_20	05 20 55.9	
	comp=Z,369nm,20.0s						
MORH	**Mrgy, Hungar**	**151.20**	**341**	*e*P	**PKPbc**	**04 09 24.4**	**-0.4**
PLVB	**Pleven**	**151.29**	**331**	⇓P	**PKPbc**	**04 09 25.6**	**+0.4**
MDVR	**Moldovita**	**151.40**	**336**	⇑P	**PKPdf**	**04 09 20.3**	**+1.0**
LEF	**Lefka**	**151.40**	**309**	⇓P	**PKPbc**	**04 09 25.7**	**+0.1**
BEHE	**Becsehely**	**151.49**	**344**	*e*P	**PKPab**	**04 09 33.9**	**+0.1**
RETA	**Reutte**	**151.64**	**353**	*e*P	**PKPbc**	**04 09 26.6**	**+0.7**
	comp=Z,7.8nm,0.6s						
KOGS	**Kog**	**151.64**	**345**	*i* PKPbc	**PKPbc**	**04 09 26.0**	**+0.1**
KBA	**Koelnbreinsper**	**151.66**	**349**	*e*P	**PKPbc**	**04 09 25.9**	**-0.2**
	comp=Z,17nm,0.9s						
WATA	**Walderalm**	**151.69**	**352**	*i* P	**PKPbc**	**04 09 26.7**	**+0.5**
	comp=Z,7.4nm,0.5s,SNR=7.2						
SOKA	**Soboth**	**151.71**	**347**	*i* P	**PKPbc**	**04 09 26.2**	**+0.1**
	comp=Z,9.8nm,0.9s,SNR=8.4						
MOTA	**Moosalm**	**151.74**	**352**	*i* P	**PKPbc**	**04 09 26.9**	**+0.6**
	comp=Z,18nm,0.8s,SNR=8.3						
FRGS	**Fruska Gora**	**151.76**	**339**	*e*P	**PKPbc**	**04 09 26.4**	**+0.2**
SQTA	**Sankt Quirin**	**151.85**	**352**	*i* P	**PKPbc**	**04 09 26.8**	**+0.3**
	comp=Z,17nm,0.9s,SNR=8.0						
KALN	**Kalnik**	**151.88**	**344**	PKP	**PKPbc**	**04 09 26.6**	**+0.2**
DAVA	**Damuels**	**151.93**	**354**	*e*P	**PKiKP**	**04 09 27.8**	**+0.8**
	comp=Z,12nm,0.5s						
OBKA	**Obir**	**151.97**	**347**	*e*P	**PKPbc**	**04 09 26.8**	**+0.1**
	comp=Z,5.3nm,0.5s						
FETA	**Feichten**	**152.10**	**353**	*e*P	**PKPdf**	**04 09 24.1**	**+3.6**
	comp=Z,3.5nm,0.7s						
ABTA	**Abfaltersbach**	**152.12**	**350**	*i* P	**PKPbc**	**04 09 26.8**	**-0.2**
	comp=Z,27nm,0.6s,SNR=11						
MOSL	**Moslavina**	**152.28**	**343**	PKP	**PKPbc**	**04 09 27.6**	**+0.3**
CRES	**Cresnjev**	**152.42**	**345**	*e*P	**PKPbc**	**04 09 27.6**	**0.0**
LJU	**Ljubljana**	**152.42**	**347**	*e*PKPbc	**PKPbc**	**04 09 28.0**	**+0.4**
LJU	**Ljubljana**	**152.42**	**347**	*e*P	**PKPbc**	**04 09 27.9**	**+0.3**
VTS	**Vitosha**	**152.53**	**331**	⇑P	**PKPbc**	**04 09 28.5**	**+0.3**
VTS	**Vitosha**	**152.53**	**331**	⇑PKIKP	**PKPbc**	**04 09 28.5**	**+0.3**
OZLJ	**Ozalj**	**152.61**	**345**	PKP	**PKPbc**	**04 09 28.2**	**+0.2**
DIVS	**Divibare**	**152.62**	**337**	⇑*i*P	**PKPbc**	**04 09 28.6**	**+0.4**
CEY	**Cerknica**	**152.73**	**347**	*e*P	**PKPbc**	**04 09 28.4**	**0.0**
BOJS	**Bojanci**	**152.77**	**345**	*i* PKPbc	**PKPbc**	**04 09 29.1**	**+0.6**
BLY	**Banja Luka**	**152.96**	**342**	*e*P	**PKPbc**	**04 09 28.8**	**0.0**
BBLS	**Lazići**	**153.03**	**338**	⇑*i*P	**PKPbc**	**04 09 29.6**	**+0.5**
MGRS	**Mrkonjic Grad**	**153.29**	**342**	*e*P	**PKPab**	**04 09 42.1**	**+0.6**
SJES	**Sjenica**	**153.35**	**337**	*e*P	**PKPbc**	**04 09 29.6**	**-0.3**
UDBI	**Udbina**	**153.56**	**344**	P	**PKPbc**	**04 09 30.7**	**+0.5**
KIJV	**Kijevo**	**153.86**	**343**	PKP	**PKPbc**	**04 09 31.4**	**+0.5**
RICI	**Ricice**	**154.12**	**341**	PKP	**PKPbc**	**04 09 32.0**	**+0.5**
BRY	**Bratogost**	**154.18**	**338**	*e*P	**PKPbc**	**04 09 30.9**	**-0.9**
MORI	**Morici**	**154.19**	**343**	PKP	**PKPbc**	**04 09 31.1**	**-0.4**
MAKA	**Makarska**	**154.34**	**341**	PKP	**PKiKP**	**04 09 32.7**	**+0.8**
ZIRJ	**Zirje**	**154.40**	**343**	PKP	**PKiKP**	**04 09 34.5**	**+2.5**
TREB	**Trebinje**	**154.41**	**338**	*e*P	**PKPbc**	**04 09 31.7**	**-0.4**
DRME	**Dracevica, Mon**	**154.57**	**336**	*e*P	**PKiKP**	**04 09 35.3**	**+2.9**
POLO	**Lamas de Olo**	**155.15**	**25**	*e*PKPab	**PKPab**	**04 09 50.7**	**+1.1**
PBRG	**Braganca**	**155.18**	**23**	*e*PKPab	**PKPab**	**04 09 51.1**	**+1.5**
PVRL	**Vila Real**	**155.26**	**25**	*e*PKPab	**PKPab**	**04 09 50.6**	**+0.6**
MVO	**Moncorvo**	**155.62**	**24**	*e*PKPab	**PKPab**	**04 09 52.9**	**+1.3**
PVIS	**Viseu**	**155.66**	**26**	*e*PKPab	**PKPab**	**04 09 53.6**	**+1.9**
COI	**Coimbra**	**155.86**	**27**	*e*PKPab	**PKPab**	**04 09 53.5**	**+1.0**
PCAS	**Casmilo, Conde**	**155.95**	**28**	*e*PKPab	**PKPab**	**04 09 54.0**	**+1.1**
MTE	**Manteigas**	**156.07**	**26**	*e*PKPab	**PKPab**	**04 09 54.4**	**+0.9**
PMTG	**Montargil**	**156.87**	**29**	*e*PKPab	**PKPab**	**04 09 57.1**	**+0.2**
PESTR	**Estremoz**	**157.32**	**28**	*e*PKPab	**PKPab**	**04 10 00.0**	**+1.1**
PESTR	**Estremoz**	**157.32**	**28**	PKPdf	**PKPdf**	**04 09 27.6**	**-0.2**
ESDC	**Sonseca Array**	**158.04**	**21**	PKP	**PKPdf**	**04 09 30.7**	**+2.0**
	comp=Z,1.6nm,1.1s,baz=335,slow=2.5,SNR=6.2						
ESDC				PKPab	**PKPab**	**04 10 03.1**	**+1.2**
	comp=Z,15nm,1.3s,baz=336,slow=4.8,SNR=16						
ESDC				PP	**PP**	**04 13 45.6**	**+4.7**
	comp=Z,3.0nm,1.3s,baz=328,slow=5.3,SNR=6.0						
ESDC	**Sonseca Array**	**158.04**	**21**		**PKPdf**	**04 09 28.4**	**-0.2**
ESDC					**PKPab**	**04 10 01.7**	**-0.3**
PVAQ	**Vaqueiros**	**158.45**	**31**	*e*PKPab	**PKPab**	**04 10 05.2**	**+1.4**
PVAQ	**Vaqueiros**	**158.45**	**31**	PKPdf	**PKPdf**	**04 09 28.2**	**-1.0**
PVAQ				PKPab	**PKPab**	**04 10 03.6**	**-0.1**
LIC	**Lamto**	**163.21**	**140**	*e*PKIKP	**PKPdf**	**04 09 36.0**	**+1.0**
	comp=Z,96nm,1.7s						
KIC	**Kosan Boka**	**163.49**	**140**	*e*PKIKP	**PKPdf**	**04 09 35.2**	**-0.1**
	comp=Z,2.4nm,0.6s						
TIC	**Toumodi**	**163.54**	**139**	*e*PKIKP	**PKPdf**	**04 09 35.3**	**0.0**
DBIC	**Dimbokro**	**163.66**	**139**	PKP	**PKPdf**	**04 09 35.1**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=223,slow=4.2,SNR=3.7						
DBIC				PKPab	**PKPab**	**04 10 28.3**	**+1.2**
	comp=Z,8.5nm,1.0s,baz=143,slow=9.5,SNR=3.1						
KOWA	**Kowa**	**169.40**	**116**		**PKPdf**	**04 09 39.1**	**-0.7**
TOA0	**Torodi Ar. Sit**	**172.66**	**146**		**PKPdf**	**04 09 40.6**	**-0.8**
TOA0				PKPab	**PKPab**	**04 11 05.5**	**-1.4**
TORD	**Torodi Ar. Bea**	**172.66**	**146**	PKP	**PKPdf**	**04 09 40.8**	**-0.7**
	comp=Z,3.5nm,0.7s,baz=333,slow=1.8,SNR=12						
TORD				PKPab	**PKPab**	**04 11 08.7**	**+1.8**
	comp=Z,8.0nm,1.1s,baz=258,slow=4.8,SNR=13						
TORD				PP	**PP**	**04 15 01.3**	**+4.0**
	comp=Z,12nm,1.4s,baz=274,slow=3.9,SNR=6.9						
TORD	**Torodi Ar. Bea**	**172.66**	**146**		**PKPdf**	**04 09 40.4**	**-1.1**

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*IDC **29** 03:50:58.7±0.7, 9.°16N×126.°22E, h0^{km}, mb4.1/14, mb1 4.2/14, mb1mx4.0/39, mbtmp4.1/14 Error ellipse: s-maj=31.0km s-min=15.1km az=74.0*

*MAN **29** 03:51:11.0, 9.°04N×126.°09E, h110^{km}, mb4.5, ML3.3, MS3.1*

ISC 29 03:51:11.9±0.8**, 9.°06N**±0.°04×**126.°09E**±0.°07**, h110**^{km}±6^{km}**, n27, σ0.^{s}93**/38**, mb4.0**/14**, 3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.47**	**259**	*e*P	**Pn**	**03 51 28.4**	**0.0**
BUTP				*e*S	**Sn**	**03 51 42.5**	**+1.6**
GLSP	**General Luna,**	**0.72**	**3**	*e*P	**Pn**	**03 51 29.9**	**-0.5**
GLSP				*e*S	**Sn**	**03 51 43.2**	**-1.0**
CGP	**Cagayan de Oro**	**1.50**	**246**	⇑*e*P	**Pn**	**03 51 38.0**	**-0.6**
CGP				*e*S	**Sn**	**03 51 56.9**	**-2.2**
BUKP	**Musuan**	**1.55**	**221**	*e*P	**Pn**	**03 51 39.4**	**+0.1**
BUKP				*e*S	**Sn**	**03 52 01.9**	**+1.7**
MSLP	**Maasin**	**1.61**	**311**	*e*P	**Pn**	**03 51 40.2**	**+0.2**
MSLP				*e*S	**Sn**	**03 52 01.6**	**+0.2**
MATI	**Mati**	**2.11**	**175**	*e*P	**Pn**	**03 51 46.4**	**+0.1**
KCP	**Kidapawan**	**2.27**	**206**	⇑*i*P	**Pn**	**03 51 49.5**	**+1.1**
KCP				*i* S	**Sn**	**03 52 16.7**	**+0.4**
LLP	**Lapu-Lapu**	**2.43**	**301**	⇑*i*P	**Pn**	**03 51 51.0**	**+0.6**
LLP				*i* S	**Sn**	**03 52 20.0**	**0.0**
OCLP	**Ormoc**	**2.45**	**324**	*e*P	**Pn**	**03 51 51.0**	**+0.3**
OCLP				*e*S	**Sn**	**03 52 21.6**	**+1.1**
PAGZ	**Pagadian**	**2.94**	**246**	*e*P	**Pn**	**03 51 56.7**	**-0.3**
PAGZ				*e*S	**Sn**	**03 52 30.4**	**-1.4**
DDMP	**Don Marcelino,**	**2.96**	**187**	*e*P	**Pn**	**03 51 56.6**	**-0.8**
DDMP				*e*S	**Sn**	**03 52 33.2**	**+0.7**
CNP	**Catarman**	**3.70**	**338**	*e*P	**Pn**	**03 52 07.5**	**+0.2**
CNP				*e*S	**Sn**	**03 52 51.6**	**+1.5**
PSI	**Prapat**	**27.71**	**259**	P	**P**	**03 56 51.2**	**+0.9**
	6.1nm,0.5s,baz=0.9,slow=5.8,SNR=5.3						
CMAR	**Chiang Mai Arr**	**27.93**	**292**	P	**P**	**03 56 53.4**	**+1.3**
	0.9nm,0.3s,baz=108,slow=7.8,SNR=7.1						
WRA	**Warramunga Arr**	**29.95**	**164**	P	**P**	**03 57 09.2**	**-0.7**
	0.4nm,0.6s,baz=343,slow=8.1,SNR=6.1						
ASAR	**Alice Springs**	**33.41**	**167**	P	**P**	**03 57 40.5**	**+0.2**
	0.3nm,0.3s,baz=345,slow=6.3,SNR=4.8						
USRK	**Ussuriysk Ar.**	**35.38**	**7**	P	**P**	**03 57 57.1**	**+0.1**
	2.2nm,0.7s,baz=206,slow=9.4,SNR=5.7						
KLR	**Kul'dur**	**40.32**	**6**	P	**P**	**03 58 37.9**	**-0.5**
	0.5nm,0.4s,baz=191,slow=5.2,SNR=3.8						
SONM	**Songino Array**	**42.08**	**340**	P	**P**	**03 58 52.2**	**-0.9**
	0.2nm,0.3s,baz=173,slow=9.7,SNR=2.6						
STKA	**Stephens Creek**	**43.33**	**161**	P	**P**	**03 59 03.0**	**-0.1**
	5.6nm,0.7s,baz=354,slow=9.2,SNR=1.9						
MKAR	**Makanchi Array**	**52.88**	**323**	P	**P**	**04 00 16.4**	**-0.1**
	0.8nm,0.5s,baz=121,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**55.59**	**332**	P	**P**	**04 00 34.9**	**-1.1**
	0.5nm,0.4s,baz=116,slow=7.1,SNR=2.5						
NRIK	**Noril'sk**	**65.13**	**346**	P	**P**	**04 01 40.3**	**-0.4**
	1.1nm,0.4s,baz=134,slow=8.5,SNR=3.6						
ARCES	**ARCESS Array B**	**85.25**	**340**	P	**P**	**04 03 35.8**	**-0.3**
	1.8nm,0.8s,baz=65,slow=6.0,SNR=5.5						
FINES	**FINESS Array B**	**86.86**	**332**	P	**P**	**04 03 43.0**	**-1.0**
	5.7nm,1.0s,baz=76,slow=3.9,SNR=12						
VNDA	**Vanda**	**88.76**	**173**	P	**P**	**04 03 53.7**	**+1.0**
	1.3nm,0.5s,baz=320,slow=7.2,SNR=6.0						
PLCA	**Paso Flores**	**145.17**	**158**	PKPbc	**PKPdf**	**04 10 38.2**	**+1.1**
	1.9nm,0.9s,baz=178,slow=2.2,SNR=3.8						

TAP 29 04:00:51.1, 22.°86N×122.°27E, h115^{km}, ML2.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.90**	**277**	P	Pn	04 01 12.0	+0.3
	baz=280						
FULB	**Fuli**	**0.96**	**291**	*e*P	Pn	04 01 12.0	-0.3
	baz=292						
HGSD	**Ruisui**	**1.00**	**309**	P	Pn	04 01 12.6	-0.1
	baz=312						
HGSD				*e*S	Sn	04 01 29.5	+0.5
	baz=312						
TWF1	**Yuli**	**1.02**	**299**	*e*P	Pn	04 01 13.2	+0.2
	baz=299						
YULB	**Yu-li**	**1.04**	**301**	*e*P	Pn	04 01 13.6	+0.5
	baz=301						
YULB				*e*S	Sn	04 01 30.2	+0.4
	baz=301						
EHY	**Hungye**	**1.08**	**307**	*e*P	Pn	04 01 14.2	+0.6
	baz=307						
VWDT	**VWDT**	**1.36**	**311**	*e*P	Pn	04 01 17.0	+0.4
	baz=314						
NACB	**Ninganchiao**	**1.44**	**335**	*e*P	Pn	04 01 16.8	-0.8
	baz=335						
ALS	**Alishan**	**1.49**	**296**	*e*P	Pn	04 01 20.9	+2.4
	baz=296						
SLGT	**Liugui**	**1.50**	**275**	*e*P	Pn	04 01 20.7	+2.4
	baz=275						
TSMG	**Majia**	**1.50**	**264**	*e*P	Pn	04 01 18.6	+0.3
	baz=259						
SSD	**Sandimen**	**1.51**	**266**	*e*P	Pn	04 01 19.5	+1.1
	baz=263						
SSLB	**Suanglung**	**1.52**	**308**	*e*P	Pn	04 01 20.2	+1.7
	baz=311						
SSLB	**Suanglung**	**1.52**	**308**	P	Pn	04 01 20.2	+1.7
CHGB	**Renai**	**1.56**	**320**	*e*P	Pn	04 01 20.2	+1.0
	baz=323						
TPUB	**Ta-pu**	**1.57**	**286**	*e*P	Pn	04 01 20.0	+0.9
	baz=286						
TPUB	**Ta-pu**	**1.57**	**286**	P	Pn	04 01 19.8	+0.7
WTP	**Ta-pu**	**1.57**	**284**	*e*P	Pn	04 01 20.2	+1.1
	baz=284						
CHN4	**Tsaushan**	**1.62**	**288**	P	Pn	04 01 21.1	+1.4
	baz=288						
TWKBT	**Hengchun**	**1.63**	**236**	*e*P	Pn	04 01 18.6	-1.2
	baz=232						
TWK1	**Hengchun**	**1.63**	**236**	*e*P	Pn	04 01 18.8	-1.1
	baz=236						
TWK1				*e*S	Sn	04 01 40.3	-1.4
	baz=236						
CHN5	**Tsauling**	**1.64**	**297**	*e*P	Pn	04 01 21.0	+1.1
	baz=287						
FUSS	**Fushou**	**1.67**	**326**	*e*P	Pn	04 01 21.7	+1.2
	baz=331						
TWK	**Hsinying**	**1.69**	**284**	*e*P	Pn	04 01 21.1	+0.5
	baz=284						
NNSB	**Datong**	**1.76**	**333**	*e*P	Pn	04 01 21.6	+0.1
	baz=332						
NNSH	**Datong**	**1.76**	**333**	*e*P	Pn	04 01 21.4	0.0
	baz=332						
NDT	**Datong Townshi**	**1.86**	**338**	*e*P	Pn	04 01 22.7	0.0
	baz=333						

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*IDC **29** 04:07:09.1±2.1, 6.°92S×129.°74E, h148^{km}±25^{km}, mb2.9/1, mb1 3.2/6, mb1mx3.0/32, mbtmp3.6/6, Error ellipse: s-maj=27.2km s-min=19.2km az=110.0*

ISC 29 04:07:07.1±0.9**, 7.°00S**±0.°07×**129.°9E**±0.°1**, h150**^{km}**, n6, σ4.^{s}48**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.24**	**12**	P	**Pn**	**04 08 39.0**	**+1.8**
	1.2nm,0.3s,baz=255,slow=22,SNR=6.7						
SIJI				S	**Sn**	**04 09 41.5**	**-6.0**
	2.4nm,0.3s,baz=265,slow=23,SNR=7.5						
BATI	**Baumata**	**6.96**	**242**	P	**Pn**	**04 08 47.5**	**+0.8**
	3.4nm,0.3s,baz=96,slow=9.2,SNR=2.6						
BATI				S	**Sn**	**04 10 03.7**	**-1.1**
	7.6nm,0.3s,baz=136,slow=21,SNR=7.0						
FITZ	**Fitzroy Crossi**	**11.79**	**200**	P	**Pn**	**04 09 52.5**	**+1.8**
	0.2nm,0.3s,baz=22,slow=11,SNR=13						
FITZ				S	**Sn**	**04 11 54.0**	**-7.2**
	0.5nm,0.3s,baz=75,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**13.56**	**162**	P	**Pn**	**04 10 15.8**	**+2.2**
	0.3nm,0.3s,baz=348,slow=14,SNR=15						
WRA				S	**Sn**	**04 12 39.8**	**-3.9**
	0.5nm,0.3s,baz=335,slow=23,SNR=7.3						
ASAR	**Alice Springs**	**17.00**	**167**	P	**Pn**	**04 11 00.9**	**+4.8**
	0.1nm,0.3s,baz=342,slow=9.9,SNR=9.8						
MKAR	**Makanchi Array**	**68.19**	**327**	P	**P**	**04 17 52.3**	**+1.0**
	0.1nm,0.4s,baz=108,slow=8.1,SNR=3.3						

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*IDC **29** 04:09:34.4±5.5, 6.°11S×151.°60E, h47^{km}±48^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.5/32, mbtmp3.8/7, ML2.4/1, Error ellipse: s-maj=53.2km s-min=27.3km az=110.0*

ISC 29 04:09:33.6±1.4**, 6.°1S**±0.°2×**151.°7E**±0.°3**, h41**^{km}**, n8, σ0.^{s}91**/9**, mb3.7**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.55**	**234**	P	**Pn**	**04 10 55.0**	**+1.3**
	7.0nm,0.3s,baz=41,slow=7.6,SNR=8.4						
PMG				S	**Sn**	**04 11 55.3**	**-0.9**
	8.1nm,0.3s,baz=230,slow=16,SNR=4.2						
WRA	**Warramunga Arr**	**21.75**	**229**	P	**P**	**04 14 20.8**	**-1.0**
	0.7nm,0.5s,baz=54,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**24.43**	**223**	P	**P**	**04 14 49.0**	**+0.3**
	1.3nm,0.6s,baz=54,slow=9.3,SNR=11						
STKA	**Stephens Creek**	**27.32**	**199**	P	**P**	**04 15 14.8**	**+0.2**
	2.6nm,0.9s,baz=338,slow=15,SNR=2.4						
FITZ	**Fitzroy Crossi**	**28.06**	**243**	P	**P**	**04 15 20.6**	**-0.8**
	1.2nm,0.6s,baz=52,slow=6.7,SNR=1.4						
SONM	**Songino Array**	**66.84**	**329**	P	**P**	**04 20 22.0**	**+0.5**
	0.2nm,0.5s,baz=116,slow=3.4,SNR=3.7						
ILAR	**Eielson Array**	**83.78**	**22**	P	**P**	**04 21 57.9**	**-0.4**
	0.8nm,0.7s,baz=246,slow=4.9,SNR=15						
TORD	**Torodi Ar. Bea**	**149.61**	**286**	PKPbc	**PKPbc**	**04 29 19.4**	**-0.5**
	1.2nm,0.7s,baz=59,slow=3.2,SNR=4.2						

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*JMA **29** 04:17:39.4±0.1, 23.°97N×122.°43E, h18^{km}±3^{km}, M2.3*

*TAP **29** 04:17:40.5, 24.°10N×122.°43E, h35^{km}±1^{km}, ML2.8, D*

ISC 29 04:17:39.8±1.1**, 24.°03N**±0.°02×**122.°42E**±0.°02**, h26**^{km}±12^{km}**, n64, σ0.^{s}65**/110**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.64**	**48**	P	**Pb**	**04 17 52.3**	**0.0**
JYNG				S	**Sb**	**04 18 01.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.69**	**51**	P	**Pb**	**04 17 53.3**	**0.0**
YOJ				S	**Sb**	**04 18 02.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.69**	**51**	P	**Pb**	**04 17 53.2**	**0.0**
	baz=56						
YOJ				*e*S	**Sn**	**04 18 03.0**	**-0.8**
	baz=56						
ENA	**Nanau**	**0.74**	**303**	*i* P	**Pb**	**04 17 54.3**	**+0.2**
	baz=306						
ENA				S	**Sb**	**04 18 04.3**	**+0.4**
	baz=306						
TWD	**Chiawan**	**0.76**	**274**	*e*S	**Sb**	**04 18 04.7**	**+0.3**
	baz=268						
NACB	**Ninganchiao**	**0.77**	**281**	P	**Pb**	**04 17 54.4**	**-0.2**
	baz=263						
NACB				S	**Sb**	**04 18 05.2**	**+0.4**
	baz=263						
TWC	**Suao**	**0.78**	**318**	*i* P	**Pb**	**04 17 54.0**	**-0.8**

	baz=306						
TWC				eS	Sb	04 18 03.0	-2.0
	baz=306						
ETLH	Xiulin Townshi	0.88	282	eP	Pb	04 17 56.3	-0.2
	baz=276						
ETLH				eS	Sb	04 18 08.3	+0.4
	baz=276						
ESL	Shilin	0.93	257	eP	Pn	04 17 56.8	-0.4
	baz=242						
TWE	Neicheng	0.98	315	P	Pn	04 17 57.9	+0.1
	baz=311						
TWE				eS	Sn	04 18 11.1	+0.2
	baz=311						
NTC	Toucheng	0.99	327	P	Pn	04 17 58.1	+0.1
	baz=323						
NTC				S	Sb	04 18 10.4	-0.5
	baz=323						
ENTT	Nioudou	0.99	308	iP	Pn	04 17 58.1	+0.1
	baz=303						
ENTT				S	Sn	04 18 11.8	+0.6
	baz=303						
NDT	Datong Townshi	1.01	305	P	Pb	04 17 59.0	+0.3
	baz=289						
NDT				S	Sn	04 18 11.7	0.0
	baz=289						
NNSB	Datong	1.03	293	P	Pn	04 17 58.9	+0.2
	baz=288						
NNSB				S	Sb	04 18 12.1	-0.2
	baz=288						
NNSH	Datong	1.03	293	eP	Pn	04 17 58.9	+0.3
	baz=278						
NNSH				S	Sb	04 18 12.0	-0.2
	baz=278						
NNS	Nan Shan	1.04	294	eP	Pb	04 17 59.4	+0.1
	baz=289						
NNS				S	Sn	04 18 12.7	+0.1
	baz=289						
HGSD	Ruisui	1.06	240	eP	Pn	04 17 59.0	+0.1
	baz=235						
HGSD				eS	Sn	04 18 12.6	-0.2
	baz=235						
WHF	Hehuan Shan	1.07	277	P	Pn	04 17 59.1	-0.4
	baz=261						
WHF				S	Sn	04 18 13.6	0.0
	baz=261						
TIPB	Shuangxi	1.09	330	P	Pb	04 17 59.9	-0.1
	baz=320						
TIPB				S	Sn	04 18 12.6	-1.1
	baz=320						
FUSS	Fushou	1.10	282	P	Pn	04 18 00.1	+0.4
	baz=277						
FUSS				S	Sn	04 18 14.3	+0.1
	baz=277						
NWLT	Wulai	1.13	312	P	Pb	04 18 01.0	+0.4
	baz=307						
NWLT				S	Sb	04 18 15.3	+0.4
	baz=307						
EHY	Hungye	1.13	243	eP	Pn	04 18 00.2	+0.2
	baz=238						
EHY				eS	Sb	04 18 15.3	+0.3
	baz=238						
CHGB	Renai	1.14	272	P	Pn	04 18 00.3	0.0
	baz=257						
CHGB				S	Sn	04 18 15.2	0.0
	baz=257						
YHNB	Yeheng	1.15	304	P	Pn	04 18 00.7	+0.4
	baz=288						
TWT	Tachien	1.16	282	eP	Pn	04 18 00.0	-0.5
	baz=266						
TWT				eS	Sb	04 18 17.0	+0.9
	baz=266						
NSK	Sanguang	1.17	304	eP	Pb	04 18 02.1	+0.7
	baz=286						
NSK				eS	Sn	04 18 15.3	-0.3
	baz=286						
TDCB	Techi	1.18	281	eP	Pn	04 17 59.4	-1.4
	baz=267						
NWF	Wu-fen Shan	1.20	331	eS	Sb	04 18 16.6	-0.3
	baz=328						
WFSB	Wu-fen Shan	1.20	331	eS	Sb	04 18 16.5	-0.3
	baz=328						
VWDT	VWDT	1.21	257	eP	Pn	04 18 01.5	+0.6
	baz=253						
VWDT				eS	Sn	04 18 16.2	-0.2
	baz=253						
YULB	Yu-li	1.21	239	eP	Pn	04 18 00.9	-0.1
	baz=250						
YULB				eS	Sn	04 18 16.9	+0.3
	baz=250						
EYUL	Yuli	1.22	237	eP	Pn	04 18 01.3	+0.2
	baz=222						
EYUL				eS	Sb	04 18 17.5	+0.1
	baz=222						
TWF1	Yuli	1.23	237	eP	Pn	04 18 01.5	+0.2
	baz=222						
TWF1				eS	Sn	04 18 16.7	-0.4
	baz=222						
IRIF	Iriomote-Funau	1.23	75	P	Pb	04 18 02.2	-0.2
NHDH	Xindian Distri	1.24	319	eS	Sb	04 18 18.2	0.0
	baz=330						
HATJ	Hateruma jima	1.26	88	eS	Sb	04 18 19.6	+0.8
TATO	Taipei	1.27	318	eS	Sb	04 18 19.2	+0.1
	baz=314						
FULB	Fuli	1.32	232	eP	Pn	04 18 01.9	-0.7
	baz=228						
FULB				eS	Sb	04 18 20.7	+0.2
	baz=228						
YM01	YM01	1.36	325	eP	Pn	04 18 03.4	+0.2
	baz=322						
YM01				eS	Sn	04 18 19.9	-0.4
	baz=322						
SSLB	Suanglung	1.37	260	eP	Pn	04 18 03.0	-0.2
	baz=256						
SSLB				eS	Sn	04 18 21.2	+0.8
	baz=256						
WHP	Taichung City	1.37	281	eP	Pb	04 18 04.7	-0.2
	baz=267						
WHP				S	Sb	04 18 21.7	-0.3
	baz=267						
YM04	YM04	1.39	324	eP	Pn	04 18 03.7	+0.2
	baz=336						
YM04				eS	Sn	04 18 20.6	-0.3
	baz=336						
SMLT	Sun Moon Lake	1.40	265	eP	Pn	04 18 04.5	+0.7
	baz=260						
LIOB	Emei	1.43	296	eP	Pb	04 18 05.5	-0.2
	baz=292						
LIOB				eS	Sb	04 18 23.9	+0.4
	baz=292						
NSTT	Nanjuang	1.43	295	eS	Sb	04 18 23.6	0.0
	baz=291						
TYC	Yuchr	1.44	266	eP	Pn	04 18 05.2	+1.0
	baz=261						
TYC				eS	Sb	04 18 23.4	-0.4
	baz=261						
JKRS	Kuro-shima	1.46	81	P	Pb	04 18 05.9	-0.4
JKRS				eS	Sb	04 18 24.6	+0.1
EDH	Donghe	1.47	225	eP	Pn	04 18 04.7	+0.2
	baz=213						
EDH				eS	Sn	04 18 21.5	-1.4
	baz=213						
WNT	Mingjian	1.60	265	eS	Sb	04 18 29.4	+0.9
	baz=261						
JIJ	Ishigaki jima	1.60	78	P	Pb	04 18 07.7	-1.0
JIJ				eS	Sb	04 18 27.5	-1.1
CHN5	Tsauling	1.66	255	eP	Pn	04 18 08.6	+1.4
	baz=243						
CHN5				eS	Sb	04 18 30.4	+0.2
	baz=243						
TWGBT	Beinan	1.72	226	eP	Pn	04 18 08.2	+0.1
	baz=235						
TWGBT				eS	Sn	04 18 29.3	+0.1
	baz=235						
STYT	Tauyuan	1.75	241	P	Pn	04 18 09.9	+1.3
	baz=227						
TPUB	Ta-pu	1.80	247	P	Pb	04 18 11.3	-0.7
	baz=243						
TPUB				eS	Sb	04 18 34.4	+0.2
	baz=243						
CHN4	Tsaushan	1.81	249	P	Pb	04 18 12.3	+0.1
	baz=245						
CHN4				eS	Sb	04 18 34.8	+0.4
	baz=245						
JISG	Ishigakijimahi	1.81	72	P	Pn	04 18 10.0	+0.8
JISG				S	Sn	04 18 32.2	+0.9
WTP	Ta-pu	1.83	245	P	Pb	04 18 11.5	-1.2
	baz=242						
WTP				eS	Sb	04 18 36.0	+0.8
	baz=242						
SLGT	Liugui	1.93	238	eP	Pb	04 18 13.1	-1.2
	baz=227						
SLGT				eS	Sb	04 18 38.1	+0.2
	baz=227						
TWK	Hsinying	1.93	247	eP	Pb	04 18 13.4	-0.9
	baz=244						
TWK				eS	Sb	04 18 36.7	-1.3
	baz=244						
TSMG	Majia	2.10	232	eP	Pb	04 18 15.9	-1.3
	baz=224						
TSMG				eS	Sn	04 18 41.0	+2.6
	baz=224						
EAST	Anshuo	2.19	222	eP	Pn	04 18 15.3	+0.8
	baz=219						
PHUB	P'eng-hu	2.66	260	eS	Sn	04 18 52.5	+0.1
	baz=270						
VWUC	VWUC	2.88	290	eP	Pn	04 18 23.9	0.0
	baz=286						
PTMZ	Houxiangcun	3.17	289	eP	Pn	04 18 28.4	+0.3
	baz=286						

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*NEIC **29** 04:29:07.4±0.9, 30°.30N±0°.08×9°.64W±0°.06, h16^{km}±6^{km}, mb4.1/8, Error ellipse: s-maj=11.9km s-min=5.9km az=154.0*

*INMG **29** 04:29:08.3±2.2, 30°.32N×10°.31W, h31^{km}, ML3.3, Error ellipse: s-maj=23.4km s-min=14.0km az=91.0*

*IGIL **29** 04:29:09.5, 30°.34N×9°.79W, h4^{km}, ML3.4*

*CNRM **29** 04:29:11.8, 30°.51N×9°.73W, h30^{km}, ml4.3, Hypocentre not reviewed by the ISC*

ISC 29 04:29:07.7±0.8, **30°.51N**±0°.06×**9°.74W**±0°.07, **h10**^{km}, **n55**, σ**2^{s}.56**/81, **mb4.4**/6, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAH	EAH	1.14	6	P		04 29 32.5	
AVE	Averroes	3.41	35	eP	Pn	04 30 05.7	+4.8
AVE				eS	Sg	04 30 58.3	+1.1
ZGR	Zagora	3.58	95	P		04 30 05.0	
TZRR	Tazzarine	3.60	85	P		04 30 05.0	
RTC	Rabat Centre	4.24	34	Pn	Pn	04 30 12.3	-0.1
RTC				Sn	Sn	04 31 03.7	+1.8
IFR	Ifrane	4.93	51	eP	Pn	04 30 23.3	+1.3
IFR				eS	Sb	04 31 35.8	+2.1
MDT	Midelt	4.94	61	P		04 30 24.1	
MACI	Morro de la Ar	6.32	251	Pn	Pn	04 30 40.3	-0.9
MACI				Sn	Sn	04 31 52.3	-1.3
PFVI	Vila Bisbo	6.65	6	ePn	Pn	04 30 47.6	+2.1
PFVI				eSn	Sn	04 31 59.5	-1.8
PFVI				A	A	04 32 39.1	
	15nm,0.6s						
PFVI	Vila Bisbo	6.65	6	Pn	Pn	04 30 47.2	+1.7
PFVI				Sn	Sn	04 32 04.0	+2.7
PFVI	Vila Bisbo	6.65	6	P		04 30 47.7	
PMOZ	Porto Moniz, M	6.77	292	Pn	Pn	04 30 48.6	+1.4
MORF	Marmelete	6.84	7	eP	Pn	04 30 50.0	+1.9
MORF				eS	Sn	04 32 03.5	-2.6
MORF				AML	AML	04 32 08.4	
	comp=E,40nm,0.5s						
MORF	Marmelete	6.84	7	ePn	Pn	04 30 50.1	+1.9
MORF				eSn	Sn	04 32 03.9	-2.2
MORF				A	A	04 32 10.7	
	comp=E,3.6nm,0.1s						
PBDV	Barranco-do-Ve	6.88	12	ePn	Pn	04 30 50.9	+2.2
PBDV				eSn	Sn	04 32 04.8	-2.3
PBDV				A	A	04 32 06.3	
	comp=E,1.1nm,0.2s						
PTEO	Sao Teotonio	7.07	7	ePn	Pn	04 30 53.1	+1.9
PTEO				eSn	Sn	04 32 09.9	-1.7
PTEO				A	A	04 32 14.8	
	comp=E,1.9nm,0.2s						
PVAQ	Vaqueiros	7.08	13	ePn	Pn	04 30 53.4	+2.1
PVAQ				eSn	Sn	04 32 09.4	-2.5
PVAQ				A	A	04 32 17.1	
	comp=E,1.6nm,0.1s						
PVAQ	Vaqueiros	7.08	13		Pn	04 30 53.0	+1.7
PVAQ	Vaqueiros	7.08	13	P		04 30 53.4	
PCVE	Castro Verde	7.24	11	ePn	Pn	04 30 55.9	+2.3
PCVE				eSn	Sn	04 32 13.3	-2.6
PCVE				A	A	04 32 22.5	
	comp=E,12nm,0.5s						
MESJ	Messejana	7.42	9	eP	Pn	04 30 57.8	+1.7
MESJ				eS	Sn	04 32 16.8	-3.4
MESJ				AML	AML	04 32 21.3	
	comp=N,23nm,0.5s						
MESJ	Messejana	7.42	9	ePn	Pn	04 30 58.3	+2.3
MESJ				eSn	Sn	04 32 17.2	-3.0
MESJ				A	A	04 32 40.5	
	comp=N,10nm,0.5s						
PNCL	Nicolau / Gran	7.65	7	ePn	Pn	04 31 01.8	+2.6
PNCL				eSn	Sn	04 32 24.5	-1.4
PNCL				A	A	04 32 27.5	
	comp=N,1.6nm,0.2s						
PBEJ	Beja	7.66	11	ePn	Pn	04 31 01.4	+2.1
PBEJ				eSn	Sn	04 32 23.3	-2.8
PBEJ				A	A	04 32 29.4	
	comp=N,5.5nm,0.6s						
PBAR	Barrancos	7.96	16	ePn	Pn	04 31 06.0	+2.5
PBAR				eSn	Sn	04 32 31.8	-1.9
PBAR				A	A	04 32 56.6	
	comp=N,7.7nm,0.6s						
EVO	Evora	8.13	10	ePn	Pn	04 31 08.4	+2.6
EVO				eSn	Sn	04 32 34.0	-3.7
HORN	Hornachuelos	8.20	26	P		04 31 08.7	
PMAFR	Mafra	8.44	2	ePn	Pn	04 31 12.5	+2.5
PMAFR				eSn	Sn	04 32 44.3	-0.9
PESTR	Estremoz	8.52	11	ePn	Pn	04 31 13.5	+2.3
PESTR				eSn	Sn	04 32 44.6	-2.8
PESTR	Estremoz	8.52	11	Pn	Pn	04 31 13.1	+1.9
PESTR	Estremoz	8.52	11	P		04 31 13.2	
PMTG	Montargil	8.63	8	ePn	Pn	04 31 14.3	+1.7
PMTG				eSn	Sn	04 32 47.7	-2.3
PSBE	So Bento	9.02	5	ePn	Pn	04 31 20.0	+2.0
PSBE				eSn	Sn	04 32 56.9	-2.7
PMRV	Marv??o	9.10	12	ePn	Pn	04 31 21.1	+1.9
PMRV				eSn	Sn	04 32 57.7	-4.0
PCBR	Castelo Branco	9.49	11	ePn	Pn	04 31 26.6	+2.2
PCBR				eSn	Sn	04 33 08.2	-3.0
PCAS	Casmilo, Conde	9.58	6	ePn	Pn	04 31 28.3	+2.7
PCAS				eSn	Sn	04 33 12.1	-1.2
COI	Coimbra	9.74	6	ePn	Pn	04 31 30.4	+2.6
COI	Coimbra	9.74	6	Pn	Pn	04 31 30.1	+2.3
MTE	Manteigas	10.03	10	ePn	Pn	04 31 34.3	+2.4
MTE				eSn	Sn	04 33 21.6	-2.9
MTE	Manteigas	10.03	10	Pn	Pn	04 31 33.5	+1.6
PAB	San Pablo	10.04	25	Pn	Pn	04 31 33.4	+1.4
ESDC	Sonseca Array	10.29	26	Pn	Pn	04 31 35.7	+0.2
ESBB	Sonseca Array	10.29	26	Pn	Pn	04 31 36.4	+0.9
PVIS	Viseu	10.29	8	ePn	Pn	04 31 38.8	+3.3
PVIS				eSn	Sn	04 33 26.4	-4.6
PTO	Porto	10.65	5	ePn	Pn	04 31 41.7	+1.5
MVO	Moncorvo	10.86	11	ePn	Pn	04 31 45.5	+2.3
MVO				eSn	Sn	04 33 40.4	-4.4
PVRL	Vila Real	10.87	8	ePn	Pn	04 31 45.8	+2.5
POLO	Lamas de Olo	10.96	8	ePn	Pn	04 31 47.6	+3.0
POLO				eSn	Sn	04 33 42.0	-5.2
PGAV	Gavieira, Arco	11.49	5	ePn	Pn	04 31 54.7	+2.7
TAM	Tamanrasset	15.65	116	Pn	Pn	04 32 45.4	-3.1
KOWA	Kowa	16.78	160	Pn	Pn	04 32 57.5	-5.5
KOWA				IAmb	IAmb	04 33 07.0	
	comp=Z,9.2nm,0.7s						
TOA0	Torodi Ar. Sit	20.25	146	P	P	04 33 40.2	-3.0
TOA0				IAmb	IAmb	04 33 47.6	
	comp=Z,8.0nm,1.1s						
TORD	Torodi Ar. Bea	20.25	146	P	P	04 33 39.8	-3.5
BFO	Black Forest	22.52	33	P	P	04 34 07.6	+0.1
BFO				IAmb	IAmb	04 34 08.3	
	comp=Z,4.4nm,0.9s						
TIC	Toumodi	24.15	168	ePKP1	P	04 34 30.7	+6.6
DBIC	Dimbokro	24.15	168	P	P	04 34 21.5	-2.6
DBIC				IAmb	IAmb	04 34 37.8	
	comp=Z,5.9nm,1.1s						
KIC	Kosan Boka	24.48	168	ePKP1	P	04 34 30.0	+2.9
	comp=Z,1.2nm,0.3s						
LIC	Lamto	24.56	169	ePKP1	P	04 34 30.7	+2.9
	comp=Z,5.3nm,0.3s						
CLL	Collm	26.77	33	eP	P	04 34 47.0	-0.5
CLL				ePPPP		04 35 47.0	
ITM	Ithomi	27.04	67	P	P	04 34 48.7	-1.5
ITM				IAmb	IAmb	04 34 52.0	
	comp=Z,22nm,1.1s						
NRS	Narsarsuaq	38.59	333	P	P	04 36 30.7	+0.2
WMQ	Urumqi	74.47	48	eP	P	04 40 47.5	+1.1
HHC	Hu-ho-hao-te	90.63	40	eP	P	04 42 10.5	-0.2
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.1s						

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*IDC **29** 04:53:56.5±2.9, 33°.78S×178°.93W, h0^{km}, mb3.6/2, mb1 4.0/3, mb1mx3.8/26, mbtmp3.8/3, ML4.1/1, Error ellipse: s-maj=70.1km s-min=35.6km az=118.0*

*WEL **29** 04:55:00.5, 38°S±62°×17°8E±3°3, h67^{km}±40^{km}, M2.4/8, ML2.4/7, MLv2.4/8, Error ellipse: s-maj=0.1km s-min=0.0km az=8.6*

ISC 29 04:54:01.8±2.5, **34°.0S**±0°.2×**178°.7W**±0°.3, **h50**^{km}, **n17**, σ**0^{s}.70**/17, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	Tauwhareparae	4.99	212	P	Pn	04 55 14.9	+0.7
CNGZ	Carnagh Statio	5.16	208	P	Pn	04 55 15.3	-1.2
MWZ	Matawai	5.32	214	P	Pn	04 55 18.7	0.0
URZ	Urewera	5.47	217	Pn	Pn	04 55 20.1	-0.6
	6.0nm,0.3s,baz=247,slow=1.4,SNR=33						
URZ				Sn	Sn	04 56 22.6	+0.3
	2.8nm,0.3s,baz=147,slow=16,SNR=8.0						
URZ	Urewera	5.47	217	P	Pn	04 55 20.3	-0.4
RIGZ	Rimuhau	5.53	210	P	Pn	04 55 21.1	-0.4
SNGZ	Shannon Statio	5.77	213	P	Pn	04 55 24.6	-0.4
RTZ	Ruatahuna	5.81	216	P	Pn	04 55 24.9	-0.5
RAHZ	Arahi	6.00	213	P	Pn	04 55 29.1	+1.1
MTHZ	Maungataniwha	6.06	215	P	Pn	04 55 29.9	+1.0
NMHZ	Naumai	6.27	214	P	Pn	04 55 32.0	+0.2
RITZ	Rihia Road	6.65	220	P	Pn	04 55 44.7	+7.7
KWHZ	Kaweka Forest	6.71	214	P	Pn	04 55 37.2	-0.6
OTVZ	Oturere	6.89	220	P	Pn	04 55 40.4	+0.1
ASAR	Alice Springs	42.47	271	P	P	05 01 52.1	0.0
	0.4nm,0.6s,baz=110,slow=7.9,SNR=7.1						
WRA	Warramunga Arr	43.78	276	P	P	05 02 02.1	-0.7
	0.5nm,0.5s,baz=117,slow=7.8,SNR=8.3						
FINES	FINESS Array B	148.25	338	PKPbc	PKPbc	05 13 42.2	+0.7
	2.6nm,0.9s,baz=1.4,slow=5.6,SNR=4.0						

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*IDC **29** 04:59:26.3±0.7, 6°.82N×73°.06W, h157^{km}±10^{km}, mb3.0/2, mb1 3.5/4, mb1mx3.1/31, mbtmp3.6/4, Error ellipse: s-maj=32.5km s-min=7.7km az=131.0*

*RSNC **29** 04:59:28.0±1.0, 6°.82N×73°.14W, h150^{km}±4^{km}, ML3.5, Mw3.8, Fault plane solution: NP1:ϕ_s20.00000°, δ38.00000°, λ78.00000°.*

ISC 29 04:59:26.4±0.8, **6°.84N**±0°.03×**73°.12W**±0°.04, **h158**^{km}±6^{km}, **n35**, σ**0^{s}.99**/62, **7C-2D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.26	194	⇑iP	Pn	04 59 48.3	+0.2
BARC				eS	Sn	05 00 03.3	-1.3
BARC				i		05 00 05.2	
	comp=Z,488nm,0.3s						
BRRC	Barranca, Sant	0.65	294	⇑iP	Pn	04 59 50.1	+0.7
BRRC				eS	Sn	05 00 07.3	+0.3
BRRC				i		05 00 12.0	
	comp=Z,351nm,0.3s						
PAMC	Pamplona, Colo	0.65	40	⇑iP	Pn	04 59 51.0	+1.0
PAMC				eS	Sn	05 00 08.1	+0.1
PAMC				i		05 00 12.7	
	comp=Z,665nm,0.9s						
RUSC	La Rusia	0.94	178	⇑iP	Pn	04 59 52.1	+0.1
RUSC				eS	Sn	05 00 11.1	-0.6
RUSC				i		05 00 11.8	
	comp=Z,390nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	257	⇑eP	Pn	04 59 54.8	-0.4
PTBC				eS	Sn	05 00 16.9	-0.4
PTBC				i		05 00 22.2	
	comp=Z,494nm,0.5s						
TAMC	Tame, Arauca	1.38	107	eP	Pn	04 59 56.5	+1.1
TAMC				i		05 00 17.3	
	comp=Z,212nm,0.4s						
TAMC				eS	Sn	05 00 18.5	+0.9
OCAC	Ocana	1.40	352	eP	Pn	04 59 56.2	+0.4
OCAC				eS	Sn	05 00 17.6	-0.8
OCAC				i		05 00 25.2	
	comp=Z,309nm,0.3s						
SPBC	San Pablo de B	1.52	219	⇑eP	Pn	04 59 57.1	+0.3
SPBC				eS	Sn	05 00 19.9	-0.3
SPBC				i		05 00 26.8	
	comp=N,1µm,0.3s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	05 00 00.7	+0.4
ZARC				eS	Sn	05 00 26.2	-0.1
ZARC				i		05 00 32.3	
	comp=Z,676nm,0.3s						
NORC	Norcasia	2.15	234	eP	Pn	05 00 04.3	+0.4
NORC				eS	Sn	05 00 32.8	0.0
NORC				i		05 00 35.4	
	comp=Z,224nm,0.3s						
SMLC	San Martn de	2.16	334	eP	Pn	05 00 04.7	+0.8
SMLC				eS	Sn	05 00 33.1	+0.2
SMLC				i		05 00 40.9	
	comp=Z,365nm,0.1s						
CHIC	Chingaza	2.28	196	eP	Pn	05 00 06.3	+0.6
CHIC				eS	Sn	05 00 35.5	-0.5
CHIC				i		05 00 45.1	
	comp=Z,178nm,0.8s						
ROSC	El Rosal	2.32	211	P	Pn	05 00 08.2	+2.0
	comp=Z,36nm,0.3s,baz=264,slow=2.2,SNR=53						
ROSC				S	Sn	05 00 37.0	+0.1
	comp=Z,63nm,0.3s,baz=131,slow=17,SNR=11						
ROSC	El Rosal	2.32	211	⇑eP	Pn	05 00 07.8	+1.7
ROSC				eS	Sn	05 00 36.6	-0.3
ROSC				i		05 00 45.9	
	comp=Z,375nm,0.5s						
HELC	Santa Helena	2.48	255	eP	Pn	05 00 08.9	+0.9
HELC				eS	Sn	05 00 39.1	-1.0
HELC				i		05 00 47.2	
	comp=Z,212nm,0.4s						
UREC	San Jos de Ur	2.56	291	eP	Pn	05 00 08.1	-0.6
UREC				eS	Sn	05 00 39.2	-2.2
UREC				i		05 00 52.3	
	comp=Z,258nm,0.3s						
GUY2C	Guyana, Caldas	2.75	234	eP	Pn	05 00 12.4	+0.9
GUY2C				eS	Sn	05 00 48.1	+1.8
GUY2C				i		05 00 57.0	
	comp=Z,212nm,0.5s						
PTGC	Puerto Gaitan,	2.80	159	eP	Pn	05 00 11.2	-0.5
PTGC				eS	Sn	05 00 44.4	-2.3
PTGC				i		05 00 51.6	
	comp=Z,146nm,0.3s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	05 00 15.6	+0.9
CBOC				eS	Sn	05 00 50.7	-1.4
CBOC				i		05 01 04.9	
	comp=Z,102nm,0.5s						
DBBC	Dabeiba	3.07	273	⇓iP	Pn	05 00 15.7	+0.6
DBBC				eS	Sn	05 00 52.1	-0.7
TOLC	Tolima	3.13	224	eP	Pn	05 00 17.4	+1.3
TOLC				eS	Sn	05 00 53.7	-0.9
TOLC				i		05 01 00.5	
	comp=Z,296nm,0.8s						
MOTC	Monteria, Cord	3.17	307	⇓eP	Pn	05 00 15.3	-1.0
MOTC				eS	Sn	05 00 53.8	-1.2
MOTC				i		05 01 09.3	
	comp=Z,138nm,0.6s						
SDV	Santo Domingo	3.19	50	P	Pn	05 00 17.6	+0.9
	comp=Z,18nm,0.3s,baz=221,slow=4.1,SNR=101						
SDV				S	Sn	05 00 54.6	-1.1
	comp=Z,20nm,0.3s,baz=40,slow=21,SNR=32						
SDV	Santo Domingo	3.19	50	eP	Pn	05 00 17.4	+0.7
SDV				eS	Sn	05 00 53.9	-1.9
SDV				i		05 00 57.0	
	comp=Z,52nm,0.5s						
ARGC	Ariguani, Magd	3.20	340	eP	Pn	05 00 18.4	+1.8
ARGC				eS	Sn	05 00 56.6	+1.0
ARGC				i		05 01 13.7	
	comp=Z,74nm,0.4s						
ANIL	Santa Ana	3.26	224	eP	Pn	05 00 19.4	+1.7
ANIL				eS	Sn	05 00 57.0	-0.4
ANIL				i		05 01 04.4	
	comp=Z,54nm,0.4s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	05 00 22.4	+0.5
ORTC				eS	Sn	05 01 05.5	+0.7
ORTC				i		05 01 11.0	
	comp=Z,105nm,0.5s						
PLMC	San Jos del P	3.69	239	eP	Pn	05 00 23.9	+0.9

PLMC				*i*		05 01 12.9	
	comp=Z,68nm,0.4s						
YOTC	Yotoco, Valle	4.29	229	*e*P	Pn	05 00 31.0	+0.2
SMRC	Santa Marta, M	4.43	346	*e*P	Pn	05 00 33.5	+1.0
SMRC				*i*		05 01 24.9	
	comp=Z,41nm,0.4s						
TXAR	Lajitas Array	36.45	312	P	P	05 06 16.1	-0.2
	comp=Z,0.2nm,0.7s,baz=123,slow=9.8,SNR=2.8						
YKA	Yellowknife Ar	63.25	340	P	P	05 09 38.5	+0.7
	comp=Z,0.7nm,0.6s,baz=129,slow=7.5,SNR=14						
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	05 18 02.5	-0.5
	comp=Z,0.2nm,0.4s,baz=279,slow=3.5,SNR=6.0						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	05 18 56.5	-0.5
	comp=Z,0.5nm,0.5s,baz=133,slow=3.3,SNR=5.9						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	05 18 59.7	-0.4
	comp=Z,0.5nm,0.4s,baz=108,slow=2.5,SNR=18						

MAN ***29*** *05:39:55.4, 8°.57N×121°.47E, h55km, mb4.9, ML3.8, MS3.8*
IDC ***29*** *05:39:55.2±1.8, 8°.47N×121°.46E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/59, mbtmp3.6/4, MS3.1/7, Ms1 3.1/7, ms1mx2.9/44, Error ellipse: s-maj=103.2km s-min=21.8km az=55.0*
ISC 29 05:39:58.1±1.1**, 8°.63N**±0°.06×**121°.48E**±0°.05**, h35km, n21, σ1ˢ.49**/24**, mb3.5**/4**, MS3.0**/5**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNOP	Candoni, Negro	1.65	44	*e*P	Pn	05 40 22.7	-2.0
CNOP				*e*S	Sn	05 40 41.8	-2.9
PAGZ	Pagadian	2.04	112	*e*P	Pn	05 40 28.3	-1.7
PAGZ				*e*S	Sn	05 40 52.4	-1.9
CUYO	Cuyo Island	2.25	348	*e*P	Pn	05 40 33.0	+0.1
CUYO				*e*S	Sn	05 40 59.7	+0.3
GUIM	Jordan	2.27	29	*e*P	Pn	05 40 32.3	-0.8
GUIM				*e*S	Sn	05 40 59.9	+0.1
LLP	Lapu-Lapu	2.97	56	⇑*e*P	Pn	05 40 42.9	0.0
LLP				*i* S	Sn	05 41 17.6	+0.3
CGP	Cagayan de Oro	3.19	93	⇓*e*P	Pn	05 40 47.3	+1.5
CGP				*e*S	Sn	05 41 22.2	-0.4
ENPP	El Nido	3.26	322	*e*P	Pn	05 40 45.4	-1.3
ENPP				*e*S	Sn	05 41 21.7	-2.6
BUSP	Coron	3.58	340	*e*P	Pn	05 40 50.7	-0.4
BUSP				*e*S	Sn	05 41 31.1	-1.1
MSLP	Maasin	3.66	66	*e*P	Pn	05 40 53.4	+1.2
MSLP				*e*S	Sn	05 41 34.4	+0.2
SKMP	Bagumbayan, Su	3.69	124	*e*P	Pn	05 40 51.6	-1.2
GLSP	General Luna,	4.73	76	*e*P	Pn	05 41 05.6	-1.4
GLSP				*e*S	Sn	05 41 58.9	-1.8
KAPI	Kappang	13.66	187	LR	LR	05 48 38.7	
	comp=Z,56nm,18.3s,baz=19,slow=39						
JOW	Kunigami	19.22	19	LR	LR	05 52 13.8	
	comp=Z,95nm,18.1s,baz=54,slow=38						
CMAR	Chiang Mai Arr	23.96	296	P	P	05 45 11.6	+2.2
	0.5nm,0.3s,baz=116,slow=8.4,SNR=7.4						
CMAR				LR	LR	05 54 03.2	
	comp=Z,52nm,21.4s,baz=295,slow=35						
KSRS	Korea Array	29.28	11	LR	LR	05 59 43.1	
	comp=Z,11nm,18.5s,baz=5.0,slow=40						
JHJ	Hachijo jima 2	29.67	32	LR	LR	05 58 23.8	
	comp=Z,22nm,19.5s,baz=280,slow=37						
WRA	Warramunga Arr	31.09	156	P	P	05 46 13.7	+0.4
	0.5nm,0.6s,baz=337,slow=9.5,SNR=6.3						
MJAR	Matsushiro Arr	31.68	26	LR	LR	05 57 19.3	
	comp=Z,49nm,21.1s,baz=350,slow=33						
ASAR	Alice Springs	34.32	160	P	P	05 46 42.9	+1.3
	0.5nm,0.8s,baz=354,slow=7.5,SNR=4.3						
SONM	Songino Array	41.11	345	LR	LR	06 05 56.4	
	comp=Z,65nm,18.6s,baz=20,slow=38						
MKAR	Makanchi Array	50.58	326	P	P	05 48 57.0	+3.6
	0.6nm,0.7s,baz=129,slow=9.2,SNR=7.7						

ANF ***29*** *05:58:18.7±1.1, 37°.07N×97°.65W, h0km±8km, ML3.8/9, Error ellipse: s-maj=4.1km s-min=2.7km az=43.0*
NEIC ***29*** *05:58:18.1±0.8, 37°.10N±0°.01×97°.64W±0°.03, h6km±7km, mb_Lg3.1/59, Error ellipse: s-maj=4.1km s-min=1.6km az=68.0*
ISC 29 05:58:18.1±0.8**, 37°.11N**±0°.02×**97°.63W**±0°.02**, h11km**±7km**, n61, σ1ˢ.28**/48**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.12	293		Pg	05 58 20.2	-0.8
KAN13	South Haven SW	0.15	129		Pg	05 58 21.7	+0.2
KAN13				Sg	Sg	05 58 24.7	+0.7
KS21	Milan North St	0.18	350		Pg	05 58 22.0	-0.1
KS21				Sg	Sg	05 58 24.9	0.0
KAN08	Anthony NE Sta	0.30	293	Pg	Pg	05 58 23.7	-0.5
KAN08				Sg	Sg	05 58 27.7	-0.6
KAN14	Manchester OK	0.31	241		Pg	05 58 23.6	-0.7
KAN12	Harper NE Stat	0.35	303		Pg	05 58 24.7	-0.5
KAN12				Sg	Sg	05 58 29.5	-0.4
KAN10	Anthony SW Sta	0.38	273		Pg	05 58 25.0	-0.6
KAN10				Sg	Sg	05 58 29.9	-0.7
CROK	Carrier	0.67	206		Pg	05 58 30.4	-0.6
CROK				Sg	Sg	05 58 39.4	-0.4
T35A	Sooner Cattle	0.91	102		Pg	05 58 35.8	+0.1
T35B	Sooner Cattle	0.91	102	P		05 58 35.8	
	baz=282,SNR=64						
T35B				S		05 58 48.3	
	baz=282						
QUOK	Quay	1.19	141		Pg	05 58 40.6	-0.4
OK031	S. Brethren Rd	1.31	151		Pn	05 58 42.6	+0.3
OK029	Liberty Lake	1.32	174		Pn	05 58 42.6	+0.2
U32A	Winter Ranch,	1.32	237	Pn	Pn	05 58 42.0	-0.5
U32A	Winter Ranch,	1.32	237	P		05 58 42.0	
	baz=56						
U32A				S		05 59 00.3	
	baz=56						
OK030	Cody Creek RV	1.36	150		Pn	05 58 43.5	+0.5
BCOK	Bluff Creek, N	1.45	180		Pn	05 58 44.7	+0.5
OK025	Westminster Rd	1.54	171	Pn	Pb	05 58 46.5	-0.1
R32A	Long Quarter,	1.57	327		Pn	05 58 46.7	+0.8
R32A	Long Quarter,	1.57	327	P		05 58 46.7	
	baz=148,SNR=201						
R32A				S		05 59 07.7	
	baz=148						
OKCFA	Oklahoma City	1.69	175		Pn	05 58 48.2	+0.6
OKCSW	OKLAHOMA CITY	1.71	175		Pn	05 58 48.2	+0.5
FNO	Franklin	1.86	174		Pn	05 58 50.2	+0.4
TUL1	Leonard	1.90	128	P	Pb	05 58 52.4	-0.4
	baz=309						
TUL1				S	Sb	05 59 18.1	+1.6
	baz=309						
TUL1	Leonard	1.90	128	Pn	Pn	05 58 51.5	+1.0
TUL1	Leonard	1.90	128	P		05 58 52.0	
	baz=309,SNR=36						
TUL1				S		05 59 18.1	
	baz=309						
KSU1	Kansas State U	2.15	22	P	Pb	05 58 56.1	-0.9
	baz=203						
KSU1				S	Sb	05 59 25.0	+1.4
	baz=203						
KSU1	Kansas State U	2.15	22		Pn	05 58 55.1	+1.3
KSU1	Kansas State U	2.15	22	P		05 58 55.6	
	baz=203,SNR=10						
KSU1				S		05 59 24.9	
	baz=203						
CBKS	Cedar Bluff	2.38	316	P	Pb	05 58 59.6	-1.5
	baz=136						
CBKS				S	Sb	05 59 31.4	+0.9
	baz=136						
CBKS	Cedar Bluff	2.38	316		Pn	05 58 58.2	+1.0
CBKS	Cedar Bluff	2.38	316	S		05 59 31.5	
	baz=136						
X34A	Smith Ranch, M	2.51	184	Pn	Pn	05 58 59.6	+0.8
WMOK	Wichita Mounta	2.54	202	P	Pn	05 58 60.0	+0.7
	baz=21						
WMOK	Wichita Mounta	2.54	202		Pn	05 59 00.2	+0.8
WMOK	Wichita Mounta	2.54	202	P		05 58 59.9	
	baz=21,SNR=22						
U38A	Gravette	2.69	103		Pn	05 59 01.7	+0.5
U38A				IAmb_Lg		05 59 44.8	
	comp=Z,48nm,0.8s						
X37A	Clayton	3.11	143		Pn	05 59 08.1	+1.0
X37A				IAmb_Lg		06 00 04.0	
	comp=Z,39nm,0.7s						
S39A	Bolivar	3.48	79	P		05 59 13.3	
	baz=262,SNR=7.0						
W39A	Magazine	3.65	120	Pb	Pb	05 59 24.1	+1.5
	baz=302						
W39A				Sb	Sg	06 00 11.9	-3.3
	baz=302						
W39A	Magazine	3.65	120	IAmb_Lg		06 00 17.2	
	comp=Z,43nm,0.9s						
Z35A	Perchaven, San	3.78	175	Pn	Pn	05 59 16.6	+0.3
Z35A	Perchaven, San	3.78	175	P		05 59 17.3	
	baz=355,SNR=5.6						
Z35A				S		06 00 02.6	
	baz=355						
U40A	Yellville	3.91	100	Pn	Pn	05 59 18.0	0.0
U40A				IAmb_Lg		06 00 25.7	
	comp=Z,48nm,0.8s						
AMTX	Amarillo	3.97	237	Pb	Pb	05 59 29.6	+1.5
	baz=55						
AMTX	Amarillo	3.97	237	IAmb_Lg		06 00 30.7	
	comp=Z,30nm,0.7s						
MIAR	Mount Ida	4.17	127	P	Pn	05 59 23.5	+1.9
	baz=309						
MIAR	Mount Ida	4.17	127	IAmb_Lg		06 00 30.7	
	comp=Z,44nm,1.0s						
MIAR	Mount Ida	4.17	127	P		05 59 23.1	
	baz=309						
MGMO	Mountain Grove	4.28	88	IAmb_Lg		06 00 33.3	
	comp=Z,24nm,0.8s						
BGNE	Belgrade	4.31	355	IAmb_Lg		06 00 47.2	
	comp=Z,48nm,0.7s						
KSCO	Kaye Shedlock’	4.38	297	IAmb_Lg		06 00 37.1	
	comp=Z,26nm,0.7s						
R40A	Maddies Statio	4.41	73	IAmb_Lg		06 00 39.3	
	comp=Z,44nm,0.8s						
X40A	Basin Creek Fa	4.69	122	IAmb_Lg		06 00 47.6	
	comp=Z,30nm,1.1s						
W41B	Gary Mavity, V	4.76	112	Sb	Sg	06 00 45.4	-5.6
	baz=295						
N38A	Joes South For	5.02	42	IAmb_Lg		06 01 01.3	
	comp=Z,24nm,0.8s						
WHTX	Lake Whitney,	5.11	178	P	Pn	05 59 35.2	+0.7
	baz=358						
WHTX	Lake Whitney,	5.11	178	P		05 59 35.1	
	baz=358,SNR=7.6						
CCM	Cathedral Cave	5.16	77	IAmb_Lg		06 01 08.0	
	comp=Z,29nm,1.0s						
T42A	Van Buren	5.22	89	IAmb_Lg		06 01 13.6	
	comp=Z,21nm,0.9s						
PBMO	Poplar Bluff	5.77	91	IAmb_Lg		06 01 28.8	
	comp=Z,26nm,0.7s						
SCIA	State Center	5.88	34	IAmb_Lg		06 01 27.5	
	comp=Z,23nm,0.8s						
435B	Jarrell	6.31	180	IAmb_Lg		06 01 49.2	
	comp=Z,23nm,0.8s						
N41A	Harden Midland	6.39	54	IAmb_Lg		06 01 47.9	
	comp=Z,26nm,0.9s						
ECSD	EROS Data Cent	6.66	6	P		05 59 56.3	
	baz=187						
S44A	Carbondale	6.69	82	IAmb_Lg		06 01 51.1	
	comp=Z,28nm,0.8s						
SIUC	Southern Illin	6.72	82	IAmb_Lg		06 01 58.1	
	comp=Z,28nm,0.9s						
JCT	Junction City	6.86	196	IAmb_Lg		06 02 05.7	
	comp=Z,20nm,1.0s						
W45A	Hickory Valley	7.10	103	IAmb_Lg		06 02 13.8	
	comp=Z,25nm,0.7s						
OXF	Oxford	7.16	109	IAmb_Lg		06 02 16.0	
	comp=Z,24nm,1.1s						
HDIL	Hopedale	7.36	60	IAmb_Lg		06 02 14.8	
	comp=Z,25nm,0.9s						
O44A	Mansfield	7.79	64	IAmb_Lg		06 02 27.4	
	comp=Z,22nm,0.7s						
P46A	Rosedale	8.56	70	IAmb_Lg		06 03 00.7	
	comp=Z,20nm,0.8s						

WEL ***29*** *06:16:32.6±1.0, 33°S±16°×17°9W±3°9, h140km±45km, M4.3/10, mB4.3/1, MLv4.3/10, Mw(mB)3.4/1, Error ellipse: s-maj=0.1km s-min=0.0km az=112.3*
IDC ***29*** *06:16:33.7±3.2, 33°.29S×178°.80W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.9/21, mbtmp4.0/3, ML3.9/1, Error ellipse: s-maj=70.8km s-min=36.5km az=113.0*
ISC 29 06:16:32.3±2.2**, 33°.3S**±0°.1×**178°.1W**±0°.3**, h34km, n16, σ1ˢ.81**/28**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.05	2	P	Pn	06 17 31.3	-0.6
GLKZ				S	Sn	06 18 17.0	-1.2
MXZ	Matakaoa Point	5.16	214	P	Pn	06 17 44.7	-2.5
MXZ				S	Sn	06 18 44.5	-1.0
WMGZ	Waiomatatini S	5.33	212	P	Pn	06 17 51.2	+1.9
WMGZ				S	Sn	06 18 51.9	+2.4
HAZ	Te Kaha	5.57	216	P	Pn	06 17 52.5	-0.2
HAZ				S	Sn	06 18 55.7	+0.2
PUZ	Puketiti	5.60	211	P	Pn	06 17 51.3	-1.9
PUZ				S	Sn	06 18 56.1	-0.3
RUGZ	Raukumara Rang	5.79	216	P	Pn	06 17 56.1	+0.3
RUGZ				S	Sn	06 19 00.1	-0.9
CNGZ	Carnagh Statio	5.97	209	P	Pn	06 18 00.2	+2.0
MWZ	Matawai	6.15	214	P	Pn	06 18 01.0	+0.3
MWZ				S	Sn	06 19 08.3	-1.5
URZ	Urewera	6.29	217	Pn	Pn	06 18 03.8	+1.1
	3.4nm,0.3s,baz=283,slow=3.1,SNR=16						
URZ				Sn	Sn	06 19 11.2	-2.2
	1.4nm,0.3s,baz=345,slow=22,SNR=6.4						
URZ	Urewera	6.29	217	P	Pn	06 18 02.6	0.0
URZ				S	Sn	06 19 10.7	-2.6
SNGZ	Shannon Statio	6.60	213	P	Pn	06 18 06.7	-0.2
SNGZ				S	Sn	06 19 20.6	-0.2
RTZ	Ruatahuna	6.63	216	P	Pn	06 18 07.6	+0.2
RTZ				S	Sn	06 19 23.2	+1.3
KAHZ	Kahuranaki	7.63	211	P	Pn	06 18 18.8	-2.3
KAHZ				S	Sn	06 19 41.9	-4.5
ASAR	Alice Springs	42.98	270	P	P	06 24 30.1	+1.6
	1.8nm,0.7s,baz=109,slow=7.3,SNR=17						
WRA	Warramunga Arr	44.23	275	P	P	06 24 39.8	+1.2
	0.9nm,0.5s,baz=116,slow=7.7,SNR=14						
FINES	FINESS Array B	147.85	338	PKPbc	PKPab	06 36 18.3	+2.8
	10nm,1.2s,baz=45,slow=3.2,SNR=4.1						

WEL 29 06:26:00.1±1.4**, 35°S**±9°×**17°9E**±2°5**, h33km, M3.5**/7**, ML3.7**/7**, MLv3.5**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=100.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.76	187	S	Sn	06 27 15.5	+1.3
WMGZ	Waiomatatini S	3.01	185	P	Pn	06 26 46.9	+1.4
WMGZ				S	Sn	06 27 20.7	+0.3
HAZ	Te Kaha	3.04	195	P	Pn	06 26 47.1	+1.4
HAZ				S	Sn	06 27 23.5	+2.5
RUGZ	Raukumara Rang	3.26	195	P	Pn	06 26 49.8	+0.8
RUGZ				S	Sn	06 27 26.4	-0.4
PUZ	Puketiti	3.27	187	P	Pn	06 26 48.9	-0.2
PUZ				S	Sn	06 27 26.9	0.0
MWZ	Matawai	3.65	195	P	Pn	06 26 53.9	-0.3
MWZ				S	Sn	06 27 36.1	0.0
URZ	Urewera	3.68	201	P	Pn	06 26 54.4	-0.3
URZ				S	Sn	06 27 39.1	+2.2
TKGZ	Te Karaka	3.69	191	P	Pn	06 26 54.5	-0.2
TKGZ				S	Sn	06 27 37.8	+0.7
RTZ	Ruatahuna	4.05	200	P	Pn	06 26 58.5	-1.3
SNGZ	Shannon Statio	4.12	196	P	Pn	06 26 59.7	-1.0
SNGZ				S	Sn	06 27 47.4	-0.3
KAHZ	Kahuranaki	5.19	196	P	Pn	06 27 11.8	-3.7

IDC 29 06:30:30.6±3.0**, 54°.53N**×**86°.14E, h0km, mb1 2.5**/2**, mb1mx2.5**/47**, mbtmp2.5**/2**, ML2.1**/2**, Error ellipse: s-maj=22.0km s-min=12.8km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.97	234	*i*		06 36 51.3	
	baz=50,slow=340,SNR=4.6						
ZALV	Zalesovo Beam	0.97	234	Pg	Pg	06 30 48.0	-1.2
	0.5nm,0.3s,baz=56,slow=17,SNR=7.7						
ZALV				Lg	Lg	06 31 03.0	
	3.4nm,0.3s,baz=54,slow=27,SNR=28						
KURBB	Kurchatov Arra	6.07	233	Pn	Pn	06 32 02.6	+1.1
	0.0nm,0.3s,baz=51,slow=14,SNR=8.2						
KURBB				Lg	Lg	06 33 44.8	
	0.0nm,0.3s,baz=43,slow=31,SNR=2.6						
MKAR	Makanchi Array	8.12	199	Pn	Pn	06 32 30.1	+0.4
	0.0nm,0.3s,baz=23,slow=11,SNR=1.7						
MKAR				Sn	Sn	06 34 01.5	-0.6
	0.1nm,0.3s,baz=28,slow=35,SNR=5.1						
MKAR				Lg	Lg	06 34 45.0	
	baz=27,slow=32,SNR=2.4						

IDC 29 06:33:58.3±2.7**, 53°.97N**×**86°.64E, h0km, mb1 2.8**/2**, mb1mx2.8**/44**, mbtmp2.8**/2**, ML2.6**/2**, Error ellipse: s-maj=24.2km s-min=14.5km az=47.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.07	269	*i*		06 40 00.0	
	baz=87,slow=342,SNR=6.9						
ZALV	Zalesovo Beam	1.07	269	Pg	Pg	06 34 18.0	-0.9
	0.7nm,0.3s,baz=91,slow=13,SNR=7.1						
ZALV				Lg	Lg	06 34 33.9	
	2.1nm,0.3s,baz=95,slow=33,SNR=16						
KURBB	Kurchatov Arra	6.00	239	Pn	Pn	06 35 29.5	+1.3
	0.1nm,0.3s,baz=56,slow=13,SNR=12						
KURBB				Lg	Lg	06 37 08.0	
	0.0nm,0.3s,baz=47,slow=30,SNR=2.3						
MKAR	Makanchi Array	7.70	203	Pn	Pn	06 35 52.4	+0.6
	0.2nm,0.3s,baz=23,slow=13,SNR=11						

JMA ***29*** *06:42:37.8±0.4, 37°.67N×134°.56E, h418km±4km, M3.1*
IDC ***29*** *06:42:38.9±1.4, 37°.69N×134°.46E, h403km±23km, mb2.5/1, mb1 2.8/4, mb1mx2.4/45, mbtmp3.3/4, Error ellipse: s-maj=43.4km s-min=28.1km az=41.0*
ISC 29 06:42:38.9±1.3**, 37°.7N**±0°.1×**134°.51E**±0°.10**, h400km, n11, σ0ˢ.54**/12**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	2.02	133	P	Pn	06 43 35.7	+0.7
JHS	Saijyo	2.90	203	P	Pn	06 43 41.6	+0.2
JSD	Sado	2.99	82	P	Pn	06 43 42.3	+0.4
JNG	Nsakai	3.14	113	P	Pn	06 43 43.5	+0.1
MAT	Matsushiro	3.16	110	P	Pn	06 43 43.9	+0.4
MAT				*e*S	S	06 44 35.0	-0.8
MJAR	Matsushiro Arr	3.17	110	P	Pn	06 43 44.4	+0.9
	0.2nm,0.3s,baz=288,slow=9.9,SNR=11						
JMM	Marumori	4.98	86	P	Pn	06 44 00.8	+0.2
JRG	Rokugo	5.10	68	P	Pn	06 44 02.2	+0.4
KSRS	Korea Array	5.24	270	P	Pn	06 44 03.6	+0.3
	0.1nm,0.3s,baz=87,slow=11,SNR=5.1						
USRK	Ussuriysk Ar.	6.79	344	P	Pn	06 44 19.7	-0.3
	baz=164,slow=11,SNR=12						
WRA	Warramunga Arr	57.31	180	P	P	06 51 46.6	-0.2
	0.3nm,0.7s,baz=355,slow=7.9,SNR=3.2						

IDC 29 06:47:20.0±2.7**, 54°.19N**×**86°.43E, h0km, mb1 2.9**/2**, mb1mx2.8**/42**, mbtmp2.9**/2**, ML2.5**/2**, Error ellipse: s-maj=20.3km s-min=12.1km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.98	257	*i*		06 53 06.6	
	baz=74,slow=342,SNR=7.5						
ZALV	Zalesovo Beam	0.98	257	Pg	Pg	06 47 37.4	-1.3
	1.7nm,0.3s,baz=73,slow=17,SNR=21						
ZALV				Lg	Lg	06 47 52.8	
	4.6nm,0.3s,baz=79,slow=31,SNR=19						
KURBB	Kurchatov Arra	6.01	237	Pn	Pn	06 48 50.6	+0.6
	0.1nm,0.3s,baz=53,slow=14,SNR=3.1						
KURBB				Lg	Lg	06 50 33.5	
	0.0nm,0.3s,baz=57,slow=32,SNR=2.4						
MKAR	Makanchi Array	7.86	201	Pn	Pn	06 49 16.9	+1.5
	0.1nm,0.3s,baz=23,slow=13,SNR=7.0						
MKAR				Lg	Lg	06 51 28.5	
	0.1nm,0.3s,baz=20,slow=29,SNR=7.6						

IDC ***29*** *07:04:44.5±1.7, 9°.62S×125°.33E, h0km, mb3.1/1, mb1 3.7/4, mb1mx3.4/49, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=30.0km s-min=26.6km az=50.0*
DJA ***29*** *07:04:44.1±1.1, 9°S±6°×12°5E±°, h59km±9km, M3.4/5, MLv3.4/5*
ISC 29 07:04:46.2±1.2**, 9°.65S**±0°.10×**125°.45E**±0°.08**, h35km, n9, σ2ˢ.89**/17**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.17	265	P	Pn	07 05 05.9	-0.3
SOEI				S	Sn	07 05 22.9	+1.9
BATI	Baumata	1.84	252	Pn	Pn	07 05 15.8	+0.4
	10nm,0.3s,baz=112,slow=9.9,SNR=4.3						
BATI				Sn	Sn	07 05 39.3	+1.7
	21nm,0.3s,baz=60,slow=20,SNR=3.5						
BATI	Baumata	1.84	252	P	Pn	07 05 16.1	+0.7
BATI				S	Sn	07 05 38.0	+0.5
MMRI	Maumere	3.33	287	P	Pn	07 05 31.8	-4.0
MMRI				S	Sn	07 06 12.8	-1.4
EDFI	Ende, Flores	3.82	283	P	Pn	07 05 40.3	-2.3
EDFI				S	Sn	07 06 22.6	-3.8
FITZ	Fitzroy Crossi	8.40	179	Pn	Pn	07 06 49.1	+3.6
	0.6nm,0.3s,baz=3.2,slow=12,SNR=7.0						
FITZ				Sn	Sn	07 08 16.1	-3.0
	0.7nm,0.3s,baz=249,slow=17,SNR=5.8						
WRA	Warramunga Arr	13.36	141	Pn	Pn	07 07 56.3	+2.9
	0.3nm,0.3s,baz=318,slow=13,SNR=13						
WRA				Sn	Sn	07 10 17.4	-3.3
	0.2nm,0.3s,baz=311,slow=23,SNR=5.8						
ASAR	Alice Springs	16.11	151	Pn	P	07 08 33.2	+0.1
	0.2nm,0.3s,baz=320,slow=11,SNR=15						
ASAR				Sn	Sn	07 11 23.4	-4.3
	0.1nm,0.3s,baz=316,slow=18,SNR=7.8						
MKAR	Makanchi Array	68.09	330	P	P	07 15 45.8	+3.3
	0.1nm,0.6s,baz=136,slow=6.3,SNR=2.1						

NNC ***29*** *07:06:04.9±0.4, 50°.01N×78°.80E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=10.2km s-min=1.9km az=72.0, Suspected Mining explosion.*
IDC 29 07:06:05.2±1.0**, 50°.04N**×**78°.68E, h0km, mb1 2.7**/2**, mb1mx2.6**/49**, mbtmp2.7**/2**, ML2.2**/2**, 20C-5D, Error ellipse: s-maj=12.1km s-min=6.5km az=67.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.55	349	⇑P	Pg	07 06 16.7	+0.8
KUR07				⇑S	Sb	07 06 25.7	-0.6
KUR06	Kurchatov Arra	0.57	350	⇓P	Pg	07 06 17.1	+0.9
KUR06				⇓S	Sb	07 06 26.0	-0.8
KUR14	Kurchatov Arra	0.58	354	⇑P	Pg	07 06 17.0	+0.7
KUR14				⇑S	Sb	07 06 25.9	-1.0
KUR15	Kurchatov Arra	0.58	352	⇑P	Pg	07 06 17.1	+0.6
KUR15				⇑S	Sb	07 06 26.3	-0.9
KURBB	Kurchatov Arra	0.59	351	Pg	Pg	07 06 15.8	-0.7
	1.4nm,0.3s,baz=166,slow=18,SNR=39						
KURBB				Lg	Lg	07 06 26.0	
	2.4nm,0.3s,baz=170,slow=32,SNR=25						
KURBB	Kurchatov Arra	0.59	351	⇑P	Pg	07 06 17.2	+0.7
	6.8nm,0.3s						
KURBB				⇑S	Sb	07 06 26.3	-1.0
	32nm,0.5s						
KUR16	Kurchatov Arra	0.60	349	⇑P	Pg	07 06 17.4	+0.7
KUR16				⇑S	Sb	07 06 27.2	-0.4
KUR17	Kurchatov Arra	0.61	347	⇑P	Pg	07 06 17.4	+0.6
KUR17				⇓S	Sb	07 06 27.2	-0.6
KUR05	Kurchatov Arra	0.61	351	⇑P	Pg	07 06 17.6	+0.7
KUR05				⇑S	Sb	07 06 26.6	-1.3
KUR04	Kurchatov Arra	0.63	352	⇑P	Pg	07 06 18.1	+0.8
KUR04				⇑S	Sb	07 06 27.0	-1.5
KURK	Kurchatov	0.68	357	⇑P	Pg	07 06 18.6	+0.4
	3.1nm,0.4s						
KURK				⇑S	Sb	07 06 28.9	-1.0
	11nm,0.5s						
MAKZ	Makanchi	3.91	145	⇓Pg	Pb	07 07 15.0	-0.1
	3.2nm,1.0s						
MAKZ				⇑Lg	Lg	07 08 05.0	
	4.1nm,1.1s						
MK31	Makanchi Array	4.04	142	⇓Pn	Pn	07 07 09.4	+1.0
	0.1nm,0.2s,baz=324,slow=9.9,SNR=12						
MK31				⇑Pg	Pb	07 07 17.3	0.0
	0.4nm,0.3s,baz=322,slow=14,SNR=10						
MK31				⇑Lg	Lg	07 08 11.2	
	2.5nm,0.5s,baz=329,slow=28,SNR=10						
MKAR	Makanchi Array	4.04	142	Pn	Pn	07 07 09.5	+1.1
	0.2nm,0.3s,baz=321,slow=10,SNR=13						
MKAR				Pg	Pb	07 07 15.5	-1.8
	0.3nm,0.3s,baz=319,slow=15,SNR=14						

MKAR				Lg	Lg	07 08 10.3	
	0.5nm,0.3s,baz=324,slow=28,SNR=13						
I46RU	**ZALESOVO INFRA**	**5.45**	**42**	*i*		07 39 00.0	
	baz=227,slow=343,SNR=6.3						
ZALV	**Zalesovo Beam**	**5.45**	**42**	Pn	Pn	07 07 29.3	+1.7
	0.4nm,0.3s,baz=232,slow=12,SNR=5.4						
ZALV				Lg	Lg	07 08 59.9	
	0.2nm,0.3s,baz=227,slow=23,SNR=2.8						

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*IDC **29** 07:14:44.9±2.7, 16°.17S×175°.05W, h299^{km}±26^{km}, mb4.0/17, mb1 4.2/18, mb1mx3.9/43, mbtmp4.6/18, Error ellipse: s-maj=26.8km s-min=9.0km az=154.0*

*NEIC **29** 07:14:44.3±1.4, 16°.11S±0°.10×174°.97W±0°.09, h291^{km}±7^{km}, mb4.5/56, Error ellipse: s-maj=14.9km s-min=11.2km az=149.0*

ISC 29 07:14:45.3±0.4**, 16°.08S**±0°.08×**174°.99W**±0°.06**, h300**^{km}**, n185, σ0^{s}.69**/186**, mb4.5**/46**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.78	56	Pn	Pn	07 15 48.6	-0.7
AFI				S	S	07 16 36.8	-3.7
NIUE	Niue	5.67	122	Pn	Pn	07 16 09.7	-1.0
NIUE				S	S	07 17 20.2	+0.7
MSVF	Nonsavu	6.86	255	Pn	Pn	07 16 26.5	+1.4
SANVU	Saraoutou	17.15	270	P	Pn	07 18 28.2	-0.8
DZM	Mont Dzumac	18.52	248	P	P	07 18 38.4	-2.4
	0.8nm,0.3s,baz=70,slow=21,SNR=12						
DZM	Mont Dzumac	18.52	248	P	P	07 18 42.0	+1.2
PPT	Papeete	24.37	97	P	P	07 19 36.3	-0.7
	26nm,0.6s,baz=110,slow=12,SNR=4.3						
PPTF	Pamatai, Papee	24.38	97	P	P	07 19 37.8	+0.7
XMAS	Kiritimati	25.00	45	P	P	07 19 43.0	+0.3
EIDS	Eidsvold	32.97	248	P	P	07 20 52.2	-0.6
EIDS				IAmb	IAmb	07 21 01.2	
	comp=Z,20nm,1.3s						
ARMA	Armidale	33.68	239	P	P	07 20 58.1	-0.9
ARMA				IAmb	IAmb	07 21 14.8	
	comp=Z,27nm,1.4s						
CAN	Canberra	37.40	232	P	P	07 21 29.7	-0.7
HMH	Humu‘ula Sheep	40.32	29	P	P	07 21 55.6	+0.8
COEN	Coen	40.41	267	P	P	07 21 56.1	+0.8
TOO	Toolangi	40.85	231	P	P	07 21 58.4	-0.2
STKA	Stephens Creek	42.37	240	P	P	07 22 10.3	-0.6
	comp=Z,15nm,0.9s,baz=74,slow=6.9,SNR=18						
STKA	Stephens Creek	42.37	240	P	P	07 22 10.8	-0.2
WB2	Warramunga Arr	48.19	257	P	P	07 22 55.1	-1.4
WB2				IAmb	IAmb	07 22 56.4	
	comp=Z,33nm,0.8s						
WRAB	Tennant Creek	48.19	257	P	P	07 22 55.7	-0.8
WRAB				IAmb	IAmb	07 22 56.3	
	comp=Z,29nm,0.8s						
WRA	Warramunga Arr	48.20	257	P	P	07 22 55.3	-1.3
	comp=Z,13nm,0.4s,baz=94,slow=6.3,SNR=309						
AS31	Alice Springs	48.44	252	P	P	07 22 57.8	-0.7
AS31				IAmb	IAmb	07 22 59.0	
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	48.44	252	P	P	07 22 57.5	-0.9
	comp=Z,68nm,0.7s,baz=86,slow=8.0,SNR=671						
ASAR				S	S	07 29 34.2	-1.9
	comp=Z,1.0nm,1.0s,baz=85,slow=16,SNR=5.2						
ASAR	Alice Springs	48.44	252	P	P	07 22 57.2	-1.2
MTN	Manton Dam	52.15	266	P	P	07 23 26.0	-0.1
MTN				IAmb	IAmb	07 23 26.1	
	comp=Z,24nm,0.8s						
FORT	Forrest	53.74	243	P	P	07 23 36.1	-1.3
VNDA	Vanda	62.55	186	P	P	07 24 38.3	+1.0
GIRL	Giralia	66.56	252	P	P	07 25 04.2	+0.1
MJAR	Matsushiro Arr	68.48	321	P	P	07 25 15.5	-0.2
	comp=Z,1.7nm,0.5s,baz=147,slow=6.3,SNR=4.8						
JAGI	Jajag, Banyuwa	69.38	267	P	P	07 25 20.4	-1.2
JWT	Wachi	69.43	318	P	P	07 25 22.2	+0.7
SCI2	San Clemente I	72.69	47	P	P	07 25 41.8	+0.7
	baz=237						
SAO	San Andreas Ge	72.86	43	P	P	07 25 41.3	-0.7
SAO				IAmb	IAmb	07 25 43.6	
	comp=Z,12nm,0.8s						
PKM	Mcpherson Peak	72.87	45	P	P	07 25 42.5	+0.2
	baz=236						
PMPB	Monarch Peak	72.97	43	P	P	07 25 42.6	-0.1
PMPB				IAmb	IAmb	07 25 46.2	
	comp=Z,13nm,1.1s						
SMMC	Simmler	72.99	44	P	P	07 25 43.8	+1.0
	baz=235						
UGM	Wanagama	73.00	266	P	P	07 25 42.5	-0.8
KMRM	Mail Ridge	73.54	39	P	P	07 25 46.6	+0.7
ARVC	Arvin	73.67	45	P	P	07 25 46.9	+0.2
	baz=236						
MWC	Mount Wilson	73.71	46	P	P	07 25 46.6	-0.5
MWC				IAmb	IAmb	07 25 48.2	
	comp=Z,12nm,0.9s						
VES	Vestal, Richgr	73.90	44	P	P	07 25 48.4	+0.4
	baz=236						
KHMM	Horse Mountain	73.93	38	P	P	07 25 48.3	0.0
KHMM				IAmb	IAmb	07 25 49.7	
	comp=Z,7.9nm,0.9s						
QSPA	South Pole Qui	73.97	180	P	P	07 25 47.5	-0.5
MURC	Murrieta	73.98	47	P	P	07 25 48.9	+0.3
	baz=238						
BFSC	Mount Baldy Ra	74.00	47	P	P	07 25 48.6	-0.1
	baz=237,SNR=5.7						
ESJX	Sierra Juarez	74.04	49	P	P	07 25 49.4	+0.3
ESJX				IAmb	IAmb	07 25 50.8	
	comp=Z,9.2nm,1.2s						
O02D	Mt. Diablo Mer	74.07	39	P	P	07 25 49.8	+0.8
	baz=232,SNR=6.7						
EDW2	Edwards Air Fo	74.11	46	P	P	07 25 49.8	+0.5
	baz=237,SNR=8.9						
MONP2	Monument Peak	74.16	48	P	P	07 25 50.2	+0.4
	baz=238,SNR=11						
ISA	Isabella, Lake	74.21	45	P	P	07 25 50.4	+0.5
	baz=236,SNR=7.0						
KRMB	Red Mountain	74.24	37	P	P	07 25 50.9	+0.9
KRMB				IAmb	IAmb	07 25 51.9	
	comp=Z,8.6nm,0.8s						
IKP	In-Ko-Pah, Jac	74.26	49	P	P	07 25 50.6	+0.3
	baz=239						
CMB	Columbia Colle	74.29	42	P	P	07 25 49.8	-0.5
CMB				IAmb	IAmb	07 25 51.4	
	comp=Z,7.8nm,0.9s						
WDC	Whiskeytown Da	74.46	39	P	P	07 25 51.2	+0.1
PFO	Pinyon Flats O	74.51	48	P	P	07 25 52.1	+0.4
	comp=Z,4.4nm,0.8s,baz=264,slow=4.1,SNR=9.5						
PFO	Pinyon Flats O	74.51	48	P	P	07 25 51.8	+0.1
	baz=238,SNR=6.0						
PFO	Pinyon Flats O	74.51	48	P	P	07 25 51.7	0.0
TPFO	Pinon Flats	74.51	48	P	P	07 25 51.6	-0.1
	baz=238,SNR=5.8						
N02D	Trinity Center	74.61	38	P	P	07 25 52.9	+0.9
	baz=232,SNR=6.0						
SWSC	Sam W. Stewart	74.63	49	P	P	07 25 52.1	-0.1
	baz=239						
LRMC	Laurel Mtn Rad	74.65	45	P	P	07 25 52.4	-0.1
	baz=237						
O03E	Paynes Creek	74.74	39	P	P	07 25 52.9	+0.1
	baz=233,SNR=5.3						
M02C	Callahan	74.77	38	P	P	07 25 53.9	+0.9
	baz=232						
L02E	Cave Junction	74.81	37	P	P	07 25 53.8	+0.7
	baz=231						
CWC	Cottonwood Cre	74.91	44	P	P	07 25 54.0	+0.1
	baz=236						
MDPB	Devils Postpil	74.91	43	P	P	07 25 54.0	-0.1
MDPB				IAmb	IAmb	07 25 55.3	
	comp=Z,7.9nm,0.8s						
OMMB	Old Mammoth Mi	74.95	43	P	P	07 25 54.0	-0.4
BELC	Belle Mtn. Jos	75.04	47	P	P	07 25 55.0	+0.3
	baz=238,SNR=10						
YBH	Yreka Blue Hor	75.07	38	P	P	07 25 55.6	+1.0
	comp=Z,11nm,0.7s,baz=193,slow=2.8,SNR=43						
YBH	Yreka Blue Hor	75.07	38	P	P	07 25 55.8	+1.2
YBH				IAmb	IAmb	07 25 56.5	
	comp=Z,11nm,0.9s						
MPMC	Manual Prospec	75.10	45	P	P	07 25 55.5	+0.4
	baz=237,SNR=12						
K02D	Willamette Mer	75.11	37	P	P	07 25 55.8	+0.9
	baz=231						
GSC	Goldstone, Bar	75.16	46	P	P	07 25 55.5	+0.1
	baz=238,SNR=5.2						
WAKR	Walker	75.17	42	P	P	07 25 55.0	-0.5
WAKR				IAmb	IAmb	07 25 57.0	
	comp=Z,7.9nm,0.7s						
HEC	Hector,Ludlow	75.23	47	P	P	07 25 55.9	+0.2
	baz=238,SNR=5.4						
BC3	Big Chuckawall	75.25	48	P	P	07 25 56.2	+0.3
	baz=239						
J01E	Myrtle Point	75.26	36	P	P	07 25 56.3	+0.7
	baz=230						
GLA	Glamis	75.39	49	P	P	07 25 57.2	+0.6
	baz=239						
PNTR	Pine Nut	75.40	41	P	P	07 25 57.2	+0.5
HUMO	Hull Mountain	75.47	37	P	P	07 25 57.4	+0.6
HUMO				IAmb	IAmb	07 25 58.8	
	comp=Z,11nm,1.3s						
L04D	Klamath Falls	75.61	38	P	P	07 25 58.2	+0.5
	baz=232						
M04C	Macdoel	75.61	38	P	P	07 25 58.4	+0.6
	baz=232,SNR=6.7						
GMRC	Granite Mounta	75.68	47	P	P	07 25 58.6	+0.2
	baz=238,SNR=9.0						
GRAC	Grapevine Rang	75.69	44	P	P	07 25 58.9	+0.7
	baz=237						
IRM	Iron Mountain	75.72	48	P	P	07 25 58.9	+0.4
	baz=239,SNR=13						
FURC	Furnace Creek,	75.74	45	P	P	07 25 58.8	+0.4
	baz=237						
RYN	Ryan	75.83	42	P	P	07 25 59.0	-0.2
SHOC	Shoshone, Teco	75.84	46	P	P	07 25 59.5	+0.4
	baz=238						
NVAR	Mina Array Bea	75.86	43	P	P	07 25 59.8	+0.4
	comp=Z,5.8nm,0.7s,baz=225,slow=9.3,SNR=50						
NVAR	Mina Array Bea	75.86	43	P	P	07 25 59.4	0.0
I02D	Swisshome	75.90	35	P	P	07 25 59.7	+0.5
	baz=230						
I03D	Drain, OR	75.92	36	P	P	07 25 59.6	+0.3
	baz=231						
214A	Organ Pipe Nat	76.33	51	P	P	07 26 02.0	+0.1
	baz=241						
J04D	Umpqua Nationa	76.35	37	P	P	07 26 02.5	+0.5
	baz=232,SNR=7.0						
TPNV	Topopah Spring	76.42	45	P	P	07 26 02.7	+0.2
	baz=238,SNR=9.4						
PDMCI	Parker Dam,Lak	76.51	48	P	P	07 26 03.3	+0.5
	baz=240,SNR=12						
I04A	Tendick Farm,	76.52	36	P	P	07 26 03.5	+0.7
	baz=232						
MOD	Modoc Plateau	76.61	39	P	P	07 26 02.9	-0.5
MOD				IAmb	IAmb	07 26 04.7	
	comp=Z,5.9nm,0.7s						
K05A	Summer Lake	76.74	38	P	P	07 26 04.8	+0.6
K05A				IAmb	IAmb	07 26 05.9	
	comp=Z,14nm,1.0s						
H04D	Lebanon	76.78	36	P	P	07 26 04.7	+0.6
	baz=231						
J05D	Fort Rock, OR	76.88	37	P	P	07 26 05.5	+0.6
	baz=233,SNR=11						
G03D	McMinnville, O	76.93	35	P	P	07 26 05.5	+0.6
	baz=231						
W13A	Hualapai Mount	77.10	47	P	P	07 26 06.4	0.0
W13A				IAmb	IAmb	07 26 07.9	
	comp=Z,7.3nm,0.9s						
PINE	Pine Mountain	77.36	37	P	P	07 26 07.5	-0.1
PINE				IAmb	IAmb	07 26 09.3	
	comp=Z,14nm,1.0s						
I05D	Terrebonne, OR	77.46	36	P	P	07 26 08.4	+0.5
	baz=232						
R11A	Troy Canyon, C	77.61	44	P	P	07 26 09.3	+0.2
	baz=238						
WVOR	Wild Horse Val	77.92	39	P	P	07 26 10.4	-0.3
WVOR				IAmb	IAmb	07 26 11.9	
	comp=Z,7.0nm,0.9s						
TUC	Tucson	78.01	51	P	P	07 26 12.0	+0.8
	baz=242						
G05D	Wamic, OR	78.02	36	P	P	07 26 11.2	+0.2
	baz=232						
E04D	Cinebar	78.15	34	P	P	07 26 12.2	+0.7
	baz=231						
F05D	White Salmon	78.34	35	P	P	07 26 13.0	+0.3
	baz=232						
I07A	Izee	78.36	37	P	P	07 26 13.0	0.0
D03D	Eldon	78.49	33	P	P	07 26 14.5	+1.0
	baz=230						
CCUT	Cedar City	78.70	45	P	P	07 26 15.5	+0.4
U15A	North Rim	78.88	47	P	P	07 26 16.5	+0.3
U15A				IAmb	IAmb	07 26 18.1	
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	79.09	48	P	P	07 26 17.7	+0.5
	baz=241						
ELK	Elko	79.11	42	P	P	07 26 17.3	0.0
	comp=Z,3.7nm,0.9s,baz=235,slow=5.5,SNR=16						
NJ2	Nanjing	79.36	308	*e*P	P	07 26 19.3	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
A04D	Lummi Island	79.44	32	P	P	07 26 19.6	+1.1
	baz=231						
B05A	Bryant	79.47	33	P	P	07 26 19.3	+0.6
	baz=231						
MSU	Marysvale	79.99	45	P	P	07 26 21.8	-0.2
TTA	Tatalina	80.15	9	P	P	07 26 22.6	+0.5
121A	Cookes Peak, D	80.37	52	P	P	07 26 25.0	+0.9
	baz=244						
DUG	Dugway, Tooele	80.40	43	P	P	07 26 23.9	-0.2
	baz=240						
N25K	Chitina, Valde	81.11	14	P	P	07 26 27.5	+0.3
	baz=209						
N25K	Chitina, Valde	81.11	14	P	P	07 26 27.2	0.0
N25K				IAmb	IAmb	07 26 28.0	
	comp=Z,5.2nm,0.7s						
GLB	Gilahina Butte	81.15	15	P	P	07 26 27.0	-0.4
GLB				IAmb	IAmb	07 26 27.6	
	comp=Z,4.4nm,0.7s						
MNTX	Cornudas Mount	81.86	54	P	P	07 26 32.3	+0.6
	baz=245						
MVCO	Mesa Verde	81.93	48	P	P	07 26 31.4	-0.8
	baz=243						
MCK	McKinley	82.08	11	P	P	07 26 32.0	-0.2
	baz=205						
NEW	Newport	82.14	35	P	P	07 26 32.5	-0.3
	comp=Z,1.9nm,0.6s,baz=182,slow=7.9,SNR=5.1						
NEW	Newport	82.14	35	P	P	07 26 32.6	-0.3
	baz=235						
TX31	Lajitas Ar. Si	82.26	57	P	P	07 26 35.3	+1.3
TX31				IAmb	IAmb	07 26 39.4	
	comp=Z,13nm,1.2s						
TXAR	Lajitas Array	82.26	57	P	P	07 26 34.3	+0.4
	comp=Z,1.5nm,0.6s,baz=217,slow=9.1,SNR=24						
TXAR	Lajitas Array	82.26	57	P	P	07 26 33.9	-0.1
ANMO	Albuquerque	82.41	50	P	P	07 26 34.9	+0.1
	comp=Z,4.9nm,0.8s,baz=234,slow=6.4,SNR=29						
ANMO	Albuquerque	82.41	50	P	P	07 26 34.9	+0.1
	baz=244						
ANMO	Albuquerque	82.41	50	P	P	07 26 35.1	+0.4
ANMO				IAmb	IAmb	07 26 36.1	
	comp=Z,7.7nm,0.9s						
MCMT	McKenzie Canyo	82.75	39	P	P	07 26 36.4	+0.1
WRH	Wood River Hil	82.91	11	P	P	07 26 35.4	-0.9
MLY	Manley	82.95	10	P	P	07 26 36.1	-0.5
	baz=203						
BCAR	Beaver Creek A	83.04	15	P	P	07 26 36.4	-0.7
HDA	Harding Lake	83.08	12	P	P	07 26 37.0	-0.2
	baz=207						
MSO	Missoula	83.14	37	P	P	07 26 38.1	0.0
	baz=238						
SCRK	Sand Creek	83.31	13	P	P	07 26 38.4	-0.1
	baz=210						
TCOL	CIGO, UAF Yank	83.32	11	P	P	07 26 38.3	0.0
	baz=206						
S22A	4UR Ranch, Cre	83.36	48	P	P	07 26 40.2	+0.5
	baz=244						
IMAR	Indian Mountai	83.36	9	P	P	07 26 38.4	-0.3
IL31		83.41	12	P	P	07 26 38.9	0.0
IL31				IAmb	IAmb	07 26 39.5	
	comp=Z,11nm,1.3s						
ILAR	Eielson Array	83.41	12	P	P	07 26 38.2	-0.6
	comp=Z,2.1nm,0.4s,baz=230,slow=5.6,SNR=73						
ILAR	Eielson Array	83.41	12	P	P	07 26 38.4	-0.5
O20A	White River Ci	83.44	45	P	P	07 26 39.6	-0.3
	baz=243						
POKR	Poker Plat Res	83.62	11	P	P	07 26 39.5	-0.4
	baz=207						
POKR	Poker Plat Res	83.62	11	P	P	07 26 39.2	-0.7
POKR				IAmb	IAmb	07 26 40.3	
	comp=Z,9.5nm,0.9s						
BW06	Boulder Array	83.80	42	P	P	07 26 41.4	-0.2
	baz=242						
PDAR	Pinedale Array	83.80	42	P	P	07 26 41.4	-0.3
	comp=Z,3.5nm,0.6s,baz=207,slow=3.5,SNR=41						
PDAR	Pinedale Array	83.80	42	P	P	07 26 41.1	-0.6
BOZ	Bozeman (W)	83.88	39	P	P	07 26 42.4	+0.4
	baz=240						
SMCO	Snowmass	83.89	46	P	P	07 26 42.4	0.0
H17A	Grant Village	83.93	41	P	P	07 26 43.4	+1.1
	baz=241						
SDCO	Great Sand Dun	84.31	48	P	P	07 26 44.4	0.0
	baz=245						
MSTX	Muleshoe	84.79	53	P	P	07 26 46.7	+0.1
	baz=247						
COLD	Coldfoot	85.06	9	P	P	07 26 48.3	+1.3
	baz=204						
RLMT	Red Lodge	85.10	40	P	P	07 26 48.6	+0.5
	baz=242						
N23A	Red Feather La	85.35	45	P	P	07 26 49.3	-0.2
	baz=244						
833A	Chaparral WMA,	85.36	59	P	P	07 26 49.2	-0.2
	baz=249						
JCT	Junction City	85.80	57	P	P	07 26 51.3	-0.3
	baz=249						
EGMT	Eagleton	86.20	38	P	P	07 26 53.3	+0.1
	baz=241						
ABTX	Abilene, Hawle	86.70	55	P	P	07 26 56.2	+0.3
	baz=249						
LAO	LASA Array	87.71	40	P	P	07 27 01.1	+0.7
	baz=244						
HHC	Hu-ho-hao-te	88.37	313	*e*P	P	07 27 04.8	+1.1
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,240nm,7.2s						
INK	Inuvik	89.30	14	P	P	07 27 06.7	-0.5
	comp=Z,0.5nm,0.5s,baz=200,slow=3.5,SNR=2.3						
CD2	Chengdu	90.86	302	*e*P	P	07 27 16.0	+0.5
YKA	Yellowknife Ar	91.33	24	P	P	07 27 16.5	-0.3
	comp=Z,0.2nm,0.4s,baz=223,slow=3.6,SNR=6.2						
CMAR	Chiang Mai Arr	91.38	289	P	P	07 27 19.2	+1.1
	comp=Z,1.0nm,0.4s,baz=89,slow=2.1,SNR=6.0						
C36M	Paulatuk	92.43	16	P	P	07 27 22.1	+0.4
	baz=228						
VNA2	Neumayer--Watz	92.79	176	P	P	07 27 23.9	+0.3
ECSD	EROS Data Cent	92.82	45	P	P	07 27 24.2	0.0
	baz=250						
VNA1	Neumayer--Stat	93.00	176	P	P	07 27 25.1	+0.6
ARCES	ARCESS Array B	125.06	351	PKP	PKPdf	07 33 08.8	-0.7
	comp=Z,3.4nm,0.8s,baz=7.4,slow=1.6,SNR=6.1						
KMBO	Kilima Mbogo	143.86	245	PKP	PKPbc	07 33 44.8	-0.2
	comp=Z,1.5nm,0.5s,baz=73,slow=7.8,SNR=4.6						
CLL	Collm	144.28	351	*e*PKPdf	PKPbc	07 33 45.0	+0.3
BRTR	Keskin Array B	145.69	319	PKPbc	PKPbc	07 33 49.7	+0.1
	comp=Z,1.6nm,0.8s,baz=80,slow=4.2,SNR=4.9						
GERES	GERESS Array B	146.56	350	PKPbc	PKPbc	07 33 51.1	-0.6
	comp=Z,0.8nm,0.7s,baz=127,slow=0.7,SNR=4.2						
ESDC	Sonseca Array	155.22	17	PKPab	PKPab	07 34 28.9	-0.6
	comp=Z,0.9nm,0.6s,baz=325,slow=4.0,SNR=4.8						
TORD	Torodi Ar. Bea	175.66	132	PKPab	PKPab	07 36 00.0	-0.1
	comp=Z,1.3nm,0.8s,baz=268,slow=5.2,SNR=4.7						

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*WEL **29** 07:17:03.1±0.8, 34°S±10°×17°8W±1°3, h185^{km}±21^{km}, M3.8/33, mB4.4/14, ML4.5/31, MLv4.4/33, Mw(mB)3.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=122.6*

*IDC **29** 07:17:30.1±9.3, 33°.53S×179°.94W, h238^{km}±97^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.3/37, mbtmp4.2/3, MS3.6/2, Ms1 3.5/2, ms1mx2.9/17, Error ellipse: s-maj=111.0km s-min=43.2km az=2.0*

ISC 29 07:16:55.6±1.8**, 34°.2S**±0°.1×**178°.2W**±0°.2**, h10**^{km}**, n51, σ2^{s}.17**/76**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.36	219	P	Pn	07 18 04.6	+2.7
MXZ				S	Sn	07 18 49.8	-3.0
WMGZ	Waiomatatini S	4.51	216	P	Pn	07 18 06.8	+3.0
WMGZ				S	Sn	07 18 58.2	+1.8
PKGZ	Pakihiroa	4.73	218	P	Pn	07 18 08.9	+1.9
PKGZ				S	Sn	07 19 04.6	+2.7
PUZ	Puketiti	4.78	215	P	Pn	07 18 09.0	+1.3
PUZ				S	Sn	07 19 04.8	+1.6
HAZ	Te Kaha	4.79	221	P	Pn	07 18 10.0	+2.3
HAZ				S	Sn	07 19 06.6	+3.3
RUGZ	Raukumara Rang	5.00	220	P	Pn	07 18 12.4	+1.6
RUGZ				S	Sn	07 19 09.8	+1.2
TWGZ	Tauwhareparae	5.00	217	P	Pn	07 18 14.7	+3.9
TWGZ				S	Sn	07 19 10.4	+1.8
CNGZ	Carnagh Statio	5.14	213	P	Pn	07 18 14.5	+1.9
CNGZ				S	Sn	07 19 12.8	+0.9
TKGZ	Te Karaka	5.27	216	P	Pn	07 18 16.7	+2.4
TKGZ				S	Sn	07 19 15.1	0.0
MWZ	Matawai	5.35	219	P	Pn	07 18 16.7	+1.2
MWZ				S	Sn	07 19 16.8	-0.4
URZ	Urewera	5.52	222	P	Pg	07 18 50.7	+9.5
	13nm,0.3s,baz=26,slow=5.5,SNR=4.1						
URZ				S	Sg	07 19 51.1	-1.6
	3.6nm,0.3s,baz=168,slow=20,SNR=2.7						
URZ	Urewera	5.52	222	P	Pn	07 18 19.4	+1.7
URZ				S	Sn	07 19 21.3	0.0
RAGZ	Rawiri	5.53	218	P	Pn	07 18 20.3	+2.3
RAGZ				S	Sn	07 19 20.4	-1.3
KUZ	Kuaotunu	5.54	241	P	Pn	07 18 21.4	+3.3
OPRZ	Ohinepanea	5.56	228	P	Pn	07 18 21.1	+2.7
OPRZ				S	Sn	07 19 21.2	-1.2
PRGZ	Paritu Road	5.64	213	P	Pn	07 18 22.6	+3.1
TGRZ	Tauranga	5.68	230	P	Pn	07 18 22.7	+2.8
SNGZ	Shannon Statio	5.79	217	P	Pn	07 18 24.0	+2.5
SNGZ				S	Sn	07 19 30.2	+2.3
KNZ	Kokohu	5.82	213	P	Pn	07 18 23.4	+1.5
KNZ				S	Sn	07 19 28.8	+0.2
MHGZ	Mahia Peninsul	5.82	211	P	Pn	07 18 23.8	+1.9
RTZ	Ruatahuna	5.85	220	P	Pn	07 18 24.2	+1.9
RTZ				S	Sn	07 19 31.1	+1.7
MUGZ	Murupara	5.86	222	P	Pn	07 18 24.4	+1.9
MUGZ				S	Sn	07 19 28.7	-1.1
WIAZ	Waiheke Island	5.99	243	P	Pn	07 18 24.3	0.0
RAHZ	Arahi	6.02	217	P	Pn	07 18 26.7	+2.0
RAHZ				S	Sn	07 19 35.3	+1.7
WHHZ	Waihua	6.07	216	P	Pn	07 18 28.4	+3.1
WHHZ				S	Sn	07 19 34.9	+0.1
MTHZ	Maungataniwha	6.09	219	P	Pn	07 18 28.1	+2.4
MTHZ				S	Sn	07 19 35.0	-0.5
TOZ	Tahuroa Road	6.17	234	P	Pn	07 18 30.0	+3.3
NMHZ	Naumai	6.29	218	P	Pn	07 18 30.6	+2.0
NMHZ				S	Sn	07 19 37.5	-3.1
MRHZ	Matea Rd	6.31	222	P	Pn	07 18 29.7	+1.0
MRHZ				S	Sn	07 19 36.6	-4.2
ARHZ	Aropaoanui	6.33	216	P	Pn	07 18 30.5	+1.6
ARHZ				S	Sn	07 19 40.0	-1.2
BKZ	Black Stump Fm	6.51	219	P	Pn	07 18 33.2	+1.8
BKZ				S	Sn	07 19 43.7	-2.1
MCHZ	McNeill Hill	6.62	216	P	Pn	07 18 35.1	+2.2
MCHZ				S	Sn	07 19 46.8	-1.5
KWHZ	Kaweka Forest	6.74	218	P	Pn	07 18 35.9	+1.3
KWHZ				S	Sn	07 19 47.6	-3.8
KAHZ	Kahuranaki	6.80	214	P	Pn	07 18 36.7	+1.2
KATZ	Kakaramea	6.81	224	P	Pn	07 18 39.2	+3.5
TMVZ	Te Maari	6.90	223	P	Pn	07 18 37.5	+0.6
ETVZ	East Tongariro	6.91	223	P	Pn	07 18 37.8	+0.7
KRHZ	Kereru	6.93	217	P	Pn	07 18 38.0	+0.8
OTVZ	Oturere	6.96	223	P	Pn	07 18 38.4	+0.7
WTVZ	West Tongariro	6.97	224	P	Pn	07 18 40.3	+2.5
BHHZ	Black Hill Sta	6.97	219	P	Pn	07 18 39.8	+2.0
NGZ	Ngauruhoe	7.00	223	P	Pn	07 18 40.1	+1.8
HIZ	Hauiti	7.03	230	P	Pn	07 18 41.8	+3.2
MOVZ	Moawhango	7.08	221	P	Pn	07 18 40.6	+1.3
WNVZ	Wahianoa	7.11	222	P	Pn	07 18 41.8	+2.0
BFZ	Birch Farm	7.80	213	P	Pn	07 18 49.1	-0.1
BFZ				S	Sn	07 20 12.9	-4.7
DZM	Mont Dzumac	18.11	308	LR	LR	07 25 54.0	
	comp=Z,136nm,19.9s,baz=206,slow=30						
STKA	Stephens Creek	33.61	263	LR	LR	07 37 02.5	
	comp=Z,118nm,18.2s,baz=21,slow=36						
ASAR	Alice Springs	42.85	271	P	P	07 24 53.9	-0.2
	1.3nm,0.7s,baz=99,slow=7.5,SNR=3.3						
WRA	Warramunga Arr	44.18	276	P	P	07 25 03.6	-1.2
	1.6nm,0.4s,baz=114,slow=7.8,SNR=5.0						
FINES	FINESS Array B	148.62	338	PKPbc	PKPab	07 36 44.2	-1.4
	6.2nm,0.9s,baz=38,slow=2.5,SNR=13						

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*SKHL **29** 07:17:50.9±0.4, 43°.24N×147°.49E, h42^{km}±2^{km}, mb4.6/3*

*JMA **29** 07:17:51.6±0.2, 43°.25N×147°.32E, h36^{km}, M3.5*

ISC 29 07:17:49.1±2.5**, 43°.35N**±0°.09×**147°.38E**±0°.09**, h11**^{km}±12^{km}**, n15, σ0^{s}.92**/25**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.19	271	P	Pg	07 18 11.9	0.0

NEM2				eS	Sg	07 18 26.7	-0.7
NMR	Nemuro--Hokkai	1.20	272	iP	Pg	07 18 12.0	-0.1
NMR				iS	Sg	07 18 27.9	+0.1
YUK	Yuzh-Kuril'sk	1.29	302	eP	Pn	07 18 14.0	+0.9
YUK				AMB	AMB	07 18 16.2	
	290nm,0.4s						
YUK				iS	Sg	07 18 30.6	-0.1
YUK				A	A	07 18 33.7	
	750nm,0.4s						
YUK				A	A	07 18 33.7	
	640nm,0.4s						
GRPR	Tuman	1.33	300	eP	Pn	07 18 14.0	+0.4
GRPR				AMB	AMB	07 18 15.0	
	240nm,0.3s						
GRPR				iS	Sg	07 18 31.3	-0.6
GRPR				A	A	07 18 31.9	
	2µm,0.4s						
GRPR				A	A	07 18 31.9	
	1µm,0.4s						
JKHN	Kushirohamanak	1.64	261	P	Pn	07 18 18.7	+0.9
JKHN				eS	Sn	07 18 37.9	-1.0
JRA	Rausu	1.74	291	P	Pn	07 18 20.2	+1.0
JRA				eS	Sn	07 18 41.6	+0.2
JNSB	Nemuroshibetsu	1.78	285	P	Pn	07 18 20.7	+1.0
JNSB				eS	Sn	07 18 42.0	-0.3
KUR	Kuril'sk	1.92	10	eP	Pn	07 18 22.0	+0.3
KUR				AMB	AMB	07 18 28.3	
	70nm,0.4s						
KUR				iS	Sn	07 18 45.0	-0.8
KUR				A	A	07 18 47.0	
	100nm,0.2s						
KUR				A	A	07 18 47.0	
	110nm,0.2s						
JNK	Nakash	1.95	278	P	Pn	07 18 22.5	+0.4
JNK				eS	Sn	07 18 45.5	-1.1
JAK	Akkeshi	1.99	261	P	Pn	07 18 23.2	+0.5
JAK				eS	Sn	07 18 46.1	-1.5
JTKR	Abashiri--Toko	2.59	285	P	Pn	07 18 32.8	+1.9
JOB	Onbets	2.63	261	P	Pn	07 18 32.1	+0.6
JAR	Ashorobuto	2.63	270	P	Pn	07 18 33.0	+1.5
JCH	Churui	3.04	257	P	Pn	07 18 37.8	+0.8
JNBK	Urakawa-nobuka	3.56	254	P	Pn	07 18 45.0	+0.7

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*INET **29** 07:21:28.6, 10°.60N×86°.68W, h15^{km}, MW3.2*

UCR 29 07:21:31.3±5.0**, 10°.77N×86°.40W, h13^{km}**±35^{km}**, MW3.7, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.79	94	eP	Pb	07 21 47.5	+0.5
LAPC	Finca la Perla	0.95	90	iP	Pb	07 21 48.4	-1.3
GB1A	Borinquen Arri	0.99	87	eP	Pb	07 21 49.6	-0.7
GUAI	GUAI	1.01	119	iP	Pb	07 21 49.0	-1.6
GUAI				iS	Sb	07 22 03.5	-0.3
ORTG	Ortega, Santa	1.01	113	eP	Pb	07 21 49.5	-1.2
ORTG				eS	Sg	07 22 04.6	+0.6
BUAI	Buenos Aires	1.06	84	iP	Pb	07 21 51.0	-0.4
PLVR	Palo Verde	1.11	112	eP	Pb	07 21 50.3	-2.3
DUNO	Dulce Nombre,	1.12	127	eP	Pb	07 21 50.6	-2.1
DUNO				eS	Sb	07 22 05.7	-1.5
HORNC	Hornillas	1.20	93	iP	Pn	07 21 44.0	-10
CUI	Cuipilapa	1.22	95	eP	Pn	07 21 52.8	-1.4
PTEN	Parque Tenorio	1.39	92	iP	Pg	07 21 59.1	+1.0
JTS	Las Juntas de	1.50	108	eP	Pn	07 21 57.4	-0.6
ARE1	Arenal 1	1.68	100	eP	Pn	07 22 00.7	+0.2
ACON	Acoyapa	1.69	45	eP	Pn	07 21 59.9	-0.7
JACO	JACO, Garabito	2.04	122	eP	Pn	07 22 05.5	+0.1
ESPN	Las Esperanzas	2.50	55	eP	Pn	07 22 11.7	0.0
LCR2	La Lucha 2	2.57	113	eP	Pn	07 22 14.1	+1.2
PEZE	Perez Zeledon,	3.02	117	eP	Pn	07 22 19.8	+1.0
MRVA	Moravia de Chi	3.06	108	eP	Pn	07 22 21.0	+1.5
EDLM	Las Mercedes	3.14	118	eS	Sn	07 22 56.8	-1.3
EDPN	Palmar Norte	3.41	121	eS	Sn	07 23 02.5	-2.1
DRK0	Durika	3.45	115	eP	Pb	07 22 29.5	-2.9
RIOS	Rincon, Osa	3.51	126	eP	Pn	07 22 25.9	+0.3
PIRO	Carate, Puerto	3.83	128	eP	Pn	07 22 30.4	+0.4

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*IDC **29** 07:40:43.9±2.9, 31°.86S×69°.33W, h83^{km}±25^{km}, mb3.2/4, mb1 3.5/7, mb1mx3.4/34, mbtmp3.6/7, Error ellipse: s-maj=42.6km s-min=25.1km az=91.0*

*GUC **29** 07:40:47.2±0.7, 31°.80S×69°.62W, h137^{km}±8^{km}, ML3.8*

ISC 29 07:40:47.0±0.8**, 31°.81S**±0°.04×**69°.34W**±0°.06**, h116^{km}**±7^{km}**, n28, σ1^{s}.32**/43**, mb3.4**/4**, 11C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.88	57	⇓iP	Pn	07 41 07.6	0.0
RTLL				iS	Sn	07 41 22.8	-0.4
RTLL				IAML		07 41 23.9	
	comp=N,6µm,0.5s						
VA03	San Esteban	1.40	227	⇑eP	Pn	07 41 13.9	+0.7
VA03				eS	Sn	07 41 33.9	+0.9
VA03				IAML		07 41 34.9	
	comp=E,2µm,0.2s						
CO03	El Pedregal	1.50	309	⇑iP	Pn	07 41 14.9	+0.5
CO03				eS	Sn	07 41 35.4	+0.3
CO03				IAML		07 41 37.4	
	comp=E,1µm,0.3s						
CO02	Combarbal	1.54	292	⇑iP	Pn	07 41 14.9	+0.1
CO02				eS	Sn	07 41 36.2	+0.3
PEL	Peldehue	1.75	220	⇑iP	Pn	07 41 17.4	+0.1
PEL				iS	Sn	07 41 40.8	+0.4
PEL				IAML		07 41 42.2	
	comp=E,920nm,0.4s						
ROCH	El Roble	1.83	230	⇑eP	Pn	07 41 18.4	0.0
ROCH				eS	Sn	07 41 42.2	-0.2
ROCH				IAML		07 41 45.7	
	comp=N,959nm,0.4s						
CO01	Juntas del Tor	1.94	340	⇑iP	Pn	07 41 21.3	+1.6
CO01				iS	Sn	07 41 47.0	+2.3
FSR	Penalolen	1.95	211	eP	Pn	07 41 21.8	+2.1
FSR				eS	Sn	07 41 47.2	+2.5
MT03	Universidad Ad	1.95	210	⇑iP	Pn	07 41 20.6	+0.8
MT03				iS	Sn	07 41 46.3	+1.5
MT03				IAML		07 41 48.0	
	comp=N,1µm,0.5s						
MT05	Renca	1.98	216	⇑iP	Pn	07 41 20.5	+0.4
MT05				eS	Sn	07 41 46.0	+0.7
GO04	Tololo Observa	2.06	322	⇑iP	Pn	07 41 21.1	-0.2
GO04				eS	Sn	07 41 46.9	-0.5
MT02	Curacav	2.10	226	eP	Pn	07 41 20.9	-0.6
MT02				iS	Sn	07 41 46.8	-1.2
LMEL	Las Melosas	2.16	199	eP	Pn	07 41 23.5	+1.0
LMEL				iS	Sn	07 41 51.9	+2.2
LMEL				IAML		07 41 59.9	
	comp=N,354nm,0.1s						
MT09	Talagante	2.41	215	eP	Pn	07 41 25.1	-0.5
MT09				iS	Sn	07 41 54.6	-0.6
MT09				IAML		07 41 56.2	
	comp=E,705nm,0.6s						
VA05	Santo Domingo	2.66	225	eP	Pn	07 41 27.9	-0.9
VA05				IAML		07 42 08.5	
	comp=E,468nm,0.5s						
AC05	El Transito	3.07	344	⇑iP	Pn	07 41 35.0	+0.7
BO02	Sierra Bellavi	3.21	202	⇑iP	Pn	07 41 36.2	+0.1
BO02				iS	Sn	07 42 14.2	+0.2
BO02				IAML		07 42 19.6	
	comp=N,248nm,0.2s						
BO03	Pichilemu	3.47	219	eP	Pn	07 41 36.9	-2.5
BO03				IAML		07 42 31.5	
	comp=N,65nm,0.3s						
AC04	Llanos de Chal	3.89	337	eP	Pn	07 41 43.9	-1.2
PLCA	Paso Flores	8.96	186	P	Pn	07 42 50.1	-3.4
	comp=N,0.1nm,0.3s,baz=357,slow=14,SNR=5.7						
LVC	Limon Verde	9.17	2	P	Pn	07 42 53.6	-3.1
	comp=N,1.1nm,0.3s,baz=176,slow=7.8,SNR=10.0						
SIV	San Ignacio	17.45	27	P	P	07 44 43.0	+0.2
	comp=N,0.1nm,0.3s,baz=230,slow=10,SNR=6.2						
TXAR	Lajitas Array	69.00	328	P	P	07 51 41.1	+1.1
	comp=N,0.4nm,0.5s,baz=158,slow=8.9,SNR=7.2						
TORD	Torodi Ar. Bea	81.31	69	P	P	07 52 51.6	+0.8
	comp=N,0.6nm,0.6s,baz=253,slow=4.3,SNR=2.7						
PDAR	Pinedale Array	82.88	331	P	P	07 52 58.8	+0.1
	comp=N,0.2nm,0.7s,baz=106,slow=5.1,SNR=1.9						
NVAR	Mina Array Bea	83.43	323	P	P	07 53 03.5	+1.9
	comp=N,0.2nm,0.6s,baz=155,slow=6.9,SNR=2.1						
WRA	Warramunga Arr	123.76	207	PKP	PKPdf	07 59 31.7	0.0
	comp=N,0.2nm,0.3s,baz=152,slow=1.8,SNR=5.5						
ZALV	Zalesovo Beam	151.16	32	PKPbc	PKiKP	08 00 27.1	+0.6
	comp=N,1.6nm,0.6s,baz=304,slow=3.7,SNR=3.7						

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*GCG **29** 07:42:11.2±0.5, 12°.77N×88°.34W, h28^{km}±369^{km}, MD4.3*

*SNET **29** 07:42:15.3±1.0, 12°.96N×88°.65W, h50^{km}±9^{km}, ML4.0*

*IDC **29** 07:42:15.1±3.5, 13°.14N×88°.41W, h68^{km}±32^{km}, mb3.5/7, mb1 3.9/9, mb1mx3.6/37, mbtmp3.9/9, ML3.1/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/25, Error ellipse: s-maj=30.8km s-min=18.5km az=56.0*

*UCR **29** 07:42:15.5±1.0, 12°.96N×88°.65W, h50^{km}, ML4.0, mb4.3(NEIC)*

*INET **29** 07:42:15.0, 12°.48N×88°.56W, h6^{km}, MW3.5*

*NEIC **29** 07:42:15.4±1.9, 13°.02N±0°.03×88°.62W±0°.05, h57^{km}±11^{km}, Error ellipse: s-maj=7.3km s-min=3.7km az=73.0*

*NEIC **29** 07:42:15, 12°.96N×88°.65W, h59^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.57; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$-0.24; $M_{r\theta}$1.74; $M_{\theta\phi}$1.22; $M_{\phi r}$-2.07; Fault plane solution: $M_0$3.85000×10^{15} NP1:ϕ_s132.30000°, δ68.04000°, λ104.87000°. NP2:ϕ_s276.93000°, δ26.31000°, λ57.53000°. Principal axes: T 3.8309, Plg64.0000°, Azm67.0000°; N 0.0376, Plg14.0000°, Azm307.0000°; P -3.8685, Plg22.0000°, Azm211.0000°;*

ISC 29 07:42:14.8±0.9**, 12°.99N**±0°.06×**88°.61W**±0°.03**, h65^{km}**±7^{km}**, n109, σ1^{s}.30**/125**, mb4.0**/11**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	0.51	9	eS	Sn	07 42 36.9	+0.4
COEB				IAML		07 42 42.0	
	comp=Z,14µm,0.4s						
COEB	Comit de Eme	0.51	9	eS	Sn	07 42 36.9	+0.4
COEB				IAML		07 42 42.0	
	comp=Z,14µm,0.4s						
TECA	Tecapa	0.51	12	eP	Pn	07 42 27.7	+0.2
TECA	Tecapa	0.51	12	eP	Pn	07 42 27.7	+0.2
RANC	El Ranchito	0.54	35	eS	Sn	07 42 38.1	+1.0
RANC	El Ranchito	0.54	35	eS	Sn	07 42 38.1	+1.0
VSM	San Miguel	0.54	37	eP	Pn	07 42 28.3	+0.4
VSM	San Miguel	0.54	37	eP	Pn	07 42 28.3	+0.4
PACA	Pacayal	0.55	30	eP	Pn	07 42 28.5	+0.7
PACA	Pacayal	0.55	30	eP	Pn	07 42 28.5	+0.7
CNRM	Centro Naciona	0.64	42	eP	Pn	07 42 29.1	+0.4
CNRM	Centro Naciona	0.64	42	eP	Pn	07 42 29.1	+0.4
UESV	Universidad de	0.66	345	IAML		07 42 41.7	
	comp=Z,4µm,0.3s						
UESV	Universidad de	0.66	345	IAML		07 42 41.7	
	comp=Z,4µm,0.3s						
COEG	Centro de Oper	0.68	337	eP	Pn	07 42 29.4	+0.2
COEG				eS	Sn	07 42 40.2	+0.5
COEG				IAML		07 42 43.7	
	comp=Z,7µm,0.3s						
COEG	Centro de Oper	0.68	337	eP	Pn	07 42 29.4	+0.2
COEG				eS	Sn	07 42 40.2	+0.5
COEG				IAML		07 42 43.7	
	comp=Z,7µm,0.3s						
LCND	La Caada	0.77	66	eP	Pn	07 42 30.7	+0.6
LCND	La Caada	0.77	66	eP	Pn	07 42 30.7	+0.6
LCND				eS	Sn	07 42 42.6	+1.1
LFRS	El Faro	0.77	325	eP	Pn	07 42 29.8	-0.4
LFRS	El Faro	0.77	325	eP	Pn	07 42 29.8	-0.4
CNCH	Conchagua	0.81	70	eP	Pn	07 42 31.2	+0.5
CNCH				eS	Sn	07 42 44.2	+1.8
CNCH	Conchagua	0.81	70	eP	Pn	07 42 31.2	+0.5
CNCH				eS	Sn	07 42 44.2	+1.8
LALI	Alcalda de L	0.85	305	eP	Pn	07 42 30.8	-0.3
LALI				eS	Sn	07 42 42.1	-1.1
LALI	Alcalda de L	0.85	305	eP	Pn	07 42 30.8	-0.3
LALI				eS	Sn	07 42 42.1	-1.1
FAGO	Alcalda de S	0.85	35	eP	Pn	07 42 31.4	+0.2
FAGO				eS	Sn	07 42 44.2	+0.9
FAGO	Alcalda de S	0.85	35	eP	Pn	07 42 31.4	+0.2
FAGO				eS	Sn	07 42 44.2	+0.9
IGN	Direccin Gen	0.90	323	eP	Pn	07 42 32.2	+0.3
IGN				eS	Sn	07 42 45.0	+0.6
IGN	Direccin Gen	0.90	323	eP	Pn	07 42 32.2	+0.3
IGN				eS	Sn	07 42 45.0	+0.6
UTEC	Universidad Te	0.91	321	IAML		07 42 47.8	
	comp=Z,3µm,0.5s						
UTEC	Universidad Te	0.91	321	IAML		07 42 47.8	
	comp=Z,3µm,0.5s						
OPAM	Oficina de Pla	0.92	321	eP	Pn	07 42 32.5	+0.4
OPAM	Oficina de Pla	0.92	321	eP	Pn	07 42 32.5	+0.4
SNET	Serv Nac Est T	0.92	319	eS	Sn	07 42 45.0	+0.1
SNET				IAML		07 42 46.8	
	comp=Z,4µm,0.3s						
SNET	Serv Nac Est T	0.92	319	eS	Sn	07 42 45.0	+0.1
SNET				IAML		07 42 46.8	
	comp=Z,4µm,0.3s						
SNET	Serv Nac Est T	0.92	319		Pn	07 42 32.3	+0.2
UESS	Universidad de	0.92	321	IAML		07 42 47.0	
	comp=Z,4µm,0.2s						
UESS	Universidad de	0.92	321	IAML		07 42 47.0	
	comp=Z,4µm,0.2s						
ITCA	Escuela Especi	0.94	316	eP	Pn	07 42 32.8	+0.4
ITCA				eS	Sn	07 42 45.8	+0.4
ITCA	Escuela Especi	0.94	316	eP	Pn	07 42 32.8	+0.4
ITCA				eS	Sn	07 42 45.8	+0.4
MAGS	Ministerio de	0.95	316	eP	Pn	07 42 32.4	-0.1
BOQS	Boqueron	0.98	318	eP	Pn	07 42 33.7	+0.6
BOQS				eS	Sn	07 42 47.5	+0.9
BOQS	Boqueron	0.98	318	eP	Pn	07 42 33.7	+0.6
BOQS				eS	Sn	07 42 47.5	+0.9
PMON	Piamonte	0.99	316	eP	Pn	07 42 33.4	+0.3
PMON	Piamonte	0.99	316	eP	Pn	07 42 33.4	+0.3
JAYA	Jayaque - finc	1.05	309	eP	Pn	07 42 34.3	+0.5
JAYA				eS	Sn	07 42 47.7	-0.3
JAYA				IAML		07 42 51.5	
	comp=Z,5µm,0.2s						
JAYA	Jayaque - finc	1.05	309	eP	Pn	07 42 34.3	+0.5
JAYA				eS	Sn	07 42 47.7	-0.3
JAYA				IAML		07 42 51.5	
	comp=Z,5µm,0.2s						
CEDA	San Andres	1.11	316	eS	Sn	07 42 50.2	+1.0
CEDA	San Andres	1.11	316	eS	Sn	07 42 50.2	+1.0
LLGN	La Laguna	1.21	344	eP	Pn	07 42 36.2	+0.4
LLGN				eS	Sn	07 42 53.3	+1.7
LLGN	La Laguna	1.21	344	eP	Pn	07 42 36.2	+0.4
LLGN				eS	Sn	07 42 53.3	+1.7
TACO	Tacachico	1.21	323	IAML		07 42 54.3	
	comp=Z,1µm,0.6s						
TACO	Tacachico	1.21	323	IAML		07 42 54.3	
	comp=Z,1µm,0.6s						
CEVE	Cerro Verde	1.29	310	eP	Pn	07 42 37.9	+0.8
CEVE				eS	Sn	07 42 55.8	+2.1
CEVE				IAML		07 43 04.0	
	comp=Z,5µm,0.4s						
CEVE	Cerro Verde	1.29	310	eP	Pn	07 42 37.9	+0.8
CEVE				eS	Sn	07 42 55.8	+2.1
CEVE				IAML		07 43 04.0	
	comp=Z,5µm,0.4s						
RTR	El Retiro	1.35	312	eP	Pn	07 42 37.6	-0.2
RTR	El Retiro	1.35	312	eP	Pn	07 42 37.6	-0.2
CRIN	San Cristobal	1.55	101		Pn	07 42 41.3	+1.0
CRIN				Sn	Sn	07 43 00.3	+0.8
MTO3	Montecristo	1.58	332	eP	Pn	07 42 41.2	+0.4
MTO3	Montecristo	1.58	332	eP	Pn	07 42 41.2	+0.4
MTO3	Montecristo	1.58	332		Pn	07 42 41.3	+0.4
TGUH	Tegucigalpa,Un	1.67	51		Pn	07 42 42.9	+0.8
TGUH				Sn	Sn	07 43 02.5	-0.2
ESQI	Esquipulas	1.71	335	⇓iP	Pn	07 42 43.6	+1.0
ESQI				eS	Sn	07 43 05.2	+1.6
ESQI	Esquipulas	1.71	335		Pn	07 42 43.5	+0.9
ESQI				Sn	Sn	07 43 01.7	-1.9
CNGN	Cerro Negro	1.93	105	eP	Pn	07 42 45.7	+0.3
CNGN	Cerro Negro	1.93	105	eP	Pn	07 42 45.7	+0.3
NBG	Las Nubes	2.31	313	eP	Pn	07 42 53.0	+2.1
MRL	Marmol	2.32	333	eP	Pn	07 42 52.9	+2.0
PCG	Pacaya	2.39	306	eP	Pn	07 42 55.3	+3.4
FUG	Fuego 3	2.61	304	eP	Pn	07 42 57.1	+2.3
FUG				eS	Sn	07 43 32.6	+7.1
RTAL	Retalhuleu	3.36	297	Pn	Pn	07 43 06.2	+1.2
ACON	Acoyapa	3.51	107		Pn	07 43 06.6	-0.3
HUEH	Huehuetenango	3.64	310		Pn	07 43 10.4	+1.5
PETF	Flores	4.08	343	Pn	Pn	07 43 16.7	+1.9
ESPN	Las Esperanzas	4.28	100	Pn	Pn	07 43 18.1	+0.6
JTS	Las Juntas de	4.48	126		Pn	07 43 22.0	+1.8
CCIG	Comitan	4.73	314		Pn	07 43 26.1	+2.3
EDLM	Las Mercedes	6.16	126	eP	Pn	07 43 45.9	+2.7
EDBA	Buenos Aires	6.47	125	eP	Pn	07 43 49.7	+2.1
EDSV	San Vito	6.92	126	eP	Pn	07 43 55.9	+2.2
TEIG	Tepich	7.20	2	Pn	Pn	07 43 59.6	+2.2
CMIG	Matias Romero	7.30	305	P	Pn	07 44 00.6	+1.7
	comp=Z,0.5nm,0.3s,baz=134,slow=9.5,SNR=16						
CMIG				S	Sn	07 45 21.2	+0.8
	comp=Z,0.5nm,0.3s,baz=336,slow=20,SNR=4.1						
SDV	Santo Domingo	18.11	101	P	P	07 46 19.4	-2.5
	comp=Z,0.5nm,0.3s,baz=279,slow=5.1,SNR=8.6						
SDV				LR	LR	07 53 46.7	
	comp=Z,88nm,20.6s,baz=288,slow=38						
SDV	Santo Domingo	18.11	101	P	P	07 46 21.5	-0.4
152A	Waverly Hall	19.91	10	P	P	07 46 41.8	+0.7
152A				IAmb	IAmb	07 46 44.7	
	comp=Z,9.8nm,0.8s						
Z47A	Carrollton	20.12	1	P	Pn	07 46 45.9	+0.1
Z47A				IAmb	IAmb	07 47 04.7	
	comp=Z,19nm,1.3s						
GOGA	Godfrey	20.86	12	P	P	07 46 51.4	0.0
GOGA				IAmb	IAmb	07 46 55.4	
	comp=Z,9.1nm,0.9s						
Y49A	Blount Mountai	20.87	5	P	P	07 46 52.5	+0.9
TXAR	Lajitas Array	21.44	322	P	P	07 46 59.1	+1.3
	comp=Z,1.9nm,0.8s,baz=138,slow=12,SNR=12						
TXAR	Lajitas Array	21.44	322	P	P	07 46 58.8	+0.9
TX31	Lajitas Ar. Si	21.45	322	P	P	07 46 58.8	+0.9
TX31				IAmb	IAmb	07 47 00.0	
	comp=Z,9.8nm,0.9s						
TX32	Lajitas Array	21.45	322	P	P	07 46 58.6	+0.7
ATAH	Atahualpa	22.43	153	LR	LR	07 54 20.4	
	comp=Z,100nm,21.0s,baz=345,slow=32						
TKL	Tuckaleechee C	22.98	10	P	P	07 47 13.9	-0.1
	comp=Z,4.0nm,0.7s,baz=180,slow=14,SNR=6.7						
TKL				LR	LR	07 55 20.7	
	comp=Z,78nm,21.9s,baz=180,slow=34						
TKL	Tuckaleechee C	22.98	10	P	P	07 47 14.4	+0.3
TKL				IAmb	IAmb	07 47 15.0	
	comp=Z,5.3nm,0.8s						
WVT	Waverly	23.05	2	P	P	07 47 14.9	+0.2
WVT				IAmb	IAmb	07 47 38.3	
	comp=Z,9.3nm,1.3s						
X34A	Smith Ranch, M	23.08	340	P	P	07 47 15.8	+0.8
LPIG	La Paz	23.32	301	LR	LR	07 55 18.7	
	comp=Z,65nm,20.6s,baz=34,slow=34						
U40A	Yellville	23.57	351	P	P	07 47 21.2	+1.5
U40A				IAmb	IAmb	07 47 22.1	
	comp=Z,5.9nm,0.7s						
TZTN	Tazewell	23.89	10	P	P	07 47 24.2	+1.7
T42A	Van Buren	24.04	355	P	P	07 47 24.3	+0.5
T42A				IAmb	IAmb	07 47 29.4	
	comp=Z,7.8nm,1.5s						
S39A	Bolivar	24.95	351	P	P	07 47 32.2	+0.1
NVAR	Mina Array Bea	36.55	319	P	P	07 49 16.3	+1.6
	comp=Z,0.5nm,0.7s,baz=118,slow=7.4,SNR=5.5						
NVAR				PcP	PcP	07 51 37.4	+0.4
	comp=Z,0.8nm,0.7s,baz=123,slow=4.4,SNR=7.7						
ULM	Lac du Bonnet	37.62	352	P	P	07 49 21.1	-2.2
	comp=Z,1.9nm,0.6s,baz=164,slow=9.3,SNR=5.6						
YKA	Yellowknife Ar	52.80	345	P	P	07 51 21.9	-1.3
	comp=Z,1.5nm,0.7s,baz=135,slow=8.5,SNR=26						
RCBR	Riachuelo	55.59	106	LR	LR	08 17 15.7	
	comp=Z,52nm,18.1s,baz=276,slow=38						
PLCA	Paso Flores	56.01	163	P	P	07 51 47.4	+0.4
	comp=Z,1.2nm,1.1s,baz=342,slow=9.6,SNR=2.5						
ILAR	Eielson Array	65.07	336	P	P	07 52 47.0	-1.3
	comp=Z,0.8nm,0.8s,baz=166,slow=4.8,SNR=18						
WRA	Warramunga Arr	138.33	255	PKP	PKiKP	08 01 34.0	-1.9
	comp=Z,0.8nm,0.6s,baz=91,slow=2.0,SNR=16						
ASAR	Alice Springs	138.41	249	PKP	PKiKP	08 01 34.1	-1.8
	comp=Z,0.4nm,0.7s,baz=108,slow=2.1,SNR=2.7						

MEX 29 07:45:22.7±0.4**, 16°.26N×98°.00W, h4^{km}**±5^{km}**, MD3.2, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	318	eP	Pg	07 45 25.9	-0.3
PNIG				iS	Sg	07 45 28.7	+0.2
YOIG	Yosondua	0.74	36	eP	Pg	07 45 36.1	-0.8
YOIG				eS	Sg	07 45 46.1	-0.4
PEIG	Puerto Escondi	0.86	108	eP	Pg	07 45 38.0	-1.3
PEIG				iS	Sg	07 45 49.2	-1.2
TXIG	Tlaxiaco	1.01	13	eP	Pg	07 45 39.8	-2.3
TXIG				iS	Sg	07 45 53.9	-1.5
CRIG	Cruz Grande	1.18	294	eP	Pg	07 45 42.0	-3.4
CRIG				eS	Sg	07 45 57.4	-3.3
HUIG	Huatulco	1.89	105	eP	Pn	07 45 52.3	-3.5

MEX 29 07:45:39.9±0.5**, 15°.61N×94°.76W, h17^{km}**±21^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.30	277	eP	Pn	07 46 00.2	-3.1
HUIG				eS	Sn	07 46 15.2	-5.2
HUIG	Huatulco	1.30	277	iS	Sn	07 46 15.2	-5.2
CMIG	Matias Romero	1.48	356	eP	Pn	07 46 02.3	-3.5
CMIG				eS	Sn	07 46 19.4	-5.3
PCIG		1.49	86	eP	Pn	07 46 02.4	-3.6
PCIG				eS	Sn	07 46 20.1	-4.8
TGIG		1.96	53	eP	Pn	07 46 09.0	-3.5
TGIG				iS	Sn	07 46 32.6	-4.0
PEIG	Puerto Escondi	2.33	280	eP	Pn	07 46 14.4	-3.1
PEIG				iS	Sn	07 46 40.8	-4.9
YOIG	Yosondua	2.95	295	iP	Pn	07 46 23.9	-2.3
YOIG				iS	Sn	07 46 57.4	-3.9
TXIG	Tlaxiaco	3.31	300	iP	Pn	07 46 28.9	-2.4
TXIG				iS	Sn	07 47 06.1	-4.3
PNIG	Pinotepa	3.33	284	eP	Pn	07 46 28.9	-2.4
PNIG				eS	Sn	07 47 07.1	-3.3

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*IDC **29** 07:55:36.8±1.7, 40°.67N×78°.15E, h0^{km}, mb3.3/3, mb1 3.4/7, mb1mx3.2/56, mbtmp3.3/7, ML3.2/4, Error ellipse: s-maj=21.4km s-min=15.8km az=168.0*

*SOME **29** 07:55:36.8, 40°.72N×78°.18E, h5^{km}*

*KRNET **29** 07:55:37.0±0.1, 40°.67N×78°.20E, mb3.8*

*NNC **29** 07:55:39.5±0.9, 40°.79N×78°.18E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=6.2km s-min=4.6km az=169.0*

ISC 29 07:55:39.2±1.4**, 40°.79N**±0°.04×**78°.27E**±0°.03**, h5^{km}**±9^{km}**, n93, σ1^{s}.55**/134**, mb3.6**/3**, 28C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.57	329	⇑eP	Pn	07 56 07.7	-0.2
	baz=33						
KDJ				⇑iS	Sg	07 56 30.5	+0.8
	baz=33						
PRZ	Przheval'sk	1.69	3	⇓iP	Pg	07 56 11.4	-0.3
	baz=5.0						
PRZ				⇓iS	Sg	07 56 36.6	+2.9
	baz=5.0						
ANVS	Anan'yevo	2.04	347	⇑iP	Pb	07 56 17.1	+0.2
	baz=50						
ANVS				⇑iS	Sg	07 56 45.2	+0.4
	baz=50						
ULHL	Ulahol	2.11	314	⇓eP	Pn	07 56 16.1	+0.8
	baz=18						
ULHL				⇓iS	Sb	07 56 45.0	+0.4
	baz=18						
ULHL	Ulahol	2.11	314	P	Pb	07 56 17.4	-0.6
	SNR=20						
KSH	Kashi	2.17	235	Pn	Pg	07 56 19.8	-1.1
KSH				Sn	Sg	07 56 53.3	+4.2
KSH				smax	smax		
	comp=N,220nm,0.3s						
KSH				smax	smax		
	comp=E,570nm,0.7s						
SATY	Saty	2.27	2	eP	Pb	07 56 21.5	+0.7
	comp=E,66nm,0.4s						
SATY				eS	Sg	07 56 53.4	+1.3
	comp=E,218nm,0.5s						
SATY	Saty	2.27	2	Pg	Pb	07 56 21.5	+0.7
	comp=E,66nm,0.4s						
SATY				Lg	Lg	07 56 53.4	
	comp=E,218nm,0.5s						
ZHN	Zhinishke	2.38	3	eP	Pb	07 56 23.4	+0.8
	comp=E,20nm,0.2s						
ZHN				eS	Sg	07 56 56.4	+0.8
	comp=E,114nm,0.6s						
ZHN	Zhinishke	2.38	3	Pg	Pb	07 56 23.4	+0.8
	comp=E,44nm,0.2s						
ZHN				Lg	Lg	07 56 56.6	
	comp=E,114nm,0.6s						
UZB	Uzynbulak	2.42	13	eP	Pb	07 56 23.7	+0.4
	comp=E,28nm,0.2s						

UZB	comp=E,87nm,0.3s			eS	Sg	07 56 57.5	+0.5
UZB	Uzynbulak comp=E,28nm,0.2s	2.42	13	Pg	Pb	07 56 23.7	+0.4
UZB	comp=E,87nm,0.3s			Lg	Lg	07 56 57.5	
BOOM	Boomskoye usch baz=18	2.44	315	⇓iP	Pn	07 56 21.2	+1.4
BOOM	baz=18			⇓iS	Sb	07 56 52.9	-1.1
TNSS	Tian-Shan comp=E,59nm,0.3s	2.45	337	eP	Pb	07 56 24.0	0.0
TNSS	comp=E,64nm,0.5s			eS	Sg	07 56 57.9	-0.2
TNSS	Tian-Shan comp=E,59nm,0.3s	2.45	337	Pg	Pb	07 56 24.0	0.0
TNSS	comp=E,64nm,0.5s			Lg	Lg	07 56 57.9	
SHLS	Shalkode comp=E,26nm,0.2s	2.52	20	eP	Pg	07 56 27.0	-0.6
SHLS	comp=E,365nm,0.4s			eS	Sg	07 57 03.3	+3.0
SHLS	Shalkode comp=E,26nm,0.2s	2.52	20	Pg	Pg	07 56 27.0	-0.6
SHLS	comp=E,365nm,0.4s			Lg	Lg	07 57 03.3	
MDOK	Medeo comp=E,68nm,0.4s	2.54	339	eP	Pb	07 56 25.4	0.0
MDOK	comp=E,273nm,0.5s			eS	Sg	07 57 00.9	0.0
MDOK	Medeo comp=E,50nm,0.5s	2.54	339	⇓Pn	Pb	07 56 23.8	-1.6
MDOK	comp=E,254nm,0.6s			⇓Lg	Lg	07 57 00.9	
MDOK	Medeo comp=E,68nm,0.4s	2.54	339	Pg	Pb	07 56 25.4	0.0
MDOK	comp=E,273nm,0.5s			Lg	Lg	07 57 00.9	
IZV	Izvestkoviy comp=E,44nm,0.2s	2.56	332	eP	Pb	07 56 25.6	-0.2
IZV	comp=E,451nm,0.4s			eS	Sg	07 57 00.5	-1.0
IZV	Izvestkoviy comp=E,44nm,0.2s	2.56	332	Pg	Pb	07 56 25.6	-0.2
IZV	comp=E,451nm,0.4s			Lg	Lg	07 57 00.5	
KOTS	Kotyrbulak comp=E,244nm,0.2s	2.59	341	eP	Pb	07 56 26.6	+0.4
KOTS	comp=E,211nm,0.4s			eS	Sg	07 57 02.2	-0.3
KOTS	Kotyrbulak comp=E,244nm,0.2s	2.59	341	Pg	Pb	07 56 26.6	+0.4
KOTS	comp=E,211nm,0.4s			Lg	Lg	07 57 02.2	
KNDC	Almaty comp=E,55nm,0.6s	2.61	339	⇑Pg	Pb	07 56 26.9	+0.4
KNDC	comp=E,230nm,0.5s			⇓Lg	Lg	07 57 04.0	
AAA	Alma-Ata comp=E,87nm,0.3s	2.62	338	eP	Pb	07 56 27.4	+0.7
AAA	comp=E,172nm,0.5s			eS	Sg	07 57 04.2	+0.8
AAA	Alma-Ata comp=E,87nm,0.3s	2.62	338	Pg	Pb	07 56 27.4	+0.7
AAA	comp=E,172nm,0.5s			Lg	Lg	07 57 04.2	
KPKS	Kokpek comp=E,81nm,0.3s	2.69	6	eP	Pb	07 56 28.9	+0.9
KPKS	comp=E,392nm,0.4s			eS	Sg	07 57 05.9	+0.2
PDGK	Podgornoye comp=E,13nm,0.5s	2.69	19	Pg	Pb	07 56 27.2	-0.8
PDGK	comp=E,81nm,0.6s			Lg	Lg	07 57 03.1	
PDGK	Podgornoye comp=E,16nm,0.5s	2.69	19	⇑Pn	Pb	07 56 25.6	-2.4
PDGK	comp=E,142nm,0.6s			⇑Lg	Lg	07 57 03.4	
KURS	Kuram comp=E,59nm,0.6s	2.70	358	eP	Pb	07 56 29.3	+1.3
KURS	comp=E,146nm,0.8s			eS	Sg	07 57 06.5	+0.7
KURS	Kuram comp=E,59nm,0.6s	2.70	358	Pg	Pb	07 56 29.3	+1.3
KURS	comp=E,146nm,0.8s			Lg	Lg	07 57 06.5	
MTBS	Maitube comp=E,21nm,0.5s	2.71	330	eP	Pb	07 56 28.0	-0.3
MTBS	comp=E,87nm,0.3s			eS	Sg	07 57 05.1	-1.3
MTBS	Maitube comp=E,21nm,0.5s	2.71	330	Pg	Pb	07 56 28.0	-0.3
MTBS	comp=E,87nm,0.3s			Lg	Lg	07 57 05.1	
KST	Kastek comp=E,48nm,0.3s	2.83	323	eP	Pb	07 56 30.0	-0.4
KST	comp=E,107nm,0.5s			eS	Sb	07 57 08.0	+2.5
KST	Kastek comp=E,48nm,0.3s	2.83	323	Pg	Pb	07 56 30.0	-0.4
KST	comp=E,107nm,0.5s			Lg	Lg	07 57 08.0	
TKM2	Tokmak 2 baz=20	2.92	318	⇑eP	Pn	07 56 27.4	+0.9
TKM2	baz=20			⇑iS	Sn	07 57 04.8	+2.7
TKM2	Tokmak 2 SNR=34	2.92	318	P	Pn	07 56 28.5	+2.0
TKM2	Tokmak 2 comp=E,12nm,0.4s	2.92	318	⇓Pn	Pn	07 56 28.3	+1.8
TKM2	comp=E,58nm,0.6s			⇑Lg	Lg	07 57 10.4	
KTMS	Ketmen comp=E,14nm,0.2s	3.07	30	eP	Pb	07 56 35.2	+0.8
KTMS	comp=E,87nm,0.6s			eS	Sg	07 57 17.1	-0.8
KTMS	Ketmen comp=E,14nm,0.2s	3.07	30	Pg	Pb	07 56 35.2	+0.8
KTMS	comp=E,87nm,0.6s			Lg	Lg	07 57 17.1	
DGS	Degeres comp=E,35nm,0.3s	3.08	324	eP	Pb	07 56 34.6	+0.1
DGS	comp=E,112nm,0.6s			eS	Sb	07 57 15.8	+3.4
DGS	Degeres comp=E,35nm,0.3s	3.08	324	Pg	Pb	07 56 34.6	+0.1
DGS	comp=E,112nm,0.6s			Lg	Lg	07 57 15.8	
KBK	Karagaybulak baz=10.0	3.11	308	⇑iP	Pn	07 56 29.7	+0.6
KBK	baz=10.0			⇑iS	Sn	07 57 09.1	+2.4
KBK	Karagaybulak SNR=22	3.11	308	P	Pb	07 56 35.6	+0.5
KTBS	Karatobe comp=E,37nm,0.3s	3.15	338	eP	Pb	07 56 35.8	+0.1
KTBS	comp=E,239nm,0.5s			eS	Sg	07 57 18.7	-1.7
KTBS	Karatobe comp=E,37nm,0.3s	3.15	338	Pg	Pb	07 56 35.8	+0.1
KTBS	comp=E,239nm,0.5s			Lg	Lg	07 57 18.7	
ARLS	Aral baz=93	3.16	291	⇑iP	Pn	07 56 30.5	+0.7
ARLS	baz=93			⇑iS	Sn	07 57 09.2	+1.2
UCH	Uchtor baz=0.0	3.17	298	⇑iP	Pn	07 56 30.8	+0.7
UCH	baz=0.0			⇑iS	Sn	07 57 10.7	+2.2
UCH	Uchtor SNR=16	3.17	298	P	Pn	07 56 31.0	+0.8
CHKK	Chushkaly comp=E,27nm,0.4s	3.21	343	eP	Pb	07 56 37.2	+0.6
CHKK	comp=E,171nm,0.2s			eS	Sg	07 57 20.3	-1.9
CHKK	Chushkaly comp=E,27nm,0.4s	3.21	343	Pg	Pb	07 56 37.2	+0.6
CHKK	comp=E,171nm,0.2s			Lg	Lg	07 57 20.3	
MNBS	Baschi comp=E,24nm,0.4s	3.29	2	eP	Pb	07 56 39.6	+1.5
MNBS	comp=E,256nm,0.6s			eS	Sg	07 57 24.6	-0.2
MNBS	Baschi comp=E,24nm,0.4s	3.29	2	Pg	Pb	07 56 39.6	+1.5
MNBS	comp=E,256nm,0.6s			Lg	Lg	07 57 24.6	
AAK	Ala-Archa comp=E,8.2nm,0.3s,baz=134,slow=11,SNR=59	3.38	304	Pn	Pn	07 56 34.9	+2.2
AAK	comp=E,8.2nm,0.3s,baz=142,slow=14,SNR=60			Pg	Pb	07 56 39.0	-0.6
AAK	comp=E,9.4nm,0.3s,baz=305,slow=22,SNR=15			Lg	Lg	07 57 21.7	
AAK	Ala-Archa baz=6.0	3.38	304	⇑eP	Pn	07 56 33.5	+0.7
AAK	baz=6.0			⇑iS	Sn	07 57 15.5	+2.2
AAK	Ala-Archa SNR=14	3.38	304	P	Pb	07 56 39.1	-0.6
AAK	Ala-Archa comp=E,14nm,0.5s	3.38	304	⇑Pg	Pb	07 56 38.9	-0.8
AAK	comp=E,87nm,0.8s			⇑Lg	Lg	07 57 23.1	
KUU	Kurty comp=E,12nm,0.4s	3.42	336	eP	Pb	07 56 40.1	-0.1
KUU	comp=E,174nm,0.7s			eS	Sb	07 57 25.7	+3.7
KUU	Kurty comp=E,12nm,0.4s	3.42	336	Pg	Pb	07 56 40.1	-0.1
KUU	comp=E,174nm,0.7s			Lg	Lg	07 57 25.7	
CHMS	Chumysh baz=13	3.43	311	⇑iP	Pn	07 56 34.4	+1.0
CHMS	baz=13			⇑iS	Sn	07 57 16.9	+2.5
CHMS	Chumysh SNR=19	3.43	311	P	Pb	07 56 41.3	+0.8
ARXS	Arharly comp=E,59nm,0.4s	3.44	355	eP	Pb	07 56 41.5	+0.9
ARXS	comp=E,70nm,0.5s			eS	Sg	07 57 28.4	-1.1
ARXS	Arharly comp=E,59nm,0.4s	3.44	355	Pg	Pb	07 56 41.5	+0.9
ARXS	comp=E,70nm,0.5s			Lg	Lg	07 57 28.4	
AML	Almayashu baz=95	3.69	293	⇓eP	Pn	07 56 37.8	+0.5
AML	baz=95			⇓iS	Sn	07 57 23.1	+1.7
AML	Almayashu SNR=9.4	3.69	293	P	Pb	07 56 46.5	+1.3
DJR	Jarkent comp=E,14nm,0.2s	3.71	17	eP	Pb	07 56 46.5	+1.2
DJR	comp=E,46nm,0.5s			eS	Sg	07 57 36.8	-1.6
DJR	Jarkent comp=E,14nm,0.2s	3.71	17	Pg	Pb	07 56 46.5	+1.2
DJR	comp=E,46nm,0.5s			Lg	Lg	07 57 36.8	
USP	Ospenovka baz=14	3.75	313	⇑iP	Pn	07 56 38.5	+0.8
USP	baz=14			⇑iS	Sn	07 57 24.4	+2.2
USP	Ospenovka SNR=16	3.75	313	P	Pb	07 56 45.4	-0.5
SGDS	Sogindy comp=E,5.3nm,0.3s	3.80	316	Pg	Pb	07 56 46.4	-0.4
SGDS	comp=E,34nm,0.4s			Lg	Lg	07 57 36.5	
EKS2	Erkin-Say SNR=8.2	3.85	301	P	Pb	07 56 48.2	+0.5
TDK	Taldyqorghan comp=E,46nm,0.2s	4.21	1	eP	Pb	07 56 56.2	+2.5
TDK	comp=E,163nm,0.9s			eS	Sg	07 57 53.8	-0.6
TDK	Taldyqorghan comp=E,46nm,0.2s	4.21	1	Pg	Pb	07 56 56.3	+2.5
TDK	comp=E,163nm,0.9s			Lg	Lg	07 57 53.8	
MRKS	Merke comp=E,13nm,0.5s	4.25	299	eP	Pb	07 56 55.1	+0.6
MRKS	comp=E,14nm,0.5s			eS	Sb	07 57 50.7	+4.6
MRKS	Merke comp=E,13nm,0.5s	4.25	299	Pg	Pb	07 56 55.1	+0.6
MRKS	comp=E,14nm,0.5s			Lg	Lg	07 57 50.7	
KAPS	Kapalarasan comp=E,7.1nm,0.4s	4.56	10	eP	Pb	07 57 02.5	+2.8
KAPS	comp=E,26nm,0.6s			eS	Sg	07 58 03.9	-1.8
KAPS	Kapalarasan comp=E,7.1nm,0.4s	4.56	10	Pg	Pb	07 57 02.5	+2.8
KAPS	comp=E,26nm,0.6s			Lg	Lg	07 58 03.9	
MNAS	Manas baz=95	4.64	293	⇑iP	Pn	07 56 50.6	+0.5
MNAS	baz=95			⇑iS	Sn	07 57 45.6	+1.1
BTLS	Baital comp=E,2.3nm,0.4s	5.26	325	eP	Pb	07 57 14.2	+2.6
BTLS	comp=E,15nm,0.6s			eS	Sg	07 58 23.9	-4.2
BTLS	Baital comp=E,2.3nm,0.4s	5.26	325	Pg	Pb	07 57 13.9	+2.2
BTLS	comp=E,15nm,0.6s			Lg	Lg	07 58 22.4	
KK31	Karatay Array comp=E,1.6nm,0.6s,baz=108,slow=16,SNR=13	6.23	294	Pg	Pb	07 57 30.9	+2.7
KK31	comp=E,4.1nm,0.5s,baz=91,slow=27,SNR=6.7			⇑Lg	Lg	07 58 57.0	
MAKZ	Makanchi comp=E,1.6nm,1.1s	6.58	23	⇓Pn	Pn	07 57 18.1	+1.4
MAKZ	comp=E,3.1nm,0.7s			⇓Lg	Lg	07 59 09.3	
MK31	Makanchi Array comp=E,1.1nm,0.7s,baz=203,slow=14,SNR=6.0	6.67	24	⇓Pn	Pn	07 57 18.5	+0.8
MK31	comp=E,2.8nm,0.7s,baz=201,slow=20,SNR=6.0			⇓Sn	Sn	07 58 35.4	+1.2
MK31	comp=E,4.5nm,0.7s,baz=210,slow=26,SNR=4.3			⇑Lg	Lg	07 59 10.3	
MKAR	Makanchi Array comp=E,0.3nm,0.3s,baz=205,slow=15,SNR=10	6.67	24	Pn	Pn	07 57 19.0	+1.2
MKAR	comp=E,0.4nm,0.3s,baz=206,slow=22,SNR=8.8			Sn	Sn	07 58 36.0	+1.9
MKAR	comp=E,0.4nm,0.3s,baz=211,slow=30,SNR=2.8			Lg	Lg	07 59 10.2	
WMQ	Urumqi	7.61	63	eP	Pn	07 57 31.5	+0.7
WMQ	comp=N,13nm,0.5s			smax	smax		
WMQ	comp=E,13nm,0.5s			smax	smax		
KURBB	Kurchatov Arra comp=E,0.1nm,0.3s,baz=186,slow=12,SNR=8.8	9.83	1	Pn	Pn	07 58 01.8	+0.6
KURBB	comp=E,0.1nm,0.3s,baz=182,slow=29,SNR=5.8			Lg	Lg	08 00 51.3	
KURBB	Kurchatov Arra comp=E,18nm,0.8s	9.83	1	Lg	Lg	08 00 52.9	
KURK	Kurchatov comp=E,16nm,1.2s	9.93	1	Lg	Lg	08 00 56.2	
BVAR	Borovoye Array comp=E,0.2nm,0.3s,baz=116,slow=9.1,SNR=3.9	13.36	339	Pn	Pn	07 58 45.2	-4.2
SONM	Songino Array comp=E,0.6nm,0.7s,baz=258,slow=12,SNR=3.8	21.24	61	P	P	08 00 26.1	0.0
TORD	Torodi Ar. Bea comp=E,0.3nm,0.5s,baz=70,slow=6.7,SNR=1.4	71.41	271	P	P	08 06 57.5	-3.2
YKA	Yellowknife Ar comp=E,0.3nm,0.6s,baz=353,slow=5.2,SNR=5.2	76.54	6	P	P	08 07 28.6	-1.3

IDC 29 07:57:56.6±3.0**,41°.87N**×**123°.95E,h0^{km},mb3.2**/1**,**
mb1 3.4/2**,mb1mx3.0**/55**,mbtmp3.1**/2**,ML2.0**/1**,Error ellipse: s-maj=35.3km s-min=24.8km az=79.0,**
Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	Korea Array 0.6nm,0.3s,baz=330,slow=18,SNR=4.7	5.37	144	Pg	Pg	07 59 35.7	-3.8
KSRS	1.1nm,0.3s,baz=323,slow=34,SNR=4.5			Lg	Lg	08 00 46.2	
USRK	Ussuriysk Ar. baz=255,slow=14,SNR=5.7	6.33	66	Pn	Pn	07 59 29.9	-1.3
USRK	baz=246,slow=16,SNR=12			Pg	Pb	07 59 51.4	+3.8
USRK	baz=255,slow=31,SNR=9.6			Lg	Lg	08 01 18.5	
KLR	Kul'dur 0.2nm,0.3s,baz=118,slow=18,SNR=5.4	9.16	34	Lg	Lg	08 02 47.8	
ILAR	Eielson Array 0.7nm,1.2s,baz=292,slow=8.2,SNR=4.2	52.73	33	P	P	08 07 12.9	+0.2

IDC 29 08:07:23.3±7.0**,20°.28S**×**179°.59W,h0^{km},mb4.0**/3**,**
mb1 4.3/3**,mb1mx3.7**/45**,mbtmp4.0**/3**,Error ellipse: s-maj=296.5km s-min=61.6km az=147.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs 1.7nm,0.8s,baz=101,slow=7.2,SNR=19	43.11	257	P	P	08 15 24.6	-1.1
WRA	Warramunga Arr 1.6nm,0.3s,baz=93,slow=8.5,SNR=68	43.15	262	P	P	08 15 26.8	+0.8
FITZ	Fitzroy Crossi 0.7nm,0.5s,baz=120,slow=11,SNR=4.7	51.57	263	P	P	08 16 31.6	0.0
BRTR	Keskin Array B 0.6nm,0.6s,baz=85,slow=3.5,SNR=2.2	145.58	312	PKPbc	PKPdf	08 27 03.3	-0.7

IDC ***29*** *08:18:59.1±1.7,5°.84N×126°.58E,h0^{km},mb3.6/5,*
mb1 3.7/5,mb1mx3.4/57,mbtmp3.6/5,Error ellipse:
s-maj=116.8km s-min=20.2km az=69.0
MAN ***29*** *08:19:01.7,5°.87N×126°.61E,h7^{km},mb4.7,ML3.6,MS3.5*
ISC 29 08:19:01.3±1.9**,5°.79N**±0°.06×**126°.62E**±0°.07**,h16^{km}**±11^{km}**,**
n12,σ**1^{s}.99**/19**,mb3.5**/5**,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.96	289	eP	Pg	08 19 18.8	-1.0
DDMP				eS	Sn	08 19 34.6	+1.1
MATI	Mati	1.21	343	eP	Pg	08 19 22.4	-2.2
MATI				eS	Sn	08 19 39.8	+0.2
KCP	Kidapawan	1.94	309	⇑eP	Pb	08 19 35.3	-1.2
KCP				i S	Sg	08 20 08.0	+4.0
SKMP	Bagumbayan, Su	2.19	289	eP	Pn	08 19 37.1	0.0
SKMP				eS	Sb	08 20 06.6	-0.9
BUKP	Musuan	2.59	323	eP	Pn	08 19 43.9	+1.2
BUKP				eS	Sb	08 20 16.8	-2.3
CGP	Cagayan de Oro	3.27	324	⇓eP	Pg	08 20 04.8	+0.8
CGP				eS	Sb	08 20 34.7	-3.9
GLSP	General Luna,	4.00	353	eP	Pn	08 20 03.9	+1.9
GLSP				eS	Sn	08 20 50.3	+1.7
FITZ	Fitzroy Crossi 2.0nm,0.8s,baz=344,slow=7.4,SNR=3.6	23.76	182	P	P	08 24 14.0	+0.8
WRA	Warramunga Arr 0.3nm,0.4s,baz=344,slow=10,SNR=11	26.67	164	P	P	08 24 41.5	+1.7
ASAR	Alice Springs 0.4nm,0.8s,baz=345,slow=6.7,SNR=5.9	30.13	167	P	P	08 25 09.9	-0.7
MKAR	Makanchi Array 0.3nm,0.6s,baz=125,slow=7.7,SNR=4.0	55.82	325	P	P	08 28 38.0	+0.1
KURBB	Kurchatov Arra 0.5nm,0.5s,baz=126,slow=6.3,SNR=5.1	59.96	327	P	P	08 29 06.3	-0.6

IDC 29 08:22:16.1±29.0**,17°.86S**×**174°.44W,h0^{km},mb3.8**/4**,**
mb1 4.0/4**,mb1mx3.6**/41**,mbtmp3.8**/4**,Error ellipse:**
s-maj=568.0km s-min=148.5km az=88.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek 1.5nm,0.7s,baz=80,slow=6.1,SNR=2.8	41.98	242	P	P	08 30 09.4	+0.2
WRA	Warramunga Arr 0.8nm,0.6s,baz=98,slow=7.4,SNR=8.2	48.36	259	P	P	08 30 59.9	-0.2
ASAR	Alice Springs 0.7nm,0.4s,baz=87,slow=8.4,SNR=8.3	48.44	254	P	P	08 31 00.6	-0.1
FITZ	Fitzroy Crossi 0.5nm,0.5s,baz=121,slow=5.9,SNR=4.2	56.76	260	P	P	08 32 02.0	-0.4

NNC ***29*** *08:32:37.7±2.4,44°.13N×83°.53E,h0^{km},mb3.6,mpv3.4,*
Error ellipse: s-maj=20.9km s-min=7.9km az=127.0
SOME ***29*** *08:32:38.5,44°.20N×83°.42E,h10^{km}*
ISC 29 08:32:40.2±1.7**,44°.08N**±0°.08×**83°.60E**±0°.08**,h10^{km},n23,**
σ**2^{s}.14**/35**,4C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen 20nm,0.2s	2.44	256	eP	Pn	08 33 22.4	+2.2
KTMS	28nm,0.2s			eS	Sb	08 33 54.1	-0.2
KTMS	Ketmen 20nm,0.2s	2.44	256	Pg	Pn	08 33 22.4	+2.2
KTMS	28nm,0.2s			Lg	Lg	08 33 54.1	
DJR	Jarkent 5.4nm,0.2s	2.75	277	eP	Pb	08 33 27.9	-1.7
DJR	23nm,0.3s			eS	Sb	08 34 03.1	-0.2
DJR	Jarkent 5.4nm,0.2s	2.75	277	Pg	Pn	08 33 27.7	+3.3
DJR	23nm,0.3s			Lg	Lg	08 34 02.6	
MK31	Makanchi Array 1.1nm,0.3s,baz=148,slow=14,SNR=44	2.87	342	⇑Pg	Pn	08 33 29.1	+3.1
MK31	1.0nm,0.2s,baz=141,slow=28,SNR=4.4			⇑Lg	Lg	08 34 05.3	
MAKZ	Makanchi 1.4nm,0.4s	2.96	338	⇑Pg	Pb	08 33 30.8	-2.2
MAKZ	4.4nm,0.6s			⇓Lg	Lg	08 34 08.0	
PDGK	Podgornoye 2.0nm,0.5s	3.08	257	Pg	Pb	08 33 32.8	-2.2
PDGK	7.5nm,0.3s			Lg	Lg	08 34 11.9	
PDGK	Podgornoye 4.9nm,0.7s	3.08	257	⇓Pg	Pn	08 33 32.0	+3.1
PDGK	11nm,0.7s			⇑Lg	Lg	08 34 13.9	
SHLS	Shalkode 12nm,0.3s	3.14	254	eP	Pn	08 33 29.7	-0.2
SHLS	30nm,0.3s			eS	Sn	08 34 06.8	-0.8
SHLS	Shalkode 12nm,0.3s	3.14	254	Pg	Pn	08 33 29.7	-0.2
SHLS	30nm,0.3s			Lg	Lg	08 34 06.8	
KAPS	Kapalarasan 1.6nm,0.1s	3.26	293	eP	Pb	08 33 37.4	-0.8
KAPS	12nm,0.3s			eS	Sb	08 34 20.0	+2.1
KAPS	Kapalarasan 1.6nm,0.1s	3.26	293	Pg	Pb	08 33 37.4	-0.8
KAPS	12nm,0.3s			Lg	Lg	08 34 20.0	
UZB	Uzynbulak	3.45	256	eP	Pb	08 33 39.6	-1.9
UZB				eS	Sb	08 34 23.3	-0.3
UZB	Uzynbulak	3.45	256	Pg	Pb	08 33 39.6	-1.9
UZB				Lg	Lg	08 34 23.3	
ZSN	Zaisan 4.8nm,0.2s	3.49	14	eP	Pb	08 33 40.3	-1.7
ZSN	14nm,0.5s			eS	Sb	08 34 24.7	+0.4
ZSN	Zaisan 4.8nm,0.2s	3.49	14	Pg	Pb	08 33 40.3	-1.7
ZSN	14nm,0.5s			Lg	Lg	08 34 24.7	
KPKS	Kokpek 5.4nm,0.2s	3.61	262	eP	Pb	08 33 41.6	-2.6
KPKS	27nm,0.4s			eS	Sb	08 34 27.4	-0.7
MNBS	Baschi 5.8nm,0.3s	3.75	272	eP	Pb	08 33 44.7	-1.8
MNBS	14nm,0.3s			eS	Sb	08 34 32.0	0.0
MNBS	Baschi 5.8nm,0.3s	3.75	272	Pg	Pb	08 33 44.7	-1.8
MNBS	14nm,0.3s			Lg	Lg	08 34 32.0	
ZHN	Zhinishke 0.9nm,0.2s	3.86	258	eP	Pb	08 33 48.5	+0.1
ZHN	1.9nm,0.2s			eS	Sb	08 34 38.8	+3.6
SATY	Saty 1.3nm,0.1s	3.91	257	eP	Pb	08 33 49.5	+0.2
SATY	8.1nm,0.2s			eS	Sb	08 34 40.9	+4.2
ARXS	Arharly 7.9nm,0.2s	4.16	274	eP	Pb	08 33 52.4	-1.1
ARXS	7.9nm,0.3s			eS	Sb	08 34 45.6	+1.8
TNSS	Tian-Shan 0.5nm,0.1s	4.95	260	eP	Pb	08 34 09.2	+2.1
TNSS	1.3nm,0.4s			eS	Sg	08 35 14.4	-4.6

IDC 29 08:35:18.1±45.0**,17°.61S**×**173°.51W,h0^{km},mb3.8**/3**,**
mb1 4.0/3**,mb1mx3.6**/36**,mbtmp3.8**/3**,Error ellipse:**

s-maj=854.8km s-min=174.9km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	42.88	242	P	P	08 43 18.8	+0.3
	1.0nm,0.6s,baz=70,slow=6.9,SNR=4.7						
WRA	Warramunga Arr	49.27	259	P	P	08 44 08.8	-0.4
	0.3nm,0.3s,baz=98,slow=7.0,SNR=14						
ASAR	Alice Springs	49.36	254	P	P	08 44 09.6	-0.2
	0.6nm,0.4s,baz=87,slow=8.5,SNR=20						

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*IDC **29** 08:36:07.9±1.9, 49°.96N×18°.46E, h0^{km}, mb1 3.8/3, mb1mx3.1/50, mbtmp3.7/3, ML2.8/4, Error ellipse: s-maj=30.3km s-min=9.6km az=132.0*

*IPEC **29** 08:36:07.7±0.1, 50°.08N×18°.45E, h1^{km}±2^{km}, ML3.1/3, Error ellipse: s-maj=1.7km s-min=0.6km az=162.0*

*BGR **29** 08:36:07.8±0.4, 50°.10N×18°.43E, h1^{km}, ML3.2/8, Error ellipse: s-maj=6.7km s-min=5.6km az=2.0*

*PRU **29** 08:36:08.0±0.0, 50°.06N×18°.41E, h0^{km}*

ISC 29 08:36:06.5±0.7, **50°.06N**±0°.02×**18°.40E**±0°.02, **h0^{km}, n69, σ1^{s}.34**/121, **4C-8D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.28	217	ePG	Pb	08 36 14.0	-0.4
OKC				eSG	Sg	08 36 17.8	+2.4
	comp=Z,1μm,0.6s						
OKC	Ostrava-Krasne	0.28	217	ePg	Pb	08 36 14.2	-0.2
OKC				eSg	Sb	08 36 18.8	-0.9
MORC	Moravsky Berou	0.62	243	⇓P	Pb	08 36 20.4	+0.1
MORC				⇓S	Sb	08 36 29.4	-0.2
MORC	Moravsky Berou	0.62	243	ePG	Pb	08 36 20.2	-0.1
MORC				eSG	Sg	08 36 28.2	+1.6
MORC	Moravsky Berou	0.62	243	ePg	Pb	08 36 20.2	-0.1
	baz=62						
MORC				eSg	Sg	08 36 28.2	+1.6
	353nm,0.4s,baz=62						
MORC	Moravsky Berou	0.62	243	ePg	Pb	08 36 20.2	-0.1
OJC	Ojcow	0.91	79	ePg	Pg	08 36 24.5	+0.6
OJC				eSg	Sg	08 36 36.9	+1.2
OJC	Ojcow	0.91	79	ePg	Pg	08 36 24.6	+0.7
KRLC	Kraliky	1.04	271	ePG	Pg	08 36 27.1	+0.6
KRLC				eSG	Sb	08 36 41.7	-0.1
	comp=Z,333nm,0.3s						
LANS	Liptovska Anna	1.15	142	ePG	Pb	08 36 29.8	+0.6
LANS				eSG	Sg	08 36 44.7	+1.5
LANS				eLG	Lg	08 36 49.1	
JAVC	Velka Javorina	1.29	202	ePG	Pn	08 36 33.0	+1.0
JAVC	Velka Javorina	1.29	202	ePg	Pn	08 36 32.9	+1.0
	baz=22						
DPC	Dobruska-Polom	1.37	283	ePG	Pb	08 36 33.8	+0.8
DPC				eSG	Sn	08 36 52.2	+0.4
	comp=Z,182nm,0.6s						
DPC	Dobruska-Polom	1.37	283	ePn	Pn	08 36 33.4	+0.5
DPC				eSg	Sb	08 36 51.7	+0.7
NIE	Niedzica	1.39	117	ePg	Pb	08 36 34.2	+0.9
NIE				eSg	Sn	08 36 53.8	+1.6
VRAC	Vranov	1.40	238	Pg	Pb	08 36 34.1	+0.6
	11nm,0.3s,baz=60,slow=14,SNR=35						
VRAC				Lg	Lg	08 36 52.6	
	60nm,0.3s,baz=313,slow=22,SNR=37						
VRAC	Vranov	1.40	238	⇓P	Pb	08 36 34.1	+0.6
VRAC				⇓S	Sn	08 36 52.6	+0.3
VRAC	Vranov	1.40	238	ePG	Pb	08 36 34.1	+0.6
VRAC				eSG	Sn	08 36 52.7	+0.3
VRAC	Vranov	1.40	238	ePg	Pb	08 36 34.1	+0.6
	baz=57						
VRAC				eSg	Sn	08 36 52.7	+0.3
	220nm,0.5s,baz=57						
OSTC	Ostas	1.49	290	ePG	Pn	08 36 34.8	+0.3
OSTC				eSG	Sn	08 36 56.3	+1.6
	comp=Z,115nm,0.8s						
KSP	Ksiaz	1.56	301	ePn	Pn	08 36 35.8	+0.3
KSP				ePg	Pg	08 36 37.8	+1.4
KSP				eSg	Sg	08 36 58.0	+1.5
KSP	Ksiaz	1.56	301	ePn	Pn	08 36 35.8	+0.3
VYHS	Vyhne	1.59	170	ePG	Pn	08 36 36.8	+0.8
VYHS				eSG	Sb	08 36 58.3	+0.8
CHVC	Chvalec	1.59	290	ePG	Pn	08 36 36.6	+0.6
CHVC				eSG	Sg	08 36 59.3	+1.6
	comp=Z,75nm,0.5s						
UPC	Upice	1.60	287	ePG	Pn	08 36 36.9	+0.9
UPC				eSG	Sg	08 36 59.4	+1.6
	comp=Z,85nm,0.6s						
KRUC	Moravsky	1.65	233	ePN	Pb	08 36 38.1	+0.3
KRUC				eSG	Sg	08 37 00.3	+0.9
KRUC	Moravsky	1.65	233	ePn	Pb	08 36 38.0	+0.3
	baz=52						
KRUC				eSg	Sg	08 37 00.2	+0.9
	226nm,0.4s,baz=52						
SMOL	Smolenice	1.68	203	ePN	Pn	08 36 37.6	+0.5
SMOL				eSN	Sg	08 37 01.1	+0.8
SMOL				eLG	Lg	08 37 02.2	
MODS	Modra-Piesok	1.84	204	ePN	Pn	08 36 39.5	+0.1
MODS				eSN	Sn	08 37 03.4	0.0
TREC	Trest	2.04	249	ePG	Pb	08 36 44.8	+0.3
TREC				eSG	Sg	08 37 12.2	+0.1
	comp=Z,107nm,0.4s						
ZST	Bratislava	2.05	205	eSG	Sb	08 37 10.4	-0.3
ZST				eLG	Lg	08 37 11.4	
KECS	Kecovo	2.09	138	ePN	Pn	08 36 43.7	+1.0
KECS				eSN	Sn	08 37 08.6	-0.8
KECS				eLG	Lg	08 37 14.2	
CRVS	Cervenica-Dubn	2.31	119	ePG	Pb	08 36 50.1	+1.1
CRVS				eSG	Sg	08 37 22.6	+2.0
PSZ	Piszkesteto	2.36	155	⇑P	Pn	08 36 47.1	+0.6
PSZ				⇓S	Sn	08 37 14.8	-1.4
PSZ	Piszkesteto	2.36	155	ePN	Pg	08 36 52.2	+0.6
PRU	Pruhonice	2.49	270	ePG	Pb	08 36 53.0	+0.9
PRU				eSG	Sg	08 37 26.6	+0.1
	comp=Z,89nm,0.9s						
PVCC	Panska Ves	2.50	282	ePN	Pn	08 36 49.5	+1.0
PVCC				ePG	Pb	08 36 53.5	+1.2
PVCC				eSG	Sg	08 37 28.1	+1.2
	comp=Z,113nm,0.4s						
PRA	Prague	2.56	272	ePG	Pb	08 36 54.6	+1.4
PRA				eSG	Sg	08 37 29.0	+0.3
	comp=Z,70nm,1.1s						
CONA	Conrad Observa	2.71	219	ePn	Pn	08 36 52.5	+1.0
	2.0nm,0.3s						
CONA				eSn	Sn	08 37 25.2	+0.2
	23nm,0.4s						
KOLS	Kolonicke sedl	2.76	113	ePG	Pb	08 36 58.7	+1.9
KOLS				eSN	Sn	08 37 25.8	-0.3
PBCC	Pribram	2.88	264	ePG	Pb	08 37 00.1	+1.4
PBCC				eSG	Sg	08 37 39.8	+0.9
MPLH	Magyarpolny	2.95	192	ePN	Pn	08 36 56.0	+1.4
BRG	Berggiesshubel	2.96	288	Pg	Pg	08 37 02.5	-0.8
BRG				Sg	Sg	08 37 41.7	0.0
BRG				Amp		08 37 45.6	
	comp=Z,34nm,0.5s						
BRG	Berggiesshubel	2.96	288	ePg	Pg	08 37 02.2	-1.0
BRG				eSg	Sg	08 37 41.6	0.0
KHC	Kasperske Hory	3.27	255	ePN	Pn	08 36 59.9	+0.8
KHC				ePG	Pb	08 37 06.5	+1.0
KHC				eSG	Sg	08 37 51.8	+0.1
	comp=Z,50nm,0.4s						
GEC2	GERESS Array S	3.30	250	ePg	Pg	08 37 09.7	-0.1
GEC2				eSg	Sg	08 37 52.6	+0.1
GERES	GERESS Array B	3.30	250	Pn	Pn	08 37 00.2	+0.7
	comp=Z,0.6nm,0.3s,baz=65,slow=14,SNR=6.6						
GERES				Pg	Pg	08 37 08.8	-1.0
	comp=Z,2.3nm,0.3s,baz=66,slow=16,SNR=16						
GERES				Lg	Lg	08 37 51.8	
	comp=Z,16nm,0.3s,baz=68,slow=29,SNR=15						
FBE	Freiberg	3.34	287	ePg	Pg	08 37 10.6	+0.2
ARSA	Arzberg	3.40	215	i Pn	Pn	08 37 02.3	+1.5
	comp=Z,1.7nm,0.3s						
ARSA				eSn	Sn	08 37 42.7	+0.8
	comp=Z,4.6nm,0.3s						
MOA	Molln	3.51	233	i Pn	Pn	08 37 02.9	+0.5
	comp=Z,0.7nm,0.2s						
MOA				Sg	Sg	08 37 57.5	-1.8
	comp=Z,65nm,0.5s						
CLL	Collm	3.65	292	ePn	Pn	08 37 06.0	+1.7
CLL				ePg	Pg	08 37 18.0	+1.5
CLL				eSg	Sg	08 38 03.0	-0.8
	comp=Z,37nm,0.5s						
CLL	Collm	3.65	292	ePg	Pg	08 37 17.6	+1.1
TANN	Tannenbergstha	3.83	278	ePn	Pn	08 37 06.8	0.0
TANN				ePg	Pg	08 37 18.9	-1.0
NKC	Novy Kostel	3.83	275	ePN	Pn	08 37 07.8	+1.0
NKC				ePG	Pb	08 37 17.1	+2.1
NKC				eSG	Sg	08 38 10.5	+0.9
	comp=Z,31nm,0.4s						
MORH	Mrgy, Hungar	3.85	178	ePN	Pn	08 37 08.0	+1.1
MORH				eSN	Sn	08 37 50.2	-2.7
ROTZ	Rotzenmuhle	4.02	268	ePg	Pg	08 37 22.8	-0.6
MANZ	Manzenberg	4.06	271	ePn	Pn	08 37 09.6	-0.3
MANZ				ePg	Pg	08 37 24.0	-0.3
DRGR		4.35	137	⇑P	Pn	08 37 14.8	+0.9
DRGR				⇑S	Sn	08 38 02.9	-2.4
OBKA	Obir	4.39	217	ePn	Pn	08 37 16.3	+1.9
	comp=Z,2.1nm,0.3s						
KBA	Koelnbreinsper	4.49	230	ePn	Pn	08 37 18.9	+3.0
	comp=Z,1.0nm,0.3s						
KBA				eSn	Sn	08 38 12.8	+3.9
	comp=Z,3.8nm,0.5s						
BZS	Buzias	4.95	153	⇓P	Pn	08 37 23.1	+1.1
BURAR	Bucovina Array	5.12	116	⇓P	Pn	08 37 25.7	+1.2
GZR	Gura Zlata	5.52	146	⇓P	Pn	08 37 30.6	+0.6
HERR	Herculane	5.85	151	⇑P	Pn	08 37 34.8	+0.3
DAVOX	Davos/Dischmat	6.55	243	Sn	Sn	08 38 59.1	-0.6
	comp=Z,0.4nm,0.3s,baz=354,slow=19,SNR=2.8						
DAVOX				Lg	Lg	08 39 36.7	
	comp=Z,1.3nm,0.3s,baz=291,slow=21,SNR=7.1						
AKASG	Malin Array Be	6.95	81	Sn	Sn	08 39 01.8	-7.4
	comp=Z,2.3nm,0.3s,baz=257,slow=24,SNR=6.1						
NOA	NORSAR Array B	11.72	343	Pn	Pn	08 38 52.2	-2.7
	comp=Z,0.0nm,0.3s,baz=152,slow=13,SNR=3.4						
FINES	FINESS Array B	12.19	18	Pn	Pn	08 38 58.5	-2.6
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=5.9						
ARCES	ARCESS Array B	19.83	7	Pn	P	08 40 37.6	-0.8
	baz=189,slow=15,SNR=4.9						

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*IDC **29** 08:37:41.2±13.0, 18°.96S×177°.12W, h491^{km}±129^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.1/36, mbtmp4.4/4, Error ellipse: s-maj=91.2km s-min=30.5km az=32.0*

*NEIC **29** 08:37:50.4±0.7, 19°.0S±0°.2×177°.5W±0°.1, h590^{km}±13^{km}, mb4.2/14, Error ellipse: s-maj=27.5km s-min=14.8km az=146.0*

ISC 29 08:37:50.1±0.7, **19°.2S**±0°.1×**177°.5W**±0°.1, **h570^{km}, n27, σ1^{s}.12**/27, **mb4.1**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.49	288	P	P	08 39 19.5	+2.4
NIUE	Niue	7.14	90	P	P	08 39 41.0	+0.9
AFI	Afiamalu	7.58	47	P	P	08 39 44.1	-0.3
URZ	Urewera	19.58	193	P	P	08 41 38.8	-2.3
	5.1nm,0.3s,baz=276,slow=2.2,SNR=30						
THZ	Tophouse	23.95	198	P	P	08 42 19.6	-0.8
CTAO	Charters Tower	34.13	262	P	P	08 43 48.4	-0.2
TOO	Toolangi	37.08	233	P	P	08 44 13.0	+0.3
TOO				IAmb	IAmb	08 44 13.1	
	comp=Z,13nm,1.0s						
STKA	Stephens Creek	38.81	243	P	P	08 44 27.4	+0.4
	comp=Z,2.4nm,0.5s,baz=99,slow=11,SNR=10						
STKA	Stephens Creek	38.81	243	IAmb	IAmb	08 44 28.1	
	comp=Z,1.5nm,1.2s						
BBOO	Buckleboo	43.58	242	P	P	08 45 04.4	-0.2
WR0	Warramunga Arr	45.09	261	P	P	08 45 15.8	-0.6
WR0				IAmb	IAmb	08 45 29.0	
	comp=Z,8.9nm,1.4s						
WB0	Warramunga Arr	45.26	261	P	P	08 45 16.9	-0.8
WB0				IAmb	IAmb	08 45 43.0	
	comp=Z,7.8nm,1.4s						
WB2	Warramunga Arr	45.27	261	P	P	08 45 17.0	-0.8
WB2				IAmb	IAmb	08 45 45.5	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	45.28	261	P	P	08 45 16.8	-1.1
	comp=Z,0.8nm,0.3s,baz=98,slow=6.9,SNR=28						
WRA				PcP	PcP	08 46 45.2	-0.3
	comp=Z,0.4nm,0.3s,baz=94,slow=3.6,SNR=5.1						
WRA	Warramunga Arr	45.28	261	IAmb	IAmb	08 45 19.2	
	comp=Z,0.2nm,1.0s						
AS31	Alice Springs	45.31	255	P	P	08 45 17.8	-0.3
ASAR	Alice Springs	45.31	255	P	P	08 45 17.4	-0.6
	comp=Z,2.1nm,0.4s,baz=87,slow=8.4,SNR=33						
ASAR				PcP	PcP	08 46 45.2	-0.3
	comp=Z,1.1nm,0.6s,baz=107,slow=3.8,SNR=7.8						
VNDA	Vanda	59.26	185	P	P	08 46 58.3	+1.5
QSPA	South Pole Qui	70.88	180	P	P	08 48 10.7	+0.7
QSPA				IAmb	IAmb	08 48 14.4	
	comp=Z,11nm,1.4s						
BELA	Belgrano 2	80.79	173	P	P	08 49 04.5	+0.1
SNAA	Sanae	89.30	178	P	P	08 49 45.3	-0.5
SNAA	Sanae	89.30	178	P	P	08 49 44.1	-1.7
SNAA				IAmb	IAmb	08 49 45.5	
	comp=Z,3.8nm,1.0s						
VNA3	Neumayer Olymp	89.41	176	P	P	08 49 46.0	-0.3
VNA2	Neumayer--Watz	89.86	177	P	P	08 49 48.3	0.0
	baz=184,slow=3.5						
ARCES	ARCESS Array B	127.72	350	PKP	PKPdf	08 55 50.3	-0.2
	comp=Z,3.9nm,1.0s,baz=48,slow=1.8,SNR=4.1						
AKASG	Malin Array Be	142.10	332	PKP	PKPdf	08 56 15.0	-2.7
	comp=Z,0.6nm,0.3s,baz=37,slow=3.3,SNR=4.1						
BRTR	Keskin Array B	146.30	314	PKPbc	PKPdf	08 56 26.2	+0.7
	comp=Z,0.9nm,0.6s,baz=164,slow=6.3,SNR=3.7						

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*NOU **29** 08:41:59.8, 13°.08N×144°.94E, h0^{km}, mb5.1, Mariana Islands*

*IDC **29** 08:42:09.0±0.6, 13°.81N×145°.01E, h129^{km}±5^{km}, mb3.9/24, mb1 4.0/24, mb1mx3.9/50, mbtmp4.3/24, MS3.1/6, Ms1 3.1/6, ms1mx2.9/36, Error ellipse: s-maj=15.3km s-min=8.8km az=83.0*

*NEIC **29** 08:42:08.6±1.8, 13°.75N±0°.06×145°.02E±0°.08, h128^{km}±6^{km}, mb4.6/41, Error ellipse: s-maj=13.0km s-min=7.3km az=56.0*

ISC 29 08:42:10.8±0.3, **13°.79N**±0°.06×**144°.97E**±0°.08, **h150^{km}, n171, σ1^{s}.44**/173, **mb4.4**/47, **1C-1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	2.63	16	Pn	Pn	08 42 52.8	-0.8
ANA2	Anatahan	2.63	16	P	Pn	08 42 53.0	-0.6
JCJ	Chichijima	13.49	349	LR	LR	08 48 56.1	
	comp=Z,56nm,20.5s,baz=109,slow=30						
PATS	Pohnpei	14.83	116		Pn	08 45 32.4	-0.8
JOW	Kunigami	20.30	312	P	Pn	08 46 36.4	-2.3
	16nm,0.5s,baz=125,slow=22,SNR=8.5						
FAKI	Fak Fak	20.85	218	P	P	08 46 40.3	-0.7
FAKI				IAmb	IAmb	08 46 51.0	
	comp=Z,22nm,0.9s						
H11S3	WAKE ISLAND Hy	21.37	74	T	T	09 08 57.6	
	baz=261,slow=75,SNR=49						
H11S1	WAKE ISLAND Hy	21.39	74	T	T	09 08 56.2	
	baz=261,slow=75,SNR=48						
H11S2	WAKE ISLAND Hy	21.39	74	T	T	09 08 58.6	
	baz=261,slow=75,SNR=48						
WAKE	Wake Island	21.48	72	P	P	08 46 45.3	-2.4
H11N1	WAKE ISLAND Hy	21.79	71	T	T	09 10 00.1	
	baz=257,slow=75,SNR=67						
H11N2	WAKE ISLAND Hy	21.80	71	T	T	09 10 01.3	
	baz=257,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	21.81	71	T	T	09 10 02.0	
	baz=257,slow=75,SNR=9.9						
JMN	Monobe	22.26	335	P	P	08 46 54.9	-0.7
JMN				IAmb	IAmb	08 46 59.1	
	comp=Z,27nm,1.3s						
JGF	Kuroka	22.77	344	P	P	08 46 59.6	-0.8
JWT	Wachi	23.07	340	P	P	08 47 03.5	+0.4
JWT				IAmb	IAmb	08 47 18.9	
	comp=Z,21nm,1.2s						
MJAR	Matsushiro Arr	23.45	346	P	P	08 47 05.0	-1.6
	comp=Z,1.7nm,0.4s,baz=168,slow=10,SNR=6.4						
MJAR				LR	LR	08 55 18.5	
	comp=Z,62nm,18.5s,baz=260,slow=34						
MJAR	Matsushiro Arr	23.45	346	P	P	08 47 05.4	-1.3
MAJO	Matsushiro	23.45	346	P	P	08 47 06.3	-0.3
MAT	Matsushiro	23.45	346	P	P	08 47 04.7	-2.0
JHS	Saijyo	23.68	335	P	P	08 47 06.7	-2.0
JHS				IAmb	IAmb	08 47 20.8	
	comp=Z,41nm,1.4s						
JMM	Marumori	24.27	352	P	P	08 47 12.4	-1.5
JMM				IAmb	IAmb	08 47 40.1	
	comp=Z,18nm,0.9s						
YHNB	Yeheng	24.73	299	P	P	08 47 16.6	-1.9
JSD	Sado	24.88	347	P	P	08 47 19.3	-0.2
JSD				IAmb	IAmb	08 47 39.6	
	comp=Z,36nm,1.1s						
KSRS	Korea Array	28.04	330	P	P	08 47 47.7	-0.2
	comp=Z,1.9nm,0.8s,baz=150,slow=9.3,SNR=8.1						
KSRS				LR	LR	08 57 46.0	
	comp=Z,28nm,18.5s,baz=130,slow=33						
MTN	Manton Dam	29.80	208	P	P	08 48 02.4	-1.3
ASAJ	Asahikawa	30.29	357	LR	LR	08 59 20.9	
	comp=Z,62nm,19.0s,baz=47,slow=34						
USRK	Ussuriysk Ar.	32.28	342	P	P	08 48 25.7	+0.5
	comp=Z,0.9nm,0.5s,baz=111,slow=6.3,SNR=3.5						
USRK				pP	pP	08 48 53.9	-2.1
	comp=Z,1.7nm,0.7s,baz=172,slow=8.6,SNR=3.5						
USRK	Ussuriysk Ar.	32.28	342	P	P	08 48 24.4	-0.7
CN2	Changchun	34.27	335	eP	P	08 48 45.5	+3.0
WR0	Warramunga Arr	35.07	197	P	P	08 48 49.1	-0.5
WB2	Warramunga Arr	35.11	198	P	P	08 48 49.4	-0.5
WB2				IAmb	IAmb	08 48 50.7	
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	35.12	198	P	P	08 48 49.3	-0.7
	comp=Z,4.2nm,0.6s,baz=19,slow=9.2,SNR=42						
WRA				PcP	PcP	08 51 20.1	+1.8
	comp=Z,2.1nm,0.7s,baz=11,slow=3.4,SNR=7.4						
WRA				LR	LR	09 03 36.6	
	comp=Z,30nm,18.8s,baz=165,slow=37						
SANVU	Saraoutou	36.43	142	P	P	08 49 00.3	-0.9
SANVU	Saraoutou	36.43	142	P	P	08 49 02.3	+1.1
AS31	Alice Springs	38.77	196	P	P	08 49 20.6	-0.2
ASAR	Alice Springs	38.77	196	P	P	08 49 20.4	-0.4
	comp=Z,2.4nm,0.5s,baz=21,slow=12,SNR=46						
ASAR				pP	pP	08 49 50.4	-1.7
	comp=Z,0.7nm,0.5s,baz=19,slow=12,SNR=2.3						
ASAR				PcP	PcP	08 51 30.9	+1.6
	comp=Z,1.5nm,0.6s,baz=29,slow=2.9,SNR=7.4						
ASAR				LR	LR	09 05 49.7	
	comp=Z,22nm,20.2s,baz=25,slow=37						
DVP	Devils Point	38.80	143	P	P	08 49 20.7	-0.4
HHC	Hu-ho-hao-te	39.69	319	eP	P	08 49 29.5	+1.1
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.2s						
PETK	Petropavlovsk-	40.51	12	P	P	08 49 35.6	+0.8
	comp=Z,13nm,1.2s,baz=150,slow=6.2,SNR=6.0						
KMI	Kunming	41.23	292	⇑eP	P	08 49 39.8	-1.6
KMI				pmax	pmax		
	comp=Z,24nm,0.5s						
NOUC	Port Laguerre	41.35	149	P	P	08 49 43.2	+1.1
DZM	Mont Dzumac	41.40	149	P	P	08 49 43.9	+1.4
	comp=Z,55nm,0.6s,baz=304,slow=4.7,SNR=114						
DZM	Mont Dzumac	41.40	149	P	P	08 49 42.6	+0.1
DZM	Mont Dzumac	41.40	149	P	P	08 49 44.0	+1.4
YATNC	Mamie plateau,	41.61	149	P	P	08 49 45.2	+1.0
OUENC	Ouen Island, N	41.89	149	P	P	08 49 47.9	+1.5
JOHN	Johnston Islan	43.92	80	P	P	08 50 01.6	-1.4
CMAR	Chiang Mai Arr	44.37	282	P	P	08 50 07.6	+1.0
	comp=Z,0.4nm,0.3s,baz=75,slow=6.8,SNR=2.9						
STKA	Stephens Creek	45.52	184	P	P	08 50 14.8	-0.5
	comp=Z,4.7nm,0.4s,baz=18,slow=7.3,SNR=26						
SONM	Songino Array	46.63	325	P	P	08 50 23.9	-0.2
	comp=Z,0.5nm,0.3s,baz=128,slow=18,SNR=5.8						
SONM				PcP	PcP	08 51 56.8	+1.3
	comp=Z,0.6nm,0.5s,baz=139,slow=3.2,SNR=1.9						
SONM				ScP	ScP	08 55 38.3	+3.1
	comp=Z,0.4nm,0.6s,baz=122,slow=3.7,SNR=4.7						
SONM	Songino Array	46.63	325	P	P	08 50 25.3	+1.3
BBOO	Buckleboo	47.11	190	P	P	08 50 27.5	-0.3
GTA	Gaotai	47.12	311	⇓P	P	08 50 29.5	+1.5
GTA				pP	pP	08 50 48.5	-12
GTA				sP	pwP	08 50 59.3	-6.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CAN	Canberra	48.99	176	P	P	08 50 42.9	+0.7
SEY	Seymchan	49.36	4	P	P	08 50 45.1	+0.5
	comp=Z,1.2nm,0.5s,baz=146,slow=13,SNR=5.5						
TLY	Talaya	50.24	328	P	P	08 50 52.8	+1.3
	comp=Z,1.3nm,0.5s,baz=101,slow=3.2,SNR=3.8						
TLY				pP	pP	08 51 22.2	-2.5
	comp=Z,1.3nm,0.6s,baz=156,slow=6.9,SNR=2.3						
UNV	Unalaska Valle	55.10	33	P	P	08 51 26.8	-0.3
WMQ	Urumqi	57.07	313	eP	P	08 51 44.8	+3.4
URZ	Urewera	59.90	151	P	P	08 52 01.1	+0.2
	comp=Z,3.5nm,0.4s,baz=240,slow=2.7,SNR=5.7						
BKZ	Black Stump Fm	60.34	152	P	P	08 52 04.2	+0.3
BKZ				IAmb	IAmb	08 52 15.1	
	comp=Z,17nm,1.3s						
TUWZ	Tuamarina	61.12	155	P	P	08 52 08.4	-0.7
MK31	Makanchi Array	61.42	316	P	P	08 52 11.8	+0.6
MKAR	Makanchi Array	61.42	316	P	P	08 52 12.2	+1.0
	comp=Z,1.9nm,0.5s,baz=91,slow=9.2,SNR=19						
MKAR				pP	pP	08 52 43.2	-2.2
	comp=Z,2.9nm,0.6s,baz=91,slow=9.7,SNR=8.0						
ZALV	Zalesovo Beam	61.52	324	P	P	08 52 11.9	+0.2
	comp=Z,0.4nm,0.4s,baz=99,slow=7.4,SNR=2.5						
ZALV				pP	pP	08 52 42.8	-3.1
	comp=Z,1.2nm,0.6s,baz=100,slow=6.5,SNR=3.4						
MSWZ	Moikau Station	61.64	154	P	P	08 52 12.5	-0.1
KDAK	Kodiak Island	63.85	32	P	P	08 52 27.6	+0.6
	comp=Z,8.5nm,0.8s,baz=92,slow=2.7,SNR=20						
KDAK	Kodiak Island	63.85	32	P	P	08 52 27.6	+0.6
TTA	Tatalina	63.93	26	P	P	08 52 27.6	0.0
KURK	Kurchatov	64.50	320	P	P	08 52 31.8	+0.4
KURK				IAmb	IAmb	08 52 32.2	
	comp=Z,3.4nm,0.8s						
PPLA	Purkeypile	65.56	27	P	P	08 52 38.7	+0.4
PPLA				IAmb	IAmb	08 52 42.0	
	comp=Z,19nm,1.4s						
NRIK	Noril'sk	65.97	341	P	P	08 52 40.4	-0.1
	comp=Z,2.2nm,0.5s,baz=104,slow=5.8,SNR=5.3						
RC01	Rabbit Creek A	66.15	29	P	P	08 52 42.4	+0.5
	baz=255						
CUT	Chulitna	66.26	27	P	P	08 52 42.7	+0.2
	baz=254						
MLY	Manley	66.84	25	P	P	08 52 46.6	+0.4
	baz=252						
COLD	Coldfoot	67.73	22	P	P	08 52 52.4	+0.7
	baz=252						
M24K	Tolsona, Glenn	68.05	28	P	P	08 52 54.4	+0.5
	baz=258						
HDA	Harding Lake	68.23	26	P	P	08 52 53.9	-1.0
	baz=256						
ILAR	Eielson Array	68.34	25	P	P	08 52 54.1	-1.5
	comp=Z,1.3nm,0.4s,baz=249,slow=5.7,SNR=47						
SCRK	Sand Creek	69.40	26	P	P	08 53 02.7	+0.4
	baz=259						
INK	Inuvik	74.14	22	P	P	08 53 30.7	+0.3
	comp=Z,1.5nm,0.6s,baz=251,slow=6.6,SNR=4.5						
INK				pP	pP	08 54 01.6	-5.1
	comp=Z,1.5nm,0.9s,baz=253,slow=0.5,SNR=2.7						
INK	Inuvik	74.14	22	P	P	08 53 30.5	+0.2
ABKAR	Akbulak array	76.46	318	P	P	08 53 44.1	+0.1
C36M	Paulatuk	77.54	21	P	P	08 53 49.9	+0.3
	baz=276						
D03D	Eldon	81.26	43	P	P	08 54 12.0	+1.8
	baz=281						
I02D	Swisshome	81.38	47	P	P	08 54 12.1	+1.2
	baz=281						
J01E	Myrtle Point	81.50	48	P	P	08 54 12.1	+0.6
	baz=281						
G03D	McMinnville, O	81.58	46	P	P	08 54 13.0	+1.1
	baz=281						
K02D	Willamette Mer	81.78	48	P	P	08 54 14.2	+1.0
	baz=281						
I03D	Drain, OR	81.81	47	P	P	08 54 14.9	+1.7
	baz=281						
L02E	Cave Junction	81.93	49	P	P	08 54 15.4	+1.6
	baz=281						
H04D	Lebanon	82.08	46	P	P	08 54 15.4	+0.8
	baz=281						
I04A	Tendick Farm,	82.46	47	P	P	08 54 17.9	+1.3
	baz=282						
M02C	Callahan	82.63	49	P	P	08 54 19.6	+2.0
	baz=282,SNR=6.7						
YKA	Yellowknife Ar	82.64	27	P	P	08 54 17.2	+0.1
	comp=Z,1.1nm,0.6s,baz=288,slow=4.5,SNR=18						
F05D	White Salmon	82.69	45	P	P	08 54 19.2	+1.5
	baz=282						
J04D	Umpqua Nationa	82.79	47	P	P	08 54 20.0	+1.4
	baz=282						
N02D	Trinity Center	82.83	50	P	P	08 54 19.8	+1.2
	baz=282						
L04D	Klamath Falls	82.86	48	P	P	08 54 20.5	+1.7
	baz=282,SNR=6.6						
G05D	Wamic, OR	82.92	45	P	P	08 54 20.1	+1.1
	baz=282						
O02D	Mt. Diablo Mer	82.93	50	P	P	08 54 21.3	+2.1
	baz=282						
I05D	Terrebonne, OR	83.10	46	P	P	08 54 21.8	+1.9
	baz=282						
M04C	Macdoel	83.29	49	P	P	08 54 22.9	+1.8
	baz=282,SNR=6.3						

J05D	**Fort Rock, OR**	**83.40**	**47**	P	**P**	**08 54 23.6**	**+1.9**
	baz=283,SNR=12						
O03E	**Paynes Creek**	**83.64**	**50**	P	**P**	**08 54 24.4**	**+1.5**
	baz=283						
BEKR	**Beckworth**	**84.82**	**50**	P	**P**	**08 54 30.1**	**+1.2**
BEKR				IAmb	IAmb	08 54 31.3	
	comp=Z,7.4nm,0.6s						
NEW	**Newport**	**85.01**	**42**	P	**P**	**08 54 30.9**	**+1.3**
	baz=285						
PNTR	**Pine Nut**	**85.57**	**51**	P	**P**	**08 54 32.2**	**-0.6**
PNTR				IAmb	IAmb	08 54 35.3	
	comp=Z,4.5nm,0.7s						
SMMC	**Simmler**	**86.18**	**55**	P	**P**	**08 54 37.3**	**+1.7**
	baz=284						
PKM	**Mcpherson Peak**	**86.43**	**55**	P	**P**	**08 54 38.6**	**+1.6**
	baz=284						
NVAR	**Mina Array Bea**	**86.72**	**51**	P	**P**	**08 54 40.2**	**+1.8**
	comp=Z,3.2nm,0.5s,baz=263,slow=6.1,SNR=48						
NVAR	**Mina Array Bea**	**86.72**	**51**	P	**P**	**08 54 40.5**	**+2.2**
VES	**Vestal, Richgr**	**86.77**	**54**	P	**P**	**08 54 39.8**	**+1.4**
	baz=285						
SCZ2	**Santa Cruz Isl**	**86.79**	**56**	P	**P**	**08 54 39.2**	**+0.7**
	baz=284						
NV11	**Mina Array Sit**	**86.83**	**51**	P	**P**	**08 54 41.1**	**+2.3**
NV11				IAmb	IAmb	08 54 41.7	
	comp=Z,3.7nm,0.8s						
ARCES	**ARCESS Array B**	**86.92**	**342**	P	**P**	**08 54 38.6**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=82,slow=8.4,SNR=7.3						
ISA	**Isabella, Lake**	**87.30**	**54**	P	**P**	**08 54 42.1**	**+1.1**
	baz=285						
CWC	**Cottonwood Cre**	**87.40**	**53**	P	**P**	**08 54 43.2**	**+1.5**
	baz=285						
MSO	**Missoula**	**87.48**	**42**	P	**P**	**08 54 42.6**	**+0.8**
	baz=287						
GRAC	**Grapevine Rang**	**87.81**	**53**	P	**P**	**08 54 44.4**	**+1.0**
	baz=286						
EDW2	**Edwards Air Fo**	**87.88**	**55**	P	**P**	**08 54 45.0**	**+1.2**
	baz=285						
MPMC	**Manual Prospec**	**87.97**	**53**	P	**P**	**08 54 46.3**	**+1.9**
	baz=286,SNR=9.9						
LRMC	**Laurel Mtn Rad**	**87.97**	**54**	P	**P**	**08 54 46.4**	**+2.1**
	baz=285,SNR=5.4						
BFSC	**Mount Baldy Ra**	**88.31**	**55**	P	**P**	**08 54 47.3**	**+1.3**
	baz=285						
FURC	**Furnace Creek,**	**88.34**	**53**	P	**P**	**08 54 47.8**	**+2.0**
	baz=286,SNR=6.9						
TPNV	**Topopah Spring**	**88.68**	**52**	P	**P**	**08 54 49.6**	**+1.9**
	baz=286,SNR=12						
TPNV	**Topopah Spring**	**88.68**	**52**	P	**P**	**08 54 50.0**	**+2.4**
TPNV				IAmb	IAmb	08 54 50.7	
	comp=Z,7.1nm,0.7s						
GSC	**Goldstone, Bar**	**88.70**	**54**	P	**P**	**08 54 49.7**	**+2.0**
	baz=286,SNR=7.5						
R11A	**Troy Canyon, C**	**88.80**	**51**	P	**P**	**08 54 50.2**	**+2.0**
	baz=287						
MURC	**Murrieta**	**88.86**	**56**	P	**P**	**08 54 49.3**	**+1.0**
	baz=286						
109C	**Camp Elliot, M**	**89.12**	**56**	P	**P**	**08 54 51.2**	**+1.6**
	baz=286						
HEC	**Hector,Ludlow**	**89.21**	**54**	P	**P**	**08 54 51.4**	**+1.4**
	baz=286						
BOZ	**Bozeman (W)**	**89.39**	**43**	P	**P**	**08 54 51.5**	**+0.7**
	baz=289						
PFO	**Pinyon Flats O**	**89.44**	**56**	P	**P**	**08 54 51.5**	**+0.3**
	baz=286						
TPFO	**Pinon Flats**	**89.45**	**56**	P	**P**	**08 54 51.5**	**+0.3**
	baz=286						
BAR	**Barrett**	**89.53**	**57**	P	**P**	**08 54 53.8**	**+2.2**
BAR				IAmb	IAmb	08 54 54.4	
	comp=Z,4.0nm,0.7s						
MONP2	**Monument Peak**	**89.67**	**56**	P	**P**	**08 54 54.4**	**+2.0**
	baz=286,SNR=8.5						
BELC	**Belle Mtn. Jos**	**89.70**	**55**	P	**P**	**08 54 54.2**	**+1.7**
	baz=286,SNR=5.6						
GMRC	**Granite Mounta**	**89.75**	**54**	P	**P**	**08 54 54.5**	**+1.8**
	baz=287,SNR=10						
IKP	**In-Ko-Pah, Jac**	**89.99**	**56**	P	**P**	**08 54 55.2**	**+1.4**
	baz=286						
PSUT	**Pine Spring**	**90.04**	**50**	P	**P**	**08 54 56.2**	**+2.1**
PSUT				IAmb	IAmb	08 54 57.3	
	comp=Z,3.9nm,0.8s						
SWSC	**Sam W. Stewart**	**90.16**	**56**	P	**P**	**08 54 56.0**	**+1.6**
	baz=286						
SPUT	**South Promonto**	**90.21**	**47**	P	**P**	**08 54 56.8**	**+2.1**
SPUT				IAmb	IAmb	08 54 57.5	
	comp=Z,3.3nm,1.1s						
BC3	**Big Chuckawall**	**90.24**	**55**	P	**P**	**08 54 56.3**	**+1.4**
	baz=287						
DUG	**Dugway, Tooele**	**90.30**	**48**	P	**P**	**08 54 56.5**	**+1.3**
	baz=288						
ESJX	**Sierra Juarez**	**90.31**	**57**	P	**P**	**08 54 57.7**	**+2.3**
ESJX				IAmb	IAmb	08 54 58.3	
	comp=Z,4.5nm,1.2s						
IRM	**Iron Mountain**	**90.34**	**55**	P	**P**	**08 54 57.3**	**+2.0**
	baz=287,SNR=6.7						
FLWY	**Flagg Ranch**	**90.52**	**44**	P	**P**	**08 54 58.8**	**+2.6**
FLWY				IAmb	IAmb	08 54 59.5	
	comp=Z,2.8nm,0.6s						
GLA	**Glamis**	**90.91**	**56**	P	**P**	**08 55 00.0**	**+2.0**
	baz=287						
FINES	**FINESS Array B**	**91.02**	**335**	P	**P**	**08 54 56.9**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=90,slow=3.8,SNR=8.5						
PDMCI	**Parker Dam,Lak**	**91.09**	**54**	P	**P**	**08 55 00.7**	**+2.0**
	baz=287						
RLMT	**Red Lodge**	**91.12**	**43**	P	**P**	**08 55 01.5**	**+2.5**
	baz=291						
PDAR	**Pinedale Array**	**91.75**	**45**	P	**P**	**08 55 02.7**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=215,slow=2.8,SNR=7.9						
PDAR	**Pinedale Array**	**91.75**	**45**	P	**P**	**08 55 02.4**	**+0.4**
214A	**Organ Pipe Nat**	**92.87**	**56**	P	**P**	**08 55 08.5**	**+1.4**
	baz=288						
WUAZ	**Wupatki**	**92.87**	**53**	P	**P**	**08 55 09.0**	**+1.9**
	baz=289						
PV14	**Lion Creek, Pa**	**93.68**	**49**	P	**P**	**08 55 12.5**	**+1.6**
PV14				IAmb	IAmb	08 55 13.6	
	comp=Z,3.8nm,1.0s						
PV11	**David Mesa, Pa**	**93.81**	**49**	P	**P**	**08 55 12.9**	**+1.4**
PV01	**Paradox Valley**	**94.09**	**49**	P	**P**	**08 55 13.7**	**+0.9**
PV01				IAmb	IAmb	08 55 14.5	
	comp=Z,2.1nm,0.9s						
SNAA	**Sanae**	**119.00**	**191**	PKPdf	**PKiKP**	**09 00 41.7**	**+0.6**
VNA2	**Neumayer--Watz**	**120.44**	**190**	PKPdf	**PKiKP**	**09 00 44.2**	**+0.3**
VNA3	**Neumayer Olymp**	**120.54**	**189**	PKPdf	**PKPdf**	**09 00 42.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**134.83**	**305**	PKP	**PKiKP**	**09 01 14.0**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=92,slow=1.9,SNR=3.6						
TORD				SKPbc	**SKPab**	**09 04 31.5**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=40,slow=3.3,SNR=3.4						
KOWA	**Kowa**	**138.38**	**311**	PKP	**PKiKP**	**09 01 21.7**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=31,slow=2.3,SNR=4.9						
PLCA	**Paso Flores**	**139.01**	**138**	PKP	**PKiKP**	**09 01 22.2**	**0.0**
	comp=Z,1.4nm,0.7s,baz=230,slow=2.8,SNR=6.2						
LCO	**Las Campanas**	**143.67**	**120**	PKPdf	**PKPdf**	**09 01 28.6**	**-0.3**
DBIC	**Dimbokro**	**143.80**	**302**	PKP	**PKPdf**	**09 01 28.5**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=43,slow=3.7,SNR=6.3						
CO01	**Juntas del Tor**	**143.88**	**122**	PKPdf	**PKPdf**	**09 01 29.4**	**+0.2**
AC05	**El Transito**	**144.08**	**120**	PKPdf	**PKPdf**	**09 01 29.9**	**+0.5**
AC01	**Pan de Azucar**	**144.50**	**116**	PKPdf	**PKPdf**	**09 01 30.9**	**+0.8**
PB14	**IPOC Station P**	**145.00**	**113**	PKPdf	**PKPab**	**09 01 32.9**	**+1.8**

NNC ***29*** *08:44:20.6±2.9, 52°.22N×75°.92E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=66.2km s-min=12.4km az=31.0, Suspected Mining explosion.*

IDC ***29*** *08:44:24.0±1.1, 51°.62N×75°.32E, h0^{km}, mb1 2.7/4, mb1mx2.6/61, mbtmp2.7/4, ML2.4/4, Error ellipse: s-maj=35.1km s-min=9.6km az=33.0*

ISC 29 08:44:20.4±1.0**, 52°.33N**±0°.07×**76°.12E**±0°.05**, h0^{km}, n11,** σ**1^s.50**/12**, 6C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.25**	**135**	⇑Pg	**Pb**	**08 45 01.9**	**+0.1**
	2.2nm,0.4s						
KURK				⇑Lg	Lg	08 45 30.2	
	11nm,0.4s						
KURBB	**Kurchatov Arra**	**2.28**	**138**	Pn	**Pb**	**08 45 02.2**	**-0.2**
	0.6nm,0.3s,baz=308,slow=22,SNR=41						
KURBB				Lg	Lg	08 45 31.4	
	1.0nm,0.3s,baz=303,slow=34,SNR=5.1						
KURBB	**Kurchatov Arra**	**2.28**	**138**	⇑Pg	**Pg**	**08 45 03.7**	**-0.3**
	3.7nm,0.5s						
KURBB				⇑Lg	Lg	08 45 33.8	
	34nm,0.5s						
BVAR	**Borovoye Array**	**3.56**	**284**	Pn	**Pn**	**08 45 17.3**	**+0.5**
	0.5nm,0.3s,baz=112,slow=42,SNR=6.5						
BVAR				Lg	Lg	08 46 08.6	
	1.9nm,0.3s,baz=87,slow=30,SNR=9.7						
BRVK	**Borovoye**	**3.63**	**284**	⇑Pg	**Pb**	**08 45 24.6**	**-0.7**
	4.7nm,1.0s						
BRVK				⇑Lg	Lg	08 46 10.1	
	12nm,0.6s						
I46RU	**ZALESOVO INFRA**	**5.48**	**69**	*i*		09 21 10.0	
	baz=252,slow=317,SNR=0.8						
ZALV	**Zalesovo Beam**	**5.48**	**69**	Pn	**Pb**	**08 45 56.8**	**-0.1**
	0.5nm,0.3s,baz=255,slow=15,SNR=8.2						
ZALV				Sn	**Sb**	**08 47 02.6**	**-0.5**
	0.3nm,0.3s,baz=247,slow=22,SNR=3.3						
MAKZ	**Makanchi**	**6.71**	**143**	⇓Sn	**Sn**	**08 47 17.5**	**+0.2**
	1.8nm,1.0s						
MAKZ				⇓Lg	Lg	08 47 50.5	
	4.1nm,0.7s						
MK31	**Makanchi Array**	**6.84**	**142**	⇓Pn	**Pn**	**08 46 04.6**	**+2.7**
	0.5nm,0.7s,baz=320,slow=11,SNR=6.4						
MK31				⇓Sn	**Sn**	**08 47 18.8**	**-1.6**
	0.4nm,0.4s,baz=325,slow=17,SNR=4.9						
MK31				⇓Lg	Lg	08 47 55.0	
	2.8nm,0.6s,baz=329,slow=27,SNR=6.8						
MKAR	**Makanchi Array**	**6.84**	**142**	Pn	**Pn**	**08 46 02.6**	**+0.6**
	0.1nm,0.3s,baz=313,slow=12,SNR=5.1						
MKAR				Sn	**Sn**	**08 47 17.5**	**-3.0**
	0.3nm,0.3s,baz=318,slow=16,SNR=7.6						
MKAR				Lg	Lg	08 47 51.9	
	1.1nm,0.3s,baz=322,slow=26,SNR=12						
AAK	**Ala-Archa**	**9.76**	**187**	Lg	Lg	08 49 10.8	
	0.2nm,0.3s,baz=193,slow=17,SNR=4.0						

IDC 29 08:47:28.7±7.0**, 55°.70N**×**86°.17E, h0^{km}, mb1 3.1**/2**, mb1mx3.0**/56**, mbtmp3.1**/2**, ML2.8**/2**, Error ellipse: s-maj=71.9km s-min=27.2km az=27.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**204**	*i*		08 58 00.0	
	baz=24,slow=350,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.92**	**204**	Pn	Pn	08 48 02.7	0.0
	6.9nm,0.3s,baz=27,slow=17,SNR=59						
ZALV				Sn	Sb	08 48 29.0	-0.2
	4.7nm,0.3s,baz=26,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**6.85**	**225**	Pn	Pn	08 49 09.2	-1.1
	0.1nm,0.3s,baz=45,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**9.24**	**197**	Pn	Pn	08 49 44.2	+1.0
	0.1nm,0.3s,baz=18,slow=13,SNR=3.6						

MEX 29 09:02:04.7±0.4**, 14°.30N**×**92°.41W, h16^{km}**±999^{km}**, MD3.5, Near coast of Chiapas**

WEL 29 09:07:49.6±0.9**, 33°S**±22°×**17°9E**±3°8**, h362^{km}**±35^{km}**, M3.8**/17**, mB4.1**/5**, ML4.0**/7**, MLv4.0**/17**, Mw(mB)3.2**/5**, Error ellipse: s-maj=0.1km s-min=0.0km az=117.6, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.86**	**188**	P	Pn	09 09 09.2	+1.1
WMGZ	**Waiomatatini S**	**5.10**	**187**	P	Pn	09 09 12.2	+1.4
WMGZ				S	S	09 10 18.1	+1.5
HAZ	**Te Kaha**	**5.13**	**192**	P	Pn	09 09 10.8	-0.2
HAZ				S	S	09 10 17.8	+0.7
PKGZ	**Pakihiroa**	**5.21**	**189**	P	Pn	09 09 13.3	+1.2
PKGZ				S	S	09 10 19.2	+0.3
RUGZ	**Raukumara Rang**	**5.35**	**193**	P	Pn	09 09 13.7	+0.1
RUGZ				S	S	09 10 20.0	-1.7
PUZ	**Puketiti**	**5.37**	**188**	P	Pn	09 09 12.6	-1.1
PUZ				S	S	09 10 20.2	-1.7
TWGZ	**Tauwhareparae**	**5.51**	**190**	P	Pn	09 09 17.3	+2.0
MWZ	**Matawai**	**5.74**	**193**	P	Pn	09 09 16.6	-1.2
MWZ				S	S	09 10 29.4	0.0
URZ	**Urewera**	**5.75**	**196**	P	Pn	09 09 16.9	-1.0
URZ				S	S	09 10 32.3	+2.6
CNGZ	**Carnagh Statio**	**5.78**	**187**	P	Pn	09 09 19.3	+1.1
TKGZ	**Te Karaka**	**5.79**	**190**	P	Pn	09 09 17.0	-1.3
TKGZ				S	S	09 10 30.0	-0.3
RAGZ	**Rawiri**	**5.92**	**193**	P	Pn	09 09 20.7	+0.8
MUGZ	**Murupara**	**6.04**	**198**	S	S	09 10 35.4	-0.3
RIGZ	**Rimuhau**	**6.06**	**190**	P	Pn	09 09 21.4	0.0
RIGZ				S	S	09 10 35.0	-1.0
RTZ	**Ruatahuna**	**6.12**	**196**	P	Pn	09 09 20.4	-1.8
SNGZ	**Shannon Statio**	**6.21**	**193**	P	Pn	09 09 23.8	+0.8
SNGZ				S	S	09 10 40.7	+1.6
KNZ	**Kokohu**	**6.38**	**190**	P	Pn	09 09 24.9	-0.1
KNZ				S	S	09 10 43.0	+0.4
RAHZ	**Arahi**	**6.39**	**195**	P	Pn	09 09 25.6	+0.4
RAHZ				S	S	09 10 43.5	+0.6
NMHZ	**Naumai**	**6.62**	**196**	P	Pn	09 09 28.2	+0.3
NMHZ				S	S	09 10 50.2	+2.3
BKZ	**Black Stump Fm**	**6.76**	**198**	P	Pn	09 09 28.6	-0.9
BKZ				S	S	09 10 51.9	+1.1
MCHZ	**McNeill Hill**	**6.98**	**196**	P	Pn	09 09 32.0	+0.1
MCHZ				S	S	09 10 56.8	+1.5
KWHZ	**Kaweka Forest**	**7.03**	**198**	P	Pn	09 09 31.6	-0.9
KWHZ				S	S	09 10 56.6	+0.2
BHHZ	**Black Hill Sta**	**7.18**	**199**	P	Pn	09 09 33.1	-1.2

IDC ***29*** *09:29:49.7±0.6, 2°.16N×97°.14W, h0^{km}, mb4.7/18, mb1 4.9/18, mb1mx4.7/34, mbtmp4.7/18, MS4.2/22, Ms1 4.2/22, ms1mx4.1/30, Error ellipse: s-maj=22.5km s-min=12.2km az=46.0*

MOS ***29*** *09:29:50.0±0.9, 2°.20N×97°.06W, h10^{km}, mb5.0/34, Error ellipse: s-maj=10.8km s-min=6.8km az=100.9*

NEIC ***29*** *09:29:52.9±1.7, 2°.2N±0°.1×97°.0W±0°.1, h18^{km}±3^{km}, mb5.0/357, Error ellipse: s-maj=20.6km s-min=13.9km az=65.0*

GCMT ***29*** *09:29:53.9±0.3, 2°.39N±0°.02×96°.75W±0°.03, h12^{km}, MW4.8/74, Moment Tensor Solution. s22,c27; s74,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.01±.06; $M_{\theta\theta}$-2.14±.06; $M_{\phi\phi}$0.13±.07; $M_{r\theta}$-1.08±.23; $M_{\theta\phi}$-0.06±.05; $M_{\phi r}$0.38±.28; Best double couple: $M_0$2.37300×10^{16} NP1:ϕ_s78.00000°,δ32.00000°,λ72.00000°. NP2: ϕ_s279.00000°,δ59.00000°,λ101.00000°. Principal axes: T 2.3410, Plg73.0000°, Azm216.0000°; N 0.0710, Plg9.0000°, Azm93.0000°; P -2.4050, Plg14.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 09:29:51.4±0.4**, 2°.19N**±0°.06×**97°.08W**±0°.07**, h10^{km}, n744,** σ**0^s.86**/626**, mb5.0**/188**, MS4.1**/23**, 9C-8D, Fault plane solution: NP1:**ϕ_s20.34400°**,**δ34.66298°**,**λ39.88508°. **NP2:**ϕ_s255.84082°**,**δ68.61028°**,**λ117.95010°. **Principal axes:** T Plg57.0865°**,** Azm203.4258°**;** N Plg25.8756°**,** Azm64.8887°**;** P Plg18.8877°**,** Azm325.3362°**; Fault plane solution: NP1:**ϕ_s305.37387°**,**δ75.16950°**,** λ98.67948°. **NP2:**ϕ_s94.56197°**,**δ17.13431°**,**λ60.31984°. **Principal axes:** T Plg58.9497°**,** Azm227.3135°**;** N Plg8.3882°**,** Azm123.1363°**;** P Plg29.6521°**,** Azm28.3209°**; West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**14.49**	**56**	⇑*e*P	**Pn**	**09 33 18.2**	**+1.5**
CCIG	**Comitan**	**14.83**	**19**		**Pn**	**09 33 21.2**	**-0.3**
CMIG	**Matias Romero**	**14.97**	**8**	LR	LR	09 37 46.0	
	comp=Z,2µm,20.1s,baz=165,slow=32						
TGUH	**Tegucigalpa,Un**	**15.26**	**39**		**Pn**	**09 33 27.6**	**+0.4**
TGUH				IAmb	IAmb	09 33 35.6	
	comp=Z,90nm,1.1s						
TLIG	**Tlapa**	**15.35**	**355**		**Pn**	**09 33 30.3**	**+1.8**
ESPN	**Las Esperanzas**	**16.10**	**51**	P	**Pn**	**09 33 37.0**	**-1.0**
ESPN				IAmb	IAmb	09 33 44.2	
	comp=Z,121nm,1.4s						
OTAV	**Otavalo**	**18.72**	**96**	P	**Pn**	**09 34 11.6**	**+0.4**
OTAV				pmax	pmax		
	comp=Z,49nm,1.1s						
OTAV	**Otavalo**	**18.72**	**96**	P	**Pn**	**09 34 11.6**	**+0.4**
OTAV	**Otavalo**	**18.72**	**96**	*e*P	**Pn**	**09 34 12.8**	**+1.6**
OTAV	**Otavalo**	**18.72**	**96**	*e*P	**Pn**	**09 34 12.6**	**+1.3**
GCUF	**Volcan Galeras**	**19.74**	**92**	*e*P	**Pn**	**09 34 24.9**	**+1.3**
PCON	**Cinco Dias**	**20.66**	**89**	*e*P	**P**	**09 34 33.6**	**+1.3**
YOTC	**Yotoco, Valle**	**20.78**	**85**	*e*P	**P**	**09 34 32.8**	**-0.2**
ATAH	**Atahualpa**	**20.82**	**117**	P	**P**	**09 34 34.5**	**+0.8**
	comp=Z,13nm,0.9s,baz=110,slow=9.9,SNR=11						
ATAH				LR	LR	09 40 42.0	
	comp=Z,452nm,20.7s,baz=293,slow=31						
PLMC	**San Jos del P**	**20.93**	**82**	*e*P	**P**	**09 34 34.3**	**-0.3**
MARP	**Paez Belalcaza**	**21.11**	**88**	*e*P	**P**	**09 34 38.0**	**+1.2**
ZAIG	**Zacatecas**	**21.14**	**346**	P	**P**	**09 34 39.9**	**+2.9**
CBOC	**Ciudad Bolivar**	**21.32**	**80**	*e*P	**P**	**09 34 39.2**	**+0.3**
DBBC	**Dabeiba**	**21.34**	**76**	*e*P	**P**	**09 34 40.5**	**+1.4**
H06E1	**SOCORRO T-PHAS**	**21.36**	**321**	T	T	09 56 32.6	
	SNR=21						
GARC	**Garzon, Huila**	**21.57**	**90**	*e*P	**P**	**09 34 42.0**	**+0.4**
BETC	**Betania**	**21.62**	**88**	*e*P	**P**	**09 34 43.6**	**+1.6**
ANIL	**Santa Ana**	**21.75**	**83**	*e*P	**P**	**09 34 46.9**	**+3.2**
ANIL				*e*		09 34 46.9	
TOLC	**Tolima**	**21.85**	**83**	*e*P	**P**	**09 34 45.7**	**+0.9**
RREF	**El Recreo**	**21.85**	**82**	*e*P	**P**	**09 34 44.5**	**-0.6**
ORTC	**Ortega, Tolima**	**21.86**	**85**	*e*P	**P**	**09 34 41.4**	**-3.3**
GUY2C	**Guyana, Caldas**	**21.87**	**81**	*e*P	**P**	**09 34 46.2**	**+1.0**
UREC	**San Jos de Ur**	**22.15**	**75**	*e*P	**P**	**09 34 47.3**	**-0.4**
MOTC	**Monteria, Cord**	**22.29**	**72**	*e*P	**P**	**09 34 50.6**	**+1.5**
PTLC	**Puerto Leguiza**	**22.36**	**95**	*e*P	**P**	**09 34 50.6**	**+0.7**
ROSC	**El Rosal**	**22.86**	**83**	P	**P**	**09 34 57.3**	**+1.6**
	comp=Z,9.7nm,0.5s,baz=254,slow=20,SNR=9.0						
ROSC				LR	LR	09 42 45.7	
	comp=Z,145nm,18.6s,baz=256,slow=34						
ROSC	**El Rosal**	**22.86**	**83**	P	**P**	**09 34 55.9**	**+0.2**
ROSC				pmax	pmax		
	comp=Z,38nm,1.3s						
ROSC	**El Rosal**	**22.86**	**83**	P	**P**	**09 34 55.9**	**+0.2**
PTBC	**PUERTO BERRIO,**	**22.96**	**78**	*e*P	**P**	**09 34 56.4**	**+0.1**
SPBC	**San Pablo de B**	**23.20**	**81**	*e*P	**P**	**09 34 59.3**	**+0.4**
MACC	**Macarena, Meta**	**23.21**	**90**	*e*P	**P**	**09 34 58.9**	**0.0**
CHIC	**Chingaza**	**23.43**	**83**	*e*P	**P**	**09 34 58.9**	**-2.6**
SMLC	**San Martn de**	**23.81**	**73**	*e*P	**P**	**09 35 02.9**	**-1.9**
RUSC	**La Rusia**	**24.21**	**81**	*e*P	**P**	**09 35 09.8**	**+0.7**
BARC	**Barichara**	**24.22**	**79**	*e*P	**P**	**09 35 09.8**	**+0.9**
OCAC	**Ocana**	**24.40**	**75**	*e*P	**P**	**09 35 11.3**	**+0.9**
NNA	**Nana**	**24.55**	**125**	LR	LR	09 42 31.4	
	comp=Z,301nm,19.2s,baz=298,slow=31						
NNA	**Nana**	**24.55**	**125**	⇑*e*P	**P**	**09 35 10.9**	**-0.8**
NNA				pmax	pmax		
	comp=Z,20nm,1.1s						
PAMC	**Pamplona, Colo**	**24.82**	**77**	*e*P	**P**	**09 35 14.4**	**-0.2**
LPIG	**La Paz**	**25.27**	**331**	LR	LR	09 42 52.6	
	comp=Z,1µm,20.4s,baz=174,slow=31						
833A	**Chaparral WMA,**	**26.09**	**355**	P	**P**	**09 35 26.3**	**+0.9**
	baz=175						
CZSB	**Cruzeiro do Su**	**26.23**	**112**	*e*P	**P**	**09 35 27.6**	**+0.7**
SDV	**Santo Domingo**	**27.13**	**75**	P	**P**	**09 35 36.0**	**+0.8**
	comp=Z,12nm,0.9s,baz=269,slow=7.1,SNR=13						
SDV				PcP	**PcP**	**09 38 56.0**	**-0.1**
	comp=Z,6.2nm,0.9s,baz=139,slow=2.1,SNR=5.5						
SDV				LR	LR	09 44 40.0	
	comp=Z,202nm,21.6s,baz=254,slow=33						
SDV	**Santo Domingo**	**27.13**	**75**	P	**P**	**09 35 35.0**	**-0.3**
SDV				IAmb	IAmb	09 35 37.3	
	comp=Z,31nm,1.2s						
SDV				PcP	**PcP**	**09 38 56.9**	**+0.8**
SDV	**Santo Domingo**	**27.13**	**75**	*e*P	**P**	**09 35 34.8**	**-0.5**
SDV	**Santo Domingo**	**27.13**	**75**	*e*P	**P**	**09 35 36.2**	**+1.0**
HKT	**Hockley**	**27.64**	**2**	⇓*i*P	**P**	**09 35 39.8**	**+0.5**
HKT				pmax	pmax		
	comp=Z,20nm,1.5s						
HKT	**Hockley**	**27.64**	**2**	P	**P**	**09 35 39.2**	**-0.1**
TX31	**Lajitas Ar. Si**	**27.72**	**348**	P	**P**	**09 35 41.1**	**+0.9**
TX31				IAmb	IAmb	09 35 42.5	
	comp=Z,47nm,1.1s						
TX32	**Lajitas Array**	**27.72**	**348**	P	**P**	**09 35 40.4**	**+0.2**
TXAR	**Lajitas Array**	**27.72**	**348**	P	**P**	**09 35 41.2**	**+1.0**
	comp=Z,6.1nm,0.9s,baz=159,slow=12,SNR=55						
TXAR				PcP	**PcP**	**09 38 57.8**	**+0.6**
	comp=Z,1.9nm,1.0s,baz=173,slow=5.2,SNR=9.1						
TXAR				LR	LR	09 45 39.7	
	comp=Z,843nm,18.2s,baz=0.0,slow=34						
JCT	**Junction City**	**28.26**	**355**	P	**P**	**09 35 45.5**	**+0.5**
JCT				pmax	pmax		
	comp=Z,55nm,1.4s						
JCT	**Junction City**	**28.26**	**355**	P	**P**	**09 35 45.5**	**+0.5**
	baz=174,SNR=7.8						
JCT	**Junction City**	**28.26**	**355**	P	**P**	**09 35 45.5**	**+0.5**
JCT				IAmb	IAmb	09 35 47.5	
	comp=Z,55nm,1.4s						
435B	**Jarrell**	**28.45**	**359**	P	**P**	**09 35 46.5**	**-0.1**
	baz=179						
342A	**Flagon Creek P**	**29.38**	**8**	P	**P**	**09 35 56.1**	**+1.3**
342A				IAmb	IAmb	09 35 56.6	
	comp=Z,20nm,0.9s						
NATX	**Nacogdoches**	**29.50**	**4**	P	**P**	**09 35 56.2**	**+0.2**
	baz=185						
NATX	**Nacogdoches**	**29.50**	**4**	P	**P**	**09 35 57.0**	**+1.0**
NATX				IAmb	IAmb	09 35 58.5	
	comp=Z,54nm,1.3s						
WHTX	**Lake Whitney,**	**29.65**	**359**	P	**P**	**09 35 57.6**	**+0.4**
	baz=179						
WHTX	**Lake Whitney,**	**29.65**	**359**	P	**P**	**09 35 57.4**	**+0.2**
WHTX				IAmb	IAmb	09 35 58.8	
	comp=Z,27nm,0.9s						
237A	**Washetta, Mont**	**29.68**	**2**	P	**P**	**09 35 57.1**	**-0.4**
237A				IAmb	IAmb	09 35 59.6	
	comp=Z,33nm,1.1s						
DWPF	**Disney Wildern**	**29.80**	**29**	P	**P**	**09 35 58.9**	**+0.3**
	baz=213						
BRAL	**Brewton**	**30.34**	**17**	P	**P**	**09 36 04.0**	**+0.6**
	baz=200						
ABTX	**Abilene, Hawle**	**30.37**	**356**	P	**P**	**09 36 03.9**	**+0.2**
	baz=175,SNR=11						
ABTX	**Abilene, Hawle**	**30.37**	**356**	P	**P**	**09 36 03.7**	**0.0**
ABTX				IAmb	IAmb	09 36 05.2	
	comp=Z,20nm,1.1s						
MNTX	**Cornudas Mount**	**30.38**	**346**	P	**P**	**09 36 03.8**	**0.0**
	baz=163,SNR=6.1						
MNTX	**Cornudas Mount**	**30.38**	**346**	P	**P**	**09 36 04.4**	**+0.6**
GDL2	**Guadalupe Moun**	**30.64**	**348**	P	**P**	**09 36 06.0**	**-0.1**
SC01	**Santiago de lo**	**30.95**	**55**	P	**P**	**09 36 09.3**	**+0.4**
Z38A	**Mt. Pleasant**	**30.98**	**3**	P	**P**	**09 36 09.2**	**+0.3**
Z41A	**Richland Creek**	**31.17**	**7**	P	**P**	**09 36 11.2**	**+0.5**
	baz=188						
319A	**Douglas**	**31.24**	**340**	P	**P**	**09 36 12.9**	**+1.4**
319A				IAmb	IAmb	09 36 13.8	
	comp=Z,26nm,1.1s						
121A	**Cookes Peak, D**	**31.82**	**343**	P	**P**	**09 36 17.7**	**+1.1**
	baz=159,SNR=12						
121A	**Cookes Peak, D**	**31.82**	**343**	P	**P**	**09 36 17.6**	**+0.9**
121A				IAmb	IAmb	09 36 19.2	
	comp=Z,28nm,1.1s						
Z47A	**Carrollton**	**31.99**	**14**	IAmb	IAmb	09 36 19.9	
	comp=Z,20nm,1.0s						
MSTX	**Muleshoe**	**32.07**	**351**	P	**P**	**09 36 19.0**	**+0.3**
	baz=169,SNR=19						
LRAL	**Lakeview Retre**	**32.11**	**16**	P	**P**	**09 36 19.2**	**+0.2**
	baz=199						
LRAL	**Lakeview Retre**	**32.11**	**16**	P	**P**	**09 36 20.0**	**+1.1**
LRAL				IAmb	IAmb	09 36 20.5	
	comp=Z,21nm,1.4s						
X34A	**Smith Ranch, M**	**32.26**	**359**	P	**P**	**09 36 21.8**	**+1.5**
X37A	**Clayton**	**32.28**	**3**	IAmb	IAmb	09 36 21.9	
	comp=Z,24nm,1.2s						
MIAR	**Mount Ida**	**32.36**	**5**	P	**P**	**09 36 21.0**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,24nm,1.2s						
MIAR	**Mount Ida**	**32.36**	**5**	P	**P**	**09 36 21.1**	**0.0**
	baz=186,SNR=8.2						
MIAR	**Mount Ida**	**32.36**	**5**	P	**P**	**09 36 21.0**	**-0.1**
MIAR				IAmb	IAmb	09 36 22.5	
	comp=Z,24nm,1.2s						
WMOK	**Wichita Mounta**	**32.43**	**357**	P	**P**	**09 36 22.3**	**+0.5**
	baz=177						
152A	**Waverly Hall**	**32.47**	**20**	IAmb	IAmb	09 36 23.4	
	comp=Z,21nm,1.1s						
TUC	**Tucson**	**32.62**	**338**	P	**P**	**09 36 25.0**	**+1.4**
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**32.62**	**338**	P	**P**	**09 36 24.5**	**+0.9**
	baz=154						
TUC	**Tucson**	**32.62**	**338**	P	**P**	**09 36 25.0**	**+1.4**
AMTX	**Amarillo**	**32.81**	**353**	P	**P**	**09 36 25.9**	**+0.7**
	baz=171						
AMTX	**Amarillo**	**32.81**	**353**	P	**P**	**09 36 26.3**	**+1.1**
Z51A	**Franklin**	**32.92**	**19**	P	**P**	**09 36 25.6**	**-0.4**
Z51A				IAmb	IAmb	09 36 27.4	
	comp=Z,18nm,1.0s						
OXF	**Oxford**	**32.95**	**12**	P	**P**	**09 36 26.7**	**+0.4**
	baz=194						
ETMB	**Extrema**	**32.97**	**112**	*e*P	**P**	**09 36 25.9**	**-0.8**
W39A	**Magazine**	**32.99**	**5**	P	**P**	**09 36 27.4**	**+0.8**
	baz=186						

W39A	Magazine	32.99	5	IAmb	IAmb	09 36 28.5	
	comp=Z,23nm,1.2s						
Y22D	IRIS PASSCAL I	33.03	345	P	P	09 36 28.6	+1.4
	baz=162						
Y22D	IRIS PASSCAL I	33.03	345	IAmb	IAmb	09 36 30.1	
	comp=Z,24nm,0.9s						
Y49A	Blount Mountai	33.05	16	IAmb	IAmb	09 36 28.9	
	comp=Z,26nm,1.4s						
214A	Organ Pipe Nat	33.12	335	P	P	09 36 28.3	+0.5
	baz=150,SNR=5.8						
214A	Organ Pipe Nat	33.12	335	P	P	09 36 27.8	0.0
W41B	Gary Mavity, V	33.13	7	P	P	09 36 28.2	+0.4
	baz=189						
BCOK	Bluff Creek, N	33.31	359	P	P	09 36 29.9	+0.4
X48A	Hartselle	33.44	15	IAmb	IAmb	09 36 31.6	
	comp=Z,18nm,1.1s						
OK029	Liberty Lake	33.45	359	P	P	09 36 30.4	-0.2
OK029				IAmb	IAmb	09 36 31.7	
	comp=Z,18nm,1.0s						
SPX	San Pedro Mart	33.55	331	P	P	09 36 33.0	+0.9
GOGA	Godfrey	33.58	21	P	P	09 36 31.8	0.0
	baz=205						
TUL1	Leonard	33.58	2	P	P	09 36 31.4	-0.4
	baz=182,SNR=5.5						
TUL1	Leonard	33.58	2	IAmb	IAmb	09 36 32.5	
	comp=Z,28nm,1.1s						
OK031	S. Brethren Rd	33.60	0	P	P	09 36 31.3	-0.7
OK031				IAmb	IAmb	09 36 33.3	
	comp=Z,27nm,1.3s						
W45A	Hickory Valley	33.62	12	P	P	09 36 32.4	+0.3
PLAL	Pickwick Lake	33.69	13	IAmb	IAmb	09 36 34.7	
	comp=Z,35nm,1.4s						
ANMO	Albuquerque	33.74	346	P	P	09 36 34.9	+1.4
ANMO				pmax	pmax		
	comp=Z,13nm,1.2s						
ANMO	Albuquerque	33.74	346	P	P	09 36 34.2	+0.7
	baz=163						
ANMO	Albuquerque	33.74	346	P	P	09 36 34.9	+1.4
U32A	Winter Ranch,	34.07	357	P	P	09 36 35.8	-0.3
X51A	Calhoun	34.17	18	IAmb	IAmb	09 36 38.8	
	comp=Z,29nm,1.3s						
U38A	Gravette	34.17	4	P	P	09 36 36.9	-0.1
U38A				IAmb	IAmb	09 36 37.8	
	comp=Z,20nm,1.1s						
PSGCX	Pisagua	34.19	131	IAmb	IAmb	09 36 39.5	
	comp=Z,17nm,1.0s						
SJG	San Juan	34.21	60	P	P	09 36 36.5	-1.0
	comp=Z,13nm,0.3s,baz=283,slow=3.0,SNR=6.3						
SJG	San Juan	34.21	60	P	P	09 36 36.5	-1.0
SJG				IAmb	IAmb	09 36 37.4	
	comp=Z,32nm,1.1s						
113A	Mohawk Valley,	34.22	335	IAmb	IAmb	09 36 40.3	
	comp=Z,27nm,1.5s						
113A				PcP	PcP	09 39 14.5	+0.4
U40A	Yellville	34.23	6	P	P	09 36 37.2	-0.2
	baz=187,SNR=5.7						
MNMC	Minye Minye	34.33	129	P	P	09 36 39.1	+0.3
MNMC				IAmb	IAmb	09 36 55.4	
	comp=Z,16nm,0.9s						
X18A	Snowflake	34.35	341	P	P	09 36 38.8	+0.1
X18A				IAmb	IAmb	09 36 41.4	
	comp=Z,28nm,1.4s						
GCPR	Guaynabo City	34.35	60	P	P	09 36 35.7	-3.0
HUMP	Col San Antoni	34.48	61	IAmb	IAmb	09 36 42.1	
	comp=Z,42nm,1.4s						
T35A	Sooner Cattle	34.56	1	IAmb	IAmb	09 36 42.0	
	comp=Z,38nm,1.2s						
NHSC	New Hope	34.60	25	P	P	09 36 40.5	-0.2
	baz=210						
V48A	Smith Brothers	34.72	15	P	P	09 36 41.9	+0.3
V48A				IAmb	IAmb	09 36 43.0	
	comp=Z,42nm,1.3s						
MTP	Monte Pirata	34.72	61	P	P	09 36 41.5	-0.5
X16A	Lo Mia Camp, P	34.76	339	IAmb	IAmb	09 36 44.9	
	comp=Z,17nm,1.2s						
W18A	Petrified Fore	34.82	342	P	P	09 36 43.8	+1.0
	baz=157,SNR=12						
W18A	Petrified Fore	34.82	342	P	P	09 36 44.0	+1.2
W18A				IAmb	IAmb	09 36 46.0	
	comp=Z,37nm,1.5s						
WVT	Waverly	34.84	13	P	P	09 36 43.0	+0.2
WVT				pmax	pmax		
	comp=Z,43nm,1.2s						
WVT	Waverly	34.84	13	P	P	09 36 42.6	-0.2
	baz=196						
WVT	Waverly	34.84	13	P	P	09 36 43.0	+0.2
GLA	Glamis	34.93	333	P	P	09 36 44.3	+0.7
GLA				pmax	pmax		
	comp=Z,18nm,1.0s						
GLA	Glamis	34.93	333	P	P	09 36 44.9	+1.2
	baz=148						
GLA	Glamis	34.93	333	P	P	09 36 44.3	+0.7
GLA				IAmb	IAmb	09 36 45.8	
	comp=Z,18nm,1.0s						
W52A	Murphy	34.95	19	IAmb	IAmb	09 36 45.6	
	comp=Z,28nm,1.3s						
MGMO	Mountain Grove	35.08	7	IAmb	IAmb	09 36 46.2	
	comp=Z,27nm,1.1s						
T42A	Van Buren	35.11	8	P	P	09 36 44.5	-0.5
IKP	In-Ko-Pah, Jac	35.19	331	P	P	09 36 46.8	+0.9
	baz=146,SNR=6.8						
SWSC	Sam W. Stewart	35.29	332	P	P	09 36 47.6	+0.9
	baz=146						
T25A	Trinidad	35.43	350	P	P	09 36 49.3	+1.2
	baz=167,SNR=19						
V51A	Loudon	35.47	18	P	P	09 36 47.5	-0.7
V51A				IAmb	IAmb	09 36 50.3	
	comp=Z,42nm,1.4s						
BAR	Barrett	35.48	331	P	P	09 36 46.3	-2.1
S39A	Bolivar	35.50	5	IAmb	IAmb	09 36 49.7	
	comp=Z,23nm,1.2s						
TKL	Tuckaleechee C	35.52	19	P	P	09 36 49.0	+0.4
	comp=Z,20nm,1.1s,baz=176,slow=5.8,SNR=6.7						
MONP2	Monument Peak	35.54	331	P	P	09 36 49.9	+0.9
	baz=145,SNR=6.7						
PB07	IPOC Station P	35.66	133	IAmb	IAmb	09 36 52.6	
	comp=Z,32nm,1.2s						
PDMCI	Parker Dam,Lak	35.70	335	P	P	09 36 51.1	+0.9
	baz=150,SNR=11						
U49A	Red Boiling Sp	35.72	16	P	P	09 36 49.9	-0.4
U49A				IAmb	IAmb	09 36 52.1	
	comp=Z,28nm,1.2s						
BC3	Big Chuckawall	35.72	333	P	P	09 36 51.5	+1.0
	baz=147,SNR=9.0						
WUAZ	Wupatki	35.72	340	P	P	09 36 51.9	+1.4
	baz=155,SNR=14						
WUAZ	Wupatki	35.72	340	P	P	09 36 51.2	+0.7
WUAZ				IAmb	IAmb	09 36 53.3	
	comp=Z,30nm,1.1s						
WUAZ					PcP	09 39 19.7	+1.0
V53A	Saluda	35.85	20	IAmb	IAmb	09 36 53.1	
	comp=Z,22nm,1.1s						
KMSC	Kings Mountain	35.91	22	P	P	09 36 52.3	+0.3
	baz=207,SNR=6.6						
KMSC	Kings Mountain	35.91	22	P	P	09 36 51.8	-0.2
KMSC				IAmb	IAmb	09 36 53.5	
	comp=Z,19nm,0.9s						
IRM	Iron Mountain	36.01	334	P	P	09 36 53.9	+1.0
	baz=148,SNR=14						
S44A	Carbondale	36.06	11	P	P	09 36 52.8	-0.4
R32A	Long Quarter,	36.09	358	P	P	09 36 51.3	-2.2
CCM	Cathedral Cave	36.10	8	P	P	09 36 53.7	+0.2
CCM				pmax	pmax		
	comp=Z,17nm,1.2s						
CCM	Cathedral Cave	36.10	8	P	P	09 36 53.4	-0.1
	baz=190						
CCM	Cathedral Cave	36.10	8	P	P	09 36 53.7	+0.2
TPFO	Pinon Flats	36.14	332	P	P	09 36 55.1	+1.0
	baz=146,SNR=12						
XPFO	Pion Flat	36.14	332	P	P	09 36 55.0	+0.8
PFO	Pinyon Flats O	36.15	332 *c*	*i*P	P	09 36 55.1	+1.0
PFO				pmax	pmax		
	comp=Z,19nm,1.1s						
PFO	Pinyon Flats O	36.15	332	P	P	09 36 55.2	+1.0
	baz=146,SNR=12						
PFO	Pinyon Flats O	36.15	332	P	P	09 36 54.5	+0.4
PB09	IPOC Station P	36.17	133	IAmb	IAmb	09 36 57.6	
	comp=Z,36nm,1.2s						
W56A	Indian Trail	36.19	23	P	P	09 36 54.2	-0.1
	baz=208						
SDCO	Great Sand Dun	36.23	349	P	P	09 36 56.0	+1.0
	baz=166,SNR=11						
SDCO	Great Sand Dun	36.23	349	IAmb	IAmb	09 36 57.4	
	comp=Z,17nm,1.1s						
Y60A	Bolivia	36.23	27	P	P	09 36 55.2	+0.6
	baz=213						
BELC	Belle Mtn. Jos	36.26	333	P	P	09 36 56.1	+1.0
	baz=147,SNR=6.7						
TZTN	Tazewell	36.40	19	P	P	09 36 56.5	+0.3
	baz=203						
MVCO	Mesa Verde	36.41	345	P	P	09 36 57.2	+0.7
	baz=160,SNR=18						
MVCO	Mesa Verde	36.41	345	P	P	09 36 56.8	+0.3
MVCO				IAmb	IAmb	09 36 58.6	
	comp=Z,27nm,1.1s						
T50A	Nancy	36.45	17	IAmb	IAmb	09 36 57.7	
	comp=Z,20nm,1.2s						
PB06	IPOC Station P	36.49	134	IAmb	IAmb	09 36 59.7	
	comp=Z,29nm,1.2s						
S22A	4UR Ranch, Cre	36.51	347	P	P	09 36 58.2	+0.8
	baz=163,SNR=16						
CBKS	Cedar Bluff	36.54	357	P	P	09 36 57.9	+0.6
	baz=175						
V55A	Taylorsville	36.58	22	IAmb	IAmb	09 36 59.3	
	comp=Z,32nm,1.1s						
USIN	University of	36.64	13	IAmb	IAmb	09 36 59.5	
	comp=Z,31nm,1.0s						
W58A	Raeford	36.64	25	P	P	09 36 58.3	+0.1
	baz=211						
SCI2	San Clemente I	36.66	329	P	P	09 36 58.9	+0.4
	baz=142						
KSU1	Kansas State U	36.74	1	P	P	09 36 59.5	+0.5
	baz=181,SNR=6.3						
GMRC	Granite Mounta	36.76	334	P	P	09 37 00.4	+1.0
	baz=148,SNR=7.4						
MACA	Manacapuru-AM	36.76	98	*e*P	P	09 36 58.5	-1.1
V56A	Mocksville	36.82	23	P	P	09 36 59.5	-0.2
	baz=208						
U15A	North Rim	36.86	339	P	P	09 37 01.4	+0.9
BBRC	Big Bear Solar	36.90	332	P	P	09 37 01.9	+1.2
	baz=146						
LVC	Limon Verde	36.91	133	P	P	09 37 00.8	-0.3
LVC				pmax	pmax		
	comp=Z,31nm,1.4s						
LVC	Limon Verde	36.91	133	P	P	09 37 00.8	-0.3
LVC				IAmb	IAmb	09 37 04.3	
	comp=Z,31nm,1.4s						
LVC	Limon Verde	36.91	133	*e*P	P	09 37 02.8	+1.7
U54A	Nelsons Funny	36.96	21	P	P	09 37 01.3	+0.3
	baz=206,SNR=8.1						
KSCO	Kaye Shedlock'	37.00	353	P	P	09 37 01.7	+0.3
	baz=171,SNR=11						
HEC	Hector,Ludlow	37.10	333	P	P	09 37 03.4	+1.2
	baz=147,SNR=6.8						
W59A	Clinton	37.11	26	P	P	09 37 01.8	-0.3
	baz=212						
V57A	Coltrane Farms	37.17	24	P	P	09 37 03.0	+0.3
	baz=209						
WCI	Wyandotte Cave	37.21	14	P	P	09 37 02.0	-1.0
WCI				pmax	pmax		
	comp=Z,36nm,1.1s						
WCI	Wyandotte Cave	37.21	14	P	P	09 37 03.3	+0.4
	baz=198						
WCI	Wyandotte Cave	37.21	14	P	P	09 37 02.0	-1.0
WCI				IAmb	IAmb	09 37 04.4	
	comp=Z,36nm,1.1s						
PTGA	Pitinga	37.21	94	P	P	09 37 03.6	+0.2
	comp=Z,19nm,1.0s,baz=281,slow=9.6,SNR=18						
PTGA	Pitinga	37.21	94	P	P	09 37 03.7	+0.2
PTGA				IAmb	IAmb	09 37 04.5	
	comp=Z,32nm,1.1s						
PTGA	Pitinga	37.21	94	*e*P	P	09 37 03.7	+0.2
BFSC	Mount Baldy Ra	37.23	331	P	P	09 37 04.4	+1.0
	baz=144						
Q44A	Meyer Farm, Va	37.28	10	P	P	09 37 03.9	+0.3
Q44A				IAmb	IAmb	09 37 04.8	
	comp=Z,37nm,1.2s						
OLIL	Olney	37.29	12	IAmb	IAmb	09 37 05.5	
	comp=Z,31nm,1.0s						
W60A	Pink Hill	37.33	27	P	P	09 37 04.2	+0.1
	baz=213						
U56A	King	37.33	22	P	P	09 37 04.4	+0.3
	baz=208,SNR=6.5						
U56A	King	37.33	22	IAmb	IAmb	09 37 05.8	
	comp=Z,42nm,1.1s						
Q24A	Divide	37.34	350	P	P	09 37 05.4	+0.9
	baz=166						
V58A	Windy Hill, Pi	37.36	24	P	P	09 37 04.2	0.0
	baz=210						
V58A	Windy Hill, Pi	37.36	24	IAmb	IAmb	09 37 05.4	
	comp=Z,29nm,1.1s						
SNCC	San Nicolas Is	37.38	328	P	P	09 37 05.3	+0.7
	baz=141						
S51A	Beattyville	37.40	18	IAmb	IAmb	09 37 06.0	
	comp=Z,46nm,1.2s						
P38A	Dawn	37.40	5	P	P	09 37 04.0	-0.6
P38A				IAmb	IAmb	09 37 05.9	
	comp=Z,26nm,1.3s						
CNNC	Cliffs of the	37.41	26	P	P	09 37 04.7	0.0
	baz=212						
MWC	Mount Wilson	37.41	331	IAmb	IAmb	09 37 08.0	
	comp=Z,24nm,1.2s						
PV02	Paradox Valley	37.41	345	IAmb	IAmb	09 37 07.0	
	comp=Z,20nm,1.1s						
P40A	Paris	37.45	6	P	P	09 37 05.1	+0.1
P40A				IAmb	IAmb	09 37 06.2	
	comp=Z,37nm,1.1s						
PV15	Paradox Valley	37.47	345	P	P	09 37 06.2	+0.7
PV15				IAmb	IAmb	09 37 07.9	
	comp=Z,25nm,1.2s						
PV18	Skein Mesa, Pa	37.49	345	P	P	09 37 05.5	-0.2
PV12	Saucer Basin,	37.53	345	IAmb	IAmb	09 37 08.1	
	comp=Z,27nm,1.1s						
PV17	East Wray Mesa	37.54	345	P	P	09 37 06.1	+0.1
KNB	Kanab	37.58	339	P	P	09 37 07.9	+1.5
KNB				pmax	pmax		
	comp=Z,20nm,1.2s						
KNB	Kanab	37.58	339	P	P	09 37 07.9	+1.5
PV07	Paradox Valley	37.60	345	P	P	09 37 07.0	+0.4
PV07				IAmb	IAmb	09 37 08.8	
	comp=Z,19nm,1.1s						
PV04	Paradox Valley	37.63	345	P	P	09 37 07.6	+0.8
PV04				IAmb	IAmb	09 37 08.9	
	comp=Z,27nm,1.2s						
V59A	Middlesex	37.70	25	P	P	09 37 07.0	-0.2
	baz=212						
GSC	Goldstone, Bar	37.71	333	P	P	09 37 08.5	+1.1
GSC				pmax	pmax		
	comp=Z,12nm,1.1s						
GSC	Goldstone, Bar	37.71	333	P	P	09 37 08.4	+1.1
	baz=146,SNR=9.9						
GSC	Goldstone, Bar	37.71	333	P	P	09 37 08.5	+1.1
PV23	Carpenter Ridg	37.71	345	P	P	09 37 08.3	+0.7
PV23				IAmb	IAmb	09 37 09.6	
	comp=Z,25nm,1.2s						
R50A	Paris	37.78	16	IAmb	IAmb	09 37 08.9	
	comp=Z,24nm,1.1s						
U57A	Blanch	37.82	24	P	P	09 37 08.7	+0.5
	baz=210,SNR=12						
P43A	Skaggs, Pawnee	37.91	10	IAmb	IAmb	09 37 10.3	
	comp=Z,32nm,1.4s						
SMCO	Snowmass	37.91	347	P	P	09 37 10.1	+0.7
EDW2	Edwards Air Fo	37.91	331	P	P	09 37 09.9	+0.8
	baz=144,SNR=13						
SHOC	Shoshone, Teco	37.97	334	P	P	09 37 10.7	+1.1
	baz=148,SNR=8.8						
SHPR	Sheep Range	38.02	336	PcP	PcP	09 39 26.9	+1.2
BLO	Bloomington	38.05	13	IAmb	IAmb	09 37 11.2	
	comp=Z,33nm,1.1s						
GO02	Mina Guanaco	38.06	137	P	P	09 37 12.5	+1.7
GO02				IAmb	IAmb	09 37 13.3	
	comp=Z,24nm,1.2s						
T56A	Rocky Mt	38.07	22	P	P	09 37 10.7	+0.4
	baz=208,SNR=12						
BLA	Blacksburg	38.08	22	P	P	09 37 10.7	+0.2
BLA				pmax	pmax		
	comp=Z,32nm,1.2s						
BLA	Blacksburg	38.08	22	P	P	09 37 10.9	+0.4
	baz=208						
BLA	Blacksburg	38.08	22	P	P	09 37 10.7	+0.2
BLA				IAmb	IAmb	09 37 12.0	
	comp=Z,32nm,1.1s						
U58A	Oxford	38.11	25	P	P	09 37 10.3	-0.3
	baz=211						
V60A	Jim Taylor Roa	38.13	27	P	P	09 37 10.1	-0.7
	baz=213						
ISCO	Idaho Springs	38.24	349	P	P	09 37 13.1	+1.0
	baz=166,SNR=18						
ISCO	Idaho Springs	38.24	349	IAmb	IAmb	09 37 15.2	
	comp=Z,31nm,1.4s						
LRMC	Laurel Mtn Rad	38.25	332	P	P	09 37 13.1	+1.1
	baz=145,SNR=20						
S54A	Dingess, Beckl	38.29	20	P	P	09 37 12.2	0.0
	baz=206						
S54A	Dingess, Beckl	38.29	20	IAmb	IAmb	09 37 13.5	
	comp=Z,28nm,1.0s						
T57A	Hurt	38.34	23	P	P	09 37 13.0	+0.4
	baz=209,SNR=6.4						
T57A	Hurt	38.34	23	IAmb	IAmb	09 37 14.1	
	comp=Z,30nm,1.1s						
U59A	Littleton	38.39	25	P	P	09 37 12.6	-0.4
	baz=212						
SBC	Santa Barbara	38.41	329	P	P	09 37 13.8	+0.6
	baz=142						
V61A	Roper	38.46	27	P	P	09 37 13.6	0.0
	baz=214						
T58A	Grand View Acr	38.59	24	P	P	09 37 14.7	+0.1
	baz=210,SNR=6.0						
MPMC	Manual Prospec	38.64	333	P	P	09 37 16.2	+0.8
	baz=146,SNR=12						
FURC	Furnace Creek,	38.70	334	P	P	09 37 16.2	+0.5
	baz=147,SNR=8.3						
R54A	Victor	38.74	20	P	P	09 37 16.2	+0.2
	baz=206						
SRU	San Rafael Swe	38.75	343	P	P	09 37 16.0	-0.2
SRU				pmax	pmax		
	comp=Z,11nm,1.3s						
SRU	San Rafael Swe	38.75	343	P	P	09 37 16.0	-0.2
Q51A	Peebles	38.75	17	IAmb	IAmb	09 37 17.3	
	comp=Z,25nm,1.1s						
U60A	Pendleton	38.77	26	P	P	09 37 16.1	-0.1
	baz=213						
ISA	Isabella, Lake	38.77	332	P	P	09 37 17.4	+1.0
	baz=144,SNR=8.2						
S56A	Natural Bridge	38.81	22	P	P	09 37 16.8	+0.2
	baz=208						
PKM	Mcpherson Peak	38.81	330	P	P	09 37 17.8	+1.0
	baz=142						
HDIL	Hopedale	38.84	9	P	P	09 37 16.6	-0.1
	baz=192,SNR=8.8						
P49A	Miami Univ. Ec	38.84	15	P	P	09 37 16.3	-0.5
	baz=200						
P49A	Miami Univ. Ec	38.84	15	IAmb	IAmb	09 37 18.6	
	comp=Z,39nm,1.4s						
OGNE	Ogallala	38.84	354	P	P	09 37 17.9	+1.0
	baz=172,SNR=7.2						
TPNV	Topopah Spring	38.85	335	P	P	09 37 18.4	+1.3
	baz=148,SNR=7.5						
T59A	Double "B" Far	39.02	25	P	P	09 37 18.3	+0.1
	baz=212,SNR=7.2						
T59A	Double "B" Far	39.02	25	IAmb	IAmb	09 37 19.5	
	comp=Z,48nm,1.1s						
Q52A	Bidwell	39.02	18	P	P	09 37 18.0	-0.3
Q52A				IAmb	IAmb	09 37 19.7	
	comp=Z,53nm,1.1s						
SFIN	Lafayette	39.08	12	P	P	09 37 18.5	-0.2
	baz=196						
SFIN	Lafayette	39.08	12	IAmb	IAmb	09 37 19.5	
	comp=Z,28nm,0.9s						
O20A	White River Ci	39.11	346	P	P	09 37 20.3	+1.0
	baz=162,SNR=16						
O20A	White River Ci	39.11	346	IAmb	IAmb	09 37 21.6	
	comp=Z,31nm,1.1s						
S57A	Dark Hollow, R	39.12	23	P	P	09 37 19.0	-0.1
	baz=209						
R55A	Marlinton	39.14	21	P	P	09 37 19.9	+0.5
	baz=207						
R55A	Marlinton	39.14	21	IAmb	IAmb	09 37 21.0	
	comp=Z,30nm,1.1s						
Q53A	Leroy	39.17	19	P	P	09 37 19.6	+0.1
	baz=205						
VES	Vestal, Richgr	39.21	331	P	P	09 37 21.3	+1.4
	baz=144						
CWC	Cottonwood Cre	39.23	333	P	P	09 37 21.2	+0.9
	baz=146						
SMMC	Simmler	39.24	330	P	P	09 37 21.3	+1.1
	baz=142						
P51A	Williamsport	39.26	17	IAmb	IAmb	09 37 21.9	
	comp=Z,36nm,1.1s						
H03N2	Juan Fernandez	39.35	156	T	T	10 19 12.3	
	baz=334,slow=77,SNR=197						
S58A	Poland Farm, P	39.35	24	P	P	09 37 21.1	+0.1
	baz=211,SNR=6.8						
S58A	Poland Farm, P	39.35	24	IAmb	IAmb	09 37 22.3	
	comp=Z,44nm,1.1s						
N23A	Red Feather La	39.36	349	P	P	09 37 22.8	+1.4
	baz=166,SNR=19						
H03N1	Juan Fernandez	39.36	156	T	T	10 19 13.5	
	baz=334,slow=77,SNR=349						
GRAC	Grapevine Rang	39.37	334	P	P	09 37 22.7	+1.4
	baz=147						
H03N3	Juan Fernandez	39.37	156	T	T	10 19 10.9	
	baz=334,slow=77,SNR=281						
AC02	Maricunga	39.49	139	P	P	09 37 24.1	+1.2
Q54A	Coxs Mills	39.51	20	IAmb	IAmb	09 37 23.9	
	comp=Z,47nm,0.9s						
R56A	Bull Pasture M	39.51	22	P	P	09 37 23.1	+0.6
	baz=208						
VILB	Vilhena	39.57	113	*e*P	P	09 37 23.6	+0.3
P52A	Corning	39.68	18	P	P	09 37 23.5	-0.2
	baz=204,SNR=5.6						
P52A	Corning	39.68	18	P	P	09 37 23.5	-0.2
P52A				IAmb	IAmb	09 37 24.9	
	comp=Z,34nm,1.1s						
SCIA	State Center	39.70	5	P	P	09 37 23.5	-0.3
	baz=186						
R58B	Mineral	39.73	24	P	P	09 37 24.5	+0.3
	baz=211						
R58B	Mineral	39.73	24	IAmb	IAmb	09 37 25.5	
	comp=Z,57nm,1.5s						
VOG	Valley Oaks Go	39.74	331	P	P	09 37 25.3	+1.0
	baz=144						
R57A	Stanardsville	39.76	23	P	P	09 37 24.4	0.0
	baz=210,SNR=6.3						
P53A	Whipple	39.78	19	IAmb	IAmb	09 37 26.1	
	comp=Z,24nm,1.0s						
R11A	Troy Canyon, C	39.78	337	P	P	09 37 26.3	+1.4
	baz=150,SNR=7.5						
S59A	Mechanicsville	39.79	25	P	P	09 37 24.8	+0.1
	baz=212						
N47A	Urbana	39.87	13	IAmb	IAmb	09 37 25.3	
	comp=Z,33nm,1.1s						
SIV	San Ignacio	39.90	118	P	P	09 37 26.3	+0.3
	comp=Z,26nm,1.1s,baz=296,slow=9.1,SNR=47						
R58A	Rapidan	39.96	24	P	P	09 37 26.8	+0.7
	baz=210						
ACSO	Alum Creek Sta	39.97	17	P	P	09 37 26.5	+0.3
	baz=202						
NLU	North Lily Min	39.99	342	P	P	09 37 27.4	+0.8
S60A	Water View	40.02	25	P	P	09 37 26.5	-0.1
	baz=213						
L40A	Anamosa	40.05	7	IAmb	IAmb	09 37 27.8	
	comp=Z,34nm,1.1s						
CBN	Corbin Frederi	40.14	24	P	P	09 37 28.0	+0.4
	baz=211						
AC05	El Transito	40.15	142	P	P	09 37 30.4	+2.4
AC05				IAmb	IAmb	09 37 30.6	
	comp=Z,32nm,1.4s						
Q56A	Snyder Ridge,	40.15	22	P	P	09 37 28.5	+0.8
	baz=208						
R59A	King George, V	40.24	25	P	P	09 37 29.0	+0.5
	baz=212						
N49A	Columbus Grove	40.28	15	IAmb	IAmb	09 37 29.1	
	comp=Z,29nm,1.1s						
RWWY	Rawlins	40.37	348	P	P	09 37 29.4	-0.4
RWWY				IAmb	IAmb	09 37 32.1	
	comp=Z,29nm,1.1s						
DUG	Dugway, Tooele	40.44	341	P	P	09 37 31.2	+0.9
	baz=155,SNR=20						
DUG	Dugway, Tooele	40.44	341	IAmb	IAmb	09 37 33.7	
	comp=Z,37nm,1.4s						
Q57A	Strasburg	40.44	23	P	P	09 37 30.5	+0.4
	baz=209						
MCWV	Mont Chateau	40.46	21	P	P	09 37 30.4	+0.2
	baz=207						
R60A	Leonardtown, M	40.52	25	P	P	09 37 30.9	+0.2
	baz=212						
O53A	New Philadelph	40.53	19	P	P	09 37 30.8	0.0
	baz=205,SNR=5.5						
O53A	New Philadelph	40.53	19	IAmb	IAmb	09 37 32.0	
	comp=Z,40nm,1.2s						
MLAC	Mammoth, Mammo	40.55	333	P	P	09 37 32.6	+1.3
	baz=145						
OMMB	Old Mammoth Mi	40.61	333	P	P	09 37 30.9	-1.1
Q58A	Fox Den Farm,	40.64	23	P	P	09 37 32.3	+0.6
	baz=210						
L44A	Lake County Fo	40.66	10	P	P	09 37 31.4	-0.4
	baz=194						
P56A	Dayton Farm, R	40.69	22	P	P	09 37 32.8	+0.7
	baz=208						
O54A	Avella	40.74	20	IAmb	IAmb	09 37 33.6	

	comp=Z,20nm,0.9s						
NV11	Mina Array Sit	40.91	334	P	P	09 37 34.7	+0.6
NV11					PcP	09 39 35.1	+0.4
NVAR	Mina Array Bea	40.97	334	P	P	09 37 35.9	+1.1
	comp=Z,5.2nm,1.0s,baz=157,slow=8.4,SNR=33						
NVAR				PcP	PcP	09 39 35.9	+0.9
	comp=Z,2.7nm,1.0s,baz=154,slow=4.0,SNR=8.1						
NVAR	Mina Array Bea	40.97	334	P	P	09 37 36.0	+1.3
NVAR				PcP	PcP	09 39 35.6	+0.5
P57A	Homestead Farm	40.98	23	P	P	09 37 35.0	+0.5
	baz=210,SNR=6.1						
P57A	Homestead Farm	40.98	23	IAmb	IAmb	09 37 36.5	
	comp=Z,37nm,1.1s						
Q59A	Harwood	40.99	25	P	P	09 37 35.2	+0.5
	baz=212						
JFWS	Jewell Farm	41.01	8	P	P	09 37 34.2	-0.5
	baz=190,SNR=5.1						
JFWS	Jewell Farm	41.01	8	IAmb	IAmb	09 37 35.5	
	comp=Z,30nm,0.9s						
N53A	Lisbon	41.15	19	IAmb	IAmb	09 37 37.7	
	comp=Z,40nm,1.1s						
K22A	Casper	41.17	349	P	P	09 37 36.3	0.0
	baz=166						
K22A	Casper	41.17	349	P	P	09 37 35.7	-0.5
M51A	Elyria	41.22	17	P	P	09 37 36.1	-0.4
	baz=203,SNR=5.2						
P58A	Pank, Wackersv	41.26	23	P	P	09 37 37.0	+0.1
	baz=211						
ECSD	EROS Data Cent	41.37	1	P	P	09 37 37.4	-0.3
	baz=181,SNR=34						
ECSD	EROS Data Cent	41.37	1	IAmb	IAmb	09 37 38.6	
	comp=Z,46nm,0.9s						
Q60A	Greensboro	41.45	25	P	P	09 37 37.9	-0.5
	baz=213						
O56A	Blue Knob Stat	41.46	22	P	P	09 37 38.6	+0.1
	baz=208						
WAKR	Walker	41.53	333	P	P	09 37 40.7	+1.3
N54A	Moraine State	41.57	20	P	P	09 37 39.3	-0.2
	baz=206,SNR=9.7						
N54A	Moraine State	41.57	20	IAmb	IAmb	09 37 40.8	
	comp=Z,43nm,1.0s						
M52A	Chesterland	41.66	18	IAmb	IAmb	09 37 41.1	
	comp=Z,52nm,1.1s						
AAM	Ann Arbor	41.71	15	P	P	09 37 39.7	-0.8
	baz=200						
AAM	Ann Arbor	41.71	15	IAmb	IAmb	09 37 41.6	
	comp=Z,60nm,1.2s						
P59A	Jarrettsville	41.72	24	P	P	09 37 40.3	-0.3
	baz=212						
ELK	Elko	41.75	339	LR	LR	09 55 18.7	
	comp=Z,420nm,19.3s,baz=124,slow=37						
O57A	Amberson	41.76	23	P	P	09 37 40.8	-0.1
	baz=210,SNR=5.1						
M53A	WI Miller and	41.78	19	P	P	09 37 40.9	-0.2
	baz=205,SNR=6.2						
M53A	WI Miller and	41.78	19	IAmb	IAmb	09 37 42.2	
	comp=Z,37nm,1.1s						
I37A	Lemond, Waseca	41.78	4	P	P	09 37 40.2	-0.9
I37A				IAmb	IAmb	09 37 43.6	
	comp=Z,44nm,1.2s						
ITTB	Itaituba	41.82	99	*e*P	P	09 37 40.4	-1.4
BW06	Boulder Array	41.92	346	P	P	09 37 42.8	+0.3
	baz=161,SNR=20						
PDAR	Pinedale Array	41.92	346	P	P	09 37 43.0	+0.5
	comp=Z,9.1nm,0.9s,baz=155,slow=7.4,SNR=57						
PDAR				PcP	PcP	09 39 37.6	-0.4
	comp=Z,1.7nm,1.0s,baz=158,slow=4.3,SNR=4.2						
PDAR				LR	LR	09 54 40.7	
	comp=Z,627nm,18.8s,baz=166,slow=36						
PDAR	Pinedale Array	41.92	346	P	P	09 37 42.3	-0.2
O58A	Lewisberry	41.96	23	P	P	09 37 42.5	0.0
	baz=211						
MVL	Millersville	42.08	24	IAmb	IAmb	09 37 45.2	
	comp=Z,30nm,1.1s						
PNTR	Pine Nut	42.09	334	P	P	09 37 44.0	0.0
SUSD	Miller	42.11	358	P	P	09 37 43.7	-0.1
	baz=177						
N56A	West Decatur	42.12	21	P	P	09 37 44.2	+0.2
	baz=208,SNR=5.5						
ALLY	Alegheny Colle	42.14	19	IAmb	IAmb	09 37 45.2	
	comp=Z,50nm,1.1s						
M54A	Oil Creek Stat	42.17	20	P	P	09 37 44.6	+0.3
	baz=206,SNR=8.8						
M54A	Oil Creek Stat	42.17	20	IAmb	IAmb	09 37 45.6	
	comp=Z,45nm,1.2s						
RSSD	Black Hills	42.21	353	P	P	09 37 46.0	+1.2
RSSD				pmax	pmax		
	comp=Z,30nm,1.1s						
RSSD	Black Hills	42.21	353	P	P	09 37 45.6	+0.8
	baz=170						
RSSD	Black Hills	42.21	353	P	P	09 37 46.0	+1.2
RSSD				IAmb	IAmb	09 37 47.4	
	comp=Z,30nm,1.1s						
P60A	Greenville	42.22	25	P	P	09 37 44.8	+0.2
	baz=213						
N57A	Milroy	42.26	22	P	P	09 37 45.1	+0.1
	baz=210						
VCNR	Virginia City	42.28	334	P	P	09 37 45.8	+0.3
J47A	Sunmer	42.31	13	IAmb	IAmb	09 37 46.4	
	comp=Z,55nm,1.2s						
L53A	Girard	42.38	19	P	P	09 37 46.0	0.0
	baz=205,SNR=7.0						
O59A	Robesonia	42.41	24	P	P	09 37 46.6	+0.3
	baz=212						
M55A	Ridgway	42.44	20	IAmb	IAmb	09 37 47.9	
	comp=Z,44nm,1.1s						
PAHR	Pah Rah Range	42.50	334	P	P	09 37 47.4	+0.2
ERPA	Erie	42.61	19	P	P	09 37 47.9	0.0
	baz=206						
NPGB	Novo Progresso	42.63	103	*e*P	P	09 37 47.1	-1.4
N58A	Sunbury	42.65	23	P	P	09 37 48.3	+0.1
	baz=211						
M56A	Emporium	42.66	21	P	P	09 37 48.2	-0.1
	baz=208,SNR=9.4						
O60A	Telford	42.74	25	P	P	09 37 49.1	+0.2
	baz=213						
REDW	Red Top Meadow	42.80	345	P	P	09 37 49.3	-0.3
REDW				IAmb	IAmb	09 37 52.0	
	comp=Z,35nm,1.4s						
SNOW	Snow King Moun	42.87	345	IAmb	IAmb	09 37 55.9	
	comp=Z,27nm,1.1s						
O61A	Allentown	42.91	26	P	P	09 37 50.8	+0.5
	baz=214						
M57A	Sunshine Farm,	42.92	22	P	P	09 37 51.0	+0.6
	baz=210						
M57A	Sunshine Farm,	42.92	22	IAmb	IAmb	09 37 51.9	
	comp=Z,29nm,1.1s						
LUPA	Lehigh Univers	42.99	24	IAmb	IAmb	09 37 52.7	
	comp=Z,56nm,1.2s						
MALB	Monte Alegre	42.99	95	*e*P	P	09 37 50.1	-1.2
SPMN	Marine on St.	43.03	4	P	P	09 37 50.7	-0.4
	baz=186,SNR=6.2						
SPMN	Marine on St.	43.03	4	P	P	09 37 49.9	-1.3
N59A	State Game Lan	43.09	24	P	P	09 37 52.3	+0.5
	baz=212						
M58A	Price's Panora	43.21	23	P	P	09 37 52.9	+0.2
	baz=211,SNR=6.7						
N60A	Cedar Hill Far	43.33	24	P	P	09 37 53.7	+0.1
	baz=213						
ORV	Oroville	43.33	332	P	P	09 37 54.0	+0.3
ORV				pmax	pmax		
	comp=Z,13nm,1.3s						
ORV	Oroville	43.33	332	P	P	09 37 54.0	+0.3
L56A	Greenwood	43.46	21	P	P	09 37 55.0	+0.2
	baz=209,SNR=7.1						
L56A	Greenwood	43.46	21	IAmb	IAmb	09 37 56.1	
	comp=Z,34nm,0.9s						
F33A	5 Mile Ranch,	43.48	1	IAmb	IAmb	09 37 55.0	
	comp=Z,52nm,1.5s						
N61A	South Mountain	43.56	25	P	P	09 37 55.9	+0.3
	baz=214						
L57A	Andrews Acres	43.60	22	P	P	09 37 56.0	+0.1
	baz=210,SNR=6.5						
F36A	Milaca	43.61	4	IAmb	IAmb	09 37 57.4	
	comp=Z,34nm,1.3s						
H17A	Grant Village	43.70	346	P	P	09 37 57.4	+0.5
M59A	Waymart	43.76	24	P	P	09 37 57.3	+0.2
	baz=212						
M60A	Port Jervis	43.91	25	P	P	09 37 58.5	+0.2
	baz=213,SNR=9.4						
PAL	Palisades	43.94	25	P	P	09 37 58.7	0.0
	baz=214						
PAL	Palisades	43.94	25	IAmb	IAmb	09 37 59.9	
	comp=Z,36nm,1.0s						
L58A	Harry Jones Me	44.02	23	P	P	09 37 59.3	+0.1
	baz=211,SNR=8.6						
K56A	Middlesex	44.03	21	P	P	09 37 59.4	0.0
	baz=209,SNR=5.8						
MEDO	Medina	44.05	20	P	P	09 37 58.1	-1.3
O03E	Paynes Creek	44.06	333	P	P	09 38 00.5	+0.8
	baz=143						
RLMT	Red Lodge	44.09	348	P	P	09 37 60.0	0.0
	baz=162,SNR=6.9						
BINY	Binghamton	44.10	23	P	P	09 37 60.0	+0.1
	baz=211,SNR=12						
YNE	Yellowstone No	44.14	347	P	P	09 38 00.3	-0.2
YHB	Horse Butte	44.19	346	P	P	09 38 00.9	+0.1
M61A	Granite Spring	44.25	25	P	P	09 38 01.1	0.0
	baz=214,SNR=6.2						
TAOE	Nuku Hiva Isla	44.31	255	*e*LR	LR	09 50 24.8	
	comp=Z,297nm,24.9s						
TAOE	Nuku Hiva Isla	44.31	255	*e*T	T	10 25 13.9	
K57A	Scipio Center	44.36	22	P	P	09 38 01.9	-0.1
	baz=210,SNR=5.1						
BCYI	Bear Canyon	44.37	343	P	P	09 38 02.4	+0.1
L59A	Walton	44.46	23	P	P	09 38 02.9	0.0
	baz=212,SNR=9.2						
WVOR	Wild Horse Val	44.48	337	IAmb	IAmb	09 38 04.9	
	comp=Z,23nm,1.5s						
E38A	The Farm, Brul	44.50	5	P	P	09 38 01.9	-1.2
L60A	Shokan	44.62	24	P	P	09 38 04.5	+0.4
	baz=213						
J56A	Wolcott	44.70	21	P	P	09 38 04.8	+0.1
	baz=209,SNR=5.6						
J56A	Wolcott	44.70	21	P	P	09 38 04.0	-0.6
MOD	Modoc Plateau	44.71	335	IAmb	IAmb	09 38 07.2	
	comp=Z,19nm,1.3s						
K58A	Earlville	44.71	22	P	P	09 38 05.1	+0.3
	baz=211,SNR=13						
KSCT	Kent School, K	44.72	25	IAmb	IAmb	09 38 06.8	
	comp=Z,36nm,1.2s						
K59A	Cooperstown	45.03	23	P	P	09 38 07.3	-0.1
	baz=212,SNR=7.5						
LAO	LASA Array	45.04	351	P	P	09 38 07.2	-0.2
	baz=167,SNR=7.3						
LAO	LASA Array	45.04	351	P	P	09 38 07.2	-0.2
LAO				IAmb	IAmb	09 38 08.4	
	comp=Z,26nm,1.2s						
MCPB	Macapa, AP	45.08	93	*e*P	P	09 38 06.5	-1.6
M63A	Gales Ferry	45.08	27	P	P	09 38 08.3	+0.6
	baz=216						
M63A	Gales Ferry	45.08	27	P	P	09 38 09.2	+1.5
BOZ	Bozeman (W)	45.09	346	P	P	09 38 08.3	+0.4
	baz=159,SNR=7.1						
J57A	Williamstown	45.13	22	P	P	09 38 08.0	-0.1
	baz=210						
J57A	Williamstown	45.13	22	IAmb	IAmb	09 38 08.5	
	comp=Z,23nm,1.1s						
H53A	Bobcaygeon	45.27	19	P	P	09 38 09.2	0.0
	baz=206						
M04C	Macdoel	45.27	334	P	P	09 38 10.0	+0.6
	baz=144,SNR=7.3						
K60A	Five Rivers En	45.28	24	P	P	09 38 09.2	-0.1
	baz=213						
J58A	Remsen	45.36	22	P	P	09 38 09.9	0.0
	baz=211,SNR=7.0						
J58A	Remsen	45.36	22	P	P	09 38 09.4	-0.6
M02C	Callahan	45.41	333	P	P	09 38 10.4	-0.1
	baz=142						
DELO	Deloro Mine	45.53	20	IAmb	IAmb	09 38 12.7	
	comp=Z,29nm,1.2s						
MDND	Maddock	45.54	358	P	P	09 38 12.0	+0.7
	baz=176						
MDND	Maddock	45.54	358	P	P	09 38 10.4	-0.9
K61A	Williamstown	45.58	25	P	P	09 38 11.9	+0.1
	baz=214						
YBH	Yreka Blue Hor	45.62	333	LR	LR	09 55 15.1	
	comp=Z,195nm,18.0s,baz=156,slow=33						
K05A	Summer Lake	45.63	335	IAmb	IAmb	09 38 14.8	
	comp=Z,33nm,1.4s						
L61B	Northampton	45.65	25	P	P	09 38 12.5	+0.2
	baz=215						
I57A	Carthage	45.71	22	P	P	09 38 12.7	0.0
	baz=210						
J59A	Piesco	45.75	23	P	P	09 38 12.8	-0.3
	baz=212						
J59A	Piesco	45.75	23	IAmb	IAmb	09 38 15.9	
	comp=Z,24nm,1.1s						
I58A	Old Forge	45.76	22	P	P	09 38 13.0	-0.2
	baz=212						
L04D	Klamath Falls	45.83	334	P	P	09 38 13.5	-0.3
	baz=144,SNR=6.6						
EYMN	Ely	45.84	5	P	P	09 38 12.9	-0.7
	baz=188,SNR=5.2						
AGMN	Agassiz Nation	45.95	1	P	P	09 38 14.2	-0.3
	baz=182,SNR=17						
AGMN	Agassiz Nation	45.95	1	P	P	09 38 14.2	-0.3
J60A	Lant Hill Farm	45.99	24	P	P	09 38 15.2	+0.3
	baz=214						
L64A	Middleborough	46.05	27	P	P	09 38 15.8	+0.4
	baz=218						
L64A	Middleborough	46.05	27	P	P	09 38 16.9	+1.5
G54A	Lake Saint Pet	46.16	19	P	P	09 38 15.7	-0.6
	baz=207,SNR=6.0						
HRY	Holter Researc	46.18	346	P	P	09 38 16.7	+0.2
HRV	Adam Dziewonsk	46.18	26	P	P	09 38 16.3	-0.1
	baz=216						
J05D	Fort Rock, OR	46.24	336	P	P	09 38 17.6	+0.5
	baz=146,SNR=12						
H57A	Richville	46.26	21	P	P	09 38 17.0	-0.1
	baz=211						
K63A	Dunstable	46.34	26	P	P	09 38 17.8	+0.1
	baz=216						
L02E	Cave Junction	46.36	333	P	P	09 38 18.6	+0.7
	baz=142						
AQDB	Aquidauana	46.38	121	*e*P	P	09 38 18.3	0.0
I60A	Shoreham	46.55	24	P	P	09 38 19.0	-0.2
	baz=214						
J04D	Umpqua Nationa	46.57	335	P	P	09 38 19.8	+0.1
	baz=144,SNR=6.4						
ALGO	Algonquin Park	46.67	18	P	P	09 38 19.7	-0.5
	baz=206,SNR=5.8						
H58A	Gabriels	46.68	23	P	P	09 38 20.1	-0.3
	baz=212						
LONY	Lake Ozonia	46.70	22	P	P	09 38 20.3	-0.1
	baz=212						
K02D	Willamette Mer	46.81	333	P	P	09 38 21.9	+0.4
	baz=142,SNR=11						
MSO	Missoula	46.83	344	P	P	09 38 21.4	-0.2
	baz=156,SNR=9.4						
MSO	Missoula	46.83	344	P	P	09 38 21.2	-0.4
MSO				IAmb	IAmb	09 38 23.4	
	comp=Z,13nm,1.2s						
EGMT	Eagleton	46.96	348	P	P	09 38 22.2	-0.3
	baz=162,SNR=5.1						
EGMT	Eagleton	46.96	348	IAmb	IAmb	09 38 24.6	
	comp=Z,33nm,1.4s						
G57A	Newington	46.96	21	P	P	09 38 21.8	-0.7
	baz=211						
J63A	Strafford	47.01	26	P	P	09 38 22.7	-0.2
	baz=217						
G08A	Pilot Rock	47.05	339	IAmb	IAmb	09 38 25.6	
	comp=Z,19nm,1.4s						
H59A	Cadyville	47.06	23	P	P	09 38 22.7	-0.6
	baz=213						
I61A	Oroboro, Fairl	47.06	25	P	P	09 38 23.1	-0.2
	baz=215						
I04A	Tendick Farm,	47.15	335	P	P	09 38 24.1	0.0
	baz=144						
I05D	Terrebonne, OR	47.15	336	P	P	09 38 24.5	+0.4
	baz=146						
J01E	Myrtle Point	47.30	333	P	P	09 38 25.9	+0.7
	baz=142						
G58A	Ormstown	47.34	22	P	P	09 38 25.1	-0.4
	baz=212						
H60A	Morristown	47.38	24	P	P	09 38 25.3	-0.5
	baz=214						
LBNH	Lisbon	47.43	25	P	P	09 38 26.9	+0.7
	baz=215						
I03D	Drain, OR	47.47	334	P	P	09 38 26.9	+0.5
	baz=143						
H61A	Lyndonville	47.67	24	P	P	09 38 28.7	+0.6
	baz=215						
CPUP	Villa Florida	47.72	129	P	P	09 38 29.4	+0.7
	comp=Z,16nm,1.0s,baz=305,slow=8.4,SNR=15						
CPUP				LR	LR	09 56 29.0	
	comp=Z,113nm,21.0s,baz=294,slow=34						
CPUP	Villa Florida	47.72	129	P	P	09 38 28.6	-0.1
CPUP				pmax	pmax		
	comp=Z,41nm,1.3s						
CPUP	Villa Florida	47.72	129	P	P	09 38 28.6	-0.1
JTMT	Jette	47.77	344	IAmb	IAmb	09 38 31.0	
	comp=Z,24nm,1.2s						
H04A	Detroit Lake	47.78	336	P	P	09 38 28.4	-0.5
H04A				IAmb	IAmb	09 38 30.0	
	comp=Z,18nm,1.3s						
E09A	Wood Farm, Sta	47.83	340	IAmb	IAmb	09 38 30.9	
	comp=Z,18nm,1.1s						
H04D	Lebanon	47.87	335	P	P	09 38 30.4	+0.8
	baz=144						
G05D	Wamic, OR	47.89	337	P	P	09 38 30.2	+0.4
	baz=146						
ULM	Lac du Bonnet	47.90	1	P	P	09 38 29.0	-0.7
	comp=Z,26nm,1.0s,baz=185,slow=7.9,SNR=26						
ULM				LR	LR	09 58 45.7	
	comp=Z,196nm,19.3s,baz=147,slow=36						
ULM	Lac du Bonnet	47.90	1	*di*P	P	09 38 29.3	-0.4
PRPB	Parauapebas	47.91	100	*e*P	P	09 38 29.8	-0.7
G60A	Masonville	47.97	24	P	P	09 38 30.1	-0.3
	baz=214						
I02D	Swisshome	48.01	334	P	P	09 38 31.7	+1.0
	baz=143						
ARAG	Araguaiana, MT	48.15	113	*e*P	P	09 38 31.3	-0.9
I64A	Boothbay	48.16	27	P	P	09 38 31.7	-0.1
	baz=218						
E56A	St. Veronique	48.18	20	P	P	09 38 32.4	+0.4
	baz=210						
HAWA	Hanford	48.20	339	IAmb	IAmb	09 38 33.5	
	comp=Z,17nm,1.4s						
E57A	Chemin Saint G	48.38	21	P	P	09 38 33.6	0.0
	baz=211						
G61A	St-Isidore-de-	48.45	24	P	P	09 38 34.2	+0.2
	baz=215						
D55A	Sainte-Anne-du	48.45	20	P	P	09 38 33.8	-0.3
	baz=209						
F05D	White Salmon	48.48	337	P	P	09 38 35.4	+1.0
	baz=146						
E58A	La Victoria	48.67	22	P	P	09 38 35.9	+0.1
	baz=212						
D56A	ZEC Mazanza, M	48.72	20	P	P	09 38 35.5	-0.6
	baz=210						
G62A	West of Eustis	48.80	25	P	P	09 38 36.9	+0.1
	baz=216						
F60A	Warwick	48.84	23	P	P	09 38 36.9	-0.1
	baz=214						
H64A	Troy	48.91	26	P	P	09 38 37.9	+0.3
	baz=218						
C09A	Chrisman Ranch	49.00	341	P	P	09 38 37.0	-1.3
NEW	Newport	49.05	342	LR	LR	09 58 45.8	
	comp=Z,234nm,19.0s,baz=166,slow=35						
NEW	Newport	49.05	342	P	P	09 38 37.8	-0.9
	baz=153,SNR=9.5						
NEW	Newport	49.05	342	IAmb	IAmb	09 38 40.7	
	comp=Z,18nm,1.5s						
PLCA	Paso Flores	49.09	153	P	P	09 38 39.2	0.0
	comp=Z,5.7nm,1.2s,baz=308,slow=6.0,SNR=4.5						
PLCA				LR	LR	09 54 59.0	
	comp=Z,524nm,18.9s,baz=324,slow=31						
PLCA	Paso Flores	49.09	153	P	P	09 38 39.9	+0.7
PLCA				pmax	pmax		
	comp=Z,20nm,1.5s						
PLCA	Paso Flores	49.09	153	P	P	09 38 39.9	+0.7
PLCA				IAmb	IAmb	09 38 43.5	
	comp=Z,20nm,1.5s						
PLCA	Paso Flores	49.09	153	*e*P	P	09 38 39.2	0.0
F61A	St Evariste	49.23	24	P	P	09 38 40.0	-0.1
	baz=215						
E60A	Ste Agathe de	49.37	23	P	P	09 38 40.7	-0.4
	baz=215						
D58A	Chemin du LacG	49.42	22	P	P	09 38 41.2	-0.3
	baz=212,SNR=5.9						
E04D	Cinebar	49.47	337	P	P	09 38 42.6	+0.7
	baz=146						
G64A	Maxfield	49.59	26	P	P	09 38 41.9	-0.9
	baz=218						
LATQ	La Tuque	49.70	22	P	P	09 38 43.8	+0.2
	baz=212						
D59A	Saint-Raymond	49.74	22	P	P	09 38 43.5	-0.4
	baz=214						
LSQQ	Lebel-sur-Quev	49.77	17	P	P	09 38 43.6	-0.5
	baz=207						
E61A	Lac Etchemin	49.80	24	P	P	09 38 44.8	+0.4
	baz=216						
TRCB	Terra Rica	49.92	122	*e*P	P	09 38 45.8	0.0
D60A	Saint Jean D'O	50.02	23	P	P	09 38 46.0	0.0
	baz=215						
D04E	Lakebay	50.06	337	P	P	09 38 46.0	-0.3
	baz=146						
MATQ	Matagami	50.21	16	P	P	09 38 47.1	-0.4
	baz=206						
F64A	Sherman	50.25	26	P	P	09 38 47.6	-0.2
	baz=218						
D03D	Eldon	50.48	337	P	P	09 38 49.8	+0.2
	baz=145						
SMTB	Santa Maria do	50.53	103	*e*P	P	09 38 50.4	-0.1
D61A	St Aubert, Com	50.55	24	P	P	09 38 50.0	0.0
	baz=216						
E63A	Oxbow	50.66	25	P	P	09 38 51.0	+0.1
	baz=218						
B05A	Bryant	50.71	339	P	P	09 38 51.9	+0.6
	baz=147						
ITRB	Iturama	50.74	118	*e*P	P	09 38 51.4	-0.7
E64A	Bridgewater	50.91	26	P	P	09 38 52.9	+0.1
	baz=219						
PTGB	Pitanga	51.19	124	*e*P	P	09 38 55.5	+0.1
D63A	Stockholm	51.27	25	P	P	09 38 56.1	+0.6
	baz=218						
A04D	Lummi Island	51.32	338	P	P	09 38 56.5	+0.7
	baz=146						
A05A	Maple Falls	51.32	339	P	P	09 38 54.9	-0.9
A05A				IAmb	IAmb	09 38 57.4	
	comp=Z,33nm,1.3s						
BDFB	Brasilia	51.63	112	P	P	09 38 58.5	-0.4
	comp=Z,9.7nm,1.0s,baz=299,slow=10,SNR=7.6						
BDFB				LR	LR	10 00 45.5	
	comp=Z,163nm,18.1s,baz=272,slow=36						
BDFB	Brasilia	51.63	112	P	P	09 38 58.6	-0.3
BDFB				pmax	pmax		
	comp=Z,19nm,1.2s						
BDFB	Brasilia	51.63	112	P	P	09 38 58.6	-0.3
BDFB				IAmb	IAmb	09 38 59.3	
	comp=Z,19nm,1.2s						
IPMB	Ipameri, GO	52.12	115	*e*P	P	09 39 01.7	-0.7
ITAB	Concordia	52.23	127	*e*P	P	09 39 03.4	+0.4
FFC	Flin Flon	52.53	356	P	P	09 39 03.7	-1.0
FFC				pmax	pmax		
	comp=Z,19nm,1.2s						
FFC	Flin Flon	52.53	356	P	P	09 39 03.7	-1.0
FFC				IAmb	IAmb	09 39 05.4	
	comp=Z,19nm,1.2s						
CPSB	Cacapava Do Su	52.72	131	*e*P	P	09 39 07.1	+0.5
FRTB	Fartura	52.74	122	*e*P	P	09 39 07.2	+0.3
BB19B	Bebedouro	52.82	119	*e*P	P	09 39 06.8	-0.8
ROSB	Rosrio	53.17	95	*e*P	P	09 39 08.8	-1.4
PLTB	Pedras Altas	53.28	133	*e*P	P	09 39 12.5	+1.7
SDBA	SAO DESIDERIO	53.80	107	*e*P	P	09 39 14.3	-0.5
CNLB	Canela	54.17	129	*e*P	P	09 39 18.3	+1.0
SPB	Sao Paulo	54.65	121	*e*P	P	09 39 20.5	-0.4
VAO	Valinhos	54.84	120	*e*P	P	09 39 21.7	-0.7
JANB	Januaria	54.94	110	*e*P	P	09 39 21.9	-1.3
PET01	Itanhaem-SP	55.04	122	*e*P	P	09 39 24.3	+0.7
PPT	Papeete	55.33	247	LR	LR	09 57 31.4	
	comp=Z,68nm,18.8s,baz=185,slow=30						
PPT2	Papeete2	55.33	247	*e*LR	LR	09 55 32.4	
	comp=Z,126nm,24.8s						
BSCB	Bom Sucesso	56.12	117	*e*P	P	09 39 31.7	+0.1
PARB	Paraibuna	56.12	120	*e*P	P	09 39 32.0	+0.5
FCC	Fort Churchill	56.47	2	IAmb	IAmb	09 39 34.0	
	comp=Z,26nm,1.2s						
SJMB	Sao Joao De Ma	58.73	113	*e*P	P	09 39 50.2	+0.2
BSFB	Barra de Sao F	59.07	113	*e*P	P	09 39 52.7	+0.3
CAM01	Campos-RJ	59.14	117	*e*P	P	09 39 52.8	+0.1
GDU01	Guandu, BA	59.15	107	*e*P	P	09 39 52.5	-0.4
NAN01	Guarapari, ES	59.50	112	*e*P	P	09 39 54.8	-0.5
RIB01	Linhares ES	59.61	114	*e*P	P	09 39 55.5	-0.6
ALF01	Guarapari-ES	59.64	115	*e*P	P	09 39 54.4	-1.9
NBPA	Parau_RN	60.40	98	*e*P	P	09 40 01.1	-0.5
NBLI	Livramento-PB	60.73	100	*e*P	P	09 40 03.9	0.0
YKA	Yellowknife Ar	61.58	351	P	P	09 40 07.8	-0.8
	comp=Z,9.1nm,1.0s,baz=152,slow=7.2,SNR=68						
YKA				PcP	PcP	09 40 48.6	-1.7
	comp=Z,1.3nm,0.9s,baz=147,slow=5.1,SNR=4.1						
YKA				LR	LR	10 05 01.2	
	comp=Z,148nm,19.8s,baz=0.0,slow=34						
RCBR	Riachuelo	61.61	98	*e*P	P	09 40 09.8	-0.1
DLBC	Dease Lake	61.75	341	IAmb	IAmb	09 40 12.3	
	comp=Z,13nm,1.1s						
NBRF	Rio Formoso -	62.68	101	*e*P	P	09 40 15.6	-1.4
BCAR	Beaver Creek A	69.08	340	P	P	09 40 56.2	-1.2
N25K	Chitina, Valde	69.16	338	P	P	09 40 59.2	+1.2

	baz=128						
N25K	Chitina, Valde	69.16	338	P	P	09 40 57.8	-0.1
C36M	Paulatuk	69.43	350	P	P	09 40 59.1	-0.2
	baz=151,SNR=5.4						
C36M	Paulatuk	69.43	350	IAmb	IAmb	09 41 00.7	
	comp=Z,11nm,1.2s						
MENT	Mentasta	69.67	339	IAmb	IAmb	09 41 03.0	
	comp=Z,16nm,1.2s						
DOT	Dot Lake	70.24	340	IAmb	IAmb	09 41 06.4	
	comp=Z,12nm,1.2s						
KDAK	Kodiak Island	70.42	332	⇑eP	P	09 41 03.6	-2.1
KDAK				pmax	pmax		
	comp=Z,145nm,1.7s						
SCRK	Sand Creek	70.42	340	P	P	09 41 05.7	-0.1
	baz=129						
RIDG	Independent Ri	70.57	340	IAmb	IAmb	09 41 07.9	
	comp=Z,22nm,1.2s						
SML	Sawmill	70.71	337	P	P	09 41 07.0	-0.5
RC01	Rabbit Creek A	70.88	336	P	P	09 41 08.7	+0.3
	baz=123						
HDA	Harding Lake	71.71	340	P	P	09 41 13.8	+0.4
	baz=126						
HDA	Harding Lake	71.71	340	IAmb	IAmb	09 41 14.8	
	comp=Z,24nm,1.2s						
RSO	Redoubt South	71.81	334	P	P	09 41 14.8	+0.4
PRP	Porcupine Dome	71.90	341	P	P	09 41 15.1	+0.3
ILAR	Eielson Array	71.91	340	P	P	09 41 14.1	-0.5
	comp=Z,15nm,1.0s,baz=151,slow=4.0,SNR=87						
ILAR				LR	LR	10 13 31.3	
	comp=Z,201nm,20.4s,baz=126,slow=36						
MCK	McKinley	72.03	338	P	P	09 41 15.5	+0.1
	baz=124						
CCB	Clear Creek Bu	72.15	340	IAmb	IAmb	09 41 17.8	
	comp=Z,16nm,1.2s						
POKR	Poker Plat Res	72.30	340	P	P	09 41 16.7	-0.2
	baz=126						
COLA	College	72.30	340	⇑eP	P	09 41 17.1	+0.2
COLA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RES	Resolute Bay	72.43	1	P	P	09 41 17.0	-0.5
RES				pmax	pmax		
	comp=Z,13nm,0.9s						
RES	Resolute Bay	72.43	1	P	P	09 41 17.0	-0.5
RES				IAmb	IAmb	09 41 17.7	
	comp=Z,13nm,0.9s						
MDM	Murphy Dome	72.48	340	IAmb	IAmb	09 41 19.7	
	comp=Z,16nm,1.2s						
NEA2	Nenana	72.56	339	P	P	09 41 19.0	+0.5
	baz=124						
BMAR	Burnt Mountain	72.81	343	P	P	09 41 17.8	-2.2
BPAW	Bear Paw Mtn.	72.99	338	IAmb	IAmb	09 41 21.8	
	comp=Z,22nm,1.2s						
SVW2	Sparrevohn	73.34	334	IAmb	IAmb	09 41 24.4	
	comp=Z,25nm,1.2s						
TTA	Tatalina	74.36	336	P	P	09 41 28.7	-0.5
TTA				pmax	pmax		
	comp=Z,12nm,1.1s						
TTA	Tatalina	74.36	336	P	P	09 41 28.7	-0.5
TTA				IAmb	IAmb	09 41 30.3	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	74.44	341	P	P	09 41 30.0	+0.5
	baz=124						
COLD	Coldfoot	74.44	341	IAmb	IAmb	09 41 31.6	
	comp=Z,20nm,1.2s						
IMAR	Indian Mountai	74.97	339	P	P	09 41 31.8	-0.8
ICESG	Greenland Ices	76.79	18	i P	P	09 41 42.8	-0.6
ICESG				IAmb	IAmb	09 41 44.8	
	comp=Z,31nm,1.1s						
EUNU	Eureka	77.99	2	P	P	09 41 49.9	+0.2
EUNU				IAmb	IAmb	09 41 50.6	
	comp=Z,12nm,1.0s						
A21K	Barrow	78.52	344	P	P	09 41 52.9	+0.4
	baz=118						
A21K	Barrow	78.52	344	IAmb	IAmb	09 41 53.8	
	comp=Z,26nm,1.4s						
ANM	Nome	78.83	336	IAmb	IAmb	09 41 57.1	
	comp=Z,22nm,1.2s						
SUMG	Summit	78.88	15	i P	P	09 41 55.0	0.0
SUMG	Summit	78.88	15	i P	P	09 41 55.0	0.0
SUMG	Summit	78.88	15	i P	P	09 41 55.0	0.0
RDOG	Red Dog Mine	79.11	340	P	P	09 41 56.6	+0.7
GAMB	Gambell	81.28	334	IAmb	IAmb	09 42 09.8	
	comp=Z,21nm,1.3s						
DAG	Danmarks Havn	85.24	13	i P	P	09 42 27.0	-0.8
DAG	Danmarks Havn	85.24	13	i P	P	09 42 27.0	-0.8
	comp=Z,17nm,1.3s						
DAG	Danmarks Havn	85.24	13	i P	P	09 42 27.0	-0.8
DAG				IAmb	IAmb	09 42 28.8	
	comp=Z,17nm,1.3s						
MSVF	Nonsavu	85.78	252	⇓eP	P	09 42 29.5	-2.3
MSVF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BELA	Belgrano 2	86.52	169	P	P	09 42 34.6	+0.4
BILL	Bilibino	90.48	338	⇑eP	P	09 42 53.8	+0.6
BILL				i		09 43 02.7	
BILL				e		09 46 31.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ESDC	Sonseca Array	91.02	50	P	P	09 42 56.4	0.0
	comp=Z,1.9nm,1.1s,baz=294,slow=4.7,SNR=4.2						
ESDC				LR	LR	10 21 01.4	
	comp=Z,104nm,18.5s,baz=310,slow=34						
ESDC	Sonseca Array	91.02	50	IAmb	IAmb	09 42 57.5	
	comp=Z,13nm,1.4s						
VNA3	Neumayer Olymp	91.22	161	P	P	09 42 56.0	-0.5
VNA2	Neumayer--Watz	91.95	161	P	P	09 43 01.0	+1.1
QSPA	South Pole Qui	92.20	180	P	P	09 43 02.8	+1.5
KOWA	Kowa	92.42	75	P	P	09 43 02.9	-0.4
SNAA	Sanae	93.40	162	P	P	09 43 05.9	-0.8
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SNAA	Sanae	93.40	162	P	P	09 43 05.9	-0.8
SNAA				IAmb	IAmb	09 43 08.2	
	comp=Z,9.0nm,1.2s						
VNDA	Vanda	94.52	192	LR	LR	10 16 12.2	
	comp=Z,121nm,20.4s,baz=128,slow=30						
H11N3	WAKE ISLAND Hy	94.93	290	T	T	11 28 34.6	
	baz=86,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	94.94	290	T	T	11 28 30.8	
	baz=86,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	94.95	290	T	T	11 28 34.0	
	baz=86,slow=75,SNR=16						
H11S2	WAKE ISLAND Hy	95.21	289	T	T	11 28 51.0	
	baz=86,slow=75,SNR=64						
H11S1	WAKE ISLAND Hy	95.21	289	T	T	11 28 53.8	
	baz=86,slow=75,SNR=55						
H11S3	WAKE ISLAND Hy	95.23	289	T	T	11 28 53.7	
	baz=86,slow=75,SNR=40						
PETK	Petropavlovsk-	97.35	324	LR	LR	10 19 23.7	
	comp=Z,57nm,19.0s,baz=85,slow=31						
TORD	Torodi Ar. Bea	98.04	76	P	P	09 43 27.0	-2.0
	comp=Z,1.6nm,1.0s,baz=298,slow=4.9,SNR=5.6						
TORD	Torodi Ar. Bea	98.04	76	P	P	09 43 27.2	-1.8
ARCES	ARCESS Array B	98.85	17	LR	LR	10 28 11.1	
	comp=Z,193nm,19.4s,baz=255,slow=35						
TMCR	Tamitsa	106.03	19	eP	Pdif	09 44 02.6	-0.8
TMCR				pmax	pmax		
	comp=Z,25nm,1.3s						
AKBB	Malin Array Si	110.30	33	⇑iPKIKP	PKiKP	09 48 25.1	+1.2
ARU	Arti	118.31	15	i PKIKP	PKiKP	09 48 41.3	+2.2
ARU						09 49 57.3	
ARU						09 55 52.1	
ARU				SS	SS	10 06 13.6	+4.2
BRTR	Keskin Array B	118.59	42	PKhKP	PKPpre	09 48 34.4	
	comp=Z,0.5nm,0.6s,baz=318,slow=3.9,SNR=2.4						
BRTR	Keskin Array B	118.59	42	i PKIKP	PKPdf	09 48 39.7	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	118.59	42		PKPdf	09 48 36.6	-3.7
KIV	Kislovodsk	121.65	33	ePKIKP	PKPdf	09 48 45.4	-0.6
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KSAR	Wonju Array Be	122.67	318	PKIKP	PKPdf	09 48 45.2	-2.8
KSAR	Wonju Array Be	122.67	318		PKPdf	09 48 45.2	-2.8
ZALV	Zalesovo Beam	124.04	359	PKP	PKPdf	09 48 49.0	-1.1
	comp=Z,0.6nm,0.5s,baz=344,slow=9.2,SNR=5.0						
ZALV				PP	PP	09 50 33.1	+0.1
	comp=Z,0.3nm,0.3s,baz=90,slow=7.4,SNR=3.8						
ZALV	Zalesovo Beam	124.04	359	PKIKP	PKPdf	09 48 49.0	-1.1
ZAK	Zakamensk	124.80	344	ePKIKP	PKPdf	09 48 50.4	-1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ABKAR	Akbulak array	125.04	18	PKPdf	PKPdf	09 48 52.5	+0.3
SONM	Songino Array	126.13	341	PKP	PKPdf	09 48 53.6	-0.9
	comp=Z,2.4nm,1.0s,baz=72,slow=0.7,SNR=11						
SONM	Songino Array	126.13	341	PKIKP	PKPdf	09 48 53.9	-0.6
SONM	Songino Array	126.13	341	PKPdf	PKPdf	09 48 53.9	-0.6
ASAR	Alice Springs	126.30	242	PKP	PKPdf	09 48 54.6	-0.8
	comp=Z,2.5nm,1.0s,baz=116,slow=2.4,SNR=12						
ASAR	Alice Springs	126.30	242	PKPdf	PKPdf	09 48 54.0	-1.3
WRAB	Tennant Creek	126.80	247	⇓iPKIKP	PKPdf	09 48 56.3	-0.1
WRA	Warramunga Arr	126.81	247	PKP	PKPdf	09 48 55.9	-0.5
	comp=Z,4.0nm,1.0s,baz=89,slow=1.9,SNR=16						
KURK	Kurchatov	127.17	3	⇓iPKIKP	PKPdf	09 48 56.1	-0.1
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURK	Kurchatov	127.17	3	PKPdf	PKPdf	09 48 55.0	-1.2
DGZ	Jazzator, Alta	128.17	356	⇓iPKIKP	PKPdf	09 48 58.4	0.0
HHC	Hu-ho-hao-te	129.84	332	ePKP	PKiKP	09 49 04.5	+2.0
ZSN	Zaisan	130.54	358	ePKP	PKPdf	09 49 02.3	-0.5
	baz=358						
ZSN	Zaisan	130.54	358	ePKIKP	PKPdf	09 49 02.3	-0.5
MAKZ	Makanchi	131.21	1	PKIKP	PKPdf	09 49 02.1	-1.9
MAKZ	Makanchi	131.21	1	PKPdf	PKPdf	09 49 02.1	-1.9
MK31	Makanchi Array	131.22	1	d iPKIKP	PKPdf	09 49 03.4	-0.7
MKAR	Makanchi Array	131.22	1	PKP	PKPdf	09 49 03.7	-0.4
	comp=Z,3.3nm,1.0s,baz=349,slow=2.5,SNR=19						
MKAR	Makanchi Array	131.22	1	PKPdf	PKPdf	09 49 03.0	-1.1
NJ2	Nanjing	131.84	318	ePKP	PKPdf	09 49 06.3	+0.7
KUU	Kurty	133.75	7	ePKP	PKPdf	09 49 07.2	-1.7
	baz=6.5						
KUU	Kurty	133.75	7	ePKIKP	PKPdf	09 49 07.2	-1.7
CHKK	Chushkaly	133.86	6	ePKP	PKPdf	09 49 08.0	-1.1
	baz=5.9						
CHKK	Chushkaly	133.86	6	ePKIKP	PKPdf	09 49 08.0	-1.1
WMQ	Urumqi	134.00	355	ePKP	PKiKP	09 49 10.8	0.0
AAA	Alma-Ata	134.49	6	ePKP	PKPdf	09 49 09.3	-1.2
	baz=6.1						
AAA	Alma-Ata	134.49	6	ePKIKP	PKPdf	09 49 09.2	-1.2
MDOK	Medeo	134.55	6	ePKP	PKPdf	09 49 09.6	-1.1
	baz=6.0						
MDOK	Medeo	134.55	6	ePKIKP	PKPdf	09 49 09.5	-1.1
AAK	Ala-Archa	134.74	9	⇑iPKIKP	PKPdf	09 49 11.4	+0.4
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHLS	Shalkode	134.76	4	ePKP	PKPdf	09 49 09.4	-1.6
	baz=3.1						
SHLS	Shalkode	134.76	4	ePKIKP	PKPdf	09 49 09.4	-1.6
LZH	Lanzhou	137.21	335	ePKP	PKiKP	09 49 17.8	+0.1
KMI	Kunming	146.74	326	PKPbc	PKPdf	09 49 33.3	+0.1
KMI				pPKP	pPKPab	09 49 38.5	+0.2
KMI				sPKP		09 49 41.0	
DANN	Dangsing	149.63	359	eP	PKPbc	09 49 42.4	-0.1
	comp=Z,80nm,1.1s						
GKN	Gorkha	149.94	357	eP	PKPbc	09 49 42.7	-0.4
	comp=Z,98nm,1.3s						
GUN	Gumba	149.94	355	eP	PKPbc	09 49 43.2	-0.1
	comp=Z,153nm,1.2s						
KOLN	Koldanda	150.21	359	eP	PKPbc	09 49 43.0	-0.8
	comp=Z,136nm,1.5s						
TAPN	Taplejung	150.28	351	eP	PKPbc	09 49 43.7	-0.4
	comp=Z,127nm,1.3s						
DMN	Daman	150.30	356	eP	PKPbc	09 49 43.7	-0.4
	comp=Z,64nm,1.2s						
PKIN	Phulchoki	150.31	356	eP	PKPbc	09 49 43.4	-0.7
	comp=Z,54nm,1.3s						
PKI	Pulchoki	150.32	356	eP	PKPbc	09 49 43.3	-0.9
	comp=Z,34nm,1.0s						
NONG	Nongkai	151.69	316	P	PKiKP	09 49 48.5	+0.9
	comp=Z,29nm,1.1s						
CM34	Chiang Mai Arr	153.70	323	P	PKiKP	09 49 53.0	+1.2
CM35	Chiang Mai Arr	153.83	323	P	PKPdf	09 49 45.0	+0.9
CM33	Chiang Mai Arr	153.85	324	P	PKPdf	09 49 45.0	+0.9
CM36	Chiang Mai Arr	153.99	323	P	PKPdf	09 49 46.0	+1.7
CM09	Chiang Mai Arr	154.11	323	P	PKPab	09 50 08.1	+2.0
CMAR	Chiang Mai Arr	154.13	323	PKP	PKPdf	09 49 44.4	-0.1
	comp=Z,1.0nm,0.3s,baz=339,slow=1.5,SNR=12						
CMAR				PKPbc	PKPbc	09 49 52.3	-0.3
	comp=Z,3.7nm,0.9s,baz=322,slow=1.7,SNR=14						
CMAR	Chiang Mai Arr	154.13	323		PKPdf	09 49 43.9	-0.6
CM02	Chiang Mai Arr	154.14	323	P	PKiKP	09 49 54.0	+1.3
	comp=Z,90nmcomp=Z,10nm,1.1s						
CM01	Chiang Mai Arr	154.15	323	P	PKPdf	09 49 47.4	+2.8
	comp=Z,106nmcomp=Z,7.5nm,1.1s						
CM04	Chiang Mai Arr	154.15	323	P	PKPdf	09 49 46.0	+1.4
	comp=Z,84nmcomp=Z,8.7nm,1.1s						
CM05	Chiang Mai Arr	154.17	323	P	PKiKP	09 49 53.0	+0.2
	comp=Z,61nmcomp=Z,5.4nm,1.1s						
CM13	Chiang Mai Arr	154.18	323	P	PKiKP	09 49 54.0	+1.2
	comp=Z,4.9nm,1.1s						
PBKT	Sadao Pong	154.22	317	P	PKPab	09 50 16.3	+10
UTHA	Uthaitani	155.96	318	P	PKPab	09 50 16.0	+2.1

IDC 29 09:30:40.0±5.9, 11°.43N×91°.84E, h0^{km}, mb3.5/2, mb1 3.9/3, mb1mx3.4/45, mbtmp3.6/3, ML4.4/1 Error ellipse: s-maj=125.6km s-min=47.2km az=99.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.79	44	Pn	Pn	09 33 02.5	+0.2
	1.0nm,0.3s,baz=235,slow=14,SNR=4.9						
WRA	Warramunga Arr	52.17	126	P	P	09 39 52.5	-0.3
	0.2nm,0.4s,baz=310,slow=8.0,SNR=8.9						
ASAR	Alice Springs	53.93	131	P	P	09 40 05.8	+0.1
	0.3nm,0.4s,baz=310,slow=6.8,SNR=10.0						

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*IDC **29** 09:41:12.4±3.4, 33°.80S×178°.78W, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.8/34, mbtmp4.0/4, ML4.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/33, Error ellipse: s-maj=72.6km s-min=36.9km az=116.0*

*WEL **29** 09:41:13.9±0.9, 34°S±9°×17°9W±2°1, h33^{km}, M4.2/13, mB4.8/7, ML4.6/13, MLv4.4/13, Mw(mB)4.1/7, Error ellipse: s-maj=0.0km s-min=0.0km az=112.2*

ISC 29 09:41:13.1±1.9, 33°.8S±0°.1×178°.2W±0°.3, h35^{km}, n22, σ1^{s}20/36, mb3.9/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.55	4	P	Pn	09 42 19.2	-0.3
GLKZ				S	Sn	09 43 09.0	-2.1
MXZ	Matakaoa Point	4.68	216	P	Pn	09 42 21.9	+0.7
MXZ				S	Sn	09 43 13.2	-1.1
WMGZ	Waiomatatini S	4.83	213	P	Pn	09 42 25.0	+1.7
WMGZ				S	Sn	09 43 17.7	-0.3
PKGZ	Pakihiroa	5.05	215	P	Pn	09 42 26.2	-0.1
PKGZ				S	Sn	09 43 21.0	-2.4
HAZ	Te Kaha	5.09	218	P	Pn	09 42 27.1	+0.2
HAZ				S	Sn	09 43 25.2	+0.8
PUZ	Puketiti	5.11	213	P	Pn	09 42 26.1	-1.1
PUZ				S	Sn	09 43 25.6	+0.7
RUGZ	Raukumara Rang	5.30	218	P	Pn	09 42 29.7	-0.2
RUGZ				S	Sn	09 43 29.2	-0.6
TWGZ	Tauwhareparae	5.32	214	P	Pn	09 42 31.0	+0.8
TWGZ				S	Sn	09 43 29.9	-0.3
CNGZ	Carnagh Statio	5.47	211	P	Pn	09 42 31.7	-0.4
CNGZ				S	Sn	09 43 34.5	+0.7
TKGZ	Te Karaka	5.59	213	P	Pn	09 42 34.8	+1.0
TKGZ				S	Sn	09 43 35.8	-1.1
MWZ	Matawai	5.66	216	P	Pn	09 42 33.9	-0.8
MWZ				S	Sn	09 43 36.6	-2.0
URZ	Urewera	5.82	219	Pn	Pn	09 42 37.0	+0.2
	5.7nm,0.3s,baz=246,slow=2.7,SNR=91						
URZ				Sn	Sn	09 43 39.2	-3.1
	5.7nm,0.3s,baz=261,slow=5.9,SNR=8.2						
OPRZ	Ohinepanea	5.83	225	P	Pn	09 42 37.6	+0.5
OPRZ				S	Sn	09 43 42.1	-0.6
RAGZ	Rawiri	5.84	216	P	Pn	09 42 36.5	-0.8
RAGZ				S	Sn	09 43 41.5	-1.7
RIGZ	Rimuhau	5.85	212	P	Pn	09 42 36.9	-0.5
RIGZ				S	Sn	09 43 41.2	-2.1
MARZ	Manawahe	5.86	223	P	Pn	09 42 38.1	+0.6
SNGZ	Shannon Statio	6.11	214	P	Pn	09 42 41.6	+0.8
DZM	Mont Dzumac	17.86	307	LR	LR	09 50 25.8	
	comp=Z,98nm,19.7s,baz=178,slow=32						
STKA	Stephens Creek	33.65	262	P	P	09 47 51.8	+1.2
	1.3nm,0.8s,baz=82,slow=14,SNR=2.4						
ASAR	Alice Springs	42.84	271	P	P	09 49 08.2	+0.2
	1.6nm,0.7s,baz=115,slow=8.0,SNR=12						
WRA	Warramunga Arr	44.13	276	P	P	09 49 19.0	+0.6
	1.7nm,0.6s,baz=117,slow=7.5,SNR=19						
FINES	FINESS Array B	148.25	338	PKPbc	PKPab	10 00 58.3	+0.6
	3.4nm,0.8s,baz=50,slow=4.3,SNR=1.9						

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*AEIC **29** 09:48:54±2.2, 56°.2N±0°.1×152°.3W±0°.1, h21^{km}±7^{km}, ML3.6, ML3.7/18(NEIC), Error ellipse: s-maj=17.6km s-min=6.8km az=160.0*

*NEIC **29** 09:48:59.1±1.2, 56°.4N±0°.1×152°.6W±0°.1, h19^{km}±9^{km}, Error ellipse: s-maj=18.8km s-min=9.7km az=154.0*

*IDC **29** 09:49:05.8±3.0, 56°.78N×152°.54W, h44^{km}±24^{km}, mb3.6/12, mb1 3.7/16, mb1mx3.5/49, mbtmp3.7/16, ML3.2/4, MS3.7/2, Ms1 3.7/2, ms1mx3.0/40, Error ellipse: s-maj=34.2km s-min=13.7km az=31.0*

ISC 29 09:49:01.9±0.7, 56°.62N±0°.07×152°.59W±0°.06, h20^{km}, n64, σ1^{s}14/65, mb3.9/12, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.72	328		Pn	09 49 16.6	-0.2
OHAK				IAML		09 49 34.0	
	comp=E,3µm,0.5s						
OHAK				IAML		09 49 35.0	
	comp=N,2µm,0.6s						
SII	Sitkinak Islan	0.88	267	Pn	Pb	09 49 16.6	-2.0
KDAK	Kodiak Island	1.17	0	P	Pb	09 49 23.7	+0.3
	comp=N,16nm,0.3s,baz=188,slow=6.2,SNR=618						
KDAK				S	Sn	09 49 39.1	+0.7
	comp=N,65nm,0.3s,baz=198,slow=20,SNR=11						
KDAK				LR	LR	09 49 56.3	
	comp=N,188nm,21.8s,baz=6.4,slow=50						
KDAK	Kodiak Island	1.17	0		Pb	09 49 23.7	+0.3
CNPM	China Poot	3.00	13	Pn	Pn	09 49 49.3	+1.0
CNPM				IAML		09 50 16.0	
	comp=N,109nm,2.4s						
CNPM				IAML		09 50 24.2	
	comp=E,105nm,1.2s						
CHGN	Chignik	3.25	267	Pn	Pn	09 49 49.4	-2.3
CHGN				IAML		09 50 29.4	
	comp=N,149nm,0.8s						
CHGN				IAML		09 51 03.5	
	comp=E,124nm,2.1s						
BRLK	Bradley Lake	3.28	15	Pn	Pn	09 49 52.1	0.0
RSO	Redoubt South	3.86	359		Pn	09 50 01.6	+1.4
SEW	Seward	3.87	24	Pn	Pn	09 49 59.5	-0.6
SVW2	Sparrevohn	4.75	342		Pn	09 50 14.0	+1.7
SVW2				IAML		09 51 39.1	
	comp=E,32nm,3.5s						
SVW2				IAML		09 52 21.0	
	comp=N,29nm,2.5s						
SUA	Susitna One	4.95	10		Pn	09 50 15.3	+0.1
SUA				IAML		09 51 59.9	
	comp=E,58nm,3.5s						
SUA				IAML		09 52 24.4	
	comp=N,68nm,4.3s						
HIN	Hinchinbrook I	4.95	38	Pn	Pn	09 50 14.2	-0.9
GLI	Glacier Island	5.14	32	Pn	Pn	09 50 17.2	-0.4
FID	Port Fidalgo	5.23	35	Pn	Pn	09 50 17.2	-1.6
KNK	Knik Glacier	5.26	22	Pn	Pn	09 50 18.5	-0.8
PMR	Palmer	5.30	18		Pn	09 50 19.5	-0.3
EYAK	Cordova Ski Ar	5.32	39	Pn	Pn	09 50 19.7	-0.4
SKT	Skwentna	5.41	5	Pn	Pn	09 50 23.0	+1.7
GHO	Glory Hole Cre	5.50	18		Pn	09 50 22.6	0.0
RAGM	Ragged Mountai	5.61	44	Pn	Pn	09 50 23.4	-0.7
SML	Sawmill	5.64	21		Pn	09 50 24.6	0.0
SCM	Sheep Creek Mo	5.88	25		Pn	09 50 28.3	+0.4
KLU	Klutina	5.97	32		Pn	09 50 28.7	-0.5
PPLA	Purkeypile	6.30	2	Pn	Pn	09 50 35.2	+1.5
M24K	Tolsona, Glenn	6.40	28		Pn	09 50 35.9	+0.9
CRQM	Cirque	6.44	46	Pn	Pn	09 50 34.9	-0.7
N25K	Chitina, Valde	6.47	36	Pn	Pn	09 50 35.8	-0.2
TTA	Tatalina	6.56	346	Pn	Pn	09 50 38.4	+1.2
VRDI	Verde Repeater	6.61	42		Pn	09 50 37.5	-0.4
GLB	Gilahina Butte	6.62	39	Pn	Pn	09 50 37.7	-0.4
MCARA	McCarthy VSAT	6.87	42	Pn	Pn	09 50 40.9	-0.4
TRF	Thorofare Moun	6.95	9	Pn	Pn	09 50 44.1	+1.5
KTH	Kantishna Hill	7.01	6		Pn	09 50 44.0	+0.7
RND	Reindeer	7.06	14	Pn	Pn	09 50 44.3	+0.3
BARN	Barnard Glacie	7.21	47	Pn	Pn	09 50 46.3	+0.1
CTGM	Chitina Glacie	7.29	49	Pn	Pn	09 50 47.1	-0.1
BPAW	Bear Paw Mtn.	7.55	5	Pn	Pn	09 50 50.8	+0.1
WRH	Wood River Hil	8.18	14	Pn	Pn	09 50 59.2	-0.2
HDA	Harding Lake	8.29	17		Pn	09 51 01.7	+0.9
MDM	Murphy Dome	8.63	12		Pn	09 51 05.0	-0.5
ILAR	Eielson Array	8.64	16	P	Pn	09 51 04.5	-1.2
	comp=N,0.9nm,0.3s,baz=200,slow=14,SNR=42						
ILAR				S	Sn	09 52 37.8	-4.5
	comp=N,0.2nm,0.3s,baz=206,slow=16,SNR=1.1						
ILAR	Eielson Array	8.64	16		Pn	09 51 04.0	-1.6
IMAR	Indian Mountai	9.41	357		Pn	09 51 16.8	+0.6
PRP	Porcupine Dome	9.55	18	Pn	Pn	09 51 18.8	+0.6
FYU	Fort Yukon	10.57	16		Pn	09 51 31.8	-0.1
COLD	Coldfoot	10.71	5	Pn	Pn	09 51 33.2	-0.7
BMAR	Burnt Mountain	11.47	16		Pn	09 51 41.8	-2.5
DLBC	Dease Lake	12.25	72	P	Pn	09 51 55.8	+0.7
	comp=N,0.1nm,0.3s,baz=140,slow=17,SNR=1.8						
DLBC				S	Sn	09 54 09.7	-1.2
	comp=N,0.1nm,0.3s,baz=298,slow=17,SNR=1.4						
INK	Inuvik	14.57	29	P	Pn	09 52 27.4	+0.9
	comp=N,0.1nm,0.3s,baz=259,slow=10,SNR=2.3						
BBB	Bella Bella	14.89	97	LR	LR	09 56 47.5	
	comp=N,74nm,21.2s,baz=6.5,slow=31						
YKA	Yellowknife Ar	19.89	57	P	Pn	09 53 33.4	+0.1
	comp=N,0.0nm,0.3s,baz=266,slow=8.9,SNR=5.2						
YBH	Yreka Blue Hor	24.30	115	P	P	09 54 19.8	+1.9
	comp=N,1.0nm,0.8s,baz=314,slow=7.1,SNR=4.0						
NVAR	Mina Array Bea	29.01	114	P	P	09 55 01.9	+1.5
	comp=N,0.5nm,0.7s,baz=307,slow=7.8,SNR=4.1						
PDAR	Pinedale Array	30.53	98	P	P	09 55 14.6	+0.7
	comp=N,0.3nm,0.8s,baz=316,slow=4.1,SNR=3.6						
TXAR	Lajitas Array	43.67	108	P	P	09 57 06.2	+1.0
	comp=N,0.4nm,0.6s,baz=323,slow=6.3,SNR=6.2						
KLR	Kul'dur	44.02	294	P	P	09 57 07.2	-0.6
	comp=N,0.7nm,0.3s,baz=54,slow=8.5,SNR=5.2						
NRIK	Noril'sk	47.05	335	P	P	09 57 31.5	+0.2
	comp=N,0.9nm,0.3s,baz=42,slow=6.7,SNR=4.7						
ARCES	ARCESS Array B	54.14	1	P	P	09 58 24.9	0.0
	comp=N,7.9nm,1.1s,baz=343,slow=5.9,SNR=1.6						
SONM	Songino Array	57.00	308	P	P	09 58 46.8	+0.9
	comp=N,2.3nm,0.8s,baz=46,slow=6.9,SNR=14						
ZALV	Zalesovo Beam	60.25	325	P	P	09 59 08.1	-0.1
	comp=N,1.4nm,0.7s,baz=22,slow=5.1,SNR=1.6						
NOA	NORSAR Array B	61.99	9	P	P	09 59 20.0	0.0
	comp=N,0.9nm,0.7s,baz=15,slow=5.8,SNR=3.9						
FINES	FINESS Array B	62.27	1	LR	LR	10 28 08.6	
	comp=N,206nm,18.3s,baz=269,slow=38						
MKAR	Makanchi Array	67.23	322	P	P	09 59 54.9	+0.5
	comp=N,0.7nm,0.7s,baz=58,slow=7.3,SNR=7.0						
AKASG	Malin Array Be	73.03	359	P	P	10 00 28.0	-1.8
	comp=N,0.4nm,0.3s,baz=6.7,slow=6.0,SNR=4.4						

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*JMA **29** 09:50:52.3±0.1, 31°.78N×131°.92E, h25^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s251.00000°, δ15.00000°, λ112.00000°. NP2: ϕ_s48.00000°, δ76.00000°, λ84.00000°. Principal axes: T Plg58.0000°, Azm311.0000°; N Plg5.0000°, Azm50.0000°; P Plg31.0000°, Azm143.0000°;*

*NIED **29** 09:50:52.4, 31°.78N×131°.92E, h25^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.75; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$-2.74; $M_{r\theta}$1.91; $M_{\theta\phi}$-2.12; $M_{\phi r}$2.11; Fault plane solution: $M_0$4.88000×10^{14} NP1:ϕ_s39.00000°, δ63.00000°, λ95.00000°. NP2:ϕ_s208.00000°, δ28.00000°, λ80.00000°.*

*IDC **29** 09:50:55.1±2.9, 31°.61N×131°.69E, h59^{km}±22^{km}, mb3.1/3, mb1 3.2/5, mb1mx3.1/42, mbtmp3.5/5, ML3.3/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/17 Error ellipse: s-maj=42.4km s-min=10.7km az=91.0*

ISC 29 09:50:51.0±1.6, 31°.73N±0°.05×131°.96E±0°.07, h27^{km}±11^{km}, n16, σ0^{s}96/24, mb3.5/3, 2C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNKG	Nichinankitago	0.50	263	⇓P	Pb	09 51 01.6	+0.3
JNKG				eS	Sb	09 51 08.3	0.0
JNAR	Kushima--Naru	0.62	251	⇓P	Pn	09 51 04.3	+0.2
JNAR				eS	Sn	09 51 12.9	-0.2
JTSN	Tsuno	0.65	324	⇓P	Pb	09 51 03.5	-0.2
JTSN				eS	Sb	09 51 11.4	-1.0
JTZ	Takazaki	0.76	284	⇓P	Pb	09 51 05.9	+0.2
JTZ				eS	Sb	09 51 15.2	-0.4
JHHC	Hyugahichiya	0.77	339	⇓P	Pb	09 51 05.7	-0.1
JHHC				eS	Sb	09 51 15.2	-0.6
JZO	Okuchi	1.23	290	⇑P	Pn	09 51 13.1	+0.6
JZO				eS	Sb	09 51 28.8	-0.2
JIU3	Izumi3	1.27	311	⇑P	Pb	09 51 13.9	-0.4
JIU3				eS	Sb	09 51 29.9	-0.4
JTO	Tosashimizu	1.34	32	P	Pn	09 51 14.0	0.0
JTN	Tanegashima 3	1.36	218	P	Pb	09 51 15.8	0.0

JNU	Nakatsue	1.66	327	P	Pb	09 51 20.5	-0.5
	38nm,0.3s,baz=204,slow=3.9,SNR=219						
JNU				S	Sb	09 51 42.4	+0.8
	40nm,0.3s,baz=236,slow=24,SNR=26						
JOW	Kunigami	5.84	214	P	Pn	09 52 16.7	+0.8
	1.4nm,0.3s,baz=153,slow=12,SNR=42						
JOW				S	Sn	09 53 19.8	-2.2
	1.2nm,0.3s,baz=114,slow=20,SNR=4.1						
KSRS	Korea Array	6.61	331	LR	LR	09 55 17.9	
	comp=Z,57nm,21.7s,baz=20,slow=40						
KLR	Kul'dur	17.49	360	P	P	09 54 56.8	+2.9
	0.2nm,0.3s,baz=198,slow=8.1,SNR=4.5						
SONM	Songino Array	25.23	317	P	P	09 56 14.6	-0.1
	0.9nm,0.7s,baz=134,slow=9.6,SNR=5.6						
MKAR	Makanchi Array	40.61	306	P	P	09 58 27.8	-0.7
	0.2nm,0.6s,baz=82,slow=11,SNR=3.6						
ASAR	Alice Springs	55.11	178	P	P	10 00 20.6	-0.4
	0.2nm,0.4s,baz=5.6,slow=10,SNR=3.2						

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*IDC **29** 09:54:50.6±6.8, 11°.89S×166°.56E, h167^{km}±68^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.4/29, mbtmp3.8/7, Error ellipse: s-maj=51.0km s-min=30.4km az=157.0*

ISC 29 09:54:49.0±1.1**, 11°.80S**±0°.10×**166°.5E**±0°.3**, h150**^{km}**, n8, σ1^{s}.47**/10**, mb3.5**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.21	181	P	Pn	09 57 14.0	+2.0
	0.5nm,0.3s,baz=129,slow=22,SNR=11						
DZM				S	Sn	09 59 03.4	-1.7
	0.0nm,0.3s,baz=139,slow=19,SNR=2.5						
WRA	Warramunga Arr	31.97	251	P	P	10 01 00.1	-1.0
	0.3nm,0.4s,baz=86,slow=9.2,SNR=5.4						
ASAR	Alice Springs	33.16	245	P	P	10 01 10.5	-1.0
	0.6nm,0.7s,baz=73,slow=8.8,SNR=8.3						
ASAR				PcP	PcP	10 03 51.2	+0.1
	0.4nm,0.6s,baz=77,slow=2.8,SNR=5.1						
CMAR	Chiang Mai Arr	73.13	294	P	P	10 06 04.6	+1.0
	0.8nm,0.3s,baz=131,slow=4.2,SNR=4.7						
SONM	Songino Array	79.73	324	P	P	10 06 41.9	+1.5
	0.3nm,0.5s,baz=132,slow=6.1,SNR=2.4						
ILAR	Eielson Array	83.98	18	P	P	10 07 00.7	-1.4
	0.3nm,0.6s,baz=225,slow=8.4,SNR=5.0						
MKAR	Makanchi Array	94.60	317	P	P	10 07 52.5	-0.4
	1.4nm,0.5s,baz=86,slow=5.9,SNR=21						
ARCES	ARCESS Array B	117.25	346	PKP	PKPdf	10 13 15.2	-0.8
	7.8nm,1.1s,baz=90,slow=3.6,SNR=2.0						

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*IDC **29** 10:08:36.5±3.1, 36°.53N×143°.49E, h0^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/37, mbtmp3.3/4, ML2.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/28, Error ellipse: s-maj=85.5km s-min=30.1km az=56.0*

*JMA **29** 10:08:38.4±0.2, 37°.07N×143°.38E, h49^{km}, M3.4*

ISC 29 10:08:38.0±5.6**, 37°.05N**±0°.05×**143°.55E**±0°.08**, h36**^{km}±45^{km}**, n21, σ1^{s}.58**/34**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.08	308	P	Pn	10 09 10.0	-0.3
JIKH				S	Sn	10 09 33.6	-1.3
JFK	Kawauchi	2.16	279	P	Pn	10 09 11.0	-0.4
JFK				*e*S	Sn	10 09 34.6	-2.4
ONAJ	Iwakimizuishiy	2.20	272	P	Pn	10 09 11.6	-0.4
ONAJ				S	Sn	10 09 35.6	-2.5
JMST	Minamisoumatoc	2.23	288	P	Pn	10 09 11.9	-0.4
JMST				S	Sn	10 09 36.6	-1.9
JIO	Ouri	2.24	309	P	Pn	10 09 12.5	0.0
JIO				S	Sn	10 09 37.3	-1.5
JMM	Marumori	2.34	291	P	Pn	10 09 13.8	-0.1
JMM				S	Sn	10 09 39.8	-1.6
JFT	Otama	2.61	281	P	Pn	10 09 18.1	+0.5
JFT				S	Sn	10 09 47.0	-1.0
JMK	Ichinoseki	2.64	317	P	Pn	10 09 18.1	+0.1
JMK				S	Sn	10 09 47.3	-1.5
JOM	Ohasama	3.00	324	P	Pn	10 09 23.4	+0.4
JOM				S	Sn	10 09 56.9	-0.8
JYK	Kaneyama	3.14	307	P	Pn	10 09 25.5	+0.7
BSO1	Boso 1	3.18	222	P	Pn	10 09 24.8	-0.1
JAG	Ashikaga	3.35	260	P	Pn	10 09 27.9	+0.1
JAG				*e*S	Sn	10 10 04.1	-2.2
JANG	Nango	3.68	335	P	Pn	10 09 32.4	+0.1
JANG				*e*S	Sn	10 10 11.6	-2.8
JRY	Ryogami san	3.88	256	P	Pn	10 09 35.0	-0.2
JRY				*e*S	Sn	10 10 16.8	-2.7
MJAR	Matsushiro Arr	4.32	265	Pn	Pn	10 09 42.4	+1.3
	0.2nm,0.3s,baz=86,slow=13,SNR=8.5						
JOT	Ohata	4.74	337	P	Pn	10 09 48.2	+1.4
JOT				*e*S	Sn	10 10 39.5	-1.0
JKB	Kayabe	5.21	339	P	Pn	10 09 54.1	+0.9
JCH	Churui	5.56	359	P	Pn	10 09 57.7	-0.4
JCH				*e*S	Sn	10 10 56.3	-4.3
MKAR	Makanchi Array	45.56	302	P	P	10 16 59.7	+5.6
	0.3nm,0.7s,baz=69,slow=7.9,SNR=2.5						
WRA	Warramunga Arr	57.35	190	P	P	10 18 21.7	-0.8
	0.5nm,0.7s,baz=11,slow=7.5,SNR=5.9						
WRA				LR	LR	10 41 10.6	
	comp=Z,15nm,21.6s,baz=280,slow=34						
ASAR	Alice Springs	61.07	190	P	P	10 18 49.8	+1.5
	0.2nm,0.6s,baz=10.0,slow=11,SNR=4.6						

IDC 29 10:11:41.8±12.0**, 4°.33N**×**93°.79E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/42**, mbtmp3.5**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/42**, Error ellipse: s-maj=557.2km s-min=28.9km az=57.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	43.46	349	P	P	10 19 46.3	-0.4
	0.5nm,0.6s,baz=162,slow=9.0,SNR=6.5						
WRA	Warramunga Arr	46.57	123	P	P	10 20 11.7	-0.1
	0.4nm,0.8s,baz=300,slow=8.6,SNR=2.8						
ZALV	Zalesovo Beam	50.01	353	P	P	10 20 37.9	+0.1
	0.6nm,0.5s,baz=177,slow=8.1,SNR=3.5						
JHJ	Hachijo jima 2	51.52	50	LR	LR	10 43 37.2	
	comp=Z,56nm,19.9s,baz=319,slow=37						

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*IDC **29** 10:26:48.9±3.2, 64°.75N×31°.16E, h0^{km}, mb1 3.2/3, mb1mx2.9/40, mbtmp3.1/3, ML2.3/3, Error ellipse: s-maj=51.6km s-min=13.0km az=97.0*

*NAO **29** 10:26:50.4±1.2, 64°.81N×30°.36E, ML2.5*

*BER **29** 10:26:51.6±3.7, 64°.80N×30°.41E, h0^{km}, ML2.5(NAO), Suspected explosion*

*UPP **29** 10:27:04.7±3.0, 65°.18N×28°.16E, h0^{km}, ML1.7, Suspected explosion*

ISC 29 10:26:48.6±1.2**, 64°.78N**±0°.04×**30°.57E**±0°.08**, h0**^{km}**, n22, σ1^{s}.57**/32**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	Oulu	2.01	281	Pn	Pn	10 27 25.3	+1.6
OUL				Lg	Lg	10 27 51.6	
OUL	Oulu	2.01	281	Pn	Pn	10 27 25.3	+1.6
OUL				Sg	Sn	10 27 51.6	+2.0
APA0	Apatity Array	3.00	18	Pn	Pn	10 27 37.6	+0.2
	baz=188,slow=16						
APA0				Pg	Pg	10 27 45.9	-0.2
	baz=199,slow=18						
APA0				Lg	Lg	10 28 26.6	
	baz=190,slow=28						
APA0	Apatity Array	3.00	18	Pn	Pn	10 27 37.6	+0.2
	baz=188,slow=16						
APA0				Pg	Pg	10 27 45.9	-0.2
	baz=199,slow=18						
APA0				Sg	Sg	10 28 26.6	+1.6
	baz=190,slow=28						
KALU	Kalix	3.21	293	P	Pn	10 27 41.9	+1.6
PAJU	Pajala	3.79	310	P	Pn	10 27 49.6	+1.3
SJUU	Sjulsmark	3.85	285	P	Pn	10 27 49.8	+0.7
ERTU	Ertsjaerv	3.90	301	P	Pn	10 27 51.3	+1.6
FIA0	FINESS Array S	3.92	213	Pn	Pn	10 27 50.9	+0.8
	baz=36,slow=14						
FIA0				Sn	Sn	10 28 37.2	+0.6
	baz=31,slow=18						
FIA0				Lg	Lg	10 28 52.3	
	baz=28,slow=28						
FIA0	FINESS Array S	3.92	213	Pn	Pn	10 27 50.9	+0.8
	baz=36,slow=14						
FIA0				Sn	Sn	10 28 37.2	+0.6
	baz=31,slow=18						
FIA0				Sg	Sg	10 28 52.3	-2.2
	baz=28,slow=28						
FINES	FINESS Array B	3.92	213	Pn	Pn	10 27 51.0	+1.0
	0.3nm,0.3s,baz=34,slow=13,SNR=6.2						
FINES				Lg	Lg	10 28 48.4	
	0.5nm,0.3s,baz=39,slow=24,SNR=2.8						
HARU	Harads	4.23	293	P	Pn	10 27 54.7	+0.4
ODEU	Stanfors	4.26	269	P	Pn	10 27 57.4	+2.7
ARA0	ARCESS Array S	5.16	340	Pn	Pn	10 28 06.8	-0.3
	baz=153,slow=14						
ARA0				Sn	Sn	10 29 04.6	-2.6
	baz=159,slow=28						
ARA0				Lg	Lg	10 29 25.3	
	baz=153,slow=37						
ARA0	ARCESS Array S	5.16	340	Pn	Pn	10 28 06.8	-0.3
	baz=153,slow=14						
ARA0				Sn	Sn	10 29 04.6	-2.6
	baz=159,slow=28						
ARCES	ARCESS Array B	5.16	340	Pn	Pn	10 28 07.0	-0.1
	baz=154,slow=13,SNR=54						
ARCES				Sn	Sn	10 29 04.5	-2.8
	baz=160,slow=24,SNR=1.4						
ARCES				Lg	Lg	10 29 25.5	
	baz=155,slow=24,SNR=3.2						
RATU	Laukkuluspa	5.37	309	P	Pn	10 28 12.2	+2.2
SALU	Saltoluokta	5.55	303	P	Pn	10 28 13.6	+1.2
NIKU	Nikkaluokta	5.58	309	P	Pn	10 28 13.8	+1.0
HFS	Hagfors	9.08	247	Pn	Pn	10 28 58.8	-2.0
	baz=67,slow=11						
HFS	Hagfors	9.08	247	Pn	Pn	10 28 58.8	-2.0
	baz=67,slow=11						
NOA	NORSAR Array B	9.57	256	Pn	Pn	10 29 07.6	0.0
	0.0nm,0.3s,baz=64,slow=20,SNR=2.8						

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*JMA **29** 10:45:18.9, 39°.64N×142°.11E, h48^{km}±1^{km}, M3.9*
JMA Felt II J1.

*NIED **29** 10:45:18.9, 39°.64N×142°.11E, h48^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.14; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-3.21; $M_{r\theta}$1.70; $M_{\theta\phi}$-0.66; $M_{\phi r}$4.45; Fault plane solution: $M_0$5.76000×10^{14} NP1:ϕ_s19.00000°, δ73.00000°, λ95.00000°. NP2:ϕ_s182.00000°, δ18.00000°, λ74.00000°.*

*NEIC **29** 10:45:20.7±2.6, 39°.61N±0°.06×142°.01E±0°.09, h68^{km}±8^{km}, mb4.3/9 Error ellipse: s-maj=10.6km s-min=7.4km az=119.0*

*IDC **29** 10:45:23.9±2.8, 39°.58N×141°.98E, h99^{km}±25^{km}, mb3.6/12, mb1 3.7/15, mb1mx3.5/36, mbtmp3.9/15, MS2.4/1, Ms1 2.4/1, ms1mx2.1/48, Error ellipse: s-maj=22.8km s-min=14.8km az=92.0*

ISC 29 10:45:18.9±0.9**, 39°.61N**±0°.03×**142°.07E**±0°.07**, h47**^{km}±7^{km}**, n61, σ1^{s}.83**/65**, mb3.9**/17**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.20	260	P	Pn	10 45 27.3	+0.4
MIYJ				S	Sn	10 45 33.0	+0.5
JTH	Tanohata	0.36	334	P	Pn	10 45 28.4	0.0
JTH				S	Sn	10 45 34.9	-0.2
OFUJ	Ofunato	0.61	210	P	Pn	10 45 31.7	+0.3
OFUJ				S	Sn	10 45 40.6	+0.2
JOM	Ohasama	0.62	257	P	Pn	10 45 32.1	+0.7
JOM				S	Sn	10 45 41.5	+1.1
JKEN	Kujiedanarisaw	0.66	335	P	Pn	10 45 31.6	-0.4
JKEN				S	Sn	10 45 40.9	-0.4
JKZ	Kuzumaki	0.68	304	P	Pn	10 45 32.6	+0.3
JKZ				S	Sn	10 45 42.2	+0.2
JANG	Nango	0.87	331	P	Pn	10 45 34.5	-0.4
JANG				*e*S	Sn	10 45 46.0	-0.5
JMK	Ichinoseki	0.93	225	P	Pn	10 45 36.1	+0.5
JMK				S	Sn	10 45 48.8	+0.9
JRG	Rokugo	1.13	260	P	Pn	10 45 38.8	+0.5
JAH	Hinai	1.24	298	P	Pn	10 45 40.3	+0.4
JIO	Ouri	1.28	206	P	Pn	10 45 40.8	+0.4
JIO				*e*S	Sn	10 45 57.3	+0.9
JTM	Tenmabayashi	1.40	327	P	Pn	10 45 42.0	0.0
JTM	Tenmabayashi	1.40	327	Pn	Pn	10 45 42.5	+0.5
JMM	Marumori	2.01	210	Pn	Pn	10 45 52.0	+1.6
ERM	Erimo	2.54	19	Pn	Pn	10 45 59.0	+1.4
ERM					Sn	10 46 31.4	+4.1
JEW	Eniwo	3.26	352		Pn	10 46 10.3	+2.8
JSD	Sado	3.36	243		Pn	10 46 09.8	+0.9
JYT	Yasato	3.69	204	Pn	Pn	10 46 14.9	+1.5
MJAR	Matsushiro Arr	4.32	226	P	Pn	10 46 25.8	+3.7
	0.5nm,0.3s,baz=33,slow=13,SNR=42						
MJAR	Matsushiro Arr	4.32	226		Pn	10 46 25.2	+3.1
MAJO	Matsushiro	4.32	226		Pn	10 46 24.8	+2.7
MAT	Matsushiro	4.32	226	P	Pn	10 46 25.0	+2.9
MAT				*e*S	Sn	10 47 15.8	+4.6
JKA	Kamikawa-asahi	4.52	5		Pn	10 46 25.6	+0.8
JKA					Sn	10 47 20.4	+4.4
ASAJ	Asahikawa	4.52	5	P	Pn	10 46 25.6	+0.8
	1.5nm,0.3s,baz=220,slow=10,SNR=7.4						
ASAJ				S	Sn	10 47 20.4	+4.4
	0.7nm,0.3s,baz=131,slow=19,SNR=3.1						
JGF	Kuroka	5.48	225		Pn	10 46 41.0	+2.9
JWT	Wachi	6.84	233	Pn	Pn	10 47 00.7	+4.1
JHS	Saijyo	8.49	240	Pn	Pn	10 47 22.0	+2.8
USA0B	Ussuriysk Arra	8.80	305	Pn	Pn	10 47 25.9	+2.4
USRK	Ussuriysk Ar.	8.80	305	P	Pn	10 47 26.8	+3.3
	baz=116,slow=15,SNR=14						
KSRS	Korea Array	11.29	263	P	Pn	10 48 02.8	+5.3
	0.6nm,0.3s,baz=69,slow=14,SNR=10.0						
KSRS				LR	LR	10 52 19.8	
	comp=Z,22nm,20.7s,baz=335,slow=37						
SEY	Seymchan	24.17	12	P	P	10 50 31.1	+0.6
	1.9nm,0.7s,baz=221,slow=7.5,SNR=5.0						
SONM	Songino Array	26.87	300	P	P	10 50 55.2	0.0
	0.5nm,0.6s,baz=82,slow=7.8,SNR=6.1						
H11N2	WAKE ISLAND Hy	29.13	126	T	T	11 21 46.5	
	baz=318,slow=75,SNR=405						
H11N1	WAKE ISLAND Hy	29.14	126	T	T	11 21 47.4	
	baz=318,slow=75,SNR=496						
H11N3	WAKE ISLAND Hy	29.14	126	T	T	11 21 49.0	
	baz=318,slow=75,SNR=357						
H11S1	WAKE ISLAND Hy	29.92	128	T	T	11 22 46.7	
	baz=320,slow=76,SNR=56						
H11S3	WAKE ISLAND Hy	29.93	128	T	T	11 23 05.0	
	baz=320,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	29.94	128	T	T	11 22 48.0	
	baz=320,slow=76,SNR=48						
ZAA0	Zalesovo Array	40.60	310	P	P	10 52 53.5	-0.3
ZAA0				IAmb	IAmb	10 52 54.2	
	comp=Z,3.3nm,1.1s						
ZALV	Zalesovo Beam	40.60	310	P	P	10 52 53.7	-0.2
	comp=Z,1.7nm,0.4s,baz=93,slow=7.7,SNR=10						
ZALV	Zalesovo Beam	40.60	310	P	P	10 52 52.3	-1.5
SIJI	Sorong	41.48	196	P	P	10 53 00.6	-0.9
	comp=Z,4.3nm,0.6s,baz=162,slow=20,SNR=1.5						
MK31	Makanchi Array	43.23	300	P	P	10 53 14.5	-1.0
MK31				IAmb	IAmb	10 53 15.4	
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	43.23	300	P	P	10 53 15.1	-0.4
	comp=Z,2.0nm,0.7s,baz=84,slow=9.7,SNR=18						
MKAR	Makanchi Array	43.23	300	P	P	10 53 12.8	-2.7
IMAR	Indian Mountai	44.19	32	P	P	10 53 23.2	+0.4
KURK	Kurchatov	44.79	306	P	P	10 53 27.0	-0.8
KURK				IAmb	IAmb	10 53 45.9	
	comp=Z,7.1nm,1.1s						
ILAR	Eielson Array	47.06	34	P	P	10 53 45.5	0.0
	comp=Z,0.5nm,0.6s,baz=266,slow=6.2,SNR=8.2						
INK	Inuvik	51.87	28	P	P	10 54 22.6	+0.5
	comp=Z,0.9nm,0.5s,baz=305,slow=5.6,SNR=5.6						
INK	Inuvik	51.87	28	P	P	10 54 22.7	+0.6
KKAR	Karatay Array	52.31	299	P	P	10 54 25.1	-0.7
ABKAR	Akbulak array	56.70	309	P	P	10 54 56.6	-0.8
ABKAR	Akbulak array	56.70	309	IAmb	IAmb	10 54 57.5	
	comp=Z,3.5nm,0.6s						
WR0	Warramunga Arr	59.67	188	P	P	10 55 17.0	-1.5
WRA	Warramunga Arr	59.68	188	P	P	10 55 17.5	-1.0
	comp=Z,0.3nm,0.5s,baz=6.8,slow=7.0,SNR=6.1						
ARCES	ARCESS Array B	61.77	339	P	P	10 55 34.1	+1.9
	comp=Z,3.5nm,0.9s,baz=22,slow=5.1,SNR=1.7						
ASAR	Alice Springs	63.41	188	P	P	10 55 42.9	-0.8
	comp=Z,0.3nm,0.7s,baz=15,slow=13,SNR=5.3						
ASAR	Alice Springs	63.41	188	P	P	10 55 41.8	-1.9
FINES	FINESS Array B	66.78	332	P	P	10 56 03.0	-2.1
	comp=Z,4.3nm,0.9s,baz=44,slow=10,SNR=2.1						
NOA	NORSAR Array B	72.01	337	P	P	10 56 36.4	-1.1
	comp=Z,0.6nm,0.6s,baz=252,slow=13,SNR=3.7						
AKASG	Malin Array Be	72.58	322	P	P	10 56 39.7	-1.3
	comp=Z,0.7nm,0.4s,baz=46,slow=6.4,SNR=5.0						

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*IDC **29** 11:03:19.0±0.7, 41°.82N×119°.73W, h0^{km}, mb3.6/3, mb1 3.7/10, mb1mx3.5/54, mbtmp3.4/10, ML3.3/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/39, Error ellipse: s-maj=12.6km s-min=8.7km az=21.0*

*SEA **29** 11:03:19.7±3.4, 41°.84N±0°.04×119°.61W±0°.03, h0^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=3.0km az=178.0*

*REN **29** 11:03:19.4±3.4, 41°.88N±0°.04×119°.62W±0°.05, h9^{km}±6^{km}, ML4.2/6, mb4.4/12(NEIC), ML4.3/98(SEA), ML3.8/98(NEIC), Mwr4.3/108(NEIC), Error ellipse: s-maj=5.8km s-min=5.2km az=211.0*

*NEIC **29** 11:03:20.7, 41°.93N×119°.64W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.09; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$2.20; $M_{r\theta}$-1.54; $M_{\theta\phi}$-0.43; $M_{\phi r}$-2.70; Fault plane solution: $M_0$3.67000×10^{15} NP1:ϕ_s26.31000°, δ80.03000°, λ-64.41000°. NP2:ϕ_s136.18000°, δ27.34000°, λ-157.86000°. Principal axes: T 3.7478, Plg30.0000°, Azm96.0000°; N -0.1639, Plg25.0000°, Azm202.0000°; P -3.5839, Plg49.0000°, Azm324.0000°;*

*ANF **29** 11:03:20.5±0.7, 41°.86N×119°.60W, h24^{km}±5^{km}, ML4.2/23 Error ellipse: s-maj=4.7km s-min=2.2km az=104.0*

*NEIC **29** 11:03:20.9±3.3, 41°.86N±0°.03×119°.63W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=5.2km s-min=3.5km az=0.0*

ISC 29 11:03:20.3±1.2**, 41°.88N**±0°.03×**119°.65W**±0°.03**, h5**^{km}±9^{km}**, n199, σ1^{s}.42**/213**, mb4.4**/5**, MS3.5**/4**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.49	273		Pg	11 03 29.5	-0.3
MOD				Sg	Sg	11 03 35.8	-0.4
MOD				IAML		11 03 38.4	
	comp=N,9µm,0.6s						
MOD				IAML		11 03 38.7	
	comp=E,12µm,0.7s						
LKVW	Lakeview	0.63	303		Pg	11 03 31.9	-0.6
LKVW					Sg	11 03 41.6	+0.9
WVOR	Wild Horse Val	0.93	53		Pg	11 03 37.0	-1.2
WVOR				Sg	Sg	11 03 49.6	-0.7
WVOR				IAML		11 03 59.3	
	comp=E,4µm,0.8s						
K05A	Summer Lake	1.25	313	Pn	Pn	11 03 43.3	-1.4
K05A					Sb	11 04 00.5	-0.5
LTIM	Timbered Crate	1.55	244		Pn	11 03 47.4	-1.3
HOG	Hogback Mounta	1.57	284		Pn	11 03 48.3	-0.8
M04C	Macdoel	1.64	267	P	Pn	11 03 48.3	-1.6
	baz=86,SNR=614						
M04C				Sb	Sb	11 04 12.6	+0.5
	baz=86						
M04C	Macdoel	1.64	267		Pn	11 03 48.5	-1.4
M04C					Sg	11 04 14.2	+1.1
LBCM	Butte Creek Ri	1.65	231		Pn	11 03 48.8	-1.4
K04D	Chiloquin, OR	1.73	296	P	Pn	11 03 49.6	-1.6
	baz=115,SNR=255						
K04D				Sb	Sb	11 04 15.5	+0.8
	baz=115						
K04D	Chiloquin, OR	1.73	296		Pn	11 03 49.9	-1.3
J05D	Fort Rock, OR	1.83	321	P	Pn	11 03 51.3	-1.2
	baz=139,SNR=1000						
J05D				Sb	Sb	11 04 18.3	+0.7
	baz=139						
J05D	Fort Rock, OR	1.83	321		Pn	11 03 53.3	+0.8
LHEM	Herd Peak	1.94	263		Pn	11 03 55.2	+1.1
M03C	McCloud	1.95	253		Pn	11 03 52.9	-1.2
LGBM	Gray Butte	1.98	255		Pn	11 03 54.4	-0.4
L04D	Klamath Falls	2.01	280	P	Pn	11 03 53.3	-1.7
	baz=99,SNR=387						
L04D				S	Sn	11 04 18.5	-2.0
	baz=99						
L04D	Klamath Falls	2.01	280		Pn	11 03 53.4	-1.7
TMBU	Tom Butte, New	2.04	328		Pn	11 03 56.3	+0.8
B040	Montague	2.07	269		Pn	11 03 54.5	-1.2
BEKR	Beckworth	2.08	195		Pn	11 03 56.7	+0.6
BEKR					Sn	11 04 23.8	+1.3
BEKR				IAML		11 04 28.7	
	comp=E,502nm,0.5s						
SVIC	Surveyors Ice	2.12	327		Pb	11 03 58.5	-0.8
NCOR	Newberry Crate	2.12	329		Pb	11 03 58.7	-0.7
PINE	Pine Mountain	2.13	334		Pn	11 03 56.5	-0.3
PINE				Sn	Sn	11 04 24.5	+0.8
PAHR	Pah Rah Range	2.18	175	Pn	Pn	11 03 58.3	+0.9
PAHR					LR	11 04 29.2	
I07A	Izee	2.20	3	Pn	Pn	11 03 57.3	-0.4
I07A					LR	11 04 28.3	
KWBU	Kawak Butte, N	2.23	327		Pb	11 04 00.4	-0.8
J04D	Umpqua Nationa	2.27	308	P	Pn	11 03 57.5	-1.1
	baz=126,SNR=18						
J04D				S	Sn	11 04 25.7	-1.4
	baz=126						
J04D	Umpqua Nationa	2.27	308		Pb	11 04 01.3	-0.6
O03E	Paynes Creek	2.27	226	P	Pn	11 03 57.3	-1.3
	baz=45,SNR=209						
O03E				Sb	Sb	11 04 30.8	+0.5
	baz=45						
YBH	Yreka Blue Hor	2.29	267	Pn	Pn	11 03 56.9	-1.9
	comp=E,2.9nm,0.3s,baz=50,slow=11,SNR=79						
YBH				Lg	Lg	11 04 32.4	
	comp=E,16nm,0.3s,baz=108,slow=18,SNR=10						
YBH	Yreka Blue Hor	2.29	267	Pn	Pn	11 03 57.0	-1.9
YBH				IAML		11 04 42.5	
	comp=N,437nm,2.1s						
ASBU	Astronaut Butt	2.31	327		Pn	11 04 01.0	+1.8
M02C	Callahan	2.45	260	P	Pn	11 03 58.9	-2.1
	baz=78,SNR=26						
M02C				Sb	Sb	11 04 36.3	+0.9
	baz=78						
M02C	Callahan	2.45	260		Pb	11 04 04.8	-0.1
BBOR	Butler Butte	2.46	295		Pn	11 03 60.0	-1.3
N02D	Trinity Center	2.47	249	P	Pn	11 03 59.3	-2.0
	baz=68,SNR=12						
N02D				Sb	Sb	11 04 37.7	+1.7
	baz=68						
BEND	Bend	2.51	331		Pb	11 04 05.7	-0.2
WDC	Whiskeytown Da	2.54	240	Pn	Pn	11 04 01.1	-1.1
HUMO	Hull Mountain	2.56	288	Pn	Pn	11 04 01.1	-1.4
HUMO				IAML		11 04 49.3	
	comp=E,432nm,1.8s						
HUMO				IAML		11 04 49.3	
	comp=N,781nm,1.4s						
VCNR	Virginia City	2.58	180		Pn	11 04 03.8	+0.9
VCNR				IAML		11 04 46.7	
	comp=N,368nm,0.7s						
VCNR				IAML		11 04 48.1	
	comp=E,485nm,0.9s						
MOON	Moon Mountain	2.63	326		Pb	11 04 07.5	-0.3
ORV	Oroville	2.72	212		Pn	11 04 04.5	-0.1
VIPM	Ingram Point	2.72	345		Pb	11 04 08.7	-0.9
I05D	Terrebonne, OR	2.75	334	P	Pn	11 04 03.4	-1.7
	baz=152						
I05D				Sb	Sb	11 04 45.2	+1.2
	baz=152						
I05D	Terrebonne, OR	2.75	334		Pb	11 04 09.5	-0.5
TCBUT	Trout Creek Bu	2.78	329		Pg	11 04 13.8	+0.2
I04A	Tendick Farm,	2.79	314	P	Pn	11 04 04.4	-1.3
	baz=132						
I04A				Sb	Sb	11 04 47.0	+1.8
	baz=132						
I04A	Tendick Farm,	2.79	314		Pb	11 04 10.3	-0.3
RUBR	Rubicon Trail	2.85	188	Pn	Pn	11 04 08.2	+1.5
RUBR				IAML		11 05 21.2	
	comp=E,290nm,2.1s						
RUBR				IAML		11 05 21.3	
	comp=N,232nm,1.6s						
PRLK	Prince Lake	2.88	325		Pb	11 04 12.3	+0.1
O02D	Mt. Diablo Mer	2.92	235	P	Pn	11 04 06.1	-1.4
	baz=54,SNR=12						
O02D				Sb	Sb	11 04 49.9	+0.9
	baz=54						
L02E	Cave Junction	2.96	277	P	Pn	11 04 06.9	-1.1
	baz=94,SNR=45						
L02E				Sb	Sb	11 04 50.8	+0.8
	baz=94						
K02D	Willamette Mer	3.09	287	P	Pn	11 04 09.1	-0.7
	baz=104,SNR=259						
K02D				Sb	Sb	11 04 55.8	+2.0
	baz=104						
K02D	Willamette Mer	3.09	287		Pn	11 04 10.7	+0.9
AFDM	Forest Hills D	3.10	199		Pn	11 04 12.1	+2.2
MFID	Camas Ranch	3.21	60	Pn	Pn	11 04 10.4	-1.1
KRMB	Red Mountain	3.21	265		Pn	11 04 11.2	-0.3
KRMB				IAML		11 05 08.9	
	comp=N,263nm,1.8s						
KRMB				IAML		11 05 12.4	

	comp=E,146nm,2.1s						
KHMM	Horse Mountain	3.23	253		Pn	11 04 14.7	+2.9
KHMM				IAML		11 05 17.4	
	comp=E,317nm,1.8s						
KHMM				IAML		11 05 18.3	
	comp=N,239nm,1.7s						
I03D	Drain, OR	3.27	305	P	Pn	11 04 10.7	-1.5
	baz=122						
I03D				Sb	Sb	11 05 01.7	+2.8
	baz=122						
H04A	Detroit Lake	3.36	327	Pn	Pn	11 04 13.2	-0.3
H04A				IAML		11 05 16.7	
	comp=N,216nm,1.1s						
H04A				IAML		11 05 17.7	
	comp=E,223nm,1.0s						
RYN	Ryan	3.36	165		Pn	11 04 14.8	+1.2
RYN				IAML		11 05 12.4	
	comp=E,125nm,0.9s						
WAKR	Walker	3.38	177		Pn	11 04 16.1	+2.2
J01E	Myrtle Point	3.41	293	P	Pn	11 04 13.9	-0.2
	baz=110,SNR=5.3						
BMO	Blue Mountains	3.42	29		Pn	11 04 16.1	+1.7
BMO				IAML		11 05 16.4	
	comp=E,231nm,1.0s						
KBO	Bosley Butte	3.42	277		Pn	11 04 14.9	+0.5
G08A	Pilot Rock	3.44	8	Pn	Pn	11 04 17.0	+2.3
G08A				IAML		11 05 10.1	
	comp=E,208nm,0.9s						
G08A				IAML		11 05 16.7	
	comp=N,122nm,0.9s						
JCC	Jacoby Creek,	3.47	254	Pn	Pn	11 04 14.2	-0.7
JCC				IAML		11 05 16.7	
	comp=E,247nm,1.6s						
JCC				IAML		11 05 24.4	
	comp=N,274nm,2.5s						
H04D	Lebanon	3.47	320	Pb	Pb	11 04 22.1	-0.1
	baz=138						
H04D				Sb	Sb	11 05 08.0	+3.3
	baz=138						
KMRM	Mail Ridge	3.49	243	Pn	Pn	11 04 17.1	+1.8
ELK	Elko	3.51	107	Pn	Pn	11 04 16.5	+0.7
	comp=N,6.9nm,0.3s,baz=304,slow=14,SNR=82						
ELK				Pg	Pb	11 04 20.9	-2.1
	comp=N,12nm,0.3s,baz=300,slow=18,SNR=37						
ELK				Lg	Lg	11 05 06.3	
	comp=N,14nm,0.3s,baz=135,slow=14,SNR=3.4						
ELK	Elko	3.51	107		Pn	11 04 15.5	-0.2
ELK				IAML		11 05 14.2	
	comp=N,123nm,1.7s						
G05D	Wamic, OR	3.57	341	Pb	Pb	11 04 23.4	-0.6
	baz=159						
G05D				Sb	Sb	11 05 11.0	+3.4
	baz=159						
NVAR	Mina Array Bea	3.60	163	Pn	Pn	11 04 17.6	+0.6
	comp=N,0.8nm,0.3s,baz=337,slow=12,SNR=32						
NVAR				Lg	Lg	11 05 15.4	
	comp=N,12nm,0.3s,baz=352,slow=27,SNR=5.0						
NVAR				LR	LR	11 06 05.0	
	comp=N,972nm,18.6s,baz=341,slow=46						
NVAR	Mina Array Bea	3.60	163	Pn	Pn	11 04 18.2	+1.3
KEBM	Edson Butte	3.61	287	Pn	Pn	11 04 16.8	-0.2
NV11	Mina Array Sit	3.63	161		Pn	11 04 19.8	+2.5
NV11				IAML		11 05 25.3	
	comp=E,97nm,2.2s						
NV11				IAML		11 05 32.6	
	comp=N,106nm,2.0s						
LHV	Little Huntoon	3.73	166		Pn	11 04 21.0	+2.5
LHV				IAML		11 05 33.2	
	comp=N,161nm,1.2s						
LHV				IAML		11 05 38.4	
	comp=E,189nm,1.2s						
I02D	Swisshome	3.80	307		Pb	11 04 25.5	-2.3
COR	Corvallis	3.80	317		Pb	11 04 30.9	+3.1
COR	Corvallis	3.80	317	IAML		11 05 45.7	
	comp=E,285nm,1.4s						
CMB	Columbia Colle	3.88	189		Pn	11 04 23.0	+2.3
CMB				IAML		11 05 26.8	
	comp=E,82nm,3.2s						
HOPS	Hopland Field	3.89	223	Pn	Pn	11 04 20.1	-0.7
HOPS				IAML		11 06 01.6	
	comp=N,85nm,2.0s						
GDXM	Geysers	3.90	219	Pn	Pn	11 04 19.8	-1.2
F05D	White Salmon	4.21	342	Sb	Sb	11 05 29.6	+3.7
	baz=161						
TPH	Tonopah	4.24	153		Pn	11 04 27.0	+1.3
TPH	Tonopah	4.24	153	IAML		11 05 51.6	
	comp=E,77nm,1.3s						
TPH				IAML		11 05 53.9	
	comp=N,92nm,0.9s						
G03D	McMinnville, O	4.24	323	Pb	Pb	11 04 35.7	+0.4
	baz=140						
MDPB	Devils Postpil	4.27	174		Pn	11 04 28.2	+2.0
OMMB	Old Mammoth Mi	4.29	173	Pn	Pn	11 04 29.0	+2.5
F10A	Beach Ranch, E	4.45	22		Pn	11 04 29.1	+0.6
F10A				IAML		11 05 43.3	
	comp=E,168nm,0.8s						
HAWA	Hanford	4.51	1	Pn	Pn	11 04 29.6	+0.4
HAWA				IAML		11 06 06.2	
	comp=E,92nm,1.2s						
HAWA				IAML		11 06 12.1	
	comp=E,113nm,1.3s						
E08A	Dider Farm, El	4.63	5		Pn	11 04 31.6	+0.8
E08A				IAML		11 05 56.1	
	comp=N,65nm,1.7s						
E07A	Sunnyside	4.68	358	Pn	Pn	11 04 32.4	+0.8
E07A				IAML		11 06 04.7	
	comp=N,129nm,1.8s						
R11A	Troy Canyon, C	4.71	137	P	Pn	11 04 30.3	-1.8
	baz=320						
R11A	Troy Canyon, C	4.71	137		Pn	11 04 33.6	+1.4
R11A				IAML		11 05 54.9	
	comp=E,82nm,2.2s						
R11A				IAML		11 06 06.8	
	comp=N,56nm,1.9s						
E09A	Wood Farm, Sta	4.75	13		Pn	11 04 34.5	+1.9
E09A				IAML		11 06 02.6	
	comp=N,82nm,1.3s						
E09A				IAML		11 06 06.4	
	comp=E,130nm,1.8s						
SPR3	Spring Creek 3	4.97	124	Pn	Pn	11 04 38.1	+2.2
SPR3				IAML		11 06 08.3	
	comp=N,86nm,2.0s						
LON	Longmire	5.11	343		Pn	11 04 39.9	+2.4
LON				IAML		11 06 15.2	
	comp=N,62nm,2.8s						
LON				IAML		11 06 17.6	
	comp=E,40nm,1.3s						
E04D	Cinebar	5.12	337	P	Pn	11 04 38.9	+1.3
	baz=155						
HVU	Hansel Valley	5.14	89		Pn	11 04 40.3	+2.3
BCYI	Bear Canyon	5.17	60	Pn	Pn	11 04 38.6	+0.1
GRAC	Grapevine Rang	5.19	159	P	Pn	11 04 39.6	+1.0
	baz=341						
D08A	Wollman Farm,	5.20	5	Pn	Pn	11 04 39.6	+0.9
D08A				IAML		11 06 10.3	
	comp=E,90nm,1.2s						
D08A				IAML		11 06 25.6	
	comp=N,44nm,1.4s						
SPUT	South Promonto	5.43	94		Pn	11 04 42.9	+0.9
DUG	Dugway, Tooele	5.44	106	P	Pn	11 04 42.4	+0.3
	baz=290						
DUG	Dugway, Tooele	5.44	106	Pn	Pn	11 04 43.0	+0.9
E03A	Lebam	5.45	330	Pn	Pn	11 04 42.5	+0.5
PSUT	Pine Spring	5.55	125		Pn	11 04 45.4	+1.6
D05A	Enumclaw	5.56	343		Pn	11 04 45.3	+1.7
TPNV	Topopah Spring	5.58	151	P	Pn	11 04 45.3	+1.1
	baz=333						
TPNV	Topopah Spring	5.58	151		Pn	11 04 46.4	+2.2
PRN	Pahroc Range	5.71	140		Pn	11 04 48.0	+2.2
RATT	Rattlesnake La	5.75	345		Pn	11 04 46.7	+0.4
MCMT	McKenzie Canyo	5.76	57		Pn	11 04 47.4	+0.7
NLU	North Lily Min	6.05	106		Pn	11 04 52.4	+1.8
MPMC	Manual Prospec	6.05	163	P	Pn	11 04 52.2	+1.6
	baz=345						
CTU	Camp Tracy	6.07	99	Pn	Pn	11 04 51.2	+0.4
D03D	Eldon	6.16	338	P	Pn	11 04 51.4	-0.5
	baz=155,SNR=7.8						
DLMT	Dillon	6.19	53		Pn	11 04 53.0	+0.6
TCUT	Toone Canyon	6.23	94		Pn	11 04 53.5	+0.3
ISA	Isabella, Lake	6.28	171	P	Pn	11 04 50.9	-2.7
	baz=352						
JLU	Jordanelle	6.31	99		Pn	11 04 55.5	+1.2
MPU	Maple Canyon	6.35	104		Pn	11 04 55.8	+1.1
B013	Quilcene	6.37	340		Pn	11 04 54.7	0.0
B013	Quilcene	6.37	340		Pn	11 04 54.7	0.0
SHPR	Sheep Range	6.40	146	Pn	Pn	11 04 56.1	+0.7
TCRU	Three Creeks R	6.41	118		Pn	11 04 56.0	+0.5
MSO	Missoula	6.42	38	P	Pn	11 04 56.1	+0.6
	baz=221						
MSO	Missoula	6.42	38	Pn	Pn	11 04 56.5	+1.0
CCUT	Cedar City	6.49	130	Pn	Pn	11 04 58.7	+2.0
LRM	Limekiln Ridge	6.52	50	Pn	Pn	11 04 57.1	-0.1
B05A	Bryant	6.61	346	P	Pn	11 04 59.6	+1.6
	baz=164						
MVU	Marysvale	6.62	118		Pn	11 04 59.0	+0.6
SZCU	Shurtz Canyon	6.62	128		Pn	11 05 00.2	+1.7
NEW	Newport	6.63	15	Pn	Pn	11 05 02.7	+4.4
	comp=N,0.1nm,0.3s,baz=190,slow=9.8,SNR=3.8						
NEW				Lg	Lg	11 06 46.8	
	comp=N,0.9nm,0.3s,baz=282,slow=20,SNR=3.7						
NEW	Newport	6.63	15		Pn	11 04 58.6	+0.2
MSU	Marysvale	6.63	118		Pn	11 04 59.7	+1.1
YHL	Hebgen Lake	6.84	61		Pn	11 05 02.8	+1.2
LOHW	Long Hollow	6.88	72	Pn	Pn	11 05 02.9	+0.9
BOZ	Bozeman (W)	6.89	55	P	Pn	11 05 01.9	-0.2
	baz=240						
BOZ	Bozeman (W)	6.89	55		Pn	11 05 00.9	-1.2
MTPU	Mount Pierson	6.90	121		Pn	11 05 02.8	+0.4
FLWY	Flagg Ranch	6.92	68	Pn	Pn	11 05 02.1	-0.5
TMUT	Trail Mountain	6.92	109		Pn	11 05 02.6	-0.1
LCMT	Little Creek M	6.94	132	Pn	Pn	11 05 00.8	-2.0
JTMT	Jette	6.99	31		Pn	11 05 04.3	+0.9
H17A	Grant Village	7.09	66	Pb	Pb	11 05 23.2	-0.9
	baz=252						
KNB	Kanab	7.17	130		Pn	11 05 07.6	+1.6
P17A	Butcher Ranch,	7.18	107		Pn	11 05 04.6	-1.6
PKCU	Pink Cliffs	7.19	126		Pn	11 05 05.3	-1.0
SRU	San Rafael Swe	7.48	109		Pn	11 05 11.9	+1.6
BW06	Boulder Array	7.53	80	P	Pn	11 05 13.2	+2.3
	baz=267						
BW06	Boulder Array	7.53	80		Pn	11 05 09.9	-1.0
PD31	Pinedale Array	7.53	80		Pn	11 05 10.6	-0.3
PDAR	Pinedale Array	7.53	80	Pn	Pn	11 05 15.2	+4.3
	comp=N,0.1nm,0.3s,baz=259,slow=13,SNR=17						
PDAR				LR	LR	11 08 55.0	
	comp=N,110nm,19.0s,baz=274,slow=44						
PDAR	Pinedale Array	7.53	80	Pn	Pn	11 05 10.3	-0.7
YNE	Yellowstone No	7.68	63	Pn	Pn	11 05 12.1	-0.9
U15A	North Rim	7.89	131	Pn	Pn	11 05 16.9	+1.0
GCMT	Greycliff	8.20	58		Pn	11 05 17.3	-2.7
PFO	Pinyon Flats O	8.63	162	LR	LR	11 08 49.5	
	comp=N,158nm,20.0s,baz=346,slow=38						
O20A	White River Ci	8.80	98		Pn	11 05 26.4	-1.9
PV23	Carpenter Ridg	8.83	109		Pn	11 05 28.5	-0.4
PV04	Paradox Valley	8.93	109		Pn	11 05 30.3	+0.1
PV17	East Wray Mesa	8.95	110		Pn	11 05 30.3	-0.1
PV12	Saucer Basin,	9.04	110	Pn	Pn	11 05 33.5	+1.8
PV01	Paradox Valley	9.29	110		Pn	11 05 35.5	+0.5
RWWY	Rawlins	9.29	87		Pn	11 05 35.8	+0.6
K22A	Casper	9.76	81		Pn	11 05 42.1	+0.6
MVCO	Mesa Verde	9.79	115	Pn	Pn	11 05 42.6	+0.7
SMCO	Snowmass	10.02	101	Pn	Pn	11 05 44.4	-0.9
PHWY	Pilot Hill	10.65	88		Pn	11 05 54.8	+1.0
BBB	Bella Bella	11.80	334	LR	LR	11 10 47.2	
	comp=N,224nm,22.0s,baz=113,slow=38						
ANMO	Albuquerque	12.44	120	Pn	Pn	11 06 21.3	+3.1
	comp=N,0.0nm,0.3s,baz=321,slow=15,SNR=2.4						
R32A	Long Quarter,	16.37	95		Pn	11 07 11.3	+0.5
KAN13	South Haven SW	17.79	99		Pn	11 07 29.1	+0.6
DLBC	Dease Lake	17.82	342	LR	LR	11 15 13.9	
	comp=N,267nm,18.1s,baz=120,slow=40						
TX31	Lajitas Ar. Si	18.01	129	P	P	11 07 33.5	+1.6
TX31				IAmb	IAmb	11 07 40.2	
	comp=Z,27nm,1.4s						
TX32	Lajitas Array	18.01	129	P	Pn	11 07 31.6	+0.2
TXAR	Lajitas Array	18.01	129	P	P	11 07 32.7	+0.7
	comp=Z,0.0nm,0.3s,baz=331,slow=5.2,SNR=1.9						
TXAR				LR	LR	11 15 30.3	
	comp=Z,118nm,20.9s,baz=0.0,slow=41						
TXAR	Lajitas Array	18.01	129	P	Pn	11 07 31.0	-0.4
ULM	Lac du Bonnet	18.44	55	P	P	11 07 36.3	-0.1
	comp=Z,0.1nm,0.3s,baz=284,slow=8.3,SNR=2.3						
LPIG	La Paz	19.36	153	LR	LR	11 15 18.1	
	comp=Z,90nm,20.9s,baz=8.0,slow=37						
N38A	Joes South For	19.84	84	P	P	11 07 52.1	+0.2
N38A				IAmb	IAmb	11 07 57.7	
	comp=Z,21nm,1.0s						
S39A	Bolivar	20.63	93	P	P	11 08 00.6	+0.1
S39A				IAmb	IAmb	11 08 06.3	
	comp=Z,21nm,1.3s						
YKA	Yellowknife Ar	20.86	7	P	P	11 08 02.6	-0.1
	comp=Z,1.4nm,0.9s,baz=189,slow=10,SNR=19						
P40A	Paris	21.02	87	*e*P	P	11 08 02.8	-1.9
P40A				IAmb	IAmb	11 08 11.9	
	comp=Z,14nm,0.7s						
237A	Washetta, Mont	21.39	110	P	P	11 08 09.0	+0.3
237A				IAmb	IAmb	11 08 13.2	
	comp=Z,21nm,1.1s						
HKT	Hockley	22.59	114	P	P	11 08 20.9	-0.6
W45A	Hickory Valley	24.68	96	P	P	11 08 43.9	+1.8
OXF	Oxford	24.79	97	P	P	11 08 40.7	-2.3
KDAK	Kodiak Island	26.19	319	LR	LR	11 18 32.3	
	comp=Z,128nm,19.0s,baz=135,slow=35						
Z47A	Carrollton	26.38	99	P	P	11 08 58.5	+1.1
INK	Inuvik	27.51	349	P	P	11 09 07.1	-0.1
	comp=Z,1.9nm,1.1s,baz=125,slow=6.6,SNR=3.0						
INK				LR	LR	11 21 47.3	
	comp=Z,208nm,19.0s,baz=68,slow=40						
ILAR	Eielson Array	27.69	335	P	P	11 09 09.0	0.0
	comp=Z,0.8nm,0.7s,baz=158,slow=9.4,SNR=7.6						
TKL	Tuckaleechee C	28.51	91	LR	LR	11 20 41.2	
	comp=Z,65nm,18.6s,baz=320,slow=36						
SADO	Sadowa	29.39	70	LR	LR	11 20 53.4	
	comp=Z,107nm,19.4s,baz=349,slow=36						
HHC	Hu-ho-hao-te	85.50	324	*e*P	P	11 15 57.5	-1.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,8.3s						
WMQ	Urumqi	91.22	341	*e*P	P	11 16 25.8	-0.7

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*NEIC **29** 11:04:45.8±1.4, 7°.47S±0°.08×104°.4E±0°.1, h51km±6km, mb4.2/7, Error ellipse: s-maj=16.8km s-min=8.6km az=54.0*

*IDC **29** 11:04:46.3±1.5, 7°.19S×104°.67E, h41km±6km, mb3.6/10, mb1 3.7/10, mb1mx3.5/41, mbtmp3.9/10, MS3.2/2, Ms1 3.2/2, ms1mx2.8/34, Error ellipse: s-maj=47.1km s-min=18.7km az=48.0*

*DJA **29** 11:04:48.1±1.4, 7°S±8°×10°5E±°, h20km±11km, M3.9/11, MLv3.9/11*

ISC 29 11:04:43.4±0.8**, 7°.40S**±0°.09×**104°.35E**±0°.07**, h27**km**, n41,** σ1s.**34**/43**, mb4.1**/12**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.87	4	P	Pn	11 05 13.6	-0.1
BLSI	Bandar Lampung	2.20	24	P	Pb	11 05 25.7	+3.1
SKJI	Sukabumi	2.22	80	P	Pb	11 05 22.1	-0.8
LWLI	Liwa	2.38	353	P	Pn	11 05 19.9	-1.0
DBJI	Dramaga	2.52	71	P	Pn	11 05 22.5	-0.2
DBJI				S	Sn	11 05 52.2	-0.4
CBJI	Citeko	2.66	69	P	Pb	11 05 29.1	-1.4
KLSI		2.71	8	P	Pn	11 05 25.4	+0.1
MDSI	Maura Dua	2.90	357	P	Pn	11 05 28.4	+0.6
LEM	Lembang	3.29	80	P	Pn	11 05 36.5	+3.2
	6.1nm,0.3s,baz=300,slow=20,SNR=3.5						
LEM				LR	LR	11 07 01.1	
	comp=Z,234nm,18.9s,baz=242,slow=46						
LEM	Lembang	3.29	80	P	Pn	11 05 36.4	+3.0
MNAI	Manna	3.32	335		Pn	11 05 35.7	+2.0
MNAI	Manna	3.32	335	P	Pn	11 05 35.7	+2.0
XMIS	Christmas Isla	3.32	157	Pn	Pn	11 05 29.5	-4.2
CISI	Cisompet, Garu	3.44	93		Pn	11 05 36.9	+1.6
CISI	Cisompet, Garu	3.44	93	P	Pn	11 05 36.3	+1.0
LHSI	Lahat	3.64	347	P	Pn	11 05 34.9	-3.2
KSI	Kapahiang	4.11	335	P	Pn	11 05 37.0	-7.6
ABJI	Asem Bagus	9.80	93	P	Pn	11 07 12.9	+10
CMAR	Chiang Mai Arr	26.24	348	P	P	11 10 16.1	-0.4
	1.5nm,0.7s,baz=177,slow=8.4,SNR=7.2						
WRA	Warramunga Arr	31.62	116	P	P	11 11 03.5	-1.0
	0.3nm,0.6s,baz=286,slow=12,SNR=2.3						
WRA	Warramunga Arr	31.62	116	P	P	11 11 03.8	-0.7
WRAB	Tennant Creek	31.63	116	P	P	11 11 04.3	-0.2
WB2	Warramunga Arr	31.64	116	P	P	11 11 04.2	-0.4
WB2				IAmb	IAmb	11 11 26.2	
	comp=Z,6.8nm,1.4s						
WR0	Warramunga Arr	31.81	116	P	P	11 11 05.3	-0.8
ASAR	Alice Springs	32.64	123	P	P	11 11 13.1	-0.3
	comp=Z,0.5nm,1.0s,baz=290,slow=7.2,SNR=3.2						
SONM	Songino Array	55.02	2	P	P	11 14 12.8	+0.1
	comp=Z,1.9nm,0.8s,baz=176,slow=9.3,SNR=12						
SONM				pP	pwP	11 14 24.9	+0.7
	comp=Z,0.9nm,0.7s,baz=203,slow=6.1,SNR=4.3						
SONM				PcP	PcP	11 15 14.8	+0.7
	comp=Z,0.7nm,0.6s,baz=184,slow=3.6,SNR=5.2						
USRK	Ussuriysk Ar.	57.10	23	P	P	11 14 25.6	-1.9
	comp=Z,1.3nm,0.8s,baz=195,slow=7.8,SNR=4.3						
USRK				pP	sP	11 14 36.8	-0.7
	comp=Z,2.2nm,0.7s,baz=212,slow=7.3,SNR=4.8						
MK31	Makanchi Array	57.41	342	P	P	11 14 30.1	+0.5
MK31				IAmb	IAmb	11 14 31.4	
	comp=Z,2.8nm,1.2s						
MKAR	Makanchi Array	57.41	342	P	P	11 14 30.1	+0.5
	comp=Z,0.9nm,0.5s,baz=146,slow=7.9,SNR=12						
MKAR				pP	pwP	11 14 42.4	+1.2
	comp=Z,1.2nm,0.9s,baz=145,slow=8.9,SNR=5.3						
MKAR	Makanchi Array	57.41	342	P	P	11 14 29.6	0.0
KLR	Kul'dur	61.27	20	P	P	11 14 54.3	-2.0
	comp=Z,0.9nm,0.6s,baz=203,slow=6.9,SNR=4.3						
KURBB	Kurchatov Arra	61.96	342	P	P	11 15 01.9	+1.0
	baz=159,slow=6.1						
KURK	Kurchatov	62.01	342	P	P	11 15 01.2	0.0
ZALV	Zalesovo Beam	63.30	347	P	P	11 15 09.7	0.0
	comp=Z,2.9nm,0.7s,baz=131,slow=4.1,SNR=13						
ZALV				pP	pwP	11 15 22.2	+0.9
	comp=Z,1.3nm,0.5s,baz=152,slow=5.9,SNR=5.4						
ZALV	Zalesovo Beam	63.30	347	P	P	11 15 08.6	-1.1
BVAR	Borovoye Array	66.74	338	P	P	11 15 32.5	+0.4
	comp=Z,0.5nm,0.6s,baz=111,slow=8.1,SNR=4.9						
KMBO	Kilima Mbogo	67.15	272	LR	LR	11 41 35.3	
	comp=Z,29nm,18.1s,baz=92,slow=33						
ABKAR	Akbulak array	68.43	330	P	P	11 15 43.6	+0.7
BKZ	Black Stump Fm	71.52	129	P	P	11 16 02.0	-0.3
BRTR	Keskin Array B	80.14	312	P	P	11 16 51.3	-0.3
	comp=Z,0.9nm,0.6s,baz=134,slow=7.2,SNR=5.2						
TXAR	Lajitas Array	145.78	47	PKPbc	PKPab	11 24 21.6	+0.3
	comp=Z,1.6nm,0.7s,baz=284,slow=1.1,SNR=23						

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*TEH **29** 11:14:20.7, 38°.33N×49°.20E, h17km, ML3.5*

*THR **29** 11:14:23.0±0.3, 38°.26N×48°.98E, h26km±9km, ML3.1*

*AZER **29** 11:14:25.0±0.1, 38°.45N×48°.90E, h44km, ml3.3/31, Error ellipse: s-maj=1.2km s-min=1.0km az=3.0*

ISC 29 11:14:23.1±1.3**, 38°.38N**±0°.03×**49°.13E**±0°.04**, h26**km±14km**, n58,** σ1s.**07**/90**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASTR	Astara	0.32	304	P	Pn	11 14 33.1	+1.0
	SNR=77						
ASTR				S	Sn	11 14 40.1	+2.2
LKRN	Lenkeran, Azer	0.43	320	P	Pn	11 14 34.1	+0.5
	SNR=15						
LKRN				S	Sn	11 14 41.8	+1.2
LRK	Lerik	0.68	293	P	Pn	11 14 37.1	-0.1
	SNR=162						
LRK				S	Sn	11 14 46.8	-0.1
LRK	Lerik	0.68	293	*e*Pg	Pn	11 14 37.0	-0.1
YRD	Yardimli	0.88	308	P	Pn	11 14 39.5	-0.4
	SNR=18						
YRD				S	Sb	11 14 51.1	-0.1
YRD	Yardimli	0.88	308	*e*Pg	Pn	11 14 39.5	-0.4
GLBA	Clilabad	1.03	326	P	Pn	11 14 41.6	-0.3
GLBA				S	Sb	11 14 56.0	+0.5
GLBA	Clilabad	1.03	326	*e*Pg	Pn	11 14 41.6	-0.3
GRMI	Germi	1.06	294	*e*Pg	Pn	11 14 42.0	-0.4
GRMI				*e*Sg	Sn	11 14 55.8	-0.6
GRMI				IAML		11 14 56.6	
	comp=N,459nm,0.2s						
GRMI	Germi	1.06	294	*e*Pg	Pn	11 14 42.0	-0.4
ISRB	Sarab	1.28	245	*e*Pg	Pn	11 14 45.8	+0.3
ISRB				*e*		11 14 46.2	
	comp=Z,99nm,0.1s						
ALIB	Äli-Bayra	1.58	356	Pn	Pb	11 14 51.2	-0.3
ALIB				Sn	Sb	11 15 12.4	+1.3
ALIB	Äli-Bayra	1.58	356	*e*Pn	Pb	11 14 51.2	-0.3
SAAT	Saatly	1.58	340	Pn	Pb	11 14 52.4	+0.9
SAAT				Sn	Sb	11 15 10.8	-0.2
SAAT	Saatly	1.58	340	*e*Pg	Pb	11 14 51.2	-0.3
ZNJK	Zanjan	1.75	192	*e*Pg	Pn	11 14 52.0	+0.1
ZNJK				*e*Sg	Sn	11 15 13.2	-0.2
ZNJK				IAML		11 15 15.8	
	comp=N,176nm,0.2s						
ZNJK	Zanjan	1.75	192	*e*Pg	Pn	11 14 52.0	+0.1
QRD	Qoradiz	1.78	308	Pn	Pn	11 14 51.8	-0.3
	SNR=11						
QRD				Sn	Sn	11 15 14.3	+0.4
QRD	Qoradiz	1.78	308	*e*Pn	Pn	11 14 51.8	-0.3
BLQ	Beylaqan	1.81	318	Pn	Pn	11 14 52.9	+0.2
	SNR=2.8						
BLQ				Sn	Sn	11 15 14.8	0.0
BLQ	Beylaqan	1.81	318	*e*Pn	Pn	11 14 52.8	+0.2
GOBA	Gobu	2.07	13	Pn	Pb	11 14 58.8	-1.1
GOBA				Sn	Sb	11 15 24.3	-0.8
KDMR	Kurdemir	2.12	340	Sn	Sn	11 15 22.8	+0.5
GBS	Qobustan	2.15	356	Pn	Pn	11 14 57.6	+0.2
GBS				Sn	Sb	11 15 26.5	-1.3
GBS	Qobustan	2.15	356	*e*Pn	Pn	11 14 57.5	+0.2
ZRD	Zardab	2.20	330	Pn	Pn	11 14 58.3	+0.3
ZRD				Sn	Sn	11 15 25.4	+1.1
ZRD	Zardab	2.20	330	*e*Pn	Pn	11 14 58.2	+0.3
QALM	Alamut, Qazvin	2.29	148	*e*Pn	Pn	11 14 59.0	-0.4
NDR	Nardaran	2.29	16	Pn	Pb	11 15 04.4	+0.7
NDR				Sn	Sb	11 15 31.3	-0.3
AGDM	Agdam	2.33	318	Pn	Pn	11 15 00.4	+0.6
	SNR=3.3						
AGDM				Sn	Sn	11 15 27.5	-0.1
BRDA	Brd	2.41	322	Pn	Pn	11 15 01.3	+0.4
BRDA				Sn	Sn	11 15 31.8	+2.3
BRDA	Brd	2.41	322	*e*Pn	Pn	11 15 01.2	+0.4
PQL	Pirkuli	2.44	350	Pn	Pn	11 15 02.0	+0.6
	SNR=4.4						
PQL				Sn	Sn	11 15 30.1	-0.3
PQL	Pirkuli	2.44	350	*e*Pn	Pn	11 15 02.0	+0.6
ATGJ	Altiaghaj	2.48	357	Pn	Pn	11 15 03.4	+1.5
ATGJ				Sn	Sn	11 15 32.7	+1.4
IML	Ismayilli	2.52	343	Pn	Pn	11 15 02.7	+0.3
IML				Sn	Sn	11 15 32.0	-0.2
ORD	Ordubad	2.52	283	Pn	Pn	11 15 03.3	+1.0
	SNR=15						
ORD				Sn	Sn	11 15 33.1	+0.9
ORD	Ordubad	2.52	283	*e*Pn	Pn	11 15 03.3	+1.0
QABG	Abgarm-Qazvin	2.69	172	*e*Pn	Pn	11 15 03.8	-1.1
SIZA	Siyzn	2.70	356	Pn	Pn	11 15 05.7	+0.9
SIZA				Sn	Sn	11 15 39.7	+3.0
IMRD	Marand	2.71	278	*e*		11 15 11.5	
	comp=Z,99nm,0.2s						
IMRD				*e*Pn	Pn	11 15 06.3	+1.2
QBL	Gabala	2.75	339	Pn	Pn	11 15 07.1	+1.6
QBL				Sn	Sn	11 15 36.8	-1.1
XNQ	Khinaliq	2.89	345	Pn	Pn	11 15 07.5	-0.1
	SNR=8.6						
XNQ				Sn	Sn	11 15 40.4	-1.2
CHTH	Charan	2.94	147	*e*Pn	Pn	11 15 10.0	+1.7
CHTH	Charan	2.94	147	*e*Pn	Pn	11 15 10.0	+1.7
IMHD	Mahdasht	2.96	155	*e*		11 15 49.9	
	comp=Z,99nm,0.1s						
IMHD				*e*Pn	Pn	11 15 07.9	-0.6
SBZ	Shahbuz	2.97	291	Pn	Pn	11 15 09.5	+0.9
	SNR=7.7						
SBZ				Sn	Sn	11 15 43.0	-0.5
QUBA	Quba, Azerbaij	3.01	351	Pn	Pn	11 15 10.1	+1.0
QUBA				Sn	Sn	11 15 44.8	+0.4
IRAZ	Razeghan	3.04	168	*e*		11 15 46.4	
	comp=Z,99nm,0.2s						
IRAZ				*e*Pn	Pn	11 15 09.9	+0.2
GANJ	Ganja	3.14	317	Pn	Pn	11 15 10.3	-0.5
GANJ				Sn	Sn	11 15 44.6	-2.8
SEKA	Sheki	3.19	333	Pn	Pn	11 15 12.1	+0.4
	SNR=3.5						
SEKA				Sn	Sn	11 15 47.0	-1.9
QSAR	Qusar	3.20	348	Pn	Pn	11 15 11.6	-0.1
	SNR=3.1						
QSAR				Sn	Sn	11 15 47.2	-1.8
IPRN	Peran	3.33	129	*e*Pn	Pn	11 15 13.9	+0.3
GDB	GEDABAY	3.50	313	Pn	Pn	11 15 16.3	+0.3
	SNR=3.9						
GDB				Sn	Sn	11 15 55.9	-0.8
ZKTA	Zakatala	3.78	330	Pn	Pn	11 15 20.6	+0.9
ZKTA				Sn	Sn	11 16 01.2	-2.2
QZX	Qazax, Azerbai	3.94	314	Pn	Pn	11 15 21.5	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QZX				Sn	Sn	11 16 03.8	-3.6
IVRN	Varamin	3.97	148	*e*Pn	Pn	11 15 24.4	+2.1
IMND	Minoodasht	5.09	101	*e*Pn	Pn	11 15 36.4	-1.3

IDC 29 11:40:55.4±1.7, 6°.93S×129°.50E, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.5/35, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=111.7km s-min=29.5km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.76	160	Pn	Pn	11 44 11.5	-0.5
	0.6nm,0.3s,baz=340,slow=13,SNR=32						
WRA				Sn	Sn	11 46 31.6	-14
	1.2nm,0.3s,baz=336,slow=23,SNR=12						
ASAR	Alice Springs	17.17	166	P	Pn	11 44 57.3	+0.4
	0.2nm,0.3s,baz=335,slow=8.8,SNR=16						
ASAR				S	Sn	11 47 53.6	-15
	0.4nm,0.3s,baz=348,slow=25,SNR=7.2						
MKAR	Makanchi Array	67.89	327	P	P	11 51 55.6	-0.3
	0.3nm,0.4s,baz=131,slow=6.5,SNR=7.9						
KURBB	Kurchatov Arra	72.19	329	P	P	11 52 22.5	+0.3
	0.4nm,0.7s,baz=125,slow=5.1,SNR=4.0						

IDC 29 11:51:25.9±1.4, 56°.36S×27°.70W, h0km, mb4.2/2, mb1 4.1/2, mb1mx3.8/19, mbtmp4.0/2, Error ellipse: s-maj=84.6km s-min=56.9km az=101.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	73.47	30	P	P	12 03 00.1	+0.2
	0.7nm,0.4s,baz=205,slow=5.7,SNR=4.8						
ASAR	Alice Springs	98.78	163	P	Pdif	12 05 07.6	+0.1
	0.3nm,0.6s,baz=188,slow=4.1,SNR=4.3						
ILAR	Eielson Array	150.10	311	PKPbc	PKPbc	12 11 16.4	-0.5
	1.2nm,0.8s,baz=120,slow=1.5,SNR=13						
SONM	Songino Array	151.03	87	PKPbc	PKPbc	12 11 19.2	-0.6
	0.9nm,0.6s,baz=224,slow=2.8,SNR=7.0						

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*IDC **29** 12:05:19.5±4.8, 32°.83N×141°.64E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.5/48, mbtmp3.8/5, ML3.5/2, MS2.9/4, Ms1 3.0/4, ms1mx2.6/52, Error ellipse: s-maj=80.8km s-min=40.5km az=150.0*

*JMA **29** 12:05:27.0±0.2, 33°.16N×141°.24E, h47km, M3.4*

ISC 29 12:05:26.2±2.3, 33°.10N±0°.10×141°.2E±0°.1, h23km±16km, n22, σ1ˢ.19/25, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.19	271	P	Pb	12 05 48.1	0.0
JHCJ	Hachijojimakas	1.21	269	P	Pb	12 05 48.1	-0.3
JHCJ				*e*S	Sn	12 06 02.9	-0.4
JHJ	Hachijo jima 2	1.22	271	Pn	Pb	12 05 48.2	-0.3
	99nm,0.3s,baz=158,slow=20,SNR=80						
JHJ				Sn	Sn	12 06 00.7	-2.9
	133nm,0.3s,baz=58,slow=23,SNR=15						
JHJ				LR	LR	12 06 29.2	
	comp=Z,136nm,18.4s,baz=93,slow=45						
JAOM	Aogashimamukai	1.39	243	P	Pb	12 05 51.0	-0.5
BSO1	Boso 1	1.57	352	P	Pn	12 05 52.3	+0.2
JMKN	Mikurajimanish	1.59	300	P	Pn	12 05 53.1	+0.2
JMKN				*e*S	Sn	12 06 11.9	-0.8
BSO3	Boso 3	1.80	341	P	Pn	12 05 55.4	-0.2
JIM2	Oshima 3	2.21	318	P	Pn	12 06 01.2	-0.2
JIZS	Izushimoda	2.54	310	P	Pn	12 06 07.1	+1.1
JIZS				*e*S	Sn	12 06 36.3	+0.1
JOD2	Odawara 2	2.80	321	P	Pn	12 06 09.7	+0.1
JOD2				*e*S	Sn	12 06 41.2	-1.4
JRY	Ryogami san	3.49	327	P	Pn	12 06 20.6	+1.5
JAG	Ashikaga	3.63	337	P	Pn	12 06 21.9	+1.0
JIE	Ise	3.99	290	P	Pn	12 06 27.3	+1.4
MJAR	Matsushiro Arr	4.24	325	Pn	Pn	12 06 31.1	+1.7
	0.3nm,0.3s,baz=150,slow=12,SNR=17						
MAT	Matsushiro	4.25	325	P	Pn	12 06 30.9	+1.5
MAT				*e*S	Sn	12 07 17.8	-0.5
JCJ	Chichijima	6.04	172	LR	LR	12 08 47.4	
	comp=Z,53nm,21.4s,baz=171,slow=36						
ASAJ	Asahikawa	11.05	5	Pn	Pn	12 08 01.1	-1.7
	0.9nm,0.3s,baz=199,slow=9.0,SNR=8.8						
ASAJ				LR	LR	12 12 45.1	
	comp=Z,90nm,18.9s,baz=126,slow=40						
PETK	Petropavlovsk-	23.23	26	LR	LR	12 20 54.8	
	comp=Z,25nm,19.6s,baz=348,slow=40						
SONM	Songino Array	30.03	310	P	P	12 11 34.9	+1.6
	0.5nm,0.6s,baz=104,slow=9.1,SNR=4.1						
MKAR	Makanchi Array	46.18	305	P	P	12 13 48.3	-0.8
	0.5nm,0.5s,baz=91,slow=9.0,SNR=6.3						
ILAR	Eielson Array	52.92	31	LR	LR	12 38 18.4	
	comp=Z,22nm,20.2s,baz=121,slow=37						
FINES	FINESS Array B	72.23	333	P	P	12 16 48.8	-0.3
	1.9nm,0.8s,baz=72,slow=6.2,SNR=3.8						

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*IDC **29** 12:07:40.6±1.8, 7°.71S×127°.57E, h179km±18km, mb3.4/4, mb1 3.8/9, mb1mx3.5/41, mbtmp4.2/9, Error ellipse: s-maj=20.3km s-min=17.4km az=94.0*

*DJA **29** 12:07:40.3±1.2, 8°S±4°×12°8E±°, h19km±10km, M4.5/11, mb4.5/7, mB5.3/1, MLv4.5/11, Mw(mB)4.7/1*

*NEIC **29** 12:07:40.5±2.0, 7°.65S±0°.09×127°.60E±0°.06, h175km±5km, mb4.1/7, Error ellipse: s-maj=13.9km s-min=8.8km az=167.0*

ISC 29 12:07:39.3±0.6, 7°.75S±0°.06×127°.64E±0°.04, h162km, n39, σ2ˢ.26/49, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.64	94	Pn	Pn	12 08 37.5	+2.3
SAUI				Sn	Sn	12 09 19.4	+0.7
SAUI	Saumlaki	3.64	94	P	Pn	12 08 39.2	+4.0
SAUI				S	Sn	12 09 20.2	+1.5
SOEI	Soe	3.88	239	Pn	Pn	12 08 40.9	+2.5
SOEI				Sn	Sn	12 09 24.5	-0.1
SOEI	Soe	3.88	239	P	Pn	12 08 40.0	+1.5
SOEI				S	Sn	12 09 25.8	+1.2
BNDI	Bandanaira	3.92	35	P	Pn	12 08 34.8	-4.0
BATI	Baumata	4.62	238	P	Pn	12 08 50.9	+2.8
	43nm,0.3s,baz=120,slow=2.6,SNR=42						
BATI				S	Sn	12 09 43.0	+1.3
	32nm,0.3s,baz=170,slow=23,SNR=11						
BATI	Baumata	4.62	238	P	Pn	12 08 50.3	+2.3
BATI				S	Sn	12 09 42.6	+0.9
MMRI	Maumere	5.42	260	Pn	Pn	12 09 00.4	+2.0
MMRI				Sn	Sn	12 10 01.6	+1.3
MMRI	Maumere	5.42	260	P	Pn	12 09 00.2	+1.8
	0.2nm52nm,0.7s						
EDFI	Ende, Flores	5.97	260	P	Pn	12 09 07.9	+2.1
	0.1nm10nm,1.1s						
MTN	Manton Dam	6.12	146		Pn	12 09 10.9	+3.2
FAKI	Fak Fak	6.64	44	Pn	Pn	12 09 15.5	+0.9
FAKI	Fak Fak	6.64	44	P	Pn	12 09 15.3	+0.7
	0.2nm25nm,0.9s						
BASI	Baing, Sumba	7.39	250	P	Pn	12 09 23.9	-0.7
	0.4nm83nm,1.5s						
WSI	Waingapu	7.50	255	P	Pn	12 09 26.0	-0.1
	1.6nm216nm,0.4s						
SIJI	Sorong	7.73	28	P	Pn	12 09 30.7	+1.6
	5.6nm,0.3s,baz=198,slow=15,SNR=15						
FITZ	Fitzroy Crossi	10.47	191	P	Pn	12 10 05.0	-0.3
	3.3nm,0.3s,baz=11,slow=11,SNR=70						
FITZ				S	Sn	12 11 56.0	-5.4
	3.1nm,0.3s,baz=320,slow=23,SNR=5.8						
FITZ	Fitzroy Crossi	10.47	191		Pn	12 10 05.2	-0.1
WB0	Warramunga Arr	13.63	152	Pn	Pn	12 10 47.4	+1.3
WRAB	Tennant Creek	13.75	152	Pn	Pn	12 10 47.5	-0.2
WRA	Warramunga Arr	13.75	152	P	Pn	12 10 47.7	0.0
	1.2nm,0.3s,baz=322,slow=13,SNR=27						
WRA				S	Sn	12 13 14.6	-5.8
	1.9nm,0.3s,baz=324,slow=24,SNR=12						
WRA	Warramunga Arr	13.75	152		Pn	12 10 48.2	+0.5
WB2	Warramunga Arr	13.76	152		Pn	12 10 47.9	+0.1
WR0	Warramunga Arr	13.86	152		Pn	12 10 49.7	+0.6
PSA00	Pilbara Seismi	15.67	208		Pn	12 11 11.8	+0.4
PSA00				IAmb	IAmb	12 11 14.6	
	comp=Z,12nm,0.8s						
COEN	Coen	16.45	113		Pn	12 11 23.2	+2.2
COEN				IAmb	IAmb	12 11 42.3	
	comp=Z,9.6nm,1.4s						
AS31	Alice Springs	16.93	160	Pn	Pn	12 11 29.0	+2.2
AS31				IAmb	IAmb	12 11 32.4	
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	16.93	160	P	Pn	12 11 28.6	+1.8
	comp=Z,1.5nm,0.3s,baz=336,slow=12,SNR=71						
ASAR				S	S	12 14 27.4	-6.9
	comp=Z,0.3nm,0.3s,baz=334,slow=14,SNR=4.1						
BBOO	Buckleboo	26.14	164	P	P	12 13 00.0	+1.6
CMAR	Chiang Mai Arr	38.47	313	P	P	12 14 45.0	-0.8
	comp=Z,0.9nm,0.7s,baz=143,slow=6.3,SNR=7.8						
SONM	Songino Array	58.44	343	P	P	12 17 18.1	0.0
	comp=Z,0.6nm,0.9s,baz=167,slow=6.8,SNR=3.4						
MK31	Makanchi Array	67.59	328	P	P	12 18 17.2	-1.2
MKAR	Makanchi Array	67.59	328	P	P	12 18 17.6	-0.8
	comp=Z,1.0nm,0.6s,baz=133,slow=7.7,SNR=15						
MKAR	Makanchi Array	67.59	328	P	P	12 18 17.2	-1.2
ZALV	Zalesovo Beam	71.24	335	P	P	12 18 38.5	-2.1
	comp=Z,1.0nm,0.5s,baz=141,slow=4.9,SNR=5.5						
ZALV	Zalesovo Beam	71.24	335	P	P	12 18 39.0	-1.5
KURK	Kurchatov	71.95	330	P	P	12 18 44.1	-0.8
KURK				IAmb	IAmb	12 18 45.0	
	comp=Z,1.9nm,0.7s						
VNDA	Vanda	72.00	173	P	P	12 18 45.6	+0.8
VNDA				IAmb	IAmb	12 19 04.4	
	comp=Z,10nm,1.4s						
CPUP	Villa Florida	145.78	172	PKPbc	PKPdf	12 26 59.6	+0.3
	comp=Z,3.3nm,1.1s,baz=218,slow=5.2,SNR=3.9						

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*NEIC **29** 12:10:44.6±0.7, 18°.1S±0°.1×178°.0W±0°.1, h634km±8km, mb4.3/24, Error ellipse: s-maj=21.7km s-min=15.2km az=160.0*

*IDC **29** 12:10:46.7±2.6, 18°.00S×178°.10W, h648km±31km, mb3.2/12, mb1 3.5/13, mb1mx3.3/32, mbtmp4.2/13, Error ellipse: s-maj=35.6km s-min=12.7km az=149.0*

ISC 29 12:10:45.6±0.5, 18°.1S±0°.1×177°.92W±0°.10, h650km, n55, σ1ˢ.09/57, mb4.1/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.86	275	P	P	12 12 12.5	-1.5
AFI	Afiamalu	7.24	56	P	P	12 12 37.2	-2.9
RAO	Raoul Island	11.08	180	P	P	12 13 15.2	-0.4
SANVU	Saraoutou	14.50	278	P	P	12 13 46.4	-0.9
DZM	Mont Dzumac	15.21	252	P	P	12 13 54.1	+0.2
	0.8nm,0.3s,baz=61,slow=19,SNR=12						
DZM	Mont Dzumac	15.21	252	P	P	12 13 53.3	-0.6
DZM				IAmb	IAmb	12 14 11.4	
	comp=Z,14nm,1.2s						
CAN	Canberra	33.95	233	P	P	12 16 38.0	0.0
COEN	Coen	37.58	271	P	P	12 17 08.7	+0.7
COEN				IAmb	IAmb	12 17 09.4	
	comp=Z,6.1nm,0.6s						
STKA	Stephens Creek	38.94	242	P	P	12 17 19.6	+0.9
	comp=Z,2.2nm,0.5s,baz=80,slow=12,SNR=4.5						
STKA	Stephens Creek	38.94	242	IAmb	IAmb	12 17 20.6	
	comp=Z,0.8nm,0.8s						
BBOO	Buckleboo	43.71	241	P	P	12 17 56.2	+0.1
BBOO				IAmb	IAmb	12 18 24.7	
	comp=Z,17nm,1.2s						
WR0	Warramunga Arr	44.86	260	P	P	12 18 04.8	-0.2
WB0	Warramunga Arr	45.02	260	P	P	12 18 06.2	0.0
WB0				IAmb	IAmb	12 18 06.5	
	comp=Z,4.5nm,0.8s						
WB2	Warramunga Arr	45.04	260	P	P	12 18 06.2	-0.2
WB2				IAmb	IAmb	12 18 06.7	
	comp=Z,5.5nm,0.6s						
WRAB	Tennant Creek	45.05	260	P	P	12 18 06.1	-0.3
WRAB				IAmb	IAmb	12 18 06.6	
	comp=Z,4.3nm,0.6s						
WRA	Warramunga Arr	45.05	260	P	P	12 18 06.2	-0.3
	comp=Z,2.8nm,0.4s,baz=96,slow=7.4,SNR=29						
WRA				PcP	PcP	12 19 33.7	+0.9
	comp=Z,0.6nm,0.4s,baz=90,slow=3.8,SNR=5.9						
WRA	Warramunga Arr	45.05	260	P	P	12 18 05.7	-0.8
AS31	Alice Springs	45.18	254	P	P	12 18 07.6	+0.1
ASAR	Alice Springs	45.19	254	P	P	12 18 07.5	0.0
	comp=Z,7.0nm,0.5s,baz=91,slow=8.0,SNR=31						
ASAR				PcP	PcP	12 19 33.9	+0.7
	comp=Z,1.5nm,0.4s,baz=105,slow=3.9,SNR=8.0						
ASAR				S	S	12 24 01.6	-0.6
	comp=Z,1.3nm,0.8s,baz=89,slow=14,SNR=11						
ASAR	Alice Springs	45.19	254	P	P	12 18 07.0	-0.4
FORT	Forrest	50.34	245	P	P	12 18 45.2	-0.3
FORT				IAmb	IAmb	12 18 48.3	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	53.45	261	P	P	12 19 08.1	+0.3
	comp=Z,1.0nm,0.3s,baz=98,slow=4.8,SNR=6.0						
FITZ	Fitzroy Crossi	53.45	261	P	P	12 19 07.9	+0.1
PSA00	Pilbara Seismi	58.31	255	P	P	12 19 41.0	-0.1
PSA00				IAmb	IAmb	12 20 02.8	
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	68.36	323	P	P	12 20 44.8	+0.4
	comp=Z,1.6nm,0.5s,baz=130,slow=12,SNR=6.3						
QSPA	South Pole Qui	71.93	180	P	P	12 21 05.6	+0.4
PEA0B	Petropavlovsk-	74.01	345	P	P	12 21 18.1	+1.2
PETK	Petropavlovsk-	74.01	345	P	P	12 21 17.2	+0.4
	comp=Z,3.4nm,0.7s,baz=103,slow=7.5,SNR=8.3						
PETK	Petropavlovsk-	74.01	345	P	P	12 21 16.9	0.0
NVAR	Mina Array Bea	79.25	44	P	P	12 21 47.4	+1.4
	comp=Z,0.1nm,0.4s,baz=228,slow=8.1,SNR=6.3						
SCM	Sheep Creek Mo	83.32	14	P	P	12 22 06.5	+0.6
VRDI	Verde Repeater	83.76	16	P	P	12 22 06.4	-1.8
N25K	Chitina, Valde	83.78	15	P	P	12 22 08.4	+0.1
N25K				IAmb	IAmb	12 22 29.6	
	comp=Z,16nm,1.4s						
GLB	Gilahina Butte	83.84	16	P	P	12 22 09.1	+0.7
GLB				IAmb	IAmb	12 22 12.6	
	comp=Z,17nm,1.4s						
BALM	Baldy	83.89	17	P	P	12 22 09.6	+0.8
BARN	Barnard Glacie	84.10	17	P	P	12 22 09.9	0.0
BARN				IAmb	IAmb	12 22 15.3	
	comp=Z,16nm,1.4s						
TRF	Thorofare Moun	84.12	12	P	P	12 22 10.1	+0.1
TRF				IAmb	IAmb	12 22 10.5	
	comp=Z,6.1nm,0.8s						
TXAR	Lajitas Array	85.72	57	P	P	12 22 20.8	+2.4
	comp=Z,0.6nm,0.7s,baz=221,slow=6.2,SNR=8.1						
IL31		85.99	13	P	P	12 22 18.8	+0.2
IL31				IAmb	IAmb	12 22 19.4	
	comp=Z,5.9nm,1.3s						
ILAR	Eielson Array	85.99	13	P	P	12 22 18.5	-0.1
	comp=Z,0.8nm,0.4s,baz=218,slow=4.9,SNR=26						
ILAR	Eielson Array	85.99	13	P	P	12 22 18.8	+0.1
PDAR	Pinedale Array	87.19	43	P	P	12 22 26.1	+1.0
	comp=Z,0.5nm,0.6s,baz=224,slow=4.1,SNR=4.3						
CMAR	Chiang Mai Arr	89.40	290	P	P	12 22 37.1	+1.5
	comp=Z,0.6nm,0.4s,baz=104,slow=2.0,SNR=5.6						
YKA	Yellowknife Ar	94.33	25	P	P	12 22 57.4	+0.2
	comp=Z,0.2nm,0.6s,baz=242,slow=4.1,SNR=3.5						
ZALV	Zalesovo Beam	108.69	322	PKiKP	PKiKP	12 28 01.6	-0.6
	comp=Z,0.6nm,0.6s,baz=108,slow=4.8,SNR=3.9						
MKAR	Makanchi Array	109.62	314	PKiKP	PKiKP	12 28 03.9	-0.4
	comp=Z,0.2nm,0.5s,baz=233,slow=1.7,SNR=5.5						
ARCES	ARCESS Array B	126.61	350	PKP	PKPdf	12 28 36.5	+0.3
	comp=Z,5.5nm,1.0s,baz=44,slow=1.1,SNR=9.5						
AKASG	Malin Array Be	140.97	333	PKhKP	PKPdf	12 28 58.2	-5.2
	comp=Z,0.3nm,0.3s,baz=40,slow=4.6,SNR=4.8						
BUR08	Bucovina Ar. S	145.01	332	PKPdf	PKPab	12 29 12.5	-0.6
BURAR	Bucovina Array	145.02	332	PKPdf	PKPab	12 29 12.5	-0.6
BR131	Keskin Array S	145.27	315		PKPbc	12 29 13.6	+0.7
BRTR	Keskin Array B	145.27	315	PKPbc	PKPbc	12 29 13.6	+0.7
	comp=Z,2.6nm,0.8s,baz=143,slow=5.0,SNR=9.4						
BRTR	Keskin Array B	145.27	315		PKPbc	12 29 12.5	-0.4
CLL	Collm	145.77	348	*i* PKPbc	PKPbc	12 29 14.7	+1.0
	comp=Z,9.0nm,0.7s						
GERES	GERESS Array B	147.94	345	PKPbc	PKiKP	12 29 20.7	-0.2
	comp=Z,1.7nm,0.6s,baz=27,slow=3.6,SNR=12						

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*IDC **29** 12:33:09.5±9.9, 14°.47N×92°.31W, h0km, mb3.4/2, mb1 3.9/4, mb1mx3.5/44, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=223.7km s-min=79.6km az=20.0*

*MEX **29** 12:33:17.8±0.7, 14°.44N×93°.02W, h16km±13km, MD4.1*

ISC 29 12:33:15.2±1.4, 14°.56N±0°.09×93°.04W±0°.05, h10km, n10, σ1ˢ.04/17, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.82	65	*i* P	Pb	12 33 32.2	+0.6
THIG				*i* S	Sb	12 33 42.3	-0.5
PCIG		1.15	351	*i* P	Pb	12 33 37.0	-0.2
PCIG				*i* S	Sg	12 33 52.5	+0.1
CCIG	Comitan	1.92	27	*e*P	Pn	12 33 48.4	+0.2
CCIG				*i* S	Sn	12 34 12.8	+0.3
TGIG		2.21	358	*i* P	Pn	12 33 52.3	+0.3
TGIG				*i* S	Sn	12 34 19.7	+0.3
CMIG	Matias Romero	3.08	325	Pn	Pn	12 34 04.9	+0.9
	2.8nm,0.3s,baz=145,slow=11,SNR=20						
CMIG				Sn	Sn	12 34 40.3	-0.6
	15nm,0.3s,baz=7.3,slow=17,SNR=11						
CMIG	Matias Romero	3.08	325	*i* P	Pn	12 34 04.6	+0.6
CMIG				*i* S	Sn	12 34 40.9	0.0
HUIG	Huatulco	3.20	292	*i* P	Pn	12 34 06.0	+0.4
HUIG				*i* S	Sn	12 34 43.7	-0.2
TXAR	Lajitas Array	17.69	328	P	P	12 37 24.8	+2.0
	0.1nm,0.3s,baz=148,slow=14,SNR=12						
NVAR	Mina Array Bea	32.61	322	P	P	12 39 48.1	+0.7
	0.3nm,0.6s,baz=153,slow=8.1,SNR=2.8						
YKA	Yellowknife Ar	50.26	347	P	P	12 42 08.6	-2.8
	0.2nm,0.6s,baz=146,slow=7.5,SNR=4.0						

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*DNK **29** 12:33:16.4±4.9, 79°.43N×2°.65E, h35km±52km, ML3.8*

*IDC **29** 12:33:17.6±0.5, 79°.10N×2°.31E, h0km, mb3.9/18, mb1 4.1/22, mb1mx3.9/57, mbtmp4.0/22, ML3.4/4, MS3.6/10, Ms1 3.6/10, ms1mx3.3/45, Error ellipse: s-maj=17.3km s-min=11.0km az=42.0*

*MOS **29** 12:33:17.9±1.2, 78°.98N×1°.67E, h17km, mb4.6/15, Error ellipse: s-maj=32.2km s-min=7.6km az=93.5*

*BER **29** 12:33:18.3±2.5, 79°.14N×3°.05E, h10km, ML3.2, ML3.8(DNK), Confirmed Earthquake*

*NEIC **29** 12:33:19.0±2.3, 78°.98N±0°.10×2°.6E±0°.2, h10km±1km, mb4.2/9, Error ellipse: s-maj=16.7km s-min=3.9km az=13.0*

*IEPN **29** 12:33:21.0, 78°.97N×3°.69E, h10km*

ISC 29 12:33:18.4±0.4, 79°.00N±0°.05×2°.31E±0°.03, h10km, n134, σ2ˢ.65/138, mb4.3/37, MS3.6/8, 13C-4D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.86	88	P	Pn	12 33 46.9	-3.3
KBS	Kingsbay	1.86	88	Pn	Pn	12 33 46.9	-3.3
KBS	Kingsbay	1.86	88⇑	*i*P	Pn	12 33 46.6	-3.6
KBS				*e*S	Sn	12 34 05.5	-8.2
KBS				IAML		12 34 07.7	
	comp=Z,920nm,0.2s						
KBS	Kingsbay	1.86	88⇑	*i*P	Pn	12 33 46.6	-3.6
KBS				*i* S	Sn	12 34 05.4	-8.2
KBS	Kingsbay	1.86	88	*i* P	Pn	12 33 46.9	-3.3
KBS				*i* S	Sn	12 34 05.7	-8.0
KBS				IAML		12 34 08.2	
	comp=Z,1µm,0.3s						
BRBA	Barentsburg A	2.56	106	*e*P	Pn	12 33 58.1	-1.8
BRBA				*e*S	Sn	12 34 24.5	-6.5
BRBA				IAML		12 34 28.9	
	comp=Z,428nm,0.6s						
HSPB	Hornsund (broa	3.41	119	*e*P	Pn	12 34 08.7	-2.8
HSPB				*e*S	Sn	12 34 47.7	-4.2
HSPB				IAML		12 35 09.6	
	comp=Z,69nm,0.6s						
HSPB	Hornsund (broa	3.41	119	*e*P	Pn	12 34 08.8	-2.7
HSPB				*e*S	Sn	12 34 45.2	-6.7
DAG	Danmarks Havn	4.92	254	*e*P	Pn	12 34 31.3	-1.0
DAG				*e*		12 35 23.4	
DAG				*e*S	Sn	12 35 24.8	-4.4
DAG				IAML		12 35 31.8	
	comp=Z,45nm,0.3s						
DAG	Danmarks Havn	4.92	254	*i* P	Pn	12 34 31.1	-1.2
DAG				*i* S	Sn	12 35 24.6	-4.6
DAG	Danmarks Havn	4.92	254	*e*	Pn	12 34 29.3	-3.0
	baz=56,slow=16						
DAG				*i* P	Pn	12 34 31.2	-1.2
DAG				*i* S	Sn	12 35 24.7	-4.6
DAG				IAML		12 35 31.8	
	comp=Z,45nm,0.3s						
HOPEN	Hopen	5.41	106	*e*P	Pn	12 34 35.7	-3.2
HOPEN				*e*S	Sn	12 35 31.3	-10
HOPEN				*e*		12 35 34.8	
HOPEN				IAML		12 35 37.6	
	comp=Z,102nm,0.4s						
HOPEN	Hopen	5.41	106	*e*P	Pn	12 34 35.8	-3.2
HOPEN				*e*S	Sn	12 35 31.4	-10
BJO1	Bjornoya	5.90	131	*e*P	Pn	12 34 45.2	-0.4
BJO1				*e*S	Sn	12 35 49.0	-4.2
BJO1				*e*		12 35 54.5	
BJO1				IAML		12 36 21.5	
	comp=Z,19nm,0.8s						
BJO1	Bjornoya	5.90	131	*e*P	Pn	12 34 45.4	-0.2
DBG	Daneborg	6.97	239	*e*P	Pn	12 34 59.1	-1.2
DBG				*e*S	Sn	12 36 12.9	-6.5
DBG				IAML		12 36 19.2	
	comp=Z,32nm,0.4s						
DBG	Daneborg	6.97	239	*i* P	Pn	12 34 59.0	-1.3
DBG				*i* S	Sn	12 36 12.5	-6.9
DBG				IAML		12 36 19.2	
	comp=Z,32nm,0.4s						
ZFI2	Zemlya Franca-	7.98	55⇑	*i*P	Pn	12 35 10.7	-3.4
ZFI2				*i* S	Sn	12 36 31.2	-13
	comp=Z,63nm,0.5s						
ZFI	Zemlya Franca-	7.98	55	*e*P	Pn	12 35 11.3	-2.9
ZFI				*e*S	Sn	12 36 32.6	-12
JNW	Jan Mayen West	8.46	204	*e*P	Pn	12 35 21.5	+0.8
JNE	Jan Mayen East	8.48	204	*e*P	Pn	12 35 21.4	+0.3
JMIC	Jan Mayen	8.51	205	*e*P	Pn	12 35 20.7	-0.7
JMI	Jan Mayen	8.58	205	*e*P	Pn	12 35 20.5	-1.9
SCO	Scoresbysund	10.53	229	P	Pn	12 35 49.2	+0.1
SCO	Scoresbysund	10.53	229	Pn	Pn	12 35 49.2	+0.1
SCO	Scoresbysund	10.53	229	*i* P	Pn	12 35 47.9	-1.2
SCO	Scoresbysund	10.53	229	*i* P	Pn	12 35 47.9	-1.2
SCO	Scoresbysund	10.53	229	*i* P	Pn	12 35 47.9	-1.2
KIF	Kilpisjarvi	11.16	144	*e*P	Pn	12 35 55.2	-2.6
ARA0	ARCESS Array S	11.26	135	*e*P	Pn	12 35 57.2	-1.8
ARCES	ARCESS Array B	11.26	135	Pn	Pn	12 35 58.5	-0.5
	baz=338,slow=11,SNR=9.5						
ARCES	ARCESS Array B	11.26	135	*e*P	Pn	12 36 00.1	+1.1
ARCES	ARCESS Array B	11.26	135		Pn	12 35 58.1	-0.9
KTK1	Kautokeino	11.45	140	*e*P	Pn	12 35 59.7	-2.0
SUMG	Summit	11.59	258	P	Pn	12 36 03.1	-0.8
SUMG	Summit	11.59	258		Pn	12 36 03.1	-0.8
SUMG	Summit	11.59	258	*i* P	Pn	12 36 02.2	-1.8
SUMG	Summit	11.59	258	*i* P	Pn	12 36 02.1	-1.8
SUMG	Summit	11.59	258	*i* P	Pn	12 36 02.2	-1.8
TULEG	Thule	14.39	297	*e*P	Pn	12 36 36.3	-5.5
TULEG	Thule	14.39	297	*e*P	Pn	12 36 36.3	-5.5
ICESG	Greenland Ices	14.71	251	*i* P	Pn	12 36 43.8	-2.7
ICESG	Greenland Ices	14.71	251	*i* P	Pn	12 36 43.8	-2.7
UPNV	Upernavik	14.81	277	*i* P	Pn	12 36 41.6	-5.8
UPNV				*i*		12 39 13.2	
UPNV	Upernavik	14.81	277	*i* P	Pn	12 36 41.6	-5.8
UPNV				*i*		12 39 13.2	
NUUG	Nuugaatsiaq	15.23	271	*i* P	Pn	12 36 47.1	-5.9
NUUG	Nuugaatsiaq	15.23	271	*i* P	Pn	12 36 47.1	-5.9
AMDE	Amderma	17.43	89	*e*P	Pn	12 37 13.5	-7.6
AMDE				*e*S	Sn	12 40 14.2	-21
SFJD	Kangerlussuaq	18.57	260	P	P	12 37 31.5	-3.5
	comp=Z,2.5nm,0.3s,baz=33,slow=12,SNR=11						
SFJD				LR	LR	12 45 29.1	
	comp=Z,228nm,21.1s,baz=358,slow=39						
SFJD	Kangerlussuaq	18.57	260	*i* P	P	12 37 33.1	-1.9
SFJD	Kangerlussuaq	18.57	260	P	P	12 37 31.8	-3.2
SFJD				IAmb	IAmb	12 37 34.1	
	comp=Z,15nm,0.9s						
SFJD	Kangerlussuaq	18.57	260	*i* P	P	12 37 33.2	-1.9
SFJD	Kangerlussuaq	18.57	260	*i* P	P	12 37 33.1	-1.9
SFJD	Kangerlussuaq	18.57	260	*i* P	P	12 37 33.2	-1.9
FINES	FINESS Array B	19.07	144	P	Pn	12 37 42.6	+1.3
	comp=Z,0.1nm,0.3s,baz=338,slow=8.2,SNR=5.0						
FINES				LR	LR	12 44 52.7	
	comp=Z,245nm,20.2s,baz=282,slow=36						
FINES	FINESS Array B	19.07	144	*e*P	Pn	12 37 44.5	+3.2
FINES	FINESS Array B	19.07	144	P	P	12 37 41.0	+0.5
HFS	Hagfors	19.29	163	P	Pn	12 37 45.1	+1.1
	comp=Z,0.3nm,0.3s,baz=11,slow=8.3,SNR=7.2						
VALR	Valaam	19.74	137	*e*P	Pn	12 37 50.4	+1.1
VALR				pmax	pmax		
	comp=Z,50nm,0.9s						
RES	Resolute Bay	20.00	310	P	P	12 37 48.5	-2.1
	comp=Z,0.9nm,0.3s,baz=31,slow=12,SNR=15						
RES	Resolute Bay	20.00	310	P	P	12 37 48.9	-1.7
RES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RES	Resolute Bay	20.00	310	P	P	12 37 48.9	-1.7
PUL	Pulkovo	21.21	139⇑	*e*P	P	12 38 07.5	+3.8
PUL				pmax	pmax		
	comp=Z,60nm,0.7s						
KLMR	Klimovskoe	21.47	126	*e*P	P	12 38 09.4	+3.0
KLMR				pmax	pmax		

	comp=Z,33nm,1.6s						
KLMR	**Klimovskoe**	21.47	126	*e*P	P	12 38 09.5	+3.0
KLMR				AMP		12 38 11.7	
	comp=Z,33nm,1.6s						
NRIK	**Noril'sk**	22.61	67	P	P	12 38 17.5	-1.1
	comp=Z,8.4nm,0.8s,baz=346,slow=8.4,SNR=14						
NRIK	**Noril'sk**	22.61	67	P	P	12 38 18.9	+0.2
NRIK				pmax	pmax		
	comp=Z,18nm,1.2s						
NRIK	**Noril'sk**	22.61	67	P	P	12 38 18.9	+0.2
NRIK				IAmb	IAmb	12 38 20.1	
	comp=Z,18nm,1.2s						
FRB	**Frobisher Bay**	24.91	274	P	P	12 38 40.1	-0.8
	comp=Z,11nm,1.2s,baz=36,slow=10,SNR=8.4						
FRB				LR	LR	12 49 53.5	
	comp=Z,121nm,19.3s,baz=2.5,slow=40						
KIRV	**Kirov**	25.25	116	LR	LR	12 50 29.1	
	comp=Z,124nm,18.0s,baz=300,slow=41						
KIRV	**Kirov**	25.25	116	⇑*e*P	P	12 38 44.9	+0.9
TIXI	**Tiksi**	26.54	35	⇓*i*P	P	12 38 57.7	+2.1
TIXI				pmax	pmax		
	comp=Z,33nm,2.5s						
OBN	**Obninsk**	26.56	134	LR	LR	12 50 59.8	
	comp=Z,33nm,18.1s,baz=328,slow=40						
OBN	**Obninsk**	26.56	134	⇑*e*P	P	12 38 57.0	+1.0
OBN				*e*		12 39 36.0	
OBN				pmax	pmax		
	comp=Z,69nm,2.5s						
CLL	**Collm**	28.07	166	*e*(P)	P	12 39 12.0	+2.5
CLL	**Collm**	28.07	166	*e*P	P	12 39 12.0	+2.5
ARU	**Arti**	28.92	107	P	P	12 39 18.0	+0.9
	comp=Z,0.5nm,0.3s,baz=341,slow=12,SNR=3.1						
ARU	**Arti**	28.92	107	P	P	12 39 17.9	+0.9
ARU						12 40 07.6	
ARU				S	S	12 44 08.0	+0.9
ARU	**Arti**	28.92	107	IAmb	IAmb	12 39 35.6	
	comp=Z,4.1nm,1.0s						
LPSR	**Galich'ya Gora**	29.34	132	*e*P	P	12 39 22.0	+1.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKASG	**Malin Array Be**	29.97	145	P	P	12 39 27.0	+0.6
	comp=Z,2.5nm,0.7s,baz=349,slow=9.4,SNR=8.7						
AKASG	**Malin Array Be**	29.97	145	*i* P	P	12 39 25.7	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	**GERESS Array B**	30.56	165	P	P	12 39 34.3	+2.5
	comp=Z,0.3nm,0.3s,baz=26,slow=7.1,SNR=2.7						
INK	**Inuvik**	30.70	330	P	P	12 39 31.5	-1.2
	comp=Z,0.8nm,0.8s,baz=212,slow=9.8,SNR=2.1						
VRH	**Novokhopyorsk**	31.11	129	*e*P	P	12 39 36.9	+0.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BUR08	**Bucovina Ar. S**	32.58	151	P	P	12 39 51.4	+1.9
BURAR	**Bucovina Array**	32.61	151	P	P	12 39 51.8	+2.0
BILL	**Bilibino**	32.87	11	⇓*e*P	P	12 39 52.5	+0.7
BILL				*i*		12 40 03.0	
BILL				*e*S	S	12 45 12.1	+3.4
BILL				pmax	pmax		
	comp=Z,8.0nm,1.7s						
YKA	**Yellowknife Ar**	34.02	312	P	P	12 40 02.8	+1.0
	comp=Z,1.4nm,1.0s,baz=27,slow=9.7,SNR=12						
YKA	**Yellowknife Ar**	34.02	312	*i* P	P	12 40 03.5	+1.7
YKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	**Borovoye**	34.32	97	⇓*i*P	P	12 40 05.9	+1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	35.31	338	P	P	12 40 14.8	+1.8
	comp=Z,0.8nm,0.9s,baz=3.8,slow=7.5,SNR=7.1						
ILAR				PcP	PcP	12 42 43.4	+0.6
	comp=Z,0.5nm,0.8s,baz=324,slow=2.5,SNR=5.4						
YAK	**Yakutsk**	35.85	40	*e*P	P	12 40 16.7	-0.9
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
ZALV	**Zalesovo Beam**	36.26	82	P	P	12 40 21.9	+0.8
	comp=N,1.7nm,0.9s,baz=326,slow=9.7,SNR=5.7						
ZALV				LR	LR	12 57 32.8	
	comp=N,126nm,18.1s,baz=326,slow=40						
ZALV	**Zalesovo Beam**	36.26	82	*i* P	P	12 40 22.7	+1.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	36.26	82	P	P	12 40 21.0	-0.2
ANN	**Anapa**	36.77	137	*e*P	P	12 40 27.2	+1.6
ANN				*e*S	S	12 46 14.0	+4.9
KURK	**Kurchatov**	38.15	90	⇑*e*P	P	12 40 38.6	+1.4
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	38.15	90	P	P	12 40 37.4	+0.2
KURK				IAmb	IAmb	12 40 39.2	
	comp=Z,4.8nm,0.9s						
KIV	**Kislovodsk**	38.33	131	*e*P	P	12 40 40.4	+1.5
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KBZ	**Khabaz**	38.58	131	P	P	12 40 43.6	+2.7
	comp=Z,4.5nm,0.8s,baz=349,slow=6.0,SNR=4.9						
KBZ				LR	LR	12 56 03.3	
	comp=Z,146nm,18.8s,baz=322,slow=35						
KBZ	**Khabaz**	38.58	131	⇑*i*P	P	12 40 43.8	+2.9
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DGZ	**Jazzator, Alta**	40.80	82	*ce*P	P	12 40 59.6	+0.1
DGZ				pmax	pmax		
	comp=Z,16nm,0.5s						
BRTR	**Keskin Array B**	41.30	143	P	P	12 41 06.2	+2.4
	comp=Z,0.9nm,0.8s,baz=330,slow=7.1,SNR=3.7						
MK31	**Makanchi Array**	42.61	88	⇑*e*P	P	12 41 15.1	+0.9
KKAR	**Karatay Array**	43.91	101	P	P	12 41 25.1	+0.4
KKAR	**Karatay Array**	43.91	101	P	P	12 41 25.1	+0.4
SADO	**Sadowa**	44.83	273	LR	LR	13 01 15.5	
	comp=Z,82nm,21.2s,baz=50,slow=37						
AAK	**Ala-Archa**	45.12	97	⇑*e*P	P	12 41 35.8	+1.3
AAK				pmax	pmax		
	comp=Z,12nm,1.7s						
SONM	**Songino Array**	46.08	65	P	P	12 41 42.4	+0.3
	comp=Z,0.6nm,0.6s,baz=350,slow=7.5,SNR=4.5						
SONM	**Songino Array**	46.08	65	IAmb	IAmb	12 41 43.0	
	comp=Z,0.6nm,0.8s						
ULN	**Ulaanbaatar**	46.16	65	⇑*e*P	P	12 41 43.8	+1.1
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
GEYT	**Alibeck**	46.68	116	LR	LR	13 05 17.3	
	comp=Z,76nm,19.0s,baz=25,slow=41						
KLR	**Kul'dur**	48.61	42	⇓*e*P	P	12 42 00.9	-0.7
KLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BMO	**Blue Mountains**	51.51	308	P	P	12 42 24.5	+0.7
BMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BMO	**Blue Mountains**	51.51	308	P	P	12 42 24.5	+0.7
BMO				IAmb	IAmb	12 42 26.6	
	comp=Z,3.8nm,1.2s						
PDAR	**Pinedale Array**	52.32	300	LR	LR	13 05 09.2	
	comp=Z,81nm,21.6s,baz=32,slow=37						
USRK	**Ussuriysk Ar.**	53.59	43	P	P	12 42 39.1	+0.2
	comp=Z,2.1nm,0.8s,baz=344,slow=7.8,SNR=4.1						
NVAR	**Mina Array Bea**	57.95	307	P	P	12 43 12.3	+1.7
	comp=Z,0.6nm,0.8s,baz=9.5,slow=2.7,SNR=3.4						
DANN	**Dangsing**	60.74	92	*e*P	P	12 43 30.9	+0.8
	comp=Z,23nm,0.7s						
GUN	**Gumba**	61.58	91	*e*P	P	12 43 35.8	-0.1
KKN	**Kakani**	61.58	91	*e*P	P	12 43 36.5	+0.8
	comp=Z,28nm,0.8s						
DMN	**Daman**	61.72	91	*e*P	P	12 43 37.6	+0.9
PKIN	**Phulchoki**	61.81	91	*e*P	P	12 43 37.9	+0.6
PKI	**Pulchoki**	61.82	91	*e*P	P	12 43 38.1	+0.6
MJAR	**Matsushiro Arr**	61.92	39	P	P	12 43 38.0	+0.4
	comp=Z,3.8nm,0.9s,baz=0.8,slow=6.1,SNR=6.0						
PFO	**Pinyon Flats O**	62.38	304	⇑*e*P	P	12 43 46.6	+5.7
PFO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TXAR	**Lajitas Array**	64.39	291	P	P	12 43 54.5	+0.3
	comp=Z,0.3nm,0.5s,baz=50,slow=5.4,SNR=6.6						
TORD	**Torodi Ar. Bea**	65.87	181	P	P	12 44 04.5	+0.6
	comp=Z,1.7nm,0.7s,baz=5.4,slow=5.6,SNR=7.7						
CMAR	**Chiang Mai Arr**	73.28	80	P	P	12 44 49.6	+0.1
	comp=Z,1.5nm,0.7s,baz=342,slow=6.8,SNR=15						
CMAR	**Chiang Mai Arr**	73.28	80	*e*P	P	12 44 49.8	+0.3
COCO	**West Island**	102.75	88	*i* P	Pdif	12 47 16.6	+1.1
ASAR	**Alice Springs**	120.57	53	PKP	PKPdf	12 52 08.9	-0.5
	comp=Z,0.2nm,0.8s,baz=354,slow=1.2,SNR=4.9						
ASAR	**Alice Springs**	120.57	53	PKIKP	PKPdf	12 52 09.0	-0.5

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*NNC **29** 12:39:35.5±2.7, 48°08N×84°20E, h0^{km}, mb3.6, mpv3.4,*
Error ellipse: s-maj=22.9km s-min=8.1km az=94.0
*SOME **29** 12:39:37.6, 48°07N×84°12E, h15^{km}*
*ASRS **29** 12:39:42.4±0.7, 48°N±4°×8°4E±°, h10^{km}, MLh3.1/10,*
smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID
smi:org.gfz-potsdam.de/geofon/tab confirmed
ISC 29 12:39:35.4±0.9**, 48°06N**±0°03×**84°18E**±0°03**, h10^{km}, n24,**
σ**1^{s}88**/44**, 7C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	0.76	142	*e*P	Pg	12 39 49.1	-0.9
	10nm,0.1s						
ZSN				*e*S	Sg	12 39 57.3	-2.7
	145nm,0.1s						
MK31	**Makanchi Array**	1.80	226	⇑P	Pg	12 40 09.0	-0.9
	3.4nm,0.2s,baz=50,slow=18,SNR=430						
MK31				⇓S	Sg	12 40 32.3	-0.9
	1.9nm,0.2s,baz=59,slow=31,SNR=10						
MKAR	**Makanchi Array**	1.80	226	Pg	Pg	12 40 10.7	+0.8
MKAR				Sg	Sg	12 40 36.0	+2.8
MAKZ	**Makanchi**	1.95	231	Pg	Pg	12 40 12.4	-0.3
MAKZ				Sg	Sg	12 40 39.8	+1.9
MAKZ	**Makanchi**	1.95	231	⇓P	Pg	12 40 11.9	-0.8
	7.3nm,0.4s						
MAKZ				⇑S	Sg	12 40 36.8	-1.2
	20nm,0.5s						
TUNR	**Tungur**	2.54	33	Pg	Pg	12 40 23.8	-0.2
TUNR				Sg	Sg	12 40 56.5	-0.3
DGZ	**Jazzator, Alta**	2.71	51	Pg	Pg	12 40 27.1	-0.1
DGZ				Sg	Sg	12 41 00.3	-2.0
UKR	**Ust'-Kan**	2.91	7	Pg	Pg	12 40 30.8	-0.3
UKR				Sg	Sg	12 41 08.9	0.0
CHBI	**Chibit, Altay**	3.14	43	Pg	Pg	12 40 35.6	+0.1
CHBI				Sg	Sg	12 41 16.2	+0.1
CUR	**Chagan-Uzun**	3.42	52	Pg	Pg	12 40 41.4	+0.5
CUR				Sg	Sg	12 41 24.6	-0.6
SEM	**Semipalatinsk**	3.49	314	*e*P	Pb	12 40 38.7	+1.4
	1.8nm,0.1s						
SEM				*e*S	Sg	12 41 22.8	-4.7
	12nm,0.1s						
SEM	**Semipalatinsk**	3.49	314	Pg	Pg	12 40 40.0	-2.2
	2.6nm,0.1s						
SEM				Lg	Lg	12 41 28.1	
	21nm,0.1s						
ULGR	**Ulagan, Altay**	3.57	42	Pg	Pg	12 40 43.8	+0.1
ULGR				Sg	Sg	12 41 29.6	-0.2
ARTR	**Artybash**	4.25	27	Pg	Pg	12 40 56.4	-0.3
ARTR				Sg	Sg	12 41 51.5	-0.2
KAPS	**Kapalarasan**	4.32	232	*e*P	Pg	12 40 55.8	-2.4
	2.1nm,0.4s						
KAPS				*e*S	Sg	12 41 52.8	-1.4
	6.7nm,0.3s						
KAPS	**Kapalarasan**	4.32	232	Pg	Pb	12 40 53.9	+2.5
	2.6nm,0.7s						
KAPS				Lg	Lg	12 41 51.7	
	6.6nm,0.7s						
KURBB	**Kurchatov Arra**	4.50	307	⇑Pn	Pn	12 40 41.6	-1.9
	7.0nm,0.9s						
KURBB				⇓Sn	Sn	12 41 40.3	+4.5
	5.8nm,0.6s						
KURBB				⇑Lg	Lg	12 41 59.0	
	14nm,0.5s						
KURK	**Kurchatov**	4.50	308	Pg	Pg	12 41 00.5	-1.1
KURK				Sg	Sg	12 42 01.1	+1.3
KURK	**Kurchatov**	4.50	308	⇑Pn	Pn	12 40 41.0	-2.6
	5.6nm,1.0s						
KURK				⇑Sn	Sn	12 41 39.2	+3.2
	1.5nm,0.4s						
KURK				⇑Lg	Lg	12 41 58.0	
	7.1nm,0.5s						
DJR	**Jarkent**	4.81	221	*e*P	Pg	12 41 04.7	-2.8
	1.8nm,0.4s						
DJR				*e*S	Sg	12 42 07.0	-2.8
	3.0nm,0.3s						
DJR	**Jarkent**	4.81	221	Pg	Pg	12 41 04.7	-2.8
	0.7nm,0.1s						
DJR				Lg	Lg	12 42 07.0	
	3.0nm,0.3s						
TEL	**Teeli**	4.92	51	Pg	Pg	12 41 09.9	+0.4
TEL				Sg	Sg	12 42 12.5	-0.6
TDK	**Taldyqorghan**	5.02	235	*e*P	Pg	12 41 10.1	-1.4
	19nm,0.3s						
TDK				*e*S	Sg	12 42 16.2	-0.3
LUZB	**Luzhba, Kemero**	6.36	26	Sg	Sg	12 42 57.0	-2.3

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*UUSS **29** 12:46:51.9±2.2, 38°97N±0°02×111°41W±0°05, h-2^{km}±7^{km},*
ML2.6/11, ML2.5/107(NEIC), Error ellipse: s-maj=6.2km
s-min=0.8km az=124.0
*NEIC **29** 12:46:52.6±2.2, 38°97N±0°02×111°40W±0°02, h2^{km}±8^{km},*
Error ellipse: s-maj=2.8km s-min=2.4km az=130.0
*IDC **29** 12:46:53.3±1.2, 38°94N×111°20W, h0^{km}, mb2.8/1,*
mb1 3.1/5, mb1mx3.0/41, mbtmp2.8/5, ML2.7/4, MS3.2/1,
Ms1 3.2/1, ms1mx2.5/13, Error ellipse: s-maj=15.8km
s-min=12.5km az=139.0
ISC 29 12:46:52.6±0.9**, 38°97N**±0°02×**111°42W**±0°02**, h10^{km}, n77,**
σ**1^{s}45**/78**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OWUT	**Old Woman Plat**	0.19	181		Pg	12 46 56.3	-0.5
SNO	**Snow College**	0.36	345		Pg	12 46 59.6	-0.2
TMUT	**Trail Mountain**	0.37	27		Pg	12 46 59.4	-0.6
TMUT	**Trail Mountain**	0.37	27	IAML		12 47 07.5	
	comp=N,790nm,0.7s						
TMUT				IAML		12 47 11.2	
	comp=E,736nm,1.0s						
DBD	**Des Bee Dove**	0.43	36		Pg	12 47 00.2	-0.9
WCU	**Willow Creek**	0.52	270		Pg	12 47 02.9	0.0
LEVU	**Levan**	0.62	330		Pg	12 47 04.4	-0.3
ELU	**Electric Lake**	0.69	14		Pg	12 47 05.6	-0.5
SRU	**San Rafael Swe**	0.71	78	Pg	Pg	12 47 05.4	-1.1
FLU	**Fool Peak**	0.71	305		Pg	12 47 05.9	-0.6
P17A	**Butcher Ranch,**	0.73	46		Pg	12 47 05.6	-1.2
MSU	**Marysvale**	0.75	233		Pg	12 47 06.5	-0.6
MMU	**Miners Mountai**	0.78	173		Pg	12 47 06.6	-1.0
MVU	**Marysvale**	0.78	233		Pg	12 47 06.8	-0.8
TCRU	**Three Creeks R**	0.88	246		Pg	12 47 09.2	-0.4
SUU	**Santaquin Cany**	0.96	343		Pg	12 47 10.6	-0.6
EMUT	**Emma Park**	0.96	29		Pg	12 47 10.3	-1.0
MPU	**Maple Canyon**	1.06	351		Pg	12 47 11.8	-1.2
ROA	**Roan Cliffs**	1.07	49		Pg	12 47 12.2	-1.1
ARGU	**Argyle Ridge**	1.09	38		Pg	12 47 12.7	-1.0
MTPU	**Mount Pierson**	1.10	213		Pg	12 47 13.1	-0.8
NLU	**North Lily Min**	1.11	333		Pn	12 47 14.0	-0.4
WMUT	**West Mountain**	1.15	344		Pn	12 47 14.6	-0.4
HMU	**Henry Mountain**	1.16	152		Pb	12 47 13.5	-1.4
NMUT	**North Mineral**	1.21	248		Pg	12 47 15.7	-0.1
IMU	**Iron Mountain**	1.40	257		Pg	12 47 19.1	-0.4
DAU	**Daniels Canyon**	1.45	5		Pb	12 47 19.5	-0.3
DWU	**Dry Willow Pea**	1.51	236		Pb	12 47 20.9	0.0
CWU	**Camp Williams**	1.57	341		Pb	12 47 21.4	-0.5
DUG	**Dugway, Tooele**	1.63	319		Pn	12 47 21.1	-0.4
DUG				IAML		12 47 36.4	
	comp=E,38nm,1.0s						
JLU	**Jordanelle**	1.63	359		Pb	12 47 22.5	-0.5
PKCU	**Pink Cliffs**	1.68	205		Pb	12 47 23.8	+0.1
CTU	**Camp Tracy**	1.74	352		Pb	12 47 23.5	-1.2
PSUT	**Pine Spring**	1.95	258		Pb	12 47 28.0	-0.4
PV23	**Carpenter Ridg**	1.95	105		Pb	12 47 28.1	-0.4
PV10	**Paradox Valley**	1.96	107		Pb	12 47 27.9	-0.6
PV14	**Lion Creek, Pa**	1.97	107		Pb	12 47 28.0	-0.7
PV19	**Morning Glory**	2.02	108		Pb	12 47 28.7	-0.9
PV20	**West Nyswonger**	2.02	107		Pb	12 47 28.4	-1.1
PV17	**East Wray Mesa**	2.05	109		Pb	12 47 29.1	-1.0
PV04	**Paradox Valley**	2.05	105		Pb	12 47 29.0	-1.1
PV16	**Nyswonger Mesa**	2.07	108		Pb	12 47 29.1	-1.3
CCUT	**Cedar City**	2.08	228		Pn	12 47 28.8	+1.0
PV18	**Skein Mesa, Pa**	2.10	109		Pb	12 47 29.3	-1.5
TCUT	**Toone Canyon**	2.15	0		Pb	12 47 29.9	-1.8
PV12	**Saucer Basin,**	2.15	107	Pn	Pb	12 47 30.8	-1.0
PV07	**Paradox Valley**	2.23	103	Pn	Pb	12 47 32.2	-1.0
PV02	**Paradox Valley**	2.23	109		Pb	12 47 31.9	-1.4
KNB	**Kanab**	2.24	210		Pb	12 47 31.6	-1.7
SPR3	**Spring Creek 3**	2.27	272		Pb	12 47 32.5	-1.4
SPR3				IAML		12 48 10.0	
	comp=E,23nm,0.9s						
SPR3				IAML		12 48 16.9	
	comp=N,25nm,0.8s						
PV15	**Paradox Valley**	2.38	104		Pb	12 47 34.7	-1.1
LCMT	**Little Creek M**	2.43	217		Pb	12 47 34.8	-1.7
SPUT	**South Promonto**	2.47	342		Pn	12 47 33.0	-0.1
U15A	**North Rim**	2.63	196		Pb	12 47 38.9	-1.1
O20A	**White River Ci**	2.72	64		Pb	12 47 39.8	-1.7
MVCO	**Mesa Verde**	2.90	126		Pb	12 47 41.6	-3.0
HVU	**Hansel Valley**	2.99	340		Pn	12 47 41.0	+0.7
R11A	**Troy Canyon, C**	3.32	261	Pn	Pb	12 47 48.4	-3.3
R11A				IAML		12 48 54.8	
	comp=N,7.0nm,3.2s						
ELK	**Elko**	3.43	302	Pn	Pb	12 47 53.1	-0.6
	comp=N,0.1nm,0.3s,baz=116,slow=7.4,SNR=4.1						
ELK				Lg	Lg	12 48 40.7	
	comp=N,0.3nm,0.3s,baz=204,slow=20,SNR=1.6						
ELK	**Elko**	3.43	302	Pn	Pn	12 47 47.2	+0.8
WUAZ	**Wupatki**	3.45	179		Pb	12 47 50.3	-3.5
SHPR	**Sheep Range**	3.85	231	Pn	Pn	12 47 52.8	+0.7
SHPR				IAML		12 49 35.0	
	comp=N,5.0nm,4.8s						
SHPR				IAML		12 49 37.3	
	comp=E,5.3nm,4.0s						
BW06	**Boulder Array**	4.05	20		Pn	12 47 56.2	+1.3
PDAR	**Pinedale Array**	4.05	20	Pn	Pn	12 47 57.8	+2.9
	comp=E,0.1nm,0.3s,baz=189,slow=11,SNR=7.4						
PDAR				Pg	Pb	12 48 06.1	+1.9
	comp=E,0.3nm,0.3s,baz=192,slow=12,SNR=11						
PDAR				Lg	Lg	12 49 05.7	
	comp=E,0.4nm,0.3s,baz=190,slow=29,SNR=2.4						
PDAR	**Pinedale Array**	4.05	20		Pn	12 47 55.8	+0.9
W18A	**Petrified Fore**	4.07	160	Pn	Pn	12 47 58.1	+2.9
RWWY	**Rawlins**	4.21	48		Pn	12 47 57.5	+0.4
TPNV	**Topopah Spring**	4.32	244	Pn	Pn	12 48 00.5	+2.0
TPNV				IAML		12 49 47.2	
	comp=E,7.9nm,4.7s						
TPNV				IAML		12 50 22.6	
	comp=E,8.5nm,4.7s						
REDW	**Red Top Meadow**	4.41	5	Pn	Pn	12 48 00.1	+0.2
ISCO	**Idaho Springs**	4.58	78	Pn	Pn	12 48 02.6	+0.4
X18A	**Snowflake**	4.58	165	Pn	Pn	12 48 04.0	+1.8
LOHW	**Long Hollow**	4.68	7		Pn	12 48 05.8	+2.3
NVAR	**Mina Array Bea**	5.41	266	Pn	Pn	12 48 17.6	+4.1
	comp=E,0.1nm,0.3s,baz=77,slow=16,SNR=3.9						
NVAR				Pg	Pg	12 48 34.3	-2.0
	comp=E,0.2nm,0.3s,baz=77,slow=16,SNR=12						
LHV	**Little Huntoon**	5.59	265	Pn	Pn	12 48 17.3	+1.4
ANMO	**Albuquerque**	5.65	134	Pn	Pn	12 48 18.4	+1.6
	comp=E,0.3nm,0.3s,baz=332,slow=12,SNR=15						
ANMO				Pg	Pb	12 48 35.0	+3.6
	comp=E,0.2nm,0.3s,baz=315,slow=13,SNR=3.8						
ANMO				Lg	Lg	12 49 47.6	
	comp=E,0.2nm,0.3s,baz=227,slow=20,SNR=5.3						
YKA	**Yellowknife Ar**	23.64	356	P	P	12 52 04.8	+1.2
	comp=E,0.1nm,0.7s,baz=164,slow=9.7,SNR=3.8						
CMIG	**Matias Romero**	26.15	142	LR	LR	13 03 25.6	
	comp=E,51nm,19.3s,baz=98,slow=38						

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*JMA **29** 12:48:07.9±0.1, 23°76N×122°89E, h57^{km}±5^{km}, M2.7*
*TAP **29** 12:48:09.0, 23°82N×122°89E, h50^{km}, ML3.2, D*
ISC 29 12:48:08.2±1.2**, 23°74N**±0°03×**122°91E**±0°02**, h31**^{km}±12^{km}**,**
n94, σ**0^{s}99**/143**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.71	3	P	Pb	12 48 22.2	-0.1
JYNG				S	Sb	12 48 31.6	-0.2
YOJ	**Yonaguni jima**	0.73	7	P	Pb	12 48 22.3	-0.2
YOJ				S	Sb	12 48 32.3	+0.1
YOJ	**Yonaguni jima**	0.73	7	P	Pb	12 48 22.4	-0.2
	baz=9.0						
YOJ				S	Sb	12 48 32.3	+0.1
	baz=9.0						
HATJ	**Hateruma jima**	0.88	68	P	Pn	12 48 24.5	+0.1
HATJ				*e*S	Sb	12 48 36.3	-0.2
IRIF	**Iriomote-Funau**	0.96	51	P	Pn	12 48 25.5	0.0
IRIF				*e*S	Sn	12 48 38.2	+0.1
JKRS	**Kuro-shima**	1.12	63	P	Pn	12 48 28.2	+0.4
JKRS				*e*S	Sn	12 48 42.7	+0.5
TWD	**Chiawan**	1.25	286	*e*P	Pn	12 48 29.0	-0.5
	baz=272						
TWD				*e*S	Sn	12 48 43.8	-1.5
	baz=272						
ENA	**Nanau**	1.27	303	*e*P	Pn	12 48 30.3	+0.4
	baz=310						
ENA				*e*S	Sn	12 48 45.5	-0.3
	baz=310						
NACB	**Ninganchiao**	1.28	290	P	Pn	12 48 29.4	-0.5
	baz=276						
NACB				*e*S	Sn	12 48 44.9	-1.1
	baz=276						
JIJ	**Ishigaki jima**	1.29	61	P	Pn	12 48 29.7	-0.4
JIJ				*e*S	Sn	12 48 45.5	-0.8
TWC	**Suao**	1.30	312	*e*P	Pn	12 48 30.6	+0.4
	baz=309						
ESL	**Shilin**	1.35	274	P	Pn	12 48 30.1	-0.9
	baz=261						
ESL				*e*S	Sn	12 48 47.3	-0.6
	baz=261						
HGSD	**Ruisui**	1.38	260	P	Pn	12 48 30.9	-0.5
	baz=256						
HGSD				*e*S	Sn	12 48 46.8	-1.9
	baz=256						
ETLH	**Xiulin Townshi**	1.39	290	P	Pn	12 48 31.1	-0.4
	baz=277						
ETLH				*e*S	Sn	12 48 47.5	-1.3
	baz=277						
EHY	**Hungye**	1.47	261	P	Pn	12 48 32.5	-0.1
	baz=257						
EHY				*e*S	Sn	12 48 50.4	-0.5
	baz=257						
TWE	**Neicheng**	1.50	311	*e*P	Pn	12 48 33.6	+0.7
	baz=308						
TWE				S	Sn	12 48 50.8	-0.7
	baz=308						
EYUL	**Yuli**	1.51	256	*e*P	Pn	12 48 33.1	0.0
	baz=244						
EYUL				*e*S	Sn	12 48 51.0	-0.7
	baz=244						
YULB	**Yu-li**	1.52	257	P	Pn	12 48 33.1	-0.2
	baz=246						
YULB				*e*S	Sn	12 48 51.5	-0.5
	baz=246						
TWB1	**Santiao Chiao**	1.52	327	*e*P	Pn	12 48 33.7	+0.5
	baz=325						
ENTT	**Nioudou**	1.52	307	P	Pn	12 48 34.0	+0.6
	baz=303						
ENTT				*e*S	Sn	12 48 51.7	-0.3
	baz=303						
TWF1	**Yuli**	1.53	256	*e*P	Pn	12 48 33.3	-0.1
	baz=245						
TWF1				*e*S	Sn	12 48 51.5	-0.7
	baz=245						
JISG	**Ishigakijimahi**	1.54	56	P	Pn	12 48 33.0	-0.5
JISG				S	Sn	12 48 51.8	-0.5
NDT	**Datong Townshi**	1.54	304	*e*P	Pn	12 48 34.1	+0.6
	baz=301						
NDT				S	Sn	12 48 52.3	-0.2
	baz=301						
CHKT	**Chengkung**	1.55	246	*e*P	Pn	12 48 33.0	-0.7
	baz=234						
NNSB	**Datong**	1.56	297	P	Pn	12 48 34.2	+0.3
	baz=284						
NNSB				*e*S	Sn	12 48 52.4	-0.7
	baz=284						
NNSH	**Datong**	1.56	297	P	Pn	12 48 34.1	+0.3
	baz=285						
NNSH				*e*S	Sn	12 48 52.2	-0.9
	baz=285						
WHF	**Hehuan Shan**	1.56	286	*e*P	Pn	12 48 33.9	-0.3
	baz=273						
WHF				*e*S	Sn	12 48 52.9	-0.7
	baz=273						
NNS	**Nan Shan**	1.57	297	P	Pn	12 48 34.3	+0.3
	baz=284						
NNS				S	Sn	12 48 52.8	-0.6
	baz=284						
FULB	**Fuli**	1.58	251	P	Pn	12 48 33.5	-0.6
	baz=239						
TIPB	**Shuangxi**	1.58	321	*e*P	Pn	12 48 34.5	+0.4
	baz=330						
TIPB				*e*S	Sn	12 48 52.7	-0.8
	baz=330						
FUSS	**Fushou**	1.61	289	P	Pn	12 48 34.9	+0.3
	baz=285						
FUSS				*e*S	Sn	12 48 54.1	-0.4
	baz=285						
CHGB	**Renai**	1.62	282	*e*P	Pn	12 48 35.0	+0.1
	baz=271						

CHGB				eS	Sn	12 48 54.5	-0.3
	baz=271						
VWDT	**VWDT**	1.62	271	P	Pn	12 48 34.9	+0.2
	baz=267						
VWDT				eS	Sn	12 48 54.3	-0.2
	baz=267						
NWLT	**Wulai**	1.65	309	eP	Pn	12 48 35.9	+0.8
	baz=306						
NWLT				S	Sn	12 48 54.9	-0.4
	baz=306						
EDH	**Donghe**	1.66	243	eP	Pn	12 48 34.5	-0.6
	baz=233						
EDH				eS	Sn	12 48 53.5	-1.9
	baz=233						
TWT	**Tachien**	1.67	288	eP	Pn	12 48 36.4	+0.9
	baz=275						
TWT				eS	Sn	12 48 55.8	-0.1
	baz=275						
WFSB	**Wu-fen Shan**	1.68	323	eP	Pn	12 48 35.9	+0.4
	baz=320						
YHNB	**Yeheng**	1.68	304	eP	Pn	12 48 36.3	+0.7
	baz=300						
YHNB				eS	Sn	12 48 55.1	-1.0
	baz=300						
TDCB	**Techi**	1.68	288	eP	Pn	12 48 36.4	+0.8
	baz=277						
LDUT	**Ludao**	1.69	232	eP	Pn	12 48 35.0	-0.7
	baz=228						
LDUT				eS	Sn	12 48 53.8	-2.5
	baz=228						
NHDH	**Xindian Distri**	1.76	314	eS	Sn	12 48 57.7	-0.1
	baz=325						
TATO	**Taipei**	1.79	314	eS	Sn	12 48 59.2	+0.5
	baz=325						
SSLB	**Suanglung**	1.79	272	P	Pn	12 48 37.3	+0.2
	baz=260						
SSLB				eS	Sn	12 48 57.9	-0.8
	baz=260						
ELDTW	**Lidau**	1.82	253	P	Pn	12 48 37.3	-0.2
	baz=240						
ELDTW				eS	Sn	12 48 57.6	-2.0
	baz=240						
LONT	**Longtian**	1.83	244	P	Pn	12 48 37.6	+0.1
	baz=234						
LONT				eS	Sn	12 48 59.8	+0.1
	baz=234						
DPDB	**Guoxing**	1.84	280	eP	Pn	12 48 38.5	+0.8
	baz=276						
SMLT	**Sun Moon Lake**	1.85	275	P	Pn	12 48 38.5	+0.7
	baz=264						
JTJ	**Tarama**	1.87	61	P	Pn	12 48 38.5	+0.5
JTJ				eS	Sn	12 49 00.5	-0.1
YM10	**YM10**	1.87	319	eP	Pn	12 48 38.1	-0.1
	baz=318						
YM10				eS	Sn	12 49 00.0	-0.8
	baz=318						
WHP	**Taichung City**	1.88	287	eP	Pn	12 48 39.4	+1.2
	baz=276						
WHP				eS	Sn	12 49 01.1	+0.2
	baz=276						
YM05	**YM05**	1.88	320	eP	Pn	12 48 38.2	0.0
	baz=317						
TYC	**Yuchr**	1.89	276	P	Pn	12 48 39.0	+0.7
	baz=272						
TYC				eS	Sn	12 49 01.4	+0.4
	baz=272						
YM04	**YM04**	1.89	319	eP	Pn	12 48 38.6	+0.3
	baz=317						
TTN	**Taitung**	1.89	239	eS	Sn	12 49 02.7	+1.6
	baz=236						
TWGBT	**Beinan**	1.91	242	P	Pn	12 48 38.9	+0.3
	baz=232						
TWGBT				eS	Sn	12 48 59.7	-2.0
	baz=232						
TWG	**Pinlang**	1.92	242	eP	Pn	12 48 39.0	+0.2
	baz=232						
ALS	**Alishan**	1.94	264	eP	Pn	12 48 40.4	+1.1
	baz=260						
LIOB	**Emei**	1.95	298	eP	Pn	12 48 41.0	+1.8
	baz=286						
LIOB				eS	Sn	12 49 03.8	+1.1
	baz=286						
NSTT	**Nanjuang**	1.96	297	eS	Sn	12 49 02.9	+0.1
	baz=285						
WJS	**Zhushan**	2.00	273	eP	Pn	12 48 41.1	+1.2
	baz=266						
WNT	**Mingjian**	2.04	274	eP	Pn	12 48 42.6	+2.2
	baz=271						
TWQ1	**Liyutan**	2.05	288	eP	Pn	12 48 42.4	+1.8
	baz=284						
TWQ1				eS	Sn	12 49 06.6	+1.6
	baz=284						
CHN5	**Tsauling**	2.05	267	eP	Pn	12 48 42.5	+1.8
	baz=263						
STYT	**Tauyuan**	2.06	254	P	Pn	12 48 41.7	+1.0
	baz=244						
NSY	**Sanyi**	2.08	289	eS	Sn	12 49 06.4	+0.6
	baz=286						
NMLH	**Miaoli**	2.09	293	eP	Pn	12 48 43.0	+1.9
	baz=290						
LAY	**Lan-yu**	2.10	217	eP	Pn	12 48 40.8	-0.5
	baz=223						
TPUB	**Ta-pu**	2.14	259	eP	Pn	12 48 43.5	+1.8
	baz=248						
WTP	**Ta-pu**	2.16	257	eP	Pn	12 48 44.0	+1.8
	baz=254						
WDLH	**Douliu**	2.17	269	eP	Pn	12 48 44.3	+2.0
	baz=266						
SGST	**Jiashian**	2.23	254	P	Pn	12 48 44.3	+1.2
	baz=244						
CHN1	**Nanshi**	2.25	256	eP	Pn	12 48 45.9	+2.5
	baz=253						
TWK	**Hsinying**	2.27	259	eP	Pn	12 48 45.5	+1.9
	baz=256						
WTK	**Tuku**	2.31	269	eP	Pn	12 48 46.0	+1.8
	baz=266						
SSD	**Sandimen**	2.31	245	eP	Pn	12 48 46.3	+2.1
	baz=239						
TSMG	**Majia**	2.32	244	eP	Pn	12 48 45.6	+1.3
	baz=237						
MASBT	**Mashibuluo**	2.38	242	eP	Pn	12 48 45.9	+0.9
	baz=234						
SCST	**Cishan**	2.38	250	eP	Pn	12 48 46.0	+1.0
	baz=241						
JMJ	**Miyako jima 2**	2.43	63	P	Pn	12 48 46.5	+0.8
	baz=65						
JMJ				eS	Sn	12 49 14.3	0.0
	baz=65						
SLIU	**Shizi**	2.46	233	eP	Pn	12 48 46.4	+0.2
	baz=231						
SCZT	**Fangliau**	2.51	238	eP	Pn	12 48 49.1	+2.3
	baz=235						
TWKBT	**Hengchun**	2.63	228	eP	Pn	12 48 50.0	+1.4
	baz=225						
TWKBT				eS	Sn	12 49 20.7	+1.3
	baz=225						
TWK1	**Hengchun**	2.64	228	eP	Pn	12 48 50.5	+1.9
	baz=226						
WDGT	**Dungji**	3.02	262	eP	Pn	12 48 55.1	+1.2
	baz=259						
PHUB	**P'eng-hu**	3.07	267	eP	Pn	12 48 56.2	+1.6
	baz=275						
PHUB				eS	Sn	12 49 30.1	-0.1
	baz=275						
PNG	**Penghu**	3.08	268	eP	Pn	12 48 56.0	+1.3
	baz=277						
PNG				eS	Sn	12 49 30.6	+0.1
	baz=277						
PTTC	**Pingtan**	3.35	302	eP	Pn	12 48 59.6	+1.1
	baz=300						
VWUC	**VWUC**	3.40	292	eP	Pn	12 48 59.0	0.0
	baz=289						
MATB	**Ma-tsu**	3.61	312	eP	Pn	12 49 02.1	+0.1
	baz=310						
PTMZ	**Houxiangcun**	3.69	291	eP	Pn	12 49 03.3	+0.2
	baz=288						
XPSS	**Dashiqiu**	4.02	323	eP	Pn	12 49 07.7	+0.1
	baz=324						
XPSS				eS	Sn	12 49 51.6	-2.1
	baz=324						
KNMB	**Chin-men Tao**	4.20	281	eP	Pn	12 49 10.4	+0.3
	baz=278						
AXDP	**Jialang**	4.65	285	eP	Pn	12 49 16.9	+0.6
	baz=282						
ZPLA	**Ao Xicun**	4.73	273	eP	Pn	12 49 18.1	+0.7
	baz=278						

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*NEIC **29** 13:32:33.8±0.9, 38°.98N±0°.02×111°.38W±0°.03, h0km±2km, Error ellipse: s-maj=3.9km s-min=3.0km az=311.0*

*UUSS **29** 13:32:33.4±0.9, 38°.97N±0°.01×111°.41W±0°.03, h-2km±7km, Md2.8/13, ML3.2/34(NEIC), Error ellipse: s-maj=3.4km s-min=0.9km az=124.0*

*IDC **29** 13:32:34.4±1.2, 38°.91N×111°.16W, h0km, mb2.6/1, mb1 2.9/5, mb1mx2.9/40, mbtmp2.6/5, ML2.7/4, Error ellipse: s-maj=15.1km s-min=10.9km az=131.0*

ISC 29 13:32:34.4±0.9**, 38°.96N**±0°.02×**111°.41W**±0°.03**, h10km, n40, σ1^{s}26**/41**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OWUT	**Old Woman Plat**	0.18	182		Pg	13 32 37.8	-0.5
SNO	**Snow College**	0.37	345		Pg	13 32 41.3	-0.6
TMUT	**Trail Mountain**	0.38	25		Pg	13 32 41.0	-1.0
TMUT	**Trail Mountain**	0.38	25	IAML		13 32 47.9	
	comp=N,508nm,0.5s						
TMUT				IAML		13 32 52.9	
	comp=E,704nm,0.8s						
DBD	**Des Bee Dove**	0.44	35		Pg	13 32 42.0	-1.0
WCU	**Willow Creek**	0.53	271		Pg	13 32 44.5	-0.2
LEVU	**Levan**	0.63	331		Pg	13 32 46.0	-0.7
ELU	**Electric Lake**	0.70	13		Pg	13 32 47.1	-0.9
SRU	**San Rafael Swe**	0.71	77		Pg	13 32 47.0	-1.2
FLU	**Fool Peak**	0.72	306		Pg	13 32 47.6	-0.8
P17A	**Butcher Ranch,**	0.74	45		Pg	13 32 47.1	-1.5
MSU	**Marysvale**	0.74	234		Pg	13 32 48.0	-0.8
MMU	**Miners Mountai**	0.76	173		Pg	13 32 48.2	-0.9
MVU	**Marysvale**	0.77	234	Pg	Pg	13 32 48.6	-0.7
TCRU	**Three Creeks R**	0.88	247		Pg	13 32 50.8	-0.5
EMUT	**Emma Park**	0.97	28		Pg	13 32 51.9	-1.3
SUU	**Santaquin Cany**	0.98	343		Pg	13 32 52.1	-1.1
DCM	**Dugout Coal Mi**	0.98	41		Pg	13 32 51.8	-1.5
BCE	**Book Cliffs Ea**	1.02	50		Pg	13 32 52.6	-1.4
MPU	**Maple Canyon**	1.07	351		Pg	13 32 54.0	-1.0
ROA	**Roan Cliffs**	1.08	49		Pg	13 32 53.8	-1.4
MTPU	**Mount Pierson**	1.09	214		Pg	13 32 54.5	-0.9
ARGU	**Argyle Ridge**	1.10	38		Pg	13 32 54.3	-1.3
NLU	**North Lily Min**	1.12	333		Pg	13 32 55.0	-1.0
DAU	**Daniels Canyon**	1.46	5		Pb	13 33 01.1	-0.8
DUG	**Dugway, Tooele**	1.64	319		Pn	13 33 02.8	-0.7
JLU	**Jordanelle**	1.64	359		Pn	13 33 03.0	-0.6
HTU	**Hoyt Peak**	1.72	5		Pb	13 33 05.5	-0.8
SZCU	**Shurtz Canyon**	1.89	225		Pb	13 33 08.1	-1.1
PV23	**Carpenter Ridg**	1.95	104		Pn	13 33 07.6	-0.1
PV23				IAML		13 33 37.5	
	comp=E,302nm,0.7s						
PV23				IAML		13 33 42.6	
	comp=N,280nm,0.8s						
PSUT	**Pine Spring**	1.95	258		Pb	13 33 08.8	-1.4
PV11	**David Mesa, Pa**	2.10	107		Pb	13 33 11.4	-1.2
PV11				IAML		13 33 49.6	
	comp=E,232nm,0.8s						
U15A	**North Rim**	2.62	196		Pb	13 33 21.4	-0.1
U15A				IAML		13 34 11.5	
	comp=E,38nm,0.8s						
O20A	**White River Ci**	2.72	63		Pb	13 33 23.5	+0.3
O20A				IAML		13 34 11.7	
	comp=N,88nm,0.8s						
O20A				IAML		13 34 19.8	
	comp=E,94nm,0.8s						
HVU	**Hansel Valley**	3.01	340		Pn	13 33 21.1	-1.1
ELK	**Elko**	3.44	302	Pn	Pb	13 33 34.5	-1.1
	comp=E,0.1nm,0.3s,baz=109,slow=10,SNR=3.3						
ELK				Lg	Lg	13 34 21.9	
	comp=E,0.3nm,0.3s,baz=33,slow=17,SNR=3.7						
PDAR	**Pinedale Array**	4.06	20	Pn	Pn	13 33 38.0	+1.3
	comp=E,0.2nm,0.3s,baz=202,slow=12,SNR=10.0						
PDAR				Pg	Pb	13 33 48.5	+2.5
	comp=E,0.2nm,0.3s,baz=198,slow=14,SNR=8.1						
PDAR				Lg	Lg	13 34 41.5	
	comp=E,0.2nm,0.3s,baz=193,slow=32,SNR=3.7						
NVAR	**Mina Array Bea**	5.42	267	Pn	Pn	13 33 59.0	+3.6
	comp=E,0.1nm,0.3s,baz=78,slow=14,SNR=3.0						
ANMO	**Albuquerque**	5.64	134	Pn	Pn	13 33 59.2	+0.8
	comp=E,0.3nm,0.3s,baz=338,slow=12,SNR=7.8						
ANMO				Pg	Pb	13 34 14.8	+1.9
	comp=E,0.1nm,0.3s,baz=333,slow=11,SNR=2.7						
ANMO				Lg	Lg	13 35 29.2	
	comp=E,0.2nm,0.3s,baz=252,slow=18,SNR=3.5						
YKA	**Yellowknife Ar**	23.65	356	P	P	13 37 47.2	+1.6
	comp=E,0.1nm,0.7s,baz=172,slow=10.0,SNR=2.8						

JMA 29 13:50:23.8±0.2**, 29°.94N**×**142°.66E, h50km, M3.7, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	2.87	189	P	Pn	13 51 08.3	+1.3
BSO1	**Boso 1**	4.91	344	P	Pn	13 51 36.1	+1.5
BSO1				eS	Sn	13 52 31.8	+2.0
BSO3	**Boso 3**	5.18	340	P	Pn	13 51 41.7	+3.2
BSO3				eS	Sn	13 52 40.7	+4.0
JRY	**Ryogami san**	6.83	333	P	Pn	13 52 04.8	+3.4
JAG	**Ashikaga**	7.00	338	P	Pn	13 52 06.3	+2.6

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*NOU **29** 14:01:06.2, 38°.31S×175°.57E, h213km, MLv3.5, North Island, New Zealand*

WEL 29 14:01:10.2, 38°S±3°×**17°6E**±°**, h187km**±4km**, M2.6**/31**, MLv2.6**/31**, Error ellipse: s-maj=0.0km s-min=0.0km az=127.8, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLZ	**Tolley Road**	0.15	308	P	Pn	14 01 35.2	+0.2
TLZ				S	Sn	14 01 55.2	+1.3
HATZ	**Hinemaiaia**	0.56	146	P	Pn	14 01 35.9	-0.2
HATZ				S	Sn	14 01 54.7	-1.6
HIZ	**Hauiti**	0.66	262	P	Pn	14 01 36.7	+0.2
WTVZ	**West Tongariro**	0.70	186	P	Pn	14 01 37.0	+0.2
WTVZ				S	Sn	14 01 57.1	-0.5
MRHZ	**Matea Rd**	0.70	126	P	Pn	14 01 36.6	-0.2
MRHZ				S	Sn	14 01 55.3	-2.1
OTVZ	**Oturere**	0.74	181	P	Pn	14 01 37.4	+0.3
OTVZ				S	Sn	14 01 57.7	-0.5
NGZ	**Ngauruhoe**	0.76	185	P	Pn	14 01 37.5	+0.3
TUVZ	**Tukino**	0.84	182	P	Pn	14 01 38.0	+0.3
TUVZ				S	Sn	14 01 58.5	-0.7
MUGZ	**Murupara**	0.85	94	P	Pn	14 01 37.3	-0.3
BKZ	**Black Stump Fm**	0.97	140	P	Pn	14 01 38.5	0.0
BKZ				S	Sn	14 01 59.2	-1.3
MTVZ	**Mangateitei**	0.98	190	P	Pn	14 01 38.7	+0.2
MOVZ	**Moawhango**	0.98	177	P	Pn	14 01 38.4	-0.1
MOVZ				S	Sn	14 01 58.7	-2.1
MTHZ	**Maungataniwha**	1.00	116	P	Pn	14 01 38.7	+0.1
MTHZ				S	Sn	14 01 59.6	-1.1
VRZ	**Vera Road**	1.01	226	P	Pn	14 01 39.0	+0.4
RTZ	**Ruatahuna**	1.03	101	P	Pn	14 01 38.8	-0.1
RTZ				S	Sn	14 02 01.3	+0.2
NMHZ	**Naumai**	1.10	128	P	Pn	14 01 40.3	+0.9
BHHZ	**Black Hill Sta**	1.10	165	P	Pn	14 01 39.3	-0.1
BHHZ				S	Sn	14 02 00.1	-2.2
URZ	**Urewera**	1.13	82	P	Pn	14 01 38.9	-0.6
KWHZ	**Kaweka Forest**	1.15	150	P	Pn	14 01 40.3	+0.5
RAHZ	**Arahi**	1.20	115	P	Pn	14 01 40.6	+0.4
MCHZ	**McNeill Hill**	1.29	143	P	Pn	14 01 41.7	+0.9
ARHZ	**Aropaoanui**	1.32	130	P	Pn	14 01 41.7	+0.6
KRHZ	**Kereru**	1.33	157	P	Pn	14 01 41.5	+0.2
SNGZ	**Shannon Statio**	1.34	106	P	Pn	14 01 41.5	+0.2
RAGZ	**Rawiri**	1.36	94	P	Pn	14 01 41.4	-0.2
WHHZ	**Waihua**	1.37	119	P	Pn	14 01 42.0	+0.4
WAZ	**Wanganui**	1.44	202	P	Pn	14 01 42.1	-0.1
LREZ	**Lake Rotokare**	1.44	224	P	Pn	14 01 42.2	0.0
MWZ	**Matawai**	1.45	87	P	Pn	14 01 41.9	-0.4
NEZ	**North Egmont**	1.50	235	P	Pn	14 01 43.4	+0.5
PKE	**Pukeiti**	1.54	239	P	Pn	14 01 43.0	-0.1
PNHZ	**Pukenui**	1.54	165	P	Pn	14 01 43.1	0.0
KHEZ	**Kahui Hut**	1.57	236	P	Pn	14 01 44.0	+0.5
TSZ	**Takapari Road**	1.65	173	P	Pn	14 01 44.0	-0.1
RIGZ	**Rimuhau**	1.65	101	P	Pn	14 01 44.2	0.0
KAHZ	**Kahuranaki**	1.65	146	P	Pn	14 01 44.7	+0.5
NBEZ	**Newall Road No**	1.65	239	P	Pn	14 01 44.6	+0.4
KNZ	**Kokohu**	1.66	112	P	Pn	14 01 44.2	0.0
TKGZ	**Te Karaka**	1.70	91	P	Pn	14 01 45.1	+0.5
NMEZ	**Namu Road**	1.73	234	P	Pn	14 01 44.4	-0.5
WPHZ	**Waipukurau**	1.74	161	P	Pn	14 01 45.1	0.0
HAZ	**Te Kaha**	1.78	69	P	Pn	14 01 43.7	-1.8
PRGZ	**Paritu Road**	1.79	107	P	Pn	14 01 45.8	+0.2
OHWZ	**Ohakea**	1.80	189	P	Pn	14 01 45.9	+0.2
TWGZ	**Tauwhareparae**	1.82	83	P	Pn	14 01 45.5	-0.4
PXZ	**Pawanui**	1.85	151	P	Pn	14 01 46.0	-0.1
MHGZ	**Mahia Peninsul**	1.88	113	P	Pn	14 01 46.8	+0.3
DVHZ	**Dannevirke**	1.91	169	P	Pn	14 01 46.2	-0.6
POWZ	**Post Office Ro**	1.97	178	P	Pn	14 01 46.7	-0.7
CNGZ	**Carnagh Statio**	1.98	93	P	Pn	14 01 47.7	+0.2
PRHZ	**Porangahau**	1.98	159	P	Pn	14 01 47.3	-0.2
ANWZ	**Angora Road**	2.12	164	P	Pn	14 01 48.8	-0.2
PRWZ	**Pori Road**	2.14	174	P	Pn	14 01 48.8	-0.4
MRZ	**Mangatainoka R**	2.24	182	P	Pn	14 01 49.3	-1.0
BFZ	**Birch Farm**	2.30	169	P	Pn	14 01 50.1	-0.8
TIWZ	**Tintock**	2.35	176	P	Pn	14 01 50.7	-0.9
HOWZ	**Holdsworth Sta**	2.48	183	P	Pn	14 01 51.6	-1.3
KIW	**Kapiti Island**	2.51	194	P	Pn	14 01 51.9	-1.4
TMWZ	**Te Maipa**	2.69	177	P	Pn	14 01 54.1	-1.3
CAW	**Cannon Point**	2.72	190	P	Pn	14 01 54.6	-1.3
MTW	**Mount Morrison**	2.74	183	P	Pn	14 01 54.3	-1.7
DUWZ	**D'Urville Isla**	2.74	209	P	Pn	14 01 54.3	-1.8
WEL	**Wellington**	2.94	194	P	Pn	14 01 56.8	-1.6
TRWZ	**Traveller**	2.97	180	P	Pn	14 01 56.7	-2.0
TCW	**Tory Channel**	2.99	201	P	Pn	14 01 57.3	-1.6
MSWZ	**Moikau Station**	3.01	186	P	Pn	14 01 57.2	-2.0
BHW	**Baring Head**	3.05	192	P	Pn	14 01 57.7	-1.9
PLWZ	**Palliser**	3.16	186	P	Pn	14 01 58.9	-2.2
TUWZ	**Tuamarina**	3.29	204	P	Pn	14 02 00.4	-2.2
NNZ	**Nelson**	3.31	212	P	Pn	14 02 00.4	-2.4
QRZ	**Quartz Range**	3.42	224	P	Pn	14 02 01.3	-3.0
BSWZ	**Blackbirch Sta**	3.57	202	P	Pn	14 02 04.1	-1.9
THZ	**Tophouse**	3.96	212	P	Pn	14 02 08.4	-2.6
KHZ	**Kahutara**	4.31	202	P	Pn	14 02 13.2	-2.2
DSZ	**Denniston Nort**	4.46	221	P	Pn	14 02 13.7	-3.6
GVZ	**Greta Valley S**	4.97	203	P	Pn	14 02 20.9	-2.9
LTZ	**Lake Taylor**	5.07	210	P	Pn	14 02 21.9	-3.3
INZ	**Inchbonnie**	5.38	216	P	Pn	14 02 26.3	-2.8
OXZ	**Oxford**	5.62	208	P	Pn	14 02 27.4	-4.9
OKCZ	**Okains Bay**	5.66	200	P	Pn	14 02 29.4	-3.3
MQZ	**McQueen's Vall**	5.75	203	P	Pn	14 02 29.6	-4.3

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*NOU **29** 14:05:55.2, 39°.93S×175°.16E, h89km, MLv3.2, North Island, New Zealand*

WEL 29 14:05:54.9, 40°S±1°×**175°.2E**±0°.9**, h16km**±2km**, M3.4**/20**, ML3.7**/20**, MLv3.4**/20**, Error ellipse: s-maj=0.0km s-min=0.0km az=6.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	0.24	311	P	Pb	14 06 01.1	+0.3
WAZ				S	Sb	14 06 05.9	+1.0
OHWZ	**Ohakea**	0.30	166	P	Pb	14 06 01.7	-0.2
OHWZ				S	Sb	14 06 07.1	+0.4
MTVZ	**Mangateitei**	0.56	20	P	Pb	14 06 06.6	+0.2
MTVZ				S	Sb	14 06 15.6	+1.4
TSZ	**Takapari Road**	0.59	105	P	Pb	14 06 07.6	+0.8
TSZ				S	Sb	14 06 16.2	+1.2
PKVZ	**Pokaka**	0.63	9	P	Pb	14 06 07.5	0.0
POWZ	**Post Office Ro**	0.64	139	P	Pb	14 06 07.9	+0.2
POWZ				S	Sb	14 06 17.4	+1.0
MOVZ	**Moawhango**	0.65	39	P	Pb	14 06 07.9	-0.1
MOVZ				S	Sb	14 06 17.6	+0.8
WNVZ	**Wahianoa**	0.65	27	P	Pb	14 06 08.1	+0.1
WNVZ				S	Sb	14 06 18.0	+1.1
DRZ	**Dome Shelter**	0.69	23	P	Pb	14 06 08.9	+0.1
DRZ				S	Sb	14 06 19.2	+1.1
WHVZ	**Whangaehu Hut**	0.69	25	P	Pb	14 06 08.7	0.0
FWVZ	**Far West T-bar**	0.71	22	P	Pg	14 06 08.6	-0.2
FWVZ				S	Sb	14 06 18.8	+0.4
TUVZ	**Tukino**	0.73	28	P	Pb	14 06 09.4	+0.2
TUVZ				S	Sb	14 06 20.2	+1.2
PNHZ	**Pukenui**	0.76	90	P	Pn	14 06 10.5	-0.4
PNHZ				S	Sn	14 06 21.6	-0.5
LREZ	**Lake Rotokare**	0.78	305	P	Pb	14 06 09.9	-0.1
BHHZ	**Black Hill Sta**	0.78	57	P	Pb	14 06 10.2	+0.1
NGZ	**Ngauruhoe**	0.79	22	P	Pg	14 06 10.4	0.0
MRZ	**Mangatainoka R**	0.80	160	P	Pb	14 06 10.2	-0.2
MRZ				S	Sb	14 06 20.5	-0.5
DVHZ	**Dannevirke**	0.82	118	P	Pn	14 06 11.8	0.0
OTVZ	**Oturere**	0.82	25	P	Pg	14 06 11.1	+0.1
WTVZ	**West Tongariro**	0.85	20	P	Pb	14 06 11.2	0.0
TWVZ	**Taurewa**	0.86	11	P	Pb	14 06 11.0	-0.4
PRWZ	**Pori Road**	0.86	138	P	Pn	14 06 12.3	0.0
ETVZ	**East Tongariro**	0.86	26	P	Pg	14 06 11.7	0.0
VRZ	**Vera Road**	0.86	336	P	Pb	14 06 11.4	-0.1
KRVZ	**Karewarewa**	0.88	22	P	Pb	14 06 11.8	0.0
TMVZ	**Te Maari**	0.88	25	P	Pb	14 06 11.9	+0.1
OGWZ	**Otaki Gorge**	0.90	182	P	Pb	14 06 11.0	-1.2
KRHZ	**Kereru**	0.93	73	P	Pn	14 06 13.1	-0.2
WPHZ	**Waipukurau**	0.95	100	P	Pn	14 06 14.5	+0.9
KIW	**Kapiti Island**	0.98	194	P	Pb	14 06 11.4	-2.1
PREZ	**Palmer Road**	1.00	305	P	Pb	14 06 13.7	-0.1
TIWZ	**Tintock**	1.00	150	P	Pg	14 06 14.3	0.0
KATZ	**Kakaramea**	1.01	22	P	Pb	14 06 14.1	+0.1
HOWZ	**Holdsworth Sta**	1.01	167	P	Pb	14 06 13.7	-0.4
KWHZ	**Kaweka Forest**	1.05	63	P	Pn	14 06 15.1	+0.1
RITZ	**Rihia Road**	1.06	28	P	Pn	14 06 15.2	+0.1
DREZ	**Durham Road**	1.07	312	P	Pb	14 06 14.9	-0.1
NEZ	**North Egmont**	1.08	306	P	Pb	14 06 14.7	-0.5
MHEZ	**Mangahewa**	1.08	320	P	Pb	14 06 15.3	+0.1
BFZ	**Birch Farm**	1.10	135	P	Pn	14 06 15.8	+0.2
ANWZ	**Angora Road**	1.11	120	P	Pg	14 06 16.9	+0.6
KHEZ	**Kahui Hut**	1.12	303	P	Pb	14 06 15.5	-0.4
RATZ	**Rangitukua**	1.13	23	P	Pg	14 06 16.5	-0.2
PRHZ	**Porangahau**	1.14	108	P	Pg	14 06 17.1	+0.1
NMEZ	**Namu Road**	1.15	295	P	Pn	14 06 15.6	-0.7
PKE	**Pukeiti**	1.19	307	P	Pb	14 06 17.0	-0.1
CAW	**Cannon Point**	1.20	186	P	Pn	14 06 15.8	-1.2
HATZ	**Hinemaiaia**	1.23	34	P	Pb	14 06 17.7	0.0
NBEZ	**Newall Road No**	1.23	301	P	Pn	14 06 16.8	-0.5
MCHZ	**McNeill Hill**	1.23	68	P	Pg	14 06 20.1	+1.4
BKZ	**Black Stump Fm**	1.24	53	P	Pb	14 06 18.1	+0.3
CPWZ	**Castlepoint**	1.25	143	P	Pg	14 06 19.8	+0.8
MTW	**Mount Morrison**	1.26	170	P	Pn	14 06 17.7	-0.1
WATZ	**Wairara**	1.27	19	P	Pb	14 06 18.6	+0.2
PXZ	**Pawanui**	1.27	96	P	Pg	14 06 19.5	+0.2
KAHZ	**Kahuranaki**	1.28	85	P	Pg	14 06 19.7	+0.1
TMWZ	**Te Maipa**	1.30	157	P	Pn	14 06 18.6	+0.2
DUWZ	**D'Urville Isla**	1.33	228	P	Pn	14 06 16.7	-2.2
WEL	**Wellington**	1.41	194	P	Pn	14 06 18.7	-1.2
MRHZ	**Matea Rd**	1.42	41	P	Pn	14 06 20.5	+0.4
HIZ	**Hauiti**	1.43	348	P	Pn	14 06 19.6	-0.5
NMHZ	**Naumai**	1.47	57	P	Pg	14 06 23.1	-0.2
PAWZ	**Paruwai Farm**	1.48	174	P	Pn	14 06 21.0	+0.1
TCW	**Tory Channel**	1.48	209	P	Pn	14 06 19.2	-1.7
KUTZ	**Kaahu Road**	1.50	18	P	Pb	14 06 22.2	-0.1
MSWZ	**Moikau Station**	1.50	179	P	Pn	14 06 20.7	-0.5
BHW	**Baring Head**	1.52	190	P	Pn	14 06 20.7	-0.7
ARHZ	**Aropaoanui**	1.52	65	P	Pg	14 06 23.6	-0.5
TRWZ	**Traveller**	1.53	167	P	Pn	14 06 21.9	+0.4
WPRZ	**Whakapapatarin**	1.57	28	P	Pb	14 06 24.0	+0.4
TLZ	**Tolley Road**	1.60	9	P	Pn	14 06 22.3	-0.3
ALRZ	**Allen Road**	1.61	33	P	Pb	14 06 24.1	-0.1
MTHZ	**Maungataniwha**	1.64	50	P	Pn	14 06 23.8	+0.7
PLWZ	**Palliser**	1.66	179	P	Pn	14 06 22.8	-0.5
PRRZ	**Plateau Road**	1.68	33	P	Pb	14 06 26.3	+0.8
GRRZ	**Galatos Road**	1.71	24	P	Pg	14 06 27.6	-0.1
HRRZ	**Handcock Road**	1.73	29	P	Pg	14 06 28.0	-0.2
RAHZ	**Arahi**	1.76	56	P	Pb	14 06 26.8	+0.1
WHHZ	**Waihua**	1.77	62	P	Pb	14 06 27.1	+0.2
HSRZ	**Hossack Road**	1.79	27	P	Pg	14 06 28.9	-0.3
TUWZ	**Tuamarina**	1.80	212	P	Pn	14 06 24.3	-0.9
RRRZ	**Republican Roa**	1.87	33	P	Pb	14 06 29.1	+0.5
RTZ	**Ruatahuna**	1.88	47	P	Pb	14 06 28.7	-0.2
UTU	**Utuhina**	1.89	24	P	Pg	14 06 30.9	-0.4
NNZ	**Nelson**	1.91	226	P	Pn	14 06 25.9	-0.9
NGRZ	**Ngongotaha**	1.96	23	P	Pg	14 06 31.6	-0.9
CMWZ	**Cape Campbell**	1.99	202	P	Pb	14 06 29.4	-1.2
SNGZ	**Shannon Statio**	2.00	56	P	Pb	14 06 30.0	-0.8
KARZ	**Kaharoa**	2.05	23	P	Pg	14 06 33.6	-0.7
BSWZ	**Blackbirch Sta**	2.07	209	P	Pn	14 06 28.7	-0.2
KNZ	**Kokohu**	2.10	66	P	Pn	14 06 30.2	+0.9
TOZ	**Tahuroa Road**	2.19	6	P	Pn	14 06 31.8	+1.2
URZ	**Urewera**	2.21	42	P	Pn	14 06 30.9	0.0
MHGZ	**Mahia Peninsul**	2.21	71	P	Pn	14 06 32.0	+1.1
RAGZ	**Rawiri**	2.22	51	P	Pb	14 06 33.5	-1.1
QRZ	**Quartz Range**	2.25	245	P	Pn	14 06 29.7	-1.7
PRGZ	**Paritu Road**	2.29	65	P	Pn	14 06 33.1	+1.1
RIGZ	**Rimuhau**	2.31	59	P	Pn	14 06 33.8	+1.5
OPRZ	**Ohinepanea**	2.31	27	P	Pb	14 06 35.3	-0.9
TGRZ	**Tauranga**	2.33	21	P	Pb	14 06 36.1	-0.4

MWZ	Matawai	2.39	49	P	Pn	14 06 34.8	+1.4
THZ	Tophouse	2.55	223	P	Pn	14 06 35.3	-0.3
RUGZ	Raukumara Rang	2.73	45	P	Pn	14 06 39.2	+1.0
TWGZ	Tauwhareparae	2.76	52	P	Pn	14 06 40.1	+1.6
KHZ	Kahutara	2.80	206	P	Pn	14 06 37.6	-1.4
MKAZ	Moumakai	2.81	359	P	Pn	14 06 39.9	+0.9
AWAZ	Awhitu Peninsu	2.88	351	P	Pn	14 06 40.6	+0.5
HAZ	Te Kaha	2.94	44	P	Pn	14 06 41.3	+0.4
ETAZ	East Tamaki Re	2.96	355	P	Pn	14 06 42.0	+0.8
PUZ	Puketiti	3.00	53	P	Pn	14 06 42.0	+0.3
WTAZ	Waiatarua	3.02	350	P	Pn	14 06 43.0	+1.0
WIAZ	Waiheke Island	3.12	359	P	Pn	14 06 43.5	+0.1
MBAZ	Motutapu North	3.15	355	P	Pb	14 06 48.4	-2.1
DSZ	Denniston Nort	3.17	234	P	Pn	14 06 43.3	-0.9
RVAZ	Riverhead Bore	3.18	351	P	Pn	14 06 44.3	+0.1
KUZ	Kuaotunu	3.19	7	P	Pb	14 06 49.8	-1.3
GVZ	Greta Valley S	3.46	208	P	Pn	14 06 45.9	-2.2
LTZ	Lake Taylor	3.62	217	P	Pn	14 06 48.4	-1.9
INZ	Inchbonnie	4.00	224	P	Pn	14 06 53.9	-1.6
FOZ	Fox Glacier	5.42	226	P	Pn	14 07 16.3	+1.3
TMZ	Timaru	5.46	214	P	Pn	14 07 13.1	-2.4
TMZ				S	Sn	14 08 10.5	-7.4
JCZ	Jackson Bay	6.34	227	P	Pn	14 07 29.2	+1.4

IDC 29 14:40:46.2±5.3**, 2°.20S**×**138°.78E, h0^{km}, mb3.0**/2**, mb1 3.2**/3**, mb1mx3.1**/19**, mbtmp3.1**/3**, ML3.3**/1**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.7**/14**, Error ellipse: s-maj=216.0km s-min=32.3km az=86.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	16.99	241	LR	LR	14 52 30.4	
	comp=Z,61nm,21.6s,baz=228,slow=41						
WRA	Warramunga Arr	18.16	194	P	Pn	14 44 59.5	-0.6
	0.1nm,0.3s,baz=17,slow=13,SNR=6.6						
WRA				S	Sn	14 48 01.1	-22
	0.1nm,0.3s,baz=16,slow=22,SNR=1.5						
ASAR	Alice Springs	21.85	192	P	P	14 45 41.4	+0.7
	0.4nm,0.8s,baz=18,slow=10,SNR=1.7						
JCJ	Chichijima	29.31	6	LR	LR	14 56 24.2	
	comp=Z,66nm,21.7s,baz=131,slow=32						
MKAR	Makanchi Array	69.43	322	P	P	14 51 56.1	-0.2
	0.1nm,0.4s,baz=119,slow=5.1,SNR=1.7						

*IDC **29** 14:45:50.0±5.7, 18°.77S×169°.93E, h42^{km}±37^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.6/30, mbtmp4.1/5, Error ellipse: s-maj=103.0km s-min=27.4km az=136.0*

*NOU **29** 14:46:21.4, 19°.22S×168°.93E, h0^{km}, MLv4.1, Vanuatu Islands*

ISC 29 14:46:12.2±1.2**, 18°.9S**±0°.1×**169°.6E**±0°.2**, h246^{km}, n15, σ1^{s}00**/15**, mb3.9**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.77	310	P	Pn	14 46 51.0	-1.3
MARNC	Mare, Loyalty	2.98	209	P	Pn	14 47 03.0	-1.2
YATNC	Mamie plateau,	4.06	218	P	Pn	14 47 14.9	-1.7
PINNC	Pines Island,	4.23	208	P	Pn	14 47 18.3	-0.2
DZM	Mont Dzumac	4.35	222	P	Pn	14 47 19.5	-0.5
OUENC	Ouen Island, N	4.37	216	P	Pn	14 47 20.6	+0.4
NOUC	Port Laguerre	4.46	223	P	Pn	14 47 20.7	-0.6
ONTNC	Ouen Toro	4.51	220	P	Pn	14 47 21.5	-0.4
KOUNC	Koumac, New Ca	5.28	251	P	Pn	14 47 32.0	+0.7
STKA	Stephens Creek	28.33	237	P	P	14 51 44.4	+0.9
	1.7nm,0.6s,baz=71,slow=9.5,SNR=4.2						
WRA	Warramunga Arr	33.24	262	P	P	14 52 25.2	-1.5
	0.2nm,0.5s,baz=97,slow=8.4,SNR=11						
WRA				ScP	ScP	14 58 47.5	+24
	0.3nm,0.9s,baz=95,slow=4.6,SNR=1.4						
ASAR	Alice Springs	33.55	255	P	P	14 52 28.8	-0.6
	3.2nm,0.4s,baz=83,slow=8.8,SNR=126						
PETK	Petropavlovsk-	72.42	353	P	P	14 57 12.4	+0.9
	11nm,1.1s,baz=156,slow=5.7,SNR=4.4						
ILAR	Eielson Array	89.78	17	P	P	14 58 42.8	+0.4
	0.2nm,0.5s,baz=220,slow=6.9,SNR=4.1						
ARCES	ARCESS Array B	124.81	345	PKP	PKPdf	15 04 42.2	+0.2
	3.5nm,1.1s,baz=69,slow=3.0,SNR=1.1						

*IDC **29** 14:57:06.2±2.3, 31°.46S×179°.85W, h391^{km}±23^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.3/38, mbtmp4.2/7, Error ellipse: s-maj=26.4km s-min=23.9km az=148.0*

ISC 29 14:57:05.3±0.7**, 31°.38S**±0°.07×**179°.4W**±0°.1**, h400^{km}, n90, σ1^{s}80**/106**, mb3.5**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.47	31	P	Pn	14 58 02.4	-2.1
GLKZ				S	S	14 58 48.8	-3.5
RAO	Raoul Island	2.48	31	S	S	14 58 46.9	-5.5
	72nm,0.3s,baz=86,slow=23,SNR=2.3						
RIZ	Raoul Island	2.48	31	S	S	14 58 49.0	-3.4
MXZ	Matakaoa Point	6.45	196	P	Pn	14 58 43.3	+0.6
MXZ				S	S	14 59 59.8	-2.4
WMGZ	Waiomatatini S	6.67	195	P	P	14 58 47.2	+1.5
WMGZ				S	S	15 00 05.6	-1.0
HAZ	Te Kaha	6.77	199	P	Pn	14 58 46.8	+0.6
HAZ				S	S	15 00 06.2	-2.5
PUZ	Puketiti	6.95	195	P	P	14 58 51.4	+2.6
PUZ				S	S	15 00 12.5	+0.1
RUGZ	Raukumara Rang	6.99	199	P	Pn	14 58 49.7	+0.8
RUGZ				S	S	15 00 12.0	-1.5
TWGZ	Tauwhareparae	7.11	197	P	P	14 58 52.3	+1.6
TWGZ				S	S	15 00 14.9	-1.0
OPRZ	Ohinepanea	7.26	206	P	P	14 58 54.9	+2.7
TGRZ	Tauranga	7.27	208	P	P	14 58 55.3	+2.9
MARZ	Manawahe	7.34	205	P	P	14 58 56.1	+2.9
CNGZ	Carnagh Statio	7.35	195	P	P	14 58 54.4	+1.1
MWZ	Matawai	7.38	199	P	Pn	14 58 52.3	-0.8
MWZ				S	S	15 00 18.5	-2.8
TKGZ	Te Karaka	7.39	197	P	Pn	14 58 52.1	-1.1
TKGZ				S	S	15 00 20.2	-1.4
EDRZ	Edgecumbe	7.42	204	P	P	14 58 56.8	+2.7
URZ	Urewera	7.43	202	P	Pn	14 58 52.2	-1.5
	11nm,0.3s,baz=268,slow=3.9,SNR=67						
URZ				S	S	15 00 18.8	-3.6
	12nm,0.3s,baz=95,slow=23,SNR=18						
URZ	Urewera	7.43	202	P	Pn	14 58 52.2	-1.5
URZ				S	S	15 00 21.5	-0.9
KARZ	Kaharoa	7.53	207	P	P	14 58 58.2	+2.9
OMRZ	Omania	7.55	206	P	P	14 58 59.2	+3.6
RAGZ	Rawiri	7.56	199	P	Pn	14 58 54.3	-0.9
RAGZ				S	S	15 00 23.1	-2.1
TARZ	Mount Tarawera	7.62	205	P	P	14 58 59.6	+3.2
NGRZ	Ngongotaha	7.62	207	P	P	14 58 60.0	+3.6
RIGZ	Rimuhau	7.67	197	P	Pn	14 58 56.1	-0.2
RIGZ				S	S	15 00 26.4	-0.9
RRRZ	Republican Roa	7.71	205	P	P	14 58 59.7	+2.4
MUGZ	Murupara	7.74	203	P	Pn	14 58 58.1	+0.9
HSRZ	Hossack Road	7.78	206	P	P	14 59 01.2	+3.1
RTZ	Ruatahuna	7.80	201	P	P	14 58 59.2	+0.8
PRGZ	Paritu Road	7.84	196	P	P	14 59 02.7	+3.9
SNGZ	Shannon Statio	7.85	199	P	Pn	14 58 57.6	-0.8
GRRZ	Galatos Road	7.87	207	P	P	14 59 01.8	+2.8
PRRZ	Plateau Road	7.89	205	P	P	14 59 00.9	+1.6
ALRZ	Allen Road	7.97	205	P	Pn	14 58 59.8	0.0
KNZ	Kokohu	7.99	197	P	Pn	14 58 59.8	-0.1
WPRZ	Whakapapatarin	8.00	206	P	P	14 59 03.3	+2.8
RAHZ	Arahi	8.05	200	P	Pn	14 59 01.1	+0.4
MHGZ	Mahia Peninsul	8.06	195	P	P	14 59 02.2	+1.1
MTHZ	Maungataniwha	8.06	201	P	Pn	14 59 01.4	+0.5
TLZ	Tolley Road	8.08	210	P	P	14 59 04.1	+2.6
KUTZ	Kaahu Road	8.10	208	P	P	14 59 04.9	+3.2
WHHZ	Waihua	8.15	199	P	P	14 59 03.1	+0.9
MRHZ	Matea Rd	8.18	204	P	Pn	14 59 01.8	-0.4
NMHZ	Naumai	8.30	201	P	Pn	14 59 04.4	+0.8
WATZ	Wairara	8.32	207	P	P	14 59 05.0	+0.8
HATZ	Hinemaiaia	8.35	205	P	Pn	14 59 04.9	+0.7
ARHZ	Aropaoanui	8.39	200	P	P	14 59 06.1	+1.3
RATZ	Rangitukua	8.45	207	P	P	14 59 06.3	+0.8
RITZ	Rihia Road	8.51	206	P	Pn	14 59 05.4	-0.6
HIZ	Hauiti	8.53	212	P	P	14 59 09.6	+3.2
KATZ	Kakaramea	8.57	207	P	P	14 59 08.0	+1.0
MCHZ	McNeill Hill	8.65	201	P	Pn	14 59 07.7	+0.1
TMVZ	Te Maari	8.69	206	P	Pn	14 59 08.4	+0.2
KRVZ	Karewarewa	8.70	206	P	P	14 59 09.3	+0.9
ETVZ	East Tongariro	8.71	206	P	Pn	14 59 08.7	+0.3
KWHZ	Kaweka Forest	8.72	202	P	Pn	14 59 08.4	0.0
WTVZ	West Tongariro	8.73	207	P	Pn	14 59 09.1	+0.4
NGZ	Ngauruhoe	8.78	206	P	P	14 59 10.4	+1.0
TUVZ	Tukino	8.84	206	P	Pn	14 59 09.8	-0.1
FWVZ	Far West T-bar	8.87	206	P	Pn	14 59 10.5	+0.1
WHVZ	Whangaehu Hut	8.88	206	P	Pn	14 59 11.1	+0.6
WNVZ	Wahianoa	8.91	206	P	Pn	14 59 10.8	0.0
KAHZ	Kahuranaki	8.92	199	P	Pn	14 59 10.6	-0.1
MOVZ	Moawhango	8.93	205	P	Pn	14 59 10.1	-0.7
KRHZ	Kereru	8.93	202	P	Pn	14 59 10.1	-0.7
PKVZ	Pokaka	8.98	207	P	Pn	14 59 11.6	+0.2
MTVZ	Mangateitei	9.01	206	P	Pn	14 59 11.7	-0.1
PXZ	Pawanui	9.15	198	P	P	14 59 13.5	+0.3
PNHZ	Pukenui	9.23	202	P	P	14 59 12.9	-1.3
WPHZ	Waipukurau	9.30	200	P	P	14 59 15.3	+0.4
PRHZ	Porangahau	9.43	199	P	P	14 59 16.6	+0.2
TSZ	Takapari Road	9.44	202	P	P	14 59 15.5	-1.0
WAZ	Wanganui	9.52	207	P	Pn	14 59 18.5	+0.8
DVHZ	Dannevirke	9.60	201	P	P	14 59 17.8	-0.5
ANWZ	Angora Road	9.65	199	P	Pn	14 59 20.0	+0.9
POWZ	Post Office Ro	9.80	202	P	P	14 59 21.0	+0.5
PRWZ	Pori Road	9.89	201	P	Pn	14 59 22.6	+0.7
TIWZ	Tintock	10.12	201	P	P	14 59 24.0	-0.1
TMWZ	Te Maipa	10.42	200	P	P	14 59 27.5	+0.1
TRWZ	Traveller	10.75	200	P	P	14 59 32.1	+1.1
RPZ	Rata Peaks	14.44	209	P	P	15 00 11.3	-0.2
	0.5nm,0.3s,baz=286,slow=1.0,SNR=5.1						
RPZ				S	S	15 02 43.1	-2.6
	0.7nm,0.3s,baz=213,slow=22,SNR=8.6						
DZM	Mont Dzumac	15.67	303	P	P	15 00 24.0	-1.2
	0.1nm,0.3s,baz=227,slow=23,SNR=2.1						
ASAR	Alice Springs	41.87	269	P	P	15 04 17.0	-1.5
	0.6nm,0.6s,baz=106,slow=7.2,SNR=21						
ASAR				PcP	PP	15 06 05.2	-0.4
	0.3nm,0.7s,baz=106,slow=4.6,SNR=1.6						
ASAR				ScP	ScP	15 09 19.3	+2.2
	0.5nm,1.0s,baz=113,slow=3.5,SNR=4.4						
WRA	Warramunga Arr	42.95	274	P	P	15 04 25.6	-1.5
	0.8nm,0.3s,baz=111,slow=8.0,SNR=26						
PETK	Petropavlovsk-	86.47	346	P	P	15 09 05.3	+1.7
	6.5nm,1.0s,baz=114,slow=6.6,SNR=5.2						
NVAR	Mina Array Bea	89.78	43	P	P	15 09 23.6	+3.9
	0.5nm,0.8s,baz=216,slow=9.1,SNR=4.5						
MKAR	Makanchi Array	117.48	310	PKP	PKiKP	15 15 04.9	+0.9
	0.2nm,0.5s,baz=31,slow=3.9,SNR=2.9						
FINES	FINESS Array B	145.64	339	PKPbc	PKPab	15 15 58.4	+0.2
	4.3nm,0.5s,baz=51,slow=3.9,SNR=36						
NOA	NORSAR Array B	149.52	350	PKPbc	PKiKP	15 16 08.8	+0.5
	0.7nm,0.9s,baz=16,slow=4.2,SNR=3.4						
AKASG	Malin Array Be	151.32	321	PKPbc	PKiKP	15 16 12.7	+0.5
	1.1nm,0.6s,baz=57,slow=3.1,SNR=3.1						
BRTR	Keskin Array B	151.99	296	PKPbc	PKPbc	15 16 13.6	-0.4
	0.6nm,0.6s,baz=78,slow=4.3,SNR=3.2						

*ISK **29** 15:37:07.7, 39°.10N×26°.40E, h10^{km}, ML2.6/20*

*DDA **29** 15:37:08.5, 39°.11N×26°.40E, h7^{km}±3^{km}, ML2.6*

*ATH **29** 15:37:09.4, 39°.12N×26°.34E, h16^{km}±2^{km}, ML2.2/2, Error ellipse: s-maj=4.2km s-min=2.0km az=320.0*

*THE **29** 15:37:09.3, 39°.07N×26°.33E, h10^{km}±2^{km}, ML2.2/2, Error ellipse: s-maj=4.1km s-min=1.4km az=335.0*

ISC 29 15:37:08.5±0.8**, 39°.10N**±0°.02×**26°.40E**±0°.02**, h16^{km}**±6^{km}**, n50, σ0^{s}56**/77**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.17	325	P	Pg	15 37 13.2	+0.3
PRK				S	Sg	15 37 15.8	0.0
PRK				AML	AML	15 37 16.5	
	comp=E,12292µm,0.4s						
PRK				AML	AML	15 37 18.7	
	comp=N,4549µm,0.4s						
PRK	Paraskevi	0.17	325	P	Pg	15 37 13.2	+0.3
PRK				S	Sg	15 37 16.1	+0.3
	comp=N,4µm,0.3s						
AYVA	Ayvalik	0.30	47	*i* P	Pg	15 37 14.6	-0.4
AYVA				*i* S	Sg	15 37 18.8	-0.6
AYVA				IAML		15 37 19.0	
	comp=N,666nm,0.7s						
SIGR	SIGRI	0.44	285	P	Pg	15 37 16.8	-0.5
SIGR				S	Sg	15 37 22.8	-0.6
SIGR				AML	AML	15 37 24.5	
	comp=E,374µm,0.4s						
SIGR				AML	AML	15 37 27.9	
	comp=N,313µm,0.3s						
SIGR	SIGRI	0.44	285	P	Pg	15 37 16.8	-0.5
SIGR				S	Sg	15 37 23.3	0.0
	comp=N,175nm,0.3s						
SIGR	SIGRI	0.44	285	PG	Pg	15 37 16.7	-0.7
KOCA	Canakkale, Ayv	0.45	333	*i* P	Pg	15 37 17.1	-0.5
KOCA				*i* S	Sg	15 37 23.8	+0.1
ZEDA	zmir-Bergama	0.54	104	*i* P	Pg	15 37 19.2	-0.1
ZEDA				*i* S	Sb	15 37 27.5	+0.2
BAYC	CANAKKALE_Bayr	0.65	10	*i* P	Pg	15 37 20.3	-1.0
BAYC				*i* S	Sn	15 37 33.0	0.0
BAYC				IAML		15 37 33.0	
	comp=E,235nm,0.2s						
BUHA	Balikesir, Bur	0.66	53	*i* P	Pg	15 37 21.2	-0.3
BUHA				*i* S	Sb	15 37 30.4	-0.2
EZN	Ezine	0.72	355	P	Pn	15 37 24.2	+0.1
EZN	Ezine	0.72	355	PG	Pb	15 37 21.9	-0.9
EZN				SG	Sg	15 37 32.9	+0.6
URLA	Izmir	0.76	168	PG	Pb	15 37 22.7	-0.6
URLA				SG	Sb	15 37 33.4	0.0
URLA	Izmir	0.76	168	*i* P	Pb	15 37 22.3	-1.0
URLA				*i* S	Sn	15 37 34.9	-0.8
BOZC	Bozcaada	0.79	340	PG	Pb	15 37 23.4	-0.4
BOZC				SG	Sb	15 37 34.2	0.0
BOZC	Bozcaada	0.79	340	*i* P	Pg	15 37 24.1	+0.2
BOZC				*i* S	Sn	15 37 35.4	-1.0
BOZC				IAML		15 37 37.0	
	comp=E,206nm,0.2s						
PSRA	Psara	0.86	230	P	Pb	15 37 24.8	-0.3
ZEYE	Izmir, Urla-Ze	0.87	175	*i* P	Pb	15 37 25.2	0.0
ZEYE				*i* S	Sn	15 37 38.2	-0.1
ZEYE				IAML		15 37 40.0	
	comp=N,186nm,0.6s						
ZEYE				IAML		15 37 41.0	
	comp=E,181nm,0.3s						
ECEA	Canakkale, Ece	0.96	350	*i* P	Pn	15 37 27.6	+0.4
ECEA				*i* S	Sn	15 37 41.8	+1.2
ECEA				IAML		15 37 42.0	
	comp=E,249nm,0.4s						
ECEA				IAML		15 37 44.0	
	comp=N,158nm,0.3s						
STEP	BALIKESIR_Sava	1.06	75	*i* P	Pn	15 37 28.7	0.0
STEP				*i* S	Sn	15 37 44.5	+1.4
STEP				IAML		15 37 46.0	
	comp=N,171nm,0.5s						
STEP				IAML		15 37 46.0	
	comp=E,132nm,0.3s						
AKHS	Akhisar	1.12	101	*i* P	Pg	15 37 29.9	-0.3
AKHS				*i* S	Sg	15 37 45.9	+1.0
BALY	Balya	1.14	56	*i* P	Pn	15 37 29.6	-0.2
BALY				*i* S	Sg	15 37 45.2	-0.2
BALY				IAML		15 37 47.0	
	comp=N,118nm,0.7s						
GOKA	anakkale-Gk	1.15	341	*i* P	Pb	15 37 30.2	+0.2
GOKA				*i* S	Sn	15 37 45.5	+0.1
GOKA				IAML		15 37 47.0	
	comp=E,358nm,0.4s						
GADA	Gvkgeada	1.15	341	P	Pb	15 37 30.2	+0.1
GADA	Gvkgeada	1.15	341	PN	Pn	15 37 29.8	-0.2
GADA				SN	Sg	15 37 45.9	0.0
LIA	Limnos Island	1.23	311	P	Pb	15 37 31.5	+0.1
LIA	Limnos Island	1.23	311	P	Pb	15 37 31.3	-0.1
BALB	Balikesir	1.27	64	PN	Pn	15 37 31.5	0.0
BALB				SN	Sg	15 37 48.9	-0.6
GELI	Tayfur-Gelibol	1.29	2	PN	Pb	15 37 32.3	-0.2
LPK	Lapseki	1.30	12	PN	Pn	15 37 31.7	-0.3
KRBG	Karabiga-Canak	1.46	28	PN	Pb	15 37 34.8	-0.5
KRBG				SN	Sb	15 37 54.0	+0.3
SMTH	Samothraki Isl	1.52	334	P	Pn	15 37 35.6	+0.5
SMTH				S	Sn	15 37 54.5	-0.1
ERIK	Erikli-Kesan	1.57	3	PN	Pn	15 37 36.2	+0.5
AYDB	Zeytinkoy-Aydi	1.64	134	PN	Pn	15 37 37.2	+0.4
ENEZ	Enez	1.64	353	PN	Pn	15 37 37.2	+0.5
EDC	Edincik	1.68	42	PN	Pn	15 37 37.9	+0.7
DURS	Dursunbey	1.68	72	*i* P	Pb	15 37 38.2	-1.0
DURS				*i* S	Sb	15 38 00.3	+0.2
RKY	Sarkoy-Tekirda	1.69	20	PN	Pn	15 37 37.9	+0.4
SART	Tekirdag	1.69	20	*i* P	Pn	15 37 36.2	-1.3
SART				*i* S	Sb	15 38 00.0	-0.4
KESN	Edirne-Kesan	1.73	7	*i* P	Pn	15 37 39.0	+0.6
KESN				*i* S	Sb	15 38 02.1	+0.2
MRMT	Marmara Adasi	1.76	31	PN	Pn	15 37 39.1	+0.7
GZKV	Gazikoy-Tekird	1.79	23	PN	Pn	15 37 39.5	+0.7
DEMI	Demirci	1.80	91	*i* P	Pb	15 37 41.9	+0.7
ALN	Alexandroupoli	1.81	351	PN	Pn	15 37 39.7	+0.6
KULA	Kula-Manisa	1.86	108	PN	Pn	15 37 40.3	+0.5
KCTX	Karacabey (Bur	1.90	52	PN	Pn	15 37 40.9	+0.5
UKOP	Uzunkopru-Edir	2.03	5	PN	Pn	15 37 42.6	+0.5
APE	Apeiranthos	2.14	199	PN	Pn	15 37 44.6	+0.9
RDO	Rodhopi	2.15	342	PN	Pn	15 37 44.6	+1.0
ARMT	Armutlu	2.39	52	PN	Pn	15 37 47.6	+0.5

*KRSC **29** 15:51:59.3±1.8, 49°.32N×157°.10E, h16^{km}±31^{km}, ML4.5*

*MOS **29** 15:52:03.0±0.9, 49°.46N×156°.25E, h63^{km}, mb4.3/10, Error ellipse: s-maj=11.1km s-min=3.9km az=77.5*

*NEIC **29** 15:52:03.7±1.8, 49°.40N±0°.09×156°.2E±0°.1, h52^{km}±7^{km}, mb4.2/25, Error ellipse: s-maj=16.5km s-min=9.6km az=129.0*

*IDC **29** 15:52:05.6±2.8, 49°.51N×156°.21E, h66^{km}±23^{km}, mb3.5/13, mb1 3.6/18, mb1mx3.5/51, mbtmp3.9/18, Error ellipse: s-maj=30.2km s-min=16.8km az=121.0*

ISC 29 15:52:03.4±0.6**, 49°.32N**±0°.06×**156°.52E**±0°.07**, h57^{km}, n138, σ1^{s}46**/151**, mb4.2**/25**, 7C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.39	349	*e*PN	Pn	15 52 25.1	-1.3
SKR				*e*S	Sn	15 52 44.3	+0.5
SKR				pmax	pmax		
	comp=Z,311nm,0.5s						
SKR				smax	smax		
	comp=E,1µm,0.4s						
SKR				smax	smax		
	comp=N,1µm,0.7s						
SKR	Severo-Kuril's	1.39	349	*i* P	Pn	15 52 24.9	-1.5
SKR				*e*S	Sn	15 52 44.2	+0.5
PAU	Pauzhetka	2.16	5	PN	Pn	15 52 36.5	-0.4
PAU				S	Sn	15 53 03.3	+0.9
PAU	Pauzhetka	2.16	5	*e*P	Pn	15 52 36.5	-0.4
PAU				*e*S	Sn	15 53 03.3	+0.9
KDTR	Khodutka, Kamc	2.68	21	PN	Pn	15 52 43.3	-0.7
KDTR				S	Sn	15 53 14.1	-1.2
KDTR	Khodutka, Kamc	2.68	21	*e*P	Pn	15 52 43.3	-0.7
KDTR				*e*S	Sn	15 53 14.1	-1.2
MTVR	Mutnovka	3.34	18	PN	Pn	15 52 52.7	-0.4
MTVR				S	Sn	15 53 31.9	+0.3
MTVR	Mutnovka	3.34	18	*e*P	Pn	15 52 52.7	-0.4
MTVR				*e*S	Sn	15 53 31.9	+0.3
RUS	Russkaya	3.36	21	PN	Pn	15 52 52.2	-1.1
RUS				S	Sn	15 53 30.6	-1.3
RUS	Russkaya	3.36	21	*e*P	Pn	15 52 52.2	-1.1
RUS				*e*S	Sn	15 53 30.6	-1.3
GRL	Gorelyy	3.38	16	PN	Pn	15 52 53.6	-0.1
GRL				S	Sn	15 53 33.4	+0.8
GRL	Gorelyy	3.38	16	*e*P	Pn	15 52 53.6	-0.1
GRL				*e*S	Sn	15 53 33.4	+0.8
APC	Apacha	3.63	6	PN	Pn	15 52 58.2	+1.2
APC	Apacha	3.63	6	*e*P	Pn	15 52 58.2	+1.2
KRMR	Karymshinskiy	3.66	16	PN	Pn	15 52 59.3	+1.9
KRMR	Karymshinskiy	3.66	16	*e*P	Pn	15 52 59.3	+1.9
PEA0B	Petropavlovsk-	3.86	11	PN	Pn	15 53 00.8	+0.6
PEA0B	Petropavlovsk-	3.86	11	Pn	Pn	15 53 00.8	+0.6
PETK	Petropavlovsk-	3.86	11	P	Pn	15 53 01.1	+0.9
	comp=N,4.8nm,0.3s,baz=278,slow=14,SNR=74						
PETK				S	Sn	15 53 56.1	+12
	comp=N,1.3nm,0.3s,baz=181,slow=18,SNR=1.7						
PETK	Petropavlovsk-	3.86	11	PN	Pn	15 53 01.2	+1.0
PET	Petropavlovsk	3.94	19	*e*PN	Pn	15 53 02.4	+1.1
PET				*e*S	Sn	15 53 48.2	+2.0
PET				pmax	pmax		
	comp=Z,74nm,0.6s						
PET				smax	smax		
	comp=E,185nm,0.6s						
PET				smax	smax		
	comp=N,125nm,0.4s						
PET	Petropavlovsk	3.94	19		Pn	15 53 02.1	+0.8
PET				Sn	Sn	15 53 46.4	+0.2
DALK	Dalny	3.97	20	PN	Pn	15 53 00.9	-0.8
DALK				S	Sn	15 53 46.8	-0.1
DALK	Dalny	3.97	20	*e*P	Pn	15 53 00.9	-0.8
DALK				*e*S	Sn	15 53 46.8	-0.1
UGLR	Uglovaya	4.15	20	PN	Pn	15 53 04.9	+0.6
UGLR	Uglovaya	4.15	20	*e*P	Pn	15 53 04.9	+0.6
AVH	Avacha	4.19	19	PN	Pn	15 53 06.4	+1.7
AVH				S	Sn	15 53 55.0	+2.7
AVH	Avacha	4.19	19	*e*P	Pn	15 53 06.4	+1.7
AVH				*e*S	Sn	15 53 55.0	+2.7
KOK	Koryaka	4.19	18	PN	Pn	15 53 05.6	+0.8
KOK	Koryaka	4.19	18	*e*P	Pn	15 53 05.6	+0.8
SMAR	Somma	4.20	19	PN	Pn	15 53 06.0	+1.0
SMAR	Somma	4.20	19	*e*P	Pn	15 53 06.0	+1.0
KRER	Koryakskii	4.23	18	PN	Pn	15 53 06.4	+1.0
KRER	Koryakskii	4.23	18	*e*P	Pn	15 53 06.4	+1.0
SDLR	Sedlovina	4.23	20	PN	Pn	15 53 04.9	-0.4
SDLR	Sedlovina	4.23	20	*e*P	Pn	15 53 04.9	-0.4
KRX	Arik	4.26	17	PN	Pn	15 53 06.3	+0.6
KRX	Arik	4.26	17	*e*P	Pn	15 53 06.3	+0.6
SPN	Mys Shipunski	4.38	29	PN	Pn	15 53 07.0	-0.2
SPN				S	Sn	15 53 55.4	-1.4
SPN	Mys Shipunski	4.38	29	*e*P	Pn	15 53 07.0	-0.2
SPN				*e*S	Sn	15 53 55.4	-1.4
GNL	Ganaly	4.47	11	PN	Pn	15 53 09.3	+0.7
GNL	Ganaly	4.47	11	*e*P	Pn	15 53 09.3	+0.7
KZV	Kizimen	6.25	20	PN	Pn	15 53 33.9	+0.9
KZV	Kizimen	6.25	20	*e*P	Pn	15 53 33.9	+0.9
TUMD	Tumrok D	6.35	21	*e*P	Pn	15 53 35.7	+1.4
TUMR	Tumrok	6.37	19	PN	Pn	15 53 35.7	+1.1
TUMR	Tumrok	6.37	19	*e*P	Pn	15 53 35.3	+0.7
KUR	Kuril'sk	7.16	238	*e*PN	Pn	15 53 44.3	-1.1
KUR				S	Sn	15 55 09.2	+3.9
KBTR	Krutoberegovo	7.88	27	PN	Pn	15 53 54.0	-1.2
KBTR	Krutoberegovo	7.88	27	*e*P	Pn	15 53 54.0	-1.2
YUK	Yuzh-Kuril'sk	9.03	238	*e*PN	Pn	15 54 07.8	-3.1
YUK				pmax	pmax		
	comp=E,31nm,0.4s						
YUK				pmax	pmax		
	comp=Z,109nm,0.4s						
YUK				pmax	pmax		
	comp=N,27nm,0.5s						
GRPR	Tuman	9.11	238	PN	Pn	15 54 08.2	-3.8
GRPR				pmax	pmax		
	comp=Z,59nm,0.3s						
GLVR	Golovnino	9.41	238	PN	Pn	15 54 13.7	-2.4
UGL	Uglegorsk	9.47	274	*e*PN	Pn	15 54 20.4	+3.5
UGL				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	9.50	261	PN	Pn	15 54 17.2	-0.2
YSS	Yuzh-Sakhalins	9.50	261	Pn	Pn	15 54 16.2	-1.2
NMR	Nemuro--Hokkai	9.54	235	*e*PN	Pn	15 54 12.3	-5.6
MA2	Magadan	10.80	344	P	Pn	15 54 34.7	-0.4
	comp=Z,1.2nm,0.3s,baz=159,slow=13,SNR=6.6						
MA2	Magadan	10.80	344	⇓*e*PN	Pn	15 54 34.6	-0.4
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JKA	Kamikawa-asahi	10.88	247		Pn	15 54 34.7	-1.4
ASAJ	Asahikawa	10.88	247	P	Pn	15 54 35.9	-0.3
	comp=Z,3.4nm,0.3s,baz=63,slow=11,SNR=35						
ERM	Erimo	11.85	237	PN	Pn	15 54 45.8	-3.7
ERM	Erimo	11.85	237	Pn	Pn	15 54 45.8	-3.7
SEY	Seymchan	13.83	352	P	P	15 55 22.8	-0.1
	comp=Z,0.2nm,0.3s,baz=247,slow=22,SNR=4.9						
SEY	Seymchan	13.83	352	⇑*e*P	Pn	15 55 14.0	-2.3
KLR	Kul'dur	16.15	279	P	P	15 55 48.3	-0.4
	comp=Z,0.3nm,0.3s,baz=63,slow=6.0,SNR=6.3						
KLR	Kul'dur	16.15	279	⇓*e*P	P	15 55 48.4	-0.4
KLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JSD	Sado	17.32	236		Pn	15 56 00.5	-0.6
JSD				IAmb	IAmb	15 56 03.2	
	comp=Z,26nm,1.2s						
USA0B	Ussuriysk Arra	17.54	262	P	Pn	15 56 02.7	-0.9
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.9s						
USA0B	Ussuriysk Arra	17.54	262		Pn	15 56 02.7	-0.9
USRK	Ussuriysk Ar.	17.54	262	P	Pn	15 56 02.6	-1.1
	baz=66,slow=14,SNR=2.6						
MJA0	Matsu Arr-Jizo	18.43	233	*e*P	Pn	15 56 16.1	+1.4
MJAR	Matsushiro Arr	18.45	233	P	Pn	15 56 16.2	+1.3
	comp=Z,0.1nm,0.3s,baz=15,slow=11,SNR=4.9						
MJAR	Matsushiro Arr	18.45	233	P	P	15 56 14.2	0.0

MAJO	Matsushiro	18.45	233	P	P	15 56 13.9	-0.4
MAJO				pmax	pmax		
	comp=Z,17nm,1.5s						
MAJO	Matsushiro	18.45	233	P	P	15 56 13.9	-0.4
MAJO				IAmb	IAmb	15 56 19.7	
	comp=Z,17nm,1.4s						
BILL	Bilibino	19.40	11	⇑eP	P	15 56 23.7	-0.6
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BILL	Bilibino	19.40	11	P	P	15 56 23.8	-0.5
YAK	Yakutsk	19.58	321	⇓eP	P	15 56 25.7	-0.7
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
JGF	Kuroka	19.62	233	P	Pn	15 56 28.2	-0.6
JGF				IAmb	IAmb	15 57 00.7	
	comp=Z,18nm,1.5s						
JWT	Wachi	20.90	236	P	P	15 56 39.3	-1.5
JWT				IAmb	IAmb	15 56 41.6	
	comp=Z,25nm,1.3s						
KSRS	Korea Array	23.78	251	P	P	15 57 10.4	-0.1
	comp=Z,1.4nm,0.7s,baz=53,slow=8.2,SNR=6.7						
ANM	Nome	25.26	39	P	P	15 57 25.1	+1.3
ANM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ANM	Nome	25.26	39	P	P	15 57 25.1	+1.3
TIXI	Tiksi	25.73	340	⇑eP	P	15 57 26.4	-1.5
TIXI				pmax	pmax		
	comp=Z,16nm,1.7s						
TIXI	Tiksi	25.73	340	P	P	15 57 25.4	-2.5
IMAR	Indian Mountai	30.34	38	P	P	15 58 09.6	+0.5
H11N2	WAKE ISLAND Hy	30.67	161	T	T	16 31 13.4	
	baz=343,slow=74						
H11N1	WAKE ISLAND Hy	30.69	161	T	T	16 31 20.4	
	baz=343						
H11N3	WAKE ISLAND Hy	30.69	161	T	T	16 31 20.6	
	baz=343,slow=74						
H11S1	WAKE ISLAND Hy	31.82	161	T	T	16 32 37.3	
	baz=347,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	31.83	161	T	T	16 32 42.1	
	baz=347,slow=76,SNR=31						
H11S2	WAKE ISLAND Hy	31.84	161	T	T	16 32 34.6	
	baz=347,slow=76,SNR=18						
COLD	Coldfoot	31.91	36	P	P	15 58 21.7	-1.3
POKR	Poker Plat Res	32.88	40	P	P	15 58 30.6	-0.8
POKR				IAmb	IAmb	15 58 34.6	
	comp=Z,4.7nm,0.9s						
ILAR	Eielson Array	33.11	41	P	P	15 58 34.7	+1.2
	comp=Z,0.2nm,0.5s,baz=273,slow=8.5,SNR=1.8						
INK	Inuvik	38.24	34	P	P	15 59 21.5	+4.2
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
INK	Inuvik	38.24	34	P	P	15 59 21.5	+4.2
INK				IAmb	IAmb	15 59 35.0	
	comp=Z,2.3nm,1.0s						
ZALV	Zalesovo Beam	43.00	305	P	P	15 59 55.4	-1.3
	comp=Z,0.4nm,0.4s,baz=38,slow=7.3,SNR=2.5						
YKA	Yellowknife Ar	47.49	39	ceP	P	16 00 31.7	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RES	Resolute Bay	47.65	20	P	P	16 00 35.4	+2.2
RES				pmax	pmax		
	comp=Z,6.0nm,1.6s						
RES	Resolute Bay	47.65	20	P	P	16 00 35.4	+2.2
RES				IAmb	IAmb	16 00 45.7	
	comp=Z,5.7nm,1.6s						
MK31	Makanchi Array	47.80	297	P	P	16 00 33.1	-1.7
MK31				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MK31	Makanchi Array	47.80	297	P	P	16 00 33.1	-1.7
MK31				IAmb	IAmb	16 00 49.0	
	comp=Z,2.5nm,1.4s						
MKAR	Makanchi Array	47.80	297	P	P	16 00 34.0	-0.9
	comp=Z,6.8nm,0.3s,baz=44,slow=5.5,SNR=4.0						
MKAR	Makanchi Array	47.80	297	i P	P	16 00 31.8	-3.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KURK	Kurchatov	47.86	303	⇑iP	P	16 00 34.7	-0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURK	Kurchatov	47.86	303	P	P	16 00 34.5	-0.7
KURK				IAmb	IAmb	16 00 35.9	
	comp=Z,3.1nm,1.1s						
KURBB	Kurchatov Arra	47.96	303	P	P	16 00 35.2	-0.7
	comp=Z,0.9nm,0.4s,baz=64,slow=7.6,SNR=4.9						
MAKZ	Makanchi	47.98	297	P	P	16 00 34.4	-1.8
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.6s						
MAKZ	Makanchi	47.98	297	P	P	16 00 34.4	-1.8
MAKZ				IAmb	IAmb	16 00 34.6	
	comp=Z,6.3nm,1.6s						
BVAR	Borovoye Array	51.00	309	P	P	16 00 58.1	-0.9
	comp=Z,0.9nm,0.3s,baz=59,slow=10,SNR=20						
BRVK	Borovoye	51.03	309	⇓eP	P	16 00 59.6	+0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
BRVK	Borovoye	51.03	309	P	P	16 00 58.4	-0.9
BRVK				IAmb	IAmb	16 00 59.8	
	comp=Z,2.5nm,0.8s						
ARU	Arti	54.66	318	P	P	16 01 25.2	-0.7
	comp=Z,0.7nm,0.3s,baz=81,slow=12,SNR=3.5						
ARU	Arti	54.66	318	c iP	P	16 01 25.3	-0.6
ARU				*PP	sP	16 01 44.5	-3.0
ARU				S	S	16 09 00.8	-0.5
ARU				SS	SS	16 12 40.4	-3.7
ARU				pmax	pmax		
	comp=Z,18nm,2.0s						
CM31	Chiang Mai Arr	55.18	257	P	P	16 01 30.1	-0.1
CM31				IAmb	IAmb	16 01 33.0	
	comp=Z,5.5nm,1.4s						
CMAR	Chiang Mai Arr	55.18	257	P	P	16 01 31.8	+1.6
	comp=Z,0.3nm,0.4s,baz=30,slow=5.1,SNR=5.2						
ARCES	ARCESS Array B	56.16	341	P	P	16 01 35.6	-0.9
	comp=Z,2.9nm,0.9s,baz=40,slow=8.5,SNR=1.4						
ABKAR	Akbulak array	58.52	310	P	P	16 01 53.0	-0.4
AB07	Akbulak array	58.52	310	P	P	16 01 53.1	-0.3
AKTO	Aktyubinsk	58.70	312	P	P	16 01 53.7	-1.0
	comp=Z,0.5nm,0.3s,baz=351,slow=5.6,SNR=1.9						
AHID	Auburn Hatcher	60.56	58	P	P	16 02 08.6	+0.7
FINES	FINESS Array B	62.66	336	P	P	16 02 21.3	-0.1
	comp=Z,0.8nm,0.7s,baz=64,slow=6.3,SNR=0.8						
FINES	FINESS Array B	62.66	336	P	P	16 02 20.4	-1.0
AKASG	Malin Array Be	70.64	328	P	P	16 03 10.8	-1.6
	comp=Z,0.4nm,0.3s,baz=34,slow=6.5,SNR=4.3						
AKASG	Malin Array Be	70.64	328	P	P	16 03 11.7	-0.7
WRAB	Tennant Creek	71.71	202	⇓eP	P	16 03 25.3	+6.2
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NIUE	Niue	74.33	147	P	P	16 03 36.4	+1.8
EKR2	Eskdalemuir Ar	74.34	348	P	P	16 03 35.2	+0.9
BUR08	Bucovina Ar. S	74.64	328	P	P	16 03 36.8	+0.4
BURAR	Bucovina Array	74.65	328	P	P	16 03 36.9	+0.5
ASAR	Alice Springs	75.41	201	P	P	16 03 42.4	+1.5
	comp=Z,0.2nm,0.5s,baz=13,slow=5.7,SNR=5.2						
BRTR	Keskin Array B	78.03	319	P	P	16 03 56.4	+0.6
	comp=Z,0.6nm,0.6s,baz=114,slow=2.4,SNR=4.7						
BRTR	Keskin Array B	78.03	319	ceP	P	16 03 56.7	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
H03N2	Juan Fernandez	136.47	90	T	T	18 43 37.1	
	baz=313,slow=77						
H03N1	Juan Fernandez	136.49	90	T	T	18 43 36.6	
	baz=313,slow=77						
H03N3	Juan Fernandez	136.49	90	T	T	18 43 34.5	
	baz=313,slow=77						

NDI ***29*** *15:52:40.9±3.4, 33°.15N×85°.69E, h10km, ML3.2*

IDC ***29*** *15:52:50.1±1.3, 33°.09N×84°.24E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.3/42, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=38.8km s-min=25.5km az=66.0*

ISC 29 15:52:53.5±0.8**, 33°.24N**±0°.08×**84°.68E**±0°.07**, h10km, n16, σ0ˢ.56**/16**, mb3.7**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	Dangsing	4.94	189	eP	Pn	15 54 07.7	-0.4
GUN	Gumba	5.42	169	eP	Pn	15 54 15.3	+0.6
KKN	Kakani	5.46	174	eP	Pn	15 54 15.8	+0.6
DMN	Daman	5.63	176	eP	Pn	15 54 17.2	-0.3
PKIN	Phulchoki	5.68	174	eP	Pn	15 54 18.1	-0.2
	18nm,0.5s						
PKI	Pulchoki	5.69	173	eP	Pn	15 54 18.3	-0.1
	14nm,0.4s						
SMLA	Simla	6.71	254	eP	Pn	15 54 31.9	-0.2
SMLA				eS	Sn	15 55 49.3	+0.8
SMLA				IAML		15 56 00.1	
	comp=N,20nm,0.5s						
SMLA				IAML		15 56 00.7	
	comp=E,17nm,0.7s						
DHRM	DHARAMSHALA	7.13	264	eP	Pn	15 54 37.5	-0.6
DHRM				eS	Sn	15 55 59.5	+0.3
DHRM				IAML		15 56 08.2	
	comp=E,16nm,0.7s						
BHPL	Bhopal	11.83	214	eP	Pn	15 55 31.8	-11
BHPL				eS	Sn	15 57 42.8	-12
MKAR	Makanchi Array	13.66	353	Pn	Pn	15 56 07.4	+0.2
	comp=E,0.1nm,0.3s,baz=169,slow=14,SNR=4.9						
KURBB	Kurchatov Arra	17.95	347	P	Pn	15 57 03.5	+0.4
	comp=E,0.1nm,0.3s,baz=165,slow=11,SNR=1.9						
CMAR	Chiang Mai Arr	19.50	136	P	P	15 57 20.3	-0.7
	comp=E,0.1nm,0.3s,baz=319,slow=12,SNR=14						
SONM	Songino Array	21.92	42	P	P	15 57 47.7	+0.6
	comp=E,0.5nm,0.5s,baz=227,slow=9.4,SNR=4.2						
ASAR	Alice Springs	73.50	134	P	P	16 04 26.8	+0.2
	comp=E,0.6nm,0.9s,baz=321,slow=6.0,SNR=3.0						
TORD	Torodi Ar. Bea	77.11	277	P	P	16 04 43.2	-4.4
	comp=E,0.6nm,0.8s,baz=41,slow=4.4,SNR=1.8						
YKA	Yellowknife Ar	83.34	9	P	P	16 05 19.5	-0.8
	comp=E,0.4nm,0.8s,baz=340,slow=5.0,SNR=5.7						

NEIC ***29*** *15:55:37.0±2.6, 23°.7S±0°.1×179°.78W±0°.09, h503km±12km, mb4.6/20, Error ellipse: s-maj=21.1km s-min=10.6km az=198.0*

IDC ***29*** *15:55:43.8±4.6, 23°.93S×179°.45E, h518km±28km, mb3.4/3, mb1 3.5/4, mb1mx3.0/29, mbtmp4.3/4, Error ellipse: s-maj=57.9km s-min=41.3km az=58.0*

ISC 29 15:55:38.9±0.8**, 23°.85S**±0°.08×**179°.8W**±0°.1**, h518km, n33, σ1ˢ.30**/34**, mb4.4**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.65	163	P	P	15 57 09.8	-2.7
MSVF	Nonsavu	6.40	342	P	P	15 57 19.2	-0.8
NIUE	Niue	10.37	65	P	P	15 58 00.4	+0.1
AFI	Afiamalu	12.48	39	P	P	15 58 17.2	-5.4
URZ	Urewera	14.60	190	P	P	15 58 46.3	+1.8
	0.3nm,0.3s,baz=190,slow=23,SNR=1.2						
URZ				S	S	16 01 16.2	-1.3
	0.2nm,0.3s,baz=177,slow=18,SNR=2.2						
URZ	Urewera	14.60	190	P	P	15 58 44.8	+0.3
SANVU	Saraoutou	14.79	302	P	P	15 58 46.7	0.0
BKZ	Black Stump Fm	15.59	191	P	P	15 58 52.6	-2.1
BKZ				IAmb	IAmb	15 58 56.6	
	comp=Z,21nm,1.5s						
QRZ	Quartz Range	18.10	199	P	P	15 59 19.1	0.0
QRZ				IAmb	IAmb	15 59 29.8	
	comp=Z,29nm,1.3s						
NNZ	Nelson	18.23	197	P	P	15 59 21.9	+1.7
LTZ	Lake Taylor	19.98	197	P	P	15 59 36.4	+0.1
LTZ				IAmb	IAmb	15 59 52.6	
	comp=Z,23nm,1.4s						
MLZ	Mavora Lakes	23.59	202	P	P	16 00 10.6	+1.9
MLZ				IAmb	IAmb	16 00 27.7	
	comp=Z,41nm,1.6s						
DCZ	Deep Cove	24.02	203	P	P	16 00 12.8	+0.5
WHZ	Wether Hill Ro	24.11	201	P	P	16 00 15.2	+2.0
WHZ				IAmb	IAmb	16 00 22.2	
	comp=Z,32nm,1.6s						
ARMA	Armidale	26.18	249	P	P	16 00 33.3	+1.3
ARMA				IAmb	IAmb	16 00 44.5	
	comp=Z,36nm,1.4s						
CTAO	Charters Tower	31.63	270	P	P	16 01 19.7	+0.3
TOO	Toolangi	32.60	237	P	P	16 01 26.6	-0.8
STKA	Stephens Creek	34.88	248	P	P	16 01 47.4	+0.7
	comp=Z,1.2nm,0.4s,baz=80,slow=11,SNR=4.6						
STKA	Stephens Creek	34.88	248	IAmb	IAmb	16 01 47.6	
	comp=Z,2.4nm,1.4s						
COEN	Coen	36.26	279	P	P	16 01 58.1	-0.2
COEN				IAmb	IAmb	16 02 16.6	
	comp=Z,12nm,1.5s						
BBOO	Buckleboo	39.60	247	P	P	16 02 25.0	-0.4
BBOO				IAmb	IAmb	16 02 25.1	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	42.19	261	P	P	16 02 45.8	-0.5
ASAR	Alice Springs	42.19	261	P	P	16 02 45.9	-0.3
	comp=Z,2.8nm,0.5s,baz=96,slow=7.5,SNR=98						
ASAR				ScP	ScP	16 07 31.0	+1.3
	comp=Z,0.7nm,0.9s,baz=104,slow=3.9,SNR=4.8						
ASAR	Alice Springs	42.19	261	P	P	16 02 44.9	-1.3
WR0	Warramunga Arr	42.37	266	P	P	16 02 46.5	-1.1
WB2	Warramunga Arr	42.55	266	P	P	16 02 48.0	-1.1
WRAB	Tennant Creek	42.55	266	P	P	16 02 48.0	-1.0
WRAB				IAmb	IAmb	16 03 00.5	
	comp=Z,16nm,1.6s						
WRA	Warramunga Arr	42.56	266	P	P	16 02 48.1	-1.0
	comp=Z,3.6nm,0.3s,baz=94,slow=8.5,SNR=141						
WRA				ScP	ScP	16 07 32.6	+1.3
	comp=Z,0.5nm,1.1s,baz=84,slow=3.4,SNR=1.1						
WRA	Warramunga Arr	42.56	266	P	P	16 02 47.9	-1.2
FORT	Forrest	46.47	250	P	P	16 03 18.5	-0.6
FORT				IAmb	IAmb	16 03 19.4	
	comp=Z,18nm,0.7s						
MTN	Manton Dam	47.60	274	P	P	16 03 26.3	-1.5
MTN				IAmb	IAmb	16 03 41.6	
	comp=Z,16nm,1.3s						
QSPA	South Pole Qui	66.23	180	P	P	16 05 36.4	+1.4
BRTR	Keskin Array B	147.67	307	PKPbc	PKiKP	16 14 29.1	+2.3
	comp=Z,0.5nm,0.9s,baz=72,slow=3.0,SNR=1.7						

IDC ***29*** *16:21:23.5±0.8, 22°.24S×68°.30W, h92km±8km, mb3.5/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.8/4, Error ellipse: s-maj=47.5km s-min=19.2km az=146.0*

NEIC ***29*** *16:21:24.1±2.4, 22°.39S±0°.05×68°.46W±0°.09, h107km±8km, Error ellipse: s-maj=12.6km s-min=7.5km az=77.0*

SJA ***29*** *16:21:24.7±0.7, 22°.34S×68°.62W, h114km±4km, ML4.2, MW4.0*

GUC ***29*** *16:21:26.0±0.7, 22°.36S×68°.54W, h103km±3km, ML4.1*

ISC 29 16:21:24.6±0.7**, 22°.31S**±0°.03×**68°.56W**±0°.04**, h111km**±6km**, n85, σ1ˢ.90**/119**, mb3.8**/3**, 9C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.44	227	P	Pn	16 21 42.1	+0.4
	632nm,0.3s,baz=51,slow=6.8						
LVC				S	Sn	16 21 54.1	-0.4
	867nm,0.3s,baz=44,slow=9.1,SNR=28						
LVC	Limon Verde	0.44	227	eP	Pn	16 21 42.1	+0.4
LVC				i S	Sn	16 21 54.1	-0.4
LVC	Limon Verde	0.44	227	Pn	Pn	16 21 41.8	+0.1
LVC				Sn	Sn	16 21 54.0	-0.4
LVC	Limon Verde	0.44	227	eP	Pn	16 21 42.1	+0.4
LVC				eS	Sn	16 21 54.4	-0.1
PB09	IPOC Station P	0.81	309	⇑iP	Pn	16 21 45.3	+0.9
PB09				eS	Sn	16 22 00.2	+1.1
PB09	IPOC Station P	0.81	309		Pn	16 21 44.9	+0.5
PB09				Sn	Sn	16 21 59.9	+0.7
PB09	IPOC Station P	0.81	309	eP	Pn	16 21 45.4	+1.0
PB09				eS	Sn	16 21 58.4	-0.7
PB09				eS	Sn	16 22 00.7	+1.6
PB09				IAML		16 22 01.0	
	comp=Z,3µm,0.9s						
PB06	IPOC Station P	1.01	247	⇓iP	Pn	16 21 46.8	+0.5
PB06				i S	Sn	16 22 03.0	+0.5
PB06				IAML		16 22 05.8	
	comp=E,4µm,0.3s						
PB06	IPOC Station P	1.01	247		Pn	16 21 46.8	+0.5
PB06				Sn	Sn	16 22 02.8	+0.3
PB06	IPOC Station P	1.01	247	eP	Pn	16 21 47.0	+0.8
PB06				eS	Sn	16 22 03.8	+1.2
PB06				IAML		16 22 07.4	
	comp=Z,3µm,0.3s						
PB03	IPOC Station P	1.14	283	⇑iP	Pn	16 21 48.1	+0.6
PB03				i S	Sn	16 22 05.2	+0.3
PB03				IAML		16 22 05.8	
	comp=N,7µm,0.3s						
PB03	IPOC Station P	1.14	283	eP	Pn	16 21 48.2	+0.6
PB03				eS	Sn	16 22 05.8	+0.9
PB03				IAML		16 22 06.1	
	comp=Z,5µm,0.3s						
PB15	IPOC Station P	1.23	223	⇓iP	Pn	16 21 49.4	+0.8
PB15				i S	Sn	16 22 07.7	+1.0
PB15	IPOC Station P	1.23	223		Pn	16 21 49.4	+0.8
PB15	IPOC Station P	1.23	223	eP	Pn	16 21 49.4	+0.8
PB15				eS	Sn	16 22 08.1	+1.4
PB15				IAML		16 22 11.6	
	comp=Z,7µm,0.1s						
PB07	IPOC Station P	1.36	295	⇑iP	Pn	16 21 50.8	+0.7
PB07				i S	Sn	16 22 10.1	+0.8
PB07				IAML		16 22 11.0	
	comp=E,5µm,0.6s						
PB07	IPOC Station P	1.36	295		Pn	16 21 50.8	+0.7
PB07	IPOC Station P	1.36	295	eP	Pn	16 21 50.7	+0.6
PB07				eS	Sn	16 22 10.2	+0.8
PB07				IAML		16 22 13.7	
	comp=Z,3µm,0.3s						
PB04	IPOC Station P	1.47	269	⇑iP	Pn	16 21 51.8	+0.5
PB04				i S	Sn	16 22 12.1	+0.5
PB04				IAML		16 22 17.4	
	comp=N,4µm,0.4s						
PB04	IPOC Station P	1.47	269		Pn	16 21 51.7	+0.5
PB04	IPOC Station P	1.47	269	eP	Pn	16 21 51.9	+0.5
PB04				eS	Sn	16 22 12.1	+0.5
PB04				IAML		16 22 18.3	
	comp=Z,3µm,0.4s						
PB01	IPOC Station P	1.53	325	⇑iP	Pn	16 21 52.6	+0.6
PB01				i S	Sn	16 22 14.0	+1.3
PB01				IAML		16 22 15.1	
	comp=E,3µm,0.3s						
PB01	IPOC Station P	1.53	325		Pn	16 21 52.6	+0.6
PB01	IPOC Station P	1.53	325	eP	Pn	16 21 52.7	+0.7
PB01				eS	Sn	16 22 14.3	+1.6
PB02	IPOC Station P	1.59	308	⇑iP	Pn	16 21 53.3	+0.7
PB02				i S	Sn	16 22 14.4	+0.5
PB02				IAML		16 22 18.3	
	comp=E,5µm,0.3s						
PB02	IPOC Station P	1.59	308	eP	Pn	16 21 53.5	+0.8
PB02				eS	Sn	16 22 14.7	+0.7
PB02				IAML		16 22 20.5	
	comp=Z,4µm,0.3s						
PB05	IPOC Station P	1.61	250	⇓iP	Pn	16 21 53.1	+0.2
PB05				i S	Sn	16 22 14.1	-0.4
PB05				IAML		16 22 22.6	
	comp=N,2µm,0.4s						
PB05	IPOC Station P	1.61	250	eP	Pn	16 21 53.4	+0.4
PB05				eS	Sn	16 22 14.7	+0.2
PB05				IAML		16 22 21.4	
	comp=Z,1µm,0.5s						
PB10	IPOC Station P	2.19	237	eP	Pn	16 22 00.4	+0.2
PB10	IPOC Station P	2.19	237	Pn	Pn	16 22 00.1	0.0
PB10	IPOC Station P	2.19	237	eP	Pn	16 22 00.5	+0.4
PB10				eS	Sn	16 22 25.2	-2.2
PB08	IPOC Station P	2.23	346	⇑iP	Pn	16 22 02.7	+1.7
PB08				IAML		16 22 36.7	
	comp=E,718nm,0.8s						
PB08	IPOC Station P	2.23	346		Pn	16 22 02.6	+1.6
PB08	IPOC Station P	2.23	346	eP	Pn	16 22 02.6	+1.6
PB08				eS	Sn	16 22 31.7	+2.9
PB08				IAML		16 22 36.1	
	comp=Z,635nm,0.5s						
TA01	Diego Aracena	2.30	319	IAML		16 22 36.2	
	comp=N,1µm,0.3s						
TA01	Diego Aracena	2.30	319	Pn	Pn	16 22 01.1	-0.4
TA02	Huaiquique	2.50	324	IAML		16 22 45.1	
	comp=N,1µm,0.1s						
YJA	Yavi	2.83	88	eP	Pn	16 22 11.6	+2.8
YJA				eS	Sn	16 22 46.5	+3.9
PB14	IPOC Station P	2.86	216	eP	Pn	16 22 10.0	+0.9
PB14				IAML		16 22 55.0	
	comp=N,366nm,0.4s						
PB14	IPOC Station P	2.86	216	Pn	Pn	16 22 09.0	-0.1
PB14	IPOC Station P	2.86	216	eP	Pn	16 22 10.1	+0.9
PB14				eS	Sn	16 22 50.8	+7.5
PB14				IAML		16 22 53.8	
	comp=Z,622nm,0.3s						
GO02	Mina Guanaco	2.99	198	⇓iP	Pn	16 22 10.9	+0.1
GO02				IAML		16 22 59.5	
	comp=E,749nm,0.5s						
GO02	Mina Guanaco	2.99	198	Pn	Pn	16 22 10.9	+0.1
HJA	Humahuaca	3.04	108	eP	Pn	16 22 14.8	+3.2
PSGC	Pisagua	3.07	331	⇑iP	Pn	16 22 10.6	-1.2
PSGC				IAML		16 22 59.9	
	comp=E,535nm,0.3s						
PSGCX	Pisagua	3.07	331	Pn	Pn	16 22 10.6	-1.2
PSGCX	Pisagua	3.07	331	eP	Pn	16 22 10.6	-1.2
PSGCX				eS	Sn	16 22 42.8	-5.2
MNMC	Minye Minye	3.31	343	⇑iP	Pn	16 22 15.3	+0.1
MNMC				i S	Sn	16 22 54.8	+0.8
MNMC	Minye Minye	3.31	343		Pn	16 22 15.2	+0.1
MNMCX	Minye Minye	3.31	343	eP	Pn	16 22 15.4	+0.3
MNMCX				eS	Sn	16 22 50.1	-3.9
AZAP	Zapla	3.73	121	eP	Pn	16 22 22.5	+1.9
PB16	IPOC Station P	4.06	347	eP	Pn	16 22 26.1	+0.8
PB16				i S	Sn	16 23 13.3	+1.1
PB16	IPOC Station P	4.06	347	Pn	Pn	16 22 25.9	+0.6
ASTB	Santa Barbara	4.12	114	eP	Pn	16 22 27.2	+1.5
AC01	Pan de Azucar	4.25	206	eP	Pn	16 22 25.6	-1.7
AC01	Pan de Azucar	4.25	206	Pn	Pn	16 22 25.7	-1.7
AP01	Chacalluta	4.26	337		Pn	16 22 28.0	+0.4
FSA	Cafayete	4.46	149	eP	Pn	16 22 32.4	+2.1
AC02	Maricunga	4.53	186	Pn	Pn	16 22 31.9	+0.3
AHML	Horco Molle	5.33	147	eP	Pn	16 22 43.6	+1.6
GO03	Copiap	5.47	196		Pn	16 22 42.3	-1.6
GO03	Copiap	5.47	196	eP	Pn	16 22 43.5	-0.5
GO03				eS	Sn	16 23 43.2	-2.5
AC04	Llanos de Chal	6.29	201	Pn	Pn	16 22 51.8	-3.2
VCA	Vinchina	6.41	177	eP	Pn	16 22 58.4	+1.8
VCA				eS	Sn	16 24 12.8	+4.4
AC05	El Transito	6.68	193		Pn	16 22 57.6	-2.7
LCO	Las Campanas	6.94	196	Pn	Pn	16 23 00.4	-3.6
AGUA	GUANDACOL	7.14	180	eP	Pn	16 23 06.3	-0.3
AGUA				eS	Sn	16 24 25.8	-0.5
AGUA				IAML		16 24 39.9	
	comp=Z,28nm,0.4s						
ACLC	CERRO LA CRUZ	7.23	169	eP	Pn	16 23 07.6	-0.2
CO01	Juntas del Tor	7.76	190		Pn	16 23 12.8	-2.2
AROD	Rodeo	7.87	186	eP	Pn	16 23 16.0	-0.6
GO04	Tololo Observa	8.08	194	Pn	Pn	16 23 15.4	-4.0
ACCO	Cerro Coronel	8.25	183	eP	Pn	16 23 20.5	-1.3
ACCO				eS	Sn	16 24 51.3	-2.3
CO03	El Pedregal	8.70	192	Pn	Pn	16 23 22.2	-5.5
CO02	Combarbal	9.12	193	Pn	Pn	16 23 28.4	-4.9
SIV	San Ignacio	9.46	50	P	Pn	16 23 35.4	-2.7
	comp=Z,0.9nm,0.3s,baz=252,slow=11,SNR=19						
SIV				S	Sn	16 25 13.9	-8.7
	comp=Z,0.3nm,0.3s,baz=325,slow=24,SNR=1.7						
CPUP	Villa Florida	10.99	114	Pn	Pn	16 23 54.4	-4.3
MT02	Curacav	11.14	191	Pn	Pn	16 23 58.1	-2.5
VNA2	Neumayer--Watz	59.78	161	P	P	16 31 19.0	+1.4
NVAR	Mina Array Bea	76.33	322	P	P	16 33 03.1	+1.4
	comp=Z,0.1nm,0.4s,baz=150,slow=9.3,SNR=1.7						
TORD	Torodi Ar. Bea	77.32	70	P	P	16 33 06.7	-0.8
	comp=Z,0.5nm,0.3s,baz=260,slow=5.4,SNR=6.9						
TORD	Torodi Ar. Bea	77.32	70	P	P	16 33 07.5	-0.1
YKA	Yellowknife Ar	92.06	340	P	P	16 34 21.8	+1.2
	comp=Z,0.5nm,0.6s,baz=129,slow=5.3,SNR=10						
ASAR	Alice Springs	129.34	207	PKP	PKiKP	16 40 21.5	0.0
	comp=Z,0.4nm,0.8s,baz=132,slow=1.5,SNR=6.1						
WRA	Warramunga Arr	132.42	210	PKP	PKiKP	16 40 28.2	+0.5
	comp=Z,0.4nm,0.6s,baz=154,slow=1.6,SNR=4.5						
MKAR	Makanchi Array	146.09	37	PKPbc	PKPab	16 40 52.3	-0.2
	comp=Z,0.7nm,0.6s,baz=323,slow=2.9,SNR=11						

IDC ***29*** *16:45:50.0±0.9, 27°.79S×178°.11W, h192km±11km, mb4.0/17, mb1 4.1/17, mb1mx4.0/34, mbtmp4.5/17, MS3.1/1, Ms1 3.1/1, ms1mx2.8/27, Error ellipse: s-maj=23.2km s-min=15.5km az=162.0*

NEIC ***29*** *16:45:50.2±1.5, 27°.76S±0°.08×178°.2W±0°.1, h195km±5km, mb4.6/82, Error ellipse: s-maj=17.8km s-min=12.1km az=94.0*

ISC 29 16:45:49.9±0.4**, 28°.11S**±0°.04×**178°.17W**±0°.08**, h200km, n225, σ1ˢ.77**/242**, mb4.5**/54**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	1.15	169	P	Pn	16 46 22.5	+1.8
RIZ				S	Sn	16 46 48.9	+4.1
RAO	Raoul Island	1.16	169	P	Pn	16 46 23.0	+2.3
	970nm,0.3s,baz=132,slow=2.6,SNR=38						
RAO				S	Sn	16 46 48.3	+3.4
	874nm,0.3s,baz=98,slow=22,SNR=11						
RAO	Raoul Island	1.16	169	Pn	Pn	16 46 23.1	+2.3
RAO				Sn	Sn	16 46 49.1	+4.2
GLKZ	Green Lake	1.17	169	P	Pn	16 46 23.0	+2.2
GLKZ				S	Sn	16 46 51.1	+6.1
MXZ	Matakaoa Point	9.88	197	Pn	Pn	16 48 10.5	+3.0
MXZ	Matakaoa Point	9.88	197	P	Pn	16 48 05.5	-2.0
MXZ				S	Sn	16 49 55.4	-2.4

OUZ	**Omahuta**	**9.97**	**223**	Pn	Pn	16 48 12.5	+3.9
WMGZ	**Waiomatatini S**	**10.10**	**196**	P	**Pn**	**16 48 08.3**	**-2.0**
WMGZ				S	**S**	**16 50 02.3**	**-1.2**
HAZ	**Te Kaha**	**10.20**	**198**	P	**Pn**	**16 48 09.1**	**-2.5**
HAZ				S	**S**	**16 50 05.6**	**-0.3**
PKGZ	**Pakihiroa**	**10.25**	**197**	P	**Pn**	**16 48 10.9**	**-1.4**
PKGZ				S	**Sn**	**16 50 04.1**	**-2.6**
RUGZ	**Raukumara Rang**	**10.43**	**198**	P	**Pn**	**16 48 13.0**	**-1.6**
RUGZ				S	**Sn**	**16 50 08.6**	**-2.4**
TWGZ	**Tauwhareparae**	**10.54**	**197**	P	**Pn**	**16 48 14.4**	**-1.7**
TWGZ				S	**S**	**16 50 12.6**	**-1.6**
CNGZ	**Carnagh Statio**	**10.78**	**195**	P	**Pn**	**16 48 16.7**	**-2.4**
MWZ	**Matawai**	**10.81**	**198**	P	**Pn**	**16 48 15.9**	**-3.6**
MWZ				S	**Sn**	**16 50 17.3**	**-2.8**
TKGZ	**Te Karaka**	**10.83**	**197**	P	**Pn**	**16 48 18.4**	**-1.2**
TKGZ				S	**Sn**	**16 50 17.8**	**-2.6**
URZ	**Urewera**	**10.87**	**200**	P	**Pn**	**16 48 16.8**	**-3.3**
	0.7nm,0.3s,baz=38,slow=12,SNR=15						
URZ				S	**S**	**16 50 19.4**	**-2.2**
	6.7nm,0.3s,baz=164,slow=23,SNR=16						
URZ	**Urewera**	**10.87**	**200**	Pn	**Pn**	**16 48 18.4**	**-1.7**
URZ	**Urewera**	**10.87**	**200**	P	**Pn**	**16 48 17.6**	**-2.5**
URZ				S	**Sn**	**16 50 18.3**	**-3.0**
MSVF	**Nonsavu**	**10.90**	**341**	Pn	**Pn**	**16 48 17.8**	**-3.0**
RIGZ	**Rimuhau**	**11.10**	**197**	P	**Pn**	**16 48 21.6**	**-1.6**
RIGZ				S	**Sn**	**16 50 22.6**	**-4.3**
MUGZ	**Murupara**	**11.17**	**201**	P	**Pn**	**16 48 21.2**	**-2.8**
MUGZ				S	**Sn**	**16 50 25.6**	**-3.0**
SNGZ	**Shannon Statio**	**11.28**	**198**	P	**Pn**	**16 48 23.2**	**-2.3**
SNGZ				S	**S**	**16 50 30.1**	**-1.5**
NIUE	**Niue**	**11.74**	**42**	Pn	Pn	16 48 23.9	-7.7
BKZ	**Black Stump Fm**	**11.89**	**201**		**Pn**	**16 48 29.4**	**-3.9**
HIZ	**Hauiti**	**11.90**	**208**	Pn	**P**	**16 48 35.3**	**-2.9**
BFZ	**Birch Farm**	**13.36**	**199**		**Pn**	**16 48 47.2**	**-4.5**
MSWZ	**Moikau Station**	**14.33**	**200**		**Pn**	**16 48 59.0**	**-4.7**
SNZO	**South Karori**	**14.41**	**202**	Pn	**Pn**	**16 49 02.3**	**-2.3**
BHW	**Baring Head**	**14.44**	**201**		**Pn**	**16 49 01.4**	**-3.7**
PLWZ	**Palliser**	**14.46**	**200**	Pn	**P**	**16 49 05.8**	**-0.9**
TUWZ	**Tuamarina**	**14.77**	**204**		Pn	16 49 02.1	-7.1
NNZ	**Nelson**	**14.80**	**206**	Pn	**Pn**	**16 49 07.1**	**-2.4**
QRZ	**Quartz Range**	**14.81**	**209**	Pn	**Pn**	**16 49 08.9**	**-0.8**
BSWZ	**Blackbirch Sta**	**15.05**	**204**	Pn	**Pn**	**16 49 11.0**	**-1.5**
DZM	**Mont Dzumac**	**15.17**	**290**	P	**P**	**16 49 18.6**	**+3.7**
	0.2nm,0.3s,baz=88,slow=15,SNR=4.5						
DZM	**Mont Dzumac**	**15.17**	**290**	*e*P	**Pn**	**16 49 13.2**	**-1.2**
	62nm,1.4s						
DZM	**Mont Dzumac**	**15.17**	**290**	P	**Pn**	**16 49 13.8**	**-0.5**
DZM				IAmb	IAmb	16 49 26.1	
	comp=Z,62nm,1.6s						
AFI	**Afiamalu**	**15.33**	**24**		Pn	16 49 03.7	-13
AFI				IAmb	IAmb	16 49 30.9	
	comp=Z,32nm,0.9s						
THZ	**Tophouse**	**15.45**	**206**		**Pn**	**16 49 14.0**	**-3.5**
THZ				IAmb	IAmb	16 49 19.7	
	comp=Z,36nm,1.6s						
KHZ	**Kahutara**	**15.79**	**203**		**P**	**16 49 17.4**	**-3.9**
KHZ				IAmb	IAmb	16 49 22.1	
	comp=Z,21nm,1.1s						
RPZ	**Rata Peaks**	**17.82**	**206**	P	**Pn**	**16 49 43.8**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=36,slow=19,SNR=1.8						
RPZ				S	**S**	**16 52 52.3**	**-5.7**
	comp=Z,1.0nm,0.3s,baz=110,slow=23,SNR=7.4						
RPZ	**Rata Peaks**	**17.82**	**206**	IAmb	IAmb	16 50 02.2	
	comp=Z,25nm,1.5s						
FUNA	**Funafuti**	**19.64**	**352**	P	**P**	**16 49 57.4**	**-6.1**
PPT	**Papeete**	**28.30**	**74**	LR	LR	17 01 15.7	
	comp=Z,35nm,18.3s,baz=244,slow=33						
CTAO	**Charters Tower**	**33.35**	**276**	P	**P**	**16 52 11.5**	**+2.2**
STKA	**Stephens Creek**	**34.91**	**254**	P	**P**	**16 52 25.0**	**+2.4**
COEN	**Coen**	**38.55**	**283**	P	**P**	**16 52 54.8**	**+1.4**
BBOO	**Buckleboo**	**39.50**	**252**	P	**P**	**16 53 02.8**	**+1.7**
BBOO				IAmb	IAmb	16 53 03.6	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**43.13**	**265**	P	**P**	**16 53 32.1**	**+1.3**
ASAR	**Alice Springs**	**43.13**	**265**	P	**P**	**16 53 32.3**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=90,slow=6.6,SNR=34						
ASAR				PcP	**PcP**	**16 55 18.1**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=112,slow=4.0,SNR=4.9						
ASAR				ScP	**ScP**	**16 58 51.0**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=109,slow=4.8,SNR=4.2						
ASAR	**Alice Springs**	**43.13**	**265**	P	**P**	**16 53 32.6**	**+1.7**
ASAR				PcP	**PcP**	**16 55 17.6**	**+0.8**
WR0	**Warramunga Arr**	**43.72**	**270**	P	**P**	**16 53 36.5**	**+0.9**
WC3	**Warramunga Arr**	**43.87**	**270**	P	**P**	**16 53 37.7**	**+0.9**
WC3				PcP	**PcP**	**16 55 18.3**	**-1.1**
WB2	**Warramunga Arr**	**43.90**	**270**	P	**P**	**16 53 37.7**	**+0.7**
WB2				PcP	**PcP**	**16 55 18.5**	**-0.9**
WRAB	**Tennant Creek**	**43.90**	**270**	P	**P**	**16 53 37.8**	**+0.9**
WRAB				PcP	**PcP**	**16 55 18.9**	**-0.6**
WRA	**Warramunga Arr**	**43.91**	**270**	P	**P**	**16 53 37.8**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=104,slow=8.0,SNR=49						
WRA				PcP	**PcP**	**16 55 21.1**	**+1.6**
	comp=Z,4.9nm,1.0s,baz=110,slow=3.4,SNR=9.7						
WRA				ScP	**ScP**	**16 58 54.7**	**+2.6**
	comp=Z,1.2nm,1.1s,baz=128,slow=5.4,SNR=4.6						
WRA	**Warramunga Arr**	**43.91**	**270**	P	**P**	**16 53 37.8**	**+0.8**
WRA					**PcP**	**16 55 21.1**	**+1.7**
WB0	**Warramunga Arr**	**43.92**	**270**		**P**	**16 53 37.9**	**+0.7**
WB0					**PcP**	**16 55 21.5**	**+2.0**
FORT	**Forrest**	**46.53**	**253**	P	**P**	**16 53 58.4**	**+0.9**
FORT				IAmb	IAmb	16 54 24.0	
	comp=Z,21nm,1.1s						
FORT				PcP	**PcP**	**16 55 29.5**	**+1.0**
MTN	**Manton Dam**	**49.52**	**277**	P	**P**	**16 54 21.6**	**+1.1**
MTN				IAmb	IAmb	16 54 30.4	
	comp=Z,22nm,1.4s						
MTN					**PcP**	**16 55 40.6**	**+1.2**
VNDA	**Vanda**	**50.35**	**186**	P	P	16 54 30.1	+4.2
VNDA				IAmb	IAmb	16 54 58.6	
	comp=Z,20nm,1.6s						
MLOA	**Mauna Loa Obse**	**52.16**	**27**	P	**P**	**16 54 37.6**	**-3.0**
FITZ	**Fitzroy Crossi**	**52.25**	**268**	P	**P**	**16 54 42.2**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=104,slow=8.3						
FITZ	**Fitzroy Crossi**	**52.25**	**268**	P	**P**	**16 54 39.3**	**-1.5**
GUMO	**Guam**	**54.77**	**314**	P	**P**	**16 54 56.8**	**-2.3**
MBWA	**Marble Bar**	**56.36**	**262**	P	**P**	**16 55 11.3**	**+0.9**
SOEI	**Soe**	**56.91**	**277**	P	**P**	**16 55 16.8**	**+2.2**
QSPA	**South Pole Qui**	**61.99**	**180**	P	**P**	**16 55 51.9**	**+3.3**
QSPA				IAmb	IAmb	16 55 59.8	
	comp=Z,12nm,1.5s						
UGM	**Wanagama**	**69.84**	**272**	P	**P**	**16 56 39.8**	**+0.4**
SBUM	**Sibu**	**73.28**	**282**	P	**P**	**16 57 00.8**	**+1.0**
SBUM				IAmb	IAmb	16 57 02.3	
	comp=Z,21nm,1.5s						
MAW	**Mawson**	**74.39**	**200**	P	P	16 57 09.6	+4.3
KSM	**Kuching**	**74.46**	**280**	P	**P**	**16 57 06.8**	**+0.2**
KSM				IAmb	IAmb	16 57 16.4	
	comp=Z,26nm,1.4s						
JOW	**Kunigami**	**75.02**	**312**	P	**P**	**16 57 08.9**	**-0.6**
	comp=Z,4.7nm,0.4s,baz=272,slow=18,SNR=3.1						
JGF	**Kuroka**	**75.99**	**324**	P	**P**	**16 57 14.7**	**-0.2**
JGF				IAmb	IAmb	16 57 15.2	
	comp=Z,17nm,1.0s						
MJAR	**Matsushiro Arr**	**76.28**	**325**	P	**P**	**16 57 15.8**	**-0.6**
	comp=Z,9.0nm,0.8s,baz=159,slow=5.8,SNR=5.7						
MJAR	**Matsushiro Arr**	**76.28**	**325**	P	**P**	**16 57 14.2**	**-2.2**
MAJO	**Matsushiro**	**76.28**	**325**	P	**P**	**16 57 15.2**	**-1.3**
MAT	**Matsushiro**	**76.28**	**325**	P	**P**	**16 57 15.2**	**-1.3**
JMN	**Monobe**	**76.46**	**320**	P	**P**	**16 57 17.5**	**-0.1**
JWT	**Wachi**	**76.78**	**322**	P	**P**	**16 57 19.1**	**-0.2**
JWT				IAmb	IAmb	16 57 20.2	
	comp=Z,18nm,1.0s						
JSU	**Suzuyama**	**76.86**	**317**	P	**P**	**16 57 19.0**	**-0.9**
YULB	**Yu-li**	**77.63**	**305**	P	**P**	**16 57 22.7**	**-1.6**
YULB				IAmb	IAmb	16 57 46.4	
	comp=Z,20nm,1.2s						
JNU	**Nakatsue**	**77.75**	**318**	P	**P**	**16 57 24.9**	**+0.1**
	comp=Z,9.2nm,0.9s,baz=50,slow=16,SNR=2.2						
JHS	**Saijyo**	**77.82**	**321**	P	**P**	**16 57 25.3**	**+0.2**
TPUB	**Ta-pu**	**78.06**	**305**	P	**P**	**16 57 24.7**	**-2.0**
SSLB	**Suanglung**	**78.12**	**305**	P	**P**	**16 57 25.6**	**-1.4**
YHNB	**Yeheng**	**78.36**	**306**	P	**P**	**16 57 27.5**	**-0.8**
KSRS	**Korea Array**	**82.51**	**320**	P	**P**	**16 57 50.9**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=141,slow=5.8,SNR=12						
KSAR	**Wonju Array Be**	**82.53**	**320**	P	**P**	**16 57 50.6**	**+0.4**
SCZ2	**Santa Cruz Isl**	**82.98**	**46**	P	**P**	**16 57 52.7**	**+0.1**
	baz=230						
PKM	**Mcpherson Peak**	**83.45**	**45**	P	**P**	**16 57 55.1**	**-0.1**
	baz=229						
PEA0B	**Petropavlovsk-**	**83.56**	**346**	P	**P**	**16 57 54.5**	**-0.6**
PETK	**Petropavlovsk-**	**83.56**	**346**	P	**P**	**16 57 54.5**	**-0.6**
	comp=Z,6.0nm,0.8s,baz=147,slow=21,SNR=8.2						
PETK	**Petropavlovsk-**	**83.56**	**346**	P	**P**	**16 57 54.4**	**-0.7**
ESJX	**Sierra Juarez**	**84.11**	**49**	P	**P**	**16 57 57.1**	**-1.5**
MONP2	**Monument Peak**	**84.35**	**48**	P	**P**	**16 57 59.9**	**+0.1**
	baz=232						
BFSC	**Mount Baldy Ra**	**84.39**	**46**	P	**P**	**16 57 59.5**	**-0.4**
	baz=231						
IKP	**In-Ko-Pah, Jac**	**84.41**	**48**	P	**P**	**16 57 59.6**	**-0.3**
	baz=232						
VES	**Vestal, Richgr**	**84.52**	**44**	P	**P**	**16 57 59.9**	**-0.5**
	baz=230						
EDW2	**Edwards Air Fo**	**84.58**	**46**	P	**P**	**16 58 00.6**	**-0.2**
	baz=230						
PFO	**Pinyon Flats O**	**84.77**	**48**	P	**P**	**16 58 01.8**	**-0.1**
	baz=232						
PFO	**Pinyon Flats O**	**84.77**	**48**	P	**P**	**16 58 01.4**	**-0.4**
TPFO	**Pinon Flats**	**84.77**	**48**	P	**P**	**16 58 01.9**	**+0.1**
	baz=232						
XPFO	**Pion Flat**	**84.77**	**48**	P	**P**	**16 58 01.3**	**-0.5**
ISA	**Isabella, Lake**	**84.78**	**45**	P	**P**	**16 58 01.4**	**-0.3**
	baz=230						
ISA	**Isabella, Lake**	**84.78**	**45**	P	**P**	**16 58 01.5**	**-0.3**
ISA				IAmb	IAmb	16 58 03.1	
	comp=Z,7.6nm,1.1s						
PSI	**Prapat**	**85.05**	**276**	P	**P**	**16 58 03.7**	**0.0**
	comp=Z,2.1nm,0.4s,baz=180,slow=6.4,SNR=5.8						
LRMC	**Laurel Mtn Rad**	**85.16**	**45**	P	**P**	**16 58 03.8**	**+0.1**
	baz=231						
CMB	**Columbia Colle**	**85.17**	**42**	P	**P**	**16 58 03.0**	**-0.5**
USA0B	**Ussuriysk Arra**	**85.17**	**327**	P	**P**	**16 58 03.9**	**+0.6**
USA0B				IAmb	IAmb	16 58 05.1	
	comp=Z,16nm,1.2s						
USRK	**Ussuriysk Ar.**	**85.17**	**327**	P	**P**	**16 58 04.1**	**+0.7**
	comp=Z,12nm,1.1s,baz=113,slow=4.4,SNR=12						
USRK	**Ussuriysk Ar.**	**85.17**	**327**	P	**P**	**16 58 03.4**	**0.0**
O02D	**Mt. Diablo Mer**	**85.22**	**39**	P	**P**	**16 58 04.3**	**+0.5**
	baz=227,SNR=7.2						
BELC	**Belle Mtn. Jos**	**85.31**	**47**	P	**P**	**16 58 04.4**	**-0.1**
	baz=232,SNR=6.6						
BC3	**Big Chuckawall**	**85.46**	**48**	P	**P**	**16 58 05.7**	**+0.5**
	baz=232						
GLA	**Glamis**	**85.50**	**49**	P	**P**	**16 58 05.0**	**-0.4**
	baz=232						
CWC	**Cottonwood Cre**	**85.53**	**45**	P	**P**	**16 58 05.4**	**-0.1**
	baz=230						
ORV	**Oroville**	**85.53**	**40**	P	**P**	**16 58 05.1**	**-0.2**
GSC	**Goldstone, Bar**	**85.61**	**46**	P	**P**	**16 58 05.5**	**-0.4**
	baz=231,SNR=5.5						
GSC	**Goldstone, Bar**	**85.61**	**46**	P	**P**	**16 58 05.5**	**-0.4**
GSC				IAmb	IAmb	16 58 07.1	
	comp=Z,9.7nm,1.1s						
HEC	**Hector,Ludlow**	**85.61**	**47**	P	**P**	**16 58 05.4**	**-0.5**
	baz=232						
WDC	**Whiskeytown Da**	**85.63**	**39**	P	**P**	**16 58 05.9**	**+0.1**
WDC				IAmb	IAmb	16 58 06.9	
	comp=Z,9.6nm,1.1s						
MPMC	**Manual Prospec**	**85.65**	**45**	P	**P**	**16 58 05.7**	**-0.5**
	baz=231,SNR=5.9						
N02D	**Trinity Center**	**85.81**	**39**	P	**P**	**16 58 06.3**	**-0.4**
	baz=227,SNR=7.0						
O03E	**Paynes Creek**	**85.86**	**40**	P	**P**	**16 58 06.8**	**-0.2**
	baz=228						
IRM	**Iron Mountain**	**85.97**	**48**	P	**P**	**16 58 08.0**	**+0.4**
	baz=232,SNR=7.7						
M02C	**Callahan**	**86.02**	**38**	P	**P**	**16 58 06.9**	**-0.8**
	baz=227						
GMRC	**Granite Mounta**	**86.02**	**47**	P	**P**	**16 58 08.2**	**+0.2**
	baz=232						
WAKR	**Walker**	**86.04**	**42**	P	**P**	**16 58 08.2**	**+0.1**
WAKR				IAmb	IAmb	16 58 09.3	
	comp=Z,12nm,1.2s						
L02E	**Cave Junction**	**86.14**	**37**	P	**P**	**16 58 08.1**	**-0.1**
	baz=226						
FURC	**Furnace Creek,**	**86.30**	**45**	P	**P**	**16 58 09.3**	**+0.2**
	baz=231						
PNTR	**Pine Nut**	**86.32**	**42**	P	**P**	**16 58 08.9**	**-0.6**
PNTR				IAmb	IAmb	16 58 10.3	
	comp=Z,15nm,1.4s						
LHV	**Little Huntoon**	**86.43**	**43**	P	**P**	**16 58 09.6**	**-0.1**
LHV				IAmb	IAmb	16 58 11.0	
	comp=Z,6.6nm,1.1s						
MDJ	**Mudanjiang**	**86.66**	**326**	P	**P**	**16 58 11.7**	**+1.0**
NVAR	**Mina Array Bea**	**86.67**	**43**	P	**P**	**16 58 10.8**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=221,slow=8.0,SNR=19						
NVAR	**Mina Array Bea**	**86.67**	**43**	P	**P**	**16 58 10.1**	**-1.1**
NVAR				pP	**pP**	**16 58 58.5**	**-1.1**
PDMCI	**Parker Dam,Lak**	**86.72**	**48**	P	**P**	**16 58 12.0**	**+0.9**
	baz=233						
NV11	**Mina Array Sit**	**86.76**	**43**	P	**P**	**16 58 10.3**	**-1.2**
L04D	**Klamath Falls**	**86.88**	**38**	P	**P**	**16 58 11.8**	**-0.2**
	baz=227						
TPNV	**Topopah Spring**	**86.99**	**45**	P	**P**	**16 58 12.4**	**-0.3**
	baz=231						
TPNV	**Topopah Spring**	**86.99**	**45**	P	**P**	**16 58 12.6**	**-0.1**
TPNV				IAmb	IAmb	16 58 13.9	
	comp=Z,7.6nm,1.2s						
TPH	**Tonopah**	**87.09**	**44**	P	**P**	**16 58 12.8**	**-0.4**
I02D	**Swisshome**	**87.36**	**36**	P	**P**	**16 58 14.7**	**+0.7**
	baz=226						
W13A	**Hualapai Mount**	**87.36**	**48**	P	**P**	**16 58 14.9**	**+0.3**
J04D	**Umpqua Nationa**	**87.68**	**37**	P	**P**	**16 58 15.9**	**0.0**
	baz=227						
TUC	**Tucson**	**87.80**	**51**	P	**P**	**16 58 17.9**	**+1.4**
	baz=235						
TUC	**Tucson**	**87.80**	**51**	P	**P**	**16 58 17.1**	**+0.5**
TUC				IAmb	IAmb	16 58 18.7	
	comp=Z,7.7nm,1.1s						
I04A	**Tendick Farm,**	**87.90**	**37**	P	**P**	**16 58 16.8**	**+0.2**
	baz=227						
PRN	**Pahroc Range**	**88.02**	**45**	P	**P**	**16 58 17.9**	**+0.4**
PRN				IAmb	IAmb	16 58 19.3	
	comp=Z,7.4nm,1.2s						
J05D	**Fort Rock, OR**	**88.18**	**38**	P	**P**	**16 58 18.5**	**+0.3**
	baz=228						
CN2	**Changchun**	**88.23**	**323**	*e*P	**P**	**16 58 18.3**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
R11A	**Troy Canyon, C**	**88.27**	**44**	P	**P**	**16 58 18.1**	**-0.6**
	baz=232						
X16A	**Lo Mia Camp, P**	**88.58**	**49**	P	**P**	**16 58 20.5**	**+0.2**
X16A				IAmb	IAmb	16 58 22.8	
	comp=Z,11nm,1.2s						
H04A	**Detroit Lake**	**88.62**	**36**	P	**P**	**16 58 19.6**	**-0.4**
H04A				IAmb	IAmb	16 58 20.7	
	comp=Z,20nm,1.5s						
PINE	**Pine Mountain**	**88.68**	**38**	P	**P**	**16 58 20.6**	**+0.1**
PINE				IAmb	IAmb	16 58 22.0	
	comp=Z,8.7nm,1.1s						
CHAI	**Chaiyaphum**	**88.72**	**289**	P	**P**	**16 58 23.0**	**+1.9**
	comp=Z,14nm,1.0s						
I05D	**Terrebonne, OR**	**88.83**	**37**	P	**P**	**16 58 20.9**	**-0.1**
	baz=228						
LCMT	**Little Creek M**	**88.93**	**46**	P	**P**	**16 58 21.6**	**-0.2**
KLR	**Kul'dur**	**88.99**	**330**	P	**P**	**16 58 22.1**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=143,slow=3.9,SNR=5.5						
CCUT	**Cedar City**	**89.17**	**46**	P	**P**	**16 58 23.1**	**0.0**
U15A	**North Rim**	**89.19**	**47**	P	**P**	**16 58 23.4**	**+0.1**
U15A				IAmb	IAmb	16 58 25.0	
	comp=Z,5.4nm,0.9s						
KNB	**Kanab**	**89.20**	**47**	P	**P**	**16 58 23.4**	**+0.3**
WUAZ	**Wupatki**	**89.26**	**49**	P	**P**	**16 58 23.5**	**+0.1**
	baz=234						
SPR3	**Spring Creek 3**	**89.44**	**44**	P	**P**	**16 58 23.9**	**-0.5**
I07A	**Izee**	**89.65**	**38**	P	**P**	**16 58 25.0**	**+0.1**
I07A				IAmb	IAmb	16 58 26.0	
	comp=Z,7.1nm,1.1s						
E04D	**Cinebar**	**89.70**	**35**	P	**P**	**16 58 24.5**	**-0.5**
	baz=227						
SLVN	**Son La**	**89.84**	**294**	P	**P**	**16 58 28.2**	**+1.9**
SLVN				IAmb	IAmb	16 58 29.5	
	comp=Z,9.2nm,1.2s						
121A	**Cookes Peak, D**	**90.02**	**53**	P	**P**	**16 58 27.5**	**+0.4**
	baz=236						
D04E	**Lakebay**	**90.03**	**34**	P	**P**	**16 58 27.2**	**+0.7**
	baz=227						
D03D	**Eldon**	**90.12**	**34**	P	**P**	**16 58 27.9**	**+1.0**
	baz=226						
ENH	**Enshi**	**90.19**	**304**	P	**P**	**16 58 28.4**	**+0.7**
MTPU	**Mount Pierson**	**90.22**	**46**	P	**P**	**16 58 28.9**	**+0.9**
GYA	**Guiyang**	**90.28**	**300**	*e*P	**P**	**16 58 29.8**	**+1.4**
GYA	**Guiyang**	**90.28**	**300**	pmax	pmax		
	comp=Z,8.0nm,1.4s						
MSU	**Marysvale**	**90.50**	**46**	P	**P**	**16 58 29.4**	**+0.2**
G08A	**Pilot Rock**	**90.73**	**37**	IAmb	IAmb	16 58 30.9	
	comp=Z,11nm,1.0s						
B05A	**Bryant**	**91.10**	**34**	P	**P**	**16 58 31.9**	**+0.4**
	baz=227						
A04D	**Lummi Island**	**91.12**	**33**	P	**P**	**16 58 33.0**	**+1.5**
	baz=227						
MFID	**Camas Ranch**	**91.27**	**40**	P	**P**	**16 58 32.6**	**+0.1**
MFID				IAmb	IAmb	16 58 33.4	
	comp=Z,5.7nm,1.1s						
MNTX	**Cornudas Mount**	**91.28**	**55**	P	**P**	**16 58 33.1**	**+0.3**
	baz=238						
TXAR	**Lajitas Array**	**91.28**	**57**	P	**P**	**16 58 33.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=212,slow=5.9,SNR=7.4						
TXAR	**Lajitas Array**	**91.28**	**57**	P	**P**	**16 58 32.4**	**-0.5**
BMO	**Blue Mountains**	**91.35**	**38**	IAmb	IAmb	16 58 33.2	
	comp=Z,6.7nm,1.4s						
RC01	**Rabbit Creek A**	**91.84**	**13**	P	**P**	**16 58 34.2**	**-0.4**
	baz=205						
SRU	**San Rafael Swe**	**91.90**	**46**	P	**P**	**16 58 34.5**	**-1.1**
F10A	**Beach Ranch, E**	**92.10**	**38**	IAmb	IAmb	16 58 36.3	
	comp=Z,5.5nm,1.1s						
HLID	**Hailey**	**92.17**	**41**	P	**P**	**16 58 36.8**	**0.0**
	baz=233						
HLID	**Hailey**	**92.17**	**41**	P	**P**	**16 58 36.4**	**-0.4**
ANMO	**Albuquerque**	**92.27**	**51**	P	**P**	**16 58 37.7**	**+0.2**
	baz=237						
CM36	**Chiang Mai Arr**	**92.40**	**290**	P	**P**	**16 58 42.0**	**+3.8**
CM35	**Chiang Mai Arr**	**92.43**	**290**	P	**P**	**16 58 40.0**	**+1.7**
CM04	**Chiang Mai Arr**	**92.44**	**289**	P	**P**	**16 58 42.7**	**+4.3**
	comp=Z,2.6nm,1.4s						
CM01	**Chiang Mai Arr**	**92.47**	**289**	P	P	16 58 46.8	+8.2
	comp=Z,2.7nm,1.2s						
CM05	**Chiang Mai Arr**	**92.47**	**289**	P	P	16 58 46.8	+8.2
	comp=Z,1.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**92.50**	**289**	P	**P**	**16 58 41.0**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=143,slow=3.8,SNR=12						
CM13	**Chiang Mai Arr**	**92.52**	**289**	P	**P**	**16 58 42.5**	**+3.7**
CM34	**Chiang Mai Arr**	**92.52**	**290**	P	**P**	**16 58 42.0**	**+3.3**
CM33	**Chiang Mai Arr**	**92.67**	**290**	P	**P**	**16 58 42.0**	**+2.6**
N25K	**Chitina, Valde**	**93.43**	**15**	P	**P**	**16 58 41.9**	**-0.1**
	baz=209						
S22A	**4UR Ranch, Cre**	**93.54**	**49**	P	**P**	**16 58 44.1**	**+0.7**
	baz=237						
SEY	**Seymchan**	**93.72**	**347**	P	**P**	**16 58 42.5**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=160,slow=6.1,SNR=8.0						
REDW	**Red Top Meadow**	**94.14**	**42**	P	**P**	**16 58 45.8**	**-0.2**
REDW				IAmb	IAmb	16 58 47.2	
	comp=Z,11nm,1.5s						
MCK	**McKinley**	**94.40**	**13**	P	**P**	**16 58 45.4**	**-0.9**
	baz=206						
BW06	**Boulder Array**	**94.58**	**43**	P	**P**	**16 58 46.8**	**-1.2**
	baz=236						
PDAR	**Pinedale Array**	**94.58**	**43**	P	**P**	**16 58 47.1**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=222,slow=2.0,SNR=7.3						
PDAR	**Pinedale Array**	**94.58**	**43**	P	**P**	**16 58 46.9**	**-1.1**
BOZ	**Bozeman (W)**	**94.98**	**40**	P	**P**	**16 58 49.9**	**+0.3**
	baz=235						
ILAR	**Eielson Array**	**95.73**	**13**	P	**P**	**16 58 51.2**	**-1.1**
	comp=Z,1.1nm,1.1s,baz=226,slow=6.0,SNR=4.7						
COLD	**Coldfoot**	**97.35**	**11**	P	Pdif	16 59 00.6	+1.0
	baz=205						
WMOK	**Wichita Mounta**	**97.58**	**55**	P	**P**	**16 59 00.6**	**-0.9**
	baz=241						
EPYK	**Eagle Plains**	**99.33**	**16**	P	**Pdif**	**16 59 09.1**	**+0.6**
	baz=216						
W41B	**Gary Mavity, V**	**102.55**	**57**	P	**Pdif**	**16 59 24.3**	**+0.8**
	baz=245						
Y60A	**Bolivia**	**112.81**	**63**	P	**PKiKP**	**17 04 03.8**	**+0.8**
	baz=251						
MKAR	**Makanchi Array**	**116.18**	**311**	PKP	**PKiKP**	**17 04 08.9**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=83,slow=1.6,SNR=8.6						
H57A	**Richville**	**117.84**	**52**	P	**PKiKP**	**17 04 14.2**	**+1.9**
	baz=257						
G59A	**Clarenceville**	**119.51**	**52**	P	**PKiKP**	**17 04 17.5**	**+2.0**
	baz=259						
ARCES	**ARCESS Array B**	**136.32**	**348**	PKP	**PKiKP**	**17 04 48.0**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=332,slow=0.4,SNR=7.7						
FINES	**FINESS Array B**	**142.94**	**341**	PKhKP	**PKPdf**	**17 04 55.0**	**-3.9**
	comp=Z,1.9nm,0.3s,baz=54,slow=4.4,SNR=22						
KBZ	**Khabaz**	**143.67**	**306**	PKP	**PKPdf**	**17 04 59.8**	**-1.0**
	comp=Z,5.1nm,1.1s,baz=164,slow=1.3,SNR=4.4						
NB2	**NORSAR Subarra**	**146.47**	**352**	PKP	**PKPdf**	**17 05 05.3**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=25,slow=3.3						
NOA	**NORSAR Array B**	**146.47**	**352**	PKPbc	**PKPbc**	**17 05 06.1**	**-0.7**
	comp=Z,6.0nm,0.9s,baz=15,slow=2.8,SNR=12						
AKASG	**Malin Array Be**	**149.37**	**325**	PKPbc	**PKPbc**	**17 05 14.2**	**-0.5**
	comp=Z,4.2nm,0.5s,baz=42,slow=3.3,SNR=20						
BRTR	**Keskin Array B**	**151.32**	**302**	PKPbc	**PKPbc**	**17 05 19.8**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=132,slow=4.5,SNR=12						
TORD	**Torodi Ar. Bea**	**165.11**	**179**	PKP	**PKPdf**	**17 05 31.1**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=358,slow=3.4,SNR=5.2						
TORD				PKPab	**PKPab**	**17 06 31.2**	**+2.6**
	comp=Z,1.2nm,0.7s,baz=176,slow=4.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**165.11**	**179**		**PKPdf**	**17 05 31.4**	**+0.6**

IDC 29 16:52:26.6±3.5**, 1°.72N×89°.19E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.3**/48**, mbtmp3.3**/5**, ML3.7**/1**, Error ellipse: s-maj=101.8km s-min=28.3km az=67.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**19.08**	**241**	T	T	17 17 15.3	
	baz=58,slow=74						
H08S2	**Diego Garcia H**	**19.08**	**241**	T	T	17 17 14.8	
	baz=58,slow=74						
H08S1	**Diego Carcia H**	**19.10**	**241**	T	T	17 17 14.2	
	baz=58						
CMAR	**Chiang Mai Arr**	**19.18**	**29**	P	Pn	16 56 52.9	0.0
	0.1nm,0.3s,baz=213,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**45.29**	**353**	P	P	17 00 46.2	0.0
	0.1nm,0.3s,baz=188,slow=7.0,SNR=2.3						
SONM	**Songino Array**	**48.29**	**15**	P	P	17 01 09.1	-0.6
	0.5nm,0.8s,baz=190,slow=7.3,SNR=3.7						
WRA	**Warramunga Arr**	**49.22**	**118**	P	P	17 01 17.4	+0.2
	1.1nm,0.9s,baz=296,slow=8.0,SNR=4.7						
ASAR	**Alice Springs**	**50.25**	**123**	P	P	17 01 24.7	-0.4
	0.3nm,0.8s,baz=296,slow=7.8,SNR=2.6						

IDC ***29*** *16:53:38.5±0.9, 37°.34N×142°.09E, h0*^{km}*, mb3.6/7, mb1 3.8/10, mb1mx3.6/53, mbtmp3.6/10, ML3.2/3, Error ellipse: s-maj=27.1km s-min=19.2km az=111.0*

NEIC ***29*** *16:53:44.6±2.5, 37°.38N±0°.05×141°.84E±0°.09, h46*^{km}*±8*^{km}*, mb4.6/11, Error ellipse: s-maj=10.3km s-min=7.0km az=87.0*

NIED ***29*** *16:53:44.7, 37°.43N×141°.81E, h47*^{km}*, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{14}*Nm;* *M*$_{rr}$*3.18; M*$_{\theta\theta}$*-0.64; M*$_{\phi\phi}$*-2.55; M*$_{r\theta}$*-0.17; M*$_{\theta\phi}$*0.50; M*$_{\phi r}$*-1.01; Fault plane solution: M*$_0$*3.10000×10*^{14} *NP1:* ϕ_s*173.00000°, δ54.00000°, λ97.00000°. NP2:* ϕ_s*341.00000°, δ36.00000°, λ81.00000°.*

JMA ***29*** *16:53:44.7±0.1, 37°.43N×141°.81E, h47*^{km}*±2*^{km}*, M3.8*

ISC 29 16:53:44.0±0.9**, 37°.38N**±0°.04×**141°.92E**±0°.08**, h36**^{km}±2^{km}**, n61, σ1**^{s}**.61**/70**, mb3.7**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.83**	**270**	P	**Pn**	**16 53 59.0**	**-0.2**
JFK				S	**Sn**	**16 54 08.8**	**-1.5**
JMST	**Minamisoumatoc**	**0.89**	**293**	P	**Pn**	**16 53 59.4**	**-0.6**
JMST				S	**Sn**	**16 54 09.9**	**-1.7**
ONAJ	**Iwakimizuishiy**	**0.93**	**253**	P	**Pn**	**16 54 00.6**	**0.0**
ONAJ				S	**Sn**	**16 54 12.0**	**-0.8**
JIKH	**Ishinomakikobu**	**1.00**	**339**	P	**Pn**	**16 54 01.3**	**-0.2**
JIKH				S	**Sn**	**16 54 13.2**	**-1.1**
JMM	**Marumori**	**1.02**	**299**	P	**Pn**	**16 54 01.4**	**-0.3**
JMM				S	**Sn**	**16 54 13.6**	**-1.1**
JMM	**Marumori**	**1.02**	**299**		**Pn**	**16 54 01.5**	**-0.3**
JMM				Sn	**Sn**	**16 54 13.3**	**-1.4**
JIO	**Ouri**	**1.17**	**338**	P	**Pn**	**16 54 03.7**	**-0.1**
JIO				S	**Sn**	**16 54 17.1**	**-1.3**
JFT	**Otama**	**1.27**	**277**	P	**Pn**	**16 54 05.7**	**+0.5**
JFT				S	**Sn**	**16 54 20.7**	**-0.2**
JOU	**Okura**	**1.40**	**315**	P	**Pn**	**16 54 07.1**	**+0.1**
JOU				*e*S	**Sn**	**16 54 23.8**	**-0.4**
JMK	**Ichinoseki**	**1.67**	**341**	P	**Pn**	**16 54 11.1**	**+0.5**
JMK				*e*S	**Sn**	**16 54 30.8**	**+0.1**
JYS	**Shirataka**	**1.69**	**300**	P	**Pn**	**16 54 11.3**	**+0.3**
JFY	**Yanaizu**	**1.76**	**272**	P	**Pn**	**16 54 12.5**	**+0.5**
JFY				*e*S	**Sn**	**16 54 32.6**	**-0.6**
JYT	**Yasato**	**1.80**	**231**		**Pn**	**16 54 12.8**	**+0.3**
JYT				Sn	**Sn**	**16 54 33.8**	**-0.1**
JYK	**Kaneyama**	**1.97**	**322**	P	**Pn**	**16 54 15.3**	**+0.5**
JYK				*e*S	**Sn**	**16 54 37.4**	**-0.8**
JSD	**Sado**	**2.97**	**284**		**Pn**	**16 54 29.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.08**	**255**	Pn	**Pn**	**16 54 31.9**	**+1.7**

	1.3nm,0.3s,baz=88,slow=16,SNR=46						
MJAR	Matsushiro Arr	3.08	255		Pn	16 54 31.2	+1.0
MAJO	Matsushiro	3.08	255		Pn	16 54 31.9	+1.7
MAT	Matsushiro	3.08	255	P	Pn	16 54 31.8	+1.6
MAT				*e*S	Sn	16 55 05.3	-0.5
MJB9	Matsu-Tunnel	3.09	256	Pn	Pn	16 54 30.9	+0.7
JTM	Tenmabayashi	3.47	349		Pn	16 54 37.5	+2.1
JGF	Kuroka	4.08	246		Pn	16 54 46.2	+2.3
INU	Inuyama	4.44	244		Pn	16 54 51.1	+2.3
JHJ2	Mitsune	4.59	203	Pn	Pn	16 54 51.6	+0.7
JHJ	Hachijo jima 2	4.59	203	Pn	Pn	16 54 49.9	-1.0
	11nm,0.3s,baz=114,slow=15,SNR=2.2						
JHJ				Sn	Sn	16 55 40.8	-2.2
	23nm,0.3s,baz=84,slow=23,SNR=5.7						
ERM	Erimo	4.73	11	Pn	Pn	16 54 53.0	+0.3
JEW	Eniwo	5.47	356	Pn	Pn	16 55 05.6	+2.7
JWT	Wachi	5.66	250		Pn	16 55 07.8	+2.3
ASAJ	Asahikawa	6.75	4	Pn	Pn	16 55 20.4	-0.2
	0.4nm,0.3s,baz=192,slow=17,SNR=10						
ASAJ				Sn	Sn	16 56 33.6	-2.5
	0.5nm,0.3s,baz=226,slow=31,SNR=6.0						
JMN	Monobe	7.49	243	Pn	Pn	16 55 27.4	-3.3
JHS	Saijyo	7.50	254	Pn	Pn	16 55 30.5	-0.4
USRK	Ussuriysk Ar.	10.15	315	Pn	Pn	16 56 09.6	+2.6
	baz=126,slow=14,SNR=2.7						
USRK	Ussuriysk Ar.	10.15	315		Pn	16 56 08.5	+1.5
KSRS	Korea Array	11.13	275	Pn	Pn	16 56 24.9	+4.3
	0.1nm,0.3s,baz=88,slow=14,SNR=4.7						
TIA	Tai'an	19.88	274	P	Pn	16 58 20.0	+6.1
TIA				pmax	pmax		
	comp=Z,21nm,1.0s						
SONM	Songino Array	27.93	303	P	P	16 59 32.2	+1.4
	comp=Z,0.5nm,0.8s,baz=102,slow=8.1,SNR=3.9						
SONM	Songino Array	27.93	303	IAmb	IAmb	16 59 34.2	
	comp=Z,1.1nm,1.3s						
H11N2	WAKE ISLAND Hy	27.98	122	T	T	17 28 59.7	
	baz=322						
H11N1	WAKE ISLAND Hy	27.99	122	T	T	17 29 00.4	
	baz=322,slow=74						
H11N3	WAKE ISLAND Hy	28.00	122	T	T	17 29 01.1	
	baz=322,slow=74						
H11S1	WAKE ISLAND Hy	28.71	124	T	T	17 29 59.1	
	baz=317,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.71	124	T	T	17 30 01.1	
	baz=317,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	28.73	124	T	T	17 30 04.9	
	baz=317,slow=76,SNR=9.1						
MKAR	Makanchi Array	44.28	302	P	P	17 01 48.9	-1.2
	comp=Z,0.4nm,0.7s,baz=94,slow=8.4,SNR=3.9						
MAKZ	Makanchi	44.49	302	P	P	17 01 50.6	-1.1
BKB	Balikpapan	44.89	217	P	P	17 01 52.9	-2.2
KURK	Kurchatov	46.04	308	P	P	17 02 03.3	-0.6
IMAR	Indian Mountai	46.15	31	P	P	17 02 04.8	+0.2
ILAR	Eielson Array	48.99	33	P	P	17 02 25.4	-1.2
	comp=Z,0.7nm,0.9s,baz=269,slow=6.1,SNR=6.3						
FYU	Fort Yukon	49.61	30	P	P	17 02 30.8	-0.5
WB0	Warramunga Arr	57.28	188	P	P	17 03 27.6	-0.4
WB0				IAmb	IAmb	17 03 32.5	
	comp=Z,6.3nm,1.2s						
WRAB	Tennant Creek	57.45	188	P	P	17 03 26.9	-2.3
WRAB				IAmb	IAmb	17 03 56.6	
	comp=Z,11nm,1.6s						
WR0	Warramunga Arr	57.45	188	P	P	17 03 27.0	-2.2
WR0				IAmb	IAmb	17 03 44.9	
	comp=Z,11nm,1.6s						
WB2	Warramunga Arr	57.46	188	P	P	17 03 28.7	-0.6
WB2				IAmb	IAmb	17 03 44.9	
	comp=Z,11nm,1.6s						
WRA	Warramunga Arr	57.46	188	P	P	17 03 28.9	-0.4
	comp=Z,0.6nm,0.6s,baz=6.0,slow=7.4,SNR=13						
WRA	Warramunga Arr	57.46	188	P	P	17 03 28.6	-0.7
ABKAR	Akbulak array	58.02	310	P	P	17 03 31.4	-1.7
ASAR	Alice Springs	61.18	188	P	P	17 03 54.5	-0.5
	comp=Z,0.5nm,1.0s,baz=19,slow=5.6,SNR=4.2						
ARCES	ARCESS Array B	63.82	339	P	P	17 04 13.7	+1.6
PDAR	Pinedale Array	77.14	46	P	P	17 05 34.7	+0.6
	comp=Z,0.3nm,0.7s,baz=305,slow=3.2,SNR=2.6						
TXAR	Lajitas Array	89.59	53	P	P	17 06 38.2	0.0
	comp=Z,0.2nm,0.5s,baz=310,slow=3.4,SNR=1.9						

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*IASPEI **29** 17:37:04.6±0.8, 47°.71N±0°.02×122°.15W±0°.02, h16^{km}±4^{km}, Error ellipse: s-maj=2.5km s-min=2.3km az=57.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **29** 17:37:04.8±2.5, 47°.70N±0°.02×122°.14W±0°.03, h21^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=181.0*

*ANF **29** 17:37:04.3±0.2, 47°.70N×122°.12W, h15^{km}±2^{km}, ML2.7/9, Error ellipse: s-maj=1.6km s-min=1.3km az=118.0*

*SEA **29** 17:37:05.6±2.4, 47°.708N±0°.009×122°.14W±0°.01, h8^{km}±1^{km}, ML2.8/107, ML2.6/36(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=215.0*

ISC 29 17:37:04.9±0.8**, 47°.72N**±0°.02×**122°.14W**±0°.02**, h14**^{km}±4^{km}**, n118,** σ0ˢ.98/144**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEOT	Leota Junior H	0.05	21		Pg	17 37 07.2	-0.4
LEOT					Sg	17 37 09.9	+0.5
MARYW	Marymoor Park	0.06	165		Pg	17 37 06.9	-0.7
MARYW					Sg	17 37 09.5	+0.2
NIHS	Ingelmoor High	0.06	293		Pg	17 37 07.2	-0.4
NIHS					Sg	17 37 09.8	+0.4
FINN	Finn Hill Juni	0.06	270		Pg	17 37 07.1	-0.5
FINN					Sg	17 37 09.7	+0.3
EARN	East Ridge Ele	0.07	73		Pg	17 37 07.6	-0.1
EARN					Sg	17 37 10.3	+0.7
NOWS	NOAA--Sand Poi	0.08	247		Pg	17 37 07.5	-0.3
NOWS					Sg	17 37 10.6	+0.8
WISC	Wilburton Inst	0.11	191		Pb	17 37 08.1	-0.7
EVGW	Everett Gatewa	0.14	357		Pb	17 37 08.9	-0.3
BLH	Bald Hill	0.14	32		Pb	17 37 08.6	-0.7
LYNC	Lynnwood City	0.15	317		Pb	17 37 09.2	-0.2
SCCW	Shoreline CC	0.15	282		Pb	17 37 08.6	-0.8
PNLK	Pine Lake Midd	0.16	151		Pb	17 37 09.1	-0.4
PNLK					Sg	17 37 13.1	+1.7
LAWT	Lawton Element	0.18	250		Pg	17 37 10.5	+1.5
LAWT					Sg	17 37 15.7	+3.8
SP2	Seward Park 2	0.18	204		Pb	17 37 09.6	-0.3
SP2					Sg	17 37 14.1	+2.3
SSS1	John Stanford	0.19	223		Pg	17 37 16.1	+6.9
BEVT	Boeing Everett	0.22	337		Pg	17 37 10.9	+1.2
BEVT					Sg	17 37 16.4	+3.4
ALKI	Alki Wastewate	0.23	232		Pg	17 37 11.3	+1.4
MPL	Maple valley S	0.25	187		Pb	17 37 10.8	-0.4
EVCC	Everett Colleg	0.29	352		Pb	17 37 12.1	+0.2
TTW	Tolt Reservoir	0.31	94		Pg	17 37 11.1	-0.2
C05A	Tolt Reservoir	0.31	94		Pg	17 37 11.1	-0.2
C05A					Sb	17 37 16.0	-1.0
VVHS	Vashon High Sc	0.36	216		Pg	17 37 12.8	+0.6
RATT	Rattlesnake La	0.37	142		Pg	17 37 12.3	-0.1
RATT					Sb	17 37 18.7	-0.2
CDMR	Cedar Moraine	0.40	139		Pg	17 37 12.8	0.0
GMW	Gold Mountain	0.47	249		Pb	17 37 14.0	-0.9
GNW	Green Mountain	0.49	252		Pb	17 37 14.2	-0.9
JCW	Jim Creek	0.50	17		Pb	17 37 14.9	-0.5
B013	Quilcene	0.53	281		Pb	17 37 14.8	-1.0
B013	Quilcene	0.53	281		Pb	17 37 14.8	-1.0
B013					Sb	17 37 22.9	-0.4
D05A	Enumclaw	0.54	169		Pb	17 37 15.7	-0.4
D05A				IAML		17 37 25.1	
	comp=N,342nm,0.5s						
B05A	Bryant	0.55	3	P	Pb	17 37 15.7	-0.5
	baz=183,SNR=177						
B05A				S	Sg	17 37 23.8	+0.9
	baz=183						
B05A	Bryant	0.55	3		Pb	17 37 15.7	-0.5
B05A					Sg	17 37 24.1	+1.2
C04A	Brinnon	0.56	270		Pb	17 37 15.3	-1.1
C04A					Sb	17 37 23.9	-0.3
GSM	Grass Mountain	0.57	155		Pb	17 37 15.6	-1.1
HDW	Hoodsport	0.62	264		Pb	17 37 16.3	-1.2
HDW					Sb	17 37 25.8	-0.3
BLN	Blyn Mountain	0.63	298		Pb	17 37 16.6	-1.0
BLN					Sg	17 37 26.1	+0.6
D03D	Eldon	0.67	254	P	Pb	17 37 17.2	-1.0
	baz=74,SNR=10						
D03D				S	Sb	17 37 27.0	-0.3
	baz=74						
D03D	Eldon	0.67	254		Pb	17 37 17.2	-1.0
D03D					Sg	17 37 27.1	+0.5
GHW	Garrison Hill	0.68	187		Pb	17 37 17.5	-1.0
D04E	Lakebay	0.69	218	P	Pb	17 37 18.2	-0.4
	baz=39,SNR=15						
SQM	Sequim	0.70	301		Pb	17 37 18.3	-0.5
SQM					Sn	17 37 29.8	-1.2
CMW	Cultus Mountai	0.71	1		Pb	17 37 18.8	-0.2
B941	Kapowsin	0.73	184		Pb	17 37 18.1	-1.3
GPW	Glacier Peak	0.79	59		Pb	17 37 19.8	-0.6
RPW	Rockport	0.84	30		Pb	17 37 21.3	0.0
OBSR	Observation Ro	0.85	165		Pb	17 37 19.4	-2.1
FMW	Mount Fremont	0.85	158		Pb	17 37 20.1	-1.4
WRW	Wenatchee Ridg	0.86	80		Pb	17 37 20.8	-0.9
C06D	Leavenworth	0.87	76	P	Pb	17 37 20.8	-0.9
	baz=256,SNR=11						
C06D				S	Sb	17 37 32.7	-0.4
	baz=256						
C06D	Leavenworth	0.87	76		Pb	17 37 20.7	-0.9
C06D					Sb	17 37 33.0	-0.1
RCS	Mount Rainier-	0.89	162		Pb	17 37 21.1	-1.2
B06A	Marblemount	0.91	29		Pb	17 37 22.5	0.0
PANH	Panhandle Gap,	0.93	158		Pb	17 37 20.6	-2.2
RCM	Mount Rainier-	0.93	162		Pb	17 37 21.7	-1.2
B04A	Port Angeles	0.98	291		Pb	17 37 22.1	-1.4
B04A	Port Angeles	0.98	291		Pb	17 37 22.2	-1.3
LON	Longmire	1.00	167		Pb	17 37 22.5	-1.4
LON	Longmire	1.00	167		Pb	17 37 22.6	-1.3
VGZ	Gonzales	1.05	312		Pb	17 37 23.2	-1.7
MCW	Mount Constitu	1.07	335		Pb	17 37 24.5	-0.6
A04D	Lummi Island	1.07	340	P	Pb	17 37 24.8	-0.3
	baz=159						
A04D				S	Sg	17 37 40.1	+0.7
	baz=159						
MBW	Mount Baker	1.08	9		Pn	17 37 25.5	-0.2
WPW	White Pass	1.10	158		Pb	17 37 24.8	-0.9
LTY	Liberty	1.10	114		Pn	17 37 24.8	-1.1
LCW	Lucas Creek	1.11	200		Pn	17 37 24.7	-1.3
OLQ	Olympics--Lake	1.15	260		Pg	17 37 27.9	+1.0
TBM	Table Mountain	1.18	117		Pn	17 37 26.8	-0.3
E04D	Cinebar	1.20	194	P	Pn	17 37 26.1	-1.1
	baz=14,SNR=85						
E04D				S	Sn	17 37 42.9	-0.3
	baz=14						
E04D	Cinebar	1.20	194		Pn	17 37 26.1	-1.1
B017	Montesano	1.20	234		Pb	17 37 27.1	-0.3
NLWA	Neilton Lookou	1.21	255		Pn	17 37 26.6	-0.8
NLWA				IAML		17 37 48.3	
	comp=N,95nm,0.4s						
NLWA				IAML		17 37 48.5	
	comp=N,127nm,0.4s						
ETW	Entiat	1.23	95		Pb	17 37 28.0	0.0
B011	North Saanich	1.28	317		Pn	17 37 27.2	-1.0
PGC	Sidney	1.28	317	Pn	Pn	17 37 27.2	-1.0
PGC				IAML		17 37 45.1	
	comp=E,108nm,0.4s						
PGC				IAML		17 37 45.2	
	comp=N,100nm,0.7s						
NAC	Naches	1.33	137		Pn	17 37 28.9	-0.1
EBG	Ellensburg	1.34	126		Pb	17 37 29.8	0.0
B201	Coldwater, Mou	1.42	183		Pn	17 37 29.5	-0.7
ERK	Elk Rock	1.42	186		Pn	17 37 29.8	-0.5
BMW	Boistfort Moun	1.45	211		Pn	17 37 30.1	-0.5
B202	Windy Ridge, M	1.48	180		Pn	17 37 30.5	-0.5
WTV	Waterville	1.48	90		Pb	17 37 32.1	0.0
STD	Studebaker Rid	1.48	182		Pn	17 37 31.1	-0.1
VALT	Mount Saint He	1.51	181		Pn	17 37 31.7	+0.1
E03A	Lebam	1.52	220		Pn	17 37 31.3	-0.3
E03A				IAML		17 37 59.0	
	comp=E,87nm,0.6s						
E03A				IAML		17 38 00.4	
	comp=N,97nm,0.5s						
ESD	East Dome	1.52	180		Pn	17 37 32.1	+0.3
OTR	Olympics--Tyee	1.52	285		Pg	17 37 34.8	+0.7
SHW	Mount Saint He	1.53	182		Pn	17 37 32.0	+0.2
FL2	Flat Top 2	1.53	185		Pn	17 37 31.7	-0.2
SWF2	Southwest Flan	1.54	182		Pn	17 37 32.0	0.0
HSR	South Ridge	1.55	181		Pb	17 37 32.8	-0.5
B203	Quarry, Mount	1.56	185		Pn	17 37 31.9	-0.2
JLK	June Lake	1.57	180		Pn	17 37 32.8	+0.4
CDFW	Cedar Flats	1.60	178		Pn	17 37 32.9	+0.1
ASR	Mount Adams--S	1.61	166		Pb	17 37 33.6	-0.9
LVP	Lakeview Peak	1.66	186		Pn	17 37 34.1	+0.4
MTMW	Mount Mitchell	1.69	182		Pb	17 37 34.9	-0.9
MXC	Moxie City	1.70	131		Pb	17 37 35.6	-0.3
B926	Mesachie Lake	1.73	310		Pn	17 37 33.7	-0.7
B023	Clatskanie	1.73	202		Pn	17 37 34.5	0.0
F04D	Rainier, OR	1.74	200	Pb	Pb	17 37 35.9	-0.7
	baz=20						
F04D				Sb	Sb	17 37 59.1	+0.9
	baz=20						
F05D	White Salmon	1.89	165	Pb	Pb	17 37 38.3	-0.9
	baz=346						
F05D				S	Sn	17 37 59.4	-1.0
	baz=346						
F05D	White Salmon	1.89	165		Pb	17 37 39.0	-0.2
E07A	Sunnyside	1.95	126		Pn	17 37 38.3	+0.8
E07A				IAML		17 38 14.2	
	comp=N,69nm,0.9s						
FHE	Frenchman Hill	1.96	112		Pb	17 37 38.7	-1.5
MDW	Midway	1.97	123		Pb	17 37 39.6	-0.7
MGB	Mount Grey	2.13	308		Pn	17 37 40.6	+0.6
SHB	Sechelt	2.20	329		Pn	17 37 38.5	-2.5
HAWA	Hanford	2.22	126		Pn	17 37 41.9	+0.6
HAWA				IAML		17 38 22.7	
	comp=N,22nm,0.6s						
HAWA				IAML		17 38 26.5	
	comp=N,28nm,0.9s						
D08A	Wollman Farm,	2.29	106	Pn	Pn	17 37 42.7	+0.6
E08A	Dider Farm, El	2.44	119		Pn	17 37 45.1	+0.9
E08A				IAML		17 38 36.9	
	comp=N,18nm,0.6s						
C09A	Chrisman Ranch	2.61	87		Pn	17 37 46.8	+0.1
G03D	McMinnville, O	2.62	198	Sb	Sb	17 38 22.8	-0.9
	baz=17						
H04A	Detroit Lake	3.04	181		Pn	17 37 54.3	+1.9
H04A				IAML		17 38 38.7	
	comp=N,23nm,0.4s						
H04A				IAML		17 38 42.8	
	comp=E,21nm,0.5s						
G08A	Pilot Rock	3.28	137	Pn	Pn	17 37 55.6	-0.2
G08A				IAML		17 38 52.3	
	comp=E,11nm,3.4s						
NEW	Newport	3.42	79	Pn	Pn	17 37 58.5	+0.8
NEW				IAML		17 38 50.9	
	comp=E,13nm,4.7s						
NEW				IAML		17 39 32.6	
	comp=E,8.7nm,4.9s						
F10A	Beach Ranch, E	3.80	116		Pn	17 38 04.4	+1.4
F10A				IAML		17 39 28.2	
	comp=N,15nm,1.0s						
I07A	Izee	4.08	152	Pn	Pn	17 38 08.3	+1.5
BMO	Blue Mountains	4.41	129		Pn	17 38 12.4	+1.0
BMO				IAML		17 40 46.0	
	comp=N,6.7nm,2.0s						

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*IDC **29** 17:39:31.7±0.8, 41°.94N×119°.57W, h0^{km}, mb3.0/2, mb1 3.3/6, mb1mx3.2/34, mbtmp3.0/6, ML3.1/4, Error ellipse: s-maj=12.2km s-min=5.5km az=9.0*

*ANF **29** 17:39:32.5±0.8, 41°.88N×119°.65W, h0^{km}±6^{km}, ML3.5/16, Error ellipse: s-maj=3.2km s-min=2.1km az=98.0*

*NEIC **29** 17:39:33.7±2.4, 41°.87N±0°.04×119°.59W±0°.02, h7^{km}±5^{km}, Error ellipse: s-maj=5.6km s-min=1.8km az=200.0*

*REN **29** 17:39:33.6±1.6, 41°.90N±0°.04×119°.63W±0°.04, h9^{km}±6^{km}, ML3.6/6, ML3.4/43(SEA), ML3.2/76(NEIC), Mwr3.6/7(SLM), Error ellipse: s-maj=5.5km s-min=4.5km az=207.0*

*NEIC **29** 17:39:33.6, 41°.90N×119°.62W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.91; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$2.35; $M_{r\theta}$-1.30; $M_{\theta\phi}$0.08; $M_{\phi r}$-1.91; Fault plane solution: $M_0$3.16000×10^{14} NP1:ϕ_s158.00000°, δ28.00000°, λ-133.00000°. NP2:ϕ_s25.00000°, δ70.00000°, λ-70.00000°. Principal axes: T 3.1659, Plg23.0000°, Azm100.0000°; N 0.0007, Plg19.0000°, Azm198.0000°; P -3.1666, Plg60.0000°, Azm324.0000°;*

*SEA **29** 17:39:34.1±2.4, 41°.87N±0°.03×119°.62W±0°.03, h0^{km}±6^{km} Error ellipse: s-maj=5.9km s-min=0.6km az=216.0*

ISC 29 17:39:33.3±1.3**, 41°.89N**±0°.03×**119°.58W**±0°.03**, h3**^{km}±11^{km}**, n90,** σ1ˢ.18/106**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.54	271	Pg	Pg	17 39 43.8	+0.1
MOD				IAML		17 39 52.6	
	comp=N,3μm,0.6s						
MOD	Modoc Plateau	0.54	271		Sg	17 39 51.2	+0.6
LKVW	Lakeview	0.67	300		Pg	17 39 45.9	-0.2
LKVW					Sg	17 39 55.2	+0.4
K05A	Summer Lake	1.28	311		Pg	17 39 57.4	-0.4
K05A					Sg	17 40 15.1	+0.6
LASM	Arnica Sink	1.52	260		Pn	17 40 00.6	-1.0
LTIM	Timbered Crate	1.60	244		Pn	17 40 01.9	-0.7
HOG	Hogback Mounta	1.62	283		Pn	17 40 02.1	-0.9
M04C	Macdoel	1.69	267	P	Pn	17 40 02.7	-1.1
	baz=85,SNR=140						
M04C				S	Sn	17 40 25.8	-0.4
	baz=85						
M04C	Macdoel	1.69	267		Pn	17 40 02.8	-1.1
LBCM	Butte Creek Ri	1.70	232		Pn	17 40 03.3	-0.7
K04D	Chiloquin, OR	1.77	295	P	Pn	17 40 04.0	-1.1
	baz=114,SNR=19						
K04D				S	Sn	17 40 27.8	-0.3
	baz=114						
K04D	Chiloquin, OR	1.77	295		Pn	17 40 05.8	+0.8
J05D	Fort Rock, OR	1.85	319	P	Pn	17 40 05.2	-0.9
	baz=139,SNR=178						
J05D				Sb	Sb	17 40 32.2	+0.7
	baz=139						
J05D	Fort Rock, OR	1.85	319		Pn	17 40 07.1	+1.0
LHEM	Herd Peak	1.99	263		Pn	17 40 09.4	+1.3
M03C	McCloud	2.00	253		Pn	17 40 09.5	+1.3
LGBM	Gray Butte	2.03	255		Pn	17 40 08.1	-0.6
L04D	Klamath Falls	2.05	280	P	Pn	17 40 07.6	-1.3
	baz=98,SNR=53						
L04D				Sb	Sb	17 40 37.3	-0.1
	baz=98						
L04D	Klamath Falls	2.05	280		Pn	17 40 07.7	-1.3
TMBU	Tom Butte, New	2.06	327		Pn	17 40 10.4	+1.4
BEKR	Beckworth	2.11	196		Pn	17 40 08.8	-0.9
BEKR				IAML		17 40 41.8	
	comp=N,194nm,0.3s						
BEKR				IAML		17 40 42.2	
	comp=E,203nm,0.6s						
B040	Montague	2.12	269		Pn	17 40 08.4	-1.3
SVIC	Surveyors Ice	2.14	325		Pb	17 40 12.3	-0.6
PINE	Pine Mountain	2.15	333	Pn	Pn	17 40 10.1	-0.2
PINE				IAML		17 40 45.6	
	comp=E,181nm,0.7s						
PINE				IAML		17 40 49.4	
	comp=N,155nm,1.1s						
PAHR	Pah Rah Range	2.19	176		Pn	17 40 09.6	-1.2
PAHR				IAML		17 40 46.0	
	comp=E,138nm,0.6s						
PAHR				IAML		17 40 46.0	
	comp=N,157nm,0.4s						
I07A	Izee	2.19	1	Pn	Pn	17 40 11.1	+0.3
I07A				IAML		17 40 43.7	
	comp=N,96nm,0.8s						
I07A				IAML		17 40 53.3	
	comp=E,104nm,1.8s						
J04D	Umpqua Nationa	2.30	307	S	Sn	17 40 40.3	-1.1
	baz=126						
J04D	Umpqua Nationa	2.30	307		Pb	17 40 15.5	-0.1
O03E	Paynes Creek	2.31	227	P	Pn	17 40 11.5	-0.9
	baz=45,SNR=49						
O03E				Sb	Sb	17 40 45.2	+0.4
	baz=45						
ASBU	Astronaut Butt	2.33	326		Pn	17 40 14.8	+2.1
YBH	Yreka Blue Hor	2.34	267	Pn	Pn	17 40 11.4	-1.5
	comp=E,3.5nm,0.3s,baz=80,slow=11,SNR=38						
YBH				Lg	Lg	17 40 45.8	
	comp=E,19nm,0.3s,baz=352,slow=9.2,SNR=14						
YBH	Yreka Blue Hor	2.34	267	Pn	Pn	17 40 11.3	-1.5
YBH				IAML		17 40 47.7	
	comp=N,85nm,0.7s						
M02C	Callahan	2.50	260	P	Pn	17 40 13.2	-1.8
	baz=77,SNR=16						
M02C				Sb	Sb	17 40 50.7	+0.5
	baz=77						
N02D	Trinity Center	2.52	250	P	Pn	17 40 13.8	-1.5
	baz=67,SNR=32						
N02D				Sb	Sb	17 40 51.9	+1.2
	baz=67						
N02D	Trinity Center	2.52	250		Pn	17 40 17.6	+2.3
WDC	Whiskeytown Da	2.59	241	Pn	Pn	17 40 15.1	-1.1
WDC				IAML		17 40 53.4	
	comp=N,96nm,0.5s						
WDC				IAML		17 40 57.7	
	comp=E,73nm,0.7s						
VCNR	Virginia City	2.59	181		Pn	17 40 15.6	-0.8
HUMO	Hull Mountain	2.60	287	Pn	Pn	17 40 14.6	-1.8
HUMO				IAML		17 41 01.1	
	comp=E,105nm,0.8s						
HUMO				IAML		17 41 03.0	
	comp=N,108nm,1.5s						
VIPM	Ingram Point	2.72	344		Pb	17 40 22.6	-0.2
ORV	Oroville	2.75	213		Pn	17 40 17.3	-1.1
I05D	Terrebonne, OR	2.76	333	P	Pn	17 40 17.9	-0.7
	baz=152						
I05D				Sb	Sb	17 40 59.8	+2.1
	baz=152						
PNTR	Pine Nut	2.80	180		Pb	17 40 24.6	+0.4
PNTR				IAML		17 41 12.0	
	comp=N,149nm,1.0s						
I04A	Tendick Farm,	2.82	313	Pb	Pb	17 40 23.6	-0.7
	baz=132						
I04A				Sb	Sb	17 41 00.5	+1.3
	baz=132						
RUBR	Rubicon Trail	2.87	189		Pb	17 40 27.0	+1.7
RUBR				IAML		17 41 07.7	
	comp=N,104nm,0.7s						
RUBR				IAML		17 41 07.8	
	comp=E,77nm,0.5s						
O02D	Mt. Diablo Mer	2.97	236	P	Pn	17 40 20.3	-1.2
	baz=53,SNR=7.0						
O02D				Sb	Sb	17 41 04.5	+0.8
	baz=53						
L02E	Cave Junction	3.01	276	P	Pn	17 40 20.8	-1.1
	baz=94						
L02E				Sb	Sb	17 41 05.0	+0.3
	baz=94						
AFDM	Forest Hills D	3.13	200		Pn	17 40 21.8	-1.8
K02D	Willamette Mer	3.13	286	P	Pn	17 40 22.8	-0.9
	baz=104,SNR=161						
K02D	Willamette Mer	3.13	286		Pn	17 40 24.9	+1.2
MFID	Camas Ranch	3.16	60	Pn	Pn	17 40 23.8	-0.3
MFID				IAML		17 41 19.4	
	comp=E,106nm,0.6s						
MFID				IAML		17 41 27.4	
	comp=E,80nm,0.6s						
KRMB	Red Mountain	3.26	265		Pn	17 40 25.4	-0.1
KRMB				IAML		17 41 31.4	
	comp=N,45nm,1.2s						
KHMM	Horse Mountain	3.28	253		Pn	17 40 25.2	-0.7
KHMM				IAML		17 41 29.1	
	comp=N,58nm,1.1s						
KHMM				IAML		17 41 32.5	
	comp=E,62nm,1.7s						
I03D	Drain, OR	3.31	304	Sb	Sb	17 41 15.4	+2.1
	baz=122						
RYN	Ryan	3.36	166		Pn	17 40 26.6	-0.3
RYN				IAML		17 41 26.0	
	comp=E,90nm,0.7s						
RYN				IAML		17 41 27.1	
	comp=N,67nm,0.5s						
H04A	Detroit Lake	3.38	327		Pn	17 40 26.5	-0.5
WAKR	Walker	3.39	178		Pn	17 40 26.2	-1.1
WAKR				IAML		17 41 30.6	
	comp=N,33nm,0.8s						
BMO	Blue Mountains	3.39	29		Pb	17 40 34.3	+0.1
G08A	Pilot Rock	3.43	7		Pn	17 40 27.0	-0.8
ELK	Elko	3.47	108	Pn	Pn	17 40 28.4	-0.1
	comp=N,4.8nm,0.3s,baz=294,slow=17,SNR=42						
ELK				Pg	Pb	17 40 33.9	-1.6
	comp=N,4.8nm,0.3s,baz=298,slow=17,SNR=35						
ELK				Sn	Sn	17 41 10.0	-0.1
	comp=N,2.7nm,0.3s,baz=348,slow=4.4,SNR=3.7						
ELK				Lg	Lg	17 41 20.4	
	comp=N,13nm,0.3s,baz=249,slow=13,SNR=9.7						
ELK	Elko	3.47	108		Pn	17 40 26.9	-1.5
KBO	Bosley Butte	3.47	277	Pn	Pn	17 40 27.3	-1.1
KMRM	Mail Ridge	3.54	243		Pn	17 40 29.0	-0.3
KMRM				IAML		17 41 36.6	
	comp=N,66nm,1.7s						
KMRM				IAML		17 41 38.8	
	comp=E,77nm,1.4s						

G05D	Wamic, OR	3.58	340	Pb	Pb	17 40 36.8	-0.5
	baz=159						
NVAR	Mina Array Bea	3.59	164	Pn	Pn	17 40 30.7	+0.5
	comp=E,0.8nm,0.3s,baz=340,slow=12,SNR=9.3						
NVAR				Lg	Lg	17 41 26.2	
	comp=E,7.0nm,0.3s,baz=338,slow=18,SNR=4.8						
NVAR	Mina Array Bea	3.59	164		Pn	17 40 30.0	-0.1
NV11	Mina Array Sit	3.62	162		Pn	17 40 30.8	+0.3
NV11				IAML		17 41 31.6	
	comp=N,38nm,0.6s						
NV11				IAML		17 41 37.2	
	comp=E,38nm,1.2s						
KEBM	Edson Butte	3.65	287		Pn	17 40 30.6	-0.2
KEBM				IAML		17 41 47.6	
	comp=N,88nm,1.3s						
LHV	Little Huntoon	3.73	167		Pn	17 40 32.1	+0.4
CMB	Columbia Colle	3.90	189		Pn	17 40 34.3	+0.1
CMB				IAML		17 41 39.5	
	comp=E,21nm,1.1s						
TPH	Tonopah	4.22	154		Pn	17 40 38.2	-0.5
R11A	Troy Canyon, C	4.68	138	P	Pn	17 40 45.2	+0.2
	baz=320						
R11A	Troy Canyon, C	4.68	138		Pn	17 40 47.7	+2.6
R11A				IAML		17 42 04.3	
	comp=E,31nm,0.6s						
SHW	Mount Saint He	4.71	337		Pn	17 40 44.3	-1.1
SPR3	Spring Creek 3	4.94	124	Pn	Pn	17 40 52.8	+4.0
BGU	Big Grassy Mou	5.02	99		Pn	17 40 49.8	+0.1
HVU	Hansel Valley	5.09	89		Pn	17 40 51.5	+0.8
SPUT	South Promonto	5.38	94	Pn	Pn	17 40 54.4	-0.3
DUG	Dugway, Tooele	5.39	106	P	Pn	17 40 56.3	+1.5
	baz=290						
DUG	Dugway, Tooele	5.39	106	Pn	Pn	17 40 55.2	+0.4
PSUT	Pine Spring	5.52	126		Pn	17 40 57.3	+0.6
TPNV	Topopah Spring	5.57	151		Pn	17 40 57.2	0.0
PRN	Pahroc Range	5.68	141		Pn	17 41 02.3	+3.5
CCUT	Cedar City	6.46	130	Pn	Pn	17 41 10.7	+1.1
MSU	Marysvale	6.60	118	Pn	Pn	17 41 12.5	+1.1
CHMT	Chamberlain Mo	6.76	40		Pb	17 41 28.8	-2.9
MTPU	Mount Pierson	6.86	122		Pn	17 41 15.8	+0.6
PNT	Penticton	7.43	360		Pn	17 41 21.9	-0.6
PDAR	Pinedale Array	7.48	80	Pn	Pn	17 41 24.6	+1.0
	comp=E,0.1nm,0.3s,baz=260,slow=10.0,SNR=2.1						
PDAR				Pg	Pb	17 41 42.2	-1.7
	comp=E,0.1nm,0.3s,baz=253,slow=14,SNR=6.7						
YKA	Yellowknife Ar	20.85	6	P	P	17 44 15.8	-0.1
	comp=E,0.1nm,0.5s,baz=190,slow=10,SNR=4.0						
ILAR	Eielson Array	27.70	335	P	P	17 45 22.9	+0.4
	comp=E,0.3nm,0.7s,baz=147,slow=7.5,SNR=5.1						

*IDC **29** 17:47:44.6±2.0, 0.°68N×91.°88E, h0^{km}, mb3.9/4, mb1 4.0/7, mb1mx3.6/32, mbtmp3.9/7, ML3.7/3, Error ellipse: s-maj=48.4km s-min=24.7km az=47.0*

ISC 29 17:47:46.8±1.5**, 0.°8N**±0.°2×**92.°05E**±0.°09**, h10^{km}, n10, σ1.^{s}69**/8**, mb4.0**/4**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.16	74	Pn	Pn	17 49 33.4	+1.6
	1.5nm,0.3s,baz=180,slow=11,SNR=2.4						
PSI				Sn	Sn	17 50 50.3	-2.9
	0.9nm,0.3s,baz=180,slow=16,SNR=1.4						
PALK	Pallekele	13.01	300	Pn	Pn	17 50 50.9	-1.0
	0.2nm,0.3s,baz=87,slow=19,SNR=2.2						
PALK				Sn	Sn	17 53 02.9	-14
	1.4nm,0.3s,baz=120,slow=17,SNR=7.1						
CMAR	Chiang Mai Arr	18.81	21	P	Pn	17 52 08.2	+1.1
	0.1nm,0.3s,baz=216,slow=12,SNR=6.6						
H08S2	Diego Garcia H	21.23	246	T	T	18 14 31.9	
	baz=66						
H08S3	Diego Garcia H	21.23	246	T	T	18 14 28.2	
	baz=66						
H08S1	Diego Carcia H	21.25	246	T	T	18 14 33.1	
	baz=66						
WRA	Warramunga Arr	46.28	119	P	P	17 56 12.9	-0.1
	0.5nm,0.4s,baz=294,slow=8.7,SNR=14						
MKAR	Makanchi Array	46.59	351	P	P	17 56 14.9	-0.1
	0.8nm,0.6s,baz=170,slow=9.1,SNR=11						
SONM	Songino Array	48.48	13	P	P	17 56 30.6	+0.8
	1.7nm,0.6s,baz=192,slow=9.3,SNR=9.5						
ZALV	Zalesovo Beam	53.30	355	P	P	17 57 05.2	-0.6
	0.7nm,0.3s,baz=181,slow=5.7,SNR=5.4						

IDC 29 17:47:57.0±4.3**, 0.°30N×91.°61E, h0^{km}, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.5**/29**, mbtmp3.8**/5**, Error ellipse: s-maj=159.3km s-min=24.6km az=59.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.43	118	P	P	17 56 26.1	+0.2
	0.3nm,0.7s,baz=294,slow=8.6,SNR=4.6						
MKAR	Makanchi Array	47.02	351	P	P	17 56 29.9	-0.2
	1.1nm,0.7s,baz=170,slow=9.5,SNR=11						
ASAR	Alice Springs	47.46	123	P	P	17 56 33.4	-0.6
	0.4nm,0.9s,baz=294,slow=7.7,SNR=3.0						
SONM	Songino Array	49.06	13	P	P	17 56 46.1	+0.1
	2.2nm,0.6s,baz=191,slow=9.2,SNR=13						
ZALV	Zalesovo Beam	53.76	355	P	P	17 57 20.8	-0.2
	1.7nm,0.4s,baz=169,slow=6.8,SNR=9.2						

*MEX **29** 18:10:14.6±0.8, 14.°87N×92.°98W, h70^{km}±10^{km}, MD4.0*
*GCG **29** 18:10:16.0±0.8, 15.°02N×92.°90W, h26^{km}±999^{km}, MD4.0*

ISC 29 18:10:14.6±1.8**, 15.°0N**±0.°1×**93.°01W**±0.°09**, h22^{km}**±13^{km}**, n9, σ0.^{s}83**/15**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.72	96	i P	Pb	18 10 28.5	0.0
THIG				i S	Sn	18 10 39.3	-0.6
PCIG		0.74	344	eP	Pn	18 10 30.0	+0.2
PCIG				eS	Sn	18 10 42.2	+1.8
CCIG	Comitan	1.54	33	eP	Pn	18 10 40.7	-0.2
TGIG		1.79	356	eP	Pn	18 10 43.5	-0.7
TGIG				i S	Sn	18 11 06.0	-0.3
FUG	Fuego 3	2.16	104	eP	Pn	18 10 49.3	-0.2
FUG				eS	Sn	18 11 14.5	-1.2
PCG	Pacaya	2.40	104	eP	Pn	18 10 53.4	+0.6
PCG				eS	Sn	18 11 22.1	+0.4
NBG	Las Nubes	2.60	98	eP	Pn	18 10 56.6	+1.0
CMIG	Matias Romero	2.76	320	eP	Pn	18 10 57.2	-0.4
CMIG				i S	Sn	18 11 30.0	-0.3
MRL	Marmol	3.21	88	eP	Pn	18 11 04.1	+0.1

*IDC **29** 18:15:52.4±1.6, 41.°98N×141.°54E, h101^{km}±14^{km}, mb3.1/10, mb1 3.3/14, mb1mx3.2/39, mbtmp3.4/14, Error ellipse: s-maj=22.0km s-min=12.7km az=128.0*
*JMA **29** 18:15:52.7±0.1, 42.°01N×141.°38E, h91^{km}±2^{km}, M3.1*

ISC 29 18:15:52.3±0.8**, 42.°00N**±0.°04×**141.°38E**±0.°04**, h98^{km}**±6^{km}**, n40, σ0.^{s}75**/45**, mb3.4**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKB	Kayabe	0.28	247	P	Pn	18 16 06.0	-0.5
JNB	Noboribetsu	0.54	332	P	Pn	18 16 07.5	-0.6
JNB				eS	Sn	18 16 19.3	-0.6
JOT	Ohata	0.66	202	P	Pn	18 16 09.1	-0.1
JOT				eS	Sn	18 16 21.7	0.0
JIAM	Iburiatsuma	0.75	33	P	Pn	18 16 10.2	+0.3
JIAM				eS	Sn	18 16 23.7	+0.6
JYM2	Yakumo 2	0.76	280	P	Pn	18 16 10.0	0.0
JEW	Eniwo	0.85	4	P	Pn	18 16 11.1	+0.2
JEW				eS	Sn	18 16 24.8	-0.1
JSR	Shiriuchi	0.85	237	P	Pn	18 16 11.1	+0.1
JSR				eS	Sn	18 16 25.2	+0.2
JNBK	Urakawa-nobuka	1.06	74	P	Pn	18 16 13.4	+0.2
JBT2	Biratori 2	1.07	43	P	Pn	18 16 13.6	+0.3
JOMM	Oshimamatsumae	1.13	246	P	Pn	18 16 14.3	+0.3
JOMM				eS	Sn	18 16 31.3	+1.0
JSH	Shimam	1.18	304	P	Pn	18 16 14.6	0.0
JHST	Hiyamasetana	1.19	291	P	Pn	18 16 14.5	-0.2
JHST				eS	Sn	18 16 31.0	-0.6
JTM	Tenmabayashi	1.23	191	P	Pn	18 16 15.5	+0.3
JTM				eS	Sn	18 16 33.0	+0.6
JISS	Ishikarishitsu	1.28	1	P	Pn	18 16 16.1	+0.4
JOSM	Okushiri--Mats	1.42	274	P	Pn	18 16 17.3	-0.1
JOSM				eS	Sn	18 16 36.4	0.0
JFR	Furan	1.47	37	P	Pn	18 16 17.6	-0.5
JSK	Shakotan	1.51	334	P	Pn	18 16 19.0	+0.5
JCH	Churui	1.60	67	P	Pn	18 16 19.9	+0.3
JCH				eS	Sn	18 16 41.0	+0.6
JANG	Nango	1.62	176	P	Pn	18 16 19.4	-0.6
JHR	Hokuryu	1.77	8	P	Pn	18 16 22.7	+0.9
ASAJ	Asahikawa	2.30	22	P	Pn	18 16 29.4	+0.6
	6.4nm,0.3s,baz=217,slow=14,SNR=146						
ASAJ				S	Sn	18 16 56.5	0.0
	7.6nm,0.3s,baz=214,slow=28,SNR=12						
MJAR	Matsushiro Arr	5.97	205	P	Pn	18 17 19.7	+1.4
	0.1nm,0.3s,baz=327,slow=16,SNR=5.8						
USRK	Ussuriysk Ar.	7.21	291	P	Pn	18 17 36.4	+1.4
	baz=92,slow=15,SNR=5.0						
KLR	Kul'dur	9.88	320	P	Pn	18 18 12.5	+1.2
	0.1nm,0.3s,baz=130,slow=12,SNR=4.5						
H11N2	WAKE ISLAND Hy	30.98	128	T	T	18 54 38.1	
	baz=321,slow=75,SNR=9.2						
H11N1	WAKE ISLAND Hy	30.99	128	T	T	18 54 40.0	
	baz=321,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	30.99	128	T	T	18 54 37.5	
	baz=321,slow=75,SNR=7.7						
H11S1	WAKE ISLAND Hy	31.82	130	T	T	18 55 39.9	
	baz=323,slow=76,SNR=4.6						
H11S3	WAKE ISLAND Hy	31.82	130	T	T	18 55 40.1	
	baz=323,slow=76,SNR=5.4						
H11S2	WAKE ISLAND Hy	31.84	130	T	T	18 55 41.2	
	baz=323,slow=76,SNR=4.4						
ZALV	Zalesovo Beam	38.69	308	P	P	18 23 06.4	+0.1
	0.4nm,0.5s,baz=82,slow=12,SNR=2.3						
MKAR	Makanchi Array	41.63	297	P	P	18 23 31.7	+1.0
	0.3nm,0.7s,baz=82,slow=10,SNR=3.6						
CMAR	Chiang Mai Arr	42.95	250	P	P	18 23 43.6	+1.9
	0.1nm,0.4s,baz=34,slow=9.8,SNR=2.0						
ILAR	Eielson Array	45.38	35	P	P	18 24 00.8	+0.2
	0.5nm,0.9s,baz=266,slow=5.3,SNR=6.0						
YKA	Yellowknife Ar	59.57	31	P	P	18 25 43.5	-1.7
	0.1nm,0.5s,baz=307,slow=6.3,SNR=2.8						
WRA	Warramunga Arr	61.97	188	P	P	18 26 01.2	-0.8
	0.2nm,0.5s,baz=5.9,slow=7.5,SNR=1.5						
FINES	FINESS Array B	64.44	331	P	P	18 26 17.3	-0.4
	2.4nm,0.8s,baz=46,slow=8.0,SNR=1.5						
ASAR	Alice Springs	65.69	188	P	P	18 26 24.8	-1.6
	0.2nm,0.7s,baz=5.6,slow=6.4,SNR=1.9						
NVAR	Mina Array Bea	72.08	54	P	P	18 27 06.3	+0.1
	0.5nm,0.6s,baz=310,slow=7.0,SNR=2.3						
PDAR	Pinedale Array	74.24	46	P	P	18 27 18.4	-0.5
	0.3nm,0.5s,baz=291,slow=2.8,SNR=2.9						

*KRNET **29** 18:45:05.9±0.1, 40.°63N×78.°48E, mb3.8*
*IDC **29** 18:45:08.6±2.5, 40.°59N×78.°28E, h0^{km}, mb3.7/3, mb1 3.6/8, mb1mx3.3/52, mbtmp3.4/8, ML2.9/5, MS3.8/2, Ms1 3.8/2, ms1mx2.9/46, Error ellipse: s-maj=35.2km s-min=23.5km az=164.0*
*SOME **29** 18:45:08.2, 40.°70N×78.°13E, h10^{km}*
*NNC **29** 18:45:09.9±1.0, 40.°72N×78.°22E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=7.2km s-min=5.0km az=167.0*

ISC 29 18:45:10.7±1.2**, 40.°75N**±0.°06×**78.°19E**±0.°03**, h10^{km}, n89, σ1.^{s}68**/122**, mb3.5**/3**, 28C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.57	331	⇑iP	Pb	18 45 39.0	-0.9
	baz=28						
KDJ				⇑iS	Sg	18 46 02.9	+1.7
	baz=28						
PRZ	Przheval'sk	1.74	5	⇑iP	Pn	18 45 40.2	-0.9
	baz=58						
PRZ				⇑iS	Sg	18 46 05.5	-1.0
	baz=58						
ANVS	Anan'yevo	2.06	349	⇑eP	Pn	18 45 46.1	+0.5
	baz=45						
ANVS				⇑iS	Sb	18 46 15.3	+1.1
	baz=45						
ULHL	Ulahol	2.09	316	⇑iP	Pn	18 45 46.7	+0.8
	baz=15						
ULHL				⇑iS	Sb	18 46 16.3	+1.4
	baz=15						
ULHL	Ulahol	2.09	316	P	Pb	18 45 48.5	-0.3
	SNR=50						
SATY	Saty	2.31	4	eP	Pg	18 45 53.3	-1.7
	54nm,0.6s						
SATY				eS	Sg	18 46 25.4	+0.5
	196nm,1.0s						
SATY	Saty	2.31	4	Pg	Pg	18 45 53.3	-1.7
	54nm,0.6s						
SATY				Lg	Lg	18 46 25.4	
	196nm,1.0s						
BOOM	Boomskoye usch	2.42	317	⇑iP	Pn	18 45 51.7	+1.2
	baz=15						
BOOM				⇑iS	Sb	18 46 25.3	+1.0
	baz=15						
ZHN	Zhinishke	2.42	4	eP	Pg	18 45 55.1	-2.0
	11nm,0.2s						
ZHN				eS	Sg	18 46 28.3	-0.1
	111nm,1.1s						
ZHN	Zhinishke	2.42	4	Pg	Pg	18 45 55.0	-2.0
	11nm,0.2s						
ZHN				Lg	Lg	18 46 28.3	
	111nm,1.1s						
TNSS	Tian-Shan	2.46	338	eP	Pg	18 45 56.2	-1.7
	50nm,0.4s						
TNSS				eS	Sg	18 46 30.5	+0.7
	102nm,0.9s						
TNSS	Tian-Shan	2.46	338	Pg	Pg	18 45 56.2	-1.7
	50nm,0.4s						
TNSS				Lg	Lg	18 46 30.5	
	102nm,0.9s						
UZB	Uzynbulak	2.47	14	eP	Pb	18 45 55.6	+0.4
	22nm,0.6s						
UZB				eS	Sg	18 46 29.6	-0.4
	71nm,0.7s						
UZB	Uzynbulak	2.47	14	Pg	Pb	18 45 55.7	+0.4
	22nm,0.6s						
UZB				Lg	Lg	18 46 29.6	
	71nm,0.7s						
MDOK	Medeo	2.55	341	eP	Pb	18 45 57.3	+0.6
	52nm,0.5s						
MDOK				eS	Sg	18 46 32.5	-0.3
	254nm,0.6s						
MDOK	Medeo	2.55	341	⇓Pn	Pb	18 45 55.7	-1.0
	40nm,0.5s						
MDOK				⇑Lg	Lg	18 46 33.2	
	227nm,0.6s						
MDOK	Medeo	2.55	341	Pg	Pb	18 45 57.3	+0.6
	52nm,0.5s						
MDOK				Lg	Lg	18 46 32.5	
	254nm,0.6s						
IZV	Izvestkoviy	2.57	333	eP	Pb	18 45 57.6	+0.7
	36nm,0.5s						
IZV				eS	Sg	18 46 33.2	0.0
	487nm,0.6s						
IZV	Izvestkoviy	2.57	333	Pg	Pb	18 45 57.6	+0.7
	36nm,0.5s						
IZV				Lg	Lg	18 46 33.2	
	487nm,0.6s						
SHLS	Shalkode	2.58	21	eP	Pg	18 45 58.8	-1.4
	28nm,0.5s						
SHLS				eS	Sg	18 46 34.8	+1.1
	150nm,0.8s						
SHLS	Shalkode	2.58	21	Pg	Pg	18 45 58.8	-1.4
	28nm,0.5s						
SHLS				Lg	Lg	18 46 34.8	
	150nm,0.8s						
KOTS	Kotyrbulak	2.60	342	eP	Pb	18 45 58.6	+1.0
	140nm,0.5s						
KOTS				eS	Sg	18 46 34.5	+0.2
	201nm,0.5s						
KOTS	Kotyrbulak	2.60	342	Pg	Pb	18 45 58.6	+1.0
	140nm,0.5s						
KOTS				Lg	Lg	18 46 34.5	
	201nm,0.5s						
KNDC	Almaty	2.62	340	⇓Pg	Pb	18 45 58.4	+0.5
	51nm,0.6s						
KNDC				⇑Lg	Lg	18 46 36.1	
	282nm,0.6s						
AAA	Alma-Ata	2.63	339	eP	Pg	18 45 59.5	-1.6
	50nm,0.2s						
AAA				eS	Sg	18 46 36.4	+1.2
	8.8nm,0.3s						
AAA	Alma-Ata	2.63	339	Pg	Pg	18 45 59.5	-1.6
	50nm,0.2s						
AAA				Lg	Lg	18 46 36.4	
	8.8nm,0.3s						
MTBS	Maitube	2.71	332	eP	Pb	18 46 00.1	+0.8
	26nm,0.7s						
MTBS				eS	Sg	18 46 37.2	-0.7
	83nm,0.3s						
MTBS	Maitube	2.71	332	Pg	Pb	18 46 00.1	+0.8
	26nm,0.7s						
MTBS				Lg	Lg	18 46 37.2	
	83nm,0.3s						
KURS	Kuram	2.73	360	eP	Pg	18 46 01.2	-1.8
	52nm,0.4s						
KURS				eS	Sg	18 46 39.4	+1.0
	157nm,0.8s						
KURS	Kuram	2.73	360	Pg	Pg	18 46 01.2	-1.8
	52nm,0.4s						
KURS				Lg	Lg	18 46 39.4	
	157nm,0.8s						
KPKS	Kokpek	2.74	8	eP	Pg	18 46 00.8	-2.3
	71nm,0.4s						
KPKS				eS	Sg	18 46 38.6	+0.1
	341nm,0.5s						
PDGK	Podgornoye	2.75	20	Pg	Pb	18 45 59.3	-0.7
	9.7nm,0.6s						
PDGK				Lg	Lg	18 46 35.3	
	59nm,0.7s						
PDGK	Podgornoye	2.75	20	⇑Pg	Pb	18 45 57.9	-2.1
	26nm,0.9s						
PDGK				⇓Lg	Lg	18 46 35.3	
	142nm,0.8s						
KST	Kastek	2.83	325	eP	Pb	18 46 02.0	+0.7
	34nm,0.5s						
KST				eS	Sg	18 46 40.8	-0.7
	89nm,0.6s						
KST	Kastek	2.83	325	Pg	Pb	18 46 02.0	+0.7
	34nm,0.5s						
KST				Lg	Lg	18 46 40.8	
	89nm,0.6s						
TKM2	Tokmak 2	2.91	319	⇓eP	Pn	18 45 57.9	+0.7
	baz=18						
TKM2				⇓iS	Sb	18 46 35.6	-2.8
	baz=18						
TKM2	Tokmak 2	2.91	319	P	Pb	18 46 00.5	-2.2
	SNR=26						
TKM2	Tokmak 2	2.91	319	⇑Pg	Pb	18 46 02.2	-0.5
	7.6nm,0.3s						
TKM2				⇑Lg	Lg	18 46 43.4	
	71nm,0.6s						
DGS	Degeres	3.07	325	eP	Pb	18 46 06.0	+0.6
	39nm,0.6s						
DGS				eS	Sg	18 46 47.5	-1.8
	144nm,0.7s						
DGS	Degeres	3.07	325	Pg	Pb	18 46 06.0	+0.6
	39nm,0.6s						
DGS				Lg	Lg	18 46 47.5	
	144nm,0.7s						
KBK	Karagaybulak	3.08	309	⇑iP	Pn	18 46 00.9	+1.3
	baz=9.0						
KBK				⇑iS	Sb	18 46 40.9	-2.5
	baz=9.0						
KBK	Karagaybulak	3.08	309	P	Pb	18 46 07.5	+1.8
	SNR=33						
ARLS	Aral	3.11	292	⇓iP	Pn	18 46 01.1	+1.1
	baz=93						
ARLS				⇓iS	Sb	18 46 41.4	-2.9
	baz=93						
UCH	Uchtor	3.13	299	⇑iP	Pn	18 46 02.0	+1.5
	baz=99						
UCH				⇑iS	Sb	18 46 42.7	-2.3
	baz=99						
UCH	Uchtor	3.13	299	P	Pn	18 46 03.1	+2.6
	SNR=10						
KTMS	Ketmen	3.14	30	eP	Pb	18 46 07.0	+0.4
	3.9nm,0.2s						
KTMS				eS	Sg	18 46 48.9	-2.5
	66nm,0.7s						
KTMS	Ketmen	3.14	30	Pg	Pb	18 46 07.0	+0.4
	3.9nm,0.2s						
KTMS				Lg	Lg	18 46 48.9	
	66nm,0.7s						
KTBS	Karatobe	3.16	340	eP	Pb	18 46 07.8	+0.9
	31nm,0.4s						
KTBS				eS	Sg	18 46 50.2	-2.0
	110nm,0.7s						
KTBS	Karatobe	3.16	340	Pg	Pb	18 46 07.8	+0.9
	31nm,0.4s						
KTBS				Lg	Lg	18 46 50.2	
	110nm,0.7s						
CHKK	Chushkaly	3.22	344	eP	Pb	18 46 09.3	+1.3
	23nm,0.5s						
CHKK				eS	Sg	18 46 53.1	-1.1
	122nm,0.7s						
CHKK	Chushkaly	3.22	344	Pg	Pb	18 46 09.3	+1.3
	23nm,0.5s						
CHKK				Lg	Lg	18 46 53.1	
	122nm,0.7s						
MNBS	Baschi	3.33	3	eP	Pg	18 46 11.7	-2.7
	18nm,0.6s						
MNBS				eS	Sg	18 46 56.9	-0.6
	189nm,0.7s						
MNBS	Baschi	3.33	3	Pg	Pg	18 46 11.7	-2.7
	18nm,0.6s						
MNBS				Lg	Lg	18 46 56.9	
	189nm,0.7s						
AAK	Ala-Archa	3.34	305	Pn	Pb	18 46 06.9	-3.3
	2.7nm,0.3s,baz=122,slow=8.2,SNR=51						
AAK				Lg	Lg	18 46 54.4	
	6.7nm,0.3s,baz=299,slow=18,SNR=15						
AAK	Ala-Archa	3.34	305	⇓iP	Pn	18 46 04.9	+1.7
	baz=5.0						
AAK				⇓iS	Sb	18 46 47.4	-3.6
	baz=5.0						
AAK	Ala-Archa	3.34	305	P	Pb	18 46 11.3	+1.2
	SNR=9.9						
AAK	Ala-Archa	3.34	305	⇓Pg	Pb	18 46 10.7	+0.5
	9.6nm,0.4s						
AAK				⇓Lg	Lg	18 46 55.3	
	150nm,1.1s						
CHMS	Chumysh	3.41	312	⇑iP	Pn	18 46 05.0	+1.1
	baz=12						
CHMS				⇑iS	Sn	18 46 48.3	+3.9
	baz=12						
CHMS	Chumysh	3.41	312	P	Pg	18 46 13.8	-2.1
	SNR=24						
ARXS	Arharly	3.47	356	eP	Pb	18 46 13.3	+1.1
	61nm,0.6s						
ARXS				eS	Sg	18 47 00.2	-1.8
	64nm,0.6s						
ARXS	Arharly	3.47	356	Pg	Pb	18 46 13.3	+1.1
	61nm,0.6s						
ARXS				Lg	Lg	18 47 00.2	
	64nm,0.6s						
AML	Almayashu	3.65	294	⇑iP	Pn	18 46 09.5	+2.0
	baz=94						
AML				⇑iS	Sb	18 46 55.8	-4.1
	baz=94						
AML	Almayashu	3.65	294	P	Pg	18 46 18.6	-2.0
	SNR=11						
USP	Ospenovka	3.72	314	P	Pb	18 46 17.2	+0.7
	SNR=21						
DJR	Jarkent	3.77	18	eP	Pb	18 46 18.8	+1.5
	8.3nm,0.6s						
DJR				eS	Sg	18 47 09.1	-2.5
	38nm,0.5s						
DJR	Jarkent	3.77	18	Pg	Pb	18 46 18.8	+1.5
	8.3nm,0.6s						
DJR				Lg	Lg	18 47 09.1	
	38nm,0.5s						
SGDS	Sogindy	3.78	317	Pg	Pb	18 46 18.5	+1.1
	4.3nm,0.5s						
SGDS				Lg	Lg	18 47 08.9	
	33nm,0.5s						
EKS2	Erkin-Say	3.81	301	P	Pb	18 46 20.4	+2.3
	SNR=9.5						
MRKS	Merke	4.21	300	eP	Pb	18 46 27.0	+2.1
	12nm,0.6s						
MRKS				eS	Sg	18 47 23.2	-2.6
	16nm,0.8s						
MRKS	Merke	4.21	300	Pg	Pb	18 46 27.0	+2.1
	12nm,0.6s						
MRKS				Lg	Lg	18 47 23.2	
	16nm,0.8s						
TDK	Taldyqorghan	4.25	2	eP	Pg	18 46 30.0	-2.1
	48nm,0.4s						
TDK				eS	Sg	18 47 28.7	+1.6
	151nm,1.0s						
TDK	Taldyqorghan	4.25	2	Pg	Pg	18 46 30.0	-2.1
	48nm,0.4s						
TDK				Lg	Lg	18 47 28.7	
	151nm,1.0s						
KAPS	Kapalarasan	4.61	10	eP	Pg	18 46 35.8	-3.1
	6.3nm,0.6s						
KAPS				eS	Sg	18 47 38.8	+0.1
	26nm,0.8s						
KAPS	Kapalarasan	4.61	10	Pg	Pg	18 46 35.8	-3.1
	6.3nm,0.6s						

KAPS				Lg	Lg	18 47 38.8	
	26nm,0.8s						
BTLS	**Baital**	**5.25**	**326**	Pg	**Pb**	**18 46 46.2**	**+3.6**
	3.1nm,0.5s						
BTLS				Lg	Lg	18 47 55.9	
	21nm,0.6s						
KK31	**Karatay Array**	**6.19**	**295**	⇑Pg	Pb	18 47 03.5	+5.0
	1.6nm,0.5s,baz=108,slow=15,SNR=9.4						
KK31				⇓Lg	Lg	18 48 26.7	
	4.9nm,0.6s,baz=99,slow=27,SNR=6.4						
MAKZ	**Makanchi**	**6.64**	**23**	⇓Pn	**Pn**	**18 46 49.1**	**+0.8**
	2.4nm,1.4s						
MAKZ				⇑Lg	Lg	18 48 38.0	
	6.3nm,1.3s						
MK31	**Makanchi Array**	**6.73**	**25**	⇓Pn	**Pn**	**18 46 50.8**	**+1.2**
	1.0nm,0.7s,baz=205,slow=14,SNR=8.2						
MK31				⇑Sn	**Sn**	**18 48 07.6**	**+1.4**
	4.0nm,0.7s						
MK31				⇓Lg	Lg	18 48 43.1	
	7.7nm,0.9s,baz=208,slow=25,SNR=4.1						
MKAR	**Makanchi Array**	**6.73**	**25**	Pn	**Pn**	**18 46 50.9**	**+1.4**
	0.2nm,0.3s,baz=206,slow=14,SNR=7.9						
MKAR				Sn	**Sn**	**18 48 08.0**	**+1.8**
	0.2nm,0.3s,baz=206,slow=24,SNR=7.7						
MKAR				Lg	Lg	18 48 40.0	
	0.1nm,0.3s,baz=204,slow=23,SNR=1.9						
KURBB	**Kurchatov Arra**	**9.87**	**1**	Pn	**Pn**	**18 47 33.5**	**+1.0**
	0.1nm,0.3s,baz=188,slow=12,SNR=12						
KURBB				Lg	Lg	18 50 22.2	
	0.0nm,0.3s,baz=17,slow=13,SNR=4.7						
KURBB	**Kurchatov Arra**	**9.87**	**1**	⇑Lg	Lg	18 50 24.8	
	16nm,0.8s						
KURK	**Kurchatov**	**9.97**	**2**	⇑Pn	**Pn**	**18 47 35.2**	**+1.3**
	3.8nm,1.2s						
KURK				⇓Lg	Lg	18 50 26.6	
	12nm,1.0s						
BVAR	**Borovoye Array**	**13.37**	**339**	Pn	**Pn**	**18 48 18.8**	**-1.6**
	0.1nm,0.3s,baz=155,slow=26,SNR=4.2						
BVAR				Lg	Lg	18 52 10.5	
	0.1nm,0.3s,baz=144,slow=32,SNR=3.3						
ZALV	**Zalesovo Beam**	**13.94**	**16**	Pn	**Pn**	**18 48 30.6**	**+2.5**
	0.2nm,0.3s,baz=204,slow=14,SNR=1.6						
SONM	**Songino Array**	**21.32**	**61**	P	**P**	**18 49 58.3**	**+0.6**
	0.6nm,0.7s,baz=265,slow=11,SNR=4.2						
BELG	**Belogornoye**	**23.83**	**310**	LR	LR	19 01 44.0	
	comp=Z,177nm,19.1s,baz=23,slow=42						
FINES	**FINESS Array B**	**37.39**	**321**	P	**P**	**18 52 24.6**	**+1.3**
	2.6nm,0.8s,baz=99,slow=7.2,SNR=1.5						
INK	**Inuvik**	**68.69**	**12**	LR	LR	19 30 23.7	
	comp=Z,73nm,19.3s,baz=340,slow=39						
YKA	**Yellowknife Ar**	**76.59**	**6**	P	**P**	**18 57 00.4**	**-0.5**
	0.3nm,0.6s,baz=347,slow=5.5,SNR=5.8						

*MAN **29** 18:47:19.1, 14°.78N×123°.35E, h1^{km}, mb4.7, ML3.6, MS3.5*
*IDC **29** 18:47:27.5±5.8, 14°.59N×123°.47E, h68^{km}±55^{km}, mb3.1/5, mb1 3.3/5, mb1mx3.0/42, mbtmp3.4/5, ML4.6/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/19, Error ellipse: s-maj=47.1km s-min=20.4km az=64.0*
ISC 29 18:47:21.5±1.4, **14°.71N**±0°.04×**123°.27E**±0°.04, **h13**^{km}±10^{km}, **n27**, σ**1^{s}83**/34, **mb3.4**/5, **2D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCNP	**Jose Panganiba**	**0.70**	**233**	*e*P	**Pg**	**18 47 34.6**	**-0.4**
JCNP				*e*S	**Sg**	**18 47 45.3**	**+1.0**
SCSP	**San Jose Seism**	**1.08**	**167**	*e*P	**Pb**	**18 47 40.8**	**-1.2**
SCSP				*e*S	**Sg**	**18 47 56.0**	**-0.4**
GQP	**Guinayangan**	**1.13**	**225**	⇓*e*P	**Pn**	**18 47 38.5**	**-4.5**
GQP				*e*S	**Sn**	**18 48 00.3**	**+1.8**
AUQP	**San Andres**	**1.50**	**203**	*e*P	**Pg**	**18 47 51.5**	**+1.2**
AUQP				*e*S	**Sg**	**18 48 13.8**	**+4.0**
BOAC	**Boac**	**1.86**	**228**	*e*P	**Pb**	**18 47 55.7**	**+0.3**
BOAC				*e*S	**Sn**	**18 48 16.0**	**-0.5**
QVP	**Quezon City--P**	**2.20**	**268**	*e*P	**Pn**	**18 47 56.9**	**-0.8**
TGY	**Tagaytay City**	**2.34**	**255**	P	**Pg**	**18 48 05.9**	**-0.5**
	126nm,0.3s,baz=40,slow=3.5,SNR=9.0						
TGY				S	**Sg**	**18 48 36.4**	**-0.5**
	100nm,0.3s,baz=287,slow=21,SNR=4.3						
MACP	**Maragondon, Ca**	**2.51**	**260**	*e*P	**Pb**	**18 48 04.3**	**-2.2**
MACP				*e*S	**Sb**	**18 48 38.2**	**+0.9**
CNP	**Catarman**	**2.57**	**148**	*e*P	**Pn**	**18 48 02.9**	**0.0**
CNP				*e*S	**Sn**	**18 48 33.9**	**-0.1**
CAUP	**Cauayan**	**2.62**	**328**	*e*P	**Pn**	**18 48 03.5**	**0.0**
CAUP				*e*S	**Sn**	**18 48 34.8**	**-0.4**
SMPP	**San Manuel, Pa**	**2.88**	**300**	*e*P	**Pn**	**18 48 06.8**	**-0.3**
SMPP				*e*S	**Sn**	**18 48 43.2**	**+1.5**
SJMP	**San Jose**	**3.06**	**223**	*e*P	**Pb**	**18 48 12.9**	**-3.0**
SJMP				*e*S	**Sn**	**18 48 50.1**	**+3.9**
CVP	**Callao Caves**	**3.28**	**335**	⇓*e*P	**Pn**	**18 48 13.0**	**+0.4**
CVP				*i* S	**Sn**	**18 48 50.6**	**-1.0**
APYP	**Conner**	**3.69**	**328**	*e*P	**Pn**	**18 48 18.9**	**+0.7**
APYP				*e*S	**Sn**	**18 49 02.4**	**+0.9**
SGCP	**Mt. Cagua**	**3.70**	**342**	*e*P	**Pn**	**18 48 18.3**	**-0.1**
SGCP				*e*S	**Sn**	**18 48 59.4**	**-2.5**
CMAR	**Chiang Mai Arr**	**23.61**	**282**	P	**P**	**18 52 34.2**	**+1.8**
	0.5nm,0.6s,baz=90,slow=7.3,SNR=4.4						
BATI	**Baumata**	**24.76**	**179**	LR	LR	19 03 59.8	
	comp=Z,62nm,19.8s,baz=195,slow=40						
SONM	**Songino Array**	**35.87**	**340**	P	**P**	**18 54 22.5**	**+1.3**
	1.9nm,0.8s,baz=159,slow=10,SNR=16						
WRA	**Warramunga Arr**	**36.12**	**162**	P	**P**	**18 54 21.5**	**-2.0**
	0.4nm,0.7s,baz=344,slow=9.6,SNR=2.4						
ASAR	**Alice Springs**	**39.53**	**165**	P	**P**	**18 54 50.6**	**-1.7**
	0.1nm,0.3s,baz=338,slow=6.8,SNR=1.5						
ASAR				LR	LR	19 14 48.3	
	comp=Z,48nm,18.4s,baz=324,slow=42						
H11S3	**WAKE ISLAND Hy**	**41.70**	**79**	T	T	19 39 34.4	
	baz=272,slow=75						
H11S1	**WAKE ISLAND Hy**	**41.72**	**79**	T	T	19 39 33.5	
	baz=272,slow=75						
H11S2	**WAKE ISLAND Hy**	**41.72**	**79**	T	T	19 39 35.1	
	baz=272,slow=75						
H11N1	**WAKE ISLAND Hy**	**41.88**	**77**	T	T	19 39 47.4	
	baz=269						
H11N2	**WAKE ISLAND Hy**	**41.88**	**77**	T	T	19 39 46.9	
	baz=269						
H11N3	**WAKE ISLAND Hy**	**41.89**	**77**	T	T	19 39 46.9	
	baz=269						
MKAR	**Makanchi Array**	**46.74**	**322**	P	**P**	**18 55 51.6**	**+1.1**
	0.5nm,0.8s,baz=119,slow=8.2,SNR=4.5						
MKAR				pP	sP	18 56 09.6	+14
	0.7nm,0.7s,baz=112,slow=9.3,SNR=6.5						

*IDC **29** 19:12:24.0±0.9, 23°.79N×49°.09E, h0^{km}, mb4.0/21, mb1 4.2/24, mb1mx4.0/50, mbtmp4.1/24, ML4.0/2, MS3.7/20, Ms1 3.7/20, ms1mx3.5/53, Error ellipse: s-maj=20.2km s-min=16.3km az=12.0*
*NEIC **29** 19:12:25.5±1.3, 23°.6N±0°.2×49°.19E±0°.05, h14^{km}±6^{km}, mb4.2/24, Error ellipse: s-maj=25.5km s-min=6.7km az=174.0*
*DSN **29** 19:12:28.8±0.8, 23°.92N×49°.11E, h30^{km}, ML5.1/13, Error ellipse: s-maj=18.9km s-min=8.2km az=168.0*
*OMAN **29** 19:12:31.4±2.3, 23°.67N×49°.47E, h14^{km}, mb5.9/23, ml5.0/2, Error ellipse: s-maj=50.0km s-min=18.8km az=84.0*
ISC 29 19:12:25.6±0.5, **23°.81N**±0°.05×**49°.13E**±0°.04, **h10**^{km}, **n120**, σ**1^{s}53**/136, **mb4.2**/27, **MS3.7**/16, **1D**, **Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLWR	**Sila**	**2.36**	**83**	P	**Pb**	**19 13 07.1**	**-1.1**
SLWR				S	**Sg**	**19 13 42.7**	**+1.3**
RAYN	**Ar Rayn**	**3.34**	**266**	*i* P	**Pn**	**19 13 19.2**	**+1.2**
	SNR=44						
RAYN	**Ar Rayn**	**3.34**	**266**		**Pn**	**19 13 18.1**	**+0.1**
JRN	**Qarnain Island**	**3.57**	**71**	P	**Pn**	**19 13 23.0**	**+1.9**
	SNR=6.5						
JRN				S	**Sn**	**19 14 05.4**	**+2.0**
MZWR	**Madinat Zayed**	**4.35**	**90**	P	**Pn**	**19 13 34.4**	**+2.6**
MZWR				S	**Sn**	**19 14 26.0**	**+3.4**
RDF	**Al-Radifah**	**5.29**	**345**	*e*P		19 13 43.8	
AJN	**Ajban**	**5.40**	**81**	*i* P	**Pn**	**19 13 47.7**	**+1.5**
	SNR=16						
AJN	**Ajban**	**5.40**	**81**	P	**Pn**	**19 13 48.5**	**+2.2**
	SNR=12						
AJN				S	**Sn**	**19 14 47.5**	**-1.0**
KBD	**Kabd**	**5.50**	**347**	*e*P		19 13 46.4	
ASUD	**Al Ashush, Dub**	**5.72**	**81**	*i* P	**Pn**	**19 13 52.2**	**+1.6**
	SNR=105						
ASUD	**Al Ashush, Dub**	**5.72**	**81**	P	**Pn**	**19 13 52.4**	**+1.8**
	SNR=105						
ASUD				S	**Sn**	**19 14 57.6**	**+1.3**
FAQ	**Al Faqa, Dubai**	**5.97**	**80**	*i* P	**Pn**	**19 13 55.2**	**+1.1**
	SNR=40						
FAQ	**Al Faqa, Dubai**	**5.97**	**80**	P	**Pn**	**19 13 55.6**	**+1.5**
	SNR=15						
FAQ				S	**Sn**	**19 15 02.5**	**0.0**
RST	**Umm Al-Ruwaisa**	**5.98**	**342**	*e*P		19 13 54.0	
ALNE	**Al Ain**	**6.06**	**86**	*i* P	**Pn**	**19 13 57.4**	**+2.1**
	SNR=13						
ALNE	**Al Ain**	**6.06**	**86**	P	**Pn**	**19 13 57.3**	**+1.9**
	SNR=21						
ALNE				S	**Sn**	**19 15 03.8**	**-1.1**
NAZ	**Nazwa, Dubai**	**6.07**	**77**	*i* P	**Pn**	**19 13 57.0**	**+1.5**
	SNR=22						
NAZ	**Nazwa, Dubai**	**6.07**	**77**	P	**Pn**	**19 13 56.9**	**+1.4**
	SNR=19						
NAZ				S	**Sn**	**19 15 03.7**	**-1.3**
UMQ	**Umm Al-Quwin**	**6.18**	**73**	P	**Pn**	**19 13 58.0**	**+1.0**
ASHO	**Ashiyiah**	**6.38**	**81**	*i* P	**Pn**	**19 14 01.0**	**+1.2**
	SNR=113						
ASHO	**Ashiyiah**	**6.38**	**81**	P	**Pn**	**19 14 00.7**	**+0.9**
ASHO				S	**Sn**	**19 15 10.5**	**-2.3**
HATD	**Hatta, Dubai**	**6.47**	**80**	*i* P	**Pn**	**19 14 02.0**	**+1.1**
	SNR=68						
HATD				*i* P	**Pn**	**19 14 02.3**	**+1.4**
	SNR=22						
HATD	**Hatta, Dubai**	**6.47**	**80**	P	**Pn**	**19 14 02.0**	**+1.1**
	SNR=68						
HATD				S	**Sn**	**19 15 12.6**	**-2.2**
UOSS	**Minazif**	**6.55**	**79**	*i* P	**Pn**	**19 14 02.8**	**+0.8**
	SNR=24						
UOSS	**Minazif**	**6.55**	**79**	Pn	**Pn**	**19 14 01.5**	**-0.5**
UOSS	**Minazif**	**6.55**	**79**	P	**Pn**	**19 14 02.6**	**+0.5**
MSFE	**Esma-Masafi**	**6.58**	**75**	*i* P	**Pn**	**19 14 02.4**	**-0.1**
	SNR=44						
MSFE				*i* P	**Pn**	**19 14 02.7**	**+0.2**
	SNR=22						
MASF	**Masafi**	**6.58**	**75**	P	**Pn**	**19 14 02.5**	**-0.1**
	SNR=44						
MASF				S	**Sn**	**19 15 14.8**	**-2.9**
MDH	**Madha**	**6.69**	**76**	*i* P	**Pn**	**19 14 04.2**	**+0.2**
	SNR=43						
MDH	**Madha**	**6.69**	**76**	P	**Pn**	**19 14 04.2**	**+0.2**
	SNR=43						
MDH				S	**Sn**	**19 15 17.9**	**-2.5**
SHME	**Shamm**	**6.75**	**69**	*i* P	**Pn**	**19 14 03.5**	**-1.2**
	SNR=71						
SHME	**Shamm**	**6.75**	**69**	P	**Pn**	**19 14 03.3**	**-1.4**
	SNR=19						
SHME				S	**Sn**	**19 15 18.4**	**-3.2**
SOHO	**SOHO**	**6.78**	**86**	*i* P	**Pn**	**19 14 06.4**	**+1.1**
	SNR=63						
SOHO	**SOHO**	**6.78**	**86**	P	**Pn**	**19 14 06.3**	**+1.1**
ARQ	**Araqi**	**6.80**	**92**	P	**Pn**	**19 14 07.0**	**+1.5**
	SNR=18						
ARQ				S	**Sn**	**19 15 21.4**	**-1.6**
BANOM	**Banah**	**6.84**	**71**	*i* P	**Pn**	**19 14 05.4**	**-0.6**
	SNR=85						
BANOM	**Banah**	**6.84**	**71**	P	**Pn**	**19 14 05.5**	**-0.6**
	SNR=85						
BANOM				S	**Sn**	**19 15 22.8**	**-1.3**
DOK	**Doka**	**6.96**	**137**	P	**Pn**	**19 14 09.2**	**+1.5**
	SNR=8.2						
DOK				S	**Sn**	**19 15 26.6**	**-0.3**
WHFO	**Wadi Hawf**	**7.29**	**143**	P	**Pn**	**19 14 12.8**	**+0.5**
	SNR=15						
WHFO				S	**Sn**	**19 15 34.2**	**-1.0**
BSY	**Bisya**	**7.49**	**97**	P	**Pn**	**19 14 16.0**	**+0.9**
	SNR=37						
BSY				S	**Sn**	**19 15 36.9**	**-3.3**
HOQ	**Hoqain**	**7.50**	**90**	P	**Pn**	**19 14 16.0**	**+0.8**
	SNR=53						
HOQ				S	**Sn**	**19 15 36.7**	**-3.6**
ABTO	**Aybut**	**7.51**	**148**	P	**Pn**	**19 14 15.8**	**+0.4**
ABTO				S	**Sn**	**19 15 39.1**	**-1.5**
SMDO	**Samad**	**8.22**	**93**	P	**Pn**	**19 14 26.0**	**+0.9**
	SNR=13						
BIDO	**Bidbid**	**8.25**	**90**	P	**Pn**	**19 14 26.0**	**+0.6**
SHAO	**Shalim**	**8.36**	**132**	*i* P	**Pn**	**19 14 28.0**	**+1.0**
	SNR=21						
JMDO	**Jabal Madar**	**8.38**	**98**	P	**Pn**	**19 14 27.6**	**+0.3**
	SNR=21						
MHTO	**MHTO**	**8.64**	**107**	P	**Pn**	**19 14 31.6**	**+0.8**
	SNR=23						
MHTO				S	**Sn**	**19 16 04.4**	**-4.0**
WSAR	**Wadi Sarin**	**8.74**	**92**	Pn	**Pn**	**19 14 32.2**	**+0.1**
	2.8nm,0.3s,baz=278,slow=14,SNR=42						
WSAR				Sn	**Sn**	**19 16 05.9**	**-4.8**
	16nm,0.3s,baz=81,slow=20,SNR=8.4						
WSAR				Lg	Lg	19 17 12.8	
	baz=211,slow=9.5,SNR=2.0						
WSAR				LR	LR	19 18 48.9	
	comp=Z,497nm,19.7s,baz=286,slow=44						
ATD	**Arta Tunnel**	**13.59**	**207**	Lg	Lg	19 19 37.8	
	0.6nm,0.3s,baz=90,slow=20,SNR=2.2						
ATD				LR	LR	19 21 26.8	
	comp=Z,109nm,21.6s,baz=1.5,slow=40						
EIL	**Elat**	**13.95**	**298**	Lg	Lg	19 19 48.9	
	1.0nm,0.3s,baz=180,slow=23,SNR=6.6						
EIL				LR	LR	19 21 01.9	
	comp=Z,83nm,20.1s,baz=100,slow=37						
MMAI	**Mount Meron Ar**	**15.15**	**310**	Pn	**P**	**19 16 04.4**	**-0.6**
	0.6nm,0.3s,baz=116,slow=13,SNR=2.3						
MMAI				Lg	Lg	19 20 36.7	
	baz=137,slow=24,SNR=1.8						
MARD	**Mardin**	**15.25**	**334**		**Pn**	**19 15 56.0**	**-5.1**
GEVA	**Gevas**	**15.36**	**342**	Pn	**Pn**	**19 15 58.8**	**-3.9**
GEVA				IAmb	IAmb	19 16 00.9	
	comp=Z,20nm,0.9s						
GEYT	**Alibeck**	**16.04**	**27**	Pn	**Pn**	**19 16 13.1**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=224,slow=12,SNR=4.2						
GYA0B	**ALIBECK ARRAY**	**16.04**	**27**	Pn	**Pn**	**19 16 12.2**	**+0.9**
GNI	**Garni**	**16.71**	**348**	Pn	**Pn**	**19 16 19.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=336,slow=20,SNR=2.6						
GNI				LR	LR	19 24 37.2	
	comp=Z,202nm,21.7s,baz=160,slow=44						
GAZ	**Gaziantep**	**16.80**	**325**	P	**P**	**19 16 22.9**	**-0.4**
GAZ				IAmb	IAmb	19 16 27.4	
	comp=Z,21nm,1.2s						
KOPT	**Kop Dagi**	**17.73**	**338**	P	**P**	**19 16 34.2**	**+0.5**
KOPT				IAmb	IAmb	19 16 38.8	
	comp=Z,28nm,1.3s						
AKH	**Akhalkalaki**	**18.18**	**346**	P	**Pn**	**19 16 38.6**	**+0.3**
KBL	**Kabul**	**20.38**	**54**	P	**P**	**19 17 02.6**	**-0.1**
KBL				IAmb	IAmb	19 17 09.5	
	comp=Z,12nm,0.9s						
KBZ	**Khabaz**	**20.52**	**347**	P	**P**	**19 17 04.5**	**+0.5**
	comp=Z,7.1nm,0.9s,baz=166,slow=5.5,SNR=12						
KBZ				LR	LR	19 27 16.7	
	comp=Z,496nm,18.9s,baz=148,slow=44						
BR131	**Keskin Array S**	**20.57**	**324**	P	**P**	**19 17 06.2**	**+1.4**
BR131				IAmb	IAmb	19 17 13.9	
	comp=Z,12nm,1.2s						
BRTR	**Keskin Array B**	**20.57**	**324**	P	**P**	**19 17 06.0**	**+1.2**
	comp=Z,1.6nm,0.5s,baz=138,slow=14,SNR=9.6						
BRTR	**Keskin Array B**	**20.57**	**324**		**P**	**19 17 05.9**	**+1.1**
KVAR	**Kislovodsk Arr**	**20.78**	**347**	P	**P**	**19 17 07.4**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=180,slow=13,SNR=2.2						
KIV	**Kislovodsk**	**20.78**	**347**	P	Pn	19 17 10.0	+0.7
KIV				IAmb	IAmb	19 17 16.2	
	comp=Z,16nm,1.0s						
NIL	**Nilore**	**23.27**	**60**	P	**P**	**19 17 33.0**	**-0.4**
IDI	**Anoyia**	**23.93**	**304**	LR	LR	19 28 14.8	
	comp=Z,84nm,19.8s,baz=93,slow=40						
KK31	**Karatay Array**	**26.11**	**37**	P	**P**	**19 18 01.1**	**+1.4**
KK31				IAmb	IAmb	19 18 24.6	
	comp=Z,3.3nm,0.8s						
KKAR	**Karatay Array**	**26.11**	**37**	P	**P**	**19 18 01.5**	**+1.8**
KKAR				IAmb	IAmb	19 18 24.6	
	comp=Z,3.3nm,0.8s						
KKAR	**Karatay Array**	**26.11**	**37**	P	**P**	**19 18 01.3**	**+1.6**
ABKAR	**Akbulak array**	**26.79**	**16**	P	**P**	**19 18 06.4**	**+0.7**
ABKAR	**Akbulak array**	**26.79**	**16**	P	**P**	**19 18 06.7**	**+1.0**
KMBO	**Kilima Mbogo**	**27.34**	**207**	LR	LR	19 27 52.0	
	comp=Z,121nm,21.3s,baz=82,slow=34						
AKTO	**Aktyubinsk**	**27.47**	**12**	P	**P**	**19 18 11.9**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=196,slow=14,SNR=6.5						
AKTO				LR	LR	19 30 10.8	
	comp=Z,102nm,20.6s,baz=155,slow=39						
AAK	**Ala-Archa**	**28.16**	**42**	P	**P**	**19 18 19.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=153,slow=2.3,SNR=2.0						
AAK				LR	LR	19 31 29.9	
	comp=Z,191nm,18.5s,baz=262,slow=41						
AAK	**Ala-Archa**	**28.16**	**42**	P	**P**	**19 18 18.4**	**+0.1**
BELG	**Belogornoye**	**28.57**	**358**	LR	LR	19 30 57.4	
	comp=Z,136nm,18.4s,baz=277,slow=39						
MLR	**Muntele Rosu**	**28.65**	**325**	P	**P**	**19 18 22.5**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=173,slow=17,SNR=2.1						
BURAR	**Bucovina Array**	**30.45**	**327**	P	**P**	**19 18 40.4**	**+1.9**
AKASG	**Malin Array Be**	**30.97**	**335**	P	**P**	**19 18 42.3**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=139,slow=8.7,SNR=9.1						
AKBB	**Malin Array Si**	**30.97**	**335**	P	**P**	**19 18 43.5**	**+0.6**
DANN	**Dangsing**	**31.36**	**74**	*e*P	**P**	**19 18 47.9**	**+0.9**
	comp=Z,15nm,0.6s						
KKN	**Kakani**	**32.71**	**75**	*e*P	**P**	**19 18 59.1**	**+0.3**
KOLS	**Kolonicke sedl**	**32.80**	**327**	*e*P	**P**	**19 19 01.0**	**+2.0**
PKIN	**Phulchoki**	**32.82**	**76**	*e*P	**P**	**19 18 59.6**	**-0.2**
	comp=Z,7.4nm,0.5s						
PKI	**Pulchoki**	**32.83**	**76**	*e*P	**P**	**19 19 00.0**	**0.0**
GUN	**Gumba**	**33.24**	**75**	*e*P	**P**	**19 19 03.8**	**+0.3**
ARU	**Arti**	**33.31**	**10**	LR	LR	19 34 18.2	
	comp=Z,113nm,20.0s,baz=241,slow=39						
BRVK	**Borovoye**	**33.32**	**23**	P	**P**	**19 19 03.5**	**0.0**
BRVK				IAmb	IAmb	19 19 04.6	
	comp=Z,3.5nm,0.7s						
LANS	**Liptovska Anna**	**34.38**	**325**	*e*P	**P**	**19 19 15.3**	**+2.5**
MAKZ	**Makanchi**	**34.89**	**41**	P	**P**	**19 19 17.9**	**+0.6**
MAKZ				IAmb	IAmb	19 19 21.8	
	comp=Z,3.3nm,0.8s						
MK31	**Makanchi Array**	**35.07**	**41**	P	**P**	**19 19 18.9**	**+0.1**
MKAR	**Makanchi Array**	**35.07**	**41**	P	**P**	**19 19 19.1**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=231,slow=7.6,SNR=18						
MKAR				LR	LR	19 34 56.1	
	comp=Z,103nm,18.9s,baz=262,slow=38						
MKAR	**Makanchi Array**	**35.07**	**41**	P	**P**	**19 19 18.7**	**-0.1**
KURK	**Kurchatov**	**35.25**	**33**	P	**P**	**19 19 21.0**	**+0.8**
KURK				IAmb	IAmb	19 19 25.3	
	comp=Z,4.8nm,1.1s						
WMQ	**Urumqi**	**37.31**	**48**	*e*P	**P**	**19 19 40.3**	**+2.2**
ZAA0	**Zalesovo Array**	**40.23**	**32**	P	**P**	**19 20 01.9**	**-0.4**
ZALV	**Zalesovo Beam**	**40.23**	**32**	P	**P**	**19 20 02.1**	**-0.1**
	comp=Z,11nm,0.5s,baz=240,slow=8.9,SNR=38						
ZALV	**Zalesovo Beam**	**40.23**	**32**	P	**P**	**19 20 02.0**	**-0.3**
FINES	**FINESS Array B**	**40.80**	**343**	P	**P**	**19 20 06.4**	**-0.5**
	comp=Z,5.1nm,0.5s,baz=150,slow=9.3,SNR=41						
NB2	**NORSAR Subarra**	**45.39**	**335**	P	**P**	**19 20 43.5**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=125,slow=8.6						
NOA	**NORSAR Array B**	**45.39**	**335**	P	**P**	**19 20 43.5**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=124,slow=8.1,SNR=7.0						
NOA				LR	LR	19 41 56.8	
	comp=Z,100nm,18.2s,baz=345,slow=39						
NAO01	**NORSAR Array S**	**45.39**	**335**	P	**P**	**19 20 44.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**46.03**	**265**	P	**P**	**19 20 50.2**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=66,slow=7.7,SNR=2.4						
TORD				LR	LR	19 40 53.5	
	comp=Z,138nm,19.5s,baz=80,slow=37						
TORD	**Torodi Ar. Bea**	**46.03**	**265**	P	**P**	**19 20 48.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**46.58**	**87**	P	**P**	**19 20 53.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=288,slow=6.5,SNR=2.6						
CMAR				LR	LR	19 46 42.4	
	comp=Z,50nm,18.6s,baz=226,slow=44						
ESDC	**Sonseca Array**	**47.18**	**303**	P	**P**	**19 20 58.3**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=75,slow=7.1,SNR=8.5						
ARCES	**ARCESS Array B**	**47.87**	**349**	P	**P**	**19 21 02.6**	**-0.8**
	comp=Z,4.9nm,0.9s,baz=165,slow=7.5,SNR=7.7						
ARCES				LR	LR	19 45 23.7	
	comp=Z,258nm,19.3s,baz=230,slow=41						
KMI	**Kunming**	**48.54**	**77**	⇓*e*P	**P**	**19 21 08.5**	**-1.0**
KMI				pP	pP	19 21 13.0	+0.2
KMI				sP	sP	19 21 15.0	+1.0
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	**Songino Array**	**50.93**	**47**	P	**P**	**19 21 27.8**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=270,slow=8.1,SNR=7.5						
SONM				LR	LR	19 47 17.4	
	comp=Z,77nm,21.5s,baz=271,slow=41						
SONM	**Songino Array**	**50.93**	**47**	P	**P**	**19 21 28.1**	**+0.9**
NRIK	**Noril'sk**	**50.95**	**16**	P	**P**	**19 21 27.0**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=232,slow=8.5,SNR=3.7						
ULN	**Ulaanbaatar**	**51.37**	**47**	P	**P**	**19 21 30.2**	**-0.4**
HHC	**Hu-ho-hao-te**	**54.33**	**56**	*e*P	**P**	**19 21 53.5**	**+0.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.9s						
BOSA	**Boshof**	**56.97**	**205**	P	**P**	**19 22 10.6**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=9.3,slow=5.6,SNR=1.8						
BOSA				LR	LR	19 48 22.0	
	comp=Z,97nm,20.8s,baz=52,slow=38						
KSRS	**Korea Array**	**67.37**	**58**	P	**P**	**19 23 20.9**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=281,slow=6.5,SNR=2.0						
KSRS				LR	LR	19 56 45.1	
	comp=Z,67nm,18.4s,baz=318,slow=40						
MJAR	**Matsushiro Arr**	**75.53**	**56**	LR	LR	20 02 25.5	
	comp=Z,64nm,18.1s,baz=315,slow=40						
YKA	**Yellowknife Ar**	**93.02**	**353**	P	**P**	**19 25 39.2**	**0.0**
	comp=Z,0.7nm,0.7s,baz=19,slow=5.1,SNR=8.6						
WRA	**Warramunga Arr**	**93.68**	**110**	P	**P**	**19 25 44.3**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=308,slow=3.9,SNR=2.5						
VNA2	**Neumayer--Watz**	**102.30**	**196**	Pdiff	**Pdif**	**19 26 17.3**	**-3.3**
VNA1	**Neumayer--Stat**	**102.35**	**197**	Pdiff	**Pdif**	**19 26 18.7**	**-2.1**
VNA3	**Neumayer Olymp**	**103.08**	**197**	Pdiff	**Pdif**	**19 26 21.0**	**-3.0**

*NEIC **29** 19:13:53.1±2.5, 40°.27N±0°.04×124°.71W±0°.08, h15^{km}±8^{km}, Error ellipse: s-maj=8.6km s-min=6.3km az=91.0*
*IDC **29** 19:13:53.6±1.4, 40°.39N×124°.36W, h0^{km}, mb3.4/4, mb1 3.9/9, mb1mx3.6/49, mbtmp3.5/9, ML4.0/4, MS3.1/4, Ms1 3.2/4, ms1mx2.9/22, Error ellipse: s-maj=16.5km s-min=9.4km az=93.0*
*NEIC **29** 19:13:55, 40°.32N×124°.59W, h24^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.02; M$_{\theta\theta}$-0.54; M$_{\phi\phi}$0.56; M$_{r\theta}$0.40; M$_{\theta\phi}$-2.81; M$_{\phi r}$-0.38; Fault plane solution: M$_0$2.92000×10^{15} NP1:φ$_s$185.99000°, δ81.74000°, λ6.44000°. NP2:φ$_s$95.06000°, δ83.63000°, λ171.69000°. Principal axes: T 2.9775, Plg10.0000°, Azm50.0000°; N -0.1230, Plg80.0000°, Azm238.0000°; P -2.8545, Plg1.0000°, Azm141.0000°;*
*NCEDC **29** 19:13:55.2±2.7, 40°.31N±0°.04×124°.59W±0°.08, h18^{km}±5^{km}, Mwr4.3/11, mb4.4/8(NEIC), ML3.5/70(NEIC) Error ellipse: s-maj=8.7km s-min=4.9km az=71.0*
*ANF **29** 19:13:56.7±0.7, 40°.46N×124°.29W, h15^{km}, ML3.7/18, Error ellipse: s-maj=9.1km s-min=3.4km az=77.0*
ISC 29 19:13:54.9±2.6, **40°.43N**±0°.04×**124°.41W**±0°.06, **h11**^{km}±17^{km}, **n147**, σ**1^{s}69**/151, **mb3.7**/5, **Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSMM	**Slide Mountain**	**0.30**	**143**		**Pb**	**19 14 02.7**	**+0.3**
KCRM	**Chalk Rock**	**0.45**	**90**		**Pn**	**19 14 07.0**	**-0.4**
JCC	**Jacoby Creek,**	**0.49**	**36**		**Pn**	**19 14 06.9**	**-0.9**
JCC				IAML		19 14 16.6	
	comp=N,3µm,1.0s						
JCC				IAML		19 14 32.0	
	comp=E,3µm,1.0s						
KMRM	**Mail Ridge**	**0.57**	**111**	Pg	**Pn**	**19 14 08.6**	**-0.5**
KHMM	**Horse Mountain**	**0.68**	**49**		**Pn**	**19 14 10.5**	**-0.2**
KBSM	**Bell Springs**	**0.80**	**129**		**Pb**	**19 14 10.6**	**-0.4**
KCPM	**Cahto Peak**	**0.97**	**139**		**Pb**	**19 14 12.4**	**-1.5**
KOMM	**Orleans Mounta**	**1.12**	**40**		**Pn**	**19 14 16.5**	**-0.1**
KRMB	**Red Mountain**	**1.16**	**19**	Pn	**Pn**	**19 14 16.5**	**-0.7**
KRMB				IAML		19 14 32.8	
	comp=E,798nm,0.5s						
KRMB				IAML		19 14 33.2	
	comp=N,649nm,0.8s						
O02D	**Mt. Diablo Mer**	**1.26**	**101**	P	**Pb**	**19 14 18.4**	**-0.4**
	baz=276,SNR=256						
O02D				S	**Sg**	**19 14 35.2**	**-0.5**
	baz=276						
GNAM	**Navarro Ridge**	**1.37**	**154**		**Pn**	**19 14 16.8**	**-3.1**
N02D	**Trinity Center**	**1.41**	**67**	P	**Pb**	**19 14 20.7**	**-0.6**
	baz=246,SNR=1000						
N02D				S	**Sb**	**19 14 38.8**	**-0.4**
	baz=246						
WDC	**Whiskeytown Da**	**1.43**	**83**		**Pn**	**19 14 20.5**	**-0.3**
WDC				IAML		19 14 54.8	
	comp=E,646nm,0.8s						
WDC				IAML		19 14 55.2	
	comp=N,951nm,1.0s						
GASB	**Alder Springs**	**1.51**	**120**		**Pn**	**19 14 20.6**	**-1.4**
M02C	**Callahan**	**1.52**	**50**	P	**Pn**	**19 14 22.4**	**+0.2**
	baz=231,SNR=1000						
M02C				S	**Sb**	**19 14 41.9**	**-0.7**
	baz=231						
LTCM	**Tuscan Springs**	**1.76**	**96**		**Pb**	**19 14 25.6**	**-1.6**
HOPS	**Hopland Field**	**1.76**	**144**	Pn	**Pn**	**19 14 22.8**	**-2.6**
HOPS				IAML		19 15 11.2	
	comp=N,491nm,1.4s						

HOPS				IAML		19 15 22.3	
	comp=E,534nm,1.1s						
KBO	Bosley Butte	1.79	4		Pn	19 14 24.0	-1.8
YBH	Yreka Blue Hor	1.83	44	Pg	Pn	19 14 26.7	+0.2
	comp=E,52nm,0.3s,baz=266,slow=11,SNR=1066						
YBH				Lg	Lg	19 14 51.5	
	comp=E,39nm,0.3s,baz=91,slow=7.2,SNR=16						
YBH				LR	LR	19 15 22.2	
	comp=E,310nm,19.7s,baz=224,slow=48						
YBH	Yreka Blue Hor	1.83	44	Pn	Pn	19 14 26.6	+0.2
YBH				IAML		19 14 52.5	
	comp=N,281nm,0.8s						
YBH				IAML		19 14 54.7	
	comp=E,338nm,0.6s						
L02E	Cave Junction	1.83	19	P	Pn	19 14 26.4	0.0
	baz=202,SNR=44						
L02E				S	Sn	19 14 48.7	-0.9
	baz=202						
LGBM	Gray Butte	1.91	61		Pb	19 14 28.7	-1.3
GPMM	Pine Mountain	1.94	144		Pn	19 14 25.7	-2.2
O03E	Paynes Creek	2.00	93	P	Pn	19 14 28.4	-0.3
	baz=272,SNR=219						
O03E				S	Sn	19 14 52.6	-1.1
	baz=272						
GSGM	Seigler Mounta	2.04	139		Pn	19 14 27.6	-1.5
GDXM	Geysers	2.04	142		Pn	19 14 26.9	-2.3
LHEM	Herd Peak	2.05	53		Pb	19 14 30.7	-1.5
GCRM	Castle Rock Sp	2.11	141		Pn	19 14 28.2	-2.0
FTR	Fort Ross	2.13	153		Pn	19 14 27.4	-3.1
LMEM	Manzanita Entr	2.17	86		Pn	19 14 32.0	+0.9
LCMM	Colby Mountain	2.23	96		Pn	19 14 32.1	+0.1
HATC	Hat Creek Radi	2.28	79		Pn	19 14 33.7	+1.1
K02D	Willamette Mer	2.33	14	P	Pn	19 14 33.2	-0.2
	baz=197,SNR=18						
K02D				S	Sn	19 15 00.6	-1.5
	baz=197						
SUTB	Sutter Butte	2.35	120		Pn	19 14 31.6	-1.8
M04C	Macdoel	2.37	54	P	Pn	19 14 34.9	+1.0
	baz=236,SNR=136						
M04C				Sb	Sb	19 15 05.8	-1.1
	baz=236						
L04D	Klamath Falls	2.39	41	P	Pn	19 14 35.7	+1.6
	baz=223,SNR=200						
L04D				Sb	Sb	19 15 06.3	-1.3
	baz=223						
ORV	Oroville	2.40	110		Pn	19 14 33.7	-0.4
HUMO	Hull Mountain	2.44	26	Pn	Pn	19 14 34.4	-0.2
HUMO				IAML		19 15 08.0	
	comp=E,162nm,0.9s						
KEBM	Edson Butte	2.44	1		Pn	19 14 35.8	+1.0
KEBM				IAML		19 15 14.1	
	comp=N,178nm,1.4s						
KEBM				IAML		19 16 10.0	
	comp=E,196nm,1.3s						
MCCM	Marconi Confer	2.57	152	Pn	Pn	19 14 33.4	-3.1
MCCM				IAML		19 15 42.9	
	comp=N,172nm,1.8s						
CVS	Carmenet Viney	2.57	143		Pn	19 14 34.4	-2.1
J01E	Myrtle Point	2.76	7	P	Pn	19 14 39.3	+0.3
	baz=190						
J01E				S	Sn	19 15 09.2	-3.1
	baz=190						
FARB	Farallon Islan	2.94	158		Pn	19 14 38.1	-3.4
K04D	Chiloquin, OR	2.97	41	P	Pn	19 14 43.3	+1.2
	baz=224,SNR=14						
K04D				S	Sn	19 15 14.5	-3.2
	baz=224						
BL67	Building 67, L	3.05	146		Pn	19 14 41.0	-2.1
BKS	Berkeley--Byer	3.06	146		Pn	19 14 39.4	-3.8
BEKR	Beckworth	3.15	99		Pn	19 14 45.1	+0.4
BEKR				IAML		19 15 29.2	
	comp=N,148nm,0.9s						
BEKR				IAML		19 15 30.4	
	comp=E,149nm,0.8s						
J04D	Umpqua Nationa	3.29	31	P	Pn	19 14 47.9	+1.3
	baz=213,SNR=31						
I03D	Drain, OR	3.36	13	P	Pn	19 14 47.6	+0.3
	baz=196						
I03D				S	Sn	19 15 25.0	-2.3
	baz=196						
MOD	Modoc Plateau	3.43	63		Pn	19 14 48.3	-0.2
MOD				IAML		19 16 14.8	
	comp=N,78nm,1.7s						
JRSC	Jasper Ridge	3.46	150		Pn	19 14 45.9	-2.8
K05A	Summer Lake	3.50	48	Pn	Pn	19 14 50.4	+1.0
K05A				IAML		19 16 12.4	
	comp=N,108nm,2.3s						
K05A				IAML		19 16 15.5	
	comp=E,73nm,1.2s						
RUBR	Rubicon Trail	3.56	111		Pn	19 14 51.0	+0.7
I04A	Tendick Farm,	3.68	23	P	Pn	19 14 53.4	+1.6
	baz=206,SNR=17						
I04A				S	Sn	19 15 34.8	-0.4
	baz=206						
I02D	Swisshome	3.70	6	P	Pn	19 14 53.1	+1.1
	baz=188						
J05D	Fort Rock, OR	3.71	39	P	Pn	19 14 53.7	+1.4
	baz=221,SNR=94						
MHC	Mount Hamilton	3.76	144		Pn	19 14 50.8	-2.1
VCNR	Virginia City	3.83	106		Pn	19 14 54.7	+0.7
VCNR				IAML		19 16 15.2	
	comp=N,93nm,1.5s						
PAHR	Pah Rah Range	3.92	99	Pn	Pn	19 14 55.6	+0.4
PAHR				IAML		19 15 58.1	
	comp=E,60nm,1.3s						
PAHR				IAML		19 16 20.7	
	comp=N,56nm,2.2s						
CMB	Columbia Colle	3.93	126		Pn	19 14 55.9	+0.6
PNTR	Pine Nut	3.94	108		Pn	19 14 56.3	+0.8
GHS	Gilroy Hot Spr	4.05	144		Pn	19 14 54.7	-2.2
COR	Corvallis	4.24	11		Pn	19 15 00.7	+1.3
COR				IAML		19 15 53.2	
	comp=N,44nm,0.9s						
COR				IAML		19 16 55.2	
	comp=N,56nm,2.1s						
PINE	Pine Mountain	4.24	36	Pn	Pn	19 15 00.9	+1.3
HSFM	Saint Francis	4.27	147		Pn	19 14 58.5	-1.4
H04D	Lebanon	4.28	16	P	Pn	19 15 01.4	+1.4
	baz=199						
H04D				S	Sn	19 15 48.2	-1.6
	baz=199						
WAKR	Walker	4.30	115		Pn	19 15 01.1	+0.7
WAKR				IAML		19 16 17.2	
	comp=E,41nm,1.0s						
SAO	San Andreas Ge	4.33	147	Pn	Pn	19 14 57.5	-3.2
I05D	Terrebonne, OR	4.52	29	P	Pn	19 15 03.9	+0.6
	baz=212						
BJCM	Johnson Can.	4.54	148		Pn	19 15 00.2	-3.3
H04A	Detroit Lake	4.56	20	Pn	Pn	19 15 05.8	+1.9
H04A				IAML		19 16 00.9	
	comp=E,42nm,0.8s						
H04A				IAML		19 16 01.0	
	comp=N,42nm,0.5s						
HAST	Hastings Reser	4.61	150		Pn	19 15 01.0	-3.6
WVOR	Wild Horse Val	4.78	63		Pn	19 15 06.9	-0.1
WVOR				IAML		19 16 50.5	
	comp=N,30nm,1.8s						
RYN	Ryan	4.89	110		Pn	19 15 08.8	+0.2
RYN				IAML		19 16 54.4	
	comp=E,32nm,2.0s						
RYN				IAML		19 16 58.8	
	comp=N,24nm,4.1s						
MDPB	Devils Postpil	5.00	122		Pn	19 15 11.4	+1.3
MDPB				IAML		19 16 59.7	
	comp=E,29nm,1.3s						
MDPB				IAML		19 17 05.0	
	comp=N,23nm,1.4s						
OMMB	Old Mammoth Mi	5.06	122	Pn	Pn	19 15 11.5	+0.4
LHV	Little Huntoon	5.07	113		Pn	19 15 12.1	+1.4
PMPB	Monarch Peak	5.07	145	Pn	Pn	19 15 08.8	-2.1
PMPB				IAML		19 16 14.3	
	comp=E,36nm,1.0s						
PMPB				IAML		19 16 24.4	
	comp=N,42nm,1.1s						
NVAR	Mina Array Bea	5.13	111	Pn	Pn	19 15 12.7	+0.8
	comp=N,1.2nm,0.3s,baz=287,slow=14,SNR=28						
NVAR				Lg	Lg	19 16 29.9	
	comp=N,0.5nm,0.3s,baz=290,slow=25,SNR=2.2						
NVAR				LR	LR	19 17 14.5	
	comp=N,196nm,18.6s,baz=183,slow=39						
NVAR	Mina Array Bea	5.13	111	Pn	Pn	19 15 12.0	+0.1
I07A	Izee	5.16	43	Pn	Pn	19 15 13.9	+1.7
NV11	Mina Array Sit	5.24	110		Pn	19 15 13.4	+0.2
NV11				IAML		19 17 02.8	
	comp=E,21nm,1.9s						
NV11				IAML		19 17 04.2	
	comp=N,28nm,2.1s						
G05D	Wamic, OR	5.32	24	P	Pn	19 15 14.8	+0.4
	baz=207						
G08A	Pilot Rock	6.30	38		Pn	19 15 28.6	+0.8
ISA	Isabella, Lake	6.67	134	P	Pn	19 15 33.8	+0.9
	baz=316,SNR=46						
ISA	Isabella, Lake	6.67	134		Pn	19 15 33.7	+0.7
BMO	Blue Mountains	6.85	47	Pn	Pn	19 15 38.1	+2.7
ARVC	Arvin	6.89	138	P	Pn	19 15 36.1	+0.2
	baz=320,SNR=6.5						
HAWA	Hanford	6.94	29	Pn	Pn	19 15 36.9	+0.4
MPMC	Manual Prospec	6.98	126	P	Pn	19 15 38.7	+1.5
	baz=310						
ELK	Elko	6.99	84	Pn	Pn	19 15 39.5	+2.1
	comp=N,0.1nm,0.3s,baz=276,slow=12,SNR=4.7						
ELK				Lg	Lg	19 17 27.5	
	comp=N,0.0nm,0.3s,baz=318,slow=18,SNR=1.3						
MFID	Camas Ranch	7.06	62	Pn	Pn	19 15 40.0	+1.7
R11A	Troy Canyon, C	7.14	104	Pn	Pn	19 15 40.6	+1.2
E08A	Dider Farm, El	7.20	31		Pn	19 15 41.8	+1.8
TPNV	Topopah Spring	7.26	116		Pn	19 15 41.4	+0.2
LTY	Liberty	7.34	20		Pn	19 15 45.2	+3.1
EDW2	Edwards Air Fo	7.52	135	P	Pn	19 15 44.9	+0.3
	baz=318,SNR=21						
F10A	Beach Ranch, E	7.63	41		Pn	19 15 49.6	+3.5
D08A	Wollman Farm,	7.73	29	Pn	Pn	19 15 49.3	+2.0
GSC	Goldstone, Bar	7.89	128	Pn	Pn	19 15 48.6	-1.1
PASC	Pasadena Art C	7.97	140	Pn	Pn	19 15 49.4	-1.3
MWC	Mount Wilson	7.99	139		Pn	19 15 50.9	-0.3
HEC	Hector,Ludlow	8.50	129	P	Pn	19 15 59.0	+1.1
	baz=312,SNR=12						
BGU	Big Grassy Mou	8.66	83		Pn	19 16 01.0	+0.7
DUG	Dugway, Tooele	8.86	88	Pn	Pn	19 16 04.8	+1.7
GMRC	Granite Mounta	8.94	126	P	Pn	19 16 05.0	+1.0
	baz=311						
BCYI	Bear Canyon	9.02	61		Pn	19 16 06.5	+1.2
BELC	Belle Mtn. Jos	9.28	131	P	Pn	19 16 09.1	+0.4
	baz=315,SNR=15						
PFO	Pinyon Flats O	9.31	134	Pn	Pn	19 16 09.2	+0.1
	comp=N,2.2nm,0.3s,baz=320,slow=9.9,SNR=22						
PFO				LR	LR	19 19 40.5	
	comp=N,132nm,20.3s,baz=305,slow=38						
PFO	Pinyon Flats O	9.31	134	P	Pn	19 16 09.4	+0.3
	baz=318,SNR=12						
NEW	Newport	9.41	31	Pn	Pn	19 16 14.3	+3.8
	comp=N,0.3nm,0.3s,baz=214,slow=8.5,SNR=5.6						
MCMT	McKenzie Canyo	9.59	59		Pn	19 16 13.4	+0.4
MSU	Marysvale	9.65	97	Pn	Pn	19 16 12.7	-1.3
IRM	Iron Mountain	9.67	127	P	Pn	19 16 14.5	+0.5
	baz=312						
MONP2	Monument Peak	9.88	137	P	Pn	19 16 17.3	+0.3
	baz=321,SNR=8.5						
MSO	Missoula	9.92	46	P	Pn	19 16 19.8	+2.3
	baz=234						
MSO	Missoula	9.92	46	Pn	Pn	19 16 21.2	+3.7
DLMT	Dillon	9.97	56		Pn	19 16 20.9	+2.7
JTMT	Jette	10.32	41		Pn	19 16 25.9	+3.0
IMW	Indian Meadow	10.58	66	Pn	Pn	19 16 30.6	+3.9
GLA	Glamis	10.64	131	P	Pn	19 16 27.3	0.0
	baz=316,SNR=5.1						
GLA	Glamis	10.64	131		Pn	19 16 26.6	-0.7
MOOW	Moose Ponds	10.68	67		Pn	19 16 32.0	+3.9
BOZ	Bozeman (W)	10.69	57	P	Pn	19 16 29.2	+1.2
	baz=245						
BOZ	Bozeman (W)	10.69	57		Pn	19 16 30.7	+2.7
YHL	Hebgen Lake	10.70	61		Pn	19 16 30.9	+2.6
YHH	Holmes Hill	10.90	62	Pn	Pn	19 16 35.4	+4.3
H17A	Grant Village	10.97	64		Pn	19 16 37.0	+5.0
LKWY	Lake	11.14	64		Pn	19 16 39.7	+5.4
PDAR	Pinedale Array	11.37	73	Pn	Pn	19 16 42.9	+5.5
	comp=N,0.1nm,0.3s,baz=254,slow=6.5,SNR=10						
PDAR				LR	LR	19 21 02.2	
	comp=N,66nm,21.8s,baz=314,slow=38						
PDAR	Pinedale Array	11.37	73		Pn	19 16 44.1	+6.7
RLMT	Red Lodge	12.07	62	Pn	P	19 16 53.8	-6.2
PIX	Pinacate	12.52	132		Pn	19 16 53.8	+0.9
SDCO	Great Sand Dun	14.93	94		Pn	19 17 26.9	+0.8
SDCO				IAmb	IAmb	19 17 37.8	
	comp=Z,27nm,1.9s						
319A	Douglas	15.21	122		Pn	19 17 28.7	-1.0
319A				IAmb	IAmb	19 18 25.0	
	comp=Z,28nm,1.1s						
TX31	Lajitas Ar. Si	20.25	117	P	Pn	19 18 31.9	-0.3
TX31				IAmb	IAmb	19 18 34.1	
	comp=Z,24nm,1.4s						
TX32	Lajitas Array	20.25	117		Pn	19 18 32.1	-0.2
TXAR	Lajitas Array	20.25	117	P	Pn	19 18 31.6	-0.6
	comp=Z,1.6nm,0.8s,baz=305,slow=8.8,SNR=7.9						
TXAR				LR	LR	19 26 43.0	
	comp=Z,111nm,19.8s,baz=0.0,slow=38						
TXAR	Lajitas Array	20.25	117		Pn	19 18 32.4	+0.1
KAN13	South Haven SW	21.26	91	P	P	19 18 40.2	-0.8
AGMN	Agassiz Nation	21.78	59	P	P	19 18 47.3	+0.7
AGMN				IAmb	IAmb	19 18 48.8	
	comp=Z,10nm,0.7s						
ULM	Lac du Bonnet	22.21	54	P	P	19 18 51.2	0.0
	comp=Z,1.7nm,0.6s,baz=256,slow=10,SNR=5.7						
YKA	Yellowknife Ar	22.87	12	P	P	19 18 59.1	+1.0
	comp=Z,0.6nm,0.7s,baz=194,slow=12,SNR=6.1						
FCAR	Ozark Folk Cen	25.70	90	P	P	19 19 25.8	+0.8
ILAR	Eielson Array	27.63	339	P	P	19 19 42.6	+0.4
	comp=Z,0.2nm,0.6s,baz=130,slow=9.3,SNR=2.2						
HHC	Hu-ho-hao-te	84.44	321	*e*P	P	19 26 28.0	+0.3
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.0s						
WMQ	Urumqi	91.28	337	*e*P	P	19 27 00.8	+0.3

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*IDC **29** 19:17:42.7±2.1, 2.°59N×92.°40E, h0^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.4/51, mbtmp3.5/7, ML3.4/3, MS2.8/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=50.8km s-min=27.1km az=40.0*

ISC 29 19:17:44.0±1.4**, 2.°6N**±0.°2×**92.°43E**±0.°10**, h10^{km}, n7, σ0.^{s}66**/8**, mb3.5**/4**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.49	88	Pn	Pn	19 19 20.1	+0.2
	1.3nm,0.3s,baz=181,slow=4.0,SNR=4.1						
PSI				Sn	Sn	19 20 33.2	-0.8
	0.5nm,0.3s,baz=0.1,slow=17,SNR=1.2						
PALK	Pallekele	12.56	292	Pn	Pn	19 20 42.3	-0.6
	0.2nm,0.3s,baz=196,slow=7.4,SNR=2.3						
PALK				Sn	Sn	19 22 47.3	-16
	0.8nm,0.3s,baz=128,slow=23,SNR=6.4						
CMAR	Chiang Mai Arr	16.99	22	P	Pn	19 21 41.4	-0.5
	0.1nm,0.3s,baz=218,slow=14,SNR=7.4						
CMAR				LR	LR	19 28 01.5	
	comp=Z,30nm,18.8s,baz=280,slow=36						
MKAR	Makanchi Array	44.88	350	P	P	19 25 59.0	+0.3
	0.3nm,0.8s,baz=164,slow=8.9,SNR=2.3						
SONM	Songino Array	46.63	13	P	P	19 26 13.1	+0.5
	0.1nm,0.4s,baz=190,slow=6.1,SNR=1.9						
WRA	Warramunga Arr	46.84	121	P	P	19 26 14.7	+0.1
	0.5nm,0.8s,baz=296,slow=9.4,SNR=2.8						
ZALV	Zalesovo Beam	51.55	354	P	P	19 26 50.6	+0.6
	0.7nm,0.4s,baz=176,slow=6.7,SNR=5.9						

IDC 29 19:31:13.2±1.9**, 0.°84N**×**124.°48E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/37**, mbtmp3.5**/4**, Error ellipse: s-maj=139.8km s-min=21.5km az=59.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.80	155	P	P	19 36 18.4	+0.7
	0.6nm,0.7s,baz=337,slow=9.8,SNR=7.3						
ASAR	Alice Springs	26.02	160	P	P	19 36 47.3	-0.9
	0.4nm,0.7s,baz=342,slow=7.2,SNR=6.6						
CMAR	Chiang Mai Arr	30.58	306	P	P	19 37 28.6	-0.5
	0.3nm,0.3s,baz=119,slow=7.3,SNR=4.3						
MKAR	Makanchi Array	58.70	327	P	P	19 41 13.3	+0.5
	0.7nm,0.7s,baz=126,slow=7.9,SNR=8.2						

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*IDC **29** 20:10:13.3±0.8, 6.°82N×73.°05W, h159^{km}±18^{km}, mb3.1/2, mb1 3.6/4, mb1mx3.1/42, mbtmp3.8/4, Error ellipse: s-maj=56.4km s-min=8.5km az=132.0*

*RSNC **29** 20:10:14.8±1.1, 6.°81N×73.°13W, h148^{km}±4^{km}, ML3.2, Mw3.8, Fault plane solution: NP1:ϕ_s0.00000°, δ43.00000°, λ-42.00000°.*

ISC 29 20:10:13.6±0.9**, 6.°84N**±0.°03×**73.°13W**±0.°03**, h155^{km}**±6^{km}**, n32, σ1.^{s}40**/61**, 3C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	192	⇓*i*P	Pn	20 10 34.8	-0.2
BARC				*e*S	Sn	20 10 49.8	-1.5
BARC				*i*		20 10 51.5	
	comp=Z,244nm,0.4s						
BRRC	Barranca, Sant	0.64	295	*e*P	Pn	20 10 36.7	+0.4
BRRC				*e*S	Sn	20 10 53.5	-0.1
BRRC				*i*		20 11 01.3	
	comp=Z,100nm,0.3s						
PAMC	Pamplona, Colo	0.66	41	⇑*i*P	Pn	20 10 37.6	+0.5
PAMC				*e*S	Sn	20 10 55.0	+0.1
PAMC				*i*		20 10 56.9	
	comp=Z,244nm,0.5s						
RUSC	La Rusia	0.94	177	⇓*i*P	Pn	20 10 38.7	-0.3
RUSC				*e*S	Sn	20 10 57.2	-1.2
RUSC				*i*		20 10 58.7	
	comp=Z,140nm,0.3s						
PTBC	PUERTO BERRIO,	1.35	257	*e*P	Pn	20 10 41.4	-0.7
PTBC				*e*S	Sn	20 11 03.2	-0.7
PTBC				*i*		20 11 08.5	
	comp=Z,285nm,0.5s						
TAMC	Tame, Arauca	1.39	107	⇓*i*P	Pn	20 10 43.0	+0.5
TAMC				*i*		20 11 03.9	
	comp=Z,146nm,0.3s						
TAMC				*e*S	Sn	20 11 04.7	0.0
OCAC	Ocana	1.41	352	*e*P	Pn	20 10 43.0	+0.1
OCAC				*e*S	Sn	20 11 05.2	-0.1
OCAC				*i*		20 11 11.3	
	comp=Z,162nm,0.3s						
SPBC	San Pablo de B	1.50	219	*e*P	Pn	20 10 43.6	-0.1
SPBC				*e*S	Sn	20 11 06.5	-0.4
SPBC				*i*		20 11 11.6	
	comp=Z,270nm,0.4s						
ZARC	Zaragoza, Cauc	1.83	291	*e*P	Pn	20 10 47.5	+0.3
ZARC				*e*S	Sn	20 11 12.6	-0.4
ZARC				*i*		20 11 19.2	
	comp=Z,204nm,0.6s						
NORC	Norcasia	2.14	234	⇑*e*P	Pn	20 10 50.6	-0.2
NORC				*e*S	Sn	20 11 18.5	-0.9
NORC				*i*		20 11 22.6	
	comp=Z,158nm,0.6s						
SMLC	San Martn de	2.16	335	*e*P	Pn	20 10 51.1	+0.1
SMLC				*e*S	Sn	20 11 19.4	-0.4
SMLC				*i*		20 11 23.4	
	comp=Z,150nm,0.1s						
CHIC	Chingaza	2.27	195	⇓*e*P	Pn	20 10 52.6	-0.2
CHIC				*e*S	Sn	20 11 21.6	-1.2
CHIC				*i*		20 11 30.9	
	comp=Z,97nm,0.6s						
ROSC	El Rosal	2.31	211	P	Pn	20 10 54.5	+1.4
	comp=Z,50nm,0.3s,baz=73,slow=9.0,SNR=33						
ROSC				S	Sn	20 11 24.2	+0.7
	comp=Z,18nm,0.3s,baz=65,slow=16,SNR=7.7						
ROSC	El Rosal	2.31	211	*e*P	Pn	20 10 54.3	+1.1
ROSC				*e*S	Sn	20 11 25.1	+1.6
ROSC				*i*		20 11 32.8	
	comp=Z,355nm,0.4s						
HELC	Santa Helena	2.47	255	*e*P	Pn	20 10 56.2	+1.2
HELC				*e*S	Sn	20 11 27.0	+0.2
HELC				*i*		20 11 33.3	
	comp=Z,84nm,0.4s						
UREC	San Jos de Ur	2.55	291	*e*P	Pn	20 10 54.8	-0.9
UREC				*e*S	Sn	20 11 25.7	-2.4
GUY2C	Guyana, Caldas	2.74	234	*e*P	Pn	20 10 59.2	+0.8
GUY2C				*e*S	Sn	20 11 32.6	-0.3
GUY2C				*i*		20 11 44.9	
	comp=Z,158nm,0.5s						
PTGC	Puerto Gaitan,	2.80	159	*e*P	Pn	20 10 57.7	-1.1
PTGC				*e*S	Sn	20 11 31.0	-2.7
PTGC				*i*		20 11 37.1	
	comp=Z,42nm,0.4s						
RREF	El Recreo	2.92	229	*e*P	Pn	20 11 01.9	+1.1
RREF				*e*S	Sn	20 11 37.3	0.0
RREF				*i*		20 11 46.6	
	comp=Z,138nm,0.3s						
CBOC	Ciudad Bolivar	3.02	252	*e*P	Pn	20 11 02.6	+1.0
CBOC				*e*S	Sn	20 11 39.2	+0.4
CBOC				*i*		20 12 00.0	
	comp=Z,47nm,0.5s						
DBBC	Dabeiba	3.06	274	*e*P	Pn	20 11 02.3	+0.3
DBBC				*e*S	Sn	20 11 38.9	-0.6
TOLC	Tolima	3.12	224	*e*P	Pn	20 11 04.2	+1.1
TOLC				*e*S	Sn	20 11 41.7	+0.4
TOLC				*i*		20 11 45.9	
	comp=Z,111nm,0.4s						
MOTC	Monteria, Cord	3.17	308	*e*P	Pn	20 11 01.7	-1.7
MOTC				*e*S	Sn	20 11 39.8	-2.1
SDV	Santo Domingo	3.21	50	P	Pn	20 11 04.1	0.0
	comp=Z,28nm,0.3s,baz=230,slow=10,SNR=91						
SDV				S	Sn	20 11 41.9	-1.1
	comp=Z,5.6nm,0.3s,baz=255,slow=20,SNR=7.2						
SDV	Santo Domingo	3.21	50	⇑*e*P	Pn	20 11 04.0	0.0
SDV				*e*S	Sn	20 11 42.2	-0.8
SDV				*i*		20 11 46.5	
	comp=Z,19nm,0.5s						
ANIL	Santa Ana	3.25	224	*e*P	Pn	20 11 06.0	+1.4
ANIL				*e*S	Sn	20 11 44.1	0.0
ANIL				*i*		20 11 48.8	
	comp=Z,39nm,0.4s						
ORTC	Ortega, Tolima	3.59	216	*e*P	Pn	20 11 08.6	-0.2
ORTC				*e*S	Sn	20 11 52.3	+0.6
ORTC				*i*		20 11 58.6	
	comp=Z,88nm,0.4s						
PLMC	San Jos del P	3.67	239	*e*P	Pn	20 11 10.5	+0.5
PLMC				*e*S	Sn	20 11 48.1	-5.5
GARC	Garzon, Huila	5.18	207	*e*P	Pn	20 11 28.6	-1.2
GARC				*e*S	Sn	20 12 25.3	-4.0
GARC				*i*		20 12 34.5	
	comp=Z,29nm,0.3s						
PDAR	Pinedale Array	48.06	324	P	P	20 18 37.3	-0.4
	comp=Z,0.2nm,0.5s,baz=128,slow=8.4,SNR=2.4						
YKA	Yellowknife Ar	63.25	340	P	P	20 20 24.9	-0.4
	comp=Z,0.6nm,0.5s,baz=128,slow=7.5,SNR=14						
WRA	Warramunga Arr	150.34	241	PKPbc	PKPdf	20 29 46.1	+3.9
	comp=Z,0.4nm,0.8s,baz=109,slow=2.4,SNR=1.9						

IDC 29 20:11:06.9±10.0**, 40.°73S**×**85.°50W, h0^{km}, mb3.5**/3**, mb1 4.0**/4**, mb1mx3.7**/38**, mbtmp3.5**/4**, ML3.5**/1**, MS3.5**/7**, Ms1 3.5**/7**, ms1mx3.4**/20**, Error ellipse: s-maj=373.6km s-min=45.4km az=22.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	8.65	39	T	T	20 22 49.0	
	baz=212,slow=72						
H03S1	Juan Fernandez	8.65	39	T	T	20 22 50.3	
	baz=212,slow=72						
H03S3	Juan Fernandez	8.66	39	T	T	20 22 49.6	
	baz=212,slow=72						
H03N3	Juan Fernandez	8.96	38	T	T	20 23 11.5	
	baz=212,slow=71						
H03N2	Juan Fernandez	8.97	38	T	T	20 23 11.3	
	baz=212,slow=71						
H03N1	Juan Fernandez	8.98	38	T	T	20 23 09.2	
	baz=212,slow=71						
PLCA	Paso Flores	11.35	95	Pn	Pn	20 13 50.3	0.0
	0.1nm,0.3s,baz=258,slow=14,SNR=3.2						
PLCA				LR	LR	20 17 11.2	
	comp=Z,140nm,18.7s,baz=324,slow=32						
LVC	Limon Verde	22.86	43	LR	LR	20 22 55.4	
	comp=Z,165nm,19.8s,baz=217,slow=31						
RPN	Rapa Nui	23.89	297	LR	LR	20 22 48.1	
	comp=Z,46nm,20.3s,baz=274,slow=29						
CPUP	Villa Florida	27.38	67	LR	LR	20 27 20.9	
	comp=Z,145nm,18.6s,baz=217,slow=36						
BDFB	Brasilia	40.97	63	LR	LR	20 36 15.7	
	comp=Z,95nm,18.7s,baz=130,slow=37						
ROSC	El Rosal	46.50	15	LR	LR	20 36 58.7	
	comp=Z,87nm,19.8s,baz=227,slow=33						
SDV	Santo Domingo	51.24	19	LR	LR	20 41 01.4	
	comp=Z,60nm,19.2s,baz=125,slow=35						
TXAR	Lajitas Array	71.72	343	P	P	20 22 30.7	-0.1
	0.4nm,0.6s,baz=171,slow=7.9,SNR=4.9						
NVAR	Mina Array Bea	84.30	335	P	P	20 23 40.4	-0.2
	0.1nm,0.3s,baz=161,slow=5.7,SNR=1.6						
PDAR	Pinedale Array	85.92	342	P	P	20 23 49.1	+0.4
	0.9nm,0.9s,baz=140,slow=5.8,SNR=3.6						

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*IDC **29** 20:15:18.6±1.0, 33.°40S×178.°33W, h0^{km}, mb4.3/3,* *mb1 4.6/5, mb1mx4.1/32, mbtmp4.4/5, ML4.1/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/38, Error ellipse: s-maj=41.5km s-min=24.8km az=136.0*

*NEIC **29** 20:15:20.2±2.0, 32.°89S±0.°06×178.°5W±0.°2, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=28.4km s-min=5.3km az=109.0*

ISC 29 20:15:20.7±0.7**, 33.°28S**±0.°09×**178.°5W**±0.°1**, h10**^{km}**, n52,** σ**1^{s}56**/49**, mb4.5**/9**, MS3.4**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.05**	**7**	LR	LR	20 17 48.6	
	comp=Z,200nm,18.1s,baz=198,slow=36						
RAO	**Raoul Island**	**4.05**	**7**		Pn	20 16 15.8	-6.9
MXZ	**Matakaoa Point**	**5.01**	**211**	Pn	**Pn**	**20 16 36.9**	**+1.0**
URZ	**Urewera**	**6.12**	**215**	Pn	**Pn**	**20 16 51.9**	**+0.8**
	6.4nm,0.3s,baz=300,slow=20,SNR=25						
URZ				Sn	**Sn**	**20 18 00.0**	**-1.1**
	10.0nm,0.3s,baz=210,slow=20,SNR=7.2						
URZ	**Urewera**	**6.12**	**215**	Pn	**Pn**	**20 16 51.8**	**+0.7**
OUZ	**Omahuta**	**6.83**	**251**		**Pn**	**20 17 05.4**	**+4.5**
BKZ	**Black Stump Fm**	**7.13**	**213**		**Pn**	**20 17 05.2**	**+0.1**
HIZ	**Hauiti**	**7.51**	**224**	Pn	**Pn**	**20 17 12.8**	**+2.6**
BFZ	**Birch Farm**	**8.50**	**208**	Pn	**Pn**	**20 17 24.2**	**+0.4**
MSWZ	**Moikau Station**	**9.52**	**210**	Pn	**Pn**	**20 17 40.9**	**+3.0**
PLWZ	**Palliser**	**9.65**	**209**	Pn	**Pn**	**20 17 41.4**	**+1.8**
BHW	**Baring Head**	**9.68**	**211**	Pn	**Pn**	**20 17 42.4**	**+2.5**
KHZ	**Kahutara**	**11.07**	**212**	Pn	**Pn**	**20 17 59.8**	**+0.7**
LTZ	**Lake Taylor**	**11.95**	**215**	Pn	**Pn**	**20 18 12.7**	**+1.6**
RPZ	**Rata Peaks**	**13.23**	**215**	Pn	**Pn**	**20 18 26.5**	**-2.2**
	0.7nm,0.3s,baz=15,slow=10,SNR=2.3						
RPZ				Sn	Sn	20 20 42.8	-13
	0.7nm,0.3s,baz=109,slow=22,SNR=1.7						
MLZ	**Mavora Lakes**	**15.88**	**217**	Pn	**P**	**20 19 07.2**	**-0.8**
DZM	**Mont Dzumac**	**17.38**	**306**	LR	LR	20 25 00.9	
	comp=Z,463nm,18.6s,baz=110,slow=33						
RAR	**Rarotonga**	**20.49**	**59**	LR	LR	20 26 25.6	
	comp=Z,109nm,21.8s,baz=352,slow=33						
PPT	**Papeete**	**30.31**	**66**	LR	LR	20 34 43.4	
	comp=Z,71nm,18.3s,baz=193,slow=38						
STKA	**Stephens Creek**	**33.52**	**261**	LR	LR	20 35 19.0	
	comp=Z,224nm,18.3s,baz=42,slow=36						
CTAO	**Charters Tower**	**33.96**	**284**	P	**P**	**20 22 06.7**	**+2.2**
COEN	**Coen**	**39.75**	**290**	P	**P**	**20 22 51.4**	**-2.4**
AS31	**Alice Springs**	**42.62**	**270**	P	**P**	**20 23 17.0**	**-0.4**
ASAR	**Alice Springs**	**42.62**	**270**	P	**P**	**20 23 17.9**	**+0.4**
	9.9nm,0.7s,baz=110,slow=7.4,SNR=147						
ASAR				PcP	**PcP**	**20 25 09.8**	**+0.2**
	1.5nm,0.8s,baz=124,slow=5.3,SNR=5.1						
ASAR				S	**S**	**20 29 36.4**	**-4.1**
	1.3nm,1.1s,baz=115,slow=13,SNR=5.4						
ASAR				LR	LR	20 40 27.5	
	comp=Z,38nm,19.1s,baz=150,slow=35						
ASAR	**Alice Springs**	**42.62**	**270**	P	**P**	**20 23 16.4**	**-1.0**
WR0	**Warramunga Arr**	**43.69**	**276**	P	**P**	**20 23 26.2**	**+0.1**
WR0				IAmb	IAmb	20 23 27.6	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	**43.86**	**275**	P	**P**	**20 23 27.6**	**+0.1**
WB2				IAmb	IAmb	20 23 28.8	
	comp=Z,7.9nm,1.0s						
WRAB	**Tennant Creek**	**43.86**	**275**	P	**P**	**20 23 27.1**	**-0.3**
WRAB				IAmb	IAmb	20 23 28.8	
	comp=Z,7.0nm,0.9s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	**P**	**20 23 27.8**	**+0.3**
	comp=Z,5.0nm,0.7s,baz=116,slow=7.6,SNR=32						
WRA				PcP	**PcP**	**20 25 14.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=124,slow=3.3,SNR=2.0						
WRA	**Warramunga Arr**	**43.87**	**275**	P	**P**	**20 23 27.3**	**-0.2**
WB0	**Warramunga Arr**	**43.91**	**276**	P	**P**	**20 23 27.8**	**0.0**
WB0				IAmb	IAmb	20 23 29.3	
	comp=Z,7.9nm,0.9s						
FORT	**Forrest**	**44.97**	**258**	P	**P**	**20 23 36.4**	**+0.2**
MTN	**Manton Dam**	**50.08**	**282**	P	**P**	**20 24 15.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**52.00**	**272**	P	**P**	**20 24 30.0**	**-0.5**
FITZ				IAmb	IAmb	20 24 31.5	
	comp=Z,4.6nm,0.8s						
RPN	**Rapa Nui**	**59.11**	**104**	LR	LR	20 50 22.7	
	comp=Z,65nm,18.0s,baz=322,slow=36						
BELA	**Belgrano 2**	**66.99**	**172**	P	**P**	**20 26 16.1**	**+2.9**
SNAA	**Sanae**	**75.29**	**179**	P	**P**	**20 27 05.0**	**+1.4**
SNAA				IAmb	IAmb	20 27 29.3	
	comp=Z,5.0nm,1.1s						
VNA3	**Neumayer Olymp**	**75.46**	**176**	P	**P**	**20 27 05.8**	**+1.3**
VNA2	**Neumayer--Watz**	**75.89**	**177**	P	**P**	**20 27 08.6**	**+1.7**
	baz=180,slow=5.2						
VNA1	**Neumayer--Stat**	**76.12**	**177**	P	**P**	**20 27 09.0**	**+0.7**
NVAR	**Mina Array Bea**	**90.63**	**43**	P	**P**	**20 28 23.6**	**0.0**
	comp=Z,0.2nm,0.4s,baz=210,slow=4.8,SNR=2.0						
MKAR	**Makanchi Array**	**119.28**	**309**	PKP	**PKPdf**	**20 34 09.2**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=112,slow=1.7,SNR=4.6						
MKAR	**Makanchi Array**	**119.28**	**309**		**PKPdf**	**20 34 08.9**	**-1.0**
KBZ	**Khabaz**	**146.29**	**300**	PKPbc	**PKPdf**	**20 35 00.5**	**+0.3**
	comp=Z,2.9nm,1.0s,baz=0.0,slow=4.0,SNR=5.6						
FINES	**FINESS Array B**	**147.68**	**338**	PKPbc	**PKPbc**	**20 35 04.2**	**-0.5**
	comp=Z,5.9nm,0.7s,baz=40,slow=3.9,SNR=20						
FINES	**FINESS Array B**	**147.68**	**338**		**PKPbc**	**20 35 04.1**	**-0.6**
NB2	**NORSAR Subarra**	**151.52**	**350**	PKP	**PKPbc**	**20 35 14.0**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=20,slow=4.4						
NOA	**NORSAR Array B**	**151.52**	**350**	PKPbc	**PKPbc**	**20 35 14.0**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=13,slow=4.0,SNR=3.6						
AKASG	**Malin Array Be**	**153.26**	**319**	PKPbc	**PKPbc**	**20 35 17.7**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=49,slow=3.5,SNR=3.3						
BRTR	**Keskin Array B**	**153.48**	**293**	PKPbc	**PKiKP**	**20 35 19.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=118,slow=3.6,SNR=12						
BRTR	**Keskin Array B**	**153.48**	**293**		**PKPbc**	**20 35 18.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**159.96**	**181**	PKPab	**PKPab**	**20 35 58.0**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=180,slow=2.9,SNR=1.9						

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*LDG **29** 20:21:14.4±0.1, 46.°89N×0.°74W, h2^{km}, Md3.4/2, Ml3.6/41, Error ellipse: s-maj=1.1km s-min=0.9km az=56.0*

*STR **29** 20:21:15.9±0.2, 47°N±2°×°±°, h5^{km}, MLv3.3/7, MLv3.5/10, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

*BGS **29** 20:21:15.5±0.9, 46.°90N×0.°46W, h4^{km}, ML3.4, ML3.4*

ISC 29 20:21:12.6±1.0**, 46.°88N**±0.°01×**0.°69W**±0.°02**, h15**^{km}±9^{km}**, n95,** σ**1^{s}28**/177**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFF	**Saint Martin d**	**0.47**	**126**	Pg	**Pn**	**20 21 24.2**	**-0.4**
MFF				Sn	**Sb**	**20 21 30.6**	**+1.5**
MFF	**Saint Martin d**	**0.47**	**126**	*e*Pg	**Pn**	**20 21 24.0**	**-0.7**
MFF				*e*Sg	**Sb**	**20 21 30.4**	**+1.3**
	520nm,0.2s						
CHIF	**Chize**	**0.77**	**165**	*e*P	**Pn**	**20 21 29.6**	**+0.8**
CHIF				*e*S	**Sn**	**20 21 40.0**	**-0.1**
CHIF	**Chize**	**0.77**	**165**	Pg	**Pn**	**20 21 29.6**	**+0.8**
CHIF				Sg	**Sn**	**20 21 40.3**	**+0.2**
RENF	**Rennes**	**1.40**	**333**	*e*P	**Pg**	**20 21 40.0**	**+0.6**
RENF				*e*S	**Sg**	**20 21 58.0**	**+0.3**
RENF	**Rennes**	**1.40**	**333**	Pn	**Pg**	**20 21 40.4**	**+0.9**
RENF				Sn	**Sg**	**20 21 59.2**	**+1.5**
GRR	**Gorron**	**1.52**	**356**	*e*Pn	**Pb**	**20 21 40.9**	**+0.5**
GRR	**Gorron**	**1.52**	**356**	*e*Pg	**Pg**	**20 21 42.3**	**+0.6**
GRR				*e*Sg	**Sg**	**20 22 01.6**	**+0.2**
	332nm,0.3s						
LDF	**La Druitiere**	**1.76**	**12**	*e*Pn	**Pb**	**20 21 44.2**	**-0.3**
LDF	**La Druitiere**	**1.76**	**12**	*e*Pg	**Pg**	**20 21 47.0**	**+0.6**
LDF				*e*Sn	**Sb**	**20 22 05.6**	**-0.8**
LDF				*e*Sg	**Sg**	**20 22 09.1**	**-0.1**
	208nm,0.3s						
SGMF	**Saint Gilles**	**1.87**	**318**	*e*Pn	**Pn**	**20 21 45.0**	**+1.0**
SGMF	**Saint Gilles**	**1.87**	**318**	*e*Pg	**Pg**	**20 21 48.4**	**-0.1**
SGMF				*e*Sn	**Sn**	**20 22 07.3**	**0.0**
SGMF				*e*Sg	**Sg**	**20 22 11.3**	**-1.4**
	113nm,0.3s						
FLN	**La Foliniere**	**1.89**	**4**	*e*Pn	**Pb**	**20 21 45.8**	**-1.0**
	baz=187						
FLN	**La Foliniere**	**1.89**	**4**	*e*Pg	**Pg**	**20 21 49.1**	**+0.2**
	baz=184						
FLN				*e*Sn	**Sn**	**20 22 08.6**	**+0.8**
	baz=192						
FLN				*e*Sg	**Sg**	**20 22 12.9**	**-0.5**
	228nm,0.2s,baz=183						
LRVF	**chteau la Riv**	**1.95**	**172**	Pn	**Pb**	**20 21 48.1**	**+0.4**
LRVF				Sn	**Sg**	**20 22 14.9**	**-0.3**
QUIF	**Quistinic**	**1.98**	**303**	*e*Pn	**Pn**	**20 21 46.8**	**+1.4**
QUIF	**Quistinic**	**1.98**	**303**	*e*Pg	**Pg**	**20 21 50.8**	**+0.3**
QUIF				*e*Sg	**Sg**	**20 22 14.8**	**-1.4**
	117nm,0.2s						
TCF	**Toulx Ste Croi**	**2.08**	**105**	*e*Pn	**Pb**	**20 21 48.9**	**-1.2**
TCF	**Toulx Ste Croi**	**2.08**	**105**	*e*Pg	**Pg**	**20 21 54.1**	**+1.5**
TCF				*e*Sg	**Sg**	**20 22 19.7**	**+0.1**
	151nm,0.3s						
LFF	**La Frestale**	**2.18**	**152**	*e*Pn	**Pb**	**20 21 50.5**	**-1.2**
LFF	**La Frestale**	**2.18**	**152**	*e*Pg	**Pg**	**20 21 55.2**	**+0.8**
LFF				*e*Sg	**Sg**	**20 22 23.5**	**+0.8**
	107nm,0.3s						
RJF	**Les Rejaudoux**	**2.20**	**135**	*e*Pn	**Pb**	**20 21 50.8**	**-1.2**
RJF	**Les Rejaudoux**	**2.20**	**135**	*e*Pg	**Pg**	**20 21 55.1**	**+0.3**
RJF				*e*Sn	**Sn**	**20 22 17.1**	**+1.7**
RJF				*e*Sg	**Sg**	**20 22 24.4**	**+1.1**
	226nm,0.2s						
ROSF	**Rostrenen**	**2.28**	**311**	*e*P	**Pg**	**20 21 55.5**	**-0.8**
ROSF				*e*S	**Sb**	**20 22 22.5**	**+1.2**
ROSF	**Rostrenen**	**2.28**	**311**	Pn	**Pb**	**20 21 52.5**	**-0.9**
ROSF				Sn	**Sg**	**20 22 23.7**	**-2.1**
ROSF	**Rostrenen**	**2.28**	**311**	*e*P	**Pb**	**20 21 52.4**	**-0.9**
ROSF	**Rostrenen**	**2.28**	**311**	*e*Pg	**Pg**	**20 21 56.0**	**-0.3**
ROSF				*e*Sn	**Sn**	**20 22 17.0**	**-0.3**
	48nm,0.2s						
ROSF				*e*Sg	**Sg**	**20 22 24.7**	**-1.1**
	97nm,0.2s						
CLF	**Chambon-Foret**	**2.31**	**59**	Pn	**Pb**	**20 21 53.9**	**0.0**
HYF	**Humbligny**	**2.31**	**79**	*e*Pn	**Pb**	**20 21 52.0**	**-1.9**
HYF	**Humbligny**	**2.31**	**79**	*e*Pg	**Pg**	**20 21 57.5**	**+0.6**
HYF				*e*Sn	**Sn**	**20 22 19.6**	**+1.5**
HYF				*e*Sg	**Sg**	**20 22 27.7**	**+0.9**
BGF	**Bois d'Agland**	**2.45**	**96**	*e*Pn	**Pb**	**20 21 54.7**	**-1.7**
BGF	**Bois d'Agland**	**2.45**	**96**	*e*Pg	**Pg**	**20 22 00.7**	**+1.1**
BGF				*e*Sn	**Sn**	**20 22 23.4**	**+1.7**
BGF				*e*Sg	**Sg**	**20 22 33.2**	**+1.8**
	296nm,0.3s						
JSA	**Saint Aubin**	**2.52**	**337**	*e*P	**Pb**	**20 21 56.6**	**-0.8**
JSA				*e*S	**Sb**	**20 22 27.0**	**-1.1**
JSA				IAML		20 22 33.4	
	comp=E,54nm,0.3s						
JSA				IAML		20 22 38.7	
	comp=N,58nm,0.5s						
JSA	**Saint Aubin**	**2.52**	**337**	Pn	**Pb**	**20 21 56.9**	**-0.5**
JSA				Sn	**Sb**	**20 22 30.2**	**+2.1**
CAF	**Calviac**	**2.74**	**134**	*e*Pn	**Pn**	**20 21 58.5**	**+2.5**
CAF	**Calviac**	**2.74**	**134**	*e*Pg	**Pg**	**20 22 05.6**	**+0.5**
CAF				*e*Sn	**Sn**	**20 22 29.7**	**+0.9**
CAF				*e*Sg	**Sg**	**20 22 41.1**	**+0.5**
	comp=N,125nm,0.3s						
AGO	**Saint Agoulin**	**2.77**	**106**	Pn	**Pb**	**20 21 59.5**	**-2.2**
AVF	**Avril sur Loir**	**2.78**	**90**	*e*Pn	**Pn**	**20 21 58.9**	**+2.5**
AVF	**Avril sur Loir**	**2.78**	**90**	*e*Pg	**Pg**	**20 22 05.8**	**0.0**
AVF				*e*Sn	**Sn**	**20 22 30.8**	**+1.2**
AVF				*e*Sg	**Sg**	**20 22 38.8**	**-3.0**
	comp=N,55nm,0.4s						
PYM	**Petit Puy Mans**	**2.80**	**112**	Pn	**Pb**	**20 21 59.7**	**-2.6**
PYM				S	**Sn**	**20 22 31.1**	**+0.8**
PYM				Sn	**Sb**	**20 22 36.2**	**-0.2**
MONQ	**Montcuq**	**2.84**	**152**	Pn	**Pn**	**20 21 59.5**	**+2.2**
MONQ				Pg	**Pg**	**20 22 08.1**	**+1.1**
SSF	**Saint Saulge**	**2.88**	**85**	*e*Pn	**Pn**	**20 21 59.8**	**+1.9**
SSF	**Saint Saulge**	**2.88**	**85**	*e*Pg	**Pg**	**20 22 07.9**	**+0.1**
SSF				*e*Sn	**Sn**	**20 22 33.6**	**+1.4**
SSF				*e*Sg	**Sg**	**20 22 45.9**	**+0.8**
	comp=N,70nm,0.4s						
SMF	**Signal de Mont**	**3.12**	**93**	*e*Pn	**Pn**	**20 22 03.0**	**+1.8**
SMF	**Signal de Mont**	**3.12**	**93**	*e*Pg	**Pg**	**20 22 12.2**	**-0.2**
SMF				*e*Sn	**Sn**	**20 22 39.0**	**+0.8**
SMF				*e*Sg	**Sg**	**20 22 54.0**	**+1.1**
	comp=N,46nm,0.3s						
LOR	**Lormes**	**3.13**	**81**	Pn	**Pn**	**20 22 03.8**	**+2.4**
LOR				Pg	**Pg**	**20 22 14.2**	**+1.5**
LOR				Sn	**Sn**	**20 22 38.9**	**+0.4**
LOR	**Lormes**	**3.13**	**81**	*e*Pn	**Pn**	**20 22 03.2**	**+1.8**
	baz=262						
LOR	**Lormes**	**3.13**	**81**	*e*Pg	**Pg**	**20 22 13.8**	**+1.2**
	baz=265						
LOR				*e*Sn	**Sn**	**20 22 40.0**	**+1.5**
	baz=250						
LOR				*e*Sg	**Sg**	**20 22 53.2**	**0.0**
	comp=N,31nm,0.2s,baz=264						
SJPF	**Ste Jean**	**3.78**	**186**	*e*Pn	**Pn**	**20 22 11.9**	**+1.6**
SJPF	**Ste Jean**	**3.78**	**186**	*e*Pg	**Pg**	**20 22 24.5**	**-0.6**
SJPF				*e*Sn	**Sn**	**20 22 54.3**	**-0.2**
SJPF				*e*Sg	**Sg**	**20 23 12.8**	**-1.3**
	comp=N,31nm,0.3s						
ATE	**Arette**	**3.79**	**180**	Pn	**Pn**	**20 22 11.9**	**+1.4**
ATE				Sn	**Sn**	**20 22 53.9**	**-0.8**
EPF	**Esparros**	**3.92**	**169**	*e*Pn	**Pn**	**20 22 13.5**	**+1.3**
EPF	**Esparros**	**3.92**	**169**	*e*Pg	**Pg**	**20 22 27.4**	**-0.2**
EPF				*e*Sn	**Sn**	**20 22 57.6**	**-0.3**
EPF				*e*Sg	**Sg**	**20 23 17.8**	**-0.5**
	comp=N,20nm,0.3s						
ETSF	**Etsaut**	**3.98**	**179**	*e*Pn	**Pn**	**20 22 14.0**	**+0.9**
ETSF	**Etsaut**	**3.98**	**179**	*e*Pg	**Pg**	**20 22 27.7**	**-1.1**
ETSF				*e*Sn	**Sn**	**20 22 59.3**	**-0.2**
ETSF				*e*Sg	**Sg**	**20 23 19.9**	**-0.5**
	comp=N,16nm,0.4s						
HMNX	**Herstmonceux**	**4.05**	**9**	*e*S	**Sn**	**20 23 01.1**	**+0.2**
HMNX				IAML		20 23 28.7	
	comp=E,131nm,0.5s						
HMNX				IAML		20 23 28.7	
	comp=N,106nm,0.6s						
MTLF	**Montolieu**	**4.09**	**149**	Pn	**Pn**	**20 22 17.3**	**+2.7**
MTLF	**Montolieu**	**4.09**	**149**	*e*Pn	**Pn**	**20 22 16.9**	**+2.4**
MTLF	**Montolieu**	**4.09**	**149**	*e*Pg	**Pg**	**20 22 31.0**	**0.0**
MTLF				*e*Sn	**Sn**	**20 23 01.7**	**-0.4**
MTLF				*e*Sg	**Sg**	**20 23 23.8**	**-0.1**
	comp=N,23nm,0.3s						
SFTF	**Sexfontaines**	**4.10**	**69**	*e*Pn	**Pn**	**20 22 16.5**	**+1.8**
	baz=248						
SFTF	**Sexfontaines**	**4.10**	**69**	*e*Pg	**Pg**	**20 22 31.2**	**+0.1**
	baz=248						
SFTF				*e*Sg	**Sg**	**20 23 23.9**	**-0.3**
	comp=N,23nm,0.4s,baz=235						
MENF	**Mencas**	**4.14**	**26**	Pn	**Pn**	**20 22 15.3**	**+0.2**
MENF				P	**Pn**	**20 22 15.7**	**+0.6**
MENF				Sn	**Sn**	**20 23 04.0**	**+0.8**
DYA	**Yadsworthy**	**4.16**	**330**	P	**Pn**	**20 22 16.0**	**+0.6**
MEZF	**Maizieres J'vi**	**4.20**	**65**	*e*Pn	**Pn**	**20 22 17.9**	**+1.8**
	baz=244						
MEZF	**Maizieres J'vi**	**4.20**	**65**	*e*Pg	**Pg**	**20 22 32.7**	**-0.4**
	baz=246						
MEZF				*e*Sn	**Sn**	**20 23 04.9**	**+0.1**
	baz=243						
MEZF				*e*Sg	**Sg**	**20 23 26.3**	**-1.2**
	comp=N,23nm,0.4s,baz=241						
LASF	**Ste Croix**	**4.25**	**130**	*e*Pn	**Pn**	**20 22 19.3**	**+2.5**
LASF	**Ste Croix**	**4.25**	**130**	*e*Pg	**Pg**	**20 22 34.6**	**+0.6**
LASF				*e*Sn	**Sn**	**20 23 06.2**	**+0.1**
LASF				*e*Sg	**Sg**	**20 23 28.6**	**-0.5**
	comp=N,47nm,0.4s						
VIVF	**Saint-Julien-l**	**4.26**	**116**	*e*Pn	**Pn**	**20 22 19.1**	**+2.3**
VIVF	**Saint-Julien-l**	**4.26**	**116**	*e*Pg	**Pg**	**20 22 34.0**	**-0.1**
VIVF				*e*Sn	**Sn**	**20 23 06.6**	**+0.4**
VIVF				*e*Sg	**Sg**	**20 23 28.1**	**-1.1**
	comp=N,31nm,0.3s						
ECHI	**Chisagues Biel**	**4.26**	**171**	Pn	**Pn**	**20 22 19.1**	**+2.1**
SAVF	**Savonnieres en**	**4.29**	**64**	*e*Pn	**Pn**	**20 22 19.3**	**+2.1**
SAVF	**Savonnieres en**	**4.29**	**64**	*e*Pg	**Pg**	**20 22 33.4**	**-1.3**
	baz=242						
SAVF				*e*Sn	**Sn**	**20 23 06.2**	**-0.8**
SAVF				*e*Sg	**Sg**	**20 23 29.7**	**-0.6**
	comp=N,20nm,0.5s,baz=249						
BAIF	**Baives**	**4.55**	**44**	*e*Pn	**Pn**	**20 22 23.0**	**+2.1**
BAIF	**Baives**	**4.55**	**44**	*e*Pg	**Pg**	**20 22 38.4**	**-1.4**
BAIF				*e*Sn	**Sn**	**20 23 12.4**	**-1.1**
BAIF				*e*Sg	**Sg**	**20 23 37.5**	**-1.2**
	comp=N,7.0nm,0.2s						
PAGF	**Fort de Pagny**	**4.64**	**66**	*e*Pn	**Pn**	**20 22 24.0**	**+1.9**
	baz=250						
PAGF	**Fort de Pagny**	**4.64**	**66**	*e*Pg	**Pg**	**20 22 41.5**	**0.0**
	baz=246						
PAGF				*e*Sn	**Sn**	**20 23 15.6**	**-0.1**
	baz=244						
PAGF				*e*Sg	**Sg**	**20 23 40.9**	**-0.7**
	comp=N,10.0nm,0.3s,baz=241						
DOU	**Dourbes**	**4.77**	**46**	*e*P	**Pn**	**20 22 25.9**	**+2.1**
DOU				*e*S	**Sn**	**20 23 17.1**	**-1.5**
DOU	**Dourbes**	**4.77**	**46**	Pn	**Pn**	**20 22 26.3**	**+2.5**
GIVF	**Givet**	**4.88**	**47**	*e*Pn	**Pn**	**20 22 27.4**	**+2.0**
GIVF				*e*Sn	**Sn**	**20 23 20.3**	**-1.3**
GIVF				*e*Sg	**Sg**	**20 23 48.2**	**-1.0**
	comp=N,15nm,0.4s						
HAU	**Haudompre**	**4.91**	**74**	*e*Pn	**Pn**	**20 22 27.2**	**+1.4**
HAU	**Haudompre**	**4.91**	**74**	*e*Pg	**Pg**	**20 22 45.3**	**-1.2**
HAU				*e*Sn	**Sn**	**20 23 22.2**	**0.0**
HAU				*e*Sg	**Sg**	**20 23 48.9**	**-1.1**
	comp=N,24nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.99**	**111**	*e*Pg	**Pg**	**20 22 46.9**	**-1.2**
ORIF				*e*Sg	**Sg**	**20 23 52.0**	**-0.6**
	comp=N,12nm,0.5s						
HINF	**Hinteralfeld**	**5.21**	**77**	*e*Pn	**Pn**	**20 22 30.5**	**+0.5**
HINF	**Hinteralfeld**	**5.21**	**77**	*e*Pg	**Pg**	**20 22 51.8**	**-0.6**
HINF				*e*Sn	**Sn**	**20 23 28.7**	**-1.1**
HINF				*e*Sg	**Sg**	**20 23 57.8**	**-2.0**
	comp=N,11nm,0.3s						
SMRF	**Simiane la Rot**	**5.28**	**121**	*e*P	Pn	20 22 37.2	+6.3
SMRF	**Simiane la Rot**	**5.28**	**121**	*e*Pg	**Pg**	**20 22 53.5**	**-0.1**
SMRF				*e*Sg	**Sg**	**20 24 00.6**	**-1.4**
	comp=N,8.9nm,0.4s						
LPL	**La Plagne**	**5.33**	**102**	*e*Sg	**Sg**	**20 24 01.8**	**-1.8**
	comp=N,11nm,0.6s						
LPG	**La Plagne**	**5.35**	**102**	*e*P	Pn	20 22 37.6	+5.5
LPG				*e*Sg	**Sg**	**20 24 02.8**	**-1.4**
	comp=N,9.0nm,0.5s						
CDF	**Champ du Feu**	**5.60**	**71**	*e*Pn	**Pn**	**20 22 36.8**	**+1.5**
CDF	**Champ du Feu**	**5.60**	**71**	*e*Pg	**Pg**	**20 22 58.2**	**-1.5**
CDF				*e*Sn	**Sn**	**20 23 38.2**	**-1.1**
CDF				*e*Sg	**Sg**	**20 24 10.2**	**-2.0**
	comp=N,13nm,0.4s						
MBDF	**Montbardon**	**5.64**	**110**	*e*Pn	**Pn**	**20 22 37.8**	**+1.8**
MBDF				*e*Sn	**Sn**	**20 23 40.0**	**-0.5**
MBDF				*e*Sg	**Sg**	**20 24 12.0**	**-1.6**
FRF	**La Foret Royal**	**6.15**	**120**	*e*P	Pn	20 22 48.8	+6.0
FRF				*e*Sn	**Sn**	**20 23 50.8**	**-2.1**
FRF				*e*Sg	**Sg**	**20 24 28.1**	**-1.8**
	comp=N,1.4nm,0.4s						
LMR	**La Mourre**	**6.21**	**122**	*e*P	Pn	20 22 49.7	+6.2
LMR	**La Mourre**	**6.21**	**122**	*e*Pg	**Pg**	**20 23 10.4**	**-0.9**
LMR				*e*Sn	**Sn**	**20 23 53.0**	**-1.2**
LMR				*e*Sg	**Sg**	**20 24 29.5**	**-2.1**
	comp=N,1.8nm,0.3s						
SBF	**Sospel**	**6.47**	**115**	*e*Sg	**Sg**	**20 24 37.8**	**-2.3**
	comp=N,9.9nm,0.5s						

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*IDC **29** 20:21:37.3±1.0, 37.°29N×97.°89W, h0^{km}, mb3.1/1, mb1 3.7/6, mb1mx3.5/43, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=12.7km s-min=12.0km az=149.0*

*NEIC **29** 20:21:38.7±0.9, 37.°19N±0.°01×97.°86W±0.°03, h5^{km}±1^{km}, mb_Lg3.6/139, Mwr3.4/4(SLM), Error ellipse: s-maj=4.6km s-min=3.0km az=266.0*

*NEIC **29** 20:21:38.7, 37.°19N×97.°89W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$1.18; $M_{\phi\phi}$-1.18; $M_{r\theta}$0.21; $M_{\theta\phi}$0.68; $M_{\phi r}$-0.12; Fault plane solution: $M_0$1.38000×10^{14} NP1:ϕ_s30.00000°, δ80.00000°, λ180.00000°. NP2:ϕ_s120.00000°, δ90.00000°, λ10.00000°. Principal axes: T 1.3830, Plg7.0000°, Azm345.0000°; N -0.0001, Plg80.0000°, Azm120.0000°; P -1.3829, Plg7.0000°, Azm255.0000°;*

*ANF **29** 20:21:41.0±0.6, 37.°13N×97.°89W, h22^{km}±6^{km}, ML4.6/10 Error ellipse: s-maj=5.7km s-min=2.6km az=41.0*

ISC 29 20:21:38.7±0.8**, 37.°19N**±0.°03×**97.°88W**±0.°03**, h11**^{km}±5^{km}**, n129,** σ**0^{s}79**/103**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN08	**Anthony NE Sta**	**0.08**	**295**		**Pg**	**20 21 41.9**	**+0.6**
KAN01	**Argonia South**	**0.10**	**112**	Pg	**Pg**	**20 21 41.3**	**-0.1**
KAN01				Sg	**Sg**	**20 21 43.1**	**-0.3**
KAN12	**Harper NE Stat**	**0.14**	**318**	Pg	**Pg**	**20 21 41.6**	**-0.5**
KAN12				Sg	**Sg**	**20 21 43.5**	**-1.0**
KAN10	**Anthony SW Sta**	**0.19**	**249**		**Pg**	**20 21 42.4**	**-0.4**
KS21	**Milan North St**	**0.20**	**61**		**Pg**	**20 21 42.8**	**-0.1**
KS21				Sg	**Sg**	**20 21 45.7**	**-0.1**
KAN14	**Manchester OK**	**0.24**	**197**	Pg	**Pg**	**20 21 43.7**	**-0.1**
GC02	**Grant County #**	**0.34**	**178**		**Pg**	**20 21 45.5**	**-0.1**
GC02				Sg	**Sg**	**20 21 50.0**	**-0.1**
KAN13	**South Haven SW**	**0.36**	**119**	Pg	**Pg**	**20 21 46.0**	**0.0**
KAN13				Sg	**Sg**	**20 21 51.1**	**+0.2**
CROK	**Carrier**	**0.69**	**187**		**Pg**	**20 21 51.7**	**-0.4**
CROK				Sg	**Sg**	**20 22 01.1**	**-0.1**
T35A	**Sooner Cattle**	**1.13**	**104**		**Pg**	**20 21 59.7**	**-0.7**
T35A				Sg	**Sg**	**20 22 14.6**	**-0.4**
T35B	**Sooner Cattle**	**1.13**	**104**	P		20 21 59.7	
	baz=285,SNR=330						
T35B				S		20 22 14.8	
	baz=285						
U32A	**Winter Ranch,**	**1.21**	**228**	Pg	**Pg**	**20 22 00.9**	**-1.1**
U32A	**Winter Ranch,**	**1.21**	**228**	P		20 22 00.9	
	baz=49						
U32A				S		20 22 17.9	
	baz=49						
QUOK	**Quay**	**1.39**	**137**		**Pn**	**20 22 04.1**	**+0.1**
R32A	**Long Quarter,**	**1.40**	**332**		**Pn**	**20 22 03.9**	**-0.3**
R32A	**Long Quarter,**	**1.40**	**332**	P		20 22 04.0	
	baz=150,SNR=153						
R32A				S		20 22 22.8	
	baz=150						
OK029	**Liberty Lake**	**1.43**	**166**		**Pn**	**20 22 04.5**	**-0.1**
OK029				IAmb_Lg		20 22 26.5	
	comp=Z,311nm,0.7s						
OK031	**S. Brethren Rd**	**1.49**	**146**		**Pn**	**20 22 05.7**	**+0.2**
OK030	**Cody Creek RV**	**1.54**	**145**		**Pn**	**20 22 06.5**	**+0.4**
BCOK	**Bluff Creek, N**	**1.55**	**172**		**Pn**	**20 22 06.6**	**+0.4**
OK025	**Westminster Rd**	**1.67**	**165**		**Pn**	**20 22 08.5**	**+0.6**
OKCFA	**Oklahoma City**	**1.81**	**169**		**Pn**	**20 22 10.3**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**1.82**	**169**		**Pn**	**20 22 10.6**	**+0.6**
FNO	**Franklin**	**1.97**	**169**		**Pn**	**20 22 12.5**	**+0.5**
FNO				IAmb_Lg		20 22 42.9	
	comp=Z,297nm,0.7s						
TUL1	**Leonard**	**2.11**	**127**	P	**Pn**	**20 22 15.1**	**+1.1**
	baz=308						
TUL1				Sb	**Sb**	**20 22 44.4**	**+1.3**
	baz=308						
TUL1	**Leonard**	**2.11**	**127**		**Pn**	**20 22 14.3**	**+0.3**
TUL1				IAmb_Lg		20 22 45.3	
	comp=Z,260nm,0.8s						
TUL1	**Leonard**	**2.11**	**127**	P		20 22 15.0	
	baz=308,SNR=45						
TUL1				S		20 22 44.5	
	baz=308						
KSU1	**Kansas State U**	**2.15**	**27**	P	**Pn**	**20 22 15.6**	**+1.0**
	baz=207						
KSU1				S	**Sb**	**20 22 44.9**	**+0.4**
	baz=207						
KSU1	**Kansas State U**	**2.15**	**27**		**Pn**	**20 22 15.1**	**+0.5**
KSU1	**Kansas State U**	**2.15**	**27**	P		20 22 15.2	
	baz=207,SNR=20						
KSU1				S		20 22 44.9	
	baz=207						
CBKS	**Cedar Bluff**	**2.19**	**318**	P	**Pn**	**20 22 15.8**	**+0.7**
	baz=137						
CBKS				S	**Sn**	**20 22 44.2**	**+2.0**
	baz=137						
CBKS	**Cedar Bluff**	**2.19**	**318**		**Pn**	**20 22 15.7**	**+0.6**
CBKS	**Cedar Bluff**	**2.19**	**318**	P		20 22 15.7	
	baz=137,SNR=34						
CBKS				S		20 22 43.9	
	baz=137						
WMOK	**Wichita Mounta**	**2.56**	**197**	Pn	**Pn**	**20 22 20.7**	**+0.5**
WMOK	**Wichita Mounta**	**2.56**	**197**	P		20 22 21.1	
	baz=17,SNR=11						
U38A	**Gravette**	**2.90**	**104**		**Pn**	**20 22 25.8**	**+1.0**
U38A	**Gravette**	**2.90**	**104**	P		20 22 25.9	
	baz=286,SNR=34						
HHAR	**Hobbs**	**3.29**	**105**		**Pn**	**20 22 31.3**	**+1.1**
X37A	**Clayton**	**3.30**	**141**		**Pn**	**20 22 31.1**	**+0.8**
X37A	**Clayton**	**3.30**	**141**	P		20 22 31.0	
	baz=323						
N33B	**J Bar K, Exete**	**3.56**	**5**	P		20 22 33.9	
	baz=185,SNR=5.5						
N33B				S		20 23 15.9	
	baz=185						
N33A	**J Bar K, Exete**	**3.56**	**5**	Pn	**Pn**	**20 22 34.0**	**+0.1**
N33A				IAmb_Lg		20 23 33.7	
	comp=Z,147nm,0.9s						
S39A	**Bolivar**	**3.66**	**81**		**Pn**	**20 22 35.8**	**+0.6**
S39A				IAmb_Lg		20 23 41.7	
	comp=Z,129nm,0.8s						
S39A	**Bolivar**	**3.66**	**81**	P		20 22 35.8	
	baz=263,SNR=43						
AMTX	**Amarillo**	**3.85**	**234**	Pn	**Pn**	**20 22 38.3**	**+0.3**
AMTX				IAmb_Lg		20 23 46.5	
	comp=Z,198nm,0.7s						
W39A	**Magazine**	**3.86**	**120**	Pb	**Pb**	**20 22 47.9**	**+1.0**
	baz=302						
W39A	**Magazine**	**3.86**	**120**		**Pn**	**20 22 38.6**	**+0.5**
Z35A	**Perchaven, San**	**3.88**	**172**		**Pn**	**20 22 38.6**	**+0.2**
Z35A				IAmb_Lg		20 23 47.7	
	comp=Z,101nm,1.0s						

N35A	**Tabor**	**4.06**	**25**		**Pn**	**20 22 40.0**	**-0.8**
U40A	**Yellville**	**4.12**	**100**	P	**Pn**	**20 22 42.3**	**+0.7**
	baz=283						
U40A				S	**Sn**	**20 23 29.2**	**-0.6**
	baz=283						
U40A	**Yellville**	**4.12**	**100**	Pn	**Pn**	**20 22 42.2**	**+0.7**
U40A	**Yellville**	**4.12**	**100**	P		20 22 42.3	
	baz=283,SNR=44						
U40A				P		20 22 42.3	
	baz=283,SNR=44						
KSCO	**Kaye Shedlock'**	**4.17**	**297**	Pb	**Pb**	**20 22 54.4**	**+2.3**
	baz=114						
KSCO	**Kaye Shedlock'**	**4.17**	**297**		**Pn**	**20 22 40.4**	**-2.0**
KSCO				IAmb_Lg		20 24 01.9	
	comp=Z,168nm,0.8s						
P38A	**Dawn**	**4.19**	**53**		**Pn**	**20 22 41.0**	**-1.5**
P38A				IAmb_Lg		20 23 50.2	
	comp=Z,146nm,0.7s						
P38A	**Dawn**	**4.19**	**53**	P		20 22 43.2	
	baz=236,SNR=19						
BGNE	**Belgrade**	**4.22**	**357**		**Pn**	**20 22 42.6**	**-0.4**
BGNE	**Belgrade**	**4.22**	**357**	P		20 22 43.1	
	baz=177						
MIAR	**Mount Ida**	**4.38**	**126**	S	**Sn**	**20 23 36.4**	**+0.2**
	baz=309						
MIAR	**Mount Ida**	**4.38**	**126**	Pn	**Pn**	**20 22 45.4**	**+0.2**
MIAR				IAmb_Lg		20 24 03.1	
	comp=Z,114nm,0.8s						
MIAR	**Mount Ida**	**4.38**	**126**	P		20 22 46.0	
	baz=309						
MIAR				S		20 23 36.9	
	baz=309						
MGMO	**Mountain Grove**	**4.48**	**89**		**Pn**	**20 22 46.9**	**+0.3**
MGMO				IAmb_Lg		20 24 02.9	
	comp=Z,199nm,0.8s						
R40A	**Maddies Statio**	**4.58**	**74**	Pn	**Pn**	**20 22 48.3**	**+0.4**
R40A	**Maddies Statio**	**4.58**	**74**	P		20 22 48.3	
	baz=258,SNR=32						
Z38A	**Mt. Pleasant**	**4.58**	**148**	Pn	**Pn**	**20 22 47.1**	**-0.8**
Z38A				IAmb_Lg		20 24 13.8	
	comp=Z,101nm,0.8s						
Z38A	**Mt. Pleasant**	**4.58**	**148**	P		20 22 48.7	
	baz=330						
ABTX	**Abilene, Hawle**	**4.78**	**198**		**Pn**	**20 22 50.2**	**-0.5**
ABTX				IAmb_Lg		20 24 10.0	
	comp=Z,102nm,1.0s						
FCAR	**Ozark Folk Cen**	**4.81**	**104**	Pn	**Pn**	**20 22 51.4**	**+0.3**
FCAR				IAmb_Lg		20 24 17.2	
	comp=Z,78nm,0.7s						
WHAR	**Wooly Hollow**	**4.90**	**111**	Pn	**Pn**	**20 22 52.7**	**+0.4**
WHAR				IAmb_Lg		20 24 13.9	
	comp=Z,147nm,1.0s						
X40A	**Basin Creek Fa**	**4.90**	**122**	P	**Pn**	**20 22 53.5**	**+1.1**
	baz=305						
X40A	**Basin Creek Fa**	**4.90**	**122**		**Pn**	**20 22 52.9**	**+0.5**
X40A				IAmb_Lg		20 24 24.2	
	comp=Z,120nm,0.7s						
X40A	**Basin Creek Fa**	**4.90**	**122**	P		20 22 53.5	
	baz=305,SNR=11						
X40A				P		20 22 53.5	
	baz=305,SNR=11						
OGNE	**Ogallala**	**4.95**	**320**	P	**Pn**	**20 22 54.7**	**+1.6**
	baz=138						
OGNE	**Ogallala**	**4.95**	**320**	Pn	**Pn**	**20 22 51.5**	**-1.6**
OGNE				IAmb_Lg		20 24 20.8	
	comp=Z,99nm,0.7s						
OGNE	**Ogallala**	**4.95**	**320**	P		20 22 54.7	
	baz=138						
W41B	**Gary Mavity, V**	**4.98**	**112**	P		20 22 53.7	
	baz=296						
N38A	**Joes South For**	**5.10**	**44**		**Pn**	**20 22 55.3**	**+0.2**
N38A	**Joes South For**	**5.10**	**44**	P		20 22 55.1	
	baz=226,SNR=5.9						
MSTX	**Muleshoe**	**5.12**	**233**		**Pn**	**20 22 55.2**	**-0.3**
P40A	**Paris**	**5.14**	**61**	Pn	**Pn**	**20 22 55.9**	**+0.3**
P40A				IAmb_Lg		20 24 20.9	
	comp=Z,108nm,0.8s						
WHTX	**Lake Whitney,**	**5.20**	**176**	P	**Pn**	**20 22 56.7**	**+0.3**
	baz=357						
WHTX	**Lake Whitney,**	**5.20**	**176**		**Pn**	**20 22 56.8**	**+0.3**
WHTX	**Lake Whitney,**	**5.20**	**176**	P		20 22 56.4	
	baz=357,SNR=14						
WLAR	**White Oak Lake**	**5.23**	**131**	IAmb_Lg		20 24 37.5	
	comp=Z,94nm,0.9s						
CCM	**Cathedral Cave**	**5.33**	**79**		**Pn**	**20 22 58.3**	**0.0**
CCM				IAmb_Lg		20 24 30.4	
	comp=Z,91nm,0.8s						
CCM	**Cathedral Cave**	**5.33**	**79**	P		20 22 58.3	
	baz=263,SNR=9.3						
T42A	**Van Buren**	**5.42**	**90**	Pn	**Pn**	**20 22 59.9**	**+0.4**
T42A				IAmb_Lg		20 24 34.1	
	comp=Z,104nm,0.8s						
T42A	**Van Buren**	**5.42**	**90**	P		20 22 59.8	
	baz=274,SNR=15						
237A	**Washetta, Mont**	**5.45**	**161**	Pn	**Pn**	**20 22 59.8**	**-0.1**
237A				IAmb_Lg		20 24 35.7	
	comp=Z,64nm,0.8s						
K31A	**O'Neill**	**5.47**	**353**		**Pn**	**20 22 59.1**	**-1.0**
LCAR	**Lake Charles**	**5.52**	**100**	Pn	**Pn**	**20 23 00.8**	**0.0**
LCAR				IAmb_Lg		20 24 31.4	
	comp=Z,109nm,1.0s						
Z41A	**Richland Creek**	**5.71**	**132**	P		20 23 03.8	
	baz=315						
Z41A				P		20 23 03.8	
	baz=315						
FVM	**French Village**	**5.97**	**80**		**Pn**	**20 23 07.1**	**+0.1**
FVM				IAmb_Lg		20 25 04.0	
	comp=Z,59nm,0.8s						
SDCO	**Great Sand Dun**	**6.09**	**278**	Pn	**Pn**	**20 23 07.8**	**-1.2**
SLM	**Saint Louis**	**6.21**	**74**	IAmb_Lg		20 24 53.0	
	comp=Z,100nm,0.9s						
435B	**Jarrell**	**6.40**	**178**	IAmb_Lg		20 25 17.0	
	comp=Z,94nm,0.8s						
N41A	**Harden Midland**	**6.50**	**55**		**Pn**	**20 23 15.0**	**+0.7**
ISCO	**Idaho Springs**	**6.60**	**296**	Pn	**Pn**	**20 23 15.1**	**-0.9**
ISCO				IAmb_Lg		20 25 19.0	
	comp=Z,43nm,0.8s						
ECSD	**EROS Data Cent**	**6.61**	**8**		**Pn**	**20 23 15.2**	**-0.5**
ECSD	**EROS Data Cent**	**6.61**	**8**	P		20 23 15.1	
	baz=188,SNR=7.5						
S44A	**Carbondale**	**6.88**	**83**		**Pn**	**20 23 19.7**	**+0.2**
JCT	**Junction City**	**6.88**	**194**		**Pn**	**20 23 19.5**	**-0.1**
JCT				IAmb_Lg		20 25 23.1	
	comp=Z,82nm,0.8s						
SIUC	**Southern Illin**	**6.91**	**83**		**Pn**	**20 23 20.3**	**+0.4**
143A	**Socs Landing,**	**6.95**	**128**	IAmb_Lg		20 25 26.9	
	comp=Z,59nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.00**	**67**	Pn	**Pn**	**20 23 21.3**	**+0.1**
P43A				IAmb_Lg		20 25 25.9	
	comp=Z,87nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.00**	**67**	P		20 23 21.2	
	baz=252,SNR=7.8						
L40A	**Anamosa**	**7.07**	**44**		**Pn**	**20 23 21.6**	**-0.6**
L40A				IAmb_Lg		20 25 23.7	
	comp=Z,112nm,0.8s						
PHWY	**Pilot Hill**	**7.17**	**307**		**Pn**	**20 23 22.5**	**-1.3**
PHWY				IAmb_Lg		20 25 24.7	
	comp=Z,42nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.20**	**74**	Pn	**Pn**	**20 23 24.4**	**+0.6**
Q44A				IAmb_Lg		20 25 31.8	
	comp=Z,112nm,0.8s						
SUSD	**Miller**	**7.29**	**354**	IAmb_Lg		20 25 36.7	
	comp=Z,49nm,0.8s						
ANMO	**Albuquerque**	**7.30**	**255**	Pn	**Pn**	**20 23 26.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=72,slow=10,SNR=1.6						
ANMO				Pg	Pb	20 23 52.1	+6.6
	comp=Z,1.1nm,0.3s,baz=66,slow=17,SNR=15						
ANMO				Lg	Lg	20 25 22.8	
	comp=Z,1.3nm,0.3s,baz=79,slow=7.0,SNR=3.0						
ANMO	**Albuquerque**	**7.30**	**255**		**Pn**	**20 23 24.6**	**-0.9**
OXF	**Oxford**	**7.38**	**109**	IAmb_Lg		20 25 44.7	
	comp=Z,92nm,0.7s						
HDIL	**Hopedale**	**7.49**	**61**	Pn	**Pn**	**20 23 28.4**	**+0.5**
HDIL				IAmb_Lg		20 25 42.5	
	comp=Z,81nm,0.8s						
I37A	**Lemond, Waseca**	**7.62**	**25**	IAmb_Lg		20 25 58.9	
	comp=Z,77nm,0.8s						
OLIL	**Olney**	**7.88**	**76**	IAmb_Lg		20 25 58.2	
	comp=Z,69nm,0.8s						
O44A	**Mansfield**	**7.93**	**65**	Pn	**Pn**	**20 23 33.6**	**-0.3**
O44A				IAmb_Lg		20 26 02.9	
	comp=Z,59nm,0.8s						
L42A	**Oliver, Polo**	**7.95**	**50**	Pn	**Pn**	**20 23 33.7**	**-0.5**
L42A				IAmb_Lg		20 25 58.5	
	comp=Z,76nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.99**	**250**	IAmb_Lg		20 26 10.0	
	comp=Z,96nm,0.9s						
WVT	**Waverly**	**8.14**	**94**	IAmb_Lg		20 25 54.6	
	comp=Z,44nm,0.8s						
JFWS	**Jewell Farm**	**8.18**	**43**	Pn	**Pn**	**20 23 36.3**	**-1.0**
JFWS				IAmb_Lg		20 26 11.2	
	comp=Z,62nm,0.7s						
PLAL	**Pickwick Lake**	**8.23**	**103**	IAmb_Lg		20 25 57.6	
	comp=Z,38nm,0.8s						
MNTX	**Cornudas Mount**	**8.27**	**231**	Pn	**Pn**	**20 23 38.8**	**+0.1**
RSSD	**Black Hills**	**8.35**	**328**	Pn	**Pn**	**20 23 39.8**	**-0.1**
RWWY	**Rawlins**	**8.50**	**305**	Pn	**Pn**	**20 23 40.1**	**-1.9**
RWWY				IAmb_Lg		20 26 13.7	
	comp=Z,44nm,1.0s						
146A	**Union**	**8.55**	**120**	IAmb_Lg		20 26 21.2	
	comp=Z,59nm,0.8s						
K22A	**Casper**	**8.59**	**312**		**Pn**	**20 23 41.9**	**-1.3**
K22A				IAmb_Lg		20 26 16.4	
	comp=Z,57nm,1.1s						
T47A	**Sharon Grove**	**8.61**	**88**	IAmb_Lg		20 26 21.8	
	comp=Z,70nm,0.9s						
PV02	**Paradox Valley**	**8.67**	**280**	IAmb_Lg		20 26 25.4	
	comp=Z,38nm,1.1s						
I40A	**Norwalk**	**8.68**	**37**	IAmb_Lg		20 26 27.3	
	comp=Z,51nm,1.1s						
F33A	**5 Mile Ranch,**	**8.72**	**7**	IAmb_Lg		20 26 13.7	
	comp=Z,30nm,0.9s						
PV12	**Saucer Basin,**	**8.73**	**281**	IAmb_Lg		20 26 29.0	
	comp=Z,57nm,1.2s						
PV11	**David Mesa, Pa**	**8.78**	**281**	IAmb_Lg		20 26 24.2	
	comp=Z,59nm,1.3s						
PV04	**Paradox Valley**	**8.81**	**281**	IAmb_Lg		20 26 37.8	
	comp=Z,38nm,1.2s						
SPMN	**Marine on St.**	**8.89**	**24**	IAmb_Lg		20 26 18.8	
	comp=Z,46nm,1.1s						
PV23	**Carpenter Ridg**	**8.90**	**282**	IAmb_Lg		20 26 25.6	
	comp=Z,32nm,0.9s						
Z47A	**Carrollton**	**8.96**	**113**	IAmb_Lg		20 26 28.0	
	comp=Z,52nm,0.8s						
SFIN	**Lafayette**	**9.00**	**66**	IAmb_Lg		20 26 23.8	
	comp=Z,57nm,0.8s						
V48A	**Smith Brothers**	**9.02**	**96**	IAmb_Lg		20 26 29.9	
	comp=Z,45nm,0.8s						
BLO	**Bloomington**	**9.16**	**74**	IAmb_Lg		20 26 38.5	
	comp=Z,55nm,0.7s						
K43A	**Burlington**	**9.16**	**50**	IAmb_Lg		20 26 42.6	
	comp=Z,79nm,1.0s						
X48A	**Hartselle**	**9.21**	**104**	IAmb_Lg		20 26 38.8	
	comp=Z,33nm,0.8s						
TXAR	**Lajitas Array**	**9.21**	**213**	Pn	**Pn**	**20 23 51.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=36,slow=12,SNR=4.1						
TXAR				Pg		20 24 24.8	
	comp=Z,0.4nm,0.3s,baz=39,slow=15,SNR=2.9						
TXAR				Lg	Lg	20 26 24.9	
	comp=Z,1.6nm,0.3s,baz=33,slow=30,SNR=8.4						
WCI	**Wyandotte Cave**	**9.24**	**80**	IAmb_Lg		20 26 39.3	
	comp=Z,46nm,0.8s						
CLTN	**Cedars of Leba**	**9.34**	**93**	IAmb_Lg		20 26 42.2	
	comp=Z,33nm,0.8s						
I42A	**Draeger Farm,**	**9.55**	**43**	IAmb_Lg		20 26 56.2	
	comp=Z,65nm,1.2s						
E28A	**Huff**	**9.61**	**348**	IAmb_Lg		20 27 09.3	
	comp=Z,49nm,1.1s						
KVTX	**Kingsville**	**9.62**	**180**	IAmb_Lg		20 27 02.4	
	comp=Z,55nm,0.7s						
LRAL	**Lakeview Retre**	**9.83**	**112**	IAmb_Lg		20 26 53.4	
	comp=Z,49nm,1.3s						
SWET	**Sewanee**	**9.85**	**98**	IAmb_Lg		20 26 49.3	
	comp=Z,33nm,0.8s						
Y49A	**Blount Mountai**	**9.92**	**106**	IAmb_Lg		20 27 02.8	
	comp=Z,38nm,0.8s						
G40A	**Rib Lake**	**9.92**	**33**	IAmb_Lg		20 26 51.1	
	comp=Z,40nm,1.2s						
PDAR	**Pinedale Array**	**10.55**	**305**	Pn	**Pn**	**20 24 08.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=120,slow=16,SNR=8.7						
PDAR				Lg	Lg	20 27 03.9	
	baz=106,slow=30,SNR=1.0						
TKL	**Tuckaleechee C**	**11.47**	**93**	Pn	**Pn**	**20 24 20.5**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=225,slow=6.8,SNR=5.8						
TKL				Lg	Lg	20 27 33.3	
	comp=Z,1.5nm,0.3s,baz=192,slow=19,SNR=3.4						
ULM	**Lac du Bonnet**	**13.13**	**6**	Pn	Pn	20 24 40.5	-4.5
	comp=Z,0.3nm,0.3s,baz=189,slow=11,SNR=1.7						
ULM				Sn	Sn	20 26 58.2	-13
	comp=Z,0.7nm,0.3s,baz=100,slow=22,SNR=2.5						
ULM				Lg	Lg	20 28 20.5	
	comp=Z,0.3nm,0.3s,baz=144,slow=17,SNR=1.5						
ILAR	**Eielson Array**	**39.80**	**330**	P	**P**	**20 29 11.5**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=114,slow=7.7,SNR=2.5						

KRSC 29 20:37:06.5±1.6**, 49°.32N**×**157°.03E, h14**km±30km**, ML3.9,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.48**	**337**	*e*P	Pn	20 37 32.4	-0.4
SKR				*e*S	Sn	20 37 50.7	-1.3
PAU	**Pauzhetka**	**2.15**	**356**	*e*P	Pb	20 37 43.6	-1.6
PAU				*e*S	Sb	20 38 10.2	-1.6
KDTR	**Khodutka, Kamc**	**2.58**	**15**	*e*P	Pb	20 37 50.9	-1.6
KDTR				*e*S	Sb	20 38 22.7	-1.3
MTVR	**Mutnovka**	**3.25**	**13**	*e*P	Pn	20 37 59.9	+2.7
MTVR				*e*S	Sn	20 38 38.6	+2.9
RUS	**Russkaya**	**3.25**	**16**	*e*P	Pb	20 38 00.6	-3.4
RUS				*e*S	Sb	20 38 39.6	-3.9
GRL	**Gorelyy**	**3.30**	**11**	*e*P	Pn	20 38 00.9	+3.0
GRL				*e*S	Sn	20 38 40.1	+3.1
KRMR	**Karymshinskiy**	**3.58**	**11**	*e*P	Pb	20 38 05.9	-3.7
KRMR				*e*S	Sb	20 38 48.4	-4.5
APC	**Apacha**	**3.61**	**1**	*e*P	Pb	20 38 06.4	-3.6
DALK	**Dalny**	**3.87**	**16**	*e*P	Pn	20 38 09.9	+4.4
DALK				*e*S	Sb	20 38 56.3	-4.9
UGLR	**Uglovaya**	**4.05**	**15**	*e*P	Pn	20 38 12.3	+4.1
AVH	**Avacha**	**4.09**	**15**	*e*P	Pn	20 38 12.5	+3.8
SMAR	**Somma**	**4.10**	**15**	*e*P	Pn	20 38 12.8	+3.9
KOK	**Koryaka**	**4.10**	**14**	*e*P	Pn	20 38 12.4	+3.6
SDLR	**Sedlovina**	**4.13**	**16**	*e*P	Pn	20 38 12.1	+2.8
KRER	**Koryakskii**	**4.13**	**15**	*e*P	Pn	20 38 12.9	+3.5
KRX	**Arik**	**4.17**	**14**	*e*P	Pn	20 38 13.7	+3.9
GNL	**Ganaly**	**4.42**	**7**	*e*P	Pn	20 38 17.3	+4.1
KBTR	**Krutoberegovo**	**7.74**	**25**	P	Pn	20 39 01.7	+3.1

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*IDC **29** 20:40:45.4±1.7, 11°.68N×85°.92W, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/34, mbtmp3.8/7, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/40, Error ellipse: s-maj=67.3km s-min=35.5km az=47.0*

*UCR **29** 20:40:50.2±2.2, 10°.81N×86°.71W, h10km, MW4.4, mb4.3(NEIC)*

*NEIC **29** 20:40:50.8±1.2, 11°.07N±0°.10×86°.69W±0°.10, h47km±12km, mb4.3/9, Error ellipse: s-maj=17.4km s-min=9.4km az=222.0*

*INET **29** 20:40:52.8, 11°.27N×86°.80W, h21km, MW3.7*

ISC 29 20:40:49.4±0.7**, 11°.11N**±0°.07×**86°.85W**±0°.06**, h30**km**, n47,**
σ1s.**44**/48**, mb4.1**/11**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	**Masaya**	**1.11**	**38**	*e*P	**Pb**	**20 41 12.0**	**+1.9**
HZTE	**Horizontes, Gu**	**1.29**	**108**	*e*P	**Pn**	**20 41 10.9**	**-0.6**
HZTE				*e*S	**Sn**	**20 41 27.6**	**-0.1**
BUAI	**Buenos Aires**	**1.51**	**99**	*i* P	**Pn**	**20 41 13.4**	**-1.0**
ORTG	**Ortega, Santa**	**1.55**	**118**	*e*P	**Pn**	**20 41 14.0**	**-1.1**
CRIN	**San Cristobal**	**1.59**	**353**	Pn	**Pb**	**20 41 16.1**	**-2.2**
PLVR	**Palo Verde**	**1.65**	**117**	*e*P	**Pn**	**20 41 14.5**	**-2.1**
CUI	**Cuipilapa**	**1.71**	**105**	*e*P	**Pn**	**20 41 16.3**	**-1.0**
CUI				*i* S	**Sb**	**20 41 42.7**	**+1.2**
ACON	**Acoyapa**	**1.85**	**62**	Pn	**Pn**	**20 41 18.4**	**-0.7**
PTEN	**Parque Tenorio**	**1.87**	**102**	*i* P	**Pb**	**20 41 22.2**	**-0.8**
JTS	**Las Juntas de**	**2.03**	**113**	*e*P	**Pn**	**20 41 21.2**	**-0.4**
JTS	**Las Juntas de**	**2.03**	**113**	Pn	**Pn**	**20 41 20.1**	**-1.5**
ARE1	**Arenal 1**	**2.19**	**107**	*e*P	**Pn**	**20 41 23.9**	**+0.1**
CEDE	**Laguna Cedeo**	**2.20**	**106**	*i* P	**Pn**	**20 41 23.3**	**-0.6**
LAFE	**Finca La Fe, P**	**2.30**	**124**	*e*P	**Pn**	**20 41 23.7**	**-1.7**
ESPN	**Las Esperanzas**	**2.72**	**66**	*e*P	**Pn**	**20 41 31.5**	**+0.4**
ESPN	**Las Esperanzas**	**2.72**	**66**	Pn	**Pn**	**20 41 30.4**	**-0.7**
HDC	**Heredia**	**2.91**	**112**	Pn	Pn	20 41 29.6	-4.1
TGUH	**Tegucigalpa,Un**	**2.96**	**352**	Pn	**Pn**	**20 41 33.1**	**-1.4**
LCR2	**La Lucha 2**	**3.11**	**116**	*e*P	**Pn**	**20 41 38.4**	**+1.8**
MTO3	**Montecristo**	**4.09**	**323**	Pn	**Pn**	**20 41 48.0**	**-2.1**
ESQI	**Esquipulas**	**4.21**	**325**	Pn	**Pn**	**20 41 51.6**	**0.0**
CMIG	**Matias Romero**	**9.80**	**308**	Pn	**Pn**	**20 43 11.8**	**+3.4**
	1.1nm,0.3s,baz=155,slow=13,SNR=9.6						
ATAH	**Atahualpa**	**19.98**	**155**	LR	LR	20 52 07.2	
	comp=Z,56nm,19.7s,baz=273,slow=34						
TXAR	**Lajitas Array**	**23.98**	**322**	P	**P**	**20 46 03.0**	**+1.4**
	2.2nm,0.8s,baz=137,slow=11,SNR=16						
TXAR	**Lajitas Array**	**23.98**	**322**	P	**P**	**20 46 02.7**	**+1.1**
TX31	**Lajitas Ar. Si**	**23.98**	**322**	P	**P**	**20 46 02.9**	**+1.3**
TX31				IAmb	IAmb	20 46 04.2	
	comp=Z,7.5nm,0.8s						
TX32	**Lajitas Array**	**23.98**	**322**	P	**P**	**20 46 02.7**	**+1.2**
SWET	**Sewanee**	**24.01**	**2**	P	**P**	**20 45 59.5**	**-2.2**
SWET				IAmb	IAmb	20 46 03.3	
	comp=Z,6.1nm,0.5s						
W50A	**Signal Mountai**	**24.02**	**3**	P	**P**	**20 46 01.2**	**-0.6**
W50A				IAmb	IAmb	20 46 04.0	
	comp=Z,5.7nm,0.6s						
CPCT	**Cooper Cave**	**24.32**	**5**	P	**P**	**20 46 04.2**	**-0.3**
CPCT				IAmb	IAmb	20 46 08.3	
	comp=Z,6.8nm,0.7s						
H06E1	**SOCORRO T-PHAS**	**24.46**	**291**	T	T	21 11 25.8	
	SNR=8.0						
PV13	**Radium Mtn., P**	**33.35**	**328**	P	**P**	**20 47 26.0**	**+0.8**
PV13				IAmb	IAmb	20 47 31.0	
	comp=Z,5.3nm,1.0s						
PV03	**Paradox Valley**	**33.44**	**328**	P	**P**	**20 47 25.5**	**-0.5**
PV11	**David Mesa, Pa**	**33.48**	**328**	P	**P**	**20 47 27.6**	**+1.3**
PV17	**East Wray Mesa**	**33.52**	**328**	P	**P**	**20 47 27.2**	**+0.6**
PDAR	**Pinedale Array**	**37.23**	**332**	P	**P**	**20 47 58.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=128,slow=11,SNR=4.9						
PDAR	**Pinedale Array**	**37.23**	**332**	P	**P**	**20 47 58.6**	**0.0**
NVAR	**Mina Array Bea**	**39.10**	**319**	P	**P**	**20 48 16.6**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=149,slow=6.6,SNR=4.1						
NVAR				PcP	**PcP**	**20 50 26.1**	**+2.3**
	comp=Z,1.7nm,0.7s,baz=131,slow=4.9,SNR=12						
NVAR	**Mina Array Bea**	**39.10**	**319**	P	**P**	**20 48 16.0**	**+1.7**
ULM	**Lac du Bonnet**	**39.73**	**351**	P	**P**	**20 48 16.2**	**-2.9**
	comp=Z,2.4nm,0.6s,baz=156,slow=7.7,SNR=4.8						
YKA	**Yellowknife Ar**	**55.05**	**345**	P	**P**	**20 50 16.5**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=142,slow=7.6,SNR=9.0						
YKA				PcP	**PcP**	**20 51 19.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=137,slow=4.4,SNR=5.2						
ILAR	**Eielson Array**	**67.48**	**336**	P	**P**	**20 51 41.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=138,slow=5.3,SNR=9.2						
ILAR	**Eielson Array**	**67.48**	**336**	P	**P**	**20 51 41.4**	**-0.8**
MKAR	**Makanchi Array**	**121.55**	**9**	PKP	**PKPdf**	**20 59 39.7**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=356,slow=2.0,SNR=1.4						
KSRS	**Korea Array**	**121.72**	**328**	PKP	**PKiKP**	**20 59 42.1**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=16,slow=2.3,SNR=5.5						
WRA	**Warramunga Arr**	**139.45**	**252**	PKhKP	PKPpre	21 00 14.5	
	comp=Z,0.3nm,0.6s,baz=86,slow=2.3,SNR=2.0						
WRA				PKP	**PKiKP**	**21 00 18.4**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=90,slow=2.2,SNR=2.3						
CMAR	**Chiang Mai Arr**	**150.07**	**349**	PKPbc	**PKPdf**	**21 00 35.2**	**+2.0**
	comp=Z,0.9nm,0.5s,baz=337,slow=3.0,SNR=4.4						

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*NEIC **29** 20:44:42.4±1.0, 36°.93N±0°.04×97°.62W±0°.03, h4km±7km, Error ellipse: s-maj=6.0km s-min=0.7km az=214.0*

*TUL **29** 20:44:42.2±1.1, 36°.95N±0°.04×97°.63W±0°.03, h6km±6km, ML3.3, mb_Lg3.3/97(NEIC), Error ellipse: s-maj=5.9km s-min=1.9km az=213.0*

*ANF **29** 20:44:43.2±1.2, 36°.89N×97°.62W, h2km±7km, ML4.1/11, Error ellipse: s-maj=3.7km s-min=3.2km az=68.0*

ISC 29 20:44:42.5±1.0**, 36°.91N**±0°.02×**97°.64W**±0°.02**, h6**km±10km**,**
n90, σ1s.**06**/71**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.17**	**53**	Pg	**Pg**	**20 44 45.4**	**-0.5**
KAN13				Sg	**Sg**	**20 44 47.4**	**-0.8**
GC02	**Grant County #**	**0.18**	**251**		**Pg**	**20 44 46.7**	**+0.5**
GC02				Sg	**Sg**	**20 44 49.6**	**+1.0**
KAN01	**Argonia South**	**0.26**	**339**		**Pg**	**20 44 47.3**	**-0.3**
KAN01				Sg	**Sg**	**20 44 50.7**	**-0.3**
KAN14	**Manchester OK**	**0.26**	**280**		**Pg**	**20 44 47.8**	**+0.2**
KAN14				Sg	**Sg**	**20 44 51.7**	**+0.6**
KAN08	**Anthony NE Sta**	**0.41**	**320**		**Pg**	**20 44 50.2**	**-0.3**
KAN08				Sg	**Sg**	**20 44 55.4**	**-0.4**
KAN10	**Anthony SW Sta**	**0.42**	**300**		**Pg**	**20 44 50.6**	**0.0**
KAN10				Sg	**Sg**	**20 44 56.3**	**+0.2**
KAN12	**Harper NE Stat**	**0.48**	**324**		**Pg**	**20 44 51.4**	**-0.4**
KAN12				Sg	**Sg**	**20 44 57.4**	**-0.6**
CROK	**Carrier**	**0.49**	**214**		**Pg**	**20 44 52.4**	**+0.5**
CROK				Sg	**Sg**	**20 44 59.4**	**+1.0**
T35A	**Sooner Cattle**	**0.91**	**89**		**Pg**	**20 44 59.1**	**-0.8**
T35A				Sg	**Sg**	**20 45 10.8**	**-0.9**
T35B	**Sooner Cattle**	**0.91**	**89**	P		20 44 59.2	
	baz=270						
T35B				S		20 45 10.9	
	baz=270						
QUOK	**Quay**	**1.06**	**134**		**Pg**	**20 45 02.3**	**-0.5**
QUOK				Sg	**Sg**	**20 45 16.2**	**-0.3**
OK029	**Liberty Lake**	**1.12**	**172**		**Pb**	**20 45 03.8**	**-0.5**
OK031	**S. Brethren Rd**	**1.16**	**146**		**Pb**	**20 45 04.2**	**-0.7**
OK030	**Cody Creek RV**	**1.20**	**145**		**Pn**	**20 45 05.0**	**-0.9**
U32A	**Winter Ranch,**	**1.22**	**244**	Pg	**Pn**	**20 45 05.4**	**-0.7**
U32A	**Winter Ranch,**	**1.22**	**244**	P		20 45 05.5	
	baz=64						
U32A				S		20 45 22.2	
	baz=64						
BCOK	**Bluff Creek, N**	**1.25**	**179**		**Pn**	**20 45 06.2**	**-0.4**
OK025	**Westminster Rd**	**1.35**	**169**		**Pb**	**20 45 07.9**	**-0.3**
OKCFA	**Oklahoma City**	**1.50**	**174**		**Pb**	**20 45 10.4**	**-0.4**
OKCSW	**OKLAHOMA CITY**	**1.51**	**174**		**Pb**	**20 45 10.6**	**-0.5**
FNO	**Franklin**	**1.66**	**173**		**Pb**	**20 45 12.9**	**-0.7**
R32A	**Long Quarter,**	**1.73**	**331**		**Pn**	**20 45 13.2**	**0.0**
R32A	**Long Quarter,**	**1.73**	**331**	S		20 45 36.1	
	baz=150						
TUL1	**Leonard**	**1.80**	**123**	P	**Pb**	**20 45 14.8**	**-1.0**
	baz=304						
TUL1				S	**Sb**	**20 45 38.8**	**+0.2**
	baz=304						
TUL1	**Leonard**	**1.80**	**123**		**Pb**	**20 45 14.7**	**-1.2**
TUL1				IAmb_Lg		20 45 40.4	
	comp=Z,261nm,0.9s						
TUL1	**Leonard**	**1.80**	**123**	P		20 45 14.8	
	baz=304						
TUL1				S		20 45 38.9	
	baz=304						
KSU1	**Kansas State U**	**2.33**	**20**	P	**Pn**	**20 45 22.5**	**+1.1**
	baz=201						
KSU1				S	**Sb**	**20 45 52.9**	**-1.2**
	baz=201						
KSU1	**Kansas State U**	**2.33**	**20**	Pn	**Pn**	**20 45 21.6**	**+0.1**
KSU1				IAmb_Lg		20 45 56.9	
	comp=Z,117nm,1.0s						
KSU1	**Kansas State U**	**2.33**	**20**	P		20 45 22.3	
	baz=201						
WMOK	**Wichita Mounta**	**2.36**	**203**	P	**Pn**	**20 45 22.5**	**+0.6**
	baz=23						
WMOK				S	**Sb**	**20 45 52.9**	**-2.0**
	baz=23						
WMOK	**Wichita Mounta**	**2.36**	**203**	Pn	**Pn**	**20 45 22.5**	**+0.6**
WMOK	**Wichita Mounta**	**2.36**	**203**	P		20 45 22.7	
	baz=23						
CBKS	**Cedar Bluff**	**2.52**	**320**	S	**Sb**	**20 45 59.9**	**+0.4**
	baz=138						
CBKS	**Cedar Bluff**	**2.52**	**320**		**Pn**	**20 45 23.6**	**-0.5**
CBKS	**Cedar Bluff**	**2.52**	**320**	S		20 45 59.9	
	baz=138						
U38A	**Gravette**	**2.66**	**99**	Pn	**Pn**	**20 45 27.3**	**+1.3**
X37A	**Clayton**	**2.96**	**141**		**Pn**	**20 45 30.5**	**+0.4**
X37A				IAmb_Lg		20 46 20.1	
	comp=Z,96nm,0.9s						
X37A	**Clayton**	**2.96**	**141**	P		20 45 30.8	
	baz=322						
X37A				S		20 46 08.1	
	baz=322						
HHAR	**Hobbs**	**3.05**	**101**		**Pn**	**20 45 31.6**	**+0.3**
S39A	**Bolivar**	**3.53**	**76**		**Pn**	**20 45 37.7**	**-0.2**
S39A				IAmb_Lg		20 46 37.5	
	comp=Z,85nm,0.7s						
S39A	**Bolivar**	**3.53**	**76**	P		20 45 39.5	
	baz=258						
W39A	**Magazine**	**3.56**	**118**		**Pn**	**20 45 38.9**	**+0.5**
W39A				IAmb_Lg		20 46 41.1	
	comp=Z,88nm,0.8s						
W39A	**Magazine**	**3.56**	**118**	S		20 46 22.2	
	baz=300						
AMTX	**Amarillo**	**3.85**	**239**	Sb	**Sg**	**20 46 43.4**	**-2.9**
	baz=57						
AMTX	**Amarillo**	**3.85**	**239**	Pg	**Pb**	**20 45 50.6**	**-0.4**
AMTX				IAmb_Lg		20 46 50.1	
	comp=Z,75nm,1.0s						
U40A	**Yellville**	**3.89**	**97**	P	**Pn**	**20 45 44.2**	**+1.3**
	baz=280						

U40A	Yellville	3.89	97		Pn	20 45 44.0	+1.1
U40A	Yellville	3.89	97	P		20 45 43.8	
	baz=280						
U40A				P		20 45 43.8	
	baz=280						
MIAR	Mount Ida	4.07	124	Pb	Pb	20 45 56.1	+1.6
	baz=307						
MIAR	Mount Ida	4.07	124		Pn	20 45 45.2	-0.1
MIAR				IAmb_Lg		20 47 00.9	
	comp=Z,52nm,0.8s						
P38A	Dawn	4.22	49	Pg	Pb	20 45 58.1	+1.0
P38A				IAmb_Lg		20 46 57.9	
	comp=Z,101nm,0.8s						
N35A	Tabor	4.24	21		Pn	20 45 47.0	-0.6
Z38A	Mt. Pleasant	4.25	148	IAmb_Lg		20 47 05.5	
	comp=Z,112nm,0.9s						
MGMO	Mountain Grove	4.31	85		Pn	20 45 49.6	+1.0
MGMO				IAmb_Lg		20 46 56.4	
	comp=Z,54nm,0.8s						
KSCO	Kaye Shedlock’	4.46	300	P	Pn	20 45 51.2	+0.3
	baz=116						
KSCO	Kaye Shedlock’	4.46	300		Pn	20 45 51.4	+0.6
R40A	Maddies Statio	4.48	71		Pn	20 45 50.2	-0.8
R40A				IAmb_Lg		20 47 08.7	
	comp=Z,70nm,0.8s						
BGNE	Belgrade	4.51	355	Pb	Pb	20 46 03.3	+1.2
	baz=175						
BGNE	Belgrade	4.51	355		Pn	20 45 50.5	-0.9
FCAR	Ozark Folk Cen	4.57	101	IAmb_Lg		20 47 03.6	
	comp=Z,56nm,0.9s						
X40A	Basin Creek Fa	4.60	120		Pn	20 45 53.9	+1.2
X40A				IAmb_Lg		20 47 18.6	
	comp=Z,44nm,0.8s						
WHAR	Wooly Hollow	4.63	109		Pn	20 45 53.5	+0.5
W41B	Gary Mavity, V	4.70	110	Sb	Sb	20 47 07.6	+5.3
	baz=293						
W41B	Gary Mavity, V	4.70	110	P		20 45 55.2	
	baz=293						
WLAR	White Oak Lake	4.91	130	IAmb_Lg		20 47 31.8	
	comp=Z,38nm,0.7s						
WHTX	Lake Whitney,	4.91	178	P	Pn	20 45 57.5	+0.6
	baz=358						
WHTX	Lake Whitney,	4.91	178	IAmb_Lg		20 47 30.3	
	comp=Z,38nm,1.1s						
MSTX	Muleshoe	5.11	236	IAmb_Lg		20 47 38.4	
	comp=Z,32nm,1.1s						
P40A	Paris	5.12	58		Pn	20 45 59.0	-0.8
P40A				IAmb_Lg		20 47 29.9	
	comp=Z,67nm,0.8s						
L34A	Svendsen Farm,	5.14	11	IAmb_Lg		20 47 33.7	
	comp=Z,65nm,0.7s						
N38A	Joes South For	5.18	40	IAmb_Lg		20 47 30.4	
	comp=Z,67nm,0.8s						
CCM	Cathedral Cave	5.21	75		Pn	20 46 01.0	-0.1
CCM				IAmb_Lg		20 47 32.8	
	comp=Z,49nm,0.8s						
T42A	Van Buren	5.25	87		Pn	20 46 01.3	-0.2
T42A				IAmb_Lg		20 47 26.2	
	comp=Z,40nm,0.7s						
OGNE	Ogallala	5.28	321	Pn	Pn	20 46 02.8	+0.6
OGNE				IAmb_Lg		20 47 33.3	
	comp=Z,38nm,0.8s						
LCAR	Lake Charles	5.29	97	Pn	Pn	20 46 00.8	-1.4
LCAR				IAmb_Lg		20 47 36.9	
	comp=Z,42nm,1.1s						
K31A	O'Neill	5.77	352	IAmb_Lg		20 47 46.9	
	comp=Z,62nm,0.7s						
FVM	French Village	5.84	77	IAmb_Lg		20 47 50.3	
	comp=Z,47nm,0.8s						
435B	Jarrell	6.11	180	IAmb_Lg		20 48 07.5	
	comp=Z,35nm,1.0s						
SLM	Saint Louis	6.11	71	IAmb_Lg		20 48 06.8	
	comp=Z,36nm,0.8s						
SDCO	Great Sand Dun	6.32	280	Pn	Pn	20 46 16.7	+0.2
N41A	Harden Midland	6.51	52	IAmb_Lg		20 48 10.2	
	comp=Z,55nm,0.8s						
143A	Socs Landing,	6.63	127	IAmb_Lg		20 48 26.9	
	comp=Z,29nm,0.8s						
JCT	Junction City	6.66	196	IAmb_Lg		20 48 29.3	
	comp=Z,29nm,0.8s						
K38A	Parkersburg	6.85	32	IAmb_Lg		20 48 36.7	
	comp=Z,43nm,0.8s						
ISCO	Idaho Springs	6.89	297	Pn	Pn	20 46 24.1	-0.4
W45A	Hickory Valley	7.07	102	IAmb_Lg		20 48 28.5	
	comp=Z,49nm,0.7s						
OXF	Oxford	7.11	107	IAmb_Lg		20 48 29.5	
	comp=Z,40nm,0.9s						
ANMO	Albuquerque	7.42	257	IAmb_Lg		20 48 41.4	
	comp=Z,8.1nm,0.9s						
O44A	Mansfield	7.88	63	IAmb_Lg		20 48 50.2	
	comp=Z,42nm,0.7s						
WVT	Waverly	7.94	93	IAmb_Lg		20 48 54.9	
	comp=Z,13nm,0.8s						
PLAL	Pickwick Lake	8.00	101	IAmb_Lg		20 48 58.9	
	comp=Z,17nm,0.9s						
JFWS	Jewell Farm	8.26	41	IAmb_Lg		20 49 04.5	
	comp=Z,36nm,1.0s						
RSSD	Black Hills	8.69	328	IAmb_Lg		20 49 32.2	
	comp=Z,15nm,1.0s						
I40A	Norwalk	8.79	35	IAmb_Lg		20 49 22.5	
	comp=Z,28nm,0.9s						
V48A	Smith Brothers	8.81	94	IAmb_Lg		20 49 24.3	
	comp=Z,17nm,0.9s						
K22A	Casper	8.92	313	IAmb_Lg		20 49 50.3	
	comp=Z,17nm,0.8s						
SFIN	Lafayette	8.95	64	IAmb_Lg		20 49 23.9	
	comp=Z,32nm,0.8s						
BLO	Bloomington	9.06	72	IAmb_Lg		20 49 31.9	
	comp=Z,29nm,0.7s						
WCI	Wyandotte Cave	9.11	78	IAmb_Lg		20 49 41.4	
	comp=Z,22nm,0.8s						
CLTN	Cedars of Leba	9.15	92	IAmb_Lg		20 49 32.0	
	comp=Z,16nm,0.9s						
E28A	Huff	9.92	348	IAmb_Lg		20 50 08.5	
	comp=Z,24nm,0.8s						
P48A	Milroy	9.95	71	IAmb_Lg		20 50 03.6	
	comp=Z,24nm,0.8s						

*DJA **29** 20:45:32.5±0.7, 4°S±3°×14°2E±°, h49^{km}±6^{km}, M4.8/18, mb4.7/18, mB5.4/5, MLv4.9/5, Mw(mB)4.8/5, MwMwp6.8/2, Mwp6.6/2*

*NEIC **29** 20:45:35.1±1.9, 3°.90S±0°.08×141°.3E±0°.1, h49^{km}±11^{km}, mb4.0/10, Error ellipse: s-maj=17.3km s-min=10.4km az=62.0*

*IDC **29** 20:45:35.9±1.9, 3°.87S×141°.37E, h53^{km}±15^{km}, mb3.7/9, mb1 4.0/13, mb1mx3.8/36, mbtmp4.1/13, ML4.3/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/40, Error ellipse: s-maj=25.1km s-min=11.5km az=81.0*

ISC 29 20:45:35.5±0.7, **4°.02S**±0°.05×**141°.25E**±0°.08, **h50^{km}, n51,** σ**2.^{s}04**/53, **mb4.2**/11, **MS3.4**/7, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.59	340	P	Pn	20 45 59.6	-1.7
	31nm,0.3s,baz=148,slow=11,SNR=103						
JAY				S	Sn	20 46 19.1	-1.5
	199nm,0.3s,baz=264,slow=7.6,SNR=14						
JAY				LR	LR	20 47 00.3	
	comp=Z,802nm,19.0s,baz=139,slow=56						
JAY	Jayapura	1.59	340	P	Pn	20 45 59.4	-1.8
JAY				S	Sn	20 46 18.5	-2.1
GENI	Genyem	1.78	323	P	Pn	20 46 03.4	-0.4
GENI				S	Sn	20 46 25.3	0.0
SRPI	Serui, Papua	5.44	293	P	Pn	20 46 58.0	+4.0
	1.4nm6μm135nm,0.6s						
BAKI	Biak	5.85	298	P	Pn	20 47 17.2	+17
KMPI	Kaimana, Papua	7.54	272	P	Pn	20 47 25.8	+3.0
	0.4nm109μm2μm98nm,0.9s						
PMG	Port Moresby	7.94	133	P	Pn	20 47 30.7	+2.3
	3.6nm,0.3s,baz=15,slow=2.6,SNR=7.3						
PMG				LR	LR	20 51 26.8	
	comp=Z,241nm,18.9s,baz=346,slow=44						
PMG	Port Moresby	7.94	133	Pn	Pn	20 47 29.1	+0.7
FAKI	Fak Fak	9.05	277	Pn	Pn	20 47 45.2	+1.6
COEN	Coen	10.06	169	Pn	Pn	20 47 57.9	+0.5
SIJI	Sorong	10.45	287	P	Pn	20 48 05.2	+2.4
	3.6nm,0.3s,baz=243,slow=22,SNR=15						
SWI	Sorong	10.46	287	P	Pn	20 48 04.1	+1.2
	30nm,0.5s						
MTN	Manton Dam	13.30	228	Pn	Pn	20 48 42.5	+0.8
WB0	Warramunga Arr	17.02	203	P	Pn	20 49 31.3	+1.1
WB0				IAmb	IAmb	20 49 58.8	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	17.14	202	P	Pn	20 49 33.4	+1.7
WRAB	Tennant Creek	17.19	202	P	Pn	20 49 33.6	+1.3
WRAB				IAmb	IAmb	20 49 48.4	
	comp=Z,11nm,0.7s						
WB2	Warramunga Arr	17.20	202	P	Pn	20 49 33.5	+1.2
WB2				IAmb	IAmb	20 49 46.3	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	17.21	202	P	P	20 49 34.3	+0.9
	comp=Z,0.8nm,0.3s,baz=15,slow=11,SNR=18						
WRA				S	Sn	20 52 39.0	-4.0
	comp=Z,0.1nm,0.3s,baz=13,slow=23,SNR=2.3						
WRA				Lg	Lg	20 54 42.8	
	baz=27,slow=28,SNR=1.1						
WRA	Warramunga Arr	17.21	202	P	P	20 49 34.3	+0.9
SOEI	Soe	17.79	250	P	Pn	20 49 40.3	+0.5
SOEI	Soe	17.79	250	P	P	20 49 43.3	+3.2
	comp=Z,91nm,0.9s						
KMSI	Cibinong	17.85	284	P	Pn	20 49 39.4	-1.0
	comp=Z,90nm,0.7s						
BATI	Baumata	18.50	250	P	Pn	20 49 49.7	+1.4
	comp=Z,4.1nm,0.3s,baz=100,slow=4.5,SNR=5.5						
BATI				S	Sn	20 53 11.2	-3.2
	comp=Z,1.3nm,0.3s,baz=349,slow=5.3,SNR=6.9						
BATI	Baumata	18.50	250	P	Pn	20 49 51.3	+3.0
	comp=Z,29nm,0.8s						
GTOI	Gorontalo	18.80	284	P	Pn	20 49 54.8	+2.8
	comp=Z,25nm,1.1s						
MRSI	Marisa	19.80	283	P	P	20 50 02.4	+0.4
	comp=Z,23nm,0.6s						
APSI	Ampana	19.82	278	P	Pn	20 50 04.6	+0.5
	comp=Z,597nmcomp=Z,46nm,1.2s						
FITZ	Fitzroy Crossi	20.72	226	P	P	20 50 13.5	+1.6
	comp=Z,3.0nm,0.9s,baz=50,slow=9.9,SNR=3.3						
FITZ				S	S	20 53 54.2	-6.5
	comp=Z,3.3nm,0.6s,baz=149,slow=7.2,SNR=2.6						
FITZ				LR	LR	20 58 14.2	
	comp=Z,86nm,21.9s,baz=41,slow=36						
FITZ	Fitzroy Crossi	20.72	226	P	P	20 50 12.8	+0.9
FITZ				IAmb	IAmb	20 50 30.4	
	comp=Z,5.6nm,0.7s						
AS31	Alice Springs	20.78	199	P	P	20 50 14.6	+2.0
ASAR	Alice Springs	20.79	199	P	P	20 50 14.2	+1.6
	comp=Z,1.7nm,0.6s,baz=28,slow=10.0,SNR=17						
ASAR				S	S	20 53 57.9	-4.1
	comp=Z,0.8nm,0.9s,baz=19,slow=26,SNR=2.0						
ASAR	Alice Springs	20.79	199	P	P	20 50 13.6	+1.0
BNSI	Bone	21.09	268	P	P	20 50 15.0	-0.9
	comp=Z,32nm,0.9s						
TTSI	Tana Toraja	21.41	272	P	P	20 50 21.5	+2.1
	comp=Z,16nm,0.8s						
MPSI	Mapaga	21.77	281	P	P	20 50 24.3	+1.1
	comp=Z,14nm,0.8s						
MYLDM	Lahad Datu	24.49	292	P	P	20 50 50.5	+0.3
STKA	Stephens Creek	27.72	179	LR	LR	21 04 37.5	
	comp=Z,92nm,18.0s,baz=26,slow=41						
MDSI	Maura Dua	36.97	268	P	P	20 52 39.5	-0.9
	comp=Z,8.1nm,1.1s						
MJAR	Matsushiro Arr	40.45	356	P	P	20 53 08.2	-1.0
	comp=Z,0.7nm,0.6s,baz=186,slow=9.8,SNR=4.3						
KSRS	Korea Array	43.08	344	LR	LR	21 08 25.4	
	comp=Z,34nm,19.5s,baz=320,slow=32						
CMAR	Chiang Mai Arr	47.28	300	P	P	20 54 04.5	+0.2
	comp=Z,2.1nm,0.9s,baz=120,slow=6.1,SNR=14						
CMAR				LR	LR	21 14 45.7	
	comp=Z,28nm,19.1s,baz=150,slow=37						
KLR	Kul'dur	53.67	352	LR	LR	21 15 04.1	
	comp=Z,62nm,18.1s,baz=148,slow=33						
SONM	Songino Array	59.99	334	P	P	20 55 37.7	+0.6
	comp=Z,0.6nm,0.9s,baz=140,slow=5.9,SNR=3.6						
SONM				LR	LR	21 23 44.5	
	comp=Z,42nm,18.4s,baz=230,slow=38						
MKAR	Makanchi Array	72.37	322	P	P	20 56 56.8	+0.5
	comp=Z,3.4nm,0.9s,baz=103,slow=8.5,SNR=26						
MKAR	Makanchi Array	72.37	322	P	P	20 56 56.5	+0.2
MAKZ	Makanchi	72.57	322	P	P	20 56 57.8	+0.3
ZALV	Zalesovo Beam	74.34	329	P	P	20 57 07.4	-0.2
	comp=Z,1.6nm,0.8s,baz=96,slow=6.0,SNR=5.7						
KURBB	Kurchatov Arra	76.25	324	P	P	20 57 18.6	-0.2
	comp=Z,1.5nm,0.9s,baz=111,slow=5.2,SNR=4.6						
NRIK	Noril'sk	81.69	343	LR	LR	21 35 33.8	
	comp=Z,92nm,18.2s,baz=310,slow=37						
ILAR	Eielson Array	85.97	24	P	P	20 58 08.0	-2.1
	comp=Z,1.4nm,0.8s,baz=260,slow=4.8,SNR=12						
ILAR	Eielson Array	85.97	24	P	P	20 58 07.9	-2.1

ANF 29 21:00:26.8±0.4, **37°.43N**×**81°.38W, h0^{km}, ML3.1**/16, **ML2.3**/7, **Error ellipse: s-maj=4.9km s-min=3.1km az=135.0, West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S54A	Dingess, Beckl	0.38	9	P	Pg	21 00 34.7	+0.6
	baz=188						
R55A	Marlinton	1.32	49	P	Pg	21 00 51.8	-0.2
	baz=230						
R55A				S	Sb	21 01 09.7	-0.2
	baz=230						
Q53A	Leroy	1.44	356	P	Pn	21 00 54.1	0.0
	baz=176						
S56A	Natural Bridge	1.47	80	P	Pb	21 00 55.0	+0.1
	baz=261						
R56A	Bull Pasture M	1.85	57	P	Pn	21 01 00.3	+0.5
	baz=238						
R56A				S	Sb	21 01 24.8	-0.3
	baz=238						
TZTN	Tazewell	1.94	244	P	Pn	21 01 00.3	-0.7
	baz=62						
V57A	Coltrane Farms	2.01	139	P	Pn	21 01 02.0	+0.1
	baz=320						

ANF 29 21:01:07.8±0.4, **37°.83N**×**81°.75W, h0^{km}, Error ellipse: s-maj=4.5km s-min=2.0km az=75.0, West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S54A	Dingess, Beckl	0.35	94	P	Pg	21 01 14.4	0.0
	baz=275						
Q53A	Leroy	1.04	10	P	Pg	21 01 27.6	-0.3
	baz=190						
Q53A				S	Sg	21 01 42.0	+0.7
	baz=190						
BLA	Blacksburg	1.22	120	S	Sg	21 01 46.8	-0.2
	baz=301						
U54A	Nelsons Funny	1.30	183	S	Sn	21 01 51.1	-0.4
	baz=2.5						
T56A	Rocky Mt	1.58	120	S	Sb	21 01 58.5	+0.1
	baz=301						
P52A	Corning	1.83	351	S	Sn	21 02 04.8	+0.5
	baz=170						
U56A	King	1.84	143	S	Sn	21 02 04.4	-0.1
	baz=324						
TZTN	Tazewell	1.93	229	S	Sb	21 02 07.9	-0.4
	baz=48						
R56A	Bull Pasture M	1.94	72	P	Pn	21 01 42.8	+0.8
	baz=253						
R56A				S	Sb	21 02 08.4	-0.4
	baz=253						
S57A	Dark Hollow, R	2.21	91	P	Pn	21 01 46.4	+0.6
	baz=273						
V56A	Mocksville	2.25	153	S	Sb	21 02 16.3	-1.4
	baz=334						
MCWV	Mont Chateau	2.36	39	P	Pn	21 01 48.7	+1.0
	baz=220						
U57A	Blanch	2.38	125	S	Sb	21 02 20.0	-1.3
	baz=307						
O53A	New Philadelph	2.45	10	P	Pn	21 01 49.4	+0.3
	baz=190						
O53A				S	Sb	21 02 22.6	-1.0
	baz=190						
Q58A	Fox Den Farm,	3.38	70	Pb	Pb	21 02 08.3	-0.3
	baz=252						
N54A	Moraine State	3.41	23	P	Pn	21 02 02.4	+0.1
	baz=204						

*NEIC **29** 21:07:51.7±1.0, 43°.78N±0°.03×105°.28W±0°.06, h0^{km}±2^{km}, ML3.1/68, Error ellipse: s-maj=7.8km s-min=4.3km az=111.0*

*IDC **29** 21:07:51.6±1.5, 43°.81N×105°.55W, h0^{km}, mb1 3.5/5, mb1mx3.3/45, mbtmp3.3/5, ML3.4/4, Error ellipse: s-maj=42.5km s-min=8.9km az=149.0*

ISC 29 21:07:51.0±1.1, **43°.79N**±0°.06×**105°.25W**±0°.07, **h0^{km}, n68,** σ**0.^{s}98**/66, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	69	Pg	Pn	21 08 10.1	-1.6
K22A	Casper	1.47	220		Pn	21 08 16.9	-2.1
K22A				IAML		21 08 39.6	
	comp=E,198nm,0.4s						
K22A				IAML		21 08 41.8	
	comp=N,565nm,0.3s						
PHWY	Pilot Hill	2.49	184		Pn	21 08 33.1	0.0
PHWY				IAML		21 09 08.6	
	comp=N,83nm,0.4s						
PHWY				IAML		21 09 12.5	
	comp=N,86nm,0.4s						
RWWY	Rawlins	2.55	215		Pn	21 08 34.1	+0.3
RWWY				IAML		21 09 09.4	
	comp=N,118nm,0.7s						
RWWY				IAML		21 09 11.4	
	comp=N,124nm,0.7s						
LAO	LASA Array	2.98	347		Pn	21 08 39.9	+0.2
LAO				IAML		21 09 24.8	
	comp=N,100nm,0.3s						
RLMT	Red Lodge	3.17	296	Pn	Pn	21 08 42.3	-0.1
RLMT				IAML		21 09 30.5	
	comp=N,42nm,0.4s						
RLMT				IAML		21 09 46.8	
	comp=N,63nm,0.4s						
BW06	Boulder Array	3.31	253		Pn	21 08 44.2	0.0
BW06				IAML		21 09 37.4	
	comp=N,47nm,0.4s						
PD31	Pinedale Array	3.31	253		Pn	21 08 44.2	0.0
PDAR	Pinedale Array	3.31	253	Pn	Pn	21 08 44.5	+0.3
	comp=N,3.2nm,0.3s,baz=73,slow=16,SNR=53						
PDAR				Lg	Lg	21 09 28.2	
	comp=N,20nm,0.3s,baz=76,slow=34,SNR=15						
PDAR	Pinedale Array	3.31	253	Pn	Pn	21 08 44.0	-0.2
YNE	Yellowstone No	3.62	291		Pn	21 08 48.8	+0.2
YMP	Mirror Lake Pl	3.65	287		Pn	21 08 49.5	+0.5
OGNE	Ogallala	3.71	139		Pn	21 08 50.8	+1.1
OGNE				IAML		21 09 56.3	
	comp=N,74nm,0.7s						
GCMT	Greycliff	3.73	304		Pn	21 08 50.5	+0.6
LKWY	Lake	3.78	284		Pn	21 08 52.2	+1.4
LKWY				IAML		21 09 23.9	
	comp=N,23nm,0.6s						
H17A	Grant Village	3.88	281		Pn	21 08 52.7	+0.5
LOHW	Long Hollow	3.88	269		Pn	21 08 52.9	+0.7
FLWY	Flagg Ranch	3.94	276		Pn	21 08 52.9	-0.1
FLWY				IAML		21 10 01.6	
	comp=N,33nm,1.8s						
FLWY				IAML		21 10 03.8	
	comp=N,21nm,2.2s						
MOOW	Moose Ponds	3.98	271		Pn	21 08 54.1	+0.6
ISCO	Idaho Springs	4.00	184	Pn	Pn	21 08 54.2	+0.4
SNOW	Snow King Moun	4.01	267		Pn	21 08 54.0	+0.1
SNOW				IAML		21 10 01.7	
	comp=N,23nm,1.1s						
SNOW				IAML		21 10 25.2	
	comp=N,24nm,2.4s						
YPP	Pitchstone Pla	4.03	279		Pn	21 08 54.8	+0.4
REDW	Red Top Meadow	4.09	266		Pn	21 08 55.6	+0.6
REDW				IAML		21 10 04.3	
	comp=N,31nm,0.7s						
REDW				IAML		21 10 10.6	
	comp=N,32nm,0.6s						
IMW	Indian Meadow	4.11	273	Pn	Pn	21 08 55.7	+0.3
IMW				IAML		21 09 24.7	
	comp=N,28nm,0.5s						
IMW				IAML		21 10 15.1	
	comp=N,17nm,0.6s						
YHH	Holmes Hill	4.14	286	Pn	Pn	21 08 56.3	+0.5
YMR	Madison River	4.20	284		Pn	21 08 56.8	+0.2
E28A	Huff	4.26	48		Pb	21 08 59.2	-7.7
O20A	White River Ci	4.28	212	Pn	Pn	21 08 57.6	0.0
O20A				IAML		21 10 12.7	
	comp=E,34nm,0.7s						
O20A				IAML		21 10 21.2	
	comp=N,26nm,1.0s						
YHB	Horse Butte	4.38	285		Pn	21 08 59.7	+0.7
YHL	Hebgen Lake	4.39	286	Pn	Pn	21 09 02.0	+2.8
ECR	Eagle Creek	4.52	263	Pn	Pn	21 09 01.8	+0.9
RDMU	Red Mountain	4.54	226		Pn	21 09 02.1	+0.9
QLMT	Earthquake Lak	4.55	285		Pn	21 09 02.3	+0.9
DGMT	Dagmar	4.74	9	Pn	Pn	21 09 04.7	+0.9
SMCO	Snowmass	4.79	196		Pn	21 09 05.2	+0.4
SMCO				IAML		21 10 22.8	
	comp=N,26nm,0.3s						
SMCO				IAML		21 10 27.9	
	comp=N,14nm,0.5s						
K31A	O'Neill	4.89	102		Pn	21 09 07.8	+1.9
BOZ	Bozeman (W)	4.89	294		Pn	21 09 06.4	+0.4
BOZ				IAML		21 10 26.7	
	comp=N,13nm,1.2s						
BOZ				IAML		21 10 28.0	
	comp=N,9.8nm,0.6s						
KSCO	Kaye Shedlock’	5.17	157		Pn	21 09 09.9	+0.2
EGMT	Eagleton	5.27	325		Pn	21 09 11.3	+0.2
TCUT	Toone Canyon	5.28	242	Pn	Pn	21 09 12.3	+1.0
DLMT	Dillon	5.48	289		Pn	21 09 13.8	-0.2
HRY	Holter Researc	5.49	304		Pn	21 09 14.2	+0.1
SPUT	South Promonto	5.86	247	Pn	Pn	21 09 18.7	-0.6
PV22	Blue Mesa, Par	5.89	208	Pn	Pn	21 09 20.4	+0.7
PV07	Paradox Valley	5.93	207		Pn	21 09 21.5	+1.2
P17A	Butcher Ranch,	5.96	225	Pn	Pn	21 09 21.2	+0.6
PV15	Paradox Valley	5.96	205	Pn	Pn	21 09 22.1	+1.3
SDCO	Great Sand Dun	6.04	182	Pn	Pn	21 09 22.6	+0.7
SRU	San Rafael Swe	6.12	222		Pn	21 09 22.9	0.0
PV11	David Mesa, Pa	6.13	208		Pn	21 09 23.2	+0.2
PV16	Nyswonger Mesa	6.13	208		Pn	21 09 23.3	+0.2
PV19	Morning Glory	6.16	209	Pn	Pn	21 09 19.5	-3.9
PV03	Paradox Valley	6.16	207		Pn	21 09 23.2	-0.2
PV02	Paradox Valley	6.17	206	Pn	Pn	21 09 24.4	+0.8
PV17	East Wray Mesa	6.17	208	Pn	Pn	21 09 23.7	+0.1
PV18	Skein Mesa, Pa	6.19	208	Pn	Pn	21 09 24.2	+0.4
PV13	Radium Mtn., P	6.24	207	Pn	Pn	21 09 24.6	0.0
MVU	Marysvale	7.44	227	Pn	Pn	21 09 41.5	+0.4
JTMT	Jette	7.45	305	Pn	Pn	21 09 41.3	+0.3
KSU1	Kansas State U	8.00	123	Pn	Pn	21 09 49.9	+1.3
ELK	Elko	8.01	251	Pn	Pn	21 09 50.1	+1.3
	comp=N,0.5nm,0.3s,baz=67,slow=13,SNR=6.9						
ELK	Elko	8.01	251		Pn	21 09 49.3	+0.5
PSUT	Pine Spring	8.34	234	Pn	Pn	21 09 53.7	+0.3
F36A	Milaca	8.59	72	Pn	Pn	21 09 56.7	+0.1
I10CA	LAC DU BONNET	8.99	41	*i*		22 01 30.0	
	baz=223,slow=331,SNR=9.4						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	21 10 03.5	0.0
	comp=N,1.2nm,0.3s,baz=234,slow=13,SNR=12						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	21 10 34.0	+1.4
	baz=52,slow=10,SNR=1.7						
YKA	Yellowknife Ar	19.52	347	P	Pn	21 12 19.1	-1.8
	comp=N,0.1nm,0.3s,baz=152,slow=12,SNR=5.5						

*NEIC **29** 21:18:44.7±1.8, 64°.2N±0°.1×17°.8W±0°.2, h8^{km}±5^{km}, mb4.5/10, Error ellipse: s-maj=18.0km s-min=12.3km az=185.0*

*IDC **29** 21:18:44.8±1.6, 64°.50N×17°.61W, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.4/46, mbtmp3.5/6, ML3.8/1, Error ellipse: s-maj=44.5km s-min=13.7km az=4.0*

ISC 29 21:18:45.2±0.6, **64°.4N**±0°.1×**17°.75W**±0°.07, **h10^{km}, n26,** σ**1.^{s}40**/26, **mb4.1**/9, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	Borgarnes	1.58	285	Pg	Pb	21 19 13.7	-0.8
	9.1nm,0.3s,baz=101,slow=13,SNR=34						
BORG				Lg	Lg	21 19 36.5	
	6.2nm,0.3s,baz=35,slow=23,SNR=9.1						
BORG	Borgarnes	1.58	285		Pn	21 19 13.5	+0.2
SCO	Scoresbysund	6.33	347		Pn	21 20 18.3	0.0
SCO	Scoresbysund	6.33	347	*i* P	Pn	21 20 17.0	-1.4
SCO	Scoresbysund	6.33	347	*i* P	Pn	21 20 17.0	-1.4
EKA	Eskdalemuir Ar	11.64	134	Pn	Pn	21 21 32.8	+1.7
	baz=324,slow=12,SNR=3.4						
CLL	Collm	20.69	115	*e*P	P	21 23 24.0	-1.0
TEOL	Teolo	25.10	125	P	P	21 24 08.7	-1.0
TEOL				IAmb	IAmb	21 24 10.6	
	comp=Z,11nm,0.8s						
J57A	Williamstown	38.42	266	P	P	21 26 06.4	-0.1
J57A				IAmb	IAmb	21 26 08.1	
	comp=Z,12nm,0.8s						
PECO	Prince Edward	38.44	267	P	P	21 26 05.3	-1.3
YKA	Yellowknife Ar	39.32	313	P	P	21 26 13.0	-0.8
	comp=Z,0.5nm,1.0s,baz=52,slow=8.0,SNR=2.4						
M53A	WI Miller and	42.05	268	P	P	21 26 34.1	-2.5
M53A				IAmb	IAmb	21 26 52.4	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,12nm,1.0s						
ABKAR	Akbulak array	42.18	72	P	P	21 26 38.4	+0.9
AB06	Akbulak array	42.19	72	P	P	21 26 37.8	+0.2
TIXI	Tiksi	42.33	15	P	P	21 26 40.2	+1.7
CSS	Mathiatis	42.44	109	P	P	21 26 37.2	-2.6
POKR	Poker Plat Res	45.68	333	P	P	21 27 04.5	-1.0
ILAR	Eielson Array	45.88	332	P	P	21 27 08.3	+1.3
	comp=Z,0.9nm,1.0s,baz=22,slow=5.1,SNR=5.2						
ILAR	Eielson Array	45.88	332	P	P	21 27 08.8	+1.7
IMAR	Indian Mountai	46.07	337	P	P	21 27 10.3	+1.8
KURBB	Kurchatov Arra	48.40	58	P	P	21 27 26.0	-0.8
	comp=Z,0.7nm,0.4s,baz=324,slow=7.3,SNR=2.9						
PDAR	Pinedale Array	53.19	293	P	P	21 28 05.5	+2.3
	comp=Z,0.7nm,0.9s,baz=49,slow=6.2,SNR=4.3						
PDAR	Pinedale Array	53.19	293	P	P	21 28 04.2	+0.9
NLWA	Neilton Lookou	54.63	307	P	P	21 28 14.1	+0.6
NLWA				IAmb	IAmb	21 28 21.5	
	comp=Z,4.9nm,1.1s						
SONM	Songino Array	59.92	40	P	P	21 28 52.0	+0.9
	comp=Z,0.5nm,0.9s,baz=318,slow=4.1,SNR=3.6						
SONM	Songino Array	59.92	40	P	P	21 28 51.4	+0.4

REY ***29*** *21:22:16.1, 64°.66N×17°.38W, h1^{km}*
NEIC ***29*** *21:22:16.8±2.1, 64°.60N±0°.09×17°.6W±0°.1, h7^{km}±5^{km}, mb4.3/22, Error ellipse: s-maj=13.5km s-min=7.1km az=176.0*
IDC ***29*** *21:22:17.6±0.6, 64°.61N×17°.51W, h0^{km}, mb3.7/17, mb1 4.0/20, mb1mx3.8/47, mbtmp3.8/20, ML2.5/2, MS3.6/5, Ms1 3.6/5, ms1mx3.2/41, Error ellipse: s-maj=21.2km s-min=9.1km az=11.0*
ISC 29 21:22:17.8±0.4**, 64°.67N**±0°.02×**17°.40W**±0°.03**, h10^{km}, n104,** σ**1^{s}.96**/111**, mb3.9**/27**, MS3.6**/3**, 1C, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.12	6	P	Pg	21 22 19.2	-1.7
	baz=2.7						
IDYN				S	Sg	21 22 21.8	-1.2
	baz=2.7						
IDJK	Dyngjujokull	0.18	157	P	Pg	21 22 20.0	-1.7
	baz=158						
IDJK				S	Sg	21 22 23.6	-0.8
	baz=158						
IURH	Urdarhals	0.19	35	P	Pg	21 22 20.4	-1.4
	baz=32						
IHAM	Hamarinn	0.26	225	P	Pg	21 22 21.6	-1.5
	baz=227						
IGRF	Grimsfjall	0.27	168	P	Pg	21 22 21.5	-1.7
	baz=169						
IGRF				S	Sg	21 22 25.5	-1.4
	baz=169						
IHUS	Husbondi	0.39	197	P	Pg	21 22 23.8	-1.7
	baz=198						
IVOT	Vottur	0.41	167	P	Pg	21 22 24.1	-1.8
	baz=168						
IVOT				S	Sg	21 22 30.1	-1.1
	baz=168						
THOR	Thorvaldshraun	0.41	49	P	Pg	21 22 24.0	-1.8
	baz=47						
ISKR	Skrokkalda	0.44	256	P	Pg	21 22 24.6	-1.8
	baz=257						
IKRE	Kreppuhraun	0.45	74	P	Pg	21 22 24.6	-2.0
	baz=73						
IKRE				S	Sg	21 22 31.4	-1.1
	baz=73						
IASK	Askja	0.50	39	P	Pg	21 22 25.5	-2.0
	baz=38						
IASK				S	Sg	21 22 32.8	-1.4
	baz=38						
IJOK	Jokulheimar	0.50	226	S	Sg	21 22 32.7	-1.5
	baz=227						
IJOK				P	Pg	21 22 25.3	-2.3
	baz=227						
IMKO	Mokollar	0.55	55	P	Pg	21 22 26.5	-2.0
	baz=54						
IMKO				S	Sg	21 22 34.9	-0.9
	baz=54						
IKSK	Karasker	0.65	141	P	Pg	21 22 27.4	-2.9
	baz=141						
IKSK				S	Sg	21 22 37.1	-1.6
	baz=141						
IIEY	Innrieyrar	0.66	209	P	Pg	21 22 28.0	-2.4
	baz=210						
ISVA	Svartarkot	0.68	5	P	Pg	21 22 28.5	-2.4
	baz=4.4						
IVSH	V-Sauoahnukur	0.73	78	P	Pg	21 22 29.3	-2.5
	baz=78						
IKAL	Kalfafell	0.73	190	P	Pg	21 22 29.4	-2.5
	baz=191						
IADA	Aoalbol	0.85	65	P	Pg	21 22 31.3	-2.9
	baz=64						
IFAG	Fagurholsmyri	0.86	157	P	Pg	21 22 31.4	-2.9
	baz=158						
IMEL	Melhnausar	0.96	19	P	Pg	21 22 33.2	-3.1
	baz=18						
IREN	Reynihlio	1.01	12	P	Pg	21 22 34.0	-3.1
	baz=11						
IKVO	Krokottuvotn	1.07	11	P	Pg	21 22 35.1	-3.3
	baz=11						
ISNB	Snabyli	1.08	211	P	Pg	21 22 35.5	-3.0
	baz=211						
IGRS	Grimsstaoir	1.11	28	P	Pb	21 22 35.9	-3.2
	baz=28						
IFED	Fedgar	1.19	238	P	Pb	21 22 37.7	-2.7
	baz=239						
IRJU	Rjupnafell	1.19	209	P	Pb	21 22 37.4	-3.1
	baz=209						
ISKI	Skildingahlsh	1.22	7	P	Pn	21 22 37.4	-3.4
	baz=6.8						
IGHA	Grjothals	1.22	14	P	Pn	21 22 37.5	-3.4
	baz=14						
IGYG	Gygjarholskot	1.28	254	P	Pn	21 22 38.7	-3.0
	baz=254						
IHED	Heoinshofoi	1.42	1	P	Pn	21 22 41.1	-2.5
	baz=1.2						
IESK	Eystri-Skogar	1.46	219	P	Pn	21 22 42.1	-2.0
	baz=220						
ISAU	Saurbar	1.48	244	P	Pn	21 22 42.0	-2.5
	baz=244						
IGIL	Gilhagi	1.48	17	P	Pn	21 22 41.7	-2.8
	baz=16						
ISIG	Siglufjorour	1.60	337	P	Pn	21 22 43.5	-2.6
	baz=337						
IASM	Asmuli	1.64	241	P	Pn	21 22 44.2	-2.3
	baz=241						
BORG	Borgarnes	1.69	275	Pg	Pn	21 22 45.5	-1.8
	14nm,0.3s,baz=94,slow=7.5,SNR=37						
BORG				Lg	Lg	21 23 08.8	
	24nm,0.3s,baz=26,slow=21,SNR=9.0						
BORG	Borgarnes	1.69	275	Pn	Pn	21 22 45.3	-2.0
ISOL	Solvholt	1.71	246	P	Pn	21 22 46.1	-1.6
	baz=246						
IKRO	Krokur	1.72	252	P	Pn	21 22 45.5	-2.1
	baz=252						
IHEI	Heioarbar	1.73	256	P	Pn	21 22 45.7	-2.1
	baz=256						
IHEI				S	Sb	21 23 09.8	-1.5
	baz=256						
IKAS	Kald??rsel	2.04	254	P	Pn	21 22 51.1	-1.1
	baz=254						
IVOS	Vogsosar	2.05	248	P	Pn	21 22 51.1	-1.1
	baz=249						
SCO	Scoresbysund	6.09	345	Pn	Pn	21 23 47.4	-0.3
EKA	Eskdalemuir Ar	11.73	136	Pn	Pn	21 25 04.0	-0.9
	baz=323,slow=13,SNR=11						
NOA	NORSAR Array B	13.49	92	Pn	Pn	21 25 26.9	-2.1
	0.0nm,0.3s,baz=289,slow=14,SNR=1.9						
HFS	Hagfors	15.00	93	Pn	Pn	21 25 49.3	-0.3
	0.1nm,0.3s,baz=297,slow=18,SNR=2.4						
HFS				LR	LR	21 30 53.9	
	comp=Z,187nm,21.8s,baz=332,slow=34						
FINES	FINESS Array B	19.66	79	P	Pn	21 26 48.3	+0.5
	0.0nm,0.3s,baz=301,slow=11,SNR=2.4						
FINES				LR	LR	21 33 16.1	
	comp=Z,254nm,18.3s,baz=284,slow=33						
FINES	FINESS Array B	19.66	79	P	Pn	21 26 46.1	-1.7
TULEG	Thule	19.87	327	P	P	21 26 46.9	-1.7
CLL	Collm	20.67	116	*e*(P)	Pn	21 27 03.0	+3.3
CLL				*e*		21 27 07.0	
CLL	Collm	20.67	116	P	P	21 26 56.8	-0.6
CLL				IAmb	IAmb	21 26 59.6	
	comp=Z,17nm,1.4s						
GRA1	Grafenberg Arr	21.30	121	P	P	21 27 05.3	+1.0
GRA1				IAmb	IAmb	21 27 06.7	
	comp=Z,16nm,1.0s						
GRFO	Grafenberg	21.30	121	P	P	21 27 05.4	+1.2
STU	Stuttgart	21.34	126	P	P	21 27 05.8	+1.1
STU				IAmb	IAmb	21 27 08.9	
	comp=Z,16nm,1.0s						
BRG	Berggiesshubel	21.37	115	*e*P	P	21 27 06.2	+1.2
BRG				Amp		21 27 08.8	
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	21.37	115	*e*(P)	P	21 27 16.3	+11
BRG				Amp		21 27 19.2	
	comp=Z,96nm,2.0s						
FRB	Frobisher Bay	21.79	291	P	P	21 27 09.9	+0.6
	comp=Z,1.2nm,0.8s,baz=69,slow=14,SNR=1.7						
OSTC	Ostas	22.52	113	*e*P	P	21 27 34.2	+17
KHC	Kasperske Hory	22.64	119	*e*P	P	21 27 21.4	+2.8
DPC	Dobruska-Polom	22.72	113	*e*P	P	21 27 20.0	+0.5
GEC2	GERESS Array S	22.92	119	P	P	21 27 22.2	+0.6
GERES	GERESS Array B	22.92	119	P	P	21 27 23.0	+1.4
	comp=Z,1.3nm,0.8s,baz=304,slow=9.5,SNR=6.4						
GERES				LR	LR	21 37 10.7	
	comp=Z,217nm,19.6s,baz=320,slow=39						
GERES	GERESS Array B	22.92	119	P	P	21 27 22.2	+0.6
KWP	Kalwaria Pacla	25.87	106	P	P	21 27 51.2	+1.9
PSZ	Piszkesteto	26.08	112	P	P	21 27 52.6	+1.4
PSZ				IAmb	IAmb	21 27 56.9	
	comp=Z,6.5nm,1.1s						
KOLS	Kolonicke sedl	26.23	108	*e*P	P	21 27 55.7	+3.1
ESDC	Sonseca Array	26.24	156	P	P	21 27 54.3	+1.6
	comp=Z,1.8nm,0.9s,baz=347,slow=8.7,SNR=5.1						
ESDC	Sonseca Array	26.24	156	P	P	21 27 52.7	0.0
AKASG	Malin Array Be	27.80	98	P	P	21 28 08.9	+2.3
	comp=Z,0.8nm,0.4s,baz=320,slow=9.7,SNR=2.1						
KEST	Kesra	33.13	138	LR	LR	21 42 29.7	
	comp=Z,110nm,19.6s,baz=240,slow=37						
BRTR	Keskin Array B	38.44	105	P	P	21 29 41.4	+2.0
	comp=Z,0.9nm,0.8s,baz=328,slow=6.8,SNR=4.7						
BRTR	Keskin Array B	38.44	105	P	P	21 29 38.8	-0.6
KBZ	Khabaz	39.07	93	P	P	21 29 46.6	+2.2
	comp=Z,2.1nm,0.9s,baz=318,slow=8.9,SNR=5.9						
YKA	Yellowknife Ar	39.24	313	P	P	21 29 47.3	+1.6
	comp=Z,0.4nm,0.7s,baz=40,slow=9.7,SNR=5.8						
YKA				PcP	PcP	21 31 56.6	+2.2
	comp=Z,0.2nm,0.6s,baz=52,slow=4.0,SNR=2.7						
TIXI	Tiksi	42.02	15	P	P	21 30 08.9	+0.3
TIXI				IAmb	IAmb	21 30 13.6	
	comp=Z,4.9nm,1.1s						
Q54A	Coxs Mills	44.31	266	P	P	21 30 24.2	-3.3
PRP	Porcupine Dome	44.77	332	P	P	21 30 30.9	-0.1
PRP				IAmb	IAmb	21 30 36.2	
	comp=Z,5.3nm,1.2s						
ILAR	Eielson Array	45.70	332	P	P	21 30 40.4	+2.1
	comp=Z,0.9nm,0.9s,baz=21,slow=6.0,SNR=8.4						
ILAR				PcP	PcP	21 32 18.6	+2.7
	comp=Z,0.5nm,0.9s,baz=358,slow=1.8,SNR=5.0						
ILAR				LR	LR	21 51 37.6	
	comp=Z,40nm,18.2s,baz=75,slow=38						
IMAR	Indian Mountai	45.88	337	P	P	21 30 41.7	+2.1
KURK	Kurchatov	48.08	58	P	P	21 30 55.8	-1.1
KURK				IAmb	IAmb	21 31 00.1	
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	48.12	58	P	P	21 30 57.6	+0.4
	comp=Z,2.7nm,0.9s,baz=324,slow=7.3,SNR=16						
PAULI	Pauline	48.24	264	P	P	21 30 56.9	-1.5
TKL	Tuckaleechee C	48.37	267	P	P	21 30 56.3	-3.1
KKAR	Karatay Array	51.23	70	P	P	21 31 21.2	+0.1
MK31	Makanchi Array	52.69	58	P	P	21 31 31.8	-0.1
MKAR	Makanchi Array	52.69	58	P	P	21 31 33.0	+1.1
	comp=Z,1.1nm,0.9s,baz=327,slow=6.0,SNR=8.3						
MKAR	Makanchi Array	52.69	58	P	P	21 31 32.1	+0.2
TORD	Torodi Ar. Bea	53.12	157	P	P	21 31 36.0	+0.7
	comp=Z,1.3nm,0.9s,baz=340,slow=7.9,SNR=3.8						
PDAR	Pinedale Array	53.22	293	P	P	21 31 37.6	+1.5
	comp=Z,1.2nm,0.8s,baz=46,slow=6.4,SNR=7.8						
PDAR	Pinedale Array	53.22	293	P	P	21 31 36.8	+0.7
AAK	Ala-Archa	53.22	67	P	P	21 31 38.5	+2.5
	comp=Z,2.2nm,1.0s,baz=293,slow=0.9,SNR=5.5						
AAK	Ala-Archa	53.22	67	P	P	21 31 37.0	+1.0
AAK				IAmb	IAmb	21 31 52.2	
	comp=Z,3.0nm,1.1s						
PV13	Radium Mtn., P	56.84	290	P	P	21 32 01.5	-0.8
PV13				IAmb	IAmb	21 32 08.3	
	comp=Z,4.4nm,1.0s						
WMQ	Urumqi	57.20	56	*e*P	P	21 32 08.5	+3.9
PSUT	Pine Spring	58.53	294	P	P	21 32 12.9	-1.3
SONM	Songino Array	59.61	40	P	P	21 32 23.0	+1.5
	comp=Z,0.4nm,0.8s,baz=340,slow=3.5,SNR=4.1						
SONM	Songino Array	59.61	40	P	P	21 32 21.9	+0.4
ULN	Ulaanbaatar	59.77	40	P	P	21 32 21.2	-1.4
ULN				IAmb	IAmb	21 32 24.4	
	comp=Z,3.5nm,1.4s						
NVAR	Mina Array Bea	60.34	297	P	P	21 32 28.9	+2.2
	comp=Z,0.3nm,0.5s,baz=14,slow=7.8,SNR=2.7						
TXAR	Lajitas Array	62.33	280	P	P	21 32 42.4	+2.3
	comp=Z,0.3nm,0.6s,baz=54,slow=4.6,SNR=2.6						
HHC	Hu-ho-hao-te	67.48	40	*e*P	P	21 33 16.5	+2.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,260nm,5.8s						
KMI	Kunming	79.32	53	⇑P	P	21 34 26.3	+2.7
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	84.09	59	P	P	21 34 49.5	+0.8
	comp=Z,0.4nm,0.4s,baz=319,slow=7.5,SNR=5.7						

ANF 29 21:27:32.5±0.4**, 38°.13N**×**81°.97W, h0^{km}, ML2.5**/9**, ML2.3**/8**, Error ellipse: s-maj=4.7km s-min=2.8km az=131.0, West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
S54A	Dingess, Beckl	0.62	122	P	Pg	21 27 44.7	+0.4
	baz=303						
R54A	Victor	0.77	86	P	Pg	21 27 47.1	-0.2
	baz=266						
Q53A	Leroy	0.81	26	P	Pg	21 27 48.1	+0.1
	baz=206						
R55A	Marlinton	1.47	84	P	Pn	21 27 59.5	-0.8
	baz=265						
BLA	Blacksburg	1.54	126	P	Pn	21 28 00.9	-0.3
	baz=307						
U54A	Nelsons Funny	1.61	176	P	Pn	21 28 01.6	-0.7
	baz=356						
U54A				S	Sg	21 28 25.1	+0.8
	baz=356						
TZTN	Tazewell	2.02	219	P	Pn	21 28 07.9	+0.1
	baz=38						
TZTN				S	Sb	21 28 35.6	-0.2
	baz=38						
R56A	Bull Pasture M	2.04	81	P	Pn	21 28 08.5	+0.3
	baz=263						
R56A				S	Sb	21 28 36.0	-0.4
	baz=263						

ANF 29 21:27:43.2±0.9**, 39°.21N**×**82°.42W, h11^{km}**±4^{km}**, Error ellipse: s-maj=4.8km s-min=4.4km az=41.0, Ohio**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
P52A	Corning	0.48	28	P	Pg	21 27 52.3	-0.2
	baz=208						
P52A				S	Sb	21 27 59.9	-0.7
	baz=208						
O53A	New Philadelph	1.39	42	P	Pn	21 28 08.2	-0.4
	baz=222						
O53A				S	Sg	21 28 27.5	-0.5
	baz=222						
R54A	Victor	1.52	132	S	Sb	21 28 30.5	-0.2
	baz=313						
S54A	Dingess, Beckl	1.66	148	S	Sn	21 28 33.3	-0.3
	baz=329						
P49A	Miami Univ. Ec	1.81	281	S	Sb	21 28 38.5	-0.4
	baz=100						
R55A	Marlinton	2.03	117	S	Sn	21 28 43.3	+0.6
	baz=298						
R56A	Bull Pasture M	2.49	108	S	Sb	21 28 57.1	-1.6
	baz=290						
N54A	Moraine State	2.56	46	Sb	Sb	21 29 02.5	+2.1
	baz=228						
M53A	WI Miller and	2.59	30	Sb	Sb	21 29 02.9	+1.4
	baz=211						

IDC 29 21:28:41.0±3.1**, 32°.93S**×**178°.61W, h0^{km}, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.8**/24**, mbtmp3.8**/3**, ML3.7**/1**, Error ellipse: s-maj=72.0km s-min=45.8km az=121.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.36	212	Pn	Pn	21 30 14.7	-1.2
	1.6nm,0.3s,baz=275,slow=2.2,SNR=9.2						
URZ				Sn	Sn	21 31 24.2	-5.1
	1.6nm,0.3s,baz=91,slow=21,SNR=6.1						
ASAR	Alice Springs	42.52	270	P	P	21 36 38.8	+0.3
	1.0nm,0.7s,baz=107,slow=7.2,SNR=11						
WRA	Warramunga Arr	43.74	275	P	P	21 36 48.0	-0.4
	0.8nm,0.7s,baz=113,slow=8.0,SNR=6.6						
FINES	FINESS Array B	147.31	338	PKPbc	PKPbc	21 48 25.0	-0.7
	3.1nm,0.8s,baz=55,slow=3.5,SNR=5.6						

IDC ***29*** *21:38:47.1±0.9, 8°.89S×157°.95E, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx4.0/31, mbtmp4.0/11, ML4.0/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/41, Error ellipse: s-maj=27.3km s-min=21.2km az=150.0*
NEIC ***29*** *21:38:48.3±1.6, 8°.9S±0°.1×158°.0E±0°.1, h11^{km}±5^{km}, mb4.4/12, Error ellipse: s-maj=19.8km s-min=11.0km az=218.0*
ISC 29 21:38:50.5±0.6**, 8°.9S**±0°.1×**157°.94E**±0°.07**, h23^{km}, n31,** σ**0^{s}.98**/28**, mb4.2**/16**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.05	104	Pn	Pn	21 39 22.6	-0.9
	22nm,0.3s,baz=60,slow=14,SNR=1.6						
HNR				LR	LR	21 39 50.2	
	comp=Z,138nm,19.6s,baz=246,slow=31						
HNR				Sn	Sb	21 39 53.9	+1.9
	120nm,0.3s,baz=266,slow=20,SNR=4.3						
HNR	Honiara	2.05	104		Pn	21 39 21.6	-1.9
PMG	Port Moresby	10.65	267	LR	LR	21 45 35.8	
	comp=Z,113nm,18.1s,baz=288,slow=38						
SANVU	Saraoutou	11.13	126	Pn	Pn	21 41 28.2	-0.1
COEN	Coen	15.30	250		P	21 42 29.3	-0.5
PATS	Pohnpei	15.67	1	Pn	Pn	21 42 28.9	-1.1
JAY	Jayapura	18.29	289	P	Pn	21 43 02.7	-0.2
	1.0nm,0.3s,baz=140,slow=16,SNR=2.4						
LHI	Lord Howe Isla	22.50	177	P	P	21 43 47.2	-1.2
WR0	Warramunga Arr	25.13	242	P	P	21 44 14.3	+0.3
WR0				IAmb	IAmb	21 44 16.7	
	comp=Z,3.6nm,0.7s						
WB0	Warramunga Arr	25.18	242	P	P	21 44 15.6	+1.0
WB0				IAmb	IAmb	21 44 17.4	
	comp=Z,5.7nm,0.6s						
WC3	Warramunga Arr	25.27	242	P	P	21 44 16.2	+0.8
WC3				IAmb	IAmb	21 44 18.4	
	comp=Z,5.5nm,0.7s						
WRAB	Tennant Creek	25.28	242	P	P	21 44 16.1	+0.7
WRAB				IAmb	IAmb	21 44 18.4	
	comp=Z,6.2nm,0.7s						
WB2	Warramunga Arr	25.29	242	P	P	21 44 16.5	+1.0
WB2				IAmb	IAmb	21 44 18.5	
	comp=Z,4.9nm,0.6s						
WRA	Warramunga Arr	25.30	242	P	P	21 44 16.2	+0.6
	comp=Z,4.2nm,0.6s,baz=66,slow=9.4,SNR=37						
WRA				PcP	PcP	21 47 49.1	+0.6
	comp=Z,0.4nm,0.6s,baz=71,slow=2.5,SNR=6.7						
ASAR	Alice Springs	27.25	235	P	P	21 44 33.0	-0.3
	comp=Z,1.1nm,0.8s,baz=64,slow=10.0,SNR=8.0						
ASAR				PcP	PcP	21 47 53.5	+0.5
	comp=Z,0.5nm,0.6s,baz=67,slow=2.4,SNR=2.7						
ASAR	Alice Springs	27.25	235	P	P	21 44 33.3	0.0
STKA	Stephens Creek	27.41	211	P	P	21 44 35.1	+0.6
	comp=Z,1.9nm,0.7s,baz=48,slow=12,SNR=2.5						
STKA	Stephens Creek	27.41	211	P	P	21 44 34.8	+0.3
H11S3	WAKE ISLAND Hy	28.59	18	T	T	22 13 09.0	
	baz=199,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	28.59	18	T	T	22 13 09.0	
	baz=199,slow=76,SNR=37						
H11S1	WAKE ISLAND Hy	28.61	18	T	T	22 13 19.7	
	baz=199,slow=76,SNR=17						
BBOO	Buckleboo	31.20	217		P	21 45 07.6	-0.6
BBOO				IAmb	IAmb	21 45 13.4	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	32.65	250	P	P	21 45 21.4	+0.4
FITZ				IAmb	IAmb	21 45 25.0	
	comp=Z,3.8nm,1.1s						
CMAR	Chiang Mai Arr	64.24	295	P	P	21 49 25.3	+1.0
	comp=Z,0.8nm,0.3s,baz=117,slow=5.0,SNR=6.4						
SONM	Songino Array	72.54	326	P	P	21 50 17.1	+1.2
	comp=Z,0.6nm,0.8s,baz=146,slow=5.5,SNR=4.5						
SONM	Songino Array	72.54	326	IAmb	IAmb	21 50 19.4	
	comp=Z,1.0nm,1.1s						
ILAR	Eielson Array	84.12	21	P	P	21 51 18.6	-0.7
	comp=Z,0.4nm,0.6s,baz=260,slow=4.3,SNR=5.1						
MKAR	Makanchi Array	86.78	318	P	P	21 51 32.5	-0.5
	comp=Z,0.5nm,0.5s,baz=96,slow=5.8,SNR=9.4						
ZALV	Zalesovo Beam	87.41	326	P	P	21 51 34.4	-1.5
	comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=1.7						
YBH	Yreka Blue Hor	88.04	47	LR	LR	22 21 19.7	
	comp=Z,68nm,21.1s,baz=87,slow=29						
NVAR	Mina Array Bea	90.64	51	P	P	21 51 53.2	+1.5
	comp=Z,0.1nm,0.3s,baz=262,slow=4.5,SNR=4.6						

IDC ***29*** *21:43:37.0±1.1, 17°.68N×148°.06E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.7/41, mbtmp3.7/9, Error ellipse: s-maj=32.3km s-min=23.7km az=86.0*
ISC 29 21:43:40.4±1.1**, 17°.7N**±0°.2×**148°.0E**±0°.2**, h21^{km}, n9,** σ**0^{s}.66**/9**, mb3.6**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	26.47	322	P	P	21 49 16.1	0.0
	1.2nm,0.9s,baz=134,slow=8.7,SNR=5.6						
WRA	Warramunga Arr	39.71	200	P	P	21 51 10.4	-1.1
	0.4nm,0.8s,baz=26,slow=9.1,SNR=2.2						
ASAR	Alice Springs	43.33	199	P	P	21 51 42.1	+1.0
	0.4nm,0.8s,baz=17,slow=10.0,SNR=2.7						
SONM	Songino Array	45.33	321	P	P	21 51 57.2	+0.2
	2.3nm,0.9s,baz=136,slow=7.0,SNR=12						
CMAR	Chiang Mai Arr	46.55	279	P	P	21 52 07.2	+0.2
	0.7nm,0.4s,baz=70,slow=6.8,SNR=4.6						
ZALV	Zalesovo Beam	60.18	323	P	P	21 53 46.3	-0.2
	1.1nm,0.6s,baz=90,slow=5.9,SNR=5.8						
MKAR	Makanchi Array	60.77	314	P	P	21 53 50.6	-0.1
	0.7nm,0.8s,baz=89,slow=6.7,SNR=5.2						
YKA	Yellowknife Ar	77.86	28	P	P	21 55 35.7	-0.5
	0.2nm,0.5s,baz=278,slow=5.4,SNR=4.2						
NVAR	Mina Array Bea	82.03	52	P	P	21 56 00.0	+0.4
	0.4nm,0.6s,baz=254,slow=6.4,SNR=3.6						

REY ***29*** *21:45:17.5, 64°.62N×17°.43W, h0^{km}*
IDC ***29*** *21:45:19.4±0.8, 64°.35N×17°.97W, h0^{km}, mb3.7/9, mb1 4.0/11, mb1mx3.7/39, mbtmp3.7/11, ML3.4/2, MS3.7/9, Ms1 3.7/9, ms1mx3.3/48, Error ellipse: s-maj=30.2km s-min=10.9km az=25.0*
NEIC ***29*** *21:45:20.2±1.7, 64°.36N±0°.10×17°.7W±0°.2, h6^{km}±1^{km}, mb4.4/48, Error ellipse: s-maj=14.5km s-min=9.5km az=199.0*
ISC 29 21:45:20.1±0.9**, 64°.48N**±0°.04×**17°.56W**±0°.03**, h7^{km}**±6^{km}**, n95,** σ**1^{s}.29**/86**, mb4.3**/29**, MS3.7**/7**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHAM	Hamarinn	0.11	269	P	Pg	21 45 22.7	0.0
	baz=231						
IDJK	Dyngjujokull	0.14	81	P	Pg	21 45 21.1	-2.1
	baz=144						
IDJK				S	Sg	21 45 24.5	-0.9
	baz=144						
IGRF	Grimsfjall	0.15	121	P	Pg	21 45 22.7	-0.6
	baz=162						
IGRF				S	Sg	21 45 29.5	+4.0
	baz=162						
IVOT	Vottur	0.27	142	P	Pg	21 45 25.1	-0.4
	baz=163						
IDYN	Dyngjuhals	0.32	15	P	Pg	21 45 21.8	-4.7
	baz=8.9						
IJOK	Jokulheimar	0.33	240	P	Pg	21 45 25.9	-0.8
	baz=229						
IJOK				S	Sg	21 45 33.1	+2.1
	baz=229						
ISKR	Skrokkalda	0.36	283	P	Pg	21 45 26.0	-1.3
	baz=262						
IURH	Urdarhals	0.38	28	P	Pg	21 45 22.7	-4.9
	baz=31						

IURH				S	Sg	21 45 27.1	-5.5
	baz=31						
IIEY	Innrieyrar	0.46	212	P	Pb	21 45 29.0	-1.5
	baz=210						
IIEY				S	Sb	21 45 37.7	+0.2
	baz=210						
IKSK	Karasker	0.57	124	P	Pg	21 45 28.4	-2.8
	baz=138						
IKRE	Kreppuhraun	0.59	59	P	Pg	21 45 26.7	-4.8
	baz=69						
THOR	Thorvaldshraun	0.59	40	P	Pg	21 45 26.7	-4.9
	baz=45						
THOR				S	Sg	21 45 33.5	-5.7
	baz=45						
IASK	Askja	0.69	34	P	Pg	21 45 28.1	-5.4
	baz=37						
IMKO	Mokollar	0.72	46	P	Pg	21 45 28.6	-5.4
	baz=52						
IMKO				S	Sg	21 45 37.7	-5.7
	baz=52						
ISVA	Svartarkot	0.87	9	P	Pg	21 45 30.8	-5.9
	baz=5.8						
ISVA				S	Sg	21 45 41.5	-6.5
	baz=5.8						
BORG	Borgarnes	1.64	281	Pg	Pn	21 45 46.6	-2.7
	47nm,0.3s,baz=97,slow=6.5,SNR=67						
BORG				Lg	Lg	21 46 08.2	
	15nm,0.3s,baz=134,slow=5.2,SNR=4.6						
BORG	Borgarnes	1.64	281	Pn	Pn	21 45 47.0	-2.3
SCO	Scoresbysund	6.26	346	Pn	Pn	21 46 51.9	-0.7
SCO	Scoresbysund	6.26	346	*e*	Pn	21 46 48.6	-4.0
	baz=160,slow=10						
SCO				*i* P	Pn	21 46 51.9	-0.7
SCO				*i* S	Sn	21 48 04.7	+0.5
SCO				IAML		21 48 18.5	
	comp=Z,1.4nm,0.5s						
ANGG	Ammassalik, Gr	8.55	287	Pn	Pn	21 47 22.1	-2.0
EKA	Eskdalemuir Ar	11.65	135	Pn	Pn	21 48 06.7	+0.2
	baz=322,slow=13,SNR=13						
HFS	Hagfors	15.06	92	LR	LR	21 55 30.6	
	comp=Z,262nm,19.5s,baz=344,slow=40						
FINES	FINESS Array B	19.77	79	P	Pn	21 49 53.8	+2.1
	comp=Z,0.1nm,0.3s,baz=294,slow=7.5,SNR=1.3						
FINES				LR	LR	21 57 38.6	
	comp=Z,258nm,19.3s,baz=268,slow=37						
TULEG	Thule	19.99	328	P	Pn	21 49 55.3	+1.0
TULEG				IAmb	IAmb	21 50 01.9	
	comp=Z,19nm,1.4s						
CLL	Collm	20.65	115	P	P	21 50 00.6	+0.7
STU	Stuttgart	21.29	125	P	P	21 50 05.5	-1.3
STU				IAmb	IAmb	21 50 07.5	
	comp=Z,12nm,0.7s						
BRG	Berggiesshubel	21.36	115	*e*P	P	21 50 07.7	+0.1
BRG				Amp		21 50 09.5	
	comp=Z,16nm,1.4s						
FRB	Frobisher Bay	21.79	291	LR	LR	21 57 44.2	
	comp=Z,134nm,19.5s,baz=76,slow=34						
KHC	Kasperske Hory	22.61	118	*e*P	P	21 50 22.0	+0.9
DPC	Dobruska-Polom	22.71	112	*e*P	P	21 50 23.3	+1.2
GERES	GERESS Array B	22.89	118	P	P	21 50 25.5	+1.4
	comp=Z,0.3nm,0.4s,baz=319,slow=7.8,SNR=5.6						
GERES	GERESS Array B	22.89	118	P	P	21 50 24.4	+0.3
DAVOX	Davos/Dischmat	23.23	127	LR	LR	21 59 43.2	
	comp=Z,209nm,21.4s,baz=328,slow=37						
MORC	Moravsky Berou	23.65	112	P	P	21 50 31.9	+0.2
MORC				IAmb	IAmb	21 50 36.3	
	comp=Z,12nm,1.5s						
EUNU	Eureka	23.83	336	P	P	21 50 33.8	+0.7
ESDC	Sonseca Array	26.10	156	P	P	21 50 55.7	+1.5
	comp=Z,1.7nm,1.1s,baz=344,slow=9.5,SNR=2.4						
ESDC	Sonseca Array	26.10	156	P	P	21 50 53.2	-1.0
MURB	Monte Urbino	27.21	127	P	P	21 51 04.7	+0.4
MURB				IAmb	IAmb	21 51 12.3	
	comp=Z,16nm,0.9s						
AQU	L'Aquila	28.32	126	P	P	21 51 12.6	-1.6
BUR08	Bucovina Ar. S	28.47	106	P	P	21 51 15.8	+0.3
BURAR	Bucovina Array	28.50	106	P	P	21 51 16.4	+0.6
MLR	Muntele Rosu	30.50	107	P	P	21 51 34.5	+1.0
NRIK	Noril'sk	36.62	35	P	P	21 52 27.5	+1.2
NRIK				IAmb	IAmb	21 52 28.7	
	comp=Z,6.5nm,1.3s						
BRTR	Keskin Array B	38.46	105	P	P	21 52 43.1	+0.8
	comp=Z,0.9nm,0.8s,baz=329,slow=9.0,SNR=2.8						
KBZ	Khabaz	39.13	92	P	P	21 52 50.5	+2.7
	comp=Z,1.7nm,0.9s,baz=306,slow=6.5,SNR=4.2						
YKA	Yellowknife Ar	39.32	313	P	P	21 52 48.5	-0.6
	comp=Z,0.6nm,0.7s,baz=46,slow=8.9,SNR=6.0						
INK	Inuvik	39.98	329	P	P	21 52 55.9	+1.4
	comp=Z,1.0nm,0.5s,baz=41,slow=9.3,SNR=3.2						
INK	Inuvik	39.98	329	IAmb	IAmb	21 52 58.9	
	comp=Z,4.7nm,1.3s						
A21K	Barrow	41.59	341	P	P	21 53 09.8	+2.0
TIXI	Tiksi	42.22	15		P	21 53 13.6	+0.8
H43A	Windswept, Lux	42.76	277	P	P	21 53 16.1	-1.5
GNI	Garni	42.85	94	P	P	21 53 18.6	0.0
GNI				IAmb	IAmb	21 53 20.9	
	comp=Z,12nm,1.4s						
TOLK	Toolik Lake Re	42.91	336	P	P	21 53 19.6	+1.0
TOLK				IAmb	IAmb	21 53 25.1	
	comp=Z,8.1nm,1.1s						
BMAR	Burnt Mountain	43.05	333	P	P	21 53 17.2	-2.6
L48A	N Adams	43.35	272	P	P	21 53 21.7	-0.8
MARD	Mardin	43.51	100	P	P	21 53 24.2	+0.3
MARD				IAmb	IAmb	21 53 35.2	
	comp=Z,4.9nm,0.9s						
FYU	Fort Yukon	43.93	333	P	P	21 53 27.5	+0.8
FYU				IAmb	IAmb	21 53 38.1	
	comp=Z,13nm,1.2s						
IL31		45.84	332	P	P	21 53 42.7	+0.8
IL31				IAmb	IAmb	21 53 54.3	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	45.84	332	P	P	21 53 42.2	+0.2
	comp=Z,1.5nm,1.1s,baz=23,slow=6.1,SNR=7.7						
ILAR				PcP	PcP	21 55 19.0	-0.1
	comp=Z,0.6nm,0.9s,baz=357,slow=3.7,SNR=4.3						
ILAR				LR	LR	22 15 01.4	
	comp=Z,45nm,18.5s,baz=335,slow=39						
ILAR	Eielson Array	45.84	332	P	P	21 53 43.0	+1.0
MDM	Murphy Dome	45.93	333	P	P	21 53 44.3	+1.5
MDM				IAmb	IAmb	21 53 49.3	
	comp=Z,7.6nm,1.3s						
IMAR	Indian Mountai	46.02	337	P	P	21 53 44.9	+1.5
BCAR	Beaver Creek A	46.25	329	P	P	21 53 46.8	+1.5
V55A	Taylorsville	47.02	264	P	P	21 53 52.0	+0.3
DLBC	Dease Lake	47.19	319	LR	LR	22 14 22.2	
	comp=Z,104nm,19.0s,baz=59,slow=37						
KURK	Kurchatov	48.23	58	P	P	21 54 00.5	-0.4
KURK				IAmb	IAmb	21 54 10.3	
	comp=Z,4.0nm,0.9s						
TKL	Tuckaleechee C	48.29	267	LR	LR	22 11 39.5	
	comp=Z,68nm,18.2s,baz=34,slow=33						
YKU2	Yakutat	48.85	325	P	P	21 54 06.3	+0.9
SIUC	Southern Illin	48.92	273	P	P	21 54 04.9	-1.4
EGMT	Eagleton	48.93	297	P	P	21 54 07.3	+0.9
W50A	Signal Mountai	49.34	268	P	P	21 54 05.9	-3.7
W50A				IAmb	IAmb	21 54 19.5	
	comp=Z,8.6nm,1.0s						
X51A	Calhoun	49.68	267	P	P	21 54 12.4	+0.2
RLMT	Red Lodge	51.14	295	P	P	21 54 23.0	-0.4
RLMT				IAmb	IAmb	21 54 28.6	
	comp=Z,6.8nm,1.4s						
YNE	Yellowstone No	51.52	295	P	P	21 54 26.4	+0.1
BOZ	Bozeman (W)	51.66	297	P	P	21 54 27.0	-0.3
YMP	Mirror Lake Pl	51.81	295	P	P	21 54 28.5	0.0
MKAR	Makanchi Array	52.84	58	P	P	21 54 34.9	-0.9
TORD	Torodi Ar. Bea	52.98	156	P	P	21 54 36.0	-1.1
	comp=Z,1.6nm,1.0s,baz=347,slow=5.9,SNR=2.5						
BW06	Boulder Array	53.22	293		P	21 54 38.6	-0.3
PD31	Pinedale Array	53.22	293	P	P	21 54 39.2	+0.3
PDAR	Pinedale Array	53.22	293	P	P	21 54 38.5	-0.4
	comp=Z,1.5nm,0.8s,baz=45,slow=6.7,SNR=5.1						
PDAR				LR	LR	22 19 05.7	
	comp=Z,83nm,20.0s,baz=46,slow=38						
REDW	Red Top Meadow	53.23	295	P	P	21 54 40.1	+1.2
KDAK	Kodiak Island	53.35	332	LR	LR	22 19 48.0	
	comp=Z,65nm,18.7s,baz=66,slow=39						
TCUT	Toone Canyon	55.35	294	P	P	21 54 55.6	+1.1
NLU	North Lily Min	56.61	293	P	P	21 55 04.3	+0.9
PV01	Paradox Valley	56.75	289	P	P	21 55 04.8	+0.3
PV01				IAmb	IAmb	21 55 13.1	
	comp=Z,5.6nm,1.4s						
PV02	Paradox Valley	56.76	290	P	P	21 55 05.5	+1.0
PV02				IAmb	IAmb	21 55 10.2	
	comp=Z,6.9nm,1.1s						
PV18	Skein Mesa, Pa	56.80	290	P	P	21 55 04.8	0.0
PV18				IAmb	IAmb	21 55 08.7	
	comp=Z,5.8nm,1.0s						
PV13	Radium Mtn., P	56.83	290	P	P	21 55 05.1	0.0
PV13				IAmb	IAmb	21 55 10.7	
	comp=Z,8.2nm,1.1s						
MSU	Marysvale	57.89	293	P	P	21 55 12.8	+0.4
MVU	Marysvale	57.91	293	P	P	21 55 13.0	+0.3
R11A	Troy Canyon, C	59.38	295	P	P	21 55 23.3	+0.5
R11A				IAmb	IAmb	21 55 26.5	
	comp=Z,3.2nm,1.3s						
LCMT	Little Creek M	59.61	293	P	P	21 55 25.2	+0.9
U15A	North Rim	59.73	291	P	P	21 55 25.6	+0.3
U15A				IAmb	IAmb	21 55 29.9	
	comp=Z,5.6nm,1.4s						
WUAZ	Wupatki	60.15	290	P	P	21 55 27.9	-0.2
WUAZ				IAmb	IAmb	21 55 32.2	
	comp=Z,3.5nm,0.9s						

*IDC **29** 21:55:55.4±2.4, 6°.31S×129°.45E, h207km±28km, mb2.8/3, mb1 3.2/7, mb1mx3.1/32, mbtmp3.7/7, Error ellipse: s-maj=49.9km s-min=12.2km az=82.0*

ISC 29 21:55:53.0±0.8**, 6°.51S**±0°.06×**129°.2E**±0°.2**, h200**km**, n7,** σ**3s.15**/11**, mb3.0**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.97	20	P	Pn	21 57 20.2	+0.3
	2.9nm,0.3s,baz=210,slow=18,SNR=21						
SIJI				S	Sn	21 58 24.1	-4.7
	1.1nm,0.3s,baz=259,slow=23,SNR=1.7						
FITZ	Fitzroy Crossi	12.03	196	P	P	21 58 42.2	-0.9
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.7						
FITZ				S	Sn	22 00 47.9	-4.8
	0.2nm,0.3s,baz=319,slow=17,SNR=2.1						
WRA	Warramunga Arr	14.26	160	P	P	21 59 08.1	+0.3
	0.6nm,0.3s,baz=340,slow=12,SNR=24						
WRA				S	S	22 01 43.2	-1.8
	0.6nm,0.3s,baz=335,slow=22,SNR=2.9						
ASAR	Alice Springs	17.65	166	P	Pn	21 59 50.0	+2.9
	0.6nm,0.3s,baz=346,slow=10,SNR=33						
ASAR				S	S	22 03 02.0	+3.9
	0.1nm,0.3s,baz=349,slow=25,SNR=4.1						
SONM	Songino Array	57.73	342	P	P	22 05 24.7	+1.6
	0.2nm,0.6s,baz=146,slow=8.7,SNR=1.3						
MKAR	Makanchi Array	67.38	327	P	P	22 06 28.9	+2.1
	0.1nm,0.4s,baz=116,slow=6.7,SNR=4.8						
ZALV	Zalesovo Beam	70.79	334	P	P	22 06 47.0	-0.5
	0.4nm,0.5s,baz=118,slow=6.6,SNR=2.3						

*NEIC **29** 22:03:35.0±1.6, 5°.4S±0°.1×147°.34E±0°.06, h217km±9km, mb4.4/20, Error ellipse: s-maj=17.1km s-min=8.9km az=188.0*

*IDC **29** 22:03:35.8±1.4, 5°.66S×147°.50E, h233km±16km, mb3.8/7, mb1 3.9/9, mb1mx3.5/39, mbtmp4.3/9, Error ellipse: s-maj=34.9km s-min=10.6km az=114.0*

ISC 29 22:03:33.5±0.8**, 5°.44S**±0°.07×**147°.3E**±0°.1**, h200**km**, n32,** σ**1s.45**/35**, mb4.4**/13**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.94	182	P	Pn	22 04 36.6	+2.0
	15nm,0.3s,baz=51,slow=6.0,SNR=23						
PMG				S	Sn	22 05 21.5	-1.2
	2.7nm,0.3s,baz=52,slow=23,SNR=1.6						
PMG	Port Moresby	3.94	182		Pn	22 04 36.8	+2.2
COEN	Coen	9.38	205	Pn	Pn	22 05 47.8	+3.0
MTN	Manton Dam	17.55	244	P	P	22 07 25.7	+1.2
MTN				IAmb	IAmb	22 07 31.5	
	comp=Z,11nm,0.8s						
WB0	Warramunga Arr	18.98	220	P	P	22 07 40.6	+0.6
WR0	Warramunga Arr	19.02	220		P	22 07 41.4	+0.9
WR0				IAmb	IAmb	22 07 45.4	
	comp=Z,5.8nm,0.7s						
WRAB	Tennant Creek	19.12	220	P	P	22 07 42.5	+0.9
WRAB				IAmb	IAmb	22 07 46.3	
	comp=Z,9.9nm,0.6s						
WB2	Warramunga Arr	19.13	220		P	22 07 42.6	+1.0
WB2				IAmb	IAmb	22 07 46.4	
	comp=Z,10nm,0.5s						
WRA	Warramunga Arr	19.14	220	P	P	22 07 42.4	+0.7
	comp=Z,1.2nm,0.3s,baz=42,slow=10,SNR=28						
WRA				S	S	22 11 04.5	-3.6
	comp=Z,0.2nm,0.3s,baz=42,slow=20,SNR=8.9						
WRA	Warramunga Arr	19.14	220	P	P	22 07 41.3	-0.5
AS31	Alice Springs	22.23	214	P	P	22 08 15.2	+1.2
AS31				IAmb	IAmb	22 08 15.5	
	comp=Z,3.2nm,0.5s						
ASAR	Alice Springs	22.23	214	P	P	22 08 14.8	+0.8
	comp=Z,7.8nm,0.7s,baz=48,slow=8.1,SNR=59						
ASAR				S	S	22 12 00.7	-3.2
	comp=Z,0.9nm,0.7s,baz=28,slow=16,SNR=2.1						
SOEI	Soe	23.20	258	P	P	22 08 23.8	+0.8
BATI	Baumata	23.86	257	P	P	22 08 30.3	+1.4
	comp=Z,42nm,0.7s,baz=138,slow=4.2,SNR=9.3						
FITZ	Fitzroy Crossi	24.60	237	P	P	22 08 36.2	+0.8
	comp=Z,16nm,0.5s,baz=44,slow=9.2,SNR=51						
FITZ	Fitzroy Crossi	24.60	237	P	P	22 08 35.8	+0.4
ARMA	Armidale	25.19	171	P	P	22 08 41.1	+0.3
PSA00	Pilbara Seismi	31.03	236	P	P	22 09 31.8	-0.9
PSA00				IAmb	IAmb	22 09 33.1	
	comp=Z,4.5nm,0.6s						
GIRL	Giralia	36.19	239	P	P	22 10 15.8	-1.5
MORW	Morawa	37.75	228	P	P	22 10 29.7	-0.6
MORW				IAmb	IAmb	22 10 33.0	
	comp=Z,14nm,1.1s						
YULB	Yu-li	38.27	319	P	P	22 10 34.9	+0.2
YULB				IAmb	IAmb	22 10 39.1	
	comp=Z,8.3nm,0.8s						
TPUB	Ta-pu	38.64	319	P	P	22 10 37.4	-0.3
TPUB				IAmb	IAmb	22 10 40.0	
	comp=Z,11nm,0.7s						
SSLB	Suanglung	38.77	320	P	P	22 10 38.5	-0.4
SSLB				IAmb	IAmb	22 10 44.1	
	comp=Z,14nm,1.1s						
NIUE	Niue	43.83	112	P	P	22 11 19.4	-0.6
ULN	Ulaanbaatar	63.75	331	P	P	22 13 45.7	+1.5
SONM	Songino Array	64.05	331	P	P	22 13 47.1	+1.1
	comp=Z,1.1nm,0.7s,baz=145,slow=5.3,SNR=9.4						
SONM	Songino Array	64.05	331	P	P	22 13 47.4	+1.4
MKAR	Makanchi Array	77.24	320	P	P	22 15 05.4	-0.2
	comp=Z,0.5nm,0.4s,baz=96,slow=8.6,SNR=11						
MAKZ	Makanchi	77.45	320	P	P	22 15 05.5	-1.2
ZALV	Zalesovo Beam	78.69	328	P	P	22 15 12.4	-0.9
	comp=Z,1.4nm,0.5s,baz=117,slow=6.7,SNR=7.9						
ILAR	Eielson Array	84.86	23	P	P	22 15 44.6	-0.7
	comp=Z,0.4nm,0.7s,baz=258,slow=4.6,SNR=7.4						
TORD	Torodi Ar. Bea	145.21	285	PKPbc	PKPdf	22 22 47.0	-1.2
	comp=Z,0.8nm,0.3s,baz=72,slow=3.5,SNR=9.2						

*MEX **29** 22:12:16.0±0.3, 30°.91N×114°.18W, h20km, MD3.7*

*ECX **29** 22:12:16.3±0.7, 30°.75N×114°.41W, h0km±20km, MD2.2, ML2.4*

ISC 29 22:12:13.0±3.3**, 30°.8N**±0°.1×**114°.3W**±0°.1**, h12**km±13km**, n9,** σ**0s.70**/16**, 1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	San Felipe	0.56	298	*e*P	Pb	22 12 25.1	+0.4
SFX				*e*S	Sb	22 12 32.3	-0.3
ECBX	El Chinero	0.96	316	*e*P	Pg	22 12 31.2	-0.4
ECBX				*e*S	Sg	22 12 43.8	-0.4
SPX	San Pedro Mart	1.06	284	*e*P	Pg	22 12 33.5	+0.1
SPX				*e*S	Sb	22 12 47.3	0.0
SPX				*e*		22 12 48.8	
SPX				IAML		22 12 48.8	
	comp=N,76nm,0.3s						
SPIG	San Pedro Mart	1.06	285	*e*P	Pg	22 12 33.5	+0.1
	baz=96,slow=10						
SPIG				*e*S	Sg	22 12 47.2	-0.2
SPIG	San Pedro Mart	1.06	285	*e*P	Pg	22 12 33.6	+0.1
SPIG				*e*S	Sb	22 12 47.3	-0.1
SQX	San Quintin	1.40	262	*e*P	Pn	22 12 38.2	-0.1
SQX				*e*S	Sn	22 12 56.6	+0.1
VTX	Valle De La Tr	1.44	296	*e*P	Pg	22 12 40.4	-0.1
VTX				*e*S	Sb	22 12 58.1	+0.2
SJX	San Joaquin	1.75	305	*e*P	Pg	22 12 48.7	+2.2
CBX	Cerro Bola	2.55	307	*e*P	Pb	22 12 58.0	-0.8
CBX				⇓*e*		22 13 36.3	
CBX				IAML		22 13 36.3	
	comp=E,34nm,0.5s						
CBX				⇑*e*		22 13 36.4	
CBX				IAML		22 13 36.4	
	comp=N,27nm,0.7s						

*IDC **29** 22:16:43.9±2.3, 43°.26N×105°.20W, h0km, mb3.1/1, mb1 3.6/3, mb1mx3.2/53, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=47.1km s-min=8.5km az=155.0*

*NEIC **29** 22:16:47.5±1.5, 43°.68N±0°.05×105°.19W±0°.07, h0km±2km, ML2.9/46, Error ellipse: s-maj=9.2km s-min=7.6km az=291.0*

ISC 29 22:16:46.6±1.0**, 43°.66N**±0°.05×**105°.21W**±0°.05**, h0**km**, n30,** σ**1s.26**/31**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.97	61	Pg	Pb	22 17 06.4	+0.1
K22A	Casper	1.39	224	Pn	Pn	22 17 11.9	-1.5
K22A				IAML		22 17 34.0	
	comp=E,126nm,0.9s						
K22A				IAML		22 17 36.4	
	comp=N,124nm,0.6s						
PHWY	Pilot Hill	2.36	185	Pn	Pn	22 17 28.1	+1.2
PHWY				IAML		22 18 01.7	
	comp=N,58nm,0.7s						
RWWY	Rawlins	2.46	218	Pn	Pn	22 17 29.9	+1.7
LAO	LASA Array	3.11	347		Pn	22 17 36.2	-0.8
LAO				IAML		22 18 36.0	
	comp=N,54nm,1.2s						
RLMT	Red Lodge	3.26	298	Pn	Pn	22 17 38.6	-0.5
RLMT				IAML		22 18 36.4	
	comp=N,21nm,0.4s						
PD31	Pinedale Array	3.30	256	Pn	Pn	22 17 40.9	+1.2
PDAR	Pinedale Array	3.30	256	Pn	Pn	22 17 39.9	+0.2
	comp=N,1.5nm,0.3s,baz=71,slow=15,SNR=27						
PDAR				Pg	Pb	22 17 45.2	-0.9
	comp=N,2.5nm,0.3s,baz=69,slow=18,SNR=28						
PDAR				Sn	Sn	22 18 18.6	-1.2
	comp=N,1.3nm,0.3s,baz=75,slow=24,SNR=3.5						
PDAR				Lg	Lg	22 18 25.2	
	comp=N,7.4nm,0.3s,baz=82,slow=31,SNR=11						
PDAR	Pinedale Array	3.30	256		Pn	22 17 40.6	+0.9
BW06	Boulder Array	3.30	256	Pn	Pn	22 17 40.7	+1.0
BW06				IAML		22 18 27.8	
	comp=N,37nm,0.8s						
BW06				IAML		22 18 30.9	
	comp=N,22nm,0.6s						
OGNE	Ogallala	3.59	138		Pn	22 17 44.2	+0.7
YNE	Yellowstone No	3.70	293		Pn	22 17 45.1	-0.1
YMP	Mirror Lake Pl	3.72	289		Pn	22 17 45.8	+0.3
GCMT	Greycliff	3.83	305		Pn	22 17 47.5	+0.6
LKWY	Lake	3.85	285		Pn	22 17 48.6	+1.4
LKWY				IAML		22 18 52.6	
	comp=N,14nm,0.9s						
LKWY				IAML		22 19 01.8	
	comp=N,23nm,1.0s						
ISCO	Idaho Springs	3.87	185		Pn	22 17 47.3	-0.3
LOHW	Long Hollow	3.92	271		Pn	22 17 49.0	+0.8
LOHW				IAML		22 18 51.2	
	comp=N,13nm,0.9s						
LOHW				IAML		22 19 09.7	
	comp=N,13nm,2.4s						
H17A	Grant Village	3.94	283		Pn	22 17 50.4	+1.9
H17A				IAML		22 18 50.9	
	comp=E,14nm,1.5s						
H17A				IAML		22 18 53.4	
	comp=N,19nm,1.2s						
FLWY	Flagg Ranch	3.99	278		Pn	22 17 50.6	+1.4
FLWY				IAML		22 19 00.9	
	comp=N,23nm,1.0s						
YPP	Pitchstone Pla	4.09	281		Pn	22 17 53.5	+3.0
REDW	Red Top Meadow	4.12	268		Pn	22 17 51.8	+0.9
REDW				IAML		22 19 03.7	
	comp=N,23nm,0.9s						
O20A	White River Ci	4.18	214	Pn	Pn	22 17 53.0	+1.2
O20A				IAML		22 19 12.3	
	comp=N,21nm,1.6s						
YHH	Holmes Hill	4.21	288		Pn	22 17 53.7	+1.4
YMR	Madison River	4.26	286	Pn	Pn	22 17 53.4	+0.5
YHL	Hebgen Lake	4.45	288		Pn	22 17 57.7	+2.1
RDMU	Red Mountain	4.48	228		Pn	22 17 57.1	+1.3
ECR	Eagle Creek	4.53	264		Pn	22 17 57.7	+1.1
I10CA	LAC DU BONNET	9.07	41	*i*		23 15 30.0	
	baz=222,slow=336,SNR=4.8						
ULM	Lac du Bonnet	9.17	41	Pn	Pn	22 18 59.0	-1.1
	comp=N,0.8nm,0.3s,baz=233,slow=11,SNR=8.0						
ULM				Lg	Lg	22 21 35.4	
	comp=N,0.3nm,0.3s,baz=348,slow=21,SNR=2.7						
ILAR	Eielson Array	31.36	327	P	P	22 23 09.3	+0.7
	comp=N,0.1nm,0.5s,baz=110,slow=11,SNR=2.2						

*JMA **29** 22:18:38.6, 39°.76N×141°.83E, h59km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs176.00000°, δ26.00000°, λ69.00000°. NP2:φs20.00000°, δ66.00000°, λ100.00000°. Principal axes: T Plg68.0000°, Azm309.0000°; N Plg9.0000°, Azm195.0000°; P Plg20.0000°, Azm102.0000°;*

JMA Felt I J1.

*NIED **29** 22:18:38.6, 39°.76N×141°.83E, h59km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.33; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$-4.49; $M_{r\theta}$1.81; $M_{\theta\phi}$-1.98; $M_{\phi r}$5.00; Fault plane solution: $M_0$7.54000×10^{14} NP1:φs21.00000°, δ67.00000°, λ88.00000°. NP2:φs206.00000°, δ23.00000°, λ95.00000°.*

*NEIC **29** 22:18:40.1±2.4, 39°.82N±0°.05×141°.69E±0°.08, h79km±7km, mb4.5/16 Error ellipse: s-maj=9.5km s-min=7.2km az=74.0*

*IDC **29** 22:18:41.0±2.1, 39°.74N×141°.88E, h92km±17km, mb3.5/9, mb1 3.6/13, mb1mx3.4/51, mbtmp3.8/13, MS3.1/4, Ms1 3.1/4, ms1mx2.7/47, Error ellipse: s-maj=23.4km s-min=14.4km az=119.0*

ISC 29 22:18:37.6±0.7**, 39°.75N**±0°.03×**141°.86E**±0°.06**, h62**km±5km**, n76,** σ**1s.58**/79**, mb4.2**/16**, 3C-9D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.17	190	⇑P	Pn	22 18 47.9	+0.7
MIYJ				S	Sn	22 18 54.3	+0.2
JTH	Tanohata	0.19	1	⇑P	Pn	22 18 47.9	+0.6
JTH				S	Sn	22 18 54.4	+0.1
JKZ	Kuzumaki	0.47	300	⇓P	Pn	22 18 50.1	+0.6
JKZ				S	Sn	22 18 58.0	-0.2
JKEN	Kujiedanarisaw	0.47	346	⇓P	Pn	22 18 49.9	+0.4
JKEN				S	Sn	22 18 58.1	0.0
JOM	Ohasama	0.52	238	⇓P	Pn	22 18 50.4	+0.5
JOM				S	Sn	22 18 59.0	+0.1
JANG	Nango	0.68	337	⇓P	Pn	22 18 52.0	+0.2
JANG				S	Sn	22 19 01.7	-0.4
JMK	Ichinoseki	0.94	212	⇓P	Pn	22 18 55.5	+0.6
JMK				S	Sn	22 19 08.0	+0.3
JRG	Rokugo	1.01	250	⇓P	Pn	22 18 56.2	+0.3
JRG				*e*S	Sn	22 19 09.2	-0.2
JAH	Hinai	1.04	296	⇓P	Pn	22 18 56.7	+0.4
JAH				*e*S	Sn	22 19 09.9	-0.2
JTM	Tenmabayashi	1.20	330	⇓P	Pn	22 18 58.8	+0.4
JTM				S	Sn	22 19 13.8	-0.1
JTM	Tenmabayashi	1.20	330	Pn	Pn	22 18 58.7	+0.4
JTM				Sn	Sn	22 19 12.8	-1.1
JIO	Ouri	1.35	197	⇑P	Pn	22 19 01.1	+0.7
JIO				*e*S	Sn	22 19 17.3	-0.1
JYK	Kaneyama	1.43	235	⇓P	Pn	22 19 02.1	+0.7
JMM	Marumori	2.06	204	Pn	Pn	22 19 10.7	+0.8
ERM	Erimo	2.47	23		Pn	22 19 17.3	+1.8
JEW	Eniwo	3.11	354	Pn	Pn	22 19 26.4	+2.2
JSD	Sado	3.29	240		Pn	22 19 26.1	-0.6
MAJO	Matsushiro	4.30	223		Pn	22 19 42.9	+2.3
MAT	Matsushiro	4.30	223	P	Pn	22 19 43.6	+3.0
MAT				*e*S	Sn	22 20 34.0	+4.5
MJAR	Matsushiro Arr	4.30	223	P	Pn	22 19 44.1	+3.4
	0.2nm,0.3s,baz=36,slow=14,SNR=13						
MJAR	Matsushiro Arr	4.30	223		Pn	22 19 43.1	+2.5
ASAJ	Asahikawa	4.40	7	P	Pn	22 19 45.0	+3.1
	1.8nm,0.3s,baz=188,slow=18,SNR=2.2						
ASAJ				S	Sn	22 20 37.0	+5.2
	2.0nm,0.3s,baz=340,slow=30,SNR=1.8						
ASAJ				LR	LR	22 21 08.7	
	comp=Z,40nm,21.0s,baz=156,slow=34						
JKA	Kamikawa-asahi	4.40	7	Pn	Pn	22 19 43.8	+1.9
JGF	Kuroka	5.47	222	Pn	Pn	22 19 59.4	+2.9
INU	Inuyama	5.84	223	Pn	Pn	22 20 03.2	+1.7
JWT	Wachi	6.80	231	Pn	Pn	22 20 18.5	+3.8

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JHS   Saijyo            8.42 238  Pn     Pn     22 20 37.4 +0.4
USA0B Ussuriysk Arra    8.59 304  Pn     Pn     22 20 37.6 -1.7
USRK  Ussuriysk Ar.     8.59 304  P      Pn     22 20 41.2 +2.0
      baz=116,slow=13,SNR=11
USRK  Ussuriysk Ar.     8.59 304         Pn     22 20 37.6 -1.7
KSRS  Korea Array      11.15 263  P      Pn     22 21 18.4 +4.3
      0.2nm,0.3s,baz=291,slow=20,SNR=2.9
KS19  Wonju Array Si   11.18 263  Pn     Pn     22 21 16.4 +1.8
KLR   Kul'dur          11.90 326  LR     LR     22 26 40.1
      comp=Z,74nm,18.1s,baz=318,slow=40
PETK  Petropavlovsk-   17.20  34  LR     LR     22 28 14.3
      comp=Z,52nm,21.3s,baz=50,slow=33
SONM  Songino Array    26.66 299  P      P      22 24 10.6 -0.1
      0.4nm,0.8s,baz=87,slow=7.7,SNR=3.7
SONM  Songino Array    26.66 299  IAmb   IAmb   22 24 14.8
      comp=Z,1.7nm,1.4s
H11N2 WAKE ISLAND Hy   29.34 126  T      T      22 55 11.1
      baz=318,slow=76,SNR=263
H11N1 WAKE ISLAND Hy   29.35 126  T      T      22 55 16.8
      baz=318,slow=76,SNR=220
H11N3 WAKE ISLAND Hy   29.35 126  T      T      22 55 14.4
      baz=318,slow=76,SNR=139
H11S1 WAKE ISLAND Hy   30.13 127  T      T      22 56 16.9
      baz=319,slow=76,SNR=24
H11S3 WAKE ISLAND Hy   30.14 127  T      T      22 56 18.1
      baz=319,slow=76,SNR=22
H11S2 WAKE ISLAND Hy   30.15 127  T      T      22 56 12.2
      baz=319,slow=76,SNR=21
ZAA0  Zalesovo Array   40.39 310  P      P      22 26 08.8 -0.5
ZAA0                              IAmb   IAmb   22 26 10.6
      comp=Z,3.7nm,0.6s
ZALV  Zalesovo Beam    40.39 310  P      P      22 26 10.0 +0.7
      comp=Z,3.2nm,0.5s,baz=92,slow=8.0,SNR=19
ZALV  Zalesovo Beam    40.39 310  P      P      22 26 09.5 +0.2
MKAR  Makanchi Array   43.03 300  P      P      22 26 31.7 +0.7
      comp=Z,1.5nm,0.7s,baz=85,slow=9.7,SNR=24
MKAR  Makanchi Array   43.03 300  P      P      22 26 31.3 +0.3
MAKZ  Makanchi         43.23 300  P      P      22 26 33.0 +0.3
FAKI  Fak Fak          43.37 194  P      P      22 26 32.6 -1.3
ILAR  Eielson Array    47.03  34  P      P      22 27 04.0 +1.5
      comp=Z,0.3nm,0.5s,baz=265,slow=6.6,SNR=6.7
ILAR  Eielson Array    47.03  34  P      P      22 27 03.1 +0.6
KK31  Karatay Array    52.11 298  P      P      22 27 40.9 -0.5
KKAR  Karatay Array    52.11 298  P      P      22 27 40.9 -0.5
KKAR  Karatay Array    52.11 298  P      P      22 27 41.2 -0.2
KKAR                              IAmb   IAmb   22 27 46.9
      comp=Z,1.4nm,0.9s
MTN   Manton Dam       53.26 193  P      P      22 27 49.2 -0.9
MTN                               IAmb   IAmb   22 27 59.1
      comp=Z,25nm,1.5s
AB01  Akbulak array    56.49 309  P      P      22 28 13.0  0.0
AB31  Akbulak array    56.49 309  P      P      22 28 13.3 +0.2
AB31                              IAmb   IAmb   22 28 14.2
      comp=Z,2.2nm,0.6s
ABKAR Akbulak array    56.49 309  P      P      22 28 13.4 +0.4
ABKAR Akbulak array    56.49 309  IAmb   IAmb   22 28 14.2
      comp=Z,2.2nm,0.6s
AB03  Akbulak array    56.49 309  P      P      22 28 12.9 -0.2
AB04  Akbulak array    56.49 309  P      P      22 28 12.9 -0.2
AB09  Akbulak array    56.50 309  P      P      22 28 13.1  0.0
AB08  Akbulak array    56.50 309  P      P      22 28 13.3 +0.1
WRAB  Tennant Creek    59.78 188  P      P      22 28 34.0 -2.3
WRAB                              IAmb   IAmb   22 28 36.1
      comp=Z,8.9nm,0.8s
WRA   Warramunga Arr   59.79 188  P      P      22 28 36.8 +0.4
      comp=Z,0.4nm,0.7s,baz=6.4,slow=7.1,SNR=4.8
WRA   Warramunga Arr   59.79 188  P      P      22 28 35.3 -1.0
YKA   Yellowknife Ar   61.30  31  P      P      22 28 44.4 -1.8
      comp=Z,0.1nm,0.3s,baz=226,slow=20,SNR=7.8
BELG  Belogornoye      62.07 316  LR     LR     22 56 13.9
      comp=Z,102nm,18.0s,baz=129,slow=36
PGC   Sidney           64.22  47  P      P      22 29 05.8  0.0
PGC                               IAmb   IAmb   22 29 25.3
      comp=Z,7.1nm,0.9s
FINES FINESS Array B   66.59 332  P      P      22 29 21.1 +0.3
      comp=Z,3.8nm,0.9s,baz=46,slow=8.2,SNR=5.0
NOA   NORSAR Array B   71.83 337  P      P      22 29 54.1 +0.7
      comp=Z,0.4nm,0.6s,baz=35,slow=2.6,SNR=2.2
AKASG Malin Array Be   72.37 322  P      P      22 29 56.4 -0.3
      comp=Z,1.2nm,0.6s,baz=52,slow=6.2,SNR=4.8
YPP   Pitchstone Pla   73.86  46  P      P      22 30 05.5 -0.6
BURAR Bucovina Array   76.41 322  P      P      22 30 20.7 +0.3
N51A  Ashland          90.18  32  P      P      22 31 29.0 -2.2
WHAR  Wooly Hollow     90.18  42  P      P      22 31 31.9 +0.6
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*NEIC **29** 22:32:15.9±2.5, 16°.8S±0°.2×15°.6W±0°.1, h10^{km}±1^{km}, mb4.9/20, Error ellipse: s-maj=30.0km s-min=16.9km az=160.0*

*IDC **29** 22:32:16.9±5.1, 16°.64S×15°.58W, h0^{km}, mb4.1/5, mb1 4.1/5, mb1mx3.8/32, mbtmp4.1/5, MS3.5/3, Ms1 3.5/3, ms1mx3.1/26, Error ellipse: s-maj=224.7km s-min=104.5km az=115.0*

ISC 29 22:32:15.6±1.0, **16°.8S**±0°.2×**15°.7W**±0°.1, **h10**^{km}**, n36,** σ**1^s.70**/28, **mb4.8**/14, **MS3.4**/3, **Southern Mid-Atlantic Ridge**

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Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
H10S2 ASCENSION HYDR  7.83     8  T      T      22 42 20.2
      baz=176,slow=74,SNR=13
H10S3 ASCENSION HYDR  7.84     7  T      T      22 42 20.8
      baz=44,slow=74,SNR=16
H10N1 ASCENSION HYDR  8.95     8  T      T      22 43 44.1
      baz=180,slow=80,SNR=4.0
H10N3 ASCENSION HYDR  8.95     8  T      T      22 43 43.1
      baz=180,slow=80,SNR=6.7
H10N2 ASCENSION HYDR  8.97     8  T      T      22 43 43.4
      baz=180,slow=80,SNR=4.6
SHEL  Horse Pasture     9.58  87  Pn     Pn     22 34 31.8 -2.0
RCBR  Riachuelo        22.58 296  P      P      22 37 13.9 -2.5
DBIC  Dimbokro         25.64  26  P      P      22 37 48.0 +2.4
      5.4nm,1.0s,baz=207,slow=14,SNR=3.6
DBIC  Dimbokro         25.64  26  P      P      22 37 45.1 -0.5
DBIC                              IAmb   IAmb   22 37 50.0
      comp=Z,24nm,1.4s
KOWA  Kowa             33.14  21  P      P      22 38 53.5 +1.2
KOWA                              IAmb   IAmb   22 38 56.8
      comp=Z,19nm,1.5s
TOA0  Torodi Ar. Sit   34.34  31  P      P      22 39 03.5 +0.8
TOA0                              IAmb   IAmb   22 39 04.1
      comp=Z,7.9nm,0.9s
TORD  Torodi Ar. Bea   34.34  31  P      P      22 39 03.1 +0.4
      comp=Z,7.0nm,1.0s,baz=214,slow=8.9,SNR=14
TORD                              LR     LR     22 50 54.4
      comp=Z,62nm,19.4s,baz=355,slow=33
TORD  Torodi Ar. Bea   34.34  31  P      P      22 39 03.0 +0.3
BOSA  Boshof           39.39 115  LR     LR     22 52 48.2
      comp=Z,50nm,19.4s,baz=184,slow=31
PMOZ  Porto Moniz, M   49.34 358  P      P      22 41 07.4 +2.2
LVC   Limon Verde      50.23 254  P      P      22 41 12.9 +0.2
CO01  Juntas del Tor   51.21 245  P      P      22 41 22.9 +3.0
GO03  Copiap           51.29 248  P      P      22 41 21.2 +1.0
GO03                              IAmb   IAmb   22 41 23.7
      comp=Z,9.3nm,0.8s
TA01  Diego Aracena    51.57 257  P      P      22 41 22.8 +0.5
TA01                              IAmb   IAmb   22 41 26.5
      comp=Z,20nm,1.1s
PSGCX Pisagua          51.61 258  P      P      22 41 23.1 +0.3
PSGCX                             IAmb   IAmb   22 41 25.3
      comp=Z,23nm,1.4s
AC01  Pan de Azucar    51.63 250  P      P      22 41 24.8 +2.1
AC01                              IAmb   IAmb   22 41 35.3
      comp=Z,33nm,1.2s
PB10  IPOC Station P   51.69 253  P      P      22 41 25.2 +2.0
PB10                              IAmb   IAmb   22 41 30.1
      comp=Z,62nm,1.4s
BO02  Sierra Bellavi   52.11 239  P      P      22 41 27.3 +1.0
BO02                              IAmb   IAmb   22 41 29.6
      comp=Z,24nm,1.5s
PLCA  Paso Flores      52.74 231  LR     LR     23 00 28.0
      comp=Z,80nm,21.0s,baz=262,slow=32
MCLT  Moule a Chique   53.99 301  P      P      22 41 37.0 -3.3
RAFF  Raffo Rosso      60.72  27  P      P      22 42 25.4 -2.0
ITM   Ithomi           64.31  33  P      P      22 42 52.6 +1.1
SGRT  San Giovanni R   65.08  25  P      P      22 42 55.8 -0.7
GERES GERESS Array B   70.36  20  P      P      22 43 31.8 +2.2
      comp=Z,0.5nm,0.8s,baz=247,slow=5.1,SNR=2.1
GERES GERESS Array B   70.36  20  P      P      22 43 29.7 +0.1
MLR   Muntele Rosu     72.56  29  P      P      22 43 43.7 +0.7
MLR                               IAmb   IAmb   22 43 47.2
      comp=Z,12nm,1.3s
BRTR  Keskin Array B   72.61  38  P      P      22 43 46.0 +2.5
      comp=Z,2.3nm,1.0s,baz=227,slow=5.5,SNR=7.8
BRTR  Keskin Array B   72.61  38  P      P      22 43 43.3 -0.2
KOPT  Kop Dagi         76.96  41  P      P      22 44 08.8 -0.1
AKASG Malin Array Be   77.88  27  P      P      22 44 14.9 +1.5
      comp=Z,0.2nm,0.2s,baz=223,slow=5.0,SNR=5.9
AKASG Malin Array Be   77.88  27  IAmb   IAmb   22 44 16.6
      comp=Z,2.3nm,1.1s
```

MEX 29 23:11:05.2±0.7, **14°.42N**×**92°.97W, h16**^{km}±45^{km}**, MD4.1, Near coast of Chiapas**

```
Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
THIG                    0.83  55  i P    Pb     23 11 18.4 -2.9
THIG                              i S    Sb     23 11 29.0 -3.3
THIG                    0.83  55  eP     Pb     23 11 19.5 -1.8
THIG                              eS     Sb     23 11 29.1 -3.2
PCIG                    1.30 349  eP     Pn     23 11 24.5 -4.1
PCIG                              i S    Sb     23 11 41.0 -4.6
PCIG                    1.30 349  eP     Pn     23 11 24.5 -4.1
PCIG                              eS     Sb     23 11 39.3 -6.3
CCIG  Comitan           2.02  23  i P    Pn     23 11 35.7 -3.0
CCIG                              i S    Sn     23 11 59.3 -4.3
CCIG  Comitan           2.02  23  eP     Pn     23 11 35.9 -2.8
CCIG                              i S    Sn     23 11 58.0 -5.6
TGIG                    2.34 356  eP     Pn     23 11 40.5 -2.6
TGIG                              i S    Sn     23 12 07.4 -4.2
TGIG                    2.34 356  eP     Pn     23 11 40.5 -2.6
TGIG                              eS     Sn     23 12 06.6 -5.0
CMIG  Matias Romero     3.23 325  eP     Pn     23 11 52.1 -3.1
CMIG                              i S    Sn     23 12 28.6 -4.8
```

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*IDC **29** 23:50:46.9±0.7, 57°.93S×25°.59W, h0^{km}, mb4.5/6, mb1 4.5/7, mb1mx4.2/25, mbtmp4.4/7, ML4.5/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/23, Error ellipse: s-maj=30.8km s-min=22.4km az=82.0*

*NEIC **29** 23:50:55.4±1.1, 58°.0S±0°.1×25°.7W±0°.2, h65^{km}±6^{km}, mb4.7/32, Error ellipse: s-maj=18.9km s-min=14.4km az=223.0*

ISC 29 23:50:53.7±0.5, **57°.95S**±0°.09×**25°.7W**±0°.1, **h49**^{km}**, n65,** σ**0^s.63**/53, **mb4.6**/20, **MS3.7**/3, **South Sandwich Islands region**

```
Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
HOPE  Hope Point        7.06 297  Pn     Pn     23 52 40.0 +5.7
VNA1  Neumayer--Stat   14.72 157  P      Pn     23 54 18.6 +0.1
VNA3  Neumayer Olymp   14.92 160  P      Pn     23 54 20.7 -0.5
VNA2  Neumayer--Watz   15.12 157  P      Pn     23 54 23.3 -0.4
      baz=321,slow=13
SNAA  Sanae            16.67 155  P      P      23 54 44.6 -0.7
SNAA  Sanae            16.67 155  Pn     Pn     23 54 43.5  0.0
      1.7nm,0.3s,baz=337,slow=4.4,SNR=38
SNAA                              Sn     Sn     23 57 34.6  -13
      0.1nm,0.3s,baz=112,slow=3.3,SNR=3.1
SNAA  Sanae            16.67 155  P      P      23 54 45.0 -0.3
PMSA  Palmer Station   19.34 233  LR     LR     00 01 49.9
      comp=Z,151nm,19.5s,baz=228,slow=34
EFI   East Falkland    19.54 275         P      23 55 16.8  0.0
EFI                               IAmb   IAmb   23 55 32.0
      comp=Z,59nm,1.3s
BELA  Belgrano 2       20.25 185  P      P      23 55 25.0 +0.7
H09N1 TRISTAN DA CUN   22.68  29  T      T      00 18 03.8
      SNR=33
QSPA  South Pole Qui   32.30 180  P      P      23 57 17.9 +0.4
QSPA                              IAmb   IAmb   23 57 32.8
      comp=Z,11nm,1.5s
PLCA  Paso Flores      33.16 282  P      P      23 57 25.7 +0.5
      comp=Z,6.5nm,1.2s,baz=129,slow=5.1,SNR=4.6
PLCA  Paso Flores      33.16 282  P      P      23 57 24.4 -0.8
CPUP  Villa Florida    38.68 311  LR     LR     00 15 50.5
      comp=Z,33nm,18.4s,baz=216,slow=39
GO04  Tololo Observa   41.49 292  P      P      23 58 35.4 -0.6
AC05  El Transito      42.34 294         P      23 58 42.6 -0.2
AC05                              IAmb   IAmb   23 58 46.5
      comp=Z,9.9nm,1.1s
VNDA  Vanda            44.71 182  P      P      23 59 02.9 +1.8
      comp=Z,2.5nm,0.9s,baz=198,slow=10.0,SNR=3.5
VNDA                              LR     LR     00 15 43.9
      comp=Z,85nm,20.4s,baz=176,slow=34
VNDA  Vanda            44.71 182  P      P      23 59 01.4 +0.3
GO02  Mina Guanaco     45.09 297  P      P      23 59 04.7 -0.5
GO02                              IAmb   IAmb   23 59 20.5
      comp=Z,19nm,1.5s
BDFB  Brasilia         45.42 329  P      P      23 59 08.2 +0.6
      comp=Z,3.7nm,0.6s,baz=130,slow=2.8,SNR=6.3
BDFB  Brasilia         45.42 329  IAmb   IAmb   23 59 09.7
      comp=Z,3.8nm,0.7s
BOSA  Boshof           45.70  73  LR     LR     00 13 38.9
      comp=Z,74nm,18.0s,baz=188,slow=30
BOSA  Boshof           45.70  73  P      P      23 59 09.8  0.0
BOSA                              IAmb   IAmb   23 59 12.5
      comp=Z,11nm,1.4s
LVC   Limon Verde      46.96 300  P      P      23 59 20.1 +0.1
PB09  IPOC Station P   47.81 300  P      P      23 59 26.3  0.0
PB09                              IAmb   IAmb   23 59 39.8
      comp=Z,6.7nm,1.0s
PB07  IPOC Station P   48.17 300  P      P      23 59 29.3 +0.2
PB07                              IAmb   IAmb   23 59 35.8
      comp=Z,12nm,1.2s
PB01  IPOC Station P   48.58 300  P      P      23 59 33.1 +1.0
PB01                              IAmb   IAmb   23 59 38.4
      comp=Z,8.7nm,1.2s
PB08  IPOC Station P   49.21 301  P      P      23 59 36.9 -0.4
PB08                              IAmb   IAmb   23 59 40.6
      comp=Z,10.0nm,1.4s
H10S2 ASCENSION HYDR49.62     14  T      T      00 53 24.2
      SNR=14
MNMC  Minye Minye      50.29 302  P      P      23 59 45.5 +0.1
MNMC                              IAmb   IAmb   23 59 47.7
      comp=Z,5.2nm,0.9s
H10N1 ASCENSION HYDR50.73     14  T      T      00 55 36.5
      baz=181,slow=71,SNR=7.0
H10N3 ASCENSION HYDR50.73     14  T      T      00 55 36.5
      baz=181,slow=71,SNR=10
H10N2 ASCENSION HYDR50.75     14  T      T      00 55 39.2
      baz=181,slow=71,SNR=28
PB16  IPOC Station P   50.95 302  P      P      23 59 50.0 -0.7
SAML  Samuel           56.72 314  P      P      00 00 32.0 -0.1
PTGA  Pitinga          63.17 321  P      P      00 01 16.1 -0.3
DBIC  Dimbokro         66.58  23  P      P      00 01 39.0 +0.4
      comp=Z,3.1nm,0.4s,baz=175,slow=6.9,SNR=13
DBIC  Dimbokro         66.58  23  IAmb   IAmb   00 01 58.0
      comp=Z,11nm,1.1s
TOA0  Torodi Ar. Sit   74.34  28  P      P      00 02 26.5 +0.7
TOA0                              IAmb   IAmb   00 02 27.1
      comp=Z,11nm,1.3s
TORD  Torodi Ar. Bea   74.34  28  P      P      00 02 26.5 +0.7
      comp=Z,2.8nm,0.4s,baz=199,slow=6.3,SNR=23
TORD  Torodi Ar. Bea   74.34  28  P      P      00 02 28.0 +2.2
KOWA  Kowa             74.37  22  P      P      00 02 25.9 -0.1
KOWA                              IAmb   IAmb   00 02 43.9
      comp=Z,5.9nm,1.0s
MLZ   Mavora Lakes     76.41 190  P      P      00 02 37.6 +0.1
MLZ                               IAmb   IAmb   00 02 42.4
      comp=Z,17nm,1.2s
ODZ   Otahua Downs     76.47 192  P      P      00 02 38.1 +0.2
MTP   Monte Pirata     82.64 322  P      P      00 03 10.1 -1.3
MTP                               IAmb   IAmb   00 03 26.0
      comp=Z,13nm,1.0s
PDPR  Patillas Dam,    82.72 322  P      P      00 03 11.8  0.0
CUPR  Culebra, Puert   82.74 322  P      P      00 03 11.9  0.0
HUMP  Col San Antoni   82.78 322  P      P      00 03 12.5 +0.3
CBYP  Canovanas        82.90 322  P      P      00 03 13.3 +0.4
CBYP                              IAmb   IAmb   00 03 16.8
      comp=Z,14nm,1.1s
BBOO  Buckleboo        88.30 165  P      P      00 03 39.5 -0.2
ASAR  Alice Springs    96.93 161  P      P      00 04 18.8 -0.9
      comp=Z,0.9nm,0.8s,baz=187,slow=3.8,SNR=7.2
H07S1 FLORES T-PHASE 97.08 356    T      T      01 50 42.3
      SNR=8.5
WRA   Warramunga Arr  100.64 161  P      Pdif   00 04 35.6 -0.7
      comp=Z,0.6nm,1.0s,baz=192,slow=4.3,SNR=1.6
PDAR  Pinedale Array  122.03 300  PKP    PKPdf  00 09 41.3 -0.7
      comp=Z,0.5nm,0.6s,baz=111,slow=5.0,SNR=11
NVAR  Mina Array Bea  122.86 291  PKP    PKiKP  00 09 44.7 +0.8
      comp=Z,0.5nm,0.5s,baz=119,slow=3.9,SNR=4.8
FINES FINESS Array B  125.69  28  PKP    PKPdf  00 09 47.6 -0.4
      comp=Z,1.5nm,0.5s,baz=149,slow=2.7,SNR=13
FRB   Frobisher Bay   125.72 338  PKP    PKPdf  00 09 47.6 -0.3
      comp=Z,1.2nm,0.5s,baz=110,slow=3.4,SNR=5.7
ARCES ARCESS Array B  132.41  22  PKP    PKPdf  00 10 00.1 -0.5
      comp=Z,1.8nm,0.8s,baz=200,slow=1.3,SNR=7.6
YKA   Yellowknife Ar  138.12 316  PKP    PKPdf  00 10 11.3 -0.1
      comp=Z,1.8nm,0.7s,baz=118,slow=3.1,SNR=22
SONM  Songino Array   150.00  89  PKPbc  PKPbc  00 10 37.4 -0.3
      comp=Z,2.3nm,0.4s,baz=221,slow=3.7,SNR=25
SONM  Songino Array   150.00  89         PKPbc  00 10 37.2 -0.5
IL31                  151.97 309         PKiKP  00 10 42.1 +0.2
ILAR  Eielson Array   151.97 309  PKPbc  PKiKP  00 10 41.7 -0.2
      comp=Z,29nm,1.2s,baz=135,slow=3.6,SNR=98
ILAR  Eielson Array   151.97 309         PKiKP  00 10 41.9  0.0
```

IDC 29 23:52:54.0±8.5, **53°.75S**×**152°.31W, h0**^{km}**, mb3.6**/2, **mb1 3.9**/2, **mb1mx3.7**/30, **mbtmp3.6**/2, **Error ellipse: s-maj=712.9km s-min=90.7km az=165.0, South Pacific Ocean**

```
Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
H03S2 Juan Fernandez   54.04 100  T      T      00 59 05.1
      baz=223
H03S1 Juan Fernandez   54.04 100  T      T      00 59 07.1
      baz=223
H03S3 Juan Fernandez   54.05 100  T      T      00 59 02.2
      baz=223
H03N3 Juan Fernandez   54.31  99  T      T      00 59 23.6
      baz=222,slow=72,SNR=25
H03N2 Juan Fernandez   54.31  99  T      T      00 59 19.7
      baz=222,slow=72,SNR=24
H03N1 Juan Fernandez   54.33  99  T      T      00 59 20.7
      baz=222,slow=72,SNR=32
ASAR  Alice Springs    61.76 268  P      P      00 03 14.8 +0.5
      0.4nm,0.5s,baz=135,slow=6.4,SNR=5.2
WRA   Warramunga Arr   64.35 271  P      P      00 03 30.8 -0.8
      0.7nm,1.0s,baz=144,slow=6.4,SNR=2.7
H01W1 Cape Leeuwin H   64.66 245  T      T      01 13 30.1
      baz=137
H01W2 Cape Leeuwin H   64.67 245  T      T      01 13 28.1
      baz=137
H01W3 Cape Leeuwin H   64.67 245  T      T      01 13 29.3
      baz=137
MKAR  Makanchi Array  145.18 281  PKPbc  PKPbc  00 12 31.6 -0.6
      1.6nm,0.7s,baz=115,slow=4.3,SNR=20
ZALV  Zalesovo Beam   147.08 294  PKPbc  PKPbc  00 12 36.9 -0.8
      0.6nm,0.5s,baz=131,slow=4.4,SNR=4.1
```

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*NEIC **29** 23:56:08.7±2.1, 17°.10N±0°.10×94°.54W±0°.08, h143^{km}±4^{km}, Error ellipse: s-maj=13.9km s-min=11.0km az=162.0*

*MEX **29** 23:56:09.8±0.6, 17°.19N×94°.45W, h142^{km}±5^{km}, MD4.0*

ISC 29 23:56:08.7±0.8, **17°.09N**±0°.07×**94°.52W**±0°.06, **h144**^{km}±7^{km}**, n26,** σ**1^s.04**/38, **mb4.2**/4, **Chiapas**

```
Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
CMIG  Matias Romero     0.35 271  i P    Pn     23 56 28.6 -0.1
CMIG                              i S    Sn     23 56 43.4 -0.5
CMIG  Matias Romero     0.35 271         Pn     23 56 28.6 -0.1
CMIG                                     Sn     23 56 43.4 -0.5
HUIG  Huatulco          2.01 230  eP     Pn     23 56 42.7 -1.0
HUIG                              eS     Sn     23 57 11.2 +0.8
HUIG  Huatulco          2.01 230         Pn     23 56 42.7 -1.0
HUIG                                     Sn     23 57 11.2 +0.8
VHO   Vista Hermosa     2.12 270  eP     Pn     23 56 46.3 +1.2
CCIG  Comitan           2.42 109   Pn    Pn     23 56 48.3 -0.4
TOIG  Toxpalan          2.63 293  eP     Pn     23 56 51.0 -0.2
TOIG                              eS     Sn     23 57 23.6 -0.4
PEIG  Puerto Escondi    2.75 247  eP     Pn     23 56 51.6 -1.0
PEIG                              i S    Sn     23 57 27.2 +0.7
YOIG  Yosondua          2.91 266  eP     Pn     23 56 55.4 +0.5
YOIG                              eS     Sn     23 57 31.1 +0.6
TXIG  Tlaxiaco          3.11 274  eP     Pn     23 56 58.5 +0.9
TXIG                              i S    Sn     23 57 35.4 +0.1
HLIG  Huajuapan de L    3.22 284  i P    Pn     23 56 59.9 +1.0
HLIG                              i S    Sn     23 57 37.8 +0.1
PNIG  Pinotepa          3.53 259  eP     Pn     23 57 02.0 -0.6
PNIG                              i S    Sn     23 57 44.6 +0.2
PNIG  Pinotepa          3.53 259         Pn     23 57 02.0 -0.6
PNIG                                     Sn     23 57 44.6 +0.2
FTIG  Fresnillo de T    3.55 284  eP     Pn     23 57 03.2 +0.2
FTIG                              i S    Sn     23 57 45.2 +0.2
KVTX  Kingsville       10.87 344   Pn    Pn     23 58 41.0 +0.7
ESPN  Las Esperanzas   11.02 115   Pn    Pn     23 58 45.8 +3.5
346A  Big Creek Wild   14.96  17   Pn    Pn     23 59 31.4 -1.5
XPFO  Pion Flat        25.68 314  P      P      00 01 23.5 -2.0
PFO   Pinyon Flats O   25.68 314  P      P      00 01 23.7 -1.8
PFO                               IAmb   IAmb   00 01 34.8
      comp=Z,4.1nm,1.1s
PSUT  Pine Spring      27.26 325  P      P      00 01 40.2 +0.5
J47A  Sunmer           27.34  16  P      P      00 01 40.8 +0.7
CUPR  Culebra, Puert   27.87  83  P      P      00 01 43.6 -1.5
DUG   Dugway, Tooele   27.96 329  P      P      00 01 45.7 -0.1
P60A  Greenville       27.96  32  P      P      00 01 45.2 -0.5
P60A                              IAmb   IAmb   00 01 59.4
      comp=Z,7.1nm,0.9s
SPMN  Marine on St.    28.09   3  P      P      00 01 47.5 +0.7
SPMN                              IAmb   IAmb   00 01 49.9
      comp=Z,9.1nm,1.1s
RSSD  Black Hills      28.13 345  P      P      00 01 47.9 +0.6
RSSD                              IAmb   IAmb   00 01 48.3
      comp=Z,2.5nm,0.7s
```

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*KRNET **30** 00:03:29.6±0.1, 41°.28N×71°.62E, h14^{km}, mb2.3*

*SOME **30** 00:03:30.0, 41°.32N×71°.68E, h10^{km}*

*NNC **30** 00:03:30.8±1.8, 41°.24N×71°.55E, h0^{km}, mb3.1, mpv3.1, Error ellipse: s-maj=15.1km s-min=5.3km az=5.0*

ISC 30 00:03:29.0±1.0, **41°.29N**±0°.02×**71°.66E**±0°.02, **h13**^{km}±12^{km}**, n32,** σ**1^s.24**/55, **25C-8D, Kyrgyzstan**

```
Code  Station Name       Δ°  AZ°   Phase ID       Time     Res
                                  Op     ISC     h  m  s   ISC
TRKS  Terek-Say         0.46 301⇑i P    Pg     00 03 37.1 -1.0
      baz=99
TRKS                            ⇑i S    Sg     00 03 43.0 -1.3
      baz=99
ARSB  Arslanbob         0.99  88⇓i P    Pn     00 03 49.3 +0.4
      baz=87
ARSB                            ⇓i S    Sn     00 04 03.6 +0.7
      baz=87
OHH   Osh               1.15 132⇑i P    Pg     00 03 51.7 +0.6
      baz=30
OHH                             ⇑i S    Sg     00 04 08.1 +2.1
      baz=30
MNAS  Manas             1.35  28⇑eP     Pg     00 03 55.8 +0.8
      baz=28
MNAS                            ⇑i S    Sg     00 04 14.8 +2.3
      baz=28
BTK   Batken            1.39 208⇑i P    Pg     00 03 55.5 -0.2
      baz=7.0
BTK                             ⇑i S    Sg     00 04 14.4 +0.6
      baz=7.0
IUG   Iuzhnay           1.49 306  eP     Pg     00 03 58.0 +0.3
      16nm,0.1s
IUG                               eS     Sg     00 04 17.4 +0.4
      45nm,0.2s
IUG   Iuzhnay           1.49 306   P     Pg     00 03 58.0 +0.3
      16nm,0.1s
IUG                                S     Sg     00 04 17.4 +0.4
      45nm,0.2s
DZA   Taraz             1.62 351  eP     Pg     00 04 00.7 +0.6
      14nm,0.1s
DZA                               eS     Sg     00 04 21.7 +0.7
      19nm,0.2s
AML   Almayashu         1.74  60⇑i P    Pg     00 04 02.9 +0.5
      baz=61
AML                             ⇑i S    Sg     00 04 27.2 +2.2
      baz=61
DRK   Karamyk           1.81 177⇑i P    Pg     00 04 03.3 -0.5
      baz=75
DRK                             ⇑i S    Sg     00 04 28.0 +0.6
      baz=75
MRKS  Merke             1.86  38  eP     Pg     00 04 06.5 +1.7
      1.9nm,0.2s
MRKS                              eS     Sg     00 04 32.2 +3.3
      11nm,0.2s
MRKS  Merke             1.86  38   Pg    Pg     00 04 06.5 +1.7
      1.9nm,0.2s
MRKS                               Lg    Lg     00 04 32.2
      11nm,0.2s
SFK   Sufi-Kurgan       1.90 132⇓i P    Pg     00 04 04.5 -0.9
      baz=31
SFK                             ⇓i S    Sg     00 04 30.4 +0.4
      baz=31
KK31  Karatay Array     2.00 335 ⇑Pn    Pg     00 04 07.0 -0.4
      0.5nm,0.3s,baz=164,slow=16,SNR=15
```

KK31				⇓Sn	**Sg**	**00 04 33.1**	**-0.3**
	2.1nm,0.3s,baz=160,slow=29,SNR=17						
ARLS	**Aral**	**2.08**	**73**	⇑*i*P	**Pg**	**00 04 08.3**	**-0.5**
	baz=73						
ARLS				⇑*i*S	**Sg**	**00 04 36.6**	**+0.8**
	baz=73						
EKS2	**Erkin-Say**	**2.09**	**48**	⇑*i*P	**Pg**	**00 04 08.3**	**-0.8**
	baz=49						
EKS2				⇑*i*S	**Sg**	**00 04 36.6**	**+0.4**
	baz=49						
UCH	**Uchtor**	**2.33**	**65**	⇑*i*P	**Pg**	**00 04 11.7**	**-2.0**
	baz=65						
UCH				⇑*i*S	**Sg**	**00 04 42.7**	**-1.2**
	baz=65						
AAK	**Ala-Archa**	**2.50**	**57**	⇑*i*P	**Pb**	**00 04 14.4**	**+0.4**
	baz=57						
AAK				⇑*i*S	**Sg**	**00 04 46.5**	**-3.0**
	baz=57						
AAK	**Ala-Archa**	**2.50**	**57**	⇓Pn	**Pg**	**00 04 15.2**	**-1.8**
	2.4nm,1.1s						
AAK				⇑Sn	**Sg**	**00 04 48.5**	**-1.0**
	2.9nm,0.5s						
KBK	**Karagaybulak**	**2.80**	**60**	⇑*i*P	**Pb**	**00 04 18.6**	**-0.5**
	baz=60						
KBK				⇑*i*S	**Sb**	**00 04 54.1**	**+0.7**
	baz=60						
USP	**Ospenovka**	**2.89**	**46**	⇓*i*P	**Pb**	**00 04 19.2**	**-1.2**
	baz=46						
USP				⇓*i*S	**Sb**	**00 04 55.6**	**0.0**
	baz=46						
SGDS	**Sogindy**	**3.08**	**45**	Pg	**Pg**	**00 04 27.7**	**-0.3**
	6.2nm,0.6s						
SGDS				Lg	Lg	00 05 08.1	
	2.3nm,0.2s						
TKM2	**Tokmak 2**	**3.35**	**60**	⇑Lg	Lg	00 05 21.7	
	2.1nm,0.8s						
DGS	**Degeres**	**3.62**	**56**	*e*P	**Pg**	**00 04 37.2**	**-1.1**
	0.9nm,0.5s						
DGS				*e*S	**Sg**	**00 05 24.6**	**-0.7**
	2.4nm,0.2s						
DGS	**Degeres**	**3.62**	**56**	Pg	**Pg**	**00 04 37.2**	**-1.1**
	0.9nm,0.5s						
DGS				Lg	Lg	00 05 24.6	
	2.4nm,0.2s						
KST	**Kastek**	**3.65**	**60**	*e*P	**Pg**	**00 04 37.9**	**-0.9**
	1.0nm,0.1s						
KST				*e*S	**Sg**	**00 05 25.6**	**-0.4**
	1.8nm,0.3s						
KST	**Kastek**	**3.65**	**60**	Pg	**Pg**	**00 04 37.9**	**-0.9**
	1.0nm,0.1s						
KST				Lg	Lg	00 05 25.7	
	1.8nm,0.3s						
KTBS	**Karatobe**	**4.43**	**55**	*e*P	**Pg**	**00 04 52.4**	**-1.4**
	0.7nm,0.2s						
KTBS				*e*S	**Sg**	**00 05 50.8**	**-0.4**
	2.7nm,0.4s						
KTBS	**Karatobe**	**4.43**	**55**	Pg	**Pg**	**00 04 52.4**	**-1.4**
	0.7nm,0.2s						
KTBS				Lg	Lg	00 05 50.8	
	2.7nm,0.4s						
CHKK	**Chushkaly**	**4.69**	**55**	*e*P	**Pg**	**00 04 58.2**	**-0.6**
	1.2nm,0.1s						
CHKK				*e*S	**Sg**	**00 06 00.7**	**+1.1**
	1.8nm,0.3s						
CHKK	**Chushkaly**	**4.69**	**55**	Pg	**Pg**	**00 04 58.2**	**-0.6**
	1.2nm,0.1s						
CHKK				Lg	Lg	00 06 00.7	
	1.8nm,0.3s						
KAPS	**Kapalarasan**	**6.89**	**52**	Pg	**Pg**	**00 05 38.5**	**-2.3**
	0.9nm,0.6s						
KAPS				Lg	Lg	00 07 09.6	
	0.7nm,0.3s						

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*NCEDC **30** 00:04:41.3±1.3, 38°.43N±0°.02×122°.24W±0°.04, h8^{km}±7^{km}, Md3.0/116, ML2.8/56(NEIC), Error ellipse: s-maj=4.7km s-min=2.0km az=65.0*

NEIC 30 00:04:41.4±3.0**, 38°.44N**±0°.02×**122°.21W**±0°.03**, h17**^{km}±4^{km}**, Error ellipse: s-maj=3.1km s-min=2.9km az=96.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVS	**Carmenet Viney**	**0.21**	**245**		Pg	00 04 45.6	-0.8
CVS					Sg	00 04 48.9	-1.0
HERB	**Hercules**	**0.43**	**185**		Pg	00 04 50.0	0.0
MNRC	**McLaughlin Min**	**0.48**	**338**		Pb	00 04 51.2	-0.2
GCRM	**Castle Rock Sp**	**0.52**	**311**		Pg	00 04 51.1	-0.6
BDM	**Black Diamond**	**0.55**	**150**		Pg	00 04 52.4	+0.1
VAK	**Adit at Lawren**	**0.56**	**183**		Pg	00 04 52.5	+0.1
BKS	**Berkeley--Byer**	**0.56**	**182**		Pg	00 04 52.5	0.0
BL67	**Building 67, L**	**0.56**	**183**		Pg	00 04 52.5	0.0
BRK	**Berkeley--Havi**	**0.56**	**184**		Pg	00 04 52.5	-0.1
GSGM	**Seigler Mounta**	**0.58**	**318**		Pb	00 04 53.0	-0.1
GDXM	**Geysers**	**0.59**	**309**		Pg	00 04 52.2	-0.8
GDXM				IAML		00 05 03.4	
	comp=N,661nm,0.3s						
GDXM				IAML		00 05 04.1	
	comp=E,568nm,0.2s						
MCCM	**Marconi Confer**	**0.60**	**241**		Pg	00 04 52.7	-0.6
MCCM				IAML		00 05 04.8	
	comp=N,680nm,0.4s						
CMCM	**Mills College**	**0.66**	**178**		Pg	00 04 54.1	-0.2
GPMM	**Pine Mountain**	**0.71**	**306**		Pg	00 04 55.2	-0.1
FTR	**Fort Ross**	**0.75**	**277**		Pb	00 04 55.6	-0.4
SUTB	**Sutter Butte**	**0.86**	**23**		Pb	00 04 56.2	-1.6
HOPS	**Hopland Field**	**0.87**	**310**	Pg	Pb	00 04 57.7	-0.4
WENL	**Wente Vineyard**	**0.89**	**156**		Pb	00 04 58.1	-0.2
FARB	**Farallon Islan**	**0.97**	**220**		Pb	00 04 58.8	-0.8
JRSC	**Jasper Ridge**	**1.03**	**181**		Pb	00 05 00.1	-0.7
MHC	**Mount Hamilton**	**1.18**	**157**		Pn	00 05 02.5	-0.7
ORV	**Oroville**	**1.25**	**26**		Pn	00 05 02.5	-1.6
ORV	**Oroville**	**1.25**	**26**	Pn	Pn	00 05 01.9	-2.1
GASB	**Alder Springs**	**1.28**	**342**		Pn	00 05 04.5	-0.1
GHS	**Gilroy Hot Spr**	**1.47**	**155**		Pn	00 05 06.7	-0.4
CMB	**Columbia Colle**	**1.49**	**105**		Pn	00 05 06.8	-0.6
CMB	**Columbia Colle**	**1.49**	**105**		Pn	00 05 06.9	-0.5
CMB				IAML		00 05 30.0	
	comp=E,148nm,0.6s						
CMB				IAML		00 05 30.5	
	comp=N,114nm,0.7s						
KCPM	**Cahto Peak**	**1.64**	**320**	Pn	Pn	00 05 10.3	+0.8
RUBR	**Rubicon Trail**	**1.72**	**68**		Pb	00 05 11.7	-1.0
SAO	**San Andreas Ge**	**1.78**	**160**	Pn	Pn	00 05 10.9	-0.4
LCMM	**Colby Mountain**	**1.79**	**17**		Pn	00 05 11.6	0.0
BEKR	**Beckworth**	**2.03**	**45**		Pb	00 05 16.6	-1.2
BEKR				IAML		00 05 44.4	
	comp=N,80nm,0.6s						
PNTR	**Pine Nut**	**2.14**	**72**		Pn	00 05 18.0	+1.4
WDC	**Whiskeytown Da**	**2.15**	**353**	Pn	Pn	00 05 15.6	-0.9
VCNR	**Virginia City**	**2.18**	**66**		Pn	00 05 15.7	-1.3
WAKR	**Walker**	**2.18**	**87**		Pb	00 05 19.1	-1.3
WAKR				IAML		00 05 50.2	
	comp=E,64nm,0.5s						
WAKR				IAML		00 05 54.6	
	comp=N,69nm,0.7s						
PMPB	**Monarch Peak**	**2.49**	**153**	Pn	Pn	00 05 20.4	-0.7
PMPB				IAML		00 06 08.8	
	comp=N,45nm,1.1s						
PMPB				IAML		00 06 35.0	
	comp=E,36nm,1.2s						
PAHR	**Pah Rah Range**	**2.54**	**59**	Pn	Pn	00 05 23.9	+2.0
PAHR				IAML		00 06 16.1	
	comp=N,25nm,1.4s						
MDPB	**Devils Postpil**	**2.60**	**107**		Pn	00 05 24.7	+1.9
OMMB	**Old Mammoth Mi**	**2.67**	**107**	Pn	Pn	00 05 25.8	+2.0
OMMB				IAML		00 06 03.4	
	comp=E,25nm,0.8s						
OMMB				IAML		00 06 08.6	
	comp=N,40nm,0.8s						
KHMM	**Horse Mountain**	**2.70**	**335**	Pn	Pn	00 05 23.4	-0.8
KHMM				IAML		00 06 46.6	
	comp=E,24nm,2.8s						
KHMM				IAML		00 07 03.7	
	comp=N,26nm,4.0s						
JCC	**Jacoby Creek,**	**2.76**	**330**	Pn	Pn	00 05 27.5	+2.7
JCC				IAML		00 06 05.2	
	comp=E,31nm,4.6s						
JCC				IAML		00 06 40.2	
	comp=N,34nm,2.0s						
RYN	**Ryan**	**2.90**	**85**		Pn	00 05 29.3	+2.4
RYN				IAML		00 06 21.8	
	comp=E,24nm,0.8s						
RYN				IAML		00 06 24.3	
	comp=N,25nm,0.6s						
LHV	**Little Huntoon**	**2.92**	**92**		Pn	00 05 28.3	+1.3
LHV				IAML		00 06 34.6	
	comp=E,38nm,0.9s						
NVAR	**Mina Array Bea**	**3.07**	**89**	Pn	Pn	00 05 30.9	+1.6
NV11	**Mina Array Sit**	**3.19**	**89**		Pn	00 05 32.8	+2.0
YBH	**Yreka Blue Hor**	**3.31**	**354**	Pn	Pn	00 05 33.9	+1.4
KRMB	**Red Mountain**	**3.35**	**338**	Pn	Pn	00 05 34.4	+1.4
KRMB				IAML		00 06 29.0	
	comp=E,18nm,2.4s						
KRMB				IAML		00 06 47.8	
	comp=N,14nm,2.0s						
ISA	**Isabella, Lake**	**4.08**	**132**		Pn	00 05 44.0	+1.1
ISA				IAML		00 06 52.5	
	comp=N,8.2nm,0.7s						
ISA				IAML		00 06 52.6	
	comp=E,10nm,0.8s						
HUMO	**Hull Mountain**	**4.20**	**352**	Pn	Pn	00 05 42.9	-1.8
HUMO				IAML		00 07 28.5	
	comp=N,7.0nm,4.1s						
K05A	**Summer Lake**	**4.40**	**13**	Pn	Pn	00 05 49.1	+1.5
K05A				IAML		00 06 22.7	
	comp=N,11nm,3.2s						

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*NNC **30** 00:28:42.9±2.4, 37°.21N×71°.23E, h208^{km}±39^{km}, mb2.5, mpv3.7, Error ellipse: s-maj=27.0km s-min=14.2km az=33.0*

ISC 30 00:28:41.6±3.4**, 37°.1N**±0°.2×**71°.2E**±0°.1**, h200**^{km}**, n9, σ0^{s}39**/12**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.36**	**20**	P	**Pn**	**00 30 00.5**	**-0.4**
	SNR=15						
UCH	**Uchtor**	**5.70**	**26**	P	**Pn**	**00 30 05.4**	**0.0**
	SNR=5.4						
EKS2	**Erkin-Say**	**5.87**	**19**	P	**Pn**	**00 30 07.8**	**+0.6**
	SNR=7.3						
KK31	**Karatay Array**	**5.99**	**355**	P	**Pn**	**00 30 09.2**	**+0.5**
	2.3nm,0.3s,baz=183,slow=14,SNR=35						
KK31				⇑S	**Sn**	**00 31 17.9**	**+0.2**
	1.2nm,0.3s,baz=178,slow=23,SNR=4.7						
AAK	**Ala-Archa**	**6.06**	**24**	P	**Pn**	**00 30 10.0**	**+0.3**
	SNR=12						
AAK	**Ala-Archa**	**6.06**	**24**	⇓P	**Pn**	**00 30 09.8**	**+0.1**
	5.0nm,0.5s						
AAK				⇑S	**Sn**	**00 31 19.5**	**+0.1**
	4.7nm,0.7s						
CHMS	**Chumysh**	**6.47**	**24**	P	**Pn**	**00 30 15.0**	**+0.2**
	SNR=5.1						
TKM2	**Tokmak 2**	**6.70**	**29**	⇑P	**Pn**	**00 30 17.9**	**-0.1**
	2.3nm,0.5s						
AB31	**Akbulak array**	**14.62**	**330**	⇑P	**P**	**00 31 60.0**	**-0.1**
	0.2nm,0.4s,baz=157,slow=11,SNR=5.9						
AB31				⇓S	**S**	**00 34 40.7**	**-0.6**
	0.9nm,0.8s,baz=151,slow=24,SNR=4.3						

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*IDC **30** 00:37:27.3±1.1, 20°.31S×172°.58E, h0^{km}, mb4.1/7, mb1 4.4/9, mb1mx4.2/29, mbtmp4.1/9, ML3.6/2, MS3.8/21, Ms1 3.8/21, ms1mx3.8/25, Error ellipse: s-maj=39.1km s-min=23.6km az=147.0*

*NEIC **30** 00:37:32.8±1.4, 20°.5S±0°.1×172°.58E±0°.09, h37^{km}±7^{km}, mb4.5/43, Error ellipse: s-maj=15.6km s-min=11.3km az=160.0*

*GCMT **30** 00:37:33.8±0.3, 20°.49S±0°.02×172°.38E±0°.02, h29^{km}±1^{km}, MW4.9/66, Moment Tensor Solution. s18,c20; s66,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.68±.22; $M_{\theta\theta}$0.41±.18; $M_{\phi\phi}$0.26±.15; $M_{r\theta}$0.46±.24; $M_{\theta\phi}$2.60±.10; $M_{\phi r}$0.24±.20; Best double couple: $M_0$2.64200×10^{16} NP1:ϕ_s1.00000°, δ81.00000°, λ178.00000°. NP2: ϕ_s91.00000°, δ88.00000°, λ9.00000°. Principal axes: T 3.0070, Plg8.0000°, Azm316.0000°; N -0.7300, Plg81.0000°, Azm100.0000°; P -2.2770, Plg6.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 00:37:32.8±0.5**, 20°.47S**±0°.08×**172°.56E**±0°.09**, h35**^{km}**, n87, σ0^{s}96**/74**, mb4.5**/25**, MS3.8**/19**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.86**	**63**	Pn	**Pn**	**00 38 57.4**	**0.0**
DZM	**Mont Dzumac**	**5.92**	**253**	Pn	**Pn**	**00 38 57.3**	**-0.8**
	1.0nm,0.3s,baz=122,slow=18,SNR=12						
DZM				LR	LR	00 40 58.6	
	comp=Z,292nm,20.4s,baz=228,slow=35						
DZM	**Mont Dzumac**	**5.92**	**253**	*e*Pn	**Pn**	**00 38 56.5**	**-1.6**
	54nm,1.2s						
DZM				*e*LR	LR	00 40 01.4	
DZM	**Mont Dzumac**	**5.92**	**253**		**Pn**	**00 38 57.9**	**-0.2**
SANVU	**Saraoutou**	**7.13**	**314**		**Pn**	**00 39 15.1**	**+0.4**
RAO	**Raoul Island**	**12.29**	**137**	LR	LR	00 44 07.5	
	comp=Z,675nm,21.0s,baz=132,slow=32						
HNR	**Honiara**	**16.38**	**310**	LR	LR	00 46 42.1	
	comp=Z,422nm,18.4s,baz=150,slow=34						
URZ	**Urewera**	**18.16**	**168**	P	**Pn**	**00 41 42.2**	**0.0**
	0.3nm,0.3s,baz=24,slow=4.9,SNR=8.8						
URZ				LR	LR	00 46 50.3	
	comp=Z,294nm,19.8s,baz=31,slow=31						
BKZ	**Black Stump Fm**	**18.94**	**171**	P	**P**	**00 41 51.5**	**+0.7**
QRZ	**Quartz Range**	**20.29**	**180**	P	**P**	**00 42 05.1**	**-0.4**
QRZ				IAmb	IAmb	00 42 14.8	
	comp=Z,29nm,1.1s						
EIDS	**Eidsvold**	**20.37**	**252**	P	**P**	**00 42 06.8**	**+0.3**
BFZ	**Birch Farm**	**20.39**	**172**	P	**P**	**00 42 05.2**	**-1.4**
MSWZ	**Moikau Station**	**21.01**	**174**	P	**P**	**00 42 11.3**	**-2.0**
PLWZ	**Palliser**	**21.16**	**174**	P	**P**	**00 42 13.1**	**-1.8**
BSWZ	**Blackbirch Sta**	**21.21**	**177**	P	**P**	**00 42 15.3**	**-0.1**
ARMA	**Armidale**	**21.30**	**238**	P	**P**	**00 42 17.2**	**+0.5**
KHZ	**Kahutara**	**21.90**	**178**	P	**P**	**00 42 23.8**	**+1.0**
KHZ				IAmb	IAmb	00 42 34.6	
	comp=Z,17nm,0.9s						
LTZ	**Lake Taylor**	**22.25**	**181**	P	**P**	**00 42 27.9**	**+1.3**
LTZ				IAmb	IAmb	00 42 36.5	
	comp=Z,13nm,0.9s						
RPZ	**Rata Peaks**	**23.21**	**183**	LR	LR	00 50 36.2	
	comp=Z,230nm,18.6s,baz=17,slow=34						
LBZ	**Lake Benmore**	**23.93**	**184**	P	**P**	**00 42 43.4**	**-0.2**
MLZ	**Mavora Lakes**	**25.10**	**187**	P	**P**	**00 42 54.9**	**+0.6**
MLZ				IAmb	IAmb	00 43 09.4	
	comp=Z,14nm,1.0s						
RAR	**Rarotonga**	**25.86**	**97**	LR	LR	00 50 54.7	
	comp=Z,173nm,19.1s,baz=266,slow=31						
PYZ	**Puysegur Point**	**26.08**	**189**	P	**P**	**00 43 01.3**	**-1.7**
PMG	**Port Moresby**	**26.85**	**290**	LR	LR	00 52 26.1	
	comp=Z,266nm,18.5s,baz=226,slow=34						
STKA	**Stephens Creek**	**29.92**	**241**	P	**P**	**00 43 38.8**	**+1.2**
	comp=Z,8.2nm,1.0s,baz=343,slow=19,SNR=3.3						
STKA				LR	LR	00 55 18.2	
	comp=Z,125nm,18.1s,baz=57,slow=36						
STKA	**Stephens Creek**	**29.92**	**241**	P	**P**	**00 43 38.9**	**+1.3**
BBOO	**Buckleboo**	**34.69**	**242**	P	**P**	**00 44 17.7**	**-1.7**
TBI	**Tubuai**	**35.29**	**102**	*e*LR	LR	00 54 10.3	
	comp=Z,355nm,29.0s						
WB0	**Warramunga Arr**	**35.79**	**264**	P	**P**	**00 44 29.6**	**+0.6**
WB0				IAmb	IAmb	00 44 42.5	
	comp=Z,7.2nm,1.1s						
WRA	**Warramunga Arr**	**35.82**	**264**	P	**P**	**00 44 28.4**	**-0.9**
	comp=Z,1.8nm,1.1s,baz=92,slow=8.4,SNR=4.4						
WRA				LR	LR	00 59 11.7	
	comp=Z,156nm,19.2s,baz=95,slow=36						
WRA	**Warramunga Arr**	**35.82**	**264**	P	**P**	**00 44 30.1**	**+0.9**
JAY	**Jayapura**	**35.82**	**296**	LR	LR	00 58 38.1	
	comp=Z,180nm,19.9s,baz=83,slow=36						
PPT2	**Papeete2**	**35.86**	**92**	*e*LR	LR	00 54 26.3	
	comp=Z,339nm,26.5s						
ASAR	**Alice Springs**	**35.89**	**258**	P	**P**	**00 44 29.1**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=92,slow=8.6,SNR=6.3						
ASAR				LR	LR	00 58 15.3	
	comp=Z,234nm,18.2s,baz=94,slow=35						
FITZ	**Fitzroy Crossi**	**44.23**	**265**	P	**P**	**00 45 39.1**	**+0.1**
FITZ				IAmb	IAmb	00 45 45.7	
	comp=Z,9.3nm,1.1s						
SOEI	**Soe**	**47.66**	**275**	P	**P**	**00 46 06.5**	**+0.2**
PSAB1	**Pilbara Seismi**	**49.04**	**259**	P	**P**	**00 46 16.7**	**0.0**
PSAB1				IAmb	IAmb	00 46 27.1	
	comp=Z,10nm,1.1s						
PSAD1	**Pilbara Seismi**	**49.05**	**259**	P	**P**	**00 46 17.4**	**+0.6**
PSAD1				IAmb	IAmb	00 46 27.3	
	comp=Z,9.8nm,1.0s						
VNDA	**Vanda**	**57.33**	**183**	LR	LR	01 09 30.5	
	comp=Z,71nm,18.2s,baz=314,slow=34						
MJAR	**Matsushiro Arr**	**65.33**	**330**	LR	LR	01 11 21.6	
	comp=Z,36nm,21.7s,baz=325,slow=31						
KSRS	**Korea Array**	**71.31**	**324**	LR	LR	01 19 42.3	
	comp=Z,42nm,18.1s,baz=350,slow=36						
USA0B	**Ussuriysk Arra**	**74.29**	**331**	P	**P**	**00 49 06.0**	**-0.4**
USA0B				IAmb	IAmb	00 49 09.6	
	comp=Z,6.9nm,0.9s						
PETK	**Petropavlovsk-**	**74.39**	**351**	LR	LR	01 14 42.6	
	comp=Z,60nm,20.5s,baz=133,slow=30						
PETK	**Petropavlovsk-**	**74.39**	**351**	P	**P**	**00 49 07.2**	**+0.4**
UNV	**Unalaska Valle**	**76.18**	**13**	P	**P**	**00 49 15.3**	**-1.7**
AIS	**Amsterdam Isla**	**81.51**	**233**	P	**P**	**00 49 46.2**	**-0.7**
MA2	**Magadan**	**81.73**	**349**	P	**P**	**00 49 46.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**81.86**	**293**	P	**P**	**00 49 49.8**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=119,slow=4.1,SNR=6.9						
CMAR				LR	LR	01 27 52.1	
	comp=Z,21nm,18.9s,baz=145,slow=37						
MWC	**Mount Wilson**	**85.47**	**51**	P	**P**	**00 50 06.7**	**-0.7**
MWC				IAmb	IAmb	00 50 11.1	
	comp=Z,3.1nm,0.8s						
WDC	**Whiskeytown Da**	**85.55**	**44**	P	**P**	**00 50 06.3**	**-1.0**
WDC				IAmb	IAmb	00 50 16.5	
	comp=Z,2.7nm,1.0s						
HUMO	**Hull Mountain**	**86.35**	**42**	P	**P**	**00 50 11.0**	**-0.4**
MDPB	**Devils Postpil**	**86.38**	**48**	P	**P**	**00 50 11.4**	**-0.6**
MDPB				IAmb	IAmb	00 50 12.9	
	comp=Z,3.4nm,1.0s						
NVAR	**Mina Array Bea**	**87.30**	**47**	P	**P**	**00 50 16.4**	**0.0**
	comp=Z,1.0nm,0.9s,baz=230,slow=8.3,SNR=6.0						
NVAR				LR	LR	01 22 11.4	
	comp=Z,71nm,19.4s,baz=211,slow=31						
NVAR	**Mina Array Bea**	**87.30**	**47**	P	**P**	**00 50 16.1**	**-0.3**
NV11	**Mina Array Sit**	**87.41**	**47**	P	**P**	**00 50 16.3**	**-0.4**
NV11				IAmb	IAmb	00 50 23.9	
	comp=Z,2.8nm,1.1s						
113A	**Mohawk Valley,**	**88.01**	**54**	P	**P**	**00 50 18.9**	**-0.6**
SNAA	**Sanae**	**88.05**	**181**	P	**P**	**00 50 21.8**	**+2.5**
SNAA				IAmb	IAmb	00 50 23.2	
	comp=Z,4.6nm,1.1s						
TPNV	**Topopah Spring**	**88.05**	**49**	P	**P**	**00 50 19.3**	**-0.6**
TPNV				IAmb	IAmb	00 50 31.3	
	comp=Z,2.4nm,1.1s						
PINE	**Pine Mountain**	**88.22**	**42**	P	**P**	**00 50 20.9**	**+0.3**
PINE				IAmb	IAmb	00 50 21.8	
	comp=Z,4.4nm,1.1s						
SHPR	**Sheep Range**	**88.63**	**50**	P	**P**	**00 50 21.3**	**-1.3**
W13A	**Hualapai Mount**	**88.93**	**52**	P	**P**	**00 50 23.8**	**-0.4**
PCA	**Pinnacle**	**88.94**	**22**	P	**P**	**00 50 23.7**	**+0.3**
SONM	**Songino Array**	**90.09**	**322**	P	**P**	**00 50 28.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=109,slow=2.0,SNR=3.7						
SONM				LR	LR	01 28 54.8	
	comp=Z,47nm,18.8s,baz=77,slow=34						
SONM	**Songino Array**	**90.09**	**322**	P	**P**	**00 50 29.6**	**+0.4**
TUC	**Tucson**	**90.10**	**55**	P	**P**	**00 50 28.9**	**-0.6**
LCMT	**Little Creek M**	**90.23**	**50**	P	**P**	**00 50 29.4**	**-0.7**
SPR3	**Spring Creek 3**	**90.32**	**48**	P	**P**	**00 50 30.0**	**-0.7**
SPR3				IAmb	IAmb	00 50 42.3	
	comp=Z,2.5nm,1.0s						
CCUT	**Cedar City**	**90.38**	**50**	P	**P**	**00 50 30.5**	**-0.4**
PSUT	**Pine Spring**	**90.45**	**49**	P	**P**	**00 50 31.2**	**0.0**
X16A	**Lo Mia Camp, P**	**90.46**	**53**	P	**P**	**00 50 32.6**	**+1.3**
X16A				IAmb	IAmb	00 50 44.3	
	comp=Z,2.0nm,0.9s						
ELK	**Elko**	**90.48**	**46**	P	**P**	**00 50 30.6**	**-0.7**
ELK				IAmb	IAmb	00 50 35.0	
	comp=Z,2.6nm,1.1s						
ILAR	**Eielson Array**	**90.50**	**16**	P	**P**	**00 50 28.6**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=229,slow=6.5,SNR=5.5						
ILAR				LR	LR	01 23 56.5	
	comp=Z,77nm,20.0s,baz=202,slow=31						
TXAR	**Lajitas Array**	**94.63**	**61**	LR	LR	01 25 06.9	
	comp=Z,70nm,20.0s,baz=0.0,slow=30						
PLCA	**Paso Flores**	**95.53**	**137**	LR	LR	01 24 07.9	
	comp=Z,107nm,21.4s,baz=241,slow=29						
OSTC	**Ostas**	**144.64**	**334**	*e*PKP	**PKPdf**	**00 57 06.6**	**+0.9**
CHVC	**Chvalec**	**144.68**	**334**	*e*PKP	**PKPdf**	**00 57 06.5**	**+0.8**
CHVC				*e*x	x	00 57 10.2	
DPC	**Dobruska-Polom**	**144.75**	**333**	*e*PKP	**PKPab**	**00 57 04.7**	**-0.1**
UPC	**Upice**	**144.76**	**334**	*e*PKP	**PKPab**	**00 57 04.7**	**0.0**
UPC				*e*x	x	00 57 10.8	
CLL	**Collm**	**145.29**	**337**	*e*PKPbc	**PKPbc**	**00 57 06.0**	**-0.5**
	comp=Z,18nm,1.3s						
CLL				*i* PKiKP	**PKiKP**	**00 57 12.3**	**+1.7**
	comp=Z,14nm,1.0s						
VRAC	**Vranov**	**145.42**	**332**	*e*PKP	**PKPbc**	**00 57 07.0**	**0.0**
KRUC	**Moravsky**	**145.69**	**332**	*e*PKP	**PKPdf**	**00 57 07.4**	**-0.1**
PRU	**Pruhonice**	**145.76**	**335**	*e*PKP	**PKPab**	**00 57 09.3**	**+0.9**
KHC	**Kasperske Hory**	**146.83**	**334**	*e*PKP	**PKPdf**	**00 57 10.5**	**+1.0**
KHC				*e*x	x	00 57 17.2	
GERES	**GERESS Array B**	**147.00**	**334**	PKPbc	**PKPdf**	**00 57 11.1**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=94,slow=1.7,SNR=6.3						
MOTA	**Moosalm**	**149.25**	**335**	*e*P	**PKPbc**	**00 57 19.0**	**+1.1**
	comp=Z,3.9nm,0.8s						
SQTA	**Sankt Quirin**	**149.31**	**335**	*e*P	**PKiKP**	**00 57 20.2**	**+1.0**
	comp=Z,3.8nm,0.7s						
DAVA	**Damuels**	**149.77**	**336**	*e*P	**PKPab**	**00 57 25.5**	**+0.9**
	comp=Z,2.9nm,0.7s						

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*IDC **30** 00:45:48.8±0.9, 46°.35N×13°.17E, h0^{km}, mb3.7/9, mb1 3.8/18, mb1mx3.6/56, mbtmp3.7/18, ML3.0/7, MS3.2/3, Ms1 3.3/3, ms1mx2.7/53, Error ellipse: s-maj=11.7km s-min=10.5km az=121.0*

*MOS **30** 00:45:48.7±1.0, 46°.36N×13°.16E, h10^{km}, mb4.3/8, Error ellipse: s-maj=6.1km s-min=4.3km az=82.4*

*LDG **30** 00:45:49.7±0.1, 46°.41N×13°.18E, h10^{km}, Md3.8/3, Ml4.2/61, Error ellipse: s-maj=2.0km s-min=1.5km az=172.0*

*ROM **30** 00:45:50.0±0.1, 46°.386N±0°.006×13°.174E±0°.008, h10^{km}, ML4.1/60, Mw3.8, Error ellipse: s-maj=0.7km s-min=0.5km az=158.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.08; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$1.59; $M_{r\theta}$4.76; $M_{\theta\phi}$0.68; $M_{\phi r}$2.40; Fault plane solution: $M_0$5.61046×10^{14} NP1:ϕ_s62.00000°, δ89.00000°, λ72.00000°. NP2:ϕ_s328.00000°, δ18.00000°, λ176.00000°.*

*VIE **30** 00:45:49.8±0.2, 46°.41N×13°.11E, h8^{km}±3^{km}, mb3.8/15, ml4.4/18 Error ellipse: s-maj=2.1km s-min=1.0km az=14.0 7 km E of Tolmezzo*

*NEIC **30** 00:45:49.9±2.2, 46°.37N±0°.04×13°.17E±0°.06, h2^{km}±7^{km}, Error ellipse: s-maj=6.6km s-min=5.5km az=127.0*

*PRU **30** 00:45:49.5±0.0, 46°.38N×13°.19E, h0^{km}*

*MED_RC **30** 00:45:49.0±0.6, 46°.41N×13°.14E, h10^{km}, MW4.1/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.06±.12; $M_{\theta\theta}$-0.75±.14; $M_{\phi\phi}$0.81±.09; $M_{r\theta}$0.47±.29; $M_{\theta\phi}$-0.07±.11; $M_{\phi r}$1.43±.23; Best double couple: $M_0$1.64000×10^{15} NP1:ϕ_s305.00000°, δ24.00000°, λ-171.00000°. NP2: ϕ_s207.00000°, δ86.00000°, λ-67.00000°. Principal axes: T 1.8900, Plg37.0000°, Azm276.0000°; N -0.4900, Plg23.0000°, Azm25.0000°; P -1.4000, Plg44.0000°, Azm140.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*IASPEI **30** 00:45:50.0±0.8, 46°.39N±0°.02×13°.15E±0°.01, h14^{km}±4^{km}, mb3.7/14 Error ellipse: s-maj=2.4km s-min=1.9km az=12.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*BNS **30** 00:45:51.5±0.6, 46°.33N×13°.16E, h5^{km}, ML4.3*

*BGR **30** 00:45:52.5±0.3, 46°.47N×13°.15E, h10^{km}, ML4.2, Error ellipse: s-maj=4.4km s-min=2.2km az=176.0*

*STR **30** 00:46:12.0±4.5, 47°N±16°×1°1E±3°5, h10^{km}, mb4.5/1, MLv4.3/12, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11*

ISC 30 00:45:50.5±0.6**, 46°.38N**±0°.01×**13°.10E**±0°.01**, h15**^{km}±3^{km}**, n517, σ2^{s}12**/726**, mb3.7**/14**, 32C-22D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOO	**Bordano**	**0.06**	**182**	⇓*e*Pg	**Pg**	**00 45 52.7**	**-0.7**
BOO				*e*Sg	**Sg**	**00 45 55.0**	**-0.4**
FUSE	**Fusea**	**0.08**	**295**	⇓*i*Pg	**Pg**	**00 45 53.0**	**-0.6**
FUSE				*i* Sg	**Sg**	**00 45 55.5**	**-0.2**
GEPF	**Gemona**	**0.11**	**167**	⇓P	**Pg**	**00 45 53.1**	**-0.7**
GEPF				S	**Sg**	**00 45 55.5**	**-0.5**
GEPF				AML	AML		
	comp=N,85800μm,0.6s						

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GEPF                               AML   AML
       comp=E,38950µm,0.6s
GEPF                               AML   AML
       comp=N,85800µm,0.6s
GEPF                               AML   AML
       comp=E,38950µm,0.6s
MPRI   Monte Prat         0.16 210⇓ePg   Pg    00 45 54.2 -0.4
MPRI                               eSg   Sg    00 45 57.7 +0.3
BUA    Buia               0.16 175⇓ePg   Pg    00 45 54.0 -0.6
BUA                                eSg   Sg    00 45 57.3  0.0
CLUD   Cludinico          0.17 296⇓ePg   Pg    00 45 54.4 -0.4
CLUD                               eSg   Sg    00 45 57.7 +0.1
PLRO   Paularo            0.17  10 ePg   Pg    00 45 53.8 -1.1
PLRO                               eSg   Sg    00 45 56.9 -0.8
BAD    Bernadia           0.17 146⇓ePg   Pg    00 45 53.7 -1.1
BAD                                eSg   Sg    00 45 57.1 -0.6
PTCC   Patocco-Chiusa     0.17  82⇑P     Pg    00 45 53.5 -1.3
PTCC                               S     Sg    00 45 56.3 -1.4
PTCC                               AML   AML
       comp=N,75850µm,0.3s
PTCC                               AML   AML
       comp=E,31700µm,0.7s
PTCC                               AML   AML
       comp=E,31700µm,0.7s
PTCC                               AML   AML
       comp=N,75850µm,0.3s
ZOU    Zoufplan           0.20 333⇓ePg   Pg    00 45 54.7 -0.6
ZOU                                eSg   Sg    00 45 58.2 -0.2
ZOU    Zoufplan           0.20 333       Pg    00 45 54.7 -0.6
STAL   STALIGIAL          0.30 246       Pg    00 45 56.3 -0.5
STAL   STALIGIAL          0.30 246 P     Pg    00 45 56.4 -0.5
STAL                               S     Sb    00 46 02.1 -0.3
STAL                               AML   AML
       comp=N,50800µm,0.5s
STAL                               AML   AML
       comp=E,69200µm,0.3s
STAL                               AML   AML
       comp=E,76300µm,0.2s
STAL                               AML   AML
       comp=N,48600µm,0.2s
STAL                               AML   AML
       comp=E,76300µm,0.2s
STAL                               AML   AML
       comp=E,69200µm,0.3s
STAL                               AML   AML
       comp=N,50800µm,0.5s
STAL                               AML   AML
       comp=N,48600µm,0.2s
LSR    Lussari            0.31  72⇑ePg   Pg    00 45 55.7 -1.4
LSR                                eSg   Sg    00 46 00.3 -1.2
FVI    Forni Avoltri      0.31 314⇑P     Pg    00 45 56.5 -0.5
FVI                                S     Sg    00 46 01.4 -0.2
FVI                                AML   AML
FVI                                AML   AML
COLI   Coloredo           0.31 142⇓ePg   Pg    00 45 56.1 -0.9
COLI                               eSg   Sg    00 46 01.5 +0.1
ROBS   Robic              0.31 116⇓iPg   Pg    00 45 55.5 -1.5
ROBS                               i Sg  Sg    00 46 00.3 -1.2
ROBS                               IAML        00 46 03.3
       comp=Z,1µm,0.1s
ACOM   Acomizza, Ital     0.33  59⇑ePg   Pg    00 45 56.1 -1.3
ACOM                               eSg   Sg    00 46 01.2 -0.9
ACOM   Acomizza, Ital     0.33  59 P     Pg    00 45 56.1 -1.3
ACOM                               S     Sg    00 46 01.0 -1.1
CSMI   Casera Mimoias     0.34 293⇑ePg   Pg    00 45 57.1 -0.5
CSMI                               eSg   Sg    00 46 02.8 +0.3
DRE    Drenchia           0.43 119 ePg   Pg    00 45 57.6 -1.5
DRE                                eSg   Sg    00 46 04.7 -0.3
MYKA   Terra Mystica      0.45  56 i Pg  Pg    00 45 58.2 -1.2
       comp=Z,230nm,0.2s,SNR=151
MYKA                               i Sg  Sg    00 46 04.1 -1.4
       comp=Z,2µm,0.3s
MYKA   Terra Mystica      0.45  56       Pg    00 45 58.2 -1.2
MYKA                                     Sg    00 46 04.1 -1.4
TLI    Talmassons         0.46 180⇑ePg   Pg    00 45 59.0 -0.7
CADS   Cadrg              0.47 109 i Pg  Pg    00 45 57.9 -1.9
CADS                               i Sg  Sg    00 46 03.3 -2.8
CADS                               i           00 46 05.2
CADS                               IAML        00 46 07.0
       comp=Z,2µm,0.3s
CIMO   Cimolais           0.47 261⇑ePg   Pg    00 45 58.9 -0.9
CIMO                               eSg   Sg    00 46 06.6 +0.5
SABO   M.te Sabotino      0.53 139 ePg   Pg    00 45 59.9 -1.1
SABO   M.te Sabotino      0.53 139 P     Pg    00 45 59.7 -1.3
SABO                               S     Sg    00 46 07.9 -0.2
ABTA   Abfaltersbach      0.55 312 ePg   Pg    00 46 00.7 -0.6
       comp=Z,549nm,0.2s,SNR=327
ABTA                               eSg   Sg    00 46 08.5 -0.2
       comp=Z,7µm,0.2s
ABTA   Abfaltersbach      0.55 312       Pg    00 46 00.8 -0.6
ABTA                                     Sg    00 46 08.5 -0.2
POLC   Polcenigo          0.55 230 P     Pg    00 46 01.6 +0.2
POLC                               AML   AML
       comp=N,26600µm,0.5s
POLC                               AML   AML
       comp=N,26600µm,0.5s
POLC                               AML   AML
       comp=E,24350µm,0.3s
CSO    Casso              0.55 259 ePg   Pg    00 46 01.3 -0.1
CSO                                eSg   Sg    00 46 09.1 +0.3
CAE    Caneva             0.60 231 ePg   Pg    00 46 01.8 -0.5
CAE                                eSg   Sb    00 46 12.1 +1.2
GORS   Gorjuse            0.62  96⇓iPg   Pg    00 46 00.6 -2.1
GORS                               eSg   Sg    00 46 09.6 -1.3
GORS                               IAML        00 46 12.4
       comp=Z,1µm,0.2s
FRE8   Fregona            0.64 235 P     Pg    00 46 03.2 +0.2
FRE8                               S     Sb    00 46 13.4 +1.3
VOJS   Vojsko             0.65 123 i Pg  Pg    00 46 01.1 -2.1
VOJS                               i Sg  Sg    00 46 11.3 -0.5
VOJS                               IAML        00 46 11.8
       comp=Z,2µm,0.5s
KBA    Koelnbreinsper     0.72  13 i Pg  Pg    00 46 03.6 -0.9
       comp=Z,415nm,0.2s,SNR=264
KBA                                i Sg  Sg    00 46 13.0 -1.0
       comp=Z,2µm,0.2s
KBA    Koelnbreinsper     0.72  13       Pg    00 46 03.6 -0.9
KBA                                      Sg    00 46 13.0 -1.0
KBA    Koelnbreinsper     0.72  13 ePg   Pg    00 46 03.7 -0.9
KBA                                eSg   Sg    00 46 13.1 -0.9
KBA    Koelnbreinsper     0.72  13 ePg   Pg    00 46 03.7 -0.9
KBA                                eSg   Sg    00 46 13.1 -0.9
FAU    Forcella Aurin     0.79 259 ePg   Pg    00 46 04.9 -1.1
VARN   Col Varnada, M     0.80 241 ePg   Pg    00 46 05.3 -0.7
ED06   Collalto TV        0.81 230 ePg   Pg    00 46 06.5 +0.2
TRI    Trieste            0.81 145⇑ePg   Pb    00 46 04.2 -2.2
TRI    Trieste            0.81 145 P     Pb    00 46 04.1 -2.2
TRI    Trieste            0.81 145       Pb    00 46 04.1 -2.2
TRI    Trieste            0.81 145 P     Pb    00 46 04.2 -2.2
TRI                                S     Sg    00 46 16.4 -0.6
JAVS   Javornik           0.83 126 i Pg  Pb    00 46 04.2 -2.5
JAVS                               eSg   Sg    00 46 16.9 -0.6
JAVS                               IAML        00 46 20.6
       comp=Z,639nm,0.3s
CRNS   Crni Vrh           0.86 110 i Pg  Pb    00 46 04.8 -2.3
CRNS                               IAML        00 46 22.1
       comp=Z,936nm,0.4s
CRND   Cornuda            0.90 233 P     Pn    00 46 09.1 +0.5
MTLO   Montello           0.90 231⇑ePg   Pg    00 46 08.2 +0.2
RISI   Rein               0.91 309 P     Pb    00 46 07.3 -0.7
RISI                               S     Sb    00 46 19.7 -0.3
RISI                               AML   AML
       comp=N,43850µm,0.4s
RISI                               AML   AML
       comp=E,45000µm,1.1s
RISI                               AML   AML
       comp=N,43850µm,0.4s
MOZS   Mozjanca           0.93  95 i Pg  Pb    00 46 06.7 -1.7
MOZS                               eSg   Sb    00 46 20.0 -0.6
MOZS                               IAML        00 46 24.7
       comp=Z,303nm,0.2s
OBKA   Obir               1.01  82 i Pg  Pb    00 46 07.8 -1.8
       comp=Z,70nm,0.2s,SNR=63
OBKA                               i Sg  Sn    00 46 23.9 -0.2
       comp=Z,766nm,0.3s
OBKA   Obir               1.01  82       Pb    00 46 08.0 -1.7
OBKA                                     Sn    00 46 23.9 -0.2
OBKA   Obir               1.01  82 ePg   Pb    00 46 07.9 -1.8
OBKA                               eSg   Sn    00 46 24.1 -0.1
OBKA   Obir               1.01  82 ePg   Pb    00 46 07.9 -1.8
OBKA                               eSg   Sn    00 46 24.1 -0.1
ASOL   Asolo              1.02 236 P     Pg    00 46 11.1 +0.9
GBAS   Gorenja Brezov     1.03 115 i Pg  Pb    00 46 07.6 -2.5
GBAS                               i           00 46 09.2
CGRP   Cima Grappa        1.04 242 ePg   Pg    00 46 10.7 +0.1
LJU    Ljubljana          1.04 108 i Pg  Pb    00 46 08.6 -1.7
LJU                                i Sg  Sn    00 46 24.8 -0.1
LJU    Ljubljana          1.04 108⇑iPn   Pb    00 46 08.3 -2.0
LJU    Ljubljana          1.04 108 P     Pb    00 46 08.8 -1.5
LJU                                S     Sb    00 46 23.1 -0.7
SKDS   Skadanscina        1.05 142 i Pg  Pb    00 46 08.2 -2.2
SKDS                               i           00 46 10.8
CTI    Castel Tesino      1.06 252 P     Pb    00 46 10.5 -0.2
CTI    Castel Tesino      1.06 252       Pb    00 46 10.5 -0.2
CTI    Castel Tesino      1.06 252 P     Pg    00 46 11.3 +0.2
CTI                                AML   AML
       comp=E,32250µm,0.2s
CTI                                AML   AML
       comp=N,22300µm,0.3s
CTI                                AML   AML
       comp=N,22300µm,0.3s
VENL   Venezia Lido       1.09 208 P     Pg    00 46 11.9 +0.3
CEY    Cerknica           1.12 124 i Pg  Pb    00 46 09.2 -2.4
CEY                                i           00 46 12.6
CEY                                IAML        00 46 30.6
       comp=Z,2µm,0.5s
CEY    Cerknica           1.12 124 ePn   Pb    00 46 09.6 -2.0
VNDS   Vrh nad Dolski     1.14 104 i Pg  Pb    00 46 10.1 -1.9
VNDS                               eSg   Sb    00 46 26.7  0.0
VNDS                               IAML        00 46 32.9
       comp=Z,1µm,0.5s
KOSI   Kohlern            1.20 275 AML   AML
       comp=N,19650µm,0.4s
KOSI                               AML   AML
       comp=E,11150µm,0.3s
KNDS   Knezji Dol         1.23 133 i Pg  Pn    00 46 11.6 -1.7
KNDS                               eSg   Sg    00 46 30.1 -0.3
KNDS                               IAML        00 46 40.1
       comp=Z,729nm,0.4s
BOSI   Bolzano            1.24 276 P     Pg    00 46 14.3 -0.1
BOSI                               S     Sg    00 46 31.6 +1.0
BOSI                               AML   AML
       comp=E,23150µm,0.5s
BOSI                               AML   AML
       comp=N,28650µm,0.6s
BOSI                               AML   AML
       comp=N,28650µm,0.6s
BOSI                               AML   AML
       comp=E,23150µm,0.5s
ABSI   Aberstueckl        1.28 286 P     Pn    00 46 13.6 -0.4
ABSI                               S     Sg    00 46 32.3 +0.5
ABSI                               AML   AML
       comp=N,39400µm,0.6s
ABSI                               AML   AML
       comp=E,19800µm,0.6s
ABSI                               AML   AML
       comp=N,39400µm,0.6s
ABSI                               AML   AML
       comp=E,19800µm,0.6s
ROSI   Rosskopf           1.29 296⇑P     Pn    00 46 14.3 +0.2
ROSI                               AML   AML
       comp=N,13850µm,0.4s
ROSI                               AML   AML
       comp=E,15050µm,0.4s
APPI   Appiano            1.30 275⇑P     Pb    00 46 15.2 +0.4
APPI                               AML   AML
       comp=E,19400µm,0.4s
APPI                               AML   AML
       comp=N,10700µm,1.3s
APPI                               AML   AML
       comp=E,19400µm,0.4s
VISS   Visnje             1.34 115 i Pg  Pn    00 46 13.9 -0.8
VISS                               eSg   Sn    00 46 31.4 -0.9
VISS                               IAML        00 46 38.8
       comp=Z,364nm,0.3s
PDKS   Podkum             1.35 103 i Pg  Pn    00 46 14.2 -0.7
PDKS                               eSg   Sb    00 46 32.9 +0.2
PDKS                               IAML        00 46 45.7
       comp=Z,507nm,0.4s
SOKA   Soboth             1.36  77 ePn   Pn    00 46 14.2 -0.9
       comp=Z,127nm,0.5s,SNR=103
SOKA                               eSg   Sg    00 46 35.4 +0.9
       comp=Z,399nm,0.5s
SOKA   Soboth             1.36  77       Pn    00 46 14.2 -0.9
SOKA                                     Sg    00 46 35.5 +0.9
RJOB   Jochberg           1.37 351 ePn   Pn    00 46 15.5 +0.3
RJOB                               eSg   Sg    00 46 34.8  0.0
RJOB   Jochberg           1.37 351 ePn   Pn    00 46 15.5 +0.3
RJOB                               eSg   Sg    00 46 34.8  0.0
WATA   Walderalm          1.42 313 ePg   Pb    00 46 16.5 -0.2
       comp=Z,122nm,0.2s,SNR=231
WATA                               i Sg  Sg    00 46 35.8 -0.5
       comp=Z,798nm,0.3s
WATA   Walderalm          1.42 313       Pb    00 46 16.7  0.0
WATA                                     Sg    00 46 35.8 -0.5
BISS   Bistriski jare     1.42  78 i Pn  Pn    00 46 15.3 -0.6
RIY    Rijeka             1.43 137 ePn   Pn    00 46 15.6 -0.3
RIY                                Sg    Sb    00 46 34.9 +0.1
RIY    Rijeka             1.43 137 ePn   Pn    00 46 15.8 -0.1
TEOL   Teolo              1.43 225       Pn    00 46 16.4 +0.4
TEOL   Teolo              1.43 225 P     Pb    00 46 16.5 -0.4
TEOL                               AML   AML
       comp=E,28750µm,0.8s
TEOL                               AML   AML
       comp=N,20100µm,0.5s
GBRS   Gornja Briga       1.46 125 i Pn  Pn    00 46 16.7 +0.3
GBRS                               IAML        00 46 45.3
       comp=Z,610nm,0.3s
SQTA   Sankt Quirin       1.55 303 ePg   Pb    00 46 19.1 +0.2
       comp=Z,744nm,0.5s,SNR=230
SQTA                               i Sg  Sg    00 46 39.7 -0.7
       comp=Z,2µm,0.5s
SQTA   Sankt Quirin       1.55 303 P     Pb    00 46 19.2 +0.2
SQTA                                           00 46 39.7
SQTA   Sankt Quirin       1.55 303       Pb    00 46 19.1 +0.2
SQTA                                     Sg    00 46 39.7 -0.7
ROVR   Rover Verones      1.59 243⇑P     Pb    00 46 19.2 -0.6
ROVR                               AML   AML
       comp=N,26650µm,0.8s
ROVR                               AML   AML
       comp=E,4745µm,0.7s
ROVR                               AML   AML
       comp=N,10250µm,0.8s
ROVR                               AML   AML
       comp=N,26650µm,0.8s
ROVR                               AML   AML
       comp=E,11000µm,0.6s
LEGS   Legarje            1.60 105 i Pn  Pn    00 46 17.9 -0.4
TREG   Tregnago           1.60 238 P     Pb    00 46 19.2 -0.7
DOBS   Dobrina            1.66  97 i Pn  Pn    00 46 18.9 -0.2
GROS   Grobnik            1.66  86 i Pn  Pn    00 46 19.4 +0.2
GROS                               IAML        00 46 48.7
       comp=Z,696nm,0.8s
MOA    Molln              1.67  28 ePg   Pb    00 46 20.7 -0.3
       comp=Z,62nm,0.2s,SNR=76
MOA                                i Sg  Sg    00 46 43.2 -1.1
       comp=Z,792nm,0.7s
MOA    Molln              1.67  28       Pb    00 46 20.7 -0.3
MOA                                      Sg    00 46 43.2 -1.1
MOA    Molln              1.67  28 ePg   Pb    00 46 20.7 -0.3
MOA                                eSg   Sb    00 46 42.6 +0.8
MOA    Molln              1.67  28 ePg   Pb    00 46 20.7 -0.3
MOA                                eSg   Sb    00 46 42.6 +0.8
MOTA   Moosalm            1.68 306 ePn   Pb    00 46 21.0 -0.1
       comp=Z,255nm,0.2s,SNR=165
MOTA                               i Sg  Sg    00 46 45.1 +0.6
       comp=Z,2µm,0.6s
MOTA   Moosalm            1.68 306 P     Pb    00 46 21.0 -0.1
MOTA                                           00 46 45.1
MOTA   Moosalm            1.68 306       Pb    00 46 21.0 -0.1
MOTA                                     Sg    00 46 45.1 +0.6
CESS   Cesta pri Krsk     1.69 103 ePn   Pn    00 46 19.2 -0.3
CESS                               IAML        00 46 50.6
       comp=Z,693nm,0.6s
OPPE   Oppeano            1.73 232 AML   AML
       comp=N,33550µm,0.6s
OPPE                               AML   AML
       comp=E,35000µm,0.6s
OPPE                               AML   AML
       comp=N,33550µm,0.6s
OPPE                               AML   AML
       comp=E,35000µm,0.6s
CRES   Cresnjev           1.73 108 i Pn  Pn    00 46 19.6 -0.5
CRES                               IAML        00 46 50.9
       comp=Z,299nm,0.4s
CRES   Cresnjev           1.73 108 ePn   Pn    00 46 19.5 -0.5
BOJS   Bojanci            1.74 120 i Pn  Pn    00 46 20.3 +0.2
BOJS                               IAML        00 46 57.7
       comp=Z,427nm,0.5s
BOJS   Bojanci            1.74 120 P     Pn    00 46 20.0 -0.1
FETA   Feichten           1.75 292 i Pn  Pb    00 46 22.7 +0.2
       comp=Z,238nm,0.5s,SNR=146
FETA                               i Sg  Sg    00 46 46.6 -0.4
       comp=Z,1µm,0.5s
FETA   Feichten           1.75 292       Pb    00 46 22.5  0.0
FETA                                     Sg    00 46 46.6 -0.4
PART   Garmisch-Parte     1.76 310 ePg   Pb    00 46 23.3 +0.8
PART                               eSg   Sg    00 46 48.3 +1.1
PART   Garmisch-Parte     1.76 310 ePg   Pb    00 46 23.3 +0.8
PART                               eSg   Sg    00 46 48.3 +1.1
KW1    Garching a.d.      1.77 349 ePn   Pb    00 46 22.8  0.0
KW1                                eSg   Sg    00 46 48.9 +1.3
KW1    Garching a.d.      1.77 349 ePn   Pb    00 46 22.8  0.0
KW1                                eSg   Sg    00 46 48.9 +1.3
MOSI   Grossmontoni       1.78 278 AML   AML
       comp=N,30400µm,1.1s
MOSI                               AML   AML
       comp=E,13555µm,0.5s
MOSI                               AML   AML
       comp=N,30400µm,1.1s
ZUGS   Zugspitze, Sch     1.79 306 eSg   Sg    00 46 50.1 +2.0
ZUGS   Zugspitze, Sch     1.79 306 eSg   Sg    00 46 50.1 +2.0
ZEN8   San Zeno di Mo     1.81 247 P     Pb    00 46 23.3 -0.1
OZLJ   Ozalj              1.82 114 ePn   Pn    00 46 21.1 -0.1
OZLJ                               Sn    Sb    00 46 46.6 +0.7
MAGA   Magasa             1.83 251 P     Pn    00 46 22.7 +1.2
MAGA                               AML   AML
       comp=E,37750µm,0.6s
MAGA                               AML   AML
       comp=N,19400µm,1.6s
MABI   Malga Bissina      1.83 261 P     Pb    00 46 22.8 -0.9
MABI                               AML   AML
       comp=E,3690µm,0.6s
MABI                               AML   AML
       comp=N,5405µm,1.4s
GCIS   Gornji Cirnik      1.83 105 i Pn  Pn    00 46 21.4 -0.1
GCIS                               IAML        00 46 51.8
       comp=Z,397nm,0.7s
SERM   Sermide            1.87 223 AML   AML
       comp=N,3005µm,0.5s
SERM                               AML   AML
       comp=E,2595µm,1.0s
SERM                               AML   AML
       comp=E,4855µm,0.4s
SERM                               AML   AML
       comp=N,4580µm,0.4s
ARSA   Arzberg            1.88  62 i Pn  Pn    00 46 22.4 +0.3
       comp=N,61nm,0.3s,SNR=36
ARSA                               eSg   Sg    00 46 50.4 -0.4
       comp=N,173nm,0.5s
ARSA   Arzberg            1.88  62       Pn    00 46 22.4 +0.3
ARSA                                     Sg    00 46 50.5 -0.4
ARSA   Arzberg            1.88  62 ePn   Pn    00 46 22.4 +0.3
ARSA                               eSg   Sg    00 46 50.4 -0.4
ARSA   Arzberg            1.88  62 ePn   Pn    00 46 22.4 +0.3
ARSA                               eSg   Sg    00 46 50.4 -0.4
ARSA   Arzberg            1.88  62 P     Pn    00 46 22.3 +0.2
BRMO   Bormio             1.89 274 P     Pb    00 46 24.2 -0.6
BRMO                               AML   AML
       comp=E,4555µm,0.9s
BRMO                               AML   AML
       comp=N,2745µm,1.2s
RETA   Reutte             1.95 305 ePn   Pb    00 46 26.0 +0.2
       comp=N,28nm,0.3s,SNR=109
RETA                               eSg   Sg    00 46 54.4 +1.2
       comp=N,2µm,0.5s
RETA   Reutte             1.95 305       Pb    00 46 26.0 +0.2
RETA                                     Sg    00 46 54.4 +1.2
SALO   Salr               1.95 248 Pn    Pb    00 46 24.6 -1.2
SALO   Salr               1.95 248 P     Pb    00 46 24.6 -1.2
SALO                               AML   AML
       comp=N,7025µm,1.6s
SALO                               AML   AML
       comp=E,25200µm,1.0s
SALO                               AML   AML
       comp=N,16800µm,1.6s
SALO                               AML   AML
       comp=E,9740µm,1.0s
SALO                               AML   AML
       comp=E,25200µm,1.0s
VOBA   Vobarno            1.96 249 S     Sg    00 46 55.0 +1.6
BE1    Monatshausen       2.00 321 ePn   Pb    00 46 26.0 -0.5
BE1                                ePg   Pg    00 46 29.3 +0.5
BE1                                eSg   Sg    00 46 55.0 +0.2
BE1    Monatshausen       2.00 321 ePn   Pb    00 46 26.0 -0.5
BE1                                ePg   Pg    00 46 29.3 +0.5
BE1                                eSg   Sg    00 46 55.0 +0.2
PTJ    Puntijarka         2.05 102 ePn   Pb    00 46 26.0 -1.5
PTJ                                Sn    Sb    00 46 53.5 +0.8
FIU    Minerbio Fiu       2.08 214 P     Pn    00 46 25.1 +0.3
FIU                                AML   AML
       comp=E,5220µm,0.7s
FIU                                AML   AML
       comp=N,4465µm,0.7s
ZAG    Zagreb             2.08 104 ePn   Pn    00 46 25.7 +0.9
ZAG                                Sn    Sb    00 46 53.4 -0.2
ZAG    Zagreb             2.08 104 ePn   Pb    00 46 27.6 -0.3
ZAG    Zagreb             2.08 104 P     Pn    00 46 25.8 +0.9
CAVE   Cavezzo            2.12 225⇑P     Pb    00 46 29.0 +0.5
CAVE                               AML   AML
       comp=E,5605µm,0.6s
CAVE                               AML   AML
       comp=N,4715µm,1.5s
BERNI  Berninapass        2.13 272 AML   AML
       comp=N,2570µm,0.7s
BERNI                              AML   AML
       comp=E,1825µm,0.6s
FUR    Furstenfeldbru     2.18 326 ePn   Pb    00 46 28.1 -1.5
FUR                                ePg   Pg    00 46 32.2  0.0
FUR                                eSg   Sg    00 46 59.7 -0.7
FUR    Furstenfeldbru     2.18 326 ePn   Pb    00 46 28.1 -1.5
FUR                                ePg   Pg    00 46 32.2  0.0
FUR                                eSg   Sg    00 46 59.7 -0.7
OBER   Oberstdorf         2.18 299 eSg   Sg    00 47 00.9 +0.2
OBER   Oberstdorf         2.18 299 eSg   Sg    00 47 00.9 +0.2
NVLJ   Novalja            2.20 145 ePn   Pn    00 46 26.5  0.0
NVLJ                               Sn    Sn    00 46 55.0 +1.6
DAVOX  Davos/Dischmat     2.26 281 Pn    Pb    00 46 30.1 -1.0
       comp=E,66nm,0.3s,baz=100,slow=11,SNR=409
DAVOX                              Lg    Lg    00 47 00.6
       comp=E,168nm,0.3s,baz=178,slow=23,SNR=13
DAVOX                              LR    LR    00 47 35.2
       comp=E,615nm,21.8s,baz=64,slow=46
DAVOX  Davos/Dischmat     2.26 281 AML   AML
       comp=E,2250µm,1.0s
DAVOX                              AML   AML
       comp=N,2840µm,0.5s
KALN   Kalnik             2.34  95 ePn   Pn    00 46 29.0 +0.6
KALN                               Sn    Sb    00 47 00.7 -0.4
DAVA   Damuels            2.39 293 i Pn  Pb    00 46 32.0 -1.4
       comp=N,96nm,0.2s,SNR=105
DAVA                               i Sg  Sg    00 47 06.7 -0.6
       comp=N,2µm,0.4s
DAVA   Damuels            2.39 293       Pb    00 46 32.0 -1.4
DAVA                                     LR    00 47 06.7
UBR    Ueberruh           2.43 303 ePn   Pb    00 46 32.2 -1.7
UBR                                eSg   Sg    00 47 08.2 -0.3
UBR    Ueberruh           2.43 303 ePn   Pb    00 46 32.2 -1.7
UBR                                eSg   Sg    00 47 08.2 -0.3
CONA   Conrad Observa     2.44  50 ePn   Pn    00 46 30.4 +0.6
       comp=N,17nm,0.5s,SNR=29
CONA                               i Pg  Pg    00 46 36.5 -0.7
       comp=N,51nm,0.3s
CONA                               Sg    Sg    00 47 08.9 +0.1
       comp=N,436nm,1.0s
CONA   Conrad Observa     2.44  50       Pn    00 46 30.4 +0.6
CONA                                     Pg    00 46 36.5 -0.7
CONA                                     Lg    00 47 08.9
PESA   Pesaro             2.45 184 P     Pn    00 46 30.2 +0.3
PESA                               AML   AML
       comp=E,1870µm,1.2s
PESA                               AML   AML
       comp=N,1660µm,1.3s
GEC2   GERESS Array S     2.50   9       Pn    00 46 31.5 +0.7
GEC2   GERESS Array S     2.50   9 ePn   Pn    00 46 31.4 +0.7
GEC2                               ePg   Pb    00 46 36.5 +1.4
GEC2                               eSg   Sg    00 47 09.3 -1.5
GEC2   GERESS Array S     2.50   9 ePn   Pn    00 46 31.4 +0.7
GEC2                               ePg   Pb    00 46 36.5 +1.4
GEC2                               eSg   Sg    00 47 09.3 -1.5
GEC2B  GERESS ARRAY S     2.50   9 Pn    Pn    00 46 31.6 +0.9
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GERES	GERESS Array B	2.50	9	Pn	Pn	00 46 31.9	+1.2
	comp=N,14nm,0.3s,baz=190,slow=14,SNR=252						
GERES				Pg	Pb	00 46 36.1	+1.0
	comp=N,93nm,0.3s,baz=188,slow=17,SNR=114						
GERES				Lg	Lg	00 47 08.4	
	comp=N,168nm,0.3s,baz=185,slow=28,SNR=34						
GERES				LR	LR	00 47 32.6	
	comp=N,258nm,19.1s,baz=160,slow=41						
GERES	GERESS Array B	2.50	9	P	Pn	00 46 31.0	+0.3
GERES	GERESS Array B	2.50	9		Pn	00 46 31.0	+0.3
BRIS	BRISIGHELLA	2.50	207	P	Pn	00 46 29.1	-1.5
BRIS				AML	AML		
	comp=N,2070µm,1.2s						
BRIS				AML	AML		
	comp=E,799µm,0.6s						
LMD	Lutirano	2.51	204	P	Pn	00 46 30.7	0.0
LMD				AML	AML		
	comp=E,1077µm,0.7s						
LMD				AML	AML		
	comp=N,830µm,1.0s						
ZCCA	Zocca	2.52	217	Pn	Pn	00 46 32.8	+1.8
BEHE	Becsehely	2.54	87	ePN	Pb	00 46 37.4	+1.6
BEHE				ePG	Pg	00 46 40.5	+1.3
BEHE				eSN	Sg	00 47 19.7	+7.6
BEHE	Becsehely	2.54	87	ePn	Pg	00 46 40.4	+1.2
PRMA	PARMA	2.54	231		Pn	00 46 32.3	+1.1
SFI	Santa Sofia	2.63	200	P	Pn	00 46 32.5	0.0
SFI				AML	AML		
	comp=N,905µm,1.0s						
SFI				AML	AML		
	comp=E,954µm,1.4s						
SFI				AML	AML		
	comp=E,1084µm,1.0s						
SFI				AML	AML		
	comp=N,970µm,1.1s						
SEI	Scarperia	2.63	209	P	Pn	00 46 33.3	+0.8
SEI				AML	AML		
	comp=E,1415µm,0.8s						
SEI				AML	AML		
	comp=N,1990µm,0.5s						
UDBI	Udbina	2.63	134	ePn	Pn	00 46 32.7	+0.2
UDBI				Sn	Sn	00 47 06.6	+2.3
PLONS	Plons/SG	2.65	286	ePn	Pb	00 46 35.6	-2.1
PLONS	Plons/SG	2.65	286	ePn	Pb	00 46 35.6	-2.1
PLONS	Plons/SG	2.65	286	AML	AML		
	comp=E,921µm,0.9s						
PLONS				AML	AML		
	comp=N,1830µm,0.7s						
MOSL	Moslavina	2.66	105	ePn	Pn	00 46 33.1	+0.3
MOSL				Sn	Sb	00 47 08.0	-2.2
SOP	Sopron	2.70	60	⇓ePN	Pn	00 46 33.7	+0.3
SOP				ePG	Pb	00 46 40.1	+1.7
FSSB	Fossombrone	2.70	185	P	Pn	00 46 33.3	-0.1
FSSB				AML	AML		
	comp=N,1525µm,0.4s						
FSSB				AML	AML		
	comp=E,1260µm,0.9s						
PE3	Peglio	2.72	189	P	Pn	00 46 33.6	0.0
PE3				AML	AML		
	comp=E,1430µm,0.5s						
PE3				AML	AML		
	comp=N,1505µm,0.6s						
ASQU	Asqua	2.75	200	P	Pn	00 46 34.2	+0.1
ASQU				AML	AML		
	comp=E,890µm,1.1s						
ASQU				AML	AML		
	comp=N,729µm,1.6s						
DUGI	Dugi Otok	2.76	149	ePn	Pn	00 46 34.1	-0.1
DUGI				Sn	Sn	00 47 07.9	+0.6
WET	Wettzell	2.77	357	ePn	Pn	00 46 35.0	+0.7
WET				eSg	Sg	00 47 17.9	-1.6
WET	Wettzell	2.77	357	ePn	Pn	00 46 35.0	+0.7
WET				eSg	Sg	00 47 17.9	-1.6
KHC	Kasperske Hory	2.77	6	eP	Pn	00 46 35.0	+0.6
KHC				e		00 47 18.0	
KHC				smax	smax		
	comp=N,831nm,0.6s						
KHC	Kasperske Hory	2.77	6	ePN	Pn	00 46 35.0	+0.6
KHC				eSG	Sg	00 47 18.0	-1.5
	comp=N,831nm,0.6s						
KHC	Kasperske Hory	2.77	6		Pn	00 46 35.0	+0.6
KHC	Kasperske Hory	2.77	6	ePn	Pn	00 46 35.1	+0.8
KHC				eSg	Sg	00 47 18.3	-1.1
KHC	Kasperske Hory	2.77	6	ePn	Pn	00 46 35.1	+0.8
KHC				eSg	Sg	00 47 18.3	-1.1
RUFI	Rufina	2.78	205	P	Pn	00 46 35.1	+0.6
APEC	Apecchio	2.87	190	P	Pn	00 46 36.1	+0.5
APEC				AML	AML		
	comp=E,874µm,0.6s						
APEC				AML	AML		
	comp=N,979µm,0.7s						
PIEI	Pieia	2.87	188	P	Pn	00 46 35.7	-0.1
PIEI				AML	AML		
	comp=E,577µm,0.8s						
PIEI				AML	AML		
	comp=N,392µm,1.3s						
FRON	Frontone	2.88	185	P	Pn	00 46 35.3	-0.6
FRON				AML	AML		
	comp=E,599µm,0.7s						
FRON				AML	AML		
	comp=N,1113µm,0.8s						
CRE	Caprese Michel	2.88	197	P	Pn	00 46 36.7	+0.8
CRE				AML	AML		
	comp=N,653µm,1.6s						
CRE				AML	AML		
	comp=E,593µm,0.9s						
NORI	Noerdlinger Ri	2.88	325	eSg	Sg	00 47 20.6	-2.4
NORI	Noerdlinger Ri	2.88	325	eSg	Sg	00 47 20.6	-2.4
ARVD	Arcevia	2.89	182	P	Pn	00 46 35.8	-0.2
ARVD				AML	AML		
	comp=E,440µm,1.1s						
ARVD				AML	AML		
	comp=N,344µm,0.9s						
PRIJ	Prijedor	2.90	118	ePn	Pg	00 46 44.3	-1.7
VLC	Villacollemand	2.94	222		Pn	00 46 38.8	+2.2
CING	Cingoli	3.01	179	P	Pn	00 46 37.4	-0.2
CING				AML	AML		
	comp=N,430µm,0.8s						
CING				AML	AML		
	comp=E,368µm,0.7s						
PP3	Marolino	3.02	173	⇑P	Pn	00 46 38.5	+0.6
PP3				AML	AML		
	comp=N,930µm,0.8s						
PP3				AML	AML		
	comp=E,904µm,0.9s						
PP3				AML	AML		
	comp=N,1201µm,0.9s						
PP3				AML	AML		
	comp=E,1255µm,0.8s						
BOB	Bobbio (Coli)	3.03	239	P	Pn	00 46 39.9	+1.9
BOB				AML	AML		
	comp=E,1655µm,1.3s						
BOB				AML	AML		
	comp=E,1655µm,1.0s						
BOB				AML	AML		
	comp=N,1750µm,0.7s						
BOB				AML	AML		
	comp=N,1745µm,0.8s						
ATVO	AVT- Monte Val	3.04	190	P	Pn	00 46 38.2	+0.1
ATVO				AML	AML		
	comp=E,807µm,1.2s						
ATVO				AML	AML		
	comp=N,702µm,1.2s						
EL6	Elcito	3.05	180	⇑P	Pn	00 46 38.6	+0.3
VARE	Varese	3.06	262	P	Pn	00 46 39.6	+1.2
VARE				AML	AML		
	comp=E,1445µm,1.0s						
VARE				AML	AML		
	comp=N,1320µm,0.8s						
WILA	Wila	3.06	291	ePn	Pn	00 46 40.4	+2.1
WILA				eSg	Sg	00 47 27.7	-1.0
WILA	Wila	3.06	291	ePn	Pn	00 46 40.4	+2.1
WILA				eSg	Sg	00 47 27.7	-1.0
FUSIO	Fusio	3.07	273	AML	AML		
	comp=N,988µm,0.6s						
FUSIO				AML	AML		
	comp=E,1475µm,0.8s						
EGYH	Egyhazaskeszo	3.08	69	ePN	Pn	00 46 35.6	-2.9
MAIM	Mastiano	3.08	218	P	Pn	00 46 38.9	+0.3
FOSV	Fossato di Vic	3.10	185	⇓P	Pn	00 46 39.0	+0.2
FOSV				AML	AML		
	comp=E,484µm,1.3s						
FOSV				AML	AML		
	comp=N,598µm,0.9s						
MORI	Morici	3.12	143	ePn	Pn	00 46 38.9	-0.2
MORI				Sn	Sn	00 47 17.1	+1.0
MURB	Monte Urbino	3.15	188		Pn	00 46 40.3	+0.8
OSSC	Osservatorio P	3.15	205		Pn	00 46 40.4	+0.9
OSSC	Osservatorio P	3.15	205	P	Pn	00 46 39.7	+0.2
OSSC				AML	AML		
	comp=E,550µm,0.8s						
OSSC				AML	AML		
	comp=N,584µm,1.0s						
MPLH	Magyarpolny	3.15	74	ePN	Pn	00 46 39.9	+0.3
ATCC	AVT- Casa Cast	3.21	186	AML	AML		
	comp=N,906µm,1.2s						
ATCC				AML	AML		
	comp=E,1235µm,0.8s						
PII	Pisa	3.23	215	P	Pn	00 46 40.8	+0.2
PII				AML	AML		
	comp=E,924µm,0.9s						
PII				AML	AML		
	comp=N,834µm,0.8s						
ZUR	Degenried	3.26	289	P	Pn	00 46 43.2	+2.1
MSSA	Maissana	3.27	232	Pn	Pn	00 46 43.4	+2.2
MSSA	Maissana	3.27	232	AML	AML		
	comp=E,736µm,0.6s						
MSSA				AML	AML		
	comp=N,555µm,0.7s						
ZIRJ	Zirje	3.27	146	ePn	Pn	00 46 40.9	-0.3
ZIRJ				Sn	Sn	00 47 20.9	+1.1
ZST	Bratislava	3.27	55	eP	Pn	00 46 44.4	+3.2
ZST	Bratislava	3.27	55	ePN	Pn	00 46 44.4	+3.2
ZST				ePG	Pg	00 46 51.4	-1.8
ZST				eSG	Sg	00 47 34.0	-1.5
ZST				eLG	Lg	00 47 40.0	
BLY	Banja Luka	3.30	118	ePn	Pn	00 46 41.6	0.0
KIJV	Kijevo	3.33	134	ePn	Pn	00 46 42.5	+0.5
KIJV				Sn	Sn	00 47 23.5	+2.1
TIH	Tihany	3.34	79	ePN	Pn	00 46 44.8	+2.7
FDMO	Fiordimonte	3.34	180	P	Pn	00 46 42.0	-0.3
FDMO				AML	AML		
	comp=N,397µm,0.9s						
FDMO				AML	AML		
	comp=E,368µm,0.8s						
PBCC	Pribram	3.36	10	ePN	Pn	00 46 43.3	+0.8
PBCC				eSG	Sg	00 47 36.6	-1.8
	comp=E,179nm,0.8s						
MGRS	Mrkonjic Grad	3.42	124	ePn	Pn	00 46 44.4	+1.1
ROTZ	Rotzenmuhle	3.44	350	ePn	Pn	00 46 43.8	+0.2
ROTZ				eSg	Sg	00 47 37.8	-3.1
ROTZ	Rotzenmuhle	3.44	350	ePn	Pn	00 46 43.8	+0.2
ROTZ				eSg	Sg	00 47 37.8	-3.1
SLE	Schleitheim	3.44	295	ePn	Pn	00 46 45.2	+1.6
SLE				eSg	Sg	00 47 41.1	+0.2
SLE	Schleitheim	3.44	295	ePn	Pn	00 46 45.2	+1.6
SLE				eSg	Sg	00 47 41.1	+0.2
MODS	Modra-Piesok	3.47	53	eP	Pn	00 46 43.7	-0.2
MODS	Modra-Piesok	3.47	53	ePN	Pn	00 46 43.7	-0.2
MODS				ePG	Pb	00 46 53.3	+1.7
MODS				eSG	Sg	00 47 40.1	-1.7
MODS				eLG	Lg	00 47 43.4	
OFFI	Offida	3.47	173	P	Pn	00 46 43.8	-0.2
OFFI				AML	AML		
	comp=N,1690µm,0.9s						
OFFI				AML	AML		
	comp=E,1695µm,0.9s						
KRUC	Moravsky	3.48	38	ePN	Pn	00 46 43.9	-0.2
KRUC				eSN	Sn	00 47 26.1	+1.0
KRUC	Moravsky	3.48	38	ePn	Pn	00 46 44.6	+0.4
KRUC	Moravsky	3.48	38	ePn	Pn	00 46 44.6	+0.4
MGAB	Montegabbione	3.54	192	P	Pn	00 46 45.0	0.0
MGAB				AML	AML		
	comp=N,475µm,0.6s						
MGAB				AML	AML		
	comp=E,586µm,1.4s						
MGAB				AML	AML		
	comp=N,500µm,0.8s						
MGAB				AML	AML		
	comp=E,552µm,1.5s						
GRFO	Grafenberg	3.54	340	P	Pn	00 46 45.5	+0.5
GRFO	Grafenberg	3.54	340	Pn	Pn	00 46 45.5	+0.5
GRFO					Pn	00 46 46.0	+1.0
GRA1	Grafenberg Arr	3.54	340		Pn	00 46 45.5	+0.5
GRF	Grafenberg Arr	3.54	340	P	Pn	00 46 45.5	+0.5
GRF	Grafenberg Arr	3.54	340	ePn	Pn	00 46 45.6	+0.5
GRF				eSg	Sg	00 47 44.3	0.0
GRF	Grafenberg Arr	3.54	340	ePn	Pn	00 46 45.6	+0.5
GRF				eSg	Sg	00 47 44.3	0.0
STU	Stuttgart	3.57	314	P	Pn	00 46 46.5	+1.2
STU	Stuttgart	3.57	314		Pn	00 46 46.5	+1.2
STU	Stuttgart	3.57	314	ePn	Pn	00 46 47.0	+1.7
STU	Stuttgart	3.57	314	ePn	Pn	00 46 47.0	+1.7
SULZ	Cheisacher	3.61	290	P	Pn	00 46 47.6	+1.8
SULZ	Cheisacher	3.61	290	ePn	Pn	00 46 47.4	+1.6
SULZ				eSg	Sg	00 47 45.8	-0.5
SULZ	Cheisacher	3.61	290	ePn	Pn	00 46 47.4	+1.6
SULZ				eSg	Sg	00 47 45.8	-0.5
SMOL	Smolenice	3.63	52	eP	Pg	00 46 59.0	-1.0
SMOL	Smolenice	3.63	52	ePG	Pg	00 46 59.0	-1.0
SMOL				eSG	Sg	00 47 47.3	+0.3
SMOL				eLG	Lg	00 47 55.1	
MANZ	Manzenberg	3.67	350	ePn	Pn	00 46 46.9	+0.2
MANZ				eSg	Sg	00 47 47.3	-0.9
MANZ	Manzenberg	3.67	350	ePn	Pn	00 46 46.9	+0.2
MANZ				eSg	Sg	00 47 47.3	-0.9
PRU	Pruhonice	3.73	14	eP	Pn	00 46 48.2	+0.6
PRU	Pruhonice	3.73	14	ePN	Pn	00 46 48.2	+0.6
PRU				eSG	Sg	00 47 47.1	-3.3
	comp=E,495nm,0.5s						
PRU	Pruhonice	3.73	14	eSg	Sg	00 47 48.2	-2.2
PRU	Pruhonice	3.73	14	eSg	Sg	00 47 48.2	-2.2
SMA1	SAN MARTINO	3.75	177	P	Pn	00 46 47.6	-0.4
SMA1				AML	AML		
	comp=E,516µm,1.1s						
SMA1				AML	AML		
	comp=N,648µm,1.2s						
VRAC	Vranov	3.75	37	Pn	Pn	00 46 47.7	-0.2
	comp=N,1.3nm,0.3s,baz=221,slow=13,SNR=6.8						
VRAC				Pg	Pb	00 46 56.3	-0.2
	comp=N,2.3nm,0.3s,baz=232,slow=11,SNR=9.2						
VRAC				Lg	Lg	00 47 46.5	
	comp=N,18nm,0.3s,baz=334,slow=22,SNR=9.9						
VRAC	Vranov	3.75	37	⇑P	Pn	00 46 47.7	-0.2
VRAC	Vranov	3.75	37	ePN	Pn	00 46 47.4	-0.5
VRAC				eSN	Sn	00 47 32.7	+0.9
LNSS	Leonessa	3.78	181	P	Pn	00 46 48.3	0.0
LNSS				AML	AML		
	comp=E,475µm,0.7s						
LNSS				AML	AML		
	comp=N,478µm,0.9s						
BFO	Black Forest	3.79	303	P	Pn	00 46 49.4	+1.1
BFO	Black Forest	3.79	303	Pn	Pn	00 46 49.4	+1.1
BFO	Black Forest	3.79	303	ePn	Pn	00 46 49.7	+1.4
BFO				eSg	Sg	00 47 52.1	+0.1
BFO	Black Forest	3.79	303	ePn	Pn	00 46 49.7	+1.4
BFO				eSg	Sg	00 47 52.1	+0.1
PRA	Prague	3.80	13	eP	Pn	00 46 48.9	+0.5
PRA	Prague	3.80	13	ePN	Pn	00 46 48.9	+0.5
PRA				eSG	Sg	00 47 50.4	-2.0
	comp=N,285nm,0.7s						
BALST	Balsthal	3.83	286	P	Pn	00 46 50.7	+1.7
BALST	Balsthal	3.83	286	ePn	Pn	00 46 50.7	+1.7
BALST	Balsthal	3.83	286	ePn	Pn	00 46 50.7	+1.7
SRO	Srobarova	3.84	66	eP	Pn	00 46 52.6	+3.6
SRO	Srobarova	3.84	66	ePN	Pn	00 46 52.6	+3.6
SRO				ePG	Pg	00 47 06.1	+2.2
MORH	Mrgy, Hungar	3.84	90	ePN	Pn	00 46 47.2	-1.8
MORH				eSN	Sn	00 47 32.0	-1.9
MORH	Mrgy, Hungar	3.84	90	ePn	Pn	00 46 47.2	-1.8
KIZ	Kirchzarten	3.87	296	P	Pn	00 46 50.9	+1.4
RM33	Pellescritta (	3.87	179	P	Pn	00 46 49.4	-0.2
RM33				AML	AML		
	comp=E,439µm,1.6s						
RM33				AML	AML		
	comp=N,370µm,0.9s						
NKC	Novy Kostel	3.88	354	eP	Pn	00 46 50.5	+0.9
NKC				e		00 47 35.5	
NKC				smax	smax		
	comp=N,397nm,0.5s						
NKC	Novy Kostel	3.88	354	ePN	Pn	00 46 50.5	+0.9
NKC				eSN	Sn	00 47 35.5	+0.6
NKC				eSG	Sg	00 47 51.7	-3.3
	comp=N,397nm,0.5s						
NKC	Novy Kostel	3.88	354	ePn	Pn	00 46 50.3	+0.7
NKC				eSg	Sg	00 47 51.5	-3.5
NKC	Novy Kostel	3.88	354	ePn	Pn	00 46 50.3	+0.7
NKC				eSg	Sg	00 47 51.5	-3.5
CASP	Castiglione de	3.93	205	Pn	Pn	00 46 49.3	-1.0
OPP	Oppenau	3.95	304	P	Pn	00 46 52.4	+1.9
JAVC	Velka Javorina	3.96	50	ePN	Pb	00 46 56.2	-3.8
DIX	Grande Dixence	3.96	268	P	Pn	00 46 52.9	+1.9
DIX				AML	AML		
	comp=N,288µm,1.3s						
DIX				AML	AML		
	comp=E,249µm,0.8s						
HVAR	Hvar	3.99	142	ePn	Pn	00 46 50.9	-0.2
HVAR				Sn	Sn	00 47 38.5	+0.9
SENIN	Lac Senin/Sane	4.02	272	Pn	Pn	00 46 54.5	+2.8
AQU	L'Aquila	4.03	177	P	Pn	00 46 51.8	+0.1
AQU	L'Aquila	4.03	177	ePn	Pn	00 46 51.0	-0.8
AQU	L'Aquila	4.03	177	Pn	Pn	00 46 51.8	+0.1
RICI	Ricice	4.06	134	ePn	Pn	00 46 52.8	+0.7
RICI				Sn	Sn	00 47 41.0	+1.5
BOURR	Bourrignon	4.15	286	P	Pn	00 46 55.2	+1.8
MAKA	Makarska	4.16	137	ePn	Pn	00 46 53.7	+0.3
MAKA				Sn	Sn	00 47 43.6	+1.8
T0110	Collepietro	4.18	173	P	Pn	00 46 53.5	-0.4
T0110				AML	AML		
	comp=E,350µm,1.3s						
T0110				AML	AML		
	comp=N,306µm,1.4s						
TORNY	Torny/Romont	4.26	278	P	Pn	00 46 58.5	+3.7
PVCC	Panska Ves	4.26	13	eSG	Sg	00 48 04.3	-3.0
	comp=N,857nm,0.8s						
PVCC	Panska Ves	4.26	13	eSg	Sg	00 48 05.6	-1.6
PVCC	Panska Ves	4.26	13	eSg	Sg	00 48 05.6	-1.6
RSP	Reno Superiore	4.27	255	AML	AML		
	comp=E,228µm,0.5s						
RSP				AML	AML		
	comp=N,249µm,1.2s						
RSP				AML	AML		
	comp=N,236µm,1.2s						
RSP				AML	AML		
	comp=E,233µm,0.5s						
MOF	Molkenrain	4.33	292	P	Pn	00 46 57.4	+1.5
MOX	Moxa	4.38	347	P	Pn	00 46 57.0	+0.5
MOX	Moxa	4.38	347	ePn	Pn	00 46 56.5	0.0
MOX	Moxa	4.38	347	ePn	Pn	00 46 56.5	0.0
INTR	Introdacqua	4.41	172	Pn	Pn	00 46 55.8	-1.1
VYHS	Vyhne	4.43	59	eP	Pn	00 46 57.0	-0.1
VYHS	Vyhne	4.43	59	ePN	Pn	00 46 57.0	-0.1
VYHS				ePG	Pg	00 47 17.2	+2.0
VYHS				eSG	Sg	00 48 14.5	+1.9
IMI	Imperia	4.44	238	P	Pn	00 46 57.8	+0.5
ECH	Echery	4.44	297	P	Pn	00 46 58.5	+1.2
CDF	Champ du Feu	4.45	299	eP	Pn	00 46 58.6	+1.1
CDF	Champ du Feu	4.45	299	ePg	Pg	00 47 12.8	-2.9
CDF				eSn	Sn	00 47 44.7	-4.3
	comp=E,93nm,0.4s						
CDF				eSg	Sg	00 48 11.8	-1.5
	comp=E,157nm,0.4s						
HINF	Hinteralfeld	4.50	291	eP	Pn	00 46 59.3	+1.1
HINF				eSn	Sn	00 47 46.1	-4.2
	comp=E,228nm,0.4s						
HINF				eSg	Sg	00 48 11.5	-3.5
	comp=E,152nm,0.5s						
DPC	Dobruska-Polom	4.51	27	eP	Pn	00 46 57.5	-0.8
DPC	Dobruska-Polom	4.51	27	ePN	Pn	00 46 57.5	-0.8
DPC	Dobruska-Polom	4.51	27	eSg	Sg	00 48 11.8	-3.6
DPC	Dobruska-Polom	4.51	27	eSg	Sg	00 48 11.8	-3.6
MORC	Moravsky Berou	4.51	40	⇑P	Pn	00 46 58.6	+0.2
MORC				⇑S	Sn	00 47 55.3	+4.7
MORC	Moravsky Berou	4.51	40	ePN	Pn	00 46 59.3	+0.9
MORC				eSN	Sn	00 47 53.0	+2.4
MORC	Moravsky Berou	4.51	40	P	Pn	00 46 58.2	-0.1
MORC	Moravsky Berou	4.51	40		Pn	00 46 58.2	-0.1
LPG	La Plagne	4.52	261	eP	Pn	00 47 00.7	+2.1
LPG				eSn	Sn	00 47 47.4	-3.6
	comp=E,52nm,0.4s						
LPG				eSg	Sg	00 48 12.4	-3.2
	comp=E,286nm,0.9s						
LPG	La Plagne	4.52	261	P	Pn	00 47 00.3	+1.7
LPG				SN	Sn	00 47 49.5	-1.5
LPL	La Plagne	4.53	261	eP	Pn	00 47 00.7	+2.0
LPL				eSn	Sn	00 47 47.6	-3.6
	comp=E,62nm,0.6s						
LPL				eSg	Sg	00 48 12.6	-3.2
	comp=E,128nm,0.7s						
BRG	Berggiesshubel	4.53	7	Pn	Pn	00 46 58.5	0.0
BRG				Pg	Pg	00 47 14.7	-2.5
BRG				Sn	Sn	00 47 51.0	+0.1
BRG				Sg	Sg	00 48 12.8	-3.0
BRG				Amp		00 48 24.4	
	comp=Z,392nm,0.9s						
UPC	Upice	4.56	24	eP	Pn	00 46 58.6	-0.3
UPC	Upice	4.56	24	ePN	Pn	00 46 58.6	-0.3
UPC				eSG	Sg	00 48 14.2	-2.6
	comp=Z,381nm,0.8s						
BRANT	Les Verrieres	4.60	279	P	Pn	00 47 01.4	+1.8
OSTC	Ostas	4.66	25	ePN	Pn	00 46 59.8	-0.6
BNI	Bardonecchia	4.69	256	P	Pn	00 47 01.7	+0.8
BNI	Bardonecchia	4.69	256	Pn	Pn	00 47 01.6	+0.8
HAPS	Han Pijesak,Bl	4.72	117	ePn	Pn	00 47 00.8	-0.5
SBF	Sospel	4.74	240	eP	Pn	00 47 03.6	+2.2
SBF				eSn	Sn	00 47 52.6	-3.5
	comp=Z,148nm,0.4s						
SBF				eSg	Sg	00 48 19.8	-2.7
	comp=Z,307nm,0.7s						
MBDF	Montbardon	4.75	252	ePn	Pn	00 47 01.3	-0.3
MBDF				eSn	Sn	00 47 52.9	-3.5
	comp=Z,141nm,0.7s						
MBDF				eSg	Sg	00 48 18.8	-4.0
	comp=Z,102nm,0.7s						
STON	Ston	4.80	135	ePn	Pn	00 47 02.4	+0.1
STON				Sn	Sn	00 47 58.1	+0.5
STON	Ston	4.80	135	ePn	Pn	00 46 57.2	-5.0
PGF	Pioggiola	4.83	219	ePn	Pn	00 47 01.0	-1.7
PGF				eSn	Sn	00 47 54.7	-3.7
	comp=Z,24nm,0.3s						
FRGS	Fruska Gora	4.85	102	ePn	Pn	00 47 01.8	-1.1
TEKS	Tekeris	4.88	110	ePn	Pn	00 47 02.1	-1.2
PSZ	Piszkesteto	4.88	69	⇑P	Pn	00 47 03.7	+0.3
PSZ	Piszkesteto	4.88	69	ePN	Pn	00 47 05.2	+1.8
PSZ	Piszkesteto	4.88	69	P	Pn	00 47 04.3	+0.9
PSZ	Piszkesteto	4.88	69		Pn	00 47 04.3	+0.9
HAU	Haudompre	4.88	292	eP	Pn	00 47 04.6	+1.2
HAU				eSn	Sn	00 47 55.5	-4.1
	comp=Z,366nm,0.5s						
HAU				eSg	Sg	00 48 23.2	-4.0
	comp=Z,260nm,0.6s						
CLL	Collm	4.93	359	ePn	Pn	00 47 05.0	+1.0
	comp=Z,91nm,0.3s						
CLL				ePg	Pg	00 47 23.0	-1.9
CLL				eSg	Sg	00 48 25.0	-3.7
	comp=Z,495nm,1.0s						
CLL				eLmax		00 48 33.0	
CLL	Collm	4.93	359	eP	Pn	00 47 05.0	+1.0
CLL				pmax	pmax		
	comp=Z,91nm,0.3s						
CLL	Collm	4.93	359	Pn	Pn	00 47 04.3	+0.3
TNS	Taunus Mts	4.94	323	eSg	Sg	00 48 28.0	-1.1
TNS	Taunus Mts	4.94	323	eSg	Sg	00 48 28.0	-1.1
SGRT	San Giovanni R	5.00	157	Pn	Pn	00 47 03.6	-1.5
LANS	Liptovska Anna	5.11	55	eP	Pn	00 47 09.5	+3.0
LANS	Liptovska Anna	5.11	55	ePN	Pn	00 47 09.5	+3.0
LANS				eSG	Sg	00 48 41.8	+7.4
ABH	Alteburg	5.11	315	P	Pn	00 47 08.2	+1.7
BBLS	Lazići	5.12	117	ePn	Pn	00 47 08.0	+1.3
DBRK	Dubrovnik	5.17	134	ePn	Pn	00 47 07.6	+0.2
DBRK				Sn	Sn	00 48 07.9	+1.1
NAST	IGS Nastaetten	5.18	319	ePn	Pn	00 47 09.5	+2.1
NAST				eSn	Sn	00 48 08.1	+1.3
BRY	Bratogost	5.21	130	ePn	Pn	00 47 08.8	+0.8
TREB	Trebinje	5.24	132	ePn	Pn	00 47 08.6	+0.3
ORIF	Oris-en-Rattie	5.27	256	eP	Pn	00 47 11.6	+2.8
ORIF				eSn	Sn	00 48 04.8	-4.5
	comp=Z,45nm,0.4s						
DIVS	Divibare	5.37	113	ePn	Pn	00 47 09.5	-0.7
DIVS	Divibare	5.37	113	Pn	Pn	00 47 10.7	+0.5
FRF	La Foret Royal	5.38	241	ePn	Pn	00 47 10.7	+0.5
FRF				eSn	Sn	00 48 07.9	-3.9
	comp=Z,21nm,0.3s						
FRF				eSg	Sg	00 48 38.7	-4.4
	comp=Z,53nm,0.6s						
KOE	Koeppel	5.40	320	ePn	Pn	00 47 11.9	+1.4
BGG	Burgeitz	5.43	317	ePn	Pn	00 47 12.3	+1.5
KECS	Kecovo	5.43	65	eP	Pn	00 47 13.2	+2.3
KECS	Kecovo	5.43	65	ePN	Pn	00 47 13.2	+2.3
PAOL	Paolisi	5.45	168	Pn	Pn	00 47 10.1	-1.1

PAGF	Fort de Pagny	5.46	296	eP	Pn	00 47 13.5	+2.3
	baz=116						
PAGF	Fort de Pagny	5.46	296	ePg	Pg	00 47 31.0	-3.9
PAGF				eSn	Sn	00 48 08.8	-4.9
	comp=Z,175nm,0.6s						
PAGF				eSg	Sg	00 48 40.8	-4.7
	comp=Z,231nm,0.8s						
HCY	Herceg Novi	5.51	134	ePn	Pn	00 47 11.9	-0.1
LMR	La Mourre	5.59	239	ePn	Pn	00 47 13.5	+0.4
LMR				eSn	Sn	00 48 12.9	-4.1
	comp=Z,29nm,0.3s						
WLF	Walferdange	5.70	308	P	Pn	00 47 17.0	+2.4
WLF	Walferdange	5.70	308	Pn	Pn	00 47 17.0	+2.4
SFTF	Sexfontaines	5.78	291	eP	Pn	00 47 17.5	+1.8
SFTF				eSn	Sn	00 48 16.8	-4.9
	comp=Z,71nm,0.4s						
SFTF				eSg	Sg	00 48 50.9	-5.1
	comp=Z,137nm,0.6s						
SJES	Sjenica	5.80	120	ePn	Pn	00 47 14.8	-1.2
HILG	Hillesheim	5.80	315	ePn	Pn	00 47 18.5	+2.5
SMRF	Simiane la Rot	5.84	248	ePn	Pn	00 47 16.1	-0.5
SMRF	Simiane la Rot	5.84	248	eP	Pn	00 47 19.6	+3.0
SMRF				eSn	Sn	00 48 18.7	-4.5
	comp=Z,24nm,0.4s						
SMRF				eSg	Sg	00 48 53.6	-4.3
	comp=Z,44nm,0.7s						
SAVF	Savonnieres en	5.85	295	eP	Pn	00 47 18.7	+2.1
	baz=115						
SAVF				eSn	Sn	00 48 18.1	-5.3
	comp=Z,73nm,0.6s						
SAVF				eSg	Sg	00 48 53.6	-4.6
	comp=Z,208nm,0.8s						
MEZF	Maizieres J'vi	5.86	294	eP	Pn	00 47 19.3	+2.5
MEZF				eSn	Sn	00 48 18.0	-5.6
	comp=Z,81nm,0.7s						
MEZF				eSg	Sg	00 48 53.1	-5.4
	comp=Z,99nm,0.7s						
PDG	Podgorica	5.92	130	⇑S	Sn	00 48 23.0	-2.1
PDG	Podgorica	5.92	130	ePn	Pn	00 47 16.9	-0.7
PDG	Podgorica	5.92	130		Pn	00 47 18.4	+0.9
BZS	Buzias	5.98	94	⇑P	Pn	00 47 17.9	-0.5
DRME	Dracevica, Mon	6.05	132	ePn	Pn	00 47 19.2	-0.2
SSB	Saint Sauveur	6.08	263	P	Pn	00 47 20.7	+0.8
SSB	Saint Sauveur	6.08	263	Pn	Pn	00 47 20.7	+0.8
VIVF	Saint-Julien-l	6.11	259	ePn	Pn	00 47 20.1	-0.1
VIVF				eSn	Sn	00 48 25.0	-4.8
	comp=Z,19nm,0.4s						
MATE	Matera	6.30	154	⇑P	Pn	00 47 20.0	-2.8
SMF	Signal de Mont	6.40	276	eP	Pn	00 47 25.3	+1.1
SMF				eSn	Sn	00 48 31.7	-5.2
	comp=Z,50nm,0.4s						
SMF				eSg	Sg	00 49 11.4	-4.3
	comp=Z,36nm,0.5s						
LOR	Lormes	6.41	281	ePn	Pn	00 47 24.9	+0.6
	baz=101						
LOR	Lormes	6.41	281	ePg	Pg	00 47 48.1	-5.0
LOR				eSn	Sn	00 48 31.8	-5.3
	comp=Z,55nm,0.3s						
LOR				eSg	Sg	00 49 10.8	-5.2
	comp=Z,45nm,0.5s						
UZH	Uzhgorod	6.62	67	eP	Pn	00 47 31.0	+3.8
UZH				eS	Sn	00 48 48.0	+5.7
UZH				MLR	MLR		
	comp=N,150nm,8.0s						
UZH				MLR	MLR		
	comp=E,100nm,8.0s						
UZH				MLR	MLR		
	comp=Z,70nm,8.0s						
SSF	Saint Saulge	6.63	279	ePn	Pn	00 47 28.4	+1.0
SSF	Saint Saulge	6.63	279	ePg	Pg	00 47 52.9	-4.5
SSF				eSn	Sn	00 48 36.7	-6.0
	comp=Z,16nm,0.4s						
SSF				eSg	Sg	00 49 17.4	-5.9
	comp=Z,55nm,0.8s						
DRGR		6.63	83	⇑P	Pn	00 47 26.7	-0.8
DRGR		6.63	83	P	Pn	00 47 26.6	-0.8
GIVF	Givet	6.67	307	eP	Pn	00 47 30.5	+2.7
GIVF	Givet	6.67	307	ePg	Pg	00 47 53.3	-4.7
GIVF				eSn	Sn	00 48 37.6	-5.8
	comp=Z,104nm,0.6s						
GIVF				eSg	Sg	00 49 18.2	-6.0
	comp=Z,155nm,0.8s						
KOLS	Kolonicke sedl	6.70	64	eP	Pn	00 47 28.9	+0.6
KOLS	Kolonicke sedl	6.70	64	ePN	Pn	00 47 28.9	+0.6
HERR	Herculane	6.70	100	⇓P	Pn	00 47 26.3	-2.0
AVF	Avril sur Loir	6.73	277	ePn	Pn	00 47 29.5	+0.7
AVF				eSn	Sn	00 48 39.6	-5.5
	comp=Z,38nm,0.6s						
AVF				eSg	Sg	00 49 20.9	-5.6
	comp=Z,45nm,0.7s						
DOU	Dourbes	6.79	306	P	Pn	00 47 32.6	+3.1
LASF	Ste Croix	6.92	254	ePn	Pn	00 47 29.4	-2.0
LASF	Ste Croix	6.92	254	eP	Pn	00 47 32.4	+1.0
LASF				eSn	Sn	00 48 44.5	-5.4
	comp=Z,20nm,0.4s						
BAIF	Baives	6.99	305	eP	Pn	00 47 35.1	+2.9
BAIF	Baives	6.99	305	ePg	Pg	00 47 58.8	-5.4
BAIF				eSn	Sn	00 48 45.3	-6.1
	comp=Z,52nm,0.6s						
BAIF				eSg	Sg	00 49 28.3	-6.3
	comp=Z,40nm,0.5s						
BGF	Bois d'Agland	7.09	275	ePn	Pn	00 47 32.8	-0.8
BGF	Bois d'Agland	7.09	275	eP	Pn	00 47 35.1	+1.5
BGF				eSn	Sn	00 48 48.1	-5.8
	comp=Z,169nm,0.5s						
BGF				eSg	Sg	00 49 31.9	-5.9
	comp=Z,80nm,0.7s						
HYF	Humbligny	7.24	281	eP	Pn	00 47 37.6	+1.9
HYF				eSn	Sn	00 48 51.6	-5.9
HYF				eSg	Sg	00 49 36.8	-5.7
VSL	Villasalto	7.40	203	Pn	Pn	00 47 38.9	+0.9
SCTE	Santa Cesarea	7.42	146	Pn	Pn	00 47 37.7	-0.5
TCF	Toulx Ste Croi	7.54	273	ePn	Pn	00 47 40.5	+0.6
TCF				eSn	Sn	00 48 59.3	-5.8
	comp=Z,35nm,0.5s						
CLF	Chambon-Foret	7.57	286	Pn	Pn	00 47 42.1	+1.9
TIP	Timpagrande	7.68	158	Pn	Pn	00 47 41.4	-0.5
CAF	Calviac	7.87	263	ePn	Pn	00 47 42.8	-1.6
CAF	Calviac	7.87	263	eP	Pn	00 47 47.5	+3.1
ARR	Arges	8.11	93	⇑P	Pn	00 47 46.7	-1.1
VTS	Vitosha	8.16	114	⇑P	Pn	00 47 45.5	-3.0
RJF	Les Rejaudoux	8.16	267	eP	Pn	00 47 50.3	+1.9
FNA	Florina	8.21	130	P	Pn	00 47 49.1	+0.1
FNA	Florina	8.21	130		Pn	00 47 49.1	+0.1
MTLF	Montolieu	8.31	252	ePn	Pn	00 47 50.9	+0.5
MTLF				eSn	Sn	00 49 17.7	-6.2
	comp=Z,4.8nm,0.5s						
BUR08	Bucovina Ar. S	8.36	77	Pn	Pn	00 47 54.8	+3.5
BURAR	Bucovina Array	8.37	77	⇑P	Pn	00 47 50.5	-0.9
BURAR	Bucovina Array	8.37	77	Pn	Pn	00 47 54.3	+3.0
VOIR		8.39	92	⇓P	Pn	00 47 50.8	-0.7
MENF	Mencas	8.39	304	P	Pn	00 47 54.9	+3.5
LFF	La Frestale	8.78	265	eP	Pn	00 47 59.0	+2.2
LFF				eSn	Sn	00 49 28.9	-6.6
	comp=Z,9.5nm,0.5s						
LFF	La Frestale	8.78	265	P	Pn	00 47 58.5	+1.7
MLR	Muntele Rosu	9.00	91	⇓P	Pn	00 47 59.1	-0.8
MFF	Saint Martin d	9.15	276	P	Pn	00 48 05.0	+3.1
MFF	Saint Martin d	9.15	276	eP	Pn	00 48 03.6	+1.8
MFF				eSn	Sn	00 49 37.4	-7.1
	comp=Z,63nm,0.7s						
LDF	La Druitiere	9.23	289	eP	Pn	00 48 05.3	+2.4
LDF				eSn	Sn	00 49 39.1	-7.3
	comp=Z,34nm,0.8s						
FLN	La Foliniere	9.49	289	eP	Pn	00 48 09.5	+3.0
FLN				eSn	Sn	00 49 45.3	-7.5
	comp=Z,14nm,0.5s						
GRR	Gorron	9.68	287	eP	Pn	00 48 10.9	+1.7
GRR				eSn	Sn	00 49 50.1	-7.5
	comp=Z,17nm,0.5s						
EPF	Esparros	9.69	254	ePn	Pn	00 48 07.5	-1.8
AGG	Agios Georgios	10.00	134	P	Pn	00 48 13.2	-0.5
AGG	Agios Georgios	10.00	134	Pn	Pn	00 48 13.2	-0.5
ETSF	Etsaut	10.34	255	eP	Pn	00 48 22.4	+4.1
SGMF	Saint Gilles	10.80	286	eP	Pn	00 48 26.5	+2.0
SGMF				eSn	Sn	00 50 16.8	-8.2
	comp=Z,12nm,0.5s						
ALN	Alexandroupoli	10.86	116	P	Pn	00 48 26.7	+1.4
ALN	Alexandroupoli	10.86	116	Pn	Pn	00 48 26.6	+1.4
KEST	Kesra	11.01	196	Pn	Pn	00 48 34.9	+7.4
	comp=Z,0.3nm,0.3s,baz=312,slow=4.0,SNR=5.5						
QUIF	Quistinic	11.19	284	eP	Pn	00 48 31.1	+1.3
QUIF				eSn	Sn	00 50 26.0	-8.5
	comp=Z,9.9nm,0.6s						
ROSF	Rostrenen	11.28	286	eP	Pn	00 48 34.1	+3.0
ROSF				eSn	Sn	00 50 28.2	-8.6
	comp=Z,4.8nm,0.3s						
KONO	Kongsberg	13.45	352	⇑eP	Pn	00 48 56.8	-3.9
EKR10	Eskdalemuir Ar	13.54	317	Pn	Pn	00 49 04.0	+2.1
EKR9	Eskdalemuir Ar	13.55	317	Pn	Pn	00 49 04.9	+2.9
EKR8	Eskdalemuir Ar	13.56	317	Pn	Pn	00 49 03.1	+1.0
EKR7	Eskdalemuir Ar	13.56	317	Pn	Pn	00 49 04.0	+1.8
EKR6	Eskdalemuir Ar	13.57	317	Pn	Pn	00 49 04.2	+1.9
EKR5	Eskdalemuir Ar	13.58	317	Pn	Pn	00 49 05.0	+2.6
EKR4	Eskdalemuir Ar	13.59	317	Pn	Pn	00 49 05.3	+2.8
EKB1	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.2	+2.6
EKR3	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.1	+2.5
EKB2	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.7	+3.0
EKA	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 02.5	-0.2
	baz=128,slow=14,SNR=16						
EKB3	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.9	+3.2
EKB4	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 03.5	+0.8
EKB5	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.5	+2.8
EKB6	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 04.8	+2.1
EKR2	Eskdalemuir Ar	13.60	317	Pn	Pn	00 49 05.0	+2.2
EKB7	Eskdalemuir Ar	13.61	317	Pn	Pn	00 49 05.8	+3.0
EKB8	Eskdalemuir Ar	13.61	317	Pn	Pn	00 49 04.7	+1.9
EKB9	Eskdalemuir Ar	13.61	317	Pn	Pn	00 49 05.3	+2.5
EKB10	Eskdalemuir Ar	13.61	317	Pn	Pn	00 49 05.9	+3.0
EKR1	Eskdalemuir Ar	13.61	317	Pn	Pn	00 49 06.2	+3.3
ESK	Eskdalemuir	13.61	317	P	Pn	00 49 04.7	+1.8
ESK	Eskdalemuir	13.61	317	Pn	Pn	00 49 04.7	+1.8
EKB	Eskdalemuir	13.62	317	Pn	Pn	00 49 05.5	+2.6
HFS	Hagfors	13.78	1	Pn	Pn	00 49 03.9	-1.3
	comp=Z,0.1nm,0.3s,baz=171,slow=13,SNR=1.6						
ESBB	Sonseca Array	14.15	248	Pn	Pn	00 49 12.6	+2.1
ESDC	Sonseca Array	14.16	248	Pn	Pn	00 49 11.2	+0.7
	comp=Z,0.0nm,0.3s,baz=60,slow=14,SNR=1.9						
IDI	Anoyia	14.21	137	Pn	Pn	00 49 13.9	+2.7
DSB	Dublin	14.30	306	Pn	Pn	00 49 14.4	+2.1
NC605	NORSAR Array S	14.46	357	Pn	Pn	00 49 15.9	+1.6
PAB	San Pablo	14.47	248	P	Pn	00 49 17.1	+2.3
PAB	San Pablo	14.47	248	Pn	Pn	00 49 17.1	+2.3
NOA	NORSAR Array B	14.73	356	Pn	Pn	00 49 17.3	-0.8
	comp=Z,0.0nm,0.3s,baz=175,slow=12,SNR=1.3						
NOA				LR	LR	00 55 35.2	
	comp=Z,201nm,20.2s,baz=350,slow=40						
NB201	NORSAR Array S	14.73	357	Pn	Pn	00 49 17.0	-1.2
NC204	NORSAR Array S	14.99	356	Pn	Pn	00 49 22.7	+1.0
BR131	Keskin Array S	16.39	107	⇓eP	P	00 49 45.1	+2.2
BRTR	Keskin Array B	16.39	107	Pn	Pn	00 49 40.6	+0.5
	comp=Z,0.0nm,0.3s,baz=286,slow=6.0,SNR=2.1						
FINES	FINESS Array B	16.86	22	Pn	Pn	00 49 43.5	-2.2
	comp=Z,0.1nm,0.3s,baz=187,slow=11,SNR=4.4						
FINES	FINESS Array B	16.86	22	eP	P	00 49 47.0	-0.7
KIV	Kislovodsk	20.94	86	eP	Pn	00 50 34.1	-1.2
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	21.13	37	eP	P	00 50 33.7	-0.7
KLMR				pmax	pmax		
	comp=Z,27nm,1.6s						
KLMR	Klimovskoe	21.13	37	eP	P	00 50 33.8	-0.7
KLMR				AMP		00 50 39.8	
	comp=Z,27nm,1.6s						
KBZ	Khabaz	21.16	86	P	P	00 50 34.8	-0.1
	comp=Z,1.8nm,1.1s,baz=304,slow=7.4,SNR=4.4						
KBZ	Khabaz	21.16	86	⇓eP	P	00 50 38.7	+3.8
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MMAI	Mount Meron Ar	21.65	120	P	P	00 50 40.5	+0.2
	comp=Z,2.6nm,0.9s,baz=304,slow=14,SNR=1.9						
BELG	Belogornoye	23.10	62	⇑eP	P	00 50 59.9	+4.4
BELG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GNI	Garni	23.76	94	⇑eP	P	00 51 07.0	+4.6
GNI				pmax	pmax		
	comp=Z,13nm,1.2s						
ARCES	ARCESS Array B	24.03	11	P	P	00 51 04.5	0.0
	comp=Z,5.2nm,1.1s,baz=204,slow=10,SNR=1.9						
KIRV	Kirov	24.92	47	P	P	00 51 12.5	-0.1
	comp=Z,12nm,0.7s,baz=21,slow=2.4,SNR=8.6						
KIRV	Kirov	24.92	47	⇓eP	P	00 51 13.8	+1.2
ARU	Arti	29.57	53	P	P	00 51 56.7	+2.3
	comp=Z,0.6nm,0.5s,baz=264,slow=7.7,SNR=4.4						
ARU	Arti	29.57	53	d iP	P	00 51 56.8	+2.4
ARU						00 52 48.2	
ARU				S	S	00 56 53.2	+4.6
ARU				SS	SnSn	00 58 15.3	-1.2
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SVE	Sverdlovsk	30.71	53	eP	P	00 52 05.4	+0.9
TORD	Torodi Ar. Bea	34.50	200	P	P	00 52 38.4	+0.4
	comp=Z,1.0nm,0.9s,baz=11,slow=9.1,SNR=2.8						
KURBB	Kurchatov Arra	42.30	59	P	P	00 53 44.6	+1.3
	comp=Z,0.2nm,0.8s,baz=269,slow=9.7,SNR=1.7						
KURK	Kurchatov	42.32	59	⇑eP	P	00 53 43.6	+0.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TIXI	Tiksi	53.90	21	⇓eP	P	00 55 12.4	-0.2
TLY	Talaya	55.90	49	⇓eP	P	00 55 27.8	+0.4
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	59.57	51	P	P	00 55 53.4	-0.1
	comp=Z,0.6nm,0.9s,baz=294,slow=7.7,SNR=4.6						
YAK	Yakutsk	60.63	29	⇑eP	P	00 55 59.7	-0.6
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	63.73	336	P	P	00 56 20.9	-0.2
	comp=Z,0.1nm,0.4s,baz=52,slow=6.6,SNR=5.2						

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*MEX **30** 01:26:05.3±0.7, 13°.61N×92°.60W, h8^{km}±64^{km}, MD4.2*

*NEIC **30** 01:26:07.3±2.1, 13°.84N±0°.07×92°.52W±0°.07, h16^{km}±3^{km}, mb4.5/169, Md4.2/16(MEX), Error ellipse: s-maj=11.0km s-min=7.6km az=220.0*

*GCG **30** 01:26:08.6±1.9, 13°.77N×92°.61W, h34^{km}±999^{km}, MD4.4*

*IDC **30** 01:26:09.9±6.2, 14°.10N×92°.12W, h33^{km}±45^{km}, mb4.2/12, mb1 4.4/14, mb1mx4.1/41, mbtmp4.3/14, ML3.8/2, MS3.8/6, Ms1 3.9/6, ms1mx3.5/25, Error ellipse: s-maj=35.2km s-min=15.3km az=44.0*

*UCR **30** 01:26:10.7±0.7, 13°.79N×92°.21W, h18^{km}±9^{km}, ML3.3, mb4.5(NEIC)*

*SNET **30** 01:26:10.5±0.8, 13°.78N×92°.21W, h17^{km}±12^{km}, ML3.5*

ISC 30 01:26:07.9±1.9**, 13°.81N**±0°.06×**92°.51W**±0°.05**, h27**^{km}±12^{km}**,**
n297, σ**1§37**/262**, mb4.5**/73**, MS3.8**/5**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	Retalhuleu	1.06	48	eP	Pn	01 26 26.7	-0.4
RTAL				eS	Sb	01 26 39.2	-2.0
RTAL	Retalhuleu	1.06	48	Pn	Pn	01 26 26.4	-0.7
THIG		1.12	12	i P	Pn	01 26 26.6	-1.2
THIG				i S	Sn	01 26 43.9	+1.5
THIG		1.12	12		Pn	01 26 26.6	-1.2
THIG					Sn	01 26 43.9	+1.5
FUG	Fuego 3	1.73	68	eP	Pn	01 26 36.7	+0.2
HUEH	Huehuetenango	1.79	33	Pn	Pn	01 26 37.3	0.0
PCG	Pacaya	1.93	72	eP	Pb	01 26 42.6	0.0
PCIG		2.01	340	eP	Pn	01 26 38.1	-2.0
PCIG				i S	Sn	01 27 03.9	-0.4
PCIG		2.01	340		Pn	01 26 38.1	-2.0
PCIG					Sn	01 27 03.9	-0.4
NBG	Las Nubes	2.23	69	eP	Pn	01 26 45.2	+1.8
NBG				eS	Sb	01 27 14.7	-0.4
CCIG	Comitan	2.48	8	eP	Pn	01 26 46.1	-0.7
CCIG				eS	Sn	01 27 18.3	+1.9
CCIG	Comitan	2.48	8		Sn	01 27 18.3	+1.9
CCIG	Comitan	2.48	8		Pn	01 26 48.6	+1.8
CEVE	Cerro Verde	2.80	89	eP	Pn	01 26 51.4	+0.2
CEVE				eS	Sn	01 27 23.1	-1.2
CEVE				IAML		01 27 47.6	
	comp=Z,775nm,0.5s						
CEVE	Cerro Verde	2.80	89	eP	Pn	01 26 51.4	+0.2
CEVE				eS	Sn	01 27 23.1	-1.2
CEVE				IAML		01 27 47.6	
	comp=Z,775nm,0.5s						
SBLS	San Blas	2.80	89	eP	Pn	01 26 51.4	+0.1
SBLS	San Blas	2.80	89	eP	Pn	01 26 51.4	+0.1
JAYA	Jayaque - finc	2.97	93	eP	Pn	01 26 52.5	-1.0
JAYA	Jayaque - finc	2.97	93	eP	Pn	01 26 52.5	-1.0
MRL	Marmol	3.01	65	eP	Pn	01 26 57.1	+2.9
TGIG		3.01	349	i P	Pn	01 26 53.9	-0.1
TGIG				eS	Sn	01 27 29.8	+0.5
TGIG		3.01	349		Pn	01 26 53.9	-0.1
TGIG					Sn	01 27 29.8	+0.5
TACO	Tacachico	3.06	87	eP	Pn	01 26 54.3	-0.4
TACO				eS	Sn	01 27 28.4	-2.2
TACO				IAML		01 27 34.4	
	comp=Z,72nm,0.6s						
TACO	Tacachico	3.06	87	eP	Pn	01 26 54.3	-0.4
TACO				eS	Sn	01 27 28.4	-2.2
TACO				IAML		01 27 34.4	
	comp=Z,72nm,0.6s						
PMON	Piamonte	3.10	91	eP	Pn	01 26 54.2	-1.1
PMON	Piamonte	3.10	91	eP	Pn	01 26 54.2	-1.1
MTO3	Montecristo	3.11	79	eP	Pn	01 26 55.0	-0.5
MTO3				IAML		01 27 43.7	
	comp=Z,81nm,0.6s						
MTO3	Montecristo	3.11	79	eP	Pn	01 26 55.0	-0.5
MTO3				IAML		01 27 43.7	
	comp=Z,81nm,0.6s						
MTO3	Montecristo	3.11	79	Pn	Pn	01 26 54.7	-0.7
ESQI	Esquipulas	3.16	76	Pn	Pn	01 26 57.0	+0.9
SNET	Serv Nac Est T	3.18	92	Pn	Pn	01 26 57.0	+0.6
COEG	Centro de Oper	3.53	93	eP	Pn	01 27 01.1	-0.1
COEG				IAML		01 28 03.1	
	comp=Z,188nm,0.4s						
COEG	Centro de Oper	3.53	93	eP	Pn	01 27 01.1	-0.1
COEG				IAML		01 28 03.1	
	comp=Z,188nm,0.4s						
CMIG	Matias Romero	3.99	325	Pn	Pn	01 27 06.8	-0.6
	comp=Z,3.0nm,0.3s,baz=139,slow=11,SNR=33						
CMIG				Sn	Sn	01 27 51.5	-1.8
	comp=Z,16nm,0.3s,baz=117,slow=19,SNR=4.8						
CMIG	Matias Romero	3.99	325	eP	Pn	01 27 06.1	-1.3
CMIG				i S	Sn	01 27 52.6	-0.7
CMIG	Matias Romero	3.99	325		Pn	01 27 06.1	-1.3
CMIG					Sn	01 27 52.6	-0.7
PETF	Flores	4.00	39	eP	Pn	01 27 09.2	+1.6
PETF	Flores	4.00	39	Pn	Pn	01 27 08.7	+1.1
LCND	La Caada	4.51	96	eP	Pn	01 27 14.7	+0.1
LCND	La Caada	4.51	96	eP	Pn	01 27 14.7	+0.1
TGUH	Tegucigalpa,Un	5.09	87	Pn	Pn	01 27 24.2	+1.6
TLIG	Tlapa	6.93	303	Pn	Pn	01 27 49.0	+1.1
TEIG	Tepich	7.55	32	Pn	Pn	01 27 57.5	+1.1
ESPN	Las Esperanzas	8.16	100	Pn	Pn	01 28 06.6	+1.9
MOIG	Morelia	10.16	306	Pn	Pn	01 28 32.5	+0.2
ZAIG	Zacatecas	13.06	314	Pn	Pn	01 29 12.7	+0.6
435B	Jarrell	17.53	345		Pn	01 30 10.8	+0.3
JCT	Junction City	17.90	339	P	P	01 30 16.8	+1.2
	baz=156						
JCT	Junction City	17.90	339		Pn	01 30 14.8	-0.4
NATX	Nacogdoches	17.98	354		Pn	01 30 15.6	-0.4
CBOC	Ciudad Bolivar	18.05	114	eP	P	01 30 19.4	+1.8
VBMS	Vicksburg	18.41	5	P	Pn	01 30 21.9	+0.5
VBMS				IAmb	IAmb	01 30 29.7	
	comp=Z,26nm,0.8s						
TXAR	Lajitas Array	18.59	328	P	Pn	01 30 25.0	+1.4
	comp=Z,0.1nm,0.3s,baz=151,slow=11,SNR=18						
TXAR				LR	LR	01 38 36.7	
	comp=Z,113nm,18.1s,baz=0.0,slow=40						
TXAR	Lajitas Array	18.59	328	P	Pn	01 30 24.8	+1.1
TX31	Lajitas Ar. Si	18.59	328	P	Pn	01 30 25.0	+1.3
TX31				IAmb	IAmb	01 30 46.4	
	comp=Z,39nm,1.0s						
TX32	Lajitas Array	18.59	328	P	Pn	01 30 24.7	+1.0
SMLC	San Martn de	18.74	103	eP	Pn	01 30 26.3	+0.8
GUY2C	Guyana, Caldas	18.92	115	eP	Pn	01 30 29.4	+1.2
PTBC	PUERTO BERRIO,	19.17	110	eP	Pn	01 30 30.6	0.0
TOLC	Tolima	19.27	117	eP	Pn	01 30 34.5	+2.3
Z47A	Carrollton	19.72	11	P	P	01 30 35.4	-0.1
Z47A				IAmb	IAmb	01 30 36.1	
	comp=Z,20nm,0.9s						
LRAL	Lakeview Retre	19.79	14	P	P	01 30 35.6	-0.6
	baz=196						
LRAL	Lakeview Retre	19.79	14	P	P	01 30 36.3	0.0
ABTX	Abilene, Hawle	19.83	342	P	P	01 30 37.6	+0.8
	baz=159,SNR=9.3						
ABTX	Abilene, Hawle	19.83	342	P	Pn	01 30 38.2	-0.2
ABTX				IAmb	IAmb	01 30 38.7	
	comp=Z,17nm,0.8s						
ROSC	El Rosal	20.02	115	P	Pn	01 30 41.7	+0.5
	comp=Z,0.6nm,0.3s,baz=125,slow=19,SNR=2.4						
ROSC	El Rosal	20.02	115	P	P	01 30 39.2	-0.1
ROSC				IAmb	IAmb	01 30 50.2	
	comp=Z,30nm,1.1s						
152A	Waverly Hall	20.08	19	P	P	01 30 40.2	+0.8
152A				IAmb	IAmb	01 30 44.5	
	comp=Z,22nm,0.7s						
CHIC	Chingaza	20.64	114	eP	Pn	01 30 48.5	+0.1
MIAR	Mount Ida	20.67	357	P	P	01 30 46.1	+0.3
	baz=177						
MIAR	Mount Ida	20.67	357	IAmb	IAmb	01 31 00.8	
	comp=Z,18nm,1.0s						
RUSC	La Rusia	20.68	110	eP	P	01 30 47.6	+1.1
Y49A	Blount Mountai	20.71	14	P	P	01 30 46.4	+0.1
X37A	Clayton	20.85	353	IAmb	IAmb	01 31 00.2	
	comp=Z,15nm,0.8s						
X48A	Hartselle	21.14	13	P	P	01 30 49.5	-1.4
X48A				IAmb	IAmb	01 31 02.0	
	comp=Z,23nm,1.4s						
GOGA	Godfrey	21.18	21	P	P	01 30 51.3	0.0
	baz=205						
GOGA	Godfrey	21.18	21	P	P	01 30 52.1	+0.8
GOGA				IAmb	IAmb	01 31 13.2	
	comp=Z,14nm,0.9s						
X34A	Smith Ranch, M	21.26	348	IAmb	IAmb	01 30 56.0	
	comp=Z,21nm,0.7s						
W41B	Gary Mavity, V	21.27	1	P	P	01 30 53.0	+0.6
	baz=181						
W39A	Magazine	21.33	357	P	P	01 30 53.1	+0.2
	baz=176						
W39A	Magazine	21.33	357	P	P	01 30 53.9	+1.0
W39A				IAmb	IAmb	01 30 57.0	
	comp=Z,9.5nm,0.8s						
MNTX	Cornudas Mount	21.37	329	P	P	01 30 54.0	+0.6
	baz=144,SNR=11						
MNTX	Cornudas Mount	21.37	329	P	P	01 30 54.3	+0.9
Y52A	Lilburn	21.39	20	IAmb	IAmb	01 31 07.8	
	comp=Z,29nm,1.2s						
WHAR	Wooly Hollow	21.39	0	P	P	01 30 54.4	+0.8
WHAR				IAmb	IAmb	01 31 15.4	
	comp=Z,29nm,1.3s						
WMOK	Wichita Mounta	21.60	346	P	P	01 30 56.3	+0.4
	baz=163,SNR=6.5						
SDV	Santo Domingo	21.99	101	P	P	01 31 04.2	+3.8
	comp=Z,5.1nm,0.8s,baz=279,slow=8.9,SNR=7.2						
SDV	Santo Domingo	21.99	101	P	P	01 30 58.6	-1.9
FCAR	Ozark Folk Cen	21.99	1	P	P	01 31 00.4	+0.4
SWET	Sewanee	22.12	14	IAmb	IAmb	01 31 02.2	
	comp=Z,9.8nm,0.8s						
MSTX	Muleshoe	22.13	337	P	P	01 31 02.2	+0.5
	baz=153,SNR=11						
MSTX	Muleshoe	22.13	337	IAmb	IAmb	01 31 03.5	
	comp=Z,20nm,0.8s						
LCAR	Lake Charles	22.20	3	IAmb	IAmb	01 31 15.7	
	comp=Z,12nm,1.1s						
TUL1	Leonard	22.20	353	P	P	01 31 01.3	-1.1
	baz=171						
TUL1	Leonard	22.20	353	IAmb	IAmb	01 31 03.5	
	comp=Z,9.5nm,0.7s						
BCOK	Bluff Creek, N	22.23	349	P	P	01 31 01.5	-1.1
W50A	Signal Mountai	22.27	16	IAmb	IAmb	01 31 03.1	
	comp=Z,12nm,0.8s						
HODGE	Hodges	22.35	23	IAmb	IAmb	01 31 25.6	
	comp=Z,14nm,1.0s						
V48A	Smith Brothers	22.43	12	IAmb	IAmb	01 31 04.5	
	comp=Z,12nm,0.8s						
U40A	Yellville	22.45	359	P	P	01 31 04.4	-0.7
	baz=179						
AMTX	Amarillo	22.56	340	P	P	01 31 06.4	+0.1
	baz=156						
QUOK	Quay	22.59	351	IAmb	IAmb	01 31 06.7	
	comp=Z,26nm,0.9s						
U38A	Gravette	22.60	356	IAmb	IAmb	01 31 08.8	
	comp=Z,10nm,0.9s						
WVT	Waverly	22.62	10	P	P	01 31 05.0	-1.8
	baz=192						
WVT	Waverly	22.62	10	P	P	01 31 05.3	-1.5
CPCT	Cooper Cave	22.72	17	IAmb	IAmb	01 31 07.9	
	comp=Z,8.7nm,0.7s						
CLTN	Cedars of Leba	22.87	13	IAmb	IAmb	01 31 08.8	
	comp=Z,14nm,0.8s						
PBMO	Poplar Bluff	22.95	4	P	P	01 31 08.8	-1.4
PBMO				IAmb	IAmb	01 31 10.3	
	comp=Z,15nm,0.8s						
V51A	Loudon	23.10	17	IAmb	IAmb	01 31 12.0	
	comp=Z,11nm,0.9s						
TKL	Tuckaleechee C	23.13	18	P	P	01 31 10.2	-1.9
	comp=Z,9.6nm,0.9s,baz=196,slow=11,SNR=8.0						
TKL	Tuckaleechee C	23.13	18	IAmb	IAmb	01 31 11.3	

	comp=Z,10nm,0.8s						
121A	Cookes Peak, D	23.29	326	P	P	01 31 14.9	+1.0
	baz=140,SNR=11						
121A	Cookes Peak, D	23.29	326	IAmb	IAmb	01 31 18.1	
	comp=Z,17nm,0.9s						
319A	Douglas	23.30	321	IAmb	IAmb	01 31 25.4	
	comp=Z,15nm,1.0s						
V52A	Sevierville	23.36	19	P	P	01 31 13.6	-0.7
V52A				IAmb	IAmb	01 31 14.8	
	comp=Z,19nm,1.1s						
U49A	Red Boiling Sp	23.40	14	IAmb	IAmb	01 31 13.5	
	comp=Z,14nm,1.0s						
X57A	Johnson Farm,	23.43	27	P	P	01 31 13.7	-1.4
	baz=212						
V53A	Saluda	23.45	20	IAmb	IAmb	01 31 16.4	
	comp=Z,9.3nm,0.9s						
KMSC	Kings Mountain	23.51	23	P	P	01 31 14.7	-1.1
	baz=208						
KMSC	Kings Mountain	23.51	23	IAmb	IAmb	01 31 16.2	
	comp=Z,10nm,0.7s						
T47A	Sharon Grove	23.58	11	IAmb	IAmb	01 31 15.0	
	comp=Z,8.6nm,0.7s						
S39A	Bolivar	23.80	358	IAmb	IAmb	01 31 18.9	
	comp=Z,10.0nm,0.8s						
W56A	Indian Trail	23.80	25	P	P	01 31 16.9	-1.8
	baz=210						
BNM	Barren Site	23.96	330	P	P	01 31 22.2	+1.7
TZTN	Tazewell	24.02	18	P	P	01 31 18.9	-1.8
	baz=202						
W57A	Gilead	24.06	26	P	P	01 31 19.3	-1.8
	baz=211						
CCM	Cathedral Cave	24.18	2	P	P	01 31 20.2	-1.9
	baz=183						
W58A	Raeford	24.28	27	P	P	01 31 21.1	-2.0
	baz=213						
V56A	Mocksville	24.42	24	P	P	01 31 22.0	-2.4
	baz=209						
ANMO	Albuquerque	24.53	332	P	P	01 31 25.9	+0.3
	comp=Z,2.6nm,0.8s,baz=158,slow=11,SNR=4.8						
ANMO	Albuquerque	24.53	332	P	P	01 31 26.0	+0.3
	baz=146						
ANMO	Albuquerque	24.53	332	P	P	01 31 26.4	+0.7
U54A	Nelsons Funny	24.56	21	P	P	01 31 24.5	-1.3
	baz=206						
V57A	Coltrane Farms	24.78	25	P	P	01 31 25.7	-1.9
	baz=210						
TUC	Tucson	24.87	321	P	P	01 31 30.0	+1.4
U56A	King	24.94	24	P	P	01 31 27.5	-1.6
	baz=209						
WCI	Wyandotte Cave	24.94	12	P	P	01 31 28.2	-0.9
	baz=194						
WCI	Wyandotte Cave	24.94	12	P	P	01 31 28.1	-0.9
V58A	Windy Hill, Pi	24.98	26	P	P	01 31 27.8	-1.7
	baz=212						
ATAH	Atahualpa	25.08	145	LR	LR	01 39 52.6	
	comp=Z,91nm,19.7s,baz=308,slow=33						
Q44A	Meyer Farm, Va	25.18	6	IAmb	IAmb	01 31 31.6	
	comp=Z,15nm,0.8s						
U57A	Blanch	25.43	25	P	P	01 31 32.3	-1.2
	baz=211						
KSU1	Kansas State U	25.45	353	P	P	01 31 33.1	-0.6
	baz=171						
W61A	Ground Anchor	25.46	31	P	P	01 31 32.9	-1.0
	baz=217						
T25A	Trinidad	25.55	338	P	P	01 31 36.2	+1.4
	baz=152,SNR=16						
BLA	Blacksburg	25.68	23	P	P	01 31 34.9	-1.0
	baz=208						
CBKS	Cedar Bluff	25.72	347	P	P	01 31 36.4	+0.3
	baz=164,SNR=7.3						
S54A	Dingess, Beckl	25.89	21	P	P	01 31 35.8	-1.9
	baz=205						
214A	Organ Pipe Nat	25.92	318	P	P	01 31 39.1	+1.0
T57A	Hurt	25.95	25	P	P	01 31 37.0	-1.2
	baz=210						
SDCO	Great Sand Dun	26.50	336	P	P	01 31 44.7	+1.1
	baz=151,SNR=13						
SDCO	Great Sand Dun	26.50	336	IAmb	IAmb	01 31 46.3	
	comp=Z,12nm,1.1s						
Q52A	Bidwell	26.64	18	IAmb	IAmb	01 31 43.3	
	comp=Z,12nm,0.8s						
T59A	Double "B" Far	26.66	27	P	P	01 31 43.1	-1.5
	baz=214						
S57A	Dark Hollow, R	26.73	24	P	P	01 31 43.0	-2.2
	baz=210						
R55A	Marlinton	26.74	22	P	P	01 31 43.6	-1.8
	baz=207						
R55A	Marlinton	26.74	22	P	P	01 31 43.7	-1.7
R55A				IAmb	IAmb	01 31 44.8	
	comp=Z,13nm,0.9s						
Q53A	Leroy	26.77	19	P	P	01 31 43.5	-2.1
	baz=204						
HDIL	Hopedale	26.79	5	P	P	01 31 44.1	-1.7
	baz=187						
SFIN	Lafayette	26.89	9	P	P	01 31 44.6	-2.1
	baz=192						
S58A	Poland Farm, P	26.98	26	P	P	01 31 45.5	-2.0
	baz=212						
S22A	4UR Ranch, Cre	27.03	334	P	P	01 31 49.9	+1.5
	baz=148,SNR=11						
R56A	Bull Pasture M	27.11	23	P	P	01 31 47.8	-1.0
	baz=209						
MVCO	Mesa Verde	27.33	331	P	P	01 31 52.4	+1.4
	baz=144,SNR=6.6						
MVCO	Mesa Verde	27.33	331	IAmb	IAmb	01 32 02.6	
	comp=Z,19nm,1.2s						
R58A	Rapidan	27.58	25	P	P	01 31 51.1	-1.8
	baz=212						
PV01	Paradox Valley	28.11	332	IAmb	IAmb	01 32 00.7	
	comp=Z,15nm,1.4s						
O53A	New Philadelph	28.14	19	P	P	01 31 55.7	-2.2
	baz=204						
PV13	Radium Mtn., P	28.25	332	IAmb	IAmb	01 32 11.5	
	comp=Z,11nm,1.0s						
PDMCI	Parker Dam,Lak	28.29	320	P	P	01 32 00.9	+1.7
	baz=131						
SMCO	Snowmass	28.31	336	IAmb	IAmb	01 32 12.0	
	comp=Z,5.0nm,0.9s						
PV03	Paradox Valley	28.34	332	IAmb	IAmb	01 32 11.7	
	comp=Z,13nm,1.1s						
ISCO	Idaho Springs	28.34	338	P	P	01 32 02.0	+1.9
	baz=152						
ISCO	Idaho Springs	28.34	338	P	P	01 32 00.7	+0.6
P57A	Homestead Farm	28.59	24	P	P	01 32 00.4	-1.5
	baz=210						
BC3	Big Chuckawall	28.72	317	P	P	01 32 04.7	+1.4
	baz=128						
TKX	Tecate	28.86	314	P	P	01 32 03.1	-1.3
M51A	Elyria	28.86	16	P	P	01 32 02.1	-2.2
	baz=201						
O56A	Blue Knob Stat	29.06	22	P	P	01 32 04.6	-1.6
	baz=209						
N54A	Moraine State	29.18	20	P	P	01 32 05.1	-2.0
	baz=205						
M53A	WI Miller and	29.39	18	P	P	01 32 07.1	-2.0
	baz=204						
N56A	West Decatur	29.72	22	P	P	01 32 10.4	-1.6
	baz=209						
N58A	Sunbury	30.26	24	P	P	01 32 14.5	-2.2
	baz=212						
M56A	Emporium	30.26	22	P	P	01 32 14.7	-2.1
	baz=208						
SCI2	San Clemente I	30.44	313	P	P	01 32 16.5	-1.9
	baz=123						
M57A	Sunshine Farm,	30.52	23	P	P	01 32 17.8	-1.3
	baz=210						
RDMU	Red Mountain	30.56	334	P	P	01 32 21.0	+1.4
RWWY	Rawlins	30.58	338	IAmb	IAmb	01 32 21.4	
	comp=Z,11nm,1.1s						
M58A	Price’s Panora	30.81	24	P	P	01 32 20.1	-1.6
	baz=212						
MPU	Maple Canyon	31.04	331	P	P	01 32 25.6	+1.7
K22A	Casper	31.19	340	P	P	01 32 26.0	+0.9
	baz=153						
TPNV	Topopah Spring	31.32	322	P	P	01 32 28.1	+1.8
	baz=131						
FURC	Furnace Creek,	31.38	320	P	P	01 32 27.7	+1.1
	baz=130						
MPMC	Manual Prospec	31.52	319	P	P	01 32 29.1	+1.0
	baz=128						
L58A	Harry Jones Me	31.62	24	P	P	01 32 27.1	-1.7
	baz=212						
BINY	Binghamton	31.70	24	P	P	01 32 28.0	-1.5
	baz=212						
DUG	Dugway, Tooele	31.75	330	P	P	01 32 32.5	+2.4
	baz=140						
RSSD	Black Hills	31.78	344	P	P	01 32 30.5	+0.1
	baz=158						
RSSD	Black Hills	31.78	344	P	P	01 32 30.9	+0.5
RSSD				IAmb	IAmb	01 32 31.4	
	comp=Z,4.3nm,0.8s						
R11A	Troy Canyon, C	31.87	324	P	P	01 32 32.6	+1.4
	baz=134						
GRAC	Grapevine Rang	32.03	321	P	P	01 32 34.3	+1.9
	baz=130,SNR=5.5						
L60A	Shokan	32.25	26	P	P	01 32 32.4	-1.8
	baz=215						
J56A	Wolcott	32.30	22	P	P	01 32 32.6	-2.0
	baz=209						
K58A	Earlville	32.31	24	P	P	01 32 32.6	-2.3
	baz=212						
BW06	Boulder Array	32.39	336	P	P	01 32 36.4	+0.6
	baz=148						
PD31	Pinedale Array	32.39	336	P	P	01 32 36.2	+0.4
PDAR	Pinedale Array	32.39	336	P	P	01 32 35.9	+0.1
	comp=Z,2.1nm,0.9s,baz=143,slow=8.9,SNR=12						
PDAR	Pinedale Array	32.39	336	P	P	01 32 36.6	+0.8
H53A	Bobcaygeon	32.88	18	P	P	01 32 37.4	-2.4
	baz=205						
SADO	Sadowa	32.89	18	P	P	01 32 36.7	-3.1
	comp=Z,4.7nm,0.7s,baz=240,slow=9.2,SNR=3.9						
I58A	Old Forge	33.36	23	P	P	01 32 41.7	-2.3
	baz=212						
ELK	Elko	33.39	328	IAmb	IAmb	01 32 47.0	
	comp=Z,4.4nm,1.1s						
NV11	Mina Array Sit	33.43	322	IAmb	IAmb	01 32 48.4	
	comp=Z,5.8nm,0.9s						
MDPB	Devils Postpil	33.49	320	P	P	01 32 47.0	+1.5
MDPB				IAmb	IAmb	01 32 48.7	
	comp=Z,4.1nm,0.9s						
NVAR	Mina Array Bea	33.51	322	P	P	01 32 47.8	+2.2
	comp=Z,4.9nm,0.8s,baz=139,slow=8.9,SNR=41						
NVAR				PcP	PcP	01 35 27.4	+1.2
	comp=Z,0.5nm,0.6s,baz=150,slow=3.8,SNR=4.2						
NVAR				LR	LR	01 49 11.7	
	comp=Z,186nm,18.1s,baz=172,slow=41						
NVAR	Mina Array Bea	33.51	322	P	P	01 32 47.5	+1.9
LHV	Little Huntoon	33.52	321	IAmb	IAmb	01 32 49.3	
	comp=Z,5.2nm,0.9s						
MOOW	Moose Ponds	33.69	336	IAmb	IAmb	01 32 49.3	
	comp=Z,6.6nm,1.0s						
G54A	Lake Saint Pet	33.77	18	P	P	01 32 44.7	-2.9
	baz=206						
IMW	Indian Meadow	33.89	336	IAmb	IAmb	01 32 52.5	
	comp=Z,5.6nm,1.0s						
FLWY	Flagg Ranch	33.95	336	IAmb	IAmb	01 32 59.3	
	comp=Z,8.5nm,1.1s						
H17A	Grant Village	34.16	337	P	P	01 32 52.6	+1.4
H17A				IAmb	IAmb	01 32 56.1	
	comp=Z,7.6nm,1.3s						
LKWY	Lake	34.24	337	IAmb	IAmb	01 32 55.2	
	comp=Z,11nm,1.4s						
ALGO	Algonquin Park	34.29	18	P	P	01 32 49.1	-2.8
	baz=205						
RLMT	Red Lodge	34.30	339	P	P	01 32 52.6	+0.2
	baz=150						
MDND	Maddock	34.45	352	P	P	01 32 52.5	-0.9
	baz=168						
LAO	LASA Array	34.74	343	P	P	01 32 56.2	+0.3
	baz=156						
PTGA	Pitinga	35.32	112	P	P	01 33 00.7	-0.6
	comp=Z,7.1nm,0.8s,baz=314,slow=7.9,SNR=16						
PTGA	Pitinga	35.32	112	P	P	01 33 02.4	+1.1
PTGA				IAmb	IAmb	01 33 03.4	
	comp=Z,9.2nm,0.9s						
BOZ	Bozeman (W)	35.58	337	P	P	01 33 04.3	+1.0
	baz=147						
MFID	Camas Ranch	35.66	330	IAmb	IAmb	01 33 19.4	
	comp=Z,3.4nm,0.9s						
E56A	St. Veronique	35.78	21	P	P	01 33 03.2	-1.7
	baz=210						
DGMT	Dagmar	35.89	347	P	P	01 33 06.0	+0.2
	baz=160						
D55A	Sainte-Anne-du	36.05	20	P	P	01 33 04.6	-2.6
	baz=209						
E58A	La Victoria	36.27	23	P	P	01 33 06.3	-2.7
	baz=213						
D56A	ZEC Mazanza, M	36.32	21	P	P	01 33 06.9	-2.5
	baz=210						
WVOR	Wild Horse Val	36.38	327	IAmb	IAmb	01 33 24.2	
	comp=Z,6.7nm,1.0s						
ULM	Lac du Bonnet	36.45	356	P	P	01 33 08.1	-2.4
	comp=Z,2.7nm,0.8s,baz=131,slow=6.4,SNR=6.0						
ULM				PcP	PcP	01 35 33.8	-0.3
	comp=Z,1.7nm,0.7s,baz=169,slow=5.2,SNR=3.1						
F60A	Warwick	36.45	24	P	P	01 33 08.0	-2.5
	baz=215						
EGMT	Eagleton	37.00	341	P	P	01 33 15.9	+0.5
	baz=151,SNR=5.9						
EGMT	Eagleton	37.00	341	IAmb	IAmb	01 33 17.0	
	comp=Z,5.7nm,0.7s						
LSQQ	Lebel-sur-Quev	37.41	17	P	P	01 33 16.0	-2.6
	baz=205						
MSO	Missoula	37.50	336	P	P	01 33 20.6	+1.0
	baz=144,SNR=5.3						
MSO	Missoula	37.50	336	P	P	01 33 20.2	+0.6
MSO				IAmb	IAmb	01 33 29.7	
	comp=Z,12nm,1.2s						
MATQ	Matagami	37.86	16	P	P	01 33 19.7	-2.8
	baz=204						
D61A	St Aubert, Com	38.16	25	P	P	01 33 22.2	-2.8
	baz=216						
L04D	Klamath Falls	38.28	323	P	P	01 33 24.0	-2.3
	baz=129						
E63A	Oxbow	38.30	27	P	P	01 33 23.7	-2.5
	baz=220						
JTMT	Jette	38.39	336	IAmb	IAmb	01 33 29.0	
	comp=Z,6.9nm,0.9s						
J04D	Umpqua Nationa	38.82	325	P	P	01 33 31.0	+0.1
	baz=130						
I04A	Tendick Farm,	39.34	325	P	P	01 33 35.5	+0.4
	baz=130						
H04A	Detroit Lake	39.80	327	IAmb	IAmb	01 33 40.9	
	comp=Z,7.9nm,0.9s						
I03D	Drain, OR	39.80	324	P	P	01 33 37.1	-1.8
	baz=129						
J01E	Myrtle Point	39.80	323	P	P	01 33 39.6	+0.7
	baz=128						
C09A	Chrisman Ranch	40.09	333	IAmb	IAmb	01 33 44.3	
	comp=Z,7.3nm,0.8s						
I02D	Swisshome	40.34	325	P	P	01 33 43.6	+0.3
	baz=129						
PB08	IPOC Station P	40.81	145	P	P	01 33 48.3	+0.4
PB08				IAmb	IAmb	01 33 50.4	
	comp=Z,8.1nm,1.1s						
B08A	Colville Reser	40.98	333	P	P	01 33 49.0	+0.4
LON	Longmire	41.00	329	P	P	01 33 50.0	+1.2
SIV	San Ignacio	42.92	133	P	P	01 34 04.7	-0.1
	comp=Z,3.0nm,0.9s,baz=284,slow=7.2,SNR=5.1						
PGC	Sidney	43.11	330	P	P	01 34 06.1	+0.2
PGC				IAmb	IAmb	01 34 16.3	
	comp=Z,9.2nm,1.0s						
FCC	Fort Churchill	44.89	359	P	P	01 34 20.4	+0.5
YKA	Yellowknife Ar	51.10	347	P	P	01 35 08.0	0.0
	comp=Z,14nm,0.7s,baz=147,slow=7.9,SNR=161						
YKA				PcP	PcP	01 36 22.4	-1.1
	comp=Z,1.0nm,0.7s,baz=142,slow=4.1,SNR=3.9						
DLBC	Dease Lake	52.63	336	P	P	01 35 21.0	+1.4
RCBR	Riachuelo	59.46	105	P	P	01 36 09.1	0.0
	comp=Z,9.0nm,0.8s,baz=321,slow=4.4,SNR=2.9						
RCBR	Riachuelo	59.46	105	P	P	01 36 10.1	+0.9
BCAR	Beaver Creek A	60.02	337	P	P	01 36 13.2	+1.1
N25K	Chitina, Valde	60.42	334	P	P	01 36 15.4	+0.4
	baz=118						
EGAK	Eagle	60.71	338	P	P	01 36 17.2	+0.4
EGAK				IAmb	IAmb	01 36 17.9	
	comp=Z,5.8nm,1.0s						
DOT	Dot Lake	61.20	336	IAmb	IAmb	01 36 30.5	
	comp=Z,5.6nm,0.8s						
M24K	Tolsona, Glenn	61.32	334	P	P	01 36 23.1	+2.0
	baz=117						
SCRK	Sand Creek	61.33	337	P	P	01 36 21.4	+0.2
	baz=120						
PAX	Paxson	61.42	335	P	P	01 36 22.9	+1.1
RC01	Rabbit Creek A	62.43	333	P	P	01 36 28.7	+0.2
	baz=113						
PRP	Porcupine Dome	62.67	338	IAmb	IAmb	01 36 31.9	
	comp=Z,5.0nm,0.8s						
HDA	Harding Lake	62.68	337	P	P	01 36 30.6	+0.5
	baz=117						
ILAR	Eielson Array	62.82	337	P	P	01 36 31.3	+0.3
	comp=Z,4.0nm,0.9s,baz=137,slow=4.4,SNR=24						
MCK	McKinley	63.16	335	P	P	01 36 33.9	+0.5
	baz=115						
POKR	Poker Plat Res	63.19	337	P	P	01 36 34.3	+0.8
	baz=117						
NEA2	Nenana	63.58	336	P	P	01 36 36.3	+0.2
	baz=115						
MLY	Manley	64.42	336	P	P	01 36 42.3	+0.7
	baz=114						
TTA	Tatalina	65.85	333	P	P	01 36 51.5	+0.5
SACV	Santiago Islan	66.49	80	P	P	01 36 55.9	0.0
ESDC	Sonseca Array	80.22	52	P	P	01 38 14.0	-2.5
	comp=Z,1.4nm,0.9s,baz=285,slow=4.9,SNR=4.8						
BILL	Bilibino	81.45	338	P	P	01 38 23.2	+0.8
ARCES	ARCESS Array B	86.47	18	LR	LR	02 20 59.4	
	comp=Z,111nm,18.9s,baz=235,slow=38						
TIXI	Tiksi	90.34	348	P	P	01 39 07.1	+0.8
TIXI				IAmb	IAmb	01 39 08.0	
	comp=Z,2.7nm,0.8s						
TORD	Torodi Ar. Bea	90.90	76	LR	LR	02 17 43.9	
	comp=Z,37nm,19.3s,baz=325,slow=34						
NRIK	Noril'sk	97.07	360	LR	LR	02 28 24.5	
	comp=Z,149nm,18.2s,baz=320,slow=39						
MKAR	Makanchi Array	119.50	4	PKP	PKPdf	01 44 54.7	-0.7
	comp=Z,0.4nm,0.8s,baz=34,slow=3.5,SNR=4.1						
LZH	Lanzhou	128.02	343	*e*PKP	PKiKP	01 45 12.8	-0.1
LZH				pPKP	sPKPdf	01 45 25.3	+2.5
LZH				sPKP		01 45 28.5	
WRA	Warramunga Arr	134.87	256	PKP	PKPdf	01 45 25.5	+0.1
	comp=Z,0.6nm,0.8s,baz=83,slow=1.6,SNR=2.2						
ASAR	Alice Springs	135.14	250	PKP	PKPdf	01 45 26.1	+0.3
	comp=Z,0.6nm,0.9s,baz=83,slow=2.3,SNR=4.2						
CHTO	Chiang Mai	145.68	341		PKPbc	01 45 45.5	+0.3
CM31	Chiang Mai Arr	146.01	340		PKPab	01 45 46.8	0.0
CMAR	Chiang Mai Arr	146.01	340	PKPbc	PKPab	01 45 46.9	+0.2
	comp=Z,6.5nm,0.7s,baz=339,slow=3.9,SNR=24						
CMAR	Chiang Mai Arr	146.01	340		PKPab	01 45 46.8	0.0

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*IDC **30** 01:28:45.8±0.8, 21.°98S×68.°53W, $h91^{km}\pm10^{km}$, mb3.6/4, mb1 3.8/6, mb1mx3.5/31, mbtmp3.9/6, Error ellipse: s-maj=35.3km s-min=21.7km az=122.0*
*GUC **30** 01:28:48.0±0.7, 22.°05S×68.°72W, $h99^{km}\pm3^{km}$, ML3.8*
ISC 30 01:28:46.7±0.8**, 22.°04S**±0.°04×**68.°69W**±0.°08**,** $\mathbf{h106}^{km}\pm6^{km}$**, n27,** σ**0.s76**/40**, mb3.9**/4**, 7C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.56	295	*e*P	Pn	01 29 04.2	+0.5
PB09				*i* S	Sn	01 29 16.4	-0.2
PB09				IAML		01 29 18.3	
	comp=N,2µm,0.3s						
LVC	Limon Verde	0.61	200	P	Pn	01 29 04.6	+0.3
	comp=N,318nm,0.3s,baz=35,slow=8.8,SNR=258						
LVC				S	Sn	01 29 16.9	-0.6
	comp=N,1µm,0.3s,baz=187,slow=19,SNR=70						
LVC	Limon Verde	0.61	200	*e*P	Pn	01 29 04.6	+0.3
LVC				*e*S	Sn	01 29 17.6	0.0
PB03	IPOC Station P	0.99	269	*e*P	Pn	01 29 07.4	-0.1
PB03				*i* S	Sn	01 29 22.9	-0.4
PB03				IAML		01 29 25.0	
	comp=N,1µm,0.7s						
PB06	IPOC Station P	1.05	231	⇑*i*P	Pn	01 29 08.6	+0.3
PB06				*i* S	Sn	01 29 24.7	+0.1
PB06				IAML		01 29 26.4	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	1.15	285	⇑*i*P	Pn	01 29 09.7	+0.3
PB07				*i* S	Sn	01 29 26.3	-0.3
PB07				IAML		01 29 28.1	
	comp=E,2µm,0.3s						
PB01	IPOC Station P	1.23	323	⇑*i*P	Pn	01 29 10.4	+0.1
PB01				*i* S	Sn	01 29 27.8	-0.3
PB01				IAML		01 29 29.3	
	comp=N,3µm,0.2s						
PB15	IPOC Station P	1.37	212	⇑*i*P	Pn	01 29 12.5	+0.5
PB15				*i* S	Sn	01 29 32.1	+1.1
PB04	IPOC Station P	1.39	257	⇑*i*P	Pn	01 29 11.9	-0.2
PB04				*i* S	Sn	01 29 30.8	-0.5
PB04				IAML		01 29 32.2	
	comp=N,1µm,0.7s						
PB05	IPOC Station P	1.62	240	⇑*i*P	Pn	01 29 14.6	-0.3
PB05				*i* S	Sn	01 29 35.6	-0.6
PB08	IPOC Station P	1.93	347	⇑*i*P	Pn	01 29 20.4	+1.4
PB08				*i* S	Sn	01 29 45.7	+2.1
PB08				IAML		01 29 47.5	
	comp=N,1µm,0.2s						
TA01	Diego Aracena	2.02	316	*e*P	Pn	01 29 19.4	-0.3
TA01				*e*S	Sn	01 29 44.4	-0.6
TA01				IAML		01 29 46.3	
	comp=E,2µm,0.5s						
TA02	Huaiquique	2.21	322	*e*P	Pn	01 29 22.4	+0.2
TA02				*i* S	Sn	01 29 49.0	-0.4
PB10	IPOC Station P	2.26	229	*e*P	Pn	01 29 23.1	+0.2
PB10				IAML		01 30 07.9	
	comp=N,698nm,0.9s						
PSGC	Pisagua	2.77	331	IAML		01 30 02.2	
	comp=E,536nm,0.2s						
MNMC	Minye Minye	3.01	343	*e*P	Pn	01 29 33.0	0.0
MNMC				*i* S	Sn	01 30 08.3	-0.3
PB14	IPOC Station P	3.02	211	*e*P	Pn	01 29 33.0	-0.1
GO02	Mina Guanaco	3.22	195	*e*P	Pn	01 29 35.4	-0.4
SIV	San Ignacio	9.38	51	P	Pn	01 30 56.5	-2.5
	comp=E,1.5nm,0.3s,baz=245,slow=8.4,SNR=44						
SIV				S	Sn	01 32 32.1	-11
	comp=E,0.1nm,0.3s,baz=45,slow=22,SNR=1.2						
PLCA	Paso Flores	18.71	184	P	P	01 32 57.3	+0.4
	comp=E,0.2nm,0.3s,baz=345,slow=12,SNR=7.0						
PTGA	Pitinga	22.82	23	P	P	01 33 39.3	-1.4
	comp=E,2.0nm,0.4s,baz=197,slow=19,SNR=6.9						
PDAR	Pinedale Array	74.67	330	P	P	01 40 15.8	+0.9
	comp=E,0.3nm,0.6s,baz=134,slow=8.1,SNR=4.7						
TORD	Torodi Ar. Bea	77.34	70	P	P	01 40 29.9	-0.3
	comp=E,0.8nm,0.3s,baz=259,slow=5.6,SNR=9.0						
YKA	Yellowknife Ar	91.76	341	P	P	01 41 42.4	+0.5
	comp=E,0.6nm,0.5s,baz=136,slow=4.8,SNR=13						
WRA	Warramunga Arr	132.60	210	PKP	PKiKP	01 47 50.8	0.0
	comp=E,0.3nm,0.7s,baz=163,slow=1.6,SNR=1.6						
ZALV	Zalesovo Beam	142.35	26	PKP	PKPdf	01 48 07.2	+0.7
	comp=E,0.5nm,0.5s,baz=294,slow=1.4,SNR=2.8						
MKAR	Makanchi Array	145.94	37	PKPbc	PKPab	01 48 14.5	-0.1
	comp=E,1.1nm,0.7s,baz=336,slow=2.7,SNR=12						

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*KRNET **30** 01:49:39.5±0.1, 39.°06N×77.°22E, mb4.4*
*IDC **30** 01:49:42.8±2.4, 39.°45N×76.°77E, $h0^{km}$, mb3.2/2, mb1 3.4/7, mb1mx3.2/58, mbtmp3.4/7, ML3.1/5, Error ellipse: s-maj=32.1km s-min=23.4km az=38.0*
*SOME **30** 01:49:43.2, 39.°57N×76.°88E, $h0^{km}$*
*BJI **30** 01:49:45.4±0.0, 39.°57N×76.°96E, $h5^{km}$, mb3.8/5, ML3.9/8*
*NNC **30** 01:49:46.9±0.7, 39.°65N×76.°94E, $h0^{km}$, mb4.5, mpv4.3, Error ellipse: s-maj=4.9km s-min=3.6km az=154.0*
ISC 30 01:49:49.3±1.0**, 39.°71N**±0.°05×**76.°99E**±0.°03**,** $\mathbf{h10}^{km}$**, n109,** σ**1.s83**/147**, 56C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KSH	Kashi	0.81	257	Pg	Pg	01 50 06.3	+1.3
KSH				Sg	Sn	01 50 22.0	+2.9
KSH				smax	smax		
	comp=N,3µm,0.6s						
KSH				smax	smax		
	comp=E,1µm,0.5s						
KDJ	Kajisay	2.42	3	⇑*i*P	Pn	01 50 30.4	+1.2
	baz=60						
KDJ				⇑*i*S	Sg	01 51 07.3	+0.1
	baz=60						
ULHL	Ulahol	2.60	348	⇑*i*P	Pn	01 50 32.8	+1.2
	baz=47						
ULHL				⇑*i*S	Sg	01 51 12.1	-0.7
	baz=47						
ULHL	Ulahol	2.60	348	P	Pn	01 50 33.6	+2.0
	SNR=33						
BOOM	Boomskoye usch	2.89	344	⇑*i*P	Pn	01 50 37.3	+1.7
	baz=45						
BOOM				⇑*i*S	Sg	01 51 19.3	-2.9
	baz=45						
ARLS	Aral	2.96	318	⇑*i*P	Pn	01 50 37.0	+0.5
	baz=23						
ARLS				⇑*i*S	Sb	01 51 19.5	+1.1
	baz=23						
PRZ	Przheval'sk	2.97	21	⇑*i*P	Pn	01 50 36.8	+0.1
	baz=14						
PRZ				⇑*i*S	Sb	01 51 18.7	-0.2
	baz=14						
ANVS	Anan'yevo	3.11	9	⇑*i*P	Pn	01 50 40.0	+1.3
	baz=5.0						
ANVS				⇑*e*S	Sb	01 51 23.6	+0.6
	baz=5.0						

UCH	**Uchtor**	**3.14**	**324**	⇑*i*P	**Pn**	**01 50 40.3**	**+1.0**
	baz=28						
UCH				⇑*i*S	**Sb**	**01 51 24.8**	**+0.8**
	baz=28						
UCH	**Uchtor**	**3.14**	**324**	P	**Pn**	**01 50 39.5**	**+0.2**
	SNR=24						
KBK	**Karagaybulak**	**3.33**	**333**	⇑*i*P	**Pn**	**01 50 43.0**	**+1.4**
	baz=35						
KBK				⇑*i*S	**Sb**	**01 51 29.4**	**+0.3**
	baz=35						
KBK	**Karagaybulak**	**3.33**	**333**	P	**Pn**	**01 50 44.4**	**+2.8**
	SNR=7.3						
TNSS	**Tian-Shan**	**3.33**	**359**	*e*P	**Pb**	**01 50 48.9**	**+0.2**
	52nm,0.2s						
TNSS				*e*S	**Sg**	**01 51 36.0**	**-0.2**
	175nm,0.3s						
TNSS	**Tian-Shan**	**3.33**	**359**	Pg	**Pb**	**01 50 48.9**	**+0.2**
	52nm,0.2s						
TNSS				Lg	Lg	01 51 36.0	
	175nm,0.3s						
IZV	**Izvestkoviy**	**3.34**	**355**	*e*P	**Pb**	**01 50 49.1**	**+0.4**
	23nm,0.4s						
IZV				*e*S	**Sg**	**01 51 36.4**	**-0.1**
	330nm,0.5s						
IZV	**Izvestkoviy**	**3.34**	**355**	Pg	**Pb**	**01 50 49.1**	**+0.4**
	23nm,0.4s						
IZV				Lg	Lg	01 51 36.4	
	330nm,0.5s						
TKM2	**Tokmak 2**	**3.38**	**342**	⇑*e*P	**Pn**	**01 50 44.1**	**+1.8**
	baz=43						
TKM2				⇑*i*S	**Sb**	**01 51 31.0**	**+0.4**
	baz=43						
TKM2	**Tokmak 2**	**3.38**	**342**	P	**Pn**	**01 50 44.5**	**+2.2**
	SNR=42						
TKM2	**Tokmak 2**	**3.38**	**342**	⇑Pn	**Pn**	**01 50 42.7**	**+0.4**
	11nm,0.3s						
TKM2				⇑Pg	**Pb**	**01 50 50.3**	**+0.9**
	27nm,0.7s						
TKM2				⇑Lg	Lg	01 51 36.3	
	90nm,0.4s						
KST	**Kastek**	**3.42**	**347**	*e*P	**Pb**	**01 50 50.2**	**+0.1**
	21nm,0.3s						
KST				*e*S	**Sg**	**01 51 38.5**	**-0.7**
	211nm,0.3s						
KST	**Kastek**	**3.42**	**347**	Pg	**Pb**	**01 50 50.2**	**+0.1**
	21nm,0.3s						
KST				Lg	Lg	01 51 38.5	
	211nm,0.3s						
MTBS	**Maitube**	**3.44**	**353**	*e*P	**Pb**	**01 50 49.5**	**-1.0**
	22nm,0.3s						
MTBS				*e*S	**Sg**	**01 51 37.0**	**-2.9**
	252nm,0.3s						
MTBS	**Maitube**	**3.44**	**353**	Pg	**Pb**	**01 50 49.5**	**-1.0**
	22nm,0.3s						
MTBS				Lg	Lg	01 51 37.0	
	252nm,0.3s						
MDOK	**Medeo**	**3.45**	**1**	*e*P	**Pb**	**01 50 51.3**	**+0.6**
	34nm,0.3s						
MDOK				*e*S	**Sg**	**01 51 40.2**	**0.0**
	390nm,0.3s						
MDOK	**Medeo**	**3.45**	**1**	⇑Pg	**Pb**	**01 50 50.5**	**-0.1**
	43nm,0.8s						
MDOK				⇑Lg	Lg	01 51 39.4	
	338nm,0.6s						
MDOK	**Medeo**	**3.45**	**1**	Pg	**Pb**	**01 50 51.3**	**+0.6**
	34nm,0.3s						
MDOK				Lg	Lg	01 51 40.2	
	390nm,0.3s						
ARSB	**Arslanbob**	**3.46**	**299**	⇑*i*P	**Pn**	**01 50 42.4**	**-1.0**
	baz=6.0						
ARSB				⇑*i*S	**Sn**	**01 51 28.4**	**+4.0**
	baz=6.0						
AML	**Almayashu**	**3.48**	**315**	⇑*i*P	**Pn**	**01 50 44.1**	**+0.2**
	baz=20						
AML				⇑*i*S	**Sb**	**01 51 32.0**	**-1.7**
	baz=20						
AML	**Almayashu**	**3.48**	**315**	P	**Pn**	**01 50 43.3**	**-0.6**
	SNR=20						
AAK	**Ala-Archa**	**3.48**	**328**	Pn	**Pn**	**01 50 44.3**	**+0.7**
	2.8nm,0.3s,baz=155,slow=10,SNR=39						
AAK				Lg	Lg	01 51 37.8	
	43nm,0.3s,baz=58,slow=21,SNR=16						
AAK	**Ala-Archa**	**3.48**	**328**	⇑*i*P	**Pn**	**01 50 45.1**	**+1.4**
	baz=31						
AAK				⇑*i*S	**Sb**	**01 51 33.0**	**-0.6**
	baz=31						
AAK	**Ala-Archa**	**3.48**	**328**	P	**Pn**	**01 50 44.4**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**3.48**	**328**	⇑Pn	**Pn**	**01 50 44.4**	**+0.7**
	6.2nm,0.6s						
AAK				⇓Pg	**Pb**	**01 50 51.3**	**+0.1**
	56nm,0.6s						
AAK				⇑Lg	Lg	01 51 38.5	
	122nm,0.5s						
AAA	**Alma-Ata**	**3.50**	**359**	*e*P	**Pb**	**01 50 51.4**	**0.0**
	60nm,0.2s						
AAA				*e*S	**Sg**	**01 51 40.3**	**-1.3**
	188nm,0.4s						
AAA	**Alma-Ata**	**3.50**	**359**	Pg	**Pb**	**01 50 51.4**	**0.0**
	60nm,0.2s						
AAA				Lg	Lg	01 51 40.3	
	188nm,0.4s						
KNDC	**Almaty**	**3.51**	**360**	⇑Pg	**Pb**	**01 50 51.9**	**+0.4**
	64nm,0.6s						
KNDC				⇑Lg	Lg	01 51 40.7	
	1µm,0.6s						
SATY	**Saty**	**3.51**	**17**	*e*P	**Pb**	**01 50 52.2**	**+0.5**
	48nm,0.5s						
SATY				*e*S	**Sg**	**01 51 42.0**	**-0.2**
	194nm,0.2s						
SATY	**Saty**	**3.51**	**17**	Pg	**Pb**	**01 50 52.2**	**+0.5**
	48nm,0.5s						
SATY				Lg	Lg	01 51 42.0	
	194nm,0.2s						
KOTS	**Kotyrbulak**	**3.52**	**1**	*e*P	**Pb**	**01 50 52.6**	**+0.7**
	117nm,0.2s						
KOTS				*e*S	**Sg**	**01 51 42.4**	**-0.2**
	1µm,0.2s						
KOTS	**Kotyrbulak**	**3.52**	**1**	Pg	**Pb**	**01 50 52.6**	**+0.7**
	117nm,0.2s						
KOTS				Lg	Lg	01 51 42.3	
	1µm,0.2s						
FRU1	**Bishkek**	**3.57**	**331**	⇑*i*P	**Pn**	**01 50 46.4**	**+1.5**
	baz=33						
FRU1				⇑*i*S	**Sb**	**01 51 35.5**	**-0.6**
	baz=33						
ZHN	**Zhinishke**	**3.62**	**17**	*e*P	**Pb**	**01 50 53.1**	**-0.5**
	14nm,0.1s						
ZHN				*e*S	**Sg**	**01 51 43.3**	**-2.4**
	107nm,0.5s						
ZHN	**Zhinishke**	**3.62**	**17**	Pg	**Pb**	**01 50 53.1**	**-0.5**
	14nm,0.1s						
ZHN				Lg	Lg	01 51 43.3	
	107nm,0.5s						
DGS	**Degeres**	**3.65**	**346**	*e*P	**Pb**	**01 50 53.1**	**-0.9**
	28nm,0.4s						
DGS				*e*S	**Sg**	**01 51 43.2**	**-3.3**
	200nm,0.4s						
DGS	**Degeres**	**3.65**	**346**	Pg	**Pb**	**01 50 53.1**	**-0.9**
	28nm,0.4s						
DGS				Lg	Lg	01 51 43.2	
	200nm,0.4s						
CHMS	**Chumysh**	**3.69**	**334**	⇑*i*P	**Pn**	**01 50 48.1**	**+1.6**
	baz=35						
CHMS				⇑*i*S	**Sb**	**01 51 37.7**	**-1.9**
	baz=35						
CHMS	**Chumysh**	**3.69**	**334**	P	**Pb**	**01 50 56.4**	**+1.7**
	SNR=9.5						
UZB	**Uzynbulak**	**3.76**	**23**	*e*P	**Pb**	**01 50 55.9**	**0.0**
	44nm,0.5s						
UZB				*e*S	**Sg**	**01 51 48.1**	**-1.9**
	49nm,0.2s						
UZB	**Uzynbulak**	**3.76**	**23**	Pg	**Pb**	**01 50 55.9**	**0.0**
	44nm,0.5s						
UZB				Lg	Lg	01 51 48.1	
	49nm,0.2s						
EKS2	**Erkin-Say**	**3.82**	**322**	⇑*i*P	**Pn**	**01 50 49.4**	**+1.1**
	baz=25						
EKS2				⇑*i*S	**Sb**	**01 51 40.0**	**-3.3**
	baz=25						
EKS2	**Erkin-Say**	**3.82**	**322**	P	**Pn**	**01 50 49.2**	**+0.8**
	SNR=12						
KURS	**Kuram**	**3.88**	**13**	*e*P	**Pb**	**01 50 58.7**	**+0.8**
	32nm,0.3s						
KURS				*e*S	**Sg**	**01 51 53.0**	**-0.9**
	67nm,0.3s						
KURS	**Kuram**	**3.88**	**13**	Pg	**Pb**	**01 50 58.7**	**+0.8**
	32nm,0.3s						
KURS				Lg	Lg	01 51 53.0	
	67nm,0.3s						
SHLS	**Shalkode**	**3.91**	**28**	*e*P	**Pb**	**01 51 01.5**	**+2.9**
	83nm,0.3s						
SHLS				*e*S	**Sg**	**01 51 57.8**	**+2.7**
	192nm,0.4s						
SHLS	**Shalkode**	**3.91**	**28**	Pg	**Pb**	**01 51 01.5**	**+2.9**
	83nm,0.3s						
SHLS				Lg	Lg	01 51 57.8	
	192nm,0.4s						
KPKS	**Kokpek**	**3.96**	**18**	*e*P	**Pb**	**01 50 59.7**	**+0.4**
	64nm,0.2s						
KPKS				*e*S	**Sg**	**01 51 54.5**	**-2.1**
	319nm,0.3s						
KTBS	**Karatobe**	**4.01**	**357**	*e*P	**Pb**	**01 51 00.3**	**+0.2**
	24nm,0.3s						
KTBS				*e*S	**Sg**	**01 51 55.5**	**-2.5**
	332nm,0.4s						
KTBS	**Karatobe**	**4.01**	**357**	Pg	**Pb**	**01 51 00.3**	**+0.2**
	24nm,0.3s						
KTBS				Lg	Lg	01 51 55.6	
	332nm,0.4s						
DRK	**Karamyk**	**4.02**	**268**	⇑*i*P	Pn	01 50 46.3	-4.9
	baz=77						
DRK				⇑*i*S	**Sn**	**01 51 35.3**	**-3.2**
	baz=77						
PDGK	**Podgornoye**	**4.08**	**27**	Pg	**Pb**	**01 51 01.8**	**+0.6**
	24nm,0.5s						
PDGK				Lg	Lg	01 51 58.3	
	36nm,0.6s						
PDGK	**Podgornoye**	**4.08**	**27**	⇑Pn	**Pn**	**01 50 51.9**	**+0.1**
	6.8nm,0.5s						
PDGK				⇑Pg	**Pb**	**01 51 02.8**	**+1.5**
	32nm,0.6s						
PDGK				⇑Lg	Lg	01 51 59.3	
	92nm,0.9s						
SGDS	**Sogindy**	**4.14**	**335**	Pg	**Pb**	**01 51 02.1**	**-0.2**
	32nm,0.3s						
SGDS				Lg	Lg	01 51 58.7	
	67nm,0.6s						
CHKK	**Chushkaly**	**4.14**	**360**	*e*P	**Pb**	**01 51 03.5**	**+1.2**
	19nm,0.4s						
CHKK				*e*S	**Sg**	**01 52 01.2**	**-1.2**
	148nm,0.3s						
CHKK	**Chushkaly**	**4.14**	**360**	Pg	**Pb**	**01 51 03.5**	**+1.2**
	19nm,0.4s						
CHKK				Lg	Lg	01 52 01.2	
	148nm,0.3s						
MRKS	**Merke**	**4.16**	**318**	*e*P	**Pb**	**01 51 01.3**	**-1.3**
	76nm,0.2s						
MRKS				⇓*i*S	**Sb**	**01 51 57.5**	**+4.6**
	91nm,0.5s						
MRKS	**Merke**	**4.16**	**318**	Pg	**Pb**	**01 51 01.3**	**-1.3**
	76nm,0.2s						
MRKS				Lg	Lg	01 51 57.5	
	91nm,0.5s						
KUU	**Kurty**	**4.21**	**354**	*e*P	**Pb**	**01 51 04.3**	**+0.9**
	12nm,0.4s						
KUU				*e*S	**Sg**	**01 52 02.5**	**-2.0**
	158nm,0.4s						
KUU	**Kurty**	**4.21**	**354**	Pg	**Pb**	**01 51 04.3**	**+0.9**
	12nm,0.4s						
KUU				Lg	Lg	01 52 02.5	
	158nm,0.4s						
MNAS	**Manas**	**4.38**	**311**	⇑*i*P	**Pn**	**01 50 56.5**	**+0.4**
	baz=15						
MNAS				⇑*i*S	**Sn**	**01 51 52.2**	**+5.0**
	baz=15						
MNBS	**Baschi**	**4.49**	**13**	*e*P	**Pb**	**01 51 10.5**	**+2.2**
	24nm,0.5s						
MNBS				*e*S	**Sg**	**01 52 13.3**	**-0.3**
	103nm,0.5s						
MNBS	**Baschi**	**4.49**	**13**	Pg	**Pb**	**01 51 10.5**	**+2.2**
	24nm,0.5s						
MNBS				Lg	Lg	01 52 13.3	
	103nm,0.5s						
KTMS	**Ketmen**	**4.50**	**33**	*e*P	**Pb**	**01 51 09.9**	**+1.3**
	19nm,0.1s						
KTMS				*e*S	**Sg**	**01 52 12.1**	**-1.8**
	61nm,0.7s						
KTMS	**Ketmen**	**4.50**	**33**	Pg	**Pb**	**01 51 09.9**	**+1.3**
	19nm,0.1s						
KTMS				Lg	Lg	01 52 12.1	
	61nm,0.7s						
ARXS	**Arharly**	**4.54**	**8**	*e*P	**Pb**	**01 51 10.8**	**+1.6**
	42nm,0.3s						
ARXS				*e*S	**Sg**	**01 52 13.5**	**-1.7**
	144nm,0.5s						
ARXS	**Arharly**	**4.54**	**8**	Pg	**Pb**	**01 51 10.8**	**+1.6**
	42nm,0.3s						
ARXS				Lg	Lg	01 52 13.5	
	144nm,0.5s						
BTK	**Batken**	**4.76**	**276**	⇑*i*P	Pn	01 50 57.6	-3.6
	baz=83						
BTK				⇑*i*S	**Sn**	**01 51 54.7**	**-1.8**
	baz=83						
TRKS	**Terek-Say**	**4.81**	**294**	⇑*i*P	**Pn**	**01 50 59.4**	**-2.6**
	baz=99						
TRKS				⇑*i*S	**Sn**	**01 51 58.4**	**+0.6**
	baz=99						
DJR	**Jarkent**	**5.07**	**23**	*e*P	**Pb**	**01 51 20.1**	**+2.0**
	15nm,0.3s						
DJR				*e*S	**Sg**	**01 52 29.7**	**-2.3**
	38nm,0.3s						
DJR	**Jarkent**	**5.07**	**23**	Pg	**Pb**	**01 51 20.1**	**+2.0**
	15nm,0.3s						
DJR				Lg	Lg	01 52 29.7	
	38nm,0.3s						
DZA	**Taraz**	**5.32**	**309**	*e*P	**Pb**	**01 51 23.4**	**+1.0**
	121nm,0.1s						
DZA				*e*S	**Sg**	**01 52 35.3**	**-4.7**
	83nm,0.3s						
DZA	**Taraz**	**5.32**	**309**	Pg	**Pb**	**01 51 23.4**	**+1.0**
	121nm,0.1s						
DZA				Lg	Lg	01 52 35.3	
	83nm,0.3s						
TDK	**Taldyqorghan**	**5.39**	**11**	*e*P	**Pb**	**01 51 26.1**	**+2.5**
	52nm,0.2s						
TDK				*e*S	**Sg**	**01 52 39.8**	**-2.6**
	155nm,0.4s						
TDK	**Taldyqorghan**	**5.39**	**11**	Pg	**Pb**	**01 51 26.1**	**+2.5**
	52nm,0.2s						
TDK				Lg	Lg	01 52 39.8	
	155nm,0.4s						
BTLS	**Baital**	**5.76**	**339**	*e*P	**Pb**	**01 51 33.2**	**+3.4**
	5.2nm,0.4s						
BTLS				*e*S	**Sg**	**01 52 52.4**	**-1.8**
	26nm,0.3s						
BTLS	**Baital**	**5.76**	**339**	Pg	**Pb**	**01 51 33.2**	**+3.4**
	5.2nm,0.4s						
BTLS				Lg	Lg	01 52 52.3	
	26nm,0.3s						
IUG	**Iuzhnay**	**5.81**	**297**	*e*P	**Pb**	**01 51 31.4**	**+0.7**
	34nm,0.3s						
IUG				*e*S	**Sb**	**01 52 49.1**	**+8.7**
	74nm,0.5s						
IUG	**Iuzhnay**	**5.81**	**297**	Pg	**Pb**	**01 51 31.4**	**+0.7**
	34nm,0.3s						
IUG				Lg	Lg	01 52 49.1	
	74nm,0.5s						
KAPS	**Kapalarasan**	**5.84**	**17**	Pg	Pb	01 51 36.2	+4.9
	9.8nm,0.2s						
KAPS				Lg	Lg	01 52 57.3	
	29nm,0.3s						
KK31	**Karatay Array**	**5.94**	**307**	Pn	**Pn**	**01 51 17.2**	**-0.1**
	0.7nm,0.3s,baz=79,slow=39,SNR=52						
KK31				Pg	**Pb**	**01 51 34.9**	**+2.0**
	9.8nm,0.6s,baz=133,slow=16,SNR=24						
KK31				⇑Lg	Lg	01 52 56.2	
	6.5nm,0.5s						
BRLS	**Borolday**	**6.32**	**304**	Pg	**Pb**	**01 51 41.4**	**+1.9**
	38nm,0.3s						
BRLS				Lg	Lg	01 53 06.1	
	39nm,0.3s						
CEP	**Cherat**	**7.15**	**216**	P	Pn	01 51 29.1	-5.0
DHRM	**DHARAMSHALA**	**7.46**	**185**	*e*P	Pn	01 51 32.1	-6.4
DHRM				*e*S	Sn	01 52 50.6	-13
DHRM				*e*S	Sn	01 52 50.8	-13
DHRM				IAML		01 52 57.6	
	comp=E,254nm,0.4s						
MAKZ	**Makanchi**	**7.97**	**25**	⇓Pn	**Pn**	**01 51 45.9**	**+0.6**
	comp=E,0.7nm,0.7s						
MAKZ				⇑Pg	Pb	01 52 13.1	+5.6
	comp=E,2.5nm,0.8s						
MAKZ				⇑Lg	Lg	01 54 02.6	
	comp=E,5.4nm,0.9s						
MK31	**Makanchi Array**	**8.07**	**27**	⇓Pn	**Pn**	**01 51 47.1**	**+0.6**
	comp=E,0.2nm,0.3s,baz=196,slow=15,SNR=11						
MK31				⇑Pg	Pb	01 52 16.1	+6.9
	comp=E,1.0nm,0.5s,baz=205,slow=11,SNR=3.6						
MK31				⇑Lg	Lg	01 54 04.8	
	comp=E,5.0nm,0.8s,baz=205,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**8.07**	**27**	Pn	**Pn**	**01 51 46.0**	**-0.6**
	comp=E,0.1nm,0.3s,baz=205,slow=15,SNR=4.4						
THW	**Thamme Wali**	**8.10**	**213**	P	Pn	01 51 40.6	-6.4
SMLA	**Simla**	**8.56**	**179**	*e*P	Pn	01 51 47.8	-5.5
SMLA				*e*S	Sn	01 53 15.6	-14
SMLA				IAML		01 53 22.6	
	comp=N,79nm,0.2s						
SMLA				IAML		01 53 23.2	
	comp=E,78nm,0.4s						
WMQ	**Urumqi**	**8.99**	**59**	*e*P	**Pn**	**01 52 03.0**	**+3.7**
WMQ				smax	smax		
	comp=E,25nm,1.1s						
WMQ				smax	smax		
	comp=E,25nm,0.9s						
KURBB	**Kurchatov Arra**	**10.97**	**5**	Pn	**Pn**	**01 52 24.9**	**-1.3**
	comp=E,0.1nm,0.3s,baz=190,slow=16,SNR=3.2						
KURBB				Lg	Lg	01 55 39.0	
	comp=E,0.1nm,0.3s,baz=193,slow=32,SNR=4.1						
KURK	**Kurchatov**	**11.07**	**5**	⇑Lg	Lg	01 55 41.5	
	comp=E,23nm,1.1s						
BVAR	**Borovoye Array**	**14.07**	**343**	Pn	**Pn**	**01 53 08.3**	**-0.3**
	comp=E,0.1nm,0.3s,baz=146,slow=13,SNR=3.6						
BVAR				Lg	Lg	01 57 14.7	
	comp=E,0.2nm,0.3s,baz=153,slow=26,SNR=6.6						
BRVK	**Borovoye**	**14.12**	**343**	⇓Lg	Lg	01 57 16.4	
	comp=E,15nm,1.1s						
GEYT	**Alibeck**	**14.82**	**269**	Pn	Pn	01 53 10.8	-8.2
	comp=E,0.3nm,0.3s,baz=71,slow=15,SNR=1.8						
GEYT				Sn	Sn	01 55 43.5	-20
	comp=E,0.3nm,0.3s,baz=156,slow=44,SNR=1.6						
ZALV	**Zalesovo Beam**	**15.20**	**18**	Pn	**Pn**	**01 53 22.1**	**-1.9**
	comp=E,0.2nm,0.3s,baz=207,slow=12,SNR=2.4						
AB31	**Akbulak array**	**15.43**	**314**	⇓Pn	**Pn**	**01 53 25.3**	**-1.7**
	comp=E,0.9nm,0.6s,baz=120,slow=12,SNR=7.7						
BHPL	**Bhopal**	**16.42**	**179**	*e*P	Pn	01 53 31.8	-8.1
BHPL				*e*S	Sn	01 56 17.4	-25
GTA	**Gaotai**	**17.60**	**84**	*e*P	**Pn**	**01 53 52.8**	**-2.0**
GTA				pP	P	01 53 57.0	+1.2
GTA				sP	pP	01 53 59.8	+0.8
GTA				pmax	pmax		
	comp=E,2.0nm,0.9s						
SONM	**Songino Array**	**22.63**	**59**	P	**P**	**01 54 48.4**	**-2.0**
	comp=E,0.4nm,0.7s,baz=256,slow=11,SNR=4.3						
YKA	**Yellowknife Ar**	**77.72**	**5**	P	P	02 01 41.5	-4.4
	comp=E,0.1nm,0.3s,baz=355,slow=5.0,SNR=1.5						

TIF ***30*** *01:56:49.6, 42°.33N×43°.04E, h3^{km}*
MOS ***30*** *01:56:50.7±1.1, 42°.31N×43°.01E, h7^{km}, mb4.3/7, Error ellipse: s-maj=4.7km s-min=3.6km az=83.7*
NORS ***30*** *01:56:50.0±0.0, 42°.24N×43°.08E, h1^{km}, MPVA4.1*
MOS ***30*** *01:56:50.1±0.0, 42°.34N×43°.05E, h1^{km}, MPVA4.2*
IDC ***30*** *01:56:50.2±0.6, 42°.35N×42°.95E, h0^{km}, mb3.8/15, mb1 3.9/19, mb1mx3.7/47, mbtmp3.8/19, ML2.7/3, MS4.0/1, Ms1 4.0/1, ms1mx2.6/44, Error ellipse: s-maj=11.7km s-min=7.5km az=70.0*
NEIC ***30*** *01:56:51.6±2.5, 42°.30N±0°.04×43°.08E±0°.09, h11^{km}±5^{km}, mb4.0/8, Error ellipse: s-maj=9.4km s-min=6.0km az=73.0*
DDA ***30*** *01:56:51.4, 42°.21N×43°.02E, h11^{km}±2^{km}, ML3.3*
ISK ***30*** *01:56:53.4, 42°.15N×42°.97E, h5^{km}, ML3.2/14*
ISC 30 01:56:50.0±1.1, **42°.31N**±0°.01×**43°.04E**±0°.01, **h1**^{km}±7^{km}, **n218, σ1§67**/308, **mb3.9**/19, **12C-8D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKB	**Tkibuli**	**0.05**	**319**	P	**Pg**	**01 56 51.0**	**-0.1**
TKB	**Tkibuli**	**0.05**	**319**	PG	**Pg**	**01 56 50.9**	**-0.1**
ABS	**Abastumani**	**0.58**	**197**	P	**Pg**	**01 57 02.3**	**+1.1**
ABS				S	**Sb**	**01 57 12.0**	**0.0**
ABS	**Abastumani**	**0.58**	**197**	PG	**Pg**	**01 57 02.3**	**+1.1**
BKRG	**Bakuriani**	**0.66**	**147**	P	**Pg**	**01 57 03.5**	**+0.8**
BKRG				S	**Sb**	**01 57 14.0**	**-0.2**
BKRG	**Bakuriani**	**0.66**	**147**	PG	**Pg**	**01 57 03.5**	**+0.8**
DIGR	**Digorskoe uzhe**	**0.71**	**34**	*i* Pg	**Pg**	**01 57 03.3**	**-0.3**
DIGR				*e*Sg	**Sg**	**01 57 13.8**	**+0.9**
DIGR	**Digorskoe uzhe**	**0.71**	**34**	*e*PG	**Pg**	**01 57 03.3**	**-0.3**
DIGR				*e*S	**Sg**	**01 57 14.3**	**+1.5**
ZEI	**Tsey**	**0.80**	**53**	*i* Pg	**Pg**	**01 57 04.8**	**-0.5**
ZEI				*e*Sg	**Sg**	**01 57 17.2**	**+1.6**
ZEI	**Tsey**	**0.80**	**53**	⇑*i*PG	**Pg**	**01 57 05.0**	**-0.3**
ZEI				*e*S	**Sb**	**01 57 17.3**	**-0.8**
CHVG	**Ch'k'valeri**	**0.81**	**300**	P	**Pg**	**01 57 05.8**	**+0.2**
BRNG	**Burnasheti**	**0.91**	**139**	P	**Pg**	**01 57 08.2**	**+0.8**
NEY	**Neytrino**	**0.96**	**346**	*e*Pg	**Pg**	**01 57 08.3**	**-0.2**
NEY				*e*Sg	**Sg**	**01 57 20.6**	**-0.4**
NEY	**Neytrino**	**0.96**	**346**	*e*PG	**Pg**	**01 57 08.5**	**0.0**
NEY				*e*S	**Sn**	**01 57 25.1**	**-0.2**
AKH	**Akhalkalaki**	**0.96**	**159**	P	**Pg**	**01 57 09.2**	**+0.7**
AKH				S	**Sb**	**01 57 23.9**	**+0.9**
AKH	**Akhalkalaki**	**0.96**	**159**	PG	**Pg**	**01 57 09.6**	**+1.1**
AKH				SG	**Sb**	**01 57 23.5**	**+0.5**
AKH	**Akhalkalaki**	**0.96**	**159**	*e*Pg	**Pg**	**01 57 09.2**	**+0.7**
AKH				*e*Sg	**Sb**	**01 57 24.1**	**+1.1**
AKH	**Akhalkalaki**	**0.96**	**159**	*e*PG	**Pg**	**01 57 09.2**	**+0.7**
AKH				*e*S	**Sb**	**01 57 24.1**	**+1.1**
AKH	**Akhalkalaki**	**0.96**	**159**	Pg	**Pg**	**01 57 09.3**	**+0.8**
LACR	**Lac**	**1.06**	**61**	*e*Pg	**Pg**	**01 57 09.1**	**-1.3**
LACR				*e*Sg	**Sg**	**01 57 25.2**	**+1.0**
LACR	**Lac**	**1.06**	**61**	*e*PG	**Pg**	**01 57 09.7**	**-0.7**
LACR				*e*S	**Sg**	**01 57 25.2**	**+1.0**
KORR	**Kora**	**1.08**	**44**	*e*Pg	**Pg**	**01 57 10.9**	**+0.1**
KORR				*e*Sg	**Sg**	**01 57 25.9**	**+1.1**
KORR	**Kora**	**1.08**	**44**	*e*PG	**Pg**	**01 57 10.9**	**+0.1**
KORR				*e*S	**Sg**	**01 57 25.9**	**+1.1**
LSNR	**Lesken**	**1.12**	**31**	*e*Pg	**Pg**	**01 57 11.8**	**+0.3**
LSNR				*e*Sg	**Sb**	**01 57 27.9**	**+0.5**
LSNR	**Lesken**	**1.12**	**31**	*e*PG	**Pg**	**01 57 11.9**	**+0.3**
LSNR				*e*S	**Sb**	**01 57 27.9**	**+0.5**
NCK	**Nalchik**	**1.25**	**19**	*e*Pg	**Pb**	**01 57 14.8**	**+0.4**
NCK				*e*Sg	**Sn**	**01 57 34.0**	**+1.9**
NCK	**Nalchik**	**1.25**	**19**	*e*PG	**Pn**	**01 57 15.4**	**+0.7**
NCK				*e*S	**Sn**	**01 57 34.4**	**+2.2**
ARNR	**Ardon**	**1.26**	**46**	*e*Pg	**Pb**	**01 57 14.9**	**+0.3**
ARNR				*e*Sg	**Sb**	**01 57 31.9**	**+0.5**
ARNR	**Ardon**	**1.26**	**46**	*e*PG	**Pb**	**01 57 15.0**	**+0.3**
ARNR				*e*S	**Sn**	**01 57 32.6**	**+0.2**
STDR	**Stavd-Durt**	**1.30**	**35**	*e*Pg	**Pb**	**01 57 16.1**	**+0.9**
STDR				*e*Sg	**Sn**	**01 57 34.5**	**+1.2**
STDR	**Stavd-Durt**	**1.30**	**35**	*e*PG	**Pb**	**01 57 16.1**	**+0.9**
STDR				*e*S	**Sn**	**01 57 34.5**	**+1.2**
DMNI	**Dmanisi**	**1.31**	**138**	P	**Pn**	**01 57 14.7**	**-0.9**
DMNI				S	**Sn**	**01 57 33.7**	**0.0**
KZRT	**Kazreti**	**1.38**	**132**	P	**Pn**	**01 57 15.6**	**-0.8**
KZRT				S	**Sg**	**01 57 35.0**	**+0.8**
KZRT	**Kazreti**	**1.38**	**132**	*i* P	**Pn**	**01 57 15.5**	**-0.9**
KZRT				*i* S	**Sb**	**01 57 33.6**	**-1.1**
KZRT	**Kazreti**	**1.38**	**132**	PG	**Pn**	**01 57 15.5**	**-0.9**
KZRT				*i* S	**Sb**	**01 57 33.6**	**-1.1**
DBOC	**Borcka**	**1.41**	**227**	*i* P	**Pn**	**01 57 16.4**	**-0.4**
DBOC				*i* S	**Sb**	**01 57 35.6**	**0.0**
DBOC				IAML		01 57 37.0	
	comp=E,777nm,0.5s						
VLKR	**Vladikavkaz**	**1.41**	**58**	*e*Pg	**Pg**	**01 57 18.1**	**+1.0**
VLKR				*e*Sg	**Sn**	**01 57 40.1**	**+3.8**
VLKR	**Vladikavkaz**	**1.41**	**58**	*e*PG	**Pg**	**01 57 18.2**	**+1.1**
VLKR				*e*S	**Sn**	**01 57 37.6**	**+1.4**
KBZ	**Khabaz**	**1.42**	**356**	LR	LR	01 57 15.9	
	comp=E,56nm,21.4s,baz=106,slow=19						
KBZ				Pg	**Pn**	**01 57 16.4**	**-0.5**
	comp=E,12nm,0.3s,baz=177,slow=14,SNR=142						
KBZ				Lg	Lg	01 57 37.0	
	comp=E,6.5nm,0.3s,baz=304,slow=18,SNR=7.4						
KBZ	**Khabaz**	**1.42**	**356**	*e*Pg	**Pn**	**01 57 16.9**	**0.0**
KBZ				*e*Sg	**Sg**	**01 57 36.6**	**+1.0**
KBZ	**Khabaz**	**1.42**	**356**	*e*PG	**Pn**	**01 57 16.9**	**0.0**
KBZ				*e*S	**Sg**	**01 57 36.6**	**+1.0**
BTNK	**Botanikuri**	**1.46**	**115**	P	**Pg**	**01 57 19.3**	**+1.4**
BTNK				S	**Sg**	**01 57 40.1**	**+3.3**
BTNK	**Botanikuri**	**1.46**	**115**	*i* P	**Pg**	**01 57 19.3**	**+1.4**
BTNK				*i* S	**Sg**	**01 57 39.1**	**+2.3**
BTNK				IAML		01 58 06.0	
	comp=E,467nm,2.6s						
BTNK	**Botanikuri**	**1.46**	**115**	PG	**Pg**	**01 57 19.3**	**+1.4**
BTNK				*i* S	**Sg**	**01 57 39.1**	**+2.3**
KBTC	**Kuba-Taba**	**1.53**	**10**	*e*Pg	**Pg**	**01 57 19.9**	**+0.6**
KBTC				*e*Sg	**Sn**	**01 57 38.3**	**-0.7**
KBTC	**Kuba-Taba**	**1.53**	**10**	*e*PG	**Pg**	**01 57 20.6**	**+1.3**

KBTC				*e*S	Sg	01 57 43.7	+4.6
BTKR	**Batakoyurt**	**1.53**	**46**	*e*Pg	**Pg**	**01 57 20.5**	**+1.1**
BTKR				*e*Sg	**Sg**	**01 57 39.9**	**+0.7**
BTKR	**Batakoyurt**	**1.53**	**46**	*e*PG	**Pg**	**01 57 20.5**	**+1.1**
BTKR				*e*S	**Sg**	**01 57 39.9**	**+0.7**
KMGR	**Komgaron**	**1.54**	**61**	*e*Pg	**Pg**	**01 57 20.4**	**+0.9**
KMGR				*e*Sg	**Sg**	**01 57 41.1**	**+1.6**
KMGR	**Komgaron**	**1.54**	**61**	*e*PG	**Pg**	**01 57 20.7**	**+1.2**
KMGR				*e*S	**Sg**	**01 57 42.8**	**+3.3**
KVAR	**Kislovodsk Arr**	**1.66**	**351**	Pn	**Pg**	**01 57 22.7**	**+0.9**
	baz=272,slow=24,SNR=131						
KVAR				Lg	Lg	01 57 43.9	
	baz=85,slow=23,SNR=3.0						
KIV	**Kislovodsk**	**1.66**	**351**		**Pb**	**01 57 21.3**	**-0.2**
EAK	**Akyaka**	**1.68**	**165**	*i* P	**Pn**	**01 57 20.1**	**-0.6**
EAK				*i* S	**Sn**	**01 57 40.2**	**-2.8**
EAK				IAML		01 57 44.0	
	comp=E,306nm,0.7s						
EAK				IAML		01 57 50.0	
	comp=N,342nm,0.6s						
PRTR	**Priterechnaya**	**1.70**	**32**	*e*Pg	**Pg**	**01 57 23.7**	**+1.0**
PRTR				*e*Sg	**Sg**	**01 57 48.3**	**+3.6**
PRTR	**Priterechnaya**	**1.70**	**32**	*e*PN	**Pg**	**01 57 23.7**	**+1.0**
PRTR				*e*S	**Sg**	**01 57 48.3**	**+3.6**
BEYR	**Belyy Ugol+**	**1.71**	**355**	*e*Pg	**Pb**	**01 57 22.9**	**+0.7**
BEYR				*e*Sg	**Sn**	**01 57 43.7**	**+0.3**
BEYR	**Belyy Ugol+**	**1.71**	**355**	*e*PN	**Pb**	**01 57 22.9**	**+0.7**
BEYR				*e*S	**Sn**	**01 57 43.7**	**+0.3**
PYA1	**Pyatigorsk**	**1.75**	**1**	*i* Pg	**Pb**	**01 57 22.6**	**-0.3**
PYA1				*e*Sg	**Sb**	**01 57 45.3**	**-0.1**
PYA1	**Pyatigorsk**	**1.75**	**1**	*i* PN	**Pb**	**01 57 22.6**	**-0.3**
PYA1				*e*S	**Sb**	**01 57 45.3**	**-0.1**
ARXR	**Arkhyz**	**1.80**	**315**	*i* Pg	**Pb**	**01 57 24.5**	**+0.7**
ARXR				*e*Sg	**Sg**	**01 57 50.1**	**+2.3**
ARXR	**Arkhyz**	**1.80**	**315**	*i* PN	**Pb**	**01 57 24.5**	**+0.7**
ARXR				*e*S	**Sg**	**01 57 50.1**	**+2.3**
SENK	**Senkaya-Erzuru**	**1.83**	**197**	PN	**Pb**	**01 57 24.7**	**+0.4**
TRKR	**Terskaya**	**1.88**	**41**	*e*Pg	**Pb**	**01 57 25.7**	**+0.7**
TRKR				*e*Sg	**Sg**	**01 57 52.6**	**+2.2**
TRKR	**Terskaya**	**1.88**	**41**	*e*PN	**Pb**	**01 57 25.8**	**+0.7**
TRKR				*e*S	**Sg**	**01 57 52.5**	**+2.1**
DIGO	**Kars**	**1.91**	**172**	*i* P	**Pn**	**01 57 23.8**	**-0.2**
GROC	**Groznyy**	**2.22**	**65**	*e*Pg	**Pn**	**01 57 29.2**	**+1.3**
GROC				*e*Sg	**Sb**	**01 57 58.8**	**-0.1**
GROC	**Groznyy**	**2.22**	**65**	*e*PN	**Pn**	**01 57 29.2**	**+1.3**
GROC				*e*S	**Sb**	**01 57 58.8**	**-0.1**
AHMR	**Akhmetovskaya**	**2.35**	**322**	*e*Pn	**Pb**	**01 57 32.2**	**-1.0**
AHMR				*e*Sn	**Sb**	**01 58 03.2**	**+0.6**
DVE	**Vedeno**	**2.37**	**73**	*e*Pn	**Pb**	**01 57 34.3**	**+0.8**
DVE				*e*Sn	**Sg**	**01 58 06.6**	**+0.5**
DVE	**Vedeno**	**2.37**	**73**	*e*PN	**Pb**	**01 57 34.3**	**+0.8**
DVE				*e*S	**Sg**	**01 58 06.6**	**+0.5**
BTLR	**Botlikh**	**2.38**	**80**	*e*Pn	**Pb**	**01 57 33.3**	**-0.4**
BTLR				*e*Sn	**Sg**	**01 58 05.5**	**-1.0**
BTLR	**Botlikh**	**2.38**	**80**	*e*PN	**Pb**	**01 57 33.3**	**-0.4**
BTLR				*e*S	**Sg**	**01 58 05.5**	**-1.0**
HOMI	**Horasan**	**2.42**	**201**	*i* P	**Pn**	**01 57 31.7**	**+0.7**
HOMI				IAML		01 58 21.0	
	comp=E,248nm,1.3s						
HOMI				IAML		01 58 26.0	
	comp=N,215nm,1.8s						
LGD	**Lagodekhi**	**2.43**	**100**	P	**Pn**	**01 57 32.6**	**+1.7**
LGD				S	**Sg**	**01 58 07.3**	**-0.9**
LGD	**Lagodekhi**	**2.43**	**100**	*e*Pn	**Pb**	**01 57 33.4**	**-1.2**
LGD				*e*Sn	**Sb**	**01 58 06.8**	**+1.7**
LGD	**Lagodekhi**	**2.43**	**100**	⇓*e*PN	**Pb**	**01 57 33.4**	**-1.2**
LGD				*e*S	**Sb**	**01 58 06.8**	**+1.7**
DDFL	**Dedoflistskaro**	**2.46**	**110**	P	**Pb**	**01 57 34.3**	**-0.7**
DDFL				S	**Sg**	**01 58 13.3**	**+4.3**
DDFL	**Dedoflistskaro**	**2.46**	**110**	*i* P	**Pb**	**01 57 35.0**	**0.0**
DDFL				*i* S	**Sg**	**01 58 09.0**	**0.0**
DDFL	**Dedoflistskaro**	**2.46**	**110**	PN	**Pb**	**01 57 34.6**	**-0.5**
DDFL				*i* S	**Sg**	**01 58 09.0**	**0.0**
RPOR	**Krasnaya Polya**	**2.46**	**305**	*i* Pn	**Pn**	**01 57 32.8**	**+1.5**
RPOR				*e*Sn	**Sb**	**01 58 07.4**	**+1.5**
RPOR	**Krasnaya Polya**	**2.46**	**305**	*i* PN	**Pn**	**01 57 32.8**	**+1.5**
RPOR				*e*S	**Sb**	**01 58 07.4**	**+1.5**
EATA	**Eleskirt**	**2.48**	**190**	*i* P	**Pb**	**01 57 34.2**	**-1.5**
VSLR	**Vesyoloye**	**2.49**	**298**	*e*Pn	**Pb**	**01 57 34.6**	**-0.9**
VSLR				*e*Sn	**Sb**	**01 58 07.9**	**+1.3**
VSLR	**Vesyoloye**	**2.49**	**298**	*e*PN	**Pb**	**01 57 34.6**	**-0.9**
VSLR				*e*S	**Sb**	**01 58 07.9**	**+1.3**
TASB	**TASBURUN-IGDIR**	**2.50**	**158**	PN	**Pb**	**01 57 35.0**	**-0.7**
KOTA	**Agri, Merkez-K**	**2.51**	**177**	*i* P	**Pb**	**01 57 34.9**	**-1.1**
GNI	**Garni**	**2.52**	**149**	Pn	**Pb**	**01 57 37.1**	**+1.0**
	comp=N,14nm,0.3s,baz=320,slow=4.5,SNR=162						
GNI				Sn	**Sb**	**01 58 08.1**	**+0.5**
	comp=N,3.9nm,0.3s,baz=239,slow=16,SNR=3.2						
GNI	**Garni**	**2.52**	**149**	PN	**Pb**	**01 57 35.7**	**-0.4**
GNI	**Garni**	**2.52**	**149**	Pn	**Pn**	**01 57 33.1**	**+1.0**
KRIK	**Erzurum-spir**	**2.54**	**220**	*i* P	**Pn**	**01 57 33.8**	**+1.3**
KRIK				*i* S	**Sb**	**01 58 06.7**	**-1.5**
AKDA	**Akdag**	**2.54**	**210**	*i* P	**Pb**	**01 57 35.4**	**-1.2**
IGDI	**IGDIR**	**2.57**	**162**	*i* P	**Pn**	**01 57 34.5**	**+1.6**
GUZR	**Guzeripl'**	**2.72**	**309**	*i* Pn	**Pn**	**01 57 36.6**	**+1.7**
GUZR				*e*Sn	**Sb**	**01 58 13.5**	**+0.2**
GUZR	**Guzeripl'**	**2.72**	**309**	*i* PN	**Pn**	**01 57 36.6**	**+1.7**
GUZR				*e*S	**Sb**	**01 58 13.5**	**+0.2**
XNZR	**Khunzakh**	**2.73**	**84**	*e*Pn	**Pb**	**01 57 38.9**	**-0.7**
XNZR				*e*Sn	**Sb**	**01 58 11.6**	**-2.0**
XNZR	**Khunzakh**	**2.73**	**84**	*e*PN	**Pb**	**01 57 38.9**	**-0.7**
XNZR				*e*S	**Sb**	**01 58 11.6**	**-2.0**
AGRB	**Hanur-Agry**	**2.74**	**181**	PN	**Pn**	**01 57 37.3**	**+2.0**
GOF	**Gofitskoye**	**2.74**	**0**	*e*Pn	**Pb**	**01 57 38.4**	**-1.4**
GOF				*e*Sn	**Sb**	**01 58 13.7**	**-0.3**
GOF	**Gofitskoye**	**2.74**	**0**	*e*PN	**Pb**	**01 57 38.4**	**-1.4**
GOF				*e*S	**Sb**	**01 58 13.7**	**-0.3**
SOC	**Sochi**	**2.75**	**299**	*e*Pn	**Pb**	**01 57 38.5**	**-1.5**
SOC				*e*Sn	**Sb**	**01 58 14.3**	**+0.2**
SOC	**Sochi**	**2.75**	**299**	*e*PN	**Pn**	**01 57 34.7**	**-0.5**
SOC				*e*		01 57 41.4	
SOC				*e*PPP	PPP	01 57 44.3	
SOC				*e*		01 58 08.6	
SOC				pmax	pmax		
	comp=Z,34nm,0.8s						
SOC				MLR	MLR		
	comp=Z,197nm,8.0s						
ZKTA	**Zakatala**	**2.76**	**103**	PN	**Pn**	**01 57 37.2**	**+1.8**
EMRE	**Erzurum,Aziziy**	**2.76**	**215**	*i* P	**Pb**	**01 57 39.1**	**-1.2**
EMRE				IAML		01 58 29.0	
	comp=E,208nm,0.7s						
EMRE				IAML		01 58 36.0	
	comp=N,175nm,0.9s						
KTUT	**Trabzon**	**2.79**	**243**	PN	**Pb**	**01 57 39.1**	**-1.5**
MACK	**Trabzon**	**2.81**	**242**	*i* P	**Pn**	**01 57 35.4**	**-0.7**
DYDN	**Diyadin**	**2.81**	**170**	*i* P	**Pn**	**01 57 38.7**	**+2.4**
LABN	**Labinsk**	**2.87**	**325**	*e*Pn	**Pn**	**01 57 39.3**	**+2.4**
LABN				*e*Sn	**Sb**	**01 58 15.7**	**-2.0**
LABN	**Labinsk**	**2.87**	**325**	*e*PN	**Pn**	**01 57 39.3**	**+2.4**
LABN				*e*S	**Sb**	**01 58 15.7**	**-2.0**
DBC	**Dubki**	**2.88**	**75**	*e*Pn	**Pb**	**01 57 40.1**	**-2.2**
DBC				*e*Sn	**Sb**	**01 58 16.1**	**-2.1**
DBC	**Dubki**	**2.88**	**75**	*e*PN	**Pb**	**01 57 40.1**	**-2.2**
DBC				*e*S	**Sb**	**01 58 16.1**	**-2.1**
BAYT	**Aydıntepe-Bayb**	**2.90**	**230**	PN	**Pn**	**01 57 40.1**	**+2.6**
GANJ	**Ganja**	**2.98**	**123**	PN	**Pn**	**01 57 41.3**	**+2.9**
KOPT	**Kop Dagi**	**2.99**	**221**	*i* P	**Pn**	**01 57 41.8**	**+2.9**
KOPT				*i* S	**Sg**	**01 58 29.4**	**+3.3**
KOPT				IAML		01 58 40.0	
	comp=N,107nm,1.0s						
KOPT	**Kop Dagi**	**2.99**	**221**	Pn	**Pn**	**01 57 40.7**	**+1.9**
BUJR	**Buynaksk**	**3.05**	**79**	*e*Pn	**Pb**	**01 57 44.0**	**-1.2**
BUJR				*e*Sn	**Sn**	**01 58 19.1**	**+2.6**
BUJR	**Buynaksk**	**3.05**	**79**	*e*PN	**Pb**	**01 57 45.7**	**+0.6**
BUJR				*e*S	**Sb**	**01 58 22.1**	**-0.7**
ECAT	**Cat-ERZURUM**	**3.12**	**211**	*i* P	**Pn**	**01 57 43.0**	**+2.4**
LZRR	**Lazarevskoye**	**3.13**	**302**	*e*Pn	**Pn**	**01 57 43.4**	**+2.9**
LZRR				*e*Sn	**Sb**	**01 58 22.9**	**-2.2**
LZRR	**Lazarevskoye**	**3.13**	**302**	*e*PN	**Pn**	**01 57 43.4**	**+2.9**
LZRR				*e*S	**Sb**	**01 58 22.9**	**-2.2**
CLDR	**Caldiran**	**3.24**	**168**	PN	**Pn**	**01 57 44.9**	**+2.7**
CLDR	**Caldiran**	**3.24**	**168**	*i* P	**Pn**	**01 57 43.0**	**+0.9**
SEKA	**Sheki**	**3.30**	**108**	PN	**Pn**	**01 57 45.3**	**+2.4**
MAK	**Makhachkala**	**3.36**	**77**	*i* PN	**Pn**	**01 57 43.3**	**-0.3**
KARO	**Karliova-Bingo**	**3.36**	**207**	PN	**Pn**	**01 57 46.6**	**+2.8**
VRTB	**Varto-Mus**	**3.37**	**201**	PN	**Pn**	**01 57 46.8**	**+2.8**
TPSR	**Tuapse**	**3.38**	**303**	*e*Pn	**Pn**	**01 57 46.1**	**+2.2**
TPSR				*e*Sn	**Sb**	**01 58 30.2**	**-2.0**
TPSR	**Tuapse**	**3.38**	**303**	*e*PN	**Pn**	**01 57 46.1**	**+2.2**
TPSR				*e*S	**Sb**	**01 58 30.2**	**-2.0**
MNGR	**Mingechevir, A**	**3.41**	**116**	PN	**Pn**	**01 57 47.3**	**+3.0**
URKR	**Urkarakh**	**3.42**	**91**	*e*PN	**Pb**	**01 57 51.3**	**-0.1**
URKR				*e*S	**Sb**	**01 58 30.6**	**-2.9**
YEDI	**Yedisu-Bingol**	**3.44**	**214**	PN	**Pn**	**01 57 47.4**	**+2.5**
KELT	**Kelkit**	**3.58**	**234**	*i* P	**Pn**	**01 57 47.8**	**+0.9**
AKT	**Akhty**	**3.60**	**102**	*e*Pn	**Pn**	**01 57 49.2**	**+2.2**
AKT				*e*Sn	**Sb**	**01 58 34.9**	**-3.9**
AKT	**Akhty**	**3.60**	**102**	*e*PN	**Pn**	**01 57 49.2**	**+2.2**
AKT				*e*S	**Sb**	**01 58 34.9**	**-3.9**
NAX	**Nakhchivan**	**3.65**	**148**	PN	**Pb**	**01 57 55.3**	**-0.1**
OZAP	**Van, Ozalp-Mer**	**3.72**	**168**	*i* P	**Pb**	**01 57 54.9**	**-1.8**
ALUC	**Giresun/Alucra**	**3.77**	**240**	*i* P	**Pn**	**01 57 50.2**	**+0.8**
ALUC				IAML		01 59 10.0	
	comp=E,91nm,1.0s						
ALUC				IAML		01 59 13.0	
	comp=N,68nm,1.3s						
BNGB	**Bingl**	**3.77**	**209**	PN	**Pn**	**01 57 52.9**	**+3.5**
GURO	**Guroymak-BITLI**	**3.84**	**192**	PN	**Pn**	**01 57 53.5**	**+3.2**
ERBR	**Yeremizino-Bor**	**3.87**	**332**	*e*PN	**Pg**	**01 58 03.6**	**-0.5**
ERBR				*e*S	**Sb**	**01 58 48.3**	**+2.0**
BINT	**Bingol**	**3.94**	**210**	PN	**Pn**	**01 57 52.8**	**+1.0**
TNCL	**Tunceli-Merkez**	**4.16**	**221**	*i* P	**Pn**	**01 57 56.6**	**+1.9**
PERV	**Siirt/Pervari-**	**4.38**	**185**	*i* P	**Pn**	**01 58 01.2**	**+3.4**
HANI	**Diyarbakir_Han**	**4.38**	**208**	*i* P	**Pn**	**01 57 58.9**	**+1.1**
SVAN	**Silvan-Diyarba**	**4.39**	**199**	PN	**Pn**	**01 58 01.4**	**+3.6**
SVAN	**Silvan-Diyarba**	**4.39**	**199**	*i* P	**Pn**	**01 58 00.2**	**+2.3**
SRTM	**Siirt_Merkez**	**4.40**	**192**	*i* P	**Pn**	**01 57 59.3**	**+1.2**
ANN	**Anapa**	**4.77**	**303**	*e*PN	**Pn**	**01 58 05.6**	**+2.6**
ANN				pmax	pmax		
	comp=Z,81nm,1.2s						
MARD	**Mardin**	**5.29**	**200**	Pn	**Pn**	**01 58 11.3**	**+1.0**
DIKM	**Dikmen**	**5.84**	**266**	⇑P	**Pn**	**01 58 17.7**	**0.0**
BZK	**Bozkurt**	**6.72**	**270**	⇓P	**Pn**	**01 58 29.4**	**-0.4**
ILGA	**Ilgaz**	**7.09**	**263**	Pn	**Pn**	**01 58 34.8**	**-0.4**
BR131	**Keskin Array S**	**7.56**	**253**	⇑*e*P	**Pn**	**01 58 44.3**	**+2.8**
BRTR	**Keskin Array B**	**7.56**	**253**	Pn	**Pn**	**01 58 43.4**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=61,slow=7.6,SNR=3.6						
BRTR	**Keskin Array B**	**7.56**	**253**	*ce*P	**Pn**	**01 58 44.5**	**+3.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VSR	**Storozhevoye**	**9.29**	**345**	*e*P	**Pn**	**01 59 08.0**	**+3.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LPSR	**Galich'ya Gora**	**10.66**	**346**	*e*P	**Pn**	**01 59 22.9**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CFR	**Carcaliu**	**11.15**	**290**	⇓P	**Pn**	**01 59 27.5**	**-3.0**
VRI	**Vrincioaia**	**12.25**	**292**	⇑P	**Pn**	**01 59 42.7**	**-3.0**
VRI	**Vrincioaia**	**12.25**	**292**	P	**Pn**	**01 59 42.6**	**-3.0**
GEYT	**Alibeck**	**12.34**	**106**	Pn	**Pn**	**01 59 44.7**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=327,slow=10,SNR=2.4						
GYA0B	**ALIBECK ARRAY**	**12.34**	**106**	Pn	**Pn**	**01 59 44.9**	**-2.0**
AKASG	**Malin Array Be**	**12.67**	**316**	Pn	**Pn**	**01 59 47.0**	**-4.2**
	baz=121,slow=14,SNR=1.7						
MLR	**Muntele Rosu**	**12.73**	**290**	Pn	**Pn**	**01 59 48.4**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=95,slow=14,SNR=2.0						
MLR	**Muntele Rosu**	**12.73**	**290**	⇓P	**Pn**	**01 59 49.8**	**-2.5**
MLR	**Muntele Rosu**	**12.73**	**290**	P	**Pn**	**01 59 49.7**	**-2.5**
BIZ	**Bicaz**	**12.91**	**297**	⇓P	**Pn**	**01 59 51.9**	**-2.7**
AKTO	**Aktyubinsk**	**13.13**	**47**	Pn	**Pn**	**01 59 54.9**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=272,slow=15,SNR=5.3						
VOIR		**13.35**	**290**	⇑P	**Pn**	**01 59 58.6**	**-2.1**
VOIR		**13.35**	**290**	P	**Pn**	**01 59 58.5**	**-2.1**
ARR	**Arges**	**13.63**	**289**	⇑P	**Pn**	**02 00 01.3**	**-3.1**
ABKAR	**Akbulak array**	**13.67**	**54**	Pn	**Pn**	**02 00 03.1**	**-1.8**
BURAR	**Bucovina Array**	**13.68**	**299**	⇓P	**Pn**	**02 00 02.0**	**-3.1**
BURAR	**Bucovina Array**	**13.68**	**299**	P	**Pn**	**02 00 02.0**	**-3.1**
BURAR	**Bucovina Array**	**13.68**	**299**	Pn	**Pn**	**02 00 01.9**	**-3.2**
KIRV	**Kirov**	**16.77**	**12**	Pn	**Pn**	**02 00 42.4**	**-3.6**
	comp=Z,0.5nm,0.3s,baz=309,slow=1.1,SNR=8.2						
KIRV	**Kirov**	**16.77**	**12**	⇓*e*P	**Pn**	**02 00 43.5**	**-2.5**
ARU	**Arti**	**17.31**	**30**	P	**P**	**02 00 54.2**	**0.0**
ARU				S	**Sn**	**02 04 09.7**	**+4.0**
KLMR	**Klimovskoe**	**18.69**	**355**	*e*P	**Pn**	**02 01 10.9**	**+1.2**
KLMR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KLMR	**Klimovskoe**	**18.69**	**355**	*e*Pn	**Pn**	**02 01 10.9**	**+1.2**
KLMR				AMP		02 01 12.8	
	comp=Z,1.0nm,0.5s						
KK31	**Karatay Array**	**20.18**	**78**	P	**P**	**02 01 26.2**	**+0.3**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	**Karatay Array**	**20.18**	**78**	P	**P**	**02 01 26.2**	**+0.3**
KK31				IAmb	IAmb	02 01 28.8	
	comp=Z,6.4nm,0.8s						
KKAR	**Karatay Array**	**20.18**	**78**	P	**P**	**02 01 25.7**	**-0.2**
KKAR	**Karatay Array**	**20.18**	**78**		**P**	**02 01 25.7**	**-0.2**
VALR	**Valaam**	**20.43**	**343**	*e*P	Pn	02 01 30.5	0.0
VALR				pmax	pmax		
	comp=Z,71nm,1.0s						
BRVK	**Borovoye**	**21.13**	**50**	*ce*P	**P**	**02 01 36.4**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRVK	**Borovoye**	**21.13**	**50**		**P**	**02 01 36.0**	**0.0**
BVAR	**Borovoye Array**	**21.18**	**50**	P	**P**	**02 01 36.8**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=225,slow=42,SNR=4.5						
GERES	**GERESS Array B**	**21.46**	**298**	P	**P**	**02 01 41.1**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=104,slow=12,SNR=8.6						
GERES	**GERESS Array B**	**21.46**	**298**	P	**P**	**02 01 38.9**	**-0.9**
FINES	**FINESS Array B**	**21.70**	**338**	P	**P**	**02 01 41.3**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=142,slow=9.6,SNR=7.5						
FINES	**FINESS Array B**	**21.70**	**338**	*ce*P	**P**	**02 01 43.2**	**+1.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TMCR	**Tamitsa**	**22.08**	**354**	*e*P	**P**	**02 01 46.7**	**+0.6**
TMCR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AAK	**Ala-Archa**	**23.14**	**78**	P	**P**	**02 01 59.1**	**+1.3**
	comp=Z,3.2nm,0.9s,baz=271,slow=14,SNR=3.1						
AAK	**Ala-Archa**	**23.14**	**78**	IAmb	IAmb	02 02 04.8	
	comp=Z,4.7nm,1.0s						
DAVOX	**Davos/Dischmat**	**23.94**	**292**	P	**P**	**02 02 05.6**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=75,slow=10,SNR=1.8						
KURBB	**Kurchatov Arra**	**25.62**	**59**	P	**P**	**02 02 21.1**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=267,slow=8.8,SNR=5.2						
KURK	**Kurchatov**	**25.68**	**59**	P	**P**	**02 02 21.1**	**-0.2**
KURK	**Kurchatov**	**25.68**	**59**	P	**P**	**02 02 21.1**	**-0.2**
KURK	**Kurchatov**	**25.68**	**59**	IAmb	IAmb	02 02 56.6	
	comp=Z,6.5nm,1.6s						
MKAR	**Makanchi Array**	**28.12**	**67**	P	**P**	**02 02 43.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=282,slow=7.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**29.78**	**52**	P	**P**	**02 02 57.1**	**-0.9**
ZALV	**Zalesovo Beam**	**29.78**	**52**	P	**P**	**02 02 57.1**	**-0.9**
NRIK	**Noril'sk**	**35.44**	**25**	P	**P**	**02 03 46.5**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=236,slow=3.7,SNR=3.6						
NRIK	**Noril'sk**	**35.44**	**25**	⇑*e*P	**P**	**02 03 48.2**	**+0.9**
TLY	**Talaya**	**41.28**	**55**	P	**P**	**02 04 37.9**	**+1.3**
	comp=Z,7.9nm,0.7s,baz=283,slow=19,SNR=4.8						
TLY	**Talaya**	**41.28**	**55**	*ce*P	**P**	**02 04 38.5**	**+1.8**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**43.97**	**60**	P	**P**	**02 04 58.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=284,slow=5.8,SNR=3.0						
SONM	**Songino Array**	**43.97**	**60**	IAmb	IAmb	02 05 02.6	
	comp=Z,0.9nm,1.2s						
ULN	**Ulaanbaatar**	**44.38**	**60**	P	**P**	**02 05 02.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	**Ulaanbaatar**	**44.38**	**60**	P	**P**	**02 05 02.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**46.05**	**243**	P	**P**	**02 05 14.9**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=37,slow=7.7,SNR=2.5						
HIA	**Hailar**	**51.79**	**54**	⇓*e*P	**P**	**02 06 00.5**	**+1.3**
HIA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.72**	**99**	P	**P**	**02 06 07.4**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=305,slow=6.4,SNR=1.0						
KLR	**Kul'dur**	**58.84**	**50**	*ce*P	**P**	**02 06 51.3**	**+1.3**
USRK	**Ussuriysk Ar.**	**61.59**	**55**	P	**P**	**02 07 08.8**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=299,slow=6.5,SNR=2.5						
KSRS	**Korea Array**	**62.69**	**63**	P	**P**	**02 07 16.8**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=303,slow=6.8,SNR=4.6						
YKA	**Yellowknife Ar**	**74.00**	**349**	P	**P**	**02 08 26.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=22,slow=6.1,SNR=6.1						
LEM	**Lembang**	**76.29**	**113**	LR	LR	02 48 30.2	
	comp=Z,87nm,18.8s,baz=214,slow=41						

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*NEIC **30** 02:00:51.7±1.2, 4°.9S±0°.1×144°.3E±0°.2, h99^{km}±11^{km}, mb4.1/9, Error ellipse: s-maj=25.7km s-min=15.2km az=65.0*

*IDC **30** 02:00:51.0±5.4, 4°.81S×144°.33E, h86^{km}±42^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.3/32, mbtmp3.9/7, Error ellipse: s-maj=47.6km s-min=24.6km az=78.0*

ISC 30 02:00:50.1±1.0**, 4°.90S**±0°.10×**144°.3E**±0°.1**, h82**^{km}**, n19, σ1^{s}.24**/20**, mb4.0**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.32**	**303**	P	**Pn**	**02 01 55.0**	**+1.5**
	1.9nm,0.3s,baz=143,slow=10,SNR=2.5						
JAY				S	**Sn**	**02 02 42.6**	**-0.1**
	1.3nm,0.3s,baz=116,slow=6.5,SNR=2.0						
COEN	**Coen**	**9.08**	**187**	Pn	**Pn**	**02 02 59.4**	**+1.0**
WR0	**Warramunga Arr**	**17.75**	**212**	P	**P**	**02 04 51.7**	**-0.1**
WR0				IAmb	IAmb	02 05 42.0	
	comp=Z,30nm,2.0s						
WB2	**Warramunga Arr**	**17.83**	**212**	P	**P**	**02 04 52.9**	**+0.2**
WB2				IAmb	IAmb	02 05 11.1	
	comp=Z,24nm,1.9s						
WRA	**Warramunga Arr**	**17.84**	**212**	P	**P**	**02 04 49.2**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=35,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**21.20**	**207**	P	**P**	**02 05 30.3**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=23,slow=12,SNR=12						
JAGI	**Jajag, Banyuwa**	**30.17**	**262**	P	**P**	**02 06 52.3**	**-0.6**
USA0B	**Ussuriysk Arra**	**50.12**	**348**	P	**P**	**02 09 37.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**50.39**	**299**	P	**P**	**02 09 40.2**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=128,slow=4.8,SNR=4.9						
CHTO	**Chiang Mai**	**50.53**	**299**	P	**P**	**02 09 38.4**	**-2.2**
CHTO				IAmb	IAmb	02 11 09.5	
	comp=Z,2.5nm,0.8s						
MK31	**Makanchi Array**	**74.96**	**321**	P	**P**	**02 12 21.8**	**-0.7**
MKAR	**Makanchi Array**	**74.96**	**321**	P	**P**	**02 12 23.3**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=98,slow=7.4,SNR=16						
ZAA0	**Zalesovo Array**	**76.67**	**328**	P	**P**	**02 12 32.0**	**-0.1**
ZAA0				IAmb	IAmb	02 12 32.3	
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**76.67**	**328**	P	**P**	**02 12 31.6**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=113,slow=5.4,SNR=8.6						
ZALV	**Zalesovo Beam**	**76.67**	**328**	P	**P**	**02 12 31.8**	**-0.3**
AAK	**Ala-Archa**	**78.68**	**315**	P	**P**	**02 12 42.7**	**-1.0**
KURK	**Kurchatov**	**78.75**	**324**	P	**P**	**02 12 43.4**	**-0.3**
KURBB	**Kurchatov Arra**	**78.76**	**324**	P	**P**	**02 12 43.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=121,slow=4.9,SNR=4.2						
ILAR	**Eielson Array**	**85.53**	**24**	P	**P**	**02 13 18.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=260,slow=4.7,SNR=9.1						

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*IDC **30** 02:10:56.5±0.9, 29°.58N×142°.97E, h0^{km}, mb3.7/9, mb1 3.9/11, mb1mx3.7/30, mbtmp3.7/11, ML3.3/2, Error ellipse: s-maj=30.8km s-min=20.6km az=81.0*

*NEIC **30** 02:10:58.6±0.6, 29°.57N±0°.06×143°.1E±0°.1, h10^{km}±5^{km}, mb4.2/6, Error ellipse: s-maj=16.1km s-min=8.6km az=104.0*

ISC 30 02:10:59.9±0.7**, 29°.51N**±0°.07×**143°.0E**±0°.1**, h22**^{km}**, n18, σ0^{s}.88**/18**, mb3.9**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.50**	**196**	Pn	**Pn**	**02 11 40.7**	**+1.5**
	24nm,0.3s,baz=349,slow=21,SNR=24						
JCJ				Sn	**Sn**	**02 12 07.5**	**-1.5**
	67nm,0.3s,baz=285,slow=22,SNR=12						
MJAR	**Matsushiro Arr**	**8.07**	**332**	Pn	**Pn**	**02 12 55.9**	**+0.1**
	0.1nm,0.3s,baz=146,slow=11,SNR=1.6						
KLR	**Kul'dur**	**21.47**	**340**	P	**P**	**02 15 46.0**	**-0.8**
	1.2nm,0.6s,baz=48,slow=2.2,SNR=3.8						
WAKE	**Wake Island**	**23.82**	**110**	P	**P**	**02 16 11.3**	**0.0**
TNTI	**Ternate**	**32.21**	**210**	P	**P**	**02 17 26.0**	**-0.6**
SONM	**Songino Array**	**33.51**	**313**	P	**P**	**02 17 36.6**	**-1.2**
	0.3nm,0.7s,baz=110,slow=6.6,SNR=2.9						
SONM	**Songino Array**	**33.51**	**313**	IAmb	IAmb	02 17 40.0	
	comp=Z,1.5nm,1.4s						
MK31	**Makanchi Array**	**49.50**	**308**	P	**P**	**02 19 49.4**	**+0.7**
MK31				IAmb	IAmb	02 19 55.4	
	comp=Z,5.9nm,1.9s						
MKAR	**Makanchi Array**	**49.50**	**308**	P	**P**	**02 19 47.6**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=88,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**49.50**	**308**	P	**P**	**02 19 49.5**	**+0.8**
WRA	**Warramunga Arr**	**49.86**	**191**	P	**P**	**02 19 51.5**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=10,slow=8.2,SNR=7.2						
KK31	**Karatay Array**	**58.25**	**305**	P	**P**	**02 20 53.9**	**+1.1**
KK31				IAmb	IAmb	02 20 54.8	
	comp=Z,1.5nm,0.8s						
KKAR	**Karatay Array**	**58.25**	**305**	P	**P**	**02 20 53.5**	**+0.8**
FINES	**FINESS Array B**	**76.09**	**334**	P	**P**	**02 22 45.5**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=72,slow=6.0,SNR=4.5						
NVAR	**Mina Array Bea**	**78.50**	**52**	P	**P**	**02 22 59.8**	**0.0**
	comp=Z,0.2nm,0.7s,baz=285,slow=4.0,SNR=3.6						
PDAR	**Pinedale Array**	**82.03**	**45**	P	**P**	**02 23 18.7**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=294,slow=2.9,SNR=1.7						
BRTR	**Keskin Array B**	**84.86**	**313**	P	**P**	**02 23 34.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=72,slow=5.3,SNR=3.5						
TXAR	**Lajitas Array**	**93.62**	**53**	P	**P**	**02 24 14.7**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=317,slow=5.2,SNR=2.3						

IDC 30 02:23:52.0±4.4**, 49°.17S**×**125°.64E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/2**, mb1mx3.2**/26**, mbtmp3.5**/2**, Error ellipse: s-maj=152.9km s-min=80.1km az=115.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.59**	**325**	T	T	02 45 31.5	
	baz=152,slow=74,SNR=5.5						
H01W2	**Cape Leeuwin H**	**16.60**	**325**	T	T	02 45 31.5	
	baz=152,slow=74,SNR=5.2						
H01W3	**Cape Leeuwin H**	**16.61**	**325**	T	T	02 45 26.3	
	baz=152,slow=74,SNR=4.2						
STKA	**Stephens Creek**	**21.04**	**41**	P	P	02 28 37.0	-0.2
	0.9nm,0.5s,baz=217,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**26.28**	**17**	P	P	02 29 29.3	+0.2
	0.3nm,0.5s,baz=193,slow=8.9,SNR=1.7						
YKA	**Yellowknife Ar**	**145.03**	**45**	PKPbc	PKPbc	02 43 28.5	-0.9
	0.2nm,0.8s,baz=265,slow=2.9,SNR=2.7						

WEL 30 03:00:38.7, 43°.1S±0°.9×**17°1E**±°**, h5**^{km}±1^{km}**, M2.4**/10**, mB4.6**/1**, ML2.5**/10**, MLv2.4**/10**, Mw(mB)3.8**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=98.9, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.36**	**25**	P	Pb	03 00 47.0	-0.6
WVZ	**Waitaha Valley**	**0.36**	**266**	P	Pb	03 00 47.5	-0.1
OXZ	**Oxford**	**0.65**	**115**	P	Pb	03 00 53.1	+0.6
RPZ	**Rata Peaks**	**0.68**	**191**	P	Pb	03 00 53.5	+0.5
GCSZ	**Gaunt Creek Bo**	**0.71**	**248**	P	Pb	03 00 53.8	+0.2
LTZ	**Lake Taylor**	**0.81**	**71**	P	Pn	03 00 56.2	-0.6
ARCZ	**Arundel**	**0.90**	**183**	P	Pn	03 00 57.6	-0.4
FOZ	**Fox Glacier**	**1.14**	**245**	P	Pn	03 01 02.6	+1.4
TMZ	**Timaru**	**1.34**	**187**	P	Pg	03 01 05.3	+0.9
DSZ	**Denniston Nort**	**1.37**	**18**	P	Pg	03 01 05.9	+0.9
AKCZ	**Akaroa Harbour**	**1.47**	**124**	P	Pb	03 01 06.7	+0.2
LBZ	**Lake Benmore**	**1.53**	**209**	P	Pg	03 01 08.5	+0.4
ODZ	**Otahua Downs**	**2.04**	**192**	P	Pn	03 01 14.6	+1.0
JCZ	**Jackson Bay**	**2.05**	**239**	P	Pb	03 01 16.7	+0.2
WKZ	**Wanaka**	**2.39**	**221**	P	Pg	03 01 25.1	+0.6
MSZ	**Milford Sound**	**2.89**	**235**	P	Pb	03 01 31.2	+0.5
TCW	**Tory Channel**	**2.92**	**52**	P	Pb	03 01 31.7	+0.5
NMEZ	**Namu Road**	**4.15**	**30**	P	Pb	03 01 47.5	-4.6
TIWZ	**Tintock**	**4.15**	**58**	P	Pn	03 01 46.9	+4.1
ANWZ	**Angora Road**	**4.70**	**58**	P	Pb	03 01 57.3	-4.3
MTHZ	**Maungataniwha**	**5.97**	**47**	P	Pn	03 02 07.9	+0.2
TWGZ	**Tauwhareparae**	**7.07**	**49**	P	Pn	03 02 21.2	-1.7

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*PGC **30** 03:18:01.5±0.0, 49°.25N×129°.52W, h10^{km}, MLSn2.7/10, Mw3.3/10, 220km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

*IDC **30** 03:18:04.0±2.2, 49°.45N×128°.92W, h0^{km}, mb3.4/2, mb1 3.5/7, mb1mx3.3/39, mbtmp3.3/7, ML3.1/4, Error ellipse: s-maj=34.1km s-min=17.4km az=65.0*

ISC 30 03:18:03.0±3.5**, 49°.39N**±0°.07×**129°.17W**±0°.08**, h8**^{km}±19^{km}**, n29, σ1^{s}.30**/33**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.42**	**69**	Pn	**Pn**	**03 18 28.6**	**-0.5**
EDB				Sn	**Sg**	**03 18 48.9**	**+0.3**
HOLB	**Holberg**	**1.42**	**28**	Pn	**Pn**	**03 18 28.4**	**-0.8**
HOLB				Sn	**Sb**	**03 18 48.0**	**-0.1**
FHRB	**Fair Harbour**	**1.49**	**62**	Pn	**Pn**	**03 18 29.9**	**-0.1**
MAYB	**Maynard**	**1.64**	**51**	Pn	**Pn**	**03 18 32.5**	**+0.1**
PHC	**Port Hardy**	**1.73**	**40**	Pn	**Pn**	**03 18 33.4**	**+0.1**
PHC				Sn	**Sb**	**03 18 56.1**	**-0.8**
WOSB	**Woss**	**1.85**	**64**	Pn	**Pn**	**03 18 35.7**	**+0.6**

TLCB	Telegraph Cove	1.90	51	Pn	Pn	03 18 36.4	+0.7
TOFB	Tofino	2.15	95	Pn	Pn	03 18 38.3	-0.7
TOFB				Sn	Sn	03 19 06.4	+0.6
NCRB	Newcastle Ridg	2.25	62	Pn	Pn	03 18 41.9	+1.2
BTB	Buttle Lake	2.38	87	Pn	Pn	03 18 42.5	0.0
OZB	Mount Ozzard	2.45	99	Pn	Pn	03 18 42.5	-0.8
B928	Bamfield	2.71	100	Sn	Sn	03 19 18.8	-0.8
BBB	Bella Bella	2.88	13	Pn	Pn	03 18 48.1	-1.1
	1.7nm,0.3s,baz=203,slow=8.7,SNR=18						
BBB				Sn	Sn	03 19 22.2	-1.8
	2.3nm,0.3s,baz=296,slow=24,SNR=1.9						
BBB	Bella Bella	2.88	13	Pn	Pn	03 18 49.1	-0.1
BBB				Sn	Sn	03 19 23.1	-0.9
MGB	Mount Grey	2.96	96	Pn	Pn	03 18 50.1	-0.3
MGB				Sn	Sn	03 19 26.4	+0.3
TXB	Texada	3.10	82	Pn	Pn	03 18 53.3	+1.1
OCP	Olym-Cheeka Pk	3.19	108	Pn	Pn	03 18 53.4	-0.1
PFB	Port Renfrew	3.22	103	Pn	Pn	03 18 54.6	+0.8
SHB	Sechelt	3.46	84	Pn	Pn	03 18 59.6	+2.4
WPB	Watts Point	3.89	84	Pn	Pn	03 19 05.2	+2.1
DLBC	Dease Lake	9.09	357	Pn	Pn	03 20 17.9	+3.5
	0.0nm,0.3s,baz=190,slow=18,SNR=1.4						
PDAR	Pinedale Array	15.11	109	Pn	P	03 21 39.8	-2.4
	0.1nm,0.3s,baz=295,slow=16,SNR=4.5						
YKA	Yellowknife Ar	15.40	26	Pn	Pn	03 21 38.7	-1.7
	0.1nm,0.3s,baz=212,slow=12,SNR=5.4						
ILAR	Eielson Array	18.07	335	P	P	03 22 14.9	+0.4
	baz=143,slow=9.1,SNR=2.7						
ULM	Lac du Bonnet	21.40	75	P	P	03 22 51.1	+0.2
	1.1nm,0.5s,baz=276,slow=10,SNR=2.0						
H11N2	WAKE ISLAND Hy	58.37	264	T	T	04 30 55.7	
	baz=43,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	58.37	264	T	T	04 30 53.2	
	baz=43,slow=75,SNR=5.0						
H11N1	WAKE ISLAND Hy	58.38	264	T	T	04 30 55.8	
	baz=43,slow=75,SNR=3.3						
MKAR	Makanchi Array	80.39	339	P	P	03 30 16.8	+2.1
	0.3nm,0.7s,baz=8.1,slow=5.1,SNR=2.5						

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*OSPL **30** 03:23:29.9±0.5, 19.°13N×66.°92W, h112^{km}±10^{km}, ML2.9*
*NEIC **30** 03:23:30.9±0.8, 19.°03N±0.°07×68.°01W±0.°04, h24^{km}±15^{km}, Error ellipse: s-maj=10.2km s-min=5.8km az=179.0*
*RSPR **30** 03:23:31.9, 19.°09N×68.°06W, h29^{km}±20^{km}, MD3.4/15*
ISC 30 03:23:31.3±1.1**, 18.°98N**±0.°08×**67.°97W**±0.°04**, h20**^{km}**, n63,** σ**0.^{s}80**/70**, 15C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.96	122	⇑eP	Pb	03 23 48.4	-0.8
AGPR	Aguadilla, PR	0.96	122		Pb	03 23 48.4	-0.8
AGPR	Aguadilla, PR	0.96	122	IAML		03 24 05.1	
	comp=E,388nm,0.4s						
AGPR				IAML		03 24 05.3	
	comp=N,276nm,0.2s						
AGPR	Aguadilla, PR	0.96	122	*i* P	Pb	03 23 47.2	-2.0
AGPR				*e*S	Sb	03 24 00.4	-1.1
AGPR				IAML		03 24 04.6	
	comp=Z,254nm,0.2s						
MPR	Mayaguez	1.10	134	*e*S	Sb	03 24 06.7	+1.2
MPR	Mayaguez	1.10	134		Sb	03 24 06.7	+1.2
MPR	Mayaguez	1.10	134		Pn	03 23 51.5	0.0
MPR	Mayaguez	1.10	134	IAML		03 24 08.8	
	comp=N,395nm,0.4s						
MPR	Mayaguez	1.10	134	*i* P	Pn	03 23 49.7	-1.9
MPR				*e*S	Sb	03 24 04.0	-1.4
MPR				IAML		03 24 08.6	
	comp=Z,92nm,0.1s						
LSP	Las Mesas	1.16	134	⇑eP	Pn	03 23 51.8	-0.7
LSP	Las Mesas	1.16	134	*e*S	Sb	03 24 08.4	+1.1
LSP	Las Mesas	1.16	134		Pn	03 23 51.8	-0.7
LSP					Sb	03 24 08.4	+1.1
CRPR	Cabo Rojo, PR	1.27	140	⇑eP	Pn	03 23 53.5	-0.4
CRPR	Cabo Rojo, PR	1.27	140	*e*S	Sn	03 24 10.8	+0.6
CRPR	Cabo Rojo, PR	1.27	140		Pn	03 23 53.5	-0.4
CRPR					Sn	03 24 10.8	+0.6
CRPR	Cabo Rojo, PR	1.27	140	IAML		03 24 16.2	
	comp=E,224nm,0.5s						
CRPR				IAML		03 24 16.6	
	comp=N,277nm,0.5s						
AOPR	Arecibo Observ	1.31	118	⇑eP	Pn	03 23 53.9	-0.6
AOPR	Arecibo Observ	1.31	118	*e*S	Sn	03 24 11.9	+0.4
AOPR	Arecibo Observ	1.31	118		Pn	03 23 53.9	-0.6
AOPR					Sn	03 24 11.9	+0.4
AOPR	Arecibo Observ	1.31	118	IAML		03 24 17.7	
	comp=N,294nm,0.2s						
MLPR	Magueyes Islan	1.33	139	⇑eP	Pn	03 23 54.4	-0.4
MLPR	Magueyes Islan	1.33	139	*e*S	Sn	03 24 12.5	+0.6
MLPR	Magueyes Islan	1.33	139		Pn	03 23 54.4	-0.4
MLPR					Sn	03 24 12.5	+0.6
MLPR	Magueyes Islan	1.33	139	IAML		03 24 14.1	
	comp=E,258nm,0.3s						
MLPR				IAML		03 24 17.6	
	comp=N,176nm,0.5s						
DR12	Loma Pena Alta	1.35	262		Pb	03 23 55.0	-1.0
GBPR	Guanica, Bosqu	1.44	134	⇑eP	Pn	03 23 56.4	+0.2
GBPR	Guanica, Bosqu	1.44	134	*e*S	Sn	03 24 15.4	+0.9
GBPR	Guanica, Bosqu	1.44	134		Pn	03 23 56.4	+0.2
GBPR					Sn	03 24 15.4	+0.9
EMPR	Esperanza - Ma	1.45	110	⇑eP	Pn	03 23 56.3	-0.1
EMPR	Esperanza - Ma	1.45	110	*e*S	Sn	03 24 14.7	-0.2
EMPR	Esperanza - Ma	1.45	110		Pn	03 23 56.3	-0.1
EMPR					Sn	03 24 14.7	-0.2
OBIP	Obispado Ponce	1.59	126	⇑eP	Pn	03 23 58.5	+0.2
OBIP	Obispado Ponce	1.59	126	*e*S	Sn	03 24 18.6	+0.2
OBIP	Obispado Ponce	1.59	126		Pn	03 23 58.5	+0.2
OBIP					Sn	03 24 18.6	+0.2
OBIP	Obispado Ponce	1.59	126	IAML		03 24 21.2	
	comp=N,180nm,0.4s						
OBIP				IAML		03 24 21.6	
	comp=E,164nm,0.4s						
CELP	Cerrillos	1.60	124	⇑eP	Pn	03 23 58.9	+0.5
CELP	Cerrillos	1.60	124	*e*S	Sn	03 24 19.1	+0.6
CELP	Cerrillos	1.60	124		Pn	03 23 58.9	+0.5
CELP					Sn	03 24 19.1	+0.6
GCPR	Guaynabo City	1.91	110	⇑eP	Pn	03 24 03.0	+0.3
GCPR	Guaynabo City	1.91	110	*e*S	Sn	03 24 26.2	0.0
GCPR	Guaynabo City	1.91	110		Pn	03 24 03.0	+0.3
GCPR					Sn	03 24 26.2	0.0
SDD	Santo Domingo	1.92	255	Pn	Pn	03 24 01.4	-1.3
SDD				IAML		03 24 39.5	
	comp=N,117nm,0.9s						
SDD				IAML		03 24 55.5	
	comp=E,100nm,2.7s						
SJG	San Juan	1.93	116		Pn	03 24 03.2	+0.2
SJG				IAML		03 24 29.8	
	comp=E,139nm,0.4s						
SJG				IAML		03 24 33.7	
	comp=E,107nm,0.3s						
IGPR	InterUniversit	2.04	119	⇑eP	Pn	03 24 04.1	-0.4
IGPR	InterUniversit	2.04	119	*e*S	Sn	03 24 30.1	+0.8
PDPR	Patillas Dam,	2.08	117		Pn	03 24 05.3	+0.3
CBYP	Canovanas	2.12	109	⇑eP	Pn	03 24 05.6	-0.1
CBYP	Canovanas	2.12	109	*e*S	Sn	03 24 32.1	+0.5
CBYP	Canovanas	2.12	109		Pn	03 24 05.6	-0.1
CBYP					Sn	03 24 32.1	+0.5
HUMP	Col San Antoni	2.18	112	⇑eP	Pn	03 24 06.6	+0.3
HUMP	Col San Antoni	2.18	112	*e*S	Sn	03 24 33.4	+0.6
HUMP	Col San Antoni	2.18	112		Pn	03 24 06.6	+0.3
HUMP					Sn	03 24 33.4	+0.6
HUMP	Col San Antoni	2.18	112	IAML		03 24 44.0	
	comp=E,76nm,0.2s						
MTP	Monte Pirata	2.46	111	⇑eP	Pn	03 24 10.4	+0.2
MTP	Monte Pirata	2.46	111	*e*S	Sn	03 24 40.5	+0.9
MTP	Monte Pirata	2.46	111		Pn	03 24 10.4	+0.2
MTP					Sn	03 24 40.5	+0.9
CUPR	Culebra, Puert	2.63	104	⇑eP	Pn	03 24 12.7	0.0
CUPR	Culebra, Puert	2.63	104	*e*S	Sn	03 24 44.1	0.0
CUPR	Culebra, Puert	2.63	104		Pn	03 24 12.7	0.0
CUPR					Sn	03 24 44.1	0.0
SC01	Santiago de lo	2.65	280	Pn	Pn	03 24 12.0	-0.9
SC01				IAML		03 25 08.4	
	comp=E,90nm,0.7s						
SC01	Santiago de lo	2.65	280	*i* P	Pb	03 24 21.9	+3.9
SC01				IAML		03 25 39.0	
	comp=Z,38nm,1.5s						
SDDR	Presa de Saban	3.14	271	Pn	Pn	03 24 17.9	-1.8
SDDR				IAML		03 25 14.0	
	comp=Z,49nm,0.9s						
SDDR				IAML		03 25 15.9	
	comp=Z,47nm,1.1s						
SDDR	Presa de Saban	3.14	271	*i* P	Pb	03 24 29.1	+2.6

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*IDC **30** 03:34:29.7±0.5, 16.°95S×14.°20W, h0^{km}, mb4.6/23, mb1 4.6/23, mb1mx4.5/36, mbtmp4.6/23, MS4.2/18, Ms1 4.2/18, ms1mx4.0/28, Error ellipse: s-maj=15.6km s-min=12.7km az=160.0*
*NEIC **30** 03:34:31.3±1.1, 16.°91S±0.°09×14.°23W±0.°08, h10^{km}±1^{km}, mb5.0/79, Error ellipse: s-maj=15.0km s-min=13.6km az=195.0*
*BJI **30** 03:34:32.0±0.0, 16.°90S×14.°20W, h15^{km}, Ms5.0/1, Ms7 4.7/1*
*GCMT **30** 03:34:33.3±0.2, 16.°68S±0.°03×14.°26W±0.°01, h12^{km}, MW5.0/100, Moment Tensor Solution. s27,c31; s100,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.00±.08; $M_{\theta\theta}$-0.18±.10; $M_{\phi\phi}$-2.82±.07; $M_{r\theta}$-2.45±.38; $M_{\theta\phi}$-0.28±.07; $M_{\phi r}$-0.78±.30; Best double couple: $M_0$3.73700×10^{16} NP1:ϕ_s348.00000°, δ38.00000°, λ48.00000°. NP2:ϕ_s217.00000°, δ63.00000°, λ118.00000°. Principal axes: T 4.3740, Plg62.0000°, Azm171.0000°; N -1.2740, Plg24.0000°, Azm23.0000°; P -3.1010, Plg13.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 03:34:31.4±0.3**, 16.°93S**±0.°07×**14.°20W**±0.°06**, h10**^{km}**, n192,** σ**1.^{s}29**/179**, mb5.0**/53**, MS4.3**/22**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.93	357	T	T	03 44 27.5	
	baz=176,slow=74,SNR=168						
H10S3	ASCENSION HYDR	7.94	357	T	T	03 44 28.0	
	baz=44,slow=74,SNR=206						
SHEL	Horse Pasture	8.17	84	Pn	Pn	03 36 29.3	-0.9
ASCN	Ascension	8.94	359	Pn	Pn	03 36 39.4	-1.3
RCBR	Riachuelo	23.93	295	P	P	03 39 45.1	-0.8
	12nm,1.0s,baz=138,slow=11,SNR=6.7						
RCBR				LR	LR	03 47 15.4	
	comp=Z,592nm,19.2s,baz=136,slow=32						
RCBR	Riachuelo	23.93	295	P	P	03 39 44.4	-1.5
RCBR				IAmb	IAmb	03 39 52.7	
	comp=Z,65nm,1.2s						
RCBR	Riachuelo	23.93	295	*e*P	P	03 39 45.4	-0.6
NBLI	Livramento-PB	24.16	290	*e*P	P	03 39 47.9	-0.2
GDU01	Guandu, BA	24.67	274	*e*P	P	03 39 52.7	0.0
LIC	Lamto	24.73	22	*e*P	P	03 39 53.6	+0.5
	comp=Z,116nm,1.4s						
NAN01	Guarapari, ES	24.75	264	*e*P	P	03 39 53.3	-0.2
KIC	Kosan Boka	24.96	23	*e*P	P	03 39 55.7	+0.5
	comp=Z,78nm,1.0s						
RIB01	Linhares ES	25.00	261	*e*P	P	03 39 58.4	+2.8
NBPA	Parau_RN	25.02	294	*e*P	P	03 39 55.1	-0.8
TIC	Toumodi	25.12	22	*e*P	P	03 39 57.1	+0.4
DBIC	Dimbokro	25.20	22	P	P	03 39 57.2	-0.2
	comp=Z,21nm,1.0s,baz=176,slow=12,SNR=12						
DBIC				LR	LR	03 47 26.4	
	comp=Z,346nm,20.5s,baz=182,slow=31						
DBIC	Dimbokro	25.20	22	P	P	03 39 57.2	-0.2
DBIC				IAmb	IAmb	03 40 00.1	
	comp=Z,44nm,1.1s						
BSFB	Barra de Sao F	25.42	262	*e*P	P	03 39 59.2	-0.2
SJMB	Sao Joao De Ma	25.74	262	*e*P	P	03 40 01.6	-0.8
CAM01	Campos-RJ	26.34	255	*e*P	P	03 40 08.3	+0.6
VAS01	Vassouras-RJ	28.03	254	*e*P	P	03 40 23.8	+0.8
DIAM	Diamantina, MG	28.11	263	*e*P	P	03 40 24.0	+0.1
BSCB	Bom Sucesso	29.17	257	*e*P	P	03 40 33.1	-0.2
SDBA	SAO DESIDERIO	30.02	274	*e*P	P	03 40 40.0	-0.8
TSUM	Tsumeb	30.28	99	P	P	03 40 43.5	+0.3
BDFB	Brasilia	32.46	267	P	P	03 41 01.6	-0.8
	comp=Z,2.5nm,0.8s,baz=66,slow=7.5,SNR=3.5						
BDFB				LR	LR	03 51 38.7	
	comp=Z,1µm,20.8s,baz=110,slow=32						
BDFB	Brasilia	32.46	267	P	P	03 41 02.5	+0.1
KOWA	Kowa	32.80	18	P	P	03 41 04.7	-0.4
	comp=Z,12nm,0.9s,baz=201,slow=9.3,SNR=20						
KOWA	Kowa	32.80	18	P	P	03 41 04.9	-0.2
KOWA				IAmb	IAmb	03 41 07.0	
	comp=Z,27nm,1.2s						
PEXB	Peixe	33.33	274	*e*P	P	03 41 09.4	-0.5
SMTB	Santa Maria do	33.48	280	*e*P	P	03 41 11.8	+0.7
TOA0	Torodi Ar. Sit	33.76	29	P	P	03 41 13.0	-0.5
TOA0				IAmb	IAmb	03 41 14.9	
	comp=Z,25nm,0.9s						
TORD	Torodi Ar. Bea	33.76	29	P	P	03 41 12.8	-0.7
	comp=Z,23nm,0.9s,baz=214,slow=8.0,SNR=48						
TORD				LR	LR	03 52 44.5	
	comp=Z,699nm,19.3s,baz=200,slow=32						
TORD	Torodi Ar. Bea	33.76	29	P	P	03 41 12.5	-1.0
SUR	Sutherland	35.16	123	P	P	03 41 24.9	-0.9
	comp=Z,19nm,1.1s,baz=342,slow=5.2,SNR=3.8						
PCMB	Pacaembu	35.24	256	*e*P	P	03 41 24.7	-1.7
ARAG	Araguaiana, MT	36.08	266	*e*P	P	03 41 34.2	+0.6
TMAB	Tom-Au,PA,Br	36.31	290	*e*P	P	03 41 35.4	-0.2
PRPB	Parauapebas	36.42	283	*e*P	P	03 41 36.2	-0.4
LBTB	Lobatse	37.91	109	P	P	03 41 48.4	-0.9
	comp=Z,8.6nm,1.1s,baz=259,slow=10,SNR=5.3						
LBTB	Lobatse	37.91	109	P	P	03 41 49.3	0.0
LBTB				IAmb	IAmb	03 41 49.8	
	comp=Z,28nm,1.4s						
BOSA	Boshof	38.03	115	P	P	03 41 49.9	-0.4
	comp=Z,12nm,1.0s,baz=277,slow=5.4,SNR=7.1						
BOSA				LR	LR	03 55 08.2	
	comp=Z,544nm,19.1s,baz=277,slow=33						
BOSA	Boshof	38.03	115	P	P	03 41 50.4	+0.1
PLTB	Pedras Altas	38.59	240	*e*P	P	03 41 56.8	+2.0
AQDB	Aquidauana	39.39	258	*e*P	P	03 42 02.1	+0.4
MATP	Matopo	40.52	102	P	P	03 42 11.0	-0.2
	comp=Z,12nm,1.0s,baz=269,slow=8.3,SNR=15						
LSZ	Lusaka	40.70	94	P	P	03 42 13.2	+0.4
MCPB	Macapa, AP	40.75	290	*e*P	P	03 42 11.8	-1.2
ITQB	Itaqui	40.76	244	*e*P	P	03 42 13.7	+0.9
CPUP	Villa Florida	41.01	249	P	P	03 42 14.7	-0.3
	comp=Z,14nm,0.9s,baz=88,slow=9.3,SNR=7.1						
CPUP				LR	LR	03 58 21.9	
	comp=Z,396nm,18.9s,baz=87,slow=35						
CPUP	Villa Florida	41.01	249	P	P	03 42 15.0	0.0
NPGB	Novo Progresso	41.36	279	*e*P	P	03 42 17.6	-0.4
MALB	Monte Alegre	42.14	287	*e*P	P	03 42 24.4	0.0
ITTB	Itaituba	42.58	282	*e*P	P	03 42 27.6	-0.4
TAM	Tamanrasset	43.94	27	P	P	03 42 39.4	+0.5
VILB	Vilhena	44.55	269	*e*P	P	03 42 44.9	+1.1
SIV	San Ignacio	44.88	264	P	P	03 42 46.7	+0.1
	comp=Z,3.4nm,0.9s,baz=96,slow=11,SNR=11						
MBAR	Mbarara	47.11	75	P	P	03 43 04.4	0.0
MACA	Manacapuru-AM	47.62	281	*e*P	P	03 43 08.2	+0.1
PTGA	Pitinga	47.83	285	P	P	03 43 09.5	-0.2
PTGA	Pitinga	47.83	285	*e*P	P	03 43 09.7	0.0
SAML	Samuel	48.29	273	P	P	03 43 14.4	+1.2
ETMB	Extrema	50.98	271	*e*P	P	03 43 34.7	+0.9
ZON	Zonda	51.28	243	P	P	03 43 34.5	-1.5
ZON				IAmb	IAmb	03 43 53.1	
	comp=Z,24nm,1.4s						
LVC	Limon Verde	51.57	254	P	P	03 43 37.9	-0.7
AC02	Maricunga	51.58	249	P	P	03 43 38.9	+0.1
PB09	IPOC Station P	51.94	255	P	P	03 43 40.1	-1.0
PB08	IPOC Station P	52.01	257	P	P	03 43 40.9	-1.1
PB15	IPOC Station P	52.04	254	P	P	03 43 42.6	+0.7
PB15				IAmb	IAmb	03 43 48.4	
	comp=Z,16nm,0.7s						
GO02	Mina Guanaco	52.05	251	P	P	03 43 42.2	+0.2
GO02				IAmb	IAmb	03 44 09.1	
	comp=Z,36nm,1.4s						
PB01	IPOC Station P	52.23	256	P	P	03 43 42.1	-1.1
PB01				IAmb	IAmb	03 43 43.9	
	comp=Z,41nm,1.5s						
AC05	El Transito	52.59	246	P	P	03 43 45.8	0.0
LCO	Las Campanas	52.96	246	P	P	03 43 48.6	-0.2
KMBO	Kilima Mbogo	52.98	78	P	P	03 43 50.4	+1.3
	comp=Z,3.8nm,0.9s,baz=271,slow=3.6,SNR=6.0						
KMBO				LR	LR	04 04 39.6	
	comp=Z,360nm,19.4s,baz=270,slow=34						
BO02	Sierra Bellavi	53.26	239	P	P	03 43 50.7	+0.1
BO02				IAmb	IAmb	03 43 51.7	
	comp=Z,33nm,1.4s						
PLCA	Paso Flores	53.76	232	P	P	03 43 53.5	-0.6
	comp=Z,11nm,1.3s,baz=74,slow=11,SNR=4.3						
PLCA				LR	LR	04 05 02.6	
	comp=Z,452nm,18.6s,baz=77,slow=34						
PLCA	Paso Flores	53.76	232	P	P	03 43 54.2	0.0
PLCA				IAmb	IAmb	03 43 56.5	
	comp=Z,25nm,1.5s						
PLCA	Paso Flores	53.76	232	*e*P	P	03 43 53.6	-0.6
BI02	San Fabin de	53.81	237	IAmb	IAmb	03 43 54.9	
	comp=Z,26nm,1.4s						
VNA1	Neumayer--Stat	53.83	178	P	P	03 43 55.7	+1.6
VNA2	Neumayer--Watz	54.15	177	P	P	03 43 56.9	+0.5
	baz=348,slow=8.8						
LC01	Cunco	54.52	234	P	P	03 43 59.2	-0.6
LC01				IAmb	IAmb	03 44 05.1	
	comp=Z,22nm,1.4s						
SNAA	Sanae	55.15	176	P	P	03 44 04.2	+0.4
SNAA	Sanae	55.15	176	P	P	03 44 03.8	0.0
	comp=Z,8.7nm,1.1s,baz=342,slow=8.0,SNR=10						
SNAA	Sanae	55.15	176	P	P	03 44 04.2	+0.4
SNAA				IAmb	IAmb	03 44 05.4	
	comp=Z,15nm,1.2s						
ROSA	Rosais	56.89	347	P	P	03 44 16.7	+0.1
KEST	Kesra	56.92	23	P	P	03 44 17.6	+0.7
	comp=Z,18nm,1.2s,baz=163,slow=6.2,SNR=4.3						
KEST				LR	LR	04 08 32.5	
	comp=Z,205nm,18.6s,baz=242,slow=36						
KEST	Kesra	56.92	23	P	P	03 44 17.5	+0.6
ESDC	Sonseca Array	57.11	9	P	P	03 44 19.0	+0.9
	comp=Z,2.1nm,1.0s,baz=191,slow=9.0,SNR=5.0						
ESDC				LR	LR	04 06 13.9	
	comp=Z,151nm,21.7s,baz=50,slow=33						
CZSB	Cruzeiro do Su	57.71	271	*e*P	P	03 44 21.4	-1.4
SDV	Santo Domingo	61.41	290	P	P	03 44 48.3	-0.2
SDV				IAmb	IAmb	03 44 50.7	
	comp=Z,14nm,1.2s						
SDV	Santo Domingo	61.41	290	*e*P	P	03 44 49.1	+0.5
BELA	Belgrano 2	61.81	185	P	P	03 44 49.7	-0.4
ROSC	El Rosal	63.20	285	P	P	03 45 01.9	+1.0
	comp=Z,3.0nm,0.3s,baz=107,slow=8.8,SNR=8.5						
ROSC				LR	LR	04 11 12.8	
	comp=Z,474nm,19.0s,baz=104,slow=35						
ROSC	El Rosal	63.20	285	P	P	03 44 59.9	-1.0
OTAV	Otavalo	65.50	278	*e*P	P	03 45 16.8	+0.8
RER	Riviere de l’E	65.78	106	P	P	03 45 17.0	-0.4
MORH	Mrgy, Hungar	69.50	24	*e*P	P	03 45 40.8	+0.8
MAW	Mawson	69.55	157	LR	LR	04 09 38.4	
	comp=Z,171nm,20.5s,baz=242,slow=30						
MPLH	Magyarpolny	69.89	22	*e*P	P	03 45 44.0	+1.6
GERES	GERESS Array B	70.03	19	P	P	03 45 42.7	-0.7
	comp=Z,0.7nm,0.7s,baz=165,slow=5.5,SNR=5.5						
GERES				LR	LR	04 14 17.6	
	comp=Z,153nm,21.7s,baz=278,slow=34						
MODS	Modra-Piesok	70.81	22	*e*P	P	03 45 48.5	+0.4
RAYN	Ar Rayn	70.83	57	*i* P	P	03 45 50.0	+1.2
	SNR=8.4						
RAYN	Ar Rayn	70.83	57	P	P	03 45 49.3	+0.5
RAYN				IAmb	IAmb	03 45 52.0	
	comp=Z,12nm,1.1s						
PSZ	Piszkesteto	71.39	23	*e*P	P	03 45 52.0	+0.3
PSZ	Piszkesteto	71.39	23	P	P	03 45 52.0	+0.3
PSZ				IAmb	IAmb	03 45 54.2	
	comp=Z,25nm,1.4s						
VYHS	Vyhne	71.47	22	*e*P	P	03 45 53.0	+0.9
BRTR	Keskin Array B	71.86	37	P	P	03 45 55.9	+1.0
	comp=Z,7.7nm,0.9s,baz=202,slow=6.4,SNR=26						
BRTR				LR	LR	04 17 42.8	
	comp=Z,46nm,18.2s,baz=263,slow=36						
BRTR	Keskin Array B	71.86	37	P	P	03 45 54.8	0.0
MLR	Muntele Rosu	72.00	28	P	P	03 45 55.4	-0.1
MORC	Moravsky Berou	72.09	21	IAmb	IAmb	03 45 57.5	
	comp=Z,19nm,1.4s						
ILGA	Ilgaz	72.79	36	P	P	03 46 00.3	-0.2
ILGA				IAmb	IAmb	03 46 02.4	
	comp=Z,12nm,0.8s						
CRVS	Cervenica-Dubn	72.80	24	*e*P	P	03 46 01.1	+1.1
KOLS	Kolonicke sedl	73.14	24	*e*P	P	03 46 03.1	+1.1
OJC	Ojcow	73.26	22	IAmb	IAmb	03 46 04.9	
	comp=Z,16nm,1.2s						
BURAR	Bucovina Array	73.31	27	P	P	03 46 03.3	+0.1
KOPT	Kop Dagi	76.14	40	P	P	03 46 20.6	+0.5
AKASG	Malin Array Be	77.36	27	P	P	03 46 25.3	-1.0
	comp=Z,11nm,1.0s,baz=221,slow=5.4,SNR=26						
AKASG	Malin Array Be	77.36	27	P	P	03 46 25.5	-0.8
AKBB	Malin Array Si	77.36	27	P	P	03 46 25.9	-0.4
AKBB				IAmb	IAmb	03 46 27.0	
	comp=Z,15nm,1.1s						
NACGM	Naroch	79.56	23	*i* P	P	03 46 36.9	-1.5
NACGM				*i* P	P	03 46 36.9	-1.5
NACGM				*i* P	P	03 46 36.9	-1.5
NACGM				*i* PcP	PcP	03 46 49.1	+2.9
NACGM				*i* PP	PP	03 49 46.5	+7.2
NACGM				*i* PPP	PPP	03 51 40.3	
NACGM				*i* S	S	03 56 39.2	-0.8
NACGM				*i* PS	PnS	03 57 14.2	-10
NACGM				*i* SS	SS	04 00 11.6	-97
NACGM				*i* SSS	SSS	04 06 46.1	
NACGM				*i* LQ	LQ	04 19 12.1	
NACGM				*i* LR	LR	04 22 59.1	
KBZ	Khabaz	79.77	38	P	P	03 46 40.0	+0.3
	comp=Z,4.6nm,0.9s,baz=227,slow=6.0,SNR=9.6						
KIV	Kislovodsk	79.77	38	P	P	03 46 39.8	-0.2
KIV				IAmb	IAmb	03 46 41.6	
	comp=Z,25nm,1.3s						
NAZ	Nazwa, Dubai	79.78	60	*i* P	P	03 46 42.0	+1.7
	SNR=7.4						
ASHO	Ashiyiah	79.98	60	*i* P	P	03 46 41.7	+0.3
	SNR=7.4						
HATD	Hatta, Dubai	80.10	60	*i* P	P	03 46 42.3	+0.3
	SNR=5.9						
SOHO	SOHO	80.16	61	*i* P	P	03 46 42.8	+0.5
	SNR=14						
T59A	Double "B" Far	80.18	313	IAmb	IAmb	03 46 44.5	
	comp=Z,31nm,1.4s						
UOSS	Minazif	80.21	60	*i* P	P	03 46 42.5	0.0
	SNR=9.1						
UOSS	Minazif	80.21	60	P	P	03 46 42.7	+0.1
UOSS				IAmb	IAmb	03 46 45.0	
	comp=Z,26nm,1.2s						
PSUB	Penn St. - Bra	80.27	317	P	P	03 46 43.0	+0.4
NOA	NORSAR Array B	80.33	12	LR	LR	04 21 32.6	
	comp=Z,59nm,18.1s,baz=195,slow=35						
MSFE	Esma-Masafi	80.34	60	P	P	03 46 43.2	-0.1
SHME	Shamm	80.60	59	*i* P	P	03 46 45.3	+0.7
	SNR=5.1						
BANOM	Banah	80.68	59	*i* P	P	03 46 45.2	0.0
	SNR=6.9						
R58B	Mineral	80.89	314	P	P	03 46 47.1	+1.2
	baz=120						
R58B	Mineral	80.89	314	IAmb	IAmb	03 46 47.4	
	comp=Z,22nm,1.3s						
G60A	Masonville	81.16	323	P	P	03 46 47.9	+0.7
	baz=125						
U57A	Blanch	81.17	312	P	P	03 46 48.1	+0.6
	baz=119						
D61A	St Aubert, Com	81.17	325	P	P	03 46 47.7	+0.5
	baz=127						
V57A	Coltrane Farms	81.22	312	P	P	03 46 48.7	+0.9
	baz=118						
Q58A	Fox Den Farm,	81.25	315	P	P	03 46 47.9	+0.1
	baz=120						
O58A	Lewisberry	81.33	316	P	P	03 46 48.4	+0.2
	baz=121						
N58A	Sunbury	81.56	317	P	P	03 46 50.6	+1.2
	baz=121						
WSAR	Wadi Sarin	81.58	63	P	P	03 46 50.5	+0.5
	comp=Z,9.8nm,1.1s,baz=298,slow=3.1,SNR=9.4						
Q57A	Strasburg	81.79	315	P	P	03 46 52.9	+2.2
	baz=120						
BINY	Binghamton	81.80	319	P	P	03 46 52.2	+1.5
	baz=122						
U56A	King	81.87	312	P	P	03 46 52.7	+1.4
	baz=118						
S56A	Natural Bridge	81.92	313	P	P	03 46 52.7	+1.3
	baz=119						
T56A	Rocky Mt	81.94	312	P	P	03 46 52.3	+0.7
	baz=118						
KMSC	Kings Mountain	82.01	310	IAmb	IAmb	03 46 53.6	
	comp=Z,18nm,1.2s						
N57A	Milroy	82.07	317	P	P	03 46 52.9	+0.8
	baz=120						
M57A	Sunshine Farm,	82.09	317	P	P	03 46 53.6	+1.4
	baz=121						
V55A	Taylorsville	82.24	311	IAmb	IAmb	03 46 54.9	
	comp=Z,23nm,1.4s						
Q56A	Snyder Ridge,	82.32	315	P	P	03 46 55.5	+2.0
	baz=119						
J57A	Williamstown	82.44	320	P	P	03 46 55.6	+1.6
	baz=122						
LATQ	La Tuque	82.71	324	P	P	03 46 55.5	+0.1
LATQ				IAmb	IAmb	03 46 56.8	
	comp=Z,20nm,1.5s						
U54A	Nelsons Funny	82.98	311	P	P	03 46 58.6	+1.5
	baz=117						

BG3	Lake Jocassee	83.11	310	IAmb	IAmb	03 47 00.1	
	comp=Z,17nm,1.3s						
N54A	Moraine State	83.78	316	P	P	03 47 02.0	+1.0
	baz=119						
TKL	Tuckaleechee C	84.02	310	LR	LR	04 18 02.8	
	comp=Z,53nm,20.0s,baz=110,slow=31						
O53A	New Philadelph	84.27	315	P	P	03 47 05.0	+1.5
	baz=118						
VNDA	Vanda	85.72	179	LR	LR	04 20 06.3	
	comp=Z,112nm,19.9s,baz=158,slow=32						
GEYT	Alibeck	86.97	49	P	P	03 47 16.1	-0.9
	comp=Z,2.8nm,0.8s,baz=234,slow=6.9,SNR=4.9						
GYA0B	ALIBECK ARRAY	86.97	49	P	P	03 47 17.1	0.0
GYA0B				IAmb	IAmb	03 47 18.7	
	comp=Z,16nm,1.4s						
WVT	Waverly	87.22	309	P	P	03 47 17.7	-0.5
	baz=113						
WVT	Waverly	87.22	309	P	P	03 47 17.2	-1.0
W41B	Gary Mavity, V	90.20	307	P	P	03 47 32.8	+0.4
	baz=111						
CCM	Cathedral Cave	90.47	310	P	P	03 47 33.2	-0.4
	baz=111						
CCM	Cathedral Cave	90.47	310	P	P	03 47 33.5	-0.1
FRB	Frobisher Bay	90.63	339	LR	LR	04 18 06.2	
	comp=Z,47nm,21.6s,baz=290,slow=29						
HKT	Hockley	91.31	301	P	P	03 47 37.9	+0.3
W39A	Magazine	91.39	306	P	P	03 47 38.2	+0.3
	baz=110						
HHAR	Hobbs	91.87	307	P	P	03 47 39.7	-0.5
HHAR				IAmb	IAmb	03 47 41.2	
	comp=Z,10nm,1.3s						
U38A	Gravette	92.27	307	IAmb	IAmb	03 47 47.6	
	comp=Z,6.1nm,1.1s						
ABKAR	Akbulak array	92.71	39	P	P	03 47 43.5	-0.1
TUL1	Leonard	93.17	306	P	P	03 47 45.4	-0.8
TUL1				IAmb	IAmb	03 47 47.2	
	comp=Z,11nm,1.3s						
KBL	Kabul	94.03	55	P	P	03 47 48.6	-1.8
ARU	Arti	94.76	32	P	P	03 47 53.4	+0.5
NIL	Nilore	97.13	57	P	P	03 48 04.2	-0.2
NIL				IAmb	IAmb	03 48 24.5	
	comp=Z,4.8nm,1.0s						
RKT	Rikitea	109.75	237	*e*LR	LR	04 25 22.9	
	comp=Z,170nm,25.2s						
WMQ	Urumqi	110.03	49	*e*PKP	PKiKP	03 53 02.5	-1.0
TBI	Tubuai	120.72	229	*e*LR	LR	04 30 24.9	
	comp=Z,154nm,37.2s						
LZH	Lanzhou	122.29	58	*e*PKP	PKiKP	03 53 27.5	0.0
LZH				sPKP		03 53 32.0	
LZH				LR	LR		
	comp=Z,100nm,17.9s						
LZH				LR	LR		
	comp=Z,110nm,18.3s						
LZH				LR	LR		
	comp=Z,160nm,19.9s						
SONM	Songino Array	122.82	44	PKP	PKPdf	03 53 28.0	+0.1
	comp=Z,1.4nm,1.1s,baz=222,slow=2.0,SNR=5.0						
PPT2	Papeete2	124.26	234	*e*LR	LR	04 32 05.7	
	comp=Z,124nm,22.5s						
HHC	Hu-ho-hao-te	127.80	51	*e*PKP	PKPdf	03 53 33.5	-4.2
ASAR	Alice Springs	129.03	141	PKP	PKPdf	03 53 39.1	-1.3
	comp=Z,1.6nm,1.0s,baz=211,slow=3.2,SNR=7.7						
ASAR	Alice Springs	129.03	141		PKPdf	03 53 38.9	-1.6
NJ2	Nanjing	135.05	61	*e*PKP	PKPdf	03 53 50.3	-1.2
JWT	Wachi	147.34	50		PKPbc	03 54 15.6	-0.2
MJAR	Matsushiro Arr	148.73	46	PKPbc	PKPbc	03 54 19.3	-0.2
	comp=Z,2.9nm,0.9s,baz=270,slow=5.4,SNR=6.2						

IDC 30 03:34:46.0±5.8**, 26.°19S×70.°79E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/48**, mbtmp3.7**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.8**/43**, Error ellipse: s-maj=159.0km s-min=40.0km az=55.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	34.63	17	LR	LR	03 51 56.0	
	comp=Z,63nm,18.4s,baz=305,slow=30						
H01W2	Cape Leeuwin H	38.08	114	T	T	04 22 01.4	
	baz=268						
H01W3	Cape Leeuwin H	38.08	114	T	T	04 22 02.0	
	baz=268						
H01W1	Cape Leeuwin H	38.10	114	T	T	04 22 03.4	
	baz=268						
CMAR	Chiang Mai Arr	52.13	35	P	P	03 43 58.2	-0.2
	1.0nm,0.3s,baz=226,slow=7.8,SNR=4.2						
ASAR	Alice Springs	56.78	102	P	P	03 44 32.8	+0.4
	0.3nm,0.6s,baz=249,slow=7.2,SNR=4.9						
WRA	Warramunga Arr	58.30	98	P	P	03 44 42.6	-0.5
	0.8nm,1.0s,baz=246,slow=7.8,SNR=1.3						
MKAR	Makanchi Array	73.38	8	P	P	03 46 19.7	0.0
	0.5nm,0.7s,baz=192,slow=4.6,SNR=6.0						

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*IDC **30** 03:45:34.8±1.1, 19.°87N×121.°46E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.4/36, mbtmp3.7/5, MS3.3/3, Ms1 3.3/3, ms1mx2.8/56, Error ellipse: s-maj=78.3km s-min=21.4km az=67.0*

*MAN **30** 03:45:38.7, 20.°05N×121.°19E, h29^{km}, mb4.0, ML2.8, MS2.4*

*NEIC **30** 03:45:40.9±0.8, 19.°76N±0.°07×121.°2E±0.°2, h44^{km}±6^{km}, mb4.2/4, Error ellipse: s-maj=31.3km s-min=10.3km az=94.0*

ISC 30 03:45:36.2±1.8**, 19.°90N**±0.°04×**121.°32E**±0.°10**, h8^{km}**±13^{km}**, n19, σ0.^{s}89**/21**, mb3.9**/7**, MS3.0**/3**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.81	48	*e*P	Pn	03 45 53.8	0.0
BBP				*e*S	Sn	03 46 06.0	0.0
SGCP	Mt. Cagua	1.79	157	*e*P	Pg	03 46 10.7	+0.2
SGCP				*e*S	Sg	03 46 35.1	+1.3
APYP	Conner	2.03	182	*e*P	Pb	03 46 13.8	+0.5
APYP				*e*S	Sb	03 46 39.1	+0.3
CVP	Callao Caves	2.24	168	⇓*i*P	Pb	03 46 16.7	-0.2
CVP				*i* S	Sg	03 46 46.5	-1.7
SZP	Santa	2.48	199	Pn	Pn	03 46 16.5	-0.4
TWG	Pinlang	2.91	355	Pn	Pb	03 46 27.0	-1.3
CAUP	Cauayan	2.98	171	*e*P	Pb	03 46 28.7	-0.9
CAUP				*e*S	Sg	03 47 12.6	+0.5
NACB	Ninganchiao	4.26	3	Pn	Pn	03 46 42.8	+1.4
JCJ	Chichijima	20.41	66	LR	LR	03 56 06.2	
	comp=Z,300nm,19.1s,baz=128,slow=31						
CMAR	Chiang Mai Arr	21.19	270	LR	LR	03 59 18.2	
	comp=Z,22nm,19.9s,baz=45,slow=39						
KAPI	Kappang	24.81	184	LR	LR	04 02 43.1	
	comp=Z,44nm,18.1s,baz=283,slow=42						
MK31	Makanchi Array	41.57	319	P	P	03 53 25.1	+0.7
MK31				IAmb	IAmb	03 53 50.0	
	comp=Z,8.6nm,1.9s						
MKAR	Makanchi Array	41.57	319	P	P	03 53 25.1	+0.6
	comp=Z,0.5nm,0.8s,baz=104,slow=10,SNR=4.9						
WRA	Warramunga Arr	41.60	161	P	P	03 53 23.6	-1.2
	comp=Z,1.7nm,0.8s,baz=343,slow=9.2,SNR=10						
WR0	Warramunga Arr	41.68	161	P	P	03 53 24.8	-0.7
ZAA0	Zalesovo Array	43.94	330	P	P	03 53 44.0	+0.5
ZAA0				IAmb	IAmb	03 54 26.8	
	comp=Z,10nm,1.9s						
ZALV	Zalesovo Beam	43.94	330	P	P	03 53 43.7	+0.3
	comp=Z,0.4nm,0.4s,baz=111,slow=8.1,SNR=3.6						
ASAR	Alice Springs	45.01	164	P	P	03 53 52.0	-0.4
	comp=Z,0.9nm,0.6s,baz=347,slow=7.4,SNR=9.7						
YKA	Yellowknife Ar	86.85	23	P	P	03 58 21.3	+0.2
	comp=Z,0.2nm,0.7s,baz=315,slow=3.8,SNR=4.1						

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*IDC **30** 04:00:49.9±3.4, 50.°87N×179.°56E, h0^{km}, mb3.2/4, mb1 3.7/5, mb1mx3.3/61, mbtmp3.4/5, ML3.6/1, MS3.2/2, Ms1 3.3/2, ms1mx2.7/25, Error ellipse: s-maj=91.3km s-min=32.3km az=174.0*

*NEIC **30** 04:00:54.5±1.2, 50.°95N±0.°08×179.°5E±0.°1, h22^{km}±10^{km}, Error ellipse: s-maj=13.0km s-min=8.0km az=221.0*

*AEIC **30** 04:00:57±1.0, 51.°1N±0.°1×179.°46E±0.°08, h22^{km}±8^{km}, ML3.3, Error ellipse: s-maj=15.3km s-min=6.8km az=188.0*

ISC 30 04:00:55.6±1.6**, 51.°1N**±0.°2×**179.°50E**±0.°09**, h35^{km}, n25, σ1.^{s}17**/16**, mb3.4**/4**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.35	340		Pn	04 01 04.0	-0.3
AMKA					Sn	04 01 10.1	-0.1
CESW	Semis’ Southwe	0.86	3		Pn	04 01 11.9	+0.7
CERAA	Semis’ Rag’d T	0.87	8		Pn	04 01 11.9	+0.6
CERB	Semis’ Cerberu	0.89	5		Pn	04 01 12.5	+0.8
CETU	Semis' Tuman	0.92	360		Pn	04 01 13.6	+1.5
CEAP	Semis’ Anvil P	0.96	3		Pn	04 01 13.5	+0.9
LSPA	Little Sitkin	1.08	328		Pn	04 01 15.4	+1.2
LSSA	Little Sitkin	1.09	326		Pn	04 01 15.5	+1.0
LSNW	Little Sitkin	1.11	327		Pn	04 01 15.2	+0.6
ADK	Adak	2.53	69		Pn	04 01 35.4	+1.3
PETK	Petropavlovsk-	13.56	287	LR	LR	04 10 39.1	
	comp=Z,31nm,18.2s,baz=338,slow=43						
KDAK	Kodiak Island	17.50	57	Pn	Pn	04 04 53.8	-2.7
	0.2nm,0.3s,baz=81,slow=19,SNR=1.6						
ILAR	Eielson Array	22.18	39	P	P	04 05 49.1	+0.9
	0.3nm,0.5s,baz=234,slow=7.7,SNR=7.3						
H11N2	WAKE ISLAND Hy	32.80	202	T	T	04 42 33.3	
	baz=21,slow=76,SNR=5.5						
H11N3	WAKE ISLAND Hy	32.81	202	T	T	04 42 37.3	
	baz=21,slow=76,SNR=3.8						
H11N1	WAKE ISLAND Hy	32.81	202	T	T	04 42 37.9	
	baz=21,slow=76,SNR=5.3						
H11S1	WAKE ISLAND Hy	34.02	202	T	T	04 43 59.4	
	baz=19						
H11S2	WAKE ISLAND Hy	34.04	202	T	T	04 44 00.0	
	baz=19						
H11S3	WAKE ISLAND Hy	34.04	202	T	T	04 44 13.2	
	baz=19						
YKA	Yellowknife Ar	36.23	46	P	P	04 07 54.4	-0.4
	0.2nm,0.4s,baz=280,slow=9.2,SNR=4.2						
PDAR	Pinedale Array	47.43	71	P	P	04 09 27.0	+0.2
	0.4nm,0.7s,baz=318,slow=4.0,SNR=4.6						
PDAR				LR	LR	04 28 09.6	
	comp=Z,92nm,22.0s,baz=115,slow=35						
MKAR	Makanchi Array	59.39	308	P	P	04 10 54.4	+0.1
	0.3nm,0.8s,baz=44,slow=3.8,SNR=3.5						
H03N2	Juan Fernandez	122.09	105	T	T	06 34 01.9	
	baz=317,slow=78,SNR=6.5						
H03N1	Juan Fernandez	122.10	105	T	T	06 34 04.2	
	baz=317,slow=78,SNR=7.2						
H03N3	Juan Fernandez	122.11	105	T	T	06 34 06.3	
	baz=317,slow=78,SNR=9.9						

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*JMA **30** 04:07:24.2±0.1, 23.°08N×121.°47E, h28^{km}, M3.3*

*TAP **30** 04:07:25.3, 23.°09N×121.°41E, h23^{km}, ML3.6, C*

ISC 30 04:07:24.4±0.9**, 23.°05N**±0.°02×**121.°49E**±0.°02**, h25^{km}**±6^{km}**, n118, σ0.^{s}99**/193**, 6C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDH	Donghe	0.19	247	*i* P	Pb	04 07 30.3	+0.4
	baz=219						
EDH				*i* S	Sb	04 07 34.1	+0.4
	baz=219						
FULB	Fuli	0.24	310	⇑*i*P	Pb	04 07 30.3	-0.3
	baz=317						
FULB				S	Sb	04 07 34.6	-0.2
	baz=317						
EYUL	Yuli	0.34	332	⇑*i*P	Pb	04 07 32.4	+0.4
	baz=348						
EYUL				*e*S	Sn	04 07 38.7	-1.1
	baz=348						
TWF1	Yuli	0.35	329	⇑*i*P	Pb	04 07 32.3	0.0
	baz=325						
TWF1				S	Sb	04 07 38.1	+0.5
	baz=325						
LONT	Longtian	0.36	247	⇓*i*P	Pb	04 07 32.6	+0.2
	baz=246						
LONT				*i* S	Sb	04 07 38.1	+0.2
	baz=246						
LDUT	Ludao	0.37	183	*e*P	Pn	04 07 33.5	-0.7
	baz=171						
LDUT				*e*S	Sn	04 07 40.2	-0.4
	baz=171						
YULB	Yu-li	0.39	333	⇑*i*P	Pb	04 07 32.7	-0.1
	baz=328						
YULB				S	Sb	04 07 38.0	-0.6
	baz=328						
TTN	Taitung	0.43	228	*e*S	Sn	04 07 41.9	-0.1
	baz=209						
TWGBT	Beinan	0.44	239	*e*P	Pb	04 07 33.2	-0.5
	baz=240						
TWGBT				*e*S	Sb	04 07 38.5	-1.5
	baz=240						
HGSD	Ruisui	0.45	352	P	Pb	04 07 34.0	+0.2
	baz=12						
HGSD				S	Sn	04 07 42.0	-0.6
	baz=12						
TWG	Pinlang	0.45	240	*i* P	Pb	04 07 33.5	-0.3
	baz=240						
TWG				S	Sb	04 07 39.3	-0.8
	baz=240						
ELDTW	Lidau	0.46	288	⇑*i*P	Pb	04 07 33.0	-1.1
	baz=286						
ELDTW				*e*S	Sb	04 07 38.2	-2.4
	baz=286						
EHY	Hungye	0.48	341	*i* P	Pb	04 07 34.1	-0.3
	baz=336						
EHY				*e*S	Sb	04 07 40.6	-0.6
	baz=336						
EGFH	Guangfu	0.62	355	*e*P	Pb	04 07 36.5	-0.2
	baz=348						
YUS	Yu-Shan	0.66	312	*i* P	Pb	04 07 37.0	-0.7
	baz=314						
ECL	Taimali	0.67	228	*i* P	Pb	04 07 36.6	-0.9
	baz=229						
ECL				*e*S	Sb	04 07 44.8	-1.5
	baz=229						
STYT	Tauyuan	0.69	280	*i* P	Pb	04 07 37.0	-0.9
	baz=282						
STYT				*e*S	Sb	04 07 45.2	-1.7
	baz=282						
ESL	Shilin	0.77	356	*e*P	Pb	04 07 38.3	-0.8
	baz=3.0						
ESL				*e*S	Sb	04 07 47.6	-1.6
	baz=3.0						
VWDT	VWDT	0.77	335	⇓*i*P	Pb	04 07 38.9	-0.4
	baz=352						
VWDT				S	Sb	04 07 48.3	-1.1
	baz=352						
SLGT	Liugui	0.78	266	*i* P	Pb	04 07 39.0	-0.4
	baz=262						
SLGT				*e*S	Sb	04 07 47.9	-1.7
	baz=262						
ALS	Alishan	0.78	306	⇑*i*P	Pb	04 07 39.2	-0.4
	baz=308						
ALS				*i* S	Sb	04 07 48.8	-1.2
	baz=308						
WTP	Ta-pu	0.83	284	*i* P	Pb	04 07 40.2	-0.1
	baz=282						
WTP				*e*S	Sb	04 07 50.8	-0.3
	baz=282						
TPUB	Ta-pu	0.83	288	⇓*i*P	Pb	04 07 40.0	-0.2
	baz=294						
TPUB				*e*S	Sb	04 07 50.7	-0.4
	baz=294						
SGST	Jiashian	0.84	273	*i* P	Pb	04 07 39.4	-1.0
	baz=272						
SGST				*e*S	Sb	04 07 50.2	-1.0
	baz=272						
SSD	Sandimen	0.85	250	P	Pb	04 07 39.6	-0.9
	baz=242						
SSD				*e*S	Sb	04 07 51.3	-0.2
	baz=242						
TSMG	Majia	0.85	247	P	Pb	04 07 39.3	-1.3
	baz=242						
TSMG				*e*S	Sb	04 07 51.1	-0.5
	baz=242						
WHYT	Xinyi Township	0.87	318	P	Pn	04 07 41.1	0.0
	baz=314						
WHYT				*e*S	Sb	04 07 51.9	-0.4
	baz=314						
TAW	Tawu	0.88	219	P	Pb	04 07 40.2	-0.8
	baz=221						
TAW				*e*S	Sb	04 07 50.3	-2.1
	baz=221						
CHN4	Tsaushan	0.88	290	*i* P	Pn	04 07 41.1	-0.2
	baz=295						
CHN4				*e*S	Sn	04 07 53.2	0.0
	baz=295						
SSLB	Suanglung	0.89	326	*i* P	Pb	04 07 40.9	-0.3
	baz=338						
SSLB				S	Sb	04 07 50.8	-1.9
	baz=338						
EAST	Anshuo	0.89	222	P	Pb	04 07 40.4	-0.8
	baz=216						
EAST				*e*S	Sn	04 07 53.3	-0.1
	baz=216						
CHN1	Nanshi	0.90	279	*i* P	Pn	04 07 41.4	-0.1
	baz=275						
CHN1				S	Sn	04 07 53.3	-0.4
	baz=275						
MASBT	Mashibuluo	0.90	242	*i* P	Pb	04 07 40.6	-0.8
	baz=235						
MASBT				*e*S	Sb	04 07 51.4	-1.7
	baz=235						
CHN5	Tsauling	0.93	306	⇓*i*P	Pn	04 07 42.0	+0.1
	baz=307						
CHN5				*i* S	Sb	04 07 53.5	-0.4
	baz=307						
HWA	Hwalien	0.93	6	*e*P	Pn	04 07 42.3	+0.4
	baz=357						
SNST	Tainan City	0.93	281	P	Pn	04 07 42.1	+0.2
	baz=279						
SNST				*e*S	Sn	04 07 55.0	+0.5
	baz=279						
SCST	Cishan	0.93	260	*e*P	Pn	04 07 42.9	+1.0
	baz=257						
SCST				*e*S	Sn	04 07 55.8	+1.3
	baz=257						
TWK	Hsinying	0.95	284	*i* P	Pn	04 07 42.1	-0.1
	baz=282						
TWK				S	Sn	04 07 54.9	-0.1
	baz=282						
SMLT	Sun Moon Lake	0.99	327	P	Pb	04 07 42.7	-0.4
	baz=335						
SMLT				*i* S	Sb	04 07 55.5	-0.3
	baz=335						
LAY	Lan-yu	1.00	177	P	Pn	04 07 42.5	-0.4
	baz=161						
LAY				*e*S	Sb	04 07 55.5	-0.5
	baz=161						
TWM1	Shoushan	1.01	258	P	Pb	04 07 44.2	+0.9
	baz=254						
TWM1				*e*S	Sn	04 07 58.4	+1.9
	baz=254						
SSPT	Xinbi	1.02	237	P	Pb	04 07 43.4	0.0
	baz=229						
SSPT				*e*S	Sn	04 07 56.6	0.0
	baz=229						
TWD	Chiawan	1.03	5	*i* P	Pn	04 07 43.1	-0.2
	baz=358						
TWD				*e*S	Sb	04 07 56.3	-0.5
	baz=358						
TYC	Yuchr	1.03	326	*i* P	Pb	04 07 43.9	+0.2
	baz=339						
TYC				S	Sn	04 07 58.1	+1.1
	baz=339						
CHN3	Shinhua	1.04	272	*e*P	Pb	04 07 44.7	+1.0
	baz=269						
CHN3				*e*S	Sn	04 08 00.4	+3.4
	baz=269						
WJS	Zhushan	1.04	318	P	Pn	04 07 43.4	0.0
	baz=320						
WJS				*e*S	Sn	04 07 57.9	+0.7
	baz=320						
SLIU	Shizi	1.04	218	*i* P	Pn	04 07 42.8	-0.6
	baz=202						
SLIU				*e*S	Sn	04 07 57.5	+0.2
	baz=202						
SCZT	Fangliau	1.05	230	P	Pn	04 07 43.2	-0.3
	baz=222						
SCZT				*e*S	Sb	04 07 56.1	-1.1
	baz=222						
CHGB	Renai	1.05	344	*i* P	Pn	04 07 43.3	-0.4
	baz=1.0						
CHGB				S	Sb	04 07 55.7	-1.8
	baz=1.0						
CHN2	Minshiung	1.05	298	*e*P	Pb	04 07 44.3	+0.3
	baz=297						
CHN2				*e*S	Sn	04 07 59.9	+2.4
	baz=297						
WGK	Gukeng	1.07	307	*e*P	Pb	04 07 45.0	+0.8
	baz=308						
WGK				*e*S	Sn	04 07 59.1	+1.3
	baz=308						
WPL	Puli Township	1.08	333	*e*P	Pn	04 07 43.9	0.0
	baz=347						
CHY	Chiayi	1.08	295	P	Pb	04 07 44.5	+0.1
	baz=294						
CHY				*e*S	Sn	04 07 59.8	+1.7
	baz=294						
WDLH	Douliu	1.08	306	P	Pb	04 07 44.8	+0.2
	baz=307						
WDLH				*e*S	Sn	04 07 59.5	+1.2
	baz=307						
SNJT	Kaohsiung City	1.11	255	*e*P	Pb	04 07 46.1	+1.2
	baz=252						
SNJT				*e*S	Sn	04 08 01.0	+2.3
	baz=252						
DPDB	Guoxing	1.11	332	P	Pb	04 07 45.0	-0.1
	baz=343						
DPDB				*e*S	Sn	04 07 59.0	0.0
	baz=343						
WNT	Mingjian	1.11	318	*i* P	Pb	04 07 45.5	+0.5
	baz=320						
WNT				S	Sn	04 08 00.4	+1.5
	baz=320						
WHF	Hehuan Shan	1.11	349	P	Pn	04 07 44.2	-0.6
	baz=5.0						
WHF				*e*S	Sb	04 07 57.2	-2.3
	baz=5.0						
NACB	Ninganchiao	1.13	5	*e*P	Pn	04 07 43.5	-1.1
	baz=358						
NACB				*e*S	Sb	04 07 58.0	-1.5
	baz=358						
WNT1	Nantou City	1.14	319	*e*P	Pb	04 07 45.8	+0.4
	baz=321						
WNT1				*e*S	Sn	04 08 00.5	+1.0
	baz=321						
ETLH	Xiulin Townshi	1.16	360	P	Pn	04 07 44.5	-0.6
	baz=2.0						
ICHU	Yijhu	1.16	286	P	Pb	04 07 45.9	+0.2
	baz=285						
ICHU				*e*S	Sn	04 08 01.4	+1.4
	baz=285						
WTK	Tuku	1.20	302	*e*P	Pb	04 07 46.1	-0.3
	baz=288						
WTK				*e*S	Sb	04 08 03.2	+1.7
	baz=288						
CHN8	Yiju	1.22	284	*e*P	Pb	04 07 46.4	-0.3
	baz=283						
FUSS	Fushou	1.22	349	P	Pn	04 07 46.2	+0.2
	baz=6.0						
FUSS				*e*S	Sn	04 08 00.8	-1.1
	baz=6.0						
WWF	Wufeng	1.23	324	*e*P	Pb	04 07 46.6	-0.4
	baz=324						
TWT	Tachien	1.24	346	*i* P	Pn	04 07 46.4	+0.2
	baz=350						
TWT				*e*S	Sn	04 08 01.1	-1.2
	baz=350						
TDCB	Techi	1.24	346	P	Pn	04 07 46.5	+0.3
	baz=350						
TDCB				*e*S	Sn	04 08 00.9	-1.4
	baz=350						
WLCH	Liuqiu	1.24	236	*e*P	Pb	04 07 49.0	+1.8
	baz=215						
WLCH				*e*S	Sb	04 08 05.9	+3.2
	baz=215						
HEN	Hengchun	1.25	214	*e*P	Pb	04 07 46.9	-0.4
	baz=212						
TSEB	Hengchuen, Pin	1.27	206	*e*P	Pb	04 07 48.4	+0.8
	baz=195						
TWKBT	Hengchun	1.27	210	*e*P	Pn	04 07 46.6	+0.1
	baz=196						
TWKBT				*e*S	Sn	04 08 02.7	-0.1
	baz=196						
TWK1	Hengchun	1.27	210	*e*P	Pb	04 07 47.1	-0.6
	baz=196						
TWK1				*e*S	Sn	04 08 02.3	-0.5
	baz=196						
WSF	Szhu	1.31	297	*e*S	Sb	04 08 05.1	+0.4
	baz=297						
WHP	Taichung City	1.32	338	*e*P	Pb	04 07 49.1	+0.5
	baz=352						
WHP				*e*S	Sb	04 08 05.8	+0.5
	baz=352						
TCU	Taichung	1.33	326	*e*P	Pb	04 07 50.1	+1.4
	baz=328						
TCU				*e*S	Sb	04 08 06.4	+1.2
	baz=328						
WCHH	Zhanghua	1.34	320	*e*P	Pb	04 07 49.0	+0.1
	baz=322						
WCHH				*e*S	Sb	04 08 06.1	+0.6
	baz=322						
NNSB	Datong	1.38	356	*e*P	Pn	04 07 48.1	0.0
	baz=10.0						

NNSB				*e*S	Sn	04 08 05.5	-0.2
	baz=10.0						
NNSH	Datong	1.38	356	*e*P	Pn	04 07 48.5	+0.3
	baz=10.0						
NNSH				*e*S	Sn	04 08 04.5	-1.2
	baz=10.0						
NNS	Nan Shan	1.39	356	*e*P	Pb	04 07 49.3	-0.6
	baz=11						
ENA	Nanau	1.39	9	*e*P	Pn	04 07 47.9	-0.4
	baz=359						
TWQ1	Liyutan	1.45	333	*e*P	Pb	04 07 51.0	+0.2
	baz=336						
TWQ1				*e*S	Sb	04 08 10.1	+1.2
	baz=336						
WDJ	Dajia District	1.51	329	P	Pb	04 07 51.6	-0.2
	baz=331						
WDJ				*e*S	Sb	04 08 10.4	-0.2
	baz=331						
NSY	Sanyi	1.52	334	*e*P	Pb	04 07 51.6	-0.4
	baz=337						
NSY				*e*S	Sb	04 08 12.0	+1.2
	baz=337						
NDT	Datong Townshi	1.55	1	*e*P	Pb	04 07 51.8	-0.6
	baz=14						
ENTT	Nioudou	1.59	2	*e*P	Pn	04 07 51.0	+0.1
	baz=4.0						
TWC	Suao	1.59	12	*e*P	Pb	04 07 52.8	-0.3
	baz=1.0						
NMLH	Miaoli	1.62	337	*e*P	Pb	04 07 53.7	+0.1
	baz=336						
YHNB	Yeheng	1.62	356	*e*P	Pn	04 07 52.1	+0.7
	baz=9.0						
NSTT	Nanjuang	1.64	344	*e*P	Pb	04 07 53.7	-0.3
	baz=344						
LIOB	Emei	1.65	345	*e*P	Pb	04 07 53.7	-0.5
	baz=344						
TWE	Neicheng	1.68	5	*e*P	Pn	04 07 52.4	+0.3
	baz=7.0						
WDGT	Dungji	1.70	278	*e*P	Pn	04 07 52.0	-0.4
	baz=276						
NWLT	Wulai	1.72	0	*e*P	Pn	04 07 53.9	+1.1
	baz=15						
NWLT				*e*S	Sn	04 08 13.5	-0.6
	baz=15						
NTC	Toucheng	1.83	10	*e*P	Pn	04 07 55.4	+1.2
	baz=358						
PHUB	P'eng-hu	1.83	285	*e*P	Pn	04 07 54.3	+0.1
	baz=284						
PNG	Penghu	1.85	287	*e*P	Pn	04 07 54.6	0.0
	baz=285						
VCHM	Qimei	1.91	275	*e*P	Pn	04 07 54.0	-1.3
	baz=274						
TIPB	Shuangxi	1.94	9	*e*P	Pb	04 07 58.2	-0.9
	baz=8.0						
YOJ	Yonaguni jima	1.98	44	*e*S	Sn	04 08 21.4	+1.1
TWB1	Santiao Chiao	2.00	13	*e*P	Pn	04 07 58.0	+1.3
	baz=1.0						
NWF	Wu-fen Shan	2.03	7	*e*P	Pb	04 07 59.4	-1.4
	baz=6.0						
WFSB	Wu-fen Shan	2.03	7	*e*P	Pb	04 07 59.2	-1.5
	baz=6.0						
YM01	YM01	2.09	2	*e*P	Pb	04 07 60.0	-1.7
HATJ	Hateruma jima	2.35	64	P	Pn	04 08 03.0	+1.6
HATJ				S	Sn	04 08 30.4	+1.0
IRIF	Iriomote-Funau	2.42	58	P	Pn	04 08 04.2	+1.8
IRIF				*e*S	Sn	04 08 33.8	+2.6
JKRS	Kuro-shima	2.59	62	*e*S	Sn	04 08 37.2	+1.7
VWUC	VWUC	2.69	316	*e*P	Pn	04 08 05.9	-0.2
	baz=316						
JIJ	Ishigaki jima	2.76	61	P	Pn	04 08 08.5	+1.4
JIJ				*e*S	Sn	04 08 39.5	-0.1
PTMZ	Houxiangcun	2.94	313	*e*P	Pn	04 08 09.1	-0.4
	baz=312						
JISG	Ishigakijimahi	3.00	59	P	Pn	04 08 11.7	+1.3
KNM	Kinmen	3.12	297	*e*P	Pn	04 08 13.3	+1.3
	baz=294						
KNMB	Chin-men Tao	3.17	297	*e*P	Pn	04 08 12.3	-0.5
	baz=296						
MATB	Ma-tsu	3.40	336	*e*P	Pn	04 08 15.0	-0.8
	baz=334						
MSUT	Lienchiang	3.42	336	*e*P	Pn	04 08 15.6	-0.5
	baz=334						
AXDP	Jialang	3.71	301	*e*P	Pn	04 08 20.0	-0.1
	baz=299						
MHZQ	Yeshan	3.78	324	*e*P	Pn	04 08 20.4	-0.6
	baz=322						
LYJJ	Jianjiangzhen	3.83	336	*e*P	Pn	04 08 21.2	-0.5
	baz=335						

IDC 30 04:18:23.0±1.3**, 51°.38N**×**81°.97E, h0**^{km}**, mb1 2.0**/3**, mb1mx2.0**/41**, mbtmp2.0**/3**, ML1.3**/3**, Error ellipse: s-maj=15.4km s-min=11.4km az=115.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.30	252	Pn	Pn	04 19 01.6	-0.6
	0.1nm,0.3s,baz=73,slow=18,SNR=4.5						
KURBB				Sn	Sn	04 19 31.7	+0.6
	0.2nm,0.3s,baz=72,slow=32,SNR=6.4						
I46RU	ZALESOVO INFRA	3.10	33	*i*		04 35 52.2	
	baz=215,slow=337,SNR=4.3						
ZALV	Zalesovo Beam	3.10	33	Pn	Pn	04 19 11.9	-1.3
	0.1nm,0.3s,baz=221,slow=17,SNR=1.8						
ZALV				Pg	Pb	04 19 20.2	+1.2
	0.2nm,0.3s,baz=227,slow=14,SNR=3.5						
ZALV				Sn	Sn	04 19 48.7	-2.2
	0.1nm,0.3s,baz=217,slow=24,SNR=6.1						
ZALV				Lg	Lg	04 20 02.5	
	0.2nm,0.3s,baz=224,slow=25,SNR=5.4						
MKAR	Makanchi Array	4.60	177	Pn	Pn	04 19 34.4	+0.6
	0.0nm,0.3s,baz=0.0,slow=12,SNR=1.8						
MKAR				Sn	Sn	04 20 29.6	+1.7
	0.1nm,0.3s,baz=0.4,slow=20,SNR=2.3						
MKAR				Lg	Lg	04 20 48.3	
	0.3nm,0.3s,baz=14,slow=26,SNR=10						
AAK	Ala-Archa	10.12	213	Lg	Lg	04 23 45.4	
	0.4nm,0.3s,baz=56,slow=15,SNR=2.5						

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*KRSC **30** 04:30:32.0±2.2, 49°.16N×156°.79E, h50^{km}±24^{km}, ML5.7*
*BJI **30** 04:30:34.3±0.0, 49°.46N×156°.38E, h44^{km}, mB5.2/55, mb4.9/72, Ms5.2/71, Ms7 5.0/69*
*NEIC **30** 04:30:35.7±1.4, 49°.50N±0°.08×156°.1E±0°.1, h26^{km}±4^{km}, mb5.1/315, Error ellipse: s-maj=12.8km s-min=9.0km az=138.0*
*MOS **30** 04:30:36.0±1.2, 49°.42N×156°.23E, h46^{km}, mb5.3/68, MS4.6/13, Error ellipse: s-maj=5.7km s-min=2.8km az=83.9*
MOS Felt (II-III) at Severo-Kuril'sk.
*GCMT **30** 04:30:38.7±0.2, 49°.33N±0°.01×156°.59E±0°.02, h26^{km}, MW5.2/125, Moment Tensor Solution. s87,c126; s125,c193; Duration: $1^{s}0$ Moment tensor: Scale 10^{16} Nm; M_{rr}5.89±.17; $M_{\theta\theta}$-3.11±.12; $M_{\phi\phi}$-2.78±.12; $M_{r\theta}$3.25±.26; $M_{\theta\phi}$-3.43±.09; $M_{\phi r}$2.71±.24; Best double couple: $M_0$7.45300×10^{16} NP1:ϕ_s224.00000°, δ28.00000°, λ86.00000°. NP2:ϕ_s49.00000°, δ62.00000°, λ92.00000°. Principal axes: T 7.2130, Plg73.0000°, Azm324.0000°; N 0.4790, Plg2.0000°, Azm228.0000°; P -7.6920, Plg17.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **30** 04:30:38.2±2.1, 49°.43N×156°.18E, h52^{km}±18^{km}, mb4.5/40, mb1 4.6/45, mb1mx4.5/58, mbtmp4.8/45, ML4.1/5, MS4.5/47, Ms1 4.5/47, ms1mx4.4/67 Error ellipse: s-maj=12.7km s-min=9.4km az=146.0*
*BGR **30** 04:30:48.5±0.0, 50°.67N×154°.03E, h33^{km}, mb5.1*
ISC 30 04:30:37.2±0.5**, 49°.36N**±0°.04×**156°.44E**±0°.04**, h46**^{km}±3^{km}**, h46**^{km}**:pP-P, n997,** $\sigma 1^{s}45$/962**, mb5.0**/324**, MS4.7**/65**, 48C-40D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.34	351	PN	Pn	04 30 58.7	-0.7
SKR				S	Sn	04 31 18.7	+2.7
SKR	Severo-Kuril's	1.34	351	*e*P	Pn	04 30 58.7	-0.7
SKR				*e*S	Sn	04 31 18.7	+2.7
PAU	Pauzhetka	2.12	6	PN	Pn	04 31 09.8	-0.3
PAU				S	Sn	04 31 38.4	+3.2
PAU	Pauzhetka	2.12	6	*e*P	Pn	04 31 09.8	-0.3
PAU				*e*S	Sn	04 31 38.4	+3.2
KDTR	Khodutka, Kamc	2.66	22	PN	Pn	04 31 16.9	-0.6
KDTR				S	Sn	04 31 49.5	+1.0
KDTR	Khodutka, Kamc	2.66	22	*e*P	Pn	04 31 16.9	-0.6
KDTR				*e*S	Sn	04 31 49.5	+1.0
MTVR	Mutnovka	3.31	19	PN	Pn	04 31 26.6	0.0
MTVR				S	Sn	04 32 06.8	+2.0
MTVR	Mutnovka	3.31	19	*e*P	Pn	04 31 26.6	0.0
MTVR				*e*S	Sn	04 32 06.8	+2.0
RUS	Russkaya	3.34	22	PN	Pn	04 31 25.7	-1.2
RUS				S	Sn	04 32 05.7	+0.4
RUS	Russkaya	3.34	22	*e*P	Pn	04 31 25.7	-1.2
RUS				*e*S	Sn	04 32 05.7	+0.4
GRL	Gorelyy	3.36	17	PN	Pn	04 31 26.9	-0.3
GRL	Gorelyy	3.36	17	*e*P	Pn	04 31 26.9	-0.3
APC	Apacha	3.60	7	PN	Pn	04 31 32.7	+2.4
APC	Apacha	3.60	7	*e*P	Pn	04 31 32.7	+2.4
KRMR	Karymshinskiy	3.63	16	PN	Pn	04 31 32.7	+1.9
KRMR	Karymshinskiy	3.63	16	*e*P	Pn	04 31 32.7	+1.9
PEA0B	Petropavlovsk-	3.83	11	PN	Pn	04 31 35.1	+1.4
PEA0B	Petropavlovsk-	3.83	11	Pn	Pn	04 31 35.0	+1.4
PETK	Petropavlovsk-	3.83	11	P	Pn	04 31 35.3	+1.7
	24nm,0.3s,baz=200,slow=13,SNR=246						
PETK				S	Sn	04 32 29.0	+12
	33nm,0.3s,baz=173,slow=13,SNR=3.6						
PETK				LR	LR	04 33 18.0	
	comp=Z,11µm,19.1s,baz=181,slow=42						
PETK	Petropavlovsk-	3.83	11	Pn	Pn	04 31 34.8	+1.1
PET	Petropavlovsk	3.92	20	PN	Pn	04 31 35.5	+0.7
PET				S	Sn	04 32 22.6	+3.1
PET	Petropavlovsk	3.92	20		Pn	04 31 34.4	-0.4
DALK	Dalny	3.95	21	PN	Pn	04 31 35.4	+0.2
DALK				S	Sn	04 32 22.0	+1.8
DALK	Dalny	3.95	21	*e*P	Pn	04 31 35.4	+0.2
DALK				*e*S	Sn	04 32 22.0	+1.8
UGLR	Uglovaya	4.13	20	PN	Pn	04 31 38.6	+0.8
UGLR	Uglovaya	4.13	20	*e*P	Pn	04 31 38.6	+0.8
AVH	Avacha	4.17	19	PN	Pn	04 31 40.5	+2.3
AVH				S	Sn	04 32 29.0	+3.3
AVH	Avacha	4.17	19	*e*P	Pn	04 31 40.5	+2.3
AVH				*e*S	Sn	04 32 29.0	+3.3
KOK	Koryaka	4.17	18	PN	Pn	04 31 39.5	+1.2
KOK	Koryaka	4.17	18	*e*P	Pn	04 31 39.5	+1.2
SMAR	Somma	4.18	20	PN	Pn	04 31 40.0	+1.5
SMAR	Somma	4.18	20	*e*P	Pn	04 31 40.0	+1.5
KRER	Koryakskii	4.21	19	PN	Pn	04 31 39.7	+0.8
KRER	Koryakskii	4.21	19	*e*P	Pn	04 31 39.7	+0.8
SDLR	Sedlovina	4.21	20	PN	Pn	04 31 38.2	-0.7
SDLR	Sedlovina	4.21	20	*e*P	Pn	04 31 38.2	-0.7
NLC	Nalytchevo	4.23	24	PN	Pn	04 31 38.5	-0.5
NLC				S	Sn	04 32 26.5	-0.5
NLC	Nalytchevo	4.23	24	*e*P	Pn	04 31 38.5	-0.5
NLC				*e*S	Sn	04 32 26.5	-0.5
KRX	Arik	4.24	18	PN	Pn	04 31 40.1	+0.8
KRX	Arik	4.24	18	*e*P	Pn	04 31 40.1	+0.8
SPN	Mys Shipunski	4.37	30	PN	Pn	04 31 40.4	-0.5
SPN				S	Sn	04 32 31.6	+1.1
SPN	Mys Shipunski	4.37	30	*e*P	Pn	04 31 40.4	-0.5
SPN				*e*S	Sn	04 32 31.6	+1.1
GNL	Ganaly	4.44	12	PN	Pn	04 31 43.6	+1.6
GNL	Ganaly	4.44	12	*e*P	Pn	04 31 43.6	+1.6
KII	Karymskiy	5.04	21	PN	Pn	04 31 52.4	+2.2
KII	Karymskiy	5.04	21	*e*P	Pn	04 31 52.4	+2.2
MKZ	Mys Kozlova	6.14	30	PN	Pn	04 32 03.9	-1.3
MKZ	Mys Kozlova	6.14	30	*e*P	Pn	04 32 03.9	-1.3
KZV	Kizimen	6.23	21	PN	Pn	04 32 08.1	+1.5
KZV	Kizimen	6.23	21	*e*P	Pn	04 32 08.1	+1.5
TUMD	Tumrok D	6.33	21	*e*P	Pn	04 32 09.1	+1.2
TUMR	Tumrok	6.35	20	PN	Pn	04 32 09.1	+0.9
TUMR	Tumrok	6.35	20	*e*P	Pn	04 32 10.1	+1.9
ESO	Esso	6.72	11	PN	Pn	04 32 16.1	+3.0
ESO	Esso	6.72	11	*e*P	Pn	04 32 16.1	+3.0
KMNR	Kamenistaya	6.81	18	PN	Pn	04 32 17.3	+2.8
KMNR	Kamenistaya	6.81	18	*e*P	Pn	04 32 17.3	+2.8
KUR	Kuril'sk	7.14	238	PN	Pn	04 32 19.0	0.0
KUR				pmax	pmax		
	comp=Z,321nm,0.6s						
KUR				pmax	pmax		
	comp=N,62nm,0.5s						
KUR				pmax	pmax		
	comp=E,148nm,0.7s						
KUR				pmax	pmax		
	comp=Z,2µm,3.6s						
KUR				MLR	MLR		
	comp=Z,4µm,14.0s						
SRDR	Sredinnyy	7.24	15	PN	Pn	04 32 22.4	+2.0
SRDR	Sredinnyy	7.24	15	*e*P	Pn	04 32 22.4	+2.0
BDR	Baidarnaya	7.77	20	PN	Pn	04 32 28.3	+0.7
BDR	Baidarnaya	7.77	20	*e*P	Pn	04 32 28.3	+0.7
SRKR	Sorokina	7.84	19	PN	Pn	04 32 29.7	+1.1
SRKR	Sorokina	7.84	19	*e*P	Pn	04 32 29.7	+1.1
KBTR	Krutoberegovo	7.87	27	PN	Pn	04 32 28.2	-0.7
KBTR	Krutoberegovo	7.87	27	*e*P	Pn	04 32 28.2	-0.7
BKI	Bering	8.27	41	PN	Pn	04 32 32.9	-1.4
BKI	Bering	8.27	41	*e*P	Pn	04 32 32.9	-1.4
BKI				*e*S	Sn	04 33 59.5	-6.7
YUK	Yuzh-Kuril'sk	9.01	238	⇑*e*PN	Pn	04 32 44.5	-0.1
GRPR	Tuman	9.09	238	*e*PN	Pn	04 32 42.9	-2.7
GRPR				pmax	pmax		
	comp=Z,329nm,0.6s						
GRPR				pmax	pmax		
	comp=N,379nm,0.7s						
GRPR				pmax	pmax		
	comp=E,192nm,0.5s						
OKH	Okha	9.41	302	*de*PN	Pn	04 32 47.3	-2.7
OKH				MLR	MLR		
	comp=Z,5µm,15.0s						
OKH				MLR	MLR		
	comp=E,9µm,14.0s						
OKH				MLR	MLR		
	comp=N,5µm,15.0s						
UGL	Uglegorsk	9.41	274	*e*PN	Pn	04 32 54.1	+4.0
UGL				*e*S	Sn	04 34 35.8	+1.4
UGL				pmax	pmax		
	comp=Z,260nm,1.1s						
UGL				smax	smax		
	comp=N,1µm,5.0s						
UGL				smax	smax		
	comp=E,2µm,5.0s						
UGL				MLR	MLR		
	comp=E,10µm,14.0s						
UGL				MLR	MLR		
	comp=Z,10µm,13.0s						
YSS	Yuzh-Sakhalins	9.46	260	⇑*e*PN	Pn	04 32 53.2	+2.5
YSS				*e*S	Sn	04 34 39.5	+3.9
YSS				pmax	pmax		
	comp=Z,120nm,0.9s						
YSS				MLR	MLR		
	comp=Z,4µm,16.0s						
YSS				MLR	MLR		
	comp=E,3µm,17.0s						
YSS	Yuzh-Sakhalins	9.46	260	Pn	Pn	04 32 47.0	-3.7
NMR	Nemuro--Hokkai	9.52	235	*e*PN	Pn	04 32 45.8	-5.8
NKL	Nikolayevsk	10.58	297	*e*PN	Pn	04 33 05.8	-0.1
NKL				MLR	MLR		
	comp=E,754nm,13.0s						
NKL				MLR	MLR		
	comp=Z,2µm,14.0s						
OSSR	Ossora	10.63	19	PN	Pn	04 33 07.5	+0.9
OSSR	Ossora	10.63	19	*e*P	Pn	04 33 07.5	+0.9
MA2	Magadan	10.75	344	P	Pn	04 33 09.4	+1.1
	comp=Z,16nm,0.3s,baz=158,slow=9.9,SNR=44						
MA2				LR	LR	04 38 00.9	
	comp=Z,4µm,18.2s,baz=168,slow=42						
MA2	Magadan	10.75	344	*de*PN	Pn	04 33 09.6	+1.3
MA2				pmax	pmax		
	comp=Z,88nm,0.7s						
MA2	Magadan	10.75	344	Pn	Pn	04 33 05.7	-2.6
JKA	Kamikawa-asahi	10.85	246	Pn	Pn	04 33 08.2	-1.5
ASAJ	Asahikawa	10.85	246	P	Pn	04 33 09.4	-0.3
	comp=Z,11nm,0.3s,baz=84,slow=17,SNR=14						
ASAJ				LR	LR	04 37 07.9	
	comp=Z,3µm,18.3s,baz=64,slow=36						
SMY	Shemya	11.61	66	PN	Pn	04 33 18.6	-1.5
SMY	Shemya	11.61	66	Pn	Pn	04 33 18.6	-1.5
ERM	Erimo	11.83	237	⇓*e*PN	Pn	04 33 20.7	-2.4
ERM	Erimo	11.83	237	Pn	Pn	04 33 19.7	-3.5
JEM	Erimo	11.83	237	Pn	Pn	04 33 08.9	-14
JEW	Eniwo	12.27	244		Pn	04 33 28.8	-0.3
TILK	Tilichiki	12.41	23	PN	Pn	04 33 30.4	-0.6
TILK	Tilichiki	12.41	23	*e*P	Pn	04 33 30.4	-0.6
GRNR	Gornyy	12.94	284	⇑*i*PN	Pn	04 33 42.5	+4.3
GRNR				*e*S	Sn	04 36 09.0	+8.4
GRNR				pmax	pmax		
	comp=E,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,3µm,16.0s						
GRNR				MLR	MLR		
	comp=N,2µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,13.0s						
SEY	Seymchan	13.79	352	P	Pn	04 33 50.8	+1.1
	comp=Z,0.7nm,0.3s,baz=158,slow=11,SNR=11						
SEY				LR	LR	04 40 08.2	
	comp=Z,4µm,18.0s,baz=154,slow=42						
SEY	Seymchan	13.79	352	⇑*e*P	Pn	04 33 50.4	+0.7
TEY	Ternei	14.15	260	⇑*e*P	Pn	04 33 56.2	+1.4
TEY				pmax	pmax		
	comp=E,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,20nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
KMSK	Kamenskaya	14.21	19	P	Pn	04 33 55.7	+0.4
KMSK	Kamenskaya	14.21	19	*e*P	Pn	04 33 55.7	+0.4
AMKA	Amchitka	14.72	73	Pn	Pn	04 34 01.8	-0.4
KLR	Kul'dur	16.09	279	P	P	04 34 22.9	+0.2
	comp=N,1.3nm,0.3s,baz=75,slow=11,SNR=45						
KLR				LR	LR	04 41 00.0	
	comp=N,5µm,18.8s,baz=82,slow=39						
KLR	Kul'dur	16.09	279	*de*P	P	04 34 21.7	-1.1
KLR				pmax	pmax		
	comp=Z,55nm,1.2s						
JMM	Marumori	16.10	230		Pn	04 34 17.4	-2.8
JSD	Sado	17.30	236	Pn	Pn	04 34 31.7	-3.5
USA0B	Ussuriysk Arra	17.49	262	P	Pn	04 34 36.0	-1.6
USA0B				pmax	pmax		
	comp=Z,43nm,1.3s						
USA0B	Ussuriysk Arra	17.49	262		Pn	04 34 36.0	-1.6
USRK	Ussuriysk Ar.	17.49	262	P	Pn	04 34 35.2	-2.3
	baz=60,slow=11,SNR=14						
USRK				LR	LR	04 41 00.1	
	comp=Z,613nm,19.4s,baz=57,slow=36						
USRK	Ussuriysk Ar.	17.49	262	Pn	Pn	04 34 32.5	-5.1
JYT	Yasato	17.68	228		Pn	04 34 38.9	-1.1
JYT				IAmb	IAmb	04 35 01.7	
	comp=Z,202nm,1.4s						
MAJO	Matsushiro	18.44	233	⇓*e*P	P	04 34 48.0	-0.8
MAJO				pmax	pmax		
	comp=Z,29nm,0.6s						
MAJO	Matsushiro	18.44	233	P	P	04 34 47.8	-1.0
MAT	Matsushiro	18.44	233	P	P	04 34 48.0	-0.8
MAT				S	S	04 38 17.2	+0.4
MJAR	Matsushiro Arr	18.44	233	P	P	04 34 47.7	-1.1
	comp=Z,0.3nm,0.3s,baz=31,slow=10,SNR=21						
MJAR				LR	LR	04 42 46.4	
	comp=Z,2µm,19.0s,baz=50,slow=40						
MJAR	Matsushiro Arr	18.44	233	P	P	04 34 48.6	-0.2
MJAR				pmax	pmax		
	comp=Z,13nm,1.0s						
MJAR	Matsushiro Arr	18.44	233	P	P	04 34 48.6	-0.2
ZEA	Zeya	18.60	295	*e*P	Pn	04 34 51.0	-0.1
ZEA				pmax	pmax		
	comp=Z,400nm,6.8s						
ZEA				pmax	pmax		
	comp=E,30nm,0.8s						
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				MLR	MLR		
	comp=E,2µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
MDJ	Mudanjiang	18.87	266	P	P	04 34 52.3	-1.1
MDJ				pmax	pmax		
	comp=Z,34nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,590nm,4.8s						
MDJ	Mudanjiang	18.87	266	P	P	04 34 51.1	-2.3
MDJ				IAmb	IAmb	04 34 59.2	
	comp=Z,83nm,1.1s						
BILL	Bilibino	19.37	11	*d i*P	P	04 34 58.2	-0.5
BILL				S	S	04 38 32.0	-3.0
BILL				pmax	pmax		
	comp=Z,35nm,0.8s						
BILL				MLR	MLR		
	comp=Z,3µm,16.0s						
BILL	Bilibino	19.37	11	P	P	04 34 58.3	-0.4
YAK	Yakutsk	19.52	321	P	P	04 34 59.6	-0.7
	comp=Z,0.5nm,0.3s,baz=101,slow=1.5,SNR=11						
YAK	Yakutsk	19.52	321	*e*P	P	04 34 59.4	-0.9
YAK				*e*S	S	04 38 38.8	+0.7
YAK				pmax	pmax		
	comp=Z,78nm,1.0s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,59nm,1.4s						
YAK				smax	smax		
	comp=N,35nm,1.0s						
YAK				smax	smax		
	comp=E,13nm,0.8s						
YAK				MLR	MLR		
	comp=Z,3µm,13.0s						
YAK				MLR	MLR		
	comp=N,777nm,15.0s						
YAK				MLR	MLR		
	comp=E,1µm,10.0s						
YAK	Yakutsk	19.52	321	P	P	04 34 58.4	-2.0
YAK				IAmb	IAmb	04 35 13.3	
	comp=Z,140nm,1.1s						
JGF	Kuroka	19.60	233	P	P	04 35 01.4	-0.1
JSG	Sagara	19.91	229	P	P	04 35 05.3	+0.6
INU	Inuyama	19.97	233	IAmb	IAmb	04 35 21.4	
	comp=Z,99nm,1.0s						
JWT	Wachi	20.88	236	P	P	04 35 14.2	-1.1
JHS	Saijyo	22.34	239	P	P	04 35 29.8	-1.3
JHS				IAmb	IAmb	04 35 44.9	
	comp=Z,74nm,1.1s						
GAMB	Gambell	22.39	38	IAmb	IAmb	04 35 57.7	
	comp=Z,50nm,1.1s						
JMN	Monobe	22.87	235	P	P	04 35 35.6	-1.1
JMN				IAmb	IAmb	04 35 53.6	
	comp=Z,54nm,0.9s						
KSRS	Korea Array	23.74	251	P	P	04 35 44.9	-0.1
	comp=Z,57nm,1.0s,baz=50,slow=9.3,SNR=56						
KSRS				LR	LR	04 44 30.1	
	comp=Z,1µm,18.6s,baz=59,slow=35						
KS19	Wonju Array Si	23.75	251	P	P	04 35 45.2	+0.1
KS19				IAmb	IAmb	04 35 47.2	
	comp=Z,80nm,1.1s						
KSAR	Wonju Array Be	23.77	251	P	P	04 35 43.8	-1.6
KSAR	Wonju Array Be	23.77	251	P	P	04 35 43.8	-1.6
HIA	Hailar	23.78	284	P	P	04 35 44.1	-1.2
HIA				pmax	pmax		
	comp=Z,19nm,1.1s						
HIA	Hailar	23.78	284	P	P	04 35 44.1	-1.2
SNY	Shenyang	24.05	264	⇓P	P	04 35 48.3	+0.4
SNY				pmax	pmax		
	comp=Z,19nm,1.0s						
SNY				pmax	pmax		
	comp=Z,370nm,4.3s						
SNY				LR	LR		
	comp=Z,2µm,17.7s						
SNY				LR	LR		
	comp=Z,1µm,16.7s						
SNY				LR	LR		
	comp=Z,2µm,15.9s						
INCN	Inchon	24.52	252	P	P	04 35 51.4	-0.8
INCN				pmax	pmax		
	comp=Z,160nm,1.6s						
INCN	Inchon	24.52	252	P	P	04 35 51.4	-0.8
INCN	Inchon	24.52	252	P	P	04 35 52.2	-0.1
TJN	Taejon	24.77	249	*ce*P	P	04 35 55.2	+0.7
JNU	Nakatsue	24.98	239	P	P	04 35 56.5	+0.1
	comp=Z,44nm,0.9s,baz=33,slow=6.9,SNR=9.5						
JNU				LR	LR	04 47 28.4	
	comp=Z,711nm,18.2s,baz=44,slow=41						
JNU	Nakatsue	24.98	239	P	P	04 35 57.1	+0.7
ANM	Nome	25.26	39	P	P	04 36 00.0	+1.4
ANM				pmax	pmax		
	comp=Z,109nm,1.3s						
ANM	Nome	25.26	39	P	P	04 36 00.0	+1.4
TIXI	Tiksi	25.67	340	⇓*e*P	P	04 35 59.9	-2.4

TIXI	**Tiksi**	**25.67**	**340**	P	**P**	**04 35 59.8**	**-2.5**
TIXI				IAmb	IAmb	04 36 02.8	
	comp=Z,48nm,0.7s						
BOD	**Bodaibo**	**26.18**	**305**	*e*P	**P**	**04 36 05.8**	**-1.2**
BOD				pmax	pmax		
	comp=Z,17nm,1.8s						
DL2	**Dalian**	**26.86**	**260**	P	**P**	**04 36 13.3**	**0.0**
DL2				S	**S**	**04 40 49.0**	**+2.4**
DL2				pmax	pmax		
	comp=Z,37nm,0.9s						
DL2				pmax	pmax		
	comp=Z,310nm,7.6s						
DL2				LR	LR		
	comp=Z,1µm,15.0s						
DL2				LR	LR		
	comp=Z,1µm,15.7s						
DL2				LR	LR		
	comp=Z,1µm,13.5s						
RDOG	**Red Dog Mine**	**27.42**	**32**	IAmb	IAmb	04 36 21.4	
	comp=Z,52nm,1.1s						
TTA	**Tatalina**	**28.99**	**44**	P	**P**	**04 36 33.4**	**+1.2**
TTA				pmax	pmax		
	comp=Z,13nm,1.0s						
TTA	**Tatalina**	**28.99**	**44**	P	**P**	**04 36 33.4**	**+1.2**
BJI	**Beijing**	**29.79**	**267**	P	**P**	**04 36 38.0**	**-1.4**
BJI				S	**S**	**04 41 34.0**	**+1.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,260nm,5.5s						
BJI				LR	LR		
	comp=Z,1µm,16.1s						
BJI				LR	LR		
	comp=Z,980nm,17.1s						
BJI				LR	LR		
	comp=Z,590nm,20.8s						
IMAR	**Indian Mountai**	**30.34**	**38**	P	**P**	**04 36 44.0**	**0.0**
A21K	**Barrow**	**30.67**	**27**	P	**P**	**04 36 47.8**	**+1.0**
	baz=250,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**30.73**	**160**	T	T	05 09 43.7	
	baz=344						
KDAK	**Kodiak Island**	**30.74**	**54**	⇑*e*P	**P**	**04 36 47.6**	**-0.1**
KDAK				pmax	pmax		
	comp=Z,11nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.75**	**160**	T	T	05 09 53.2	
	baz=344						
H11N3	**WAKE ISLAND Hy**	**30.75**	**160**	T	T	05 09 58.7	
	baz=344						
BPAW	**Bear Paw Mtn.**	**31.32**	**42**	P	**P**	**04 36 52.8**	**+0.1**
BPAW				IAmb	IAmb	04 37 08.5	
	comp=Z,16nm,0.8s						
KTH	**Kantishna Hill**	**31.32**	**43**	IAmb	IAmb	04 36 55.9	
	comp=Z,35nm,1.3s						
TIA	**Tai'an**	**31.34**	**260**	P	**P**	**04 36 53.8**	**+0.7**
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
MLY	**Manley**	**31.48**	**40**	P	**P**	**04 36 55.7**	**+1.5**
	baz=266,SNR=7.1						
TRF	**Thorofare Moun**	**31.61**	**43**	P	**P**	**04 36 56.0**	**+0.6**
TRF				IAmb	IAmb	04 37 25.8	
	comp=Z,22nm,1.1s						
H11S1	**WAKE ISLAND Hy**	**31.87**	**161**	T	T	05 11 26.4	
	baz=347,slow=76,SNR=200						
H11S3	**WAKE ISLAND Hy**	**31.88**	**161**	T	T	05 11 22.5	
	baz=347,slow=76,SNR=1514						
H11S2	**WAKE ISLAND Hy**	**31.89**	**161**	T	T	05 11 26.1	
	baz=347,slow=76,SNR=850						
COLD	**Coldfoot**	**31.91**	**36**	P	**P**	**04 36 58.4**	**+0.6**
	baz=263,SNR=19						
COLD	**Coldfoot**	**31.91**	**36**	P	**P**	**04 36 58.7**	**+0.9**
COLD				IAmb	IAmb	04 37 15.6	
	comp=Z,15nm,0.9s						
NEA2	**Nenana**	**32.17**	**41**	P	**P**	**04 37 01.3**	**+1.1**
	baz=269,SNR=5.9						
MCK	**McKinley**	**32.22**	**43**	P	**P**	**04 37 01.5**	**+0.9**
	baz=270						
ULN	**Ulaanbaatar**	**32.22**	**287**	⇑*e*P	**P**	**04 37 00.2**	**-0.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	**Ulaanbaatar**	**32.22**	**287**	P	**P**	**04 36 59.3**	**-1.7**
RND	**Reindeer**	**32.25**	**44**	P	**P**	**04 37 01.2**	**+0.2**
RND				pmax	pmax		
	comp=Z,16nm,0.8s						
RND	**Reindeer**	**32.25**	**44**	P	**P**	**04 37 01.2**	**+0.2**
RND				IAmb	IAmb	04 37 13.6	
	comp=Z,16nm,0.8s						
HHC	**Hu-ho-hao-te**	**32.38**	**272**	*e*P	**P**	**04 37 01.5**	**-0.9**
HHC				sP	sP	04 37 20.5	+1.0
HHC				S	S	04 42 03.3	-10
HHC				sS	sS	04 42 34.0	+1.4
HHC				pmax	pmax		
	comp=Z,14nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,19.1s						
HHC				LR	LR		
	comp=Z,1µm,19.0s						
HHC				LR	LR		
	comp=Z,1µm,19.0s						
KNK	**Knik Glacier**	**32.51**	**47**	IAmb	IAmb	04 37 17.7	
	comp=Z,32nm,0.9s						
MDM	**Murphy Dome**	**32.54**	**41**	IAmb	IAmb	04 37 16.8	
	comp=Z,17nm,1.0s						
WRH	**Wood River Hil**	**32.59**	**42**	IAmb	IAmb	04 37 20.2	
	comp=Z,22nm,0.9s						
SONM	**Songino Array**	**32.65**	**287**	P	**P**	**04 37 01.9**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=75,slow=8.2,SNR=6.1						
SONM				PcP	**PcP**	**04 39 47.4**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=85,slow=4.8,SNR=2.6						
SONM				LR	LR	04 51 36.9	
	comp=Z,1µm,18.4s,baz=78,slow=39						
SONM	**Songino Array**	**32.65**	**287**	P	**P**	**04 37 02.2**	**-2.5**
SONM	**Songino Array**	**32.65**	**287**	P	**P**	**04 37 02.2**	**-2.5**
TCOL	**CIGO, UAF Yank**	**32.70**	**41**	P	**P**	**04 37 05.9**	**+1.1**
	baz=269,SNR=8.3						
TCOL	**CIGO, UAF Yank**	**32.70**	**41**	IAmb	IAmb	04 37 18.1	
	comp=Z,26nm,0.7s						
COLA	**College**	**32.70**	**41**	*c i*P	**P**	**04 37 05.8**	**+1.0**
COLA				pmax	pmax		
	comp=Z,24nm,1.1s						
COLA	**College**	**32.70**	**41**	P	**P**	**04 37 05.5**	**+0.7**
CCB	**Clear Creek Bu**	**32.72**	**41**	IAmb	IAmb	04 37 18.1	
	comp=Z,21nm,1.0s						
POKR	**Poker Plat Res**	**32.88**	**40**	P	**P**	**04 37 07.6**	**+1.2**
	baz=269,SNR=18						
NJ2	**Nanjing**	**32.91**	**252**	*e*P	**P**	**04 37 07.3**	**+0.4**
NJ2				pP	**pP**	**04 37 15.0**	**-3.6**
NJ2				S	**S**	**04 42 24.5**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,29nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,430nm,5.2s						
NJ2				LR	LR		
	comp=Z,2µm,12.8s						
NJ2				LR	LR		
	comp=Z,1µm,14.9s						
NJ2				LR	LR		
	comp=Z,2µm,13.7s						
SCM	**Sheep Creek Mo**	**33.02**	**46**	IAmb	IAmb	04 37 26.6	
	comp=Z,33nm,1.1s						
TLY	**Talaya**	**33.04**	**295**	PcP	**PcP**	**04 39 52.6**	**+2.0**
	comp=Z,3.0nm,0.8s,baz=354,slow=3.9,SNR=3.9						
TLY				LR	LR	04 51 37.0	
	comp=Z,1µm,18.2s,baz=62,slow=38						
TLY	**Talaya**	**33.04**	**295**	*e*P	**P**	**04 37 07.5**	**-0.5**
TLY				*e*		04 38 26.0	
TLY				*e*S	**S**	**04 42 29.7**	**+6.4**
TLY				pmax	pmax		
	comp=Z,48nm,0.9s						
TLY				MLR	MLR		
	comp=Z,3µm,13.0s						
TLY	**Talaya**	**33.04**	**295**	P	**P**	**04 37 06.9**	**-1.1**
TLY				IAmb	IAmb	04 37 10.4	
	comp=Z,22nm,1.0s						
HDA	**Harding Lake**	**33.09**	**42**	P	**P**	**04 37 09.1**	**+0.9**
	baz=271						
HDA	**Harding Lake**	**33.09**	**42**	IAmb	IAmb	04 37 25.4	
	comp=Z,14nm,0.7s						
IL31		**33.11**	**41**	IAmb	IAmb	04 37 20.6	
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**33.11**	**41**	P	**P**	**04 37 08.4**	**0.0**
	comp=Z,2.7nm,0.6s,baz=244,slow=8.3,SNR=42						
ILAR				LR	LR	04 53 40.0	
	comp=Z,778nm,18.2s,baz=278,slow=42						
ILAR	**Eielson Array**	**33.11**	**41**	P	**P**	**04 37 08.1**	**-0.3**
TIY	**Taiyuan**	**33.50**	**267**	*e*P	**P**	**04 37 12.8**	**+0.6**
TIY				pmax	pmax		
	comp=Z,29nm,0.7s						
TIY				LR	LR		
	comp=Z,610nm,13.0s						
TIY				LR	LR		
	comp=Z,330nm,8.0s						
TIY				LR	LR		
	comp=Z,600nm,15.0s						
ZAK	**Zakamensk**	**33.67**	**292**	*e*P	**P**	**04 37 12.2**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,22nm,1.0s						
PRP	**Porcupine Dome**	**33.69**	**40**	P	**P**	**04 37 14.7**	**+1.1**
PRP				IAmb	IAmb	04 37 27.0	
	comp=Z,21nm,0.9s						
RIDG	**Independent Ri**	**34.03**	**43**	IAmb	IAmb	04 37 34.4	
	comp=Z,33nm,1.1s						
BMAR	**Burnt Mountain**	**34.10**	**36**	P	**P**	**04 37 15.6**	**-1.4**
N25K	**Chitina, Valde**	**34.33**	**47**	P	**P**	**04 37 20.4**	**+1.2**
	baz=277						
N25K	**Chitina, Valde**	**34.33**	**47**	IAmb	IAmb	04 37 21.3	
	comp=Z,26nm,1.5s						
DOT	**Dot Lake**	**34.39**	**43**	IAmb	IAmb	04 37 32.3	
	comp=Z,15nm,0.7s						
SCRK	**Sand Creek**	**34.40**	**42**	P	**P**	**04 37 20.2**	**+0.4**
	baz=274,SNR=13						
MOY	**Mondy**	**34.62**	**295**	*e*P	**P**	**04 37 21.1**	**-0.7**
MOY				pmax	pmax		
	comp=Z,13nm,1.4s						
BCAR	**Beaver Creek A**	**35.47**	**44**	P	**P**	**04 37 26.3**	**-2.6**
EGAK	**Eagle**	**35.56**	**41**	IAmb	IAmb	04 37 42.2	
	comp=Z,30nm,0.8s						
BARN	**Barnard Glacie**	**35.81**	**47**	IAmb	IAmb	04 37 46.1	
	comp=Z,25nm,1.0s						
CTGM	**Chitina Glacie**	**35.99**	**47**	IAmb	IAmb	04 37 47.5	
	comp=Z,29nm,1.0s						
WHN	**Wuhan**	**36.76**	**255**	⇑P	**P**	**04 37 39.5**	**-0.6**
WHN				S	**S**	**04 43 21.5**	**+0.8**
WHN				LR	LR		
	comp=Z,2µm,12.3s						
WHN				LR	LR		
	comp=Z,1µm,14.0s						
WHN				LR	LR		
	comp=Z,2µm,12.3s						
NACB	**Ninganchiao**	**37.04**	**240**	P	**P**	**04 37 42.4**	**-0.2**
NRIK	**Noril'sk**	**37.72**	**327**	P	**P**	**04 37 45.2**	**-2.7**
	comp=Z,14nm,1.2s,baz=101,slow=8.7,SNR=5.3						
NRIK				LR	LR	04 55 21.1	
	comp=Z,1µm,19.1s,baz=72,slow=40						
NRIK	**Noril'sk**	**37.72**	**327**	⇑*e*P	**P**	**04 37 45.6**	**-2.3**
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NRIK				MLR	MLR		
	comp=Z,2µm,16.0s						
NRIK	**Noril'sk**	**37.72**	**327**	P	**P**	**04 37 46.4**	**-1.4**
HYT	**Haines Junctio**	**37.85**	**47**	IAmb	IAmb	04 38 03.7	
	comp=Z,25nm,1.0s						
XAN	**Xi'an**	**37.98**	**264**	P	**P**	**04 37 50.5**	**0.0**
XAN				pP	pP	04 38 00.5	-2.0
XAN				sP	sP	04 38 07.5	-0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,250nm,9.1s						
XAN				LR	LR		
	comp=Z,1µm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,11.9s						
INK	**Inuvik**	**38.24**	**34**	P	**P**	**04 37 53.0**	**+0.7**
	comp=Z,13nm,0.6s,baz=285,slow=7.4,SNR=33						
INK				LR	LR	04 55 44.6	
	comp=Z,387nm,20.2s,baz=267,slow=39						
INK	**Inuvik**	**38.24**	**34**	P	**P**	**04 37 53.0**	**+0.7**
ENH	**Enshi**	**40.04**	**259**	P	**P**	**04 38 08.0**	**+0.2**
ENH				IAmb	IAmb	04 38 09.7	
	comp=Z,66nm,1.6s						
LZH	**Lanzhou**	**40.06**	**271**	*e*P	**P**	**04 38 07.5**	**-0.5**
LZH				pP	pP	04 38 19.0	-1.0
LZH				sP	sP	04 38 21.5	-3.8
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,5.5s						
LZH				LR	LR		
	comp=Z,2µm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
GTA	**Gaotai**	**40.79**	**278**	⇑P	**P**	**04 38 13.3**	**-0.7**
GTA				pP	pP	04 38 26.8	+0.9
GTA				sP	sP	04 38 32.0	+0.9
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,50nm,4.9s						
GTA				LR	LR		
	comp=Z,2µm,14.5s						
GTA				LR	LR		
	comp=Z,3µm,15.3s						
GTA				LR	LR		
	comp=Z,4µm,15.6s						
C36M	**Paulatuk**	**41.43**	**32**	P	**P**	**04 38 19.9**	**+1.2**
	baz=284,SNR=39						
C36M	**Paulatuk**	**41.43**	**32**	IAmb	IAmb	04 38 21.9	
	comp=Z,54nm,1.1s						
DLBC	**Dease Lake**	**42.18**	**49**	P	**P**	**04 38 28.3**	**+3.2**
	comp=Z,3.5nm,0.8s,baz=266,slow=7.2,SNR=9.3						
DLBC				LR	LR	04 59 06.3	
	comp=Z,396nm,18.1s,baz=317,slow=40						
DLBC	**Dease Lake**	**42.18**	**49**	P	**P**	**04 38 27.1**	**+2.0**
ZALV	**Zalesovo Beam**	**42.93**	**305**	P	**P**	**04 38 29.4**	**-1.7**
	comp=Z,5.4nm,0.5s,baz=66,slow=8.5,SNR=18						
ZALV				PcP	**PcP**	**04 40 22.5**	**+1.5**
	comp=Z,8.4nm,0.9s,baz=46,slow=4.3,SNR=8.1						
ZALV				LR	LR	04 57 48.7	
	comp=Z,837nm,18.0s,baz=55,slow=38						
DGZ	**Jazzator, Alta**	**43.32**	**298**	⇓*e*P	**P**	**04 38 33.8**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,13nm,0.9s						
CD2	**Chengdu**	**43.33**	**265**	P	**P**	**04 38 34.5**	**-0.2**
CD2				S	**S**	**04 44 58.0**	**-1.0**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,250nm,4.7s						
CD2				LR	LR		
	comp=Z,850nm,14.7s						
CD2				LR	LR		
	comp=Z,1µm,13.5s						
CD2				LR	LR		
	comp=Z,1µm,15.7s						
GYA	**Guiyang**	**44.45**	**258**	⇓P	**P**	**04 38 44.3**	**+0.5**
GYA				pP	pP	04 38 56.5	+0.8
GYA				sP	sP	04 39 00.8	0.0
GYA				pmax	pmax		
	comp=Z,37nm,1.2s						
GYA				pmax	pmax		
	comp=Z,180nm,3.5s						
GYA				LR	LR		
	comp=Z,550nm,15.3s						
GYA				LR	LR		
	comp=Z,460nm,11.7s						
GYA				LR	LR		
	comp=Z,680nm,16.8s						
BBB	**Bella Bella**	**45.78**	**56**	LR	LR	04 58 53.4	
	comp=Z,220nm,18.9s,baz=285,slow=37						
ZSN	**Zaisan**	**45.90**	**296**	*e*P	**P**	**04 38 54.2**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=296						
ZSN				*i* S	**S**	**04 45 32.5**	**-3.3**
	baz=296						
ZSN	**Zaisan**	**45.90**	**296**	*e*P	**P**	**04 38 54.1**	**-0.8**
ZSN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	**Urumqi**	**46.08**	**291**	*e*P	**P**	**04 38 57.0**	**+0.5**
WMQ				pP	pP	04 39 09.3	+0.5
WMQ				sP	sP	04 39 17.5	+3.5
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,320nm,4.9s						
WMQ				LR	LR		
	comp=Z,960nm,9.1s						
WMQ				LR	LR		
	comp=Z,580nm,7.9s						
WMQ				LR	LR		
	comp=Z,320nm,29.1s						
EUNU	**Eureka**	**46.11**	**12**	P	**P**	**04 38 56.2**	**-0.1**
SEM	**Semipalatinsk**	**47.05**	**302**	*i* S	**S**	**04 45 49.1**	**-3.6**
	baz=301						
YKA	**Yellowknife Ar**	**47.49**	**39**	P	**P**	**04 39 08.1**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=298,slow=6.9,SNR=41						
RES	**Resolute Bay**	**47.63**	**20**	P	**P**	**04 39 08.8**	**+0.7**
RES				pmax	pmax		
	comp=Z,37nm,1.3s						
RES	**Resolute Bay**	**47.63**	**20**	P	**P**	**04 39 08.8**	**+0.7**
RES				IAmb	IAmb	04 39 11.0	
	comp=Z,37nm,1.3s						
MK31	**Makanchi Array**	**47.74**	**297**	*c i*P	**P**	**04 39 08.3**	**-1.1**
MK31	**Makanchi Array**	**47.74**	**297**	IAmb	IAmb	04 39 10.2	
	comp=Z,16nm,0.9s						
MKAR	**Makanchi Array**	**47.74**	**297**	P	**P**	**04 39 08.4**	**-0.9**
	comp=Z,11nm,0.7s,baz=62,slow=7.3,SNR=68						
MKAR				PcP	**PcP**	**04 40 37.9**	**0.0**
	comp=Z,5.6nm,1.0s,baz=55,slow=6.4,SNR=4.1						
MKAR				LR	LR	05 00 41.8	
	comp=Z,3µm,18.3s,baz=43,slow=38						
MKAR	**Makanchi Array**	**47.74**	**297**	P	**P**	**04 39 07.5**	**-1.8**
KURK	**Kurchatov**	**47.80**	**303**	*d i*P	**P**	**04 39 08.2**	**-1.4**
KURK				pmax	pmax		
	comp=Z,70nm,1.0s						
KURK	**Kurchatov**	**47.80**	**303**	P	**P**	**04 39 08.0**	**-1.6**
KURK	**Kurchatov**	**47.80**	**303**	P	**P**	**04 39 07.9**	**-1.7**
KMI	**Kunming**	**47.91**	**260**	⇑P	**P**	**04 39 11.5**	**+0.4**
KMI				pP	pP	04 39 22.8	-0.3
KMI				sP	sP	04 39 28.0	-0.1
KMI				S	**S**	**04 46 03.8**	**-1.6**
KMI				sS	sS	04 46 23.8	-1.4
KMI				pmax	pmax		
	comp=Z,30nm,1.3s						
KMI				pmax	pmax		
	comp=Z,120nm,7.9s						
KMI				LR	LR		
	comp=Z,820nm,18.5s						
KMI				LR	LR		
	comp=Z,650nm,17.7s						
KMI				LR	LR		
	comp=Z,550nm,19.2s						
QIZ	**Qiongzhong**	**47.91**	**248**	P	**P**	**04 39 09.3**	**-1.6**
QIZ				S	**S**	**04 46 03.5**	**-1.7**
QIZ				ScS	**ScS**	**04 49 00.5**	**+0.2**
QIZ				LR	LR		
	comp=Z,370nm,14.9s						
QIZ				LR	LR		
	comp=Z,790nm,19.6s						
QIZ				LR	LR		
	comp=Z,560nm,17.7s						
MAKZ	**Makanchi**	**47.92**	**297**	P	**P**	**04 39 09.0**	**-1.7**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.7s						
MAKZ	**Makanchi**	**47.92**	**297**	P	**P**	**04 39 08.9**	**-1.7**
MAKZ				IAmb	IAmb	04 39 11.1	
	comp=Z,11nm,0.7s						
SLVN	**Son La**	**49.88**	**255**	P	**P**	**04 39 25.8**	**-0.2**
D03D	**Eldon**	**50.96**	**59**	P	**P**	**04 39 35.1**	**+1.3**
	baz=304						
BRVK	**Borovoye**	**50.97**	**309**	*c i*P	**P**	**04 39 33.0**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,51nm,1.0s						
BRVK	**Borovoye**	**50.97**	**309**	P	**P**	**04 39 32.6**	**-1.3**
BRVK	**Borovoye**	**50.97**	**309**	P	**P**	**04 39 33.3**	**-0.5**
TDK	**Taldyqorghan**	**50.99**	**297**	*e*P	**P**	**04 39 34.0**	**-0.1**
	comp=Z,27nm,0.6s,baz=296						
TDK				*i* S	**S**	**04 46 44.6**	**-3.2**
	baz=296						
TDK	**Taldyqorghan**	**50.99**	**297**	*e*P	**P**	**04 39 34.0**	**-0.1**
TDK				pmax	pmax		
	comp=Z,27nm,0.6s						
B05A	**Bryant**	**51.11**	**58**	P	**P**	**04 39 36.1**	**+1.1**
	baz=304						
TULEG	**Thule**	**51.11**	**12**	P	**P**	**04 39 34.7**	**+0.1**
TULEG	**Thule**	**51.11**	**12**	*i* P	**P**	**04 39 35.4**	**+0.8**
TULEG				IAmb	IAmb	04 39 36.7	
	comp=Z,20nm,1.1s						
BRZS	**Berezniki**	**51.41**	**305**	*e*P	**P**	**04 39 35.8**	**-1.5**
	comp=Z,21nm,1.2s,baz=304						
BRZS				*i* S	**S**	**04 46 50.3**	**-3.1**
	baz=304						
BRZS	**Berezniki**	**51.41**	**305**	*e*P	**P**	**04 39 35.7**	**-1.5**
BRZS				pmax	pmax		
	comp=Z,21nm,1.2s						
SHLS	**Shalkode**	**51.43**	**294**	*i* S	**S**	**04 46 47.2**	**-6.8**
	baz=294						
KPKS	**Kokpek**	**51.71**	**295**	*e*P	**P**	**04 39 38.5**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=294						
KPKS				*i* S	**S**	**04 46 54.5**	**-3.3**
	baz=294						
KPKS	**Kokpek**	**51.71**	**295**	*e*P	**P**	**04 39 38.4**	**-1.2**
KPKS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
E04D	**Cinebar**	**51.81**	**60**	P	**P**	**04 39 41.8**	**+1.6**
	baz=305						
SATY	**Saty**	**52.11**	**295**	*e*P	**P**	**04 39 42.0**	**-0.8**
	comp=Z,5.4nm,1.3s,baz=294						
SATY				*i* S	**S**	**04 47 00.1**	**-3.4**
	baz=294						
SATY	**Saty**	**52.11**	**295**	*e*P	**P**	**04 39 41.9**	**-0.8**
SATY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LON	**Longmire**	**52.13**	**60**	IAmb	IAmb	04 40 15.4	
	comp=Z,27nm,2.0s						
LSA	**Lhasa**	**52.35**	**273**	P	**P**	**04 39 45.7**	**+0.7**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**52.35**	**273**	P	**P**	**04 39 45.7**	**+0.7**
CHKK	**Chushkaly**	**52.48**	**296**	*e*P	**P**	**04 39 44.0**	**-1.3**
	baz=296						
CHKK				*i* S	**S**	**04 47 05.1**	**-3.2**
	baz=296						
CHKK	**Chushkaly**	**52.48**	**296**	*e*P	**P**	**04 39 44.0**	**-1.3**
NONG	**Nongkai**	**52.77**	**253**	P	**P**	**04 39 49.3**	**+1.7**
	comp=Z,8µmcomp=Z,57nm,0.9s						
KUU	**Kurty**	**52.84**	**297**	*e*P	**P**	**04 39 46.0**	**-2.0**
	comp=Z,9.3nm,1.2s,baz=296						
KUU				*i* S	**S**	**04 47 10.0**	**-3.1**
	baz=296						
KUU	**Kurty**	**52.84**	**297**	*e*P	**P**	**04 39 45.9**	**-2.0**
KUU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDOK	**Medeo**	**52.85**	**296**	*e*P	**P**	**04 39 47.3**	**-1.0**
	baz=295						
MDOK				*i* S	**S**	**04 47 10.2**	**-3.4**
	baz=295						
MDOK	**Medeo**	**52.85**	**296**	*e*P	**P**	**04 39 47.2**	**-1.0**
H04D	**Lebanon**	**52.89**	**62**	P	**P**	**04 39 50.4**	**+2.1**
	baz=306						
AAA	**Alma-Ata**	**52.91**	**296**	*e*P	**P**	**04 39 48.1**	**-0.5**
	baz=295						
AAA				*i* S	**S**	**04 47 10.9**	**-3.2**
	baz=295						
AAA	**Alma-Ata**	**52.91**	**296**	*e*P	**P**	**04 39 48.0**	**-0.5**
TNSS	**Tian-Shan**	**52.99**	**295**	*e*P	**P**	**04 39 48.1**	**-1.4**
	baz=295						
TNSS				*i* S	**S**	**04 47 12.1**	**-3.9**
	baz=295						
TNSS	**Tian-Shan**	**52.99**	**295**	*e*P	**P**	**04 39 48.1**	**-1.4**
I03D	**Drain, OR**	**53.02**	**63**	P	**P**	**04 39 51.5**	**+2.3**
	baz=307						
H04A	**Detroit Lake**	**53.11**	**62**	IAmb	IAmb	04 40 09.1	
	comp=Z,19nm,1.4s						
MTBS	**Maitube**	**53.24**	**296**	*e*P	**P**	**04 39 50.7**	**-0.2**
	baz=295						
MTBS				*i* S	**S**	**04 47 15.5**	**-3.3**
	baz=295						
MTBS	**Maitube**	**53.24**	**296**	*e*P	**P**	**04 39 50.7**	**-0.2**
G05D	**Wamic, OR**	**53.28**	**61**	P	**P**	**04 39 52.6**	**+1.5**
	baz=306						
E07A	**Sunnyside**	**53.34**	**59**	P	**P**	**04 39 53.2**	**+1.7**
SVE	**Sverdlovsk**	**53.44**	**317**	*e*P	**P**	**04 39 50.9**	**-1.2**
SVE				pmax	pmax		
	comp=Z,37nm,1.1s						
BTLS	**Baital**	**53.49**	**299**	*e*P	**P**	**04 39 51.5**	**-1.1**
	baz=299						
BTLS				*i* S	**S**	**04 47 18.8**	**-3.1**
	baz=299						
BTLS	**Baital**	**53.49**	**299**	*e*P	**P**	**04 39 51.5**	**-1.1**
I04A	**Tendick Farm,**	**53.51**	**63**	P	**P**	**04 39 54.2**	**+1.3**
	baz=307						
HAWA	**Hanford**	**53.61**	**59**	P	**P**	**04 39 55.4**	**+1.9**
I05D	**Terrebonne, OR**	**53.81**	**62**	P	**P**	**04 39 56.7**	**+1.7**
	baz=307						

NEW	**Newport**	**53.84**	**56**	LR	LR	05 02 17.3	
	comp=Z,176nm,18.9s,baz=300,slow=35						
NEW	**Newport**	**53.84**	**56**	P	**P**	**04 39 56.7**	**+1.5**
	baz=306,SNR=5.5						
PAYA	**Payao**	**53.88**	**257**	P	**P**	**04 39 57.9**	**+2.0**
	comp=Z,385nm,1.1s						
J04D	**Umpqua Nationa**	**54.02**	**63**	P	**P**	**04 39 57.9**	**+1.1**
	baz=307						
SGDS	**Sogindy**	**54.10**	**297**	*i* S	**S**	**04 47 27.1**	**-3.2**
	baz=297						
DAG	**Danmarks Havn**	**54.10**	**359**	*i* P	**P**	**04 39 56.0**	**-0.7**
DAG	**Danmarks Havn**	**54.10**	**359**	*i* P	**P**	**04 39 56.0**	**-0.7**
	comp=Z,27nm,1.1s						
DAG	**Danmarks Havn**	**54.10**	**359**	*i* P	**P**	**04 39 56.0**	**-0.7**
DAG				IAmb	IAmb	04 39 57.6	
	comp=Z,27nm,1.1s						
E09A	**Wood Farm, Sta**	**54.31**	**58**	IAmb	IAmb	04 40 14.6	
	comp=Z,8.7nm,0.8s						
PINE	**Pine Mountain**	**54.36**	**62**	P	**P**	**04 40 01.4**	**+2.1**
J05D	**Fort Rock, OR**	**54.50**	**63**	P	**P**	**04 40 01.5**	**+1.3**
	baz=308,SNR=15						
L04D	**Klamath Falls**	**54.52**	**64**	P	**P**	**04 40 02.0**	**+1.6**
	baz=308,SNR=5.8						
YBH	**Yreka Blue Hor**	**54.58**	**65**	LR	LR	04 59 46.1	
	comp=Z,320nm,21.7s,baz=306,slow=32						
YBH	**Yreka Blue Hor**	**54.58**	**65**	IAmb	IAmb	04 40 16.6	
	comp=Z,14nm,1.2s						
ARU	**Arti**	**54.59**	**318**	LR	LR	05 06 00.1	
	comp=Z,688nm,18.5s,baz=38,slow=39						
ARU	**Arti**	**54.59**	**318**	*d i*P	**P**	**04 39 59.3**	**-1.2**
ARU				*PP	**pP**	**04 40 12.8**	**-0.4**
ARU						04 41 02.2	
ARU						04 41 58.3	
ARU				S	**S**	**04 47 36.8**	**+0.4**
ARU				SS	**SS**	**04 51 13.8**	**-5.0**
ARU				pmax	pmax		
	comp=Z,54nm,1.2s						
ARU	**Arti**	**54.59**	**318**	P	**P**	**04 39 59.0**	**-1.5**
UTTA	**Uttaradit**	**54.64**	**255**	P	**P**	**04 40 03.3**	**+1.9**
	comp=Z,291nmcomp=Z,33nm,1.2s						
LAMP	**Lampang**	**54.65**	**257**	P	**P**	**04 40 04.5**	**+3.1**
	comp=Z,45nm,1.2s						
SHL	**Shillong**	**54.66**	**269**	P	**P**	**04 40 02.5**	**+0.9**
	SNR=14						
AAK	**Ala-Archa**	**54.67**	**296**	⇓*e*P	**P**	**04 40 00.5**	**-1.0**
AAK				pmax	pmax		
	comp=Z,29nm,1.0s						
AAK	**Ala-Archa**	**54.67**	**296**	P	**P**	**04 40 00.4**	**-1.0**
M02C	**Callahan**	**54.70**	**65**	P	**P**	**04 40 03.0**	**+1.3**
	baz=308						
CMMT	**Chiang Mai**	**54.87**	**258**	P	**P**	**04 40 03.0**	**-0.1**
	comp=Z,367nmcomp=Z,31nm,1.3s						
CHTO	**Chiang Mai**	**54.88**	**258**	P	**P**	**04 40 02.9**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,93nm,1.3s						
CHTO	**Chiang Mai**	**54.88**	**258**	P	**P**	**04 40 02.9**	**-0.2**
CHTO	**Chiang Mai**	**54.88**	**258**	P	**P**	**04 40 04.2**	**+1.1**
K05A	**Summer Lake**	**55.04**	**63**	IAmb	IAmb	04 40 27.9	
	comp=Z,18nm,1.0s						
N02D	**Trinity Center**	**55.05**	**66**	P	**P**	**04 40 05.6**	**+1.5**
	baz=308						
M04C	**Macdoel**	**55.06**	**65**	P	**P**	**04 40 06.7**	**+2.4**
	baz=308,SNR=6.6						
WALA	**Waterton Lakes**	**55.07**	**53**	IAmb	IAmb	04 40 29.6	
	comp=Z,8.1nm,0.7s						
CM09	**Chiang Mai Arr**	**55.12**	**257**	P	**P**	**04 40 06.8**	**+2.0**
	comp=Z,205nmcomp=Z,20nm,1.3s						
CHAI	**Chaiyaphum**	**55.13**	**253**	P	**P**	**04 40 06.0**	**+1.1**
	comp=Z,520nmcomp=Z,58nm,1.2s						
CM31	**Chiang Mai Arr**	**55.14**	**257**	P	**P**	**04 40 07.7**	**+2.8**
	comp=Z,594nm,0.8s						
CM31	**Chiang Mai Arr**	**55.14**	**257**	P	**P**	**04 40 05.7**	**+0.7**
CM31				IAmb	IAmb	04 40 15.1	
	comp=Z,33nm,1.1s						
CMAR	**Chiang Mai Arr**	**55.14**	**257**	P	**P**	**04 40 05.5**	**+0.6**
	comp=Z,5.5nm,0.7s,baz=28,slow=6.9,SNR=46						
CMAR				LR	LR	05 07 23.3	
	comp=Z,367nm,18.2s,baz=90,slow=40						
CMAR	**Chiang Mai Arr**	**55.14**	**257**	P	**P**	**04 40 05.0**	**+0.1**
PHIT	**Phitsanulok**	**55.14**	**255**	P	**P**	**04 40 09.0**	**+4.1**
	comp=Z,98nm,0.9s						
F10A	**Beach Ranch, E**	**55.15**	**58**	IAmb	IAmb	04 40 18.6	
	comp=Z,33nm,1.9s						
CM02	**Chiang Mai Arr**	**55.15**	**257**	P	**P**	**04 40 07.0**	**+1.9**
	comp=Z,196nmcomp=Z,22nm,0.9s						
CM15	**Chiang Mai Arr**	**55.15**	**257**	P	**P**	**04 40 07.1**	**+2.0**
	comp=Z,543nmcomp=Z,27nm,1.0s						
CM01	**Chiang Mai Arr**	**55.16**	**257**	P	**P**	**04 40 07.0**	**+1.9**
	comp=Z,212nmcomp=Z,23nm,1.2s						
CM04	**Chiang Mai Arr**	**55.16**	**257**	P	**P**	**04 40 07.0**	**+1.9**
	comp=Z,217nmcomp=Z,21nm,1.1s						
CM05	**Chiang Mai Arr**	**55.18**	**257**	P	**P**	**04 40 07.0**	**+1.8**
	comp=Z,182nmcomp=Z,19nm,1.1s						
SUKH	**Sukhothai**	**55.42**	**256**	P	**P**	**04 40 09.0**	**+2.0**
	comp=Z,30nm,0.9s						
O02D	**Mt. Diablo Mer**	**55.49**	**67**	P	**P**	**04 40 08.9**	**+1.6**
	baz=309						
JTMT	**Jette**	**55.67**	**55**	IAmb	IAmb	04 40 46.7	
	comp=Z,18nm,1.5s						
KSH	**Kashi**	**55.72**	**293**	P	**P**	**04 40 13.0**	**+4.0**
KSH				pP	sP	04 40 25.3	-1.5
KSH				S	**S**	**04 47 53.0**	**+0.8**
KSH				pmax	pmax		
	comp=Z,21nm,1.2s						
KSH				pmax	pmax		
	comp=Z,490nm,6.5s						
KSH				LR	LR		
	comp=Z,1µm,7.8s						
KSH				LR	LR		
	comp=Z,960nm,8.0s						
KSH				LR	LR		
	comp=Z,750nm,9.4s						
APA	**Apatity**	**55.81**	**337**	⇓*i*P	**P**	**04 40 10.3**	**+1.2**
APA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MOD	**Modoc Plateau**	**55.89**	**64**	IAmb	IAmb	04 40 32.4	
	comp=Z,14nm,0.9s						
MHMT	**Maesarieng**	**55.99**	**258**	P	**P**	**04 40 12.6**	**+1.5**
	comp=Z,58nm,1.3s						
O03E	**Paynes Creek**	**56.01**	**66**	P	**P**	**04 40 12.3**	**+1.2**
	baz=309,SNR=6.1						
UPNV	**Upernavik**	**56.06**	**11**	*i* P	**P**	**04 40 11.0**	**+0.1**
ARCES	**ARCESS Array B**	**56.10**	**341**	P	**P**	**04 40 09.8**	**-1.4**
	comp=Z,3.7nm,0.8s,baz=40,slow=7.0,SNR=23						
ARCES				LR	LR	05 09 08.7	
	comp=Z,902nm,18.4s,baz=20,slow=41						
TAPN	**Taplejung**	**56.17**	**274**	*e*P	**P**	**04 40 14.3**	**+1.7**
	comp=Z,17nm,0.7s						
DZA	**Taraz**	**56.35**	**298**	*e*P	**P**	**04 40 12.7**	**-0.8**
	baz=298						
DZA				*i* S	**S**	**04 47 57.3**	**-3.1**
	baz=298						
DZA	**Taraz**	**56.35**	**298**	*e*P	**P**	**04 40 12.6**	**-0.8**
MSO	**Missoula**	**56.42**	**56**	P	**P**	**04 40 14.6**	**+0.7**
	baz=309,SNR=10						
MSO	**Missoula**	**56.42**	**56**	IAmb	IAmb	04 40 29.7	
	comp=Z,16nm,1.2s						
WVOR	**Wild Horse Val**	**56.53**	**62**	IAmb	IAmb	04 40 38.0	
	comp=Z,9.9nm,0.8s						
SRAK	**Srakaew**	**56.53**	**251**	P	**P**	**04 40 14.0**	**-0.9**
	comp=Z,3µmcomp=Z,388nm,1.0s						
DBG	**Daneborg**	**56.60**	**359**	*i* P	**P**	**04 40 14.3**	**-0.3**
DBG				IAmb	IAmb	04 40 16.6	
	comp=Z,18nm,1.1s						
ORV	**Oroville**	**56.65**	**66**	P	**P**	**04 40 17.3**	**+1.8**
ORV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ORV	**Oroville**	**56.65**	**66**	P	**P**	**04 40 17.3**	**+1.8**
KK31	**Karatay Array**	**56.69**	**299**	P	**P**	**04 40 15.1**	**-0.7**
KK31				pmax	pmax		
	comp=Z,14nm,1.3s						
KK31	**Karatay Array**	**56.69**	**299**	P	**P**	**04 40 15.1**	**-0.7**
KK31				IAmb	IAmb	04 40 16.4	
	comp=Z,14nm,1.2s						
KKAR	**Karatay Array**	**56.69**	**299**	P	**P**	**04 40 14.6**	**-1.2**
KKAR	**Karatay Array**	**56.69**	**299**	P	**P**	**04 40 14.6**	**-1.2**
UTHA	**Uthaitani**	**56.98**	**255**	P	**P**	**04 40 20.5**	**+2.4**
	comp=Z,478nmcomp=Z,24nm,0.7s						
GUN	**Gumba**	**56.98**	**276**	*e*P	**P**	**04 40 19.4**	**+0.9**
	comp=Z,49nm,0.9s						
KIRV	**Kirov**	**57.02**	**323**	*de*P	**P**	**04 40 16.1**	**-1.7**
TMCR	**Tamitsa**	**57.05**	**333**	*e*P	**P**	**04 40 16.5**	**-1.4**
TMCR				pmax	pmax		
	comp=Z,21nm,1.2s						
FFC	**Flin Flon**	**57.30**	**42**	P	**P**	**04 40 21.3**	**+1.4**
FFC				pmax	pmax		
	comp=Z,12nm,1.1s						
FFC	**Flin Flon**	**57.30**	**42**	P	**P**	**04 40 21.3**	**+1.4**
FFC				IAmb	IAmb	04 40 38.2	
	comp=Z,12nm,1.1s						
KKN	**Kakani**	**57.45**	**276**	*e*P	**P**	**04 40 22.4**	**+0.8**
	comp=Z,53nm,1.0s						
PKI	**Pulchoki**	**57.52**	**276**	*e*P	**P**	**04 40 22.3**	**+0.1**
	comp=Z,50nm,1.0s						
PKIN	**Phulchoki**	**57.52**	**276**	*e*P	**P**	**04 40 22.5**	**+0.3**
	comp=Z,20nm,0.6s						
SANI	**Sanana**	**57.56**	**217**	P	**P**	**04 40 23.3**	**+1.1**
	comp=Z,30nm,0.8s						
IUG	**Iuzhnay**	**57.57**	**298**	*e*P	**P**	**04 40 21.6**	**-0.5**
	comp=Z,6.6nm,0.9s,baz=298						
IUG				*i* S	**S**	**04 48 13.3**	**-3.2**
	baz=298						
IUG	**Iuzhnay**	**57.57**	**298**	*e*P	**P**	**04 40 21.6**	**-0.5**
IUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DMN	**Daman**	**57.69**	**276**	*e*P	**P**	**04 40 23.7**	**+0.4**
	comp=Z,93nm,1.0s						
GKN	**Gorkha**	**57.73**	**277**	*e*P	**P**	**04 40 24.0**	**+0.5**
	comp=Z,123nm,1.2s						
PAHR	**Pah Rah Range**	**57.81**	**65**	IAmb	IAmb	04 40 50.1	
	comp=Z,15nm,1.4s						
FCC	**Fort Churchill**	**57.85**	**35**	IAmb	IAmb	04 40 37.2	
	comp=Z,13nm,0.9s						
EGMT	**Eagleton**	**57.88**	**52**	P	**P**	**04 40 25.0**	**+0.8**
	baz=310						
EGMT	**Eagleton**	**57.88**	**52**	IAmb	IAmb	04 40 42.5	
	comp=Z,13nm,1.1s						
SUMG	**Summit**	**57.92**	**5**	P	**P**	**04 40 24.3**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,74nm,1.2s						
SUMG	**Summit**	**57.92**	**5**	P	**P**	**04 40 24.3**	**-0.1**
SUMG	**Summit**	**57.92**	**5**	*i* P	**P**	**04 40 25.6**	**+1.2**
	comp=Z,185nm,1.2s						
SUMG	**Summit**	**57.92**	**5**	*i* P	**P**	**04 40 25.6**	**+1.2**
SUMG				IAmb	IAmb	04 40 26.7	
	comp=Z,185nm,1.2s						
DANN	**Dangsing**	**58.06**	**277**	*e*P	**P**	**04 40 26.3**	**+0.3**
	comp=Z,33nm,0.7s						
DLMT	**Dillon**	**58.07**	**56**	IAmb	IAmb	04 40 44.1	
	comp=Z,35nm,1.9s						
PNTR	**Pine Nut**	**58.08**	**66**	IAmb	IAmb	04 40 54.9	
	comp=Z,12nm,0.8s						
BOZ	**Bozeman (W)**	**58.44**	**55**	P	**P**	**04 40 29.6**	**+1.3**
	baz=310,SNR=14						
BOZ	**Bozeman (W)**	**58.44**	**55**	IAmb	IAmb	04 40 42.7	
	comp=Z,13nm,1.0s						
ABKAR	**Akbulak array**	**58.45**	**310**	P	**P**	**04 40 27.0**	**-1.1**
KOLN	**Koldanda**	**58.56**	**277**	*e*P	**P**	**04 40 29.2**	**-0.2**
	comp=Z,90nm,1.2s						
AKTO	**Aktyubinsk**	**58.64**	**312**	P	**P**	**04 40 27.6**	**-1.7**
	comp=Z,4.4nm,0.3s,baz=51,slow=5.1,SNR=26						
AKTO				LR	LR	05 07 02.0	
	comp=Z,387nm,21.1s,baz=41,slow=37						
PHET	**Kaeng Krachan**	**58.87**	**252**	P	**P**	**04 40 34.0**	**+2.6**
KLMR	**Klimovskoe**	**59.01**	**329**	*e*P	**P**	**04 40 29.6**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,46nm,1.4s						
KLMR	**Klimovskoe**	**59.01**	**329**	*e*P	**P**	**04 40 29.6**	**-2.1**
KLMR				AMP		04 40 32.5	
	comp=Z,46nm,1.4s						
KLMR				LQ	LQ	05 02 49.8	
KLMR				LQ	LQ	05 02 49.8	
KLMR				LR	LR	05 08 12.1	
RYN	**Ryan**	**59.02**	**66**	IAmb	IAmb	04 40 55.5	
	comp=Z,8.8nm,0.9s						
LHV	**Little Huntoon**	**59.28**	**66**	IAmb	IAmb	04 40 57.5	
	comp=Z,12nm,0.9s						
NVAR	**Mina Array Bea**	**59.28**	**66**	P	**P**	**04 40 35.1**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=291,slow=7.3,SNR=18						
NVAR				LR	LR	05 02 37.9	
	comp=Z,205nm,21.6s,baz=307,slow=32						
NVAR	**Mina Array Bea**	**59.28**	**66**	P	**P**	**04 40 35.4**	**+1.1**
ELK	**Elko**	**59.57**	**62**	LR	LR	05 03 50.6	
	comp=Z,193nm,20.6s,baz=319,slow=33						
H17A	**Grant Village**	**59.79**	**56**	P	**P**	**04 40 39.5**	**+1.8**
	baz=311,SNR=7.3						
H17A	**Grant Village**	**59.79**	**56**	IAmb	IAmb	04 41 08.2	
	comp=Z,18nm,1.1s						
IMW	**Indian Meadow**	**59.92**	**57**	P	**P**	**04 40 40.5**	**+1.8**
IMW				IAmb	IAmb	04 41 08.1	
	comp=Z,10nm,1.1s						
FLWY	**Flagg Ranch**	**59.93**	**56**	IAmb	IAmb	04 41 07.2	
	comp=Z,14nm,0.9s						
ILULI	**Ilulissat**	**60.01**	**11**	*i* P	**P**	**04 40 39.2**	**+0.8**
ILULI	**Ilulissat**	**60.01**	**11**	*i* P	**P**	**04 40 39.2**	**+0.8**
	comp=Z,33nm,0.9s						
ILULI	**Ilulissat**	**60.01**	**11**	*i* P	**P**	**04 40 39.3**	**+0.8**
ILULI				IAmb	IAmb	04 40 39.9	
	comp=Z,33nm,0.9s						
RLMT	**Red Lodge**	**60.02**	**55**	P	**P**	**04 40 40.5**	**+1.3**
	baz=312,SNR=11						
RLMT	**Red Lodge**	**60.02**	**55**	IAmb	IAmb	04 41 08.5	
	comp=Z,18nm,1.1s						
LOHW	**Long Hollow**	**60.29**	**57**	IAmb	IAmb	04 41 10.1	
	comp=Z,14nm,1.1s						
SNOW	**Snow King Moun**	**60.31**	**57**	IAmb	IAmb	04 40 57.3	
	comp=Z,33nm,1.6s						
REDW	**Red Top Meadow**	**60.32**	**57**	IAmb	IAmb	04 41 06.7	
	comp=Z,19nm,1.1s						
DGMT	**Dagmar**	**60.40**	**49**	P	**P**	**04 40 42.8**	**+1.2**
	baz=312						
DGMT	**Dagmar**	**60.40**	**49**	P	**P**	**04 40 43.2**	**+1.7**
DGMT				IAmb	IAmb	04 40 55.8	
	comp=Z,29nm,1.2s						
LAO	**LASA Array**	**60.57**	**52**	P	**P**	**04 40 43.6**	**+0.8**
	baz=312						
LAO	**LASA Array**	**60.57**	**52**	IAmb	IAmb	04 40 57.5	
	comp=Z,25nm,1.0s						
PKM	**Mcpherson Peak**	**60.70**	**70**	P	**P**	**04 40 45.0**	**+1.0**
	baz=312						
CWC	**Cottonwood Cre**	**60.72**	**67**	P	**P**	**04 40 45.3**	**+1.2**
	baz=312						
BKB	**Balikpapan**	**60.82**	**227**	P	**P**	**04 40 44.3**	**-0.4**
R11A	**Troy Canyon, C**	**60.94**	**64**	P	**P**	**04 40 46.6**	**+1.0**
	baz=312,SNR=7.6						
ISA	**Isabella, Lake**	**61.00**	**68**	P	**P**	**04 40 47.1**	**+1.2**
	baz=312						
NIL	**Nilore**	**61.18**	**289**	P	**P**	**04 40 46.9**	**-0.2**
NIL				pmax	pmax		
	comp=Z,31nm,0.9s						
NIL	**Nilore**	**61.18**	**289**	P	**P**	**04 40 46.9**	**-0.2**
NIL	**Nilore**	**61.18**	**289**	P	**P**	**04 40 46.8**	**-0.3**
SPR3	**Spring Creek 3**	**61.24**	**63**	P	**P**	**04 40 50.0**	**+2.2**
SPR3				IAmb	IAmb	04 41 03.0	
	comp=Z,9.6nm,1.1s						
ICESG	**Greenland Ices**	**61.27**	**7**	*i* P	**P**	**04 40 48.2**	**+0.7**
ICESG				IAmb	IAmb	04 40 49.5	
	comp=Z,25nm,0.7s						
DUG	**Dugway, Tooele**	**61.32**	**61**	P	**P**	**04 40 49.8**	**+1.7**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DUG	**Dugway, Tooele**	**61.32**	**61**	P	**P**	**04 40 49.4**	**+1.3**
	baz=312,SNR=7.8						
DUG	**Dugway, Tooele**	**61.32**	**61**	P	**P**	**04 40 49.8**	**+1.7**
DUG				IAmb	IAmb	04 41 11.9	
	comp=Z,8.9nm,1.0s						
MPMC	**Manual Prospec**	**61.33**	**67**	P	**P**	**04 40 49.5**	**+1.2**
	baz=312						
BW06	**Boulder Array**	**61.42**	**57**	P	**P**	**04 40 49.8**	**+0.9**
	baz=312,SNR=8.2						
PDAR	**Pinedale Array**	**61.42**	**57**	P	**P**	**04 40 49.2**	**+0.4**
	comp=Z,7.3nm,1.1s,baz=329,slow=2.6,SNR=18						
PDAR				LR	LR	05 07 59.2	
	comp=Z,121nm,19.9s,baz=334,slow=36						
FURC	**Furnace Creek,**	**61.44**	**66**	P	**P**	**04 40 50.5**	**+1.9**
	baz=312,SNR=9.6						
TPNV	**Topopah Spring**	**61.48**	**66**	P	**P**	**04 40 50.8**	**+1.6**
	baz=312,SNR=7.1						
TPNV	**Topopah Spring**	**61.48**	**66**	IAmb	IAmb	04 41 12.4	
	comp=Z,9.5nm,0.9s						
LRMC	**Laurel Mtn Rad**	**61.60**	**68**	P	**P**	**04 40 51.5**	**+1.5**
	baz=312						
EDW2	**Edwards Air Fo**	**61.81**	**68**	P	**P**	**04 40 52.5**	**+1.1**
	baz=313						
PRN	**Pahroc Range**	**61.88**	**64**	IAmb	IAmb	04 41 18.2	
	comp=Z,14nm,1.3s						
BELG	**Belogornoye**	**62.05**	**319**	P	**P**	**04 40 51.2**	**-1.4**
	comp=Z,25nm,0.8s,baz=106,slow=3.1,SNR=9.9						
BELG	**Belogornoye**	**62.05**	**319**	⇓*e*P	**P**	**04 40 51.1**	**-1.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BELG				MLR	MLR		
	comp=Z,95nm,15.0s						
SFJD	**Kangerlussuaq**	**62.16**	**12**	P	**P**	**04 40 53.0**	**0.0**
	comp=Z,16nm,0.6s,baz=347,slow=9.4,SNR=12						
SFJD	**Kangerlussuaq**	**62.16**	**12**	P	**P**	**04 40 53.8**	**+0.7**
SFJD				pmax	pmax		
	comp=Z,77nm,1.4s						
SFJD	**Kangerlussuaq**	**62.16**	**12**	P	**P**	**04 40 53.8**	**+0.7**
SFJD	**Kangerlussuaq**	**62.16**	**12**	*i* P	**P**	**04 40 54.2**	**+1.1**
SFJD	**Kangerlussuaq**	**62.16**	**12**	*i* P	**P**	**04 40 54.2**	**+1.1**
SHOC	**Shoshone, Teco**	**62.17**	**67**	P	**P**	**04 40 54.9**	**+1.2**
	baz=313						
GSC	**Goldstone, Bar**	**62.25**	**67**	P	**P**	**04 40 55.3**	**+0.9**
	baz=313						
STKI	**Sintang**	**62.39**	**233**	P	P	04 41 03.4	+8.1
BFSC	**Mount Baldy Ra**	**62.45**	**69**	P	**P**	**04 40 56.6**	**+0.8**
	baz=313						
FIA1	**FINESS Array S**	**62.60**	**336**	P	**P**	**04 40 56.2**	**+0.1**
FINES	**FINESS Array B**	**62.60**	**336**	P	**P**	**04 40 54.7**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=37,slow=8.3,SNR=21						
FINES				LR	LR	05 10 58.6	
	comp=Z,949nm,19.1s,baz=23,slow=39						
KAPI	**Kappang**	**62.83**	**222**	P	**P**	**04 40 59.4**	**+1.2**
KAPI				pmax	pmax		
	comp=Z,15nm,1.0s						
KAPI	**Kappang**	**62.83**	**222**	P	**P**	**04 40 59.4**	**+1.2**
KAPI				IAmb	IAmb	04 42 23.5	
	comp=Z,15nm,1.0s						
HEC	**Hector,Ludlow**	**62.85**	**67**	P	**P**	**04 40 60.0**	**+1.6**
	baz=313						
ULM	**Lac du Bonnet**	**63.09**	**43**	P	**P**	**04 41 00.7**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=305,slow=7.4,SNR=4.6						
ULM				LR	LR	05 10 18.7	
	comp=Z,251nm,19.8s,baz=320,slow=38						
ULM	**Lac du Bonnet**	**63.09**	**43**	⇑*e*P	**P**	**04 40 59.9**	**+0.4**
K22A	**Casper**	**63.15**	**55**	P	**P**	**04 41 00.9**	**+0.6**
	baz=314						
KBL	**Kabul**	**63.15**	**292**	P	**P**	**04 40 59.7**	**-0.8**
KBL				pmax	pmax		
	comp=Z,34nm,1.5s						
KBL	**Kabul**	**63.15**	**292**	P	**P**	**04 40 59.7**	**-0.8**
KBL				IAmb	IAmb	04 41 02.2	
	comp=Z,34nm,1.4s						
KBL	**Kabul**	**63.15**	**292**	P	**P**	**04 40 59.7**	**-0.8**
	SNR=7.0						
MURC	**Murrieta**	**63.17**	**69**	P	**P**	**04 41 01.3**	**+1.0**
	baz=313						
GMRC	**Granite Mounta**	**63.29**	**67**	P	**P**	**04 41 02.5**	**+1.2**
	baz=313						
RSSD	**Black Hills**	**63.45**	**53**	P	**P**	**04 41 02.7**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,24nm,1.2s						
RSSD	**Black Hills**	**63.45**	**53**	P	**P**	**04 41 02.5**	**+0.2**
	baz=314						
RSSD	**Black Hills**	**63.45**	**53**	P	**P**	**04 41 02.7**	**+0.4**
RSSD				IAmb	IAmb	04 41 23.1	
	comp=Z,24nm,1.1s						
PFO	**Pinyon Flats O**	**63.61**	**68**	LR	LR	05 03 13.4	
	comp=Z,266nm,21.9s,baz=296,slow=31						
TPFO	**Pinon Flats**	**63.62**	**69**	P	**P**	**04 41 04.6**	**+1.2**
	baz=314						
BELC	**Belle Mtn. Jos**	**63.62**	**68**	P	**P**	**04 41 04.8**	**+1.2**
	baz=314						
BBKI	**Banjar Baru**	**63.73**	**228**	P	**P**	**04 41 01.9**	**-2.3**
	comp=Z,3µmcomp=Z,24nm,1.0s						
O20A	**White River Ci**	**63.94**	**58**	P	**P**	**04 41 06.2**	**+0.7**
	baz=314						
O20A	**White River Ci**	**63.94**	**58**	IAmb	IAmb	04 41 33.5	
	comp=Z,42nm,1.9s						
IRM	**Iron Mountain**	**64.03**	**67**	P	**P**	**04 41 07.2**	**+1.1**
	baz=314,SNR=7.2						
COEN	**Coen**	**64.12**	**194**	P	**P**	**04 41 08.7**	**+2.0**
MONP2	**Monument Peak**	**64.12**	**69**	P	**P**	**04 41 07.8**	**+0.9**
	baz=314						
BC3	**Big Chuckawall**	**64.19**	**68**	P	**P**	**04 41 08.1**	**+0.9**
	baz=314						
KULM	**Kulim**	**64.19**	**246**	P	**P**	**04 41 07.8**	**+0.5**
KULM				IAmb	IAmb	04 41 23.9	
	comp=Z,25nm,1.0s						
OBN	**Obninsk**	**64.39**	**326**	LR	LR	05 13 53.6	
	comp=Z,190nm,18.7s,baz=73,slow=40						
OBN	**Obninsk**	**64.39**	**326**	⇓*i*P	**P**	**04 41 07.1**	**-0.9**
OBN				*e**SP	**sP**	**04 41 30.2**	**+4.2**
OBN						04 41 42.0	
OBN				S	**S**	**04 49 39.0**	**-3.7**
OBN				*e*		04 50 04.6	
OBN				pmax	pmax		
	comp=Z,56nm,2.5s						
OBN				MLR	MLR		
	comp=Z,649nm,16.0s						
OBN	**Obninsk**	**64.39**	**326**	P	**P**	**04 41 06.5**	**-1.4**
IKP	**In-Ko-Pah, Jac**	**64.48**	**69**	P	**P**	**04 41 11.0**	**+1.9**
	baz=314						
RMX	**La Rumorosa**	**64.53**	**69**	P	**P**	**04 41 11.9**	**+2.4**
PDMCI	**Parker Dam,Lak**	**64.53**	**66**	P	**P**	**04 41 11.1**	**+1.8**
	baz=314						
IPM	**Ipoh**	**64.61**	**245**	P	**P**	**04 41 10.8**	**+0.7**
IPM				IAmb	IAmb	04 41 11.9	
	comp=Z,23nm,1.1s						
N23A	**Red Feather La**	**64.67**	**56**	P	**P**	**04 41 11.3**	**+0.9**
	baz=315						
PV12	**Saucer Basin,**	**64.88**	**60**	IAmb	IAmb	04 41 37.9	
	comp=Z,15nm,1.0s						
GLA	**Glamis**	**64.98**	**68**	P	**P**	**04 41 13.8**	**+1.5**
	baz=314						
MMRI	**Maumere**	**65.05**	**218**	P	**P**	**04 41 14.8**	**+2.1**
SOEI	**Soe**	**65.28**	**215**	P	**P**	**04 41 15.8**	**+1.4**
SMCO	**Snowmass**	**65.31**	**58**	IAmb	IAmb	04 41 38.0	
	comp=Z,7.5nm,0.8s						
WUAZ	**Wupatki**	**65.34**	**64**	P	**P**	**04 41 15.2**	**+0.5**
	baz=314						
VRH	**Novokhopyorsk**	**65.41**	**321**	*e*P	**P**	**04 41 12.5**	**-2.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LPSR	**Galich'ya Gora**	**65.45**	**324**	*e*P	**P**	**04 41 13.8**	**-1.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ISCO	**Idaho Springs**	**65.62**	**57**	P	**P**	**04 41 17.8**	**+1.2**
	baz=315,SNR=9.0						
ISCO	**Idaho Springs**	**65.62**	**57**	IAmb	IAmb	04 41 45.1	
	comp=Z,8.8nm,0.9s						
MVCO	**Mesa Verde**	**65.82**	**61**	P	**P**	**04 41 18.3**	**+0.4**
	baz=315						
MVCO	**Mesa Verde**	**65.82**	**61**	IAmb	IAmb	04 41 40.6	
	comp=Z,12nm,1.1s						
F33A	**5 Mile Ranch,**	**66.08**	**47**	IAmb	IAmb	04 41 58.5	
	comp=Z,14nm,1.2s						
SFX	**San Felipe**	**66.37**	**70**	P	**P**	**04 41 23.2**	**+2.0**
S22A	**4UR Ranch, Cre**	**66.39**	**59**	P	**P**	**04 41 23.0**	**+1.4**
	baz=315,SNR=8.3						
VSR	**Storozhevoye**	**66.43**	**322**	*e*P	**P**	**04 41 20.4**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NB2	**NORSAR Subarra**	**66.44**	**342**	P	**P**	**04 41 20.0**	**-1.3**
	comp=Z,31nm,1.2s,baz=25,slow=6.5						
NB2	**NORSAR Subarra**	**66.44**	**342**	P	**P**	**04 41 20.0**	**-1.3**
	baz=25,slow=6.5						
NOA	**NORSAR Array B**	**66.44**	**342**	P	**P**	**04 41 20.2**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=28,slow=6.7,SNR=9.3						
NOA				LR	LR	05 16 00.7	
	comp=Z,650nm,18.8s,baz=25,slow=41						
Q24A	**Divide**	**66.46**	**57**	P	**P**	**04 41 22.7**	**+0.6**
	baz=316						
W18A	**Petrified Fore**	**66.57**	**63**	P	**P**	**04 41 23.9**	**+1.2**
	baz=315						
VORD	**Divnogorie**	**66.57**	**322**	*e*P	**P**	**04 41 21.1**	**-1.1**
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
EYMN	**Ely**	**66.73**	**43**	P	**P**	**04 41 23.3**	**0.0**
	baz=319						
OGNE	**Ogallala**	**66.73**	**54**	P	**P**	**04 41 23.9**	**+0.4**
	baz=316						
HFS	**Hagfors**	**66.76**	**341**	P	**P**	**04 41 22.2**	**-1.0**
	comp=Z,2.6nm,0.3s,baz=52,slow=2.4,SNR=30						
214A	**Organ Pipe Nat**	**66.97**	**67**	P	**P**	**04 41 26.1**	**+1.0**
	baz=315						
SDCO	**Great Sand Dun**	**67.13**	**58**	P	**P**	**04 41 28.1**	**+1.7**
	baz=316,SNR=6.5						
GEYT	**Alibeck**	**67.15**	**302**	P	**P**	**04 41 25.0**	**-1.1**
	comp=Z,9.9nm,0.6s,baz=27,slow=3.6,SNR=14						
GEYT				LR	LR	05 12 53.9	
	comp=Z,655nm,19.2s,baz=230,slow=38						
GEYT	**Alibeck**	**67.15**	**302**	P	**P**	**04 41 25.6**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**67.15**	**302**	P	**P**	**04 41 25.4**	**-0.7**
GYA0B				IAmb	IAmb	04 41 27.5	
	comp=Z,14nm,0.6s						
HRA	**Herat**	**67.30**	**297**	IAmb	IAmb	04 41 29.3	
	comp=Z,9.0nm,0.7s						
ECSD	**EROS Data Cent**	**67.47**	**49**	P	**P**	**04 41 28.5**	**+0.5**
	baz=318,SNR=6.9						

ECSD	EROS Data Cent	67.47	49	IAmb	IAmb	04 41 33.9	
	comp=Z,7.5nm,0.8s						
MNK	Minsk	67.86	330	*i* P	P	04 41 31.6	+1.3
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	04 41 31.6	+1.3
	comp=N,12nm,0.8s						
MNK				*i* P	P	04 41 31.6	+1.3
	comp=Z,22nm,1.0s						
MNK				*i* PP	PP	04 44 03.6	+4.0
MNK				*i* PPP	PPP	04 45 43.3	
MNK				*i* S	S	04 50 33.5	+8.6
MNK				*i* SS	SS	04 55 03.1	+17
MNK				*i* SSS	SSS	04 58 19.9	
MNK				*i* LQ	LQ	05 06 56.2	
MNK				*i* LR	LR	05 12 11.1	
MNK				*i* LRM	MLR	05 14 20.0	
	comp=E,72nm,15.0s						
MNK				*i* LRM	MLR	05 14 20.0	
	comp=N,1µm,18.8s						
MNK				*i* LRM	MLR	05 14 20.0	
	comp=Z,342nm,15.7s						
NACGM	Naroch	67.87	331	*i* P	P	04 41 30.1	-0.2
NACGM				*i* P	P	04 41 30.1	-0.2
NACGM				*i* P	P	04 41 30.1	-0.2
NACGM				*i* PcP	sP	04 41 49.1	+0.7
NACGM				*i* PP	PP	04 43 59.1	-0.5
NACGM				*i* PPP	PPP	04 45 51.8	
NACGM				*i* S	S	04 50 25.0	0.0
NACGM				*i* PS	PnS	04 51 30.6	+38
NACGM				*i* SS	SS	04 54 41.6	-4.5
NACGM				*i* SSS	SSS	04 58 09.2	
NACGM				*i* LQ	LQ	05 08 24.5	
NACGM				*i* LR	LR	05 11 59.3	
TUC	Tucson	67.93	66	P	P	04 41 33.0	+1.8
TUC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TUC	Tucson	67.93	66	P	P	04 41 31.7	+0.5
	baz=316						
TUC	Tucson	67.93	66	P	P	04 41 33.0	+1.8
BKNI	Bangkinang	67.94	243	P	P	04 41 32.4	+1.1
T25A	Trinidad	68.17	58	P	P	04 41 33.0	+0.2
	baz=316						
SPMN	Marine on St.	68.19	45	P	P	04 41 32.3	-0.2
	baz=319						
ANMO	Albuquerque	68.59	61	*ce*P	P	04 41 37.2	+1.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,2.5s						
ANMO	Albuquerque	68.59	61	P	P	04 41 36.1	+0.7
	baz=316						
ANMO	Albuquerque	68.59	61	P	P	04 41 37.8	+2.4
SDSI	Sungai Dareh	68.74	242	P	P	04 41 36.0	-0.3
	comp=Z,6µmcomp=Z,14nm,1.3s						
MAK	Makhachkala	69.02	312	*e*P	P	04 41 36.6	-1.1
MAK				*e*PPP	PPP	04 45 48.6	
MAK				*e*S	S	04 50 39.5	+0.5
MAK				*e*SS	SS	04 55 04.2	-0.2
MAK				pmax	pmax		
	comp=Z,67nm,1.0s						
MAK				MLR	MLR		
	comp=Z,1µm,16.0s						
HYB	Hyderabad	69.14	273	*i* P	P	04 41 40.0	+1.1
	comp=Z,71nm,1.2s						
PWJI	Pagerwojo	69.16	228	P	P	04 41 38.5	-0.3
	comp=Z,43nm,1.0s						
GSI	Gunungsitoli	69.20	246	P	P	04 41 40.2	+1.0
KNRA	Kununurra	69.23	209	P	P	04 41 40.9	+1.7
319A	Douglas	69.49	66	IAmb	IAmb	04 42 15.0	
	comp=Z,21nm,1.1s						
CBKS	Cedar Bluff	69.49	54	P	P	04 41 41.1	+0.3
	baz=318						
CBKS	Cedar Bluff	69.49	54	IAmb	IAmb	04 42 05.5	
	comp=Z,22nm,1.3s						
MSVF	Nonsavu	69.50	158	⇑*e*P	P	04 41 40.4	-0.5
MSVF				pmax	pmax		
	comp=Z,12nm,1.4s						
GOF	Gofitskoye	69.53	316	⇑*e*P	P	04 41 41.7	+0.9
KLSI		69.98	236	P	P	04 41 45.4	+1.5
	comp=Z,195nmcomp=Z,9.6nm,1.7s						
N35A	Tabor	70.09	50	IAmb	IAmb	04 41 50.9	
	comp=Z,15nm,0.8s						
MDSI	Maura Dua	70.11	237	P	P	04 41 45.3	+0.6
	comp=Z,11nm,1.1s						
HSIG		70.18	68	P	P	04 41 47.1	+2.0
SISI	Saibi	70.41	243	P	P	04 41 47.6	+1.0
	comp=Z,18nm,1.2s						
NCK	Nalchik	70.47	315	⇓*e*P	P	04 41 46.5	-0.2
NCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SCIA	State Center	70.50	48	P	P	04 41 46.7	-0.1
	baz=320						
KVAR	Kislovodsk Arr	70.53	315	P	P	04 41 44.1	-3.1
	comp=Z,1.8nm,0.3s,baz=270,slow=20,SNR=2.0						
KIV	Kislovodsk	70.54	315	*e*P	P	04 41 49.0	+1.8
KIV				pmax	pmax		
	comp=Z,29nm,1.1s						
KIV	Kislovodsk	70.54	315	P	P	04 41 46.9	-0.3
KIV				IAmb	IAmb	04 42 02.8	
	comp=Z,8.5nm,0.8s						
AKASG	Malin Array Be	70.58	328	P	P	04 41 44.9	-2.2
	comp=Z,3.5nm,0.4s,baz=31,slow=6.2,SNR=15						
AKASG				LR	LR	05 15 02.5	
	comp=Z,648nm,21.6s,baz=10.0,slow=38						
AKASG	Malin Array Be	70.58	328	P	P	04 41 46.5	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AKASG	Malin Array Be	70.58	328	P	P	04 41 46.5	-0.6
AKBB	Malin Array Si	70.58	328	P	P	04 41 46.8	-0.3
AKBB				pmax	pmax		
	comp=Z,38nm,1.7s						
AKBB	Malin Array Si	70.58	328	P	P	04 41 46.8	-0.3
AKBB				IAmb	IAmb	04 41 47.8	
	comp=Z,38nm,1.7s						
KBZ	Khabaz	70.62	315	P	P	04 41 46.6	-0.8
	comp=Z,6.9nm,0.6s,baz=93,slow=3.6,SNR=25						
KBZ				LR	LR	05 17 49.5	
	comp=Z,480nm,18.5s,baz=24,slow=40						
KBZ	Khabaz	70.62	315	⇑*e*P	P	04 41 48.0	+0.5
KBZ				pmax	pmax		
	comp=Z,47nm,2.7s						
DDFL	Dedoflistskaro	70.84	312	P	P	04 41 50.8	+1.8
ZEI	Tsey	70.87	314	*e*P	P	04 41 47.2	-2.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MATQ	Matagami	70.90	34	P	P	04 41 48.6	-0.6
	baz=326						
JFWS	Jewell Farm	71.14	45	P	P	04 41 50.6	-0.1
	baz=321						
AMTX	Amarillo	71.33	58	P	P	04 41 52.9	+0.8
	baz=318						
AMTX	Amarillo	71.33	58	P	P	04 41 54.0	+1.9
AMTX				IAmb	IAmb	04 42 11.6	
	comp=Z,27nm,1.6s						
N38A	Joes South For	71.33	49	IAmb	IAmb	04 41 53.6	
	comp=Z,14nm,0.8s						
MSTX	Muleshoe	71.39	59	P	P	04 41 53.3	+0.7
	baz=318						
MNTX	Cornudas Mount	71.56	63	P	P	04 41 53.7	+0.3
	baz=317						
WB0	Warramunga Arr	71.56	202	IAmb	IAmb	04 42 01.2	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	71.71	202	IAmb	IAmb	04 42 21.2	
	comp=Z,9.9nm,0.9s						
KZRT	Kazreti	71.71	313	P	P	04 41 58.2	+3.9
LSQQ	Lebel-sur-Quev	71.72	34	P	P	04 41 53.8	-0.3
	baz=327						
WRAB	Tennant Creek	71.73	202	P	P	04 41 55.6	+1.3
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WRAB	Tennant Creek	71.73	202	P	P	04 41 55.6	+1.3
WRAB				IAmb	IAmb	04 42 02.3	
	comp=Z,15nm,1.0s						
WB2	Warramunga Arr	71.74	202	P	P	04 41 54.8	+0.3
WB2				IAmb	IAmb	04 42 02.4	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	71.74	202	P	P	04 41 53.3	-1.1
	comp=Z,2.7nm,0.8s,baz=18,slow=6.4,SNR=18						
WRA				LR	LR	05 10 25.9	
	comp=Z,138nm,22.0s,baz=15,slow=33						
WC3	Warramunga Arr	71.75	202	P	P	04 41 54.9	+0.4
WC3				IAmb	IAmb	04 42 02.4	
	comp=Z,11nm,0.9s						
P38A	Dawn	72.08	50	IAmb	IAmb	04 42 18.7	
	comp=Z,20nm,1.2s						
AKH	Akhalkalaki	72.13	313	⇑P	P	04 41 58.0	+1.1
AKH	Akhalkalaki	72.13	313	P	P	04 41 57.2	+0.3
AKH				pmax	pmax		
	comp=Z,44nm,1.1s						
AKH	Akhalkalaki	72.13	313	P	P	04 41 57.2	+0.3
SOC	Sochi	72.17	317	*e*P	P	04 41 54.4	-2.5
SOC				*e**PP	pP	04 42 08.1	-1.5
SOC				*e**SP	sP	04 42 13.9	-0.7
SOC				*e*		04 44 35.6	
SOC				*e*PPP	PPP	04 46 18.5	
SOC				*e*S	S	04 51 13.0	-2.7
SOC				*e*SS	SS	04 55 51.2	-1.5
SOC				pmax	pmax		
	comp=Z,26nm,0.9s						
SOC				MLR	MLR		
	comp=Z,501nm,15.0s						
VLDQ	Val d'Or	72.34	35	P	P	04 41 57.6	-0.2
VLDQ				IAmb	IAmb	04 42 11.1	
	comp=Z,21nm,1.1s						
GNI	Garni	72.50	312	P	P	04 41 58.9	-0.2
	comp=Z,6.2nm,0.6s,baz=228,slow=9.9,SNR=4.9						
GNI				LR	LR	05 20 46.6	
	comp=Z,460nm,18.2s,baz=22,slow=42						
GNI	Garni	72.50	312	P	P	04 41 58.8	-0.4
GNI				pmax	pmax		
	comp=Z,64nm,1.6s						
GNI	Garni	72.50	312	P	P	04 41 58.8	-0.4
FITZ	Fitzroy Crossi	72.51	211	P	P	04 41 59.8	+0.8
FITZ				IAmb	IAmb	04 42 13.6	
	comp=Z,14nm,1.1s						
P40A	Paris	72.89	49	IAmb	IAmb	04 42 24.2	
	comp=Z,17nm,1.0s						
WMOK	Wichita Mounta	73.03	56	P	P	04 42 02.6	+0.4
	baz=319						
SORM	Soroca	73.04	327	⇑P	P	04 42 01.5	-0.4
OK031	S. Brethren Rd	73.16	54	IAmb	IAmb	04 42 25.0	
	comp=Z,26nm,1.3s						
HDIL	Hopedale	73.42	46	P	P	04 42 04.3	0.0
	baz=322						
R40A	Maddies Statio	73.73	50	IAmb	IAmb	04 42 26.0	
	comp=Z,13nm,1.0s						
TUL1	Leonard	73.75	54	P	P	04 42 06.9	+0.6
	baz=320						
OJC	Ojcow	74.06	333	*e*P	P	04 42 09.6	+1.7
OJC	Ojcow	74.06	333	P	P	04 42 08.0	0.0
OJC				pmax	pmax		
	comp=Z,24nm,1.2s						
OJC	Ojcow	74.06	333	P	P	04 42 08.0	0.0
OJC				IAmb	IAmb	04 42 10.8	
	comp=Z,24nm,1.2s						
ABTX	Abilene, Hawle	74.14	58	P	P	04 42 09.8	+1.0
	baz=319						
ABTX	Abilene, Hawle	74.14	58	IAmb	IAmb	04 42 36.6	
	comp=Z,12nm,1.1s						
D56A	ZEC Mazanza, M	74.22	34	P	P	04 42 08.7	-0.2
	baz=328						
EKA	Eskdalemuir Ar	74.29	348	P	P	04 42 08.7	-0.5
	comp=Z,3.1nm,0.3s,baz=20,slow=5.2,SNR=57						
TX31	Lajitas Ar. Si	74.29	63	IAmb	IAmb	04 42 28.6	
	comp=Z,25nm,0.8s						
TXAR	Lajitas Array	74.29	63	P	P	04 42 10.6	+0.8
	comp=Z,4.3nm,0.6s,baz=276,slow=3.6,SNR=13						
G54A	Lake Saint Pet	74.36	37	P	P	04 42 10.1	+0.3
	baz=327						
CCM	Cathedral Cave	74.42	49	P	P	04 42 10.9	+0.6
CCM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CCM	Cathedral Cave	74.42	49	P	P	04 42 10.5	+0.2
	baz=322						
CCM	Cathedral Cave	74.42	49	P	P	04 42 10.9	+0.6
KOLS	Kolonicke sedl	74.43	331	*e*P	P	04 42 11.3	+1.2
KOLS	Kolonicke sedl	74.43	331	*e*P	P	04 42 11.3	+1.2
HHAR	Hobbs	74.43	52	IAmb	IAmb	04 42 11.7	
	comp=Z,34nm,1.7s						
FLTG	Flechtingen	74.46	339	*e*P	P	04 42 11.5	+1.4
	comp=Z,14nm,1.0s,baz=23,slow=5.8						
KSP	Ksiaz	74.52	335	*e*P	P	04 42 12.4	+1.8
E56A	St. Veronique	74.55	34	P	P	04 42 10.6	-0.2
	baz=328						
BUR08	Bucovina Ar. S	74.57	328	IAmb	IAmb	04 42 12.6	
	comp=Z,56nm,1.9s						
SFIN	Lafayette	74.59	45	P	P	04 42 11.4	+0.2
	baz=323						
BURAR	Bucovina Array	74.59	328	⇑P	P	04 42 10.6	-0.6
BURAR	Bucovina Array	74.59	328	P	P	04 42 10.4	-0.8
KOPT	Kop Dagi	74.63	314	IAmb	IAmb	04 42 30.1	
	comp=Z,19nm,0.9s						
LATQ	La Tuque	74.64	32	P	P	04 42 11.4	+0.1
	baz=329						
UZH	Uzhgorod	74.69	330	*e*P	P	04 42 12.8	+1.2
UZH				*e*		04 42 23.5	
CRVS	Cervenica-Dubn	74.72	331	*e*P	P	04 42 13.3	+1.5
CRVS				pmax	pmax		
	comp=Z,96nm,2.2s						
CRVS	Cervenica-Dubn	74.72	331	*e*P	P	04 42 13.3	+1.5
OSTC	Ostas	74.80	335	*e*P	P	04 42 13.1	+0.9
D58A	Chemin du LacG	74.85	32	P	P	04 42 12.7	+0.1
	baz=329						
H53A	Bobcaygeon	74.85	37	P	P	04 42 12.9	+0.2
	baz=327						
BIZ	Bicaz	74.86	327	⇑P	P	04 42 12.6	-0.1
FVM	French Village	74.88	49	IAmb	IAmb	04 42 14.8	
	comp=Z,38nm,1.6s						
HPIG		74.89	66	P	P	04 42 15.3	+2.0
UPC	Upice	74.90	335	*e*P	P	04 42 14.8	+2.0
UPC	Upice	74.90	335	*e*P	P	04 42 14.8	+2.0
U40A	Yellville	74.93	51	P	P	04 42 13.3	0.0
	baz=321,SNR=9.7						
U40A	Yellville	74.93	51	IAmb	IAmb	04 42 34.8	
	comp=Z,19nm,1.1s						
DPC	Dobruska-Polom	74.95	335	*e*P	P	04 42 14.3	+1.1
DPC				*e*		04 42 20.6	
DPC	Dobruska-Polom	74.95	335	*e*P	P	04 42 14.3	+1.1
DPC				*e*pP	pP	04 42 20.6	-5.2
CLL	Collm	74.97	337	*i* P	P	04 42 13.7	+0.6
	comp=Z,39nm,1.4s						
CLL				*e*SS	SS	04 57 00.0	+25
CLL				LmH		05 19 00.0	
	comp=Z,800nm,20.2s						
CLL				LmV		05 21 00.0	
	comp=Z,900nm,18.9s						
CLL	Collm	74.97	337	*i* P	P	04 42 13.7	+0.6
CLL				pmax	pmax		
	comp=Z,39nm,1.4s						
CLL				MLR	MLR		
	comp=Z,900nm,18.9s						
CLL	Collm	74.97	337	IAmb	IAmb	04 42 15.5	
	comp=Z,28nm,1.1s						
CLL	Collm	74.97	337	*e*P	P	04 42 13.5	+0.4
	comp=Z,15nm,1.0s,baz=23,slow=5.8						
E57A	Chemin Saint G	74.98	34	P	P	04 42 13.4	0.0
	baz=329						
TESR	Tescani	75.03	327	⇑P	P	04 42 13.7	+0.1
KRLC	Kraliky	75.07	334	AMS	AMS	05 19 10.0	
	comp=Z,2µm,22.2s						
CLZ	Clausthal	75.11	339	*e*P	P	04 42 15.5	+1.4
	comp=Z,48nm,1.3s,baz=23,slow=5.8						
LANS	Liptovska Anna	75.11	332	*e*P	P	04 42 15.9	+1.8
LANS				pmax	pmax		
	comp=Z,21nm,1.6s						
LANS	Liptovska Anna	75.11	332	*e*P	P	04 42 15.9	+1.8
BRG	Berggiesshubel	75.12	336	*e*P	P	04 42 14.4	+0.3
BRG				Amp		04 42 16.7	
	comp=Z,15nm,1.2s						
BRG	Berggiesshubel	75.12	336	*e*P	P	04 42 14.4	+0.3
	comp=Z,8.7nm,1.1s,baz=23,slow=5.8						
MORC	Moravsky Berou	75.12	334	*e*P	P	04 42 14.7	+0.5
MORC	Moravsky Berou	75.12	334	P	P	04 42 14.6	+0.4
MORC				pmax	pmax		
	comp=Z,49nm,1.5s						
MORC	Moravsky Berou	75.12	334	P	P	04 42 14.6	+0.4
PALK	Pallekele	75.23	264	⇑*e*P	P	04 42 15.4	+0.1
PALK				pmax	pmax		
	comp=Z,56nm,1.3s						
PALK	Pallekele	75.23	264	P	P	04 42 15.9	+0.7
PALK	Pallekele	75.23	264	P	P	04 42 18.0	+2.7
D59A	Saint-Raymond	75.29	32	P	P	04 42 15.0	-0.1
	baz=330						
E58A	La Victoria	75.33	33	P	P	04 42 15.6	+0.2
	baz=329,SNR=7.9						
W39A	Magazine	75.34	53	P	P	04 42 16.3	+0.7
	baz=321						
NEUB	Neuenburg	75.36	338	*e*P	P	04 42 17.8	+2.3
	comp=Z,18nm,1.0s,baz=23,slow=5.8						
AS31	Alice Springs	75.42	201	P	P	04 42 17.5	+1.5
ASAR	Alice Springs	75.42	201	P	P	04 42 15.5	-0.5
	comp=Z,1.2nm,0.7s,baz=16,slow=5.3,SNR=12						
ASAR				LR	LR	05 13 13.8	
	comp=Z,170nm,21.8s,baz=25,slow=34						
VRI	Vrincioaia	75.56	326	⇑P	P	04 42 17.0	+0.3
CFR	Carcaliu	75.62	325	⇑P	P	04 42 16.8	-0.2
JCT	Junction City	75.66	60	P	P	04 42 18.5	+0.9
	baz=319						
D61A	St Aubert, Com	75.68	31	P	P	04 42 17.4	+0.1
	baz=331,SNR=6.0						
D60A	Saint Jean D'O	75.68	31	P	P	04 42 16.9	-0.5
	baz=331						
OZUR		75.70	327	⇑P	P	04 42 18.1	+0.5
PRU	Pruhonice	75.77	336	*e*P	P	04 42 18.5	+0.7
PRU	Pruhonice	75.77	336	*e*P	P	04 42 18.5	+0.7
G57A	Newington	75.79	35	P	P	04 42 18.1	+0.1
	baz=328						
TPGR	Topolog	75.79	325	⇑P	P	04 42 18.3	+0.3
VRAC	Vranov	75.82	334	P	P	04 42 19.1	+1.0
	comp=Z,37nm,1.3s,baz=24,slow=4.6,SNR=9.4						
VRAC	Vranov	75.82	334	⇑P	P	04 42 18.2	+0.1
VRAC	Vranov	75.82	334	*e*P	P	04 42 19.7	+1.6
PBMO	Poplar Bluff	75.83	50	IAmb	IAmb	04 42 20.5	
	comp=Z,31nm,1.4s						
VYHS	Vyhne	75.89	332	*e*P	P	04 42 19.8	+1.3
VYHS				pmax	pmax		
	comp=Z,18nm,1.4s						
VYHS	Vyhne	75.89	332	*e*P	P	04 42 19.8	+1.3
JAVC	Velka Javorina	75.91	333	*e*P	P	04 42 21.1	+2.4
MOX	Moxa	75.92	338	*e*P	P	04 42 19.8	+1.2
	comp=Z,28nm,1.2s,baz=23,slow=5.8						
TANN	Tannenbergstha	75.92	337	*e*P	P	04 42 20.1	+1.3
	comp=Z,36nm,1.5s,baz=23,slow=5.8						
WERD	Werda	75.93	337	*e*P	P	04 42 20.2	+1.5
	comp=Z,27nm,1.3s,baz=23,slow=5.8						
F59A	Saint Guilaume	75.95	33	P	P	04 42 18.7	-0.2
	baz=330						
MIAR	Mount Ida	75.95	53	P	P	04 42 20.0	+0.9
	baz=321,SNR=6.3						
MIAR	Mount Ida	75.95	53	IAmb	IAmb	04 42 41.8	
	comp=Z,19nm,1.3s						
E60A	Ste Agathe de	75.98	32	P	P	04 42 18.9	-0.1
	baz=330						
WERN	Wernitzgruen	76.06	337	*e*P	P	04 42 21.0	+1.5
	comp=Z,7.8nm,0.9s,baz=23,slow=5.8						
PSZ	Piszkesteto	76.08	332	⇑P	P	04 42 20.8	+1.1
PSZ	Piszkesteto	76.08	332	*e*P	P	04 42 20.0	+0.4
PSZ	Piszkesteto	76.08	332	P	P	04 42 20.1	+0.4
PSZ				pmax	pmax		
	comp=Z,33nm,1.5s						
PSZ	Piszkesteto	76.08	332	P	P	04 42 20.1	+0.4
PSZ				IAmb	IAmb	04 42 22.1	
	comp=Z,33nm,1.5s						
NKC	Novy Kostel	76.09	337	*e*P	P	04 42 20.1	+0.4
NKC	Novy Kostel	76.09	337	*e*P	P	04 42 20.1	+0.4
G58A	Ormstown	76.09	34	P	P	04 42 19.7	0.0
	baz=329						
KRUC	Moravsky	76.09	334	*e*P	P	04 42 21.3	+1.6
HARR	Harsova	76.11	325	⇑P	P	04 42 20.9	+1.1
TIRR	Tirgusor	76.13	324	P	P	04 42 19.4	-0.5
TIRR				pmax	pmax		
	comp=Z,45nm,1.0s						
TIRR	Tirgusor	76.13	324	P	P	04 42 19.4	-0.5
F60A	Warwick	76.15	32	P	P	04 42 19.9	-0.1
	baz=330						
UBBA	Unterbreizbach	76.15	339	*e*P	P	04 42 21.5	+1.7
	comp=Z,7.3nm,0.9s,baz=23,slow=5.8						
DRGR		76.16	329	⇑P	P	04 42 19.9	-0.3
DRGR		76.16	329	P	P	04 42 21.0	+0.8
DRGR				pmax	pmax		
	comp=Z,30nm,2.5s						
KASTN	Kahler Asten	76.16	340	*e*P	P	04 42 20.5	+0.5
	comp=Z,14nm,0.9s,baz=23,slow=5.8						
W41B	Gary Mavity, V	76.16	52	P	P	04 42 21.1	+0.9
	baz=322						
MLR	Muntele Rosu	76.16	327	P	P	04 42 19.5	-0.8
	comp=Z,6.2nm,0.4s,baz=341,slow=14,SNR=14						
MLR	Muntele Rosu	76.16	327	⇑P	P	04 42 20.0	-0.3
MLR	Muntele Rosu	76.16	327	IAmb	IAmb	04 42 23.0	
	comp=Z,19nm,1.0s						
D62A	Allapoint, All	76.16	30	P	P	04 42 19.9	-0.2
	baz=332						
D62A	Allapoint, All	76.16	30	IAmb	IAmb	04 42 22.3	
	comp=Z,12nm,0.8s						
H57A	Richville	76.18	35	P	P	04 42 20.4	+0.2
	baz=328						
BUG	Bochum--Univer	76.19	341	*e*P	P	04 42 21.6	+1.5
	comp=Z,18nm,1.0s,baz=23,slow=5.8						
TOKA	Tokat	76.23	317	IAmb	IAmb	04 42 23.3	
	comp=Z,32nm,1.2s						
E61A	Lac Etchemin	76.25	31	P	P	04 42 20.6	-0.1
	baz=331						
ISR	Istrita	76.26	326	⇑P	P	04 42 21.6	+0.8
SMOL	Smolenice	76.29	333	*e*P	P	04 42 22.7	+1.9
SMOL				pmax	pmax		
	comp=Z,27nm,1.7s						
SMOL	Smolenice	76.29	333	*e*P	P	04 42 22.7	+1.9
L53A	Girard	76.34	40	P	P	04 42 21.3	+0.1
	baz=326						
P49A	Miami Univ. Ec	76.36	44	P	P	04 42 21.7	+0.4
	baz=324						
X40A	Basin Creek Fa	76.39	53	P	P	04 42 22.5	+0.9
	baz=321						
MANZ	Manzenberg	76.41	337	*e*P	P	04 42 22.8	+1.4
	comp=Z,9.1nm,1.0s,baz=23,slow=5.8						
MODS	Modra-Piesok	76.46	333	*e*P	P	04 42 23.1	+1.3
MODS				pmax	pmax		
	comp=Z,32nm,1.4s						
MODS	Modra-Piesok	76.46	333	*e*P	P	04 42 23.1	+1.3
F61A	St Evariste	76.48	32	P	P	04 42 22.4	+0.5
	baz=331,SNR=8.1						
D63A	Stockholm	76.51	30	P	P	04 42 22.2	+0.1
	baz=332						
I57A	Carthage	76.52	36	P	P	04 42 22.4	+0.2
	baz=328						
VOIR		76.53	327	⇑P	P	04 42 23.3	+1.0
M53A	WI Miller and	76.59	40	P	P	04 42 22.5	-0.1
	baz=326						
MARD	Mardin	76.64	312	P	P	04 42 23.6	+0.5
ICOR	Ion Corvin	76.65	325	⇑P	P	04 42 23.9	+1.0
H59A	Cadyville	76.66	34	P	P	04 42 22.7	-0.3
	baz=329						
H58A	Gabriels	76.67	35	P	P	04 42 22.5	-0.6
	baz=329						
WCI	Wyandotte Cave	76.68	46	P	P	04 42 24.1	+0.9
WCI				pmax	pmax		
	comp=Z,15nm,0.9s						
WCI	Wyandotte Cave	76.68	46	P	P	04 42 23.5	+0.3
	baz=324						
WCI	Wyandotte Cave	76.68	46	P	P	04 42 24.1	+0.9
WCI				IAmb	IAmb	04 42 25.3	
	comp=Z,15nm,0.8s						
ARR	Arges	76.74	327	⇑P	P	04 42 24.7	+1.2
SULR		76.75	326	⇓P	P	04 42 23.5	+0.1
G60A	Masonville	76.76	33	P	P	04 42 23.1	-0.5
	baz=330						
KHC	Kasperske Hory	76.81	336	⇓*e*P	P	04 42 25.4	+1.6
KHC				pmax	pmax		
	comp=Z,68nm,1.3s						
KHC	Kasperske Hory	76.81	336	*e*P	P	04 42 24.3	+0.5
KHC				*e*pP	PcP	04 42 30.0	-4.9
KHC				AMS	AMS	05 20 00.0	
	comp=Z,2µm,18.5s						
KHC	Kasperske Hory	76.81	336	IAmb	IAmb	04 42 26.3	
	comp=Z,31nm,1.2s						
ILGA	Ilgaz	76.84	319	P	P	04 42 23.5	-0.8
G61A	St-Isidore-de-	76.89	33	P	P	04 42 25.3	+1.0
	baz=330,SNR=6.7						
GRF	Grafenberg Arr	76.90	338	*e*P	P	04 42 25.5	+1.3
	comp=Z,46nm,1.1s,baz=23,slow=5.8						
GRFO	Grafenberg	76.90	338	P	P	04 42 24.9	+0.7
GRFO				pmax	pmax		
	comp=Z,16nm,1.2s						
GRFO	Grafenberg	76.90	338	P	P	04 42 24.9	+0.7
GRFO				IAmb	IAmb	04 42 26.9	
	comp=Z,16nm,1.2s						
K56A	Middlesex	76.92	38	P	P	04 42 24.3	-0.2
	baz=328						
BATG	Bathurst New B	76.94	28	P	P	04 42 25.6	+1.0
BATG				IAmb	IAmb	04 42 27.4	
	comp=Z,33nm,1.2s						
E63A	Oxbow	76.95	30	P	P	04 42 24.7	+0.1
	baz=332						
MALT	Malatya	76.96	315	P	P	04 42 26.5	+1.6
SHME	Shamm	76.98	295	*i* P	P	04 42 24.5	-0.5
	SNR=22						
SHME	Shamm	76.98	295	P	P	04 42 24.3	-0.7
	SNR=13						
BANOM	Banah	76.98	295	*i* P	P	04 42 24.3	-0.8

	SNR=61						
BANOM	Banah	76.98	295	P	P	04 42 24.7	-0.4
	SNR=26						
WET	Wettzell	76.98	336	eP	P	04 42 26.4	+1.6
	comp=Z,16nm,1.0s,baz=23,slow=5.8						
GEC2	GERESS Array S	77.04	336	IAmb	IAmb	04 42 27.1	
	comp=Z,34nm,1.6s						
GEC2B	GERESS ARRAY S	77.04	336	P	P	04 42 25.4	+0.3
GERES	GERESS Array B	77.04	336	P	P	04 42 24.6	-0.5
	comp=Z,1.1nm,0.3s,baz=57,slow=4.9,SNR=15						
GERES				LR	LR	05 20 47.3	
	comp=Z,2µm,18.2s,baz=19,slow=39						
GERES	GERESS Array B	77.04	336	P	P	04 42 24.5	-0.6
TNS	Taunus Mts	77.07	340	eP	P	04 42 27.1	+1.8
	comp=Z,12nm,0.8s,baz=23,slow=5.8						
AHRW	Bad Neuenahr-A	77.08	341	eP	P	04 42 26.9	+1.7
	comp=Z,38nm,1.1s,baz=23,slow=5.8						
H60A	Morristown	77.09	34	P	P	04 42 25.7	+0.2
	baz=330						
BEBN	Eben Emael	77.13	341	dP	P	04 42 26.9	+1.4
E64A	Bridgewater	77.14	30	P	P	04 42 25.7	0.0
	baz=332						
J58A	Remsen	77.16	36	P	P	04 42 26.0	+0.2
	baz=329						
MEM	Membach	77.24	341	dP	P	04 42 25.6	-0.4
	comp=Z,42nm,1.3s						
N54A	Moraine State	77.27	40	P	P	04 42 27.0	+0.6
	baz=326						
CONA	Conrad Observa	77.27	334	i P	P	04 42 28.3	+1.8
	comp=Z,34nm,1.5s,SNR=7.4						
T47A	Sharon Grove	77.29	47	IAmb	IAmb	04 42 29.1	
	comp=Z,40nm,1.4s						
G62A	West of Eustis	77.29	32	P	P	04 42 27.0	+0.5
	baz=331,SNR=5.6						
G62A	West of Eustis	77.29	32	IAmb	IAmb	04 42 29.2	
	comp=Z,35nm,1.1s						
SOP	Sopron	77.29	333	eP	P	04 42 29.2	+2.8
L56A	Greenwood	77.30	38	P	P	04 42 26.7	+0.1
	baz=328						
I59A	Olmsteadville	77.32	35	P	P	04 42 26.5	-0.2
	baz=329						
O53A	New Philadelph	77.34	42	P	P	04 42 27.0	+0.2
	baz=326						
F63A	Nahmakanta, Br	77.36	31	P	P	04 42 26.9	0.0
	baz=332						
BSTI	Sart Tilman	77.36	341	dP	P	04 42 27.7	+1.0
GZR	Gura Zlata	77.36	329	⇓P	P	04 42 27.0	+0.1
J59A	Piesco	77.36	35	P	P	04 42 27.0	0.0
	baz=329						
Q51A	Peebles	77.39	44	P	P	04 42 27.9	+0.6
Q51A				IAmb	IAmb	04 42 43.8	
	comp=Z,14nm,1.0s						
H61A	Lyndonville	77.40	33	P	P	04 42 27.9	+0.8
	baz=330,SNR=5.1						
UCC	Uccle	77.40	342	P	P	04 42 27.6	+0.6
UCC				pmax	pmax		
	comp=Z,61nm,1.4s						
UCC	Uccle	77.40	342	P	P	04 42 27.6	+0.6
P52A	Corning	77.44	42	P	P	04 42 27.6	+0.2
	baz=326						
MDH	Madha	77.44	294	i P	P	04 42 27.8	+0.1
	SNR=11						
MDH	Madha	77.44	294	P	P	04 42 28.1	+0.4
	SNR=8.3						
MPLH	Magyarpolny	77.46	333	eP	P	04 42 28.8	+1.4
F64A	Sherman	77.47	30	P	P	04 42 27.1	-0.3
	baz=332						
MASF	Masafi	77.47	294	P	P	04 42 27.5	-0.4
	SNR=9.4						
BHOU	Houvegnez	77.48	341	dP	P	04 42 28.9	+1.4
BHOU				dPcP	PcP	04 42 36.9	-0.8
MSFE	Esma-Masafi	77.48	294	i P	P	04 42 27.7	-0.3
	SNR=15						
I60A	Shoreham	77.49	34	P	P	04 42 26.9	-0.7
	baz=330						
NATX	Nacogdoches	77.53	56	P	P	04 42 29.1	+1.0
	baz=321						
BZS	Buzias	77.55	329	⇑P	P	04 42 28.3	+0.3
BCLA	Clavier	77.57	342	dP	P	04 42 27.1	-0.8
WSAR	Wadi Sarin	77.58	291	P	P	04 42 28.8	+0.3
	comp=Z,31nm,1.0s,baz=67,slow=4.8,SNR=17						
M56A	Emporium	77.59	39	P	P	04 42 28.5	+0.3
	baz=327						
COPA	Copaceanca	77.59	326	⇑P	P	04 42 28.1	-0.1
WVT	Waverly	77.62	48	P	P	04 42 29.2	+0.8
	baz=323						
H62A	Milan	77.64	33	P	P	04 42 28.7	+0.2
	baz=331						
H62A	Milan	77.64	33	IAmb	IAmb	04 42 43.0	
	comp=Z,22nm,0.8s						
BGES	Gesves	77.64	342	dP	P	04 42 29.6	+1.3
BGES				dPcP	PcP	04 42 38.4	0.0
LBNH	Lisbon	77.65	33	P	P	04 42 28.8	+0.2
	baz=330						
UMQ	Umm Al-Quwin	77.65	295	i P	P	04 42 29.3	+0.5
	SNR=9.5						
UMQ	Umm Al-Quwin	77.65	295	P	P	04 42 29.7	+0.9
	SNR=12						
BIDO	Bidbid	77.67	292	P	P	04 42 29.9	+0.9
	SNR=7.0						
PKME	Peaks-Kenny Pk	77.68	31	P	P	04 42 29.1	+0.4
	baz=332						
SNF	Seneffe	77.69	342	dP	P	04 42 29.7	+1.1
L57A	Andrews Acres	77.69	38	P	P	04 42 29.3	+0.5
	baz=328						
G63A	Kingsbury	77.70	31	P	P	04 42 28.8	+0.1
	baz=332						
UOSS	Minazif	77.77	294	i P	P	04 42 29.1	-0.4
	SNR=10						
UOSS	Minazif	77.77	294	P	P	04 42 28.8	-0.7
BMRD	Maredsous	77.79	342	dP	P	04 42 30.2	+1.0
	comp=Z,40nm,1.1s						
MOA	Molln	77.79	335	i P	P	04 42 30.8	+1.5
	comp=Z,8.6nm,1.0s						
I61A	Oroboro, Fairl	77.81	34	P	P	04 42 29.8	+0.4
	baz=330						
K59A	Cooperstown	77.82	36	P	P	04 42 29.8	+0.3
	baz=329						
WBK	Wadi Bani Khal	77.84	290	P	P	04 42 31.2	+1.3
	SNR=8.4						
G64A	Maxfield	77.87	31	P	P	04 42 29.9	+0.2
	baz=332						
BINY	Binghamton	77.87	37	P	P	04 42 29.9	+0.1
	baz=328						
HATD	Hatta, Dubai	77.90	294	i P	P	04 42 29.9	-0.3
	SNR=57						
HATD	Hatta, Dubai	77.90	294	P	P	04 42 30.1	-0.2
	SNR=33						
JLN	Jalan Bani Buh	77.91	290	P	P	04 42 31.1	+0.8
	SNR=15						
HERR	Herculane	77.93	328	⇑P	P	04 42 30.1	0.0
H63A	New Sharon	77.95	32	P	P	04 42 30.5	+0.3
	baz=331						
J60A	Lant Hill Farm	77.96	35	P	P	04 42 30.4	+0.2
	baz=330						
BR131	Keskin Array S	77.96	318	deP	P	04 42 30.5	0.0
BRTR	Keskin Array B	77.96	318	P	P	04 42 30.6	+0.1
	comp=Z,28nm,1.0s,baz=60,slow=3.0,SNR=64						
BRTR				LR	LR	05 19 50.2	
	comp=Z,91nm,21.2s,baz=14,slow=38						
BRTR	Keskin Array B	77.96	318	P	P	04 42 30.1	-0.4
MORH	Mrgy, Hungar	77.98	332	eP	P	04 42 28.8	-1.5
MORH	Mrgy, Hungar	77.98	332	eP	P	04 42 29.5	-0.8
ARSA	Arzberg	77.98	334	i P	P	04 42 32.0	+1.7
	comp=Z,25nm,1.4s,SNR=5.4						
N56A	West Decatur	78.02	39	P	P	04 42 30.7	0.0
	baz=327						
DOU	Dourbes	78.02	342	dP	P	04 42 30.0	-0.4
DOU				dPcP	PcP	04 42 39.3	-0.7
DOU				dpP	pP	04 42 41.5	-1.7
ASHO	Ashiyiah	78.05	294	i P	P	04 42 30.7	-0.4
	SNR=39						
ASHO	Ashiyiah	78.05	294	P	P	04 42 31.0	-0.1
	SNR=26						
L58A	Harry Jones Me	78.05	37	P	P	04 42 30.8	0.0
	baz=328						
NAZ	Nazwa, Dubai	78.06	294	i P	P	04 42 30.9	-0.1
	SNR=24						
NAZ	Nazwa, Dubai	78.06	294	P	P	04 42 31.1	0.0
	SNR=19						
SMDO	Samad	78.06	291	P	P	04 42 31.8	+0.5
	SNR=9.3						
WLF	Walferdange	78.10	341	dP	P	04 42 30.4	-0.5
	comp=Z,29nm,2.3s						
HOQ	Hoqain	78.12	292	P	P	04 42 31.5	0.0
	SNR=18						
M57A	Sunshine Farm,	78.14	38	P	P	04 42 31.4	+0.1
	baz=328						
SOHO	SOHO	78.18	293	i P	P	04 42 31.6	-0.1
	SNR=36						
J61A	Chester	78.19	34	P	P	04 42 32.5	+1.0
	baz=330						
L59A	Walton	78.25	36	P	P	04 42 32.2	+0.3
	baz=329						
STU	Stuttgart	78.25	339	IAmb	IAmb	04 42 33.9	
	comp=Z,19nm,0.8s						
H64A	Troy	78.25	31	P	P	04 42 32.2	+0.4
	baz=332						
MDVR	Moldovita	78.26	329	⇓P	P	04 42 31.4	-0.5
PUNG	Punghina	78.28	328	⇓P	P	04 42 31.6	-0.4
FAQ	Al Faqa, Dubai	78.28	294	i P	P	04 42 31.6	-0.7
	SNR=29						
FAQ	Al Faqa, Dubai	78.28	294	P	P	04 42 31.6	-0.7
	SNR=20						
HKT	Hockley	78.28	58	⇑eP	P	04 42 32.0	-0.2
HKT				pmax	pmax		
	comp=Z,4.0nm,1.5s						
I63A	Otisfield	78.29	33	P	P	04 42 32.2	+0.1
	baz=331						
RJOB	Jochberg	78.30	336	eP	P	04 42 33.3	+1.2
	comp=Z,29nm,0.9s,baz=23,slow=5.8						
U49A	Red Boiling Sp	78.30	47	IAmb	IAmb	04 42 34.5	
	comp=Z,18nm,1.4s						
G65A	Princeton	78.31	30	P	P	04 42 31.9	-0.3
	baz=333						
T50A	Nancy	78.34	46	IAmb	IAmb	04 42 34.1	
	comp=Z,8.1nm,0.7s						
Q53A	Leroy	78.34	43	P	P	04 42 33.1	+0.6
	baz=326						
CLTN	Cedars of Leba	78.38	47	IAmb	IAmb	04 42 35.5	
	comp=Z,29nm,1.5s						
M58A	Price's Panora	78.38	38	P	P	04 42 33.1	+0.5
	baz=328						
MCWV	Mont Chateau	78.41	41	P	P	04 42 33.6	+0.7
	baz=327						
O56A	Blue Knob Stat	78.45	40	P	P	04 42 33.5	+0.4
	baz=327						
PLVB	Pleven	78.46	326	⇑P	P	04 42 33.1	+0.1
N57A	Milroy	78.46	39	P	P	04 42 33.7	+0.6
	baz=328						
K61A	Williamstown	78.51	35	P	P	04 42 33.3	-0.1
	baz=330						
ASUD	Al Ashush, Dub	78.53	294	i P	P	04 42 33.5	-0.2
	SNR=30						
ASUD	Al Ashush, Dub	78.53	294	P	P	04 42 34.1	+0.5
	SNR=15						
H65A	Eastbrook	78.53	31	P	P	04 42 33.7	+0.3
	baz=332						
JMDO	Jabal Madar	78.55	291	P	P	04 42 33.8	0.0
	SNR=22						
FRGS	Fruska Gora	78.55	330	eP	P	04 42 33.7	+0.2
SOKA	Soboth	78.64	334	i P	P	04 42 34.7	+0.6
	comp=Z,49nm,1.3s,SNR=11						
ALNE	Al Ain	78.70	294	i P	P	04 42 35.2	+0.5
	SNR=7.3						
ALNE	Al Ain	78.70	294	P	P	04 42 34.5	-0.1
	SNR=24						
N58A	Sunbury	78.73	38	P	P	04 42 35.3	+0.8
	baz=328						
L60A	Shokan	78.73	36	P	P	04 42 34.7	+0.1
	baz=329						
I64A	Boothbay	78.74	32	P	P	04 42 34.5	0.0
	baz=332						
KBA	Koelnbreinsper	78.75	335	i P	P	04 42 36.0	+1.2
	comp=Z,109nm,1.1s,SNR=28						
H66A	Whiting	78.76	30	P	P	04 42 34.8	+0.2
	baz=333						
EMMW	East Machias	78.78	30	P	P	04 42 36.0	+1.3
AJN	Ajban	78.78	295	i P	P	04 42 35.5	+0.4
	SNR=8.1						
AJN	Ajban	78.78	295	P	P	04 42 34.9	-0.1
	SNR=10						
ARQ	Araqi	78.78	293	P	P	04 42 35.5	+0.3
	SNR=12						
J63A	Strafford	78.79	33	P	P	04 42 35.4	+0.6
	baz=331						
L61A	Hillsdale 1, H	78.81	35	P	P	04 42 35.4	+0.4
	baz=330						
BSY	Bisya	78.82	292	P	P	04 42 35.7	+0.4
	SNR=19						
BFO	Black Forest	78.87	339	P	P	04 42 35.2	0.0
BFO				pmax	pmax		
	comp=Z,26nm,1.0s						
BFO	Black Forest	78.87	339	P	P	04 42 35.2	0.0
BFO				IAmb	IAmb	04 42 37.3	
	comp=Z,26nm,1.0s						
BFO	Black Forest	78.87	339	eP	P	04 42 36.8	+1.5
	comp=Z,14nm,0.9s,baz=23,slow=5.8						
O57A	Amberson	78.88	39	P	P	04 42 35.8	+0.4
	baz=328						
K62A	Royalston	78.90	34	P	P	04 42 35.9	+0.4
	baz=330						
L61B	Northampton	78.92	35	P	P	04 42 36.0	+0.4
	baz=330						
OBKA	Obir	78.94	334	i P	P	04 42 36.4	+0.7
	comp=Z,17nm,0.7s						
P56A	Dayton Farm, R	78.97	40	P	P	04 42 36.7	+0.8
	baz=327						
WATA	Walderalm	78.99	336	i P	P	04 42 37.6	+1.6
	comp=Z,48nm,1.0s,SNR=9.0						
UBR	Ueberruh	79.04	338	eP	P	04 42 37.8	+1.6
	comp=Z,33nm,1.3s,baz=23,slow=5.8						
N59A	State Game Lan	79.04	38	P	P	04 42 36.8	+0.5
	baz=329						
RETA	Reutte	79.06	337	eP	P	04 42 37.4	+1.1
	comp=Z,14nm,0.8s						
MYKA	Terra Mystica	79.08	335	eP	P	04 42 37.3	+0.8
	comp=Z,24nm,1.0s						
MOTA	Moosalm	79.10	337	i P	P	04 42 37.0	+0.3
	comp=Z,75nm,1.1s,SNR=13						
R54A	Victor	79.14	43	P	P	04 42 37.3	+0.5
	baz=326						
UMR	Umm Al-Rimmam	79.14	303	eP		04 42 35.6	
ZAG	Zagreb	79.14	333	eP	P	04 42 38.0	+1.3
M60A	Port Jervis	79.14	37	P	P	04 42 37.4	+0.6
	baz=329						
MIB	Mutribah	79.15	303	⇓eP		04 42 35.0	
TEKS	Tekeris	79.19	330	eP	P	04 42 35.8	-1.2
SQTA	Sankt Quirin	79.19	337	i P	P	04 42 37.7	+0.6
	comp=Z,62nm,1.2s,SNR=11						
Q56A	Snyder Ridge,	79.21	41	P	P	04 42 38.0	+0.8
	baz=327						
O58A	Lewisberry	79.25	39	P	P	04 42 37.4	0.0
	baz=328						
ABTA	Abfaltersbach	79.28	336	i P	P	04 42 38.8	+1.2
	comp=Z,51nm,1.2s,SNR=6.8						
CRES	Cresnjev	79.30	333	eP	P	04 42 37.4	-0.2
S54A	Dingess, Beckl	79.31	43	P	P	04 42 38.0	+0.2
	baz=326						
LJU	Ljubljana	79.37	334	eP	P	04 42 38.7	+0.7
LJU	Ljubljana	79.37	334	eP	P	04 42 38.0	0.0
CRNS	Crni Vrh	79.41	334	eP	P	04 42 38.7	+0.5
DIVS	Divibare	79.44	330	eP	P	04 42 37.5	-1.0
DIVS	Divibare	79.44	330	P	P	04 42 37.6	-0.9
R55A	Marlinton	79.44	42	P	P	04 42 39.5	+0.9
	baz=327						
DAVA	Damuels	79.47	338	i P	P	04 42 39.6	+0.9
	comp=Z,31nm,1.1s,SNR=7.4						
FETA	Feichten	79.50	337	i P	P	04 42 39.5	+0.7
	comp=Z,41nm,1.2s,SNR=7.6						
RST	Umm Al-Ruwaisa	79.57	303	eP		04 42 37.8	
VTS	Vitosha	79.62	327	⇑P	P	04 42 39.4	-0.2
P58A	Pank, Wackersv	79.63	39	P	P	04 42 39.4	-0.1
	baz=328						
R56A	Bull Pasture M	79.65	41	P	P	04 42 40.3	+0.6
	baz=327						
MHTO	MHTO	79.66	290	P	P	04 42 40.6	+0.6
	SNR=30						
CEY	Cerknica	79.67	334	eP	P	04 42 37.3	-2.4
STAL	STALIGIAL	79.68	335	P	P	04 42 39.1	-0.5
O60A	Telford	79.70	38	P	P	04 42 40.0	+0.2
	baz=329						
RDF	Al-Radifah	79.72	303	eP		04 42 38.3	
N61A	South Mountain	79.77	37	P	P	04 42 40.6	+0.4
	baz=329						
HAPS	Han Pijesak,Bl	79.79	330	eP	P	04 42 39.8	-0.6
BBLS	Lazići	79.83	330	eP	P	04 42 40.2	-0.4
ZAIG	Zacatecas	79.86	67	P	P	04 42 42.8	+1.5
P59A	Jarrettsville	79.88	39	P	P	04 42 41.2	+0.3
	baz=328						
Q58A	Fox Den Farm,	79.93	40	P	P	04 42 41.8	+0.7
	baz=328						
DAVOX	Davos/Dischmat	79.94	337	P	P	04 42 41.6	+0.3
	comp=Z,30nm,0.9s,baz=160,slow=0.7,SNR=25						
TKL	Tuckaleechee C	79.94	46	P	P	04 42 42.9	+1.6
	comp=Z,3.3nm,0.7s,baz=192,slow=4.3,SNR=6.4						
TAOE	Nuku Hiva Isla	80.01	116	eLR	LR	05 07 40.1	
	comp=Z,1µm,22.4s						
M63A	Gales Ferry	80.06	35	P	P	04 42 42.3	+0.6
	baz=331						
ALN	Alexandroupoli	80.08	324	P	P	04 42 42.4	+0.6
ALN				pmax	pmax		
	comp=Z,45nm,1.1s						
ALN	Alexandroupoli	80.08	324	P	P	04 42 42.4	+0.6
MGRS	Mrkonjic Grad	80.08	332	eP	P	04 42 39.4	-2.5
R57A	Stanardsville	80.12	41	P	P	04 42 43.0	+0.8
	baz=327						
U54A	Nelsons Funny	80.14	44	P	P	04 42 43.1	+0.7
	baz=326						
SJES	Sjenica	80.19	329	eP	P	04 42 42.3	-0.3
BLA	Blacksburg	80.19	43	P	P	04 42 43.4	+0.7
	baz=327						
BLA	Blacksburg	80.19	43	IAmb	IAmb	04 42 59.4	
	comp=Z,16nm,1.0s						
RAR	Rarotonga	80.32	139	LR	LR	05 10 28.2	
	comp=Z,224nm,20.4s,baz=286,slow=30						
R58A	Rapidan	80.34	40	P	P	04 42 43.8	+0.5
	baz=328						
LRAL	Lakeview Retre	80.50	50	P	P	04 42 44.3	0.0
	baz=324						
CBN	Corbin Frederi	80.68	40	P	P	04 42 47.3	+2.1
CBN				IAmb	IAmb	04 45 30.9	
	comp=Z,45nm,1.6s						
STIP	Stip	80.81	327	i P	P	04 42 45.0	-0.8
SKO	Skopje	80.83	328	i P	P	04 42 46.1	+0.2
T57A	Hurt	80.89	42	P	P	04 42 46.8	+0.5
	baz=327						
SENIN	Lac Senin/Sane	80.95	339	IAmb	IAmb	04 42 49.2	
	comp=Z,15nm,0.9s						
R60A	Leonardtown, M	80.96	40	P	P	04 42 47.6	+0.9
	baz=328						
BRY	Bratogost	80.98	330	eP	P	04 42 46.7	-0.2
VAY	Valandovo	81.00	327	i P	P	04 42 47.4	+0.5
SSF	Saint Saulge	81.13	342	eP	P	04 42 48.5	+1.1
SSF				pmax	pmax		
	comp=Z,24nm,1.0s						
PDG	Podgorica	81.17	329	⇑P	P	04 42 46.9	-0.8
PDG	Podgorica	81.17	329	eP	P	04 42 47.2	-0.5
T58A	Grand View Acr	81.25	42	P	P	04 42 48.6	+0.4
	baz=328						
U57A	Blanch	81.32	42	P	P	04 42 49.6	+1.0
	baz=327						
DRME	Dracevica, Mon	81.41	329	eP	P	04 42 49.0	0.0
V57A	Coltrane Farms	81.58	43	P	P	04 42 50.6	+0.6
	baz=327						
T59A	Double "B" Far	81.64	41	P	P	04 42 51.2	+0.9
	baz=328						
U58A	Oxford	81.70	42	P	P	04 42 51.4	+0.8
	baz=328						
S61A	Accomac	81.84	39	P	P	04 42 51.6	+0.4
	baz=329						
LPL	La Plagne	81.89	339	eP	P	04 42 52.5	+0.8
LPL				pmax	pmax		
	comp=Z,43nm,0.8s						
FNA	Florina	81.90	327	IAmb	IAmb	04 42 52.9	
	comp=Z,24nm,0.9s						
TIR	Tirane	81.92	328	⇑P	P	04 42 52.4	+0.7
STKA	Stephens Creek	81.95	193	P	P	04 42 52.0	+0.4
	comp=Z,1.6nm,0.7s,baz=8.2,slow=4.5,SNR=3.8						
STKA				LR	LR	05 18 40.4	
	comp=Z,196nm,20.2s,baz=20,slow=35						
PPT	Papeete	81.97	129	LR	LR	05 18 54.5	
	comp=Z,193nm,18.2s,baz=330,slow=35						
PPT2	Papeete2	81.99	129	eLR	LR	05 08 23.6	
	comp=Z,190nm,22.2s						
ELL	Elmali	82.06	319	P	P	04 42 52.9	+0.2
ELL				pmax	pmax		
	comp=Z,92nm,0.9s						
ELL	Elmali	82.06	319	P	P	04 42 52.9	+0.2
W57A	Gilead	82.10	44	P	P	04 42 53.1	+0.4
	baz=327						
W58A	Raeford	82.55	43	P	P	04 42 55.5	+0.5
	baz=327						
MMAI	Mount Meron Ar	82.70	313	P	P	04 42 56.4	+0.4
	comp=Z,5.7nm,0.3s,baz=42,slow=6.8,SNR=22						
MMAI				LR	LR	05 26 05.0	
	comp=Z,307nm,18.3s,baz=280,slow=40						
SHAO	Shalim	83.34	290	P	P	04 42 58.5	-0.9
W61A	Ground Anchor	83.40	41	P	P	04 42 59.1	-0.4
	baz=328						
CAF	Calviac	83.47	342	eP	P	04 43 01.6	+1.9
CAF				pmax	pmax		
	comp=Z,45nm,1.2s						
MATE	Matera	83.60	330	⇓P	P	04 43 00.1	-0.3
FORT	Forrest	83.70	204	P	P	04 43 02.2	+1.5
DOK	Doka	83.80	291	P	P	04 43 01.6	-0.2
	SNR=6.2						
Z59A	Georgetown, SC	84.02	44	P	P	04 43 03.9	+1.2
	baz=328						
TIP	Timpagrande	84.92	330	⇑P	P	04 43 07.9	+0.7
RAYN	Ar Rayn	85.08	301	P	P	04 43 07.5	-0.8
RAYN	Ar Rayn	85.08	301	P	P	04 43 07.9	-0.3
RAYN				pmax	pmax		
	comp=Z,32nm,1.0s						
RAYN	Ar Rayn	85.08	301	P	P	04 43 07.9	-0.3
IDI	Anoyia	85.39	322	P	P	04 43 07.7	-1.9
	comp=Z,16nm,0.8s,baz=15,slow=13,SNR=8.5						
EIL	Elat	85.67	312	P	P	04 43 11.2	+0.2
	comp=Z,11nm,0.6s,baz=354,slow=6.4,SNR=14						
EIL				LR	LR	05 24 55.8	
	comp=Z,172nm,20.3s,baz=58,slow=38						
TBI	Tubuai	86.90	132	eLR	LR	05 10 43.9	
	comp=Z,596nm,23.8s,baz=327						
ESDC	Sonseca Array	89.67	345	P	P	04 43 29.4	-0.7
	comp=Z,5.0nm,1.0s,baz=6.9,slow=2.9,SNR=9.3						
ESDC				LR	LR	05 30 36.1	
	comp=Z,382nm,18.1s,baz=30,slow=40						
ESDC	Sonseca Array	89.67	345	P	P	04 43 29.3	-0.9
KEST	Kesra	90.38	334	P	P	04 43 34.0	+0.4
	comp=Z,6.6nm,0.7s,baz=218,slow=1.8,SNR=7.7						
KEST				LR	LR	05 28 24.1	
	comp=Z,782nm,20.5s,baz=334,slow=38						
DBIC	Dimbokro	121.86	338	PKP	PKiKP	04 49 27.4	+0.7
	comp=Z,3.9nm,1.0s,baz=18,slow=3.2,SNR=1.8						
H03N2	Juan Fernandez	136.53	90	T	T	07 22 22.1	
	baz=313,slow=77,SNR=23						
H03N1	Juan Fernandez	136.54	90	T	T	07 22 15.5	
	baz=313,slow=77,SNR=29						
H03N3	Juan Fernandez	136.54	90	T	T	07 22 22.8	
	baz=313,slow=77,SNR=34						
BOSA	Boshof	137.65	281	PKP	PKPdf	04 49 56.5	+0.4
	comp=Z,3.7nm,1.0s,baz=67,slow=4.5,SNR=2.8						
CPUP	Villa Florida	145.24	61	PKPbc	PKPdf	04 50 10.1	+0.5
	comp=Z,5.4nm,0.7s,baz=307,slow=2.7,SNR=14						
CPUP	Villa Florida	145.24	61		PKPdf	04 50 10.2	+0.6
GO07	Milladeo Hill,	145.32	99	PKPbc	PKiKP	04 50 12.6	-0.5
BB19B	Bebedouro	145.48	44	eP	PKPab	04 50 12.3	+1.7
LL01	San Ignacio de	145.78	97	PKPbc	PKiKP	04 50 14.8	+0.7
PLCA	Paso Flores	146.18	93	PKPbc	PKPbc	04 50 12.2	+0.3
	comp=Z,2.7nm,0.8s,baz=313,slow=5.1,SNR=7.7						
PLCA	Paso Flores	146.18	93	PKPdf	PKPbc	04 50 12.0	0.0
PLCA				PKPbc	PKiKP	04 50 16.9	+1.8
PLCA	Paso Flores	146.18	93	eP	PKPab	04 50 13.0	+0.3

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*MEX **30** 04:30:55.5±0.4, 27.°41N×111.°50W, h14^{km}±7^{km}, MD3.7*
*ECX **30** 04:30:55.1±0.7, 27.°68N×111.°64W, h6^{km}±8^{km}, MD3.0*
ISC 30 04:30:53.6±1.1**, 27.°6N**±0.°1×**111.°58W**±0.°09**, h10^{km}, n6,**
σ**0.^{s}32**/12**, 1C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.66	243	eP	Pg	04 31 06.4	0.0
SRIG				i S	Sg	04 31 15.0	-0.1
SRIG	Santa Rosalia	0.66	243	eP	Pg	04 31 06.4	0.0
SRIG				i S	Sg	04 31 15.1	-0.1
GUYB	Guaymas	0.68	66	eP	Pb	04 31 07.4	-0.2
GUYB				eS	Sb	04 31 17.0	-0.1
GUYB	Guaymas	0.68	66	⇑eP	Pb	04 31 07.5	-0.2
GUYB				eS	Sb	04 31 17.4	+0.3
HSIG		1.50	21	eP	Pn	04 31 21.1	+0.5
HSIG				i S	Sn	04 31 40.0	-0.2
HSIG		1.50	21	eP	Pn	04 31 21.0	+0.4
HSIG				i S	Sn	04 31 39.7	-0.5

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*CNRM **30** 04:36:57.2, 36.°50N×10.°07W, h22^{km}, ml4.0, Hypocentre not reviewed by the ISC*
*SFS **30** 04:36:59.0, 36.°60N×9.°90W, h10^{km}, ML3.2, SW. CABO*

DE SAN VICENTE

*MDD **30** 04:36:60.0±0.7, 36°.52N×10°.00W, h40^{km}±24^{km}, mb4.7/30, Error ellipse: s-maj=5.8km s-min=5.4km az=56.0, PRXIMO*

*INMG **30** 04:37:00.7±1.8, 36°.50N×9°.96W, h31^{km}±4^{km}, MD3.1, ML3.4, Error ellipse: s-maj=3.1km s-min=1.9km az=102.0*

*IGIL **30** 04:37:01.0, 36°.50N×9°.91W, h32^{km}, ML3.5*

*LDG **30** 04:37:02.2, 36°.75N×9°.62W, h85^{km}*

ISC 30 04:36:56.9±0.9**, 36°.51N**±0°.04×**10°.01W**±0°.04**, h30**^{km}**, n124,** σ2^{s}**21**/220**, 1D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.13	56	P	Pn	04 37 18.6	+1.9
	68nm,0.1s,SNR=72						
PFVI				S	Sn	04 37 31.5	+0.4
	266nm,0.1s,SNR=15						
PFVI	Vila Bisbo	1.13	56	*e*P	Pn	04 37 18.6	+1.9
PFVI				*e*S	Sn	04 37 31.6	+0.4
PFVI				A	A	04 37 38.9	
	201nm,0.2s						
PFVI	Vila Bisbo	1.13	56	P		04 37 18.4	
MORF	Marmelete	1.34	53	*e*P	Pn	04 37 21.6	+2.0
MORF				*e*S	Sn	04 37 36.5	0.0
MORF				AML	AML	04 37 39.5	
	comp=E,459nm,0.2s						
MORF	Marmelete	1.34	53	P	Pn	04 37 21.6	+2.0
MORF				S	Sn	04 37 36.5	0.0
	comp=E,459nm,0.2s						
MORF	Marmelete	1.34	53	*e*P	Pn	04 37 21.7	+2.0
MORF				*e*S	Sn	04 37 36.9	+0.3
MORF				A	A	04 37 42.8	
	comp=E,290nm,0.2s						
PTEO	Sao Teotonio	1.46	44	P	Pn	04 37 23.3	+2.2
PTEO				S	Sn	04 37 39.8	+0.6
	comp=E,129nm,0.2s						
PTEO	Sao Teotonio	1.46	44	*e*P	Pn	04 37 23.3	+2.2
PTEO				*e*S	Sn	04 37 39.8	+0.6
PTEO				A	A	04 37 54.1	
	comp=E,258nm,0.2s						
PBDV	Barranco-do-Ve	1.82	66	P	Pn	04 37 28.3	+2.2
PBDV				S	Sn	04 37 48.4	+0.2
	comp=E,148nm,0.6s						
PBDV	Barranco-do-Ve	1.82	66	*e*Pn	Pn	04 37 28.3	+2.2
PBDV				*e*Sn	Sn	04 37 48.4	+0.2
PBDV				A	A	04 38 06.0	
	comp=E,148nm,0.6s						
PCVE	Castro Verde	1.93	54	P	Pn	04 37 29.9	+2.2
PCVE				S	Sn	04 37 51.9	+1.0
	comp=E,123nm,0.3s						
PCVE	Castro Verde	1.93	54	*e*Pn	Pn	04 37 29.9	+2.2
PCVE				*e*Sn	Sn	04 37 51.9	+1.0
PCVE				A	A	04 38 04.1	
	comp=E,123nm,0.3s						
MESJ	Messejana	1.95	47	*e*P	Pn	04 37 29.9	+2.0
MESJ				*e*S	Sn	04 37 51.2	-0.1
MESJ				AML	AML	04 37 53.3	
	comp=E,154nm,0.1s						
MESJ	Messejana	1.95	47	P	Pn	04 37 29.9	+2.0
MESJ				S	Sn	04 37 51.2	-0.1
	comp=E,154nm,0.1s						
MESJ	Messejana	1.95	47	*e*Pn	Pn	04 37 29.9	+2.0
MESJ				*e*Sn	Sn	04 37 51.4	+0.1
MESJ				A	A	04 38 04.1	
	comp=E,134nm,0.5s						
PNCL	Nicolau / Gran	1.98	36	P	Pn	04 37 30.4	+2.0
PNCL				S	Sn	04 37 52.3	+0.1
	comp=E,164nm,0.5s						
PNCL	Nicolau / Gran	1.98	36	*e*Pn	Pn	04 37 30.4	+2.0
PNCL				*e*Sn	Sn	04 37 52.3	+0.1
PNCL				A	A	04 37 55.5	
	comp=E,164nm,0.5s						
PVAQ	Vaqueiros	2.04	63	P	Pn	04 37 31.1	+2.0
PVAQ				S	Sn	04 37 53.1	-0.5
	comp=E,118nm,0.3s						
PVAQ	Vaqueiros	2.04	63	*e*Pn	Pn	04 37 31.1	+2.0
PVAQ				*e*Sn	Sn	04 37 53.1	-0.5
PVAQ				A	A	04 38 00.5	
	comp=E,118nm,0.3s						
PVAQ	Vaqueiros	2.04	63	P		04 37 31.1	
EGRO	El Granado	2.26	62	P	Pn	04 37 34.3	+2.1
	comp=E,7.4nm,0.0s,SNR=24						
EGRO				S	Sn	04 37 59.0	-0.1
	comp=E,40nm,0.1s						
PBEJ	Beja	2.28	48	P	Pn	04 37 34.3	+1.8
PBEJ				S	Sn	04 37 59.2	-0.4
	comp=E,50nm,0.3s						
PBEJ	Beja	2.28	48	*e*Pn	Pn	04 37 34.3	+1.8
PBEJ				*e*Sn	Sn	04 37 59.2	-0.4
PBEJ				A	A	04 38 00.7	
	comp=E,101nm,0.3s						
LIS	Lisbon	2.30	17	*e*P	Pn	04 37 35.3	+2.5
LIS				*e*S	Sn	04 38 00.6	+0.5
LIS				AML	AML	04 38 03.4	
	comp=N,1μm,0.3s						
LIS	Lisbon	2.30	17	P	Pn	04 37 35.3	+2.5
LIS				S	Sn	04 38 00.6	+0.5
	comp=N,1μm,0.3s						
LIS	Lisbon	2.30	17	*e*Pn	Pn	04 37 35.3	+2.5
LIS				*e*Sn	Sn	04 38 00.9	+0.8
LIS				A	A	04 38 02.6	
	comp=N,536nm,0.3s						
INMG	Instituto de M	2.37	17	S	Sn	04 38 03.3	+1.7
INMG	Instituto de M	2.37	17	*e*Sn	Sn	04 38 03.3	+1.7
PMAFR	Mafra	2.51	13	P	Pn	04 37 37.8	+2.1
	comp=N,55nm,0.1s,SNR=47						
PMAFR				S	Sn	04 38 05.2	0.0
	comp=N,698nm,0.2s,SNR=23						
PMAFR	Mafra	2.51	13	*e*Pn	Pn	04 37 37.7	+2.1
PMAFR				*e*Sn	Sn	04 38 05.8	+0.6
PMAFR				A	A	04 38 08.2	
	comp=N,551nm,0.2s						
PBAR	Barrancos	2.89	54	P	Pn	04 37 42.6	+1.8
PBAR				S	Sn	04 38 14.6	0.0
	comp=N,58nm,0.4s						
PBAR	Barrancos	2.89	54	*e*Pn	Pn	04 37 42.6	+1.8
PBAR				*e*Sn	Sn	04 38 14.6	0.0
PBAR				A	A	04 38 15.8	
	comp=N,58nm,0.4s						
PMTG	Montargil	2.92	28	P	Pn	04 37 43.4	+2.2
PMTG				S	Sn	04 38 14.9	-0.4
	comp=N,182nm,0.4s						
PMTG	Montargil	2.92	28	*e*Pn	Pn	04 37 43.4	+2.2
PMTG				*e*Sn	Sn	04 38 14.9	-0.4
PMTG				A	A	04 38 16.4	
	comp=N,182nm,0.4s						
EMIN	Mina Concepcio	2.94	64	P	Pn	04 37 43.2	+1.6
	comp=N,3.1nm,0.2s,SNR=51						
EMIN				S	Sn	04 38 15.7	-0.2
	comp=N,17nm,0.1s,SNR=5.8						
PESTR	Estremoz	3.03	38	*e*Pn	Pn	04 37 44.5	+1.6
PESTR				*e*Sn	Sn	04 38 17.5	-0.7
PESTR				A	A	04 38 34.6	
	comp=N,43nm,0.3s						
PESTR	Estremoz	3.03	38	P		04 37 44.3	
PSBE	So Bento	3.15	17	*e*Pn	Pn	04 37 46.7	+2.3
PSBE				*e*Sn	Sn	04 38 20.7	-0.3
PSBE				A	A	04 38 24.3	
	comp=N,96nm,0.4s						
CNIL	Conil	3.19	91	P	Pn	04 37 49.2	+4.3
CNIL				S	Sn	04 38 22.0	0.0
CNIL	Conil	3.19	91	*e*P	Pn	04 37 49.2	+4.3
CNIL				*e*S	Sn	04 38 22.0	0.0
ESPR	Espera	3.35	83	P	Pn	04 37 49.0	+1.8
	comp=N,48nm,0.1s,SNR=178						
ESPR				S	Sn	04 38 24.6	-1.4
	comp=N,499nm,0.3s,SNR=6.8						
PMRV	Marv??o	3.57	35	P	Pn	04 37 52.2	+2.0
PMRV				S	Sn	04 38 30.1	-1.3
	comp=N,112nm,0.5s						
PMRV	Marv??o	3.57	35	*e*Pn	Pn	04 37 52.2	+2.0
PMRV				*e*Sn	Sn	04 38 30.1	-1.3
PMRV				A	A	04 38 32.3	
	comp=N,112nm,0.5s						
RTC	Rabat Centre	3.60	133	P		04 37 52.0	
EJIF	Jimena Fronter	3.66	90	P	Pn	04 37 53.8	+2.4
	SNR=7.9						
EJIF				S	Sn	04 38 31.2	-2.3
	SNR=7.9						
PCAS	Casmilo, Conde	3.73	18	P	Pn	04 37 54.5	+2.1
PCAS				S	Sn	04 38 35.0	-0.3
	comp=N,69nm,0.5s						
PCAS	Casmilo, Conde	3.73	18	*e*Pn	Pn	04 37 54.5	+2.1
PCAS				*e*Sn	Sn	04 38 35.0	-0.3
PCAS				A	A	04 38 37.7	
	comp=N,69nm,0.5s						
RSA	Sarsar	3.77	114	P		04 37 55.0	
CEU	Ceuta	3.80	98	P	Pn	04 37 56.2	+2.9
CEU				S	Sn	04 38 35.3	-1.6
CEU	Ceuta	3.80	98	*e*P	Pn	04 37 56.2	+2.9
CEU				*e*S	Sn	04 38 35.3	-1.6
AVE	Averroes	3.85	146	*e*P	Pn	04 37 55.8	+1.7
AVE				*e*S	Sn	04 38 36.9	-1.3
PCBR	Castelo Branco	3.88	30	P	Pn	04 37 56.5	+2.1
PCBR				S	Sn	04 38 37.7	-1.2
	comp=N,19nm,0.2s						
PCBR	Castelo Branco	3.88	30⇓	*e*Pn	Pn	04 37 56.5	+2.1
PCBR				*e*Sn	Sn	04 38 37.7	-1.2
PCBR				A	A	04 38 39.7	
	comp=N,38nm,0.2s						
COI	Coimbra	3.90	18	P	Pn	04 37 56.9	+2.2
COI				S	Sn	04 38 38.7	-0.7
	comp=N,44nm,0.4s						
COI	Coimbra	3.90	18	*e*Pn	Pn	04 37 56.9	+2.2
COI				*e*Sn	Sn	04 38 38.7	-0.7
COI				A	A	04 38 43.7	
	comp=N,87nm,0.4s						
ECAB	El Cabril	3.98	66	P	Pn	04 37 57.6	+1.8
	comp=N,5.4nm,0.2s,SNR=82						
ECAB				S	Sn	04 38 39.3	-2.1
	comp=N,19nm,0.2s						
HORN	Hornachuelos	4.02	69	P		04 37 57.8	
ZHG	ZHG	4.12	137	P		04 37 59.0	
MTE	Manteigas	4.34	26	P	Pn	04 38 02.7	+1.9
MTE				S	Sn	04 38 48.6	-1.8
	comp=N,40nm,0.5s						
MTE	Manteigas	4.34	26	*e*Pn	Pn	04 38 02.7	+1.9
MTE				*e*Sn	Sn	04 38 48.6	-1.8
MTE				A	A	04 38 53.0	
	comp=N,79nm,0.5s						
EMAL	Malaga-Limoner	4.49	85	P	Pn	04 38 05.1	+2.3
EMAL				S	Sn	04 38 53.1	-1.0
EMAL	Malaga-Limoner	4.49	85	*e*P	Pn	04 38 05.1	+2.3
EMAL				*e*S	Sn	04 38 53.1	-1.0
PVIS	Viseu	4.51	21	P	Pn	04 38 05.0	+1.8
PVIS				S	Sn	04 38 53.2	-1.5
	comp=N,40nm,0.2s						
PVIS	Viseu	4.51	21	*e*Pn	Pn	04 38 05.0	+1.8
PVIS				*e*Sn	Sn	04 38 53.2	-1.5
PVIS				A	A	04 38 55.5	
	comp=N,81nm,0.2s						
EADA	Adamuz	4.63	67	P	Pn	04 38 07.0	+2.2
	comp=N,17nm,0.2s,SNR=78						
EADA				S	Sn	04 38 54.3	-3.3
	comp=N,15nm,0.1s						
EPLA	Plasencia	4.70	40	P	Pn	04 38 07.8	+1.9
	comp=N,3.0nm,0.1s,SNR=18						
EPLA				S	Sn	04 38 57.2	-2.2
	comp=N,44nm,0.1s,SNR=15						
PTO	Porto	4.75	13	P	Pn	04 38 07.9	+1.5
PTO				S	Sn	04 38 58.2	-2.2
	comp=N,38nm,0.1s						
PTO	Porto	4.75	13	*e*Pn	Pn	04 38 07.9	+1.5
PTO				*e*Sn	Sn	04 38 58.2	-2.2
PTO				A	A	04 39 01.3	
	comp=N,77nm,0.1s						
EGOR	Sierra Gorda,	4.77	81	P	Pn	04 38 09.5	+2.6
	comp=N,1.6nm,0.1s,SNR=4.0						
EGOR				S	Sn	04 38 59.1	-2.0
	comp=N,33nm,0.3s,SNR=7.9						
EAH	EAH	4.86	176	P		04 38 09.2	
IFR	Ifrane	5.00	125	*e*P	Pn	04 38 10.4	+0.4
IFR				*e*S	Sn	04 39 01.2	-5.6
PVRL	Vila Real	5.08	20	P	Pn	04 38 12.7	+1.7
PVRL				S	Sn	04 39 05.3	-3.4
	comp=N,51nm,0.4s						
PVRL	Vila Real	5.08	20	*e*Pn	Pn	04 38 12.7	+1.7
PVRL				*e*Sn	Sn	04 39 05.3	-3.4
PVRL				A	A	04 39 09.6	
	comp=N,102nm,0.4s						
ELGU	Los Guajares,	5.14	84	P	Pn	04 38 14.3	+2.4
	comp=N,3.4nm,0.1s,SNR=7.9						
ELGU				S	Sn	04 39 09.0	-1.2
	comp=N,44nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	5.15	19	P	Pn	04 38 13.5	+1.5
POLO				S	Sn	04 39 08.3	-2.2
	comp=N,16nm,0.3s						
POLO	Lamas de Olo	5.15	19	*e*Pn	Pn	04 38 13.5	+1.5
POLO				*e*Sn	Sn	04 39 08.3	-2.2
POLO				A	A	04 39 12.1	
	comp=N,16nm,0.3s						
MVO	Moncorvo	5.20	26	P	Pn	04 38 14.2	+1.6
	comp=N,35nm,0.2s,SNR=106						
MVO				S	Sn	04 39 09.3	-2.2
	comp=N,34nm,0.1s,SNR=6.4						
MVO	Moncorvo	5.20	26	*e*Pn	Pn	04 38 14.2	+1.6
MVO				*e*Sn	Sn	04 39 09.4	-2.2
MVO				A	A	04 39 13.3	
	comp=N,49nm,0.2s						
EQUE	Quentar	5.31	81	P	Pn	04 38 16.2	+2.0
	comp=N,6.1nm,0.3s,SNR=22						
EQUE				S	Sn	04 39 12.8	-1.7
	comp=N,22nm,0.4s,SNR=5.0						
PAB	San Pablo	5.40	54	P	Pn	04 38 17.3	+1.9
	comp=N,2.7nm,0.2s,SNR=7.9						
PAB				S	Sn	04 39 13.9	-2.6
	comp=N,5.3nm,0.2s,SNR=7.9						
PAB	San Pablo	5.40	54	P		04 38 16.7	
PCAB	Cabril	5.42	16	P	Pn	04 38 17.3	+1.7
PCAB				S	Sn	04 39 13.9	-3.0
	comp=N,19nm,0.1s						
PCAB	Cabril	5.42	16	*e*Pn	Pn	04 38 17.3	+1.7
PCAB				*e*Sn	Sn	04 39 13.9	-3.0
PCAB				A	A	04 39 18.3	
	comp=N,39nm,0.1s						
ELOB	Lobios	5.56	15	P	Pn	04 38 19.1	+1.5
	comp=N,8.3nm,0.1s,SNR=42						
ELOB				S	Sn	04 39 17.6	-2.9
	comp=N,36nm,0.1s,SNR=10						
PGAV	Gavieira, Arco	5.61	13	P	Pn	04 38 20.0	+1.7
PGAV				S	Sn	04 39 19.7	-2.1
	comp=N,31nm,0.5s						
PGAV	Gavieira, Arco	5.61	13	*e*Pn	Pn	04 38 20.0	+1.7
PGAV				*e*Sn	Sn	04 39 19.7	-2.1
PGAV				A	A	04 39 39.7	
	comp=N,31nm,0.5s						
GORA	Gorafe	5.66	78	S	Sn	04 39 20.7	-2.2
	comp=N,22nm,0.4s,SNR=7.9						
EQES	Quesada	5.69	75	P	Pn	04 38 21.1	+1.7
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES				S	Sn	04 39 20.9	-2.8
	comp=N,25nm,0.3s,SNR=9.8						
ESDC	Sonseca Array	5.72	55	P	Pn	04 38 21.5	+1.7
	comp=N,2.0nm,0.2s,baz=238,slow=14,SNR=42						
ESDC				S	Sn	04 39 22.3	-2.0
	comp=N,10nm,0.4s,baz=238,slow=23,SNR=25						
EZAM	Zamans	5.72	10	P	Pn	04 38 21.6	+1.8
	comp=N,28nm,0.1s,SNR=7.9						
EZAM				S	Sn	04 39 21.6	-2.8
	comp=N,27nm,0.2s,SNR=7.9						
EBER	Berja	5.73	84	P	Pn	04 38 21.9	+1.8
	comp=N,1.1nm,0.1s,SNR=5.6						
EBER				S	Sn	04 39 22.6	-2.3
	comp=N,18nm,0.4s,SNR=5.3						
MDT	Midelt	5.78	128	P		04 38 21.5	
EMEL	Melilla	5.85	100	P	Pn	04 38 23.8	+2.3
	comp=N,20nm,0.1s,SNR=7.9						
EMEL				S	Sn	04 39 23.9	-3.6
	comp=N,48nm,0.2s,SNR=7.9						
PBRG	Braganca	5.86	25	P	Pn	04 38 22.9	+1.1
PBRG				S	Sn	04 39 26.0	-1.9
	comp=N,9.8nm,0.4s						
PBRG	Braganca	5.86	25	*e*Pn	Pn	04 38 22.9	+1.1
PBRG				*e*Sn	Sn	04 39 26.0	-1.9
PBRG				A	A	04 39 29.4	
	comp=N,20nm,0.4s						
ECAL	Calabor	5.99	24	P	Pn	04 38 25.2	+1.8
	comp=N,7.7nm,0.2s,SNR=10						
ECAL				S	Sn	04 39 28.6	-2.4
	comp=N,57nm,0.3s,SNR=5.1						
SESP	Santiago Espad	6.16	73	S	Sn	04 39 32.2	-3.2
	comp=N,11nm,0.2s,SNR=7.9						
GUD	Guadarrama	6.17	46	P	Pn	04 38 27.8	+1.8
	comp=N,3.8nm,0.2s,SNR=12						
GUD				S	Sn	04 39 32.4	-3.2
	comp=N,18nm,0.3s,SNR=10						
OUZM	OUZ	6.21	153	P		04 38 28.0	
PMPST	Porto Santo, M	6.23	239	*e*Pn	Pn	04 38 29.4	+2.6
PMPST				*e*Sn	Sn	04 39 31.1	-5.9
PMPST				A	A	04 39 47.0	
	comp=N,36nm,0.7s						
PMPS	Porto Santo	6.24	238	P	Pn	04 38 29.4	+2.5
PMPS				S	Sn	04 39 31.1	-6.1
	comp=N,18nm,0.7s						
PMPS	Porto Santo	6.24	238	*e*Pn	Pn	04 38 30.4	+3.5
PMPS				*e*Sn	Sn	04 39 30.9	-6.3
PMPS				A	A	04 39 41.1	
	comp=N,20nm,0.6s						
ENIJ	Nijar	6.28	83	P	Pn	04 38 28.7	+1.2
	comp=N,1.8nm,0.2s,SNR=7.9						
ENIJ				S	Sn	04 39 35.0	-3.2
	comp=N,19nm,0.4s,SNR=7.9						
EAGO	Agolada(Pontev	6.46	13	P	Pn	04 38 31.2	+1.4
	comp=N,30nm,0.2s,SNR=7.9						
EAGO				S	Sn	04 39 38.8	-3.7
	comp=N,19nm,0.3s,SNR=7.9						
EMAZ	Mazaricos	6.48	7	S	Sn	04 39 37.9	-5.1
	comp=N,58nm,0.2s,SNR=7.9						
UCM	Universidad Co	6.52	52	P	Pn	04 38 33.2	+2.4
UCM				S	Sn	04 39 41.1	-3.1
UCM	Universidad Co	6.52	52	*e*P	Pn	04 38 33.2	+2.4
UCM				*e*S	Sn	04 39 41.1	-3.1
TZRR	Tazzarine	6.80	146	P		04 38 36.1	
PMAR	Madeira	6.83	238	P	Pn	04 38 37.4	+2.2
PMAR				S	Sn	04 39 48.6	-3.5
	comp=N,9.4nm,0.4s						
PMAR	Madeira	6.83	238	*e*Pn	Pn	04 38 37.4	+2.2
PMAR				*e*Sn	Sn	04 39 48.6	-3.5
PMAR				A	A	04 39 56.1	
	comp=N,19nm,0.4s						
FUL	Funchal	6.86	238	S	Sn	04 39 49.0	-3.5
FUL	Funchal	6.86	238	*e*Sn	Sn	04 39 49.0	-3.5
ETOB	Tobarra	7.05	70	P	Pn	04 38 39.6	+1.5
	comp=N,3.5nm,0.2s,SNR=7.5						
ETOB				S	Sn	04 39 53.5	-3.7
	comp=N,4.4nm,0.3s						
EMUR	La Murta	7.12	77	P	Pn	04 38 41.0	+1.9
	comp=N,2.8nm,0.3s,SNR=5.1						
EMUR				S	Sn	04 39 54.8	-4.2
	comp=N,14nm,0.4s						
EPON	Pontenova	7.15	17	P	Pn	04 38 40.9	+1.5
	comp=N,4.0nm,0.2s,SNR=10.0						
EPON				S	Sn	04 39 55.6	-4.0
	comp=N,7.0nm,0.2s						
ZGR	Zagora	7.36	149	P		04 38 44.0	
ETOR	Torete	7.56	53	P	Pn	04 38 47.1	+2.0
	comp=N,23nm,0.2s,SNR=14						
ETOR				S	Sn	04 40 05.8	-4.0
	comp=N,31nm,0.3s,SNR=7.6						
EARI	Arriondas	7.72	27	P	Pn	04 38 50.0	+2.8
	comp=N,2.6nm,0.3s,SNR=7.9						
EARI				S	Sn	04 40 07.6	-5.9
	comp=N,1.6nm,0.2s,SNR=7.9						
EFAM	Famara	7.94	203	S	Sn	04 40 13.2	-5.8
	comp=N,12nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	8.41	60	P	Pn	04 38 59.9	+3.0
	comp=N,1.0nm,0.2s,SNR=7.9						
EMOS				S	Sn	04 40 27.0	-3.8
	comp=N,3.2nm,0.3s,SNR=7.9						
CFUE	Fuerteventura	8.51	204	P	Pn	04 38 58.9	+0.8
	comp=N,1.5nm,0.2s,SNR=4.0						
CFUE				S	Sn	04 40 27.6	-5.5
	comp=N,7.2nm,0.2s,SNR=7.9						
SJPF	Ste Jean	9.44	43	P	Pn	04 39 12.8	+2.1
SJPF	Ste Jean	9.44	43	*e*P	Pn	04 39 12.8	+2.1
SJPF				*e*Sn	Sn	04 40 42.4	-13
	comp=N,9.1nm,0.5s						
ETSF	Etsaut	9.67	46	P	Pn	04 39 15.9	+1.8
ETSF	Etsaut	9.67	46	*e*P	Pn	04 39 15.9	+1.8
ETSF				*e*Sn	Sn	04 40 48.9	-13
	comp=N,1.1nm,0.2s						
ATE	Arette	9.71	45	P	Pn	04 39 16.7	+2.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ATE				S	Sn	04 40 58.0	-4.5
	comp=N,2.7nm,0.4s,SNR=7.9						
ECHI	Chisagues Biel	9.98	49	P	Pn	04 39 20.9	+2.6
	comp=N,1.3nm,0.4s,SNR=7.9						
ECHI				S	Sn	04 41 03.9	-5.4
	comp=N,3.8nm,0.3s,SNR=7.9						
EPF	Esparros	10.28	48	P	Pn	04 39 24.6	+2.3
EPF	Esparros	10.28	48	*e*P	Pn	04 39 24.6	+2.3
EPF				*e*Sn	Sn	04 41 02.6	-14
	comp=N,3.7nm,0.3s						
CLLI	Llivia	11.00	54	P	Pn	04 39 34.3	+2.0
	comp=N,0.8nm,0.4s,SNR=7.9						
CLLI				S	Sn	04 41 28.6	-5.8
	comp=N,1.3nm,0.3s,SNR=7.9						
LFF	La Frestale	11.71	41	P	Pn	04 39 43.6	+1.8
LFF	La Frestale	11.71	41	*e*P	Pn	04 39 43.6	+1.8
QUIF	Quistinic	12.47	22	P	Pn	04 39 54.6	+2.5
QUIF	Quistinic	12.47	22	*e*P	Pn	04 39 54.6	+2.5
MFF	Saint Martin d	12.49	33	P	Pn	04 39 53.5	+1.1
MFF	Saint Martin d	12.49	33	*e*P	Pn	04 39 53.5	+1.1
LASF	Ste Croix	12.99	50	*e*Pn	Pn	04 39 55.8	-3.6

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*NEIC **30** 04:38:15.3±0.9, 32°.47N±0°.08×140°.1E±0°.1, h98^{km}±5^{km}, mb4.3/12, Error ellipse: s-maj=13.6km s-min=11.9km az=88.0*

*IDC **30** 04:38:15.2±0.8, 32°.49N×140°.07E, h94^{km}±5^{km}, mb3.6/18, mb1 3.8/20, mb1mx3.6/49, mbtmp3.9/20, Error ellipse: s-maj=19.4km s-min=14.8km az=93.0*

*JMA **30** 04:38:15.3±0.1, 32°.52N×140°.43E, h85^{km}±4^{km}, M3.7*

ISC 30 04:38:14.7±0.8**, 32°.43N**±0°.05×**140°.29E**±0°.06**, h92**^{km}±6^{km}**, n65,** σ1^{s}**10**/74**, mb3.9**/21**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.45	275	P	Pn	04 38 30.2	+1.0
JHCJ	Hachijojimakas	0.76	327	P	Pn	04 38 32.1	+0.1
JHCJ				*e*S	Sn	04 38 44.7	-0.2
JHJ2	Mitsune	0.79	330	P	Pn	04 38 32.4	+0.2
JHJ2				*e*S	Sn	04 38 45.5	+0.2
JHJ2	Mitsune	0.79	330		Pn	04 38 32.0	-0.2
JHJ	Hachijo jima 2	0.81	328	P	Pn	04 38 32.6	+0.1
	412nm,0.3s,baz=62,slow=21,SNR=168						
JHJ				S	Sn	04 38 45.4	-0.4
	760nm,0.3s,baz=75,slow=23,SNR=11						
JMKN	Mikurajimanish	1.57	338	P	Pn	04 38 41.5	+0.1
JMKN				*e*S	Sn	04 39 01.0	-0.7
JKO	Kozu shima	2.00	331	P	Pn	04 38 46.9	-0.1
BSO3	Boso 3	2.37	4	P	Pn	04 38 51.7	+0.1
JIM2	Oshima 3	2.39	343	P	Pn	04 38 52.4	+0.3
JIM2				S	Sn	04 39 20.1	-0.7
JIZS	Izushimoda	2.57	333	P	Pn	04 38 55.2	+0.7
TK02	Tokai 2	2.61	306	P	Pn	04 38 56.2	+1.4
TK04	Tokai 4	2.81	315	P	Pn	04 38 59.0	+1.5
JSG	Sagara	2.84	322	Pn	Pn	04 38 55.1	-3.1
JOD2	Odawara 2	3.00	341	P	Pn	04 39 00.9	+0.7
TTO2	TONANKAI O.B.S	3.03	296	P	Pn	04 39 01.5	+1.1
TTO1	TONANKAI O.B.S	3.17	293	P	Pn	04 39 03.3	+1.0
JYN	Shimob	3.39	335	P	Pn	04 39 07.1	+1.6
JIE	Ise	3.58	304	P	Pn	04 39 08.9	+0.9
JYT	Yasato	3.79	359	Pn	Pn	04 39 10.7	-0.2
INU	Inuyama	3.98	318		Pn	04 39 13.6	+0.1
JGF	Kuroka	3.99	323		Pn	04 39 14.1	+0.4
JAG	Ashikaga	4.05	350	P	Pn	04 39 14.2	-0.2
JTNC	Tanabenakahech	4.16	291	P	Pn	04 39 16.8	+0.9
JTNC				*e*S	Sn	04 40 02.7	-0.8
MJAR	Matsushiro Arr	4.45	338	P	Pn	04 39 19.6	-0.2
	0.3nm,0.3s,baz=166,slow=11,SNR=3.2						
MAJO	Matsushiro	4.45	338	Pn	Pn	04 39 20.1	+0.2
MAT	Matsushiro	4.45	338	P	Pn	04 39 21.3	+1.5
MAT				*e*S	Sn	04 40 09.7	-0.7
JWT	Wachi	4.96	306		Pn	04 39 26.3	-0.5
JMM	Marumori	5.44	4		Pn	04 39 31.6	-1.6
JMN	Monobe	5.53	285	Pn	Pn	04 39 33.1	-1.5
JCJ	Chichijima	5.56	162	P	Pn	04 39 34.1	-1.0
	6.1nm,0.3s,baz=288,slow=20,SNR=1.4						
JCJ				S	Sn	04 40 34.6	-3.1
	13nm,0.3s,baz=264,slow=22,SNR=1.7						
JSD	Sado	5.84	344	Pn	Pn	04 39 38.0	-0.7
KLR	Kul'dur	17.96	342	P	P	04 42 15.7	-1.9
	0.1nm,0.3s,baz=165,slow=12,SNR=1.8						
SOEI	Soe	44.65	203	P	P	04 46 16.3	-2.2
MK31	Makanchi Array	45.92	306	P	P	04 46 27.2	-0.9
MK31				IAmb	IAmb	04 46 50.7	
	comp=Z,7.8nm,1.9s						
MKAR	Makanchi Array	45.92	306	P	P	04 46 27.1	-1.0
	comp=Z,0.4nm,0.4s,baz=86,slow=9.8,SNR=8.0						
MKAR				ScP	ScP	04 51 46.4	-1.9
	comp=Z,0.2nm,0.6s,baz=92,slow=5.0,SNR=2.6						
KDAK	Kodiak Island	51.19	39	P	P	04 47 08.9	+0.6
	comp=Z,10nm,1.0s,baz=317,slow=2.3,SNR=17						

BPAW	Bear Paw Mtn.	52.10	31	P	P	04 47 16.1	+1.1
WR0	Warramunga Arr	52.38	187	P	P	04 47 17.9	+0.4
WRA	Warramunga Arr	52.38	187	P	P	04 47 17.3	-0.2
	comp=Z,0.4nm,0.3s,baz=1.7,slow=7.6,SNR=13						
ILAR	Eielson Array	53.90	30	P	P	04 47 28.4	+0.2
	comp=Z,0.5nm,0.7s,baz=268,slow=7.0,SNR=6.8						
ILAR				PcP	PcP	04 48 31.6	-0.9
	comp=Z,0.2nm,0.7s,baz=257,slow=3.7,SNR=4.3						
SANVU	Saraoutou	54.13	147	P	P	04 47 31.3	+0.9
AS31	Alice Springs	56.11	187	P	P	04 47 45.5	+0.9
ASAR	Alice Springs	56.11	187	P	P	04 47 44.5	0.0
	comp=Z,0.3nm,0.3s,baz=5.2,slow=6.7,SNR=5.3						
ABKAR	Akbulak array	60.26	312	P	P	04 48 12.4	-0.9
STKA	Stephens Creek	63.97	179	P	P	04 48 40.3	+2.2
	comp=Z,1.0nm,0.6s,baz=344,slow=15,SNR=1.5						
GEYT	Alibeck	65.31	300	P	P	04 48 48.7	+1.7
	comp=Z,1.3nm,0.4s,baz=66,slow=11,SNR=1.7						
YKA	Yellowknife Ar	68.26	29	P	P	04 49 05.5	+0.2
	comp=Z,0.4nm,0.7s,baz=301,slow=5.7,SNR=5.5						
FINES	FINESS Array B	72.46	333	P	P	04 49 30.2	-0.6
	comp=Z,2.0nm,0.8s,baz=54,slow=6.3,SNR=10						
KBZ	Khabaz	73.22	311	P	P	04 49 35.7	0.0
	comp=Z,2.0nm,0.9s,baz=335,slow=8.9,SNR=3.8						
PINE	Pine Mountain	74.06	48	P	P	04 49 41.8	+0.9
PINE				IAmb	IAmb	04 49 44.3	
	comp=Z,4.1nm,0.8s						
AKASG	Malin Array Be	77.37	323	P	P	04 49 58.8	-0.6
	comp=Z,0.8nm,0.5s,baz=174,slow=30,SNR=4.1						
HFS	Hagfors	77.89	336	P	P	04 50 01.4	-0.7
	comp=Z,3.7nm,1.0s,baz=88,slow=6.5,SNR=1.4						
HRY	Holter Researc	77.96	42	P	P	04 50 03.0	+0.1
NOA	NORSAR Array B	78.07	337	P	P	04 50 03.1	0.0
	comp=Z,0.5nm,0.7s,baz=42,slow=5.4,SNR=1.7						
NVAR	Mina Array Bea	78.52	52	P	P	04 50 08.1	+1.8
	comp=Z,0.5nm,0.6s,baz=288,slow=5.8,SNR=5.5						
NVAR	Mina Array Bea	78.52	52	P	P	04 50 06.6	+0.3
ELK	Elko	79.26	48	P	P	04 50 11.9	+1.6
	comp=Z,0.7nm,0.4s,baz=330,slow=6.7,SNR=3.6						
ELK	Elko	79.26	48	IAmb	IAmb	04 50 48.4	
	comp=Z,8.3nm,1.7s						
BRTR	Keskin Array B	81.21	312	P	P	04 50 19.8	-0.9
	comp=Z,0.4nm,0.4s,baz=120,slow=3.6,SNR=5.2						
PDAR	Pinedale Array	81.58	44	P	P	04 50 22.8	+0.1
	comp=Z,0.3nm,0.6s,baz=270,slow=3.0,SNR=4.4						
SRU	San Rafael Swe	83.16	48	P	P	04 50 31.3	+0.3
GERES	GERESS Array B	86.12	328	P	P	04 50 45.0	-0.5
	comp=Z,0.2nm,0.4s,baz=32,slow=5.8,SNR=2.2						
TXAR	Lajitas Array	93.68	52	P	P	04 51 22.6	+1.3
	comp=Z,0.7nm,0.5s,baz=310,slow=3.6,SNR=5.6						
TORD	Torodi Ar. Bea	119.82	312	PKP	PKiKP	04 56 57.1	+2.1
	comp=Z,0.6nm,0.9s,baz=42,slow=2.3,SNR=2.9						
TORD	Torodi Ar. Bea	119.82	312		PKiKP	04 56 55.9	+0.9

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*IDC **30** 04:46:51.2±3.5, 49°.16N×156°.13E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.5/68, mbtmp3.7/9, ML2.6/1, Error ellipse: s-maj=84.4km s-min=29.0km az=163.0*

*KRSC **30** 04:46:55.9±1.5, 49°.30N×156°.64E, h62^{km}±19^{km}, ML4.3*

*NEIC **30** 04:46:57.0±2.5, 49°.20N±0°.09×155°.9E±0°.2, h35^{km}±2^{km}, mb4.1/9, Error ellipse: s-maj=28.7km s-min=3.2km az=122.0*

*MOS **30** 04:46:56.6±0.8, 49°.27N×156°.43E, h61^{km}, mb4.2/3, Error ellipse: s-maj=19.6km s-min=4.2km az=80.4*

ISC 30 04:46:55.6±0.8**, 49°.13N**±0°.08×**156°.41E**±0°.08**, h35**^{km}**, n84,** σ**1**^{s}**.47**/98**, mb3.8**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.56	353	PN	Pn	04 47 20.9	0.0
SKR				S	Sn	04 47 39.2	-0.7
SKR	Severo-Kuril's	1.56	353	*e*P	Pn	04 47 20.9	0.0
SKR				*e*S	Sn	04 47 39.2	-0.7
PAU	Pauzhetka	2.35	6	PN	Pn	04 47 31.9	+0.2
PAU				S	Sn	04 47 58.6	-0.7
PAU	Pauzhetka	2.35	6	*e*P	Pn	04 47 31.9	+0.2
PAU				*e*S	Sn	04 47 58.6	-0.7
KDTR	Khodutka, Kamc	2.88	21	PN	Pn	04 47 38.2	-0.8
KDTR				S	Sn	04 48 08.8	-3.6
KDTR	Khodutka, Kamc	2.88	21	*e*P	Pn	04 47 38.2	-0.8
KDTR				*e*S	Sn	04 48 08.8	-3.6
MTVR	Mutnovka	3.54	18	PN	Pn	04 47 48.1	0.0
MTVR				S	Sn	04 48 26.5	-2.3
MTVR	Mutnovka	3.54	18	*e*P	Pn	04 47 48.1	0.0
MTVR				*e*S	Sn	04 48 26.5	-2.3
RUS	Russkaya	3.56	21	PN	Pn	04 47 48.2	-0.1
RUS				S	Sn	04 48 26.7	-2.5
RUS	Russkaya	3.56	21	*e*P	Pn	04 47 48.2	-0.1
RUS				*e*S	Sn	04 48 26.7	-2.5
GRL	Gorelyy	3.58	16	PN	Pn	04 47 49.1	+0.4
GRL				S	Sn	04 48 28.0	-1.8
GRL	Gorelyy	3.58	16	*e*P	Pn	04 47 49.1	+0.4
GRL				*e*S	Sn	04 48 28.0	-1.8
APC	Apacha	3.83	7	PN	Pn	04 47 53.1	+1.2
APC				S	Sn	04 48 35.6	0.0
APC	Apacha	3.83	7	*e*P	Pn	04 47 53.1	+1.2
APC				*e*S	Sn	04 48 35.6	0.0
KRMR	Karymshinskiy	3.86	16	PN	Pn	04 47 54.2	+1.8
KRMR	Karymshinskiy	3.86	16	*e*P	Pn	04 47 54.2	+1.8
PEA0B	Petropavlovsk-	4.06	11	PN	Pn	04 47 56.6	+1.4
PEA0B	Petropavlovsk-	4.06	11	Pn	Pn	04 47 56.6	+1.4
PETK	Petropavlovsk-	4.06	11	Pn	Pn	04 47 56.2	+1.0
	1.9nm,0.3s,baz=172,slow=14,SNR=23						
PETK				Sn	Sn	04 48 52.6	+11
	1.0nm,0.3s,baz=213,slow=16,SNR=1.6						
PETK	Petropavlovsk-	4.06	11		Pn	04 47 56.1	+0.9
PET	Petropavlovsk	4.14	19	PN	Pn	04 47 58.2	+1.9
PET				S	Sn	04 48 42.7	-0.8
PET	Petropavlovsk	4.14	19		Pn	04 47 56.6	+0.3
DALK	Dalny	4.17	20	PN	Pn	04 47 56.5	-0.2
DALK				S	Sn	04 48 42.9	-1.3
DALK	Dalny	4.17	20	*e*P	Pn	04 47 56.5	-0.2
DALK				*e*S	Sn	04 48 42.9	-1.3
UGLR	Uglovaya	4.35	19	PN	Pn	04 48 00.5	+1.2
UGLR	Uglovaya	4.35	19	*e*P	Pn	04 48 00.5	+1.2
AVH	Avacha	4.39	19	PN	Pn	04 48 00.8	+1.0
AVH				S	Sn	04 48 47.1	-2.5
AVH	Avacha	4.39	19	*e*P	Pn	04 48 00.8	+1.0
AVH				*e*S	Sn	04 48 47.1	-2.5
KOK	Koryaka	4.39	18	PN	Pn	04 48 01.3	+1.5
KOK	Koryaka	4.39	18	*e*P	Pn	04 48 01.3	+1.5
SMAR	Somma	4.40	19	PN	Pn	04 48 01.1	+1.0
SMAR	Somma	4.40	19	*e*P	Pn	04 48 01.1	+1.0
KRER	Koryakskii	4.43	18	PN	Pn	04 48 01.2	+0.8
KRER	Koryakskii	4.43	18	*e*P	Pn	04 48 01.2	+0.8
SDLR	Sedlovina	4.43	20	PN	Pn	04 48 00.5	+0.1
SDLR	Sedlovina	4.43	20	*e*P	Pn	04 48 00.5	+0.1
KRX	Arik	4.46	18	PN	Pn	04 48 01.7	+0.9
KRX	Arik	4.46	18	*e*P	Pn	04 48 01.7	+0.9
SPN	Mys Shipunski	4.58	28	PN	Pn	04 48 02.1	-0.1
SPN				S	Sn	04 48 51.1	-3.0
SPN	Mys Shipunski	4.58	28	*e*P	Pn	04 48 02.1	-0.1
SPN				*e*S	Sn	04 48 51.1	-3.0
GNL	Ganaly	4.67	11	PN	Pn	04 48 04.4	+0.8
GNL	Ganaly	4.67	11	*e*P	Pn	04 48 04.4	+0.8
KZV	Kizimen	6.45	20	PN	Pn	04 48 29.3	+1.2
KZV	Kizimen	6.45	20	*e*P	Pn	04 48 29.3	+1.2
TUMD	Tumrok D	6.55	20	*e*P	Pn	04 48 30.3	+0.9
TUMR	Tumrok	6.57	19	PN	Pn	04 48 30.7	+0.9
TUMR	Tumrok	6.57	19	*e*P	Pn	04 48 30.7	+0.9
SRDR	Sredinnyy	7.47	14	PN	Pn	04 48 44.7	+2.7
SRDR	Sredinnyy	7.47	14	*e*P	Pn	04 48 44.7	+2.7
SRKR	Sorokina	8.06	19	PN	Pn	04 48 51.7	+1.6
SRKR	Sorokina	8.06	19	P	Pn	04 48 51.7	+1.6
KBTR	Krutoberegovo	8.08	26	PN	Pn	04 48 50.8	+0.4
KBTR	Krutoberegovo	8.08	26	*e*P	Pn	04 48 50.8	+0.4
ASAJ	Asahikawa	10.74	247	Pn	Pn	04 49 32.0	+5.2
	1.3nm,0.3s,baz=144,slow=32,SNR=2.1						
JTM	Tenmabayashi	13.68	238	Pn	Pn	04 50 06.7	-0.3
JSG	Sagara	19.74	230	P	P	04 51 19.7	-2.5
KSAR	Wonju Array Be	23.68	251	P	P	04 52 02.8	-1.1
KSAR	Wonju Array Be	23.68	251	P	P	04 52 02.8	-1.1
TIXI	Tiksi	25.88	340	P	P	04 52 22.3	-1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TIXI	Tiksi	25.88	340	P	P	04 52 22.2	-1.4
TIXI				IAmb	IAmb	04 52 23.3	
	comp=Z,2.3nm,0.5s						
JSU	Suzuyama	26.29	238	P	P	04 52 25.2	-2.6
H11N2	WAKE ISLAND Hy	30.52	160	T	T	05 25 57.8	
	baz=349						
H11N1	WAKE ISLAND Hy	30.54	160	T	T	05 26 02.3	
	baz=349						
H11N3	WAKE ISLAND Hy	30.54	160	T	T	05 26 07.9	
	baz=349						
H11S1	WAKE ISLAND Hy	31.66	161	T	T	05 27 26.9	
	baz=347,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	31.67	161	T	T	05 27 26.8	
	baz=347,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	31.68	161	T	T	05 27 31.3	
	baz=347,slow=76,SNR=9.9						
ILAR	Eielson Array	33.30	41	P	P	04 53 29.6	+0.2
	comp=Z,0.3nm,0.7s,baz=239,slow=6.2,SNR=1.6						
ZALV	Zalesovo Beam	43.05	305	P	P	04 54 51.0	-0.5
	comp=Z,0.5nm,0.3s,baz=59,slow=8.6,SNR=2.5						
ZALV	Zalesovo Beam	43.05	305	P	P	04 54 50.3	-1.2
YKA	Yellowknife Ar	47.68	39	P	P	04 55 30.7	+2.6
	comp=Z,0.1nm,0.3s,baz=55,slow=31,SNR=5.2						
MK31	Makanchi Array	47.83	297	P	P	04 55 28.6	-1.0
MK31				pmax	pmax		
	comp=Z,2.0nm,1.5s						
MK31	Makanchi Array	47.83	297	P	P	04 55 28.6	-1.0
MKAR	Makanchi Array	47.83	297	P	P	04 55 29.1	-0.4
	comp=Z,0.3nm,0.4s,baz=57,slow=6.8,SNR=5.3						
ARCES	ARCESS Array B	56.31	341	P	P	04 56 31.1	-1.2
	comp=Z,4.5nm,1.0s,baz=17,slow=16,SNR=1.6						
KK31	Karatay Array	56.78	299	P	P	04 56 35.7	-0.3
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	56.78	299	P	P	04 56 35.7	-0.3
ABKAR	Akbulak array	58.59	310	P	P	04 56 48.2	-0.4
ABKAR				IAmb	IAmb	04 56 50.2	
	comp=Z,2.7nm,1.4s						
NIL	Nilore	61.24	289	P	P	04 57 07.1	0.0
NIL	Nilore	61.24	289	P	P	04 57 07.1	0.0
HFS	Hagfors	66.97	341	P	P	04 57 44.3	+0.2
	comp=Z,2.0nm,0.8s,baz=62,slow=3.4,SNR=1.3						
KSCO	Kaye Shedlock'	67.95	56	P	P	04 57 55.3	+4.4
EKA	Eskdalemuir Ar	74.50	348	P	P	04 58 30.6	+0.6
	comp=Z,0.3nm,0.3s,baz=21,slow=5.2,SNR=6.9						
BRTR	Keskin Array B	78.12	318	P	P	04 58 52.1	+1.1
	comp=Z,0.3nm,0.5s,baz=37,slow=5.9,SNR=2.5						

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*DNK **30** 04:54:38.5±2.9, 51°.53N×15°.51E, h0^{km}±276^{km}, ML2.1*

*PRU **30** 04:54:38.7±0.0, 51°.46N×16°.14E, h0^{km}*

*IDC **30** 04:54:38.5±0.7, 51°.50N×15°.89E, h0^{km}, mb3.2/1, mb1 3.5/10, mb1mx3.2/48, mbtmp3.3/10, ML2.9/8, Error ellipse: s-maj=12.4km s-min=6.0km az=101.0*

*VIE **30** 04:54:39.8, 51°.39N×15°.78E, h0^{km}, ML2.5/2 82 km NE of Liberec Suspected Mining induced.*

ISC 30 04:54:36.3±0.6**, 51°.54N**±0°.03×**16°.14E**±0°.02**, h0**^{km}**, n43,** σ**1**^{s}**.43**/88**, 2C-16D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	172	*i* Pg	Pg	04 54 50.6	+0.8
KSP				*i* Sg	Sg	04 54 59.1	+0.1
CHVC	Chvalec	0.96	183	⇓*i*PG	Pb	04 54 55.4	-0.4
CHVC				*e*SG	Sg	04 55 07.2	+0.2
	comp=Z,65nm,0.3s						
OSTC	Ostas	0.99	177	⇓*e*PG	Pb	04 54 56.1	-0.2
OSTC				*e*SG	Sg	04 55 07.7	-0.3
	comp=Z,109nm,1.1s						
UPC	Upice	1.04	185	⇓*e*PG	Pg	04 54 56.5	+0.3
UPC				*e*SG	Sg	04 55 09.5	-0.2
DPC	Dobruska-Polom	1.20	174	⇓*i*PG	Pg	04 54 59.4	+0.2
DPC				*e*SG	Sg	04 55 13.9	-0.9
	comp=Z,48nm,0.5s						
PVCC	Panska Ves	1.42	225	⇓*e*PG	Pb	04 55 03.8	+0.2
PVCC				*e*SG	Sg	04 55 21.9	0.0
	comp=Z,154nm,0.3s						
KRLC	Kraliky	1.53	164	⇓*e*PG	Pg	04 55 05.7	+0.2
KRLC				*e*SG	Sg	04 55 24.0	-1.2
	comp=Z,66nm,0.5s						
BRG	Berggiesshubel	1.54	245	Pn	Pn	04 55 05.1	+0.2
BRG				Pg	Pg	04 55 06.6	+0.9
BRG				Sg	Sg	04 55 26.5	+0.9
BRG				Amp		04 55 27.4	
	comp=Z,59nm,0.5s						
PRU	Pruhonice	1.86	214	⇓*e*PN	Pn	04 55 09.4	+0.1
PRU				*e*PG	Pb	04 55 11.0	-0.1
PRU				*e*SG	Sb	04 55 35.4	+0.5
	comp=Z,46nm,0.4s						
CLL	Collm	1.98	264	*e*Pn	Pn	04 55 11.0	0.0
CLL				*e*Pg	Pg	04 55 14.0	-0.2
CLL				*i*		04 55 18.1	
CLL				*i*		04 55 29.2	
CLL				*e*Sg	Sg	04 55 41.0	+1.2
	comp=Z,18nm,0.7s						
MORC	Moravsky Berou	1.98	153	⇑P	Pn	04 55 11.6	+0.5
MORC				⇑S	Sn	04 55 36.9	+0.3
MORC	Moravsky Berou	1.98	153	*e*PN	Pn	04 55 11.1	0.0
MORC				*e*SG	Sb	04 55 38.5	+0.1
OKC	Ostrava-Krasne	2.13	142	⇓*e*SG	Sb	04 55 42.7	0.0
VRAC	Vranov	2.26	172	Pn	Pn	04 55 16.1	+1.3
	comp=Z,1.7nm,0.3s,baz=342,slow=11,SNR=16						
VRAC				Sn	Sn	04 55 44.8	+1.5
	comp=Z,4.7nm,0.3s,baz=284,slow=23,SNR=12						
VRAC				Lg	Lg	04 55 48.9	
	comp=Z,5.9nm,0.3s,baz=66,slow=20,SNR=7.1						
VRAC	Vranov	2.26	172	⇓P	Pb	04 55 16.8	-1.1
VRAC				⇓S	Sn	04 55 44.6	+1.2
VRAC	Vranov	2.26	172	*e*PN	Pn	04 55 15.6	+0.8
VRAC				*e*SG	Sb	04 55 46.6	+0.3
TREC	Trest	2.29	191	⇓*e*SG	Sb	04 55 48.5	+1.2
PBCC	Pribram	2.31	217	⇓*e*PN	Pn	04 55 15.6	+0.1
PBCC				*e*PG	Pb	04 55 19.6	+0.9
KRUC	Moravsky	2.49	176	*e*PN	Pn	04 55 19.1	+1.1
KRUC				*e*SG	Sb	04 55 54.4	+1.4
OJC	Ojcow	2.67	118	*e*Pg	Pg	04 55 29.4	+2.0
OJC				*e*Sg	Sg	04 56 04.2	+2.2
NKC	Novy Kostel	2.68	242	⇓*e*PN	Pn	04 55 21.8	+1.1
NKC				*e*PG	Pg	04 55 28.1	+0.5
NKC				*e*SG	Sg	04 56 04.0	+1.6
	comp=Z,43nm,0.4s						
KHC	Kasperske Hory	2.92	215	⇓*e*PN	Pn	04 55 24.6	+0.6
KHC				*e*PG	Pg	04 55 30.8	-1.4
KHC				*e*SN	Sn	04 55 58.5	-1.3
KHC				*e*SG	Sg	04 56 09.1	-0.9
	comp=Z,18nm,0.5s						
GERES	GERESS Array B	3.12	211	Pn	Pn	04 55 27.7	+0.9
	comp=Z,0.9nm,0.3s,baz=28,slow=13,SNR=23						
GERES				Pg	Pb	04 55 33.9	+1.2
	comp=Z,3.3nm,0.3s,baz=31,slow=17,SNR=31						
GERES				Sn	Sn	04 56 03.0	-1.8
	comp=Z,2.1nm,0.3s,baz=26,slow=24,SNR=4.7						
GERES				Lg	Lg	04 56 13.1	
	comp=Z,3.0nm,0.3s,baz=17,slow=28,SNR=4.4						
LANS	Liptovska Anna	3.21	137	*e*PN	Pn	04 55 29.1	+1.2
LANS				*e*PG	Pg	04 55 38.3	+0.6
LANS				*e*SG	Sg	04 56 18.7	-0.5
LANS				*e*LG	Lg	04 56 26.2	
MODS	Modra-Piesok	3.26	167	*e*PN	Pn	04 55 29.9	+1.3
MODS				*e*PG	Pg	04 55 37.7	-1.0
MODS				*e*SG	Sb	04 56 17.9	+2.8
VYHS	Vyhne	3.51	149	*e*PN	Pn	04 55 31.4	-0.7
VYHS				*e*PG	Pg	04 55 43.1	-0.5
VYHS				*e*SG	Sg	04 56 28.1	-1.0
CONA	Conrad Observa	3.62	183	*e*Pn	Pn	04 55 35.2	+1.5
	comp=Z,1.7nm,0.3s						
CONA				*e*Pg	Pg	04 55 44.5	-1.2
	comp=Z,4.3nm,0.3s						
CONA				*e*Sn	Sn	04 56 13.9	-3.3
	comp=Z,1.9nm,0.2s						
CONA				*e*Sg	Sg	04 56 31.1	-1.5
	comp=Z,19nm,0.5s						
BSD	Bornholm Skovb	3.65	349	*e*	Pn	04 55 34.0	+0.1
	baz=184,slow=14						
BSD				*i* P	Pn	04 55 35.1	+1.2
BSD				IAML		04 56 11.8	
	comp=Z,2.0nm,0.4s						
BSD				*i* S	Sn	04 56 17.3	-0.4
MOA	Molln	3.89	199	*i* Pn	Pn	04 55 38.4	+1.1
	comp=Z,0.8nm,0.1s						
MOA				*e*Pg	Pg	04 55 49.6	-1.3
	comp=Z,3.1nm,0.2s						
MOA				*e*Sg	Sg	04 56 40.5	-0.8
	comp=Z,8.7nm,0.3s						
ARSA	Arzberg	4.32	186	*i* Pn	Pn	04 55 47.0	+3.8
	comp=Z,1.1nm,0.2s						
ARSA				*e*Sg	Sb	04 56 49.5	+3.9
	comp=Z,5.3nm,0.4s						
KBA	Koelnbreinsper	4.83	203	Pn	Pn	04 55 51.7	+1.4
	comp=Z,1.4nm,0.3s						
KBA				*e*Sg	Sg	04 57 10.3	-1.0
	comp=Z,7.3nm,0.5s						
ABTA	Abfaltersbach	5.36	208	*e*Sg	Sg	04 57 28.6	+0.4
	comp=Z,6.2nm,0.6s						
DAVOX	Davos/Dischmat	6.29	223	Pn	Pn	04 56 11.8	+1.4
	comp=Z,0.3nm,0.3s,baz=16,slow=18,SNR=1.5						
DAVOX				Lg	Lg	04 57 52.3	
	comp=Z,0.3nm,0.3s,baz=16,slow=14,SNR=2.1						
DRGR		6.42	135	⇓P	Pn	04 56 12.1	+0.1
BURAR	Bucovina Array	7.09	120	⇓P	Pn	04 56 22.3	+1.0
AKASG	Malin Array Be	8.28	91	Pn	Pn	04 56 38.0	+0.6
	comp=Z,0.5nm,0.3s,baz=279,slow=12,SNR=2.0						
HFS	Hagfors	8.72	352	Pn	Pn	04 56 44.3	+0.8
	baz=177,slow=13,SNR=1.3						
HFS				Sn	Sn	04 58 17.5	-4.9
	comp=Z,0.2nm,0.3s,baz=181,slow=27,SNR=1.8						
NOA	NORSAR Array B	9.90	346	Pn	Pn	04 56 57.8	-1.9
	comp=Z,0.0nm,0.3s,baz=168,slow=12,SNR=1.8						
FINES	FINESS Array B	11.32	25	Pn	Pn	04 57 18.9	-0.1
	comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=4.6						
FINES				Sn	Sn	04 59 21.9	-4.3
	comp=Z,0.1nm,0.3s,baz=218,slow=32,SNR=1.8						
FINES	FINESS Array B	11.32	25	P	Pn	04 57 19.0	-0.1
EKA	Eskdalemuir Ar	12.11	296	Pn	Pn	04 57 30.8	+1.0
	baz=97,slow=13,SNR=1.7						
ARCES	ARCESS Array B	18.59	10	Pn	P	04 58 52.6	-1.9
	baz=185,slow=12,SNR=5.9						
YKA	Yellowknife Ar	59.83	336	P	P	05 04 45.4	+2.6
	comp=Z,0.2nm,0.6s,baz=37,slow=7.0,SNR=3.3						

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*THE **30** 05:02:24.4, 35°.49N×25°.91E, h15^{km}±2^{km}, ML2.7/6, Error ellipse: s-maj=2.2km s-min=0.6km az=179.0*

*ATH **30** 05:02:24.3, 35°.51N×25°.91E, h15^{km}±3^{km}, ML2.6/6, Error ellipse: s-maj=3.8km s-min=0.8km az=197.0*

ISC 30 05:02:23.9±1.0**, 35°.51N**±0°.03×**25°.91E**±0°.02**, h15**^{km}±9^{km}**, n40,** σ**0**^{s}**.77**/58**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STIA	Sitia Lasithi	0.35	154	P	Pg	05 02 30.8	-0.1
STIA				S	Sg	05 02 35.8	0.0
NPS	Neapolis	0.35	224	P	Pg	05 02 31.2	+0.2
NPS				S	Sg	05 02 36.4	+0.6
NPS				AML	AML	05 02 36.7	
	comp=N,3608μm,0.2s						
NPS				AML	AML	05 02 36.8	
	comp=E,6844μm,0.2s						
NPS	Neapolis	0.35	224	P	Pg	05 02 31.5	+0.5
NPS				S	Sg	05 02 36.3	+0.4
	comp=E,3μm,0.2s						
ZKR	Zakros	0.47	147	P	Pb	05 02 33.9	0.0
ZKR				S	Sb	05 02 40.2	-0.5
ZKR				AML	AML	05 02 40.9	
	comp=E,2244μm,0.4s						
ZKR				AML	AML	05 02 41.2	
	comp=N,557μm,0.3s						
ZKR	Zakros	0.47	147	P	Pb	05 02 33.9	0.0
ZKR				S	Sb	05 02 40.4	-0.3
	comp=N,720nm,0.4s						
LAST	Lasithi	0.50	225	P	Pg	05 02 33.9	+0.2
LAST				S	Sg	05 02 40.8	+0.4
LAST				AML	AML	05 02 41.7	
	comp=N,663μm,0.1s						
LAST				AML	AML	05 02 42.7	
	comp=E,586μm,0.1s						
LAST	Lasithi	0.50	225	P	Pg	05 02 33.9	+0.2
LAST				S	Sg	05 02 40.5	+0.1
HRKL	Herakleio	0.69	253	P	Pg	05 02 37.6	+0.3
HRKL				S	Sb	05 02 47.3	+0.4
	comp=E,665nm,0.3s						
IACM	Heraklion	0.71	253	P	Pg	05 02 38.2	+0.4
IACM				S	Sb	05 02 48.2	+0.6
IACM	Heraklion	0.71	253	P	Pg	05 02 38.2	+0.4
IACM				S	Sb	05 02 48.2	+0.6
	comp=E,2μm,0.5s						
KSTL	Kastelli Herak	0.71	253	P	Pg	05 02 35.7	-2.1
KSTL				S	Sg	05 02 42.8	-4.4
ANAF	Anafi Island	0.85	353	P	Pb	05 02 39.7	-0.6
ANAF				S	Sb	05 02 51.9	+0.3
ANAF				AML	AML	05 02 53.7	
	comp=E,3629μm,0.2s						
ANAF				AML	AML	05 02 54.0	
	comp=N,4833μm,0.3s						
ANAF	Anafi Island	0.85	353	P	Pb	05 02 39.7	-0.6
ANAF				S	Sb	05 02 52.4	+0.9
IDI	Anoyia	0.86	255	P	Pb	05 02 40.0	-0.6
IDI				AML	AML	05 02 52.9	
	comp=N,841μm,0.2s						
IDI				AML	AML	05 02 54.1	
	comp=E,680μm,0.3s						
IDI	Anoyia	0.86	255	P	Pb	05 02 40.4	-0.2
IDI				S	Sb	05 02 52.0	0.0
	comp=E,385nm,0.2s						
SANT	Santorini	0.93	337	P	Pb	05 02 41.6	-0.2
SANT				AML	AML	05 02 56.0	
	comp=E,895μm,0.3s						
SANT				AML	AML	05 02 57.2	
	comp=N,310μm,0.1s						
SANT	Santorini	0.93	337	P	Pb	05 02 41.8	+0.1
THR6	Thira Island,	0.94	334	P	Pb	05 02 42.1	+0.3
THR6	Thira Island,	0.94	334	P	Pb	05 02 42.2	+0.3
THR8	Santorini-Mono	0.96	339	P	Pb	05 02 41.7	-0.5
THR8	Santorini-Mono	0.96	339	P	Pb	05 02 42.0	-0.1
SNT1	Gialos, Santor	0.98	337	P	Pb	05 02 42.3	-0.3
SNT1	Gialos, Santor	0.98	337	P	Pb	05 02 42.5	-0.1
SNT1				S	Sb	05 02 56.0	+0.7
SNT5	Nea Kammeni, S	0.98	335	P	Pb	05 02 42.6	+0.1
SNT5	Nea Kammeni, S	0.98	335	P	Pb	05 02 42.7	+0.1
THR3	Thira Island,	0.98	335	P	Pb	05 02 42.6	-0.1
THR3	Thira Island,	0.98	335	P	Pb	05 02 42.5	-0.1
THR7	Fira-Santorini	0.99	337	P	Pb	05 02 42.7	0.0
THR7	Fira-Santorini	0.99	337	P	Pb	05 02 42.8	+0.1
THR5	Thira Island,	1.01	333	P	Pb	05 02 43.8	+0.7
KARP	Karpathos	1.02	88	P	Pb	05 02 42.8	-0.5
KARP				S	Sb	05 02 56.7	+0.1
KARP	Karpathos	1.02	88	P	Pb	05 02 42.8	-0.5
KARP				S	Sb	05 02 56.5	-0.1
SAP3	Santorini-Thir	1.03	334	P	Pb	05 02 43.7	+0.3
SAP3	Santorini-Thir	1.03	334	P	Pb	05 02 43.7	+0.3
SIVA	Sivas	1.03	241	P	Pb	05 02 43.6	+0.3
SIVA	Sivas	1.03	241	P	Pb	05 02 43.3	0.0
SIVA				S	Sb	05 02 57.1	+0.5
	comp=N,285nm,0.3s						
VAM	Vamos	1.40	266	P	Pn	05 02 48.9	+0.1
VAM	Vamos	1.40	266	P	Pn	05 02 48.9	+0.1
IMMV	Iera Moni Meta	1.57	269	P	Pn	05 02 51.5	+0.2
ARG	Arkhangelos	1.93	68	P	Pn	05 02 57.0	+0.8

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*NNC **30** 05:12:47.7±2.1, 54°.48N×87°.12E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=37.1km s-min=16.1km az=154.0, Suspected Mining explosion.*

IDC 30 05:12:52.8±2.9**, 54°.38N**×**86°.73E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.8**/56**, mbtmp3.0**/2**, ML2.5**/2**, 5C-1D, Error ellipse: s-maj=23.1km s-min=15.1km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.21	250	*i*		05 19 40.0	
	baz=68,slow=338,SNR=5.0						
ZAA0	Zalesovo Array	1.21	250	⇑P	Pg	05 13 14.4	-1.5
	0.5nm,0.5s						
ZAA0				⇓S	Sn	05 13 34.6	+0.7
	9.5nm,1.1s						
ZALV	Zalesovo Beam	1.21	250	Pg	Pg	05 13 14.2	-1.7
	1.0nm,0.3s,baz=68,slow=17,SNR=14						
ZALV				Lg	Lg	05 13 32.5	
	1.9nm,0.3s,baz=69,slow=26,SNR=21						
KURBB	Kurchatov Arra	6.26	236	Pn	Pn	05 14 27.1	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=18						
KURBB				Sn	Sn	05 15 38.4	-0.1
	0.1nm,0.3s,baz=49,slow=21,SNR=2.7						
KURBB				Lg	Lg	05 16 12.7	
	0.1nm,0.3s,baz=40,slow=45,SNR=4.5						
KURBB	Kurchatov Arra	6.26	236	⇑Pn	Pn	05 14 25.5	-0.8
	3.1nm,0.7s						
KURBB				⇑Sn	Sn	05 15 40.2	+1.6
	4.7nm,0.6s						
KURBB				⇑Lg	Lg	05 16 14.1	
	13nm,1.1s						
MK31	Makanchi Array	8.10	202	⇑Lg	Lg	05 17 11.6	
	3.0nm,0.8s,baz=27,slow=33,SNR=6.0						
MKAR	Makanchi Array	8.10	202	Pn	Pn	05 14 52.9	+1.3
	0.1nm,0.3s,baz=33,slow=12,SNR=4.4						

MKAR				Sn	Sn	05 16 22.9	-1.0
	0.1nm,0.3s,baz=34,slow=26,SNR=5.3						
MKAR				Lg	Lg	05 17 08.6	
	0.0nm,0.3s,baz=30,slow=23,SNR=6.5						
TLY	**Talaya**	**10.54**	**98**	Lg	Lg	05 18 33.7	
	baz=78,slow=19,SNR=1.2						

ASRS 30 05:15:15.2±0.4, 56°N±2°×9°5E±°, h0km, MLh3.3/8, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORY	**Orie**	**0.63**	**190**	Pg	Pn	05 15 32.0	+0.7
KTRR	**Kuturchin**	**0.92**	**223**	Pg	Pn	05 15 36.8	+1.5
GZLN	**Zheleznogorsk**	**1.15**	**312**	Sg	Sn	05 15 54.2	-0.8
ABNR	**Abakan**	**2.94**	**231**	Pg	Pg	05 16 12.6	+1.2
ABNR				Sg	Sg	05 16 52.8	+3.2
BLRR	**Bol'shaya Rech**	**3.08**	**214**	Pg	Pg	05 16 14.7	+0.5
BLRR				Sg	Sg	05 16 56.9	+2.8
SHRR	**Shira**	**3.17**	**251**	Pg	Pg	05 16 15.2	-0.5
SHRR				Sg	Sg	05 16 57.8	+1.0
ARDR	**Aradan**	**3.24**	**201**	Pg	Pg	05 16 18.1	+0.9
ARDR				Sg	Sg	05 17 01.5	+2.4
TDJR	**Todzha**	**3.26**	**171**	Pg	Pg	05 16 16.9	-0.6
TDJR				Sg	Sg	05 17 01.8	+2.1
CERR	**Cheremushki**	**3.59**	**221**	Pg	Pg	05 16 23.2	-0.6
CERR				Sg	Sg	05 17 13.2	+2.8
DJOS	**Djoyskaya Sosn**	**3.64**	**221**	Pg	Pg	05 16 24.8	-0.1
DJOS				Sg	Sg	05 17 15.0	+2.9
DJO	**Djoy, Khakassi**	**3.72**	**222**	Pg	Pg	05 16 26.0	-0.3
DJO				Sg	Sg	05 17 16.3	+1.8
TBTR	**Tabat**	**3.80**	**227**	Pg	Pg	05 16 27.1	-0.9
TBTR				Sg	Sg	05 17 22.4	+5.1
BRCR	**Berchikul'**	**3.96**	**273**	Pg	Pg	05 16 29.0	-2.0
BRCR				Sg	Sg	05 17 24.2	+2.0
LUZB	**Luzhba, Kemero**	**4.21**	**245**	Pg	Pg	05 16 35.0	-0.7
LUZB				Sg	Sg	05 17 33.9	+3.8
KNGR	**Kungurtug, Tuv**	**5.20**	**164**	Pg	Pg	05 16 53.8	-0.9
KNGR				Sg	Sg	05 18 05.0	+3.1
MOY	**Mondy**	**5.21**	**137**	Pg	Pg	05 16 53.5	-1.4
MOY				Sg	Sg	05 18 03.9	+1.6
TASR	**Tashtagol**	**5.21**	**240**	Sg	Sg	05 18 09.6	+7.0
ELT	**Eltsovka**	**5.79**	**250**	Pg	Pg	05 17 07.7	+1.7
ELT				Sg	Sg	05 18 22.9	+1.9
ARTR	**Artybash**	**6.11**	**235**	Sg	Sg	05 18 33.5	+2.2
ULGR	**Ulagan, Altay**	**6.67**	**224**	Sg	Sg	05 18 51.9	+2.6

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*ANF **30** 05:26:25.2±0.7, 41°.88N×119°.62W, h0km, ML2.9/9, Error ellipse: s-maj=5.5km s-min=2.9km az=79.0*

*SEA **30** 05:26:26.9±2.2, 41°.86N±0°.03×119°.62W±0°.02, h0km±6km, Error ellipse: s-maj=4.0km s-min=2.6km az=174.0*

*REN **30** 05:26:26.3±1.6, 41°.91N±0°.03×119°.63W±0°.03, h10km±5km, ML2.8/6, ML3.1/16(SEA), ML2.5/24(NEIC), Error ellipse: s-maj=4.3km s-min=2.8km az=168.0*

*NEIC **30** 05:26:27.1±2.9, 41°.97N±0°.03×119°.63W±0°.03, h10km±6km, Error ellipse: s-maj=4.6km s-min=2.8km az=168.0*

ISC 30 05:26:26.8±1.2, 41°.96N±0°.03×119°.64W±0°.03, h7km±11km, n35, $\sigma 0^{s}.99$/46, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.50**	**264**		**Pg**	**05 26 36.4**	**-0.1**
MOD					**Sg**	**05 26 43.8**	**+0.8**
MOD	**Modoc Plateau**	**0.50**	**264**	IAML		05 26 44.0	
	comp=E,1μm,0.5s						
MOD				IAML		05 26 44.3	
	comp=N,641nm,0.2s						
LKVW	**Lakeview**	**0.60**	**297**		**Pg**	**05 26 38.6**	**+0.2**
LKVW					**Sb**	**05 26 47.6**	**-0.8**
WVOR	**Wild Horse Val**	**0.88**	**57**		**Pg**	**05 26 43.6**	**-0.2**
WVOR					**Sb**	**05 26 56.0**	**-0.7**
WVOR				IAML		05 26 59.6	
	comp=N,159nm,0.6s						
WVOR				IAML		05 26 59.8	
	comp=N,204nm,0.7s						
K05A	**Summer Lake**	**1.20**	**310**		**Pn**	**05 26 50.3**	**0.0**
K05A					**Sn**	**05 27 07.2**	**+0.2**
LASM	**Arnica Sink**	**1.49**	**257**		**Pn**	**05 26 53.3**	**-1.0**
LASM					**Sn**	**05 27 14.3**	**+0.1**
M04C	**Macdoel**	**1.65**	**265**	P	**Pn**	**05 26 55.4**	**-0.9**
	baz=85,SNR=63						
M04C				Sb	**Sg**	**05 27 20.0**	**+0.1**
	baz=85						
M04C	**Macdoel**	**1.65**	**265**		**Pn**	**05 26 55.5**	**-0.9**
K04D	**Chiloquin, OR**	**1.70**	**294**	Pb	**Pb**	**05 26 58.3**	**-0.3**
	baz=114,SNR=7.5						
K04D				Sb	**Sg**	**05 27 22.6**	**+1.1**
	baz=114						
LBCM	**Butte Creek Ri**	**1.71**	**229**		**Pn**	**05 26 56.0**	**-1.1**
J05D	**Fort Rock, OR**	**1.77**	**319**	Pb	**Pb**	**05 26 59.8**	**+0.1**
	baz=139						
J05D				Sb	**Sg**	**05 27 25.2**	**+1.5**
	baz=139						
J05D	**Fort Rock, OR**	**1.77**	**319**		**Pb**	**05 26 59.9**	**+0.1**
L04D	**Klamath Falls**	**2.00**	**278**	P	**Pn**	**05 27 00.1**	**-1.1**
	baz=98,SNR=26						
L04D				Sb	**Sg**	**05 27 30.4**	**-0.7**
	baz=98						
L04D	**Klamath Falls**	**2.00**	**278**		**Pn**	**05 27 00.4**	**-0.8**
WVA	**Winnemucca Val**	**2.02**	**184**		**Pn**	**05 27 02.7**	**+1.3**
PINE	**Pine Mountain**	**2.07**	**333**		**Pb**	**05 27 04.1**	**-0.7**
PINE				IAML		05 27 38.5	
	comp=E,46nm,0.6s						
PINE				IAML		05 27 39.8	
	comp=N,32nm,0.6s						
I07A	**Izee**	**2.12**	**3**		**Pb**	**05 27 05.0**	**-0.8**
I07A				IAML		05 27 36.4	
	comp=N,22nm,0.5s						
BEKR	**Beckworth**	**2.16**	**195**		**Pn**	**05 27 04.2**	**+0.8**
BEKR				IAML		05 27 34.4	
	comp=N,31nm,0.3s						
BEKR				IAML		05 27 35.5	
	comp=E,30nm,0.6s						
J04D	**Umpqua Nationa**	**2.23**	**306**	Sb	**Sg**	**05 27 38.6**	**+0.2**
	baz=125						
PAHR	**Pah Rah Range**	**2.26**	**175**		**Pn**	**05 27 05.8**	**+1.0**
PAHR				IAML		05 27 38.7	
	comp=N,24nm,0.4s						
YBH	**Yreka Blue Hor**	**2.30**	**265**		**Pn**	**05 27 04.3**	**-1.0**
O03E	**Paynes Creek**	**2.33**	**225**	P	**Pn**	**05 27 04.7**	**-1.0**
	baz=45,SNR=14						
O03E				Sb	**Sb**	**05 27 38.3**	**0.0**
	baz=45						
LOY	**Loyalton**	**2.34**	**191**		**Pb**	**05 27 08.6**	**-0.9**
PEAR	**Peavine Mounta**	**2.36**	**186**		**Pb**	**05 27 08.8**	**-1.1**
M02C	**Callahan**	**2.47**	**258**	Sb	**Sb**	**05 27 44.0**	**+1.7**
	baz=77						
KBF	**Kyburz Flat**	**2.49**	**190**		**Pb**	**05 27 11.5**	**-0.5**
VPK	**Verdi Peak**	**2.50**	**187**		**Pb**	**05 27 12.2**	**0.0**
N02D	**Trinity Center**	**2.50**	**248**	Pb	**Pb**	**05 27 10.6**	**-1.6**
	baz=67,SNR=11						
N02D				Sb	**Sb**	**05 27 45.2**	**+2.0**
	baz=67						
HUMO	**Hull Mountain**	**2.54**	**286**		**Pn**	**05 27 07.8**	**-0.8**
HUMO				IAML		05 27 47.3	
	comp=N,21nm,0.5s						
HUMO				IAML		05 27 51.5	
	comp=E,20nm,0.5s						
WDC	**Whiskeytown Da**	**2.58**	**239**		**Pn**	**05 27 08.2**	**-0.8**
WDC				IAML		05 27 46.1	
	comp=N,16nm,0.5s						
I05D	**Terrebonne, OR**	**2.68**	**333**	Pb	**Pb**	**05 27 16.1**	**+0.9**
	baz=152,SNR=6.6						
I04A	**Tendick Farm,**	**2.74**	**313**	Sb	**Sg**	**05 27 53.5**	**-1.4**
	baz=132						
L02E	**Cave Junction**	**2.96**	**275**	Sb	**Sb**	**05 27 57.8**	**+1.6**
	baz=94						
O02D	**Mt. Diablo Mer**	**2.97**	**234**	Pb	**Pb**	**05 27 18.5**	**-1.7**
	baz=53						
O02D				Sb	**Sb**	**05 27 57.8**	**+1.1**
	baz=53						
K02D	**Willamette Mer**	**3.07**	**285**	P	**Pn**	**05 27 16.8**	**+0.9**
	baz=103,SNR=31						

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*IDC **30** 05:34:54.0±1.9, 6°.28S×104°.69E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/35, mbtmp3.6/5, ML3.5/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/41, Error ellipse: s-maj=65.6km s-min=22.1km az=44.0*

*DJA **30** 05:34:57.1±0.5, 6°S±4°×10°5E±°, h10km, M3.6/8, MLv3.6/8*

ISC 30 05:34:56.6±1.0, 6°.42S±0°.07×104°.85E±0°.07, h10km, n20, $\sigma 1^{s}.53$/17, mb3.5/4, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.96**	**338**	P	**Pg**	**05 35 15.5**	**+0.4**
BLSI	**Bandar Lampung**	**1.12**	**21**	P	**Pn**	**05 35 19.3**	**+0.9**
BLSI				S	**Sn**	**05 35 34.6**	**+0.8**
LWLI	**Liwa**	**1.60**	**331**	P	**Pn**	**05 35 26.2**	**+1.1**
KLSI		**1.72**	**356**	P	**Pn**	**05 35 28.2**	**+1.5**
KLSI				S	**Sg**	**05 35 51.7**	**-0.4**
DBJI	**Dramaga**	**1.89**	**94**	P	**Pn**	**05 35 28.7**	**-0.3**
CBJI	**Citeko**	**1.99**	**90**	P	**Pn**	**05 35 32.5**	**+2.2**
MDSI	**Maura Dua**	**2.04**	**341**	P	**Pn**	**05 35 32.4**	**+1.4**
LEM	**Lembang**	**2.78**	**98**	Pn	**Pn**	**05 35 42.3**	**+0.9**
	6.2nm,0.3s,baz=200,slow=23,SNR=3.8						
LEM				Sn	**Sb**	**05 36 21.3**	**+0.6**
	9.0nm,0.3s,baz=172,slow=22,SNR=2.2						
LEM				LR	LR	05 36 41.7	
	comp=Z,77nm,19.4s,baz=234,slow=36						
MNAI	**Manna**	**2.78**	**317**	P	**Pn**	**05 35 43.1**	**+1.8**
H01W3	**Cape Leeuwin H**	**29.59**	**164**	T	T	06 11 27.0	
	baz=345,slow=76,SNR=6.6						
H01W2	**Cape Leeuwin H**	**29.61**	**164**	T	T	06 11 28.1	
	baz=345,slow=76,SNR=6.4						
H01W1	**Cape Leeuwin H**	**29.61**	**164**	T	T	06 11 28.2	
	baz=345,slow=76,SNR=7.6						
WRA	**Warramunga Arr**	**31.63**	**118**	P	**P**	**05 41 19.3**	**-0.9**
	0.2nm,0.4s,baz=288,slow=10,SNR=5.6						
H08S2	**Diego Garcia H**	**32.13**	**266**	T	T	06 15 05.8	
	baz=92						
H08S3	**Diego Garcia H**	**32.14**	**266**	T	T	06 15 04.0	
	baz=92						
H08S1	**Diego Carcia H**	**32.15**	**266**	T	T	06 15 13.5	
	baz=92						
STKA	**Stephens Creek**	**42.62**	**131**	P	**P**	**05 42 55.0**	**+1.7**
	2.7nm,0.9s,baz=288,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**54.04**	**1**	P	**P**	**05 44 19.5**	**-1.8**
	0.3nm,0.8s,baz=163,slow=1.5,SNR=2.2						
MKAR	**Makanchi Array**	**56.64**	**342**	P	**P**	**05 44 37.2**	**-2.8**
	0.3nm,0.4s,baz=164,slow=8.2,SNR=7.8						
TXAR	**Lajitas Array**	**144.75**	**46**	PKP	**PKPab**	**05 54 34.8**	**+1.3**
	0.3nm,0.6s,baz=291,slow=5.4,SNR=2.6						

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*NNC **30** 06:11:44.9±2.7, 53°.51N×87°.84E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=22.8km s-min=12.2km az=59.0, Suspected Mining explosion.*

IDC 30 06:11:45.0±2.8, 53°.52N×87°.83E, h0km, mb1 3.1/2, mb1mx2.9/66, mbtmp3.1/2, ML2.8/2, 8C, Error ellipse: s-maj=24.2km s-min=15.2km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.84**	**285**	*i*		06 22 20.0	
	baz=98,slow=341,SNR=2.2						
ZAA0	**Zalesovo Array**	**1.84**	**285**	⇑Pn	Pn	06 12 17.2	-0.6
	0.4nm,0.4s						
ZAA0				⇑Sn	Sb	06 12 43.1	+0.1
	5.9nm,0.6s						
ZALV	**Zalesovo Beam**	**1.84**	**285**	Pg	Pn	06 12 17.6	-0.2
	2.2nm,0.3s,baz=102,slow=15,SNR=28						
ZALV				Lg	Lg	06 12 43.5	
	2.6nm,0.3s,baz=102,slow=15,SNR=4.8						
KURBB	**Kurchatov Arra**	**6.43**	**247**	Pn	Pn	06 13 21.7	+0.9
	0.2nm,0.3s,baz=61,slow=14,SNR=11						
KURBB				Sn	Sn	06 14 34.4	-0.4
	0.1nm,0.3s,baz=22,slow=15,SNR=2.5						
KURBB				Lg	Lg	06 15 10.2	
	0.1nm,0.3s,baz=69,slow=28,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.43**	**247**	⇑Pn	Pn	06 13 21.6	+0.8
	2.5nm,0.5s						
KURBB				⇑Sn	Sn	06 14 34.1	-0.7
	3.0nm,0.6s						
KURBB				⇑Lg	Lg	06 15 08.3	
	3.9nm,0.6s						
MK31	**Makanchi Array**	**7.61**	**210**	⇑Pn	Pn	06 13 38.4	+1.3
	0.2nm,0.5s,baz=27,slow=14,SNR=7.4						
MK31				⇑Sn	Sn	06 15 05.4	+1.2
	1.0nm,0.8s						
MK31				⇑Lg	Lg	06 15 45.2	
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**7.61**	**210**	Pn	Pn	06 13 38.7	+1.5
	0.2nm,0.3s,baz=29,slow=14,SNR=8.9						
MKAR				Sn	Sn	06 15 02.2	-1.9
	0.1nm,0.3s,baz=27,slow=16,SNR=1.6						
MKAR				Lg	Lg	06 15 42.8	
	0.1nm,0.3s,baz=23,slow=23,SNR=2.2						

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*IDC **30** 06:25:02.8±2.1, 8°.95S×113°.83E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/36, mbtmp3.8/6, ML3.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/39, Error ellipse: s-maj=108.1km s-min=19.1km az=52.0*

ISC 30 06:25:07.8±2.4, 9°.0S±0°.5×113°.9E±0°.7, h35km, n8, $\sigma 1^{s}.44$/6, mb3.9/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.53**	**130**	Pn	**Pn**	**06 28 29.4**	**-1.5**
	0.1nm,0.3s,baz=300,slow=8.1,SNR=1.7						
FITZ				Sn	Sn	06 31 03.6	-7.3
	0.1nm,0.3s,baz=248,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	**22.53**	**121**	P	**P**	**06 30 06.0**	**+1.1**
	1.4nm,0.6s,baz=299,slow=11,SNR=17						
ASAR	**Alice Springs**	**24.03**	**130**	P	**P**	**06 30 20.8**	**+1.0**
	1.0nm,0.6s,baz=302,slow=8.9,SNR=20						
JAY	**Jayapura**	**27.42**	**78**	LR	LR	06 43 15.4	
	comp=Z,32nm,18.1s,baz=247,slow=40						
STKA	**Stephens Creek**	**34.30**	**135**	P	**P**	**06 31 51.9**	**+0.9**
	2.5nm,0.8s,baz=318,slow=13,SNR=4.6						
SONM	**Songino Array**	**57.01**	**354**	P	**P**	**06 34 50.6**	**+0.5**
	0.4nm,0.3s,baz=171,slow=8.6,SNR=5.2						
MKAR	**Makanchi Array**	**62.32**	**336**	P	**P**	**06 35 25.7**	**-0.9**
	0.5nm,0.4s,baz=151,slow=7.5,SNR=11						
GNI	**Garni**	**80.27**	**313**	LR	LR	07 16 58.3	
	comp=Z,48nm,18.0s,baz=2.5,slow=39						

IDC 30 06:27:28.4±1.9, 5°.78S×130°.58E, h0km, mb3.1/1, mb1 3.5/5, mb1mx3.3/35, mbtmp3.3/5, ML3.3/4, Error ellipse: s-maj=74.4km s-min=25.7km az=87.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.92**	**8**	Pn	Pn	06 28 45.6	+1.8
	1.9nm,0.3s,baz=202,slow=23,SNR=16						
SIJI				Sn	Sn	06 29 35.4	-6.1
	0.6nm,0.3s,baz=285,slow=23,SNR=1.0						
FITZ	**Fitzroy Crossi**	**13.16**	**201**	Pn	Pn	06 30 38.8	+2.1
	0.1nm,0.3s,baz=24,slow=12,SNR=1.6						
FITZ				Sn	Sn	06 32 56.8	-7.1
	0.0nm,0.3s,baz=216,slow=14,SNR=1.0						
WRA	**Warramunga Arr**	**14.54**	**166**	Pn	Pn	06 30 53.5	-2.2
	0.1nm,0.3s,baz=350,slow=14,SNR=6.2						
WRA				Sn	Sn	06 33 28.7	-9.0
	0.1nm,0.3s,baz=355,slow=24,SNR=1.4						
ASAR	**Alice Springs**	**18.07**	**170**	P	P	06 31 41.6	+0.1
	0.1nm,0.3s,baz=355,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**67.53**	**326**	P	P	06 38 25.7	-0.8
	0.1nm,0.5s,baz=120,slow=7.5,SNR=2.0						

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*IDC **30** 06:29:42.1±0.5, 56°.72S×150°.64W, h0km, mb4.4/10, mb1 4.5/10, mb1mx4.3/31, mbtmp4.4/10, MS3.8/11, Ms1 3.8/11, ms1mx3.7/23, Error ellipse: s-maj=35.6km s-min=15.4km az=9.0*

*NEIC **30** 06:29:43.6±1.3, 56°.8S±0°.1×150°.7W±0°.2, h10km±1km, mb4.8/11, Error ellipse: s-maj=31.2km s-min=5.4km az=43.0*

ISC 30 06:29:43.8±0.6, 56°.9S±0°.2×150°.7W±0°.1, h10km, n66, $\sigma 0^{s}.81$/34, mb4.5/12, MS3.9/14, 1C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**26.32**	**201**	LR	LR	06 43 02.2	
	comp=Z,316nm,20.3s,baz=114,slow=30						
RPZ	**Rata Peaks**	**27.37**	**282**	LR	LR	06 45 15.6	
	comp=Z,51nm,18.2s,baz=168,slow=34						
URZ	**Urewera**	**28.23**	**297**	LR	LR	06 44 12.0	
	comp=Z,183nm,20.5s,baz=210,slow=31						
QSPA	**South Pole Qui**	**33.29**	**180**	P	**P**	**06 36 22.1**	**+0.9**
	12nm,1.0s,baz=69,slow=3.7,SNR=20						
QSPA	**South Pole Qui**	**33.29**	**180**	P	**P**	**06 36 22.8**	**+1.6**
TBI	**Tubuai**	**33.48**	**2**	*e*T	T	07 11 32.8	
	29nm,0.3s						
RKT	**Rikitea**	**35.59**	**25**	*e*LR	LR	06 45 03.3	
	comp=Z,847nm,28.8s						
RAR	**Rarotonga**	**36.23**	**345**	LR	LR	06 47 15.3	
	comp=Z,163nm,19.1s,baz=152,slow=29						
TVO	**Taravao**	**39.02**	**2**	*e*T	T	07 18 27.6	
	0.6nm,0.3s						
PAE	**Paea**	**39.14**	**2**	*e*T	T	07 18 36.6	
	0.6nm,0.2s						
PPT2	**Papeete2**	**39.21**	**2**	*e*LR	LR	06 47 00.0	
	comp=Z,363nm,27.0s						
PPT2	**Papeete2**	**39.21**	**2**	*e*T	T	07 18 42.2	
	2.6nm,0.4s						
PPT	**Papeete**	**39.23**	**2**	LR	LR	06 49 49.5	
	comp=Z,159nm,19.4s,baz=234,slow=31						
BELA	**Belgrano 2**	**40.02**	**163**		**P**	**06 37 18.5**	**+0.3**
VAH	**Vaihoa**	**41.60**	**4**	*e*T	T	07 21 40.7	
	31nm,0.2s						
TAOE	**Nuku Hiva Isla**	**48.58**	**14**	*e*LR	LR	06 50 15.6	
	comp=Z,425nm,27.9s						
SNAA	**Sanae**	**49.79**	**167**	P	**P**	**06 38 35.3**	**-0.7**
STKA	**Stephens Creek**	**51.97**	**269**	P	**P**	**06 38 54.4**	**+1.5**
	2.8nm,0.8s,baz=131,slow=5.9,SNR=4.3						
STKA				LR	LR	06 56 56.0	
	comp=Z,81nm,19.9s,baz=186,slow=31						
PLCA	**Paso Flores**	**52.05**	**108**	P	**P**	**06 38 53.5**	**+0.1**
	5.2nm,0.9s,baz=244,slow=8.5,SNR=11						
PLCA	**Paso Flores**	**52.05**	**108**	P	**P**	**06 38 54.2**	**+0.7**
PLCA				IAmb	IAmb	06 38 55.3	
	comp=Z,8.0nm,0.9s						
H03S2	**Juan Fernandez**	**52.66**	**96**	T	T	07 35 56.2	
	baz=219,slow=74,SNR=32						
H03S1	**Juan Fernandez**	**52.66**	**96**	T	T	07 35 55.5	
	baz=219,slow=74,SNR=26						
H03S3	**Juan Fernandez**	**52.68**	**96**	T	T	07 35 57.7	
	baz=219,slow=74,SNR=30						
LC01	**Cunco**	**52.70**	**106**	P	**P**	**06 38 57.7**	**-0.4**
LC01				IAmb	IAmb	06 38 59.5	
	comp=Z,9.9nm,0.8s						
H03N3	**Juan Fernandez**	**52.95**	**96**	T	T	07 36 16.3	
	baz=222,slow=72,SNR=92						
H03N2	**Juan Fernandez**	**52.95**	**96**	T	T	07 36 15.1	
	baz=222,slow=72,SNR=119						
H03N1	**Juan Fernandez**	**52.97**	**96**	T	T	07 36 14.6	
	baz=222,slow=72,SNR=119						
SYO	**Syowa Base**	**54.22**	**185**	⇑*e*P	**P**	**06 39 06.9**	**-2.0**
AS31	**Alice Springs**	**62.61**	**268**	P	**P**	**06 40 08.0**	**-0.2**
ASAR	**Alice Springs**	**62.61**	**268**	P	**P**	**06 40 07.8**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=139,slow=6.6,SNR=32						
ASAR				LR	LR	07 05 56.2	
	comp=Z,42nm,18.3s,baz=180,slow=35						
H01W1	**Cape Leeuwin H**	**64.22**	**245**	T	T	07 50 29.9	
	baz=141,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**64.22**	**245**	T	T	07 50 26.5	
	baz=141,slow=76,SNR=13						
H01W3	**Cape Leeuwin H**	**64.24**	**245**	T	T	07 50 25.8	
	baz=141,slow=76,SNR=14						
WRA	**Warramunga Arr**	**65.36**	**271**	P	**P**	**06 40 25.3**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=147,slow=5.6,SNR=9.5						
WRA	**Warramunga Arr**	**65.36**	**271**	IAmb	IAmb	06 40 31.4	
	comp=Z,0.4nm,1.4s						
WB0	**Warramunga Arr**	**65.47**	**271**	P	**P**	**06 40 26.5**	**-0.5**
WB0				IAmb	IAmb	06 40 44.2	
	comp=Z,8.0nm,1.3s						
LVC	**Limon Verde**	**66.90**	**96**	P	**P**	**06 40 37.2**	**+0.7**
	comp=Z,7.9nm,0.7s,baz=256,slow=6.4,SNR=8.2						
LVC	**Limon Verde**	**66.90**	**96**	P	**P**	**06 40 37.0**	**+0.5**
LVC				IAmb	IAmb	06 40 38.2	
	comp=Z,9.0nm,0.8s						
MNMC	**Minye Minye**	**69.33**	**93**	P	**P**	**06 40 52.9**	**+1.1**
CPUP	**Villa Florida**	**70.12**	**108**	P	**P**	**06 40 55.9**	**-0.2**
	comp=Z,7.0nm,0.8s,baz=230,slow=5.4,SNR=11						
CPUP				LR	LR	07 07 09.8	
	comp=Z,55nm,19.6s,baz=210,slow=32						
CPUP	**Villa Florida**	**70.12**	**108**	P	**P**	**06 40 56.0**	**-0.1**
CPUP				IAmb	IAmb	06 40 57.0	
	comp=Z,10nm,0.9s						
FITZ	**Fitzroy Crossi**	**71.63**	**265**	P	**P**	**06 41 05.9**	**+0.5**
	comp=Z,2.3nm,1.0s,baz=155,slow=17,SNR=2.3						
SIV	**San Ignacio**	**76.54**	**99**	P	**P**	**06 41 33.9**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=217,slow=6.0,SNR=11						
BDFB	**Brasilia**	**83.79**	**109**	P	**P**	**06 42 13.2**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=255,slow=26,SNR=3.5						
TXAR	**Lajitas Array**	**94.59**	**40**	LR	LR	07 17 21.0	
	comp=Z,61nm,20.0s,baz=0.0,slow=30						
BOSA	**Boshof**	**94.80**	**176**	LR	LR	07 20 30.0	
	comp=Z,49nm,21.9s,baz=192,slow=32						
NVAR	**Mina Array Bea**	**98.78**	**25**	LR	LR	07 19 13.5	
	comp=Z,70nm,18.0s,baz=191,slow=30						
H10S3	**ASCENSION HYDR**	**105.14**	**135**	T	T	08 42 00.8	
	baz=16,slow=74,SNR=8.9						
H10S2	**ASCENSION HYDR**	**105.14**	**135**	T	T	08 41 58.5	
	baz=204,slow=74,SNR=5.2						
H10N3	**ASCENSION HYDR**	**106.21**	**134**	T	T	08 43 19.6	
	baz=204,slow=75,SNR=17						
H10N1	**ASCENSION HYDR**	**106.22**	**134**	T	T	08 43 24.7	
	baz=204,slow=75,SNR=17						
H10N2	**ASCENSION HYDR**	**106.23**	**134**	T	T	08 43 21.0	
	baz=204,slow=75,SNR=21						
ILAR	**Eielson Array**	**121.34**	**2**	PKP	**PKiKP**	**06 48 35.5**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=254,slow=1.8,SNR=17						
ILAR	**Eielson Array**	**121.34**	**2**		**PKiKP**	**06 48 35.8**	**+0.1**
YKA	**Yellowknife Ar**	**122.27**	**19**	PKP	**PKPdf**	**06 48 36.2**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=179,slow=2.2,SNR=5.9						
TORD	**Torodi Ar. Bea**	**131.51**	**143**	PKP	**PKPdf**	**06 48 56.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=225,slow=1.0,SNR=2.1						
RAYN	**Ar Rayn**	**144.68**	**206**		PKPbc	06 49 19.8	+0.5
MDT	**Midelt**	**146.55**	**121**	PKPbc	**PKPbc**	**06 49 25.6**	**+0.7**
	comp=Z,5.3nm,1.1s,baz=224,slow=1.9,SNR=2.9						
MK31	**Makanchi Array**	**146.58**	**276**		**PKPdf**	**06 49 23.3**	**+0.4**
MKAR	**Makanchi Array**	**146.58**	**276**	PKPbc	**PKPbc**	**06 49 24.4**	**-0.1**
	comp=Z,9.3nm,0.8s,baz=119,slow=4.5,SNR=68						
MKAR	**Makanchi Array**	**146.58**	**276**		**PKPbc**	**06 49 24.5**	**0.0**
ZALV	**Zalesovo Beam**	**149.10**	**289**	PKPbc	**PKPbc**	**06 49 29.2**	**-1.7**
	comp=Z,3.3nm,0.6s,baz=118,slow=3.2,SNR=9.5						
KURBB	**Kurchatov Arra**	**150.80**	**279**	PKPbc	**PKPbc**	**06 49 34.6**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=118,slow=1.9,SNR=19						
NRIK	**Noril'sk**	**152.12**	**320**	PKPbc	**PKiKP**	**06 49 37.8**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=130,slow=3.9,SNR=4.7						
ESDC	**Sonseca Array**	**152.33**	**114**	PKPbc	**PKPbc**	**06 49 39.3**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=249,slow=4.1,SNR=4.3						
BRTR	**Keskin Array B**	**162.63**	**191**	PKP	**PKPdf**	**06 49 45.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=276,slow=2.4,SNR=3.8						

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*ISK **30** 06:33:10.0, 35°.71N×36°.59E, h11km, ML3.2/17*

*DDA **30** 06:33:11.5, 35°.85N×36°.60E, h36km±1km, ML3.1*

*GRAL **30** 06:33:13.8±0.3, 35°.84N×36°.52E, h15km±5km, MD3.6*

ISC 30 06:33:11.2±1.2, 35°.83N±0°.03×36°.59E±0°.03, h14km±10km, n41, $\sigma 1^{s}.05$/61, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUZU	**Kuzuini**	**1.02**	**22**	*i* P	**Pb**	**06 33 30.8**	**-0.1**
KUZU				*i* S	**Sn**	**06 33 45.0**	**-0.6**
KUZU				IAML		06 33 50.0	
	comp=N,721nm,0.4s						
KUZU				IAML		06 33 53.0	
	comp=E,1μm,0.4s						
KRTD	**Karatas-Adana**	**1.22**	**309**	PN	**Pg**	**06 33 34.7**	**-0.1**
KRTS	**Karatas**	**1.23**	**308**	PN	**Pg**	**06 33 34.9**	**-0.1**
KRTS				SN	**Sg**	**06 33 53.5**	**+2.4**
KAMA	**Osmaniye**	**1.36**	**3**	*i* P	**Pn**	**06 33 35.8**	**-0.1**
KAMA				*i* S	**Sg**	**06 33 54.7**	**-0.4**
KAMA				IAML		06 33 57.0	
	comp=E,192nm,0.4s						
CEYT	**Ceyhan**	**1.36**	**330**	PN	**Pg**	**06 33 37.1**	**-0.4**
CEYT				SN	**Sg**	**06 33 56.6**	**+1.4**
GAZ	**Gaziantep**	**1.43**	**20**	PN	**Pg**	**06 33 38.4**	**-0.4**
GAZ				SN	**Sg**	**06 33 59.0**	**+1.5**
HCB	**Kahramanmara**	**1.54**	**9**	*i* P	**Pb**	**06 33 39.0**	**-0.6**
HCB				*i* S	**Sn**	**06 33 58.0**	**-0.1**
HCB				IAML		06 34 03.0	
	comp=E,154nm,0.5s						
HWQ	**Hawqa**	**1.63**	**199**	*e*P	**Pb**	**06 33 40.8**	**-0.5**
HWQ				*e*S	**Sn**	**06 34 00.8**	**+0.2**
KMRS	**Kahramanmaras**	**1.69**	**8**	PN	**Pb**	**06 33 42.2**	**-0.1**
KMRS				SN	**Sg**	**06 34 05.1**	**-0.7**
GZT	**Gaziantep**	**1.72**	**27**	*i* P	**Pn**	**06 33 41.5**	**+0.6**
GZT				*i* S	**Sb**	**06 34 03.4**	**-0.8**
GZT				IAML		06 34 08.0	

	comp=N,295nm,0.4s						
GZT				IAML		06 34 15.0	
	comp=E,260nm,0.5s						
KAHM	Kahramanmaras,	1.72	11	*i* P	Pn	06 33 40.4	-0.4
KAHM				*i* S	Sb	06 34 03.6	-0.6
ANDN	Andirin	1.76	354	*i* P	Pn	06 33 41.7	+0.2
ANDN				*i* S	Sb	06 34 05.5	+0.1
ANDN				IAML		06 34 11.0	
	comp=E,131nm,0.5s						
ANDN				IAML		06 34 13.0	
	comp=N,118nm,0.4s						
KOZT	Kozan	1.76	340	PN	Pb	06 33 42.6	-0.8
KOZT				SN	Sg	06 34 06.5	-1.5
DED	Mersin	1.84	309	*i* P	Pn	06 33 43.2	+0.8
DED				*i* S	Sb	06 34 08.6	+1.0
KARA	Karaisali	1.89	320	PN	Pn	06 33 44.2	+1.0
KARA				SN	Sb	06 34 09.2	+0.1
SURC	SANLIURFA_SURC	1.94	57	*i* P	Pn	06 33 44.3	+0.4
SURC				*i* S	Sb	06 34 09.4	-1.2
SURC				IAML		06 34 14.0	
	comp=N,204nm,0.4s						
SURC				IAML		06 34 18.0	
	comp=E,246nm,0.5s						
GULE	Gulek	2.06	315	*i* P	Pb	06 33 47.8	-0.8
GULE				*i* S	Sb	06 34 15.1	+0.9
GULE				IAML		06 34 19.0	
	comp=E,145nm,0.4s						
GULE				IAML		06 34 20.0	
	comp=N,107nm,0.4s						
BHL	Bhannes	2.07	202	*e*P	Pn	06 33 47.0	+1.3
BHL				*e*S	Sn	06 34 11.4	+0.1
KIZK	Mersin	2.08	289	PN	Pn	06 33 46.5	+0.7
KIZK	Mersin	2.08	289	*i* P	Pn	06 33 46.7	+0.9
KIZK				*i* S	Sb	06 34 13.6	-1.1
KIZK				IAML		06 34 21.0	
	comp=N,100nm,0.4s						
CMRD	Camardi-Nigde	2.24	325	PN	Pb	06 33 49.9	-1.7
DQRL	Deir Qamar	2.27	202	*e*P	Pn	06 33 49.6	+1.1
DQRL				*e*S	Sn	06 34 16.3	-0.2
SANL	SANLIURFA_Merk	2.35	54	*i* P	Pg	06 33 55.9	-0.5
IKL	Isikli	2.39	281	PN	Pn	06 33 50.6	+0.6
RCY	Rachaya	2.41	195	*e*P	Pn	06 33 51.7	+1.3
KEBE	Keben-Mersin	2.41	286	PN	Pn	06 33 51.6	+1.2
YAHY	KAYSERI_Yahyal	2.47	337	*i* P	Pn	06 33 51.8	+0.6
AKKU	Akkuyu-Mersin	2.49	279	PN	Pn	06 33 51.9	+0.6
ELBS	KAHRAMANMARAS	2.53	10	*i* P	Pn	06 33 54.1	+2.1
KERG	Konya-Eregli	2.54	309	*i* P	Pb	06 33 54.9	-1.8
KERG				*i* S	Sb	06 34 28.1	+0.2
SARI	SarD1z-Kayseri	2.58	357	PN	Pn	06 33 54.0	+1.2
NIDE	Nigde/Merkez-G	2.61	327	*i* P	Pn	06 33 53.7	+0.5
TEVE	Tevekalti-Mers	2.62	284	PN	Pn	06 33 53.4	+0.2
AKCD	Akcadag	2.69	23	*i* P	Pn	06 33 55.0	+0.8
AKCD				IAML		06 34 40.0	
	comp=N,131nm,0.5s						
AKCD				IAML		06 34 44.0	
	comp=E,122nm,0.5s						
CSS	Mathiatis	2.80	253	PN	Pn	06 33 55.3	-0.4
DARE	Darende-Malaty	2.83	14	PN	Pn	06 33 57.6	+1.4
TEKE	Tekeli-Mersin	2.84	277	PN	Pn	06 33 57.1	+0.9
MALT	Malatya	2.88	30	PN	Pn	06 33 58.9	+2.0
BNN	Bunyan	3.08	349	PN	Pn	06 34 01.3	+1.7
MMLI	Mount Malkishu	3.52	196	PN	Pn	06 34 04.5	-1.0
BNGB	Bingl	4.54	45	PN	Pn	06 34 22.3	+2.7

*IDC **30** 06:37:19.0±1.4, 22°.04S×112°.87W, h0^{km}, mb3.4/3, mb1 3.8/3, mb1mx3.6/25, mbtmp3.4/3, MS3.8/2, Ms1 3.8/2, ms1mx3.4/10, Error ellipse: s-maj=91.6km s-min=50.3km az=94.0*

ISC 30 06:37:19.8±1.4**, 22°.2S**±0°.3×**112°.9W**±0°.7**, h10^{km}, n14, σ1ˢ.56**/9**, mb3.6**/3**, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	5.90	147	LR	LR	06 40 43.0	
	comp=Z,1µm,18.2s,baz=316,slow=34						
H03N2	Juan Fernandez	31.94	118	T	T	07 18 41.5	
	baz=283,slow=75,SNR=54						
H03N3	Juan Fernandez	31.95	118	T	T	07 18 42.6	
	baz=283,slow=75,SNR=55						
H03N1	Juan Fernandez	31.95	118	T	T	07 18 42.6	
	baz=283,slow=75,SNR=72						
PLCA	Paso Flores	40.14	127	LR	LR	06 58 08.6	
	comp=Z,93nm,20.0s,baz=220,slow=31						
NVAR	Mina Array Bea	60.50	355	P	P	06 47 31.9	+1.7
	0.3nm,0.6s,baz=192,slow=8.0,SNR=3.7						
PDAR	Pinedale Array	64.69	3	P	P	06 47 57.1	-1.1
	0.1nm,0.3s,baz=152,slow=6.1,SNR=2.0						
H02S1	DAWSON INLET T	76.96	348	T	T	08 13 20.7	
	SNR=12						
YKA	Yellowknife Ar	84.39	359	P	P	06 49 50.3	-1.5
	0.4nm,0.8s,baz=168,slow=4.8,SNR=4.5						
TORD	Torodi Ar. Bea	117.43	86	PKP	PKiKP	06 56 08.2	+1.7
	0.4nm,0.5s,baz=5.7,slow=1.4,SNR=1.9						
ZALV	Zalesovo Beam	145.55	341	PKPbc	PKPab	06 57 00.1	+1.7
	0.5nm,0.5s,baz=31,slow=3.9,SNR=2.0						
BRTR	Keskin Array B	146.65	51	PKPbc	PKPbc	06 57 01.9	-0.2
	1.0nm,0.8s,baz=45,slow=1.9,SNR=4.1						
CMAR	Chiang Mai Arr	149.94	269	PKP	PKPdf	06 57 04.7	-1.6
	1.0nm,0.3s,baz=150,slow=3.8,SNR=1.4						
CMAR				PKPbc	PKiKP	06 57 12.0	-0.1
	0.6nm,0.3s,baz=116,slow=2.1,SNR=0.9						
MKAR	Makanchi Array	152.53	337	PKPbc	PKPbc	06 57 16.6	+0.1
	0.2nm,0.5s,baz=55,slow=2.7,SNR=2.2						

*IDC **30** 06:37:33.0±0.8, 12°.46N×95°.15E, h0^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/62, mbtmp3.9/13, ML4.0/1, Error ellipse: s-maj=33.4km s-min=17.0km az=57.0*

*NEIC **30** 06:37:34.9±1.2, 12°.59N±0°.03×95°.3E±0°.1, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=17.0km s-min=5.5km az=99.0*

*NDI **30** 06:37:41.5±3.3, 12°.85N×95°.27E, h10^{km}, ML3.6, mb4.2(NEIC)*

ISC 30 06:37:36.0±0.8**, 12°.4N**±0°.1×**95°.20E**±0°.08**, h19^{km}, n42, σ2ˢ.08**/41**, mb3.9**/15**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	2.34	289	*e*P	Pn	06 38 13.1	-0.5
DGPR				*e*S	Sb	06 38 46.1	-0.1
DGPR				IAML		06 38 54.3	
	comp=E,194nm,0.5s						
DGPR				IAML		06 38 54.8	
	comp=N,275nm,0.5s						
PBA	Port Blair	2.52	253	*e*P	Pg	06 38 23.5	-0.8
PBA				*e*S	Sg	06 39 00.3	+3.3
PBA				IAML		06 39 06.7	
	comp=E,2µm,0.5s						
PBA	Port Blair	2.52	253	Pn	Pn	06 38 17.2	+1.4
CM31	Chiang Mai Arr	7.02	30	Pn	Pn	06 39 14.6	-3.3
CMAR	Chiang Mai Arr	7.02	30	Pn	Pn	06 39 15.9	-1.9
	comp=E,0.6nm,0.3s,baz=220,slow=16,SNR=6.0						
SAIH	SAIHA	10.25	348	*e*P	Pn	06 40 03.3	+1.0
SHL	Shillong	13.46	347	Pn	Pn	06 40 43.3	-3.0
TAPN	Taplejung	16.45	336	*e*P	P	06 41 33.6	+4.8
LSA	Lhasa	17.62	348	P	Pn	06 41 39.6	-1.4
LSA				IAmb	IAmb	06 41 49.6	
	comp=Z,7.6nm,0.6s						
PKI	Pulchoki	17.66	330	*e*P	P	06 41 47.3	+5.1
	comp=Z,27nm,0.8s						
PKIN	Phulchoki	17.67	330	*e*P	P	06 41 47.5	+5.2
DMN	Daman	17.84	329	*e*P	P	06 41 49.0	+4.8
GKN	Gorkha	18.40	329	*e*P	Pn	06 41 51.6	+1.3
KOLN	Koldanda	18.75	326	*e*P	Pn	06 41 58.4	+3.8
	comp=Z,29nm,0.7s						
DANN	Dangsing	19.13	328	*e*P	P	06 41 57.7	-0.7
	comp=Z,20nm,0.6s						
MK31	Makanchi Array	35.97	345	P	P	06 44 35.0	-0.6
MKAR	Makanchi Array	35.97	345	P	P	06 44 35.2	-0.3
	comp=Z,0.8nm,0.6s,baz=154,slow=10.0,SNR=10						
MKAR	Makanchi Array	35.97	345	P	P	06 44 34.1	-1.4
SONM	Songino Array	36.55	13	P	P	06 44 40.2	-0.4
	comp=Z,1.5nm,1.1s,baz=194,slow=13,SNR=5.2						
SONM	Songino Array	36.55	13	P	P	06 44 38.8	-1.8
KKAR	Karatay Array	37.30	330	P	P	06 44 46.6	-0.4
KURBB	Kurchatov Arra	40.48	344	P	P	06 45 12.8	-0.6
	comp=Z,1.9nm,0.8s,baz=159,slow=7.7,SNR=15						
KURK	Kurchatov	40.54	344	P	P	06 45 13.6	-0.3
KURK				IAmb	IAmb	06 45 22.6	
	comp=Z,4.4nm,0.9s						
GEYT	Alibeck	41.67	314	P	P	06 45 23.8	+0.3
	comp=Z,2.4nm,0.5s,baz=92,slow=4.3,SNR=2.2						
ZAA0	Zalesovo Array	42.26	351	P	P	06 45 26.8	-1.1
ZALV	Zalesovo Beam	42.26	351	P	P	06 45 27.5	-0.4
	comp=Z,1.8nm,0.7s,baz=170,slow=9.0,SNR=9.6						
ZALV	Zalesovo Beam	42.26	351	P	P	06 45 26.6	-1.4
ABKAR	Akbulak array	46.85	329		P	06 46 04.4	-0.3
ABKAR	Akbulak array	46.85	329	P	P	06 46 04.2	-0.5
WRA	Warramunga Arr	50.17	129	P	P	06 46 31.4	+0.6
	comp=Z,0.8nm,0.5s,baz=313,slow=8.4,SNR=16						
WB2	Warramunga Arr	50.18	129	P	P	06 46 31.5	+0.7
WR0	Warramunga Arr	50.33	129	P	P	06 46 32.7	+0.7
WR0				IAmb	IAmb	06 46 46.4	
	comp=Z,6.6nm,1.3s						
ASAR	Alice Springs	52.13	133	P	P	06 46 46.2	+0.8
	comp=Z,0.7nm,0.7s,baz=314,slow=6.7,SNR=6.5						
KVAR	Kislovodsk Arr	54.76	315	P	P	06 47 05.1	+0.6
	comp=Z,3.0nm,0.3s,baz=131,slow=18,SNR=1.9						
BRTR	Keskin Array B	60.35	309	P	P	06 47 42.1	-2.1
	comp=Z,0.5nm,0.5s,baz=119,slow=9.0,SNR=3.2						
AKASG	Malin Array Be	65.31	320	P	P	06 48 18.7	+1.9
	comp=Z,0.4nm,0.3s,baz=104,slow=4.0,SNR=4.7						
FINES	FINESS Array B	69.24	331	P	P	06 48 40.8	-0.6
	comp=Z,3.4nm,1.1s,baz=93,slow=16,SNR=1.9						
GERES	GERESS Array B	75.19	317	P	P	06 49 16.8	-0.6
	comp=Z,0.6nm,0.5s,baz=97,slow=5.3,SNR=3.2						
ILAR	Eielson Array	90.18	22	P	P	06 50 34.9	0.0
	comp=Z,0.2nm,0.8s,baz=316,slow=2.5,SNR=1.6						
NVAR	Mina Array Bea	120.51	30	PKP	PKiKP	06 56 27.1	-0.1
	comp=Z,0.5nm,0.6s,baz=24,slow=2.9,SNR=4.3						
PDAR	Pinedale Array	120.59	21	PKP	PKPdf	06 56 26.6	-0.6
	comp=Z,0.3nm,0.7s,baz=222,slow=1.2,SNR=2.8						
PLCA	Paso Flores	149.12	201	PKPbc	PKPbc	06 57 23.4	-0.1
	comp=Z,1.4nm,0.9s,baz=265,slow=3.6,SNR=4.0						

*IDC **30** 06:42:57.4±0.9, 15°.72S×174°.82W, h0^{km}, mb4.0/9, mb1 4.2/9, mb1mx4.0/23, mbtmp4.0/9, Error ellipse: s-maj=42.1km s-min=19.1km az=137.0*

ISC 30 06:43:28.4±0.9**, 16°.1S**±0°.2×**174°.9W**±0°.2**, h278^{km}, n11, σ0ˢ.61**/11**, mb3.4**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	23.13	196	P	P	06 48 09.7	-0.5
	4.4nm,0.4s,baz=311,slow=6.1,SNR=1.6						
STKA	Stephens Creek	42.42	240	P	P	06 50 57.2	+0.9
	1.0nm,0.4s,baz=28,slow=11,SNR=3.9						
WRA	Warramunga Arr	48.28	258	P	P	06 51 41.5	-0.7
	0.9nm,0.7s,baz=96,slow=7.8,SNR=16						
ASAR	Alice Springs	48.51	253	P	P	06 51 43.8	-0.3
	3.7nm,0.7s,baz=86,slow=8.0,SNR=64						
PETK	Petropavlovsk-	72.91	343	P	P	06 54 27.2	0.0
	3.6nm,0.7s,baz=115,slow=8.9,SNR=9.2						
NVAR	Mina Array Bea	75.84	43	P	P	06 54 44.9	+0.3
	0.6nm,0.8s,baz=211,slow=7.8,SNR=4.8						
TXAR	Lajitas Array	82.22	57	P	P	06 55 19.5	+0.4
	0.1nm,0.4s,baz=262,slow=8.6,SNR=3.9						
ILAR	Eielson Array	83.45	12	P	P	06 55 23.9	-0.6
	0.3nm,0.6s,baz=213,slow=5.4,SNR=8.0						
PDAR	Pinedale Array	83.78	42	P	P	06 55 26.4	-0.5
	0.4nm,0.7s,baz=204,slow=3.6,SNR=4.1						
BRTR	Keskin Array B	145.80	319	PKPbc	PKPbc	07 02 35.8	+0.3
	1.4nm,0.8s,baz=70,slow=1.4,SNR=5.3						
GERES	GERESS Array B	146.64	350	PKPbc	PKPbc	07 02 38.0	+0.5
	0.3nm,0.4s,baz=8.9,slow=9.5,SNR=3.7						

*SOME **30** 06:51:02.3, 40°.90N×69°.68E, h0^{km}*

*KRNET **30** 06:51:03.8±0.1, 41°.17N×69°.63E, mb3.1*

*ISU **30** 06:51:05, 41°.00N×70°.30E, h5^{km}, Hypocentre not reviewed by the ISC*

*NNC **30** 06:51:06.2±0.8, 40°.85N×69°.87E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=5.6km s-min=3.4km az=30.0*

ISC 30 06:51:06.9±1.4**, 41°.09N**±0°.05×**69°.71E**±0°.05**, h10^{km}, n36, σ2ˢ.31**/53**, 20C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.39	306	*e*S		06 51 22.0	
CHMG	Chimgan	0.51	26	*e*P		06 51 18.0	
CHMG				*e*S		06 51 25.0	
YNGY	Yangiyul	0.51	272	*e*P		06 51 24.0	
YNGY				*e*S		06 51 47.0	
IUG	Iuzhnay	1.08	13	*e*P	Pb	06 51 27.6	-0.2
	91nm,0.1s						
IUG				*e*S	Sn	06 51 46.4	+3.0
	177nm,0.3s						
TRKS	Terek-Say	1.16	68	⇑*i*P	Pb	06 51 26.9	-2.3
	baz=75						
TRKS				⇑*i*S	Sb	06 51 43.5	-0.9
	baz=75						
CHM	Chimkent	1.23	356	*e*P	Pb	06 51 30.1	-0.2
	10nm,0.3s						
CHM				*e*S	Sn	06 51 51.0	+4.1
	413nm,0.3s						
BTK	Batken	1.33	140	⇑*i*P	Pn	06 51 30.9	-0.8
	baz=40						
BTK				⇑*i*S	Sg	06 51 50.8	+0.9
	baz=40						
BRLS	Borolday	1.94	3	*e*P	Pn	06 51 38.6	-1.3
	28nm,0.2s						
BRLS				*e*S	Sn	06 52 05.0	+0.6
	69nm,0.5s						
KK31	Karatay Array	2.09	16	Pn	Pb	06 51 45.8	+0.7
	8.9nm,0.7s,baz=200,slow=17,SNR=38						
KK31				Sn	Sg	06 52 15.4	+1.2
	27nm,0.7s,baz=192,slow=18,SNR=22						
DZA	Taraz	2.16	33	*e*P	Pb	06 51 46.7	+0.5
	69nm,0.1s						
DZA				*e*S	Sg	06 52 19.1	+2.6
	84nm,0.2s						
ARSB	Arslanbob	2.48	84	⇑*i*P	Pn	06 51 48.3	+0.8
	baz=85						
ARSB				⇑*i*S	Sb	06 52 21.0	-1.3
	baz=85						
MNAS	Manas	2.51	55	⇓*i*P	Pn	06 51 48.3	+0.4
	baz=57						
MNAS				⇓*i*S	Sn	06 52 20.6	+1.9
	baz=57						
MRKS	Merke	3.10	57	*e*P	Pb	06 52 03.0	+0.8
	6.0nm,0.4s						
MRKS				*e*S	Sg	06 52 47.0	+0.6
	6.3nm,0.4s						
MRKS	Merke	3.10	57	Lg	Lg	06 52 47.0	
	6.3nm,0.4s						
AML	Almayashu	3.16	70	⇑*i*P	Pn	06 51 58.1	+1.0
	baz=71						
AML				⇑*i*S	Sn	06 52 37.2	+2.1
	baz=71						
EKS2	Erkin-Say	3.42	61	⇑*e*P	Pn	06 52 01.0	+0.6
	baz=63						
EKS2				⇑*i*S	Sn	06 52 42.7	+1.7
	baz=63						
ARLS	Aral	3.55	76	⇑*i*P	Pn	06 52 02.9	+0.7
	baz=77						
ARLS				⇑*i*S	Sn	06 52 46.6	+2.3
	baz=77						
UCH	Uchtor	3.77	71	⇑*i*P	Pn	06 52 06.3	+0.7
	baz=72						
UCH				⇑*i*S	Sn	06 52 52.1	+1.9
	baz=72						
AAK	Ala-Archa	3.89	65	⇑Pg	Pb	06 52 17.2	+1.5
	2.5nm,0.6s						
AAK				⇑Lg	Lg	06 53 09.9	
	4.7nm,0.7s						
SGDS	Sogindy	4.34	56	Lg	Lg	06 53 25.1	
	5.6nm,0.5s						
TKM2	Tokmak 2	4.75	65	⇑Pg	Pb	06 52 32.0	+1.6
	2.1nm,0.6s						
TKM2				⇓Lg	Lg	06 53 36.7	
	6.9nm,0.8s						
DGS	Degeres	4.99	63	*e*P	Pb	06 52 37.4	+3.0
	4.8nm,0.6s						
DGS				*e*S	Sg	06 53 46.4	-0.7
	5.8nm,0.6s						
DGS	Degeres	4.99	63	Pg	Pb	06 52 37.4	+3.0
	4.8nm,0.6s						
DGS				Lg	Lg	06 53 46.4	
	5.8nm,0.6s						
KST	Kastek	5.04	65	⇑*i*P	Pb	06 52 37.2	+1.8
	5.8nm,0.5s						
KST				⇑*i*S	Sg	06 53 45.9	-3.0
	9.1nm,0.6s						
KST	Kastek	5.04	65	Pg	Pb	06 52 37.2	+1.8
	5.8nm,0.5s						
KST				Lg	Lg	06 53 45.9	
	9.1nm,0.6s						
BTLS	Baital	5.06	37	*e*P	Pg	06 52 40.1	-3.8
	2.2nm,0.6s						
BTLS				*e*S	Sg	06 53 50.8	+1.4
	3.5nm,0.4s						
BTLS	Baital	5.06	37	Pg	Pg	06 52 40.1	-3.8
	2.2nm,0.6s						
BTLS				Lg	Lg	06 53 50.8	
	3.5nm,0.4s						
MTBS	Maitube	5.39	66	*e*P	Pb	06 52 44.6	+3.3
	7.0nm,0.1s						
MTBS				*e*S	Sg	06 53 58.4	-1.7
	9.1nm,0.1s						
MTBS	Maitube	5.39	66	Pg	Pb	06 52 44.6	+3.3
	7.0nm,0.1s						
MTBS				Lg	Lg	06 53 58.4	
	9.1nm,0.1s						
KUU	Kurty	5.64	58	⇑*i*P	Pb	06 52 49.2	+3.8
	2.8nm,0.3s						
KUU				⇓*i*S	Sg	06 54 07.3	-0.7
	5.0nm,0.3s						
KUU	Kurty	5.64	58	Pg	Pb	06 52 49.2	+3.8
	2.8nm,0.3s						
KUU				Lg	Lg	06 54 07.3	
	5.0nm,0.3s						
TNSS	Tian-Shan	5.72	68	*e*P	Pb	06 52 50.4	+3.3
	1.1nm,0.3s						
TNSS				*e*S	Sg	06 54 08.0	-2.7
	1.9nm,0.3s						
TNSS	Tian-Shan	5.72	68	Pg	Pb	06 52 50.4	+3.3
	1.1nm,0.3s						
TNSS				Lg	Lg	06 54 08.0	
	1.9nm,0.3s						
KTBS	Karatobe	5.79	61	*e*P	Pb	06 52 52.1	+4.2
	2.0nm,0.6s						
KTBS				*e*S	Sg	06 54 11.0	-1.6
	5.5nm,0.8s						
KTBS	Karatobe	5.79	61	Pg	Pb	06 52 52.1	+4.2
	2.0nm,0.6s						
KTBS				Lg	Lg	06 54 11.0	
	5.5nm,0.8s						
ARXS	Arharly	6.75	60	*e*P	Pb	06 53 09.7	+5.4
	11nm,0.6s						
ARXS				*e*S	Sg	06 54 41.4	-2.0
	3.7nm,0.4s						
ARXS	Arharly	6.75	60	Pg	Pb	06 53 09.7	+5.4
	11nm,0.6s						
ARXS				Lg	Lg	06 54 41.4	
	3.7nm,0.4s						
KAPS	Kapalarasan	8.20	56	*e*P	Pg	06 53 36.9	-6.9
	0.7nm,0.4s						
KAPS				*e*S	Sg	06 55 27.9	-2.0
	1.6nm,0.4s						
KAPS	Kapalarasan	8.20	56	Pg	Pg	06 53 36.9	-6.9
	0.7nm,0.4s						
KAPS				Lg	Lg	06 55 27.9	
	1.6nm,0.4s						

IDC 30 07:08:43.7±7.0**, 7°.24S**×**126°.82E, h266^{km}**±74^{km}**, mb2.9**/2**, mb1 3.1**/6**, mb1mx2.8**/40**, mbtmp3.6**/6**, Error ellipse: s-maj=92.8km s-min=18.3km az=50.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.29	226	P	Pn	07 09 53.1	+1.4
	6.8nm,0.3s,baz=225,slow=1.4,SNR=2.3						
BATI				S	S	07 10 45.9	0.0
	19nm,0.3s,baz=98,slow=6.2,SNR=12						
FITZ	Fitzroy Crossi	10.85	186	P	Pn	07 11 12.5	-0.3
	baz=24,slow=10.0,SNR=1.9						
WRA	Warramunga Arr	14.58	151	P	P	07 11 57.7	-0.5
	0.2nm,0.3s,baz=328,slow=13,SNR=11						
WRA				S	S	07 14 49.3	+10
	0.1nm,0.3s,baz=336,slow=22,SNR=2.9						
ASAR	Alice Springs	17.69	158	P	P	07 12 32.0	-0.2
	0.2nm,0.3s,baz=335,slow=11,SNR=12						
STKA	Stephens Creek	28.12	153	P	P	07 14 11.7	+0.2
	0.9nm,0.6s,baz=332,slow=15,SNR=2.6						
MKAR	Makanchi Array	66.74	328	P	P	07 19 06.5	-0.1
	0.1nm,0.4s,baz=116,slow=6.7,SNR=3.2						

*NNC **30** 07:11:33.8±0.7, 50°.00N×78°.28E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=8.2km s-min=3.0km az=88.0, Suspected Mining explosion.*

*IDC **30** 07:11:35.0±1.1, 50°.04N×78°.72E, h0^{km}, mb1 2.8/2, mb1mx2.7/42, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=16.8km s-min=6.5km az=68.0*

ISC 30 07:11:31.8±1.2**, 50°.03N**±0°.03×**78°.11E**±0°.08**, h0^{km}, n22, σ1ˢ.14**/32**, 19C-5D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.61	25	⇑P	Pb	07 11 45.7	+0.3
KUR07				⇓S	Sb	07 11 54.9	+0.2
KUR06	Kurchatov Arra	0.63	24	⇑P	Pb	07 11 46.2	+0.4
KUR06				⇑S	Sb	07 11 54.6	-0.6
KUR17	Kurchatov Arra	0.65	21	⇑P	Pb	07 11 46.8	+0.8
KUR17				⇑S	Sb	07 11 56.0	+0.4
KUR16	Kurchatov Arra	0.65	22	⇑P	Pb	07 11 46.5	+0.4
KUR16				⇑S	Sb	07 11 55.7	0.0
KURBB	Kurchatov Arra	0.65	24	Pg	Pb	07 11 46.4	+0.3
	1.8nm,0.3s,baz=167,slow=19,SNR=29						
KURBB				Lg	Lg	07 11 55.2	
	2.2nm,0.3s,baz=178,slow=32,SNR=38						
KURBB	Kurchatov Arra	0.65	24	⇑P	Pb	07 11 46.5	+0.4
	9.7nm,0.3s						
KURBB				⇑S	Sb	07 11 55.5	-0.2
	100nm,0.6s						
KUR15	Kurchatov Arra	0.66	26	⇓P	Pb	07 11 46.3	+0.1
KUR15				⇓S	Sb	07 11 55.7	-0.2
KUR14	Kurchatov Arra	0.66	27	⇑P	Pb	07 11 46.3	0.0
KUR14				⇑S	Sb	07 11 54.7	-1.3
KUR05	Kurchatov Arra	0.67	24	⇑P	Pb	07 11 46.8	+0.4
KUR05				⇑S	Sb	07 11 55.5	-0.8
KUR04	Kurchatov Arra	0.69	23	⇑P	Pb	07 11 47.0	+0.2
KUR04				⇑S	Sb	07 11 56.2	-0.7
SEM	Semipalatinsk	1.43	74	P	Pb	07 12 01.9	+2.5
	5.4nm,0.1s						
SEM				S	Sg	07 12 16.6	-1.0
	25nm,0.2s						
MAKZ	Makanchi	4.12	140	⇑Pg	Pb	07 12 46.3	+1.0
	0.8nm,0.5s						
MAKZ				⇓Lg	Lg	07 13 41.5	
	4.1nm,0.5s						
MK31	Makanchi Array	4.27	138	⇑Pn	Pn	07 12 37.9	-0.2
	baz=333,slow=11,SNR=15						
MK31				⇑Pg	Pb	07 12 48.9	+1.1
	0.7nm,0.5s,baz=319,slow=13,SNR=6.8						
MK31				⇓Lg	Lg	07 13 44.7	
	2.4nm,0.5s,baz=328,slow=25,SNR=12						
MKAR	Makanchi Array	4.27	138	Pn	Pn	07 12 38.9	+0.8
	0.3nm,0.3s,baz=330,slow=11,SNR=17						
MKAR				Pg	Pb	07 12 45.0	-2.8
	0.3nm,0.3s,baz=320,slow=15,SNR=12						
MKAR				Lg	Lg	07 13 39.0	
	1.4nm,0.3s,baz=323,slow=25,SNR=11						
KAPS	Kapalarasan	4.82	169	Pg	Pb	07 12 58.5	+1.3
	1.1nm,0.4s						
KAPS				Lg	Lg	07 13 53.8	
	6.5nm,0.3s						
ZSN	Zaisan	5.16	117	Pg	Pn	07 12 51.1	+0.8
	3.5nm,0.5s						
ZSN				Lg	Lg	07 13 41.6	
	6.6nm,1.0s						
I46RU	ZALESOVO INFRA	5.71	44	*i*		07 45 00.0	
	baz=225,slow=329,SNR=2.7						
ZALV	Zalesovo Beam	5.71	44	Pn	Pn	07 12 59.3	+1.5
	0.6nm,0.3s,baz=229,slow=14,SNR=6.8						
ZALV				Lg	Lg	07 14 28.5	
	0.2nm,0.3s,baz=225,slow=22,SNR=2.6						
DJR	Jarkent	5.81	168	Pg	Pb	07 13 16.0	+2.0
	0.5nm,0.0s						
DJR				Lg	Lg	07 14 24.2	
	2.9nm,0.3s						
ARXS	Arharly	5.82	182	Pg	Pg	07 13 20.9	-2.4
	1.8nm,0.2s						
ARXS				Lg	Lg	07 14 32.6	
	4.6nm,0.3s						
KUU	Kurty	6.26	192	Pg	Pg	07 13 31.5	-0.2
	1.4nm,0.3s						
KUU				Lg	Lg	07 14 50.8	
	3.4nm,0.4s						
PDGK	Podgornoye	6.77	171	⇑Lg	Lg	07 15 06.9	
	1.9nm,0.6s						

IDC 30 07:23:49.3±3.0**, 54°.35N×86°.94E, h0^{km}, mb1 2.7**/2**, mb1mx2.6**/50**, mbtmp2.7**/2**, ML2.3**/2**, Error ellipse: s-maj=25.6km s-min=15.5km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.31	253	*i*		07 31 03.2	
	baz=73,slow=345,SNR=2.6						
ZALV	Zalesovo Beam	1.31	253	Pg	Pg	07 24 13.0	-1.4
	1.7nm,0.3s,baz=72,slow=17,SNR=22						
ZALV				Lg	Lg	07 24 30.9	
	1.3nm,0.3s,baz=72,slow=30,SNR=9.0						
KURBB	Kurchatov Arra	6.35	237	Pn	Pn	07 25 25.1	+1.1
	0.0nm,0.3s,baz=55,slow=14,SNR=4.6						
KURBB				Lg	Lg	07 27 11.4	
	baz=55,slow=34,SNR=3.1						
MKAR	Makanchi Array	8.12	203	Pn	Pn	07 25 49.0	+0.6
	0.1nm,0.3s,baz=14,slow=10,SNR=4.6						
MKAR				Sn	Sn	07 27 22.2	+1.4
	0.1nm,0.3s,baz=25,slow=24,SNR=3.2						
MKAR				Lg	Lg	07 28 05.7	
	0.0nm,0.3s,baz=29,slow=31,SNR=3.3						

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*NNC **30** 07:28:17.4±0.8, 48°.63N×77°.83E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=11.5km s-min=3.3km az=82.0, Suspected Mining explosion.*

*IDC **30** 07:28:18.0±3.4, 48°.69N×77°.92E, h0^{km}, mb1 2.9/2, mb1mx2.8/41, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=44.8km s-min=11.2km az=71.0*

ISC 30 07:28:18.6±1.4**, 48°.69N**±0°.06×**77°.9E**±0°.1**, h0^{km}, n11, σ0^{s}.72**/12**, 4C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	1.98	12	Pg	Pn	07 28 53.3	-0.1
	0.5nm,0.3s,baz=201,slow=16,SNR=39						
KURBB				Lg	Lg	07 29 22.1	
	0.4nm,0.3s,baz=196,slow=27,SNR=12						
KURBB	Kurchatov Arra	1.98	12	⇓P	Pn	07 28 53.1	-0.3
	3.3nm,0.3s						
KURBB				⇓S	Sb	07 29 20.5	-0.3
	10nm,0.5s						
MAKZ	Makanchi	3.35	123	⇑Pg	Pb	07 29 17.7	-1.2
	1.4nm,0.8s						
MAKZ				⇓Lg	Lg	07 30 02.2	
	1.7nm,0.6s						
MK31	Makanchi Array	3.54	121	⇑Pn	Pn	07 29 14.5	-0.3
	0.9nm,0.8s,baz=300,slow=11,SNR=8.5						
MK31				⇑Pg	Pb	07 29 22.3	+0.3
	0.4nm,0.5s,baz=294,slow=14,SNR=10.0						
MK31				⇑Lg	Lg	07 30 08.1	
	1.1nm,0.5s,baz=309,slow=27,SNR=9.0						
MKAR	Makanchi Array	3.54	121	Pn	Pn	07 29 15.1	+0.3
	0.1nm,0.3s,baz=299,slow=12,SNR=6.7						
MKAR				Lg	Lg	07 30 06.6	
	0.5nm,0.3s,baz=305,slow=28,SNR=14						
KAPS	Kapalarasan	3.56	163	Pg	Pb	07 29 22.2	-0.1
	0.4nm,0.2s						
KAPS				Lg	Lg	07 30 09.5	
	7.7nm,0.5s						
ARXS	Arharly	4.48	180	Pg	Pb	07 29 37.7	-0.4
	2.1nm,0.5s						
ARXS				Lg	Lg	07 30 35.9	
	7.1nm,0.7s						
DJR	Jarkent	4.56	162	Pg	Pb	07 29 40.7	+1.2
	0.6nm,0.2s						
DJR				Lg	Lg	07 30 40.7	
	6.3nm,0.6s						
MNBS	Baschi	4.63	175	Pg	Pb	07 29 40.3	-0.3
	0.6nm,0.2s						
MNBS				Lg	Lg	07 30 40.1	
	7.6nm,0.7s						
I46RU	ZALESOVO INFRA	6.83	37	*i*		08 11 00.0	
	baz=221,slow=336,SNR=0.7						
ZALV	Zalesovo Beam	6.83	37	Pn	Pn	07 30 01.1	+1.1
	0.9nm,0.3s,baz=233,slow=16,SNR=6.2						

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*NEIC **30** 07:45:53.3±2.4, 31°.72N±0°.05×131°.80E±0°.06, h29^{km}±5^{km}, mb4.6/31, Mwr4.4/12, Error ellipse: s-maj=8.1km s-min=5.7km az=130.0*

*NIED **30** 07:45:53.2, 31°.76N×131°.91E, h26^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.72; $M_{\theta\theta}$2.76; $M_{\phi\phi}$-4.48; $M_{r\theta}$3.06; $M_{\theta\phi}$-0.32; $M_{\phi r}$3.39; Fault plane solution: $M_0$6.02000×10^{15} NP1:ϕ_s39.00000°, δ80.00000°, λ125.00000°. NP2:ϕ_s143.00000°, δ36.00000°, λ18.00000°.*

*MOS **30** 07:45:53.5±0.9, 31°.79N×131°.63E, h44^{km}, mb4.7/21 Error ellipse: s-maj=9.2km s-min=5.6km az=93.0*

*NEIC **30** 07:45:53.3, 31°.72N×131°.78E, h30^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.80; $M_{\theta\theta}$1.09; $M_{\phi\phi}$0.71; $M_{r\theta}$2.84; $M_{\theta\phi}$1.37; $M_{\phi r}$4.05; Fault plane solution: $M_0$5.37000×10^{15} NP1:ϕ_s67.33000°, δ12.69000°, λ-59.03000°. NP2:ϕ_s215.73000°, δ79.15000°, λ-96.61000°. Principal axes: T 5.5307, Plg34.0000°, Azm311.0000°; N -0.3434, Plg6.0000°, Azm217.0000°; P -5.1872, Plg55.0000°, Azm117.0000°;*

*JMA **30** 07:45:53.2±0.1, 31°.76N×131°.91E, h26^{km}±2^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s250.00000°, δ11.00000°, λ126.00000°. NP2: ϕ_s33.00000°, δ81.00000°, λ84.00000°. Principal axes: T Plg53.0000°, Azm296.0000°; N Plg6.0000°, Azm34.0000°; P Plg36.0000°, Azm129.0000°;*

JMA Felt II J1.

*IDC **30** 07:45:54.1±0.6, 31°.81N×131°.53E, h30^{km}±3^{km}, mb4.1/25, mb1 4.2/29, mb1mx4.1/62, mbtmp4.2/29, ML3.9/3, MS4.0/20, Ms1 4.0/20, ms1mx3.7/49 Error ellipse: s-maj=14.4km s-min=10.9km az=95.0*

ISC 30 07:45:53.8±0.5**, 31°.76N**±0°.03×**131°.82E**±0°.04**, h32^{km}**±3^{km}**, h32^{km}:pP-P, n173, σ1^{s}.47**/194**, mb4.5**/59**, MS4.1**/25**, 11C-5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNKG	Nichinankitago	0.39	255	⇓P	Pb	07 46 02.2	-0.4
JNKG				S	Sn	07 46 09.2	-0.3
JNAR	Kushima--Naru	0.52	243	⇓P	Pn	07 46 05.0	0.0
JNAR				S	Sn	07 46 13.3	+0.5
JTSN	Tsuno	0.55	331	⇓P	Pb	07 46 04.6	-0.5
JTSN				S	Sb	07 46 12.7	-0.1
JTZ	Takazaki	0.64	283	⇑P	Pn	07 46 06.5	-0.1
JTZ				S	Sn	07 46 16.7	+1.0
JHHC	Hyugahichiya	0.70	347	⇑P	Pn	07 46 06.9	-0.5
JHHC				S	Sb	07 46 16.4	-0.4
JZO	Okuchi	1.10	290	⇑P	Pb	07 46 13.6	-0.7
JIU3	Izumi3	1.16	313	⇑P	Pb	07 46 14.8	-0.4
JSU	Suzuyama	1.19	258	Pn	Pb	07 46 15.1	-0.7
JSU				Sn	Sn	07 46 26.8	-2.6
JTN	Tanegashima 3	1.32	213	⇑P	Pn	07 46 16.5	+0.5
JTO	Tosashimizu	1.38	37	⇑P	Pn	07 46 15.2	-1.6
JNU	Nakatsue	1.57	330	Pn	Pb	07 46 21.0	-1.2
	127nm,0.3s,baz=62,slow=10.0,SNR=253						
JNU				Sn	Sb	07 46 41.9	+0.2
	184nm,0.3s,baz=37,slow=21,SNR=6.8						
JNU	Nakatsue	1.57	330		Pn	07 46 20.6	+1.1
JNU				Sn	Sn	07 46 39.0	+0.2
JMN	Monobe	2.62	41		Pn	07 46 34.0	0.0
JHS	Saijyo	3.41	18		Pn	07 46 45.4	+0.7
JTU	Tsushima	3.42	324		Pn	07 46 45.4	+0.5
JWT	Wachi	4.61	39		Pn	07 47 02.4	+1.1
INU	Inuyama	5.62	49	Pn	Pn	07 47 16.7	+1.5
JOW	Kunigami	5.81	213	Pn	Pn	07 47 17.4	-0.3
	10nm,0.3s,baz=94,slow=18,SNR=12						
JOW				Sn	Sn	07 48 20.5	-2.8
	9.1nm,0.3s,baz=151,slow=19,SNR=7.2						
TJN	Taejon	5.90	322	*ce*P	Pn	07 47 19.5	+0.5
JMZ	Minamidaito 2	5.95	185	Pn	Pn	07 47 18.9	-0.7
JGF	Kuroka	6.00	49		Pn	07 47 21.7	+1.3
JSG	Sagara	6.08	60	Pn	Pn	07 47 21.6	+0.3
KSRS	Korea Array	6.52	332	Pn	Pn	07 47 29.0	+1.5
	0.5nm,0.3s,baz=147,slow=14,SNR=6.3						
KSRS				Sn	Sn	07 48 36.6	-4.1
	1.8nm,0.3s,baz=346,slow=28,SNR=5.7						
KSRS				LR	LR	07 50 18.5	
	comp=Z,1µm,19.0s,baz=153,slow=42						
KS19	Wonju Array Si	6.59	331	Pn	Pn	07 47 28.4	0.0
JHJ2	Mitsune	6.89	77	Pn	Pn	07 47 32.0	-0.6
MAJO	Matsushiro	7.12	46	*i* P	Pn	07 47 36.9	+1.1
MAJO	Matsushiro	7.12	46	Pn	Pn	07 47 35.8	0.0
MAT	Matsushiro	7.12	46	P	Pn	07 47 35.7	-0.1
MAT				*e*S	Sn	07 48 52.1	-3.6
MJAR	Matsushiro Arr	7.12	46	Pn	Pn	07 47 40.4	+4.5
	0.2nm,0.3s,baz=246,slow=14,SNR=4.3						
MJAR	Matsushiro Arr	7.12	46	Pn	Pn	07 47 37.2	+1.4
NJ2	Nanjing	11.02	275	*e*P	Pn	07 48 30.0	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=N,420nm,5.7s						
NJ2				LR	LR		
	comp=E,800nm,9.9s						
NJ2				LR	LR		
	comp=Z,1µm,11.4s						
USA0B	Ussuriysk Arra	12.42	1	P	Pn	07 48 49.5	+1.2
USA0B	Ussuriysk Arra	12.42	1	Pn	Pn	07 48 49.5	+1.2
USRK	Ussuriysk Ar.	12.42	1	Pn	Pn	07 48 49.3	+1.1
	baz=190,slow=14,SNR=1.5						
USRK				LR	LR	07 53 29.8	
	comp=Z,523nm,18.5s,baz=170,slow=37						
USRK	Ussuriysk Ar.	12.42	1		Pn	07 48 47.8	-0.4
YULB	Yu-li	12.51	231		Pn	07 48 48.2	-1.4
TIA	Tai'an	12.97	294	P	Pn	07 48 59.8	+3.9
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ERM	Erimo	13.66	38	*i* P	Pn	07 49 07.0	+1.8
TEY	Ternei	13.77	14	*e*P	P	07 49 12.3	-2.5
BJI	Beijing	15.12	307	P	P	07 49 31.5	+1.7
BJI				pmax	pmax		
	comp=Z,30nm,0.8s						
BJI				LR	LR		
	comp=N,310nm,14.7s						
BJI				LR	LR		
	comp=E,650nm,14.1s						
BJI				LR	LR		
	comp=Z,340nm,18.9s						
YUK	Yuzh-Kuril'sk	16.49	38	*i* P	P	07 49 45.3	+0.3
TIY	Taiyuan	16.99	296	*e*P	P	07 49 54.5	+3.8
TIY				pmax	pmax		
	comp=Z,26nm,0.7s						
TIY				LR	LR		
	comp=N,280nm,8.1s						
TIY				LR	LR		
	comp=E,670nm,15.5s						
TIY				LR	LR		
	comp=Z,830nm,15.2s						
YSS	Yuzh-Sakhalins	17.34	26	*e*P	Pn	07 49 52.6	-0.7
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS	Yuzh-Sakhalins	17.34	26	P	Pn	07 49 53.0	-0.3
YSS				IAmb	IAmb	07 50 16.3	
	comp=Z,49nm,1.5s						
KLR	Kul'dur	17.45	360	P	P	07 49 56.1	+0.5
	comp=Z,1.3nm,0.3s,baz=168,slow=9.5,SNR=36						
KLR				LR	LR	07 56 37.7	
	comp=Z,289nm,18.3s,baz=176,slow=37						
HHC	Hu-ho-hao-te	18.64	305	*e*P	Pn	07 50 10.3	+0.9
HHC				sP	sP	07 50 20.5	-0.7
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
HHC				LR	LR		
	comp=N,460nm,15.7s						
HHC				LR	LR		
	comp=E,930nm,15.0s						
HHC				LR	LR		
	comp=Z,910nm,14.5s						
XAN	Xi'an	19.36	283	P	P	07 50 17.0	+0.2
XAN				pP	pP	07 50 23.0	-2.1
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
BTO	Baotou	19.64	303	*e*P	P	07 50 19.5	-0.4
HIA	Hailar	19.70	336	P	P	07 50 20.2	-0.2
HIA				pmax	pmax		
	comp=Z,21nm,0.7s						
HIA	Hailar	19.70	336	P	P	07 50 20.1	-0.2
HIA				IAmb	IAmb	07 50 33.7	
	comp=Z,21nm,0.7s						
ZEA	Zeya	22.21	353	*e*P	P	07 50 48.6	+1.3
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
QIZ	Qiongzhong	23.50	243	P	P	07 51 01.3	+0.3
QIZ				S	S	07 55 14.3	+1.5
QIZ				sS	sS	07 55 28.5	+0.7
QIZ				LR	LR		
	comp=N,230nm,14.7s						
QIZ				LR	LR		
	comp=E,220nm,16.7s						
QIZ				LR	LR		
	comp=Z,220nm,18.4s						
LZH	Lanzhou	23.57	288	*e*P	P	07 51 01.0	-0.8
LZH				sP	pP	07 51 12.0	+1.4
LZH				PP	PnPn	07 51 31.3	+2.1
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,92nm,4.7s						
LZH				LR	LR		
	comp=N,430nm,11.4s						
LZH				LR	LR		
	comp=E,500nm,11.6s						
LZH				LR	LR		
	comp=Z,510nm,14.1s						
CD2	Chengdu	23.96	275	P	P	07 51 04.5	-0.9
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				LR	LR		
	comp=N,510nm,10.3s						
CD2				LR	LR		
	comp=E,800nm,10.3s						
CD2				LR	LR		
	comp=Z,930nm,14.8s						
ULN	Ulaanbaatar	24.75	318	P	P	07 51 12.2	-0.4
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	24.75	318	P	P	07 51 12.2	-0.4
ULN				IAmb	IAmb	07 51 14.5	
	comp=Z,18nm,1.0s						
SONM	Songino Array	25.12	317	P	P	07 51 15.4	-0.4
	comp=Z,15nm,0.8s,baz=130,slow=9.6,SNR=71						
SONM				PcP	PcP	07 54 50.4	+1.0
	comp=Z,0.6nm,0.6s,baz=121,slow=2.8,SNR=3.3						
SONM				LR	LR	08 02 32.4	
	comp=Z,644nm,18.6s,baz=119,slow=40						
SONM	Songino Array	25.12	317	P	P	07 51 15.4	-0.4
GTA	Gaotai	27.02	295	⇓P	P	07 51 33.3	+0.2
GTA				pP	pP	07 51 43.3	+1.1
GTA				sP	sP	07 51 46.5	+0.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,58nm,5.6s						
GTA				LR	LR		
	comp=N,200nm,15.6s						
GTA				LR	LR		
	comp=E,450nm,16.7s						
GTA				LR	LR		
	comp=Z,570nm,16.4s						
ZAK	Zakamensk	28.18	320	*e*P	P	07 51 32.0	-11
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TLY	Talaya	28.67	322	LR	LR	08 03 44.3	
	comp=Z,148nm,18.7s,baz=120,slow=38						
PET	Petropavlovsk	28.76	35	*e*P	P	07 51 51.7	+3.3
PET				*e*S	S	07 56 37.9	+2.2
PET				pmax	pmax		
	comp=Z,100nm,8.4s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
CHTO	Chiang Mai	32.27	254	P	P	07 52 18.3	-1.4
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHTO	Chiang Mai	32.27	254	P	P	07 52 18.3	-1.4
CMAR	Chiang Mai Arr	32.45	254	P	P	07 52 21.0	-0.2
	comp=Z,0.7nm,0.3s,baz=47,slow=8.6,SNR=3.8						
CMAR				PcP	PcP	07 55 09.1	+1.0
	comp=Z,1.1nm,0.4s,baz=69,slow=1.4,SNR=4.9						
CMAR				LR	LR	08 06 59.1	
	comp=Z,142nm,18.7s,baz=114,slow=39						
CMAR	Chiang Mai Arr	32.45	254	P	P	07 52 19.1	-2.2
H11N2	WAKE ISLAND Hy	33.65	102	T	T	08 28 23.1	
	baz=297,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	33.65	102	T	T	08 28 33.9	
	baz=297,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	33.66	102	T	T	08 28 25.1	
	baz=297,slow=75,SNR=16						
LUWI	Luwuk	33.73	196	P	P	07 52 29.9	-2.6
SEY	Seymchan	33.83	17	P	P	07 52 34.6	+1.8
	comp=Z,0.6nm,0.3s,baz=206,slow=12,SNR=3.9						
BKB	Balikpapan	35.76	206	P	P	07 52 47.2	-2.7
WMQ	Urumqi	36.48	302	*e*P	P	07 52 55.5	-0.5
WMQ				pP	pP	07 53 04.0	-1.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,5.1s						
WMQ				LR	LR		
	comp=N,720nm,5.5s						
WMQ				LR	LR		
	comp=E,190nm,5.1s						
WMQ				LR	LR		
	comp=Z,250nm,26.7s						
GUN	Gumba	39.81	277	*e*P	P	07 53 24.7	+0.1
	comp=Z,40nm,0.5s						
ZALV	Zalesovo Beam	40.01	318	P	P	07 53 22.5	-2.9
	comp=Z,0.4nm,0.3s,baz=20,slow=4.6,SNR=2.1						
ZALV				LR	LR	08 11 24.3	
	comp=Z,162nm,18.2s,baz=88,slow=38						
PKI	Pulchoki	40.31	276	*e*P	P	07 53 28.1	-0.6
	comp=Z,12nm,0.5s						
PKIN	Phulchoki	40.32	276	*e*P	P	07 53 27.8	-0.9
	comp=Z,13nm,0.5s						
MK31	Makanchi Array	40.49	306	P	P	07 53 29.1	-0.5
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	40.49	306	P	P	07 53 29.1	-0.5
MKAR	Makanchi Array	40.49	306	P	P	07 53 28.4	-1.2
	comp=Z,2.8nm,0.6s,baz=91,slow=10,SNR=39						
MKAR				LR	LR	08 11 56.4	
	comp=Z,216nm,19.1s,baz=93,slow=39						
MKAR	Makanchi Array	40.49	306	P	P	07 53 28.8	-0.8
MAKZ	Makanchi	40.71	306	P	P	07 53 30.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAKZ	Makanchi	40.71	306	P	P	07 53 30.5	-0.9
GKN	Gorkha	40.84	277	*e*P	P	07 53 32.1	-0.7
BILL	Bilibino	41.45	19	⇓*e*P	P	07 53 38.4	+1.3
BILL				*e**PP	sP	07 53 48.7	-1.2
BILL				*SP	pP	07 53 54.0	+7.8
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
BILL				MLR	MLR		
	comp=Z,59nm,15.0s						
BILL	Bilibino	41.45	19	P	P	07 53 38.2	+1.1
BILL				IAmb	IAmb	07 53 39.8	
	comp=Z,12nm,0.9s						
DANN	Dangsing	41.47	278	*e*P	P	07 53 37.7	-0.5
	comp=Z,21nm,0.5s						
KURK	Kurchatov	43.22	312	P	P	07 53 51.1	-0.7
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KURK	Kurchatov	43.22	312	P	P	07 53 51.0	-0.7
KURBB	Kurchatov Arra	43.27	312	P	P	07 53 50.8	-1.4
	comp=Z,2.2nm,0.7s,baz=98,slow=9.0,SNR=14						
LEM	Lembang	44.79	215	P	P	07 54 04.9	0.0
	comp=Z,17nm,0.4s,baz=340,slow=13,SNR=6.7						
NRIK	Noril'sk	45.07	340	P	P	07 54 05.7	-0.6
	comp=Z,8.0nm,0.3s,baz=40,slow=2.8,SNR=16						
NRIK				LR	LR	08 14 46.1	
	comp=Z,256nm,18.5s,baz=144,slow=38						
NRIK	Noril'sk	45.07	340	*ce*P	P	07 54 04.8	-1.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	45.07	340	P	P	07 54 05.3	-1.0
NRIK				IAmb	IAmb	07 54 18.4	
	comp=Z,7.5nm,1.0s						
KSH	Kashi	45.42	296	P	P	07 54 12.8	+3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,530nm,7.8s						
AAK	Ala-Archa	46.14	301	LR	LR	08 16 07.9	
	comp=Z,228nm,21.6s,baz=37,slow=40						
AAK	Ala-Archa	46.14	301	*i* P	P	07 54 13.4	-2.0
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	48.49	315	P	P	07 54 32.6	-0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	Borovoye	48.49	315	P	P	07 54 32.6	-0.8
BRVK				IAmb	IAmb	07 54 45.6	
	comp=Z,8.4nm,1.3s						
KK31	Karatay Array	48.99	302	P	P	07 54 36.7	-0.7
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	48.99	302	P	P	07 54 36.7	-0.7
KK31				IAmb	IAmb	07 54 49.0	
	comp=Z,4.4nm,0.9s						
KKAR	Karatay Array	48.99	302	P	P	07 54 37.1	-0.3
KKAR	Karatay Array	48.99	302	P	P	07 54 37.1	-0.3
HNR	Honiara	49.01	142	LR	LR	08 13 25.3	
	comp=Z,28nm,19.5s,baz=63,slow=34						
FITZ	Fitzroy Crossi	49.93	188	P	P	07 54 45.3	+0.7
FITZ				IAmb	IAmb	07 55 06.7	
	comp=Z,6.5nm,1.1s						
WRA	Warramunga Arr	51.47	177	P	P	07 54 56.5	+0.3
	comp=Z,2.9nm,0.8s,baz=352,slow=8.2,SNR=17						
WRA	Warramunga Arr	51.47	177	*i* P	P	07 54 57.0	+0.8
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	51.47	177	P	P	07 54 56.5	+0.3
WB2	Warramunga Arr	51.47	177	P	P	07 54 56.2	0.0
WB2				IAmb	IAmb	07 55 07.2	
	comp=Z,6.4nm,0.9s						
ARU	Arti	55.12	320	P	P	07 55 21.3	-1.5
	comp=Z,1.2nm,0.5s,baz=45,slow=4.3						
ARU				LR	LR	08 19 40.2	
	comp=Z,153nm,19.4s,baz=77,slow=37						
ARU	Arti	55.12	320	*c i*P	P	07 55 21.5	-1.2
ARU						07 56 20.9	
ARU						07 57 20.9	
ARU				S	S	08 03 05.0	+1.8
ARU				SS	SS	08 06 50.1	+3.2
ARU				pmax	pmax		
	comp=Z,24nm,2.5s						
ARU	Arti	55.12	320	P	P	07 55 21.2	-1.5
ARU				IAmb	IAmb	07 55 22.2	
	comp=Z,8.8nm,1.0s						
AS31	Alice Springs	55.15	178	P	P	07 55 23.7	+0.4
ASAR	Alice Springs	55.15	178	P	P	07 55 23.8	+0.5
	comp=Z,2.3nm,0.7s,baz=4.2,slow=7.3,SNR=20						
ASAR				LR	LR	08 20 38.7	
	comp=Z,47nm,19.1s,baz=348,slow=38						
ASAR	Alice Springs	55.15	178	P	P	07 55 24.4	+1.1
ASAR	Alice Springs	55.15	178	P	P	07 55 24.4	+1.1
ABKAR	Akbulak array	55.29	311	P	P	07 55 23.3	-0.8
RSO	Redoubt South	55.86	35	P	P	07 55 29.9	+1.7
KDAK	Kodiak Island	56.23	39	P	P	07 55 32.1	+1.4
	comp=Z,13nm,1.1s,baz=341,slow=2.3,SNR=6.2						
SUA	Susitna One	56.74	34	P	P	07 55 35.8	+1.4
RND	Reindeer	57.40	32	P	P	07 55 40.1	+1.1
RND				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RND	Reindeer	57.40	32	P	P	07 55 40.1	+1.1
MDM	Murphy Dome	57.50	30	P	P	07 55 40.5	+0.9
ILAR	Eielson Array	58.09	30	P	P	07 55 44.8	+1.0
	comp=Z,0.7nm,0.7s,baz=292,slow=8.7,SNR=6.3						
GEYT	Alibeck	59.36	298	LR	LR	08 24 52.4	
	comp=Z,130nm,18.7s,baz=320,slow=40						
KIRV	Kirov	59.65	323	*ce*P	P	07 55 53.3	-1.3
BCAR	Beaver Creek A	60.61	31	P	P	07 56 02.7	+1.4
BELG	Belogornoye	62.17	316	*i* P	P	07 56 11.5	-0.3
INK	Inuvik	62.58	25	P	P	07 56 14.4	+0.1
	comp=Z,2.4nm,0.8s,baz=302,slow=8.1,SNR=7.8						
KLMR	Klimovskoe	63.89	327	*e*P	P	07 56 18.8	-4.3
KLMR				pmax	pmax		
	comp=Z,15nm,1.1s						
KLMR	Klimovskoe	63.89	327	*e*P	P	07 56 18.8	-4.3
KLMR				AMP		07 56 22.3	
	comp=Z,15nm,1.1s						
STKA	Stephens Creek	63.97	171	P	P	07 56 25.0	+1.2
	comp=Z,1.4nm,0.5s,baz=328,slow=13,SNR=3.9						
STKA				pP	pP	07 56 34.8	+1.5
	comp=Z,4.3nm,0.8s,baz=359,slow=7.7,SNR=2.9						
STKA				LR	LR	08 24 27.3	
	comp=Z,40nm,19.7s,baz=33,slow=36						
C36M	Paulatuk	65.41	22	P	P	07 56 33.5	+0.6
ARCES	ARCESS Array B	66.03	338	P	P	07 56 36.3	-0.6
	comp=Z,3.9nm,0.9s,baz=54,slow=4.6,SNR=2.1						
ARCES				LR	LR	08 29 34.7	
	comp=Z,180nm,18.9s,baz=355,slow=40						

EUNU	Eureka	66.45	7	P	P	07 56 39.7	+0.2
KBZ	Khabaz	68.13	309	P	P	07 56 50.2	-0.4
	comp=Z,4.8nm,0.8s,baz=109,slow=2.5,SNR=12						
KBZ				LR	LR	08 31 17.1	
	comp=Z,159nm,19.2s,baz=29,slow=40						
KBZ	Khabaz	68.13	309	ceP	P	07 56 50.6	-0.1
KIV	Kislovodsk	68.18	309	eP	P	07 56 51.6	+0.5
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV				MLR	MLR		
	comp=Z,229nm,17.0s						
FINES	FINESS Array B	69.61	330	P	P	07 56 59.1	-0.4
	comp=Z,2.0nm,0.5s,baz=74,slow=5.1,SNR=14						
FINES				pP	pP	07 57 08.6	-0.5
	comp=Z,2.8nm,0.5s,baz=68,slow=5.1,SNR=3.4						
FINES				LR	LR	08 30 55.4	
	comp=Z,234nm,20.1s,baz=36,slow=39						
FINES	FINESS Array B	69.61	330	i P	P	07 56 59.0	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DAG	Danmarks Havn	70.18	353	i P	P	07 57 02.2	-0.6
DAG	Danmarks Havn	70.18	353	i P	P	07 57 02.2	-0.6
	comp=Z,5.6nm,0.8s						
DAG	Danmarks Havn	70.18	353	i P	P	07 57 02.2	-0.6
DAG				IAmb	IAmb	07 57 04.0	
	comp=Z,5.6nm,0.8s						
YKA	Yellowknife Ar	72.19	27	P	P	07 57 16.3	+1.1
	comp=Z,2.7nm,0.8s,baz=307,slow=5.1,SNR=50						
NACGM	Naroch	72.54	324	i P	P	07 57 17.4	0.0
NACGM				i P	P	07 57 17.4	0.0
NACGM				i P	P	07 57 17.4	0.0
NACGM				i PcP	PcP	07 57 40.4	+5.4
NACGM				i PP	PP	08 00 00.9	+2.4
NACGM				i PPP	PPP	08 02 02.8	
NACGM				i S	S	08 06 34.3	-5.3
NACGM				i PS	PnS	08 08 06.6	+54
NACGM				i SS	SS	08 11 15.4	-2.6
NACGM				i SSS	SSS	08 14 09.8	
NACGM				i LQ	LQ	08 24 04.7	
NACGM				i LR	LR	08 29 33.7	
AKASG	Malin Array Be	73.37	320	P	P	07 57 21.0	-1.4
	comp=Z,1.1nm,0.3s,baz=53,slow=6.3,SNR=6.3						
AKASG				pP	pP	07 57 31.2	-1.0
	comp=Z,1.9nm,0.5s,baz=56,slow=6.6,SNR=5.7						
RAYN	Ar Rayn	75.04	289	P	P	07 57 32.4	-0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HFS	Hagfors	75.37	333	P	P	07 57 33.1	-0.8
	comp=Z,2.5nm,0.8s,baz=20,slow=4.6,SNR=1.7						
HFS				pP	pP	07 57 43.0	-0.6
	comp=Z,2.4nm,0.6s,baz=29,slow=3.4,SNR=1.8						
SUMG	Summit	75.72	357	i P	P	07 57 36.0	-0.2
SUMG	Summit	75.72	357	i P	P	07 57 36.0	-0.2
	comp=Z,26nm,1.0s						
SUMG	Summit	75.72	357	i P	P	07 57 36.0	-0.2
SUMG				IAmb	IAmb	07 57 38.7	
	comp=Z,26nm,1.0s						
NOA	NORSAR Array B	75.73	334	P	P	07 57 34.9	-1.1
	comp=Z,0.4nm,0.6s,baz=64,slow=5.4,SNR=1.1						
BRTR	Keskin Array B	76.11	308	P	P	07 57 37.9	-0.9
	comp=Z,2.1nm,0.9s,baz=116,slow=5.6,SNR=7.6						
BRTR				LR	LR	08 36 03.5	
	comp=Z,60nm,19.2s,baz=27,slow=40						
BRTR	Keskin Array B	76.11	308	P	P	07 57 37.7	-1.0
B08A	Colville Reser	78.07	40	P	P	07 57 50.6	+1.2
B08A				IAmb	IAmb	07 57 51.7	
	comp=Z,5.1nm,1.0s						
BMO	Blue Mountains	81.24	42	P	P	07 58 07.3	+0.5
BMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BMO	Blue Mountains	81.24	42	P	P	07 58 07.3	+0.5
BMO				IAmb	IAmb	07 58 09.2	
	comp=Z,6.8nm,1.3s						
FCC	Fort Churchill	82.06	22	P	P	07 58 11.5	+0.8
FCC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FCC	Fort Churchill	82.06	22	P	P	07 58 11.4	+0.8
FCC				IAmb	IAmb	07 58 27.3	
	comp=Z,6.4nm,0.8s						
BEKR	Beckworth	82.31	48	P	P	07 58 12.8	+0.2
DLMT	Dillon	83.56	40	P	P	07 58 20.2	+1.3
DLMT				IAmb	IAmb	07 58 21.5	
	comp=Z,5.4nm,0.9s						
NVAR	Mina Array Bea	84.45	48	P	P	07 58 25.4	+1.6
	comp=Z,1.2nm,0.7s,baz=301,slow=5.2,SNR=15						
NVAR	Mina Array Bea	84.45	48	P	P	07 58 23.0	-0.7
ELK	Elko	84.93	45	P	P	07 58 25.1	-1.0
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ELK	Elko	84.93	45	P	P	07 58 25.1	-1.0
PDAR	Pinedale Array	86.91	40	P	P	07 58 36.7	+0.8
	comp=Z,1.0nm,0.8s,baz=295,slow=1.9,SNR=12						
PDAR				pP	pP	07 58 46.6	+1.0
	comp=Z,1.1nm,0.8s,baz=292,slow=1.4,SNR=5.8						
PDAR	Pinedale Array	86.91	40	P	P	07 58 36.2	+0.3
ULM	Lac du Bonnet	88.08	28	P	P	07 58 41.6	+0.6
	comp=Z,5.5nm,0.7s,baz=305,slow=5.7,SNR=9.2						
ULM				pP	pP	07 58 51.3	+0.5
	comp=Z,2.9nm,0.8s,baz=304,slow=8.1,SNR=3.1						
SRU	San Rafael Swe	88.77	44	P	P	07 58 44.4	-0.4
SRU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SRU	San Rafael Swe	88.77	44	P	P	07 58 44.4	-0.4
ESDC	Sonseca Array	97.94	327	LR	LR	08 49 52.2	
	comp=Z,185nm,21.7s,baz=20,slow=39						
H03N3	Juan Fernandez	154.09	102	T	T	10 58 54.9	
	baz=110,slow=74,SNR=4.1						
H03N1	Juan Fernandez	154.10	102	T	T	10 58 54.2	
	baz=279,slow=74,SNR=4.9						

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*NNC **30** 07:56:15.0±3.1, 38°.71N×71°.13E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=30.3km s-min=22.8km az=36.0*

ISC 30 07:56:03.6±14.0**, 37°.8N**±0°.9×**70°.8E**±0°.4**, h10^{km}, n8, σ1^{s}.04**/9**, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.88	27	P	Pn	07 57 18.6	+1.2
	SNR=29						
UCH	Uchtor	5.28	32	P	Pn	07 57 23.2	+0.4
	SNR=25						
KK31	Karatay Array	5.30	358	Pn	Pn	07 57 23.1	+0.3
	0.5nm,0.2s,baz=192,slow=13,SNR=24						
KK31				⇑Pg	Pb	07 57 35.6	-0.7
	1.0nm,0.3s,baz=187,slow=14,SNR=5.3						
KK31				⇓Lg	Lg	07 58 34.5	
	4.6nm,0.8s,baz=163,slow=12,SNR=6.3						
EKS2	Erkin-Say	5.38	24	P	Pn	07 57 25.6	+1.7
	SNR=12						
AAK	Ala-Archa	5.61	29	P	Pn	07 57 27.9	+0.7
	SNR=9.4						
AAK	Ala-Archa	5.61	29	⇑Pn	Pn	07 57 27.7	+0.4
	5.8nm,0.7s						
AAK				⇑Lg	Lg	07 58 43.9	
	6.7nm,0.7s						
TKM2	Tokmak 2	6.31	34	P	Pn	07 57 36.4	-0.4
	SNR=5.2						
TKM2	Tokmak 2	6.31	34	⇑Pn	Pn	07 57 36.0	-0.8

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*NNC **30** 08:29:57.2±1.1, 53°.35N×87°.28E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=9.7km s-min=4.3km az=60.0, Suspected Mining explosion.*

IDC 30 08:29:58.1±2.7**, 53°.40N×87°.21E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/48**, mbtmp2.8**/2**, ML2.6**/2**, 4C-4D, Error ellipse: s-maj=26.1km s-min=13.3km az=73.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.53	292	i		08 38 37.9	
	baz=108,slow=335,SNR=2.7						
ZAA0	Zalesovo Array	1.53	292	⇑P	Pn	08 30 25.8	-0.8
	0.1nm,0.3s						
ZAA0				⇓S	Sn	08 30 47.6	+0.4
	2.3nm,0.8s						
ZALV	Zalesovo Beam	1.53	292	Pg	Pn	08 30 25.2	-1.4
	0.4nm,0.3s,baz=107,slow=17,SNR=5.6						
ZALV				Lg	Lg	08 30 46.9	
	2.4nm,0.3s,baz=111,slow=27,SNR=18						
KURBB	Kurchatov Arra	6.04	246	Pn	Pn	08 31 29.2	+0.6
	0.1nm,0.3s,baz=62,slow=14,SNR=6.3						
KURBB	Kurchatov Arra	6.04	246	⇑Pn	Pn	08 31 28.9	+0.3
	1.3nm,0.5s						
KURBB				⇓Sn	Sn	08 32 38.5	+0.1
	1.7nm,0.6s						
KURBB				⇑Lg	Lg	08 33 08.5	
	5.2nm,0.7s						
MK31	Makanchi Array	7.33	208	⇑Pn	Pn	08 31 44.7	-1.6
	0.1nm,0.2s,baz=27,slow=13,SNR=5.5						
MK31				⇓Sn	Sn	08 33 10.1	-0.1
	0.3nm,0.5s						
MK31				⇓Lg	Lg	08 33 48.6	
	1.5nm,0.9s						
MKAR	Makanchi Array	7.33	208	Pn	Pn	08 31 48.1	+1.8
	0.1nm,0.3s,baz=22,slow=12,SNR=7.0						
MKAR				Sn	Sn	08 33 08.7	-1.4
	0.0nm,0.3s,baz=25,slow=29,SNR=2.8						
MKAR				Lg	Lg	08 33 48.9	
	0.1nm,0.3s,baz=38,slow=27,SNR=3.0						

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*VAO **30** 08:42:55.9±1.0, 24°.07S×67°.89W, h259^{km}±7^{km}, mb4.2*

*NEIC **30** 08:42:56.4±2.4, 24°.23S±0°.04×67°.3W±0°.2, h201^{km}±20^{km}, Error ellipse: s-maj=26.1km s-min=4.8km az=97.0*

*IDC **30** 08:42:56.4±1.4, 24°.16S×67°.07W, h172^{km}±11^{km}, mb3.2/4, mb1 3.6/9, mb1mx3.4/28, mbtmp3.8/9, Error ellipse: s-maj=26.2km s-min=14.9km az=17.0*

*GUC **30** 08:42:58.0±0.7, 24°.20S×67°.51W, h210^{km}±9^{km}, ML4.3*

ISC 30 08:42:55.9±0.7**, 24°.26S**±0°.03×**67°.20W**±0°.07**, h182^{km}**±8^{km}**, n76, σ1^{s}.33**/95**, mb3.3**/4**, 11C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.27	316	P	Pn	08 43 38.0	+1.6
	29nm,0.3s,baz=147,slow=6.2,SNR=392						
LVC				S	Sn	08 44 07.7	-0.2
	81nm,0.3s,baz=276,slow=19,SNR=15						
LVC	Limon Verde	2.27	316	eP	Pn	08 43 37.9	+1.4
LVC				eS	Sn	08 44 08.1	+0.2
LVC	Limon Verde	2.27	316	Pn	Pn	08 43 37.2	+0.8
LVC				Sn	Sn	08 44 07.8	-0.2
LVC	Limon Verde	2.27	316	eP	Pn	08 43 37.3	+0.8
PB15	IPOC Station P	2.33	296	⇓eP	Pn	08 43 38.3	+1.4
PB15				i S	Sn	08 44 08.5	-0.3
PB15	IPOC Station P	2.33	296		Pn	08 43 38.2	+1.2
PB15				Sn	Sn	08 44 07.8	-0.9
GO02	Mina Guanaco	2.35	247	⇑iP	Pn	08 43 38.7	+1.4
GO02				eS	Sn	08 44 10.5	+1.0
GO02				IAML		08 44 11.8	
	comp=E,996nm,0.4s						
GO02	Mina Guanaco	2.35	247	Pn	Pn	08 43 38.4	+1.1
GO02				Sn	Sn	08 44 10.1	+0.6
PB06	IPOC Station P	2.67	305	⇑iP	Pn	08 43 42.1	+1.2
PB06				i S	Sn	08 44 15.0	-0.7
PB06				IAML		08 44 18.9	
	comp=N,826nm,0.3s						
PB06	IPOC Station P	2.67	305		Pn	08 43 42.0	+1.1
PB06				Sn	Sn	08 44 14.9	-0.9
PB14	IPOC Station P	2.94	262	⇑iP	Pn	08 43 44.9	+0.7
PB14				i S	Sn	08 44 20.9	-1.0
PB14	IPOC Station P	2.94	262	Pn	Pn	08 43 44.4	+0.2
PB09	IPOC Station P	3.09	322	⇑iP	Pn	08 43 47.4	+1.5
PB09				eS	Sn	08 44 24.6	-0.2
PB09				IAML		08 44 26.1	
	comp=N,394nm,0.5s						
PB09	IPOC Station P	3.09	322		Pn	08 43 47.1	+1.3
PB05	IPOC Station P	3.09	296	⇑iP	Pn	08 43 46.5	+0.7
PB05				i S	Sn	08 44 22.7	-2.0
PB05				IAML		08 44 25.0	
AC02	Maricunga	3.10	214	⇑iP	Pn	08 43 47.8	+1.4
AC02				eS	Sn	08 44 27.6	+1.9
AC02	Maricunga	3.10	214	Pn	Pn	08 43 47.5	+1.2
PB10	IPOC Station P	3.16	283	⇑iP	Pn	08 43 47.5	+0.9
PB10				i S	Sn	08 44 24.4	-1.6
PB10				IAML		08 44 31.9	
	comp=E,299nm,0.4s						
PB10	IPOC Station P	3.16	283	Pn	Pn	08 43 47.0	+0.5
PB04	IPOC Station P	3.32	305	⇑iP	Pn	08 43 49.3	+0.6
PB04				i S	Sn	08 44 28.1	-1.7
PB04				IAML		08 44 32.5	
	comp=N,530nm,0.3s						
PB04	IPOC Station P	3.32	305		Pn	08 43 48.8	+0.1
PB07	IPOC Station P	3.53	315	⇑iP	Pn	08 43 51.9	+0.6
PB07				i S	Sn	08 44 32.3	-2.3
PB07	IPOC Station P	3.53	315		Pn	08 43 52.0	+0.7
AC01	Pan de Azucar	3.61	238	⇑iP	Pn	08 43 52.0	-0.1
AC01				eS	Sn	08 44 34.3	-1.8
AC01	Pan de Azucar	3.61	238	Pn	Pn	08 43 51.7	-0.4
PB01	IPOC Station P	3.83	326	⇑iP	Pn	08 43 55.1	0.0
PB01				i S	Sn	08 44 39.1	-2.2
PB01	IPOC Station P	3.83	326		Pn	08 43 55.1	0.0
GO03	Copiap	4.30	219	eP	Pn	08 44 00.4	-0.5
GO03				i S	Sn	08 44 49.8	-2.2
GO03	Copiap	4.30	219		Pn	08 44 00.6	-0.4
PB08	IPOC Station P	4.48	336	eP	Pn	08 44 04.4	+0.8
PB08				i S	Sn	08 44 55.2	-1.3
PB08	IPOC Station P	4.48	336		Pn	08 44 04.7	+1.1
TA01	Diego Aracena	4.59	323		Pn	08 44 04.3	-0.3
AC04	Llanos de Chal	5.25	221	eP	Pn	08 44 11.7	-1.4
AC04				i S	Sn	08 45 11.5	-2.4
AC04	Llanos de Chal	5.25	221	Pn	Pn	08 44 11.9	-1.2
AC05	El Transito	5.33	210	eP	Pn	08 44 13.8	-0.4
AC05				i S	Sn	08 45 14.2	-1.7
AC05	El Transito	5.33	210		Pn	08 44 14.0	-0.3
PSGCX	Pisagua	5.37	329	Pn	Pn	08 44 13.0	-1.9
MNMC	Minye Minye	5.56	336		Pn	08 44 17.8	+0.2
LCO	Las Campanas	5.68	213	Pn	Pn	08 44 17.8	-1.1
CO01	Juntas del Tor	6.25	204	Pn	Pn	08 44 26.9	+0.5
GO04	Tololo Observa	6.71	208	Pn	Pn	08 44 31.1	-1.3
CO03	El Pedregal	7.25	204	Pn	Pn	08 44 37.8	-1.5
CO02	Combarbal	7.70	205	Pn	Pn	08 44 45.0	-0.3
CPUP	Villa Florida	9.17	105	P	Pn	08 45 03.4	-1.1
	comp=N,0.1nm,0.3s,baz=330,slow=14,SNR=2.7						
CPUP	Villa Florida	9.17	105	eP	Pn	08 45 12.5	+8.0
SIV	San Ignacio	10.04	36	P	Pn	08 45 14.1	-1.8
	comp=N,1.5nm,0.3s,baz=257,slow=10,SNR=29						
VILB	Vilhena	13.05	32	eP	Pn	08 45 54.8	0.0
TRCB	Terra Rica	13.44	87	eP	P	08 46 03.7	+0.9
PCMB	Pacaembu	14.92	83	eP	P	08 46 19.8	+0.7
SAML	Samuel	15.70	15	eP	Pn	08 46 23.3	-4.2
FRTB	Fartura	16.17	90	eP	Pn	08 46 35.6	+2.4
ITRB	Iturama	16.26	77	eP	P	08 46 34.6	+0.6
PLCA	Paso Flores	16.67	189	P	Pn	08 46 40.6	+1.6
	comp=N,0.1nm,0.3s,baz=17,slow=12,SNR=3.3						
PLCA	Paso Flores	16.67	189	P	P	08 46 38.9	+0.6
PLCA				IAmb	IAmb	08 46 49.0	
	comp=Z,5.4nm,1.1s						
CZSB	Cruzeiro do Su	17.26	341	eP	P	08 46 34.9	-10
LL01	San Ignacio de	18.59	192	P	Pn	08 47 01.2	-0.3
LL01				IAmb	IAmb	08 47 05.6	
	comp=Z,7.2nm,0.7s						
IPMB	Ipameri, GO	18.77	74	eP	P	08 47 01.1	-0.4
SNDB	Serra Nova Dou	19.41	54	eP	P	08 47 07.6	-0.7
BDFB	Brasilia	19.95	68	P	P	08 47 14.2	0.0
	comp=Z,1.6nm,0.3s,baz=278,slow=5.8,SNR=11						
BDFB	Brasilia	19.95	68	P	P	08 47 14.6	+0.4
BDFB				IAmb	IAmb	08 47 15.3	
	comp=Z,13nm,1.1s						
NPGB	Novo Progresso	20.54	35	eP	P	08 47 18.3	-2.1
MACA	Manacapuru-AM	21.89	18	eP	P	08 47 28.0	-6.6
JANB	Januaria	23.39	71	eP	P	08 47 47.1	-1.4
SDBA	SAO DESIDERIO	24.18	65	eP	P	08 47 53.5	-2.2
SMTB	Santa Maria do	24.19	54	eP	P	08 47 53.5	-2.3
NAN01	Guarapari, ES	26.04	81	eP	P	08 48 11.3	-1.1
GDU01	Guandu, BA	28.09	73	eP	P	08 48 29.6	-1.2
NBPS	Pedro II - PI	31.70	56	eP	P	08 49 00.2	-2.5
TORD	Torodi Ar. Bea	76.83	69	P	P	08 54 28.6	+0.5
	comp=Z,0.3nm,0.4s,baz=255,slow=5.7,SNR=2.5						
PDAR	Pinedale Array	77.27	329	P	P	08 54 32.2	+2.0
	comp=Z,0.3nm,0.5s,baz=131,slow=9.7,SNR=2.7						
NVAR	Mina Array Bea	78.62	321	P	P	08 54 39.0	+1.2
	comp=Z,0.1nm,0.5s,baz=146,slow=7.3,SNR=3.2						
YKA	Yellowknife Ar	94.30	340	P	P	08 55 55.8	+1.8
	comp=Z,0.4nm,0.6s,baz=128,slow=4.9,SNR=9.6						
ASAR	Alice Springs	128.15	205	PKP	PKiKP	09 01 42.6	+0.9
	comp=Z,0.4nm,0.7s,baz=130,slow=1.5,SNR=7.1						
WRA	Warramunga Arr	131.31	207	PKP	PKiKP	09 01 48.9	+0.7
	comp=Z,0.5nm,0.5s,baz=157,slow=1.7,SNR=12						
MKAR	Makanchi Array	146.84	40	PKPbc	PKPbc	09 02 17.9	+1.3
	comp=Z,1.1nm,0.6s,baz=305,slow=3.9,SNR=9.8						
KLR	Kul'dur	150.97	334	PKPbc	PKiKP	09 02 28.1	+0.7
	comp=Z,0.4nm,0.4s,baz=44,slow=3.4,SNR=4.6						

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*MOS **30** 08:53:41.9±0.0, 44°.86N×42°.84E, h5^{km}, MPVA4.4*

*MOS **30** 08:53:42.1±0.8, 44°.92N×42°.89E, h9^{km}, mb4.1/1, Error ellipse: s-maj=8.5km s-min=4.6km az=98.9*

NORS 30 08:53:40.9±0.0**, 44°.81N×42°.72E, h10^{km}, MPVA4.5, 3C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOF	Gofitskoye	0.34	42	i Pg	Pg	08 53 46.3	-1.4
GOF				eSg	Sg	08 53 50.5	-1.7
GOF	Gofitskoye	0.34	42	⇓iPG	Pg	08 53 46.3	-1.3
GOF				eS	Sg	08 53 50.5	-1.6
PYA1	Pyatigorsk	0.79	160	i Pg	Pb	08 53 57.3	+0.6
PYA1				eSg	Sn	08 54 09.4	-0.6
PYA1	Pyatigorsk	0.79	160	⇑iPG	Pb	08 53 57.3	+0.5
PYA1				eS	Sn	08 54 09.5	-0.5
BEYR	Belyy Ugol+	0.80	175	i Pg	Pn	08 53 57.8	-0.5
BEYR				eSg	Sn	08 54 12.1	+1.9
BEYR	Belyy Ugol+	0.80	175	⇑iPG	Pn	08 53 57.9	-0.4
BEYR				i S	Sn	08 54 12.7	+2.5
KIV	Kislovodsk	0.85	182	i Pg	Pn	08 53 59.0	0.0
KIV				eSg	Sn	08 54 13.2	+1.6
KIV	Kislovodsk	0.85	182	⇓iPG	Pn	08 53 59.0	0.0
KIV				i S	Sn	08 54 14.2	+2.6
KIV0	Kislovodsk Arr	0.85	181	i Pg	Pn	08 53 59.0	-0.1
KIV0				eSg	Sn	08 54 12.2	+0.5
KBZ	Khabaz	1.09	173	i Pg	Pn	08 54 03.2	+1.1
KBZ				i Sg	Sn	08 54 20.1	+2.9
KBZ	Khabaz	1.09	173	i PG	Pn	08 54 03.2	+1.1
KBZ				i S	Sn	08 54 20.1	+2.9
KBTC	Kuba-Taba	1.11	153	i Pg	Pn	08 54 03.6	+1.1
KBTC				eSg	Sn	08 54 20.4	+2.6
KBTC	Kuba-Taba	1.11	153	ePG	Pn	08 54 03.7	+1.2
KBTC				eS	Sn	08 54 20.5	+2.7
AHMR	Akhmetovskaya	1.37	242	ePg	Pg	08 54 08.9	+1.8
AHMR				eSg	Sg	08 54 29.8	+5.0
LABN	Labinsk	1.44	264	ePg	Pg	08 54 11.7	+3.2
LABN				i Sg	Sg	08 54 33.5	+6.5
LABN	Labinsk	1.44	264	ePG	Pg	08 54 11.7	+3.3
LABN				i S	Sg	08 54 33.5	+6.4
NCK	Nalchik	1.46	154	i Pg	Pb	08 54 08.4	+0.3
NCK				eSg	Sg	08 54 30.2	+2.6
NCK	Nalchik	1.46	154	ePG	Pg	08 54 09.9	+1.1
NCK				eS	Sg	08 54 30.4	+2.7
PRTR	Priterechnaya	1.54	133	i Pg	Pg	08 54 10.6	+0.2
PRTR				eSg	Sg	08 54 31.3	+0.9
PRTR	Priterechnaya	1.54	133	ePG	Pg	08 54 10.7	+0.3
PRTR				eS	Sg	08 54 33.1	+2.7
NEY	Neytrino	1.56	180	i Pg	Pg	08 54 11.7	+0.8
NEY				i Sg	Sg	08 54 33.2	+2.2
NEY	Neytrino	1.56	180	i PN	Pg	08 54 11.6	+0.8
NEY				i S	Sg	08 54 33.2	+2.2
ARXR	Arkhyz	1.62	220	ePg	Pg	08 54 12.8	+0.8
ARXR				i Sg	Sg	08 54 35.8	+2.7
ARXR	Arkhyz	1.62	220	⇑ePN	Pg	08 54 12.8	+0.7
LSNR	Lesken	1.72	152	ePg	Pg	08 54 13.9	-0.1
LSNR				eSg	Sg	08 54 37.6	+1.3
LSNR	Lesken	1.72	152	ePN	Pg	08 54 14.2	+0.2
LSNR				eS	Sg	08 54 38.6	+2.3
STDR	Stavd-Durt	1.73	146	ePg	Pg	08 54 13.7	-0.4
STDR	Stavd-Durt	1.73	146	ePN	Pg	08 54 14.1	0.0
STDR				eS	Sg	08 54 39.5	+2.9
TRKR	Terskaya	1.81	126	ePg	Pb	08 54 14.6	+0.6
TRKR				eSg	Sg	08 54 39.6	+0.7
TRKR	Terskaya	1.81	126	ePN	Pg	08 54 15.5	0.0
TRKR				eS	Sg	08 54 40.3	+1.4
ERBR	Yeremizino-Bor	1.82	301	ePg	Pg	08 54 16.1	+0.2
ERBR				eSg	Sg	08 54 40.7	+1.2
ERBR	Yeremizino-Bor	1.82	301	ePN	Pg	08 54 16.1	+0.3
ERBR				eS	Sg	08 54 40.7	+1.2
KORR	Kora	1.98	150	ePg	Pg	08 54 19.0	+0.2
KORR				eSg	Sg	08 54 44.0	-0.4
KORR	Kora	1.98	150	ePN	Pg	08 54 18.9	+0.1
KORR				eS	Sg	08 54 45.6	+1.2
ARNR	Ardon	1.98	145	ePN	Pg	08 54 19.5	+0.7
ARNR				eS	Sg	08 54 47.4	+2.9
DIGR	Digorskoe uzhe	2.01	162	ePg	Pb	08 54 17.1	-0.5
DIGR				eSg	Sg	08 54 45.2	-0.2
DIGR	Digorskoe uzhe	2.01	162	ePN	Pb	08 54 18.1	+0.5
DIGR				eS	Sg	08 54 45.4	0.0
GUZR	Guzeripl'	2.04	247	ePg	Pb	08 54 18.6	+0.6
GUZR				eSg	Sg	08 54 46.0	-0.3
GUZR	Guzeripl'	2.04	247	ePN	Pb	08 54 18.6	+0.6
GUZR				eS	Sg	08 54 46.0	-0.3
RPOR	Krasnaya Polya	2.08	239	ePg	Pg	08 54 21.2	+0.3
RPOR				eSg	Sg	08 54 49.1	+1.2
RPOR	Krasnaya Polya	2.08	239	ePN	Pg	08 54 21.2	+0.3
RPOR				eS	Sg	08 54 49.1	+1.2
ZEI	Tsey	2.19	157	ePg	Pg	08 54 21.9	-1.0
ZEI				eSg	Sg	08 54 49.8	-1.5
ZEI	Tsey	2.19	157	ePN	Pg	08 54 22.3	-0.6
ZEI				eS	Sg	08 54 50.7	-0.6
LACR	Lac	2.29	150	ePn	Pb	08 54 22.3	+0.1
LACR				eSn	Sb	08 54 50.5	-0.1
LACR	Lac	2.29	150	ePN	Pg	08 54 23.9	-0.8
LACR				eS	Sg	08 54 54.1	-0.2
VSLR	Vesyoloye	2.36	236	ePn	Pb	08 54 24.6	+1.1
VSLR				eSn	Sg	08 54 55.3	-1.4
VSLR	Vesyoloye	2.36	236	ePN	Pb	08 54 24.6	+1.1
VSLR				eS	Sg	08 54 55.3	-1.4
LZRR	Lazarevskoye	2.55	251	ePN	Pg	08 54 29.4	-0.4
LZRR				eS	Sg	08 55 01.1	-1.7
TPSR	Tuapse	2.70	256	i PN	Pb	08 54 29.2	0.0
GROC	Groznyy	2.74	125	i PN	Pb	08 54 27.7	-2.2
DVE	Vedeno	3.08	126	i PN	Pn	08 54 32.4	+2.8
BTLR	Botlikh	3.32	129	i PN	Pn	08 54 33.1	+0.2
MAK	Makhachkala	3.92	116	PN	Pn	08 54 42.9	+1.8
GNI	Garni	4.89	162	i PN	Pn	08 54 54.8	+0.2
AKT	Akhty	4.95	131	i PN	Pn	08 54 58.0	+2.6
BELG	Belogornoye	8.25	21	i P	Pn	08 55 42.5	+2.0
BRVK	Borovoye	19.80	56	i P	Pn	08 58 12.9	+0.1

IDC 30 08:59:51.2±3.1**, 53°.59N×87°.80E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/40**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=30.5km s-min=20.5km az=83.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.81	283	i		09 10 40.0	
	baz=100,slow=341,SNR=5.9						
ZALV	Zalesovo Beam	1.81	283	Pn	Pn	09 00 23.1	-0.4
	1.2nm,0.3s,baz=99,slow=9.8,SNR=13						
ZALV				Sn	Sn	09 00 47.1	-0.1
	2.4nm,0.3s,baz=99,slow=25,SNR=9.7						
KURBB	Kurchatov Arra	6.44	246	Pn	Pn	09 01 28.2	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=4.6						
KURBB				Sn	Sn	09 02 40.7	-0.6
	0.0nm,0.3s,baz=65,slow=29,SNR=1.8						
MKAR	Makanchi Array	7.67	210	Pn	Pn	09 01 45.1	+1.1
	0.1nm,0.3s,baz=20,slow=12,SNR=6.4						
MKAR				Lg	Lg	09 03 52.9	
	baz=26,slow=27,SNR=3.1						

NNC 30 09:01:01.4±3.4**, 36°.83N×70°.91E, h148^{km}**±55^{km}**, mb3.2, mpv3.9, 3C-2D, Error ellipse: s-maj=29.3km s-min=20.9km az=27.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.27	357	⇑P	Pn	09 02 30.9	-0.7
	2.5nm,0.2s,baz=172,slow=11,SNR=73						
KK31				⇓S	Sn	09 03 43.3	+1.1
	8.2nm,0.5s,baz=189,slow=24,SNR=12						
AAK	Ala-Archa	6.42	24	⇓P	Pn	09 02 32.8	-0.9
	3.3nm,0.3s						
AAK				⇑S	Sn	09 03 46.0	0.0
	17nm,0.7s						
TKM2	Tokmak 2	7.07	29	P	Pn	09 02 44.1	+1.7
	7.2nm,0.6s						
TKM2				S	Sn	09 04 02.2	+0.6
	4.0nm,0.6s						
AB31	Akbulak array	14.76	331	P	Pn	09 04 22.7	0.0
	0.5nm,0.3s,baz=148,slow=14,SNR=34						
AB31				S	Sn	09 07 06.3	-0.1
	0.7nm,0.4s,baz=154,slow=23,SNR=6.9						
AKTO	Aktyubinsk	16.46	330	⇑P	Pn	09 04 43.4	-0.2
	3.4nm,0.7s						

IDC 30 09:02:14.4±2.5, 54°.10N×87°.20E, h0^{km}, mb1 3.1/3, mb1mx3.0/41, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=22.3km s-min=14.0km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.41	265	i		09 10 17.6	
	baz=80,slow=340,SNR=5.1						
ZALV	Zalesovo Beam	1.41	265	Pg	Pn	09 02 39.0	-2.4
	2.7nm,0.3s,baz=85,slow=16,SNR=13						
ZALV				Lg	Lg	09 02 58.5	
	5.0nm,0.3s,baz=79,slow=28,SNR=12						
KURBB	Kurchatov Arra	6.35	240	Pn	Pn	09 03 49.3	+0.1
	0.1nm,0.3s,baz=56,slow=14,SNR=5.3						
KURBB				Sn	Sn	09 05 02.2	-0.1
	0.0nm,0.3s,baz=59,slow=14,SNR=1.7						
KURBB				Lg	Lg	09 05 35.7	
	0.0nm,0.3s,baz=50,slow=32,SNR=2.1						
MKAR	Makanchi Array	7.96	205	Pn	Pn	09 04 11.9	+0.6
	0.1nm,0.3s,baz=28,slow=14,SNR=4.5						
MKAR				Sn	Sn	09 05 41.8	-0.2
	0.1nm,0.3s,baz=29,slow=28,SNR=3.2						
MKAR				Lg	Lg	09 06 25.6	
	0.1nm,0.3s,baz=19,slow=27,SNR=1.4						
BVAR	Borovoye Array	10.06	271	Pn	Pn	09 04 40.7	+0.7
	0.2nm,0.3s,baz=57,slow=23,SNR=5.1						

IDC 30 09:20:15.2±2.6, 53°.71N×86°.76E, h0^{km}, mb1 2.9/2, mb1mx2.8/36, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=24.6km s-min=13.8km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.18	282	i		09 27 20.0	
	baz=99,slow=340,SNR=6.8						
ZALV	Zalesovo Beam	1.18	282	Pg	Pg	09 20 37.2	-0.5
	1.3nm,0.3s,baz=104,slow=11,SNR=28						
ZALV				Lg	Lg	09 20 53.4	
	0.8nm,0.3s,baz=104,slow=28,SNR=9.4						
KURBB	Kurchatov Arra	5.94	242	Pn	Pn	09 21 45.6	+1.3
	0.1nm,0.3s,baz=57,slow=13,SNR=5.1						
MKAR	Makanchi Array	7.50	204	Pn	Pn	09 22 06.6	+0.9
	0.1nm,0.3s,baz=27,slow=12,SNR=7.6						

IDC 30 09:27:49.7±3.0, 53°.41N×87°.22E, h0^{km}, mb1 2.6/2, mb1mx2.6/52, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=29.6km s-min=16.1km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.53	292	i		09 36 37.0	
	baz=108,slow=334,SNR=1.9						
ZALV	Zalesovo Beam	1.53	292	Pg	Pn	09 28 17.3	-0.9
	0.5nm,0.3s,baz=112,slow=16,SNR=5.5						
ZALV				Lg	Lg	09 28 38.4	
	1.0nm,0.3s,baz=114,slow=26,SNR=8.1						
KURBB	Kurchatov Arra	6.04	246	Pn	Pn	09 29 20.4	+0.2
	0.1nm,0.3s,baz=61,slow=14,SNR=3.2						
MKAR	Makanchi Array	7.34	208	Pn	Pn	09 29 39.5	+1.5
	0.1nm,0.3s,baz=28,slow=14,SNR=4.6						

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*ISK **30** 09:31:30.8, 35°.72N×31°.88E, h25^{km}, ML2.7/4*
*DDA **30** 09:31:34.9, 36°.46N×31°.86E, h7^{km}±7^{km}, ML1.7*
ISC 30 09:31:28.4±4.1, 36°.2N±0°.2×31°.7E±0°.2, h92^{km}±20^{km}, n8, σ1^{s}.69/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALAN	Alanya-ANTALYA	0.47	40	PG	Pn	09 31 47.5	+4.4
GAZI	Gazipasa	0.53	86	PG	Pn	09 31 43.9	+0.2
GAZI				SG	Sn	09 31 53.3	-1.7
GAZI	Gazipasa	0.53	86	i P	Pn	09 31 43.5	-0.1
GAZI				i S	Sn	09 31 53.4	-1.6
GAZI				IAML		09 31 54.0	
	comp=E,100nm,0.4s						
GAZI				IAML		09 31 55.0	
	comp=N,121nm,0.4s						
KEPZ	Antalya-Kepez	0.70	357	i P	Pn	09 31 45.2	0.0
KEPZ				i S	Sn	09 31 56.6	-1.1
KEPZ				IAML		09 31 57.0	
	comp=E,35nm,0.7s						
KEPZ				IAML		09 32 12.0	
	comp=N,34nm,1.5s						
ERMK	Ermenek	1.10	66	i P	Pn	09 31 50.0	+0.3
ERMK				i S	Sn	09 32 04.9	-0.7
ERMK				IAML		09 32 16.0	
	comp=E,46nm,2.4s						
ERMK				IAML		09 32 18.0	
	comp=N,64nm,2.4s						
TEKE	Tekeli-Mersin	1.18	92	PN	Pn	09 31 50.7	+0.4
TEKE				SN	Sn	09 32 05.7	-1.1
SEDI	Konya, Seydise	1.25	4	i P	Pn	09 31 51.5	+0.2
SEDI				IAML		09 32 04.0	
	comp=E,13nm,1.3s						
SEDI				i S	Sn	09 32 07.6	-1.0
SEDI				IAML		09 32 13.0	
	comp=N,15nm,1.6s						
BERE	Bereket-Mersin	1.27	83	PN	Pn	09 31 53.1	+1.5
BERE				SN	Sn	09 32 09.2	+0.1

IDC 30 09:31:54.0±3.4, 54°.15N×86°.80E, h0^{km}, mb1 2.6/2, mb1mx2.6/59, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=29.5km s-min=17.1km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.19	261	i		09 39 47.5	
	baz=78,slow=337,SNR=2.5						
ZALV	Zalesovo Beam	1.19	261	Pg	Pg	09 32 16.9	+0.2
	2.4nm,0.3s,baz=79,slow=17,SNR=18						
ZALV				Lg	Lg	09 32 31.8	
	1.1nm,0.3s,baz=80,slow=14,SNR=6.9						
KURBB	Kurchatov Arra	6.17	238	Pn	Pn	09 33 28.2	+1.8
	0.0nm,0.3s,baz=53,slow=13,SNR=2.2						
MKAR	Makanchi Array	7.91	203	Pn	Pn	09 33 50.5	+0.3
	0.1nm,0.3s,baz=25,slow=13,SNR=5.0						

IDC 30 09:39:39.5±3.0, 53°.73N×88°.19E, h0^{km}, mb1 2.8/3, mb1mx2.8/52, mbtmp2.8/3, ML2.2/3, Error ellipse: s-maj=24.3km s-min=17.2km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	2.01	278	i		09 50 21.9	
	baz=97,slow=336,SNR=5.4						
ZALV	Zalesovo Beam	2.01	278	Pn	Pn	09 40 14.3	-0.4
	1.2nm,0.3s,baz=92,slow=16,SNR=11						
ZALV				Lg	Lg	09 40 42.9	
	5.6nm,0.3s,baz=99,slow=25,SNR=15						
KURBB	Kurchatov Arra	6.71	246	Pn	Pn	09 41 19.6	+0.4
	0.1nm,0.3s,baz=64,slow=14,SNR=3.3						
KURBB				Sn	Sn	09 42 36.1	-0.1
	0.1nm,0.3s,baz=63,slow=25,SNR=4.2						
KURBB				Lg	Lg	09 43 12.4	
	0.1nm,0.3s,baz=63,slow=31,SNR=6.6						
MKAR	Makanchi Array	7.90	211	Pn	Pn	09 41 36.2	+0.5
	0.1nm,0.3s,baz=25,slow=14,SNR=5.0						
MKAR				Sn	Sn	09 43 07.5	+1.8
	0.1nm,0.3s,baz=29,slow=24,SNR=4.4						
MKAR				Lg	Lg	09 43 47.0	
	0.1nm,0.3s,baz=39,slow=30,SNR=3.9						

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*DJA **30** 09:40:41.0±1.1, 6°S±9°×10°3E±°, h10^{km}, M3.3/7, MLv3.3/7*
*IDC **30** 09:40:45.9±7.5, 5°.75S×104°.40E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/49, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/35, Error ellipse: s-maj=382.0km s-min=24.6km az=51.0*
ISC 30 09:40:41.4±2.0, 6°.2S±0°.1×102°.9E±0°.1, h35^{km}, n13, σ0^{s}.72/10, mb3.4/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	1.62	46	P	Pn	09 41 07.8	+0.2
KASI	Kota Agung	1.72	69	P	Pn	09 41 08.5	-0.3
KASI				S	Sn	09 41 28.3	-1.3
MNAI	Manna	1.77	2	P	Pn	09 41 09.2	-0.4
MDSI	Maura Dua	2.09	38	P	Pn	09 41 14.5	+0.5
MDSI				S	Sn	09 41 38.9	+0.1
KLSI		2.34	52	P	Pn	09 41 18.5	+1.1
LHSI	Lahat	2.39	16	P	Pn	09 41 18.2	+0.2
H08S2	Diego Garcia H	30.20	265	T	T	10 18 28.6	
	baz=86						
H08S3	Diego Garcia H	30.21	265	T	T	10 18 26.0	
	baz=86,SNR=12						
H08S1	Diego Carcia H	30.22	265	T	T	10 18 27.0	
	baz=86						
WRA	Warramunga Arr	33.49	117	P	P	09 47 17.8	+0.1
	0.3nm,0.7s,baz=310,slow=7.9,SNR=3.7						
ASAR	Alice Springs	34.54	124	P	P	09 47 26.9	+0.1
	0.2nm,0.4s,baz=302,slow=8.5,SNR=6.2						
ASAR				LR	LR	10 02 05.7	
	comp=Z,21nm,18.4s,baz=238,slow=38						
MKAR	Makanchi Array	55.79	343	P	P	09 50 24.6	+10
	0.2nm,0.5s,baz=149,slow=7.3,SNR=4.5						
ZALV	Zalesovo Beam	61.77	348	P	P	09 51 06.6	+10
	0.3nm,0.3s,baz=177,slow=5.5,SNR=3.7						

IDC 30 09:44:14.8±2.8, 6°.12S×130°.59E, h117^{km}±39^{km}, mb3.1/1, mb1 3.1/5, mb1mx2.9/43, mbtmp3.4/5, Error ellipse: s-maj=85.2km s-min=21.7km az=87.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.25	7	P	Pn	09 45 31.4	+0.1
	1.9nm,0.3s,baz=68,slow=23,SNR=11						
SIJI				S	Sn	09 46 26.8	-3.9
	2.5nm,0.3s,baz=145,slow=23,SNR=8.7						
FITZ	Fitzroy Crossi	12.85	202	P	Pn	09 47 12.9	-0.5
	0.1nm,0.3s,baz=42,slow=12,SNR=3.0						
FITZ				S	Sn	09 49 24.1	-11
	0.1nm,0.3s,baz=267,slow=19,SNR=2.9						
WRA	Warramunga Arr	14.22	166	P	Pn	09 47 30.8	-0.2
	0.1nm,0.3s,baz=350,slow=13,SNR=4.7						
WRA				S	Sn	09 49 55.9	-12
	0.2nm,0.3s,baz=348,slow=20,SNR=7.5						
ASAR	Alice Springs	17.74	170	P	Pn	09 48 14.3	-0.2
	0.1nm,0.3s,baz=349,slow=10.0,SNR=6.8						
MKAR	Makanchi Array	67.82	326	P	P	09 55 00.3	0.0
	0.2nm,0.4s,baz=114,slow=5.6,SNR=4.5						

IDC 30 09:51:53.4±2.9, 54°.21N×87°.08E, h0^{km}, mb1 2.7/2, mb1mx2.7/44, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.5km s-min=16.1km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.35	260	i		09 59 29.3	
	baz=78,slow=343,SNR=2.0						
ZALV	Zalesovo Beam	1.35	260	Pg	Pg	09 52 18.4	-1.0
	0.6nm,0.3s,baz=73,slow=16,SNR=10						
ZALV				Lg	Lg	09 52 36.4	
	0.9nm,0.3s,baz=75,slow=28,SNR=5.3						
KURBB	Kurchatov Arra	6.34	239	Pn	Pn	09 53 29.1	+1.1
	0.0nm,0.3s,baz=54,slow=14,SNR=5.9						
KURBB				Lg	Lg	09 55 14.9	
	0.0nm,0.3s,baz=53,slow=34,SNR=3.2						
MKAR	Makanchi Array	8.02	204	Pn	Pn	09 53 52.2	+1.1
	0.1nm,0.3s,baz=23,slow=12,SNR=5.9						
MKAR				Sn	Sn	09 55 21.6	-0.9
	0.1nm,0.3s,baz=26,slow=28,SNR=7.4						
MKAR				Lg	Lg	09 56 07.6	
	0.0nm,0.3s,baz=27,slow=29,SNR=2.5						

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*NOU **30** 09:54:09.6, 33°.33S×177°.10W, h122^{km}, mb4.2, South of Kermadec Islands*
*IDC **30** 09:54:18.8±2.2, 33°.64S×178°.57W, h0^{km}, mb4.1/2, mb1 4.4/3, mb1mx3.9/34, mbtmp4.2/3, ML4.2/1, Error ellipse: s-maj=61.4km s-min=34.0km az=127.0*
*NEIC **30** 09:54:19.3±2.8, 33°.56S±0°.10×178°.4W±0°.2, h10^{km}±2^{km}, mb4.2/5, Error ellipse: s-maj=25.9km s-min=13.5km az=114.0*
*WEL **30** 09:54:22.5±0.6, 33°S±8°×17°9W±1°9, h33^{km}, M4.1/32, mB4.8/14, ML4.7/32, MLv4.5/32, Mw(mB)4.0/14, Error ellipse: s-maj=0.0km s-min=0.0km az=112.5*
ISC 30 09:54:21.2±1.1, 33°.66S±0°.07×178°.2W±0°.1, h35^{km}, n66, σ1^{s}.23/90, mb4.1/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.40	4	P	Pn	09 55 22.5	-2.9
GLKZ				S	Sn	09 56 12.5	-2.9
RAO	Raoul Island	4.41	4	Pn	Pn	09 55 25.3	-0.2
MXZ	Matakaoa Point	4.81	215	Pn	Pn	09 55 32.6	+1.6
MXZ	Matakaoa Point	4.81	215	P	Pn	09 55 32.2	+1.2
MXZ				S	Sn	09 56 25.1	-0.4
WMGZ	Waiomatatini S	4.96	212	P	Pn	09 55 35.0	+1.8
WMGZ				S	Sn	09 56 30.3	+0.9
PKGZ	Pakihiroa	5.18	214	P	Pn	09 55 35.5	-0.6
PKGZ				S	Sn	09 56 32.5	-2.2
HAZ	Te Kaha	5.22	217	P	Pn	09 55 37.6	+1.0
HAZ				S	Sn	09 56 34.9	-0.6
PUZ	Puketiti	5.24	212	P	Pn	09 55 36.3	-0.8
PUZ				S	Sn	09 56 36.5	+0.3
RUGZ	Raukumara Rang	5.43	217	P	Pn	09 55 39.7	0.0
RUGZ				S	Sn	09 56 42.6	+1.6
TWGZ	Tauwhareparae	5.45	213	P	Pn	09 55 42.0	+2.0
TWGZ				S	Sn	09 56 41.4	-0.1
CNGZ	Carnagh Statio	5.61	210	P	Pn	09 55 43.0	+0.9
CNGZ				S	Sn	09 56 45.4	+0.2
TKGZ	Te Karaka	5.73	213	P	Pn	09 55 45.0	+1.4
TKGZ				S	Sn	09 56 47.5	-0.7
MWZ	Matawai	5.79	215	P	Pn	09 55 43.3	-1.3
MWZ				S	Sn	09 56 48.8	-1.1
URZ	Urewera	5.94	218	Pn	Pn	09 55 46.8	+0.1
	6.2nm,0.3s,baz=290,slow=2.0,SNR=19						
URZ				Sn	Sn	09 56 52.0	-1.5
	6.5nm,0.3s,baz=214,slow=22,SNR=6.7						
URZ	Urewera	5.94	218	Pn	Pn	09 55 46.4	-0.3
URZ	Urewera	5.94	218	P	Pn	09 55 47.0	+0.4
URZ				S	Sn	09 56 51.4	-2.1
OPRZ	Ohinepanea	5.95	224	P	Pn	09 55 47.9	+1.2
RAGZ	Rawiri	5.97	215	P	Pn	09 55 48.2	+1.0
RAGZ				S	Sn	09 56 52.6	-1.8
RIGZ	Rimuhau	5.99	212	P	Pn	09 55 48.0	+0.7
PRGZ	Paritu Road	6.12	210	P	Pn	09 55 50.4	+1.3
PRGZ				S	Sn	09 56 57.6	-0.2
SNGZ	Shannon Statio	6.24	214	P	Pn	09 55 51.3	+0.6
SNGZ				S	Sn	09 57 00.1	-0.7
RTZ	Ruatahuna	6.28	217	P	Pn	09 55 51.4	+0.1
RTZ				S	Sn	09 57 00.1	-1.8
MUGZ	Murupara	6.28	219	P	Pn	09 55 52.2	+0.9
MUGZ				S	Sn	09 56 59.7	-2.2
MHGZ	Mahia Peninsul	6.30	209	S	Sn	09 57 02.5	+0.2
RRRZ	Republican Roa	6.32	221	P	Pn	09 55 53.2	+1.4
RAHZ	Arahi	6.46	214	P	Pn	09 55 54.5	+0.7
RAHZ				S	Sn	09 57 04.7	-1.6
WHHZ	Waihua	6.53	213	P	Pn	09 55 55.9	+1.3
WHHZ				S	Sn	09 57 07.9	+0.1
MTHZ	Maungataniwha	6.53	216	P	Pn	09 55 54.9	+0.1
MTHZ				S	Sn	09 57 07.3	-0.8
ALRZ	Allen Road	6.57	220	P	Pn	09 55 55.5	+0.2
MRHZ	Matea Rd	6.73	218	P	Pn	09 55 57.0	-0.6
MRHZ				S	Sn	09 57 10.9	-2.1
NMHZ	Naumai	6.74	215	P	Pn	09 55 58.0	+0.3
NMHZ				S	Sn	09 57 12.3	-0.9
ARHZ	Aropaoanui	6.78	213	P	Pn	09 55 58.5	+0.3
OUZ	Omahuta	6.93	255	Pn	Pn	09 56 01.6	+1.4
HATZ	Hinemaiaia	6.95	220	P	Pn	09 55 59.9	-0.5
BKZ	Black Stump Fm	6.95	216		Pn	09 56 00.1	-0.3
BKZ	Black Stump Fm	6.95	216	P	Pn	09 55 59.5	-1.0
MCHZ	McNeill Hill	7.07	214	P	Pn	09 56 02.5	+0.4
KWHZ	Kaweka Forest	7.18	215	P	Pn	09 56 03.2	-0.5
KAHZ	Kahuranaki	7.27	211	P	Pn	09 56 04.4	-0.5
TMVZ	Te Maari	7.32	220	P	Pn	09 56 04.8	-0.8
ETVZ	East Tongariro	7.33	220	P	Pn	09 56 05.4	-0.4
OTVZ	Oturere	7.37	220	P	Pn	09 56 06.5	+0.1
KRHZ	Kereru	7.38	214	P	Pn	09 56 05.1	-1.3
HIZ	Hauiti	7.40	227	Pn	Pn	09 56 07.6	+1.0
BHHZ	Black Hill Sta	7.41	217	P	Pn	09 56 06.2	-0.6
NGZ	Ngauruhoe	7.42	220	P	Pn	09 56 08.2	+1.2
MOVZ	Moawhango	7.50	218	P	Pn	09 56 07.1	-1.0
WNVZ	Wahianoa	7.53	220	P	Pn	09 56 07.7	-0.8
PNHZ	Pukenui	7.67	214	P	Pn	09 56 09.2	-1.2
WPHZ	Waipukurau	7.68	212	P	Pn	09 56 09.8	-0.7
BFZ	Birch Farm	8.28	211	Pn	Pn	09 56 17.2	-1.4
BFZ	Birch Farm	8.28	211	P	Pn	09 56 17.1	-1.6
SNZO	South Karori	9.47	214	Pn	Pn	09 56 35.5	+0.5
TUWZ	Tuamarina	9.93	216	Pn	Pn	09 56 39.8	-1.6
MQZ	McQueen’s Vall	12.29	213	Pn	Pn	09 57 11.3	-2.3
AS31	Alice Springs	42.84	271	P	P	10 02 14.2	-1.9
ASAR	Alice Springs	42.84	271	P	P	10 02 16.4	+0.3
	1.7nm,0.7s,baz=108,slow=7.3,SNR=18						
WR0	Warramunga Arr	43.95	276	P	P	10 02 25.4	+0.4
WR0				IAmb	IAmb	10 02 35.6	
	comp=Z,4.6nm,1.2s						
WB2	Warramunga Arr	44.12	276	P	P	10 02 26.6	+0.2
WB2				IAmb	IAmb	10 02 49.6	
	comp=Z,4.9nm,1.1s						
WRA	Warramunga Arr	44.12	276	P	P	10 02 26.8	+0.5
	comp=Z,2.7nm,0.8s,baz=117,slow=7.4,SNR=21						
WRA	Warramunga Arr	44.12	276	P	P	10 02 26.9	+0.5
WB0	Warramunga Arr	44.16	276	P	P	10 02 27.1	+0.4
FINES	FINESS Array B	148.11	338	PKPbc	PKiKP	10 14 04.9	+0.9
	comp=Z,2.9nm,0.7s,baz=68,slow=4.9,SNR=8.9						
FINES	FINESS Array B	148.11	338		PKPab	10 14 05.2	0.0
BRTR	Keskin Array B	153.83	293	PKPbc	PKiKP	10 14 19.0	+2.2
	comp=Z,0.4nm,0.5s,baz=132,slow=2.1,SNR=3.2						
BRTR	Keskin Array B	153.83	293	PKPdf	PKPdf	10 14 12.3	+3.5
BRTR					sPKPdf	10 14 20.2	-1.2

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*IDC **30** 10:01:10.8±10.0, 17°.71N×145°.77E, h271^{km}±109^{km}, mb3.3/11, mb1 3.5/11, mb1mx3.3/43, mbtmp3.9/11, MS3.1/1, Ms1 3.1/1, ms1mx2.6/15, Error ellipse: s-maj=27.5km s-min=14.2km az=82.0*
*NEIC **30** 10:01:12.4±0.8, 17°.66N±0°.06×145°.7E±0°.2, h291^{km}±10^{km}, mb4.1/17, Error ellipse: s-maj=25.7km s-min=7.2km az=76.0*
ISC 30 10:01:13.2±0.6, 17°.62N±0°.09×145°.7E±0°.1, h300^{km}, n33, σ0^{s}.74/32, mb3.9/20, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	1.27	180	Pn	Pn	10 01 53.4	-1.7
JNU	Nakatsue	20.40	322	P	P	10 05 29.5	+1.2
JSD	Sado	21.36	344	P	P	10 05 36.5	-0.9
JSD				IAmb	IAmb	10 05 45.8	
	comp=Z,6.6nm,0.9s						
JEW	Eniwo	25.40	353	P	P	10 06 13.4	-0.4
PMG	Port Moresby	26.89	177	LR	LR	10 15 32.4	
	comp=Z,38nm,19.3s,baz=15,slow=32						
COEN	Coen	31.48	185	P	P	10 07 07.4	-0.4
COEN				IAmb	IAmb	10 07 08.7	
	comp=Z,8.9nm,1.3s						
KLR	Kul'dur	33.50	343	P	P	10 07 24.3	-0.5
	comp=Z,1.2nm,0.5s,baz=173,slow=4.1,SNR=7.6						
SOEI	Soe	34.48	220	P	P	10 07 34.0	+0.2
WB0	Warramunga Arr	38.78	197	P	P	10 08 10.7	+0.9
WR0	Warramunga Arr	38.92	197	P	P	10 08 11.7	+0.8
WR0				IAmb	IAmb	10 08 14.8	
	comp=Z,7.8nm,1.2s						
WRAB	Tennant Creek	38.95	197	P	P	10 08 11.9	+0.8
WRAB				IAmb	IAmb	10 08 12.5	
	comp=Z,5.4nm,0.6s						
WB2	Warramunga Arr	38.96	197	P	P	10 08 11.9	+0.7
WB2				IAmb	IAmb	10 08 12.8	
	comp=Z,5.6nm,0.9s						
WRA	Warramunga Arr	38.96	197	P	P	10 08 11.9	+0.7
	comp=Z,3.2nm,0.6s,baz=20,slow=8.8,SNR=38						
WRA	Warramunga Arr	38.96	197	P	P	10 08 11.2	-0.1
AS31	Alice Springs	42.62	196	P	P	10 08 41.1	+0.2
ASAR	Alice Springs	42.63	196	P	P	10 08 41.5	+0.5
	comp=Z,0.7nm,0.7s,baz=16,slow=7.4,SNR=7.9						
SONM	Songino Array	43.99	322	P	P	10 08 51.9	+0.3
	comp=Z,0.8nm,0.6s,baz=120,slow=5.8,SNR=7.0						
SONM	Songino Array	43.99	322	P	P	10 08 51.6	-0.1
CMAR	Chiang Mai Arr	44.38	279	P	P	10 08 56.0	+1.1
	comp=Z,2.1nm,0.3s,baz=72,slow=5.0,SNR=7.3						
ZALV	Zalesovo Beam	58.88	323	P	P	10 10 40.5	-0.5
	comp=Z,0.5nm,0.5s,baz=119,slow=5.1,SNR=2.3						
MK31	Makanchi Array	59.22	314	P	P	10 10 43.5	+0.1
MKAR	Makanchi Array	59.22	314	P	P	10 10 43.4	-0.1
	comp=Z,1.2nm,0.5s,baz=90,slow=8.0,SNR=17						
MKAR	Makanchi Array	59.22	314	P	P	10 10 43.0	-0.4
MAKZ	Makanchi	59.43	314	P	P	10 10 44.8	-0.2
MAKZ				IAmb	IAmb	10 10 45.6	
	comp=Z,3.1nm,0.7s						
KURK	Kurchatov	62.08	318	P	P	10 11 02.2	-0.4
KURK				IAmb	IAmb	10 11 02.7	
	comp=Z,3.4nm,0.8s						
NRIK	Noril'sk	62.62	340	P	P	10 11 05.4	-0.4
	comp=Z,2.0nm,0.6s,baz=126,slow=9.5,SNR=4.3						
ILAR	Eielson Array	64.60	26	P	P	10 11 18.3	-0.5
	comp=Z,0.4nm,0.6s,baz=253,slow=6.1,SNR=8.0						
ILAR	Eielson Array	64.60	26	P	P	10 11 18.5	-0.2
KKAR	Karatay Array	67.46	310	P	P	10 11 37.3	0.0
ABKAR	Akbulak array	74.13	317	P	P	10 12 15.9	-1.1
ABKAR				IAmb	IAmb	10 12 16.5	
	comp=Z,2.5nm,0.6s						
NLWA	Neilton Lookou	77.52	44	P	P	10 12 36.9	+0.6
NLWA				IAmb	IAmb	10 13 00.6	
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	78.93	28	P	P	10 12 43.9	+0.3
	comp=Z,0.2nm,0.5s,baz=292,slow=4.5,SNR=2.8						
NVAR	Mina Array Bea	83.79	52	P	P	10 13 11.3	+1.5
	comp=Z,0.2nm,0.6s,baz=251,slow=2.8,SNR=2.3						

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*ISN **30** 10:29:30.5±1.3, 32°.82N×47°.65E, h6^{km}±8^{km}, ML3.3*
*TEH **30** 10:29:31.1, 32°.85N×47°.60E, h12^{km}, ML3.3*
*THR **30** 10:29:33.6±0.5, 32°.94N×47°.75E, h14^{km}±7^{km}, ML3.1*
*KISR **30** 10:29:35.2±0.8, 32°.20N×47°.68E, h175^{km}±42^{km}, ML3.6, Hypocentre not reviewed by the ISC*
ISC 30 10:29:32.4±0.9, 32°.83N±0°.04×47°.62E±0°.04, h10^{km}, n33, σ1^{s}.17/37, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	0.72	15	ePg	Pg	10 29 44.4	-1.9
IKMR	Kamar-syah	0.94	43	ePg	Pg	10 29 48.4	-2.1
IKMR				e		10 30 07.4	
	comp=Z,99nm,0.4s						
IDOB	Doab	1.06	26	ePg	Pg	10 29 51.4	-1.5
SHGR	Shooshtar-Gavs	1.23	125	ePg	Pg	10 29 56.1	+0.1
SHGR				eSg	Sn	10 30 12.6	+0.2
SHGR				IAML		10 30 16.8	
	comp=E,384nm,0.7s						
SHGR				IAML		10 30 21.4	
	comp=N,402nm,0.6s						
SHGR	Shooshtar-Gavs	1.23	125	ePg	Pg	10 29 56.1	+0.1
IBDR	Badra	1.45	282	ePg	Pn	10 29 58.0	-0.7
	baz=101						
IBDR				eSg	Sg	10 30 20.0	+1.0
IBDR				AML	AML	10 30 21.0	
	comp=E,297nm,0.4s						
IBDR				AML	AML	10 30 22.6	
	comp=N,307nm,0.5s						
KCHF	Cheshme Sefid,	1.52	342	ePg	Pn	10 29 59.6	-0.3
KCHF				e		10 30 25.1	
	comp=Z,99nm,0.5s						
KER	Kermanshah	1.60	345	ePg	Pn	10 30 01.2	+0.2
IBZA	Bozab	1.65	7	e		10 30 03.3	
	comp=Z,99nm,0.3s						
IBZA				ePg	Pn	10 30 02.5	+0.8
AHWZ	Ahwaz	1.73	150	ePg	Pb	10 30 03.4	-0.8
IGHG	Ghaleghazi	1.73	330	ePg	Pn	10 30 02.7	-0.1
IGHG				e		10 30 40.4	
	comp=Z,99nm,0.8s						
AMIS	Naft Sefid	1.83	129	ePg	Pb	10 30 04.6	-1.4
AMIS				e		10 30 40.5	
	comp=Z,99nm,0.5s						
IALM	Almabolaq	2.08	13	ePn	Pn	10 30 08.4	+0.8
IDHR	Dehrash	2.13	332	e		10 30 42.6	
	comp=Z,99nm,0.5s						
IDHR				ePn	Pn	10 30 08.8	+0.5
KHMZ	Khomeyn	2.16	65	ePn	Pn	10 30 09.6	+0.9
KHMZ	Khomeyn	2.16	65	ePn	Pn	10 30 09.6	+0.9
HSRG	Sareghieh	2.47	13	e	Sg	10 30 56.2	+4.4
	comp=Z,99nm,0.4s						
ASAO	Ashtian	2.64	49	ePn	Pn	10 30 15.8	+0.5
ASAO				eSg	Sb	10 30 51.6	-0.9
ASAO	Ashtian	2.64	49	ePn	Pn	10 30 15.8	+0.5
BHD	Baghdad	2.76	280	ePn	Pn	10 30 17.0	+0.4
BHD				eSn	Sn	10 30 52.0	+2.0
BHD				AML	AML	10 31 06.0	
	comp=E,395nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IPIR	Pirpir	2.76	92	*e*Pn	Pn	10 30 17.3	+0.3
IPIR				*e*		10 31 00.1	
	comp=Z,99nm,0.7s						
MIB	Mutribah	3.02	185	*e*P		10 30 19.0	
IRAZ	Razeghan	3.21	36	*e*Pn	Pn	10 30 24.5	+1.5
UMR	Umm Al-Rimmam	3.27	179	*e*P		10 30 21.2	
QABG	Abgarm-Qazvin	3.30	29	*e*Pn	Pn	10 30 24.1	-0.3
QAM	Ghamsar	3.33	73	*e*Pn	Pn	10 30 25.7	+0.9
IKLH	Kolahrood	3.36	81	*e*Pn	Pn	10 30 25.9	+0.7
IKLH				*e*		10 31 28.7	
	comp=Z,99nm,0.5s						
RST	Umm Al-Ruwaisa	3.36	189	*e*P		10 30 23.0	
RST				*e*S		10 30 59.3	
GHVR	GHOM	3.48	61	*e*Pn	Pn	10 30 26.5	-0.2
GHVR	GHOM	3.48	61	*e*Pn	Pn	10 30 26.5	-0.2
IQOM	Qom	3.50	54	*e*Pn	Pn	10 30 27.5	+0.3
IGAR	Gharneh	3.76	95	*e*Pn	Pn	10 30 30.1	-0.5
IGAR				*e*		10 30 38.8	
	comp=Z,99nm,0.2s						
RDF	Al-Radifah	3.89	181	*e*P		10 30 30.3	
RDF				*e*S		10 31 10.8	
RDF				IAML		10 31 23.7	
	comp=Z,114nm,0.5s						
KRSH	Karshahi	3.94	72	*e*Pn	Pn	10 30 33.3	+0.1
IZEF	Zefreh	3.96	88	*e*Pn	Pn	10 30 33.4	-0.1
IVRN	Varamin	4.04	57	*e*Pn	Pn	10 30 34.6	+0.2
ANAR	Anarak	5.14	84	*e*Pn	Pn	10 30 49.4	-0.2

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*IDC **30** 10:35:53.0±0.8, 19°.03S×174°.40W, h0^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.2/32, mbtmp4.2/12, MS3.4/6, Ms1 3.4/6, ms1mx3.1/30, Error ellipse: s-maj=34.8km s-min=17.1km az=137.0*

*NEIC **30** 10:35:53.3±2.9, 19°.24S±0°.08×174°.07W±0°.08, h10^{km}±1^{km}, mb4.6/27, Error ellipse: s-maj=17.4km s-min=4.7km az=221.0*

ISC 30 10:35:53.5±0.5**, 19°.20S**±0°.10×**174°.12W**±0°.07**, h10**^{km}**, n60, σ1^{s}28**/53**, mb4.6**/23**, MS3.3**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.97	89		Pn	10 36 54.0	-0.4
NIUE				Sn	Sn	10 37 33.9	-7.1
AFI	Afiamalu	5.72	23	Pn	Pn	10 37 19.2	+0.6
RAO	Raoul Island	10.59	198	LR	LR	10 41 37.8	
	comp=Z,147nm,21.2s,baz=156,slow=32						
RAR	Rarotonga	13.62	101	Pn	Pn	10 39 06.4	-0.4
	4.3nm,0.3s,baz=292,slow=9.8,SNR=13						
RAR	Rarotonga	13.62	101		Pn	10 39 06.0	-0.8
DZM	Mont Dzumac	18.41	258	Pn	P	10 40 10.6	+1.4
	0.5nm,0.3s,baz=73,slow=19,SNR=9.2						
DZM				LR	LR	10 46 04.4	
	comp=Z,232nm,18.0s,baz=46,slow=34						
DZM	Mont Dzumac	18.41	258	*e*Pn	P	10 40 13.3	+4.1
	42nm,1.4s						
DZM				*e*LR	LR	10 44 28.4	
	comp=Z,274nm,25.1s						
DZM	Mont Dzumac	18.41	258	P	P	10 40 12.0	+2.8
DZM				IAmb	IAmb	10 40 19.2	
	comp=Z,39nm,1.5s						
OUZ	Omahuta	19.31	212	P	Pn	10 40 21.1	+1.2
URZ	Urewera	20.47	200	P	P	10 40 32.3	+0.9
	comp=Z,5.6nm,0.4s,baz=28,slow=0.8,SNR=8.9						
URZ	Urewera	20.47	200	P	P	10 40 32.3	+0.9
BKZ	Black Stump Fm	21.50	200	P	P	10 40 43.3	+0.8
PAE	Paea	23.33	90	*e*T	T	11 05 03.0	
	comp=Z,11nm,0.2s						
PPT2	Papeete2	23.34	90	*e*LR	LR	10 46 27.6	
	comp=Z,335nm,27.0s						
PPT2	Papeete2	23.34	90	*e*T	T	11 05 05.0	
	comp=Z,7.4nm,0.3s						
PPT	Papeete	23.34	90	LR	LR	10 49 24.1	
	comp=Z,60nm,18.1s,baz=198,slow=34						
TIAR	Tiarei	23.56	90	*e*T	T	11 05 16.6	
	comp=Z,2.3nm,0.3s						
TVO	Taravao	23.62	91	*e*T	T	11 05 15.0	
	comp=Z,1.7nm,0.3s						
QRZ	Quartz Range	24.40	205	P	P	10 41 14.3	+2.1
MEH	Mehetia	24.73	91	*e*T	T	11 06 49.5	
	comp=Z,32nm,0.2s						
KHZ	Kahutara	25.40	202	P	P	10 41 20.1	-1.0
KHZ				IAmb	IAmb	10 41 20.2	
	comp=Z,27nm,1.5s						
LTZ	Lake Taylor	26.18	203	P	P	10 41 28.9	+0.7
LTZ				IAmb	IAmb	10 41 34.2	
	comp=Z,9.1nm,0.7s						
OXZ	Oxford	26.73	203	P	P	10 41 32.8	-0.4
HNR	Honiara	26.90	288	LR	LR	10 50 33.1	
	comp=Z,58nm,19.7s,baz=73,slow=33						
RPZ	Rata Peaks	27.43	204	P	P	10 41 41.9	+2.4
	comp=Z,6.5nm,0.6s,baz=344,slow=1.4,SNR=8.4						
RPZ	Rata Peaks	27.43	204	P	P	10 41 40.0	+0.5
RPZ				IAmb	IAmb	10 41 54.7	
	comp=Z,23nm,1.2s						
EIDS	Eidsvold	32.72	253	P	P	10 42 24.4	-2.1
CTAO	Charters Tower	37.27	262	P	P	10 43 05.9	0.0
CTAO				IAmb	IAmb	10 43 11.0	
	comp=Z,15nm,1.1s						
COEN	Coen	41.18	271	P	P	10 43 37.5	-1.2
COEN				IAmb	IAmb	10 43 44.9	
	comp=Z,16nm,1.5s						
STKA	Stephens Creek	41.64	243	P	P	10 43 41.5	-0.8
	comp=Z,0.8nm,0.4s,baz=105,slow=8.4,SNR=3.0						
STKA				LR	LR	10 58 12.4	
	comp=Z,46nm,20.7s,baz=33,slow=32						
STKA	Stephens Creek	41.64	243	P	P	10 43 41.7	-0.5
WR0	Warramunga Arr	48.22	260	P	P	10 44 33.5	-1.3
WR0				IAmb	IAmb	10 44 37.5	
	comp=Z,3.8nm,0.8s						
AS31	Alice Springs	48.38	255	P	P	10 44 35.1	-0.9
ASAR	Alice Springs	48.38	255	P	P	10 44 34.7	-1.3
	comp=Z,3.8nm,0.6s,baz=92,slow=8.0,SNR=62						
ASAR				PcP	PcP	10 46 02.8	+0.2
	comp=Z,1.3nm,0.7s,baz=100,slow=4.0,SNR=6.6						
ASAR	Alice Springs	48.38	255	P	P	10 44 35.1	-0.9
WB0	Warramunga Arr	48.38	260	P	P	10 44 34.4	-1.7
WB0				IAmb	IAmb	10 44 36.0	
	comp=Z,5.7nm,0.7s						
WB2	Warramunga Arr	48.40	260	P	P	10 44 34.6	-1.5
WB2				IAmb	IAmb	10 44 36.2	
	comp=Z,6.5nm,0.8s						
WRAB	Tennant Creek	48.40	260	P	P	10 44 34.5	-1.7
WRAB				IAmb	IAmb	10 45 02.2	
	comp=Z,5.3nm,1.0s						
WRA	Warramunga Arr	48.41	260	P	P	10 44 34.8	-1.5
	comp=Z,4.5nm,0.8s,baz=93,slow=6.2,SNR=87						
WRA				PcP	PcP	10 46 03.1	+0.4
	comp=Z,0.3nm,0.5s,baz=98,slow=5.8,SNR=1.3						
WRA				LR	LR	11 03 48.2	
	comp=Z,64nm,18.5s,baz=160,slow=35						
WRA	Warramunga Arr	48.41	260	P	P	10 44 34.6	-1.7
MTN	Manton Dam	52.83	268	P	P	10 45 07.9	-1.8
SIJI	Sorong	56.49	282	P	P	10 45 36.0	-0.3
	comp=Z,7.2nm,0.7s,baz=64,slow=12,SNR=3.1						
FITZ	Fitzroy Crossi	56.83	261	P	P	10 45 37.9	-0.7
	comp=Z,1.6nm,0.6s,baz=90,slow=10,SNR=4.8						
FITZ	Fitzroy Crossi	56.83	261	P	P	10 45 38.2	-0.4
SOEI	Soe	60.14	270	P	P	10 46 02.6	+0.6
PSA00	Pilbara Seismi	61.52	255	P	P	10 46 10.1	-1.1
QSPA	South Pole Qui	70.87	180	P	P	10 47 11.5	+0.9
QSPA				IAmb	IAmb	10 47 29.8	
	comp=Z,2.7nm,0.9s						
NVAR	Mina Array Bea	77.60	42	P	P	10 47 51.8	+1.4
	comp=Z,1.3nm,0.8s,baz=226,slow=9.0,SNR=9.7						
F10A	Beach Ranch, E	82.78	36	P	P	10 48 17.8	-0.1
F10A				IAmb	IAmb	10 48 19.8	
	comp=Z,5.2nm,1.2s						
IMW	Indian Meadow	85.27	40	P	P	10 48 31.2	+0.3
PDAR	Pinedale Array	85.54	42	P	P	10 48 33.4	+1.2
	comp=Z,0.7nm,0.7s,baz=214,slow=2.8,SNR=8.5						
PDAR	Pinedale Array	85.54	42	P	P	10 48 32.7	+0.5
CCB	Clear Creek Bu	86.00	11	P	P	10 48 33.9	+0.2
CCB				IAmb	IAmb	10 48 34.7	
	comp=Z,4.5nm,0.6s						
IL31		86.28	11	P	P	10 48 33.7	-1.4
IL31				IAmb	IAmb	10 49 01.5	
	comp=Z,7.4nm,1.5s						
ILAR	Eielson Array	86.28	11	P	P	10 48 35.2	+0.2
	comp=Z,0.8nm,0.6s,baz=228,slow=6.2,SNR=37						
CMAR	Chiang Mai Arr	93.15	288	P	P	10 49 09.0	+0.5
	comp=Z,0.6nm,0.4s,baz=106,slow=3.5,SNR=4.9						
CMAR	Chiang Mai Arr	93.15	288	P	P	10 49 09.0	+0.5
YKA	Yellowknife Ar	93.83	24	P	P	10 49 11.3	+0.7
	comp=Z,0.2nm,0.7s,baz=230,slow=3.6,SNR=3.6						
BRTR	Keskin Array B	148.54	317	PKPbc	PKPbc	10 55 41.3	+0.2
	comp=Z,1.8nm,0.7s,baz=116,slow=3.4,SNR=3.8						
GERES	GERESS Array B	149.75	350	PKPbc	PKiKP	10 55 44.5	-0.3
	comp=Z,0.2nm,0.3s,baz=338,slow=2.1,SNR=2.1						

IDC 30 10:49:25.0±2.6**, 6°.46S**×**130°.24E, h148**^{km}±36^{km}**, mb3.1**/1**, mb1 2.9**/5**, mb1mx2.8**/30**, mbtmp3.3**/5**, Error ellipse: s-maj=70.0km s-min=20.6km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.65	10	P	Pn	10 50 47.3	+0.3
	1.3nm,0.3s,baz=218,slow=22,SNR=8.1						
SIJI				S	Sn	10 51 45.1	-6.1
	2.3nm,0.3s,baz=272,slow=23,SNR=8.8						
FITZ	Fitzroy Crossi	12.41	201	P	Pn	10 52 16.5	-0.2
	0.1nm,0.3s,baz=14,slow=12,SNR=2.1						
FITZ				S	Sn	10 54 25.8	-8.1
	0.1nm,0.3s,baz=234,slow=19,SNR=2.1						
WRA	Warramunga Arr	13.98	164	P	Pn	10 52 35.0	-1.8
	0.0nm,0.3s,baz=348,slow=12,SNR=4.0						
WRA				S	Sn	10 55 00.3	-11
	0.1nm,0.3s,baz=345,slow=23,SNR=1.7						
ASAR	Alice Springs	17.47	169	P	Pn	10 53 20.4	+0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=8.1						
ASAR				S	S	10 56 29.0	-4.1
	0.1nm,0.3s,baz=358,slow=32,SNR=3.1						
MKAR	Makanchi Array	67.91	327	P	P	11 00 07.5	-0.1
	0.2nm,0.4s,baz=108,slow=7.2,SNR=5.3						

IDC 30 11:00:40.4±8.5**, 25°.87S**×**29°.35E, h0**^{km}**, mb1 2.9**/1**, mb1mx2.8**/54**, mbtmp2.9**/1**, ML2.4**/1**, Error ellipse: s-maj=97.3km s-min=57.3km az=142.0, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	Boshof	4.55	232	Pn	Pn	11 01 51.1	+0.4
	0.1nm,0.3s,baz=56,slow=14,SNR=1.6						
BOSA				Pg	Pb	11 02 02.9	+1.6
	0.4nm,0.3s,baz=60,slow=17,SNR=1.9						
BOSA				Sn	Sn	11 02 44.4	-0.1
	0.7nm,0.3s,baz=338,slow=16,SNR=2.2						
BOSA				Lg	Lg	11 03 06.0	
	4.5nm,0.3s,baz=149,slow=22,SNR=11						
BOSA				Rg	Rg	11 03 36.4	
	4.6nm,0.6s,baz=325,slow=9.2,SNR=1.2						
I47ZA	BOSHOF INFRASO	4.57	232	*i*		11 29 20.0	
	baz=53,slow=314,SNR=2.7						
I35NA	TSUMEB INFRASO	12.74	299	*i*		12 21 00.0	
	baz=126,slow=319,SNR=1.0						

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*NEIC **30** 11:06:11.7±2.2, 22°.07S±0°.04×68°.77W±0°.09, h113^{km}±4^{km}, Error ellipse: s-maj=12.4km s-min=6.3km az=90.0*

*IDC **30** 11:06:11.0±0.8, 21°.97S×68°.51W, h92^{km}±11^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.5/28, mbtmp3.8/6, Error ellipse: s-maj=32.3km s-min=22.7km az=123.0*

*GUC **30** 11:06:12.7±0.7, 22°.04S×68°.71W, h102^{km}±3^{km}, ML3.7*

ISC 30 11:06:11.7±0.7**, 22°.05S**±0°.04×**68°.72W**±0°.07**, h108**^{km}±6^{km}**, n55, σ1^{s}26**/73**, mb3.8**/4**, 12C, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.54	298	⇑*e*P	Pn	11 06 29.3	+0.5
PB09				*i* S	Sn	11 06 42.1	+0.4
PB09				IAML		11 06 43.3	
	comp=N,3μm,0.5s						
PB09	IPOC Station P	0.54	298		Pn	11 06 29.4	+0.5
PB09				Sn	Sn	11 06 43.0	+1.2
LVC	Limon Verde	0.58	197	P	Pn	11 06 29.7	+0.3
	comp=N,132nm,0.3s,baz=38,slow=7.8,SNR=1780						
LVC				S	Sn	11 06 42.4	-0.2
	comp=N,1μm,0.3s,baz=191,slow=19,SNR=320						
LVC	Limon Verde	0.58	197	*e*P	Pn	11 06 29.7	+0.3
LVC				*i* S	Sn	11 06 42.7	+0.1
LVC	Limon Verde	0.58	197		Pn	11 06 29.9	+0.5
LVC				Sn	Sn	11 06 42.8	+0.1
PB03	IPOC Station P	0.95	270	⇑*i*P	Pn	11 06 32.5	+0.1
PB03				*i* S	Sn	11 06 48.1	0.0
PB03				IAML		11 06 49.5	
	comp=N,2μm,0.5s						
PB06	IPOC Station P	1.02	230	⇑*i*P	Pn	11 06 33.7	+0.6
PB06				*i* S	Sn	11 06 50.1	+0.8
PB06				IAML		11 06 51.4	
	comp=E,3μm,0.4s						
PB06	IPOC Station P	1.02	230		Pn	11 06 33.5	+0.4
PB06				Sn	Sn	11 06 50.2	+1.0
PB07	IPOC Station P	1.13	286	⇑*i*P	Pn	11 06 34.4	+0.2
PB07				*i* S	Sn	11 06 51.3	0.0
PB07				IAML		11 06 52.3	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	1.13	286		Pn	11 06 34.0	-0.2
PB07				Sn	Sn	11 06 51.5	+0.1
PB01	IPOC Station P	1.23	325	⇑*i*P	Pn	11 06 35.3	0.0
PB01				*i* S	Sn	11 06 52.7	-0.4
PB01				IAML		11 06 54.4	
	comp=N,1μm,0.5s						
PB01	IPOC Station P	1.23	325		Pn	11 06 35.4	+0.1
PB01				Sn	Sn	11 06 52.8	-0.4
PB15	IPOC Station P	1.34	211	⇑*i*P	Pn	11 06 37.5	+0.8
PB15				*i* S	Sn	11 06 57.2	+1.5
PB15	IPOC Station P	1.34	211		Pn	11 06 37.5	+0.8
PB04	IPOC Station P	1.35	258	⇑*i*P	Pn	11 06 36.9	+0.1
PB04				*i* S	Sn	11 06 56.0	+0.2
PB04				IAML		11 06 57.2	
	comp=N,1μm,0.6s						
PB04	IPOC Station P	1.35	258		Pn	11 06 36.7	-0.1
PB04				Sn	Sn	11 06 55.5	-0.3
PB05	IPOC Station P	1.58	239	⇑*i*P	Pn	11 06 39.6	+0.1
PB05				*e*S	Sn	11 07 00.5	-0.2
PB05				IAML		11 07 11.2	
	comp=E,700nm,0.4s						
PB08	IPOC Station P	1.94	348	⇑*i*P	Pn	11 06 45.3	+1.0
PB08				*e*S	Sn	11 07 10.9	+1.9
PB08				IAML		11 07 13.2	
	comp=E,768nm,0.4s						
PB08	IPOC Station P	1.94	348		Pn	11 06 45.3	+1.0
TA01	Diego Aracena	2.01	317	*e*P	Pn	11 06 44.3	-0.4
TA01				*e*S	Sn	11 07 09.6	-0.3
TA01				IAML		11 07 11.7	
	comp=N,1μm,0.5s						
TA01	Diego Aracena	2.01	317	Pn	Pn	11 06 44.6	-0.1
TA02	Huaiquique	2.21	323	IAML		11 07 18.3	
	comp=E,631nm,0.1s						
PB10	IPOC Station P	2.23	229	*e*P	Pn	11 06 48.0	+0.5
PB10				IAML		11 07 36.8	
	comp=N,342nm,0.7s						
PB10	IPOC Station P	2.23	229	Pn	Pn	11 06 48.6	+1.1
PSGC	Pisagua	2.77	332	⇑*e*P	Pn	11 06 53.3	-1.4
PSGC				IAML		11 07 27.5	
	comp=N,246nm,0.5s						
PSGCX	Pisagua	2.77	332	Pn	Pn	11 06 53.5	-1.2
PB14	IPOC Station P	2.99	211	Pn	Pn	11 06 58.3	+0.5
MNMC	Minye Minye	3.02	344	⇑*i*P	Pn	11 06 58.0	-0.2
MNMC				*i* S	Sn	11 07 32.5	-1.4
MNMC	Minye Minye	3.02	344		Pn	11 06 57.8	-0.3
GO02	Mina Guanaco	3.20	194	⇑*i*P	Pn	11 07 00.3	-0.2
GO02	Mina Guanaco	3.20	194	Pn	Pn	11 07 00.4	-0.2
PB16	IPOC Station P	3.77	349	*e*P	Pn	11 07 09.4	+0.9
PB16	IPOC Station P	3.77	349	Pn	Pn	11 07 09.4	+0.9
AC01	Pan de Azucar	4.42	202	Pn	Pn	11 07 15.0	-1.7
AC02	Maricunga	4.78	184	*e*P	Pn	11 07 22.0	+0.1
AC02	Maricunga	4.78	184	Pn	Pn	11 07 22.0	+0.1
GO03	Copiap	5.69	194		Pn	11 07 31.5	-2.3
AC04	Llanos de Chal	6.49	199	Pn	Pn	11 07 41.2	-3.4
AC05	El Transito	6.90	191		Pn	11 07 47.9	-2.4
LCO	Las Campanas	7.16	194	Pn	Pn	11 07 50.2	-3.8
CO01	Juntas del Tor	7.99	189	Pn	Pn	11 08 04.0	-1.3
GO04	Tololo Observa	8.30	193	Pn	Pn	11 08 06.2	-3.2
CO03	El Pedregal	8.93	191	Pn	Pn	11 08 13.9	-3.9
SIV	San Ignacio	9.42	52	P	Pn	11 08 22.0	-2.4
	comp=N,0.8nm,0.3s,baz=241,slow=11,SNR=24						
MT02	Curacav	11.37	190	Pn	Pn	11 08 49.6	-1.1
BO02	Sierra Bellavi	12.82	188	Pn	Pn	11 09 10.6	+0.6
BI02	San Fabin de	14.73	188	Pn	Pn	11 09 34.2	-0.4
PLCA	Paso Flores	18.69	184	P	P	11 10 22.4	+0.9
	comp=N,0.1nm,0.3s,baz=310,slow=10,SNR=5.1						
PLCA	Paso Flores	18.69	184	P	P	11 10 21.7	+0.2
PLCA				IAmb	IAmb	11 10 56.6	
	comp=Z,20nm,1.7s						
PTGA	Pitinga	22.84	23	P	P	11 11 03.5	-2.3
	comp=Z,2.5nm,0.4s,baz=176,slow=18,SNR=4.9						
PTGA	Pitinga	22.84	23	P	P	11 11 05.1	-0.7
PTGA				IAmb	IAmb	11 11 07.1	
	comp=Z,9.5nm,1.3s						
PDAR	Pinedale Array	74.67	330	P	P	11 17 40.9	+1.4
	comp=Z,0.2nm,0.5s,baz=141,slow=7.7,SNR=3.8						
TORD	Torodi Ar. Bea	77.38	70	P	P	11 17 55.3	+0.1
	comp=Z,0.8nm,0.6s,baz=257,slow=4.9,SNR=5.9						
YKA	Yellowknife Ar	91.76	341	P	P	11 19 07.8	+1.2
	comp=Z,0.8nm,0.7s,baz=133,slow=5.1,SNR=13						
MKAR	Makanchi Array	145.97	37	PKPbc	PKPbc	11 25 39.5	+0.8
	comp=Z,0.9nm,0.7s,baz=320,slow=3.2,SNR=9.6						

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*SOME **30** 11:06:31.1, 43°.68N×69°.77E*

*KRNET **30** 11:06:31.4±0.1, 43°.62N×69°.52E, mb2.9*

*NNC **30** 11:06:32.9±0.9, 43°.63N×69°.82E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=5.4km s-min=3.7km az=142.0, Suspected Mining explosion.*

ISC 30 11:06:29.2±2.2**, 43°.82N**±0°.08×**69°.84E**±0°.08**, h0**^{km}**, n20, σ1^{s}09**/31**, 15C-6D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRLS	Borolday	0.79	180	P	Pn	11 06 48.5	+0.9
	20nm,0.2s						
BRLS				S	Sn	11 07 00.6	+0.5
	38nm,0.3s						
KK31	Karatay Array	0.87	145	⇑P	Pb	11 06 46.5	-0.7
	1.7nm,0.4s,baz=324,slow=18,SNR=174						
KK31				S	Sg	11 06 57.1	+0.1
	45nm,0.7s,baz=302,slow=17,SNR=136						
IUG	Iuzhnay	1.68	175	P	Pg	11 07 00.8	-0.5
	22nm,0.1s						
IUG				S	Sg	11 07 22.5	-0.5
	60nm,0.7s						
MNAS	Manas	2.36	123	⇑*i*P	Pg	11 07 15.0	+0.5
	baz=16						
MNAS				⇑*i*S	Sg	11 07 46.7	+1.6
	baz=16						
TRKS	Terek-Say	2.48	157	⇑*i*P	Pb	11 07 15.1	+0.3
	baz=50						
TRKS				⇑*i*S	Sb	11 07 47.1	+1.2
	baz=50						
MRKS	Merke	2.70	112	Pg	Pg	11 07 21.7	+0.8
	3.9nm,0.4s						
MRKS				Lg	Lg	11 07 58.5	
	13nm,0.4s						
EKS2	Erkin-Say	3.10	111	⇑*i*P	Pb	11 07 26.1	+0.8
	baz=6.0						
EKS2				⇑*i*S	Sb	11 08 05.8	+2.0
	baz=6.0						
AML	Almayashu	3.29	119	⇓*i*P	Pb	11 07 28.3	-0.5
	baz=14						
AML				⇓*i*S	Sb	11 08 09.8	+0.2
	baz=14						
ARSB	Arslanbob	3.41	136	⇓*i*P	Pb	11 07 29.0	-1.5
	baz=31						
ARSB				⇓*i*S	Sb	11 08 09.8	-2.8
	baz=31						
SGDS	Sogindy	3.50	94	Pg	Pg	11 07 36.8	+0.6
	3.5nm,0.4s						
SGDS				Lg	Lg	11 08 24.8	
	11nm,0.5s						
AAK	Ala-Archa	3.60	108	⇑*i*P	Pb	11 07 33.3	-0.6
	baz=3.0						
AAK				⇑*i*S	Sb	11 08 18.3	+0.1
	baz=3.0						
AAK	Ala-Archa	3.60	108	⇓Pg	Pg	11 07 37.5	-0.8
	2.8nm,0.5s						
AAK				⇑Lg	Lg	11 08 26.2	
	8.5nm,0.5s						
UCH	Uchtor	3.78	113	⇑*e*P	Pb	11 07 35.6	-1.5
	baz=9.0						
UCH				⇑*i*S	Sb	11 08 22.2	-1.4
	baz=9.0						
KBK	Karagaybulak	3.91	106	⇑*i*P	Pb	11 07 37.7	-1.4
	baz=2.0						
KBK				⇑*i*S	Sb	11 08 25.9	-1.2
	baz=2.0						
TKM2	Tokmak 2	4.29	100	⇓Pg	Pg	11 07 51.6	+0.1
	1.0nm,0.3s						
TKM2				⇑Lg	Lg	11 08 49.0	
	8.3nm,0.8s						
DGS	Degeres	4.35	96	Pg	Pg	11 07 52.8	+0.1
	1.8nm,0.4s						
DGS				Lg	Lg	11 08 51.6	
	12nm,0.5s						
KST	Kastek	4.53	98	Pg	Pg	11 07 55.0	-1.0
	3.4nm,0.6s						
KST				Lg	Lg	11 08 54.7	
	8.0nm,0.6s						
KUU	Kurty	4.70	87	Pg	Pg	11 07 59.9	+0.6
	1.8nm,0.1s						
KUU				Lg	Lg	11 09 03.5	
	12nm,0.4s						
KTBS	Karatobe	4.96	89	Pg	Pg	11 08 03.1	-1.1
	1.1nm,0.5s						
KTBS				Lg	Lg	11 09 09.2	
	14nm,0.6s						
IZV	Izvestkoviy	5.00	97	Pg	Pg	11 08 04.9	-0.1
	1.3nm,0.3s						
IZV				Lg	Lg	11 09 12.5	
	11nm,0.5s						

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*BJI **30** 11:31:42.8±0.0, 35°.96N×140°.44E, h37^{km}, mB5.0/43, mb4.7/68, Ms4.3/31, Ms7 4.0/33*

*NIED **30** 11:31:47.1, 35°.98N×140°.21E, h40^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.19; M$_{θθ}$-0.59; M$_{φφ}$0.78; M$_{rθ}$0.71; M$_{θφ}$0.45; M$_{φr}$-0.78; Fault plane solution: M$_0$1.33000×10^{16} NP1: φ$_s$332.00000°, δ84.00000°, λ-129.00000°. NP2: φ$_s$234.00000°, δ39.00000°, λ-9.00000°.*

*JMA **30** 11:31:47.1±0.1, 35°.98N×140°.21E, h40^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1: φ$_s$241.00000°, δ34.00000°, λ18.00000°. NP2: φ$_s$136.00000°, δ80.00000°, λ122.00000°. Principal axes: T Plg45.0000°, Azm79.0000°; N Plg32.0000°, Azm310.0000°; P Plg28.0000°, Azm201.0000°;*

JMA Felt III J1.

*NEIC **30** 11:31:47.3, 35°.98N×140°.19E, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.62; M$_{θθ}$-3.31; M$_{φφ}$3.93; M$_{rθ}$3.42; M$_{θφ}$2.79; M$_{φr}$-3.17; Fault plane solution: M$_0$6.55000×10^{15} NP1:φ$_s$334.04000°, δ82.84000°, λ-137.59000°. NP2:φ$_s$237.55000°, δ48.00000°, λ-9.66000°. Principal axes: T 5.6813, Plg23.0000°, Azm98.0000°; N 1.4804, Plg47.0000°, Azm342.0000°; P -7.1616, Plg34.0000°, Azm205.0000°;*

*NEIC **30** 11:31:47.5±3.1, 35°.98N±0°.05×140°.28E±0°.07, h35^{km}±1^{km}, mb4.9/208, Mwr4.5/19 Error ellipse: s-maj=10.0km s-min=7.7km az=101.0*

*MOS **30** 11:31:47.3±0.9, 35°.93N×140°.06E, h57^{km}, mb5.0/63, MS4.2/6, Error ellipse: s-maj=7.0km s-min=4.4km az=121.9*

*IDC **30** 11:31:48.7±1.5, 35°.86N×140°.09E, h57^{km}±14^{km}, mb4.4/30, mb1 4.5/33, mb1mx4.5/40, mbtmp4.7/33, MS3.8/32, Ms1 3.8/32, ms1mx3.7/52, Error ellipse: s-maj=12.3km s-min=9.0km az=82.0*

*GCMT **30** 11:31:50.3±0.4, 35°.93N±0°.02×140°.13E±0°.03, h49^{km}±2^{km}, MW4.8/72, Moment Tensor Solution. s7,c7; s72,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.11±.17; M$_{θθ}$-0.41±.11; M$_{φφ}$1.53±.09; M$_{rθ}$1.09±.07; M$_{θφ}$0.72±.07; M$_{φr}$-0.39±.06; Best double couple: M$_0$1.91300×10^{16} NP1:φ$_s$231.00000°, δ56.00000°, λ-40.00000°. NP2: φ$_s$346.00000°, δ57.00000°, λ-139.00000°. Principal axes: T 1.7670, Plg1.0000°, Azm108.0000°; N 0.3000, Plg39.0000°, Azm17.0000°; P -2.0590, Plg51.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 11:31:47.2±0.4**, 35°.95N**±0°.03×**140°.22E**±0°.04**, h42**^{km}±3^{km}**, h42**^{km}**:pP-P, n622, σ1^{s}42**/617**, mb4.8**/204**, MS3.9**/35**, 27C-13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIHU	Itakohorinouch	0.25	87	P	Pn	11 31 55.2	+0.2
JYT	Yasato	0.28	356	⇓P	Pn	11 31 54.9	-0.4
JYT				S	Sn	11 32 00.4	-0.6
JYT	Yasato	0.28	356		Pn	11 31 54.9	-0.4

JSMT	**Sammumatsuo**	0.36	149	⇓P	**Pn**	**11 31 56.8**	**+0.6**
JAG	**Ashikaga**	0.78	307	P	**Pn**	**11 32 01.2**	**-0.6**
JAG				S	**Sn**	**11 32 11.4**	**-0.9**
JRY	**Ryogami san**	1.07	274	⇑P	**Pn**	**11 32 05.5**	**-0.3**
JRY				S	**Sn**	**11 32 18.4**	**-1.1**
JKT	**Katashina**	1.13	316	P	**Pn**	**11 32 06.3**	**-0.3**
JKT				S	**Sn**	**11 32 20.4**	**-0.6**
JOD2	**Odawara 2**	1.15	234	⇓P	**Pn**	**11 32 07.3**	**+0.5**
BSO3	**Boso 3**	1.17	168	P	**Pn**	**11 32 08.0**	**+1.1**
MJAR	**Matsushiro Arr**	1.73	290	P	**Pn**	**11 32 15.1**	**+0.3**
	26nm,0.3s,baz=93,slow=13,SNR=548						
MJAR				LR	LR	11 33 13.3	
	comp=Z,2µm,20.0s,baz=120,slow=52						
MJAR	**Matsushiro Arr**	1.73	290		**Pn**	**11 32 14.2**	**-0.6**
MAJO	**Matsushiro**	1.73	290	*c* *i*P	**Pn**	**11 32 15.6**	**+0.8**
MAJO	**Matsushiro**	1.73	290		**Pn**	**11 32 14.5**	**-0.3**
MAT	**Matsushiro**	1.73	290	P	**Pn**	**11 32 14.3**	**-0.5**
MAT				S	**Sn**	**11 32 35.5**	**-0.2**
MJB9	**Matsu-Tunnel**	1.73	291	Pn	**Pn**	**11 32 14.6**	**-0.2**
JMM	**Marumori**	1.96	13		**Pn**	**11 32 17.6**	**-0.4**
JSG	**Sagara**	2.10	233		**Pn**	**11 32 21.3**	**+1.5**
JGF	**Kuroka**	2.35	262		**Pn**	**11 32 25.5**	**+2.1**
JSD	**Sado**	2.61	324	Pn	**Pn**	**11 32 26.9**	**+0.1**
INU	**Inuyama**	2.68	258		**Pn**	**11 32 28.9**	**+1.1**
JHJ	**Hachijo jima 2**	2.85	187	P	**Pn**	**11 32 30.4**	**+0.2**
	518nm,0.3s,baz=313,slow=3.0,SNR=54						
JHJ				S	**Sn**	**11 33 02.8**	**-0.4**
	213nm,0.3s,baz=72,slow=20,SNR=3.7						
JHJ				LR	LR	11 33 54.1	
	comp=Z,2µm,19.8s,baz=114,slow=46						
JHJ2	**Mitsune**	2.85	187	Pn	**Pn**	**11 32 31.8**	**+1.6**
JWT	**Wachi**	3.98	262	Pn	**Pn**	**11 32 48.2**	**+2.5**
JTM	**Tenmabayashi**	4.87	8	Pn	**Pn**	**11 32 58.8**	**+0.9**
JMN	**Monobe**	5.67	249	Pn	**Pn**	**11 33 10.0**	**+1.1**
JHS	**Saijyo**	5.88	263	Pn	**Pn**	**11 33 14.5**	**+2.8**
ERM	**Erimo**	6.47	20	P	**Pn**	**11 33 18.4**	**-1.4**
ERM	**Erimo**	6.47	20	Pn	**Pn**	**11 33 18.4**	**-1.4**
JEW	**Eniwo**	6.94	8	Pn	**Pn**	**11 33 26.8**	**+0.4**
JNU	**Nakatsue**	8.21	253	P	**Pn**	**11 33 43.7**	**-0.1**
	0.4nm,0.3s,baz=29,slow=19,SNR=2.5						
JNU				LR	LR	11 37 13.5	
	comp=Z,1µm,19.0s,baz=66,slow=40						
ASAJ	**Asahikawa**	8.36	12	P	**Pn**	**11 33 44.8**	**-0.9**
	6.3nm,0.3s,baz=224,slow=11,SNR=37						
ASAJ				S	**Sn**	**11 35 16.9**	**-1.8**
	0.7nm,0.3s,baz=135,slow=20,SNR=1.3						
ASAJ				LR	LR	11 38 08.3	
	comp=Z,192nm,18.1s,baz=190,slow=45						
ASAJ	**Asahikawa**	8.36	12	P	**Pn**	**11 33 44.2**	**-1.5**
JKA	**Kamikawa-asahi**	8.36	12	Pn	**Pn**	**11 33 44.2**	**-1.5**
NMR	**Nemuro--Hokkai**	8.54	28	⇑*i*P	**Pn**	**11 33 45.1**	**-3.0**
GLVR	**Golovnino**	8.78	26	P	**Pn**	**11 33 46.9**	**-4.5**
GLVR				pmax	pmax		
	comp=Z,196nm,0.6s						
GLVR				pmax	pmax		
	comp=N,61nm,0.4s						
JCJ	**Chichijima**	8.99	169	P	**Pn**	**11 33 51.3**	**-3.1**
	comp=N,87nm,0.3s,baz=273,slow=23,SNR=47						
JCJ				S	Sn	11 35 24.8	-10
	comp=N,3.4nm,0.3s,baz=41,slow=19,SNR=1.7						
JCJ	**Chichijima**	8.99	169	Pn	**Pn**	**11 33 52.6**	**-1.9**
GRPR	**Tuman**	9.09	26	*e*P	**Pn**	**11 33 51.3**	**-4.4**
GRPR				S	**Sn**	**11 35 32.7**	**-3.9**
GRPR				pmax	pmax		
	comp=N,77nm,0.3s						
GRPR				pmax	pmax		
	comp=E,57nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,122nm,0.3s						
YUK	**Yuzh-Kuril'sk**	9.16	26	*e*P	**Pn**	**11 33 54.5**	**-2.1**
YUK				pmax	pmax		
	comp=E,51nm,0.3s						
YUK				pmax	pmax		
	comp=Z,108nm,0.3s						
YUK				MLR	MLR		
	comp=Z,425nm,16.0s						
TEY	**Ternei**	9.48	344	⇑*e*P	Pn	11 34 09.0	+7.9
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.1s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
KSRS	**Korea Array**	9.99	282	P	**Pn**	**11 34 12.4**	**+4.3**
	comp=E,0.8nm,0.3s,baz=95,slow=14,SNR=24						
KSRS				LR	LR	11 38 00.9	
	comp=E,409nm,20.1s,baz=90,slow=38						
KSAR	**Wonju Array Be**	10.02	282	P	**Pn**	**11 34 09.8**	**+1.3**
KSAR	**Wonju Array Be**	10.02	282	Pn	**Pn**	**11 34 09.8**	**+1.3**
KS19	**Wonju Array Si**	10.04	283	Pn	**Pn**	**11 34 09.5**	**+0.7**
USA0B	**Ussuriysk Arra**	10.37	325	*i* P	**Pn**	**11 34 16.6**	**+3.4**
USRK	**Ussuriysk Ar.**	10.37	325	P	**Pn**	**11 34 17.9**	**+4.7**
	baz=138,slow=12,SNR=21						
USRK				LR	LR	11 38 01.2	
	comp=E,488nm,18.1s,baz=135,slow=36						
USRK	**Ussuriysk Ar.**	10.37	325	P	**Pn**	**11 34 15.3**	**+2.1**
USRK	**Ussuriysk Ar.**	10.37	325	Pn	**Pn**	**11 34 15.3**	**+2.1**
KUR	**Kuril'sk**	10.94	30	⇑*i*P	**Pn**	**11 34 19.8**	**-1.2**
KUR				pmax	pmax		
	comp=Z,45nm,0.8s						
KUR				pmax	pmax		
	comp=N,20nm,0.6s						
KUR				pmax	pmax		
	comp=E,11nm,0.7s						
YSS	**Yuzh-Sakhalins**	11.15	9	⇑*e*P	**Pn**	**11 34 23.5**	**-0.5**
YSS				*e*S	**Sn**	**11 36 25.9**	**-1.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS				MLR	MLR		
	comp=N,600nm,15.0s						
YSS	**Yuzh-Sakhalins**	11.15	9	Pn	**Pn**	**11 34 22.1**	**-1.9**
MDJ	**Mudanjiang**	11.85	320	P	**Pn**	**11 34 38.0**	**+4.4**
MDJ				pmax	pmax		
	comp=N,44nm,1.2s						
MDJ				pmax	pmax		
	comp=N,300nm,2.7s						
UGL	**Uglegorsk**	13.19	5	*e*P	Pn	11 34 45.9	-5.8
UGL				*e*S	**Sn**	**11 37 10.3**	**-6.6**
UGL				smax	smax		
	comp=Z,30nm,0.5s						
UGL				MLR	MLR		
	comp=Z,2µm,14.0s						
UGL				MLR	MLR		
	comp=N,800nm,15.0s						
UGL				MLR	MLR		
	comp=E,1µm,15.0s						
JOW	**Kunigami**	13.65	232	P	**Pn**	**11 35 01.5**	**+3.2**
	comp=E,2.7nm,0.3s,baz=281,slow=16,SNR=3.0						
JOW				LR	LR	11 40 02.5	
	comp=E,428nm,21.5s,baz=166,slow=36						
CN2	**Changchun**	13.78	309	*e*P	**Pn**	**11 35 02.8**	**+3.0**
CN2				*e*pP	P	11 35 11.3	+3.9
CN2				S	**Sn**	**11 37 35.5**	**+4.2**
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=E,200nm,4.0s						
CN2				LR	LR		
	comp=E,400nm,14.0s						
CN2				LR	LR		
	comp=E,400nm,14.0s						
CN2				LR	LR		
	comp=E,600nm,11.0s						
KLR	**Kul'dur**	14.65	338	P	**Pn**	**11 35 13.6**	**+2.0**
	comp=E,0.4nm,0.3s,baz=132,slow=12,SNR=12						
KLR				LR	LR	11 40 36.8	
	comp=E,300nm,19.4s,baz=152,slow=36						
KLR	**Kul'dur**	14.65	338	*i* P	**Pn**	**11 35 10.9**	**-0.6**
DL2	**Dalian**	15.06	287	P	**Pn**	**11 35 16.8**	**-0.3**
DL2				S	**Sn**	**11 38 03.0**	**+0.3**
DL2				pmax	pmax		
	comp=E,66nm,1.2s						
DL2				pmax	pmax		
	comp=E,230nm,5.3s						
DL2				LR	LR		
	comp=E,380nm,19.5s						
DL2				LR	LR		
	comp=E,560nm,21.0s						
DL2				LR	LR		
	comp=E,440nm,19.5s						
NJ2	**Nanjing**	18.13	264	*e*P	**Pn**	**11 35 56.5**	**+0.7**
NJ2				pmax	pmax		
	comp=E,16nm,0.6s						
NJ2				LR	LR		
	comp=E,510nm,11.4s						
NJ2				LR	LR		
	comp=E,440nm,10.9s						
NJ2				LR	LR		
	comp=E,600nm,14.9s						
TIA	**Tai'an**	18.67	278	P	**Pn**	**11 36 04.0**	**+1.7**
BJI	**Beijing**	19.37	289	P	**Pn**	**11 36 10.0**	**-0.6**
BJI				pmax	pmax		
	comp=E,12nm,0.7s						
BJI				pmax	pmax		
	comp=E,91nm,3.5s						
BJT	**Baijiatuau**	19.37	289	P	**P**	**11 36 09.1**	**-0.2**
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
BJT	**Baijiatuau**	19.37	289	P	**P**	**11 36 09.1**	**-0.2**
YHNB	**Yeheng**	19.74	240	P	**P**	**11 36 13.8**	**+0.3**
YHNB				IAmb	IAmb	11 36 25.1	
	comp=Z,34nm,0.9s						
NACB	**Ninganchiao**	19.90	239	P	**P**	**11 36 13.8**	**-1.4**
ZEA	**Zeya**	19.96	337	*e*P	**Pn**	**11 36 18.0**	**+0.4**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.6s						
HIA	**Hailar**	20.02	318	P	**P**	**11 36 15.2**	**-1.2**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HIA	**Hailar**	20.02	318	P	**P**	**11 36 15.2**	**-1.2**
SSLB	**Suanglung**	20.60	239	P	**P**	**11 36 22.5**	**-0.4**
SSLB				IAmb	IAmb	11 36 30.8	
	comp=Z,38nm,1.1s						
YULB	**Yu-li**	20.62	238	P	**P**	**11 36 22.3**	**-0.7**
YULB				IAmb	IAmb	11 36 25.9	
	comp=Z,41nm,1.2s						
PEA0B	**Petropavlovsk-**	21.10	30	P	**P**	**11 36 29.0**	**+1.0**
PEA0B				pmax	pmax		
	comp=Z,70nm,1.3s						
PEA0B	**Petropavlovsk-**	21.10	30	P	**P**	**11 36 29.0**	**+1.0**
PEA0B				IAmb	IAmb	11 36 31.3	
	comp=Z,70nm,1.2s						
PETK	**Petropavlovsk-**	21.10	30	P	**P**	**11 36 29.2**	**+1.2**
	comp=Z,11nm,0.7s,baz=202,slow=10,SNR=10						
PETK				LR	LR	11 44 07.1	
	comp=Z,181nm,21.6s,baz=222,slow=35						
PETK	**Petropavlovsk-**	21.10	30	P	**P**	**11 36 28.9**	**+0.9**
TPUB	**Ta-pu**	21.14	239	P	**P**	**11 36 26.9**	**-1.7**
TPUB				IAmb	IAmb	11 36 32.4	
	comp=Z,41nm,0.8s						
TWG	**Pinlang**	21.16	237	P	**P**	**11 36 28.3**	**-0.5**
TWG				IAmb	IAmb	11 36 33.6	
	comp=Z,34nm,0.8s						
PET	**Petropavlovsk**	21.44	32	*ce*P	**P**	**11 36 32.3**	**+0.8**
PET				pmax	pmax		
	comp=Z,265nm,1.3s						
PET	**Petropavlovsk**	21.44	32	P	**P**	**11 36 33.0**	**+1.5**
PET				IAmb	IAmb	11 36 35.0	
	comp=Z,114nm,1.5s						
WHN	**Wuhan**	22.27	263	⇑P	**P**	**11 36 41.0**	**+0.3**
WHN				pP	**sP**	**11 36 54.8**	**-1.4**
WHN				pmax	pmax		
	comp=Z,64nm,0.6s						
WHN				LR	LR		
	comp=Z,1µm,25.7s						
HHC	**Hu-ho-hao-te**	22.93	291	*e*P	**P**	**11 36 47.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
BTO	**Baotou**	24.09	290	*e*P	**P**	**11 36 53.5**	**-5.4**
MA2	**Magadan**	24.61	13	P	**P**	**11 37 04.0**	**+0.7**
	comp=Z,22nm,0.7s,baz=197,slow=9.9,SNR=9.4						
MA2				LR	LR	11 47 21.9	
	comp=Z,169nm,18.1s,baz=201,slow=38						
MA2	**Magadan**	24.61	13	*i* P	**P**	**11 37 04.4**	**+1.1**
MA2	**Magadan**	24.61	13	P	**P**	**11 37 03.9**	**+0.7**
MA2				IAmb	IAmb	11 37 14.5	
	comp=Z,46nm,0.8s						
XAN	**Xi'an**	25.66	275	P	**P**	**11 37 12.0**	**-1.1**
XAN				pP	pP	11 37 18.0	-6.3
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
ENH	**Enshi**	26.29	266	P	**P**	**11 37 17.5**	**-1.4**
YAK	**Yakutsk**	26.93	349	P	**P**	**11 37 23.8**	**-0.4**
	comp=Z,5.4nm,0.3s,baz=117,slow=0.2,SNR=2.4						
YAK				LR	LR	11 47 56.1	
	comp=Z,211nm,20.0s,baz=178,slow=36						
YAK	**Yakutsk**	26.93	349	*e*P	**P**	**11 37 23.6**	**-0.6**
YAK				*e**PP	**pP**	**11 37 33.0**	**-2.5**
YAK				*e*PPP	PPP	11 38 13.2	
YAK				*e*S	**S**	**11 42 00.1**	**+2.0**
YAK				*e*SS	**SnSn**	**11 43 07.2**	**+1.3**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				smax	smax		
	comp=N,83nm,2.3s						
YAK				smax	smax		
	comp=E,35nm,2.0s						
YAK				MLR	MLR		
	comp=Z,327nm,16.0s						
YAK				MLR	MLR		
	comp=N,78nm,12.0s						
YAK				MLR	MLR		
	comp=E,81nm,15.0s						
YAK	**Yakutsk**	26.93	349	P	**P**	**11 37 23.7**	**-0.4**
YAK				IAmb	IAmb	11 37 30.6	
	comp=Z,29nm,1.0s						
ULN	**Ulaanbaatar**	27.19	306	P	**P**	**11 37 25.2**	**-1.7**
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	**Ulaanbaatar**	27.19	306	P	**P**	**11 37 25.2**	**-1.7**
SONM	**Songino Array**	27.62	306	P	**P**	**11 37 30.3**	**-0.4**
	comp=Z,5.4nm,0.6s,baz=104,slow=8.5,SNR=30						
SONM				LR	LR	11 48 53.7	
	comp=Z,234nm,19.8s,baz=75,slow=37						
SONM	**Songino Array**	27.62	306	P	**P**	**11 37 29.5**	**-1.2**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	**Songino Array**	27.62	306	P	**P**	**11 37 29.5**	**-1.2**
SEY	**Seymchan**	28.04	12	P	**P**	**11 37 35.4**	**+1.3**
	comp=Z,5.0nm,0.7s,baz=174,slow=8.6,SNR=12						
SEY	**Seymchan**	28.04	12	*i* P	**P**	**11 37 35.7**	**+1.6**
H11N2	**WAKE ISLAND Hy**	28.46	117	T	T	12 07 50.2	
	baz=312,slow=75,SNR=78						
H11N1	**WAKE ISLAND Hy**	28.47	117	T	T	12 07 49.9	
	baz=312,slow=75,SNR=88						
H11N3	**WAKE ISLAND Hy**	28.48	117	T	T	12 07 47.5	
	baz=312,slow=75,SNR=93						
H11S1	**WAKE ISLAND Hy**	29.12	120	T	T	12 08 41.4	
	baz=314,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	29.12	120	T	T	12 08 38.7	
	baz=314,slow=76,SNR=69						
H11S2	**WAKE ISLAND Hy**	29.14	120	T	T	12 08 39.8	
	baz=314,slow=76,SNR=56						
LZH	**Lanzhou**	29.32	281	*e*P	**P**	**11 37 48.8**	**+2.8**
LZH				pP	pP	11 37 59.5	+2.2
LZH				sP	sP	11 38 02.5	+0.2
LZH				PP	**PnPn**	**11 38 43.0**	**+2.5**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,89nm,4.6s						
LZH				LR	LR		
	comp=Z,360nm,11.9s						
LZH				LR	LR		
	comp=Z,340nm,10.8s						
LZH				LR	LR		
	comp=Z,410nm,14.1s						
GYA	**Guiyang**	30.10	261	⇑P	**P**	**11 37 51.3**	**-1.7**
GYA				pP	pP	11 38 03.5	-0.8
GYA				pmax	pmax		
	comp=Z,18nm,0.8s						
GYA				LR	LR		
	comp=Z,270nm,16.8s						
ZAK	**Zakamensk**	30.21	310	*e*P	**P**	**11 37 53.0**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	**Talaya**	30.33	313	P	**P**	**11 37 55.0**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=26,slow=1.0,SNR=4.3						
TLY	**Talaya**	30.33	313	*e*P	**P**	**11 37 54.6**	**-0.1**
TLY				*e*S	**S**	**11 42 50.3**	**-1.7**
TLY				pmax	pmax		
	comp=Z,11nm,0.6s						
TLY				MLR	MLR		
	comp=Z,770nm,15.0s						
TLY	**Talaya**	30.33	313	P	**P**	**11 37 54.3**	**-0.4**
QIZ	**Qiongzhong**	31.61	246	P	**P**	**11 38 09.0**	**+2.8**
QIZ				S	**S**	**11 43 16.5**	**+4.1**
QIZ				LR	LR		
	comp=Z,190nm,20.6s						
QIZ				LR	LR		
	comp=Z,280nm,18.6s						
QIZ				LR	LR		
	comp=Z,280nm,17.2s						
GTA	**Gaotai**	31.98	289	P	**P**	**11 38 08.8**	**-0.6**
GTA				pP	pP	11 38 15.0	-5.8
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	**Kunming**	33.85	262	*e*P	**P**	**11 38 25.3**	**-0.7**
KMI				pP	pP	11 38 35.3	-2.1
KMI				sP	sP	11 38 38.5	-3.9
KMI				SS	SS	11 45 58.8	-16
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				LR	LR		
	comp=Z,230nm,9.5s						
KMI				LR	LR		
	comp=Z,240nm,11.4s						
KMI				LR	LR		
	comp=Z,180nm,16.9s						
BILL	**Bilibino**	35.33	17	⇑*e*P	**P**	**11 38 39.0**	**+0.9**
BILL				*SP	**sP**	**11 38 55.0**	**+0.5**
BILL						11 41 09.0	
BILL				SS	SS	11 46 34.0	-10
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,74nm,15.0s						
BILL	**Bilibino**	35.33	17	P	**P**	**11 38 37.8**	**-0.3**
TIXI	**Tiksi**	36.25	354	*i* P	**P**	**11 38 45.7**	**-0.2**
TIXI	**Tiksi**	36.25	354	P	**P**	**11 38 45.2**	**-0.7**
NONG	**Nongkai**	37.25	251	P	**P**	**11 38 54.6**	**-0.4**
	comp=Z,31nm,0.9s						
LKP	**Lekhapani**	38.47	270	⇑*e*P	**P**	**11 39 05.5**	**+0.3**
LKP				IAmb	IAmb	11 39 07.0	
	comp=Z,69nm,0.6s						
PAYA	**Payao**	39.07	256	P	**P**	**11 39 14.6**	**+4.3**
	comp=Z,76nm,0.4s						
MRSI	**Marisa**	39.17	210	P	**P**	**11 39 08.3**	**-2.8**
	comp=Z,11nm,1.2s						
FAKI	**Fak Fak**	39.38	193	P	**P**	**11 39 12.8**	**-0.1**
FAKI				IAmb	IAmb	11 39 16.4	
	comp=Z,14nm,0.8s						
CHAI	**Chaiyaphum**	39.43	250	P	**P**	**11 39 12.0**	**-1.3**
	comp=Z,63nm,0.9s						
UTTA	**Uttaradit**	39.44	253	P	**P**	**11 39 14.7**	**+1.3**
	comp=Z,12nm,0.7s						
LAMP	**Lampang**	39.72	255	P	**P**	**11 39 18.0**	**+2.3**
	comp=Z,12nm,1.0s						
MOKO	**MOKOCHONG**	39.97	269	*e*P	**P**	**11 39 17.4**	**-0.6**
MOKO				IAmb	IAmb	11 39 18.7	
	comp=Z,54nm,0.8s						
ZIRO	**ZIRO**	40.01	271	*e*P	**P**	**11 39 18.2**	**-0.1**
ZIRO				IAmb	IAmb	11 39 19.2	
	comp=Z,49nm,0.7s						
SANI	**Sanana**	40.08	202	P	**P**	**11 39 14.8**	**-3.8**
	comp=Z,32nm,0.8s						
CMMT	**Chiang Mai**	40.09	256	P	**P**	**11 39 20.1**	**+1.2**
	comp=Z,3.3nm,0.9s						
CHTO	**Chiang Mai**	40.10	256	P	**P**	**11 39 18.1**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	**Chiang Mai**	40.10	256	P	**P**	**11 39 18.1**	**-0.8**
DGZ	**Jazzator, Alta**	40.26	307	*d* *i*P	**P**	**11 39 21.0**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,50nm,0.7s						
CMAR	**Chiang Mai Arr**	40.29	256	P	**P**	**11 39 19.6**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=49,slow=7.1,SNR=13						
CMAR				LR	LR	11 56 26.6	
	comp=Z,87nm,20.5s,baz=126,slow=37						
CMAR	**Chiang Mai Arr**	40.29	256	P	**P**	**11 39 20.0**	**-0.5**
CMAR	**Chiang Mai Arr**	40.29	256	P	**P**	**11 39 20.0**	**-0.5**
CM04	**Chiang Mai Arr**	40.30	255	P	**P**	**11 39 22.4**	**+1.9**
	comp=Z,4.6nm,0.9s						
CM01	**Chiang Mai Arr**	40.30	255	P	**P**	**11 39 24.2**	**+3.6**
	comp=Z,4.7nm,0.9s						
CM02	**Chiang Mai Arr**	40.30	255	P	**P**	**11 39 22.4**	**+1.7**
	comp=Z,3.7nm,0.8s						
CM05	**Chiang Mai Arr**	40.32	255	P	**P**	**11 39 22.6**	**+1.9**
	comp=Z,2.3nm,0.9s						
CM13	**Chiang Mai Arr**	40.34	256	P	**P**	**11 39 23.0**	**+2.1**
	comp=Z,48nmcomp=Z,3.1nm,0.8s						
WMQ	**Urumqi**	40.48	298	*e*P	**P**	**11 39 24.0**	**+2.1**
WMQ	**Urumqi**	40.48	298	P	**P**	**11 39 21.4**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ	**Urumqi**	40.48	298	P	**P**	**11 39 21.4**	**-0.5**
WMQ				IAmb	IAmb	11 39 28.3	
	comp=Z,19nm,0.9s						
APSI	**Ampana**	40.55	209	P	**P**	**11 39 18.6**	**-4.0**
	comp=Z,18nm,1.1s						
TEZP	**TEZPUR**	41.24	271	*e*P	**P**	**11 39 27.6**	**-0.7**
LSA	**Lhasa**	41.35	276	P	**P**	**11 39 30.0**	**+0.3**
LSA				pmax	pmax		
	comp=Z,14nm,0.9s						
LSA	**Lhasa**	41.35	276	P	**P**	**11 39 30.0**	**+0.3**
LSA				IAmb	IAmb	11 39 31.6	
	comp=Z,14nm,0.9s						
ZAA0	**Zalesovo Array**	41.94	313	P	**P**	**11 39 33.5**	**-0.1**
ZAA0				IAmb	IAmb	11 39 35.1	
	comp=Z,16nm,0.9s						
ZALV	**Zalesovo Beam**	41.94	313	P	**P**	**11 39 33.4**	**-0.3**
	comp=Z,14nm,0.8s,baz=93,slow=7.4,SNR=56						
ZALV				LR	LR	11 56 27.9	
	comp=Z,74nm,18.8s,baz=57,slow=35						
ZSN	**Zaisan**	42.07	304	*e*P	**P**	**11 39 35.2**	**+0.3**
	comp=Z,13nm,0.8s,baz=303						
ZSN	**Zaisan**	42.07	304	*e*P	**P**	**11 39 35.1**	**+0.3**
ZSN				pmax	pmax		
	comp=Z,13nm,0.8s						
GUWA	**GUWAHATI**	42.32	271	*e*P	**P**	**11 39 35.8**	**-1.3**
GUWA				IAmb	IAmb	11 39 36.7	
	comp=Z,24nm,0.6s						
SHL	**Shillong**	42.44	270	P	**P**	**11 39 37.0**	**-1.3**
SHL				pmax	pmax		
	comp=Z,14nm,0.8s						
SHL	**Shillong**	42.44	270	*e*P	**P**	**11 39 36.3**	**-1.9**
SHL	**Shillong**	42.44	270	P	**P**	**11 39 37.0**	**-1.3**
SHL				IAmb	IAmb	11 39 37.4	
	comp=Z,14nm,0.8s						
SAIH	**SAIHA**	42.96	265	*e*P	**P**	**11 39 40.9**	**-1.6**
SAIH				IAmb	IAmb	11 39 44.0	
	comp=Z,23nm,0.7s						
ANM	**Nome**	43.02	31	P	**P**	**11 39 43.4**	**+1.2**
ANM				pmax	pmax		
	comp=Z,11nm,0.9s						
ANM	**Nome**	43.02	31	P	**P**	**11 39 43.4**	**+1.2**
PHET	**Kaeng Krachan**	43.07	248	P	**P**	**11 39 43.0**	**-0.2**
	comp=Z,354nmcomp=Z,31nm,0.8s						
NRIK	**Noril'sk**	43.85	336	P	**P**	**11 39 49.4**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=136,slow=4.5,SNR=6.5						
NRIK				LR	LR	11 59 19.2	
	comp=Z,105nm,18.5s,baz=109,slow=38						
NRIK	**Noril'sk**	43.85	336	P	**P**	**11 39 49.0**	**+0.1**
MK31	**Makanchi Array**	43.89	303	P	**P**	**11 39 49.4**	**-0.2**
MK31				pmax	pmax		
	comp=Z,22nm,0.8s						
MK31	**Makanchi Array**	43.89	303	P	**P**	**11 39 49.4**	**-0.2**
MK31				IAmb	IAmb	11 39 50.8	
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	43.89	303	P	**P**	**11 39 49.8**	**+0.3**
	comp=Z,22nm,0.7s,baz=90,slow=9.8,SNR=233						
MKAR				LR	LR	11 58 49.2	
	comp=Z,146nm,19.1s,baz=88,slow=37						
MKAR	**Makanchi Array**	43.89	303	P	**P**	**11 39 49.3**	**-0.2**
MAKZ	**Makanchi**	44.10	303	P	**P**	**11 39 51.4**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,26nm,0.9s						
MAKZ	**Makanchi**	44.10	303	P	**P**	**11 39 51.4**	**+0.2**
MAKZ				IAmb	IAmb	11 39 52.6	
	comp=Z,26nm,0.8s						
KSM	**Kuching**	44.11	226	P	**P**	**11 39 50.0**	**-1.6**
SEM	**Semipalatinsk**	44.84	308	*e*P	**P**	**11 39 56.2**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=308						
SEM	**Semipalatinsk**	44.84	308	*e*P	**P**	**11 39 56.1**	**-1.2**
SEM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RDOG	**Red Dog Mine**	44.90	26	P	**P**	**11 39 58.5**	**+1.2**

RDOG				IAmb	IAmb	11 40 00.4	
	comp=Z,14nm,0.8s						
TAPN	**Taplejung**	**45.06**	**274**	*e*P	**P**	**11 39 59.5**	**0.0**
	comp=Z,15nm,0.4s						
KURK	**Kurchatov**	**45.85**	**309**	P	**P**	**11 40 04.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,47nm,0.8s						
KURK	**Kurchatov**	**45.85**	**309**	P	**P**	**11 40 04.7**	**-0.3**
KURBB	**Kurchatov Arra**	**45.92**	**309**	P	**P**	**11 40 05.5**	**-0.1**
	comp=Z,28nm,0.7s,baz=85,slow=7.8,SNR=100						
SURT	**Suratani**	**46.25**	**245**	P	P	11 40 13.7	+5.0
	comp=Z,0.7nm,1.1s						
GUN	**Gumba**	**46.31**	**276**	*e*P	**P**	**11 40 09.2**	**-0.2**
	comp=Z,31nm,0.7s						
TRTT	**Trang**	**46.35**	**243**	P	**P**	**11 40 08.0**	**-1.4**
PDGK	**Podgornoye**	**46.44**	**299**	*i* P	**P**	**11 40 09.3**	**-0.6**
SHLS	**Shalkode**	**46.49**	**298**	*e*P	**P**	**11 40 07.6**	**-2.8**
	comp=Z,4.9nm,0.7s,baz=298						
SHLS	**Shalkode**	**46.49**	**298**	*e*P	**P**	**11 40 07.5**	**-2.8**
SHLS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PKI	**Pulchoki**	**46.83**	**276**	*e*P	**P**	**11 40 13.4**	**0.0**
	comp=Z,17nm,0.7s						
TTA	**Tatalina**	**46.85**	**34**	P	**P**	**11 40 14.8**	**+1.9**
TTA				pmax	pmax		
	comp=Z,12nm,1.0s						
TTA	**Tatalina**	**46.85**	**34**	P	**P**	**11 40 14.8**	**+1.9**
TTA				IAmb	IAmb	11 40 15.3	
	comp=Z,12nm,1.0s						
TDK	**Taldyqorghan**	**46.86**	**301**	*e*P	**P**	**11 40 13.3**	**+0.2**
	comp=Z,5.7nm,0.5s,baz=301						
TDK	**Taldyqorghan**	**46.86**	**301**	*e*P	**P**	**11 40 13.2**	**+0.2**
TDK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SVW2	**Sparrevohn**	**46.96**	**37**	P	**P**	**11 40 15.9**	**+2.2**
KPKS	**Kokpek**	**46.98**	**299**	*e*P	**P**	**11 40 13.9**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=299						
KPKS	**Kokpek**	**46.98**	**299**	*e*P	**P**	**11 40 13.8**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SATY	**Saty**	**47.27**	**298**	*e*P	**P**	**11 40 16.4**	**-0.1**
	baz=298						
SATY	**Saty**	**47.27**	**298**	*e*P	**P**	**11 40 16.4**	**-0.1**
GKN	**Gorkha**	**47.27**	**277**	*e*P	**P**	**11 40 16.4**	**-0.3**
	comp=Z,81nm,0.9s						
KULM	**Kulim**	**47.44**	**239**	P	**P**	**11 40 17.0**	**-0.9**
IPM	**Ipoh**	**47.76**	**238**	P	**P**	**11 40 19.0**	**-1.4**
A21K	**Barrow**	**47.83**	**23**	P	**P**	**11 40 20.9**	**+0.7**
	baz=258						
DANN	**Dangsing**	**47.84**	**278**	*e*P	**P**	**11 40 21.3**	**+0.1**
	comp=Z,136nm,0.8s						
IMAR	**Indian Mountai**	**48.07**	**30**	P	**P**	**11 40 23.2**	**+1.1**
CHKK	**Chushkaly**	**48.09**	**300**	*e*P	**P**	**11 40 22.5**	**-0.3**
	baz=300						
CHKK	**Chushkaly**	**48.09**	**300**	*e*P	**P**	**11 40 22.4**	**-0.3**
KOLN	**Koldanda**	**48.20**	**277**	*e*P	**P**	**11 40 24.7**	**+0.7**
	comp=Z,43nm,0.9s						
MDOK	**Medeo**	**48.21**	**299**	*e*P	**P**	**11 40 23.7**	**-0.1**
	baz=299						
MDOK	**Medeo**	**48.21**	**299**	*e*P	**P**	**11 40 23.7**	**-0.1**
AAA	**Alma-Ata**	**48.30**	**299**	*e*P	**P**	**11 40 23.8**	**-0.6**
	baz=299						
AAA	**Alma-Ata**	**48.30**	**299**	*e*P	**P**	**11 40 23.7**	**-0.6**
TNSS	**Tian-Shan**	**48.31**	**299**	*e*P	**P**	**11 40 25.0**	**+0.1**
	baz=298						
TNSS	**Tian-Shan**	**48.31**	**299**	*e*P	**P**	**11 40 24.9**	**+0.1**
RSO	**Redoubt South**	**48.34**	**38**	P	**P**	**11 40 26.1**	**+1.5**
KUU	**Kurty**	**48.54**	**300**	*e*P	**P**	**11 40 25.7**	**-0.4**
	comp=Z,15nm,1.7s,baz=300						
KUU	**Kurty**	**48.54**	**300**	*e*P	**P**	**11 40 25.7**	**-0.4**
KUU				pmax	pmax		
	comp=Z,15nm,1.7s						
PPLA	**Purkeypile**	**48.60**	**34**	P	**P**	**11 40 27.2**	**+0.7**
PPLA				IAmb	IAmb	11 40 29.6	
	comp=Z,19nm,0.9s						
MTBS	**Maitube**	**48.66**	**299**	*e*P	**P**	**11 40 27.5**	**+0.3**
	baz=299						
MTBS	**Maitube**	**48.66**	**299**	*e*P	**P**	**11 40 27.4**	**+0.3**
BPAW	**Bear Paw Mtn.**	**49.15**	**33**	P	**P**	**11 40 32.2**	**+1.7**
BPAW				IAmb	IAmb	11 40 33.1	
	comp=Z,7.0nm,0.8s						
KTH	**Kantishna Hill**	**49.18**	**33**	P	**P**	**11 40 32.6**	**+1.8**
MLY	**Manley**	**49.27**	**32**	P	**P**	**11 40 33.4**	**+1.9**
	baz=269,SNR=26						
MTN	**Manton Dam**	**49.29**	**192**	P	**P**	**11 40 31.1**	**-0.9**
SUA	**Susitna One**	**49.30**	**36**	P	**P**	**11 40 32.7**	**+1.0**
TKM2	**Tokmak 2**	**49.30**	**299**	P	**P**	**11 40 33.1**	**+0.9**
	SNR=14						
TKM2	**Tokmak 2**	**49.30**	**299**	*i* P	**P**	**11 40 32.4**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,17nm,0.8s						
BRLK	**Bradley Lake**	**49.31**	**39**	P	**P**	**11 40 33.6**	**+1.8**
TRF	**Thorofare Moun**	**49.46**	**34**	P	**P**	**11 40 35.5**	**+2.4**
TRF				IAmb	IAmb	11 40 37.0	
	comp=Z,11nm,0.9s						
CUT	**Chulitna**	**49.49**	**35**	P	**P**	**11 40 34.0**	**+0.9**
	baz=272						
COLD	**Coldfoot**	**49.56**	**29**	P	**P**	**11 40 34.7**	**+1.1**
	baz=268						
COLD	**Coldfoot**	**49.56**	**29**	P	**P**	**11 40 34.5**	**+0.9**
COEN	**Coen**	**49.72**	**176**	P	**P**	**11 40 35.5**	**+0.3**
COEN				IAmb	IAmb	11 40 59.2	
	comp=Z,13nm,1.1s						
BRZS	**Berezniki**	**49.72**	**309**	*e*P	**P**	**11 40 34.3**	**-0.8**
	comp=Z,4.6nm,0.8s,baz=308						
BRZS	**Berezniki**	**49.72**	**309**	*e*P	**P**	**11 40 34.2**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RC01	**Rabbit Creek A**	**49.80**	**37**	P	**P**	**11 40 36.4**	**+0.9**
	baz=273						
BWN	**Browne**	**49.82**	**33**	P	**P**	**11 40 37.5**	**+1.9**
KBK	**Karagaybulak**	**49.83**	**299**	P	**P**	**11 40 36.8**	**+0.6**
	SNR=13						
SGDS	**Sogindy**	**49.85**	**300**	*e*P	**P**	**11 40 35.2**	**-1.1**
	baz=300						
SGDS	**Sogindy**	**49.85**	**300**	*e*P	**P**	**11 40 35.1**	**-1.1**
BTLS	**Baital**	**49.86**	**302**	*e*P	**P**	**11 40 35.8**	**-0.4**
	comp=Z,6.7nm,0.9s,baz=302						
BTLS	**Baital**	**49.86**	**302**	*e*P	**P**	**11 40 35.8**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KSH	**Kashi**	**49.97**	**295**	P	**P**	**11 40 41.5**	**+4.2**
KSH				pP	sP	11 40 53.5	-0.5
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				pmax	pmax		
	comp=Z,560nm,6.4s						
NEA2	**Nenana**	**49.99**	**32**	P	**P**	**11 40 38.5**	**+1.6**
	baz=271,SNR=18						
USP	**Ospenovka**	**49.99**	**300**	P	**P**	**11 40 37.7**	**+0.5**
	SNR=8.4						
MCK	**McKinley**	**50.06**	**33**	P	**P**	**11 40 38.6**	**+1.1**
	baz=272,SNR=11						
PMR	**Palmer**	**50.06**	**36**	P	**P**	**11 40 38.2**	**+0.8**
PMR				pmax	pmax		
	comp=Z,13nm,0.8s						
PMR	**Palmer**	**50.06**	**36**	P	**P**	**11 40 38.2**	**+0.8**
PMR				IAmb	IAmb	11 40 40.3	
	comp=Z,13nm,0.8s						
RND	**Reindeer**	**50.11**	**34**	P	**P**	**11 40 39.0**	**+1.1**
RND				pmax	pmax		
	comp=Z,20nm,0.8s						
RND	**Reindeer**	**50.11**	**34**	P	**P**	**11 40 39.0**	**+1.1**
GHO	**Glory Hole Cre**	**50.15**	**36**	P	**P**	**11 40 39.6**	**+1.4**
AAK	**Ala-Archa**	**50.16**	**299**	P	**P**	**11 40 38.6**	**-0.1**
	comp=Z,4.6nm,0.7s,baz=114,slow=5.4,SNR=17						
AAK	**Ala-Archa**	**50.16**	**299**	P	**P**	**11 40 39.2**	**+0.5**
	SNR=6.0						
AAK	**Ala-Archa**	**50.16**	**299**	*ce*P	**P**	**11 40 38.3**	**-0.4**
AAK				pmax	pmax		
	comp=Z,16nm,0.8s						
AAK	**Ala-Archa**	**50.16**	**299**	P	**P**	**11 40 38.5**	**-0.1**
AAK				IAmb	IAmb	11 40 46.0	
	comp=Z,8.0nm,0.9s						
UCH	**Uchtor**	**50.26**	**298**	P	**P**	**11 40 40.8**	**+1.0**
	SNR=8.1						
MDM	**Murphy Dome**	**50.34**	**32**	P	**P**	**11 40 41.8**	**+2.2**
KNK	**Knik Glacier**	**50.40**	**36**	P	**P**	**11 40 41.2**	**+1.2**
KNK				IAmb	IAmb	11 40 42.0	
	comp=Z,19nm,0.8s						
WRH	**Wood River Hil**	**50.41**	**32**	P	**P**	**11 40 41.5**	**+1.4**
WRH				IAmb	IAmb	11 40 42.5	
	comp=Z,17nm,0.8s						
WRH					**PcP**	**11 41 58.4**	**+0.6**
SML	**Sawmill**	**50.43**	**36**	P	**P**	**11 40 41.8**	**+1.4**
TCOL	**CIGO, UAF Yank**	**50.50**	**32**	P	**P**	**11 40 42.2**	**+1.6**
	baz=272,SNR=15						
TCOL	**CIGO, UAF Yank**	**50.50**	**32**	P	**P**	**11 40 42.5**	**+1.9**
COLA	**College**	**50.50**	**32**	P	**P**	**11 40 42.4**	**+1.7**
COLA				pmax	pmax		
	comp=Z,33nm,0.8s						
COLA	**College**	**50.50**	**32**	P	**P**	**11 40 42.4**	**+1.7**
CCB	**Clear Creek Bu**	**50.53**	**32**	P	**P**	**11 40 42.1**	**+1.2**
CCB				IAmb	IAmb	11 40 45.0	
	comp=Z,7.5nm,0.9s						
BRVK	**Borovoye**	**50.65**	**313**	P	**P**	**11 40 42.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,14nm,1.1s						
BRVK	**Borovoye**	**50.65**	**313**	P	**P**	**11 40 42.1**	**+0.1**
BRVK				IAmb	IAmb	11 40 55.6	
	comp=Z,14nm,1.1s						
EKS2	**Erkin-Say**	**50.66**	**299**	P	**P**	**11 40 42.9**	**+0.4**
	SNR=5.6						
POKR	**Poker Plat Res**	**50.67**	**31**	P	**P**	**11 40 43.9**	**+1.8**
	baz=272,SNR=40						
POKR	**Poker Plat Res**	**50.67**	**31**	P	**P**	**11 40 44.0**	**+2.0**
AML	**Almayashu**	**50.87**	**298**	P	**P**	**11 40 45.2**	**+0.8**
	SNR=37						
SCM	**Sheep Creek Mo**	**50.90**	**36**	P	**P**	**11 40 45.5**	**+1.6**
SCM				pmax	pmax		
	comp=Z,20nm,0.8s						
SCM	**Sheep Creek Mo**	**50.90**	**36**	P	**P**	**11 40 45.5**	**+1.6**
SCM				IAmb	IAmb	11 40 46.2	
	comp=Z,20nm,0.8s						
HDA	**Harding Lake**	**50.91**	**32**	P	**P**	**11 40 44.6**	**+0.8**
	baz=273						
HDA	**Harding Lake**	**50.91**	**32**	P	**P**	**11 40 44.5**	**+0.7**
IL31		**50.92**	**32**	P	**P**	**11 40 44.7**	**+0.9**
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**11 40 44.8**	**+0.9**
	comp=Z,25nm,0.8s,baz=270,slow=6.2,SNR=231						
ILAR	**Eielson Array**	**50.92**	**32**	P	**P**	**11 40 44.4**	**+0.5**
IL18	**Eielson Array**	**50.97**	**32**	P	**P**	**11 40 44.8**	**+0.5**
M24K	**Tolsona, Glenn**	**51.42**	**35**	P	**P**	**11 40 49.4**	**+1.6**
	baz=275						
PRP	**Porcupine Dome**	**51.46**	**31**	P	**P**	**11 40 49.5**	**+1.4**
PRP				IAmb	IAmb	11 40 50.9	
	comp=Z,18nm,0.9s						
SDSI	**Sungai Dareh**	**51.47**	**233**	P	**P**	**11 40 46.2**	**-2.4**
	comp=Z,21nm,0.8s						
FYU	**Fort Yukon**	**51.52**	**29**	P	**P**	**11 40 51.1**	**+2.7**
KLU	**Klutina**	**51.60**	**36**	P	**P**	**11 40 50.8**	**+1.6**
KLU				IAmb	IAmb	11 40 52.5	
	comp=Z,15nm,0.7s						
PAX	**Paxson**	**51.67**	**34**	P	**P**	**11 40 51.1**	**+1.4**
PAX				pmax	pmax		
	comp=Z,11nm,1.2s						
PAX	**Paxson**	**51.67**	**34**	P	**P**	**11 40 51.1**	**+1.4**
PAX				IAmb	IAmb	11 40 52.4	
	comp=Z,11nm,1.2s						
BMAR	**Burnt Mountain**	**51.74**	**28**	P	**P**	**11 40 49.6**	**-0.5**
EYAK	**Cordova Ski Ar**	**51.79**	**37**	P	**P**	**11 40 52.4**	**+1.9**
RIDG	**Independent Ri**	**51.88**	**33**	P	**P**	**11 40 51.9**	**+0.7**
RIDG				IAmb	IAmb	11 40 54.1	
	comp=Z,14nm,1.0s						
SMLA	**Simla**	**51.98**	**284**	*e*P	**P**	**11 40 51.1**	**-1.1**
SMLA				IAmb	IAmb	11 40 52.7	
	comp=Z,29nm,0.8s						
DHRM	**DHARAMSHALA**	**52.22**	**286**⇑	*e*P	**P**	**11 40 52.7**	**-1.7**
DHRM				IAmb	IAmb	11 40 54.6	
	comp=Z,24nm,1.0s						
N25K	**Chitina, Valde**	**52.22**	**36**	P	**P**	**11 40 55.0**	**+1.2**
	baz=277						
DOT	**Dot Lake**	**52.23**	**33**	P	**P**	**11 40 54.2**	**+0.4**
DOT				IAmb	IAmb	11 40 55.8	
	comp=Z,16nm,0.7s						
SCRK	**Sand Creek**	**52.23**	**33**	P	**P**	**11 40 54.7**	**+0.8**
	baz=276,SNR=27						
DZA	**Taraz**	**52.33**	**300**	*e*P	**P**	**11 40 54.4**	**-0.4**
	baz=300						
DZA	**Taraz**	**52.33**	**300**	*e*P	**P**	**11 40 54.3**	**-0.4**
KLSI		**52.34**	**227**	P	**P**	**11 40 53.6**	**-1.5**
	comp=Z,11nm,0.9s						
LHSI	**Lahat**	**52.38**	**229**	P	**P**	**11 40 54.3**	**-1.1**
	comp=Z,2µmcomp=Z,58nm,0.8s						
GSI	**Gunungsitoli**	**52.42**	**239**	P	**P**	**11 40 54.6**	**-1.1**
GSI	**Gunungsitoli**	**52.42**	**239**	P	**P**	**11 40 51.8**	**-3.9**
	comp=Z,69nm,1.1s						
MENT	**Mentasta**	**52.47**	**34**	P	**P**	**11 40 56.6**	**+1.1**
MDSI	**Maura Dua**	**52.51**	**228**	P	**P**	**11 40 54.7**	**-1.6**
	comp=Z,32nm,1.0s						
GLB	**Gilahina Butte**	**52.62**	**36**	P	**P**	**11 40 58.7**	**+2.1**
GLB				IAmb	IAmb	11 40 59.9	
	comp=Z,19nm,1.4s						
VRDI	**Verde Repeater**	**52.82**	**36**	P	**P**	**11 40 59.8**	**+1.5**
VRDI				IAmb	IAmb	11 41 00.8	
	comp=Z,16nm,0.9s						
KK05	**Karatay Array**	**52.83**	**300**	P	**P**	**11 40 57.9**	**-0.6**
KK02	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 57.7**	**-0.9**
KK31	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.3**	**-0.2**
KK31				pmax	pmax		
	comp=Z,12nm,0.9s						
KK31	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.3**	**-0.2**
KK31				IAmb	IAmb	11 41 11.4	
	comp=Z,12nm,0.8s						
KKAR	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.3**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,12nm,0.9s						
KKAR	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.1**	**-0.4**
KKAR	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.3**	**-0.3**
KKAR				IAmb	IAmb	11 41 11.4	
	comp=Z,12nm,0.8s						
KK04	**Karatay Array**	**52.84**	**300**	P	**P**	**11 40 58.2**	**-0.3**
CISI	**Cisompet, Garu**	**52.93**	**222**	P	**P**	**11 41 01.2**	**+1.7**
MCARA	**McCarthy VSAT**	**53.00**	**36**	P	**P**	**11 41 01.4**	**+1.9**
CRQM	**Cirque**	**53.04**	**37**	P	**P**	**11 41 01.8**	**+1.9**
TGL	**Tana Glacier**	**53.19**	**37**	P	**P**	**11 41 02.4**	**+1.4**
TGL				IAmb	IAmb	11 41 05.5	
	comp=Z,20nm,0.9s						
BCAR	**Beaver Creek A**	**53.33**	**34**	P	**P**	**11 41 03.1**	**+1.2**
EGAK	**Eagle**	**53.36**	**32**	P	**P**	**11 41 03.0**	**+1.0**
EGAK				IAmb	IAmb	11 41 04.4	
	comp=Z,18nm,1.2s						
BALM	**Baldy**	**53.38**	**36**	P	**P**	**11 41 03.8**	**+1.5**
BALM				IAmb	IAmb	11 41 04.6	
	comp=Z,20nm,0.8s						
IUG	**Iuzhnay**	**53.47**	**299**	*e*P	**P**	**11 41 03.3**	**-0.1**
	comp=Z,8.2nm,1.1s,baz=299						
IUG	**Iuzhnay**	**53.47**	**299**	*e*P	**P**	**11 41 03.2**	**-0.1**
IUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BARN	**Barnard Glacie**	**53.70**	**36**	P	**P**	**11 41 06.7**	**+1.9**
BARN				IAmb	IAmb	11 41 07.3	
	comp=Z,16nm,0.7s						
YAH	**Yahtse**	**53.78**	**37**	P	**P**	**11 41 07.3**	**+1.9**
CTGM	**Chitina Glacie**	**53.88**	**36**	P	**P**	**11 41 07.9**	**+1.9**
NIL	**Nilore**	**54.04**	**288**	P	**P**	**11 41 07.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,11nm,0.9s						
NIL	**Nilore**	**54.04**	**288**	P	**P**	**11 41 07.6**	**+0.1**
NIL				IAmb	IAmb	11 41 08.6	
	comp=Z,11nm,0.9s						
DAWY	**Dawson**	**54.23**	**32**	P	**P**	**11 41 09.7**	**+1.3**
DAWY				IAmb	IAmb	11 41 12.3	
	comp=Z,7.8nm,1.1s						
EPYK	**Eagle Plains**	**54.94**	**29**	P	**P**	**11 41 15.4**	**+1.9**
SVE	**Sverdlovsk**	**55.33**	**319**	*e*P	**P**	**11 41 20.1**	**+3.7**
SVE				pmax	pmax		
	comp=Z,19nm,1.0s						
FITZ	**Fitzroy Crossi**	**55.50**	**197**	P	**P**	**11 41 17.7**	**-0.3**
WB0	**Warramunga Arr**	**55.69**	**187**	P	**P**	**11 41 19.4**	**0.0**
HYT	**Haines Junctio**	**55.74**	**36**	P	**P**	**11 41 22.2**	**+2.7**
INK	**Inuvik**	**55.78**	**27**	P	**P**	**11 41 20.7**	**+1.2**
	comp=Z,17nm,0.7s,baz=286,slow=6.7,SNR=58						
INK	**Inuvik**	**55.78**	**27**	P	**P**	**11 41 20.5**	**+1.0**
INK				pmax	pmax		
	comp=Z,17nm,0.7s						
INK	**Inuvik**	**55.78**	**27**	P	**P**	**11 41 20.5**	**+1.0**
WRAB	**Tennant Creek**	**55.86**	**187**	*ce*P	**P**	**11 41 19.2**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,55nm,1.7s						
WRAB	**Tennant Creek**	**55.86**	**187**	P	**P**	**11 41 19.8**	**-0.8**
WR0	**Warramunga Arr**	**55.87**	**186**	P	**P**	**11 41 19.5**	**-1.2**
WB2	**Warramunga Arr**	**55.87**	**187**	P	**P**	**11 41 19.8**	**-0.8**
WRA	**Warramunga Arr**	**55.87**	**187**	P	**P**	**11 41 19.9**	**-0.8**
	comp=Z,20nm,0.6s,baz=3.1,slow=7.7,SNR=185						
WRA				LR	LR	12 02 35.9	
	comp=Z,72nm,21.9s,baz=95,slow=33						
WRA	**Warramunga Arr**	**55.87**	**187**	P	**P**	**11 41 19.3**	**-1.3**
WC3	**Warramunga Arr**	**55.88**	**187**	P	**P**	**11 41 19.9**	**-0.8**
ARU	**Arti**	**56.53**	**319**	LR	LR	12 09 40.6	
	comp=Z,59nm,21.0s,baz=53,slow=40						
ARU	**Arti**	**56.53**	**319***d*	*i*P	**P**	**11 41 24.5**	**-0.6**
ARU						11 42 22.2	
ARU						11 43 27.5	
ARU				S	**S**	**11 49 14.2**	**+0.8**
ARU				SS	**SS**	**11 52 55.3**	**-5.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU	**Arti**	**56.53**	**319**	P	**P**	**11 41 24.4**	**-0.7**
ARU				IAmb	IAmb	11 41 33.2	
	comp=Z,19nm,1.1s						
KBL	**Kabul**	**56.91**	**291**	P	**P**	**11 41 27.5**	**-0.8**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBL	**Kabul**	**56.91**	**291**	P	**P**	**11 41 27.5**	**-0.8**
KBL				IAmb	IAmb	11 41 41.6	
	comp=Z,7.4nm,0.8s						
WHY	**Whitehorse**	**57.03**	**36**	P	**P**	**11 41 29.7**	**+1.1**
WHY				IAmb	IAmb	11 41 31.7	
	comp=Z,13nm,0.8s						
SANVU	**Saraoutou**	**57.14**	**149**	P	**P**	**11 41 29.1**	**-0.6**
SANVU	**Saraoutou**	**57.14**	**149**	P	**P**	**11 41 30.3**	**+0.6**
HYB	**Hyderabad**	**57.21**	**268**	*i* P	**P**	**11 41 30.0**	**-0.5**
BESE	**Bessie Mountai**	**57.62**	**38**	P	**P**	**11 41 34.5**	**+1.7**
BESE				IAmb	IAmb	11 41 37.6	
	comp=Z,23nm,1.1s						
AB06	**Akbulak array**	**57.88**	**310**	P	**P**	**11 41 33.9**	**-0.8**
ABKAR	**Akbulak array**	**57.90**	**310**	P	**P**	**11 41 34.0**	**-0.8**
ABKAR				IAmb	IAmb	11 41 39.4	
	comp=Z,8.3nm,0.8s						
JIS	**Juneau Island**	**57.95**	**38**	P	**P**	**11 41 37.0**	**+2.1**
C36M	**Paulatuk**	**58.81**	**24**	P	**P**	**11 41 41.6**	**+0.8**
	baz=289						
C36M	**Paulatuk**	**58.81**	**24**	P	**P**	**11 41 41.6**	**+0.8**
AS31	**Alice Springs**	**59.59**	**187**	P	**P**	**11 41 45.6**	**-1.2**
AS31				IAmb	IAmb	11 41 50.4	
	comp=Z,3.4nm,0.5s						
ASAR	**Alice Springs**	**59.60**	**187**	P	**P**	**11 41 46.1**	**-0.6**
	comp=Z,5.6nm,0.7s,baz=21,slow=9.9,SNR=73						
ASAR				LR	LR	12 08 12.1	
	comp=Z,81nm,18.7s,baz=352,slow=37						
ASAR	**Alice Springs**	**59.60**	**187**	P	**P**	**11 41 45.7**	**-1.1**
DLBC	**Dease Lake**	**60.07**	**37**	P	**P**	**11 41 51.3**	**+1.5**
DLBC				IAmb	IAmb	11 41 53.1	
	comp=Z,11nm,1.0s						
PSA00	**Pilbara Seismi**	**60.38**	**202**	P	**P**	**11 41 51.0**	**-1.2**
KIRV	**Kirov**	**60.53**	**323**	*ce*P	**P**	**11 41 51.8**	**-1.0**
PALK	**Pallekele**	**61.20**	**257**	LR	LR	12 10 40.2	
	comp=Z,72nm,18.7s,baz=149,slow=38						
EUNU	**Eureka**	**61.40**	**8**	P	**P**	**11 41 58.7**	**+0.2**
EUNU				IAmb	IAmb	11 42 08.7	
	comp=Z,8.0nm,0.6s						
EIDS	**Eidsvold**	**61.85**	**169**	P	**P**	**11 42 02.6**	**+0.6**
DZM	**Mont Dzumac**	**62.82**	**153**	LR	LR	12 06 14.8	
	comp=Z,99nm,21.9s,baz=27,slow=33						
DZM	**Mont Dzumac**	**62.82**	**153**	*e*P	**P**	**11 42 10.1**	**+1.4**
	comp=Z,69nm,1.1s						
DZM	**Mont Dzumac**	**62.82**	**153**	*e*LR	LR	12 00 39.0	
	comp=Z,216nm,24.2s						
DZM	**Mont Dzumac**	**62.82**	**153**	P	**P**	**11 42 09.6**	**+0.9**
DZM	**Mont Dzumac**	**62.82**	**153**	P	**P**	**11 42 10.3**	**+1.6**
TMCR	**Tamitsa**	**63.23**	**331**	*e*P	**P**	**11 42 09.8**	**-1.0**
GEYT	**Alibeck**	**63.52**	**299**	P	**P**	**11 42 13.5**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=234,slow=1.3,SNR=6.0						
GEYT				LR	LR	12 11 50.0	
	comp=Z,65nm,18.2s,baz=335,slow=38						
GEYT	**Alibeck**	**63.52**	**299**	P	**P**	**11 42 13.4**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**63.52**	**299**	P	**P**	**11 42 13.3**	**0.0**
GYA0B				IAmb	IAmb	11 42 23.1	
	comp=Z,9.6nm,0.7s						
RES	**Resolute Bay**	**63.88**	**14**	P	**P**	**11 42 15.0**	**0.0**
RES	**Resolute Bay**	**63.88**	**14**	P	**P**	**11 42 15.0**	**0.0**
RES				IAmb	IAmb	11 42 17.7	
	comp=Z,7.3nm,0.8s						
BELG	**Belogornoye**	**63.94**	**317**⇑	*i*P	**P**	**11 42 15.6**	**-0.1**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	**Klimovskoe**	**64.16**	**328**	*e*P	**P**	**11 42 15.9**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	**Klimovskoe**	**64.16**	**328**	*e*P	**P**	**11 42 15.9**	**-1.1**
KLMR				AMP		11 42 18.3	
	comp=Z,17nm,1.1s						
ARCES	**ARCESS Array B**	**64.67**	**339**	P	**P**	**11 42 20.4**	**+0.1**
	comp=Z,4.8nm,0.7s,baz=51,slow=7.7,SNR=8.4						
ARCES				LR	LR	12 13 05.5	
	comp=Z,77nm,20.9s,baz=250,slow=38						
ARCES	**ARCESS Array B**	**64.67**	**339**	P	**P**	**11 42 20.4**	**+0.1**
YKA	**Yellowknife Ar**	**65.22**	**30**	P	**P**	**11 42 24.3**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=302,slow=6.1,SNR=77						
YKA	**Yellowknife Ar**	**65.22**	**30**	*i* P	**P**	**11 42 24.2**	**+0.3**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DAG	**Danmarks Havn**	**66.76**	**355**	*i* P	**P**	**11 42 34.0**	**+0.4**
DAG	**Danmarks Havn**	**66.76**	**355**	*i* P	**P**	**11 42 34.0**	**+0.4**
	comp=Z,9.3nm,0.9s						
DAG	**Danmarks Havn**	**66.76**	**355**	*i* P	**P**	**11 42 34.0**	**+0.4**
DAG				IAmb	IAmb	11 42 34.4	
	comp=Z,9.3nm,0.9s						
FORT	**Forrest**	**67.36**	**191**	P	**P**	**11 42 39.7**	**+1.8**
STKA	**Stephens Creek**	**67.49**	**179**	P	**P**	**11 42 37.8**	**-0.9**
	comp=Z,6.7nm,0.8s,baz=356,slow=8.4,SNR=9.2						
STKA				LR	LR	12 09 45.1	
	comp=Z,33nm,21.9s,baz=19,slow=34						
STKA	**Stephens Creek**	**67.49**	**179**	P	**P**	**11 42 38.4**	**-0.3**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**67.49**	**179**	P	**P**	**11 42 38.4**	**-0.3**
VRH	**Novokhopyorsk**	**67.73**	**318**	*e*P	**P**	**11 42 37.8**	**-2.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAK	**Makhachkala**	**68.36**	**308**	*e*P	**P**	**11 42 45.2**	**+0.9**
MAK				*i* S	**S**	**11 51 44.4**	**+2.0**
MAK				MLR	MLR		
	comp=Z,308nm,16.0s						
OBN	**Obninsk**	**68.38**	**323**⇓	*i*P	**P**	**11 42 44.4**	**+0.2**
OBN				*PP	**pP**	**11 42 56.0**	**-0.4**
OBN						11 43 15.0	
OBN				PPP	PPP	11 46 53.0	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
OBN				MLR	MLR		
	comp=Z,154nm,13.0s						
LPSR	**Galich'ya Gora**	**68.51**	**320**	*e*P	**P**	**11 42 43.9**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BBOO	**Buckleboo**	**68.52**	**184**	P	**P**	**11 42 45.2**	**+0.1**
D03D	**Eldon**	**68.54**	**46**	P	**P**	**11 42 47.2**	**+1.9**
	baz=300						
B05A	**Bryant**	**68.75**	**45**	P	**P**	**11 42 48.2**	**+1.6**
	baz=300						
E03A	**Lebam**	**68.76**	**47**	P	**P**	**11 42 49.1**	**+2.4**
VSR	**Storozhevoye**	**69.11**	**319**	*e*P	**P**	**11 42 47.2**	**-1.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD	**Divnogorie**	**69.17**	**318**	*e*P	**P**	**11 42 48.3**	**-0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FIA1	**FINESS Array S**	**69.32**	**332**	P	**P**	**11 42 50.0**	**+0.1**
FINES	**FINESS Array B**	**69.32**	**332**	P	**P**	**11 42 49.6**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=52,slow=6.6,SNR=14						
FINES	**FINESS Array B**	**69.32**	**332**	P	**P**	**11 42 49.7**	**-0.2**
E04D	**Cinebar**	**69.34**	**47**	P	**P**	**11 42 52.3**	**+2.0**
	baz=301						
G03D	**McMinnville, O**	**69.61**	**49**	P	**P**	**11 42 54.0**	**+2.0**
	baz=301						
LON	**Longmire**	**69.69**	**47**	P	**P**	**11 42 54.1**	**+1.5**
LON				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LON	**Longmire**	**69.69**	**47**	P	**P**	**11 42 54.1**	**+1.5**
LTY	**Liberty**	**70.09**	**46**	P	**P**	**11 42 56.3**	**+1.2**
B08A	**Colville Reser**	**70.28**	**44**	P	**P**	**11 42 57.5**	**+1.3**
B08A				IAmb	IAmb	11 42 59.8	
	comp=Z,11nm,1.3s						
H04D	**Lebanon**	**70.29**	**49**	P	**P**	**11 42 57.5**	**+1.3**
	baz=301						
I03D	**Drain, OR**	**70.34**	**50**	P	**P**	**11 42 58.1**	**+1.6**
	baz=301						
KBO	**Bosley Butte**	**70.55**	**52**	P	**P**	**11 43 00.1**	**+2.2**
K02D	**Willamette Mer**	**70.66**	**51**	P	**P**	**11 43 00.0**	**+1.5**
	baz=301						
ZEI	**Tsey**	**70.74**	**309**	*e*P	**P**	**11 42 56.7**	**-2.5**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
G05D	**Wamic, OR**	**70.77**	**48**	P	**P**	**11 43 00.3**	**+1.2**
	baz=302						

I04A	Tendick Farm,	70.87	49	P	P	11 43 00.9	+1.2
	baz=302						
KBZ	Khabaz	70.87	310	P	P	11 42 59.9	+0.2
	comp=Z,9.7nm,0.9s,baz=54,slow=1.8,SNR=18						
KBZ				LR	LR	12 14 38.9	
	comp=Z,102nm,18.8s,baz=9.5,slow=36						
KBZ	Khabaz	70.87	310	*ce*P	P	11 43 00.4	+0.7
KVAR	Kislovodsk Arr	70.88	311	LR	LR	12 14 55.3	
	comp=Z,190nm,21.5s,baz=94,slow=36						
KIV	Kislovodsk	70.88	311	⇑P	P	11 42 59.7	-0.2
KIV	Kislovodsk	70.88	311	*e*P	P	11 42 58.9	-1.0
KIV				pmax	pmax		
	comp=Z,73nm,1.0s						
KIV	Kislovodsk	70.88	311	P	P	11 43 01.1	+1.1
E07A	Sunnyside	70.94	46	P	P	11 43 00.0	-0.1
E07A				IAmb	IAmb	11 43 02.5	
	comp=Z,11nm,1.1s						
L02E	Cave Junction	70.98	51	P	P	11 43 02.0	+1.5
	baz=302						
C09A	Chrisman Ranch	71.18	44	P	P	11 43 01.8	+0.2
C09A				IAmb	IAmb	11 43 03.5	
	comp=Z,8.0nm,0.8s						
D08A	Wollman Farm,	71.21	45	IAmb	IAmb	11 43 03.7	
	comp=Z,6.1nm,0.8s						
I05D	Terrebonne, OR	71.24	49	P	P	11 43 03.5	+1.5
	baz=302						
J04D	Umpqua Nationa	71.34	50	P	P	11 43 04.3	+1.4
	baz=302						
NEW	Newport	71.57	43	P	P	11 43 05.0	+1.0
	baz=304						
NEW	Newport	71.57	43	IAmb	IAmb	11 43 05.9	
	comp=Z,6.4nm,0.8s						
GNI	Garni	71.58	306	LR	LR	12 17 13.3	
	comp=Z,90nm,19.0s,baz=50,slow=38						
SUMG	Summit	71.76	360	*i* P	P	11 43 05.5	+0.4
SUMG	Summit	71.76	360	IAmb	IAmb	11 43 07.0	
	comp=Z,15nm,0.9s						
SUMG	Summit	71.76	360	*i* P	P	11 43 05.5	+0.4
	comp=Z,30nm,0.8s						
SUMG	Summit	71.76	360	*i* P	P	11 43 05.6	+0.4
SUMG				IAmb	IAmb	11 43 07.2	
	comp=Z,30nm,0.8s						
L04D	Klamath Falls	71.77	51	P	P	11 43 06.7	+1.4
	baz=302						
PINE	Pine Mountain	71.77	49	IAmb	IAmb	11 43 08.3	
	comp=Z,16nm,0.8s						
M02C	Callahan	71.86	52	P	P	11 43 07.3	+1.5
	baz=302						
J05D	Fort Rock, OR	71.86	49	P	P	11 43 07.4	+1.5
	baz=302						
E09A	Wood Farm, Sta	71.96	45	IAmb	IAmb	11 43 08.5	
	comp=Z,9.7nm,0.9s						
G08A	Pilot Rock	72.15	47	P	P	11 43 08.9	+1.3
N02D	Trinity Center	72.17	52	P	P	11 43 09.2	+1.5
	baz=302						
M04C	Macdoel	72.29	51	P	P	11 43 10.0	+1.5
	baz=303						
K05A	Summer Lake	72.37	50	P	P	11 43 10.8	+1.7
K05A				IAmb	IAmb	11 43 11.8	
	comp=Z,12nm,0.9s						
O02D	Mt. Diablo Mer	72.55	53	P	P	11 43 11.1	+1.1
	baz=302						
NACGM	Naroch	73.09	326	*i* P	P	11 43 13.0	+0.1
NACGM				*i* P	P	11 43 13.0	+0.1
NACGM				*i* P	P	11 43 13.0	+0.1
NACGM				*i* PcP	sP	11 43 32.1	+2.1
NACGM				*i* PP	PP	11 45 55.7	+0.4
NACGM				*i* PPP	PPP	11 47 34.7	
NACGM				*i* S	S	11 52 35.6	-1.4
NACGM				*i* PS	PnS	11 53 55.3	+43
NACGM				*i* SS	SS	11 57 11.7	-5.9
NACGM				*i* SSS	SSS	12 00 25.9	
NACGM				*i* LQ	LQ	12 10 28.1	
NACGM				*i* LR	LR	12 16 01.5	
O03E	Paynes Creek	73.12	52	P	P	11 43 14.1	+0.7
	baz=303						
BMO	Blue Mountains	73.37	46	IAmb	IAmb	11 43 16.9	
	comp=Z,7.5nm,0.8s						
JTMT	Jette	73.44	43	IAmb	IAmb	11 43 17.9	
	comp=Z,13nm,0.8s						
ORV	Oroville	73.72	53	P	P	11 43 17.2	+0.4
ORV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ORV	Oroville	73.72	53	P	P	11 43 17.2	+0.4
ORV				IAmb	IAmb	11 43 18.4	
	comp=Z,5.8nm,0.8s						
WVOR	Wild Horse Val	73.93	49	P	P	11 43 18.9	+0.7
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WVOR	Wild Horse Val	73.93	49	P	P	11 43 18.9	+0.7
MSO	Missoula	74.16	43	P	P	11 43 20.0	+0.6
	baz=306,SNR=7.4						
MSO	Missoula	74.16	43	P	P	11 43 19.8	+0.4
BEKR	Beckworth	74.28	52	IAmb	IAmb	11 43 22.3	
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	74.56	322	P	P	11 43 20.9	-0.6
	comp=Z,5.2nm,0.5s,baz=48,slow=6.1,SNR=20						
AKASG				LR	LR	12 18 18.5	
	comp=Z,151nm,18.9s,baz=355,slow=37						
AKASG	Malin Array Be	74.56	322	*i* P	P	11 43 20.8	-0.7
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKASG	Malin Array Be	74.56	322	P	P	11 43 20.4	-1.1
AKBB	Malin Array Si	74.56	322	P	P	11 43 20.8	-0.7
AKBB				pmax	pmax		
	comp=Z,12nm,0.8s						
AKBB	Malin Array Si	74.56	322	P	P	11 43 20.8	-0.7
AKBB				IAmb	IAmb	11 43 24.7	
	comp=Z,12nm,0.8s						
NC204	NORSAR Array S	74.77	337	P	P	11 43 23.1	+0.5
NB2	NORSAR Subarra	74.81	337	P	P	11 43 22.5	-0.3
	comp=Z,4.7nm,0.7s,baz=40,slow=5.9						
NOA	NORSAR Array B	74.81	337	P	P	11 43 22.5	-0.3
	comp=Z,3.1nm,0.7s,baz=40,slow=5.8,SNR=11						
NOA				LR	LR	12 19 25.3	
	comp=Z,98nm,18.9s,baz=315,slow=38						
PAHR	Pah Rah Range	74.99	52	IAmb	IAmb	11 43 26.5	
	comp=Z,7.3nm,0.8s						
MFID	Camas Ranch	75.06	47	P	P	11 43 26.0	+1.3
FFC	Flin Flon	75.13	32	P	P	11 43 25.4	+0.6
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
FFC	Flin Flon	75.13	32	P	P	11 43 25.4	+0.6
FFC				IAmb	IAmb	11 43 26.1	
	comp=Z,12nm,0.8s						
PNTR	Pine Nut	75.20	52	P	P	11 43 27.2	+1.5
ICESG	Greenland Ices	75.27	360	*i* P	P	11 43 27.3	+1.6
ICESG				IAmb	IAmb	11 43 29.4	
	comp=Z,9.4nm,0.8s						
CMB	Columbia Colle	75.28	54	IAmb	IAmb	11 43 28.1	
	comp=Z,6.6nm,0.8s						
FCC	Fort Churchill	75.39	26	P	P	11 43 26.7	+0.6
FCC				pmax	pmax		
	comp=Z,13nm,1.2s						
FCC	Fort Churchill	75.39	26	P	P	11 43 26.7	+0.6
FCC				IAmb	IAmb	11 43 27.3	
	comp=Z,13nm,1.1s						
EGMT	Eagleton	75.72	41	P	P	11 43 29.1	+0.8
	baz=308,SNR=10						
EGMT	Eagleton	75.72	41	P	P	11 43 29.7	+1.3
EGMT				IAmb	IAmb	11 43 32.1	
	comp=Z,16nm,0.9s						
DLMT	Dillon	75.78	44	P	P	11 43 30.0	+1.1
DLMT				IAmb	IAmb	11 43 31.5	
	comp=Z,17nm,1.0s						
BOZ	Bozeman (W)	76.19	43	P	P	11 43 32.1	+0.9
	baz=308,SNR=19						
BOZ	Bozeman (W)	76.19	43	IAmb	IAmb	11 43 33.2	
	comp=Z,9.5nm,0.9s						
LHV	Little Huntoon	76.38	53	IAmb	IAmb	11 43 35.1	
	comp=Z,11nm,0.9s						
NVAR	Mina Array Bea	76.41	52	P	P	11 43 34.3	+1.7
	comp=Z,6.2nm,0.7s,baz=288,slow=5.6,SNR=51						
NVAR	Mina Array Bea	76.41	52	P	P	11 43 33.5	+0.9
SORM	Soroca	76.61	320	⇑P	P	11 43 32.8	-0.5
SORM	Soroca	76.61	320	⇑P	P	11 43 32.8	-0.5
PAGB	Antelope Grade	76.67	56	IAmb	IAmb	11 43 36.4	
	comp=Z,11nm,0.8s						
DIKM	Dikmen	76.70	312	⇓P	P	11 43 38.4	+4.5
YHL	Hebgen Lake	76.89	44	IAmb	IAmb	11 43 37.8	
	comp=Z,7.7nm,0.9s						
YHB	Horse Butte	76.94	44	IAmb	IAmb	11 43 38.0	
	comp=Z,9.1nm,0.9s						
ELK	Elko	76.98	49	P	P	11 43 37.2	+1.4
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	Elko	76.98	49	P	P	11 43 37.2	+1.4
ELK				IAmb	IAmb	11 43 38.3	
	comp=Z,6.3nm,0.8s						
YHH	Holmes Hill	77.12	44	P	P	11 43 38.1	+1.5
YMR	Madison River	77.12	44	IAmb	IAmb	11 43 39.1	
	comp=Z,8.1nm,1.0s						
VES	Vestal, Richgr	77.38	55	P	P	11 43 38.7	+0.8
	baz=305						
H17A	Grant Village	77.51	44	P	P	11 43 41.8	+3.0
	baz=308,SNR=7.8						
FLWY	Flagg Ranch	77.64	44	P	P	11 43 41.7	+2.3
FLWY				IAmb	IAmb	11 43 42.8	
	comp=Z,10nm,1.1s						
CWC	Cottonwood Cre	77.70	54	P	P	11 43 40.7	+0.8
	baz=306						
RLMT	Red Lodge	77.79	43	P	P	11 43 41.6	+1.3
	baz=309,SNR=8.7						
RLMT	Red Lodge	77.79	43	P	P	11 43 41.5	+1.3
RLMT				IAmb	IAmb	11 43 42.6	
	comp=Z,14nm,1.4s						
MOOW	Moose Ponds	77.82	44	P	P	11 43 41.6	+1.1
GRAC	Grapevine Rang	77.84	53	P	P	11 43 42.1	+1.7
	baz=306						
HVU	Hansel Valley	77.85	47	P	P	11 43 41.6	+1.0
HVU				pmax	pmax		
	comp=Z,11nm,0.8s						
HVU	Hansel Valley	77.85	47	P	P	11 43 41.6	+1.0
HVU				IAmb	IAmb	11 43 43.0	
	comp=Z,11nm,0.8s						
ISA	Isabella, Lake	77.89	55	P	P	11 43 41.2	+0.4
	baz=306						
R11A	Troy Canyon, C	78.19	51	P	P	11 43 43.8	+1.2
	baz=307,SNR=15						
R11A	Troy Canyon, C	78.19	51	IAmb	IAmb	11 43 44.8	
	comp=Z,6.8nm,0.9s						
AHID	Auburn Hatcher	78.22	45	P	P	11 43 41.1	-1.6
DGMT	Dagmar	78.28	38	P	P	11 43 43.2	+0.6
	baz=312						
MPMC	Manual Prospec	78.31	54	P	P	11 43 44.4	+1.1
	baz=306,SNR=6.3						
SPUT	South Promonto	78.33	47	P	P	11 43 44.4	+1.2
LAO	LASA Array	78.42	40	P	P	11 43 44.4	+0.9
	baz=311						
LAO	LASA Array	78.42	40	IAmb	IAmb	11 43 46.2	
	comp=Z,17nm,1.2s						
FURC	Furnace Creek,	78.48	53	P	P	11 43 45.3	+1.3
	baz=306,SNR=5.9						
LRMC	Laurel Mtn Rad	78.52	55	P	P	11 43 45.2	+0.8
	baz=306						
BIZ	Bicaz	78.55	320	⇑P	P	11 43 44.1	0.0
BUR08	Bucovina Ar. S	78.55	321	P	P	11 43 43.9	-0.4
BURAR	Bucovina Array	78.56	321	⇑P	P	11 43 43.3	-1.0
BURAR	Bucovina Array	78.56	321	⇑P	P	11 43 43.3	-1.0
BURAR	Bucovina Array	78.56	321	P	P	11 43 44.1	-0.2
SPR3	Spring Creek 3	78.58	50	P	P	11 43 46.8	+1.9
TPNV	Topopah Spring	78.59	53	P	P	11 43 45.9	+1.1
	baz=307,SNR=11						
TPNV	Topopah Spring	78.59	53	IAmb	IAmb	11 43 46.9	
	comp=Z,7.2nm,0.8s						
EDW2	Edwards Air Fo	78.67	55	P	P	11 43 45.7	+0.6
	baz=306						
DUG	Dugway, Tooele	78.79	48	P	P	11 43 47.2	+1.4
	baz=308,SNR=14						
BRTR	Keskin Array B	78.84	311	P	P	11 43 45.9	-0.2
	comp=Z,3.2nm,1.0s,baz=97,slow=2.9,SNR=9.7						
BRTR				PP	PP	11 46 42.1	-2.3
	comp=Z,2.5nm,1.1s,baz=58,slow=9.3,SNR=4.3						
BRTR				LR	LR	12 21 06.4	
	comp=Z,35nm,19.0s,baz=342,slow=38						
BRTR	Keskin Array B	78.84	311	*i* P	P	11 43 46.2	+0.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	78.84	311	P	P	11 43 46.1	0.0
VRI	Vrincioaia	78.92	319	⇓P	P	11 43 47.5	+1.3
VRI	Vrincioaia	78.92	319	⇓P	P	11 43 47.5	+1.3
PLOR	Plostina	78.97	319	⇓P	P	11 43 47.9	+1.4
PLOR	Plostina	78.97	319	⇓P	P	11 43 47.9	+1.4
BW06	Boulder Array	79.11	45	P	P	11 43 48.2	+0.6
	baz=309,SNR=8.0						
BW06	Boulder Array	79.11	45	P	P	11 43 48.5	+0.8
PDAR	Pinedale Array	79.11	45	P	P	11 43 48.5	+0.8
	comp=Z,3.9nm,0.6s,baz=272,slow=2.3,SNR=43						
PDAR	Pinedale Array	79.11	45	P	P	11 43 48.0	+0.4
CTU	Camp Tracy	79.12	47	P	P	11 43 48.5	+0.9
CTU				IAmb	IAmb	11 43 49.8	
	comp=Z,6.0nm,0.7s						
KOLS	Kolonicke sedl	79.12	324	*e*P	P	11 43 48.3	+1.0
KOLS	Kolonicke sedl	79.12	324	*e*P	P	11 43 48.3	+1.0
PSUT	Pine Spring	79.16	50	P	P	11 43 49.3	+1.4
SHOC	Shoshone, Teco	79.20	53	P	P	11 43 48.7	+0.8
	baz=307						
GSC	Goldstone, Bar	79.21	54	P	P	11 43 49.1	+1.0
	baz=306						
BFSC	Mount Baldy Ra	79.27	56	P	P	11 43 49.5	+1.0
	baz=306						
MLR	Muntele Rosu	79.58	319	⇑P	P	11 43 50.4	+0.4
MLR	Muntele Rosu	79.58	319	⇑P	P	11 43 50.4	+0.4
MURC	Murrieta	79.95	56	P	P	11 43 53.0	+0.9
	baz=307						
RAYN	Ar Rayn	80.17	292	P	P	11 43 53.0	-0.4
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RAYN	Ar Rayn	80.17	292	P	P	11 43 53.0	-0.4
MVU	Marysvale	80.20	49	P	P	11 43 55.1	+1.5
MSU	Marysvale	80.21	49	P	P	11 43 55.7	+2.0
MSU	Marysvale	80.21	49	P	P	11 43 55.7	+2.0
SZCU	Shurtz Canyon	80.21	51	P	P	11 43 54.7	+1.1
GMRC	Granite Mounta	80.27	54	P	P	11 43 55.0	+1.1
	baz=307,SNR=7.6						
ARR	Arges	80.35	320	⇑P	P	11 43 55.2	+1.1
109C	Camp Elliot, M	80.44	56	P	P	11 43 55.5	+0.9
	baz=307						
PFO	Pinyon Flats O	80.44	55	LR	LR	12 11 16.0	
	comp=Z,72nm,20.7s,baz=286,slow=29						
PFO	Pinyon Flats O	80.44	55	P	P	11 43 55.7	+0.9
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	80.44	55	P	P	11 43 55.8	+0.9
	baz=307,SNR=8.7						
PFO	Pinyon Flats O	80.44	55	P	P	11 43 55.7	+0.9
PFO				IAmb	IAmb	11 43 58.6	
	comp=Z,12nm,1.1s						
TPFO	Pinon Flats	80.45	55	P	P	11 43 55.9	+1.0
	baz=307,SNR=10						
BELC	Belle Mtn. Jos	80.52	55	P	P	11 43 55.8	+0.5
	baz=307						
MORC	Moravsky Berou	80.73	326	⇓P	P	11 43 55.3	-0.7
MORC	Moravsky Berou	80.73	326	⇓P	P	11 43 55.3	-0.7
BAR	Barrett	80.86	56	IAmb	IAmb	11 43 58.8	
	comp=Z,6.7nm,0.8s						
MONP2	Monument Peak	80.90	56	P	P	11 43 58.4	+1.0
	baz=307,SNR=5.3						
ULM	Lac du Bonnet	80.93	33	P	P	11 43 57.0	0.0
	comp=Z,7.0nm,0.9s,baz=309,slow=6.9,SNR=12						
ULM	Lac du Bonnet	80.93	33	P	P	11 43 57.0	0.0
ULM	Lac du Bonnet	80.93	33	IAmb	IAmb	11 44 00.1	
	comp=Z,8.8nm,1.1s						
TKX	Tecate	80.97	56	P	P	11 43 58.5	+1.0
TKX				IAmb	IAmb	11 44 00.1	
	comp=Z,7.6nm,0.7s						
IRM	Iron Mountain	80.98	54	P	P	11 43 58.7	+1.1
	baz=308,SNR=9.7						
VYHS	Vyhne	81.06	325	*e*P	P	11 43 59.2	+1.5
VYHS	Vyhne	81.06	325	*e*P	P	11 43 59.2	+1.5
CBX	Cerro Bola	81.08	57	P	P	11 43 59.8	+1.5
BC3	Big Chuckawall	81.08	55	P	P	11 43 59.4	+1.1
	baz=307,SNR=6.3						
IKP	In-Ko-Pah, Jac	81.25	56	P	P	11 44 00.3	+1.2
	baz=307,SNR=8.9						
RSSD	Black Hills	81.27	41	P	P	11 43 59.5	+0.3
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RSSD	Black Hills	81.27	41	P	P	11 43 59.7	+0.4
	baz=312						
RSSD	Black Hills	81.27	41	P	P	11 43 59.5	+0.3
SWSC	Sam W. Stewart	81.28	56	P	P	11 44 00.3	+1.1
	baz=307						
CLL	Collm	81.55	330	*e*P	P	11 44 00.0	-0.2
CLL				*e*PcP	PcP	11 44 08.0	+1.9
CLL				*e*pP	pP	11 44 11.0	-1.8
CLL	Collm	81.55	330	*e*P	P	11 44 00.0	-0.2
CLL				*e*		11 44 11.0	
O20A	White River Ci	81.55	46	P	P	11 44 01.5	+0.7
	baz=310,SNR=9.6						
PDMCI	Parker Dam,Lak	81.56	54	P	P	11 44 01.9	+1.3
	baz=308,SNR=7.1						
GLA	Glamis	81.87	55	P	P	11 44 03.6	+1.3
GLA				pmax	pmax		
	comp=Z,13nm,0.9s						
GLA	Glamis	81.87	55	P	P	11 44 03.6	+1.3
	baz=308,SNR=13						
GLA	Glamis	81.87	55	P	P	11 44 03.6	+1.3
GLA				IAmb	IAmb	11 44 04.6	
	comp=Z,13nm,0.9s						
PV22	Blue Mesa, Par	82.26	48	P	P	11 44 05.6	+1.1
PV22				IAmb	IAmb	11 44 07.8	
	comp=Z,8.3nm,0.9s						
PV16	Nyswonger Mesa	82.33	48	P	P	11 44 06.1	+1.2
PV16				IAmb	IAmb	11 44 07.2	
	comp=Z,10.0nm,0.8s						
AGMN	Agassiz Nation	82.37	34	P	P	11 44 04.6	0.0
	baz=317						
N23A	Red Feather La	82.38	44	P	P	11 44 06.1	+0.9
	baz=312						
PV13	Radium Mtn., P	82.48	48	P	P	11 44 07.2	+1.4
PV13				IAmb	IAmb	11 44 08.0	
	comp=Z,15nm,0.9s						
WUAZ	Wupatki	82.58	51	P	P	11 44 07.7	+1.5
	baz=309,SNR=6.2						
GERES	GERESS Array B	83.11	328	P	P	11 44 07.6	-1.0
	comp=Z,1.4nm,0.8s,baz=5.7,slow=5.4,SNR=4.4						
GERES				LR	LR	12 26 01.8	
	comp=Z,70nm,20.1s,baz=328,slow=39						
X16A	Lo Mia Camp, P	83.23	52	P	P	11 44 10.9	+1.3
X16A				IAmb	IAmb	11 44 12.8	
	comp=Z,12nm,0.9s						
MVCO	Mesa Verde	83.29	49	P	P	11 44 10.6	+0.7
	baz=311						
MVCO	Mesa Verde	83.29	49	P	P	11 44 10.4	+0.5
MVCO				IAmb	IAmb	11 44 12.1	
	comp=Z,7.0nm,0.8s						
ISCO	Idaho Springs	83.29	45	P	P	11 44 10.7	+0.7
	baz=312						
W18A	Petrified Fore	83.87	51	P	P	11 44 14.2	+1.3
	baz=310						
214A	Organ Pipe Nat	83.88	55	P	P	11 44 13.9	+1.1
	baz=309,SNR=16						
S22A	4UR Ranch, Cre	83.94	47	P	P	11 44 14.6	+1.3
	baz=311						
Q24A	Divide	84.12	45	P	P	11 44 15.4	+1.1
	baz=312						
EYMN	Ely	84.56	32	P	P	11 44 16.1	+0.2
	baz=320						
SDCO	Great Sand Dun	84.73	47	P	P	11 44 18.2	+0.9
	baz=312						
TUC	Tucson	84.99	53	P	P	11 44 19.6	+1.1
TUC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TUC	Tucson	84.99	53	P	P	11 44 19.7	+1.3
	baz=310						
TUC	Tucson	84.99	53	P	P	11 44 19.6	+1.1
TUC				IAmb	IAmb	11 44 20.6	
	comp=Z,8.8nm,0.8s						
PPT	Papeete	85.02	116	LR	LR	12 17 35.3	
	comp=Z,65nm,18.9s,baz=207,slow=32						
PPT2	Papeete2	85.03	116	*e*LR	LR	12 10 49.0	
	comp=Z,136nm,22.5s						
ECSD	EROS Data Cent	85.36	38	P	P	11 44 20.0	0.0
	baz=317						
ECSD	EROS Data Cent	85.36	38	P	P	11 44 19.6	-0.4
ECSD				IAmb	IAmb	11 44 20.9	
	comp=Z,6.9nm,0.8s						
T25A	Trinidad	85.78	46	P	P	11 44 23.3	+0.8
	baz=313						
ANMO	Albuquerque	86.02	49	*ce*P	P	11 44 25.3	+1.6
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANMO	Albuquerque	86.02	49	P	P	11 44 25.0	+1.3
	baz=312						
ANMO	Albuquerque	86.02	49	P	P	11 44 24.2	+0.5
ANMO				IAmb	IAmb	11 44 26.5	
	comp=Z,6.5nm,0.9s						
L34A	Svendsen Farm,	86.77	39	P	P	11 44 27.5	+0.5
121A	Cookes Peak, D	86.78	52	P	P	11 44 28.6	+1.1
	baz=311						
MATQ	Matagami	88.31	23	P	P	11 44 34.7	+0.5
	baz=330						
KSU1	Kansas State U	88.75	41	P	P	11 44 37.0	+0.5
	baz=317						
LSQQ	Lebel-sur-Quev	89.13	23	P	P	11 44 38.7	+0.6
	baz=331						
TUL1	Leonard	91.54	42	P	P	11 44 50.5	+0.9
	baz=318						
TXAR	Lajitas Array	91.54	52	P	P	11 44 50.6	+0.8
	comp=Z,4.2nm,0.6s,baz=295,slow=3.0,SNR=34						
TXAR	Lajitas Array	91.54	52	P	P	11 44 49.8	0.0
D58A	Chemin du LacG	92.15	22	P	P	11 44 52.2	0.0
	baz=334						
JCT	Junction City	93.15	48	P	P	11 44 57.5	+0.3
JCT				pmax	pmax		
	comp=Z,13nm,0.7s						
JCT	Junction City	93.15	48	P	P	11 44 57.5	+0.3
F61A	St Evariste	93.73	21	P	P	11 44 59.4	-0.1
	baz=335						
ACSO	Alum Creek Sta	94.40	32	P	P	11 45 03.2	+0.5
	baz=326						
G62A	West of Eustis	94.55	21	P	P	11 45 02.4	-0.9
	baz=336						
M54A	Oil Creek Stat	94.69	29	P	P	11 45 04.5	+0.5
	baz=329						
K58A	Earlville	95.09	26	P	P	11 45 05.9	+0.1
	baz=332						
ETX02	Prairie Street	95.28	44	P	P	11 45 05.9	-1.0
O57A	Amberson	96.59	28	P	P	11 45 11.3	-1.4
	baz=330						
TORD	Torodi Ar. Bea	117.39	313	PKP	PKPdf	11 50 28.7	-0.1
	comp=Z,0.7nm,0.8s,baz=110,slow=2.0,SNR=2.8						
BOSA	Boshof	125.42	258	PKP	PKPdf	11 50 41.3	-2.6
	comp=Z,6.8nm,1.0s,baz=40,slow=1.0,SNR=4.6						

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*NNC **30** 11:54:24.3±3.7, 54°.83N×60°.82E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=38.1km s-min=10.4km az=150.0, Suspected Mining explosion.*

*IDC **30** 11:54:41.8±1.0, 53°.37N×63°.05E, h0^{km}, mb3.9/1, mb1 3.3/4, mb1mx3.0/46, mbtmp3.2/4, ML1.6/2, Error ellipse: s-maj=12.0km s-min=10.6km az=35.0*

ISC 30 11:54:41.2±1.0**, 53°.31N**±0°.05×**62°.97E**±0°.05**, h0^{km}, n9, σ1^{s}.89**/12**, 5C-1D, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ARU	Arti	4.03	323	Pn	Pn	11 55 44.7	+0.6
	0.0nm,0.3s,baz=106,slow=18,SNR=5.9						
ARU				Pg	Pg	11 55 57.1	-1.2
	0.0nm,0.3s,baz=126,slow=17,SNR=6.0						
ARU				Sn	Sn	11 56 32.9	+0.9
	0.0nm,0.3s,baz=160,slow=19,SNR=2.2						
ARU				Lg	Lg	11 56 47.4	
	0.0nm,0.3s,baz=156,slow=22,SNR=7.9						
AKTO	Aktyubinsk	4.21	229	Pn	Pn	11 55 48.9	+2.3
	0.1nm,0.3s,baz=83,slow=8.1,SNR=1.8						
AKTO				Pg	Pg	11 56 00.3	-1.6
	0.5nm,0.3s,baz=51,slow=9.8,SNR=6.7						
AKTO				Lg	Lg	11 56 54.2	
	0.8nm,0.3s,baz=338,slow=16,SNR=5.0						
AKTO	Aktyubinsk	4.21	229	⇑Pg	Pn	11 55 50.0	+3.3
	1.6nm,0.5s						
AKTO				⇑Lg	Lg	11 56 54.2	
	19nm,0.9s						
I31KZ	AKTYUBINSK INF	4.22	228	*i*		12 19 12.6	
	baz=43,slow=343,SNR=10						
BRVK	Borovoye	4.41	90	Pn	Pn	11 55 51.6	+2.4
BRVK				⇑Pg	Pg	11 56 11.7	+6.2
	4.8nm,1.0s,baz=294,slow=13						
BRVK				⇑Sn	Sg	11 57 01.5	-1.1
	6.4nm,0.6s						
BVAR	Borovoye Array	4.47	91	Pn	Pn	11 55 51.3	+1.1
	0.7nm,0.3s,baz=283,slow=14,SNR=5.9						
BVAR				Lg	Lg	11 56 59.5	
	1.8nm,0.3s,baz=276,slow=22,SNR=3.6						
AB31	Akbulak array	4.49	206	Pn	Pn	11 55 50.5	+0.1
	0.2nm,0.3s,baz=25,slow=15,SNR=17						
AB31				⇓Pg	Pg	11 56 05.7	-1.4
	0.4nm,0.3s,baz=23,slow=12,SNR=11						
AB31				⇑Lg	Lg	11 57 20.6	
	7.9nm,0.6s,baz=20,slow=26,SNR=9.8						
I46RU	ZALESOVO INFRA	12.97	78	*i*		13 10 10.0	
	baz=279,slow=342,SNR=0.8						
FINES	FINESS Array B	21.23	307	P	P	11 59 27.6	-0.6
	7.1nm,1.1s,baz=109,slow=7.5,SNR=3.4						

IDC ***30*** *12:00:30.9±6.3, 36°.50N×71°.54E, h210km±55km, mb2.9/1, mb1 3.4/6, mb1mx2.9/54, mbtmp4.0/6, Error ellipse: s-maj=54.3km s-min=41.3km az=47.0*
NNC ***30*** *12:00:34.9±2.7, 36°.92N×71°.20E, h228km±29km, mb3.1, mpv4.3, Error ellipse: s-maj=27.2km s-min=14.4km az=28.0*
ISC 30 12:00:29.4±1.2**, 36°.55N**±0°.09×**71°.1E**±0°.1**, h200km, n28, σ1ˢ.33**/32**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	5.92	19	P	Pn	12 01 57.6	+1.8
	SNR=257						
UCH	**Uchtor**	6.24	24	P	Pn	12 02 01.7	+1.6
	SNR=104						
EKS2	**Erkin-Say**	6.43	18	P	Pn	12 02 04.1	+1.9
	SNR=60						
KK31	**Karatay Array**	6.56	356	⇓P	Pn	12 02 05.7	+1.9
	3.1nm,0.3s,baz=168,slow=12,SNR=92						
KK31				S	Sn	12 03 16.4	-2.3
	11nm,0.3s,baz=185,slow=21,SNR=23						
AAK	**Ala-Archa**	6.61	22	P	Pn	12 02 06.3	+1.7
	8.6nm,0.3s,baz=187,slow=6.0,SNR=112						
AAK				S	Sn	12 03 19.1	-1.0
	0.5nm,0.3s,baz=326,slow=23,SNR=7.6						
AAK	**Ala-Archa**	6.61	22	P	Pn	12 02 06.3	+1.7
	SNR=39						
AAK	**Ala-Archa**	6.61	22	⇓P	Pn	12 02 06.1	+1.5
	19nm,0.4s						
AAK				⇑S	Sn	12 03 19.8	-0.3
	10nm,0.6s						
KBK	**Karagaybulak**	6.77	25	P	Pn	12 02 08.6	+1.9
	SNR=16						
ULHL	**Ulahol**	6.92	33	P	Pn	12 02 09.5	+0.7
	SNR=24						
CHMS	**Chumysh**	7.01	22	P	Pn	12 02 11.6	+1.9
	SNR=14						
USP	**Ospenovka**	7.19	20	P	Pn	12 02 13.5	+1.5
	SNR=6.8						
TKM2	**Tokmak 2**	7.23	27	P	Pn	12 02 13.9	+1.2
	SNR=33						
TKM2	**Tokmak 2**	7.23	27	P	Pn	12 02 13.6	+0.9
	18nm,0.5s						
MDOK	**Medeo**	8.02	33	P	Pn	12 02 23.7	+0.8
	15nm,0.6s						
MAKZ	**Makanchi**	13.05	35	⇑P	Pn	12 03 26.7	-0.7
	3.4nm,0.6s						
MK31	**Makanchi Array**	13.19	36	⇑P	Pn	12 03 29.3	+0.3
	0.4nm,0.3s,baz=218,slow=12,SNR=31						
MKAR	**Makanchi Array**	13.19	36	P	Pn	12 03 29.0	0.0
	0.5nm,0.3s,baz=212,slow=13,SNR=19						
DANN	**Dangsing**	13.43	124	eP	Pn	12 03 32.2	-0.3
	12nm,0.3s						
GKN	**Gorkha**	14.24	123	eP	Pn	12 03 42.7	+0.2
	14nm,0.3s						
KURBB	**Kurchatov Arra**	15.04	18	P	Pn	12 03 51.2	-0.6
	0.1nm,0.3s,baz=205,slow=11,SNR=4.2						
PKI	**Pulchoki**	15.04	122	eP	Pn	12 03 51.9	-0.5
	15nm,0.5s						
AB31	**Akbulak array**	15.09	331	⇑P	Pn	12 03 53.1	+0.6
	2.4nm,0.7s,baz=140,slow=12,SNR=10						
AB31				⇓S	S	12 06 38.1	-1.8
	0.8nm,0.5s,baz=157,slow=22,SNR=4.8						
GUN	**Gumba**	15.15	120	eP	P	12 03 55.0	+0.7
	14nm,0.4s						
TAPN	**Taplejung**	16.78	118	eP	Pn	12 04 13.5	+0.2
	6.1nm,0.3s						
AKTO	**Aktyubinsk**	16.79	330	P	Pn	12 04 14.4	+1.5
	1.5nm,0.3s,baz=141,slow=8.9,SNR=22						
AKTO	**Aktyubinsk**	16.79	330	⇑P	Pn	12 04 13.7	+0.8
	7.1nm,0.8s						
ZALV	**Zalesovo Beam**	19.82	24	P	P	12 04 45.1	+0.6
	0.3nm,0.3s,baz=223,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	81.93	122	P	P	12 12 25.3	-1.5
	0.2nm,0.3s,baz=325,slow=5.0,SNR=5.6						

IDC ***30*** *12:44:33.1±1.9, 33°.78N×88°.00E, h0km, mb3.9/2, mb1 3.9/6, mb1mx3.4/55, mbtmp3.6/6, ML3.0/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/54, Error ellipse: s-maj=71.5km s-min=23.8km az=71.0*
ISC 30 12:44:34.1±1.6**, 33°.8N**±0°.2×**87°.8E**±0°.3**, h10km, n7, σ0ˢ.64**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	13.64	344	Pn	Pn	12 47 47.3	-0.2
	0.0nm,0.3s,baz=159,slow=15,SNR=4.3						
KURBB	**Kurchatov Arra**	18.14	341	P	P	12 48 46.8	+0.6
	baz=162,slow=13,SNR=3.1						
CMAR	**Chiang Mai Arr**	18.24	144	P	P	12 48 48.2	+0.6
	baz=333,slow=11,SNR=4.2						
SONM	**Songino Array**	19.80	39	P	P	12 49 04.7	+0.1
	0.1nm,0.3s,baz=222,slow=11,SNR=5.0						
PSI	**Prapat**	32.54	159	LR	LR	13 05 09.5	
	comp=Z,170nm,18.1s,baz=94,slow=38						
WRA	**Warramunga Arr**	69.44	133	P	P	12 55 42.4	-0.3
	1.6nm,0.8s,baz=327,slow=6.3,SNR=14						
ASAR	**Alice Springs**	72.04	136	P	P	12 55 57.9	-0.6
	0.7nm,0.8s,baz=330,slow=6.4,SNR=8.3						

NOU 30 12:53:44.4, 15°.55S×166°.39E, h0km, MLv4.9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	0.79	83	P	Pg	12 53 59.7	+0.1
DVP	**Devils Point**	2.77	142	P	Pn	12 54 29.9	-0.1
KOUNC	**Koumac, New Ca**	5.36	202	P	Pn	12 55 05.7	0.0
DZM	**Mont Dzumac**	6.49	180	P	Pn	12 55 20.8	-0.5
PINNC	**Pines Island,**	7.10	172	P	Pn	12 55 29.9	+0.3

RHSSO ***30*** *12:58:22.2±1.0, 41°.62N×19°.59E, h7km±3km, ML2.9/6*
TIR ***30*** *12:58:23.2, 41°.72N×19°.35E, h10km±1km, Md2.5*
PDG ***30*** *12:58:24.6±0.0, 41°.67N×19°.40E, h6km, MD2.5/1, ML2.8/11, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
BEO ***30*** *12:58:24.7±0.5, 41°.64N×19°.32E, h18km±3km, ML2.7/7*
ISC 30 12:58:25.2±1.0**, 41°.72N**±0°.03×**19°.40E**±0°.03**, h10km**±8km**, n39, σ1ˢ.04**/70**, 4C-6D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	0.26	335	⇓iPg	Pg	12 58 30.5	-0.1
ULC				i Sg	Sg	12 58 35.5	+1.3
TIR	**Tirane**	0.52	137	ePg	Pg	12 58 34.2	-0.9
TIR				eSg	Sg	12 58 42.8	+0.8
TIR	**Tirane**	0.52	137	P	Pg	12 58 34.3	-0.9
	baz=134						
TIR				S	Sg	12 58 42.2	+0.2
	baz=134						
BUM	**Brajici-Budva**	0.69	327	⇓iPg	Pg	12 58 38.2	-0.3
BUM				i Sg	Sb	12 58 49.8	+1.0
PDG	**Podgorica**	0.71	352	ePg	Pg	12 58 38.2	-0.7
PDG				eSg	Sn	12 58 51.5	-0.7
PDG	**Podgorica**	0.71	352	ePg	Pg	12 58 37.5	-1.4
PDG				eSg	Sb	12 58 49.1	-0.4
TTG	**Podgorica**	0.71	352	⇑iPg	Pb	12 58 38.8	-0.8
TTG				i Sg	Sn	12 58 50.8	-1.4
PHP	**Peshkopia**	0.78	93	P	Pg	12 58 39.6	-0.6
	baz=92						
PHP				S	Sb	12 58 51.8	+0.2
	baz=92						
BCI	**Bajram Curri**	0.81	38	P	Pg	12 58 40.0	-0.9
	baz=39						
BCI				S	Sb	12 58 52.1	-0.3
	baz=39						
CEME	**Cevo**	0.90	337	⇓iPg	Pg	12 58 42.1	-0.3
CEME				i Sg	Sn	12 58 56.9	0.0
PVY	**Plav**	0.96	26	⇓iPg	Pb	12 58 43.3	-0.7
PVY				i Sg	Sn	12 58 59.0	+0.3
HCY	**Herceg Novi**	0.99	317	ePg	Pg	12 58 43.2	-0.9
HCY				eSg	Sn	12 58 59.1	+0.1
HCY	**Herceg Novi**	0.99	317	⇓iPg	Pg	12 58 43.6	-0.5
HCY				i Sg	Sn	12 58 59.6	+0.6
NKME	**Niksic**	1.09	343	⇑iPg	Pb	12 58 45.8	-0.4
NKME				i Sg	Sn	12 59 03.6	+1.9
KOME	**Kolasin**	1.13	4	⇓iPg	Pb	12 58 46.4	-0.4
KOME				i Sg	Sn	12 59 04.9	+2.2
IVA	**Berane**	1.21	18	⇑iPg	Pn	12 58 47.7	-0.4
IVA				i Sg	Sn	12 59 07.4	+2.9
TREB	**Trebinje**	1.26	322	ePg	Pb	12 58 48.8	-0.2
TREB				eSg	Sn	12 59 06.3	+0.5
TREB	**Trebinje**	1.26	322	ePg	Pn	12 58 47.9	-0.9
TREB				eSg	Sn	12 59 07.5	+1.7
DBRK	**Dubrovnik**	1.32	316	ePg	Pn	12 58 49.3	-0.4
DBRK				Sg	Sg	12 59 08.1	+0.3
BRY	**Bratogost**	1.34	332	ePg	Pb	12 58 50.2	-0.2
BRY				i Sg	Sg	12 59 11.7	+3.5
SKO	**Skopje**	1.55	80	ePg	Pg	12 58 54.5	-0.3
SKO				eSg	Sg	12 59 15.5	+0.6
SJES	**Sjenica**	1.59	15	ePg	Pg	12 58 56.5	+0.7
SJES				eSn	Sb	12 59 13.7	-1.3
PLE	**Pljevlja**	1.60	360	⇑iPn	Pg	12 58 55.1	-0.9
PLE				i Sn	Sg	12 59 19.4	+2.6
STON	**Ston**	1.70	313	ePg	Pn	12 58 54.9	+0.1
STON				eSg	Sb	12 59 18.4	+0.5
STON	**Ston**	1.70	313	ePn	Pn	12 58 54.9	+0.1
STON				Sn	Sb	12 59 17.2	-0.7
STON	**Ston**	1.70	313	ePn	Pn	12 58 54.1	-0.7
STON				eSn	Sg	12 59 18.8	-1.1
SRN	**Sarande**	1.90	166	P	Pn	12 58 59.0	+1.5
	baz=164						
SRN				S	Sg	12 59 26.2	+0.1
	baz=164						
BBLS	**Lazići**	2.14	0	ePg	Pg	12 59 05.4	-0.8
BBLS				eSg	Sg	12 59 34.6	+0.7
BBLS	**Lazići**	2.14	0	ePn	Pn	12 59 00.2	-0.8
BBLS				eSn	Sn	12 59 27.5	-0.1
HAPS	**Han Pijesak,Bl**	2.38	352	ePn	Pn	12 59 04.9	+0.6
HAPS	**Han Pijesak,Bl**	2.38	352	ePn	Pn	12 59 03.1	-1.2
HAPS				eSn	Sn	12 59 34.3	+0.7
DIVS	**Divibare**	2.41	10	ePg	Pg	12 59 10.1	-1.3
DIVS	**Divibare**	2.41	10	ePn	Pn	12 59 03.4	-1.3
DIVS				eSn	Sn	12 59 34.2	-0.1
BOSS	**Bosilegrad**	2.42	70	ePn	Pn	12 59 05.4	+0.6
RICI	**Ricice**	2.43	317	ePn	Pn	12 59 04.7	-0.2
ZAPS	**Zavoj**	2.85	56	ePn	Pn	12 59 10.6	-0.1
ZAGS	**Zajecar**	2.95	44	ePn	Pn	12 59 12.1	+0.1
KIJV	**Kijevo**	3.17	317	ePn	Pn	12 59 14.1	-0.9
MORI	**Morici**	3.46	309	ePn	Pn	12 59 18.8	-0.1

IDC ***30*** *13:05:26.1±3.3, 34°.02S×178°.80W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/34, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=74.9km s-min=37.2km az=117.0*
NEIC ***30*** *13:05:30.6±1.2, 34°.0S±0°.1×178°.8W±0°.2, h35km±10km, mb4.4/10, Error ellipse: s-maj=27.8km s-min=8.9km az=119.0*
WEL ***30*** *13:06:21.1, 37°S±41°×17°9E±1°0, h68km±21km, M2.5/15, ML2.8/15, MLv2.5/15, Error ellipse: s-maj=0.1km s-min=0.0km az=179.2*
ISC 30 13:05:30.3±1.1**, 34°.0S**±0°.1×**178°.7W**±0°.2**, h37km, n39, σ0ˢ.77**/40**, mb4.2**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	4.30	213	Pn	Pn	13 06 34.2	+1.1
WMGZ	**Waiomatatini S**	4.46	211	P	Pn	13 06 36.3	+0.9
PKGZ	**Pakihiroa**	4.67	213	P	Pn	13 06 37.6	-0.7
HAZ	**Te Kaha**	4.70	216	P	Pn	13 06 39.0	+0.4
PUZ	**Puketiti**	4.75	210	P	Pn	13 06 38.3	-1.0
RUGZ	**Raukumara Rang**	4.92	215	P	Pn	13 06 41.7	0.0
TWGZ	**Tauwhareparae**	4.95	212	P	Pn	13 06 42.9	+0.8
CNGZ	**Carnagh Statio**	5.12	208	P	Pn	13 06 44.4	+0.1
TKGZ	**Te Karaka**	5.23	211	P	Pn	13 06 46.0	+0.1
MWZ	**Matawai**	5.29	214	P	Pn	13 06 46.6	-0.1
OPRZ	**Ohinepanea**	5.43	224	P	Pn	13 06 50.0	+1.4
URZ	**Urewera**	5.43	217	Pn	Pn	13 06 48.1	-0.5
	4.3nm,0.3s,baz=258,slow=1.1,SNR=34						
URZ				Sn	Sn	13 07 49.7	-0.1
	0.9nm,0.3s,baz=39,slow=5.0,SNR=3.2						
URZ	**Urewera**	5.43	217	Pn	Pn	13 06 48.4	-0.2
URZ	**Urewera**	5.43	217	P	Pn	13 06 48.5	-0.1
RAGZ	**Rawiri**	5.47	214	P	Pn	13 06 49.8	+0.6
RIGZ	**Rimuhau**	5.49	210	P	Pn	13 06 49.4	-0.1
SNGZ	**Shannon Statio**	5.73	213	P	Pn	13 06 53.1	+0.2
RTZ	**Ruatahuna**	5.77	216	P	Pn	13 06 52.9	-0.4
RAHZ	**Arahi**	5.96	213	P	Pn	13 06 56.0	+0.1
MTHZ	**Maungataniwha**	6.02	215	P	Pn	13 06 57.2	+0.4
MRHZ	**Matea Rd**	6.22	218	P	Pn	13 06 59.0	-0.5
NMHZ	**Naumai**	6.23	214	P	Pn	13 07 00.3	+0.6
BKZ	**Black Stump Fm**	6.44	215	Pn	Pn	13 07 01.8	-0.7
BKZ	**Black Stump Fm**	6.44	215	P	Pn	13 07 01.6	-0.9
BHW	**Baring Head**	8.97	213	Pn	Pn	13 07 36.6	-0.5
EIDS	**Eidsvold**	27.54	280	P	P	13 11 11.4	-2.2
COEN	**Coen**	39.83	291	P	P	13 13 00.6	+0.4
COEN				IAmb	IAmb	13 13 19.1	
	comp=Z,11nm,1.3s						
AS31	**Alice Springs**	42.45	271	P	P	13 13 22.6	+0.8
ASAR	**Alice Springs**	42.45	271	P	P	13 13 22.4	+0.7
	comp=Z,0.8nm,0.6s,baz=114,slow=7.6,SNR=16						
ASAR	**Alice Springs**	42.45	271	P	P	13 13 22.3	+0.6
TAOE	**Nuku Hiva Isla**	43.36	64	P	P	13 13 29.5	+0.3
WB2	**Warramunga Arr**	43.75	276	P	P	13 13 32.8	+0.5
WB2				IAmb	IAmb	13 13 35.7	
	comp=Z,4.3nm,1.2s						
WRAB	**Tennant Creek**	43.76	276	P	P	13 13 33.5	+1.1
WRAB				IAmb	IAmb	13 13 35.6	
	comp=Z,8.5nm,1.4s						
WRA	**Warramunga Arr**	43.76	276	P	P	13 13 32.8	+0.4
	comp=Z,1.1nm,0.7s,baz=117,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	43.76	276	P	P	13 13 32.8	+0.4
WB0	**Warramunga Arr**	43.80	277	P	P	13 13 33.3	+0.6
WB0				IAmb	IAmb	13 13 33.7	
	comp=Z,5.0nm,1.1s						
KNRA	**Kununurra**	50.48	278	P	P	13 14 23.2	-1.5
NWAO	**Narrogin (SRO)**	52.64	252	P	P	13 14 41.3	+0.6
NWAO				IAmb	IAmb	13 14 45.7	
	comp=Z,32nm,1.4s						
FINES	**FINESS Array B**	148.28	337	PKPbc	PKiKP	13 25 12.6	-0.6
	comp=Z,1.8nm,0.8s,baz=96,slow=1.4,SNR=3.5						

IDC ***30*** *13:18:47.4±1.4, 3°.43S×131°.27E, h0km, mb3.9/4, mb1 4.2/8, mb1mx3.9/34, mbtmp4.0/8, ML3.8/4, MS3.0/2, Ms1 3.0/2, ms1mx2.6/46, Error ellipse: s-maj=45.7km s-min=18.6km az=78.0*
DJA ***30*** *13:18:52.5±0.2, 3°S±3°×13°1E±°, h49km±11km, M4.0/10, mb4.3/6, MLv3.8/10*
NEIC ***30*** *13:18:52.3±2.9, 3°.58S±0°.07×131°.15E±0°.10, h45km±13km, mb4.1/15, Error ellipse: s-maj=16.4km s-min=6.3km az=122.0*
ISC 30 13:18:50.9±0.6**, 3°.39S**±0°.05×**131°.03E**±0°.04**, h30km, n38, σ1ˢ.88**/38**, mb4.2**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	1.30	69		Pb	13 19 14.7	0.0
FAKI	**Fak Fak**	1.30	69	P	Pb	13 19 14.8	0.0
FAKI				S	Sb	13 19 32.3	+1.1
BNDI	**Bandanaira**	1.59	225	P	Pb	13 19 19.2	-0.5
MSAI	**Masohi**	2.10	271	P	Pn	13 19 24.6	+0.5
MSAI				S	Sn	13 19 49.3	+0.1
SIJI	**Sorong**	2.52	5	Pn	Pn	13 19 29.3	-0.5
	11nm,0.3s,baz=161,slow=22,SNR=50						
SIJI				Sn	Sn	13 19 57.8	-1.8
	14nm,0.3s,baz=116,slow=24,SNR=13						
SWI	**Sorong**	2.52	5	P	Pn	13 19 29.1	-0.8
SWI				S	Sn	13 19 58.2	-1.4
KMPI	**Kaimana, Papua**	2.68	96	P	Pn	13 19 34.3	+2.2
NLAI	**Namlea**	3.93	272	P	Pn	13 19 50.4	+1.2
SANI	**Sanana**	5.21	285	P	Pn	13 20 05.4	-1.5
	0.1nm20nm,1.0s						
SOEI	**Soe**	9.22	226	Pn	Pn	13 21 03.0	+0.8
MTN	**Manton Dam**	9.39	179	Pn	Pn	13 21 04.2	-0.1
APSI	**Ampana**	9.70	285	P	Pn	13 21 07.5	-1.0
	17nm,0.8s						
BATI	**Baumata**	9.97	227	Pn	Pn	13 21 13.3	+1.1
	3.8nm,0.3s,baz=9.4,slow=0.7,SNR=6.2						
BATI	**Baumata**	9.97	227	P	Pn	13 21 14.9	+2.7
	25nm,0.9s						
KAPI	**Kappang**	11.37	261	LR	LR	13 27 01.7	
	comp=Z,81nm,21.1s,baz=77,slow=43						
WSI	**Waingapu**	12.35	239	P	Pn	13 21 46.7	+1.8
FITZ	**Fitzroy Crossi**	15.54	199	Pn	Pn	13 22 26.6	-1.4
	0.2nm,0.3s,baz=27,slow=12,SNR=5.4						
FITZ	**Fitzroy Crossi**	15.54	199		Pn	13 22 27.2	-0.9
COEN	**Coen**	15.93	132		Pn	13 22 33.8	+0.6
WB0	**Warramunga Arr**	16.60	169		Pn	13 22 39.4	-2.3
WB0				IAmb	IAmb	13 22 53.5	
	comp=Z,5.7nm,0.6s						
WRAB	**Tennant Creek**	16.76	169		Pn	13 22 41.4	-2.2
WRAB				IAmb	IAmb	13 22 55.5	
	comp=Z,7.6nm,0.6s						
WRA	**Warramunga Arr**	16.76	169	Pn	Pn	13 22 40.9	-2.9
	comp=Z,0.3nm,0.3s,baz=357,slow=13,SNR=12						
WRA	**Warramunga Arr**	16.76	169		Pn	13 22 40.6	-3.1
WB2	**Warramunga Arr**	16.77	169		Pn	13 22 41.2	-2.5
WB2				IAmb	IAmb	13 22 54.9	
	comp=Z,6.1nm,0.8s						
WR0	**Warramunga Arr**	16.82	169		Pn	13 22 41.1	-3.3
WR0				IAmb	IAmb	13 22 57.9	
	comp=Z,5.2nm,0.7s						
PMG	**Port Moresby**	17.10	111		Pn	13 22 46.6	-1.3
AS31	**Alice Springs**	20.35	172		Pn	13 23 26.9	-0.4
AS31				IAmb	IAmb	13 23 27.6	
	comp=Z,7.0nm,0.4s						
ASAR	**Alice Springs**	20.35	172	P	P	13 23 26.1	+1.0
	comp=Z,12nm,0.5s,baz=351,slow=11,SNR=189						
ASAR	**Alice Springs**	20.35	172		Pn	13 23 26.9	-0.3
PSA00	**Pilbara Seismi**	21.09	210	P	P	13 23 30.9	-2.2
PSA00				IAmb	IAmb	13 23 33.7	
	comp=Z,14nm,1.1s						
KSM	**Kuching**	21.27	283	P	P	13 23 35.8	+0.7
KSM				IAmb	IAmb	13 23 50.9	
	comp=Z,16nm,1.1s						
CTAO	**Charters Tower**	22.27	139	P	P	13 23 41.0	-4.7
CTAO				IAmb	IAmb	13 23 41.1	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	30.03	162	P	P	13 24 57.4	+0.1
	comp=Z,2.1nm,0.7s,baz=350,slow=8.7,SNR=5.3						
NWAO	**Narrogin (SRO)**	32.10	202	P	P	13 25 16.3	+0.8
ARMA	**Armidale**	33.19	146	P	P	13 25 25.0	-0.3
CMAR	**Chiang Mai Arr**	38.34	306	P	P	13 26 12.8	+3.2
	comp=Z,0.3nm,0.3s,baz=129,slow=7.1,SNR=1.7						
KSRS	**Korea Array**	40.74	356	LR	LR	13 42 34.5	
	comp=Z,24nm,21.7s,baz=225,slow=35						
MKAR	**Makanchi Array**	65.82	326	P	P	13 29 35.6	+2.1
	comp=Z,0.4nm,0.7s,baz=108,slow=7.8,SNR=6.7						

DJA 30 13:18:58.8±0.6**, 4°S**±3°×**10°2E**±°**, h19km**±5km**, M3.4**/8**, MLv3.4**/8**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	0.72	29	P	Pg	13 19 12.9	-0.1
KSI				S	Sg	13 19 23.2	+0.6
MNAI	**Manna**	0.72	96	P	Pn	13 19 13.5	-0.5
LHSI	**Lahat**	1.36	71	P	Pn	13 19 23.0	+0.3
LHSI				S	Sb	13 19 40.5	-0.1
MDSI	**Maura Dua**	1.94	96	P	Pn	13 19 30.5	-0.3
MDSI				S	Sn	13 19 55.7	+1.0
KLSI		2.52	99	P	Pn	13 19 39.9	+1.2
KASI	**Kota Agung**	2.57	119	P	Pn	13 19 39.1	-0.3
KASI	**Kota Agung**	2.57	119	P	Sn	13 20 09.4	-0.7
PMBI	**Palembang**	2.86	62	P	Sb	13 20 26.6	+2.6
RGRI	**Rengat**	3.91	1	P	Pn	13 19 54.7	-3.1

IDC ***30*** *13:21:31.9±1.6, 4°.35S×131°.16E, h0km, mb3.8/3, mb1 4.1/7, mb1mx3.7/40, mbtmp3.9/7, ML3.8/4, Error ellipse: s-maj=62.3km s-min=22.2km az=80.0*
DJA ***30*** *13:21:38.1±0.6, 4°S±6°×13°1E±°, h50km±30km, M4.2/9, mb4.4/1, MLv4.0/9*
ISC 30 13:21:33.3±0.8**, 4°.46S**±0°.05×**131°.55E**±0°.06**, h35km, n13, σ3ˢ.63**/19**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	1.64	268	P	Pn	13 22 02.3	+2.7
BNDI				S	Sn	13 22 21.2	+1.6
FAKI	**Fak Fak**	1.68	24	P	Pn	13 22 02.1	+1.9
FAKI				S	Sn	13 22 20.9	+0.3
KMPI	**Kaimana, Papua**	2.29	70	P	Pn	13 22 14.8	+6.2
MSAI	**Masohi**	2.84	293	P	Pn	13 22 16.8	+0.6
MSAI				S	Sn	13 22 46.0	-3.2
SIJI	**Sorong**	3.58	355	Pn	Pn	13 22 25.7	-0.7
	5.5nm,0.3s,baz=39,slow=23,SNR=12						
SIJI				Sn	Sn	13 23 00.6	-6.9
	35nm,0.3s,baz=46,slow=23,SNR=22						
SWI	**Sorong**	3.59	355	P	Pn	13 22 26.0	-0.4
SANI	**Sanana**	6.05	293	P	Pn	13 22 59.1	-1.2
FITZ	**Fitzroy Crossi**	14.73	203	Pn	Pn	13 25 00.0	+0.8
	0.7nm,0.3s,baz=17,slow=9.8,SNR=14						
FITZ				Sn	Sn	13 27 34.6	-6.8
	0.2nm,0.3s,baz=232,slow=19,SNR=1.3						
WRA	**Warramunga Arr**	15.62	170	Pn	P	13 25 14.4	-0.3
	0.2nm,0.3s,baz=349,slow=13,SNR=4.0						
WRA				Sn	Sn	13 27 56.3	-6.8
	0.3nm,0.3s,baz=351,slow=23,SNR=3.8						
ASAR	**Alice Springs**	19.23	173	P	Pn	13 26 00.2	+4.5
	0.7nm,0.3s,baz=352,slow=10,SNR=13						
ASAR				S	Sn	13 29 26.8	-3.6
	0.2nm,0.3s,baz=360,slow=24,SNR=3.0						
CMAR	**Chiang Mai Arr**	39.39	306	P	P	13 29 01.1	+1.2
	0.7nm,0.6s,baz=137,slow=7.7,SNR=5.9						
MKAR	**Makanchi Array**	66.99	326	P	P	13 32 24.9	+2.3
	0.5nm,0.6s,baz=122,slow=8.1,SNR=5.9						
KURBB	**Kurchatov Arra**	71.19	327	P	P	13 32 50.6	+2.1
	0.6nm,0.7s,baz=124,slow=5.3,SNR=7.7						

ASRS 30 13:32:47.7±0.3**, 51°N**±2°×**9°8E**±°**, h5km, MLh3.6**/8**, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	0.84	214	Pg	Pb	13 33 04.6	-0.3
KNGR				Sg	Sb	13 33 16.1	-0.5
TDJR	**Todzha**	1.73	310	Pg	Pg	13 33 25.5	+4.7
TDJR				Sg	Sg	13 33 51.5	+8.4
MOY	**Mondy**	1.75	77	Pg	Pg	13 33 21.9	+0.7
MOY				Sg	Sg	13 33 43.8	-0.1
KZLR	**Kyzyl**	2.41	281	Pg	Pg	13 33 35.3	+1.5
KZLR				Sg	Sg	13 34 08.6	+3.6
ARDR	**Aradan**	3.25	295	Pg	Pg	13 33 50.1	+0.2
ARDR				Sg	Sg	13 34 36.3	+4.4
ORY	**Orie**	4.16	334	Pg	Pg	13 34 07.4	0.0
ORY				Sg	Sg	13 35 03.3	+2.1
KTRR	**Kuturchin**	4.37	328	Pg	Pg	13 34 11.4	-0.1
KTRR				Sg	Sg	13 35 12.2	+4.1
DJOS	**Djoyskaya Sosn**	4.49	292	Pg	Pg	13 34 16.3	+2.7
DJOS				Sg	Sg	13 35 17.7	+6.0
CERR	**Cheremushki**	4.49	293	Pg	Pg	13 34 15.6	+1.9
CERR				Sg	Sg	13 35 17.2	+5.3
DJO	**Djoy, Khakassi**	4.59	292	Pg	Pg	13 34 16.8	+1.3
DJO				Sg	Sg	13 35 19.5	+4.6
TEL	**Teeli**	5.08	270	Pg	Pg	13 34 24.3	-0.6
TEL				Sg	Sg	13 35 30.3	-0.4
GZLN	**Zheleznogorsk**	5.73	334	Sg	Sg	13 35 57.2	+5.6
LUZB	**Luzhba, Kemero**	6.18	296	Pg	Pg	13 34 47.1	+1.0
LUZB				Sg	Sg	13 36 08.1	+2.0
CUR	**Chagan-Uzun**	6.41	263	Pg	Pg	13 34 49.5	-0.9
CUR				Sg	Sg	13 36 15.5	+2.1
ULGR	**Ulagan, Altay**	6.54	268	Pg	Pg	13 34 52.1	-0.8
ULGR				Sg	Sg	13 36 21.4	+3.9

ISK ***30*** *13:52:18.4, 36°.03N×32°.93E, h8km, ML2.5/14*
DDA ***30*** *13:52:19.0, 36°.15N×32°.90E, h7km±1km, ML1.9*
NIC ***30*** *13:52:26.5±0.0, 35°.65N×33°.02E, h17km±13km, Ml1.8/2*
ISC 30 13:52:18.7±0.9**, 36°.07N**±0°.02×**32°.92E**±0°.02**, h15km**±6km**, n40, σ0ˢ.92**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZY	**Bozyazi-Mersin**	0.06	50	PG	Pg	13 52 21.8	+0.2
TEKE	**Tekeli-Mersin**	0.18	64	PG	Pg	13 52 23.1	+0.1
TEKE				SG	Sg	13 52 25.9	+0.1
BERE	**Bereket-Mersin**	0.38	41	PG	Pg	13 52 25.6	-0.8
YORU	**Yoruktepe-Mers**	0.41	77	PG	Pg	13 52 27.3	+0.4
OREN	**Orenkoy-Mersin**	0.46	72	PG	Pg	13 52 27.3	-0.6
AKK1	**Akkuyu-Mersin**	0.51	81	PG	Pg	13 52 28.9	+0.1
GAZI	**Gazipasa**	0.51	289	PG	Pb	13 52 29.5	0.0
GAZI				SG	Sb	13 52 37.2	+0.4
GAZI	**Gazipasa**	0.51	289	i P	Pg	13 52 29.1	+0.2
GAZI				i S	Sg	13 52 36.1	+0.3
GAZI				IAML		13 52 37.0	
	comp=E,82nm,0.3s						
GAZI				IAML		13 52 37.0	
	comp=N,91nm,0.2s						
AKK2	**Akkuyu-Mersin**	0.52	82	PG	Pg	13 52 28.9	0.0
AKK2				SG	Sg	13 52 36.2	+0.4

GULN	**MERSIN_Gulnar**	**0.52**	**77**	*i*	P	**Pg**	**13 52 29.0**	**0.0**
GULN				*i*	S	**Sb**	**13 52 36.9**	**-0.1**
GULN					IAML		13 52 37.0	
	comp=N,78nm,0.4s							
GULN					IAML		13 52 38.0	
	comp=E,51nm,0.2s							
AKKU	**Akkuyu-Mersin**	**0.52**	**80**		PG	**Pg**	**13 52 28.9**	**-0.1**
TEPK	**Tepekoy-MERSIN**	**0.53**	**73**		PG	**Pg**	**13 52 29.4**	**+0.2**
TEVE	**Tevekalti-Mers**	**0.56**	**49**		PG	**Pg**	**13 52 29.9**	**+0.1**
ERMK	**Ermenek**	**0.57**	**360**	*i*	P	**Pg**	**13 52 28.6**	**-1.5**
ERMK				*i*	S	**Sg**	**13 52 35.8**	**-2.0**
ERMK					IAML		13 52 36.0	
	comp=E,124nm,0.3s							
ERMK					IAML		13 52 38.0	
	comp=N,130nm,0.3s							
YESI	**Yesilovacik-Me**	**0.60**	**77**		PG	**Pg**	**13 52 30.1**	**-0.4**
TISA	**Tisan-Mersin**	**0.62**	**81**		PG	**Pg**	**13 52 30.5**	**-0.4**
IKL	**Isikli**	**0.65**	**74**		PG	**Pg**	**13 52 30.9**	**-0.4**
KARG	**Kargicak-Mersi**	**0.66**	**78**		PG	**Pg**	**13 52 31.8**	**+0.3**
KEBE	**Keben-Mersin**	**0.75**	**59**		PG	**Pb**	**13 52 33.7**	**+0.2**
ALAN	**Alanya-ANTALYA**	**0.86**	**305**		PG	**Pb**	**13 52 35.8**	**+0.4**
SILI	**Silifke-Mersin**	**0.87**	**69**		PG	**Pg**	**13 52 35.4**	**-0.1**
SLFK	**Silifke-Mersin**	**0.90**	**68**		PG	**Pg**	**13 52 35.6**	**-0.4**
ALFC	**Alefka**	**0.94**	**196**		P	**Pn**	**13 52 38.1**	**+0.6**
ALFC					S	**Sg**	**13 52 47.4**	**-1.9**
ALFC					AML	AML	13 52 53.2	
	comp=N,0.2nm,0.3s							
ALFC					AML	AML	13 52 53.2	
	comp=N,0.2nm,0.3s							
ALFC					AML	AML	13 52 54.8	
	comp=N,0.3nm,0.4s							
ALFC					AML	AML	13 52 54.8	
	comp=N,0.3nm,0.4s							
KIZK	**Mersin**	**1.07**	**67**		PG	**Pg**	**13 52 39.8**	**+0.4**
KIZK	**Mersin**	**1.07**	**67**	*i*	P	**Pb**	**13 52 38.7**	**-0.3**
KIZK				*i*	S	**Sb**	**13 52 52.4**	**-0.4**
KIZK					IAML		13 52 53.0	
	comp=E,40nm,1.7s							
KIZK					IAML		13 52 58.0	
	comp=N,17nm,0.7s							
AKMS	**Akamas**	**1.15**	**205**		P	**Pg**	**13 52 41.5**	**+0.7**
KKBE	**Karaman, Kazim**	**1.15**	**1**	*i*	P	**Pb**	**13 52 39.5**	**-0.9**
KKBE				*i*	S	**Sb**	**13 52 52.9**	**-2.3**
KKBE					IAML		13 52 56.0	
	comp=E,20nm,0.7s							
KKBE					IAML		13 52 56.0	
	comp=N,17nm,0.5s							
CSS	**Mathiatis**	**1.15**	**163**		PN	**Pb**	**13 52 40.1**	**-0.2**
CSS	**Mathiatis**	**1.15**	**163**		P	**Pg**	**13 52 40.7**	**-0.2**
MVOU	**Mavrovouni**	**1.20**	**151**		P	**Pg**	**13 52 42.0**	**+0.2**
MVOU					AML	AML	13 52 42.8	
	comp=N,0.1nm,0.4s							
MVOU					AML	AML	13 52 42.8	
	comp=N,0.1nm,0.4s							
MVOU					S	**Sb**	**13 52 53.9**	**-2.5**
ASGA	**Asgata**	**1.31**	**168**		P	**Pb**	**13 52 43.0**	**0.0**
SZAC	**Souni**	**1.31**	**181**		P	**Pg**	**13 52 43.8**	**-0.1**
KEPZ	**Antalya-Kepez**	**1.35**	**309**	*i*	P	**Pn**	**13 52 43.7**	**+0.7**
KEPZ				*i*	S	**Sn**	**13 52 59.6**	**-1.1**
KEPZ					IAML		13 53 03.0	
	comp=N,15nm,0.5s							
KEPZ					IAML		13 53 06.0	
	comp=E,19nm,1.3s							
KERG	**Konya-Eregli**	**1.66**	**35**	*i*	P	**Pn**	**13 52 48.1**	**+0.7**
KERG				*i*	S	**Sn**	**13 53 09.5**	**+1.0**
KERG					IAML		13 53 16.0	
	comp=N,17nm,0.2s							
KERG					IAML		13 53 19.0	
	comp=E,18nm,0.3s							
GULE	**Gulek**	**1.93**	**50**	*i*	P	**Pn**	**13 52 52.0**	**+0.9**
GULE				*i*	S	**Sb**	**13 53 18.1**	**+0.6**
GULE					IAML		13 53 25.0	
	comp=N,26nm,0.7s							
GULE					IAML		13 53 31.0	
	comp=E,32nm,1.4s							
KONT	**Konya--Tatoy**	**1.93**	**347**		PN	**Pb**	**13 52 53.4**	**-0.2**
KONT	**Konya--Tatoy**	**1.93**	**347**	*i*	P	**Pb**	**13 52 54.3**	**+0.7**
LADK	**Ladik-KONYA**	**2.17**	**348**		PN	**Pn**	**13 52 56.1**	**+1.6**
CMRD	**Camardi-Nigde**	**2.30**	**46**		PN	**Pn**	**13 52 58.0**	**+1.7**
YVAC	**Isparta, Yalva**	**2.58**	**329**	*i*	P	**Pn**	**13 53 02.1**	**+2.1**

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*IDC **30** 14:24:22.0±0.8, 36°.92N×98°.44W, h0^{km}, mb4.1/4, mb1 4.2/10, mb1mx3.8/52, mbtmp3.9/10, ML3.6/5, MS2.9/3, Ms1 2.9/3, ms1mx2.6/41, Error ellipse: s-maj=11.4km s-min=9.9km az=134.0*

*TUL **30** 14:24:22.1±1.5, 36°.81N±0°.03×98°.36W±0°.05, h4^{km}±6^{km}, ML4.1, mb_Lg4.0/148(NEIC), Mwr3.6/36(NEIC), Error ellipse: s-maj=5.5km s-min=4.3km az=116.0*

*NEIC **30** 14:24:22.1, 36°.81N×98°.36W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.33; M$_{\theta\theta}$3.72; M$_{\phi\phi}$-3.38; M$_{r\theta}$-0.91; M$_{\theta\phi}$-0.72; M$_{\phi r}$0.12; Fault plane solution: M$_0$3.75000×10^{14} NP1:φ$_s$230.12000°, δ81.17000°, λ171.84000°. NP2:φ$_s$321.38000°, δ81.94000°, λ8.92000°. Principal axes: T 3.9828, Plg12.0000°, Azm186.0000°; N -0.5246, Plg78.0000°, Azm3.0000°; P -3.4582, Plg1.0000°, Azm96.0000°;*

*NEIC **30** 14:24:22.6±1.5, 36°.80N±0°.04×98°.34W±0°.04, h7^{km}±6^{km} Error ellipse: s-maj=6.0km s-min=4.5km az=181.0*

*ANF **30** 14:24:24.6±0.6, 36°.81N×98°.32W, h26^{km}±5^{km}, ML4.9/17, Error ellipse: s-maj=2.2km s-min=1.7km az=28.0*

ISC 30 14:24:23.0±0.9, **36°.80N**±0°.02×**98°.31W**±0°.02, **h12**^{km}±7^{km}, **n173,** σ1^s.**34**/160, **mb4.1**/5, **Oklahoma**

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.32**	**61**			**Pg**	**14 24 29.4**	**-0.1**
KAN14					Sg	**Sg**	**14 24 34.6**	**+0.8**
KAN10	**Anthony SW Sta**	**0.36**	**28**			**Pg**	**14 24 29.9**	**-0.4**
GC02	**Grant County #**	**0.37**	**82**			**Pg**	**14 24 30.3**	**0.0**
GC02					Sg	**Sg**	**14 24 36.3**	**+1.1**
CROK	**Carrier**	**0.40**	**138**			**Pg**	**14 24 30.8**	**-0.1**
CROK					Sg	**Sg**	**14 24 37.1**	**+0.9**
KAN08	**Anthony NE Sta**	**0.50**	**33**			**Pg**	**14 24 32.6**	**-0.3**
KAN12	**Harper NE Stat**	**0.56**	**27**			**Pg**	**14 24 33.4**	**-0.4**
KAN01	**Argonia South**	**0.56**	**52**			**Pg**	**14 24 33.9**	**-0.2**
U32A	**Winter Ranch,**	**0.70**	**233**			**Pg**	**14 24 34.9**	**-1.6**
U32A					Sg	**Sg**	**14 24 44.7**	**-1.0**
KAN13	**South Haven SW**	**0.70**	**72**			**Pg**	**14 24 36.4**	**-0.3**
OK029	**Liberty Lake**	**1.22**	**145**			**Pg**	**14 24 45.6**	**-0.8**
BCOK	**Bluff Creek, N**	**1.28**	**153**			**Pn**	**14 24 46.2**	**-0.5**
QUOK	**Quay**	**1.44**	**115**			**Pn**	**14 24 49.5**	**+0.5**
T35A	**Sooner Cattle**	**1.45**	**85**			**Pn**	**14 24 49.6**	**+0.5**
OK025	**Westminster Rd**	**1.45**	**147**		Pn	**Pn**	**14 24 49.5**	**+0.4**
OK031	**S. Brethren Rd**	**1.46**	**125**			**Pn**	**14 24 49.6**	**+0.4**
OK030	**Cody Creek RV**	**1.51**	**125**			**Pn**	**14 24 50.4**	**+0.4**
OKCFA	**Oklahoma City**	**1.55**	**153**			**Pn**	**14 24 50.8**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.56**	**153**			**Pn**	**14 24 51.2**	**+0.5**
R32A	**Long Quarter,**	**1.65**	**349**			**Pn**	**14 24 52.4**	**+0.6**
R32A					IAmb_Lg		14 25 17.3	
	comp=Z,872nm,0.9s							
FNO	**Franklin**	**1.71**	**154**			**Pb**	**14 24 54.3**	**-0.1**
W35A	**Tecumseh**	**2.02**	**144**		Pn	**Pn**	**14 24 57.2**	**+0.3**
WMOK	**Wichita Mounta**	**2.10**	**191**		P	**Pn**	**14 24 58.0**	**0.0**
	baz=9.0,SNR=180							
WMOK					S	**Sn**	**14 25 25.9**	**+1.9**
	baz=9.0							
WMOK	**Wichita Mounta**	**2.10**	**191**			**Pn**	**14 24 58.1**	**+0.1**
WMOK					IAmb_Lg		14 25 34.3	
	comp=Z,356nm,1.1s							
TUL1	**Leonard**	**2.22**	**113**		P	**Pn**	**14 25 00.0**	**+0.4**
	baz=294,SNR=207							
TUL1					Sb	**Sb**	**14 25 32.2**	**+1.6**
	baz=294							
TUL1	**Leonard**	**2.22**	**113**		Pn	**Pn**	**14 25 00.3**	**+0.6**
TUL1					IAmb_Lg		14 25 35.4	
	comp=Z,1µm,0.7s							
X34A	**Smith Ranch, M**	**2.23**	**170**		Pn	**Pn**	**14 25 01.2**	**+1.3**
X34A					IAmb_Lg		14 25 36.0	
	comp=Z,1µm,0.7s							
CBKS	**Cedar Bluff**	**2.30**	**331**		P	**Pn**	**14 25 01.3**	**+0.5**
	baz=151,SNR=69							
CBKS					S	**Sn**	**14 25 30.5**	**+1.3**
	baz=151							
CBKS	**Cedar Bluff**	**2.30**	**331**		Pn	**Pn**	**14 25 01.4**	**+0.5**
CBKS					IAmb_Lg		14 25 35.8	
	comp=Z,686nm,0.7s							
KSU1	**Kansas State U**	**2.66**	**30**		P	**Pn**	**14 25 06.6**	**+0.8**
	baz=212,SNR=58							
KSU1					Sb	**Sb**	**14 25 44.6**	**+1.4**
	baz=212							
KSU1	**Kansas State U**	**2.66**	**30**		Pn	**Pn**	**14 25 06.9**	**+1.1**
KSU1					IAmb_Lg		14 25 49.3	
	comp=Z,425nm,0.8s							
U38A	**Gravette**	**3.18**	**95**			**Pn**	**14 25 14.1**	**+1.2**
U38A					IAmb_Lg		14 26 11.0	
	comp=Z,574nm,0.7s							
X37A	**Clayton**	**3.26**	**132**			**Pn**	**14 25 14.9**	**+1.0**
X37A					IAmb_Lg		14 26 13.1	
	comp=Z,640nm,0.7s							
AMTX	**Amarillo**	**3.34**	**236**		P	**Pn**	**14 25 16.0**	**+0.9**
	baz=53							
AMTX					Sb	**Sb**	**14 26 04.3**	**+1.5**
	baz=53							
AMTX	**Amarillo**	**3.34**	**236**		Pn	**Pn**	**14 25 16.1**	**+1.0**
HHAR	**Hobbs**	**3.56**	**97**			**Pn**	**14 25 19.1**	**+1.0**
HHAR					IAmb_Lg		14 26 18.4	
	comp=Z,495nm,0.9s							
Z35A	**Perchaven, San**	**3.57**	**166**			**Pn**	**14 25 19.3**	**+1.0**
N33A	**J Bar K, Exete**	**3.99**	**9**			**Pn**	**14 25 23.4**	**-0.6**
N33A					IAmb_Lg		14 26 38.0	
	comp=Z,231nm,0.8s							
W39A	**Magazine**	**4.01**	**112**		P	**Pn**	**14 25 25.3**	**+1.0**
	baz=295,SNR=14							
W39A					S	**Sn**	**14 26 12.3**	**+1.2**
	baz=295							
W39A	**Magazine**	**4.01**	**112**			**Pn**	**14 25 25.1**	**+0.9**
W39A					IAmb_Lg		14 26 40.8	
	comp=Z,521nm,0.9s							
KSCO	**Kaye Shedlock’**	**4.06**	**304**		P	**Pn**	**14 25 26.0**	**+0.9**
	baz=122							
KSCO					S	**Sn**	**14 26 12.0**	**-0.7**
	baz=122							
KSCO	**Kaye Shedlock’**	**4.06**	**304**		Pn	**Pn**	**14 25 26.2**	**+1.1**
KSCO					IAmb_Lg		14 26 38.6	
	comp=Z,398nm,0.8s							
S39A	**Bolivar**	**4.08**	**76**			**Pn**	**14 25 26.1**	**+0.9**
ABTX	**Abilene, Hawle**	**4.31**	**195**		P	**Pn**	**14 25 28.4**	**0.0**
	baz=14,SNR=16							
ABTX					S	**Sn**	**14 26 19.2**	**+0.6**
	baz=14							
ABTX	**Abilene, Hawle**	**4.31**	**195**		Pn	**Pn**	**14 25 28.4**	**0.0**
ABTX					IAmb_Lg		14 26 40.9	
	comp=Z,205nm,1.0s							
U40A	**Yellville**	**4.42**	**94**		P	**Pn**	**14 25 30.3**	**+0.5**
	baz=278,SNR=42							
U40A					S	**Sn**	**14 26 21.6**	**+0.4**
	baz=278							
U40A	**Yellville**	**4.42**	**94**		Pn	**Pn**	**14 25 30.6**	**+0.7**
U40A					IAmb_Lg		14 26 50.1	
	comp=Z,268nm,0.7s							
MIAR	**Mount Ida**	**4.46**	**119**		P	**Pn**	**14 25 31.3**	**+0.7**
	baz=302,SNR=18							
MIAR					S	**Sn**	**14 26 23.7**	**+1.3**
	baz=302							
MIAR	**Mount Ida**	**4.46**	**119**			**Pn**	**14 25 31.6**	**+1.1**
MIAR					IAmb_Lg		14 26 47.0	
	comp=Z,326nm,0.9s							
Z38A	**Mt. Pleasant**	**4.47**	**141**		Pn	**Pn**	**14 25 30.3**	**-0.2**
Z38A					IAmb_Lg		14 26 49.3	
	comp=Z,361nm,0.7s							
N35A	**Tabor**	**4.56**	**26**			**Pn**	**14 25 31.6**	**-0.2**
BGNE	**Belgrade**	**4.60**	**2**		P	**Pn**	**14 25 32.4**	**-0.1**
	baz=182,SNR=18							
BGNE					S	**Sn**	**14 26 27.6**	**+1.8**
	baz=182							
BGNE	**Belgrade**	**4.60**	**2**		Pn	**Pn**	**14 25 32.3**	**-0.1**
BGNE					IAmb_Lg		14 26 59.2	
	comp=Z,364nm,0.7s							
MSTX	**Muleshoe**	**4.61**	**234**		P	**Pn**	**14 25 32.5**	**-0.1**
	baz=50,SNR=8.4							
MSTX					Sb	**Sb**	**14 26 43.4**	**+4.0**
	baz=50							
MSTX	**Muleshoe**	**4.61**	**234**		Pn	**Pn**	**14 25 33.0**	**+0.4**
MSTX					IAmb_Lg		14 26 52.8	
	comp=Z,209nm,0.7s							
P38A	**Dawn**	**4.70**	**52**		IAmb_Lg		14 26 51.7	
	comp=Z,296nm,0.8s							
WHTX	**Lake Whitney,**	**4.85**	**171**		P	**Pn**	**14 25 36.3**	**+0.5**
	baz=351,SNR=7.2							
WHTX					Sb	**Sb**	**14 26 51.9**	**+5.6**
	baz=351							
WHTX	**Lake Whitney,**	**4.85**	**171**		Pn	**Pn**	**14 25 36.6**	**+0.8**
MGMO	**Mountain Grove**	**4.85**	**84**			**Pn**	**14 25 36.9**	**+1.1**
MGMO					IAmb_Lg		14 26 56.7	
	comp=Z,327nm,0.7s							
T25A	**Trinidad**	**4.89**	**276**		P	**Pn**	**14 25 36.2**	**-0.4**
	baz=92,SNR=7.6							
T25A					Sb	**Sb**	**14 26 51.7**	**+4.0**
	baz=92							
X40A	**Basin Creek Fa**	**5.02**	**116**		P	**Pn**	**14 25 39.1**	**+0.9**
	baz=299,SNR=46							
X40A					S	**Sn**	**14 26 37.5**	**+1.3**
	baz=299							
X40A	**Basin Creek Fa**	**5.02**	**116**			**Pn**	**14 25 38.8**	**+0.6**
X40A					IAmb_Lg		14 27 09.0	
	comp=Z,237nm,0.7s							
R40A	**Maddies Statio**	**5.03**	**71**		Pn	**Pn**	**14 25 39.2**	**+0.9**
R40A					IAmb_Lg		14 27 10.8	
	comp=Z,364nm,1.0s							
OGNE	**Ogallala**	**5.05**	**326**		P	**Pn**	**14 25 39.9**	**+1.2**
	baz=144,SNR=21							
OGNE					Sb	**Sb**	**14 26 56.9**	**+4.7**
	baz=144							
OGNE	**Ogallala**	**5.05**	**326**			**Pn**	**14 25 39.8**	**+1.2**
FCAR	**Ozark Folk Cen**	**5.08**	**98**			**Pn**	**14 25 39.6**	**+0.7**
FCAR					IAmb_Lg		14 27 08.6	
	comp=Z,192nm,0.8s							
WHAR	**Wooly Hollow**	**5.11**	**105**		IAmb_Lg		14 27 15.9	
	comp=Z,277nm,0.7s							
W41B	**Gary Mavity, V**	**5.18**	**106**		P	**Pn**	**14 25 40.8**	**+0.5**
	baz=290,SNR=8.0							
W41B					S	**Sn**	**14 26 39.5**	**-0.5**
	baz=290							
237A	**Washetta, Mont**	**5.22**	**156**			**Pn**	**14 25 40.7**	**-0.1**
237A					IAmb_Lg		14 27 20.1	
	comp=Z,237nm,0.8s							
UALR	**University of**	**5.26**	**111**			**Pn**	**14 25 42.8**	**+1.4**
UALR					IAmb_Lg		14 27 12.1	
	comp=Z,260nm,0.8s							
WLAR	**White Oak Lake**	**5.27**	**125**		IAmb_Lg		14 27 23.3	
	comp=Z,265nm,1.0s							
L34A	**Svendsen Farm,**	**5.37**	**16**		Pn	**Pn**	**14 25 42.1**	**-0.9**
L34A					IAmb_Lg		14 27 27.4	
	comp=Z,320nm,0.7s							
N38A	**Joes South For**	**5.62**	**43**			**Pn**	**14 25 46.7**	**+0.3**
P40A	**Paris**	**5.64**	**59**		Pn	**Pn**	**14 25 47.5**	**+0.9**
Z41A	**Richland Creek**	**5.74**	**126**		S	**Sn**	**14 26 53.4**	**-0.4**
	baz=310							
CCM	**Cathedral Cave**	**5.76**	**75**		P	**Pn**	**14 25 49.2**	**+0.8**
	baz=260							
CCM					S	**Sn**	**14 26 54.3**	**-0.1**
	baz=260							
CCM	**Cathedral Cave**	**5.76**	**75**			**Pn**	**14 25 49.5**	**+1.2**
CCM					IAmb_Lg		14 27 30.2	
	comp=Z,329nm,0.7s							
T42A	**Van Buren**	**5.79**	**86**			**Pn**	**14 25 49.2**	**+0.5**
T42A					IAmb_Lg		14 27 39.8	
	comp=Z,280nm,1.0s							
SDCO	**Great Sand Dun**	**5.81**	**281**		P	**Pn**	**14 25 49.8**	**+0.6**
	baz=97,SNR=13							
SDCO	**Great Sand Dun**	**5.81**	**281**			**Pn**	**14 25 50.0**	**+0.8**
SDCO					IAmb_Lg		14 27 37.1	
	comp=Z,132nm,1.2s							
LCAR	**Lake Charles**	**5.82**	**95**			**Pn**	**14 25 50.1**	**+1.0**
LCAR					IAmb_Lg		14 27 30.7	
	comp=Z,290nm,1.2s							
K31A	**O'Neill**	**5.82**	**357**			**Pn**	**14 25 49.5**	**+0.3**
NATX	**Nacogdoches**	**5.87**	**148**		IAmb_Lg		14 27 44.3	
	comp=Z,158nm,0.9s							
435B	**Jarrell**	**6.03**	**174**		IAmb_Lg		14 27 50.6	
	comp=Z,268nm,0.9s							
CCAR	**Cane Creek**	**6.07**	**116**		IAmb_Lg		14 27 51.5	
	comp=Z,274nm,0.9s							
FVM	**French Village**	**6.39**	**77**		IAmb_Lg		14 27 43.4	
	comp=Z,325nm,1.0s							
JCT	**Junction City**	**6.43**	**192**		P	**Pn**	**14 25 57.5**	**0.0**
	baz=10							
JCT	**Junction City**	**6.43**	**192**			**Pn**	**14 25 57.2**	**-0.4**
JCT					IAmb_Lg		14 27 48.5	
	comp=Z,315nm,1.1s							
SCIA	**State Center**	**6.45**	**36**		P	**Pn**	**14 25 58.5**	**+0.7**
	baz=220							
SCIA	**State Center**	**6.45**	**36**			**Pn**	**14 25 58.3**	**+0.6**
SCIA					IAmb_Lg		14 27 57.4	
	comp=Z,300nm,0.8s							
ISCO	**Idaho Springs**	**6.47**	**300**		P	**Pn**	**14 25 58.1**	**-0.3**
	baz=116							
ISCO	**Idaho Springs**	**6.47**	**300**			**Pn**	**14 25 57.9**	**-0.6**
ISCO					IAmb_Lg		14 27 49.7	
	comp=Z,175nm,1.1s							
SLM	**Saint Louis**	**6.66**	**72**		IAmb_Lg		14 27 57.1	
	comp=Z,269nm,0.7s							
ANMO	**Albuquerque**	**6.87**	**257**		Pn	**Pn**	**14 26 03.6**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=83,slow=16,SNR=11							
ANMO					Pg	**Pb**	**14 26 24.4**	**+2.0**
	comp=Z,1.7nm,0.3s,baz=76,slow=14,SNR=9.9							
ANMO					Lg	Lg	14 27 55.7	
	comp=Z,13nm,0.3s,baz=341,slow=22,SNR=8.6							
ANMO					LR	LR	14 29 02.8	
	comp=Z,101nm,20.0s,baz=98,slow=41							
ANMO	**Albuquerque**	**6.87**	**257**		P	**Pn**	**14 26 03.8**	**+0.1**
	baz=72							
ANMO	**Albuquerque**	**6.87**	**257**			**Pn**	**14 26 04.0**	**+0.3**
ANMO					IAmb_Lg		14 28 03.3	
	comp=Z,88nm,0.9s							
PVMO	**Portageville**	**6.94**	**91**		IAmb_Lg		14 28 22.4	
	comp=Z,312nm,0.9s							
143A	**Socs Landing,**	**7.00**	**124**		IAmb_Lg		14 28 12.0	
	comp=Z,122nm,0.9s							
N41A	**Harden Midland**	**7.01**	**54**			**Pn**	**14 26 05.5**	**0.0**
ECSD	**EROS Data Cent**	**7.04**	**10**		P	**Pn**	**14 26 04.4**	**-1.6**
	baz=192,SNR=18							
ECSD	**EROS Data Cent**	**7.04**	**10**			**Pn**	**14 26 04.5**	**-1.5**
PHWY	**Pilot Hill**	**7.15**	**311**			**Pn**	**14 26 06.7**	**-0.9**
PHWY					IAmb_Lg		14 28 14.8	
	comp=Z,161nm,0.8s							
N23A	**Red Feather La**	**7.22**	**307**		P	**Pn**	**14 26 09.4**	**+0.8**
	baz=122,SNR=7.6							
K38A	**Parkersburg**	**7.23**	**34**			**Pn**	**14 26 06.8**	**-1.7**
BNM	**Barren Site**	**7.28**	**251**			**Pn**	**14 26 09.5**	**+0.1**
HALT	**Halls**	**7.29**	**94**		IAmb_Lg		14 28 16.9	
	comp=Z,265nm,1.0s							
SIUC	**Southern Illin**	**7.31**	**80**		IAmb_Lg		14 28 21.1	
	comp=Z,281nm,0.9s							
P43A	**Skaggs, Pawnee**	**7.48**	**65**			**Pn**	**14 26 12.0**	**+0.1**
Y22D	**IRIS PASSCAL I**	**7.53**	**251**		IAmb_Lg		14 28 30.1	
	comp=Z,251nm,1.0s							
W45A	**Hickory Valley**	**7.58**	**100**		IAmb_Lg		14 28 23.5	
	comp=Z,204nm,0.8s							
OXF	**Oxford**	**7.60**	**105**		P	**Pn**	**14 26 13.1**	**-0.5**
	baz=290,SNR=24							
OXF	**Oxford**	**7.60**	**105**			**Pn**	**14 26 13.0**	**-0.5**
OXF					IAmb_Lg		14 28 44.8	
	comp=Z,128nm,0.8s							
SUSD	**Miller**	**7.65**	**357**		P	**Pn**	**14 26 14.2**	**-0.1**
	baz=176							
SUSD	**Miller**	**7.65**	**357**		IAmb_Lg		14 28 30.0	
	comp=Z,126nm,0.9s							
Y45A	**Yeager Farm, C**	**7.74**	**110**		IAmb_Lg		14 28 42.8	
	comp=Z,149nm,0.8s							
MNTX	**Cornudas Mount**	**7.75**	**231**		P	**Pn**	**14 26 15.5**	**-0.3**
	baz=47,SNR=13							
MNTX	**Cornudas Mount**	**7.75**	**231**			**Pn**	**14 26 15.8**	**+0.1**
MNTX					IAmb_Lg		14 28 37.2	
	comp=Z,176nm,1.1s							
735A	**Kenedy**	**7.94**	**177**		IAmb_Lg		14 28 54.3	
	comp=Z,118nm,0.9s							
HDIL	**Hopedale**	**7.99**	**59**		P	**Pn**	**14 26 19.0**	**+0.1**
	baz=245							
I37A	**Lemond, Waseca**	**8.12**	**26**		IAmb_Lg		14 28 48.5	
	comp=Z,117nm,0.8s							
MVCO	**Mesa Verde**	**8.16**	**276**		IAmb_Lg		14 28 44.9	
	comp=Z,70nm,0.7s							
RWWY	**Rawlins**	**8.45**	**308**		IAmb_Lg		14 28 55.8	
	comp=Z,131nm,1.0s							
O20A	**White River Ci**	**8.47**	**296**		IAmb_Lg		14 29 12.8	
	comp=Z,92nm,1.2s							
WVT	**Waverly**	**8.47**	**91**		P	**Pn**	**14 26 25.3**	**-0.2**
	baz=278							
WVT	**Waverly**	**8.47**	**91**		IAmb_Lg		14 29 07.0	
	comp=Z,60nm,0.9s							
PLAL	**Pickwick Lake**	**8.50**	**99**		IAmb_Lg		14 28 59.0	
	comp=Z,92nm,1.1s							
RSSD	**Black Hills**	**8.51**	**331**		P	**Pn**	**14 26 26.5**	**+0.3**
	baz=148							
RSSD	**Black Hills**	**8.51**	**331**			**Pn**	**14 26 27.3**	**+1.0**
RSSD					IAmb_Lg		14 28 59.8	
	comp=Z,119nm,0.8s							
PV11	**David Mesa, Pa**	**8.52**	**283**		IAmb_Lg		14 29 00.0	
	comp=Z,105nm,1.1s							
PV16	**Nyswonger Mesa**	**8.55**	**283**		IAmb_Lg		14 29 10.7	
	comp=Z,65nm,1.1s							
USIN	**University of**	**8.55**	**79**		IAmb_Lg		14 28 54.8	
	comp=Z,210nm,0.9s							
K22A	**Casper**	**8.61**	**315**		P	**Pn**	**14 26 27.0**	**-0.5**
	baz=130							
TX31	**Lajitas Ar. Si**	**8.70**	**213**			**Pn**	**14 26 28.9**	**+0.1**
TX32	**Lajitas Array**	**8.70**	**213**			**Pn**	**14 26 28.7**	**-0.1**
TXAR	**Lajitas Array**	**8.70**	**213**		Pn	**Pn**	**14 26 29.0**	**+0.2**
	comp=Z,3.0nm,0.3s,baz=35,slow=11,SNR=40							
TXAR					Pg	Pg	14 26 57.8	-12
	comp=Z,2.5nm,0.3s,baz=56,slow=12,SNR=6.1							
TXAR					Lg	Lg	14 28 51.0	
	comp=Z,2.3nm,0.3s,baz=31,slow=27,SNR=3.6							
TXAR	**Lajitas Array**	**8.70**	**213**			**Pn**	**14 26 29.5**	**+0.8**
JFWS	**Jewell Farm**	**8.70**	**43**		P	**Pn**	**14 26 27.8**	**-0.8**
	baz=228,SNR=6.3							
JFWS	**Jewell Farm**	**8.70**	**43**			**Pn**	**14 26 27.4**	**-1.2**
JFWS					IAmb_Lg		14 29 00.4	
	comp=Z,202nm,0.8s							
121A	**Cookes Peak, D**	**8.89**	**244**		IAmb_Lg		14 29 15.3	
	comp=Z,89nm,1.2s							
T47A	**Sharon Grove**	**8.98**	**85**		IAmb_Lg		14 29 19.2	
	comp=Z,151nm,1.1s							
F33A	**5 Mile Ranch,**	**9.16**	**9**			**Pn**	**14 26 32.2**	**-2.7**
F33A					IAmb_Lg		14 29 19.3	
	comp=Z,67nm,0.9s							
I40A	**Norwalk**	**9.20**	**37**			**Pn**	**14 26 35.1**	**-0.3**
I40A					IAmb_Lg		14 29 20.3	
	comp=Z,101nm,0.7s							
X48A	**Hartselle**	**9.47**	**101**		IAmb_Lg		14 29 28.5	
	comp=Z,76nm,1.0s							
SFIN	**Lafayette**	**9.48**	**64**		P	**Pn**	**14 26 40.2**	**+0.9**
	baz=252							
SFIN	**Lafayette**	**9.48**	**64**		IAmb_Lg		14 29 25.3	
	comp=Z,202nm,0.8s							
WCI	**Wyandotte Cave**	**9.65**	**78**		IAmb_Lg		14 29 33.9	
	comp=Z,146nm,0.7s							
CLTN	**Cedars of Leba**	**9.68**	**91**		IAmb_Lg		14 29 33.5	
	comp=Z,79nm,0.9s							
F36A	**Milaca**	**9.74**	**20**			**Pn**	**14 26 40.2**	**-2.7**
F36A					IAmb_Lg		14 29 45.2	
	comp=Z,54nm,0.9s							
E28A	**Huff**	**9.93**	**350**		IAmb_Lg		14 29 41.2	
	comp=Z,164nm,1.1s							
G40A	**Rib Lake**	**10.44**	**33**			**Pn**	**14 26 51.8**	**-0.6**
BW06	**Boulder Array**	**10.50**	**308**		P	**Pn**	**14 26 52.7**	**-0.9**
	baz=121							
PDAR	**Pinedale Array**	**10.50**	**308**		Pn	**Pn**	**14 26 52.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=125,slow=14,SNR=10							
PDAR					Lg	Lg	14 29 46.4	
	comp=Z,1.5nm,0.3s,baz=106,slow=23,SNR=2.7							
PDAR	**Pinedale Array**	**10.50**	**308**			**Pn**	**14 26 50.8**	**-2.8**
LAO	**LASA Array**	**11.50**	**332**		P	**Pn**	**14 27 06.4**	**-0.6**
	baz=147							
COWI	**Conover**	**11.55**	**34**			**Pn**	**14 27 06.1**	**-1.7**
TKL	**Tuckaleechee C**	**11.80**	**91**		Pn	**Pn**	**14 27 11.0**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=232,slow=9.1,SNR=18							
TKL					Lg	Lg	14 30 31.0	
	comp=Z,2.3nm,0.3s,baz=9.5,slow=22,SNR=6.9							
TKL					LR	LR	14 32 14.6	
	comp=Z,29nm,18.0s,baz=313,slow=40							
B35A	**Bob, Littlefor**	**12.03**	**15**			**Pn**	**14 27 10.5**	**-3.8**
EYMN	**Ely**	**12.22**	**22**		P	**Pn**	**14 27 12.8**	**-4.0**
	baz=207,SNR=5.9							
EYMN	**Ely**	**12.22**	**22**			**Pn**	**14 27 13.1**	**-3.7**
DGMT	**Dagmar**	**12.43**	**342**		P	**Pn**	**14 27 17.4**	**-2.4**
	baz=158							
E43A	**Lone Tree Farm**	**12.76**	**38**		Pn	**Pn**	**14 27 21.3**	**-3.0**
ULM	**Lac du Bonnet**	**13.56**	**7**		Pn	Pn	14 27 29.1	-5.9
	comp=Z,0.9nm,0.3s,baz=177,slow=9.3,SNR=8.2							
ULM					Sn	Sn	14 29 54.1	-11
	comp=Z,0.7nm,0.3s,baz=123,slow=5.2,SNR=5.3							
ULM					Lg	Lg	14 31 17.2	
	comp=Z,0.5nm,0.3s,baz=194,slow=18,SNR=2.0							
ULM	**Lac du Bonnet**	**13.56**	**7**		Pn	**Pn**	**14 27 31.3**	**-3.7**
S54A	**Dingess, Beckl**	**13.57**	**81**		P	**Pn**	**14 27 34.4**	**-1.1**
	baz=271							
EGMT	**Eagleton**	**14.02**	**327**		Pn	**Pn**	**14 27 39.6**	**-2.0**
NVAR	**Mina Array Bea**	**15.93**	**282**		Pn	**Pn**	**14 28 05.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=94,slow=13,SNR=2.5							
SADO	**Sadowa**	**16.53**	**55**		Lg	Lg	14 32 58.9	
	comp=Z,0.6nm,0.3s,baz=177,slow=14,SNR=6.1							

YBH	Yreka Blue Hor	19.50	292	LR	LR	14 36 32.2	
	comp=Z,64nm,19.6s,baz=38,slow=38						
FCC	Fort Churchill	22.15	6	P	P	14 29 18.1	-0.3
YKA	Yellowknife Ar	27.63	344	P	P	14 30 09.9	-0.2
	comp=Z,1.5nm,0.7s,baz=145,slow=10,SNR=17						
ILAR	Eielson Array	39.96	330	P	P	14 31 58.1	+1.2
	comp=Z,1.1nm,0.8s,baz=107,slow=7.2,SNR=15						
ARCES	ARCESS Array B	66.34	19	P	P	14 35 10.4	-0.7
	comp=Z,4.2nm,0.9s,baz=28,slow=5.5,SNR=3.8						
ZALV	Zalesovo Beam	89.58	358	P	P	14 37 20.5	+0.3
	comp=Z,0.5nm,0.4s,baz=351,slow=7.9,SNR=4.2						
HHC	Hu-ho-hao-te	98.01	338	eP	P	14 37 59.0	-0.4
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,69nm,7.6s						

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*OMAN **30** 14:32:42.7±0.5, 27°.94N×56°.03E, h8^{km}, ml3.7/8, Error ellipse: s-maj=14.2km s-min=9.8km az=29.0*
*IDC **30** 14:32:46.6±1.2, 27°.44N×56°.05E, h0^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.4/47, mbtmp3.6/8, ML3.3/1, Error ellipse: s-maj=24.6km s-min=23.2km az=33.0*
*TEH **30** 14:32:47.9, 27°.45N×56°.19E, h8^{km}, ML3.6*
*THR **30** 14:32:47.1±0.4, 27°.33N×56°.16E, h13^{km}±1^{km}, ML3.6*
*DSN **30** 14:32:51.2±1.6, 27°.39N×56°.04E, h10^{km}, ML3.5/9, Error ellipse: s-maj=32.3km s-min=11.6km az=73.0*
ISC 30 14:32:48.3±0.8**, 27°.47N**±0°.03×**56°.17E**±0°.04**, h8**^{km}±5^{km}**, n73, σ1^{s}.61**/83**, mb3.5**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.07	175	ePg	Pg	14 32 50.1	-0.3
BNDS				eSg	Sg	14 32 52.1	+0.3
BNDS				IAML		14 32 54.0	
	comp=N,29µm,0.5s						
BNDS	Bandar-Abbas	0.07	175	ePg	Pg	14 32 50.1	-0.3
GENO	Geno	0.07	174	ePg	Pg	14 32 50.0	-0.4
SHME	Shamm	1.41	181	eP	Pg	14 33 15.0	-0.5
	SNR=21						
SHME				S	Sg	14 33 34.9	+1.2
SHME	Shamm	1.41	181	ePn	Pg	14 33 14.9	-0.5
SHME	Shamm	1.41	181	P	Pg	14 33 15.2	-0.2
	SNR=8.6						
SHME				S	Sg	14 33 35.8	+2.1
KHNJ	Kahnooj	1.45	70	ePg	Pb	14 33 14.9	-0.6
BANOM	Banah	1.54	175	eP	Pg	14 33 17.1	-0.8
	SNR=60						
BANOM				S	Sg	14 33 38.1	+0.2
BANOM	Banah	1.54	175	ePn	Pg	14 33 17.3	-0.6
BANOM	Banah	1.54	175	P	Pg	14 33 17.4	-0.6
	SNR=60						
BANOM				S	Sg	14 33 39.6	+1.6
LAR1	LAR	1.60	278	ePg	Pg	14 33 19.0	0.0
LAR1				e		14 34 03.5	
	comp=Z,99nm,0.4s						
MASF	Masafi	2.09	180	P	Pb	14 33 25.4	-1.1
	SNR=9.9						
MASF				S	Sg	14 33 56.2	+0.8
MSFE	Esma-Masafi	2.10	180	P	Pb	14 33 25.0	-1.6
MSFE	Esma-Masafi	2.10	180	ePn	Pb	14 33 25.2	-1.4
MDH	Madha	2.16	177	P	Pb	14 33 28.0	+0.3
MDH	Madha	2.16	177	ePn	Pb	14 33 25.6	-2.1
NGRK	Negar Kerman	2.23	13	ePn	Pn	14 33 27.0	+1.2
NGRK				e		14 34 01.7	
	comp=Z,99nm,0.3s						
NAZ	Nazwa, Dubai	2.51	190	ePn	Pn	14 33 29.3	-0.1
NAZ	Nazwa, Dubai	2.51	190	P	Pn	14 33 29.1	-0.4
JHRM	Jahrom	2.51	295	ePn	Pn	14 33 31.5	+2.0
UOSS	Minazif	2.51	179	eP	Pn	14 33 29.6	+0.2
	SNR=6.1						
UOSS	Minazif	2.51	179	ePn	Pn	14 33 30.7	+1.2
UOSS	Minazif	2.51	179	P	Pn	14 33 30.6	+1.2
UOSS				S	Sg	14 34 12.6	+3.5
KRBR	Kerman	2.56	12	ePn	Pb	14 33 32.7	-2.0
KRBR				IAML		14 34 16.5	
	comp=E,172nm,0.7s						
KRBR	Kerman	2.56	12	ePn	Pb	14 33 32.7	-2.0
TVBK	TV Kerman	2.56	12	ePn	Pb	14 33 32.8	-2.0
TVBK				e		14 33 42.1	
	comp=Z,99nm,0.5s						
KBAM	BAM	2.61	50	ePn	Pb	14 33 32.9	-2.6
KBAM				e		14 34 16.7	
	comp=Z,99nm,0.6s						
HATD	Hatta, Dubai	2.63	181	ePn	Pb	14 33 32.8	-2.9
HATD	Hatta, Dubai	2.63	181	P	Pn	14 33 32.6	+1.5
HATD				S	Sg	14 34 12.4	-0.4
CHMN	Cheshme madani	2.67	27	ePn	Pn	14 33 34.0	+2.0
CHMN				e		14 34 12.4	
	comp=Z,99nm,0.5s						
FAQ	Al Faqa, Dubai	2.76	191	eP	Pb	14 33 35.0	-2.9
	SNR=6.4						
FAQ	Al Faqa, Dubai	2.76	191	ePn	Pn	14 33 34.2	+1.4
FAQ	Al Faqa, Dubai	2.76	191	P	Pn	14 33 34.6	+1.8
	SNR=6.4						
ASHO	Ashiyiah	2.77	182	eP	Pn	14 33 34.9	+1.9
	SNR=8.6						
ASHO	Ashiyiah	2.77	182	ePn	Pn	14 33 35.0	+1.9
ASHO	Ashiyiah	2.77	182	P	Pn	14 33 34.9	+1.9
	SNR=8.6						
ASHO				S	Sg	14 34 19.6	+2.2
KHGB	Koh Gabri	2.91	5	ePn	Pn	14 33 37.6	+2.5
KHGB				e		14 34 19.3	
	comp=Z,99nm,0.3s						
ASUD	Al Ashush, Dub	2.93	195	P	Pn	14 33 37.2	+2.1
ASUD	Al Ashush, Dub	2.93	195	ePn	Pn	14 33 37.0	+1.9
SOHO	SOHO	3.34	174	P	Pn	14 33 43.1	+2.4
SOHO	SOHO	3.34	174	ePn	Pn	14 33 41.7	+0.9
ALNE	Al Ain	3.42	186	ePn	Pn	14 33 42.1	+0.2
ARQ	Araqi	4.13	175	P	Pn	14 33 52.7	+1.1
IMEH	Mehriz	4.14	341	ePn	Pn	14 33 53.7	+1.7
WSAR	Wadi Sarin	4.76	152	Pn	Pn	14 34 00.9	+0.4
	comp=Z,1.2nm,0.3s,baz=357,slow=7.3,SNR=30						
WSAR				Sn	Sn	14 34 55.5	-0.4
	comp=Z,1.5nm,0.3s,baz=27,slow=23,SNR=6.2						
UMZA	Um Al Zommool	4.82	191	ePn	Pn	14 34 02.2	+1.0
UMZA	Um Al Zommool	4.82	191	P	Pn	14 34 01.9	+0.7
YZKH	Yazd	5.09	345	ePn	Pn	14 34 07.5	+2.6
YZKH	Yazd	5.09	345	ePn	Pn	14 34 07.6	+2.6
BSRN	Basiran	5.17	29	ePn	Pn	14 34 08.0	+1.9
BSRN	Basiran	5.17	29	ePn	Pn	14 34 08.0	+1.9
NHDN	Nehbandan	5.17	40	ePn	Pn	14 34 08.3	+2.1
IRAM	Ramesheh	5.44	324	ePn	Pn	14 34 12.0	+2.1
IKOO	Kooshah	5.52	26	ePn	Pn	14 34 13.1	+2.1
TPRV	Parvadeh(Tabas	5.56	5	ePn	Pn	14 34 12.9	+1.5
ITEG	Tejag	5.86	22	ePn	Pn	14 34 17.2	+1.6
NASN	Na'in	6.06	332	ePn	Pn	14 34 20.5	+2.0
NASN	Na'in	6.06	332	ePn	Pn	14 34 20.5	+2.0
IGAR	Gharneh	6.08	325	ePn	Pn	14 34 20.5	+1.8
IZEF	Zefreh	6.35	329	ePn	Pn	14 34 23.4	+1.0
TNSJ	Nastanj	6.49	3	ePn	Pn	14 34 27.1	+2.9
IPIR	Pirpir	6.92	320	ePn	Pn	14 34 32.0	+1.7
IKLH	Kolahrood	7.05	327	ePn	Pn	14 34 33.6	+1.6
KBD	Kabd	7.66	285	eP		14 34 38.5	
RDF	Al-Radifah	7.74	283	eP		14 34 39.6	
RST	Umm Al-Ruwaisa	8.32	286	eP		14 34 47.6	
DOK	Doka	9.01	192	P	Pn	14 34 59.6	+1.0
SHAO	Shalim	9.41	183	P	Pn	14 35 04.4	+0.1
	SNR=6.1						
WHFO	Wadi Hawf	9.76	194	P	Pn	14 35 09.6	+0.5
	SNR=7.5						
AAK	Ala-Archa	21.24	40	P	P	14 37 35.4	+0.5
	comp=Z,0.8nm,0.6s,baz=339,slow=4.5,SNR=4.3						
BRTR	Keskin Array B	22.32	309	P	P	14 37 46.8	+0.2
	comp=Z,0.9nm,0.7s,baz=125,slow=11,SNR=4.6						
AKTO	Aktyubinsk	22.98	3	P	P	14 37 53.9	+0.6
	comp=Z,1.2nm,0.8s,baz=180,slow=7.1,SNR=2.5						
MKAR	Makanchi Array	28.18	40	P	P	14 38 41.7	+0.5
	comp=Z,0.3nm,0.6s,baz=222,slow=7.9,SNR=4.5						
FINES	FINESS Array B	39.48	338	P	P	14 40 16.7	-2.3
	comp=Z,2.2nm,0.9s,baz=156,slow=11,SNR=2.8						
SONM	Songino Array	43.78	48	P	P	14 40 54.9	+0.4
	comp=Z,0.6nm,0.7s,baz=256,slow=4.4,SNR=4.7						
TORD	Torodi Ar. Bea	52.65	266	P	P	14 42 02.0	-1.3
	comp=Z,0.8nm,0.5s,baz=67,slow=7.2,SNR=6.2						

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*SNET **30** 14:46:50.8±1.4, 13°.49N×90°.01W, h54^{km}±14^{km}, ML3.4*
*GCG **30** 14:46:52.0±0.7, 13°.40N×90°.29W, h24^{km}±4^{km}, MD3.6*
ISC 30 14:46:48.3±2.0**, 13°.29N**±0°.09×**90°.08W**±0°.05**, h18**^{km}±5^{km}**, n19, σ0^{s}.57**/30**, 3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.69	39	⇓iP	Pn	14 47 03.0	-0.5
CEVE				eS	Sn	14 47 13.5	-0.4
CEVE				IAML		14 47 15.9	
	comp=Z,3µm,0.2s						
SBLS	San Blas	0.70	39	⇓eP	Pb	14 47 03.1	+0.9
SBLS				eS	Sb	14 47 12.4	+0.8
JAYA	Jayaque - finc	0.71	59	eP	Pb	14 47 02.6	+0.4
JAYA				eS	Sn	14 47 13.7	-0.5
JAYA				IAML		14 47 17.5	
	comp=Z,2µm,0.2s						
RTR	El Retiro	0.74	34	eP	Pb	14 47 03.4	+0.7
SNJE	San Jose	0.74	38	⇓eP	Pb	14 47 03.5	+0.7
CEDA	San Andres	0.84	52	eP	Pg	14 47 04.8	+0.1
CEDA				eS	Sb	14 47 15.9	+0.6
CEDA				IAML		14 47 19.8	
	comp=Z,2µm,0.2s						
PMON	Piamonte	0.85	60	eP	Pg	14 47 04.9	-0.1
PMON				eS	Sb	14 47 15.9	+0.1
BOQS	Boqueron	0.89	60	eP	Pg	14 47 05.6	-0.1
BOQS				eS	Sg	14 47 17.9	+0.3
TACO	Tacachico	0.98	46	eP	Pb	14 47 06.4	-0.3
LFRS	El Faro	1.04	71	eP	Pb	14 47 07.6	-0.2
LFRS				eS	Sb	14 47 20.2	-1.0
LBRS	Las Brisas	1.10	66	eP	Pb	14 47 08.9	+0.1
LBRS				eS	Sb	14 47 22.9	0.0
COEG	Centro de Oper	1.21	74	eP	Pn	14 47 10.8	+0.4
COEG				IAML		14 47 32.9	
	comp=Z,426nm,0.2s						
PCG	Pacaya	1.22	335	eP	Pb	14 47 11.5	+0.6
PCG				eS	Sb	14 47 26.7	+0.3
MTO3	Montecristo	1.31	32	eP	Pn	14 47 10.7	-1.2
NBG	Las Nubes	1.32	349	eP	Pb	14 47 13.3	+0.6
NBG				eS	Sg	14 47 31.1	-0.1
FUG	Fuego 3	1.37	327	eP	Pb	14 47 13.8	+0.2
FUG				eS	Sn	14 47 29.8	-0.8
COEB	Comit de Eme	1.52	82	IAML		14 47 36.4	
	comp=Z,277nm,0.2s						
TECA	Tecapa	1.54	82	eP	Pb	14 47 16.4	-0.1
TECA				eS	Sn	14 47 35.3	+0.4
LCND	La Caada	2.13	89	eP	Pn	14 47 23.5	+0.5
LCND				IAML		14 47 52.8	
	comp=Z,190nm,0.2s						

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*IDC **30** 14:46:58.5±1.5, 36°.24N×27°.73E, h75^{km}±22^{km}, mb3.1/2, mb1 3.5/7, mb1mx3.2/33, mbtmp3.7/7, Error ellipse: s-maj=30.4km s-min=12.7km az=163.0*
*ISK **30** 14:46:58.3, 36°.46N×27°.66E, h86^{km}, ML3.3/22*
*ATH **30** 14:46:58.8, 36°.44N×27°.39E, h57^{km}±12^{km}, ML3.3/4, Error ellipse: s-maj=12.7km s-min=1.6km az=117.0*
*HLW **30** 14:46:59.1, 36°.26N×28°.15E, h10^{km}±12^{km}, Md3.8*
*THE **30** 14:46:59.9, 36°.44N×27°.72E, h91^{km}±3^{km}, ML3.5/5, Error ellipse: s-maj=3.1km s-min=0.9km az=71.0*
*DDA **30** 14:47:00.3, 36°.53N×27°.71E, h75^{km}, ML3.3*
*NIC **30** 14:47:00.6±0.0, 36°.11N×27°.93E, h87^{km}±1^{km}, Ml4.6/4*
ISC 30 14:46:59.0±0.8**, 36°.37N**±0°.03×**27°.73E**±0°.03**, h90**^{km}±5^{km}**, n92, σ1^{s}.38**/131**, 3C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.36	116	P	Pn	14 47 13.2	+0.6
ARG				S	Sn	14 47 23.1	+0.2
ARG				AML	AML	14 47 23.7	
	comp=E,43232µm,0.3s						
ARG				AML	AML	14 47 23.9	
	comp=N,14733µm,0.4s						
ARG	Arkhangelos	0.36	116	P	Pn	14 47 13.3	+0.6
ARG				S	Sn	14 47 23.2	+0.4
	comp=N,15µm,0.3s						
ARG	Arkhangelos	0.36	116	PG	Pn	14 47 13.3	+0.6
ARG				SG	Sn	14 47 23.3	+0.4
ARG	Arkhangelos	0.36	116	P	Pn	14 47 13.3	+0.6
ARG				S	Sn	14 47 23.2	+0.4
MRSB	Marmaris-Mugla	0.51	48	PG	Pn	14 47 13.3	-0.5
TURN	Turunc	0.57	46	PG	Pn	14 47 14.0	-0.3
TURN				SG	Sn	14 47 24.7	-1.0
TURN	Turunc	0.57	46	⇓iP	Pn	14 47 13.9	-0.3
TURN				IAML		14 47 24.0	
	comp=E,1µm,0.3s						
TURN				iS	Sn	14 47 24.5	-1.2
KOSK	Kos Island	0.71	302	P	Pn	14 47 15.0	-0.5
KOSK				S	Sn	14 47 26.1	-1.9
	comp=E,460nm,0.5s						
KOSK	Kos Island	0.71	302	PG	Pn	14 47 15.1	-0.5
KOSK				SG	Sn	14 47 26.3	-1.7
BDRM	Kayabasi	0.73	342	iP	Pn	14 47 14.9	-0.9
BDRM				iS	Sn	14 47 26.0	-2.3
BODT	Bodrum	0.77	334	P	Pn	14 47 14.4	-1.7
BODT				S	Sn	14 47 25.9	-3.1
BODT	Bodrum	0.77	334	PG	Pn	14 47 14.5	-1.7
BODT				SG	Sn	14 47 25.8	-3.2
DALY	Dalyan (Mula)	0.86	59	PG	Pn	14 47 17.5	+0.4
DALY				SG	Sn	14 47 30.7	0.0
DALY	Dalyan (Mula)	0.86	59	⇓iP	Pn	14 47 17.8	+0.7
DALY				iS	Sn	14 47 30.7	0.0
DALY				IAML		14 47 33.0	
	comp=N,568nm,0.4s						
YER	Yerkesik	0.88	30	P	Pn	14 47 17.3	-0.1
YER				S	Sn	14 47 29.8	-1.3
YER	Yerkesik	0.88	30	PG	Pn	14 47 17.3	-0.1
MLSB	Milas	0.92	2	PG	Pn	14 47 16.7	-1.1
MLSB				SG	Sn	14 47 30.7	-1.2
KARP	Karpathos	0.95	209	P	Pn	14 47 18.5	+0.4
KARP				S	Sn	14 47 32.5	+0.1
	comp=N,6µm,0.5s						
KARP	Karpathos	0.95	209	PG	Pn	14 47 18.7	+0.5
KARP				SG	Sn	14 47 32.7	+0.3
KARP	Karpathos	0.95	209	P	Pn	14 47 18.6	+0.5
KARP				S	Sn	14 47 32.4	-0.1
KARP				AML	AML	14 47 32.6	
	comp=N,13nm,0.5s						
KARP				AML	AML	14 47 32.6	
	comp=N,13nm,0.5s						
KARP				AML	AML	14 47 32.8	
	comp=N,10nm,0.5s						
KARP				AML	AML	14 47 32.8	
	comp=N,10nm,0.5s						
MULA	Mugla, Merkez-	1.00	28	iP	Pn	14 47 18.6	-0.2
MULA				iS	Sn	14 47 31.9	-1.7
FETY	Fethiye	1.12	76	P	Pn	14 47 19.4	-0.7
FETY				S	Sn	14 47 34.4	-1.5
FETY	Fethiye	1.12	76	PN	Pn	14 47 19.7	-0.4
DDIM	Aydin, Didim	1.15	340	iP	Pn	14 47 20.0	-0.4
DDIM				iS	Sn	14 47 34.8	-1.7
GCAM	G?zelcaml?	1.38	343	PN	Pn	14 47 22.8	-0.4
GCAM	G?zelcaml?	1.38	343	iP	Pn	14 47 22.6	-0.6
GCAM				iS	Sn	14 47 39.5	-2.0
GCAM				IAML		14 47 40.0	
	comp=E,499nm,0.4s						
TAVA	DENIZLI_Tavas	1.44	41	iP	Pn	14 47 24.2	+0.1
TAVA				iS	Sn	14 47 42.2	-0.9
CAEL	Denizli, Camel	1.48	59	iP	Pn	14 47 25.2	+0.7
CAEL				iS	Sn	14 47 44.5	+0.5
CAEL				IAML		14 47 52.0	
	comp=E,427nm,0.7s						
SMG	Samos	1.51	332	P	Pn	14 47 24.0	-0.8
SMG	Samos	1.51	332	P	Pn	14 47 24.1	-0.8
AKAS	Kas	1.52	95	PN	Pn	14 47 25.2	+0.1
AKAS	Kas	1.52	95	iP	Pn	14 47 24.6	-0.5
AKAS				iS	Sn	14 47 43.4	-1.5
AKAS				IAML		14 47 47.0	
	comp=E,259nm,0.2s						
AYDB	Zeytinkoy-Aydi	1.57	5	PN	Pn	14 47 25.5	-0.3
ANAF	Anafi Island	1.58	270	P	Pn	14 47 25.9	+0.1
GOLH	Golhisar	1.70	59	iP	Pn	14 47 28.4	+1.1
GOLH				iS	Sn	14 47 50.0	+1.0
ZKR	Zakros	1.76	225	P	Pn	14 47 29.0	+0.9
ZKR				S	Sn	14 47 50.7	+0.5
ZKR				AML	AML	14 47 53.0	
	comp=E,1910µm,0.4s						
ZKR				AML	AML	14 47 53.6	
	comp=N,724µm,0.4s						
ZKR	Zakros	1.76	225	P	Pn	14 47 29.0	+0.9
ZKR				S	Sn	14 47 51.0	+0.9
	comp=N,655nm,0.4s						
STIA	Sitia Lasithi	1.77	229	P	Pn	14 47 27.9	-0.3
ELL	Elmali	1.79	77	PN	Pn	14 47 29.4	+0.8
ELL	Elmali	1.79	77	P	Pn	14 47 29.3	+0.8
THR8	Santorini-Mono	1.82	272	P	Pn	14 47 28.8	0.0
SANT	Santorini	1.83	271	P	Pn	14 47 29.2	+0.2
THR3	Thira Island,	1.88	272	P	Pn	14 47 29.9	+0.3
THR6	Thira Island,	1.88	270	P	Pn	14 47 30.0	+0.4
APE	Apeiranthos	1.90	292	P	Pn	14 47 30.0	+0.1
NPS	Neapolis	2.05	238	P	Pn	14 47 32.0	+0.2
NPS				S	Sn	14 47 56.2	-0.7
NPS				AML	AML	14 47 57.8	
	comp=N,1004µm,0.3s						
NPS				AML	AML	14 47 58.1	
	comp=E,995µm,0.3s						
NPS	Neapolis	2.05	238	P	Pn	14 47 32.0	+0.2
NPS				S	Sn	14 47 56.7	-0.2
	comp=E,505nm,0.3s						
AKUM	Antalya-Kumluc	2.11	91	iP	Pn	14 47 33.6	+1.0
AKUM				iS	Sn	14 47 57.5	-0.8
AKUM				IAML		14 48 01.0	
	comp=N,194nm,0.4s						
URLA	Izmir	2.18	336	PN	Pn	14 47 32.5	-1.1
KORT	Korkueli	2.20	73	PN	Pn	14 47 35.1	+1.2
KORT	Korkueli	2.20	73	iP	Pn	14 47 35.3	+1.5
KORT				iS	Sn	14 48 02.8	+2.3
LAST	Lasithi	2.20	237	P	Pn	14 47 34.2	+0.4
LAST				AML	AML	14 48 01.2	
	comp=E,274µm,0.5s						
LAST				AML	AML	14 48 06.0	
	comp=N,254µm,0.5s						
LAST	Lasithi	2.20	237	P	Pn	14 47 34.0	+0.2
MANT	Manisa	2.21	17	iP	Pn	14 47 33.8	-0.4
MANT				iS	Sn	14 47 58.2	-2.9
KULA	Kula-Manisa	2.26	19	PN	Pn	14 47 34.7	0.0
BASM	Basmaki-Afyon	2.41	50	PN	Pn	14 47 37.0	+0.3
KHL	Karahalli	2.41	36	PN	Pn	14 47 36.9	+0.2
KHAL	Karahalli	2.44	35	iP	Pn	14 47 36.9	-0.2
KHAL				iS	Sn	14 48 04.0	-2.2
BCK	Bucak	2.53	64	PN	Pn	14 47 38.9	+0.6
IDI	Anoyia	2.55	246	P	Pn	14 47 38.3	-0.2
	comp=N,26nm,0.3s,baz=359,slow=5.2,SNR=103						
IDI				S	Sn	14 48 06.8	-2.1
	comp=N,11nm,0.3s,baz=110,slow=11,SNR=7.3						
IDI	Anoyia	2.55	246	P	Pn	14 47 39.1	+0.6
IDI	Anoyia	2.55	246	P	Pn	14 47 38.4	-0.2
ISP	Isparta	2.66	56	PN	Pn	14 47 40.4	+0.4
SIVA	Sivas	2.74	241	P	Pn	14 47 42.6	+1.6
SIVA	Sivas	2.74	241	P	Pn	14 47 41.5	+0.6
SIMA	Simav-Kutahya	2.88	20	PN	Pn	14 47 42.4	-0.6
SHUT	Suhut-Afyon	3.12	45	PN	Pn	14 47 46.8	+0.5
IMMV	Iera Moni Meta	3.18	254	P	Pn	14 47 47.4	+0.5
GVD	Gavdhos	3.34	244	P	Pn	14 47 50.4	+1.3
GAZI	Gazipasa	3.71	91	PN	Pn	14 47 55.2	+1.2
AKMS	Akamas	3.98	109	⇑P	Pn	14 47 57.5	-0.3
AKMS				AML	AML	14 48 39.9	
	comp=N,3.5nm,0.7s						
AKMS				AML	AML	14 48 40.1	
	comp=N,3.2nm,0.4s						
OSC1	CSNet OBS 1	4.09	134	P	Pn	14 47 58.4	-0.8
OSC1				S	Sn	14 48 42.5	-3.4
ALFC	Alefka	4.14	106	⇑P	Pn	14 47 59.4	-0.6
ALFC				AML	AML	14 48 46.2	
	comp=N,1.5nm,0.1s						
ALFC				AML	AML	14 48 47.6	
	comp=N,2.0nm,0.3s						
NATA	Nata	4.25	111	⇑P	Pn	14 48 01.1	-0.4
SZAC	Souni	4.50	110	P	Pn	14 48 04.8	0.0
SZAC				AML	AML	14 48 54.6	
	comp=N,1.8nm,0.3s						
SZAC				AML	AML	14 48 56.7	
	comp=N,2.7nm,0.3s						
ASGA	Asgata	4.77	108	P	Pn	14 48 08.0	-0.4
CSS	Mathiatis	4.77	106	P	Pn	14 48 08.2	-0.3
OSC2	CSNet OBS 4	4.98	130	P	Pn	14 48 09.8	-1.5
OSC2				S	Sn	14 49 04.4	-3.2
BRTR	Keskin Array B	5.74	53	P	Pn	14 48 22.7	+1.0
	comp=N,0.9nm,0.3s,baz=220,slow=14,SNR=39						
HMYD	Mayadein	7.05	158	P	Pn	14 48 39.4	-0.1
	baz=160						
HNAT	Natroun	7.15	159	P	Pn	14 48 40.6	-0.2
	baz=161						
MMAI	Mount Meron Ar	7.15	116	P	Pn	14 48 39.4	-1.6
	comp=N,11nm,0.3s,baz=310,slow=12,SNR=34						
KOT	Kottamia	7.29	151	P	Pn	14 48 42.1	-0.7
	baz=152						
KOT				S	Sn	14 49 57.4	-6.7
	baz=152						
HSAF	As Saff	7.46	153	P	Pn	14 48 44.8	-0.4
	baz=155						
GLL	Jalalah	7.56	153	P	Pn	14 48 46.0	-0.5
	baz=154						
ZAF	Zafarana	8.15	149	P	Pn	14 48 53.8	-0.7
	baz=150						
ZAF				S	Sn	14 50 18.2	-6.8
	baz=150						
ZNM	Zenema	8.21	147	P	Pn	14 48 55.3	-0.1
	baz=148						
EIL	Elat	9.02	136	P	Pn	14 49 04.8	-1.7
	comp=N,1.0nm,0.3s,baz=267,slow=2.6,SNR=17						
TR2	Tor 2	9.44	146	P	Pn	14 49 11.5	-0.6
	baz=147						
AKASG	Malin Array Be	14.36	4	P	Pn	14 50 19.4	+1.7
	comp=N,0.5nm,0.3s,baz=192,slow=10,SNR=4.4						
TORD	Torodi Ar. Bea	32.88	232	P	P	14 53 25.2	+0.7
	comp=N,0.2nm,0.4s,baz=30,slow=8.8,SNR=2.0						
MKAR	Makanchi Array	41.36	58	P	P	14 54 37.1	+1.1
	comp=N,0.2nm,0.5s,baz=264,slow=9.6,SNR=5.9						

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*IDC **30** 15:01:04.7±1.9, 14°.62N×89°.07W, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.9/33, mbtmp3.9/8, ML3.4/2, MS3.4/2, Ms1 3.4/2, ms1mx3.0/24, Error ellipse: s-maj=62.8km s-min=18.2km az=22.0*
*GCG **30** 15:01:04.4±0.6, 14°.93N×88°.86W, h50^{km}±321^{km}, MD4.4*
*SNET **30** 15:01:05.3±1.4, 14°.51N×89°.17W, h1^{km}±6^{km}, ML4.0*
*NEIC **30** 15:01:06.0±1.7, 14°.49N±0°.05×89°.22W±0°.05, h13^{km}±10^{km}, Error ellipse: s-maj=7.2km s-min=7.2km az=211.0*
*UCR **30** 15:01:05.2±1.7, 14°.50N×89°.17W, h1^{km}±14^{km}, ML4.0, mb4.0(NEIC)*
ISC 30 15:01:05.9±0.9**, 14°.50N**±0°.03×**89°.14W**±0°.03**, h11**^{km}±6^{km}**, n58, σ0^{s}.97**/65**, mb3.9**/6**, 3C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESQI	Esquipulas	0.20	286	⇑iP	Pg	15 01 09.7	-0.7
ESQI				eS	Sg	15 01 12.3	-1.2
ESQI	Esquipulas	0.20	286		Pg	15 01 09.7	-0.7
MTO3	Montecristo	0.24	245	eP	Pg	15 01 10.7	-0.4
MTO3				eS	Sg	15 01 14.7	+0.2
MTO3	Montecristo	0.24	245	eP	Pg	15 01 10.7	-0.4
MTO3				eS	Sg	15 01 14.7	+0.2
MTO3	Montecristo	0.24	245		Pg	15 01 10.7	-0.4
LLGN	La Laguna	0.39	151	⇑iP	Pg	15 01 13.7	+0.1
LLGN				eS	Sg	15 01 20.0	+1.1
LLGN				IAML		15 01 21.0	
	comp=Z,20µm,0.2s						
LLGN	La Laguna	0.39	151	⇑iP	Pg	15 01 13.7	+0.1
LLGN				eS	Sg	15 01 20.0	+1.1
LLGN				IAML		15 01 21.0	
	comp=Z,20µm,0.2s						
UNIC	Universidad Ca	0.65	218	eP	Pb	15 01 18.4	-1.0
UNIC	Universidad Ca	0.65	218	eP	Pb	15 01 18.4	-1.0
CEDA	San Andres	0.74	200	eP	Pb	15 01 20.8	0.0
CEDA				eS	Sb	15 01 31.6	+0.7
CEDA				IAML		15 01 43.8	
	comp=Z,5µm,0.4s						
CEDA	San Andres	0.74	200	eP	Pb	15 01 20.8	0.0
CEDA				eS	Sb	15 01 31.6	+0.7
CEDA				IAML		15 01 43.8	
	comp=Z,5µm,0.4s						
LFU	La Fuente	0.75	178	eP	Pb	15 01 20.9	-0.1
LFU	La Fuente	0.75	178	eP	Pb	15 01 20.9	-0.1
BOQS	Boqueron	0.78	190	eP	Pb	15 01 21.2	-0.4
BOQS	Boqueron	0.78	190	eP	Pb	15 01 21.2	-0.4
SNJE	San Jose	0.78	216	eP	Pb	15 01 21.2	-0.4
SNJE	San Jose	0.78	216	eP	Pb	15 01 21.2	-0.4
RTR	El Retiro	0.78	219	eP	Pb	15 01 21.7	+0.2
RTR	El Retiro	0.78	219	eP	Pb	15 01 21.7	+0.2
MRL	Marmol	0.78	318	iP	Pg	15 01 20.3	-0.8
OPAM	Oficina de Pla	0.79	184	eP	Pb	15 01 21.7	0.0
OPAM	Oficina de Pla	0.79	184	eP	Pb	15 01 21.7	0.0
PMON	Piamonte	0.80	192	eP	Pb	15 01 21.9	-0.1
PMON	Piamonte	0.80	192	eP	Pb	15 01 21.9	-0.1
SBLS	San Blas	0.81	216	eP	Pb	15 01 21.9	-0.2
SBLS	San Blas	0.81	216	eP	Pb	15 01 21.9	-0.2
SNET	Serv Nac Est T	0.81	186		Pg	15 01 20.9	-0.9

CEVE	**Cerro Verde**	0.82	215	*e*P	Pb	15 01 22.1	-0.2
CEVE				IAML		15 01 40.2	
	comp=Z,4µm,0.4s						
CEVE	**Cerro Verde**	0.82	215	*e*P	Pb	15 01 22.1	-0.2
CEVE				IAML		15 01 40.2	
	comp=Z,4µm,0.4s						
LFRS	**El Faro**	0.88	175	*e*P	Pb	15 01 22.9	-0.4
LFRS	**El Faro**	0.88	175	*e*P	Pb	15 01 22.9	-0.4
JAYA	**Jayaque - finc**	0.90	200	*e*P	Pg	15 01 22.7	-0.6
JAYA	**Jayaque - finc**	0.90	200	*e*P	Pg	15 01 22.7	-0.6
PQSS	**Presa 15 de Se**	1.04	147	*e*P	Pg	15 01 25.4	-0.5
PQSS				IAML		15 01 44.6	
	comp=Z,3µm,0.2s						
COEB	**Comit de Eme**	1.16	149	IAML		15 01 51.0	
	comp=Z,5µm,0.4s						
COEB	**Comit de Eme**	1.16	149	IAML		15 01 51.0	
	comp=Z,5µm,0.4s						
NBG	**Las Nubes**	1.17	274	*e*P	Pn	15 01 28.4	-0.1
PCG	**Pacaya**	1.43	266	*e*P	Pb	15 01 33.6	+0.8
FUG	**Fuego 3**	1.65	268	*e*P	Pg	15 01 37.1	-0.6
FUG				*e*S	Sg	15 02 00.9	+1.8
TGUH	**Tegucigalpa,Un**	1.86	104		Pb	15 01 39.8	-0.3
HUEH	**Huehuetenango**	2.43	290		Pn	15 01 46.3	+0.6
RTAL	**Retalhuleu**	2.48	271		Pn	15 01 44.6	-1.6
PETF	**Flores**	2.50	344		Pn	15 01 46.0	-0.6
CRIN	**San Cristobal**	2.71	131	Pn	Pn	15 01 49.8	+0.3
CCIG	**Comitan**	3.39	302	Pn	Pn	15 01 58.7	-0.2
TEIG	**Tepich**	5.75	8	Pn	Pn	15 02 29.6	-1.7
CMIG	**Matias Romero**	6.10	296	Pn	Pn	15 02 34.9	-1.2
	comp=Z,1.8nm,0.3s,baz=104,slow=10,SNR=12						
CMIG				Pg	Pb	15 02 56.2	+3.9
	comp=Z,4.2nm,0.3s,baz=107,slow=14,SNR=10						
CMIG				Sn	Sn	15 03 42.7	-3.2
	comp=Z,5.4nm,0.3s,baz=284,slow=23,SNR=12						
CMIG				Lg	Lg	15 04 16.6	
	comp=Z,3.7nm,0.3s,baz=30,slow=18,SNR=5.0						
ROSC	**El Rosal**	17.47	122	LR	LR	15 11 58.1	
	comp=Z,93nm,20.6s,baz=266,slow=37						
SDV	**Santo Domingo**	18.95	105	P	P	15 05 28.1	+0.6
	comp=Z,0.6nm,0.3s,baz=308,slow=4.8,SNR=7.5						
TXAR	**Lajitas Array**	19.96	320	P	Pn	15 05 41.0	+1.1
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=8.9						
NVAR	**Mina Array Bea**	35.09	318	P	P	15 08 01.2	+1.7
	comp=Z,1.3nm,0.9s,baz=126,slow=9.1,SNR=6.4						
ULM	**Lac du Bonnet**	36.07	353	P	P	15 08 06.3	-1.2
	comp=Z,2.5nm,0.8s,baz=168,slow=11,SNR=4.8						
BDFB	**Brasilia**	50.49	125	LR	LR	15 33 09.8	
	comp=Z,64nm,19.2s,baz=136,slow=38						
YKA	**Yellowknife Ar**	51.22	345	P	P	15 10 09.2	0.0
	comp=Z,0.4nm,0.7s,baz=140,slow=8.3,SNR=7.9						
YKA				PcP	PcP	15 11 24.4	+0.1
	comp=Z,1.7nm,0.8s,baz=140,slow=4.3,SNR=19						
ILAR	**Eielson Array**	63.49	336	P	P	15 11 36.0	+0.2
	comp=Z,1.0nm,0.7s,baz=164,slow=4.7,SNR=12						
ESDC	**Sonseca Array**	77.23	52	P	P	15 13 00.3	-0.1
	comp=Z,0.6nm,0.7s,baz=288,slow=5.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	87.56	77	P	P	15 13 53.5	-1.3
	comp=Z,0.7nm,0.9s,baz=288,slow=6.2,SNR=3.6						
CMAR	**Chiang Mai Arr**	146.29	346	PKPbc	PKPdf	15 20 47.7	+1.2
	comp=Z,2.9nm,0.8s,baz=346,slow=4.7,SNR=25						

IDC 30 15:08:47.5±3.9**, 6°.61S**×**125°.50E, h496**^{km}±52^{km}**, mb2.4**/1**, mb1 2.7**/5**, mb1mx2.5**/29**, mbtmp3.5**/5**, Error ellipse: s-maj=103.7km s-min=25.8km az=53.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	4.01	207	P	P	15 10 06.9	+1.1
	7.0nm,0.3s,baz=42,slow=0.3,SNR=8.7						
BATI				S	S	15 11 09.2	-0.2
	2.4nm,0.3s,baz=93,slow=19,SNR=1.8						
FITZ	**Fitzroy Crossi**	11.42	179	P	P	15 11 18.8	-1.1
	0.2nm,0.3s,baz=7.1,slow=9.8,SNR=1.9						
WRA	**Warramunga Arr**	15.79	148	P	P	15 12 06.4	+0.2
	0.2nm,0.3s,baz=326,slow=11,SNR=8.6						
ASAR	**Alice Springs**	18.79	155	P	P	15 12 35.9	+0.4
	0.2nm,0.3s,baz=329,slow=8.6,SNR=22						
MKAR	**Makanchi Array**	65.52	329	P	P	15 18 41.1	-0.3
	0.1nm,0.5s,baz=133,slow=6.1,SNR=2.4						

IDC 30 15:19:45.6±1.5**, 8°.75S**×**123°.21E, h204**^{km}±12^{km}**, mb2.6**/1**, mb1 3.2**/4**, mb1mx2.9**/34**, mbtmp3.6**/4**, Error ellipse: s-maj=82.9km s-min=15.1km az=60.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	1.51	163	P	Pn	15 20 19.4	-0.4
	32nm,0.3s,baz=342,slow=8.3,SNR=45						
BATI				S	S	15 20 46.9	+0.6
	23nm,0.3s,baz=261,slow=19,SNR=5.2						
FITZ	**Fitzroy Crossi**	9.59	166	P	Pn	15 21 59.3	-0.2
	0.7nm,0.3s,baz=349,slow=13,SNR=16						
FITZ				S	S	15 23 45.8	-1.2
	1.4nm,0.3s,baz=115,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	15.48	137	P	Pn	15 23 11.6	-2.0
	0.7nm,0.3s,baz=314,slow=14,SNR=28						
WRA				S	S	15 25 55.6	-10
	0.1nm,0.3s,baz=329,slow=24,SNR=2.5						
ASAR	**Alice Springs**	18.02	147	P	Pn	15 23 42.9	-0.8
	0.2nm,0.3s,baz=327,slow=12,SNR=23						
ASAR				S	S	15 26 58.2	+0.6
	0.1nm,0.3s,baz=312,slow=22,SNR=2.3						
MKAR	**Makanchi Array**	66.21	331	P	P	15 30 11.4	-0.1
	0.1nm,0.5s,baz=131,slow=6.9,SNR=5.6						

*IDC **30** 15:20:16.9±1.2, 47°.25S×95°.53E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.7/33, mbtmp3.9/5, Error ellipse: s-maj=48.3km s-min=23.1km az=117.0*

ISC 30 15:20:18.3±1.2**, 47°.3S**±0°.2×**95°.5E**±0°.3**, h10**^{km}**, n9,** σ**0**^{s}**.58**/6**, mb3.8**/5**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	18.62	55	T	T	15 43 41.8	
	baz=222,slow=75,SNR=19						
H01W3	**Cape Leeuwin H**	18.63	55	T	T	15 43 42.4	
	baz=222,slow=75,SNR=16						
H01W1	**Cape Leeuwin H**	18.64	55	T	T	15 43 42.9	
	baz=222,slow=75,SNR=17						
ASAR	**Alice Springs**	38.56	66	P	P	15 27 41.3	0.0
	0.7nm,0.6s,baz=219,slow=7.7,SNR=6.3						
WRA	**Warramunga Arr**	41.61	63	P	P	15 28 06.7	+0.1
	1.7nm,0.9s,baz=223,slow=8.9,SNR=6.1						
QSPA	**South Pole Qui**	42.89	180	P	P	15 28 16.9	+0.2
	1.3nm,0.7s,baz=317,slow=2.4,SNR=8.3						
SNAA	**Sanae**	48.46	205	P	P	15 29 00.5	-0.1
	2.2nm,0.9s,baz=88,slow=5.4,SNR=3.6						
CMAR	**Chiang Mai Arr**	65.48	4	P	P	15 31 01.8	+0.4
	0.6nm,0.5s,baz=205,slow=6.8,SNR=5.7						
INK	**Inuvik**	147.73	32	PKPbc	PKPbc	15 40 00.9	-0.9
	1.3nm,0.7s,baz=283,slow=3.2,SNR=4.0						

*OSPL **30** 15:22:00.5±2.5, 19°.50N×66°.71W, h31^{km}±76^{km}, ML3.5*
*NEIC **30** 15:22:04.7±1.3, 18°.92N±0°.03×67°.75W±0°.03, h27^{km}±11^{km}, Error ellipse: s-maj=4.9km s-min=4.3km az=127.0*
*RSPR **30** 15:22:04.4, 19°.03N×67°.86W, h21^{km}±35^{km}, MD3.2/13*

ISC 30 15:22:05.2±1.0**, 18°.95N**±0°.06×**67°.70W**±0°.04**, h27**^{km}**, n60,** σ**0**^{s}**.91**/66**, 10C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	0.74	130	⇓*e*P	Pb	15 22 18.4	-1.0
AGPR	**Aguadilla, PR**	0.74	130	*e*S	Sb	15 22 29.8	+0.6
AGPR	**Aguadilla, PR**	0.74	130		Pb	15 22 18.4	-1.0
AGPR	**Aguadilla, PR**	0.74	130		Sb	15 22 29.8	+0.6
AGPR	**Aguadilla, PR**	0.74	130	IAML		15 22 28.8	
	comp=N,892nm,0.4s						
AGPR				IAML		15 22 28.9	
	comp=E,1µm,0.4s						
AGPR	**Aguadilla, PR**	0.74	130	*i* P	Pb	15 22 18.3	-1.2
AGPR				*e*S	Sb	15 22 28.7	-0.5
AGPR				IAML		15 22 36.1	
	comp=Z,366nm,0.3s						
MPR	**Mayaguez**	0.91	144	*i* P	Pn	15 22 21.4	-0.8
LSP	**Las Mesas**	0.97	143	⇑*e*P	Pn	15 22 22.5	-0.5
LSP	**Las Mesas**	0.97	143	*e*S	Sn	15 22 35.4	-0.5
LSP	**Las Mesas**	0.97	143		Pn	15 22 22.5	-0.5
LSP					Sn	15 22 35.4	-0.5
AOPR	**Arecibo Observ**	1.08	123	⇑*e*P	Pn	15 22 23.8	-0.8
AOPR	**Arecibo Observ**	1.08	123	*e*S	Sn	15 22 39.9	+1.1
AOPR	**Arecibo Observ**	1.08	123		Pn	15 22 23.8	-0.8
AOPR					Sn	15 22 39.9	+1.1
AOPR	**Arecibo Observ**	1.08	123	IAML		15 22 52.3	
	comp=N,659nm,0.3s						
CRPR	**Cabo Rojo, PR**	1.09	149	⇑*e*P	Pn	15 22 24.4	-0.4
CRPR	**Cabo Rojo, PR**	1.09	149	*e*S	Sn	15 22 39.7	+0.7
CRPR	**Cabo Rojo, PR**	1.09	149		Pn	15 22 24.4	-0.4
CRPR					Sn	15 22 39.7	+0.7
CRPR	**Cabo Rojo, PR**	1.09	149	IAML		15 22 44.5	
	comp=E,417nm,0.8s						
CRPR				IAML		15 22 45.4	
	comp=N,478nm,0.6s						
MLPR	**Magueyes Islan**	1.16	147	⇑*e*P	Pn	15 22 24.3	-1.4
MLPR	**Magueyes Islan**	1.16	147	*e*S	Sn	15 22 40.7	+0.1
MLPR	**Magueyes Islan**	1.16	147		Pn	15 22 24.3	-1.4
MLPR					Sn	15 22 40.7	+0.1
MLPR	**Magueyes Islan**	1.16	147	IAML		15 22 42.8	
	comp=E,490nm,0.6s						
EMPR	**Esperanza - Ma**	1.21	113	⇓*e*P	Pn	15 22 25.6	-0.7
EMPR	**Esperanza - Ma**	1.21	113	*e*S	Sn	15 22 42.3	+0.5
EMPR	**Esperanza - Ma**	1.21	113		Pn	15 22 25.6	-0.7
EMPR					Sn	15 22 42.3	+0.5
EMPR	**Esperanza - Ma**	1.21	113	IAML		15 22 47.6	
	comp=N,562nm,0.5s						
GBPR	**Guanica, Bosqu**	1.24	141	⇓*e*P	Pn	15 22 26.6	-0.2
GBPR	**Guanica, Bosqu**	1.24	141	*e*S	Sn	15 22 43.0	+0.3
GBPR	**Guanica, Bosqu**	1.24	141		Pn	15 22 26.6	-0.2
GBPR					Sn	15 22 43.0	+0.3
CELP	**Cerrillos**	1.38	129	⇑*e*P	Pn	15 22 28.8	+0.1
CELP	**Cerrillos**	1.38	129	*e*S	Sn	15 22 47.3	+1.3
CELP	**Cerrillos**	1.38	129		Pn	15 22 28.8	+0.1
CELP					Sn	15 22 47.3	+1.3
OBIP	**Obispado Ponce**	1.38	131	⇑*e*P	Pn	15 22 28.2	-0.5
OBIP	**Obispado Ponce**	1.38	131	*e*S	Sn	15 22 46.6	+0.6
OBIP	**Obispado Ponce**	1.38	131		Pn	15 22 28.2	-0.5
OBIP					Sn	15 22 46.6	+0.6
OBIP	**Obispado Ponce**	1.38	131	IAML		15 22 51.0	
	comp=E,364nm,0.5s						
OBIP				IAML		15 22 51.3	
	comp=N,354nm,0.7s						
ICMP	**Isla Caja de M**	1.54	133		Pn	15 22 31.4	+0.6
ICMP				IAML		15 22 59.1	
	comp=N,251nm,0.9s						
GCPR	**Guaynabo City**	1.66	112		Pn	15 22 32.0	-0.6
SJG	**San Juan**	1.69	119		Pn	15 22 32.7	-0.3
SJG				IAML		15 22 57.4	
	comp=N,252nm,0.6s						
SJG				IAML		15 22 58.3	
	comp=N,235nm,0.4s						
IGPR	**InterUniversit**	1.80	123	⇑*e*P	Pn	15 22 34.6	+0.1
IGPR	**InterUniversit**	1.80	123	*e*S	Sn	15 22 57.7	+1.2
IGPR	**InterUniversit**	1.80	123		Sn	15 22 57.7	+1.2
PDPR	**Patillas Dam,**	1.84	120	⇑*e*P	Pn	15 22 35.3	+0.2
PDPR	**Patillas Dam,**	1.84	120		Pn	15 22 35.3	+0.2
PDPR	**Patillas Dam,**	1.84	120	IAML		15 23 01.1	
	comp=E,180nm,0.7s						
CBYP	**Canovanas**	1.88	111	⇓*e*P	Pn	15 22 35.4	-0.2
CBYP	**Canovanas**	1.88	111	*e*S	Sn	15 22 59.2	+0.7
CBYP	**Canovanas**	1.88	111		Pn	15 22 35.4	-0.2
CBYP					Sn	15 22 59.2	+0.7
HUMP	**Col San Antoni**	1.93	114	⇑*e*P	Pn	15 22 36.2	-0.1
HUMP	**Col San Antoni**	1.93	114	*e*S	Sn	15 23 00.9	+1.2
HUMP	**Col San Antoni**	1.93	114		Pn	15 22 36.2	-0.1
HUMP					Sn	15 23 00.9	+1.2
HUMP	**Col San Antoni**	1.93	114	IAML		15 23 07.8	
	comp=E,141nm,0.5s						
MTP	**Monte Pirata**	2.21	112	⇑*e*P	Pn	15 22 39.7	-0.4
MTP	**Monte Pirata**	2.21	112	*e*S	Sn	15 23 08.2	+1.6
MTP	**Monte Pirata**	2.21	112		Pn	15 22 39.7	-0.4
MTP					Sn	15 23 08.2	+1.6
CUPR	**Culebra, Puert**	2.38	105	⇓*e*P	Pn	15 22 42.3	-0.2
CUPR	**Culebra, Puert**	2.38	105		Pn	15 22 42.3	-0.2
BANI	**BANI**	2.58	258	*i* P	Pb	15 22 50.6	-0.3
SDDR	**Presa de Saban**	3.39	271	*i* P	Pb	15 23 03.3	-1.4
SDDR				*e*S	Sb	15 23 49.3	+3.7
SDDR				IAML		15 23 54.9	
	comp=Z,52nm,1.5s						
GRTK	**Grand Turk**	4.11	309	*i* P	Pn	15 23 05.3	-0.9
GRTK				*e*S	Sn	15 23 52.6	-0.8
GRTK				IAML		15 23 58.0	
	comp=Z,104nm,2.2s						

*IDC **30** 15:53:28.7±0.7, 40°.00N×14°.19E, h416^{km}±14^{km}, mb3.1/9, mb1 3.2/18, mb1mx3.0/60, mbtmp3.9/18, Error ellipse: s-maj=20.5km s-min=14.4km az=15.0*

ISC 30 15:53:28.3±0.7**, 40°.11N**±0°.09×**14°.17E**±0°.09**, h400**^{km}**, n25,** σ**1**^{s}**.06**/26**, mb3.4**/8**, 4C-2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAE	**Valguarnera**	2.63	176	P	Pn	15 54 29.5	+0.7
	5.7nm,0.3s,baz=188,slow=18,SNR=2.4						
VAE				S	S	15 55 19.9	+2.3
	1.2nm,0.3s,baz=183,slow=22,SNR=1.6						
KEST	**Kesra**	5.80	223	P	Pn	15 54 58.2	-0.7
	1.2nm,0.3s,baz=15,slow=4.8,SNR=7.0						
FRGS	**Fruska Gora**	6.54	38	⇑P	Pn	15 55 07.9	+1.2
VTS	**Vitosha**	7.26	67	⇓P	Pn	15 55 15.7	+0.7
BZS	**Buzias**	7.76	42	⇑P	Pn	15 55 21.7	+1.3
GERES	**GERESS Array B**	8.74	358	P	Pn	15 55 33.3	+1.5
	0.2nm,0.3s,baz=181,slow=11,SNR=1.9						
DRGR		9.12	40	⇓P	Pn	15 55 37.5	+1.4
VOIR		9.61	53	⇑P	Pn	15 55 43.5	+1.8
IDI	**Anoyia**	9.76	116	P	P	15 55 42.3	-1.0
	0.9nm,0.3s,baz=297,slow=9.0,SNR=1.2						
MLR	**Muntele Rosu**	10.19	54	P	Pn	15 55 49.7	+1.3
	0.8nm,0.3s,baz=305,slow=12,SNR=7.9						
MLR	**Muntele Rosu**	10.19	54	⇑P	Pn	15 55 49.9	+1.4
ESDC	**Sonseca Array**	13.94	274	P	P	15 56 29.2	0.0
	0.3nm,0.3s,baz=73,slow=11,SNR=10						
AKASG	**Malin Array Be**	14.94	40	P	P	15 56 39.6	-0.3
	3.8nm,0.3s,baz=235,slow=9.3,SNR=23						
BRTR	**Keskin Array B**	14.95	85	P	P	15 56 40.4	+0.1
	0.5nm,0.3s,baz=270,slow=9.1,SNR=36						
MMAI	**Mount Meron Ar**	18.44	106	P	P	15 57 16.3	-1.3
	0.5nm,0.3s,baz=309,slow=9.5,SNR=4.6						
HFS	**Hagfors**	20.05	359	P	P	15 57 33.1	+0.3
	4.8nm,0.7s,baz=185,slow=9.0,SNR=11						
NB2	**NORSAR Subarra**	21.04	356	P	P	15 57 41.5	-0.4
	comp=Z,3.0nm,0.9s,baz=174,slow=11						
NOA	**NORSAR Array B**	21.04	356	P	P	15 57 42.2	+0.3
	comp=Z,0.4nm,0.5s,baz=172,slow=11,SNR=6.1						
KBZ	**Khabaz**	21.63	71	P	P	15 57 47.6	+0.1
	comp=Z,3.5nm,0.8s,baz=290,slow=8.5,SNR=9.7						
FINES	**FINESS Array B**	22.58	15	P	P	15 57 55.5	-0.3
	comp=Z,2.4nm,0.8s,baz=189,slow=11,SNR=4.3						
ZALV	**Zalesovo Beam**	48.10	49	P	P	16 01 28.6	-0.7
	comp=Z,0.4nm,0.4s,baz=286,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	48.50	58	P	P	16 01 31.6	-1.0
	comp=Z,0.9nm,0.4s,baz=282,slow=6.8,SNR=25						
SONM	**Songino Array**	62.99	49	P	P	16 03 13.9	-0.3
	comp=Z,0.1nm,0.4s,baz=282,slow=5.5,SNR=4.2						
YKA	**Yellowknife Ar**	69.80	337	P	P	16 03 56.2	-0.2
	comp=Z,0.3nm,0.4s,baz=48,slow=6.4,SNR=6.6						
ULM	**Lac du Bonnet**	71.14	320	P	P	16 04 04.2	-0.4
	comp=Z,0.4nm,0.3s,baz=62,slow=4.5,SNR=4.3						

*ISK **30** 16:05:42.7, 38°.71N×25°.76E, h14^{km}, ML2.9/18*
*ATH **30** 16:05:43.6, 38°.69N×25°.69E, h32^{km}±4^{km}, ML3.0/4, Error ellipse: s-maj=4.6km s-min=1.5km az=101.0*
*DDA **30** 16:05:44.6, 38°.74N×25°.81E, h7^{km}±2^{km}, ML2.3*
*THE **30** 16:05:45.3, 38°.80N×25°.69E, h13^{km}±1^{km}, ML2.7/5, Error ellipse: s-maj=2.3km s-min=1.0km az=70.0*

ISC 30 16:05:44.2±0.9**, 38°.74N**±0°.02×**25°.75E**±0°.03**, h16**^{km}±8^{km}**, n43,** σ**0**^{s}**.92**/63**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSRA	**Psara**	0.24	217	P	Pg	16 05 50.1	+0.5
PSRA				S	Sg	16 05 54.0	+0.7
PSRA				AML	AML	16 05 54.5	
	comp=N,18128µm,0.2s						
PSRA				AML	AML	16 05 54.7	
	comp=E,31243µm,0.3s						
SIGR	**SIGRI**	0.48	10	P	Pg	16 05 53.7	-0.1
SIGR				AML	AML	16 06 00.8	
	comp=E,1999µm,0.3s						
SIGR				AML	AML	16 06 02.0	
	comp=N,1697µm,0.1s						
SIGR	**SIGRI**	0.48	10	P	Pg	16 05 53.7	-0.1
SIGR				S	Sg	16 06 00.4	+0.1
	comp=N,930nm,0.2s						
SIGR	**SIGRI**	0.48	10	PG	Pg	16 05 53.6	-0.2
SIGR				SG	Sg	16 06 00.4	+0.1
PRK	**Paraskevi**	0.65	39	P	Pb	16 05 57.6	+0.4
PRK				S	Sb	16 06 07.2	+1.1
PRK				AML	AML	16 06 09.5	
	comp=N,3633µm,0.4s						
PRK				AML	AML	16 06 10.1	
	comp=E,3399µm,0.3s						
PRK	**Paraskevi**	0.65	39	P	Pb	16 05 57.6	+0.4
PRK				S	Sb	16 06 06.3	+0.2
	comp=E,2µm,0.4s						
URLA	**Izmir**	0.76	119	PG	Pg	16 05 58.1	-1.0
URLA				SG	Sg	16 06 08.3	-0.9
URLA	**Izmir**	0.76	119	*i* P	Pg	16 05 58.5	-0.6
URLA				*i* S	Sg	16 06 08.8	-0.4
URLA				IAML		16 06 11.0	
	comp=E,158nm,0.6s						
URLA				IAML		16 06 12.0	
	comp=N,70nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	0.77	130	*i* P	Pb	16 05 59.6	+0.3
ZEYE				*i* S	Sb	16 06 10.0	+0.5
ZEYE				IAML		16 06 12.0	
	comp=E,326nm,0.2s						
ZEYE				IAML		16 06 13.0	
	comp=N,313nm,0.5s						
KOCA	**Canakkale, Ayv**	0.82	21	*i* P	Pg	16 05 59.8	-0.4
KOCA				*i* S	Sb	16 06 13.0	+2.0
KOCA				IAML		16 06 14.0	
	comp=N,310nm,0.3s						
KOCA				IAML		16 06 15.0	
	comp=E,152nm,0.2s						
AYVA	**Ayvalik**	0.93	52	*i* P	Pg	16 06 01.9	-0.3
AYVA				*i* S	Sb	16 06 14.4	+0.3
AYVA				IAML		16 06 15.0	
	comp=N,267nm,0.6s						
AYVA				IAML		16 06 16.0	
	comp=E,152nm,0.2s						
DKL	**Dikili**	0.96	69	PG	Pg	16 06 02.1	-0.7
DKL				SG	Sb	16 06 15.4	+0.4
ZEDA	**zmir-Bergama**	1.06	77	*i* P	Pg	16 06 03.9	-0.9
ZEDA				*i* S	Sb	16 06 18.4	+0.6
ZEDA				IAML		16 06 21.0	
	comp=E,55nm,0.3s						
ZEDA				IAML		16 06 22.0	
	comp=N,54nm,0.2s						
BOZC	**Bozcaada**	1.13	12	PN	Pg	16 06 05.2	-0.8
BOZC				SN	Sb	16 06 20.8	+1.0
EZN	**Ezine**	1.17	22	P	Pg	16 06 05.3	-1.6
EZN				S	Sn	16 06 22.6	+0.9
	comp=N,342nm,0.5s						
EZN	**Ezine**	1.17	22	PN	Pg	16 06 05.5	-1.4
EZN				SN	Sb	16 06 21.9	+0.8
BAYC	**CANAKKALE_Bayr**	1.18	31	*i* P	Pg	16 06 06.1	-0.8
BAYC				*i* S	Sg	16 06 21.3	-1.0
BAYC				IAML		16 06 23.0	
	comp=N,76nm,0.3s						
BAYC				IAML		16 06 24.0	
	comp=E,145nm,0.2s						
LIA	**Limnos Island**	1.24	339	P	Pn	16 06 06.6	-0.3
LIA	**Limnos Island**	1.24	339	P	Pn	16 06 06.8	-0.1
LIA				S	Sb	16 06 22.0	-1.0
KARY	**Karystos**	1.25	236	P	Pn	16 06 04.5	-2.6
KYMI	**Kymi, Euboea I**	1.30	266	P	Pn	16 06 06.4	-1.4
SMG	**Samos**	1.34	140	P	Pn	16 06 08.0	-0.3
SMG				AML	AML	16 06 29.7	
	comp=N,641µm,0.6s						
SMG				AML	AML	16 06 30.1	
	comp=E,720µm,0.5s						
SMG	**Samos**	1.34	140	P	Pg	16 06 10.3	+0.3
SMG				S	Sn	16 06 28.6	+2.8
	comp=E,350nm,0.5s						
GADA	**Gvkgeada**	1.46	4	P	Pn	16 06 09.6	-0.3
GADA				S	Sn	16 06 28.4	-0.3
	comp=E,125nm,1.1s						
GADA	**Gvkgeada**	1.46	4	PN	Pn	16 06 09.3	-0.6
GCAM	**G?zelcaml?**	1.56	131	PN	Pn	16 06 10.0	-1.4
GCAM	**G?zelcaml?**	1.56	131	*i* P	Pg	16 06 14.6	+0.3
GCAM				*i* S	Sg	16 06 34.1	-0.4
DION	**Dionisos Attik**	1.57	246	P	Pn	16 06 11.0	-0.6
APE	**Apeiranthos**	1.68	186	P	Pn	16 06 11.9	-1.1
APE	**Apeiranthos**	1.68	186	PN	Pn	16 06 11.6	-1.4
SMTH	**Samothraki Isl**	1.74	354	P	Pn	16 06 13.2	-0.6
GELI	**Tayfur-Gelibol**	1.75	18	PN	Pn	16 06 13.6	-0.4
AYDB	**Zeytinkoy-Aydi**	1.86	115	PN	Pn	16 06 14.2	-1.4
BALB	**Balikesir**	1.88	61	PN	Pn	16 06 15.2	-0.6
ERIK	**Erikli-Kesan**	2.02	17	PN	Pn	16 06 17.4	-0.2
KRBG	**Karabiga-Canak**	2.04	35	PN	Pn	16 06 17.6	-0.3
BODT	**Bodrum**	2.08	143	PN	Pn	16 06 17.4	-1.1
ALN	**Alexandroupoli**	2.17	6	PN	Pn	16 06 19.5	-0.2
RKY	**Sarkoy-Tekirda**	2.24	29	PN	Pn	16 06 20.5	-0.2
KULA	**Kula-Manisa**	2.29	95	PN	Pn	16 06 20.8	-0.7
GZKV	**Gazikoy-Tekird**	2.35	31	PN	Pn	16 06 22.1	0.0
KCTX	**Karacabey (Bur**	2.53	52	PN	Pn	16 06 24.1	-0.6
AGG	**Agios Georgios**	2.69	277	PN	Pn	16 06 26.5	-0.4

IDC 30 16:10:28.9±2.0**, 9°.33S**×**125°.06E, h0**^{km}**, mb3.3**/1**, mb1 3.3**/3**, mb1mx3.1**/37**, mbtmp3.1**/3**, ML2.9**/2**, Error ellipse: s-maj=30.7km s-min=18.2km az=149.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	1.63	237	Pg	Pn	16 10 57.3	-1.7
	5.2nm,0.3s,baz=90,slow=19,SNR=9.5						
BATI				Lg	Lg	16 11 20.9	
	1.7nm,0.3s,baz=70,slow=15,SNR=1.5						
WRA	**Warramunga Arr**	13.85	141	Pn	Pn	16 13 48.3	+1.6
	0.1nm,0.3s,baz=320,slow=12,SNR=1.8						
WRA				Sn	Sn	16 16 23.1	+1.7
	0.2nm,0.3s,baz=325,slow=29,SNR=6.6						
ASAR	**Alice Springs**	16.58	150	Pn	Pn	16 14 22.1	-0.9
	0.0nm,0.3s,baz=327,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	67.62	330	P	P	16 21 28.2	+0.6
	0.2nm,0.4s,baz=125,slow=7.2,SNR=2.7						

*NEIC **30** 16:12:52.6±0.9, 58°.05N±0°.03×151°.74W±0°.06, h3^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=3.3km az=137.0*
*IDC **30** 16:12:54.6±3.1, 57°.78N×151°.52W, h0^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.1/53, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=51.5km s-min=10.1km az=164.0*
*AEIC **30** 16:12:54±1.1, 58°.06N±0°.04×151°.71W±0°.06, h6^{km}±6^{km}, ML3.1, ML3.3/44(NEIC), Error ellipse: s-maj=7.3km s-min=1.4km az=139.0*

ISC 30 16:12:53.7±1.6**, 58°.07N**±0°.04×**151°.73W**±0°.04**, h9**^{km}±12^{km}**, n104,** σ**0**^{s}**.93**/100**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	0.54	238	Pg	Pn	16 13 06.5	-1.1
	baz=51,slow=13						
KDAK				Lg	Lg	16 13 13.7	
	518nm,0.3s,baz=300,slow=20,SNR=55						
OHAK	**Old Harbor**	1.20	225		Pg	16 13 15.2	-1.4
OHAK					Sn	16 13 32.7	-0.1
OHAK	**Old Harbor**	1.20	225	IAML		16 13 45.2	
	comp=E,505nm,0.9s						
CNPM	**China Poot**	1.48	10		Pn	16 13 20.5	-0.1
CNPM					Sb	16 13 40.6	+0.3
CNPM	**China Poot**	1.48	10	IAML		16 13 54.4	
	comp=E,298nm,0.7s						
KAHG	**Katmai Hook Gl**	1.55	287		Pn	16 13 21.0	-0.5
AU22	**Augustine Moun**	1.56	328		Pn	16 13 20.9	-0.6
AU22					Sn	16 13 41.7	-0.1
AUP	**Augustine Pinn**	1.57	326		Pn	16 13 21.8	0.0
AUCH	**Augustine Cone**	1.57	326		Sg	16 13 44.1	-0.1
AUH	**Augustine H**	1.57	326		Pn	16 13 21.9	0.0
AUL	**Augustine Lava**	1.59	327		Pn	16 13 22.2	+0.2
AUW	**Augustine West**	1.59	326		Pn	16 13 21.8	-0.2
HOM	**Homer**	1.59	2		Pn	16 13 22.1	+0.1
HOM					Sb	16 13 43.9	+0.4
KABR	**Katmai Barrier**	1.72	273		Pn	16 13 23.1	-0.8
BRSE	**Bradley Lake S**	1.75	17		Pn	16 13 23.8	-0.5
BRLK	**Bradley Lake**	1.75	14		Pn	16 13 23.6	-0.7
OPT	**Oil Point**	1.77	334		Pn	16 13 24.6	+0.1
KAHC	**Katmai Hardscr**	1.82	290		Pn	16 13 24.5	-0.8
KBM	**Katmai Bkd Mtn**	1.85	278		Pn	16 13 25.2	-0.4
KVTA	**Katmai Vly 10**	1.91	281		Pn	16 13 25.8	-0.6
ANCK	**Angle Creek**	2.00	275		Pn	16 13 27.4	-0.3
ILS	**Iliamna Low So**	2.02	340		Pn	16 13 27.8	-0.1
SII	**Sitkinak Islan**	2.02	222		Pn	16 13 26.6	-1.3
SII					Sn	16 13 53.8	+0.6
SII	**Sitkinak Islan**	2.02	222	IAML		16 14 19.3	
	comp=E,210nm,2.1s						

IVE	Iliamna Volcan	2.06	342		Pn	16 13 28.3	-0.3
IVE					Sn	16 13 55.2	+0.7
ILIM	Iliamna	2.11	343		Pn	16 13 29.1	-0.2
KELA	Mount Kelaz	2.15	282		Pn	16 13 29.1	-0.7
SEW	Seward	2.35	29		Pn	16 13 31.5	-1.0
RED	Redoubt Volcan	2.42	348		Pn	16 13 32.9	-0.5
PLK3	Peulik 3	2.46	263		Pn	16 13 33.9	0.0
RSO	Redoubt South	2.46	348		Pn	16 13 33.8	-0.3
PLK2	Peulik 2	2.47	265		Pn	16 13 33.9	-0.2
RDT	Redoubt	2.53	352		Pn	16 13 34.2	-0.8
SLKM	Skilak Lake	2.56	17		Pn	16 13 34.7	-0.7
NCT	North Crescent	2.57	347		Pn	16 13 35.4	-0.2
NCT					Sn	16 14 07.4	+0.3
DFR	Drift River	2.58	349		Pn	16 13 35.1	-0.5
DFR					Sn	16 14 06.2	-0.9
PLK1	Peulik 1	2.62	266		Pn	16 13 35.6	-0.5
CAPN	Captain Cook N	2.72	6		Pn	16 13 38.1	+0.6
RC01	Rabbit Creek A	3.19	18		Pn	16 13 43.4	-0.6
SPCP	Crater Peak Br	3.21	356		Pn	16 13 44.2	-0.2
SPCG	Spurr Capps Gl	3.23	358		Pn	16 13 44.7	0.0
PWL	Port Wells	3.29	30		Pn	16 13 44.9	-0.5
STLK	Strandline Lak	3.44	359		Pn	16 13 47.2	-0.3
SUA	Susitna One	3.44	8		Pn	16 13 46.7	-0.8
HIN	Hinchinbrook I	3.56	47		Pn	16 13 49.0	-0.1
SVW2	Sparrevohn	3.61	329		Pn	16 13 48.9	-0.9
SVW2				IAML		16 14 57.0	
	comp=E,39nm,0.6s						
GLI	Glacier Island	3.68	38		Pn	16 13 49.9	-0.8
GLI	Glacier Island	3.68	38	IAML		16 15 09.2	
	comp=N,48nm,1.5s						
GLI				IAML		16 15 48.0	
	comp=E,39nm,2.4s						
KNK	Knik Glacier	3.74	25		Pn	16 13 50.8	-0.7
KNK	Knik Glacier	3.74	25	IAML		16 15 01.4	
	comp=E,45nm,0.8s						
KNK				IAML		16 15 08.8	
	comp=N,45nm,0.9s						
FID	Port Fidalgo	3.80	43		Pn	16 13 51.0	-1.3
FID	Port Fidalgo	3.80	43	IAML		16 14 45.8	
	comp=N,42nm,2.4s						
FID				IAML		16 14 54.5	
	comp=E,42nm,2.2s						
SKT	Skwentna	3.92	1		Pn	16 13 53.4	-0.6
EYAK	Cordova Ski Ar	3.94	48		Pn	16 13 53.9	-0.5
GHO	Glory Hole Cre	3.97	20		Pn	16 13 54.1	-0.7
SML	Sawmill	4.12	23		Pb	16 14 08.7	+2.4
SML				IAML		16 15 13.0	
	comp=N,43nm,0.9s						
SML				IAML		16 15 14.0	
	comp=E,36nm,1.1s						
SML	Sawmill	4.12	23		Pn	16 13 57.0	+0.3
RAGM	Ragged Mountai	4.30	54		Pn	16 13 58.8	-0.5
SCM	Sheep Creek Mo	4.37	29		Pn	16 14 00.5	+0.2
SCM	Sheep Creek Mo	4.37	29	IAML		16 15 09.6	
	comp=E,33nm,0.8s						
SCM				IAML		16 15 16.1	
	comp=N,35nm,2.0s						
GOAT	Goat Mountain	4.38	52		Pn	16 14 00.5	+0.1
KLU	Klutina	4.51	38		Pn	16 14 02.0	-0.2
BMRM	Bremner River	4.65	48		Pn	16 14 04.0	0.0
BERG	Berg Lake	4.73	57		Pn	16 14 04.6	-0.6
PPLA	Purkeypile	4.85	358		Pn	16 14 07.7	+0.8
M24K	Tolsona, Glenn	4.91	32		Pn	16 14 08.1	+0.4
SNH	Sunshine Point	5.04	61		Pn	16 14 10.1	+0.6
N25K	Chitina, Valde	5.05	42		Pn	16 14 09.6	0.0
N25K	Chitina, Valde	5.05	42	IAML		16 15 38.3	
	comp=N,18nm,4.5s						
N25K				IAML		16 15 45.0	
	comp=E,14nm,2.5s						
CRQM	Cirque	5.15	55		Pn	16 14 10.8	-0.2
CRQM	Cirque	5.15	55	IAML		16 16 50.4	
	comp=E,19nm,2.5s						
GLB	Gilahina Butte	5.24	46		Pn	16 14 11.6	-0.6
GLB	Gilahina Butte	5.24	46	IAML		16 15 54.9	
	comp=N,14nm,3.6s						
GLB				IAML		16 17 40.7	
	comp=E,15nm,3.2s						
TGL	Tana Glacier	5.28	56		Pn	16 14 12.3	-0.5
TGL	Tana Glacier	5.28	56	IAML		16 15 39.3	
	comp=E,21nm,3.0s						
TT01	Tatalina	5.29	338		Pn	16 14 11.9	-1.0
TTA	Tatalina	5.31	338		Pn	16 14 12.3	-0.9
TTA	Tatalina	5.31	338	IAML		16 15 54.6	
	comp=E,12nm,2.6s						
TTA				IAML		16 17 24.7	
	comp=N,11nm,3.5s						
ISLE	Juniper Island	5.43	58		Pn	16 14 14.9	0.0
TRF	Thorofare Moun	5.44	7		Pn	16 14 15.2	+0.1
MCARA	McCarthy VSAT	5.51	49		Pn	16 14 16.0	+0.1
KTH	Kantishna Hill	5.51	4		Pn	16 14 16.6	+0.6
RND	Reindeer	5.54	14		Pn	16 14 16.2	-0.1
KIAG	Kiagna River	5.56	55		Pn	16 14 16.5	-0.2
YAH	Yahtse	5.62	62		Pn	16 14 17.8	+0.3
BALM	Baldy	5.62	54		Pn	16 14 17.4	0.0
GRNC	Granite Creek	5.75	58		Pn	16 14 19.8	+0.4
CHX	Chaix Hills	5.83	65		Pn	16 14 20.6	+0.3
MCK	McKinley	5.84	12		Pn	16 14 20.5	+0.1
TABL	Table Mountain	5.93	62		Pn	16 14 22.1	+0.4
CTGM	Chitina Glacie	6.03	57		Pn	16 14 23.1	0.0
PCA	Pinnacle	6.25	66		Pn	16 14 26.3	+0.2
BCPM	Bancas Point	6.53	68		Pn	16 14 30.2	+0.4
PNL	Peninsula	6.59	71		Pn	16 14 30.0	-0.7
YUK2	White River	6.62	51		Pn	16 14 31.3	+0.2
IL31		7.11	17		Pn	16 14 37.4	-0.4
ILAR	Eielson Array	7.11	17	Pn	Pn	16 14 37.4	-0.4
	comp=N,0.2nm,0.3s,baz=203,slow=13,SNR=7.6						
ILAR				Sn	Sn	16 15 51.6	-7.0
	comp=N,0.1nm,0.3s,baz=207,slow=20,SNR=2.3						
POKR	Poker Plat Res	7.36	14		Pn	16 14 41.4	+0.2
YUK7	Dusty Glacier	7.38	65		Pn	16 14 42.1	+0.5
IM03		8.00	354		Pn	16 14 49.0	-0.9
PRP	Porcupine Dome	8.02	19		Pn	16 14 50.1	-0.3
PLBC	Pleasant Camp	8.11	74		Pn	16 14 51.5	0.0
YKA	Yellowknife Ar	18.74	61	P	Pn	16 17 13.8	+1.0
	comp=N,0.1nm,0.3s,baz=271,slow=11,SNR=6.1						
MKAR	Makanchi Array	66.36	323	P	P	16 23 48.7	+6.3
	comp=N,0.4nm,0.8s,baz=36,slow=6.3,SNR=4.2						

NEIC ***30*** *16:19:49.4±0.8, 18°.1S±0°.2×177°.7W±0°.2, h633km±14km, mb4.3/24, Error ellipse: s-maj=30.0km s-min=24.8km az=113.0*

IDC ***30*** *16:19:51.3±4.8, 17°.96S×178°.12W, h617km±54km, mb3.4/11, mb1 3.6/12, mb1mx3.2/37, mbtmp4.3/12, Error ellipse: s-maj=43.6km s-min=23.3km az=130.0*

ISC 30 16:19:49.0±0.7, 18°.1S±0°.1×177°.9W±0°.1, h600km, n40, σ0s.70/41, mb4.3/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.87	275	P	P	16 21 17.8	+4.1
AFI	Afiamalu	7.22	56	P	P	16 21 41.2	0.0
DZM	Mont Dzumac	15.22	252	P	P	16 23 00.6	+1.2
	0.7nm,0.3s,baz=80,slow=19,SNR=7.7						
DZM	Mont Dzumac	15.22	252	P	P	16 23 00.4	+1.1
DZM				IAmb	IAmb	16 23 08.5	
	comp=Z,14nm,1.1s						
THZ	Tophouse	24.86	197	P	P	16 24 25.0	-0.9
THZ				IAmb	IAmb	16 24 29.9	
	comp=Z,11nm,1.2s						
FOZ	Fox Glacier	27.39	200	P	P	16 24 47.6	-0.4
FOZ				IAmb	IAmb	16 25 00.9	
	comp=Z,7.5nm,0.9s						
EIDS	Eidsvold	29.65	250	P	P	16 25 07.7	-0.2
WHZ	Wether Hill Ro	30.10	200	P	P	16 25 11.3	-0.1
ARMA	Armidale	30.26	240	P	P	16 25 13.9	+0.7
ARMA				IAmb	IAmb	16 25 14.3	
	comp=Z,4.9nm,0.5s						
CTAO	Charters Tower	33.89	261	P	P	16 25 44.0	+0.1
CAN	Canberra	33.97	233	P	P	16 25 45.2	+0.9
TOO	Toolangi	37.42	231	P	P	16 26 13.5	+0.8
COEN	Coen	37.59	270	P	P	16 26 15.2	+0.8
STKA	Stephens Creek	38.96	241	P	P	16 26 25.8	+0.6
	comp=Z,8.4nm,0.7s,baz=91,slow=9.8,SNR=17						
STKA	Stephens Creek	38.96	241	P	P	16 26 25.6	+0.4
BBOO	Buckleboo	43.73	241	P	P	16 27 02.8	0.0
BBOO				IAmb	IAmb	16 27 03.4	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	44.88	260	P	P	16 27 11.6	-0.2
WB0	Warramunga Arr	45.04	260	P	P	16 27 12.3	-0.7
WB0				IAmb	IAmb	16 27 13.0	
	comp=Z,9.4nm,0.8s						
WB2	Warramunga Arr	45.06	260	P	P	16 27 12.4	-0.7
WB2				IAmb	IAmb	16 27 13.2	
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	45.06	260	P	P	16 27 12.4	-0.7
WRAB				IAmb	IAmb	16 27 13.1	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	45.07	260	P	P	16 27 12.6	-0.6
	comp=Z,4.7nm,0.4s,baz=96,slow=6.9,SNR=143						
WRA				PcP	PcP	16 28 40.6	-0.3
	comp=Z,0.5nm,0.4s,baz=92,slow=3.6,SNR=2.7						
WRA	Warramunga Arr	45.07	260	P	P	16 27 12.3	-0.9
AS31	Alice Springs	45.20	254	P	P	16 27 14.1	-0.1
AS31				IAmb	IAmb	16 27 14.3	
	comp=Z,5.3nm,0.3s						
ASAR	Alice Springs	45.20	254	P	P	16 27 13.9	-0.3
	comp=Z,12nm,0.4s,baz=93,slow=7.7,SNR=511						
ASAR				PcP	PcP	16 28 41.0	-0.3
	comp=Z,1.0nm,0.4s,baz=106,slow=3.8,SNR=5.3						
ASAR	Alice Springs	45.20	254	P	P	16 27 13.8	-0.4
MTN	Manton Dam	49.27	268	P	P	16 27 44.1	-0.6
MTN				IAmb	IAmb	16 27 44.2	
	comp=Z,12nm,0.9s						
FORT	Forrest	50.36	245	P	P	16 27 51.7	-0.7
FORT				IAmb	IAmb	16 27 57.9	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	53.47	261	P	P	16 28 14.7	-0.2
	comp=Z,1.5nm,0.3s,baz=114,slow=6.5,SNR=16						
FITZ	Fitzroy Crossi	53.47	261	P	P	16 28 14.4	-0.4
SOEI	Soe	56.55	270	P	P	16 28 37.3	+0.8
SOEI				IAmb	IAmb	16 28 38.3	
	comp=Z,23nm,0.8s						
PSA00	Pilbara Seismi	58.33	255	P	P	16 28 46.9	-1.4
NWAO	Narrogin (SRO)	59.54	242	P	P	16 28 55.7	-0.5
	comp=Z,8.4nm,1.0s,baz=132,slow=12,SNR=1.7						
MORW	Morawa	60.84	246	P	P	16 29 04.2	-0.7
MORW				IAmb	IAmb	16 29 16.6	
	comp=Z,9.8nm,1.1s						
MJAR	Matsushiro Arr	68.35	323	P	P	16 29 50.9	-0.8
	comp=Z,0.8nm,0.5s,baz=141,slow=6.4,SNR=5.0						
PETK	Petropavlovsk-	73.99	345	P	P	16 30 24.3	0.0
	comp=Z,2.9nm,1.1s,baz=101,slow=7.7,SNR=4.2						
SEY	Seymchan	84.07	347	P	P	16 31 16.9	-0.3
	comp=Z,0.9nm,0.5s,baz=72,slow=17,SNR=4.5						
TXAR	Lajitas Array	85.69	57	P	P	16 31 27.4	+1.5
	comp=Z,0.7nm,0.8s,baz=222,slow=6.6,SNR=5.4						
ILAR	Eielson Array	85.97	13	P	P	16 31 25.7	-0.6
	comp=Z,1.3nm,1.2s,baz=216,slow=5.3,SNR=4.4						
CMAR	Chiang Mai Arr	89.40	290	P	P	16 31 44.3	+0.9
	comp=Z,0.5nm,0.7s,baz=94,slow=2.0,SNR=6.0						
BRTR	Keskin Array B	145.26	315	PKPbc	PKPbc	16 38 20.2	-0.8
	comp=Z,1.4nm,0.9s,baz=125,slow=4.3,SNR=6.3						

IDC 30 16:29:41.2±3.2, 26°.10S×28°.94E, h0km, mb1 3.2/4, mb1mx3.1/29, mbtmp3.2/4, ML2.8/3, Error ellipse: s-maj=29.6km s-min=16.9km az=108.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.21	289	Pn	Pn	16 30 34.1	+1.1
	2.2nm,0.3s,baz=105,slow=16,SNR=5.0						
LBTB				Pg	Pb	16 30 39.9	+0.7
	2.2nm,0.3s,baz=104,slow=16,SNR=5.0						
LBTB				Lg	Lg	16 31 24.2	
	3.2nm,0.3s,baz=9.2,slow=21,SNR=10						
BOSA	Boshof	4.12	232	Pn	Pn	16 30 45.2	-0.4
	0.1nm,0.3s,baz=55,slow=13,SNR=1.4						
BOSA				Pg	Pb	16 30 56.0	+1.3
	0.4nm,0.3s,baz=54,slow=17,SNR=7.5						
BOSA				Lg	Lg	16 31 51.2	
	1.5nm,0.3s,baz=165,slow=19,SNR=7.9						
I47ZA	BOSHOF INFRASO	4.14	232	*i*		16 55 10.0	
	baz=50,slow=302,SNR=1.7						
MATP	Matopo	5.67	356	Pn	Pn	16 31 07.2	+0.4
	baz=168,slow=13						
MATP				Sn	Sn	16 32 09.3	-3.4
	0.4nm,0.3s,baz=90,slow=19,SNR=2.2						
MATP				Lg	Lg	16 32 38.9	
	1.1nm,0.3s,baz=263,slow=22,SNR=7.6						
SUR	Sutherland	9.46	227	Pn	Pn	16 31 59.2	+0.3
	0.2nm,0.3s,baz=37,slow=13,SNR=1.9						
SUR				Sn	Sn	16 33 42.5	-3.7
	0.1nm,0.3s,baz=162,slow=20,SNR=1.4						
SUR				Lg	Lg	16 34 40.4	
	0.2nm,0.3s,baz=173,slow=6.9,SNR=1.9						
I35NA	TSUMEB INFRASO	12.54	301	*i*		17 47 50.0	
	baz=126,slow=314,SNR=0.9						

IDC 30 16:34:60.0±3.5, 26°.17S×29°.18E, h0km, mb1 3.1/4, mb1mx3.1/30, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=32.1km s-min=21.8km az=104.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	3.43	289	Pn	Pn	16 35 55.6	+0.8
	0.3nm,0.3s,baz=113,slow=11,SNR=2.1						
LBTB				Pg	Pb	16 36 02.5	+0.8
	1.1nm,0.3s,baz=105,slow=13,SNR=18						
LBTB				Lg	Lg	16 36 49.2	
	4.9nm,0.3s,baz=195,slow=19,SNR=12						
BOSA	Boshof	4.25	234	Pn	Pn	16 36 07.2	+1.1
	0.3nm,0.3s,baz=59,slow=17,SNR=2.7						
BOSA				Pg	Pb	16 36 13.9	-1.8
	0.7nm,0.3s,baz=61,slow=15,SNR=7.8						
BOSA				Lg	Lg	16 37 07.4	
	1.7nm,0.3s,baz=142,slow=19,SNR=7.9						
I47ZA	BOSHOF INFRASO	4.27	234	*i*		17 00 50.0	
	baz=56,slow=306,SNR=1.4						
MATP	Matopo	5.75	354	Pn	Pn	16 36 27.5	+0.8
	0.2nm,0.3s,baz=178,slow=13,SNR=1.8						
MATP				Sn	Sn	16 37 32.6	-0.9
	0.4nm,0.3s,baz=107,slow=20,SNR=2.3						
MATP				Lg	Lg	16 38 02.3	
	1.1nm,0.3s,baz=256,slow=15,SNR=9.2						
SUR	Sutherland	9.57	228	Pn	Pn	16 37 17.3	-1.9
	0.1nm,0.3s,baz=51,slow=13,SNR=1.8						
SUR				Sn	Sn	16 39 02.7	-4.9
	0.2nm,0.3s,baz=342,slow=20,SNR=1.7						
SUR				Lg	Lg	16 39 57.4	
	0.2nm,0.3s,baz=85,slow=1.3,SNR=1.5						
I35NA	TSUMEB INFRASO	12.76	301	*i*		17 52 10.0	
	baz=129,slow=301,SNR=1.6						

PRU ***30*** *16:37:42.7±0.0, 51°.53N×16°.03E, h0km*

VIE ***30*** *16:37:46.5±0.5, 51°.19N×15°.75E, h0km, mb2.5/5, ml2.4/6, Error ellipse: s-maj=2.9km s-min=2.2km az=172.0 64 km NE of Liberec Suspected Mining induced.*

ISC 30 16:37:42.3±1.2, 51°.47N±0°.05×16°.09E±0°.03, h0km, n21, σ1s.26/50, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	169	*i* Pg	Pb	16 37 55.6	-0.8
KSP				*e*Sg	Sb	16 38 05.1	-0.8
CHVC	Chvalec	0.89	182	*e*PG	Pb	16 38 00.3	-0.3
CHVC				*e*SG	Sb	16 38 13.2	+0.2
	comp=Z,32nm,0.4s						
OSTC	Ostas	0.92	175	*e*PG	Pb	16 38 01.0	-0.2
OSTC				*e*SG	Sb	16 38 13.8	-0.1
	comp=Z,37nm,0.5s						
UPC	Upice	0.97	183	*e*PG	Pb	16 38 01.6	-0.3
UPC				*e*SG	Sb	16 38 15.5	+0.2
DPC	Dobruska-Polom	1.13	173	*e*PG	Pb	16 38 04.4	-0.4
DPC				*e*SG	Sb	16 38 19.3	-0.8
	comp=Z,31nm,0.5s						
PVCC	Panska Ves	1.35	226	*e*PG	Pn	16 38 08.6	+0.2
PVCC				*e*SG	Sn	16 38 27.3	+0.3
	comp=Z,102nm,0.4s						
BRG	Berggiesshubel	1.48	247	Pg	Pn	16 38 10.7	+0.5
BRG				Sg	Sn	16 38 30.8	+0.6
BRG				Amp		16 38 31.2	
	comp=Z,63nm,0.4s						
PRU	Pruhonice	1.78	214	*e*PN	Pn	16 38 13.9	-0.5
PRU				*e*PG	Pg	16 38 16.5	0.0
PRU				*e*SG	Sg	16 38 39.7	+0.1
	comp=Z,25nm,0.3s						
MORC	Moravsky Berou	1.93	151	*e*PN	Pn	16 38 15.7	-0.8
MORC				*e*SG	Sg	16 38 44.6	+0.2
CLL	Collm	1.94	266	*e*Pn	Pn	16 38 15.0	-1.5
CLL				*i* Pg	Pb	16 38 18.4	-0.1
CLL				*i*		16 38 21.6	
CLL				*e*Sg	Sb	16 38 44.0	+0.7
	comp=Z,20nm,0.5s						
VRAC	Vranov	2.19	171	*e*PN	Pn	16 38 20.3	+0.3
VRAC				*e*SG	Sg	16 38 52.6	0.0
KRUC	Moravsky	2.42	175	*e*PN	Pn	16 38 24.0	+0.9
KRUC				*e*SG	Sg	16 38 59.9	-0.2
NKC	Novy Kostel	2.62	243	*e*PN	Pn	16 38 25.5	-0.4
NKC				*e*PG	Pg	16 38 31.8	-0.7
NKC				*e*PG	Pb	16 38 32.2	+2.0
NKC				*e*SG	Sg	16 39 07.3	+0.8
	comp=Z,38nm,0.6s						
OJC	Ojcow	2.66	117	*e*Pn	Pn	16 38 25.2	-1.2
OJC				*e*Pg	Pg	16 38 32.5	-0.9
OJC				*e*Sg	Sg	16 39 07.9	+0.1
KHC	Kasperske Hory	2.85	215	*e*PN	Pn	16 38 28.6	-0.4
KHC				*e*PG	Pb	16 38 35.0	+1.0
KHC				*e*SN	Sn	16 39 04.1	+0.1
KHC				*e*SG	Sg	16 39 14.0	+0.3
	comp=Z,8.5nm,0.4s						
MODS	Modra-Piesok	3.20	166	*e*PG	Pg	16 38 42.8	-0.7
MODS				*e*SG	Sg	16 39 28.4	+3.5
VYHS	Vyhne	3.47	148	*e*PN	Pn	16 38 37.0	-0.5
VYHS				*e*PG	Pg	16 38 50.1	+1.4
VYHS				*e*SG	Sg	16 39 38.4	+4.7
CONA	Conrad Observa	3.55	183	*e*Pn	Pn	16 38 39.0	+0.2
	comp=Z,0.6nm,0.2s						
CONA				*e*Sg	Sg	16 39 34.0	-2.4
	comp=Z,4.0nm,0.3s						
MOA	Molln	3.82	199	*e*Pn	Pn	16 38 42.5	+0.2
	comp=Z,4.2nm,0.3s						
MOA				*e*Sg	Sg	16 39 42.0	-2.9
	comp=Z,7.6nm,0.8s						
ARSA	Arzberg	4.24	185	*e*Pn	Pn	16 38 48.0	-0.1
	comp=Z,0.1nm,0.1s						
ARSA				*e*Sg	Sg	16 39 58.0	-0.6
	comp=Z,6.4nm,0.6s						
KBA	Koelnbreinsper	4.75	203	*e*Pn	Pn	16 38 55.6	+0.3
	comp=Z,2.9nm,0.4s						
KBA				*e*Sg	Sg	16 40 12.4	-2.5
	comp=Z,4.1nm,0.5s						

IDC ***30*** *16:47:09.7±1.0, 49°.04S×124°.82E, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.1/32, mbtmp4.2/7, ML2.4/1, MS3.7/12, Ms1 3.7/12, ms1mx3.5/22, Error ellipse: s-maj=44.0km s-min=19.7km az=115.0*

ISC 30 16:47:11.1±1.1, 49°.0S±0°.2×124°.8E±0°.2, h10km, n18, σ0s.69/8, mb4.1/6, MS3.5/11, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.14	327	T	T	17 07 32.7	
	baz=152,slow=74,SNR=59						
H01W2	Cape Leeuwin H	16.15	327	T	T	17 07 32.6	
	baz=152,slow=74,SNR=56						
H01W3	Cape Leeuwin H	16.16	327	T	T	17 07 36.9	
	baz=152,slow=74,SNR=49						
NWAO	Narrogin (SRO)	17.03	338	P	P	16 51 10.8	-0.3
	0.6nm,0.3s,baz=163,slow=14,SNR=2.1						
NWAO				LR	LR	16 56 11.6	
	comp=Z,220nm,19.9s,baz=196,slow=32						
STKA	Stephens Creek	21.28	43	P	P	16 51 57.9	+0.2
	7.0nm,1.0s,baz=207,slow=11,SNR=4.2						
STKA				LR	LR	16 58 44.2	
	comp=Z,194nm,20.2s,baz=208,slow=33						
ASAR	Alice Springs	26.29	19	P	P	16 52 46.8	-0.1
	5.1nm,1.0s,baz=197,slow=8.6,SNR=29						
ASAR				LR	LR	17 02 07.5	
	comp=Z,336nm,20.5s,baz=194,slow=34						
WRA	Warramunga Arr	29.99	18	P	P	16 53 18.9	-1.0
	1.6nm,1.0s,baz=194,slow=8.4,SNR=4.7						
WRA				LR	LR	17 04 32.8	
	comp=Z,353nm,20.5s,baz=210,slow=35						
FITZ	Fitzroy Crossi	30.84	2	LR	LR	17 05 07.7	
	comp=Z,112nm,19.5s,baz=176,slow=35						
VNDA	Vanda	31.91	166	LR	LR	17 05 22.1	
	comp=Z,113nm,20.0s,baz=319,slow=34						
RPZ	Rata Peaks	31.97	98	LR	LR	17 02 12.1	
	comp=Z,57nm,21.2s,baz=1.0,slow=28						
MAW	Mawson	35.52	216	LR	LR	17 05 33.9	
	comp=Z,92nm,20.5s,baz=60,slow=31						
URZ	Urewera	38.65	94	LR	LR	17 08 50.6	
	comp=Z,69nm,20.2s,baz=211,slow=34						
BATI	Baumata	38.69	358	LR	LR	17 08 47.0	
	comp=Z,254nm,19.6s,baz=245,slow=34						
SNAA	Sanae	54.08	198	P	P	16 56 35.2	-0.1
	7.7nm,0.9s,baz=131,slow=9.6,SNR=15						
CMAR	Chiang Mai Arr	70.99	334	P	P	16 58 29.8	+0.9
	1.1nm,0.9s,baz=183,slow=5.7,SNR=12						
CMAR				LR	LR	17 30 03.2	
	comp=Z,24nm,18.6s,baz=205,slow=36						
BOSA	Boshof	74.77	244	P	P	16 58 51.3	-0.3
	1.5nm,0.5s,baz=140,slow=5.4,SNR=6.8						
KSRS	Korea Array	86.13	2	LR	LR	17 39 00.9	
	comp=Z,32nm,19.5s,baz=206,slow=36						
YKA	Yellowknife Ar	145.31	45	PKPbc	PKPab	17 06 48.3	+0.5
	3.5nm,0.8s,baz=268,slow=2.8,SNR=41						

IDC ***30*** *16:57:49.2±3.5, 10°.02N×126°.17E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, Error ellipse: s-maj=282.8km s-min=27.0km az=65.0*

MAN ***30*** *16:57:51.6, 9°.74N×125°.53E, h26km, mb4.6, ML3.5, MS3.4*

ISC 30 16:57:52.9±1.0, 9°.70N±0°.04×125°.52E±0°.05, h21km±4km, n11, σ1s.32/17, mb3.3/3, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLSP	General Luna,	0.61	82	*e*P	Pb	16 58 04.3	-0.7
GLSP				*e*S	Sn	16 58 14.1	-1.6
BUTP	Butuan	0.73	172	*e*P	Pb	16 58 05.6	-1.4
BUTP				*e*S	Sn	16 58 20.4	+1.7
MSLP	Maasin	0.78	304	*e*P	Pb	16 58 06.4	-1.3
MSLP				*e*S	Sb	16 58 17.7	-0.2
CGP	Cagayan de Oro	1.48	213	⇑ *i*P	Pn	16 58 17.0	-1.4
CGP				*i* S	Sn	16 58 36.8	-0.3
OCLP	Ormoc	1.61	327	*e*P	Pb	16 58 21.3	-0.7
OCLP				*e*S	Sb	16 58 44.4	+2.5
LLP	Lapu-Lapu	1.64	292	⇓ *e*P	Pn	16 58 20.9	+0.2
LLP				*e*S	Sn	16 58 40.1	-1.1
BUKP	Musuan	1.86	194	*e*P	Pn	16 58 23.6	-0.1
BUKP				*e*S	Sb	16 58 50.5	+1.3
KCP	Kidapawan	2.71	189	⇓ *e*P	Pb	16 58 48.0	+7.3
WRA	Warramunga Arr	30.71	164	P	P	17 04 07.0	+0.3
	0.4nm,0.8s,baz=344,slow=9.8,SNR=2.3						
ASAR	Alice Springs	34.16	166	P	P	17 04 37.8	+0.9
	0.2nm,0.8s,baz=349,slow=7.0,SNR=7.6						
MKAR	Makanchi Array	52.03	323	P	P	17 07 01.6	+0.4
	0.4nm,0.5s,baz=120,slow=8.0,SNR=7.6						

JMA 30 17:02:28.9±0.2, 23°.96N×123°.57E, h30km±2km, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.23	66	P	Pb	17 02 35.2	-0.3
HATJ				S	Sb	17 02 40.2	+0.2
IRIF	Iriomote-Funau	0.40	21	P	Pb	17 02 37.5	-0.3
IRIF				S	Sb	17 02 43.8	-0.1
JKRS	Kuro-shima	0.49	55	P	Pb	17 02 39.1	0.0
JKRS				S	Sb	17 02 46.3	+0.2
JIJ	Ishigaki jima	0.66	52	P	Pb	17 02 41.4	-0.6
JIJ				S	Sb	17 02 49.7	-1.2
JISG	Ishigakijimahi	0.92	47	P	Pn	17 02 45.8	0.0
JISG				S	Sn	17 02 57.8	-0.2

TAP 30 17:02:53.9, 24°.68N×121°.82E, h67km, ML3.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.07	156	*i* P	Pn	17 03 04.0	+0.3
	baz=149						
TWC				*i* S	Sn	17 03 11.7	+0.9
	baz=149						
ILA	Ilan	0.11	325	P	Pn	17 03 03.1	-0.6
	baz=328						
ILA				S	Sn	17 03 10.6	-0.3
	baz=328						
TWE	Neicheng	0.14	288	*i* P	Pn	17 03 04.5	+0.6
	baz=289						
TWE				*i* S	Sn	17 03 12.2	+1.1
	baz=289						
ENTT	Nioudou	0.23	261	*i* P	Pn	17 03 04.7	+0.4
	baz=260						
ENTT				S	Sn	17 03 12.6	+0.7

	baz=260						
ENA	**Nanau** baz=193	**0.26**	**195**	P	Pn	17 03 04.5	+0.1
ENA	baz=193			S	Sn	17 03 12.3	+0.2
NDT	**Datong Townshi** baz=255	**0.28**	**255**	*i* P	Pn	17 03 05.0	+0.4
NDT	baz=255			S	Sn	17 03 13.0	+0.5
TIPB	**Shuangxi** baz=1.0	**0.29**	**2**	*i* P	Pn	17 03 05.2	+0.4
TIPB	baz=1.0			S	Sn	17 03 13.3	+0.6
NWLT	**Wulai** baz=289	**0.30**	**290**	*i* P	Pn	17 03 05.0	+0.2
NWLT	baz=289			S	Sn	17 03 13.1	+0.3
TWB1	**Santiao Chiao** baz=26	**0.37**	**25**	P	Pn	17 03 05.5	+0.3
TWB1	baz=26			S	Sn	17 03 13.9	+0.4
TWA	**Mucha** baz=325	**0.37**	**325**	P	Pn	17 03 05.7	+0.4
TWA	baz=325			S	Sn	17 03 14.4	+0.8
NHDH	**Xindian Distri** baz=317	**0.39**	**317**	P	Pn	17 03 05.8	+0.4
NHDH	baz=317			S	Sn	17 03 14.4	+0.6
NWF	**Wu-fen Shan** baz=355	**0.40**	**355**	P	Pn	17 03 06.0	+0.4
NWF	baz=355			S	Sn	17 03 14.2	+0.1
WFSB	**Wu-fen Shan** baz=355	**0.40**	**355**	*i* P	Pn	17 03 06.0	+0.5
WFSB	baz=355			S	Sn	17 03 14.2	+0.3
YHNB	**Yeheng** baz=269	**0.40**	**269**	*i* P	Pn	17 03 05.6	0.0
YHNB	baz=269			S	Sn	17 03 14.3	+0.1
TATO	**Taipei** baz=315	**0.42**	**315**	P	Pn	17 03 06.0	+0.3
TATO	baz=315			S	Sn	17 03 14.8	+0.5
TAP1	**Taipei** baz=322	**0.45**	**324**	P	Pn	17 03 06.5	+0.6
TAP1	baz=322			S	Sn	17 03 15.7	+1.0
TAP	**Taipei** baz=322	**0.46**	**322**	P	Pn	17 03 06.4	+0.4
TAP	baz=322			S	Sn	17 03 15.9	+1.0
NNSB	**Datong** baz=238	**0.47**	**238**	*i* P	Pn	17 03 06.5	+0.3
NNSB	baz=238			S	Sn	17 03 15.4	+0.2
BACT	**New Taipei Cit** baz=313	**0.47**	**313**	*e*S	Sn	17 03 17.0	+1.9
NNS	**Nan Shan** baz=239	**0.47**	**240**	P	Pn	17 03 06.4	+0.1
NNS	baz=239			*e*S	Sn	17 03 15.4	+0.1
TNOU	**National Taiwa** baz=354	**0.47**	**355**	*e*S	Sn	17 03 15.9	+0.8
YM01	**YM01** baz=334	**0.52**	**335**	P	Pn	17 03 06.1	-0.5
YM01	baz=334			S	Sn	17 03 16.0	-0.1
YM10	**YM10** baz=334	**0.53**	**334**	P	Pn	17 03 07.2	+0.4
YM10	baz=334			*e*S	Sn	17 03 16.7	+0.4
YM11	**YM11** baz=335	**0.54**	**336**	P	Pn	17 03 07.2	+0.3
YM11	baz=335			S	Sn	17 03 17.0	+0.6
YM05	**YM05** baz=334	**0.54**	**335**	P	Pn	17 03 07.2	+0.3
YM05	baz=334			*e*S	Sn	17 03 16.8	+0.4
NACB	**Ninganchiao** baz=201	**0.54**	**202**	P	Pn	17 03 07.2	+0.4
NACB	baz=201			*e*S	Sn	17 03 16.3	0.0
YM04	**YM04** baz=331	**0.54**	**332**	P	Pn	17 03 07.2	+0.3
YM04	baz=331			S	Sn	17 03 16.9	+0.6
YM08	**YM08** baz=338	**0.55**	**338**	P	Pn	17 03 07.1	+0.1
YM08	baz=338			*e*S	Sn	17 03 17.0	+0.5
TWS1	**Kuangyinshan** baz=319	**0.56**	**320**	P	Pn	17 03 07.6	+0.6
TWS1	baz=319			*e*S	Sn	17 03 18.1	+1.6
ETLH	**Xiulin Townshi** baz=213	**0.56**	**213**	*e*P	Pn	17 03 06.7	-0.4
ETLH	baz=213			*e*S	Sn	17 03 17.4	+0.6
YM03	**YM03** baz=333	**0.56**	**333**	P	Pn	17 03 07.5	+0.3
YM03	baz=333			*e*S	Sn	17 03 17.4	+0.5
NTY	**Taoyuan** baz=304	**0.57**	**304**	*e*P	Pn	17 03 08.7	+1.5
NTY	baz=304			*e*S	Sn	17 03 18.1	+1.2
ANP	**Anpu** baz=332	**0.57**	**332**	*e*P	Pn	17 03 07.5	+0.2
ANP	baz=332			*e*S	Sn	17 03 17.6	+0.4
TWD	**Chiawan** baz=198	**0.63**	**199**	*e*P	Pn	17 03 08.3	+0.6
TWD	baz=198			*e*S	Sn	17 03 18.6	+0.7
TWY	**Chenhua** baz=342	**0.63**	**342**	*e*P	Pn	17 03 08.5	+0.7
TWY	baz=342			*e*S	Sn	17 03 18.9	+1.0
NCU	**National Centr** baz=297	**0.64**	**297**	P	Pn	17 03 08.3	+0.4
NCU	baz=297			*e*S	Sn	17 03 18.8	+0.6
NJD	**Zhudong** baz=275	**0.67**	**275**	*e*P	Pn	17 03 08.6	+0.4
NJD	baz=275			*e*S	Sn	17 03 19.6	+0.9
FUSS	**Fushou** baz=230	**0.67**	**231**	P	Pn	17 03 09.0	+0.5
FUSS	baz=230			*e*S	Sn	17 03 19.7	+0.4
TWT	**Tachien** baz=234	**0.72**	**234**	*e*P	Pn	17 03 09.7	+0.7
TWT	baz=234			*e*S	Sn	17 03 21.1	+1.1
LIOB	**Emei** baz=267	**0.73**	**268**	*e*P	Pn	17 03 09.1	+0.2
LIOB	baz=267			*e*S	Sn	17 03 20.5	+0.5
WHF	**Hehuan Shan** baz=223	**0.73**	**224**	*e*P	Pn	17 03 09.6	+0.2
WHF	baz=223			*e*S	Sn	17 03 20.8	+0.1
TDCB	**Techi** baz=234	**0.73**	**235**	P	Pn	17 03 09.9	+0.8
TDCB	baz=234			*e*S	Sn	17 03 20.7	+0.4
HSN1	**Hsinchu** baz=277	**0.73**	**278**	*e*S	Sn	17 03 21.0	+1.0
NSTT	**Nanjuang** baz=266	**0.74**	**267**	*e*P	Pn	17 03 09.2	+0.2
NSTT	baz=266			*e*S	Sn	17 03 20.5	+0.3
SBCB	**Hsinchu** baz=278	**0.76**	**279**	*e*S	Sn	17 03 21.5	+0.8
NHW	**Xinwu Township** baz=295	**0.77**	**295**	*e*P	Pn	17 03 09.7	+0.3
NHW	baz=295			*e*S	Sn	17 03 22.1	+1.2
CHGB	**Renai** baz=223	**0.85**	**224**	*e*P	Pn	17 03 10.8	+0.3
CHGB	baz=223			*e*S	Sn	17 03 23.1	+0.3
WHP	**Taichung City** baz=243	**0.89**	**244**	*e*P	Pn	17 03 11.6	+0.7
WHP	baz=243			*e*S	Sn	17 03 24.1	+0.6
ESL	**Shilin** baz=201	**0.93**	**202**	*e*S	Sn	17 03 24.6	+0.4
NSY	**Sanyi** baz=254	**0.99**	**255**	P	Pn	17 03 12.7	+0.6
NSY	baz=254			*e*S	Sn	17 03 26.7	+0.9
TWQ1	**Liyutan** baz=250	**1.00**	**251**	*e*P	Pn	17 03 12.5	+0.2
TWQ1	baz=250			*e*S	Sn	17 03 27.2	+1.2
DPDB	**Guoxing** baz=231	**1.03**	**232**	*e*P	Pn	17 03 13.9	+1.2
VWDT	**VWDT** baz=213	**1.11**	**214**	*e*P	Pn	17 03 14.2	+0.6
VWDT	baz=213			*e*S	Sn	17 03 29.6	+1.4
WDJ	**Dajia District** baz=253	**1.12**	**253**	*e*S	Sn	17 03 29.1	+0.5
SMLT	**Sun Moon Lake** baz=226	**1.15**	**227**	*e*P	Pn	17 03 16.0	+1.7
SMLT	baz=226			*e*S	Sn	17 03 30.4	+1.0
TYC	**Yuchr** baz=228	**1.17**	**229**	*e*P	Pn	17 03 14.9	+0.6
TYC	baz=228			*e*S	Sn	17 03 30.8	+1.2
SSLB	**Suanglung** baz=221	**1.18**	**222**	*e*P	Pn	17 03 15.3	+0.6
SSLB	baz=221			*e*S	Sn	17 03 31.3	+1.1
HGSD	**Ruisui** baz=196	**1.23**	**197**	*e*P	Pn	17 03 15.6	+0.4
HGSD	baz=196			*e*S	Sn	17 03 32.4	+1.3
EHY	**Hungye** baz=200	**1.25**	**201**	*e*P	Pn	17 03 16.1	+0.6
EHY	baz=200			*e*S	Sn	17 03 32.6	+1.0
WNT1	**Nantou City** baz=233	**1.29**	**234**	*e*S	Sn	17 03 33.7	+1.2
WNT	**Mingjian** baz=232	**1.30**	**233**	*e*S	Sn	17 03 33.8	+1.0
WHYT	**Xinyi Township** baz=222	**1.31**	**222**	*e*S	Sn	17 03 34.3	+1.2
YULB	**Yu-li** baz=200	**1.36**	**200**	*e*P	Pn	17 03 15.5	-1.4
YULB	baz=200			*e*S	Sn	17 03 35.0	+0.7
EYUL	**Yuli** baz=198	**1.40**	**199**	*e*S	Sn	17 03 36.2	+1.1
TWF1	**Yuli** baz=199	**1.40**	**200**	*e*S	Sn	17 03 36.1	+0.9
ALS	**Alishan** baz=218	**1.48**	**219**	*e*P	Pn	17 03 19.8	+1.0
ALS	baz=218			*e*S	Sn	17 03 39.1	+1.6
CHN5	**Tsauling** baz=224	**1.50**	**224**	*e*P	Pn	17 03 19.5	+0.7
CHN5	baz=224			*e*S	Sn	17 03 38.5	+1.0
WGK	**Gukeng** baz=229	**1.51**	**230**	*e*P	Pn	17 03 19.4	+0.5
WGK	baz=229			*e*S	Sn	17 03 39.1	+1.4
FULB	**Fuli** baz=197	**1.55**	**198**	*e*P	Pn	17 03 20.1	+0.7
FULB	baz=197			*e*S	Sn	17 03 39.8	+1.1
WTK	**Tuku** baz=232	**1.63**	**233**	*e*P	Pn	17 03 20.6	+0.1
WTK	baz=232			*e*S	Sn	17 03 40.9	+0.2
ELDTW	**Lidau** baz=206	**1.65**	**206**	*e*P	Pn	17 03 21.2	+0.3
ELDTW	baz=206			*e*S	Sn	17 03 41.4	+0.1
CHN4	**Tsaushan** baz=220	**1.73**	**221**	*e*P	Pn	17 03 23.3	+1.5
CHN4	baz=220			*e*S	Sn	17 03 45.3	+2.3
TPUB	**Ta-pu** baz=218	**1.75**	**219**	*e*P	Pn	17 03 23.9	+1.8
TPUB	baz=218			*e*S	Sn	17 03 45.1	+1.6
EDH	**Donghe** baz=195	**1.76**	**196**	*e*S	Sn	17 03 42.3	-1.4
STYT	**Tauyuan** baz=212	**1.79**	**213**	*e*P	Pn	17 03 24.0	+1.3
STYT	baz=212			*e*S	Sn	17 03 46.5	+1.9
TWK	**Hsinying** baz=220	**1.86**	**221**	*e*P	Pn	17 03 25.8	+2.2
CHN1	**Nanshi** baz=218	**1.90**	**219**	*e*S	Sn	17 03 49.4	+2.4
SGST	**Jiashian** baz=215	**1.95**	**216**	*e*S	Sn	17 03 49.3	+1.0
PTTC	**Pingtan** baz=293	**2.03**	**294**	*e*P	Pn	17 03 25.1	-0.7
PTTC	baz=293			*e*S	Sn	17 03 49.3	-0.9
VWUC	**VWUC** baz=278	**2.17**	**279**	*e*P	Pn	17 03 27.2	-0.6
VWUC	baz=278			*e*S	Sn	17 03 51.3	-2.4
TSMG	**Majia** baz=208	**2.24**	**209**	*e*P	Pn	17 03 30.4	+1.7
MATB	**Ma-tsu** baz=310	**2.24**	**311**	*e*P	Pn	17 03 28.0	-0.7
MATB	baz=310			*e*S	Sn	17 03 54.5	-0.8
MSUT	**Lienchiang** baz=310	**2.27**	**311**	*e*S	Sn	17 03 55.5	-0.5
MASBT	**Mashibuluo** baz=207	**2.32**	**208**	*e*P	Pn	17 03 30.7	+0.8
MASBT	baz=207			*e*S	Sn	17 03 59.0	+1.7
PTMZ	**Houxiangcun** baz=278	**2.48**	**279**	*e*P	Pn	17 03 31.4	-0.5
PTMZ	baz=278			*e*S	Sn	17 03 58.5	-2.5
LYJJ	**Jianjiangzhen** baz=315	**2.63**	**316**	*e*P	Pn	17 03 33.7	-0.3
LYJJ	baz=315			*e*S	Sn	17 04 04.5	-0.4
XPSS	**Dashiqiu** baz=326	**2.68**	**327**	*e*P	Pn	17 03 34.4	-0.3
XPSS	baz=326			*e*S	Sn	17 04 05.7	-0.3
KNMB	**Chin-men Tao** baz=266	**3.13**	**267**	*e*P	Pn	17 03 40.1	-0.7
KNMB	baz=266			*e*S	Sn	17 04 14.4	-2.6
AXDP	**Jialang** baz=273	**3.50**	**274**	*e*P	Pn	17 03 45.5	-0.4

SOME ***30*** *17:39:55.9, 42°.22N×83°.80E, h10^{km}*
NNC ***30*** *17:39:58.3±1.4, 42°.33N×83°.74E, h11^{km}±8^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=10.3km s-min=6.0km az=149.0*
ISC 30 17:39:60.0±2.0**, 42°.45N**±0°.09×**83°.64E**±0°.07**, h10**^{km}**, n42, σ2^{s}.46**/59**, 3C-9D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen** 12nm,0.2s	**2.61**	**294**	*e*P	**Pb**	**17 40 48.0**	**+1.0**
KTMS	94nm,0.5s			*e*S	**Sg**	**17 41 25.9**	**+1.9**
KTMS	**Ketmen** 12nm,0.2s	**2.61**	**294**	Pg	**Pb**	**17 40 48.0**	**+1.0**
KTMS	94nm,0.5s			Lg	Lg	17 41 25.9	
SHLS	**Shalkode** 26nm,0.5s	**3.16**	**284**	*e*P	**Pn**	**17 40 52.5**	**+2.6**
SHLS	105nm,0.5s			*e*S	**Sb**	**17 41 33.6**	**-1.2**
SHLS	**Shalkode** 26nm,0.5s	**3.16**	**284**	Pg	**Pn**	**17 40 52.5**	**+2.6**
SHLS	105nm,0.5s			Lg	Lg	17 41 33.6	
PDGK	**Podgornoye** 1.1nm,0.2s	**3.18**	**287**	Pg	**Pb**	**17 40 57.5**	**+1.0**
PDGK	16nm,0.4s			Lg	Lg	17 41 42.0	
PDGK	**Podgornoye** 1.3nm,0.6s	**3.18**	**287**	⇑Pn	**Pn**	**17 40 50.1**	**-0.1**
PDGK	6.3nm,0.7s			⇓Pg	**Pb**	**17 40 57.7**	**+1.1**
PDGK	30nm,0.5s			⇓Lg	Lg	17 41 43.6	
DJR	**Jarkent** 3.9nm,0.4s	**3.38**	**305**	*e*P	**Pb**	**17 41 01.6**	**+1.6**
DJR	28nm,0.5s			*e*S	**Sg**	**17 41 49.5**	**+0.9**
DJR	**Jarkent** 3.9nm,0.4s	**3.38**	**305**	Pg	**Pb**	**17 41 01.6**	**+1.6**
DJR	28nm,0.5s			Lg	Lg	17 41 49.5	
UZB	**Uzynbulak** 1.1nm,0.2s	**3.47**	**283**	*e*P	**Pg**	**17 41 04.4**	**-2.1**
UZB	26nm,0.6s			*e*S	**Sg**	**17 41 54.2**	**+2.8**
UZB	**Uzynbulak** 1.1nm,0.2s	**3.47**	**283**	Pg	**Pg**	**17 41 04.4**	**-2.1**
UZB	26nm,0.6s			Lg	Lg	17 41 54.3	
KPKS	**Kokpek** 5.1nm,0.3s	**3.78**	**287**	*e*P	**Pb**	**17 41 08.0**	**+1.1**
KPKS	47nm,0.5s			*e*S	**Sg**	**17 42 00.2**	**-1.1**
SATY	**Saty** 4.2nm,0.3s	**3.91**	**281**	*e*P	**Pb**	**17 41 10.1**	**+1.1**
SATY	24nm,0.4s			*e*S	**Sg**	**17 42 03.6**	**-1.8**
KURS	**Kuram** 3.3nm,0.9s	**4.15**	**286**	*e*P	**Pb**	**17 41 14.9**	**+1.7**
KURS	11nm,0.9s			*e*S	**Sg**	**17 42 11.8**	**-1.4**
KURS	**Kuram** 3.3nm,0.9s	**4.15**	**286**	Pg	**Pb**	**17 41 14.9**	**+1.7**
KURS	11nm,0.9s			Lg	Lg	17 42 11.8	
MNBS	**Baschi** 3.5nm,0.3s	**4.16**	**295**	*e*P	**Pb**	**17 41 15.7**	**+2.4**
MNBS	20nm,0.5s			*e*S	**Sg**	**17 42 13.1**	**-0.5**
MNBS	**Baschi** 3.5nm,0.3s	**4.16**	**295**	Pg	**Pb**	**17 41 15.7**	**+2.4**
MNBS	20nm,0.5s			Lg	Lg	17 42 13.1	
KAPS	**Kapalarasan** 3.3nm,0.3s	**4.20**	**314**	*e*P	**Pg**	**17 41 18.0**	**-2.4**
KAPS	13nm,0.5s			*e*S	**Sg**	**17 42 16.7**	**+1.9**
KAPS	**Kapalarasan** 3.3nm,0.3s	**4.20**	**314**	Pg	**Pg**	**17 41 18.0**	**-2.4**
KAPS	13nm,0.5s			Lg	Lg	17 42 16.7	
MK31	**Makanchi Array** 0.1nm,0.3s,baz=156,slow=14,SNR=7.9	**4.45**	**348**	⇑Pn	**Pn**	**17 41 07.1**	**-0.4**
MK31	1.7nm,0.4s,baz=160,slow=17,SNR=28			⇓Pg	**Pb**	**17 41 21.5**	**+3.3**
MK31	8.2nm,0.5s,baz=164,slow=29,SNR=7.8			⇓Lg	Lg	17 42 23.8	
MAKZ	**Makanchi** 11nm,1.1s	**4.52**	**345**	⇓Pg	**Pg**	**17 41 23.6**	**-2.9**
MAKZ	11nm,0.8s			⇑Lg	Lg	17 42 25.4	
ARXS	**Arharly** 3.4nm,0.2s	**4.59**	**295**	*e*P	**Pb**	**17 41 23.4**	**+2.7**
ARXS	16nm,0.4s			*e*S	**Sg**	**17 42 26.8**	**-0.7**
ARXS	**Arharly** 3.4nm,0.2s	**4.59**	**295**	Pg	**Pb**	**17 41 23.4**	**+2.7**
ARXS	16nm,0.4s			Lg	Lg	17 42 26.8	
KOTS	**Kotyrbulak** 5.5nm,0.5s	**4.87**	**281**	*e*P	**Pg**	**17 41 30.2**	**-3.0**
KOTS	32nm,0.5s			*e*S	**Sg**	**17 42 38.6**	**+2.3**
KOTS	**Kotyrbulak** 5.5nm,0.5s	**4.87**	**281**	Pg	**Pg**	**17 41 30.2**	**-3.0**
KOTS	32nm,0.5s			Lg	Lg	17 42 38.6	
MDOK	**Medeo** 2.3nm,0.6s	**4.91**	**281**	*e*P	**Pb**	**17 41 29.8**	**+3.8**
MDOK	10nm,0.8s			*e*S	**Sg**	**17 42 37.2**	**-0.2**
MDOK	**Medeo** 3.6nm,0.6s	**4.91**	**281**	Pg	**Pb**	**17 41 29.0**	**+3.0**
MDOK	9.9nm,0.6s			⇓Lg	Lg	17 42 36.5	
MDOK	**Medeo** 2.3nm,0.6s	**4.91**	**281**	Pg	**Pb**	**17 41 29.8**	**+3.8**
MDOK	10nm,0.8s			Lg	Lg	17 42 37.2	
TNSS	**Tian-Shan** 2.7nm,0.4s	**4.97**	**279**	*e*P	**Pg**	**17 41 32.4**	**-2.8**
TNSS	5.4nm,0.5s			*e*S	**Sg**	**17 42 41.4**	**+1.9**
TNSS	**Tian-Shan** 2.7nm,0.4s	**4.97**	**279**	Pg	**Pg**	**17 41 32.4**	**-2.8**
TNSS	5.4nm,0.5s			Lg	Lg	17 42 41.4	
ZSN	**Zaisan** 8.1nm,0.5s	**5.08**	**9**	*e*P	**Pg**	**17 41 33.7**	**-3.5**
ZSN	16nm,0.9s			*e*S	**Sg**	**17 42 44.3**	**+1.4**
ZSN	**Zaisan** 8.1nm,0.5s	**5.08**	**9**	Pg	**Pg**	**17 41 33.7**	**-3.5**
ZSN	16nm,0.9s			Lg	Lg	17 42 44.3	
IZV	**Izvestkoviy** 2.2nm,0.6s	**5.21**	**279**	*e*P	**Pb**	**17 41 32.8**	**+1.5**
IZV	9.7nm,0.5s			*e*S	**Sg**	**17 42 42.1**	**-5.2**
IZV	**Izvestkoviy** 2.2nm,0.6s	**5.21**	**279**	Pg	**Pb**	**17 41 32.8**	**+1.5**
IZV	9.7nm,0.5s			Lg	Lg	17 42 42.1	
KTBS	**Karatobe** 1.9nm,0.6s	**5.25**	**286**	*e*P	**Pb**	**17 41 35.8**	**+3.9**
KTBS	13nm,0.6s			*e*S	**Sg**	**17 42 47.4**	**-1.2**
KTBS	**Karatobe** 1.9nm,0.6s	**5.25**	**286**	Pg	**Pb**	**17 41 35.8**	**+3.9**
KTBS	13nm,0.6s			Lg	Lg	17 42 47.4	
KUU	**Kurty** 1.9nm,0.4s	**5.53**	**288**	*e*P	**Pg**	**17 41 42.3**	**-3.7**
KUU	8.5nm,0.5s			*e*S	**Sg**	**17 42 58.5**	**+0.9**
KUU	**Kurty** 1.9nm,0.4s	**5.53**	**288**	Pg	**Pg**	**17 41 42.3**	**-3.7**
KUU	8.5nm,0.5s			Lg	Lg	17 42 58.5	
KST	**Kastek** 5.1nm,0.4s	**5.69**	**279**	*e*P	**Pg**	**17 41 46.1**	**-2.8**
KST	5.5nm,0.7s			*e*S	**Sg**	**17 43 04.9**	**+2.4**
KST	**Kastek** 5.1nm,0.4s	**5.69**	**279**	Pg	**Pg**	**17 41 46.1**	**-2.8**
KST	5.5nm,0.7s			Lg	Lg	17 43 04.9	
TKM2	**Tokmak 2** 8.8nm,0.8s	**5.95**	**277**	⇓Lg	Lg	17 43 11.1	
AAK	**Ala-Archa** 4.0nm,0.8s	**6.76**	**275**	⇓Lg	Lg	17 43 35.9	
KURK	**Kurchatov** 0.4nm,0.4s	**8.96**	**339**	⇓Lg	Lg	17 44 45.4	

NEIC ***30*** *17:56:49.0±2.5, 21°.28S±0°.09×170°.11E±0°.02, h4^{km}±4^{km}, mb4.8/40, Error ellipse: s-maj=12.7km s-min=2.6km az=177.0*
IDC ***30*** *17:56:49.6±1.1, 21°.16S×169°.95E, h0^{km}, mb4.3/8, mb1 4.6/10, mb1mx4.2/31, mbtmp4.4/10, ML3.6/2, Error ellipse: s-maj=37.6km s-min=19.3km az=152.0*
NOU ***30*** *17:56:54.9, 21°.37S×169°.66E, h0^{km}, MLv5.4, Southeast of Loyalty Islands*
ISC 30 17:56:50.2±0.4**, 21°.25S**±0°.06×**170°.11E**±0°.06**, h10**^{km}**, n92, σ1^{s}.19**/82**, mb4.8**/27**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.95**	**263**	P	**Pn**	**17 57 21.9**	**-1.4**
PINNC	**Pines Island,**	**2.82**	**241**	P	**Pn**	**17 57 34.5**	**-0.7**
YATNC	**Mamie plateau,**	**3.10**	**254**	P	**Pn**	**17 57 38.4**	**-0.7**
OUENC	**Ouen Island, N**	**3.25**	**248**	P	**Pn**	**17 57 41.5**	**+0.3**
DZM	**Mont Dzumac** 8.2nm,0.3s,baz=305,slow=23,SNR=84	**3.50**	**256**	Pn	**Pn**	**17 57 44.8**	**0.0**
DZM	25nm,0.3s,baz=262,slow=23,SNR=11			Sn	**Sn**	**17 58 26.8**	**+0.5**
DZM	**Mont Dzumac**	**3.50**	**256**	Pn	**Pn**	**17 57 44.3**	**-0.5**

DZM				Sn	Sn	17 58 25.4	-0.9
DZM	Mont Dzumac	3.50	256	P	Pn	17 57 45.4	+0.6
ONTNC	Ouen Toro	3.55	252	P	Pn	17 57 45.7	+0.3
NOUC	Port Laguerre	3.64	256	P	Pn	17 57 46.7	+0.2
DVP	Devils Point	3.95	332	P	Pb	17 57 55.7	-4.1
SANVU	Saraoutou	6.40	334	Pn	Pn	17 58 24.7	+0.2
MSVF	Nonsavu	8.27	66	Pn	Pn	17 58 49.8	-0.5
OUZ	Omahuta	14.25	168		P	18 00 18.0	-1.4
EIDS	Eidsvold	17.95	253	P	P	18 01 01.9	+1.4
URZ	Urewera	18.00	162	P	P	18 01 02.5	+1.5
	0.1nm,0.3s,baz=20,slow=15,SNR=6.0						
URZ	Urewera	18.00	162	P	P	18 00 59.9	-1.1
URZ				IAmb	IAmb	18 01 02.5	
	comp=Z,81nm,1.6s						
BKZ	Black Stump Fm	18.68	164	P	Pn	18 01 08.6	-0.2
ARMA	Armidale	18.95	237	P	Pn	18 01 14.3	+2.0
QRZ	Quartz Range	19.62	175	P	Pn	18 01 19.7	-0.4
QRZ				IAmb	IAmb	18 01 23.1	
	comp=Z,80nm,1.5s						
BFZ	Birch Farm	20.06	166	P	P	18 01 22.2	-1.4
BFZ				IAmb	IAmb	18 01 41.5	
	comp=Z,80nm,1.3s						
TUWZ	Tuamarina	20.38	172	P	P	18 01 26.2	-0.8
MSWZ	Moikau Station	20.57	169	P	P	18 01 28.1	-1.1
THZ	Tophouse	20.59	174	P	P	18 01 29.5	+0.1
PLWZ	Palliser	20.72	169	P	P	18 01 29.4	-1.4
KHZ	Kahutara	21.30	173	P	P	18 01 36.2	-0.7
KHZ				IAmb	IAmb	18 01 51.4	
	comp=Z,65nm,1.7s						
LTZ	Lake Taylor	21.55	176	P	P	18 01 39.9	+0.3
LTZ				IAmb	IAmb	18 01 47.1	
	comp=Z,63nm,1.4s						
OXZ	Oxford	22.07	176	P	P	18 01 44.2	-1.0
OXZ				IAmb	IAmb	18 02 11.9	
	comp=Z,56nm,1.4s						
FOZ	Fox Glacier	22.22	181	P	P	18 01 46.9	+0.1
FOZ				IAmb	IAmb	18 01 57.8	
	comp=Z,107nm,1.7s						
CTAO	Charters Tower	22.34	269	P	P	18 01 49.0	+0.6
CTAO				IAmb	IAmb	18 02 17.7	
	comp=Z,60nm,1.8s						
TARA	Tarawa	22.64	7	P	P	18 01 53.6	+2.1
PMG	Port Moresby	25.03	295	P	P	18 02 15.8	+1.2
PMG				IAmb	IAmb	18 02 24.6	
	comp=Z,39nm,1.2s						
COEN	Coen	26.65	281	P	P	18 02 31.8	+2.5
STKA	Stephens Creek	27.53	241	P	P	18 02 37.8	+0.7
	comp=Z,4.9nm,0.8s,baz=51,slow=7.3,SNR=8.3						
STKA	Stephens Creek	27.53	241	P	P	18 02 37.7	+0.5
TAU	Tasmania Unive	28.80	216	P	P	18 02 47.3	-1.0
BBOO	Buckleboo	32.30	242	P	P	18 03 17.9	-1.5
WR0	Warramunga Arr	33.27	266	P	P	18 03 26.4	-1.7
WR0				IAmb	IAmb	18 03 33.7	
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	33.44	266	P	P	18 03 28.0	-1.5
WB0				IAmb	IAmb	18 03 29.1	
	comp=Z,13nm,0.9s						
WB2	Warramunga Arr	33.45	266	P	P	18 03 28.4	-1.3
WB2				IAmb	IAmb	18 03 35.2	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	33.45	266	P	P	18 03 28.0	-1.6
WRAB				IAmb	IAmb	18 03 35.2	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	33.46	266	P	P	18 03 28.3	-1.4
	comp=Z,6.5nm,0.7s,baz=94,slow=8.2,SNR=70						
WRA	Warramunga Arr	33.46	266	P	P	18 03 28.2	-1.6
AS31	Alice Springs	33.49	259	P	P	18 03 29.2	-0.7
ASAR	Alice Springs	33.49	259	P	P	18 03 29.4	-0.5
	comp=Z,9.0nm,0.8s,baz=84,slow=8.9,SNR=72						
ASAR	Alice Springs	33.49	259	P	P	18 03 28.5	-1.4
MTN	Manton Dam	38.10	276	P	P	18 04 09.0	-0.6
MTN				IAmb	IAmb	18 04 15.2	
	comp=Z,10nm,0.6s						
PPTF	Pamatai, Papee	38.14	92	P	P	18 04 07.6	-2.3
FORT	Forrest	38.77	247	P	P	18 04 14.7	-0.3
FORT				IAmb	IAmb	18 04 42.8	
	comp=Z,24nm,0.9s						
FITZ	Fitzroy Crossi	41.89	266	P	P	18 04 41.0	0.0
	comp=Z,17nm,0.8s,baz=132,slow=7.8,SNR=30						
FITZ	Fitzroy Crossi	41.89	266	P	P	18 04 40.9	-0.1
FITZ				IAmb	IAmb	18 04 41.8	
	comp=Z,16nm,0.8s						
PSA00	Pilbara Seismi	46.62	260	P	P	18 05 17.4	-1.5
PSA00				IAmb	IAmb	18 05 34.1	
	comp=Z,13nm,1.1s						
NWAO	Narrogin (SRO)	48.05	244	P	P	18 05 29.6	-0.4
NWAO	Narrogin (SRO)	48.05	244	P	P	18 05 31.2	+1.3
NWAO				IAmb	IAmb	18 05 33.2	
	comp=Z,39nm,1.3s						
MORW	Morawa	49.20	249	P	P	18 05 38.6	-0.2
TOLI2	Tolitoli	53.06	288	P	P	18 06 07.4	-0.6
TOLI2				IAmb	IAmb	18 06 13.8	
	comp=Z,12nm,0.9s						
VNDA	Vanda	56.46	182	P	P	18 06 32.7	+1.0
VNDA				IAmb	IAmb	18 06 46.0	
	comp=Z,30nm,1.6s						
UGM	Wanagama	58.86	274	P	P	18 06 49.5	-0.2
NJ2	Nanjing	72.21	316	*e*P	P	18 08 17.5	+2.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SMY	Shemya	73.75	3	P	P	18 08 26.6	+2.5
PETK	Petropavlovsk-	74.83	352	P	P	18 08 31.6	+1.1
UTTA	Uttaradit	78.38	294	P	P	18 08 58.8	+7.5
LAMP	Lampang	79.51	295	P	P	18 09 04.2	+6.6
CM04	Chiang Mai Arr	80.01	294	P	P	18 09 06.6	+6.3
CM09	Chiang Mai Arr	80.02	294	P	P	18 09 06.0	+5.6
BELA	Belgrano 2	80.03	175	P	P	18 08 59.8	+0.4
CM05	Chiang Mai Arr	80.04	294	P	P	18 09 06.7	+6.2
CM02	Chiang Mai Arr	80.05	294	P	P	18 09 06.9	+6.4
CM31	Chiang Mai Arr	80.07	294	P	P	18 09 07.3	+6.7
CM31	Chiang Mai Arr	80.07	294	P	P	18 09 01.4	+0.8
CMAR	Chiang Mai Arr	80.07	294	P	P	18 09 01.0	+0.4
	comp=Z,0.8nm,0.9s,baz=135,slow=4.3,SNR=7.5						
CMAR	Chiang Mai Arr	80.07	294	P	P	18 09 00.0	-0.6
CM15	Chiang Mai Arr	80.08	294	P	P	18 09 06.0	+5.3
CM13	Chiang Mai Arr	80.08	294	P	P	18 09 06.0	+5.3
CMMT	Chiang Mai	80.22	295	P	P	18 09 06.0	+4.5
CHTO	Chiang Mai	80.22	295	P	P	18 09 00.7	-0.7
HHC	Hu-ho-hao-te	82.27	319	*e*P	P	18 09 11.0	-1.0
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
LZH	Lanzhou	84.67	312	*e*P	P	18 09 26.3	+1.8
LZH				pP	pwP	18 09 29.0	-1.1
LZH				sP	sP	18 09 29.8	+1.7
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,5.6s						
GTA	Gaotai	89.09	313	*e*P	P	18 09 50.5	+4.6
GTA				pP	pwP	18 10 00.5	+9.0
GTA				sP	sP	18 10 04.5	+15
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	89.31	323	P	P	18 09 46.8	0.0
	comp=Z,1.8nm,1.0s,baz=110,slow=2.6,SNR=9.7						
SONM	Songino Array	89.31	323	IAmb	IAmb	18 09 52.1	
	comp=Z,2.4nm,1.0s						
NVAR	Mina Array Bea	89.52	48	P	P	18 09 48.9	+0.7
	comp=Z,0.4nm,0.6s,baz=232,slow=5.6,SNR=2.3						
ILAR	Eielson Array	91.90	17	P	P	18 09 58.5	+0.2
	comp=Z,0.4nm,0.6s,baz=233,slow=4.9,SNR=10						
WMQ	Urumqi	99.17	313	*e*P	Pdif	18 10 33.5	+1.5
YKA	Yellowknife Ar	102.07	27	P	Pdif	18 10 45.4	+1.1
	comp=Z,0.2nm,0.5s,baz=248,slow=4.7,SNR=2.0						
EKA	Eskdalemuir Ar	145.59	353	PKPbc	PKiKP	18 16 30.9	-1.5
	comp=Z,1.0nm,0.5s,baz=3.8,slow=1.9,SNR=6.9						
CONA	Conrad Observa	146.27	328	*e*P	PKPdf	18 16 29.2	-0.7
	comp=Z,7.8nm,1.5s						
GERES	GERESS Array B	146.64	331	PKPbc	PKPbc	18 16 31.9	-0.2
	comp=Z,1.7nm,0.8s,baz=35,slow=3.6,SNR=7.4						
ARSA	Arzberg	146.90	328	*e*P	PKPab	18 16 33.7	-0.6
	comp=Z,13nm,1.8s						
KBA	Koelnbreinsper	148.09	329	*e*P	PKPab	18 16 38.1	-1.0
	comp=Z,6.5nm,1.4s						
ABTA	Abfaltersbach	148.72	330	*e*P	PKiKP	18 16 38.8	-0.5
	comp=Z,10nm,1.3s						
RETA	Reutte	148.96	332	*e*P	PKPdf	18 16 33.8	-0.6
	comp=Z,7.1nm,1.3s						
SQTA	Sankt Quirin	148.97	332	*e*P	PKPab	18 16 42.0	-0.6
	comp=Z,0.1nm,0.3s						

WEL 30 17:56:58.7±0.8,**34°S**±14°×**17°9W**±3°1,**h33**^{km},**M3.9**/10, **mB4.5**/1,**ML4.0**/10,**MLv3.9**/10,**Mw(mB)3.7**/1,**Error ellipse: s-maj=0.0km s-min=0.0km az=113.1,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.36	204	P	Pn	17 58 01.7	-0.9
MXZ				S	Sn	17 58 52.0	-0.2
GLKZ	Green Lake	4.51	17	S	Sn	17 58 56.2	+0.2
WMGZ	Waiomatatini S	4.56	202	P	Pn	17 58 06.3	+1.0
WMGZ				S	Sn	17 58 57.1	0.0
HAZ	Te Kaha	4.72	208	P	Pn	17 58 08.4	+0.9
HAZ				S	Sn	17 59 05.3	+4.2
PKGZ	Pakihiroa	4.73	204	P	Pn	17 58 07.6	-0.2
PKGZ				S	Sn	17 59 02.4	+0.9
RUGZ	Raukumara Rang	4.95	207	P	Pn	17 58 10.3	-0.5
RUGZ				S	Sn	17 59 08.8	+2.0
CNGZ	Carnagh Statio	5.23	201	P	Pn	17 58 14.4	-0.1
MWZ	Matawai	5.33	207	P	Pn	17 58 15.8	-0.1
MWZ				S	Sn	17 59 16.0	0.0
URZ	Urewera	5.42	210	P	Pn	17 58 17.5	+0.3
URZ				S	Sn	17 59 18.6	+0.2
MUGZ	Murupara	5.75	211	P	Pn	17 58 22.0	+0.3
MUGZ				S	Sn	17 59 26.5	-0.1
RTZ	Ruatahuna	5.78	209	P	Pn	17 58 19.9	-2.3
RTZ				S	Sn	17 59 26.9	-0.5
SNGZ	Shannon Statio	5.79	206	P	Pn	17 58 22.0	-0.2
SNGZ				S	Sn	17 59 27.3	-0.2
MTHZ	Maungataniwha	6.04	209	P	Pn	17 58 26.9	+1.2
MTHZ				S	Sn	17 59 35.0	+1.3
KWHZ	Kaweka Forest	6.70	209	P	Pn	17 58 35.7	+1.0
KWHZ				S	Sn	17 59 48.7	-1.2
OTVZ	Oturere	6.81	214	P	Pn	17 58 37.6	+1.2

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*NEIC **30** 17:57:56.6,21°.25S×170°.19E,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.13; $M_{\theta\theta}$-8.41; $M_{\phi\phi}$7.28; $M_{r\theta}$0.35; $M_{\theta\phi}$-4.11; $M_{\phi r}$1.30; Fault plane solution: $M_0$9.01000×10^{17} NP1:ϕ_s300.91000°, δ81.00000°,λ176.02000°. NP2:ϕ_s31.53000°,δ86.07000°, λ9.02000°. Principal axes: T 8.4836, Plg9.0000°, Azm257.0000°; N 0.9762, Plg80.0000°, Azm55.0000°; P -9.4598, Plg4.0000°, Azm166.0000°;*

*NEIC **30** 17:57:56.4±2.1,21°.25S±0°.02×170°.16E±0°.07,h7^{km}±3^{km}, mb5.9/189,Ms_20 5.8/730,Mwb5.9/57,Mwc6.1/48,Mww6.0, Mwc6.0(GCMT) Error ellipse: s-maj=9.2km s-min=3.2km az=92.0*

*MOS **30** 17:57:57.9±1.8,21°.36S×170°.09E,h14^{km},mb5.8/26, MS5.7/32,Error ellipse: s-maj=7.9km s-min=7.0km az=110.3*

*IDC **30** 17:57:57.6±0.4,21°.29S×169°.93E,h0^{km},mb5.0/25, mb1 5.1/26,mb1mx5.1/28,mbtmp5.0/26,ML4.9/1,MS5.7/11, Ms1 5.7/11,ms1mx5.3/15,Error ellipse: s-maj=13.9km s-min=13.2km az=6.0*

*NOU **30** 17:57:59.9,21°.49S×170°.08E,h0^{km},ML5.7,Southeast of Loyalty Islands*

*GCMT **30** 17:58:02.4±0.1,21°.23S×170°.26E,h15^{km},MW6.0/161, Moment Tensor Solution. s159,c345; s161,c556; Duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.28±.01; $M_{\theta\theta}$-0.78±.01; $M_{\phi\phi}$1.06±.01; $M_{r\theta}$0.24±.01; $M_{\theta\phi}$-0.59±.01; $M_{\phi r}$0.19±.01; Best double couple: $M_0$1.15100×10^{18} NP1:ϕ_s300.00000°,δ73.00000°, λ-169.00000°. NP2:ϕ_s207.00000°,δ79.00000°, λ-17.00000°. Principal axes: T 1.2430, Plg4.0000°, Azm254.0000°; N -0.1850, Plg69.0000°, Azm356.0000°; P -1.0590, Plg20.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 17:58:02,21°.24S×170°.26E,h15^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.29; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$1.13; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.29000×10^{18} NP1:ϕ_s302.00000°, δ69.00000°,λ-162.00000°. NP2:ϕ_s206.00000°, δ73.00000°,λ-22.00000°. Principal axes: T 1.3115, Plg3.0000°, Azm254.0000°; N -0.0427, Plg63.0000°, Azm350.0000°; P -1.2688, Plg27.0000°, Azm163.0000°;*

*BGR **30** 17:58:03.5±0.0,21°.44S×169°.87E,h10^{km}*

*NEIC **30** 17:58:06,20°.96S×170°.16E,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.28; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$1.05; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.58; $M_{\phi r}$0.50; Fault plane solution: $M_0$1.24000×10^{18} NP1:ϕ_s300.00000°, δ60.00000°,λ-171.00000°. NP2:ϕ_s206.00000°, δ82.00000°,λ-30.00000°. Principal axes: T 1.3228, Plg15.0000°, Azm256.0000°; N -0.1824, Plg59.0000°, Azm12.0000°; P -1.1404, Plg27.0000°, Azm159.0000°;*

*NEIC **30** 17:58:21.7,21°.02S×170°.37E,h30^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.54; $M_{\theta\theta}$-0.81; $M_{\phi\phi}$1.34; $M_{r\theta}$0.71; $M_{\theta\phi}$-0.67; $M_{\phi r}$-0.32; Fault plane solution: $M_0$1.55000×10^{18} NP1:ϕ_s305.32000°, δ75.70000°,λ-142.92000°. NP2:ϕ_s204.74000°, δ54.25000°,λ-17.72000°. Principal axes: T 1.6595, Plg14.0000°, Azm71.0000°; N -0.2231, Plg51.0000°, Azm323.0000°; P -1.4364, Plg36.0000°, Azm171.0000°;*

ISC 30 17:57:59.2±0.5,**21°.40S**±0°.03×**170°.18E**±0°.03,**h17**^{km}±3^{km}, **h17**^{km}**:pP-P,n1210,**σ**2^{s}06**/831,**mb5.7**/185,**MS5.8**/417, **30C-43D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.01	267	P	Pn	17 58 29.9	-2.4
PINNC	Pines Island,	2.81	244	P	Pn	17 58 42.4	-1.0
YATNC	Mamie plateau,	3.13	257	P	Pn	17 58 48.4	+0.6
OUENC	Ouen Island, N	3.26	251	P	Pn	17 58 50.4	+0.8
DZM	Mont Dzumac	3.54	258	Pn	Pn	17 58 54.1	+0.6
	113nm,0.3s,baz=324,slow=24,SNR=19						
DZM				Sn	Sn	17 59 33.9	-1.1
	205nm,0.3s,baz=240,slow=21,SNR=7.6						
DZM	Mont Dzumac	3.54	258	*e*Pn	Pn	17 58 54.1	+0.6
	340nm,0.2s						
DZM				*e*Sn	Sn	17 59 34.8	-0.3
	659nm,0.4s						
DZM				*e*LR	LR	17 59 42.4	
	comp=Z,335µm,25.8s						
DZM	Mont Dzumac	3.54	258	Pn	Pn	17 58 52.8	-0.7
DZM	Mont Dzumac	3.54	258	P	Pn	17 58 55.0	+1.5
DVP	Devils Point	4.11	332	P	Pn	17 59 04.3	+3.1
SANVU	Saraoutou	6.56	334	Pn	Pn	17 59 33.8	-1.1
SANVU	Saraoutou	6.56	334	P	Pn	17 59 39.1	+4.2
NFK	Norfolk Island	7.88	194	P	Pn	17 59 54.6	+1.5
	baz=8.0,SNR=8.8						
NFK				S	Sn	18 01 23.6	+1.7
	baz=8.0						
NFK	Norfolk Island	7.88	194	P	Pn	17 59 54.0	+0.9
MSVF	Nonsavu	8.26	65	P	Pn	17 59 57.5	-0.9
MSVF	Nonsavu	8.26	65	Pn	Pn	17 59 57.5	-0.9
MSVF	Nonsavu	8.26	65	P	Pn	17 59 58.8	+0.4
RAO	Raoul Island	13.30	128	LR	LR	18 05 21.1	
	comp=Z,21µm,18.5s,baz=305,slow=33						
RAO	Raoul Island	13.30	128	P	Pn	18 01 08.2	+0.9
RAO	Raoul Island	13.30	128	Pn	Pn	18 01 08.2	+0.9
OUZ	Omahuta	14.10	168	Pn	Pn	18 01 20.8	+2.7
OUZ	Omahuta	14.10	168	P	Pn	18 01 21.1	+3.0
LHI	Lord Howe Isla	14.16	222	P	Pn	18 01 21.7	+2.7
	baz=14,SNR=4.7						
LHI	Lord Howe Isla	14.16	222	Pn	P	18 01 23.2	-3.3
HNR	Honiara	15.44	319	Pn	Pn	18 01 37.8	+1.4
	6.7nm,0.3s,baz=121,slow=5.9,SNR=2.5						
HNR				LR	LR	18 06 57.7	
	comp=Z,10µm,18.3s,baz=151,slow=36						
HNR	Honiara	15.44	319	P	Pn	18 01 37.4	+1.0
HNR				pmax	pmax		
	comp=Z,981nm,1.2s						
HNR	Honiara	15.44	319	P	Pn	18 01 37.4	+1.0
HNR				IAmb	IAmb	18 01 47.0	
	comp=Z,981nm,1.2s						
HNR	Honiara	15.44	319	P	P	18 01 41.2	+0.3
FUNA	Funafuti	15.47	36		Pn	18 01 33.1	-3.6
KUZ	Kuaotunu	16.04	164	P	P	18 01 46.8	-0.5
HIZ	Hauiti	17.53	168	P	P	18 02 04.3	+0.4
HAZ	Te Kaha	17.58	160	P	P	18 02 07.1	+2.7
MXZ	Matakaoa Point	17.58	158	P	P	18 02 04.2	-0.2
RUGZ	Raukumara Rang	17.74	160	P	P	18 02 08.3	+2.0
URZ	Urewera	17.84	162	P	P	18 02 09.5	+2.2
	comp=Z,4.0nm,0.3s,baz=1.2,slow=7.1,SNR=62						
URZ				LR	LR	18 07 37.6	
	comp=Z,27µm,20.6s,baz=24,slow=32						
URZ	Urewera	17.84	162	P	P	18 02 07.5	+0.3
URZ	Urewera	17.84	162	P	P	18 02 10.1	+2.9
WMGZ	Waiomatatini S	17.85	158	P	P	18 02 11.7	+4.3
MUGZ	Murupara	17.95	163	P	P	18 02 12.9	+4.4
EIDS	Eidsvold	17.97	254	P	P	18 02 11.3	+2.4
	baz=18,SNR=39						
EIDS	Eidsvold	17.97	254	P	P	18 02 10.2	+1.3
EIDS				IAmb	IAmb	18 02 30.5	
	comp=Z,1µm,1.8s						
MWZ	Matawai	18.03	161	P	P	18 02 12.0	+2.6
RTZ	Ruatahuna	18.13	163	P	P	18 02 13.3	+2.7
CNGZ	Carnagh Statio	18.38	160	P	Pn	18 02 15.4	+2.1
SNGZ	Shannon Statio	18.39	162	P	Pn	18 02 15.4	+2.0
RAHZ	Arahi	18.44	163	P	Pn	18 02 16.5	+2.5
BKZ	Black Stump Fm	18.52	164	P	Pn	18 02 15.5	+0.4
BKZ				IAmb	IAmb	18 02 20.2	
	comp=Z,2µm,1.7s						
KNZ	Kokohu	18.71	162	P	Pn	18 02 17.6	+0.4
AFI	Afiamalu	18.72	70	P	P	18 02 12.3	-4.9
AFI				pmax	pmax		
	comp=Z,416nm,1.1s						
AFI	Afiamalu	18.72	70	P	P	18 02 12.3	-4.9
AFI	Afiamalu	18.72	70	P	Pn	18 02 19.7	+2.0
NIUE	Niue	18.81	86	P	P	18 02 16.7	-1.3
	baz=19,SNR=4.5						
NIUE	Niue	18.81	86	P	P	18 02 14.8	-3.2
NIUE	Niue	18.81	86	P	Pn	18 02 21.7	+3.1
ARMA	Armidale	18.93	238	P	Pn	18 02 22.7	+2.5
	baz=19,SNR=32						
ARMA	Armidale	18.93	238	P	Pn	18 02 22.0	+1.8
ARMA				IAmb	IAmb	18 02 33.3	
	comp=Z,911nm,1.4s						
QRZ	Quartz Range	19.47	175	P	Pn	18 02 26.6	+0.1
QRZ				IAmb	IAmb	18 02 32.5	
	comp=Z,1µm,1.5s						
BFZ	Birch Farm	19.90	166	P	P	18 02 30.0	+0.1
NNZ	Nelson	19.95	173	P	Pn	18 02 32.0	-0.1
RMQ	Roma	20.22	251	P	Pn	18 02 36.1	+0.7
	baz=20,SNR=60						
SNZO	South Karori	20.22	170	P	P	18 02 33.9	+0.6
SNZO				IAmb	IAmb	18 02 41.0	
	comp=Z,710nm,1.3s						
SNZO	South Karori	20.22	170	IAMs_20	IAMs_20	18 10 01.9	
	comp=Z,32µm,19.0s						
TUWZ	Tuamarina	20.23	172	P	Pn	18 02 34.4	-1.0
BHW	Baring Head	20.34	170	P	P	18 02 34.7	0.0
MSWZ	Moikau Station	20.41	169	P	P	18 02 34.7	-0.7
THZ	Tophouse	20.43	174	P	Pn	18 02 37.1	-0.8
BSWZ	Blackbirch Sta	20.50	172	P	P	18 02 36.4	0.0
PLWZ	Palliser	20.56	169	P	P	18 02 36.9	-0.2
CMWZ	Cape Campbell	20.57	171	P	Pn	18 02 38.4	-1.1
MGCD	Mangrove Creek	20.59	231	P	Pn	18 02 41.1	+1.3
	baz=21,SNR=4.7						
RIV	Riverview	20.88	230	P	Pn	18 02 46.8	+3.8
	baz=21,SNR=8.3						
KHZ	Kahutara	21.15	173	P	P	18 02 44.0	+0.6
KHZ				IAmb	IAmb	18 02 47.5	
	comp=Z,782nm,1.4s						
LTZ	Lake Taylor	21.40	176	P	P	18 02 48.0	+1.9
OXZ	Oxford	21.92	176	P	P	18 02 51.6	-0.1
OXZ				IAmb	IAmb	18 02 54.8	
	comp=Z,285nm,1.0s						
FOZ	Fox Glacier	22.08	181	P	P	18 02 54.2	+0.9
RPZ	Rata Peaks	22.27	178	P	P	18 02 56.9	+1.4
	comp=Z,109nm,0.9s,baz=20,slow=4.7,SNR=20						
RPZ				LR	LR	18 10 15.5	
	comp=Z,17µm,20.6s,baz=2.0,slow=33						
RPZ	Rata Peaks	22.27	178	P	P	18 02 55.1	-0.3
MQZ	McQueen's Vall	22.34	175	P	P	18 02 55.5	-0.7
MQZ				IAmb	IAmb	18 03 03.3	
	comp=Z,559nm,1.8s						
CTAO	Charters Tower	22.41	269	P	P	18 02 56.0	-1.2
CTAO				pmax	pmax		
	comp=Z,451nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,34µm,19.0s						
CTAO	Charters Tower	22.41	269	P	P	18 02 56.0	-1.2
CTAO				IAmb	IAmb	18 03 16.6	
	comp=Z,452nm,1.5s						
CTAO	Charters Tower	22.41	269	IAMs_20	IAMs_20	18 11 28.3	
	comp=Z,34µm,19.0s						
TARA	Tarawa	22.77	7	P	P	18 02 58.6	-2.4
TARA	Tarawa	22.77	7	P	P	18 03 03.4	+2.5
CNB	Canberra Magne	22.91	228	P	P	18 03 04.5	+2.0
	baz=23,SNR=12						
LBZ	Lake Benmore	22.93	180	P	P	18 03 02.3	-0.1
LBZ				IAmb	IAmb	18 03 20.6	
	comp=Z,565nm,1.6s						
YNG	Young	23.10	232	P	P	18 03 06.0	+1.8
	baz=23,SNR=5.9						
CAN	Canberra	23.17	229	P	P	18 03 06.5	+1.4
CAN				pmax	pmax		
	comp=Z,575nm,1.4s						
CAN				MLR	MLR		
	comp=Z,34µm,19.0s						
CAN	Canberra	23.17	229	P	P	18 03 06.5	+1.4
CAN				IAmb	IAmb	18 03 16.5	
	comp=Z,575nm,1.4s						
CAN				IAMs_20	IAMs_20	18 10 34.8	
	comp=Z,34µm,19.0s						
WKZ	Wanaka	23.39	182	P	P	18 03 08.9	+1.8
WKZ				IAMs_20	IAMs_20	18 10 55.8	
	comp=Z,24µm,20.0s						
ODZ	Otahua Downs	23.59	179	P	P	18 03 09.5	+0.4
ODZ				IAmb	IAmb	18 03 12.2	
	comp=Z,710nm,2.0s						
MLZ	Mavora Lakes	23.97	184	P	P	18 03 13.6	+0.9
MLZ				IAmb	IAmb	18 03 35.2	
	comp=Z,596nm,1.9s						
CMSA	Cobar Meteorol	24.09	240	P	P	18 03 14.5	+0.6
	baz=24,SNR=26						
DCZ	Deep Cove	24.14	185	P	P	18 03 15.0	+0.8
DCZ				IAmb	IAmb	18 03 21.1	
	comp=Z,210nm,1.0s						
QLP	Quilpie	24.24	253	P	P	18 03 15.4	0.0
	baz=24,SNR=25						
RABL	Rabaul	24.47	312	P	P	18 03 14.9	-2.6
RABL				IAmb	IAmb	18 03 39.2	
	comp=Z,295nm,1.1s						
RABL	Rabaul	24.47	312	P	P	18 03 21.8	+4.2
WHZ	Wether Hill Ro	24.50	184	P	P	18 03 18.3	+0.7
WHZ				IAmb	IAmb	18 03 23.6	
	comp=Z,679nm,1.9s						
MTSU	Mount Surprise	24.55	273	P	P	18 03 18.2	-0.1
	baz=25,SNR=32						
PYZ	Puysegur Point	24.87	186	P	P	18 03 20.7	-0.2
PMG	Port Moresby	25.15	295	P	P	18 03 22.7	-1.0
	comp=Z,75nm,0.9s,baz=91,slow=7.6,SNR=9.4						
PMG				LR	LR	18 11 45.1	
	comp=Z,20µm,18.4s,baz=133,slow=33						
PMG	Port Moresby	25.15	295	P	P	18 03 23.5	-0.2
PMG				pmax	pmax		
	comp=Z,205nm,0.9s						
PMG				MLR	MLR		
	comp=Z,17µm,19.0s						
PMG	Port Moresby	25.15	295	P	P	18 03 23.5	-0.2
PMG				IAmb	IAmb	18 03 32.6	
	comp=Z,205nm,0.9s						
PMG	Port Moresby	25.15	295	P	P	18 03 23.5	-0.2
KNTN	Kanton	25.55	46	P	P	18 03 23.6	-3.8
KNTN				IAmb	IAmb	18 03 36.8	
	comp=Z,468nm,1.4s						
KNTN	Kanton	25.55	46	P	P	18 03 34.1	+6.8
COEN	Coen	26.75	282	P	P	18 03 37.8	-0.5
TOO	Toolangi	26.75	228	P	P	18 03 41.2	+3.1
	baz=27,SNR=4.4						
TOO	Toolangi	26.75	228	P	P	18 03 39.2	+1.1
TOO				pmax	pmax		
	comp=Z,357nm,1.7s						
TOO				MLR	MLR		
	comp=Z,27µm,21.0s						
TOO	Toolangi	26.75	228	P	P	18 03 39.2	+1.1
TOO				IAmb	IAmb	18 03 49.0	
	comp=Z,357nm,1.7s						
TOO				IAMs_20	IAMs_20	18 12 00.6	
	comp=Z,27µm,21.0s						
STKA	Stephens Creek	27.53	242	P	P	18 03 45.6	+0.5
	baz=28,SNR=10						
STKA	Stephens Creek	27.53	242	P	P	18 03 45.1	0.0
	comp=Z,20nm,0.8s,baz=89,slow=11,SNR=19						
STKA				LR	LR	18 14 03.8	
	comp=Z,22µm,19.4s,baz=70,slow=35						
STKA	Stephens Creek	27.53	242	P	P	18 03 44.7	-0.4

STKA				pmax	pmax		
	comp=Z,21nm,0.9s						
STKA				MLR	MLR		
	comp=Z,5µm,19.0s						
STKA	Stephens Creek	27.53	242	P	P	18 03 44.6	-0.4
RAR	Rarotonga	27.97	95	P	P	18 03 52.3	+3.1
	comp=Z,128nm,1.2s,baz=202,slow=6.7,SNR=5.1						
RAR	Rarotonga	27.97	95	P	P	18 03 46.2	-3.0
RAR				pmax	pmax		
	comp=Z,513nm,1.6s						
RAR	Rarotonga	27.97	95	P	P	18 03 46.2	-3.0
RAR	Rarotonga	27.97	95	P	P	18 03 50.5	+1.3
QIS	Mount Isa	28.54	266	P	P	18 03 53.3	-1.0
	baz=29,SNR=8.9						
TAU	Tasmania Unive	28.73	216	P	P	18 03 57.0	+1.3
TAU				pmax	pmax		
	comp=Z,170nm,1.4s						
TAU				MLR	MLR		
	comp=Z,17µm,21.0s						
TAU	Tasmania Unive	28.73	216	P	P	18 03 57.0	+1.3
ARPS	Mount Arapiles	28.98	232	P	P	18 03 59.8	+1.7
	baz=29,SNR=8.5						
MANU	Manus Island	29.39	308	P	P	18 03 59.0	-2.8
HTT	Hallett	30.11	240	P	P	18 04 08.4	+0.3
	baz=30,SNR=23						
KWAJ	Kwajalein Atol	30.11	355	IAMs_20	IAMs_20	18 15 29.2	
	comp=Z,15µm,18.0s						
BBOO	Buckleboo	32.30	242	P	P	18 04 27.0	-0.3
	baz=32,SNR=11						
BBOO	Buckleboo	32.30	242	P	P	18 04 26.6	-0.8
BBOO				IAmb	IAmb	18 04 37.0	
	comp=Z,257nm,1.4s						
WR0	Warramunga Arr	33.33	266	P	P	18 04 33.9	-2.7
WR0				IAmb	IAmb	18 04 45.6	
	comp=Z,88nm,0.8s						
WC3	Warramunga Arr	33.49	266	P	P	18 04 36.0	-2.0
	baz=34						
WB0	Warramunga Arr	33.50	266	P	P	18 04 35.6	-2.5
WB0				IAmb	IAmb	18 04 45.3	
	comp=Z,254nm,1.4s						
WB2	Warramunga Arr	33.51	266	P	P	18 04 35.5	-2.6
WB2				IAmb	IAmb	18 04 45.5	
	comp=Z,160nm,1.1s						
WRAB	Tennant Creek	33.52	266	P	P	18 04 35.6	-2.5
WRAB				pmax	pmax		
	comp=Z,295nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,33µm,19.0s						
WRAB	Tennant Creek	33.52	266	P	P	18 04 35.6	-2.5
WRA	Warramunga Arr	33.52	266	P	P	18 04 36.2	-2.0
	comp=Z,37nm,0.8s,baz=94,slow=8.0,SNR=6.4						
WRA				PcP	PcP	18 07 19.5	+0.5
	comp=Z,4.1nm,0.9s,baz=105,slow=2.8,SNR=2.8						
WRA				LR	LR	18 18 11.0	
	comp=Z,32µm,20.0s,baz=100,slow=36						
WRA	Warramunga Arr	33.52	266	P	P	18 04 35.1	-3.1
WRA					PcP	18 07 18.7	-0.3
AS31	Alice Springs	33.53	259	P	P	18 04 36.5	-1.8
ASAR	Alice Springs	33.53	259	P	P	18 04 37.0	-1.3
	comp=Z,63nm,0.8s,baz=84,slow=8.8,SNR=50						
ASAR				PcP	PcP	18 07 22.0	+3.0
	comp=Z,16nm,0.9s,baz=99,slow=2.7,SNR=5.7						
ASAR				LR	LR	18 17 56.0	
	comp=Z,19µm,21.0s,baz=89,slow=36						
ASAR	Alice Springs	33.53	259	P	P	18 04 37.0	-1.3
ASAR						18 07 22.0	
ASAR	Alice Springs	33.53	259	P	P	18 04 35.9	-2.4
MCQ	Macquarie Isla	34.13	192	P	P	18 04 43.3	+0.3
MCQ				pmax	pmax		
	comp=Z,175nm,1.4s						
MCQ				MLR	MLR		
	comp=Z,10µm,20.0s						
MCQ	Macquarie Isla	34.13	192	P	P	18 04 43.3	+0.3
MCQ				IAmb	IAmb	18 05 06.3	
	comp=Z,175nm,1.4s						
JAY	Jayapura	34.28	299	P	P	18 04 43.0	-1.8
	comp=Z,41nm,0.9s,baz=109,slow=3.2,SNR=7.4						
JAY	Jayapura	34.28	299	P	P	18 04 50.4	+5.6
GENI	Genyem	34.67	299	P	P	18 04 53.7	+5.5
SMPI	Sarmi	36.21	298	P	P	18 05 07.1	+5.7
KDU	Kakadu	37.00	277	P	P	18 05 06.3	-1.8
	baz=37,SNR=4.3						
TBI	Tubuai	37.29	101	*e*S	S	18 10 58.0	+0.5
	comp=Z,4µm,24.6s						
TBI				*e*LQ	LQ	18 13 44.6	
	comp=Z,32µm,33.0s						
TBI				*e*LR	LR	18 15 21.4	
	comp=Z,13µm,29.0s,baz=262						
PAE	Paea	38.03	92	*e*P	P	18 05 19.0	+2.1
	comp=Z,15nm,1.3s						
PPT2	Papeete2	38.05	91	*e*P	P	18 05 19.5	+2.3
	comp=Z,94nm,1.4s						
PPT2				*e*S	S	18 11 09.4	0.0
	comp=Z,4µm,25.5s						
PPT2				*e*LQ	LQ	18 14 04.6	
	comp=Z,45µm,27.8s						
PPT2				*e*LR	LR	18 15 40.6	
	comp=Z,28µm,26.2s,baz=253						
PPT	Papeete	38.06	91	P	P	18 05 20.7	+3.5
	comp=Z,50nm,1.0s,baz=289,slow=7.8,SNR=5.7						
PPTF	Pamatai, Papee	38.06	91	P	P	18 05 14.8	-2.4
PPTF				IAmb	IAmb	18 05 24.7	
	comp=Z,192nm,1.3s						
MTN	Manton Dam	38.19	276	P	P	18 05 16.6	-1.6
	baz=38,SNR=20						
MTN	Manton Dam	38.19	276	P	P	18 05 15.6	-2.6
TIAR	Tiarei	38.27	91	*e*P	P	18 05 21.0	+2.0
	comp=Z,30nm,1.2s						
TVO	Taravao	38.31	92	*e*P	P	18 05 21.3	+1.9
	comp=Z,35nm,1.7s						
SRPI	Serui, Papua	38.33	296	P	P	18 05 17.5	-1.9
	comp=Z,2µmcomp=Z,132nm,1.0s						
FORT	Forrest	38.78	247	P	P	18 05 22.3	-0.8
	baz=39,SNR=9.4						
FORT	Forrest	38.78	247	P	P	18 05 21.9	-1.2
BAKI	Biak	38.81	297	P	P	18 05 22.6	-0.9
	comp=Z,3µmcomp=Z,197nm,1.1s						
MEH	Mehetia	39.40	92	*e*P	P	18 05 30.4	+2.0
	comp=Z,51nm,1.3s						
KMPI	Kaimana, Papua	39.57	291	P	P	18 05 28.3	-1.5
	comp=Z,3µmcomp=Z,166nm,1.0s						
H11S2	WAKE ISLAND Hy	39.79	355	T	T	18 47 29.3	
	baz=181,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	39.79	355	T	T	18 47 30.4	
	baz=181,slow=76,SNR=8.2						
H11S1	WAKE ISLAND Hy	39.80	355	T	T	18 47 37.5	
	baz=181,slow=76,SNR=7.3						
VAH	Vaihoa	40.43	89	*e*P	P	18 05 38.8	+1.9
	comp=Z,115nm,1.1s						
WAKE	Wake Island	40.58	355	P	P	18 05 35.2	-2.8
WAKE	Wake Island	40.58	355	IAMs_20	IAMs_20	18 19 07.5	
	comp=Z,9µm,19.0s						
H11N1	WAKE ISLAND Hy	40.98	355	T	T	18 49 11.4	
	baz=182,slow=76,SNR=8.0						
H11N3	WAKE ISLAND Hy	40.99	355	T	T	18 48 58.6	
	baz=182,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	41.00	355	T	T	18 49 05.5	
	baz=182,slow=76,SNR=6.7						
FAKI	Fak Fak	41.20	291	P	P	18 05 40.8	-2.6
FAKI				IAmb	IAmb	18 05 55.0	
	comp=Z,262nm,1.4s						
FAKI	Fak Fak	41.20	291	P	P	18 05 41.8	-1.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,125nm,1.1s						
FITZ	Fitzroy Crossi	41.95	266	P	P	18 05 48.8	-0.7
	baz=42,SNR=41						
FITZ	Fitzroy Crossi	41.95	266	P	P	18 05 48.8	-0.7
	comp=Z,63nm,0.7s,baz=140,slow=7.0,SNR=34						
FITZ	Fitzroy Crossi	41.95	266	P	P	18 05 47.6	-1.9
FITZ				IAmb	IAmb	18 05 58.1	
	comp=Z,225nm,0.9s						
BNDI	Bandanaira	42.51	287	P	P	18 06 00.9	+6.9
SWI	Sorong	43.08	293	P	P	18 05 56.5	-2.2
	comp=Z,2µmcomp=Z,2µmcomp=Z,182nm,1.3s						
KMBL	Kambalda	44.10	247	P	P	18 06 05.7	-1.1
	baz=44,SNR=12						
SOEI	Soe	45.56	277	P	P	18 06 16.4	-2.3
SOEI				IAMs_20	IAMs_20	18 29 02.5	
	comp=Z,11µm,18.0s						
SOEI	Soe	45.56	277	P	P	18 06 18.7	0.0
	comp=Z,3µmcomp=Z,3µmcomp=Z,148nm,1.1s						
NLAI	Namlea	45.58	287	P	P	18 06 17.6	-1.1
	comp=Z,173nm,1.7s						
BATI	Baumata	45.97	277	P	P	18 06 21.9	+0.1
	comp=Z,2µmcomp=Z,110nm,1.2s						
PSA00	Pilbara Seismi	46.67	260	P	P	18 06 25.5	-1.8
PSA00	Pilbara Seismi	46.67	260	P	P	18 06 26.7	-0.5
PSA00				IAmb	IAmb	18 06 34.6	
	comp=Z,109nm,0.9s						
SANI	Sanana	47.11	288	P	P	18 06 30.2	-0.5
	comp=Z,3µmcomp=Z,3µmcomp=Z,299nm,1.3s						
MEEK	Meekatharra	47.14	253	P	P	18 06 29.7	-1.3
	baz=47,SNR=22						
TNTI	Ternate	47.26	292	P	P	18 06 31.0	-1.0
TNTI				IAmb	IAmb	18 06 46.2	
	comp=Z,277nm,2.0s						
KLBR	Kellerberrin	47.62	246	P	P	18 06 33.3	-1.3
	baz=48,SNR=15						
MMRI	Maumere	47.83	278	P	P	18 06 34.1	-2.2
MMRI	Maumere	47.83	278	P	P	18 06 34.6	-1.8
	comp=Z,3µmcomp=Z,2µmcomp=Z,123nm,0.9s						
NWAO	Narrogin (SRO)	48.05	244	P	P	18 06 37.0	-0.9
	baz=48,SNR=20						
NWAO	Narrogin (SRO)	48.05	244	P	P	18 06 36.8	-1.1
NWAO				pmax	pmax		
	comp=Z,230nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,25µm,21.0s						
NWAO	Narrogin (SRO)	48.05	244	P	P	18 06 36.8	-1.1
NWAO	Narrogin (SRO)	48.05	244	P	P	18 06 36.9	-0.9
NWAO				IAmb	IAmb	18 06 46.7	
	comp=Z,184nm,1.1s						
EDFI	Ende, Flores	48.29	277	P	P	18 06 38.0	-2.1
	comp=Z,2µmcomp=Z,924nmcomp=Z,38nm,1.6s						
BLDU	Ballidu	48.55	248	P	P	18 06 40.2	-1.6
	baz=49,SNR=8.9						
BASI	Baing, Sumba	48.82	275	P	P	18 06 44.1	+0.1
	comp=Z,2µmcomp=Z,4µmcomp=Z,262nm,1.3s						
MUN	Mundaring	48.93	246	P	P	18 06 44.3	-0.4
	baz=49,SNR=4.5						
MORW	Morawa	49.22	250	P	P	18 06 45.9	-1.0
	baz=49,SNR=24						
MORW	Morawa	49.22	250	P	P	18 06 44.7	-2.2
WSI	Waingapu	49.27	276	P	P	18 06 46.7	-0.7
	comp=Z,8µmcomp=Z,589nm,1.5s						
TAOE	Nuku Hiva Isla	49.35	83	*e*S	S	18 13 52.3	-2.2
	comp=Z,6µm,25.4s						
TAOE				*e*LQ	LQ	18 18 41.0	
	comp=Z,6µm,23.7s						
TAOE				*e*LR	LR	18 20 56.7	
	comp=Z,28µm,27.3s,baz=252						
TAOE	Nuku Hiva Isla	49.35	83	IAMs_20	IAMs_20	18 22 18.3	
	comp=Z,8µm,22.0s						
KMSI	Cibinong	50.11	290	P	P	18 06 52.6	-1.2
	comp=Z,1µmcomp=Z,109nm,1.4s						
LUWI	Luwuk	50.42	287	P	P	18 06 53.3	-2.9
LUWI	Luwuk	50.42	287	P	P	18 06 55.6	-0.6
	comp=Z,4µmcomp=Z,4µmcomp=Z,293nm,1.3s						
RKT	Rikitea	50.53	103	*e*S	S	18 14 10.2	-0.5
	comp=Z,5µm,31.2s						
RKT				*e*LR	LR	18 21 27.0	
	comp=Z,7µm,27.0s						
MIDW	Midway	50.77	14	P	P	18 06 55.5	-2.9
MIDW				IAmb	IAmb	18 07 43.6	
	comp=Z,238nm,1.4s						
GTOI	Gorontalo	50.99	289	P	P	18 07 01.8	+1.3
	comp=Z,1µmcomp=Z,114nm,1.4s						
BKSI	Bulukumba	51.01	281	P	P	18 06 59.0	-1.7
	comp=Z,2µmcomp=Z,1µmcomp=Z,125nm,1.1s						
BNSI	Bone	51.39	282	P	P	18 07 08.7	+5.2
DDMP	Don Marcelino,	51.47	297	*e*P	P	18 07 08.9	+4.8
KAPI	Kappang	51.47	281	P	P	18 07 02.0	-2.1
KAPI				pmax	pmax		
	comp=Z,242nm,1.1s						
KAPI	Kappang	51.47	281	P	P	18 07 02.0	-2.1
KAPI				IAmb	IAmb	18 07 12.7	
	comp=Z,242nm,1.1s						
APSI	Ampana	51.48	287	P	P	18 07 11.6	+7.4
GIRL	Giralia	51.62	258	P	P	18 07 06.0	+0.9
	baz=52,SNR=4.3						
GIRL	Giralia	51.62	258	P	P	18 07 03.4	-1.8
MRSI	Marisa	51.86	288	P	P	18 07 12.8	+5.8
SPSI	Sidrap Palu	51.88	282	P	P	18 07 12.9	+5.7
PLAI	Plampang	51.89	276	P	P	18 07 12.2	+4.9
TTSI	Tana Toraja	52.21	283	P	P	18 07 16.6	+7.0
KHU	Kahuku	52.46	42	P	P	18 07 06.9	-4.7
KHU				pmax	pmax		
	comp=Z,302nm,1.4s						
KHU				MLR	MLR		
	comp=Z,5µm,20.0s						
KHU	Kahuku	52.46	42	P	P	18 07 06.9	-4.7
KHU				IAmb	IAmb	18 07 20.3	
	comp=Z,302nm,1.4s						
KCP	Kidapawan	52.48	298	⇑*i*P	P	18 07 12.2	+0.5
KHLU	Kahalu`u	52.54	42	P	P	18 07 08.5	-3.6
KHLU				IAmb	IAmb	18 07 20.7	
	comp=Z,172nm,1.3s						
HON	Honolulu	52.61	38	P	P	18 07 08.3	-4.1
HON				pmax	pmax		
	comp=Z,296nm,1.3s						
HON	Honolulu	52.61	38	P	P	18 07 08.2	-4.1
MWH	Moku‘aweowe	52.65	42	P	P	18 07 09.3	-4.1
KIP	Kipapa	52.68	38	*ce*P	P	18 07 13.8	+0.9
KIP				pmax	pmax		
	comp=Z,139nm,1.3s						
TWSI	Taliwang, Sumb	52.75	275	P	P	18 07 19.8	+6.1
MLH	Mauna Loa	52.79	42	P	P	18 07 12.1	-2.0
MLH				IAmb	IAmb	18 07 22.9	
	comp=Z,238nm,1.3s						
HMH	Humu‘ula Sheep	52.81	42	P	P	18 07 12.2	-2.1
OPA	Opana	52.89	38	P	P	18 07 14.0	-0.5
OPA				pmax	pmax		
	comp=Z,226nm,1.0s						
OPA	Opana	52.89	38	P	P	18 07 14.0	-0.5
OPA				IAmb	IAmb	18 07 22.1	
	comp=Z,226nm,1.0s						
BUKP	Musuan	52.98	298	*e*P	P	18 07 15.8	+0.4
TOLI2	Tolitoli	53.18	288	P	P	18 07 15.2	-1.6
TOLI2				IAmb	IAmb	18 07 24.0	
	comp=Z,191nm,1.0s						
HLK	Haleakala	53.21	40	P	P	18 07 15.6	-1.6
MPSI	Mapaga	53.60	287	P	P	18 07 19.2	-0.8
	comp=Z,2µmcomp=Z,2µmcomp=Z,173nm,1.3s						
PAGZ	Pagadian	54.35	297	*e*P	P	18 07 25.2	-0.1
MSLP	Maasin	54.43	301	*e*P	P	18 07 30.7	+4.8
SRBI	Singaraja	54.52	275	P	P	18 07 33.4	+6.7
JAGI	Jajag, Banyuwa	55.38	274	P	P	18 07 30.2	-2.7
	comp=Z,2µmcomp=Z,182nm,1.2s						
KBKI	Kotabaru	55.43	281	P	P	18 07 31.4	-1.8
	comp=Z,648nmcomp=Z,58nm,1.3s						
ABJI	Asem Bagus	55.53	275	P	P	18 07 39.3	+5.3
BKB	Balikpapan	55.60	284	P	P	18 07 45.9	+11
KMMI	Kalianget	56.04	276	P	P	18 07 48.2	+11
CNOP	Candoni, Negro	56.05	299	*e*P	P	18 07 35.0	-2.6
VNDA	Vanda	56.32	182	P	P	18 07 40.6	+1.9
	comp=Z,5.6nm,1.0s,baz=345,slow=7.0,SNR=6.7						
VNDA	Vanda	56.32	182	P	P	18 07 38.7	0.0
VNDA				pmax	pmax		
	comp=Z,230nm,2.1s						
VNDA	Vanda	56.32	182	P	P	18 07 38.7	0.0
VNDA				IAmb	IAmb	18 07 41.1	
	comp=Z,230nm,2.0s						
GUIM	Jordan	56.54	300	*e*P	P	18 07 38.2	-2.9
BBKI	Banjar Baru	56.58	280	P	P	18 07 48.6	+7.1
MTKI	Muara Teweh, K	57.55	283	P	P	18 07 54.2	+5.8
CASY	Casey	58.52	204	P	P	18 07 53.3	-1.0
CASY				IAmb	IAmb	18 07 56.2	
	comp=Z,186nm,1.6s						
JCNP	Jose Panganiba	58.56	303	*e*P	P	18 08 00.3	+5.0
BOAC	Boac	58.75	302	*e*P	P	18 08 01.8	+5.2
BUSP	Coron	59.25	299	*e*P	P	18 08 05.0	+4.9
LQP	Lukban	59.37	302	⇑*e*P	P	18 08 06.0	+4.8
BATP	Bataraza	59.53	295	*e*P	P	18 08 07.5	+5.5
MACP	Maragondon, Ca	60.10	302	*e*P	P	18 08 09.0	+3.0
JMZ	Minamidaito 2	60.26	319	IAMs_20	IAMs_20	18 35 24.4	
	comp=Z,5µm,18.0s						
CAUP	Cauayan	60.82	305	*e*P	P	18 08 14.4	+3.5
STKI	Sintang	61.08	283	P	P	18 08 21.1	+8.4
SMPP	San Manuel, Pa	61.23	304	*e*P	P	18 08 14.3	+0.6
SBUM	Sibu	61.41	285	P	P	18 08 13.9	-1.2
SBUM	Sibu	61.41	285	P	P	18 08 21.0	+6.0
CISI	Cisompet, Garu	61.58	273	P	P	18 08 13.7	-2.6
CISI				IAMs_20	IAMs_20	18 35 58.8	
	comp=Z,6µm,19.0s						
CISI	Cisompet, Garu	61.58	273	P	P	18 08 22.3	+6.0
APYP	Conner	61.81	305	*e*P	P	18 08 21.1	+3.6
XMI	Christmas Isla	62.61	269	P	P	18 08 28.5	+5.4
XMIS	Christmas Isla	62.63	269	P	P	18 08 21.7	-1.5
XMIS	Christmas Isla	62.63	269	P	P	18 08 26.6	+3.3
KSM	Kuching	62.72	283	P	P	18 08 22.2	-1.6
KSM	Kuching	62.72	283	P	P	18 08 30.0	+6.2
TPI	Tanjungpandan	63.47	278	P	P	18 08 40.4	+12
JYT	Yasato	63.95	333	P	P	18 08 30.8	-0.6
JYT				IAmb	IAmb	18 08 37.4	
	comp=Z,72nm,1.0s						
INU	Inuyama	64.61	330	P	P	18 08 34.5	-1.2
INU				IAMs_20	IAMs_20	18 31 48.2	
	comp=Z,5µm,22.0s						
JGF	Kuroka	64.66	331	IAMs_20	IAMs_20	18 31 38.4	
	comp=Z,5µm,21.0s						
BLSI	Bandar Lampung	64.74	274	P	P	18 08 42.6	+5.4
JSU	Suzuyama	64.94	323	P	P	18 08 38.1	0.0
JSU				IAmb	IAmb	18 08 44.9	
	comp=Z,140nm,1.3s						
JSU				IAMs_20	IAMs_20	18 32 25.5	
	comp=Z,5µm,22.0s						
MJAR	Matsushiro Arr	65.06	332	P	P	18 08 37.9	-0.8
	comp=Z,15nm,1.0s,baz=174,slow=5.9,SNR=5.2						
MJAR	Matsushiro Arr	65.06	332	P	P	18 08 41.2	+2.4
MJAR				pmax	pmax		
	comp=Z,13nm,0.9s						
MJAR	Matsushiro Arr	65.06	332	P	P	18 08 41.2	+2.4
MAJO	Matsushiro	65.06	332	P	P	18 08 37.6	-1.2
MAJO				pmax	pmax		
	comp=Z,56nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,4µm,20.0s						
MAJO	Matsushiro	65.06	332	P	P	18 08 37.5	-1.2
MAT	Matsushiro	65.06	332	P	P	18 08 36.3	-2.5
MAT				S	S	18 17 20.8	+0.3
PPBI	Pangkal Pinang	65.09	278	P	P	18 08 46.7	+7.2
JMM	Marumori	65.11	335	IAMs_20	IAMs_20	18 31 04.0	
	comp=Z,8µm,21.0s						
KASI	Kota Agung	65.38	274	P	P	18 08 47.2	+5.9
KLSI		65.46	275	P	P	18 08 47.5	+5.7
LWLI	Liwa	65.97	274	P	P	18 08 50.8	+5.6
MDSI	Maura Dua	66.05	275	P	P	18 08 45.6	0.0
	comp=Z,995nmcomp=Z,92nm,1.2s						
PMBI	Palembang	66.07	276	IAMs_20	IAMs_20	18 39 54.1	
	comp=Z,5µm,20.0s						
LHSI	Lahat	66.89	275	P	P	18 08 57.2	+6.2
JMBI	JAMBI	67.60	277	P	P	18 09 03.9	+8.4
KSI	Kapahiang	67.82	275	P	P	18 09 02.7	+5.7
JEM	Erimo	67.87	339	IAMs_20	IAMs_20	18 35 41.6	
	comp=Z,7µm,20.0s						
QZH	Quanzhou	68.07	310	*e*P	P	18 09 00.3	+2.1
QZH				S	S	18 18 02.0	+4.7
QZH				LR	LR		
	comp=Z,1µm,15.2s						
QZH				LR	LR		
	comp=Z,1µm,15.7s						
QZH				LR	LR		
	comp=Z,2µm,20.7s						
QSPA	South Pole Qui	68.67	180	P	P	18 09 01.0	-0.5
MYKOM	Kota Tinggi	68.74	281	IAMs_20	IAMs_20	18 40 31.7	
	comp=Z,4µm,20.0s						
MYKOM	Kota Tinggi	68.74	281	P	P	18 09 09.0	+6.4
YUK	Yuzh-Kuril'sk	68.82	341	*e*P	P	18 08 59.7	-2.8
YUK				*e*		18 09 24.1	
YUK				*e*		18 11 31.8	
YUK				*e*PPP	PPP	18 13 08.0	
YUK				*e*S	S	18 18 02.2	-3.3
YUK				*e*		18 18 58.2	
YUK				*e*SS	SS	18 22 28.1	-3.2
YUK				pmax	pmax		
	comp=Z,234nm,1.7s						
YUK				pmax	pmax		
	comp=Z,60nm,1.0s						
YUK				pmax	pmax		
	comp=N,60nm,0.7s						
YUK				pmax	pmax		
	comp=E,29nm,0.6s						
YUK				MLR	MLR		
	comp=Z,2µm,19.0s						
YUK				MLR	MLR		
	comp=N,1µm,16.0s						
YUK				MLR	MLR		
	comp=E,1µm,21.0s						
JEW	Eniwo	69.19	338	IAMs_20	IAMs_20	18 33 14.3	
	comp=Z,6µm,22.0s						
KUR	Kuril'sk	69.36	343	*d i*P	P	18 09 07.6	+1.9
KUR				*e*S	S	18 18 20.1	+8.3
KUR				pmax	pmax		
	comp=Z,1µm,5.4s						
KUR				MLR	MLR		
	comp=Z,1µm,15.0s						
KUR				MLR	MLR		
	comp=E,829nm,14.0s						
JKA	Kamikawa-asahi	69.92	339	IAMs_20	IAMs_20	18 33 52.6	
	comp=Z,5µm,22.0s						
SSE	Sheshan	70.24	317	P	P	18 09 06.0	-5.5
SSE				S	S	18 18 24.0	+1.3
SSE				pmax	pmax		
	comp=Z,11nm,1.6s						
SSE				pmax	pmax		
	comp=Z,280nm,4.3s						
SSE				LR	LR		
	comp=N,740nm,18.0s						
SSE				LR	LR		
	comp=E,950nm,18.0s						
TJN	Taejon	70.28	324	*i* P	P	18 09 13.1	+1.5
BKNI	Bangkinang	70.75	278	IAMs_20	IAMs_20	18 42 22.1	
	comp=Z,5µm,19.0s						
BKNI	Bangkinang	70.75	278	P	P	18 09 22.2	+7.1
KSRS	Korea Array	70.78	325	P	P	18 09 16.2	+1.6
	comp=Z,6.5nm,0.9s,baz=144,slow=5.7,SNR=13						
PDSI	Padang	70.81	277	P	P	18 09 21.3	+5.8
QIZ	Qiongzhong	71.41	300	P	P	18 09 19.8	+0.9
QIZ				PP	PP	18 11 57.8	+0.1
QIZ				S	S	18 18 39.5	+2.6
QIZ				ScS	SKSac	18 19 19.0	-2.9
QIZ				SS	SS	18 23 08.5	-3.5
QIZ				pmax	pmax		
	comp=Z,59nm,1.8s						
QIZ				pmax	pmax		
	comp=Z,520nm,8.8s						
QIZ				LR	LR		
	comp=Z,2µm,24.0s						
QIZ				LR	LR		
	comp=Z,1µm,22.1s						
QIZ				LR	LR		
	comp=Z,2µm,27.5s						
MNSI	Mandailing Nat	72.27	278	P	P	18 09 22.7	-1.6
	comp=Z,1µmcomp=Z,76nm,1.1s						
NJ2	Nanjing	72.37	316	*e*P	P	18 09 24.0	-0.4
NJ2				sP	sP	18 09 30.0	-0.9
NJ2				S	S	18 18 48.8	+1.5
NJ2				ScS	ScS	18 19 31.8	+1.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,530nm,5.0s						
NJ2				LR	LR		
	comp=Z,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
NJ2				LR	LR		
	comp=Z,3µm,19.9s						
IPM	Ipoh	72.39	282	P	P	18 09 22.3	-2.8
IPM				IAmb	IAmb	18 09 32.5	
	comp=Z,80nm,1.0s						
IPM				IAMs_20	IAMs_20	18 42 52.5	
	comp=Z,5µm,20.0s						
IPM	Ipoh	72.39	282	P	P	18 09 31.0	+6.0
YSS	Yuzh-Sakhalins	72.40	341	κ*e*P	P	18 09 27.6	+3.4
YSS				*e*S	S	18 18 50.5	+3.4
YSS				MLR	MLR		
	comp=Z,2µm,17.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS	Yuzh-Sakhalins	72.40	341	IAMs_20	IAMs_20	18 38 26.1	
	comp=Z,6µm,21.0s						
KULM	Kulim	73.06	283	P	P	18 09 27.1	-1.9
KULM				IAMs_20	IAMs_20	18 42 30.3	
	comp=Z,5µm,21.0s						
KULM	Kulim	73.06	283	P	P	18 09 35.0	+6.0
UBPT	Khong Chiam	73.19	294	P	P	18 09 36.0	+6.4
ADK	Adak	73.87	8	IAMs_20	IAMs_20	18 35 07.9	
	comp=Z,7µm,22.0s						
USA0B	Ussuriysk Arra	74.05	332	*i* P	P	18 09 33.9	-0.1
USRK	Ussuriysk Ar.	74.05	332	P	P	18 09 34.0	-0.1
	comp=Z,25nm,1.1s,baz=132,slow=5.4,SNR=15						
USRK	Ussuriysk Ar.	74.05	332	P	P	18 09 34.0	-0.1
USRK	Ussuriysk Ar.	74.05	332	P	P	18 09 32.1	-2.0
TSI	Tuntungan	74.25	280	P	P	18 09 42.0	+6.0
GSI	Gunungsitoli	74.32	278	IAMs_20	IAMs_20	18 43 20.7	
	comp=Z,6µm,21.0s						

GSI	**Gunungsitoli**	**74.32**	**278**	P	P	18 09 43.4	+7.0
WHN	**Wuhan**	**74.45**	**312**	⇓P	P	18 09 41.8	+5.1
WHN				pP	pwP	18 09 47.3	+2.9
WHN				S	**S**	**18 19 16.0**	**+5.0**
WHN				pmax	pmax		
	comp=Z,100nm,1.3s						
WHN				LR	LR		
	comp=Z,4µm,16.0s						
WHN				LR	LR		
	comp=Z,2µm,12.7s						
WHN				LR	LR		
	comp=Z,6µm,23.1s						
UGL	**Uglegorsk**	**74.50**	**341**	*e*P	**P**	**18 09 35.9**	**-0.6**
UGL				*e*S	**SKiKP**	**18 19 04.7**	**+2.4**
UGL				pmax	pmax		
	comp=Z,1µm,5.7s						
UGL				smax	smax		
	comp=E,1µm,7.0s						
ATKA	**Atka Island**	**74.55**	**10**	IAMs_20	IAMs_20	18 35 06.5	
	comp=Z,5µm,21.0s						
PET	**Petropavlovsk**	**74.78**	**353**	*e*P	**P**	**18 09 41.0**	**+2.9**
PET				*e*S	**S**	**18 19 15.7**	**+2.0**
PET				*e*PS		18 19 54.8	
PET				*e*PPS	PPS	18 20 09.8	
PET				pmax	pmax		
	comp=Z,600nm,13.8s						
PEA0B	**Petropavlovsk-**	**74.98**	**352**	*i* P	**P**	**18 09 40.4**	**+1.1**
PEA0B	**Petropavlovsk-**	**74.98**	**352**	IAMs_20	IAMs_20	18 35 29.0	
	comp=Z,4µm,22.0s						
PETK	**Petropavlovsk-**	**74.98**	**352**	P	**P**	**18 09 39.8**	**+0.5**
	comp=Z,23nm,1.0s,baz=101,slow=4.7,SNR=8.9						
DL2	**Dalian**	**75.26**	**323**	P	P	18 09 46.3	+5.1
DL2				S	**S**	**18 19 27.5**	**+7.8**
DL2				pmax	pmax		
	comp=Z,130nm,1.3s						
DL2				pmax	pmax		
	comp=Z,740nm,5.5s						
DL2				LR	LR		
	comp=Z,2µm,19.3s						
DL2				LR	LR		
	comp=Z,2µm,18.3s						
DL2				LR	LR		
	comp=Z,3µm,21.6s						
MDJ	**Mudanjiang**	**75.43**	**331**	P	P	18 09 47.0	+4.9
MDJ				pmax	pmax		
	comp=Z,29nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,360nm,3.3s						
TPTI		**75.43**	**279**	P	P	18 09 49.0	+6.2
SNY	**Shenyang**	**76.26**	**326**	⇓P	P	18 09 52.5	+5.7
SNY				S	**S**	**18 19 30.8**	**+0.2**
SNY				pmax	pmax		
	comp=Z,16nm,2.0s						
SNY				pmax	pmax		
	comp=Z,510nm,6.9s						
SNY				LR	LR		
	comp=Z,2µm,21.1s						
SNY				LR	LR		
	comp=Z,1µm,17.6s						
SNY				LR	LR		
	comp=Z,3µm,19.2s						
NIKH	**Nikolski High**	**76.26**	**13**	P	**P**	**18 09 46.2**	**-0.4**
LHMI	**Lhok Sumawe**	**76.42**	**281**	IAMs_20	IAMs_20	18 48 43.2	
	comp=Z,6µm,19.0s						
CN2	**Changchun**	**76.75**	**328**	*e*P	**P**	**18 09 51.3**	**+1.7**
CN2				S	**S**	**18 19 36.0**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,500nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,21.0s						
CN2				LR	LR		
	comp=Z,3µm,21.0s						
MAW	**Mawson**	**76.78**	**202**	P	**P**	**18 09 50.6**	**+1.1**
	baz=77,SNR=9.0						
MAW	**Mawson**	**76.78**	**202**	P	**P**	**18 09 50.5**	**+1.0**
	comp=Z,9.1nm,0.6s,baz=149,slow=7.9,SNR=10.0						
MAW	**Mawson**	**76.78**	**202**	P	**P**	**18 09 50.1**	**+0.6**
MAW				pmax	pmax		
	comp=Z,12nm,1.1s						
MAW				MLR	MLR		
	comp=Z,600nm,20.0s						
MAW	**Mawson**	**76.78**	**202**	P	**P**	**18 09 50.1**	**+0.6**
UNV	**Unalaska Valle**	**77.59**	**14**	IAMs_20	IAMs_20	18 36 33.1	
	comp=Z,4µm,22.0s						
ENH	**Enshi**	**77.72**	**309**	P	**P**	**18 09 54.0**	**-1.4**
ENH				IAmb	IAmb	18 10 01.6	
	comp=Z,86nm,1.1s						
GYA	**Guiyang**	**77.77**	**305**	⇓P	**P**	**18 09 55.8**	**-0.1**
GYA				pP	pP	18 10 01.0	+0.3
GYA				sP	pwP	18 10 03.5	-0.1
GYA				S	**S**	**18 19 49.5**	**+1.4**
GYA				SS	**SS**	**18 24 52.5**	**+3.6**
GYA				pmax	pmax		
	comp=Z,18nm,2.0s						
GYA				pmax	pmax		
	comp=Z,580nm,6.5s						
GYA				LR	LR		
	comp=Z,910nm,19.5s						
GYA				LR	LR		
	comp=Z,1µm,21.4s						
GYA				LR	LR		
	comp=Z,1µm,21.5s						
GRNR	**Gornyy**	**77.77**	**339**	⇓*i*P	**P**	**18 09 55.5**	**+0.3**
KLR	**Kul'dur**	**78.19**	**335**	P	**P**	**18 09 57.4**	**-0.1**
	comp=Z,24nm,1.1s,baz=100,slow=7.8,SNR=7.0						
UTHA	**Uthaitani**	**78.48**	**292**	P	**P**	**18 10 02.0**	**+2.1**
UTTA	**Uttaradit**	**78.50**	**294**	P	**P**	**18 10 01.4**	**+1.5**
BJI	**Beijing**	**79.16**	**321**	P	**P**	**18 10 03.5**	**+0.4**
BJI				S	**S**	**18 20 04.3**	**+2.2**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,580nm,9.7s						
BJI				LR	LR		
	comp=Z,1µm,32.6s						
BJI				LR	LR		
	comp=Z,800nm,33.3s						
BJI				LR	LR		
	comp=Z,3µm,25.6s						
SUKH	**Sukhothai**	**79.17**	**294**	P	**P**	**18 10 05.1**	**+1.4**
LAMP	**Lampang**	**79.64**	**295**	P	**P**	**18 10 06.7**	**+0.5**
	comp=Z,2µmcomp=Z,202nm,0.9s						
BELA	**Belgrano 2**	**79.88**	**175**	P	**P**	**18 10 04.4**	**-2.2**
SPIA	**Saint Paul Isl**	**79.98**	**11**	IAMs_20	IAMs_20	18 38 22.2	
	comp=Z,4µm,21.0s						
TIY	**Taiyuan**	**80.01**	**317**	*e*P	P	18 10 13.8	+5.9
TIY				S	**S**	**18 20 08.5**	**-2.9**
TIY				pmax	pmax		
	comp=Z,52nm,1.0s						
TIY				pmax	pmax		
	comp=Z,570nm,6.2s						
TIY				LR	LR		
	comp=Z,360nm,6.9s						
TIY				LR	LR		
	comp=Z,1µm,14.2s						
TIY				LR	LR		
	comp=Z,3µm,20.0s						
KMI	**Kunming**	**80.16**	**302**	⇑P	**P**	**18 10 08.5**	**-0.7**
KMI				pP	pP	18 10 13.5	-0.5
KMI				sP	sP	18 10 15.5	-0.2
KMI				PP	**PP**	**18 13 08.8**	**-3.0**
KMI				S	**S**	**18 20 09.8**	**-4.0**
KMI				SS	**SS**	**18 25 22.5**	**-2.5**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,770nm,7.0s						
KMI				LR	LR		
	comp=Z,810nm,18.2s						
KMI				LR	LR		
	comp=Z,720nm,19.1s						
KMI				LR	LR		
	comp=Z,1µm,20.0s						
CM01	**Chiang Mai Arr**	**80.16**	**294**	P	**P**	**18 10 09.7**	**+0.6**
	comp=Z,670nmcomp=Z,76nm,1.1s						
CM02	**Chiang Mai Arr**	**80.18**	**294**	P	**P**	**18 10 09.7**	**+0.6**
	comp=Z,599nmcomp=Z,70nm,1.1s						
CM31	**Chiang Mai Arr**	**80.19**	**294**	IAmb	IAmb	18 10 17.4	
	comp=Z,104nm,1.1s						
CMAR	**Chiang Mai Arr**	**80.19**	**294**	P	**P**	**18 10 08.8**	**-0.4**
	comp=Z,5.5nm,0.8s,baz=132,slow=3.8,SNR=16						
CMAR	**Chiang Mai Arr**	**80.19**	**294**	*ce*P	**P**	**18 10 08.3**	**-0.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.19**	**294**	P	**P**	**18 10 07.7**	**-1.5**
CNBA	**Chernabura Isl**	**80.20**	**17**	IAMs_20	IAMs_20	18 41 35.6	
	comp=Z,4µm,20.0s						
XAN	**Xi'an**	**80.21**	**312**	P	**P**	**18 10 12.5**	**+3.5**
XAN				pP	pwP	18 10 19.0	+2.2
XAN				S	**S**	**18 20 09.8**	**-3.8**
XAN				pmax	pmax		
	comp=Z,73nm,1.0s						
XAN				pmax	pmax		
	comp=Z,780nm,9.8s						
XAN				LR	LR		
	comp=Z,2µm,18.6s						
XAN				LR	LR		
	comp=Z,2µm,16.8s						
XAN				LR	LR		
	comp=Z,3µm,19.5s						
CMMT	**Chiang Mai**	**80.34**	**295**	P	**P**	**18 10 08.9**	**-1.1**
	comp=Z,509nmcomp=Z,56nm,1.2s						
CHTO	**Chiang Mai**	**80.35**	**295**	P	**P**	**18 10 08.5**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,107nm,1.1s						
CHTO	**Chiang Mai**	**80.35**	**295**	P	**P**	**18 10 08.5**	**-1.5**
CHTO				IAmb	IAmb	18 10 17.9	
	comp=Z,107nm,1.1s						
SDPT	**Sand Point**	**80.43**	**16**	IAMs_20	IAMs_20	18 41 56.3	
	comp=Z,3µm,20.0s						
MHMT	**Maesarieng**	**80.93**	**294**	P	**P**	**18 10 14.1**	**+0.9**
	comp=Z,1µmcomp=Z,107nm,1.3s						
CHIR	**Chirikof Islan**	**82.21**	**19**	IAMs_20	IAMs_20	18 42 09.5	
	comp=Z,3µm,20.0s						
MA2	**Magadan**	**82.23**	**350**	*i* P	**P**	**18 10 17.8**	**-1.3**
MA2	**Magadan**	**82.23**	**350**	IAMs_20	IAMs_20	18 42 54.9	
	comp=Z,4µm,21.0s						
CD2	**Chengdu**	**82.24**	**307**	*e*P	**P**	**18 10 20.8**	**+0.9**
CD2				pP	PcP	18 10 25.0	-0.2
CD2				S	**S**	**18 20 34.8**	**-0.1**
CD2				pmax	pmax		
	comp=Z,30nm,1.7s						
CD2				pmax	pmax		
	comp=Z,670nm,6.7s						
CD2				LR	LR		
	comp=Z,2µm,16.1s						
CD2				LR	LR		
	comp=Z,2µm,20.6s						
CD2				LR	LR		
	comp=Z,2µm,18.6s						
HHC	**Hu-ho-hao-te**	**82.42**	**319**	*e*P	**P**	**18 10 24.3**	**+3.6**
HHC				S	**S**	**18 20 39.0**	**+2.5**
HHC				sS	SKKSac	18 20 47.5	+2.9
HHC				SS	**SS**	**18 25 57.8**	**-0.3**
HHC				pmax	pmax		
	comp=Z,55nm,1.2s						
HHC				pmax	pmax		
	comp=Z,380nm,7.6s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,22.4s						
HHC				LR	LR		
	comp=Z,3µm,23.2s						
PBA	**Port Blair**	**82.78**	**285**	IAMs_20	IAMs_20	18 51 01.4	
	comp=Z,5µm,20.0s						
SYO	**Syowa Base**	**83.12**	**196**	⇓*i*P	**P**	**18 10 23.0**	**-0.7**
SYO	**Syowa Base**	**83.12**	**196**	⇓*e*PcP	**PcP**	**18 10 28.0**	**-0.3**
DGPR	**DIGLIPUR**	**83.22**	**287**	*e*P	P	18 10 30.9	+5.7
DGPR				IAmb	IAmb	18 10 32.4	
	comp=Z,187nm,1.2s						
BTO	**Baotou**	**83.23**	**318**	*e*P	P	18 10 19.8	-5.1
BTO	**Baotou**	**83.23**	**318**	S	**S**	**18 20 49.5**	**+4.8**
SII	**Sitkinak Islan**	**83.26**	**19**	IAMs_20	IAMs_20	18 42 40.4	
	comp=Z,3µm,20.0s						
ZEA	**Zeya**	**83.48**	**336**	*e*P	**P**	**18 10 25.6**	**-0.1**
ZEA				*e*S	**S**	**18 20 48.7**	**+2.4**
ZEA				pmax	pmax		
	comp=N,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.6s						
ZEA				smax	smax		
	comp=N,500nm,18.0s						
ZEA				MLR	MLR		
	comp=N,600nm,18.0s						
ZEA				MLR	MLR		
	comp=E,300nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,17.0s						
KDAK	**Kodiak Island**	**84.77**	**19**	P	**P**	**18 10 33.2**	**+1.1**
	comp=Z,38nm,1.1s,baz=177,slow=2.1,SNR=5.2						
KDAK	**Kodiak Island**	**84.77**	**19**	*i* P	**P**	**18 10 32.4**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,33nm,1.0s						
KDAK	**Kodiak Island**	**84.77**	**19**	P	**P**	**18 10 32.2**	**+0.1**
LZH	**Lanzhou**	**84.82**	**312**	⇓P	**P**	**18 10 34.0**	**+0.8**
LZH				pP	sP	18 10 39.3	-0.5
LZH				sP	pwP	18 10 43.3	+2.3
LZH				S	**SKSac**	**18 20 50.5**	**-6.6**
LZH				sS	pS	18 21 06.5	-0.7
LZH				SS	**SS**	**18 26 35.3**	**+1.4**
LZH				pmax	pmax		
	comp=Z,96nm,1.4s						
LZH				pmax	pmax		
	comp=Z,830nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,17.1s						
LZH				LR	LR		
	comp=Z,2µm,17.3s						
LZH				LR	LR		
	comp=Z,2µm,19.0s						
SEY	**Seymchan**	**85.22**	**352**	*i* P	**P**	**18 10 33.8**	**-0.5**
GAMB	**Gambell**	**86.07**	**8**	IAMs_20	IAMs_20	18 42 09.2	
	comp=Z,4µm,22.0s						
SNCC	**San Nicolas Is**	**86.25**	**52**	P	**P**	**18 10 40.1**	**0.0**
	baz=242						
SNCC	**San Nicolas Is**	**86.25**	**52**	IAMs_20	IAMs_20	18 39 01.8	
	comp=Z,4µm,22.0s						
SCZ2	**Santa Cruz Isl**	**86.52**	**52**	P	**P**	**18 10 41.3**	**-0.3**
	baz=242						
SAO	**San Andreas Ge**	**86.58**	**48**	IAMs_20	IAMs_20	18 40 38.1	
	comp=Z,3µm,19.0s						
HOM	**Homer**	**86.59**	**18**	P	**P**	**18 10 41.9**	**+0.7**
	baz=215						
HOPS	**Hopland Field**	**86.59**	**46**	IAMs_20	IAMs_20	18 44 13.3	
	comp=Z,4µm,18.0s						
CNPM	**China Poot**	**86.60**	**19**	IAMs_20	IAMs_20	18 50 14.7	
	comp=Z,3µm,18.0s						
KCPM	**Cahto Peak**	**86.61**	**45**	IAMs_20	IAMs_20	18 46 18.7	
	comp=Z,2µm,18.0s						
LKP	**Lekhapani**	**86.66**	**301**	*e*P	P	18 10 47.2	+4.9
LKP				IAmb	IAmb	18 10 48.7	
	comp=Z,69nm,0.9s						
SBC	**Santa Barbara**	**86.68**	**51**	P	**P**	**18 10 42.5**	**+0.3**
	baz=241						
SVW2	**Sparrevohn**	**86.72**	**16**	IAMs_20	IAMs_20	18 45 53.6	
	comp=Z,3µm,20.0s						
PMPB	**Monarch Peak**	**86.76**	**49**	IAMs_20	IAMs_20	18 41 16.0	
	comp=Z,3µm,19.0s						
PKM	**Mcpherson Peak**	**86.82**	**51**	P	**P**	**18 10 43.2**	**0.0**
	baz=241						
NVL	**N'lazarevskaya**	**86.84**	**187**	*e*P	**P**	**18 10 39.8**	**-2.6**
NVL				*e*S	**SKSac**	**18 21 03.8**	**-4.6**
NVL				pmax	pmax		
	comp=Z,56nm,1.1s						
NVL				MLR	MLR		
	comp=Z,2µm,14.0s						
SCI2	**San Clemente I**	**86.85**	**53**	P	**P**	**18 10 42.8**	**-0.3**
	baz=242						
SMMC	**Simmler**	**86.89**	**50**	P	**P**	**18 10 43.4**	**+0.1**
	baz=241						
PAGB	**Antelope Grade**	**86.92**	**50**	IAmb	IAmb	18 10 57.4	
	comp=Z,166nm,2.0s						
PAGB				IAMs_20	IAMs_20	18 41 48.9	
	comp=Z,3µm,19.0s						
SAIH	**SAIHA**	**86.96**	**295**	IAML		18 10 51.4	
	comp=Z,128nm,1.1s						
SNAA	**Sanae**	**87.05**	**182**	P	**P**	**18 10 41.9**	**-1.7**
SNAA	**Sanae**	**87.05**	**182**	sP	sP	18 10 50.5	+0.4
SNAA	**Sanae**	**87.05**	**182**	P	**P**	**18 10 42.0**	**-1.6**
SNAA				pmax	pmax		
	comp=Z,46nm,1.1s						
SNAA				MLR	MLR		
	comp=Z,3µm,19.0s						
SNAA	**Sanae**	**87.05**	**182**	P	**P**	**18 10 42.0**	**-1.6**
SNAA				IAMs_20	IAMs_20	18 48 13.6	
	comp=Z,3µm,19.0s						
KHMM	**Horse Mountain**	**87.13**	**44**	IAMs_20	IAMs_20	18 43 08.4	
	comp=Z,3µm,20.0s						
MOKO	**MOKOCHONG**	**87.30**	**299**	*e*P	P	18 10 50.8	+5.1
MOKO				IAmb	IAmb	18 10 52.3	
	comp=Z,232nm,1.5s						
FMP	**Fort Macarthur**	**87.38**	**52**	P	**P**	**18 10 45.5**	**-0.1**
	baz=242						
KOHI	**KOHIMA**	**87.38**	**299**	*e*P	P	18 10 51.5	+5.5
KOHI				IAmb	IAmb	18 10 52.5	
	comp=Z,153nm,1.4s						
O02D	**Mt. Diablo Mer**	**87.39**	**45**	P	**P**	**18 10 45.5**	**-0.2**
	baz=239,SNR=20						
OSI	**Osito Audit: C**	**87.48**	**51**	P	**P**	**18 10 46.1**	**-0.1**
	baz=242						
KBO	**Bosley Butte**	**87.52**	**43**	IAMs_20	IAMs_20	18 45 03.5	
	comp=Z,3µm,19.0s						
DECC	**Green Verdugo**	**87.60**	**52**	P	**P**	**18 10 46.9**	**+0.2**
	baz=242						
VNA3	**Neumayer Olymp**	**87.61**	**180**	P	**P**	**18 10 44.9**	**-1.3**
VNA3	**Neumayer Olymp**	**87.61**	**180**	sP	sP	18 10 53.5	+0.8
CAPN	**Captain Cook N**	**87.64**	**18**	P	**P**	**18 10 47.3**	**+1.1**
	baz=216						
ARVC	**Arvin**	**87.64**	**51**	P	**P**	**18 10 46.9**	**0.0**
	baz=242						
ANM	**Nome**	**87.75**	**10**	IAMs_20	IAMs_20	18 42 51.7	
	comp=Z,5µm,22.0s						
WDC	**Whiskeytown Da**	**87.76**	**45**	IAmb	IAmb	18 10 58.7	
	comp=Z,90nm,1.4s						
WDC				IAMs_20	IAMs_20	18 43 33.0	
	comp=Z,3µm,19.0s						
MWC	**Mount Wilson**	**87.79**	**52**	IAmb	IAmb	18 10 57.4	
	comp=Z,58nm,1.2s						
VES	**Vestal, Richgr**	**87.80**	**50**	P	**P**	**18 10 47.0**	**-0.6**
	baz=242						
VOG	**Valley Oaks Go**	**87.81**	**50**	P	**P**	**18 10 47.6**	**-0.1**
	baz=242						
N02D	**Trinity Center**	**87.85**	**44**	P	**P**	**18 10 47.6**	**-0.3**
	baz=239,SNR=22						
109C	**Camp Elliot, M**	**87.88**	**54**	P	**P**	**18 10 47.1**	**-0.9**
	baz=243						
109C	**Camp Elliot, M**	**87.88**	**54**	IAMs_20	IAMs_20	18 45 26.0	
	comp=Z,3µm,19.0s						
L02E	**Cave Junction**	**87.88**	**43**	P	**P**	**18 10 47.9**	**0.0**
	baz=239,SNR=5.9						
VNA2	**Neumayer--Watz**	**87.91**	**181**	P	**P**	**18 10 46.8**	**-0.9**
	baz=185,slow=4.1						
VNA2	**Neumayer--Watz**	**87.91**	**181**	sP	sP	18 10 55.3	+1.1
ORV	**Oroville**	**87.93**	**46**	IAmb	IAmb	18 10 57.9	
	comp=Z,48nm,1.2s						
CMB	**Columbia Colle**	**87.94**	**48**	IAMs_20	IAMs_20	18 49 36.0	
	comp=Z,4µm,18.0s						
M02C	**Callahan**	**87.97**	**44**	P	**P**	**18 10 48.7**	**+0.3**
	baz=239,SNR=27						
BFSC	**Mount Baldy Ra**	**88.09**	**52**	P	**P**	**18 10 48.6**	**-0.6**
	baz=243,SNR=6.0						
O03E	**Paynes Creek**	**88.10**	**45**	P	**P**	**18 10 48.9**	**-0.2**
	baz=240,SNR=24						
BAR	**Barrett**	**88.11**	**54**	IAMs_20	IAMs_20	18 41 12.2	
	comp=Z,3µm,20.0s						
K02D	**Willamette Mer**	**88.12**	**42**	P	**P**	**18 10 49.4**	**+0.3**
	baz=239,SNR=5.9						
MURC	**Murrieta**	**88.14**	**53**	P	**P**	**18 10 49.2**	**-0.1**
	baz=243						
EDW2	**Edwards Air Fo**	**88.14**	**51**	P	**P**	**18 10 49.1**	**-0.3**
	baz=242,SNR=22						
ISA	**Isabella, Lake**	**88.15**	**51**	P	**P**	**18 10 48.2**	**-1.2**
ISA				pmax	pmax		
	comp=Z,45nm,1.1s						
ISA				MLR	MLR		
	comp=Z,2µm,21.0s						
ISA	**Isabella, Lake**	**88.15**	**51**	P	**P**	**18 10 49.4**	**0.0**
	baz=242						
ISA	**Isabella, Lake**	**88.15**	**51**	P	**P**	**18 10 48.2**	**-1.2**
ISA				IAmb	IAmb	18 10 59.4	
	comp=Z,46nm,1.1s						
TTA	**Tatalina**	**88.18**	**15**	IAMs_20	IAMs_20	18 45 57.2	
	comp=Z,3µm,20.0s						
VNA1	**Neumayer--Stat**	**88.20**	**181**	P	**P**	**18 10 47.4**	**-1.6**
VNA1	**Neumayer--Stat**	**88.20**	**181**	sP	sP	18 10 56.7	+1.2
J01E	**Myrtle Point**	**88.20**	**42**	P	**P**	**18 10 49.7**	**+0.4**
	baz=238						
YBH	**Yreka Blue Hor**	**88.23**	**44**	P	**P**	**18 10 51.9**	**+2.2**
	comp=Z,8.6nm,0.9s,baz=208,slow=7.5,SNR=6.7						
YBH	**Yreka Blue Hor**	**88.23**	**44**	IAmb	IAmb	18 11 01.2	
	comp=Z,95nm,1.4s						
SPX	**San Pedro Mart**	**88.30**	**56**	IAMs_20	IAMs_20	18 48 16.4	
	comp=Z,3µm,18.0s						
RC01	**Rabbit Creek A**	**88.31**	**18**	P	**P**	**18 10 50.2**	**+0.7**
	baz=217						
ZIRO	**ZIRO**	**88.35**	**300**	*e*P	P	18 10 55.7	+5.0
ZIRO				IAmb	IAmb	18 10 57.5	
	comp=Z,55nm,1.1s						
MONP2	**Monument Peak**	**88.39**	**54**	P	**P**	**18 10 50.7**	**-0.1**
	baz=243,SNR=9.1						
IKP	**In-Ko-Pah, Jac**	**88.52**	**54**	P	**P**	**18 10 51.3**	**+0.1**
	baz=244,SNR=5.5						
RMX	**La Rumorosa**	**88.52**	**54**	IAMs_20	IAMs_20	18 41 37.6	
	comp=Z,3µm,21.0s						
HUMO	**Hull Mountain**	**88.53**	**43**	IAmb	IAmb	18 11 04.4	
	comp=Z,48nm,1.1s						
BELO	**BELONIA**	**88.56**	**296**	*e*P	P	18 10 58.2	+6.7
RUBR	**Rubicon Trail**	**88.59**	**47**	IAMs_20	IAMs_20	18 40 56.4	
	comp=Z,3µm,21.0s						
BBRC	**Big Bear Solar**	**88.64**	**52**	P	**P**	**18 10 51.8**	**-0.1**
	baz=243						
LRMC	**Laurel Mtn Rad**	**88.64**	**51**	P	**P**	**18 10 51.5**	**-0.3**
	baz=243,SNR=8.2						
MDPB	**Devils Postpil**	**88.65**	**49**	IAmb	IAmb	18 11 04.0	
	comp=Z,114nm,1.5s						
MDPB				IAMs_20	IAMs_20	18 42 25.0	
	comp=Z,3µm,20.0s						
PFO	**Pinyon Flats O**	**88.69**	**53**	P	**P**	**18 10 54.4**	**+2.3**
	comp=Z,4.0nm,0.9s,baz=260,slow=6.5						
PFO	**Pinyon Flats O**	**88.69**	**53**	*e*P	**P**	**18 10 51.9**	**-0.2**
PFO				pmax	pmax		
	comp=Z,34nm,1.1s						
PFO	**Pinyon Flats O**	**88.69**	**53**	P	**P**	**18 10 51.9**	**-0.2**
	baz=243						
PFO	**Pinyon Flats O**	**88.69**	**53**	IAMs_20	IAMs_20	18 42 18.5	
	comp=Z,3µm,19.0s						
TPFO	**Pinon Flats**	**88.69**	**53**	P	**P**	**18 10 51.9**	**-0.1**
	baz=243						
XPFO	**Pion Flat**	**88.69**	**53**	IAMs_20	IAMs_20	18 42 18.5	
	comp=Z,3µm,20.0s						
L04D	**Klamath Falls**	**88.74**	**43**	P	**P**	**18 10 52.0**	**-0.1**
	baz=240,SNR=6.3						
HIN	**Hinchinbrook I**	**88.75**	**20**	IAMs_20	IAMs_20	18 43 56.5	
	comp=Z,3µm,21.0s						
I02D	**Swisshome**	**88.75**	**41**	P	**P**	**18 10 52.5**	**+0.6**
	baz=238						
SFX	**San Felipe**	**88.78**	**56**	IAMs_20	IAMs_20	18 48 13.9	
	comp=Z,2µm,18.0s						
CWC	**Cottonwood Cre**	**88.80**	**50**	P	**P**	**18 10 52.7**	**+0.1**
	baz=242						
WAKR	**Walker**	**88.82**	**48**	P	**P**	**18 10 51.3**	**-1.3**
WAKR				IAmb	IAmb	18 11 04.2	
	comp=Z,89nm,1.3s						
TEZP	**TEZPUR**	**88.82**	**299**	*e*P	**P**	**18 10 57.3**	**+4.7**
TEZP				IAmb	IAmb	18 11 01.1	
	comp=Z,17nm,0.9s						
MLAC	**Mammoth, Mammo**	**88.82**	**49**	P	**P**	**18 10 52.5**	**-0.3**
	baz=242						
M04C	**Macdoel**	**88.82**	**44**	P	**P**	**18 10 52.4**	**-0.1**
	baz=240						
I03D	**Drain, OR**	**88.84**	**42**	P	**P**	**18 10 52.4**	**0.0**
	baz=239						
BEKR	**Beckworth**	**88.85**	**46**	IAmb	IAmb	18 11 03.8	
	comp=Z,59nm,1.3s						
RRX	**Edison Barstow**	**88.86**	**52**	P	**P**	**18 10 52.3**	**-0.4**
	baz=243						
GO10	**Punta Arenas**	**88.89**	**148**	P	**P**	**18 10 52.6**	**-0.1**
SWSC	**Sam W. Stewart**	**88.89**	**54**	P	**P**	**18 10 52.8**	**0.0**
	baz=244,SNR=6.2						
PMR	**Palmer**	**88.89**	**18**	IAMs_20	IAMs_20	18 44 28.1	
	comp=Z,3µm,22.0s						
TIN	**Tinemaha, Big**	**88.98**	**49**	P	**P**	**18 10 53.4**	**+0.1**
	baz=242						
AGT	**Agartala**	**88.98**	**296**	⇑*e*P	P	18 10 59.3	+5.9
PNTR	**Pine Nut**	**88.99**	**47**	IAMs_20	IAMs_20	18 50 19.8	
	comp=Z,3µm,18.0s						
FID	**Port Fidalgo**	**89.03**	**20**	IAMs_20	IAMs_20	18 47 02.4	
	comp=Z,3µm,20.0s						
MPMC	**Manual Prospec**	**89.05**	**51**	P	**P**	**18 10 53.7**	**-0.1**
	baz=243,SNR=6.8						
GHO	**Glory Hole Cre**	**89.09**	**18**	IAMs_20	IAMs_20	18 44 45.4	
	comp=Z,3µm,21.0s						
PPLA	**Purkeypile**	**89.10**	**16**	IAMs_20	IAMs_20	18 47 28.7	
	comp=Z,4µm,20.0s						
EYAK	**Cordova Ski Ar**	**89.11**	**20**	IAMs_20	IAMs_20	18 43 34.9	

	comp=Z,3µm,20.0s						
ULN	Ulaanbaatar	89.11	323	ceP	P	18 10 53.6	-0.2
ULN				pmax	pmax		
	comp=Z,71nm,1.3s						
ULN	Ulaanbaatar	89.11	323	P	P	18 10 52.8	-1.0
ULN				IAmb	IAmb	18 11 00.2	
	comp=Z,69nm,1.2s						
SHL	Shillong	89.14	298	P	P	18 10 52.5	-1.9
SHL				pmax	pmax		
	comp=Z,78nm,1.1s						
SHL	Shillong	89.14	298	eP	P	18 10 59.4	+5.0
SHL				IAmb	IAmb	18 11 01.1	
	comp=Z,38nm,0.9s						
SHL	Shillong	89.14	298	P	P	18 10 52.5	-1.9
SHL				IAmb	IAmb	18 11 01.4	
	comp=Z,78nm,1.1s						
YAK	Yakutsk	89.19	342	eP	P	18 10 52.7	-0.8
YAK				e		18 10 57.9	
YAK				e*PP	pwP	18 11 03.5	+2.1
YAK				e		18 14 33.8	
YAK				eS	SKSac	18 21 19.5	-2.7
YAK				e*SS	SKKSac	18 21 37.8	+3.6
YAK				eSS	SS	18 27 43.5	+7.2
YAK				eSSS	SSS	18 31 07.1	
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,99nm,2.4s						
YAK				pmax	pmax		
	comp=N,40nm,2.6s						
YAK				pmax	pmax		
	comp=E,23nm,2.9s						
YAK				smax	smax		
	comp=N,257nm,5.2s						
YAK				smax	smax		
	comp=E,63nm,3.3s						
YAK	Yakutsk	89.19	342	P	P	18 10 52.2	-1.2
GSC	Goldstone, Bar	89.19	51	P	P	18 10 54.3	-0.1
	baz=243						
BELC	Belle Mtn. Jos	89.21	53	P	P	18 10 54.2	-0.3
	baz=244,SNR=5.6						
BILL	Bilibino	89.22	359⇑	eP	P	18 10 52.0	-1.6
BILL				e		18 10 54.2	
BILL				e*PP	pP	18 10 58.1	-0.3
BILL						18 14 28.2	
BILL				S	SKSac	18 21 16.0	-6.3
BILL				PS	PS	18 22 46.0	-2.7
BILL				pmax	pmax		
	comp=Z,49nm,1.3s						
BILL				MLR	MLR		
	comp=Z,943nm,20.0s						
BILL	Bilibino	89.22	359	P	P	18 10 51.3	-2.3
CUT	Chulitna	89.22	17	P	P	18 10 54.4	+0.8
	baz=216						
GTA	Gaotai	89.24	313	P	P	18 10 53.3	-1.2
GTA				pP	pP	18 10 59.8	+0.4
GTA				sP	pwP	18 11 03.3	+1.0
GTA				PP	PP	18 14 29.8	+4.3
GTA				SKS	SKSac	18 21 24.5	+0.5
GTA				S	SKKSac	18 21 39.5	+3.5
GTA				sS	sS	18 21 51.3	-0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,140nm,6.0s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
GTA				LR	LR		
	comp=Z,3µm,20.7s						
SRIG	Santa Rosalia	89.27	60	IAMs_20	IAMs_20	18 42 04.4	
	comp=Z,4µm,21.0s						
K04D	Chiloquin, OR	89.30	43	P	P	18 10 54.5	-0.2
	baz=240						
GO09	Cerro Castillo	89.31	146	P	P	18 10 54.1	-0.5
HEC	Hector,Ludlow	89.33	52	P	P	18 10 54.6	-0.4
	baz=243,SNR=12						
LHV	Little Huntoon	89.34	48	P	P	18 10 53.4	-1.4
LHV				IAmb	IAmb	18 11 06.3	
	comp=Z,70nm,1.3s						
J04D	Umpqua Nationa	89.39	43	P	P	18 10 54.7	-0.5
	baz=240,SNR=9.3						
PAHR	Pah Rah Range	89.43	47	IAmb	IAmb	18 11 06.4	
	comp=Z,68nm,1.3s						
BC3	Big Chuckawall	89.46	53	P	P	18 10 55.6	0.0
	baz=244,SNR=6.7						
SONM	Songino Array	89.47	323	P	P	18 10 55.2	-0.2
	comp=Z,4.6nm,1.0s,baz=136,slow=4.0,SNR=26						
SONM	Songino Array	89.47	323	P	P	18 10 53.6	-1.8
SONM				pmax	pmax		
	comp=Z,41nm,1.1s						
SONM	Songino Array	89.47	323	P	P	18 10 53.6	-1.8
I04A	Tendick Farm,	89.48	42	P	P	18 10 55.0	-0.4
	baz=239,SNR=6.7						
RYN	Ryan	89.51	48	IAMs_20	IAMs_20	18 42 11.6	
	comp=Z,3µm,21.0s						
LPIG	La Paz	89.56	64	LR	LR	18 41 45.3	
	comp=Z,6µm,21.7s,baz=244,slow=29						
GRAC	Grapevine Rang	89.56	50	P	P	18 10 55.8	-0.2
	baz=243						
NVAR	Mina Array Bea	89.57	48	P	P	18 10 57.0	+0.8
	comp=Z,7.5nm,0.9s,baz=227,slow=7.4,SNR=22						
NVAR	Mina Array Bea	89.57	48	P	P	18 10 54.4	-1.8
H04D	Lebanon	89.65	41	P	P	18 10 56.1	0.0
	baz=239						
GLA	Glamis	89.67	54	P	P	18 10 56.6	0.0
	baz=244						
GLA	Glamis	89.67	54	IAmb	IAmb	18 11 07.6	
	comp=Z,58nm,1.1s						
NV11	Mina Array Sit	89.67	48	IAmb	IAmb	18 11 07.6	
	comp=Z,82nm,1.3s						
NV11				IAMs_20	IAMs_20	18 42 08.0	
	comp=Z,3µm,21.0s						
FURC	Furnace Creek,	89.68	50	P	P	18 10 56.6	+0.1
	baz=243						
G03D	McMinnville, O	89.68	40	P	P	18 10 56.8	+0.5
	baz=239						
SLBS	Sierra La Lagu	89.69	64	P	P	18 10 56.4	-0.5
SLBS				IAmb	IAmb	18 11 08.6	
	comp=Z,61nm,1.2s						
GMRC	Granite Mounta	89.80	52	P	P	18 10 56.8	-0.5
	baz=244						
SHOC	Shoshone, Teco	89.85	51	P	P	18 10 57.3	-0.1
	baz=243						
MOD	Modoc Plateau	89.88	44	P	P	18 10 56.5	-1.0
MOD				IAmb	IAmb	18 11 08.4	
	comp=Z,86nm,1.2s						
K05A	Summer Lake	89.90	43	IAmb	IAmb	18 11 06.4	
	comp=Z,55nm,1.1s						
IRM	Iron Mountain	89.91	53	P	P	18 10 57.4	-0.3
	baz=244,SNR=10						
J05D	Fort Rock, OR	89.96	43	P	P	18 10 57.3	-0.5
	baz=240						
KTH	Kantishna Hill	89.97	16	P	P	18 10 57.4	+0.1
KTH				IAMs_20	IAMs_20	18 47 26.7	
	comp=Z,3µm,20.0s						
TRF	Thorofare Moun	90.06	17	IAMs_20	IAMs_20	18 48 09.9	
	comp=Z,4µm,20.0s						
H04A	Detroit Lake	90.07	41	IAMs_20	IAMs_20	18 46 43.9	
	comp=Z,3µm,18.0s						
CRQM	Cirque	90.12	21	P	P	18 10 57.3	-0.8
CRQM				IAmb	IAmb	18 11 04.6	
	comp=Z,125nm,1.2s						
CRQM				IAMs_20	IAMs_20	18 51 31.0	
	comp=Z,3µm,19.0s						
TPH	Tonopah	90.16	49	P	P	18 10 58.0	-0.9
TPH				pmax	pmax		
	comp=Z,314nm,1.3s						
TPH	Tonopah	90.16	49	P	P	18 10 58.0	-0.9
M24K	Tolsona, Glenn	90.17	19	P	P	18 10 59.1	+0.9
	baz=220						
E03A	Lebam	90.20	39	IAmb	IAmb	18 11 07.2	
	comp=Z,90nm,1.1s						
E03A				IAMs_20	IAMs_20	18 44 36.1	
	comp=Z,3µm,20.0s						
TGL	Tana Glacier	90.22	21	IAmb	IAmb	18 11 05.0	
	comp=Z,114nm,1.2s						
TGL				IAMs_20	IAMs_20	18 51 23.4	
	comp=Z,3µm,19.0s						
N25K	Chitina, Valde	90.28	20	P	P	18 10 59.7	+0.9
	baz=222						
N25K	Chitina, Valde	90.28	20	P	P	18 10 56.8	-2.0
N25K				IAmb	IAmb	18 11 06.0	
	comp=Z,94nm,1.3s						
F04D	Rainier, OR	90.28	40	P	P	18 10 59.0	-0.1
	baz=239						
YAH	Yahtse	90.30	22	P	P	18 10 56.9	-2.2
YAH				IAmb	IAmb	18 11 05.9	
	comp=Z,111nm,1.2s						
YAH				IAMs_20	IAMs_20	18 44 02.4	
	comp=Z,3µm,21.0s						
VRDI	Verde Repeater	90.36	20	P	P	18 10 57.3	-2.0
VRDI				IAmb	IAmb	18 11 05.6	
	comp=Z,72nm,1.3s						
PINE	Pine Mountain	90.40	42	IAmb	IAmb	18 11 08.7	
	comp=Z,67nm,1.1s						
BPAW	Bear Paw Mtn.	90.40	16	IAMs_20	IAMs_20	18 47 59.0	
	comp=Z,3µm,19.0s						
GLB	Gilahina Butte	90.40	20	IAmb	IAmb	18 11 06.3	
	comp=Z,84nm,1.2s						
RND	Reindeer	90.41	17	P	P	18 10 58.2	-1.1
RND				pmax	pmax		
	comp=Z,42nm,1.2s						
RND				MLR	MLR		
	comp=Z,2µm,19.0s						
RND	Reindeer	90.41	17	P	P	18 10 58.2	-1.1
RND				IAMs_20	IAMs_20	18 53 02.2	
	comp=Z,2µm,19.0s						
I05D	Terrebonne, OR	90.42	42	P	P	18 10 59.7	-0.1
	baz=240,SNR=7.8						
NEE2	Needles Airpor	90.57	53	P	P	18 11 00.2	-0.4
	baz=244						
BALM	Baldy	90.59	21	P	P	18 10 58.6	-1.6
BALM				IAmb	IAmb	18 11 06.7	
	comp=Z,95nm,1.2s						
PCA	Pinnacle	90.63	22	IAmb	IAmb	18 11 06.8	
	comp=Z,90nm,1.0s						
PCA				IAMs_20	IAMs_20	18 43 41.4	
	comp=Z,3µm,21.0s						
MCK	McKinley	90.65	17	P	P	18 11 01.1	+0.7
	baz=218						
PDMCI	Parker Dam,Lak	90.72	53	P	P	18 11 01.2	-0.2
	baz=245,SNR=7.9						
214A	Organ Pipe Nat	90.74	56	P	P	18 11 01.4	-0.2
	baz=245						
214A	Organ Pipe Nat	90.74	56	P	P	18 11 00.9	-0.7
214A				IAMs_20	IAMs_20	18 49 30.0	
	comp=Z,3µm,18.0s						
BCPM	Bancas Point	90.75	23	IAMs_20	IAMs_20	18 43 44.5	
	comp=Z,3µm,21.0s						
E04D	Cinebar	90.79	40	P	P	18 11 01.3	-0.1
	baz=239						
BWN	Browne	90.86	16	IAmb	IAmb	18 11 24.5	
	comp=Z,76nm,1.2s						
BWN				IAMs_20	IAMs_20	18 49 05.2	
	comp=Z,3µm,20.0s						
CTGM	Chitina Glacie	90.88	21	P	P	18 11 00.5	-1.1
G05D	Wamic, OR	90.88	41	P	P	18 11 01.3	-0.6
	baz=240						
SHPR	Sheep Range	90.93	51	P	P	18 11 01.2	-1.3
SHPR				IAmb	IAmb	18 11 18.2	
	comp=Z,63nm,1.6s						
D03D	Eldon	90.99	39	P	P	18 11 01.7	-0.6
	baz=239						
D04E	Lakebay	90.99	39	P	P	18 11 02.5	+0.2
	baz=239						
HSIG		91.00	59	IAMs_20	IAMs_20	18 41 42.2	
	comp=Z,3µm,22.0s						
F05D	White Salmon	91.12	40	P	P	18 11 02.7	-0.2
	baz=240						
WVOR	Wild Horse Val	91.22	44	IAMs_20	IAMs_20	18 46 13.6	
	comp=Z,3µm,19.0s						
IMAR	Indian Mountai	91.30	14	P	P	18 11 02.6	-0.7
NEA2	Nenana	91.30	16	P	P	18 11 03.2	-0.2
	baz=218						
LON	Longmire	91.34	40	P	P	18 11 02.6	-1.4
LON				pmax	pmax		
	comp=Z,12nm,1.0s						
LON				MLR	MLR		
	comp=Z,2µm,20.0s						
LON	Longmire	91.34	40	P	P	18 11 02.6	-1.4
LON				IAMs_20	IAMs_20	18 45 32.4	
	comp=Z,3µm,20.0s						
RDOG	Red Dog Mine	91.36	10	IAMs_20	IAMs_20	18 45 26.1	
	comp=Z,3µm,20.0s						
PRN	Pahroc Range	91.40	50	P	P	18 11 03.2	-1.4
PRN				IAmb	IAmb	18 11 16.1	
	comp=Z,85nm,1.3s						
PRN				IAMs_20	IAMs_20	18 44 15.9	
	comp=Z,3µm,20.0s						
LSA	Lhasa	91.41	301	P	P	18 11 04.3	-1.0
LSA				pmax	pmax		
	comp=Z,13nm,1.1s						
LSA	Lhasa	91.41	301	i P	P	18 11 09.6	+4.3
	SNR=11						
R11A	Troy Canyon, C	91.43	49	P	P	18 11 03.4	-1.5
	baz=244						
R11A	Troy Canyon, C	91.43	49	P	P	18 11 03.8	-1.1
R11A				IAMs_20	IAMs_20	18 44 55.7	
	comp=Z,3µm,20.0s						
I07A	Izee	91.44	43	IAmb	IAmb	18 11 15.8	
	comp=Z,51nm,1.4s						
I07A				IAMs_20	IAMs_20	18 47 35.4	
	comp=Z,3µm,18.0s						
WRH	Wood River Hil	91.46	17	IAMs_20	IAMs_20	18 48 24.0	
	comp=Z,3µm,19.0s						
MENT	Mentasta	91.55	19	IAmb	IAmb	18 11 11.9	
	comp=Z,69nm,1.4s						
BOD	Bodaibo	91.65	334	eP	P	18 11 05.6	+0.5
BOD				pmax	pmax		
	comp=Z,28nm,1.3s						
CCB	Clear Creek Bu	91.68	17	IAMs_20	IAMs_20	18 48 40.7	
	comp=Z,3µm,20.0s						
HDA	Harding Lake	91.72	17	P	P	18 11 05.7	+0.4
	baz=219						
HDA	Harding Lake	91.72	17	IAmb	IAmb	18 11 16.3	
	comp=Z,69nm,1.2s						
HDA				IAMs_20	IAMs_20	18 49 57.0	
	comp=Z,3µm,20.0s						
MDM	Murphy Dome	91.81	16	P	P	18 11 04.7	-1.0
MDM				IAmb	IAmb	18 11 12.0	
	comp=Z,50nm,1.3s						
MDM				IAMs_20	IAMs_20	18 48 54.2	
	comp=Z,3µm,20.0s						
RIDG	Independent Ri	91.81	18	IAmb	IAmb	18 11 12.9	
	comp=Z,80nm,1.4s						
A04D	Lummi Island	91.82	38	P	P	18 11 06.0	-0.1
	baz=239						
TCOL	CIGO, UAF Yank	91.84	17	P	P	18 11 05.6	-0.2
	baz=219						
TCOL	CIGO, UAF Yank	91.84	17	IAMs_20	IAMs_20	18 48 44.0	
	comp=Z,3µm,20.0s						
COLA	College	91.84	17	i P	P	18 11 06.6	+0.8
COLA				pmax	pmax		
	comp=Z,46nm,1.3s						
COLA	College	91.84	17	IAMs_20	IAMs_20	18 48 45.0	
	comp=Z,3µm,20.0s						
B05A	Bryant	91.94	38	P	P	18 11 06.4	-0.3
	baz=240						
DOT	Dot Lake	91.97	19	IAmb	IAmb	18 11 12.9	
	comp=Z,52nm,1.2s						
IL31		92.02	17	P	P	18 11 04.0	-2.6
IL31				IAmb	IAmb	18 11 13.2	
	comp=Z,88nm,1.8s						
ILAR	Eielson Array	92.02	17	P	P	18 11 04.2	-2.5
	comp=Z,1.8nm,0.9s,baz=231,slow=6.6,SNR=11						
ILAR				PKKPbc	PKKPbc	18 28 27.1	+0.9
	comp=Z,0.6nm,0.9s,baz=334,slow=1.6,SNR=3.7						
ILAR	Eielson Array	92.02	17	P	P	18 11 05.0	-1.7
ILAR	Eielson Array	92.02	17	P	P	18 11 05.0	-1.7
HYT	Haines Junctio	92.12	23	IAmb	IAmb	18 11 14.1	
	comp=Z,86nm,1.1s						
HYT				IAMs_20	IAMs_20	18 44 16.8	
	comp=Z,3µm,21.0s						
PALK	Pallekele	92.13	277	IAMs_20	IAMs_20	18 51 12.9	
	comp=Z,4µm,20.0s						
POKR	Poker Plat Res	92.14	17	P	P	18 11 07.4	+0.1
	baz=219						
POKR	Poker Plat Res	92.14	17	IAMs_20	IAMs_20	18 49 14.1	
	comp=Z,3µm,20.0s						
SCRK	Sand Creek	92.24	18	P	P	18 11 07.9	0.0
	baz=222						
BCAR	Beaver Creek A	92.24	20	P	P	18 11 05.4	-2.5
LTY	Liberty	92.27	40	IAMs_20	IAMs_20	18 45 52.0	
	comp=Z,3µm,20.0s						
G08A	Pilot Rock	92.36	42	P	P	18 11 07.8	-1.1
G08A				IAMs_20	IAMs_20	18 48 17.6	
	comp=Z,3µm,18.0s						
TUC	Tucson	92.45	56	P	P	18 11 07.9	-1.7
TUC	Tucson	92.45	56	P	P	18 11 09.6	0.0
	baz=246						
TUC	Tucson	92.45	56	P	P	18 11 07.9	-1.7
TUC	Tucson	92.45	56	IAMs_20	IAMs_20	18 49 40.4	
	comp=Z,2µm,18.0s						
CRZF	Crozet Islands	92.51	218	IAMs_20	IAMs_20	18 45 13.8	
	comp=Z,3µm,21.0s						
GTK	Tadong	92.53	298	eP	P	18 11 15.5	+5.4
GTK				IAmb	IAmb	18 11 17.1	
	comp=Z,42nm,1.1s						
HAWA	Hanford	92.53	41	IAMs_20	IAMs_20	18 51 57.1	
	comp=Z,3µm,18.0s						
ZAK	Zakamensk	92.55	324	eP	P	18 11 09.6	0.0
ZAK				pmax	pmax		
	comp=Z,43nm,1.4s						
ELK	Elko	92.72	47	P	P	18 11 08.5	-2.3
ELK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ELK				MLR	MLR		
	comp=Z,3µm,22.0s						
ELK	Elko	92.72	47	P	P	18 11 08.5	-2.3
E08A	Dider Farm, El	92.87	41	IAMs_20	IAMs_20	18 51 58.9	
	comp=Z,3µm,18.0s						
PRP	Porcupine Dome	92.97	17	IAMs_20	IAMs_20	18 49 19.8	
	comp=Z,3µm,19.0s						
WHY	Whitehorse	92.98	24	IAmb	IAmb	18 11 18.1	
	comp=Z,68nm,1.1s						
U15A	North Rim	92.99	52	P	P	18 11 09.3	-2.9
U15A				IAmb	IAmb	18 11 23.1	
	comp=Z,48nm,1.1s						
IRK	Irkutsk	92.99	326	eP	P	18 11 13.4	+1.9
IRK				pmax	pmax		
	comp=Z,46nm,22.0s						
TLY	Talaya	93.03	325	eP	P	18 11 14.7	+3.0
TLY				eS	SKSac	18 21 47.9	+3.1
TLY				pmax	pmax		
	comp=Z,75nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,15.0s						
TLY	Talaya	93.03	325	IAMs_20	IAMs_20	18 48 22.6	
	comp=Z,3µm,22.0s						
COLD	Coldfoot	93.13	14	P	P	18 11 11.9	+0.1
	baz=217						
BMO	Blue Mountains	93.20	43	IAMs_20	IAMs_20	18 48 39.8	
	comp=Z,3µm,19.0s						
319A	Douglas	93.26	58	IAMs_20	IAMs_20	18 47 35.9	
	comp=Z,2µm,18.0s						
WUAZ	Wupatki	93.30	53	P	P	18 11 13.4	-0.1
	baz=246						
WUAZ	Wupatki	93.30	53	IAmb	IAmb	18 11 24.2	
	comp=Z,34nm,1.1s						
WUAZ				IAMs_20	IAMs_20	18 44 37.4	
	comp=Z,3µm,20.0s						
E09A	Wood Farm, Sta	93.44	41	IAMs_20	IAMs_20	18 52 26.0	
	comp=Z,3µm,18.0s						
BOK	Bokaro	93.48	294	eP	P	18 11 20.6	+6.2
BOK				IAmb	IAmb	18 11 22.4	
	comp=Z,16nm,0.9s						
DLBC	Dease Lake	93.55	27	IAmb	IAmb	18 11 21.5	
	comp=Z,55nm,1.1s						
DLBC				IAMs_20	IAMs_20	18 47 44.7	
	comp=Z,3µm,19.0s						
EGAK	Eagle	93.67	19	P	P	18 11 12.9	-1.4
DAWY	Dawson	93.71	20	IAmb	IAmb	18 11 21.1	
	comp=Z,95nm,1.2s						
F10A	Beach Ranch, E	93.75	42	IAMs_20	IAMs_20	18 48 16.5	
	comp=Z,2µm,19.0s						
FYU	Fort Yukon	93.84	16	IAMs_20	IAMs_20	18 50 25.9	
	comp=Z,2µm,20.0s						
C09A	Chrisman Ranch	93.95	40	IAMs_20	IAMs_20	18 57 51.8	
	comp=Z,2µm,18.0s						
X18A	Snowflake	93.97	55	P	P	18 11 15.3	-1.4
DUG	Dugway, Tooele	94.17	48	P	P	18 11 16.8	-0.6
	baz=246						
DUG	Dugway, Tooele	94.17	48	IAMs_20	IAMs_20	18 44 51.0	
	comp=Z,3µm,21.0s						
H03S2	Juan Fernandez	94.33	129	T	T	19 56 00.2	
	baz=239,slow=74,SNR=4.9						
H03S1	Juan Fernandez	94.35	129	T	T	19 56 08.6	
	baz=239,slow=74,SNR=4.5						
H03S3	Juan Fernandez	94.35	129	T	T	19 56 25.5	
	baz=239,slow=74,SNR=6.1						
W18A	Petrified Fore	94.37	54	P	P	18 11 17.6	-0.9
	baz=247						
MOY	Mondy	94.45	324	eP	P	18 11 21.9	+3.6
MOY				pmax	pmax		
	comp=Z,44nm,2.2s						
H03N3	Juan Fernandez	94.52	128	T	T	19 56 28.3	
	baz=240,slow=74						
H03N2	Juan Fernandez	94.52	128	T	T	19 56 32.1	
	baz=240,slow=74						
H03N1	Juan Fernandez	94.54	128	T	T	19 56 33.1	
	baz=240						
BMAR	Burnt Mountain	94.66	16	P	P	18 11 16.9	-2.0
NEW	Newport	94.85	40	PP	PP	18 15 09.2	-0.2
	comp=Z,0.7nm,0.4s,baz=236,slow=7.7,SNR=3.1						
NEW	Newport	94.85	40	P	P	18 11 19.6	-0.6
	baz=243						
121A	Cookes Peak, D	94.88	57	P	P	18 11 20.1	-0.7
	baz=248						
GUN	Gumba	94.99	298	eP	P	18 11 17.9	-3.8
	comp=Z,57nm,1.1s						
PKI	Pulchoki	95.26	297	eP	P	18 11 22.1	-0.8
	comp=Z,88nm,1.1s						
A21K	Barrow	95.29	10	IAMs_20	IAMs_20	18 47 21.9	
	comp=Z,4µm,22.0s						
KKN	Kakani	95.44	298	eP	P	18 11 22.0	-1.6
	comp=Z,54nm,1.1s						
DMN	Daman	95.52	297	eP	P	18 11 23.4	-0.6
	comp=Z,95nm,1.0s						
EPT	El Paso	95.60	58	IAMs_20	IAMs_20	18 55 08.9	
	comp=Z,2µm,18.0s						
EFI	East Falkland	95.89	152	IAMs_20	IAMs_20	18 45 37.7	
	comp=Z,3µm,22.0s						
MVCO	Mesa Verde	96.09	53	IAMs_20	IAMs_20	18 47 27.3	
	comp=Z,2µm,20.0s						
PV14	Lion Creek, Pa	96.14	51	IAMs_20	IAMs_20	18 55 49.7	
	comp=Z,3µm,18.0s						
PV19	Morning Glory	96.15	51	IAMs_20	IAMs_20	18 55 57.8	
	comp=Z,3µm,18.0s						
PV20	West Nyswonger	96.17	51	IAMs_20	IAMs_20	18 57 27.4	
	comp=Z,3µm,18.0s						
MSO	Missoula	96.17	42	IAMs_20	IAMs_20	18 52 30.5	
	comp=Z,2µm,18.0s						
PV16	Nyswonger Mesa	96.20	51	IAMs_20	IAMs_20	18 56 24.1	
	comp=Z,3µm,18.0s						
PV11	David Mesa, Pa	96.23	51	IAMs_20	IAMs_20	18 56 23.8	
	comp=Z,3µm,18.0s						
PV03	Paradox Valley	96.23	51	IAMs_20	IAMs_20	18 59 04.9	
	comp=Z,2µm,18.0s						
PV04	Paradox Valley	96.24	51	IAMs_20	IAMs_20	18 56 25.1	
	comp=Z,4µm,18.0s						
PLCA	Paso Flores	96.34	138	P	P	18 11 29.6	+2.2
	comp=Z,1.0nm,0.6s,baz=233,slow=11,SNR=3.2						
PLCA	Paso Flores	96.34	138	eP	P	18 11 28.4	+1.0
MNTX	Cornudas Mount	96.47	59	P	P	18 11 26.8	-1.1
	baz=249						
PV15	Paradox Valley	96.53	51	IAMs_20	IAMs_20	18 57 31.8	
	comp=Z,2µm,18.0s						
LC01	Cunco	96.54	136	IAMs_20	IAMs_20	18 44 20.7	
	comp=Z,3µm,22.0s						
ANMO	Albuquerque	96.79	55	LR	LR	18 45 08.2	
	comp=Z,481nm,21.0s,baz=242,slow=29						
ANMO	Albuquerque	96.79	55	ceP	P	18 11 31.2	+1.6
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
DANN	Dangsing	96.90	298	eP	P	18 11 28.7	-1.6
	comp=Z,37nm,1.0s						
TXAR	Lajitas Array	97.02	61	P	Pdif	18 11 32.0	+1.4
	comp=Z,1.0nm,0.9s,baz=242,slow=2.7,SNR=6.9						
TXAR				PKKPbc	PKKPbc	18 28 11.3	-0.2
	comp=Z,0.2nm,0.4s,baz=121,slow=3.5,SNR=1.2						
TXAR				LR	LR	18 46 51.0	
	comp=Z,5µm,20.6s,baz=0.0,slow=30						
TXAR	Lajitas Array	97.02	61	P	Pdif	18 11 33.4	+2.7
TXAR	Lajitas Array	97.02	61	P	Pdif	18 11 33.4	+2.7
BOZ	Bozeman (W)	97.14	44	IAMs_20	IAMs_20	18 51 02.3	
	comp=Z,3µm,19.0s						
TLIG	Tlapa	97.36	74	IAMs_20	IAMs_20	18 45 41.0	
	comp=Z,4µm,22.0s						
O20A	White River Ci	97.37	50	IAMs_20	IAMs_20	18 47 20.8	
	comp=Z,3µm,20.0s						
PDAR	Pinedale Array	97.43	47	P	Pdif	18 11 33.8	+1.4
	comp=Z,1.5nm,1.1s,baz=151,slow=3.4,SNR=3.6						
PDAR				PP	PP	18 15 26.9	-2.9
	comp=Z,1.2nm,1.0s,baz=238,slow=5.1,SNR=5.1						
PDAR				PKKPbc	PKKPbc	18 28 11.4	+0.3
	comp=Z,0.8nm,1.0s,baz=303,slow=1.8,SNR=3.1						
PDAR	Pinedale Array	97.43	47	P	Pdif	18 11 38.6	+6.3
S22A	4UR Ranch, Cre	97.52	53	P	P	18 11 32.2	-0.8

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      baz=249
HYB   Hyderabad        97.65 286 i P        P        18 11 33.0 -0.6
INK   Inuvik           98.30  18   P        Pdif     18 11 36.0 +0.7
      comp=Z,38nm,1.2s,baz=192,slow=3.8,SNR=3.6
INK   Inuvik           98.30  18   P        P        18 11 34.0 -1.3
INK                                pmax     pmax
      comp=Z,86nm,1.4s
INK                                MLR      MLR
      comp=Z,3µm,20.0s
INK   Inuvik           98.30  18   P        P        18 11 34.0 -1.3
INK                                IAMs_20  IAMs_20  18 54 05.0
      comp=Z,3µm,20.0s
SDCO  Great Sand Dun   98.51  53   P        P        18 11 36.3 -1.0
      baz=250
SDCO  Great Sand Dun   98.51  53   IAMs_20  IAMs_20  18 47 26.3
      comp=Z,2µm,21.0s
PAYG  Puerto Ayora     98.63  94   IAMs_20  IAMs_20  18 45 40.6
      comp=Z,3µm,22.0s
MSTX  Muleshoe         99.31  57   IAMs_20  IAMs_20  18 54 47.1
      comp=Z,2µm,18.0s
WMQ   Urumqi           99.33 313   P        Pdif     18 11 43.8 +3.2
WMQ                                pP       pP       18 11 46.0 +0.5
WMQ                                sP       pwP      18 11 52.5 +4.1
WMQ                                S        S        18 23 00.3  -12
WMQ                                SS       SS       18 30 02.0  0.0
WMQ                                pmax     pmax
      comp=Z,19nm,1.5s
WMQ                                pmax     pmax
      comp=Z,190nm,4.3s
WMQ                                LR       LR
      comp=Z,2µm,15.3s
WMQ                                LR       LR
      comp=Z,860nm,23.7s
WMQ                                LR       LR
      comp=Z,2µm,23.7s
PHWY  Pilot Hill       99.76  50   IAMs_20  IAMs_20  18 48 40.1
      comp=Z,3µm,20.0s
AMTX  Amarillo        100.46  57   IAMs_20  IAMs_20  18 52 45.5
      comp=Z,2µm,18.0s
LAO   LASA Array      101.04  44   IAMs_20  IAMs_20  18 53 25.5
      comp=Z,3µm,18.0s
KSCO  Kaye Shedlock'  101.06  52   IAMs_20  IAMs_20  18 50 00.8
      comp=Z,3µm,21.0s
KVTX  Kingsville      101.22  65   IAMs_20  IAMs_20  18 52 17.4
      comp=Z,3µm,19.0s
DGZ   Jazzator, Alta  101.51 319 i P        Pdif     18 11 50.0 -0.2
DGZ                                pmax     pmax
      comp=Z,1.0nm,0.8s
C36M  Paulatuk        101.73  19   P        Pdif     18 11 50.1 -0.4
      baz=240
OGNE  Ogallala        102.09  51   IAMs_20  IAMs_20  19 01 35.0
      comp=Z,2µm,18.0s
YKA   Yellowknife Ar  102.17  27   P        Pdif     18 11 53.9 +1.3
      comp=Z,4.0nm,1.0s,baz=250,slow=3.8,SNR=19
YKA                                PP       PP       18 15 55.7 -9.2
      comp=Z,0.4nm,0.8s,baz=249,slow=5.2,SNR=2.0
YKA                                PKKPbc   PKKPbc   18 27 58.6 +0.7
      comp=Z,0.2nm,0.7s,baz=63,slow=3.3,SNR=3.7
WMOK  Wichita Mounta  102.69  58   IAMs_20  IAMs_20  18 56 09.5
      comp=Z,2µm,18.0s
CCIG  Comitan         102.75  77   IAMs_20  IAMs_20  18 48 18.9
      comp=Z,3µm,20.0s
U32A  Winter Ranch,   103.00  56   IAMs_20  IAMs_20  18 58 24.5
      comp=Z,2µm,18.0s
X34A  Smith Ranch, M  103.39  58   IAMs_20  IAMs_20  18 57 22.2
      comp=Z,2µm,19.0s
R32A  Long Quarter,   103.81  54   IAMs_20  IAMs_20  18 58 18.7
      comp=Z,2µm,18.0s
CROK  Carrier         103.82  56   IAMs_20  IAMs_20  18 59 14.3
      comp=Z,2µm,18.0s
MKAR  Makanchi Array  103.89 315   Pdiff    Pdif     18 12 00.8 +0.1
      comp=Z,1.1nm,0.9s,baz=103,slow=5.2,SNR=4.1
MKAR                               PP       PP       18 16 16.6 -1.6
      comp=Z,2.1nm,1.1s,baz=116,slow=5.6,SNR=3.2
MKAR                               PKKPbc   PKKPbc   18 27 48.6 -3.7
      comp=Z,0.3nm,0.6s,baz=255,slow=2.4,SNR=4.2
MKAR  Makanchi Array  103.89 315   P        Pdif     18 11 59.4 -1.3
MKAR  Makanchi Array  103.89 315   Pdif     Pdif     18 11 59.4 -1.3
MKAR  Makanchi Array  103.89 315            PKKPbc   18 27 47.0 -5.3
OKCFA Oklahoma City   103.93  57   IAMs_20  IAMs_20  18 56 59.2
      comp=Z,2µm,19.0s
OK029 Liberty Lake    104.03  57   IAMs_20  IAMs_20  18 56 55.0
      comp=Z,2µm,19.0s
OK025 Westminster Rd  104.06  57   IAMs_20  IAMs_20  18 57 12.8
      comp=Z,2µm,19.0s
ZAA0  Zalesovo Array  104.36 323   IAMs_20  IAMs_20  18 55 48.6
      comp=Z,2µm,22.0s
ZALV  Zalesovo Beam   104.36 323   PP       PKiKP    18 16 16.7 -2.3
      comp=Z,1.3nm,0.8s,baz=120,slow=5.2,SNR=3.9
ZALV  Zalesovo Beam   104.36 323            PKiKP    18 16 15.7 -3.3
SNET  Serv Nac Est T  104.58  81   IAMs_20  IAMs_20  18 47 44.6
      comp=Z,3µm,22.0s
OK030 Cody Creek RV   104.59  57   IAMs_20  IAMs_20  18 54 16.8
      comp=Z,2µm,18.0s
K31A  O'Neill         104.92  50   IAMs_20  IAMs_20  18 54 48.7
      comp=Z,3µm,19.0s
PETF  Flores          105.01  77   IAMs_20  IAMs_20  18 48 49.9
      comp=Z,2µm,22.0s
BGNE  Belgrade        105.03  51   IAMs_20  IAMs_20  18 57 02.9
      comp=Z,2µm,18.0s
T35A  Sooner Cattle   105.07  56   IAMs_20  IAMs_20  18 55 34.4
      comp=Z,2µm,18.0s
SUSD  Miller          105.26  48   IAMs_20  IAMs_20  19 01 16.4
      comp=Z,2µm,18.0s
X37A  Clayton         105.34  59   IAMs_20  IAMs_20  18 56 06.9
      comp=Z,2µm,19.0s
TUL1  Leonard         105.36  57   IAMs_20  IAMs_20  18 57 45.2
      comp=Z,3µm,18.0s
N33A  J Bar K, Exete  105.37  52   IAMs_20  IAMs_20  18 54 05.8
      comp=Z,3µm,20.0s
KSU1  Kansas State U  105.57  54   IAMs_20  IAMs_20  18 58 49.4
      comp=Z,2µm,19.0s
FFC   Flin Flon       105.97  37   IAMs_20  IAMs_20  18 59 41.0
      comp=Z,2µm,18.0s
441A  DeRidder        106.09  63   IAMs_20  IAMs_20  18 51 46.1
      comp=Z,3µm,20.0s
L34A  Svendsen Farm,  106.46  51   IAMs_20  IAMs_20  18 55 45.6
      comp=Z,2µm,19.0s
U38A  Gravette        106.60  57   IAMs_20  IAMs_20  18 58 49.9
      comp=Z,2µm,18.0s
ECSD  EROS Data Cent  106.72  49   IAMs_20  IAMs_20  19 01 16.2
      comp=Z,2µm,19.0s
N35A  Tabor           106.73  52   IAMs_20  IAMs_20  18 53 00.9
      comp=Z,2µm,20.0s
W39A  Magazine        106.76  58   IAMs_20  IAMs_20  18 57 12.3
      comp=Z,3µm,18.0s
MIAR  Mount Ida       106.76  59   IAMs_20  IAMs_20  18 59 03.5
      comp=Z,3µm,18.0s
HHAR  Hobbs           106.91  57   IAMs_20  IAMs_20  18 57 51.1
      comp=Z,3µm,20.0s
342A  Flagon Creek P  106.97  62   IAMs_20  IAMs_20  18 52 13.4
      comp=Z,3µm,22.0s
D32A  Dogwood Acres,  107.22  46   IAMs_20  IAMs_20  18 57 32.2
      comp=Z,2µm,19.0s
NRIK  Noril'sk        107.26 338   IAMs_20  IAMs_20  18 57 08.8
      comp=Z,3µm,21.0s
X40A  Basin Creek Fa  107.34  59   IAMs_20  IAMs_20  18 53 49.8
      comp=Z,2µm,19.0s
F33A  5 Mile Ranch,   107.42  47   IAMs_20  IAMs_20  18 54 13.6
      comp=Z,2µm,21.0s
JTS   Las Juntas de   107.44  86   IAMs_20  IAMs_20  18 50 16.7
      comp=Z,2µm,20.0s
TEIG  Tepich          107.44  75   IAMs_20  IAMs_20  18 52 53.1
      comp=Z,3µm,21.0s
S39A  Bolivar         107.72  56   IAMs_20  IAMs_20  18 56 46.7
      comp=Z,3µm,18.0s
ACON  Acoyapa         107.78  84   IAMs_20  IAMs_20  18 49 40.5
      comp=Z,2µm,20.0s
U40A  Yellville       107.78  57   IAMs_20  IAMs_20  18 58 52.2
      comp=Z,2µm,18.0s
WHAR  Wooly Hollow    107.97  58   IAMs_20  IAMs_20  18 58 55.4
      comp=Z,3µm,18.0s
P38A  Dawn            108.01  54   IAMs_20  IAMs_20  19 00 23.0
      comp=Z,2µm,18.0s
HDC   Heredia         108.12  86   IAMs_20  IAMs_20  18 49 46.9
      comp=Z,3µm,22.0s
AGMN  Agassiz Nation  108.23  45   IAMs_20  IAMs_20  18 57 19.9
      comp=Z,3µm,19.0s
FCAR  Ozark Folk Cen  108.24  58   IAMs_20  IAMs_20  18 59 57.5
      comp=Z,2µm,18.0s
MGMO  Mountain Grove  108.42  57   IAMs_20  IAMs_20  18 59 13.1
      comp=Z,2µm,18.0s
N38A  Joes South For  108.49  53   IAMs_20  IAMs_20  19 00 45.6
      comp=Z,2µm,18.0s
ESPN  Las Esperanzas  108.66  84   IAMs_20  IAMs_20  18 50 09.9
      comp=Z,3µm,22.0s
R40A  Maddies Statio  108.67  55   IAMs_20  IAMs_20  18 57 45.7
      comp=Z,2µm,19.0s
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SCIA  State Center    108.74  52   IAMs_20  IAMs_20  18 56 11.1
      comp=Z,2µm,20.0s
I37A  Lemond, Waseca  109.04  49   IAMs_20  IAMs_20  18 55 02.8
      comp=Z,3µm,20.0s
LCAR  Lake Charles    109.05  58   IAMs_20  IAMs_20  19 00 45.9
      comp=Z,3µm,18.0s
P40A  Paris           109.11  54   IAMs_20  IAMs_20  18 57 13.1
      comp=Z,2µm,20.0s
K38A  Parkersburg     109.22  51   IAMs_20  IAMs_20  19 00 07.6
      comp=Z,2µm,18.0s
T42A  Van Buren       109.31  57   IAMs_20  IAMs_20  19 00 40.7
      comp=Z,3µm,18.0s
F36A  Milaca          109.32  47   IAMs_20  IAMs_20  19 03 56.9
      comp=Z,2µm,18.0s
HBAR  Harrisburg      109.33  59   IAMs_20  IAMs_20  19 00 52.3
      comp=Z,3µm,18.0s
346A  Big Creek Wild  109.34  63   IAMs_20  IAMs_20  18 55 14.3
      comp=Z,2µm,20.0s
CCM   Cathedral Cave  109.41  56   IAMs_20  IAMs_20  19 01 04.5
      comp=Z,2µm,19.0s
LPAR  Lepanto         109.62  59   IAMs_20  IAMs_20  19 01 18.1
      comp=Z,2µm,18.0s
B35A  Bob, Littlefor  109.65  45   IAMs_20  IAMs_20  19 01 01.2
      comp=Z,2µm,18.0s
PBMO  Poplar Bluff    109.77  57   IAMs_20  IAMs_20  18 57 16.0
      comp=Z,2µm,20.0s
MET   Memphis--Engin  109.81  59   IAMs_20  IAMs_20  18 55 53.2
      comp=Z,2µm,20.0s
GNAR  Gosnell         109.92  58   IAMs_20  IAMs_20  19 01 19.1
      comp=Z,2µm,18.0s
FVM   French Village  110.03  56   IAMs_20  IAMs_20  18 57 24.6
      comp=Z,2µm,20.0s
PEBM  Pemiscott Bayo  110.08  58   IAMs_20  IAMs_20  19 01 16.2
      comp=Z,2µm,18.0s
L40A  Anamosa         110.23  52   IAMs_20  IAMs_20  19 00 36.5
      comp=Z,3µm,19.0s
PVMO  Portageville    110.27  58   IAMs_20  IAMs_20  19 01 15.2
      comp=Z,3µm,18.0s
PARMO Parma           110.28  58   IAMs_20  IAMs_20  18 59 22.5
      comp=Z,2µm,19.0s
SLM   Saint Louis     110.31  55   IAMs_20  IAMs_20  18 55 09.9
      comp=Z,2µm,21.0s
PENMO Penman          110.33  58   IAMs_20  IAMs_20  19 01 25.9
      comp=Z,2µm,18.0s
LNXT  Lenox           110.37  58   IAMs_20  IAMs_20  19 01 49.9
      comp=Z,2µm,18.0s
W45A  Hickory Valley  110.41  59   IAMs_20  IAMs_20  19 01 11.2
      comp=Z,3µm,18.0s
HENM  Henderson Moun  110.51  58   IAMs_20  IAMs_20  18 55 38.6
      comp=Z,2µm,20.0s
GLAT  Glass           110.56  58   IAMs_20  IAMs_20  19 01 57.1
      comp=Z,2µm,18.0s
HICK  Hickman         110.67  58   IAMs_20  IAMs_20  19 01 52.7
      comp=Z,2µm,18.0s
E38A  The Farm, Brul  110.80  47   IAMs_20  IAMs_20  18 59 38.9
      comp=Z,3µm,19.0s
I40A  Norwalk         111.00  50   IAMs_20  IAMs_20  18 55 41.5
      comp=Z,3µm,20.0s
P43A  Skaggs, Pawnee  111.04  54   IAMs_20  IAMs_20  18 59 28.4
      comp=Z,3µm,19.0s
EYMN  Ely             111.05  45   IAMs_20  IAMs_20  19 00 56.4
      comp=Z,3µm,19.0s
JFWS  Jewell Farm     111.09  51   IAMs_20  IAMs_20  19 00 49.2
      comp=Z,2µm,18.0s
T45A  Paducah         111.22  57   IAMs_20  IAMs_20  18 56 29.3
      comp=Z,3µm,20.0s
Q44A  Meyer Farm, Va  111.29  55   IAMs_20  IAMs_20  18 59 46.0
      comp=Z,2µm,20.0s
BRAL  Brewton         111.31  64   IAMs_20  IAMs_20  18 56 13.3
      comp=Z,3µm,22.0s
L42A  Oliver, Polo    111.36  52   IAMs_20  IAMs_20  19 01 10.4
      comp=Z,3µm,19.0s
HDIL  Hopedale        111.38  54   IAMs_20  IAMs_20  19 03 05.2
      comp=Z,2µm,18.0s
G40A  Rib Lake        111.52  48   IAMs_20  IAMs_20  19 00 17.1
      comp=Z,2µm,19.0s
WVT   Waverly         111.69  58   IAMs_20  IAMs_20  19 02 08.0
      comp=Z,2µm,18.0s
LRAL  Lakeview Retre  111.75  62   IAMs_20  IAMs_20  18 55 56.8
      comp=Z,3µm,21.0s
O44A  Mansfield       111.93  54   IAMs_20  IAMs_20  19 00 14.9
      comp=Z,2µm,19.0s
250A  Grady           112.13  63   IAMs_20  IAMs_20  18 57 10.1
      comp=Z,2µm,21.0s
USIN  University of   112.16  57   IAMs_20  IAMs_20  19 00 53.2
      comp=Z,3µm,19.0s
451A  Vernon          112.28  65   IAMs_20  IAMs_20  18 58 36.2
      comp=Z,2µm,20.0s
COWI  Conover         112.38  48   IAMs_20  IAMs_20  19 00 50.8
      comp=Z,2µm,19.0s
T47A  Sharon Grove    112.43  58   IAMs_20  IAMs_20  18 58 55.3
      comp=Z,2µm,20.0s
K43A  Burlington      112.45  51   IAMs_20  IAMs_20  19 01 52.2
      comp=Z,2µm,20.0s
M44A  Midewin, Midew  112.46  53   IAMs_20  IAMs_20  19 02 20.6
      comp=Z,2µm,19.0s
HQIL  Hanson Quary C  112.66  52   IAMs_20  IAMs_20  19 03 53.9
      comp=Z,2µm,18.0s
BRVK  Borovoye        112.70 320c iPKIKP    PKiKP    18 16 34.3 -0.3
BRVK                               pmax     pmax
      comp=Z,12nm,1.7s
BRVK  Borovoye        112.70 320   IAMs_20  IAMs_20  19 00 53.4
      comp=Z,3µm,22.0s
P46A  Rosedale        112.80  55   IAMs_20  IAMs_20  18 59 13.9
      comp=Z,2µm,19.0s
CLTN  Cedars of Leba  112.88  59   IAMs_20  IAMs_20  18 57 40.4
      comp=Z,2µm,20.0s
D41A  Chassel         112.89  47   IAMs_20  IAMs_20  19 00 51.4
      comp=Z,2µm,19.0s
SFIN  Lafayette       113.01  54   IAMs_20  IAMs_20  19 01 50.2
      comp=Z,2µm,20.0s
F42A  Maple Grove Fa  113.02  48   IAMs_20  IAMs_20  19 06 17.0
      comp=Z,2µm,18.0s
352A  Blakely         113.15  64   IAMs_20  IAMs_20  18 57 18.1
      comp=Z,2µm,21.0s
BLO   Bloomington     113.25  55   IAMs_20  IAMs_20  19 02 33.9
      comp=Z,3µm,19.0s
WCI   Wyandotte Cave  113.28  56   IAMs_20  IAMs_20  19 01 19.6
      comp=Z,3µm,18.0s
553A  Crawfordville   113.30  65   IAMs_20  IAMs_20  19 03 28.3
      comp=Z,2µm,20.0s
U49A  Red Boiling Sp  113.39  58   IAMs_20  IAMs_20  19 01 30.9
      comp=Z,2µm,18.0s
W50A  Signal Mountai  113.53  60   IAMs_20  IAMs_20  18 58 34.9
      comp=Z,3µm,20.0s
152A  Waverly Hall    113.55  63   IAMs_20  IAMs_20  19 03 32.7
      comp=Z,3µm,18.0s
L46A  Eue Claire      113.84  52   IAMs_20  IAMs_20  18 57 07.2
      comp=Z,2µm,21.0s
E43A  Lone Tree Farm  113.89  48   IAMs_20  IAMs_20  19 01 26.7
      comp=Z,2µm,19.0s
N47A  Urbana          114.14  54   IAMs_20  IAMs_20  19 03 37.1
      comp=Z,2µm,20.0s
R49A  Shelbyville     114.16  57   IAMs_20  IAMs_20  19 01 02.0
      comp=Z,2µm,19.0s
T50A  Nancy           114.22  58   IAMs_20  IAMs_20  19 03 27.8
      comp=Z,2µm,18.0s
W52A  Murphy          114.63  60   IAMs_20  IAMs_20  18 59 39.1
      comp=Z,3µm,20.0s
P49A  Miami Univ. Ec  114.69  55   IAMs_20  IAMs_20  19 03 27.0
      comp=Z,3µm,18.0s
656A  Willston        114.75  67   IAMs_20  IAMs_20  18 58 14.8
      comp=Z,3µm,22.0s
R50A  Paris           114.81  57   IAMs_20  IAMs_20  19 01 58.4
      comp=Z,2µm,19.0s
154A  Montrose        114.88  63   IAMs_20  IAMs_20  19 03 08.9
      comp=Z,2µm,18.0s
O49A  Covington       115.07  55   IAMs_20  IAMs_20  19 01 33.9
      comp=Z,2µm,19.0s
J47A  Sunmer          115.08  51   IAMs_20  IAMs_20  19 08 36.6
      comp=Z,2µm,18.0s
L48A  N Adams         115.21  53   IAMs_20  IAMs_20  18 57 16.5
      comp=Z,2µm,22.0s
N49A  Columbus Grove  115.28  54   IAMs_20  IAMs_20  19 03 10.3
      comp=Z,2µm,19.0s
255A  Hazlehurst      115.28  64   IAMs_20  IAMs_20  18 58 29.7
      comp=Z,3µm,21.0s
S51A  Beattyville     115.29  57   IAMs_20  IAMs_20  18 59 01.2
      comp=Z,3µm,21.0s
BG3   Lake Jocassee   115.42  60   IAMs_20  IAMs_20  18 59 08.0
      comp=Z,3µm,21.0s
061Z  Ochoppi         115.44  71   IAMs_20  IAMs_20  18 59 47.4
      comp=Z,2µm,20.0s
456A  Hilliard        115.44  65   IAMs_20  IAMs_20  19 00 07.1
      comp=Z,3µm,21.0s
DWPF  Disney Wildern  115.44  68   IAMs_20  IAMs_20  19 00 26.4
      comp=Z,2µm,20.0s
Q51A  Peebles         115.68  56   IAMs_20  IAMs_20  19 03 37.1
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      comp=Z,2µm,18.0s
E46A  Sault Ste Mari  115.74  48   IAMs_20  IAMs_20  19 02 49.7
      comp=Z,2µm,19.0s
AAM   Ann Arbor       115.83  52   IAMs_20  IAMs_20  19 03 45.7
      comp=Z,2µm,18.0s
P51A  Williamsport    115.95  56   IAMs_20  IAMs_20  19 02 21.4
      comp=Z,2µm,19.0s
ACSO  Alum Creek Sta  116.10  55   IAMs_20  IAMs_20  19 05 14.3
      comp=Z,3µm,18.0s
060A  Indiantown      116.16  70   IAMs_20  IAMs_20  18 59 13.5
      comp=Z,2µm,21.0s
M50A  Fremont         116.19  53   IAMs_20  IAMs_20  19 03 56.3
      comp=Z,2µm,18.0s
Q52A  Bidwell         116.50  56   IAMs_20  IAMs_20  19 04 19.0
      comp=Z,2µm,18.0s
257A  Skidaway Islan  116.50  64   IAMs_20  IAMs_20  19 05 30.0
      comp=Z,3µm,19.0s
K50A  Casco           116.63  52   IAMs_20  IAMs_20  19 04 29.9
      comp=Z,3µm,19.0s
N51A  Ashland         116.64  54   IAMs_20  IAMs_20  19 04 54.3
      comp=Z,2µm,18.0s
R53A  Hurricane       116.67  57   IAMs_20  IAMs_20  19 01 01.6
      comp=Z,2µm,21.0s
JSC   Jenkinsville    116.68  61   IAMs_20  IAMs_20  18 59 17.3
      comp=Z,3µm,20.0s
P52A  Corning         116.68  55   IAMs_20  IAMs_20  19 02 53.7
      comp=Z,3µm,20.0s
S54A  Dingess, Beckl  117.11  58   IAMs_20  IAMs_20  19 05 36.3
      comp=Z,2µm,18.0s
P53A  Whipple         117.24  56   IAMs_20  IAMs_20  19 03 19.5
      comp=Z,3µm,19.0s
O53A  New Philadelph  117.45  55   IAMs_20  IAMs_20  19 05 54.0
      comp=Z,3µm,18.0s
M52A  Chesterland     117.46  53   IAMs_20  IAMs_20  19 04 44.1
      comp=Z,3µm,19.0s
Q54A  Coxs Mills      117.61  56   IAMs_20  IAMs_20  19 00 19.5
      comp=Z,2µm,20.0s
U56A  King            117.67  59   IAMs_20  IAMs_20  19 00 09.3
      comp=Z,3µm,22.0s
BLA   Blacksburg      117.74  58   IAMs_20  IAMs_20  19 03 48.1
      comp=Z,2µm,19.0s
N53A  Lisbon          117.79  54   IAMs_20  IAMs_20  19 01 18.8
      comp=Z,2µm,19.0s
M53A  Wl Miller and   117.96  54   IAMs_20  IAMs_20  19 04 23.4
      comp=Z,2µm,18.0s
O54A  Avella          118.08  55   IAMs_20  IAMs_20  19 03 47.7
      comp=Z,3µm,20.0s
R55A  Marlinton       118.10  57   IAMs_20  IAMs_20  19 02 14.4
      comp=Z,2µm,19.0s
SVE   Sverdlovsk      118.32 324 i PKIKP    PKiKP    18 16 50.1 +4.8
SVE                                pmax     pmax
      comp=Z,24nm,1.4s
SVE                                MLR      MLR
      comp=Z,2µm,23.0s
N54A  Moraine State   118.44  54   IAMs_20  IAMs_20  19 01 49.1
      comp=Z,2µm,20.0s
ERPA  Erie            118.53  53   IAMs_20  IAMs_20  18 59 28.1
      comp=Z,2µm,22.0s
SOCY  Socotra         118.57 273   IAMs_20  IAMs_20  19 05 56.6
      comp=Z,2µm,20.0s
M54A  Oil Creek Stat  118.72  54   IAMs_20  IAMs_20  19 04 54.5
      comp=Z,2µm,18.0s
Q56A  Snyder Ridge,   118.90  56   IAMs_20  IAMs_20  19 01 36.4
      comp=Z,2µm,20.0s
S57A  Dark Hollow, R  118.96  58   IAMs_20  IAMs_20  19 06 17.3
      comp=Z,3µm,18.0s
ABKAR Akbulak array   119.03 315   PKPdf    PKPdf    18 16 45.0 -1.9
ABKAR                              PP       PP       18 18 00.3 -6.5
SADO  Sadowa          119.27  50   IAMs_20  IAMs_20  19 01 13.5
      comp=Z,3µm,20.0s
SOHO  SOHO            119.27 286 i P        PKiKP    18 16 51.0 +2.8
      SNR=6.9
M55A  Ridgway         119.40  54   IAMs_20  IAMs_20  19 04 41.3
      comp=Z,2µm,20.0s
O56A  Blue Knob Stat  119.47  55   IAMs_20  IAMs_20  19 04 50.5
      comp=Z,3µm,19.0s
ARU   Arti            119.49 324 i PKIKP    PKiKP    18 16 51.7 +4.1
ARU                                                  18 24 03.4
SAML  Samuel          119.56 114   IAMs_20  IAMs_20  18 58 00.4
      comp=Z,2µm,22.0s
WVNY  West Valley, N  119.57  53   IAMs_20  IAMs_20  19 00 43.7
      comp=Z,3µm,22.0s
J54A  Appleton        119.58  52   IAMs_20  IAMs_20  19 06 34.9
      comp=Z,2µm,18.0s
UOSS  Minazif         119.73 287   P        PKiKP    18 16 52.7 +3.6
HATD  Hatta, Dubai    119.77 287 i P        PKiKP    18 16 54.0 +4.8
      SNR=6.7
ASHO  Ashiyiah        119.81 287 i P        PKiKP    18 16 54.0 +4.7
      SNR=6.0
R58B  Mineral         119.83  58   IAMs_20  IAMs_20  19 07 19.2
      comp=Z,2µm,18.0s
M56A  Emporium        119.83  54   IAMs_20  IAMs_20  19 05 11.9
      comp=Z,2µm,19.0s
MSFE  Esma-Masafi     119.85 288 i P        PKiKP    18 16 53.7 +4.4
      SNR=6.2
GEYT  Alibeck         119.92 302   PKP      PKiKP    18 16 49.9 +0.7
      comp=Z,7.5nm,0.9s,baz=250,slow=2.9,SNR=5.0
GEYT  Alibeck         119.92 302            PKPdf    18 16 45.0 -4.0
GEYT                               PP       PP       18 18 03.6  -10
ALNE  Al Ain          119.96 286   P        PKiKP    18 16 54.2 +4.6
T59A  Double "B" Far  120.00  59   IAMs_20  IAMs_20  19 05 49.9
      comp=Z,3µm,18.0s
CBN   Corbin Frederi  120.24  57   IAMs_20  IAMs_20  19 07 24.3
      comp=Z,2µm,18.0s
L56A  Greenwood       120.33  53   IAMs_20  IAMs_20  19 01 49.9
      comp=Z,3µm,21.0s
DELO  Deloro Mine     120.35  50   IAMs_20  IAMs_20  19 01 35.2
      comp=Z,2µm,21.0s
ASUD  Al Ashush, Dub  120.45 287   P        PKiKP    18 16 54.9 +4.4
VLDQ  Val d'Or        120.45  46   IAMs_20  IAMs_20  19 04 07.8
      comp=Z,2µm,20.0s
M57A  Sunshine Farm,  120.62  54   IAMs_20  IAMs_20  19 03 23.5
      comp=Z,3µm,21.0s
T60A  Surry           120.67  59   IAMs_20  IAMs_20  19 03 15.6
      comp=Z,2µm,20.0s
LSQQ  Lebel-sur-Quev  120.74  45   P        PKPdf    18 16 49.2 -1.0
      baz=272
PECO  Prince Edward   120.79  51   IAMs_20  IAMs_20  19 00 46.9
      comp=Z,2µm,21.0s
PAGS  Pennsylvania G  120.88  55   IAMs_20  IAMs_20  19 06 26.7
      comp=Z,2µm,19.0s
Q60A  Greensboro      121.49  57   IAMs_20  IAMs_20  19 03 23.2
      comp=Z,3µm,21.0s
J57A  Williamstown    121.51  51   IAMs_20  IAMs_20  19 10 13.0
      comp=Z,3µm,18.0s
KSPA  Keystone Colle  121.65  54   IAMs_20  IAMs_20  19 07 45.9
      comp=Z,2µm,21.0s
WUPA  West Chester U  121.72  56   IAMs_20  IAMs_20  19 02 57.0
      comp=Z,2µm,20.0s
K58A  Earlville       121.76  52   IAMs_20  IAMs_20  19 04 02.7
      comp=Z,2µm,21.0s
LUPA  Lehigh Univers  121.92  55   IAMs_20  IAMs_20  19 05 22.3
      comp=Z,2µm,19.0s
SPB   Sao Paulo       122.20 139   IAMs_20  IAMs_20  19 02 28.1
      comp=Z,2µm,21.0s
P61A  Hammonton       122.34  56   IAMs_20  IAMs_20  19 02 35.4
      comp=Z,3µm,21.0s
ODNJ  Ogdensburg      122.52  54   IAMs_20  IAMs_20  19 03 43.7
      comp=Z,3µm,21.0s
LONY  Lake Ozonia     122.52  50   IAMs_20  IAMs_20  19 05 23.5
      comp=Z,2µm,20.0s
UPNV  Upernavik       122.54  15 i P        PKiKP    18 16 57.2 +4.1
UPNV                               IAmb     IAmb     18 16 58.2
      comp=Z,16nm,0.9s
SDDR  Presa de Saban  122.58  81   IAMs_20  IAMs_20  18 58 05.6
      comp=Z,3µm,21.0s
J59A  Piesco          122.60  51   IAMs_20  IAMs_20  19 07 16.7
      comp=Z,2µm,19.0s
NCB   Newcomb         122.79  51   IAMs_20  IAMs_20  19 02 28.8
      comp=Z,2µm,22.0s
SC01  Santiago de lo  123.20  80   IAMs_20  IAMs_20  18 59 11.9
      comp=Z,3µm,21.0s
TRY   Troy            123.22  52   IAMs_20  IAMs_20  19 04 16.3
      comp=Z,2µm,20.0s
KSCT  Kent School, K  123.36  53   IAMs_20  IAMs_20  19 08 04.3
      comp=Z,3µm,20.0s
KIRV  Kirov           123.96 327c iPKIKP    PKPdf    18 16 55.3 -0.7
L62A  Suffield        123.97  53   IAMs_20  IAMs_20  19 08 28.4
      comp=Z,2µm,19.0s
UCCT  U. Connecticut  124.30  53   IAMs_20  IAMs_20  19 08 39.2
      comp=Z,2µm,19.0s
DAG   Danmarks Havn   124.40   2 i PKIKP    PKiKP    18 16 58.0 +1.2
DAG   Danmarks Havn   124.40   2 i P        PKiKP    18 16 58.0 +1.2
      comp=Z,12nm,1.0s
DAG   Danmarks Havn   124.40   2 i P        PKiKP    18 16 58.0 +1.2
DAG                                IAmb     IAmb     18 17 00.6
      comp=Z,12nm,1.0s
L63A  North Scituate  124.76  53   IAMs_20  IAMs_20  19 09 12.3
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	comp=Z,2µm,19.0s						
BRYW	Bryant College	124.81	53	IAMs_20	IAMs_20	19 09 21.7	
	comp=Z,2µm,19.0s						
WES	Weston	124.96	53	IAMs_20	IAMs_20	19 03 35.4	
	comp=Z,3µm,22.0s						
M64A	Tiverton	125.07	54	IAMs_20	IAMs_20	19 05 28.5	
	comp=Z,2µm,21.0s						
L64A	Middleborough	125.33	53	IAMs_20	IAMs_20	19 05 28.4	
	comp=Z,2µm,21.0s						
G62A	West of Eustis	125.36	49	IAMs_20	IAMs_20	19 03 38.6	
	comp=Z,3µm,22.0s						
M65A	Busby, Falmout	125.49	54	IAMs_20	IAMs_20	19 15 24.6	
	comp=Z,2µm,18.0s						
ILULI	Ilulissat	126.07	17	i PKIKP	PKiKP	18 17 03.5	+3.3
ILULI	Ilulissat	126.07	17	i P	PKiKP	18 17 03.5	+3.3
ILULI	Ilulissat	126.07	17	i P	PKiKP	18 17 03.6	+3.3
PKME	Peaks-Kenny Pk	126.23	49	P	PKPdf	18 16 59.5	-1.3
	baz=276						
SUMG	Summit	126.32	10	i PKIKP	PKiKP	18 17 05.2	+4.0
SUMG	Summit	126.32	10	PKPdf	PKPdf	18 16 58.5	-2.3
SUMG				PP	PP	18 18 50.3	-5.4
SUMG	Summit	126.32	10	i P	PKiKP	18 17 05.2	+4.0
	comp=Z,59nm,0.8s						
SUMG	Summit	126.32	10	i P	PKiKP	18 17 05.2	+4.0
SUMG				IAmb	IAmb	18 17 05.8	
	comp=Z,59nm,0.8s						
PTGA	Pitinga	126.34	108		PKPdf	18 17 00.1	-2.0
APA	Apatity	126.55	341	⇑iPKIKP	PKiKP	18 17 04.5	+3.2
APA				i		18 24 15.0	
APA				i		18 28 56.0	
APA				pmax	pmax		
	comp=Z,17nm,1.0s						
E63A	Oxbow	126.71	47	IAMs_20	IAMs_20	19 12 27.0	
	comp=Z,2µm,18.0s						
DBG	Daneborg	126.76	4	i P	PKiKP	18 17 04.1	+2.5
DBG				IAmb	IAmb	18 17 06.5	
	comp=Z,19nm,1.1s						
TMCR	Tamitsa	126.87	336	ePKIKP	PKiKP	18 17 05.1	+3.1
TMCR				pmax	pmax		
	comp=Z,41nm,1.4s						
ARCES	ARCESS Array B	127.37	345	PKP	PKiKP	18 17 02.8	-0.1
	comp=Z,27nm,1.1s,baz=45,slow=0.6,SNR=3.8						
ARCES	ARCESS Array B	127.37	345	PKPdf	PKPdf	18 16 59.0	-3.3
HUMP	Col San Antoni	127.40	83		PKPdf	18 17 00.9	-3.0
BDFB	Brasilia	127.48	131	PKP	PKiKP	18 17 05.9	+1.1
	comp=Z,6.0nm,0.9s,baz=138,slow=3.1,SNR=4.3						
BDFB	Brasilia	127.48	131	IAMs_20	IAMs_20	19 03 18.2	
	comp=Z,2µm,22.0s						
EMMW	East Machias	127.59	49	IAMs_20	IAMs_20	19 04 55.5	
	comp=Z,2µm,21.0s						
KLMR	Klimovskoe	127.84	332	ePKIKP	PKiKP	18 17 05.9	+1.9
KLMR				pmax	pmax		
	comp=Z,77nm,1.2s						
KLMR	Klimovskoe	127.84	332	ePKPdf	PKiKP	18 17 05.9	+1.9
KLMR				AMP		18 17 09.5	
	comp=Z,77nm,1.2s						
KLMR				eSKKPbc	SKKPbc	18 30 17.0	-4.8
KLMR				LQ	LQ	18 59 16.8	
KLMR				LQ	LQ	18 59 16.8	
KLMR				LR	LR	19 05 30.9	
MAK	Makhachkala	128.00	308	eP	Pdif	18 13 39.5	-8.5
MAK				e		18 19 03.2	
BATG	Bathurst New B	128.19	46	IAMs_20	IAMs_20	19 04 47.9	
	comp=Z,2µm,22.0s						
ITTB	Itaituba	128.25	114	eP	PKiKP	18 17 09.6	+3.3
DIAM	Diamantina, MG	128.47	137	eP	PKiKP	18 17 09.6	+2.8
KMBO	Kilima Mbogo	128.87	250	PKP	PKiKP	18 17 07.8	-0.1
	comp=Z,0.5nm,0.3s,baz=54,slow=2.5,SNR=1.6						
ICESG	Greenland Ices	128.96	13	i P	PKiKP	18 17 09.9	+3.4
ICESG				IAmb	IAmb	18 17 11.6	
	comp=Z,22nm,1.2s						
RAYN	Ar Rayn	129.10	283	i P	PKiKP	18 17 12.5	+4.8
	SNR=8.8						
GROC	Groznyy	129.22	309	i PKIKP	PKiKP	18 17 09.7	+2.4
GROC				ePS	PS	18 29 17.9	-7.1
GROC				pmax	pmax		
	comp=Z,39nm,1.1s						
PEXB	Peixe	129.64	128	eP	PKiKP	18 17 08.8	-0.2
RIB01	Linhares ES	129.68	141	eP	PKiKP	18 17 10.9	+1.8
SJMB	Sao Joao De Ma	129.69	140	eP	PKiKP	18 17 09.8	+0.7
BSFB	Barra de Sao F	129.79	141	eP	PKiKP	18 17 10.5	+1.2
VRH	Novokhopyorsk	130.28	320	ePKIKP	PKiKP	18 17 12.0	+2.8
VRH				pmax	pmax		
	comp=Z,40nm,1.2s						
GNI	Garni	130.33	305	P	PKiKP	18 17 15.3	+5.4
GNI	Garni	130.33	305	i PKIKP	PKiKP	18 17 12.7	+2.8
ZEI	Tsey	130.65	309	i PKIKP	PKiKP	18 17 15.4	+4.9
ZEI				pmax	pmax		
	comp=Z,23nm,2.0s						
MOS	Moscow	130.96	327	i PKIKP	PKiKP	18 17 11.5	+1.1
MOS				e		18 19 30.2	
MOS				pmax	pmax		
	comp=Z,71nm,1.3s						
MOS				MLR	MLR		
	comp=Z,1µm,20.0s						
KBZ	Khabaz	131.23	310	PKP	PKiKP	18 17 12.1	+0.7
	comp=Z,1.5nm,0.9s,baz=347,slow=1.4,SNR=3.0						
KIV	Kislovodsk	131.34	310	i PKIKP	PKiKP	18 17 12.4	+0.7
KIV				e		18 19 28.2	
KIV				ePS	PS	18 29 44.7	+1.1
KIV				eSS	SS	18 37 04.6	+2.8
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				MLR	MLR		
	comp=Z,3µm,23.0s						
LPSR	Galich'ya Gora	131.47	322	ePKIKP	PKiKP	18 17 14.6	+3.1
LPSR				pmax	pmax		
	comp=Z,70nm,1.4s						
GBN	Guysborough	131.63	48	IAMs_20	IAMs_20	19 11 06.3	
	comp=Z,2µm,20.0s						
OBN	Obninsk	131.77	326	PKP	PKiKP	18 17 15.5	+3.4
	comp=Z,3.6nm,0.5s,baz=0.0,slow=3.0,SNR=6.6						
OBN	Obninsk	131.77	326	⇓iPKIKP	PKiKP	18 17 14.4	+2.3
OBN				e		18 17 15.9	
OBN						18 17 19.0	
OBN						18 19 30.0	
OBN				PS	PS	18 29 44.0	-2.5
OBN				eSS	SS	18 37 10.2	+4.4
OBN				eSSS	SSS	18 41 57.0	
OBN				pmax	pmax		
	comp=Z,30nm,1.0s						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s						
OBN	Obninsk	131.77	326		PKPdf	18 17 08.4	-2.6
VSR	Storozhevoye	131.81	320	ePKIKP	PKiKP	18 17 13.2	+0.9
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
FINES	FINESS Array B	132.91	337	PKP	PKPdf	18 17 13.5	+0.5
	comp=Z,12nm,0.9s,baz=46,slow=11,SNR=6.7						
FINES	FINESS Array B	132.91	337	PKPdf	PKPdf	18 17 11.6	-1.4
MCPB	Macapa, AP	133.44	112	eP	PKiKP	18 17 16.7	-0.1
SOC	Sochi	133.52	310	ePKIKP	PKPdf	18 17 13.7	-1.1
SOC				e		18 19 39.6	
SOC				ePS	PS	18 29 52.8	-9.4
SOC				eSS	SS	18 37 27.1	-1.0
SOC				eSSS	SSS	18 42 20.2	
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
GDU01	Guandu, BA	134.49	137	eP	PKPdf	18 17 17.3	-0.2
TMAB	Tom-Au,PA,Br	135.73	118	eP	PKiKP	18 17 21.1	-0.4
AAL	Aland	135.91	339	eP	PKiKP	18 17 21.2	+0.9
MNK	Minsk	136.44	329	i PKP	PKiKP	18 17 24.7	+3.1
	comp=E,4.0nm,1.3s						
MNK				i PKP	PKiKP	18 17 24.7	+3.1
	comp=N,33nm,1.6s						
MNK				i PKP	PKiKP	18 17 24.7	+3.1
	comp=Z,43nm,1.2s						
MNK				i PP	PP	18 20 07.0	+6.1
MNK				i SKP		18 20 59.6	
MNK				i PPP	PPP	18 23 04.5	
MNK				i PKKP	PKKPdf	18 27 02.5	+3.0
MNK				i SKKP		18 30 31.2	
MNK				i PKKS		18 30 39.2	
MNK				i SKKS		18 34 33.9	
MNK				i SS	SS	18 38 51.1	+49
MNK				i LQ	LQ	19 10 20.4	
MNK				i LR	LR	19 12 59.4	
MNK				i LRM	MLR	19 16 32.7	
	comp=N,2µm,24.8s						
MNK				i LRM	MLR	19 16 51.6	
	comp=E,164nm,20.0s						
MNK				i LRM	MLR	19 16 52.7	
	comp=Z,2µm,20.9s						
IDID	Didziasalis	136.51	330	eP	PKiKP	18 17 22.4	+0.7
GAZ	Gaziantep	136.52	302	IAMs_20	IAMs_20	19 20 57.2	
	comp=Z,2µm,22.0s						
ISAL	Salakas	136.64	331	eP	PKiKP	18 17 22.6	+0.7
NACGM	Naroch	136.73	330	i PKP	PKiKP	18 17 22.6	+0.4
NACGM				i PKP	PKiKP	18 17 22.6	+0.4
NACGM				i PKP	PKiKP	18 17 22.6	+0.4
NACGM				i PP	PP	18 20 19.4	+17
NACGM				i PPP	PPP	18 23 05.1	
NACGM				i SKS	SKSdf	18 24 23.5	-6.9
NACGM				i SKKS	SKKSac	18 26 49.9	-7.0
NACGM				i SS	SS	18 38 24.2	+19
NACGM				i SSS	SSS	18 42 31.2	
NACGM				i LQ	LQ	19 02 01.0	
NACGM				i LR	LR	19 07 42.6	
PABE	Paberze	137.64	332	eP	PKiKP	18 17 26.8	+2.9
NB2	NORSAR Subarra	137.75	345	PKPdf	PKiKP	18 17 28.0	+3.9
	comp=Z,25nm,1.4s,baz=31,slow=1.9						
NB2	NORSAR Subarra	137.75	345	PKPdf	PKiKP	18 17 28.0	+3.9
	baz=31,slow=1.9						
NOA	NORSAR Array B	137.75	345	PKP	PKPdf	18 17 22.3	+0.1
	comp=Z,1.8nm,0.9s,baz=38,slow=2.1,SNR=3.8						
AKASG	Malin Array Be	137.75	323	PKP	PKPdf	18 17 23.1	+0.7
	comp=Z,16nm,1.0s,baz=56,slow=2.5,SNR=15						
AKASG				PP	PP	18 20 10.2	+0.9
	comp=Z,0.1nm,0.3s,baz=50,slow=6.1,SNR=4.9						
AKASG	Malin Array Be	137.75	323	PKIKP	PKiKP	18 17 23.4	-1.0
AKASG	Malin Array Be	137.75	323		PKiKP	18 17 23.4	-1.0
PBUR	Paburge	138.16	334	eP	PKiKP	18 17 32.2	+7.1
BRTR	Keskin Array B	138.81	306	PKP	PKiKP	18 17 26.0	-1.1
	comp=Z,6.3nm,1.0s,baz=52,slow=2.0,SNR=17						
BRTR				PP	PP	18 20 16.3	-0.5
	comp=Z,1.0nm,1.0s,baz=99,slow=7.4,SNR=2.7						
SUW	Suwalki	138.94	331	ePKP	PKiKP	18 17 29.7	+3.0
SUW	Suwalki	138.94	331	eP	PKiKP	18 17 29.2	+2.5
CFR	Carcaliu	140.91	316	⇓P	PKiKP	18 17 33.9	+2.9
CFR	Carcaliu	140.91	316	⇓PKIKP	PKiKP	18 17 33.9	+2.9
LVV	L'vov	141.04	325	ePKIKP	PKiKP	18 17 33.1	+1.9
LVV				MLR	MLR		
	comp=Z,2µm,22.0s						
TESR	Tescani	141.25	319	⇑P	PKiKP	18 17 35.2	+3.5
BIZ	Bicaz	141.38	320	⇑P	PKiKP	18 17 34.2	+2.3
BEL	Belsk	141.45	330	ePKP	PKiKP	18 17 34.8	+2.9
BURAR	Bucovina Array	141.57	321	⇑P	PKPdf	18 17 29.8	+0.2
BURAR	Bucovina Array	141.57	321	⇑PKIKP	PKPdf	18 17 29.8	+0.2
ISP	Isparta	141.63	304	IAMs_20	IAMs_20	19 30 54.1	
	comp=Z,1µm,19.0s						
KWP	Kalwaria Pacla	141.86	326	ePKP	PKiKP	18 17 34.2	+1.4
MLR	Muntele Rosu	142.16	318	⇓P	PKiKP	18 17 33.2	-0.6
MLR	Muntele Rosu	142.16	318	⇓PKIKP	PKiKP	18 17 33.2	-0.6
DOPR	Dopca	142.28	319	⇑P	PKiKP	18 17 36.1	+2.2
KOLS	Kolonicke sedl	142.50	325	ePKIKP	PKiKP	18 17 33.9	-0.3
KOLS	Kolonicke sedl	142.50	325	ePKP	PKiKP	18 17 33.9	-0.3
UZH	Uzhgorod	142.66	324	ePKHKP	PKPpre	18 17 24.8	
UZH				i		18 17 32.3	
UZH				e		18 23 58.6	
VOIR		142.74	318	⇑P	PKiKP	18 17 33.4	-1.5
VOIR		142.74	318	⇑PKIKP	PKiKP	18 17 33.4	-1.5
RCBR	Riachuelo	142.76	134	IAMs_20	IAMs_20	19 14 22.2	
	comp=Z,2µm,21.0s						
OJC	Ojcow	142.98	328	ePKP	PKiKP	18 17 37.6	+2.5
ARR	Arges	143.03	318	⇑P	PKPdf	18 17 33.4	+1.2
HUMR	Humele	143.21	317	⇓P	PKPdf	18 17 34.0	+1.5
NIE	Niedzica	143.24	327	ePKP	PKiKP	18 17 38.3	+2.6
DRGR		143.45	322	⇓P	PKPdf	18 17 33.3	+0.4
DRGR		143.45	322	⇓PKIKP	PKPdf	18 17 33.3	+0.4
YER	Yerkesik	143.52	304	P	PKiKP	18 17 47.4	+11
LTVH	Ltavrtes, Hu	143.59	323	eP	PKiKP	18 17 37.4	+0.9
VLAD	Vladila	143.82	317	⇑P	PKiKP	18 17 37.7	+0.7
LANS	Liptovska Anna	143.83	327	ePKIKP	PKiKP	18 17 40.1	+3.1
LANS	Liptovska Anna	143.83	327	e	PKiKP	18 17 40.1	+3.1
PLVB	Pleven	143.96	316	⇓P	PKiKP	18 17 37.6	+0.3
ALN	Alexandroupoli	144.00	311	P	PKiKP	18 17 44.6	+7.1
GZR	Gura Zlata	144.15	320	⇑P	PKPab	18 17 30.2	-1.7
KSP	Ksiaz	144.19	332	ePKP	PKiKP	18 17 36.9	-0.7
MORC	Moravsky Berou	144.36	329	⇓P	PKiKP	18 17 38.2	+0.2
MORC	Moravsky Berou	144.36	329	ePKP	PKPbc	18 17 33.2	+0.4
MORC	Moravsky Berou	144.36	329	⇓PKIKP	PKiKP	18 17 38.2	+0.2
MORC	Moravsky Berou	144.36	329	IAMs_20	IAMs_20	19 25 47.6	
	comp=Z,1µm,18.0s						
PSZ	Piszkesteto	144.37	325	⇑P	PKiKP	18 17 37.5	-0.7
PSZ	Piszkesteto	144.37	325	eP	PKiKP	18 17 38.4	+0.2
PSZ	Piszkesteto	144.37	325	⇑PKIKP	PKiKP	18 17 37.5	-0.7
PSZ	Piszkesteto	144.37	325	PKPdf	PKPbc	18 17 33.1	+0.2
OSTC	Ostas	144.43	331	ePKP	PKPdf	18 17 35.6	+1.1
OSTC				AMS	AMS	19 16 20.0	
	comp=Z,3µm,20.6s						
CHVC	Chvalec	144.48	331	ePKP	PKPdf	18 17 36.3	+1.7
DPC	Dobruska-Polom	144.53	331	ePKIKP	PKPbc	18 17 33.5	+0.2
DPC				e		18 17 38.5	
DPC				MLR	MLR		
	comp=Z,3µm,20.9s						
DPC	Dobruska-Polom	144.53	331	ePKP	PKPbc	18 17 33.5	+0.2
DPC				epPKP	PKiKP	18 17 38.5	+0.1
DPC				AMS	AMS	19 17 40.0	
	comp=Z,3µm,20.9s						
UPC	Upice	144.56	331	ePKIKP	PKPdf	18 17 34.0	-0.7
UPC				MLR	MLR		
	comp=Z,3µm,21.4s						
UPC	Upice	144.56	331	ePKP	PKPdf	18 17 34.0	-0.7
UPC				AMS	AMS	19 17 30.0	
	comp=Z,3µm,21.4s						
VYHS	Vyhne	144.57	327	ePKIKP	PKPdf	18 17 35.8	+1.0
VYHS				e		18 17 40.3	
VYHS	Vyhne	144.57	327	ePKP	PKPdf	18 17 35.8	+1.0
VYHS				e		18 17 40.2	
HERR	Herculane	144.63	319	⇑P	PKPab	18 17 33.6	0.0
BZS	Buzias	144.73	321	⇓P	PKPab	18 17 33.5	-0.4
BZS	Buzias	144.73	321	⇓PKIKP	PKPab	18 17 33.5	-0.4
KARP	Karpathos	144.79	302	IAMs_20	IAMs_20	19 32 54.1	
	comp=Z,2µm,18.0s						
JAVC	Velka Javorina	144.92	328	ePKP	PKPdf	18 17 35.8	+0.4
FLTG	Flechtingen	145.09	337	ePKPbc	PKiKP	18 17 39.2	-0.1
	baz=37,slow=2.9						
BUD	Budapest	145.10	325	eP	PKiKP	18 17 40.1	+0.5
VRAC	Vranov	145.13	329	⇑P	PKiKP	18 17 40.8	+1.2
VRAC	Vranov	145.13	329	ePKP	PKPbc	18 17 34.4	-0.8
VRAC	Vranov	145.13	329	⇑PKIKP	PKiKP	18 17 40.8	+1.2
PVCC	Panska Ves	145.18	333	ePKIKP	PKPdf	18 17 35.6	-0.1
PVCC				e		18 17 35.9	
PVCC				e		18 17 40.6	
PVCC				MLR	MLR		
	comp=Z,2µm,22.0s						
PVCC	Panska Ves	145.18	333	ePKP	PKPdf	18 17 35.6	-0.1
PVCC				ex	x	18 17 40.6	
PVCC				AMS	AMS	19 20 30.0	
	comp=Z,2µm,22.0s						
BRG	Berggiesshubel	145.19	333	i PKP	PKPbc	18 17 34.5	-0.8
BRG				Amp		18 17 36.3	
	comp=Z,12nm,1.0s						
BRG				i x	x	18 17 40.1	
BRG				Amp		18 17 41.6	
	comp=Z,106nm,1.1s						
BRG				ex	x	18 17 46.6	
BRG				Amp		18 17 49.1	
	comp=Z,122nm,1.6s						
BRG	Berggiesshubel	145.19	333	ePKPbc	PKiKP	18 17 40.0	+0.4
	baz=37,slow=2.9						
VTS	Vitosha	145.21	315	⇓P	PKiKP	18 17 41.4	+1.3
VTS	Vitosha	145.21	315	⇓PKIKP	PKiKP	18 17 41.4	+1.3
CLL	Collm	145.24	335	ePKPbc	PKPbc	18 17 33.0	-2.5
CLL				i		18 17 36.4	
CLL				i PKiKP	PKiKP	18 17 39.6	-0.1
	comp=Z,80nm,1.1s						
CLL				i		18 17 46.1	
CLL				e		18 18 04.0	
CLL				ePKSdf	PKSdf	18 21 10.0	-1.1
CLL				e		18 25 33.0	
CLL				ePSKS		18 31 12.0	
CLL				ePPS	PPS	18 33 30.0	
CLL				e		18 34 18.0	
CLL				eSS	SS	18 40 00.0	+16
CLL				eSSS	SSS	18 44 42.0	
CLL				eSSSS		18 48 42.0	
CLL	Collm	145.24	335	ePKP2	PKPbc	18 17 33.0	-2.5
CLL				pmax	pmax		
	comp=Z,80nm,1.1s						
CLL	Collm	145.24	335		PKPbc	18 17 33.2	-2.3
CLL				IAMs_20	IAMs_20	19 22 26.1	
	comp=Z,2µm,22.0s						
CLL	Collm	145.24	335	ePKPbc	PKiKP	18 17 39.7	0.0
	baz=37,slow=2.9						
NVR	Nevrokopi	145.34	313	P	PKiKP	18 17 38.8	-1.5
NRDL	Niedersach Rie	145.35	338	ePKPbc	PKiKP	18 17 40.1	+0.3
	baz=37,slow=2.9						
KRUC	Moravsky	145.40	329	ePKP	PKPbc	18 17 35.1	-1.0
MODS	Modra-Piesok	145.43	328	ePKIKP	PKPab	18 17 36.8	+0.4
MODS				e		18 17 41.0	
MODS	Modra-Piesok	145.43	328	ePKP	PKPab	18 17 36.8	+0.4
MODS				e		18 17 41.0	
ASSE	Asse, Remlinge	145.46	338	ePKPbc	PKiKP	18 17 40.8	+0.8
	baz=37,slow=2.9						
CSKK	Cskako	145.58	326	eP	PKiKP	18 17 42.2	+1.6
PRU	Pruhonice	145.59	332	ePKP2	PKPdf	18 17 35.4	-1.1
PRU				MLR	MLR		
	comp=Z,2µm,21.5s						
PRU	Pruhonice	145.59	332	ePKP	PKPdf	18 17 35.4	-1.1
PRU				ex	x	18 17 41.5	
PRU				AMS	AMS	19 17 50.0	
	comp=Z,2µm,21.5s						
SRS	Serrai	145.62	313	P	PKPab	18 17 38.3	+0.9
ZST	Bratislava	145.64	328	ePKIKP	PKPab	18 17 37.7	+0.5
ZST				e		18 17 43.0	
ZST	Bratislava	145.64	328	ePKP	PKPab	18 17 37.7	+0.5
ZST				e		18 17 43.0	
TREC	Trest	145.66	330	AMS	AMS	19 16 40.0	
	comp=Z,3µm,23.4s						
STIA	Sitia Lasithi	145.72	301	P	PKiKP	18 17 47.6	+6.4
EKA	Eskdalemuir Ar	145.75	353	PKPbc	PKPdf	18 17 34.9	-1.6
	comp=Z,17nm,0.8s,baz=356,slow=2.4,SNR=15						
ESK	Eskdalemuir	145.77	353	PKIKP	PKPdf	18 17 35.2	-1.4
ESK	Eskdalemuir	145.77	353	PKPdf	PKPdf	18 17 35.2	-1.4
NEUB	Neuenburg	145.79	336	ePKPbc	PKiKP	18 17 42.0	+1.2
	baz=37,slow=2.9						
CLZ	Clausthal	145.80	338	ePKPbc	PKiKP	18 17 42.3	+1.3
	baz=37,slow=2.9						
THR8	Santorini-Mono	145.88	304	P	PKiKP	18 17 42.2	+0.7
EGYH	Egyhazaskeszo	146.03	326	eP	PKPab	18 17 39.4	+0.8
FRGS	Fruska Gora	146.04	321	eP	PKiKP	18 17 42.3	+0.7
TIH	Tihany	146.07	325	eP	PKiKP	18 17 43.3	+1.8
NPS	Neapolis	146.08	302	P	PKiKP	18 17 44.4	+2.4
MPLH	Magyarpolny	146.09	326	eP	PKiKP	18 17 42.9	+1.3
MORH	Mrgy, Hungar	146.09	324	eP	PKiKP	18 17 42.3	+0.7
MORH	Mrgy, Hungar	146.09	324	eP	PKPdf	18 17 36.5	-0.9
TANN	Tannenbergstha	146.15	334	ePKPbc	PKiKP	18 17 43.1	+1.4
	baz=37,slow=2.9						
WERD	Werda	146.18	334	ePKPbc	PKiKP	18 17 43.0	+1.3
	baz=37,slow=2.9						
GTTG	Gottingen	146.19	338	ePKPbc	PKiKP	18 17 43.1	+1.5
	baz=37,slow=2.9						
PLN	Plauen	146.21	335	ePKPbc	PKiKP	18 17 43.1	+1.4
	baz=37,slow=2.9						
LAST	Lasithi	146.21	302	P	PKPbc	18 17 39.2	0.0
VAY	Valandovo	146.23	313	i P	PKiKP	18 17 43.6	+1.5
SOP	Sopron	146.25	327	eP	PKiKP	18 17 43.6	+1.7
WERN	Wernitzgruen	146.28	334	ePKPbc	PKiKP	18 17 43.4	+1.5
	baz=37,slow=2.9						
IBBN	Ibbenburen	146.28	340	ePKPbc	PKiKP	18 17 43.5	+1.7
	baz=37,slow=2.9						
NKC	Novy Kostel	146.29	334	AMS	AMS	19 18 00.0	
	comp=Z,2µm,21.8s						
MOX	Moxa	146.30	335	ePKPbc	PKiKP	18 17 43.3	+1.3
	baz=37,slow=2.9						
STIP	Stip	146.32	314	i P	PKiKP	18 17 44.0	+1.8
CONA	Conrad Observa	146.44	328	i P	PKPab	18 17 39.9	-0.4
	comp=Z,100nm,1.2s,SNR=15						
DIVS	Divibare	146.52	320	eP	PKiKP	18 17 45.2	+2.5
TEKS	Tekeris	146.55	321	eP	PKiKP	18 17 44.8	+2.1
MANZ	Manzenberg	146.62	334	ePKPbc	PKiKP	18 17 44.7	+2.1
	baz=37,slow=2.9						
KHC	Kasperske Hory	146.64	332	ePKIKP	PKPdf	18 17 38.2	-0.1
KHC				e		18 17 45.0	
KHC				MLR	MLR		
	comp=Z,2µm,19.4s						
KHC	Kasperske Hory	146.64	332	ePKP	PKPdf	18 17 38.2	-0.1
KHC				ex	x	18 17 45.0	
KHC				AMS	AMS	19 23 00.0	
	comp=Z,2µm,19.4s						
KHC	Kasperske Hory	146.64	332		PKPdf	18 17 37.5	-0.8
KHC				IAMs_20	IAMs_20	19 21 18.7	
	comp=Z,2µm,22.0s						
IDI	Anoyia	146.65	302	⇑P	PKiKP	18 17 44.9	+1.7
IDI	Anoyia	146.65	302	IAMs_20	IAMs_20	19 30 44.3	
	comp=Z,1µm,20.0s						
SKO	Skopje	146.69	315	i P	PKiKP	18 17 44.8	+1.7
ROTZ	Rotzenmuhle	146.75	334	ePKPbc	PKiKP	18 17 45.2	+2.3
	baz=37,slow=2.9						
UBBA	Unterbreizbach	146.77	337	ePKPbc	PKiKP	18 17 44.7	+1.9
	baz=37,slow=2.9						
GEC2	GERESS Array S	146.80	331	PKPdf	PKPdf	18 17 38.0	-0.8
GEC2	GERESS Array S	146.80	331	ePKPbc	PKiKP	18 17 45.2	+2.0
	baz=37,slow=2.9						
GERES	GERESS Array B	146.80	331	PKPbc	PKPdf	18 17 39.3	+0.6
	comp=Z,9.8nm,0.9s,baz=54,slow=2.3,SNR=19						
GERES	GERESS Array B	146.80	331	PKPdf	PKPdf	18 17 37.9	-0.8
WET	Wettzell	146.94	332	ePKPbc	PKiKP	18 17 45.8	+2.4
	baz=37,slow=2.9						
SJES	Sjenica	146.98	318	eP	PKiKP	18 17 43.3	-0.4
ATAL	Atalanti	146.99	309	P	PKiKP	18 17 45.0	+1.3
BBLS	Lazići	147.00	320	eP	PKPab	18 17 42.3	-0.3
KASTN	Kahler Asten	147.01	339	ePKPbc	PKiKP	18 17 45.6	+2.2
	baz=37,slow=2.9						
ARSA	Arzberg	147.06	328	eP	PKiKP	18 17 43.6	-0.1
	comp=Z,29nm,1.4s						
HAPS	Han Pijesak,Bl	147.15	320	eP	PKPbc	18 17 42.0	+0.4
VAM	Vamos	147.16	303	P	PKiKP	18 17 47.5	+3.3
BUG	Bochum--Univer	147.18	340	ePKPbc	PKiKP	18 17 45.8	+2.1
	baz=37,slow=2.9						
GRF	Grafenberg Arr	147.21	334	ePKPbc	PKiKP	18 17 46.7	+2.9
	baz=37,slow=2.9						
MOA	Molln	147.26	329	i P	PKiKP	18 17 43.8	-0.2
	comp=Z,72nm,1.6s,SNR=7.1						
THAL	Thalero	147.49	308	P	PKiKP	18 17 47.0	+2.2
OHR	Ohrid	147.52	314	i P	PKiKP	18 17 47.7	+2.9
SOKA	Soboth	147.70	327	eP	PKPbc	18 17 42.3	-0.7
	comp=Z,46nm,1.3s						
BLY	Banja Luka	147.79	323	eP	PKPbc	18 17 43.2	0.0
TNS	Taunus Mts	147.82	338	ePKPbc	PKPab	18 17 48.1	+2.5
	baz=37,slow=2.9						
KLV	Kalavryta, Ach	147.86	308	P	PKPab	18 17 46.9	+0.7
PDG	Podgorica	147.87	317	⇓P	PKPbc	18 17 43.0	-0.4
PDG	Podgorica	147.87	317	eP	PKPab	18 17 48.2	+2.2
TIR	Tirane	148.02	315	⇓P	PKPab	18 17 49.2	+2.5
TIR	Tirane	148.02	315	⇓PKP2	PKPab	18 17 49.2	+2.5
MGRS	Mrkonjic Grad	148.05	322	eP	PKPab	18 17 49.1	+2.4
CRES	Cresnjev	148.05	326	eP	PKPab	18 17 48.1	+1.5
OBKA	Obir	148.06	327	eP	PKPbc	18 17 43.9	-0.1
	comp=Z,22nm,1.0s						
BEBN	Eben Emael	148.24	341	dPKP	PKPab	18 17 47.9	+0.7
KBA	Koelnbreinsper	148.25	329	i P	PKPbc	18 17 44.2	-0.4
	comp=Z,59nm,1.4s,SNR=7.8						
BTNL	Ternell	148.28	341	dPKP	PKPab	18 17 49.2	+1.8
MEM	Membach	148.30	341	dx	x	18 17 44.9	
MEM				dPKP	PKPab	18 17 48.5	+1.1
FUR	Furstenfeldbru	148.38	333	ePKPbc	PKPab	18 17 49.6	+1.7
	baz=37,slow=2.9						
LJU	Ljubljana	148.39	327	eP	PKPab	18 17 48.3	+0.3
MYKA	Terra Mystica	148.42	328	i P	PKPbc	18 17 44.3	-0.6
	comp=Z,36nm,0.9s,SNR=6.2						
BSTI	Sart Tilman	148.46	341	dPKP	PKPab	18 17 49.7	+1.6
BHOU	Houvegnez	148.52	340	dPKP	PKPab	18 17 47.6	-0.8
CEY	Cerknica	148.65	326	eP	PKPab	18 17 49.4	+0.3
NYDR	Nydri-Lefkada	148.65	310	P	PKPab	18 17 51.2	+2.0
BCLA	Clavier	148.68	341	dPKP	PKPab	18 17 48.5	-0.4
STU	Stuttgart	148.74	335	ePKPbc	PKPab	18 17 50.7	+1.4
	baz=37,slow=2.9						
BGES	Gesves	148.78	341	dPKP	PKPab	18 17 48.9	-0.5
ZOU	Zoufplan	148.80	329		PKiKP	18 17 47.8	+0.3
WATA	Walderalm	148.88	331	i P	PKPbc	18 17 46.6	+0.4
	comp=Z,66nm,1.1s,SNR=7.0						
ABTA	Abfaltersbach	148.88	330	eP	PKPbc	18 17 45.8	-0.4
	comp=Z,60nm,0.9s						
SNF	Seneffe	148.90	342	dPKP	PKPab	18 17 50.4	+0.6
RCHB	Rochefort	148.94	341	dPKP	PKPab	18 17 50.4	+0.4
BMRD	Maredsous	148.94	342	dx	x	18 17 43.5	
BMRD				dPKP	PKPab	18 17 49.0	-1.0
TRI	Trieste	149.01	327	IAMs_20	IAMs_20	19 29 18.8	
	comp=Z,2µm,21.0s						
WLF	Walferdange	149.08	340	dx	x	18 17 47.5	
WLF				dPKP	PKPab	18 17 51.9	+1.3
WLF	Walferdange	149.08	340	PKIKP	PKPdf	18 17 42.3	0.0
WLF	Walferdange	149.08	340	PKPdf	PKPdf	18 17 42.3	0.0
WLF	Walferdange	149.08	340	ePKPbc	PKPab	18 17 51.9	+1.3
	baz=37,slow=2.9						
MOTA	Moosalm	149.08	332	i P	PKPbc	18 17 45.7	-1.0
	comp=Z,72nm,1.0s,SNR=8.0						
RETA	Reutte	149.12	332	i P	PKPab	18 17 51.4	+0.4

	comp=Z,85nm,1.3s,SNR=10						
SQTA	Sankt Quirin	149.13	332	*i* P	PKPbc	18 17 46.1	-0.7
	comp=Z,81nm,1.2s,SNR=7.8						
STAL	STALIGIAL	149.14	329		PKPdf	18 17 42.5	0.0
DOU	Dourbes	149.18	342	*d*PKP	PKPab	18 17 51.3	+0.3
UBR	Ueberruh	149.25	333	*e*PKPbc	PKPab	18 17 51.6	+0.1
	baz=37,slow=2.9						
BFO	Black Forest	149.44	336	PKP2	PKPbc	18 17 46.5	-0.9
BFO	Black Forest	149.44	336		PKPbc	18 17 46.5	-0.9
BFO	Black Forest	149.44	336	*e*PKPbc	PKPab	18 17 52.5	+0.3
	baz=37,slow=2.9						
FETA	Feichten	149.49	332	*i* P	PKPbc	18 17 47.2	-0.5
	comp=Z,116nm,1.1s,SNR=14						
DAVA	Damuels	149.65	333	*i* P	PKPbc	18 17 47.4	-0.8
	comp=Z,94nm,1.2s,SNR=11						
ECH	Echery	149.97	337	PKP2	PKPab	18 17 53.4	-1.0
ECH	Echery	149.97	337		PKPbc	18 17 46.8	-1.9
ECH				PKPab	PKPab	18 17 53.4	-1.0
DAVOX	Davos/Dischmat	150.05	332	PKPbc	PKPbc	18 17 48.1	-1.1
	comp=Z,31nm,0.8s,baz=337,slow=0.8,SNR=14						
TEOL	Teolo	150.29	329		PKPbc	18 17 48.6	-1.0
TEOL				PKPab	pPKPbc	18 17 54.6	+0.1
SGRT	San Giovanni R	150.42	319		PKPab	18 17 54.4	-2.1
MATE	Matera	150.43	316	⇑P	PKiKP	18 17 53.0	+2.3
TIP	Timpagrande	151.16	314	⇑P	PKPab	18 17 57.5	-2.1
TIP	Timpagrande	151.16	314		PKPab	18 17 56.9	-2.8
INTR	Introdacqua	151.36	321	PKPab	PKPab	18 17 57.2	-3.2
AQU	L'Aquila	151.43	322	*e*P	PKiKP	18 17 56.5	+3.6
CLF	Chambon-Foret	151.71	343		PKPbc	18 17 52.1	-0.6
CLF				PKPab	pPKPbc	18 17 58.2	+0.6
KEST	Kesra	157.98	315	PKPab	PKPab	18 18 30.2	+1.4
	comp=Z,17nm,1.0s,baz=198,slow=3.2,SNR=3.1						
ESDC	Sonseca Array	161.10	346	PKPab	PKPab	18 18 42.1	0.0
	comp=Z,5.1nm,0.9s,baz=7.2,slow=3.5,SNR=5.9						
DBIC	Dimbokro	164.59	199	PKPab	PKPab	18 18 58.1	+0.2
	comp=Z,7.5nm,0.7s,baz=148,slow=4.4,SNR=11						
DBIC	Dimbokro	164.59	199	PKP2	PKPab	18 18 58.2	+0.4
TORD	Torodi Ar. Bea	166.29	235	PKP	PKPdf	18 18 06.0	+1.6
	comp=Z,5.4nm,1.2s,baz=108,slow=0.5,SNR=4.8						
TORD				PKPab	PKPab	18 19 06.6	+1.1
	comp=Z,2.8nm,1.0s,baz=105,slow=3.8,SNR=1.8						
TORD				PP	PP	18 22 53.8	+1.1
	comp=Z,2.3nm,1.1s,baz=146,slow=3.1,SNR=2.6						
TORD	Torodi Ar. Bea	166.29	235		PKPdf	18 18 01.1	-3.3
TORD					PKPab	18 19 05.2	-0.3

*NNC **30** 18:00:48.1±0.9, 44°.49N×79°.97E, h8^{km}±5^{km}, mb2.5, mpv2.5, Error ellipse: s-maj=8.7km s-min=4.4km az=93.0*

*SOME **30** 18:00:50.1, 44°.50N×79°.88E, h10^{km}*

ISC 30 18:00:49.1±1.1, 44°.50N±0°.03×79°.94E±0°.04, h13^{km}±8^{km}, n17, σ0^{s}68/33, 4C, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	0.20	212	*e*P	Pg	18 00 53.8	+0.1
	2.1nm,0.0s						
DJR				*e*S	Sg	18 00 56.7	-0.1
	15nm,0.1s						
DJR	Jarkent	0.20	212	P	Pg	18 00 53.8	+0.1
	2.1nm,0.0s						
DJR				S	Sg	18 00 56.7	-0.1
	15nm,0.1s						
KAPS	Kapalarasan	0.89	332	*e*P	Pg	18 01 06.1	-0.2
	0.3nm,0.2s						
KAPS				*e*S	Sg	18 01 17.4	-0.5
	2.8nm,0.2s						
KAPS	Kapalarasan	0.89	332	P	Pg	18 01 06.1	-0.2
	0.3nm,0.2s						
KAPS				S	Sg	18 01 17.4	-0.5
	2.8nm,0.2s						
KTMS	Ketmen	1.10	164	*e*P	Pb	18 01 10.3	+0.3
	3.5nm,0.1s						
KTMS				*e*S	Sb	18 01 24.6	+0.3
	2.8nm,0.1s						
MNBS	Baschi	1.18	250	*e*P	Pb	18 01 11.3	-0.1
	1.0nm,0.1s						
MNBS				*e*S	Sg	18 01 26.5	-0.8
	3.6nm,0.1s						
MNBS	Baschi	1.18	250	P	Pb	18 01 11.3	-0.1
	1.0nm,0.1s						
MNBS				S	Sg	18 01 26.5	-0.8
	3.6nm,0.1s						
PDGK	Podgornoye	1.22	196	⇑P	Pb	18 01 11.3	-0.8
	1.3nm,0.8s						
PDGK				⇑S	Sb	18 01 26.9	-0.8
	1.8nm,0.6s						
KPKS	Kokpek	1.38	222	*e*P	Pg	18 01 15.9	+0.3
	12nm,0.1s						
KPKS				*e*S	Sg	18 01 34.5	+1.0
	12nm,0.1s						
SHLS	Shalkode	1.39	195	*e*P	Pb	18 01 15.2	+0.3
	3.2nm,0.2s						
SHLS				*e*S	Sg	18 01 33.3	-0.6
	5.4nm,0.3s						
UZB	Uzynbulak	1.51	206	*e*P	Pg	18 01 18.2	+0.1
	1.1nm,0.1s						
UZB				*e*S	Sg	18 01 38.5	+0.8
	5.1nm,0.2s						
ARXS	Arharly	1.54	260	*e*P	Pb	18 01 18.0	+0.4
	2.3nm,0.2s						
ARXS				*e*S	Sg	18 01 38.3	-0.5
	8.3nm,0.3s						
ARXS	Arharly	1.54	260	P	Pb	18 01 18.0	+0.4
	2.3nm,0.2s						
ARXS				S	Sg	18 01 38.3	-0.5
	8.3nm,0.3s						
KURS	Kuram	1.63	232	*e*P	Pg	18 01 19.7	-0.7
	1.2nm,0.3s						
KURS				*e*S	Sg	18 01 40.8	-0.8
	2.5nm,0.1s						
SATY	Saty	1.82	218	*e*P	Pg	18 01 23.2	-0.8
	2.5nm,0.1s						
SATY				*e*S	Sg	18 01 46.8	-0.9
	6.7nm,0.1s						
CHKK	Chushkaly	2.22	254	*e*P	Pb	18 01 30.0	+0.9
	0.5nm,0.1s						
CHKK				*e*S	Sb	18 01 58.3	+1.8
	7.1nm,0.1s						
MK31	Makanchi Array	2.82	35	⇑Pg	Pb	18 01 39.7	+0.3
MK31				⇑Lg	Lg	18 02 16.2	
	0.1nm,0.2s,baz=213,slow=27,SNR=8.2						

*IDC **30** 18:07:11.3±2.6, 5°.94S×130°.16E, h0^{km}, mb3.5/1, mb1 3.8/4, mb1mx3.5/36, mbtmp3.6/4, ML2.9/3, Error ellipse: s-maj=114.3km s-min=31.1km az=77.0*

*NEIC **30** 18:07:22.0±2.9, 6°.26S±0°.05×130°.7E±0°.1, h132^{km}±13^{km}, mb4.7/2, Error ellipse: s-maj=14.7km s-min=7.6km az=92.0*

ISC 30 18:07:22.5±0.7, 6°.28S±0°.05×130°.73E±0°.07, h150^{km}, n13, σ2^{s}45/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.78	162	Pn	Pn	18 07 53.4	-1.7
SAUI				Sn	Sn	18 08 19.8	-0.5
FAKI	Fak Fak	3.67	24	Pn	Pn	18 08 18.1	-0.4
FAKI				Sn	Sn	18 08 59.4	-2.5
MTN	Manton Dam	6.53	177	Pn	Pn	18 08 57.7	+1.3
MTN				Sn	Sn	18 10 08.9	-1.0
SOEI	Soe	7.27	241	Pn	Pn	18 09 06.9	+0.5
SOEI				Sn	Sn	18 10 27.0	-0.8
TOLI2	Tolitoli	12.35	306	Pn	Pn	18 10 11.8	-1.6
FITZ	Fitzroy Crossi	12.75	202	Pn	Pn	18 10 16.9	-1.6
	0.1nm,0.3s,baz=18,slow=13,SNR=1.3						
WRA	Warramunga Arr	14.03	166	Pn	P	18 10 36.8	-1.1
	0.0nm,0.3s,baz=337,slow=17,SNR=0.9						
WRA				Sn	Sn	18 13 04.7	-5.7
	0.1nm,0.3s,baz=349,slow=24,SNR=1.5						
COEN	Coen	14.42	123	P	P	18 10 44.0	+1.6
ASAR	Alice Springs	17.55	170	P	Pn	18 11 22.6	+4.6
	0.1nm,0.3s,baz=350,slow=10,SNR=1.5						
ASAR				S	S	18 14 32.4	+0.4
	0.0nm,0.3s,baz=345,slow=28,SNR=1.3						
BBOO	Buckleboo	26.86	170	P	P	18 12 48.2	-1.0
BBOO				IAmb	IAmb	18 13 03.6	
	comp=Z,25nm,1.4s						
KULM	Kulim	32.15	290	P	P	18 13 37.0	+0.8
KULM				IAmb	IAmb	18 14 11.6	
	comp=Z,21nm,1.4s						
MKAR	Makanchi Array	68.03	326	P	P	18 18 08.9	+3.2
	comp=Z,0.4nm,0.8s,baz=116,slow=6.6,SNR=1.6						
MKAR	Makanchi Array	68.03	326	P	P	18 18 08.5	+2.8

*IDC **30** 18:09:07.5±5.0, 22°.26S×170°.82E, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.8/29, mbtmp3.8/4, ML2.9/1, Error ellipse: s-maj=135.5km s-min=68.8km az=151.0*

*NEIC **30** 18:09:11.1±1.2, 21°.92S±0°.10×170°.6E±0°.1, h11^{km}±7^{km}, mb4.6/7, Error ellipse: s-maj=18.7km s-min=6.1km az=135.0*

ISC 30 18:09:11.0±1.3, 21°.9S±0°.2×170°.5E±0°.1, h10^{km}, n15, σ0^{s}80/17, mb4.4/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.75	267	Pn	Pn	18 10 10.2	+1.0
	0.7nm,0.3s,baz=67,slow=7.7,SNR=1.6						
DZM				Sn	Sn	18 10 52.2	-1.2
	2.4nm,0.3s,baz=158,slow=22,SNR=3.2						
DZM	Mont Dzumac	3.75	267		Pn	18 10 10.5	+1.3
DZM				Sn	Sn	18 10 52.8	-0.7
SANVU	Saraoutou	7.13	334	Pn	Pn	18 10 56.3	+0.9
MSVF	Nonsavu	8.24	61	Pn	Pn	18 11 10.5	-0.3
WR0	Warramunga Arr	33.58	267	P	P	18 15 52.2	+0.5
WR0				IAmb	IAmb	18 16 08.1	
	comp=Z,19nm,1.7s						
AS31	Alice Springs	33.72	260	P	P	18 15 53.2	+0.4
ASAR	Alice Springs	33.72	260	P	P	18 15 53.4	+0.6
	comp=Z,1.9nm,0.9s,baz=85,slow=9.0,SNR=11						
WB0	Warramunga Arr	33.75	267	P	P	18 15 53.3	+0.2
WB0				IAmb	IAmb	18 15 59.0	
	comp=Z,5.5nm,0.9s						
WB2	Warramunga Arr	33.76	267	P	P	18 15 53.4	+0.1
WB2				IAmb	IAmb	18 15 58.8	
	comp=Z,5.3nm,1.0s						
WRAB	Tennant Creek	33.76	267	P	P	18 15 53.3	+0.1
WRAB				IAmb	IAmb	18 15 58.1	
	comp=Z,13nm,1.5s						
WRA	Warramunga Arr	33.77	267	P	P	18 15 53.3	0.0
	comp=Z,2.1nm,0.8s,baz=102,slow=7.9,SNR=7.3						
WRA	Warramunga Arr	33.77	267	P	P	18 15 52.7	-0.6
FITZ	Fitzroy Crossi	42.20	267	P	P	18 17 04.3	-0.1
SBUM	Sibu	61.81	285	P	P	18 19 29.4	-1.3
CMAR	Chiang Mai Arr	80.65	294	P	P	18 21 25.1	+0.5
	comp=Z,0.6nm,0.8s,baz=142,slow=3.7,SNR=6.1						

*NEIC **30** 18:11:10.7±2.0, 21°.21S±0°.08×170°.13E±0°.07, h8^{km}±4^{km}, mb5.1/68, Error ellipse: s-maj=11.9km s-min=9.3km az=150.0*

*IDC **30** 18:11:10.0±0.9, 21°.16S×170°.10E, h0^{km}, mb4.5/10, mb1 4.7/12, mb1mx4.4/28, mbtmp4.5/12, ML3.9/2, MS4.3/1, Ms1 4.3/1, ms1mx3.9/25, Error ellipse: s-maj=24.6km s-min=21.4km az=155.0*

*BJI **30** 18:11:11.0±0.0, 21°.20S×170°.10E, h5^{km}, mB5.4/16, mb4.8/32, Ms5.6/7, Ms7 5.3/7*

*NOU **30** 18:11:12.2, 21°.23S×170°.03E, h0^{km}, mb5.1, Southeast of Loyalty Islands*

*GCMT **30** 18:11:13.7±0.4, 21°.09S±0°.02×170°.24E±0°.02, h15^{km}±2^{km}, MW5.0/72, Moment Tensor Solution. s1,c1; s72,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.26; $M_{\theta\theta}$-1.70±.26; $M_{\phi\phi}$1.92±.24; $M_{r\theta}$0.56±.75; $M_{\theta\phi}$-3.87±.21; $M_{\phi r}$-1.39±.83; Best double couple: $M_0$4.49800×10^{16} NP1:ϕ_s101.00000°, δ75.00000°, λ171.00000°. NP2: ϕ_s194.00000°, δ82.00000°, λ15.00000°. Principal axes: T 4.8140, Plg16.0000°, Azm58.0000°; N -0.6360, Plg73.0000°, Azm223.0000°; P -4.1820, Plg4.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 18:11:12.3±0.3, 21°.37S±0°.04×170°.15E±0°.05, h10^{km}, n178, σ1^{s}71/151, mb5.1/46, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.98	266	P	Pn	18 11 44.1	-1.8
PINNC	Pines Island,	2.80	243	P	Pn	18 11 56.7	-0.5
YATNC	Mamie plateau,	3.11	257	P	Pn	18 12 00.5	-1.0
OUENC	Ouen Island, N	3.25	251	P	Pn	18 12 03.8	+0.4
DZM	Mont Dzumac	3.52	258	Pn	Pn	18 12 06.2	-1.0
	13nm,0.3s,baz=92,slow=16,SNR=23						
DZM				LR	LR	18 12 46.3	
	comp=Z,4μm,21.2s,baz=172,slow=27						
DZM				Sn	Sn	18 12 47.8	-1.2
	18nm,0.3s,baz=86,slow=19,SNR=4.1						
DZM	Mont Dzumac	3.52	258	Pn	Pn	18 12 07.0	-0.2
DZM	Mont Dzumac	3.52	258	P	Pn	18 12 07.3	+0.1
ONTNC	Ouen Toro	3.56	254	P	Pn	18 12 07.9	+0.2
NOUC	Port Laguerre	3.65	258	P	Pn	18 12 08.9	0.0
DVP	Devils Point	4.07	333	P	Pn	18 12 14.1	-0.5
SANVU	Saraoutou	6.52	334	Pn	Pn	18 12 46.7	-1.6
SANVU	Saraoutou	6.52	334	P	Pn	18 12 46.7	-1.6
NFK	Norfolk Island	7.90	194	P	Pn	18 13 09.4	+2.1
	baz=8.1,SNR=4.2						
MSVF	Nonsavu	8.28	65	Pn	Pn	18 13 11.9	-0.7
MSVF	Nonsavu	8.28	65	P	Pn	18 13 12.8	+0.3
OUZ	Omahuta	14.13	168	Pn	Pn	18 14 35.7	+3.1
URZ	Urewera	17.87	162	P	Pn	18 15 22.9	+1.8
	0.3nm,0.3s,baz=34,slow=15,SNR=11						
EIDS	Eidsvold	17.96	254	P	Pn	18 15 24.2	+2.0
	baz=18,SNR=4.7						
EIDS	Eidsvold	17.96	254	P	Pn	18 15 22.4	+0.2
BKZ	Black Stump Fm	18.56	164		P	18 15 29.2	-0.1
AFI	Afiamalu	18.74	70	P	P	18 15 30.2	-1.3
ARMA	Armidale	18.93	238	P	P	18 15 34.9	+1.4
	baz=19,SNR=17						
ARMA	Armidale	18.93	238		P	18 15 33.0	-0.5
BFZ	Birch Farm	19.94	166	P	P	18 15 44.3	-0.1
NNZ	Nelson	19.98	173	P	P	18 15 44.0	-0.7
NNZ				IAmb	IAmb	18 16 08.9	
	comp=Z,293nm,1.8s						
RMQ	Roma	20.20	251	P	P	18 15 49.9	+2.5
	baz=20,SNR=34						
SNZO	South Karori	20.25	170	P	P	18 15 46.8	-1.0
SNZO				IAmb	IAmb	18 16 17.8	
	comp=Z,128nm,1.2s						
TUWZ	Tuamarina	20.26	172	P	P	18 15 49.0	+1.2
BHW	Baring Head	20.38	170	P	P	18 15 50.8	+1.7
MSWZ	Moikau Station	20.45	169	P	P	18 15 49.4	-0.5
THZ	Tophouse	20.47	174	P	P	18 15 49.9	-0.3
THZ				IAmb	IAmb	18 16 30.3	
	comp=Z,93nm,1.4s						
BSWZ	Blackbirch Sta	20.53	172	P	P	18 15 51.5	+0.7
PLWZ	Palliser	20.60	169	P	P	18 15 51.0	-0.6
KHZ	Kahutara	21.18	173	P	P	18 15 57.1	-0.7
KHZ				IAmb	IAmb	18 16 16.2	
	comp=Z,141nm,1.9s						
LTZ	Lake Taylor	21.43	176	P	P	18 15 60.0	-0.5
LTZ				IAmb	IAmb	18 16 25.6	
	comp=Z,102nm,1.6s						
OXZ	Oxford	21.95	176	P	P	18 16 05.9	-0.3
FOZ	Fox Glacier	22.11	181	P	P	18 16 07.5	-0.2
RPZ	Rata Peaks	22.30	178	P	P	18 16 13.7	+3.9
	comp=Z,7.0nm,0.7s,baz=337,slow=7.7,SNR=1.7						
RPZ	Rata Peaks	22.30	178	P	P	18 16 10.0	+0.1
TARA	Tarawa	22.74	7	P	P	18 16 07.4	-7.4
CNB	Canberra Magne	22.91	228	P	P	18 16 18.8	+2.3
	baz=23,SNR=8.5						
LBZ	Lake Benmore	22.96	180	P	P	18 16 15.8	-1.0
LBZ				IAmb	IAmb	18 16 39.1	
	comp=Z,78nm,1.4s						
YNG	Young	23.09	231	P	P	18 16 20.8	+2.4
	baz=23,SNR=5.7						
CAN	Canberra	23.17	229	P	P	18 16 17.6	-1.6
CAN				IAmb	IAmb	18 16 22.1	
	comp=Z,96nm,1.2s						
WKZ	Wanaka	23.42	182	P	P	18 16 21.1	-0.4
MLZ	Mavora Lakes	24.00	184	P	P	18 16 25.0	-2.1
MLZ				IAmb	IAmb	18 17 01.4	
	comp=Z,118nm,1.7s						
CMSA	Cobar Meteorol	24.08	240	P	P	18 16 28.7	+0.6
	baz=24,SNR=44						
DCZ	Deep Cove	24.16	185	P	P	18 16 27.8	-0.9
DCZ				IAmb	IAmb	18 16 59.3	
	comp=Z,79nm,1.5s						
QLP	Quilpie	24.23	253	P	P	18 16 29.7	+0.3
	baz=24,SNR=16						
MTSU	Mount Surprise	24.52	273	P	P	18 16 32.4	+0.2
	baz=24,SNR=16						
WHZ	Wether Hill Ro	24.53	184		P	18 16 32.6	+0.6
PYZ	Puysegur Point	24.90	186	P	P	18 16 35.3	0.0
PMG	Port Moresby	25.11	295	P	P	18 16 36.4	-1.1
	comp=Z,34nm,0.9s,baz=101,slow=10,SNR=5.8						
PMG	Port Moresby	25.11	295	P	P	18 16 34.3	-3.2
PMG				IAmb	IAmb	18 16 44.8	
	comp=Z,46nm,1.0s						
KNTN	Kanton	25.55	46	P	P	18 16 41.0	-0.4
COEN	Coen	26.71	282	P	P	18 16 51.5	-0.6
TOO	Toolangi	26.75	227	P	P	18 16 51.8	-0.5
STKA	Stephens Creek	27.52	242	P	P	18 17 00.0	+0.8
	baz=28,SNR=10						
STKA	Stephens Creek	27.52	242	P	P	18 16 59.6	+0.4
	comp=Z,13nm,0.8s,baz=69,slow=9.5,SNR=17						
STKA	Stephens Creek	27.52	242	P	P	18 16 59.0	-0.2
KWAJ	Kwajalein Atol	30.08	355	P	P	18 17 19.0	-3.1
HTT	Hallett	30.10	240	P	P	18 17 22.7	+0.5
	baz=30,SNR=7.0						
BBOO	Buckleboo	32.29	242	P	P	18 17 40.3	-1.2
BBOO				IAmb	IAmb	18 17 42.4	
	comp=Z,53nm,1.5s						
WR0	Warramunga Arr	33.31	266	P	P	18 17 48.5	-2.1
WR0				IAmb	IAmb	18 17 56.1	
	comp=Z,24nm,0.8s						
WC3	Warramunga Arr	33.47	266	P	P	18 17 50.3	-1.7
	baz=33						
WB0	Warramunga Arr	33.48	266	P	P	18 17 50.3	-1.7
WB0				IAmb	IAmb	18 17 57.6	
	comp=Z,27nm,0.8s						
WB2	Warramunga Arr	33.49	266	P	P	18 17 50.2	-1.9
WB2				IAmb	IAmb	18 17 58.9	
	comp=Z,28nm,1.0s						
WRAB	Tennant Creek	33.49	266	P	P	18 17 50.3	-1.9
WRAB				IAmb	IAmb	18 17 58.9	
	comp=Z,31nm,1.1s						
WRA	Warramunga Arr	33.50	266	P	P	18 17 50.2	-2.0
	comp=Z,8.1nm,0.7s,baz=94,slow=8.1,SNR=29						
WRA	Warramunga Arr	33.50	266	P	P	18 17 49.6	-2.6
AS31	Alice Springs	33.51	259	P	P	18 17 50.5	-1.8
ASAR	Alice Springs	33.51	259	P	P	18 17 51.0	-1.3
	comp=Z,17nm,0.8s,baz=83,slow=8.7,SNR=83						
ASAR				PcP	PcP	18 20 33.4	+0.2
	comp=Z,1.8nm,0.8s,baz=100,slow=3.3,SNR=5.4						
ASAR	Alice Springs	33.51	259	P	P	18 17 50.2	-2.1
PPTF	Pamatai, Papee	38.09	92	P	P	18 18 30.5	-1.2
MTN	Manton Dam	38.16	276	P	P	18 18 31.0	-1.2
	baz=38,SNR=5.3						
MTN	Manton Dam	38.16	276	P	P	18 18 30.8	-1.4
MTN				IAmb	IAmb	18 18 37.3	
	comp=Z,19nm,0.6s						
FORT	Forrest	38.77	247	P	P	18 18 36.3	-0.9
FORT				IAmb	IAmb	18 18 50.7	
	comp=Z,27nm,0.9s						
XMAS	Kiritimati	39.32	58	P	P	18 18 41.0	-0.9
FAKI	Fak Fak	41.16	291	P	P	18 18 54.1	-3.1
FAKI				IAmb	IAmb	18 19 01.4	
	comp=Z,73nm,1.4s						
FITZ	Fitzroy Crossi	41.92	266	P	P	18 19 02.8	-0.6
	baz=42,SNR=19						
FITZ	Fitzroy Crossi	41.92	266	P	P	18 19 02.8	-0.6
FITZ				IAmb	IAmb	18 19 09.5	
	comp=Z,41nm,0.8s						
SOEI	Soe	45.53	277	P	P	18 19 32.3	-0.4
SOEI				IAmb	IAmb	18 20 01.6	
	comp=Z,28nm,1.0s						
PSA00	Pilbara Seismi	46.65	260	P	P	18 19 39.6	-1.6
PSA00				IAmb	IAmb	18 19 47.4	
	comp=Z,22nm,0.8s						
SANI	Sanana	47.07	288	P	P	18 19 50.0	+5.3
MEEK	Meekatharra	47.12	253	P	P	18 19 43.7	-1.3
	baz=47,SNR=13						
MMRI	Maumere	47.80	278	P	P	18 19 48.5	-1.8
NWAO	Narrogin (SRO)	48.04	244	P	P	18 19 51.4	-0.6
NWAO	Narrogin (SRO)	48.04	244	P	P	18 19 51.5	-0.6
NWAO				IAmb	IAmb	18 21 34.7	
	comp=Z,81nm,1.7s						
MORW	Morawa	49.20	250	P	P	18 20 00.7	-0.3
	baz=49,SNR=3.7						
MORW	Morawa	49.20	250	P	P	18 19 59.9	-1.1
MORW				IAmb	IAmb	18 20 07.1	
	comp=Z,22nm,0.9s						
LUWI	Luwuk	50.39	287	P	P	18 20 08.8	-1.4
LUWI				IAmb	IAmb	18 20 29.6	
	comp=Z,39nm,1.0s						
MIDW	Midway	50.74	14	P	P	18 20 10.8	-1.7
KAPI	Kappang	51.44	281	P	P	18 20 17.5	-0.6
TOLI2	Tolitoli	53.14	288	P	P	18 20 29.0	-1.7
TOLI2				IAmb	IAmb	18 20 36.8	
	comp=Z,21nm,0.8s						
MPSI	Mapaga	53.57	287	P	P	18 20 35.3	+1.4
KKM	Kota Kinabalu	59.48	291	P	P	18 21 12.8	-3.4
KSM	Kuching	62.69	283	P	P	18 21 35.0	-2.9
BLSI	Bandar Lampung	64.71	274	P	P	18 22 03.9	+13
MJAR	Matsushiro Arr	65.02	332	P	P	18 21 50.2	-2.5
	comp=Z,1.9nm,0.8s,baz=169,slow=6.7,SNR=1.7						
MJAR	Matsushiro Arr	65.02	332	P	P	18 21 50.8	-2.0
QSPA	South Pole Qui	68.70	180	P	P	18 22 16.5	+0.5
QSPA				IAmb	IAmb	18 22 38.2	
	comp=Z,18nm,1.2s						
NJ2	Nanjing	72.33	316	*e*P	P	18 22 39.0	+0.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DL2	Dalian	75.22	323	P	P	18 22 58.8	+3.6
DL2				pmax	pmax		
	comp=Z,61nm,1.3s						
CN2	Changchun	76.71	328	*e*P	P	18 23 03.3	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAW	Mawson	76.80	202	P	P	18 23 04.2	+0.4
	comp=Z,6.0nm,0.9s,baz=141,slow=6.5,SNR=1.8						
UTHA	Uthaitani	78.45	292	P	P	18 23 20.0	+6.1
UTTA	Uttaradit	78.47	294	P	P	18 23 19.8	+5.8
SUKH	Sukhothai	79.14	294	P	P	18 23 23.5	+5.9
PAYA	Payao	79.78	295	P	P	18 23 26.0	+4.8
CM36	Chiang Mai Arr	80.05	294	P	P	18 23 24.0	+1.3
CM35	Chiang Mai Arr	80.07	295	P	P	18 23 23.0	+0.2
CM04	Chiang Mai Arr	80.10	294	P	P	18 23 24.0	+1.1
CM09	Chiang Mai Arr	80.11	294	P	P	18 23 28.4	+5.5
KMI	Kunming	80.12	302	⇓P	P	18 23 19.5	-3.7
KMI				pP	pP	18 23 28.5	+2.7
KMI				sP	PcP	18 23 33.0	+2.5
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CM01	Chiang Mai Arr	80.12	294	P	P	18 23 26.0	+2.9
CM05	Chiang Mai Arr	80.13	294	P	P	18 23 26.8	+3.7
CM02	Chiang Mai Arr	80.14	294	P	P	18 23 24.0	+0.8
CM34	Chiang Mai Arr	80.15	295	P	P	18 23 28.0	+4.8
CM31	Chiang Mai Arr	80.16	294	P	P	18 23 28.6	+5.3
CMAR	Chiang Mai Arr	80.16	294	P	P	18 23 22.1	-1.1
	comp=Z,1.5nm,0.7s,baz=135,slow=4.4,SNR=12						
CM15	Chiang Mai Arr	80.17	294	P	P	18 23 25.1	+1.7
CM13	Chiang Mai Arr	80.17	294	P	P	18 23 27.0	+3.7
CMMT	Chiang Mai	80.31	295	P	P	18 23 25.4	+1.3
CHTO	Chiang Mai	80.31	295	P	P	18 23 22.9	-1.2
CM33	Chiang Mai Arr	80.31	295	P	P	18 23 24.0	-0.1
MHMT	Maesarieng	80.89	294	P	P	18 23 32.6	+5.4
HHC	Hu-ho-hao-te	82.39	319	*e*P	P	18 23 34.0	-0.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,7.6s						
LZH	Lanzhou	84.78	312	*e*P	P	18 23 48.0	+0.8
LZH				pP	pP	18 23 52.5	+2.6
LZH				sP	pwP	18 23 56.0	+3.4
LZH				PP	PP	18 27 05.0	+1.2
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,6.0s						
LZH				LR	LR		
	comp=Z,1μm,17.0s						
LZH				LR	LR		
	comp=Z,970nm,17.3s						
LZH				LR	LR		
	comp=Z,1μm,19.1s						
SNAA	Sanae	87.08	182	P	P	18 23 58.6	+0.6
SNAA	Sanae	87.08	182	P	P	18 23 58.2	+0.2
	comp=Z,6.3nm,1.1s,baz=176,slow=7.3,SNR=7.0						
SNAA	Sanae	87.08	182	P	P	18 23 58.3	+0.2
SNAA				IAmb	IAmb	18 26 17.2	
	comp=Z,10nm,0.9s						
VNA3	Neumayer Olymp	87.64	180	P	P	18 24 01.6	+1.0
VNA2	Neumayer--Watz	87.94	181	P	P	18 24 00.6	-1.4
	baz=177,slow=4.1						
ISA	Isabella, Lake	88.15	51	P	P	18 24 00.5	-3.2
ISA				IAmb	IAmb	18 24 12.6	
	comp=Z,15nm,1.4s						
VNA1	Neumayer--Stat	88.23	181	P	P	18 24 07.1	+3.8
ULN	Ulaanbaatar	89.07	323	P	P	18 24 06.0	-1.8

BILL	Bilibino	89.19	359	P	P	18 24 07.4	-0.3
BILL				IAmb	IAmb	18 24 18.5	
	comp=Z,19nm,1.9s						
GTA	Gaotai	89.20	313	P	P	18 24 12.0	+3.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	89.43	323	P	P	18 24 08.9	-0.6
	comp=Z,4.0nm,0.9s,baz=123,slow=5.3,SNR=7.6						
SONM	Songino Array	89.43	323	P	P	18 24 08.2	-1.2
PAHR	Pah Rah Range	89.43	47	P	P	18 24 08.2	-1.5
PAHR				IAmb	IAmb	18 24 17.8	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	89.57	48	P	P	18 24 08.2	-2.2
	comp=Z,0.2nm,0.3s,baz=225,slow=8.8,SNR=2.7						
NVAR	Mina Array Bea	89.57	48	P	P	18 24 09.5	-0.9
214A	Organ Pipe Nat	90.75	56	P	P	18 24 14.7	-1.2
W13A	Hualapai Mount	91.26	53	P	P	18 24 16.9	-1.5
W13A				IAmb	IAmb	18 24 28.1	
	comp=Z,11nm,1.6s						
ILAR	Eielson Array	92.00	17	P	P	18 24 19.6	-1.2
HYT	Haines Junctio	92.11	23	P	P	18 24 20.1	-1.4
HYT				IAmb	IAmb	18 24 26.8	
	comp=Z,8.6nm,1.1s						
CCUT	Cedar City	92.67	51	P	P	18 24 23.8	-1.1
U15A	North Rim	92.99	52	P	P	18 24 24.6	-1.9
U15A				IAmb	IAmb	18 24 36.3	
	comp=Z,8.6nm,1.3s						
EGMT	Eagleton	99.25	42	P	Pdif	18 24 51.4	-3.1
WMQ	Urumqi	99.29	313	eP	Pdif	18 24 54.0	-0.7
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,68nm,4.7s						
WMQ				LR	LR		
	comp=Z,610nm,24.9s						
WMQ				LR	LR		
	comp=Z,890nm,26.9s						
WMQ				LR	LR		
	comp=Z,910nm,24.9s						
YKA	Yellowknife Ar	102.15	27	P	Pdif	18 25 06.9	+0.1
	comp=Z,0.1nm,0.3s,baz=272,slow=4.3,SNR=2.1						
MKAR	Makanchi Array	103.84	315	Pdiff	Pdif	18 25 11.8	-3.0
	comp=Z,0.1nm,0.5s,baz=55,slow=6.5,SNR=1.3						
PB14	IPOC Station P	105.48	125	PKKPbc	PKKPbc	18 40 59.7	-1.7
GO02	Mina Guanaco	105.81	126	PKKPbc	PKKPbc	18 40 52.4	-8.0
FCC	Fort Churchill	110.97	34	PKKPbc	PKKPbc	18 40 45.6	+1.1
BRTR	Keskin Array B	138.78	306	PKP	PKPdf	18 30 38.5	-0.6
	comp=Z,0.2nm,0.5s,baz=138,slow=6.7,SNR=1.5						
DPC	Dobruska-Polom	144.49	331	ePKP	PKPbc	18 30 50.9	+3.4
BRG	Berggiesshubel	145.15	333	ePKP	PKPdf	18 30 52.7	+2.7
BRG				Amp		18 30 54.2	
	comp=Z,7.0nm,1.0s						
BRG				ex	x	19 08 02.0	
BRG				Amp		19 08 03.1	
	comp=Z,10nm,1.3s						
CLL	Collm	145.20	335	ePKiKP	PKPbc	18 30 52.0	+2.4
PRU	Pruhonice	145.55	332	ePKP	PKPab	18 30 54.3	+3.3
CONA	Conrad Observa	146.40	328	eP	PKPdf	18 30 55.7	+3.4
	comp=Z,12nm,1.4s						
KHC	Kasperske Hory	146.60	332	ePKP	PKPab	18 30 57.5	+2.4
KHC				ex	x	18 31 04.5	
KHC				ex	x	18 31 10.1	
GERES	GERESS Array B	146.76	331	PKPbc	PKPdf	18 30 51.5	-1.4
	comp=Z,0.3nm,0.4s,baz=91,slow=4.1,SNR=3.8						
ARSA	Arzberg	147.03	328	eP	PKPbc	18 30 58.2	+2.8
	comp=Z,4.2nm,1.0s						
MOA	Molln	147.22	329	eP	PKPbc	18 30 58.1	+2.2
	comp=Z,13nm,1.5s						
SOKA	Soboth	147.66	327	eP	PKPbc	18 30 59.9	+2.7
	comp=Z,7.4nm,1.3s						
OBKA	Obir	148.02	327	eP	PKPdf	18 30 59.4	+4.3
	comp=Z,12nm,1.9s						
KBA	Koelnbreinsper	148.21	329	eP	PKPdf	18 30 56.4	+0.9
	comp=Z,7.8nm,1.1s						
MYKA	Terra Mystica	148.38	328	eP	PKPbc	18 31 01.4	+2.3
	comp=Z,6.5nm,1.0s						
WATA	Walderalm	148.84	331	eP	PKPbc	18 31 02.3	+2.0
	comp=Z,7.2nm,1.1s						
ABTA	Abfaltersbach	148.84	330	eP	PKPbc	18 31 02.2	+1.9
	comp=Z,9.5nm,1.0s						
MOTA	Moosalm	149.04	332	eP	PKPdf	18 30 59.9	+3.1
	comp=Z,13nm,1.1s						
RETA	Reutte	149.08	332	eP	PKPab	18 31 07.4	+2.4
	comp=Z,5.9nm,1.0s						
SQTA	Sankt Quirin	149.09	332	eP	PKPbc	18 31 02.4	+1.5
	comp=Z,13nm,1.4s						
FETA	Feichten	149.45	332	eP	PKPbc	18 31 05.1	+3.1
	comp=Z,19nm,1.1s						
DAVA	Damuels	149.61	333	eP	PKPdf	18 31 00.6	+2.9
	comp=Z,20nm,1.9s						
DAVOX	Davos/Dischmat	150.01	332	PKPbc	PKPdf	18 31 01.1	+2.6
	comp=Z,5.4nm,1.0s,baz=262,slow=12,SNR=2.7						

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*REY **30** 18:16:01.1, 64°.66N×17°.40W, h0^{km}*

*IDC **30** 18:16:02.2±1.2, 64°.46N×17°.73W, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.5/48, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.8/46, Error ellipse: s-maj=51.3km s-min=16.6km az=17.0*

*NEIC **30** 18:16:02.4±1.7, 64°.6N±0°.1×17°.7W±0°.1, h8^{km}±4^{km}, mb4.1/6, Error ellipse: s-maj=14.5km s-min=6.3km az=182.0*

ISC 30 18:16:02.6±0.5, **64°.65N**±0°.02×**17°.45W**±0°.03, **h10^{km}, n45, σ1s.84**/59, **mb3.8**/7, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	Dyngjuhals	0.14	14	P	Pg	18 16 04.4	-1.5
	baz=5.7						
IDYN				S	Sg	18 16 07.2	-1.1
	baz=5.7						
IDJK	Dyngjujokull	0.18	149	P	Pg	18 16 05.3	-1.2
	baz=156						
IDJK				S	Sg	18 16 09.8	+0.6
	baz=156						
IURH	Urdarhals	0.21	38	P	Pg	18 16 05.7	-1.3
	baz=34						
IURH				S	Sg	18 16 09.3	-0.8
	baz=34						
IGRF	Grimsfjall	0.26	162	P	Pg	18 16 06.8	-1.1
	baz=168						
IVOT	Vottur	0.40	163	P	Pg	18 16 09.3	-1.2
	baz=166						
IVOT				S	Sb	18 16 17.0	-1.1
	baz=166						
ISKR	Skrokkalda	0.41	257	P	Pb	18 16 09.9	-2.1
	baz=257						
THOR	Thorvaldshraun	0.43	49	S	Sg	18 16 16.1	-0.8
	baz=48						
THOR				P	Pg	18 16 09.4	-1.7
	baz=48						
IKRE	Kreppuhraun	0.48	74	P	Pg	18 16 09.9	-2.0
	baz=74						
IKRE				S	Sg	18 16 15.5	-2.7
	baz=74						
IJOK	Jokulheimar	0.48	225	P	Pg	18 16 10.5	-1.5
	baz=226						
IASK	Askja	0.53	40	P	Pg	18 16 10.9	-2.0
	baz=39						
IASK				S	Sg	18 16 19.2	-0.6
	baz=39						
IMKO	Mokollar	0.57	55	P	Pg	18 16 11.7	-2.1
	baz=54						
IMKO				S	Sg	18 16 20.5	-0.8
	baz=54						
IIEY	Innrieyrar	0.63	208	P	Pg	18 16 13.2	-1.7
	baz=210						
IKSK	Karasker	0.65	139	P	Pg	18 16 12.7	-2.5
	baz=141						
IKSK				S	Sg	18 16 22.1	-1.6
	baz=141						
ISVA	Svartarkot	0.69	7	P	Pg	18 16 13.8	-2.2
	baz=5.0						
ISVA				S	Sg	18 16 23.8	-1.1
	baz=5.0						
IKAL	Kalfafell	0.72	188	P	Pg	18 16 14.6	-1.8
	baz=190						
IVSH	V-Sauoahnukur	0.75	77	P	Pg	18 16 14.6	-2.6
	baz=78						
IVSH				S	Sg	18 16 24.7	-2.3
	baz=78						
IFAG	Fagurholsmyri	0.86	156	P	Pg	18 16 17.0	-2.1
	baz=157						
IADA	Aoalbol	0.88	65	P	Pg	18 16 16.6	-2.9
	baz=64						
IADA				S	Sg	18 16 28.8	-2.3
	baz=64						
IMEL	Melhnausar	0.98	20	P	Pg	18 16 18.6	-2.8
	baz=19						
IMEL				S	Sg	18 16 32.5	-1.6
	baz=19						
ISNB	Snabyli	1.06	210	P	Pg	18 16 20.7	-2.2
	baz=211						
BORG	Borgarnes	1.67	275	Pg	Pn	18 16 30.0	-1.9
	9.0nm,0.3s,baz=98,slow=11,SNR=42						
BORG				Lg	Lg	18 16 54.6	
	14nm,0.3s,baz=32,slow=19,SNR=12						
BORG	Borgarnes	1.67	275		Pn	18 16 29.9	-1.9
BORG				Sn	Sn	18 16 51.2	-2.1
SCO	Scoresbysund	6.10	346		Pn	18 17 33.4	+0.7
SCO				Sn	Sn	18 18 44.1	+1.7
JMIC	Jan Mayen	7.20	24	LR	LR	18 19 40.9	
	comp=Z,216nm,19.4s,baz=202,slow=30						
ANGG	Ammassalik, Gr	8.55	286	Pn	Pn	18 18 05.4	-0.9
EKA	Eskdalemuir Ar	11.73	136	Pn	Pn	18 18 49.7	-0.2
	baz=320,slow=13,SNR=1.5						
ESK	Eskdalemuir	11.74	136	Pn	Pn	18 18 50.8	+1.0
FIA1	FINESS Array S	19.69	79	P	Pn	18 20 31.4	-1.5
FINES	FINESS Array B	19.69	79	P	Pn	18 20 38.0	+5.1
	0.1nm,0.3s,baz=282,slow=7.0,SNR=3.4						
FINES	FINESS Array B	19.69	79	P	P	18 20 29.2	-2.3
TULEG	Thule	19.87	327	P	P	18 20 32.8	-0.6
TULEG				IAmb	IAmb	18 20 34.1	
	comp=Z,4.6nm,0.7s						
CLL	Collm	20.68	116	eP	P	18 20 42.0	-0.4
	comp=Z,11nm,1.3s						
BRTR	Keskin Array B	38.46	105	P	P	18 23 25.8	+1.4
	comp=Z,0.7nm,0.9s,baz=317,slow=8.3,SNR=2.7						
BRTR	Keskin Array B	38.46	105	P	P	18 23 25.0	+0.6
KBZ	Khabaz	39.09	92	P	P	18 23 32.4	+2.9
	comp=Z,1.7nm,0.9s,baz=311,slow=11,SNR=2.8						
YKA	Yellowknife Ar	39.24	313	P	P	18 23 31.6	+1.1
	comp=Z,1.3nm,1.1s,baz=45,slow=8.7,SNR=6.6						
TIXI	Tiksi	42.04	15	P	P	18 23 55.9	+2.4
TIXI				IAmb	IAmb	18 23 59.2	
	comp=Z,4.2nm,1.1s						
ILAR	Eielson Array	45.71	332	PcP	PcP	18 26 02.7	+2.0
	comp=Z,0.5nm,0.9s,baz=349,slow=2.8,SNR=2.8						
MK31	Makanchi Array	52.71	58	P	P	18 25 17.2	+0.2
MKAR	Makanchi Array	52.71	58	P	P	18 25 17.4	+0.5
BW06	Boulder Array	53.20	293	P	P	18 25 21.8	+1.0
BW06				IAmb	IAmb	18 25 46.5	
	comp=Z,3.5nm,1.2s						
PD31	Pinedale Array	53.20	293	P	P	18 25 19.8	-1.0
PD31				IAmb	IAmb	18 25 46.5	
	comp=Z,5.9nm,1.6s						
PDAR	Pinedale Array	53.20	293	P	P	18 25 23.2	+2.4
	comp=Z,0.7nm,0.9s,baz=60,slow=8.8,SNR=5.6						
PDAR	Pinedale Array	53.20	293	P	P	18 25 20.5	-0.3
CMAR	Chiang Mai Arr	84.12	59	P	P	18 28 34.9	+1.2
	comp=Z,0.3nm,0.5s,baz=313,slow=5.1,SNR=4.3						

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*IDC **30** 18:21:04.9±0.5, 52°.52S×26°.39E, h0^{km}, mb4.5/16, mb1 4.6/16, mb1mx4.4/27, mbtmp4.5/16, MS4.4/5, Ms1 4.4/5, ms1mx3.9/31, Error ellipse: s-maj=20.2km s-min=13.1km az=74.0*

*NEIC **30** 18:21:07.6±1.5, 52°.54S±0°.10×26°.5E±0°.2, h12^{km}±3^{km}, mb5.1/46, Error ellipse: s-maj=16.2km s-min=13.5km az=65.0*

ISC 30 18:21:07.1±0.3, **52°.51S**±0°.07×**26°.43E**±0°.08, **h10^{km}, n106, σ1s.04**/107, **mb4.9**/33, **MS4.1**/5, **2C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYO	Syowa Base	17.68	164⇑	ePn	Pn	18 25 11.8	-1.2
SYO	Syowa Base	17.68	164⇑	eP	Pn	18 25 12.4	-0.6
SYO	Syowa Base	17.68	164⇓	epP	pP	18 25 18.0	+2.3
SUR	Sutherland	20.53	346	P	P	18 25 46.0	+0.4
	7.7nm,0.6s,baz=161,slow=11,SNR=10						
SUR				LR	LR	18 32 01.3	
	comp=Z,480nm,20.6s,baz=205,slow=32						
SUR	Sutherland	20.53	346		Pn	18 25 47.7	-0.1
SUR				IAmb	IAmb	18 25 59.1	
	comp=Z,65nm,1.2s						
SNAA	Sanae	23.14	203	P	P	18 26 13.6	+0.5
	comp=Z,6.9nm,0.8s,baz=69,slow=6.1,SNR=14						
SNAA	Sanae	23.14	203	P	P	18 26 14.9	+1.8
MAW	Mawson	23.15	145	P	P	18 26 13.6	+0.5
	comp=Z,27nm,0.9s,baz=293,slow=10,SNR=12						
MAW	Mawson	23.15	145	P	P	18 26 13.5	+0.5
BOSA	Boshof	23.89	357	P	P	18 26 20.9	0.0
	comp=Z,9.8nm,0.8s,baz=180,slow=9.1,SNR=15						
BOSA				LR	LR	18 35 03.6	
	comp=Z,319nm,19.9s,baz=226,slow=35						
BOSA	Boshof	23.89	357	P	P	18 26 20.6	-0.3
PAF	Port-aux-Franc	27.46	101	P	P	18 26 53.7	+0.8
LBTB	Lobatse	27.47	358	P	P	18 26 53.8	+0.5
	comp=Z,4.2nm,0.8s,baz=184,slow=9.0,SNR=4.5						
LBTB				LR	LR	18 36 24.6	
	comp=Z,436nm,18.4s,baz=109,slow=34						
LBTB	Lobatse	27.47	358	P	P	18 26 54.1	+0.8
MATP	Matopo	32.07	4	P	P	18 27 33.4	-0.8
	comp=Z,4.1nm,0.7s,baz=177,slow=8.1,SNR=3.8						
BELA	Belgrano 2	33.26	200	P	P	18 27 44.4	+0.4
TSUM	Tsumeb	33.96	345	P	P	18 27 51.1	+0.5
	comp=Z,11nm,0.7s,baz=169,slow=8.6,SNR=24						
TSUM	Tsumeb	33.96	345	P	P	18 27 51.6	+1.0
TSUM				IAmb	IAmb	18 27 59.5	
	comp=Z,20nm,0.7s						
QSPA	South Pole Qui	37.71	180	P	P	18 28 21.9	-0.5
QSPA				IAmb	IAmb	18 28 25.3	
	comp=Z,27nm,1.1s						
CASY	Casey	41.47	143	P	P	18 28 54.4	+0.9
CASY				IAmb	IAmb	18 28 55.5	
	comp=Z,44nm,1.6s						
SHEL	Horse Pasture	44.45	313	P	P	18 29 18.6	+0.3
SHEL				IAmb	IAmb	18 29 44.8	
	comp=Z,29nm,0.9s						
VNDA	Vanda	47.32	168	P	P	18 29 40.4	+0.2
	comp=Z,3.2nm,0.8s,baz=241,slow=9.5,SNR=7.5						
VNDA	Vanda	47.32	168	P	P	18 29 40.8	+0.6
PLCA	Paso Flores	62.74	238	P	P	18 31 30.8	-1.4
	comp=Z,3.8nm,1.1s,baz=169,slow=2.7,SNR=4.7						
PLCA	Paso Flores	62.74	238	P	P	18 31 32.6	+0.4
PLCA				IAmb	IAmb	18 32 12.9	
	comp=Z,12nm,1.4s						
DBIC	Dimbokro	64.69	325	P	P	18 31 44.0	-1.2
	comp=Z,2.0nm,0.6s,baz=148,slow=10,SNR=6.1						
DBIC	Dimbokro	64.69	325	P	P	18 31 46.1	+1.0
DBIC				IAmb	IAmb	18 33 49.5	
	comp=Z,34nm,1.6s						
NWAO	Narrogin (SRO)	65.10	112	P	P	18 31 45.9	-1.9
NWAO	Narrogin (SRO)	65.10	112	P	P	18 31 45.8	-1.9
NWAO				IAmb	IAmb	18 33 11.4	
	comp=Z,60nm,1.5s						
CPUP	Villa Florida	65.87	258	P	P	18 31 51.0	-1.8
	comp=Z,3.9nm,0.7s,baz=162,slow=8.5,SNR=6.0						
CPUP				LR	LR	18 57 33.8	
	comp=Z,704nm,19.0s,baz=236,slow=33						
CPUP	Villa Florida	65.87	258	P	P	18 31 53.4	+0.6
MORW	Morawa	67.28	108	P	P	18 32 02.0	+0.2
MORW				IAmb	IAmb	18 33 16.9	
	comp=Z,22nm,1.2s						
BDFB	Brasilia	68.29	273	P	P	18 32 06.9	-1.5
	comp=Z,1.7nm,0.5s,baz=143,slow=10,SNR=2.0						
BDFB	Brasilia	68.29	273	IAmb	IAmb	18 32 26.3	
	comp=Z,27nm,1.6s						
TOA0	Torodi Ar. Sit	68.79	334	P	P	18 32 11.9	+0.7
TOA0				IAmb	IAmb	18 32 20.1	
	comp=Z,18nm,1.5s						
TORD	Torodi Ar. Bea	68.79	334	P	P	18 32 10.3	-0.9
	comp=Z,1.5nm,0.6s,baz=173,slow=6.3,SNR=6.2						
TORD	Torodi Ar. Bea	68.79	334	P	P	18 32 11.8	+0.6
CO01	Juntas del Tor	70.53	246	P	P	18 32 23.1	+0.8
CO01				IAmb	IAmb	18 32 30.8	
	comp=Z,20nm,1.2s						
LCO	Las Campanas	71.61	246	P	P	18 32 29.5	+0.6
LCO				IAmb	IAmb	18 32 31.5	
	comp=Z,39nm,1.4s						
KOWA	Kowa	71.74	329	P	P	18 32 30.2	+1.0
KOWA				IAmb	IAmb	18 32 33.1	
	comp=Z,39nm,2.0s						
FORT	Forrest	72.72	118	P	P	18 32 36.3	+1.1
FORT				IAmb	IAmb	18 34 57.1	
	comp=Z,33nm,1.1s						
PSA00	Pilbara Seismi	75.20	106	P	P	18 32 49.3	-0.4
PSA00				IAmb	IAmb	18 32 59.3	
	comp=Z,15nm,1.1s						
XMIS	Christmas Isla	75.20	88	P	P	18 32 49.6	-0.3
BBOO	Buckleboo	75.29	125	P	P	18 32 50.6	+0.5
LVC	Limon Verde	75.52	252	P	P	18 32 53.1	+1.0
RAYN	Ar Rayn	77.52	18	P	P	18 33 03.9	+1.2
MNAI	Manna	78.36	82	P	P	18 33 09.3	+1.6
PSGCX	Pisagua	78.57	253	P	P	18 33 10.5	+1.6
PSGCX				IAmb	IAmb	18 33 13.1	
	comp=Z,40nm,1.7s						
MNMC	Minye Minye	78.63	254	P	P	18 33 09.4	0.0
MNMC				IAmb	IAmb	18 33 25.0	
	comp=Z,43nm,1.9s						
STKA	Stephens Creek	78.76	128	P	P	18 33 09.7	0.0
	comp=Z,4.4nm,0.7s,baz=150,slow=5.3,SNR=9.9						
STKA	Stephens Creek	78.76	128	P	P	18 33 09.7	0.0
FITZ	Fitzroy Crossi	81.29	108	P	P	18 33 23.1	-0.5
FITZ				IAmb	IAmb	18 34 01.2	
	comp=Z,23nm,1.9s						
UOSS	Minazif	81.40	27	P	P	18 33 22.8	-0.9
UOSS				IAmb	IAmb	18 35 34.1	
	comp=Z,24nm,1.8s						
ASAR	Alice Springs	81.51	118	P	P	18 33 24.2	-0.5
	comp=Z,7.5nm,0.6s,baz=214,slow=4.8,SNR=130						
ASAR	Alice Springs	81.51	118	P	P	18 33 23.9	-0.8
AS31	Alice Springs	81.51	118	P	P	18 33 24.2	-0.6
THZ	Tophouse	81.72	155	P	P	18 33 24.6	-1.0
SAML	Samuel	82.74	265	P	P	18 33 31.8	+0.6
BFZ	Birch Farm	83.56	157	P	P	18 33 35.7	+0.6
KULM	Kulim	84.66	74	P	P	18 33 42.0	+1.0
WRA	Warramunga Arr	84.74	116	P	P	18 33 39.2	-2.3
	comp=Z,2.9nm,0.8s,baz=212,slow=3.9,SNR=22						
WRA	Warramunga Arr	84.74	116	P	P	18 33 41.2	-0.3
WB2	Warramunga Arr	84.75	116	P	P	18 33 40.8	-0.7
WB2				IAmb	IAmb	18 33 48.4	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	84.76	116	P	P	18 33 41.6	+0.1
WRAB				IAmb	IAmb	18 33 42.5	
	comp=Z,30nm,1.7s						
WR0	Warramunga Arr	84.84	116	P	P	18 33 41.6	-0.3
WR0				IAmb	IAmb	18 33 43.3	
	comp=Z,34nm,1.9s						
WB0	Warramunga Arr	84.92	116	P	P	18 33 41.5	-0.9
WB0				IAmb	IAmb	18 33 44.4	
	comp=Z,31nm,1.7s						
KBZ	Khabaz	96.91	12	LR	LR	19 20 36.6	
	comp=Z,620nm,19.4s,baz=54,slow=37						
SONM	Songino Array	120.87	51	PKP	PKPdf	18 39 56.7	-2.0
	comp=Z,0.1nm,0.4s,baz=223,slow=3.2,SNR=1.7						
TIXI	Tiksi	142.41	30		PKPpre	18 40 33.1	
ULM	Lac du Bonnet	144.74	290	PKKPbc	PKKPbc	18 40 41.4	-8.5
ULM	Lac du Bonnet	144.74	290	PKP	PKPab	18 40 41.4	-0.5
	comp=Z,2.8nm,0.6s,baz=44,slow=7.5,SNR=5.1						
EUNU	Eureka	145.16	344		PKPdf	18 40 43.2	+0.1
SMCO	Snowmass	145.53	266		PKPbc	18 40 45.4	-0.1
WUAZ	Wupatki	145.81	257		PKPab	18 40 46.2	-0.3
GLA	Glamis	146.10	250		PKPbc	18 40 47.0	+0.1
PV04	Paradox Valley	146.21	263		PKPbc	18 40 47.0	-0.3
PV22	Blue Mesa, Par	146.23	264		PKPbc	18 40 46.9	-0.5
PV14	Lion Creek, Pa	146.27	263		PKPbc	18 40 47.4	-0.2
RSSD	Black Hills	146.59	276		PKPbc	18 40 47.8	-0.4
W13A	Hualapai Mount	147.01	254		PKPbc	18 40 49.7	0.0
SRU	San Rafael Swe	147.65	263		PKPdf	18 40 48.5	-0.1
RES	Resolute Bay	147.94	335		PKPbc	18 40 51.1	+0.3
MTPU	Mount Pierson	147.97	260		PKPbc	18 40 52.5	+0.1
CCUT	Cedar City	148.36	258		PKPbc	18 40 52.5	-0.9
SHPR	Sheep Range	148.72	255		PKPbc	18 40 53.6	-0.6
NLU	North Lily Min	149.11	263		PKPbc	18 40 55.1	-0.1
JLU	Jordanelle	149.12	264		PKPbc	18 40 55.1	-0.1
PDAR	Pinedale Array	149.22	269	PKP	PKPdf	18 40 48.5	-2.7
	comp=Z,0.5nm,0.9s,baz=111,slow=4.1,SNR=3.4						
PDAR				PKPbc	sPKPdf	18 40 54.5	+0.3
	comp=Z,2.1nm,0.9s,baz=134,slow=5.2,SNR=12						
PDAR	Pinedale Array	149.22	269	PKPab	PKPab	18 41 00.6	+0.7
BW06	Boulder Array	149.23	269	PKPdf	PKPdf	18 40 50.8	-0.3
BW06					sPKPdf	18 40 54.2	+0.1
PSUT	Pine Spring	149.29	259		PKPbc	18 40 55.9	+0.2
DUG	Dugway, Tooele	149.71	262		PKPbc	18 40 56.7	+0.2
SPR3	Spring Creek 3	149.88	259		PKPbc	18 40 57.5	+0.3
R11A	Troy Canyon, C	150.21	257		PKiKP	18 40 58.4	-0.2
BGU	Big Grassy Mou	150.28	263		PKiKP	18 40 58.4	-0.3
IMW	Indian Meadow	150.69	270		PKPdf	18 40 54.9	+1.4
GCMT	Greycliff	150.88	274		PKiKP	18 40 59.6	-0.2
YHH	Holmes Hill	151.10	272		PKiKP	18 41 00.2	-0.3
ELK	Elko	151.51	261	PKPbc	PKiKP	18 41 01.3	-0.1
	comp=Z,3.1nm,0.6s,baz=218,slow=2.8,SNR=17						
ELK				PKPab	PKPab	18 41 07.9	-1.5
	comp=Z,4.3nm,0.8s,baz=104,slow=4.6,SNR=11						
ELK	Elko	151.51	261		PKPdf	18 40 55.1	+0.4
NV11	Mina Array Sit	151.78	254		PKPdf	18 40 55.8	+0.7
NVAR	Mina Array Bea	151.87	254	PKP	PKPdf	18 40 53.4	-2.0
	comp=Z,0.8nm,0.7s,baz=134,slow=2.6,SNR=2.3						
NVAR				PKPbc	pPKPbc	18 41 03.2	-0.9
	comp=Z,2.9nm,0.6s,baz=138,slow=2.4,SNR=14						
NVAR				PKPab	PKPab	18 41 09.0	-2.0
	comp=Z,1.7nm,0.8s,baz=145,slow=3.1,SNR=6.5						
NVAR	Mina Array Bea	151.87	254	PKPdf	PKPdf	18 40 56.5	+1.2
HRY	Holter Researc	152.64	275		PKPdf	18 40 57.7	+1.6
HRY				PKPbc	PKPbc	18 41 02.1	-1.1
HRY				PKPab	sPKPbc	18 41 10.0	+3.8
YKA	Yellowknife Ar	157.17	311	PKPab	PKPab	18 41 33.3	+0.7
	comp=Z,0.7nm,0.6s,baz=85,slow=5.4,SNR=9.2						
ILAR	Eielson Array	167.24	347	PKPab	PKPab	18 42 13.3	-3.2
	comp=Z,0.4nm,0.9s,baz=0.3,slow=1.3,SNR=2.5						

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*IDC **30** 18:24:07.2±7.5, 31°.45S×179°.22W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.7/24, mbtmp3.7/2, Error ellipse: s-maj=319.6km s-min=58.0km az=157.0*

*NEIC **30** 18:24:14.4±0.5, 34°.1S±0°.2×178°.6W±0°.2, h114^{km}±15^{km}, mb4.4/6, Error ellipse: s-maj=31.3km s-min=21.5km az=122.0*

ISC 30 18:24:01.8±2.2, **33°.5S**±0°.2×**177°.7W**±0°.3, **h35^{km}, n16, σ0s.91**/15, **mb4.4**/5, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.37	220	Pn	Pn	18 25 34.2	+1.0
BKZ	Black Stump Fm	7.37	218	Pn	Pn	18 25 46.4	-0.5
OUZ	Omahuta	7.40	254	Pn	Pn	18 25 48.0	+0.7
BFZ	Birch Farm	8.68	212	Pn	Pn	18 26 05.2	+0.4
AS31	Alice Springs	43.27	270	P	P	18 31 59.6	-0.6
ASAR	Alice Springs	43.27	270	P	P	18 32 00.1	-0.1
	1.0nm,0.6s,baz=110,slow=8.2,SNR=20						
ASAR	Alice Springs	43.27	270	P	P	18 31 59.0	-1.2
WR0	Warramunga Arr	44.35	275	P	P	18 32 07.7	-1.2
WR0				IAmb	IAmb	18 32 08.6	
	comp=Z,11nm,1.6s						
WB2	Warramunga Arr	44.52	275	P	P	18 32 09.6	-0.7
WB2				IAmb	IAmb	18 32 33.5	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	44.52	275	P	P	18 32 09.4	-0.9
WRAB				IAmb	IAmb	18 32 21.4	
	comp=Z,7.7nm,1.2s						
WRA	Warramunga Arr	44.53	275	P	P	18 32 09.7	-0.6
	comp=Z,0.5nm,0.6s,baz=116,slow=7.8,SNR=6.8						
WRA	Warramunga Arr	44.53	275	P	P	18 32 09.7	-0.6
WRA	Warramunga Arr	44.53	275	IAmb	IAmb	18 32 18.3	
	comp=Z,0.2nm,1.1s						
WB0	Warramunga Arr	44.57	275	P	P	18 32 09.3	-1.3
FINES	FINESS Array B	148.08	338	PKPbc	PKPab	18 43 46.5	+0.7
	comp=Z,2.8nm,1.0s,baz=64,slow=3.2,SNR=5.7						
FINES	FINESS Array B	148.08	338		PKPab	18 43 46.5	+0.7

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*IDC **30** 18:26:07.1±1.2, 52°.91S×25°.47E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.7/34, mbtmp4.0/4, Error ellipse: s-maj=59.1km s-min=29.6km az=64.0*

*NEIC **30** 18:26:08.8±2.4, 52°.9S±0°.1×25°.2E±0°.3, h10^{km}±1^{km}, mb4.9/11, Error ellipse: s-maj=32.4km s-min=17.9km az=53.0*

ISC 30 18:26:10.0±0.8, **52°.8S**±0°.1×**25°.3E**±0°.2, **h10^{km}, n16, σ1s.88**/16, **mb4.7**/7, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	Sutherland	20.65	349	P	P	18 30 51.1	+1.2
	6.1nm,1.0s,baz=159,slow=14,SNR=1.7						
SUR	Sutherland	20.65	349		P	18 30 51.3	+1.4
SUR				IAmb	IAmb	18 30 54.7	
	comp=Z,79nm,1.7s						
BOSA	Boshof	24.14	360	P	P	18 31 25.3	-0.9
	comp=Z,2.6nm,0.8s,baz=194,slow=8.3,SNR=3.8						
BOSA	Boshof	24.14	360	P	P	18 31 25.1	-1.1
BOSA				IAmb	IAmb	18 31 43.6	
	comp=Z,43nm,1.8s						
TSUM	Tsumeb	34.05	347	P	P	18 32 55.7	+1.3

TSUM				IAmb	IAmb	18 33 06.2	
	comp=Z,22nm,1.9s						
QSPA	South Pole Qui	37.44	180	P	P	18 33 25.7	+2.5
NWAO	Narrogin (SRO)	65.63	113	P	P	18 36 55.9	+1.7
PB14	IPOC Station P	74.09	250	P	P	18 37 45.5	-1.2
ASAR	Alice Springs	81.98	119	P	P	18 38 28.4	-1.8
	comp=Z,1.1nm,0.6s,baz=212,slow=4.9,SNR=22						
WRA	Warramunga Arr	85.24	117	P	P	18 38 44.9	-2.0
	comp=Z,0.5nm,0.8s,baz=211,slow=3.8,SNR=1.9						
WB2	Warramunga Arr	85.25	117	P	P	18 38 46.0	-1.0
WB2				IAmb	IAmb	18 38 58.0	
	comp=Z,13nm,1.5s						
WRAB	Tennant Creek	85.25	117	P	P	18 38 45.1	-1.8
WR0	Warramunga Arr	85.33	117	P	P	18 38 45.3	-2.1
WR0				IAmb	IAmb	18 39 19.1	
	comp=Z,17nm,1.7s						
WB0	Warramunga Arr	85.41	117	P	P	18 38 45.1	-2.7
WB0				IAmb	IAmb	18 39 00.9	
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	148.54	270	PKPbc	PKPbc	18 45 54.9	-1.7
	comp=Z,0.2nm,0.6s,baz=108,slow=5.8,SNR=2.5						
NVAR	Mina Array Bea	151.13	255	PKPbc	PKPbc	18 46 01.7	-1.3
	comp=Z,0.1nm,0.3s,baz=160,slow=2.9,SNR=2.2						

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*NOU **30** 18:40:47.7, 21°.41S×170°.34E, h0^{km}, MLv4.5, Southeast of Loyalty Islands*

*NEIC **30** 18:40:49.5±2.0, 21°.52S±0°.08×170°.21E±0°.08, h9^{km}±4^{km}, mb4.8/10, Error ellipse: s-maj=15.2km s-min=5.5km az=139.0*

*IDC **30** 18:40:50.2±3.0, 21°.02S×170°.00E, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx4.1/31, mbtmp4.1/8, ML3.5/1, Error ellipse: s-maj=129.6km s-min=23.2km az=154.0*

ISC 30 18:40:50.3±0.7**, 21°.43S**±0°.08×**170°.20E**±0°.08**, h10^{km}, n36, σ1^{s}.05**/38**, mb4.4**/10**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINNC	Pines Island,	2.82	245	P	Pn	18 41 35.5	+0.1
YATNC	Mamie plateau,	3.14	258	P	Pn	18 41 39.7	-0.1
YATNC	Mamie plateau,	3.14	258	P	Pn	18 41 39.8	-0.1
OUENC	Ouen Island, N	3.27	252	P	Pn	18 41 42.1	+0.5
OUENC	Ouen Island, N	3.27	252	P	Pn	18 41 42.1	+0.5
DZM	Mont Dzumac	3.55	259	Pn	Pn	18 41 45.8	+0.2
	3.9nm,0.3s,baz=136,slow=12,SNR=32						
DZM				Sn	Sn	18 42 28.8	+1.1
	9.5nm,0.3s,baz=114,slow=20,SNR=5.2						
DZM	Mont Dzumac	3.55	259		Pn	18 41 45.9	+0.4
DZM				Sn	Sn	18 42 27.8	+0.1
DZM	Mont Dzumac	3.55	259	P	Pn	18 41 46.0	+0.4
ONTNC	Ouen Toro	3.59	255	P	Pn	18 41 46.2	+0.2
NOUC	Port Laguerre	3.69	259	P	Pn	18 41 47.6	+0.3
NOUC	Port Laguerre	3.69	259	P	Pn	18 41 47.7	+0.4
DVP	Devils Point	4.14	332	P	Pn	18 41 52.7	-0.9
SANVU	Saraoutou	6.59	334		Pn	18 42 28.0	+0.7
MSVF	Nonsavu	8.26	65	Pn	Pn	18 42 51.8	+1.6
MSWZ	Moikau Station	20.38	169	P	P	18 45 25.1	-2.0
DCZ	Deep Cove	24.11	185	P	P	18 46 08.7	+2.7
WB0	Warramunga Arr	33.52	266	P	P	18 47 28.4	-1.9
WB0				IAmb	IAmb	18 47 35.6	
	comp=Z,10.0nm,0.9s						
WB2	Warramunga Arr	33.53	266	P	P	18 47 29.1	-1.3
WRAB	Tennant Creek	33.53	266	P	P	18 47 29.4	-1.1
WRA	Warramunga Arr	33.54	266	P	P	18 47 29.3	-1.3
	comp=Z,2.3nm,0.6s,baz=97,slow=8.0,SNR=6.5						
WRA	Warramunga Arr	33.54	266	P	P	18 47 29.7	-0.8
ASAR	Alice Springs	33.55	259	P	P	18 47 30.6	+0.1
	comp=Z,4.7nm,0.7s,baz=85,slow=8.6,SNR=15						
ASAR	Alice Springs	33.55	259	P	P	18 47 29.9	-0.6
FITZ	Fitzroy Crossi	41.97	266	P	P	18 48 43.2	+1.5
	comp=Z,9.0nm,0.7s,baz=148,slow=9.5,SNR=2.8						
FITZ	Fitzroy Crossi	41.97	266	P	P	18 48 42.1	+0.3
FITZ				IAmb	IAmb	18 48 48.3	
	comp=Z,17nm,1.0s						
TOLI2	Tolitoli	53.20	289	P	P	18 50 09.8	+0.6
TOLI2				IAmb	IAmb	18 50 14.2	
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	68.64	180	P	P	18 51 52.3	-1.3
QSPA				IAmb	IAmb	18 52 17.3	
	comp=Z,9.6nm,1.4s						
CM31	Chiang Mai Arr	80.22	294	P	P	18 53 01.9	+0.3
CMAR	Chiang Mai Arr	80.22	294	P	P	18 53 01.9	+0.3
	comp=Z,1.2nm,1.0s,baz=140,slow=4.3,SNR=7.0						
SONM	Songino Array	89.50	323	P	P	18 53 47.8	+0.1
	comp=Z,0.4nm,0.5s,baz=111,slow=3.6,SNR=2.4						
SONM	Songino Array	89.50	323	P	P	18 53 47.2	-0.6
NVAR	Mina Array Bea	89.57	48	P	P	18 53 50.2	+1.8
	comp=Z,0.3nm,0.6s,baz=229,slow=6.9,SNR=2.1						
NVAR	Mina Array Bea	89.57	48	P	P	18 53 47.5	-0.9
ILAR	Eielson Array	92.04	17	P	P	18 53 57.5	-1.6
	comp=Z,0.3nm,0.7s,baz=238,slow=5.1,SNR=2.7						
CLL	Collm	145.27	335	*e*PKPbc	PKPdf	19 00 29.0	+0.9
GERES	GERESS Array B	146.84	331	PKPbc	PKPbc	19 00 32.3	-0.5
	comp=Z,1.2nm,0.9s,baz=62,slow=3.2,SNR=4.5						

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*NOU **30** 18:41:14.9, 9°.98S×118°.11E, h34^{km}, mb4.5, Sumbawa Region, Indonesia*

*DJA **30** 18:41:15.8±0.3, 10°S±3°×11°8E±°, h57^{km}±8^{km}, M4.8/19, mB5.3/5, mb4.8/13, MLv4.8/19, Mw(mB)4.8/5*

*NEIC **30** 18:41:15.6±2.3, 9°.84S±0°.07×117°.83E±0°.05, h88^{km}±7^{km}, mb4.4/44, Error ellipse: s-maj=10.0km s-min=7.2km az=187.0*

*IDC **30** 18:41:15.7±0.7, 9°.80S×117°.95E, h85^{km}±6^{km}, mb4.1/13, mb1 4.2/17, mb1mx4.0/41, mbtmp4.4/17, Error ellipse: s-maj=13.2km s-min=9.8km az=66.0*

ISC 30 18:41:15.1±0.5**, 9°.90S**±0°.04×**117°.90E**±0°.04**, h82^{km}**±5^{km}**, h82^{km}:pP-P, n152, σ1^{s}.50**/167**, mb4.5**/46**, 1C-2D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.07	354	P	Pn	18 41 35.0	-0.2
PLAI				S	Sn	18 41 48.8	-1.5
TWSI	Taliwang, Sumb	1.53	319	P	Pn	18 41 41.5	+0.5
TWSI				S	Sn	18 42 00.2	-0.3
WSI	Waingapu	2.38	85	P	Pn	18 41 52.8	+0.7
BASI	Baing, Sumba	2.66	97	P	Pn	18 41 56.2	+0.3
DNP	Denpasar	2.92	294	P	Pn	18 42 00.3	+0.8
SRBI	Singaraja	3.21	304	P	Pn	18 42 04.2	+0.8
EDFI	Ende, Flores	3.91	73	P	Pn	18 42 13.4	+0.4
JAGI	Jajag, Banyuwa	3.96	291		Pn	18 42 12.3	-1.3
JAGI				Sn	Sn	18 42 57.4	-1.6
JAGI	Jajag, Banyuwa	3.96	291	P	Pn	18 42 12.7	-0.9
ABJI	Asem Bagus	4.18	300	P	Pn	18 42 17.2	+0.6
MMRI	Maumere	4.46	74		Pn	18 42 21.4	+1.0
MMRI				Sn	Sn	18 43 10.6	-0.6
MMRI	Maumere	4.46	74	P	Pn	18 42 22.0	+1.6
BSSI	Bau Bau, Buton	4.53	35	P	Pn	18 42 22.9	+1.5
BKSI	Bulukumba	5.06	26	P	Pn	18 42 30.2	+1.7
	3.5nm9µm309nm,0.7s						
KAPI	Kappang	5.19	21	P	Pn	18 42 30.5	+0.1
	4.8nm,0.3s,baz=183,slow=4.2,SNR=46						
KAPI				S	Sn	18 43 26.8	-2.2
	50nm,0.3s,baz=131,slow=19,SNR=43						
KAPI	Kappang	5.19	21		Pn	18 42 31.5	+1.2
KAPI				Sn	Sn	18 43 26.7	-2.2
BATI	Baumata	5.68	94	P	Pn	18 42 37.6	+0.5
	16nm,0.3s,baz=276,slow=3.9,SNR=30						
BATI				S	Sn	18 43 39.8	-1.3
	26nm,0.3s,baz=336,slow=23,SNR=8.3						
BATI	Baumata	5.68	94	P	Pn	18 42 37.9	+0.8
	0.4nm46nm,0.6s						
BNSI	Bone	5.89	22	P	Pn	18 42 43.1	+3.2
	0.5nm104nm,0.7s						
SPSI	Sidrap Palu	6.18	18	P	Pn	18 42 45.7	+1.8
	0.2nm31nm,0.7s						
SOEI	Soe	6.28	89		Pn	18 42 46.2	+1.0
SOEI	Soe	6.28	89	P	Pn	18 42 46.3	+1.0
	0.5nm90nm,0.8s						
KBKI	Kotabaru	6.78	345	P	Pn	18 42 54.2	+2.1
	0.3nm999nm40nm,0.5s						
TTSI	Tana Toraja	7.07	16	P	Pn	18 43 12.5	+16
UGM	Wanagama	7.55	285	Pn	Pn	18 43 01.7	-0.9
UGM	Wanagama	7.55	285	P	Pn	18 43 02.7	+0.1
	0.8nm139nm,2.4s						
MTKI	Muara Teweh, K	9.39	341	P	Pn	18 43 30.0	+2.3
	2µm11nm,0.7s						
CISI	Cisompet, Garu	10.24	282		Pn	18 43 36.4	-2.9
FITZ	Fitzroy Crossi	11.08	138	P	Pn	18 43 50.5	-0.2
	1.9nm,0.3s,baz=333,slow=9.7,SNR=75						
FITZ				S	Sn	18 45 46.4	-6.4
	4.0nm,0.3s,baz=195,slow=20,SNR=12						
FITZ	Fitzroy Crossi	11.08	138		Pn	18 43 50.2	-0.5
TOLI2	Tolitoli	11.31	15	Pn	Pn	18 43 56.0	+2.1
PSA00	Pilbara Seismi	11.75	171		Pn	18 43 58.5	-1.3
PSA00	Pilbara Seismi	11.75	171		Pn	18 43 57.0	-2.9
GIRL	Giralia	13.15	195	Pn	Pn	18 44 18.2	-0.4
MTN	Manton Dam	13.30	104		Pn	18 44 18.4	-2.3
SAUI	Saumlaki	13.38	83	Pn	Pn	18 44 24.5	+2.8
SBUM	Sibu	13.51	335	Pn	Pn	18 44 23.2	-0.3
SBUM	Sibu	13.51	335	P	P	18 44 27.0	-2.7
KSM	Kuching	13.60	326	Pn	Pn	18 44 22.3	-2.3
KSM	Kuching	13.60	326	P	P	18 44 33.0	+2.3
KLSI		14.05	291	P	Pn	18 44 31.8	+1.3
	14nm,1.0s						
LWLI	Liwa	14.55	288	P	P	18 44 46.1	+4.6
MYLDM	Lahad Datu	14.99	2	Pn	Pn	18 44 42.4	-0.4
LHSI	Lahat	15.49	292	P	P	18 44 52.4	+0.6
	79nm,0.9s						
MNAI	Manna	15.81	289	Pn	Pn	18 44 50.4	-2.7
FAKI	Fak Fak	15.85	65	Pn	Pn	18 44 53.1	-0.5
FAKI				IAmb	IAmb	18 45 02.7	
	comp=Z,64nm,1.3s						
KKM	Kota Kinabalu	15.93	354		P	18 44 55.7	-1.0
KKM				IAmb	IAmb	18 45 05.8	
	comp=Z,34nm,1.1s						
RGRI	Rengat	18.16	301	P	Pn	18 45 31.5	+9.5
MYKOM	Kota Tinggi	18.18	309		P	18 45 20.7	-0.8
MYKOM				IAmb	IAmb	18 45 25.6	
	comp=Z,13nm,0.8s						
MYKOM	Kota Tinggi	18.18	309	P	Pn	18 45 25.0	+2.7
WB0	Warramunga Arr	18.70	123	P	Pn	18 45 29.9	+1.4
WRA	Warramunga Arr	18.74	124	P	P	18 45 27.3	-0.4
	comp=Z,0.1nm,0.3s,baz=292,slow=13,SNR=5.0						
WRA				S	S	18 48 44.3	-12
	comp=Z,0.6nm,0.3s,baz=294,slow=23,SNR=5.0						
WRA	Warramunga Arr	18.74	124	P	Pn	18 45 30.5	+1.5
WRAB	Tennant Creek	18.75	124	P	Pn	18 45 29.8	+0.7
WB2	Warramunga Arr	18.75	124		Pn	18 45 29.6	+0.5
WR0	Warramunga Arr	18.92	124	P	Pn	18 45 31.6	+0.5
MORW	Morawa	19.15	185	P	Pn	18 45 35.4	+1.7
MORW				IAmb	IAmb	18 46 24.9	
	comp=Z,34nm,1.5s						
PDSI	Padang	19.51	296	P	P	18 45 34.9	-1.2
BKNI	Bangkinang	19.62	300	P	P	18 45 37.9	+0.7
AS31	Alice Springs	20.52	134		Pn	18 45 49.4	-0.4
ASAR	Alice Springs	20.52	134	P	Pn	18 45 49.1	-0.7
	comp=Z,13nm,1.1s,baz=309,slow=10,SNR=97						
ASAR				S	S	18 49 30.6	-1.5
	comp=Z,2.9nm,0.8s,baz=306,slow=22,SNR=7.5						
MNSI	Mandailing Nat	21.11	299	P	P	18 45 55.4	+2.1
IPM	Ipoh	22.06	310	P	P	18 46 02.3	-1.2
IPM				IAmb	IAmb	18 46 40.0	
	comp=Z,24nm,1.6s						
IPM	Ipoh	22.06	310	P	P	18 46 04.0	+0.5
PSI	Prapat	22.73	303	P	P	18 46 09.4	-1.3
	comp=Z,9.0nm,0.3s,baz=180,slow=9.3,SNR=13						
FORT	Forrest	22.82	157	P	P	18 46 12.4	+1.0
KULM	Kulim	22.87	311	P	P	18 46 10.0	-2.0
KULM				IAmb	IAmb	18 46 50.0	
	comp=Z,20nm,1.4s						
KULM	Kulim	22.87	311	P	P	18 46 11.0	-1.0
NWAO	Narrogin (SRO)	22.92	181	P	P	18 46 13.5	+1.1
	comp=Z,5.4nm,0.7s,baz=2.6,slow=10,SNR=1.9						
NWAO				pP	pP	18 46 29.1	+0.9
	comp=Z,6.8nm,0.6s,baz=1.6,slow=11,SNR=2.6						
NWAO				S	S	18 50 18.4	+2.3
	comp=Z,7.1nm,0.3s,baz=305,slow=11,SNR=3.0						
NWAO	Narrogin (SRO)	22.92	181	P	P	18 46 13.4	+1.1
NWAO				IAmb	IAmb	18 46 50.8	
	comp=Z,51nm,1.6s						
NWAO	Narrogin (SRO)	22.92	181	P	P	18 46 13.9	+1.5
NWAO				IAmb	IAmb	18 46 40.5	
	comp=Z,45nm,1.4s						
GSI	Gunungsitoli	23.09	298	P	P	18 46 12.6	-1.7
TSI	Tuntungan	23.41	304	P	P	18 46 19.1	+1.9
TPTI		24.43	301	P	P	18 46 27.0	+0.6
CHAI	Chaiyaphum	30.09	328	P	P	18 47 17.9	+0.8
	comp=Z,25nm,0.6s						
STKA	Stephens Creek	30.98	138	P	P	18 47 26.4	+1.6
UTTA	Uttaradit	32.38	328	P	P	18 47 37.8	+0.7
	comp=Z,17nm,0.7s						
SUKH	Sukhothai	32.65	326	P	P	18 47 40.9	+1.3
	comp=Z,19nm,0.6s						
LAMP	Lampang	33.51	327	P	P	18 47 50.1	+3.1
	comp=Z,11nm,0.8s						
CM02	Chiang Mai Arr	33.80	326	P	P	18 47 50.0	+0.4
	comp=Z,3.7nm,0.9s						
CM31	Chiang Mai Arr	33.82	326	P	P	18 47 49.0	-0.8
CM31				IAmb	IAmb	18 47 51.0	
	comp=Z,4.2nm,0.9s						
CMAR	Chiang Mai Arr	33.82	326	P	P	18 47 49.1	-0.7
	comp=Z,2.7nm,0.8s,baz=152,slow=6.5,SNR=27						
CMAR				PcP	PcP	18 50 29.2	+1.9
	comp=Z,1.1nm,0.7s,baz=185,slow=2.9,SNR=10						
CMAR	Chiang Mai Arr	33.82	326	P	P	18 47 48.8	-1.0
CM35	Chiang Mai Arr	33.89	327	P	P	18 47 51.0	+0.6
CM34	Chiang Mai Arr	34.03	327	P	P	18 47 52.0	+0.4
CMMT	Chiang Mai	34.11	327	P	P	18 47 51.6	-0.7
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	34.11	327	P	P	18 47 51.4	-0.9
CHTO				IAmb	IAmb	18 47 52.8	
	comp=Z,2.8nm,0.8s						
KMI	Kunming	37.82	337	⇓*e*P	P	18 48 26.0	+1.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ENH	Enshi	40.75	349	P	P	18 48 46.6	-1.7
ENH				IAmb	IAmb	18 48 48.4	
	comp=Z,6.3nm,0.7s						
PALK	Pallekele	40.79	293	P	P	18 48 49.0	+0.2
	comp=Z,7.2nm,0.7s,baz=198,slow=12,SNR=6.6						
PALK	Pallekele	40.79	293	P	P	18 48 46.4	-2.5
CD2	Chengdu	42.79	342	*e*P	P	18 49 04.5	-0.4
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
SHL	Shillong	43.41	325	P	P	18 49 08.2	-1.9
LSA	Lhasa	47.05	328	P	P	18 49 39.5	+0.2
TAPN	Taplejung	47.20	322	*e*P	P	18 49 39.8	-0.5
LZH	Lanzhou	47.62	345	⇓P	P	18 49 43.8	+0.6
LZH				pP	pP	18 50 04.5	+2.0
LZH				sP	sP	18 50 14.3	+2.9
LZH				PP	PP	18 51 36.8	+1.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.8s						
KSRS	Korea Array	48.03	11	P	P	18 49 46.1	0.0
	comp=Z,3.9nm,0.8s,baz=188,slow=9.3,SNR=7.4						
GUN	Gumba	48.72	321	*e*P	P	18 49 50.8	-1.2
	comp=Z,12nm,0.7s						
PKI	Pulchoki	48.77	321	*e*P	P	18 49 50.6	-1.8
	comp=Z,5.1nm,0.6s						
DMN	Daman	48.99	320	*e*P	P	18 49 52.1	-1.9
	comp=Z,4.6nm,0.4s						
DANN	Dangsing	50.35	320	*e*P	P	18 50 02.6	-1.8
	comp=Z,12nm,0.4s						
HHC	Hu-ho-hao-te	50.83	354	*e*P	P	18 50 09.8	+2.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,970nm,6.6s						
GTA	Gaotai	51.86	342	⇑P	P	18 50 16.5	+1.2
GTA				pP	pP	18 50 31.0	-3.8
GTA				sP	pwP	18 50 38.5	+0.3
MDJ	Mudanjiang	55.28	10	P	P	18 50 40.5	+0.4
USA0B	Ussuriysk Arra	55.34	12	P	P	18 50 40.2	-0.3
USRK	Ussuriysk Ar.	55.34	12	P	P	18 50 40.0	-0.5
	comp=Z,2.7nm,0.6s,baz=194,slow=8.1,SNR=5.9						
USRK	Ussuriysk Ar.	55.34	12	P	P	18 50 40.3	-0.2
ULN	Ulaanbaatar	58.31	351	P	P	18 51 02.1	+0.4
ULN				IAmb	IAmb	18 51 03.0	
	comp=Z,2.3nm,0.8s						
SONM	Songino Array	58.38	351	P	P	18 51 01.0	-1.1
	comp=Z,2.2nm,0.5s,baz=169,slow=8.4,SNR=26						
SONM				pP	pwP	18 51 24.5	-0.4
	comp=Z,0.5nm,0.4s,baz=169,slow=8.4,SNR=2.3						
SONM				PcP	PcP	18 51 53.1	+1.0
	comp=Z,1.2nm,0.5s,baz=135,slow=3.5,SNR=5.5						
SONM	Songino Array	58.38	351	P	P	18 51 01.2	-0.9
WMQ	Urumqi	60.10	335	*e*P	P	18 51 15.0	+1.0
SHLS	Shalkode	63.36	329	*e*P	P	18 51 34.0	-2.0
	comp=Z,3.5nm,0.7s,baz=330						
SATY	Saty	63.83	329	*e*P	P	18 51 38.0	-1.0
	baz=329						
KBL	Kabul	63.98	316	P	P	18 51 39.0	-1.3
KBL				IAmb	IAmb	18 51 40.0	
	comp=Z,5.5nm,0.7s						
KPKS	Kokpek	63.98	329	*e*P	P	18 51 38.7	-1.3
	baz=329						
ZSN	Zaisan	64.20	336	*e*P	P	18 51 39.1	-2.2
	baz=336						
MDOK	Medeo	64.60	328	*e*P	P	18 51 43.3	-0.8
	baz=328						
MK31	Makanchi Array	64.77	334	P	P	18 51 44.2	-0.8
MK31				IAmb	IAmb	18 51 45.1	
	comp=Z,3.2nm,0.7s						
MK31				pP	pP	18 52 07.1	+1.9
MKAR	Makanchi Array	64.77	334	P	P	18 51 43.8	-1.2
	comp=Z,5.0nm,0.7s,baz=147,slow=7.6,SNR=68						
MKAR				pP	pP	18 52 07.1	+1.9
	comp=Z,1.9nm,0.6s,baz=152,slow=8.1,SNR=5.1						
MAKZ	Makanchi	64.92	334	P	P	18 51 44.7	-1.3
TDK	Taldyqorghan	65.23	330	*e*P	P	18 51 47.2	-0.8
	baz=330						
KUU	Kurty	65.48	328	*e*P	P	18 51 47.8	-1.8
	comp=Z,2.3nm,0.7s,baz=328						
AAK	Ala-Archa	65.61	326	P	P	18 51 49.6	-1.1
AAK				IAmb	IAmb	18 51 51.3	
	comp=Z,3.5nm,0.8s						
SGDS	Sogindy	66.08	327	*e*P	P	18 51 52.0	-1.6
	baz=327						
BTLS	Baital	67.47	328	*e*P	P	18 52 01.7	-0.5
	baz=328						
IUG	Iuzhnay	67.83	323	*e*P	P	18 52 03.8	-0.9
	comp=Z,1.6nm,0.5s,baz=324						
MAW	Mawson	68.02	200	P	P	18 52 06.5	+1.1
MAW				IAmb	IAmb	18 52 39.2	
	comp=Z,8.2nm,1.6s						
KK06	Karatay Array	68.13	324	P	P	18 52 05.3	-1.2
KK07	Karatay Array	68.14	324	P	P	18 52 05.2	-1.4
KK31	Karatay Array	68.15	324	P	P	18 52 05.8	-0.8
KKAR	Karatay Array	68.15	324	P	P	18 52 05.7	-1.0
KKAR	Karatay Array	68.15	324	P	P	18 52 04.8	-1.8
SEM	Semipalatinsk	68.42	335	*e*P	P	18 52 06.5	-1.9
	comp=Z,6.2nm,0.8s,baz=335						
AFI	Afiamalu	68.72	101	P	P	18 52 11.5	+0.7
KURK	Kurchatov	69.33	335	P	P	18 52 13.1	-0.6
KURK				IAmb	IAmb	18 52 13.8	
	comp=Z,6.5nm,0.8s						
KURK				pP	pP	18 52 35.5	+1.5
UOSS	Minazif	69.36	301	P	P	18 52 14.3	-0.2
UOSS				IAmb	IAmb	18 52 30.1	
	comp=Z,7.1nm,1.2s						
ZAA0	Zalesovo Array	69.50	340	P	P	18 52 13.2	-1.6
ZAA0				IAmb	IAmb	18 52 14.0	
	comp=Z,5.6nm,0.8s						
ZALV	Zalesovo Beam	69.50	340	P	P	18 52 13.2	-1.5
	comp=Z,3.5nm,0.4s,baz=140,slow=4.7,SNR=28						
ZALV				pP	pP	18 52 36.0	+1.0
	comp=Z,1.2nm,0.6s,baz=125,slow=4.2,SNR=2.4						
ZALV	Zalesovo Beam	69.50	340	P	P	18 52 12.9	-1.9
NIUE	Niue	70.08	107	P	P	18 52 18.9	-0.1
PETK	Petropavlovsk-	71.33	24	P	P	18 52 25.6	-0.4
BRZS	Berezniki	71.48	331	*e*P	P	18 52 26.1	-0.9
	comp=Z,2.0nm,0.6s,baz=331						
GEYT	Alibeck	73.29	314	P	P	18 52 38.0	+0.1
	comp=Z,1.6nm,0.6s,baz=87,slow=3.0,SNR=4.2						
BRVK	Borovoye	74.65	332	P	P	18 52 44.7	-0.8
BRVK				IAmb	IAmb	18 52 45.8	
	comp=Z,3.5nm,0.8s						
AB07	Akbulak array	77.66	325	P	P	18 53 02.6	-0.1
ABKAR	Akbulak array	77.68	325	P	P	18 53 02.0	-0.8
ABKAR	Akbulak array	77.68	325	P	P	18 53 02.3	-0.5
ABKAR				IAmb	IAmb	18 53 03.1	
	comp=Z,8.8nm,0.6s						
RAYN	Ar Rayn	78.13	297	P	P	18 53 05.5	-0.4
RAYN				IAmb	IAmb	18 53 07.8	
	comp=Z,2.8nm,0.8s						
NRIK	Noril'sk	81.83	350	P	P	18 53 24.4	-0.4
	comp=Z,1.5nm,0.3s,baz=158,slow=4.9,SNR=4.6						
KBZ	Khabaz	86.15	315	P	P	18 53 47.8	+0.5
	comp=Z,3.4nm,0.8s,baz=193,slow=1.2,SNR=11						
YKA	Yellowknife Ar	115.45	24	PKP	PKPdf	18 59 48.2	+1.0
	comp=Z,0.3nm,0.5s,baz=344,slow=1.2,SNR=5.0						
TORD	Torodi Ar. Bea	117.55	280	PKP	PKiKP	18 59 53.8	+1.2
	comp=Z,0.4nm,0.5s,baz=124,slow=2.6,SNR=2.1						

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*IDC **30** 18:48:18.7±1.0, 21°.40S×170°.17E, h0^{km}, mb4.3/11, mb1 4.4/13, mb1mx4.3/27, mbtmp4.3/13, ML3.4/2, MS4.4/6, Ms1 4.4/6, ms1mx3.9/37, Error ellipse: s-maj=24.7km s-min=22.0km az=170.0*

*NOU **30** 18:48:21.2, 21°.32S×170°.07E, h6^{km}, mb4.9, Southeast of Loyalty Islands*

*NEIC **30** 18:48:22.2±2.5, 21°.34S±0°.08×170°.02E±0°.07, h10^{km}±4^{km}, mb4.9/42, Error ellipse: s-maj=12.5km s-min=8.7km az=147.0*

*GCMT **30** 18:48:26.2±0.4, 21°.21S±0°.03×170°.12E±0°.02, h25^{km}±1^{km}, MW5.0/58, Moment Tensor Solution. s13,c19; s58,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.61±.31; $M_{\theta\theta}$-2.89±.23; $M_{\phi\phi}$3.50±.24; $M_{r\theta}$1.60±.53; $M_{\theta\phi}$-2.60±.16; $M_{\phi r}$1.25±.44; Best double couple: $M_0$4.61900×10^{16} NP1:ϕ_s298.00000°,δ67.00000°,λ-167.00000°. NP2: ϕ_s203.00000°,δ78.00000°,λ-24.00000°. Principal axes: T 4.5120, Plg8.0000°, Azm252.0000°; N 0.2100, Plg63.0000°, Azm358.0000°; P -4.7260, Plg25.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 18:48:21.9±0.4**, 21°.36S**±0°.06×**170°.10E**±0°.06**, h10^{km}, n111, σ1^{s}.38**/101**, mb4.8**/34**, MS4.5**/7**, 2C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.93	266	P	Pn	18 48 53.2	-1.6
PINNC	Pines Island,	2.76	243	P	Pn	18 49 05.6	-0.6
YATNC	Mamie plateau,	3.06	256	P	Pn	18 49 09.4	-1.0
OUENC	Ouen Island, N	3.20	250	P	Pn	18 49 13.3	+1.0
DZM	Mont Dzumac	3.47	258	Pn	Pn	18 49 15.3	-0.8
	7.9nm,0.3s,baz=115,slow=19,SNR=22						
DZM				Sn	Sn	18 49 57.4	0.0
	38nm,0.3s,baz=122,slow=22,SNR=10.0						
DZM	Mont Dzumac	3.47	258		Pn	18 49 15.7	-0.4
DZM	Mont Dzumac	3.47	258	P	Pn	18 49 15.9	-0.2
ONTNC	Ouen Toro	3.51	254	P	Pn	18 49 16.5	-0.1
NOUC	Port Laguerre	3.60	258	P	Pn	18 49 17.4	-0.4
DVP	Devils Point	4.04	333	P	Pn	18 49 22.9	-1.0
SANVU	Saraoutou	6.49	334		Pn	18 49 57.4	-0.2
SANVU	Saraoutou	6.49	334	P	Pn	18 49 56.7	-0.9
NFK	Norfolk Island	7.89	194	P	Pn	18 50 16.8	0.0
MSVF	Nonsavu	8.32	66	Pn	Pn	18 50 21.4	-1.4
MSVF	Nonsavu	8.32	66	P	Pn	18 50 22.8	0.0
OUZ	Omahuta	14.14	168	Pn	Pn	18 51 44.1	+1.7
URZ	Urewera	17.89	162	P	Pn	18 52 30.1	-0.8
	0.1nm,0.3s,baz=285,slow=7.6,SNR=2.5						
URZ				LR	LR	18 58 09.9	
	comp=Z,885nm,18.2s,baz=31,slow=33						
URZ	Urewera	17.89	162	P	P	18 52 33.1	+1.6
BKZ	Black Stump Fm	18.57	164	P	Pn	18 52 40.6	+1.3
AFI	Afiamalu	18.79	70	P	Pn	18 52 42.8	+0.7
ARMA	Armidale	18.89	238	P	Pn	18 52 44.0	+0.8
BFZ	Birch Farm	19.95	166	P	P	18 52 53.8	-0.3
SNZO	South Karori	20.27	170	P	P	18 52 57.6	+0.1
SNZO				IAmb	IAmb	18 53 21.5	
	comp=Z,134nm,1.3s						
TUWZ	Tuamarina	20.27	172	P	P	18 52 57.8	+0.2
BHW	Baring Head	20.39	170	P	P	18 52 58.7	-0.1
MSWZ	Moikau Station	20.46	169	P	P	18 52 59.1	-0.6
THZ	Tophouse	20.48	174	P	P	18 53 01.2	+1.3
THZ				IAmb	IAmb	18 53 19.1	
	comp=Z,104nm,1.6s						
BSWZ	Blackbirch Sta	20.54	172	P	P	18 53 01.1	+0.6
PLWZ	Palliser	20.61	169	P	P	18 53 01.0	-0.3
KHZ	Kahutara	21.19	173		P	18 53 07.5	0.0
LTZ	Lake Taylor	21.43	176	P	P	18 53 11.6	+1.4
LTZ				IAmb	IAmb	18 53 18.9	
	comp=Z,57nm,1.3s						
OXZ	Oxford	21.96	176	P	P	18 53 16.0	+0.2
OXZ				IAmb	IAmb	18 53 18.2	
	comp=Z,71nm,1.5s						
FOZ	Fox Glacier	22.11	181	P	P	18 53 18.1	+0.7
FOZ				IAmb	IAmb	18 53 28.5	
	comp=Z,53nm,1.2s						
RPZ	Rata Peaks	22.30	178	P	P	18 53 16.9	-2.6
	comp=Z,18nm,0.9s,baz=79,slow=1.8,SNR=4.8						
RPZ				LR	LR	19 00 03.7	
	comp=Z,626nm,20.8s,baz=328,slow=32						

RPZ	Rata Peaks	22.30	178	P	P	18 53 20.7	+1.2
RPZ				IAmb	IAmb	18 53 30.8	
	comp=Z,46nm,1.1s						
LBZ	Lake Benmore	22.96	180	P	P	18 53 28.5	+2.0
CAN	Canberra	23.14	229	P	P	18 53 30.6	+2.2
ODZ	Otahua Downs	23.62	179	P	P	18 53 34.9	+1.8
DCZ	Deep Cove	24.16	185	P	P	18 53 38.9	+0.7
DCZ				IAmb	IAmb	18 53 40.7	
	comp=Z,32nm,1.0s						
PYZ	Puysegur Point	24.90	186	P	P	18 53 43.7	-1.2
PMG	Port Moresby	25.07	295	P	P	18 53 45.8	-1.0
	comp=Z,13nm,0.9s,baz=135,slow=12,SNR=2.6						
PMG				LR	LR	19 02 31.4	
	comp=Z,616nm,20.3s,baz=208,slow=34						
PMG	Port Moresby	25.07	295	P	P	18 53 46.6	-0.1
PMG				IAmb	IAmb	18 53 53.0	
	comp=Z,30nm,0.9s						
TOO	Toolangi	26.71	227	P	P	18 54 03.7	+2.2
TOO				IAmb	IAmb	18 54 43.5	
	comp=Z,80nm,2.0s						
STKA	Stephens Creek	27.47	242	P	P	18 54 08.7	+0.3
	comp=Z,3.5nm,0.6s,baz=44,slow=13,SNR=2.9						
STKA				LR	LR	19 03 51.5	
	comp=Z,1µm,18.8s,baz=53,slow=34						
BBOO	Buckleboo	32.25	242	P	P	18 54 51.9	+1.3
WR0	Warramunga Arr	33.26	266	P	P	18 54 57.4	-2.3
WR0				IAmb	IAmb	18 54 59.1	
	comp=Z,9.9nm,0.9s						
WB0	Warramunga Arr	33.43	266	P	P	18 54 59.1	-2.0
WB0				IAmb	IAmb	18 55 08.8	
	comp=Z,8.5nm,0.7s						
WB2	Warramunga Arr	33.44	266	P	P	18 54 59.4	-1.8
WB2				IAmb	IAmb	18 55 07.3	
	comp=Z,22nm,1.2s						
WRAB	Tennant Creek	33.44	266	P	P	18 54 59.5	-1.7
WRAB				IAmb	IAmb	18 55 01.7	
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	33.45	266	P	P	18 54 59.1	-2.3
	comp=Z,2.0nm,0.4s,baz=92,slow=5.8,SNR=43						
WRA				LR	LR	19 08 09.4	
	comp=Z,1µm,19.5s,baz=90,slow=36						
WRA	Warramunga Arr	33.45	266	P	P	18 54 59.7	-1.6
AS31	Alice Springs	33.46	259	P	P	18 55 00.3	-1.1
ASAR	Alice Springs	33.46	259	P	P	18 55 00.0	-1.4
	comp=Z,3.7nm,0.6s,baz=81,slow=8.4,SNR=36						
ASAR				LR	LR	19 08 03.8	
	comp=Z,709nm,18.1s,baz=138,slow=35						
ASAR	Alice Springs	33.46	259	P	P	18 55 00.4	-1.0
MCQ	Macquarie Isla	34.15	192	P	P	18 55 05.5	-1.4
MTN	Manton Dam	38.11	276	P	P	18 55 40.1	-1.3
MTN				IAmb	IAmb	18 55 47.1	
	comp=Z,16nm,0.8s						
PPTF	Pamatai, Papee	38.14	92	P	P	18 55 39.9	-1.9
PPTF				IAmb	IAmb	18 55 42.0	
	comp=Z,43nm,1.2s						
FORT	Forrest	38.72	247	P	P	18 55 45.7	-0.7
FORT				IAmb	IAmb	18 56 13.3	
	comp=Z,23nm,0.9s						
KNRA	Kununurra	39.52	271	P	P	18 55 53.0	-0.2
FAKI	Fak Fak	41.11	291	P	P	18 56 06.3	-0.2
FITZ	Fitzroy Crossi	41.87	266	P	P	18 56 12.3	-0.3
FITZ				IAmb	IAmb	18 56 19.8	
	comp=Z,13nm,0.7s						
NWAO	Narrogin (SRO)	48.00	244	P	P	18 57 00.5	-0.8
	comp=Z,8.3nm,0.9s,baz=102,slow=9.3,SNR=1.8						
NWAO	Narrogin (SRO)	48.00	244	P	P	18 57 00.8	-0.5
TOLI2	Tolitoli	53.09	289	P	P	18 57 40.0	+0.1
TOLI2				IAmb	IAmb	18 57 44.7	
	comp=Z,40nm,1.4s						
NJ2	Nanjing	72.29	316	eP	P	18 59 48.5	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
UTTA	Uttaradit	78.42	294	P	P	19 00 30.5	+7.2
BELA	Belgrano 2	79.92	175	P	P	19 00 30.9	+0.3
CM04	Chiang Mai Arr	80.05	294	P	P	19 00 37.0	+4.7
CM09	Chiang Mai Arr	80.06	294	P	P	19 00 38.5	+6.2
KMI	Kunming	80.08	302	⇑P	P	19 00 35.0	+2.5
KMI				pP	pwP	19 00 38.5	+0.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CM01	Chiang Mai Arr	80.08	294	P	P	19 00 38.0	+5.6
CM05	Chiang Mai Arr	80.08	294	P	P	19 00 38.2	+5.8
CM02	Chiang Mai Arr	80.09	294	P	P	19 00 38.0	+5.5
CM31	Chiang Mai Arr	80.11	294	P	P	19 00 38.0	+5.4
CM31	Chiang Mai Arr	80.11	294	P	P	19 00 33.1	+0.5
CMAR	Chiang Mai Arr	80.11	294	P	P	19 00 31.9	-0.7
	comp=Z,1.3nm,0.8s,baz=146,slow=3.7,SNR=7.3						
CMAR	Chiang Mai Arr	80.11	294	P	P	19 00 32.4	-0.2
CM15	Chiang Mai Arr	80.12	294	P	P	19 00 37.8	+5.1
CM13	Chiang Mai Arr	80.12	294	P	P	19 00 37.0	+4.3
CMMT	Chiang Mai	80.26	295	P	P	19 00 37.7	+4.3
CHTO	Chiang Mai	80.26	295	P	P	19 00 33.6	+0.2
CM32	Chiang Mai Arr	80.28	294	P	P	19 00 42.0	+8.5
HHC	Hu-ho-hao-te	82.35	319	eP	P	19 00 45.0	+0.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
LZH	Lanzhou	84.74	312	eP	P	19 00 57.3	+0.7
LZH				pP	PcP	19 01 00.5	+0.4
LZH				sP	pwP	19 01 02.0	-0.4
LZH				ePP	PP	19 04 15.5	+2.5
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,6.2s						
LZH				LR	LR		
	comp=N,230nm,17.2s						
LZH				LR	LR		
	comp=E,230nm,16.9s						
LZH				LR	LR		
	comp=Z,300nm,19.3s						
SNAA	Sanae	87.08	182	P	P	19 01 05.9	-1.7
SNAA	Sanae	87.08	182	P	P	19 01 04.5	-3.1
	comp=Z,1.3nm,0.9s,baz=168,slow=6.7,SNR=1.8						
VNA3	Neumayer Olymp	87.64	180	P	P	19 01 08.6	-1.7
VNA2	Neumayer--Watz	87.94	181	P	P	19 01 09.6	-2.0
	baz=169,slow=5.8						
CMB	Columbia Colle	87.97	48	P	P	19 01 15.1	+2.7
CMB				IAmb	IAmb	19 01 17.3	
	comp=Z,8.2nm,1.3s						
GTA	Gaotai	89.16	313	⇑P	P	19 01 22.5	+4.5
GTA				pP	pwP	19 01 26.3	+2.5
GTA				sP	sP	19 01 29.3	+7.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	89.39	323	P	P	19 01 18.5	-0.4
	comp=Z,0.1nm,0.4s,baz=91,slow=5.8,SNR=1.4						
NVAR	Mina Array Bea	89.60	48	P	P	19 01 18.6	-1.7
	comp=Z,0.1nm,0.3s,baz=234,slow=4.3,SNR=1.9						
TPH	Tonopah	90.19	49	P	P	19 01 24.8	+1.8
ILAR	Eielson Array	92.01	17	P	P	19 01 29.7	-0.8
	comp=Z,0.5nm,0.6s,baz=231,slow=6.2,SNR=3.1						
HYT	Haines Junctio	92.12	23	P	P	19 01 34.2	+3.0
HYT				IAmb	IAmb	19 01 37.2	
	comp=Z,12nm,1.2s						
WUAZ	Wupatki	93.34	53	P	P	19 01 37.7	+0.1
WUAZ				IAmb	IAmb	19 01 44.3	
	comp=Z,5.2nm,1.0s						
WMQ	Urumqi	99.25	313	eP	Pdif	19 02 05.0	+0.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,670nm,3.7s						
WMQ				LR	LR		
	comp=N,420nm,21.3s						
WMQ				LR	LR		
	comp=E,970nm,29.1s						
WMQ				LR	LR		
	comp=Z,870nm,29.0s						
DPC	Dobruska-Polom	144.47	331	ePKP	PKiKP	19 08 02.2	+0.1
CLL	Collm	145.17	335	ePKPbc	PKiKP	19 08 02.0	-1.4
CONA	Conrad Observa	146.37	328	eP	PKPdf	19 08 01.4	-0.5
	comp=Z,15nm,1.8s						
KHC	Kasperske Hory	146.58	332	ePKP	PKiKP	19 08 07.1	+0.6
GERES	GERESS Array B	146.73	331	PKPbc	PKPdf	19 08 00.3	-2.2
	comp=Z,0.2nm,0.4s,baz=20,slow=3.1,SNR=1.8						
ARSA	Arzberg	147.00	328	eP	PKPbc	19 08 04.7	-0.2
	comp=Z,10nm,1.9s						
SOKA	Soboth	147.63	327	eP	PKiKP	19 08 13.7	+4.9
	comp=Z,18nm,2.7s						
KBA	Koelnbreinsper	148.18	329	eP	PKiKP	19 08 10.1	+0.1
	comp=Z,13nm,1.3s						
WATA	Walderalm	148.81	331	eP	PKiKP	19 08 11.1	-0.2
	comp=Z,8.7nm,1.3s						
ABTA	Abfaltersbach	148.81	330	eP	PKPab	19 08 15.3	+1.7
	comp=Z,8.4nm,1.3s						
MOTA	Moosalm	149.01	332	eP	PKPab	19 08 13.5	-1.1
	comp=Z,12nm,1.3s						
SQTA	Sankt Quirin	149.06	331	eP	PKPab	19 08 13.6	-1.1
	comp=Z,7.5nm,1.0s						
FETA	Feichten	149.43	332	eP	PKPab	19 08 14.7	-1.5
	comp=Z,11nm,1.3s						
DAVA	Damuels	149.59	333	eP	PKPab	19 08 16.7	-0.1
	comp=Z,11nm,1.2s						

IDC ***30*** *18:52:54.6±0.5, 52°.53S×26°.61E, h0^{km}, mb4.4/18, mb1 4.5/18, mb1mx4.4/26, mbtmp4.4/18, Error ellipse: s-maj=18.2km s-min=13.8km az=69.0*

BJI ***30*** *18:52:54.5±0.0, 52°.23S×26°.23E, h6^{km}, mb5.3/2, Ms4.9/1, Ms7 4.6/1*

NEIC ***30*** *18:52:56.7±1.0, 52°.53S±0°.07×26°.6E±0°.2, h8^{km}±2^{km}, mb5.1/41, Error ellipse: s-maj=16.1km s-min=9.1km az=106.0*

ISC 30 18:52:56.9±0.3**, 52°.50S**±0°.07×**26°.57E**±0°.09**, h10^{km}, n121, σ1^{s}.02**/133**, mb4.8**/30**, 1C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	17.67	164	⇓ePn	Pn	18 57 02.6	-0.1
SYO	Syowa Base	17.67	164	⇑eP	P	18 57 06.5	+2.9
SUR	Sutherland	20.54	346	P	P	18 57 36.9	+1.4
	27nm,0.7s,baz=152,slow=9.9,SNR=26						
SUR	Sutherland	20.54	346	P	Pn	18 57 37.0	-0.6
SUR				IAmb	IAmb	18 57 39.4	
	comp=Z,70nm,1.4s						
MAW	Mawson	23.11	145	P	P	18 58 03.0	+0.5
	comp=Z,22nm,1.0s,baz=290,slow=15,SNR=6.9						
MAW	Mawson	23.11	145	P	P	18 58 03.7	+1.2
SNAA	Sanae	23.19	203	P	P	18 58 04.9	+1.5
SNAA	Sanae	23.19	203	P	P	18 58 03.7	+0.3
	comp=Z,3.9nm,0.8s,baz=72,slow=6.4,SNR=12						
SNAA	Sanae	23.19	203	P	P	18 58 04.4	+1.0
BOSA	Boshof	23.88	357	P	P	18 58 11.0	+0.4
	comp=Z,17nm,0.7s,baz=182,slow=9.2,SNR=37						
BOSA	Boshof	23.88	357	P	P	18 58 10.0	-0.6
BOSA				IAmb	IAmb	18 58 12.3	
	comp=Z,20nm,0.8s						
VNA2	Neumayer--Watz	23.93	207	P	P	18 58 12.0	+1.4
	baz=34,slow=10						
VNA1	Neumayer--Stat	24.02	208	P	P	18 58 10.9	-0.5
VNA3	Neumayer Olymp	24.73	207	P	P	18 58 20.5	+2.6
LBTB	Lobatse	27.45	358	P	P	18 58 43.1	+0.1
	comp=Z,6.0nm,0.6s,baz=174,slow=9.8,SNR=9.1						
LBTB	Lobatse	27.45	358	P	P	18 58 43.7	+0.7
BELA	Belgrano 2	33.31	200	P	P	18 59 33.6	-0.5
TSUM	Tsumeb	33.96	345	P	P	18 59 40.8	+0.3
TSUM				IAmb	IAmb	18 59 49.3	
	comp=Z,31nm,0.8s						
HOPE	Hope Point	36.54	241	P	P	19 00 04.8	+2.6
ABPO	Ambohimpanom	37.10	34	P	P	19 00 09.5	+1.9
ABPO				IAmb	IAmb	19 00 12.8	
	comp=Z,44nm,2.0s						
LSZ	Lusaka	37.16	3	P	P	19 00 07.8	-0.2
QSPA	South Pole Qui	37.72	180	P	P	19 00 12.1	-0.3
QSPA				IAmb	IAmb	19 00 20.7	
	comp=Z,24nm,0.9s						
PMSA	Palmer Station	44.59	218	P	P	19 01 07.5	-1.0
VNDA	Vanda	47.32	168	P	P	19 01 28.5	-1.5
	comp=Z,1.7nm,0.7s,baz=292,slow=5.4,SNR=2.3						
VNDA	Vanda	47.32	168	P	P	19 01 29.4	-0.6
VNDA				IAmb	IAmb	19 02 30.9	
	comp=Z,32nm,1.6s						
SBA	Scott Base	47.63	169	P	P	19 01 32.0	-0.3
PLCA	Paso Flores	62.82	238	P	P	19 03 20.9	-1.6
	comp=Z,1.4nm,0.7s,baz=132,slow=8.9,SNR=4.6						
PLCA	Paso Flores	62.82	238	P	P	19 03 22.6	+0.1
PLCA				IAmb	IAmb	19 03 35.8	
	comp=Z,8.4nm,1.1s						
DBIC	Dimbokro	64.73	325	P	P	19 03 33.7	-1.4
	comp=Z,9.0nm,0.7s,baz=132,slow=8.4,SNR=12						
DBIC	Dimbokro	64.73	325	P	P	19 03 34.5	-0.7
DBIC				IAmb	IAmb	19 03 36.0	
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	65.03	112	P	P	19 03 36.9	-0.2
NWAO	Narrogin (SRO)	65.03	112	P	P	19 03 36.8	-0.3
NWAO				IAmb	IAmb	19 04 17.3	
	comp=Z,85nm,1.6s						
CPUP	Villa Florida	65.95	258	P	P	19 03 42.0	-1.2
	comp=Z,2.2nm,0.6s,baz=149,slow=6.2,SNR=6.1						
CPUP	Villa Florida	65.95	258	P	P	19 03 42.3	-0.8
CPUP				IAmb	IAmb	19 03 51.6	
	comp=Z,15nm,1.4s						
MORW	Morawa	67.21	108	P	P	19 03 50.9	-0.2
BDFB	Brasilia	68.37	272	P	P	19 03 59.1	+0.4
	comp=Z,3.5nm,0.6s,baz=166,slow=3.9,SNR=5.4						
BDFB	Brasilia	68.37	272	P	P	19 03 59.0	+0.3
BDFB				IAmb	IAmb	19 04 06.3	
	comp=Z,6.2nm,0.8s						
PEL	Peldehue	68.54	243	P	P	19 03 59.8	+0.3
TOA0	Torodi Ar. Sit	68.81	334	P	P	19 04 01.5	+0.3
TOA0				IAmb	IAmb	19 04 10.3	
	comp=Z,22nm,1.6s						
TORD	Torodi Ar. Bea	68.81	334	P	P	19 04 00.9	-0.2
	comp=Z,3.0nm,0.7s,baz=173,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	68.81	334	P	P	19 04 01.1	-0.1
RCBR	Riachuelo	68.84	289	P	P	19 04 02.0	+0.4
RCBR				IAmb	IAmb	19 04 52.0	
	comp=Z,31nm,1.6s						
ROC1	El Roble	68.85	243	P	P	19 04 02.1	+0.5
CO01	Juntas del Tor	70.62	246	P	P	19 04 12.8	+0.2
CO01				IAmb	IAmb	19 04 21.6	
	comp=Z,10.0nm,0.9s						
LCO	Las Campanas	71.69	246	P	P	19 04 19.6	+0.4
KOWA	Kowa	71.77	329	P	P	19 04 20.6	+1.3
KOWA				IAmb	IAmb	19 04 28.9	
	comp=Z,51nm,1.9s						
TOO	Toolangi	75.79	134	P	P	19 04 44.1	+1.3
SIV	San Ignacio	76.06	262	P	P	19 04 42.6	-2.0
	comp=Z,0.7nm,0.5s,baz=107,slow=6.9,SNR=3.8						
RAYN	Ar Rayn	77.48	18	P	P	19 04 53.5	+1.2
PB08	IPOC Station P	77.67	253	P	P	19 04 54.1	0.0
PB08				IAmb	IAmb	19 05 36.5	
	comp=Z,6.1nm,0.7s						
STKA	Stephens Creek	78.71	128	P	P	19 04 58.2	-0.9
	comp=Z,4.6nm,0.6s,baz=264,slow=4.0,SNR=8.9						
STKA	Stephens Creek	78.71	128	P	P	19 04 58.3	-0.9
FITZ	Fitzroy Crossi	81.22	108	P	P	19 05 13.1	+0.1
ASAR	Alice Springs	81.44	118	P	P	19 05 13.7	-0.5
	comp=Z,6.0nm,0.6s,baz=212,slow=4.7,SNR=85						
AS31	Alice Springs	81.44	118	P	P	19 05 13.1	-1.1
SAML	Samuel	82.82	265	P	P	19 05 22.2	+0.7
WRA	Warramunga Arr	84.68	116	P	P	19 05 30.0	-0.9
	comp=Z,3.9nm,0.8s,baz=213,slow=4.1,SNR=25						
WRA	Warramunga Arr	84.68	116	P	P	19 05 30.1	-0.9
WB2	Warramunga Arr	84.68	116	P	P	19 05 30.6	-0.4
WB2				IAmb	IAmb	19 05 39.5	
	comp=Z,17nm,1.0s						
WRAB	Tennant Creek	84.69	116	P	P	19 05 30.6	-0.4
WRAB				IAmb	IAmb	19 05 39.5	
	comp=Z,19nm,0.9s						
WR0	Warramunga Arr	84.78	116	P	P	19 05 31.1	-0.4
WR0				IAmb	IAmb	19 05 39.3	
	comp=Z,11nm,0.9s						
WB0	Warramunga Arr	84.85	116	P	P	19 05 30.2	-1.6
WB0				IAmb	IAmb	19 05 39.7	
	comp=Z,10nm,0.9s						
BRTR	Keskin Array B	92.05	5	P	P	19 06 05.9	+0.3
	comp=Z,0.9nm,0.7s,baz=165,slow=6.0,SNR=6.3						
CMAR	Chiang Mai Arr	94.21	65	P	P	19 06 13.8	-2.1
	comp=Z,0.1nm,0.3s,baz=231,slow=5.7,SNR=1.7						
NIL	Nilore	94.97	38	P	P	19 06 19.0	-0.1
NIL				IAmb	IAmb	19 06 27.7	
	comp=Z,10nm,1.1s						
ESDC	Sonseca Array	95.55	337	P	P	19 06 20.5	-1.1
	comp=Z,0.7nm,0.9s,baz=165,slow=3.6,SNR=2.2						
LZH	Lanzhou	110.79	58	ePKP	PKiKP	19 11 30.8	+1.2
LZH				sPKP		19 11 35.3	
LZH				LR	LR		
	comp=Z,120nm,18.1s						
LZH				LR	LR		
	comp=Z,120nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,20.3s						
NJ2	Nanjing	116.02	71	ePKP	PKiKP	19 11 42.0	+2.5
HHC	Hu-ho-hao-te	118.37	59	ePKP	PKiKP	19 11 45.0	+1.0
CN2	Changchun	127.89	65	ePKP	PKiKP	19 12 03.0	+0.5
ECSD	EROS Data Cent	141.97	280		PKPpre	19 12 21.2	
ECSD				PKPdf	PKPdf	19 12 28.9	+0.7
ULM	Lac du Bonnet	144.81	290	PKP	PKPab	19 12 31.1	-0.9
	comp=Z,3.4nm,0.6s,baz=113,slow=1.8,SNR=7.8						
ULM	Lac du Bonnet	144.81	290		PKPab	19 12 31.2	-0.8
ISCO	Idaho Springs	145.16	268	P	PKPdf	19 12 34.7	+0.3
	baz=128						
ISCO	Idaho Springs	145.16	268		PKPbc	19 12 33.4	-0.6
MVCO	Mesa Verde	145.29	262	P	PKPdf	19 12 34.8	+0.2
	baz=131						
MVCO	Mesa Verde	145.29	262		PKPbc	19 12 33.6	-0.7
MDND	Maddock	145.89	284	PKPdf	PKPdf	19 12 34.7	-0.2
WUAZ	Wupatki	145.89	257	P	PKPab	19 12 36.5	-0.1
	baz=133						
PV15	Paradox Valley	146.01	264		PKPdf	19 12 35.6	-0.2
N23A	Red Feather La	146.02	269	P	PKPdf	19 12 36.0	+0.3
	baz=126						
GLA	Glamis	146.18	250	P	PKPbc	19 12 36.9	-0.1
	baz=137						
PV12	Saucer Basin,	146.19	263	PKPdf	PKPbc	19 12 36.7	-0.4
RSSD	Black Hills	146.68	276	P	PKPbc	19 12 38.0	-0.4
	baz=122						
RSSD	Black Hills	146.68	276	PKPdf	PKPdf	19 12 37.0	+0.4
PDMCI	Parker Dam,Lak	146.68	253	P	PKPbc	19 12 37.7	-0.7
	baz=135						
FCC	Fort Churchill	146.91	305	PKPdf	PKPdf	19 12 36.7	+0.5
O20A	White River Ci	146.97	266	P	PKPbc	19 12 38.6	-0.7
	baz=128						
W13A	Hualapai Mount	147.09	254	PKPdf	PKPdf	19 12 38.6	+0.9
IRM	Iron Mountain	147.16	251	P	PKPbc	19 12 39.6	-0.1
	baz=136						
BELC	Belle Mtn. Jos	147.54	250	P	PKPbc	19 12 41.4	+0.4
	baz=136						
GMRC	Granite Mounta	147.91	252	P	PKPbc	19 12 42.4	+0.5
	baz=135						
LCMT	Little Creek M	148.01	257	PKPdf	PKPdf	19 12 40.1	+1.1
SHPR	Sheep Range	148.81	254		PKPbc	19 12 44.7	+0.4
GSC	Goldstone, Bar	148.93	251	P	PKPbc	19 12 44.7	+0.2
	baz=135						
GSC	Goldstone, Bar	148.93	251		PKPbc	19 12 44.5	-0.1
GSC				PKPab	pPKPab	19 12 50.9	+0.2
MPU	Maple Canyon	148.96	263		PKPbc	19 12 44.6	+0.1
LAO	LASA Array	149.30	278	P	PKPbc	19 12 45.0	0.0
	baz=119						
BW06	Boulder Array	149.31	269	P	PKPbc	19 12 44.3	-1.1
	baz=124						
PDAR	Pinedale Array	149.31	269	PKP	PKPdf	19 12 39.2	-1.9
	comp=Z,2.7nm,0.7s,baz=134,slow=2.6,SNR=17						
PDAR				PKPbc	sPKPdf	19 12 44.2	+0.2
	comp=Z,2.8nm,0.7s,baz=164,slow=6.4,SNR=18						
PDAR				PKPab	PKPab	19 12 50.7	+0.6
	comp=Z,6.6nm,0.9s,baz=132,slow=4.6,SNR=18						
EDW2	Edwards Air Fo	149.32	249	P	PKPbc	19 12 45.4	0.0
	baz=136						
LRMC	Laurel Mtn Rad	149.57	250	P	PKPbc	19 12 46.4	+0.2
	baz=135						
DUG	Dugway, Tooele	149.79	262	P	PKPbc	19 12 46.5	0.0
	baz=128						
MPMC	Manual Prospec	149.86	251	P	PKiKP	19 12 47.7	-0.2
	baz=135						
FFC	Flin Flon	149.95	295		PKPbc	19 12 46.7	+0.4
FFC				PKPab	PKPab	19 12 52.8	+0.8
SPR3	Spring Creek 3	149.96	259		PKPbc	19 12 46.9	-0.3
ISA	Isabella, Lake	150.15	250	P	PKiKP	19 12 48.2	-0.1
	baz=136						
R11A	Troy Canyon, C	150.29	257	P	PKPbc	19 12 48.1	+0.3
	baz=131						
RLMT	Red Lodge	150.38	273	P	PKPbc	19 12 47.9	-0.1
	baz=121						
CWC	Cottonwood Cre	150.47	251	P	PKPbc	19 12 48.4	+0.1
	baz=134						
PETK	Petropavlovsk-	150.91	69	PKPbc	PKPdf	19 12 45.4	+2.5
	comp=Z,2.7nm,1.0s,baz=289,slow=4.4,SNR=1.9						
PETK				PKPab	PKPab	19 12 54.2	-1.9
	comp=Z,10nm,1.0s,baz=211,slow=5.2,SNR=5.7						
QLMT	Earthquake Lak	151.56	271		PKPbc	19 12 50.9	+0.2
ELK	Elko	151.59	261	PKP	PKPdf	19 12 45.6	+0.9
	comp=Z,1.8nm,0.8s,baz=137,slow=1.6						
ELK				PKPbc	PKiKP	19 12 51.4	0.0
	baz=215,slow=3.4						
ELK	Elko	151.59	261		PKPdf	19 12 45.3	+0.6
ELK				PKPbc	PKiKP	19 12 51.2	-0.2
ELK				PKPab	PKPab	19 12 57.8	-1.9
NVAR	Mina Array Bea	151.95	254	PKP	PKPdf	19 12 45.5	+0.2
	comp=Z,2.3nm,0.8s,baz=152,slow=3.6,SNR=13						
NVAR				PKPbc	PKiKP	19 12 52.0	-0.1
	comp=Z,4.5nm,0.7s,baz=142,slow=2.5,SNR=18						
NVAR				PKPab	PKPab	19 12 59.2	-1.9
	comp=Z,4.5nm,0.7s,baz=152,slow=2.9,SNR=8.7						
NVAR	Mina Array Bea	151.95	254	PKPdf	PKPdf	19 12 45.7	+0.4
NVAR				PKPbc	PKiKP	19 12 52.0	-0.1
NVAR				PKPab	PKPab	19 12 58.8	-2.3
EGMT	Eagleton	152.05	278	P	PKiKP	19 12 51.7	-0.1
	baz=116						
BOZ	Bozeman (W)	152.06	273	P	PKPbc	19 12 51.7	0.0
	baz=120						
YKA	Yellowknife Ar	157.22	311	PKP	PKPdf	19 12 47.8	-3.7
	comp=Z,0.1nm,0.3s,baz=70,slow=2.5,SNR=1.9						
YKA				PKPab	PKPab	19 13 21.6	-1.0
	comp=Z,2.3nm,0.7s,baz=87,slow=5.3,SNR=20						
INK	Inuvik	161.50	336	PKPab	PKPab	19 13 39.5	-1.4
	comp=Z,1.7nm,0.7s,baz=23,slow=7.7,SNR=3.9						
ILAR	Eielson Array	167.24	347	PKPab	PKPab	19 14 05.8	-0.6
	comp=Z,0.9nm,0.9s,baz=351,slow=4.1,SNR=6.7						

IDC 30 19:13:15.5±4.2**, 33°.81N×81°.94E, h0^{km}, mb3.2**/3**, mb1 3.5**/5**, mb1mx3.2**/43**, mbtmp3.2**/5**, ML2.8**/2**, Error ellipse: s-maj=175.5km s-min=26.6km az=67.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	12.97	1	Pn	Pn	19 16 21.0	0.0
	0.1nm,0.3s,baz=175,slow=12,SNR=5.8						
KURBB	Kurchatov Arra	16.98	353	Pn	Pn	19 17 11.3	-3.0
	0.0nm,0.3s,baz=183,slow=17,SNR=1.7						
CMAR	Chiang Mai Arr	21.56	131	P	P	19 18 07.9	+1.2
	0.1nm,0.3s,baz=307,slow=12,SNR=1.2						
WRA	Warramunga Arr	73.14	129	P	P	19 24 47.3	-0.7
	0.3nm,0.6s,baz=328,slow=6.2,SNR=4.8						
YKA	Yellowknife Ar	83.11	8	P	P	19 25 43.1	+0.3
	0.3nm,0.6s,baz=344,slow=4.8,SNR=5.4						

PRU ***30*** *19:14:17.1±0.0, 51°.45N×16°.18E, h0^{km}*

VIE ***30*** *19:14:19.5±0.7, 51°.28N×16°.00E, h0^{km}, mb2.1/1, ml2.5/6, Error ellipse: s-maj=4.3km s-min=3.7km az=15.0 73 km WNW of Wroclaw Suspected Mining induced.*

ISC 30 19:14:16.8±1.2**, 51°.43N**±0°.05×**16°.20E**±0°.03**, h0^{km}, n25, σ0^{s}.71**/47**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.59	174	ePg	Pg	19 14 28.7	+0.6
KSP				eSg	Sg	19 14 36.9	+1.1
CHVC	Chvalec	0.85	186	ePG	Pg	19 14 33.7	+0.6
CHVC				eSG	Sg	19 14 45.3	+1.2
	comp=Z,32nm,0.4s						
OSTC	Ostas	0.88	179	ePG	Pb	19 14 34.4	-0.5
OSTC				eSG	Sb	19 14 46.2	-1.0
	comp=Z,47nm,0.4s						
UPC	Upice	0.93	187	ePG	Pb	19 14 35.6	-0.2
UPC				eSG	Sg	19 14 47.6	+0.9
	comp=Z,76nm,0.4s						
DPC	Dobruska-Polom	1.09	176	ePG	Pg	19 14 37.4	-0.2
DPC				eSG	Sg	19 14 52.1	+0.5
PVCC	Panska Ves	1.37	229	ePG	Pg	19 14 43.0	0.0
PVCC				eSG	Sn	19 15 02.1	+0.1
	comp=Z,62nm,0.3s						
KRLC	Kraliky	1.41	165	ePG	Pn	19 14 43.6	-0.1
KRLC				eSG	Sb	19 15 02.3	-0.2
	comp=Z,26nm,0.5s						
BRG	Berggiesshubel	1.53	249	Pg	Pg	19 14 45.9	-0.1
BRG				Sg	Sb	19 15 06.0	+0.2
BRG				Amp		19 15 06.6	
	comp=Z,29nm,0.5s						
PRU	Pruhonice	1.79	217	ePG	Pb	19 14 50.1	-0.3
PRU				eSG	Sb	19 15 13.3	-0.1
	comp=Z,12nm,0.5s						
MORC	Moravsky Berou	1.87	152	ePN	Pn	19 14 49.4	-0.6
MORC				eSG	Sn	19 15 13.7	-0.6
CLL	Collm	2.01	268	i Pg	Pb	19 14 54.1	0.0
CLL				eSg	Sb	19 15 19.0	-0.6
	comp=Z,12nm,0.5s						
OKC	Ostrava-Krasne	2.02	141	eSG	Sb	19 15 20.5	+0.4
	comp=Z,17nm,0.3s						
VRAC	Vranov	2.14	173	ePN	Pn	19 14 54.5	+0.7

VRAC				eSG	Sg	19 15 25.0	-0.5
KRUC	Moravsky	2.38	177	eSG	Sg	19 15 32.7	-0.4
OJC	Ojcow	2.59	117	ePg	Pg	19 15 06.8	+0.4
OJC				eSg	Sg	19 15 41.2	+1.4
NKC	Novy Kostel	2.66	245	ePG	Pb	19 15 06.1	+0.8
NKC				eSG	Sg	19 15 42.0	-0.3
	comp=Z,18nm,0.4s						
KHC	Kasperske Hory	2.85	217	ePN	Pn	19 15 04.0	+0.4
KHC				ePG	Pb	19 15 08.7	+0.1
KHC				eSN	Sn	19 15 37.8	-0.8
KHC				eSG	Sg	19 15 47.1	-1.2
	comp=Z,9.9nm,0.5s						
LANS	Liptovska Anna	3.10	136	ePG	Pg	19 15 15.4	-0.8
LANS				eSG	Sg	19 15 55.6	-0.7
MODS	Modra-Piesok	3.14	167	eSG	Sg	19 15 57.7	+0.1
ZST	Bratislava	3.29	169	eSG	Sg	19 16 04.1	+1.6
VYHS	Vyhne	3.40	149	eSG	Sg	19 16 04.5	-1.4
CONA	Conrad Observa	3.52	184	ePn	Pn	19 15 13.3	+0.6
	comp=Z,0.1nm,0.1s						
CONA				eSg	Sg	19 16 11.0	+1.4
	comp=Z,5.8nm,0.4s						
MOA	Molln	3.80	200	ePn	Pn	19 15 17.0	+0.4
	comp=Z,0.3nm,0.2s						
MOA				eSg	Sg	19 16 18.2	-0.6
	comp=Z,4.2nm,0.4s						
ARSA	Arzberg	4.21	186	ePn	Pn	19 15 22.2	0.0
	comp=Z,0.2nm,0.1s						
ARSA				eSg	Sg	19 16 32.1	+0.2
	comp=Z,2.4nm,0.4s						
KBA	Koelnbreinsper	4.74	204	ePn	Pn	19 15 30.2	+0.5
	comp=Z,0.1nm,0.1s						
KBA				eSg	Sg	19 16 49.0	-0.1
	comp=Z,2.7nm,0.6s						

*MOS **30** 19:26:11.0±1.0, 46°.80N×145°.86E, h381^{km}, mb3.9/9, Error ellipse: s-maj=9.6km s-min=7.6km az=86.4*
*NEIC **30** 19:26:12.0±1.6, 46°.73N±0°.09×145°.8E±0°.1, h378^{km}±7^{km}, mb4.1/35, Error ellipse: s-maj=14.2km s-min=12.2km az=118.0*
*JMA **30** 19:26:11.5±0.4, 46°.38N×146°.11E, h399^{km}, M3.5*
*SKHL **30** 19:26:11.4±0.4, 46°.77N×145°.99E, h370^{km}±8^{km}, mb4.8/3, msh4.3/6*
*IDC **30** 19:26:12.8±1.2, 46°.86N×145°.77E, h377^{km}±12^{km}, mb3.1/18, mb1 3.3/25, mb1mx3.2/61, mbtmp3.9/25, Error ellipse: s-maj=14.4km s-min=11.6km az=145.0*
ISC 30 19:26:11.3±0.5, **46°.67N**±0°.04×**145°.90E**±0°.05, **h371**^{km}±5^{km}, **n159**, σ**1^{s}.50**/184, **mb3.8**/40, **9C-2D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.99	136	eP	Pn	19 27 06.0	+1.6
KUR				AMB	AMB	19 27 07.4	
	68nm,0.6s						
KUR				eS	S	19 27 48.7	+1.4
KUR				A	A	19 27 53.0	
	20nm,0.7s						
KUR				A	A	19 27 53.0	
	20nm,0.7s						
KUR				A	A	19 27 54.0	
	710nm,4.0s						
KUR				A	A	19 27 54.0	
	550nm,4.0s						
KUR	Kuril'sk	1.99	136	d iPN	Pn	19 27 06.0	+1.6
KUR				pmax	pmax		
	comp=Z,41nm,0.5s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.4s						
YSS	Yuzh-Sakhalins	2.18	279	eP	Pn	19 27 07.2	+1.6
YSS				AMB	AMB	19 27 08.0	
	comp=N,110nm,0.4s						
YSS				eS	S	19 27 50.2	+0.7
YSS				A	A	19 27 51.8	
	comp=N,50nm,0.6s						
YSS				A	A	19 27 51.8	
	comp=N,10.0nm,0.6s						
YSS				A	A	19 27 59.0	
	comp=N,210nm,4.0s						
YSS				A	A	19 27 59.0	
	comp=N,105nm,4.0s						
YSS	Yuzh-Sakhalins	2.18	279	αePN	Pn	19 27 07.6	+2.0
YSS				eS	S	19 27 51.1	+1.6
YSS				pmax	pmax		
	comp=Z,130nm,0.9s						
YSS				smax	smax		
	comp=E,50nm,1.0s						
YSS	Yuzh-Sakhalins	2.18	279	Pn	Pn	19 27 07.4	+1.8
YSS				S	S	19 27 50.1	+0.6
YUK	Yuzh-Kuril'sk	2.64	181	eP	Pn	19 27 10.7	+1.5
YUK				AMB	AMB	19 27 11.5	
	comp=E,140nm,0.5s						
YUK				eS	S	19 27 59.3	+3.4
YUK				A	A	19 27 59.7	
	comp=E,890nm,3.0s						
YUK				A	A	19 27 59.7	
	comp=E,380nm,3.0s						
YUK				A	A	19 28 00.0	
	comp=E,3μm,0.3s						
YUK				A	A	19 28 00.0	
	comp=E,2μm,0.3s						
YUK	Yuzh-Kuril'sk	2.64	181	PN	Pn	19 27 08.3	-0.9
YUK				S	S	19 27 55.2	-0.7
YUK				pmax	pmax		
	comp=Z,34nm,0.4s						
YUK				pmax	pmax		
	comp=N,12nm,0.3s						
YUK				pmax	pmax		
	comp=E,42nm,0.5s						
YUK				smax	smax		
	comp=E,125nm,0.4s						
YUK				smax	smax		
	comp=N,116nm,0.3s						
GRPR	Tuman	2.68	182	i P	Pn	19 27 11.0	+1.4
GRPR				AMB	AMB	19 27 12.0	
	comp=N,89nm,0.4s						
GRPR				eS	S	19 27 59.0	+2.4
GRPR				A	A	19 28 03.0	
	comp=N,108nm,0.6s						
GRPR				A	A	19 28 03.0	
	comp=N,233nm,0.6s						
GRPR	Tuman	2.68	182	⇑iPN	Pn	19 27 10.7	+1.1
GRPR				S	S	19 27 59.6	+3.0
GRPR				pmax	pmax		
	comp=Z,89nm,0.4s						
GRPR				pmax	pmax		
	comp=E,36nm,0.2s						
GRPR				pmax	pmax		
	comp=N,40nm,0.3s						
GRPR				smax	smax		
	comp=N,108nm,0.3s						
GRPR				smax	smax		
	comp=E,233nm,0.6s						
JRA	Rausu	2.79	192	P	Pn	19 27 11.4	+0.9
JSE	Soyaes	2.88	235	P	Pn	19 27 13.0	+1.8
JTKR	Abashiri--Toko	3.04	208	P	Pn	19 27 14.2	+1.6
JTKR				eS	S	19 28 03.5	+1.4
JWK2	Keihoku	3.10	246	P	Pn	19 27 15.5	+2.5
NMR	Nemuro--Hokkai	3.30	182	i P	Pn	19 27 14.0	-0.9
NMR	Nemuro--Hokkai	3.30	182	⇓iPN	Pn	19 27 14.1	-0.9
NEM2	Nemuro 2	3.31	182	P	Pn	19 27 14.1	-0.9
NEM2				eS	S	19 28 03.4	-3.0
JKA	Kamikawa-asahi	3.45	223	eP	Pn	19 27 18.5	+2.2
JKA	Kamikawa-asahi	3.45	223	Pn	Pn	19 27 18.2	+1.9
ASAJ	Asahikawa	3.45	223	P	Pn	19 27 18.5	+2.2
	comp=E,3.0nm,0.3s,baz=17,slow=2.8,SNR=48						
UGL	Uglegorsk	3.53	314	eP	Pn	19 27 17.0	+0.3
UGL				AMB	AMB	19 27 18.0	
	comp=E,61nm,0.4s						
UGL				eS	S	19 28 09.2	-0.6
UGL				A	A	19 28 10.0	
	comp=E,70nm,0.9s						
UGL				A	A	19 28 10.0	
	comp=E,65nm,0.9s						
UGL				A	A	19 28 12.0	
	comp=E,690nm,4.0s						
UGL				A	A	19 28 12.0	
	comp=E,240nm,4.0s						
UGL	Uglegorsk	3.53	314	ePN	Pn	19 27 17.1	+0.3
UGL				eS	S	19 28 05.7	-4.1
UGL				pmax	pmax		
	comp=Z,60nm,0.4s						
UGL				smax	smax		
	comp=E,100nm,0.5s						
UGL				smax	smax		
	comp=N,100nm,1.0s						
JKK2	Kamakawa 2	3.57	220	P	Pn	19 27 19.1	+1.6
JAR	Ashorobuto	3.70	205	P	Pn	19 27 19.6	+1.0
JAR				eS	S	19 28 12.9	-0.1
JAK	Akkeshi	3.77	194	P	Pn	19 27 18.9	-0.4
JAK				eS	S	19 28 11.5	-2.8
JHR	Hokuryu	4.16	227	P	Pn	19 27 25.0	+1.9
JFR	Furan	4.22	215	P	Pn	19 27 25.3	+1.5
JFR				eS	S	19 28 23.1	+0.7
JCH	Churui	4.44	205	P	Pn	19 27 25.7	-0.3
JCH				eS	S	19 28 23.2	-3.3
TYV	Tymovskoe	4.71	334	eP	Pn	19 27 28.5	-0.1
TYV				AMB	AMB	19 27 31.2	
	comp=N,200nm,3.0s						
TYV				eS	S	19 28 29.7	-1.6
TYV				A	A	19 28 34.2	
	comp=N,900nm,5.0s						
JNBK	Urakawa-nobuka	4.93	208	P	Pn	19 27 30.7	-0.5
JEW	Eniwo	4.97	221	P	Pn	19 27 33.3	+1.7
JEW	Eniwo	4.97	221	Pn	Pn	19 27 33.5	+1.9
JEW				S	S	19 28 35.7	-0.9
JEM	Erimo	5.05	204	Pn	Pn	19 27 33.7	+1.2
ERM	Erimo	5.05	204	i PN	Pn	19 27 37.8	+5.4
ERM	Erimo	5.05	204	Pn	Pn	19 27 32.7	+0.2
JKB	Kayabe	5.92	218	P	Pn	19 27 41.7	-0.2
JKB				eS	S	19 28 51.7	-3.9
JOT	Ohata	6.34	215	P	Pn	19 27 45.7	-0.9
JOT				eS	S	19 28 59.1	-5.1
TEY	Ternei	6.69	259	eP	P	19 27 51.5	-0.2
TEY				AMB	AMB	19 27 53.2	
	comp=N,13nm,0.7s						
JTM	Tenmabayashi	6.84	212	Pn	Pn	19 27 52.0	-0.3
JANG	Nango	7.05	208	eS	S	19 29 13.5	-5.7
OKH	Okha	7.14	346	eP	P	19 27 56.5	-0.1
OKH				AMB	AMB	19 27 57.0	
	comp=N,19nm,0.3s						
SKR	Severo-Kuril's	7.86	56	eP	Pn	19 28 00.7	-3.2
SKR				AMB	AMB	19 28 08.6	
	comp=N,200nm,5.0s						
SKR	Severo-Kuril's	7.86	56	ePN	P	19 28 04.7	-0.2
SKR				pmax	pmax		
	comp=Z,200nm,5.4s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
JOM	Ohasama	7.94	207	P	Pn	19 28 06.3	+1.2
PAU	Pauzhetka	8.62	52	eP	Pn	19 28 10.8	-2.0
PAU				AMB	AMB	19 28 14.7	
	comp=Z,45nm,0.8s						
JMM	Marumori	9.57	205		Pn	19 28 25.5	+1.2
KLR	Kul'dur	9.83	290	P	P	19 28 28.3	+0.5
	comp=Z,0.5nm,0.3s,baz=102,slow=13,SNR=9.6						
PEA0B	Petropavlovsk-	9.97	45	PN	P	19 28 30.0	+0.8
PEA0B	Petropavlovsk-	9.97	45		P	19 28 30.0	+0.8
PETK	Petropavlovsk-	9.97	45	P	P	19 28 29.4	+0.2
	comp=Z,0.5nm,0.3s,baz=222,slow=7.6,SNR=15						
PETK	Petropavlovsk-	9.97	45	P	P	19 28 29.3	+0.1
USA0B	Ussuriysk Arra	10.09	261	PN	P	19 28 31.3	+0.7
USA0B	Ussuriysk Arra	10.09	261	P	P	19 28 31.3	+0.7
USRK	Ussuriysk Ar.	10.09	261	P	P	19 28 30.7	0.0
	baz=66,slow=12,SNR=13						
PET	Petropavlovsk	10.40	48	eP	P	19 28 35.0	+1.1
EKMR	Ekimchan	10.52	312	eP	Pn	19 28 36.5	+1.4
EKMR				AMB	AMB	19 28 37.0	
	comp=Z,6.0nm,0.8s						
MAJO	Matsushiro	11.63	212	PN	Pn	19 28 50.4	+1.9
MAJO	Matsushiro	11.63	212		Pn	19 28 50.4	+1.9
MJAR	Matsushiro Arr	11.63	212	P	Pn	19 28 50.8	+2.3
	comp=Z,0.1nm,0.3s,baz=85,slow=35,SNR=5.4						
JGF	Kuroka	12.79	213	P	Pn	19 29 03.3	+1.3
MA2	Magadan	13.25	11	cePN	P	19 28 59.7	-5.7
MA2				pmax	pmax		
	comp=Z,19nm,1.7s						
BMKR	Bomnak	13.45	313	eP	Pn	19 29 08.0	-1.4
BMKR				AMB	AMB	19 29 09.0	
	comp=Z,4.0nm,0.7s						
ZEA	Zeya	13.85	308	eP	Pn	19 29 14.9	+0.8
KROS	Kirovskiy	14.29	310	eP	P	19 29 16.5	-0.4
KROS				AMB	AMB	19 29 17.8	
	comp=Z,6.0nm,0.4s						
KSRS	Korea Array	16.19	242	P	P	19 29 39.6	+1.9
	comp=Z,0.3nm,0.3s,baz=46,slow=11,SNR=8.5						
HIA	Hailar	17.68	288	P	P	19 29 51.2	-2.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HIA	Hailar	17.68	288	P	P	19 29 51.2	-2.3
HIA				IAmb	IAmb	19 29 52.0	
	comp=Z,4.4nm,0.5s						
YAK	Yakutsk	17.97	335	P	P	19 29 55.0	-1.4
	comp=Z,0.1nm,0.3s,baz=169,slow=1.5,SNR=7.3						
YAK	Yakutsk	17.97	335	eP	P	19 29 53.9	-2.5
YAK	Yakutsk	17.97	335	eP	P	19 29 53.9	-2.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK	Yakutsk	17.97	335	P	P	19 29 54.5	-1.9
ULN	Ulaanbaatar	26.20	287	eP	P	19 31 16.6	+3.0
ULN	Ulaanbaatar	26.20	287	ceP	P	19 31 16.6	+3.0
SONM	Songino Array	26.64	287	P	P	19 31 17.8	+0.3
	comp=N,0.5nm,0.3s,baz=79,slow=8.0,SNR=6.0						
SONM	Songino Array	26.64	287	P	P	19 31 17.1	-0.4
SONM	Songino Array	26.64	287	P	P	19 31 17.1	-0.4
IMAR	Indian Mountai	36.77	36	P	P	19 32 44.5	+0.1
KDAK	Kodiak Island	37.98	50	P	P	19 32 55.1	+0.6
	comp=N,6.4nm,0.9s,baz=324,slow=13,SNR=1.2						
DGZ	Jazzator, Alta	38.25	297	i P	P	19 32 57.3	+0.2
ZALV	Zalesovo Beam	38.58	304	P	P	19 32 58.8	-0.7
	comp=N,0.8nm,0.4s,baz=65,slow=8.1,SNR=4.9						
ZALV	Zalesovo Beam	38.58	304	P	P	19 32 58.6	-0.9
KNK	Knik Glacier	39.44	44	P	P	19 33 06.4	-0.1
KNK				IAmb	IAmb	19 33 39.9	
	comp=Z,27nm,1.5s						
ILAR	Eielson Array	39.70	38	P	P	19 33 08.6	0.0
	comp=Z,0.3nm,0.7s,baz=255,slow=7.2,SNR=5.6						
SCM	Sheep Creek Mo	39.90	43	P	P	19 33 08.7	-1.7
SCM				pmax	pmax		
	comp=Z,19nm,1.4s						
SCM	Sheep Creek Mo	39.90	43	P	P	19 33 08.7	-1.7
SCM				IAmb	IAmb	19 33 29.4	
	comp=Z,19nm,1.4s						
BALM	Baldy	42.41	43	P	P	19 33 32.1	+1.6
BALM				IAmb	IAmb	19 33 35.4	
	comp=Z,24nm,1.6s						
MK31	Makanchi Array	42.51	294	P	P	19 33 31.0	-0.5
MK31	Makanchi Array	42.51	294	P	P	19 33 30.9	-0.5
MKAR	Makanchi Array	42.51	294	P	P	19 33 31.4	-0.1
	comp=Z,1.8nm,0.7s,baz=68,slow=7.7,SNR=21						
MKAR				PcP	PcP	19 35 16.2	0.0
	comp=Z,0.4nm,0.6s,baz=54,slow=2.1,SNR=4.4						
MKAR				ScP	ScP	19 38 30.6	-0.1
	comp=Z,0.4nm,0.7s,baz=49,slow=4.9,SNR=4.7						
MKAR	Makanchi Array	42.51	294	eP	P	19 33 31.3	-0.2
MKAR	Makanchi Array	42.51	294	i P	P	19 33 31.3	-0.2
MKAR	Makanchi Array	42.51	294	P	P	19 33 30.8	-0.7
MKAR				PcP	PcP	19 35 16.2	0.0
MAKZ	Makanchi	42.70	295	P	P	19 33 33.1	+0.1
MAKZ	Makanchi	42.70	295	P	P	19 33 33.1	+0.1
BARN	Barnard Glacie	42.73	43	P	P	19 33 34.6	+1.4
BARN				IAmb	IAmb	19 33 41.0	
	comp=Z,22nm,1.5s						
CTGM	Chitina Glacie	42.90	43	P	P	19 33 34.3	-0.3
CTGM				IAmb	IAmb	19 33 48.4	
	comp=Z,24nm,1.6s						
KURK	Kurchatov	43.21	301	eP	P	19 33 36.1	-0.8
KURK	Kurchatov	43.21	301	ceP	P	19 33 36.1	-0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	43.21	301	P	P	19 33 35.7	-1.2
KURK				PcP	PcP	19 35 18.7	+0.3
HYT	Haines Junctio	44.74	43	P	P	19 33 48.4	-0.6
HYT				IAmb	IAmb	19 34 13.6	
	comp=Z,9.3nm,1.4s						
LSA	Lhasa	45.31	268	P	P	19 33 55.0	+0.8
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSA	Lhasa	45.31	268	P	P	19 33 55.0	+0.8
LSA				IAmb	IAmb	19 33 56.7	
	comp=Z,3.2nm,0.6s						
BRVK	Borovoye	47.05	307	eP	P	19 34 06.2	-0.5
BRVK	Borovoye	47.05	307	ceP	P	19 34 06.2	-0.5
CHTO	Chiang Mai	47.34	250	P	P	19 34 10.1	+0.7
CHTO	Chiang Mai	47.34	250	P	P	19 34 10.1	+0.7
CMAR	Chiang Mai Arr	47.60	250	P	P	19 34 13.2	+1.9
	comp=Z,0.5nm,0.3s,baz=34,slow=7.6,SNR=7.0						
AAK	Ala-Archa	49.35	293	eP	P	19 34 24.8	+0.3
AAK	Ala-Archa	49.35	293	i P	P	19 34 24.8	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AAK	Ala-Archa	49.35	293	P	P	19 34 25.0	+0.5
GUN	Gumba	50.05	270	eP	P	19 34 30.7	+0.6
	comp=Z,5.3nm,0.3s						
KKN	Kakani	50.53	270	eP	P	19 34 34.2	+0.7
	comp=Z,4.2nm,0.3s						
PKI	Pulchoki	50.58	270	eP	P	19 34 34.4	+0.4
	comp=Z,5.7nm,0.5s						
DMN	Daman	50.77	270	eP	P	19 34 36.4	+1.1
DANN	Dangsing	51.23	272	eP	P	19 34 39.9	+1.2
	comp=Z,7.0nm,0.3s						
KK31	Karatay Array	51.61	295	P	P	19 34 40.6	-0.4
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KK31	Karatay Array	51.61	295	P	P	19 34 40.6	-0.4
KKAR	Karatay Array	51.61	295	P	P	19 34 40.2	-0.8
KKAR	Karatay Array	51.61	295	P	P	19 34 41.1	0.0
KKAR	Karatay Array	51.61	295	P	P	19 34 40.2	-0.8
ARU	Arti	51.63	315	eP	P	19 34 40.1	-0.8
ARU	Arti	51.63	315	c iP	P	19 34 40.0	-0.8
ARU				*PP	pP	19 35 55.0	-1.9
ARU						19 36 41.8	
ARU				S	S	19 41 34.0	+1.5
ARU				SS	SS	19 45 12.4	-1.3
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARU	Arti	51.63	315	P	P	19 34 39.9	-0.9
ARU				IAmb	IAmb	19 34 40.8	
	comp=Z,6.7nm,1.0s						
RES	Resolute Bay	52.43	17	P	P	19 34 46.0	-0.4
RES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
RES	Resolute Bay	52.43	17	P	P	19 34 46.0	-0.4
RES				IAmb	IAmb	19 34 46.5	
	comp=Z,2.2nm,0.5s						
HUH	Hualalai	54.26	99	P	P	19 35 01.4	+0.7
ABKAR	Akbulak array	54.58	307	P	P	19 35 00.8	-1.4
ABKAR	Akbulak array	54.58	307	P	P	19 35 01.1	-1.1
ARCES	ARCESS Array B	56.20	339	P	P	19 35 13.1	-0.3
	comp=Z,5.6nm,1.1s,baz=47,slow=6.6,SNR=1.5						
KBL	Kabul	57.41	287	P	P	19 35 21.6	-1.0
KBL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	Kabul	57.41	287	P	P	19 35 21.6	-1.0
KBL				IAmb	IAmb	19 35 22.7	
	comp=Z,3.5nm,0.8s						
SUMG	Summit	61.02	1	P	P	19 35 46.6	0.0
SUMG				pmax	pmax		
	comp=Z,16nm,1.6s						
SUMG	Summit	61.02	1	P	P	19 35 46.6	0.0
SUMG				IAmb	IAmb	19 36 18.1	
	comp=Z,16nm,1.6s						
PINE	Pine Mountain	61.80	55	P	P	19 35 54.9	+2.8
PINE				IAmb	IAmb	19 36 17.5	
	comp=Z,9.8nm,1.5s						
FIA1	FINESS Array S	61.87	332	P	P	19 35 51.1	-0.8
FINES	FINESS Array B	61.88	332	P	P	19 35 51.0	-0.9
	comp=Z,3.1nm,0.5s,baz=41,slow=7.7,SNR=30						
FINES	FINESS Array B	61.88	332	P	P	19 35 51.1	-0.9
FINES	FINESS Array B	61.88	332	P	P	19 35 51.1	-0.9
NC303	NORSAR Array S	66.36	338	P	P	19 36 19.7	-1.1
NC405	NORSAR Array S	66.37	338	P	P	19 36 20.4	-0.5
NC405				IAmb	IAmb	19 36 27.7	
	comp=Z,6.9nm,1.1s						
NC204	NORSAR Array S	66.48	338	P	P	19 36 21.1	-0.5
NB201	NORSAR Array S	66.53	338	P	P	19 36 21.1	-0.8
NB2	NORSAR Subarra	66.56	338	P	P	19 36 21.4	-0.7
	comp=Z,0.8nm,0.4s,baz=32,slow=6.5						
NOA	NORSAR Array B	66.56	338	P	P	19 36 21.3	-0.8
	comp=Z,1.2nm,0.7s,baz=29,slow=6.5,SNR=9.4						
YMR	Madison River	66.65	49	P	P	19 36 23.2	0.0
NVAR	Mina Array Bea	66.78	58	P	P	19 36 26.0	+1.8
	comp=Z,0.3nm,0.3s,baz=323,slow=5.8,SNR=2.0						
WB0	Warramunga Arr	66.94	192	P	P	19 36 26.2	+1.3
FITZ	Fitzroy Crossi	67.01	201	P	P	19 36 21.9	-3.5
WR0	Warramunga Arr	67.11	192	P	P	19 36 24.7	-1.2
WR0				IAmb	IAmb	19 36 30.0	
	comp=Z,7.1nm,1.2s						
WRA	Warramunga Arr	67.12	192	P	P	19 36 27.1	+1.0
	comp=Z,0.7nm,1.1s,baz=6.9,slow=6.8,SNR=5.7						
KIV	Kislovodsk	67.18	310	P	P	19 36 27.7	+1.3
KIV				IAmb	IAmb	19 36 28.3	
	comp=Z,3.7nm,0.7s						
KBZ	Khabaz	67.22	310	P	P	19 36 27.4	+0.9
	comp=Z,2.5nm,0.9s,baz=22,slow=6.4,SNR=7.2						
PDAR	Pinedale Array	68.70	50	P	P	19 36 37.4	+1.4
	comp=Z,0.4nm,0.5s,baz=55,slow=1.1,SNR=3.7						
PDAR	Pinedale Array	68.70	50	P	P	19 36 36.8	+0.9
AKASG	Malin Array Be	68.71	322	P	P	19 36 34.8	-0.8
	comp=Z,0.6nm,0.3s,baz=37,slow=6.1,SNR=4.5						
ASAR	Alice Springs	70.84	192	P	P	19 36 50.3	+1.6
	comp=Z,0.1nm,0.5s,baz=7.9,slow=5.8,SNR=1.1						
BRTR	Keskin Array B	74.90	312	P	P	19 37 11.6	-0.8
	comp=Z,0.8nm,0.8s,baz=60,slow=5.0,SNR=4.4						
BRTR	Keskin Array B	74.90	312	ceP	P	19 37 13.0	+0.6
GERES	GERESS Array B	76.18	330	P	P	19 37 19.2	-0.2
	comp=Z,0.4nm,0.5s,baz=38,slow=5.0,SNR=2.7						
TXAR	Lajitas Array	81.75	56	P	P	19 37 51.0	+1.4
	comp=Z,0.3nm,0.6s,baz=264,slow=3.6,SNR=2.8						

*NEIC **30** 19:28:29.6±2.6, 20°.05S±0°.06×169°.8E±0°.1, h4^{km}±10^{km}, mb4.3/6, Error ellipse: s-maj=16.3km s-min=4.7km az=117.0*
*IDC **30** 19:28:36.5±6.7, 19°.96S×168°.91E, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/44, mbtmp4.1/4, ML2.8/1, Error ellipse: s-maj=130.2km s-min=35.5km az=112.0*
ISC 30 19:28:30.2±1.1, **20°.2S**±0°.3×**170°.0E**±0°.1, **h10**^{km}, **n14**, σ**1^{s}.76**/13, **mb4.0**/7, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.76	240	Pn	Pn	19 29 26.3	-2.1
	1.3nm,0.3s,baz=118,slow=15,SNR=11						
DZM				Sn	Sn	19 30 05.3	-7.6
	3.7nm,0.3s,baz=286,slow=17,SNR=6.9						
SANVU	Saraoutou	5.45	331	Pn	Pn	19 29 46.0	-5.6
MSVF	Nonsavu	8.04	73	Pn	Pn	19 30 26.4	-0.8
STKA	Stephens Creek	27.92	240	P	P	19 34 24.4	+3.8
STKA				IAmb	IAmb	19 34 33.1	
	comp=Z,2.5nm,1.3s						
WR0	Warramunga Arr	33.24	264	P	P	19 35 08.4	+0.6
WR0				IAmb	IAmb	19 35 20.0	
	comp=Z,9.9nm,1.4s						
WB0	Warramunga Arr	33.40	265	P	P	19 35 08.1	-1.1
WB0				IAmb	IAmb	19 35 21.7	
	comp=Z,7.9nm,1.3s						
WB2	Warramunga Arr	33.42	264	P	P	19 35 09.4	0.0
WRA	Warramunga Arr	33.43	264	P	P	19 35 09.5	0.0
	comp=Z,0.6nm,0.5s,baz=94,slow=8.2,SNR=16						
WRA	Warramunga Arr	33.43	264	P	P	19 35 08.7	-0.8
JAY	Jayapura	33.56	298	P	P	19 35 09.2	-1.5
	comp=Z,14nm,0.6s,baz=87,slow=20,SNR=7.8						
AS31	Alice Springs	33.57	257	P	P	19 35 10.1	-0.6
ASAR	Alice Springs	33.57	257	P	P	19 35 10.8	0.0
	comp=Z,1.2nm,0.7s,baz=86,slow=9.0,SNR=20						
ASAR	Alice Springs	33.57	257	P	P	19 35 09.8	-0.9
CMAR	Chiang Mai Arr	79.54	294	P	P	19 40 40.3	+2.4
	comp=Z,0.3nm,0.4s,baz=133,slow=5.3,SNR=2.8						

*IDC **30** 19:31:51.8±3.2, 17°.55S×178°.92W, h517^{km}±33^{km}, mb3.4/15, mb1 3.7/15, mb1mx3.5/44, mbtmp4.2/15, Error ellipse: s-maj=32.1km s-min=15.7km az=141.0*
*NEIC **30** 19:31:52.8±1.3, 17°.7S±0°.1×178°.88W±0°.10, h538^{km}±8^{km}, mb4.6/24, Error ellipse: s-maj=22.5km s-min=10.1km az=152.0*
ISC 30 19:31:53.1±0.5, **17°.7S**±0°.1×**178°.92W**±0°.09, **h539**^{km}, **n53**, σ**1^{s}.11**/51, **mb4.5**/27, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.89	268	P	P	19 33 08.3	+1.7
AFI	Afiamalu	7.82	62	P	P	19 33 45.5	-3.4
NIUE	Niue	8.65	101	P	P	19 33 57.0	-0.1
URZ	Urewera	20.81	189	P	P	19 35 54.7	-2.2
MSWZ	Moikau Station	24.20	191	P	P	19 36 27.4	+0.2
EIDS	Eidsvold	28.90	249	P	P	19 37 08.2	-0.5
EIDS				IAmb	IAmb	19 37 47.0	
	comp=Z,35nm,1.6s						

WKZ	Wanaka	28.91	198	P	P	19 37 07.7	-0.8
ARMA	Armidale	29.64	239	P	P	19 37 15.6	+0.4
ARMA				IAmb	IAmb	19 37 17.1	
	comp=Z,11nm,0.7s						
MLZ	Mavora Lakes	29.67	199	P	P	19 37 15.1	0.0
CTAO	Charters Tower	33.01	260	P	P	19 37 44.4	+0.3
CTAO				IAmb	IAmb	19 37 54.7	
	comp=Z,22nm,1.3s						
COEN	Coen	36.62	270	P	P	19 38 14.1	-0.1
COEN				IAmb	IAmb	19 38 41.1	
	comp=Z,23nm,1.6s						
TOO	Toolangi	36.95	230	P	P	19 38 16.6	0.0
TOO				IAmb	IAmb	19 38 26.3	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	38.32	241	P	P	19 38 29.1	+1.2
	comp=Z,6.0nm,0.4s,baz=86,slow=9.9,SNR=26						
STKA	Stephens Creek	38.32	241	IAmb	IAmb	19 38 29.8	
	comp=Z,2.2nm,1.0s						
BBOO	Buckleboo	43.10	241	P	P	19 39 06.6	+0.7
BBOO				IAmb	IAmb	19 39 18.6	
	comp=Z,30nm,1.4s						
WB2	Warramunga Arr	44.19	259	P	P	19 39 13.9	-0.7
WRAB	Tennant Creek	44.19	259	P	P	19 39 13.9	-0.7
WRA	Warramunga Arr	44.20	259	P	P	19 39 13.9	-0.7
	comp=Z,1.0nm,0.3s,baz=92,slow=7.9,SNR=8.8						
WRA	Warramunga Arr	44.20	259	IAmb	IAmb	19 39 18.5	
	comp=Z,0.3nm,1.1s						
AS31	Alice Springs	44.39	254	P	P	19 39 16.4	+0.2
ASAR	Alice Springs	44.39	254	P	P	19 39 16.2	+0.1
	comp=Z,16nm,0.5s,baz=89,slow=7.9,SNR=46						
ASAR				ScP	ScP	19 43 52.3	+3.1
	comp=Z,0.4nm,0.8s,baz=87,slow=4.7,SNR=2.0						
ASAR				S	S	19 45 08.7	-3.1
	comp=Z,1.3nm,0.9s,baz=92,slow=16,SNR=6.1						
ASAR	Alice Springs	44.39	254	P	P	19 39 15.7	-0.4
FORT	Forrest	49.67	244	P	P	19 39 55.8	+0.1
FORT				IAmb	IAmb	19 40 20.1	
	comp=Z,24nm,0.9s						
TOLI2	Tolitoli	62.19	281	P	P	19 41 21.4	-1.2
TOLI2				IAmb	IAmb	19 41 22.1	
	comp=Z,16nm,0.9s						
JGF	Kuroka	67.25	322	P	P	19 41 54.6	+0.5
MJAR	Matsushiro Arr	67.42	324	P	P	19 41 55.0	-0.1
	comp=Z,4.0nm,0.6s,baz=143,slow=6.5,SNR=6.6						
MJAR	Matsushiro Arr	67.42	324	P	P	19 41 54.9	-0.3
MAJO	Matsushiro	67.42	324	P	P	19 41 55.3	+0.1
MAJO				IAmb	IAmb	19 41 59.1	
	comp=Z,22nm,1.4s						
JHS	Saijyo	69.40	319	P	P	19 42 08.2	+1.1
JKA	Kamikawa-asahi	70.83	332	P	P	19 42 16.9	+1.4
JKA	Kamikawa-asahi	70.83	332	IAmb	IAmb	19 42 44.8	
	comp=Z,57nm,1.8s						
ASAJ	Asahikawa	70.83	332	P	P	19 42 16.8	+1.4
	comp=Z,2.5nm,0.5s,baz=259,slow=8.7,SNR=7.0						
SSLB	Suanglung	71.70	303	P	P	19 42 20.5	-0.5
SSLB				IAmb	IAmb	19 42 46.8	
	comp=Z,38nm,1.2s						
PEA0B	Petropavlovsk-	73.32	346	P	P	19 42 29.7	0.0
PETK	Petropavlovsk-	73.32	346	P	P	19 42 29.7	0.0
	comp=Z,5.5nm,0.9s,baz=128,slow=9.2,SNR=5.6						
USRK	Ussuriysk Ar.	76.14	326	P	P	19 42 46.1	+0.4
	comp=Z,1.4nm,0.6s,baz=131,slow=6.3,SNR=2.2						
OHAK	Old Harbor	77.61	14	P	P	19 42 53.4	0.0
OHAK				IAmb	IAmb	19 43 27.2	
	comp=Z,58nm,1.8s						
NVAR	Mina Array Bea	79.59	44	P	P	19 43 04.9	+0.2
	comp=Z,0.9nm,0.7s,baz=229,slow=7.9,SNR=4.1						
ILAR	Eielson Array	85.76	13	P	P	19 43 34.0	-0.9
	comp=Z,0.9nm,0.5s,baz=226,slow=5.3,SNR=19						
TXAR	Lajitas Array	86.28	58	P	P	19 43 40.2	+2.0
	comp=Z,0.5nm,0.7s,baz=221,slow=6.0,SNR=6.2						
PDAR	Pinedale Array	87.51	44	P	P	19 43 44.0	+0.1
	comp=Z,0.4nm,0.5s,baz=218,slow=4.4,SNR=5.2						
CMAR	Chiang Mai Arr	88.35	290	P	P	19 43 49.5	+1.5
	comp=Z,0.5nm,0.8s,baz=126,slow=2.5,SNR=4.8						
CMAR	Chiang Mai Arr	88.35	290	P	P	19 43 49.0	+1.0
INK	Inuvik	91.78	15	P	P	19 44 02.3	-0.5
	comp=Z,0.6nm,0.4s,baz=102,slow=1.8,SNR=2.3						
SONM	Songino Array	93.05	319	P	P	19 44 08.7	-0.6
	comp=Z,0.2nm,0.4s,baz=72,slow=4.7,SNR=2.1						
YKA	Yellowknife Ar	94.31	25	P	P	19 44 14.4	-0.1
	comp=Z,0.5nm,0.7s,baz=241,slow=4.0,SNR=8.2						
MKAR	Makanchi Array	108.62	314	PKiKP	PKiKP	19 49 20.3	-0.5
	comp=Z,0.3nm,0.5s,baz=79,slow=3.1,SNR=5.9						
BVAR	Borovoye Array	116.35	321	PKP	PKPdf	19 49 35.0	-0.3
	comp=Z,0.3nm,0.3s,baz=130,slow=53,SNR=4.2						
ARCES	ARCESS Array B	125.99	350	PKP	PKPdf	19 49 53.4	0.0
	comp=Z,4.0nm,0.9s,baz=12,slow=4.6,SNR=1.5						
BUR08	Bucovina Ar. S	144.16	332		PKPab	19 50 27.8	+0.3
BRTR	Keskin Array B	144.27	315	PKP	PKPbc	19 50 28.3	+0.4
	comp=Z,1.0nm,0.5s,baz=102,slow=2.3,SNR=12						
CLL	Collm	145.12	347	i PKPbc	PKPbc	19 50 30.1	+0.2
	comp=Z,5.0nm,0.6s						
GERES	GERESS Array B	147.25	345	PKPbc	PKPbc	19 50 36.5	+0.4
	comp=Z,2.1nm,0.7s,baz=22,slow=3.0,SNR=9.6						

IDC ***30*** *19:31:54.7±0.9, 21°.20S×170°.17E, h0^{km}, mb4.3/10, mb1 4.5/12, mb1mx4.2/42, mbtmp4.4/12, ML4.0/2, MS4.3/16, Ms1 4.3/16, ms1mx4.2/38, Error ellipse: s-maj=25.3km s-min=20.3km az=158.0*

NEIC ***30*** *19:31:57.1±2.7, 21°.37S±0°.09×170°.14E±0°.08, h15^{km}±4^{km}, mb4.9/32, Error ellipse: s-maj=13.1km s-min=10.1km az=161.0*

GCMT ***30*** *19:32:00.1±0.3, 21°.25S±0°.02×170°.26E±0°.01, h15^{km}±1^{km}, MW5.1/109, Moment Tensor Solution. s24,c25; s109,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.21; $M_{\theta\theta}$-4.76±.21; $M_{\phi\phi}$4.77±.21; $M_{r\theta}$0.55±.60; $M_{\theta\phi}$-2.73±.16; $M_{\phi r}$0.76±.61; Best double couple: $M_0$5.57100×10^{16} NP1:ϕ_s300.00000°, δ80.00000°, λ-179.00000°. NP2:ϕ_s210.00000°, δ89.00000°, λ-10.00000°. Principal axes: T 5.5610, Plg6.0000°, Azm255.0000°; N 0.0190, Plg80.0000°, Azm25.0000°; P -5.5810, Plg7.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***30*** *19:32:18.9, 21°.82S×168°.48E, h0^{km}, MLv3.8, Loyalty Islands*

ISC 30 19:31:56.3±0.5**, 21°.43S**±0°.07×**170°.23E**±0°.06**, h10^{km}, n100, σ1^{s}45**/92**, mb4.8**/25**, MS4.4**/17**, 1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINNC	Pines Island,	2.84	245	P	Pn	19 32 41.8	+0.1
YATNC	Mamie plateau,	3.17	258	P	Pn	19 32 45.4	-0.9
OUENC	Ouen Island, N	3.29	252	P	Pn	19 32 48.8	+0.8
DZM	Mont Dzumac	3.58	259	Pn	Pn	19 32 51.8	-0.1
	9.6nm,0.3s,baz=126,slow=12,SNR=108						
DZM				LR	LR	19 33 21.8	
	comp=Z,1µm,21.9s,baz=126,slow=24						
DZM				Sn	Sn	19 33 34.6	+0.2
	29nm,0.3s,baz=86,slow=23,SNR=9.5						
DZM	Mont Dzumac	3.58	259	ePn	Pn	19 32 52.6	+0.6
	47nm,0.3s						
DZM				eSn	Sn	19 33 35.2	+0.8
	84nm,0.3s						
DZM				eLR	LR	19 33 43.3	
	comp=Z,15µm,24.9s						
DZM	Mont Dzumac	3.58	259	Pn	Pn	19 32 51.2	-0.8
DZM				Sn	Sn	19 33 35.0	+0.7
DZM	Mont Dzumac	3.58	259	P	Pn	19 32 52.9	+0.9
ONTNC	Ouen Toro	3.61	255	P	Pn	19 32 52.9	+0.5
NOUC	Port Laguerre	3.71	259	P	Pn	19 32 54.1	+0.4
SANVU	Saraoutou	6.61	334	Pn	Pn	19 33 33.9	+0.3
MSVF	Nonsavu	8.24	65	Pn	Pn	19 33 57.8	+1.7
RAO	Raoul Island	13.24	128	LR	LR	19 39 15.7	
	comp=Z,577nm,18.7s,baz=223,slow=33						
OUZ	Omahuta	14.05	169		Pn	19 35 16.8	+1.2
URZ	Urewera	17.79	162	P	P	19 36 07.2	+2.3
	0.7nm,0.3s,baz=18,slow=5.5,SNR=14						
URZ				LR	LR	19 41 32.9	
	comp=Z,2µm,20.5s,baz=30,slow=32						
EIDS	Eidsvold	18.00	254	P	P	19 36 07.6	+0.3
BKZ	Black Stump Fm	18.48	164	P	P	19 36 13.0	+0.5
BKZ				IAmb	IAmb	19 36 16.8	
	comp=Z,229nm,1.7s						
ARMA	Armidale	18.95	238	P	P	19 36 18.6	+0.7
ARMA				IAmb	IAmb	19 36 43.4	
	comp=Z,100nm,1.8s						
BFZ	Birch Farm	19.86	166	P	P	19 36 27.5	-0.1
BFZ				IAmb	IAmb	19 36 29.2	
	comp=Z,43nm,0.9s						
NNZ	Nelson	19.91	173	P	P	19 36 28.8	+0.7
TUWZ	Tuamarina	20.18	172	P	P	19 36 32.5	+1.4
BHW	Baring Head	20.30	170	P	P	19 36 33.2	+0.8
MSWZ	Moikau Station	20.37	169	P	P	19 36 33.2	0.0
THZ	Tophouse	20.40	174	P	P	19 36 35.7	+2.2
THZ				IAmb	IAmb	19 36 51.2	
	comp=Z,154nm,1.8s						
BSWZ	Blackbirch Sta	20.46	172	P	P	19 36 35.2	+1.2
PLWZ	Palliser	20.52	169	P	P	19 36 35.1	+0.3
CMWZ	Cape Campbell	20.54	171	P	P	19 36 36.6	+1.7
KHZ	Kahutara	21.11	173	P	P	19 36 38.4	-2.7
KHZ				IAmb	IAmb	19 36 44.1	
	comp=Z,47nm,1.1s						
LTZ	Lake Taylor	21.36	176	P	P	19 36 43.3	-0.5
LTZ				IAmb	IAmb	19 36 55.8	
	comp=Z,47nm,1.2s						
FOZ	Fox Glacier	22.04	181	P	P	19 36 52.2	+1.1
RPZ	Rata Peaks	22.23	178	P	P	19 36 55.2	+2.0
	comp=Z,25nm,1.0s,baz=47,slow=6.9,SNR=5.5						
RPZ				LR	LR	19 44 20.0	
	comp=Z,1µm,18.4s,baz=4.5,slow=33						
RPZ	Rata Peaks	22.23	178	P	P	19 36 54.1	+0.9
RPZ				IAmb	IAmb	19 36 56.4	
	comp=Z,111nm,1.4s						
DCZ	Deep Cove	24.11	185	P	P	19 37 13.4	+1.3
DCZ				IAmb	IAmb	19 37 16.3	
	comp=Z,39nm,1.1s						
PMG	Port Moresby	25.20	295	P	P	19 37 21.1	-1.3
	comp=Z,13nm,0.8s,baz=222,slow=11,SNR=2.3						
PMG				LR	LR	19 45 43.1	
	comp=Z,634nm,18.7s,baz=136,slow=33						
PMG	Port Moresby	25.20	295	IAmb	IAmb	19 37 29.7	
	comp=Z,30nm,0.9s						
COEN	Coen	26.79	282	P	P	19 37 37.2	+0.4
STKA	Stephens Creek	27.55	242	P	P	19 37 44.6	+1.1
	comp=Z,3.2nm,0.7s,baz=22,slow=8.5,SNR=4.5						
STKA				LR	LR	19 48 41.5	
	comp=Z,1µm,18.3s,baz=69,slow=36						
STKA	Stephens Creek	27.55	242	P	P	19 37 44.0	+0.5
RAR	Rarotonga	27.93	95	LR	LR	19 46 32.3	
	comp=Z,361nm,21.8s,baz=258,slow=31						
WR0	Warramunga Arr	33.37	266	P	P	19 38 34.5	-0.7
WR0				IAmb	IAmb	19 38 35.2	
	comp=Z,16nm,1.1s						
WB0	Warramunga Arr	33.54	266	P	P	19 38 34.1	-2.5
WB2	Warramunga Arr	33.55	266	P	P	19 38 35.1	-1.6
WB2				PcP	PcP	19 41 16.9	-0.4
WRAB	Tennant Creek	33.56	266	P	P	19 38 35.3	-1.4
WRAB				IAmb	IAmb	19 38 44.1	
	comp=Z,32nm,1.6s						
WRA	Warramunga Arr	33.56	266	P	P	19 38 35.8	-1.1
	comp=Z,3.8nm,0.5s,baz=94,slow=8.1,SNR=74						
WRA				LR	LR	19 52 37.2	
	comp=Z,2µm,18.4s,baz=120,slow=37						
WRA	Warramunga Arr	33.56	266	P	P	19 38 34.5	-2.3
AS31	Alice Springs	33.56	259	P	P	19 38 35.2	-1.6
ASAR	Alice Springs	33.57	259	P	P	19 38 36.8	-0.1
	comp=Z,16nm,1.1s,baz=84,slow=8.1,SNR=78						
ASAR				LR	LR	19 52 03.7	
	comp=Z,677nm,19.7s,baz=86,slow=36						
ASAR	Alice Springs	33.57	259	P	P	19 38 34.5	-2.3
JAY	Jayapura	34.33	299	LR	LR	19 50 38.7	
	comp=Z,497nm,21.0s,baz=108,slow=33						
TBI	Tubuai	37.24	101	eLQ	LQ	19 47 42.7	
	comp=Z,1µm,30.2s						
TBI				eLR	LR	19 49 05.3	
	comp=Z,465nm,29.8s						
PPT2	Papeete2	38.01	91	eLQ	LQ	19 47 59.8	
	comp=Z,2µm,25.8s						
PPT2				eLR	LR	19 49 41.6	
	comp=Z,1µm,25.2s						
PPT	Papeete	38.01	91	LR	LR	19 50 48.6	
	comp=Z,448nm,21.3s,baz=241,slow=30						
FITZ	Fitzroy Crossi	41.99	266	P	P	19 39 47.4	-0.6
	comp=Z,13nm,1.1s,baz=108,slow=7.6,SNR=14						
FITZ	Fitzroy Crossi	41.99	266	P	P	19 39 47.8	-0.2
FITZ					PcP	19 41 39.5	-3.8
SANI	Sanana	47.16	288	P	P	19 40 36.8	+7.4
NWAO	Narrogin (SRO)	48.08	245	P	P	19 40 39.3	+3.0
TAOE	Nuku Hiva Isla	49.31	83	eLR	LR	19 54 53.2	
	comp=Z,1µm,26.8s						
LUWI	Luwuk	50.47	287	P	P	19 40 54.3	-0.5
GIRL	Giralia	51.65	258	P	P	19 41 03.9	+0.2
VNDA	Vanda	56.29	182	LR	LR	20 02 18.9	
	comp=Z,337nm,20.2s,baz=360,slow=32						
MJAR	Matsushiro Arr	65.11	332	LR	LR	20 06 31.0	
	comp=Z,74nm,20.8s,baz=165,slow=32						
NJ2	Nanjing	72.42	316	eP	P	19 43 24.3	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	Petropavlovsk-	75.02	352	LR	LR	20 10 00.2	
	comp=Z,218nm,20.5s,baz=71,slow=31						
CN2	Changchun	76.80	328	eP	P	19 43 48.5	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BELA	Belgrano 2	79.84	175	P	P	19 44 02.3	-2.4
KMI	Kunming	80.21	302	⇓P	P	19 44 08.0	+0.3
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	Chiang Mai Arr	80.24	294	P	P	19 44 07.5	-0.3
	comp=Z,1.1nm,0.8s,baz=134,slow=4.2,SNR=8.8						
CMAR	Chiang Mai Arr	80.24	294	P	P	19 44 06.1	-1.7
HHC	Hu-ho-hao-te	82.48	319	eP	P	19 44 20.0	+0.7
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,7.6s						
KDAK	Kodiak Island	84.78	19	LR	LR	20 15 58.5	
	comp=Z,226nm,20.7s,baz=50,slow=31						
LZH	Lanzhou	84.88	312	eP	P	19 44 32.5	+0.8
LZH				pP	pwP	19 44 37.5	-0.1
LZH				sP	sP	19 44 39.8	+4.7
LZH				ePP	PP	19 47 50.5	+1.9
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,83nm,5.2s						
SNAA	Sanae	87.02	182	P	P	19 44 40.0	-1.8
SNAA	Sanae	87.02	182	P	P	19 44 39.5	-2.2
SNAA				IAmb	IAmb	19 44 41.2	
	comp=Z,5.7nm,0.9s						
VNA3	Neumayer Olymp	87.58	180	P	P	19 44 42.4	-2.0
VNA2	Neumayer--Watz	87.88	181	P	P	19 44 44.2	-1.6
	baz=160,slow=4.0						
ORV	Oroville	87.92	46	P	P	19 44 48.1	+1.7
ORV				IAmb	IAmb	19 44 59.8	
	comp=Z,8.6nm,1.4s						
GTA	Gaotai	89.30	313	eP	P	19 44 55.8	+2.7
GTA				pP	pwP	19 45 05.0	+6.1
GTA				sP	sP	19 45 08.8	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PAHR	Pah Rah Range	89.42	47		P	19 44 56.9	+3.2
SONM	Songino Array	89.52	323	P	P	19 44 53.4	-0.5
	comp=Z,0.9nm,1.0s,baz=115,slow=6.5,SNR=3.0						
LPIG	La Paz	89.53	64	LR	LR	20 15 51.6	
	comp=Z,288nm,21.5s,baz=330,slow=30						
NVAR	Mina Array Bea	89.56	48	P	P	19 44 53.8	-0.7
	comp=Z,0.2nm,0.3s,baz=253,slow=10,SNR=4.1						
NV11	Mina Array Sit	89.66	48	P	P	19 44 53.2	-1.6
NV11				IAmb	IAmb	19 45 08.3	
	comp=Z,8.3nm,1.3s						
PIX	Pinacate	90.06	56	P	P	19 44 58.6	+1.9
TPH	Tonopah	90.15	49	P	P	19 44 57.0	-0.2
ILAR	Eielson Array	92.04	17	P	P	19 45 04.8	-0.3
	comp=Z,0.6nm,0.8s,baz=251,slow=2.8,SNR=3.8						
EGAK	Eagle	93.69	19	P	P	19 45 11.7	-0.9
WMQ	Urumqi	99.38	313	eP	Pdif	19 45 42.8	+3.7
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.9s						
WMQ				LR	LR		
	comp=N,400nm,6.5s						
WMQ				LR	LR		
	comp=E,360nm,7.3s						
WMQ				LR	LR		
	comp=Z,110nm,18.3s						
YKA	Yellowknife Ar	102.18	27	P	Pdif	19 45 51.0	0.0
	comp=Z,0.1nm,0.4s,baz=256,slow=3.3,SNR=3.6						
AKASG	Malin Array Be	137.80	323	PKP	PKPdf	19 51 18.5	-2.3
	comp=Z,0.2nm,0.4s,baz=90,slow=6.8,SNR=1.8						
CONA	Conrad Observa	146.49	328	eP	PKPdf	19 51 35.7	-0.8
	comp=Z,13nm,1.9s						
KHC	Kasperske Hory	146.69	332	ePKP	PKPdf	19 51 36.7	-0.1
KHC				ex	x	19 51 43.7	
GERES	GERESS Array B	146.85	331	PKPbc	PKPdf	19 51 36.0	-1.2
	comp=Z,1.1nm,0.8s,baz=35,slow=3.6,SNR=6.1						
GERES	GERESS Array B	146.85	331		PKPdf	19 51 36.4	-0.7
SOKA	Soboth	147.75	327	eP	PKPdf	19 51 38.5	-0.2
	comp=Z,20nm,2.0s						
OBKA	Obir	148.11	327	eP	PKPdf	19 51 38.7	-0.5
	comp=Z,1.9nm,0.7s						
KBA	Koelnbreinsper	148.30	329	eP	PKPdf	19 51 40.3	+0.6
	comp=Z,12nm,1.9s						
ABTA	Abfaltersbach	148.93	330	eP	PKPdf	19 51 40.3	-0.3
	comp=Z,7.7nm,1.3s						
MOTA	Moosalm	149.13	332	eP	PKPdf	19 51 39.9	-1.1
	comp=Z,3.0nm,1.0s						
SQTA	Sankt Quirin	149.18	332	eP	PKPbc	19 51 43.3	-1.9
	comp=Z,15nm,1.4s						
FETA	Feichten	149.54	332	eP	PKPbc	19 51 43.8	-2.4
	comp=Z,8.5nm,1.0s						
DAVA	Damuels	149.70	333	eP	PKiKP	19 51 47.1	-0.4
	comp=Z,9.2nm,1.1s						

IDC 30 19:33:48.0±8.9**, 20°.78S**×**169°.84E, h0^{km}, mb4.1**/4**, mb1 4.3**/5**, mb1mx3.9**/40**, mbtmp4.1**/5**, Error ellipse: s-maj=268.4km s-min=46.8km az=141.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.42	247	Pn	Pn	19 34 42.6	-0.1
	baz=31,slow=23,SNR=0.6						
DZM				Sn	Sn	19 35 25.7	+1.7
	5.7nm,0.3s,baz=127,slow=20,SNR=1.9						
WRA	Warramunga Arr	33.26	265	P	P	19 40 26.4	-1.0
	0.4nm,0.4s,baz=97,slow=8.1,SNR=4.8						
ASAR	Alice Springs	33.34	258	P	P	19 40 28.3	+0.2
	2.9nm,1.0s,baz=85,slow=8.6,SNR=2.4						
FITZ	Fitzroy Crossi	41.68	266	P	P	19 41 38.8	+0.1
	9.1nm,1.2s,baz=105,slow=14,SNR=3.6						
CMAR	Chiang Mai Arr	79.65	294	P	P	19 45 58.3	+0.4
	0.8nm,0.8s,baz=131,slow=3.8,SNR=3.7						

JMA ***30*** *19:33:57.9±0.2, 34°.55N×138°.63E, h220^{km}±2^{km}, M3.5*

NEIC ***30*** *19:33:58.4±1.5, 34°.59N±0°.06×138°.59E±0°.04, h216^{km}±7^{km}, mb4.4/29, Error ellipse: s-maj=9.1km s-min=4.1km az=199.0*

IDC ***30*** *19:33:59.2±0.7, 34°.65N×138°.68E, h225^{km}±8^{km}, mb3.4/14, mb1 3.4/17, mb1mx3.2/57, mbtmp3.9/17, Error ellipse: s-maj=28.8km s-min=10.4km az=70.0*

ISC 30 19:33:58.5±0.6**, 34°.68N**±0°.05×**138°.57E**±0°.05**, h218^{km}**±5^{km}**, n95, σ1^{s}31**/108**, mb4.0**/26**, 1C-2D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIZS	Izushimoda	0.26	80	P	Pn	19 34 27.0	-0.1
JIZS				eS	S	19 34 49.2	-0.2
JSG	Sagara	0.32	270	P	Pn	19 34 27.4	+0.2
JSG				S	S	19 34 50.0	+0.4
JSG	Sagara	0.32	270	Pn	Pn	19 34 27.6	+0.4
JSG				S	S	19 34 50.8	+1.2
JFNN	Fujinakano	0.53	10	P	Pn	19 34 28.1	+0.3
JOD2	Odawara 2	0.72	36	P	Pn	19 34 29.0	+0.4
JYN	Shimob	0.82	358	P	Pn	19 34 29.9	+0.7
JYN				eS	S	19 34 54.3	+1.0
TK02	Tokai 2	0.99	223	P	Pn	19 34 29.5	-0.4
JGF	Kuroka	1.36	313		Pn	19 34 33.3	+0.6
JGF				S	S	19 35 00.0	+0.7
JRY	Ryogami san	1.36	11	P	Pn	19 34 34.1	+1.4
JRY				S	S	19 35 01.1	+1.6
INU	Inuyama	1.44	298		Pn	19 34 33.4	+0.1
INU				S	S	19 34 57.9	-2.5
JIE	Ise	1.57	260	P	Pn	19 34 34.0	-0.4
JYTA	Yamagatataniai	1.76	302	P	Pn	19 34 36.4	+0.3
TTO1	TONANKAI O.B.S	1.82	235	P	Pn	19 34 35.9	-0.4
JHJ	Hachijo jima 2	1.85	147	P	Pn	19 34 36.0	-1.0
	83nm,0.3s,baz=246,slow=23,SNR=13						
JHJ				S	S	19 35 09.7	+2.9
	42nm,0.3s,baz=89,slow=22,SNR=2.3						
JHJ2	Mitsune	1.87	146	P	Pn	19 34 35.9	-1.3
JHJ2	Mitsune	1.87	146		Pn	19 34 35.8	-1.3
JHJ2				S	S	19 35 04.3	-2.8
MJAR	Matsushiro Arr	1.89	351	P	Pn	19 34 38.2	+0.9
	0.4nm,0.3s,baz=171,slow=11,SNR=21						
MJAR	Matsushiro Arr	1.89	351		Pn	19 34 37.3	+0.1
MAJO	Matsushiro	1.89	351		Pn	19 34 38.5	+1.2
MAT	Matsushiro	1.89	351	P	Pn	19 34 38.2	+0.9
MAT				S	S	19 35 07.4	-0.1
MAT	Matsushiro	1.89	351	P	Pn	19 34 38.2	+0.9
JAG	Ashikaga	1.89	22	P	Pn	19 34 37.5	+0.2
BSO1	Boso 1	1.98	90	P	Pn	19 34 36.9	-0.7
JYT	Yasato	2.04	40		Pn	19 34 38.5	-0.2
JYT				S	S	19 35 08.4	-1.6
JWY	Kouya	2.50	260	P	Pn	19 34 43.3	-0.4
JWT	Wachi	2.67	284	Pn	Pn	19 34 45.7	+0.3
JWT				S	S	19 35 19.5	-2.4
JMM	Marumori	3.65	29		Pn	19 34 57.3	+0.6
JMM				S	S	19 35 40.9	-1.5
JMN	Monobe	4.00	258		Pn	19 35 00.2	-0.8
JHS	Saijyo	4.50	276	Pn	Pn	19 35 07.7	+0.6
JTU	Tsushima	7.57	271	Pn	Pn	19 35 42.6	-3.5
ERM	Erimo	8.16	25	Pn	Pn	19 35 54.4	+0.7
JCJ	Chichijima	8.17	157	Pn	Pn	19 35 48.0	-6.0
JEW	Eniwo	8.46	15	Pn	Pn	19 35 58.0	+0.5
KSRS	Korea Array	9.06	291	P	Pn	19 36 06.9	+1.6
	0.2nm,0.3s,baz=103,slow=13,SNR=7.5						
ASAJ	Asahikawa	9.93	17	P	Pn	19 36 15.2	-1.2
	0.2nm,0.3s,baz=284,slow=17,SNR=1.2						
ASAJ				S	S	19 38 00.5	-7.1
	0.2nm,0.3s,baz=297,slow=32,SNR=1.6						
KLR	Kul'dur	15.39	343	P	P	19 37 23.4	-1.0
	0.1nm,0.3s,baz=159,slow=7.3,SNR=5.0						
BJT	Baijiatuau	18.58	293	P	P	19 37 57.0	-2.2
BJT				IAmb	IAmb	19 38 32.0	
	comp=Z,4.9nm,0.5s						
SSLB	Suanglung	18.79	239	P	P	19 38 00.3	-1.4
YULB	Yu-li	18.80	238	P	P	19 37 59.7	-2.2
YULB				IAmb	IAmb	19 38 10.5	
	comp=Z,26nm,1.0s						
TPUB	Ta-pu	19.33	239	P	P	19 38 06.3	-1.2
PEA0B	Petropavlovsk-	22.88	31	P	P	19 38 43.6	+0.7
ENH	Enshi	24.89	268	P	P	19 39 00.1	-1.3
SONM	Songino Array	27.32	309	P	P	19 39 24.6	+1.5
	comp=Z,0.5nm,0.5s,baz=109,slow=7.8,SNR=6.0						
SONM	Songino Array	27.32	309	P	P	19 39 22.4	-0.6
LZH	Lanzhou	28.27	283	⇑P	P	19 39 32.0	+0.3
LZH				pP	pP	19 40 15.3	-0.2
LZH				PP	PnPn	19 40 33.5	+0.7
LZH				sP	PP	19 40 40.3	+0.3
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,73nm,4.9s						
SMY	Shemya	30.96	43	P	P	19 39 53.5	-1.5
KMI	Kunming	32.35	263	⇓P	P	19 40 07.0	-0.7
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
KMI	Kunming	32.35	263	P	P	19 40 06.2	-1.5
KMI				IAmb	IAmb	19 40 07.7	
	comp=Z,13nm,1.0s						
WMQ	Urumqi	39.90	299	eP	P	19 41 12.5	+1.3
ZAA0	Zalesovo Array	41.85	314	P	P	19 41 27.2	+0.3
ZALV	Zalesovo Beam	41.85	314	P	P	19 41 27.9	+1.0
	comp=Z,0.5nm,0.3s,baz=108,slow=6.6,SNR=5.4						
ZALV	Zalesovo Beam	41.85	314	P	P	19 41 27.7	+0.8
MK31	Makanchi Array	43.46	304	P	P	19 41 41.0	+1.0
MKAR	Makanchi Array	43.46	304	P	P	19 41 40.8	+0.8
	comp=Z,1.9nm,0.4s,baz=84,slow=10,SNR=54						
MKAR	Makanchi Array	43.46	304	P	P	19 41 40.6	+0.6
MAKZ	Makanchi	43.67	304	P	P	19 41 42.5	+0.8
MAKZ				IAmb	IAmb	19 41 42.9	
	comp=Z,2.9nm,0.4s						
KURK	Kurchatov	45.61	310	P	P	19 41 57.2	+0.3
KURBB	Kurchatov Arra	45.67	310	P	P	19 41 57.8	+0.4
	comp=Z,1.9nm,0.5s,baz=89,slow=7.7,SNR=16						
MTN	Manton Dam	47.78	190	P	P	19 42 14.0	0.0
MTN				IAmb	IAmb	19 42 46.6	
	comp=Z,23nm,1.4s						
A21K	Barrow	49.52	23	P	P	19 42 26.9	+0.4
AAK	Ala-Archa	49.60	299	P	P	19 42 27.8	-0.1
	comp=Z,1.3nm,0.6s,baz=128,slow=6.5,SNR=6.4						
AAK	Ala-Archa	49.60	299	P	P	19 42 29.0	+1.2

OHAK	**Old Harbor**	**50.05**	**41**	P	**P**	**19 42 31.9**	**+1.2**
BRLK	**Bradley Lake**	**51.14**	**38**	P	**P**	**19 42 39.7**	**+0.8**
BRLK				IAmb	IAmb	19 42 54.9	
	comp=Z,53nm,1.7s						
KK05	**Karatay Array**	**52.32**	**301**	P	**P**	**19 42 48.8**	**+0.9**
KK06	**Karatay Array**	**52.32**	**301**	P	**P**	**19 42 48.6**	**+0.7**
KK31	**Karatay Array**	**52.33**	**301**	P	**P**	**19 42 48.7**	**+0.8**
KK31				IAmb	IAmb	19 42 49.3	
	comp=Z,3.5nm,0.6s						
KKAR	**Karatay Array**	**52.33**	**301**	P	**P**	**19 42 48.8**	**+0.9**
KKAR	**Karatay Array**	**52.33**	**301**	P	**P**	**19 42 48.3**	**+0.4**
ILAR	**Eielson Array**	**52.71**	**31**	P	**P**	**19 42 52.7**	**+2.4**
FITZ	**Fitzroy Crossi**	**53.90**	**195**	P	**P**	**19 42 58.5**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=0.0,slow=8.1,SNR=1.3						
FITZ	**Fitzroy Crossi**	**53.90**	**195**	P	**P**	**19 42 59.2**	**-0.3**
FITZ				IAmb	IAmb	19 43 03.3	
	comp=Z,12nm,1.5s						
GLB	**Gilahina Butte**	**54.44**	**35**	P	**P**	**19 43 02.8**	**-0.1**
GLB				IAmb	IAmb	19 43 25.2	
	comp=Z,4.7nm,0.7s						
WB2	**Warramunga Arr**	**54.46**	**185**	P	**P**	**19 43 02.4**	**-1.1**
WB2				IAmb	IAmb	19 43 39.3	
	comp=Z,14nm,1.6s						
WRA	**Warramunga Arr**	**54.47**	**185**	P	**P**	**19 43 03.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=360,slow=7.5,SNR=9.0						
WRA	**Warramunga Arr**	**54.47**	**185**	IAmb	IAmb	19 43 07.5	
	comp=Z,0.2nm,1.1s						
WR0	**Warramunga Arr**	**54.47**	**185**	P	**P**	**19 43 03.2**	**-0.3**
WR0				IAmb	IAmb	19 43 40.5	
	comp=Z,15nm,1.5s						
WC3	**Warramunga Arr**	**54.48**	**185**	P	**P**	**19 43 02.9**	**-0.7**
WC3				IAmb	IAmb	19 43 04.5	
	comp=Z,14nm,1.4s						
BARN	**Barnard Glacie**	**55.52**	**35**	P	**P**	**19 43 12.0**	**+1.1**
BARN				IAmb	IAmb	19 43 45.0	
	comp=Z,17nm,1.5s						
AB06	**Akbulak array**	**57.69**	**311**	P	**P**	**19 43 26.6**	**+0.6**
ABKAR	**Akbulak array**	**57.70**	**311**	P	**P**	**19 43 26.8**	**+0.6**
ABKAR				IAmb	IAmb	19 43 27.4	
	comp=Z,4.0nm,0.6s						
ABKAR	**Akbulak array**	**57.70**	**311**	P	**P**	**19 43 26.6**	**+0.5**
ASAR	**Alice Springs**	**58.19**	**185**	P	**P**	**19 43 29.6**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=0.3,slow=6.6,SNR=2.7						
AKTO	**Aktyubinsk**	**58.54**	**312**	P	**P**	**19 43 32.7**	**+0.7**
	comp=Z,1.3nm,0.6s						
ARCES	**ARCESS Array B**	**65.38**	**339**	P	**P**	**19 44 18.3**	**+1.2**
	comp=Z,4.4nm,1.0s,baz=68,slow=7.3,SNR=1.2						
ARCES	**ARCESS Array B**	**65.38**	**339**	P	**P**	**19 44 15.8**	**-1.3**
FIA1	**FINESS Array S**	**69.81**	**332**	P	**P**	**19 44 45.6**	**+0.8**
FINES	**FINESS Array B**	**69.81**	**332**	P	**P**	**19 44 45.8**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=63,slow=5.1,SNR=11						
FINES	**FINESS Array B**	**69.81**	**332**	P	**P**	**19 44 45.6**	**+0.8**
KBZ	**Khabaz**	**70.67**	**310**	P	**P**	**19 44 51.9**	**+1.5**
	comp=Z,2.3nm,0.9s,baz=11,slow=4.0,SNR=6.2						
AKASG	**Malin Array Be**	**74.73**	**322**	P	**P**	**19 45 14.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=49,slow=5.3,SNR=1.9						
NC405	**NORSAR Array S**	**75.22**	**336**	P	**P**	**19 45 18.0**	**+1.2**
NC204	**NORSAR Array S**	**75.42**	**337**	P	**P**	**19 45 19.0**	**+1.1**
NOA	**NORSAR Array B**	**75.44**	**336**	P	**P**	**19 45 18.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=54,slow=7.7,SNR=1.6						
BTNL	**Ternell**	**85.31**	**332**	*d*PcP	**PcP**	**19 46 13.6**	**+0.1**

*SJA **30** 20:07:41.7±0.7, 28°.25S×67°.92W, h129^{km}±3^{km}, ML4.0, MW3.9*
*NEIC **30** 20:07:41.9±2.9, 28°.23S±0°.07×67°.9W±0°.1, h106^{km}±2^{km}, Error ellipse: s-maj=12.7km s-min=9.5km az=96.0*
*IDC **30** 20:07:44.2±6.5, 28°.10S×67°.71W, h114^{km}±42^{km}, mb3.9/3, mb1 3.8/6, mb1mx3.5/42, mbtmp4.1/6, Error ellipse: s-maj=71.5km s-min=23.4km az=36.0*
ISC 30 20:07:42.1±0.7**, 28°.21S**±0°.03×**67°.89W**±0°.03**, h116**^{km}±7^{km}**, n83, σ1^{s}.73**/114**, mb4.4**/7**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.59**	**208**	*e*P	**Pn**	**20 08 01.9**	**+1.4**
VCA				*e*S	**Sn**	**20 08 16.3**	**+2.0**
VCA				IAML		20 08 19.9	
	comp=Z,6μm,0.3s						
AGUA	**GUANDACOL**	**1.38**	**202**	*e*P	**Pn**	**20 08 09.2**	**+1.1**
AGUA				*e*S	**Sn**	**20 08 30.1**	**+2.5**
AGUA				IAML		20 08 31.4	
	comp=Z,3μm,0.9s						
ACLC	**CERRO LA CRUZ**	**1.47**	**146**	*e*P	**Pn**	**20 08 10.6**	**+1.4**
ACLC				*e*S	**Sn**	**20 08 30.9**	**+1.3**
ACLC				IAML		20 08 32.1	
	comp=Z,1μm,0.3s						
AC02	**Maricunga**	**1.75**	**321**	Pn	**Pn**	**20 08 15.4**	**+2.5**
CYA	**Choya**	**1.86**	**98**	*e*P	**Pn**	**20 08 15.6**	**+1.9**
CYA				*e*S	**Sn**	**20 08 39.0**	**+1.3**
CYA				IAML		20 08 40.3	
	comp=Z,980nm,0.4s						
GO03	**Copiap**	**2.16**	**286**		**Pn**	**20 08 18.5**	**+1.0**
GO03				Sn	**Sn**	**20 08 44.5**	**-0.1**
GO03	**Copiap**	**2.16**	**286**	*e*P	**Pn**	**20 08 18.5**	**+1.0**
GO03				*e*S	**Sn**	**20 08 45.0**	**+0.5**
AC05	**El Transito**	**2.19**	**253**		**Pn**	**20 08 19.1**	**+1.2**
AC05				Sn	**Sn**	**20 08 46.2**	**+1.0**
ACDV	**Cuesta del Vie**	**2.23**	**208**	*e*P	**Pn**	**20 08 20.1**	**+1.6**
ACDV				*e*S	**Sn**	**20 08 47.1**	**+0.8**
ACDV				IAML		20 08 48.7	
	comp=Z,452nm,0.5s						
AROD	**Rodeo**	**2.39**	**215**	*e*P	**Pn**	**20 08 22.0**	**+1.4**
AROD				*e*S	**Sn**	**20 08 51.3**	**+1.1**
AVFE	**Valle Fertil**	**2.47**	**171**	*e*P	**Pn**	**20 08 22.1**	**+0.7**
AVFE				*e*S	**Sn**	**20 08 51.6**	**-0.1**
AVFE				IAML		20 08 52.5	
	comp=Z,399nm,0.4s						
ACCO	**Cerro Coronel**	**2.58**	**203**	*e*P	**Pn**	**20 08 24.2**	**+1.1**
ACCO				*e*S	**Sn**	**20 08 55.6**	**+1.0**
ACCO				IAML		20 08 57.6	
	comp=Z,595nm,0.3s						
LCO	**Las Campanas**	**2.59**	**251**		**Pn**	**20 08 23.8**	**+0.5**
LCO				Sn	**Sn**	**20 08 54.3**	**-0.5**
CO01	**Juntas del Tor**	**2.61**	**227**		**Pn**	**20 08 24.8**	**+1.4**
CO01				Sn	**Sn**	**20 08 56.9**	**+1.8**
AHML	**Horco Molle**	**2.68**	**59**	*e*P	**Pn**	**20 08 26.3**	**+2.1**
AHML				*e*S	**Sn**	**20 08 58.2**	**+1.7**
FSA	**Cafayete**	**2.70**	**40**	*e*P	**Pn**	**20 08 28.2**	**+3.6**
FSA				*e*S	**Sn**	**20 08 58.0**	**+0.9**
AC04	**Llanos de Chal**	**2.81**	**269**		**Pn**	**20 08 25.8**	**+0.1**
AC04				Sn	**Sn**	**20 08 57.1**	**-2.3**
ACHE	**Chepes**	**3.13**	**160**	*e*P	**Pn**	**20 08 31.1**	**+1.0**
RTLL	**Cerro Villicun**	**3.15**	**189**	*e*P	**Pn**	**20 08 30.8**	**+0.5**
RTLL				*e*S	**Sn**	**20 09 07.0**	**-0.5**
RTLL				IAML		20 09 08.2	
	comp=Z,656nm,0.4s						
AC01	**Pan de Azucar**	**3.17**	**310**		**Pn**	**20 08 31.3**	**+0.8**
GO04	**Tololo Observa**	**3.21**	**232**		**Pn**	**20 08 31.1**	**-0.2**
GO04	**Tololo Observa**	**3.21**	**232**	*e*P	**Pn**	**20 08 31.1**	**-0.2**
GO04				*e*P		20 08 31.4	
GO04				*e*S	**Sn**	**20 09 08.9**	**-0.2**
GO02	**Mina Guanaco**	**3.39**	**333**		**Pn**	**20 08 35.6**	**+1.8**
ZON	**Zonda**	**3.39**	**191**		**Pn**	**20 08 34.1**	**+0.5**
ZON	**Zonda**	**3.39**	**191**	*e*P	**Pn**	**20 08 34.8**	**+1.2**
ZON				*e*S	**Sn**	**20 09 12.6**	**-0.7**
ZON				IAML		20 09 17.3	
	comp=Z,140nm,0.8s						
CO03	**El Pedregal**	**3.58**	**222**	Pn	**Pn**	**20 08 36.0**	**0.0**
RTCV	**Cerro Valdivia**	**3.68**	**189**	*e*P	**Pn**	**20 08 37.9**	**+0.5**
RTCV				*e*S	**Sn**	**20 09 20.4**	**+0.2**
RTCV				IAML		20 09 20.6	
	comp=Z,204nm,0.8s						
CO02	**Combarbal**	**4.03**	**221**		**Pn**	**20 08 41.1**	**-1.0**
AUSP	**Uspallata**	**4.20**	**198**	*e*P	**Pn**	**20 08 45.5**	**+0.9**
AUSP				*e*S	**Sn**	**20 09 34.9**	**+1.9**
PB14	**IPOC Station P**	**4.22**	**327**	Pn	**Pn**	**20 08 45.7**	**+0.8**
PB14	**IPOC Station P**	**4.22**	**327**	*e*P	**Pn**	**20 08 45.9**	**+1.0**
PB14				*e*S	**Sn**	**20 09 33.7**	**+0.2**
PB14				IAML		20 09 47.5	
	comp=Z,106nm,0.3s						
TCA	**Tanti**	**4.24**	**138**	*e*P	**Pn**	**20 08 45.0**	**+0.2**
TCA				*e*S	**Sn**	**20 09 31.6**	**-1.8**
TCA				IAML		20 09 32.3	
	comp=Z,98nm,0.8s						
ASAL	**Salagasta**	**4.44**	**190**	*e*P	**Pn**	**20 08 48.0**	**+0.4**
ASAL				*e*S	**Sn**	**20 09 38.7**	**+0.3**
ASAL				IAML		20 10 05.6	
	comp=Z,111nm,0.5s						
MRA	**San Martin**	**4.60**	**156**	*e*P	**Pn**	**20 08 49.8**	**+0.1**
MRA				*e*S	**Sn**	**20 09 40.5**	**-1.7**
MRA				IAML		20 10 26.1	
	comp=Z,86nm,0.6s						
ARCO	**CERRO ARCO**	**4.70**	**191**	*e*P	**Pn**	**20 08 51.6**	**+0.4**
ARCO				IAML		20 10 06.6	
	comp=Z,95nm,0.8s						
AZAP	**Zapla**	**4.71**	**33**	*e*P	**Pn**	**20 08 54.2**	**+2.8**
AZAP				*e*S	**Sn**	**20 09 38.0**	**-7.2**
AZAP				IAML		20 09 40.9	
	comp=Z,62nm,0.8s						
AAGR	**Agrelo**	**4.93**	**189**	*e*P	**Pn**	**20 08 54.2**	**+0.1**
AAGR				IAML		20 10 16.0	
	comp=Z,104nm,1.0s						
VA03	**San Esteban**	**5.08**	**206**		**Pn**	**20 08 55.8**	**-0.5**
PB15	**IPOC Station P**	**5.18**	**344**		**Pn**	**20 08 55.6**	**-2.1**
PB15	**IPOC Station P**	**5.18**	**344**	*e*P	**Pn**	**20 08 56.0**	**-1.7**
PB15				*e*S	**Sn**	**20 09 58.7**	**+2.2**
PB15				IAML		20 10 10.2	
	comp=Z,192nm,0.1s						
PB10	**IPOC Station P**	**5.25**	**332**	Pn	**Pn**	**20 08 58.3**	**-0.2**
PB10	**IPOC Station P**	**5.25**	**332**	*e*P	**Pn**	**20 08 59.3**	**+0.8**
PB10				IAML		20 10 11.9	
	comp=Z,40nm,0.6s						
ROC1	**El Roble**	**5.46**	**209**		**Pn**	**20 08 59.6**	**-1.8**
HJA	**Humahuaca**	**5.46**	**25**	*e*P	**Pn**	**20 09 05.4**	**+3.7**
HJA				*e*S	**Sn**	**20 09 55.7**	**-7.8**
PEL	**Peldehue**	**5.47**	**205**	Pn	**Pn**	**20 09 00.1**	**-1.4**
PEL	**Peldehue**	**5.47**	**205**	*e*P	**Pn**	**20 09 01.1**	**-0.4**
PEL				*e*S	**Sn**	**20 10 01.6**	**-1.7**
LVC	**Limon Verde**	**5.65**	**350**	P	**Pn**	**20 09 05.6**	**+1.4**
	comp=Z,12nm,0.3s,baz=186,slow=9.3,SNR=27						
LVC				S	**Sn**	**20 10 08.7**	**+0.7**
	comp=Z,8.0nm,0.3s,baz=332,slow=22,SNR=7.2						
LVC	**Limon Verde**	**5.65**	**350**	Pn	**Pn**	**20 09 05.3**	**+1.1**
PB06	**IPOC Station P**	**5.69**	**344**		**Pn**	**20 09 04.9**	**+0.4**
MT05	**Renca**	**5.72**	**205**	Pn	**Pn**	**20 09 03.4**	**-1.3**
MT02	**Curacav**	**5.76**	**208**		**Pn**	**20 09 02.6**	**-2.6**
PB04	**IPOC Station P**	**6.20**	**340**		**Pn**	**20 09 10.5**	**-0.9**
PB09	**IPOC Station P**	**6.50**	**349**		**Pn**	**20 09 16.2**	**+0.6**
RFA	**San Rafael**	**6.56**	**184**	*e*P	**Pn**	**20 09 14.6**	**-1.5**
RFA				*e*S	**Sn**	**20 10 26.3**	**-3.3**
RFA				IAML		20 11 05.5	
	comp=Z,29nm,0.7s						
PB07	**IPOC Station P**	**6.70**	**344**		**Pn**	**20 09 17.2**	**-1.1**
BO02	**Sierra Bellavi**	**7.01**	**200**		**Pn**	**20 09 20.6**	**-1.7**
PB01	**IPOC Station P**	**7.28**	**348**		**Pn**	**20 09 25.1**	**-0.9**
PUMA	**Malargue**	**7.38**	**190**	*e*P	**Pn**	**20 09 27.0**	**-0.3**
TA01	**Diego Aracena**	**7.89**	**344**	Pn	**Pn**	**20 09 32.7**	**-1.5**
PB08	**IPOC Station P**	**8.11**	**352**	Pn	**Pn**	**20 09 36.5**	**-1.1**
PSGCX	**Pisagua**	**8.81**	**346**	Pn	**Pn**	**20 09 43.8**	**-3.0**
BI02	**San Fabin de**	**8.90**	**198**	Pn	**Pn**	**20 09 45.3**	**-2.5**
MNMC	**Minye Minye**	**9.17**	**350**	Pn	**Pn**	**20 09 50.1**	**-1.7**
CPUP	**Villa Florida**	**9.59**	**81**	P	**Pn**	**20 09 56.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=254,slow=13,SNR=5.3						
CPUP	**Villa Florida**	**9.59**	**81**		**Pn**	**20 09 55.8**	**-1.2**
BI03	**Tigo**	**9.63**	**205**	Pn	**Pn**	**20 09 55.7**	**-2.0**
PB16	**IPOC Station P**	**9.94**	**351**	Pn	**Pn**	**20 10 02.3**	**-0.1**
SIV	**San Ignacio**	**13.70**	**29**	P	**Pn**	**20 10 51.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=205,slow=14,SNR=3.7						
SAML	**Samuel**	**19.67**	**14**	P	**P**	**20 12 02.5**	**+0.3**
SAML				IAmb	IAmb	20 12 04.8	
	comp=Z,4.3nm,0.8s						
BDFB	**Brasilia**	**22.24**	**60**	P	**P**	**20 12 29.5**	**-0.2**
PTGA	**Pitinga**	**28.36**	**17**	P	**P**	**20 13 27.8**	**+2.4**
PTGA				IAmb	IAmb	20 13 29.0	
	comp=Z,5.9nm,0.8s						
LIC	**Lamto**	**69.54**	**71**	*e*P	**P**	**20 18 39.7**	**+0.9**
	comp=Z,18nm,0.8s						
TIC	**Toumodi**	**69.78**	**70**	*e*P	**P**	**20 18 41.0**	**+0.7**
KIC	**Kosan Boka**	**69.86**	**71**	*e*P	**P**	**20 18 41.8**	**+1.0**
	comp=Z,12nm,0.6s						
DBIC	**Dimbokro**	**69.93**	**70**	P	**P**	**20 18 42.4**	**+1.2**
	comp=Z,6.6nm,0.6s,baz=209,slow=7.5,SNR=11						
TOA0	**Torodi Ar. Sit**	**78.84**	**69**	P	**P**	**20 19 33.8**	**+1.0**
TOA0				IAmb	IAmb	20 19 34.9	
	comp=Z,4.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.84**	**69**	P	**P**	**20 19 34.3**	**+1.5**
	comp=Z,3.5nm,0.6s,baz=260,slow=5.2,SNR=13						
TORD	**Torodi Ar. Bea**	**78.84**	**69**	P	**P**	**20 19 34.0**	**+1.3**
PDAR	**Pinedale Array**	**80.36**	**330**	P	**P**	**20 19 42.4**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=144,slow=7.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**147.45**	**30**	PKPbc	**PKiKP**	**20 27 13.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=304,slow=4.8,SNR=10						
ZALV	**Zalesovo Beam**	**147.45**	**30**		**PKiKP**	**20 27 13.5**	**-0.7**
MKAR	**Makanchi Array**	**150.20**	**43**	PKPbc	**PKiKP**	**20 27 20.8**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=303,slow=2.4,SNR=15						
MKAR	**Makanchi Array**	**150.20**	**43**		**PKiKP**	**20 27 20.4**	**+0.2**

*ISN **30** 20:07:57.6±1.4, 35°.21N×45°.06E, h6^{km}±9^{km}, ML3.1*
*TEH **30** 20:07:58.6, 35°.38N×45°.12E, h10^{km}, ML3.6*
ISC 30 20:07:59.2±0.9**, 35°.32N**±0°.04×**45°.01E**±0°.05**, h10**^{km}**, n31, σ1^{s}.50**/31**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**1.29**	**119**	*e*Pg	**Pn**	**20 08 20.4**	**-3.0**
IDHR				*e*		20 08 38.0	
	comp=Z,99nm,0.2s						
MAHB	**Mahabad**	**1.54**	**21**	*e*Pg	**Pn**	**20 08 26.2**	**-0.7**
MAHB				*e*		20 08 49.9	
	comp=Z,99nm,0.4s						
IGHG	**Ghaleghazi**	**1.62**	**127**	*e*Pg	**Pn**	**20 08 28.8**	**+0.8**
IGHG				*e*		20 08 57.8	
	comp=Z,99nm,0.6s						
KCHF	**Cheshme Sefid,**	**1.97**	**122**	*e*Pn	**Pn**	**20 08 33.3**	**+0.5**
KER	**Kermanshah**	**1.98**	**118**	*e*Pn	**Pn**	**20 08 32.6**	**-0.2**
BHD	**Baghdad**	**2.12**	**195**	*e*Pg	**Pn**	**20 08 35.0**	**+0.4**
	baz=16						
BHD				*e*Sg	**Sb**	**20 09 04.0**	**+0.1**
CUKT	**Cukurca**	**2.23**	**330**	*e*P	**Pg**	**20 08 40.9**	**-1.1**
CUKT				*e*S	**Sg**	**20 09 11.4**	**+0.5**
IBDR	**Badra**	**2.33**	**161**	*e*Pn	**Pn**	**20 08 37.0**	**-0.6**
IBDR				*e*Sn	**Sn**	**20 09 06.0**	**-0.4**
IBDR				AML	AML	20 09 22.1	
	comp=E,216nm,0.5s						
IBDR				AML	AML	20 09 24.6	
	comp=N,142nm,0.4s						
HSRG	**Sareghieh**	**2.67**	**91**	*e*	**Sn**	**20 09 19.0**	**+3.9**
	comp=Z,99nm,0.9s						
IHSH	**Hashtrud**	**2.68**	**42**	*e*Pn	Pn	20 08 42.8	-11
IKFM	**Kafar-mosalman**	**2.95**	**127**	*e*Pn	**Pn**	**20 08 47.7**	**+1.6**
IKFM				*e*		20 09 37.7	
	comp=Z,99nm,0.3s						
SIRT	**Sirnak**	**3.01**	**317**	*e*P	**Pb**	**20 08 53.1**	**+0.2**
IDOB	**Doab**	**3.03**	**120**	*e*Pn	**Pn**	**20 08 48.4**	**+1.0**
ITBZ	**Tabriz**	**3.04**	**17**	*e*Pn	**Pn**	**20 08 47.8**	**+0.3**
ISRB	**Sarab**	**3.28**	**40**	*e*Pn	**Pn**	**20 08 50.9**	**0.0**
IKMR	**Kamar-syah**	**3.31**	**122**	*e*Pn	**Pn**	**20 08 52.2**	**+1.1**
IKMR				*e*		20 09 53.5	
	comp=Z,99nm,0.4s						
IHRS	**Heris**	**3.40**	**28**	*e*Pn	**Pn**	**20 08 53.4**	**+0.9**
AKDM	**Akdamar-Van**	**3.41**	**332**	*e*P	**Pb**	**20 08 57.4**	**-2.5**
IMRD	**Marand**	**3.43**	**9**	*e*Pn	**Pn**	**20 08 53.7**	**+0.9**
IMRD				*e*		20 09 51.3	
	comp=Z,99nm,0.4s						
VANB	**Van**	**3.52**	**339**	*e*P	**Pn**	**20 08 56.7**	**+2.7**
QABG	**Abgarm-Qazvin**	**3.75**	**83**	*e*Pn	**Pn**	**20 08 57.6**	**+0.3**
GURO	**Guroymak-BITLI**	**4.01**	**324**	*e*P	**Pb**	**20 09 07.5**	**-2.5**
AGRB	**Hanur-Agry**	**4.54**	**340**	*e*P	**Pn**	**20 09 09.6**	**+1.5**
TASB	**TASBURUN-IGDIR**	**4.69**	**353**	*e*P	Pn	20 09 03.9	-6.2
QALM	**Alamut, Qazvin**	**4.71**	**75**	*e*Pn	**Pn**	**20 09 11.0**	**+0.5**
DYBB	**Diyarbakir**	**4.72**	**305**	*e*P	**Pb**	**20 09 22.1**	**+0.1**
GNI	**Garni**	**4.82**	**358**	*e*P	**Pn**	**20 09 09.8**	**-2.2**
BNGB	**Bingl**	**5.04**	**318**	*e*P	Pb	20 09 21.2	-6.3
AMIS	**Naft Sefid**	**5.10**	**134**	*e*Pn	**Pn**	**20 09 16.8**	**+1.1**
IPIR	**Pirpir**	**5.55**	**117**	*e*Pn	**Pn**	**20 09 22.2**	**+0.1**
IKLH	**Kolahrood**	**5.79**	**108**	*e*Pn	**Pn**	**20 09 25.6**	**+0.3**

IDC 30 21:04:48.6±1.8**, 3°.42S×136°.74E, h0**^{km}**, mb3.3**/2**, mb1 3.8**/4**, mb1mx3.5**/39**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=44.0km s-min=32.0km az=96.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.06**	**77**	Pn	Pn	21 05 52.3	+0.3
	0.8nm,0.3s,baz=255,slow=16,SNR=1.7						
JAY				Sn	Sn	21 06 29.1	-11
	1.7nm,0.3s,baz=125,slow=7.7,SNR=2.1						
WRA	**Warramunga Arr**	**16.59**	**188**	Pn	P	21 08 44.2	-1.1
	0.5nm,0.3s,baz=12,slow=13,SNR=22						
WRA				Sn	Sn	21 11 29.1	-19
	0.1nm,0.3s,baz=4.2,slow=24,SNR=3.2						
ASAR	**Alice Springs**	**20.31**	**188**	P	P	21 09 25.7	-0.7
	1.5nm,0.7s,baz=15,slow=12,SNR=14						
ASAR				S	S	21 13 03.5	-12
	0.7nm,0.7s,baz=10,slow=23,SNR=4.2						
MKAR	**Makanchi Array**	**69.16**	**323**	P	P	21 15 57.0	0.0
	0.1nm,0.4s,baz=110,slow=7.8,SNR=1.7						

*BJI **30** 21:07:15.0±0.0, 15°.40S×173°.64W, h10^{km}, mB5.5/13, mb4.8/17*
*IDC **30** 21:07:16.0±0.6, 15°.21S×173°.63W, h0^{km}, mb4.5/20, mb1 4.7/21, mb1mx4.5/45, mbtmp4.5/21, ML3.5/1, MS4.2/22, Ms1 4.2/22, ms1mx4.0/39, Error ellipse: s-maj=29.3km s-min=13.7km az=143.0*
*NEIC **30** 21:07:17.6±1.3, 15°.09S±0°.08×173°.6W±0°.1, h10^{km}±1^{km}, mb5.0/153, Error ellipse: s-maj=18.7km s-min=12.8km az=292.0*
*NOU **30** 21:07:23.7, 15°.01S×173°.06W, h55^{km}, MLv5.0, Tonga Islands*
*GCMT **30** 21:07:26.6±0.2, 15°.06S±0°.02×173°.32W±0°.02, h12^{km}, MW5.3/97, Moment Tensor Solution. s19,c21; s97,c126; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.02±.01; $M_{\theta\theta}$0.04±.01; $M_{\phi\phi}$-0.01±.01; $M_{r\theta}$-1.05±.03; $M_{\theta\phi}$-0.04±.01; $M_{\phi r}$0.47±.03; Best double couple: $M_0$1.15000×10^{17} NP1:ϕ_s307.00000°, δ1.00000°, λ-77.00000°. NP2:ϕ_s114.00000°, δ89.00000°, λ-90.00000°. Principal axes: T 1.1700, Plg44.0000°, Azm204.0000°; N -0.0400, Plg0.0000°, Azm114.0000°; P -1.1300, Plg46.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 21:07:17.4±0.3**, 15°.13S**±0°.06×**173°.56W**±0°.08**, h10**^{km}**, n368, σ0^{s}.86**/340**, mb4.9**/83**, MS4.2**/23**, 12C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.11**	**55**	Pn	**Pn**	**21 07 50.5**	**-2.4**
AFI	**Afiamalu**	**2.11**	**55**	P	**Pn**	**21 07 50.8**	**-2.0**
NIUE	**Niue**	**5.24**	**139**	Pn	**Pn**	**21 08 35.3**	**-0.5**
NIUE	**Niue**	**5.24**	**139**	P	**Pn**	**21 08 35.3**	**-0.5**
MSVF	**Nonsavu**	**8.46**	**251**	P	Pb	21 09 31.1	-13
KNTN	**Kanton**	**12.41**	**9**	Pn	**Pn**	**21 10 12.0**	**-2.3**
KNTN	**Kanton**	**12.41**	**9**	P	**Pn**	**21 10 14.4**	**+0.1**
RAR	**Rarotonga**	**14.42**	**117**	Pn	**Pn**	**21 10 42.1**	**+0.3**
	2.1nm,0.3s,baz=20,slow=12,SNR=2.1						
RAR				Sn	Sn	21 13 07.2	-15
	0.9nm,0.3s,baz=157,slow=22,SNR=1.4						
RAR				LR	LR	21 14 25.2	
	comp=Z,259nm,20.0s,baz=248,slow=30						
RAO	**Raoul Island**	**14.62**	**195**	LR	LR	21 15 47.2	
	comp=Z,839nm,18.4s,baz=86,slow=35						
DZM	**Mont Dzumac**	**20.16**	**247**	P	**P**	**21 11 51.6**	**-0.6**
	6.0nm,0.8s,baz=128,slow=18,SNR=2.2						
DZM				LR	LR	21 18 36.7	
	comp=Z,960nm,20.4s,baz=87,slow=34						
DZM	**Mont Dzumac**	**20.16**	**247**	*e*LR	LR	21 17 13.5	
	comp=Z,3μm,26.9s						
DZM	**Mont Dzumac**	**20.16**	**247**	IAmb	IAmb	21 12 00.8	
	comp=Z,106nm,1.4s						
OUZ	**Omahuta**	**23.09**	**208**	P	**P**	**21 12 24.1**	**+0.7**
PAE	**Paea**	**23.14**	**100**	*e*T	T	21 35 22.8	
	comp=Z,2.0nm,0.2s						
PPT	**Papeete**	**23.14**	**99**	LR	LR	21 20 57.7	
	comp=Z,125nm,18.0s,baz=236,slow=35						
PPT2	**Papeete2**	**23.14**	**99**	*e*LR	LR	21 17 48.4	
	comp=Z,614nm,25.5s						
PPT2	**Papeete2**	**23.14**	**99**	*e*T	T	21 35 23.6	
	comp=Z,6.6nm,0.3s						
TIAR	**Tiarei**	**23.35**	**99**	*e*T	T	21 35 39.1	
	comp=Z,2.2nm,0.3s						
TVO	**Taravao**	**23.45**	**100**	*e*T	T	21 35 46.7	
	comp=Z,1.1nm,0.3s						
TBI	**Tubuai**	**24.15**	**113**	*e*LR	LR	21 18 24.3	
	comp=Z,257nm,27.8s						
TBI	**Tubuai**	**24.15**	**113**	*e*T	T	21 36 54.2	
	comp=Z,8.9nm,0.3s						
URZ	**Urewera**	**24.47**	**198**	P	**P**	**21 12 36.2**	**-0.5**
	comp=Z,7.4nm,0.4s,baz=282,slow=2.3,SNR=9.6						
URZ				LR	LR	21 21 21.7	
	comp=Z,1μm,18.3s,baz=30,slow=35						
URZ	**Urewera**	**24.47**	**198**	P	**P**	**21 12 36.4**	**-0.2**
VAH	**Vaihoa**	**25.02**	**94**	*e*T	T	21 37 38.5	
	comp=Z,3.6nm,0.2s						
BKZ	**Black Stump Fm**	**25.49**	**198**	P	**P**	**21 12 46.4**	**+0.4**
BFZ	**Birch Farm**	**26.96**	**197**	P	**P**	**21 12 59.8**	**+0.6**
BFZ				IAmb	IAmb	21 13 15.5	
	comp=Z,36nm,1.2s						
MSWZ	**Moikau Station**	**27.93**	**198**	P	**P**	**21 13 08.2**	**+0.3**
BHW	**Baring Head**	**28.04**	**199**	P	**P**	**21 13 07.2**	**-1.6**
PLWZ	**Palliser**	**28.07**	**198**	P	**P**	**21 13 09.6**	**+0.4**
QRZ	**Quartz Range**	**28.32**	**203**	P	**P**	**21 13 11.4**	**0.0**
QRZ				IAmb	IAmb	21 13 22.0	
	comp=Z,26nm,1.1s						
NNZ	**Nelson**	**28.36**	**201**	P	**P**	**21 13 12.2**	**+0.5**
THZ	**Tophouse**	**29.01**	**201**	P	**P**	**21 13 17.8**	**+0.2**
KHZ	**Kahutara**	**29.38**	**200**	P	**P**	**21 13 21.6**	**+1.0**
KHZ				IAmb	IAmb	21 13 27.7	
	comp=Z,21nm,1.2s						
LTZ	**Lake Taylor**	**30.13**	**201**	P	**P**	**21 13 25.9**	**-1.5**
LTZ				IAmb	IAmb	21 13 37.2	
	comp=Z,39nm,1.5s						
FOZ	**Fox Glacier**	**31.67**	**203**	P	**P**	**21 13 40.7**	**-0.3**
FOZ				IAmb	IAmb	21 13 59.7	
	comp=Z,21nm,1.0s						
LBZ	**Lake Benmore**	**32.27**	**202**	P	**P**	**21 13 45.2**	**-1.1**
LBZ				IAmb	IAmb	21 13 45.3	
	comp=Z,18nm,1.3s						
ODZ	**Otahua Downs**	**32.68**	**201**	P	**P**	**21 13 50.8**	**+1.0**
WKZ	**Wanaka**	**33.08**	**203**	P	**P**	**21 13 53.8**	**+0.4**
TAOE	**Nuku Hiva Isla**	**33.24**	**83**	*e*LR	LR	21 22 21.5	
	comp=Z,778nm,25.6s						
TAOE	**Nuku Hiva Isla**	**33.24**	**83**	*e*T	T	21 47 45.5	
	comp=Z,33nm,0.3s						
MLZ	**Mavora Lakes**	**33.87**	**203**	P	**P**	**21 14 01.6**	**+1.3**
DCZ	**Deep Cove**	**34.33**	**204**	P	**P**	**21 14 02.6**	**-1.6**
WHZ	**Wether Hill Ro**	**34.38**	**203**	P	**P**	**21 14 05.8**	**+1.2**
PYZ	**Puysegur Point**	**35.10**	**204**	P	**P**	**21 14 10.5**	**-0.3**
H11N3	**WAKE ISLAND Hy**	**39.60**	**330**	T	T	21 56 55.4	
	baz=149,slow=76,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**39.61**	**330**	T	T	21 57 12.0	
	baz=149,slow=76,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**39.62**	**330**	T	T	21 56 56.6	
	baz=149,slow=76,SNR=8.4						
COEN	**Coen**	**41.85**	**266**	P	**P**	**21 15 07.9**	**-0.1**
STKA	**Stephens Creek**	**44.04**	**240**	P	**P**	**21 15 24.8**	**-0.9**
	comp=Z,4.4nm,1.0s,baz=67,slow=11,SNR=4.2						
STKA				LR	LR	21 31 46.9	
	comp=Z,278nm,20.6s,baz=44,slow=34						
WR0	**Warramunga Arr**	**49.57**	**257**	P	**P**	**21 16 09.1**	**0.0**
WB0	**Warramunga Arr**	**49.72**	**257**	P	**P**	**21 16 09.6**	**-0.6**
WB2	**Warramunga Arr**	**49.75**	**257**	P	**P**	**21 16 09.1**	**-1.4**
WRAB	**Tennant Creek**	**49.75**	**257**	P	**P**	**21 16 09.4**	**-1.1**
WRAB				IAmb	IAmb	21 16 11.8	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**49.76**	**257**	P	**P**	**21 16 09.5**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=94,slow=6.9,SNR=24						
WRA				LR	LR	21 37 57.7	
	comp=Z,176nm,18.0s,baz=345,slow=37						
WRA	**Warramunga Arr**	**49.76**	**257**	P	**P**	**21 16 10.1**	**-0.4**
AS31	**Alice Springs**	**50.05**	**252**	P	**P**	**21 16 11.9**	**-0.9**
ASAR	**Alice Springs**	**50.05**	**252**	P	**P**	**21 16 11.5**	**-1.3**
	comp=Z,13nm,0.8s,baz=85,slow=8.4,SNR=44						
ASAR				LR	LR	21 35 40.5	
	comp=Z,579nm,21.9s,baz=89,slow=34						
VNDA	**Vanda**	**63.63**	**186**	LR	LR	21 45 26.8	
	comp=Z,78nm,18.2s,baz=16,slow=36						
MJAR	**Matsushiro Arr**	**68.64**	**320**	LR	LR	21 42 51.7	
	comp=Z,144nm,21.8s,baz=130,slow=31						
SCI2	**San Clemente I**	**71.04**	**47**	P	**P**	**21 18 36.4**	**+0.6**
	baz=237						
PKM	**Mcpherson Peak**	**71.22**	**44**	P	**P**	**21 18 37.6**	**+0.5**
	baz=235						
SMMC	**Simmler**	**71.34**	**44**	P	**P**	**21 18 39.0**	**+1.3**
	baz=235						
FMP	**Fort Macarthur**	**71.61**	**46**	P	**P**	**21 18 40.3**	**+1.0**
	baz=237						
OSI	**Osito Audit: C**	**71.81**	**45**	P	**P**	**21 18 41.4**	**+0.8**
	baz=236						
VES	**Vestal, Richgr**	**72.25**	**44**	P	**P**	**21 18 43.9**	**+0.8**
	baz=236						
MURC	**Murrieta**	**72.32**	**47**	P	**P**	**21 18 44.4**	**+0.8**
	baz=238						
PEA0B	**Petropavlovsk-**	**72.33**	**342**	P	**P**	**21 18 43.0**	**-0.2**
PETK	**Petropavlovsk-**	**72.33**	**342**	P	**P**	**21 18 44.2**	**+1.1**
	comp=Z,8.5nm,0.9s,baz=119,slow=8.6,SNR=8.2						

PETK				LR	LR	21 43 11.1	
	comp=Z,86nm,21.4s,baz=135,slow=30						
PETK	Petropavlovsk-	72.33	342	P	P	21 18 43.4	+0.3
BFSC	Mount Baldy Ra	72.34	46	P	P	21 18 44.4	+0.6
	baz=237						
EDW2	Edwards Air Fo	72.46	45	P	P	21 18 45.3	+0.8
	baz=237,SNR=13						
O02D	Mt. Diablo Mer	72.46	38	P	P	21 18 45.9	+1.5
	baz=232,SNR=7.5						
MONP2	Monument Peak	72.50	48	P	P	21 18 45.8	+0.9
	baz=238,SNR=5.6						
ISA	Isabella, Lake	72.57	44	P	P	21 18 46.1	+1.1
	baz=236,SNR=7.2						
IKP	In-Ko-Pah, Jac	72.59	48	P	P	21 18 46.1	+0.7
	baz=238						
KRMB	Red Mountain	72.65	37	P	P	21 18 46.6	+1.2
CMB	Columbia Colle	72.66	41	P	P	21 18 45.2	-0.3
CMB				IAmb	IAmb	21 18 47.6	
	comp=Z,18nm,1.1s						
PFO	Pinyon Flats O	72.85	47	P	P	21 18 48.1	+1.2
	comp=Z,2.4nm,0.6s,baz=195,slow=1.5,SNR=5.8						
PFO	Pinyon Flats O	72.85	47	P	P	21 18 47.8	+0.9
	baz=238						
TPFO	Pinon Flats	72.85	47	P	P	21 18 47.8	+0.9
	baz=238						
KBO	Bosley Butte	72.91	36	P	P	21 18 46.5	-0.4
SWSC	Sam W. Stewart	72.97	48	P	P	21 18 48.3	+0.9
	baz=239						
LRMC	Laurel Mtn Rad	73.00	45	P	P	21 18 48.4	+0.7
	baz=237,SNR=7.8						
N02D	Trinity Center	73.01	38	P	P	21 18 49.2	+1.7
	baz=232,SNR=5.2						
O03E	Paynes Creek	73.13	39	P	P	21 18 49.2	+0.9
	baz=232,SNR=9.6						
M02C	Callahan	73.18	37	P	P	21 18 49.7	+1.1
	baz=231						
L02E	Cave Junction	73.23	36	P	P	21 18 49.7	+0.9
	baz=230						
CWC	Cottonwood Cre	73.26	44	P	P	21 18 50.3	+1.0
	baz=236						
BELC	Belle Mtn. Jos	73.38	47	P	P	21 18 50.9	+0.8
	baz=238						
MLAC	Mammoth, Mammo	73.43	43	P	P	21 18 50.8	+0.4
	baz=235						
MPMC	Manual Prospec	73.45	45	P	P	21 18 51.0	+0.5
	baz=237,SNR=15						
YBH	Yreka Blue Hor	73.48	37	P	P	21 18 51.7	+1.3
	comp=Z,16nm,0.9s,baz=222,slow=1.4,SNR=30						
YBH	Yreka Blue Hor	73.48	37	P	P	21 18 51.7	+1.3
TIN	Tinemaha, Big	73.50	43	P	P	21 18 51.6	+0.9
	baz=236						
GSC	Goldstone, Bar	73.51	46	P	P	21 18 51.4	+0.7
	baz=237,SNR=8.2						
K02D	Willamette Mer	73.53	36	P	P	21 18 51.6	+1.0
	baz=230,SNR=5.4						
WAKR	Walker	73.54	42	P	P	21 18 52.1	+1.1
WAKR				IAmb	IAmb	21 18 54.0	
	comp=Z,29nm,1.4s						
HEC	Hector,Ludlow	73.58	46	P	P	21 18 51.5	+0.4
	baz=238,SNR=10						
BC3	Big Chuckawall	73.59	48	P	P	21 18 52.2	+1.0
	baz=239,SNR=6.3						
J01E	Myrtle Point	73.68	36	P	P	21 18 52.6	+1.2
	baz=230						
GLA	Glamis	73.73	48	P	P	21 18 52.7	+0.8
	baz=239						
BEKR	Beckworth	73.76	40	P	P	21 18 52.5	+0.4
BEKR				IAmb	IAmb	21 18 54.2	
	comp=Z,16nm,1.0s						
PNTR	Pine Nut	73.78	41	P	P	21 18 51.9	-0.5
HUMO	Hull Mountain	73.88	36	P	P	21 18 54.0	+1.4
HUMO				IAmb	IAmb	21 18 55.5	
	comp=Z,22nm,1.1s						
L04D	Klamath Falls	74.02	37	P	P	21 18 54.6	+1.0
	baz=232,SNR=11						
M04C	Macdoel	74.02	38	P	P	21 18 54.8	+1.2
	baz=232						
GMRC	Granite Mounta	74.03	46	P	P	21 18 54.3	+0.5
	baz=238,SNR=7.8						
GRAC	Grapevine Rang	74.05	44	P	P	21 18 54.6	+0.9
	baz=236						
IRM	Iron Mountain	74.06	47	P	P	21 18 54.5	+0.5
	baz=239,SNR=13						
FURC	Furnace Creek,	74.10	44	P	P	21 18 54.9	+0.9
	baz=237						
NVAR	Mina Array Bea	74.23	42	P	P	21 18 56.0	+1.0
	comp=Z,10nm,0.8s,baz=227,slow=9.6,SNR=35						
NVAR				LR	LR	21 43 50.5	
	comp=Z,332nm,21.5s,baz=266,slow=30						
NVAR	Mina Array Bea	74.23	42	P	P	21 18 56.0	+1.0
I02D	Swisshome	74.33	35	P	P	21 18 56.1	+1.0
	baz=230						
I03D	Drain, OR	74.35	35	P	P	21 18 56.4	+1.1
	baz=230,SNR=5.3						
214A	Organ Pipe Nat	74.66	50	P	P	21 18 58.6	+1.2
	baz=241						
TPH	Tonopah	74.74	43	P	P	21 18 58.7	+0.8
J04D	Umpqua Nationa	74.76	36	P	P	21 18 59.0	+1.0
	baz=232						
TPNV	Topopah Spring	74.77	44	P	P	21 18 59.2	+1.0
	baz=237,SNR=5.8						
TPNV	Topopah Spring	74.77	44	P	P	21 18 58.4	+0.2
PDMCI	Parker Dam,Lak	74.85	48	P	P	21 18 59.4	+0.9
	baz=239						
QSPA	South Pole Qui	74.91	180	P	P	21 18 59.1	+0.6
I04A	Tendick Farm,	74.94	36	P	P	21 18 59.3	+0.5
	baz=231,SNR=6.6						
MOD	Modoc Plateau	75.00	38	P	P	21 19 00.3	+0.9
K05A	Summer Lake	75.15	37	P	P	21 19 01.1	+0.9
H04D	Lebanon	75.22	35	P	P	21 19 01.2	+0.9
	baz=231						
SHPR	Sheep Range	75.28	45	P	P	21 19 01.8	+0.7
SHPR				IAmb	IAmb	21 19 03.4	
	comp=Z,17nm,1.2s						
J05D	Fort Rock, OR	75.29	37	P	P	21 19 02.2	+1.2
	baz=232,SNR=18						
G03D	McMinnville, O	75.36	34	P	P	21 19 01.8	+0.7
	baz=230						
PINE	Pine Mountain	75.77	36	P	P	21 19 06.0	+2.2
KSRS	Korea Array	75.86	316	LR	LR	21 46 14.3	
	comp=Z,56nm,21.3s,baz=135,slow=31						
I05D	Terrebonne, OR	75.88	36	P	P	21 19 05.2	+1.0
	baz=232,SNR=5.8						
R11A	Troy Canyon, C	75.97	43	P	P	21 19 05.7	+0.7
	baz=238,SNR=12						
WVOR	Wild Horse Val	76.32	39	P	P	21 19 05.9	-0.9
WVOR				IAmb	IAmb	21 19 09.1	
	comp=Z,20nm,1.1s						
TUC	Tucson	76.34	51	P	P	21 19 08.3	+1.2
	baz=242						
G05D	Wamic, OR	76.45	35	P	P	21 19 08.5	+1.1
	baz=232						
E04D	Cinebar	76.60	33	P	P	21 19 09.6	+1.5
	baz=230						
I07A	Izee	76.78	37	P	P	21 19 09.8	+0.4
I07A				IAmb	IAmb	21 19 11.8	
	comp=Z,19nm,1.2s						
LCMT	Little Creek M	76.86	46	P	P	21 19 10.2	+0.2
D03D	Eldon	76.95	32	P	P	21 19 11.1	+1.0
	baz=230						
319A	Douglas	77.05	52	P	P	21 19 11.4	+0.3
CCUT	Cedar City	77.05	45	P	P	21 19 11.6	+0.4
USRK	Ussuriysk Ar.	77.08	323	LR	LR	21 46 52.2	
	comp=Z,135nm,21.1s,baz=124,slow=31						
SPR3	Spring Creek 3	77.14	43	P	P	21 19 11.4	-0.4
SPR3				IAmb	IAmb	21 19 13.4	
	comp=Z,9.6nm,1.1s						
KNB	Kanab	77.15	46	P	P	21 19 11.9	+0.2
PSUT	Pine Spring	77.22	44	P	P	21 19 11.6	-0.5
U15A	North Rim	77.23	46	P	P	21 19 11.6	-0.7
SZCU	Shurtz Canyon	77.26	45	P	P	21 19 13.1	+0.7
WUAZ	Wupatki	77.43	48	P	P	21 19 14.4	+1.1
	baz=241						
WUAZ	Wupatki	77.43	48	P	P	21 19 13.6	+0.3
WUAZ				IAmb	IAmb	21 19 15.9	
	comp=Z,20nm,1.2s						
ELK	Elko	77.48	41	P	P	21 19 14.2	+0.6
	comp=Z,6.4nm,0.9s,baz=243,slow=5.3,SNR=22						
ELK	Elko	77.48	41	P	P	21 19 13.2	-0.4
ELK				IAmb	IAmb	21 19 15.5	
	comp=Z,10.0nm,1.0s						
G08A	Pilot Rock	77.81	36	P	P	21 19 14.7	-0.4
G08A				IAmb	IAmb	21 19 17.3	
	comp=Z,27nm,1.4s						
A04D	Lummi Island	77.91	32	P	P	21 19 15.9	+0.5
	baz=230						
B05A	Bryant	77.93	32	P	P	21 19 15.9	+0.4
	baz=230						
X18A	Snowflake	77.99	49	P	P	21 19 16.9	+0.4
X18A				IAmb	IAmb	21 19 19.0	
	comp=Z,20nm,1.5s						
MTPU	Mount Pierson	78.10	45	P	P	21 19 17.5	+0.2
HAWA	Hanford	78.14	35	P	P	21 19 17.3	+0.5
HAWA				IAmb	IAmb	21 19 19.8	
	comp=Z,11nm,0.9s						
MVU	Marysvale	78.31	45	P	P	21 19 18.9	+0.7
MSU	Marysvale	78.34	45	P	P	21 19 19.2	+0.8
W18A	Petrified Fore	78.42	49	P	P	21 19 19.9	+1.1
	baz=242						
BMO	Blue Mountains	78.50	37	P	P	21 19 18.7	-0.2
BMO				IAmb	IAmb	21 19 20.9	
	comp=Z,16nm,1.4s						
MFID	Camas Ranch	78.57	39	P	P	21 19 19.5	+0.1
MFID				IAmb	IAmb	21 19 22.0	
	comp=Z,23nm,1.4s						
121A	Cookes Peak, D	78.70	52	P	P	21 19 21.9	+1.5
	baz=244						
121A	Cookes Peak, D	78.70	52	P	P	21 19 20.8	+0.3
121A				IAmb	IAmb	21 19 23.1	
	comp=Z,12nm,1.0s						
DUG	Dugway, Tooele	78.77	43	P	P	21 19 21.4	+0.8
	baz=239						
DUG	Dugway, Tooele	78.77	43	P	P	21 19 20.5	-0.1
DUG				IAmb	IAmb	21 19 22.5	
	comp=Z,11nm,1.1s						
BGU	Big Grassy Mou	79.00	42	P	P	21 19 20.6	-1.3
TTA	Tatalina	79.01	8	P	P	21 19 20.6	-0.7
F10A	Beach Ranch, E	79.19	36	P	P	21 19 22.0	-0.7
Q16A	Castle Valley	79.22	45	P	P	21 19 24.0	+0.8
TMUT	Trail Mountain	79.39	44	P	P	21 19 24.9	+0.6
CUT	Chulitna	79.42	11	P	P	21 19 24.4	+0.9
	baz=203						
SPUT	South Promonto	79.57	42	P	P	21 19 25.2	+0.2
HVU	Hansel Valley	79.61	42	P	P	21 19 25.0	-0.2
SRU	San Rafael Swe	79.76	45	P	P	21 19 26.1	0.0
P17A	Butcher Ranch,	79.79	44	P	P	21 19 26.4	+0.2
N25K	Chitina, Valde	79.86	14	P	P	21 19 27.1	+1.2
	baz=208						
N25K	Chitina, Valde	79.86	14	P	P	21 19 26.1	+0.1
JLU	Jordanelle	79.87	43	P	P	21 19 26.7	0.0
NJ2	Nanjing	79.88	307	*e*P	P	21 19 26.0	-0.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
M24K	Tolsona, Glenn	79.96	13	P	P	21 19 26.8	+0.3
	baz=207						
BARN	Barnard Glacie	80.08	15	P	P	21 19 27.9	+0.5
BARN				IAmb	IAmb	21 19 30.8	
	comp=Z,17nm,1.2s						
TCUT	Toone Canyon	80.16	43	P	P	21 19 28.8	+0.5
MNTX	Cornudas Mount	80.19	53	P	P	21 19 29.2	+0.9
	baz=245						
MNTX	Cornudas Mount	80.19	53	P	P	21 19 28.6	+0.2
MNTX				IAmb	IAmb	21 19 30.7	
	comp=Z,14nm,1.2s						
PV05	Paradox Valley	80.25	46	P	P	21 19 29.2	+0.3
PV05				IAmb	IAmb	21 19 32.4	
	comp=Z,18nm,1.1s						
BNM	Barren Site	80.27	51	P	P	21 19 29.7	+0.7
KTH	Kantishna Hill	80.37	10	P	P	21 19 28.1	-0.6
TRF	Thorofare Moun	80.39	10	IAmb	IAmb	21 19 31.0	
	comp=Z,12nm,1.0s						
PV10	Paradox Valley	80.43	46	P	P	21 19 29.0	-0.9
PV10				IAmb	IAmb	21 19 32.5	
	comp=Z,19nm,1.1s						
PV19	Morning Glory	80.44	46	P	P	21 19 29.5	-0.3
PV19				IAmb	IAmb	21 19 32.8	
	comp=Z,18nm,1.1s						
PV14	Lion Creek, Pa	80.44	46	P	P	21 19 29.5	-0.4
PV14				IAmb	IAmb	21 19 33.4	
	comp=Z,19nm,1.1s						
PV17	East Wray Mesa	80.44	46	P	P	21 19 30.1	+0.2
PV17				IAmb	IAmb	21 19 32.7	
	comp=Z,15nm,1.1s						
PV18	Skein Mesa, Pa	80.46	46	P	P	21 19 29.6	-0.3
PV18				IAmb	IAmb	21 19 32.8	
	comp=Z,13nm,1.1s						
PV20	West Nyswonger	80.47	46	P	P	21 19 30.4	+0.4
PV20				IAmb	IAmb	21 19 32.1	
	comp=Z,20nm,1.3s						
PV16	Nyswonger Mesa	80.49	46	P	P	21 19 30.5	+0.4
PV16				IAmb	IAmb	21 19 33.7	
	comp=Z,16nm,1.1s						
PV23	Carpenter Ridg	80.49	46	P	P	21 19 30.6	+0.4
PV23				IAmb	IAmb	21 19 33.2	
	comp=Z,15nm,1.0s						
PV03	Paradox Valley	80.51	46	P	P	21 19 30.2	-0.1
PV03				IAmb	IAmb	21 19 32.4	
	comp=Z,22nm,1.4s						
PV11	David Mesa, Pa	80.51	46	P	P	21 19 30.3	+0.1
BCYI	Bear Canyon	80.53	39	P	P	21 19 30.4	+0.2
PV04	Paradox Valley	80.53	46	P	P	21 19 30.9	+0.5
PV04				IAmb	IAmb	21 19 33.4	
	comp=Z,11nm,1.0s						
PV12	Saucer Basin,	80.57	46	P	P	21 19 31.1	+0.5
PV12				IAmb	IAmb	21 19 34.8	
	comp=Z,22nm,1.1s						
NEW	Newport	80.57	34	P	P	21 19 30.6	+0.5
	baz=235						
TXAR	Lajitas Array	80.59	56	P	P	21 19 32.2	+1.5
	comp=Z,5.5nm,1.1s,baz=232,slow=6.1,SNR=20						
TXAR				LR	LR	21 49 25.4	
	comp=Z,169nm,19.1s,baz=0.0,slow=31						
TXAR	Lajitas Array	80.59	56	P	P	21 19 31.1	+0.4
RND	Reindeer	80.60	11	P	P	21 19 29.5	-0.5
PV01	Paradox Valley	80.65	46	P	P	21 19 31.6	+0.7
PV01				IAmb	IAmb	21 19 33.9	
	comp=Z,15nm,1.1s						
PV22	Blue Mesa, Par	80.68	46	P	P	21 19 30.7	-0.4
PV07	Paradox Valley	80.73	46	P	P	21 19 31.0	-0.4
ANMO	Albuquerque	80.75	50	P	P	21 19 32.7	+1.1
	comp=Z,4.4nm,0.9s,baz=245,slow=5.7,SNR=11						
ANMO	Albuquerque	80.75	50	P	P	21 19 32.9	+1.4
	baz=244						
ANMO	Albuquerque	80.75	50	P	P	21 19 32.2	+0.6
CN2	Changchun	80.78	320	*e*P	P	21 19 31.5	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MCK	McKinley	80.89	11	P	P	21 19 32.4	+1.0
	baz=204						
HYT	Haines Junctio	81.00	17	P	P	21 19 32.6	+0.4
HYT				IAmb	IAmb	21 19 35.5	
	comp=Z,15nm,1.4s						
RDMU	Red Mountain	81.11	44	P	P	21 19 32.6	-0.8
MCMT	McKenzie Canyo	81.14	39	P	P	21 19 33.6	+0.1
AHID	Auburn Hatcher	81.18	41	P	P	21 19 33.8	+0.1
GDL2	Guadalupe Moun	81.18	53	P	P	21 19 34.6	+0.7
BWN	Browne	81.20	10	P	P	21 19 32.4	-0.6
DLBC	Dease Lake	81.51	21	P	P	21 19 35.6	+0.8
	comp=Z,3.3nm,1.1s,baz=234,slow=10,SNR=4.0						
DLBC				LR	LR	21 52 50.7	
	comp=Z,93nm,18.1s,baz=322,slow=34						
MSO	Missoula	81.56	37	P	P	21 19 35.3	-0.1
	baz=237						
MSO	Missoula	81.56	37	P	P	21 19 35.4	-0.1
MSO				IAmb	IAmb	21 19 37.6	
	comp=Z,12nm,1.3s						
DLMT	Dillon	81.57	39	P	P	21 19 36.9	+1.3
REDW	Red Top Meadow	81.63	41	P	P	21 19 36.1	0.0
REDW				IAmb	IAmb	21 19 38.9	
	comp=Z,18nm,1.2s						
NEA2	Nenana	81.65	10	P	P	21 19 36.1	+0.7
	baz=204						
S22A	4UR Ranch, Cre	81.70	47	P	P	21 19 37.6	+1.0
	baz=244						
SNOW	Snow King Moun	81.74	41	P	P	21 19 36.7	0.0
SNOW				IAmb	IAmb	21 19 40.7	
	comp=Z,17nm,1.2s						
DOT	Dot Lake	81.78	13	P	P	21 19 36.3	+0.2
DOT				IAmb	IAmb	21 19 38.9	
	comp=Z,16nm,1.3s						
BCAR	Beaver Creek A	81.78	14	P	P	21 19 35.0	-1.2
IMW	Indian Meadow	81.84	40	P	P	21 19 37.6	+0.4
IMW				IAmb	IAmb	21 19 40.2	
	comp=Z,20nm,1.3s						
HDA	Harding Lake	81.87	11	P	P	21 19 37.3	+0.7
	baz=206						
HDA	Harding Lake	81.87	11	P	P	21 19 36.3	-0.3
HDA				IAmb	IAmb	21 19 38.6	
	comp=Z,14nm,0.9s						
MOOW	Moose Ponds	81.89	41	P	P	21 19 37.8	+0.3
LOHW	Long Hollow	81.91	41	P	P	21 19 37.0	-0.5
LOHW				IAmb	IAmb	21 19 39.7	
	comp=Z,14nm,1.4s						
CCB	Clear Creek Bu	81.93	11	IAmb	IAmb	21 19 38.6	
	comp=Z,14nm,0.8s						
QLMT	Earthquake Lak	82.01	39	P	P	21 19 39.2	+1.2
SCRK	Sand Creek	82.08	13	P	P	21 19 38.2	+0.4
	baz=209						
YHB	Horse Butte	82.11	40	P	P	21 19 39.6	+1.0
YPP	Pitchstone Pla	82.11	40	P	P	21 19 38.8	+0.1
TCOL	CIGO, UAF Yank	82.12	11	P	P	21 19 38.9	+1.0
	baz=205						
TCOL	CIGO, UAF Yank	82.12	11	P	P	21 19 37.7	-0.1
COLA	College	82.13	11	P	P	21 19 37.4	-0.4
MDM	Murphy Dome	82.14	11	P	P	21 19 37.8	-0.2
MDM				IAmb	IAmb	21 19 40.4	
	comp=Z,17nm,1.3s						
BW06	Boulder Array	82.17	42	P	P	21 19 39.5	+0.5
	baz=241						
BW06	Boulder Array	82.17	42	P	P	21 19 38.8	-0.2
PD31	Pinedale Array	82.17	42	P	P	21 19 38.8	-0.2
PDAR	Pinedale Array	82.17	42	P	P	21 19 39.1	+0.2
	comp=Z,2.2nm,0.8s,baz=208,slow=2.9,SNR=12						
PDAR				LR	LR	21 50 32.7	
	comp=Z,229nm,19.0s,baz=227,slow=32						
PDAR	Pinedale Array	82.17	42	P	P	21 19 37.8	-1.2
YHL	Hebgen Lake	82.17	40	P	P	21 19 39.9	+0.9
IL31		82.21	11	P	P	21 19 37.9	-0.4
ILAR	Eielson Array	82.21	11	P	P	21 19 38.5	+0.1
	comp=Z,2.4nm,0.8s,baz=207,slow=5.4,SNR=22						
ILAR				LR	LR	21 49 00.1	
	comp=Z,131nm,21.5s,baz=213,slow=30						
ILAR	Eielson Array	82.21	11	P	P	21 19 38.3	0.0
YMR	Madison River	82.21	40	P	P	21 19 40.0	+0.9
IL18	Eielson Array	82.22	11	P	P	21 19 38.4	-0.1
SEY	Seymchan	82.22	345	P	P	21 19 38.8	+0.3
	comp=Z,4.2nm,1.0s,baz=128,slow=5.6,SNR=6.3						
IMAR	Indian Mountai	82.23	8	P	P	21 19 39.2	+0.8
SMCO	Snowmass	82.23	46	P	P	21 19 40.1	+0.5
SMCO				IAmb	IAmb	21 19 45.6	
	comp=Z,9.7nm,1.1s						
BOZ	Bozeman (W)	82.28	39	P	P	21 19 40.3	+1.0
	baz=239						
BOZ	Bozeman (W)	82.28	39	P	P	21 19 40.3	+1.0
H17A	Grant Village	82.32	40	P	P	21 19 41.1	+1.3
	baz=240						
H17A	Grant Village	82.32	40	P	P	21 19 40.9	+1.2
YHH	Holmes Hill	82.34	40	P	P	21 19 41.2	+1.3
YNR	Norris Junctio	82.41	40	P	P	21 19 41.9	+1.7
POKR	Poker Plat Res	82.42	11	P	P	21 19 39.3	-0.1
	baz=205						
POKR	Poker Plat Res	82.42	11	P	P	21 19 39.4	-0.1
POKR				IAmb	IAmb	21 19 40.7	
	comp=Z,14nm,0.8s						
LKWY	Lake	82.51	40	P	P	21 19 42.2	+1.5
LKWY				IAmb	IAmb	21 19 45.6	
	comp=Z,14nm,1.1s						
SDCO	Great Sand Dun	82.65	48	P	P	21 19 42.2	+0.6
	baz=244						
SDCO	Great Sand Dun	82.65	48	P	P	21 19 42.0	+0.4
HRY	Holter Researc	82.73	38	P	P	21 19 42.0	+0.4
YMP	Mirror Lake Pl	82.75	40	P	P	21 19 42.4	+0.4
YNE	Yellowstone No	82.97	40	P	P	21 19 44.4	+1.3
MSTX	Muleshoe	83.11	52	P	P	21 19 45.4	+1.4
	baz=247						
MSTX	Muleshoe	83.11	52	P	P	21 19 44.3	+0.4
PRP	Porcupine Dome	83.14	11	P	P	21 19 43.6	+0.2
PRP				IAmb	IAmb	21 19 46.9	
	comp=Z,11nm,0.9s						
T25A	Trinidad	83.18	49	P	P	21 19 45.4	+1.0
	baz=245						
DAWY	Dawson	83.20	14	P	P	21 19 44.0	+0.4
DAWY				IAmb	IAmb	21 19 47.3	
	comp=Z,9.5nm,0.9s						
RWWY	Rawlins	83.20	44	P	P	21 19 44.0	-0.3
RDOG	Red Dog Mine	83.31	4	P	P	21 19 44.8	+0.7
EGAK	Eagle	83.39	13	P	P	21 19 44.5	0.0
Q24A	Divide	83.42	47	P	P	21 19 46.0	+0.4
	baz=245						
ISCO	Idaho Springs	83.45	46	P	P	21 19 47.2	+1.4
	baz=244						
ISCO	Idaho Springs	83.45	46	P	P	21 19 45.9	+0.1
RLMT	Red Lodge	83.49	40	P	P	21 19 46.5	+0.7
	baz=241						
RLMT	Red Lodge	83.49	40	P	P	21 19 46.1	+0.3
RLMT				IAmb	IAmb	21 19 49.0	
	comp=Z,10nm,1.1s						
GCMT	Greycliff	83.56	39	P	P	21 19 46.7	+0.7
N23A	Red Feather La	83.70	45	P	P	21 19 47.9	+0.9
	baz=244						
COLD	Coldfoot	83.90	9	P	P	21 19 48.5	+1.4
	baz=203						
COLD	Coldfoot	83.90	9	P	P	21 19 47.9	+0.8
COLD				IAmb	IAmb	21 19 51.0	
	comp=Z,10nm,1.1s						
K22A	Casper	84.09	43	P	P	21 19 49.7	+0.9
	baz=243						
K22A	Casper	84.09	43	P	P	21 19 49.0	+0.2
PHWY	Pilot Hill	84.21	45	P	P	21 19 49.6	0.0
PHWY				IAmb	IAmb	21 19 52.2	
	comp=Z,21nm,1.5s						
BILL	Bilibino	84.22	353	P	P	21 19 48.3	-0.3
BILL				IAmb	IAmb	21 19 50.7	
	comp=Z,6.6nm,1.0s						
BELA	Belgrano 2	84.28	172	P	P	21 19 47.8	-1.2
AMTX	Amarillo	84.30	52	P	P	21 19 50.5	+0.5
	baz=247						
AMTX	Amarillo	84.30	52	P	P	21 19 50.1	+0.1
EGMT	Eagleton	84.61	37	P	P	21 19 52.1	+0.9
	baz=240						
EGMT	Eagleton	84.61	37	P	P	21 19 51.4	+0.2
EGMT				IAmb	IAmb	21 19 53.8	
	comp=Z,13nm,1.2s						
BMAR	Burnt Mountain	85.02	11	P	P	21 19 52.9	+0.1
ABTX	Abilene, Hawle	85.03	54	P	P	21 19 54.3	+0.7
	baz=249						
ABTX	Abilene, Hawle	85.03	54	P	P	21 19 53.8	+0.2
EPYK	Eagle Plains	85.75	14	P	P	21 19 56.9	+0.5
	baz=216						
EPYK	Eagle Plains	85.75	14	P	P	21 19 56.5	+0.1
EPYK				IAmb	IAmb	21 19 58.6	
	comp=Z,8.7nm,0.9s						
LAO	LASA Array	86.10	40	P	P	21 19 59.6	+1.0
LAO				IAmb	IAmb	21 20 02.1	
	comp=Z,19nm,1.1s						
RSSD	Black Hills	86.36	43	P	P	21 20 01.0	+0.7
	baz=245						
RSSD	Black Hills	86.36	43	P	P	21 20 00.8	+0.6
WMOK	Wichita Mounta	86.46	53	P	P	21 20 01.6	+0.9
	baz=249						
X34A	Smith Ranch, M	87.14	53	P	P	21 20 06.2	+2.2
MAW	Mawson	88.00	199	LR	LR	21 56 58.5	
	comp=Z,285nm,20.1s,baz=68,slow=34						
INK	Inuvik	88.04	14	P	P	21 20 07.9	+0.4
	comp=Z,4.1nm,1.1s,baz=174,slow=4.3,SNR=6.0						
DGMT	Dagmar	88.11	39	P	P	21 20 09.4	+1.1
	baz=245						
HHC	Hu-ho-hao-te	88.73	313	*e*P	P	21 20 13.3	+1.7
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,71nm,7.6s						
PLCA	Paso Flores	89.80	132	LR	LR	21 51 38.8	
	comp=Z,74nm,20.0s,baz=203,slow=30						
YKA	Yellowknife Ar	89.91	23	P	P	21 20 16.7	+0.3
	comp=Z,2.5nm,0.8s,baz=231,slow=3.9,SNR=30						
YKA				LR	LR	21 53 40.7	
	comp=Z,230nm,20.6s,baz=0.0,slow=31						
ECSD	EROS Data Cent	91.17	45	P	P	21 20 23.2	+0.4
	baz=250						
CMAR	Chiang Mai Arr	92.39	288	P	P	21 20 30.2	+1.3
	comp=Z,0.8nm,0.4s,baz=77,slow=3.4,SNR=5.1						
SYO	Syowa Base	92.83	191	⇑*e*P	P	21 20 27.7	-2.3
VNA3	Neumayer Olymp	93.14	175	P	P	21 20 30.4	-1.0
AGMN	Agassiz Nation	93.19	41	P	P	21 20 31.4	-0.6
	baz=251						
VNA2	Neumayer--Watz	93.63	175	P	P	21 20 33.8	0.0
	baz=171,slow=4.3						
OXF	Oxford	93.72	55	P	P	21 20 34.7	0.0
	baz=254						
ULM	Lac du Bonnet	93.82	39	P	P	21 20 33.5	-1.3
	comp=Z,0.5nm,0.3s,baz=263,slow=7.5,SNR=3.7						
VNA1	Neumayer--Stat	93.83	175	P	P	21 20 34.3	-0.3
SONM	Songino Array	94.54	318	LR	LR	21 57 56.9	
	comp=Z,60nm,21.7s,baz=124,slow=32						
L56A	Greenwood	104.38	50	P	Pdif	21 21 22.0	-0.6
	baz=263						

O58A	Lewisberry	104.60	52	P	Pdif	21 21 22.7	-0.8
	baz=262						
LBNH	Lisbon	108.68	48	P	PKiKP	21 25 45.1	-1.8
	baz=267						
ARCES	ARCESS Array B	124.32	352	PKP	PKPdf	21 26 15.4	-0.6
	comp=Z,3.0nm,0.8s,baz=1.9,slow=2.7,SNR=4.1						
CLL	Collm	143.53	353	ePKiKP	PKiKP	21 26 56.0	+0.3
OSTC	Ostas	143.79	349	ePKP	PKPdf	21 26 52.4	-0.5
DPC	Dobruska-Polom	143.97	349	ePKP	PKPbc	21 26 52.1	+1.1
MORC	Moravsky Berou	144.28	348	⇑P	PKPdf	21 26 53.2	-0.7
MORC	Moravsky Berou	144.28	348	ePKP	PKPab	21 26 51.9	+0.2
LANS	Liptovska Anna	144.43	345	ePKP	PKPdf	21 26 54.5	+0.4
PRU	Pruhonice	144.61	351	ePKP	PKPdf	21 26 55.6	+1.3
ARCR	ARCALIA	144.82	339	⇑P	PKPdf	21 26 55.3	+0.5
VRAC	Vranov	144.92	348	⇑P	PKPdf	21 26 55.6	+0.7
VRAC	Vranov	144.92	348	ePKP	PKPab	21 26 54.3	+0.3
PLOR	Plostina	144.98	335	⇑P	PKPdf	21 26 55.2	0.0
JAVC	Velka Javorina	145.12	347	ePKP	PKPdf	21 26 56.4	+1.1
KRUC	Moravsky	145.19	349	ePKP	PKPbc	21 26 55.1	+0.2
VYHS	Vyhne	145.20	346	ePKP	PKPdf	21 26 56.2	+0.8
TIRR	Tirgusor	145.33	332	⇑P	PKiKP	21 27 03.5	+3.9
DOPR	Dopca	145.38	337	⇑P	PKPab	21 26 57.5	+1.6
KMBO	Kilima Mbogo	145.51	245	PKPbc	PKPbc	21 26 56.1	-1.3
	comp=Z,1.6nm,0.7s,baz=93,slow=3.0,SNR=5.1						
MLR	Muntele Rosu	145.56	335	⇑P	PKPdf	21 26 55.3	-1.0
KHC	Kasperske Hory	145.59	352	ePKP	PKPab	21 26 57.3	+0.8
DRGR		145.64	340	⇑P	PKPab	21 26 57.3	+0.5
MODS	Modra-Piesok	145.67	347	ePKP	PKPab	21 26 57.7	+0.9
BRTR	Keskin Array B	145.85	321	PKPbc	PKPab	21 26 58.0	0.0
	comp=Z,6.5nm,0.8s,baz=127,slow=1.6,SNR=18						
GERES	GERESS Array B	145.85	351	PKPbc	PKPbc	21 26 57.6	+0.4
	comp=Z,4.7nm,0.9s,baz=29,slow=3.0,SNR=22						
ARR	Arges	146.18	337	⇑P	PKPab	21 26 59.5	+0.7
CONA	Conrad Observa	146.38	349	eP	PKPab	21 26 59.7	+0.1
MOA	Molln	146.74	350	eP	PKPdf	21 26 58.8	+0.8
BZS	Buzias	147.03	340	⇑P	PKPab	21 27 01.7	-0.4
ARSA	Arzberg	147.09	349	eP	PKPdf	21 26 56.9	-1.8
	comp=Z,4.6nm,0.9s						
HERR	Herculane	147.41	339	⇑P	PKPbc	21 27 02.4	+0.7
RETA	Reutte	147.54	355	eP	PKiKP	21 27 03.4	-0.9
	comp=Z,9.3nm,0.8s						
WATA	Walderalm	147.61	353	eP	PKPbc	21 27 01.1	-1.2
	comp=Z,5.1nm,0.9s						
KBA	Koelnbreinsper	147.63	351	eP	PKPbc	21 27 03.0	+0.6
MOTA	Moosalm	147.65	354	eP	PKPbc	21 27 02.7	+0.2
	comp=Z,9.9nm,1.0s						
SOKA	Soboth	147.74	349	eP	PKPbc	21 27 03.4	+0.7
SQTA	Sankt Quirin	147.76	354	eP	PKPbc	21 27 03.7	+1.0
	comp=Z,7.3nm,0.9s						
DAVA	Damuels	147.81	356	eP	PKiKP	21 27 04.3	-0.6
	comp=Z,15nm,1.0s						
OBKA	Obir	147.99	349	eP	PKPbc	21 27 02.7	-0.7
FETA	Feichten	148.00	354	eP	PKPdf	21 26 59.0	-1.4
	comp=Z,5.2nm,0.9s						
MYKA	Terra Mystica	148.02	351	eP	PKPbc	21 27 03.9	+0.5
ABTA	Abfaltersbach	148.07	352	eP	PKPbc	21 27 04.1	+0.5
	comp=Z,13nm,0.9s						

OMAN 30 21:14:23.5±0.6**,23°.72N×49°.56E,h14**^{km}**,mb4.7**/16**,**
ml3.8/1**,Error ellipse: s-maj=19.2km s-min=11.3km**
az=14.0,Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASUD	Al Ashush, Dub	5.34	79	P	Pn	21 15 43.4	+0.6
ASUD				S	Sn	21 16 48.1	+3.9
FAQ	Al Faqa, Dubai	5.60	78	P	Pn	21 15 46.3	-0.1
FAQ				S	Sn	21 16 53.4	+2.8
ALNE	Al Ain	5.67	85	P	Pn	21 15 48.9	+1.5
ALNE				S	Sn	21 16 55.8	+3.3
ASHO	Ashiyiah	6.01	79	P	Pn	21 15 52.0	-0.1
	SNR=6.5						
ASHO				S	Sn	21 17 01.2	+0.5
HATD	Hatta, Dubai	6.10	78	P	Pn	21 15 53.4	+0.2
	SNR=5.5						
HATD				S	Sn	21 17 03.4	+0.5
UOSS	Minazif	6.18	77	P	Pn	21 15 53.9	-0.5
UOSS				S	Sn	21 17 05.9	+1.0
MASF	Masafi	6.23	73	P	Pn	21 15 53.6	-1.5
MASF				S	Sn	21 17 06.5	+0.3
MDH	Madha	6.33	74	P	Pn	21 15 55.1	-1.4
MDH				S	Sn	21 17 09.6	+0.9
SOHO	SOHO	6.39	85	P	Pn	21 15 57.3	0.0
SOHO				S	Sn	21 17 10.9	+0.8
ARQ	Araqi	6.40	92	P	Pn	21 15 57.8	+0.4
	SNR=8.3						
ARQ				S	Sn	21 17 12.9	+2.6
SHME	Shamm	6.41	67	P	Pn	21 15 53.9	-3.7
SHME				S	Sn	21 17 10.7	+0.2
BANOM	Banah	6.50	69	P	Pn	21 15 56.1	-2.7
	SNR=9.7						
BANOM				S	Sn	21 17 13.0	+0.1
WHFO	Wadi Hawf	6.99	145	P	Pn	21 16 05.2	-0.4
WHFO				S	Sn	21 17 27.4	+2.6
BSY	Bisya	7.09	96	P	Pn	21 16 07.2	+0.2
BSY				S	Sn	21 17 29.5	+2.1
HOQ	Hoqain	7.11	90	P	Pn	21 16 06.5	-0.7
	SNR=17						
HOQ				S	Sn	21 17 27.9	+0.1
ABTO	Aybut	7.24	150	P	Pn	21 16 08.8	-0.2
ABTO				S	Sn	21 17 31.9	+0.9
SMDO	Samad	7.83	93	P	Pn	21 16 17.8	+0.7
SMDO				S	Sn	21 17 46.2	+0.6
JMDO	Jabal Madar	7.98	98	P	Pn	21 16 18.8	-0.4
JMDO				S	Sn	21 17 50.1	+0.9
MHTO	MHTO	8.24	108	P	Pn	21 16 21.8	-0.9
MHTO				S	Sn	21 17 55.2	-0.5
WBK	Wadi Bani Khal	8.73	95	P	Pn	21 16 29.2	-0.2
	SNR=9.4						
WBK				S	Sn	21 18 08.2	+0.5
JLN	Jalan Bani Buh	9.21	98	P	Pn	21 16 34.6	-1.4
JLN				S	Sn	21 18 18.7	-0.8

IDC ***30*** *21:22:41.9±0.8,53°.76N×169°.32E,h0*^{km}*,mb4.0/23,*
mb1 4.2/24,mb1mx4.0/50,mbtmp4.0/24,ML3.2/1,MS4.0/3,
Ms1 4.0/3,ms1mx3.0/52,Error ellipse: s-maj=23.6km
s-min=12.7km az=173.0
KRSC ***30*** *21:22:42.7±1.2,53°.37N×169°.19E,h69*^{km}*±36*^{km}*,ML4.5*
NEIC ***30*** *21:22:45.6±1.3,53°.7N±0°.1×169°.3E±0°.1,h30*^{km}*±6*^{km}*,*
mb4.2/51,Error ellipse: s-maj=18.4km s-min=9.4km
az=182.0
MOS ***30*** *21:22:47.2±0.8,53°.51N×168°.92E,h81*^{km}*,mb4.1/7,Error*
ellipse: s-maj=7.6km s-min=6.6km az=23.5
ISC 30 21:22:45.6±0.5**,53°.40N**±0°.07×**169°.19E**±0°.04**,h35**^{km}**,n164,**
σ**1**^{s}**.48**/166**,mb4.1**/49**,1D,Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	2.61	315	PN	Pn	21 23 26.1	+0.9
BKI				S	Sn	21 23 56.0	+0.3
BKI	Bering	2.61	315	P	Pn	21 23 25.0	-0.2
BKI				S	Sn	21 23 58.6	+2.9
SMY	Shemya	3.04	101	PN	Pn	21 23 31.4	+0.3
SMY	Shemya	3.04	101	eP	Pn	21 23 31.3	+0.2
SMY				eS	Sn	21 24 06.5	+0.4
SMY	Shemya	3.04	101	Pn	Pn	21 23 31.4	+0.3
MKZ	Mys Kozlova	4.55	288	PN	Pn	21 23 52.0	+0.1
MKZ				S	Sn	21 24 41.3	-2.3
MKZ	Mys Kozlova	4.55	288	eP	Pn	21 23 51.3	-0.6
MKZ				eS	Sn	21 24 41.1	-2.5
KBTR	Krutoberegovo	4.64	310	PN	Pn	21 23 53.3	+0.2
KZV	Kizimen	5.49	292	PN	Pn	21 24 05.9	+0.9
KZV				S	Sn	21 25 04.7	-2.2
SPN	Mys Shipunski	5.52	270	PN	Pn	21 24 05.5	+0.4
SPN				S	Sn	21 25 03.7	-3.6
SPN	Mys Shipunski	5.52	270	P	Pn	21 24 05.3	+0.2
BDR	Baidarnaya	5.58	308	PN	Pn	21 24 07.5	+1.3
TUMR	Tumrok	5.62	293	PN	Pn	21 24 08.0	+1.3
TUMR	Tumrok	5.62	293	P	Pn	21 24 07.4	+0.7
KII	Karymskiy	5.82	280	PN	Pn	21 24 09.3	-0.1
SDLR	Sedlovina	6.18	273	PN	Pn	21 24 15.1	+0.7
UGLR	Uglovaya	6.22	272	PN	Pn	21 24 15.8	+0.8
UGLR				S	Sn	21 25 22.7	-2.1
UGLR	Uglovaya	6.22	272	eP	Pn	21 24 15.7	+0.8
SMAR	Somma	6.23	273	PN	Pn	21 24 15.7	+0.6
KRER	Koryakskii	6.26	273	PN	Pn	21 24 16.3	+0.7
KRER	Koryakskii	6.26	273	eP	Pn	21 24 16.2	+0.7
AVH	Avacha	6.27	273	PN	Pn	21 24 16.5	+1.0
AVH	Avacha	6.27	273	eP	Pn	21 24 16.3	+0.8
DALK	Dalny	6.28	271	PN	Pn	21 24 16.5	+0.8
DALK				S	Sn	21 25 23.3	-2.9
DALK	Dalny	6.28	271	eP	Pn	21 24 16.7	+1.0
KRX	Arik	6.31	274	PN	Pn	21 24 16.8	+0.6
KRX				S	Sn	21 25 23.5	-3.6
KRX	Arik	6.31	274	eP	Pn	21 24 17.0	+0.8
KOK	Koryaka	6.33	273	PN	Pn	21 24 16.6	+0.2
KOK	Koryaka	6.33	273	eP	Pn	21 24 16.9	+0.5
PET	Petropavlovsk	6.34	271	Pn	Pn	21 24 17.7	+1.2
AMKA	Amchitka	6.51	104	Pn	Pn	21 24 18.3	-0.5
RUS	Russkaya	6.53	266	PN	Pn	21 24 21.2	+2.1
RUS	Russkaya	6.53	266	P	Pn	21 24 20.1	+1.0
ESO	Esso	6.59	297	PN	Pn	21 24 21.5	+1.6
KRMR	Karymshinskiy	6.69	270	PN	Pn	21 24 22.2	+1.0
GNL	Ganaly	6.71	277	PN	Pn	21 24 22.9	+1.2
GNL	Ganaly	6.71	277	P	Pn	21 24 23.0	+1.2
MTVR	Mutnovka	6.72	267	PN	Pn	21 24 22.4	+0.6
MTVR	Mutnovka	6.72	267	eP	Pn	21 24 22.6	+0.8
MTVR				eS	Sn	21 25 33.1	-4.0
GRL	Gorelyy	6.77	267	PN	Pn	21 24 24.0	+1.4
GRL	Gorelyy	6.77	267	P	Pn	21 24 23.9	+1.4
GRL				S	Sn	21 25 38.0	-0.4
OSSR	Ossora	6.78	332	PN	Pn	21 24 22.7	+0.3
PEA0B	Petropavlovsk-	6.91	272	PN	Pn	21 24 26.1	+1.8
PEA0B	Petropavlovsk-	6.91	272	Pn	Pn	21 24 26.1	+1.8
PETK	Petropavlovsk-	6.91	272	Pn	Pn	21 24 26.3	+2.1
	2.1nm,0.3s,baz=94,slow=19,SNR=40						
PETK				Sn	Sn	21 25 40.0	-1.6
	2.6nm,0.3s,baz=321,slow=29,SNR=8.6						
PETK	Petropavlovsk-	6.91	272	Pn	Pn	21 24 25.7	+1.5
KDTR	Khodutka, Kamc	6.96	261	PN	Pn	21 24 25.8	+0.9
KDTR	Khodutka, Kamc	6.96	261	P	Pn	21 24 25.8	+0.9
APC	Apacha	7.25	271	PN	Pn	21 24 29.7	+0.7
TILK	Tilichiki	7.25	348	PN	Pn	21 24 29.2	+0.3
TILK	Tilichiki	7.25	348	eP	Pn	21 24 29.2	+0.3
TILK				eS	Sn	21 25 52.1	+2.1
SKR	Severo-Kuril's	8.51	257	PN	Pn	21 24 45.7	-0.5
ADK	Adak	8.72	94	PN	Pn	21 24 47.3	-1.8
ADK	Adak	8.72	94	Pn	Pn	21 24 47.3	-1.8
KMSK	Kamenskaya	9.23	351	PN	Pn	21 24 56.2	+0.3
KMSK	Kamenskaya	9.23	351	P	Pn	21 24 56.0	+0.1
KMSK				S	Sn	21 26 38.8	+0.5
SPIA	Saint Paul Isl	12.30	64	Pn	Pn	21 25 36.6	-1.4
BILL	Bilibino	14.75	356	⇓eP	Pn	21 26 12.5	+1.1
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,74nm,16.0s						
BILL	Bilibino	14.75	356	Pn	Pn	21 26 08.2	-3.1
TTA	Tatalina	20.42	48	P	P	21 27 19.0	-0.4
TTA				pmax	pmax		
	comp=Z,13nm,1.2s						
TTA	Tatalina	20.42	48	P	P	21 27 19.0	-0.4
TTA				IAmb	IAmb	21 27 20.4	
	comp=Z,13nm,1.2s						
OHAK	Old Harbor	21.50	65	P	P	21 27 28.7	-2.4
OHAK				IAmb	IAmb	21 27 31.5	
	comp=Z,12nm,0.9s						
KDAK	Kodiak Island	21.83	63	P	P	21 27 33.5	-1.0
	comp=Z,12nm,1.1s,baz=220,slow=0.4,SNR=9.0						
KDAK	Kodiak Island	21.83	63	IAmb	IAmb	21 27 52.5	
	comp=Z,11nm,0.9s						
SPU	Mount Spurr	22.05	54	P	P	21 27 35.0	-1.9
IMAR	Indian Mountai	22.13	41	P	P	21 27 35.9	-1.8
PPLA	Purkeypile	22.14	49	P	P	21 27 36.6	-1.5
SKT	Skwentna	22.35	52	P	P	21 27 38.9	-1.2
CNPM	China Poot	22.43	58	P	P	21 27 39.1	-2.0
YAK	Yakutsk	22.46	308	P	P	21 27 41.6	+0.4
	comp=Z,3.9nm,0.3s,baz=76,slow=0.9,SNR=11						
YAK				LR	LR	21 35 33.5	
	comp=Z,45nm,19.2s,baz=121,slow=35						
YAK	Yakutsk	22.46	308	eP	P	21 27 41.7	+0.4
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
BRLK	Bradley Lake	22.60	58	P	P	21 27 40.6	-2.3
KTH	Kantishna Hill	22.80	48	P	P	21 27 43.4	-1.5
TRF	Thorofare Moun	23.07	48	P	P	21 27 46.5	-1.3
TRF				IAmb	IAmb	21 27 47.4	
	comp=Z,7.0nm,0.9s						
GHO	Glory Hole Cre	23.57	53	P	P	21 27 51.5	-1.2
GHO				IAmb	IAmb	21 28 05.5	
	comp=Z,6.2nm,1.1s						
RND	Reindeer	23.70	48	P	P	21 27 52.1	-1.8
RND				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RND	Reindeer	23.70	48	P	P	21 27 52.0	-1.8
KNK	Knik Glacier	23.79	53	P	P	21 27 52.1	-2.5
KNK				IAmb	IAmb	21 27 59.3	
	comp=Z,6.9nm,1.1s						
COLD	Coldfoot	23.84	39	P	P	21 27 53.3	-1.7
SML	Sawmill	23.85	52	P	P	21 27 53.1	-2.3
SML				IAmb	IAmb	21 27 54.8	
	comp=Z,7.4nm,0.7s						
WRH	Wood River Hil	24.15	46	IAmb	IAmb	21 27 58.1	
	comp=Z,5.6nm,0.8s						
CCB	Clear Creek Bu	24.30	46	P	P	21 27 58.0	-1.3
CCB				IAmb	IAmb	21 27 59.4	
	comp=Z,3.7nm,0.6s						
SCM	Sheep Creek Mo	24.33	52	P	P	21 27 57.9	-1.8
SCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SCM	Sheep Creek Mo	24.33	52	P	P	21 27 57.9	-1.8
SCM				IAmb	IAmb	21 28 02.6	
	comp=Z,7.0nm,0.8s						
HDA	Harding Lake	24.64	46	P	P	21 28 00.9	-1.5
ILAR	Eielson Array	24.70	45	P	P	21 28 00.8	-2.3
	comp=Z,1.9nm,0.6s,baz=250,slow=7.4,SNR=47						
ILAR	Eielson Array	24.70	45	P	P	21 28 01.7	-1.3
ILAR	Eielson Array	24.70	45	P	P	21 28 01.7	-1.3
IL18	Eielson Array	24.75	45	P	P	21 28 01.8	-1.6
FID	Port Fidalgo	24.76	55	P	P	21 28 00.6	-3.0
FID				IAmb	IAmb	21 28 18.3	
	comp=Z,9.3nm,1.2s						
M24K	Tolsona, Glenn	24.88	52	P	P	21 28 03.4	-1.3
KLU	Klutina	25.00	53	P	P	21 28 04.0	-1.9
KLU				IAmb	IAmb	21 28 20.5	
	comp=Z,5.3nm,1.0s						
PAX	Paxson	25.21	50	P	P	21 28 06.4	-1.3
PAX				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PAX	Paxson	25.21	50	P	P	21 28 06.4	-1.3
PAX				IAmb	IAmb	21 28 10.6	
	comp=Z,4.0nm,0.9s						
PRP	Porcupine Dome	25.36	44	P	P	21 28 07.5	-1.6
PRP				IAmb	IAmb	21 28 09.8	
	comp=Z,5.9nm,1.2s						
RIDG	Independent Ri	25.51	48	P	P	21 28 07.8	-2.7
RIDG				IAmb	IAmb	21 28 09.4	
	comp=Z,5.8nm,1.1s						
FYU	Fort Yukon	25.62	41	P	P	21 28 09.9	-1.3
N25K	Chitina, Valde	25.63	53	P	P	21 28 10.2	-1.4
N25K				IAmb	IAmb	21 28 23.9	
	comp=Z,8.4nm,1.0s						
DOT	Dot Lake	25.86	48	IAmb	IAmb	21 28 13.3	
	comp=Z,5.9nm,0.6s						
BMAR	Burnt Mountain	26.00	39	P	P	21 28 11.7	-3.1
GLB	Gilahina Butte	26.02	53	P	P	21 28 13.2	-1.8
VRDI	Verde Repeater	26.21	54	P	P	21 28 15.3	-1.6
VRDI				IAmb	IAmb	21 28 29.7	
	comp=Z,6.3nm,1.1s						
CRQM	Cirque	26.40	55	P	P	21 28 19.0	+0.4
BALM	Baldy	26.76	54	P	P	21 28 20.1	-1.7
BALM				IAmb	IAmb	21 28 36.8	
	comp=Z,6.4nm,1.0s						
BCAR	Beaver Creek A	26.89	49	P	P	21 28 22.4	-0.5
EGAK	Eagle	27.15	46	IAmb	IAmb	21 28 23.6	
	comp=Z,6.9nm,0.8s						
DAWY	Dawson	27.93	47	P	P	21 28 30.6	-1.5
HYT	Haines Junctio	29.13	54	P	P	21 28 42.1	-0.9
HYT				IAmb	IAmb	21 28 43.4	
	comp=Z,3.3nm,0.8s						
INK	Inuvik	30.25	38	P	P	21 28 51.3	-1.3
	comp=Z,1.1nm,0.5s,baz=257,slow=5.6,SNR=4.3						
INK	Inuvik	30.25	38	P	P	21 28 51.0	-1.6
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	30.25	38	P	P	21 28 51.0	-1.6
DLBC	Dease Lake	33.39	57	P	P	21 29 19.9	-0.5
	comp=Z,1.3nm,0.4s,baz=315,slow=11,SNR=3.3						
DLBC	Dease Lake	33.39	57	IAmb	IAmb	21 29 22.4	
	comp=Z,3.3nm,0.9s						
H11N2	WAKE ISLAND Hy	33.66	184	T	T	22 05 16.2	
	baz=2.8,slow=76						
H11N3	WAKE ISLAND Hy	33.67	184	T	T	22 05 13.4	
	baz=2.8,slow=76						
H11N1	WAKE ISLAND Hy	33.67	184	T	T	22 05 16.2	
	baz=2.8,slow=76						
H11S1	WAKE ISLAND Hy	34.88	184	T	T	22 06 47.2	
	baz=1.5,slow=76						
H11S3	WAKE ISLAND Hy	34.89	184	T	T	22 06 47.4	
	baz=1.5,slow=76						
H11S2	WAKE ISLAND Hy	34.90	184	T	T	22 06 51.9	
	baz=1.5,slow=76						
SONM	Songino Array	39.08	288	P	P	21 30 10.8	+1.7
	comp=Z,0.5nm,0.6s,baz=58,slow=8.2,SNR=6.4						
SONM	Songino Array	39.08	288	P	P	21 30 10.4	+1.3
YKA	Yellowknife Ar	39.13	46	P	P	21 30 08.3	-0.9
	comp=Z,1.3nm,0.6s,baz=295,slow=7.2,SNR=16						
YBH	Yreka Blue Hor	45.71	76	P	P	21 31 03.7	+0.6
	comp=Z,1.3nm,0.5s,baz=336,slow=12,SNR=2.9						
GTA	Gaotai	47.95	282	eP	P	21 31 22.0	+1.4
GTA				pP	sP	21 31 33.3	-0.4
GTA				sP	pwP	21 31 37.5	+3.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FCC	Fort Churchill	49.68	43	P	P	21 31 32.8	-0.6
FCC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FCC	Fort Churchill	49.68	43	P	P	21 31 32.8	-0.6
NVAR	Mina Array Bea	50.42	76	P	P	21 31 40.2	+0.6
	comp=Z,0.6nm,0.5s,baz=293,slow=7.6,SNR=4.3						
ELK	Elko	50.64	72	P	P	21 31 41.7	+0.4
	comp=Z,0.7nm,0.6s,baz=328,slow=9.5,SNR=2.4						
WMQ	Urumqi	51.92	295	eP	P	21 31 53.8	+3.1
MKAR	Makanchi Array	52.83	301	P	P	21 31 56.7	-0.6
	comp=Z,0.6nm,0.7s,baz=54,slow=6.8,SNR=9.6						
MKAR	Makanchi Array	52.83	301	P	P	21 31 56.3	-1.0
MAKZ	Makanchi	52.98	301	P	P	21 31 57.1	-1.3
MAKZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MAKZ	Makanchi	52.98	301	P	P	21 31 57.0	-1.3
MTPU	Mount Pierson	54.21	73	P	P	21 32 08.4	+0.5
BRVK	Borovoye	54.37	313	P	P	21 32 08.5	+0.1
BRVK	Borovoye	54.37	313	P	P	21 32 08.5	+0.1
ARCES	ARCESS Array B	54.55	345	P	P	21 32 08.2	-1.3
	comp=Z,3.1nm,0.7s,baz=30,slow=9.8,SNR=4.2						
FRB	Frobisher Bay	54.88	27	P	P	21 32 09.9	-2.0
	comp=Z,2.4nm,0.5s,baz=339,slow=10.0,SNR=7.7						
FRB	Frobisher Bay	54.88	27	P	P	21 32 10.0	-2.0
PV22	Blue Mesa, Par	55.80	70	P	P	21 32 19.8	+0.6
PV17	East Wray Mesa	55.88	70	P	P	21 32 19.9	+0.1
PV03	Paradox Valley	55.96	70	P	P	21 32 19.6	-0.8
PV13	Radium Mtn., P	56.04	70	P	P	21 32 21.3	+0.3
SPX	San Pedro Mart	57.25	81	P	P	21 32 30.2	+0.4
SPX				IAmb	IAmb	21 32 31.2	
	comp=Z,1.7nm,0.9s						
KKAR	Karatay Array	61.37	304	P	P	21 32 57.5	-0.2
KKAR	Karatay Array	61.37	304	P	P	21 32 57.5	-0.2
ABKAR	Akbulak array	61.59	315	P	P	21 32 58.7	-0.3
ABKAR				IAmb	IAmb	21 32 59.2	
	comp=Z,1.4nm,0.6s						
ABKAR	Akbulak array	61.59	315	P	P	21 32 58.6	-0.5
FIA1	FINESS Array S	61.82	341	P	P	21 32 59.4	-0.9
FINES	FINESS Array B	61.82	341	P	P	21 32 59.1	-1.3
	comp=Z,2.4nm,0.7s,baz=6.9,slow=6.3,SNR=6.3						
MNTX	Cornudas Mount	62.64	73	P	P	21 33 07.2	+0.8
MNTX				IAmb	IAmb	21 33 08.9	
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	63.63	266	P	P	21 33 15.7	+2.6
	comp=Z,0.2nm,0.4s,baz=33,slow=8.5,SNR=4.3						
NOA	NORSAR Array B	64.56	348	P	P	21 33 18.0	-0.6
	comp=Z,2.2nm,1.0s,baz=17,slow=6.7,SNR=4.1						
TXAR	Lajitas Array	65.39	74	P	P	21 33 25.2	+0.6
	comp=Z,2.3nm,0.6s,baz=303,slow=4.4,SNR=13						
TXAR	Lajitas Array	65.39	74		P	21 33 25.1	+0.5
SADO	Sadowa	66.13	46	LR	LR	22 03 25.2	
	comp=Z,244nm,19.1s,baz=202,slow=37						
AKASG	Malin Array Be	70.94	334	P	P	21 33 58.6	-0.3
	comp=Z,1.1nm,0.6s,baz=24,slow=5.9,SNR=3.4						
KBZ	Khabaz	72.86	322	P	P	21 34 11.7	+1.2
	comp=Z,2.6nm,0.9s,baz=323,slow=3.7,SNR=6.6						
BATI	Baumata	74.22	227	LR	LR	22 02 29.4	
	comp=Z,272nm,20.6s,baz=18,slow=32						
GERES	GERESS Array B	76.03	344	P	P	21 34 29.0	0.0
	comp=Z,1.2nm,0.7s,baz=17,slow=5.6,SNR=9.0						
GERES	GERESS Array B	76.03	344	P	P	21 34 29.0	0.0
WRA	Warramunga Arr	79.01	213	P	P	21 34 48.4	+2.6
	comp=Z,0.4nm,0.8s,baz=25,slow=6.4,SNR=2.3						
BRTR	Keskin Array B	79.62	327	P	P	21 34 49.7	+0.5
	comp=Z,0.6nm,0.8s,baz=36,slow=2.3,SNR=4.1						
ASAR	Alice Springs	82.62	212	P	P	21 35 08.1	+3.1
	comp=Z,0.2nm,0.6s,baz=20,slow=4.7,SNR=1.7						

WEL ***30*** *21:38:00,42°.96S×172°.09E,h9*^{km}*,ML3.9,Mw3.8,*
Moment Tensor Solution. s4 Moment tensor: Scale 10^{14}
Nm; M$_{rr}$*1.90; M*$_{\theta\theta}$*3.40; M*$_{\phi\phi}$*-5.30; M*$_{r\theta}$*-0.16; M*$_{\theta\phi}$*-1.91;*
M$_{\phi r}$*-0.58; Fault plane solution: M*$_{0}$*4.78000×10*^{14} *NP1:*
ϕ$_{s}$*327.00000°,δ86.00000°,λ-2.00000°. NP2:ϕ*$_{s}$*57.00000°,*
δ88.00000°,λ-176.00000°. Principal axes: T -57.4700,
Plg1.0000°, Azm192.0000°; N 38.0600, Plg86.0000°,
Azm83.0000°; P 19.4100, Plg4.0000°, Azm283.0000°;
NOU ***30*** *21:38:23.2,43°.03S×172°.11E,h62*^{km}*,MLv4.0,South*
Island, New Zealand
WEL 30 21:38:21.0±0.4**,43°S**±2°×**17°2E**±°**,h5**^{km}**,M4.1**/82**,**
ML4.1/12**,MLv4.1**/82**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=124.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTZ	Lake Taylor	0.23	35	P	Pg	21 38 25.6	+0.1
LTZ				S	Sg	21 38 29.1	+0.6
OXZ	Oxford	0.36	186	P	Pg	21 38 28.4	+0.5
INZ	Inchbonnie	0.54	297	P	Pg	21 38 31.5	+0.2
INZ				S	Sg	21 38 38.8	+0.5
MHCZ	Mount Hutt	0.68	214	S	Sb	21 38 44.5	-0.7
RACZ	Rakaia	0.76	177	P	Pg	21 38 36.1	+0.5
MQZ	McQueen's Vall	0.84	151	P	Pg	21 38 37.3	+0.1
MQZ				S	Sg	21 38 48.4	+0.3
WACZ	Wakanui South	0.99	191	P	Pb	21 38 40.4	-0.3
WACZ				S	Sb	21 38 53.7	-0.3
WVZ	Waitaha Valley	1.00	264	P	Pg	21 38 40.1	-0.1
OKCZ	Okains Bay	1.03	137	P	Pg	21 38 40.5	-0.4
RPZ	Rata Peaks	1.06	225	P	Pg	21 38 41.3	-0.1
AKCZ	Akaroa Harbour	1.08	147	P	Pg	21 38 41.0	-0.8
AKCZ				S	Sg	21 38 55.3	-0.5
ARCZ	Arundel	1.18	214	P	Pg	21 38 42.6	-1.2
ARCZ				S	Sg	21 38 58.4	-0.6
KHZ	Kahutara	1.20	63	P	Pn	21 38 44.6	+0.2
DSZ	Denniston Nort	1.24	350	P	Pg	21 38 44.4	-0.4
GCSZ	Gaunt Creek Bo	1.34	254	P	Pn	21 38 46.1	-0.2
THZ	Tophouse	1.35	27	P	Pn	21 38 45.5	-1.1
TMZ	Timaru	1.62	209	P	Pn	21 38 48.6	-1.6
FOZ	Fox Glacier	1.76	251	P	Pn	21 38 52.1	+0.1
BSWZ	Blackbirch Sta	1.82	47	P	Pn	21 38 53.0	0.0
LBZ	Lake Benmore	1.98	224	P	Pn	21 38 54.3	-0.9
CMWZ	Cape Campbell	1.99	53	P	Pn	21 38 56.0	+0.7
NNZ	Nelson	2.00	29	P	Pn	21 38 55.8	+0.4
TUWZ	Tuamarina	2.06	42	P	Pn	21 38 55.9	-0.4
QRZ	Quartz Range	2.17	9	P	Pn	21 38 57.3	-0.5
ODZ	Otahua Downs	2.32	206	P	Pn	21 38 58.1	-1.7
TCW	Tory Channel	2.39	44	P	Pn	21 39 00.0	-0.9
DUWZ	D'Urville Isla	2.56	33	P	Pn	21 39 03.9	+0.7
BHW	Baring Head	2.59	54	P	Pn	21 39 01.8	-1.7
JCZ	Jackson Bay	2.65	244	P	Pn	21 39 03.8	-0.6
PLWZ	Palliser	2.73	60	P	Pn	21 39 03.7	-1.9
MSWZ	Moikau Station	2.81	58	P	Pn	21 39 04.8	-1.8
CAW	Cannon Point	2.89	51	P	Pn	21 39 06.0	-1.7
WKZ	Wanaka	2.90	229	P	Pn	21 39 06.2	-1.6
PAWZ	Paruwai Farm	2.94	59	P	Pn	21 39 07.0	-1.5
KIW	Kapiti Island	2.98	46	P	Pn	21 39 07.8	-1.1
EAZ	Earnscleugh	3.02	221	P	Pn	21 39 07.6	-1.9
TRWZ	Traveller	3.10	61	P	Pn	21 39 10.6	0.0
HHSZ	Highcliff Hill	3.10	200	P	Pn	21 39 09.1	-1.6
MTW	Mount Morrison	3.12	56	P	Pn	21 39 09.0	-1.8
OGWZ	Otaki Gorge	3.15	48	P	Pn	21 39 09.5	-1.7
HOWZ	Holdsworth Sta	3.29	52	P	Pb	21 39 18.5	-1.3
TUZ	Tuapeka	3.46	210	P	Pn	21 39 14.0	-1.6
MRZ	Mangatainoka R	3.48	50	P	Pn	21 39 13.5	-2.3
MLZ	Mavora Lakes	3.73	229	P	Pn	21 39 17.8	-1.5
PRWZ	Pori Road	3.77	52	P	Pn	21 39 18.9	-0.9
NMEZ	Namu Road	3.80	21	P	Pn	21 39 20.1	-0.1
BFZ	Birch Farm	3.85	55	P	Pn	21 39 19.8	-1.1
WAZ	Wanganui	3.88	35	P	Pn	21 39 22.0	+0.7
NBEZ	Newall Road No	3.93	21	P	Pn	21 39 23.8	+1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PREZ	Palmer Road	3.94	24	P	Pn	21 39 23.8	+1.6
KHEZ	Kahui Hut	3.95	22	P	Pn	21 39 23.5	+1.2
NEZ	North Egmont	3.99	23	P	Pn	21 39 24.4	+1.5
PKE	Pukeiti	4.04	21	P	Pn	21 39 24.5	+1.1
DREZ	Durham Road	4.10	24	P	Pn	21 39 25.3	+1.0
SYZ	Scrubby Hill	4.14	210	P	Pn	21 39 23.3	-1.6
WHZ	Wether Hill Ro	4.17	224	P	Pn	21 39 22.7	-2.6
MHEZ	Mangahewa	4.24	24	P	Pn	21 39 29.7	+3.5
VRZ	Vera Road	4.34	29	P	Pn	21 39 30.0	+2.4
MTVZ	Mangateitei	4.40	37	P	Pn	21 39 30.6	+2.1
PKVZ	Pokaka	4.42	35	P	Pn	21 39 30.6	+1.7
WNVZ	Wahianoa	4.50	37	P	Pn	21 39 32.1	+2.2
MOVZ	Moawhango	4.50	39	P	Pn	21 39 31.4	+1.4
TUVZ	Tukino	4.57	37	P	Pn	21 39 30.5	-0.5
BHHZ	Black Hill Sta	4.59	42	P	Pn	21 39 30.2	-0.9
NGZ	Ngauruhoe	4.63	36	P	Pn	21 39 33.7	+2.0
TWVZ	Taurewa	4.64	34	P	Pn	21 39 37.1	+5.2
OTVZ	Oturere	4.66	37	P	Pn	21 39 31.5	-0.7
WTVZ	West Tongariro	4.67	36	P	Pn	21 39 33.5	+1.2
ETVZ	East Tongariro	4.71	37	P	Pn	21 39 32.3	-0.5
KRVZ	Karewarewa	4.71	36	P	Pn	21 39 35.6	+2.8
TMVZ	Te Maari	4.72	37	P	Pn	21 39 32.4	-0.6
KWHZ	Kaweka Forest	4.82	44	P	Pn	21 39 33.3	-1.0
KATZ	Kakaramea	4.83	36	P	Pn	21 39 39.3	+4.8
APZ	The Paps	4.84	216	P	Pn	21 39 32.2	-2.2
HIZ	Hauiti	4.92	26	P	Pn	21 39 35.9	+0.3
RATZ	Rangitukua	4.96	35	P	Pn	21 39 41.4	+5.2
BKZ	Black Stump Fm	5.05	43	P	Pn	21 39 35.4	-2.0
BKZ				P	Pn	21 39 35.8	-1.7
WATZ	Wairara	5.07	34	P	Pn	21 39 43.2	+5.5
TLZ	Tolley Road	5.32	31	P	Pn	21 39 42.0	+0.8
MTHZ	Maungataniwha	5.46	43	P	Pn	21 39 43.2	+0.1
RTZ	Ruatahuna	5.72	42	P	Pn	21 39 48.6	+2.0
MUGZ	Murupara	5.72	40	P	Pn	21 39 43.6	-3.0
TOZ	Tahuroa Road	5.84	28	P	Pn	21 39 48.4	+0.2
OMRZ	Omania	5.85	35	P	Pn	21 39 53.9	+5.5
URZ	Urewera	6.06	41	P	Pn	21 39 51.3	+0.1
MARZ	Manawahe	6.08	37	P	Pn	21 39 56.5	+4.9
AWAZ	Awhitu Peninsu	6.21	19	P	Pn	21 39 54.2	+0.8
RUGZ	Raukumara Rang	6.57	42	P	Pn	21 39 56.3	-2.0
WIAZ	Waiheke Island	6.60	22	P	Pn	21 39 58.7	+0.1

IDC ***30*** *21:45:58.0±2.7, 23.°07S×179.°68W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/46, mbtmp3.7/4, Error ellipse: s-maj=157.0km s-min=31.8km az=159.0*

NEIC ***30*** *21:46:45.6±2.4, 23.°79S±0.°10×179.°2W±0.°2, h580km±14km, mb4.3/22, Error ellipse: s-maj=23.3km s-min=12.7km az=110.0*

ISC 30 21:46:50.6±0.9**, 24.°2S**±0.°1×**179.°8E**±0.°1**, h537**km**, n30,** σ**1.s67**/29**, mb4.0**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.63	346		P	21 48 33.4	-1.3
DZM	Mont Dzumac	12.42	277	P	P	21 49 35.9	+2.2
BKZ	Black Stump Fm	15.17	190	P	P	21 50 00.8	-1.2
BKZ				IAmb	IAmb	21 50 05.4	
	comp=Z,8.8nm,1.2s						
BFZ	Birch Farm	16.70	189	P	P	21 50 14.3	-2.7
SNZO	South Karori	17.58	193	P	P	21 50 22.7	-2.3
QRZ	Quartz Range	17.65	198	P	P	21 50 25.3	-0.4
TUWZ	Tuamarina	17.85	194	P	P	21 50 24.8	-2.8
CMWZ	Cape Campbell	18.10	193	P	P	21 50 29.4	-0.4
THZ	Tophouse	18.42	196	P	P	21 50 31.8	-1.0
THZ				IAmb	IAmb	21 50 41.2	
	comp=Z,11nm,0.9s						
KHZ	Kahutara	18.88	194	P	P	21 50 35.0	-2.0
KHZ				IAmb	IAmb	21 50 50.4	
	comp=Z,20nm,1.2s						
LTZ	Lake Taylor	19.54	197	P	P	21 50 41.6	-1.4
LTZ				IAmb	IAmb	21 50 54.4	
	comp=Z,13nm,1.2s						
FOZ	Fox Glacier	20.94	201	P	P	21 50 57.8	+2.2
WHZ	Wether Hill Ro	23.65	201	P	P	21 51 20.1	+0.3
CTAO	Charters Tower	31.25	271	P	P	21 52 28.6	+1.9
CTAO				IAmb	IAmb	21 52 44.1	
	comp=Z,3.6nm,1.1s						
COEN	Coen	35.93	280	P	P	21 53 05.4	-0.8
COEN				IAmb	IAmb	21 53 07.6	
	comp=Z,8.7nm,1.1s						
BBOO	Buckleboo	39.11	247	P	P	21 53 32.1	+0.1
BBOO				IAmb	IAmb	21 53 44.1	
	comp=Z,11nm,1.1s						
ASAR	Alice Springs	41.76	261	P	P	21 53 55.0	+1.8
	comp=Z,0.2nm,0.5s,baz=106,slow=9.8,SNR=1.3						
WR0	Warramunga Arr	41.97	267	P	P	21 53 52.7	-2.2
WC3	Warramunga Arr	42.12	267	P	P	21 53 56.4	+0.3
WC3				IAmb	IAmb	21 54 00.4	
	comp=Z,5.7nm,1.1s						
WB2	Warramunga Arr	42.15	267	P	P	21 53 56.4	+0.1
WRAB	Tennant Creek	42.15	267	P	P	21 53 56.9	+0.5
WB0	Warramunga Arr	42.15	267	P	P	21 53 57.0	+0.6
WRA	Warramunga Arr	42.16	267	P	P	21 53 57.4	+0.9
	comp=Z,0.5nm,0.4s,baz=103,slow=8.3,SNR=12						
WRA	Warramunga Arr	42.16	267	P	P	21 53 57.1	+0.7
FORT	Forrest	45.99	250	P	P	21 54 26.4	+0.5
FORT				IAmb	IAmb	21 54 29.9	
	comp=Z,18nm,0.9s						
FAKI	Fak Fak	50.45	287	P	P	21 54 55.6	-3.7
FAKI				IAmb	IAmb	21 55 12.3	
	comp=Z,14nm,0.9s						
QSPA	South Pole Qui	65.88	180	P	P	21 56 43.4	+0.3
PEA0B	Petropavlovsk-	79.34	347	P	P	21 57 50.2	-10
PEA0B				IAmb	IAmb	21 58 02.0	
	comp=Z,14nm,1.1s						
TXAR	Lajitas Array	90.79	58	P	P	21 58 58.8	+1.9
	comp=Z,0.6nm,0.7s,baz=211,slow=5.1,SNR=4.3						
ILAR	Eielson Array	92.38	14	P	P	21 59 03.9	+0.6
	comp=Z,0.5nm,1.0s,baz=223,slow=4.9,SNR=2.3						

IDC ***30*** *21:55:45.7±0.5, 0.°23N×128.°77E, h0km, mb4.5/20, mb1 4.6/23, mb1mx4.4/43, mbtmp4.5/23, ML3.8/3, MS3.6/16, Ms1 3.6/16, ms1mx3.5/37, Error ellipse: s-maj=16.4km s-min=11.7km az=82.0*

DJA ***30*** *21:55:47.7±0.2, 0°N±2°×12°9E±°, h10km, M4.8/42, mB5.4/13, mb4.9/42, MLv4.6/16, Mw(mB)4.8/13*

NEIC ***30*** *21:55:49.5±1.4, 0.°20N±0.°07×128.°73E±0.°06, h29km±4km, mb4.8/66, Error ellipse: s-maj=11.7km s-min=8.2km az=211.0*

KLM ***30*** *21:55:50, 0.°25N×128.°95E, h30km, mb5.0*

NOU ***30*** *21:55:52.5, 0.°22N×128.°77E, h35km, mb4.8, Halmahera, Indonesia*

ISC 30 21:55:50.8±0.3**, 0.°22N**±0.°05×**128.°77E**±0.°05**, h35**km**, n216,** σ**1.s28**/208**, mb4.7**/82**, MS3.6**/14**, 2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.51	292	Pn	Pn	21 56 12.8	-2.6
TNTI	Ternate	1.51	292	P	Pn	21 56 13.2	-2.1
TNTI				S	Sn	21 56 35.5	+1.7
SWI	Sorong	2.71	113	P	Pn	21 56 30.7	-1.2
SIJI	Sorong	2.72	113	Pn	Pn	21 56 30.9	-1.1
	14nm,0.3s,baz=291,slow=21,SNR=12						
SIJI				Sn	Sn	21 57 06.8	+3.1
	8.3nm,0.3s,baz=189,slow=21,SNR=1.3						
MSAI	Masohi	3.54	177	P	Pn	21 56 43.9	+0.6
SANI	Sanana	3.58	231	P	Pn	21 56 41.9	-1.9
NLAI	Namlea	3.82	206	P	Pn	21 56 46.2	-0.9
FAKI	Fak Fak	4.67	132	Pn	Pn	21 56 58.4	-0.5
FAKI	Fak Fak	4.67	132	P	Pn	21 56 59.1	+0.3
KMSI	Cibinong	4.80	274	P	Pn	21 57 00.8	+0.1
BNDI	Bandanaira	4.84	166	P	Pn	21 57 02.3	+1.1
LUWI	Luwuk	6.13	258		Pn	21 57 18.0	-0.9
LUWI	Luwuk	6.13	258	P	Pn	21 57 16.3	-2.6
	0.9nm2µm242nm,1.0s						
MRSI	Marisa	6.83	272	P	Pn	21 57 29.0	+0.4
	0.3nm709nm85nm,1.0s						
APSI	Ampana	7.21	261	P	Pn	21 57 33.0	-0.7
	0.7nm2µm155nm,0.8s						
TOLI2	Tolitoli	8.04	276	Pn	Pn	21 57 43.5	-1.6
SAUI	Saumlaki	8.52	163	Pn	Pn	21 57 50.4	-1.5
MPSI	Mapaga	8.87	271	P	Pn	21 57 55.0	-1.6
	38nm,1.2s						
TTSI	Tana Toraja	9.52	250	P	Pn	21 58 05.9	+0.5
	743nm72nm,0.6s						
BNSI	Bone	9.79	242	P	Pn	21 58 10.4	+1.2
	35nm,1.1s						
SPSI	Sidrap Palu	9.91	245	P	Pn	21 58 11.6	+0.8
	2µm198nm,0.8s						
BKSI	Bulukumba	10.24	237	P	Pn	21 58 16.6	+1.3
	830nm100nm,0.8s						
KAPI	Kappang	10.40	240	Pn	Pn	21 58 17.8	+0.3
	1.8nm,0.3s,baz=101,slow=2.6,SNR=10						
KAPI				Sn	Sn	22 00 15.9	+3.0
	0.4nm,0.3s,baz=105,slow=22,SNR=1.5						
KAPI				LR	LR	22 02 17.5	
	comp=Z,218nm,18.6s,baz=78,slow=38						
KAPI	Kappang	10.40	240	Pn	Pn	21 58 17.1	-0.4
MMRI	Maumere	10.94	216	Pn	Pn	21 58 21.7	-3.3
EDFI	Ende, Flores	11.36	218	P	Pn	21 58 31.2	+0.4
	18nm,1.4s						
MYLDM	Lahad Datu	11.38	296		Pn	21 58 31.2	+0.3
BKB	Balikpapan	11.96	263	Pn	Pn	21 58 36.6	-2.4
MTN	Manton Dam	13.18	170	P	Pn	21 58 51.9	-3.8
	baz=13,SNR=13						
MTN	Manton Dam	13.18	170	Pn	Pn	21 58 55.0	-0.6
KDU	Kakadu	13.33	164	P	Pn	21 58 52.2	-5.5
	baz=14,SNR=6.3						
MTKI	Muara Teweh, K	13.92	265	P	Pn	21 59 03.9	-1.8
PLAI	Plampang	14.16	230	P	Pn	21 59 09.5	+0.5
	49nm,1.0s						
TWSI	Taliwang, Sumb	14.81	233	P	Pn	21 59 18.7	+0.9
	22nm,1.0s						
TGY	Tagaytay City	15.83	331	LR	LR	22 06 16.4	
	comp=Z,238nm,20.9s,baz=101,slow=40						
SRBI	Singaraja	15.83	238	P	Pn	21 59 31.8	+0.6
	142nm,1.0s						
KMMI	Kalianget	16.44	244	P	P	21 59 40.6	-0.7
	123nm,1.1s						
ABJI	Asem Bagus	16.53	241	P	Pn	21 59 40.6	+0.5
	2µm144nm,1.1s						
SBUM	Sibu	16.69	278	P	P	21 59 43.3	-0.9
SBUM	Sibu	16.69	278	P	P	21 59 45.0	+0.8
JAGI	Jajag, Banyuwa	16.93	239	P	Pn	21 59 44.4	-0.7
JAGI				IAmb	IAmb	21 59 48.8	
	comp=Z,79nm,1.3s						
JAGI	Jajag, Banyuwa	16.93	239	P	Pn	21 59 45.2	+0.1
	comp=Z,43nm,1.1s						
FITZ	Fitzroy Crossi	18.46	189	P	Pn	22 00 03.8	-0.1
	baz=19,SNR=7.3						
FITZ	Fitzroy Crossi	18.46	189	P	P	22 00 02.0	-1.6
	comp=Z,0.1nm,0.3s,baz=43,slow=9.0,SNR=11						
FITZ				LR	LR	22 07 30.7	
	comp=Z,185nm,21.2s,baz=16,slow=38						
FITZ	Fitzroy Crossi	18.46	189	P	P	22 00 02.2	-1.4
KSM	Kuching	18.50	274	P	Pn	22 00 05.0	+0.4
UGM	Wanagama	19.90	246		P	22 00 19.3	-0.3
UGM	Wanagama	19.90	246	P	Pn	22 00 20.4	-1.0
	comp=Z,281nm,1.4s						
COEN	Coen	20.04	135	P	Pn	22 00 22.1	-0.9
WB0	Warramunga Arr	20.61	165		P	22 00 26.8	-0.4
WB0				IAmb	IAmb	22 00 28.9	
	comp=Z,34nm,1.1s						
PMG	Port Moresby	20.65	118	LR	LR	22 11 02.7	
	comp=Z,252nm,18.1s,baz=232,slow=44						
PMG	Port Moresby	20.65	118	P	P	22 00 27.1	-0.6
PMG				IAmb	IAmb	22 00 33.6	
	comp=Z,35nm,1.1s						
WRAB	Tennant Creek	20.76	165	P	P	22 00 28.3	-0.5
WRAB				IAmb	IAmb	22 00 30.5	
	comp=Z,46nm,1.2s						
WRA	Warramunga Arr	20.76	165	P	P	22 00 27.9	-0.9
	comp=Z,24nm,1.0s,baz=345,slow=11,SNR=60						
WRA				LR	LR	22 11 05.9	
	comp=Z,270nm,19.4s,baz=340,slow=44						
WRA	Warramunga Arr	20.76	165	P	P	22 00 28.5	-0.3
WB2	Warramunga Arr	20.77	165		P	22 00 28.1	-0.8
WB2				IAmb	IAmb	22 00 30.6	
	comp=Z,50nm,1.2s						
WC3	Warramunga Arr	20.79	165	P	P	22 00 28.4	-0.7
	baz=21						
WR0	Warramunga Arr	20.83	165		P	22 00 29.3	-0.2
WR0				IAmb	IAmb	22 00 31.2	
	comp=Z,34nm,1.0s						
LEM	Lembang	22.23	251	P	P	22 00 46.0	+1.1
	comp=Z,14nm,0.5s,baz=108,slow=11,SNR=4.6						
LEM				LR	LR	22 10 36.9	
	comp=Z,176nm,18.0s,baz=138,slow=40						
CISI	Cisompet, Garu	22.28	249	P	P	22 00 43.7	-1.6
CISI	Cisompet, Garu	22.28	249	P	P	22 00 46.6	+1.4
	comp=Z,80nm,0.9s						
DBJI	Dramaga	22.98	253	P	P	22 01 07.3	+15
QIS	Mount Isa	23.21	153	P	P	22 00 55.6	+0.8
	baz=23,SNR=25						
PSAD1	Pilbara Seismi	23.24	202	P	P	22 00 54.3	-0.8
PSAD1				IAmb	IAmb	22 00 56.6	
	comp=Z,51nm,1.4s						
DLV	T Lat	23.26	301	P	P	22 00 54.9	-0.8
DLV				IAmb	IAmb	22 00 59.1	
	comp=Z,48nm,1.1s						
PSAC2	Pilbara Seismi	23.31	201	P	P	22 00 55.0	-0.9
PSAC2				IAmb	IAmb	22 00 57.3	
	comp=Z,43nm,1.3s						
PSAC1	Pilbara Seismi	23.32	201	P	P	22 00 54.5	-1.4
PSAC1				IAmb	IAmb	22 00 56.8	
	comp=Z,30nm,1.1s						
PSAB2	Pilbara Seismi	23.32	201	P	P	22 00 54.9	-1.0
PSAB2				IAmb	IAmb	22 00 57.3	
	comp=Z,48nm,1.4s						
PSAA2	Pilbara Seismi	23.33	201	P	P	22 00 54.6	-1.4
PSAD2	Pilbara Seismi	23.34	201	P	P	22 00 55.4	-0.7
PSAD2				IAmb	IAmb	22 00 57.6	
	comp=Z,44nm,1.2s						
PSA00	Pilbara Seismi	23.34	201	P	P	22 00 55.8	-0.3
PSA00				IAmb	IAmb	22 00 57.0	
	comp=Z,33nm,1.2s						
PSA00	Pilbara Seismi	23.34	201	P	P	22 00 55.0	-1.1
PSA00				IAmb	IAmb	22 00 57.0	
	comp=Z,13nm,1.0s						
PSAA3	Pilbara Seismi	23.34	201	P	P	22 00 54.9	-1.3
PSAA3				IAmb	IAmb	22 00 57.1	
	comp=Z,32nm,1.2s						
PSAB1	Pilbara Seismi	23.35	201	P	P	22 00 54.9	-1.3
PSAB1				IAmb	IAmb	22 00 57.0	
	comp=Z,39nm,1.2s						
PSAA1	Pilbara Seismi	23.35	201	P	P	22 00 55.6	-0.6
PSAA1				IAmb	IAmb	22 00 57.0	
	comp=Z,39nm,1.2s						
PSAB3	Pilbara Seismi	23.36	201	P	P	22 00 55.3	-1.0
PSAB3				IAmb	IAmb	22 00 57.1	
	comp=Z,43nm,1.2s						
PSAC3	Pilbara Seismi	23.39	201	P	P	22 00 55.1	-1.5
PSAC3				IAmb	IAmb	22 00 58.0	
	comp=Z,28nm,1.2s						
PSAD3	Pilbara Seismi	23.43	201	P	P	22 00 55.6	-1.4
PSAD3				IAmb	IAmb	22 01 00.9	
	comp=Z,30nm,1.1s						
BLSI	Bandar Lampung	24.14	256	P	P	22 01 05.0	+1.2
	comp=Z,76nm,1.3s						
AS31	Alice Springs	24.26	168	P	P	22 01 05.0	+0.2
AS31				IAmb	IAmb	22 01 07.9	
	comp=Z,25nm,1.1s						
ASAR	Alice Springs	24.26	168	P	P	22 01 05.5	+0.7
	comp=Z,80nm,1.1s,baz=347,slow=11,SNR=214						
ASAR				PcP	PcP	22 04 43.8	-0.8
	comp=Z,1.0nm,0.6s,baz=360,slow=2.0,SNR=2.5						
ASAR				LR	LR	22 12 06.5	
	comp=Z,155nm,19.6s,baz=346,slow=40						
ASAR	Alice Springs	24.26	168	P	P	22 01 04.9	+0.1
KLSI		24.50	258	P	P	22 01 08.4	+1.3
	comp=Z,26nm,1.0s						
KASI	Kota Agung	24.90	256	P	P	22 01 12.0	+1.3
	comp=Z,1µmcomp=Z,142nm,1.0s						
MDSI	Maura Dua	25.01	259	P	P	22 01 12.3	+0.6
	comp=Z,762nmcomp=Z,91nm,1.1s						
LWLI	Liwa	25.22	258	P	P	22 01 14.9	+1.1
	comp=Z,60nm,0.7s						
XMIS	Christmas Isla	25.33	245	P	P	22 01 12.9	-1.7
QIZ	Qiongzhong	26.35	316	P	P	22 01 25.3	+1.5
QIZ				S	S	22 05 55.3	+0.5
QIZ				LR	LR		
	comp=N,260nm,16.7s						
QIZ				LR	LR		
	comp=E,260nm,20.6s						
QIZ				LR	LR		
	comp=Z,140nm,11.8s						
KSI	Kapahiang	26.44	261	P	P	22 01 26.0	+1.2
	comp=Z,3µmcomp=Z,37nm,0.8s						
JOW	Kunigami	26.47	359	LR	LR	22 10 13.1	
	comp=Z,160nm,19.4s,baz=258,slow=33						
UBPT	Khong Chiam	27.46	304	P	P	22 01 38.4	+4.6
	comp=Z,8.3nm,1.1s						
UBPT	Khong Chiam	27.46	304	P	P	22 01 33.5	-0.3
IPM	Ipoh	28.04	279	P	P	22 01 38.4	-0.7
IPM				IAmb	IAmb	22 01 44.9	
	comp=Z,20nm,1.1s						
IPM	Ipoh	28.04	279	P	P	22 01 40.0	+0.9
PDSI	Padang	28.33	268	P	P	22 01 40.9	-0.8
	comp=Z,11nm,1.0s						
MEEK	Meekatharra	28.43	199	P	P	22 01 43.0	+0.6
	baz=29,SNR=5.7						
MNSI	Mandailing Nat	29.20	271	P	P	22 01 50.3	+1.0
	comp=Z,11nm,0.8s						
PSI	Prapat	29.94	275	P	P	22 01 55.4	-0.7
	comp=Z,18nm,1.0s,baz=180,slow=2.8,SNR=14						
FORT	Forrest	30.83	181	P	P	22 02 04.0	+0.4
GSI	Gunungsitoli	31.21	272	P	P	22 02 05.4	-1.8
GSI	Gunungsitoli	31.21	272	P	P	22 02 05.7	-1.5
	comp=Z,56nm,1.1s						
MORW	Morawa	31.56	202	P	P	22 02 10.0	-0.1
	baz=32,SNR=4.6						
MORW	Morawa	31.56	202	P	P	22 02 09.2	-0.9
KMBL	Kambalda	32.08	191	P	P	22 02 15.2	+0.6
	baz=32,SNR=5.7						
BLDU	Ballidu	32.73	199	P	P	22 02 21.1	+0.8
	baz=33,SNR=4.9						
NJ2	Nanjing	33.02	344	*e*P	P	22 02 22.5	-0.3
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KLBR	Kellerberrin	33.31	197	P	P	22 02 26.1	+0.8
	baz=34,SNR=10						
BBOO	Buckleboo	33.56	169	P	P	22 02 28.4	+0.9
	baz=34						
BBOO	Buckleboo	33.56	169	P	P	22 02 27.7	+0.2
GYA	Guiyang	33.68	323	*e*P	P	22 02 32.0	+3.2
GYA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
STKA	Stephens Creek	34.15	160	P	P	22 02 33.8	+1.1
	baz=34,SNR=6.4						
STKA	Stephens Creek	34.15	160	P	P	22 02 33.5	+0.9
	comp=Z,6.5nm,0.7s,baz=349,slow=8.5,SNR=7.9						
STKA				LR	LR	22 18 10.8	
	comp=Z,113nm,19.6s,baz=355,slow=39						
STKA	Stephens Creek	34.15	160	P	P	22 02 33.0	+0.3
MUN	Mundaring	34.15	199	P	P	22 02 34.2	+1.6
	baz=34,SNR=4.2						
CM09	Chiang Mai Arr	34.40	303	P	P	22 02 39.2	+4.2
	comp=Z,5.1nm,0.8s						
CM01	Chiang Mai Arr	34.42	303	P	P	22 02 39.9	+4.7
CM05	Chiang Mai Arr	34.42	303	P	P	22 02 39.4	+4.1
	comp=Z,2.0nm,1.0s						
CM02	Chiang Mai Arr	34.44	303	P	P	22 02 39.0	+3.7
	comp=Z,4.2nm,0.9s						
CMAR	Chiang Mai Arr	34.45	303	P	P	22 02 36.5	+1.0
	comp=Z,3.2nm,1.0s,baz=124,slow=7.4,SNR=16						
CMAR				LR	LR	22 19 12.2	
	comp=Z,40nm,18.9s,baz=186,slow=41						
CM13	Chiang Mai Arr	34.46	303	P	P	22 02 39.0	+3.4
	comp=Z,3.4nm,0.8s						
CMMT	Chiang Mai	34.62	304	P	P	22 02 36.7	-0.2
	comp=Z,2.9nm,1.6s						
CHTO	Chiang Mai	34.62	304	P	P	22 02 36.5	-0.4
NWAO	Narrogin (SRO)	34.71	197	P	P	22 02 37.6	+0.1
	comp=Z,38nm,1.2s,baz=50,slow=9.1,SNR=3.4						
NWAO	Narrogin (SRO)	34.71	197	P	P	22 02 37.4	-0.1
NWAO	Narrogin (SRO)	34.71	197	P	P	22 02 37.2	-0.3
NWAO				IAmb	IAmb	22 02 40.0	
	comp=Z,34nm,1.1s						
ENH	Enshi	35.07	330	P	P	22 02 40.7	0.0
ENH				IAmb	IAmb	22 02 44.3	
	comp=Z,12nm,0.9s						
KMI	Kunming	35.30	316	⇑*e*P	P	22 02 44.5	+1.5
KMI				pP	sP	22 02 55.8	-1.7
KMI				sP	pP	22 02 59.5	+6.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI	Kunming	35.30	316	P	P	22 02 42.8	-0.2
CMSA	Cobar Meteorol	35.42	155	P	P	22 02 45.6	+2.0
	baz=36,SNR=9.2						
KSAR	Wonju Array Be	37.05	359	P	P	22 02 56.8	-0.6
KSRS	Korea Array	37.06	359	P	P	22 02 58.1	+0.6
	comp=Z,2.0nm,0.9s,baz=174,slow=9.1,SNR=4.1						
KSRS				LR	LR	22 16 22.3	
	comp=Z,58nm,21.9s,baz=195,slow=33						
MJAR	Matsushiro Arr	37.19	13	P	P	22 02 57.0	-1.8
	comp=Z,2.2nm,0.8s,baz=190,slow=9.4,SNR=4.7						
MJAR				LR	LR	22 17 06.9	
	comp=Z,46nm,21.2s,baz=195,slow=34						
ARMA	Armidale	37.43	146	P	P	22 03 03.2	+2.2
	baz=38,SNR=4.2						
ARMA	Armidale	37.43	146	P	P	22 03 01.3	+0.4
ARMA				IAmb	IAmb	22 03 05.6	
	comp=Z,17nm,0.9s						
XAN	Xi'an	38.45	333	P	P	22 03 10.8	+1.3
XAN				pP	sP	22 03 21.0	-2.9
XAN				pmax	pmax		
	comp=Z,14nm,1.5s						
CD2	Chengdu	38.67	324	P	P	22 03 11.8	+0.5
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
ARPS	Mount Arapiles	38.74	163	P	P	22 03 13.6	+1.8
	baz=39,SNR=7.9						
BJT	Baijiatuau	41.25	345	P	P	22 03 33.0	+0.5
BJI	Beijing	41.27	345	P	P	22 03 33.8	+1.1
BJI				PP	PP	22 05 08.0	-0.4
BJI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,260nm,5.7s						
H11S3	WAKE ISLAND Hy	41.42	62	T	T	22 47 33.1	
	baz=249,slow=74						
H11S2	WAKE ISLAND Hy	41.44	62	T	T	22 47 34.4	
	baz=249,slow=74						
H11S1	WAKE ISLAND Hy	41.44	62	T	T	22 47 33.9	
	baz=249						
H11N1	WAKE ISLAND Hy	42.06	60	T	T	22 48 22.0	
	baz=246,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	42.07	60	T	T	22 48 19.1	
	baz=246,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	42.08	60	T	T	22 48 22.9	
	baz=246,slow=75,SNR=19						
LZH	Lanzhou	42.55	330	*e*P	P	22 03 44.5	+1.1
LZH				pP	pP	22 03 54.5	+0.8
LZH				sP	sP	22 03 59.5	+1.6
LZH				PP	PP	22 05 26.0	+3.5
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,89nm,5.8s						
HHC	Hu-ho-hao-te	43.36	341	*e*P	P	22 03 50.0	+0.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,7.6s						
CN2	Changchun	43.50	357	*e*P	P	22 03 52.0	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SHL	Shillong	43.62	308	P	P	22 03 51.5	-0.7
SHL				IAmb	IAmb	22 03 54.9	
	comp=Z,12nm,0.9s						
USRK	Ussuriysk Ar.	43.89	3	P	P	22 03 55.4	+1.5
	comp=Z,1.8nm,0.6s,baz=152,slow=6.5,SNR=2.5						
USRK				LR	LR	22 22 58.5	
	comp=Z,49nm,18.2s,baz=174,slow=37						
LSA	Lhasa	46.29	313	P	P	22 04 15.0	+1.2
LSA				pmax	pmax		
	comp=Z,37nm,1.1s						
LSA	Lhasa	46.29	313	P	P	22 04 13.6	-0.3
LSA				IAmb	IAmb	22 04 17.9	
	comp=Z,12nm,1.2s						
GTA	Gaotai	47.14	329	⇑P	P	22 04 21.0	+1.1
GTA				pP	pP	22 04 25.5	-4.9
GTA				sP	sP	22 04 28.3	-6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TAPN	Taplejung	47.75	308	*e*P	P	22 04 25.5	+0.4
KLR	Kul'dur	48.89	3	P	P	22 04 34.7	+1.6
	comp=Z,1.5nm,0.9s,baz=308,slow=8.9,SNR=4.8						
GUN	Gumba	49.45	308	*e*P	P	22 04 37.8	-0.4
	comp=Z,23nm,0.7s						
PKI	Pulchoki	49.68	307	*e*P	P	22 04 40.2	+0.3
	comp=Z,9.8nm,0.8s						
KKN	Kakani	49.88	307	*e*P	P	22 04 41.0	-0.3
DMN	Daman	49.94	307	*e*P	P	22 04 41.3	-0.5
ULN	Ulaanbaatar	51.08	341	P	P	22 04 49.9	0.0
SONM	Songino Array	51.26	341	P	P	22 04 52.4	+1.1
	comp=Z,1.7nm,0.9s,baz=157,slow=6.8,SNR=9.8						
SONM				PcP	PcP	22 06 06.7	+0.6
	comp=Z,1.7nm,0.9s,baz=145,slow=3.2,SNR=5.7						
SONM				LR	LR	22 26 36.8	
	comp=Z,75nm,21.0s,baz=155,slow=36						

SONM	Songino Array	51.26	341	P	P	22 04 52.0	+0.8
DANN	Dangsing	51.33	307	eP	P	22 04 51.7	-0.6
	comp=Z,22nm,0.6s						
WMQ	Urumqi	56.76	325	eP	P	22 05 32.8	+1.4
WMQ	Urumqi	56.76	325	P	P	22 05 31.0	-0.4
PETK	Petropavlovsk-	57.95	20	P	P	22 05 39.2	-0.4
	comp=Z,4.8nm,0.7s,baz=192,slow=3.8,SNR=7.3						
TUWZ	Tuamarina	58.15	141	P	P	22 05 41.1	-0.1
ZSN	Zaisan	60.55	327	i P	P	22 05 56.6	-1.1
	comp=Z,3.6nm,1.0s,baz=327						
ZSN				eS	S	22 14 10.6	-0.6
	baz=327						
SHLS	Shalkode	61.34	321	eP	P	22 06 00.6	-2.7
	comp=Z,5.3nm,1.0s,baz=321						
MK31	Makanchi Array	61.59	325	P	P	22 06 04.2	-0.5
MK31				IAmb	IAmb	22 06 07.9	
	comp=Z,8.2nm,0.9s						
MKAR	Makanchi Array	61.59	325	P	P	22 06 04.3	-0.4
	comp=Z,8.1nm,0.8s,baz=118,slow=8.0,SNR=60						
MKAR				LR	LR	22 34 20.3	
	comp=Z,83nm,18.9s,baz=75,slow=38						
MKAR	Makanchi Array	61.59	325	P	P	22 06 03.9	-0.9
YAK	Yakutsk	61.66	0	P	P	22 06 04.8	0.0
MAKZ	Makanchi	61.77	325	P	P	22 06 05.3	-0.7
SATY	Saty	61.96	320	eP	P	22 06 06.8	-0.7
	comp=Z,5.4nm,0.9s,baz=320						
KSH	Kashi	61.96	316	P	P	22 06 11.0	+3.4
KSH				pP	sP	22 06 22.0	-0.2
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,460nm,5.4s						
KPKS	Kokpek	61.98	321	eP	P	22 06 06.6	-1.0
	comp=Z,6.9nm,1.0s,baz=321						
MDOK	Medeo	62.88	320	eP	P	22 06 12.8	-0.9
	baz=320						
TNSS	Tian-Shan	62.89	320	eP	P	22 06 13.5	-0.6
	baz=320						
TDK	Taldyqorghan	62.92	322	eP	P	22 06 12.9	-0.8
	comp=Z,3.7nm,1.1s,baz=322						
CHKK	Chushkaly	63.25	320	eP	P	22 06 14.8	-1.2
	baz=320						
KUU	Kurty	63.68	320	eP	P	22 06 17.2	-1.6
	comp=Z,12nm,1.0s,baz=320						
AAK	Ala-Archa	64.32	318	P	P	22 06 22.1	-1.1
ZAA0	Zalesovo Array	64.62	333	IAmb	IAmb	22 06 26.5	
	comp=Z,7.3nm,1.1s						
ZALV	Zalesovo Beam	64.62	333	P	P	22 06 23.7	-1.0
	comp=Z,6.5nm,1.0s,baz=116,slow=6.8,SNR=18						
ZALV				LR	LR	22 35 00.1	
	comp=Z,77nm,20.6s,baz=95,slow=36						
ZALV	Zalesovo Beam	64.62	333	P	P	22 06 23.3	-1.4
SEM	Semipalatinsk	64.74	328	eP	P	22 06 24.8	-1.1
	baz=328						
SEY	Seymchan	65.01	12	P	P	22 06 28.0	+1.0
	comp=Z,3.2nm,0.8s,baz=195,slow=4.1,SNR=7.4						
KBL	Kabul	65.28	308	P	P	22 06 28.4	-1.3
BTLS	Baital	65.67	321	eP	P	22 06 29.9	-1.7
	baz=320						
KURK	Kurchatov	65.78	328	P	P	22 06 31.8	-0.5
DZA	Taraz	66.54	318	eP	P	22 06 36.3	-1.1
	baz=317						
IUG	Iuzhnay	67.15	316	eP	P	22 06 40.1	-1.3
	comp=Z,2.4nm,1.0s,baz=316						
KK31	Karatay Array	67.18	317	P	P	22 06 40.8	-0.7
KK31				IAmb	IAmb	22 06 44.5	
	comp=Z,7.7nm,1.1s						
KKAR	Karatay Array	67.18	317	P	P	22 06 40.1	-1.4
KKAR	Karatay Array	67.18	317	IAmb	IAmb	22 06 44.5	
	comp=Z,7.7nm,1.1s						
BRZS	Berezniki	68.72	325	eP	P	22 06 49.8	-1.2
	comp=Z,3.8nm,1.1s,baz=325						
TIXI	Tiksi	71.32	0	P	P	22 07 06.0	-0.4
BRVK	Borovoye	71.43	327	P	P	22 07 06.7	-0.8
BRVK				IAmb	IAmb	22 07 10.0	
	comp=Z,14nm,1.1s						
UOSS	Minazif	74.13	296	P	P	22 07 23.3	-0.9
NRIK	Noril'sk	74.31	346	P	P	22 07 24.2	-0.1
	comp=Z,7.5nm,0.9s,baz=127,slow=6.9,SNR=10						
NRIK	Noril'sk	74.31	346	P	P	22 07 23.9	-0.4
NRIK				IAmb	IAmb	22 07 35.5	
	comp=Z,9.3nm,1.0s						
GEYT	Alibeck	74.68	309	P	P	22 07 26.9	-0.3
	comp=Z,2.3nm,0.7s,baz=130,slow=4.5,SNR=3.6						
GEYT	Alibeck	74.68	309	P	P	22 07 26.1	-1.0
ABKAR	Akbulak array	76.15	321	P	P	22 07 34.0	-1.3
ABKAR	Akbulak array	76.15	321	P	P	22 07 33.8	-1.5
ABKAR				IAmb	IAmb	22 07 37.4	
	comp=Z,4.3nm,1.0s						
ARU	Arti	78.98	328	P	P	22 07 49.8	-1.1
AKH	Akhalkalaki	86.31	311	P	P	22 08 29.2	-0.4
ILAR	Eielson Array	87.39	25	P	P	22 08 34.1	0.0
	comp=Z,0.5nm,0.8s,baz=249,slow=4.8,SNR=5.7						
BMAR	Burnt Mountain	88.51	23	P	P	22 08 37.7	-1.8
BCAR	Beaver Creek A	89.56	27	P	P	22 08 42.3	-2.2
QSPA	South Pole Qui	90.14	180	P	P	22 08 47.1	-0.2
QSPA				IAmb	IAmb	22 08 50.7	
	comp=Z,7.5nm,1.0s						
KMBO	Kilima Mbogo	91.52	269	P	P	22 08 54.7	-0.2
	comp=Z,1.9nm,0.8s,baz=36,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	125.90	286	PKP	PKiKP	22 14 50.4	-0.2
	comp=Z,1.5nm,0.8s,baz=69,slow=1.8,SNR=4.5						
TORD	Torodi Ar. Bea	125.90	286		PKiKP	22 14 50.3	-0.3
CPUP	Villa Florida	153.38	168	PKPbc	PKiKP	22 15 46.6	+0.3
	comp=Z,4.1nm,0.9s,baz=270,slow=1.0,SNR=5.8						

*NCEDC **30** 22:02:41.7±0.8, 38°.44N±0°.02×119°.27W±0°.02, h12^{km}±5^{km}, Md3.1/78, ML2.8/56(NEIC), Error ellipse: s-maj=2.4km s-min=1.8km az=206.0*

NEIC 30 22:02:41.6±0.9**, 38°.44N**±0°.01×**119°.27W**±0°.02**, h9**^{km}±4^{km}**,**
Error ellipse: s-maj=2.3km s-min=1.5km az=221.0,
California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAKR	Walker	0.15	296		Pg	22 02 45.3	+0.3
WAKR				Sg	Sg	22 02 47.9	+0.6
WAKR				IAML		22 02 48.6	
	comp=N,2µm,0.2s						
WAKR				IAML		22 02 49.0	
	comp=E,2µm,0.3s						
LUL	Lundy Lake	0.39	170		Pg	22 02 49.7	+0.3
RYN	Ryan	0.62	72		Pg	22 02 53.8	+0.2
RYN				Sg	Sg	22 03 02.2	+0.5
LHV	Little Huntoon	0.63	107		Pg	22 02 54.1	+0.3
LHV				Sg	Sg	22 03 02.3	+0.2
LHV				IAML		22 03 03.2	
	comp=E,358nm,0.3s						
LHV				IAML		22 03 04.2	
	comp=N,436nm,0.3s						
PNTR	Pine Nut	0.70	338		Pg	22 02 55.1	0.0
PNTR				Sg	Sg	22 03 04.9	+0.6
PNTR				IAML		22 03 07.4	
	comp=E,526nm,0.5s						
PNTR				IAML		22 03 08.3	
	comp=N,432nm,0.6s						
MDCM	Deadman Creek	0.75	166		Pg	22 02 56.0	-0.1
NVAR	Mina Array Bea	0.76	90		Pg	22 02 55.5	-0.9
ANTCA	Antelope Range	0.76	133		Pg	22 02 56.6	+0.3
MGNR	McGee Canyon	0.77	144		Pg	22 02 56.6	+0.1
MDPB	Devils Postpil	0.82	169		Pg	22 02 57.3	-0.2
MDPB				IAML		22 03 09.5	
	comp=E,261nm,0.4s						
MRDM	Red Cones	0.86	169		Pg	22 02 58.2	+0.1
MDRNC	Doe Ridge	0.87	157		Pg	22 02 58.4	0.0
NV11	Mina Array Sit	0.88	90		Pg	22 02 58.0	-0.5
VCNR	Virginia City	0.91	341		Pg	22 02 59.0	-0.1
BENR	Benton	0.91	142		Pg	22 02 58.9	-0.3
RUBR	Rubicon Trail	0.92	312		Pg	22 02 59.5	+0.1
RUBR				IAML		22 03 13.0	
	comp=N,232nm,0.8s						
RUBR				IAML		22 03 14.0	
	comp=E,289nm,0.5s						
ORC	Owens River	0.94	149		Pg	22 02 59.5	-0.2
CMB	Columbia Colle	0.97	246	Pg	Pg	22 02 59.7	-0.6
CMB				IAML		22 03 12.8	
	comp=N,239nm,0.4s						
CMB				IAML		22 03 13.3	
	comp=E,317nm,0.3s						
CMB	Columbia Colle	0.97	246		Sg	22 03 12.4	-0.4
RCCR	Rock Creek Can	1.04	155		Pg	22 03 01.5	-0.2
MLNR	Milner Canyon	1.12	139		Pg	22 03 02.8	-0.3
SCHCA	Scheelite	1.17	157		Pb	22 03 04.4	+0.1
VPK	Verdi Peak	1.19	330		Pg	22 03 04.4	-0.2
PAHR	Pah Rah Range	1.27	356		Pn	22 03 05.7	-0.1
PAHR				IAML		22 03 24.5	
	comp=N,110nm,0.4s						
PAHR				IAML		22 03 25.6	
	comp=E,109nm,0.7s						
IND	Independence	1.27	322		Pn	22 03 05.9	0.0
PEAR	Peavine Mounta	1.28	335		Pn	22 03 06.0	0.0
KBF	Kyburz Flat	1.29	326		Pn	22 03 06.2	0.0
POCCA	Poleta Canyon	1.33	144		Pn	22 03 06.5	-0.2
LOY	Loyalton	1.43	329		Pb	22 03 08.5	-0.1
TPH	Tonopah	1.65	102		Pn	22 03 11.0	-0.1
BEKR	Beckworth	1.66	330		Pn	22 03 11.1	0.0
BEKR				IAML		22 03 35.5	
	comp=N,76nm,0.6s						
BEKR				IAML		22 03 35.6	
	comp=E,170nm,0.6s						
HELL	Mitchell Peak,	1.77	174		Pb	22 03 13.6	-0.7
ORV	Oroville	2.06	303		Pn	22 03 17.6	+1.1
SUTB	Sutter Butte	2.12	293		Pn	22 03 13.6	-3.7
GHS	Gilroy Hot Spr	2.19	233		Pb	22 03 20.0	-1.4
HFEM	San Felipe	2.23	230		Pb	22 03 20.5	-1.6
BBNM	San Benito	2.40	217		Pb	22 03 24.8	-0.3
SAO	San Andreas Ge	2.41	227	Pn	Pn	22 03 22.0	+0.8
MNRC	McLaughlin Min	2.52	281		Pb	22 03 26.3	-0.8
PMPB	Monarch Peak	2.53	209	Pn	Pn	22 03 23.9	+0.9
PMPB				IAML		22 04 08.6	
	comp=N,69nm,0.8s						
PMPB				IAML		22 04 11.0	
	comp=E,67nm,0.6s						
PAGB	Antelope Grade	2.81	196		Pn	22 03 26.4	-0.5
PAGB				IAML		22 04 12.4	
	comp=N,38nm,1.2s						
PAGB				IAML		22 04 19.8	
	comp=E,33nm,1.0s						
ISA	Isabella, Lake	2.84	167		Pn	22 03 27.0	-0.4
ISA				IAML		22 04 12.5	
	comp=N,44nm,0.5s						
MCCM	Marconi Confer	2.85	265	Pn	Pn	22 03 29.4	+2.0
R11A	Troy Canyon, C	2.90	91		Pn	22 03 28.0	-0.2
HOPS	Hopland Field	3.02	282	Pn	Pn	22 03 30.2	+0.4
WDC	Whiskeytown Da	3.31	311	Pn	Pn	22 03 35.4	+1.7
PRN	Pahroc Range	3.49	106		Pn	22 03 37.0	+0.7
PRN				IAML		22 04 41.1	
	comp=E,13nm,0.5s						
PRN				IAML		22 04 43.9	
	comp=N,15nm,1.0s						
MOD	Modoc Plateau	3.55	347		Pn	22 03 36.0	-1.1
SHPR	Sheep Range	3.80	119		Pn	22 03 41.1	+0.6
ELK	Elko	3.87	52		Pn	22 03 41.5	-0.2
ELK				IAML		22 04 45.8	
	comp=N,14nm,0.5s						
ELK				IAML		22 04 46.2	
	comp=N,10.0nm,0.5s						
SPR3	Spring Creek 3	3.90	80		Pn	22 03 42.8	+0.7
SPR3				IAML		22 04 45.3	
	comp=N,18nm,0.9s						
SPR3				IAML		22 04 49.7	
	comp=E,13nm,0.4s						

*OSPL **30** 22:07:34.8±2.2, 18°.44N×68°.56W, h176^{km}±31^{km}, ML2.9*
*NEIC **30** 22:07:37.4±1.8, 19°.2N±0°.1×68°.32W±0°.05, h1^{km}±3^{km}, Error ellipse: s-maj=15.7km s-min=4.9km az=201.0*
*RSPR **30** 22:07:38.2, 19°.09N×68°.26W, h157^{km}±3^{km}, MD3.7/4*

ISC 30 22:07:35.2±2.3**, 19°.3N**±0°.1×**68°.38W**±0°.04**, h3**^{km}±15^{km}**, n34,**
σ1^{s}.82/43**, 7C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.47	125	⇑eP	Pb	22 08 05.1	+1.9
AGPR	Aguadilla, PR	1.47	125		Pb	22 08 04.8	+1.6
AGPR				Sn	Sn	22 08 27.3	+5.0
AGPR				IAML		22 08 30.0	
	comp=N,206nm,0.3s						
AGPR				IAML		22 08 30.6	
	comp=E,244nm,0.5s						
AGPR	Aguadilla, PR	1.47	125	i P	Pb	22 08 03.9	+0.7
AGPR				eS	Sn	22 08 27.0	+4.6
AGPR				IAML		22 08 30.0	
	comp=Z,102nm,0.6s						
MPR	Mayaguez	1.61	133	Pn	Pn	22 08 04.8	+0.2
MPR				IAML		22 08 34.5	
	comp=N,173nm,0.1s						
MPR	Mayaguez	1.61	133	i P	Pn	22 08 03.7	-0.8
MPR				eS	Sg	22 08 24.3	-2.8
SDD	Santo Domingo	1.68	240	Pn	Pb	22 08 08.6	+1.8
SDD				IAML		22 08 48.9	
	comp=N,118nm,1.6s						
SDD				IAML		22 09 32.5	
	comp=E,89nm,2.3s						
CRPR	Cabo Rojo, PR	1.78	137	Pn	Pn	22 08 06.3	-0.4
CRPR				IAML		22 08 35.4	
	comp=N,63nm,2.0s						
AOPR	Arecibo Observ	1.82	122	⇑eP	Pb	22 08 09.4	+0.3
AOPR	Arecibo Observ	1.82	122	eS	Sg	22 08 33.8	0.0
AOPR	Arecibo Observ	1.82	122		Pn	22 08 07.9	+0.5
AOPR					Sg	22 08 33.3	-0.4
MLPR	Magueyes Islan	1.85	136	Pn	Pn	22 08 06.8	-1.0
MLPR				IAML		22 08 30.2	
	comp=N,57nm,3.4s						
EMPR	Esperanza - Ma	1.94	115	⇑eP	Pb	22 08 11.3	+0.1
EMPR	Esperanza - Ma	1.94	115	eS	Sg	22 08 37.0	-0.7
EMPR	Esperanza - Ma	1.94	115		Pn	22 08 09.9	+0.8
EMPR				Sn	Sn	22 08 29.5	-4.5
EMPR				IAML		22 09 22.4	
	comp=N,190nm,0.8s						
BANI	BANI	2.08	244	Pn	Pb	22 08 16.1	+2.4
OBIP	Obispado Ponce	2.11	127	⇑eP	Pn	22 08 12.6	+1.2
OBIP	Obispado Ponce	2.11	127	eS	Sb	22 08 39.6	-1.0
OBIP	Obispado Ponce	2.11	127		Pn	22 08 11.7	+0.3
OBIP					Sn	22 08 37.6	-0.5
CELP	Cerrillos	2.11	126	⇑eP	Pn	22 08 12.1	+0.7
CELP	Cerrillos	2.11	126	eS	Sb	22 08 39.1	-1.6
CELP	Cerrillos	2.11	126		Pn	22 08 12.1	+0.7
CELP					Sb	22 08 39.1	-1.6
SC01	Santiago de lo	2.22	273	i P	Pn	22 08 13.5	+0.6
SC01				eS	Sn	22 08 40.4	-0.4
ICMP	Isla Caja de M	2.26	129	Pn	Pn	22 08 14.6	+1.1
ICMP				IAML		22 09 15.7	
	comp=E,80nm,1.0s						
ICMP				IAML		22 09 44.3	
	comp=N,78nm,2.1s						
GCPR	Guaynabo City	2.40	114	⇓eP	Pn	22 08 16.2	+0.8
GCPR	Guaynabo City	2.40	114		Pn	22 08 16.2	+0.8
PDPR	Patillas Dam,	2.58	120	Pn	Pn	22 08 18.2	+0.3
PDPR				IAML		22 08 59.8	
	comp=E,42nm,1.8s						
CBYP	Canovanas	2.61	113	⇑eP	Pn	22 08 18.7	+0.4
CBYP	Canovanas	2.61	113	eS	Sn	22 08 50.1	-0.5
CBYP	Canovanas	2.61	113		Pn	22 08 18.7	+0.4
HUMP	Col San Antoni	2.67	116	⇑eP	Pn	22 08 19.9	+0.9
HUMP	Col San Antoni	2.67	116	eS	Sn	22 08 51.4	-0.6
HUMP	Col San Antoni	2.67	116		Pn	22 08 19.6	+0.5
HUMP					Sn	22 08 51.8	-0.2
HUMP				IAML		22 08 56.9	
	comp=E,53nm,0.2s						
HUMP				IAML		22 08 58.6	
	comp=N,48nm,0.2s						
SDDR	Presa de Saban	2.77	264	i P	Pn	22 08 17.0	-3.4
SDDR				eS	Sn	22 08 49.8	-4.6
SDDR				IAML		22 08 56.8	
	comp=Z,23nm,0.3s						
MTP	Monte Pirata	2.94	114	Pn	Pn	22 08 23.7	+0.8
MTP				IAML		22 09 06.2	
	comp=E,28nm,0.3s						

*JMA **30** 22:18:02.6±0.1, 22°.12N×121°.49E, h9^{km}, M3.6*
*TAP **30** 22:18:04.2, 22°.13N×121°.38E, h22^{km}, ML3.5, C*

ISC 30 22:18:03.9±1.1**, 22°.16N**±0°.02×**121°.41E**±0°.03**, h15**^{km}±9^{km}**,**
n69, σ0^{s}.91/104**, 1C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.18	133	⇓iP	Pb	22 18 09.5	+0.6
	baz=113						
LAY				i S	Sb	22 18 13.4	+1.1
	baz=113						
LDUT	Ludao	0.51	6	i P	Pb	22 18 14.9	+0.2
	baz=19						
LDUT				S	Sb	22 18 23.1	+1.1
	baz=19						
TAW	Tawu	0.52	292	i P	Pg	22 18 14.0	-0.1
	baz=297						
TAW				S	Sg	22 18 21.2	+0.1
	baz=297						
TSEB	Hengchuen, Pin	0.54	242	i P	Pb	22 18 15.2	0.0
	baz=257						
TSEB				S	Sb	22 18 23.4	+0.6
	baz=257						
EAST	Anshuo	0.57	293	⇓iP	Pg	22 18 14.8	-0.3
	baz=297						
EAST				S	Sg	22 18 22.6	-0.2
	baz=297						
SLIU	Shizi	0.57	276	⇓iP	Pg	22 18 14.8	-0.4
	baz=279						
SLIU				i S	Sg	22 18 22.1	-0.7
	baz=279						
TWKBT	Hengchun	0.60	249	⇑iP	Pg	22 18 15.3	-0.4
	baz=260						
TWKBT				eS	Sg	22 18 22.8	-0.9
	baz=260						
TWK1	Hengchun	0.60	249	i P	Pg	22 18 15.3	-0.5
	baz=260						
TWK1				S	Sg	22 18 23.1	-0.7
	baz=260						
ECL	Taimali	0.61	316	⇓iP	Pg	22 18 15.6	-0.3
	baz=320						
ECL				eS	Sg	22 18 24.4	+0.4
	baz=320						
TTN	Taitung	0.64	337	eP	Pn	22 18 18.5	0.0
	baz=352						
HEN	Hengchun	0.64	256	P	Pb	22 18 16.5	-0.4
	baz=265						
HEN				eS	Sg	22 18 25.1	0.0
	baz=265						
TWGBT	Beinan	0.72	335	P	Pg	22 18 17.9	-0.2
	baz=325						
TWGBT				eS	Sg	22 18 27.1	-0.5
	baz=325						
TWG	Pinlang	0.73	334	eP	Pg	22 18 17.8	-0.3
	baz=325						
TWG				eS	Sg	22 18 27.2	-0.6
	baz=325						
SCZT	Fangliau	0.76	286	⇓iP	Pb	22 18 18.0	-0.9
	baz=295						
LONT	Longtian	0.79	341	eP	Pb	22 18 19.2	-0.2
	baz=330						
LONT				eS	Sb	22 18 27.9	-2.0
	baz=330						
EDH	Donghe	0.81	353	eP	Pb	22 18 19.7	-0.1
	baz=4.0						
EDH				eS	Sg	22 18 31.5	+1.0
	baz=4.0						
SSPT	Xinbi	0.85	293	eP	Pb	22 18 20.1	-0.2
	baz=295						
MASBT	Mashibuluo	0.85	302	⇓P	Pb	22 18 19.5	-1.0
	baz=312						
TSMG	Majia	0.89	308	eP	Pb	22 18 20.2	-1.0
	baz=311						
SSD	Sandimen	0.93	309	eP	Pb	22 18 21.3	-0.5
	baz=312						
CHKT	Chengkung	0.94	357	eP	Pb	22 18 22.0	+0.1
	baz=6.0						
WLCH	Liuqiu	0.98	281	eP	Pn	22 18 24.6	+1.4
	baz=284						
TWP	Hsiaoliuchiu	0.99	281	eP	Pg	22 18 24.7	+1.6
	baz=283						
FULB	Fuli	1.04	354	eP	Pb	22 18 23.4	-0.3
	baz=340						
SLGT	Liugui	1.09	320	eP	Pb	22 18 23.7	-0.8
	baz=327						
SCST	Cishan	1.11	311	eP	Pn	22 18 23.6	-1.5
	baz=321						
TWM1	Shoushan	1.13	306	eP	Pg	22 18 27.2	+1.5
	baz=317						
STYT	Tauyuan	1.17	329	eP	Pn	22 18 25.3	-0.5
	baz=339						
TWF1	Yuli	1.19	355	eP	Pn	22 18 25.9	-0.3
	baz=345						
SGST	Jiashian	1.20	320	eP	Pg	22 18 26.9	-0.1
	baz=326						
SGST				eS	Sg	22 18 44.7	+2.1
	baz=326						
YULB	Yu-li	1.23	355	eP	Pn	22 18 25.4	-1.3
	baz=346						
CHN1	Nanshi	1.31	321	eP	Pg	22 18 29.5	+0.4
	baz=323						
CHN1				eS	Sg	22 18 47.9	+1.7
	baz=323						
WTP	Ta-pu	1.31	326	eP	Pb	22 18 28.6	+0.3
	baz=339						
WTP				eS	Sg	22 18 48.1	+1.9
	baz=339						
HGSD	Ruisui	1.33	0	eP	Pn	22 18 27.3	-0.6
	baz=14						
EHY	Hungye	1.34	356	eP	Pn	22 18 28.1	-0.1
	baz=347						
TPUB	Ta-pu	1.35	328	eP	Pb	22 18 29.3	+0.4
	baz=340						
TPUB				eS	Sg	22 18 48.6	+1.2
	baz=340						
SNST	Tainan City	1.35	321	eP	Pg	22 18 30.4	+0.5
	baz=323						
TWK	Hsinying	1.39	322	eP	Pb	22 18 30.2	+0.5
	baz=324						
TWK				eS	Sg	22 18 49.9	+1.0
	baz=324						
CHN4	Tsaushan	1.41	328	eP	Pb	22 18 30.4	+0.5
	baz=330						
CHN5	Tsauling	1.58	335	eP	Pb	22 18 32.9	-0.1
	baz=336						
CHN5				eS	Sg	22 18 54.9	-0.1
	baz=336						
ICHU	Yijhu	1.59	319	eP	Pb	22 18 32.4	-0.6
	baz=320						
ICHU				eS	Sb	22 18 53.5	+0.6
	baz=320						
VWDT	VWDT	1.61	351	eP	Pn	22 18 32.2	+0.4
	baz=1.0						
VWDT				eS	Sg	22 18 55.7	0.0
	baz=1.0						
ESL	Shilin	1.65	1	eP	Pn	22 18 32.0	-0.4
	baz=352						
SSLB	Suanglung	1.67	345	eP	Pb	22 18 34.6	+0.1
	baz=355						
SSLB				eS	Sg	22 18 58.3	+0.4
	baz=355						
SMLT	Sun Moon Lake	1.78	345	eP	Pb	22 18 36.3	0.0
	baz=345						
SMLT				eS	Sg	22 19 01.3	0.0
	baz=345						
WTK	Tuku	1.79	328	eP	Pb	22 18 35.7	-0.8
	baz=329						
WTK				eS	Sn	22 18 58.1	+1.3
	baz=329						
TYC	Yuchr	1.81	344	eP	Pb	22 18 36.8	0.0
	baz=344						
TYC				eS	Sb	22 19 00.6	+1.3
	baz=344						
WNT	Mingjian	1.84	339	eP	Pb	22 18 37.3	+0.1
	baz=324						
CHGB	Renai	1.90	353	eP	Pn	22 18 37.2	+1.1
	baz=4.0						
DPDB	Guoxing	1.92	347	eP	Pb	22 18 39.0	+0.3
	baz=347						
NACB	Ninganchiao	2.01	5	eP	Pn	22 18 37.4	0.0
	baz=355						
NACB				eS	Sb	22 19 04.0	-1.2
	baz=355						
ETLH	Xiulin Townshi	2.04	2	eP	Pn	22 18 38.5	+0.6
	baz=3.0						
FUSS	Fushou	2.08	356	eP	Pn	22 18 39.8	+1.1
	baz=6.0						
TDCB	Techi	2.10	354	eP	Pb	22 18 41.3	-0.5
	baz=4.0						
WHP	Taichung City	2.15	349	eP	Pb	22 18 41.9	-0.8
	baz=334						
WHP				eS	Sb	22 19 10.2	+0.9
	baz=334						
TWQ1	Liyutan	2.26	345	eP	Pb	22 18 43.6	-0.8
	baz=345						
TWQ1				eS	Sb	22 19 12.3	+0.1
	baz=345						
NNSB	Datong	2.26	359	eP	Pb	22 18 43.2	-1.4
	baz=8.0						
ENA	Nanau	2.28	8	eP	Pn	22 18 42.7	+1.6
	baz=357						
ENTT	Nioudou	2.47	3	eP	Pn	22 18 44.9	+1.2
	baz=4.0						
YHNB	Yeheng	2.50	359	eP	Pn	22 18 46.0	+1.8
	baz=10.0						

NWLT	Wulai	2.61	2	eP	Pb	22 18 48.1	-2.3
	baz=2.0						
HATJ	Hateruma jima	2.90	49	P	Pn	22 18 49.9	+0.3
HATJ				S	Sn	22 19 23.0	-1.3
IRIF	Iriomote-Funau	3.04	44	P	Pn	22 18 52.4	+0.9
IRIF				eS	Sn	22 19 27.5	-0.2
JKRS	Kuro-shima	3.16	49	P	Pn	22 18 53.9	+0.7
JKRS				S	Sn	22 19 29.9	-0.8
JIJ	Ishigaki jima	3.33	48	P	Pn	22 18 55.7	+0.1
JIJ				S	Sn	22 19 33.0	-2.0
JISG	Ishigakijimahi	3.59	47	P	Pn	22 18 59.5	+0.3
JISG				eS	Sn	22 19 39.6	-1.8
JTJ	Tarama	3.90	50	P	Pn	22 19 04.0	+0.6
JTJ				S	Sn	22 19 49.0	0.0
JIRB	Irabujima	4.36	52	S	Sn	22 19 58.6	-1.6
JMJ2	Miyako jima3	4.42	54	eS	Sn	22 20 00.7	-1.0

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*IDC **30** 22:40:18.9±2.1, 34°.03N×83°.80E, h0^{km}, mb3.3/4, mb1 3.6/7, mb1mx3.3/40, mbtmp3.4/7, ML2.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/33, Error ellipse: s-maj=62.0km s-min=21.1km az=66.0*

ISC 30 22:40:23.6±1.1**, 34°.12N**±0°.09×**83°.7E**±0°.2**, h35^{km}, n13, σ1ˢ.32**/12**, mb3.2**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	5.75	180	eP	Pn	22 41 46.3	-0.4
	6.2nm,0.4s						
KKN	Kakani	6.45	168	eP	Pn	22 41 55.9	-0.3
GUN	Gumba	6.46	163	eP	Pn	22 41 57.5	+1.0
	12nm,0.5s						
DMN	Daman	6.60	169	eP	Pn	22 41 59.2	+0.9
PKI	Pulchoki	6.68	167	eP	Pn	22 42 00.2	+0.6
	4.2nm,0.3s						
MKAR	Makanchi Array	12.71	355	Pn	Pn	22 43 20.6	-1.1
	0.1nm,0.3s,baz=179,slow=12,SNR=6.2						
KURBB	Kurchatov Arra	16.93	349	P	P	22 44 19.1	-0.1
	0.0nm,0.3s,baz=171,slow=11,SNR=4.9						
ZALV	Zalesovo Beam	19.84	2	P	P	22 44 50.8	-0.3
	0.1nm,0.3s,baz=186,slow=12,SNR=4.9						
CMAR	Chiang Mai Arr	20.67	135	P	P	22 44 58.1	-2.4
	1.0nm,0.3s,baz=305,slow=11,SNR=5.0						
BVAR	Borovoye Array	21.16	337	P	P	22 45 07.4	+1.9
	0.7nm,0.6s,baz=144,slow=11,SNR=9.1						
SONM	Songino Array	21.81	44	P	P	22 45 14.0	+1.3
	0.6nm,0.9s,baz=230,slow=11,SNR=4.1						
DAV	Davao City (W)	47.02	115	LR	LR	23 08 54.9	
	comp=Z,59nm,21.1s,baz=316,slow=37						
WRA	Warramunga Arr	72.17	130	P	P	22 51 45.7	+0.8
	0.3nm,0.5s,baz=324,slow=6.5,SNR=6.3						

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*NEIC **30** 22:49:14.4±1.4, 21°.1S±0°.1×170°.18E±0°.08, h10^{km}±1^{km}, mb4.6/20, Error ellipse: s-maj=17.6km s-min=11.9km az=159.0*
*IDC **30** 22:49:14.3±3.3, 20°.69S×169°.96E, h0^{km}, mb4.5/4, mb1 4.6/5, mb1mx4.1/25, mbtmp4.4/5, ML3.5/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/31, Error ellipse: s-maj=106.9km s-min=33.1km az=141.0*
*NOU **30** 22:49:33.6, 21°.76S×168°.80E, h0^{km}, MLv3.6, Loyalty Islands*

ISC 30 22:49:14.4±0.7**, 21°.15S**±0°.09×**170°.21E**±0°.07**, h10^{km}, n48, σ0ˢ.91**/45**, mb4.6**/12**, MS3.6**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.06	260	P	Pn	22 49 48.4	-0.6
MARNC	Mare, Loyalty	2.06	260	P	Sn	22 50 14.4	-0.4
PINNC	Pines Island,	2.95	240	P	Pn	22 50 00.4	-0.9
YATNC	Mamie plateau,	3.22	253	P	Pn	22 50 04.7	-0.3
OUENC	Ouen Island, N	3.38	247	P	Pn	22 50 07.6	+0.4
DZM	Mont Dzumac	3.62	255	Pn	Pn	22 50 11.1	+0.5
	4.7nm,0.3s,baz=64,slow=18,SNR=139						
DZM				LR	LR	22 50 52.3	
	comp=Z,287nm,21.8s,baz=136,slow=28						
DZM				Sn	Sn	22 50 53.6	+0.1
	3.2nm,0.3s,baz=92,slow=19,SNR=3.6						
DZM	Mont Dzumac	3.62	255	ePn	Pn	22 50 11.1	+0.5
	35nm,0.3s						
DZM				eSn	Sn	22 50 52.1	-1.4
	78nm,0.3s						
DZM	Mont Dzumac	3.62	255		Pn	22 50 11.5	+0.9
DZM				Sn	Sn	22 50 54.6	+1.0
DZM	Mont Dzumac	3.62	255	P	Pn	22 50 11.6	+0.9
DZM	Mont Dzumac	3.62	255	P	Pn	22 50 11.9	+1.2
ONTNC	Ouen Toro	3.68	251	P	Pn	22 50 11.7	+0.4
ONTNC	Ouen Toro	3.68	251	P	Pn	22 50 11.1	-0.2
NOUC	Port Laguerre	3.75	255	P	Pn	22 50 13.2	+0.8
NOUC	Port Laguerre	3.75	255	P	Pn	22 50 13.3	+0.8
SANVU	Saraoutou	6.35	333	Pn	Pn	22 50 48.6	+0.5
MSVF	Nonsavu	8.14	67	Pn	Pn	22 51 14.2	+1.4
HNR	Honiara	15.28	318	LR	LR	22 57 58.2	
	comp=Z,140nm,19.4s,baz=216,slow=35						
EIDS	Eidsvold	18.07	253		P	22 53 28.5	+2.4
ARMA	Armidale	19.09	237		Pn	22 53 39.0	+0.8
ARMA				IAmb	IAmb	22 53 49.7	
	comp=Z,39nm,1.4s						
BFZ	Birch Farm	20.14	167	P	Pn	22 53 51.2	+0.8
BFZ				IAmb	IAmb	22 54 06.7	
	comp=Z,38nm,1.3s						
MSWZ	Moikau Station	20.65	169	P	P	22 53 53.2	-1.0
THZ	Tophouse	20.68	174	P	P	22 53 55.0	+0.4
THZ				IAmb	IAmb	22 54 08.8	
	comp=Z,60nm,1.5s						
RPZ	Rata Peaks	22.51	178	P	P	22 54 15.1	+0.9
RPZ				IAmb	IAmb	22 54 17.1	
	comp=Z,36nm,1.4s						
PMG	Port Moresby	25.07	294	LR	LR	23 01 43.1	
	comp=Z,73nm,18.1s,baz=5.5,slow=30						
COEN	Coen	26.72	281	P	P	22 54 54.5	+0.2
TOO	Toolangi	26.93	227	P	P	22 54 56.8	+0.8
TOO				IAmb	IAmb	22 55 09.0	
	comp=Z,23nm,1.3s						
STKA	Stephens Creek	27.67	241	P	P	22 55 03.8	+1.2
	comp=Z,2.1nm,0.7s,baz=79,slow=10,SNR=3.1						
STKA				LR	LR	23 04 58.2	
	comp=Z,172nm,20.3s,baz=32,slow=34						
STKA	Stephens Creek	27.67	241	P	P	22 55 02.6	0.0
BBOO	Buckleboo	32.44	242	P	P	22 55 44.7	-0.1
WR0	Warramunga Arr	33.38	266	P	P	22 55 52.8	-0.4
WR0				IAmb	IAmb	22 56 00.0	
	comp=Z,6.5nm,0.8s						
WB0	Warramunga Arr	33.54	266	P	P	22 55 54.6	-0.1
WB0				IAmb	IAmb	22 56 01.5	
	comp=Z,7.5nm,0.8s						
WB2	Warramunga Arr	33.56	266	P	P	22 55 54.6	-0.2
WB2				IAmb	IAmb	22 56 01.2	
	comp=Z,5.9nm,0.8s						
WRA	Warramunga Arr	33.57	266	P	P	22 55 54.3	-0.5
	comp=Z,3.6nm,0.6s,baz=96,slow=7.9,SNR=55						
WRA				LR	LR	23 08 20.1	
	comp=Z,146nm,21.4s,baz=100,slow=34						
WRA	Warramunga Arr	33.57	266	P	P	22 55 54.6	-0.3
AS31	Alice Springs	33.60	259	P	P	22 55 55.0	-0.2
ASAR	Alice Springs	33.60	259	P	P	22 55 55.2	0.0
	comp=Z,4.1nm,0.6s,baz=83,slow=9.0,SNR=31						
ASAR				LR	LR	23 09 11.2	
	comp=Z,86nm,21.5s,baz=106,slow=36						
ASAR	Alice Springs	33.60	259	P	P	22 55 54.7	-0.5
PPT2	Papeete2	38.03	92	eLR	LR	23 07 00.1	
	comp=Z,125nm,26.2s						
MTN	Manton Dam	38.19	276	P	P	22 56 34.2	-0.3
MTN				IAmb	IAmb	22 56 48.1	
	comp=Z,15nm,1.2s						
FAKI	Fak Fak	41.13	291	P	P	22 56 56.9	-2.2
FITZ	Fitzroy Crossi	41.99	266	P	P	22 57 06.0	-0.1
FITZ				IAmb	IAmb	22 57 14.3	
	comp=Z,11nm,0.8s						
MORW	Morawa	49.33	249	P	P	22 58 04.0	-0.1
VNDA	Vanda	56.56	182	P	P	22 58 56.5	-0.2
VNDA				IAmb	IAmb	22 59 01.6	
	comp=Z,11nm,1.2s						
PETK	Petropavlovsk-	74.74	352	LR	LR	23 28 22.1	
	comp=Z,39nm,20.9s,baz=129,slow=32						
CMAR	Chiang Mai Arr	80.11	294	P	P	23 01 25.9	+0.8
	comp=Z,1.1nm,0.3s,baz=119,slow=5.6,SNR=7.3						
KRMB	Red Mountain	87.16	43	P	P	23 01 58.7	-2.3
NVAR	Mina Array Bea	89.38	48	LR	LR	23 33 43.2	
	comp=Z,23nm,20.4s,baz=258,slow=30						
GERES	GERESS Array B	146.59	331	PKPbc	PKPdf	23 08 54.4	-0.3
	comp=Z,0.6nm,0.6s,baz=70,slow=1.1,SNR=6.2						

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*IDC **30** 23:36:45.8±1.0, 57°.82S×25°.52W, h0^{km}, mb4.1/2, mb1 4.2/2, mb1mx3.8/24, mbtmp4.1/2, Error ellipse: s-maj=80.7km s-min=36.6km az=102.0*
*NEIC **30** 23:36:53.6±0.9, 57°.8S±0°.1×25°.7W±0°.2, h55^{km}±8^{km}, mb4.1/9, Error ellipse: s-maj=22.9km s-min=6.1km az=220.0*

ISC 30 23:36:52.5±0.7**, 57°.9S**±0°.1×**25°.6W**±0°.1**, h49^{km}, n23, σ0ˢ.99**/21**, mb4.1**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	7.09	296	Pn	Pn	23 38 32.6	-0.9
VNA1	Neumayer--Stat	14.75	157	P	Pn	23 40 15.8	-1.8
VNA3	Neumayer Olymp	14.95	160	P	Pn	23 40 18.8	-1.5
VNA2	Neumayer--Watz	15.14	157	P	Pn	23 40 21.1	-1.7
	baz=319,slow=14						
SNAA	Sanae	16.69	155	P	Pn	23 40 42.1	-0.4
SNAA	Sanae	16.69	155	Pn	Pn	23 40 42.5	-0.1
BELA	Belgrano 2	20.31	185	P	Pn	23 41 25.5	-0.6
QSPA	South Pole Qui	32.35	180	P	P	23 43 17.4	+0.6
QSPA				IAmb	IAmb	23 43 17.8	
	comp=Z,1.5nm,0.5s						
PLCA	Paso Flores	33.21	281	P	P	23 43 24.4	-0.1
PLCA				IAmb	IAmb	23 43 40.2	
	comp=Z,2.3nm,1.0s						
MAW	Mawson	38.14	142	P	P	23 44 07.6	+1.4
VNDA	Vanda	44.76	182	P	P	23 45 01.4	+1.1
	comp=Z,2.1nm,0.9s,baz=170,slow=6.1,SNR=1.7						
VNDA	Vanda	44.76	182	P	P	23 45 01.3	+1.0
VNDA				IAmb	IAmb	23 45 16.0	
	comp=Z,3.7nm,1.0s						
SAML	Samuel	56.73	314	P	P	23 46 31.4	+0.3
SAML				IAmb	IAmb	23 46 32.8	
	comp=Z,1.9nm,0.8s						
RER	Riviere de l’E	67.75	94	P	P	23 47 43.6	-1.4
TOA0	Torodi Ar. Sit	74.26	28	P	P	23 48 24.8	+0.7
TOA0				IAmb	IAmb	23 48 34.1	
	comp=Z,3.8nm,1.1s						
TORD	Torodi Ar. Bea	74.26	28	P	P	23 48 24.8	+0.7
	comp=Z,0.9nm,0.5s,baz=200,slow=6.5,SNR=8.0						
TORD	Torodi Ar. Bea	74.26	28	IAmb	IAmb	23 48 26.7	
	comp=Z,1.5nm,1.1s						
FINES	FINESS Array B	125.61	28	PKP	PKPdf	23 55 46.0	-0.6
	comp=Z,3.6nm,1.0s,baz=160,slow=4.4,SNR=5.9						
ARCES	ARCESS Array B	132.34	22	PKP	PKPdf	23 55 58.9	-0.3
	comp=Z,10nm,1.3s,baz=238,slow=3.1,SNR=1.4						
YKA	Yellowknife Ar	138.12	316	PKP	PKPdf	23 56 10.4	+0.2
	comp=Z,0.6nm,0.5s,baz=123,slow=2.9,SNR=12						
SONM	Songino Array	149.93	88	PKPbc	PKPbc	23 56 36.0	-0.3
	comp=Z,1.4nm,0.5s,baz=220,slow=3.7,SNR=20						
IL31		151.98	309	PKPbc	PKiKP	23 56 41.3	+0.6
ILAR	Eielson Array	151.98	309	PKPbc	PKiKP	23 56 41.0	+0.2
	comp=Z,2.6nm,0.9s,baz=134,slow=2.1,SNR=21						

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*BEO **30** 23:42:59.2±0.6, 40°.83N×20°.11E, h3^{km}±2^{km}, ML3.0/15*
*TIR **30** 23:43:01.0, 41°.06N×20°.23E, h14^{km}±1^{km}, Ml3.2*
*PDG **30** 23:43:03.0±0.2, 41°.12N×20°.17E, h10^{km}, ML3.3/10, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SKO **30** 23:43:03.0, 41°.07N×20°.19E, h10^{km}*

ISC 30 23:43:02.3±0.9**, 41°.05N**±0°.02×**20°.18E**±0°.02**, h12**^{km}±7^{km}**, n93, σ1ˢ.12**/139**, 16C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELBAS	Elbasan	0.10	313	P	Pg	23 43 04.8	-0.3
	baz=297						
TIR	Tirane	0.38	322	⇑P	Pg	23 43 09.2	-0.7
TIR				⇓S	Sg	23 43 14.6	-0.4
TIR	Tirane	0.38	322	ePg	Pg	23 43 09.1	-0.7
TIR				eSg	Sb	23 43 16.4	-0.5
TIR	Tirane	0.38	322	P	Pg	23 43 09.2	-0.7
	baz=317						
TIR				S	Sg	23 43 15.7	+0.8
	baz=317						
TIR				AMP			
	comp=N,3.8nm,0.7s,baz=317						
TIR	Tirane	0.38	322	⇑iPg	Pg	23 43 09.2	-0.7
OHR	Ohrid	0.47	82	⇓iPg	Pg	23 43 11.1	-0.6
OHR				i Sg	Sg	23 43 18.9	+1.0
OHR				eLg	Lg	23 43 19.1	
	comp=E,337nm,0.4s						
OHR				eLg	Lg	23 43 19.1	
	comp=N,532nm,0.3s						
PHP	Peshkopia	0.67	17	P	Pg	23 43 13.8	-1.4
	baz=14						
PHP				S	Sg	23 43 23.6	-0.5
	baz=14						
PHP				AMP			
	comp=N,2.5nm,0.5s,baz=14						
VLO	Vlora	0.78	222	P	Pg	23 43 17.3	0.0
	baz=224						
VLO				S	Sb	23 43 29.4	+1.1
	baz=224						
VLO				AMP			
	comp=E,6.3nm,0.5s,baz=224						
FNA	Florina	0.95	106	P	Pg	23 43 19.2	-1.3
	baz=107						
FNA				S	Sg	23 43 32.9	+0.1
	baz=107						
FNA	Florina	0.95	106	⇓iPg	Pg	23 43 19.4	-1.2
FNA				i Sg	Sb	23 43 34.0	+0.7
LSK	Leskovik	0.95	160	P	Pg	23 43 18.9	-1.8
	baz=162						
LSK				S	Sg	23 43 33.6	+0.5
	baz=162						
LSK				AMP			
	comp=N,3.0nm,0.6s,baz=162						
PUK	Puka	1.02	348	P	Pg	23 43 20.6	-1.3
	baz=346						
PUK				S	Sb	23 43 35.7	+0.5
	baz=346						
PUK				AMP			
	comp=N,2.5nm,0.3s,baz=346						
SRN	Sarande	1.18	187	P	Pb	23 43 24.4	-0.1
	baz=189						
SRN				S	Sb	23 43 41.2	+1.5
	baz=189						
BCI	Bajram Curri	1.32	356	P	Pn	23 43 26.2	-0.4
	baz=355						
BCI				S	Sg	23 43 45.3	+0.5
	baz=355						
BCI				AMP			
	comp=N,2.9nm,0.8s,baz=355						
SKO	Skopje	1.32	45	ePg	Pn	23 43 27.1	+0.5
SKO				eSg	Sg	23 43 47.0	+2.1
SKO	Skopje	1.32	45	i Pg	Pn	23 43 26.9	+0.3
SKO				i Sg	Sb	23 43 44.4	+0.4
IGT	Igoumenitsa	1.52	175	i Pg	Pb	23 43 31.1	+0.7
PDG	Podgorica	1.54	334	⇓P	Pn	23 43 28.9	-0.7
PDG				⇓S	Sn	23 43 46.6	-3.0
PDG	Podgorica	1.54	334	ePg	Pn	23 43 30.5	+0.8
PDG				eSg	Sg	23 43 54.7	+2.8
PDG	Podgorica	1.54	334	ePn	Pn	23 43 29.8	+0.2
PDG	Podgorica	1.54	334	i Pg	Pb	23 43 31.0	+0.2
TTG	Podgorica	1.54	334	⇑iPg	Pn	23 43 30.4	+0.8
TTG				i Sg	Sg	23 43 52.8	+0.9
PVY	Plav	1.55	354	⇑iPg	Pn	23 43 30.4	+0.5
PVY				i Sg	Sg	23 43 52.9	+0.6
GRG	Griva	1.69	92	i Pn	Pn	23 43 31.8	+0.1
GJIK	Gjilan	1.70	33	i Pn	Pn	23 43 32.6	+0.8
CEME	Cevo	1.77	328	⇑iPn	Pn	23 43 33.9	+1.1
CEME				i Sn	Sb	23 43 58.3	+1.4
VAY	Valandovo	1.83	81	ePg	Pn	23 43 33.5	0.0
VAY				eSg	Sb	23 43 59.1	+0.6
VAY	Valandovo	1.83	81	i Pn	Pn	23 43 33.9	+0.3
IVA	Berane	1.83	353	ePn	Pn	23 43 34.7	+1.0
IVA				i Sn	Sb	23 43 59.7	+0.9
KOME	Kolasin	1.87	345	⇓iPn	Pn	23 43 35.2	+1.0
KOME				i Sn	Sb	23 44 00.5	+0.7
HCY	Herceg Novi	1.88	319	⇓iPn	Pn	23 43 35.6	+1.3
HCY				i Sn	Sb	23 44 01.2	+1.1
NKME	Niksic	1.94	332	⇑iPn	Pn	23 43 36.3	+1.1
NKME				i Sn	Sb	23 44 02.5	+0.5
NKY	Niksic	1.97	334	⇑iPn	Pn	23 43 36.7	+1.1
NKY				i Sn	Sb	23 44 03.1	+0.3
KNT	Kendrikon	2.06	86	i Pn	Pn	23 43 36.8	+0.1
TREB	Trebinje	2.15	321	ePn	Pn	23 43 38.4	+0.4
TREB	Trebinje	2.15	321	ePn	Pn	23 43 38.4	+0.4
THE	Thessaloniki	2.16	100	i Pn	Pb	23 43 40.7	-0.6
SJES	Sjenica	2.22	356	ePn	Pn	23 43 39.1	+0.1
SJES				eSn	Sb	23 44 09.4	-0.4
SJES	Sjenica	2.22	356	ePn	Pb	23 43 41.8	-0.6
BRY	Bratogost	2.22	327	ePn	Pn	23 43 40.4	+1.3
BRY	Bratogost	2.22	327	⇑iPn	Pn	23 43 40.1	+1.0
BRY				i Sn	Sb	23 44 09.1	-0.8
DBRK	Dubrovnik	2.22	318	ePn	Pn	23 43 38.3	-0.7
DBRK				Sn	Sn	23 44 06.3	0.0
PLE	Pljevlja	2.35	346	ePn	Pn	23 43 41.9	+1.0
PLE				i Sn	Sn	23 44 12.2	+2.4
SOH	Sokhos	2.42	94	i Pn	Pn	23 43 42.0	+0.3
IVAS	Ivanjica	2.53	360	ePn	Pn	23 43 44.5	+1.3
IVAS				eSn	Sb	23 44 18.2	-0.5
SRS	Serrai	2.58	87	i Pn	Pn	23 43 44.3	+0.3
STON	Ston	2.59	315	ePn	Pn	23 43 43.4	-0.7
STON	Ston	2.59	315	Sn	Sn	23 44 15.0	-0.5
STON	Ston	2.59	315	ePn	Pn	23 43 41.9	-2.2
MATE	Matera	2.66	263	⇑P	Pn	23 43 44.8	-0.2
MATE				⇓S	Sn	23 44 15.8	-1.4
GRUS	Gruza	2.87	8	ePn	Pn	23 43 48.5	+0.7
GRUS				eSn	Sb	23 44 26.3	-2.1
BBLS	Lazići	2.87	349	ePn	Pn	23 43 49.6	+1.6
BBLS	Lazići	2.87	349	ePn	Pn	23 43 49.1	+1.1
ZAPS	Zavoj	2.88	39	ePn	Pn	23 43 50.1	+2.1
ZAPS				eSn	Sb	23 44 26.8	-2.0
DIVS	Divibare	3.05	358	ePn	Pn	23 43 50.1	-0.4
DIVS				eSn	Sn	23 44 29.7	+2.7
DIVS	Divibare	3.05	358	ePn	Pn	23 43 52.0	+1.5
ZAGS	Zajecar	3.15	28	ePn	Pn	23 43 51.4	-0.4
HAPS	Han Pijesak,Bl	3.17	344	ePn	Pn	23 43 52.0	-0.1
HAPS	Han Pijesak,Bl	3.17	344	ePn	Pn	23 43 52.3	+0.2
BLKB	Belogradchik	3.17	35	⇓S	Sn	23 44 30.9	+1.1
TIP	Timpagrande	3.22	236	⇑P	Pn	23 43 52.8	+0.1
TIP				⇑S	Sn	23 44 31.1	+0.1
RICI	Ricice	3.33	318	ePn	Pn	23 43 54.4	+0.2
RICI				Sn	Sn	23 44 33.7	0.0
TEKS	Tekeris	3.53	352	ePn	Pn	23 43 58.3	+1.3
PUNG	Punghina	3.81	31	⇓P	Pn	23 44 01.3	+0.5
PUNG				⇑S	Sn	23 44 46.2	+0.6
MDVR	Moldovita	3.90	16	⇓P	Pn	23 44 02.5	+0.4
MDVR				⇑S	Sn	23 44 47.3	-0.5
PLVB	Pleven	4.04	53	⇓P	Pn	23 44 04.9	+0.9
PLVB				⇓S	Sn	23 44 53.5	+2.2
KIJV	Kijevo	4.06	318	ePn	Pn	23 44 04.7	+0.4
MGRS	Mrkonjic Grad	4.06	327	ePn	Pn	23 44 06.1	+1.8
FRGS	Fruska Gora	4.12	356	ePn	Pn	23 44 05.4	+0.4
FRGS				eSn	Sn	23 44 55.8	+2.7
FRGS	Fruska Gora	4.12	356	ePn	Pn	23 44 01.4	-3.6
HERR	Herculane	4.17	22	⇓P	Pn	23 44 06.1	+0.4
HERR				⇓S	Sn	23 44 54.3	0.0
BLY	Banja Luka	4.30	330	ePn	Pn	23 44 08.5	+0.9
MORI	Morici	4.34	312	ePn	Pn	23 44 08.9	+0.8
MORI				Sn	Sn	23 44 58.8	+0.2
BZS	Buzias	4.69	12	⇓P	Pn	23 44 13.0	+0.2
BZS				⇓S	Sn	23 45 06.7	-0.4
GZR	Gura Zlata	4.74	23	⇑P	Pn	23 44 14.1	+0.4
GZR				⇑S	Sn	23 45 09.2	+0.6
UDBI	Udbina	4.76	318	ePn	Pn	23 44 14.9	+1.0
UDBI				Sn	Sn	23 45 09.1	+0.1
MOSL	Moslavina	5.20	332	ePn	Pn	23 44 20.3	+0.4
NVLJ	Novalja	5.25	314	ePn	Pn	23 44 20.8	+0.2
NVLJ				Sn	Sn	23 45 19.6	-1.4
MORH	Mrgy, Hungar	5.28	348	ePn	Pn	23 44 21.3	+0.3
CRES	Cresnjev	5.88	326	ePn	Pn	23 44 29.5	+0.2
DRGR		6.03	17	⇑S	Sn	23 45 39.9	-0.3
CEY	Cerknica	6.29	320	ePn	Pn	23 44 35.2	+0.4
LJU	Ljubljana	6.46	322	ePn	Pn	23 44 37.8	+0.6
SOKA	Soboth	6.74	328	ePn	Pn	23 44 39.7	-1.4
	comp=N,0.8nm,0.3s						
OBKA	Obir	6.81	325	ePn	Pn	23 44 40.2	-1.8
	comp=N,0.8nm,0.2s						
ARSA	Arzberg	7.04	333	ePn	Pn	23 44 43.0	-2.3
	comp=N,1.7nm,0.3s						
VYHS	Vyhne	7.50	353	eSN	Sn	23 46 18.4	+1.8
KBA	Koelnbreinsper	7.78	323	ePn	Pn	23 44 53.3	-2.2
	comp=N,1.1nm,0.5s						
ABTA	Abfaltersbach	7.94	318	ePn	Pn	23 44 56.7	-0.9
	comp=N,0.8nm,0.2s						
WATA	Walderalm	8.81	318	ePn	Pn	23 45 08.4	-1.2
	comp=N,0.7nm,0.2s						
SQTA	Sankt Quirin	8.92	317	ePn	Pn	23 45 09.5	-1.6
	comp=N,1.9nm,0.3s						
FETA	Feichten	9.05	314	ePn	Pn	23 45 11.8	-1.1
	comp=N,0.9nm,0.5s						
MOTA	Moosalm	9.06	317	ePn	Pn	23 45 12.9	0.0
	comp=N,0.5nm,0.2s						

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*SNET **30** 23:58:48.2±1.2, 13°.23N×89°.97W, h34^{km}±24^{km}, ML3.2*
*GCG **30** 23:58:49.7±0.5, 13°.26N×90°.26W, h22^{km}±3^{km}, MD3.7*

ISC 30 23:58:48.7±2.3**, 13°.2N**±0°.1×**89°.96W**±0°.06**, h33**^{km}±11^{km}**, n15, σ0ˢ.69**/26**, 1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAYA	Jayaque - finc	0.65	49	eP	Pb	23 59 01.3	-0.4
JAYA				eS	Sb	23 59 11.3	+0.6
JAYA				IAML		23 59 14.7	
	comp=Z,2μm,0.2s						
LALI	Alcalda de L	0.67	67	eP	Pb	23 59 01.1	-0.9
LALI				IAML		23 59 10.6	
	comp=Z,438nm,0.2s						
LALI				eS	Sb	23 59 11.6	+0.6
CEVE	Cerro Verde	0.68	29	eP	Pb	23 59 01.8	-0.5
CEVE				eS	Sb	23 59 12.6	+1.1
CEVE				IAML		23 59 13.9	
	comp=Z,3μm,0.3s						
SBLS	San Blas	0.69	28	eP	Pb	23 59 01.9	-0.6
RTR	El Retiro	0.73	24	eP	Pb	23 59 02.6	-0.5
CEDA	San Andres	0.79	44	eP	Pn	23 59 02.3	-1.3
CEDA				eS	Sb	23 59 15.3	+0.9
CEDA				IAML		23 59 21.7	
	comp=Z,1μm,0.2s						
BOQS	Boqueron	0.83	53	eP	Pn	23 59 03.9	-0.4
BOQS				eS	Sb	23 59 16.4	+0.7
TACO	Tacachico	0.94	38	⇓iP	Pn	23 59 05.2	-0.5
TACO				eS	Sn	23 59 18.3	+0.3
TACO				IAML		23 59 19.9	
	comp=Z,296nm,0.3s						
COEG	Centro de Oper	1.11	70	eP	Pn	23 59 07.9	-0.2
COEG				eS	Sn	23 59 22.9	+0.5
PCG	Pacaya	1.32	331	eP	Pn	23 59 11.3	+0.3
PCG				eS	Sn	23 59 28.4	+0.8
NBG	Las Nubes	1.40	344	eP	Pb	23 59 13.6	-0.8
NBG				eS	Sb	23 59 32.5	+0.4
COEB	Comit de Eme	1.41	79	eP	Pn	23 59 11.7	-0.5
COEB				eS	Sn	23 59 30.0	+0.2
COEB				IAML		23 59 32.4	
	comp=Z,372nm,0.4s						
FUG	Fuego 3	1.48	325	eP	Pn	23 59 13.5	+0.2
FUG				eS	Sn	23 59 31.2	-0.4
MRL	Marmol	1.86	8	eP	Pb	23 59 21.5	-0.7
LCND	La Caada	2.01	88	eP	Pn	23 59 21.1	+0.7

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*NEIC **31** 00:01:18.7±2.0, 19°.20N±0°.04×64°.64W±0°.05, h24^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=5.8km az=69.0*
*RSPR **31** 00:01:19.8, 19°.20N×64°.56W, h26^{km}±18^{km}, MD4.0/13*
*IDC **31** 00:01:22.4±3.3, 19°.00N×64°.73W, h64^{km}±33^{km}, mb3.5/11, mb1 3.9/14, mb1mx3.7/45, mbtmp4.0/14, ML3.7/3, MS3.5/14, Ms1 3.5/14, ms1mx3.4/30, Error ellipse: s-maj=28.4km s-min=15.4km az=40.0*

ISC 31 00:01:19.0±1.5**, 19°.18N**±0°.05×**64°.64W**±0°.03**, h29**^{km}±11^{km}**, n160, σ1ˢ.23**/158**, mb4.2**/20**, MS3.7**/11**, 14C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.76	179	⇑iP	Pn	00 01 32.9	-0.9
TBVI	Tortola	0.76	179	eS	Sb	00 01 43.1	-0.4
TBVI	Tortola	0.76	179		Pn	00 01 32.9	-0.9
TBVI					Sb	00 01 43.1	-0.4
CUPR	Culebra, Puert	1.06	215	⇓eP	Pn	00 01 37.6	-0.3
CUPR	Culebra, Puert	1.06	215	eS	Sn	00 01 51.6	-0.2
CUPR	Culebra, Puert	1.06	215		Pn	00 01 37.6	-0.3
CUPR					Sn	00 01 51.9	+0.1
CUPR				IAML		00 01 55.5	
	comp=N,7μm,0.3s						
CUPR				IAML		00 01 56.3	
	comp=E,5μm,0.8s						
MTP	Monte Pirata	1.38	219	⇑eP	Pn	00 01 42.6	+0.2
MTP	Monte Pirata	1.38	219	eS	Sn	00 01 59.9	+0.2
MTP	Monte Pirata	1.38	219	Pn	Pn	00 01 42.6	+0.2

MTP					Sn	00 02 00.4	+0.7
MTP				IAML		00 02 05.8	
	comp=E,3µm,0.5s						
CDVI	St. Croix	1.42	185	*e*P	Pn	00 01 44.1	+1.2
CDVI				*e*S	Sb	00 02 03.5	+0.9
CDVI	St. Croix	1.42	185		Pb	00 01 44.3	-0.6
CBYP	Canovanas	1.47	232	⇑*e*P	Pn	00 01 43.5	-0.1
CBYP	Canovanas	1.47	232	*e*S	Sn	00 02 02.4	+0.5
CBYP	Canovanas	1.47	232		Pn	00 01 43.2	-0.4
CBYP	Canovanas	1.47	232		Sn	00 02 02.4	+0.5
CBYP	Canovanas	1.47	232	IAML		00 02 07.1	
	comp=N,10µm,0.2s						
CBYP				IAML		00 02 13.7	
	comp=E,7µm,0.2s						
HUMP	Col San Antoni	1.54	228	⇑*i*P	Pn	00 01 44.8	+0.2
HUMP	Col San Antoni	1.54	228	*e*S	Sn	00 02 04.0	+0.2
HUMP	Col San Antoni	1.54	228		Pn	00 01 44.5	-0.1
HUMP					Sn	00 02 04.5	+0.8
HUMP				IAML		00 02 08.0	
	comp=N,3µm,0.7s						
HUMP				IAML		00 02 11.4	
	comp=E,3µm,0.3s						
GCPR	Guaynabo City	1.62	238	⇑*i*P	Pn	00 01 45.3	-0.4
GCPR	Guaynabo City	1.62	238	*e*S	Sn	00 02 06.1	+0.4
GCPR	Guaynabo City	1.62	238		Pn	00 01 45.2	-0.4
GCPR					Sn	00 02 05.4	-0.2
PDPR	Patillas Dam,	1.75	229	⇑*e*P	Pn	00 01 47.8	+0.3
PDPR	Patillas Dam,	1.75	229		Pn	00 01 47.7	+0.3
SJG	San Juan	1.78	234	P	Pn	00 01 47.7	-0.2
	comp=E,81nm,0.3s,baz=54,slow=12,SNR=104						
SJG				S	Sn	00 02 08.7	-1.0
	comp=E,188nm,0.3s,baz=355,slow=5.5,SNR=11						
SJG	San Juan	1.78	234	*e*P	Pn	00 01 47.4	-0.5
SJG	San Juan	1.78	234		Pn	00 01 47.7	-0.2
IGPR	InterUniversit	1.84	229	⇑*e*P	Pn	00 01 49.1	+0.3
IGPR	InterUniversit	1.84	229	*e*S	Sn	00 02 11.5	+0.4
IGPR	InterUniversit	1.84	229		Pn	00 01 48.9	+0.1
EMPR	Esperanza - Ma	1.92	249	⇑*e*P	Pn	00 01 50.2	+0.3
EMPR	Esperanza - Ma	1.92	249	*e*S	Sn	00 02 13.5	+0.4
EMPR	Esperanza - Ma	1.92	249		Pn	00 01 50.1	+0.3
EMPR					Sn	00 02 13.7	+0.6
EMPR				IAML		00 02 24.9	
	comp=N,3µm,0.9s						
EMPR				IAML		00 02 29.7	
	comp=E,3µm,0.8s						
SABA	Saba	2.04	139	*e*P	Pb	00 01 54.0	-1.4
SABA	Saba	2.04	139	*e*P	Pb	00 01 56.7	+1.3
SABA	Saba	2.04	139	Pn	Pn	00 01 52.3	+0.9
SABA				IAML		00 02 38.5	
	comp=N,2µm,0.7s						
CELP	Cerrillos	2.14	240	⇑*e*P	Pn	00 01 53.3	+0.4
CELP	Cerrillos	2.14	240	*e*S	Sn	00 02 18.9	+0.3
CELP	Cerrillos	2.14	240		Pn	00 01 53.3	+0.4
CELP					Sn	00 02 18.9	+0.3
AOPR	Arecibo Observ	2.17	248	*e*P	Pn	00 01 53.1	-0.2
AOPR				*e*S	Sb	00 02 23.6	-0.6
AOPR	Arecibo Observ	2.17	248	⇑*e*P	Pn	00 01 53.4	+0.1
AOPR	Arecibo Observ	2.17	248	*e*S	Sn	00 02 20.1	+0.8
AOPR	Arecibo Observ	2.17	248		Pn	00 01 53.4	+0.1
AOPR					Sn	00 02 19.8	+0.6
OBIP	Obispado Ponce	2.18	239	⇑*e*P	Pn	00 01 53.8	+0.4
OBIP	Obispado Ponce	2.18	239	*e*S	Sn	00 02 20.5	+1.0
OBIP	Obispado Ponce	2.18	239		Pn	00 01 53.8	+0.4
OBIP					Sn	00 02 20.7	+1.2
OBIP				IAML		00 02 28.1	
	comp=E,2µm,0.7s						
OBIP				IAML		00 02 29.1	
	comp=N,1µm,0.6s						
ICMP	Isla Caja de M	2.21	235	⇑*e*P	Pn	00 01 54.6	+0.9
ICMP	Isla Caja de M	2.21	235	*e*S	Sn	00 02 20.3	+0.2
ICMP	Isla Caja de M	2.21	235	Pn	Pn	00 01 54.5	+0.9
ICMP				IAML		00 02 33.7	
	comp=N,1µm,0.8s						
ICMP				IAML		00 02 34.2	
	comp=E,2µm,0.7s						
SEUS	St. Eustatius	2.30	137	*e*P	Pn	00 01 53.0	-1.9
GBPR	Guanica, Bosqu	2.44	241	⇑*e*P	Pn	00 01 58.1	+1.1
GBPR	Guanica, Bosqu	2.44	241	*e*S	Sn	00 02 26.6	+0.8
GBPR	Guanica, Bosqu	2.44	241		Pn	00 01 58.1	+1.1
GBPR					Sn	00 02 26.6	+0.8
AGPR	Aguadilla, PR	2.45	254	⇑*e*P	Pn	00 01 57.1	0.0
AGPR	Aguadilla, PR	2.45	254		Pn	00 01 57.1	0.0
AGPR	Aguadilla, PR	2.45	254	IAML		00 02 40.8	
	comp=N,1µm,0.9s						
AGPR				IAML		00 02 54.7	
	comp=E,1µm,0.6s						
LSP	Las Mesas	2.53	247	⇑*e*P	Pn	00 01 58.7	+0.5
LSP	Las Mesas	2.53	247		Pn	00 01 58.7	+0.5
MPR	Mayaguez	2.56	248		Pn	00 01 58.8	+0.2
MPR				IAML		00 02 39.5	
	comp=N,785nm,0.6s						
SKI	Saint Kitts	2.57	135	*e*P	Pn	00 02 00.1	+1.4
SKI	Saint Kitts	2.57	135	*e*P	Pn	00 02 00.2	+1.4
SKI	Saint Kitts	2.57	135		Pn	00 02 00.5	+1.7
MLPR	Magueyes Islan	2.58	243	⇑*e*P	Pn	00 01 59.2	+0.3
MLPR	Magueyes Islan	2.58	243	*e*S	Sn	00 02 29.9	+0.6
MLPR	Magueyes Islan	2.58	243		Pn	00 01 58.6	-0.3
MLPR					Pn	00 01 58.7	-0.2
MLPR				IAML		00 02 41.1	
	comp=E,884nm,1.1s						
SKOC	St. Kitts, UWI	2.60	136	*e*P	Pn	00 01 59.9	+0.7
CRPR	Cabo Rojo, PR	2.62	244	⇑*e*P	Pn	00 02 00.1	+0.6
CRPR	Cabo Rojo, PR	2.62	244	*e*S	Sn	00 02 31.5	+1.2
CRPR	Cabo Rojo, PR	2.62	244	Pn	Pn	00 02 00.0	+0.6
CRPR				IAML		00 02 47.2	
	comp=N,942nm,0.9s						
ANWB	Willy Bob	3.09	119	Pn	Pn	00 02 05.1	-0.8
MLYT	Lee's Yard	3.37	136	*e*P	Pn	00 02 02.7	-7.1
ANBD	Bethesda, Anti	3.45	127	*e*P	Pn	00 02 10.2	-0.7
ANBD	Bethesda, Anti	3.45	127	*e*P	Pn	00 02 10.2	-0.7
ANBD				*e*S	Sn	00 02 49.6	-1.3
ABD	La Joyeuse, An	4.03	131	*e*P	Pn	00 02 18.1	-0.7
ABD	La Joyeuse, An	4.03	131	*e*P	Pn	00 02 18.8	0.0
ABD	La Joyeuse, An	4.03	131	*e*S	Sn	00 03 04.2	-0.8
CBE	Ff, Capester	4.23	136	*e*P	Pn	00 02 22.2	+0.6
CBE	Ff, Capester	4.23	136	*e*P	Pn	00 02 22.7	+1.1
TBG	Guadaloupe-3	4.37	139	*e*P	Pn	00 02 24.2	+0.7
TDBA	Terre de Bas,	4.37	139	*e*P	Pn	00 02 23.5	-0.1
TDBA	Terre de Bas,	4.37	139	*e*P	Pn	00 02 26.1	+2.5
DR12	Loma Pena Alta	4.51	266	Pn	Pn	00 02 25.1	-0.4
MAGL	Barre de l’ile	4.53	135	*e*P	Pn	00 02 24.4	-1.4
MAGL	Barre de l’ile	4.53	135	*e*P	Pn	00 02 26.2	+0.5
DSLB	Salisbury	4.82	140	*e*P	Pn	00 02 31.3	+1.6
DSLB	Salisbury	4.82	140	*e*P	Pn	00 02 31.3	+1.6
SDD	Santo Domingo	5.05	263	Pn	Pn	00 02 33.4	+0.5
SDD				IAML		00 03 56.5	
	comp=N,220nm,1.0s						
SDD				IAML		00 04 03.4	
	comp=E,248nm,1.4s						
PCM	Pelee Case Pet	5.43	142	*e*P	Pn	00 02 40.1	+1.9
SVN	Savane Anatole	5.44	142	*e*P	Pn	00 02 40.8	+2.5
CXM	Morne La Croix	5.46	142	*e*P	Pn	00 02 42.4	+3.7
BAMF	Morne Balai	5.47	142	*e*P	Pn	00 02 40.3	+1.6
GBMF	Grand Be	5.47	142	*e*P	Pn	00 02 41.4	+2.6
BANI	BANI	5.48	263		Pn	00 02 41.7	+2.9
FDF	Fort de France	5.54	142	*e*P	Pn	00 02 42.4	+2.7
FDF	Fort de France	5.54	142	Pn	Pn	00 02 39.8	+0.2
BIM	Bigot	5.75	143	*e*P	Pn	00 02 43.5	+1.0
BIM	Bigot	5.75	143	*e*P	Pn	00 02 43.6	+1.0
SC01	Santiago de lo	5.76	273		Pn	00 02 43.6	+1.0
LPMF	Morne Lapointe	5.77	142	*e*P	Pn	00 02 45.2	+2.4
MPOM	Morne Pois Mar	5.93	142	*e*P	Pn	00 02 45.3	+0.3
MPOM	Morne Pois Mar	5.93	142	*e*P	Pn	00 02 48.0	+3.0
SLBI	Saint Lucia, B	6.21	145	*e*P	Pn	00 02 49.6	+0.7
SDDR	Presa de Saban	6.29	269		Pn	00 02 51.0	+0.9
MCLT	Moule a Chique	6.49	146	Pn	Pn	00 02 57.6	+4.9
GRTK	Grand Turk	6.52	292	Pn	Pn	00 02 51.3	-1.8
SVB	Belmont	6.71	151	Pn	Pn	00 02 56.9	+1.1
JAKH	Jacmel	7.53	264	Pn	Pn	00 03 08.7	+1.8
GRGR	Grenville	7.57	157	Pn	Pn	00 03 07.4	-0.1
LGNH	Logne	7.58	266	Pn	Pn	00 03 08.4	+0.8
TOSP	Speyside	8.77	153	*e*	Pn	00 03 31.6	+7.6
TOSP	Speyside	8.77	153	Pn	Pn	00 03 26.8	+2.8
PCRV	Puerto La Cruz	8.95	180	P	Pn	00 03 26.6	+0.2
	comp=E,2.5nm,0.3s,baz=6.5,slow=7.7,SNR=7.8						
PCRV				S	Sn	00 05 07.2	+0.8
	comp=E,1.5nm,0.3s,baz=0.2,slow=12,SNR=3.0						
PLCV	Puerto La Cruz	8.96	180		Pn	00 03 26.6	0.0
TRN	Trinidad (W)	9.03	159	*e*	Pn	00 03 32.1	+4.5
GTBY	Guantanamo Bay	9.90	276	Pn	Pn	00 03 37.7	-1.9
SDV	Santo Domingo	11.76	210	P	Pn	00 04 06.8	+1.6
	comp=E,1.6nm,0.3s,baz=50,slow=6.5,SNR=15						
SDV				S	Sn	00 06 15.5	-0.2
	comp=E,1.4nm,0.3s,baz=318,slow=15,SNR=4.7						
SDV				LR	LR	00 09 09.4	
	comp=E,240nm,18.3s,baz=26,slow=40						
SDV	Santo Domingo	11.76	210	Pn	Pn	00 04 07.2	+2.0
BBSR	BB Station	13.14	360	Pn	Pn	00 04 19.4	-4.4
LCCY	Blossom Villag	14.58	274	Pn	P	00 04 47.1	-2.5
061Z	Ochoppi	16.43	297	Pn	Pn	00 05 07.2	-0.4
060A	Indiantown	16.44	301	Pn	Pn	00 05 08.8	+1.1
ROSC	El Rosal	17.10	215	P	Pn	00 05 16.2	-0.3
	comp=E,6.4nm,0.3s,baz=87,slow=8.4,SNR=9.7						
ROSC				LR	LR	00 12 30.4	
	comp=E,361nm,19.9s,baz=26,slow=40						
ROSC	El Rosal	17.10	215		Pn	00 05 16.9	+0.5
BCIP	Isla Barro Col	17.77	238	Pn	Pn	00 05 23.8	-0.6
MDP	Montagnes des	18.23	139	LR	LR	00 13 25.4	
	comp=E,92nm,20.4s,baz=313,slow=40						
656A	Willston	19.19	305	P	Pn	00 05 45.5	+3.9
PTGA	Pitinga	20.31	166	P	P	00 05 50.9	-2.0
	comp=E,1.6nm,0.3s,baz=314,slow=21,SNR=5.8						
PTGA				LR	LR	00 13 22.7	
	comp=E,56nm,19.5s,baz=354,slow=36						
PTGA	Pitinga	20.31	166	P	P	00 05 51.6	-1.3
JTS	Las Juntas de	21.52	249	P	P	00 06 05.2	-0.8
JTS				IAmb	IAmb	00 06 18.4	
	comp=Z,18nm,1.1s						
OTAV	Otavalo	23.19	217	P	P	00 06 24.3	+0.1
SAML	Samuel	27.98	177	P	P	00 07 06.9	-0.6
SAML				IAmb	IAmb	00 07 20.6	
	comp=Z,8.2nm,1.1s						
CMIG	Matias Romero	28.80	271	LR	LR	00 19 58.0	
	comp=Z,43nm,18.2s,baz=47,slow=39						
TXAR	Lajitas Array	36.85	294	P	P	00 08 25.5	+0.4
	comp=Z,0.5nm,0.6s,baz=103,slow=9.8,SNR=4.3						
TXAR				LR	LR	00 30 44.5	
	comp=Z,29nm,18.2s,baz=0.0,slow=48						
TX31	Lajitas Ar. Si	36.85	294	P	P	00 08 26.8	+1.6
TX31				IAmb	IAmb	00 08 35.5	
	comp=Z,5.0nm,0.9s						
TX32	Lajitas Array	36.85	294	P	P	00 08 26.8	+1.7
ULM	Lac du Bonnet	39.72	329	P	P	00 08 47.8	-1.1
	comp=Z,0.9nm,0.5s,baz=128,slow=8.1,SNR=2.9						
BNM	Barren Site	40.09	301	P	P	00 08 53.2	+0.8
PV13	Radium Mtn., P	42.68	306	IAmb	IAmb	00 09 23.6	
	comp=Z,7.5nm,1.1s						
PV12	Saucer Basin,	42.70	306	IAmb	IAmb	00 09 23.2	
	comp=Z,5.1nm,0.8s						
PV03	Paradox Valley	42.72	306	IAmb	IAmb	00 09 23.3	
	comp=Z,5.0nm,1.0s						
PV16	Nyswonger Mesa	42.78	306	P	P	00 09 15.9	+1.4
PV16				IAmb	IAmb	00 09 23.8	
	comp=Z,7.0nm,1.0s						
PV17	East Wray Mesa	42.81	306	IAmb	IAmb	00 09 24.0	
	comp=Z,6.1nm,1.0s						
PV14	Lion Creek, Pa	42.88	306	P	P	00 09 16.4	+1.1
PV14				IAmb	IAmb	00 09 24.4	
	comp=Z,6.5nm,1.1s						
PD31	Pinedale Array	44.46	312	IAmb	IAmb	00 09 29.4	
	comp=Z,3.1nm,0.8s						
PDAR	Pinedale Array	44.46	312	P	P	00 09 28.6	+0.6
	comp=Z,1.8nm,0.5s,baz=112,slow=9.0,SNR=23						
BW06	Boulder Array	44.46	312	IAmb	IAmb	00 09 29.3	
	comp=Z,3.3nm,0.8s						
CPUP	Villa Florida	45.79	171	P	P	00 09 35.4	-2.9
	comp=Z,2.6nm,0.8s,baz=330,slow=7.0,SNR=5.4						
CPUP	Villa Florida	45.79	171	P	P	00 09 37.2	-1.1
CPUP				IAmb	IAmb	00 09 38.2	
	comp=Z,2.7nm,0.8s						
BGU	Big Grassy Mou	46.48	309	P	P	00 09 44.9	+1.0
NVAR	Mina Array Bea	50.06	304	P	P	00 10 12.4	+0.7
	comp=Z,0.9nm,0.8s,baz=98,slow=7.9,SNR=4.6						
YKA	Yellowknife Ar	55.15	334	P	P	00 10 47.7	-0.9
	comp=Z,1.1nm,0.6s,baz=110,slow=8.1,SNR=17						
ESDC	Sonseca Array	55.60	55	P	P	00 10 54.2	+1.9
	comp=Z,0.9nm,0.9s,baz=278,slow=5.8,SNR=2.0						
ESDC				LR	LR	00 28 49.4	
	comp=Z,66nm,22.0s,baz=0.0,slow=30						
RES	Resolute Bay	57.88	351	LR	LR	00 36 54.9	
	comp=Z,40nm,20.6s,baz=62,slow=37						
DBIC	Dimbokro	59.32	94	LR	LR	00 35 17.5	
	comp=Z,43nm,18.8s,baz=288,slow=34						
JMIC	Jan Mayen	61.24	18	LR	LR	00 33 23.5	
	comp=Z,102nm,19.1s,baz=264,slow=31						
TORD	Torodi Ar. Bea	63.68	84	P	P	00 11 49.6	+1.3
	comp=Z,0.9nm,0.7s,baz=287,slow=7.4,SNR=2.3						
TORD				LR	LR	00 38 27.1	
	comp=Z,41nm,18.1s,baz=310,slow=35						
NOA	NORSAR Array B	66.57	31	LR	LR	00 38 35.7	
	comp=Z,42nm,19.2s,baz=300,slow=34						
GERES	GERESS Array B	68.20	44	LR	LR	00 40 59.4	
	comp=Z,41nm,18.0s,baz=294,slow=35						
ILAR	Eielson Array	69.54	333	P	P	00 12 24.3	-0.6
	comp=Z,0.3nm,0.6s,baz=101,slow=4.2,SNR=8.5						
ILAR				LR	LR	00 42 45.2	
	comp=Z,43nm,20.8s,baz=235,slow=36						
BRTR	Keskin Array B	84.09	50	P	P	00 13 46.6	-1.1
	comp=Z,0.7nm,1.0s,baz=339,slow=7.7,SNR=2.5						

*IDC **31** 00:32:52.8±11.0, 5°.01N×76°.37W, h0^{km}, mb3.3/2, mb1 3.7/2, mb1mx3.3/25, mbtmp3.3/2, Error ellipse: s-maj=686.7km s-min=47.3km az=93.0*

*RSNC **31** 00:33:00.4±1.0, 5°.25N×78°.15W, h32^{km}±18^{km}, ML2.8*

ISC 31 00:32:58.8±1.9**, 5°.27N**±0°.04×**78°.15W**±0°.07**, h13**^{km}±11^{km}**, n21, σ1^{s}.90**/32**, 1C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	0.85	111	*e*P	Pg	00 33 14.6	-0.5
PIZC				*e*S	Sg	00 33 26.5	+0.2
PIZC				*i*		00 33 28.0	
	comp=Z,846nm,0.3s						
SOLC	Bahia Solano	1.20	38	*e*P	Pn	00 33 20.5	-0.9
SOLC				*e*S	Sb	00 33 35.6	-1.3
SOLC				*i*		00 33 42.4	
	comp=Z,64nm,0.4s						
MALC	Bahia Malaga	1.49	147	*e*P	Pn	00 33 23.7	-1.7
MALC				*e*S	Sn	00 33 42.4	-2.3
PTAC	Punta Ardita,	1.89	10	*e*P	Pn	00 33 30.0	-0.9
PTAC				*e*S	Sn	00 33 51.0	-3.6
PLMC	San Jos del P	1.90	101	*e*P	Pn	00 33 29.7	-1.3
PLMC				*e*S	Sn	00 33 51.7	-3.1
PLMC				*i*		00 33 55.0	
	comp=Z,193nm,0.4s						
CBOC	Ciudad Bolivar	2.21	74	*e*P	Pn	00 33 34.7	-0.6
CBOC				*e*S	Sn	00 33 58.6	-4.1
CBOC				*i*		00 34 04.6	
	comp=Z,20nm,0.5s						
YOTC	Yotoco, Valle	2.21	125	⇓*e*P	Pn	00 33 33.8	-1.6
YOTC				*e*S	Sn	00 33 59.8	-2.9
YOTC				*i*		00 34 00.4	
	comp=Z,37nm,0.5s						
DBBC	Dabeiba	2.59	48	*e*P	Pn	00 33 42.8	+2.2
DBBC				*i*		00 34 26.1	
	comp=Z,86nm,0.5s						
GUY2C	Guyana, Caldas	2.78	91	*e*P	Pn	00 33 44.2	+0.8
GUY2C				*e*S	Sn	00 34 17.6	+0.5
GUY2C				*i*		00 34 20.2	
	comp=Z,27nm,0.4s						
RREF	El Recreo	2.82	97	⇑*i*P	Pn	00 33 45.4	+1.2
RREF				*i*		00 33 58.2	
	comp=Z,22nm,0.3s						
RREF				*e*S	Sn	00 34 17.8	-0.5
ANIL	Santa Ana	2.85	106	*e*P	Pn	00 33 43.7	-0.5
TOLC	Tolima	2.90	103	*e*P	Pn	00 33 45.6	+0.5
TOLC				*i*		00 34 25.2	
	comp=Z,16nm,0.5s						
ORTC	Ortega, Tolima	3.20	115	*e*P	Pn	00 33 50.3	+1.5
ORTC				*e*S	Sn	00 34 27.2	+0.3
ORTC				*i*		00 34 36.2	
	comp=Z,33nm,0.6s						
ZARC	Zaragoza, Cauc	3.95	56	*e*P	Pn	00 34 01.1	+2.0
GARC	Garzon, Huila	4.05	139	*e*P	Pn	00 34 01.9	+1.1
GARC				*e*S	Sn	00 34 47.9	-0.4
GARC				*i*		00 34 50.1	
	comp=Z,24nm,0.2s						
SPBC	San Pablo de B	4.08	85	*e*P	Pn	00 34 02.1	+1.1
CHIC	Chingaza	4.45	98	*e*P	Pn	00 34 10.2	+3.8
CHIC				*i*		00 34 23.8	
	comp=Z,5.6nm,0.5s						
YKA	Yellowknife Ar	63.08	342	P	P	00 43 26.9	+1.2
	comp=Z,0.4nm,0.8s,baz=130,slow=6.9,SNR=4.9						
ILAR	Eielson Array	76.27	336	P	P	00 44 49.0	+2.0
	comp=Z,0.2nm,0.7s,baz=100,slow=3.9,SNR=2.1						
ASAR	Alice Springs	144.12	236	PKPbc	PKPab	00 52 32.8	-0.1
	comp=Z,0.6nm,0.5s,baz=124,slow=4.4,SNR=6.4						
WRA	Warramunga Arr	145.20	242	PKPbc	PKPbc	00 52 36.5	-0.4
	comp=Z,0.3nm,0.6s,baz=97,slow=3.4,SNR=7.2						

*IDC **31** 00:36:23.1±1.1, 1°.91N×126°.24E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.7/31, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=120.1km s-min=16.4km az=69.0*

*DJA **31** 00:36:28.9±1.2, 2°N±3°×12°7E±°, h39^{km}±31^{km}, M3.9/6, MLv3.9/6*

*NEIC **31** 00:36:28.8±1.2, 2°.0N±0°.1×126°.57E±0°.08, h51^{km}±10^{km}, mb4.0/14, Error ellipse: s-maj=16.0km s-min=9.6km az=211.0*

ISC 31 00:36:28.9±0.6**, 2°.01N**±0°.05×**126°.55E**±0°.08**, h47**^{km}**, n48, σ0^{s}.99**/51**, mb4.0**/11**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.48	146		Pn	00 36 52.8	-0.3
TNTI	Ternate	1.48	146	P	Pn	00 36 53.0	-0.1
SGSI	Sangihe	1.95	329	P	Pn	00 36 58.7	-0.8
SGSI				S	Sn	00 37 22.3	-0.5
KMSI	Cibinong	2.93	241	P	Pn	00 37 15.0	+2.0
GTOI	Gorontalo	3.79	249	P	Pn	00 37 25.8	+1.0
SANI	Sanana	4.07	188	P	Pn	00 37 27.7	-1.0
LUWI	Luwuk	4.84	231	Pn	Pn	00 37 39.8	+0.6
SKMP	Bagumbayan, Su	4.90	336	*e*P	Pn	00 37 40.4	+0.3
SKMP				*e*S	Sn	00 38 34.5	-1.1
KCP	Kidapawan	5.17	344	⇓*e*P	Pn	00 37 47.9	+4.1
TOLI2	Tolitoli	5.83	261		Pn	00 37 52.3	-0.5
PAGZ	Pagadian	6.60	332	*e*P	Pn	00 37 58.9	-4.5
PAGZ				*e*S	Sn	00 39 04.5	-13
FAKI	Fak Fak	7.52	131	Pn	Pn	00 38 16.4	+0.4
MYLDM	Lahad Datu	8.62	292	Pn	Pn	00 38 30.8	-0.4
MTN	Manton Dam	15.45	163	Pn	Pn	00 40 03.4	-0.4
MTN				IAmb	IAmb	00 40 21.6	
	comp=Z,16nm,1.1s						
FITZ	Fitzroy Crossi	20.00	183	P	P	00 40 56.9	-0.9
	comp=Z,0.1nm,0.3s,baz=25,slow=10,SNR=1.4						
FITZ	Fitzroy Crossi	20.00	183	P	P	00 40 58.4	+0.7
FITZ				IAmb	IAmb	00 41 12.6	
	comp=Z,9.7nm,1.5s						
COEN	Coen	22.88	134	P	P	00 41 26.9	-1.8
COEN				IAmb	IAmb	00 41 34.1	
	comp=Z,10.0nm,1.4s						
WB0	Warramunga Arr	22.97	161	P	P	00 41 28.8	-0.8
WB0				IAmb	IAmb	00 41 34.0	
	comp=Z,8.5nm,1.1s						
WRA	Warramunga Arr	23.12	161	P	P	00 41 29.9	-1.1
	comp=Z,2.7nm,0.5s,baz=340,slow=11,SNR=49						
WRA	Warramunga Arr	23.12	161	P	P	00 41 29.3	-1.8
WB2	Warramunga Arr	23.12	161	P	P	00 41 30.3	-0.8
WB2				IAmb	IAmb	00 41 35.6	
	comp=Z,5.3nm,0.8s						
WR0	Warramunga Arr	23.20	161	P	P	00 41 31.1	-0.8
WR0				IAmb	IAmb	00 41 34.1	
	comp=Z,4.9nm,1.0s						
MBWA	Marble Bar	23.98	196	P	P	00 41 39.7	+0.6
ASAR	Alice Springs	26.51	165	P	P	00 42 02.3	+0.1
	comp=Z,1.5nm,0.6s,baz=345,slow=8.8,SNR=13						
ASAR				PcP	PcP	00 45 27.1	+0.9
	comp=Z,0.4nm,0.7s,baz=352,slow=2.0,SNR=5.9						
BBOO	Buckleboo	35.78	166	P	P	00 43 22.9	-0.8
STKA	Stephens Creek	36.61	158	P	P	00 43 32.5	+1.8
	comp=Z,2.3nm,0.8s,baz=331,slow=13,SNR=3.8						
SONM	Songino Array	48.86	342	P	P	00 45 10.6	+0.7
	comp=Z,0.8nm,0.7s,baz=152,slow=7.4,SNR=5.4						
MK31	Makanchi Array	58.86	326	P	P	00 46 23.0	+0.1
MK31				IAmb	IAmb	00 46 25.1	
	comp=Z,0.7nm,0.5s						
MKAR	Makanchi Array	58.86	326	P	P	00 46 22.9	0.0
	comp=Z,0.9nm,0.4s,baz=120,slow=7.4,SNR=28						
MKAR				PcP	PcP	00 47 12.8	+0.9
	comp=Z,0.5nm,0.7s,baz=118,slow=4.4,SNR=4.1						
MKAR	Makanchi Array	58.86	326	P	P	00 46 22.6	-0.3
MAKZ	Makanchi	59.04	326	P	P	00 46 24.0	-0.2
ZALV	Zalesovo Beam	62.03	334	P	P	00 46 45.1	+0.8
	comp=Z,0.2nm,0.3s,baz=142,slow=3.5,SNR=2.8						
KURK	Kurchatov	63.09	328	P	P	00 46 51.6	+0.2
KKAR	Karatay Array	64.36	318	P	P	00 46 59.5	-0.6
KKAR	Karatay Array	64.36	318	P	P	00 46 60.0	-0.1
KKAR				IAmb	IAmb	00 47 11.5	
	comp=Z,1.9nm,1.5s						
AMKA	Amchitka	66.03	33	P	P	00 47 09.8	-0.9
AB06	Akbulak array	73.34	321	P	P	00 47 56.1	+0.3
AB07	Akbulak array	73.34	321	P	P	00 47 55.7	0.0
AB02	Akbulak array	73.36	321	P	P	00 47 55.4	-0.4
AB03	Akbulak array	73.36	321	P	P	00 47 55.7	-0.1
AB01	Akbulak array	73.36	321	P	P	00 47 55.9	+0.1
AB31	Akbulak array	73.36	321	P	P	00 47 55.5	-0.4
ABKAR	Akbulak array	73.36	321	P	P	00 47 55.2	-0.6
ABKAR	Akbulak array	73.36	321	P	P	00 47 56.0	+0.2
ABKAR				IAmb	IAmb	00 47 57.5	
	comp=Z,0.6nm,0.8s						
AB04	Akbulak array	73.36	321	P	P	00 47 55.0	-0.9
AB08	Akbulak array	73.36	321	P	P	00 47 56.6	+0.7
AB05	Akbulak array	73.36	321	P	P	00 47 55.5	-0.4
AB09	Akbulak array	73.38	321	P	P	00 47 56.4	+0.5

*IDC **31** 01:39:27.4±1.0, 56°.52N×168°.93W, h0^{km}, mb4.1/23, mb1 4.2/27, mb1mx4.1/60, mbtmp4.1/27, ML3.4/4, MS3.5/19, Ms1 3.5/19, ms1mx3.3/50, Error ellipse: s-maj=28.1km s-min=12.0km az=1.0*

*NEIC **31** 01:39:28.0±1.9, 56°.56N±0°.05×169°.09W±0°.09, h6^{km}±4^{km}, mb4.5/47, ML4.1(AEIC), Error ellipse: s-maj=9.1km s-min=5.4km az=218.0*

*AEIC **31** 01:39:27±1.9, 56°.59N±0°.05×169°.03W±0°.09, h21^{km}±2^{km}, Error ellipse: s-maj=8.6km s-min=5.3km az=220.0*

*MOS **31** 01:39:28.3±0.9, 56°.60N×168°.88W, h17^{km}, mb4.7/24, Error ellipse: s-maj=13.0km s-min=7.5km az=90.6*

ISC 31 01:39:28.8±0.4**, 56°.55N**±0°.05×**169°.05W**±0°.05**, h10**^{km}**, n199, σ1^{s}.21**/190**, mb4.5**/61**, MS3.6**/18**, 15C-1D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.91	314		Pg	01 39 44.7	-1.6
SPIA	Saint Paul Isl	0.91	314		Sg	01 39 58.0	-0.1
MCIR	Makushin Cirqu	2.88	154		Pn	01 40 15.9	+1.1
AKGG	Akutan Green G	2.93	142		Pn	01 40 15.3	-0.1
MSW	Makushin Switc	2.94	153		Pn	01 40 15.3	-0.3
MSW					Sn	01 40 51.3	+0.3
AKRB	Akutan Reef Bi	2.96	144		Pn	01 40 16.1	+0.2
AKRB					Sn	01 40 52.4	+1.0
AKLV	Akutan Long Va	2.98	142		Pn	01 40 16.5	+0.5
MNAT	Makushin Natee	3.00	152		Pn	01 40 16.4	+0.1
MAPS	Pakushin South	3.00	155		Pn	01 40 16.5	+0.1
MAPS					Sn	01 40 53.4	+0.9
MGOD	Makushin Gods	3.03	155		Pn	01 40 17.7	+0.8
AKUT	Akutan	3.06	141	Pn	Pn	01 40 16.9	-0.2
UNV	Unalaska Valle	3.08	151	Pn	Pn	01 40 17.6	+0.2
UNV	Unalaska Valle	3.08	151		Sn	01 40 55.5	+1.3
OKWE	Okmok W’ng Wal	3.12	171		Pn	01 40 16.8	-1.3
WEBT	Westdahl Beart	3.13	127		Pn	01 40 18.2	0.0
WECS	Westdahl Cape	3.16	128		Pn	01 40 18.3	-0.3
WESP	Westdahl Peak	3.21	128		Pn	01 40 19.0	-0.3
OKSO	Okmok South	3.24	171		Pn	01 40 21.6	+1.8
OKSP	Okmok Steeple	3.34	172		Pn	01 40 20.8	-0.2
NIKH	Nikolski High	3.59	178	Pn	Pn	01 40 22.9	-1.6
FALS	False Pass	3.61	116	Pn	Pn	01 40 23.3	-1.4
SDPT	Sand Point	4.96	100	Pn	Pn	01 40 43.6	+0.3
ATKA	Atka Island	5.30	217	Pn	Pn	01 40 46.8	-1.1
CNBA	Chernabura Isl	5.62	104	Pn	Pn	01 40 52.4	+0.1
CHGN	Chignik	5.91	88	Pn	Pn	01 40 56.4	+0.1
GAMB	Gambell	7.37	351		Pn	01 41 14.8	-1.4
ANM	Nome	8.24	11	P	Pn	01 41 27.3	-0.9
ANM	Nome	8.24	11	Pn	Pn	01 41 27.3	-0.9
SVW2	Sparrevohn	8.33	51		Pn	01 41 27.5	-2.0
AMKA	Amchitka	8.60	238	Pn	Pn	01 41 31.7	-1.5
OHAK	Old Harbor	8.65	79	Pn	Pn	01 41 35.1	+1.2
KDAK	Kodiak Island	9.03	75	Pn	Pn	01 41 39.4	+0.4
	0.9nm,0.3s,baz=284,slow=9.1,SNR=14						
KDAK				LR	LR	01 45 25.7	
	comp=Z,275nm,18.6s,baz=276,slow=40						
KDAK	Kodiak Island	9.03	75	*i* P	Pn	01 41 39.3	+0.3
KDAK	Kodiak Island	9.03	75	Pn	Pn	01 41 41.8	+2.8
TTA	Tatalina	9.16	40	P	Pn	01 41 42.1	+1.2
TTA	Tatalina	9.16	40	Pn	Pn	01 41 42.1	+1.2
RSO	Redoubt South	9.38	59	Pn	Pn	01 41 42.6	-1.4

SKT	**Skwentna**	**10.46**	**51**	Pn	**Pn**	**01 41 57.9**	**-0.8**
SUA	**Susitna One**	**10.62**	**55**	Pn	**Pn**	**01 42 00.3**	**-0.6**
BPAW	**Bear Paw Mtn.**	**11.68**	**42**		**Pn**	**01 42 15.0**	**-0.3**
SML	**Sawmill**	**11.83**	**55**	P	**Pn**	**01 42 17.7**	**+0.3**
SML	**Sawmill**	**11.83**	**55**	Pn	**Pn**	**01 42 17.7**	**+0.3**
IMAR	**Indian Mountai**	**11.94**	**31**		**Pn**	**01 42 22.2**	**+3.3**
RND	**Reindeer**	**12.18**	**47**	P	**Pn**	**01 42 21.8**	**-0.4**
RND	**Reindeer**	**12.18**	**47**	Pn	**Pn**	**01 42 21.8**	**-0.4**
BWN	**Browne**	**12.29**	**44**		**Pn**	**01 42 23.9**	**+0.3**
MDM	**Murphy Dome**	**13.14**	**42**		**Pn**	**01 42 37.0**	**+1.7**
CCB	**Clear Creek Bu**	**13.15**	**43**	Pn	**Pn**	**01 42 35.1**	**-0.2**
TCOL	**CIGO, UAF Yank**	**13.24**	**42**	Pn	**Pn**	**01 42 37.4**	**+0.8**
COLA	**College**	**13.24**	**42**	*i* P	**Pn**	**01 42 38.0**	**+1.4**
HDA	**Harding Lake**	**13.37**	**45**		**Pn**	**01 42 38.4**	**0.0**
PAX	**Paxson**	**13.45**	**52**	P	**Pn**	**01 42 39.2**	**-0.4**
PAX	**Paxson**	**13.45**	**52**	Pn	**Pn**	**01 42 39.2**	**-0.4**
POKR	**Poker Plat Res**	**13.52**	**42**	Pn	**Pn**	**01 42 38.2**	**-2.1**
IL31		**13.56**	**44**		**Pn**	**01 42 40.6**	**-0.3**
ILAR	**Eielson Array**	**13.56**	**44**	Pn	**Pn**	**01 42 39.6**	**-1.3**
	0.1nm,0.3s,baz=238,slow=12,SNR=13						
ILAR				LR	LR	01 48 13.6	
	comp=Z,286nm,18.4s,baz=258,slow=39						
COLD	**Coldfoot**	**13.83**	**32**	Pn	**Pn**	**01 42 43.8**	**-0.8**
VRDI	**Verde Repeater**	**13.98**	**60**	Pn	**Pn**	**01 42 45.1**	**-1.8**
MENT	**Mentasta**	**14.21**	**53**	Pn	**Pn**	**01 42 47.9**	**-2.0**
DOT	**Dot Lake**	**14.27**	**50**	Pn	**Pn**	**01 42 49.2**	**-1.4**
BARN	**Barnard Glacie**	**14.83**	**61**	Pn	**Pn**	**01 42 57.1**	**-1.3**
CTGM	**Chitina Glacie**	**14.98**	**61**	Pn	**Pn**	**01 42 59.1**	**-1.3**
FYU	**Fort Yukon**	**15.03**	**39**	Pn	**Pn**	**01 43 00.1**	**-0.7**
BMAR	**Burnt Mountain**	**15.70**	**36**		**Pn**	**01 43 10.0**	**+0.3**
BILL	**Bilibino**	**16.10**	**325**	*ce*P	**P**	**01 43 17.2**	**-1.0**
BILL				*e*S	**Sn**	**01 46 15.0**	**+1.8**
BILL				pmax	pmax		
	comp=Z,40nm,2.5s						
BILL				MLR	MLR		
	comp=Z,236nm,15.0s						
DAWY	**Dawson**	**16.37**	**51**	Pn	**Pn**	**01 43 17.4**	**-1.0**
DAWY				IAmb	IAmb	01 43 27.4	
	comp=Z,42nm,1.2s						
PETK	**Petropavlovsk-**	**19.35**	**274**	P	**Pn**	**01 43 55.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=80,slow=12,SNR=5.7						
PETK				LR	LR	01 52 20.3	
	comp=Z,42nm,18.1s,baz=93,slow=40						
INK	**Inuvik**	**19.85**	**39**	P	**P**	**01 43 59.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=236,slow=11,SNR=22						
INK	**Inuvik**	**19.85**	**39**	P	**P**	**01 43 58.8**	**-0.7**
INK				IAmb	IAmb	01 44 04.4	
	comp=Z,22nm,1.1s						
CRAG	**Craig**	**19.97**	**78**	P	**P**	**01 44 01.3**	**+0.4**
WRAK	**Wrangell Islan**	**20.11**	**75**	P	**P**	**01 44 02.2**	**-0.3**
WRAK				IAmb	IAmb	01 44 24.6	
	comp=Z,36nm,1.4s						
SEY	**Seymchan**	**20.20**	**304**	P	**P**	**01 44 04.5**	**+1.1**
	comp=Z,9.2nm,1.0s,baz=96,slow=9.7,SNR=19						
SEY	**Seymchan**	**20.20**	**304**	*i* P	**P**	**01 44 04.6**	**+1.3**
DLBC	**Dease Lake**	**20.85**	**68**	P	**P**	**01 44 10.0**	**-0.5**
	comp=Z,6.7nm,1.2s,baz=263,slow=9.0,SNR=4.8						
C36M	**Paulatuk**	**23.44**	**39**	P	**P**	**01 44 36.5**	**-1.1**
C36M				IAmb	IAmb	01 44 41.4	
	comp=Z,22nm,1.2s						
YKA	**Yellowknife Ar**	**27.50**	**55**	P	**P**	**01 45 13.6**	**-1.3**
	comp=Z,1.5nm,1.0s,baz=280,slow=8.8,SNR=13						
YKA				PcP	**PcP**	**01 48 33.2**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=291,slow=1.7,SNR=4.2						
YKA				LR	LR	01 57 16.0	
	comp=Z,226nm,18.9s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	**27.50**	**55**	*ce*P	**P**	**01 45 15.3**	**+0.4**
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	**Tiksi**	**29.32**	**325**	*ce*P	**P**	**01 45 30.9**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,28nm,2.5s						
YAK	**Yakutsk**	**30.70**	**306**	LR	LR	01 58 02.5	
	comp=Z,62nm,21.2s,baz=106,slow=36						
YAK	**Yakutsk**	**30.70**	**306**	*i* P	**P**	**01 45 44.5**	**+1.2**
YAK				pmax	pmax		
	comp=Z,18nm,0.5s						
YAK	**Yakutsk**	**30.70**	**306**	P	**P**	**01 45 42.3**	**-1.0**
KLR	**Kul'dur**	**35.45**	**284**	LR	LR	02 00 10.8	
	comp=Z,40nm,20.0s,baz=40,slow=35						
HRY	**Holter Researc**	**35.85**	**81**	P	**P**	**01 46 27.8**	**-0.7**
BCYI	**Bear Canyon**	**36.48**	**85**	P	**P**	**01 46 32.8**	**-1.3**
NVAR	**Mina Array Bea**	**37.75**	**97**	P	**P**	**01 46 43.3**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=289,slow=9.2,SNR=4.2						
NVAR				LR	LR	02 00 54.9	
	comp=Z,60nm,19.2s,baz=270,slow=34						
NVAR	**Mina Array Bea**	**37.75**	**97**	P	**P**	**01 46 42.7**	**-2.2**
ELK	**Elko**	**37.83**	**91**	P	**P**	**01 46 44.7**	**-0.9**
ELK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ELK	**Elko**	**37.83**	**91**	P	**P**	**01 46 44.7**	**-0.9**
FCC	**Fort Churchill**	**38.23**	**54**	P	**P**	**01 46 48.3**	**0.0**
FCC				pmax	pmax		
	comp=Z,21nm,1.7s						
FCC	**Fort Churchill**	**38.23**	**54**	P	**P**	**01 46 48.3**	**0.0**
FCC				IAmb	IAmb	01 46 52.8	
	comp=Z,21nm,1.7s						
R11A	**Troy Canyon, C**	**39.31**	**94**	P	**P**	**01 46 58.8**	**+0.9**
R11A				IAmb	IAmb	01 47 56.5	
	comp=Z,13nm,1.9s						
TPNV	**Topopah Spring**	**39.95**	**96**	P	**P**	**01 47 02.7**	**-0.5**
PSUT	**Pine Spring**	**40.13**	**93**	P	**P**	**01 47 04.8**	**0.0**
PRN	**Pahroc Range**	**40.28**	**95**	P	**P**	**01 47 05.4**	**-0.5**
SRU	**San Rafael Swe**	**41.57**	**89**	P	**P**	**01 47 15.0**	**-1.7**
SRU				pmax	pmax		
	comp=Z,11nm,1.2s						
SRU	**San Rafael Swe**	**41.57**	**89**	P	**P**	**01 47 15.9**	**-0.7**
U15A	**North Rim**	**42.51**	**93**	IAmb	IAmb	01 47 26.2	
	comp=Z,7.8nm,1.3s						
NRIK	**Noril'sk**	**42.87**	**330**	P	**P**	**01 47 27.1**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=78,slow=16,SNR=3.8						
NRIK				LR	LR	02 09 13.8	
	comp=Z,88nm,18.8s,baz=28,slow=42						
NRIK	**Noril'sk**	**42.87**	**330**	*ce*P	**P**	**01 47 26.7**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,11nm,2.3s						
NRIK	**Noril'sk**	**42.87**	**330**	IAmb	IAmb	01 47 28.1	
	comp=Z,4.9nm,1.1s						
X18A	**Snowflake**	**45.20**	**93**	IAmb	IAmb	01 47 47.7	
	comp=Z,6.7nm,1.0s						
KSRS	**Korea Array**	**45.24**	**273**	LR	LR	02 06 10.7	
	comp=Z,24nm,18.1s,baz=60,slow=35						
TUC	**Tucson**	**46.40**	**96**	P	**P**	**01 47 54.7**	**-0.7**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TUC	**Tucson**	**46.40**	**96**	P	**P**	**01 47 54.7**	**-0.7**
TUC				IAmb	IAmb	01 47 57.1	
	comp=Z,5.9nm,1.3s						
SUMG	**Summit**	**46.73**	**18**	*i* P	**P**	**01 47 58.6**	**+0.8**
SUMG	**Summit**	**46.73**	**18**	P	**P**	**01 47 57.6**	**-0.2**
SUMG	**Summit**	**46.73**	**18**	*i* P	**P**	**01 47 58.6**	**+0.8**
	comp=Z,21nm,1.0s						
SUMG	**Summit**	**46.73**	**18**	*i* P	**P**	**01 47 58.6**	**+0.8**
SUMG				IAmb	IAmb	01 47 59.7	
	comp=Z,21nm,1.0s						
ANMO	**Albuquerque**	**46.82**	**90**	*ce*P	**P**	**01 47 58.1**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TLY	**Talaya**	**48.10**	**303**	*i* P	**P**	**01 48 09.1**	**+0.8**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**48.10**	**303**	P	**P**	**01 48 07.6**	**-0.8**
TLY				IAmb	IAmb	01 48 17.5	
	comp=Z,8.1nm,1.4s						
ULN	**Ulaanbaatar**	**49.06**	**298**	*ce*P	**P**	**01 48 16.9**	**+1.0**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ULN	**Ulaanbaatar**	**49.06**	**298**	P	**P**	**01 48 17.5**	**+1.6**
ULN				IAmb	IAmb	01 48 18.1	
	comp=Z,6.3nm,1.2s						
SONM	**Songino Array**	**49.41**	**298**	P	**P**	**01 48 19.6**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=55,slow=7.6,SNR=7.1						
SONM	**Songino Array**	**49.41**	**298**	P	**P**	**01 48 19.8**	**+1.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**49.41**	**298**	P	**P**	**01 48 19.8**	**+1.3**
MNTX	**Cornudas Mount**	**49.85**	**92**	P	**P**	**01 48 21.7**	**-0.2**
E46A	**Sault Ste Mari**	**50.51**	**63**	P	**P**	**01 48 26.8**	**0.0**
HHC	**Hu-ho-hao-te**	**51.69**	**288**	*e*P	**P**	**01 48 37.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,40nm,7.6s						
TX32	**Lajitas Array**	**52.60**	**92**	IAmb	IAmb	01 48 44.1	
	comp=Z,9.2nm,1.5s						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**01 48 42.6**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=308,slow=6.2,SNR=11						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**01 48 42.2**	**-0.5**
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**01 48 42.2**	**-0.5**
ARCES	**ARCESS Array B**	**53.77**	**354**	LR	LR	02 14 27.6	
	comp=Z,38nm,18.0s,baz=245,slow=39						
NJ2	**Nanjing**	**54.25**	**275**	*e*P	**P**	**01 48 54.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZALV	**Zalesovo Beam**	**54.50**	**316**	P	**P**	**01 48 56.7**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=27,slow=13,SNR=1.7						
ZALV				LR	LR	02 13 46.3	
	comp=Z,78nm,18.1s,baz=46,slow=38						
PENMO	**Penman**	**54.93**	**76**	P	**P**	**01 48 58.6**	**-0.9**
DGZ	**Jazzator, Alta**	**56.69**	**311**	*i* P	**P**	**01 49 13.4**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA	**Gaotai**	**58.80**	**295**	⇓P	**P**	**01 49 28.0**	**+0.8**
GTA				pP	sP	01 49 32.0	+0.5
GTA				sP	pP	01 49 34.8	+4.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.4s						
GTA				LR	LR		
	comp=N,79nm,16.7s						
GTA				LR	LR		
	comp=E,130nm,18.2s						
GTA				LR	LR		
	comp=Z,110nm,17.4s						
LZH	**Lanzhou**	**59.27**	**290**	*e*P	**P**	**01 49 29.3**	**-1.2**
LZH				pP	sP	01 49 35.3	+0.4
LZH				sP	pP	01 49 38.5	+4.8
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,7.2s						
KURK	**Kurchatov**	**59.40**	**317**	*ce*P	**P**	**01 49 31.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KURBB	**Kurchatov Arra**	**59.51**	**317**	P	**P**	**01 49 31.7**	**0.0**
	comp=Z,0.7nm,0.3s,baz=35,slow=6.5,SNR=6.7						
SVE	**Sverdlovsk**	**60.09**	**331**	*e*P	**P**	**01 49 36.2**	**+0.6**
SVE				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BVAR	**Borovoye Array**	**60.43**	**323**	P	**P**	**01 49 38.7**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=41,slow=9.9,SNR=8.0						
BRVK	**Borovoye**	**60.44**	**323**	*ce*P	**P**	**01 49 38.9**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	**Klimovskoe**	**60.79**	**344**	*e*P	P	01 49 34.3	-6.0
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	**Klimovskoe**	**60.79**	**344**	*e*P	P	01 49 34.3	-6.0
KLMR				AMP		01 49 41.2	
	comp=Z,14nm,1.3s						
ARU	**Arti**	**60.99**	**332**	P	**P**	**01 49 41.5**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=0.5,slow=9.2,SNR=5.7						
ARU	**Arti**	**60.99**	**332**	*c i*P	**P**	**01 49 42.5**	**+0.8**
ARU						01 50 21.7	
ARU				S	**S**	**01 58 04.1**	**+4.4**
ARU				SS	**SS**	**02 01 55.2**	**-2.9**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	**Arti**	**60.99**	**332**	IAmb	IAmb	01 49 43.6	
	comp=Z,6.8nm,1.1s						
MK31	**Makanchi Array**	**61.10**	**312**	*ce*P	**P**	**01 49 42.9**	**+0.2**
MK31	**Makanchi Array**	**61.10**	**312**	P	**P**	**01 49 41.3**	**-1.4**
MK31				IAmb	IAmb	01 49 46.3	
	comp=Z,6.5nm,1.9s						
MKAR	**Makanchi Array**	**61.10**	**312**	P	**P**	**01 49 42.5**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=60,slow=4.8,SNR=7.3						
MKAR				LR	LR	02 16 35.5	
	comp=Z,28nm,19.5s,baz=1.5,slow=36						
MKAR	**Makanchi Array**	**61.10**	**312**	P	**P**	**01 49 41.7**	**-1.0**
WMQ	**Urumqi**	**61.14**	**306**	*e*P	**P**	**01 49 44.3**	**+1.2**
FINES	**FINESS Array B**	**61.74**	**352**	P	**P**	**01 49 47.9**	**+1.1**
	comp=Z,4.0nm,1.0s,baz=0.0,slow=1.4,SNR=4.6						
NOA	**NORSAR Array B**	**62.75**	**360**	P	**P**	**01 49 53.1**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=1.0,slow=6.6,SNR=3.5						
NOA				LR	LR	02 18 12.6	
	comp=Z,30nm,18.7s,baz=290,slow=37						
CD2	**Chengdu**	**63.33**	**286**	*e*P	**P**	**01 49 57.3**	**-0.6**
AKTO	**Aktyubinsk**	**66.49**	**329**	P	**P**	**01 50 19.0**	**+0.9**
	comp=Z,5.1nm,0.9s,baz=24,slow=6.6,SNR=9.7						
ABKAR	**Akbulak array**	**66.98**	**328**	P	**P**	**01 50 20.9**	**-0.3**
BELG	**Belogornoye**	**67.31**	**337**	P	**P**	**01 50 23.2**	**0.0**
	comp=Z,11nm,0.9s,baz=77,slow=4.4,SNR=4.6						
AAK	**Ala-Archa**	**67.67**	**314**	P	**P**	**01 50 26.8**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=208,slow=2.5,SNR=6.0						
AAK	**Ala-Archa**	**67.67**	**314**	*ce*P	**P**	**01 50 26.9**	**+0.9**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AAK	**Ala-Archa**	**67.67**	**314**	P	**P**	**01 50 25.7**	**-0.3**
KMI	**Kunming**	**68.45**	**283**	⇑P	**P**	**01 50 30.0**	**-1.2**
KMI				pP	sP	01 50 36.8	+1.2
KMI				sP	pP	01 50 40.3	+5.9
KMI				pmax	pmax		
	comp=Z,26nm,0.5s						
KK31	**Karatay Array**	**68.81**	**317**	P	**P**	**01 50 33.4**	**+0.5**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	**Karatay Array**	**68.81**	**317**	P	**P**	**01 50 33.4**	**+0.5**
KKAR	**Karatay Array**	**68.81**	**317**	P	**P**	**01 50 32.8**	**-0.1**
KKAR	**Karatay Array**	**68.81**	**317**	P	**P**	**01 50 32.8**	**-0.1**
SUW	**Suwalki**	**69.34**	**352**	P	**P**	**01 50 35.6**	**-0.3**
SUW	**Suwalki**	**69.34**	**352**	P	**P**	**01 50 35.6**	**-0.3**
KSH	**Kashi**	**69.71**	**312**	P	P	01 50 44.0	+5.4
KSH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,430nm,4.4s						
HNR	**Honiara**	**70.57**	**213**	LR	LR	02 16 41.5	
	comp=Z,40nm,20.9s,baz=344,slow=32						
LSA	**Lhasa**	**70.83**	**295**	P	**P**	**01 50 46.1**	**+0.1**
LSA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LSA	**Lhasa**	**70.83**	**295**	P	**P**	**01 50 46.1**	**+0.1**
AKASG	**Malin Array Be**	**72.05**	**348**	P	**P**	**01 50 51.5**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=15,slow=6.1,SNR=7.4						
AKASG	**Malin Array Be**	**72.05**	**348**	*i* P	**P**	**01 50 50.9**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**72.05**	**348**	P	**P**	**01 50 51.5**	**-1.0**
AKBB	**Malin Array Si**	**72.05**	**348**	*ce*P	**P**	**01 50 51.2**	**-1.3**
AKBB	**Malin Array Si**	**72.05**	**348**	P	**P**	**01 50 51.5**	**-1.0**
KOLS	**Kolonicke sedl**	**74.46**	**352**	*e*P	**P**	**01 51 07.8**	**+1.0**
KOLS	**Kolonicke sedl**	**74.46**	**352**	*e*P	**P**	**01 51 07.8**	**+1.0**
KHC	**Kasperske Hory**	**74.66**	**358**	*ce*P	**P**	**01 51 05.7**	**-2.3**
KHC				pmax	pmax		
	comp=Z,25nm,1.7s						
GERES	**GERESS Array B**	**74.94**	**358**	P	**P**	**01 51 09.8**	**+0.1**
	comp=Z,2.0nm,1.1s,baz=323,slow=2.0,SNR=5.6						
GERES	**GERESS Array B**	**74.94**	**358**	P	**P**	**01 51 10.4**	**+0.7**
PMG	**Port Moresby**	**74.98**	**225**	LR	LR	02 15 56.0	
	comp=Z,48nm,21.8s,baz=14,slow=29						
CONA	**Conrad Observa**	**75.81**	**357**	*e*P	**P**	**01 51 12.6**	**-2.0**
	comp=Z,9.4nm,1.7s						
NIL	**Nilore**	**75.85**	**310**	P	**P**	**01 51 14.9**	**-0.2**
NIL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NIL	**Nilore**	**75.85**	**310**	P	**P**	**01 51 14.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**75.90**	**282**	P	**P**	**01 51 17.4**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=22,slow=6.5,SNR=8.1						
MOA	**Molln**	**75.93**	**358**	*e*P	**P**	**01 51 19.3**	**+4.0**
	comp=Z,10nm,1.5s						
KIV	**Kislovodsk**	**76.36**	**337**	*e*P	**P**	**01 51 17.7**	**-0.2**
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,165nm,18.0s						
WATA	**Walderalm**	**76.48**	**360**	*e*P	**P**	**01 51 15.6**	**-3.0**
	comp=Z,9.5nm,1.5s						
DAVA	**Damuels**	**76.53**	**1**	*e*P	**P**	**01 51 15.4**	**-3.5**
	comp=Z,23nm,2.7s						
KBZ	**Khabaz**	**76.53**	**337**	P	**P**	**01 51 20.1**	**+1.4**
	comp=Z,3.4nm,1.0s,baz=289,slow=3.1,SNR=4.8						
KBZ				LR	LR	02 32 00.7	
	comp=Z,32nm,18.8s,baz=342,slow=41						
KBZ	**Khabaz**	**76.53**	**337**	*ce*P	**P**	**01 51 21.3**	**+2.6**
FETA	**Feichten**	**76.80**	**0**	*e*P	**P**	**01 51 16.2**	**-4.2**
	comp=Z,10.0nm,1.3s						
KBL	**Kabul**	**76.80**	**314**	P	**P**	**01 51 20.0**	**-0.7**
KBL				IAmb	IAmb	01 51 21.7	
	comp=Z,5.7nm,1.1s						
SOKA	**Soboth**	**77.08**	**357**	*e*P	**P**	**01 51 21.6**	**-0.3**
	comp=Z,4.7nm,1.2s						
ZEI	**Tsey**	**77.20**	**336**	*e*P	**P**	**01 51 23.4**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
OBKA	**Obir**	**77.26**	**357**	*e*P	**P**	**01 51 24.3**	**+1.3**
	comp=Z,11nm,1.1s						
GEYT	**Alibeck**	**77.76**	**324**	P	**P**	**01 51 27.2**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=29,slow=3.3,SNR=3.7						
GEYT				LR	LR	02 27 53.2	
	comp=Z,79nm,18.4s,baz=135,slow=37						
GEYT	**Alibeck**	**77.76**	**324**	IAmb	IAmb	01 51 28.2	
	comp=Z,2.7nm,0.9s						
GYA0	**ALIBECK ARRAY**	**77.76**	**324**	P	**P**	**01 51 26.3**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**77.76**	**324**	P	**P**	**01 51 26.3**	**+0.5**
GYA0B				IAmb	IAmb	01 51 31.4	
	comp=Z,6.2nm,1.0s						
BRTR	**Keskin Array B**	**82.18**	**343**	P	**P**	**01 51 50.1**	**+0.3**
	comp=Z,2.0nm,1.1s,baz=46,slow=5.3,SNR=5.4						
BRTR				LR	LR	02 32 24.8	
	comp=Z,14nm,21.8s,baz=348,slow=39						
BRTR	**Keskin Array B**	**82.18**	**343**	P	**P**	**01 51 49.1**	**-0.7**
STKA	**Stephens Creek**	**97.51**	**221**	LR	LR	02 31 39.6	
	comp=Z,41nm,21.0s,baz=26,slow=32						
COCO	**West Island**	**102.33**	**267**	*i* P	**Pdif**	**01 53 21.6**	**-2.8**

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*IDC **31** 01:51:09.8±2.4, 2°.61N×128°.23E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.3/46, mbtmp3.6/3, Error ellipse: s-maj=160.1km s-min=27.8km az=68.0*

*DJA **31** 01:51:22.3±1.2, 1°N±6°×12°6E±°, h31^{km}±19^{km}, M3.5/7, MLv3.5/7*

ISC 31 01:51:21.4±1.1, **1°.41N**±0°.09×**125°.85E**±0°.07, **h54**^{km}, **n7**, σ**1^{s}.92**/8, **mb3.6**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.64**	**113**	P	**Pn**	**01 51 49.5**	**+1.5**
KMSI	**Cibinong**	**2.04**	**246**	P	**Pn**	**01 51 53.2**	**-0.2**
KMSI				S	**Sn**	**01 52 18.7**	**+0.9**
SGSI	**Sangihe**	**2.28**	**352**	P	**Pn**	**01 51 57.9**	**+1.1**
GTOI	**Gorontalo**	**2.94**	**255**	P	**Pn**	**01 52 08.0**	**+2.3**
WRA	**Warramunga Arr**	**22.80**	**159**	P	**P**	**01 56 17.4**	**-2.4**
	2.9nm,1.0s,baz=345,slow=10,SNR=12						
ASAR	**Alice Springs**	**26.13**	**163**	P	**P**	**01 56 51.5**	**+0.8**
	0.7nm,0.4s,baz=345,slow=11,SNR=13						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**02 01 13.9**	**-1.6**
	0.1nm,0.4s,baz=120,slow=8.8,SNR=1.5						

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*IDC **31** 01:59:52.9±2.4, 56°.21N×169°.07W, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.5/46, mbtmp3.7/7, ML3.2/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/50, Error ellipse: s-maj=47.9km s-min=24.5km az=2.0*

*AEIC **31** 01:59:55±1.8, 56°.60N±0°.05×169°.0W±0°.1, h25^{km}±6^{km}, Error ellipse: s-maj=10.1km s-min=4.0km az=52.0*

*NEIC **31** 01:59:57.0±1.2, 56°.62N±0°.06×169°.11W±0°.09, h20^{km}±4^{km}, mb4.1/3, ML3.6/24(AEIC), Error ellipse: s-maj=9.9km s-min=4.5km az=220.0*

ISC 31 01:59:56.3±0.7, **56°.60N**±0°.06×**169°.05W**±0°.06, **h10**^{km}, **n38**, σ**0^{s}.79**/44, **mb3.8**/4, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.87**	**312**		**Pg**	**02 00 13.3**	**+0.2**
SPIA					**Sb**	**02 00 25.5**	**+0.2**
MCIR	**Makushin Cirqu**	**2.93**	**154**		**Pn**	**02 00 43.6**	**+0.7**
AKGG	**Akutan Green G**	**2.97**	**143**		**Pn**	**02 00 42.7**	**-0.8**
AKGG					**Sn**	**02 01 19.6**	**+0.5**
MSW	**Makushin Switc**	**2.99**	**153**		**Pn**	**02 00 43.2**	**-0.5**
MSW					**Sn**	**02 01 21.0**	**+1.4**
AKRB	**Akutan Reef Bi**	**3.00**	**144**		**Pn**	**02 00 43.9**	**0.0**
AKRB					**Sn**	**02 01 21.0**	**+1.1**
AKLV	**Akutan Long Va**	**3.02**	**143**		**Pn**	**02 00 43.3**	**-0.7**
MNAT	**Makushin Natee**	**3.04**	**153**		**Pn**	**02 00 44.5**	**+0.1**
MAPS	**Pakushin South**	**3.05**	**156**		**Pn**	**02 00 44.6**	**+0.1**
AKBBA	**Akutan Broad B**	**3.08**	**143**		**Pn**	**02 00 44.4**	**-0.5**
MGOD	**Makushin Gods**	**3.08**	**155**		**Pn**	**02 00 44.8**	**-0.2**
MGOD					**Sn**	**02 01 21.5**	**-0.2**
AKUT	**Akutan**	**3.10**	**141**	Pn	**Pn**	**02 00 45.1**	**-0.1**
UNV	**Unalaska Valle**	**3.12**	**151**		**Pn**	**02 00 45.1**	**-0.4**
UNV					**Sn**	**02 01 23.1**	**+0.3**
AKSA	**Akutan Strait**	**3.12**	**141**		**Pn**	**02 00 45.6**	**+0.1**
AKSA					**Sn**	**02 01 24.1**	**+1.2**
OKWE	**Okmok W’ng Wal**	**3.17**	**171**		**Pn**	**02 00 45.1**	**-1.0**
WESP	**Westdahl Peak**	**3.24**	**129**		**Pn**	**02 00 46.6**	**-0.6**
FALS	**False Pass**	**3.63**	**116**	Pn	**Pn**	**02 00 52.1**	**-0.4**
NIKH	**Nikolski High**	**3.64**	**178**		**Pn**	**02 00 52.2**	**-0.4**
SDPT	**Sand Point**	**4.98**	**101**	Pn	**Pn**	**02 01 11.1**	**+0.1**
ATKA	**Atka Island**	**5.33**	**216**		**Pn**	**02 01 15.0**	**-0.8**
CHGN	**Chignik**	**5.91**	**88**	Pn	**Pn**	**02 01 22.8**	**-1.0**
SVW2	**Sparrevohn**	**8.31**	**52**	Pn	**Pn**	**02 01 56.2**	**-0.5**
AMKA	**Amchitka**	**8.62**	**238**	Pn	**Pn**	**02 02 00.6**	**-0.3**
KDAK	**Kodiak Island**	**9.02**	**76**	Pn	**Pn**	**02 02 06.9**	**+0.5**
	0.5nm,0.3s,baz=292,slow=8.4,SNR=7.0						
BPAW	**Bear Paw Mtn.**	**11.65**	**42**	Pn	**Pn**	**02 02 41.9**	**-0.5**
ILAR	**Eielson Array**	**13.53**	**44**	Pn	**Pn**	**02 03 07.5**	**-0.5**
	0.1nm,0.3s,baz=237,slow=12,SNR=7.0						
ILAR				LR	LR	02 08 43.5	
	comp=Z,36nm,20.1s,baz=134,slow=38						
DOT	**Dot Lake**	**14.24**	**50**	Pn	**Pn**	**02 03 18.1**	**+0.3**
FYU	**Fort Yukon**	**14.99**	**39**	Pn	**Pn**	**02 03 27.1**	**-0.8**
BCAR	**Beaver Creek A**	**15.07**	**53**		**Pn**	**02 03 28.4**	**-0.6**
BMAR	**Burnt Mountain**	**15.66**	**36**	Pn	**Pn**	**02 03 34.4**	**-2.4**
DAWY	**Dawson**	**16.34**	**51**	Pn	**Pn**	**02 03 43.9**	**-1.6**
DAWY				IAmb	IAmb	02 03 52.4	
	comp=Z,20nm,1.6s						
INK	**Inuvik**	**19.82**	**40**	P	**P**	**02 04 27.3**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=253,slow=8.6,SNR=13						
INK				LR	LR	02 12 04.8	
	comp=Z,74nm,18.7s,baz=36,slow=36						
INK	**Inuvik**	**19.82**	**40**	P	**P**	**02 04 26.4**	**-0.2**
INK				IAmb	IAmb	02 04 31.7	
	comp=Z,4.1nm,0.8s						
SEY	**Seymchan**	**20.17**	**304**	P	**P**	**02 04 31.3**	**+0.8**
	comp=Z,0.6nm,0.2s,baz=118,slow=9.1,SNR=5.6						
YKA	**Yellowknife Ar**	**27.48**	**55**	P	**P**	**02 05 42.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=281,slow=6.8,SNR=6.4						
TULEG	**Thule**	**38.10**	**22**	P	**P**	**02 07 15.5**	**+1.0**
TULEG				IAmb	IAmb	02 07 21.5	
	comp=Z,8.3nm,0.8s						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**02 09 09.0**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=323,slow=5.9,SNR=3.2						
AKASG	**Malin Array Be**	**72.00**	**348**	P	**P**	**02 11 19.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=17,slow=6.8,SNR=3.4						
PSI	**Prapat**	**88.80**	**273**	LR	LR	02 54 36.2	
	comp=Z,53nm,19.0s,baz=91,slow=37						

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*IDC **31** 02:15:50.8±2.0, 42°.47S×15°.85W, h0^{km}, mb4.2/4, mb1 4.2/4, mb1mx4.0/19, mbtmp4.2/4, MS4.1/12, Ms1 4.1/12, ms1mx4.0/16, Error ellipse: s-maj=73.2km s-min=34.5km az=171.0*

*NEIC **31** 02:15:52.9±1.8, 42°.2S±0°.1×16°.3W±0°.2, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=23.8km s-min=22.1km az=176.0*

ISC 31 02:15:53.2±0.6, **42°.3S**±0°.1×**16°.2W**±0°.1, **h10**^{km}, **n47**, σ**0^{s}.79**/32, **mb4.4**/8, **MS4.1**/12, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**29.06**	**174**	P	**P**	**02 21 53.0**	**-0.2**
	baz=341,slow=10						
VNA3	**Neumayer Olymp**	**29.22**	**176**	P	**P**	**02 21 54.4**	**-0.2**
SNAA	**Sanae**	**30.20**	**172**	P	**P**	**02 22 03.9**	**+0.5**
SNAA				IAmb	IAmb	02 22 11.0	
	comp=Z,7.6nm,1.5s						
H10S2	**ASCENSION HYDR**	**33.22**	**3**	T	T	02 57 36.7	
	baz=38,slow=74,SNR=7.1						
H10S3	**ASCENSION HYDR**	**33.22**	**3**	T	T	02 57 34.3	
	baz=182,slow=74,SNR=22						
H10N1	**ASCENSION HYDR**	**34.33**	**3**	T	T	02 59 00.0	
	baz=189						
H10N3	**ASCENSION HYDR**	**34.33**	**3**	T	T	02 59 06.6	
	baz=189,slow=74,SNR=19						
H10N2	**ASCENSION HYDR**	**34.35**	**3**	T	T	02 59 06.7	
	baz=189,slow=74,SNR=5.1						
TRQA	**Tornquist**	**34.92**	**261**	P	**P**	**02 22 43.6**	**-1.3**
BOSA	**Boshof**	**36.06**	**81**	LR	LR	02 35 09.0	
	comp=Z,281nm,18.8s,baz=218,slow=32						
CPUP	**Villa Florida**	**37.13**	**282**	P	**P**	**02 23 05.8**	**+1.9**

	comp=Z,2.6nm,0.9s,baz=197,slow=9.0,SNR=3.4						
CPUP				LR	LR	02 35 32.8	
	comp=Z,322nm,21.6s,baz=146,slow=32						
CPUP	Villa Florida	37.13	282	P	P	02 23 03.7	-0.2
CPUP				IAmb	IAmb	02 23 07.8	
	comp=Z,5.2nm,1.1s						
BDFB	Brasilia	38.09	305	P	P	02 23 14.2	+1.9
	comp=Z,3.4nm,0.9s,baz=131,slow=9.6,SNR=3.2						
BDFB				LR	LR	02 35 47.9	
	comp=Z,190nm,20.2s,baz=107,slow=31						
BDFB	Brasilia	38.09	305	P	P	02 23 11.2	-1.1
LBTB	Lobatse	38.38	77	P	P	02 23 15.4	+0.7
LBTB				IAmb	IAmb	02 23 19.0	
	comp=Z,9.5nm,1.1s						
MAW	Mawson	47.70	149	LR	LR	02 40 41.8	
	comp=Z,105nm,21.2s,baz=241,slow=32						
QSPA	South Pole Qui	47.98	180	P	P	02 24 32.3	+0.4
DBIC	Dimbokro	49.80	15	LR	LR	02 40 42.8	
	comp=Z,176nm,21.0s,baz=173,slow=30						
TOA0	Torodi Ar. Sit	57.56	21	P	P	02 25 42.5	-0.5
TOA0				IAmb	IAmb	02 25 44.8	
	comp=Z,4.5nm,1.1s						
TORD	Torodi Ar. Bea	57.56	21	P	P	02 25 42.0	-0.9
	comp=Z,2.0nm,1.0s,baz=196,slow=7.5,SNR=6.6						
TORD				LR	LR	02 44 50.5	
	comp=Z,197nm,21.4s,baz=170,slow=30						
TORD	Torodi Ar. Bea	57.56	21	P	P	02 25 43.1	+0.1
MBAR	Mbarara	59.09	58	P	P	02 25 53.9	-0.1
MBAR				IAmb	IAmb	02 26 01.0	
	comp=Z,4.8nm,1.2s						
VNDA	Vanda	60.47	180	LR	LR	02 49 10.3	
	comp=Z,133nm,20.4s,baz=162,slow=33						
KMBO	Kilima Mbogo	62.93	64	LR	LR	02 51 09.6	
	comp=Z,420nm,19.5s,baz=262,slow=34						
ROSC	El Rosal	70.47	296	LR	LR	02 56 55.6	
	comp=Z,374nm,18.9s,baz=151,slow=35						
ROSC	El Rosal	70.47	296	P	P	02 27 09.4	+0.9
KEST	Kesra	81.08	21	LR	LR	03 00 40.8	
	comp=Z,182nm,19.4s,baz=220,slow=33						
ESDC	Sonseca Array	82.33	9	LR	LR	02 59 43.3	
	comp=Z,60nm,19.1s,baz=335,slow=32						
BR131	Keskin Array S	93.30	36	P	P	02 29 07.8	-0.2
BRTR	Keskin Array B	93.30	36	P	P	02 29 08.9	+1.0
	comp=Z,1.5nm,0.9s,baz=221,slow=1.5,SNR=5.7						
BRTR				LR	LR	03 10 05.9	
	comp=Z,53nm,20.2s,baz=208,slow=35						
BRTR	Keskin Array B	93.30	36	P	P	02 29 07.9	-0.1
MKAR	Makanchi Array	124.21	55	PKP	PKPdf	02 34 50.1	-1.4
	comp=Z,0.1nm,0.3s,baz=270,slow=2.9,SNR=3.5						
YKA	Yellowknife Ar	130.10	323	PKP	PKPdf	02 35 01.1	-1.1
	comp=Z,0.3nm,0.7s,baz=108,slow=2.8,SNR=5.1						
IL31		144.39	326		PKPbc	02 35 26.9	+0.1
ILAR	Eielson Array	144.39	326	PKP	PKPab	02 35 26.9	+0.2
	comp=Z,1.8nm,0.8s,baz=66,slow=1.9,SNR=16						
ILAR	Eielson Array	144.39	326		PKPab	02 35 26.1	-0.5
HDA	Harding Lake	144.51	325		PKPab	02 35 27.2	+0.2
POKR	Poker Plat Res	144.52	327	PKPdf	PKPbc	02 35 27.6	+0.2
COLA	College	144.76	326	PKPdf	PKPab	02 35 27.7	-0.2
TCOL	CIGO, UAF Yank	144.76	326	PKPdf	PKPab	02 35 27.4	-0.6
CCB	Clear Creek Bu	144.80	326		PKPab	02 35 27.9	-0.2
MDM	Murphy Dome	144.89	327		PKPab	02 35 28.3	-0.2
WRH	Wood River Hil	144.97	326		PKPbc	02 35 28.6	-0.1
DHY	Denali Highway	145.01	323		PKPdf	02 35 29.9	+0.1
BPAW	Bear Paw Mtn.	146.29	326	PKPbc	PKPdf	02 35 32.0	+0.2
KTH	Kantishna Hill	146.43	325	PKPbc	PKPbc	02 35 33.3	-0.1
IMAR	Indian Mountai	146.69	330	PKPbc	PKPbc	02 35 33.6	-0.5

*ECX **31** 02:16:20.5±0.6, 27°.66N×111°.59W, h15^{km}±64^{km}, MD2.3*

MEX 31 02:16:20.5±0.3, 27°.52N×111°.50W, h9^{km}±9^{km}, MD3.6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUYB	Guaymas	0.67	56	eP	Pg	02 16 32.0	-1.4
GUYB				eS	Sg	02 16 42.0	-0.1
GUYB	Guaymas	0.67	56	eP	Pg	02 16 32.1	-1.4
GUYB				eS	Sg	02 16 42.2	0.0
SRIG	Santa Rosalia	0.69	253	eP	Pg	02 16 32.4	-1.4
SRIG				i S	Sg	02 16 41.5	-1.3
SRIG	Santa Rosalia	0.69	253	eP	Pg	02 16 32.3	-1.5
SRIG				i S	Sg	02 16 41.7	-1.1
HSIG		1.57	18	eP	Pn	02 16 44.9	-3.7
HSIG				eS	Sn	02 17 04.4	-4.7
HSIG		1.57	18	eS	Sn	02 17 05.0	-4.1

IDC 31 02:17:23.3±6.3, 49°.65S×126°.42E, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.4/30, mbtmp3.4/2, Error ellipse: s-maj=329.0km s-min=70.9km az=90.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	17.28	324	T	T	02 39 00.9	
	baz=151,slow=74,SNR=14						
H01W2	Cape Leeuwin H	17.29	324	T	T	02 39 04.2	
	baz=151,slow=74,SNR=16						
H01W3	Cape Leeuwin H	17.30	324	T	T	02 39 02.1	
	baz=151,slow=74,SNR=17						
ASAR	Alice Springs	26.59	15	P	P	02 23 03.5	+0.3
	0.8nm,0.7s,baz=188,slow=9.9,SNR=6.9						
WRA	Warramunga Arr	30.31	15	P	P	02 23 36.0	-0.3
	0.3nm,0.8s,baz=194,slow=7.8,SNR=1.9						
YKA	Yellowknife Ar	145.01	45	PKPbc	PKPbc	02 36 59.5	-0.9
	0.5nm,0.7s,baz=264,slow=2.5,SNR=7.9						

IDC 31 02:21:26.5±6.1, 49°.56S×126°.12E, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.6/24, mbtmp3.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.9/17, Error ellipse: s-maj=327.0km s-min=69.9km az=91.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	17.10	325	T	T	02 43 06.1	
	baz=152,slow=74,SNR=8.7						
H01W2	Cape Leeuwin H	17.10	325	T	T	02 43 04.2	
	baz=152,slow=74,SNR=9.9						
H01W3	Cape Leeuwin H	17.11	325	T	T	02 43 04.8	
	baz=152,slow=74,SNR=8.8						
NWAO	Narrogin (SRO)	17.89	335	LR	LR	02 31 11.4	
	comp=Z,52nm,18.5s,baz=222,slow=33						
ASAR	Alice Springs	26.56	16	P	P	02 27 06.2	+0.1
	0.7nm,0.6s,baz=188,slow=9.1,SNR=8.5						
WRA	Warramunga Arr	30.27	15	P	P	02 27 39.1	-0.1
	0.3nm,0.8s,baz=192,slow=8.5,SNR=1.8						
RPZ	Rata Peaks	31.03	97	LR	LR	02 37 04.1	
	comp=Z,63nm,21.7s,baz=238,slow=30						
YKA	Yellowknife Ar	145.09	45	PKPbc	PKPbc	02 41 03.1	-0.8
	0.4nm,0.6s,baz=270,slow=3.2,SNR=9.1						

*RHSSO **31** 02:48:38.3±0.8, 41°.86N×19°.68E, h13^{km}±2^{km}, ML3.0/9*
*SKO **31** 02:48:38.8, 41°.88N×19°.49E, h27^{km}*
*TIR **31** 02:48:38.3, 41°.90N×19°.59E, h19^{km}, Ml2.6*
*PDG **31** 02:48:39.0±0.2, 41°.91N×19°.58E, h12^{km}, ML2.8/10, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*BEO **31** 02:48:39.1±0.3, 42°.02N×19°.74E, h0^{km}, ML2.4/12*

ISC 31 02:48:38.8±1.0, 41°.90N±0°.02×19°.59E±0°.02, h14^{km}±8^{km}, n63, σ0^{s}.76/116, 17C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	Puka	0.27	57	P	Pb	02 48 45.1	-0.4
	baz=57						
PUK				S	Sb	02 48 49.4	-0.6
	baz=57						
PUK				AMP			
	comp=N,5.8nm,0.3s,baz=57						
TIR	Tirane	0.58	159	⇑P	Pb	02 48 50.6	-0.2
TIR				⇑S	Sn	02 49 00.8	-1.3
TIR	Tirane	0.58	159	ePg	Pg	02 48 50.4	+0.1
TIR				eSg	Sb	02 48 58.9	-0.1
TIR	Tirane	0.58	159	P	Pg	02 48 50.3	0.0
	baz=159						
TIR				S	Sb	02 48 59.4	+0.4
	baz=159						
TIR				AMP			
	comp=E,1.0nm,0.5s,baz=159						
TIR	Tirane	0.58	159	i Pg	Pg	02 48 50.5	+0.1
BCI	Bajram Curri	0.59	37	P	Pg	02 48 50.2	-0.2
	baz=37						
BCI				S	Sb	02 48 59.6	+0.4
	baz=37						
BCI				AMP			
	comp=N,2.0nm,0.4s,baz=37						
PDG	Podgorica	0.59	335	⇑P	Pg	02 48 49.7	-0.7
PDG				⇑S	Sb	02 48 59.3	+0.1
PDG	Podgorica	0.59	335	ePg	Pg	02 48 49.6	-0.7
PDG				eSg	Sg	02 48 56.8	-1.4
PDG	Podgorica	0.59	335	⇑iPg	Pg	02 48 49.7	-0.7
PDG				eSg	Sb	02 49 00.1	+0.9
PDG	Podgorica	0.59	335	i Pg	Pg	02 48 49.8	-0.6
PDG				i Sg	Sb	02 49 00.3	+1.2
TTG	Podgorica	0.59	335	⇑iPg	Pg	02 48 49.8	-0.6
TTG				i Sg	Sb	02 48 59.5	+0.3
PHP	Peshkopia	0.67	108	P	Pg	02 48 51.8	-0.1
	baz=108						
PHP				S	Sb	02 49 01.9	+0.5
	baz=108						
PHP				AMP			
	comp=N,0.7nm,0.3s,baz=108						
PVY	Plav	0.75	21	⇓iPg	Pg	02 48 53.1	-0.3
PVY				i Sg	Sb	02 49 05.1	+1.2
CEME	Cevo	0.82	323	⇑iPg	Pg	02 48 54.0	-0.8
CEME				i Sg	Sb	02 49 06.8	+0.9
KOME	Kolasin	0.96	357	⇑iPg	Pb	02 48 56.7	-0.5
KOME				i Sg	Sn	02 49 11.4	0.0
HCY	Herceg Novi	0.98	304	ePg	Pb	02 48 57.2	-0.5
HCY				eSg	Sn	02 49 12.3	+0.3
HCY	Herceg Novi	0.98	304	⇓iPg	Pb	02 48 56.9	-0.8
HCY				i Sg	Sn	02 49 11.8	-0.2
NKME	Niksic	0.99	332	⇓iPg	Pb	02 48 57.2	-0.6
NKME				i Sg	Sn	02 49 12.2	0.0
BEY	Berane	1.00	13	i Pg	Pb	02 48 57.7	-0.3
IVA	Berane	1.00	13	⇓iPg	Pb	02 48 57.6	-0.4
IVA				i Sg	Sn	02 49 12.7	+0.2
NKY	Niksic	1.02	334	⇑iPg	Pb	02 48 57.7	-0.6
NKY				i Sg	Sn	02 49 13.1	+0.1
OHR	Ohrid	1.20	130	i Pg	Pg	02 49 02.0	+0.1
OHR				i Sg	Sg	02 49 18.0	+0.5
TREB	Trebinje	1.23	312	ePg	Pn	02 49 01.7	0.0
TREB				eSg	Sg	02 49 19.5	+0.9
TREB	Trebinje	1.23	312	⇓iPg	Pn	02 49 01.6	-0.1
TREB				eSg	Sg	02 49 19.6	+0.9
BRY	Bratogost	1.27	323	ePg	Pb	02 49 02.8	+0.1
BRY				eSg	Sg	02 49 21.6	+1.7
BRY	Bratogost	1.27	323	⇑iPg	Pn	02 49 02.2	-0.1
BRY				i Sg	Sg	02 49 21.1	+1.2
DBRK	Dubrovnik	1.32	306	ePn	Pn	02 49 01.8	-1.1
DBRK				Sg	Sg	02 49 21.5	0.0
SKO	Skopje	1.38	86	ePg	Pn	02 49 01.5	-2.2
SKO				eSg	Sn	02 49 20.4	-1.3
SKO	Skopje	1.38	86	i Pg	Pg	02 49 05.3	-0.1
VLO	Vlora	1.43	183	P	Pb	02 49 05.5	+0.3
	baz=183						
VLO				S	Sg	02 49 25.4	+0.6
	baz=183						
PLE	Pljevlja	1.44	354	⇓iPg	Pb	02 49 05.4	-0.1
PLE				i Sg	Sg	02 49 26.6	+1.3
GJIK	Gjilan	1.48	67	i Pg	Pg	02 49 07.3	0.0
STON	Ston	1.71	305	ePg	Pb	02 49 09.3	-0.7
STON				eSg	Sg	02 49 34.4	+0.6
STON	Ston	1.71	305	ePn	Pn	02 49 07.0	-1.1
STON				Sn	Sn	02 49 29.5	-0.3
STON	Ston	1.71	305	⇑iPn	Pn	02 49 08.5	+0.3
STON				eSn	Sb	02 49 30.6	-0.7
RUDO	Rudo	1.73	355	ePn	Pn	02 49 08.7	+0.2
RUDO				eSn	Sn	02 49 30.6	+0.2
IVAS	Ivanjica	1.73	14	ePg	Pb	02 49 09.5	-0.9
IVAS				eSg	Sn	02 49 29.0	-1.5
FNA	Florina	1.74	129	P	Pb	02 49 10.8	+0.2
	baz=128						
FNA				S	Sg	02 49 35.4	+0.5
	baz=128						
LSK	Leskovik	1.90	156	P	Pb	02 49 13.2	-0.1
	baz=156						
BBLS	Lazići	1.97	356	ePg	Pn	02 49 11.4	-0.5
BBLS				eSg	Sb	02 49 38.5	-0.6
BBLS	Lazići	1.97	356	ePn	Pn	02 49 12.3	+0.4
BBLS				eSn	Sn	02 49 37.2	+0.7
GRUS	Gruza	2.16	22	ePn	Pn	02 49 14.8	+0.5
DIVS	Divibare	2.22	7	ePg	Pn	02 49 16.5	+1.2
DIVS				eSg	Sb	02 49 45.6	-0.6
DIVS	Divibare	2.22	7	ePn	Pn	02 49 15.8	+0.5
DIVS				eSn	Sn	02 49 42.3	-0.3
HAPS	Han Pijesak,BI	2.24	348	ePn	Pn	02 49 16.4	+0.8
HAPS				eSg	Sb	02 49 45.5	-1.2
HAPS	Han Pijesak,BI	2.24	348	⇑iPn	Pn	02 49 15.9	+0.3
HAPS				eSn	Sn	02 49 43.9	+0.8
RICI	Ricice	2.42	312	ePn	Pn	02 49 17.9	-0.1
RICI				Sn	Sn	02 49 48.5	+1.2
ZAPS	Zavoj	2.63	57	ePn	Pn	02 49 20.0	-1.0
HVAR	Hvar	2.65	300	ePn	Pn	02 49 20.7	-0.5
HVAR				Sn	Sn	02 49 52.5	-0.7
TEKS	Tekeris	2.65	359	eSn	Sn	02 49 53.9	+0.7
ZAGS	Zajecar	2.73	44	ePn	Pn	02 49 22.3	+0.1
ZAGS				eSg	Sb	02 49 58.7	-2.0
KIJV	Kijevo	3.15	313	ePn	Pn	02 49 28.7	+0.7
KIJV				Sn	Sn	02 50 05.8	+0.4
FRGS	Fruska Gora	3.27	3	ePn	Pn	02 49 29.6	0.0
FRGS				eSn	Sn	02 50 07.7	-0.6
BLY	Banja Luka	3.35	329	ePn	Pn	02 49 31.8	+1.1
BLY				eSn	Sn	02 50 11.8	+1.5
ZIRJ	Zirje	3.40	302	ePn	Pn	02 49 30.7	-0.7
MORI	Morici	3.47	306	ePn	Pn	02 49 31.9	-0.4
MORI				Sn	Sn	02 50 13.4	+0.2
HERR	Herculane	3.62	34	⇑P	Pn	02 49 35.3	+0.8
HERR				⇑S	Sn	02 50 17.7	+0.7
UDBI	Udbina	3.84	315	ePn	Pn	02 49 37.6	0.0
UDBI				Sn	Sn	02 50 23.6	+1.1
BZS	Buzias	4.00	21	⇑P	Pn	02 49 40.9	+1.2
BZS				⇑S	Sn	02 50 26.3	0.0
GZR	Gura Zlata	4.19	32	⇓P	Pn	02 49 44.0	+1.7
GZR				⇑S	Sn	02 50 32.4	+1.2
NVLJ	Novalja	4.36	309	ePn	Pn	02 49 44.3	-0.3
NVLJ				Sn	Sn	02 50 34.5	-0.7
MORH	Mrgy, Hungar	4.37	351	ePn	Pn	02 49 45.0	+0.2
MORH				eSn	Sn	02 50 35.1	-0.4
DRGR		5.38	23	⇓P	Pn	02 49 59.5	+0.8

IDC 31 02:57:28.6±6.5, 49°.58S×125°.51E, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.5/28, mbtmp3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/12, Error ellipse: s-maj=365.0km s-min=71.6km az=93.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	Cape Leeuwin H	16.88	326	T	T	03 19 09.3	
	baz=152,slow=74,SNR=13						
H01W2	Cape Leeuwin H	16.88	326	T	T	03 19 09.9	
	baz=152,slow=74,SNR=15						
H01W3	Cape Leeuwin H	16.90	326	T	T	03 19 10.1	
	baz=152,slow=74,SNR=12						
ASAR	Alice Springs	26.69	17	P	P	03 03 09.4	+0.1
	0.7nm,0.6s,baz=189,slow=9.3,SNR=8.8						
WRA	Warramunga Arr	30.40	17	P	P	03 03 42.3	-0.1
	0.3nm,0.9s,baz=195,slow=8.5,SNR=1.6						
VNDA	Vanda	31.24	166	LR	LR	03 15 50.3	
	comp=Z,61nm,18.5s,baz=226,slow=35						
YKA	Yellowknife Ar	145.38	45	PKPbc	PKPbc	03 17 06.2	-0.9
	0.3nm,0.6s,baz=263,slow=2.9,SNR=7.0						

PRU 31 02:59:06.1±0.0, 50°.14N×19°.04E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.49	80	ePg	Pg	02 59 16.0	+0.4
OJC				eSg	Sg	02 59 21.9	-0.1
LANS	Liptovska Anna	1.03	164	ePG	Pg	02 59 25.2	-0.6
LANS				eSG	Sg	02 59 38.8	-0.3
LANS				eLG	Lg	02 59 43.5	
MORC	Moravsky Berou	1.03	250	ePG	Pb	02 59 26.4	-0.5
MORC				eSG	Sg	02 59 39.1	-0.2
NIE	Niedzica	1.09	131	ePg	Pg	02 59 26.7	-0.3
NIE				eSg	Sb	02 59 42.7	+0.1
KRLC	Kraliky	1.46	268	ePG	Pn	02 59 33.5	-0.2
KRLC				eSG	Sn	02 59 53.7	+0.2
	comp=Z,8.4nm,0.4s						
VYHS	Vyhne	1.65	185	ePN	Pn	02 59 35.6	-0.8
VYHS				eSN	Sn	02 59 56.6	-1.7
DPC	Dobruska-Polom	1.76	278	ePG	Pb	02 59 38.7	-0.5
DPC				eSG	Sg	03 00 02.2	-0.3
	comp=Z,9.5nm,0.3s						
VRAC	Vranov	1.79	243	ePN	Pb	02 59 39.2	-0.6
VRAC				eSG	Sb	03 00 03.1	+0.3
OSTC	Ostas	1.86	284	ePG	Pn	02 59 39.9	+0.7
OSTC				eSG	Sb	03 00 04.8	+0.1
UPC	Upice	1.98	282	eSG	Sg	03 00 09.4	-0.1
KRUC	Moravsky	2.03	239	ePN	Pn	02 59 42.1	+0.5
KRUC				eSG	Sb	03 00 10.2	+0.5
PRU	Pruhonice	2.90	269	eSG	Sg	03 00 37.5	-1.8
KHC	Kasperske Hory	3.69	256	eSG	Sg	03 01 02.0	-2.6

*IDC **31** 03:04:33.2±2.2, 31°.77S×178°.36W, h0^{km}, mb4.4/3, mb1 4.6/4, mb1mx4.2/24, mbtmp4.4/4, ML4.5/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/34, Error ellipse: s-maj=60.7km s-min=38.8km az=135.0*
*NEIC **31** 03:04:38.3±1.9, 32°.3S±0°.1×177°.9W±0°.2, h72^{km}±10^{km}, mb4.4/8, Error ellipse: s-maj=27.8km s-min=4.7km az=125.0*

ISC 31 03:04:33.3±1.3, 32°.16S±0°.10×177°.8W±0°.2, h24^{km}, n28, σ1^{s}.72/23, mb4.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.90	357	Pn	Pb	03 05 24.9	+0.6
MXZ	Matakaoa Point	6.29	210	Pn	Pn	03 06 05.7	+1.2
URZ	Urewera	7.40	213	Pn	Pn	03 06 22.9	+3.2
	7.7nm,0.3s,baz=276,slow=3.0,SNR=32						
URZ				Sn	Sn	03 07 40.8	-2.1
	3.6nm,0.3s,baz=160,slow=18,SNR=8.4						
URZ	Urewera	7.40	213		Pn	03 06 22.1	+2.4
OUZ	Omahuta	7.83	245		Pn	03 06 28.5	+2.9
DZM	Mont Dzumac	17.27	302	LR	LR	03 13 03.1	
	comp=Z,119nm,20.0s,baz=178,slow=31						
STKA	Stephens Creek	34.32	259	P	P	03 11 18.7	+0.6
	2.4nm,0.9s,baz=94,slow=14,SNR=3.0						
STKA	Stephens Creek	34.32	259	IAmb	IAmb	03 11 51.4	
	comp=Z,5.2nm,1.8s						
COEN	Coen	39.98	288	P	P	03 12 06.6	+0.4
AS31	Alice Springs	43.25	269	P	P	03 12 31.3	-1.7
ASAR	Alice Springs	43.25	269	P	P	03 12 32.1	-0.9
	comp=Z,2.8nm,0.6s,baz=106,slow=7.7,SNR=35						
WB2	Warramunga Arr	44.39	274	P	P	03 12 40.7	-1.4
WRA	Warramunga Arr	44.40	274	P	P	03 12 41.1	-1.1
	comp=Z,4.0nm,0.3s,baz=112,slow=8.0,SNR=102						
WRA	Warramunga Arr	44.40	274	P	P	03 12 41.0	-1.3
WB0	Warramunga Arr	44.43	274	P	P	03 12 41.2	-1.3
WB0				IAmb	IAmb	03 12 41.8	
	comp=Z,6.6nm,0.7s						
FORT	Forrest	45.82	257	P	P	03 12 52.1	-1.3
KNRA	Kununurra	51.06	276	P	P	03 13 31.5	-2.4
FITZ	Fitzroy Crossi	52.58	271	P	P	03 13 44.5	-0.7
SNAA	Sanae	76.40	178	P	P	03 16 30.7	+10
VNA3	Neumayer Olymp	76.54	176	P	P	03 16 32.0	+11
VNA2	Neumayer--Watz	76.98	177	P	P	03 16 34.3	+11
	baz=176,slow=4.2						
MJAR	Matsushiro Arr	79.80	325	LR	LR	03 45 54.8	
	comp=Z,33nm,20.9s,baz=55,slow=31						
KSAR	Wonju Array Be	85.83	320	P	P	03 17 09.1	-1.6
MK31	Makanchi Array	119.05	309	PKPdf	PKPdf	03 23 20.4	+0.7
MKAR	Makanchi Array	119.05	309	PKP	PKiKP	03 23 21.7	+1.9
	comp=Z,0.1nm,0.5s,baz=115,slow=1.0,SNR=1.6						
MKAR	Makanchi Array	119.05	309		PKPdf	03 23 18.2	-1.5
FINES	FINESS Array B	146.86	339	PKPbc	PKPab	03 24 14.7	+0.6
	comp=Z,1.9nm,0.4s,baz=57,slow=4.3,SNR=24						
FINES	FINESS Array B	146.86	339		PKPbc	03 24 12.7	-0.1

*NEIC **31** 03:05:05.8±0.5, 19°.1N±0°.1×68°.03W±0°.07, h37^{km}±84^{km}, Error ellipse: s-maj=17.8km s-min=3.4km az=209.0*
*RSPR **31** 03:05:06.3, 19°.14N×68°.03W, h42^{km}±14^{km}, MD3.5/9*

ISC 31 03:05:04.4±1.7, 19°.1N±0°.1×68°.02W±0°.06, h20^{km}, n46, σ0^{s}.40/45, 12C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	1.05	125	⇑eP	Pn	03 05 23.1	-1.0
AGPR	Aguadilla, PR	1.05	125		Pn	03 05 23.1	-1.0
AGPR	Aguadilla, PR	1.05	125	IAML		03 05 33.6	
	comp=N,428nm,0.6s						
MPR	Mayaguez	1.20	136		Pn	03 05 25.9	-0.2
LSP	Las Mesas	1.26	136	⇑eP	Pn	03 05 27.0	0.0
LSP	Las Mesas	1.26	136		Pn	03 05 27.0	0.0
CRPR	Cabo Rojo, PR	1.37	141	⇑eP	Pn	03 05 28.7	+0.3
CRPR	Cabo Rojo, PR	1.37	141	eS	Sn	03 05 46.5	+0.4
CRPR	Cabo Rojo, PR	1.37	141		Pn	03 05 28.7	+0.3
CRPR					Sn	03 05 46.5	+0.4
CRPR	Cabo Rojo, PR	1.37	141	IAML		03 05 49.9	
	comp=N,217nm,0.8s						
CRPR				IAML		03 05 50.0	
	comp=E,173nm,0.7s						
AOPR	Arecibo Observ	1.40	121	⇑eP	Pn	03 05 28.5	-0.4
AOPR	Arecibo Observ	1.40	121		Pn	03 05 28.5	-0.4
AOPR	Arecibo Observ	1.40	121	IAML		03 05 54.0	
	comp=E,396nm,0.3s						
AOPR				IAML		03 05 57.8	
	comp=N,282nm,0.4s						
MLPR	Magueyes Islan	1.44	140	⇑eP	Pn	03 05 29.4	0.0
MLPR	Magueyes Islan	1.44	140	eS	Sn	03 05 47.6	-0.1
MLPR	Magueyes Islan	1.44	140		Pn	03 05 29.4	0.0
MLPR					Sn	03 05 47.6	-0.1
MLPR	Magueyes Islan	1.44	140	IAML		03 05 47.7	
	comp=N,243nm,0.5s						
MLPR				IAML		03 05 48.0	
	comp=E,218nm,0.4s						
EMPR	Esperanza - Ma	1.53	113	⇑eP	Pn	03 05 30.4	-0.2
EMPR	Esperanza - Ma	1.53	113	eS	Sn	03 05 49.6	-0.3
EMPR	Esperanza - Ma	1.53	113		Pn	03 05 30.4	-0.2
EMPR					Sn	03 05 49.6	-0.3
EMPR	Esperanza - Ma	1.53	113	IAML		03 05 52.0	
	comp=N,282nm,1.2s						
OBIP	Obispado Ponce	1.69	127	⇑eP	Pn	03 05 32.9	+0.1
OBIP	Obispado Ponce	1.69	127	eS	Sn	03 05 53.6	-0.3
OBIP	Obispado Ponce	1.69	127		Pn	03 05 32.9	+0.1
OBIP					Sn	03 05 53.6	-0.3
OBIP	Obispado Ponce	1.69	127	IAML		03 05 55.4	
	comp=E,162nm,0.4s						
OBIP				IAML		03 05 56.0	
	comp=N,219nm,0.6s						
CELP	Cerrillos	1.69	126	⇑eP	Pn	03 05 33.4	+0.5
CELP	Cerrillos	1.69	126	eS	Sn	03 05 53.8	-0.2
CELP	Cerrillos	1.69	126		Pn	03 05 33.4	+0.5
CELP					Sn	03 05 53.8	-0.2
ICMP	Isla Caja de M	1.85	130		Pn	03 05 35.2	+0.2
ICMP				IAML		03 06 03.8	
	comp=N,110nm,1.0s						
GCPR	Guaynabo City	1.99	112	⇑eP	Pn	03 05 37.4	+0.4
GCPR	Guaynabo City	1.99	112		Pn	03 05 37.4	+0.4
SJG	San Juan	2.02	118		Pn	03 05 37.5	+0.2
SJG				IAML		03 06 02.1	
	comp=N,90nm,0.5s						
SJG				IAML		03 06 02.6	
	comp=N,134nm,0.3s						
IGPR	InterUniversit	2.12	121	⇑eP	Pn	03 05 38.7	-0.1
IGPR	InterUniversit	2.12	121	eS	Sn	03 06 04.3	-0.3
IGPR	InterUniversit	2.12	121		Sn	03 06 04.3	-0.3
PDPR	Patillas Dam,	2.17	119		Pn	03 05 39.8	+0.3
CBYP	Canovanas	2.20	111		Pn	03 05 39.9	0.0
HUMP	Col San Antoni	2.26	114	⇑eP	Pn	03 05 41.3	+0.6
HUMP	Col San Antoni	2.26	114	eS	Sn	03 06 07.9	0.0
HUMP	Col San Antoni	2.26	114		Pn	03 05 41.3	+0.6
HUMP					Sn	03 06 07.9	0.0
HUMP	Col San Antoni	2.26	114	IAML		03 06 14.7	
	comp=E,80nm,0.4s						
MTP	Monte Pirata	2.53	112	⇑eP	Pn	03 05 44.6	+0.1
MTP	Monte Pirata	2.53	112		Pn	03 05 44.6	+0.1
CUPR	Culebra, Puert	2.70	106	Pn	Pn	03 05 47.5	+0.7
SDDR	Presa de Saban	3.10	269	Pn	Pn	03 05 52.2	-0.1
SDDR				IAML		03 07 01.9	
	comp=E,39nm,1.1s						
SDDR				IAML		03 07 04.2	
	comp=E,47nm,0.9s						
CDVI	St. Croix	3.36	113	Pn	Pn	03 05 56.5	+0.7

IDC 31 03:18:06.4±1.6, 7°.69N×34°.88W, h0^{km}, mb3.8/3, mb1 3.9/3, mb1mx3.5/30, mbtmp3.8/3, MS3.6/5, Ms1 3.6/5, ms1mx3.2/28, Error ellipse: s-maj=51.4km s-min=35.2km az=136.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	25.51	127	T	T	03 49 49.6	
	baz=306,slow=75,SNR=9.9						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H10N2	ASCENSION HYDR	25.51	127	T	T	03 49 53.0	
	baz=306,slow=75,SNR=12						
H10N1	ASCENSION HYDR	25.53	127	T	T	03 50 00.0	
	baz=306,slow=75,SNR=12						
H10S3	ASCENSION HYDR	26.06	129	T	T	03 50 33.2	
	baz=274,slow=74,SNR=8.3						
H10S2	ASCENSION HYDR	26.08	129	T	T	03 50 41.0	
	baz=306,slow=74,SNR=5.3						
BDFB	Brasilia	26.58	209	P	P	03 23 46.6	0.0
	2.8nm,0.8s,baz=51,slow=9.7,SNR=4.0						
BDFB				LR	LR	03 33 24.4	
	comp=Z,142nm,18.9s,baz=315,slow=34						
TORD	Torodi Ar. Bea	36.35	78	P	P	03 25 12.6	0.0
	0.7nm,0.6s,baz=276,slow=8.3,SNR=2.7						
TORD				LR	LR	03 40 09.3	
	comp=Z,63nm,18.3s,baz=320,slow=36						
CPUP	Villa Florida	40.23	212	LR	LR	03 40 53.4	
	comp=Z,60nm,18.7s,baz=175,slow=34						
ESDC	Sonseca Array	42.20	36	LR	LR	03 41 23.7	
	comp=Z,45nm,18.7s,baz=265,slow=33						
PLCA	Paso Flores	58.30	211	LR	LR	03 53 40.4	
	comp=Z,151nm,18.2s,baz=164,slow=37						
YKA	Yellowknife Ar	78.48	332	P	P	03 30 09.1	0.0
	0.5nm,1.0s,baz=84,slow=5.8,SNR=2.3						

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*IDC **31** 03:24:55.7±0.6, 56.°60N×168.°94W, h0^{km}, mb4.4/27, mb1 4.6/31, mb1mx4.5/52, mbtmp4.5/31, ML4.1/4, MS3.8/26, Ms1 3.8/26, ms1mx3.6/51, Error ellipse: s-maj=18.1km s-min=10.0km az=173.0*

*AEIC **31** 03:24:55±2.0, 56.°64N±0.°05×169.°03W±0.°09, h31^{km}±3^{km}, Error ellipse: s-maj=8.7km s-min=4.8km az=221.0*

*MOS **31** 03:24:56.4±1.0, 56.°69N×168.°90W, h17^{km}, mb5.0/45, Error ellipse: s-maj=10.2km s-min=5.4km az=97.3*

*GCMT **31** 03:24:56.9±0.3, 56.°79N±0.°03×169.°31W±0.°08, h19^{km}±1^{km}, MW4.9/91, Moment Tensor Solution. s24,c25; s91,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.38±.18; M$_{\theta\theta}$2.05±.14; M$_{\phi\phi}$0.32±.10; M$_{r\theta}$0.26±.29; M$_{\theta\phi}$-0.55±.08; M$_{\phi r}$1.05±.27; Best double couple: M$_0$2.49400×10^{16} NP1:φ$_s$267.00000°,δ48.00000°,λ-118.00000°. NP2: φ$_s$125.00000°,δ49.00000°,λ-63.00000°. Principal axes: T 2.2100, Plg1.0000°, Azm197.0000°; N 0.5660, Plg20.0000°, Azm287.0000°; P -2.7770, Plg70.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 03:24:56.9±1.2, 56.°65N±0.°05×168.°93W±0.°08, h8^{km}±2^{km}, mb4.8/165, ML4.5(AEIC) Error ellipse: s-maj=8.5km s-min=5.0km az=216.0*

ISC 31 03:24:56.8±0.7**, 56.°64N**±0.°05×**168.°94W**±0.°04**, h6**^{km}±4^{km}**, n519, σ0$.^{s}$99**/500**, mb4.9**/150**, MS3.9**/32**, 31C-12D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.90	308		Sg	03 25 25.8	+0.2
SPIA	Saint Paul Isl	0.90	308		Pg	03 25 13.0	-1.0
AKGG	Akutan Green G	2.97	144		Pn	03 25 43.1	-1.2
AKGG					Sn	03 26 19.2	-0.9
MTBL	Makushin Table	2.97	153		Pn	03 25 44.2	-0.2
MSW	Makushin Switc	3.00	155		Pn	03 25 43.8	-0.9
AKRB	Akutan Reef Bi	3.00	146		Pn	03 25 44.0	-0.8
AKRB					Sn	03 26 21.0	0.0
AKLV	Akutan Long Va	3.01	144		Pn	03 25 44.1	-0.8
MNAT	Makushin Natee	3.05	154		Pn	03 25 44.7	-0.8
MNAT					Sn	03 26 21.2	-0.9
AKMO	Akutan Morgan	3.05	146		Pn	03 25 44.8	-0.7
MAPS	Pakushin South	3.06	157		Pn	03 25 45.2	-0.4
AKBBA	Akutan Broad B	3.07	145		Pn	03 25 44.2	-1.6
AKUT	Akutan	3.09	143		Pn	03 25 45.8	-0.3
AKSA	Akutan Strait	3.12	142		Pn	03 25 46.0	-0.4
AKSA					Sn	03 26 24.2	+0.3
UNV	Unalaska Valle	3.13	152		Sn	03 26 23.3	-0.8
UNV	Unalaska Valle	3.13	152		Pn	03 25 46.0	-0.5
WEBT	Westdahl Beart	3.14	129		Pn	03 25 46.1	-0.6
WTUG	Tugumak	3.14	123		Pn	03 25 46.2	-0.5
WESP	Westdahl Peak	3.22	130		Pn	03 25 47.1	-0.8
OKFG	Magazine Ridge	3.29	169		Pn	03 25 46.1	-2.6
OKSO	Okmok South	3.32	172		Pn	03 25 47.0	-2.1
OKSP	Okmok Steeple	3.41	173		Pn	03 25 49.1	-1.4
FALS	False Pass	3.60	117	Pn	Pn	03 25 52.4	-0.5
NIKH	Nikolski High	3.67	179		Pn	03 25 53.5	-0.6
DT1	Dutton Round H	4.05	109		Pn	03 25 57.8	-1.4
SDPT	Sand Point	4.92	102		Pn	03 26 09.8	-1.3
KOFP	Korovin Flat P	5.30	217		Pn	03 26 16.9	+0.4
ATKA	Atka Island	5.40	217		Sn	03 27 16.0	-4.1
ATKA	Atka Island	5.40	217	Pn	Pn	03 26 18.2	+0.5
CNBA	Chernabura Isl	5.59	105	Pn	Pn	03 26 21.6	+1.2
CHGN	Chignik	5.85	89		Pn	03 26 23.1	-0.8
ADK	Adak	6.58	227	P	Pn	03 26 34.0	+0.2
ADK	Adak	6.58	227	Pn	Pn	03 26 34.0	+0.2
GAMB	Gambell	7.29	350		Pn	03 26 42.6	-1.0
ANCK	Angle Creek	7.43	72		Pn	03 26 45.2	-0.4
ANM	Nome	8.14	11	P	Pn	03 26 54.4	-0.9
ANM	Nome	8.14	11	Pn	Pn	03 26 54.4	-0.9
SVW2	Sparrevohn	8.23	52		Pn	03 26 56.2	-0.4
OHAK	Old Harbor	8.58	80	Pn	Pn	03 27 02.0	+0.6
AMKA	Amchitka	8.69	238	Pn	Pn	03 27 04.0	+1.1
KDAK	Kodiak Island	8.95	76	Pn	Pn	03 27 06.9	+0.5
	2.5nm,0.3s,baz=294,slow=8.2,SNR=41						
KDAK	Kodiak Island	8.95	76	i P	Pn	03 27 05.5	-0.9
KDAK	Kodiak Island	8.95	76	Pn	Pn	03 27 07.9	+1.5
TTA	Tatalina	9.06	41	P	Pn	03 27 07.3	-0.6
TTA	Tatalina	9.06	41		Pn	03 27 07.3	-0.6
RSO	Redoubt South	9.28	59	Pn	Pn	03 27 11.3	+0.2
CNPM	China Poot	9.81	65		Pn	03 27 18.6	+0.5
BRLK	Bradley Lake	10.03	64		Pn	03 27 21.6	+0.4
SKT	Skwentna	10.37	52		Pn	03 27 25.3	-0.5
SEW	Seward	10.80	63	Pn	Pn	03 27 33.6	+2.0
RC01	Rabbit Creek A	10.88	58	P	Pn	03 27 35.7	+2.9
	baz=254						
CUT	Chulitna	11.08	51	P	Pn	03 27 36.1	+0.6
	baz=247						
PMR	Palmer	11.30	56	P	Pn	03 27 39.1	+0.5
PMR	Palmer	11.30	56		Pn	03 27 39.1	+0.5
IMAR	Indian Mountai	11.84	32		Pn	03 27 46.9	+1.1
MLY	Manley	12.18	39	P	Pn	03 27 49.8	-0.8
	baz=235,SNR=9.0						
MCK	McKinley	12.19	46	P	Pn	03 27 53.3	+2.6
	baz=244,SNR=27						
NEA2	Nenana	12.55	42	P	Pn	03 27 57.4	+1.9
	baz=240						
M24K	Tolsona, Glenn	12.79	55	P	Pn	03 27 59.9	+0.9
	baz=255						
TCOL	CIGO, UAF Yank	13.14	43	Pn	Pn	03 28 04.5	+1.0
COLA	College	13.14	43	i P	Pn	03 28 04.3	+0.7
HDA	Harding Lake	13.27	45	P	Pn	03 28 07.1	+1.6
	baz=244						
N25K	Chitina, Valde	13.41	58	P	Pn	03 28 07.5	+0.1
	baz=259						
POKR	Poker Plat Res	13.41	42	P	Pn	03 28 10.8	+3.4
	baz=241,SNR=10						
ILAR	Eielson Array	13.46	44	Pn	Pn	03 28 07.3	-0.6
	0.2nm,0.3s,baz=231,slow=11,SNR=28						
ILAR				LR	LR	03 33 32.4	
	comp=Z,563nm,20.4s,baz=253,slow=38						
ILAR	Eielson Array	13.46	44	P	Pn	03 28 08.1	+0.1
ILAR	Eielson Array	13.46	44		Pn	03 28 08.1	+0.1
COLD	Coldfoot	13.73	32	P	Pn	03 28 13.4	+1.8
	baz=229,SNR=9.6						
COLD	Coldfoot	13.73	32		Pn	03 28 10.9	-0.7
SCRK	Sand Creek	14.30	49	P	Pn	03 28 19.5	-0.2
	baz=251,SNR=6.9						
BCAR	Beaver Creek A	15.00	53		Pn	03 28 27.3	-1.7
BMAR	Burnt Mountain	15.59	36		Pn	03 28 35.2	-1.7
A21K	Barrow	15.64	15	P	P	03 28 41.2	-0.4
	baz=206						
A21K	Barrow	15.64	15	Pn	Pn	03 28 35.1	-2.3
A21K				IAmb	IAmb	03 28 46.3	
	comp=Z,43nm,0.8s						
BILL	Bilibino	16.06	325	⇑eP	Pn	03 28 44.3	+1.5
BILL				eS	Sn	03 31 38.8	-2.1
BILL				pmax	pmax		
	comp=Z,62nm,1.4s						
BILL				MLR	MLR		
	comp=Z,354nm,15.0s						
BILL	Bilibino	16.06	325	Pn	Pn	03 28 40.1	-2.7
DAWY	Dawson	16.27	51	IAmb	IAmb	03 28 55.5	
	comp=Z,123nm,1.3s						
HYT	Haines Junctio	16.75	62	IAmb	IAmb	03 28 59.6	
	comp=Z,85nm,1.4s						
WHY	Whitehorse	18.04	63	IAmb	IAmb	03 29 12.0	
	comp=Z,152nm,1.9s						
BESE	Bessie Mountai	18.25	70	IAmb	IAmb	03 29 17.6	
	comp=Z,83nm,1.2s						
SIT	Sitka	18.29	75	IAmb	IAmb	03 29 25.4	
	comp=Z,78nm,1.3s						
PET	Petropavlovsk	18.91	273	i P	Pn	03 29 19.6	+1.2
PEA0B	Petropavlovsk-	19.40	274	ceP	Pn	03 29 25.1	+0.8
PEA0B	Petropavlovsk-	19.40	274	P	P	03 29 23.4	+0.1
PETK	Petropavlovsk-	19.40	274	P	Pn	03 29 24.8	+0.5
	comp=Z,1.0nm,0.3s,baz=86,slow=12,SNR=34						
PETK				LR	LR	03 37 17.6	
	comp=Z,68nm,19.8s,baz=79,slow=38						
PETK	Petropavlovsk-	19.40	274	P	P	03 29 22.6	-0.6
PETK	Petropavlovsk-	19.40	274	P	P	03 29 22.6	-0.6
INK	Inuvik	19.75	40	P	P	03 29 27.1	+0.2
	comp=Z,1.8nm,0.3s,baz=236,slow=9.2,SNR=79						
INK				LR	LR	03 37 47.9	
	comp=Z,601nm,18.4s,baz=245,slow=39						
INK	Inuvik	19.75	40	P	P	03 29 26.8	-0.1
INK				pmax	pmax		
	comp=Z,40nm,0.7s						
INK	Inuvik	19.75	40	P	P	03 29 26.8	-0.1
INK				IAmb	IAmb	03 29 32.4	
	comp=Z,40nm,0.7s						
CRAG	Craig	19.90	78	IAmb	IAmb	03 29 35.5	
	comp=Z,75nm,1.0s						
WRAK	Wrangell Islan	20.04	75	P	P	03 29 30.6	+0.5
WRAK				IAmb	IAmb	03 29 36.3	
	comp=Z,96nm,1.4s						
SEY	Seymchan	20.20	304	P	P	03 29 31.9	+0.1
	comp=Z,24nm,0.8s,baz=108,slow=8.0,SNR=59						
SEY	Seymchan	20.20	304	i P	P	03 29 32.4	+0.6
DLBC	Dease Lake	20.77	69	P	P	03 29 38.0	-0.1
	comp=Z,25nm,1.2s,baz=283,slow=12,SNR=9.9						
DLBC				LR	LR	03 37 40.8	
	comp=Z,305nm,19.0s,baz=267,slow=37						
DLBC	Dease Lake	20.77	69	P	P	03 29 38.5	+0.3
DLBC				IAmb	IAmb	03 29 47.6	
	comp=Z,42nm,1.2s						
MA2	Magadan	21.25	295	ceP	P	03 29 44.2	+0.9
MA2				pmax	pmax		
	comp=Z,38nm,1.7s						
MA2	Magadan	21.25	295	P	P	03 29 43.3	0.0
MA2				IAmb	IAmb	03 29 50.4	
	comp=Z,59nm,1.5s						
C36M	Paulatuk	23.34	39	P	P	03 30 03.7	-1.5
	baz=260						
C36M	Paulatuk	23.34	39	P	P	03 30 04.9	-0.3
C36M				IAmb	IAmb	03 30 08.8	
	comp=Z,40nm,1.1s						
BBB	Bella Bella	23.91	83	LR	LR	03 38 36.3	
	comp=Z,210nm,19.6s,baz=314,slow=34						
YKA	Yellowknife Ar	27.40	55	P	P	03 30 42.8	+0.2
	comp=Z,6.9nm,1.0s,baz=282,slow=7.2,SNR=26						
YKA				PcP	PcP	03 34 00.8	-0.2
	comp=Z,1.4nm,0.7s,baz=304,slow=1.3,SNR=6.8						
YKA				LR	LR	03 41 24.8	
	comp=Z,340nm,19.8s,baz=0.0,slow=36						
YKA	Yellowknife Ar	27.40	55	ceP	P	03 30 42.7	+0.2
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
D03D	Eldon	29.10	88	P	P	03 30 59.0	+1.1
	baz=306						
B05A	Bryant	29.23	86	P	P	03 30 59.4	+0.4
	baz=304						
TIXI	Tiksi	29.28	325	⇓eP	P	03 30 58.4	-0.8
TIXI	Tiksi	29.28	325	P	P	03 30 58.4	-0.8
TIXI				IAmb	IAmb	03 31 03.2	
	comp=Z,32nm,2.0s						
E04D	Cinebar	29.97	90	P	P	03 31 06.9	+1.4
	baz=307						
YAK	Yakutsk	30.70	306	P	P	03 31 12.1	+0.3
	comp=Z,3.3nm,0.3s,baz=267,slow=2.5,SNR=5.9						
YAK				PcP	PcP	03 34 10.9	+1.6
	comp=Z,7.5nm,0.4s,baz=165,slow=1.7,SNR=4.1						
YAK				LR	LR	03 44 20.9	
	comp=Z,140nm,21.1s,baz=80,slow=38						
YAK	Yakutsk	30.70	306	ceP	P	03 31 10.4	-1.4
YAK				pmax	pmax		
	comp=Z,41nm,1.3s						
YAK	Yakutsk	30.70	306	P	P	03 31 10.9	-0.9
B08A	Colville Reser	30.70	84	IAmb	IAmb	03 31 13.6	
	comp=Z,12nm,1.4s						
H04A	Detroit Lake	31.33	92	IAmb	IAmb	03 31 22.7	
	comp=Z,21nm,1.2s						
G05D	Wamic, OR	31.46	91	P	P	03 31 18.9	+0.1
	baz=309						
D08A	Wollman Farm,	31.68	86	IAmb	IAmb	03 31 22.0	
	comp=Z,24nm,1.6s						
HAWA	Hanford	31.74	87	IAmb	IAmb	03 31 26.6	
	comp=Z,16nm,1.3s						
I04A	Tendick Farm,	31.78	94	P	P	03 31 22.4	+0.8
	baz=310						
NEW	Newport	31.97	83	P	P	03 31 23.7	+0.5
NEW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEW	Newport	31.97	83	P	P	03 31 23.2	0.0
	baz=305						
I05D	Terrebonne, OR	32.02	92	P	P	03 31 24.3	+0.6
	baz=310						
E09A	Wood Farm, Sta	32.44	86	IAmb	IAmb	03 31 32.9	
	comp=Z,34nm,1.7s						
RES	Resolute Bay	32.45	28	LR	LR	03 48 08.8	
	comp=Z,206nm,18.1s,baz=268,slow=43						
RES	Resolute Bay	32.45	28	P	P	03 31 26.8	-0.3
RES				pmax	pmax		
	comp=Z,11nm,1.3s						
RES	Resolute Bay	32.45	28	P	P	03 31 26.8	-0.3
RES				IAmb	IAmb	03 31 31.3	
	comp=Z,11nm,1.2s						
PINE	Pine Mountain	32.59	92	P	P	03 31 29.2	+0.3
PINE				IAmb	IAmb	03 31 35.0	
	comp=Z,19nm,1.4s						
G08A	Pilot Rock	32.74	89	IAmb	IAmb	03 31 35.0	
	comp=Z,16nm,1.5s						
J05D	Fort Rock, OR	32.76	93	P	P	03 31 31.7	+1.3
	baz=311,SNR=7.1						
M02C	Callahan	33.14	97	P	P	03 31 35.4	+1.9
	baz=313						
I07A	Izee	33.20	91	IAmb	IAmb	03 31 36.0	
	comp=Z,36nm,1.8s						
F10A	Beach Ranch, E	33.27	86	IAmb	IAmb	03 31 39.5	
	comp=Z,23nm,1.4s						
M04C	Macdoel	33.43	96	P	P	03 31 37.3	+1.1
	baz=313						
EUNU	Eureka	33.56	18	P	P	03 31 37.1	+0.3
JTMT	Jette	33.82	81	IAmb	IAmb	03 31 44.3	
	comp=Z,8.9nm,1.1s						
BMO	Blue Mountains	33.92	88	IAmb	IAmb	03 31 45.6	
	comp=Z,23nm,1.9s						
O03E	Paynes Creek	34.47	98	P	P	03 31 45.6	+0.4
	baz=314						
MSO	Missoula	34.56	83	P	P	03 31 45.6	-0.3
	baz=307						
MSO	Missoula	34.56	83	P	P	03 31 45.0	-0.9
MSO				PcP	PcP	03 34 19.9	-0.5
WVOR	Wild Horse Val	34.76	92	IAmb	IAmb	03 31 49.5	
	comp=Z,30nm,1.6s						
ZEA	Zeya	35.38	293	eP	P	03 31 51.6	-1.1
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KLR	Kul'dur	35.48	284	ceP	P	03 31 52.7	-1.0
HRY	Holter Researc	35.78	81	P	P	03 31 56.5	0.0
PAHR	Pah Rah Range	36.21	96	P	P	03 32 00.7	+0.4
HLID	Hailey	36.35	87	P	P	03 32 01.7	+0.3
	baz=311						
HLID	Hailey	36.35	87	IAmb	IAmb	03 32 06.4	
	comp=Z,19nm,1.8s						
FFC	Flin Flon	36.45	64	P	P	03 32 01.7	-0.3
FFC				pmax	pmax		
	comp=Z,22nm,1.6s						
FFC	Flin Flon	36.45	64	P	P	03 32 01.7	-0.3
FFC				IAmb	IAmb	03 32 06.7	
	comp=Z,22nm,1.6s						
PNTR	Pine Nut	36.53	97	IAmb	IAmb	03 32 05.2	
	comp=Z,32nm,1.3s						
BOZ	Bozeman (W)	36.58	83	P	P	03 32 03.3	-0.1
	baz=309						
WAKR	Walker	37.03	98	IAmb	IAmb	03 32 09.5	
	comp=Z,19nm,1.4s						
NVAR	Mina Array Bea	37.71	97	P	P	03 32 12.8	-0.2
	comp=Z,1.0nm,0.5s,baz=295,slow=8.3,SNR=9.8						
NVAR				PcP	PcP	03 34 30.9	+0.9
	comp=Z,2.2nm,0.8s,baz=279,slow=2.8,SNR=6.0						
NVAR				LR	LR	03 45 34.5	
	comp=Z,113nm,19.2s,baz=245,slow=33						
NVAR	Mina Array Bea	37.71	97	P	P	03 32 13.1	0.0
NVAR				PcP	PcP	03 34 30.0	-0.1
H17A	Grant Village	37.92	83	P	P	03 32 16.0	+1.2
	baz=310						
TULEG	Thule	38.04	22	P	P	03 32 15.0	-0.2
IMW	Indian Meadow	38.04	84	IAmb	IAmb	03 32 17.4	
	comp=Z,21nm,1.7s						
FCC	Fort Churchill	38.13	55	IAmb	IAmb	03 32 20.2	
	comp=Z,37nm,1.6s						
RLMT	Red Lodge	38.17	81	P	P	03 32 17.3	+0.4
	baz=310						
TPH	Tonopah	38.55	96	P	P	03 32 20.2	0.0
GRAC	Grapevine Rang	39.26	98	P	P	03 32 26.4	+0.6
	baz=317						
R11A	Troy Canyon, C	39.26	95	P	P	03 32 25.9	-0.1
	baz=316,SNR=12						
DUG	Dugway, Tooele	39.49	90	P	P	03 32 28.1	+0.1
	baz=314						
PD31	Pinedale Array	39.55	84	P	P	03 32 28.0	-0.5
PDAR	Pinedale Array	39.55	84	P	P	03 32 27.9	-0.5
	comp=Z,0.5nm,0.7s,baz=302,slow=2.6,SNR=5.7						
PDAR				LR	LR	03 49 32.0	
	comp=Z,58nm,18.7s,baz=330,slow=37						
PDAR	Pinedale Array	39.55	84	P	P	03 32 27.3	-1.2
BOD	Bodaibo	39.62	305	eP	P	03 32 27.8	-0.7
BOD				pmax	pmax		
	comp=Z,12nm,1.3s						
MPMC	Manual Prospec	39.88	99	P	P	03 32 31.8	+0.5
	baz=318						
TPNV	Topopah Spring	39.90	97	P	P	03 32 31.8	+0.3
	baz=317,SNR=8.7						
FURC	Furnace Creek,	39.92	98	P	P	03 32 32.1	+0.8
	baz=317						
MJAR	Matsushiro Arr	40.28	263	P	P	03 32 34.5	+0.2
	comp=Z,5.6nm,1.0s,baz=29,slow=7.3,SNR=5.3						
MJAR	Matsushiro Arr	40.28	263	P	P	03 32 34.6	+0.2
SHOC	Shoshone, Teco	40.66	98	P	P	03 32 38.2	+0.7
	baz=318						
GSC	Goldstone, Bar	40.81	99	P	P	03 32 38.8	0.0
	baz=318						
GSC	Goldstone, Bar	40.81	99	IAmb	IAmb	03 32 41.2	
	comp=Z,25nm,1.6s						
HEC	Hector,Ludlow	41.42	99	P	P	03 32 44.6	+0.8
	baz=319						
RSSD	Black Hills	41.67	79	P	P	03 32 45.2	-0.8
	baz=311						
KNB	Kanab	41.74	94	P	P	03 32 46.4	-0.1
KNB				PcP	PcP	03 34 43.2	+0.4
GMRC	Granite Mounta	41.82	98	P	P	03 32 47.9	+0.7
	baz=318,SNR=6.6						
O20A	White River Ci	42.06	86	P	P	03 32 48.8	-0.4
	baz=314,SNR=7.4						
O20A	White River Ci	42.06	86	IAmb	IAmb	03 32 53.2	
	comp=Z,23nm,1.4s						
ULM	Lac du Bonnet	42.07	66	P	P	03 32 48.4	-0.5
	comp=Z,2.5nm,0.5s,baz=305,slow=8.1,SNR=9.7						
ULM				LR	LR	03 51 34.7	
	comp=Z,222nm,21.1s,baz=308,slow=38						
ULM	Lac du Bonnet	42.07	66	i P	P	03 32 48.8	-0.1
ULM	Lac du Bonnet	42.07	66	IAmb	IAmb	03 32 50.5	
	comp=Z,52nm,2.0s						
BELC	Belle Mtn. Jos	42.22	99	P	P	03 32 50.4	-0.1
	baz=319						
PFO	Pinyon Flats O	42.27	100	P	P	03 32 51.0	+0.2
	baz=320						
PFO	Pinyon Flats O	42.27	100	P	P	03 32 50.8	0.0
U15A	North Rim	42.46	94	IAmb	IAmb	03 32 57.7	
	comp=Z,29nm,1.6s						
IRM	Iron Mountain	42.57	98	P	P	03 32 53.7	+0.5
	baz=319,SNR=12						
BC3	Big Chuckawall	42.78	99	P	P	03 32 54.5	-0.5
	baz=319						
NRIK	Noril'sk	42.82	329	P	P	03 32 54.6	-0.2
	comp=Z,2.8nm,0.4s,baz=68,slow=8.6,SNR=10						
NRIK				LR	LR	03 51 38.5	
	comp=Z,119nm,18.6s,baz=39,slow=37						
NRIK	Noril'sk	42.82	329	ceP	P	03 32 53.5	-1.3
NRIK				pmax	pmax		
	comp=Z,24nm,1.9s						
NRIK	Noril'sk	42.82	329	P	P	03 32 54.4	-0.4
MONP2	Monument Peak	42.83	101	P	P	03 32 55.9	+0.3
	baz=320						
PV18	Skein Mesa, Pa	43.02	89	P	P	03 32 56.4	-0.6
PV18				IAmb	IAmb	03 33 01.0	
	comp=Z,17nm,1.3s						
SWSC	Sam W. Stewart	43.13	100	P	P	03 32 58.5	+0.9
	baz=320						
AGMN	Agassiz Nation	43.30	69	P	P	03 32 59.0	+0.1
	baz=310						
AGMN	Agassiz Nation	43.30	69	P	P	03 32 58.7	-0.2
AGMN				IAmb	IAmb	03 33 00.3	
	comp=Z,26nm,1.7s						
WUAZ	Wupatki	43.63	94	P	P	03 33 02.0	+0.1
	baz=318						
WUAZ	Wupatki	43.63	94	IAmb	IAmb	03 33 07.5	
	comp=Z,37nm,2.0s						
MVCO	Mesa Verde	43.99	90	P	P	03 33 03.9	-1.0
	baz=316						
MVCO	Mesa Verde	43.99	90	P	P	03 33 03.9	-1.0
MVCO				IAmb	IAmb	03 33 15.6	
	comp=Z,33nm,1.9s						
B35A	Bob, Littlefor	44.35	67	P	P	03 33 06.8	-0.5
B35A				IAmb	IAmb	03 33 07.5	
	comp=Z,34nm,1.6s						
X16A	Lo Mia Camp, P	44.41	95	IAmb	IAmb	03 33 13.6	
	comp=Z,26nm,1.6s						
S22A	4UR Ranch, Cre	44.52	88	P	P	03 33 09.3	0.0
	baz=316						
W18A	Petrified Fore	44.83	93	P	P	03 33 11.8	+0.2
	baz=318						
W18A	Petrified Fore	44.83	93	IAmb	IAmb	03 33 16.1	
	comp=Z,21nm,1.5s						
X18A	Snowflake	45.15	93	IAmb	IAmb	03 33 15.5	
	comp=Z,19nm,1.0s						
SDCO	Great Sand Dun	45.26	87	P	P	03 33 14.5	-0.6
	baz=316						
KSRS	Korea Array	45.30	273	P	P	03 33 15.4	+0.5
	comp=Z,9.9nm,1.2s,baz=55,slow=7.2,SNR=7.2						
KSRS				LR	LR	03 51 51.7	
	comp=Z,21nm,21.1s,baz=290,slow=36						
KSAR	Wonju Array Be	45.33	273	P	P	03 33 15.3	+0.1
KSAR	Wonju Array Be	45.33	273	P	P	03 33 15.3	+0.1
214A	Organ Pipe Nat	45.51	98	P	P	03 33 17.1	+0.3
	baz=320,SNR=6.9						
214A	Organ Pipe Nat	45.51	98	IAmb	IAmb	03 33 18.0	
	comp=Z,8.2nm,0.8s						
DAG	Danmarks Havn	45.52	9	i P	P	03 33 14.9	-1.4
DAG	Danmarks Havn	45.52	9	i P	P	03 33 14.9	-1.4
	comp=Z,19nm,1.3s						
DAG	Danmarks Havn	45.52	9	i P	P	03 33 15.0	-1.4
DAG				IAmb	IAmb	03 33 19.4	
	comp=Z,19nm,1.3s						
EYMN	Ely	45.75	66	P	P	03 33 17.9	-0.6
	baz=311						
EYMN	Ely	45.75	66	P	P	03 33 18.4	-0.2
TUC	Tucson	46.35	96	P	P	03 33 23.9	+0.3
	baz=320						
TUC	Tucson	46.35	96	P	P	03 33 23.7	+0.2
TUC				IAmb	IAmb	03 33 28.6	
	comp=Z,15nm,1.4s						
SUMG	Summit	46.63	18	i P	P	03 33 25.7	+0.1
SUMG	Summit	46.63	18	P	P	03 33 25.4	-0.2
SUMG	Summit	46.63	18	i P	P	03 33 25.7	+0.1
	comp=Z,51nm,0.9s						
SUMG	Summit	46.63	18	i P	P	03 33 25.7	+0.1
SUMG				IAmb	IAmb	03 33 27.4	
	comp=Z,51nm,0.9s						
ANMO	Albuquerque	46.77	90	ceP	P	03 33 25.3	-1.6
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ANMO	Albuquerque	46.77	90	P	P	03 33 25.9	-1.0
	baz=318						
ANMO	Albuquerque	46.77	90	P	P	03 33 26.1	-0.8
ANMO				IAmb	IAmb	03 35 05.0	
	comp=Z,6.4nm,0.8s						
DBG	Daneborg	47.66	11	i P	P	03 33 32.0	-1.1
DBG				IAmb	IAmb	03 33 33.7	
	comp=Z,14nm,1.0s						
121A	Cookes Peak, D	47.84	93	P	P	03 33 35.1	-0.1
	baz=319						
TLY	Talaya	48.10	303	P	P	03 33 36.9	0.0
	comp=Z,1.4nm,0.4s,baz=24,slow=8.8,SNR=4.7						
TLY	Talaya	48.10	303	eP	P	03 33 37.6	+0.7
TLY				pmax	pmax		
	comp=Z,33nm,1.1s						

TLY				MLR	MLR		
	comp=Z,374nm,15.0s						
TLY	Talaya	48.10	303	P	P	03 33 37.0	+0.2
HSIG		48.80	99	P	P	03 33 42.5	+0.1
HSIG				IAmb	IAmb	03 33 43.5	
	comp=Z,11nm,1.0s						
ULN	Ulaanbaatar	49.07	298	ceP	P	03 33 44.7	+0.2
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	Ulaanbaatar	49.07	298	P	P	03 33 44.5	0.0
ULN				IAmb	IAmb	03 33 45.9	
	comp=Z,12nm,1.1s						
ZAK	Zakamensk	49.15	302	eP	P	03 33 44.5	-0.6
ZAK				e		03 35 07.3	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ICESG	Greenland Ices	49.28	22	i P	P	03 33 45.5	-0.6
ICESG				IAmb	IAmb	03 33 46.2	
	comp=Z,17nm,0.7s						
BJI	Beijing	49.85	284	P	P	03 33 49.8	-0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
E46A	Sault Ste Mari	50.42	63	IAmb	IAmb	03 33 59.0	
	comp=Z,21nm,1.1s						
SCO	Scoresbysund	51.00	14	P	P	03 33 58.9	+0.3
SCO				IAmb	IAmb	03 34 04.0	
	comp=Z,32nm,1.5s						
MATQ	Matagami	51.22	56	P	P	03 33 59.6	-1.0
	baz=315						
HHC	Hu-ho-hao-te	51.72	288	eP	P	03 34 05.3	+0.7
HHC	Hu-ho-hao-te	51.72	288	pmax	pmax		
	comp=Z,13nm,0.8s						
HHC	Hu-ho-hao-te	51.72	288	pmax	pmax		
	comp=Z,140nm,6.6s						
HHC	Hu-ho-hao-te	51.72	288	pmax	pmax		
	comp=Z,21nm,1.2s						
HHC	Hu-ho-hao-te	51.72	288	pmax	pmax		
	comp=Z,110nm,6.6s						
TUL1	Leonard	51.92	81	P	P	03 34 08.2	+2.2
	baz=318						
LSQQ	Lebel-sur-Quev	52.02	57	P	P	03 34 05.4	-1.1
	baz=316						
TXAR	Lajitas Array	52.55	93	P	P	03 34 10.6	-0.3
	comp=Z,3.5nm,0.9s,baz=305,slow=4.4,SNR=6.0						
TXAR	Lajitas Array	52.55	93	P	P	03 34 10.2	-0.7
TXAR	Lajitas Array	52.55	93	P	P	03 34 10.4	-0.5
ANGG	Ammassalik, Gr	52.64	23	P	P	03 34 10.6	-0.3
ANGG				IAmb	IAmb	03 34 10.8	
	comp=Z,17nm,0.8s						
ANGG	Ammassalik, Gr	52.64	23	i P	P	03 34 09.1	-1.8
ANGG				IAmb	IAmb	03 34 11.0	
	comp=Z,18nm,0.8s						
D55A	Sainte-Anne-du	54.20	57	P	P	03 34 21.3	-1.3
	baz=317						
NJ2	Nanjing	54.30	275	eP	P	03 34 23.0	-0.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
ZAA0	Zalesovo Array	54.48	316	IAmb	IAmb	03 34 28.4	
	comp=Z,24nm,2.0s						
ZALV	Zalesovo Beam	54.48	316	P	P	03 34 24.1	-0.5
	comp=Z,0.9nm,0.6s,baz=27,slow=6.8,SNR=6.7						
ZALV				LR	LR	03 59 23.8	
	comp=Z,97nm,18.0s,baz=46,slow=38						
D56A	ZEC Mazanza, M	54.51	57	P	P	03 34 23.8	-1.1
	baz=318						
E57A	Chemin Saint G	55.26	57	P	P	03 34 29.2	-1.2
	baz=318						
ERPA	Erie	55.64	64	P	P	03 34 33.0	-0.1
	baz=318						
M53A	WI Miller and	55.80	65	P	P	03 34 34.1	-0.2
	baz=318						
P52A	Corning	56.41	68	P	P	03 34 37.3	-1.4
	baz=319						
D61A	St Aubert, Com	56.47	54	P	P	03 34 37.6	-1.4
	baz=319						
DGZ	Jazzator, Alta	56.67	311	⇓iP	P	03 34 40.4	-0.2
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
L56A	Greenwood	56.82	63	P	P	03 34 41.5	-0.2
	baz=319						
M56A	Emporium	57.01	64	P	P	03 34 42.8	-0.2
	baz=319						
D62A	Allapoint, All	57.07	53	P	P	03 34 42.5	-0.8
	baz=320						
N56A	West Decatur	57.38	64	P	P	03 34 45.0	-0.5
	baz=319						
MCWV	Mont Chateau	57.55	66	P	P	03 34 46.2	-0.6
	baz=319						
M57A	Sunshine Farm,	57.64	63	P	P	03 34 47.1	-0.3
	baz=319						
R54A	Victor	58.09	68	P	P	03 34 50.1	-0.5
	baz=320						
E64A	Bridgewater	58.12	53	P	P	03 34 49.7	-0.9
	baz=320						
O57A	Amberson	58.24	64	P	P	03 34 51.6	0.0
	baz=320						
F64A	Sherman	58.31	54	P	P	03 34 51.3	-0.7
	baz=320						
ZAIG	Zacatecas	58.33	96	P	P	03 34 52.4	-0.3
ZAIG				IAmb	IAmb	03 34 53.2	
	comp=Z,15nm,1.6s						
O58A	Lewisberry	58.66	64	P	P	03 34 53.6	-0.9
	baz=320						
GTA	Gaotai	58.82	295	⇓P	P	03 34 55.5	-0.3
GTA				pP	sP	03 34 59.3	+0.7
GTA				sP	pP	03 35 02.5	+4.7
GTA				pmax	pmax		
	comp=Z,15nm,1.3s						
GTA				pmax	pmax		
	comp=Z,140nm,5.6s						
GTA				LR	LR		
	comp=N,110nm,18.2s						
GTA				LR	LR		
	comp=E,180nm,17.8s						
GTA				LR	LR		
	comp=Z,78nm,18.2s						
O59A	Robesonia	58.88	63	P	P	03 34 55.2	-0.9
	baz=320						
SEM	Semipalatinsk	59.01	316	eP	P	03 34 55.5	-1.5
	comp=Z,4.0nm,1.8s,baz=316						
SEM	Semipalatinsk	59.01	316	eP	P	03 34 55.5	-1.5
SEM				pmax	pmax		
	comp=Z,4.0nm,1.8s						
Q58A	Fox Den Farm,	59.19	65	P	P	03 34 57.8	-0.4
	baz=320						
S56A	Natural Bridge	59.20	67	P	P	03 34 58.0	-0.4
	baz=320						
LZH	Lanzhou	59.30	290	eP	P	03 34 58.8	-0.4
LZH				pP	pP	03 35 00.3	-1.0
LZH				sP	sP	03 35 01.5	-0.5
LZH				PP	PP	03 37 11.8	+2.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,7.3s						
KURK	Kurchatov	59.38	317	ceP	P	03 34 59.8	+0.5
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
KURK	Kurchatov	59.38	317	P	P	03 34 59.3	-0.1
T56A	Rocky Mt	59.46	68	P	P	03 34 59.1	-1.0
	baz=320						
ZSN	Zaisan	59.50	311	eP	P	03 35 00.2	0.0
	comp=Z,18nm,1.3s,baz=311						
ZSN	Zaisan	59.50	311	eP	P	03 35 00.2	0.0
ZSN				pmax	pmax		
	comp=Z,19nm,1.3s						
R58A	Rapidan	59.52	66	P	P	03 34 59.9	-0.5
	baz=320						
SVE	Sverdlovsk	60.05	331	eP	P	03 35 04.5	+0.7
SVE				pmax	pmax		
	comp=Z,28nm,1.3s						
V56A	Mocksville	60.15	70	P	P	03 35 04.3	-0.6
	baz=321						
DRLN	Deer Lake	60.17	45	P	P	03 35 04.6	-0.2
KMSC	Kings Mountain	60.23	71	P	P	03 35 04.9	-0.5
	baz=321						
KMSC	Kings Mountain	60.23	71	P	P	03 35 05.3	-0.1
U57A	Blanch	60.27	68	P	P	03 35 05.2	-0.5
	baz=321						
BRVK	Borovoye	60.40	323	i P	P	03 35 06.5	+0.2
BRVK				pmax	pmax		
	comp=Z,26nm,1.4s						
BRVK	Borovoye	60.40	323	P	P	03 35 06.6	+0.3
KLMR	Klimovskoe	60.72	344	eP	P	03 35 06.5	-1.8
KLMR				pmax	pmax		
	comp=Z,28nm,1.5s						
KLMR	Klimovskoe	60.72	344	eP	P	03 35 06.6	-1.8
KLMR				AMP		03 35 10.9	
	comp=Z,28nm,1.5s						
V58A	Windy Hill, Pi	60.88	69	P	P	03 35 09.5	-0.3
	baz=321						
ARU	Arti	60.94	332	d iP	P	03 35 09.2	-0.8
ARU						03 35 49.8	
ARU				S	S	03 43 30.3	+2.3
ARU				SS	SS	03 47 26.8	+0.6
ARU				pmax	pmax		
	comp=Z,15nm,0.8s						
ARU	Arti	60.94	332	P	P	03 35 09.1	-0.9
MK31	Makanchi Array	61.09	312	i P	P	03 35 10.5	-0.7
MK31				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MK31	Makanchi Array	61.09	312	IAmb	IAmb	03 35 11.8	
	comp=Z,5.7nm,1.1s						
MKAR	Makanchi Array	61.09	312	P	P	03 35 10.8	-0.3
	comp=Z,3.3nm,1.0s,baz=50,slow=6.5,SNR=19						
MKAR				PP	PP	03 37 23.0	-2.1
	comp=Z,1.5nm,1.1s,baz=40,slow=7.9,SNR=3.9						
MKAR	Makanchi Array	61.09	312	P	P	03 35 10.4	-0.8
MKAR	Makanchi Array	61.09	312	P	P	03 35 10.4	-0.8
KIRV	Kirov	61.11	338	ceP	P	03 35 10.2	-0.8
WMQ	Urumqi	61.14	306	eP	P	03 35 12.5	+0.9
WMQ				pP	sP	03 35 17.3	+2.9
WMQ				pmax	pmax		
	comp=Z,12nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,87nm,6.1s						
WMQ				LR	LR		
	comp=N,330nm,29.3s						
WMQ				LR	LR		
	comp=E,1µm,29.1s						
WMQ				LR	LR		
	comp=Z,2µm,29.1s						
MAKZ	Makanchi	61.20	312	P	P	03 35 11.7	-0.2
V59A	Middlesex	61.35	68	P	P	03 35 12.6	-0.4
	baz=321						
FINES	FINESS Array B	61.67	352	P	P	03 35 14.5	-0.3
	comp=Z,7.8nm,0.9s,baz=3.3,slow=5.2,SNR=12						
FINES				LR	LR	04 01 55.5	
	comp=Z,79nm,22.0s,baz=18,slow=36						
BRZS	Berezniki	62.16	320	eP	P	03 35 17.5	-0.8
	comp=Z,9.9nm,1.4s,baz=320						
BRZS	Berezniki	62.16	320	eP	P	03 35 17.5	-0.8
BRZS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NB2	NORSAR Subarra	62.66	360	P	P	03 35 21.5	0.0
	comp=Z,1.5nm,0.8s,baz=357,slow=6.5						
NOA	NORSAR Array B	62.66	360	P	P	03 35 21.6	0.0
	comp=Z,4.5nm,1.0s,baz=359,slow=7.0,SNR=7.6						
NOA				LR	LR	04 04 00.7	
	comp=Z,62nm,18.2s,baz=280,slow=37						
CD2	Chengdu	63.36	286	P	P	03 35 27.3	+0.7
CD2	Chengdu	63.36	286	pmax	pmax		
	comp=Z,40nm,1.0s						
TDK	Taldyqorghan	64.12	313	eP	P	03 35 31.4	0.0
	comp=Z,5.9nm,0.6s,baz=313						
TDK	Taldyqorghan	64.12	313	eP	P	03 35 31.4	0.0
TDK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SHLS	Shalkode	65.21	311	eP	P	03 35 37.6	-1.1
	comp=Z,30nm,1.5s,baz=311						
SHLS	Shalkode	65.21	311	eP	P	03 35 37.6	-1.1
SHLS				pmax	pmax		
	comp=Z,30nm,1.5s						
KPKS	Kokpek	65.28	312	eP	P	03 35 38.8	-0.3
	comp=Z,11nm,1.1s,baz=312						
KPKS	Kokpek	65.28	312	eP	P	03 35 38.8	-0.3
KPKS				pmax	pmax		
	comp=Z,11nm,1.1s						
GYA	Guiyang	65.31	281	⇑P	P	03 35 40.5	+1.0
GYA				sP	sP	03 35 43.3	+0.9
GYA				pmax	pmax		
	comp=Z,23nm,1.1s						
CHKK	Chushkaly	65.64	314	eP	P	03 35 40.2	-1.2
	baz=314						
CHKK	Chushkaly	65.64	314	eP	P	03 35 40.1	-1.2
SATY	Saty	65.73	312	eP	P	03 35 41.7	-0.4
	comp=Z,3.6nm,1.4s,baz=312						
SATY	Saty	65.73	312	eP	P	03 35 41.6	-0.4
SATY				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BTLS	Baital	65.80	316	eP	P	03 35 41.9	-0.4
	comp=Z,10nm,1.6s,baz=316						
BTLS	Baital	65.80	316	eP	P	03 35 41.9	-0.4
BTLS				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KUU	Kurty	65.87	314	eP	P	03 35 41.8	-1.1
	comp=Z,6.5nm,1.2s,baz=314						
KUU	Kurty	65.87	314	eP	P	03 35 41.7	-1.1
KUU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MDOK	Medeo	66.19	313	eP	P	03 35 44.8	-0.4
	baz=313						
MDOK	Medeo	66.19	313	eP	P	03 35 44.7	-0.4
AAA	Alma-Ata	66.21	313	eP	P	03 35 45.1	0.0
	baz=313						
AAA	Alma-Ata	66.21	313	eP	P	03 35 45.1	0.0
AKTO	Aktyubinsk	66.44	329	P	P	03 35 46.2	-0.2
MTBS	Maitube	66.47	313	eP	P	03 35 46.7	-0.1
	baz=314						
MTBS	Maitube	66.47	313	eP	P	03 35 46.6	-0.1
OBN	Obninsk	66.69	344	ceP	P	03 35 45.9	-1.9
OBN				e		03 36 19.7	
OBN				e		03 38 14.7	
OBN				eS	S	03 44 40.3	+0.9
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
OBN				MLR	MLR		
	comp=Z,150nm,17.0s						
SGDS	Sogindy	66.91	315	eP	P	03 35 49.3	-0.3
	comp=Z,10nm,1.5s,baz=315						
SGDS	Sogindy	66.91	315	eP	P	03 35 49.2	-0.3
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
AB31	Akbulak array	66.94	328	P	P	03 35 49.1	-0.5
ABKAR	Akbulak array	66.94	328	P	P	03 35 49.6	+0.1
TKM2	Tokmak 2	66.98	314	P	P	03 35 51.2	+1.1
	SNR=7.5						
USP	Ospenovka	67.12	315	P	P	03 35 51.7	+0.8
	SNR=10						
CHMS	Chumysh	67.25	315	P	P	03 35 52.9	+1.3
	SNR=6.3						
BELG	Belogornoye	67.25	337	i P	P	03 35 51.1	-0.3
BELG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBK	Karagaybulak	67.46	314	P	P	03 35 54.2	+1.0
	SNR=7.4						
AAK	Ala-Archa	67.65	314	P	P	03 35 55.2	+0.8
	SNR=8.6						
AAK	Ala-Archa	67.65	314	ceP	P	03 35 54.2	-0.2
AAK				pmax	pmax		
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	67.65	314	P	P	03 35 54.8	+0.4
EKS2	Erkin-Say	67.92	315	P	P	03 35 56.9	+0.9
	SNR=10						
UCH	Uchtor	67.99	314	P	PcP	03 36 27.9	+4.7
	SNR=6.5						
NACGM	Naroch	68.08	350	i P	P	03 35 57.0	+0.4
NACGM				i P	P	03 35 57.0	+0.4
NACGM				i P	P	03 35 57.0	+0.4
NACGM				i PP	PP	03 38 27.1	+1.1
NACGM				i PPP	PPP	03 40 05.6	
NACGM				i S	S	03 44 57.5	+1.4
NACGM				i SS	SS	03 49 18.3	+1.1
NACGM				i SSS	SSS	03 52 34.7	
NACGM				i LQ	LQ	04 02 28.8	
NACGM				i LR	LR	04 08 17.4	
MNK	Minsk	68.37	350	i P	P	03 35 57.5	-1.0
	comp=E,4.0nm,1.2s						
MNK				i P	P	03 35 57.5	-1.0
	comp=N,14nm,0.8s						
MNK				i P	P	03 35 57.5	-1.0
	comp=Z,16nm,0.9s						
MNK				i PP	PP	03 38 28.1	-0.5
MNK				i PPP	PPP	03 40 06.6	
MNK				i S	S	03 44 58.6	-1.1
MNK				i SS	SS	03 49 23.5	+1.8
MNK				i SSS	SSS	03 52 39.4	
MNK				i LQ	LQ	04 01 06.5	
MNK				i LR	LR	04 06 18.6	
MNK				i LRM	MLR	04 08 52.5	
	comp=E,17nm,12.4s						
MNK				i LRM	MLR	04 08 53.8	
	comp=N,149nm,16.4s						
MNK				i LRM	MLR	04 08 59.1	
	comp=Z,66nm,9.5s						
AML	Almayashu	68.40	315	P	P	03 36 00.5	+1.1
	SNR=7.7						
DZA	Taraz	68.66	317	eP	P	03 36 00.6	0.0
	baz=317						
DZA	Taraz	68.66	317	eP	P	03 36 00.5	0.0
LPSR	Galich'ya Gora	68.74	342	eP	P	03 35 59.2	-1.6
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
KK31	Karatay Array	68.79	317	P	P	03 36 01.1	-0.2
KKAR	Karatay Array	68.79	317	P	P	03 36 01.2	-0.1
KKAR	Karatay Array	68.79	317	P	P	03 36 01.2	-0.1
SUW	Suwalki	69.27	352	eP	P	03 36 03.8	-0.3
VRH	Novokhopyorsk	69.58	340	eP	P	03 36 03.7	-2.3
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSH	Kashi	69.69	312	P	P	03 36 11.0	+3.9
KSH				PP	PP	03 38 46.0	+5.4
KSH				pmax	pmax		
	comp=Z,38nm,1.2s						
KSH				pmax	pmax		
	comp=Z,410nm,5.3s						
IUG	Iuzhnay	69.79	317	eP	P	03 36 07.5	-0.1
	comp=Z,9.9nm,1.1s,baz=317						
IUG	Iuzhnay	69.79	317	eP	P	03 36 07.5	-0.1
IUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	Storozhevoye	70.03	342	eP	P	03 36 07.3	-1.5
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VORD	Divnogorie	70.25	341	eP	P	03 36 09.1	-1.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LSA	Lhasa	70.84	295	P	P	03 36 15.3	+0.6
SLVN	Son La	70.91	280	P	P	03 36 14.8	+0.1
JAY	Jayapura	71.59	234	LR	LR	04 00 33.8	
	comp=Z,50nm,20.8s,baz=51,slow=30						
AKASG	Malin Array Be	71.97	348	P	P	03 36 19.6	-1.0
	comp=Z,12nm,0.7s,baz=15,slow=6.0,SNR=26						
AKASG				LR	LR	04 12 24.3	
	comp=Z,52nm,18.6s,baz=330,slow=40						
AKASG	Malin Array Be	71.97	348	P	P	03 36 19.9	-0.8
CLL	Collm	72.41	359	eP	P	03 36 23.0	-0.2
	comp=Z,9.0nm,0.9s						
CLL	Collm	72.41	359	eP	P	03 36 23.0	-0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	72.41	359	P	P	03 36 23.1	-0.2
CLL				IAmb	IAmb	03 36 23.5	
	comp=Z,8.1nm,0.9s						
KSP	Ksiaz	72.80	357	eP	P	03 36 25.8	+0.3
BRG	Berggiesshubel	72.83	358	eP	P	03 36 26.1	+0.4
BRG				Amp		03 36 29.8	
	comp=Z,34nm,1.7s						
MEM	Membach	73.04	3	dP	P	03 36 26.9	-0.1
MEM				dPcP	PcP	03 36 42.6	-1.2
CHVC	Chvalec	73.06	357	eP	P	03 36 26.9	-0.2
BTNL	Ternell	73.06	3	dP	P	03 36 26.4	-0.7
BTNL				dPcP	PcP	03 36 42.1	-1.8
OSTC	Ostas	73.09	357	eP	P	03 36 27.6	+0.3
PVCC	Panska Ves	73.16	358	eP	P	03 36 28.2	+0.5
PVCC	Panska Ves	73.16	358	eP	P	03 36 28.2	+0.5
OJC	Ojcow	73.26	354	eP	P	03 36 28.7	+0.4
DPC	Dobruska-Polom	73.29	356	eP	P	03 36 28.9	+0.4
DPC	Dobruska-Polom	73.29	356	eP	P	03 36 28.9	+0.4
BMRD	Maredsous	73.30	4	dP	P	03 36 28.5	0.0
BMRD				dPcP	PcP	03 36 42.7	-2.2
LVV	L'vov	73.36	351	eP	P	03 36 28.5	-0.4
NKC	Novy Kostel	73.49	359	eP	P	03 36 29.3	-0.4
NKC	Novy Kostel	73.49	359	eP	P	03 36 29.3	-0.4
KRLC	Kraliky	73.55	356	eP	P	03 36 30.4	+0.3
KRLC	Kraliky	73.55	356	eP	P	03 36 30.4	+0.3
KWP	Kalwaria Pacla	73.66	352	eP	P	03 36 31.3	+0.7
PRU	Pruhonice	73.70	358	eP	P	03 36 31.3	+0.4
PRU				e		03 36 34.0	
PRU	Pruhonice	73.70	358	eP	P	03 36 31.3	+0.4
PRU				epP	sP	03 36 34.0	+0.3
MORC	Moravsky Berou	73.81	356	⇑P	P	03 36 29.9	-1.7
MORC	Moravsky Berou	73.81	356	eP	P	03 36 31.4	-0.2
MORC	Moravsky Berou	73.81	356	IAmb	IAmb	03 36 36.3	
	comp=Z,12nm,1.3s						
SHL	Shillong	73.85	292	P	P	03 36 31.2	-1.2
SHL				IAmb	IAmb	03 36 31.9	
	comp=Z,9.1nm,1.0s						
PBCC	Pribram	74.02	358	eP	P	03 36 32.9	+0.1
VRAC	Vranov	74.32	356	⇑P	P	03 36 34.2	-0.3
VRAC	Vranov	74.32	356	eP	P	03 36 34.9	+0.3
LANS	Liptovska Anna	74.35	354	eP	P	03 36 36.2	+1.5
LANS	Liptovska Anna	74.35	354	e	P	03 36 36.2	+1.5
TREC	Trest	74.37	357	eP	P	03 36 34.6	-0.3
TREC	Trest	74.37	357	eP	P	03 36 34.6	-0.3
KOLS	Kolonicke sedl	74.38	352	eP	P	03 36 35.3	+0.4
KOLS				pmax	pmax		
	comp=Z,20nm,1.5s						
KOLS	Kolonicke sedl	74.38	352	eP	P	03 36 35.3	+0.4
TAPN	Taplejung	74.49	296	eP	P	03 36 36.7	+0.5
KRUC	Moravsky	74.57	356	eP	P	03 36 36.2	+0.2
KHC	Kasperske Hory	74.58	358	ceP	P	03 36 36.5	+0.4
KHC				pmax	pmax		
	comp=Z,46nm,1.3s						
KHC	Kasperske Hory	74.58	358	eP	P	03 36 36.2	+0.1
KHC				epP	sP	03 36 40.6	+1.7
SORM	Soroca	74.60	348	⇑P	P	03 36 35.4	-0.7
SIJI	Sorong	74.61	244	P	P	03 36 36.5	-0.2
	comp=Z,26nm,0.8s,baz=52,slow=7.0,SNR=6.1						
UZH	Uzhgorod	74.68	352	eP	P	03 36 35.7	-0.9
JAVC	Velka Javorina	74.73	355	eP	P	03 36 38.2	+1.2
GEC2	GERESS Array S	74.86	358	IAmb	IAmb	03 37 39.5	
	comp=Z,31nm,1.9s						
GERES	GERESS Array B	74.86	358	P	P	03 36 37.1	-0.7
	comp=Z,2.2nm,0.9s,baz=11,slow=2.9,SNR=9.2						
GERES	GERESS Array B	74.86	358	P	P	03 36 37.8	-0.1
GUN	Gumba	74.92	298	eP	P	03 36 39.1	+0.3
	comp=Z,37nm,0.9s						
KECS	Kecovo	74.95	354	eP	P	03 36 38.7	+0.5
KECS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KECS	Kecovo	74.95	354	eP	P	03 36 38.7	+0.5
UBPT	Khong Chiam	74.97	275	P	P	03 36 39.9	+1.2
	comp=Z,0.1nmcomp=Z,14nm,1.3s						
UBPT	Khong Chiam	74.97	275	P	P	03 36 39.1	+0.3
VYHS	Vyhne	75.04	355	eP	P	03 36 39.3	+0.5
VYHS				pmax	pmax		
	comp=Z,28nm,1.5s						
VYHS	Vyhne	75.04	355	eP	P	03 36 39.2	+0.5
GOF	Gofitskoye	75.18	337	⇑eP	P	03 36 40.1	+0.5
GOF				pmax	pmax		
	comp=Z,66nm,0.9s						
MODS	Modra-Piesok	75.23	356	eP	P	03 36 40.0	+0.2
MODS				pmax	pmax		
	comp=Z,34nm,1.4s						
MODS	Modra-Piesok	75.23	356	eP	P	03 36 40.0	+0.2
ZST	Bratislava	75.41	356	eP	P	03 36 41.6	+0.7
ZST	Bratislava	75.41	356	eP	P	03 36 41.6	+0.7
PKI	Pulchoki	75.44	298	eP	P	03 36 41.7	0.0
BURAR	Bucovina Array	75.44	350	⇑P	P	03 36 40.7	-0.5
BURAR	Bucovina Array	75.44	350	P	P	03 36 41.0	-0.2
GKN	Gorkha	75.45	299	eP	P	03 36 41.9	+0.3
CM34	Chiang Mai Arr	75.51	282	P	P	03 36 42.0	+0.2
PSZ	Piszkesteto	75.55	354	eP	P	03 36 42.5	+0.7
DMN	Daman	75.55	298	eP	P	03 36 42.5	+0.2
DANN	Dangsing	75.58	300	eP	P	03 36 43.0	+0.5
	comp=Z,77nm,0.7s						
CM33	Chiang Mai Arr	75.64	282	P	P	03 36 44.0	+1.4
CMMT	Chiang Mai	75.65	282	P	P	03 36 45.0	+2.4
	comp=Z,0.0nmcomp=Z,3.7nm,1.5s						
CHTO	Chiang Mai	75.65	282	P	P	03 36 42.6	0.0
CHTO				IAmb	IAmb	03 36 47.4	
	comp=Z,14nm,1.4s						
PPT	Papeete	75.69	161	LR	LR	04 03 11.7	
	comp=Z,74nm,19.9s,baz=6.5,slow=30						
PPT2	Papeete2	75.71	161	eLR	LR	03 59 53.2	
	comp=Z,141nm,25.5s						
CONA	Conrad Observa	75.72	357	eP	P	03 36 43.4	+0.6
	comp=Z,9.8nm,0.9s						
MILM	Milestii Mici	75.75	348	⇑P	P	03 36 41.9	-0.8
NIL	Nilore	75.83	310	P	P	03 36 44.0	+0.4
MOA	Molln	75.85	358	eP	P	03 36 44.2	+0.8
	comp=Z,8.7nm,1.2s						
CM31	Chiang Mai Arr	75.94	282	P	P	03 36 44.6	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	75.94	282	P	P	03 36 45.0	+0.7
	comp=Z,4.2nm,0.9s,baz=18,slow=6.0,SNR=22						
CMAR				LR	LR	04 13 43.3	
	comp=Z,65nm,18.0s,baz=244,slow=38						
CMAR	Chiang Mai Arr	75.94	282	P	P	03 36 44.1	-0.2
CM02	Chiang Mai Arr	75.96	282	P	P	03 36 45.0	+0.6
	comp=Z,0.0nmcomp=Z,81nmcomp=Z,10nm,1.0s						
CM01	Chiang Mai Arr	75.96	282	P	P	03 36 46.0	+1.6
	comp=Z,0.0nmcomp=Z,112nmcomp=Z,9.3nm,1.1s						
CM04	Chiang Mai Arr	75.97	282	P	P	03 36 46.0	+1.5
	comp=Z,0.0nmcomp=Z,76nmcomp=Z,7.8nm,1.2s						
CM05	Chiang Mai Arr	75.98	282	P	P	03 36 45.8	+1.2
	comp=Z,0.0nmcomp=Z,71nmcomp=Z,5.9nm,1.2s						
CM13	Chiang Mai Arr	75.99	282	P	P	03 36 45.0	+0.4
	comp=Z,0.0nmcomp=Z,71nmcomp=Z,7.4nm,1.1s						
BIZ	Bicaz	76.03	349	⇑P	P	03 36 44.8	+0.3
ARCR	ARCALIA	76.05	351	⇑P	P	03 36 44.5	0.0
KOLN	Koldanda	76.15	299	eP	P	03 36 45.8	+0.1
	comp=Z,28nm,0.9s						
CSKK	Cskako	76.19	355	eP	P	03 36 47.0	+1.7
RETA	Reutte	76.24	0	eP	P	03 36 46.0	+0.3
	comp=Z,6.1nm,0.9s						
KIV	Kislovodsk	76.30	337	⇑P	P	03 36 47.2	+1.0
KIV	Kislovodsk	76.30	337	eP	P	03 36 46.6	+0.4
KIV				pmax	pmax		
	comp=Z,32nm,0.9s						
KIV				MLR	MLR		
	comp=Z,187nm,18.0s						
KIV	Kislovodsk	76.30	337	P	P	03 36 46.4	+0.2
KIV				IAmb	IAmb	03 36 51.4	
	comp=Z,14nm,1.1s						
MOTA	Moosalm	76.39	360	iP	P	03 36 46.5	-0.1
	comp=Z,12nm,1.1s,SNR=6.0						
WATA	Walderalm	76.39	360	eP	P	03 36 47.1	+0.5
	comp=Z,21nm,1.5s						
ARSA	Arzberg	76.41	357	eP	P	03 36 47.2	+0.5
	comp=Z,7.6nm,1.0s						
MPLH	Magyarpolny	76.42	355	eP	P	03 36 48.0	+1.4
DAVA	Damuels	76.44	1	eP	P	03 36 45.0	-1.9
	comp=Z,9.0nm,1.4s						
KBZ	Khabaz	76.47	337	P	P	03 36 47.6	+0.7
	comp=Z,5.4nm,0.9s,baz=61,slow=3.7,SNR=11						
KBZ				LR	LR	04 13 09.7	
	comp=Z,95nm,18.4s,baz=2.5,slow=38						
KBZ	Khabaz	76.47	337	ceP	P	03 36 48.2	+1.2
DRGR		76.48	352	⇓P	P	03 36 45.9	-1.2
SQTA	Sankt Quirin	76.51	360	iP	P	03 36 47.7	+0.4
	comp=Z,21nm,1.5s,SNR=5.2						
KBA	Koelnbreinsper	76.64	358	eP	P	03 36 49.0	+0.9
	comp=Z,21nm,1.3s						
TIH	Tihany	76.67	355	eP	P	03 36 48.8	+0.8
FETA	Feichten	76.71	0	eP	P	03 36 49.0	+0.5
	comp=Z,18nm,1.2s						
KBL	Kabul	76.78	314	P	P	03 36 48.7	-0.5
KBL				pmax	pmax		
	comp=Z,26nm,1.3s						
KBL	Kabul	76.78	314	P	P	03 36 48.7	-0.5
ABTA	Abfaltersbach	76.98	359	eP	P	03 36 49.8	-0.1
	comp=Z,8.8nm,1.3s						
SOKA	Soboth	77.00	357	eP	P	03 36 50.9	+0.9
	comp=Z,18nm,1.4s						
MYKA	Terra Mystica	77.08	358	eP	P	03 36 49.0	-1.5
	comp=Z,18nm,1.6s						
ZEI	Tsey	77.15	336	eP	P	03 36 49.5	-1.6
ZEI				pmax	pmax		
	comp=Z,19nm,1.5s						
OBKA	Obir	77.18	358	iP	P	03 36 51.5	+0.5
	comp=Z,17nm,0.8s,SNR=7.2						
ARR	Arges	77.73	350	⇑P	P	03 36 51.8	-2.3
GEYT	Alibeck	77.73	324	P	P	03 36 55.1	+1.0
	comp=Z,7.3nm,0.9s,baz=298,slow=6.2,SNR=12						
GEYT	Alibeck	77.73	324	P	P	03 36 55.2	+1.0
GYA0B	ALIBECK ARRAY	77.73	324	P	P	03 36 54.4	+0.2
BZS	Buzias	77.73	352	⇑P	P	03 36 53.4	-0.6
GZR	Gura Zlata	77.86	352	⇑P	P	03 36 55.1	+0.2
SRAK	Srakaew	77.89	277	P	P	03 36 57.5	+2.1
	comp=Z,0.4nmcomp=Z,62nm,0.7s						
UTHA	Uthaitani	78.04	280	P	P	03 37 00.7	+4.6
FRGS	Fruska Gora	78.31	354	⇑P	P	03 36 56.1	-1.2
TOLI2	Tolitoli	78.32	254	P	P	03 36 57.2	-0.5
HERR	Herculane	78.40	352	⇓P	P	03 36 57.5	-0.3
AKH	Akhalkalaki	78.55	336	P	P	03 36 59.6	+0.7
GNI	Garni	79.46	334	ceP	P	03 37 05.9	+2.0
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GNI	Garni	79.46	334	P	P	03 37 04.7	+0.9
HRA	Herat	79.50	319	IAmb	IAmb	03 37 05.7	
	comp=Z,26nm,1.6s						
DR12	Loma Pena Alta	79.64	72	P	P	03 37 05.6	+0.7
DZM	Mont Dzumac	81.11	203	eLR	LR	04 02 30.2	
	comp=Z,162nm,29.6s						
TBI	Tubuai	81.36	162	eLR	LR	04 02 42.0	
	comp=Z,241nm,32.2s						
BR131	Keskin Array S	82.12	343	IAmb	IAmb	03 37 23.2	
	comp=Z,9.6nm,0.9s						
BRTR	Keskin Array B	82.12	343	P	P	03 37 17.8	-0.3
	comp=Z,3.6nm,0.8s,baz=36,slow=2.9,SNR=18						
BRTR				LR	LR	04 17 29.2	
	comp=Z,36nm,21.3s,baz=346,slow=38						
BRTR	Keskin Array B	82.12	343	ceP	P	03 37 18.5	+0.4
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	82.12	343	P	P	03 37 18.2	+0.1
MARD	Mardin	83.08	337	P	P	03 37 22.9	-0.2
ESDC	Sonseca Array	83.21	12	P	P	03 37 23.5	-0.1
	comp=Z,1.3nm,0.6s,baz=346,slow=4.8,SNR=7.1						
ESDC				LR	LR	04 16 48.4	
	comp=Z,59nm,18.1s,baz=305,slow=37						
SDV	Santo Domingo	87.19	78	P	P	03 37 44.2	+0.2
SDV				IAmb	IAmb	03 37 48.4	
	comp=Z,5.2nm,0.8s						
PSI	Prapat	88.86	273	P	P	03 37 51.9	0.0
	comp=Z,3.9nm,0.5s,baz=179,slow=0.6,SNR=6.8						
WRA	Warramunga Arr	89.85	232	P	P	03 37 54.8	-1.3
	comp=Z,2.7nm,1.2s,baz=36,slow=4.8,SNR=4.8						
WRA				LR	LR	04 16 07.6	
	comp=Z,30nm,20.3s,baz=330,slow=34						
WRA	Warramunga Arr	89.85	232	iP	P	03 37 58.0	+1.8
WRA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WRA	Warramunga Arr	89.85	232	P	P	03 37 56.3	+0.1
ASAR	Alice Springs	93.32	230	P	P	03 38 11.6	-0.6
	comp=Z,0.8nm,0.9s,baz=35,slow=2.9,SNR=4.4						
ASAR				LR	LR	04 13 48.1	
	comp=Z,52nm,21.9s,baz=31,slow=31						
STKA	Stephens Creek	97.62	221	LR	LR	04 18 04.3	
	comp=Z,59nm,21.8s,baz=26,slow=33						
QSPA	South Pole Qui	146.41	180	PKPbc	PKPbc	03 44 36.5	-0.5
LBTB	Lobatse	146.69	335	PKPbc	PKPab	03 44 39.6	-0.7
BOSA	Boshof	150.23	334	PKPbc	PKPbc	03 44 47.8	-0.6
	comp=Z,4.5nm,0.8s,baz=39,slow=4.2,SNR=8.5						
BOSA	Boshof	150.23	334		PKPbc	03 44 47.0	-1.4

JMA 31 03:29:02.2±0.1**, 38°.33N×142°.08E, h32**^{km}±1^{km}**, M3.7,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.48	268	P	Pb	03 29 12.1	-0.4
JIKH				S	Sb	03 29 18.8	-0.7
JIO	Ouri	0.59	282	P	Pb	03 29 13.8	-0.3
JIO				S	Sb	03 29 21.8	-0.5
JKMT	Kesennumamotoy	0.68	315	P	Pn	03 29 15.3	-0.2
JKMT				S	Sb	03 29 24.4	-0.3
OFUJ	Ofunato	0.81	337	P	Pn	03 29 17.0	-0.5
JMK	Ichinoseki	0.92	313	P	Pn	03 29 18.9	+0.1
JMK				eS	Sn	03 29 30.8	-0.1
JOU	Okura	1.11	272	P	Pn	03 29 22.0	+0.4
JOU				S	Sb	03 29 36.5	-0.6
JMM	Marumori	1.12	246	P	Pn	03 29 21.0	-0.6
JOM	Ohasama	1.30	332	P	Pn	03 29 24.5	+0.4
JOM				eS	Sn	03 29 41.0	+0.7
JFK	Kawauchi	1.35	225	P	Pn	03 29 23.8	-1.1
JFK				eS	Sn	03 29 39.6	-2.2
JFT	Otama	1.60	240	P	Pn	03 29 28.8	+0.5
MAT	Matsushiro	3.56	241	P	Pn	03 29 58.6	+3.3
MAT				eS	Sn	03 30 40.1	+3.8

IDC 31 03:31:57.5±3.9**, 11°.92S×117°.50E, h0**^{km}**, mb3.1**/1**,**
mb1 3.6/4**, mb1mx3.4**/35**, mbtmp3.4**/4**, ML3.6**/3**, Error**
ellipse: s-maj=243.1km s-min=27.7km az=46.0, South
of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.98	129	Pn	Pn	03 34 21.4	-0.9
	0.6nm,0.3s,baz=315,slow=8.5,SNR=15						
FITZ				Sn	Sn	03 36 05.3	-10
	0.7nm,0.3s,baz=178,slow=16,SNR=5.6						
WRA	Warramunga Arr	18.04	118	P	Pn	03 36 08.6	-1.3
	0.2nm,0.3s,baz=287,slow=15,SNR=8.2						
ASAR	Alice Springs	19.48	129	P	Pn	03 36 27.8	+0.4
	0.2nm,0.3s,baz=306,slow=12,SNR=13						
MKAR	Makanchi Array	66.40	334	P	P	03 42 48.3	-0.1
	0.1nm,0.4s,baz=128,slow=7.4,SNR=1.7						

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*SOME **31** 03:35:52.6, 41°.57N×72°.18E, h10^{km}*
*KRNET **31** 03:35:52.5±0.1, 41°.52N×72°.17E, h18^{km}, mb2.4*
*NNC **31** 03:35:56.6±3.8, 41°.57N×72°.44E, h0^{km}, mb3.0, mpv3.1,*
Error ellipse: s-maj=33.7km s-min=13.0km az=167.0
ISC 31 03:35:52.2±1.1**, 41°.54N**±0°.03×**72°.20E**±0°.03**, h8**^{km}±11^{km}**,**
n22, σ1^{s}**.36**/39**, 19C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.63	110	⇑iP	Pg	03 36 04.8	+0.4
	baz=7.0						
ARSB				⇑iS	Sg	03 36 13.5	+0.8
	baz=7.0						
TRKS	Terek-Say	0.79	269	⇑iP	Pg	03 36 07.1	-0.4
	baz=66						
TRKS				⇑iS	Sg	03 36 17.3	-0.6
	baz=66						
MNAS	Manas	0.97	14	⇑iP	Pb	03 36 11.4	0.0
	baz=14						
MNAS				⇑iS	Sn	03 36 25.0	-1.3
	baz=14						
OHH	Osh	1.11	156	⇑iP	Pb	03 36 12.9	-0.8
	baz=55						
OHH				⇑eS	Sg	03 36 28.1	+0.1
	baz=55						
AML	Almayashu	1.26	62	⇑iP	Pn	03 36 16.6	0.0
	baz=61						
AML				⇑iS	Sn	03 36 33.8	-0.1
	baz=61						
MRKS	Merke	1.42	32	eP	Pg	03 36 19.9	+0.3
	6.5nm,0.2s						
MRKS				eS	Sg	03 36 39.5	+1.5
	4.9nm,0.2s						
MRKS	Merke	1.42	32	P	Pg	03 36 20.7	+1.1
	6.5nm,0.2s						
MRKS				S	Sg	03 36 39.3	+1.2
	4.9nm,0.2s						
DZA	Taraz	1.49	335	P	Pg	03 36 28.3	+7.4
	137nm,0.1s						
DZA				S	Sg	03 36 51.9	+12
	94nm,0.2s						
EKS2	Erkin-Say	1.62	46	⇓eP	Pb	03 36 23.0	+0.5
	baz=46						
EKS2				⇓iS	Sg	03 36 45.0	+0.6
	baz=46						
BTK	Batken	1.82	216	⇑iP	Pn	03 36 24.8	+0.9
	baz=16						
BTK				⇑iS	Sb	03 36 48.9	+0.2
	baz=16						
UCH	Uchtor	1.86	68	⇓iP	Pb	03 36 27.2	+0.5
	baz=67						
UCH				⇓iS	Sg	03 36 52.0	-0.1
	baz=67						
KK31	Karatay Array	2.00	322	⇓Pn	Pb	03 36 29.1	+0.3
	0.5nm,0.3s,baz=138,slow=16,SNR=21						
KK31				⇑Sn	Sg	03 36 55.6	-0.9
	2.1nm,0.3s,baz=138,slow=30,SNR=8.0						
AAK	Ala-Archa	2.03	57	⇓iP	Pb	03 36 29.5	0.0
	baz=56						
AAK				⇓iS	Sb	03 36 56.1	+1.2
	baz=56						
AAK	Ala-Archa	2.03	57	⇑Pn	Pb	03 36 30.4	+0.9
	1.4nm,0.3s						
AAK				⇑Lg	Lg	03 36 58.2	
	1.6nm,0.5s						
DRK	Karamyk	2.08	188	⇑eP	Pn	03 36 29.3	+1.6
	baz=88						
DRK				⇑iS	Sb	03 36 56.0	-0.6
	baz=88						
KBK	Karagaybulak	2.33	61	⇑eP	Pb	03 36 34.0	-0.6
	baz=60						
KBK				⇑iS	Sb	03 37 03.2	-0.4
	baz=60						
SGDS	Sogindy	2.62	43	Pg	Pg	03 36 42.0	-0.4
	2.2nm,0.4s						
SGDS				Lg	Lg	03 37 15.5	
	5.4nm,0.5s						
DGS	Degeres	3.15	56	eP	Pb	03 36 50.5	+2.1
	1.6nm,0.4s						
DGS				eS	Sg	03 37 32.3	-1.0
	4.7nm,0.6s						
KST	Kastek	3.17	61	eP	Pg	03 36 51.3	-1.7
	1.4nm,0.5s						
KST				eS	Sg	03 37 33.4	-0.7
	5.4nm,0.4s						
KUU	Kurty	3.85	51	eP	Pb	03 37 02.9	+2.5
	0.6nm,0.4s						
KUU				eS	Sg	03 37 53.2	-2.6
	3.7nm,0.4s						
KTBS	Karatobe	3.96	55	eP	Pb	03 37 04.8	+2.6
	0.8nm,0.3s						
KTBS				eS	Sg	03 37 56.5	-2.7
	3.7nm,0.5s						
ARXS	Arharly	4.92	55	Pg	Pg	03 37 23.2	-3.4
	2.7nm,1.1s						
ARXS				Lg	Lg	03 38 26.2	
	1.8nm,0.5s						

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*IDC **31** 03:53:23.6±3.2, 11°.54S×162°.16E, h51^{km}±25^{km}, mb3.5/4,*
mb1 3.9/6, mb1mx3.5/47, mbtmp4.0/6, ML4.1/2, MS3.2/2,
Ms1 3.2/2, ms1mx2.7/25, Error ellipse: s-maj=41.0km
s-min=18.3km az=63.0
ISC 31 03:53:22.9±1.3**, 11°.6S**±0°.2×**162°.2E**±0°.2**, h39**^{km}**, n14,**
σ1^{s}**.17**/9**, mb3.7**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.06	315	P	Pn	03 54 08.5	-0.2
	58nm,0.3s,baz=200,slow=6.6,SNR=11						
HNR				S	Sn	03 54 44.7	+0.6
	89nm,0.3s,baz=9.8,slow=12,SNR=6.3						
DZM	Mont Dzumac	11.19	159	P	Pn	03 56 01.9	+1.5
	0.6nm,0.3s,baz=359,slow=3.9,SNR=15						
DZM				S	Sn	03 58 03.0	-1.4
	0.4nm,0.3s,baz=76,slow=19,SNR=1.5						
PMG	Port Moresby	14.91	277	LR	LR	04 02 28.5	
	comp=Z,118nm,18.2s,baz=96,slow=36						
WRA	Warramunga Arr	27.99	249	P	P	03 59 10.3	+0.1
	0.7nm,0.6s,baz=78,slow=9.1,SNR=8.5						
ASAR	Alice Springs	29.41	242	P	P	03 59 22.6	-0.3
	1.5nm,0.8s,baz=63,slow=10,SNR=12						
H11S2	WAKE ISLAND Hy	30.23	9	T	T	04 30 31.0	
	baz=188,slow=76,SNR=109						
H11S3	WAKE ISLAND Hy	30.23	9	T	T	04 30 32.4	
	baz=188,slow=76,SNR=79						
H11S1	WAKE ISLAND Hy	30.25	9	T	T	04 30 31.1	
	baz=188,slow=76,SNR=69						
H11N1	WAKE ISLAND Hy	31.46	9	T	T	04 32 05.9	
	baz=188,slow=76,SNR=56						
H11N3	WAKE ISLAND Hy	31.47	9	T	T	04 32 03.6	
	baz=188,slow=76,SNR=80						
H11N2	WAKE ISLAND Hy	31.48	9	T	T	04 32 04.6	
	baz=188,slow=76,SNR=52						
KSRS	Korea Array	58.42	328	LR	LR	04 28 31.2	
	comp=Z,11nm,18.8s,baz=225,slow=36						
SONM	Songino Array	77.07	325	P	P	04 05 12.1	-0.1
	0.5nm,0.8s,baz=134,slow=6.2,SNR=2.9						
MKAR	Makanchi Array	91.53	317	P	P	04 06 24.1	-1.5
	0.1nm,0.3s,baz=101,slow=6.4,SNR=4.8						
MKAR				pP	sP	04 06 40.4	+1.2
	0.3nm,0.7s,baz=107,slow=5.8,SNR=3.8						

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*NEIC **31** 03:55:09.9±0.7, 31°.66S±0°.09×177°.39W±0°.04,*
h48^{km}±11^{km}, mb4.3/9, Error ellipse: s-maj=13.0km
s-min=4.6km az=166.0
*IDC **31** 03:55:12.2±4.4, 31°.60S×177°.90W, h38^{km}±32^{km}, mb3.8/2,*
mb1 4.1/4, mb1mx3.7/40, mbtmp4.1/4, ML3.8/2, Error
ellipse: s-maj=56.8km s-min=25.6km az=117.0
ISC 31 03:55:09.0±1.8**, 31°.73S**±0°.09×**177°.4W**±0°.2**, h35**^{km}**, n20,**
σ0^{s}**.99**/19**, mb4.3**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.51	350	Pn	Pn	03 55 48.1	+0.8
	59nm,0.3s,baz=233,slow=20,SNR=2.3						
RAO				Sn	Sn	03 56 16.1	-0.5
	180nm,0.3s,baz=95,slow=20,SNR=5.1						
RAO	Raoul Island	2.51	350	Pn	Pn	03 55 47.4	+0.1
URZ	Urewera	7.90	213	Pn	Pn	03 57 03.2	+1.8
	0.6nm,0.3s,baz=262,slow=3.0,SNR=2.3						
URZ				Sn	Sn	03 58 27.3	-2.2
	2.5nm,0.3s,baz=175,slow=18,SNR=7.1						
OUZ	Omahuta	8.26	243		Pn	03 57 08.1	+1.8
LHI	Lord Howe Isla	20.01	264	P	P	03 59 39.0	+0.3
CTAO	Charters Tower	34.51	281	P	P	04 01 54.4	+0.3
CTAO				IAmb	IAmb	04 01 55.2	
	comp=Z,3.7nm,0.7s						
RABL	Rabaul	39.56	308	P	P	04 02 36.2	-0.8
COEN	Coen	40.11	287	P	P	04 02 41.6	0.0
COEN				IAmb	IAmb	04 02 48.1	
	comp=Z,6.3nm,1.2s						
AS31	Alice Springs	43.53	268	P	P	04 03 08.7	-0.9
ASAR	Alice Springs	43.54	268	P	P	04 03 08.8	-0.7
	comp=Z,1.0nm,0.6s,baz=103,slow=7.6,SNR=11						
WR0	Warramunga Arr	44.47	273	P	P	04 03 16.9	-0.1
WR0				IAmb	IAmb	04 03 45.4	
	comp=Z,7.1nm,1.4s						
WB2	Warramunga Arr	44.63	273	P	P	04 03 17.2	-1.1
WB2				IAmb	IAmb	04 03 19.1	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	44.64	273	P	P	04 03 18.2	-0.2
	comp=Z,2.1nm,0.5s,baz=111,slow=8.0,SNR=23						
WRA	Warramunga Arr	44.64	273	P	P	04 03 18.4	0.0
WB0	Warramunga Arr	44.67	273	P	P	04 03 18.3	-0.4
WB0				IAmb	IAmb	04 03 25.9	
	comp=Z,4.6nm,0.8s						
SNAA	Sanae	76.81	178	P	P	04 07 09.7	+13
VNA3	Neumayer Olymp	76.95	176	P	P	04 07 11.0	+14
VNA2	Neumayer--Watz	77.39	177	P	P	04 07 13.5	+14
	baz=123,slow=1.9						
FINES	FINESS Array B	146.56	340	PKPbc	PKiKP	04 14 48.4	-0.4
	comp=Z,2.0nm,0.3s,baz=51,slow=3.6,SNR=35						
AKASG	Malin Array Be	152.65	322	PKPbc	PKiKP	04 15 01.5	-0.2
	comp=Z,0.5nm,0.4s,baz=52,slow=3.3,SNR=3.0						

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*IDC **31** 04:13:16.9±1.5, 56°.35N×169°.10W, h0^{km}, mb3.5/7,*
mb1 3.8/10, mb1mx3.5/51, mbtmp3.6/10, ML3.1/3, MS3.3/9,
Ms1 3.3/9, ms1mx3.0/50, Error ellipse: s-maj=37.8km
s-min=16.9km az=178.0
*AEIC **31** 04:13:18±2.7, 56°.58N±0°.05×169°.15W±0°.05, h37^{km}±8^{km},*
Error ellipse: s-maj=7.5km s-min=4.0km az=185.0
*NEIC **31** 04:13:20.2±2.3, 56°.58N±0°.05×169°.16W±0°.09, h22^{km}±6^{km},*
mb4.0/5, ML3.7/19(AEIC), Error ellipse: s-maj=9.6km
s-min=3.3km az=45.0
ISC 31 04:13:18.5±0.6**, 56°.59N**±0°.06×**169°.15W**±0°.06**, h10**^{km}**, n65,**
σ1^{s}**.42**/62**, mb3.3**/5**, MS3.3**/6**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.84	315		Sn	04 13 48.8	-0.1
SPIA	Saint Paul Isl	0.84	315		Pg	04 13 33.4	-1.4
AKGG	Akutan Green G	3.00	142		Pn	04 14 05.4	-0.6
MSW	Makushin Switc	3.00	152		Pn	04 14 06.9	+0.9
MSW					Sn	04 14 40.3	-1.8
AKRB	Akutan Reef Bi	3.03	143		Pn	04 14 06.8	+0.4
AKRB					Sn	04 14 42.9	+0.2
AKLV	Akutan Long Va	3.04	142		Pn	04 14 07.0	+0.4
AKMO	Akutan Morgan	3.08	143		Pn	04 14 07.2	+0.1
AKMO					Sn	04 14 43.9	0.0
MGOD	Makushin Gods	3.09	154		Pn	04 14 07.5	+0.2
AKBBA	Akutan Broad B	3.10	142		Pn	04 14 06.0	-1.4
AKUT	Akutan	3.12	140	Pn	Pn	04 14 06.2	-1.5
UNV	Unalaska Valle	3.14	150		Pn	04 14 06.6	-1.3
UNV	Unalaska Valle	3.14	150		Sn	04 14 45.0	-0.3
AKSA	Akutan Strait	3.15	140		Pn	04 14 08.4	+0.3
OKWE	Okmok W’ng Wal	3.17	170		Pn	04 14 07.7	-0.7
WESP	Westdahl Peak	3.28	128		Pn	04 14 09.5	-0.5
OKSP	Okmok Steeple	3.38	171		Pn	04 14 11.4	+0.1
NIKH	Nikolski High	3.63	177		Pn	04 14 14.3	-0.4
FALS	False Pass	3.68	116	Pn	Pn	04 14 15.4	+0.1
SDPT	Sand Point	5.03	101	Pn	Pn	04 14 34.4	+0.5
ATKA	Atka Island	5.29	216	Pn	Pn	04 14 40.9	+3.5
CHGN	Chignik	5.96	88	Pn	Pn	04 14 44.6	-2.1
ADK	Adak	6.45	226	Pn	Pn	04 14 52.8	-0.7
ANM	Nome	8.22	11		Pn	04 15 15.6	-2.0
AMKA	Amchitka	8.57	237	Pn	Pn	04 15 26.2	+3.8
OHAK	Old Harbor	8.71	79	Pn	Pn	04 15 26.1	+1.8
KDAK	Kodiak Island	9.08	76	Pn	Pn	04 15 30.2	+0.8
	0.8nm,0.3s,baz=262,slow=8.6,SNR=15						
KDAK				LR	LR	04 19 16.7	
	comp=Z,88nm,20.6s,baz=269,slow=40						
TTA	Tatalina	9.18	41	Pn	Pn	04 15 30.2	-0.6
RSO	Redoubt South	9.41	59	Pn	Pn	04 15 34.1	0.0
CNPM	China Poot	9.94	65	Pn	Pn	04 15 43.6	+2.4
BRLK	Bradley Lake	10.15	64	Pn	Pn	04 15 44.2	0.0
SKT	Skwentna	10.49	52	Pn	Pn	04 15 49.4	+0.6
PPLA	Purkeypile	10.62	46	Pn	Pn	04 15 49.2	-1.4
SUA	Susitna One	10.65	55	Pn	Pn	04 15 51.5	+0.5
GHO	Glory Hole Cre	11.58	55	Pn	Pn	04 16 05.0	+1.3
TRF	Thorofare Moun	11.64	46	Pn	Pn	04 16 05.1	+0.5
BPAW	Bear Paw Mtn.	11.69	42	Pn	Pn	04 16 03.5	-1.7
IMAR	Indian Mountai	11.95	32	Pn	Pn	04 16 12.1	+3.5
RND	Reindeer	12.20	48	Pn	Pn	04 16 13.0	+0.8
SCM	Sheep Creek Mo	12.32	56	Pn	Pn	04 16 13.7	-0.1
M24K	Tolsona, Glenn	12.92	55	Pn	Pn	04 16 25.9	+4.0
WRH	Wood River Hil	12.98	44	Pn	Pn	04 16 24.4	+1.7
CCB	Clear Creek Bu	13.17	43	Pn	Pn	04 16 26.4	+1.2
ILAR	Eielson Array	13.58	44	Pn	Pn	04 16 31.6	+0.7
	0.0nm,0.3s,baz=246,slow=10,SNR=5.5						
ILAR				LR	LR	04 21 55.6	
	comp=Z,107nm,19.0s,baz=212,slow=38						
RIDG	Independent Ri	13.99	49	P	P	04 16 45.4	+0.8
CTGM	Chitina Glacie	15.01	62	Pn	Pn	04 16 50.9	+0.3
CTGM				IAmb	IAmb	04 17 28.5	
	comp=Z,14nm,1.2s						
BCAR	Beaver Creek A	15.12	53	P	Pn	04 16 51.6	-0.3
HYT	Haines Junctio	16.88	62	P	Pn	04 17 14.7	+0.1
PEA0B	Petropavlovsk-	19.29	274	P	P	04 17 41.6	-1.6
PETK	Petropavlovsk-	19.29	274	P	Pn	04 17 44.2	0.0
	comp=Z,0.2nm,0.3s,baz=96,slow=11,SNR=8.0						
PETK	Petropavlovsk-	19.29	274	P	P	04 17 41.3	-1.8
INK	Inuvik	19.87	40	P	P	04 17 49.8	+0.5
	comp=Z,2.8nm,0.7s,baz=232,slow=8.5,SNR=10.0						
INK				LR	LR	04 26 01.6	
	comp=Z,76nm,18.8s,baz=93,slow=38						
INK	Inuvik	19.87	40	P	P	04 17 49.6	+0.3
INK				IAmb	IAmb	04 17 58.0	
	comp=Z,14nm,1.6s						
SEY	Seymchan	20.13	304	P	P	04 17 53.4	+1.1
	comp=Z,1.6nm,0.6s,baz=121,slow=10,SNR=6.8						
DLBC	Dease Lake	20.90	69	LR	LR	04 26 23.6	
	comp=Z,87nm,18.4s,baz=206,slow=38						
BBB	Bella Bella	24.03	83	LR	LR	04 26 32.1	
	comp=Z,60nm,18.6s,baz=308,slow=33						
YKA	Yellowknife Ar	27.53	55	P	P	04 19 05.0	+0.2
	comp=Z,0.2nm,0.6s,baz=283,slow=8.1,SNR=3.0						
NVAR	Mina Array Bea	37.82	97	P	P	04 20 34.9	-0.2
	comp=Z,0.4nm,0.7s,baz=308,slow=10,SNR=2.0						
MJAR	Matsushiro Arr	40.16	263	LR	LR	04 39 20.8	
	comp=Z,21nm,19.4s,baz=340,slow=39						
FRB	Frobisher Bay	45.51	38	LR	LR	04 43 14.1	
	comp=Z,76nm,19.9s,baz=106,slow=39						
SONM	Songino Array	49.34	298	P	P	04 22 09.4	+1.7
	comp=Z,0.5nm,0.9s,baz=65,slow=7.0,SNR=4.0						
SONM	Songino Array	49.34	298	P	P	04 22 05.1	-2.6
SONM				IAmb	IAmb	04 22 13.1	
	comp=Z,1.8nm,1.3s						
TXAR	Lajitas Array	52.67	92	P	P	04 22 32.6	-0.3
	comp=Z,0.4nm,0.9s,baz=317,slow=3.8,SNR=3.0						
SADO	Sadowa	54.23	61	LR	LR	04 46 03.8	
	comp=Z,83nm,19.3s,baz=163,slow=36						
JAY	Jayapura	71.46	234	LR	LR	04 55 11.0	
	comp=Z,24nm,18.0s,baz=324,slow=35						
AKASG	Malin Array Be	72.00	348	P	P	04 24 42.1	+0.2
	comp=Z,0.3nm,0.3s,baz=16,slow=5.5,SNR=4.2						

IDC 31 04:32:57.0±2.1**, 6°.58S×129°.45E, h99**^{km}±27^{km}**, mb3.1**/1**,**
mb1 3.3/5**, mb1mx3.1**/40**, mbtmp3.6**/5**, Error ellipse:**
s-maj=38.5km s-min=17.5km az=104.0, Banda Sea

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

SIJI	Sorong	5.96	18	P	Pn	04 34 24.4	+1.7
	0.9nm,0.3s,baz=222,slow=23,SNR=6.3						
SIJI				S	Sn	04 35 29.1	-0.6
	1.3nm,0.3s,baz=174,slow=22,SNR=5.7						
BATI	Baumata	6.76	237	P	Pn	04 34 34.0	+0.2
	6.8nm,0.3s,baz=12,slow=8.6,SNR=4.1						
WRA	Warramunga Arr	14.11	161	P	Pn	04 36 11.1	-1.3
	0.2nm,0.3s,baz=340,slow=12,SNR=12						
WRA				S	Sn	04 38 39.5	-8.4
	0.2nm,0.3s,baz=336,slow=22,SNR=6.1						
ASAR	Alice Springs	17.52	166	P	P	04 36 54.5	-0.3
	0.1nm,0.3s,baz=346,slow=10,SNR=6.8						
MKAR	Makanchi Array	67.58	327	P	P	04 43 43.1	+0.2
	0.2nm,0.4s,baz=128,slow=6.8,SNR=5.3						

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*IPEC **31** 04:39:59.9±0.3, 51°.56N×16°.15E, h0^{km}, ML2.0/4, Error ellipse: s-maj=3.4km s-min=1.7km az=62.0*
*PRU **31** 04:40:01.4±0.0, 51°.51N×16°.16E, h0^{km}*
*VIE **31** 04:40:03.9±0.7, 51°.30N×15°.87E, h0^{km}, mb2.4/3, ml2.5/6, Error ellipse: s-maj=4.4km s-min=4.0km az=54.0 78 km NE of Liberec Suspected Mining induced.*
ISC 31 04:39:59.8±0.9, **51°.52N**±0°.03×**16°.19E**±0°.03, **h0^{km}, n32,** σ**1^s.04**/64, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.68	175	*e*Pg	Pb	04 40 14.1	-0.3
KSP				*e*Sg	Sb	04 40 23.2	-1.1
CHVC	Chvalec	0.93	185	*e*PG	Pb	04 40 19.0	+0.2
CHVC				*e*SG	Sb	04 40 31.4	-0.3
	comp=Z,26nm,0.4s						
OSTC	Ostas	0.96	179	*e*PG	Pb	04 40 19.7	+0.4
OSTC				*e*SG	Sb	04 40 32.3	-0.2
	comp=Z,29nm,0.3s						
UPC	Upice	1.01	186	*e*PG	Pb	04 40 20.3	+0.1
UPC				*e*SG	Sb	04 40 33.8	-0.3
	comp=Z,59nm,0.5s						
DPC	Dobruska-Polom	1.17	176	*e*PG	Pb	04 40 23.0	+0.1
DPC				*e*SG	Sb	04 40 38.3	-0.3
	comp=Z,33nm,0.2s						
PVCC	Panska Ves	1.42	227	*e*PG	Pb	04 40 27.4	+0.2
PVCC				*e*SG	Sn	04 40 46.9	+0.6
	comp=Z,47nm,0.3s						
KRLC	Kraliky	1.49	165	*e*PG	Pg	04 40 28.3	0.0
KRLC				*e*SG	Sb	04 40 47.9	+0.1
	comp=Z,17nm,0.3s						
BRG	Berggiesshubel	1.55	246	Pg	Pg	04 40 30.1	+0.6
BRG				Sg	Sg	04 40 50.9	+1.2
BRG				Amp		04 40 51.4	
	comp=Z,77nm,0.3s						
PRA	Prague	1.83	218	*e*SG	Sg	04 40 59.7	+1.3
PRU	Pruhonice	1.85	215	*e*PN	Pn	04 40 33.0	+0.2
PRU				*e*PG	Pb	04 40 34.9	+0.4
PRU				*e*SG	Sg	04 40 59.5	+0.2
	comp=Z,18nm,0.5s						
MORC	Moravsky Berou	1.94	153	*e*PN	Pn	04 40 34.4	+0.4
MORC				*e*SG	Sg	04 41 02.4	+0.3
MORC	Moravsky Berou	1.94	153	*e*Pn	Pn	04 40 34.4	+0.4
	baz=334						
MORC				*e*Sg	Sg	04 41 02.3	+0.2
	comp=Z,8.2nm,0.3s,baz=334						
CLL	Collm	2.01	265	*e*Pn	Pn	04 40 35.0	+0.1
CLL				*e*Pg	Pg	04 40 38.0	-0.2
CLL				*e*		04 40 42.0	
CLL				*e*Sg	Sg	04 41 05.0	+0.8
	comp=Z,25nm,0.6s						
VRAC	Vranov	2.22	173	*e*PN	Pn	04 40 38.7	+0.8
VRAC				*e*SG	Sg	04 41 11.2	0.0
VRAC	Vranov	2.22	173	*e*Pn	Pn	04 40 38.6	+0.7
	baz=353						
VRAC				*e*Sg	Sg	04 41 11.1	-0.1
	comp=Z,8.2nm,0.2s,baz=353						
PBCC	Pribram	2.31	218	*e*PN	Pn	04 40 39.2	+0.2
PBCC				*e*PG	Pg	04 40 43.5	-0.4
PBCC				*e*SG	Sg	04 41 13.6	-0.2
KRUC	Moravsky	2.46	177	*e*PN	Pn	04 40 42.0	+0.8
KRUC				*e*SG	Sg	04 41 18.0	-0.7
KRUC	Moravsky	2.46	177	*e*Pn	Pn	04 40 41.9	+0.8
	baz=356						
KRUC				*e*Sg	Sg	04 41 18.0	-0.7
	comp=Z,7.1nm,0.3s,baz=356						
OJC	Ojcow	2.63	118	*e*Pg	Pg	04 40 50.7	+0.6
OJC				*e*Sg	Sg	04 41 25.4	+1.3
NKC	Novy Kostel	2.70	243	*e*PG	Pg	04 40 51.3	-0.1
NKC				*e*SG	Sg	04 41 26.7	+0.3
	comp=Z,39nm,0.6s						
JAVC	Velka Javorina	2.82	160	*e*PN	Pn	04 40 47.0	+0.8
JAVC				*e*SG	Sg	04 41 29.8	-0.6
JAVC	Velka Javorina	2.82	160	*e*Pn	Pn	04 40 47.0	+0.8
	baz=341						
JAVC				*e*Sg	Sg	04 41 29.8	-0.6
	comp=Z,5.1nm,0.5s,baz=341						
KHC	Kasperske Hory	2.92	216	*e*PN	Pn	04 40 48.3	+0.9
KHC				*e*PG	Pb	04 40 54.1	+1.5
KHC				*e*SG	Sg	04 41 32.8	-0.6
	comp=Z,6.2nm,0.4s						
LANS	Liptovska Anna	3.16	137	*e*	Pg	04 41 01.6	+1.2
LANS				*e*		04 41 44.0	
MODS	Modra-Piesok	3.22	167	*e*	Pg	04 41 00.8	-0.7
MODS				*e*		04 41 44.5	
VYHS	Vyhne	3.47	150	*e*	Pg	04 41 06.4	+0.1
CONA	Conrad Observa	3.60	184	*e*Pn	Pn	04 40 57.7	+0.9
	comp=Z,0.4nm,0.2s						
CONA				*e*Sg	Sg	04 41 54.6	-0.7
	comp=Z,4.4nm,0.4s						
BSD	Bornholm Skovb	3.69	349	*i* P	Pn	04 41 00.0	+2.1
BSD				*e*S	Sn	04 41 38.0	-4.0
BSD	Bornholm Skovb	3.69	349	*e*P	Pn	04 41 00.1	+2.1
BSD				*e*S	Sn	04 41 38.0	-4.0
BSD				IAML		04 41 40.3	
	comp=Z,0.7nm,0.2s						
MOA	Molln	3.88	200	*e*Pn	Pn	04 41 01.7	+1.0
	comp=Z,0.8nm,0.3s						
MOA				*e*Sg	Sg	04 42 04.3	+0.1
	comp=Z,7.6nm,0.5s						
ARSA	Arzberg	4.29	186	*e*Pn	Pn	04 41 07.1	+0.8
	comp=Z,0.8nm,0.2s						
ARSA				*e*Sg	Sg	04 42 18.0	+0.5
	comp=Z,3.4nm,0.4s						
KBA	Koelnbreinsper	4.81	204	*e*Pn	Pn	04 41 14.7	+1.0
	comp=Z,1.9nm,0.6s						
KBA				*e*Sg	Sg	04 42 34.2	-0.2
	comp=Z,2.6nm,0.4s						

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*IDC **31** 04:46:08.9±6.5, 54°.91N×169°.00W, h0^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.2/73, mbtmp3.2/4, ML2.7/2, Error ellipse: s-maj=115.6km s-min=50.2km az=100.0*
*AEIC **31** 04:46:26±0.9, 53°.6N±0°.1×166°.70W±0°.09, h73^{km}±6^{km}, ML3.4, Error ellipse: s-maj=17.6km s-min=4.1km az=157.0*
*NEIC **31** 04:46:27.7±0.7, 53°.59N±0°.06×166°.7W±0°.1, h67^{km}±8^{km}, Error ellipse: s-maj=11.5km s-min=5.0km az=135.0*
ISC 31 04:46:27.4±1.3, **53°.6N**±0°.1×**166°.67W**±0°.08, **h66^{km}**±10^{km}, **n30,** σ**0^s.90**/28, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MREP	Makushin Rep’t	0.23	348		Pn	04 46 38.3	+0.4
MGOD	Makushin Gods	0.24	329		Pn	04 46 38.4	+0.5
MAPS	Pakushin South	0.28	324		Pn	04 46 38.5	+0.5
UNV	Unalaska Valle	0.28	20		Pn	04 46 38.3	+0.3
MNAT	Makushin Natee	0.30	358		Pn	04 46 38.6	+0.4
MSW	Makushin Switc	0.34	348		Pn	04 46 39.0	+0.5
AKMO	Akutan Morgan	0.64	37		Pn	04 46 41.7	+0.3
AKRB	Akutan Reef Bi	0.65	33		Pn	04 46 42.1	+0.6
AKLV	Akutan Long Va	0.71	36		Pn	04 46 42.4	+0.2
AKGG	Akutan Green G	0.73	33		Pn	04 46 42.1	-0.4
AKUT	Akutan	0.76	43		Pn	04 46 42.9	+0.2
OKFG	Magazine Ridge	0.77	257		Pn	04 46 42.6	-0.2
AKSA	Akutan Strait	0.80	46		Pn	04 46 43.2	0.0
OKSO	Okmok South	0.92	256		Pn	04 46 44.7	0.0
OKSP	Okmok Steeple	1.03	252		Pn	04 46 46.6	+0.4
NIKH	Nikolski High	1.45	246		Pn	04 46 51.9	+0.3
WESP	Westdahl Peak	1.46	51		Pn	04 46 52.5	+0.7
WEBT	Westdahl Beart	1.51	47		Pn	04 46 53.2	+0.8
SSLS	Shishaldin Sou	1.93	53		Pn	04 46 58.8	+0.7
BRPK	Brown Peak	2.02	57		Pn	04 46 59.7	+0.4
FALS	False Pass	2.29	55		Sn	04 47 29.9	-0.2
FALS	False Pass	2.29	55		Pn	04 47 03.9	+1.0
SPIA	Saint Paul Isl	4.14	332	Pn	Pn	04 47 28.2	+0.2
CHGN	Chignik	5.48	57	Pn	Pn	04 47 47.1	+0.8
ADK	Adak	6.32	258	Pn	Pn	04 47 57.5	-0.4
KDAK	Kodiak Island	8.99	56	Pn	Pn	04 48 30.7	-3.7
	0.1nm,0.3s,baz=92,slow=14,SNR=1.2						
KDAK	Kodiak Island	8.99	56		Pn	04 48 34.7	+0.4
ILAR	Eielson Array	15.03	34	Pn	Pn	04 49 35.8	-20
	0.0nm,0.3s,baz=218,slow=8.7,SNR=1.9						
YKA	Yellowknife Ar	28.21	51	P	P	04 52 06.2	-7.2
	0.1nm,0.4s,baz=273,slow=7.6,SNR=2.1						
TXAR	Lajitas Array	51.12	92	P	P	04 55 23.3	-0.2
	0.2nm,0.5s,baz=314,slow=6.6,SNR=5.7						

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*IDC **31** 04:49:55.0±6.3, 6°.25S×151°.56E, h62^{km}±51^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/36, mbtmp3.9/5, ML1.8/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/29, Error ellipse: s-maj=98.6km s-min=31.3km az=130.0*
ISC 31 04:49:51.7±2.0, **6°.3S**±0°.6×**151°.8E**±0°.6, **h37^{km}, n6,** σ**1^s.05**/7, **mb3.8**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.54	236	P	Pn	04 51 13.2	+1.5
	2.0nm,0.3s,baz=63,slow=11,SNR=1.9						
PMG				S	Sn	04 52 13.5	-0.7
	4.3nm,0.3s,baz=37,slow=8.5,SNR=3.6						
PMG				LR	LR	04 53 14.0	
	comp=Z,42nm,19.3s,baz=60,slow=37						
WRA	Warramunga Arr	21.72	230	P	P	04 54 39.2	-0.7
	1.6nm,0.9s,baz=55,slow=9.8,SNR=6.5						
ASAR	Alice Springs	24.37	223	P	P	04 55 06.4	-0.2
	2.9nm,0.7s,baz=53,slow=9.3,SNR=24						
FITZ	Fitzroy Crossi	28.09	243	P	P	04 55 39.5	-0.6
	1.5nm,0.7s,baz=55,slow=8.8,SNR=5.8						
ILAR	Eielson Array	83.94	22	P	P	05 02 17.9	+0.4
	0.8nm,0.7s,baz=242,slow=5.1,SNR=15						
TORD	Torodi Ar. Bea	149.82	285	PKPbc	PKPbc	05 09 38.1	-0.8
	1.2nm,0.8s,baz=90,slow=2.7,SNR=3.5						

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*OSPL **31** 05:02:22.7±1.9, 19°.38N×66°.85W, h14^{km}±28^{km}, ML2.6*
*RSPR **31** 05:02:23.9, 19°.15N×68°.00W, h43^{km}±26^{km}, MD3.3/8*
*NEIC **31** 05:02:23.6±1.3, 19°.05N±0°.08×68°.01W±0°.09, h36^{km}±88^{km}, Error ellipse: s-maj=13.6km s-min=10.2km az=126.0*
ISC 31 05:02:26.5±1.3, **19°.00N**±0°.09×**67°.68W**±0°.05, **h27^{km}, n36,** σ**1^s.19**/40, **11C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.75	134	⇑*e*P	Pb	05 02 40.5	-0.6
AGPR	Aguadilla, PR	0.75	134		Pb	05 02 40.7	-0.3
AGPR				IAML		05 02 50.9	
	comp=N,262nm,0.4s						
AGPR	Aguadilla, PR	0.75	134	*i* P	Pb	05 02 40.2	-0.9
AGPR				*e*S	Sb	05 02 50.8	-0.2
MPR	Mayaguez	0.94	147		Pn	05 02 43.8	-0.1
MPR				IAML		05 03 01.7	
	comp=N,216nm,0.2s						
MPR	Mayaguez	0.94	147	*i* P	Pn	05 02 43.2	-0.7
MPR				IAML		05 02 58.2	
	comp=Z,48nm,0.4s						
LSP	Las Mesas	0.99	145	⇑*e*P	Pn	05 02 44.5	-0.3
LSP	Las Mesas	0.99	145		Pn	05 02 44.5	-0.3
AOPR	Arecibo Observ	1.09	126	⇑*e*P	Pn	05 02 45.8	-0.3
AOPR	Arecibo Observ	1.09	126		Pn	05 02 45.4	-0.7
AOPR				IAML		05 03 09.2	
	comp=N,162nm,0.3s						
CRPR	Cabo Rojo, PR	1.12	151	⇑*e*P	Pn	05 02 46.2	-0.3
CRPR	Cabo Rojo, PR	1.12	151	*e*S	Sb	05 03 04.1	+2.5
CRPR	Cabo Rojo, PR	1.12	151		Pn	05 02 46.3	-0.3
CRPR				IAML		05 03 06.8	
	comp=N,196nm,0.6s						
CRPR				IAML		05 03 07.5	
	comp=E,130nm,0.6s						
MLPR	Magueyes Islan	1.19	150	⇑*e*P	Pn	05 02 46.8	-0.6
MLPR	Magueyes Islan	1.19	150	*e*S	Sb	05 03 04.6	+1.2
MLPR	Magueyes Islan	1.19	150		Pn	05 02 46.3	-1.1
MLPR					Sb	05 03 04.1	+0.7
MLPR				IAML		05 03 05.2	
	comp=N,188nm,0.5s						
MLPR				IAML		05 03 05.5	
	comp=E,186nm,0.5s						
CELP	Cerrillos	1.39	131	⇑*e*P	Pn	05 02 51.0	+0.8
CELP	Cerrillos	1.39	131	*e*S	Sb	05 03 11.1	+1.9
CELP	Cerrillos	1.39	131		Pn	05 02 51.0	+0.8
CELP					Sb	05 03 11.1	+1.9
OBIP	Obispado Ponce	1.39	133	⇑*e*P	Pn	05 02 49.5	-0.7
OBIP	Obispado Ponce	1.39	133		Pn	05 02 49.4	-0.8
OBIP				IAML		05 03 12.1	
	comp=E,128nm,0.5s						
OBIP				IAML		05 03 12.8	
	comp=N,148nm,0.6s						
ICMP	Isla Caja de M	1.56	135	Pn	Pn	05 02 52.7	+0.3
ICMP				IAML		05 03 13.8	
	comp=N,92nm,0.1s						
GCPR	Guaynabo City	1.66	114	Pn	Pn	05 02 53.0	-0.9
SJG	San Juan	1.70	121		Pn	05 02 54.7	+0.3
SJG				IAML		05 03 19.8	
	comp=N,81nm,0.5s						
SJG				IAML		05 03 20.1	
	comp=N,126nm,0.3s						
IGPR	InterUniversit	1.81	124	⇑*e*P	Pn	05 02 56.5	+0.6
IGPR	InterUniversit	1.81	124	*e*S	Sb	05 03 21.5	+0.2
PDPR	Patillas Dam,	1.85	122		Pn	05 02 57.0	+0.5
CBYP	Canovanas	1.87	112	⇑*e*P	Pn	05 02 57.5	+0.7
CBYP	Canovanas	1.87	112	*e*S	Sb	05 03 23.0	-0.2
CBYP	Canovanas	1.87	112		Pn	05 02 56.9	0.0
HUMP	Col San Antoni	1.93	116	⇑*e*P	Pn	05 02 58.4	+0.7
HUMP	Col San Antoni	1.93	116	*e*S	Sb	05 03 25.3	+0.5
HUMP	Col San Antoni	1.93	116		Pb	05 02 59.7	-1.4
HUMP				IAML		05 03 32.7	
	comp=N,54nm,0.2s						
MTP	Monte Pirata	2.21	114	Pn	Pn	05 03 02.4	+0.9
CUPR	Culebra, Puert	2.37	106	⇑*e*P	Pn	05 03 04.5	+0.8
CUPR	Culebra, Puert	2.37	106		Pn	05 03 04.8	+1.1
CUPR				IAML		05 03 39.2	
	comp=N,36nm,2.4s						
SDDR	Presa de Saban	3.42	270	*i* P	Pb	05 03 23.9	-2.6
SDDR				*e*S	Sb	05 04 11.6	+4.0
SDDR				IAML		05 04 41.0	
	comp=Z,20nm,2.6s						

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*IDC **31** 05:03:45.9±2.1, 32°.93S×178°.88W, h0^{km}, mb4.1/2, mb1 4.3/3, mb1mx4.0/19, mbtmp4.1/3, ML4.0/1, MS3.5/2, Ms1 3.6/2, ms1mx2.8/31, Error ellipse: s-maj=56.8km s-min=32.4km az=124.0*
ISC 31 05:03:51.9±1.4, **33°.0S**±0°.1×**179°.0W**±0°.2, **h45^{km}, n10,** σ**0^s.99**/9, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.18	210	Pn	Pn	05 05 19.9	-0.7
	3.5nm,0.3s,baz=276,slow=1.4,SNR=19						
URZ				Sn	Sn	05 06 29.9	-0.1
	3.3nm,0.3s,baz=278,slow=4.0,SNR=7.7						
DZM	Mont Dzumac	16.86	306	LR	LR	05 12 38.3	
	comp=Z,67nm,20.4s,baz=314,slow=32						
ASAR	Alice Springs	42.22	270	P	P	05 11 41.4	+0.5
	1.9nm,0.8s,baz=108,slow=7.2,SNR=14						
WRA	Warramunga Arr	43.44	275	P	P	05 11 51.5	+0.8
	1.3nm,0.4s,baz=115,slow=7.9,SNR=25						
SNAA	Sanae	75.63	179	P	P	05 15 32.9	+1.1
VNA3	Neumayer Olymp	75.81	176	P	P	05 15 32.8	0.0
VNA2	Neumayer--Watz	76.24	177	P	P	05 15 36.3	+1.1
	baz=190,slow=5.9						
CPUP	Villa Florida	99.03	129	LR	LR	05 52 30.2	
	comp=Z,60nm,21.2s,baz=182,slow=30						
FINES	FINESS Array B	147.23	338	PKPbc	PKPab	05 23 29.9	-1.5
	6.2nm,1.0s,baz=29,slow=3.2,SNR=7.8						
NOA	NORSAR Array B	151.13	350	PKPbc	PKiKP	05 23 39.6	-0.4
	0.7nm,0.6s,baz=17,slow=4.1,SNR=3.3						

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*BGR **31** 05:05:43.8±0.0, 20°.18S×177°.02W, h33^{km}*
*IDC **31** 05:06:48.7±2.4, 19°.92S×178°.39W, h607^{km}±31^{km}, mb3.7/15, mb1 4.0/17, mb1mx3.9/22, mbtmp4.7/17, Error ellipse: s-maj=22.8km s-min=13.0km az=166.0*
*NEIC **31** 05:06:48.8±1.4, 19°.8S±0°.2×178°.4W±0°.1, h607^{km}±9^{km}, mb4.5/26, Error ellipse: s-maj=22.9km s-min=15.7km az=162.0*
*NOU **31** 05:06:48.8, 19°.84S×178°.21W, h630^{km}, mb4.4, Fiji Islands Region*
ISC 31 05:06:48.4±0.5, **19°.9S**±0°.1×**178°.40W**±0°.07, **h602^{km}, n137,** σ**1^s.01**/146, **mb4.4**/27, **15C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.98	302	P	P	05 08 17.1	+3.0
MSVF	Nonsavu	3.98	302	P	P	05 08 17.0	+3.0
NIUE	Niue	8.04	86	P	P	05 08 49.0	+0.8
NIUE	Niue	8.04	86	P	P	05 08 48.7	+0.6
AFI	Afiamalu	8.68	48	P	P	05 08 53.1	-1.4
AFI	Afiamalu	8.68	48	P	P	05 08 53.4	-1.1
DVP	Devils Point	12.88	277	P	P	05 09 38.0	+2.0
	410µm,0.8s						
YATNC	Mamie plateau,	13.91	258	P	P	05 09 47.8	+1.4
DZM	Mont Dzumac	14.32	259	P	P	05 09 50.4	0.0
	3.4nm,0.3s,baz=98,slow=20,SNR=30						
DZM	Mont Dzumac	14.32	259	P	P	05 09 50.1	-0.4
DZM	Mont Dzumac	14.32	259	P	P	05 09 52.2	+1.8
SANVU	Saraoutou	14.40	286	P	P	05 09 51.4	+0.3
SANVU	Saraoutou	14.40	286	P	P	05 09 53.1	+2.0
NOUC	Port Laguerre	14.46	258	P	P	05 09 53.3	+1.8
URZ	Urewera	18.73	191	P	P	05 10 29.0	-1.4
	4.8nm,0.3s,baz=268,slow=3.4,SNR=21						
PPT	Papeete	27.38	90	P	P	05 11 47.4	-0.1
	8.1nm,0.4s,baz=70,slow=20,SNR=4.4						
EIDS	Eidsvold	28.66	253	P	P	05 11 58.9	+0.3
CTAO	Charters Tower	33.18	263	P	P	05 12 37.6	+0.4
COEN	Coen	37.17	273	P	P	05 13 10.8	+0.6
COEN				IAmb	IAmb	05 13 11.8	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	37.73	243	P	P	05 13 15.0	+0.5
	comp=Z,5.2nm,0.4s,baz=92,slow=13,SNR=7.1						
WB0	Warramunga Arr	44.29	262	P	P	05 14 06.3	-0.2
WB0				IAmb	IAmb	05 14 06.8	
	comp=Z,24nm,1.3s						
AS31	Alice Springs	44.30	256	P	P	05 14 06.6	+0.1
ASAR	Alice Springs	44.30	256	P	P	05 14 06.8	+0.2
	comp=Z,12nm,0.7s,baz=88,slow=8.2,SNR=109						
ASAR				PcP	PcP	05 15 37.1	-0.2
	comp=Z,1.9nm,0.7s,baz=104,slow=3.9,SNR=7.2						
ASAR				S	S	05 19 54.9	-3.2
	comp=Z,2.5nm,0.7s,baz=91,slow=15,SNR=18						
ASAR	Alice Springs	44.30	256	P	P	05 14 06.1	-0.4
WB2	Warramunga Arr	44.30	261	P	P	05 14 05.7	-0.9
WB2				IAmb	IAmb	05 14 06.7	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	44.31	261	P	P	05 14 06.4	-0.3
	comp=Z,3.3nm,0.3s,baz=98,slow=7.7,SNR=92						
WRA				S	S	05 19 54.6	-3.8
	comp=Z,1.9nm,1.0s,baz=94,slow=14,SNR=7.6						
HMH	Humu‘ula Sheep	45.21	31	P	P	05 14 13.9	+0.1
FITZ	Fitzroy Crossi	52.74	262	P	P	05 15 08.9	0.0
MJAR	Matsushiro Arr	69.48	324	P	P	05 16 57.0	-0.8
	comp=Z,7.1nm,0.6s,baz=156,slow=6.0,SNR=9.2						
MJAR	Matsushiro Arr	69.48	324	P	P	05 16 57.5	-0.2
QSPA	South Pole Qui	70.19	180	P	P	05 17 02.3	+0.7
UNV	Unalaska Valle	74.13	7	P	P	05 17 23.2	-0.9
PETK	Petropavlovsk-	75.57	345	P	P	05 17 31.9	-0.4
	comp=Z,9.5nm,0.7s,baz=131,slow=7.5,SNR=14						
KSRS	Korea Array	76.17	319	P	P	05 17 36.6	+0.7
	comp=Z,1.4nm,0.5s,baz=128,slow=6.1,SNR=5.5						
USRK	Ussuriysk Ar.	78.23	326	P	P	05 17 48.0	+1.1
	comp=Z,7.0nm,0.7s,baz=126,slow=3.4,SNR=10						
PNTR	Pine Nut	80.38	42	P	P	05 17 59.9	+1.3
PNTR				IAmb	IAmb	05 18 00.5	
	comp=Z,12nm,0.8s						
NVAR	Mina Array Bea	80.83	44	P	P	05 18 02.0	+1.0
	comp=Z,3.1nm,0.7s,baz=223,slow=9.3,SNR=17						
PAHR	Pah Rah Range	80.87	42		P	05 18 01.3	+0.3
K05A	Summer Lake	81.72	39	P	P	05 18 06.6	+1.2
K05A				IAmb	IAmb	05 18 07.0	
	comp=Z,9.6nm,0.7s						
PINE	Pine Mountain	82.32	38	P	P	05 18 09.4	+1.0
PINE				IAmb	IAmb	05 18 10.5	
	comp=Z,12nm,0.9s						
BRLK	Bradley Lake	82.47	14	P	P	05 18 08.0	-0.5
BRLK				IAmb	IAmb	05 18 08.9	
	comp=Z,20nm,0.9s						
I07A	Izee	83.33	38	P	P	05 18 13.8	+0.4
I07A				IAmb	IAmb	05 18 15.2	
	comp=Z,6.5nm,0.9s						
TTA	Tatalina	84.40	10	P	P	05 18 17.8	-0.2
MTPU	Mount Pierson	84.70	47	P	P	05 18 21.9	+1.3
SCM	Sheep Creek Mo	85.12	14	P	P	05 18 20.9	-0.7
F10A	Beach Ranch, E	85.74	38	P	P	05 18 24.5	-0.5
F10A				IAmb	IAmb	05 18 26.1	
	comp=Z,9.8nm,0.8s						
HLID	Hailey	86.10	41	P	P	05 18 27.8	+1.0
HLID				IAmb	IAmb	05 18 28.8	
	comp=Z,4.4nm,0.8s						
RND	Reindeer	86.17	13	P	P	05 18 25.9	-0.7
TXAR	Lajitas Array	87.04	58	P	P	05 18 33.0	+1.5
	comp=Z,2.5nm,0.8s,baz=214,slow=6.2,SNR=26						
TXAR	Lajitas Array	87.04	58	P	P	05 18 32.2	+0.7
WRH	Wood River Hil	87.28	13	P	P	05 18 30.4	-1.2
WRH				IAmb	IAmb	05 18 31.5	
	comp=Z,15nm,0.8s						
CCB	Clear Creek Bu	87.49	13	P	P	05 18 31.6	-1.0
IMAR	Indian Mountai	87.61	10	P	P	05 18 32.7	-0.4
MDM	Murphy Dome	87.68	12	P	P	05 18 32.5	-1.0
MDM				IAmb	IAmb	05 18 33.2	
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	87.79	13	P	P	05 18 33.0	-1.1
	comp=Z,6.7nm,0.8s,baz=218,slow=5.5,SNR=79						
PDAR	Pinedale Array	88.77	43	P	P	05 18 39.6	+0.2
	comp=Z,2.2nm,0.7s,baz=217,slow=3.3,SNR=22						
CMAR	Chiang Mai Arr	89.55	290	P	P	05 18 44.9	+1.6
	comp=Z,1.5nm,0.4s,baz=120,slow=2.9,SNR=15						
SONM	Songino Array	95.03	319	P	P	05 19 07.5	-0.5
	comp=Z,0.4nm,0.5s,baz=124,slow=5.3,SNR=2.8						
YKA	Yellowknife Ar	96.10	25	P	P	05 19 11.5	-0.7
	comp=Z,0.6nm,0.6s,baz=237,slow=4.0,SNR=13						
ZALV	Zalesovo Beam	109.77	321	PKiKP	PKiKP	05 24 10.1	-1.6
	comp=Z,0.9nm,0.6s,baz=214,slow=1.8,SNR=4.1						
MKAR	Makanchi Array	110.49	314	PKiKP	PKiKP	05 24 11.9	-1.4
	comp=Z,0.9nm,0.6s,baz=69,slow=0.2,SNR=14						
ARCES	ARCESS Array B	128.24	350	PKP	PKPdf	05 24 45.0	-1.7
	comp=Z,5.0nm,0.8s,baz=4.0,slow=1.9,SNR=18						
FINES	FINESS Array B	135.07	344	PKP	PKPdf	05 24 59.6	-0.1
	comp=Z,2.0nm,0.5s,baz=117,slow=3.0,SNR=7.6						
NB2	NORSAR Subarra	138.31	353	PKP	PKPpre	05 24 55.8	
	comp=Z,0.6nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	138.31	353	PKhKP	PKPpre	05 24 57.6	
	comp=Z,0.7nm,0.6s,baz=4.4,slow=2.3,SNR=4.1						
NOA				PKP	PKPdf	05 25 06.3	+0.5
	comp=Z,0.4nm,0.6s,baz=18,slow=4.2,SNR=3.3						
AKASG	Malin Array Be	142.28	331	PKhKP	PKPdf	05 25 08.6	-4.5
	comp=Z,3.6nm,0.3s,baz=44,slow=4.7,SNR=24						
SORM	Soroca	144.47	329	⇑P	PKPdf	05 25 15.7	-1.3
BSEG	Bad Segeberg	145.34	351	*e*PKPbc	PKPbc	05 25 19.3	-0.4
	baz=16,slow=2.6						
BRTR	Keskin Array B	146.14	313	PKPbc	PKPbc	05 25 21.8	-0.9
	comp=Z,4.0nm,0.6s,baz=139,slow=4.6,SNR=19						
BUR08	Bucovina Ar. S	146.32	331		PKPbc	05 25 23.4	+0.6
BURAR	Bucovina Array	146.33	331	⇓P	PKPbc	05 25 23.4	+0.6
BURAR	Bucovina Array	146.33	331		PKPbc	05 25 23.1	+0.3
BIZ	Bicaz	146.40	329	⇑P	PKPbc	05 25 22.6	-0.3
KOLS	Kolonicke sedl	146.59	335	*e*PKP	PKPbc	05 25 23.4	+0.1
FLTG	Flechtingen	146.74	349	*e*PKPbc	PKPbc	05 25 23.0	-0.6
	baz=16,slow=2.6						
VRI	Vrincioaia	146.84	327	⇓P	PKPdf	05 25 22.6	+1.4
ASSE	Asse, Remlinge	147.03	350	*e*PKPbc	PKPbc	05 25 24.1	-0.2
	baz=16,slow=2.6						
OSTC	Ostas	147.26	343	⇑*e*PKP	PKPbc	05 25 25.2	+0.1
CHVC	Chvalec	147.28	343	⇑*e*PKP	PKPbc	05 25 25.0	-0.1
CLZ	Clausthal	147.36	350	*e*PKPbc	PKPbc	05 25 25.3	0.0
	baz=16,slow=2.6						
UPC	Upice	147.36	343	⇑*e*PKP	PKPbc	05 25 25.2	-0.1
CLL	Collm	147.37	347	⇓*i*PKPbc	PKPbc	05 25 25.0	-0.3
	comp=Z,21nm,0.6s						
CLL				⇑*i*PKPab	PKPab	05 25 28.9	-0.4
	comp=Z,13nm,0.7s						
CLL	Collm	147.37	347		PKPbc	05 25 24.9	-0.4
CLL	Collm	147.37	347	*e*PKPbc	PKPbc	05 25 25.0	-0.3
	baz=16,slow=2.6						
DPC	Dobruska-Polom	147.42	342	⇑*e*PKP	PKPbc	05 25 25.6	+0.1
DPC				*e*PKPAB	PKPab	05 25 29.9	+0.3
DOPR	Dopca	147.44	328	⇑P	PKPbc	05 25 25.7	0.0
LANS	Liptovska Anna	147.46	338	*e*PKP	PKPbc	05 25 26.4	+0.7
LANS				*e*		05 25 30.8	
MLR	Muntele Rosu	147.49	327	⇓P	PKPbc	05 25 25.2	-0.8
BRG	Berggiesshubel	147.56	345	*e*PKPbc	PKPbc	05 25 25.7	-0.1
	baz=16,slow=2.6						
MORC	Moravsky Berou	147.56	341	*e*PKP	PKPdf	05 25 23.7	+1.4
MORC				*e*		05 25 30.2	
GTTG	Gottingen	147.71	350	*e*PKPbc	PKPbc	05 25 25.9	-0.3
	baz=16,slow=2.6						

PVCC	Panska Ves	147.73	344	⇑*e*PKP	PKPbc	05 25 26.4	+0.2
PVCC				*e*PKPAB	PKPab	05 25 30.8	0.0
BUG	Bochum--Univer baz=16,slow=2.6	148.18	353	*e*PKPbc	PKPbc	05 25 26.9	-0.4
PRU	Pruhonice	148.23	344	⇑*e*PKP	PKPbc	05 25 27.3	-0.2
PRU				*e*PKPAB	PKPab	05 25 32.8	-0.1
ARR	Arges	148.24	328	⇓P	PKPbc	05 25 28.1	+0.3
VYHS	Vyhne	148.24	338	*e*PKP	PKPbc	05 25 27.4	-0.2
VYHS				*e*		05 25 33.2	
VRAC	Vranov	148.27	341	*e*PKP	PKPbc	05 25 27.0	-0.7
VRAC				*e*		05 25 33.4	
KASTN	Kahler Asten baz=16,slow=2.6	148.28	352	*e*PKPbc	PKPbc	05 25 27.3	-0.3
MOX	Moxa baz=16,slow=2.6	148.28	348	*e*PKPbc	PKPbc	05 25 27.5	-0.2
JAVC	Velka Javorina	148.32	340	*e*PKP	PKPbc	05 25 28.5	+0.6
JAVC				*e*		05 25 35.3	
TANN	Tannenbergstha baz=16,slow=2.6	148.32	347	*e*PKPbc	PKPbc	05 25 27.8	-0.1
WERD	Werda baz=16,slow=2.6	148.33	347	*e*PKPbc	PKPbc	05 25 27.7	-0.1
UBBA	Unterbreizbach baz=16,slow=2.6	148.41	350	*e*PKPbc	PKPbc	05 25 27.3	-0.5
WERN	Wernitzgruen baz=16,slow=2.6	148.46	347	*e*PKPbc	PKPbc	05 25 28.4	+0.2
NKC	Novy Kostel	148.50	347	⇑*e*PKP	PKPbc	05 25 28.2	0.0
NKC				*e*PKPAB	PKPab	05 25 33.9	-0.1
KRUC	Moravsky	148.54	341	*e*PKP	PKPbc	05 25 27.9	-0.4
KRUC				*e*		05 25 34.2	
TREC	Trest	148.60	342	⇑*e*PKP	PKPbc	05 25 28.4	-0.1
PBCC	Pribram	148.65	344	⇑*e*PKP	PKPbc	05 25 28.3	-0.3
PBCC				*e*PKPAB	PKPab	05 25 34.6	0.0
SMOL	Smolenice	148.70	340	*e*PKP	PKPbc	05 25 29.2	+0.5
MANZ	Manzenberg baz=16,slow=2.6	148.81	347	*e*PKPbc	PKPbc	05 25 29.1	+0.1
MODS	Modra-Piesok	148.87	340	*e*PKP	PKPbc	05 25 28.7	-0.5
ROTZ	Rotzenmuhle baz=16,slow=2.6	148.99	347	*e*PKPbc	PKPbc	05 25 29.3	-0.1
TNS	Taunus Mts baz=16,slow=2.6	149.23	351	*e*PKPbc	PKPbc	05 25 30.1	+0.1
KHC	Kasperske Hory	149.26	345	⇑*e*PKP	PKPbc	05 25 29.9	-0.2
KHC				*e*PKPAB	PKPab	05 25 37.4	+0.1
GRF	Grafenberg Arr baz=16,slow=2.6	149.27	348	*e*PKPbc	PKPbc	05 25 30.2	+0.1
BZS	Buzias	149.47	332	⇑P	PKPbc	05 25 29.8	-0.8
GEC2	GERESS Array S	149.50	344		PKPbc	05 25 30.4	-0.3
GEC2	GERESS Array S baz=16,slow=2.6	149.50	344	*e*PKPbc	PKPbc	05 25 30.5	-0.3
GERES	GERESS Array B comp=Z,6.4nm,0.8s,baz=29,slow=3.0,SNR=31	149.50	344	PKPbc	PKPbc	05 25 30.5	-0.3
GERES	GERESS Array B	149.50	344		PKPbc	05 25 30.1	-0.6
PLVB	Pleven	149.63	326	⇓P	PKPbc	05 25 30.9	-0.2
HERR	Herculane	149.66	330	⇓P	PKPbc	05 25 30.0	-1.1
CONA	Conrad Observa comp=Z,5.1nm,0.6s,SNR=7.8	149.72	341	*i* P	PKPbc	05 25 31.0	-0.3
WLF	Walferdange baz=16,slow=2.6	150.05	354	*e*PKPbc	PKiKP	05 25 32.6	+0.1
MOA	Molln comp=Z,2.1nm,0.5s	150.26	343	*e*P	PKPbc	05 25 31.8	-0.7
STU	Stuttgart baz=16,slow=2.6	150.53	350	*e*PKPbc	PKPbc	05 25 33.1	+0.1
SOKA	Soboth comp=Z,6.2nm,0.9s	151.09	341	*e*P	PKPbc	05 25 33.3	-1.2
BFO	Black Forest baz=16,slow=2.6	151.09	351	*e*PKPbc	PKPbc	05 25 33.6	-0.8
KBA	Koelnbreinsper comp=Z,4.4nm,0.5s	151.22	343	*e*P	PKPbc	05 25 33.6	-1.3
WATA	Walderalm comp=Z,4.5nm,0.5s,SNR=4.9	151.42	346	*i* P	PKPbc	05 25 34.5	-0.8
RETA	Reutte comp=Z,1.4nm,0.5s	151.46	347	*e*P	PKPbc	05 25 34.5	-0.8
MOTA	Moosalm comp=Z,10nm,1.3s	151.52	346	*e*P	PKPbc	05 25 35.0	-0.6
MYKA	Terra Mystica comp=Z,4.1nm,0.4s,SNR=4.2	151.54	342	*i* P	PKPbc	05 25 34.1	-1.4
SQTA	Sankt Quirin comp=Z,5.7nm,0.6s	151.62	346	*e*P	PKPbc	05 25 35.1	-0.7
ABTA	Abfaltersbach comp=Z,8.0nm,0.5s,SNR=8.2	151.74	344	*i* P	PKPbc	05 25 34.8	-1.1
DAVA	Damuels comp=Z,9.7nm,1.1s	151.83	348	*e*P	PKPbc	05 25 36.1	-0.2
FETA	Feichten comp=Z,5.7nm,0.8s	151.91	347	*e*P	PKPbc	05 25 36.0	-0.5

IDC 31 05:13:34.7±11.0**,17°.16S**×**176°.56W,h0**^{km}**,mb3.5**/3**, mb1 3.8**/3**,mb1mx3.6**/31**,mbtmp3.5**/3**,Error ellipse: s-maj=524.8km s-min=38.9km az=141.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.2nm,0.6s,baz=93,slow=11,SNR=1.4	46.51	259	P	P	05 22 04.2	0.0
ASAR	Alice Springs 0.6nm,0.6s,baz=88,slow=8.4,SNR=7.9	46.69	253	P	P	05 22 05.4	-0.2
ILAR	Eielson Array 0.3nm,0.6s,baz=222,slow=5.8,SNR=5.3	84.77	12	P	P	05 26 10.4	0.0

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*IDC **31** 05:14:30.8±3.9,42°.99S×14°.74W,h0^{km},mb4.0/2, mb1 3.9/2,mb1mx3.7/16,mbtmp3.9/2,MS4.0/19, Ms1 4.0/19,ms1mx3.9/25,Error ellipse: s-maj=198.6km s-min=70.0km az=136.0*

*GCMT **31** 05:14:38.0±0.3,42°.34S±0°.04×16°.04W±0°.04,h15^{km}±1^{km}, MW4.9/88,Moment Tensor Solution. s19,c21; s88,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.29±.18; $M_{\theta\theta}$1.02±.14; $M_{\phi\phi}$1.27±.12; $M_{r\theta}$2.09±.40; $M_{\theta\phi}$-0.66±.09; $M_{\phi r}$1.09±.26; Best double couple: $M_0$2.84500×10^{16} NP1:ϕ_s136.00000°,δ29.00000°,λ-47.00000°. NP2: ϕ_s270.00000°,δ69.00000°,λ-110.00000°. Principal axes: T 2.0610, Plg22.0000°, Azm15.0000°; N 1.5690, Plg19.0000°, Azm277.0000°; P -3.6300, Plg60.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 31 05:14:34.3±1.2**,42°.3S**±0°.2×**15°.6W**±0°.6**,h10**^{km}**,n23, σ1^{s}.04**/6**,MS4.1**/19**,Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	28.98	174	P	P	05 20 34.5	+0.8
VNA3	Neumayer Olymp	29.15	176	P	P	05 20 34.8	-0.4
BOSA	Boshof comp=Z,200nm,18.9s,baz=216,slow=32	35.60	81	LR	LR	05 33 31.3	
CPUP	Villa Florida comp=Z,260nm,18.3s,baz=141,slow=33	37.60	282	LR	LR	05 35 45.5	
BDFB	Brasilia comp=Z,174nm,18.4s,baz=134,slow=31	38.49	304	LR	LR	05 34 59.7	
MAW	Mawson comp=Z,105nm,20.9s,baz=240,slow=30	47.42	149	LR	LR	05 38 07.1	
DBIC	Dimbokro comp=Z,105nm,21.8s,baz=158,slow=29	49.72	14	LR	LR	05 38 54.0	
TORD	Torodi Ar. Bea 1.9nm,0.9s,baz=185,slow=7.2,SNR=5.4	57.43	20	P	P	05 24 24.2	+1.0
TORD	comp=Z,104nm,20.2s,baz=200,slow=30			LR	LR	05 43 44.9	
VNDA	Vanda comp=Z,95nm,18.6s,baz=170,slow=34	60.43	179	LR	LR	05 48 40.8	
KMBO	Kilima Mbogo comp=Z,280nm,19.5s,baz=268,slow=34	62.53	64	LR	LR	05 50 01.4	
ROSC	El Rosal comp=Z,270nm,19.7s,baz=142,slow=34	70.91	296	LR	LR	05 55 28.1	
RPN	Rapa Nui comp=Z,90nm,19.6s,baz=132,slow=31	74.89	247	LR	LR	05 53 37.0	
ATD	Arta Tunnel comp=Z,152nm,18.3s,baz=234,slow=34	75.66	60	LR	LR	05 57 46.7	
KEST	Kesra comp=Z,120nm,20.1s,baz=346,slow=33	80.95	20	LR	LR	05 59 14.1	
EIL	Elat comp=Z,106nm,20.3s,baz=270,slow=33	85.40	42	LR	LR	06 01 57.4	
MMAI	Mount Meron Ar comp=Z,82nm,21.9s,baz=250,slow=33	88.35	41	LR	LR	06 03 11.2	
BRTR	Keskin Array B 0.2nm,0.4s,baz=194,slow=2.4,SNR=2.0	93.05	36	P	P	05 27 46.9	-1.1
BRTR	comp=Z,40nm,20.1s,baz=222,slow=35			LR	LR	06 08 48.3	
GERES	GERESS Array B comp=Z,43nm,18.0s,baz=272,slow=35	94.36	19	LR	LR	06 09 41.0	
WSAR	Wadi Sarin comp=Z,111nm,19.1s,baz=220,slow=35	94.43	63	LR	LR	06 08 59.6	
VRAC	Vranov comp=Z,80nm,18.6s,baz=270,slow=35	95.52	20	LR	LR	06 10 27.7	
GNI	Garni comp=Z,41nm,20.7s,baz=222,slow=34	98.58	42	LR	LR	06 10 46.5	
YKA	Yellowknife Ar 0.5nm,0.9s,baz=115,slow=2.6,SNR=4.1	130.41	323	PKP	PKPdf	05 33 43.6	-0.3
ILAR	Eielson Array 2.2nm,0.9s,baz=84,slow=1.7,SNR=17	144.68	326	PKPbc	PKPab	05 34 09.0	+0.1

IDC 31 05:45:11.5±11.0**,25°.01S**×**179°.07E,h650**^{km}±149^{km}**, mb3.4**/4**,mb1 3.6**/4**,mb1mx3.2**/21**,mbtmp4.4**/4**,Error ellipse: s-maj=118.6km s-min=60.9km az=179.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 2.7nm,0.4s,baz=95,slow=11,SNR=12	33.54	250	P	P	05 50 59.6	-0.8
ASAR	Alice Springs 3.8nm,0.4s,baz=90,slow=7.5,SNR=106	41.03	262	P	P	05 52 01.5	+0.2
WRA	Warramunga Arr 4.6nm,0.4s,baz=100,slow=6.2,SNR=162	41.50	268	P	P	05 52 05.4	+0.4
TXAR	Lajitas Array 0.5nm,1.0s,baz=226,slow=4.5,SNR=3.5	91.73	58	P	P	05 57 11.6	-0.4
HFS	Hagfors 1.1nm,0.4s,baz=34,slow=2.4,SNR=12	143.45	348	PKP	PKPdf	06 03 33.9	+0.7

IDC 31 05:53:18.0±2.5**,26°.42N**×**53°.54E,h0**^{km}**,mb3.7**/4**, mb1 3.8**/5**,mb1mx3.4**/60**,mbtmp3.7**/5**,ML2.7**/1**,Error ellipse: s-maj=67.6km s-min=26.1km az=36.0,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin 0.2nm,0.3s,baz=312,slow=10,SNR=1.1	5.61	123	Pn	Pn	05 54 43.7	+0.9
WSAR	0.7nm,0.3s,baz=73,slow=7.5,SNR=4.1			Sn	Sn	05 55 47.7	-0.2
BRTR	Keskin Array B 0.6nm,0.7s,baz=117,slow=13,SNR=3.8	21.25	314	P	P	05 58 05.6	-0.3
ZALV	Zalesovo Beam 1.6nm,0.4s,baz=239,slow=8.2,SNR=5.8	35.91	32	P	P	06 00 19.7	-0.1
HFS	Hagfors 2.7nm,0.9s,baz=140,slow=9.4,SNR=1.0	43.30	332	P	P	06 01 22.1	+0.8
YKA	Yellowknife Ar 0.2nm,0.5s,baz=9.9,slow=5.0,SNR=4.2	90.89	355	P	P	06 06 22.5	-0.9

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*SOME **31** 05:55:53.7,40°.93N×69°.73E,h15^{km}*

*NNC **31** 05:55:54.6±2.8,40°.84N×69°.77E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=19.4km s-min=11.4km az=34.0*

*ISU **31** 05:55:55,40°.93N×69°.73E,h5^{km},Hypocentre not reviewed by the ISC*

*KRNET **31** 05:55:56.6±0.1,41°.00N×69°.86E,mb3.0*

ISC 31 05:55:55.9±1.6**,41°.05N**±0°.03×**69°.98E**±0°.06**,h1**^{km}±11^{km}**, n29,σ2^{s}.17**/49**,15C-7D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGS	TashGRES	0.51	318	*e*P		05 55 22.0	
TGS				*e*S		05 55 30.0	
TAS	Tashkent	0.58	298	*e*P		05 56 04.0	
TAS				*e*S		05 56 11.0	
TRKS	Terek-Say baz=65	1.00	61	⇑*i*P	Pn	05 56 17.4	+0.2
TRKS	baz=65			⇑*i*S	Sn	05 56 32.9	+0.9
IUG	Iuzhnay 154nm,0.2s	1.10	2	*e*P	Pn	05 56 19.6	+1.1
IUG	150nm,0.4s			*e*S	Sn	05 56 38.2	+3.9
IUG	Iuzhnay 154nm,0.2s	1.10	2	P	Pn	05 56 19.6	+1.1
IUG	150nm,0.4s			S	Sn	05 56 38.3	+3.9
BTK	Batken baz=42	1.18	147	⇑*i*P	Pg	05 56 19.6	+1.1
BTK	baz=42			⇑*i*S	Sn	05 56 36.1	-0.2
BTK	Batken	1.18	147	*e*P		05 56 18.0	
BTK				*e*S		05 56 39.0	
BRLS	Borolday 22nm,0.2s	1.98	357	*e*P	Pn	05 56 28.8	-1.7
BRLS	109nm,0.4s			*e*S	Sn	05 56 54.3	-1.7
KK31	Karatay Array 5.8nm,0.5s,baz=198,slow=17,SNR=208	2.09	11	⇑Pn	Pg	05 56 35.3	-0.6
KK31	19nm,0.5s,baz=201,slow=26,SNR=6.7			⇓Sn	Sg	05 57 05.4	+2.4
DRK	Karamyk baz=35	2.10	138	⇓*e*P	Pg	05 56 35.8	-0.3
DRK	baz=35			⇓*i*S	Sg	05 57 04.2	+0.9
OHH	Osh baz=1.0	2.20	103	⇑*i*P	Pg	05 56 37.3	-0.7
OHH	baz=1.0			⇑*i*S	Sg	05 57 07.2	+0.7
OHH	Osh	2.20	103	*e*P		05 56 36.0	
OHH				*e*S		05 57 13.0	
ARSB	Arslanbob baz=81	2.29	82	⇓*i*P	Pg	05 56 38.5	-1.2
ARSB	baz=81			⇓*i*S	Sg	05 57 09.8	+0.5
ARSB	Arslanbob	2.29	82	*e*P		05 56 40.0	
ARSB				*e*S		05 57 15.0	
MNAS	Manas baz=52	2.38	52	⇓*e*P	Pg	05 56 40.6	-0.8
MNAS	baz=52			⇓*i*S	Sg	05 57 12.7	+0.5
MRKS	Merke 6.0nm,0.5s	2.96	54	*e*P	Pg	05 56 52.8	+0.2
MRKS	5.3nm,0.5s			*e*S	Sg	05 57 34.6	+3.7
MRKS	Merke 6.0nm,0.5s	2.96	54	Pg	Pg	05 56 52.5	-0.1
MRKS	5.3nm,0.5s			Lg	Lg	05 57 33.8	
AML	Almayashu baz=67	2.99	68	⇑*e*P	Pb	05 56 49.0	-1.2
AML	baz=67			⇑*i*S	Sb	05 57 27.2	-0.1
EKS2	Erkin-Say baz=59	3.27	59	⇑*e*P	Pb	05 56 52.5	-2.2
EKS2	baz=59			⇑*i*S	Sb	05 57 34.6	-0.3
ARLS	Aral baz=74	3.37	75	⇑*i*P	Pb	05 56 54.3	-2.1
ARLS	baz=74			⇑*i*S	Sb	05 57 36.4	-1.5
SGDS	Sogindy 5.5nm,0.8s	4.21	54	Pg	Pg	05 57 14.3	-2.2
SGDS	7.5nm,0.8s			Lg	Lg	05 58 12.1	
TKM2	Tokmak 2 3.2nm,0.8s	4.59	64	⇑Pg	Pg	05 57 21.3	-2.5
TKM2	5.7nm,0.6s			⇑Lg	Lg	05 58 26.9	
DGS	Degeres 5.3nm,0.6s	4.83	61	*e*P	Pg	05 57 27.1	-1.4
DGS	9.5nm,0.6s			*e*S	Sg	05 58 34.3	+3.1
DGS	Degeres 5.3nm,0.6s	4.83	61	Pg	Pg	05 57 26.5	-2.0
DGS	9.5nm,0.6s			Lg	Lg	05 58 34.3	
KST	Kastek 7.1nm,0.8s	4.88	64	*e*P	Pg	05 57 27.4	-2.0
KST	10nm,0.7s			*e*S	Sg	05 58 34.6	+1.9
KST	Kastek 7.1nm,0.8s	4.88	64	Pg	Pg	05 57 27.4	-2.0
KST	10nm,0.7s			Lg	Lg	05 58 34.7	
BTLS	Baital 0.9nm,0.2s	4.98	35	*e*P	Pg	05 57 28.7	-2.6
BTLS	3.8nm,0.4s			*e*S	Sg	05 58 36.6	+0.8
IZV	Izvestkoviy 2.6nm,0.6s	5.33	66	*e*P	Pg	05 57 38.3	+0.3
IZV	8.3nm,0.7s			*e*S	Sg	05 58 53.2	+6.3
IZV	Izvestkoviy 2.6nm,0.6s	5.33	66	Pg	Pg	05 57 38.3	+0.3
TNSS	Tian-Shan 1.7nm,0.6s	5.56	67	*e*P	Pg	05 57 42.0	-0.4
TNSS	2.2nm,0.6s			*e*S	Sg	05 58 59.5	+5.1
TNSS	Tian-Shan 1.7nm,0.6s	5.56	67	Pg	Pg	05 57 41.9	-0.4
KTBS	Karatobe 1.3nm,0.4s	5.63	60	*e*P	Pg	05 57 41.5	-2.4
KTBS	12nm,0.6s			*e*S	Sg	05 58 58.7	+1.8
KTBS	Karatobe 1.3nm,0.4s	5.63	60	Pg	Pg	05 57 41.5	-2.4
KTBS	12nm,0.6s			Lg	Lg	05 58 58.7	
ARXS	Arharly 2.7nm,0.5s	6.60	59	Pg	Pg	05 57 59.3	-2.9
ARXS	3.6nm,0.5s			Lg	Lg	05 59 28.5	

IDC 31 06:00:40.4±1.8**,0°.90N**×**146°.10E,h0**^{km}**,mb3.6**/5**, mb1 3.8**/5**,mb1mx3.5**/43**,mbtmp3.6**/5**,MS3.3**/2**,Ms1 3.3**/2**, ms1mx2.7**/32**,Error ellipse: s-maj=77.8km s-min=26.4km az=103.0,Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.9nm,0.7s,baz=39,slow=9.8,SNR=8.6	23.71	208	P	P	06 05 53.5	-0.7
WRA	comp=Z,87nm,19.6s,baz=205,slow=35			LR	LR	06 14 38.0	
ASAR	Alice Springs 0.6nm,0.8s,baz=41,slow=8.6,SNR=3.1	27.14	205	P	P	06 06 26.5	+0.9
FITZ	Fitzroy Crossi comp=Z,49nm,20.8s,baz=292,slow=35	27.60	226	LR	LR	06 16 51.5	
MKAR	Makanchi Array 0.2nm,0.5s,baz=104,slow=7.2,SNR=2.2	71.67	319	P	P	06 12 04.4	+0.2
KURBB	Kurchatov Arra 0.3nm,0.2s,baz=94,slow=5.9,SNR=1.4	75.22	322	P	P	06 12 24.8	-0.3
ILAR	Eielson Array 0.5nm,1.0s,baz=242,slow=6.5,SNR=2.1	79.55	24	P	P	06 12 49.1	+0.1

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*AEIC **31** 06:16:05±3.0,56°.66N±0°.04×168°.73W±0°.10,h10^{km}±5^{km}, Error ellipse: s-maj=8.9km s-min=3.5km az=56.0*

NEIC 31 06:16:06.6±2.1**,56°.71N**±0°.06×**168°.9W**±0°.1**,h10**^{km}±1^{km}**, ML3.5**/19(AEIC)**,Error ellipse: s-maj=12.1km s-min=5.7km az=43.0,Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.90	302		Sn	06 16 38.1	-0.1
SPIA	Saint Paul Isl	0.90	302		Pb	06 16 24.6	+0.4
MCIR	Makushin Cirqu	2.98	157		Pn	06 16 54.5	+0.5
AKGG	Akutan Green G	3.00	146		Pn	06 16 53.7	-0.4
AKGG					Sn	06 17 28.8	-1.3
AKRB	Akutan Reef Bi	3.04	147		Pn	06 16 54.6	0.0
AKRB					Sn	06 17 32.2	+1.3
AKLV	Akutan Long Va	3.04	146		Pn	06 16 54.1	-0.6
MSW	Makushin Switc	3.04	156		Pn	06 16 54.9	+0.2
MNAT	Makushin Natee	3.09	156		Pn	06 16 56.2	+0.8
MAPS	Pakushin South	3.11	159		Pn	06 16 55.7	+0.1
MAPS					Sn	06 17 32.0	-0.8
AKUT	Akutan	3.12	145	Pn	Pn	06 16 55.9	+0.1
MGOD	Makushin Gods	3.13	158		Pn	06 16 57.1	+1.1
UNV	Unalaska Valle	3.17	154		Sn	06 17 33.6	-0.7
UNV	Unalaska Valle	3.17	154		Pn	06 16 56.8	+0.4
WECS	Westdahl Cape	3.18	132		Pn	06 16 58.2	+1.6
WESP	Westdahl Peak	3.23	132		Pn	06 16 58.7	+1.4
NIKH	Nikolski High	3.75	180		Pn	06 17 03.5	-1.0
ATKA	Atka Island	5.49	217		Pn	06 17 28.9	+0.6
CHGN	Chignik	5.79	90	Pn	Pn	06 17 31.2	-1.2
ADK	Adak	6.66	227	Pn	Pn	06 17 42.7	-1.7
ANM	Nome	8.06	11	Pn	Pn	06 18 03.5	0.0
TTA	Tatalina	8.97	41	Pn	Pn	06 18 15.5	-0.6
PPLA	Purkeypile	10.41	47	Pn	Pn	06 18 38.1	+2.3
GHO	Glory Hole Cre	11.37	55	Pn	Pn	06 18 47.3	-1.6
BPAW	Bear Paw Mtn.	11.49	43	Pn	Pn	06 18 50.3	-0.2

GCMT 31 06:33:23.0±0.4**,42°.85S**±0°.05×**15°.76W**±0°.04**,h17**^{km}±1^{km}**, MW4.8**/74**,Moment Tensor Solution. s15,c16; s74,c87; Duration: 0 Moment tensor: Scale** 10^{16}**Nm;** M_{rr}-1.61±.15; $M_{\theta\theta}$0.03±.11; $M_{\phi\phi}$1.58±.12; $M_{r\theta}$-1.26±.38; $M_{\theta\phi}$0.02±.07; $M_{\phi r}$-1.12±.32; **Best double couple:** $M_0$2.28000×10^{16} **NP1:**ϕ_s164.00000°,δ29.00000°, λ-132.00000°. **NP2:**ϕ_s30.00000°,δ69.00000°, λ-69.00000°. **Principal axes:** T 2.0320, Plg21.0000°, Azm105.0000°; N 0.5010, Plg19.0000°, Azm202.0000°; P -2.5290, Plg61.0000°, Azm331.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Tristan da Cunha region**

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*NOU **31** 06:44:44.3,25°.32S×179°.15W,h499^{km},mb4.9,South of Fiji Islands*

*IDC **31** 06:44:52.0±1.1,25°.66S×179°.64E,h479^{km}±10^{km}, mb4.0/14,mb1 4.2/16,mb1mx3.9/40,mbtmp4.8/16,Error ellipse: s-maj=14.9km s-min=12.7km az=3.0*

*NEIC **31** 06:44:53.0±1.3,25°.8S±0°.1×179°.7E±0°.1,h494^{km}±7^{km}, mb4.6/53,Error ellipse: s-maj=18.8km s-min=15.5km az=88.0*

ISC 31 06:44:53.6±0.4**,25°.79S**±0°.06×**179°.67E**±0°.07**,h503**^{km}**, n181,**σ**1^{s}.05**/190**,mb4.6**/40**,2C-1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island 563nm,0.3s,baz=78,slow=7.1,SNR=17	4.06	149	P	P	06 46 12.2	-0.4
RAO	255nm,0.3s,baz=94,slow=22,SNR=4.9			S	S	06 47 18.1	+0.9
RAO	Raoul Island	4.06	149	P	P	06 46 09.8	-2.8
RAO				S	S	06 47 15.4	-1.7
MSVF	Nonsavu	8.15	349	P	P	06 46 48.9	-3.0
OUZ	Omahuta	10.76	208	P	P	06 47 19.3	+0.5
YATNC	Mamie plateau,	12.26	285	P	P	06 47 35.6	+0.6
URZ	Urewera 4.0nm,0.3s,baz=94,slow=2.4,SNR=21	12.62	189	P	P	06 47 36.1	-2.5
URZ	2.2nm,0.3s,baz=231,slow=23,SNR=11			S	S	06 49 54.8	+0.2
DZM	Mont Dzumac 2.9nm,0.3s,baz=135,slow=20,SNR=34	12.64	284	P	P	06 47 38.9	-0.3
DZM	Mont Dzumac	12.64	284	P	P	06 47 39.8	+0.6
NOUC	Port Laguerre	12.76	284	P	P	06 47 40.8	+0.5
SANVU	Saraoutou	15.54	309	P	P	06 48 10.2	+0.6
LHI	Lord Howe Isla baz=19	18.95	248	P	P	06 48 43.5	+1.0
RPZ	Rata Peaks 0.8nm,0.3s,baz=5.2,slow=11,SNR=3.0	19.21	199	P	P	06 48 43.9	-0.8
ARMA	Armidale baz=25,SNR=12	25.13	253	P	P	06 49 39.3	+1.0
ARMA	Armidale	25.13	253	P	P	06 49 39.7	+1.4
ARMA	comp=Z,22nm,0.8s			IAmb	IAmb	06 49 40.4	
EIDS	Eidsvold baz=26,SNR=17	25.77	265	P	P	06 49 44.3	+0.4
EIDS	Eidsvold	25.77	265	P	P	06 49 44.5	+0.7
EIDS	comp=Z,36nm,0.8s			IAmb	IAmb	06 49 45.1	
MGCD	Mangrove Creek baz=26,SNR=15	25.88	247	P	P	06 49 46.2	+1.5
CNB	Canberra Magne baz=28,SNR=8.3	27.68	243	P	P	06 50 01.4	+0.7
RMQ	Roma baz=28,SNR=18	27.73	262	P	P	06 50 02.5	+1.4
CAN	Canberra	27.98	243	P	P	06 50 04.6	+1.4
CAN	comp=Z,20nm,0.6s			IAmb	IAmb	06 50 05.2	
YNG	Young baz=29,SNR=9.2	28.28	245	P	P	06 50 07.4	+1.5
CMSA	Cobar Meteorol baz=31,SNR=69	30.28	251	P	P	06 50 23.6	+0.4
TOO	Toolangi baz=32,SNR=23	31.20	239	P	P	06 50 32.0	+0.8
TOO	Toolangi	31.20	239	P	P	06 50 31.9	+0.7
TOO	comp=Z,30nm,0.8s			IAmb	IAmb	06 50 32.9	
CTAO	Charters Tower	31.23	273	P	P	06 50 32.2	+0.6
QLP	Quilpie baz=32,SNR=18	31.75	261	P	P	06 50 36.1	+0.2
MTSU	Mount Surprise baz=34,SNR=85	33.58	276	P	P	06 50 52.0	+0.4
STKA	Stephens Creek baz=34,SNR=154	33.78	251	P	P	06 50 53.6	+0.5
STKA	Stephens Creek	33.78	251	P	P	06 50 53.6	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,32nm,0.5s,baz=96,slow=11,SNR=145						
STKA				ScP	ScP	06 56 18.1	+3.2
	comp=Z,3.3nm,0.8s,baz=15,slow=4.0,SNR=4.2						
STKA	Stephens Creek	33.78	251	P	P	06 50 53.9	+0.8
STKA				IAmb	IAmb	06 50 54.3	
	comp=Z,7.7nm,0.5s						
ARPS	Mount Arapiles	33.94	242	P	P	06 50 54.9	+0.5
	baz=34,SNR=6.0						
PMG	Port Moresby	34.87	292	P	P	06 51 02.9	+0.4
HTT	Hallett	36.06	248	P	P	06 51 12.3	+0.1
	baz=36,SNR=42						
COEN	Coen	36.16	282	P	P	06 51 14.0	+0.8
QIS	Mount Isa	37.10	270	P	P	06 51 20.6	-0.4
	baz=37,SNR=27						
BBOO	Buckleboo	38.46	249	P	P	06 51 31.4	-0.5
	baz=39,SNR=84						
BBOO	Buckleboo	38.46	249	P	P	06 51 31.5	-0.4
AS31	Alice Springs	41.46	263	P	P	06 51 56.1	-0.1
ASAR	Alice Springs	41.47	263	P	P	06 51 56.0	-0.3
	comp=Z,50nm,0.4s,baz=92,slow=7.4,SNR=1523						
ASAR				ScP	ScP	06 56 47.1	+2.8
	comp=Z,2.8nm,0.9s,baz=110,slow=4.1,SNR=8.5						
ASAR				S	S	06 57 33.2	-1.8
	comp=Z,5.0nm,0.9s,baz=100,slow=17,SNR=17						
ASAR	Alice Springs	41.47	263	P	P	06 51 55.9	-0.3
WR0	Warramunga Arr	41.83	268	P	P	06 51 58.8	-0.3
WB2	Warramunga Arr	42.00	268	P	P	06 52 00.2	-0.3
	baz=42						
WRAB	Tennant Creek	42.01	268	P	P	06 52 00.2	-0.3
WRA	Warramunga Arr	42.01	268	P	P	06 51 59.8	-0.8
	comp=Z,53nm,0.6s,baz=103,slow=7.8,SNR=531						
WRA				ScP	ScP	06 56 50.5	+4.0
	comp=Z,3.6nm,1.0s,baz=108,slow=4.2,SNR=6.8						
WRA				S	S	06 57 41.6	-1.4
	comp=Z,4.7nm,0.8s,baz=101,slow=14,SNR=10						
WRA	Warramunga Arr	42.01	268	P	P	06 51 59.4	-1.2
WB0	Warramunga Arr	42.02	269	P	P	06 52 00.3	-0.3
JAY	Jayapura	44.01	295	P	P	06 52 15.9	-0.4
	comp=Z,6.2nm,0.3s,baz=212,slow=9.8,SNR=6.0						
FORT	Forrest	45.40	251	P	P	06 52 26.0	-0.8
	baz=46,SNR=36						
FORT	Forrest	45.40	251	P	P	06 52 26.1	-0.7
KDU	Kakadu	46.19	277	P	P	06 52 32.0	-1.0
	baz=46,SNR=48						
MTN	Manton Dam	47.33	276	P	P	06 52 40.7	-0.9
	baz=48,SNR=18						
MTN	Manton Dam	47.33	276	P	P	06 52 40.7	-0.9
MTN				IAmb	IAmb	06 52 45.8	
	comp=Z,47nm,1.4s						
FITZ	Fitzroy Crossi	50.41	267	P	P	06 53 04.6	+0.1
	baz=51,SNR=29						
FITZ	Fitzroy Crossi	50.41	267	P	P	06 53 04.5	+0.1
FITZ				IAmb	IAmb	06 53 06.0	
	comp=Z,27nm,0.8s						
FAKI	Fak Fak	50.87	289	P	P	06 53 07.5	-0.4
FAKI				IAmb	IAmb	06 53 17.9	
	comp=Z,34nm,1.2s						
SIJI	Sorong	52.77	290	P	P	06 53 21.6	-0.1
	comp=Z,42nm,0.6s,baz=94,slow=8.5,SNR=12						
KLBR	Kellerberrin	54.00	249	P	P	06 53 29.5	-0.7
	baz=54,SNR=7.5						
MEEK	Meekatharra	54.30	255	P	P	06 53 31.1	-1.3
	baz=55,SNR=7.9						
PSA00	Pilbara Seismi	54.55	261	P	P	06 53 33.1	-1.1
BLDU	Ballidu	55.07	249	P	P	06 53 36.8	-1.0
	baz=55,SNR=16						
MORW	Morawa	55.96	251	P	P	06 53 43.2	-0.8
	baz=56,SNR=3.9						
MORW	Morawa	55.96	251	P	P	06 53 43.6	-0.4
MORW				IAmb	IAmb	06 53 60.0	
	comp=Z,27nm,1.4s						
CASY	Casey	58.29	206	P	P	06 53 58.8	-0.5
QSPA	South Pole Qui	64.31	180	P	P	06 54 39.9	+1.0
	comp=Z,12nm,0.7s,baz=16,slow=1.0,SNR=51						
QSPA	South Pole Qui	64.31	180	P	P	06 54 40.0	+1.0
QSPA				IAmb	IAmb	06 54 40.9	
	comp=Z,12nm,0.7s						
BELA	Belgrano 2	74.61	173	P	P	06 55 40.2	-0.2
MDSI	Maura Dua	75.00	272	P	P	06 55 42.9	-0.7
MAW	Mawson	75.89	201	P	P	06 55 48.1	+0.5
ADK	Adak	77.40	2	P	P	06 55 55.9	-0.1
ADK				IAmb	IAmb	06 55 58.9	
	comp=Z,43nm,1.1s						
KSRS	Korea Array	79.50	321	P	P	06 56 07.1	-0.5
	comp=Z,1.7nm,0.7s,baz=143,slow=6.5,SNR=6.0						
PETK	Petropavlovsk-	80.86	347	P	P	06 56 14.1	-0.2
	comp=Z,3.1nm,0.7s,baz=93,slow=8.7,SNR=5.6						
PETK	Petropavlovsk-	80.86	347	P	P	06 56 14.6	+0.3
NJ2	Nanjing	81.67	311	⇑P	P	06 56 21.0	+2.0
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
SNAA	Sanae	82.79	179	P	P	06 56 23.8	-0.5
SNAA	Sanae	82.79	179	P	P	06 56 24.0	-0.3
VNA3	Neumayer Olymp	83.02	177	P	P	06 56 25.2	-0.1
VNA2	Neumayer--Watz	83.43	178	P	P	06 56 27.4	+0.1
	baz=184,slow=3.7						
VNA1	Neumayer--Stat	83.67	177	P	P	06 56 28.0	-0.5
HOPS	Hopland Field	83.75	41	P	P	06 56 30.5	+1.2
MURC	Murrieta	84.16	48	P	P	06 56 32.4	+0.8
	baz=234						
BFSC	Mount Baldy Ra	84.23	48	P	P	06 56 32.4	+0.4
	baz=234						
VES	Vestal, Richgr	84.25	46	P	P	06 56 32.7	+0.8
	baz=232						
MONP2	Monument Peak	84.28	49	P	P	06 56 33.8	+1.5
	baz=234,SNR=7.7						
IKP	In-Ko-Pah, Jac	84.35	50	P	P	06 56 33.9	+1.3
	baz=234						
EDW2	Edwards Air Fo	84.39	47	P	P	06 56 33.2	+0.5
	baz=233,SNR=5.4						
ISA	Isabella, Lake	84.54	46	P	P	06 56 34.3	+0.8
	baz=233,SNR=7.9						
ISA	Isabella, Lake	84.54	46	P	P	06 56 35.2	+1.7
ISA				IAmb	IAmb	06 56 35.4	
	comp=Z,12nm,0.9s						
PFO	Pinyon Flats O	84.67	49	P	P	06 56 35.2	+1.0
	baz=234						
O02D	Mt. Diablo Mer	84.68	40	P	P	06 56 35.2	+1.2
	baz=230,SNR=5.1						
SWSC	Sam W. Stewart	84.73	50	P	P	06 56 35.4	+1.1
	baz=235						
CMB	Columbia Colle	84.77	43	P	P	06 56 35.0	+0.5
LRMC	Laurel Mtn Rad	84.95	47	P	P	06 56 36.3	+0.8
	baz=233						
BELC	Belle Mtn. Jos	85.20	49	P	P	06 56 38.0	+1.2
	baz=234,SNR=6.0						
N02D	Trinity Center	85.24	40	P	P	06 56 38.4	+1.7
	baz=230						
CWC	Cottonwood Cre	85.26	46	P	P	06 56 37.7	+0.7
	baz=233						
O03E	Paynes Creek	85.34	41	P	P	06 56 37.6	+0.4
	baz=230						
BC3	Big Chuckawall	85.38	49	P	P	06 56 39.1	+1.5
	baz=235						
MPMC	Manual Prospec	85.42	46	P	P	06 56 38.6	+0.7
	baz=233						
GSC	Goldstone, Bar	85.42	47	P	P	06 56 38.7	+0.9
	baz=234,SNR=5.5						
M02C	Callahan	85.43	40	P	P	06 56 38.4	+0.7
	baz=230						
HEC	Hector,Ludlow	85.46	48	P	P	06 56 38.8	+0.8
	baz=234,SNR=8.7						
GLA	Glamis	85.46	50	P	P	06 56 39.7	+1.7
	baz=235						
PIX	Pinacate	85.59	52	P	P	06 56 39.1	+0.6
YBH	Yreka Blue Hor	85.73	39	P	P	06 56 40.4	+1.3
	comp=Z,2.2nm,0.8s,baz=228,slow=3.6,SNR=5.5						
IRM	Iron Mountain	85.87	49	P	P	06 56 41.3	+1.4
	baz=235,SNR=5.9						
GMRC	Granite Mounta	85.89	48	P	P	06 56 41.0	+0.9
	baz=235						
BEKR	Beckworth	85.93	42	P	P	06 56 40.3	+0.1
214A	Organ Pipe Nat	86.27	52	P	P	06 56 43.4	+1.6
	baz=236,SNR=5.4						
L04D	Klamath Falls	86.27	39	P	P	06 56 42.8	+1.1
	baz=230						
NVAR	Mina Array Bea	86.31	44	P	P	06 56 42.8	+0.7
	comp=Z,3.8nm,0.7s,baz=223,slow=8.4,SNR=22						
PDMCI	Parker Dam,Lak	86.64	49	P	P	06 56 44.9	+1.5
	baz=236						
I03D	Drain, OR	86.65	38	P	P	06 56 44.1	+0.8
	baz=229						
TPNV	Topopah Spring	86.75	46	P	P	06 56 45.1	+1.0
	baz=234,SNR=6.9						
TPNV	Topopah Spring	86.75	46	P	P	06 56 44.6	+0.5
TPNV				IAmb	IAmb	06 56 45.9	
	comp=Z,6.6nm,0.9s						
K04D	Chiloquin, OR	86.85	39	P	P	06 56 45.2	+0.8
	baz=230						
J04D	Umpqua Nationa	87.04	38	P	P	06 56 46.7	+1.3
	baz=230						
PLCA	Paso Flores	87.17	134	P	P	06 56 47.7	+1.6
	comp=Z,2.0nm,0.7s,baz=239,slow=6.3,SNR=9.3						
I04A	Tendick Farm,	87.23	38	P	P	06 56 46.7	+0.6
	baz=230						
H04D	Lebanon	87.52	37	P	P	06 56 48.7	+1.3
	baz=230						
J05D	Fort Rock, OR	87.56	39	P	P	06 56 49.2	+1.4
	baz=231						
PRN	Pahroc Range	87.79	46	P	P	06 56 47.5	-1.5
PRN				IAmb	IAmb	06 56 51.4	
	comp=Z,9.2nm,1.2s						
TUC	Tucson	87.90	53	P	P	06 56 51.6	+2.0
	baz=238						
TUC	Tucson	87.90	53	P	P	06 56 48.9	-0.7
TUC				IAmb	IAmb	06 56 52.4	
	comp=Z,7.8nm,0.9s						
PINE	Pine Mountain	88.05	39	P	P	06 56 49.8	-0.3
I05D	Terrebonne, OR	88.17	38	P	P	06 56 51.7	+1.2
	baz=230						
WVOR	Wild Horse Val	88.53	41	P	P	06 56 52.8	+0.5
WVOR				IAmb	IAmb	06 56 54.2	
	comp=Z,8.4nm,1.0s						
X16A	Lo Mia Camp, P	88.57	50	P	P	06 56 53.5	+0.7
X16A				IAmb	IAmb	06 56 55.1	
	comp=Z,5.8nm,0.9s						
HPIG		88.97	59	P	P	06 56 55.8	+1.0
HPIG				IAmb	IAmb	06 56 56.4	
	comp=Z,6.9nm,0.8s						
I07A	Izee	89.04	39	P	P	06 56 54.9	+0.3
I07A				IAmb	IAmb	06 56 56.6	
	comp=Z,9.3nm,0.8s						
SPR3	Spring Creek 3	89.17	45	P	P	06 56 55.9	+0.3
SZCU	Shurtz Canyon	89.19	47	P	P	06 56 56.4	+0.8
WUAZ	Wupatki	89.21	50	P	P	06 56 56.9	+1.2
	baz=237						
WUAZ	Wupatki	89.21	50	P	P	06 56 55.7	0.0
WUAZ				IAmb	IAmb	06 56 57.7	
	comp=Z,7.0nm,1.1s						
D04E	Lakebay	89.22	35	P	P	06 56 56.8	+1.7
	baz=229						
D03D	Eldon	89.29	35	P	P	06 56 57.0	+1.5
	baz=229						
LON	Longmire	89.45	36	P	P	06 56 56.1	-0.3
ELK	Elko	89.59	44	P	P	06 56 56.4	-1.0
KMI	Kunming	89.88	298	⇑eP	P	06 56 58.5	-0.6
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
G08A	Pilot Rock	90.09	38	P	P	06 56 59.0	-0.5
G08A				IAmb	IAmb	06 57 01.3	
	comp=Z,13nm,1.5s						
MSU	Marysvale	90.29	47	P	P	06 57 00.8	+0.1
E07A	Sunnyside	90.38	37	P	P	06 57 00.8	+0.2
E07A				IAmb	IAmb	06 57 02.6	
	comp=Z,5.4nm,0.8s						
MFID	Camas Ranch	90.77	41	P	P	06 57 02.7	0.0
DUG	Dugway, Tooele	90.81	45	P	P	06 57 03.3	+0.3
	baz=236						
TMUT	Trail Mountain	91.35	46	P	P	06 57 06.6	+0.9
F10A	Beach Ranch, E	91.47	38	P	P	06 57 05.6	-0.2
F10A				IAmb	IAmb	06 57 07.3	
	comp=Z,4.1nm,0.8s						
MNTX	Cornudas Mount	91.53	55	P	P	06 57 07.3	+1.0
	baz=240						
HHC	Hu-ho-hao-te	91.54	315	eP	P	06 57 06.0	-0.3
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,7.6s						
TX31	Lajitas Ar. Si	91.68	58	P	P	06 57 07.9	+0.8
TX31				IAmb	IAmb	06 57 09.1	
	comp=Z,9.3nm,0.8s						
TX32	Lajitas Array	91.68	58	P	P	06 57 08.4	+1.2
TXAR	Lajitas Array	91.68	58	P	P	06 57 08.3	+1.1
	comp=Z,2.7nm,0.8s,baz=214,slow=6.4,SNR=32						
TXAR	Lajitas Array	91.68	58	P	P	06 57 07.9	+0.7
HLID	Hailey	91.70	42	P	P	06 57 07.9	+0.8
	baz=235						
SRU	San Rafael Swe	91.70	47	P	P	06 57 06.9	-0.3
ANMO	Albuquerque	92.35	52	P	P	06 57 11.0	+0.8
	baz=240						
MCK	McKinley	92.58	13	P	P	06 57 09.3	-1.1
	baz=208						
S22A	4UR Ranch, Cre	93.48	50	P	P	06 57 16.1	+0.6
	baz=240						
HDA	Harding Lake	93.60	14	P	P	06 57 14.3	-0.7
	baz=210						
ILAR	Eielson Array	93.93	14	P	P	06 57 15.2	-1.3
	comp=Z,0.6nm,0.7s,baz=224,slow=5.0,SNR=8.1						
PDAR	Pinedale Array	94.25	44	P	P	06 57 17.9	-1.0
	comp=Z,0.4nm,0.7s,baz=164,slow=6.0,SNR=3.9						
LZH	Lanzhou	94.29	308	⇓P	P	06 57 19.3	+0.2
LZH				pP	pP	06 59 10.3	+0.2
LZH				sP	sP	07 00 00.5	+0.1
LZH				PP	PP	07 01 18.0	+3.0
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,79nm,5.2s						
BOZ	Bozeman (W)	94.48	41	P	P	06 57 20.4	+0.7
	baz=237						
YKA	Yellowknife Ar	102.19	26	PKiKP	PKiKP	07 02 11.8	-0.5
	comp=Z,0.1nm,0.4s,baz=244,slow=1.1,SNR=4.2						
MKAR	Makanchi Array	113.20	312	PKiKP	PKiKP	07 02 33.0	-0.5
	comp=Z,0.3nm,0.5s,baz=215,slow=2.1,SNR=2.8						
KKAR	Karatay Array	120.75	306		PKiKP	07 02 48.2	0.0
ARCES	ARCESS Array B	133.66	348	PKhKP	PKPpre	07 03 04.7	
	comp=Z,3.9nm,0.8s,baz=339,slow=3.0,SNR=4.3						
ARCES				PKP	PKPdf	07 03 10.9	-1.0
	comp=Z,2.5nm,0.6s,baz=73,slow=2.5,SNR=14						
ARCES				SKPbc	SKPab	07 05 55.5	-1.0
	comp=Z,5.1nm,0.9s,baz=42,slow=3.8,SNR=8.7						
FINES	FINESS Array B	140.12	341	PKhKP	PKPpre	07 03 16.1	
	comp=Z,2.9nm,0.9s,baz=62,slow=3.6,SNR=9.7						
FINES				PKP	PKiKP	07 03 25.9	-0.7
	comp=Z,0.9nm,0.4s,baz=71,slow=0.7,SNR=9.4						
FINES				SKPbc	SKiKP	07 06 14.7	-0.1
	comp=Z,3.8nm,0.6s,baz=24,slow=3.6,SNR=15						
NB201	NORSAR Array S	143.87	350		PKPbc	07 03 29.6	-0.1
NB2	NORSAR Subarra	143.89	350	PKP	PKPbc	07 03 29.2	-0.6
	comp=Z,7.1nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	143.89	350	PKP	PKPbc	07 03 29.3	-0.5
	comp=Z,2.0nm,0.5s,baz=22,slow=3.8,SNR=33						
NAO01	NORSAR Array S	144.12	351		PKPbc	07 03 30.2	-0.4
AKASG	Malin Array Be	146.37	326	PKPbc	PKPbc	07 03 36.7	-0.8
	comp=Z,2.1nm,0.5s,baz=36,slow=4.2,SNR=6.1						
AKASG				SKPbc	SKiKP	07 06 29.7	+1.7
	comp=Z,0.7nm,0.4s,baz=45,slow=3.0,SNR=4.3						
BRTR	Keskin Array B	148.43	305	PKPbc	PKPbc	07 03 43.3	-0.2
	comp=Z,1.2nm,0.5s,baz=131,slow=1.9,SNR=6.1						
KWP	Kalwaria Pacla	150.25	329	ePKP	PKiKP	07 03 47.8	-0.1
KOLS	Kolonicke sedl	150.94	329	ePKP	PKiKP	07 03 50.0	+0.7
OJC	Ojcow	151.09	333	ePKP	PKPbc	07 03 49.3	+0.1
OJC	Ojcow	151.09	333		PKiKP	07 03 49.7	+0.1
NIE	Niedzica	151.48	331	ePKP	PKiKP	07 03 51.3	+0.8
KSP	Ksiaz	151.92	337	ePKP	PKiKP	07 03 51.7	+0.4
CLL	Collm	152.55	342	i PKPbc	PKPbc	07 03 52.2	-0.2
	comp=Z,6.0nm,0.7s						
CLL				i PKPab	PKPab	07 04 05.0	-0.3
GERES	GERESS Array B	154.50	338	PKPbc	PKiKP	07 03 55.8	-1.1
	comp=Z,0.6nm,0.6s,baz=72,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	167.28	189	PKPab	PKPab	07 05 10.6	+0.2
	comp=Z,1.9nm,0.7s,baz=172,slow=4.0,SNR=5.6						

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*MAN **31** 07:03:07.2, 9.°22N×125.°63E, h5^{km}, mb4.7, ML3.5, MS3.4*

*IDC **31** 07:03:08.3±1.9, 9.°47N×125.°45E, h0^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.3/37, mbtmp3.4/4, ML4.4/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/27, Error ellipse: s-maj=99.9km s-min=18.8km az=79.0*

ISC 31 07:03:07.8±1.3, **9.°24N**±0.°03×**125.°60E**±0.°04, **h4**^{km}±10^{km}, **n17**, σ**1.^{s}38**/23, **mb3.4**/3, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.27	175	eP	Pg	07 03 12.9	0.0
BUTP				eS	Sb	07 03 17.3	-2.8
GLSP	General Luna,	0.75	44	eP	Pg	07 03 21.7	-0.7
GLSP				eS	Sb	07 03 33.1	-1.0
MSLP	Maasin	1.15	321	eP	Pg	07 03 29.7	-0.2
MSLP				eS	Sb	07 03 45.8	+0.2
CGP	Cagayan de Oro	1.18	229	⇑eP	Pg	07 03 29.2	-1.3
CGP				i S	Sg	07 03 45.1	-0.8
BUKP	Musuan	1.45	202	eP	Pn	07 03 33.3	-1.6
BUKP				eS	Sg	07 03 54.3	-0.1
LLP	Lapu-Lapu	1.94	304	⇓eP	Pn	07 03 41.5	-0.1
LLP				eS	Sg	07 04 10.3	+0.2
OCLP	Ormoc	2.05	332	eP	Pn	07 03 43.2	+0.2
OCLP				eS	Sn	07 04 09.7	+0.6
DAV	Davao City (W)	2.15	181	Pn	Pg	07 03 49.8	+0.7
	85nm,0.3s,baz=108,slow=14,SNR=5.7						
DAV				Lg	Lg	07 04 24.1	
	29nm,0.3s,baz=266,slow=21,SNR=9.4						
KCP	Kidapawan	2.27	193	⇓iP	Pn	07 03 45.5	-0.6
KCP				i S	Sg	07 04 24.8	+4.0
MATI	Mati	2.37	164	eP	Pn	07 03 46.7	-0.7
MATI				eS	Sb	07 04 20.2	-0.4
PAGZ	Pagadian	2.59	238	eP	Pn	07 03 50.3	-0.2
PAGZ				eS	Sn	07 04 23.5	+1.1
KAPI	Kappang	15.31	203	LR	LR	07 12 22.0	
	comp=Z,70nm,20.1s,baz=42,slow=36						
WRA	Warramunga Arr	30.25	164	P	P	07 09 24.7	+4.7
	0.5nm,0.9s,baz=342,slow=9.8,SNR=2.9						
ASAR	Alice Springs	33.69	166	P	P	07 09 51.8	+1.5
	0.2nm,0.6s,baz=343,slow=6.7,SNR=1.6						
ASAJ	Asahikawa	37.76	20	LR	LR	07 25 03.4	
	comp=Z,25nm,19.5s,baz=21,slow=35						
PETK	Petropavlovsk-	50.85	24	LR	LR	07 33 08.5	
	comp=Z,21nm,19.9s,baz=108,slow=36						
MKAR	Makanchi Array	52.45	324	P	P	07 12 20.9	-0.8
	0.3nm,0.6s,baz=118,slow=8.5,SNR=2.8						

IDC 31 07:16:32.6±7.7, **6.°60S**×**149.°45E**, **h61**^{km}±59^{km}, **mb3.3**/2, **mb1 3.6**/4, **mb1mx3.2**/38, **mbtmp3.6**/4, **ML3.0**/2, **Error ellipse: s-maj=103.6km s-min=50.9km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.59	219	P	Pn	07 17 26.7	+0.8
	12nm,0.3s,baz=23,slow=3.9,SNR=18						
PMG				S	Sn	07 18 07.8	+0.7
	14nm,0.3s,baz=340,slow=17,SNR=8.5						
WRA	Warramunga Arr	19.78	226	P	P	07 20 57.0	-1.0
	0.2nm,0.3s,baz=51,slow=11,SNR=7.0						
ASAR	Alice Springs	22.61	220	P	P	07 21 28.4	-0.2
	1.0nm,0.7s,baz=59,slow=9.7,SNR=12						
FITZ	Fitzroy Crossi	25.87	242	P	P	07 21 58.9	0.0
	0.8nm,0.4s,baz=56,slow=11,SNR=2.1						
TORD	Torodi Ar. Bea	147.60	284	PKPbc	PKPbc	07 36 11.1	-0.1
	0.3nm,0.5s,baz=81,slow=3.3,SNR=1.5						

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*SOME **31** 07:33:55.5, 48.°13N×84.°18E, h0^{km}*

*NNC **31** 07:33:56.2±4.5, 48.°11N×84.°58E, h0^{km}, mb2.9, mpv2.4, Error ellipse: s-maj=33.8km s-min=24.5km az=97.0*

ISC 31 07:33:51.0±3.7, **48.°3N**±0.°2×**85.°0E**±0.°2, **h10**^{km}, **n5**, σ**0.^{s}36**/6, **1C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	0.88	184	eP	Pn	07 34 09.4	0.0
	4.5nm,0.2s						
ZSN				eS	Sg	07 34 19.3	0.0
	14nm,0.3s						
MK31	Makanchi Array	2.36	231	Pg	Pb	07 34 33.9	+0.3
	0.6nm,0.2s,baz=54,slow=15,SNR=106						
MK31				⇓Lg	Lg	07 35 01.6	
	0.1nm,0.1s,baz=56,slow=24,SNR=14						
MAKZ	Makanchi	2.52	234	⇑Pg	Pb	07 34 35.8	-0.5
	1.0nm,0.2s						
MAKZ				⇓Lg	Lg	07 35 05.1	
	1.8nm,0.3s						
KURK	Kurchatov	4.76	302	⇓Lg	Lg	07 36 23.8	
	0.1nm,0.1s						
KAPS	Kapalarasan	4.90	234	eP	Pb	07 35 17.1	+0.3
	0.6nm,0.4s						
KAPS				eS	Sb	07 36 15.7	0.0
	1.3nm,0.5s						

IDC 31 08:46:09.8±2.2, **2.°87S**×**127.°41E**, **h0**^{km}, **mb3.0**/2, **mb1 3.5**/3, **mb1mx3.3**/29, **mbtmp3.3**/3, **ML3.1**/1, **Error ellipse: s-maj=172.3km s-min=29.0km az=66.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.27	159	P	P	08 50 26.2	+1.0
	0.1nm,0.3s,baz=337,slow=12,SNR=4.2						
ASAR	Alice Springs	21.61	164	P	P	08 51 00.5	-1.1
	0.2nm,0.4s,baz=348,slow=12,SNR=6.0						
MKAR	Makanchi Array	63.38	327	P	P	08 56 41.3	+0.2
	0.1nm,0.4s,baz=119,slow=8.9,SNR=2.0						

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*MEX **31** 09:01:38.2±1.4, 32.°32N×115.°09W, h10^{km}, MD3.8*

*PAS **31** 09:01:38.8±1.5, 32.°23N±0.°02×115.°30W±0.°02, h19^{km}±5^{km}, ML2.8/27, ML2.7/24(NEIC), Error ellipse: s-maj=3.3km s-min=1.3km az=142.0*

*NEIC **31** 09:01:38.3±2.3, 32.°23N±0.°02×115.°30W±0.°03, h19^{km}±2^{km}, Error ellipse: s-maj=3.5km s-min=3.1km az=89.0*

*ECX **31** 09:01:39.0±0.8, 32.°21N×115.°31W, h2^{km}±3^{km}, MD2.6, ML2.8*

ISC 31 09:01:37.8±0.9, **32.°22N**±0.°02×**115.°27W**±0.°02, **h21**^{km}±1^{km}, **n70**, σ**1.^{s}08**/100, **7C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUVIX	Guadalupe Vict	0.18	62		Pb	09 01 43.7	+0.1
MBIG	Mexicali	0.20	17	eP	Pb	09 01 43.7	+0.1
MBIG				eS	Sb	09 01 48.5	+0.8
MBIG	Mexicali	0.20	17		Pb	09 01 43.7	+0.1
MBIG					Sb	09 01 48.5	+0.8
MBIG	Mexicali	0.20	17	eP	Pb	09 01 43.7	+0.1
CPBX	Cerro Prieto	0.21	351		Pb	09 01 43.2	-0.4
CPBX				Sg	Sb	09 01 47.2	-0.6
CPBX	Cerro Prieto	0.21	351	eP	Pb	09 01 43.2	-0.4
CPBX				IAML		09 01 49.5	
	comp=E,5µm,0.2s						
CPBX				⇓e		09 01 49.5	
CPBX				IAML		09 01 51.3	
	comp=N,5µm,0.3s						
CTLX	Tlaxcala, TLX	0.28	22	⇑eP	Pb	09 01 45.1	+0.9
UABX	UABC, Campus M	0.44	341		Pb	09 01 47.4	+0.6
EMSC	East Mesa	0.57	25		Pb	09 01 50.0	+0.7
EMSC					Sn	09 01 59.1	-0.5
EMSC	East Mesa	0.57	25	eP	Pb	09 01 50.0	+0.7
SGL	Mount Signal	0.58	318		Pb	09 01 49.1	-0.2
SGL					Sb	09 01 56.8	-0.4
SGL	Mount Signal	0.58	318	eP	Pb	09 01 49.1	-0.2
DREC	Desert Rsrch C	0.61	346		Pb	09 01 50.3	+0.5
DREC					Sn	09 02 00.6	+0.2
DREC	Desert Rsrch C	0.61	346	eP	Pb	09 01 50.5	+0.7
ESJX	Sierra Juarez	0.61	250		Pb	09 01 50.0	0.0
ESJX				IAML		09 01 59.3	
	comp=N,778nm,0.1s						
ESJX	Sierra Juarez	0.61	250		Sb	09 01 58.4	+0.1
COA	Coachella	0.66	11		Pb	09 01 51.1	+0.5
COA					Sb	09 02 00.7	+1.3
COA	Coachella	0.66	11	eP	Pb	09 01 51.1	+0.5
SNR	Schaffner Ranc	0.66	348		Pb	09 01 51.5	+0.8
SNR					Sn	09 02 01.8	+0.2
WESC	Westside Schoo	0.67	324		Pb	09 01 50.9	+0.1
YMD	Yuma Desert	0.70	61		Pb	09 01 51.9	+0.7
YUH	Yuha Desert	0.70	308		Pb	09 01 51.0	-0.3
YUH					Sb	09 02 00.2	-0.4
SJX	San Joaquin	0.74	233	⇑iP	Pb	09 01 50.0	-1.9
SJX				eS	Sb	09 01 57.9	-3.6
SJX				IAML		09 01 59.3	
	comp=N,1µm,0.1s						
SJX				⇑e		09 01 59.3	
COK2	Cook Ranch 2	0.74	329		Pb	09 01 52.1	+0.1
COK2	Cook Ranch 2	0.74	329	eP	Pb	09 01 52.1	+0.1
ECBX	El Chinero	0.76	166	eP	Pb	09 01 51.9	-0.4
ECBX				eS	Sb	09 02 02.7	+0.5
RMX	La Rumorosa	0.79	300		Pb	09 01 51.6	-1.2
RMX					Sb	09 02 00.9	-2.3
RMX				IAML		09 02 01.2	
	comp=N,382nm,0.2s						
RMX				IAML		09 02 01.2	
	comp=E,418nm,0.2s						
RMX	La Rumorosa	0.79	300	eP	Pb	09 01 51.6	-1.2

RMX				eS	Sb	09 02 00.8	-2.3
RUN	Ruthven	0.79	18		Pb	09 01 52.8	-0.1
RUN					Sb	09 02 03.2	0.0
IKP	In-Ko-Pah, Jac	0.83	302		Pb	09 01 53.5	-0.1
IKP					Sb	09 02 04.1	-0.3
IKP	In-Ko-Pah, Jac	0.83	302	⇓iP	Pb	09 01 53.4	-0.1
SWSC	Sam W. Stewart	0.85	329		Pb	09 01 53.3	-0.7
WEMD	Westmorland, C	0.86	342		Pb	09 01 54.7	+0.6
WEMD					Sn	09 02 07.8	+1.1
CRR	Carrizo Plain	0.89	319		Pb	09 01 54.0	-0.6
CRR					Sb	09 02 06.4	+0.4
CRR	Carrizo Plain	0.89	319	eP	Pb	09 01 54.0	-0.6
GLA	Glamis	0.91	24		Pb	09 01 54.7	-0.2
GLA				IAML		09 02 08.8	
	comp=N,146nm,0.4s						
GLA				IAML		09 02 10.7	
	comp=E,113nm,0.5s						
GLA	Glamis	0.91	24	eP	Pb	09 01 54.8	-0.2
SPIG	San Pedro Mart	1.18	188	eP	Pn	09 01 59.5	+0.2
SPIG				eS	Sn	09 02 16.0	+1.1
SPIG	San Pedro Mart	1.18	188		Pn	09 01 59.5	+0.2
SPIG					Sn	09 02 16.0	+1.1
SPIG	San Pedro Mart	1.18	188	eP	Pn	09 01 59.5	+0.2
SPIG				eS	Sn	09 02 15.8	+0.9
CBX	Cerro Bola	1.19	275		Pb	09 01 59.8	+0.2
CBX				IAML		09 02 15.6	
	comp=E,119nm,0.3s						
CBX				IAML		09 02 19.6	
	comp=N,132nm,0.4s						
CBX	Cerro Bola	1.19	275	eP	Pb	09 01 59.8	+0.2
CBX				eS	Sn	09 02 14.8	0.0
CBX				⇑e		09 02 15.8	
CBX				IAML		09 02 15.8	
	comp=E,231nm,0.4s						
MONP2	Monument Peak	1.19	305		Pb	09 01 59.7	0.0
MONP2					Sb	09 02 14.6	-0.1
MONP2	Monument Peak	1.19	305	⇓eP	Pb	09 01 59.7	0.0
SPX	San Pedro Mart	1.19	188		Pn	09 01 59.7	+0.2
SPX				IAML		09 02 17.0	
	comp=E,69nm,0.5s						
SPX	San Pedro Mart	1.19	188	eP	Pn	09 01 59.6	+0.1
SPX				⇑e		09 02 17.4	
SPX				IAML		09 02 17.4	
	comp=N,114nm,0.4s						
TJIG	Tijuana	1.21	281	eP	Pn	09 01 59.5	0.0
TJIG				eS	Sn	09 02 15.3	0.0
TJIG	Tijuana	1.21	281		Pn	09 01 59.5	0.0
TJIG					Sb	09 02 14.8	-0.4
TJIG	Tijuana	1.21	281	eP	Pn	09 01 59.4	-0.1
SFX	San Felipe	1.23	163		Pb	09 02 01.2	+0.9
SFX				Sn	Sn	09 02 18.1	+2.5
SFX				IAML		09 02 18.8	
	comp=E,75nm,0.4s						
SFX	San Felipe	1.23	163	eP	Pb	09 02 01.4	+1.1
SFX				eS	Sn	09 02 18.2	+2.5
CCX	Cicese	1.23	254		Pb	09 02 00.5	+0.1
CCX					Pn	09 02 01.5	+1.7
CCX				IAML		09 02 17.2	
	comp=N,306nm,0.4s						
CCX				IAML		09 02 17.8	
	comp=E,226nm,0.4s						
BAR	Barrett	1.27	292		Pn	09 02 00.3	-0.1
BAR				IAML		09 02 18.7	
	comp=E,296nm,0.2s						
BAR	Barrett	1.27	292		Sn	09 02 16.9	0.0
BAR	Barrett	1.27	292		Pn	09 02 00.8	+0.4
BAR	Barrett	1.27	292	eP	Pn	09 02 00.5	+0.1
BAR				IAML		09 02 18.5	
	comp=N,254nm,0.2s						
BAR				⇑e		09 02 18.5	
BAR				⇑e		09 02 18.7	
BAR				IAML		09 02 18.7	
	comp=E,201nm,0.2s						
SLH	Sleepy Hollow	1.28	320		Pb	09 02 01.2	0.0
BORC	Borrego Spring	1.43	318		Pn	09 02 01.8	-0.7
BORC					Sb	09 02 23.5	+2.0
OLP	Otay Lakes Par	1.46	286		Sn	09 02 21.8	+0.4
SDRC	San Diego Road	1.51	291		Sn	09 02 22.6	0.0
SDRC	San Diego Road	1.51	291	eP	Pb	09 02 04.8	-0.2
MATG	Mataguay Scout	1.52	311		Pb	09 02 05.7	+0.4
MATG					Sb	09 02 25.6	+1.4
DPP	Dos Picos Cty	1.61	299		Sb	09 02 27.4	+0.6
HWB	Hans Werner Br	1.64	300		Sb	09 02 28.0	+0.4
CPE	Camp Elliot	1.69	294		Sb	09 02 29.4	+0.4
FRD	Ford Ranch, An	1.70	319		Pb	09 02 09.1	+0.7
PFO	Pinyon Flats O	1.72	325	Pn	Pn	09 02 06.0	-0.6
214A	Organ Pipe Nat	2.10	96	eP	Pn	09 02 08.2	-3.6
214A				i S	Sn	09 02 32.2	-5.2
214A	Organ Pipe Nat	2.10	96	Pn	Pn	09 02 11.6	-0.2
SSK	Sunset Peak	2.84	315		Pb	09 02 27.7	-0.3

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*SOME **31** 09:30:26.8, 42°.27N×73°.23E, h5^{km}*
*KRNET **31** 09:30:26.4±0.1, 42°.24N×73°.22E, h22^{km}, mb1.9*
*NNC **31** 09:30:29.0±1.6, 42°.30N×73°.21E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=12.5km s-min=8.7km az=156.0*
ISC 31 09:30:26.9±1.0, **42°.24N**±0°.03×**73°.27E**±0°.02, **h13**^{km}±10^{km}, **n17, σ1^{s}07**/32, **9C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.34	108	⇓iP	Pg	09 30 34.5	+0.6
	baz=7.0						
AML				⇓iS	Sg	09 30 39.8	+1.1
	baz=7.0						
MRKS	Merke	0.51	357	⇓eP	Pg	09 30 36.8	-0.2
	4.3nm,0.1s						
MRKS				eS	Sg	09 30 43.6	-0.3
	7.7nm,0.1s						
MRKS	Merke	0.51	357	P	Pg	09 30 36.8	-0.2
	2.8nm,0.1s						
MRKS				S	Sg	09 30 43.7	-0.2
	7.0nm,0.2s						
EKS2	Erkin-Say	0.57	41	⇓iP	Pg	09 30 38.1	-0.1
	baz=44						
EKS2				⇓iS	Sb	09 30 46.5	-0.4
	baz=44						
MNAS	Manas	0.62	294	⇑iP	Pg	09 30 37.8	-1.3
	baz=95						
MNAS				⇑iS	Sg	09 30 45.8	-1.5
	baz=95						
ARLS	Aral	0.87	115	⇓iP	Pb	09 30 43.4	-0.6
	baz=15						
ARLS				⇓iS	Sg	09 30 55.8	+0.5
	baz=15						
UCH	Uchtor	0.93	90	⇑iP	Pb	09 30 44.4	-0.7
	baz=90						
UCH				⇑iS	Sg	09 30 57.5	+0.4
	baz=90						
ARSB	Arslanbob	0.93	193	⇑iP	Pb	09 30 43.8	-1.3
	baz=91						
ARSB				⇑iS	Sb	09 30 56.5	-0.9
	baz=91						
USP	Ospenovka	1.38	41	⇑iP	Pb	09 30 51.9	-0.6
	baz=42						
USP				⇑iS	Sg	09 31 10.0	-1.3
	baz=42						
SGDS	Sogindy	1.58	39	P	Pg	09 30 58.3	+1.1
	1.4nm,0.4s						
SGDS				S	Sg	09 31 20.4	+2.6
	1.8nm,0.2s						
TRKS	Terek-Say	1.74	247	⇓iP	Pn	09 30 57.3	+0.4
	baz=44						
TRKS				⇓iS	Sn	09 31 20.0	+1.0
	baz=44						
DGS	Degeres	2.10	61	eP	Pg	09 31 06.5	-0.7
	3.0nm,0.2s						
DGS				eS	Sg	09 31 34.4	-0.1
	1.8nm,0.3s						
KST	Kastek	2.15	67	eP	Pg	09 31 07.2	-0.9
	0.4nm,0.1s						
KST				eS	Sg	09 31 35.7	-0.3
	1.5nm,0.3s						
KST	Kastek	2.15	67	Pg	Pg	09 31 07.2	-0.9
KST				Lg	Lg	09 31 35.6	
KK31	Karatay Array	2.21	294	⇑P	Pb	09 31 06.7	0.0
	0.2nm,0.3s,baz=113,slow=15,SNR=7.7						
KK31				⇓S	Sg	09 31 37.2	-0.7
	0.4nm,0.3s,baz=114,slow=27,SNR=7.8						
IUG	Iuzhnay	2.41	269	eP	Pb	09 31 12.2	+2.1
	0.5nm,0.1s						
IUG				eS	Sg	09 31 44.3	0.0
	3.6nm,0.4s						
IUG	Iuzhnay	2.41	269	Pg	Pb	09 31 12.2	+2.1
	2.1nm,0.2s						
IUG				Lg	Lg	09 31 44.3	
	4.1nm,0.4s						

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*MOS **31** 09:35:14.9±1.3, 37°.33N×72°.15E, h172^{km}, mb4.4/9, Error ellipse: s-maj=7.0km s-min=4.3km az=83.2*
*IDC **31** 09:35:15.7±2.3, 37°.23N×72°.14E, h180^{km}±21^{km}, mb3.5/17, mb1 3.6/25, mb1mx3.5/48, mbtmp4.1/25, Error ellipse: s-maj=17.4km s-min=10.9km az=177.0*
*NNC **31** 09:35:16.7±5.2, 37°.72N×71°.97E, h0^{km}, mb4.5, mpv4.0, Error ellipse: s-maj=42.6km s-min=36.0km az=176.0*
*NEIC **31** 09:35:17.1±2.5, 37°.44N±0°.07×72°.05E±0°.07, h186^{km}±7^{km}, mb4.4/15, Error ellipse: s-maj=10.0km s-min=8.2km az=204.0*
*BJI **31** 09:35:17.1±0.0, 37°.52N×72°.18E, h183^{km}, mB4.7/16, mb4.3/27*
ISC 31 09:35:17.4±0.4, **37°.35N**±0°.04×**72°.16E**±0°.04, **h200**^{km}, **n183, σ1^{s}94**/197, **mb4.1**/28, **17C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.52	183	P	Pn	09 36 13.3	-0.3
CEP				S	Sn	09 36 55.0	-2.5
KSH	Kashi	3.69	53	P	Pn	09 36 10.3	-5.2
KBL	Kabul	3.78	223	PN	Pn	09 36 16.4	-0.3
KBL						09 37 00.8	
KBL	Kabul	3.78	223	Pn	Pn	09 36 16.4	-0.3
KBL				Sn	Sn	09 37 00.8	-2.3
NIL	Nilore	3.80	166	PN	Pn	09 36 17.3	+0.5
NIL	Nilore	3.80	166		Pn	09 36 17.3	+0.5
TAS	Tashkent	4.55	332	PN	Pn	09 36 23.9	-2.1
TAS	Tashkent	4.55	332	Pn	Pn	09 36 23.9	-2.1
AML	Almayashu	4.92	13	P	Pn	09 36 29.9	-1.2
	SNR=215						
IUG	Iuzhnay	5.06	342	eP	Pn	09 36 31.2	-1.5
	25nm,0.6s,baz=342						
IUG				eS	Sn	09 37 28.2	-4.0
	baz=342						
IUG	Iuzhnay	5.06	342	ePN	Pn	09 36 31.1	-1.5
IUG				eS	Sn	09 37 28.1	-4.0
IUG				pmax	pmax		
	comp=Z,25nm,0.6s						
UCH	Uchtor	5.20	20	P	Pn	09 36 34.0	-0.7
	SNR=37						
EKS2	Erkin-Say	5.45	13	P	Pn	09 36 37.2	-0.4
	SNR=15						
AAK	Ala-Archa	5.58	18	P	Pn	09 36 38.9	-0.5
	comp=Z,6.6nm,0.3s,baz=186,slow=6.2,SNR=64						
AAK				S	Sn	09 37 40.0	-4.1
	comp=Z,4.9nm,0.3s,baz=210,slow=21,SNR=4.2						
AAK	Ala-Archa	5.58	18	P	Pn	09 36 38.8	-0.5
	SNR=21						
AAK	Ala-Archa	5.58	18	⇑P	Pn	09 36 38.8	-0.5
	comp=Z,8.2nm,0.4s						
AAK				⇓S	Sn	09 37 40.9	-3.1
	comp=Z,79nm,0.7s						
AAK	Ala-Archa	5.58	18	PN	Pn	09 36 38.8	-0.5
AAK				S	Sn	09 37 40.9	-3.1
AAK	Ala-Archa	5.58	18	Pn	Pn	09 36 39.0	-0.3
THN	Thein Dam	5.71	148	eP	Pn	09 36 42.0	+1.1
THN				eP	Pn	09 36 42.0	+1.1
THN				eS	Sn	09 37 44.9	-2.0
ULHL	Ulahol	5.81	31	P	Pn	09 36 41.5	-0.9
	SNR=9.2						
KK31	Karatay Array	5.88	348	⇑P	Pn	09 36 41.9	-1.2
	comp=Z,13nm,0.5s,baz=163,slow=12,SNR=381						
KK31				⇑S	Sn	09 37 44.4	-6.5
	comp=Z,26nm,0.3s,baz=166,slow=21,SNR=18						
KK31	Karatay Array	5.88	348	PN	Pn	09 36 41.9	-1.2
KK31	Karatay Array	5.88	348	Pn	Pn	09 36 41.7	-1.4
KKAR	Karatay Array	5.88	348	PN	Pn	09 36 41.5	-1.6
KKAR				SN	Sn	09 37 51.0	+0.1
KKAR	Karatay Array	5.88	348		Pn	09 36 41.5	-1.6
KKAR	Karatay Array	5.88	348	Pn	Pn	09 36 41.6	-1.6
BRLS	Borolday	5.95	343	eP	Pn	09 36 38.6	-5.4
	comp=Z,8.7nm,0.5s,baz=342						
BRLS	Borolday	5.95	343	ePN	Pn	09 36 38.5	-5.4
BRLS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CHMS	Chumysh	5.98	19	P	Pn	09 36 43.8	-0.5
	SNR=6.6						
DHRM	DHARAMSHALA	6.12	145	eP	Pn	09 36 44.8	-1.7
DHRM				eS	Sn	09 37 51.3	-5.7
DHRM				IAML		09 37 53.5	
	comp=E,1µm,0.4s						
DHRM				IAML		09 37 54.0	
	comp=N,1µm,0.4s						
TKM2	Tokmak 2	6.15	24	P	Pn	09 36 46.1	-0.7
	SNR=9.9						
TKM2	Tokmak 2	6.15	24	⇑P	Pn	09 36 46.0	-0.9
	comp=N,4.4nm,0.6s						
TKM2				⇑S	Sn	09 37 52.0	-5.6
	comp=N,18nm,0.7s						
TKM2	Tokmak 2	6.15	24	PN	Pn	09 36 45.9	-0.9
MTBS	Maitube	6.63	28	eP	Pn	09 36 52.2	-0.7
	baz=29						
MTBS	Maitube	6.63	28	ePN	Pn	09 36 52.1	-0.7
TNSS	Tian-Shan	6.76	31	eP	Pn	09 36 53.5	-1.4
	baz=32						
TNSS	Tian-Shan	6.76	31	ePN	Pn	09 36 53.4	-1.4
BHK	Bhakra	6.88	148	eS	Sn	09 38 09.6	-5.0
AAA	Alma-Ata	6.89	30	eP	Pn	09 36 56.3	+0.2
	comp=N,10nm,0.7s,baz=31						
AAA	Alma-Ata	6.89	30	ePN	Pn	09 36 56.3	+0.2
AAA				pmax	pmax		
	comp=Z,11nm,0.7s						
MDOK	Medeo	6.90	31	eP	Pn	09 36 56.0	-0.5
	baz=32						
MDOK	Medeo	6.90	31	⇓P	Pn	09 36 56.2	-0.2
	comp=Z,14nm,0.8s						
MDOK	Medeo	6.90	31	ePN	Pn	09 36 55.9	-0.5
KUU	Kurty	7.27	25	eP	Pn	09 36 59.3	-1.8
	baz=26						
KUU	Kurty	7.27	25	ePN	Pn	09 36 59.2	-1.8
SATY	Saty	7.44	38	eP	Pn	09 37 02.0	-1.4
	baz=39						
SATY	Saty	7.44	38	ePN	Pn	09 37 01.9	-1.4
CHKK	Chushkaly	7.46	28	eP	Pn	09 37 01.1	-2.5
	baz=29						
CHKK	Chushkaly	7.46	28	ePN	Pn	09 37 01.9	-1.7
SMLA	Simla	7.46	145	eP	Pn	09 37 02.8	-0.9
SMLA				eS	Sn	09 38 21.6	-6.6
SMLA				IAML		09 38 24.1	
	comp=E,465nm,0.3s						
SMLA				IAML		09 38 24.6	
	comp=N,356nm,0.4s						
KPKS	Kokpek	7.88	37	eP	Pn	09 37 07.9	-1.2
	comp=N,4.5nm,0.8s,baz=38						
KPKS	Kokpek	7.88	37	ePN	Pn	09 37 07.8	-1.2
KPKS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHLS	Shalkode	8.05	42	eP	Pn	09 37 13.4	+2.0
	baz=44						
SHLS	Shalkode	8.05	42	ePN	Pn	09 37 13.3	+2.0
PDGK	Podgornoye	8.18	41	⇑P	Pn	09 37 12.9	-0.2
	comp=Z,7.4nm,0.8s						
PDGK	Podgornoye	8.18	41	PN	Pn	09 37 12.9	-0.2
DDI	Dehra Dun	8.55	143	eP	Pn	09 37 17.1	-0.9
DDI				eS	Sn	09 38 46.7	-7.4
DDI				IAML		09 38 50.6	
	comp=N,427nm,0.3s						
HRA	Herat	8.57	253	Pn	Pn	09 37 17.0	-1.3
NDI	New Delhi	9.63	152	eS	Sn	09 39 12.0	-7.6
GEYT	Alibeck	11.15	277	P	Pn	09 37 48.7	-2.8
	comp=N,2.1nm,0.3s,baz=112,slow=12,SNR=6.7						
MAKZ	Makanchi	11.93	35	P	Pn	09 38 00.4	-0.9
MAKZ	Makanchi	11.93	35		Pn	09 38 00.4	-0.9
MK31	Makanchi Array	12.06	35	c iP	Pn	09 38 04.2	+1.3
MK31	Makanchi Array	12.06	35		Pn	09 38 02.1	-0.8
MKAR	Makanchi Array	12.06	35	P	Pn	09 38 02.2	-0.7
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=8.7						
MKAR	Makanchi Array	12.06	35	i P	Pn	09 38 03.4	+0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	12.06	35	Pn	Pn	09 38 03.0	0.0
DANN	Dangsing	13.24	129	eP	Pn	09 38 17.0	-1.3
	comp=Z,54nm,0.4s						
DANN				eS	S	09 40 34.6	-11
WMQ	Urumqi	13.45	56	eP	P	09 38 22.0	-1.1
KOLN	Koldanda	13.56	131	eP	Pn	09 38 21.3	-0.9
	comp=Z,22nm,0.3s						
KOLN				eS	S	09 40 42.8	-11
KURBB	Kurchatov Arra	14.03	17	P	P	09 38 28.9	-0.5
	comp=Z,0.2nm,0.3s,baz=200,slow=11,SNR=28						
GKN	Gorkha	14.03	128	eP	Pn	09 38 27.4	-0.6
	comp=Z,95nm,0.6s						
GKN				eS	S	09 40 52.1	-12
KURK	Kurchatov	14.14	17	⇓iP	P	09 38 31.3	+0.8
KURK				pmax	pmax		
	comp=Z,6.0nm,2.5s						
KURK	Kurchatov	14.14	17	Pn	Pn	09 38 27.2	-1.7
SEM	Semipalatinsk	14.28	21	eP	Pn	09 38 30.1	-0.8
	baz=22						
SEM	Semipalatinsk	14.28	21	eP	Pn	09 38 30.0	-0.8
DMN	Daman	14.60	128	eP	Pn	09 38 34.8	-0.3
	comp=Z,37nm,0.5s						
BHPL	Bhopal	14.78	161	eP	Pn	09 38 36.0	-0.9
BHPL				eS	S	09 41 11.0	-10
PKI	Pulchoki	14.82	127	eP	Pn	09 38 37.0	-0.8
	comp=Z,55nm,0.5s						
AB31	Akbulak array	14.83	327	⇑P	Pn	09 38 37.0	-0.4
	comp=Z,6.7nm,0.5s,baz=144,slow=14,SNR=188						
AB31	Akbulak array	14.83	327	eP	Pn	09 38 36.8	-0.6
ABKAR	Akbulak array	14.83	327		Pn	09 38 36.1	-1.3
ABKAR	Akbulak array	14.83	327		Pn	09 38 36.4	-1.0
GUN	Gumba	14.89	125	eP	P	09 38 38.9	-0.6
	comp=Z,38nm,0.4s						
BVAR	Borovoye Array	15.72	356	P	Pn	09 38 48.4	+0.2
	comp=Z,0.4nm,0.3s,baz=107,slow=5.1,SNR=6.6						
BRVK	Borovoye	15.76	356	⇑iP	Pn	09 38 49.6	+0.9
BRVK				pmax	pmax		
	comp=Z,13nm,2.5s						
BRVK	Borovoye	15.76	356		P	09 38 46.9	-1.6
TAPN	Taplejung	16.47	123	eP	Pn	09 38 59.2	+1.4
	comp=Z,22nm,0.4s						
DGZ	Jazzator, Alta	16.54	37	⇓iP	Pn	09 38 57.9	-0.3
AKTO	Aktyubinsk	16.54	327	P	P	09 38 58.2	+1.1
	comp=Z,3.5nm,0.3s,baz=130,slow=10,SNR=48						
AKTO				S	S	09 41 53.6	-6.2
	comp=Z,1.1nm,0.3s,baz=210,slow=18,SNR=8.1						
AKTO	Aktyubinsk	16.54	327	⇓P	Pn	09 38 59.1	+1.1
	comp=Z,8.5nm,0.5s						
LSA	Lhasa	17.56	110	P	Pn	09 39 13.3	+2.6
LSA	Lhasa	17.56	110	P	P	09 39 07.7	-1.2
LSA				pmax	pmax		
	comp=Z,17nm,0.6s						
LSA	Lhasa	17.56	110		P	09 39 07.7	-1.2
LSA				IAmb	IAmb	09 39 14.2	
	comp=Z,17nm,0.6s						
WSAR	Wadi Sarin	18.25	223	P	P	09 39 15.9	-0.1
	comp=Z,0.4nm,0.3s,baz=36,slow=6.9,SNR=4.1						
UOSS	Minazif	18.39	232	P	P	09 39 16.4	-1.2
UOSS				IAmb	IAmb	09 39 22.2	
	comp=Z,11nm,1.1s						
LKRN	Lenkeran, Azer	18.46	281	P	P	09 39 19.6	+1.4
ZAA0	Zalesovo Array	18.76	24	P	P	09 39 20.2	-1.0
ZAA0				IAmb	IAmb	09 39 22.7	
	comp=Z,9.6nm,0.8s						
ZALV	Zalesovo Beam	18.76	24	P	P	09 39 21.9	+0.7
	comp=Z,1.1nm,0.3s,baz=218,slow=10.0,SNR=42						
ZALV	Zalesovo Beam	18.76	24	P	P	09 39 20.2	-1.0
SEKA	Sheki	19.68	289	P	P	09 39 33.2	+1.8
MNGR	Mingechevir, A	19.75	288	P	P	09 39 34.5	+2.5
ZKTA	Zakatala	20.14	290	P	P	09 39 39.1	+2.9
GANJ	Ganja	20.33	287	P	P	09 39 40.5	+2.3
NAX	Nakhchivan	21.00	283	P	P	09 39 46.1	+0.7
ARU	Arti	21.15	339	P	P	09 39 47.2	+0.4
	comp=Z,1.4nm,0.6s,baz=152,slow=5.4,SNR=7.6						
ARU	Arti	21.15	339	d iP	P	09 39 47.3	+0.6
ARU						09 40 26.2	
ARU				S	S	09 43 31.6	+2.0
ARU				pmax	pmax		
	comp=Z,16nm,1.4s						
ARU	Arti	21.15	339	P	P	09 39 45.2	-1.6
GNI	Garni	21.54	286	⇓eP	P	09 39 52.7	+1.6
GNI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GNI	Garni	21.54	286	P	P	09 39 48.7	-2.4
GNI				IAmb	IAmb	09 40 01.7	
	comp=Z,24nm,1.1s						
GTA	Gaotai	21.75	76	P	P	09 39 55.3	+2.1
GTA				pP	pP	09 40 31.8	+3.3
GTA				sP	sP	09 40 52.8	-1.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AKH	Akhalkalaki	22.48	289	P	P	09 39 58.2	-2.0
AKH				pmax	pmax		
	comp=Z,26nm,0.7s						
AKH	Akhalkalaki	22.48	289	P	P	09 39 58.2	-2.0
BELG	Belogornoye	22.83	319	P	P	09 40 02.5	-0.4
	comp=Z,7.5nm,0.7s,baz=304,slow=2.7,SNR=4.7						
BELG	Belogornoye	22.83	319	⇓eP	P	09 40 04.2	+1.2
BELG				pmax	pmax		
	comp=Z,12nm,5.2s						
KBZ	Khabaz	23.06	295	P	P	09 40 05.2	+0.1
	comp=Z,3.0nm,0.9s,baz=130,slow=6.8,SNR=4.7						
KBZ				pP	pP	09 40 42.0	+0.4
	comp=Z,2.9nm,0.7s,baz=72,slow=9.6,SNR=4.1						
KBZ	Khabaz	23.06	295	⇓eP	P	09 40 07.5	+2.4
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	23.24	296	eP	P	09 40 09.5	+2.6
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH	Lanzhou	25.37	83	⇓P	P	09 40 29.3	+2.9
LZH				pP	pP	09 41 05.8	-1.6
LZH				PP	PnPn	09 41 18.0	+3.1
LZH				sP	PP	09 41 28.3	+0.4
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,97nm,4.7s						
KIRV	Kirov	25.90	332	⇓eP	P	09 40 30.9	+0.3
SONM	Songino Array	27.09	56	P	P	09 40 43.1	+1.5
	comp=Z,1.4nm,0.5s,baz=264,slow=9.3,SNR=12						
SONM				pP	pP	09 41 22.1	-1.1
	comp=Z,0.8nm,0.7s,baz=256,slow=9.4,SNR=4.1						
SONM	Songino Array	27.09	56	P	P	09 40 44.0	+2.4
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	27.09	56	P	P	09 40 44.0	+2.4
ULN	Ulaanbaatar	27.53	56	⇑iP	P	09 40 47.4	+1.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.7s						
ULN	Ulaanbaatar	27.53	56	P	P	09 40 47.9	+2.3
ULN				IAmb	IAmb	09 40 48.3	
	comp=Z,2.8nm,0.7s						
OBN	Obninsk	29.91	318	⇑eP	P	09 41 06.7	+0.4
OBN				eS	S	09 45 50.2	+1.7
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BR131	Keskin Array S	30.07	287	P	P	09 41 09.6	+1.5
BR131				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BR131	Keskin Array S	30.07	287	P	P	09 41 09.6	+1.5
BR131				IAmb	IAmb	09 41 10.6	
	comp=Z,8.2nm,0.6s						
BRTR	Keskin Array B	30.07	287	P	P	09 41 09.9	+1.8
	comp=Z,2.6nm,0.5s,baz=99,slow=6.8,SNR=18						
BRTR	Keskin Array B	30.07	287	P	P	09 41 09.2	+1.1
BRTR	Keskin Array B	30.07	287	P	P	09 41 09.2	+1.1
HHC	Hu-ho-hao-te	30.60	71	eP	P	09 41 16.0	+3.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,250nm,6.6s						
AKASG	Malin Array Be	33.15	308	P	P	09 41 35.2	+0.5
	comp=Z,1.3nm,0.3s,baz=112,slow=8.3,SNR=7.4						
AKASG	Malin Array Be	33.15	308	P	P	09 41 35.7	+1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	33.15	308	P	P	09 41 35.7	+1.1
AKBB	Malin Array Si	33.15	308	⇑eP	P	09 41 35.1	+0.4
AKBB				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BISRR	Bisoca	34.65	298	⇑P	P	09 42 01.3	+14
PLOR	Plostina	34.68	299	⇓P	P	09 41 50.4	+2.5
NEHR	Nehoiu	34.95	298	⇑P	P	09 41 57.5	+7.3
MLR	Muntele Rosu	35.19	298	⇑P	P	09 41 54.0	+1.5
BURAR	Bucovina Array	35.62	302	P	P	09 41 57.4	+1.4
ARR	Arges	36.12	298	⇑P	P	09 42 00.3	0.0
FINES	FINESS Array B	37.31	325	P	P	09 42 10.4	+0.4
	comp=Z,1.4nm,0.3s,baz=124,slow=8.3,SNR=16						
ARA0	ARCESS Array S	40.72	337	eP	P	09 42 39.7	+1.5
ARCES	ARCESS Array B	40.72	337	P	P	09 42 39.6	+1.4
	comp=Z,2.5nm,0.4s,baz=114,slow=8.5,SNR=32						
KTK1	Kautokeino	41.22	336	eP	P	09 42 43.2	+1.0

HAMF	Hammerfest	41.78	338	eP	P	09 42 48.6	+1.9
YAK	Yakutsk	42.73	36⇓	eP	P	09 42 56.4	+1.9
YAK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GSI	Gunungsitoli	42.84	141	P	P	09 42 58.8	+2.8
TRO	Tromso	42.87	336	eP	P	09 42 56.9	+1.4
GERES	GERESS Array B	43.20	305	P	P	09 42 59.6	+1.0
	comp=Z,0.3nm,0.4s,baz=86,slow=5.0,SNR=2.3						
CLL	Collm	43.39	308	eP	P	09 42 59.0	-0.9
CLL	Collm	43.39	308	eP	P	09 42 59.0	-0.9
FAUS	Fauske	43.49	332	eP	P	09 43 01.6	+1.2
MOR8	Moi Rana	43.54	330	eP	P	09 43 01.4	+0.5
STEI	Steigen	43.64	333	eP	P	09 43 01.9	+0.3
KSRS	Korea Array	43.73	72	P	P	09 43 02.3	-0.5
	comp=Z,1.0nm,0.7s,baz=258,slow=8.6,SNR=2.5						
NC602	NORSAR Array S	44.09	322	eP	P	09 43 06.0	+0.7
KONS	Konsvik	44.13	330	eP	P	09 43 06.9	+1.4
NB201	NORSAR Array S	44.23	322	eP	P	09 43 07.3	+0.8
NB2	NORSAR Subarra	44.27	322	P	P	09 43 07.5	+0.7
	comp=Z,1.6nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.27	322	P	P	09 43 07.6	+0.7
	comp=Z,2.4nm,0.6s,baz=94,slow=7.6,SNR=12						
NSS	Namsos	44.27	327	eP	P	09 43 05.5	-1.2
LOF	Lofoten	44.31	333	eP	P	09 43 07.5	+0.5
TIXI	Tiksi	44.64	22⇓	iP	P	09 43 10.9	+1.4
USRK	Ussuriysk Ar.	44.95	62	P	P	09 43 13.4	+1.1
	comp=Z,1.1nm,0.5s,baz=148,slow=42,SNR=1.8						
KONO	Kongsberg	45.02	320	eP	P	09 43 13.7	+1.0
DOMB	Dombas	45.35	324	eP	P	09 43 16.0	+0.6
HOMB	Homborsund	45.59	318	eP	P	09 43 18.4	+1.2
SKAR	Skarslia	45.68	322	eP	P	09 43 19.6	+1.7
ODD1	Odda	46.52	321	eP	P	09 43 25.9	+1.4
BLS5	Blasjo	46.62	320	eP	P	09 43 26.4	+1.1
KBS	Kingsbay	47.99	347	eP	P	09 43 35.5	0.0
MA2	Magadan	53.12	39⇓	eP	P	09 44 15.1	+1.0
MA2				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SEY	Seymchan	53.19	34⇑	eP	P	09 44 16.1	+1.5
COCO	West Island	54.46	150	i P	P	09 44 30.0	+5.7
ESDC	Sonseca Array	57.88	298	P	P	09 44 48.3	-0.1
	comp=Z,2.3nm,0.8s,baz=55,slow=7.6,SNR=12						
ESDC	Sonseca Array	57.88	298	IAmb	IAmb	09 44 50.7	
	comp=Z,16nm,1.5s						
TORD	Torodi Ar. Bea	66.67	269	P	P	09 45 46.8	-0.2
	comp=Z,2.4nm,0.4s,baz=47,slow=5.6,SNR=34						
TORD	Torodi Ar. Bea	66.67	269	P	P	09 45 46.8	-0.2
YKA	Yellowknife Ar	80.35	3	P	P	09 47 07.0	+1.2
	comp=Z,0.3nm,0.4s,baz=359,slow=5.2,SNR=9.3						
WRA	Warramunga Arr	81.66	123	P	P	09 47 13.4	-0.1
	comp=Z,0.8nm,1.2s,baz=319,slow=4.4,SNR=5.0						
ASAR	Alice Springs	83.98	126	P	P	09 47 25.3	-0.1
	comp=Z,0.2nm,0.8s,baz=8.9,slow=6.6,SNR=2.4						

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*IDC **31** 09:57:08.6±43.0, 15°.09S×174°.14W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.8/28, mbtmp4.2/3, Error ellipse: s-maj=817.3km s-min=179.4km az=77.0*

*NEIC **31** 09:58:05.3±1.6, 16°.0S±0°.1×176°.3W±0°.1, h394^{km}±14^{km}, mb4.2/13, Error ellipse: s-maj=18.3km s-min=11.8km az=224.0*

ISC 31 09:58:05.1±1.0**, 16°.0S**±0°.2×**176°.3W**±0°.1**, h382^{km}, n20, σ0^{s}.95**/20**, mb4.0**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.84	65	Pn	Pn	09 59 25.0	+0.3
MSVF	Nonsavu	5.67	251	Pn	Pn	09 59 35.5	+2.0
NIUE	Niue	6.82	118	Pn	Pn	09 59 45.9	-0.4
OUZ	Omahuta	21.18	203	P	P	10 02 22.0	+0.6
EIDS	Eidsvold	31.83	248	P	P	10 03 55.0	-1.2
EIDS				IAmb	IAmb	10 04 12.4	
	comp=Z,13nm,1.5s						
ARMA	Armidale	32.65	238	P	P	10 04 03.4	+0.1
STKA	Stephens Creek	41.32	240	P	P	10 05 14.8	-0.5
	comp=Z,1.2nm,0.7s,baz=95,slow=11,SNR=1.5						
BBOO	Buckleboo	46.09	240	P	P	10 05 52.0	-0.9
BBOO				IAmb	IAmb	10 06 25.8	
	comp=Z,19nm,1.2s						
WR0	Warramunga Arr	46.79	257	P	P	10 05 57.8	-0.6
WB0	Warramunga Arr	46.94	258	P	P	10 05 58.4	-1.1
WB0				IAmb	IAmb	10 05 59.3	
	comp=Z,14nm,1.6s						
WB2	Warramunga Arr	46.97	257	P	P	10 05 59.1	-0.7
WB2				IAmb	IAmb	10 06 16.1	
	comp=Z,26nm,1.8s						
WRAB	Tennant Creek	46.97	258	P	P	10 05 59.6	-0.2
WRAB				IAmb	IAmb	10 06 39.9	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	46.98	257	P	P	10 05 58.6	-1.2
	comp=Z,1.5nm,0.7s,baz=93,slow=7.3,SNR=21						
WRA	Warramunga Arr	46.98	257	P	P	10 05 59.4	-0.4
AS31	Alice Springs	47.26	252	P	P	10 06 01.7	-0.3
ASAR	Alice Springs	47.26	252	P	P	10 06 01.7	-0.3
	comp=Z,5.5nm,0.5s,baz=87,slow=8.0,SNR=124						
ASAR	Alice Springs	47.26	252	P	P	10 06 01.5	-0.5
FORT	Forrest	52.65	243	P	P	10 06 40.0	-1.8
PSA00	Pilbara Seismi	60.35	254	P	P	10 07 35.9	+0.2
PSA00				IAmb	IAmb	10 08 14.5	
	comp=Z,15nm,1.4s						
QSPA	South Pole Qui	74.06	180	P	P	10 09 00.9	+0.8

NOU 31 10:10:36.2, 38°.47S×173°.47E, h55^{km}, MLv3.6, Off W. Coast of N. Island, N.Z., Off west coast of North Island

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*IDC **31** 10:10:46.6±2.0, 14°.79S×70°.78W, h214^{km}±23^{km}, mb3.0/6, mb1 3.4/10, mb1mx3.3/32, mbtmp3.7/10, Error ellipse: s-maj=27.9km s-min=15.0km az=48.0*

ISC 31 10:10:45.7±0.7**, 14°.81S**±0°.10×**70°.8W**±0°.1**, h200^{km}, n10, σ1^{s}.72**/11**, mb3.3**/6**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	6.55	295	P	Pn	10 12 22.4	+2.1
	1.3nm,0.3s,baz=99,slow=17,SNR=2.2						
LVC	Limon Verde	7.96	168	P	Pn	10 12 39.6	+0.8
	0.6nm,0.3s,baz=352,slow=10,SNR=19						
LVC				S	Sn	10 14 06.1	-2.6
	2.6nm,0.3s,baz=73,slow=22,SNR=18						
SIV	San Ignacio	9.41	98	P	Pn	10 12 59.2	+1.8
	0.5nm,0.3s,baz=278,slow=7.6,SNR=6.9						
CPUP	Villa Florida	17.00	135	P	Pn	10 14 31.9	-0.1
	0.7nm,0.3s,baz=313,slow=7.1,SNR=8.7						
PLCA	Paso Flores	25.83	180	P	P	10 16 00.4	+1.7
	0.8nm,0.8s,baz=26,slow=9.1,SNR=3.0						
TXAR	Lajitas Array	54.18	324	P	P	10 19 49.5	-1.3
	0.2nm,0.5s,baz=150,slow=9.6,SNR=5.1						
PDAR	Pinedale Array	67.47	330	P	P	10 21 19.8	-0.5
	0.2nm,0.5s,baz=126,slow=8.9,SNR=4.3						
NVAR	Mina Array Bea	69.17	322	P	P	10 21 29.4	-1.6
	0.5nm,0.9s,baz=153,slow=8.8,SNR=1.8						
TORD	Torodi Ar. Bea	76.89	72	P	P	10 22 15.5	-1.0
	0.5nm,0.4s,baz=266,slow=4.7,SNR=5.0						
YKA	Yellowknife Ar	84.32	341	P	P	10 22 54.2	-0.6
	0.5nm,0.7s,baz=130,slow=5.7,SNR=10						

RSNC 31 10:22:00.2±0.7**, 6°.98N×76°.37W, h29^{km}**±6^{km}**, ML1.4, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.16	78⇑	eP	Pb	10 22 05.6	-0.4
DBBC				eS	Sb	10 22 10.3	+0.3
DBBC	Dabeiba	0.16	78	eS	Sb	10 22 26.6	+17
UREC	San Jos de Ur	1.13	47	eP	Pb	10 22 24.8	+3.7
UREC				eS	Sb	10 22 44.1	+8.6
UREC				i		10 22 46.0	
	comp=Z,7.9nm,0.4s						
HELC	Santa Helena	1.15	133	eP	Pn	10 22 19.7	-0.9
HELC				eS	Sn	10 22 35.4	-0.3
HELC				i		10 22 37.3	
	comp=Z,3.4nm,0.5s						
CBOC	Ciudad Bolivar	1.17	162	eP	Pn	10 22 20.0	-0.7
CBOC				eS	Sn	10 22 34.8	-1.0
CBOC				i		10 22 37.9	
	comp=Z,10.0nm,0.4s						
SOLC	Bahia Solano	1.28	234	eP	Pn	10 22 20.7	-1.4
SOLC				eS	Sn	10 22 37.9	-0.3
SOLC				i		10 22 39.3	
	comp=Z,7.6nm,0.2s						
SOLC	Bahia Solano	1.28	234	eS	Sn	10 22 37.7	-0.6
SOLC				i		10 22 39.4	
	comp=Z,7.6nm,0.2s						
ZARC	Zaragoza, Cauc	1.58	71	eP	Pb	10 22 31.3	+2.5
ZARC				eS	Sb	10 22 54.8	+6.3
ZARC				i		10 22 56.1	
	comp=Z,8.8nm,0.7s						
PTBC	PUERTO BERRIO,	1.95	103	eP	Pb	10 22 35.5	+0.4
PTBC				eS	Sb	10 23 03.5	+4.4
PTBC				i		10 23 08.7	
	comp=Z,3.9nm,0.4s						
NORC	Norcasia	2.05	133	eS	Sb	10 23 04.0	+1.9

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*DJA **31** 10:45:14.2±1.0, 6°S±7°×10°2E±1°0, h20^{km}±7^{km}, M3.6/7, MLv3.6/7*

*IDC **31** 10:45:14.7±4.2, 5°.26S×102°.20E, h0^{km}, mb3.5/6, mb1 3.6/6, mb1mx3.5/31, mbtmp3.5/6, Error ellipse: s-maj=167.4km s-min=23.2km az=55.0*

ISC 31 10:45:12.9±1.6**, 5°.7S**±0°.1×**102°.4E**±0°.1**, h10^{km}, n14, σ0^{s}.33**/10**, mb3.5**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.42	23	P	Pb	10 45 39.3	-0.2
MNAI				S	Sg	10 45 58.6	-0.1
LWLI	Liwa	1.77	68	P	Pn	10 45 43.7	0.0
KASI	Kota Agung	2.08	86	P	Pn	10 45 47.7	-0.2
MDSI	Maura Dua	2.12	56	P	Pn	10 45 48.7	+0.2
KLSI		2.51	67	P	Pn	10 45 54.2	+0.4
CMAR	Chiang Mai Arr	24.23	352	P	P	10 50 29.6	-0.5
	0.5nm,0.4s,baz=182,slow=8.7,SNR=5.3						
H01W3	Cape Leeuwin H	31.01	161	T	T	11 23 57.2	
	baz=339,slow=76,SNR=5.8						
H01W2	Cape Leeuwin H	31.03	161	T	T	11 23 57.2	
	baz=339,slow=76,SNR=7.0						
H01W1	Cape Leeuwin H	31.03	161	T	T	11 23 57.2	
	baz=339,slow=76,SNR=7.9						
WRA	Warramunga Arr	34.12	117	P	P	10 52 03.9	+5.7
	0.2nm,0.7s,baz=288,slow=12,SNR=1.4						
ASAR	Alice Springs	35.19	124	P	P	10 52 15.2	+7.8
	0.3nm,0.9s,baz=303,slow=8.5,SNR=1.8						
SONM	Songino Array	53.40	3	P	P	10 54 33.4	+0.4
	0.8nm,0.8s,baz=182,slow=7.3,SNR=6.4						
MKAR	Makanchi Array	55.21	343	P	P	10 54 46.0	0.0
	0.3nm,0.5s,baz=148,slow=8.5,SNR=5.4						
ZALV	Zalesovo Beam	61.22	348	P	P	10 55 27.8	0.0
	0.5nm,0.4s,baz=153,slow=8.1,SNR=3.6						

IDC 31 10:53:53.0±7.2**, 48°.90S×125°.13E, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.5**/19**, mbtmp3.3**/2**, Error ellipse: s-maj=434.9km s-min=75.0km az=95.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	16.18	326	T	T	11 15 29.2	
	baz=151,slow=73,SNR=7.1						
H01W2	Cape Leeuwin H	16.18	326	T	T	11 15 33.7	
	baz=151,slow=73,SNR=6.8						
H01W3	Cape Leeuwin H	16.19	326	T	T	11 15 33.3	
	baz=151,slow=73,SNR=5.6						
ASAR	Alice Springs	26.12	19	P	P	10 59 29.0	+0.4
	0.3nm,0.6s,baz=189,slow=9.3,SNR=5.3						
WRA	Warramunga Arr	29.82	18	P	P	11 00 00.8	-0.9
	0.4nm,0.9s,baz=192,slow=8.9,SNR=2.3						
YKA	Yellowknife Ar	145.07	44	PKPbc	PKPbc	11 13 29.8	-0.6
	0.4nm,0.8s,baz=266,slow=2.6,SNR=5.6						

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*JMA **31** 10:57:44.4±0.4, 22°.07N×121°.49E, h4^{km}*

*TAP **31** 10:57:46.6, 22°.15N×121°.33E, h4^{km}, ML3.1, C*

ISC 31 10:57:46.9±1.0**, 22°.13N**±0°.03×**121°.41E**±0°.03**, h17^{km}**±8^{km}**, n63, σ0^{s}.94**/101**, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.16	124⇓	iP	Pb	10 57 52.4	+0.9
	baz=118						
LAY				S	Sb	10 57 56.3	+1.7
	baz=118						
TAW	Tawu	0.52	296	P	Pg	10 57 56.9	-0.4
	baz=297						
TAW				S	Sg	10 58 04.3	-0.1
	baz=297						
TSEB	Hengchuen, Pin	0.52	244	i S	Sb	10 58 06.4	+1.6
	baz=240						
LDUT	Ludao	0.54	6	P	Pb	10 57 57.8	-0.1
	baz=13						
LDUT				S	Sb	10 58 05.9	+0.5
	baz=13						
SLIU	Shizi	0.57	279	P	Pg	10 57 57.8	-0.5
	baz=277						
SLIU				eS	Sg	10 58 05.0	-0.9
	baz=277						
EAST	Anshuo	0.57	296⇓	iP	Pg	10 57 57.9	-0.5
	baz=297						
EAST				i S	Sg	10 58 05.5	-0.5
	baz=297						
TWKBT	Hengchun	0.58	251	P	Pg	10 57 58.0	-0.4
	baz=246						
TWKBT				S	Sg	10 58 06.1	-0.2
	baz=246						
TWK1	Hengchun	0.59	251	i P	Pg	10 57 58.4	-0.2
	baz=246						
TWK1				i S	Sg	10 58 06.1	-0.4
	baz=246						
ECL	Taimali	0.62	318	i P	Pg	10 57 58.7	-0.5
	baz=322						
ECL				S	Sg	10 58 07.6	0.0
	baz=322						
HEN	Hengchun	0.63	259	eP	Pg	10 57 59.3	-0.1
	baz=255						
HEN				S	Sg	10 58 08.4	+0.6
	baz=255						
SNW	Nanwan	0.63	254	S	Sg	10 58 08.4	+0.6
	baz=250						
TTN	Taitung	0.66	339	eP	Pn	10 58 01.1	-0.4
	baz=344						
TTN				S	Sb	10 58 10.4	+1.5
	baz=344						
TWGBT	Beinan	0.74	336	P	Pb	10 58 00.7	-0.8
	baz=340						
TWGBT				S	Sb	10 58 12.3	+0.9
	baz=340						
TWG	Pinlang	0.75	336	i P	Pb	10 58 01.1	-0.4
	baz=340						
SCZT	Fangliau	0.77	288	i P	Pb	10 58 00.9	-0.9
	baz=288						
SCZT				eS	Sb	10 58 11.9	0.0
	baz=288						
LONT	Longtian	0.81	342	eP	Pn	10 58 03.3	-0.3
	baz=346						
EDH	Donghe	0.84	354	eP	Pb	10 58 03.0	0.0
	baz=358						
EDH				S	Sn	10 58 16.1	+0.2
	baz=358						
SSPT	Xinbi	0.85	294	P	Pb	10 58 03.4	+0.2
	baz=295						
MASBT	Mashibuluo	0.86	304	P	Pb	10 58 02.4	-1.0
	baz=305						
MASBT				eS	Sn	10 58 16.7	+0.4
	baz=305						
TSMG	Majia	0.91	309	eP	Pb	10 58 03.6	-0.6
	baz=310						
TSMG				eS	Sg	10 58 16.9	+0.4
	baz=310						
SSD	Sandimen	0.94	311	P	Pb	10 58 04.6	-0.2
	baz=312						
SSD				S	Sg	10 58 18.4	+0.8
	baz=312						
CHKT	Chengkung	0.96	358	eS	Sn	10 58 20.0	+1.1
	baz=2.0						
FULB	Fuli	1.07	354	P	Pg	10 58 08.2	+0.6
	baz=358						
SLGT	Liugui	1.11	321	eP	Pg	10 58 08.4	0.0
	baz=322						
ELDTW	Lidau	1.11	341	eP	Pg	10 58 09.4	+0.9
	baz=344						
ELDTW				S	Sg	10 58 23.9	+0.8
	baz=344						
SCST	Cishan	1.13	312	eP	Pn	10 58 07.6	-0.3
	baz=313						
TWM1	Shoushan	1.14	307	eP	Pn	10 58 07.6	-0.5
	baz=308						
TWM1				eS	Sb	10 58 23.4	+0.7
	baz=308						
STYT	Tauyuan	1.19	330	P	Pg	10 58 09.8	-0.1
	baz=332						
EYUL	Yuli	1.21	356	eP	Pb	10 58 09.6	+0.2
	baz=359						
SGST	Jiashian	1.21	321	P	Pb	10 58 09.8	+0.4
	baz=323						
TWF1	Yuli	1.22	355	P	Pn	10 58 09.2	0.0
	baz=358						
TWF1				eS	Sg	10 58 27.1	+0.7
	baz=358						
YULB	Yu-li	1.26	355	eP	Pn	10 58 09.8	+0.1
	baz=358						
YULB				eS	Sg	10 58 30.4	+2.6
	baz=358						
CHN1	Nanshi	1.32	322	P	Pg	10 58 12.9	+0.4
	baz=324						
CHN1				S	Sg	10 58 31.0	+1.2
	baz=324						
WTP	Ta-pu	1.33	327	P	Pb	10 58 11.7	+0.3
	baz=328						
WTP				eS	Sn	10 58 28.5	+0.5
	baz=328						
HGSD	Ruisui	1.35	1	eP	Pb	10 58 11.9	0.0
	baz=3.0						
TPUB	Ta-pu	1.37	329	P	Pg	10 58 12.9	-0.4
	baz=330						
EHY	Hungye	1.37	357	eP	Pn	10 58 11.1	-0.2
	baz=359						
EHY				eS	Sg	10 58 32.8	+1.6
	baz=359						
TWK	Hsinying	1.41	323	P	Pb	10 58 13.3	+0.5
	baz=325						
TWK				eS	Sb	10 58 31.8	+1.2
	baz=325						
YUS	Yu-Shan	1.41	343	eP	Pn	10 58 12.1	-0.2
	baz=345						
ALS	Alishan	1.48	338	P	Pg	10 58 15.1	-0.4
	baz=340						
ALS				eS	Sb	10 58 33.4	+0.7
	baz=340						
CHN5	Tsauling	1.60	335	P	Pb	10 58 16.7	+0.6
	baz=337						
CHN5				eS	Sb	10 58 37.3	+1.1
	baz=337						
SSLB	Suanglung	1.70	346	eP	Pb	10 58 17.4	-0.4
	baz=347						
SMLT	Sun Moon Lake	1.80	345	eP	Pb	10 58 18.8	-0.8
	baz=347						
SMLT				eS	Sb	10 58 41.9	0.0
	baz=347						
TYC	Yuchr	1.83	344	eP	Pb	10 58 20.0	0.0
	baz=346						
CHGB	Renai	1.93	354	eP	Pb	10 58 20.8	-1.0
	baz=355						
WHF	Hehuan Shan	2.01	356	eP	Pn	10 58 21.6	+1.2
	baz=358						
WHF				eS	Sn	10 58 46.6	+1.3
	baz=358						
NACB	Ninganchiao	2.04	5	P	Pb	10 58 22.6	-0.9
	baz=6.0						
NACB				S	Sb	10 58 48.6	0.0
	baz=6.0						
ETLH	Xiulin Townshi	2.07	2	eP	Pb	10 58 23.9	-0.2
	baz=3.0						
ETLH				eS	Sb	10 58 49.3	-0.2
	baz=3.0						
FUSS	Fushou	2.11	356	eP	Pb	10 58 24.3	-0.6
	baz=357						
FUSS				eS	Sb	10 58 49.9	-1.0
	baz=357						
WHP	Taichung City	2.18	349	eP	Pb	10 58 24.9	-1.0
	baz=350						
NNSB	Datong	2.29	359	eP	Pb	10 58 26.1	-1.7
	baz=1.0						
NNSB				eS	Sb	10 58 54.5	-1.3
	baz=1.0						
ENA	Nanau	2.31	8	eP	Pb	10 58 26.5	-1.6
	baz=9.0						
ENTT	Nioudou	2.50	3	eP	Pn	10 58 28.9	+2.1
	baz=5.0						
ENTT				eS	Sb	10 58 59.6	-2.3
	baz=5.0						
YHNB	Yeheng	2.53	359	eP	Pn	10 58 28.7	+1.5
JYNG	Yonagunijimaku	2.71	31	P	Pn	10 58 29.1	-0.5
HATJ	Hateruma jima	2.92	49	P	Pn	10 58 32.8	+0.2
HATJ				eS	Sn	10 59 05.8	-1.5
IRIF	Iriomote-Funau	3.06	44	P	Pn	10 58 35.1	+0.6
JKRS	Kuro-shima	3.18	48	P	Pn	10 58 36.7	+0.5
JKRS				S	Sn	10 59 12.5	-1.2
JIJ	Ishigaki jima	3.36	48	P	Pn	10 58 38.6	0.0
JIJ				S	Sn	10 59 15.3	-2.7
JISG	Ishigakijimahi	3.62	47	P	Pn	10 58 42.3	+0.1
JISG				eS	Sn	10 59 22.3	-2.2
JTJ	Tarama	3.93	50	P	Pn	10 58 46.9	+0.5
JTJ				S	Sn	10 59 30.7	-1.4
JIRB	Irabujima	4.38	51	eS	Sn	10 59 41.8	-1.4
JMJ2	Miyako jima3	4.44	53	eS	Sn	10 59 43.6	-1.2

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*IDC **31** 11:24:32.2±1.8, 2°.03N×96°.19W, h0^{km}, mb3.8/6, mb1 4.2/6, mb1mx3.8/34, mbtmp3.8/6, MS3.5/6, Ms1 3.5/6, ms1mx3.2/32, Error ellipse: s-maj=116.3km s-min=34.7km az=86.0*

ISC 31 11:24:35.0±1.4**, 2°.0N**±0°.2×**97°.2W**±0°.2**, h10^{km}, n29, σ1^{s}.09**/15**, mb3.8**/6**, MS3.5**/5**, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	15.18	8	LR	LR	11 32 36.4	
	comp=Z,186nm,20.0s,baz=174,slow=32						
MARP	Paez Belalcaza	21.22	87	eP	P	11 29 22.1	+0.5
CBOC	Ciudad Bolivar	21.46	79	eP	P	11 29 23.8	-0.2
DBBC	Dabeiba	21.48	76	eP	P	11 29 24.4	+0.2
ORTC	Ortega, Tolima	21.98	84	eP	P	11 29 30.2	+0.7
GUY2C	Guyana, Caldas	22.00	81	eP	P	11 29 30.9	+0.7
PTLC	Puerto Leguiza	22.45	94	eP	P	11 29 34.8	+0.3
NNA	Nana	24.51	125	LR	LR	11 36 59.2	
	comp=Z,48nm,21.8s,baz=292,slow=32						
LPIG	La Paz	25.40	331	LR	LR	11 37 42.3	
	comp=Z,143nm,20.4s,baz=188,slow=31						
TXAR	Lajitas Array	27.89	348	P	P	11 30 25.4	-0.1
	0.8nm,0.9s,baz=152,slow=8.3,SNR=8.0						
TKL	Tuckaleechee C	35.74	19	LR	LR	11 45 13.4	
	comp=Z,82nm,21.6s,baz=177,slow=35						
H03N2	Juan Fernandez	39.21	156	T	T	12 13 42.0	
	baz=333,slow=77,SNR=48						
H03N1	Juan Fernandez	39.22	156	T	T	12 13 44.9	
	baz=333,slow=77,SNR=47						
H03N3	Juan Fernandez	39.23	156	T	T	12 13 44.0	
	baz=333,slow=77,SNR=54						
NVAR	Mina Array Bea	41.11	334	P	P	11 32 22.5	+2.9
	0.5nm,0.7s,baz=134,slow=7.7,SNR=2.8						
PDAR	Pinedale Array	42.09	346	P	P	11 32 27.5	0.0
	1.3nm,1.0s,baz=144,slow=9.0,SNR=5.8						
PDAR				LR	LR	11 48 48.1	
	comp=Z,104nm,18.2s,baz=144,slow=34						
SADO	Sadowa	45.49	18	LR	LR	11 51 18.0	
	comp=Z,74nm,19.8s,baz=252,slow=36						
ULM	Lac du Bonnet	48.10	1	P	P	11 33 13.5	-1.5
	2.3nm,0.9s,baz=187,slow=5.1,SNR=3.7						
YKA	Yellowknife Ar	61.76	351	P	P	11 34 53.3	-0.3
	1.0nm,0.9s,baz=152,slow=7.1,SNR=7.9						
ILAR	Eielson Array	72.06	340	P	P	11 35 59.1	0.0
	2.0nm,0.9s,baz=144,slow=4.9,SNR=23						
H11N3	WAKE ISLAND Hy	94.90	290	T	T	13 23 24.8	
	baz=79,slow=74,SNR=5.5						
H11N2	WAKE ISLAND Hy	94.92	290	T	T	13 23 32.1	
	baz=79						
H11N1	WAKE ISLAND Hy	94.92	290	T	T	13 23 24.6	
	baz=79,slow=74,SNR=4.9						
H11S2	WAKE ISLAND Hy	95.18	289	T	T	13 23 42.5	
	baz=87,SNR=20						
H11S1	WAKE ISLAND Hy	95.18	289	T	T	13 23 40.8	
	baz=87,slow=74,SNR=15						
H11S3	WAKE ISLAND Hy	95.20	289	T	T	13 23 43.2	
	baz=87,slow=74,SNR=8.8						
ASAR	Alice Springs	126.11	242	PKP	PKiKP	11 43 39.3	+0.2
	0.3nm,0.7s,baz=82,slow=2.0,SNR=4.2						
WRA	Warramunga Arr	126.64	247	PKP	PKPdf	11 43 39.8	+0.1
	0.6nm,0.8s,baz=122,slow=1.5,SNR=3.3						
KURBB	Kurchatov Arra	127.47	3	PKP	PKPdf	11 43 39.0	-1.5
	0.8nm,0.9s,baz=342,slow=2.1,SNR=5.5						

IDC 31 11:31:08.6±1.7**, 3°.09N×127°.94E, h0^{km}, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/47**, mbtmp3.5**/5**, Error ellipse:**

s-maj=135.5km s-min=21.3km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.74	165	P	P	11 36 21.7	-1.0
	0.8nm,0.5s,baz=345,slow=11,SNR=10						
ASAR	Alice Springs	27.22	168	P	P	11 36 54.3	-0.1
	0.1nm,0.4s,baz=349,slow=7.6,SNR=1.0						
STKA	Stephens Creek	37.12	161	P	P	11 38 22.1	+1.1
	2.6nm,0.9s,baz=333,slow=11,SNR=3.9						
MKAR	Makanchi Array	58.77	325	P	P	11 41 08.9	+0.3
	0.2nm,0.4s,baz=123,slow=8.0,SNR=4.0						
KURBB	Kurchatov Arra	62.92	327	P	P	11 41 36.2	-0.5
	0.2nm,0.5s,baz=126,slow=7.2,SNR=3.2						

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*INET **31** 11:40:22.3, 15°.21N×89°.79W, h30^{km}, ML4.5, MW4.4*
*IDC **31** 11:40:26.6±0.9, 14°.59N×89°.03W, h0^{km}, mb4.2/11, mb1 4.4/14, mb1mx4.1/40, mbtmp4.2/14, ML3.7/3, MS3.4/14, Ms1 3.4/14, ms1mx3.3/34, Error ellipse: s-maj=31.8km s-min=14.7km az=34.0*
*GCG **31** 11:40:27.5±0.6, 14°.65N×89°.12W, h0^{km}±88^{km}, MD4.6*
*NEIC **31** 11:40:27.8±1.2, 14°.53N±0°.03×89°.13W±0°.04, h10^{km}±1^{km}, mb4.6/91, Md4.4(SNET), Error ellipse: s-maj=6.9km s-min=4.6km az=235.0*
*UCR **31** 11:40:27.1±3.0, 14°.53N×89°.15W, h1^{km}±5^{km}, ML4.3, mb4.6(NEIC)*
*SNET **31** 11:40:27.4±3.2, 14°.53N×89°.15W, h1^{km}±6^{km}, ML4.4*
ISC 31 11:40:27.4±1.1, **14°.59N**±0°.03×**89°.12W**±0°.02, **h5**^{km}±7^{km}, **n240**, σ**0^{s}95**/278, **mb4.6**/44, **MS3.2**/11, **12C-13D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESQI	Esquipulas	0.22	263	⇑iP	Pg	11 40 31.9	+0.1
ESQI				eS	Sg	11 40 35.6	+0.9
ESQI	Esquipulas	0.22	263		Pg	11 40 31.8	+0.1
ESQI				Sg	Sg	11 40 35.4	+0.7
LLGN	La Laguna	0.46	159	⇑eP	Pg	11 40 35.9	-0.3
LLGN				eS	Sg	11 40 42.6	+0.4
LLGN				IAML		11 40 43.3	
	comp=Z,59µm,0.2s						
LLGN	La Laguna	0.46	159	⇑eP	Pg	11 40 35.9	-0.3
LLGN				eS	Sg	11 40 42.6	+0.4
LLGN				IAML		11 40 43.3	
	comp=Z,59µm,0.2s						
TACO	Tacachico	0.66	201	eP	Pg	11 40 39.4	-0.6
TACO	Tacachico	0.66	201	eP	Pg	11 40 39.4	-0.6
UNIC	Universidad Ca	0.73	215	eP	Pg	11 40 40.7	-0.8
UNIC				⇑eS	Sg	11 40 50.5	-0.6
UNIC	Universidad Ca	0.73	215	eP	Pg	11 40 40.7	-0.8
UNIC				⇑eS	Sg	11 40 50.5	-0.6
MRL	Marmol	0.74	312	⇓iP	Pg	11 40 41.7	+0.1
MRL	Marmol	0.74	312	⇓iP	Pg	11 40 41.7	+0.1
MRL	Marmol	0.74	312	⇑eP	Pb	11 40 42.5	-0.3
QUEZ	Alcaldia de Qu	0.76	191	eP	Pg	11 40 42.0	-0.1
QUEZ				eS	Sg	11 40 52.4	+0.4
CEDA	San Andres	0.83	199	eP	Pg	11 40 42.9	-0.4
CEDA				eS	Sb	11 40 55.6	-0.2
CEDA				IAML		11 41 04.0	
	comp=Z,18µm,0.3s						
CEDA	San Andres	0.83	199	eP	Pg	11 40 42.9	-0.4
CEDA				eS	Sb	11 40 55.6	-0.2
CEDA				IAML		11 41 04.0	
	comp=Z,18µm,0.3s						
LFU	La Fuente	0.83	180	eP	Pg	11 40 43.1	-0.4
LFU	La Fuente	0.83	180	eP	Pg	11 40 43.1	-0.4
LBRS	Las Brisas	0.85	175	⇑iP	Pg	11 40 43.1	-0.6
LBRS	Las Brisas	0.85	175	⇑iP	Pg	11 40 43.1	-0.6
RTR	El Retiro	0.86	217	eP	Pg	11 40 43.6	-0.2
RTR	El Retiro	0.86	217	eP	Pg	11 40 43.6	-0.2
SNJE	San Jose	0.86	214	eP	Pg	11 40 43.2	-0.7
SNJE	San Jose	0.86	214	eP	Pg	11 40 43.2	-0.7
BOQS	Boqueron	0.86	191	⇓iP	Pg	11 40 43.9	-0.1
BOQS	Boqueron	0.86	191	⇓iP	Pg	11 40 43.9	-0.1
UESS	Universidad de	0.87	185	eP	Pg	11 40 43.2	-0.8
UESS				eS	Sg	11 40 54.4	-0.9
UESS				IAML		11 41 02.0	
	comp=Z,7µm,0.3s						
UESS	Universidad de	0.87	185	eP	Pg	11 40 43.2	-0.8
UESS				eS	Sg	11 40 54.4	-0.9
UESS				IAML		11 41 02.0	
	comp=Z,7µm,0.3s						
UDBS	Universidad Do	0.87	182	eP	Pg	11 40 43.9	-0.2
UDBS				eS	Sg	11 40 55.4	0.0
UDBS	Universidad Do	0.87	182	eP	Pg	11 40 43.9	-0.2
UDBS				eS	Sg	11 40 55.4	0.0
IGN	Direccin Gen	0.87	183	⇓iP	Pg	11 40 43.6	-0.5
IGN				eS	Sg	11 40 55.3	-0.1
IGN	Direccin Gen	0.87	183	⇓iP	Pg	11 40 43.6	-0.5
IGN				eS	Sg	11 40 55.3	-0.1
OPAM	Oficina de Pla	0.88	185	eP	Pg	11 40 43.5	-0.7
OPAM				eS	Sg	11 40 55.9	+0.3
OPAM				IAML		11 41 03.4	
	comp=Z,8µm,0.4s						
OPAM	Oficina de Pla	0.88	185	eP	Pg	11 40 43.5	-0.7
OPAM				eS	Sg	11 40 55.9	+0.3
OPAM				IAML		11 41 03.4	
	comp=Z,8µm,0.4s						
AEIL	Aeropuerto Ilo	0.89	180	⇓iP	Pg	11 40 44.1	-0.3
AEIL				eS	Sg	11 40 56.3	+0.4
AEIL				IAML		11 41 04.7	
	comp=Z,25µm,0.3s						
AEIL	Aeropuerto Ilo	0.89	180	⇓iP	Pg	11 40 44.1	-0.3
AEIL				eS	Sg	11 40 56.3	+0.4
AEIL				IAML		11 41 04.7	
	comp=Z,25µm,0.3s						
PMON	Piamonte	0.89	192	eP	Pg	11 40 44.2	-0.4
PMON	Piamonte	0.89	192	eP	Pg	11 40 44.2	-0.4
SBLS	San Blas	0.89	213	eP	Pg	11 40 44.0	-0.5
SBLS	San Blas	0.89	213	eP	Pg	11 40 44.0	-0.5
CEVE	Cerro Verde	0.90	213	eP	Pg	11 40 44.4	-0.3
CEVE				eS	Sb	11 40 57.4	-0.8
CEVE				IAML		11 41 07.1	
	comp=Z,11µm,0.4s						
CEVE	Cerro Verde	0.90	213	eP	Pg	11 40 44.4	-0.3
CEVE				eS	Sb	11 40 57.4	-0.8
CEVE				IAML		11 41 07.1	
	comp=Z,11µm,0.4s						
SNET	Serv Nac Est T	0.90	187	eP	Pg	11 40 44.2	-0.5
SNET				eS	Sg	11 40 56.3	-0.2
SNET				IAML		11 41 01.7	
	comp=Z,9µm,0.3s						
SNET	Serv Nac Est T	0.90	187	eP	Pg	11 40 44.2	-0.5
SNET				eS	Sg	11 40 56.3	-0.2
SNET				IAML		11 41 01.7	
	comp=Z,9µm,0.3s						
SNET	Serv Nac Est T	0.90	187	Pg	Pg	11 40 43.7	-1.0
ITCA	Escuela Especi	0.92	190	i P	Pg	11 40 44.7	-0.4
ITCA	Escuela Especi	0.92	190	i P	Pg	11 40 44.7	-0.4
LFRS	El Faro	0.96	177	i P	Pg	11 40 45.3	-0.6
LFRS	El Faro	0.96	177	i P	Pg	11 40 45.3	-0.6
JAYA	Jayaque - finc	0.98	199	⇓eP	Pg	11 40 45.7	-0.6
JAYA				eS	Sg	11 40 59.7	+0.6
JAYA				IAML		11 41 05.5	
	comp=Z,7µm,0.3s						
JAYA	Jayaque - finc	0.98	199	⇓eP	Pg	11 40 45.7	-0.6
JAYA				eS	Sg	11 40 59.7	+0.6
JAYA				IAML		11 41 05.5	
	comp=Z,7µm,0.3s						
COEG	Centro de Oper	0.99	167	eP	Pg	11 40 45.7	-0.7
	comp=Z,20µm,0.5s						
COEG				eS	Sg	11 40 59.3	+0.1
COEG				IAML		11 41 09.6	
	comp=Z,20µm,0.5s						
COEG	Centro de Oper	0.99	167	eP	Pg	11 40 45.7	-0.7
	comp=Z,20µm,0.5s						
COEG				eS	Sg	11 40 59.3	+0.1
COEG				IAML		11 41 09.6	
	comp=Z,20µm,0.5s						
UESV	Universidad de	1.00	161	eP	Pg	11 40 45.7	-0.9
UESV				eS	Sg	11 40 59.6	+0.1
UESV	Universidad de	1.00	161	eP	Pg	11 40 45.7	-0.9
UESV				eS	Sg	11 40 59.6	+0.1
PQSS	Presa 15 de Se	1.10	151	⇓eP	Pg	11 40 47.7	-0.8
PQSS				eS	Sg	11 41 02.8	0.0
PQSS				IAML		11 41 06.8	
	comp=Z,10µm,0.2s						
LALI	Alcalda de L	1.11	190	⇑eP	Pg	11 40 47.7	-1.1
LALI				eS	Sb	11 41 04.0	+0.1
LALI				IAML		11 41 10.6	
	comp=Z,3µm,0.5s						
LALI	Alcalda de L	1.11	190	⇑eP	Pg	11 40 47.7	-1.1
LALI				eS	Sb	11 41 04.0	+0.1
LALI				IAML		11 41 10.6	
	comp=Z,3µm,0.5s						
NBG	Las Nubes	1.19	270	eP	Pb	11 40 50.6	0.0
COEB	Comit de Eme	1.22	152	eP	Pg	11 40 49.9	-1.0
COEB				eS	Sn	11 41 08.9	+0.6
COEB				IAML		11 41 15.7	
	comp=Z,14µm,0.4s						
COEB	Comit de Eme	1.22	152	eP	Pg	11 40 49.9	-1.0
COEB				eS	Sn	11 41 08.9	+0.6
COEB				IAML		11 41 15.7	
	comp=Z,14µm,0.4s						
TECA	Tecapa	1.24	151	eP	Pg	11 40 43.2	-8.0
TECA	Tecapa	1.24	151	eP	Pg	11 40 43.2	-8.0
FAGO	Alcalda de S	1.32	132	eP	Pg	11 40 51.1	-1.6
FAGO				eS	Sg	11 41 09.4	-0.5
FAGO				IAML		11 41 19.9	
	comp=Z,4µm,0.4s						
FAGO	Alcalda de S	1.32	132	eP	Pg	11 40 51.1	-1.6
FAGO				eS	Sg	11 41 09.4	-0.5
FAGO				IAML		11 41 19.9	
	comp=Z,4µm,0.4s						
IXG	Ixpaco	1.35	252	⇑iP	Pg	11 40 52.2	-1.1
IXG	Ixpaco	1.35	252	⇑iP	Pg	11 40 52.2	-1.1
IXG	Ixpaco	1.35	252	eP	Pg	11 40 53.1	-0.2
IXG				eS	Sg	11 41 10.7	-0.2
PACA	Pacayal	1.35	145	eP	Pg	11 40 52.3	-1.0
PACA				eS	Sg	11 41 10.9	0.0
PACA				IAML		11 41 13.5	
	comp=Z,4µm,0.3s						
PACA	Pacayal	1.35	145	eP	Pg	11 40 52.3	-1.0
PACA				eS	Sg	11 41 10.9	0.0
PACA				IAML		11 41 13.5	
	comp=Z,4µm,0.3s						
RANC	El Ranchito	1.40	145	eP	Pn	11 40 53.2	-0.6
RANC				eS	Sn	11 41 14.7	+2.0
RANC				IAML		11 41 20.6	
	comp=Z,11µm,0.4s						
RANC	El Ranchito	1.40	145	eP	Pn	11 40 53.2	-0.6
RANC				eS	Sn	11 41 14.7	+2.0
RANC				IAML		11 41 20.6	
	comp=Z,11µm,0.4s						
CNRM	Centro Naciona	1.44	140	⇓iP	Pn	11 40 53.7	-0.4
CNRM				eS	Sg	11 41 13.6	0.0
CNRM	Centro Naciona	1.44	140	⇓iP	Pn	11 40 53.7	-0.4
CNRM				eS	Sg	11 41 13.6	0.0
PCG	Pacaya	1.46	262	eP	Pb	11 40 55.6	+0.5
FUG	Fuego 3	1.68	265	eP	Pb	11 40 58.6	-0.3
LCND	La Caada	1.74	137	eP	Pn	11 40 58.3	0.0
LCND				eS	Sb	11 41 22.6	+0.5
LCND				IAML		11 41 25.6	
	comp=Z,14µm,0.4s						
LCND	La Caada	1.74	137	eP	Pn	11 40 58.3	0.0
LCND				eS	Sb	11 41 22.6	+0.5
LCND				IAML		11 41 25.6	
	comp=Z,14µm,0.4s						
CNCH	Conchagua	1.80	136	eP	Pn	11 40 59.2	-0.1
CNCH	Conchagua	1.80	136	eP	Pn	11 40 59.2	-0.1
TGUH	Tegucigalpa,Un	1.86	106	eP	Pn	11 41 00.1	0.0
TGUH	Tegucigalpa,Un	1.86	106	eP	Pn	11 41 00.1	0.0
TGUH	Tegucigalpa,Un	1.86	106	Pn	Pn	11 41 01.6	+1.5
TGUH				Sn	Sn	11 41 25.1	+1.0
TGUH	Tegucigalpa,Un	1.86	106	eP	Pn	11 40 59.8	-0.3
HUEH	Huehuetenango	2.42	288	eP	Pn	11 41 08.5	+0.6
HUEH	Huehuetenango	2.42	288		Pn	11 41 08.6	+0.8
PETF	Flores	2.42	343		Pn	11 41 08.6	+0.9
RTAL	Retalhuleu	2.50	269		Pb	11 41 12.0	-0.8
CRIN	San Cristobal	2.75	133		Pb	11 41 15.9	-1.2
CCIG	Comitan	3.37	300		Pn	11 41 22.6	+1.7
ACON	Acoyapa	4.64	124		Pn	11 41 38.0	-0.2
ESPN	Las Esperanzas	5.26	116		Pn	11 41 47.5	+0.8
TEIG	Tepich	5.66	8	Pn	Pn	11 41 52.8	+0.5
TEIG	Tepich	5.66	8	eP	Pn	11 41 52.3	0.0
JTS	Las Juntas de	5.90	136	Pn	Pn	11 41 55.7	+0.2
JTS	Las Juntas de	5.90	136	eP	Pn	11 41 57.6	+2.1
CMIG	Matias Romero	6.08	295	Pn	Pn	11 41 57.3	-0.7
	comp=Z,1.9nm,0.3s,baz=125,slow=7.6,SNR=25						
CMIG				Pg	Pg	11 42 20.5	-3.5
	comp=Z,4.5nm,0.3s,baz=97,slow=12,SNR=19						
CMIG				Sn	Sn	11 43 04.3	-3.8
	comp=Z,7.8nm,0.3s,baz=294,slow=23,SNR=13						
CMIG				Lg	Lg	11 43 40.7	
	comp=Z,4.6nm,0.3s,baz=33,slow=18,SNR=6.1						
MOTC	Monteria, Cord	14.38	112	eP	P	11 44 00.1	+1.2
DBBC	Dabeiba	14.73	119	eP	P	11 44 05.0	+2.0
UREC	San Jos de Ur	14.95	116	eP	P	11 44 06.2	+0.9
CBOC	Ciudad Bolivar	15.53	123	eP	P	11 44 14.2	+2.3
ZARC	Zaragoza, Cauc	15.66	115	eP	P	11 44 14.3	+1.1
HELC	Santa Helena	15.75	121	eP	P	11 44 16.6	+2.1
SMLC	San Martn de	15.81	110	eP	P	11 44 16.4	+1.6
PLMC	San Jos del P	15.88	126	eP	P	11 44 18.3	+2.6
GUY2C	Guyana, Caldas	16.42	123	eP	P	11 44 24.6	+2.4
PTBC	PUERTO BERRIO,	16.47	118	eP	P	11 44 22.4	+0.1
HKT	Hockley	16.50	339	P	P	11 44 23.2	+0.9
441A	DeRidder	16.52	348		Pn	11 44 20.6	+0.7
RREF	El Recreo	16.62	124	eP	P	11 44 25.7	+1.2
NORC	Norcasia	16.64	121	eP	P	11 44 26.2	+2.2
TOLC	Tolima	16.83	125	eP	P	11 44 29.9	+3.4
ROSC	El Rosal	17.49	122	P	P	11 44 34.8	+0.9
	comp=Z,0.7nm,0.3s,baz=16,slow=7.1,SNR=7.8						
ROSC				LR	LR	11 51 42.1	
	comp=Z,234nm,20.5s,baz=325,slow=39						
ROSC	El Rosal	17.49	122	P	Pn	11 44 32.4	-0.2
ROSC				IAmb	IAmb	11 44 42.2	
	comp=Z,92nm,1.5s						
BARC	Barichara	17.55	115	eP	P	11 44 39.4	+5.0
VBMS	Vicksburg	17.60	356		Pn	11 44 34.5	+1.1
PAMC	Pamplona, Colo	17.64	112	eP	P	11 44 38.2	+2.5
OTAV	Otavalo	17.74	143	P	Pn	11 44 35.4	-0.4
NATX	Nacogdoches	17.83	344	P	Pn	11 44 37.2	+0.8
435B	Jarrell	17.90	336	P	Pn	11 44 36.8	-0.4
RUSC	La Rusia	17.98	117	eP	P	11 44 40.2	+0.8
CHIC	Chingaza	18.09	122	eP	P	11 44 43.3	+2.7
237A	Washetta, Mont	18.38	342	P	Pn	11 44 43.3	+0.2
237A				IAmb	IAmb	11 44 51.7	
	comp=Z,19nm,0.7s						
SDV	Santo Domingo	18.96	105	P	P	11 44 50.7	+0.9
	comp=Z,0.5nm,0.3s,baz=286,slow=4.5,SNR=17						
SDV				LR	LR	11 52 32.1	
	comp=Z,193nm,21.1s,baz=250,slow=38						
SDV	Santo Domingo	18.96	105		Pn	11 44 51.7	+1.3
SDV	Santo Domingo	18.96	105	eP	Pn	11 44 52.9	+2.5
Z38A	Mt. Pleasant	19.34	345	P	Pn	11 44 55.7	+1.0
Z38A				IAmb	IAmb	11 44 58.0	
	comp=Z,53nm,1.3s						
HPIG		19.73	311	P	P	11 44 58.0	-0.2
TXAR	Lajitas Array	19.90	320	P	Pn	11 45 02.6	+0.9
	comp=Z,0.1nm,0.3s,baz=145,slow=10,SNR=30						
TXAR				LR	LR	11 53 35.3	
	comp=Z,55nm,19.9s,baz=0.0,slow=40						
TXAR	Lajitas Array	19.90	320	P	Pn	11 45 01.3	-0.3
TX31	Lajitas Ar. Si	19.91	320	P	P	11 45 00.2	+0.2
TX31				IAmb	IAmb	11 45 07.2	
	comp=Z,25nm,1.0s						
TX32	Lajitas Array	19.91	320	P	Pn	11 45 02.4	+0.8
Z35A	Perchaven, San	20.07	340	P	P	11 45 02.1	+0.4
Z35A				IAmb	IAmb	11 45 12.9	
	comp=Z,31nm,1.2s						
X40A	Basin Creek Fa	20.09	351	P	Pn	11 45 03.7	-0.1
FPAL	Fort Paine	20.12	8	P	P	11 45 02.6	+0.4
MIAR	Mount Ida	20.27	349	P	P	11 45 04.6	+0.7
MIAR				IAmb	IAmb	11 45 13.9	
	comp=Z,25nm,1.4s						
UALR	University of	20.31	352	P	P	11 45 03.4	-0.9
UALR				IAmb	IAmb	11 45 12.5	
	comp=Z,25nm,1.1s						
PLAL	Pickwick Lake	20.33	2	P	P	11 45 04.5	0.0
ABTX	Abilene, Hawle	20.36	334		P	11 45 05.2	+0.4
X37A	Clayton	20.70	345	P	Pn	11 45 10.3	-0.6
FCAR	Ozark Folk Cen	21.38	353	P	P	11 45 17.8	+1.9
BIRD	Birdtown, Kers	21.44	20	P	P	11 45 16.8	+0.2
BIRD				IAmb	IAmb	11 45 19.3	
	comp=Z,28nm,1.0s						
LCAR	Lake Charles	21.47	355	P	P	11 45 17.3	+0.5
LCAR				IAmb	IAmb	11 45 22.6	
	comp=Z,20nm,1.2s						
TKL	Tuckaleechee C	21.52	12	LR	LR	11 54 06.4	
	comp=Z,44nm,18.0s,baz=194,slow=38						
CLTN	Cedars of Leba	21.56	6	P	P	11 45 17.6	-0.1
WMOK	Wichita Mounta	21.88	338	P	P	11 45 22.4	+1.2
FNO	Franklin	21.89	342	P	P	11 45 22.4	+1.1
U40A	Yellville	21.93	352	P	P	11 45 20.9	-0.9
U40A				IAmb	IAmb	11 45 26.1	
	comp=Z,19nm,1.2s						
EMPR	Esperanza - Ma	21.99	77	P	P	11 45 21.3	-1.2
HHAR	Hobbs	22.03	350	P	P	11 45 23.9	+1.0
TUL1	Leonard	22.06	345	P	P	11 45 23.2	0.0
TUL1				IAmb	IAmb	11 45 41.4	
	comp=Z,21nm,1.1s						
LPIG	La Paz	22.09	299	LR	LR	11 54 48.2	
	comp=Z,134nm,20.9s,baz=148,slow=39						
PBMO	Poplar Bluff	22.13	357	P	P	11 45 23.9	0.0
PBMO				IAmb	IAmb	11 45 26.4	
	comp=Z,21nm,1.1s						
OK025	Westminster Rd	22.17	342	P	P	11 45 24.4	0.0
OK025				IAmb	IAmb	11 45 25.9	
	comp=Z,21nm,1.2s						
BCOK	Bluff Creek, N	22.32	342	P	P	11 45 26.1	+0.1
OK030	Cody Creek RV	22.33	343	P	P	11 45 25.3	-0.8
OK030				IAmb	IAmb	11 45 28.5	
	comp=Z,15nm,1.1s						
OK031	S. Brethren Rd	22.37	343	P	P	11 45 26.8	+0.3
OK031				IAmb	IAmb	11 45 37.5	
	comp=Z,40nm,1.5s						
T47A	Sharon Grove	22.38	4	P	P	11 45 27.0	+0.4
T47A				IAmb	IAmb	11 45 29.7	
	comp=Z,21nm,1.0s						
GDL2	Guadalupe Moun	22.38	324	P	P	11 45 25.4	-1.4
OK029	Liberty Lake	22.41	342	P	P	11 45 27.1	+0.2
OK029				IAmb	IAmb	11 45 28.7	
	comp=Z,41nm,1.4s						
T42A	Van Buren	22.42	356	P	P	11 45 27.6	+0.6
QUOK	Quay	22.54	344	P	P	11 45 28.6	+0.3
QUOK				IAmb	IAmb	11 45 30.9	
	comp=Z,16nm,0.8s						
MNTX	Cornudas Mount	22.61	322	P	P	11 45 29.2	0.0
MGMO	Mountain Grove	22.65	353	P	P	11 45 29.9	+0.4
MSTX	Muleshoe	22.92	330	P	P	11 45 32.5	0.0
MSTX				IAmb	IAmb	11 45 37.1	
	comp=Z,16nm,0.9s						
V58A	Windy Hill, Pi	22.94	21	P	P	11 45 33.0	+0.4
S44A	Carbondale	23.01	360	P	P	11 45 33.4	+0.1
SIUC	Southern Illin	23.03	360	P	P	11 45 34.4	+0.9
AMTX	Amarillo	23.16	333	P	P	11 45 35.1	+0.1
AMTX				IAmb	IAmb	11 45 37.6	
	comp=Z,14nm,1.0s						
T35A	Sooner Cattle	23.19	345	P	P	11 45 34.3	-0.9
T35A				IAmb	IAmb	11 45 57.1	
	comp=Z,14nm,1.2s						
S39A	Bolivar	23.31	352	P	P	11 45 36.8	+0.4
S39A				IAmb	IAmb	11 45 38.5	
	comp=Z,20nm,1.2s						
USIN	University of	23.32	3	P	P	11 45 36.9	+0.5
U32A	Winter Ranch,	23.43	340	P	P	11 45 38.7	+1.1
U32A				IAmb	IAmb	11 45 40.0	
	comp=Z,17nm,0.9s						
CCM	Cathedral Cave	23.45	356	P	P	11 45 38.8	+1.1
KAN13	South Haven SW	23.54	343	P	P	11 45 38.6	-0.1
KAN14	Manchester OK	23.63	342	P	P	11 45 39.5	-0.1
WCI	Wyandotte Cave	23.68	6	P	P	11 45 40.5	+0.6
WCI				IAmb	IAmb	11 45 42.2	
	comp=Z,21nm,1.0s						
KAN01	Argonia South	23.75	343	P	P	11 45 40.8	0.0
R40A	Maddies Statio	23.77	354	P	P	11 45 39.9	-1.0
R40A				IAmb	IAmb	11 45 42.7	
	comp=Z,19nm,1.1s						
KAN08	Anthony NE Sta	23.89	342	P	P	11 45 42.1	+0.1
KAN12	Harper NE Stat	23.96	342	P	P	11 45 42.8	0.0
ATAH	Atahualpa	24.06	153	LR	LR	11 54 53.4	
	comp=Z,84nm,18.7s,baz=336,slow=36						
OLIL	Olney	24.07	2	P	P	11 45 44.0	+0.3
OLIL				IAmb	IAmb	11 45 45.4	
	comp=Z,18nm,0.9s						
Q44A	Meyer Farm, Va	24.22	0	P	P	11 45 45.6	+0.5
S58A	Poland Farm, P	24.95	21	P	P	11 45 51.5	-0.3
P40A	Paris	24.98	355	P	P	11 45 51.8	-0.2
P40A				IAmb	IAmb	11 45 53.7	
	comp=Z,16nm,0.9s						
BNM	Barren Site	25.10	324	P	P	11 45 53.5	0.0
P38A	Dawn	25.24	352	P	P	11 45 55.0	+0.7
P38A				IAmb	IAmb	11 45 55.8	
	comp=Z,16nm,1.0s						
KSU1	Kansas State U	25.30	346	P	P	11 45 55.6	+0.8
KSU1				IAmb	IAmb	11 45 57.5	
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	25.59	325	P	P	11 45 59.3	+1.5
	comp=Z,1.2nm,0.8s,baz=149,slow=18,SNR=5.2						
ANMO				LR	LR	11 56 29.8	
	comp=Z,44nm,21.9s,baz=114,slow=38						
ANMO	Albuquerque	25.59	325	P	P	11 45 57.6	-0.2
CBN	Corbin Frederi	25.72	22	P	P	11 45 58.6	-0.1
N38A	Joes South For	26.35	353	P	P	11 46 04.6	+0.1
N35A	Tabor	26.79	349	P	P	11 46 08.7	+0.4
N35A				IAmb	IAmb	11 46 10.5	
	comp=Z,16nm,1.0s						
SDMD	Soldier's Deli	26.98	21	P	P	11 46 08.8	-1.4
SDMD				IAmb	IAmb	11 46 12.5	
	comp=Z,8.1nm,1.0s						
SDCO	Great Sand Dun	27.27	331	P	P	11 46 12.5	-0.5
L40A	Anamosa	27.44	357	P	P	11 46 13.9	-0.3
NNA	Nana	29.07	155	LR	LR	11 57 50.6	
	comp=Z,42nm,18.9s,baz=68,slow=36						
SPMN	Marine on St.	30.70	355	P	P	11 46 43.1	0.0
SPMN				IAmb	IAmb	11 46 44.1	
	comp=Z,8.8nm,0.8s						
SUSD	Miller	30.91	346	P	P	11 46 45.1	+0.1
E38A	The Farm, Brul	31.98	357	P	P	11 46 53.7	-0.8
E38A				IAmb	IAmb	11 46 59.4	
	comp=Z,9.6nm,1.0s						
PDAR	Pinedale Array	33.13	332	LR	LR	12 02 22.3	
	comp=Z,38nm,19.3s,baz=145,slow=40						
B35A	Bob, Littlefor	33.89	354	P	P	11 47 10.7	-0.4
B35A				IAmb	IAmb	11 47 13.4	
	comp=Z,12nm,1.4s						
AGMN	Agassiz Nation	34.07	352	P	P	11 47 12.7	0.0
AGMN				IAmb	IAmb	11 47 13.9	
	comp=Z,12nm,1.3s						
NV11	Mina Array Sit	34.94	318	P	P	11 47 19.6	-0.9
NVAR	Mina Array Bea	35.04	318	P	P	11 47 21.9	+0.4
	comp=Z,3.5nm,0.9s,baz=132,slow=9.4,SNR=13						
NVAR				LR	LR	12 03 17.1	
	comp=Z,82nm,19.3s,baz=113,slow=39						
NVAR	Mina Array Bea	35.04	318	P	P	11 47 21.1	-0.3
ULM	Lac du Bonnet	35.99	353	P	P	11 47 27.9	-1.3
	comp=Z,5.1nm,0.9s,baz=174,slow=8.6,SNR=9.1						
ULM				PcP	PcP	11 49 55.3	-0.5
	comp=Z,2.1nm,0.7s,baz=181,slow=5.4,SNR=4.3						
ULM				LR	LR	12 06 05.2	
	comp=Z,62nm,18.2s,baz=130,slow=43						
ULM	Lac du Bonnet	35.99	353	P	P	11 47 28.6	-0.6
ULM				IAmb	IAmb	11 47 31.9	
	comp=Z,8.0nm,1.0s						
DGMT	Dagmar	36.01	343	P	P	11 47 30.2	+0.7
MCMT	McKenzie Canyo	36.24	331	P	P	11 47 30.5	-1.3
HRY	Holter Researc	37.24	334	P	P	11 47 40.7	+0.7
RPN	Rapa Nui	45.88	205	LR	LR	12 02 58.5	
	comp=Z,27nm,20.3s,baz=62,slow=29						
BDFB	Brasilia	50.52	125	LR	LR	12 14 01.3	
	comp=Z,62nm,20.7s,baz=296,slow=40						
BDFB	Brasilia	50.52	125	P	P	11 49 26.2	-1.0
YKA	Yellowknife Ar	51.14	345	P	P	11 49 31.3	+0.2
	comp=Z,2.0nm,1.0s,baz=140,slow=8.6,SNR=14						
YKA				PcP	PcP	11 50 46.7	+0.1
	comp=Z,3.0nm,0.8s,baz=139,slow=4.2,SNR=22						
RCBR	Riachuelo	56.53	107	LR	LR	12 14 55.7	
	comp=Z,87nm,20.7s,baz=318,slow=37						
PLCA	Paso Flores	57.67	163	P	P	11 50 18.5	-0.4
	comp=Z,2.6nm,0.9s,baz=335,slow=8.1,SNR=5.7						
PLCA	Paso Flores	57.67	163	P	P	11 50 18.2	-0.8
PLCA				IAmb	IAmb	11 50 19.7	
	comp=Z,5.3nm,1.1s						
RES	Resolute Bay	60.18	358	P	P	11 50 36.5	+0.7
RES				IAmb	IAmb	11 50 44.0	
	comp=Z,4.3nm,0.9s						
MCARA	McCarthy VSAT	60.40	333	P	P	11 50 37.7	+0.1
BCAR	Beaver Creek A	60.65	335	P	P	11 50 39.5	+0.2
HDA	Harding Lake	63.30	336	P	P	11 50 57.6	+0.6
HDA				IAmb	IAmb	11 51 00.2	
	comp=Z,4.1nm,1.1s						
IL31		63.42	336	P	P	11 50 58.3	+0.5
IL31				IAmb	IAmb	11 51 02.2	
	comp=Z,3.1nm,0.8s						
ILAR	Eielson Array	63.42	336	P	P	11 50 58.0	+0.2
	comp=Z,1.9nm,1.0s,baz=156,slow=4.5,SNR=15						
ILAR	Eielson Array	63.42	336	P	P	11 50 58.4	+0.6
RND	Reindeer	63.70	334	P	P	11 51 01.4	+1.7
CCB	Clear Creek Bu	63.73	336	P	P	11 51 00.7	+0.9

CCB				IAmb	IAmb	11 51 07.7	
	comp=Z,7.1nm,1.4s						
BWN	**Browne**	**64.23**	**335**	P	**P**	**11 51 03.7**	**+0.5**
BPAW	**Bear Paw Mtn.**	**64.83**	**335**	P	**P**	**11 51 08.0**	**+0.9**
IMAR	**Indian Mountai**	**66.54**	**336**	P	**P**	**11 51 18.1**	**0.0**
TTA	**Tatalina**	**66.65**	**333**	P	**P**	**11 51 18.8**	**-0.1**
TTA				IAmb	IAmb	11 51 39.6	
	comp=Z,4.9nm,1.2s						
ESDC	**Sonseca Array**	**77.16**	**52**	P	**P**	**11 52 22.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=302,slow=7.0,SNR=5.6						
DBIC	**Dimbokro**	**82.81**	**85**	P	**P**	**11 52 52.9**	**-0.6**
	comp=Z,5.8nm,1.0s,baz=245,slow=8.9,SNR=3.4						
ARCES	**ARCESS Array B**	**84.70**	**19**	P	**P**	**11 53 01.3**	**-0.8**
	comp=Z,5.5nm,1.0s,baz=316,slow=5.0,SNR=2.1						
GERES	**GERESS Array B**	**87.36**	**40**	P	**P**	**11 53 16.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=318,slow=1.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**87.52**	**77**	P	**P**	**11 53 15.3**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=283,slow=5.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**87.52**	**77**	P	**P**	**11 53 15.7**	**-1.4**
LZH	**Lanzhou**	**128.13**	**347**	*e*PKP	**PKPdf**	**11 59 36.0**	**+0.5**
LZH				pPKP	sPKPdf	11 59 39.3	+1.0
LZH				sPKP		11 59 40.5	
WRA	**Warramunga Arr**	**138.25**	**256**	PKP	**PKPdf**	**11 59 54.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=93,slow=2.2,SNR=4.6						
HYB	**Hyderabad**	**145.95**	**21**	*i* PKP	**PKPdf**	**12 00 08.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**146.22**	**346**	PKPbc	**PKPdf**	**12 00 10.0**	**+1.1**
	comp=Z,6.2nm,0.9s,baz=343,slow=4.5,SNR=40						

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*IDC **31** 11:42:49.6±7.7, 20°.83S×178°.67W, h610^{km}±90^{km}, mb2.8/7, mb1 3.2/7, mb1mx3.0/25, mbtmp3.7/7, Error ellipse: s-maj=71.9km s-min=29.5km az=147.0*

ISC 31 11:42:46.6±1.5**, 20°.9S**±0°.4×**178°.6W**±0°.3**, h579**^{km}**, n8, σ1^{s}13**/9**, mb3.4**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.89**	**257**	P	**P**	**11 50 03.5**	**+0.4**
	0.8nm,0.6s,baz=95,slow=7.7,SNR=16						
ASAR				PcP	**PcP**	**11 51 36.6**	**+0.3**
	0.3nm,0.6s,baz=95,slow=3.4,SNR=5.1						
WRA	**Warramunga Arr**	**43.99**	**263**	P	**P**	**11 50 04.2**	**+0.2**
	0.3nm,0.3s,baz=97,slow=7.5,SNR=18						
PETK	**Petropavlovsk-**	**76.51**	**346**	P	**P**	**11 53 38.1**	**+0.5**
	2.6nm,1.0s,baz=189,slow=5.5,SNR=2.9						
NVAR	**Mina Array Bea**	**81.69**	**44**	P	**P**	**11 54 05.4**	**-0.2**
	0.3nm,0.5s,baz=219,slow=5.4,SNR=3.6						
TXAR	**Lajitas Array**	**87.74**	**58**	P	**P**	**11 54 35.6**	**+0.6**
	0.3nm,0.8s,baz=213,slow=6.1,SNR=2.7						
ILAR	**Eielson Array**	**88.82**	**13**	P	**P**	**11 54 38.8**	**-0.4**
	0.3nm,0.5s,baz=219,slow=5.0,SNR=6.1						
PDAR	**Pinedale Array**	**89.63**	**43**	P	**P**	**11 54 44.4**	**+0.6**
	0.4nm,0.6s,baz=175,slow=2.9,SNR=5.2						
AKASG	**Malin Array Be**	**143.08**	**330**	PKP	**PKPdf**	**12 01 12.6**	**-2.5**
	1.7nm,0.5s,baz=41,slow=4.3,SNR=5.0						

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*IDC **31** 12:02:31.4±6.6, 24°.71S×179°.47E, h478^{km}±78^{km}, mb3.1/5, mb1 3.4/6, mb1mx3.2/29, mbtmp4.0/6, Error ellipse: s-maj=40.5km s-min=24.5km az=20.0*

ISC 31 12:02:33.7±1.1**, 24°.8S**±0°.1×**179°.4E**±0°.2**, h507**^{km}**, n6, σ0^{s}48**/7**, mb3.5**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.53**	**188**	P	**P**	**12 05 27.7**	**-0.4**
	0.7nm,0.3s,baz=42,slow=3.8,SNR=6.8						
URZ				S	**S**	**12 07 52.1**	**+0.1**
	0.1nm,0.3s,baz=243,slow=15,SNR=2.2						
ASAR	**Alice Springs**	**41.37**	**262**	P	**P**	**12 09 35.7**	**+0.4**
	1.3nm,0.8s,baz=95,slow=7.0,SNR=22						
WRA	**Warramunga Arr**	**41.83**	**267**	P	**P**	**12 09 38.5**	**-0.3**
	1.9nm,0.5s,baz=101,slow=8.4,SNR=49						
QSPA	**South Pole Qui**	**65.26**	**180**	P	**P**	**12 12 25.0**	**+0.4**
	1.0nm,0.9s,baz=4.3,slow=0.8,SNR=2.1						
NVAR	**Mina Array Bea**	**85.78**	**44**	P	**P**	**12 14 18.9**	**-0.4**
	0.4nm,0.6s,baz=219,slow=8.1,SNR=3.7						
TXAR	**Lajitas Array**	**91.37**	**58**	P	**P**	**12 14 45.7**	**+0.3**
	0.4nm,0.7s,baz=215,slow=6.7,SNR=6.5						

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*NEIC **31** 12:29:30.6±1.7, 15°.24N±0°.08×147°.12E±0°.07, h5^{km}±1^{km}, mb5.9/415, Ms_20 5.6/533, Mwb5.7/76, Mww5.5, Mwc5.7(GCMT), Error ellipse: s-maj=13.5km s-min=11.0km az=206.0*

*BJI **31** 12:29:30.8±0.0, 15°.81N×147°.14E, h9^{km}, mB5.7/77, mb5.7/90, Ms5.7/98, Ms7 5.5/92*

*NEIC **31** 12:29:31.6, 15°.30N×147°.09E, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.50; M$_{θθ}$-0.47; M$_{φφ}$-3.02; M$_{rθ}$-0.26; M$_{θφ}$1.39; M$_{φr}$2.83; Fault plane solution: M$_0$4.56000×10^{17} NP1:φ$_s$144.89000°, δ27.40000°, λ69.66000°. NP2:φ$_s$347.56000°, δ64.44000°, λ100.21000°. Principal axes: T 4.5642, Plg69.0000°, Azm278.0000°; N -0.0065, Plg9.0000°, Azm163.0000°; P -4.5578, Plg19.0000°, Azm70.0000°;*

*MOS **31** 12:29:32.8±0.9, 15°.38N×146°.92E, h30^{km}, mb6.1/129, MS5.3/66 Error ellipse: s-maj=6.2km s-min=3.8km az=107.9*

*IDC **31** 12:29:33.3±2.1, 15°.36N×147°.04E, h21^{km}±12^{km}, mb5.4/39, mb1 5.4/42, mb1mx5.4/44, mbtmp5.5/42, ML5.4/3, MS5.2/22, Ms1 5.2/22, ms1mx5.0/41, Error ellipse: s-maj=12.5km s-min=9.2km az=97.0*

*NEIC **31** 12:29:34, 15°.28N×147°.34E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.13; M$_{θθ}$-0.92; M$_{φφ}$-2.20; M$_{rθ}$-0.61; M$_{θφ}$1.83; M$_{φr}$2.03; Fault plane solution: M$_0$3.95000×10^{17} NP1:φ$_s$133.00000°, δ30.00000°, λ71.00000°. NP2:φ$_s$335.00000°, δ61.00000°, λ101.00000°. Principal axes: T 3.8128, Plg71.0000°, Azm270.0000°; N 0.2580, Plg10.0000°, Azm150.0000°; P -4.0708, Plg16.0000°, Azm57.0000°;*

*GCMT **31** 12:29:34.6±0.1, 15°.26N±0°.01×147°.34E±0°.01, h12^{km}, MW5.6/149, Moment Tensor Solution. s118, c209; s149, c294; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$3.02±.03; M$_{θθ}$-0.82±.03; M$_{φφ}$-2.19±.03; M$_{rθ}$-0.21±.09; M$_{θφ}$1.70±.02; M$_{φr}$1.61±.08; Best double couple: M$_0$3.57800×10^{17} NP1:φ$_s$133.00000°, δ34.00000°, λ68.00000°. NP2:φ$_s$338.00000°, δ59.00000°, λ104.00000°. Principal axes: T 3.4950, Plg73.0000°, Azm283.0000°; N 0.1710, Plg12.0000°, Azm151.0000°; P -3.6610, Plg12.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 12:29:34, 15°.37N×147°.12E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.30; M$_{θθ}$-0.89; M$_{φφ}$-1.41; M$_{rθ}$0.81; M$_{θφ}$1.34; M$_{φr}$0.78; Fault plane solution: M$_0$2.66000×10^{17} NP1:φ$_s$119.00000°, δ48.00000°, λ58.00000°. NP2:φ$_s$342.00000°, δ51.00000°, λ121.00000°. Principal axes: T 2.7866, Plg66.0000°, Azm318.0000°; N -0.2720, Plg23.0000°, Azm142.0000°; P -2.5146, Plg1.0000°, Azm51.0000°;*

*NOU **31** 12:29:37.4, 15°.30N×147°.01E, h45^{km}, ML5.7, Mariana Islands Region*

ISC 31 12:29:33.7±0.5**, 15°.40N**±0°.03×**147°.01E**±0°.04**, h26**^{km}±2^{km}**, h26**^{km}**:pP-P, n1529, σ1^{s}40**/1577**, mb5.9**/442**, MS5.5**/364**, 86C-25D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**1.56**	**307**	Pn	**Pb**	**12 30 02.9**	**+0.9**
ANA2	**Anatahan**	**1.56**	**307**	P	**Pb**	**12 30 03.7**	**+1.7**
SARN	**Sarigan**	**1.75**	**318**	P	**Pb**	**12 30 05.8**	**+0.5**
JCJ	**Chichijima**	**12.47**	**340**	Pn	**Pn**	**12 32 29.2**	**-0.4**
	50nm,0.3s,baz=284,slow=23,SNR=11						
JCJ				Sn	**Sn**	**12 34 47.0**	**-0.7**
	9.1nm,0.3s,baz=83,slow=22,SNR=4.1						
JCJ	**Chichijima**	**12.47**	**340**	Pn	**Pn**	**12 32 29.5**	**-0.1**
PATS	**Pohnpei**	**13.97**	**126**	Pn	Pn	12 32 41.7	-8.5
MANU	**Manus Island**	**17.34**	**179**	P	**P**	**12 33 34.7**	**-0.5**
JMZ	**Minamidaito 2**	**18.03**	**308**		**P**	**12 33 43.5**	**+0.6**
JHJ2	**Mitsune**	**18.80**	**341**	P	**P**	**12 33 50.6**	**-0.6**
JHJ2				IAmb	IAmb	12 34 07.2	
	comp=Z,1μm,1.1s						
JHJ	**Hachijo jima 2**	**18.82**	**341**	P	**Pn**	**12 33 51.8**	**-0.3**
	comp=Z,66nm,0.3s,baz=72,slow=24,SNR=8.7						
JAY	**Jayapura**	**18.86**	**200**	P	**Pn**	**12 33 53.1**	**+0.3**
	comp=Z,3.6nm,0.3s,baz=12,slow=7.7,SNR=14						
JAY	**Jayapura**	**18.86**	**200**	P	**Pn**	**12 33 52.5**	**-0.3**
	comp=Z,9μmcomp=Z,4μmcomp=Z,110nm,1.3s						
H11S3	**WAKE ISLAND Hy**	**19.07**	**78**	T	T	12 53 18.6	
	baz=263,slow=74,SNR=128						
H11S1	**WAKE ISLAND Hy**	**19.09**	**78**	T	T	12 53 19.5	
	baz=263,slow=74,SNR=54						
H11S2	**WAKE ISLAND Hy**	**19.09**	**78**	T	T	12 53 21.3	
	baz=263,slow=74,SNR=60						
GENI	**Genyem**	**19.12**	**201**	P	**Pn**	**12 33 56.5**	**+0.7**
	comp=Z,23μmcomp=Z,20μmcomp=Z,384nm,1.2s						
SMPI	**Sarmi**	**19.13**	**206**	P	**P**	**12 33 55.0**	**0.0**
	comp=Z,14μmcomp=Z,9μmcomp=Z,159nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**19.43**	**74**	T	T	12 53 49.5	
	baz=259,slow=75,SNR=1.6						
H11N2	**WAKE ISLAND Hy**	**19.44**	**74**	T	T	12 53 40.9	
	baz=259,slow=75,SNR=21						
H11N3	**WAKE ISLAND Hy**	**19.45**	**74**	T	T	12 53 49.1	
	baz=259,slow=75,SNR=7.9						
BAKI	**Biak**	**19.70**	**214**	P	**P**	**12 34 00.7**	**-0.5**
	comp=Z,13μmcomp=Z,319nm,1.7s						
RABL	**Rabaul**	**20.12**	**165**	P	**P**	**12 34 06.1**	**+0.2**
RABL	**Rabaul**	**20.12**	**165**	P	Pn	12 34 08.5	+0.7
JSG	**Sagara**	**20.77**	**339**	P	**P**	**12 34 12.8**	**+0.1**
JOW	**Kunigami**	**20.82**	**306**	P	Pn	12 34 14.7	-1.2
	comp=Z,237nm,0.8s,baz=121,slow=14,SNR=20						
WAMI	**Wamena**	**20.85**	**204**	P	Pn	12 34 17.0	+0.7
	comp=Z,15μmcomp=Z,11μmcomp=Z,556nm,0.9s						
KWAJ	**Kwajalein Atol**	**21.18**	**106**	P	**P**	**12 34 13.0**	**-4.2**
KWAJ				pmax	pmax		
	comp=Z,674nm,1.5s						
KWAJ	**Kwajalein Atol**	**21.18**	**106**	P	**P**	**12 34 13.0**	**-4.2**
KWAJ				IAmb	IAmb	12 34 28.8	
	comp=Z,674nm,1.4s						
JYT	**Yasato**	**21.61**	**345**	P	**P**	**12 34 22.1**	**+0.3**
JYT				IAmb	IAmb	12 34 25.4	
	comp=Z,329nm,1.0s						
JMN	**Monobe**	**21.77**	**329**	P	**P**	**12 34 24.5**	**+1.0**
INU	**Inuyama**	**21.79**	**338**	P	**P**	**12 34 22.9**	**-0.8**
JGF	**Kuroka**	**21.89**	**339**	P	**P**	**12 34 24.6**	**-0.3**
JSU	**Suzuyama**	**22.03**	**320**	P	**P**	**12 34 27.1**	**+0.7**
PVCP	**Virac**	**22.20**	**268**	*e*P	**P**	**12 34 30.0**	**+1.7**
MSLP	**Maasin**	**22.22**	**259**	*e*P	**P**	**12 34 30.4**	**+1.9**
JWT	**Wachi**	**22.37**	**334**	P	**P**	**12 34 30.9**	**+1.0**
SIJI	**Sorong**	**22.44**	**225**	P	**P**	**12 34 32.3**	**+1.4**
	comp=Z,423nm,0.6s,baz=34,slow=9.4,SNR=181						
SIJI				LR	LR	12 42 50.8	
	comp=Z,11μm,19.8s,baz=36,slow=36						
SWI	**Sorong**	**22.44**	**225**	P	**P**	**12 34 32.8**	**+1.9**
	comp=Z,13μmcomp=Z,19μmcomp=Z,1μm,1.4s						
MJAR	**Matsushiro Arr**	**22.47**	**341**	P	**P**	**12 34 28.4**	**-2.6**
	comp=Z,62nm,0.9s,baz=170,slow=10,SNR=53						
MJAR				PcP	**PcP**	**12 38 25.6**	**+0.8**
	comp=Z,12nm,0.9s,baz=157,slow=4.4,SNR=4.3						
MJAR	**Matsushiro Arr**	**22.47**	**341**	P	**P**	**12 34 28.8**	**-2.2**
MJAR				pmax	pmax		
	comp=Z,54nm,0.9s						
MJAR	**Matsushiro Arr**	**22.47**	**341**	P	**P**	**12 34 28.8**	**-2.2**
MAJO	**Matsushiro**	**22.47**	**341**	P	**P**	**12 34 30.5**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,196nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,10μm,19.0s						
MAJO	**Matsushiro**	**22.47**	**341**	P	**P**	**12 34 30.5**	**-0.5**
MAT	**Matsushiro**	**22.47**	**341**	P	**P**	**12 34 28.2**	**-2.8**
MAT				S	**S**	**12 38 37.9**	**+1.7**
MJB9	**Matsu-Tunnel**	**22.47**	**341**	P	**P**	**12 34 30.1**	**-1.0**
DAV	**Davao City (W)**	**22.57**	**251**	P	**P**	**12 34 33.2**	**+0.9**
	comp=Z,107nm,0.3s,baz=322,slow=3.7,SNR=8.1						
JNU	**Nakatsue**	**22.91**	**323**	P	**P**	**12 34 35.8**	**+0.1**
	comp=Z,86nm,0.9s,baz=237,slow=4.3,SNR=23						
JNU	**Nakatsue**	**22.91**	**323**	P	**P**	**12 34 36.2**	**+0.4**
JMM	**Marumori**	**23.04**	**347**	P	**P**	**12 34 37.2**	**+0.3**
KMPI	**Kaimana, Papua**	**23.07**	**216**	P	**P**	**12 34 39.5**	**+2.0**
	comp=Z,22μmcomp=Z,1μm,1.8s						
JHS	**Saijyo**	**23.16**	**330**	P	**P**	**12 34 39.3**	**+1.0**
JHS				IAMs_20	IAMs_20	12 44 02.6	
	comp=Z,23μm,18.0s						
FAKI	**Fak Fak**	**23.34**	**220**	P	**P**	**12 34 40.7**	**+0.6**
FAKI	**Fak Fak**	**23.34**	**220**	P	**P**	**12 34 40.8**	**+0.6**
	comp=Z,13μmcomp=Z,21μmcomp=Z,2μm,1.2s						
JSD	**Sado**	**23.84**	**343**	P	**P**	**12 34 44.9**	**+0.2**
JSD				IAmb	IAmb	12 34 48.4	
	comp=Z,566nm,1.4s						
CAUP	**Cauayan**	**24.24**	**277**	*e*P	**P**	**12 34 50.1**	**+1.4**
TNTI	**Ternate**	**24.24**	**235**	P	**P**	**12 34 48.2**	**-0.5**
	comp=Z,4μmcomp=Z,2μmcomp=Z,92nm,1.1s						
CVP	**Callao Caves**	**24.25**	**279**⇑	*e*P	**P**	**12 34 50.3**	**+1.5**
GUIM	**Jordan**	**24.25**	**262**	*e*P	**P**	**12 34 48.4**	**-0.5**
YOJ	**Yonaguni jima**	**24.26**	**296**	P	**P**	**12 34 49.1**	**+0.2**
YOJ				pmax	pmax		
	comp=Z,262nm,0.9s						
YOJ				MLR	MLR		
	comp=Z,7μm,20.0s						
YOJ	**Yonaguni jima**	**24.26**	**296**	P	**P**	**12 34 49.1**	**+0.2**
YOJ				IAmb	IAmb	12 35 03.9	
	comp=Z,262nm,0.9s						
PAGZ	**Pagadian**	**24.31**	**255**	*e*P	**P**	**12 34 49.7**	**+0.3**
CNOP	**Candoni, Negro**	**24.41**	**260**	*e*P	**P**	**12 34 50.0**	**-0.3**
PMG	**Port Moresby**	**24.65**	**180**	P	**P**	**12 34 51.7**	**-0.7**
	comp=Z,163nm,0.7s,baz=32,slow=4.1,SNR=44						
PMG				LR	LR	12 44 58.5	
	comp=Z,3μm,18.9s,baz=320,slow=38						
PMG	**Port Moresby**	**24.65**	**180**	P	**P**	**12 34 51.5**	**-0.9**
PMG				pmax	pmax		
	comp=Z,217nm,0.9s						
PMG	**Port Moresby**	**24.65**	**180**	P	**P**	**12 34 51.5**	**-0.9**
PMG				IAmb	IAmb	12 34 56.0	
	comp=Z,217nm,0.8s						
PMG	**Port Moresby**	**24.65**	**180**	P	**P**	**12 34 52.1**	**-0.3**
LQP	**Lukban**	**24.66**	**270**⇑	*e*P	**P**	**12 34 52.7**	**-0.1**
APYP	**Conner**	**24.80**	**279**	*e*P	**P**	**12 34 53.1**	**-0.7**
TGY	**Tagaytay City**	**25.24**	**270**	P	**P**	**12 34 59.1**	**+1.2**
	comp=Z,311nm,0.5s,baz=226,slow=3.7,SNR=5.9						
PGP	**Puerto Galera**	**25.30**	**269**⇑	*e*P	**P**	**12 34 58.0**	**-0.4**
SMPP	**San Manuel, Pa**	**25.34**	**275**	*e*P	**P**	**12 34 59.1**	**+0.4**
NACB	**Ninganchiao**	**25.42**	**294**	P	**P**	**12 34 59.3**	**-0.2**
MACP	**Maragondon, Ca**	**25.44**	**271**	*e*P	**P**	**12 34 59.0**	**-0.6**
YULB	**Yu-li**	**25.49**	**292**	P	**P**	**12 35 00.6**	**+0.6**
YULB				IAmb	IAmb	12 35 04.8	
	comp=Z,180nm,1.0s						
YULB				IAMs_20	IAMs_20	12 44 58.1	
	comp=Z,11μm,18.0s						
SZP	**Santa**	**25.55**	**279**	IAMs_20	IAMs_20	12 44 43.0	
	comp=Z,11μm,19.0s						
TWG	**Pinlang**	**25.57**	**291**	P	**P**	**12 35 00.5**	**-0.3**
TWG				IAmb	IAmb	12 35 19.0	
	comp=Z,273nm,1.2s						
YHNB	**Yeheng**	**25.75**	**295**	P	**P**	**12 35 03.2**	**+0.8**
YHNB				IAMs_20	IAMs_20	12 45 36.9	
	comp=Z,10μm,19.0s						
JTM	**Tenmabayashi**	**25.82**	**350**	P	**P**	**12 35 04.2**	**+1.4**
MSAI	**Masohi**	**25.83**	**225**	P	**P**	**12 35 04.1**	**+0.9**
	comp=Z,2μmcomp=Z,113nm,0.8s						
SSLB	**Suanglung**	**25.89**	**293**	P	**P**	**12 35 04.0**	**+0.3**
SSLB				IAmb	IAmb	12 35 06.6	
	comp=Z,330nm,1.4s						
SSLB				IAMs_20	IAMs_20	12 45 21.7	
	comp=Z,10μm,18.0s						
LUBP	**Lubang**	**25.95**	**270**	*e*P	**P**	**12 35 03.5**	**-0.8**
TPUB	**Ta-pu**	**26.07**	**292**	P	**P**	**12 35 05.8**	**+0.4**
TPUB				IAmb	IAmb	12 35 07.3	
	comp=Z,243nm,1.2s						
ERM	**Erimo**	**26.73**	**354***c*	*e*P	**P**	**12 35 12.7**	**+1.7**
ERM				pmax	pmax		
	comp=Z,480nm,1.2s						
ERM				MLR	MLR		
	comp=Z,8μm,17.0s						
ERM	**Erimo**	**26.73**	**354**	P	**P**	**12 35 12.0**	**+1.0**
ERM				IAmb	IAmb	12 35 17.3	
	comp=Z,458nm,1.1s						
ERM				IAMs_20	IAMs_20	12 47 26.0	
	comp=Z,12μm,18.0s						
JEM	**Erimo**	**26.73**	**354**	IAMs_20	IAMs_20	12 47 26.7	
	comp=Z,12μm,18.0s						
NLAI	**Namlea**	**27.05**	**228**	P	**P**	**12 35 14.4**	**+0.3**
	comp=Z,2μmcomp=Z,74nm,1.1s						
SANI	**Sanana**	**27.08**	**232**	P	**P**	**12 35 12.5**	**-1.9**
	comp=Z,4μmcomp=Z,2μmcomp=Z,73nm,0.6s						
KMSI	**Cibinong**	**27.09**	**239**	P	**P**	**12 35 14.8**	**+0.2**
	comp=Z,317nmcomp=Z,5μmcomp=Z,454nm,0.6s						
ENPP	**El Nido**	**27.16**	**265**	*e*P	**P**	**12 35 14.5**	**-0.7**
TJN	**Taejon**	**27.26**	**324**⇑	*i*P	**P**	**12 35 15.8**	**0.0**
KSRS	**Korea Array**	**27.72**	**326**	P	**P**	**12 35 20.1**	**+0.2**
	comp=Z,41nm,0.9s,baz=147,slow=9.3,SNR=90						
KSRS				PcP	**PcP**	**12 38 38.3**	**+1.8**
	comp=Z,18nm,1.0s,baz=142,slow=2.9,SNR=9.3						
KSRS				ScP	**ScP**	**12 42 16.1**	**+0.6**
	comp=Z,6.0nm,1.1s,baz=134,slow=3.1,SNR=5.7						
KSAR	**Wonju Array Be**	**27.73**	**326**	P	**P**	**12 35 19.6**	**-0.5**
KSAR	**Wonju Array Be**	**27.73**	**326**	P	**P**	**12 35 19.6**	**-0.5**
JEW	**Eniwo**	**27.76**	**351**	P	**P**	**12 35 21.5**	**+1.2**
KS19	**Wonju Array Si**	**27.79**	**326**	P	**P**	**12 35 20.6**	**0.0**
HNR	**Honiara**	**27.80**	**152**	LR	LR	12 44 05.9	
	comp=Z,4μm,21.9s,baz=326,slow=31						
HNR	**Honiara**	**27.80**	**152**	IAMs_20	IAMs_20	12 46 22.8	
	comp=Z,11μm,21.0s						
GTOI	**Gorontalo**	**27.87**	**240**	P	**P**	**12 35 22.2**	**+0.6**
	comp=Z,814nmcomp=Z,42nm,1.0s						
SAUI	**Saumlaki**	**27.97**	**215**	P	**P**	**12 35 23.4**	**+1.0**
SAUI	**Saumlaki**	**27.97**	**215**	P	**P**	**12 35 23.2**	**+0.8**
	comp=Z,7μmcomp=Z,13μmcomp=Z,585nm,0.9s						
QZH	**Quanzhou**	**28.26**	**294**⇓	*i*P	**P**	**12 35 25.5**	**+0.5**
QZH				PP	**PnPn**	**12 36 15.8**	**+2.0**
QZH				S	**S**	**12 40 12.5**	**+2.9**
QZH				pmax	pmax		
	comp=Z,1μm,7.7s						
QZH				LR	LR		
	comp=Z,3μm,16.6s						
QZH				LR	LR		
	comp=Z,6μm,16.3s						
QZH				LR	LR		
	comp=Z,6μm,16.1s						
SSE	**Sheshan**	**28.30**	**308**	P	**P**	**12 35 25.3**	**0.0**
SSE				PP	**PnPn**	**12 36 13.8**	**-0.5**
SSE				S	**S**	**12 40 14.3**	**+4.1**
SSE				pmax	pmax		
	comp=Z,83nm,1.2s						
SSE				pmax	pmax		
	comp=Z,610nm,8.4s						
SSE				LR	LR		
	comp=Z,2μm,14.8s						
SSE	**Sheshan**	**28.30**	**308**	P	**P**	**12 35 25.4**	**0.0**
SSE				IAmb	IAmb	12 35 26.9	
	comp=Z,167nm,1.0s						
KNMB	**Chin-men Tao**	**28.33**	**293**	P	**P**	**12 35 26.3**	**+0.7**
KNMB				IAmb	IAmb	12 35 27.8	
	comp=Z,142nm,0.9s						
INCN	**Inchon**	**28.45**	**324**	P	**P**	**12 35 28.1**	**+1.5**
INCN				pmax	pmax		
	comp=Z,94nm,1.3s						
INCN				MLR	MLR		
	comp=Z,6μm,20.0s						
INCN	**Inchon**	**28.45**	**324**	P	**P**	**12 35 28.1**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**28.55**	**358**	*e*P	P	12 35 20.0	-7.3
YUK				*e*S	**S**	**12 40 10.0**	**-3.8**
YUK				SSS	SSS	12 41 32.3	
YUK				pmax	pmax		
	comp=Z,2μm,1.3s						
YUK				pmax	pmax		
	comp=Z,2μm,1.2s						
YUK				pmax	pmax		
	comp=E,819nm,1.3s						
YUK				pmax	pmax		
	comp=N,1μm,1.0s						
YUK				MLR	MLR		
	comp=Z,6μm,16.0s						
MRSI	**Marisa**	**28.86**	**241**	P	**P**	**12 35 29.7**	**-0.7**
	comp=Z,4μmcomp=Z,3μmcomp=Z,154nm,0.6s						
JKA	**Kamikawa-asahi**	**28.86**	**353**	P	**P**	**12 35 31.7**	**+1.6**
ASAJ	**Asahikawa**	**28.87**	**353**	P	**P**	**12 35 32.3**	**+2.2**
	comp=Z,314nm,1.1s,baz=224,slow=11,SNR=34						
ASAJ				LR	LR	12 46 55.0	
	comp=Z,5μm,20.8s,baz=190,slow=36						
ASAJ	**Asahikawa**	**28.87**	**353**	P	**P**	**12 35 31.7**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,622nm,1.2s						
ASAJ				MLR	MLR		
	comp=Z,8μm,20.0s						
LUWI	**Luwuk**	**29.00**	**238**	P	**P**	**12 35 30.7**	**-1.0**
LUWI				IAmb	IAmb	12 35 32.1	
	comp=Z,183nm,0.7s						
LUWI	**Luwuk**	**29.00**	**238**	P	**P**	**12 35 30.7**	**-1.0**
	comp=Z,3μmcomp=Z,298nm,1.2s						
COEN	**Coen**	**29.42**	**188**	P	**P**	**12 35 34.5**	**-0.8**
TOLI2	**Tolitoli**	**29.52**	**244**	P	**P**	**12 35 34.9**	**-1.4**
KUR	**Kuril'sk**	**29.75**	**1***d*	*i*P	**P**	**12 35 40.3**	**+2.4**
KUR				*e*		12 38 44.1	
KUR				S	**S**	**12 40 36.3**	**+3.8**
KUR				*e*		12 46 12.0	
KUR				pmax	pmax		
	comp=Z,843nm,1.3s						
KUR				pmax	pmax		
	comp=E,475nm,1.6s						
KUR				pmax	pmax		
	comp=N,356nm,1.2s						
APSI	**Ampana**	**29.85**	**239**	P	**P**	**12 35 35.8**	**-3.4**
	comp=N,2μmcomp=N,937nmcomp=N,35nm,0.6s						
MSHR	**Mys Shultsa**	**30.32**	**336**⇓	*e*P	**P**	**12 35 43.1**	**+0.1**
MSHR				pmax	pmax		
	comp=Z,42nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,3μm,17.0s						
NJ2	**Nanjing**	**30.51**	**308** ⇑	P	**P**	**12 35 44.8**	**-0.1**
NJ2				pP	**pP**	**12 35 47.8**	**-3.1**
NJ2				sP	**sP**	**12 35 50.0**	**-3.7**
NJ2				PP	**PnPn**	**12 36 46.3**	**+2.1**
NJ2				S	**S**	**12 40 48.0**	**+3.1**
NJ2				sS	**sS**	**12 40 56.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,37nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,810nm,6.8s						
NJ2				LR	LR		
	comp=Z,4μm,14.1s						
NJ2				LR	LR		
	comp=Z,6μm,15.3s						
NJ2				LR	LR		
	comp=Z,7μm,16.3s						
MPSI	**Mapaga**	**30.67**	**243**	P	**P**	**12 35 45.9**	**-0.6**
	comp=Z,4μmcomp=Z,1μmcomp=Z,96nm,0.9s						
TEY	**Ternei**	**30.82**	**346**⇑	*e*P	**P**	**12 35 44.1**	**-3.3**
TEY				pmax	pmax		
	comp=Z,30nm,1.5s						
TEY				pmax	pmax		
	comp=N,20nm,1.5s						
TEY				MLR	MLR		
	comp=Z,400μm,12.0s						
USA0B	**Ussuriysk Arra**	**31.42**	**339**	P	**P**	**12 35 51.9**	**-0.8**
USA0B				pmax	pmax		
	comp=Z,29nm,0.9s						
USA0B				MLR	MLR		
	comp=Z,5μm,18.0s						
USA0B	**Ussuriysk Arra**	**31.42**	**339**	P	**P**	**12 35 51.9**	**-0.8**
USRK	**Ussuriysk Ar.**	**31.42**	**339**	P	**P**	**12 35 53.1**	**+0.4**
	comp=Z,16nm,0.7s,baz=147,slow=8.4,SNR=25						
USRK				PcP	**PcP**	**12 38 47.1**	**+1.3**
	comp=Z,4.5nm,0.7s,baz=199,slow=3.9,SNR=4.4						
USRK				ScP	**ScP**	**12 42 27.1**	**-0.2**
	comp=Z,4.9nm,1.0s,baz=166,slow=1.6,SNR=4.1						
USRK				LR	LR	12 47 33.4	
	comp=Z,4μm,20.3s,baz=138,slow=34						
USRK	**Ussuriysk Ar.**	**31.42**	**339**	P	**P**	**12 35 52.1**	**-0.6**
KKM	**Kota Kinabalu**	**31.61**	**256**	P	**P**	**12 35 54.4**	**-0.5**
YSS	**Yuzh-Sakhalins**	**31.66**	**354**α	*i*P	**P**	**12 35 55.8**	**+1.1**
YSS				*e*		12 38 47.0	
YSS				*e*S	**S**	**12 41 03.7**	**+1.3**
YSS				pmax	pmax		
	comp=Z,220nm,0.9s						
YSS				pmax	pmax		
	comp=Z,1μm,6.4s						
YSS				MLR	MLR		
	comp=Z,4μm,17.0s						
YSS				MLR	MLR		
	comp=N,4μm,15.0s						
YSS	**Yuzh-Sakhalins**	**31.66**	**354**	P	**P**	**12 35 54.5**	**-0.2**
MTN	**Manton Dam**	**32.16**	**210**	P	**P**	**12 35 58.9**	**-0.6**
MTN				IAmb	IAmb	12 36 02.2	
	comp=Z,81nm,0.6s						
DL2	**Dalian**	**32.33**	**321**	P	**P**	**12 36 00.8**	**+0.1**
DL2				PcP	**PcP**	**12 38 49.3**	**+0.9**
DL2				S	**S**	**12 41 16.5**	**+3.4**
DL2				pmax	pmax		
	comp=Z,41nm,1.1s						
DL2				pmax	pmax		
	comp=Z,840nm,6.4s						
DL2				LR	LR		
	comp=Z,3μm,12.5s						
DL2				LR	LR		
	comp=Z,5μm,15.0s						
DL2				LR	LR		
	comp=Z,6μm,15.3s						
TTSI	**Tana Toraja**	**32.56**	**238**	P	**P**	**12 36 06.4**	**+3.3**
	comp=Z,2μmcomp=Z,51nm,1.1s						

GZH	**Guangzhou**	**32.63 289**	P	**P**	**12 36 03.5**	**-0.1**
GZH			PP	**PnPn**	**12 37 12.8**	**+1.0**
GZH			S	**S**	**12 41 18.0**	**-0.2**
GZH			LR	LR		
	comp=Z,3µm,10.6s					
GZH			LR	LR		
	comp=Z,7µm,16.9s					
MDJ	**Mudanjiang**	**32.65 337**	P	**P**	**12 36 03.0**	**-0.5**
MDJ			pP	sP	12 36 12.3	+0.2
MDJ			sP	pwP	12 36 16.3	+0.5
MDJ			S	**S**	**12 41 19.0**	**+1.1**
MDJ			ScP	**ScP**	**12 42 30.0**	**-1.5**
MDJ			PcS	**PcS**	**12 42 31.3**	**-2.9**
MDJ			pmax	pmax		
	comp=Z,54nm,1.1s					
MDJ			pmax	pmax		
	comp=Z,740nm,6.5s					
MDJ			LR	LR		
	comp=Z,7µm,16.2s					
MDJ			LR	LR		
	comp=Z,7µm,16.2s					
MDJ			LR	LR		
	comp=Z,10µm,18.4s					
MDJ	**Mudanjiang**	**32.65 337**	P	**P**	**12 36 03.2**	**-0.3**
MDJ			IAMs_20	IAMs_20	12 47 50.2	
	comp=Z,8µm,19.0s					
BNSI	**Bone**	**33.12 236**	P	**P**	**12 36 08.8**	**+0.9**
	comp=Z,2µmcomp=Z,66nm,1.0s					
SPSI	**Sidrap Palu**	**33.13 237**	P	**P**	**12 36 07.7**	**-0.4**
	comp=Z,3µmcomp=Z,1µmcomp=Z,61nm,0.7s					
SNY	**Shenyang**	**33.20 327**	⇓P	**P**	**12 36 07.5**	**-0.8**
SNY			pmax	pmax		
	comp=Z,20nm,1.0s					
SNY			pmax	pmax		
	comp=Z,500nm,9.0s					
SNY			LR	LR		
	comp=Z,6µm,13.3s					
SNY			LR	LR		
	comp=Z,7µm,13.7s					
SNY			LR	LR		
	comp=Z,9µm,22.0s					
WHN	**Wuhan**	**33.48 302**	⇑P	**P**	**12 36 10.5**	**-0.5**
WHN			PP	**PP**	**12 37 27.3**	**+0.3**
WHN			S	**S**	**12 41 31.0**	**-0.3**
WHN			pmax	pmax		
	comp=Z,590nm,2.0s					
WHN			pmax	pmax		
	comp=Z,2µm,4.2s					
WHN			LR	LR		
	comp=Z,4µm,10.4s					
WHN			LR	LR		
	comp=Z,8µm,13.3s					
WHN			LR	LR		
	comp=Z,11µm,17.1s					
SOEI	**Soe**	**33.65 223**	P	**P**	**12 36 11.3**	**-1.4**
SOEI			IAmb	IAmb	12 36 36.5	
	comp=Z,170nm,0.9s					
SOEI	**Soe**	**33.65 223**	P	**P**	**12 36 11.3**	**-1.4**
	comp=Z,4µmcomp=Z,196nm,1.4s					
BKSI	**Bulukumba**	**33.66 234**	P	**P**	**12 36 12.9**	**+0.2**
	comp=Z,2µmcomp=Z,1µmcomp=Z,42nm,1.2s					
CN2	**Changchun**	**33.74 331**	*e*P	**P**	**12 36 12.5**	**-0.5**
CN2			sP	pwP	12 36 26.0	+0.7
CN2			PP	**PnPn**	**12 37 20.0**	**-5.6**
CN2			S	**S**	**12 41 33.0**	**-1.9**
CN2			pmax	pmax		
	comp=Z,30nm,0.9s					
CN2			LR	LR		
	comp=Z,7µm,15.0s					
CN2			LR	LR		
	comp=Z,9µm,15.0s					
CN2			LR	LR		
	comp=Z,12µm,17.0s					
TIA	**Tai'an**	**33.74 313**	P	**P**	**12 36 13.0**	**-0.2**
TIA			S	**S**	**12 41 35.5**	**+0.3**
TIA			pmax	pmax		
	comp=Z,38nm,1.2s					
TIA			pmax	pmax		
	comp=Z,920nm,11.3s					
TIA			LR	LR		
	comp=Z,4µm,17.6s					
TIA			LR	LR		
	comp=Z,5µm,15.2s					
TIA			LR	LR		
	comp=Z,4µm,14.2s					
KAPI	**Kappang**	**33.77 235**	P	**P**	**12 36 13.4**	**-0.2**
KAPI			pmax	pmax		
	comp=Z,110nm,1.3s					
KAPI			MLR	MLR		
	comp=Z,3µm,22.0s					
KAPI	**Kappang**	**33.77 235**	P	**P**	**12 36 13.4**	**-0.2**
KAPI	**Kappang**	**33.77 235**	P	**P**	**12 36 13.6**	**0.0**
KAPI			P	**P**	**12 36 13.6**	**0.0**
UGL	**Uglegorsk**	**33.83 354**	⇑*i*P	**P**	**12 36 15.3**	**+1.6**
UGL			*e*S	**S**	**12 41 34.5**	**-1.6**
UGL			pmax	pmax		
	comp=Z,2µm,2.4s					
UGL			pmax	pmax		
	comp=E,370nm,1.4s					
UGL			pmax	pmax		
	comp=Z,540nm,1.2s					
UGL			smax	smax		
	comp=N,3µm,8.5s					
UGL			smax	smax		
	comp=E,5µm,8.5s					
UGL			MLR	MLR		
	comp=N,5µm,15.0s					
UGL			MLR	MLR		
	comp=E,6µm,15.0s					
UGL			MLR	MLR		
	comp=Z,4µm,16.0s					
BKB	**Balikpapan**	**34.07 244**	P	**P**	**12 36 15.9**	**-0.3**
BKB			IAmb	IAmb	12 36 18.5	
	comp=Z,170nm,1.1s					
BKB	**Balikpapan**	**34.07 244**	P	**P**	**12 36 15.9**	**-0.3**
	comp=Z,5µmcomp=Z,3µmcomp=Z,153nm,1.3s					
MMRI	**Maumere**	**34.25 227**	P	**P**	**12 36 16.9**	**-0.9**
MMRI	**Maumere**	**34.25 227**	P	**P**	**12 36 17.8**	**0.0**
	comp=Z,3µmcomp=Z,3µmcomp=Z,157nm,1.4s					
BATI	**Baumata**	**34.38 224**	P	**P**	**12 36 18.4**	**-0.6**
	comp=Z,2µmcomp=Z,2µmcomp=Z,92nm,0.8s					
EDFI	**Ende, Flores**	**34.72 228**	P	**P**	**12 36 21.2**	**-0.7**
	comp=Z,1µmcomp=Z,1µmcomp=Z,37nm,2.0s					
CTAO	**Charters Tower**	**35.28 181**	P	**P**	**12 36 26.4**	**-0.1**
CTAO			pmax	pmax		
	comp=Z,69nm,1.5s					
CTAO			MLR	MLR		
	comp=Z,3µm,18.0s					
CTAO	**Charters Tower**	**35.28 181**	P	**P**	**12 36 26.4**	**-0.1**
TYV	**Tymovskoe**	**35.55 355**	*e*P	**P**	**12 36 29.8**	**+1.3**
TYV			*e*S	**S**	**12 42 05.6**	**+3.1**
TYV			pmax	pmax		
	comp=Z,2µm,4.3s					
TYV			pmax	pmax		
	comp=Z,210nm,1.5s					
TYV			smax	smax		
	comp=E,4µm,9.0s					
TYV			smax	smax		
	comp=N,84nm,2.3s					
TYV			MLR	MLR		
	comp=E,6µm,17.0s					
TYV			MLR	MLR		
	comp=Z,5µm,17.0s					
QIZ	**Qiongzhong**	**35.64 281**	P	**P**	**12 36 31.5**	**+1.7**
QIZ			PP	**PnPn**	**12 37 49.3**	**-0.3**
QIZ			S	**S**	**12 42 08.5**	**+3.7**
QIZ			pmax	pmax		
	comp=Z,100nm,1.4s					
QIZ			pmax	pmax		
	comp=Z,1µm,6.4s					
QIZ			LR	LR		
	comp=Z,3µm,16.7s					
QIZ			LR	LR		
	comp=Z,3µm,17.2s					
QIZ			LR	LR		
	comp=Z,5µm,18.2s					
QIZ	**Qiongzhong**	**35.64 281**	P	**P**	**12 36 31.1**	**+1.3**
QIZ			IAmb	IAmb	12 36 32.9	
	comp=Z,130nm,1.1s					
MTKI	**Muara Teweh, K**	**35.66 246**	P	**P**	**12 36 30.6**	**+0.6**
	comp=Z,2µmcomp=Z,4µmcomp=Z,127nm,1.5s					
KBKI	**Kotabaru**	**35.74 241**	P	**P**	**12 36 30.8**	**+0.2**
	comp=Z,804nmcomp=Z,84nm,0.6s					
SKR	**Severo-Kuril's**	**35.95 10**	*e*P	**P**	**12 36 33.6**	**+1.6**
SKR			*i* S	**S**	**12 42 10.0**	**+1.3**
SKR			*e*SSS	SSS	12 44 39.4	
SKR			pmax	pmax		
	comp=Z,600nm,4.5s					
SKR			pmax	pmax		
	comp=Z,81nm,1.0s					
SKR			pmax	pmax		
	comp=Z,300nm,5.3s					
SKR			MLR	MLR		
	comp=Z,3µm,12.0s					
SKR			MLR	MLR		
	comp=Z,3µm,15.0s					
KLR	**Kul'dur**	**35.97 343**	*c i*P	**P**	**12 36 31.2**	**-1.0**
KLR			pmax	pmax		
	comp=Z,89nm,1.3s					
KLR			MLR	MLR		
	comp=Z,6µm,16.0s					
GRNR	**Gornyy**	**36.30 349**	⇑*i*P	**P**	**12 36 35.8**	**+0.8**
GRNR			*e*S	**S**	**12 42 18.6**	**+4.5**
GRNR			pmax	pmax		
	comp=N,10.0nm,0.7s					
GRNR			pmax	pmax		
	comp=Z,30nm,0.7s					
GRNR			smax	smax		
	comp=N,6.0nm,0.8s					
WSI	**Waingapu**	**36.34 228**	P	P	12 36 45.8	+10
BJT	**Baijiatuau**	**36.39 318**	P	**P**	**12 36 35.5**	**-0.4**
BJT			pmax	pmax		
	comp=Z,129nm,1.3s					
BJT			MLR	MLR		
	comp=Z,4µm,18.0s					
BJT	**Baijiatuau**	**36.39 318**	P	**P**	**12 36 35.5**	**-0.4**
BJI	**Beijing**	**36.40 318**	P	**P**	**12 36 35.5**	**-0.5**
BJI			PP	**PP**	**12 38 02.5**	**+3.5**
BJI			S	**S**	**12 42 20.3**	**+4.5**
BJI			pmax	pmax		
	comp=Z,86nm,1.3s					
BJI			pmax	pmax		
	comp=Z,620nm,3.5s					
BJI			LR	LR		
	comp=Z,5µm,18.8s					
BJI			LR	LR		
	comp=Z,2µm,18.4s					
BJI			LR	LR		
	comp=Z,3µm,16.9s					
SANVU	**Saraoutou**	**36.57 146**	P	**P**	**12 36 34.3**	**-3.4**
SANVU			IAMs_20	IAMs_20	12 49 23.9	
	comp=Z,6µm,18.0s					
SANVU	**Saraoutou**	**36.57 146**	P	**P**	**12 36 39.0**	**+1.3**
SBUM	**Sibu**	**36.62 253**	P	**P**	**12 36 35.0**	**-3.2**
SBUM	**Sibu**	**36.62 253**	P	**P**	**12 36 35.0**	**-3.2**
BBKI	**Banjar Baru**	**36.95 242**	P	**P**	**12 36 41.7**	**+0.7**
	comp=Z,2µmcomp=Z,54nm,1.4s					
WB0	**Warramunga Arr**	**37.09 200**	P	**P**	**12 36 41.5**	**-0.5**
WR0	**Warramunga Arr**	**37.22 200**	P	**P**	**12 36 42.5**	**-0.6**
WRAB	**Tennant Creek**	**37.26 200**	P	**P**	**12 36 43.0**	**-0.5**
WRAB			pmax	pmax		
	comp=Z,108nm,1.1s					
WRAB			MLR	MLR		
	comp=Z,4µm,21.0s					
WRAB	**Tennant Creek**	**37.26 200**	P	**P**	**12 36 43.0**	**-0.5**
WB2	**Warramunga Arr**	**37.26 200**	P	**P**	**12 36 43.1**	**-0.5**
WRA	**Warramunga Arr**	**37.27 200**	P	**P**	**12 36 43.1**	**-0.5**
	comp=Z,39nm,0.8s,baz=24,slow=9.4,SNR=256					
WRA			PKiKP	**PKiKP**	**12 46 21.7**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=336,slow=1.4,SNR=5.8					
WRA			LR	LR	12 52 30.5	
	comp=Z,2µm,21.7s,baz=25,slow=37					
WRA	**Warramunga Arr**	**37.27 200**	*i* P	**P**	**12 36 43.0**	**-0.6**
WRA			pmax	pmax		
	comp=Z,41nm,0.8s					
WRA	**Warramunga Arr**	**37.27 200**	P	**P**	**12 36 41.3**	**-2.3**
ENH	**Enshi**	**37.42 300**	P	**P**	**12 36 45.8**	**+0.8**
ENH			IAmb	IAmb	12 36 48.3	
	comp=Z,379nm,1.2s					
DLV	**T Lat**	**37.56 270**	P	**P**	**12 36 47.2**	**+0.8**
PLAI	**Plampang**	**37.66 232**	P	**P**	**12 36 47.6**	**+0.6**
	comp=Z,3µmcomp=Z,3µmcomp=Z,130nm,0.5s					
TIY	**Taiyuan**	**37.76 313**	*e*P	**P**	**12 36 48.0**	**+0.3**
TIY			S	**S**	**12 42 39.0**	**+2.1**
TIY			pmax	pmax		
	comp=Z,55nm,0.8s					
TIY			pmax	pmax		
	comp=Z,940nm,5.2s					
TIY			LR	LR		
	comp=Z,5µm,14.9s					
TIY			LR	LR		
	comp=Z,6µm,17.9s					
TIY			LR	LR		
	comp=Z,4µm,13.7s					
NKL	**Nikolayevsk**	**37.99 354**	*e*P	**P**	**12 36 48.0**	**-1.3**
NKL			*e*S	**S**	**12 42 40.9**	**+1.1**
NKL			pmax	pmax		
	comp=E,60nm,1.0s					
NKL			pmax	pmax		
	comp=N,12nm,1.1s					
NKL			pmax	pmax		
	comp=Z,393nm,1.2s					
NKL			smax	smax		
	comp=E,145nm,2.9s					
NKL			smax	smax		
	comp=N,11nm,2.4s					
NKL			MLR	MLR		
	comp=E,876nm,11.0s					
NKL			MLR	MLR		
	comp=Z,2µm,14.0s					
TWSI	**Taliwang, Sumb**	**38.29 233**	P	**P**	**12 36 52.1**	**-0.3**
	comp=Z,2µmcomp=Z,2µmcomp=Z,170nm,0.7s					
PEA0B	**Petropavlovsk-**	**38.56 10**	P	**P**	**12 36 54.8**	**+0.7**
PEA0B			pmax	pmax		
	comp=Z,181nm,1.3s					
PEA0B	**Petropavlovsk-**	**38.56 10**	P	**P**	**12 36 54.8**	**+0.7**
PEA0B			IAMs_20	IAMs_20	12 50 20.6	
	comp=Z,7µm,19.0s					
PETK	**Petropavlovsk-**	**38.56 10**	P	**P**	**12 36 56.0**	**+1.9**
	comp=Z,17nm,0.8s,baz=152,slow=6.4,SNR=38					
PETK			PcP	**PcP**	**12 39 07.7**	**+1.3**
	comp=Z,13nm,0.8s,baz=140,slow=1.3,SNR=3.2					
PETK	**Petropavlovsk-**	**38.56 10**	P	**P**	**12 36 55.7**	**+1.6**
PET	**Petropavlovsk**	**38.65 11**	*d i*P	**P**	**12 36 56.2**	**+1.4**
PET			*e*S	**S**	**12 42 51.1**	**+1.4**
PET					12 46 12.1	
PET			pmax	pmax		
	comp=Z,141nm,1.1s					
PET			pmax	pmax		
	comp=Z,800nm,13.2s					
PET			MLR	MLR		
	comp=Z,6µm,16.0s					
PET			MLR	MLR		
	comp=Z,8µm,17.0s					
PET	**Petropavlovsk**	**38.65 11**	P	**P**	**12 36 53.9**	**-1.0**
KSM	**Kuching**	**38.76 253**	P	**P**	**12 36 56.0**	**-0.3**
KSM	**Kuching**	**38.76 253**	P	**P**	**12 36 56.0**	**-0.3**
XAN	**Xi'an**	**38.97 305**	P	**P**	**12 36 58.5**	**+0.5**
XAN			ScP	**ScP**	**12 42 52.5**	**-2.4**
XAN			S	**S**	**12 42 55.8**	**+0.5**
XAN			pmax	pmax		
	comp=Z,110nm,1.4s					
XAN			pmax	pmax		
	comp=Z,2µm,6.0s					
XAN			LR	LR		
	comp=Z,6µm,18.0s					
XAN			LR	LR		
	comp=Z,4µm,14.0s					
XAN			LR	LR		
	comp=Z,7µm,15.7s					
GYA	**Guiyang**	**39.11 293**	⇑P	**P**	**12 37 01.5**	**+2.2**
GYA			pP	pP	12 37 04.8	-0.7
GYA			sP	sP	12 37 10.5	+2.2
GYA			PP	**PP**	**12 38 34.3**	**+5.1**
GYA			PcP	**PcP**	**12 39 12.0**	**+3.2**
GYA			ScP	**S**	**12 42 59.0**	**+1.4**
GYA			S	**ScP**	**12 43 01.5**	**+5.8**
GYA			pmax	pmax		
	comp=Z,150nm,1.3s					
GYA			pmax	pmax		
	comp=Z,1µm,4.6s					
GYA			LR	LR		
	comp=Z,2µm,15.9s					
GYA			LR	LR		
	comp=Z,2µm,14.8s					
GYA			LR	LR		
	comp=Z,3µm,21.4s					
SRBI	**Singaraja**	**39.21 236**	P	**P**	**12 37 01.5**	**+1.5**
	comp=Z,4µmcomp=Z,5µmcomp=Z,258nm,1.5s					
PBKI	**Pangkalan Bun**	**39.33 246**	P	**P**	**12 37 02.3**	**+1.3**
	comp=Z,4µmcomp=Z,297nm,1.2s					
FITZ	**Fitzroy Crossi**	**39.39 213**	P	**P**	**12 37 01.5**	**0.0**
DNP	**Denpasar**	**39.56 235**	P	**P**	**12 37 04.2**	**+1.2**
	comp=Z,373nm,1.2s					
KMMI	**Kalianget**	**39.62 238**	P	**P**	**12 37 06.1**	**+2.7**
	comp=Z,283nm,1.5s					
HHC	**Hu-ho-hao-te**	**39.82 317**	*e*P	**P**	**12 37 06.8**	**+1.8**
HHC			sP	sP	12 37 15.0	+1.1
HHC			S	**S**	**12 43 09.0**	**+1.0**
HHC			SS	**SS**	**12 45 51.0**	**-14**
HHC			pmax	pmax		
	comp=Z,180nm,1.1s					
HHC			pmax	pmax		
	comp=Z,900nm,6.6s					
HHC			LR	LR		
	comp=Z,3µm,14.2s					
HHC			LR	LR		
	comp=Z,4µm,18.3s					
HHC			LR	LR		
	comp=Z,4µm,20.2s					
ABJI	**Asem Bagus**	**39.82 237**	P	**P**	**12 37 07.7**	**+2.5**
	comp=Z,6µmcomp=Z,345nm,1.0s					
UBPT	**Khong Chiam**	**40.02 276**	P	**P**	**12 37 08.0**	**+1.2**
JAGI	**Jajag, Banyuwa**	**40.28 236**	P	**P**	**12 37 06.7**	**-2.3**
JAGI			IAmb	IAmb	12 37 09.7	
	comp=Z,215nm,1.1s					
JAGI	**Jajag, Banyuwa**	**40.28 236**	P	**P**	**12 37 09.5**	**+0.5**
	comp=Z,3µmcomp=Z,200nm,0.9s					
HIA	**Hailar**	**40.44 332**	P	**P**	**12 37 09.5**	**-0.5**
HIA			pmax	pmax		
	comp=Z,43nm,0.8s					
HIA			MLR	MLR		
	comp=Z,6µm,18.0s					
HIA	**Hailar**	**40.44 332**	P	**P**	**12 37 09.5**	**-0.5**
HIA	**Hailar**	**40.44 332**	IAMs_20	IAMs_20	12 52 58.9	
	comp=Z,6µm,18.0s					
EIDS	**Eidsvold**	**40.72 174**	P	**P**	**12 37 11.5**	**-0.9**
EIDS			IAMs_20	IAMs_20	12 52 49.5	
	comp=Z,5µm,19.0s					
BTO	**Baotou**	**40.74 315**	*e*P	**P**	**12 37 13.5**	**+0.9**
BTO			S	**S**	**12 43 21.3**	**-0.4**
BTO			SS	**SS**	**12 46 14.3**	**-8.6**
ASAR	**Alice Springs**	**40.89 199**	P	**P**	**12 37 13.4**	**-0.4**
	comp=Z,7.9nm,0.6s,baz=25,slow=7.1,SNR=50					
ASAR			LR	LR	12 54 33.8	
	comp=Z,3µm,21.8s,baz=14,slow=37					
ASAR			PKPPKP		13 09 27.1	
	comp=Z,1.1nm,1.0s,baz=176,slow=2.2,SNR=4.1					
ASAR	**Alice Springs**	**40.89 199**	P	**P**	**12 37 13.3**	**-0.6**
ASAR	**Alice Springs**	**40.89 199**	P	**P**	**12 37 13.3**	**-0.6**
SLVN	**Son La**	**41.24 285**	P	**P**	**12 37 18.8**	**+1.8**
SLVN			IAmb	IAmb	12 37 20.4	
	comp=Z,170nm,1.0s					
ZEA	**Zeya**	**41.27 342**	*e*P	**P**	**12 37 16.1**	**-0.6**
ZEA			*e*		12 38 51.1	
ZEA			*e*		12 39 15.2	
ZEA			*e*S	**S**	**12 43 30.5**	**+1.5**
ZEA			*e*SS	**SS**	**12 46 33.2**	**+0.3**
ZEA			*e*		12 47 21.2	
ZEA			pmax	pmax		
	comp=E,20nm,1.4s					
ZEA			pmax	pmax		
	comp=Z,60nm,1.4s					
ZEA			pmax	pmax		
	comp=E,200nm,8.1s					
ZEA			pmax	pmax		
	comp=N,300nm,6.3s					
ZEA			pmax	pmax		
	comp=Z,400nm,6.8s					
ZEA			smax	smax		
	comp=E,500nm,8.8s					
ZEA			MLR	MLR		
	comp=E,2µm,13.0s					
ZEA			MLR	MLR		
	comp=Z,3µm,16.0s					
NOUC	**Port Laguerre**	**41.79 153**	P	**P**	**12 37 21.4**	**+0.1**
DZM	**Mont Dzumac**	**41.83 152**	P	**P**	**12 37 21.7**	**0.0**
	comp=Z,56nm,0.9s,baz=242,slow=4.1,SNR=19					
DZM	**Mont Dzumac**	**41.83 152**	*e*P	**P**	**12 37 21.7**	**0.0**
	comp=Z,347nm,1.4s					
DZM			*e*S	**S**	**12 43 37.9**	**-0.2**
	comp=Z,1µm,22.9s					
DZM			*e*LQ	LQ	12 47 04.9	
	comp=Z,4µm,25.8s					
DZM			*e*LR	LR	12 48 49.9	
	comp=Z,4µm,23.9s					
DZM	**Mont Dzumac**	**41.83 152**	P	**P**	**12 37 20.8**	**-0.9**
DZM			IAMs_20	IAMs_20	12 52 09.7	
	comp=Z,6µm,18.0s					
DZM	**Mont Dzumac**	**41.83 152**	P	**P**	**12 37 22.1**	**+0.4**
PWJI	**Pagerwojo**	**41.94 239**	P	**P**	**12 37 21.9**	**-0.7**
	comp=Z,4µmcomp=Z,406nm,1.0s					
NONG	**Nongkai**	**42.02 280**	P	**P**	**12 37 24.8**	**+1.6**
	comp=Z,184nm,1.6s					
OUENC	**Ouen Island, N**	**42.31 152**	P	**P**	**12 37 27.2**	**+1.7**
	comp=Z,94nm,1.4s					
CD2	**Chengdu**	**42.38 299**	⇑P	**P**	**12 37 26.8**	**+0.7**
CD2			S	**S**	**12 43 48.8**	**+2.7**
CD2			pmax	pmax		
	comp=Z,390nm,1.1s					
CD2			pmax	pmax		
	comp=Z,2µm,9.3s					
CD2			LR	LR		
	comp=Z,5µm,17.3s					
CD2			LR	LR		
	comp=Z,6µm,15.7s					
KHON	**Khomkaen**	**42.45 277**	P	**P**	**12 37 28.0**	**+1.2**
	comp=Z,4µmcomp=Z,310nm,1.1s					
KMI	**Kunming**	**42.48 290**	⇑*i*P	**P**	**12 37 29.3**	**+2.1**
KMI			pP	pP	12 37 32.5	-1.0
KMI			sP	sP	12 37 33.8	-2.6
KMI			PcP	**PcP**	**12 39 21.8**	**+1.9**
KMI			ScP	**ScP**	**12 43 12.3**	**+3.2**
KMI			S	**S**	**12 43 50.5**	**+2.4**
KMI			SS	**SS**	**12 46 55.5**	**-2.5**
KMI			pmax	pmax		
	comp=Z,85nm,1.2s					
KMI			pmax	pmax		
	comp=Z,1µm,5.8s					
KMI			LR	LR		
	comp=Z,2µm,15.2s					
KMI			LR	LR		
	comp=Z,3µm,18.1s					
KMI			LR	LR		
	comp=Z,4µm,18.3s					
KMI	**Kunming**	**42.48 290**	P	**P**	**12 37 29.1**	**+1.9**
KMI			pmax	pmax		
	comp=Z,117nm,1.1s					
KMI			MLR	MLR		
	comp=Z,4µm,19.0s					
KMI	**Kunming**	**42.48 290**	P	**P**	**12 37 29.1**	**+1.9**
TPI	**Tanjungpandan**	**42.92 248**	P	**P**	**12 37 31.4**	**+0.8**
	comp=Z,2µmcomp=Z,112nm,1.4s					
UGM	**Wanagama**	**42.94 240**	P	**P**	**12 37 29.4**	**-1.4**
UGM	**Wanagama**	**42.94 240**	P	**P**	**12 37 30.9**	**+0.1**
	comp=Z,560nm,1.1s					
CHAI	**Chaiyaphum**	**43.29 277**	P	**P**	**12 37 34.6**	**+1.0**
	comp=Z,3µmcomp=Z,315nm,1.0s					
SRAK	**Srakaew**	**43.46 274**	P	**P**	**12 37 32.2**	**-2.8**
	comp=Z,20µmcomp=Z,2µm,1.2s					
LZH	**Lanzhou**	**43.56 306**	⇑P	**P**	**12 37 37.8**	**+2.0**
LZH			sP	pP	12 37 43.0	+1.0
LZH			PP	**PcP**	**12 39 21.3**	**-2.0**
LZH			S	**S**	**12 44 02.8**	**-0.8**
LZH			sS	sS	12 44 15.3	+0.9
LZH			pmax	pmax		
	comp=Z,500nm,1.3s					
LZH			pmax	pmax		
	comp=Z,2µm,5.6s					
LZH			LR	LR		
	comp=Z,5µm,14.0s					
LZH			LR	LR		
	comp=Z,4µm,13.6s					
LZH			LR	LR		
	comp=Z,4µm,15.7s					
JCJI	**Jatiwangi**	**44.12 243**	P	**P**	**12 37 42.0**	**+1.7**
	comp=Z,9µmcomp=Z,735nm,1.1s					
MA2	**Magadan**	**44.19 3**	*c i*P	**P**	**12 37 41.9**	**+1.7**
MA2			pmax	pmax		
	comp=Z,276nm,1.2s					
MA2			MLR	MLR		
	comp=Z,3µm,18.0s					
MA2	**Magadan**	**44.19 3**	P	**P**	**12 37 41.8**	**+1.5**
MA2			IAmb	IAmb	12 37 49.9	
	comp=Z,234nm,1.0s					
AMKA	**Amchitka**	**44.22 29**	P	**P**	**12 37 41.2**	**+0.6**
UTTA	**Uttaradit**	**44.50 280**	P	**P**	**12 37 44.5**	**+1.2**
	comp=Z,2µmcomp=Z,232nm,0.8s					

MYKOM	Kota Tinggi	44.65	257	P	P	12 37 44.8	+0.2
MYKOM	Kota Tinggi	44.65	257	P	P	12 37 45.0	+0.4
PHIT	Phitsanulok	44.68	279	P	P	12 37 46.5	+1.8
	comp=Z,6µmcomp=Z,811nm,1.0s						
MSVF	Nonsavu	44.95	136	*d i*P	P	12 37 46.7	-0.2
MSVF				pmax	pmax		
	comp=Z,79nm,1.3s						
MSVF				MLR	MLR		
	comp=Z,2µm,14.0s						
MSVF	Nonsavu	44.95	136	P	P	12 37 45.6	-1.3
MSVF	Nonsavu	44.95	136	IAMs_20	IAMs_20	12 54 27.4	
	comp=Z,4µm,18.0s						
MSVF	Nonsavu	44.95	136	P	P	12 37 47.5	+0.6
	comp=Z,79nm,1.2s						
CISI	Cisompet, Garu	45.04	242	P	P	12 37 45.6	-2.1
CISI	Cisompet, Garu	45.04	242	P	P	12 37 46.0	-1.7
	comp=Z,2µmcomp=Z,5µmcomp=Z,357nm,0.6s						
PAYA	Payao	45.06	282	P	P	12 37 49.3	+1.5
	comp=Z,3µm,0.9s						
MBWA	Marble Bar	45.13	217	P	P	12 37 48.6	+0.3
CBJI	Citeko	45.31	244	P	P	12 37 50.2	+0.4
	comp=Z,17µmcomp=Z,162nm,0.5s						
LAMP	Lampang	45.33	281	P	P	12 37 51.6	+1.6
	comp=Z,1µmcomp=Z,82nm,0.6s						
PSA00	Pilbara Seismi	45.39	217	P	P	12 37 50.5	+0.2
PSA00				IAmb	IAmb	12 38 16.8	
	comp=Z,157nm,1.1s						
PSA00	Pilbara Seismi	45.39	217	P	P	12 37 50.1	-0.2
PSA00				IAmb	IAmb	12 38 11.3	
	comp=Z,33nm,0.9s						
SUKH	Sukhothai	45.40	279	P	P	12 37 52.1	+1.6
	comp=Z,3µmcomp=Z,226nm,1.2s						
DBJI	Dramaga	45.46	244	P	P	12 37 50.9	-0.1
	comp=Z,83nm,1.2s						
CM34	Chiang Mai Arr	45.76	281	P	P	12 37 54.0	+0.6
UTHA	Uthaitani	45.76	277	P	P	12 37 55.1	+1.7
	comp=Z,2µmcomp=Z,226nm,1.1s						
CM35	Chiang Mai Arr	45.77	281	P	P	12 37 54.0	+0.6
ARMA	Armidale	45.77	174	P	P	12 37 52.9	-0.4
ARMA				IAMs_20	IAMs_20	12 57 00.4	
	comp=Z,5µm,19.0s						
CM36	Chiang Mai Arr	45.84	281	P	P	12 37 55.0	+1.0
CM09	Chiang Mai Arr	45.94	281	P	P	12 37 56.5	+1.7
	comp=Z,2µmcomp=Z,165nm,1.2s						
PHET	Kaeng Krachan	45.94	273	P	P	12 37 57.3	+2.5
	comp=Z,2µmcomp=Z,123nm,1.1s						
CM04	Chiang Mai Arr	45.95	281	P	P	12 37 56.6	+1.7
	comp=Z,2µmcomp=Z,194nm,1.1s						
CMMT	Chiang Mai	45.96	281	P	P	12 37 54.8	-0.1
	comp=Z,1µmcomp=Z,58nm,1.3s						
CM33	Chiang Mai Arr	45.96	281	P	P	12 37 55.0	+0.1
CHTO	Chiang Mai	45.96	281	P	P	12 37 56.0	+1.1
CHTO				pmax	pmax		
	comp=Z,134nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,2µm,20.0s						
CHTO	Chiang Mai	45.96	281	P	P	12 37 56.0	+1.1
CHTO				IAmb	IAmb	12 37 56.8	
	comp=Z,134nm,1.3s						
CHTO	Chiang Mai	45.96	281	P	P	12 37 56.2	+1.2
CHTO				P	P	12 37 56.2	+1.2
CM01	Chiang Mai Arr	45.97	281	P	P	12 37 56.7	+1.7
	comp=Z,2µmcomp=Z,175nm,1.3s						
CM02	Chiang Mai Arr	45.98	281	P	P	12 37 56.8	+1.6
	comp=Z,2µmcomp=Z,167nm,1.3s						
CM31	Chiang Mai Arr	45.98	281	P	P	12 37 56.0	+0.9
	comp=Z,48µmcomp=Z,4µm,1.2s						
CM31	Chiang Mai Arr	45.98	281	P	P	12 37 56.7	+1.5
CMAR	Chiang Mai Arr	45.98	281	P	P	12 37 56.7	+1.6
	comp=Z,77nm,0.8s,baz=72,slow=6.3,SNR=359						
CMAR				PKPPKP	P'P'df	13 09 21.9	-5.1
	comp=Z,0.6nm,0.3s,baz=256,slow=4.3,SNR=4.2						
CMAR	Chiang Mai Arr	45.98	281	P	P	12 37 56.4	+1.3
CMAR	Chiang Mai Arr	45.98	281	P	P	12 37 56.4	+1.3
CM05	Chiang Mai Arr	45.98	281	P	P	12 37 56.8	+1.6
	comp=Z,2µmcomp=Z,142nm,1.1s						
CM15	Chiang Mai Arr	46.00	281	P	P	12 37 56.9	+1.6
	comp=Z,91nmcomp=Z,2µmcomp=Z,165nm,1.3s						
CM13	Chiang Mai Arr	46.02	281	P	P	12 37 57.0	+1.6
	comp=Z,2µmcomp=Z,154nm,1.1s						
CM32	Chiang Mai Arr	46.06	281	P	P	12 37 57.0	+1.3
ULN	Ulaanbaatar	46.13	323	*c i*P	P	12 37 56.0	-0.1
ULN				pmax	pmax		
	comp=Z,162nm,1.3s						
ULN				MLR	MLR		
	comp=Z,5µm,19.0s						
ULN	Ulaanbaatar	46.13	323	P	P	12 37 56.4	+0.3
ULN				IAmb	IAmb	12 37 58.2	
	comp=Z,110nm,1.0s						
ULN	Ulaanbaatar	46.13	323	IAMs_20	IAMs_20	12 58 03.6	
	comp=Z,6µm,20.0s						
ULN	Ulaanbaatar	46.13	323	P	P	12 37 56.0	-0.1
ULN				P	P	12 37 56.0	-0.1
SRDT	SRDT	46.22	275	P	P	12 37 58.4	+1.4
	comp=Z,31µmcomp=Z,82nm,1.6s						
BLSI	Bandar Lampung	46.23	247	P	P	12 37 57.2	+0.1
	comp=Z,190nm,1.2s						
KLSI		46.38	248	P	P	12 37 57.7	-0.6
	comp=Z,1µmcomp=Z,80nm,1.3s						
ADK	Adak	46.46	30	P	P	12 37 58.7	+0.4
ADK				pmax	pmax		
	comp=Z,261nm,1.3s						
ADK	Adak	46.46	30	P	P	12 37 58.7	+0.4
IPM	Ipoh	46.48	261	P	P	12 37 59.6	+0.5
IPM	Ipoh	46.48	261	P	P	12 38 00.0	+0.9
SONM	Songino Array	46.50	323	P	P	12 37 59.5	+0.5
	comp=Z,76nm,0.9s,baz=131,slow=8.1,SNR=170						
SONM				ScP	ScP	12 43 25.4	+0.4
	comp=Z,8.8nm,1.1s,baz=116,slow=3.4,SNR=5.0						
SONM	Songino Array	46.50	323	P	P	12 37 59.6	+0.7
SONM				pmax	pmax		
	comp=Z,89nm,1.1s						
SONM	Songino Array	46.50	323	P	P	12 37 59.6	+0.7
KULM	Kulim	46.60	263	P	P	12 37 59.8	-0.3
KULM				IAmb	IAmb	12 38 02.8	
	comp=Z,126nm,1.1s						
KULM	Kulim	46.60	263	P	P	12 38 02.0	+1.9
MDSI	Maura Dua	46.79	248	P	P	12 38 00.3	-1.2
	comp=Z,2µmcomp=Z,124nm,1.3s						
TRTT	Trang	46.88	266	P	P	12 38 03.4	+1.2
	comp=Z,2µmcomp=Z,80nm,1.4s						
KASI	Kota Agung	46.96	247	P	P	12 38 01.7	-1.1
	comp=Z,2µmcomp=Z,166nm,1.2s						
MHMT	Maesarieng	46.96	281	P	P	12 38 03.5	+0.7
	comp=Z,3µmcomp=Z,282nm,1.4s						
LHSI	Lahat	47.10	250	P	P	12 38 04.7	+0.8
	comp=Z,3µmcomp=Z,107nm,1.6s						
LWLI	Liwa	47.13	248	P	P	12 38 03.4	-0.8
	comp=Z,8µmcomp=Z,276nm,0.7s						
STKA	Stephens Creek	47.30	186	P	P	12 38 04.2	-0.9
	comp=Z,9.4nm,0.5s,baz=3.7,slow=8.3,SNR=22						
STKA				LR	LR	12 56 51.1	
	comp=Z,2µm,21.5s,baz=0.2,slow=35						
STKA	Stephens Creek	47.30	186	P	P	12 38 03.9	-1.2
STKA	Stephens Creek	47.30	186	P	P	12 38 03.9	-1.2
SURT	Suratani	47.48	268	P	P	12 38 09.8	+2.9
	comp=Z,5.3nm,1.1s						
GTA	Gaotai	47.57	310	⇑P	P	12 38 08.8	+1.3
GTA				pP	pP	12 38 13.5	-0.3
GTA				sP	sP	12 38 16.0	-0.5
GTA				PcP	PcP	12 39 38.8	+1.7
GTA				ScP	ScP	12 43 32.0	+2.3
GTA				S	S	12 45 02.5	+1.2
GTA				sS	sS	12 45 14.0	+1.9
GTA				ScS	ScS	12 47 59.8	0.0
GTA				pmax	pmax		
	comp=Z,150nm,1.4s						
GTA				pmax	pmax		
	comp=Z,1µm,4.7s						
GTA				LR	LR		
	comp=Z,3µm,14.5s						
GTA				LR	LR		
	comp=Z,5µm,14.9s						
GTA				LR	LR		
	comp=Z,6µm,15.3s						
SEY	Seymchan	47.62	3	P	P	12 38 09.2	+1.9
	comp=Z,99nm,1.0s,baz=177,slow=6.6,SNR=8.2						
SEY	Seymchan	47.62	3	*ce*P	P	12 38 09.5	+2.2
BKNI	Bangkinang	47.79	256	P	P	12 38 08.6	-0.7
BKNI				IAmb	IAmb	12 38 12.9	
	comp=Z,108nm,1.3s						
KSI	Kapahiang	47.87	250	P	P	12 38 09.3	-0.7
	comp=Z,4µmcomp=Z,155nm,0.9s						
ATKA	Atka Island	47.88	31	P	P	12 38 10.1	+0.7
PKDT	Phuket	48.17	267	P	P	12 38 13.6	+1.3
YAK	Yakutsk	48.17	349	*c i*P	P	12 38 11.6	+0.1
YAK				*e**PP	pwP	12 38 25.2	+1.1
YAK				*e*		12 39 45.7	
YAK				*e*S	S	12 45 04.5	-4.3
YAK				*e*		12 47 56.2	
YAK				*e*SS	SS	12 48 27.7	-10
YAK				*e*SSS	SSS	12 49 43.5	
YAK				pmax	pmax		
	comp=Z,309nm,0.9s						
YAK				pmax	pmax		
	comp=N,158nm,1.1s						
YAK				pmax	pmax		
	comp=E,41nm,1.2s						
YAK				smax	smax		
	comp=E,700nm,3.5s						
YAK				smax	smax		
	comp=N,787nm,3.3s						
YAK				MLR	MLR		
	comp=Z,3µm,16.0s						
YAK				MLR	MLR		
	comp=N,2µm,16.0s						
YAK	Yakutsk	48.17	349	P	P	12 38 11.6	+0.1
XMI	Christmas Isla	48.32	240	P	P	12 38 12.2	-1.2
	comp=N,698nm,1.0s						
XMIS	Christmas Isla	48.37	240	P	P	12 38 12.4	-1.4
XMIS	Christmas Isla	48.37	240	P	P	12 38 12.7	-1.0
PDSI	Padang	48.77	255	P	P	12 38 15.8	-1.1
	comp=N,2µmcomp=N,27nm,0.8s						
LKP	Lekhapani	48.80	293	*e*P	P	12 38 17.9	+0.9
LKP				IAmb	IAmb	12 38 20.0	
	comp=Z,228nm,0.6s						
MNSI	Mandailing Nat	49.00	257	P	P	12 38 18.7	+0.1
	comp=Z,1µmcomp=Z,33nm,1.0s						
BOD	Bodaibo	49.02	337	*e*P	P	12 38 17.6	-0.5
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BBOO	Buckleboo	49.07	192	P	P	12 38 17.6	-1.2
BBOO				IAmb	IAmb	12 38 19.9	
	comp=Z,55nm,0.7s						
TSI	Tuntungan	49.11	261	P	P	12 38 21.4	+1.9
	comp=Z,119nm,1.4s						
FORT	Forrest	49.40	202	P	P	12 38 21.1	-0.2
FORT				IAmb	IAmb	12 38 23.1	
	comp=Z,186nm,1.4s						
FORT				IAMs_20	IAMs_20	12 58 09.3	
	comp=Z,4µm,22.0s						
ZAK	Zakamensk	49.54	324	*e*P	P	12 38 22.3	0.0
ZAK				*e*		12 48 10.9	
ZAK				pmax	pmax		
	comp=Z,94nm,1.2s						
GIRL	Giralia	49.60	221	P	P	12 38 23.7	+0.8
DIBR	DIBRUGARH	49.64	293	*e*P	P	12 38 25.4	+2.0
IRK	Irkutsk	49.93	327	*e*P	P	12 38 24.4	-0.8
IRK				pmax	pmax		
	comp=Z,202nm,3.0s						
MOKO	MOKOCHONG	49.95	292	*e*P	P	12 38 25.3	-0.6
TLY	Talaya	49.98	326	*c i*P	P	12 38 25.5	-0.1
TLY				*e*S	S	12 45 33.0	-1.6
TLY				*e*		12 48 15.5	
TLY				*e*SS	SS	12 49 04.2	-3.4
TLY				pmax	pmax		
	comp=Z,285nm,1.3s						
TLY				MLR	MLR		
	comp=Z,10µm,15.0s						
TLY	Talaya	49.98	326	P	P	12 38 26.5	+0.9
TLY				IAMs_20	IAMs_20	13 01 48.1	
	comp=Z,5µm,18.0s						
TLY	Talaya	49.98	326	P	P	12 38 25.8	+0.2
TLY				P	P	12 38 25.8	+0.2
KOHI	KOHIMA	50.30	291	*e*P	P	12 38 27.6	-1.0
KOHI				IAmb	IAmb	12 38 29.2	
	comp=Z,102nm,0.5s						
CAN	Canberra	50.48	178	P	P	12 38 28.9	-0.6
CAN				pmax	pmax		
	comp=Z,144nm,1.4s						
CAN				MLR	MLR		
	comp=Z,5µm,18.0s						
CAN	Canberra	50.48	178	P	P	12 38 28.9	-0.6
CAN				IAmb	IAmb	12 38 47.4	
	comp=Z,144nm,1.4s						
CAN				IAMs_20	IAMs_20	12 59 38.1	
	comp=Z,5µm,18.0s						
TPTI		50.50	261	P	P	12 38 30.1	+0.1
	comp=Z,687nmcomp=Z,22nm,0.5s						
ZIRO	ZIRO	50.59	293	*e*P	P	12 38 31.9	+1.1
GSI	Gunungsitoli	50.72	259	P	P	12 38 31.2	-0.5
GSI				IAmb	IAmb	12 38 33.5	
	comp=Z,130nm,0.5s						
GSI	Gunungsitoli	50.72	259	P	P	12 38 31.7	-0.1
	comp=Z,3µmcomp=Z,166nm,0.5s						
NIKH	Nikolski High	51.03	33	P	P	12 38 33.8	+0.3
NIKH				IAmb	IAmb	12 38 51.0	
	comp=Z,224nm,1.1s						
SAIH	SAIHA	51.36	287	*e*P	P	12 38 36.8	+0.2
TEZP	TEZPUR	51.50	292	*e*P	P	12 38 37.9	+0.5
SHL	Shillong	52.31	291	P	P	12 38 44.2	+0.5
SHL				pmax	pmax		
	comp=Z,212nm,0.8s						
SHL				MLR	MLR		
	comp=Z,3µm,18.0s						
SHL	Shillong	52.31	291	*e*P	P	12 38 43.9	+0.2
SHL	Shillong	52.31	291	P	P	12 38 44.2	+0.5
SHL	Shillong	52.31	291	P	P	12 38 44.3	+0.5
DGPR	DIGLIPUR	52.34	275	*e*P	P	12 38 45.3	+1.5
DGPR				IAmb	IAmb	12 38 45.6	
	comp=Z,183nm,1.1s						
GUWA	GUWAHATI	52.48	291	*e*P	P	12 38 44.8	+0.1
GUWA				IAmb	IAmb	12 38 46.2	
	comp=Z,248nm,0.7s						
TOO	Toolangi	52.71	182	P	P	12 38 45.1	-1.0
TOO				pmax	pmax		
	comp=Z,238nm,1.4s						
TOO				MLR	MLR		
	comp=Z,3µm,19.0s						
TOO	Toolangi	52.71	182	P	P	12 38 45.1	-1.0
TOO				IAmb	IAmb	12 38 48.6	
	comp=Z,238nm,1.4s						
BELO	BELONIA	52.75	288	*e*P	P	12 38 48.9	+2.1
AGT	Agartala	52.91	288	*e*P	P	12 38 50.1	+2.1
AGT				IAmb	IAmb	12 38 51.1	
	comp=Z,323nm,0.7s						
LSA	Lhasa	53.05	296	P	P	12 38 51.5	+2.0
LSA				S	S	12 46 18.5	0.0
LSA				pmax	pmax		
	comp=Z,550nm,0.6s						
LSA				LR	LR		
	comp=Z,6µm,16.4s						
LSA				LR	LR		
	comp=Z,5µm,16.4s						
LSA				LR	LR		
	comp=Z,8µm,16.4s						
LSA	Lhasa	53.05	296	P	P	12 38 51.5	+2.0
LSA	Lhasa	53.05	296	P	P	12 38 51.3	+1.8
LSA				pmax	pmax		
	comp=Z,207nm,0.6s						
LSA				MLR	MLR		
	comp=Z,2µm,18.0s						
LSA	Lhasa	53.05	296	P	P	12 38 51.3	+1.8
LSA	Lhasa	53.05	296	P	P	12 38 51.7	+2.2
LSA				P	P	12 38 51.7	+2.2
MORW	Morawa	53.38	214	P	P	12 38 51.1	-0.2
MORW				IAmb	IAmb	12 38 52.4	
	comp=Z,176nm,1.4s						
BILL	Bilibino	54.05	9	*d i*P	P	12 38 56.9	+1.3
BILL				*e*		12 41 01.0	
BILL				*i* S	S	12 46 31.5	+1.5
BILL				*e*SS	SS	12 50 17.5	+6.0
BILL				pmax	pmax		
	comp=Z,167nm,1.0s						
BILL				MLR	MLR		
	comp=Z,3µm,18.0s						
BILL	Bilibino	54.05	9	P	P	12 38 56.9	+1.3
GTK	Tadong	55.25	293	*e*P	P	12 39 06.0	+0.8
GTK				IAmb	IAmb	12 39 09.2	
	comp=Z,330nm,1.0s						
NWAO	Narrogin (SRO)	55.85	210	P	P	12 39 08.8	-0.3
NWAO				pmax	pmax		
	comp=Z,36nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,3µm,18.0s						
NWAO	Narrogin (SRO)	55.85	210	P	P	12 39 08.8	-0.3
NWAO	Narrogin (SRO)	55.85	210	P	P	12 39 08.8	-0.3
NWAO				IAmb	IAmb	12 39 11.8	
	comp=Z,28nm,0.9s						
NWAO	Narrogin (SRO)	55.85	210	IAMs_20	IAMs_20	13 04 55.4	
	comp=Z,3µm,18.0s						
TAPN	Taplejung	56.04	293	*e*P	P	12 39 12.2	+1.2
GAMB	Gambell	56.05	21	P	P	12 39 11.4	+1.4
GAMB				IAmb	IAmb	12 39 21.7	
	comp=Z,214nm,1.4s						
XMAS	Kiritimati	56.31	98	IAMs_20	IAMs_20	13 07 55.3	
	comp=Z,3µm,18.0s						
OUZ	Omahuta	56.31	154	P	P	12 39 12.5	+0.2
OUZ				IAMs_20	IAMs_20	13 01 36.6	
	comp=Z,3µm,18.0s						
SDPT	Sand Point	56.50	33	P	P	12 39 13.8	+0.4
TIXI	Tiksi	57.27	353	*c i*P	P	12 39 18.6	0.0
TIXI				pmax	pmax		
	comp=Z,611nm,1.0s						
TIXI	Tiksi	57.27	353	P	P	12 39 18.8	+0.2
TIXI				IAmb	IAmb	12 39 29.9	
	comp=Z,134nm,0.9s						
WMQ	Urumqi	57.43	312	*e*P	P	12 39 21.5	+1.2
WMQ				sP	sP	12 39 29.8	+0.4
WMQ				PcP	PcP	12 40 12.0	-2.0
WMQ				S	S	12 47 19.5	+3.6
WMQ				sS	sS	12 47 27.0	+0.3
WMQ				ScS	ScS	12 49 10.3	+2.0
WMQ				pmax	pmax		
	comp=Z,410nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.7s						
WMQ				LR	LR		
	comp=Z,4µm,23.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.5s						
WMQ				LR	LR		
	comp=Z,2µm,22.5s						
WMQ	Urumqi	57.43	312	P	P	12 39 21.7	+1.4
WMQ				pmax	pmax		
	comp=Z,492nm,1.1s						
WMQ	Urumqi	57.43	312	P	P	12 39 21.7	+1.4
WMQ	Urumqi	57.43	312	IAMs_20	IAMs_20	13 03 25.5	
	comp=Z,4µm,20.0s						
GUN	Gumba	57.66	293	*e*P	P	12 39 23.6	+1.0
	comp=Z,1µm,1.1s						
BOK	Bokaro	57.82	289	*e*P	P	12 39 24.6	+1.2
CHGN	Chignik	57.94	32	P	P	12 39 24.1	+0.5
CHGN				IAmb	IAmb	12 39 48.0	
	comp=Z,222nm,1.4s						
PKI	Pulchoki	58.08	293	*e*P	P	12 39 26.1	+0.6
	comp=Z,526nm,0.9s						
KKN	Kakani	58.19	293	*e*P	P	12 39 26.8	+0.7
	comp=Z,637nm,1.2s						
DMN	Daman	58.35	293	*e*P	P	12 39 28.2	+0.9
	comp=Z,600nm,0.9s						
ANM	Nome	58.75	22	P	P	12 39 30.3	+1.2
ANM				pmax	pmax		
	comp=Z,152nm,1.0s						
ANM	Nome	58.75	22	P	P	12 39 30.3	+1.2
ANM				IAmb	IAmb	12 39 40.8	
	comp=Z,152nm,1.0s						
GKN	Gorkha	58.75	294	*e*P	P	12 39 30.7	+0.7
DGZ	Jazzator, Alta	58.81	319	*c i*P	P	12 39 31.1	+1.1
DGZ				pmax	pmax		
	comp=Z,231nm,0.8s						
DGZ				MLR	MLR		
	comp=Z,4µm,15.0s						
DANN	Dangsing	59.51	294	*e*P	P	12 39 36.4	+0.9
	comp=Z,682nm,0.6s						
KOLN	Koldanda	59.68	293	*e*P	P	12 39 36.7	+0.2
	comp=Z,714nm,1.3s						
ZSN	Zaisan	60.02	316	⇑*i*P	P	12 39 39.4	+1.1
	comp=Z,83nm,1.1s,baz=316						
ZSN				*e*S	S	12 47 51.2	+1.8
	comp=Z,103nm,2.3s,baz=316						
ZSN	Zaisan	60.02	316	*c i*P	P	12 39 39.3	+1.1
ZSN				*e*S	S	12 47 51.2	+1.8
ZSN				pmax	pmax		
	comp=Z,83nm,1.1s						
ZSN				smax	smax		
	comp=N,103nm,2.3s						
SII	Sitkinak Islan	60.24	33	P	P	12 39 40.2	+0.6
QRZ	Quartz Range	60.75	158	P	P	12 39 42.3	-0.9
QRZ				IAmb	IAmb	12 39 44.5	
	comp=Z,186nm,1.4s						
BKZ	Black Stump Fm	60.88	154	P	P	12 39 43.1	-1.0
BKZ				IAmb	IAmb	12 39 44.7	
	comp=Z,111nm,1.4s						
OHAK	Old Harbor	60.91	33	P	P	12 39 44.6	+0.6
OHAK				IAMs_20	IAMs_20	13 02 59.1	
	comp=Z,4µm,21.0s						
SVW2	Sparrevohn	61.11	28	IAMs_20	IAMs_20	13 01 37.1	
	comp=Z,4µm,19.0s						
ZAA0	Zalesovo Array	61.39	323	P	P	12 39 47.2	-0.2
ZAA0				IAmb	IAmb	12 39 48.6	
	comp=Z,139nm,1.1s						
ZAA0				IAMs_20	IAMs_20	13 05 12.1	
	comp=Z,3µm,21.0s						
ZALV	Zalesovo Beam	61.39	323	P	P	12 39 47.1	-0.3
	comp=Z,83nm,0.9s,baz=102,slow=6.2,SNR=218						
ZALV				PcP	PcP	12 40 28.6	-0.8
	comp=Z,45nm,0.9s,baz=108,slow=4.0,SNR=5.2						
ZALV				LR	LR	13 08 03.1	
	comp=Z,2µm,18.2s,baz=91,slow=38						
ZALV				PKP2bc		13 09 07.4	
	comp=Z,3.2nm,1.0s,baz=253,slow=2.5,SNR=7.7						
ZALV	Zalesovo Beam	61.39	323	P	P	12 39 46.9	-0.5
NNZ	Nelson	61.40	158	P	P	12 39 47.5	0.0
NNZ				IAmb	IAmb	12 40 08.4	
	comp=Z,83nm,1.2s						
KDAK	Kodiak Island	61.44	32	P	P	12 39 48.5	+0.8
	comp=Z,88nm,0.9s,baz=340,slow=0.6,SNR=16						
KDAK	Kodiak Island	61.44	32	P	P	12 39 48.1	+0.4
KDAK				pmax	pmax		
	comp=Z,230nm,1.4s						
KDAK	Kodiak Island	61.44	32	P	P	12 39 48.1	+0.4
RDOG	Red Dog Mine	61.49	19	P	P	12 39 49.4	+1.5
RDOG				IAmb	IAmb	12 39 56.5	
	comp=Z,75nm,1.0s						
RDOG				IAMs_20	IAMs_20	13 04 01.8	
	comp=Z,3µm,20.0s						
TTA	Tatalina	61.63	26	P	P	12 39 50.3	+1.3
TTA				pmax	pmax		
	comp=Z,152nm,1.3s						
TTA	Tatalina	61.63	26	P	P	12 39 50.3	+1.3
TTA				IAmb	IAmb	12 40 00.2	
	comp=Z,152nm,1.3s						
TTA				IAMs_20	IAMs_20	13 02 05.2	
	comp=Z,5µm,22.0s						
MK31	Makanchi Array	61.66	315	P	P	12 39 50.2	+0.8
MK31				pmax	pmax		
	comp=Z,143nm,1.1s						
MK31	Makanchi Array	61.66	315	P	P	12 39 50.2	+0.8
MK31				IAmb	IAmb	12 39 51.8	
	comp=Z,143nm,1.1s						
MKAR	Makanchi Array	61.66	315	P	P	12 39 50.3	+0.9
	comp=Z,86nm,0.7s,baz=90,slow=8.5,SNR=565						
MKAR				PKP2bc		13 09 05.5	
	comp=Z,3.0nm,1.1s,baz=298,slow=2.6,SNR=7.0						
THZ	Tophouse	61.70	158	IAMs_20	IAMs_20	13 06 09.4	
	comp=Z,2µm,18.0s						
TUWZ	Tuamarina	61.79	157	P	P	12 39 48.8	-1.4
MAKZ	Makanchi	61.87	315	P	P	12 39 51.8	+0.9
MAKZ				pmax	pmax		
	comp=Z,229nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,2µm,18.0s						
MAKZ	Makanchi	61.87	315	P	P	12 39 51.8	+0.9
MAKZ				IAMs_20	IAMs_20	13 09 02.2	
	comp=Z,3µm,18.0s						
SNZO	South Karori	61.98	157	P	P	12 39 49.9	-1.5
SNZO				IAmb	IAmb	12 39 59.9	
	comp=Z,139nm,1.2s						
BFZ	Birch Farm	62.05	155	P	P	12 39 50.5	-1.4
BFZ				IAmb	IAmb	12 39 52.4	
	comp=Z,151nm,1.2s						
BFZ				IAMs_20	IAMs_20	13 05 30.4	
	comp=Z,2µm,19.0s						
BHW	Baring Head	62.13	157	P	P	12 39 50.9	-1.5
CMWZ	Cape Campbell	62.17	157	P	P	12 39 50.3	-2.5
RSO	Redoubt South	62.19	29	P	P	12 39 53.1	+0.1
MSWZ	Moikau Station	62.28	156	P	P	12 39 52.1	-1.4
LTZ	Lake Taylor	62.38	159	IAMs_20	IAMs_20	13 05 56.3	
	comp=Z,4µm,19.0s						
PLWZ	Palliser	62.41	156	P	P	12 39 53.1	-1.3
HOM	Homer	62.47	30	P	P	12 39 55.1	+0.5
	baz=252						
KHZ	Kahutara	62.50	158	P	P	12 39 53.0	-1.9
KHZ				IAmb	IAmb	12 40 08.3	
	comp=Z,76nm,1.2s						
KHZ				IAMs_20	IAMs_20	13 07 29.5	

	comp=Z,3µm,18.0s						
CNPM	**China Poot**	**62.63**	**30**	P	**P**	**12 39 55.9**	**+0.2**
CNPM				IAMs_20	IAMs_20	13 04 00.5	
	comp=Z,3µm,20.0s						
OXZ	**Oxford**	**62.78**	**160**	IAMs_20	IAMs_20	13 06 07.0	
	comp=Z,3µm,19.0s						
RPZ	**Rata Peaks**	**62.81**	**161**	IAMs_20	IAMs_20	13 04 31.6	
	comp=Z,4µm,21.0s						
BRLK	**Bradley Lake**	**62.87**	**30**	P	**P**	**12 39 57.1**	**-0.2**
BRLK				IAmb	IAmb	12 39 58.4	
	comp=Z,112nm,0.8s						
BRLK				IAMs_20	IAMs_20	13 02 45.5	
	comp=Z,2µm,19.0s						
CAPN	**Captain Cook N**	**63.04**	**29**	P	**P**	**12 39 59.2**	**+0.9**
	baz=252						
SKT	**Skwentna**	**63.24**	**28**	P	**P**	**12 39 60.0**	**+0.3**
SKT				IAmb	IAmb	12 40 09.1	
	comp=Z,121nm,1.1s						
SKT				IAMs_20	IAMs_20	13 03 41.7	
	comp=Z,4µm,22.0s						
PPLA	**Purkeypile**	**63.25**	**27**	P	**P**	**12 40 01.2**	**+1.3**
PPLA				IAMs_20	IAMs_20	13 03 28.9	
	comp=Z,5µm,21.0s						
PDGK	**Podgornoye**	**63.28**	**311**	*i* P	**P**	**12 40 00.9**	**+0.4**
PDGK				pmax	pmax		
	comp=Z,224nm,1.2s						
SHLS	**Shalkode**	**63.29**	**311**	*i* P	**P**	**12 39 59.6**	**-1.0**
	comp=Z,134nm,1.2s,baz=311						
SHLS				*e*S	**S**	**12 48 28.8**	**-2.4**
	comp=Z,105nm,2.7s,baz=311						
SHLS	**Shalkode**	**63.29**	**311**	*i* P	**P**	**12 39 59.5**	**-1.0**
SHLS				*e*S	**S**	**12 48 28.8**	**-2.4**
SHLS				pmax	pmax		
	comp=Z,134nm,1.2s						
SHLS				smax	smax		
	comp=N,105nm,2.7s						
MQZ	**McQueen’s Vall**	**63.33**	**159**	IAMs_20	IAMs_20	13 06 42.7	
	comp=Z,2µm,18.0s						
SUA	**Susitna One**	**63.43**	**28**	P	**P**	**12 40 01.7**	**+0.6**
SUA				IAmb	IAmb	12 40 06.8	
	comp=Z,93nm,1.2s						
SEM	**Semipalatinsk**	**63.49**	**319**	*i* P	**P**	**12 40 01.4**	**-0.4**
	comp=Z,164nm,1.3s,baz=319						
SEM				LR	LR	13 08 03.7	
	comp=Z,1µm,15.7s,baz=319						
SEM	**Semipalatinsk**	**63.49**	**319**	*i* P	**P**	**12 40 01.4**	**-0.4**
SEM				pmax	pmax		
	comp=Z,164nm,1.3s						
SEM				MLR	MLR		
	comp=Z,1µm,16.0s						
O22K	**Cooper Landing**	**63.63**	**30**	P	**P**	**12 40 02.8**	**+0.6**
	baz=254,SNR=35						
O22K	**Cooper Landing**	**63.63**	**30**	P	**P**	**12 40 02.8**	**+0.6**
O22K				IAMs_20	IAMs_20	13 01 45.0	
	comp=Z,3µm,22.0s						
SEW	**Seward**	**63.66**	**30**	P	**P**	**12 40 03.1**	**+0.7**
SEW				IAMs_20	IAMs_20	13 03 55.7	
	comp=Z,4µm,22.0s						
IMAR	**Indian Mountai**	**63.72**	**23**	P	**P**	**12 40 03.6**	**+0.8**
RC01	**Rabbit Creek A**	**63.79**	**29**	P	**P**	**12 40 03.8**	**+0.5**
	baz=254,SNR=62						
KPKS	**Kokpek**	**63.88**	**311**	*i* P	**P**	**12 40 05.2**	**+0.8**
	comp=Z,110nm,1.2s,baz=311						
KPKS				*e*S	**S**	**12 48 39.8**	**+1.3**
	baz=311						
KPKS	**Kokpek**	**63.88**	**311**	*i* P	**P**	**12 40 05.2**	**+0.8**
KPKS				*e*S	**S**	**12 48 39.7**	**+1.3**
KPKS				pmax	pmax		
	comp=Z,110nm,1.2s						
CUT	**Chulitna**	**63.93**	**27**	P	**P**	**12 40 04.5**	**+0.3**
	baz=252,SNR=5.8						
KTH	**Kantishna Hill**	**64.00**	**26**	P	**P**	**12 40 05.7**	**+0.9**
KTH				IAMs_20	IAMs_20	13 03 50.9	
	comp=Z,4µm,21.0s						
SATY	**Saty**	**64.06**	**311**	⇑*i*P	**P**	**12 40 06.6**	**+1.0**
	comp=Z,154nm,1.4s,baz=310						
SATY				*e*S	**S**	**12 48 42.2**	**+1.5**
	baz=310						
SATY	**Saty**	**64.06**	**311**	*c* *i*P	**P**	**12 40 06.6**	**+1.0**
SATY				*e*S	**S**	**12 48 42.2**	**+1.5**
SATY				pmax	pmax		
	comp=Z,154nm,1.4s						
BPAW	**Bear Paw Mtn.**	**64.15**	**26**	P	**P**	**12 40 06.5**	**+0.8**
TDK	**Taldyqorghan**	**64.17**	**313**	*i* P	**P**	**12 40 07.7**	**+1.5**
	comp=Z,374nm,1.1s,baz=313						
TDK				*e*S	**S**	**12 48 43.9**	**+2.0**
	baz=313						
TDK				LR	LR	13 06 45.0	
	comp=Z,1µm,14.9s,baz=313						
TDK	**Taldyqorghan**	**64.17**	**313**	*i* P	**P**	**12 40 07.6**	**+1.5**
TDK				*e*S	**S**	**12 48 43.9**	**+2.0**
TDK				pmax	pmax		
	comp=Z,374nm,1.1s						
TDK				MLR	MLR		
	comp=Z,1µm,15.0s						
PMR	**Palmer**	**64.21**	**28**	P	**P**	**12 40 06.4**	**+0.3**
PMR				pmax	pmax		
	comp=Z,241nm,1.3s						
PMR	**Palmer**	**64.21**	**28**	P	**P**	**12 40 06.4**	**+0.3**
PMR				IAMs_20	IAMs_20	13 03 43.4	
	comp=Z,3µm,21.0s						
TRF	**Thorofare Moun**	**64.24**	**26**	P	**P**	**12 40 06.8**	**+0.3**
TRF				IAMs_20	IAMs_20	13 03 48.2	
	comp=Z,4µm,20.0s						
GHO	**Glory Hole Cre**	**64.36**	**28**	P	**P**	**12 40 07.8**	**+0.6**
GHO				IAmb	IAmb	12 40 16.8	
	comp=Z,111nm,1.0s						
NGP	**Nagpur**	**64.37**	**286**	*e*P	**P**	**12 40 08.2**	**+0.3**
DDI	**Dehra Dun**	**64.40**	**297**	*e*P	**P**	**12 40 08.7**	**+0.7**
KNK	**Knik Glacier**	**64.48**	**29**	P	**P**	**12 40 08.8**	**+1.0**
KNK				IAMs_20	IAMs_20	13 05 06.4	
	comp=Z,4µm,21.0s						
MDRS	**Chennai**	**64.53**	**277**	*e*P	**P**	**12 40 10.5**	**+1.6**
MLY	**Manley**	**64.56**	**25**	P	**P**	**12 40 09.6**	**+1.2**
	baz=251,SNR=111						
KURK	**Kurchatov**	**64.56**	**319**	P	**P**	**12 40 08.7**	**+0.2**
KURK				pmax	pmax		
	comp=Z,697nm,1.2s						
KURK				MLR	MLR		
	comp=Z,5µm,19.0s						
KURK	**Kurchatov**	**64.56**	**319**	P	**P**	**12 40 08.7**	**+0.2**
KURK	**Kurchatov**	**64.56**	**319**	P	**P**	**12 40 08.9**	**+0.3**
KURK				P	**P**	**12 40 08.9**	**+0.3**
SML	**Sawmill**	**64.64**	**28**	P	**P**	**12 40 09.9**	**+0.9**
SML				IAMs_20	IAMs_20	13 04 40.7	
	comp=Z,3µm,20.0s						
RND	**Reindeer**	**64.84**	**27**	P	**P**	**12 40 10.3**	**0.0**
RND				pmax	pmax		
	comp=Z,108nm,1.0s						
RND	**Reindeer**	**64.84**	**27**	P	**P**	**12 40 10.3**	**0.0**
RND				IAmb	IAmb	12 40 12.3	
	comp=Z,108nm,1.0s						
RND				IAMs_20	IAMs_20	13 04 07.1	
	comp=Z,5µm,22.0s						
MCK	**McKinley**	**64.90**	**26**	P	**P**	**12 40 10.8**	**+0.2**
	baz=253,SNR=33						
GLI	**Glacier Island**	**64.98**	**30**	P	**P**	**12 40 11.7**	**+0.5**
GLI				IAMs_20	IAMs_20	13 04 16.8	
	comp=Z,5µm,22.0s						
Q23K	**Middleton Isla**	**65.02**	**31**	P	**P**	**12 40 13.2**	**+1.8**
	baz=258						
Q23K	**Middleton Isla**	**65.02**	**31**	P	**P**	**12 40 12.6**	**+1.2**
MID	**Middleton Isla**	**65.02**	**31**	P	**P**	**12 40 12.6**	**+1.2**
MID				pmax	pmax		
	comp=Z,354nm,1.0s						
MID	**Middleton Isla**	**65.02**	**31**	P	**P**	**12 40 12.6**	**+1.2**
A21K	**Barrow**	**65.04**	**17**	P	**P**	**12 40 12.7**	**+1.4**
	baz=242,SNR=19						
A21K	**Barrow**	**65.04**	**17**	P	**P**	**12 40 12.8**	**+1.6**
MDOK	**Medeo**	**65.06**	**311**	*i* P	**P**	**12 40 13.5**	**+1.3**
	baz=310						
MDOK				*e*S	**S**	**12 48 54.9**	**+1.8**
	baz=310						
MDOK				LR	LR	13 08 39.0	
	comp=Z,1µm,15.8s,baz=310						
MDOK	**Medeo**	**65.06**	**311**	*i* P	**P**	**12 40 13.5**	**+1.3**
MDOK				*e*S	**S**	**12 48 54.9**	**+1.8**
MDOK				MLR	MLR		
	comp=Z,1µm,16.0s						
NEA2	**Nenana**	**65.10**	**25**	P	**P**	**12 40 12.1**	**+0.3**
	baz=253,SNR=33						
SCM	**Sheep Creek Mo**	**65.11**	**28**	P	**P**	**12 40 13.3**	**+1.3**
SCM				pmax	pmax		
	comp=Z,443nm,1.0s						
SCM	**Sheep Creek Mo**	**65.11**	**28**	P	**P**	**12 40 13.3**	**+1.3**
SCM				IAMs_20	IAMs_20	13 04 10.0	
	comp=Z,4µm,22.0s						
SMLA	**Simla**	**65.12**	**297**	*e*P	**P**	**12 40 12.8**	**+0.3**
NRIK	**Noril'sk**	**65.12**	**340**	P	**P**	**12 40 11.9**	**+0.1**
	comp=Z,63nm,0.7s,baz=113,slow=7.6,SNR=95						
NRIK				LR	LR	13 08 51.3	
	comp=Z,2µm,19.5s,baz=104,slow=36						
NRIK	**Noril'sk**	**65.12**	**340**	*c* *i*P	**P**	**12 40 11.6**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,241nm,1.5s						
NRIK				MLR	MLR		
	comp=Z,2µm,16.0s						
NRIK	**Noril'sk**	**65.12**	**340**	P	**P**	**12 40 12.0**	**+0.1**
CHKK	**Chushkaly**	**65.13**	**311**	*e*P	**P**	**12 40 13.2**	**+0.7**
	baz=311						
CHKK	**Chushkaly**	**65.13**	**311**	*e*P	**P**	**12 40 13.1**	**+0.7**
TNSS	**Tian-Shan**	**65.13**	**311**	*e*P	**P**	**12 40 14.6**	**+1.6**
	baz=310						
TNSS	**Tian-Shan**	**65.13**	**311**	*e*P	**P**	**12 40 14.5**	**+1.6**
AAA	**Alma-Ata**	**65.16**	**311**	⇑*e*P	**P**	**12 40 14.4**	**+1.7**
	comp=Z,182nm,1.0s,baz=311						
AAA				*e*S	**S**	**12 48 56.3**	**+2.1**
	baz=311						
AAA				LR	LR	13 08 42.7	
	comp=Z,1µm,16.4s,baz=311						
AAA	**Alma-Ata**	**65.16**	**311**	*e*P	**P**	**12 40 14.4**	**+1.7**
AAA				*e*S	**S**	**12 48 48.4**	**-5.8**
AAA				pmax	pmax		
	comp=Z,800nm,3.0s						
AAA				MLR	MLR		
	comp=Z,2µm,18.0s						
HIN	**Hinchinbrook I**	**65.16**	**30**	P	**P**	**12 40 12.9**	**+0.6**
HIN				IAMs_20	IAMs_20	13 03 40.3	
	comp=Z,5µm,22.0s						
FID	**Port Fidalgo**	**65.25**	**30**	P	**P**	**12 40 13.8**	**+0.9**
FID				IAMs_20	IAMs_20	13 04 43.1	
	comp=Z,4µm,21.0s						
PALK	**Pallekele**	**65.31**	**271**	*c* *i*P	**P**	**12 40 14.6**	**+0.5**
PALK				pmax	pmax		
	comp=Z,146nm,1.1s						
PALK				MLR	MLR		
	comp=Z,1µm,17.0s						
PALK	**Pallekele**	**65.31**	**271**	P	**P**	**12 40 14.9**	**+0.8**
PALK				IAmb	IAmb	12 40 16.2	
	comp=Z,101nm,1.1s						
PALK	**Pallekele**	**65.31**	**271**	P	**P**	**12 40 15.0**	**+0.8**
PALK				P	**P**	**12 40 15.0**	**+0.8**
HYB	**Hyderabad**	**65.38**	**282**	*i* P	**P**	**12 40 14.0**	**-0.5**
	comp=Z,214nm,1.2s						
HYB				*e*S	**S**	**12 49 04.0**	**+6.5**
HYB	**Hyderabad**	**65.38**	**282**	*e*P	**P**	**12 40 13.7**	**-0.8**
HYB				IAmb	IAmb	12 40 14.9	
	comp=Z,247nm,1.3s						
DHY	**Denali Highway**	**65.40**	**27**	P	**P**	**12 40 14.7**	**+0.7**
DHY				IAmb	IAmb	12 40 25.5	
	comp=Z,158nm,1.2s						
DHY				IAMs_20	IAMs_20	13 04 47.8	
	comp=Z,5µm,22.0s						
WRH	**Wood River Hil**	**65.47**	**26**	P	**P**	**12 40 14.2**	**0.0**
WRH				IAmb	IAmb	12 40 15.6	
	comp=Z,102nm,0.9s						
WRH				IAMs_20	IAMs_20	13 05 40.7	
	comp=Z,4µm,20.0s						
COLD	**Coldfoot**	**65.49**	**22**	P	**P**	**12 40 15.9**	**+1.6**
	baz=250,SNR=120						
COLD	**Coldfoot**	**65.49**	**22**	P	**P**	**12 40 16.2**	**+1.9**
MDM	**Murphy Dome**	**65.55**	**25**	P	**P**	**12 40 14.9**	**+0.1**
MDM				IAmb	IAmb	12 40 18.9	
	comp=Z,72nm,1.0s						
EYAK	**Cordova Ski Ar**	**65.55**	**30**	P	**P**	**12 40 16.0**	**+1.2**
EYAK				IAMs_20	IAMs_20	13 06 25.8	
	comp=Z,3µm,20.0s						
KUU	**Kurty**	**65.60**	**311**	⇑*e*P	**P**	**12 40 16.3**	**+0.8**
	comp=Z,165nm,0.8s,baz=311						
KUU				*i* S	**S**	**12 49 00.9**	**+1.4**
	baz=311						
KUU	**Kurty**	**65.60**	**311**	*ce*P	**P**	**12 40 16.3**	**+0.8**
KUU				*i* S	**S**	**12 49 00.8**	**+1.4**
KUU				pmax	pmax		
	comp=Z,165nm,0.8s						
BHPL	**Bhopal**	**65.61**	**289**	*e*P	**P**	**12 40 14.7**	**-1.2**
BHPL				IAmb	IAmb	12 40 16.1	
	comp=Z,52nm,0.6s						
ULHL	**Ulahol**	**65.63**	**310**	P	**P**	**12 40 16.9**	**+1.0**
	SNR=81						
CCB	**Clear Creek Bu**	**65.64**	**25**	P	**P**	**12 40 15.4**	**+0.1**
CCB				IAmb	IAmb	12 40 17.2	
	comp=Z,83nm,1.1s						
CCB				IAMs_20	IAMs_20	13 05 55.1	
	comp=Z,5µm,21.0s						
KLU	**Klutina**	**65.68**	**29**	P	**P**	**12 40 17.1**	**+1.3**
KLU				IAMs_20	IAMs_20	13 04 41.1	
	comp=Z,5µm,21.0s						
TCOL	**CIGO, UAF Yank**	**65.68**	**25**	P	**P**	**12 40 16.1**	**+0.5**
	baz=254,SNR=36						
TCOL	**CIGO, UAF Yank**	**65.68**	**25**	P	**P**	**12 40 15.9**	**+0.3**
TCOL				IAmb	IAmb	12 40 26.5	
	comp=Z,110nm,1.0s						
COLA	**College**	**65.68**	**25**	P	**P**	**12 40 15.9**	**+0.3**
COLA				pmax	pmax		
	comp=Z,109nm,1.0s						
COLA	**College**	**65.68**	**25**	P	**P**	**12 40 15.9**	**+0.3**
COLA				IAmb	IAmb	12 40 26.5	
	comp=Z,110nm,1.0s						
M24K	**Tolsona, Glenn**	**65.70**	**28**	P	**P**	**12 40 17.0**	**+1.1**
	baz=256,SNR=32						
M24K	**Tolsona, Glenn**	**65.70**	**28**	P	**P**	**12 40 17.4**	**+1.6**
DHRM	**DHARAMSHALA**	**65.79**	**299**	*e*P	**P**	**12 40 16.3**	**-0.9**
DHRM				IAmb	IAmb	12 40 17.4	
	comp=Z,204nm,1.1s						
KSH	**Kashi**	**65.81**	**307**	P	**P**	**12 40 20.5**	**+3.4**
KSH				pP	sP	12 40 25.5	-0.8
KSH				S	**S**	**12 49 08.0**	**+5.5**
KSH				sS	sS	12 49 14.5	+1.4
KSH				pmax	pmax		
	comp=Z,420nm,1.2s						
KSH				pmax	pmax		
	comp=Z,2µm,4.4s						
KSH				LR	LR		
	comp=Z,2µm,12.8s						
KSH				LR	LR		
	comp=Z,1µm,8.6s						
KSH				LR	LR		
	comp=Z,4µm,14.6s						
POKR	**Poker Plat Res**	**65.92**	**25**	P	**P**	**12 40 17.1**	**-0.1**
	baz=254,SNR=35						
POKR	**Poker Plat Res**	**65.92**	**25**	P	**P**	**12 40 17.4**	**+0.2**
POKR				IAmb	IAmb	12 40 27.3	
	comp=Z,166nm,1.4s						
HDA	**Harding Lake**	**65.93**	**26**	P	**P**	**12 40 16.8**	**-0.4**
	baz=255						
HDA	**Harding Lake**	**65.93**	**26**	P	**P**	**12 40 16.8**	**-0.4**
HDA				IAmb	IAmb	12 40 18.2	
	comp=Z,81nm,0.9s						
HDA				IAMs_20	IAMs_20	13 04 27.9	
	comp=Z,4µm,22.0s						
RAGM	**Ragged Mountai**	**66.04**	**30**	P	**P**	**12 40 18.9**	**+0.9**
IL31		**66.05**	**25**	P	**P**	**12 40 17.4**	**-0.5**
ILAR	**Eielson Array**	**66.05**	**25**	P	**P**	**12 40 17.5**	**-0.5**
	comp=Z,122nm,1.1s,baz=252,slow=5.6,SNR=278						
ILAR				LR	LR	13 06 29.4	
	comp=Z,4µm,21.1s,baz=260,slow=34						
ILAR				PKPPKP	**P'P'df**	**13 08 55.8**	**-1.0**
	comp=Z,2.1nm,1.1s,baz=350,slow=1.0,SNR=6.3						
ILAR	**Eielson Array**	**66.05**	**25**	P	**P**	**12 40 17.3**	**-0.7**
KAIM	**Kayak Island**	**66.08**	**31**	P	**P**	**12 40 19.1**	**+0.9**
TKM2	**Tokmak 2**	**66.11**	**310**	P	**P**	**12 40 20.2**	**+1.2**
	SNR=81						
TKM2	**Tokmak 2**	**66.11**	**310**	*i* P	**P**	**12 40 18.7**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,132nm,1.3s						
PAX	**Paxson**	**66.22**	**27**	P	**P**	**12 40 20.0**	**+0.8**
PAX				pmax	pmax		
	comp=Z,165nm,1.2s						
PAX	**Paxson**	**66.22**	**27**	P	**P**	**12 40 20.0**	**+0.8**
PAX				IAMs_20	IAMs_20	13 05 23.4	
	comp=Z,3µm,21.0s						
HMT	**Hamilton**	**66.23**	**30**	P	**P**	**12 40 20.7**	**+1.4**
HMT				IAMs_20	IAMs_20	13 04 04.0	
	comp=Z,5µm,22.0s						
N25K	**Chitina, Valde**	**66.32**	**29**	P	**P**	**12 40 21.1**	**+1.2**
	baz=258,SNR=36						
N25K	**Chitina, Valde**	**66.32**	**29**	P	**P**	**12 40 20.9**	**+1.0**
SUCK	**Suckling Hills**	**66.42**	**31**	P	**P**	**12 40 22.3**	**+1.8**
KBK	**Karagaybulak**	**66.59**	**310**	P	**P**	**12 40 23.1**	**+1.0**
	SNR=54						
GLB	**Gilahina Butte**	**66.66**	**29**	P	**P**	**12 40 23.2**	**+1.2**
GLB				IAMs_20	IAMs_20	13 05 20.1	
	comp=Z,2µm,21.0s						
RIDG	**Independent Ri**	**66.66**	**27**	P	**P**	**12 40 22.6**	**+0.6**
CHMS	**Chumysh**	**66.73**	**310**	P	**P**	**12 40 23.4**	**+0.5**
	SNR=38						
VRDI	**Verde Repeater**	**66.79**	**30**	P	**P**	**12 40 23.9**	**+0.9**
PRP	**Porcupine Dome**	**66.80**	**25**	P	**P**	**12 40 22.3**	**-0.6**
SGDS	**Sogindy**	**66.83**	**311**	⇑*i*P	**P**	**12 40 23.9**	**+0.4**
	baz=311						
SGDS				*e*S	**S**	**12 49 15.3**	**+0.8**
	baz=311						
SGDS	**Sogindy**	**66.83**	**311**	*c* *i*P	**P**	**12 40 23.8**	**+0.3**
SGDS				*e*S	**S**	**12 49 15.3**	**+0.8**
CRQM	**Cirque**	**66.85**	**30**	P	**P**	**12 40 24.8**	**+1.4**
CRQM				IAMs_20	IAMs_20	13 05 34.8	
	comp=Z,3µm,22.0s						
UCH	**Uchtor**	**66.91**	**310**	P	**P**	**12 40 25.8**	**+1.3**
	SNR=127						
USP	**Ospenovka**	**66.92**	**311**	P	**P**	**12 40 24.6**	**+0.6**
	SNR=56						
AAK	**Ala-Archa**	**66.92**	**310**	P	**P**	**12 40 25.0**	**+0.8**
	SNR=36						
AAK	**Ala-Archa**	**66.92**	**310**	*c* *i*P	**P**	**12 40 24.8**	**+0.6**
AAK				pmax	pmax		
	comp=Z,330nm,1.7s						
AAK				MLR	MLR		
	comp=Z,10µm,17.0s						
AAK	**Ala-Archa**	**66.92**	**310**	P	**P**	**12 40 25.0**	**+0.8**
AAK				IAmb	IAmb	12 40 26.5	
	comp=Z,89nm,1.2s						
AAK	**Ala-Archa**	**66.92**	**310**	IAMs_20	IAMs_20	13 14 05.0	
	comp=Z,4µm,18.0s						
AAK	**Ala-Archa**	**66.92**	**310**	P	**P**	**12 40 25.2**	**+1.0**
AAK				P	**P**	**12 40 25.2**	**+1.0**
MENT	**Mentasta**	**66.99**	**28**	P	**P**	**12 40 25.4**	**+1.3**
MENT				IAmb	IAmb	12 40 36.1	
	comp=Z,72nm,1.2s						
TGL	**Tana Glacier**	**67.00**	**30**	P	**P**	**12 40 25.5**	**+1.2**
TGL				IAMs_20	IAMs_20	13 05 49.2	
	comp=Z,3µm,21.0s						
MCARA	**McCarthy VSAT**	**67.02**	**29**	P	**P**	**12 40 25.4**	**+1.2**
SCRK	**Sand Creek**	**67.09**	**27**	P	**P**	**12 40 25.2**	**+0.4**
	baz=258,SNR=109						
FYU	**Fort Yukon**	**67.17**	**24**	P	**P**	**12 40 26.9**	**+1.8**
FYU				IAMs_20	IAMs_20	13 06 21.8	
	comp=Z,4µm,20.0s						
ISLE	**Juniper Island**	**67.22**	**30**	P	**P**	**12 40 26.5**	**+0.9**
ISLE				IAMs_20	IAMs_20	13 06 26.2	
	comp=Z,2µm,18.0s						
BTLS	**Baital**	**67.26**	**313**	⇑*i*P	**P**	**12 40 26.7**	**+0.6**
	comp=Z,56nm,0.9s,baz=313						
BTLS				*e*S	**S**	**12 49 21.0**	**+1.4**
	baz=313						
BTLS	**Baital**	**67.26**	**313**	*c* *i*P	**P**	**12 40 26.7**	**+0.6**
BTLS				*e*S	**S**	**12 49 21.0**	**+1.4**
BTLS				pmax	pmax		
	comp=Z,56nm,0.9s						
BALM	**Baldy**	**67.28**	**30**	P	**P**	**12 40 26.8**	**+0.8**
BALM				IAMs_20	IAMs_20	13 05 13.6	
	comp=Z,3µm,22.0s						
MESA	**MESA**	**67.34**	**31**	P	**P**	**12 40 28.3**	**+1.8**
MESA				IAMs_20	IAMs_20	13 06 28.3	
	comp=Z,3µm,20.0s						
EKS2	**Erkin-Say**	**67.45**	**310**	P	**P**	**12 40 28.6**	**+1.1**
	SNR=57						
YAH	**Yahtse**	**67.47**	**31**	P	**P**	**12 40 28.9**	**+1.5**
YAH				IAMs_20	IAMs_20	13 10 36.4	
	comp=Z,2µm,19.0s						
AML	**Almayashu**	**67.52**	**310**	P	**P**	**12 40 29.3**	**+1.0**
	SNR=115						
BARN	**Barnard Glacie**	**67.62**	**30**	P	**P**	**12 40 29.5**	**+1.3**
BARN				IAmb	IAmb	12 40 32.0	
	comp=Z,104nm,1.2s						
BARN				IAMs_20	IAMs_20	13 05 35.4	
	comp=Z,3µm,22.0s						
BMAR	**Burnt Mountain**	**67.64**	**23**	P	**P**	**12 40 26.4**	**-1.7**
CTGM	**Chitina Glacie**	**67.76**	**30**	P	**P**	**12 40 30.5**	**+1.4**
TABL	**Table Mountain**	**67.78**	**31**	P	**P**	**12 40 30.8**	**+1.5**
TABL				IAMs_20	IAMs_20	13 06 11.7	
	comp=Z,3µm,21.0s						
BCAR	**Beaver Creek A**	**67.88**	**28**	P	**P**	**12 40 30.9**	**+1.2**
PCA	**Pinnacle**	**68.17**	**31**	P	**P**	**12 40 32.7**	**+1.1**
NIL	**Nilore**	**68.25**	**300**	P	**P**	**12 40 33.9**	**+1.3**
NIL				pmax	pmax		
	comp=Z,467nm,1.0s						
NIL	**Nilore**	**68.25**	**300**	P	**P**	**12 40 33.9**	**+1.3**
NIL	**Nilore**	**68.25**	**300**	P	**P**	**12 40 33.9**	**+1.3**
NIL				P	**P**	**12 40 33.9**	**+1.3**
BRZS	**Berezniki**	**68.30**	**318**	⇑*i*P	**P**	**12 40 32.5**	**-0.1**
	comp=Z,105nm,1.7s,baz=318						
BRZS				*e*S	**S**	**12 49 32.5**	**+0.6**
	baz=318						
BRZS	**Berezniki**	**68.30**	**318**	*c* *i*P	**P**	**12 40 32.5**	**-0.1**
BRZS				*e*S	**S**	**12 49 32.4**	**+0.6**
BRZS				pmax	pmax		
	comp=Z,105nm,1.7s						
EGAK	**Eagle**	**68.45**	**26**	P	**P**	**12 40 34.2**	**+1.1**
EGAK				IAMs_20	IAMs_20	13 07 13.4	
	comp=Z,3µm,20.0s						
BCPM	**Bancas Point**	**68.46**	**31**	P	**P**	**12 40 34.1**	**+0.7**
BCPM				IAmb	IAmb	12 40 35.9	
	comp=Z,112nm,1.0s						
DZA	**Taraz**	**69.25**	**310**	*e*P	**P**	**12 40 39.2**	**+0.5**
	comp=Z,15nm,0.7s,baz=310						
DZA				*e*S	**S**	**12 49 44.4**	**+1.0**
	baz=310						
DZA	**Taraz**	**69.25**	**310**	*e*P	**P**	**12 40 39.1**	**+0.5**
DZA				*e*S	**S**	**12 49 44.4**	**+1.0**
DZA				pmax	pmax		
	comp=Z,15nm,0.7s						
HYT	**Haines Junctio**	**69.60**	**30**	P	**P**	**12 40 42.7**	**+2.1**
HYT				IAMs_20	IAMs_20	13 07 30.9	
	comp=Z,4µm,21.0s						
POO	**Poona**	**69.61**	**284**	*e*P	**P**	**12 40 41.0**	**-0.3**
KK31	**Karatay Array**	**69.84**	**311**	P	**P**	**12 40 42.9**	**+0.6**
KK31				pmax	pmax		
	comp=Z,147nm,0.9s						
KK31	**Karatay Array**	**69.84**	**311**	P	**P**	**12 40 42.9**	**+0.6**
KKAR	**Karatay Array**	**69.84**	**311**	P	**P**	**12 40 42.5**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,147nm,0.9s						
KKAR	**Karatay Array**	**69.84**	**311**	P	**P**	**12 40 42.9**	**+0.7**
KKAR	**Karatay Array**	**69.84**	**311**	P	**P**	**12 40 42.5**	**+0.2**
BRVK	**Borovoye**	**69.87**	**321**	P	**P**	**12 40 42.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,195nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,4µm,20.0s						
BRVK	**Borovoye**	**69.87**	**321**	P	**P**	**12 40 42.3**	**+0.1**
BRVK	**Borovoye**	**69.87**	**321**	IAMs_20	IAMs_20	13 13 08.6	
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**69.87**	**321**	P	**P**	**12 40 42.4**	**+0.2**
IUG	**Iuzhnay**	**70.24**	**310**	⇑*e*P	**P**	**12 40 45.9**	**+1.0**
	comp=Z,123nm,1.5s,baz=310						
IUG				*e*S	**S**	**12 49 56.5**	**+1.3**
	baz=310						
IUG	**Iuzhnay**	**70.24**	**310**	*ce*P	**P**	**12 40 45.8**	**+1.0**
IUG				*e*S	**S**	**12 49 56.5**	**+1.3**
IUG				pmax	pmax		
	comp=Z,123nm,1.5s						
BRLS	**Borolday**	**70.34**	**311**	*e*P	**P**	**12 40 46.6**	**+1.3**
	comp=Z,16nm,0.8s,baz=310						
BRLS				*e*S	**S**	**12 49 58.5**	**+2.3**
	baz=310						
BRLS	**Borolday**	**70.34**	**311**	*e*P	**P**	**12 40 46.6**	**+1.3**
BRLS				*e*S	**S**	**12 49 58.5**	**+2.3**
BRLS				pmax	pmax		
	comp=Z,16nm,0.8s						
EPYK	**Eagle Plains**	**70.50**	**25**	P	**P**	**12 40 47.0**	**+1.2**
	baz=264						
EPYK	**Eagle Plains**	**70.50**	**25**	P	**P**	**12 40 47.2**	**+1.3**
SIT	**Sitka**	**70.51**	**34**	P	**P**	**12 40 47.2**	**+1.2**
SIT				pmax	pmax		
	comp=Z,84nm,1.1s						
SIT	**Sitka**	**70.51**	**34**	P	**P**	**12 40 47.1**	**+1.2**
SIT				IAmb	IAmb	12 40 48.9	
	comp=Z,84nm,1.1s						
PPT	**Papeete**	**70.57**	**115**	LR	LR	13 04 14.2	
	comp=Z,2µm,21.6s,baz=310,slow=30						
PPT2	**Papeete2**	**70.58**	**115**	*e*P	**P**	**12 40 48.3**	**+1.1**
	comp=Z,82nm,1.5s						
PPT2				*e*S	**S**	**12 50 01.1**	**+1.4**
	comp=Z,905nm,23.8s						
PPT2				*e*LQ	LQ	12 58 41.9	
	comp=Z,3µm,29.2s						

PPT2				*e*LR	LR	13 02 12.0	
	comp=Z,3µm,23.8s,baz=296						
SKAG	**Skagway**	**70.60**	**32**	P	**P**	**12 40 48.2**	**+1.7**
SKAG				IAmb	IAmb	12 40 52.3	
	comp=Z,69nm,1.0s						
PAE	**Paea**	**70.61**	**115**	*e*P	**P**	**12 40 47.9**	**+0.7**
	comp=Z,17nm,1.3s						
TIAR	**Tiarei**	**70.77**	**115**	*e*P	**P**	**12 40 49.0**	**+0.7**
	comp=Z,43nm,1.4s						
BESE	**Bessie Mountai**	**70.81**	**33**	P	**P**	**12 40 49.6**	**+1.7**
BESE				IAmb	IAmb	12 41 00.0	
	comp=Z,129nm,1.1s						
TAS	**Tashkent**	**70.84**	**309**	P	**P**	**12 40 49.6**	**+1.2**
TAS				pmax	pmax		
	comp=Z,157nm,0.8s						
TAS	**Tashkent**	**70.84**	**309**	P	**P**	**12 40 49.6**	**+1.2**
WHY	**Whitehorse**	**70.88**	**31**	P	**P**	**12 40 50.0**	**+1.6**
WHY				IAmb	IAmb	12 40 51.2	
	comp=Z,109nm,0.9s						
WHY				IAMs_20	IAMs_20	13 09 24.6	
	comp=Z,3µm,20.0s						
TVO	**Taravao**	**70.94**	**115**	*e*P	**P**	**12 40 50.4**	**+1.0**
	comp=Z,62nm,1.5s						
JIS	**Juneau Island**	**71.05**	**33**	P	**P**	**12 40 50.9**	**+1.7**
JIS				IAmb	IAmb	12 41 02.0	
	comp=Z,172nm,1.2s						
JIS				IAMs_20	IAMs_20	13 07 27.1	
	comp=Z,2µm,21.0s						
VAH	**Vaihoa**	**71.39**	**112**	*e*P	**P**	**12 40 52.3**	**+0.3**
	comp=Z,115nm,1.2s						
KBL	**Kabul**	**71.64**	**302**	P	**P**	**12 40 54.0**	**+0.4**
KBL				pmax	pmax		
	comp=Z,377nm,1.5s						
KBL				MLR	MLR		
	comp=Z,1µm,18.0s						
KBL	**Kabul**	**71.64**	**302**	P	**P**	**12 40 54.0**	**+0.4**
KBL	**Kabul**	**71.64**	**302**	P	**P**	**12 40 54.2**	**+0.6**
	SNR=80						
KBL				P	**P**	**12 40 54.2**	**+0.6**
	SNR=80						
CRAG	**Craig**	**71.72**	**36**	P	**P**	**12 40 55.2**	**+1.8**
CRAG				IAmb	IAmb	12 41 05.5	
	comp=Z,127nm,1.3s						
INK	**Inuvik**	**71.91**	**23**	P	**P**	**12 40 55.0**	**+0.8**
	comp=Z,127nm,0.9s,baz=264,slow=6.8,SNR=269						
INK	**Inuvik**	**71.91**	**23**	P	**P**	**12 40 55.1**	**+0.8**
INK				pmax	pmax		
	comp=Z,130nm,0.9s						
INK	**Inuvik**	**71.91**	**23**	P	**P**	**12 40 55.1**	**+0.8**
INK				IAmb	IAmb	12 40 56.2	
	comp=Z,130nm,0.8s						
INK				IAMs_20	IAMs_20	13 07 07.9	
	comp=Z,3µm,22.0s						
MEH	**Mehetia**	**72.01**	**115**	*e*P	**P**	**12 40 56.7**	**+0.9**
	comp=Z,46nm,1.3s						
WRAK	**Wrangell Islan**	**72.15**	**35**	P	**P**	**12 40 57.5**	**+1.5**
WRAK				IAmb	IAmb	12 41 08.7	
	comp=Z,212nm,1.2s						
DIB	**Dawson Inlet,**	**72.15**	**39**	P	**P**	**12 40 56.6**	**+0.5**
DIB				IAmb	IAmb	12 41 09.5	
	comp=Z,89nm,1.2s						
DIB				IAMs_20	IAMs_20	13 07 31.3	
	comp=Z,4µm,20.0s						
BHUJ	**Bhuj**	**72.67**	**290**	*e*P	**P**	**12 41 00.8**	**+1.1**
BHUJ				IAmb	IAmb	12 41 02.2	
	comp=Z,252nm,1.2s						
TBI	**Tubuai**	**73.07**	**121**	*e*S	**S**	**12 50 28.6**	**+0.5**
	comp=Z,778nm,27.8s						
TBI				*e*LQ	LQ	12 59 29.8	
	comp=Z,1µm,33.0s						
TBI				*e*LR	LR	13 03 21.3	
	comp=Z,2µm,27.0s,baz=305						
DLBC	**Dease Lake**	**73.34**	**33**	P	**P**	**12 41 04.0**	**+0.9**
	comp=Z,163nm,1.0s,baz=284,slow=4.7,SNR=159						
DLBC	**Dease Lake**	**73.34**	**33**	P	**P**	**12 41 04.6**	**+1.5**
BBB	**Bella Bella**	**74.87**	**39**	P	**P**	**12 41 12.5**	**+0.5**
	comp=Z,49nm,1.1s,baz=300,slow=5.0,SNR=7.0						
BBB	**Bella Bella**	**74.87**	**39**	P	**P**	**12 41 12.9**	**+0.9**
BBB				IAmb	IAmb	12 41 14.9	
	comp=Z,97nm,1.2s						
BBB				IAMs_20	IAMs_20	13 06 18.2	
	comp=Z,3µm,21.0s						
SVE	**Sverdlovsk**	**75.28**	**325***d*	*i*P	**P**	**12 41 14.9**	**+0.6**
SVE				*e*S	**S**	**12 50 49.4**	**-2.5**
SVE				pmax	pmax		
	comp=Z,346nm,1.2s						
C36M	**Paulatuk**	**75.33**	**22**	P	**P**	**12 41 15.1**	**+0.7**
	baz=274,SNR=37						
C36M	**Paulatuk**	**75.33**	**22**	P	**P**	**12 41 15.1**	**+0.7**
TAOE	**Nuku Hiva Isla**	**76.06**	**103**	*e*S	**S**	**12 51 03.6**	**+1.5**
	comp=Z,3µm,26.1s						
TAOE				*e*LQ	LQ	13 00 59.0	
	comp=Z,2µm,24.0s						
TAOE				*e*LR	LR	13 04 27.0	
	comp=Z,5µm,24.9s,baz=302						
ARU	**Arti**	**76.47**	**325***c*	*i*P	**P**	**12 41 21.0**	**-0.1**
ARU						12 41 36.4	
ARU				S	**S**	**12 51 01.8**	**-3.2**
ARU						12 51 26.8	
ARU				pmax	pmax		
	comp=Z,365nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,16.0s						
ARU	**Arti**	**76.47**	**325**	P	**P**	**12 41 21.2**	**0.0**
ARU				IAMs_20	IAMs_20	13 21 03.8	
	comp=Z,2µm,19.0s						
AB31	**Akbulak array**	**76.60**	**318**	*i* P	**P**	**12 41 21.7**	**-0.3**
AB31				pmax	pmax		
	comp=Z,49nm,0.7s						
ABKAR	**Akbulak array**	**76.60**	**318**	P	**P**	**12 41 21.8**	**-0.2**
ABKAR				IAmb	IAmb	12 41 23.3	
	comp=Z,173nm,1.4s						
ABKAR	**Akbulak array**	**76.60**	**318**	P	**P**	**12 41 22.0**	**0.0**
HRA	**Herat**	**77.22**	**302**	P	**P**	**12 41 26.9**	**+0.8**
HRA				IAmb	IAmb	12 41 28.3	
	comp=Z,72nm,0.8s						
HRA				IAMs_20	IAMs_20	13 19 55.0	
	comp=Z,2µm,19.0s						
AKTO	**Aktyubinsk**	**77.66**	**319**	*i* P	**P**	**12 41 27.3**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,73nm,1.2s						
NLWA	**Neilton Lookou**	**78.25**	**44**	P	**P**	**12 41 33.0**	**+1.6**
NLWA				IAmb	IAmb	12 41 43.7	
	comp=Z,166nm,1.2s						
PGC	**Sidney**	**78.31**	**43**	P	**P**	**12 41 32.8**	**+1.2**
PGC				IAmb	IAmb	12 41 49.0	
	comp=Z,78nm,1.1s						
E03A	**Lebam**	**78.60**	**45**	P	**P**	**12 41 34.7**	**+1.5**
E03A				IAmb	IAmb	12 41 37.0	
	comp=Z,159nm,1.1s						
E03A				IAMs_20	IAMs_20	13 20 26.8	
	comp=Z,2µm,19.0s						
KEBM	**Edson Butte**	**78.72**	**49**	P	**P**	**12 41 35.3**	**+1.2**
KEBM				IAmb	IAmb	12 41 51.8	
	comp=Z,200nm,1.3s						
KEBM				IAMs_20	IAMs_20	13 07 40.0	
	comp=Z,4µm,21.0s						
D03D	**Eldon**	**78.74**	**44**	P	**P**	**12 41 35.3**	**+1.3**
	baz=280,SNR=44						
A04D	**Lummi Island**	**78.78**	**42**	P	**P**	**12 41 35.6**	**+1.5**
	baz=280,SNR=17						
I02D	**Swisshome**	**78.84**	**47**	P	**P**	**12 41 36.0**	**+1.4**
	baz=280						
KBO	**Bosley Butte**	**78.92**	**49**	P	**P**	**12 41 37.2**	**+2.0**
KBO				IAmb	IAmb	12 41 48.2	
	comp=Z,91nm,1.2s						
KBO				IAMs_20	IAMs_20	13 08 28.3	
	comp=Z,4µm,21.0s						
J01E	**Myrtle Point**	**78.96**	**48**	P	**P**	**12 41 36.6**	**+1.3**
	baz=281,SNR=14						
D04E	**Lakebay**	**79.02**	**44**	P	**P**	**12 41 37.0**	**+1.5**
	baz=281,SNR=7.0						
G03D	**McMinnville, O**	**79.05**	**46**	P	**P**	**12 41 36.9**	**+1.2**
	baz=281,SNR=5.5						
F04D	**Rainier, OR**	**79.06**	**45**	P	**P**	**12 41 37.7**	**+1.9**
	baz=281						
COR	**Corvallis**	**79.14**	**47**	P	**P**	**12 41 37.4**	**+1.2**
COR				pmax	pmax		
	comp=Z,186nm,1.4s						
COR	**Corvallis**	**79.14**	**47**	P	**P**	**12 41 37.4**	**+1.2**
COR				IAmb	IAmb	12 41 54.3	
	comp=Z,186nm,1.4s						
COR	**Corvallis**	**79.14**	**47**	IAMs_20	IAMs_20	13 08 12.0	
	comp=Z,4µm,22.0s						
K02D	**Willamette Mer**	**79.24**	**49**	P	**P**	**12 41 37.8**	**+0.9**
	baz=281,SNR=8.8						
B05A	**Bryant**	**79.26**	**43**	P	**P**	**12 41 37.7**	**+0.9**
	baz=281,SNR=44						
E04D	**Cinebar**	**79.27**	**45**	P	**P**	**12 41 38.0**	**+1.0**
	baz=281,SNR=26						
I03D	**Drain, OR**	**79.28**	**48**	P	**P**	**12 41 38.3**	**+1.3**
	baz=281,SNR=10						
KRMB	**Red Mountain**	**79.28**	**50**	P	**P**	**12 41 38.5**	**+1.3**
KRMB				IAMs_20	IAMs_20	13 07 56.9	
	comp=Z,3µm,22.0s						
L02E	**Cave Junction**	**79.39**	**49**	P	**P**	**12 41 38.5**	**+0.9**
	baz=281,SNR=12						
D05A	**Enumclaw**	**79.54**	**44**	P	**P**	**12 41 40.1**	**+1.7**
D05A				IAmb	IAmb	12 41 56.3	
	comp=Z,171nm,1.1s						
KHMM	**Horse Mountain**	**79.54**	**50**	P	**P**	**12 41 39.8**	**+1.1**
KHMM				IAmb	IAmb	12 41 54.8	
	comp=Z,165nm,1.4s						
H04D	**Lebanon**	**79.55**	**47**	P	**P**	**12 41 39.7**	**+1.2**
	baz=281,SNR=16						
B06A	**Marblemount**	**79.61**	**43**	P	**P**	**12 41 39.7**	**+1.0**
B06A				IAmb	IAmb	12 41 55.9	
	comp=Z,205nm,1.4s						
LON	**Longmire**	**79.75**	**44**	P	**P**	**12 41 40.2**	**+0.6**
LON				pmax	pmax		
	comp=Z,121nm,1.4s						
LON				MLR	MLR		
	comp=Z,2µm,18.0s						
LON	**Longmire**	**79.75**	**44**	P	**P**	**12 41 40.2**	**+0.6**
LON				IAMs_20	IAMs_20	13 21 31.8	
	comp=Z,2µm,18.0s						
HUMO	**Hull Mountain**	**79.77**	**49**	P	**P**	**12 41 41.0**	**+1.3**
GEYT	**Alibeck**	**79.85**	**307**	P	**P**	**12 41 41.2**	**+0.9**
	comp=Z,95nm,1.1s,baz=90,slow=3.0,SNR=102						
GEYT				PP	**PP**	**12 44 45.0**	**+3.3**
	comp=Z,28nm,1.1s,baz=100,slow=8.1,SNR=5.2						
KCPM	**Cahto Peak**	**79.89**	**52**	P	**P**	**12 41 41.6**	**+1.0**
KCPM				IAmb	IAmb	12 41 52.6	
	comp=Z,195nm,1.2s						
KCPM				IAMs_20	IAMs_20	13 08 41.9	
	comp=Z,3µm,22.0s						
H04A	**Detroit Lake**	**79.90**	**46**	P	**P**	**12 41 41.2**	**+0.7**
H04A				IAmb	IAmb	12 41 52.0	
	comp=Z,166nm,1.4s						
H04A				IAMs_20	IAMs_20	13 08 45.3	
	comp=Z,3µm,22.0s						
I04A	**Tendick Farm,**	**79.92**	**47**	P	**P**	**12 41 40.7**	**+0.1**
	baz=282,SNR=28						
M02C	**Callahan**	**80.09**	**50**	P	**P**	**12 41 42.5**	**+0.9**
	baz=282,SNR=14						
C06D	**Leavenworth**	**80.12**	**43**	P	**P**	**12 41 42.6**	**+1.0**
	baz=282						
YBH	**Yreka Blue Hor**	**80.12**	**49**	P	**P**	**12 41 42.4**	**+0.6**
	comp=Z,26nm,0.9s,baz=323,slow=2.7,SNR=33						
YBH	**Yreka Blue Hor**	**80.12**	**49**	P	**P**	**12 41 43.1**	**+1.3**
YBH				pmax	pmax		
	comp=Z,132nm,1.5s						
YBH	**Yreka Blue Hor**	**80.12**	**49**	P	**P**	**12 41 43.1**	**+1.3**
YBH				IAmb	IAmb	12 41 53.8	
	comp=Z,132nm,1.4s						
YBH				IAMs_20	IAMs_20	13 08 38.1	
	comp=Z,4µm,22.0s						
F05D	**White Salmon**	**80.16**	**45**	P	**P**	**12 41 42.8**	**+1.0**
	baz=282,SNR=16						
J04D	**Umpqua Nationa**	**80.25**	**48**	P	**P**	**12 41 43.5**	**+1.0**
	baz=282,SNR=6.1						
N02D	**Trinity Center**	**80.28**	**50**	P	**P**	**12 41 43.7**	**+1.1**
	baz=282,SNR=12						
YKA	**Yellowknife Ar**	**80.30**	**28**	P	**P**	**12 41 42.6**	**+0.5**
	comp=Z,53nm,0.8s,baz=287,slow=4.9,SNR=540						
YKA				PKPPKP	**P'P'df**	**13 08 30.5**	**-1.2**
	comp=Z,0.7nm,1.0s,baz=107,slow=2.5,SNR=4.1						
YKA				LR	LR	13 15 06.5	
	comp=Z,1µm,21.0s,baz=0.0,slow=34						
YKA	**Yellowknife Ar**	**80.30**	**28**		PKPPKPdf	13 08 30.5	
L04D	**Klamath Falls**	**80.32**	**49**	P	**P**	**12 41 43.4**	**+0.5**
	baz=282,SNR=10						
O02D	**Mt. Diablo Mer**	**80.39**	**51**	P	**P**	**12 41 44.4**	**+1.2**
	baz=282,SNR=17						
G05D	**Wamic, OR**	**80.39**	**46**	P	**P**	**12 41 44.1**	**+1.0**
	baz=282,SNR=8.2						
LTY	**Liberty**	**80.41**	**44**	P	**P**	**12 41 43.5**	**+0.4**
LTY				IAmb	IAmb	12 42 06.6	
	comp=Z,197nm,1.5s						
LTY				IAMs_20	IAMs_20	13 11 15.7	
	comp=Z,2µm,19.0s						
HOPS	**Hopland Field**	**80.42**	**52**	P	**P**	**12 41 44.8**	**+1.5**
HOPS				IAmb	IAmb	12 41 55.1	
	comp=Z,180nm,1.4s						
HOPS				IAMs_20	IAMs_20	13 08 56.1	
	comp=Z,3µm,22.0s						
WDC	**Whiskeytown Da**	**80.49**	**51**	P	**P**	**12 41 44.6**	**+1.0**
WDC				pmax	pmax		
	comp=Z,81nm,1.4s						
WDC	**Whiskeytown Da**	**80.49**	**51**	P	**P**	**12 41 44.6**	**+1.0**
I05D	**Terrebonne, OR**	**80.57**	**47**	P	**P**	**12 41 44.5**	**+0.5**
	baz=282,SNR=20						
K04D	**Chiloquin, OR**	**80.64**	**48**	P	**P**	**12 41 45.2**	**+0.6**
	baz=282						
GDXM	**Geysers**	**80.67**	**52**	P	**P**	**12 41 46.2**	**+1.4**
GDXM				IAmb	IAmb	12 41 57.6	
	comp=Z,171nm,1.4s						
GDXM				IAMs_20	IAMs_20	13 10 29.5	
	comp=Z,2µm,19.0s						
MCCM	**Marconi Confer**	**80.74**	**53**	IAMs_20	IAMs_20	13 10 08.5	
	comp=Z,2µm,20.0s						
M04C	**Macdoel**	**80.75**	**49**	P	**P**	**12 41 46.0**	**+0.8**
	baz=282,SNR=34						
EUNU	**Eureka**	**80.79**	**8**	P	**P**	**12 41 45.6**	**+1.0**
EUNU				IAmb	IAmb	12 41 50.6	
	comp=Z,138nm,1.4s						
J05D	**Fort Rock, OR**	**80.87**	**48**	P	**P**	**12 41 46.6**	**+0.8**
	baz=282,SNR=53						
KIRV	**Kirov**	**80.91**	**328***c*	*i*P	**P**	**12 41 45.7**	**+0.3**
PINE	**Pine Mountain**	**80.97**	**47**	P	**P**	**12 41 47.1**	**+0.7**
PINE				IAMs_20	IAMs_20	13 09 17.4	
	comp=Z,3µm,21.0s						
O03E	**Paynes Creek**	**81.10**	**51**	P	**P**	**12 41 47.2**	**+0.2**
	baz=282,SNR=30						
E07A	**Sunnyside**	**81.11**	**44**	P	**P**	**12 41 48.0**	**+1.2**
E07A				IAmb	IAmb	12 41 58.7	
	comp=Z,161nm,1.4s						
K05A	**Summer Lake**	**81.23**	**48**	P	**P**	**12 41 49.1**	**+1.3**
K05A				IAmb	IAmb	12 42 05.5	
	comp=Z,247nm,1.4s						
K05A				IAMs_20	IAMs_20	13 09 23.5	
	comp=Z,3µm,22.0s						
HAWA	**Hanford**	**81.36**	**44**	P	**P**	**12 41 49.2**	**+1.0**
HAWA				IAmb	IAmb	12 41 60.0	
	comp=Z,147nm,1.4s						
HAWA				IAMs_20	IAMs_20	13 11 13.8	
	comp=Z,2µm,19.0s						
ORV	**Oroville**	**81.49**	**51**	P	**P**	**12 41 49.3**	**+0.3**
ORV				pmax	pmax		
	comp=Z,167nm,1.4s						
ORV	**Oroville**	**81.49**	**51**	P	**P**	**12 41 49.3**	**+0.3**
ORV				IAmb	IAmb	12 42 00.3	
	comp=Z,167nm,1.4s						
D08A	**Wollman Farm,**	**81.61**	**44**	P	**P**	**12 41 50.5**	**+0.9**
D08A				IAmb	IAmb	12 42 07.4	
	comp=Z,141nm,1.4s						
MOD	**Modoc Plateau**	**81.84**	**49**	P	**P**	**12 41 51.7**	**+0.6**
MOD				IAMs_20	IAMs_20	13 10 47.7	
	comp=Z,2µm,21.0s						
C09A	**Chrisman Ranch**	**81.87**	**43**	P	**P**	**12 41 51.7**	**+0.8**
C09A				IAmb	IAmb	12 42 02.4	
	comp=Z,144nm,1.3s						
I07A	**Izee**	**81.91**	**47**	P	**P**	**12 41 52.1**	**+0.8**
I07A				IAMs_20	IAMs_20	13 10 12.4	
	comp=Z,3µm,22.0s						
G08A	**Pilot Rock**	**82.00**	**45**	P	**P**	**12 41 52.5**	**+0.7**
G08A				IAmb	IAmb	12 42 03.3	
	comp=Z,96nm,1.4s						
AFDM	**Forest Hills D**	**82.02**	**52**	P	**P**	**12 41 52.5**	**+0.6**
AFDM				IAmb	IAmb	12 42 12.4	
	comp=Z,107nm,0.9s						
HOPEN	**Hopen**	**82.15**	**348**	*e*P	**P**	**12 41 52.9**	**+1.2**
SAO	**San Andreas Ge**	**82.16**	**54**	P	**P**	**12 41 53.7**	**+1.1**
SAO				pmax	pmax		
	comp=Z,109nm,1.5s						
SAO				MLR	MLR		
	comp=Z,2µm,19.0s						
SAO	**San Andreas Ge**	**82.16**	**54**	P	**P**	**12 41 53.7**	**+1.1**
SAO				IAmb	IAmb	12 41 55.8	
	comp=Z,109nm,1.5s						
SAO				IAMs_20	IAMs_20	13 20 36.0	
	comp=Z,2µm,19.0s						
JLN	**Jalan Bani Buh**	**82.16**	**291**	P	**P**	**12 41 53.3**	**+0.4**
	SNR=22						
JLN				P	**P**	**12 41 53.3**	**+0.4**
	SNR=22						
E09A	**Wood Farm, Sta**	**82.26**	**44**	P	**P**	**12 41 53.9**	**+1.0**
E09A				IAmb	IAmb	12 42 04.7	
	comp=Z,158nm,1.4s						
E09A				IAMs_20	IAMs_20	13 10 26.7	
	comp=Z,2µm,20.0s						
BEKR	**Beckworth**	**82.27**	**51**	P	**P**	**12 41 54.0**	**+0.6**
BEKR				IAmb	IAmb	12 42 04.7	
	comp=Z,120nm,1.4s						
BEKR				IAMs_20	IAMs_20	13 10 13.0	
	comp=Z,4µm,22.0s						
RES	**Resolute Bay**	**82.31**	**14**	P	**P**	**12 41 53.5**	**+0.9**
RES				pmax	pmax		
	comp=Z,68nm,0.9s						
RES	**Resolute Bay**	**82.31**	**14**	P	**P**	**12 41 53.5**	**+0.9**
RES				IAmb	IAmb	12 41 54.8	
	comp=Z,68nm,0.9s						
WBK	**Wadi Bani Khal**	**82.45**	**291**	P	**P**	**12 41 55.3**	**+0.9**
	SNR=35						
WBK				P	**P**	**12 41 55.3**	**+0.9**
	SNR=35						
NEW	**Newport**	**82.50**	**42**	P	**P**	**12 41 55.1**	**+0.9**
NEW				pmax	pmax		
	comp=Z,96nm,1.0s						
NEW				MLR	MLR		
	comp=Z,2µm,18.0s						
NEW	**Newport**	**82.50**	**42**	P	**P**	**12 41 54.7**	**+0.4**
	baz=284,SNR=86						
NEW	**Newport**	**82.50**	**42**	P	**P**	**12 41 55.1**	**+0.9**
NEW				IAmb	IAmb	12 41 57.4	
	comp=Z,96nm,1.0s						
NEW	**Newport**	**82.50**	**42**	IAMs_20	IAMs_20	13 18 10.0	
	comp=Z,2µm,18.0s						
RUBR	**Rubicon Trail**	**82.62**	**52**	IAMs_20	IAMs_20	13 10 19.4	
	comp=Z,2µm,20.0s						
CMB	**Columbia Colle**	**82.68**	**53**	P	**P**	**12 41 55.7**	**+0.3**
CMB				pmax	pmax		
	comp=Z,55nm,1.0s						
CMB	**Columbia Colle**	**82.68**	**53**	P	**P**	**12 41 55.7**	**+0.3**
CMB				IAmb	IAmb	12 41 58.6	
	comp=Z,55nm,1.0s						
KBS	**Kingsbay**	**82.71**	**352***c*	*e*P	**P**	**12 41 55.5**	**+0.9**
KBS				pmax	pmax		
	comp=Z,226nm,1.7s						
KBS				MLR	MLR		
	comp=Z,1µm,16.0s						
KBS	**Kingsbay**	**82.71**	**352**	P	**P**	**12 41 55.4**	**+0.7**
KBS				IAmb	IAmb	12 41 56.9	
	comp=Z,104nm,0.9s						
KBS	**Kingsbay**	**82.71**	**352**	IAMs_20	IAMs_20	13 07 55.0	
	comp=Z,2µm,18.0s						
KBS	**Kingsbay**	**82.71**	**352**	*e*P	**P**	**12 41 55.6**	**+1.0**
KBS	**Kingsbay**	**82.71**	**352**	*i* P	**P**	**12 41 55.9**	**+1.3**
KBS				IAmb	IAmb	12 41 56.7	
	comp=Z,238nm,0.9s						
PMPB	**Monarch Peak**	**82.79**	**55**	P	**P**	**12 41 56.8**	**+0.8**
PMPB				IAMs_20	IAMs_20	13 09 34.8	
	comp=Z,2µm,20.0s						
WVOR	**Wild Horse Val**	**82.92**	**48**	P	**P**	**12 41 56.9**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,109nm,1.3s						
WVOR	**Wild Horse Val**	**82.92**	**48**	P	**P**	**12 41 56.9**	**+0.3**
WVOR				IAmb	IAmb	12 42 08.3	
	comp=Z,109nm,1.3s						
WVOR				IAMs_20	IAMs_20	13 10 51.1	
	comp=Z,4µm,22.0s						
VCNR	**Virginia City**	**82.94**	**51**	P	**P**	**12 41 57.4**	**+0.5**
VCNR				IAMs_20	IAMs_20	13 09 45.7	
	comp=Z,2µm,22.0s						
BIDO	**Bidbid**	**82.99**	**292**	P	**P**	**12 41 58.1**	**+0.9**
	SNR=76						
BIDO				P	**P**	**12 41 58.1**	**+0.9**
	SNR=76						
F10A	**Beach Ranch, E**	**83.01**	**44**	P	**P**	**12 41 57.4**	**+0.4**
F10A				IAmb	IAmb	12 42 15.2	
	comp=Z,68nm,1.3s						
F10A				IAMs_20	IAMs_20	13 12 03.6	
	comp=Z,2µm,21.0s						
PNTR	**Pine Nut**	**83.03**	**52**	P	**P**	**12 41 58.5**	**+1.1**
PNTR				IAmb	IAmb	12 42 14.3	
	comp=Z,57nm,1.0s						
PNTR				IAMs_20	IAMs_20	13 09 46.1	
	comp=Z,2µm,19.0s						
PAHR	**Pah Rah Range**	**83.04**	**51**	P	**P**	**12 41 58.0**	**+0.7**
PAHR				IAmb	IAmb	12 42 08.9	
	comp=Z,116nm,1.5s						
PAHR				IAMs_20	IAMs_20	13 10 59.3	
	comp=Z,3µm,22.0s						
SMDO	**Samad**	**83.17**	**292**	P	**P**	**12 41 58.8**	**+0.5**
	SNR=26						
SMDO				P	**P**	**12 41 58.8**	**+0.5**
	SNR=26						
BMO	**Blue Mountains**	**83.25**	**45**	P	**P**	**12 41 58.6**	**+0.4**
BMO				pmax	pmax		
	comp=Z,162nm,1.4s						
BMO	**Blue Mountains**	**83.25**	**45**	P	**P**	**12 41 58.6**	**+0.4**
BMO				IAmb	IAmb	12 42 09.7	
	comp=Z,162nm,1.4s						
JMDO	**Jabal Madar**	**83.29**	**291**	P	**P**	**12 41 59.1**	**+0.3**
	SNR=18						
JMDO				P	**P**	**12 41 59.1**	**+0.3**
	SNR=18						
WAKR	**Walker**	**83.30**	**52**	P	**P**	**12 41 59.9**	**+1.1**
WAKR				IAmb	IAmb	12 42 03.4	
	comp=Z,110nm,1.5s						
PAGB	**Antelope Grade**	**83.34**	**55**	P	**P**	**12 41 60.0**	**+1.2**
PAGB				IAMs_20	IAMs_20	13 11 47.4	
	comp=Z,2µm,19.0s						
HSPB	**Hornsund (broa**	**83.54**	**350**	*e*P	**P**	**12 42 00.5**	**+1.5**
HSPB	**Hornsund (broa**	**83.54**	**350**	*e*P	**P**	**12 41 59.7**	**+0.7**
BELG	**Belogornoye**	**83.56**	**323***c*	*i*P	**P**	**12 41 59.6**	**+0.1**
BELG				pmax	pmax		
	comp=Z,97nm,1.1s						
BELG				MLR	MLR		
	comp=Z,421nm,17.0s						
SMMC	**Simmler**	**83.64**	**55**	P	**P**	**12 42 01.6**	**+1.3**
	baz=284,SNR=12						
HOQ	**Hoqain**	**83.70**	**293**	P	**P**	**12 42 01.7**	**+0.8**
	SNR=48						
HOQ				P	**P**	**12 42 01.7**	**+0.8**
	SNR=48						
MHTO	**MHTO**	**83.74**	**290**	P	**P**	**12 42 01.4**	**+0.4**
	SNR=45						
MHTO				P	**P**	**12 42 01.4**	**+0.4**
	SNR=45						
VOG	**Valley Oaks Go**	**83.88**	**54**	P	**P**	**12 42 01.7**	**+0.2**
	baz=284						
PKM	**Mcpherson Peak**	**83.89**	**56**	P	**P**	**12 42 02.6**	**+0.7**
	baz=284,SNR=24						
LVZ	**Lovozero**	**83.95**	**339**⇑	*i*P	**P**	**12 42 00.4**	**-0.9**
LVZ				pmax	pmax		
	comp=Z,30nm,1.0s						
LVZ	**Lovozero**	**83.95**	**339**	P	**P**	**12 42 01.1**	**-0.2**
LVZ				IAmb	IAmb	12 42 02.2	
	comp=Z,70nm,1.1s						
RYN	**Ryan**	**83.96**	**52**	P	**P**	**12 42 03.1**	**+1.0**
RYN				IAmb	IAmb	12 42 14.8	
	comp=Z,89nm,1.4s						
MLAC	**Mammoth, Mammo**	**83.97**	**53**	P	**P**	**12 42 03.6**	**+1.3**
	baz=285						
BSY	**Bisya**	**84.01**	**292**	P	**P**	**12 42 03.0**	**+0.6**
	SNR=24						
BSY				P	**P**	**12 42 03.0**	**+0.6**
	SNR=24						
BANOM	**Banah**	**84.03**	**295**	*i* P	**P**	**12 42 03.6**	**+1.1**
	SNR=61						
BANOM	**Banah**	**84.03**	**295**	P	**P**	**12 42 03.7**	**+1.2**
	SNR=32						
LHV	**Little Huntoon**	**84.07**	**52**	P	**P**	**12 42 03.8**	**+1.4**
LHV				IAmb	IAmb	12 42 20.2	
	comp=Z,131nm,1.4s						
LHV				IAMs_20	IAMs_20	13 20 29.6	
	comp=Z,2µm,18.0s						
SBC	**Santa Barbara**	**84.09**	**56**	P	**P**	**12 42 03.6**	**+1.0**
	baz=284						
SHME	**Shamm**	**84.14**	**295**	*i* P	**P**	**12 42 04.0**	**+0.9**
	SNR=40						
SHME	**Shamm**	**84.14**	**295**	P	**P**	**12 42 04.3**	**+1.2**
	SNR=37						
SHME				P	**P**	**12 42 04.3**	**+1.2**
	SNR=37						
NVAR	**Mina Array Bea**	**84.17**	**52**	P	**P**	**12 42 04.1**	**+0.8**
	comp=Z,22nm,0.8s,baz=263,slow=5.9,SNR=102						
NVAR				LR	LR	13 12 36.8	

	comp=Z,777nm,21.4s,baz=276,slow=31						
NVAR	Mina Array Bea	84.17	52	P	P	12 42 03.9	+0.6
MDH	Madha	84.19	295	*i* P	P	12 42 03.2	-0.1
	SNR=9.0						
MDH	Madha	84.19	295	P	P	12 42 03.1	-0.1
MDH				P	P	12 42 03.1	-0.1
VES	Vestal, Richgr	84.23	55	P	P	12 42 03.6	+0.3
	baz=285,SNR=34						
SCZ2	Santa Cruz Isl	84.26	56	P	P	12 42 03.7	+0.2
	baz=284						
SOHO	SOHO	84.26	293	*i* P	P	12 42 04.0	+0.3
	SNR=40						
SOHO	SOHO	84.26	293	P	P	12 42 04.3	+0.6
SOHO				P	P	12 42 04.3	+0.6
TMCR	Tamitsa	84.27	335	*e*P	P	12 42 01.0	-1.9
TMCR				*e*S	SKSac	12 52 21.1	-3.4
TMCR				pmax	pmax		
	comp=Z,255nm,1.3s						
NV11	Mina Array Sit	84.29	52	P	P	12 42 04.5	+0.8
NV11				IAmb	IAmb	12 42 06.5	
	comp=Z,89nm,1.5s						
MASF	Masafi	84.29	295	P	P	12 42 05.1	+1.2
	SNR=39						
MASF				P	P	12 42 05.1	+1.2
	SNR=39						
MSFE	Esma-Masafi	84.29	295	*i* P	P	12 42 05.0	+1.1
	SNR=38						
WALA	Waterton Lakes	84.34	41	P	P	12 42 05.2	+1.4
WALA				IAmb	IAmb	12 42 08.6	
	comp=Z,162nm,1.4s						
WALA				IAMs_20	IAMs_20	13 10 51.5	
	comp=Z,2µm,22.0s						
UOSS	Minazif	84.35	294	*i* P	P	12 42 04.5	+0.3
	SNR=25						
UOSS	Minazif	84.35	294	P	P	12 42 04.6	+0.5
UOSS				IAmb	IAmb	12 42 06.0	
	comp=Z,87nm,0.8s						
UOSS	Minazif	84.35	294	P	P	12 42 04.5	+0.3
UOSS				P	P	12 42 04.5	+0.3
DQM	DQM	84.39	289	P	P	12 42 05.1	+0.7
	SNR=14						
DQM				P	P	12 42 05.1	+0.7
	SNR=14						
HATD	Hatta, Dubai	84.45	294	*i* P	P	12 42 05.4	+0.8
	SNR=27						
HATD	Hatta, Dubai	84.45	294	P	P	12 42 05.7	+1.1
	SNR=32						
HATD				P	P	12 42 05.7	+1.1
	SNR=32						
ARQ	Araqi	84.47	293	P	P	12 42 05.9	+1.1
	SNR=44						
ARQ				P	P	12 42 05.9	+1.1
	SNR=44						
JTMT	Jette	84.48	42	P	P	12 42 05.1	+0.6
JTMT				IAmb	IAmb	12 42 21.5	
	comp=Z,66nm,1.1s						
APA	Apatity	84.52	339⇓	*i*P	P	12 42 01.5	-2.6
APA				pmax	pmax		
	comp=Z,62nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
SNCC	San Nicolas Is	84.54	57	P	P	12 42 07.2	+2.3
	baz=285						
SNCC	San Nicolas Is	84.54	57	IAMs_20	IAMs_20	13 09 04.1	
	comp=Z,3µm,21.0s						
ASHO	Ashiyiah	84.55	294	*i* P	P	12 42 05.6	+0.4
	SNR=31						
ASHO	Ashiyiah	84.55	294	P	P	12 42 06.1	+0.9
	SNR=27						
ASHO				P	P	12 42 06.1	+0.9
	SNR=27						
TIN	Tinemaha, Big	84.59	53	P	P	12 42 06.5	+1.2
	baz=285						
ARVC	Arvin	84.62	55	P	P	12 42 05.9	+0.6
	baz=285,SNR=12						
MFID	Camas Ranch	84.66	47	P	P	12 42 06.3	+0.8
MFID				IAmb	IAmb	12 42 17.1	
	comp=Z,151nm,1.3s						
MFID				IAMs_20	IAMs_20	13 11 39.0	
	comp=Z,2µm,22.0s						
UMQ	Umm Al-Quwin	84.69	295	*i* P	P	12 42 07.2	+1.4
	SNR=7.0						
UMQ	Umm Al-Quwin	84.69	295	P	P	12 42 07.2	+1.4
UMQ				P	P	12 42 07.2	+1.4
ISA	Isabella, Lake	84.76	55	P	P	12 42 06.0	-0.1
ISA				pmax	pmax		
	comp=Z,46nm,1.3s						
ISA				MLR	MLR		
	comp=Z,2µm,18.0s						
ISA	Isabella, Lake	84.76	55	P	P	12 42 06.0	-0.1
	baz=285,SNR=19						
ISA	Isabella, Lake	84.76	55	P	P	12 42 06.0	-0.1
ISA				IAMs_20	IAMs_20	13 23 56.9	
	comp=Z,2µm,18.0s						
NAZ	Nazwa, Dubai	84.82	294	*i* P	P	12 42 07.0	+0.5
	SNR=10						
NAZ	Nazwa, Dubai	84.82	294	P	P	12 42 07.0	+0.5
	SNR=16						
NAZ				P	P	12 42 07.0	+0.5
	SNR=16						
OSI	Osito Audit: C	84.83	56	P	P	12 42 07.3	+0.8
	baz=285,SNR=9.2						
OSI	Osito Audit: C	84.83	56	P	P	12 42 06.7	+0.3
OSI				IAmb	IAmb	12 42 17.9	
	comp=Z,88nm,1.1s						
OSI				IAMs_20	IAMs_20	13 24 32.8	
	comp=Z,3µm,18.0s						
CWC	Cottonwood Cre	84.86	54	P	P	12 42 07.2	+0.5
	baz=285						
KLMR	Klimovskoe	84.94	332	*e*P	P	12 42 03.4	-2.9
KLMR				*e*S	SKSac	12 52 23.9	-5.0
KLMR				pmax	pmax		
	comp=Z,314nm,1.1s						
KLMR	Klimovskoe	84.94	332	*e*P	P	12 42 03.4	-2.9
KLMR				AMP		12 42 07.2	
	comp=Z,314nm,1.1s						
KLMR				*e*S	SKSac	12 52 24.0	-5.0
KLMR				*e*S	SKSac	12 52 24.0	-5.0
KLMR				LQ	LQ	13 10 53.2	
KLMR				LQ	LQ	13 10 53.2	
KLMR				LR	LR	13 17 24.6	
FAQ	Al Faqa, Dubai	84.94	294	*i* P	P	12 42 07.5	+0.4
	SNR=15						
FAQ	Al Faqa, Dubai	84.94	294	P	P	12 42 07.7	+0.6
	SNR=17						
FAQ				P	P	12 42 07.7	+0.6
	SNR=17						
MSO	Missoula	84.97	43	P	P	12 42 07.4	+0.5
	baz=287,SNR=31						
MSO	Missoula	84.97	43	P	P	12 42 07.3	+0.4
ALNE	Al Ain	84.97	293	*i* P	P	12 42 08.1	+0.8
	SNR=32						
ALNE	Al Ain	84.97	293	P	P	12 42 08.3	+1.0
	SNR=58						
ALNE				P	P	12 42 08.3	+1.0
	SNR=58						
TPH	Tonopah	85.09	52	P	P	12 42 08.5	+0.6
TPH				pmax	pmax		
	comp=Z,383nm,1.4s						
TPH	Tonopah	85.09	52	P	P	12 42 08.5	+0.6
ASUD	Al Ashush, Dub	85.20	294	*i* P	P	12 42 09.3	+0.8
	SNR=23						
ASUD	Al Ashush, Dub	85.20	294	P	P	12 42 09.5	+1.0
	SNR=24						
DECC	Green Verdugo	85.24	56	P	P	12 42 08.8	+0.3
	baz=285,SNR=6.4						
GRAC	Grapevine Rang	85.27	53	P	P	12 42 09.4	+0.8
	baz=286,SNR=6.3						
RKT	Rikitea	85.33	115	*e*S	S	12 52 38.0	-0.5
	comp=Z,1µm,27.2s						
RKT	Rikitea	85.33	115	*e*LQ	LQ	13 04 52.8	
	comp=Z,1µm,32.0s						
RKT				*e*LR	LR	13 09 03.5	
	comp=Z,2µm,24.2s						
EDW2	Edwards Air Fo	85.34	55	P	P	12 42 09.3	+0.3
	baz=285,SNR=45						
PASC	Pasadena Art C	85.38	56	P	P	12 42 09.6	+0.4
PASC				IAmb	IAmb	12 42 11.9	
	comp=Z,69nm,1.1s						
PASC	Pasadena Art C	85.38	56	IAMs_20	IAMs_20	13 24 57.3	
	comp=Z,2µm,18.0s						
FMP	Fort Macarthur	85.41	56	P	P	12 42 09.2	-0.1
	baz=285						
MPMC	Manual Prospec	85.43	54	P	P	12 42 09.8	+0.2
	baz=286,SNR=58						
LRMC	Laurel Mtn Rad	85.43	55	P	P	12 42 10.2	+0.7
	baz=286,SNR=32						
KEV	Kevo	85.44	342	P	P	12 42 09.0	+0.4
KEV				pmax	pmax		
	comp=Z,184nm,1.4s						
KEV	Kevo	85.44	342	P	P	12 42 09.0	+0.4
KEV				IAmb	IAmb	12 42 19.6	
	comp=Z,184nm,1.4s						
MWC	Mount Wilson	85.47	56	P	P	12 42 10.1	+0.3
MWC				pmax	pmax		
	comp=Z,164nm,1.4s						
MWC	Mount Wilson	85.47	56	P	P	12 42 10.1	+0.3
MWC				IAmb	IAmb	12 42 12.6	
	comp=Z,164nm,1.4s						
MWC				IAMs_20	IAMs_20	13 25 34.6	
	comp=Z,3µm,18.0s						
AJN	Ajban	85.52	294	*i* P	P	12 42 10.6	+0.7
	SNR=11						
AJN	Ajban	85.52	294	P	P	12 42 10.9	+0.9
	SNR=27						
AJN				P	P	12 42 10.9	+0.9
	SNR=27						
HLID	Hailey	85.60	46	P	P	12 42 10.9	+0.6
	baz=287,SNR=40						
HLID	Hailey	85.60	46	P	P	12 42 11.1	+0.8
HLID				IAMs_20	IAMs_20	13 12 28.1	
	comp=Z,2µm,21.0s						
BFSC	Mount Baldy Ra	85.78	56	P	P	12 42 11.2	-0.1
	baz=286,SNR=12						
TULEG	Thule	85.79	8	P	P	12 42 11.4	+1.2
TULEG	Thule	85.79	8⇑	*i*P	P	12 42 11.5	+1.2
TULEG				IAmb	IAmb	12 42 12.6	
	comp=Z,148nm,0.9s						
FURC	Furnace Creek,	85.80	53	P	P	12 42 12.1	+1.0
	baz=286,SNR=29						
ELK	Elko	85.83	49	P	P	12 42 12.2	+0.6
ELK				pmax	pmax		
	comp=Z,121nm,1.2s						
ELK	Elko	85.83	49	P	P	12 42 12.2	+0.6
ELK				IAmb	IAmb	12 42 23.2	
	comp=Z,121nm,1.2s						
ELK				IAMs_20	IAMs_20	13 13 06.1	
	comp=Z,3µm,20.0s						
UMZA	Um Al Zommool	85.84	292	P	P	12 42 11.6	0.0
CASY	Casey	85.85	194	P	P	12 42 11.2	+0.7
HAMF	Hammerfest	85.86	344	*e*P	P	12 42 10.6	-0.1
ARA0	ARCESS Array S	86.00	343	*e*P	P	12 42 11.9	+0.4
ARCES	ARCESS Array B	86.00	343	P	P	12 42 12.1	+0.6
	comp=Z,48nm,0.8s,baz=68,slow=6.7,SNR=158						
ARCES				PKKPbc	PKKPbc	13 00 11.9	-1.7
	comp=Z,5.4nm,1.0s,baz=298,slow=2.6,SNR=5.2						
ARCES				LR	LR	13 26 40.0	
	comp=Z,2µm,18.1s,baz=70,slow=40						
ARCES	ARCESS Array B	86.00	343	P	P	12 42 11.6	+0.1
ARCES				pmax	pmax		
	comp=Z,204nm,1.5s						
ARCES	ARCESS Array B	86.00	343	P	P	12 42 11.6	+0.1
BCYI	Bear Canyon	86.08	45	P	P	12 42 13.5	+0.8
RRX	Edison Barstow	86.13	55	P	P	12 42 12.9	0.0
	baz=286						
TPNV	Topopah Spring	86.14	53	P	P	12 42 13.7	+0.6
TPNV				pmax	pmax		
	comp=Z,56nm,1.1s						
TPNV	Topopah Spring	86.14	53	P	P	12 42 13.3	+0.2
	baz=286,SNR=25						
TPNV	Topopah Spring	86.14	53	P	P	12 42 13.7	+0.6
GSC	Goldstone, Bar	86.17	55	P	P	12 42 13.7	+0.6
GSC				pmax	pmax		
	comp=Z,137nm,1.5s						
GSC				MLR	MLR		
	comp=Z,2µm,18.0s						
GSC	Goldstone, Bar	86.17	55	P	P	12 42 13.5	+0.4
	baz=286,SNR=23						
GSC	Goldstone, Bar	86.17	55	P	P	12 42 13.7	+0.6
GSC				IAmb	IAmb	12 42 24.6	
	comp=Z,137nm,1.4s						
GSC				IAMs_20	IAMs_20	13 22 15.1	
	comp=Z,2µm,18.0s						
R11A	Troy Canyon, C	86.25	51	P	P	12 42 13.8	+0.2
	baz=286,SNR=71						
R11A	Troy Canyon, C	86.25	51	P	P	12 42 14.3	+0.7
R11A				IAmb	IAmb	12 42 26.2	
	comp=Z,92nm,1.4s						
R11A				IAMs_20	IAMs_20	13 25 31.4	
	comp=Z,2µm,18.0s						
LRM	Limekiln Ridge	86.25	44	P	P	12 42 14.6	+1.0
MCMT	McKenzie Canyo	86.30	45	P	P	12 42 14.5	+0.7
DLMT	Dillon	86.30	44	P	P	12 42 14.2	+0.5
DLMT				IAmb	IAmb	12 42 42.6	
	comp=Z,106nm,1.5s						
DLMT				IAMs_20	IAMs_20	13 14 57.5	
	comp=Z,2µm,22.0s						
MURC	Murrieta	86.32	56	P	P	12 42 13.6	-0.3
	baz=286,SNR=17						
BBRC	Big Bear Solar	86.36	56	P	P	12 42 14.1	-0.2
	baz=286,SNR=7.6						
HRY	Holter Researc	86.38	43	P	P	12 42 15.0	+1.0
SHOC	Shoshone, Teco	86.42	54	P	P	12 42 14.6	+0.4
	baz=286,SNR=18						
MAK	Makhachkala	86.43	313	*e*P	P	12 42 12.0	-2.1
MAK				*e*		12 45 32.2	
MAK				*e*PPP	PPP	12 47 28.8	
MAK				*e*		12 52 35.5	
MAK				*e*SS	SS	12 58 31.6	+3.2
MAK				*e*SSS	SSS	13 02 05.0	
MAK				pmax	pmax		
	comp=Z,246nm,1.0s						
109C	Camp Elliot, M	86.59	57	P	P	12 42 15.3	+0.1
	baz=286,SNR=11						
109C	Camp Elliot, M	86.59	57	P	P	12 42 15.5	+0.3
109C				IAmb	IAmb	12 42 26.3	
	comp=Z,105nm,1.3s						
109C				IAMs_20	IAMs_20	13 21 32.5	
	comp=Z,1µm,18.0s						
SHAO	Shalim	86.62	288	*i* P	P	12 42 15.8	+0.3
	SNR=28						
SHAO	Shalim	86.62	288	P	P	12 42 15.9	+0.4
	SNR=8.2						
SHAO				P	P	12 42 15.9	+0.4
	SNR=8.2						
HEC	Hector,Ludlow	86.67	55	P	P	12 42 15.9	+0.3
	baz=286,SNR=8.8						
MZWR	Madinat Zayed	86.70	294	P	P	12 42 16.6	+0.8
TJX	Tijuana	86.74	57	IAMs_20	IAMs_20	13 11 35.3	
	comp=Z,2µm,22.0s						
BOZ	Bozeman (W)	86.87	44	P	P	12 42 17.0	+0.5
BOZ				pmax	pmax		
	comp=Z,142nm,1.3s						
BOZ	Bozeman (W)	86.87	44	P	P	12 42 16.6	+0.1
	baz=289,SNR=104						
BOZ	Bozeman (W)	86.87	44	P	P	12 42 17.0	+0.5
BOZ				IAmb	IAmb	12 42 34.8	
	comp=Z,142nm,1.3s						
PFO	Pinyon Flats O	86.91	56	P	P	12 42 17.2	+0.3
PFO				pmax	pmax		
	comp=Z,102nm,1.5s						
PFO				MLR	MLR		
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	86.91	56	P	P	12 42 16.7	-0.2
	baz=286,SNR=20						
PFO	Pinyon Flats O	86.91	56	P	P	12 42 17.2	+0.3
PFO				IAmb	IAmb	12 42 20.6	
	comp=Z,102nm,1.5s						
PFO	Pinyon Flats O	86.91	56	IAMs_20	IAMs_20	13 25 05.0	
	comp=Z,2µm,20.0s						
XPFO	Pion Flat	86.92	56	IAMs_20	IAMs_20	13 25 05.0	
	comp=Z,2µm,20.0s						
PRN	Pahroc Range	86.93	52	P	P	12 42 17.8	+0.9
PRN				IAmb	IAmb	12 42 20.3	
	comp=Z,62nm,1.3s						
KTK1	Kautokeino	86.96	343	*e*P	P	12 42 16.2	0.0
BAR	Barrett	87.00	57	P	P	12 42 17.4	+0.2
BAR				IAmb	IAmb	12 42 28.3	
	comp=Z,132nm,1.4s						
BAR				IAMs_20	IAMs_20	13 22 36.3	
	comp=Z,1µm,18.0s						
SPR3	Spring Creek 3	87.00	50	P	P	12 42 18.5	+1.0
SPR3				IAMs_20	IAMs_20	13 13 39.2	
	comp=Z,3µm,22.0s						
TKX	Tecate	87.08	57	P	P	12 42 17.9	+0.2
TKX				IAmb	IAmb	12 42 21.2	
	comp=Z,77nm,1.2s						
SHPR	Sheep Range	87.11	53	P	P	12 42 18.8	+1.0
SHPR				IAmb	IAmb	12 42 42.7	
	comp=Z,107nm,1.4s						
CBX	Cerro Bola	87.11	57	P	P	12 42 18.2	+0.4
MONP2	Monument Peak	87.14	57	P	P	12 42 17.9	-0.2
	baz=286,SNR=27						
BELC	Belle Mtn. Jos	87.17	56	P	P	12 42 18.2	+0.1
	baz=286,SNR=8.8						
GMRC	Granite Mounta	87.21	55	P	P	12 42 18.4	+0.1
	baz=287,SNR=38						
CCX	Cicese	87.23	58	P	P	12 42 19.0	+0.7
CCX				IAMs_20	IAMs_20	13 11 10.5	
	comp=Z,2µm,22.0s						
QLMT	Earthquake Lak	87.25	44	P	P	12 42 19.8	+1.4
EGMT	Eagleton	87.28	41	P	P	12 42 18.7	+0.4
	baz=290,SNR=33						
EGMT	Eagleton	87.28	41	P	P	12 42 18.8	+0.4
HVU	Hansel Valley	87.29	47	P	P	12 42 19.7	+1.1
HVU				pmax	pmax		
	comp=Z,144nm,1.5s						
HVU	Hansel Valley	87.29	47	P	P	12 42 19.7	+1.1
DMTO	DMTO	87.32	288	P	P	12 42 19.0	+0.1
	SNR=12						
DMTO				P	P	12 42 19.0	+0.1
	SNR=12						
VRH	Novokhopyorsk	87.41	323	*e*P	P	12 42 17.3	-1.4
VRH				pmax	pmax		
	comp=Z,210nm,1.5s						
VRH				pmax	pmax		
	comp=Z,60nm,0.8s						
VRH				MLR	MLR		
	comp=Z,3µm,16.0s						
YHL	Hebgen Lake	87.41	44	P	P	12 42 20.9	+1.6
IKP	In-Ko-Pah, Jac	87.46	57	P	P	12 42 19.7	+0.2
	baz=286,SNR=13						
PSUT	Pine Spring	87.50	51	P	P	12 42 20.6	+0.8
RMX	La Rumorosa	87.50	57	P	P	12 42 20.4	+0.6
RMX				IAmb	IAmb	12 42 31.4	
	comp=Z,95nm,1.4s						
RMX				IAMs_20	IAMs_20	13 11 21.0	
	comp=Z,2µm,22.0s						
GROC	Groznyy	87.54	314	*e*P	P	12 42 18.0	-1.5
GROC				*e*S	SKSac	12 52 43.1	-2.8
GROC				pmax	pmax		
	comp=Z,158nm,1.3s						
DAG	Danmarks Havn	87.61	357⇑	*i*P	P	12 42 19.2	0.0
DAG	Danmarks Havn	87.61	357⇑	*i*P	P	12 42 19.2	0.0
	comp=Z,73nm,0.9s						
DAG	Danmarks Havn	87.61	357⇑	*i*P	P	12 42 19.2	0.0
DAG				IAmb	IAmb	12 42 21.0	
	comp=Z,73nm,0.9s						
YMR	Madison River	87.62	44	P	P	12 42 22.0	+1.8
SWSC	Sam W. Stewart	87.63	57	P	P	12 42 20.2	0.0
	baz=287,SNR=13						
YHH	Holmes Hill	87.66	44	P	P	12 42 21.9	+1.5
BC3	Big Chuckawall	87.70	56	P	P	12 42 21.1	+0.4
	baz=287,SNR=26						
DUG	Dugway, Tooele	87.76	49	P	P	12 42 21.1	+0.2
DUG				pmax	pmax		
	comp=Z,89nm,1.2s						
DUG	Dugway, Tooele	87.76	49	P	P	12 42 21.4	+0.5
	baz=288,SNR=59						
DUG	Dugway, Tooele	87.76	49	P	P	12 42 21.1	+0.2
DUG				IAmb	IAmb	12 42 24.1	
	comp=Z,89nm,1.1s						
DUG				IAMs_20	IAMs_20	13 13 33.1	
	comp=Z,3µm,22.0s						
TRO	Tromso	87.77	344	*e*P	P	12 42 20.8	+0.8
YNM	Yellowstone No	87.78	44	P	P	12 42 23.1	+2.1
ESJX	Sierra Juarez	87.78	58	P	P	12 42 21.9	+0.7
ESJX				IAmb	IAmb	12 42 24.4	
	comp=Z,108nm,1.4s						
ESJX				IAMs_20	IAMs_20	13 11 52.9	
	comp=Z,2µm,22.0s						
YNR	Norris Junctio	87.80	44	P	P	12 42 23.5	+2.4
IRM	Iron Mountain	87.80	55	P	P	12 42 21.5	+0.4
	baz=287,SNR=28						
DOK	Doka	87.83	289	P	P	12 42 21.1	-0.3
	SNR=16						
DOK				P	P	12 42 21.1	-0.3
	SNR=16						
YPP	Pitchstone Pla	87.86	45	P	P	12 42 23.3	+1.9
ECR	Eagle Creek	87.87	46	P	P	12 42 22.7	+1.3
MOS	Moscow	87.90	328	*e*P	P	12 42 18.1	-2.9
MOS				*e*		12 42 29.1	
MOS				*e*		12 52 43.1	
MOS				*e*		12 52 57.6	
MOS				pmax	pmax		
	comp=Z,161nm,1.3s						
MOS				pmax	pmax		
	comp=Z,500nm,2.6s						
MOS				MLR	MLR		
	comp=Z,3µm,17.0s						
YUF	Upper Falls	87.91	44	P	P	12 42 23.9	+2.3
H17A	Grant Village	87.97	44	P	P	12 42 24.2	+2.3
	baz=289,SNR=44						
H17A	Grant Village	87.97	44	P	P	12 42 24.6	+2.7
H17A				IAmb	IAmb	12 42 41.6	
	comp=Z,77nm,1.1s						
UABX	UABC, Campus M	88.01	57	IAMs_20	IAMs_20	13 23 58.9	
	comp=Z,2µm,19.0s						
LKWY	Lake	88.03	44	P	P	12 42 25.0	+2.7
LKWY				pmax	pmax		
	comp=Z,95nm,1.1s						
LKWY	Lake	88.03	44	P	P	12 42 24.9	+2.7
LKWY				IAmb	IAmb	12 42 41.4	
	comp=Z,95nm,1.1s						
NEE2	Needles Airpor	88.04	55	P	P	12 42 22.7	+0.6
	baz=287						
RBK	Rabkut	88.06	288	P	P	12 42 22.3	-0.3
	SNR=11						
RBK				P	P	12 42 22.3	-0.3
	SNR=11						
MOOW	Moose Ponds	88.07	45	P	P	12 42 23.4	+1.0
MOOW				IAmb	IAmb	12 42 47.2	
	comp=Z,58nm,1.4s						
MOOW				IAMs_20	IAMs_20	13 15 28.4	
	comp=Z,2µm,20.0s						
GCMT	Greycliff	88.11	43	P	P	12 42 23.2	+0.8
REDW	Red Top Meadow	88.13	46	P	P	12 42 23.6	+0.9
REDW				IAmb	IAmb	12 42 46.3	
	comp=Z,133nm,1.5s						
YMP	Mirror Lake Pl	88.14	44	P	P	12 42 24.9	+2.1
YNE	Yellowstone No	88.15	44	P	P	12 42 24.0	+1.3
AHID	Auburn Hatcher	88.15	46	P	P	12 42 23.5	+0.7
AHID				IAmb	IAmb	12 42 39.9	
	comp=Z,124nm,1.2s						
AHID				IAMs_20	IAMs_20	13 14 04.6	
	comp=Z,2µm,21.0s						
SNOW	Snow King Moun	88.16	45	P	P	12 42 23.6	+0.7
SNOW				IAmb	IAmb	12 42 40.5	
	comp=Z,72nm,1.4s						
CCUT	Cedar City	88.17	52	P	P	12 42 24.1	+1.1
LOHW	Long Hollow	88.22	45	P	P	12 42 23.4	+0.3
LOHW				IAMs_20	IAMs_20	13 15 11.2	
	comp=Z,2µm,21.0s						
WHFO	Wadi Hawf	88.35	288	P	P	12 42 23.2	-0.7
	SNR=6.2						
WHFO				P	P	12 42 23.2	-0.7
	SNR=6.2						
SZCU	Shurtz Canyon	88.36	52	P	P	12 42 24.4	+0.6
CTU	Camp Tracy	88.37	48	P	P	12 42 24.1	+0.3
NLU	North Lily Min	88.37	49	P	P	12 42 24.7	+0.9
GLA	Glamis	88.38	56	P	P	12 42 24.3	+0.5
GLA				pmax	pmax		
	comp=Z,117nm,1.5s						
GLA	Glamis	88.38	56	P	P	12 42 24.5	+0.7
	baz=287,SNR=8.4						
GLA	Glamis	88.38	56	P	P	12 42 24.3	+0.5
GLA				IAmb	IAmb	12 42 35.5	
	comp=Z,117nm,1.5s						
GLA				IAMs_20	IAMs_20	13 11 47.8	
	comp=Z,2µm,22.0s						
LCMT	Little Creek M	88.42	52	P	P	12 42 25.2	+1.1
SPX	San Pedro Mart	88.45	58	P	P	12 42 24.7	+0.1
SPX				IAmb	IAmb	12 42 27.8	
	comp=Z,53nm,1.2s						
SPX				IAMs_20	IAMs_20	13 12 23.7	
	comp=Z,3µm,22.0s						
TCUT	Toone Canyon	88.47	48	P	P	12 42 25.0	+0.6
LPSR	Galich'ya Gora	88.48	325	*e*P	P	12 42 23.0	-0.8
LPSR				pmax	pmax		
	comp=Z,160nm,1.0s						
LPSR				pmax	pmax		
	comp=Z,110nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,2µm,15.0s						
W13A	Hualapai Mount	88.51	54	P	P	12 42 25.5	+0.8
W13A				IAMs_20	IAMs_20	13 14 27.3	
	comp=Z,2µm,20.0s						
SLWR	Sila	88.55	294	P	P	12 42 24.9	+0.2

PDMCI	Parker Dam,Lak	88.55	55	P	P	12 42 25.4	+0.9
	baz=288,SNR=20						
RLMT	Red Lodge	88.60	43	P	P	12 42 26.3	+1.5
	baz=290,SNR=31						
RLMT				S	S	12 53 11.3	+1.3
	baz=290						
RLMT	Red Lodge	88.60	43	P	P	12 42 26.4	+1.5
RLMT				IAmb	IAmb	12 42 36.8	
	comp=Z,75nm,1.2s						
MPU	Maple Canyon	88.67	49	P	P	12 42 25.9	+0.6
OBN	Obninsk	88.71	327	⇑P	P	12 42 24.6	-0.2
OBN	Obninsk	88.71	327	c iP	P	12 42 23.6	-1.2
OBN				i		12 42 32.3	
OBN				eS	SKSac	12 52 51.5	-0.9
OBN				pmax	pmax		
	comp=Z,195nm,1.3s						
OBN				MLR	MLR		
	comp=Z,3µm,18.0s						
OBN	Obninsk	88.71	327	P	P	12 42 24.0	-0.8
MVU	Marysvale	88.73	50	P	P	12 42 26.8	+1.1
KNB	Kanab	88.74	52	P	P	12 42 27.1	+1.4
KNB				pmax	pmax		
	comp=Z,192nm,1.4s						
KNB	Kanab	88.74	52	P	P	12 42 27.1	+1.4
MSU	Marysvale	88.75	50	P	P	12 42 26.9	+1.2
MSU	Marysvale	88.75	50	P	P	12 42 26.9	+1.2
GOF	Gofitskoye	88.79	317	⇑eP	P	12 42 25.0	-0.4
GOF				pmax	pmax		
	comp=Z,193nm,1.6s						
VSR	Storozhevoye	88.89	323	eP	P	12 42 24.3	-1.5
VSR				pmax	pmax		
	comp=Z,150nm,0.9s						
VSR				pmax	pmax		
	comp=Z,180nm,0.9s						
VSR				MLR	MLR		
	comp=Z,2µm,19.0s						
MTPU	Mount Pierson	88.90	51	P	P	12 42 27.9	+1.3
VORD	Divnogorie	88.92	323	eP	P	12 42 24.4	-1.5
VORD				pmax	pmax		
	comp=Z,90nm,0.8s						
ABTO	Aybut	88.94	288	P	P	12 42 26.7	-0.1
	SNR=13						
ABTO				P	P	12 42 26.7	-0.1
	SNR=13						
SFX	San Felipe	88.96	58	P	P	12 42 27.1	+0.6
SFX				IAmb	IAmb	12 42 29.5	
	comp=Z,75nm,1.0s						
SFX				IAMs_20	IAMs_20	13 12 51.1	
	comp=Z,2µm,22.0s						
NCK	Nalchik	88.96	315	⇓iP	P	12 42 26.0	-0.3
NCK				pmax	pmax		
	comp=Z,136nm,1.0s						
NCK				MLR	MLR		
	comp=Z,2µm,20.0s						
ZEI	Tsey	88.99	314	eP	P	12 42 22.9	-3.8
ZEI				pmax	pmax		
	comp=Z,85nm,1.4s						
FFC	Flin Flon	89.18	33	P	P	12 42 27.3	+0.3
FFC				pmax	pmax		
	comp=Z,129nm,1.4s						
FFC	Flin Flon	89.18	33	P	P	12 42 27.3	+0.3
FFC				IAmb	IAmb	12 42 44.4	
	comp=Z,129nm,1.4s						
TMUT	Trail Mountain	89.22	49	P	P	12 42 28.7	+0.8
BW06	Boulder Array	89.22	46	P	P	12 42 28.1	+0.2
	baz=290,SNR=26						
BW06	Boulder Array	89.22	46	P	P	12 42 28.4	+0.5
BW06				IAMs_20	IAMs_20	13 15 03.8	
	comp=Z,2µm,21.0s						
PD31	Pinedale Array	89.22	46	P	P	12 42 28.0	+0.1
PDAR	Pinedale Array	89.22	46	P	P	12 42 27.9	+0.1
	comp=Z,5.1nm,1.0s,baz=270,slow=3.0,SNR=24						
PDAR				LR	LR	13 15 14.4	
	comp=Z,2µm,21.8s,baz=300,slow=31						
PDAR	Pinedale Array	89.22	46	P	P	12 42 27.7	-0.2
GNI	Garni	89.29	311	P	P	12 42 27.8	-0.3
GNI	Garni	89.29	311	c iP	P	12 42 27.7	-0.4
GNI				pmax	pmax		
	comp=Z,113nm,1.7s						
GNI				MLR	MLR		
	comp=Z,843nm,20.0s						
GNI	Garni	89.29	311	P	P	12 42 28.8	+0.7
GNI	Garni	89.29	311	P	P	12 42 27.9	-0.3
GNI				P	P	12 42 27.9	-0.3
U15A	North Rim	89.33	52	P	P	12 42 29.8	+1.3
U15A				IAmb	IAmb	12 42 31.0	
	comp=Z,44nm,0.9s						
KBZ	Khabaz	89.35	315	P	P	12 42 27.6	-0.5
	comp=Z,50nm,0.9s,baz=159,slow=1.3,SNR=49						
KBZ	Khabaz	89.35	315	c iP	P	12 42 27.2	-0.9
KBZ				pmax	pmax		
	comp=Z,82nm,1.0s						
KBZ				MLR	MLR		
	comp=Z,2µm,20.0s						
KIV	Kislovodsk	89.42	316	⇑P	P	12 42 28.7	+0.2
KIV	Kislovodsk	89.42	316	i P	P	12 42 27.9	-0.6
	SNR=13						
KIV	Kislovodsk	89.42	316	eP	P	12 42 27.9	-0.6
KIV				e		12 45 58.6	
KIV				e		12 52 54.8	
KIV				eSS	SS	12 59 14.3	+2.2
KIV				pmax	pmax		
	comp=Z,217nm,1.1s						
KIV				pmax	pmax		
	comp=Z,296nm,4.2s						
KIV				MLR	MLR		
	comp=Z,5µm,20.0s						
KIV	Kislovodsk	89.42	316	P	P	12 42 27.9	-0.6
KIV				IAmb	IAmb	12 42 30.7	
	comp=Z,87nm,1.1s						
KIV				IAMs_20	IAMs_20	13 26 06.9	
	comp=Z,2µm,20.0s						
KIV	Kislovodsk	89.42	316	P	P	12 42 27.7	-0.9
KIV				P	P	12 42 27.7	-0.9
P17A	Butcher Ranch,	89.50	49	P	P	12 42 29.9	+0.8
NEY	Neytrino	89.64	315	d iP	P	12 42 30.0	+0.3
NEY				pmax	pmax		
	comp=Z,13nm,1.0s						
NEY				MLR	MLR		
	comp=Z,920nm,19.0s						
SOCY	Socotra	89.68	282	P	P	12 42 29.2	-1.1
N2IH	Innhavet	89.70	343	eP	P	12 42 29.4	+0.3
AKH	Akhalkalaki	89.75	313	⇓P	P	12 42 30.6	+0.4
AKH	Akhalkalaki	89.75	313	P	P	12 42 30.5	+0.2
AKH				pmax	pmax		
	comp=Z,162nm,0.9s						
AKH	Akhalkalaki	89.75	313	P	P	12 42 30.5	+0.2
SRU	San Rafael Swe	89.78	49	P	P	12 42 31.0	+0.5
SRU				pmax	pmax		
	comp=Z,59nm,1.4s						
SRU	San Rafael Swe	89.78	49	P	P	12 42 31.0	+0.5
STEI	Steigen	89.91	344	eP	P	12 42 30.7	+0.6
PIX	Pinacate	89.93	57	P	P	12 42 30.7	-0.4
LAO	LASA Array	90.01	41	P	P	12 42 31.8	+0.6
	baz=292,SNR=16						
LAO				S	S	12 53 23.8	+1.1
	baz=292						
LAO	LASA Array	90.01	41	P	P	12 42 32.4	+1.2
LAO				IAmb	IAmb	12 42 43.0	
	comp=Z,141nm,1.4s						
DBG	Daneborg	90.12	357	i P	P	12 42 31.0	0.0
DBG				IAmb	IAmb	12 42 33.0	
	comp=Z,42nm,1.1s						
CHVG	Ch'k'valeri	90.27	315	⇓P	P	12 42 32.4	-0.1
FAUS	Fauske	90.28	343	eP	P	12 42 32.3	+0.3
WUAZ	Wupatki	90.33	53	P	P	12 42 34.3	+1.2
	baz=289,SNR=43						
WUAZ				S	S	12 53 27.8	+1.5
	baz=289						
WUAZ	Wupatki	90.33	53	P	P	12 42 34.5	+1.4
WUAZ				IAmb	IAmb	12 42 45.3	
	comp=Z,172nm,1.4s						
WUAZ				IAMs_20	IAMs_20	13 15 54.4	
	comp=Z,2µm,20.0s						
214A	Organ Pipe Nat	90.34	57	P	P	12 42 33.7	+0.7
	baz=288,SNR=43						
214A				S	S	12 53 28.2	+2.0
	baz=288						
214A	Organ Pipe Nat	90.34	57	P	P	12 42 34.1	+1.1
214A				IAmb	IAmb	12 42 35.9	
	comp=Z,141nm,1.4s						
214A				IAMs_20	IAMs_20	13 25 11.6	
	comp=Z,2µm,18.0s						
UMR	Umm Al-Rimmam	90.36	301	eP		12 42 30.6	
FIA1	FINESS Array S	90.39	336	P	P	12 42 31.8	-0.7
FIA1				IAmb	IAmb	12 42 32.7	
	comp=Z,116nm,1.2s						
FINES	FINESS Array B	90.39	336	P	P	12 42 31.4	-1.2
	comp=Z,32nm,0.9s,baz=62,slow=4.0,SNR=64						
KBD	Kabd	90.49	300	eP		12 42 31.3	
DGMT	Dagmar	90.56	39	P	P	12 42 33.8	+0.1
	baz=294						
DGMT	Dagmar	90.56	39	IAMs_20	IAMs_20	13 16 04.3	
	comp=Z,2µm,22.0s						
MIB	Mutribah	90.59	301	eP		12 42 31.3	
X16A	Lo Mia Camp, P	90.64	54	P	P	12 42 36.0	+1.4
X16A				IAMs_20	IAMs_20	13 25 11.7	
	comp=Z,2µm,18.0s						
UPNV	Upernavik	90.70	7	⇑iP	P	12 42 34.6	+0.8
UPNV				IAmb	IAmb	12 42 36.7	
	comp=Z,44nm,0.9s						
RST	Umm Al-Ruwaisa	90.97	301	eP		12 42 33.7	
FCC	Fort Churchill	91.01	27	P	P	12 42 35.8	+0.3
FCC				pmax	pmax		
	comp=Z,44nm,1.3s						
FCC	Fort Churchill	91.01	27	P	P	12 42 35.8	+0.3
O20A	White River Ci	91.08	48	P	P	12 42 36.9	+0.4
	baz=291,SNR=14						
O20A				S	S	12 53 32.0	-1.1
	baz=291						
O20A	White River Ci	91.08	48	P	P	12 42 36.9	+0.4
O20A				IAMs_20	IAMs_20	13 15 36.0	
	comp=Z,3µm,21.0s						
PV10	Paradox Valley	91.12	50	P	P	12 42 37.3	+0.5
PV10				IAmb	IAmb	12 43 05.1	
	comp=Z,137nm,1.5s						
PV14	Lion Creek, Pa	91.14	50	P	P	12 42 37.5	+0.6
PV14				IAmb	IAmb	12 42 48.3	
	comp=Z,142nm,1.4s						
PV14				IAMs_20	IAMs_20	13 16 58.6	
	comp=Z,2µm,20.0s						
GEVA	Gevas	91.15	310	P	P	12 42 36.2	-0.6
PV05	Paradox Valley	91.18	50	P	P	12 42 37.6	+0.5
PV19	Morning Glory	91.19	50	P	P	12 42 37.7	+0.6
PV19				IAmb	IAmb	12 42 39.5	
	comp=Z,109nm,1.3s						
PV19				IAMs_20	IAMs_20	13 16 39.0	
	comp=Z,2µm,22.0s						
PV20	West Nyswonger	91.19	50	P	P	12 42 37.5	+0.5
PV20				IAmb	IAmb	12 42 39.4	
	comp=Z,90nm,1.3s						
PV20				IAMs_20	IAMs_20	13 17 11.0	
	comp=Z,2µm,20.0s						
PV04	Paradox Valley	91.22	50	P	P	12 42 37.9	+0.7
PV04				IAmb	IAmb	12 42 48.7	
	comp=Z,149nm,1.5s						
PV04				IAMs_20	IAMs_20	13 16 06.7	
	comp=Z,3µm,22.0s						
PV17	East Wray Mesa	91.22	50	P	P	12 42 37.9	+0.6
PV17				IAmb	IAmb	12 42 39.6	
	comp=Z,100nm,1.3s						
PV17				IAMs_20	IAMs_20	13 14 33.7	
	comp=Z,3µm,22.0s						
PV16	Nyswonger Mesa	91.24	50	P	P	12 42 37.9	+0.6
PV16				IAmb	IAmb	12 43 06.4	
	comp=Z,88nm,1.3s						
PV16				IAMs_20	IAMs_20	13 16 40.2	
	comp=Z,3µm,22.0s						
RWWY	Rawlins	91.24	46	P	P	12 42 37.2	-0.1
RWWY				IAmb	IAmb	12 42 51.4	
	comp=Z,73nm,1.2s						
PV22	Blue Mesa, Par	91.25	50	P	P	12 42 38.4	+1.1
PV22				IAmb	IAmb	12 42 59.6	
	comp=Z,59nm,1.4s						
PV22				IAMs_20	IAMs_20	13 15 00.7	
	comp=Z,3µm,22.0s						
PV18	Skein Mesa, Pa	91.26	50	P	P	12 42 37.3	-0.1
PV18				IAmb	IAmb	12 42 39.7	
	comp=Z,70nm,1.4s						
PV18				IAMs_20	IAMs_20	13 16 21.0	
	comp=Z,3µm,22.0s						
PV11	David Mesa, Pa	91.27	50	P	P	12 42 38.0	+0.6
PV11				IAmb	IAmb	12 42 39.8	
	comp=Z,99nm,1.2s						
PV03	Paradox Valley	91.31	50	P	P	12 42 38.0	+0.4
PV03				IAmb	IAmb	12 42 39.9	
	comp=Z,75nm,1.4s						
PV03				IAMs_20	IAMs_20	13 17 04.1	
	comp=Z,2µm,21.0s						
PV12	Saucer Basin,	91.32	50	P	P	12 42 38.3	+0.6
PV12				IAmb	IAmb	12 42 47.5	
	comp=Z,138nm,1.5s						
PV12				IAMs_20	IAMs_20	13 16 54.4	
	comp=Z,3µm,21.0s						
K22A	Casper	91.35	45	P	P	12 42 38.2	+0.5
	baz=292,SNR=34						
K22A				S	S	12 53 35.3	-0.1
	baz=292						
K22A	Casper	91.35	45	P	P	12 42 38.3	+0.6
K22A				IAMs_20	IAMs_20	13 17 35.1	
	comp=Z,2µm,20.0s						
PV13	Radium Mtn., P	91.36	50	P	P	12 42 38.2	+0.3
MOR8	Moi Rana	91.37	343	eP	P	12 42 36.0	-1.0
PV07	Paradox Valley	91.39	50	P	P	12 42 38.5	+0.5
PV02	Paradox Valley	91.40	50	P	P	12 42 38.4	+0.3
PV02				IAmb	IAmb	12 42 47.5	
	comp=Z,66nm,1.4s						
PV15	Paradox Valley	91.55	50	P	P	12 42 39.1	+0.3
PV15				IAmb	IAmb	12 42 50.0	
	comp=Z,49nm,1.3s						
PV15				IAMs_20	IAMs_20	13 14 19.4	
	comp=Z,3µm,22.0s						
SOC	Sochi	91.55	316	eP	P	12 42 36.3	-2.0
SOC				e		12 46 15.3	
SOC				ePPP	PPP	12 48 13.8	
SOC				eS	SKSac	12 53 05.4	-4.0
SOC				eSS	SS	12 59 38.3	-4.4
SOC				eSSS	SSS	13 03 20.8	
PV01	Paradox Valley	91.55	50	P	P	12 42 39.2	+0.4
PV01				IAMs_20	IAMs_20	13 16 05.7	
	comp=Z,3µm,22.0s						
W18A	Petrified Fore	91.73	53	P	P	12 42 41.4	+1.8
	baz=290						
W18A				S	S	12 53 42.7	+3.6
	baz=290						
W18A	Petrified Fore	91.73	53	IAMs_20	IAMs_20	13 25 59.3	
	comp=Z,2µm,19.0s						
X18A	Snowflake	91.76	54	P	P	12 42 41.1	+1.4
X18A				IAmb	IAmb	12 42 52.0	
	comp=Z,87nm,1.4s						
X18A				IAMs_20	IAMs_20	13 29 10.5	
	comp=Z,2µm,18.0s						
VSU	Vasula	91.78	333	eP	P	12 42 38.6	-0.4
VSU	Vasula	91.78	333	c iP	P	12 42 38.0	-1.0
VSU				pmax	pmax		
	comp=Z,398nm,1.1s						
VSU				MLR	MLR		
	comp=Z,3µm,17.0s						
TUC	Tucson	91.85	56	P	P	12 42 41.4	+1.3
TUC				pmax	pmax		
	comp=Z,77nm,1.5s						
TUC	Tucson	91.85	56	P	P	12 42 41.0	+0.9
	baz=289						
TUC				S	S	12 53 43.3	+3.2
	baz=289						
TUC	Tucson	91.85	56	P	P	12 42 41.4	+1.3
TUC				IAmb	IAmb	12 42 53.1	
	comp=Z,78nm,1.5s						
MVCO	Mesa Verde	91.94	51	P	P	12 42 41.3	+0.7
	baz=291,SNR=16						
MVCO	Mesa Verde	91.94	51	P	P	12 42 41.8	+1.2
MVCO				IAmb	IAmb	12 42 51.5	
	comp=Z,72nm,1.4s						
MVCO				IAMs_20	IAMs_20	13 19 12.8	
	comp=Z,1µm,20.0s						
SUMG	Summit	92.15	2	P	P	12 42 41.8	+0.7
SUMG				pmax	pmax		
	comp=Z,42nm,1.1s						
SUMG	Summit	92.15	2	P	P	12 42 41.8	+0.7
SUMG				IAmb	IAmb	12 42 47.8	
	comp=Z,42nm,1.1s						
SUMG	Summit	92.15	2	i P	P	12 42 42.5	+1.4
	comp=Z,92nm,1.0s						
SUMG	Summit	92.15	2	i P	P	12 42 42.5	+1.4
SUMG				IAmb	IAmb	12 42 47.0	
	comp=Z,92nm,1.0s						
SRIG	Santa Rosalia	92.27	61	P	P	12 42 41.9	-0.1
SRIG				IAmb	IAmb	12 42 44.4	
	comp=Z,56nm,1.2s						
SMCO	Snowmass	92.34	48	P	P	12 42 43.3	+0.7
SMCO				IAmb	IAmb	12 42 58.1	
	comp=Z,47nm,1.2s						
KOPT	Kop Dagi	92.38	313	P	P	12 42 42.6	0.0
N23A	Red Feather La	92.42	47	P	P	12 42 43.6	+0.8
	baz=293,SNR=36						
RSSD	Black Hills	92.44	43	P	P	12 42 43.0	+0.3
RSSD				pmax	pmax		
	comp=Z,75nm,1.3s						
RSSD	Black Hills	92.44	43	P	P	12 42 42.9	+0.1
	baz=294						
RSSD	Black Hills	92.44	43	P	P	12 42 43.0	+0.3
RSSD				IAmb	IAmb	12 42 60.0	
	comp=Z,75nm,1.2s						
ANN	Anapa	92.56	318	eP	P	12 42 40.4	-2.6
ANN				e*PP	pP	12 42 50.7	+0.9
ANN				e		12 46 23.3	
ANN				eS	SKSac	12 53 10.9	-4.1
ANN				eSS	SS	12 59 56.9	-0.2
ANN				pmax	pmax		
	comp=Z,69nm,1.0s						
PHWY	Pilot Hill	92.60	46	P	P	12 42 44.4	+0.8
PHWY				IAmb	IAmb	12 42 54.6	
	comp=Z,63nm,1.4s						
PHWY				IAMs_20	IAMs_20	13 16 49.4	
	comp=Z,2µm,22.0s						
HSIG		92.80	59	P	P	12 42 45.1	+0.6
S22A	4UR Ranch, Cre	92.98	50	P	P	12 42 46.3	+0.8
	baz=292,SNR=29						
S22A				S	S	12 53 51.6	+1.2
	baz=292						
ISCO	Idaho Springs	93.08	47	P	P	12 42 46.8	+0.9
ISCO				pmax	pmax		
	comp=Z,23nm,1.2s						
ISCO	Idaho Springs	93.08	47	P	P	12 42 46.8	+0.9
	baz=293,SNR=13						
ISCO				S	S	12 53 51.7	+0.4
	baz=293						
ISCO	Idaho Springs	93.08	47	P	P	12 42 46.8	+0.9
VNDA	Vanda	93.14	177	P	P	12 42 44.2	-0.6
	comp=Z,8.6nm,1.0s,baz=359,slow=3.1,SNR=4.2						
VNDA				LR	LR	13 22 20.7	
	comp=Z,745nm,19.2s,baz=352,slow=34						
MARD	Mardin	93.19	310	P	P	12 42 46.0	-0.2
NSS	Namsos	93.28	342	eP	P	12 42 45.5	-0.4
319A	Douglas	93.37	56	P	P	12 42 48.4	+1.2
319A				IAmb	IAmb	12 43 14.4	
	comp=Z,68nm,1.4s						
319A				IAMs_20	IAMs_20	13 30 23.1	
	comp=Z,2µm,18.0s						
MNK	Minsk	93.41	329	i P	P	12 42 44.8	-1.9
	comp=E,3.0nm,1.0s						
MNK				i P	P	12 42 44.8	-1.9
	comp=N,23nm,0.9s						
MNK				i P	P	12 42 44.8	-1.9
	comp=Z,60nm,1.4s						
MNK				i PP	PP	12 46 29.4	-1.0
MNK				i PPP	PPP	12 48 30.0	
MNK				i S	SKSac	12 53 16.2	-3.1
MNK				i SS	SS	13 00 09.0	+0.4
MNK				i SSS	SSS	13 03 51.0	
MNK				i LQ	LQ	13 19 04.7	
MNK				i LR	LR	13 23 30.4	
MNK				i LRM	MLR	13 27 14.7	
	comp=E,204nm,17.1s						
MNK				i LRM	MLR	13 27 24.7	
	comp=N,2µm,16.4s						
MNK				i LRM	MLR	13 27 28.2	
	comp=Z,1µm,13.5s						
E28A	Huff	93.52	40	P	P	12 42 48.2	+0.8
E28A				IAmb	IAmb	12 43 04.8	
	comp=Z,111nm,1.3s						
IDID	Didziasalis	93.52	330	eP	P	12 42 47.0	-0.2
AAL	Aland	93.53	336	eP	P	12 42 46.8	-0.3
MDND	Maddock	93.60	38	P	P	12 42 47.9	+0.2
	baz=297						
MDND	Maddock	93.60	38	P	P	12 42 48.4	+0.6
MDND				IAmb	IAmb	12 43 09.5	
	comp=Z,66nm,1.1s						
ISAL	Salakas	93.67	331	eP	P	12 42 47.8	0.0
NACGM	Naroch	93.72	330	i P	P	12 42 47.6	-0.5
NACGM				i P	P	12 42 47.6	-0.5
NACGM				i P	P	12 42 47.6	-0.5
NACGM				i PP	PP	12 46 32.7	-0.1
NACGM				i PPP	PPP	12 48 33.5	
NACGM				i S	SKSac	12 53 16.6	-4.4
NACGM				i SS	SS	12 59 55.2	-18
NACGM				i SSS	SSS	13 03 33.1	
NACGM				i LQ	LQ	13 18 11.3	
NACGM				i LR	LR	13 26 20.0	
Q24A	Divide	93.73	48	P	P	12 42 49.5	+0.5
	baz=293						
Q24A				S	S	12 53 56.8	-0.3
	baz=293						
SDCO	Great Sand Dun	93.95	49	P	P	12 42 50.6	+0.6
	baz=293,SNR=17						
SDCO	Great Sand Dun	93.95	49	P	P	12 42 50.5	+0.5
SDCO				IAMs_20	IAMs_20	13 17 49.1	
	comp=Z,3µm,22.0s						
SCO	Scoresbysund	93.99	356	i P	P	12 42 49.7	+0.7
SCO	Scoresbysund	93.99	356	i P	P	12 42 49.7	+0.7
	comp=Z,26nm,1.2s						
SCO	Scoresbysund	93.99	356	i P	P	12 42 49.8	+0.7
SCO				IAmb	IAmb	12 42 53.0	
	comp=Z,26nm,1.2s						
RAYN	Ar Rayn	94.12	296	i P	P	12 42 49.9	-0.8
	SNR=19						
RAYN	Ar Rayn	94.12	296	P	P	12 42 49.9	-0.8
RAYN				pmax	pmax		
	comp=Z,38nm,1.1s						
RAYN	Ar Rayn	94.12	296	P	P	12 42 49.9	-0.8
121A	Cookes Peak, D	94.15	55	P	P	12 42 52.6	+1.7
	baz=291,SNR=22						
121A				S	S	12 54 05.4	+4.7
	baz=291						
121A	Cookes Peak, D	94.15	55	P	P	12 42 52.5	+1.6
121A				IAmb	IAmb	12 43 04.2	
	comp=Z,87nm,1.4s						
121A				IAMs_20	IAMs_20	13 18 49.6	
	comp=Z,1µm,20.0s						
LENM	Lemitar	94.19	53	P	P	12 42 52.5	+1.5
Y22D	IRIS PASSCAL I	94.27	53	P	P	12 42 53.2	+1.9
	baz=292						
Y22D	IRIS PASSCAL I	94.27	53	IAMs_20	IAMs_20	13 31 42.8	
	comp=Z,1µm,18.0s						
ANMO	Albuquerque	94.30	52	ceP	P	12 42 52.5	+1.0
ANMO				pmax	pmax		
	comp=Z,26nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,2µm,17.0s						
ANMO	Albuquerque	94.30	52	P	P	12 42 52.1	+0.6
	baz=292						
ANMO				S	S	12 54 03.6	+1.7
	baz=292						
ANMO	Albuquerque	94.30	52	P	P	12 42 52.4	+0.9
ANMO	Albuquerque	94.30	52	IAMs_20	IAMs_20	13 28 12.4	
	comp=Z,2µm,18.0s						
BNM	Barren Site	94.47	53	P	P	12 42 52.4	0.0
ULM	Lac du Bonnet	94.58	35	P	P	12 42 51.0	-1.2
	comp=Z,9.5nm,1.1s,baz=293,slow=3.5,SNR=9.0						
ULM				LR	LR	13 20 58.3	
	comp=Z,2µm,20.1s,baz=310,slow=33						
ULM	Lac du Bonnet	94.58	35	P	P	12 42 52.0	-0.2
ULM				pmax	pmax		
	comp=Z,28nm,1.1s						
ULM	Lac du Bonnet	94.58	35	P	P	12 42 52.0	-0.2
ULM				IAMs_20	IAMs_20	13 21 55.4	
	comp=Z,2µm,21.0s						
SIM	Simferopol'	94.62	319	eP	P	12 42 58.6	+6.1
SIM				pmax	pmax		
	comp=Z,51nm,0.5s						
UPP	Uppsala	94.65	337	eP	P	12 42 51.2	-1.0
PABE	Paberze	94.71	331	eP	P	12 42 52.2	-0.4
AKASG	Malin Array Be	94.72	326	P	P	12 42 51.4	-1.3
	comp=Z,3.6nm,0.6s,baz=57,slow=5.1,SNR=14						
AKASG				LR	LR	13 26 47.8	
	comp=Z,2µm,21.1s,baz=35,slow=36						
AKASG	Malin Array Be	94.72	326	P	P	12 42 51.4	-1.3
T25A	Trinidad	94.99	49	P	P	12 42 55.3	+0.7
	baz=293,SNR=12						
PBUR	Paburge	95.33	333	eP	P	12 42 54.5	-0.9
SLBS	Sierra La Lagu	95.40	64	IAMs_20	IAMs_20	13 16 53.1	
	comp=Z,2µm,20.0s						
KSCO	Kaye Shedlock’	95.51	47	P	P	12 42 57.6	+0.7
	baz=295,SNR=6.7						
KSCO	Kaye Shedlock’	95.51	47	P	P	12 42 57.9	+1.0
KSCO				IAmb	IAmb	12 43 16.0	

	comp=Z,69nm,1.3s						
AGMN	Agassiz Nation	95.58	37	P	P	12 42 56.7	-0.1
	baz=300						
AGMN	Agassiz Nation	95.58	37	P	P	12 42 56.0	-0.8
SUSD	Miller	95.58	41	P	P	12 42 56.2	-0.7
	baz=298						
SUSD	Miller	95.58	41	P	P	12 42 56.0	-1.0
ICESG	Greenland Ices	95.60	2	*i* P	P	12 42 56.8	-0.1
ICESG				IAmb	IAmb	12 42 58.0	
	comp=Z,36nm,1.2s						
GAZ	Gaziantep	95.86	311	P	P	12 42 58.1	-0.4
SUW	Suwalki	95.96	330	*e*P	P	12 42 57.1	-1.2
SUW	Suwalki	95.96	330	*e*P	P	12 42 57.2	-1.2
SUW	Suwalki	95.96	330	P	P	12 42 57.2	-1.2
SUW				pmax	pmax		
	comp=Z,76nm,1.0s						
SUW	Suwalki	95.96	330	P	P	12 42 57.2	-1.2
DOMB	Dombas	96.01	341	*e*P	P	12 42 57.9	-0.6
NC204	NORSAR Array S	96.05	340	P	P	12 42 57.8	-1.0
MOL	Molde	96.06	342	*e*P	P	12 42 57.9	-0.7
NB2	NORSAR Subarra	96.08	340	P	P	12 42 57.6	-1.3
	comp=Z,2.4nm,0.7s,baz=54,slow=5.1						
NOA	NORSAR Array B	96.08	340	P	P	12 42 58.3	-0.6
	comp=Z,1.5nm,0.9s,baz=51,slow=4.2,SNR=17						
NOA				PP	PP	12 46 49.5	-1.4
	comp=Z,3.1nm,0.9s,baz=43,slow=8.3,SNR=4.3						
NOA				LR	LR	13 30 32.7	
	comp=Z,1µm,19.6s,baz=30,slow=38						
NC602	NORSAR Array S	96.20	340	*e*P	P	12 42 57.9	-1.4
MNTX	Cornudas Mount	96.36	55	P	P	12 43 01.6	+0.9
	baz=292,SNR=39						
MNTX	Cornudas Mount	96.36	55	P	P	12 43 01.5	+0.8
MNTX				IAmb	IAmb	12 43 17.9	
	comp=Z,29nm,1.2s						
MNTX				IAMs_20	IAMs_20	13 28 00.9	
	comp=Z,1µm,19.0s						
FRB	Frobisher Bay	96.46	15	LR	LR	13 28 20.7	
	comp=Z,787nm,20.2s,baz=274,slow=37						
AKN	Aaknes	96.53	342	*e*P	P	12 43 00.6	-0.2
K31A	O'Neill	96.55	43	P	P	12 43 01.3	-0.1
F33A	5 Mile Ranch,	96.56	39	P	P	12 43 00.3	-1.0
F33A				IAmb	IAmb	12 43 18.1	
	comp=Z,47nm,1.4s						
F33A				IAMs_20	IAMs_20	13 19 29.8	
	comp=Z,2µm,22.0s						
B35A	Bob, Littlefor	96.77	36	P	P	12 43 01.4	-0.8
B35A				IAmb	IAmb	12 43 18.2	
	comp=Z,26nm,1.1s						
B35A				IAMs_20	IAMs_20	13 24 29.3	
	comp=Z,2µm,20.0s						
GDL2	Guadalupe Moun	96.96	54	P	P	12 43 04.0	+0.5
OSL	Oslo	97.06	339	*e*P	P	12 43 00.6	-2.6
SKAR	Skarslia	97.29	341	*e*P	P	12 43 04.0	-0.4
BRTR	Keskin Array B	97.30	314	P	P	12 43 04.0	-0.9
	comp=Z,14nm,1.0s,baz=111,slow=3.1,SNR=29						
BRTR				PP	PP	12 46 56.1	-5.2
	comp=Z,4.7nm,1.0s,baz=93,slow=6.2,SNR=3.6						
BRTR	Keskin Array B	97.30	314	P	P	12 43 03.9	-1.1
ECSD	EROS Data Cent	97.40	41	P	P	12 43 04.8	-0.3
	baz=299,SNR=8.9						
ECSD	EROS Data Cent	97.40	41	P	P	12 43 04.9	-0.3
MSTX	Muleshoe	97.48	52	P	P	12 43 05.1	-0.8
	baz=294						
MSTX	Muleshoe	97.48	52	P	P	12 43 05.6	-0.3
MSTX				IAMs_20	IAMs_20	13 20 55.8	
	comp=Z,1µm,20.0s						
HYA	Hoyanger	97.56	342	*e*P	P	12 43 04.0	-1.5
CBKS	Cedar Bluff	97.63	46	P	Pdif	12 43 06.6	+0.2
	baz=297						
CBKS	Cedar Bluff	97.63	46	IAMs_20	IAMs_20	13 19 17.3	
	comp=Z,2µm,21.0s						
TLCR		97.80	321	⇑P	P	12 43 06.4	-0.4
ANTO	Ankara	97.81	315	IAMs_20	IAMs_20	13 32 57.3	
	comp=Z,1µm,21.0s						
HPIG		97.90	59	P	P	12 43 08.0	-0.1
AMTX	Amarillo	97.93	51	P	Pdif	12 43 08.2	+0.3
	baz=295						
AMTX	Amarillo	97.93	51	P	P	12 43 07.0	-0.8
AMTX				IAmb	IAmb	12 43 11.8	
	comp=Z,22nm,1.1s						
AMTX				IAMs_20	IAMs_20	13 30 37.4	
	comp=Z,2µm,18.0s						
F36A	Milaca	98.21	38	P	P	12 43 07.8	-0.9
TPGR	Topolog	98.21	321	⇑P	P	12 43 08.3	-0.5
CFR	Carcaliu	98.21	321	⇑P	P	12 43 08.2	-0.5
EYMN	Ely	98.24	35	IAMs_20	IAMs_20	13 26 58.5	
	comp=Z,1µm,20.0s						
TESR	Tescani	98.39	323	⇑P	P	12 43 08.6	-0.9
TIRR	Tirgusor	98.42	321	⇑P	P	12 43 09.3	-0.3
BIZ	Bicaz	98.47	324	⇑P	P	12 43 09.7	-0.2
R32A	Long Quarter,	98.52	46	P	P	12 43 10.2	-0.2
R32A				IAmb	IAmb	12 43 21.2	
	comp=Z,29nm,1.4s						
R32A				IAMs_20	IAMs_20	13 21 34.1	
	comp=Z,2µm,20.0s						
BUR08	Bucovina Ar. S	98.59	324		Pdif	12 43 10.6	0.0
HARR	Harsova	98.59	321	⇑P	P	12 43 09.7	-0.8
BURAR	Bucovina Array	98.60	324	⇑P	P	12 43 10.5	-0.1
BURAR	Bucovina Array	98.60	324		P	12 43 09.6	-0.9
TLBR	Topalu	98.60	321	⇑P	P	12 43 09.7	-0.7
TX31	Lajitas Ar. Si	98.63	56	P	Pdif	12 43 11.8	+0.6
TX31				IAmb	IAmb	12 43 22.9	
	comp=Z,66nm,1.5s						
TX32	Lajitas Array	98.63	56	P	Pdif	12 43 11.8	+0.7
TXAR	Lajitas Array	98.63	56	P	P	12 43 10.9	-0.2
	comp=Z,3.9nm,1.1s,baz=290,slow=3.7,SNR=15						
TXAR				LR	LR	13 20 07.2	
	comp=Z,2µm,21.6s,baz=0.0,slow=31						
TXAR	Lajitas Array	98.63	56		Pdif	12 43 11.8	+0.6
VRI	Vrincioaia	98.69	322	⇑P	P	12 43 10.6	-0.3
PLOR	Plostina	98.74	322	⇑P	P	12 43 11.2	0.0
KWP	Kalwaria Pacla	98.80	327	*e*P	P	12 43 11.1	-0.1
KWP	Kalwaria Pacla	98.80	327	P	P	12 43 11.2	-0.1
KWP				pmax	pmax		
	comp=Z,53nm,1.1s						
KWP	Kalwaria Pacla	98.80	327	P	P	12 43 11.2	-0.1
E38A	The Farm, Brul	98.95	37	P	P	12 43 10.9	-1.1
SPMN	Marine on St.	98.97	38	Pdiff	P	12 43 11.6	-0.6
	baz=302						
SPMN	Marine on St.	98.97	38	P	Pdif	12 43 13.0	+0.8
AMRR	Amara	99.00	321	⇑P	Pdif	12 43 12.8	+0.6
HOMB	Homborsund	99.08	339	*e*Pdif	Pdif	12 43 08.9	-3.4
MLR	Muntele Rosu	99.35	322	⇑P	Pdif	12 43 13.9	-0.1
DOPR	Dopca	99.42	323	⇑P	Pdif	12 43 14.4	+0.2
KOLS	Kolonicke sedl	99.44	327	*e*P	Pdif	12 43 14.0	-0.2
KOLS	Kolonicke sedl	99.44	327	*e*PDIFF	Pdif	12 43 14.0	-0.2
BORG	Borgarnes	99.60	355	*i* P	Pdif	12 43 17.3	+2.8
SULR		99.61	322	⇑P	Pdif	12 43 15.5	+0.5
UZH	Uzhgorod	99.61	326	*c i*P	Pdif	12 43 14.4	-0.5
UZH				*e*		12 43 27.1	
UZH				*i*		12 53 53.0	
UZH				*i* S	S	12 54 40.0	-6.5
UZH				*e*PS	PS	12 56 14.0	-2.6
CSS	Mathiatis	99.65	310	IAMs_20	IAMs_20	13 35 29.2	
	comp=Z,2µm,19.0s						
KSU1	Kansas State U	99.65	45	Pdiff	Pdif	12 43 15.3	-0.1
	baz=299						
VOIR		99.91	323	⇑P	Pdif	12 43 16.4	-0.1
OJC	Ojcow	99.93	329	*e*P	Pdif	12 43 16.0	-0.4
WMOK	Wichita Mounta	100.14	50	Pdiff	Pdif	12 43 17.9	+0.3
	baz=297						
NIE	Niedzica	100.17	328	*e*P	Pdif	12 43 18.8	+1.3
ARR	Arges	100.19	323	⇓P	Pdif	12 43 18.0	+0.3
ISP	Isparta	100.34	314	IAMs_20	IAMs_20	13 34 38.2	
	comp=Z,1µm,20.0s						
D41A	Chassel	100.38	35	IAMs_20	IAMs_20	13 35 06.0	
	comp=Z,2µm,18.0s						
ABTX	Abilene, Hawle	100.42	52	Pdiff	Pdif	12 43 19.5	+0.5
	baz=296						
HUMR	Humele	100.45	322	⇑P	Pdif	12 43 18.1	-0.7
DRGR		100.47	325	⇑P	Pdif	12 43 17.8	-1.1
COPA	Copaceanca	100.53	322	⇑P	Pdif	12 43 19.1	0.0
OK029	Liberty Lake	100.62	48	IAMs_20	IAMs_20	13 23 26.8	
	comp=Z,2µm,20.0s						
KECS	Kecovo	100.66	327	*e*P	Pdif	12 43 20.1	+0.5
KECS	Kecovo	100.66	327	*e*PDIFF	Pdif	12 43 20.1	+0.5
T35A	Sooner Cattle	100.77	47	IAMs_20	IAMs_20	13 21 03.6	
	comp=Z,3µm,22.0s						
OKCFA	Oklahoma City	100.80	49	IAMs_20	IAMs_20	13 23 45.5	
	comp=Z,2µm,20.0s						
OK025	Westminster Rd	100.81	48	IAMs_20	IAMs_20	13 30 11.6	
	comp=Z,2µm,19.0s						
X34A	Smith Ranch, M	100.90	49	IAMs_20	IAMs_20	13 23 05.1	
	comp=Z,2µm,21.0s						
OK031	S. Brethren Rd	100.99	48	IAMs_20	IAMs_20	13 22 16.8	
	comp=Z,2µm,21.0s						
OKC	Ostrava-Krasne	101.00	329	AMS	AMS	13 34 10.0	
	comp=Z,4µm,16.3s						
I40A	Norwalk	101.01	38	IAMs_20	IAMs_20	13 27 31.8	
	comp=Z,2µm,20.0s						
OK030	Cody Creek RV	101.04	48	IAMs_20	IAMs_20	13 22 18.9	
	comp=Z,2µm,20.0s						
JCT	Junction City	101.22	54	Pdiff	Pdif	12 43 23.1	+0.5
	baz=295						
JCT	Junction City	101.22	54	IAMs_20	IAMs_20	13 23 57.9	
	comp=Z,1µm,19.0s						
KSP	Ksiaz	101.23	331	*e*P	Pdif	12 43 21.8	-0.3
PLVB	Pleven	101.30	321	⇑P	Pdif	12 43 22.5	0.0
PSZ	Piszkesteto	101.32	327	⇑P	Pdif	12 43 22.5	-0.2
PSZ	Piszkesteto	101.32	327	*e*P	Pdif	12 43 22.3	-0.4
PSZ	Piszkesteto	101.32	327	P	Pdif	12 43 22.5	-0.2
PSZ	Piszkesteto	101.32	327	Pdif	Pdif	12 43 22.5	-0.2
MORC	Moravsky Berou	101.33	329	*e*PDIFF	Pdif	12 43 21.3	-1.3
MORC				*e*PP	PP	12 47 32.6	+1.2
F42A	Maple Grove Fa	101.39	36	IAMs_20	IAMs_20	13 24 58.6	
	comp=Z,3µm,21.0s						
OSTC	Ostas	101.46	330	AMS	AMS	13 37 30.0	
	comp=Z,2µm,18.3s						
KRLC	Kraliky	101.51	330	AMS	AMS	13 35 40.0	
	comp=Z,3µm,15.5s						
DPC	Dobruska-Polom	101.55	330	AMS	AMS	13 37 30.0	
	comp=Z,3µm,16.4s						
UPC	Upice	101.59	331	AMS	AMS	13 33 30.0	
	comp=Z,2µm,17.1s						
HERR	Herculane	101.75	323	⇑P	Pdif	12 43 24.5	-0.1
JAVC	Velka Javorina	101.86	329	*e*PDIFF	Pdif	12 43 24.9	-0.2
JAVC				*e*PP	PP	12 47 33.5	-2.0
ZAIG	Zacatecas	102.07	62	IAMs_20	IAMs_20	13 36 58.5	
	comp=Z,1µm,19.0s						
VRAC	Vranov	102.11	329	*e*PDIFF	Pdif	12 43 25.1	-1.0
VRAC				*e*PP	PP	12 47 34.2	-3.0
MDVR	Moldovita	102.22	324	⇓P	Pdif	12 43 26.1	-0.6
PVCC	Panska Ves	102.25	331	AMS	AMS	13 35 50.0	
	comp=Z,2µm,22.0s						
BRG	Berggiesshubel	102.31	332	⇓*e*Piff	Pdif	12 43 26.1	-0.8
BRG				Amp		12 43 27.7	
	comp=Z,9.4nm,1.3s						
BRG				PP	PP	12 47 35.9	-2.6
BRG				Amp		12 47 37.5	
	comp=Z,35nm,1.5s						
KRUC	Moravsky	102.37	329	*e*PDIFF	Pdif	12 43 25.9	-1.3
KRUC				*e*PP	PP	12 47 35.1	-4.0
MODS	Modra-Piesok	102.38	328	*e*P	Pdif	12 43 27.0	-0.3
MODS	Modra-Piesok	102.38	328	*e*PDIFF	Pdif	12 43 27.0	-0.3
CLL	Collm	102.42	332	*i* Pdif	Pdif	12 43 25.4	-2.0
	comp=Z,34nm,1.6s						
CLL				*i*		12 43 39.3	
CLL				*e*		12 46 41.0	
CLL				*e*PPlp		12 47 32.0	
CLL				*i* PP	PP	12 47 45.6	+6.2
CLL				*e*SKSac	SKSac	12 54 03.0	-2.4
CLL				*e*Sdif	Sdif	12 55 08.0	-1.9
CLL				*e*PS	PS	12 56 47.0	+0.5
CLL				*e*PPS	PPS	12 57 48.0	
CLL				*e*SS	SS	13 02 12.0	-3.2
CLL				*e*SSS	SSS	13 06 00.0	
CLL				*e*(SSSS)		13 09 00.0	
CLL	Collm	102.42	332	*i* P	Pdif	12 43 25.4	-2.0
CLL				*e*		12 54 03.0	
CLL				*e*S	Sdif	12 55 08.0	-1.9
CLL				pmax	pmax		
	comp=Z,34nm,1.6s						
CLL	Collm	102.42	332	IAMs_20	IAMs_20	13 32 32.8	
	comp=Z,2µm,20.0s						
P40A	Paris	102.49	43	IAMs_20	IAMs_20	13 26 57.0	
	comp=Z,1µm,21.0s						
CSKK	Cskako	102.52	327	*e*P	Pdif	12 43 28.4	+0.4
PRA	Prague	102.63	331	AMS	AMS	13 35 10.0	
	comp=Z,1µm,14.6s						
PRU	Pruhonice	102.64	331	AMS	AMS	13 37 20.0	
	comp=Z,2µm,15.9s						
L42A	Oliver, Polo	102.65	40	IAMs_20	IAMs_20	13 27 57.1	
	comp=Z,2µm,22.0s						
TREC	Trest	102.66	330	AMS	AMS	13 36 20.0	
	comp=Z,3µm,16.3s						
MPLH	Magyarpolny	103.03	327	*e*P	Pdif	12 43 28.6	-1.5
MORH	Mrgy, Hungar	103.05	326	⇑P	Pdif	12 43 29.5	-0.8
MORH	Mrgy, Hungar	103.05	326	*e*P	Pdif	12 43 29.4	-0.8
K43A	Burlington	103.06	38	IAMs_20	IAMs_20	13 27 20.0	
	comp=Z,2µm,18.0s						
FRGS	Fruska Gora	103.07	325	⇑P	Pdif	12 43 30.7	+0.3
PBCC	Pribram	103.10	331	*e*PP	PP	12 47 43.7	-0.9
G45A	Suttons Bay	103.21	35	IAMs_20	IAMs_20	13 26 42.9	
	comp=Z,2µm,21.0s						
CONA	Conrad Observa	103.39	329	*e*P	Pdif	12 43 32.2	+0.3
	comp=Z,9.9nm,1.3s						
CONA				*e*P	PP	12 47 48.1	+1.2
	comp=Z,15nm,1.3s						
NKC	Novy Kostel	103.43	332	AMS	AMS	13 38 20.0	
	comp=Z,2µm,15.2s						
W39A	Magazine	103.53	47	IAMs_20	IAMs_20	13 24 37.8	
	comp=Z,2µm,20.0s						
DIVS	Divibare	103.61	324	IAMs_20	IAMs_20	13 34 53.1	
	comp=Z,2µm,19.0s						
L44A	Lake County Fo	103.62	39	IAMs_20	IAMs_20	13 23 59.8	
	comp=Z,3µm,22.0s						
KHC	Kasperske Hory	103.68	331	*e*PP	PP	12 47 45.7	-3.3
KHC				AMS	AMS	13 35 00.0	
	comp=Z,2µm,18.7s						
KHC	Kasperske Hory	103.68	331	IAMs_20	IAMs_20	13 32 30.3	
	comp=Z,2µm,20.0s						
GERES	GERESS Array B	103.82	330	Pdiff	Pdif	12 43 33.6	-0.2
	comp=Z,1.7nm,0.8s,baz=52,slow=5.2,SNR=7.1						
GERES				PP	PP	12 47 53.0	+2.9
	comp=Z,1.1nm,0.6s,baz=66,slow=3.3,SNR=4.8						
HQIL	Hanson Quary C	103.87	39	IAMs_20	IAMs_20	13 27 55.6	
	comp=Z,2µm,19.0s						
KVTX	Kingsville	104.00	56	IAMs_20	IAMs_20	13 18 14.4	
	comp=Z,1µm,19.0s						
M44A	Midewin, Midew	104.00	39	IAMs_20	IAMs_20	13 23 58.8	
	comp=Z,2µm,22.0s						
MIAR	Mount Ida	104.01	48	IAMs_20	IAMs_20	13 24 14.4	
	comp=Z,3µm,22.0s						
ARSA	Arzberg	104.01	328	*e*P	Pdif	12 43 31.4	-3.2
	comp=Z,9.4nm,1.6s						
ARSA				*e*P	PP	12 47 47.9	-3.6
	comp=Z,7.4nm,1.2s						
MOA	Molln	104.23	329	*e*P	PKiKP	12 47 53.2	+0.9
	comp=Z,19nm,1.4s						
FCAR	Ozark Folk Cen	104.34	46	IAMs_20	IAMs_20	13 23 49.3	
	comp=Z,3µm,22.0s						
GRA1	Grafenberg Arr	104.38	332	IAMs_20	IAMs_20	13 35 39.5	
	comp=Z,2µm,19.0s						
O44A	Mansfield	104.44	41	IAMs_20	IAMs_20	13 31 39.7	
	comp=Z,2µm,19.0s						
X40A	Basin Creek Fa	104.56	48	IAMs_20	IAMs_20	13 23 57.1	
	comp=Z,2µm,22.0s						
NATX	Nacogdoches	104.57	51	IAMs_20	IAMs_20	13 37 54.5	
	comp=Z,2µm,18.0s						
SOKA	Soboth	104.64	328	*e*P	Pdif	12 43 36.8	-0.7
	comp=Z,14nm,1.4s						
SOKA				*e*P	PKiKP	12 47 54.4	+1.2
	comp=Z,21nm,1.3s						
L46A	Eue Claire	104.69	38	IAMs_20	IAMs_20	13 28 56.0	
	comp=Z,2µm,21.0s						
OBKA	Obir	105.00	328	*e*P	Pdif	12 43 39.2	+0.1
	comp=Z,22nm,1.8s						
OBKA				*e*P	PP	12 47 57.5	-1.5
	comp=Z,8.8nm,1.1s						
PDG	Podgorica	105.06	323	IAMs_20	IAMs_20	13 33 15.2	
	comp=Z,2µm,22.0s						
SFIN	Lafayette	105.17	40	IAMs_20	IAMs_20	13 27 56.8	
	comp=Z,2µm,21.0s						
KBA	Koelnbreinsper	105.22	329	*e*P	PP	12 47 59.6	-1.0
	comp=Z,28nm,1.3s						
QSPA	South Pole Qui	105.23	180	IAMs_20	IAMs_20	13 33 18.9	
	comp=Z,1µm,19.0s						
MYKA	Terra Mystica	105.38	329	*e*P	PP	12 47 59.1	-2.6
	comp=Z,16nm,1.5s						
P46A	Rosedale	105.55	41	IAMs_20	IAMs_20	13 32 19.8	
	comp=Z,2µm,21.0s						
ZOU	Zoufplan	105.76	329	IAMs_20	IAMs_20	13 36 19.4	
	comp=Z,2µm,20.0s						
ABTA	Abfaltersbach	105.86	329	*e*P	PP	12 48 01.1	-4.1
	comp=Z,13nm,1.3s						
BTNL	Ternell	105.88	335	*d*PP	PP	12 48 03.7	-1.5
WATA	Walderalm	105.90	330	*e*P	PKiKP	12 47 58.7	+3.2
	comp=Z,23nm,1.4s						
MEM	Membach	105.91	335	*d*PP	PP	12 48 04.8	-0.6
BSTI	Sart Tilman	106.11	336	*d*PP	PP	12 48 06.4	-0.3
MOTA	Moosalm	106.12	330	*e*P	PKiKP	12 47 56.6	+0.6
	comp=Z,39nm,1.4s						
SQTA	Sankt Quirin	106.16	330	*e*P	PKiKP	12 47 56.2	+0.2
	comp=Z,18nm,1.4s						
RETA	Reutte	106.17	331	*e*P	Pdif	12 43 43.1	-1.1
	comp=Z,7.9nm,1.6s						
RETA				*e*P	PKiKP	12 47 56.4	+0.4
	comp=Z,11nm,1.5s						
BLO	Bloomington	106.24	41	IAMs_20	IAMs_20	13 32 59.1	
	comp=Z,1µm,20.0s						
UNM	Universidad Na	106.31	64	IAMs_20	IAMs_20	13 22 56.0	
	comp=Z,2µm,21.0s						
BCLA	Clavier	106.34	336	*d*PP	PP	12 48 08.1	-0.4
FETA	Feichten	106.53	330	*e*P	Pdif	12 43 44.6	-1.4
	comp=Z,7.8nm,1.6s						
FETA				*e*P	PKiKP	12 47 57.1	+0.4
	comp=Z,12nm,1.1s						
WLF	Walferdange	106.59	335	*d*PP	PP	12 48 10.3	0.0
BMRD	Maredsous	106.65	336	*d*PP	PP	12 48 10.2	-0.5
SNF	Seneffe	106.67	336	*d*PP	PP	12 48 10.5	-0.4
DAVA	Damuels	106.73	331	*e*P	PKiKP	12 47 57.0	-0.1
	comp=Z,31nm,1.3s						
DOU	Dourbes	106.88	336	*d*PP	PP	12 48 12.1	-0.3
OXF	Oxford	106.96	46	IAMs_20	IAMs_20	13 26 24.5	
	comp=Z,2µm,21.0s						
Q51A	Peebles	108.29	39	IAMs_20	IAMs_20	13 26 54.4	
	comp=Z,2µm,21.0s						
INTR	Introdacqua	108.37	325	IAMs_20	IAMs_20	13 42 40.9	
	comp=Z,2µm,18.0s						
TIP	Timpagrande	108.56	321	IAMs_20	IAMs_20	13 42 14.3	
	comp=Z,2µm,20.0s						
Z47A	Carrollton	108.61	47	IAMs_20	IAMs_20	13 25 58.2	
	comp=Z,2µm,22.0s						
OSSC	Osservatorio P	108.76	328	IAMs_20	IAMs_20	13 37 10.8	
	comp=Z,2µm,20.0s						
LRAL	Lakeview Retre	109.45	46	IAMs_20	IAMs_20	13 28 31.4	
	comp=Z,2µm,20.0s						
CASP	Castiglione de	109.47	327	IAMs_20	IAMs_20	13 37 20.7	
	comp=Z,2µm,18.0s						
MCWV	Mont Chateau	109.96	37	IAMs_20	IAMs_20	13 29 59.6	
	comp=Z,2µm,21.0s						
250A	Grady	110.55	47	IAMs_20	IAMs_20	13 27 09.6	
	comp=Z,2µm,22.0s						
BLA	Blacksburg	111.22	39	IAMs_20	IAMs_20	13 29 39.0	
	comp=Z,2µm,22.0s						
352A	Blakely	111.77	46	IAMs_20	IAMs_20	13 41 47.9	
	comp=Z,2µm,19.0s						
CCIG	Comitan	113.67	64	IAMs_20	IAMs_20	13 26 51.0	
	comp=Z,1µm,21.0s						
TEIG	Tepich	115.16	59	IAMs_20	IAMs_20	13 31 08.1	
	comp=Z,1µm,21.0s						
PETF	Flores	115.35	63	IAMs_20	IAMs_20	13 44 52.5	
	comp=Z,1µm,18.0s						
MBAR	Mbarara	115.45	277	PKIKP	PKPdf	12 48 13.1	-1.4
MBAR	Mbarara	115.45	277		PKPdf	12 48 13.1	-1.4
ESQI	Esquipulas	116.84	65	IAMs_20	IAMs_20	13 44 47.1	
	comp=Z,869nm,18.0s						
SNET	Serv Nac Est T	117.32	65	IAMs_20	IAMs_20	13 27 33.6	
	comp=Z,1µm,22.0s						
061Z	Ochoppi	117.90	49	IAMs_20	IAMs_20	13 34 32.3	
	comp=Z,2µm,21.0s						
MVO	Moncorvo	118.80	338	*e*PKP	PKiKP	12 48 20.8	+0.7
MVO	Moncorvo	118.80	338	*e*LR	LR	13 33 45.8	
	comp=Z,868nm,22.0s						
ES08	SONSECA Array	118.86	335	IAMs_20	IAMs_20	13 24 14.4	
	comp=Z,1µm,20.0s						
ES06	SONSECA Array	118.88	335	IAMs_20	IAMs_20	13 24 41.1	
	comp=Z,1µm,19.0s						
ESDC	Sonseca Array	118.89	335	PKP	PKiKP	12 48 20.6	+0.3
	comp=Z,3.4nm,1.0s,baz=25,slow=2.8,SNR=7.4						
ESDC				PP	PP	12 49 35.7	-2.4
	comp=Z,9.4nm,1.0s,baz=16,slow=5.8,SNR=9.8						
PAB	San Pablo	119.15	335	IAMs_20	IAMs_20	13 50 21.3	
	comp=Z,2µm,19.0s						
MTE	Manteigas	119.65	338	*e*PKP	PKiKP	12 48 22.6	+0.8
MTE	Manteigas	119.65	338	*e*LR	LR	13 33 41.5	
	comp=Z,807nm,20.0s						
PCBR	Castelo Branco	120.12	337	*e*PKP	PKiKP	12 48 23.1	+0.4
PMRV	Marv??o	120.45	337	*e*PKP	PKiKP	12 48 24.2	+0.8
PMRV	Marv??o	120.45	337	*e*LR	LR	13 35 13.0	
	comp=Z,925nm,18.0s						
SNAA	Sanae	120.95	191	PKiKP	PKPdf	12 48 22.9	-0.4
SNAA	Sanae	120.95	191	*d i*PKIKP	PKPdf	12 48 21.8	-1.4
SNAA				MLR	MLR		
	comp=Z,1µm,20.0s						
SNAA	Sanae	120.95	191	PKPdf	PKPdf	12 48 22.6	-0.7
SNAA				IAMs_20	IAMs_20	13 42 55.9	
	comp=Z,1µm,19.0s						
LSZ	Lusaka	121.19	261	PKIKP	PKPdf	12 48 24.7	-0.7
LSZ	Lusaka	121.19	261	PKPdf	PKPdf	12 48 24.7	-0.7
EVO	Evora	121.47	337	*e*PKP	PKiKP	12 48 26.1	+0.7
PCVE	Castro Verde	122.26	337	*e*PKP	PKiKP	12 48 27.1	+0.1
PVAQ	Vaqueiros	122.34	336	*e*LR	LR	13 36 06.7	
	comp=Z,1µm,18.0s						
VNA2	Neumayer--Watz	122.36	190	PKiKP	PKiKP	12 48 26.0	-0.1
VNA3	Neumayer Olymp	122.43	189	PKiKP	PKPdf	12 48 25.8	-0.2
JTS	Las Juntas de	122.55	67	IAMs_20	IAMs_20	13 28 51.4	
	comp=Z,925nm,21.0s						
VNA1	Neumayer--Stat	122.74	190	PKiKP	PKPdf	12 48 26.4	-0.2
HDC	Heredia	123.42	67	IAMs_20	IAMs_20	13 41 59.4	
	comp=Z,763nm,18.0s						
LBTB	Lobatse	124.55	250	PKIKP	PKiKP	12 48 31.9	0.0
LBTB	Lobatse	124.55	250	PKPdf	PKiKP	12 48 31.9	0.0
BOSA	Boshof	124.89	246	PKP	PKiKP	12 48 33.0	+0.5
	comp=Z,4.5nm,0.5s,baz=181,slow=3.8,SNR=5.1						
BOSA	Boshof	124.89	246	PKIKP	PKPdf	12 48 31.7	-0.4
BOSA	Boshof	124.89	246		PKPdf	12 48 31.7	-0.4
TAM	Tamanrasset	126.50	314	PKIKP	PKiKP	12 48 35.9	0.0
TAM	Tamanrasset	126.50	314	PKPdf	PKiKP	12 48 35.9	0.0
SDDR	Presa de Saban	129.12	49	IAMs_20	IAMs_20	13 38 21.7	
	comp=Z,2µm,22.0s						
SC01	Santiago de lo	129.24	48	IAMs_20	IAMs_20	13 37 59.8	
	comp=Z,2µm,22.0s						
MOTC	Monteria, Cord	131.37	63	*e*P	PKPdf	12 48 44.7	-0.1
SMRC	Santa Marta, M	131.38	60	*e*P	PKiKP	12 48 49.1	+3.4
DBBC	Dabeiba	131.73	66	*e*P	PKPdf	12 48 45.6	0.0
CBOC	Ciudad Bolivar	132.43	67	*e*P	PKPdf	12 48 47.2	+0.2
OTAV	Otavalo	132.49	75	PKIKP	PKPdf	12 48 46.9	-0.6
OTAV				MLR	MLR		
	comp=Z,800nm,18.0s						
OTAV	Otavalo	132.49	75		PKPdf	12 48 46.9	-0.6
OTAV	Otavalo	132.49	75	IAMs_20	IAMs_20	13 47 29.2	
	comp=Z,847nm,18.0s						
OTAV	Otavalo	132.49	75	*e*P	PKiKP	12 48 48.2	-0.4
OTAV	Otavalo	132.49	75	*e*P	PKPdf	12 48 47.8	+0.3
PLMC	San Jos del P	132.62	68	*e*P	PKiKP	12 48 47.9	-0.4
ZARC	Zaragoza, Cauc	132.69	64	*e*P	PKPdf	12 48 47.2	-0.1
HELC	Santa Helena	132.71	66	*e*P	PKiKP	12 48 50.0	+1.1
SMLC	San Martn de	132.72	62	*e*P	PKPdf	12 48 42.2	-5.1
YOTC	Yotoco, Valle	132.96	69	*e*P	PKPdf	12 48 47.7	-0.2
OBIP	Obispado Ponce	133.08	46	IAMs_20	IAMs_20	13 44 58.2	
	comp=Z,1µm,19.0s						
GCUF	Volcan Galeras	133.15	73	*e*P	PKiKP	12 48 49.7	-0.3
GUY2C	Guyana, Caldas	133.29	67	*e*P	PKPdf	12 48 49.0	0.0
SJG	San Juan	133.34	46	IAMs_20	IAMs_20	13 51 29.4	
	comp=Z,1µm,20.0s						
RREF	El Recreo	133.46	68	*e*P	PKiKP	12 48 52.7	+2.0
PTBC	PUERTO BERRIO,	133.49	65	*e*P	PKPdf	12 48 48.1	-0.7
NORC	Norcasia	133.58	67	*e*P	PKPdf	12 48 48.3	-0.7
ANIL	Santa Ana	133.59	68	*e*P	PKPdf	12 48 49.8	+0.5
PCON	Cinco Dias	133.59	71	*e*P	PKiKP	12 48 50.6	-0.3
TOLC	Tolima	133.62	68	*e*P	PKPdf	12 48 49.8	+0.3
MARP	Paez Belalcaza	133.78	71	*e*P	PKPdf	12 48 50.2	+0.5
ORTC	Ortega, Tolima	133.98	69	*e*P	PKPdf	12 48 48.4	-1.4
SPBC	San Pablo de B	134.25	66	*e*P	PKPdf	12 48 50.0	-0.3
BETC	Betania	134.32	70	*e*P	PKPdf	12 48 50.2	-0.2
BARC	Barichara	134.58	64	*e*P	PKPdf	12 48 49.7	-1.4
RUSC	La Rusia	135.00	65	*e*P	PKPdf	12 48 52.2	0.0
CHIC	Chingaza	135.01	67	*e*P	PKPdf	12 48 48.0	-4.1
TOC3	Torodi Ar. Sit	135.46	308	IAMs_20	IAMs_20	13 51 51.1	
	comp=Z,790nm,22.0s						
TOB1	Torodi Ar. Sit	135.47	308	IAMs_20	IAMs_20	13 51 35.3	
	comp=Z,738nm,21.0s						
TOA0	Torodi Ar. Sit	135.48	308	PKPdf	PKPdf	12 48 52.9	+0.4
TORD	Torodi Ar. Bea	135.48	308	PKhKP	PKPpre	12 48 40.5	
	comp=Z,0.8nm,0.5s,baz=60,slow=2.7,SNR=5.3						
TORD				PKP	PKPdf	12 48 53.1	+0.7
	comp=Z,33nm,1.2s,baz=21,slow=2.3,SNR=22						
TORD				PP	PP	12 51 30.2	+1.4
	comp=Z,10nm,1.0s,baz=43,slow=5.2,SNR=6.5						
TORD				SKPbc	SKPbc	12 52 22.9	+0.9
	comp=Z,7.6nm,1.1s,baz=32,slow=1.9,SNR=6.5						
TOC4	Torodi Ar. Sit	135.49	308	IAMs_20	IAMs_20	13 51 50.8	
	comp=Z,805nm,21.0s						
SDV	Santo Domingo	135.58	60	IAMs_20	IAMs_20	13 44 19.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,859nm,21.0s						
SDV	Santo Domingo	135.58	60	*e*P	PKPdf	12 48 52.7	-0.2
SDV	Santo Domingo	135.58	60	*e*P	PKPdf	12 48 53.3	+0.3
PTLC	Puerto Leguiza	135.90	73	*e*P	PKPdf	12 48 54.1	+0.8
MACC	Macarena, Meta	135.99	70	*e*P	PKPdf	12 48 47.7	-5.8
NNA	Nana	137.31	91	IAMs_20	IAMs_20	13 57 07.5	
	comp=Z,1μm,18.0s						
KOWA	Kowa	138.73	315	PP	PP	12 51 48.7	-0.2
	comp=Z,10nm,0.9s,baz=41,slow=7.7,SNR=6.1						
PLCA	Paso Flores	138.82	135	PKhKP	PKPpre	12 48 50.0	
	comp=Z,2.5nm,0.9s,baz=224,slow=4.5,SNR=5.0						
PLCA				PKP	PKiKP	12 48 59.6	-0.6
	comp=Z,9.9nm,1.0s,baz=219,slow=1.0,SNR=12						
PLCA	Paso Flores	138.82	135	PKPdf	PKPdf	12 48 57.8	-0.2
PLCA	Paso Flores	138.82	135	*e*P	PKPdf	12 48 58.5	+0.5
FDF	Fort de France	139.12	44	PKIKP	PKPdf	12 48 56.3	-2.9
FDF	Fort de France	139.12	44	PKPdf	PKPdf	12 48 56.3	-2.9
FDF				IAMs_20	IAMs_20	13 43 15.4	
	comp=Z,1μm,22.0s						
BI02	San Fabin de	139.97	129	PKPdf	PKPdf	12 48 59.5	-0.7
BI02				IAMs_20	IAMs_20	13 41 17.0	
	comp=Z,935nm,18.0s						
CZSB	Cruzeiro do Su	140.41	83	*e*P	PKPdf	12 49 02.0	+0.4
PEL	Peldehue	141.62	124	PKIKP	PKPdf	12 49 01.9	-1.4
PEL	Peldehue	141.62	124		PKPdf	12 49 01.9	-1.4
PEL				IAMs_20	IAMs_20	13 57 36.5	
	comp=Z,1μm,18.0s						
VA03	San Esteban	141.85	124		PKPdf	12 49 04.4	+0.7
CO03	El Pedregal	142.28	121	PKPdf	PKPdf	12 49 04.8	+0.2
GO04	Tololo Observa	142.36	120	PKPdf	PKPdf	12 49 03.4	-1.5
AUSP	Uspallata	142.95	123	*i* P	PKPdf	12 49 03.0	-3.0
AAGR	Agrelo	143.12	125	*i* P	PKPbc	12 49 03.3	+0.4
ARCO	CERRO ARCO	143.12	125	*i* P	PKPbc	12 49 03.1	+0.2
ASAL	Salagasta	143.28	124	*i* P	PKPbc	12 49 03.3	-0.1
AROD	Rodeo	143.47	120	*i* P	PKPbc	12 49 05.0	+0.7
ACCO	Cerro Coronel	143.70	121	*i* P	PKPbc	12 49 05.1	+0.2
ZON	Zonda	143.73	123	*i* P	PKPbc	12 49 04.7	+0.1
RTCV	Cerro Valdivia	143.75	123	*i* P	PKPbc	12 49 05.0	+0.3
PB10	IPOC Station P	143.76	109	PKPdf	PKPbc	12 49 05.6	+0.8
PB14	IPOC Station P	143.76	111	PKPdf	PKPbc	12 49 05.7	+0.5
PB14	IPOC Station P	143.76	111	*i* P	PKPbc	12 49 05.5	+0.2
ACDV	Cuesta del Vie	143.77	120	*e*P	PKPbc	12 49 05.0	0.0
RTLL	Cerro Villicun	143.97	122	*i* P	PKPbc	12 49 05.1	-0.2
PB05	IPOC Station P	144.14	108	*i* P	PKPbc	12 49 06.8	+0.6
AP01	Chacalluta	144.18	100	IAMs_20	IAMs_20	13 56 31.7	
	comp=Z,884nm,18.0s						
PB04	IPOC Station P	144.24	107		PKPdf	12 49 07.7	-0.6
PB04				IAMs_20	IAMs_20	13 39 19.6	
	comp=Z,987nm,18.0s						
PB04	IPOC Station P	144.24	107	*i* P	PKPbc	12 49 07.2	+0.7
TA01	Diego Aracena	144.31	104	PKPdf	PKPdf	12 49 07.9	-0.4
PSGCX	Pisagua	144.39	102	PKPdf	PKPdf	12 49 07.9	-0.7
GO02	Mina Guanaco	144.42	112	PKPdf	PKPbc	12 49 07.9	+0.6
PB07	IPOC Station P	144.52	106		PKPdf	12 49 08.7	-0.2
PB07	IPOC Station P	144.52	106	*i* P	PKPdf	12 49 08.3	-0.5
DBIC	Dimbokro	144.53	306	PKP	PKPbc	12 49 07.7	+0.2
	comp=Z,252nm,0.8s,baz=29,slow=3.9,SNR=235						
AC02	Maricunga	144.54	115	PKPdf	PKPbc	12 49 08.4	+0.6
PB02	IPOC Station P	144.54	105	*i* P	PKPdf	12 49 08.3	-0.5
PB03	IPOC Station P	144.62	106	*i* P	PKPdf	12 49 08.5	-0.5
KIC	Kosan Boka	144.63	306	*e*PKP1	PKPbc	12 49 08.0	+0.2
	comp=Z,439nm,0.7s						
TIC	Toumodi	144.68	306	*e*PKP1	PKPbc	12 49 08.0	0.0
PB06	IPOC Station P	144.74	108		PKPdf	12 49 09.2	0.0
PB06	IPOC Station P	144.74	108	*i* P	PKPdf	12 49 08.8	-0.3
PB15	IPOC Station P	144.78	108		PKPdf	12 49 09.1	-0.2
PB15	IPOC Station P	144.78	108	*i* P	PKPdf	12 49 09.4	+0.1
MNMC	Minye Minye	144.89	101		PKPdf	12 49 09.8	+0.2
MNMCX	Minye Minye	144.89	101	*i* P	PKPdf	12 49 10.2	+0.5
VCA	Vinchina	144.91	118	*i* P	PKPdf	12 49 09.6	+0.3
PB01	IPOC Station P	144.94	105		PKPdf	12 49 09.5	0.0
PB01	IPOC Station P	144.94	105	*i* P	PKPdf	12 49 09.7	+0.3
LIC	Lamto	144.94	306	*e*PKP1	PKPbc	12 49 09.0	+0.2
	comp=Z,1μm,0.8s						
PB16	IPOC Station P	144.97	100	PKPdf	PKPdf	12 49 10.8	+0.6
PB16	IPOC Station P	144.97	100	*i* P	PKPdf	12 49 11.0	+0.8
AVFE	Valle Fertil	145.00	122	*e*P	PKPbc	12 49 08.7	0.0
PB09	IPOC Station P	145.12	106		PKPdf	12 49 11.0	+1.1
PB09	IPOC Station P	145.12	106	*i* P	PKPdf	12 49 11.0	+1.1
PB08	IPOC Station P	145.29	103		PKPdf	12 49 11.3	+0.8
PB08	IPOC Station P	145.29	103	*i* P	PKPdf	12 49 11.4	+0.9
LVC	Limon Verde	145.35	108	PKIKP	PKPab	12 49 12.1	+1.6
LVC	Limon Verde	145.35	108	PKPbc	PKPab	12 49 12.1	+1.6
LVC	Limon Verde	145.35	108	*i* P	PKPab	12 49 11.3	+0.7
LVC	Limon Verde	145.35	108	*e*P	PKPbc	12 49 09.5	-0.8
ACHE	Chepes	145.49	123	*e*P	PKPab	12 49 10.5	-0.1
ACLC	CERRO LA CRUZ	145.78	120	*e*P	PKPbc	12 49 11.2	-0.1
MRA	San Martin	145.80	126	*e*P	PKPbc	12 49 11.1	-0.1
APLL	PUNTA DE LOS L	145.84	122	*i* P	PKPbc	12 49 11.5	+0.1
CYA	Choya	147.03	119	*e*P	PKPbc	12 49 13.8	-1.0
TCA	Tanti	147.09	124	*e*P	PKPbc	12 49 14.2	-0.9
ETMB	Extrema	147.13	84	*e*P	PKPdf	12 49 13.0	-0.3
FSA	Cafayete	147.45	115	*e*P	PKPbc	12 49 15.3	-1.0
AHML	Horco Molle	147.86	116	*e*P	PKPdf	12 49 15.4	+1.2
AHML				*i* P	PKPbc	12 49 16.2	-1.0
SACV	Santiago Islan	148.43	342		PKiKP	12 49 20.4	-0.2
HJA	Humahuaca	148.49	109	*e*P	PKPbc	12 49 18.1	-1.3
PTGA	Pitinga	149.64	64	PKPdf	PKPdf	12 49 18.1	+0.7
PTGA				IAMs_20	IAMs_20	13 51 19.4	
	comp=Z,973nm,21.0s						
PTGA	Pitinga	149.64	64	*e*P	PKPdf	12 49 18.2	+0.8
PTGA	Pitinga	149.64	64	*e*P	PKPdf	12 49 17.7	+0.2
SAML	Samuel	149.82	81		PKPdf	12 49 17.8	+0.1
SAML	Samuel	149.82	81	IAMs_20	IAMs_20	14 01 43.5	
	comp=Z,939nm,19.0s						
SAML	Samuel	149.82	81	*e*P	PKPdf	12 49 18.0	+0.3
SAML	Samuel	149.82	81	*e*P	PKPdf	12 49 18.0	+0.3
MACA	Manacapuru-AM	150.14	69	*e*P	PKPdf	12 49 18.6	+0.4
MDP	Montagnes des	151.82	45	PKPbc	PKPbc	12 49 27.2	0.0
	baz=310,slow=3.2						
VILB	Vilhena	153.51	88	*e*P	PKPdf	12 49 23.5	+0.3
ITQB	Itaqui	154.03	127	*e*P	PKPdf	12 49 23.6	0.0
CPUP	Villa Florida	154.84	120	PKP	PKPdf	12 49 24.6	-0.1
	comp=Z,6.9nm,1.1s,baz=322,slow=0.4,SNR=6.6						
CPUP	Villa Florida	154.84	120	PKIKP	PKPdf	12 49 25.5	+0.7
CPUP				PKP	PKPbc	12 49 33.1	-0.3
CPUP	Villa Florida	154.84	120	PKPdf	PKPdf	12 49 25.5	+0.7
CPUP					PKPbc	12 49 33.1	-0.3
CPUP	Villa Florida	154.84	120	*e*P	PKPdf	12 49 25.2	+0.4
MALB	Monte Alegre	155.07	59	*e*P	PKPdf	12 49 25.9	+0.5
ITTB	Itaituba	155.09	66	*e*P	PKPdf	12 49 25.8	+0.3
PLTB	Pedras Altas	155.13	135	*e*P	PKPdf	12 49 25.2	+0.1
MCPB	Macapa, AP	155.96	53	*e*P	PKPdf	12 49 27.3	+0.6
CPSB	Cacapava Do Su	156.02	132	*e*P	PKPdf	12 49 26.5	+0.2
NPGB	Novo Progresso	156.56	72	*e*P	PKPdf	12 49 27.5	0.0
AQDB	Aquidauana	157.82	106	*e*P	PKPdf	12 49 29.1	+0.2
CNLB	Canela	158.49	133	*e*P	PKPdf	12 49 30.9	+1.4
ITAB	Concordia	158.67	127	*e*P	PKPdf	12 49 30.8	+1.1
PP1B	Ponte de Pedra	158.90	99	*e*P	PKPdf	12 49 31.1	+0.9
PTGB	Pitanga	159.85	120	*e*P	PKPdf	12 49 31.8	+0.5
TRCB	Terra Rica	160.05	115	*e*P	PKPdf	12 49 32.1	+0.6
TMAB	Tom-Au,PA,Br	160.26	50	*e*P	PKPdf	12 49 32.4	+0.4
PRPB	Parauapebas	161.11	63	*e*P	PKPdf	12 49 33.2	+0.4
PCMB	Pacaembu	161.61	112	*e*P	PKPdf	12 49 33.2	0.0
ARAG	Araguaiana, MT	161.86	93	*e*P	PKPdf	12 49 34.0	+0.5
SNDB	Serra Nova Dou	161.89	81	*e*P	PKPdf	12 49 33.8	+0.2
FRTB	Fartura	162.49	119	*e*P	PKPdf	12 49 34.3	+0.3
ITRB	Iturama	162.90	107	*e*P	PKPdf	12 49 35.1	+0.6
ROSB	Rosrio	163.42	43	*e*P	PKPdf	12 49 35.8	+0.7
PET01	Itanhaem-SP	163.93	126	*e*P	PKPdf	12 49 35.4	+0.1
SPB	Sao Paulo	164.14	123	*e*P	PKPdf	12 49 36.0	+0.5
BB19B	Bebedouro	164.21	113	*e*P	PKPdf	12 49 35.8	+0.1
SMTB	Santa Maria do	164.32	67	*e*P	PKPdf	12 49 36.5	+0.5
PEXB	Peixe	164.77	79	*e*P	PKPdf	12 49 36.6	+0.3
VAO	Valinhos	164.80	122	*e*P	PKPdf	12 49 37.0	+0.8
IPMB	Ipameri, GO	165.19	102	*e*P	PKPdf	12 49 37.1	+0.4
BDFB	Brasilia	165.52	93	PKP	PKPdf	12 49 37.1	+0.1
	comp=Z,6.9nm,0.9s,baz=24,slow=7.0,SNR=6.9						
BDFB	Brasilia	165.52	93		PKPdf	12 49 38.1	+1.0
PARB	Paraibuna	165.71	125	*e*P	PKPdf	12 49 37.4	+0.4
NBMO	Morrinhos-CE	166.12	31	*e*P	PKPdf	12 49 38.1	+0.6
NBPS	Pedro II - PI	166.26	38	*e*P	PKPdf	12 49 38.1	+0.4
ESAR	Angra dos Reis	166.80	127	*e*P	PKPdf	12 49 38.1	+0.4
BSCB	Bom Sucesso	167.50	118	*e*P	PKPdf	12 49 38.9	+0.5
VAS01	Vassouras-RJ	167.97	126	*e*P	PKPdf	12 49 39.3	+0.6
SDBA	SAO DESIDERIO	168.06	77	*e*P	PKPdf	12 49 39.5	+0.5
DUB01	Friburgo-RJ	168.91	128	*e*P	PKPdf	12 49 40.0	+0.7
JANB	Januaria	169.07	90	*e*P	PKPdf	12 49 40.1	+0.5
DIAM	Diamantina, MG	169.38	107	*e*P	PKPdf	12 49 40.2	+0.4
NBPA	Parau_RN	169.59	23	*e*P	PKPdf	12 49 40.8	+0.9
CAM01	Campos-RJ	169.59	129	*e*P	PKPdf	12 49 40.5	+0.9
RCBR	Riachuelo	170.06	17	*e*P	PKPdf	12 49 40.9	+0.7
ALF01	Guarapari-ES	171.00	126	*e*P	PKPdf	12 49 41.0	+0.5
NBLI	Livramento-PB	171.12	26	*e*P	PKPdf	12 49 41.5	+0.7
SJMB	Sao Joao De Ma	171.50	114	*e*P	PKPdf	12 49 41.5	+0.7
BSFB	Barra de Sao F	171.75	116	*e*P	PKPdf	12 49 41.5	+0.6
RIB01	Linhares ES	171.93	120	*e*P	PKPdf	12 49 41.8	+0.8
NBRF	Rio Formoso -	173.00	18	*e*P	PKPdf	12 49 42.3	+0.7
GDU01	Guandu, BA	173.41	76	*e*P	PKPdf	12 49 42.3	+0.6

IDC ***31*** *12:29:35.5±4.4, 18°.77S×177°.57W, h526^{km}±51^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.6/40, mbtmp4.5/11, Error ellipse: s-maj=24.0km s-min=22.3km az=179.0*

NEIC ***31*** *12:29:38.9±1.8, 18°.7S±0°.1×177°.7W±0°.1, h562^{km}±10^{km}, mb4.4/12, Error ellipse: s-maj=20.9km s-min=19.3km az=164.0*

ISC 31 12:29:37.8±0.5**, 18°.7S**±0°.1×**177°.70W**±0°.09**, h550**^{km}**, n46, σ0^{s}87**/43**, mb4.4**/14**, 6C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.15	282		P	12 31 05.5	+4.5
NIUE	Niue	7.37	94	P	P	12 31 30.5	+1.1
AFI	Afiamalu	7.40	51	P	P	12 31 29.9	0.0
SANVU	Saraoutou	14.79	280	P	P	12 32 46.3	+1.1
DZM	Mont Dzumac	15.24	255	P	P	12 32 49.4	-0.5
	0.3nm,0.3s,baz=86,slow=19,SNR=2.2						
DZM	Mont Dzumac	15.24	255	P	P	12 32 49.4	-0.5
DZM				IAmb	IAmb	12 32 51.3	
	comp=Z,16nm,1.1s						
OUZ	Omahuta	18.20	203	P	P	12 33 19.5	+2.1
URZ	Urewera	20.03	192	P	P	12 33 30.8	-3.2
	comp=Z,1.0nm,0.3s,baz=292,slow=4.0,SNR=9.2						
EIDS	Eidsvold	29.65	251	P	P	12 34 59.1	-0.2
EIDS				IAmb	IAmb	12 35 00.6	
	comp=Z,12nm,1.3s						
ARMA	Armidale	30.15	241	P	P	12 35 04.8	+1.1
CTAO	Charters Tower	33.99	262	P	P	12 35 37.0	+0.7
CTAO				IAmb	IAmb	12 35 37.8	
	comp=Z,8.5nm,0.8s						
TOO	Toolangi	37.22	232	P	P	12 36 03.3	+0.4
STKA	Stephens Creek	38.86	242	P	P	12 36 17.1	+0.8
	comp=Z,9.3nm,0.7s,baz=90,slow=9.6,SNR=14						
STKA	Stephens Creek	38.86	242	P	P	12 36 17.2	+0.8
BBOO	Buckleboo	43.63	242	P	P	12 36 54.2	+0.1
BBOO				IAmb	IAmb	12 36 54.6	
	comp=Z,12nm,0.8s						
AS31	Alice Springs	45.23	255	P	P	12 37 06.1	-0.5
AS31				IAmb	IAmb	12 37 18.1	
	comp=Z,7.5nm,0.5s						
ASAR	Alice Springs	45.24	255	P	P	12 37 06.7	0.0
	comp=Z,16nm,0.8s,baz=86,slow=8.7,SNR=120						
ASAR	Alice Springs	45.24	255	P	P	12 37 06.2	-0.4
FORT	Forrest	50.29	245	P	P	12 37 43.5	-0.7
SIJI	Sorong	53.07	283	P	P	12 38 04.3	-0.1
	comp=Z,29nm,0.7s,baz=151,slow=6.3,SNR=5.8						
VNDA	Vanda	59.74	185	P	P	12 38 50.1	+0.8
QSPA	South Pole Qui	71.38	180	P	P	12 40 02.6	+0.3
QSPA				IAmb	IAmb	12 40 03.4	
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	74.59	345	P	P	12 40 20.6	-0.1
	comp=Z,6.0nm,0.7s,baz=123,slow=9.3,SNR=12						
PETK	Petropavlovsk-	74.59	345	P	P	12 40 21.0	+0.3
NVAR	Mina Array Bea	79.51	43	P	P	12 40 47.8	-0.2
	comp=Z,0.7nm,0.7s,baz=215,slow=10.0,SNR=3.7						
MAW	Mawson	83.37	200	P	P	12 41 06.9	-0.1
	comp=Z,4.2nm,0.8s,baz=168,slow=9.3,SNR=2.7						
SEY	Seymchan	84.67	347	P	P	12 41 12.8	-0.5
	comp=Z,19nm,1.1s,baz=204,slow=6.4,SNR=2.0						
TXAR	Lajitas Array	85.84	57	P	P	12 41 21.2	+1.3
	comp=Z,0.9nm,0.8s,baz=216,slow=6.2,SNR=11						
PDAR	Pinedale Array	87.45	43	P	P	12 41 27.4	0.0
	comp=Z,0.6nm,0.8s,baz=193,slow=2.6,SNR=4.9						
SNAA	Sanae	89.81	178	P	P	12 41 36.7	-1.0
VNA3	Neumayer Olymp	89.93	176	P	P	12 41 37.3	-0.8
VNA2	Neumayer--Watz	90.38	177	P	P	12 41 39.7	-0.6
	baz=186,slow=3.7						
VNA1	Neumayer--Stat	90.60	176	P	P	12 41 40.7	-0.5
ARCES	ARCESS Array B	127.19	350	PKP	PKPdf	12 47 38.2	-1.0
	comp=Z,3.9nm,0.8s,baz=78,slow=0.3,SNR=20						
FINES	FINESS Array B	134.11	344	PKP	PKiKP	12 47 53.4	-0.6
	comp=Z,2.5nm,0.8s,baz=135,slow=4.1,SNR=6.7						
AKASG	Malin Array Be	141.55	332	PKhKP	PKPpre	12 48 00.6	
	comp=Z,0.8nm,0.3s,baz=42,slow=4.0,SNR=6.6						
SORM	Soroca	143.79	330	⇓P	PKPbc	12 48 08.6	-1.0
BIZ	Bicaz	145.71	331	⇑P	PKPbc	12 48 15.5	0.0
BRTR	Keskin Array B	145.80	314	PKPbc	PKPbc	12 48 15.6	-0.6
	comp=Z,2.7nm,0.7s,baz=161,slow=2.7,SNR=2.7						
CLL	Collm	146.35	348	*i* PKPbc	PKPbc	12 48 16.9	-0.2
	comp=Z,12nm,0.6s						
MLR	Muntele Rosu	146.83	329	⇑P	PKPbc	12 48 18.3	-0.5
DRGR		147.32	334	⇑P	PKPbc	12 48 19.8	-0.1
ARR	Arges	147.56	330	⇑P	PKiKP	12 48 21.3	-0.9
GERES	GERESS Array B	148.52	346	PKPbc	PKPbc	12 48 22.8	-0.2
	comp=Z,4.8nm,0.9s,baz=45,slow=4.0,SNR=6.4						
HERR	Herculane	148.95	332	⇑P	PKPbc	12 48 23.7	-0.3
FRGS	Fruska Gora	149.84	335	⇑P	PKPbc	12 48 25.5	-0.6

MAN 31 12:32:39.9, 13°.04N×121°.25E, h17^{km}, mb4.0, ML2.8, MS2.5, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.54	328	⇑*e*P	Pg	12 32 50.8	0.0
PGP				*i* S	Sb	12 32 58.9	+0.3
SJMP	San Jose	0.59	192	*e*P	Pb	12 32 52.7	+0.8
BOAC	Boac	0.71	54	*e*P	Pb	12 32 53.0	-1.0
BOAC				*e*S	Sn	12 33 06.8	+1.0
LUBP	Lubang	1.20	305	*e*P	Pn	12 33 01.1	-0.8
LUBP				*e*S	Sg	12 33 18.3	-0.4
BUSP	Coron	1.46	225	*e*P	Pn	12 33 04.5	-0.9
BUSP				*e*S	Sn	12 33 24.4	+0.3
CGP	Cagayan de Oro	5.68	143	⇓*e*P	Pg	12 34 35.9	+7.2
GLSP	General Luna,	5.77	124	*e*P	Pb	12 34 17.3	-2.9
BUKP	Musuan	6.35	143	*e*P	Pb	12 34 34.5	+4.4
KCP	Kidapawan	7.09	147	⇑*i*P	Pb	12 34 36.7	-6.0
BBP	Basco	7.39	5	*e*P	Pb	12 34 49.0	+1.2
MATI	Mati	7.81	140	*e*P	Pn	12 34 26.0	-6.9
DDMP	Don Marcelino,	8.18	147	*e*P	Pn	12 34 34.2	-3.7

GCMT ***31*** *12:38:26.4±0.2, 56°.64N±0°.01×168°.74W±0°.03, h12^{km}, MW5.3/109, Moment Tensor Solution. s59,c69; s109,c161; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.77±.02; $M_{\theta\theta}$0.65±.02; $M_{\phi\phi}$0.12±.02; $M_{r\theta}$-0.89±.06; $M_{\theta\phi}$-0.14±.02; $M_{\phi r}$-0.52±.07; Best double couple: $M_0$1.23500×10^{17} NP1:ϕ_s294.00000°, δ22.00000°, λ-49.00000°. NP2:ϕ_s71.00000°, δ74.00000°, λ-105.00000°. Principal axes: T 1.0840, Plg27.0000°, Azm172.0000°; N 0.3020, Plg14.0000°, Azm75.0000°; P -1.3860, Plg59.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

AEIC ***31*** *12:38:28±1.8, 56°.56N±0°.03×168°.88W±0°.07, h3^{km}±3^{km} Error ellipse: s-maj=5.9km s-min=3.1km az=65.0*

IDC ***31*** *12:38:29.8±0.6, 56°.59N×168°.95W, h0^{km}, mb4.7/25, mb1 4.9/29, mb1mx4.8/42, mbtmp4.7/29, ML4.6/3, MS4.4/1, Ms1 4.4/1, ms1mx3.6/30, Error ellipse: s-maj=18.1km s-min=10.2km az=178.0*

BJI ***31*** *12:38:29.0±0.0, 56°.60N×169°.00W, h10^{km}, mB5.7/28, mb5.1/51, Ms5.5/21, Ms7 5.3/21*

MOS ***31*** *12:38:30.2±0.9, 56°.67N×168°.94W, h14^{km}, mb5.3/74, Error ellipse: s-maj=7.9km s-min=4.8km az=97.7*

NEIC ***31*** *12:38:31.4±1.7, 56°.65N±0°.05×168°.93W±0°.08, h10^{km}±1^{km}, mb5.3/170, ML4.9(AEIC), Mwc5.3(GCMT), Error ellipse: s-maj=9.8km s-min=5.9km az=215.0*

ISC 31 12:38:31.1±1.1**, 56°.63N**±0°.04×**168°.93W**±0°.04**, h9**^{km}±6^{km}**, n697, σ0^{s}97**/695**, mb5.2**/204**, MS5.1**/16**, 40C-33D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.91	308		Pg	12 38 47.4	-1.2
SPIA	Saint Paul Isl	0.91	308		Sg	12 39 00.7	+0.3
AKGG	Akutan Green G	2.95	144		Pn	12 39 16.4	-1.8
MSW	Makushin Switc	2.98	155		Pn	12 39 18.1	-0.5
MSW					Sn	12 39 55.5	+1.0
AKRB	Akutan Reef Bi	2.99	146		Pn	12 39 17.6	-1.0
AKRB					Sn	12 39 54.6	0.0
AKLV	Akutan Long Va	3.00	144		Pn	12 39 17.7	-1.1
AKLV					Sn	12 39 56.1	+1.3
MAPS	Pakushin South	3.05	157		Pn	12 39 18.6	-0.9
AKBBA	Akutan Broad B	3.06	145		Pn	12 39 17.5	-2.1
MGOD	Makushin Gods	3.07	157		Pn	12 39 19.3	-0.5
MGOD					Sn	12 39 55.8	-0.9
AKUT	Akutan	3.08	143	Pn	Pn	12 39 19.2	-0.7
AKSA	Akutan Strait	3.10	142		Pn	12 39 19.5	-0.8
AKSA					Sn	12 39 57.6	+0.1
UNV	Unalaska Valle	3.12	153	Pn	Pn	12 39 20.3	-0.1
UNV	Unalaska Valle	3.12	153		Sn	12 39 58.1	+0.4
WEBT	Westdahl Beart	3.13	129		Pn	12 39 19.9	-0.6
WTUG	Tugumak	3.13	123		Pn	12 39 20.0	-0.6
WESP	Westdahl Peak	3.21	130		Pn	12 39 20.8	-0.9
OKFG	Magazine Ridge	3.28	169		Pn	12 39 20.8	-1.8
OKFG					Sn	12 39 59.1	-2.5
OKSO	Okmok South	3.31	172		Pn	12 39 20.8	-2.3
OKSO					Sn	12 40 00.3	-2.2
SSLS	Shishaldin Sou	3.39	122		Pn	12 39 23.5	-0.7
OKSP	Okmok Steeple	3.40	174		Pn	12 39 22.4	-2.0
FALS	False Pass	3.59	117		Pn	12 39 27.2	+0.4
NIKH	Nikolski High	3.66	179		Pn	12 39 27.8	-0.1
NIKH	Nikolski High	3.66	179		Sn	12 40 11.1	-0.1
DT1	Dutton Round H	4.04	109		Pn	12 39 32.8	-0.4
SDPT	Sand Point	4.92	102	Pn	Pn	12 39 44.0	-1.1
KOFP	Korovin Flat P	5.30	217		Pn	12 39 50.8	+0.3
ATKA	Atka Island	5.39	217	Pn	Pn	12 39 53.1	+1.4
VNHG	Veniaminof 1	5.44	90		Pn	12 39 51.5	-0.8
CNBA	Chernabura Isl	5.58	105		Pn	12 39 55.9	+1.7
CHGN	Chignik	5.84	89		Pn	12 39 57.7	0.0
ADK	Adak	6.57	227	P	Pn	12 40 06.9	-0.9
ADK	Adak	6.57	227	Pn	Pn	12 40 06.9	-0.9
PLK3	Peulik 3	6.97	76		Pn	12 40 12.9	-0.5
GAMB	Gambell	7.30	350		Pn	12 40 16.8	-1.0
KVTA	Katmai Vly 10	7.55	71		Pn	12 40 20.7	-0.7
ANM	Nome	8.15	11	P	Pn	12 40 28.8	-0.7
ANM	Nome	8.15	11	Pn	Pn	12 40 28.8	-0.7
OHAK	Old Harbor	8.58	79	Pn	Pn	12 40 36.3	+1.0
AMKA	Amchitka	8.69	238	Pn	Pn	12 40 38.7	+1.8
KDAK	Kodiak Island	8.95	76	Pn	Pn	12 40 42.0	+1.6
	9.5nm,0.3s,baz=273,slow=8.4,SNR=18						
KDAK	Kodiak Island	8.95	76	P	Pn	12 40 41.7	+1.3
KDAK	Kodiak Island	8.95	76	Pn	Pn	12 40 41.7	+1.3
TTA	Tatalina	9.06	40	P	Pn	12 40 42.9	+0.9
TTA	Tatalina	9.06	40	Pn	Pn	12 40 42.9	+0.9
CNPM	China Poot	9.81	65	Pn	Pn	12 40 54.6	+2.4
BRLK	Bradley Lake	10.02	64	Pn	Pn	12 40 55.3	+0.1
PPLA	Purkeypile	10.50	46	Pn	Pn	12 41 02.0	+0.2
SMY	Shemya	10.57	255	P	Pn	12 41 02.6	+0.1
SMY	Shemya	10.57	255	Pn	Pn	12 41 02.6	+0.1
PMR	Palmer	11.30	56	P	Pn	12 41 12.8	+0.2
PMR	Palmer	11.30	56	Pn	Pn	12 41 12.8	+0.2
GHO	Glory Hole Cre	11.45	55	Pn	Pn	12 41 15.6	+0.9
BPAW	Bear Paw Mtn.	11.58	42	Pn	Pn	12 41 16.2	-0.2
ILAR	Eielson Array	13.46	44	Pn	Pn	12 41 40.9	-1.2
	baz=247,slow=12,SNR=1.4						
GLB	Gilahina Butte	13.75	59	Pn	Pn	12 41 47.3	+1.2
BALM	Baldy	14.40	61	Pn	Pn	12 41 57.4	+2.3
YAH	Yahtse	14.64	64	Pn	Pn	12 42 00.9	+2.4
BARN	Barnard Glacie	14.73	61	Pn	Pn	12 42 00.1	+0.4
CTGM	Chitina Glacie	14.89	62	Pn	Pn	12 42 04.1	+2.4
A21K	Barrow	15.65	15	P	P	12 42 14.4	-1.2
	baz=206						
BILL	Bilibino	16.07	325	*e*P	P	12 42 19.7	-0.7
BILL				pmax	pmax		
	comp=Z,107nm,1.4s						
WHY	Whitehorse	18.04	63		P	12 42 42.7	+0.3
BESE	Bessie Mountai	18.25	70		P	12 42 44.8	+0.2
BESE				IAmb	IAmb	12 42 48.1	
	comp=Z,190nm,1.3s						
SIT	Sitka	18.29	75	P	Pn	12 42 44.3	-0.5
SIT				pmax	pmax		
	comp=Z,82nm,1.2s						
SIT	Sitka	18.29	75	P	Pn	12 42 44.3	-0.5
PET	Petropavlovsk	18.92	273	*d i*P	Pn	12 42 53.2	+0.8
PET				pmax	pmax		
	comp=Z,473nm,1.3s						
PET	Petropavlovsk	18.92	273	P	Pn	12 42 52.5	0.0
PEA0B	Petropavlovsk-	19.41	274	P	Pn	12 42 58.9	+0.5
PEA0B				pmax	pmax		
	comp=Z,216nm,1.3s						
PEA0B	Petropavlovsk-	19.41	274	P	Pn	12 42 58.9	+0.5
PEA0B				IAmb	IAmb	12 43 00.4	
	comp=Z,216nm,1.3s						
PETK	Petropavlovsk-	19.41	274	P	Pn	12 42 57.9	-0.5
	comp=Z,1.1nm,0.3s,baz=81,slow=8.0,SNR=34						
PETK	Petropavlovsk-	19.41	274	P	P	12 42 56.6	-0.7
INK	Inuvik	19.76	40	P	Pn	12 43 02.0	-0.4
	comp=Z,4.7nm,0.3s,baz=230,slow=4.3,SNR=17						
INK				PcP	PcP	12 47 18.9	+0.3
	comp=Z,0.5nm,0.3s,baz=221,slow=1.7,SNR=4.1						
INK	Inuvik	19.76	40	P	P	12 43 01.5	+0.6
INK				pmax	pmax		
	comp=Z,44nm,0.7s						
INK	Inuvik	19.76	40	P	P	12 43 01.5	+0.6
CRAG	Craig	19.90	78		Pn	12 43 04.0	-0.1
CRAG				IAmb	IAmb	12 43 06.1	
	comp=Z,199nm,1.2s						
WRAK	Wrangell Islan	20.04	75	P	Pn	12 43 06.0	+0.2
SEY	Seymchan	20.21	304	P	P	12 43 06.3	+0.4
	comp=Z,48nm,0.9s,baz=97,slow=10,SNR=15						
SEY	Seymchan	20.21	304	⇑*e*P	P	12 43 06.8	+0.9
DLBC	Dease Lake	20.77	69	P	Pn	12 43 13.3	-1.2
	comp=Z,22nm,1.0s,baz=301,slow=4.8,SNR=4.4						
DLBC	Dease Lake	20.77	69	P	P	12 43 13.1	+1.0
DLBC				IAmb	IAmb	12 43 19.6	
	comp=Z,149nm,1.4s						
MA2	Magadan	21.27	295	*d i*P	P	12 43 18.0	+0.6
MA2				pmax	pmax		
	comp=Z,125nm,1.4s						
MA2	Magadan	21.27	295		P	12 43 16.2	-1.2
MA2				IAmb	IAmb	12 43 23.9	
	comp=Z,110nm,1.2s						
SKR	Severo-Kuril's	21.38	269	⇑*i*P	P	12 43 19.4	+0.8
SKR				*i*		12 43 24.5	
SKR				pmax	pmax		
	comp=Z,149nm,1.0s						
C36M	Paulatuk	23.34	39	P	P	12 43 39.0	-0.2
	baz=260						
C36M	Paulatuk	23.34	39	P	P	12 43 38.5	-0.7
C36M				IAmb	IAmb	12 43 41.4	
	comp=Z,110nm,1.4s						
YKA	Yellowknife Ar	27.41	55	P	P	12 44 16.4	-0.2
	comp=Z,16nm,1.0s,baz=272,slow=11,SNR=8.3						
YKA				PcP	PcP	12 47 35.0	+0.1
	comp=Z,2.4nm,0.6s,baz=284,slow=2.4,SNR=5.7						
YKA	Yellowknife Ar	27.41	55	*i* P	P	12 44 17.7	+1.2
YKA				pmax	pmax		
	comp=Z,16nm,1.0s						
A04D	Lummi Island	28.64	86	P	P	12 44 29.7	+2.1
	baz=304						
D03D	Eldon	29.10	88	P	P	12 44 33.0	+1.2
	baz=305						
B05A	Bryant	29.23	86	P	P	12 44 33.9	+1.0
	baz=304						
TIXI	Tiksi	29.29	325	P	P	12 44 32.6	-0.7
TIXI				pmax	pmax		
	comp=Z,24nm,1.3s						
TIXI	Tiksi	29.29	325	P	P	12 44 32.6	-0.7
E04D	Cinebar	29.96	90	P	P	12 44 41.3	+1.8
	baz=307						
UGL	Uglegorsk	29.97	277	*e*P	P	12 44 40.2	+0.8
UGL				*e*		12 45 34.8	
UGL				pmax	pmax		
	comp=Z,60nm,1.0s						
UGL				pmax	pmax		
	comp=Z,80nm,1.3s						
LON	Longmire	30.27	89	P	P	12 44 42.1	-0.1
LON				pmax	pmax		
	comp=Z,31nm,1.5s						
LON	Longmire	30.27	89	P	P	12 44 42.1	-0.1
LTY	Liberty	30.59	87	P	P	12 44 45.0	-0.1
YAK	Yakutsk	30.71	306	*e*P	P	12 44 44.8	-1.1
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=Z,63nm,1.1s						
YAK				pmax	pmax		
	comp=E,35nm,1.1s						
YAK	Yakutsk	30.71	306	P	P	12 44 44.9	-1.1
YAK				IAmb	IAmb	12 44 46.3	
	comp=Z,66nm,1.1s						
COR	Corvallis	30.77	93	P	P	12 44 46.1	-0.5

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COR                                pmax   pmax
      comp=Z,33nm,1.1s
COR   Corvallis         30.77  93  P      P      12 44 46.1 -0.5
COR                                IAmb   IAmb   12 44 52.1
      comp=Z,33nm,1.1s
H04A  Detroit Lake      31.33  92  P      P      12 44 50.3 -1.3
H04A                               IAmb   IAmb   12 44 54.6
      comp=Z,67nm,1.5s
E07A  Sunnyside         31.46  87  P      P      12 44 52.4 -0.3
E07A                               IAmb   IAmb   12 44 54.9
      comp=Z,42nm,1.3s
HAWA  Hanford           31.74  87  P      P      12 44 54.4 -0.7
HAWA                               IAmb   IAmb   12 44 57.1
      comp=Z,51nm,1.3s
I04A  Tendick Farm,     31.77  94  P      P      12 44 56.7 +1.2
      baz=310
NEW   Newport           31.96  83  P      P      12 44 58.2 +1.0
      baz=305
I05D  Terrebonne, OR    32.02  92  P      P      12 44 58.1 +0.5
      baz=310
J04D  Umpqua Nationa    32.30  94  P      P      12 45 02.1 +1.8
      baz=311
RES   Resolute Bay      32.45  28  PcP    PcP    12 47 47.6 -0.1
      comp=Z,2.9nm,0.5s,baz=41,slow=0.2,SNR=6.6
J05D  Fort Rock, OR     32.75  93  P      P      12 45 06.5 +2.3
      baz=311,SNR=6.2
L04D  Klamath Falls     32.87  96  P      P      12 45 06.6 +1.3
      baz=312
M04C  Macdoel           33.42  96  P      P      12 45 12.3 +2.2
      baz=313
N02D  Trinity Center    33.50  98  P      P      12 45 13.1 +2.4
      baz=314
O02D  Mt. Diablo Mer    34.01  99  P      P      12 45 17.1 +2.0
      baz=315
MOD   Modoc Plateau     34.19  94  P      P      12 45 17.1 +0.4
MOD                                IAmb   IAmb   12 45 19.2
      comp=Z,43nm,1.4s
O03E  Paynes Creek      34.47  98  P      P      12 45 19.9 +0.8
      baz=314
WVOR  Wild Horse Val    34.75  92  P      P      12 45 20.3 -1.3
WVOR                               pmax   pmax
      comp=Z,28nm,1.2s
WVOR  Wild Horse Val    34.75  92  P      P      12 45 20.3 -1.3
WVOR                               IAmb   IAmb   12 45 23.7
      comp=Z,28nm,1.1s
ZEA   Zeya              35.39 293 eP      P      12 45 26.4 -0.4
ZEA                                pmax   pmax
      comp=Z,10.0nm,1.5s
KLR   Kul'dur           35.49 284⇓eP      P      12 45 26.8 -0.9
KLR                                pmax   pmax
      comp=Z,12nm,1.4s
PAHR  Pah Rah Range     36.20  96  P      P      12 45 34.8 +0.6
PAHR                               IAmb   IAmb   12 45 36.1
      comp=Z,58nm,1.3s
HLID  Hailey            36.34  87  P      P      12 45 35.4 +0.1
      baz=311
HLID  Hailey            36.34  87  P      P      12 45 35.6 +0.3
BOZ   Bozeman (W)       36.58  83  P      P      12 45 37.2 -0.1
      baz=309
CMB   Columbia Colle    36.84  99  P      P      12 45 40.6 +1.1
CMB                                pmax   pmax
      comp=Z,22nm,1.4s
CMB   Columbia Colle    36.84  99  P      P      12 45 40.5 +1.1
YHL   Hebgen Lake       37.29  83  P      P      12 45 43.7 +0.1
NVAR  Mina Array Bea    37.70  97  P      P      12 45 47.0 +0.1
      comp=Z,5.4nm,0.8s,baz=297,slow=8.2,SNR=9.6
NVAR                               PcP    PcP    12 48 04.2 +0.2
      comp=Z,5.0nm,0.8s,baz=292,slow=3.1,SNR=5.8
FCC   Fort Churchill    38.13  55  P      P      12 45 49.9 -0.2
FCC                                pmax   pmax
      comp=Z,59nm,1.5s
FCC   Fort Churchill    38.13  55  P      P      12 45 49.9 -0.2
FCC                                IAmb   IAmb   12 45 52.7
      comp=Z,59nm,1.5s
RLMT  Red Lodge         38.17  81  P      P      12 45 51.2 +0.4
      baz=309
RLMT  Red Lodge         38.17  81  P      P      12 45 51.3 +0.5
LOHW  Long Hollow       38.41  84  P      P      12 45 53.5 +0.7
HVU   Hansel Valley     38.43  88  P      P      12 45 53.0  0.0
HVU                                pmax   pmax
      comp=Z,14nm,0.8s
HVU   Hansel Valley     38.43  88  P      P      12 45 53.0  0.0
USRK  Ussuriysk Ar.     38.44 277  PcP    PcP    12 48 06.5 +0.7
      comp=Z,7.3nm,1.1s,baz=60,slow=5.7,SNR=4.3
VES   Vestal, Richgr    39.16 100  P      P      12 46 00.0 +1.1
      baz=318
R11A  Troy Canyon, C    39.25  95  P      P      12 46 00.4 +0.4
      baz=316,SNR=6.0
CWC   Cottonwood Cre    39.26  99  P      P      12 46 01.1 +1.1
      baz=317
DUG   Dugway, Tooele    39.49  90  P      P      12 46 01.9 +0.1
DUG                                pmax   pmax
      comp=Z,35nm,1.5s
DUG   Dugway, Tooele    39.49  90  P      P      12 46 01.7 -0.2
      baz=314
DUG   Dugway, Tooele    39.49  90  P      P      12 46 01.9 +0.1
BW06  Boulder Array     39.54  84  P      P      12 46 02.1 -0.3
      baz=312
PDAR  Pinedale Array    39.54  84  P      P      12 46 02.0 -0.4
      comp=Z,1.2nm,0.5s,baz=323,slow=2.2,SNR=19
PDAR  Pinedale Array    39.54  84  P      P      12 46 01.8 -0.6
ISA   Isabella, Lake    39.62 100  P      P      12 46 03.7 +0.7
      baz=318
MPMC  Manual Prospec    39.87  99  P      P      12 46 06.2 +1.1
      baz=318
TPNV  Topopah Spring    39.90  97  P      P      12 46 06.7 +1.4
      baz=317
FURC  Furnace Creek,    39.91  98  P      P      12 46 06.1 +0.9
      baz=317
LRMC  Laurel Mtn Rad    40.19  99  P      P      12 46 08.8 +1.1
      baz=318
PRN   Pahroc Range      40.22  95  P      P      12 46 09.0 +1.1
PRN                                IAmb   IAmb   12 46 13.9
      comp=Z,52nm,1.3s
MPU   Maple Canyon      40.26  89  P      P      12 46 08.4  0.0
MAJO  Matsushiro        40.29 263⇑iP      P      12 46 08.8 +0.4
MAJO                               pmax   pmax
      comp=Z,73nm,1.7s
MAJO  Matsushiro        40.29 263  P      P      12 46 08.7 +0.3
MAJO                               IAmb   IAmb   12 46 10.1
      comp=Z,50nm,1.2s
MAT   Matsushiro        40.29 263  P      P      12 46 08.9 +0.5
MJAR  Matsushiro Arr    40.29 263  P      P      12 46 08.6 +0.2
      comp=Z,21nm,1.2s,baz=29,slow=7.2,SNR=13
MJAR  Matsushiro Arr    40.29 263  P      P      12 46 09.1 +0.7
MJAR  Matsushiro Arr    40.29 263  P      P      12 46 09.1 +0.7
SHOC  Shoshone, Teco    40.65  98  P      P      12 46 12.7 +1.4
      baz=318,SNR=5.7
GSC   Goldstone, Bar    40.80  99  P      P      12 46 13.6 +0.9
GSC                                pmax   pmax
      comp=Z,43nm,1.5s
GSC   Goldstone, Bar    40.80  99  P      P      12 46 14.1 +1.4
      baz=318,SNR=5.2
GSC   Goldstone, Bar    40.80  99  P      P      12 46 13.6 +0.9
TMUT  Trail Mountain    41.00  90  P      P      12 46 14.9 +0.3
MVU   Marysvale         41.00  91  P      P      12 46 14.9 +0.4
BFSC  Mount Baldy Ra    41.13 101  P      P      12 46 16.9 +1.4
      baz=319,SNR=5.2
K22A  Casper            41.28  82  P      P      12 46 16.7 -0.1
      baz=312
HEC   Hector,Ludlow     41.41  99  P      P      12 46 19.2 +1.5
      baz=318
SRU   San Rafael Swe    41.51  89  P      P      12 46 18.8 +0.2
SRU                                pmax   pmax
      comp=Z,92nm,1.4s
SRU   San Rafael Swe    41.51  89  P      P      12 46 18.8 +0.2
RSSD  Black Hills       41.66  79  P      P      12 46 19.3 -0.6
RSSD                               pmax   pmax
      comp=Z,21nm,1.3s
RSSD  Black Hills       41.66  79  P      P      12 46 19.3 -0.6
      baz=311
RSSD  Black Hills       41.66  79  P      P      12 46 19.3 -0.6
HIA   Hailar            41.79 291⇓eP      P      12 46 19.0 -1.6
HIA                                pmax   pmax
      comp=Z,31nm,1.7s
HIA   Hailar            41.79 291  P      P      12 46 20.0 -0.6
GMRC  Granite Mounta    41.81  98  P      P      12 46 22.3 +1.2
      baz=318,SNR=6.0
MURC  Murrieta          41.87 101  P      P      12 46 22.3 +0.9
      baz=320
O20A  White River Ci    42.05  86  P      P      12 46 22.7 -0.4
      baz=314
ULM   Lac du Bonnet     42.06  66  P      P      12 46 22.8 -0.1
      comp=Z,5.4nm,0.5s,baz=302,slow=8.3,SNR=18
ULM   Lac du Bonnet     42.06  66  P      P      12 46 22.7 -0.1
ULM                                pmax   pmax
      comp=Z,9.0nm,1.1s
ULM   Lac du Bonnet     42.06  66  P      P      12 46 22.7 -0.1
BELC  Belle Mtn. Jos    42.21  99  P      P      12 46 24.6 +0.2
      baz=319
PFO   Pinyon Flats O    42.26 100ceP      P      12 46 25.3 +0.6
PFO                                pmax   pmax
      comp=Z,50nm,1.5s
PFO   Pinyon Flats O    42.26 100  P      P      12 46 25.4 +0.6
      baz=319,SNR=5.7
CN2   Changchun         42.27 281 eP      P      12 46 23.8 -0.7
CN2                                pmax   pmax
      comp=Z,20nm,1.2s
109C  Camp Elliot, M    42.45 102  P      P      12 46 27.3 +1.1
      baz=320
109C  Camp Elliot, M    42.45 102  P      P      12 46 26.9 +0.7
W13A  Hualapai Mount    42.55  96  P      P      12 46 27.6 +0.4
IRM   Iron Mountain     42.56  98  P      P      12 46 27.8 +0.7
      baz=319,SNR=16
BC3   Big Chuckawall    42.77  99  P      P      12 46 29.6 +0.7
      baz=319
MONP2 Monument Peak     42.82 101  P      P      12 46 28.7 -0.8
      baz=320
NRIK  Noril'sk          42.84 329  P      P      12 46 29.2 +0.3
      comp=Z,14nm,1.0s,baz=64,slow=5.0,SNR=5.9
NRIK  Noril'sk          42.84 329⇑iP      P      12 46 29.3 +0.5
NRIK  Noril'sk          42.84 329  P      P      12 46 28.6 -0.3
PV11  David Mesa, Pa    42.99  89  P      P      12 46 30.8  0.0
PV11                               IAmb   IAmb   12 46 31.4
      comp=Z,70nm,1.5s
PDMCI Parker Dam,Lak    43.00  97  P      P      12 46 30.8 +0.2
      baz=319
SWSC  Sam W. Stewart    43.12 100  P      P      12 46 31.6  0.0
      baz=320
PV13  Radium Mtn., P    43.12  89  P      P      12 46 31.9 +0.1
PV13                               IAmb   IAmb   12 46 33.1
      comp=Z,74nm,1.4s
IKP   In-Ko-Pah, Jac    43.18 101  P      P      12 46 33.3 +1.1
      baz=320
AGMN  Agassiz Nation    43.29  69  P      P      12 46 32.1 -0.7
      baz=310
AGMN  Agassiz Nation    43.29  69  P      P      12 46 32.2 -0.6
GLA   Glamis            43.57  99  P      P      12 46 35.4 +0.1
GLA                                pmax   pmax
      comp=Z,59nm,1.5s
GLA   Glamis            43.57  99  P      P      12 46 36.3 +1.1
      baz=320
GLA   Glamis            43.57  99  P      P      12 46 35.4 +0.1
GLA                                IAmb   IAmb   12 46 36.9
      comp=Z,59nm,1.5s
WUAZ  Wupatki           43.62  94  P      P      12 46 36.9 +1.0
      baz=318
ESJX  Sierra Juarez     43.76 101  P      P      12 46 37.2 +0.2
B35A  Bob, Littlefor    44.35  67  P      P      12 46 39.9 -1.4
B35A                               IAmb   IAmb   12 46 41.6
      comp=Z,36nm,1.4s
X16A  Lo Mia Camp, P    44.40  95  P      P      12 46 42.5 +0.4
S22A  4UR Ranch, Cre    44.52  88  P      P      12 46 43.0 -0.1
      baz=316
SPX   San Pedro Mart    44.77 102  P      P      12 46 46.1 +0.9
SFX   San Felipe        45.10 101  P      P      12 46 47.7 +0.3
X18A  Snowflake         45.14  93  P      P      12 46 48.7 +0.7
X18A                               IAmb   IAmb   12 46 50.3
      comp=Z,40nm,1.1s
SDCO  Great Sand Dun    45.25  87  P      P      12 46 48.7 -0.3
      baz=316
KSRS  Korea Array       45.30 273  P      P      12 46 48.8 -0.2
      comp=Z,15nm,1.1s,baz=48,slow=7.8,SNR=20
KSRS                               LR     LR     13 05 19.3
      comp=Z,443nm,21.3s,baz=95,slow=36
KSAR  Wonju Array Be    45.33 273  P      P      12 46 49.1 -0.1
KSAR  Wonju Array Be    45.33 273  P      P      12 46 49.1 -0.1
214A  Organ Pipe Nat    45.50  98  P      P      12 46 51.4 +0.6
      baz=320,SNR=7.6
214A  Organ Pipe Nat    45.50  98  P      P      12 46 50.7 -0.1
214A                               IAmb   IAmb   12 46 52.3
      comp=Z,60nm,1.4s
EYMN  Ely               45.75  66  P      P      12 46 52.1 -0.4
      baz=311
EYMN  Ely               45.75  66  P      P      12 46 52.9 +0.4
EYMN                               IAmb   IAmb   12 46 54.0
      comp=Z,82nm,1.5s
ECSD  EROS Data Cent    45.91  74  P      P      12 46 52.9 -0.9
      baz=313
KSCO  Kaye Shedlock’    45.93  83  P      P      12 46 54.2  0.0
      baz=315
F36A  Milaca            46.10  70  P      P      12 46 54.2 -1.0
T25A  Trinidad          46.29  86  P      P      12 46 56.8 -0.3
      baz=316
TUC   Tucson            46.35  96  P      P      12 46 58.1 +0.7
TUC                                pmax   pmax
      comp=Z,31nm,1.3s
TUC   Tucson            46.35  96  P      P      12 46 57.8 +0.4
      baz=320
TUC   Tucson            46.35  96  P      P      12 46 58.1 +0.7
TUC                                IAmb   IAmb   12 46 59.1
      comp=Z,31nm,1.3s
SUMG  Summit            46.64  18  P      P      12 46 59.0 -0.6
SUMG                               pmax   pmax
      comp=Z,72nm,1.3s
SUMG  Summit            46.64  18  P      P      12 46 59.0 -0.6
ANMO  Albuquerque       46.76  90⇓eP      P      12 47 01.6 +0.8
ANMO                               pmax   pmax
      comp=Z,23nm,1.4s
ANMO  Albuquerque       46.76  90  P      P      12 47 01.2 +0.4
      baz=318
SPMN  Marine on St.     46.90  70  P      P      12 47 00.7 -0.8
      baz=313
SPMN  Marine on St.     46.90  70  P      P      12 47 01.0 -0.5
SPMN                               IAmb   IAmb   12 47 03.6
      comp=Z,30nm,1.3s
Y22D  IRIS PASSCAL I    47.15  91  P      P      12 47 03.8  0.0
      baz=318
Y22D  IRIS PASSCAL I    47.15  91  P      P      12 47 03.8  0.0
Y22D                               IAmb   IAmb   12 47 05.6
      comp=Z,44nm,1.2s
121A  Cookes Peak, D    47.83  93  P      P      12 47 09.6 +0.5
      baz=319,SNR=5.9
121A  Cookes Peak, D    47.83  93  IAmb   IAmb   12 47 11.2
      comp=Z,25nm,1.2s
TLY   Talaya            48.12 303⇓eP      P      12 47 11.4 +0.5
TLY                                pmax   pmax
      comp=Z,37nm,1.3s
TLY   Talaya            48.12 303  P      P      12 47 11.4 +0.5
TLY                                IAmb   IAmb   12 47 12.7
      comp=Z,40nm,1.3s
G40A  Rib Lake          48.21  68  IAmb   IAmb   12 47 12.9
      comp=Z,56nm,1.5s
HSIG                    48.79  99  IAmb   IAmb   12 47 18.2
      comp=Z,23nm,0.9s
I40A  Norwalk           48.95  70  P      P      12 47 17.0 -0.4
I40A                               IAmb   IAmb   12 47 17.9
      comp=Z,48nm,1.5s
ULN   Ulaanbaatar       49.09 298deP      P      12 47 18.7 +0.1
ULN                                pmax   pmax
      comp=Z,29nm,1.1s
ULN   Ulaanbaatar       49.09 298  P      P      12 47 19.3 +0.8
ULN                                IAmb   IAmb   12 47 20.1
      comp=Z,24nm,1.1s
SONM  Songino Array     49.43 298  P      P      12 47 21.3 +0.1
      comp=Z,10nm,1.0s,baz=56,slow=8.1,SNR=22
SONM  Songino Array     49.43 298  P      P      12 47 21.5 +0.3
SONM  Songino Array     49.43 298  P      P      12 47 21.5 +0.3
AMTX  Amarillo          49.45  86  P      P      12 47 21.1 -0.3
      baz=318
MSTX  Muleshoe          49.52  88  P      P      12 47 21.9 -0.1
      baz=318
MSTX  Muleshoe          49.52  88  P      P      12 47 22.1 +0.1
MNTX  Cornudas Mount    49.79  92  P      P      12 47 24.5 +0.6
      baz=320,SNR=7.5
MNTX  Cornudas Mount    49.79  92  IAmb   IAmb   12 47 25.3
      comp=Z,30nm,1.2s
JFWS  Jewell Farm       49.83  71  P      P      12 47 23.1 -1.1
      baz=315
BJI   Beijing           49.86 284  P      P      12 47 25.5 +1.1
BJI                                pmax   pmax
      comp=Z,15nm,1.3s
BJT   Baijiatuau        49.88 284  P      P      12 47 25.3 +0.8
BJT                                pmax   pmax
      comp=Z,24nm,1.2s
BJT   Baijiatuau        49.88 284  P      P      12 47 25.3 +0.8
GDL2  Guadalupe Moun    49.97  91  P      P      12 47 25.9 +0.5
E46A  Sault Ste Mari    50.42  63  P      P      12 47 28.2 -0.3
E46A                               IAmb   IAmb   12 47 29.5
      comp=Z,62nm,1.4s
MATQ  Matagami          51.22  56  P      P      12 47 33.6 -1.0
      baz=315,SNR=5.4
P40A  Paris             51.29  75  P      P      12 47 34.3 -0.9
HHC   Hu-ho-hao-te      51.73 288 eP      P      12 47 39.5 +0.9
HHC                                pP     sP     12 47 44.0 +1.6
HHC                                pmax   pmax
      comp=Z,33nm,1.3s
HHC                                pmax   pmax
      comp=Z,1μm,6.6s
HDIL  Hopedale          52.01  72  P      P      12 47 39.7 -0.9
      baz=316
HDIL  Hopedale          52.01  72  P      P      12 47 39.5 -1.1
HDIL                               IAmb   IAmb   12 47 50.9
      comp=Z,51nm,1.4s
LSQQ  Lebel-sur-Quev    52.02  57  P      P      12 47 39.3 -1.2
      baz=316
M44A  Midewin, Midew    52.06  70  P      P      12 47 40.3 -0.6
M44A                               IAmb   IAmb   12 47 41.6
      comp=Z,66nm,1.4s
ABTX  Abilene, Hawle    52.26  87  P      P      12 47 41.3 -1.2
      baz=319,SNR=5.5
VLDQ  Val d'Or          52.48  58  P      P      12 47 41.5 -2.5
VLDQ                               IAmb   IAmb   12 47 43.4
      comp=Z,28nm,1.2s
TX31  Lajitas Ar. Si    52.55  93  IAmb   IAmb   12 47 45.6
      comp=Z,71nm,1.2s
TXAR  Lajitas Array     52.55  93  P      P      12 47 44.5 -0.3
      comp=Z,14nm,1.1s,baz=301,slow=5.1,SNR=27
TXAR                               PcP    PcP    12 48 54.8 -0.3
      comp=Z,4.2nm,0.8s,baz=282,slow=1.9,SNR=5.8
TXAR  Lajitas Array     52.55  93  P      P      12 47 44.7 -0.1
ANGG  Ammassalik, Gr    52.64  23  P      P      12 47 44.0 -0.8
CCM   Cathedral Cave    52.80  76  P      P      12 47 46.2 -0.2
      baz=317
SFIN  Lafayette         53.29  71  P      P      12 47 49.7 -0.3
      baz=317
SFIN  Lafayette         53.29  71  P      P      12 47 49.4 -0.6
HPIG                    53.31  96  P      P      12 47 50.8 +0.2
TIY   Taiyuan           53.56 285 eP      P      12 47 53.5 +1.4
TIY                                pmax   pmax
      comp=Z,42nm,0.6s
N47A  Urbana            53.65  69  P      P      12 47 51.9 -0.8
N47A                               IAmb   IAmb   12 47 52.1
      comp=Z,56nm,1.4s
AAM   Ann Arbor         53.66  67  P      P      12 47 52.6 -0.1
AAM                                pmax   pmax
      comp=Z,44nm,1.4s
AAM   Ann Arbor         53.66  67  P      P      12 47 52.6 -0.1
AAM                                IAmb   IAmb   12 47 53.9
      comp=Z,44nm,1.4s
ARCES ARCESS Array B    53.71 354  P      P      12 47 52.8  0.0
      comp=Z,4.1nm,0.9s,baz=28,slow=5.5,SNR=3.7
ALGO  Algonquin Park    53.76  60  P      P      12 47 52.6 -0.8
      baz=317
JCT   Junction City     53.80  88  P      P      12 47 51.6 -2.4
JCT                                pmax   pmax
      comp=Z,31nm,1.4s
JCT   Junction City     53.80  88  P      P      12 47 53.2 -0.8
      baz=320,SNR=5.4
JCT   Junction City     53.80  88  P      P      12 47 51.6 -2.4
JCT                                IAmb   IAmb   12 47 53.9
      comp=Z,31nm,1.4s
I51A  Listowel          53.88  64  P      P      12 47 55.1 +0.7
      baz=317
G54A  Lake Saint Pet    54.15  60  P      P      12 47 55.4 -0.9
      baz=317
D55A  Sainte-Anne-du    54.20  57  P      P      12 47 55.4 -1.2
      baz=317
NJ2   Nanjing           54.30 275⇑iP      P      12 47 58.0 +0.5
NJ2                                pmax   pmax
      comp=Z,14nm,0.9s
N49A  Columbus Grove    54.40  68  P      P      12 47 57.2 -0.9
N49A                               IAmb   IAmb   12 47 58.7
      comp=Z,48nm,1.2s
ZAA0  Zalesovo Array    54.49 316  P      P      12 47 57.6 -1.0
ZALV  Zalesovo Beam     54.49 316  P      P      12 47 58.9 +0.2
      comp=Z,4.2nm,0.9s,baz=34,slow=5.6,SNR=5.0
ZALV  Zalesovo Beam     54.49 316 i P     P      12 48 01.0 +2.4
ZALV                               pmax   pmax
      comp=Z,4.0nm,0.9s
ZALV  Zalesovo Beam     54.49 316  P      P      12 47 58.3 -0.3
D56A  ZEC Mazanza, M    54.51  57  P      P      12 47 58.5 -0.3
      baz=317
LVZ   Lovozero          54.57 349⇓eP      P      12 47 58.5 -0.5
LVZ                                pmax   pmax
      comp=Z,48nm,1.1s
E56A  St. Veronique     54.75  57  P      P      12 48 00.1 -0.6
      baz=318
P48A  Milroy            54.84  70  IAmb   IAmb   12 48 01.4
      comp=Z,50nm,1.4s
APA   Apatity           55.01 350⇓iP      P      12 47 49.9  -12
APA                                pmax   pmax
      comp=Z,8.0nm,1.1s
APA                                MLR    MLR
      comp=Z,1μm,16.0s
LATQ  La Tuque          55.17  55  P      P      12 48 02.7 -0.9
      baz=318
E57A  Chemin Saint G    55.26  57  P      P      12 48 03.8 -0.6
      baz=318
WCI   Wyandotte Cave    55.30  72  P      P      12 48 03.6 -1.1
WCI                                pmax   pmax
      comp=Z,17nm,1.2s
WCI   Wyandotte Cave    55.30  72  P      P      12 48 03.8 -0.9
      baz=318
WCI   Wyandotte Cave    55.30  72  P      P      12 48 03.6 -1.1
N51A  Ashland           55.33  67  IAmb   IAmb   12 48 05.5
      comp=Z,50nm,1.3s
D58A  Chemin du LacG    55.34  56  P      P      12 48 03.7 -1.1
      baz=318
ACSO  Alum Creek Sta    55.52  68  P      P      12 48 05.9 -0.4
      baz=318
ACSO  Alum Creek Sta    55.52  68  P      P      12 48 05.6 -0.7
ACSO                               IAmb   IAmb   12 48 06.4
      comp=Z,49nm,1.4s
L53A  Girard            55.62  65  P      P      12 48 07.5 +0.5
      baz=318
ERPA  Erie              55.64  64  P      P      12 48 07.6 +0.5
      baz=318
ERPA  Erie              55.64  64  P      P      12 48 07.2 +0.2
833A  Chaparral WMA,    55.69  90  P      P      12 48 07.8 +0.2
      baz=321
E58A  La Victoria       55.69  57  P      P      12 48 06.9 -0.5
      baz=318
M53A  WI Miller and     55.80  65  P      P      12 48 08.4 +0.1
      baz=318
WVNY  West Valley, N    56.11  63  IAmb   IAmb   12 48 11.5
      comp=Z,55nm,1.2s
N53A  Lisbon            56.19  66  IAmb   IAmb   12 48 10.8
      comp=Z,50nm,1.4s
Q51A  Peebles           56.24  69  IAmb   IAmb   12 48 12.2
      comp=Z,47nm,1.2s
G58A  Ormstown          56.25  58  P      P      12 48 11.0 -0.4
      baz=318
M54A  Oil Creek Stat    56.25  65  P      P      12 48 10.7 -0.9
      baz=318
R50A  Paris             56.28  70  IAmb   IAmb   12 48 12.6
      comp=Z,44nm,1.2s
D60A  Saint Jean D’O    56.36  55  P      P      12 48 11.6 -0.5
      baz=319
I57A  Carthage          56.39  60  P      P      12 48 12.4 -0.1
      baz=318
HKT   Hockley           56.40  86⇓eP      P      12 48 12.7 +0.1
HKT                                pmax   pmax
      comp=Z,14nm,1.6s
O53A  New Philadelph    56.41  67  P      P      12 48 11.9 -0.8
      baz=318
D61A  St Aubert, Com    56.47  54  P      P      12 48 12.4 -0.5
      baz=319
N54A  Moraine State     56.50  65  P      P      12 48 13.0 -0.3
      baz=318
N54A  Moraine State     56.50  65  P      P      12 48 12.7 -0.6
N54A                               IAmb   IAmb   12 48 13.8
      comp=Z,42nm,1.1s
E60A  Ste Agathe de     56.53  55  P      P      12 48 12.4 -1.0
      baz=319
DGZ   Jazzator, Alta    56.69 311deP      P      12 48 15.2 +0.5
DGZ                                pmax   pmax
      comp=Z,37nm,1.3s
M55A  Ridgway           56.73  64  P      P      12 48 14.8 -0.2
H59A  Cadyville         56.80  58  P      P      12 48 14.5 -0.8
      baz=319
L56A  Greenwood         56.82  63  P      P      12 48 15.6 -0.1
      baz=319
K57A  Scipio Center     56.89  62  P      P      12 48 16.0  0.0
      baz=319
O54A  Avella            56.89  66  P      P      12 48 15.3 -0.7
O54A                               IAmb   IAmb   12 48 16.4
      comp=Z,33nm,1.0s
I58A  Old Forge         56.91  60  P      P      12 48 14.7 -1.5
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	baz=319						
T50A	Nancy	56.96	72	P	P	12 48 15.9	-0.7
T50A				IAmb	IAmb	12 48 16.8	
	comp=Z,34nm,1.3s						
L57A	Andrews Acres	57.27	62	P	P	12 48 18.7	-0.1
	baz=319						
Q53A	Leroy	57.30	68	P	P	12 48 18.4	-0.5
	baz=319						
N56A	West Decatur	57.38	64	P	P	12 48 19.5	0.0
	baz=319						
BINY	Binghamton	57.55	62	P	P	12 48 20.4	-0.2
	baz=319						
MCWV	Mont Chateau	57.55	66	P	P	12 48 20.1	-0.6
	baz=319						
MCWV	Mont Chateau	57.55	66	P	P	12 48 20.4	-0.3
MCWV				IAmb	IAmb	12 48 21.2	
	comp=Z,27nm,1.1s						
M57A	Sunshine Farm,	57.64	63	P	P	12 48 21.3	0.0
	baz=319						
O56A	Blue Knob Stat	57.73	65	P	P	12 48 22.0	-0.1
	baz=319						
TMCR	Tamitsa	57.77	346	*e*P	P	12 48 21.1	-0.8
TMCR				pmax	pmax		
	comp=Z,42nm,1.5s						
SSPA	Standing Stone	57.79	64	P	P	12 48 22.1	-0.3
SSPA				IAmb	IAmb	12 48 23.3	
	comp=Z,51nm,1.2s						
E63A	Oxbow	57.85	53	P	P	12 48 21.1	-1.7
	baz=320						
N57A	Milroy	57.87	64	P	P	12 48 23.8	+0.9
	baz=319						
WHN	Wuhan	57.93	278	⇑P	P	12 48 24.0	+0.5
M58A	Price's Panora	57.94	63	P	P	12 48 22.7	-0.8
	baz=319						
J60A	Lant Hill Farm	57.98	59	P	P	12 48 23.4	-0.3
	baz=320						
L59A	Walton	58.01	61	P	P	12 48 23.3	-0.7
	baz=320						
R54A	Victor	58.08	68	P	P	12 48 23.8	-0.8
	baz=319						
E64A	Bridgewater	58.12	53	P	P	12 48 23.5	-1.1
	baz=320						
P56A	Dayton Farm, R	58.17	66	P	P	12 48 25.0	-0.1
	baz=319						
XAN	Xi'an	58.19	285	P	P	12 48 25.5	+0.1
XAN				pP	sP	12 48 34.0	+4.9
XAN				pmax	pmax		
	comp=Z,45nm,1.4s						
S54A	Dingess, Beckl	58.21	69	P	P	12 48 24.1	-1.3
	baz=320						
N58A	Sunbury	58.22	63	P	P	12 48 24.9	-0.5
	baz=320						
O57A	Amberson	58.24	64	P	P	12 48 26.0	+0.4
	baz=320						
M59A	Waymart	58.31	62	P	P	12 48 25.7	-0.3
	baz=320						
F64A	Sherman	58.31	54	P	P	12 48 25.9	0.0
	baz=320						
Q56A	Snyder Ridge,	58.35	66	P	P	12 48 26.4	+0.1
	baz=320						
P57A	Homestead Farm	58.60	65	P	P	12 48 28.5	+0.4
	baz=320						
N59A	State Game Lan	58.62	62	P	P	12 48 28.6	+0.3
	baz=320						
O58A	Lewisberry	58.66	64	P	P	12 48 28.3	-0.2
	baz=320						
R56A	Bull Pasture M	58.72	67	P	P	12 48 28.1	-0.9
	baz=320						
Q57A	Strasburg	58.75	66	P	P	12 48 28.7	-0.4
	baz=320						
GTA	Gaotai	58.83	295	⇑P	P	12 48 30.3	+0.5
GTA				pP	sP	12 48 33.5	-0.1
GTA				sP	pP	12 48 37.0	+4.4
GTA				pmax	pmax		
	comp=Z,39nm,1.4s						
GTA				pmax	pmax		
	comp=Z,510nm,4.9s						
GTA				LR	LR		
	comp=Z,690nm,15.6s						
GTA				LR	LR		
	comp=Z,2µm,15.6s						
GTA				LR	LR		
	comp=Z,2µm,16.4s						
O59A	Robesonia	58.88	63	P	P	12 48 30.2	+0.1
	baz=320						
U54A	Nelsons Funny	58.92	70	P	P	12 48 30.4	0.0
	baz=320						
U54A	Nelsons Funny	58.92	70	P	P	12 48 30.2	-0.2
N60A	Cedar Hill Far	58.99	62	P	P	12 48 31.6	+0.9
	baz=320						
SEM	Semipalatinsk	59.02	316	*e*P	P	12 48 29.6	-1.5
	comp=Z,40nm,2.3s,baz=316						
SEM				*e*S	S	12 56 36.9	-0.7
	baz=316						
SEM	Semipalatinsk	59.02	316	*e*P	P	12 48 29.6	-1.5
SEM				*e*S	S	12 56 36.8	-0.8
SEM				pmax	pmax		
	comp=Z,40nm,2.3s						
V53A	Saluda	59.05	71	P	P	12 48 31.4	+0.1
LUPA	Lehigh Univers	59.06	62	P	P	12 48 31.0	-0.3
BLA	Blacksburg	59.11	68	P	P	12 48 31.9	+0.1
	baz=320						
Q58A	Fox Den Farm,	59.18	65	P	P	12 48 31.9	-0.3
	baz=320						
S56A	Natural Bridge	59.20	67	P	P	12 48 32.3	0.0
	baz=320						
R57A	Stanardsville	59.25	66	P	P	12 48 32.5	-0.1
	baz=320						
P59A	Jarrettsville	59.30	64	P	P	12 48 32.6	-0.3
	baz=320						
LZH	Lanzhou	59.31	290	⇓P	P	12 48 33.5	+0.2
LZH				pP	pP	12 48 36.0	0.0
LZH				PP	PP	12 50 48.5	+4.6
LZH				pmax	pmax		
	comp=Z,50nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,6.0s						
LZH				LR	LR		
	comp=Z,980nm,15.7s						
LZH				LR	LR		
	comp=Z,530nm,15.7s						
LZH				LR	LR		
	comp=Z,690nm,16.8s						
KURK	Kurchatov	59.39	317	*de*P	P	12 48 33.3	-0.1
KURK				pmax	pmax		
	comp=Z,41nm,1.3s						
KURK	Kurchatov	59.39	317	P	P	12 48 32.0	-1.4
KURK				IAmb	IAmb	12 48 34.9	
	comp=Z,49nm,1.4s						
S57A	Dark Hollow, R	59.44	67	P	P	12 48 33.9	-0.1
	baz=320						
T56A	Rocky Mt	59.45	68	P	P	12 48 33.9	-0.2
	baz=320						
ZSN	Zaisan	59.51	311	*e*P	P	12 48 34.1	-0.2
	comp=Z,16nm,1.2s,baz=311						
ZSN	Zaisan	59.51	311	*e*P	P	12 48 34.1	-0.2
ZSN				pmax	pmax		
	comp=Z,16nm,1.2s						
R58A	Rapidan	59.51	66	P	P	12 48 34.2	-0.2
	baz=320						
V55A	Taylorsville	59.74	70	P	P	12 48 35.9	-0.2
U56A	King	59.80	69	P	P	12 48 36.0	-0.4
	baz=320						
U56A	King	59.80	69	IAmb	IAmb	12 48 37.0	
	comp=Z,33nm,1.0s						
T57A	Hurt	59.88	68	P	P	12 48 36.3	-0.6
	baz=320						
T57A	Hurt	59.88	68	P	P	12 48 36.2	-0.7
T57A				IAmb	IAmb	12 48 37.8	
	comp=Z,38nm,1.2s						
SVE	Sverdlovsk	60.06	331	*e*P	P	12 48 38.7	+0.8
V56A	Mocksville	60.15	70	P	P	12 48 39.1	+0.2
	baz=320						
DRLN	Deer Lake	60.18	45	P	P	12 48 38.6	-0.2
KMSC	Kings Mountain	60.23	71	P	P	12 48 39.1	-0.2
	baz=320						
KMSC	Kings Mountain	60.23	71	IAmb	IAmb	12 48 40.3	
	comp=Z,36nm,1.2s						
U57A	Blanch	60.27	68	P	P	12 48 39.2	-0.4
	baz=320						
S59A	Mechanicsville	60.28	66	P	P	12 48 40.2	+0.5
	baz=320						
T58A	Grand View Acr	60.28	67	P	P	12 48 39.3	-0.4
	baz=320						
BRVK	Borovoye	60.41	323	*de*P	P	12 48 40.8	+0.4
BRVK				pmax	pmax		
	comp=Z,43nm,1.1s						
BRVK	Borovoye	60.41	323	P	P	12 48 41.1	+0.7
BRVK				IAmb	IAmb	12 48 41.9	
	comp=Z,36nm,1.1s						
V57A	Coltrane Farms	60.46	69	P	P	12 48 40.4	-0.6
	baz=321						
KLMR	Klimovskoe	60.74	344	*e*P	P	12 48 40.5	-1.9
KLMR				pmax	pmax		
	comp=Z,60nm,1.4s						
KLMR	Klimovskoe	60.74	344	*e*P	P	12 48 40.6	-1.9
KLMR				AMP		12 48 43.7	
	comp=Z,60nm,1.4s						
T59A	Double "B" Far	60.76	67	P	P	12 48 43.4	+0.4
	baz=321						
ENH	Enshi	60.79	281	IAmb	IAmb	12 48 44.5	
	comp=Z,35nm,1.1s						
V58A	Windy Hill, Pi	60.88	69	P	P	12 48 43.4	-0.4
	baz=321						
JSC	Jenkinsville	60.93	71	IAmb	IAmb	12 48 44.4	
	comp=Z,22nm,1.3s						
ARU	Arti	60.95	332	*c i*P	P	12 48 43.4	-0.6
ARU				S	S	12 57 04.7	+2.8
ARU				SS	SS	13 01 02.6	+2.5
ARU				pmax	pmax		
	comp=Z,46nm,1.1s						
ARU	Arti	60.95	332	P	P	12 48 43.7	-0.3
MK31	Makanchi Array	61.10	312	*c i*P	P	12 48 44.8	-0.4
MKAR	Makanchi Array	61.10	312	P	P	12 48 44.9	-0.3
	comp=Z,7.3nm,1.0s,baz=54,slow=6.2,SNR=9.6						
MKAR	Makanchi Array	61.10	312	P	P	12 48 45.1	-0.1
MKAR	Makanchi Array	61.10	312	P	P	12 48 45.1	-0.1
KIRV	Kirov	61.12	338	⇓*e*P	P	12 48 43.3	-1.8
WMQ	Urumqi	61.15	306	*e*P	P	12 48 46.5	+0.9
WMQ				pP	sP	12 48 49.3	-0.1
WMQ				sP	pP	12 48 57.5	+9.1
WMQ				S	S	12 56 58.0	-6.9
WMQ				pmax	pmax		
	comp=Z,22nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,730nm,6.5s						
WMQ				LR	LR		
	comp=Z,1µm,14.1s						
WMQ				LR	LR		
	comp=Z,910nm,14.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
V59A	Middlesex	61.35	68	P	P	12 48 46.9	0.0
	baz=321						
X57A	Johnson Farm,	61.40	70	P	P	12 48 47.5	+0.2
	baz=321						
W58A	Raeford	61.41	69	P	P	12 48 47.2	-0.2
	baz=321						
FINES	FINESS Array B	61.68	352	P	P	12 48 48.5	-0.3
	comp=Z,11nm,1.0s,baz=46,slow=5.5,SNR=6.2						
BRZS	Berezniki	62.17	320	*e*P	P	12 48 51.6	-0.7
	comp=Z,20nm,1.5s,baz=320						
BRZS	Berezniki	62.17	320	*e*P	P	12 48 51.6	-0.7
BRZS				pmax	pmax		
	comp=Z,20nm,1.5s						
NB2	NORSAR Subarra	62.67	360	P	P	12 48 55.5	-0.1
	comp=Z,2.5nm,1.0s,baz=358,slow=6.2						
NOA	NORSAR Array B	62.67	360	P	P	12 48 55.5	-0.1
	comp=Z,9.4nm,1.1s,baz=360,slow=6.7,SNR=6.2						
CD2	Chengdu	63.37	286	⇑P	P	12 49 01.8	+1.2
CD2				pP	sP	12 49 04.8	+0.4
CD2				pmax	pmax		
	comp=Z,100nm,1.1s						
TDK	Taldyqorghan	64.13	313	*e*P	P	12 49 05.3	-0.2
	comp=Z,22nm,1.3s,baz=313						
TDK	Taldyqorghan	64.13	313	*e*P	P	12 49 05.2	-0.2
TDK				pmax	pmax		
	comp=Z,22nm,1.3s						
VSU	Vasula	64.58	351	⇑*e*P	P	12 49 08.2	+0.1
VSU				pmax	pmax		
	comp=Z,183nm,1.4s						
TLIG	Tlapa	64.72	96	P	P	12 49 09.6	-0.1
TLIG				IAmb	IAmb	12 49 11.2	
	comp=Z,24nm,1.1s						
SHLS	Shalkode	65.22	311	*e*P	P	12 49 11.3	-1.5
	comp=Z,33nm,1.2s,baz=311						
SHLS	Shalkode	65.22	311	*e*P	P	12 49 11.2	-1.5
SHLS				pmax	pmax		
	comp=Z,33nm,1.2s						
KPKS	Kokpek	65.29	312	*e*P	P	12 49 12.4	-0.7
	comp=Z,17nm,1.1s,baz=312						
KPKS	Kokpek	65.29	312	*e*P	P	12 49 12.4	-0.7
KPKS				pmax	pmax		
	comp=Z,17nm,1.1s						
GYA	Guiyang	65.31	281	⇑P	P	12 49 14.5	+1.0
GYA				pP	sP	12 49 18.0	+0.7
GYA				sP	pP	12 49 20.5	+4.2
GYA				pmax	pmax		
	comp=Z,58nm,1.2s						
GYA				LR	LR		
	comp=Z,2µm,15.9s						
GYA				LR	LR		
	comp=Z,2µm,14.8s						
GYA				LR	LR		
	comp=Z,3µm,21.4s						
CHKK	Chushkaly	65.65	314	*e*P	P	12 49 14.2	-1.2
	baz=314						
CHKK	Chushkaly	65.65	314	*e*P	P	12 49 14.2	-1.2
SATY	Saty	65.74	312	*e*P	P	12 49 15.9	-0.2
	comp=Z,9.4nm,1.3s,baz=312						
SATY	Saty	65.74	312	*e*P	P	12 49 15.9	-0.2
SATY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BTLS	Baital	65.81	316	*e*P	P	12 49 15.6	-0.8
	comp=Z,9.2nm,1.1s,baz=316						
BTLS	Baital	65.81	316	*e*P	P	12 49 15.5	-0.8
BTLS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KUU	Kurty	65.88	314	*e*P	P	12 49 15.8	-1.0
	comp=Z,11nm,1.1s,baz=314						
KUU	Kurty	65.88	314	*e*P	P	12 49 15.8	-1.0
KUU				pmax	pmax		
	comp=Z,11nm,1.1s						
MOS	Moscow	65.94	344	*e*P	P	12 49 16.0	-0.9
MOS				pmax	pmax		
	comp=Z,31nm,1.1s						
MDOK	Medeo	66.21	313	*e*P	P	12 49 18.6	-0.5
	baz=313						
MDOK	Medeo	66.21	313	*e*P	P	12 49 18.6	-0.5
AAA	Alma-Ata	66.22	313	*e*P	P	12 49 19.2	+0.1
	baz=313						
AAA	Alma-Ata	66.22	313	*e*P	P	12 49 19.2	+0.1
TNSS	Tian-Shan	66.35	313	*e*P	P	12 49 20.1	-0.2
	baz=313						
TNSS	Tian-Shan	66.35	313	*e*P	P	12 49 20.1	-0.2
MTBS	Maitube	66.48	313	*e*P	P	12 49 20.7	-0.1
	baz=314						
MTBS	Maitube	66.48	313	*e*P	P	12 49 20.7	-0.1
OBN	Obninsk	66.70	344	⇓*e*P	P	12 49 20.7	-1.1
OBN				*i*		12 49 49.6	
OBN				*e*		12 51 47.3	
OBN				*e*S	S	12 58 33.2	+20
OBN				pmax	pmax		
	comp=Z,41nm,1.2s						
SGDS	Sogindy	66.92	315	*e*P	P	12 49 23.6	0.0
	comp=Z,8.1nm,1.2s,baz=315						
SGDS	Sogindy	66.92	315	*e*P	P	12 49 23.6	0.0
SGDS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AB31	Akbulak array	66.96	328	*i* P	P	12 49 23.3	-0.3
AB31				pmax	pmax		
	comp=Z,39nm,1.1s						
ABKAR	Akbulak array	66.96	328	P	P	12 49 23.4	-0.1
ABKAR	Akbulak array	66.96	328	IAmb	IAmb	12 49 25.0	
	comp=Z,38nm,1.1s						
TKM2	Tokmak 2	66.99	314	P	P	12 49 23.8	-0.4
	SNR=5.8						
USP	Ospenovka	67.13	315	P	P	12 49 25.4	+0.6
	SNR=13						
CHMS	Chumysh	67.26	315	P	P	12 49 26.9	+1.3
	SNR=12						
BELG	Belogornoye	67.26	337	⇓*i*P	P	12 49 25.1	-0.3
BELG				pmax	pmax		
	comp=Z,13nm,1.0s						
ULHL	Ulahol	67.30	313	P	P	12 49 24.6	-1.6
	SNR=7.8						
KBK	Karagaybulak	67.47	314	P	P	12 49 28.4	+1.2
	SNR=12						
ISAL	Salakas	67.49	351	*e*P	P	12 49 26.6	-0.2
AAK	Ala-Archa	67.67	314	P	P	12 49 29.7	+1.2
	SNR=12						
AAK	Ala-Archa	67.67	314	*de*P	P	12 49 29.1	+0.7
AAK				pmax	pmax		
	comp=Z,152nm,1.5s						
AAK	Ala-Archa	67.67	314	P	P	12 49 29.6	+1.1
IDID	Didziasalis	67.69	350	*e*P	P	12 49 27.0	-1.1
PABE	Paberze	67.73	352	*e*P	P	12 49 27.4	-1.0
EKS2	Erkin-Say	67.93	315	P	P	12 49 30.7	+0.7
	SNR=14						
MNK	Minsk	68.38	350	*i* P	P	12 49 31.0	-1.5
	comp=E,4.0nm,2.0s						
MNK				*i* P	P	12 49 31.0	-1.5
	comp=N,20nm,2.0s						
MNK				*i* P	P	12 49 31.0	-1.5
	comp=Z,30nm,1.0s						
MNK				*i* PcP	PcP	12 49 56.2	-1.7
MNK				*i* PP	PP	12 52 01.6	-1.0
MNK				*i* PPP	PPP	12 53 40.2	
MNK				*i* S	S	12 58 30.2	-3.3
MNK				*i* ScS	SKSac	12 59 30.4	-0.7
MNK				*i* SS	SS	13 02 57.2	+1.6
MNK				*i* SSS	SSS	13 06 13.2	
MNK				*i* LQ	LQ	13 14 40.9	
MNK				*i* LR	LR	13 19 53.1	
MNK				*i* LRM	MLR	13 24 21.7	
	comp=E,73nm,17.2s						
MNK				*i* LRM	MLR	13 24 31.3	
	comp=Z,663nm,14.1s						
MNK				*i* LRM	MLR	13 24 39.6	
	comp=N,1µm,15.9s						
MNK	Minsk	68.38	350	*e*P	P	12 49 32.0	-0.5
AML	Almayashu	68.41	315	P	P	12 49 34.9	+1.5
	SNR=12						
KMI	Kunming	68.50	283	⇑P	P	12 49 35.0	+1.0
KMI				pP	sP	12 49 39.3	+1.5
KMI				pmax	pmax		
	comp=N,28nm,1.4s						
KMI				LR	LR		
	comp=N,610nm,13.4s						
KMI				LR	LR		
	comp=N,1µm,13.1s						
KMI				LR	LR		
	comp=N,1µm,15.5s						
DZA	Taraz	68.67	317	*e*P	P	12 49 34.3	-0.3
	baz=317						
DZA	Taraz	68.67	317	*e*P	P	12 49 34.3	-0.3
KK31	Karatay Array	68.80	317	P	P	12 49 35.4	+0.1
KK31				pmax	pmax		
	comp=Z,48nm,1.2s						
KK31	Karatay Array	68.80	317	P	P	12 49 35.4	+0.1
KKAR	Karatay Array	68.80	317	P	P	12 49 35.2	-0.2
KKAR	Karatay Array	68.80	317	P	P	12 49 35.2	-0.2
KKAR	Karatay Array	68.80	317	IAmb	IAmb	12 49 36.8	
	comp=Z,48nm,1.1s						
SUW	Suwalki	69.28	352	*e*P	P	12 49 37.6	-0.4
SUW	Suwalki	69.28	352	P	P	12 49 37.4	-0.7
SUW				pmax	pmax		
	comp=Z,94nm,1.1s						
SUW	Suwalki	69.28	352	P	P	12 49 37.4	-0.7
TAOE	Nuku Hiva Isla	69.44	149	*e*LR	LR	13 10 38.8	
	comp=Z,1µm,23.7s						
KSH	Kashi	69.70	312	P	P	12 49 45.3	+4.2
KSH				pP	sP	12 49 49.3	+4.3
KSH				S	S	12 58 53.5	+3.6
KSH				pmax	pmax		
	comp=Z,87nm,1.2s						
KSH				pmax	pmax		
	comp=Z,2µm,8.2s						
KSH				LR	LR		
	comp=Z,2µm,7.8s						
KSH				LR	LR		
	comp=Z,2µm,13.9s						
KSH				LR	LR		
	comp=Z,1µm,13.8s						
IUG	Iuzhnay	69.80	317	*e*P	P	12 49 41.8	0.0
	comp=Z,23nm,1.2s,baz=317						
IUG	Iuzhnay	69.80	317	*e*P	P	12 49 41.7	0.0
IUG				pmax	pmax		
	comp=Z,23nm,1.2s						
TAS	Tashkent	70.79	317	P	P	12 49 48.5	+0.9
TAS				pmax	pmax		
	comp=Z,80nm,1.0s						
TAS	Tashkent	70.79	317	P	P	12 49 48.5	+0.9
AKASG	Malin Array Be	71.99	348	P	P	12 49 53.3	-1.3
	comp=Z,8.5nm,0.5s,baz=15,slow=6.0,SNR=27						
AKASG	Malin Array Be	71.99	348	P	P	12 49 54.0	-0.7
AKASG				pmax	pmax		
	comp=Z,14nm,1.2s						
AKASG	Malin Array Be	71.99	348	P	P	12 49 54.0	-0.7
AKBB	Malin Array Si	71.99	348	⇑*i*P	P	12 49 54.1	-0.5
AKBB				pmax	pmax		
	comp=Z,45nm,1.2s						
AKBB	Malin Array Si	71.99	348	IAmb	IAmb	12 49 54.8	
	comp=Z,48nm,1.2s						
CLL	Collm	72.42	359	*i* P	P	12 49 55.3	-1.9
	comp=Z,23nm,1.2s						
CLL				*i*		12 49 59.9	
CLL	Collm	72.42	359	*i* P	P	12 49 55.3	-1.9
CLL				pmax	pmax		
	comp=Z,23nm,1.2s						
BRG	Berggiesshubel	72.84	358	*i* P	P	12 50 00.1	+0.4
BRG				Amp		12 50 01.6	
	comp=Z,34nm,1.4s						
MEM	Membach	73.05	3	*d*P	P	12 50 01.0	0.0
BSTI	Sart Tilman	73.06	4	*d*P	P	12 50 00.7	-0.3
CHVC	Chvalec	73.07	357	*e*P	P	12 50 01.4	+0.2
SNF	Seneffe	73.08	5	*d*P	P	12 50 01.0	-0.2
OSTC	Ostas	73.10	357	*e*P	P	12 50 01.8	+0.5
UPC	Upice	73.15	357	*e*P	P	12 50 01.8	+0.2
UPC	Upice	73.15	357	*e*P	P	12 50 01.8	+0.2
BCLA	Clavier	73.21	4	*d*P	P	12 50 02.5	+0.5
BCLA				*d*PcP	PcP	12 50 21.3	+2.8
BGES	Gesves	73.24	4	*d*P	P	12 50 01.9	-0.2
BGES				*d*PcP	PcP	12 50 18.8	+0.2
OJC	Ojcow	73.27	354	IAmb	IAmb	12 50 03.7	
	comp=Z,30nm,1.2s						
DPC	Dobruska-Polom	73.30	356	*e*P	P	12 50 02.9	+0.4
DPC	Dobruska-Polom	73.30	356	*e*P	P	12 50 02.9	+0.4
BMRD	Maredsous	73.31	4	*d*P	P	12 50 02.5	-0.1
LVV	L'vov	73.38	351	*e*P	P	12 50 03.1	+0.2
NKC	Novy Kostel	73.50	359	*e*P	P	12 50 04.0	+0.3
NKC	Novy Kostel	73.50	359	*e*P	P	12 50 04.0	+0.3
DOU	Dourbes	73.51	4	*d*P	P	12 50 02.7	-1.0
KRLC	Kraliky	73.56	356	*e*P	P	12 50 04.3	+0.2
KRLC	Kraliky	73.56	356	*e*P	P	12 50 04.3	+0.2
PRU	Pruhonice	73.71	358	*e*P	P	12 50 05.4	+0.5
PRU	Pruhonice	73.71	358	*e*P	P	12 50 05.4	+0.5
MORC	Moravsky Berou	73.83	356	⇑P	P	12 50 05.5	-0.2
MORC	Moravsky Berou	73.83	356	*e*P	P	12 50 05.0	-0.7
MORC	Moravsky Berou	73.83	356	⇑P	P	12 50 05.5	-0.2
MORC	Moravsky Berou	73.83	356	IAmb	IAmb	12 50 07.0	
	comp=Z,22nm,1.3s						
PBCC	Pribram	74.03	358	*e*P	P	12 50 07.0	+0.2
GRFO	Grafenberg	74.05	360	P	P	12 50 06.8	-0.1
GRFO				pmax	pmax		
	comp=Z,36nm,1.2s						
GRFO	Grafenberg	74.05	360	P	P	12 50 06.8	-0.1
GRFO				IAmb	IAmb	12 50 12.4	
	comp=Z,36nm,1.2s						
VRAC	Vranov	74.33	356	⇑P	P	12 50 09.4	+0.8
VRAC	Vranov	74.33	356	*e*P	P	12 50 08.5	-0.1
VRAC	Vranov	74.33	356	⇑P	P	12 50 09.4	+0.8
LANS	Liptovska Anna	74.36	354	*e*P	P	12 50 10.6	+1.8
LANS				pmax	pmax		
	comp=Z,21nm,1.2s						
LANS	Liptovska Anna	74.36	354	*e*P	P	12 50 10.6	+1.8
LANS				*e*		12 51 01.7	
KOLS	Kolonicke sedl	74.39	352	*e*P	P	12 50 09.4	+0.5
KOLS				pmax	pmax		
	comp=Z,20nm,1.2s						
KOLS	Kolonicke sedl	74.39	352	*e*P	P	12 50 09.4	+0.5
KOLS				*e*		12 51 00.2	
TAPN	Taplejung	74.50	296	*e*P	P	12 50 09.3	-0.9
	comp=Z,134nm,1.3s						
KRUC	Moravsky	74.59	356	*e*P	P	12 50 09.5	-0.5
KHC	Kasperske Hory	74.59	358	⇑*e*P	P	12 50 10.9	+0.8
KHC				pmax	pmax		
	comp=Z,95nm,1.4s						
KHC	Kasperske Hory	74.59	358	*e*P	P	12 50 10.7	+0.6
KHC	Kasperske Hory	74.59	358	P	P	12 50 10.2	+0.1
KHC				IAmb	IAmb	12 50 11.8	
	comp=Z,53nm,1.4s						
SWI	Sorong	74.61	244	P	P	12 50 09.8	-0.7
	comp=Z,71nm,1.2s						
SORM	Soroca	74.62	348	⇑P	P	12 50 08.8	-1.4
SORM	Soroca	74.62	348	⇑P	P	12 50 08.8	-1.4
UZH	Uzhgorod	74.69	352	*e*P	P	12 50 10.5	-0.1

UZH				*i*		12 50 21.3	
JAVC	Velka Javorina	74.74	355	*e*P	P	12 50 11.9	+0.9
GEC2	GERESS Array S	74.87	358	P	P	12 50 11.9	0.0
GEC2				IAmb	IAmb	12 50 13.1	
	comp=Z,29nm,1.4s						
GERES	GERESS Array B	74.87	358	P	P	12 50 12.0	+0.2
	comp=Z,4.0nm,0.9s,baz=8.5,slow=2.7,SNR=7.7						
MSVF	Nonsavu	74.88	193	⇑*e*P	P	12 50 11.4	-0.6
MSVF				pmax	pmax		
	comp=Z,51nm,2.1s						
GUN	Gumba	74.94	298	*e*P	P	12 50 13.2	+0.4
KECS	Kecovo	74.97	354	*e*P	P	12 50 12.3	+0.1
KECS				pmax	pmax		
	comp=Z,17nm,1.3s						
KECS	Kecovo	74.97	354	*e*P	P	12 50 12.3	+0.1
UBPT	Khong Chiam	74.98	275	P	P	12 50 13.6	+0.9
PMG	Port Moresby	75.08	225	⇓*e*P	P	12 50 13.4	+0.2
PMG				pmax	pmax		
	comp=Z,55nm,1.1s						
SMOL	Smolenice	75.09	356	*e*P	P	12 50 13.8	+0.8
SMOL				pmax	pmax		
	comp=Z,13nm,1.2s						
SMOL	Smolenice	75.09	356	*e*P	P	12 50 13.8	+0.8
SMOL				*e*		12 51 04.9	
MODS	Modra-Piesok	75.24	356	*e*P	P	12 50 14.0	+0.2
MODS				pmax	pmax		
	comp=Z,75nm,1.4s						
MODS	Modra-Piesok	75.24	356	*e*P	P	12 50 14.0	+0.2
MODS				*e*		12 51 04.7	
KKN	Kakani	75.33	298	*e*P	P	12 50 15.2	+0.3
BFO	Black Forest	75.39	2	P	P	12 50 14.8	+0.1
BFO				pmax	pmax		
	comp=Z,21nm,1.3s						
BFO	Black Forest	75.39	2	P	P	12 50 14.8	+0.1
ZST	Bratislava	75.42	356	*e*P	P	12 50 15.9	+1.0
ZST				pmax	pmax		
	comp=Z,119nm,1.4s						
ZST	Bratislava	75.42	356	*e*P	P	12 50 15.9	+1.0
ZST				*e*		12 51 06.4	
PKI	Pulchoki	75.45	298	*e*P	P	12 50 15.6	-0.2
	comp=Z,196nm,1.5s						
BURAR	Bucovina Array	75.46	350	⇑P	P	12 50 15.1	-0.1
BURAR	Bucovina Array	75.46	350	⇑P	P	12 50 15.1	-0.1
BURAR	Bucovina Array	75.46	350	P	P	12 50 14.8	-0.5
GKN	Gorkha	75.46	299	*e*P	P	12 50 15.9	+0.3
	comp=Z,236nm,1.4s						
ECH	Echery	75.47	3	P	P	12 50 15.1	-0.1
ECH				pmax	pmax		
	comp=Z,20nm,1.2s						
ECH	Echery	75.47	3	P	P	12 50 15.1	-0.1
ECH				IAmb	IAmb	12 50 16.9	
	comp=Z,20nm,1.2s						
DMN	Daman	75.56	298	*e*P	P	12 50 16.9	+0.6
	comp=Z,176nm,1.4s						
PSZ	Piszkesteto	75.56	354	⇑P	P	12 50 16.7	+0.9
PSZ	Piszkesteto	75.56	354	P	P	12 50 16.3	+0.5
PSZ				pmax	pmax		
	comp=Z,44nm,1.3s						
PSZ	Piszkesteto	75.56	354	P	P	12 50 16.3	+0.5
PSZ				IAmb	IAmb	12 50 17.9	
	comp=Z,44nm,1.3s						
DANN	Dangsing	75.60	300	*e*P	P	12 50 16.9	+0.3
	comp=Z,174nm,1.0s						
CM33	Chiang Mai Arr	75.65	282	P	P	12 50 17.0	+0.4
CM35	Chiang Mai Arr	75.65	282	P	P	12 50 17.0	+0.4
CMMT	Chiang Mai	75.66	282	P	P	12 50 16.6	0.0
	comp=Z,7.9nm,1.5s						
CHTO	Chiang Mai	75.66	282	P	P	12 50 17.1	+0.4
CHTO				pmax	pmax		
	comp=Z,28nm,1.4s						
CHTO	Chiang Mai	75.66	282	P	P	12 50 17.1	+0.4
CHTO				IAmb	IAmb	12 50 18.0	
	comp=Z,28nm,1.4s						
KIS	Kishinev	75.68	348	*e*LR	LR	13 27 04.0	
	comp=Z,500nm,17.0s						
KIS	Kishinev	75.68	348	*e*P	P	12 50 11.0	-5.4
KIS				MLR	MLR		
	comp=Z,600nm,17.0s						
KIS	Kishinev	75.68	348	*e*P	P	12 50 11.0	-5.4
PPT2	Papeete2	75.70	161	*e*LR	LR	13 13 33.5	
	comp=Z,1μm,23.8s						
CONA	Conrad Observa	75.74	357	*i* P	P	12 50 17.4	+0.6
	comp=Z,34nm,1.3s,SNR=6.1						
SRO	Srobarova	75.75	355	*e*P	P	12 50 18.4	+1.7
SRO	Srobarova	75.75	355	*e*P	P	12 50 18.4	+1.7
CM36	Chiang Mai Arr	75.82	282	P	P	12 50 18.0	+0.4
CM32	Chiang Mai Arr	75.84	282	P	P	12 50 19.0	+1.3
NIL	Nilore	75.85	310	P	P	12 50 18.7	+1.1
NIL				pmax	pmax		
	comp=Z,99nm,1.3s						
NIL	Nilore	75.85	310	P	P	12 50 18.7	+1.1
MOA	Molln	75.86	358	*e*P	P	12 50 17.8	+0.4
	comp=Z,20nm,1.5s						
FAKI	Fak Fak	75.90	242	P	P	12 50 18.7	+0.7
FAKI	Fak Fak	75.90	242	P	P	12 50 18.1	+0.1
	comp=Z,60nm,1.0s						
CM09	Chiang Mai Arr	75.93	282	P	P	12 50 19.0	+0.8
	comp=Z,194nmcomp=Z,15nm,1.2s						
CM31	Chiang Mai Arr	75.95	282	P	P	12 50 20.2	+1.9
	comp=Z,6μmcomp=Z,342nm,1.2s						
CM31	Chiang Mai Arr	75.95	282	P	P	12 50 19.1	+0.8
CM31				IAmb	IAmb	12 50 20.1	
	comp=Z,36nm,1.2s						
CMAR	Chiang Mai Arr	75.95	282	P	P	12 50 19.1	+0.7
	comp=Z,9.3nm,1.0s,baz=19,slow=5.8,SNR=50						
CMAR	Chiang Mai Arr	75.95	282	P	P	12 50 18.9	+0.6
CMAR	Chiang Mai Arr	75.95	282	P	P	12 50 18.9	+0.6
CM15	Chiang Mai Arr	75.96	282	P	P	12 50 19.0	+0.6
	comp=Z,177nmcomp=Z,14nm,1.2s						
CM02	Chiang Mai Arr	75.97	282	P	P	12 50 19.0	+0.6
	comp=Z,224nmcomp=Z,18nm,1.1s						
CM01	Chiang Mai Arr	75.97	282	P	P	12 50 19.0	+0.6
	comp=Z,236nmcomp=Z,19nm,1.2s						
CM04	Chiang Mai Arr	75.98	282	P	P	12 50 19.9	+1.4
	comp=Z,223nmcomp=Z,20nm,1.1s						
CM05	Chiang Mai Arr	75.99	282	P	P	12 50 19.9	+1.3
	comp=Z,192nmcomp=Z,16nm,1.1s						
CM13	Chiang Mai Arr	76.00	282	P	P	12 50 19.9	+1.3
	comp=Z,198nmcomp=Z,15nm,1.2s						
BIZ	Bicaz	76.04	349	⇑P	P	12 50 18.2	-0.2
MAK	Makhachkala	76.14	333	*e*P	P	12 50 16.0	-3.0
MAK				*e*		12 53 05.6	
MAK				*e*S	S	12 59 57.8	-4.9
MAK				*e*SSS	SSS	13 08 12.4	
KOLN	Koldanda	76.16	299	*e*P	P	12 50 19.6	-0.1
	comp=Z,214nm,1.4s						
RETA	Reutte	76.25	0	*e*P	P	12 50 19.4	-0.4
	comp=Z,20nm,1.3s						
KIV	Kislovodsk	76.32	337	*e*P	P	12 50 18.4	-1.8
KIV				pmax	pmax		
	comp=Z,68nm,1.1s						
KIV				MLR	MLR		
	comp=Z,5μm,18.0s						
KIV	Kislovodsk	76.32	337	P	P	12 50 21.2	+1.0
KIV				IAmb	IAmb	12 50 21.9	
	comp=Z,19nm,0.9s						
MOTA	Moosalm	76.40	360	*e*P	P	12 50 20.6	0.0
WATA	Walderalm	76.41	360	*e*P	P	12 50 20.6	0.0
	comp=Z,25nm,1.3s						
ARSA	Arzberg	76.42	357	*e*P	P	12 50 21.2	+0.5
	comp=Z,20nm,1.4s						
KBZ	Khabaz	76.49	337	P	P	12 50 22.2	+1.3
	comp=Z,11nm,1.0s,baz=335,slow=5.1,SNR=10						
DRGR		76.49	352	⇑P	P	12 50 21.4	+0.3
DRGR		76.49	352	⇑P	P	12 50 21.4	+0.3
SQTA	Sankt Quirin	76.52	360	*i* P	P	12 50 21.6	+0.3
	comp=Z,27nm,1.2s,SNR=5.3						
NCK	Nalchik	76.56	336	⇓*e*P	P	12 50 22.9	+1.5
NCK				pmax	pmax		
	comp=Z,58nm,1.0s						
KBA	Koelnbreinsper	76.65	358	*i* P	P	12 50 23.0	+1.0
	comp=Z,44nm,1.3s,SNR=6.9						
FETA	Feichten	76.72	0	*e*P	P	12 50 22.8	+0.3
	comp=Z,22nm,1.0s						
MHMT	Maesarieng	76.72	283	P	P	12 50 23.0	+0.3
KBL	Kabul	76.80	314	P	P	12 50 22.8	-0.4
KBL				pmax	pmax		
	comp=Z,47nm,1.1s						
KBL	Kabul	76.80	314	P	P	12 50 22.8	-0.4
ABTA	Abfaltersbach	76.99	359	*e*P	P	12 50 24.7	+0.8
	comp=Z,29nm,1.3s						
SOKA	Soboth	77.01	357	*i* P	P	12 50 24.4	+0.4
	comp=Z,43nm,1.5s,SNR=8.4						
DOPR	Dopca	77.07	350	⇓P	P	12 50 24.7	+0.3
MYKA	Terra Mystica	77.09	358	*e*P	P	12 50 25.2	+0.8
	comp=Z,19nm,1.6s						
ZEI	Tsey	77.16	336	*e*P	P	12 50 24.2	-0.9
ZEI				pmax	pmax		
	comp=Z,40nm,1.6s						
OBKA	Obir	77.19	358	*e*P	P	12 50 25.4	+0.4
	comp=Z,64nm,2.2s						
SOC	Sochi	77.29	339	*e*P	P	12 50 25.6	+0.1
SOC				*e*		12 53 14.2	
SOC				*e*PPP	PPP	12 55 10.3	
SOC				*e*S	S	13 00 14.6	-0.6
SOC				*e*SS	SS	13 05 14.9	+3.1
SOC				*e*SSS	SSS	13 08 34.4	
MORH	Mrgy, Hungar	77.33	355	⇓P	P	12 50 25.9	+0.2
CFR	Carcaliu	77.56	348	⇑P	P	12 50 26.8	-0.2
CFR	Carcaliu	77.56	348	⇑P	P	12 50 26.8	-0.2
ARR	Arges	77.74	350	⇑P	P	12 50 28.6	+0.5
GEYT	Alibeck	77.74	324	P	P	12 50 29.4	+1.1
	comp=Z,17nm,0.9s,baz=336,slow=3.3,SNR=21						
BZS	Buzias	77.74	352	⇑P	P	12 50 28.2	+0.2
BZS	Buzias	77.74	352	⇑P	P	12 50 28.2	+0.2
GZR	Gura Zlata	77.88	352	⇑P	P	12 50 29.1	+0.2
GZR	Gura Zlata	77.88	352	⇑P	P	12 50 29.1	+0.2
UTHA	Uthaitani	78.05	280	P	P	12 50 32.0	+1.9
	comp=Z,374nmcomp=Z,22nm,1.3s						
MRSI	Marisa	78.24	253	P	P	12 50 30.1	-1.1
	comp=Z,52nm,1.5s						
FRGS	Fruska Gora	78.32	354	⇑P	P	12 50 31.4	+0.1
HERR	Herculane	78.41	352	⇑P	P	12 50 30.5	-1.3
MDVR	Moldovita	78.57	352	⇑P	P	12 50 32.6	-0.1
DIVS	Divibare	79.36	353	P	P	12 50 37.1	0.0
DIVS				IAmb	IAmb	12 50 38.2	
	comp=Z,31nm,1.2s						
MPSI	Mapaga	79.44	254	P	P	12 50 36.4	-1.4
	comp=Z,51nm,1.4s						
BANI	BANI	79.45	73	P	P	12 50 38.8	+0.9
GNI	Garni	79.47	334	*de*P	P	12 50 39.5	+1.6
GNI				pmax	pmax		
	comp=Z,63nm,1.7s						
GNI	Garni	79.47	334	P	P	12 50 40.0	+2.1
GNI				IAmb	IAmb	12 50 40.1	
	comp=Z,18nm,0.8s						
HRA	Herat	79.52	319	IAmb	IAmb	12 50 39.8	
	comp=Z,45nm,1.4s						
DR12	Loma Pena Alta	79.63	72	P	P	12 50 39.6	+0.7
PHET	Kaeng Krachan	80.13	278	P	P	12 50 43.8	+2.3
	comp=Z,416nmcomp=Z,14nm,1.1s						
MURB	Monte Urbino	80.47	359	IAmb	IAmb	12 50 46.3	
	comp=Z,51nm,1.2s						
KOPT	Kop Dagi	80.55	338	P	P	12 50 45.6	+1.8
COEN	Coen	80.79	227	P	P	12 50 44.9	0.0
COEN				IAmb	IAmb	12 50 46.1	
	comp=Z,22nm,1.2s						
DZM	Mont Dzumac	81.10	203	*e*LR	LR	13 16 09.1	
	comp=Z,1μm,25.9s						
TBI	Tubuai	81.35	162	*e*LR	LR	13 16 14.7	
	comp=Z,1μm,28.0s						
SKO	Skopje	81.38	352	*i* P	P	12 50 48.9	+1.0
STIP	Stip	81.60	352	*i* P	P	12 50 48.6	-0.4
GEVA	Gevas	81.62	335	P	P	12 50 50.0	+0.5
OBIP	Obispado Ponce	81.70	70	P	P	12 50 49.7	-0.2
GCPR	Guaynabo City	81.75	69	P	P	12 50 50.4	+0.2
VAY	Valandovo	81.94	351	*i* P	P	12 50 51.9	+1.1
BRTR	Keskin Array B	82.13	343	P	P	12 50 52.6	+0.6
	comp=Z,15nm,1.1s,baz=36,slow=2.3,SNR=13						
BRTR	Keskin Array B	82.13	343	P	P	12 50 52.2	+0.1
BRTR	Keskin Array B	82.13	343	P	P	12 50 52.2	+0.1
MTP	Monte Pirata	82.20	69	P	P	12 50 52.8	+0.2
MTP				IAmb	IAmb	12 50 54.1	
	comp=Z,34nm,1.1s						
OHR	Ohrid	82.28	353	*i* P	P	12 50 52.9	+0.2
ESDC	Sonseca Array	83.22	12	P	P	12 50 57.9	+0.2
	comp=Z,7.1nm,1.1s,baz=342,slow=4.6,SNR=5.8						
GAZ	Gaziantep	83.97	339	P	P	12 51 02.8	+1.3
RKT	Rikitea	84.45	149	*e*LR	LR	13 17 39.4	
	comp=Z,1μm,26.2s						
MTN	Manton Dam	85.07	238	P	P	12 51 07.5	+0.3
MTN				IAmb	IAmb	12 51 08.7	
	comp=Z,25nm,1.1s						
CTAO	Charters Tower	85.19	222	P	P	12 51 08.1	+0.5
CTAO				pmax	pmax		
	comp=Z,47nm,1.2s						
CTAO	Charters Tower	85.19	222	P	P	12 51 08.1	+0.5
KULM	Kulim	85.85	273	P	P	12 51 11.0	-0.2
EDFI	Ende, Flores	86.19	248	P	P	12 51 09.7	-3.2
	comp=Z,13nm,1.4s						
IPM	Ipoh	86.32	272	IAmb	IAmb	12 51 14.8	
	comp=Z,33nm,1.2s						
HYB	Hyderabad	87.37	298	*i* P	P	12 51 18.5	-0.2
WRAB	Tennant Creek	89.83	232	⇑*i*P	P	12 51 29.5	-0.5
WRAB				pmax	pmax		
	comp=Z,28nm,1.7s						
WRAB	Tennant Creek	89.83	232	P	P	12 51 30.2	+0.2
WRA	Warramunga Arr	89.85	232	P	P	12 51 29.8	-0.3
	comp=Z,3.3nm,1.1s,baz=42,slow=5.2,SNR=12						
WRA	Warramunga Arr	89.85	232	P	P	12 51 29.5	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,1.4s						
WRA	Warramunga Arr	89.85	232	P	P	12 51 29.5	-0.6
FITZ	Fitzroy Crossi	92.22	240	P	P	12 51 41.1	0.0
FITZ				IAmb	IAmb	12 51 42.1	
	comp=Z,21nm,1.2s						
ASAR	Alice Springs	93.32	231	P	P	12 51 45.8	-0.4
	comp=Z,2.3nm,1.0s,baz=31,slow=4.2,SNR=9.2						
ASAR	Alice Springs	93.32	231	P	P	12 51 45.9	-0.2
ASAR	Alice Springs	93.32	231	P	P	12 51 45.9	-0.2
BI02	San Fabin de	123.69	107		PKPdf	12 57 28.3	-0.3
PLCA	Paso Flores	127.08	110	PKP	PKiKP	12 57 35.3	-0.1
	comp=Z,5.7nm,0.9s,baz=278,slow=2.4,SNR=8.3						
PLCA	Paso Flores	127.08	110		PKiKP	12 57 35.8	+0.3
QSPA	South Pole Qui	146.40	180		PKPbc	12 58 10.6	-0.3
LBTB	Lobatse	146.71	336	PKP2	PKPab	12 58 13.8	-0.5
LBTB	Lobatse	146.71	336		PKPab	12 58 13.8	-0.5
BOSA	Boshof	150.24	334	PKP	PKPdf	12 58 16.2	-1.0
	comp=Z,4.6nm,1.1s,baz=19,slow=3.9,SNR=3.0						
BOSA				PKPbc	PKPbc	12 58 21.9	-0.5
	comp=Z,12nm,0.9s,baz=39,slow=1.9,SNR=15						
BOSA	Boshof	150.24	334	PKIKP	PKPdf	12 58 17.3	+0.1
BOSA						12 58 22.6	
BOSA	Boshof	150.24	334		PKPdf	12 58 17.3	+0.1
BOSA					PKPbc	12 58 22.6	+0.3
SYO	Syowa Base	162.25	214	⇓*e*X	PKPab	12 59 20.7	+2.1

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*IDC **31** 12:39:21.8±0.6, 56°.74N×169°.11W, h0^{km}, mb4.9/22, mb1 5.1/26, mb1mx4.9/44, mbtmp4.9/26, ML4.3/4, MS4.7/2, Ms1 4.8/2, ms1mx4.0/31, Error ellipse: s-maj=20.4km s-min=11.3km az=177.0*

*NEIC **31** 12:39:27, 56°.78N×169°.09W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.99; M$_{\theta\theta}$0.85; M$_{\phi\phi}$0.14; M$_{r\theta}$0.42; M$_{\theta\phi}$-0.25; M$_{\phi r}$0.25; Fault plane solution: M$_0$1.08000×10^{17} NP1:φ$_s$122.00000°, δ38.00000°, λ-64.00000°. NP2:φ$_s$270.00000°, δ57.00000°, λ-109.00000°. Principal axes: T 0.9866, Plg10.0000°, Azm14.0000°; N 0.1600, Plg16.0000°, Azm281.0000°; P -1.1467, Plg71.0000°, Azm135.0000°;*

ISC 31 12:39:23.8±0.6**, 56°.8N**±0°.1×**168°.96W**±0°.07**, h10^{km}, n76, σ1^{s}.49**/79**, mb5.0**/39**, 1C, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	Kodiak Island	8.92	77	Pn	Pn	12 41 34.0	+1.4
	6.1nm,0.3s,baz=315,slow=10,SNR=2.2						
KDAK				LR	LR	12 44 44.3	
	comp=Z,4μm,20.4s,baz=280,slow=36						
ILAR	Eielson Array	13.34	44	Pn	Pn	12 42 32.4	-0.6
	0.3nm,0.3s,baz=238,slow=12,SNR=1.1						
ILAR				LR	LR	12 48 25.5	
	comp=Z,4μm,19.3s,baz=254,slow=40						
PETK	Petropavlovsk-	19.38	273	P	P	12 43 49.3	-0.3
	1.9nm,0.3s,baz=81,slow=9.0,SNR=10						
INK	Inuvik	19.62	40	P	Pn	12 43 52.7	-0.7
	2.0nm,0.3s,baz=243,slow=8.8,SNR=8.4						
SEY	Seymchan	20.10	304	P	P	12 43 57.1	-0.1
	65nm,1.0s,baz=119,slow=10.0,SNR=8.3						
DLBC	Dease Lake	20.71	69	P	Pn	12 44 05.4	-1.0
	56nm,1.1s,baz=259,slow=6.1,SNR=3.9						
BBB	Bella Bella	23.90	84	P	P	12 44 38.8	+1.4
	17nm,1.0s,baz=302,slow=12,SNR=3.3						
YKA	Yellowknife Ar	27.31	55	P	P	12 45 09.3	+1.1
	20nm,1.0s,baz=280,slow=8.8,SNR=5.3						
YKA				PcP	PcP	12 48 25.9	-1.3
	6.1nm,1.0s,baz=297,slow=1.7,SNR=3.0						
RES	Resolute Bay	32.30	29	PcP	PcP	12 48 38.5	-1.3
	3.5nm,0.7s,baz=268,slow=2.9,SNR=4.9						
NVAR	Mina Array Bea	37.74	97	P	P	12 46 41.1	+1.3
	6.5nm,0.9s,baz=295,slow=8.0,SNR=5.0						
NVAR				PcP	PcP	12 48 55.6	-1.0
	3.5nm,0.7s,baz=299,slow=2.3,SNR=4.2						
MJAR	Matsushiro Arr	40.30	263	P	P	12 47 00.9	0.0
	52nm,1.3s,baz=22,slow=7.1,SNR=11						
CN2	Changchun	42.22	281	*e*P	P	12 47 15.8	-0.9
CN2	Changchun	42.22	281	pmax	pmax		
	comp=Z,20nm,1.7s						
NRIK	Noril'sk	42.67	329	P	P	12 47 20.7	+0.7
	18nm,1.1s,baz=59,slow=9.1,SNR=5.3						
UPNV	Upernavik	42.80	24	*e*P	P	12 47 20.2	-0.8
KSRS	Korea Array	45.28	273	P	P	12 47 41.4	0.0
	28nm,1.2s,baz=48,slow=7.4,SNR=10						
KSRS				PcP	PcP	12 49 19.8	-1.2
	2.6nm,0.9s,baz=48,slow=2.4,SNR=4.1						
DAG	Danmarks Havn	45.36	9	*i* P	P	12 47 41.3	-0.1
DAG	Danmarks Havn	45.36	9	*e*P	P	12 47 41.4	-0.1
SUMG	Summit	46.47	18	*i* P	P	12 47 49.0	-1.8
	200nm,1.2s						
SUMG	Summit	46.47	18	*i* P	P	12 47 49.0	-1.8
SUMG				IAmb	IAmb	12 47 55.5	
	comp=Z,200nm,1.2s						
DBG	Daneborg	47.49	11	*e*P	P	12 47 59.8	+1.6
ICESG	Greenland Ices	49.12	22	*e*P	P	12 48 10.4	-0.9
SONM	Songino Array	49.33	298	P	P	12 48 12.7	-0.2
	comp=Z,10.0nm,0.9s,baz=49,slow=6.8,SNR=11						
SONM				PcP	PcP	12 49 35.4	0.0
	comp=Z,6.3nm,1.0s,baz=62,slow=3.1,SNR=4.7						
SCO	Scoresbysund	50.84	14	*i* P	P	12 48 23.5	-0.3
SCO	Scoresbysund	50.84	14	*i* P	P	12 48 23.5	-0.3
ANGG	Ammassalik, Gr	52.48	23	*i* P	P	12 48 34.7	-1.4
TXAR	Lajitas Array	52.57	93	P	P	12 48 37.6	+0.1
	comp=Z,17nm,1.0s,baz=308,slow=4.6,SNR=13						
TXAR				PcP	PcP	12 49 48.5	+0.8
	comp=Z,8.6nm,1.1s,baz=298,slow=2.7,SNR=3.5						
TIY	Taiyuan	53.50	285	*e*P	P	12 48 48.0	+3.8
TIY				pmax	pmax		
	comp=Z,31nm,0.6s						
ARCES	ARCESS Array B	53.52	354	P	P	12 48 45.0	+1.1
	comp=Z,23nm,1.1s,baz=18,slow=8.9,SNR=3.9						
ZALV	Zalesovo Beam	54.35	316	P	P	12 48 50.2	+0.1
	comp=Z,2.5nm,0.8s,baz=29,slow=6.8,SNR=3.7						
XAN	Xi'an	58.13	284	P	P	12 49 16.5	-1.0
XAN				pP	sP	12 49 28.0	+6.1
XAN				pmax	pmax		
	comp=Z,44nm,1.7s						
GTA	Gaotai	58.74	295	P	P	12 49 20.5	-1.2
GTA				pP	pP	12 49 24.3	-0.6
GTA				sP	sP	12 49 27.5	+1.4
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
SEM	Semipalatinsk	58.88	316	*e*P	P	12 49 23.6	+0.9
	comp=Z,13nm,1.6s,baz=315						
ZSN	Zaisan	59.38	311	*i* P	P	12 49 27.9	+2.0
	comp=Z,32nm,1.2s,baz=310						
MKAR	Makanchi Array	60.97	312	P	P	12 49 36.0	-0.9
	comp=Z,15nm,1.1s,baz=56,slow=8.9,SNR=7.4						
FINES	FINESS Array B	61.50	352	P	P	12 49 39.7	-0.4
	comp=Z,26nm,1.1s,baz=15,slow=7.9,SNR=7.8						
BRZS	Berezniki	62.02	320	*e*P	P	12 49 45.1	+1.3
	comp=Z,16nm,1.4s,baz=319						
NOA	NORSAR Array B	62.49	360	P	P	12 49 46.2	-0.7
	comp=Z,20nm,1.2s,baz=359,slow=6.5,SNR=5.7						
TDK	Taldyqorghan	64.00	313	*e*P	P	12 49 59.4	+2.3
	comp=Z,48nm,1.8s,baz=313						
SHLS	Shalkode	65.09	311	*e*P	P	12 50 05.7	+1.3
	comp=Z,59nm,1.5s,baz=310						
KPKS	Kokpek	65.16	312	*i* P	P	12 50 07.8	+3.1
	comp=Z,20nm,1.2s,baz=312						
BTLS	Baital	65.67	316	*i* P	P	12 50 09.7	+1.7
	comp=Z,16nm,1.3s,baz=316						
KUU	Kurty	65.74	314	*e*P	P	12 50 09.7	+1.3
	comp=Z,15nm,1.3s,baz=313						
MDOK	Medeo	66.07	313	*e*P	P	12 50 12.5	+1.7
	comp=Z,231nm,1.4s,baz=312						
AAA	Alma-Ata	66.08	313	*e*P	P	12 50 12.9	+2.1
	baz=312						
TNSS	Tian-Shan	66.22	313	*e*P	P	12 50 13.8	+1.8
	baz=312						
MTBS	Maitube	66.35	313	*e*P	P	12 50 14.2	+1.7
	baz=313						
SGDS	Sogindy	66.78	315	*e*P	P	12 50 17.4	+2.1
	comp=Z,9.1nm,1.2s,baz=314						
KMI	Kunming	68.44	283	⇑P	P	12 50 29.3	+3.2
KMI				pP	sP	12 50 40.5	+10
KMI				pmax	pmax		
	comp=Z,38nm,1.5s						
IUG	Iuzhnay	69.66	317	*e*P	P	12 50 35.7	+2.4
	comp=Z,30nm,1.3s,baz=317						
AKASG	Malin Array Be	71.80	348	P	P	12 50 44.2	-1.8
	comp=Z,19nm,0.7s,baz=14,slow=5.8,SNR=10						
CLL	Collm	72.23	359	*i* P	P	12 50 47.1	-1.5
	comp=Z,15nm,1.1s						
CLL				*i*		12 50 50.7	
	comp=Z,37nm,1.2s						
CLL				*e*		12 51 09.0	
BRG	Berggiesshubel	72.66	358	*i* P	P	12 50 50.8	-0.4
BRG				Amp		12 50 56.8	
	comp=Z,44nm,1.4s						
BRG				SKS		12 54 06.0	
BRG				Amp		13 37 41.0	
	comp=N,1.8nm,14.5s						
BRG				Amp		13 37 48.0	
	comp=E,1.0nm,14.5s						
BRG				Amp		13 37 52.0	
	comp=Z,2.6nm,15.1s						
CHVC	Chvalec	72.89	357	*e*P	P	12 50 52.1	-0.5
OSTC	Ostas	72.91	357	*e*P	P	12 50 50.2	-2.5
OSTC				*e*x	x	12 50 56.0	
UPC	Upice	72.97	357	*e*P	P	12 50 53.0	0.0
DPC	Dobruska-Polom	73.12	356	*e*P	P	12 50 53.6	-0.4
NKC	Novy Kostel	73.32	359	*e*P	P	12 50 54.6	-0.5
NKC				*e*x	x	12 50 59.5	
KRLC	Kraliky	73.37	356	*e*P	P	12 50 55.2	-0.3
PRU	Pruhonice	73.53	358	*e*P	P	12 50 55.9	-0.4
MORC	Moravsky Berou	73.64	356	*e*PCP	P	12 50 56.2	-0.9
PBCC	Pribram	73.84	358	*e*P	P	12 50 58.1	-0.1
NONG	Nongkai	73.94	278	P	P	12 51 02.7	+3.5
	comp=Z,11μmcomp=Z,46nm,1.6s						
VRAC	Vranov	74.15	356	*e*PCP	P	12 50 59.4	-0.6
KRUC	Moravsky	74.40	356	*e*PCP	P	12 51 00.6	-0.9
KHC	Kasperske Hory	74.41	358	*e*P	P	12 51 01.6	+0.1
KHC				*e*x	x	12 51 05.6	
JAVC	Velka Javorina	74.55	355	*e*PCP	P	12 51 02.8	+0.4
GERES	GERESS Array B	74.69	358	P	P	12 51 01.5	-1.7
	comp=Z,2.3nm,0.9s,baz=20,slow=4.3,SNR=4.0						
KHON	Khomkaen	75.53	278	P	P	12 51 12.1	+3.7
CMAR	Chiang Mai Arr	75.90	282	P	P	12 51 09.0	-1.5
	comp=Z,14nm,1.0s,baz=18,slow=6.0,SNR=13						
KBZ	Khabaz	76.31	337	P	P	12 51 13.1	+0.6
	comp=Z,12nm,0.9s,baz=336,slow=4.6,SNR=4.1						
GEYT	Alibeck	77.58	324	P	P	12 51 19.7	-0.1
	comp=Z,41nm,1.2s,baz=22,slow=4.7,SNR=12						
ESDC	Sonseca Array	83.05	12	P	P	12 51 48.4	-0.9
	comp=Z,20nm,1.2s,baz=352,slow=4.6,SNR=5.7						
ASAR	Alice Springs	93.42	230	P	P	12 52 36.4	-2.8
	comp=Z,1.5nm,0.8s,baz=28,slow=4.9,SNR=3.4						
PLCA	Paso Flores	127.16	109	PKP	PKPdf	12 58 25.9	-1.7
	comp=Z,12nm,1.1s,baz=263,slow=2.8,SNR=8.4						
BOSA	Boshof	150.07	334	PKPbc	PKPbc	12 59 13.3	-1.1
	comp=Z,24nm,1.1s,baz=26,slow=2.7,SNR=5.7						

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*SKHL **31** 12:39:37.2±0.3, 47°.05N×141°.96E, h10^{km}±5^{km}, mb5.0/5*
SKHL Felt (III)at Kholmsk.

*JMA **31** 12:39:37.1±0.5, 47°.19N×142°.40E, h18^{km}, M3.4*

ISC 31 12:39:38.9±1.0**, 47°.05N**±0°.04×**142°.17E**±0°.06**, h10^{km}, n7, σ1^{s}.00**/14**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHLM	Kholmsk	0.08	271	*i* Pg	Pg	12 39 40.2	-1.0
KHLM				AMB	AMB	12 39 40.3	
	80μm,0.2s						
KHLM				*e*Sg	Sg	12 39 42.5	-0.4
KHLM				A	A	12 39 44.4	
	84μm,0.3s						
KHLM				A	A	12 39 44.4	
	113μm,0.3s						
YSS	Yuzh-Sakhalins	0.41	104	*e*Pg	Pn	12 39 48.6	-2.2
YSS				AMB	AMB	12 39 48.9	
	1μm,0.4s						
YSS				*e*Sg	Sb	12 39 56.5	+2.0
YSS				A	A	12 39 57.1	

	2µm,0.3s						
YSS				A	A	12 39 57.1	
	1µm,0.3s						
JWK2	**Keihoku**	**1.75**	**186**	P	**Pn**	**12 40 09.3**	**+0.1**
UGL	**Uglegorsk**	**2.03**	**358**	*e*P	**Pn**	**12 40 13.3**	**+0.3**
UGL				P	**Pg**	**12 40 18.0**	**+0.3**
	40nm,0.5s						
UGL				*e*S	**Sn**	**12 40 38.9**	**+0.5**
UGL				S	**Sb**	**12 40 41.1**	**+0.1**
	100nm,0.6s						
UGL				S	**Sb**	**12 40 41.1**	**+0.1**
	200nm,0.6s						
ASAJ	**Asahikawa**	**2.95**	**174**	P	**Pn**	**12 40 26.1**	**+0.3**
JKK2	**Kamakawa 2**	**3.21**	**173**	P	**Pn**	**12 40 30.0**	**+0.7**
JTKR	**Abashiri--Toko**	**3.32**	**158**	P	**Pn**	**12 40 30.7**	**-0.1**
JTKR				*e*S	**Sn**	**12 41 10.2**	**0.0**

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*AEIC **31** 12:45:02±2.7, 56°.54N±0°.06×169°.2W±0°.1, h26km±4km, Error ellipse: s-maj=9.6km s-min=7.1km az=223.0*

*IDC **31** 12:45:02.8±1.5, 56°.77N×169°.07W, h0km, mb3.6/6, mb1 4.0/9, mb1mx3.7/48, mbtmp3.8/9, ML3.5/3, Error ellipse: s-maj=47.9km s-min=18.4km az=7.0*

*NEIC **31** 12:45:03.0±0.9, 56°.63N±0°.05×169°.02W±0°.10, h10km±1km, ML3.9(AEIC), Error ellipse: s-maj=11.8km s-min=5.1km az=224.0*

ISC 31 12:45:03.5±0.7**, 56°.63N**±0°.08×**169°.03W**±0°.07**, h10km, n28, σ1s.10**/29**, mb3.4**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.86**	**310**		**Pg**	**12 45 19.2**	**-0.9**
AKGG	**Akutan Green G**	**2.99**	**143**		**Pn**	**12 45 49.6**	**-1.3**
MSW	**Makushin Switc**	**3.01**	**154**		**Pn**	**12 45 50.7**	**-0.5**
AKRB	**Akutan Reef Bi**	**3.02**	**145**		**Pn**	**12 45 51.0**	**-0.3**
MNAT	**Makushin Natee**	**3.06**	**153**		**Pn**	**12 45 51.5**	**-0.4**
MGOD	**Makushin Gods**	**3.10**	**156**		**Pn**	**12 45 51.8**	**-0.7**
AKUT	**Akutan**	**3.12**	**142**		**Pn**	**12 45 52.1**	**-0.5**
UNV	**Unalaska Valle**	**3.15**	**152**		**Pn**	**12 45 52.6**	**-0.4**
WESP	**Westdahl Peak**	**3.25**	**129**		**Pn**	**12 45 53.7**	**-0.8**
OKSP	**Okmok Steeple**	**3.41**	**172**		**Pn**	**12 45 55.1**	**-1.7**
NIKH	**Nikolski High**	**3.67**	**178**		**Pn**	**12 45 58.1**	**-2.1**
SDPT	**Sand Point**	**4.97**	**101**	Pn	**Pn**	**12 46 17.5**	**-0.6**
CHGN	**Chignik**	**5.90**	**89**	Pn	**Pn**	**12 46 30.1**	**-0.6**
GAMB	**Gambell**	**7.29**	**351**	Pn	**Pn**	**12 46 50.7**	**+0.9**
ANM	**Nome**	**8.16**	**11**	Pn	**Pn**	**12 47 01.3**	**-0.5**
AMKA	**Amchitka**	**8.65**	**237**		**Pn**	**12 47 09.2**	**+0.7**
KDAK	**Kodiak Island**	**9.00**	**76**	Pn	**Pn**	**12 47 16.4**	**+3.0**
	0.8nm,0.3s,baz=279,slow=10,SNR=9.9						
KDAK	**Kodiak Island**	**9.00**	**76**		**Pn**	**12 47 12.2**	**-1.1**
TTA	**Tatalina**	**9.10**	**41**	Pn	**Pn**	**12 47 13.0**	**-1.7**
BRLK	**Bradley Lake**	**10.07**	**64**	Pn	**Pn**	**12 47 28.0**	**-0.1**
PETK	**Petropavlovsk-**	**19.35**	**274**	P	**Pn**	**12 49 31.1**	**+1.2**
	0.2nm,0.3s,baz=79,slow=15,SNR=5.7						
INK	**Inuvik**	**19.79**	**40**	P	**Pn**	**12 49 34.3**	**-0.7**
	0.2nm,0.3s,baz=244,slow=9.6,SNR=4.4						
SEY	**Seymchan**	**20.16**	**304**	P	**P**	**12 49 37.5**	**0.0**
	3.6nm,0.9s,baz=106,slow=10,SNR=4.3						
YKA	**Yellowknife Ar**	**27.45**	**55**	P	**P**	**12 50 48.9**	**-0.2**
	0.6nm,0.7s,baz=282,slow=8.4,SNR=3.5						
YKA				PcP	**PcP**	**12 54 07.5**	**+0.3**
	0.6nm,0.8s,baz=310,slow=1.2,SNR=4.0						
NVAR	**Mina Array Bea**	**37.76**	**97**	P	**P**	**12 52 20.8**	**+1.2**
	0.5nm,0.7s,baz=291,slow=7.6,SNR=1.9						
TXAR	**Lajitas Array**	**52.60**	**92**	P	**P**	**12 54 17.4**	**+0.1**
	0.8nm,0.8s,baz=306,slow=4.5,SNR=3.8						
MKAR	**Makanchi Array**	**61.05**	**312**	P	**P**	**12 55 17.1**	**0.0**
	0.2nm,0.6s,baz=20,slow=4.6,SNR=2.0						
AKASG	**Malin Array Be**	**71.97**	**348**	P	**P**	**12 56 25.9**	**-0.7**
	0.7nm,0.5s,baz=12,slow=6.5,SNR=4.5						

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*IDC **31** 12:57:56.0±3.0, 55°.65N×168°.69W, h0km, mb3.9/2, mb1 4.1/5, mb1mx3.6/33, mbtmp3.9/5, ML3.3/3, MS4.5/2, Ms1 4.5/2, ms1mx3.6/51, Error ellipse: s-maj=75.6km s-min=25.2km az=165.0*

*AEIC **31** 12:57:58±3.6, 56°.82N±0°.06×168°.78W±0°.10, h21km±7km, Error ellipse: s-maj=10.0km s-min=6.6km az=209.0*

*NEIC **31** 12:57:59.5±1.6, 56°.64N±0°.06×169°.08W±0°.06, h10km±1km, mb3.9/5, ML3.7/13(AEIC), Error ellipse: s-maj=10.6km s-min=5.2km az=18.0*

ISC 31 12:57:59.7±0.8**, 56°.64N**±0°.08×**169°.11W**±0°.06**, h10km, n43, σ1s.18**/41**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.83**	**311**		**Pg**	**12 58 15.7**	**0.0**
SPIA	**Saint Paul Isl**	**0.83**	**311**		**Sb**	**12 58 27.6**	**+0.3**
AKGG	**Akutan Green G**	**3.02**	**143**		**Pn**	**12 58 46.7**	**-0.8**
MSW	**Makushin Switc**	**3.04**	**153**		**Pn**	**12 58 47.4**	**-0.4**
AKRB	**Akutan Reef Bi**	**3.05**	**144**		**Pn**	**12 58 48.4**	**+0.3**
AKMO	**Akutan Morgan**	**3.10**	**144**		**Pn**	**12 58 50.9**	**+2.2**
MGOD	**Makushin Gods**	**3.12**	**155**		**Pn**	**12 58 48.8**	**-0.2**
MREP	**Makushin Rep't**	**3.14**	**154**		**Pn**	**12 58 48.9**	**-0.4**
AKUT	**Akutan**	**3.15**	**141**	Pn	**Pn**	**12 58 49.6**	**+0.3**
UNV	**Unalaska Valle**	**3.17**	**151**	Pn	**Pn**	**12 58 49.7**	**+0.1**
WEBT	**Westdahl Beart**	**3.21**	**128**		**Pn**	**12 58 48.8**	**-1.4**
NIKH	**Nikolski High**	**3.68**	**178**		**Pn**	**12 58 55.9**	**-0.7**
SDPT	**Sand Point**	**5.01**	**101**	Pn	**Pn**	**12 59 13.7**	**-1.2**
ATKA	**Atka Island**	**5.34**	**216**	Pn	**Pn**	**12 59 19.6**	**+0.1**
CHGN	**Chignik**	**5.94**	**89**	Pn	**Pn**	**12 59 25.3**	**-2.3**
ADK	**Adak**	**6.51**	**226**	Pn	**Pn**	**12 59 34.1**	**-1.3**
ANM	**Nome**	**8.16**	**11**	Pn	**Pn**	**12 59 58.6**	**+0.6**
SII	**Sitkinak Islan**	**8.24**	**84**	Pn	**Pn**	**12 59 58.5**	**-0.7**
AMKA	**Amchitka**	**8.62**	**237**		**Pn**	**13 00 05.3**	**+1.0**
OHAK	**Old Harbor**	**8.67**	**80**	Pn	**Pn**	**13 00 05.1**	**0.0**
KDAK	**Kodiak Island**	**9.04**	**76**	Pn	**Pn**	**13 00 11.0**	**+0.9**
	1.4nm,0.3s,baz=282,slow=6.4,SNR=9.9						
KDAK	**Kodiak Island**	**9.04**	**76**	Pn	**Pn**	**13 00 10.2**	**+0.1**
TTA	**Tatalina**	**9.12**	**41**	Pn	**Pn**	**13 00 10.8**	**-0.5**
SKT	**Skwentna**	**10.44**	**52**	Pn	**Pn**	**13 00 30.0**	**+0.7**
PMR	**Palmer**	**11.38**	**56**	Pn	**Pn**	**13 00 43.0**	**+0.9**
BPAW	**Bear Paw Mtn.**	**11.64**	**43**	Pn	**Pn**	**13 00 43.9**	**-1.8**
SCM	**Sheep Creek Mo**	**12.27**	**56**	Pn	**Pn**	**13 00 51.9**	**-2.5**
M24K	**Tolsona, Glenn**	**12.87**	**55**	Pn	**Pn**	**13 01 02.9**	**+0.4**
N25K	**Chitina, Valde**	**13.49**	**58**	Pn	**Pn**	**13 01 11.1**	**+0.1**
ILAR	**Eielson Array**	**13.52**	**44**	Pn	**Pn**	**13 01 14.2**	**+2.8**
	0.1nm,0.3s,baz=238,slow=11,SNR=5.5						
EGAK	**Eagle**	**15.79**	**48**	Pn	**Pn**	**13 01 41.0**	**-0.9**
BILL	**Bilibino**	**16.01**	**325**	Pn	**Pn**	**13 01 43.1**	**-1.6**
HYT	**Haines Junctio**	**16.83**	**62**	Pn	**Pn**	**13 01 54.1**	**-1.2**
HYT				IAmb	IAmb	13 02 04.7	
	comp=Z,12nm,1.3s						
WHY	**Whitehorse**	**18.12**	**63**	Pn	**Pn**	**13 02 09.5**	**-1.8**
PEA0B	**Petropavlovsk-**	**19.31**	**274**	P	**P**	**13 02 24.4**	**-0.2**
PETK	**Petropavlovsk-**	**19.31**	**274**	P	**Pn**	**13 02 26.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=88,slow=10.0,SNR=9.7						
PETK	**Petropavlovsk-**	**19.31**	**274**	P	**P**	**13 02 24.4**	**-0.3**
INK	**Inuvik**	**19.81**	**40**	P	**Pn**	**13 02 33.2**	**+1.7**
	comp=Z,3.7nm,0.6s,baz=245,slow=7.6,SNR=18						
INK	**Inuvik**	**19.81**	**40**	P	**P**	**13 02 30.3**	**+0.4**
INK				IAmb	IAmb	13 02 35.1	
	comp=Z,11nm,1.3s						
YKA	**Yellowknife Ar**	**27.48**	**55**	P	**P**	**13 03 46.8**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=279,slow=9.0,SNR=11						
YKA	**Yellowknife Ar**	**27.48**	**55**	P	**P**	**13 03 46.8**	**+1.2**
YBH	**Yreka Blue Hor**	**33.08**	**97**	LR	LR	13 14 13.5	
	comp=Z,967nm,19.7s,baz=314,slow=30						
DZM	**Mont Dzumac**	**81.08**	**203**	LR	LR	13 45 03.7	
	comp=Z,162nm,18.2s,baz=54,slow=35						

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*IDC **31** 13:28:07.4±1.1, 2°.24S×121°.11E, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.6/44, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=30.7km s-min=19.6km az=63.0*

*DJA **31** 13:28:08.7±0.3, 2°S±3°×12°1E±°, h10km, M4.4/12, mb4.7/2, MLv4.2/12*

ISC 31 13:28:08.6±0.8**, 2°.22S**±0°.05×**120°.91E**±0°.06**, h10km, n17, σ1s.32**/22**, mb3.6**/4**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.36**	**233**	P	**Pn**	**13 28 32.6**	**-1.1**
TTSI				S	**Sb**	**13 28 51.2**	**-0.4**
APSI	**Ampana**	**1.50**	**30**	P	**Pn**	**13 28 35.7**	**+0.1**
APSI				S	**Sg**	**13 28 57.4**	**+0.5**
SPSI	**Sidrap Palu**	**2.07**	**213**	P	**Pn**	**13 28 43.7**	**+0.2**
SPSI				S	**Sb**	**13 29 12.6**	**+0.5**
LUWI	**Luwuk**	**2.20**	**58**	P	**Pn**	**13 28 44.9**	**-0.4**
BNSI	**Bone**	**2.31**	**200**	P	**Pn**	**13 28 46.5**	**-0.2**
MPSI	**Mapaga**	**2.73**	**338**	P	**Pn**	**13 28 52.8**	**+0.2**
MRSI	**Marisa**	**2.87**	**21**	P	**Pn**	**13 28 54.8**	**+0.3**
KAPI	**Kappang**	**3.00**	**202**	Pn	**Pn**	**13 28 57.2**	**+0.9**
	11nm,0.3s,baz=54,slow=3.9,SNR=23						
KAPI				Sn	**Sn**	**13 29 34.7**	**+2.3**
	9.2nm,0.3s,baz=175,slow=23,SNR=4.1						
BKSI	**Bulukumba**	**3.18**	**194**	P	**Pn**	**13 28 59.5**	**+0.8**
BSSI	**Bau Bau, Buton**	**3.92**	**186**	P	**Pn**	**13 29 09.9**	**+1.0**
KBKI	**Kotabaru**	**4.85**	**257**	P	**Pb**	**13 29 31.2**	**-2.6**
SANI	**Sanana**	**5.08**	**88**	P	**Pn**	**13 29 23.0**	**-1.9**
	0.2nm51nm,0.7s						
SIJI	**Sorong**	**10.44**	**83**	Pn	**Pn**	**13 30 37.8**	**-0.8**
	1.3nm,0.3s,baz=148,slow=24,SNR=4.9						
WRA	**Warramunga Arr**	**21.97**	**144**	P	**P**	**13 33 01.3**	**-1.5**
	0.9nm,0.7s,baz=325,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**24.76**	**150**	P	**P**	**13 33 30.1**	**-0.6**
	0.6nm,0.6s,baz=339,slow=12,SNR=11						
ASAR				PcP	**PcP**	**13 37 07.3**	**-0.2**
	0.3nm,0.5s,baz=346,slow=1.7,SNR=2.2						
CMAR	**Chiang Mai Arr**	**29.82**	**314**	P	**P**	**13 34 19.2**	**+3.0**
	0.9nm,0.4s,baz=138,slow=7.0,SNR=7.5						
MKAR	**Makanchi Array**	**59.44**	**330**	P	**P**	**13 38 11.6**	**0.0**
	0.5nm,0.6s,baz=134,slow=7.3,SNR=6.8						

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*IDC **31** 13:32:03.2±1.9, 56°.16N×168°.98W, h0km, mb3.5/4, mb1 3.8/7, mb1mx3.5/57, mbtmp3.7/7, ML3.1/3, Error ellipse: s-maj=45.1km s-min=20.5km az=174.0*

*AEIC **31** 13:32:04±2.5, 56°.61N±0°.05×169°.0W±0°.1, h26km±7km, Error ellipse: s-maj=11.1km s-min=4.0km az=48.0*

*NEIC **31** 13:32:05.5±2.2, 56°.61N±0°.06×169°.0W±0°.1, h10km±2km, ML3.6/22(AEIC), Error ellipse: s-maj=12.0km s-min=7.4km az=48.0*

ISC 31 13:32:05.7±0.7**, 56°.62N**±0°.06×**168°.98W**±0°.06**, h10km, n27, σ1s.02**/32**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.90**	**309**		**Pg**	**13 32 22.1**	**-0.8**
SPIA					**Sg**	**13 32 34.8**	**+0.2**
AKGG	**Akutan Green G**	**2.96**	**144**		**Pn**	**13 32 51.5**	**-1.2**
AKGG					**Sn**	**13 33 28.0**	**-0.2**
MSW	**Makushin Switc**	**2.98**	**154**		**Pn**	**13 32 52.9**	**-0.1**
AKRB	**Akutan Reef Bi**	**2.99**	**145**		**Pn**	**13 32 52.3**	**-0.8**
AKRB					**Sn**	**13 33 30.2**	**+1.1**
AKV	**Akutan Volcano**	**3.03**	**144**		**Pn**	**13 32 54.4**	**+0.6**
MNAT	**Makushin Natee**	**3.04**	**153**		**Pn**	**13 32 53.7**	**0.0**
MAPS	**Pakushin South**	**3.04**	**157**		**Pn**	**13 32 54.3**	**+0.4**
MAPS					**Sn**	**13 33 29.8**	**-0.6**
AKBBA	**Akutan Broad B**	**3.06**	**144**		**Pn**	**13 32 52.6**	**-1.5**
UNV	**Unalaska Valle**	**3.12**	**152**		**Pn**	**13 32 54.1**	**-0.7**
UNV					**Sn**	**13 33 31.7**	**-0.3**
OKWE	**Okmok W'ng Wal**	**3.18**	**172**		**Pn**	**13 32 54.0**	**-1.7**
WESP	**Westdahl Peak**	**3.22**	**130**		**Pn**	**13 32 56.1**	**-0.2**
NIKH	**Nikolski High**	**3.65**	**179**		**Pn**	**13 33 02.7**	**+0.5**
KOFP	**Korovin Flat P**	**5.28**	**217**		**Pn**	**13 33 25.4**	**+0.9**
ATKA	**Atka Island**	**5.37**	**217**		**Pn**	**13 33 26.5**	**+0.7**
VNHG	**Veniaminof 1**	**5.46**	**90**		**Pn**	**13 33 26.7**	**-0.5**
ADK	**Adak**	**6.54**	**227**	Pn	**Pn**	**13 33 42.4**	**+0.5**
GAMB	**Gambell**	**7.31**	**350**	Pn	**Pn**	**13 33 51.5**	**-0.9**
ANM	**Nome**	**8.17**	**11**	Pn	**Pn**	**13 34 04.0**	**-0.1**
AMKA	**Amchitka**	**8.67**	**238**	Pn	**Pn**	**13 34 13.0**	**+2.1**
KDAK	**Kodiak Island**	**8.98**	**76**	Pn	**Pn**	**13 34 17.5**	**+2.3**
	0.8nm,0.3s,baz=291,slow=5.6,SNR=16						
BRLK	**Bradley Lake**	**10.05**	**64**	Pn	**Pn**	**13 34 31.2**	**+1.2**
ILAR	**Eielson Array**	**13.49**	**44**	Pn	**Pn**	**13 35 19.1**	**+2.2**
	0.0nm,0.3s,baz=231,slow=12,SNR=4.7						
PETK	**Petropavlovsk-**	**19.38**	**274**	P	**Pn**	**13 36 32.5**	**0.0**
	0.2nm,0.3s,baz=82,slow=11,SNR=8.6						
INK	**Inuvik**	**19.78**	**40**	P	**Pn**	**13 36 37.0**	**-0.2**
	2.5nm,0.6s,baz=260,slow=8.3,SNR=5.9						
SEY	**Seymchan**	**20.20**	**304**	P	**P**	**13 36 40.2**	**0.0**
	2.1nm,0.8s,baz=90,slow=9.0,SNR=5.7						
YKA	**Yellowknife Ar**	**27.43**	**55**	P	**P**	**13 37 51.5**	**+0.3**
	0.5nm,0.7s,baz=280,slow=8.4,SNR=5.9						
TXAR	**Lajitas Array**	**52.57**	**92**	P	**P**	**13 41 18.6**	**-0.8**
	0.5nm,0.8s,baz=316,slow=7.0,SNR=4.2						

IDC 31 13:34:31.9±2.3**, 49°.65S**×**125°.37E, h0km, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.6**/33**, mbtmp3.6**/3**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.3**/19**, Error ellipse: s-maj=225.1km s-min=28.2km az=99.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.89**	**327**	T	T	13 56 10.4	
	baz=153,slow=75,SNR=17						
H01W2	**Cape Leeuwin H**	**16.90**	**327**	T	T	13 56 10.1	
	baz=153,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**16.91**	**327**	T	T	13 56 15.9	
	baz=153,slow=75,SNR=14						
STKA	**Stephens Creek**	**21.52**	**40**	LR	LR	13 46 10.0	
	comp=Z,247nm,18.7s,baz=13,slow=32						
ASAR	**Alice Springs**	**26.79**	**18**	P	P	13 40 13.7	+0.1
	0.9nm,0.5s,baz=188,slow=9.1,SNR=10						
WRA	**Warramunga Arr**	**30.50**	**17**	P	P	13 40 46.3	-0.3
	0.4nm,0.9s,baz=190,slow=11,SNR=2.3						
QSPA	**South Pole Qui**	**40.47**	**180**	P	P	13 42 11.8	-0.1
	1.2nm,1.0s,baz=317,slow=7.6,SNR=2.6						
PSI	**Prapat**	**57.02**	**328**	LR	LR	14 07 18.4	
	comp=Z,94nm,19.3s,baz=74,slow=34						
YKA	**Yellowknife Ar**	**145.50**	**45**	PKPbc	PKPdf	13 54 10.5	-0.1
	0.9nm,0.8s,baz=262,slow=2.3,SNR=9.1						
RES	**Resolute Bay**	**149.82**	**20**	PKPbc	PKPbc	13 54 21.1	-1.0
	0.6nm,0.4s,baz=0.0,slow=3.0,SNR=5.2						

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*IDC **31** 13:38:45.0±2.6, 56°.01N×168°.98W, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.4/52, mbtmp3.5/5, ML2.5/1, Error ellipse: s-maj=49.0km s-min=32.3km az=3.0*

*NEIC **31** 13:38:47.9±3.2, 56°.68N±0°.05×169°.2W±0°.1, h10km±2km, mb3.6/2, ML3.7(AEIC), Error ellipse: s-maj=13.2km s-min=6.8km az=245.0*

*AEIC **31** 13:38:49.0±1.1, 56°.70N±0°.08×169°.0W±0°.1, h40km±9km, Error ellipse: s-maj=12.0km s-min=6.9km az=210.0*

ISC 31 13:38:49.5±0.8**, 56°.61N**±0°.09×**168°.93W**±0°.07**, h10km, n27, σ1s.15**/27**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.92**	**309**	Pn	**Pg**	**13 39 05.5**	**-1.7**
AKGG	**Akutan Green G**	**2.94**	**144**		**Pn**	**13 39 36.3**	**+0.1**
MTBL	**Makushin Table**	**2.94**	**153**		**Pn**	**13 39 36.3**	**0.0**
MSW	**Makushin Switc**	**2.97**	**155**		**Pn**	**13 39 35.6**	**-1.0**
AKRB	**Akutan Reef Bi**	**2.97**	**146**		**Pn**	**13 39 36.9**	**+0.2**
AKLV	**Akutan Long Va**	**2.98**	**144**		**Pn**	**13 39 37.4**	**+0.6**
MNAT	**Makushin Natee**	**3.02**	**154**		**Pn**	**13 39 37.5**	**+0.2**
MAPS	**Pakushin South**	**3.03**	**157**		**Pn**	**13 39 37.4**	**0.0**
AKBBA	**Akutan Broad B**	**3.04**	**145**		**Pn**	**13 39 36.8**	**-0.8**
AKUT	**Akutan**	**3.06**	**143**	Pn	**Pn**	**13 39 38.1**	**+0.3**
UNV	**Unalaska Valle**	**3.10**	**152**		**Pn**	**13 39 38.3**	**0.0**
WECS	**Westdahl Cape**	**3.14**	**130**		**Pn**	**13 39 39.2**	**+0.1**
OKFG	**Magazine Ridge**	**3.26**	**169**		**Pn**	**13 39 42.0**	**+1.5**
NIKH	**Nikolski High**	**3.65**	**179**	Pn	**Pn**	**13 39 45.8**	**-0.1**
KOFP	**Korovin Flat P**	**5.29**	**217**		**Pn**	**13 40 09.3**	**+0.8**
ATKA	**Atka Island**	**5.38**	**217**		**Pn**	**13 40 10.3**	**+0.6**
AMKA	**Amchitka**	**8.69**	**238**		**Pn**	**13 40 56.9**	**+1.8**
TTA	**Tatalina**	**9.07**	**40**	Pn	**Pn**	**13 41 00.9**	**+0.5**
SKT	**Skwentna**	**10.38**	**52**	Pn	**Pn**	**13 41 20.2**	**+2.0**
ILAR	**Eielson Array**	**13.47**	**44**	Pn	**Pn**	**13 42 01.1**	**+0.7**
	0.0nm,0.3s,baz=243,slow=12,SNR=2.2						
BMAR	**Burnt Mountain**	**15.61**	**36**	P	**Pn**	**13 42 31.3**	**+2.0**
HYT	**Haines Junctio**	**16.75**	**62**	P	**P**	**13 42 46.7**	**+0.4**
HYT				IAmb	IAmb	13 42 49.5	
	comp=Z,5.8nm,1.1s						
INK	**Inuvik**	**19.77**	**40**	P	**P**	**13 43 20.1**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=241,slow=9.5,SNR=6.9						
INK	**Inuvik**	**19.77**	**40**	P	**P**	**13 43 20.1**	**+0.8**
INK				IAmb	IAmb	13 43 30.4	
	comp=Z,3.2nm,1.0s						
SEY	**Seymchan**	**20.22**	**304**	P	**P**	**13 43 24.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=96,slow=11,SNR=4.6						
YKA	**Yellowknife Ar**	**27.41**	**55**	P	**P**	**13 44 35.8**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=280,slow=8.7,SNR=5.8						
TXAR	**Lajitas Array**	**52.54**	**93**	P	**P**	**13 48 00.0**	**-2.9**
	comp=Z,0.7nm,0.9s,baz=316,slow=5.2,SNR=4.3						

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*IDC **31** 13:41:36.8±1.0, 56°.34N×169°.13W, h0km, mb3.8/9, mb1 4.1/12, mb1mx3.8/53, mbtmp3.9/12, ML3.1/3, Error ellipse: s-maj=29.9km s-min=15.5km az=178.0*

*AEIC **31** 13:41:37.8±1.8, 56°.59N±0°.05×168°.93W±0°.10, h12km±5km, Error ellipse: s-maj=9.9km s-min=4.1km az=225.0*

*NEIC **31** 13:41:40.1±1.4, 56°.65N±0°.07×169°.1W±0°.1, h19km±5km, mb4.1/6, ML3.9/17(AEIC), Error ellipse: s-maj=13.6km s-min=2.6km az=224.0*

ISC 31 13:41:39.2±0.6**, 56°.65N**±0°.07×**168°.95W**±0°.06**, h10km, n36, σ1s.01**/41**, mb3.8**/7**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.89**	**307**		**Pg**	**13 41 55.7**	**-0.6**
SPIA					**Sb**	**13 42 08.7**	**+0.2**
AKGG	**Akutan Green G**	**2.98**	**144**		**Pn**	**13 42 26.4**	**-0.1**
AKGG					**Sn**	**13 43 03.5**	**+1.3**
MSW	**Makushin Switc**	**3.01**	**155**		**Pn**	**13 42 26.7**	**-0.2**
AKRB	**Akutan Reef Bi**	**3.01**	**146**		**Pn**	**13 42 27.1**	**+0.2**
AKLV	**Akutan Long Va**	**3.02**	**144**		**Pn**	**13 42 27.4**	**+0.3**
MNAT	**Makushin Natee**	**3.06**	**154**		**Pn**	**13 42 27.7**	**+0.1**
MNAT					**Sn**	**13 43 04.8**	**+0.5**
AKBBA	**Akutan Broad B**	**3.08**	**145**		**Pn**	**13 42 27.1**	**-0.8**
MGOD	**Makushin Gods**	**3.10**	**157**		**Pn**	**13 42 28.8**	**+0.7**
UNV	**Unalaska Valle**	**3.14**	**152**		**Pn**	**13 42 28.5**	**-0.1**
WECS	**Westdahl Cape**	**3.18**	**130**		**Pn**	**13 42 29.8**	**+0.4**
OKFG	**Magazine Ridge**	**3.30**	**169**		**Pn**	**13 42 30.3**	**-0.6**
NIKH	**Nikolski High**	**3.69**	**179**		**Pn**	**13 42 36.1**	**-0.1**
ATKA	**Atka Island**	**5.40**	**217**		**Pn**	**13 43 00.8**	**+1.1**
AMKA	**Amchitka**	**8.69**	**238**		**Pn**	**13 43 46.2**	**+1.3**
KDAK	**Kodiak Island**	**8.96**	**76**	Pn	**Pn**	**13 43 50.4**	**+2.0**
	0.7nm,0.3s,baz=286,slow=7.8,SNR=5.4						
ILAR	**Eielson Array**	**13.45**	**44**	Pn	**Pn**	**13 44 52.1**	**+2.2**
	0.0nm,0.3s,baz=238,slow=11,SNR=5.5						
DOT	**Dot Lake**	**14.16**	**50**	P	**P**	**13 45 08.9**	**+1.6**
MESA	**MESA**	**14.54**	**65**	P	**P**	**13 45 09.2**	**-2.4**
BMAR	**Burnt Mountain**	**15.59**	**36**	P	**P**	**13 45 21.5**	**-1.5**
HYT	**Haines Junctio**	**16.75**	**63**	P	**P**	**13 45 36.5**	**+0.4**
HYT				IAmb	IAmb	13 45 45.6	
	comp=Z,11nm,1.2s						
WHY	**Whitehorse**	**18.04**	**63**	P	**P**	**13 45 50.9**	**+0.6**
WHY				IAmb	IAmb	13 45 54.4	
	comp=Z,16nm,1.3s						
SIT	**Sitka**	**18.29**	**75**	P	**Pn**	**13 45 52.9**	**+0.1**
SIT				IAmb	IAmb	13 46 09.0	
	comp=Z,23nm,1.2s						
PETK	**Petropavlovsk-**	**19.39**	**274**	P	**P**	**13 46 03.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=90,slow=11,SNR=6.1						
INK	**Inuvik**	**19.75**	**40**	P	**Pn**	**13 46 10.8**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=238,slow=8.5,SNR=14						
INK	**Inuvik**	**19.75**	**40**	P	**Pn**	**13 46 09.7**	**-0.5**
CRAG	**Craig**	**19.90**	**78**	P	**P**	**13 46 11.2**	**+0.6**
SEY	**Seymchan**	**20.19**	**304**	P	**P**	**13 46 14.3**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=91,slow=7.7,SNR=9.6						
DLBC	**Dease Lake**	**20.77**	**69**	P	**P**	**13 46 18.2**	**-1.9**
DLBC				IAmb	IAmb	13 46 30.2	
	comp=Z,17nm,1.4s						
YKA	**Yellowknife Ar**	**27.40**	**55**	P	**P**	**13 47 25.4**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=283,slow=9.0,SNR=9.3						
RES	**Resolute Bay**	**32.44**	**28**	PcP	**PcP**	**13 50 56.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=225,slow=4.3,SNR=4.3						
NVAR	**Mina Array Bea**	**37.72**	**97**	P	**P**	**13 48 54.1**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=301,slow=7.3,SNR=3.5						
NVAR				PcP	**PcP**	**13 51 11.8**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=282,slow=2.0,SNR=4.5						
TXAR	**Lajitas Array**	**52.56**	**93**	P	**P**	**13 50 51.9**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=298,slow=5.1,SNR=8.9						
TXAR				PcP	**PcP**	**13 52 04.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=222,slow=1.2,SNR=3.6						
MKAR	**Makanchi Array**	**61.08**	**312**	P	**P**	**13 51 53.1**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=46,slow=5.2,SNR=3.9						
EKA	**Eskdalemuir Ar**	**67.78**	**9**	P	**P**	**13 52 36.7**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=358,slow=5.2,SNR=4.0						
AKASG	**Malin Array Be**	**71.96**	**348**	P	**P**	**13 53 02.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=14,slow=5.8,SNR=6.1						
CMAR	**Chiang Mai Arr**	**75.93**	**282**	P	**P**	**13 53 25.2**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=18,slow=6.0,SNR=6.4						

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*REN **31** 13:42:48.5±1.1, 41°.89N±0°.04×119°.64W±0°.06, h9km±3km, ML3.2/5, ML3.0/29(SEA), ML2.9/28(NEIC), Error ellipse: s-maj=6.4km s-min=5.2km az=75.0*

*ANF **31** 13:42:48.7±0.4, 41°.87N×119°.64W, h10km, ML3.1/15, Error ellipse: s-maj=3.3km s-min=2.6km az=86.0*

*SEA **31** 13:42:49.2±3.8, 41°.85N±0°.03×119°.64W±0°.03, h2km±6km, Error ellipse: s-maj=4.4km s-min=3.0km az=170.0*

*NEIC **31** 13:42:49.7±2.0, 41°.94N±0°.04×119°.66W±0°.03, h12km±2km, Error ellipse: s-maj=5.7km s-min=2.6km az=166.0*

ISC 31 13:42:48.1±1.2**, 41°.88N**±0°.02×**119°.64W**±0°.02**, h1km**±13km**, n56, σ1s.04**/73**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.49**	**273**	Pg	**Pg**	**13 42 58.5**	**+1.0**
MOD	**Modoc Plateau**	**0.49**	**273**		**Sg**	**13 43 05.8**	**+1.9**
LKVW	**Lakeview**	**0.64**	**303**		**Pg**	**13 43 00.8**	**+0.6**
LKVW					**Sb**	**13 43 10.0**	**-1.5**
WVOR	**Wild Horse Val**	**0.93**	**53**		**Pg**	**13 43 06.1**	**+0.1**
WVOR					**Sb**	**13 43 19.3**	**-0.8**
WVOR	**Wild Horse Val**	**0.93**	**53**	IAML		13 43 22.3	
	472nm,0.6s						
K05A	**Summer Lake**	**1.26**	**313**		**Pn**	**13 43 12.3**	**-0.7**
K05A	**Summer Lake**	**1.26**	**313**	IAML		13 43 34.8	
	comp=E,183nm,0.7s						
K05A				IAML		13 43 41.6	
	comp=N,173nm,0.6s						
LASM	**Arnica Sink**	**1.47**	**260**		**Pn**	**13 43 15.4**	**-0.5**
LASM					**Sg**	**13 43 35.8**	**+0.4**
LTIM	**Timbered Crate**	**1.55**	**244**		**Pn**	**13 43 16.6**	**-0.3**
LTIM					**Sb**	**13 43 37.8**	**0.0**
HOG	**Hogback Mounta**	**1.58**	**284**		**Pn**	**13 43 17.1**	**-0.3**
M04C	**Macdoel**	**1.64**	**268**	P	**Pn**	**13 43 17.6**	**-0.6**
	baz=86,SNR=218						
M04C				Sb	**Sg**	**13 43 40.8**	**0.0**
	baz=86						
M04C	**Macdoel**	**1.64**	**268**		**Pn**	**13 43 17.6**	**-0.6**
LBCM	**Butte Creek Ri**	**1.65**	**232**		**Pn**	**13 43 17.9**	**-0.3**
K04D	**Chiloquin, OR**	**1.74**	**296**	Pn	**Pn**	**13 43 18.8**	**-0.6**
	baz=114						
K04D				Pb	**Pb**	**13 43 20.3**	**-0.5**
	baz=114,SNR=45						
K04D				Sb	**Sg**	**13 43 45.0**	**+1.2**
	baz=114						
K04D	**Chiloquin, OR**	**1.74**	**296**		**Pn**	**13 43 19.0**	**-0.5**
J05D	**Fort Rock, OR**	**1.83**	**321**	Pb	**Pb**	**13 43 22.2**	**-0.3**
	baz=139,SNR=180						
J05D				Sb	**Sg**	**13 43 47.3**	**+0.2**
	baz=139						
J05D	**Fort Rock, OR**	**1.83**	**321**		**Pb**	**13 43 22.3**	**-0.2**
WVA	**Winnemucca Val**	**1.93**	**184**		**Pb**	**13 43 24.7**	**+0.5**
L04D	**Klamath Falls**	**2.01**	**281**	P	**Pn**	**13 43 22.4**	**-0.8**
	baz=98,SNR=95						
L04D				Sb	**Sg**	**13 43 52.1**	**-0.6**
	baz=98						
L04D	**Klamath Falls**	**2.01**	**281**		**Pn**	**13 43 22.4**	**-0.8**
TMBU	**Tom Butte, New**	**2.05**	**328**		**Pb**	**13 43 26.3**	**+0.1**
BEKR	**Beckworth**	**2.08**	**195**		**Pn**	**13 43 25.0**	**+0.8**
BEKR				IAML		13 43 55.5	
	comp=N,63nm,0.2s						
BEKR				IAML		13 43 56.6	
	comp=E,80nm,0.5s						
PINE	**Pine Mountain**	**2.14**	**334**		**Pb**	**13 43 27.9**	**+0.1**
PINE				IAML		13 43 58.8	
	comp=E,110nm,0.6s						
PINE				IAML		13 44 06.0	
	comp=N,84nm,0.6s						
PAHR	**Pah Rah Range**	**2.17**	**175**		**Pb**	**13 43 28.6**	**+0.3**
PAHR				IAML		13 43 59.1	
	comp=N,57nm,0.5s						
I07A	**Izee**	**2.21**	**3**		**Pg**	**13 43 29.7**	**-0.7**
I07A				IAML		13 43 59.6	
	comp=N,78nm,0.6s						
I07A				IAML		13 44 08.0	
	comp=E,68nm,1.0s						
KWBU	**Kawak Butte, N**	**2.24**	**327**		**Pb**	**13 43 29.4**	**0.0**
LOY	**Loyalton**	**2.26**	**192**		**Pb**	**13 43 30.0**	**+0.3**
O03E	**Paynes Creek**	**2.27**	**227**	Pn	**Pn**	**13 43 26.7**	**-0.1**
	baz=45						
O03E				Pb	**Pb**	**13 43 29.5**	**-0.3**
	baz=45,SNR=33						
O03E				Sn	**Sb**	**13 43 56.7**	**-1.7**
	baz=45						
O03E				Sb	**Sg**	**13 44 00.5**	**-0.5**
	baz=45						
J04D	**Umpqua Nationa**	**2.28**	**308**	Pb	**Pb**	**13 43 29.8**	**-0.2**
	baz=126,SNR=32						
PEAR	**Peavine Mounta**	**2.28**	**186**		**Pb**	**13 43 30.9**	**+0.8**
YBH	**Yreka Blue Hor**	**2.30**	**267**		**Pn**	**13 43 26.2**	**-0.9**

YBH	**Yreka Blue Hor**	**2.30**	**267**		**Pn**	**13 43 26.3**	**-0.8**
YBH				IAML		13 44 02.6	
	comp=N,58nm,0.6s						
YBH				IAML		13 44 06.9	
	comp=E,20nm,0.9s						
ASBU	**Astronaut Butt**	**2.32**	**327**		**Pb**	**13 43 29.9**	**-0.8**
KBF	**Kyburz Flat**	**2.41**	**191**		**Pb**	**13 43 32.7**	**+0.5**
VPK	**Verdi Peak**	**2.42**	**187**		**Pb**	**13 43 33.8**	**+1.3**
M02C	**Callahan**	**2.45**	**260**	Sb	**Sb**	**13 44 04.9**	**+1.2**
	baz=77						
N02D	**Trinity Center**	**2.47**	**250**	Pb	**Pb**	**13 43 32.1**	**-1.2**
	baz=67						
N02D				Sb	**Sg**	**13 44 06.4**	**-1.0**
	baz=67						
IND	**Independence**	**2.49**	**192**		**Pb**	**13 43 34.3**	**+0.6**
WDC	**Whiskeytown Da**	**2.54**	**240**	Pn	**Pn**	**13 43 29.6**	**-0.7**
WDC				IAML		13 44 10.5	
	comp=N,43nm,0.5s						
HUMO	**Hull Mountain**	**2.57**	**288**	Pn	**Pn**	**13 43 29.7**	**-1.1**
I05D	**Terrebonne, OR**	**2.76**	**334**	Pb	**Pb**	**13 43 38.2**	**+0.1**
	baz=152,SNR=9.4						
I05D				Sb	**Sg**	**13 44 15.7**	**-0.9**
	baz=152						
I04A	**Tendick Farm,**	**2.80**	**314**	Pb	**Pb**	**13 43 38.9**	**+0.1**
	baz=132,SNR=5.9						
PRLK	**Prince Lake**	**2.89**	**325**		**Pb**	**13 43 40.4**	**0.0**
O02D	**Mt. Diablo Mer**	**2.92**	**236**	Pb	**Pb**	**13 43 40.5**	**-0.5**
	baz=53,SNR=6.5						
O02D				Sb	**Sb**	**13 44 19.3**	**+2.1**
	baz=53						
DBO	**Dodson Butte**	**2.94**	**296**		**Pn**	**13 43 35.8**	**-0.1**
L02E	**Cave Junction**	**2.96**	**277**	P	**Pn**	**13 43 36.6**	**+0.4**
	baz=94,SNR=28						
L02E				Sb	**Sb**	**13 44 20.0**	**+1.6**
	baz=94						
K02D	**Willamette Mer**	**3.09**	**287**	P	**Pn**	**13 43 38.6**	**+0.5**
	baz=104,SNR=141						
K02D				Sb	**Sg**	**13 44 24.9**	**-2.6**
	baz=104						
K02D	**Willamette Mer**	**3.09**	**287**		**Pn**	**13 43 38.2**	**+0.2**
MFID	**Camas Ranch**	**3.21**	**60**	Pn	**Pn**	**13 43 39.5**	**-0.2**
H04D	**Lebanon**	**3.48**	**321**	Pb	**Pb**	**13 43 51.1**	**+0.6**
	baz=138						
HLID	**Hailey**	**4.21**	**65**	P	**Pn**	**13 43 53.9**	**+0.4**
	baz=248						
HLID				Sb	**Sb**	**13 44 57.7**	**+3.4**
	baz=248						
HLID	**Hailey**	**4.21**	**65**	Pn	**Pn**	**13 43 53.2**	**-0.3**
HLID				IAML		13 45 03.1	
	comp=N,20nm,1.0s						
HLID				IAML		13 45 05.6	
	comp=N,16nm,0.9s						
MDPB	**Devils Postpil**	**4.26**	**174**		**Pn**	**13 43 52.8**	**-1.4**
R11A	**Troy Canyon, C**	**4.70**	**137**	Pg	**Pg**	**13 44 17.4**	**-0.7**
	baz=320						
R11A				Sb	**Sg**	**13 45 15.4**	**-3.6**
	baz=320						
DUG	**Dugway, Tooele**	**5.43**	**106**	Pg	**Pg**	**13 44 33.2**	**+1.0**
	baz=290						
SMW	**South Mountain**	**6.05**	**335**		**Pn**	**13 44 19.0**	**+0.4**

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*IDC **31** 13:44:34.7±1.7, 56°.28N×169°.13W, h0^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.7/54, mbtmp3.8/10, ML3.1/3, MS3.8/2, Ms1 3.8/2, ms1mx3.2/38, Error ellipse: s-maj=44.1km s-min=16.4km az=176.0*

*AEIC **31** 13:44:36.4±1.8, 56°.63N±0°.06×168°.96W±0°.05, h16^{km}±7^{km}, Error ellipse: s-maj=8.7km s-min=3.9km az=183.0*

*NEIC **31** 13:44:38.3±1.7, 56°.66N±0°.06×169°.1W±0°.1, h17^{km}±3^{km}, mb4.1/2, ML3.9/21(AEIC), Error ellipse: s-maj=10.8km s-min=4.2km az=46.0*

ISC 31 13:44:37.7±0.6**, 56°.65N**±0°.07×**169°.02W**±0°.06**, h10**^{km}**, n30,** σ**0**^{s}**85**/32**, mb3.6**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.86**	**309**		**Pg**	**13 44 53.5**	**-0.7**
SPIA					**Sb**	**13 45 06.4**	**+0.3**
AKGG	**Akutan Green G**	**3.00**	**144**		**Pn**	**13 45 24.5**	**-0.8**
AKGG					**Sn**	**13 46 01.2**	**-0.1**
MSW	**Makushin Switc**	**3.02**	**154**		**Pn**	**13 45 25.5**	**-0.2**
AKRB	**Akutan Reef Bi**	**3.04**	**145**		**Pn**	**13 45 26.8**	**+1.0**
AKLV	**Akutan Long Va**	**3.04**	**144**		**Pn**	**13 45 25.8**	**-0.1**
MNAT	**Makushin Natee**	**3.08**	**153**		**Pn**	**13 45 26.7**	**+0.3**
AKMO	**Akutan Morgan**	**3.09**	**145**		**Pn**	**13 45 28.1**	**+1.7**
MAPS	**Pakushin South**	**3.09**	**156**		**Pn**	**13 45 26.8**	**+0.3**
MAPS					**Sn**	**13 46 03.8**	**+0.4**
UNV	**Unalaska Valle**	**3.16**	**152**		**Pn**	**13 45 27.3**	**-0.1**
WEBT	**Westdahl Beart**	**3.18**	**129**		**Pn**	**13 45 27.7**	**0.0**
WESP	**Westdahl Peak**	**3.26**	**130**		**Pn**	**13 45 28.2**	**-0.7**
OKSP	**Okmok Steeple**	**3.43**	**173**		**Pn**	**13 45 30.4**	**-0.8**
NIKH	**Nikolski High**	**3.69**	**178**		**Pn**	**13 45 34.6**	**-0.1**
DT1	**Dutton Round H**	**4.10**	**109**		**Pn**	**13 45 40.7**	**+0.4**
KOFP	**Korovin Flat P**	**5.29**	**216**		**Pn**	**13 45 57.4**	**+0.6**
ATKA	**Atka Island**	**5.38**	**216**		**Pn**	**13 45 58.1**	**+0.1**
AMKA	**Amchitka**	**8.66**	**237**	Pn	**Pn**	**13 46 45.3**	**+2.3**
KDAK	**Kodiak Island**	**8.99**	**76**	Pn	**Pn**	**13 46 48.8**	**+1.3**
	1.4nm,0.3s,baz=319,slow=8.6,SNR=10						
ILAR	**Eielson Array**	**13.48**	**44**	Pn	**Pn**	**13 47 50.1**	**+1.3**
	0.0nm,0.3s,baz=222,slow=14,SNR=4.2						
ILAR				LR	LR	13 52 45.1	
	comp=Z,220nm,18.1s,baz=258,slow=36						
HYT	**Haines Junctio**	**16.78**	**63**		**P**	**13 48 35.3**	**+0.4**
HYT				IAmb	IAmb	13 48 40.8	
	comp=Z,25nm,1.4s						
PETK	**Petropavlovsk-**	**19.36**	**274**	P	**P**	**13 49 01.5**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=6.7						
INK	**Inuvik**	**19.77**	**40**	P	**Pn**	**13 49 08.9**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=241,slow=8.1,SNR=11						
INK	**Inuvik**	**19.77**	**40**	P	**Pn**	**13 49 08.7**	**-0.3**
INK				IAmb	IAmb	13 49 17.6	
	comp=Z,13nm,1.3s						
SEY	**Seymchan**	**20.16**	**304**	P	**P**	**13 49 12.2**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=94,slow=9.7,SNR=7.8						
YKA	**Yellowknife Ar**	**27.43**	**55**	P	**P**	**13 50 23.8**	**+0.6**
	comp=Z,1.2nm,1.0s,baz=285,slow=8.5,SNR=5.0						
PFO	**Pinyon Flats O**	**42.31**	**100**	LR	LR	14 06 06.3	
	comp=Z,154nm,19.2s,baz=19,slow=30						
SONM	**Songino Array**	**49.37**	**298**	P	**P**	**13 53 27.7**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=57,slow=5.5,SNR=4.3						
TXAR	**Lajitas Array**	**52.60**	**92**	P	**P**	**13 53 50.9**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=279,slow=2.4,SNR=4.9						
MKAR	**Makanchi Array**	**61.05**	**312**	P	**P**	**13 54 50.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=78,slow=6.3,SNR=3.7						
AKASG	**Malin Array Be**	**71.95**	**348**	P	**P**	**13 56 00.2**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=12,slow=6.1,SNR=5.6						

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*AEIC **31** 13:49:08.7±1.9, 56°.49N±0°.07×169°.1W±0°.1, h4^{km}±5^{km}, Error ellipse: s-maj=13.9km s-min=6.1km az=45.0*

NEIC 31 13:49:10.1±0.8**, 56°.70N**±0°.08×**168°.9W**±0°.1**, h10**^{km}±2^{km}**, ML3.6**/13(AEIC)**, Error ellipse: s-maj=17.1km s-min=4.9km az=36.0, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.87**	**304**		Pg	13 49 26.3	-0.6
SPIA					Sb	13 49 39.7	+0.7
AKGG	**Akutan Green G**	**3.01**	**145**		Pn	13 49 58.0	+0.2
AKRB	**Akutan Reef Bi**	**3.04**	**146**		Pn	13 49 58.5	+0.3
MSW	**Makushin Switc**	**3.04**	**155**		Pn	13 49 58.4	+0.1
MSW					Sn	13 50 32.8	-1.9
MNAT	**Makushin Natee**	**3.09**	**155**		Pn	13 49 59.2	+0.2
MAPS	**Pakushin South**	**3.11**	**158**		Pn	13 49 59.2	0.0
AKUT	**Akutan**	**3.13**	**144**	Pn	Pn	13 49 59.2	-0.2
UNV	**Unalaska Valle**	**3.17**	**153**		Pn	13 49 59.9	-0.1
UNV					Sn	13 50 36.8	-1.1
OKWE	**Okmok W’ng Wal**	**3.25**	**173**		Pn	13 49 59.3	-1.9
NIKH	**Nikolski High**	**3.73**	**179**		Pn	13 50 07.5	-0.2
ATKA	**Atka Island**	**5.45**	**217**		Pn	13 50 31.7	+0.4
CNBA	**Chernabura Isl**	**5.59**	**106**	Pn	Pn	13 50 34.7	+1.4
ADK	**Adak**	**6.62**	**227**	Pn	Pn	13 50 47.3	-0.1
AMKA	**Amchitka**	**8.73**	**237**		Pn	13 51 18.1	+1.7

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*AEIC **31** 13:58:07.5±2.0, 56°.73N±0°.04×168°.90W±0°.05, h32^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=3.3km az=197.0*

*IDC **31** 13:58:07.4±1.6, 56°.52N×169°.07W, h0^{km}, mb3.5/5, mb1 3.9/9, mb1mx3.5/54, mbtmp3.7/9, ML3.2/4, MS3.8/1, Ms1 3.8/1, ms1mx2.9/38, Error ellipse: s-maj=37.9km s-min=19.6km az=179.0*

*NEIC **31** 13:58:08.9±1.4, 56°.68N±0°.05×169°.1W±0°.1, h18^{km}±3^{km}, ML3.7/21(AEIC), Error ellipse: s-maj=10.6km s-min=4.4km az=46.0*

ISC 31 13:58:09.0±0.7**, 56°.63N**±0°.07×**169°.01W**±0°.06**, h10**^{km}**, n28,** σ**1**^{s}**03**/33**, mb3.4**/4**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPIA	**Saint Paul Isl**	**0.87**	**309**		**Pg**	**13 58 24.9**	**-0.8**
SPIA					**Sg**	**13 58 37.3**	**+0.3**
AKGG	**Akutan Green G**	**2.99**	**144**		**Pn**	**13 58 55.2**	**-1.1**
AKGG					**Sn**	**13 59 32.1**	**-0.1**
MSW	**Makushin Switc**	**3.01**	**154**		**Pn**	**13 58 54.0**	**-2.7**
AKRB	**Akutan Reef Bi**	**3.02**	**145**		**Pn**	**13 58 56.2**	**-0.5**
AKRB					**Sn**	**13 59 33.2**	**+0.2**
MNAT	**Makushin Natee**	**3.06**	**153**		**Pn**	**13 58 56.6**	**-0.7**
MAPS	**Pakushin South**	**3.07**	**156**		**Pn**	**13 58 57.6**	**+0.1**
AKBBA	**Akutan Broad B**	**3.09**	**144**		**Pn**	**13 58 56.0**	**-1.7**
MGOD	**Makushin Gods**	**3.10**	**156**		**Pn**	**13 58 56.9**	**-1.1**
MGOD					**Sn**	**13 59 34.4**	**-0.6**
AKUT	**Akutan**	**3.11**	**142**	Pn	**Pn**	**13 58 57.6**	**-0.4**
AKSA	**Akutan Strait**	**3.14**	**142**		**Pn**	**13 58 57.9**	**-0.5**
AKSA					**Sn**	**13 59 36.2**	**+0.4**
UNV	**Unalaska Valle**	**3.14**	**152**		**Pn**	**13 58 57.8**	**-0.6**
UNV					**Sn**	**13 59 37.6**	**+1.7**
NIKH	**Nikolski High**	**3.67**	**178**		**Pn**	**13 59 05.2**	**-0.5**
ATKA	**Atka Island**	**5.37**	**216**		**Pn**	**13 59 29.2**	**+0.1**
VNHG	**Veniaminof 1**	**5.48**	**90**		**Pn**	**13 59 29.9**	**-0.8**
ADK	**Adak**	**6.54**	**227**		**Pn**	**13 59 44.1**	**-1.0**
AMKA	**Amchitka**	**8.66**	**237**		**Pn**	**14 00 16.9**	**+2.7**
KDAK	**Kodiak Island**	**8.99**	**76**	Pn	**Pn**	**14 00 20.0**	**+1.3**
	0.4nm,0.3s,baz=286,slow=12,SNR=2.2						
TTA	**Tatalina**	**9.09**	**41**	Pn	**Pn**	**14 00 19.9**	**-0.2**
ILAR	**Eielson Array**	**13.49**	**44**	Pn	**Pn**	**14 01 20.1**	**0.0**
	0.0nm,0.3s,baz=235,slow=12,SNR=4.6						
BCAR	**Beaver Creek A**	**15.03**	**53**		**Pn**	**14 01 41.5**	**+0.2**
PETK	**Petropavlovsk-**	**19.36**	**274**	P	**Pn**	**14 02 35.6**	**0.0**
	0.1nm,0.3s,baz=81,slow=11,SNR=7.8						
INK	**Inuvik**	**19.78**	**40**	P	**P**	**14 02 39.0**	**+0.1**
	0.3nm,0.3s,baz=228,slow=9.5,SNR=14						
SEY	**Seymchan**	**20.17**	**304**	P	**P**	**14 02 43.9**	**+0.7**
	1.4nm,0.8s,baz=83,slow=9.9,SNR=4.0						
YKA	**Yellowknife Ar**	**27.44**	**55**	P	**P**	**14 03 55.0**	**+0.5**
	0.3nm,0.7s,baz=283,slow=8.3,SNR=5.3						
NVAR	**Mina Array Bea**	**37.75**	**97**	P	**P**	**14 05 25.8**	**+0.8**
	0.1nm,0.3s,baz=304,slow=6.4,SNR=1.9						
NRIK	**Noril'sk**	**42.81**	**329**	LR	LR	14 25 24.7	
	comp=Z,111nm,19.2s,baz=336,slow=38						
TXAR	**Lajitas Array**	**52.59**	**92**	P	**P**	**14 07 22.4**	**-0.4**
	0.4nm,0.6s,baz=291,slow=3.5,SNR=3.6						
AKASG	**Malin Array Be**	**71.97**	**348**	P	**P**	**14 09 31.4**	**-0.8**
	1.6nm,0.7s,baz=12,slow=5.9,SNR=4.1						

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*IDC **31** 13:59:40.5±0.5, 28°.26N×84°.05E, h0^{km}, mb4.5/31, mb1 4.6/34, mb1mx4.5/46, mbtmp4.5/34, ML4.4/3, MS3.8/2, Ms1 3.8/2, ms1mx3.1/44, Error ellipse: s-maj=13.8km s-min=11.4km az=29.0*

*BJI **31** 13:59:41.1±0.0, 28°.47N×84°.12E, h6^{km}, mB4.9/35, mb4.5/56, ML4.3/1, Ms4.2/21, Ms7 4.0/19*

*MOS **31** 13:59:42.2±1.1, 28°.42N×83°.98E, h18^{km}, mb5.1/33, Error ellipse: s-maj=7.4km s-min=3.8km az=111.5*

*DMN **31** 13:59:43.0±0.6, 28°.21N×83°.72E, h30^{km}, Ml5.7/2, Error ellipse: s-maj=23.5km s-min=8.1km az=46.0*

*NDI **31** 13:59:43.9±3.5, 28°.25N×84°.10E, h10^{km}, ML4.1, mb4.8(NEIC)*

*NEIC **31** 13:59:45.2±1.7, 28°.3N±0°.1×83°.97E±0°.09, h32^{km}±5^{km}, mb4.8/54, Error ellipse: s-maj=16.1km s-min=9.9km az=208.0*

ISC 31 13:59:42.1±0.3**, 28°.29N**±0°.04×**84°.02E**±0°.03**, h10**^{km}**, n343,** σ**1**^{s}**55**/373**, mb4.8**/101**, 24C-24D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DANN	**Dangsing**	**0.23**	**286**	*e*Pg	**Pb**	**13 59 48.8**	**+1.7**
DMN	**Daman**	**1.18**	**125**	*e*Pg	**Pb**	**14 00 05.1**	**+0.3**
DMN				*e*Sg	**Sn**	**14 00 21.7**	**+0.5**
KKN	**Kakani**	**1.22**	**114**	*e*Pg	**Pb**	**14 00 05.5**	**0.0**
KKN	**Kakani**	**1.22**	**114**	*e*Pg	**Pg**	**14 00 06.4**	**+0.7**
KKN				*e*Sg	**Sn**	**14 00 22.5**	**+0.3**
	23µm,0.4s						
PKI	**Pulchoki**	**1.43**	**120**	*e*Pg	**Pn**	**14 00 08.9**	**+0.5**
GUN	**Gumba**	**1.69**	**102**	*e*Pg	**Pb**	**14 00 13.5**	**0.0**
GUN	**Gumba**	**1.69**	**102**	*e*Pg	**Pb**	**14 00 13.6**	**0.0**
GUN				*e*Sg	**Sn**	**14 00 34.2**	**+0.3**
	7µm,0.3s						
RAMN	**Ramite**	**2.65**	**120**	*e*Pn	**Pn**	**14 00 25.1**	**-0.1**
TAPN	**Taplejung**	**3.40**	**105**	*e*Pn	**Pn**	**14 00 37.0**	**+1.4**
GTK	**Tadong**	**4.18**	**102**	IAML		14 01 37.0	
	comp=E,316nm,0.3s						
BOK	**Bokaro**	**4.78**	**159**	*e*P	**Pn**	**14 00 55.9**	**+1.6**
BOK				*e*S	**Sn**	**14 01 48.8**	**-0.9**
BOK				IAML		14 02 13.4	
	comp=N,254nm,0.3s						
BOK				IAML		14 02 15.8	
	comp=E,429nm,0.4s						
DDI	**Dehra Dun**	**5.58**	**293**	*e*P	**Pn**	**14 01 09.0**	**+3.6**
DDI				*e*S	**Sn**	**14 02 10.5**	**+0.9**
DDI				IAML		14 02 11.7	
	comp=E,603nm,0.3s						
DDI				IAML		14 02 12.9	
	comp=N,1µm,0.3s						
NDI	**New Delhi**	**6.00**	**275**	*e*P	**Pn**	**14 01 14.0**	**+3.0**
NDI				*e*S	**Sn**	**14 02 19.5**	**-0.2**
LSA	**Lhasa**	**6.41**	**76**	Pn	**Pn**	**14 01 18.0**	**+1.0**
LSA				Sn	**Sn**	**14 02 30.0**	**-0.5**
LSA				smax	smax		
	comp=N,180nm,0.7s						
LSA				smax	smax		
	comp=N,180nm,0.7s						
LSA	**Lhasa**	**6.41**	**76**	P	**Pn**	**14 01 18.6**	**+1.6**
LSA	**Lhasa**	**6.41**	**76**	Pn	**Pn**	**14 01 18.6**	**+1.6**
SMLA	**Simla**	**6.59**	**297**	*e*P	**Pn**	**14 01 20.7**	**+1.6**
SMLA				*e*S	**Sn**	**14 02 33.8**	**-0.7**
SMLA				IAML		14 02 35.7	
	comp=N,188nm,0.5s						
BHK	**Bhakra**	**7.30**	**297**	*e*P	**Pn**	**14 01 30.2**	**+1.3**
BHK				*e*S	**Sn**	**14 02 51.0**	**-0.8**
SHL	**Shillong**	**7.53**	**109**	P	**Pn**	**14 01 30.6**	**-1.6**
SHL	**Shillong**	**7.53**	**109**	*e*P	**Pn**	**14 01 30.6**	**-1.6**
SHL				*e*S	**Sn**	**14 02 51.3**	**-6.4**
SHL	**Shillong**	**7.53**	**109**	Pn	**Pn**	**14 01 30.6**	**-1.6**
BHPL	**Bhopal**	**7.78**	**231**	*e*P	**Pn**	**14 01 35.0**	**-0.5**
BHPL				IAML		14 03 05.9	
	comp=E,220nm,0.3s						
BHPL				IAML		14 03 07.0	
	comp=N,169nm,0.2s						
THN	**Thein Dam**	**8.27**	**302**	*e*P	**Pn**	**14 01 45.0**	**+2.8**
THN				*e*S	**Sn**	**14 03 16.5**	**+0.8**
NGP	**Nagpur**	**8.42**	**214**	*e*P	**Pn**	**14 01 43.8**	**-0.4**
NGP				*e*S	**Sn**	**14 03 17.2**	**-2.2**
NGP				IAML		14 03 19.3	
	comp=N,88nm,0.5s						
NGP				IAML		14 03 19.7	
	comp=E,118nm,0.3s						
MOKO	**MOKOCHONG**	**9.54**	**99**	*e*P	**Pn**	**14 01 58.0**	**-1.8**
MOKO				*e*S	**Sn**	**14 03 40.5**	**-6.7**
SARP	**Sargodha**	**10.47**	**293**	P	**Pn**	**14 02 11.1**	**-1.2**
NIL	**Nilore**	**10.67**	**303**	P	**Pn**	**14 02 14.9**	**-0.2**
NIL				SN	**Sn**	**14 04 10.6**	**-4.1**
NIL	**Nilore**	**10.67**	**303**	Pn	**Pn**	**14 02 14.9**	**-0.2**
NIL				Sn	**Sn**	**14 04 10.6**	**-4.1**
THW	**Thamme Wali**	**11.49**	**296**	P	**Pn**	**14 02 24.9**	**-1.5**
CEP	**Cherat**	**11.75**	**301**	⇑P	**Pn**	**14 02 28.5**	**-1.5**
CEP				S	**Sn**	**14 04 35.0**	**-6.4**
HYB	**Hyderabad**	**11.93**	**206**	*i* P	**Pn**	**14 02 30.0**	**-2.4**
HYB				*e*S	Sn	14 04 37.0	-8.7
HYB	**Hyderabad**	**11.93**	**206**	*e*P	**Pn**	**14 02 30.2**	**-2.3**
HYB				*e*S	Sn	14 04 35.4	-10
HYB				IAML		14 05 22.8	
	comp=E,56nm,0.7s						
KSH	**Kashi**	**13.03**	**331**	P	**Pn**	**14 02 44.5**	**-3.0**
KSH				pmax	pmax		
	comp=E,74nm,0.6s						
KSH				pmax	pmax		
	comp=E,330nm,6.1s						
POO	**Poona**	**13.46**	**226**	*e*S	Sn	14 05 15.0	-8.1
KBL	**Kabul**	**14.22**	**300**	P	**Pn**	**14 03 01.9**	**-1.9**
KBL	**Kabul**	**14.22**	**300**	Pn	**Pn**	**14 03 01.9**	**-1.9**
SHLS	**Shalkode**	**15.29**	**347**	*e*P	**Pn**	**14 03 14.4**	**-3.7**
	comp=E,3.1nm,0.6s,baz=348						
SHLS	**Shalkode**	**15.29**	**347**	*e*P	**Pn**	**14 03 14.4**	**-3.7**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ULHL	**Ulahol**	**15.29**	**338**	P	**Pn**	**14 03 17.4**	**-0.9**
	SNR=7.7						
SATY	**Saty**	**15.42**	**344**	*e*P	**Pn**	**14 03 17.5**	**-2.4**
	baz=344						
SATY				*e*S	**Sn**	**14 06 08.0**	**-2.9**
	baz=344						
SATY	**Saty**	**15.42**	**344**	*e*P	**Pn**	**14 03 17.5**	**-2.4**
SATY				*e*S	**Sn**	**14 06 07.9**	**-2.9**
KPKS	**Kokpek**	**15.74**	**346**	*e*P	**Pn**	**14 03 21.0**	**-3.1**
	comp=Z,7.7nm,1.2s,baz=345						
KPKS	**Kokpek**	**15.74**	**346**	*e*P	**Pn**	**14 03 21.0**	**-3.1**
KPKS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WMQ	**Urumqi**	**15.78**	**10**	*e*P	**P**	**14 03 26.0**	**-2.4**
WMQ				pP	pP	14 03 30.0	-2.0
WMQ				PP	**sP**	**14 03 37.5**	**+3.8**
WMQ				S	**Sn**	**14 06 22.0**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,59nm,4.1s						
WMQ				LR	LR		
	comp=Z,500nm,9.9s						
WMQ				LR	LR		
	comp=Z,280nm,9.9s						
MDOK	**Medeo**	**15.88**	**341**	*e*P	**Pn**	**14 03 22.8**	**-3.0**
	baz=341						
MDOK				LR	LR	14 09 04.7	
	comp=Z,269nm,13.6s,baz=341						
MDOK	**Medeo**	**15.88**	**341**	*e*P	**Pn**	**14 03 22.8**	**-3.0**
MDOK				MLR	MLR		
	comp=Z,269nm,14.0s						
UCH	**Uchtor**	**15.91**	**333**	P	**Pn**	**14 03 25.4**	**-1.2**
	SNR=18						
AAA	**Alma-Ata**	**15.96**	**341**	LR	LR	14 09 06.4	
	comp=Z,106nm,8.6s,baz=341						
KBK	**Karagaybulak**	**16.11**	**335**	P	**P**	**14 03 34.5**	**+2.2**
	SNR=30						
AML	**Almayashu**	**16.16**	**331**	P	**Pn**	**14 03 27.8**	**-1.9**
	SNR=16						
MHMT	**Maesarieng**	**16.26**	**125**	P	**P**	**14 03 36.5**	**+2.7**
	comp=Z,17nm,0.8s						
AAK	**Ala-Archa**	**16.27**	**334**	Pn	**Pn**	**14 03 29.0**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=160,slow=7.9,SNR=13						
AAK	**Ala-Archa**	**16.27**	**334**	P	**P**	**14 03 36.2**	**+2.2**
	SNR=6.8						
AAK	**Ala-Archa**	**16.27**	**334**	⇓*e*P	**Pn**	**14 03 30.2**	**-0.7**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AAK	**Ala-Archa**	**16.27**	**334**	Pn	**Pn**	**14 03 29.6**	**-1.3**
EKS2	**Erkin-Say**	**16.57**	**333**	P	**Pn**	**14 03 34.4**	**-0.3**
	SNR=9.9						
CM33	**Chiang Mai Arr**	**16.61**	**121**	P	**P**	**14 03 37.0**	**-0.7**
CHTO	**Chiang Mai**	**16.61**	**121**	P	**P**	**14 03 37.2**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**16.61**	**121**	P	**P**	**14 03 37.2**	**-0.5**
CMMT	**Chiang Mai**	**16.61**	**121**	P	**Pn**	**14 03 36.6**	**+1.4**
	comp=Z,10nm,0.9s						
CM32	**Chiang Mai Arr**	**16.63**	**122**	P	**P**	**14 03 38.0**	**+0.1**
CM34	**Chiang Mai Arr**	**16.74**	**121**	P	**P**	**14 03 39.0**	**-0.1**
KUU	**Kurty**	**16.75**	**340**	*e*P	**Pn**	**14 03 35.5**	**-1.3**
	baz=340						
KUU				LR	LR	14 09 34.8	
	comp=Z,84nm,9.6s,baz=340						
KUU	**Kurty**	**16.75**	**340**	*e*P	**Pn**	**14 03 35.5**	**-1.3**
KUU				MLR	MLR		
	comp=Z,84nm,10.0s						
USP	**Ospenovka**	**16.80**	**335**	P	**P**	**14 03 38.8**	**-0.9**
	SNR=7.0						
CM15	**Chiang Mai Arr**	**16.81**	**122**	P	**P**	**14 03 40.9**	**+0.9**
	comp=Z,104nmcomp=Z,16nm,0.9s						
CM13	**Chiang Mai Arr**	**16.82**	**123**	P	**P**	**14 03 41.0**	**+1.0**
	comp=Z,143nmcomp=Z,20nm,0.9s						
CM31	**Chiang Mai Arr**	**16.82**	**122**	P	**P**	**14 03 42.0**	**+1.9**
	comp=Z,5µmcomp=Z,524nm,0.8s						
CM31	**Chiang Mai Arr**	**16.82**	**122**		**Pn**	**14 03 38.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**16.82**	**122**	Pn	**Pn**	**14 03 36.4**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=306,slow=12,SNR=31						
CMAR	**Chiang Mai Arr**	**16.82**	**122**	*i* P	**P**	**14 03 40.4**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.82**	**122**		**Pn**	**14 03 39.0**	**+1.1**
CM02	**Chiang Mai Arr**	**16.84**	**122**	P	**P**	**14 03 40.0**	**-0.2**
	comp=Z,140nmcomp=Z,20nm,0.8s						
CM35	**Chiang Mai Arr**	**16.85**	**121**	P	**P**	**14 03 40.5**	**+0.1**
CM01	**Chiang Mai Arr**	**16.86**	**122**	P	**P**	**14 03 41.5**	**+1.0**
	comp=Z,128nmcomp=Z,16nm,0.9s						
CM05	**Chiang Mai Arr**	**16.86**	**122**	P	**P**	**14 03 41.0**	**+0.5**
	comp=Z,102nmcomp=Z,14nm,1.1s						
CM09	**Chiang Mai Arr**	**16.87**	**122**	P	**P**	**14 03 41.0**	**+0.4**
	comp=Z,201nmcomp=Z,27nm,0.8s						
CM04	**Chiang Mai Arr**	**16.89**	**122**	P	**P**	**14 03 41.0**	**+0.2**
	comp=Z,113nmcomp=Z,15nm,0.8s						
CM36	**Chiang Mai Arr**	**16.90**	**122**	P	**Pn**	**14 03 40.0**	**+1.1**
PAYA	**Payao**	**17.00**	**118**	P	**P**	**14 03 42.9**	**+0.9**
	comp=Z,2µmcomp=Z,198nm,0.8s						
KMI	**Kunming**	**17.02**	**96**	⇑P	**P**	**14 03 42.5**	**0.0**
KMI				PP	**PnPn**	**14 03 57.0**	**+6.7**
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
GTA	**Gaotai**	**17.16**	**46**	*e*P	**Pn**	**14 03 39.3**	**-2.8**
GTA				pP	P	14 03 43.3	-0.5
GTA				sP	pP	14 03 45.8	-1.1
GTA				PcP	**PcP**	**14 08 27.5**	**+1.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,94nm,5.5s						
GTA				LR	LR		
	comp=Z,250nm,15.6s						
GTA				LR	LR		
	comp=Z,310nm,16.7s						
GTA				LR	LR		
	comp=Z,270nm,15.6s						
TDK	**Taldyqorghan**	**17.27**	**346**	*e*P	**Pn**	**14 03 40.9**	**-2.5**
	baz=346						
TDK	**Taldyqorghan**	**17.27**	**346**	*e*P	**Pn**	**14 03 40.9**	**-2.5**
LAMP	**Lampang**	**17.30**	**121**	P	P	14 04 02.4	+17
CD2	**Chengdu**	**17.37**	**77**	*e*P	**Pn**	**14 03 45.0**	**+0.3**
DZA	**Taraz**	**17.82**	**328**	*e*P	**Pn**	**14 03 48.6**	**-1.7**
	baz=328						
DZA	**Taraz**	**17.82**	**328**	*e*P	**Pn**	**14 03 48.6**	**-1.7**
IUG	**Iuzhnay**	**17.90**	**324**	*e*P	**Pn**	**14 03 47.9**	**-3.5**
	baz=324						
IUG	**Iuzhnay**	**17.90**	**324**	*e*P	**Pn**	**14 03 47.8**	**-3.6**
SUKH	**Sukhothai**	**17.94**	**123**	P	**P**	**14 03 55.0**	**+2.6**
	comp=Z,17nm,0.8s						
KK31	**Karatay Array**	**18.37**	**327**	P	**Pn**	**14 03 55.9**	**-1.1**
KK31				pmax	pmax		
	comp=Z,21nm,1.0s						
KK31	**Karatay Array**	**18.37**	**327**		**Pn**	**14 03 55.9**	**-1.1**
KKAR	**Karatay Array**	**18.37**	**327**	P	**Pn**	**14 03 55.7**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,21nm,1.0s						
KKAR	**Karatay Array**	**18.37**	**327**	P	**Pn**	**14 03 55.9**	**-1.1**
KKAR	**Karatay Array**	**18.37**	**327**	P	**Pn**	**14 03 55.7**	**-1.3**
UTTA	**Uttaradit**	**18.47**	**121**	P	**Pn**	**14 04 02.0**	**+3.7**
	comp=Z,13nm,0.7s						
LZH	**Lanzhou**	**18.48**	**60**	*e*P	**Pn**	**14 03 57.0**	**-1.5**
LZH				pP	pP	14 04 02.0	+0.4
LZH				PP	**PnPn**	**14 04 14.5**	**+4.4**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,4.6s						
LZH				LR	LR		
	comp=Z,310nm,13.0s						
LZH				LR	LR		
	comp=Z,440nm,13.6s						
LZH				LR	LR		
	comp=Z,280nm,15.2s						
BTLS	**Baital**	**18.51**	**337**	*e*P	**P**	**14 03 56.9**	**-1.6**
	baz=337						
BTLS	**Baital**	**18.51**	**337**	*e*P	**P**	**14 03 56.9**	**-1.6**
MK31	**Makanchi Array**	**18.52**	**356**	⇓*e*P	**P**	**14 03 58.1**	**-0.6**
MK31	**Makanchi Array**	**18.52**	**356**	P	**P**	**14 03 58.0**	**-0.7**
MKAR	**Makanchi Array**	**18.52**	**356**	P	**P**	**14 03 57.6**	**-1.1**
	comp=Z,2.6nm,0.3s,baz=172,slow=9.6,SNR=118						
MKAR	**Makanchi Array**	**18.52**	**356**	P	**Pn**	**14 03 58.2**	**-0.6**
MKAR	**Makanchi Array**	**18.52**	**356**	P	**Pn**	**14 03 58.2**	**-0.6**
MAKZ	**Makanchi**	**18.56**	**356**	P	**P**	**14 03 57.0**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAKZ	**Makanchi**	**18.56**	**356**		**P**	**14 03 57.0**	**-2.1**

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UTHA   Uthaitani          19.09 128    P        Pn       14 04 06.8 +1.0
       comp=Z,26nm,0.8s
ZSN    Zaisan             19.14   2   eP        P        14 04 04.2 -1.3
       comp=Z,5.5nm,1.0s,baz=1.8
ZSN    Zaisan             19.14   2   eP        P        14 04 04.1 -1.3
ZSN                                    pmax     pmax
       comp=Z,6.0nm,1.0s
GYA    Guiyang            20.19  90  ⇑P         P        14 04 17.8 +0.6
GYA                                    pP       sP       14 04 23.5 +1.3
GYA                                    pmax     pmax
       comp=Z,20nm,0.8s
CHAI   Chaiyaphum         20.68 123    P        P        14 04 24.1 +1.6
       comp=Z,603nmcomp=Z,75nm,0.8s
PHET   Kaeng Krachan      21.12 133    P        P        14 04 32.1 +4.9
       comp=Z,28nm,0.8s
PALK   Pallekele          21.14 189    P        P        14 04 27.2 -0.2
       comp=Z,4.2nm,0.8s,baz=55,slow=12,SNR=1.8
DGZ    Jazzator, Alta     21.54   6ceP          P        14 04 32.4 +0.8
DGZ                                    pmax     pmax
       comp=Z,7.0nm,0.6s
SRAK   Srakaew            21.97 127    P        P        14 04 45.6 +9.3
       comp=Z,122nm,0.8s
XAN    Xi'an              22.05  69    P        P        14 04 35.8 -1.3
XAN                                    pP       sP       14 04 45.8 +4.0
XAN                                    pmax     pmax
       comp=Z,29nm,0.6s
SEM    Semipalatinsk      22.28 354   eP        P        14 04 38.1 -1.5
       baz=354
SEM                                    LR       LR       14 13 18.8
       comp=Z,104nm,12.2s,baz=354
SEM    Semipalatinsk      22.28 354   eP        P        14 04 38.0 -1.5
SEM                                    MLR      MLR
       comp=Z,105nm,12.0s
ENH    Enshi              22.30  79    P        P        14 04 37.7 -2.0
ENH                                    IAmb     IAmb     14 05 01.4
       comp=Z,18nm,0.9s
KURBB  Kurchatov Arra     22.69 351    P        P        14 04 43.6 -0.1
       comp=Z,9.8nm,0.8s,baz=174,slow=10,SNR=82
KURBB                                  PcP      PcP      14 08 35.8 -0.1
       comp=Z,0.2nm,0.3s,baz=184,slow=2.0,SNR=5.4
KURK   Kurchatov          22.77 351d iP         P        14 04 44.4 -0.2
KURK                                   pmax     pmax
       comp=Z,23nm,1.0s
KURK   Kurchatov          22.77 351    P        P        14 04 44.6  0.0
KURK                                   IAmb     IAmb     14 04 47.7
       comp=Z,17nm,0.8s
BRZS   Berezniki          23.33 341   eP        P        14 04 49.0 -1.4
       comp=Z,3.7nm,0.8s,baz=341
BRZS   Berezniki          23.33 341   eP        P        14 04 48.9 -1.4
BRZS                                   pmax     pmax
       comp=Z,4.0nm,0.8s
GEYT   Alibeck            23.66 301    P        P        14 04 54.8 +1.0
       comp=Z,5.5nm,0.8s,baz=162,slow=10,SNR=7.8
ZAA0   Zalesovo Array     25.64   1    P        P        14 05 12.2 +0.4
ZAA0                                   IAmb     IAmb     14 05 13.1
       comp=Z,12nm,0.8s
ZALV   Zalesovo Beam      25.64   1    P        P        14 05 12.2 +0.4
       comp=Z,9.9nm,0.5s,baz=184,slow=9.7,SNR=62
ZALV                                   LR       LR       14 16 56.8
       comp=Z,136nm,19.6s,baz=34,slow=40
HHC    Hu-ho-hao-te       25.80  54   eP        P        14 05 14.5 +1.0
HHC                                    pmax     pmax
       comp=Z,8.0nm,0.8s
HHC                                    pmax     pmax
       comp=Z,230nm,7.6s
SONM   Songino Array      26.13  36    P        P        14 05 18.1 +1.6
       comp=Z,22nm,0.8s,baz=221,slow=10.0,SNR=85
SONM                                   PcP      PcP      14 08 43.6 -0.1
       comp=Z,0.6nm,0.5s,baz=217,slow=3.8,SNR=3.6
SONM                                   ScP      ScP      14 12 22.1 -1.4
       comp=Z,1.4nm,0.8s,baz=209,slow=2.9,SNR=5.9
SONM   Songino Array      26.13  36    P        P        14 05 17.9 +1.4
SONM                                   pmax     pmax
       comp=Z,16nm,0.8s
SONM   Songino Array      26.13  36    P        P        14 05 17.9 +1.4
ZAK    Zakamensk          26.47  28   eP        P        14 05 20.6 +1.1
ZAK                                    pmax     pmax
       comp=Z,21nm,1.0s
ULN    Ulaanbaatar        26.49  36c iP         P        14 05 20.8 +1.1
ULN                                    pmax     pmax
       comp=Z,37nm,1.0s
ULN    Ulaanbaatar        26.49  36    P        P        14 05 20.2 +0.4
ULN                                    IAmb     IAmb     14 05 21.9
       comp=Z,26nm,0.8s
BRVK   Borovoye           26.75 341    P        P        14 05 21.7 -0.1
BRVK                                   pmax     pmax
       comp=Z,8.0nm,0.8s
BRVK   Borovoye           26.75 341    P        P        14 05 21.7 -0.1
TLY    Talaya             27.61  27⇓eP          P        14 05 28.5 -1.2
TLY                                    pmax     pmax
       comp=Z,12nm,3.7s
ABKAR  Akbulak array      27.91 325    P        P        14 05 33.1 +0.9
ABKAR  Akbulak array      27.91 325    P        P        14 05 32.8 +0.5
BJI    Beijing            28.93  58    P        P        14 05 41.5 +0.1
BJI                                    pmax     pmax
       comp=Z,8.0nm,1.0s
BJI                                    pmax     pmax
       comp=Z,140nm,4.9s
AKTO   Aktyubinsk         29.62 325    P        P        14 05 47.4 -0.1
       comp=Z,1.6nm,0.5s,baz=142,slow=7.5,SNR=9.1
NJ2    Nanjing            30.27  74   eP        P        14 05 53.8 +0.3
NJ2                                    pmax     pmax
       comp=Z,9.0nm,0.5s
ARU    Arti               33.45 334d iP         P        14 06 21.3 +0.2
ARU                                                      14 07 29.5
ARU                                    S        S        14 11 45.5 +3.1
ARU                                    SS       SnSn     14 13 37.9 -6.1
ARU                                    pmax     pmax
       comp=Z,11nm,1.8s
GROC   Groznyy            34.08 306   eP        P        14 06 25.6 -1.2
GROC                                  e                  14 07 40.5
GROC                                   pmax     pmax
       comp=Z,29nm,0.5s
HIA    Hailar             34.39  43⇓iP          P        14 06 31.0 +1.6
HIA                                    pmax     pmax
       comp=Z,19nm,1.2s
KZRT   Kazreti            34.75 303    P        P        14 06 35.1 +2.5
ZEI    Tsey               35.36 305   eP        P        14 06 39.5 +1.5
ZEI                                    pmax     pmax
       comp=Z,11nm,0.7s
AKH    Akhalkalaki        35.42 303    P        P        14 06 41.8 +3.2
NCK    Nalchik            35.71 306⇓eP          P        14 06 42.5 +1.6
NCK                                    pmax     pmax
       comp=Z,14nm,0.3s
BELG   Belogornoye        36.14 322⇓iP          P        14 06 44.9 +0.6
BELG                                   pmax     pmax
       comp=Z,2.0nm,0.9s
BOD    Bodaibo            36.20  27   eP        P        14 06 45.8 +1.0
BOD                                    pmax     pmax
       comp=Z,10.0nm,0.9s
KBZ    Khabaz             36.26 306    P        P        14 06 46.4 +0.9
       comp=Z,3.8nm,0.8s,baz=118,slow=7.7,SNR=7.7
KBZ    Khabaz             36.26 306⇓eP          P        14 06 46.9 +1.4
KIV    Kislovodsk         36.45 307   eP        P        14 06 47.8 +0.5
KIV                                    pmax     pmax
       comp=Z,21nm,1.0s
CN2    Changchun          36.50  54   eP        P        14 06 47.0 -0.5
CN2                                    pmax     pmax
       comp=Z,10.0nm,0.8s
KSRS   Korea Array        37.71  64    P        P        14 06 56.5 -1.5
       comp=Z,2.7nm,0.7s,baz=267,slow=8.0,SNR=8.9
KIRV   Kirov              38.57 332⇑eP          P        14 07 05.3 +0.4
MALT   Malatya            39.05 297    P        P        14 07 12.7 +3.3
NRIK   Noril'sk           41.14   2    P        P        14 07 27.0 +0.9
       comp=Z,19nm,0.5s,baz=173,slow=6.4,SNR=29
NRIK   Noril'sk           41.14   2c iP         P        14 07 26.7 +0.6
NRIK                                   pmax     pmax
       comp=Z,15nm,0.6s
NRIK   Noril'sk           41.14   2    P        P        14 07 24.9 -1.1
NRIK                                   IAmb     IAmb     14 07 27.7
       comp=Z,22nm,0.6s
USRK   Ussuriysk Ar.      41.22  54    P        P        14 07 27.4 +0.2
       comp=Z,3.6nm,0.6s,baz=263,slow=8.3,SNR=12
KLR    Kul'dur            41.86  47    P        P        14 07 32.5 +0.2
       comp=Z,7.7nm,0.9s,baz=272,slow=9.6,SNR=17
KLR    Kul'dur            41.86  47⇓iP          P        14 07 33.1 +0.8
BRTR   Keskin Array B     42.79 299    P        P        14 07 41.2 +1.0
       comp=Z,2.2nm,0.7s,baz=119,slow=7.6,SNR=6.4
MOS    Moscow             42.88 323   eP        P        14 07 55.0  +15
OBN    Obninsk            43.24 322⇑eP          P        14 07 43.6 +0.2
OBN                                   e                  14 09 24.2
OBN                                    pmax     pmax
       comp=Z,65nm,1.7s
KLMR   Klimovskoe         44.03 330   eP        P        14 07 48.4 -1.3
KLMR                                   pmax     pmax
       comp=Z,23nm,1.0s

KLMR   Klimovskoe         44.03 330   eP        P        14 07 48.4 -1.3
KLMR                                   AMP               14 07 50.7
       comp=Z,23nm,1.0s
KDZE   Karadeniz Ereo     44.45 301  ⇑P         P        14 07 52.8 -0.6
YAK    Yakutsk            45.06  28    P        P        14 07 58.5 +0.6
       comp=Z,14nm,0.5s,baz=77,slow=1.3,SNR=16
YAK    Yakutsk            45.06  28c iP         P        14 07 58.1 +0.2
YAK                                    pmax     pmax
       comp=Z,23nm,0.6s
YAK    Yakutsk            45.06  28    P        P        14 07 58.1 +0.2
ELL    Elmali             45.88 295    P        P        14 08 06.4 +1.4
ELL    Elmali             45.88 295    P        P        14 08 06.4 +1.4
TMCR   Tamitsa            46.19 334   eP        P        14 08 06.9 +0.1
TMCR                                   pmax     pmax
       comp=Z,26nm,0.8s
AKASG  Malin Array Be     46.59 314    P        P        14 08 09.9 -0.3
       comp=Z,3.6nm,0.5s,baz=84,slow=7.3,SNR=25
AKASG                                  PcP      PcP      14 09 43.8 -0.4
       comp=Z,0.9nm,0.4s,baz=78,slow=5.0,SNR=4.1
AKASG  Malin Array Be     46.59 314ceP          P        14 08 09.8 -0.4
AKASG                                  pmax     pmax
       comp=Z,4.0nm,0.5s
AKASG  Malin Array Be     46.59 314    P        P        14 08 09.2 -1.0
AKBB   Malin Array Si     46.59 314⇑eP          P        14 08 09.8 -0.4
AKBB                                   pmax     pmax
       comp=Z,10.0nm,0.8s
AKBB   Malin Array Si     46.59 314    P        P        14 08 09.3 -0.9
AKBB                                   IAmb     IAmb     14 08 11.2
       comp=Z,9.6nm,0.7s
VRI    Vrincioaia         47.91 308  ⇓P         P        14 08 22.4 +1.8
VRI    Vrincioaia         47.91 308  ⇓P         P        14 08 22.4 +1.8
PLOR   Plostina           47.97 308  ⇑P         P        14 08 22.2 +1.1
PLOR   Plostina           47.97 308  ⇑P         P        14 08 22.2 +1.1
JOF    Joensuu            48.41 331    P        P        14 08 25.0 +0.8
JOF                                    pmax     pmax
       comp=Z,47nm,2.1s
MLR    Muntele Rosu       48.46 307  ⇓P         P        14 08 25.7 +0.7
MLR    Muntele Rosu       48.46 307  ⇓P         P        14 08 25.7 +0.7
NACGM  Naroch             48.66 320  i P        P        14 08 27.0 +0.8
NACGM                                i P        P        14 08 27.0 +0.8
NACGM                                i P        P        14 08 27.0 +0.8
NACGM                                i PP       PP       14 10 17.6 -1.4
NACGM                                i PPP      PPP      14 11 21.9
NACGM                                i S        S        14 15 31.2 +3.0
NACGM                                i SS       SS       14 18 59.6 +1.5
NACGM                                i SSS      SSS      14 20 13.8
NACGM                                i LQ       LQ       14 25 32.0
NACGM                                i LR       LR       14 29 14.2
YSS    Yuzh-Sakhalins     48.93  51⇓eP          P        14 08 28.8 +0.4
YSS                                    pmax     pmax
       comp=Z,38nm,2.5s
BURAR  Bucovina Array     48.98 310  ⇑P         P        14 08 30.1 +1.1
BURAR  Bucovina Array     48.98 310  ⇑P         P        14 08 30.1 +1.1
TYV    Tymovskoe          49.04  46   eP        P        14 08 30.2 +1.0
TYV                                    pmax     pmax
       comp=Z,8.0nm,1.1s
TYV                                    pmax     pmax
       comp=Z,300nm,7.2s
LVZ    Lovozero           49.18 338⇓eP          P        14 08 30.1 +0.1
LVZ                                    pmax     pmax
       comp=Z,30nm,1.1s
VSU    Vasula             49.34 324⇑eP          P        14 08 31.4 +0.1
TIXI   Tiksi              49.82  17⇑eP          P        14 08 34.4 -0.4
TIXI                                   pmax     pmax
       comp=Z,46nm,0.8s
TIXI   Tiksi              49.82  17    P        P        14 08 34.6 -0.2
TIXI                                   IAmb     IAmb     14 08 35.5
       comp=Z,10nm,0.8s
FIA1   FINESS Array S     50.33 328    P        P        14 08 39.1 +0.3
FINES  FINESS Array B     50.33 328    P        P        14 08 39.1 +0.3
       comp=Z,18nm,0.6s,baz=107,slow=8.1,SNR=113
VTS    Vitosha            50.52 303  ⇑P         P        14 08 37.6 -3.2
VTS    Vitosha            50.52 303  ⇑P         P        14 08 37.6 -3.2
SUF    Sumiainen          50.61 330    P        P        14 08 41.5 +0.6
SUF                                    pmax     pmax
       comp=Z,56nm,0.7s
DRGR                      50.69 309  ⇓P         P        14 08 42.3 +0.4
DRGR                      50.69 309  ⇓P         P        14 08 42.3 +0.4
UZH    Uzhgorod           50.96 311c iP         P        14 08 42.3 -1.5
UZH                                  i                   14 08 44.8
UZH                                  i                   14 08 52.2
KOLS   Kolonicke sedl     50.97 312   eP        P        14 08 45.1 +1.2
KOLS   Kolonicke sedl     50.97 312   eP        P        14 08 45.1 +1.2
ARA0   ARCESS Array S     52.89 338   eP        P        14 08 58.3 +0.4
ARCES  ARCESS Array B     52.89 338    P        P        14 08 58.4 +0.5
       comp=Z,9.7nm,0.5s,baz=97,slow=6.9,SNR=72
KTK1   Kautokeino         53.50 337   eP        P        14 09 02.4 +0.1
MORH   Mrgy, Hungar       53.53 308   eP        P        14 09 02.9  0.0
HAMF   Hammerfest         53.84 339   eP        P        14 09 05.5 +0.7
MORC   Moravsky Berou     54.04 313  ⇓P         P        14 09 07.5 +0.8
MORC   Moravsky Berou     54.04 313  ⇓P         P        14 09 07.5 +0.8
MA2    Magadan            54.34  35    LR       LR       14 32 45.4
       comp=Z,3μm,20.2s,baz=172,slow=36
MA2    Magadan            54.34  35d iP         P        14 09 09.3 +0.6
MA2                                    pmax     pmax
       comp=Z,9.0nm,1.3s
KRLC   Kraliky            54.52 313   eP        P        14 09 10.6 +0.4
KRLC   Kraliky            54.52 313   eP        P        14 09 10.6 +0.4
DPC    Dobruska-Polom     54.80 314   eP        P        14 09 12.9 +0.7
DPC    Dobruska-Polom     54.80 314   eP        P        14 09 12.9 +0.7
OSTC   Ostas              54.86 314   eP        P        14 09 13.3 +0.7
CHVC   Chvalec            54.96 314   eP        P        14 09 13.9 +0.6
UPC    Upice              54.99 314   eP        P        14 09 14.2 +0.7
UPC    Upice              54.99 314   eP        P        14 09 14.2 +0.7
TRO    Tromso             55.13 337   eP        P        14 09 14.2  0.0
CONA   Conrad Observa     55.28 311  i P        P        14 09 16.5 +0.8
       comp=Z,16nm,1.7s,SNR=9.7
SEY    Seymchan           55.39  31    P        P        14 09 16.4 +0.1
       comp=Z,2.2nm,0.6s,baz=242,slow=3.5,SNR=14
SEY    Seymchan           55.39  31⇓iP          P        14 09 17.1 +0.9
TREC   Trest              55.41 312   eP        P        14 09 17.7 +1.1
TREC   Trest              55.41 312   eP        P        14 09 17.7 +1.1
ARSA   Arzberg            55.57 310   eP        P        14 09 18.3 +0.5
       comp=Z,7.3nm,1.1s
HOPEN  Hopen              55.61 346   eP        P        14 09 19.1 +1.6
N2IH   Innhavet           55.89 335   eP        P        14 09 19.9 +0.3
PRU    Pruhonice          55.97 313   eP        P        14 09 21.4 +0.8
PRU    Pruhonice          55.97 313   eP        P        14 09 21.4 +0.8
SOKA   Soboth             55.97 309  i P        P        14 09 21.6 +0.9
       comp=Z,5.9nm,0.6s,SNR=8.2
FAUS   Fauske             56.05 334   eP        P        14 09 20.8  0.0
STEI   Steigen            56.14 335   eP        P        14 09 20.0 -1.5
MOR8   Moi Rana           56.23 333   eP        P        14 09 21.5 -0.7
BRG    Berggiesshubel     56.28 314  i P        P        14 09 23.2 +0.4
BRG                                    Amp               14 09 25.2
       comp=Z,9.9nm,0.6s
BRG                                  i x        x        14 09 27.3
BRG                                    Amp               14 09 28.1
       comp=Z,2.6nm,0.6s
OBKA   Obir               56.32 309   eP        P        14 09 23.7 +0.5
       comp=Z,10nm,0.9s
PBCC   Pribram            56.35 313   eP        P        14 09 24.0 +0.7
MOA    Molln              56.35 311  i P        P        14 09 23.7 +0.3
       comp=Z,8.3nm,1.1s,SNR=6.3
GERES  GERESS Array B     56.62 312    P        P        14 09 25.8 +0.4
       comp=Z,1.6nm,0.5s,baz=78,slow=6.6,SNR=14
GERES  GERESS Array B     56.62 312    P        P        14 09 25.4  0.0
KHC    Kasperske Hory     56.67 312⇓eP          P        14 09 26.2 +0.5
KHC                                    pmax     pmax
       comp=Z,19nm,1.7s
KHC    Kasperske Hory     56.67 312   eP        P        14 09 25.9 +0.2
KHC    Kasperske Hory     56.67 312    P        P        14 09 25.4 -0.3
KHC                                    IAmb     IAmb     14 10 21.9
       comp=Z,34nm,2.0s
KONS   Konsvik            56.80 333   eP        P        14 09 26.1  0.0
LOF    Lofoten            56.80 335   eP        P        14 09 25.8 -0.4
STOK   Stokkvaagen        56.82 333   eP        P        14 09 26.7 +0.4
MYKA   Terra Mystica      56.92 309   eP        P        14 09 28.2 +0.6
       comp=Z,3.4nm,0.7s
N2SV   S¸rv¥gen           56.98 335   eP        P        14 09 26.4 -1.0
KBA    Koelnbreinsper     57.07 310  i P        P        14 09 28.5 -0.1
       comp=Z,3.1nm,0.5s,SNR=5.4
NSS    Namsos             57.14 331   eP        P        14 09 28.2 -0.4
NC405  NORSAR Array S     57.16 327    P        P        14 09 29.0 +0.1
NC602  NORSAR Array S     57.24 326    P        P        14 09 29.1 -0.4
NC602  NORSAR Array S     57.24 326   eP        P        14 09 29.0 -0.4
NC303  NORSAR Array S     57.33 327    P        P        14 09 30.0 -0.1
NB201  NORSAR Array S     57.36 327    P        P        14 09 30.2 -0.1
NB2    NORSAR Subarra     57.40 327    P        P        14 09 30.1 -0.5
       comp=Z,5.3nm,0.5s,baz=87,slow=7.4
NOA    NORSAR Array B     57.40 327    P        P        14 09 29.8 -0.8
       comp=Z,7.1nm,0.6s,baz=101,slow=7.2,SNR=36
NAO01  NORSAR Array S     57.56 326    P        P        14 09 31.3 -0.4

NC204  NORSAR Array S     57.62 327    P        P        14 09 32.0 -0.2
OSL    Oslo               57.66 325   eP        P        14 09 32.6 +0.2
ABTA   Abfaltersbach      57.68 309   eP        P        14 09 32.6 -0.3
       comp=Z,5.4nm,0.9s
MOX    Moxa               57.77 314    P        P        14 09 33.9 +0.5
WATA   Walderalm          58.23 310   eP        P        14 09 35.8 -1.0
       comp=Z,8.5nm,1.2s
KONO   Kongsberg          58.24 325   eP        P        14 09 36.6 +0.2
PETK   Petropavlovsk-     58.30  43    P        P        14 09 36.3 -0.7
       comp=Z,1.6nm,0.6s,baz=298,slow=2.2,SNR=14
CTI    Castel Tesino      58.38 309    P        P        14 09 37.1 -0.7
CTI                                    pmax     pmax
       comp=Z,8.0nm,0.5s
CTI    Castel Tesino      58.38 309    P        P        14 09 37.1 -0.7
CTI                                    IAmb     IAmb     14 09 38.3
       comp=Z,7.6nm,0.5s
DOMB   Dombas             58.42 328   eP        P        14 09 37.7  0.0
SQTA   Sankt Quirin       58.49 310   eS        P        14 09 37.9 -0.8
       SNR=4.3
SQTA                                 i P        P        14 09 38.1 -0.5
       comp=Z,9.0nm,0.4s,SNR=8.0
MOTA   Moosalm            58.54 310  i P        P        14 09 38.4 -0.6
       comp=Z,7.8nm,0.5s,SNR=8.6
MOTA                                  eS        P        14 09 38.7 -0.3
       SNR=6.3
RETA   Reutte             58.75 311  i P        P        14 09 39.8 -0.6
       comp=Z,4.1nm,0.5s,SNR=5.5
SKAR   Skarslia           58.84 326   eP        P        14 09 40.8 +0.1
FETA   Feichten           58.85 310  i P        P        14 09 40.7 -0.5
       comp=Z,3.8nm,0.5s,SNR=6.7
KBS    Kingsbay           59.00 348   eP        P        14 09 41.6 +0.1
MOL    Molde              59.11 328   eP        P        14 09 42.0 -0.5
DAVA   Damuels            59.37 310   eP        P        14 09 44.2 -0.6
       comp=Z,11nm,0.7s
AKN    Aaknes             59.38 328   eP        P        14 09 44.8 +0.3
ODD1   Odda               59.72 325   eP        P        14 09 45.5 -1.3
BER    Bergen             60.32 326   eP        P        14 09 49.2 -1.6
ASK    Askoy              60.38 326   eP        P        14 09 51.3 +0.1
BILL   Bilibino           61.22  25⇓iP          P        14 09 57.5 +0.7
BILL                                  e                  14 10 02.9
BILL                                   pmax     pmax
       comp=Z,8.0nm,1.7s
SENIN  Lac Senin/Sane     61.29 310    P        P        14 09 57.8 -0.2
SENIN                                  IAmb     IAmb     14 09 59.2
       comp=Z,13nm,0.7s
KEST   Kesra              62.37 298    P        P        14 10 05.1 -0.1
       comp=Z,10nm,0.7s,baz=273,slow=2.6,SNR=4.4
DAG    Danmarks Havn      65.53 346  i P        P        14 10 25.2 -0.1
DAG    Danmarks Havn      65.53 346  i P        P        14 10 25.2 -0.1
       comp=Z,8.9nm,0.9s
DAG    Danmarks Havn      65.53 346  i P        P        14 10 25.2 -0.1
DAG                                    IAmb     IAmb     14 10 25.8
       comp=Z,8.9nm,0.9s
DBG    Daneborg           66.76 343  i P        P        14 10 33.7 +0.5
DBG                                    IAmb     IAmb     14 10 34.9
       comp=Z,3.9nm,0.8s
WB0    Warramunga Arr     68.21 129    P        P        14 10 43.1  0.0
WB0                                    IAmb     IAmb     14 10 44.2
       comp=Z,11nm,1.3s
WRA    Warramunga Arr     68.29 129    P        P        14 10 43.8 +0.1
       comp=Z,2.5nm,0.6s,baz=323,slow=6.4,SNR=53
WRA    Warramunga Arr     68.29 129    P        P        14 10 43.3 -0.4
WRAB   Tennant Creek      68.29 129⇑eP          P        14 10 43.5 -0.2
WRAB                                   pmax     pmax
       comp=Z,5.0nm,0.7s
WRAB   Tennant Creek      68.29 129    P        P        14 10 43.8 +0.1
WRAB                                   IAmb     IAmb     14 10 44.3
       comp=Z,4.8nm,0.7s
WB2    Warramunga Arr     68.30 129    P        P        14 10 43.9 +0.2
WB2                                    IAmb     IAmb     14 10 52.3
       comp=Z,6.1nm,0.8s
AS31   Alice Springs      70.56 132    P        P        14 10 57.2 -0.5
ASAR   Alice Springs      70.56 132    P        P        14 10 57.7  0.0
       comp=Z,2.3nm,0.6s,baz=316,slow=6.3,SNR=40
ESDC   Sonseca Array      71.11 305    P        P        14 11 01.4 +0.5
       comp=Z,3.6nm,0.8s,baz=59,slow=6.1,SNR=11
ESDC   Sonseca Array      71.11 305    P        P        14 11 00.3 -0.6
PAB    San Pablo          71.43 305    P        P        14 11 00.9 -2.0
PAB                                    pmax     pmax
       comp=Z,48nm,1.6s
PAB    San Pablo          71.43 305    P        P        14 11 00.9 -2.0
A21K   Barrow             72.12  17    P        P        14 11 06.1 -0.3
SUMG   Summit             72.13 345    P        P        14 11 06.1 -0.8
SUMG                                   pmax     pmax
       comp=Z,16nm,0.8s
SUMG   Summit             72.13 345    P        P        14 11 06.1 -0.8
SUMG                                   IAmb     IAmb     14 11 08.3
       comp=Z,16nm,0.8s
SUMG   Summit             72.13 345  i P        P        14 11 07.0 +0.1
       comp=Z,46nm,0.9s
SUMG   Summit             72.13 345  i P        P        14 11 07.1 +0.1
SUMG                                   IAmb     IAmb     14 11 08.2
       comp=Z,46nm,0.9s
ANM    Nome               73.08  25    P        P        14 11 12.8 +0.6
ANM                                    pmax     pmax
       comp=Z,19nm,1.8s
ANM    Nome               73.08  25    P        P        14 11 12.8 +0.6
ANM                                    IAmb     IAmb     14 13 11.3
       comp=Z,19nm,1.8s
TULEG  Thule              74.07 354    P        P        14 11 16.4 -1.4
TULEG                                  IAmb     IAmb     14 11 18.0
       comp=Z,13nm,0.7s
ICESG  Greenland Ices     74.66 342  i P        P        14 11 22.2 +0.4
ICESG                                  IAmb     IAmb     14 11 24.3
       comp=Z,16nm,0.8s
COLD   Coldfoot           76.50  19    P        P        14 11 31.1 -0.9
COLD                                   IAmb     IAmb     14 11 34.3
       comp=Z,11nm,1.0s
TOA0   Torodi Ar. Sit     77.21 278    P        P        14 11 36.1 -0.8
TOA0                                   IAmb     IAmb     14 11 41.6
       comp=Z,3.5nm,0.7s
TORD   Torodi Ar. Bea     77.21 278    P        P        14 11 36.5 -0.4
       comp=Z,3.1nm,0.7s,baz=57,slow=4.0,SNR=11
TORD   Torodi Ar. Bea     77.21 278    P        P        14 11 36.1 -0.8
BMAR   Burnt Mountain     77.89  17    P        P        14 11 38.4 -1.5
COLA   College            78.83  20⇑eP          P        14 11 45.1 +0.2
COLA                                   pmax     pmax
       comp=Z,12nm,1.1s
IL31                      79.19  20    P        P        14 11 45.3 -1.6
ILAR   Eielson Array      79.19  20    P        P        14 11 46.4 -0.6
       comp=Z,3.0nm,0.8s,baz=298,slow=4.5,SNR=38
ILAR                                   PP       PP       14 14 43.4 -2.4
       comp=Z,0.6nm,0.8s,baz=318,slow=8.2,SNR=5.3
SKT    Skwentna           79.63  23    P        P        14 11 48.5 -1.0
SKT                                    IAmb     IAmb     14 11 50.6
       comp=Z,22nm,1.2s
INK    Inuvik             79.77  13    P        P        14 11 49.6 -0.4
       comp=Z,5.7nm,0.8s,baz=340,slow=6.6,SNR=26
INK    Inuvik             79.77  13    P        P        14 11 50.3 +0.3
INK                                    pmax     pmax
       comp=Z,6.0nm,0.8s
INK    Inuvik             79.77  13    P        P        14 11 50.3 +0.3
INK                                    IAmb     IAmb     14 11 50.8
       comp=Z,6.4nm,0.8s
BOSA   Boshof             79.77 230    P        P        14 11 51.8 +0.9
       comp=Z,3.4nm,0.8s,baz=85,slow=8.1,SNR=3.7
BOSA   Boshof             79.77 230    P        P        14 11 50.9 +0.1
BOSA                                   pmax     pmax
       comp=Z,39nm,1.7s
BOSA   Boshof             79.77 230    P        P        14 11 50.9 +0.1
BOSA                                   IAmb     IAmb     14 14 11.8
       comp=Z,39nm,1.7s
RIDG   Independent Ri     80.55  20    P        P        14 11 54.1 -0.4
RIDG                                   IAmb     IAmb     14 11 55.2
       comp=Z,14nm,1.1s
EPYK   Eagle Plains       80.67  15    P        P        14 11 54.7 -0.3
EPYK                                   IAmb     IAmb     14 11 55.9
       comp=Z,7.9nm,0.7s
DOT    Dot Lake           80.86  20    P        P        14 11 54.9 -1.2
DOT                                    IAmb     IAmb     14 11 57.0
       comp=Z,6.3nm,0.9s
STKA   Stephens Creek     81.11 133    P        P        14 11 57.4 -0.4
       comp=Z,1.2nm,0.5s,baz=334,slow=4.1,SNR=6.1
STKA   Stephens Creek     81.11 133    P        P        14 11 57.1 -0.7
STKA                                   pmax     pmax
       comp=Z,4.0nm,1.6s
STKA   Stephens Creek     81.11 133    P        P        14 11 57.1 -0.7
BCAR   Beaver Creek A     81.97  19    P        P        14 12 02.9 +0.8
KDAK   Kodiak Island      82.07  27⇑eP          P        14 12 02.8 +0.3
KDAK                                   pmax     pmax
       comp=Z,78nm,1.3s
MCARA  McCarthy VSAT      82.89  21    P        P        14 12 08.2 +1.4
HYT    Haines Junctio     84.98  19    P        P        14 12 17.5 -0.1
HYT                                    IAmb     IAmb     14 12 19.9
       comp=Z,7.1nm,0.9s
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YKA	Yellowknife Ar	88.31	9	P	P	14 12 33.1	-0.5
	comp=Z,4.6nm,0.7s,baz=347,slow=4.6,SNR=68						
YKA	Yellowknife Ar	88.31	9	*i* P	P	14 12 33.0	-0.7
YKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DLBC	Dease Lake	89.05	17	P	P	14 12 38.0	+0.6
	comp=Z,1.7nm,0.8s,baz=226,slow=3.3,SNR=4.1						
DLBC				LR	LR	14 59 50.6	
	comp=Z,65nm,18.4s,baz=84,slow=40						
CPUP	Villa Florida	145.69	264	PKPbc	PKPdf	14 19 21.4	+0.1
	comp=Z,2.6nm,0.8s,baz=135,slow=2.7,SNR=3.2						

IDC ***31*** *14:00:38.2±2.2, 56°.33N×169°.20W, h0^{km}, mb3.8/5, mb1 4.0/8, mb1mx3.6/45, mbtmp3.9/8, ML3.2/3, Error ellipse: s-maj=60.0km s-min=17.9km az=167.0*

NEIC ***31*** *14:00:38.8±2.8, 56°.57N±0°.07×169°.2W±0°.1, h10^{km}±2^{km}, mb3.9/2, ML3.5/11(AEIC), Error ellipse: s-maj=14.3km s-min=6.7km az=44.0*

AEIC ***31*** *14:00:38.5±2.9, 56°.51N±0°.06×169°.6W±0°.2, h36^{km}±9^{km}, Error ellipse: s-maj=15.8km s-min=4.9km az=64.0*

ISC 31 14:00:39.3±0.7**, 56°.56N**±0°.07×**169°.18W**±0°.07**, h10**^{km}**, n29, σ1^{s}41**/32**, mb3.8**/3**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.86	317		Pg	14 00 54.6	-1.2
SPIA					Sg	14 01 05.6	-1.3
AKGG	Akutan Green G	2.98	141		Pn	14 01 27.9	+1.4
MSW	Makushin Switc	2.98	152		Pn	14 01 25.9	-0.7
MSW					Sn	14 02 01.9	-0.4
AKRB	Akutan Reef Bi	3.01	143		Pn	14 01 26.2	-0.7
MNAT	Makushin Natee	3.04	151		Pn	14 01 26.6	-0.7
MGOD	Makushin Gods	3.07	154		Pn	14 01 27.7	-0.1
AKUT	Akutan	3.11	140	Pn	Pn	14 01 28.8	+0.5
UNV	Unalaska Valle	3.12	149		Pn	14 01 27.1	-1.3
UNV					Sn	14 02 04.3	-1.3
NIKH	Nikolski High	3.60	177		Pn	14 01 35.2	+0.2
AMKA	Amchitka	8.54	237	Pn	Pn	14 02 45.9	+3.0
KDAK	Kodiak Island	9.10	75	Pn	Pn	14 02 53.5	+3.0
	1.0nm,0.3s,baz=283,slow=11,SNR=7.0						
PMR	Palmer	11.46	56	Pn	Pn	14 03 24.6	+1.8
BPAW	Bear Paw Mtn.	11.72	42	Pn	Pn	14 03 26.4	0.0
KLU	Klutina	12.92	58	Pn	Pn	14 03 42.0	-0.8
ILAR	Eielson Array	13.61	44	Pn	Pn	14 03 53.8	+1.7
	0.1nm,0.3s,baz=232,slow=10,SNR=4.3						
MCARA	McCarthy VSAT	14.27	59	Pn	Pn	14 04 01.8	+0.6
ISLE	Juniper Island	14.52	63	Pn	Pn	14 04 05.2	+0.6
BARN	Barnard Glacie	14.89	61	Pn	Pn	14 04 07.5	-2.3
CTGM	Chitina Glacie	15.04	61	Pn	Pn	14 04 10.0	-1.8
CTGM				IAmb	IAmb	14 04 14.2	
	comp=Z,6.9nm,0.9s						
BCAR	Beaver Creek A	15.15	53	Pn	Pn	14 04 13.4	+0.3
BMAR	Burnt Mountain	15.74	36	Pn	Pn	14 04 21.7	+1.0
PETK	Petropavlovsk-	19.28	274	P	Pn	14 05 06.0	+1.2
	comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=9.7						
PETK	Petropavlovsk-	19.28	274	P	P	14 05 01.8	-2.1
INK	Inuvik	19.90	40	P	Pn	14 05 12.2	+0.1
	comp=Z,3.4nm,0.6s,baz=228,slow=8.3,SNR=14						
INK	Inuvik	19.90	40	P	P	14 05 08.8	-1.7
INK				IAmb	IAmb	14 05 14.4	
	comp=Z,5.9nm,1.1s						
SEY	Seymchan	20.14	304	P	P	14 05 13.8	+0.6
	comp=Z,1.7nm,0.7s,baz=105,slow=11,SNR=6.6						
YKA	Yellowknife Ar	27.56	55	P	P	14 06 26.7	+0.8
	comp=Z,1.9nm,0.9s,baz=282,slow=8.0,SNR=10						
AKASG	Malin Array Be	72.03	348	P	P	14 12 03.8	+0.9
	comp=Z,1.2nm,0.6s,baz=14,slow=5.3,SNR=4.1						
CMAR	Chiang Mai Arr	75.83	282	P	P	14 12 26.8	+1.2
	comp=Z,0.3nm,0.3s,baz=10,slow=5.5,SNR=2.3						

NEIC ***31*** *14:20:11.9±1.8, 52°.7N±0°.1×174°.52W±0°.09, h163^{km}±8^{km}, mb4.6/140, ML4.1(AEIC), Error ellipse: s-maj=19.7km s-min=7.6km az=170.0*

MOS ***31*** *14:20:11.6±1.1, 52°.62N×174°.50W, h179^{km}, mb4.3/25, Error ellipse: s-maj=9.3km s-min=6.9km az=85.9*

IDC ***31*** *14:20:12.8±0.8, 52°.66N×174°.58W, h172^{km}±7^{km}, mb3.8/32, mb1 4.0/33, mb1mx3.9/55, mbtmp4.3/33, Error ellipse: s-maj=13.4km s-min=7.3km az=174.0*

AEIC ***31*** *14:20:12±4.9, 52°.2N±0°.1×174°.34W±0°.09, h165^{km}±5^{km}, Error ellipse: s-maj=21.7km s-min=7.6km az=171.0*

ISC 31 14:20:11.0±0.4**, 52°.64N**±0°.07×**174°.52W**±0°.04**, h158**^{km}**, n366, σ1^{s}27**/350**, mb4.5**/100**, 11C-18D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOWE	Korovin West	0.32	149		Pn	14 20 34.4	+1.8
KOFP	Korovin Flat P	0.45	145		Pn	14 20 34.5	+1.4
ATKA	Atka Island	0.48	156	Pn	Pn	14 20 33.9	+0.7
ATKA	Atka Island	0.48	156		Sn	14 20 51.4	+1.4
ADK	Adak	1.53	241	P	Pn	14 20 42.6	+1.2
ADK						14 21 05.4	
ADK	Adak	1.53	241	Pn	Pn	14 20 42.6	+1.2
NIKH	Nikolski High	3.45	82	Pn	Pn	14 21 05.0	+0.6
NIKH	Nikolski High	3.45	82		Sn	14 21 45.2	-0.6
CERAA	Semis' Rag'd T	3.63	261		Pn	14 21 08.8	+2.1
CESW	Semis' Southwe	3.71	261		Pn	14 21 09.6	+2.0
OKRE	Okmok R'deer P	3.93	75		Pn	14 21 12.1	+1.6
AMKA	Amchitka	4.02	254	Pn	Pn	14 21 12.7	+1.1
OKFG	Magazine Ridge	4.06	76		Pn	14 21 13.2	+1.0
MAPS	Pakushin South	4.70	73		Pn	14 21 21.8	+1.3
MGOD	Makushin Gods	4.74	73		Pn	14 21 22.5	+1.4
MSW	Makushin Switc	4.81	72		Pn	14 21 24.1	+2.0
MSW					Sn	14 22 21.2	+3.7
MNAT	Makushin Natee	4.87	72		Pn	14 21 24.3	+1.6
UNV	Unalaska Valle	4.96	73		Pn	14 21 25.3	+1.4
AKRB	Akutan Reef Bi	5.27	70		Pn	14 21 29.7	+1.6
AKRB					Sn	14 22 31.0	+2.7
AKBBA	Akutan Broad B	5.34	71		Pn	14 21 29.5	+0.5
WESP	Westdahl Peak	6.13	68		Pn	14 21 41.0	+1.6
ANM	Nome	12.85	18	P	P	14 23 10.5	-2.0
ANM	Nome	12.85	18	Pn	P	14 23 10.5	-2.0
OHAK	Old Harbor	13.02	61	P	P	14 23 13.4	-1.0
KDAK	Kodiak Island	13.51	59	P	Pn	14 23 13.6	-2.6
	4.5nm,0.3s,baz=230,slow=3.9,SNR=70						
KDAK				S	Sn	14 25 35.6	-10
	0.2nm,0.3s,baz=288,slow=20,SNR=1.9						
KDAK	Kodiak Island	13.51	59	P	Pn	14 23 16.0	-0.1
KDAK	Kodiak Island	13.51	59	Pn	Pn	14 23 16.0	-0.1
TTA	Tatalina	14.21	36	P	P	14 23 27.3	-0.3
TTA	Tatalina	14.21	36		P	14 23 27.3	-0.3
RSO	Redoubt South	14.28	48	P	P	14 23 29.2	+0.7
CNPM	China Poot	14.66	53	P	P	14 23 32.7	+0.1
BRLK	Bradley Lake	14.90	52		Pn	14 23 34.1	+0.5
SKT	Skwentna	15.46	44	P	P	14 23 44.0	+2.5
SUA	Susitna One	15.58	46	P	P	14 23 43.2	+0.3
SUA				IAmb	IAmb	14 23 46.0	
	comp=Z,27nm,0.9s						
PPLA	Purkeypile	15.63	40	P	P	14 23 45.8	+2.3
O22K	Cooper Landing	15.68	50	P	P	14 23 43.5	-0.3
	baz=249,SNR=12						
O22K	Cooper Landing	15.68	50	P	P	14 23 43.5	-0.3
SEW	Seward	15.69	52	Pn	Pn	14 23 42.3	-0.9
RC01	Rabbit Creek A	15.88	48	P	P	14 23 46.2	+0.1
	baz=247						
CUT	Chulitna	16.18	43	P	P	14 23 50.6	+1.2
	baz=242,SNR=6.6						
KTH	Kantishna Hill	16.46	39	P	Pn	14 23 55.2	+2.5
KNK	Knik Glacier	16.58	48	P	P	14 23 53.8	0.0
KNK				IAmb	IAmb	14 23 56.6	
	comp=Z,16nm,0.6s						
TRF	Thorofare Moun	16.66	40	P	Pn	14 23 56.4	+1.2
TRF				IAmb	IAmb	14 24 00.8	
	comp=Z,38nm,1.0s						
BPAW	Bear Paw Mtn.	16.73	38		Pn	14 23 58.3	+2.5
BPAW				IAmb	IAmb	14 24 02.6	
	comp=Z,49nm,1.1s						
PEA0B	Petropavlovsk-	16.74	283	⇑*e*P	Pn	14 23 58.3	+2.2
PETK	Petropavlovsk-	16.74	283	P	Pn	14 23 57.2	+1.2
	comp=Z,0.5nm,0.3s,baz=88,slow=12,SNR=20						
SML	Sawmill	16.77	47	P	Pn	14 23 57.2	+0.8
SML				IAmb	IAmb	14 24 07.8	
	comp=Z,13nm,0.6s						
IMAR	Indian Mountai	16.94	30	P	P	14 23 57.1	-0.6
RND	Reindeer	17.21	41	P	Pn	14 24 01.8	+0.2
RND				pmax	pmax		
	comp=Z,63nm,0.6s						
RND	Reindeer	17.21	41	P	Pn	14 24 01.8	+0.2
SCM	Sheep Creek Mo	17.23	47	P	P	14 24 00.5	-0.5
SCM				pmax	pmax		
	comp=Z,24nm,0.9s						
SCM	Sheep Creek Mo	17.23	47	P	P	14 24 00.5	-0.5
SCM				IAmb	IAmb	14 24 04.1	
	comp=Z,24nm,0.9s						
FID	Port Fidalgo	17.29	51	P	P	14 24 00.2	-1.4
MCK	McKinley	17.33	40	P	Pn	14 24 03.3	+0.3
	baz=241,SNR=26						
MLY	Manley	17.33	35	P	Pn	14 24 04.6	+1.5
	baz=234,SNR=32						
DHY	Denali Highway	17.67	43	P	Pn	14 24 07.0	-0.2
NEA2	Nenana	17.70	38	P	Pn	14 24 07.3	-0.1
	baz=238,SNR=18						
KLU	Klutina	17.76	49	P	Pn	14 24 08.0	-0.2
KLU				IAmb	IAmb	14 24 09.8	
	comp=Z,19nm,1.0s						
M24K	Tolsona, Glenn	17.83	47	P	Pn	14 24 08.4	-0.7
	baz=249,SNR=7.4						
M24K	Tolsona, Glenn	17.83	47	P	Pn	14 24 08.4	-0.7
M24K				IAmb	IAmb	14 24 12.6	
	comp=Z,35nm,0.8s						
BILL	Bilibino	17.99	336	*ce*P	Pn	14 24 11.9	+1.1
BILL				*e*S	S	14 27 27.7	+0.6
BILL				pmax	pmax		
	comp=Z,20nm,1.3s						
WRH	Wood River Hil	18.00	39	P	P	14 24 09.6	+0.3
WRH				IAmb	IAmb	14 24 13.6	
	comp=Z,26nm,1.0s						
MDM	Murphy Dome	18.19	37	P	P	14 24 12.2	+0.7
MDM				IAmb	IAmb	14 24 16.8	
	comp=Z,26nm,0.8s						
CCB	Clear Creek Bu	18.20	38	P	P	14 24 11.5	+0.1
CCB				IAmb	IAmb	14 24 16.9	
	comp=Z,26nm,0.7s						
TCOL	CIGO, UAF Yank	18.29	38	P	Pn	14 24 14.1	-0.2
	baz=239						
COLA	College	18.29	38	*c i*P	Pn	14 24 14.0	-0.3
COLA				pmax	pmax		
	comp=Z,25nm,0.6s						
N25K	Chitina, Valde	18.40	49	P	P	14 24 12.8	-0.9
	baz=253,SNR=7.7						
N25K	Chitina, Valde	18.40	49	P	P	14 24 12.8	-0.9
N25K				IAmb	IAmb	14 24 18.0	
	comp=Z,17nm,0.6s						
HDA	Harding Lake	18.41	40	P	Pn	14 24 14.9	-0.9
	baz=242						
HDA	Harding Lake	18.41	40	P	P	14 24 13.8	0.0
PAX	Paxson	18.44	45	P	P	14 24 15.1	+0.9
PAX				pmax	pmax		
	comp=Z,25nm,0.3s						
PAX	Paxson	18.44	45	P	P	14 24 15.1	+0.9
POKR	Poker Plat Res	18.57	37	P	P	14 24 15.4	-0.1
	baz=239,SNR=17						
POKR	Poker Plat Res	18.57	37	P	P	14 24 15.4	-0.1
POKR				IAmb	IAmb	14 24 18.8	
	comp=Z,22nm,0.6s						
ILAR	Eielson Array	18.60	39	P	P	14 24 14.6	-1.3
	comp=Z,1.0nm,0.3s,baz=242,slow=10,SNR=27						
ILAR				S	S	14 27 37.6	-1.7
	baz=238,slow=17,SNR=2.1						
ILAR				ScP	ScP	14 31 54.1	-3.7
	comp=Z,0.1nm,0.3s,baz=281,slow=3.7,SNR=8.8						
ILAR	Eielson Array	18.60	39	P	Pn	14 24 17.1	-1.0
ILAR	Eielson Array	18.60	39	P	Pn	14 24 17.1	-1.0
GLB	Gilahina Butte	18.72	50	P	P	14 24 16.9	-0.3
GLB				IAmb	IAmb	14 24 22.6	
	comp=Z,13nm,0.5s						
COLD	Coldfoot	18.82	30	P	Pn	14 24 20.7	+0.1
	baz=230,SNR=28						
COLD	Coldfoot	18.82	30	Pn	Pn	14 24 20.6	+0.1
COLD				IAmb	IAmb	14 24 24.9	
	comp=Z,23nm,0.9s						
VRDI	Verde Repeater	18.84	51	P	P	14 24 18.0	-0.7
VRDI				IAmb	IAmb	14 24 25.1	
	comp=Z,30nm,1.4s						
RIDG	Independent Ri	18.98	43	P	P	14 24 20.8	+0.7
TGL	Tana Glacier	19.04	52	P	P	14 24 19.2	-1.5
MENT	Mentasta	19.18	45	P	P	14 24 22.9	+0.7
MENT				IAmb	IAmb	14 24 41.4	
	comp=Z,23nm,1.0s						
DOT	Dot Lake	19.27	43	P	P	14 24 23.9	+0.8
SCRK	Sand Creek	19.42	42	P	P	14 24 25.5	+0.6
	baz=247,SNR=94						
YAH	Yahtse	19.50	54	P	P	14 24 26.5	+0.7
YAH				IAmb	IAmb	14 24 39.8	
	comp=Z,16nm,0.5s						
BCAR	Beaver Creek A	20.06	46	P	P	14 24 31.8	+0.1
FYU	Fort Yukon	20.07	35	P	P	14 24 33.2	+1.6
FYU				IAmb	IAmb	14 24 35.8	
	comp=Z,37nm,1.4s						
SEY	Seymchan	20.18	314	P	P	14 24 34.6	+1.7
	comp=Z,1.4nm,0.3s,baz=107,slow=12,SNR=18						
SEY				ScP	ScP	14 31 58.8	-2.6
	comp=Z,0.6nm,0.5s,baz=81,slow=19,SNR=6.6						
SEY	Seymchan	20.18	314	⇑*i*P	Pn	14 24 35.3	-1.3
MA2	Magadan	20.37	304	P	P	14 24 36.6	+1.7
	comp=Z,4.6nm,0.7s,baz=63,slow=4.5,SNR=3.3						
MA2	Magadan	20.37	304	⇓*e*P	Pn	14 24 38.1	-0.8
MA2				pmax	pmax		
	comp=Z,9.0nm,1.3s						
A21K	Barrow	20.38	17	P	P	14 24 36.0	+1.2
	baz=212						
A21K	Barrow	20.38	17	P	P	14 24 35.5	+0.7
A21K				IAmb	IAmb	14 24 37.1	
	comp=Z,16nm,0.8s						
BMAR	Burnt Mountain	20.73	33	P	P	14 24 36.5	-2.2
EPYK	Eagle Plains	23.12	39	P	P	14 25 02.4	-0.3
	baz=251						
EPYK	Eagle Plains	23.12	39	P	P	14 25 02.8	+0.1
EPYK				IAmb	IAmb	14 25 04.2	
	comp=Z,26nm,1.1s						
INK	Inuvik	24.90	35	P	P	14 25 19.0	+0.3
	comp=Z,5.0nm,0.8s,baz=233,slow=7.1,SNR=28						
INK				ScP	ScP	14 32 11.0	-2.5
	comp=Z,1.0nm,1.0s,baz=247,slow=0.3,SNR=3.6						
INK	Inuvik	24.90	35	P	P	14 25 19.2	+0.5
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	24.90	35	P	P	14 25 19.2	+0.5
DLBC	Dease Lake	25.45	59	P	P	14 25 25.0	+1.1
	comp=Z,1.4nm,0.5s,baz=233,slow=8.3,SNR=7.4						
DLBC				pP	pwP	14 25 59.4	0.0
	comp=Z,1.6nm,0.4s,baz=278,slow=17,SNR=4.4						
BBB	Bella Bella	27.93	72	P	P	14 25 47.1	+1.0
	comp=Z,30nm,1.2s,baz=330,slow=5.1,SNR=5.6						
ASAJ	Asahikawa	29.35	271	P	P	14 25 59.5	+0.8
	comp=Z,6.6nm,0.8s,baz=80,slow=18,SNR=1.5						
TIXI	Tiksi	30.88	329	⇓*i*P	P	14 26 13.3	+1.4
TIXI				pmax	pmax		
	comp=Z,15nm,1.7s						
YKA	Yellowknife Ar	32.43	49	P	P	14 26 25.2	-0.3
	comp=Z,0.9nm,0.4s,baz=285,slow=7.0,SNR=21						
YKA				ScP	ScP	14 32 34.6	-2.8
	comp=Z,0.5nm,0.6s,baz=286,slow=2.8,SNR=5.9						
D03D	Eldon	32.80	78	P	P	14 26 29.0	0.0
	baz=298,SNR=5.2						
B05A	Bryant	33.05	76	P	P	14 26 32.7	+1.6
	baz=297,SNR=9.1						
KLR	Kul'dur	33.38	286	⇓*e*P	P	14 26 34.5	+0.5
KLR				pmax	pmax		
	comp=Z,9.0nm,1.9s						
E04D	Cinebar	33.59	79	P	P	14 26 37.8	+2.0
	baz=299						
G03D	McMinnville, O	33.86	82	P	P	14 26 39.7	+1.5
	baz=301						
LON	Longmire	33.95	78	P	P	14 26 40.3	+1.3
LON				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LON	Longmire	33.95	78	P	P	14 26 40.3	+1.3
LTY	Liberty	34.38	77	P	P	14 26 43.7	+1.1
H04D	Lebanon	34.54	82	P	P	14 26 46.0	+2.0
	baz=302						
I03D	Drain, OR	34.62	84	P	P	14 26 46.9	+2.2
	baz=302						
H04A	Detroit Lake	34.79	82	P	P	14 26 47.2	+1.0
H04A				IAmb	IAmb	14 26 48.7	
	comp=Z,15nm,0.6s						
G05D	Wamic, OR	35.01	80	P	P	14 26 49.6	+1.4
	baz=301						
I04A	Tendick Farm,	35.13	83	P	P	14 26 50.8	+1.6
	baz=302,SNR=6.8						
I05D	Terrebonne, OR	35.48	82	P	P	14 26 53.8	+1.7
	baz=302						
HAWA	Hanford	35.48	78	P	P	14 26 53.1	+1.0
HAWA				IAmb	IAmb	14 26 55.2	
	comp=Z,14nm,0.7s						
J04D	Umpqua Nationa	35.62	84	P	P	14 26 55.3	+1.8
	baz=303						
NEW	Newport	35.97	73	P	P	14 26 57.1	+0.8
	comp=Z,15nm,0.6s,baz=302,slow=7.7,SNR=40						
NEW	Newport	35.97	73	P	P	14 26 57.1	+0.8
	baz=298,SNR=18						
NEW	Newport	35.97	73	P	P	14 26 57.0	+0.8
NEW				IAmb	IAmb	14 26 57.9	
	comp=Z,15nm,0.8s						
L04D	Klamath Falls	36.08	85	P	P	14 26 59.0	+1.6
	baz=304						
YBH	Yreka Blue Hor	36.12	86	P	P	14 26 59.8	+2.1
	comp=Z,5.9nm,0.8s,baz=261,slow=5.5,SNR=7.5						
J05D	Fort Rock, OR	36.13	83	P	P	14 26 60.0	+2.2
	baz=303,SNR=11						
G08A	Pilot Rock	36.40	79	P	P	14 27 00.5	+0.5
N02D	Trinity Center	36.57	87	P	P	14 27 03.9	+2.5
	baz=306						
MAJO	Matsushiro	36.58	263	⇓*e*P	P	14 27 01.8	+0.3
MAJO				pmax	pmax		
	comp=Z,22nm,1.2s						
MAT	Matsushiro	36.58	263	P	P	14 27 01.6	+0.1
MJAR	Matsushiro Arr	36.58	263	P	P	14 27 01.8	+0.2
	comp=Z,4.6nm,0.6s,baz=29,slow=6.1,SNR=14						
M04C	Macdoel	36.62	86	P	P	14 27 04.1	+2.1
	baz=305,SNR=8.4						
K05A	Summer Lake	36.65	84	P	P	14 27 04.5	+2.2
K05A				IAmb	IAmb	14 27 05.3	
	comp=Z,13nm,0.9s						
I07A	Izee	36.73	81	P	P	14 27 04.1	+1.3
I07A				IAmb	IAmb	14 27 05.1	
	comp=Z,7.6nm,0.6s						
O02D	Mt. Diablo Mer	36.99	89	P	P	14 27 07.2	+2.1
	baz=307						
F10A	Beach Ranch, E	37.07	77	P	P	14 27 06.3	+0.7
H11S1	WAKE ISLAND Hy	37.09	210	T	T	15 06 37.5	
	baz=20,slow=76,SNR=8.9						
H11S2	WAKE ISLAND Hy	37.11	210	T	T	15 06 37.9	
	baz=20,slow=76,SNR=32						
H11S3	WAKE ISLAND Hy	37.11	210	T	T	15 06 39.2	
	baz=20,slow=76,SNR=18						
WALA	Waterton Lakes	37.45	70	P	P	14 27 08.8	0.0
MOD	Modoc Plateau	37.48	84	P	P	14 27 11.1	+1.8
MOD				IAmb	IAmb	14 27 11.8	
	comp=Z,10nm,0.7s						
RES	Resolute Bay	37.48	25	P	P	14 27 09.0	+0.3
	comp=Z,0.7nm,0.7s,baz=280,slow=12,SNR=4.3						
RES	Resolute Bay	37.48	25	P	P	14 27 09.0	+0.3
O03E	Paynes Creek	37.52	88	P	P	14 27 11.0	+1.4
	baz=306,SNR=8.1						
BMO	Blue Mountains	37.62	78	P	P	14 27 10.8	+0.4
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BMO	Blue Mountains	37.62	78	P	P	14 27 10.8	+0.4
JTMT	Jette	37.89	73	P	P	14 27 12.9	+0.3
JTMT				IAmb	IAmb	14 27 14.1	
	comp=Z,14nm,1.2s						
ORV	Oroville	38.16	88	P	P	14 27 15.6	+0.8
ORV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ORV	Oroville	38.16	88	P	P	14 27 15.6	+0.8
WVOR	Wild Horse Val	38.18	83	P	P	14 27 16.5	+1.4
WVOR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WVOR	Wild Horse Val	38.18	83	P	P	14 27 16.5	+1.4
WVOR				IAmb	IAmb	14 27 17.3	
	comp=Z,9.2nm,0.8s						
MSO	Missoula	38.56	74	P	P	14 27 18.5	+0.3
	baz=301,SNR=13						
MSO	Missoula	38.56	74	P	P	14 27 18.4	+0.2
MSO				IAmb	IAmb	14 27 19.0	
	comp=Z,9.6nm,0.6s						
BEKR	Beckworth	38.66	87	P	P	14 27 20.4	+1.2
BEKR				IAmb	IAmb	14 27 21.4	
	comp=Z,6.6nm,0.7s						
PAHR	Pah Rah Range	39.35	87	IAmb	IAmb	14 27 27.2	
	comp=Z,15nm,0.8s						
PNTR	Pine Nut	39.60	87	P	P	14 27 29.1	+2.0
WAKR	Walker	40.07	88	IAmb	IAmb	14 27 33.5	
	comp=Z,15nm,0.7s						
HLID	Hailey	40.07	78	P	P	14 27 31.7	+0.9
	baz=304,SNR=7.2						
EGMT	Eagleton	40.35	70	P	P	14 27 32.9	0.0
	baz=301						
RYN	Ryan	40.55	87	P	P	14 27 36.3	+1.5
RYN				IAmb	IAmb	14 27 37.0	
	comp=Z,16nm,1.1s						
BOZ	Bozeman (W)	40.57	74	P	P	14 27 35.1	+0.3
	baz=303,SNR=18						
BOZ	Bozeman (W)	40.57	74	IAmb	IAmb	14 27 36.0	
	comp=Z,9.2nm,0.8s						
NVAR	Mina Array Bea	40.81	87	P	P	14 27 38.5	+1.5
	comp=Z,7.3nm,0.7s,baz=299,slow=7.7,SNR=34						
NVAR				PcP	PcP	14 29 35.9	+1.1
	comp=Z,0.2nm,0.3s,baz=343,slow=2.8,SNR=1.9						
NVAR				ScP	ScP	14 33 07.9	-1.3
	comp=Z,0.4nm,0.5s,baz=290,slow=3.7,SNR=2.8						
NVAR	Mina Array Bea	40.81	87	P	P	14 27 38.1	+1.2
VOG	Valley Oaks Go	41.51	91	P	P	14 27 43.8	+1.4
	baz=310						
YNE	Yellowstone No	41.85	74	P	P	14 27 45.6	+0.2
H17A	Grant Village	41.87	75	P	P	14 27 47.5	+2.0
	baz=304,SNR=8.0						
VES	Vestal, Richgr	42.00	91	P	P	14 27 47.6	+1.2
	baz=311,SNR=7.6						
RLMT	Red Lodge	42.22	73	P	P	14 27 49.2	+0.8
	baz=304,SNR=11						
CWC	Cottonwood Cre	42.22	89	P	P	14 27 50.0	+1.6
	baz=310						
KSRS	Korea Array	42.24	273	P	P	14 27 48.6	+0.3
	comp=Z,0.7nm,0.5s,baz=53,slow=7.5,SNR=5.1						
GRAC	Grapevine Rang	42.29	88	P	P	14 27 50.6	+1.8
	baz=310						
ISA	Isabella, Lake	42.49	91	P	P	14 27 51.1	+0.6
	baz=311,SNR=7.7						
R11A	Troy Canyon, C	42.51	85	P	P	14 27 51.7	+0.9
	baz=309,SNR=22						
R11A	Troy Canyon, C	42.51	85	IAmb	IAmb	14 27 52.5	
	comp=Z,9.3nm,0.6s						
MPMC	Manual Prospec	42.83	89	P	P	14 27 54.7	+1.3
	baz=311,SNR=6.3						
FURC	Furnace Creek,	42.95	88	P	P	14 27 55.6	+1.6
	baz=310,SNR=6.2						
TPNV	Topopah Spring	43.01	87	P	P	14 27 56.2	+1.5
	baz=310,SNR=20						
DUG	Dugway, Tooele	43.03	81	P	P	14 27 55.4	+0.5
DUG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
DUG	Dugway, Tooele	43.03	81	P	P	14 27 56.0	+1.1
	baz=308,SNR=6.2						
DUG	Dugway, Tooele	43.03	81	P	P	14 27 55.4	+0.5
LAO	LASA Array	43.09	69	P	P	14 27 55.9	+0.7
	baz=303						
LRMC	Laurel Mtn Rad	43.10	90	P	P	14 27 56.4	+1.0
	baz=311						
FCC	Fort Churchill	43.16	49	P	P	14 27 53.7	-1.7
FCC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FCC	Fort Churchill	43.16	49	P	P	14 27 53.7	-1.7
EDW2	Edwards Air Fo	43.30	91	P	P	14 27 57.7	+0.7
	baz=312						
JNU	Nakatsue	43.33	265	P	P	14 27 57.6	+0.4
	comp=Z,9.5nm,0.7s,baz=63,slow=2.3,SNR=1.7						
BW06	Boulder Array	43.42	76	P	P	14 27 58.5	+0.4
	baz=306,SNR=18						
BW06	Boulder Array	43.42	76	IAmb	IAmb	14 27 59.2	
	comp=Z,9.1nm,0.7s						
PD31	Pinedale Array	43.42	76	IAmb	IAmb	14 27 58.9	
	comp=Z,9.0nm,0.5s						
PDAR	Pinedale Array	43.42	76	P	P	14 27 58.5	+0.4
	comp=Z,7.4nm,0.5s,baz=321,slow=2.8,SNR=140						
PDAR				ScP	ScP	14 33 18.8	-0.9
	comp=Z,0.3nm,0.5s,baz=224,slow=2.5,SNR=3.2						
PDAR	Pinedale Array	43.42	76	P	P	14 27 58.3	+0.2
PRN	Pahroc Range	43.44	86	P	P	14 27 59.6	+1.4
PRN				IAmb	IAmb	14 28 00.4	
	comp=Z,17nm,0.8s						
PSUT	Pine Spring	43.44	84	P	P	14 27 58.8	+0.5
SHOC	Shoshone, Teco	43.68	89	P	P	14 28 01.4	+1.5
	baz=311,SNR=5.7						
GSC	Goldstone, Bar	43.75	90	P	P	14 28 02.0	+1.4
	baz=311,SNR=13						
GSC	Goldstone, Bar	43.75	90	IAmb	IAmb	14 28 02.6	
	comp=Z,17nm,0.8s						
BFSC	Mount Baldy Ra	43.94	91	P	P	14 28 03.7	+1.5
	baz=312,SNR=7.3						
HEC	Hector,Ludlow	44.35	90	P	P	14 28 06.6	+1.2
	baz=312						

TMUT	Trail Mountain	44.56	81	P	P	14 28 08.2	+0.9
NRIK	Noril'sk	44.65	330	P	P	14 28 08.2	+1.0
	comp=Z,3.8nm,0.8s,baz=71,slow=12,SNR=4.1						
NRIK	Noril'sk	44.65	330	⇑eP	P	14 28 08.4	+1.2
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MURC	Murrieta	44.66	92	P	P	14 28 08.5	+0.8
	baz=313						
GMRC	Granite Mounta	44.79	89	P	P	14 28 10.0	+1.1
	baz=312,SNR=9.3						
PFO	Pinyon Flats O	45.10	91	⇓iP	P	14 28 12.4	+1.0
PFO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PFO	Pinyon Flats O	45.10	91	P	P	14 28 12.1	+0.7
	baz=313						
PFO	Pinyon Flats O	45.10	91	P	P	14 28 11.9	+0.6
BELC	Belle Mtn. Jos	45.12	90	P	P	14 28 11.7	+0.2
	baz=312						
K22A	Casper	45.28	74	P	P	14 28 13.1	+0.4
	baz=307						
IRM	Iron Mountain	45.53	90	P	P	14 28 15.7	+1.0
	baz=312,SNR=9.4						
MONP2	Monument Peak	45.61	92	P	P	14 28 12.8	-2.7
	baz=313						
BC3	Big Chuckawall	45.68	90	P	P	14 28 16.6	+0.7
	baz=312						
U15A	North Rim	45.75	85	IAmb	IAmb	14 28 18.8	
	comp=Z,18nm,0.6s						
O20A	White River Ci	45.81	78	P	P	14 28 17.4	+0.5
	baz=308,SNR=13						
O20A	White River Ci	45.81	78	IAmb	IAmb	14 28 17.7	
	comp=Z,15nm,0.6s						
RSSD	Black Hills	45.84	71	P	P	14 28 15.9	-1.3
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.5s						
RSSD	Black Hills	45.84	71	P	P	14 28 16.7	-0.4
	baz=306						
RSSD	Black Hills	45.84	71	P	P	14 28 15.8	-1.3
PDMCI	Parker Dam,Lak	46.04	89	P	P	14 28 19.5	+1.0
	baz=312,SNR=6.2						
GLA	Glamis	46.48	90	P	P	14 28 23.1	+1.0
	baz=313,SNR=11						
GLA	Glamis	46.48	90	IAmb	IAmb	14 28 23.8	
	comp=Z,13nm,0.8s						
PV04	Paradox Valley	46.52	81	IAmb	IAmb	14 28 23.7	
	comp=Z,11nm,0.9s						
PV19	Morning Glory	46.53	81	IAmb	IAmb	14 28 23.6	
	comp=Z,7.9nm,0.6s						
PV17	East Wray Mesa	46.56	81	IAmb	IAmb	14 28 24.0	
	comp=Z,17nm,0.6s						
PV16	Nyswonger Mesa	46.57	81	P	P	14 28 21.8	-1.2
PV16				IAmb	IAmb	14 28 24.0	
	comp=Z,6.7nm,0.5s						
PV18	Skein Mesa, Pa	46.61	81	IAmb	IAmb	14 28 24.4	
	comp=Z,8.9nm,0.6s						
PV12	Saucer Basin,	46.63	81	IAmb	IAmb	14 28 25.1	
	comp=Z,17nm,1.3s						
PV03	Paradox Valley	46.65	81	IAmb	IAmb	14 28 24.6	
	comp=Z,8.8nm,0.6s						
N23A	Red Feather La	46.70	76	P	P	14 28 24.4	+0.4
	baz=308						
PV02	Paradox Valley	46.74	81	IAmb	IAmb	14 28 25.5	
	comp=Z,14nm,0.7s						
ULM	Lac du Bonnet	46.77	60	P	P	14 28 23.2	-0.9
	comp=Z,0.6nm,0.3s,baz=294,slow=7.2,SNR=1.8						
WUAZ	Wupatki	46.91	85	P	P	14 28 27.0	+1.4
	baz=311,SNR=14						
WUAZ	Wupatki	46.91	85	IAmb	IAmb	14 28 27.6	
	comp=Z,14nm,0.7s						
MVCO	Mesa Verde	47.53	81	P	P	14 28 30.4	0.0
	baz=310,SNR=5.5						
ISCO	Idaho Springs	47.59	77	P	P	14 28 32.0	+1.0
	baz=309						
X16A	Lo Mia Camp, P	47.61	86	IAmb	IAmb	14 28 33.3	
	comp=Z,7.3nm,0.7s						
ULN	Ulaanbaatar	48.05	298	⇓eP	P	14 28 34.7	+0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
W18A	Petrified Fore	48.17	84	P	P	14 28 36.4	+1.1
	baz=312,SNR=8.0						
S22A	4UR Ranch, Cre	48.19	80	P	P	14 28 36.4	+0.9
	baz=310						
SONM	Songino Array	48.42	298	P	P	14 28 37.0	0.0
	comp=Z,0.4nm,0.3s,baz=40,slow=11,SNR=3.8						
SONM				PcP	PcP	14 30 00.4	-0.4
	comp=Z,0.6nm,0.6s,baz=67,slow=3.2,SNR=2.8						
X18A	Snowflake	48.44	85	IAmb	IAmb	14 28 39.4	
	comp=Z,12nm,0.6s						
214A	Organ Pipe Nat	48.46	90	P	P	14 28 38.4	+1.0
	baz=314,SNR=8.2						
SDCO	Great Sand Dun	48.98	79	P	P	14 28 42.2	+0.6
	baz=310,SNR=6.1						
TUC	Tucson	49.45	88	P	P	14 28 45.6	+0.6
TUC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TUC	Tucson	49.45	88	P	P	14 28 46.0	+1.0
	baz=314						
TUC	Tucson	49.45	88	P	P	14 28 45.6	+0.6
TUC				IAmb	IAmb	14 28 46.9	
	comp=Z,10nm,0.8s						
HHC	Hu-ho-hao-te	49.86	288	eP	P	14 28 50.0	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,7.6s						
KSCO	Kaye Shedlock’	49.86	76	P	P	14 28 48.8	+0.7
	baz=310						
T25A	Trinidad	50.03	79	P	P	14 28 50.5	+1.1
	baz=311,SNR=5.3						
ANMO	Albuquerque	50.27	82	⇓iP	P	14 28 52.2	+0.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ANMO	Albuquerque	50.27	82	P	P	14 28 52.0	+0.7
	baz=312						
ANMO	Albuquerque	50.27	82	P	P	14 28 51.4	+0.1
BGNE	Belgrade	50.92	70	P	P	14 28 55.3	-0.5
	baz=310						
121A	Cookes Peak, D	51.12	85	P	P	14 28 58.6	+1.0
	baz=314						
121A	Cookes Peak, D	51.12	85	IAmb	IAmb	14 28 59.5	
	comp=Z,5.9nm,0.7s						
NJ2	Nanjing	51.39	274	eP	P	14 28 59.3	-0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CBKS	Cedar Bluff	51.69	74	P	P	14 29 01.8	+0.2
	baz=311						
MSTX	Muleshoe	53.16	80	P	P	14 29 12.6	+0.1
	baz=313,SNR=5.9						
MSTX	Muleshoe	53.16	80	IAmb	IAmb	14 29 14.3	
	comp=Z,11nm,1.0s						
MNTX	Cornudas Mount	53.16	84	P	P	14 29 13.5	+1.0
	baz=314,SNR=18						
MNTX	Cornudas Mount	53.16	84	IAmb	IAmb	14 29 14.3	
	comp=Z,10nm,0.8s						
AMTX	Amarillo	53.19	79	P	P	14 29 13.2	+0.4
	baz=313						
KSU1	Kansas State U	53.32	72	P	P	14 29 12.7	-0.8
	baz=312						
P38A	Dawn	54.73	69	IAmb	IAmb	14 29 23.3	
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	55.01	77	P	P	14 29 26.0	+0.1
	baz=313						
TX32	Lajitas Array	55.88	85	IAmb	IAmb	14 29 33.4	
	comp=Z,5.4nm,0.7s						
TXAR	Lajitas Array	55.88	85	P	P	14 29 32.6	+0.4
	comp=Z,5.9nm,0.7s,baz=298,slow=4.8,SNR=40						
TXAR				pP	pP	14 30 11.6	+3.4
	comp=Z,0.6nm,0.5s,baz=297,slow=4.1,SNR=1.6						
TXAR				ScP	ScP	14 34 11.4	-1.4
	comp=Z,0.4nm,0.5s,baz=222,slow=1.2,SNR=4.5						
TXAR	Lajitas Array	55.88	85	P	P	14 29 32.3	+0.1
TUL1	Leonard	55.97	74	P	P	14 29 32.1	-0.5
	baz=313						
ABTX	Abilene, Hawle	55.97	79	P	P	14 29 33.2	+0.4
	baz=314						
U38A	Gravette	56.42	72	IAmb	IAmb	14 29 35.2	
	comp=Z,6.0nm,0.7s						
HHAR	Hobbs	56.79	72	IAmb	IAmb	14 29 37.6	
	comp=Z,8.4nm,0.5s						
DGZ	Jazzator, Alta	56.80	310	⇓eP	P	14 29 39.4	+0.9
DGZ				pmax	pmax		
	comp=Z,4.0nm,2.3s						
LSQQ	Lebel-sur-Quev	57.00	51	P	P	14 29 38.9	-0.9
	baz=314						
CCM	Cathedral Cave	57.11	69	P	P	14 29 38.8	-1.9
CCM				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CCM	Cathedral Cave	57.11	69	P	P	14 29 39.1	-1.6
	baz=313						
CCM	Cathedral Cave	57.11	69	P	P	14 29 38.8	-1.9
MGMO	Mountain Grove	57.15	70	IAmb	IAmb	14 29 40.0	
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	57.26	352	P	P	14 29 41.6	+0.3
	comp=Z,4.3nm,0.9s,baz=21,slow=7.7,SNR=10						
U40A	Yellville	57.37	72	P	P	14 29 41.0	-1.5
	baz=314,SNR=8.5						
JCT	Junction City	57.40	81	P	P	14 29 43.0	+0.2
	baz=315,SNR=5.6						
GTA	Gaotai	57.52	294	eP	P	14 29 43.0	-0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
LZH	Lanzhou	57.54	288	⇓P	P	14 29 43.8	-0.1
LZH				pP	pwP	14 30 22.3	-1.9
LZH				sP	sP	14 30 41.5	+5.3
LZH				PP	PP	14 31 55.3	+2.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,7.5s						
W39A	Magazine	57.64	73	P	P	14 29 43.6	-0.8
	baz=314						
MIAR	Mount Ida	58.21	74	P	P	14 29 48.3	-0.2
	baz=314,SNR=7.2						
W41B	Gary Mavity, V	58.55	72	P	P	14 29 49.6	-1.1
	baz=314,SNR=6.6						
LCAR	Lake Charles	58.55	71	IAmb	IAmb	14 29 49.7	
	comp=Z,8.5nm,1.2s						
X40A	Basin Creek Fa	58.69	73	P	P	14 29 50.7	-0.9
	baz=315						
ZSN	Zaisan	59.59	309	eP	P	14 29 57.6	-0.2
	baz=309						
ZSN	Zaisan	59.59	309	eP	P	14 29 57.5	-0.2
KURK	Kurchatov	60.02	315	⇓eP	P	14 30 00.5	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KURK	Kurchatov	60.02	315	P	P	14 30 00.6	-0.1
T47A	Sharon Grove	60.20	67	P	P	14 30 01.4	-0.7
WVT	Waverly	60.40	68	P	P	14 30 03.0	-0.4
	baz=315						
OXF	Oxford	60.66	71	P	P	14 30 03.7	-1.4
OXF	Oxford	60.66	71	P	P	14 30 04.6	-0.6
	baz=315,SNR=5.5						
OXF	Oxford	60.66	71	P	P	14 30 03.7	-1.4
WMQ	Urumqi	60.84	305	eP	P	14 30 08.8	+2.5
CD2	Chengdu	61.27	284	eP	P	14 30 07.0	-2.4
MK31	Makanchi Array	61.28	310	⇓iP	P	14 30 09.0	-0.2
MKAR	Makanchi Array	61.28	310	P	P	14 30 08.5	-0.7
	comp=Z,0.4nm,0.3s,baz=52,slow=6.3,SNR=12						
MKAR				pP	pwP	14 30 48.9	-1.0
	comp=Z,0.3nm,0.6s,baz=52,slow=6.6,SNR=1.5						
MKAR	Makanchi Array	61.28	310	ceP	P	14 30 09.1	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	61.28	310	P	P	14 30 08.8	-0.4
K56A	Middlesex	61.35	56	P	P	14 30 09.4	-0.3
	baz=316						
BRVK	Borovoye	61.60	322	⇓eP	P	14 30 11.5	+0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	61.60	322	P	P	14 30 10.6	-0.6
L56A	Greenwood	61.64	57	P	P	14 30 11.4	-0.3
	baz=316						
R54A	Victor	62.71	62	P	P	14 30 18.5	-0.4
	baz=316						
FPAL	Fort Paine	62.80	68	P	P	14 30 18.6	-0.9
ARU	Arti	62.88	330	c iP	P	14 30 19.0	-0.6
ARU						14 32 35.8	
ARU				S	S	14 38 34.0	-2.2
ARU				SS	SS	14 42 39.4	-3.7
ARU				pmax	pmax		
	comp=Z,12nm,1.9s						
BRZS	Berezniki	63.06	318	eP	P	14 30 19.5	-1.6
	baz=318						
BRZS	Berezniki	63.06	318	eP	P	14 30 19.4	-1.6
LRAL	Lakeview Retre	63.11	70	P	P	14 30 20.1	-1.4
	baz=316						
KIRV	Kirov	63.54	336	⇓eP	P	14 30 25.1	+1.2
KMSC	Kings Mountain	64.75	65	P	P	14 30 32.0	-0.2
	baz=317						
GOGA	Godfrey	64.84	68	P	P	14 30 31.7	-1.1
	baz=317						
FINES	FINESS Array B	65.09	349	P	P	14 30 33.9	-0.1
	comp=Z,1.5nm,0.4s,baz=6.0,slow=6.9,SNR=14						
SHLS	Shalkode	65.33	309	eP	P	14 30 34.0	-2.0
	baz=309						
SHLS	Shalkode	65.33	309	eP	P	14 30 34.0	-2.0
KPKS	Kokpek	65.46	310	eP	P	14 30 36.8	-0.1
	baz=310						
KPKS	Kokpek	65.46	310	eP	P	14 30 36.7	-0.1
V59A	Middlesex	65.97	62	P	P	14 30 40.1	+0.1
	baz=318						
KMI	Kunming	66.14	280	⇓eP	P	14 30 44.5	+3.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BTLS	Baital	66.34	314	eP	P	14 30 42.0	-0.4
	baz=314						
BTLS	Baital	66.34	314	eP	P	14 30 41.9	-0.4
MDOK	Medeo	66.46	311	eP	P	14 30 42.9	-0.4
	baz=311						
MDOK	Medeo	66.46	311	eP	P	14 30 42.8	-0.4
NOA	NORSAR Array B	66.58	357	P	P	14 30 44.5	+1.0
	comp=Z,0.6nm,0.5s,baz=7.9,slow=6.5,SNR=7.8						
X59A	McDuffie Farm,	66.67	63	P	P	14 30 44.4	-0.1
	baz=318						
VSU	Vasula	67.91	348	⇓eP	P	14 30 52.0	+0.1
VSU				pmax	pmax		
	comp=Z,61nm,1.2s						
AAK	Ala-Archa	68.03	312	⇑eP	P	14 30 53.9	+0.7
AAK				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	68.03	312	P	P	14 30 53.8	+0.7
ABKAR	Akbulak array	68.47	325	P	P	14 30 55.9	+0.3
ABKAR				IAmb	IAmb	14 30 57.2	
	comp=Z,4.8nm,0.6s						
ABKAR	Akbulak array	68.47	325	P	P	14 30 55.6	0.0
BELG	Belogornoye	69.53	334	⇑eP	P	14 31 01.9	-0.1
BELG				pmax	pmax		
	comp=Z,4.0nm,2.2s						
KSH	Kashi	69.81	309	P	P	14 31 08.0	+3.8
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				pmax	pmax		
	comp=Z,250nm,6.0s						
SIJI	Sorong	69.86	240	P	P	14 31 04.4	-0.2
	comp=Z,6.8nm,0.6s,baz=343,slow=14,SNR=5.7						
IUG	Iuzhnay	70.41	315	eP	P	14 31 07.6	-0.2
	baz=315						
IUG	Iuzhnay	70.41	315	eP	P	14 31 07.5	-0.2
CMAR	Chiang Mai Arr	73.47	279	P	P	14 31 25.8	-0.4
	comp=Z,1.4nm,0.8s,baz=27,slow=7.0,SNR=12						
CMAR	Chiang Mai Arr	73.47	279	ceP	P	14 31 25.7	-0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GUN	Gumba	73.78	295	eP	P	14 31 28.0	-0.3
	comp=Z,12nm,0.4s						
KKN	Kakani	74.21	295	eP	P	14 31 28.1	-2.5
PKI	Pulchoki	74.31	295	eP	P	14 31 27.9	-3.4
DMN	Daman	74.45	295	eP	P	14 31 28.4	-3.7
DANN	Dangsing	74.61	296	eP	P	14 31 30.7	-2.3
AKASG	Malin Array Be	75.10	345	P	P	14 31 34.6	-0.4
	comp=Z,4.5nm,0.3s,baz=18,slow=6.0,SNR=28						
AKASG	Malin Array Be	75.10	345	P	P	14 31 34.5	-0.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	75.10	345	P	P	14 31 34.5	-0.5
AKBB	Malin Array Si	75.10	345	ceP	P	14 31 34.6	-0.4
MEM	Membach	77.12	360	dPcP	PcP	14 31 53.1	-3.6
LANS	Liptovska Anna	77.89	351	eP	P	14 31 52.6	+1.7
LANS	Liptovska Anna	77.89	351	eP	P	14 31 52.6	+1.7
GERES	GERESS Array B	78.65	354	P	P	14 31 55.4	+0.3
	comp=Z,1.0nm,0.8s,baz=19,slow=8.5,SNR=4.1						
KBZ	Khabaz	78.74	333	P	P	14 31 56.0	+0.4
	comp=Z,1.6nm,0.7s,baz=93,slow=8.7,SNR=2.9						
KBZ	Khabaz	78.74	333	⇓eP	P	14 31 56.3	+0.8
NCK	Nalchik	78.76	333	⇓eP	P	14 31 56.7	+1.0
NCK				pmax	pmax		
	comp=Z,6.0nm,0.2s						
WRA	Warramunga Arr	84.79	227	P	P	14 32 26.7	-0.7
	comp=Z,1.2nm,0.6s,baz=31,slow=5.6,SNR=12						
FITZ	Fitzroy Crossi	87.34	235	P	P	14 32 39.9	0.0
	comp=Z,1.6nm,0.6s,baz=17,slow=6.4,SNR=6.3						
ESDC	Sonseca Array	87.69	7	P	P	14 32 40.8	-0.7
	comp=Z,0.6nm,0.6s,baz=35,slow=4.7,SNR=2.3						
ASAR	Alice Springs	88.24	226	P	P	14 32 44.2	+0.1
	comp=Z,3.3nm,0.8s,baz=20,slow=5.0,SNR=32						
PLCA	Paso Flores	128.84	109	SKPbc	SKPbc	14 42 03.0	
	comp=Z,2.3nm,0.7s,baz=313,slow=4.8,SNR=6.3						
QSPA	South Pole Qui	142.40	180	SKPbc	SKPbc	14 42 44.0	-2.0
	comp=Z,1.1nm,0.5s,baz=83,slow=3.5,SNR=9.0						
BOSA	Boshof	151.88	321	PKPbc	PKPbc	14 39 46.2	-0.7
	comp=Z,4.4nm,1.1s,baz=7.9,slow=0.6,SNR=5.9						

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*IDC **31** 14:32:24.0±5.9, 32°.88S×179°.97E, h126^{km}±48^{km}, mb3.4/4, mb1 3.4/5, mb1mx3.3/44, mbtmp3.8/5, Error ellipse: s-maj=50.6km s-min=26.8km az=60.0*

*NOU **31** 14:32:29.8, 38°.46S×175°.57E, h205^{km}, MLv2.8, North Island, New Zealand*

ISC 31 14:32:22.3±1.2, **32°.9S**±0°.1×**179°.9E**±0°.3, **h100**^{km}, **n8**, σ**2^{s}.10**/9, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.78	202	P	Pn	14 33 48.1	+2.6
	0.6nm,0.3s,baz=325,slow=15,SNR=1.7						
URZ				S	Sn	14 34 48.6	-1.9
	2.7nm,0.3s,baz=151,slow=23,SNR=8.2						
ASAR	Alice Springs	41.22	271	P	P	14 39 57.3	-0.3
	0.2nm,0.8s,baz=112,slow=7.7,SNR=1.2						
WRA	Warramunga Arr	42.45	276	P	P	14 40 07.4	-0.1
	0.3nm,0.4s,baz=115,slow=8.0,SNR=2.2						
QSPA	South Pole Qui	57.20	180	P	P	14 41 58.1	-0.6
	2.2nm,0.7s,baz=108,slow=0.6,SNR=12						
PETK	Petropavlovsk-	87.81	347	P	P	14 44 59.1	-0.6
	3.5nm,1.1s,baz=123,slow=7.1,SNR=4.3						
FINES	FINESS Array B	146.81	337	PKPbc	PKPdf	14 51 49.4	-0.7
	3.0nm,0.8s,baz=56,slow=4.8,SNR=7.9						
NOA	NORSAR Array B	150.90	349	PKPbc	PKPdf	14 52 00.1	+3.3
	0.7nm,0.8s,baz=16,slow=4.0,SNR=3.6						
TORD	Torodi Ar. Bea	160.25	185	PKPab	PKPab	14 52 49.3	-1.9
	0.3nm,0.4s,baz=163,slow=2.9,SNR=1.6						

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*IDC **31** 14:34:09.3±1.3, 47°.03N×155°.58E, h0^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.6/50, mbtmp3.6/11, ML2.8/3, Error ellipse: s-maj=34.1km s-min=21.5km az=136.0*

ISC 31 14:34:12.1±1.2, **47°.1N**±0°.2×**155°.6E**±0°.2, **h18**^{km}, **n11**, σ**0^{s}.87**/11, **mb3.5**/8, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.20	12	Pn	Pn	14 35 41.9	-0.8
	0.3nm,0.3s,baz=182,slow=13,SNR=15						
ASAJ	Asahikawa	9.55	257	Pn	Pn	14 36 27.7	-1.0
	0.3nm,0.3s,baz=74,slow=18,SNR=1.7						
USRK	Ussuriysk Ar.	16.71	269	Pn	Pn	14 38 06.4	+1.2
	baz=82,slow=10,SNR=1.3						
ILAR	Eielson Array	35.25	39	P	P	14 41 05.3	+0.1
	0.4nm,1.0s,baz=245,slow=8.0,SNR=2.2						
ZALV	Zalesovo Beam	43.78	306	P	P	14 42 15.4	-0.9
	0.3nm,0.4s,baz=70,slow=5.4,SNR=2.0						
MKAR	Makanchi Array	48.27	298	P	P	14 42 51.4	-0.5
	0.2nm,0.4s,baz=67,slow=7.9,SNR=4.6						
YKA	Yellowknife Ar	49.66	38	P	P	14 43 02.2	0.0
	0.2nm,0.7s,baz=295,slow=6.6,SNR=3.0						
CMAR	Chiang Mai Arr	54.07	258	P	P	14 43 36.2	+0.5
	0.3nm,0.3s,baz=43,slow=6.7,SNR=1.8						
FINES	FINESS Array B	64.45	336	P	P	14 44 47.6	+0.7
	1.3nm,0.7s,baz=35,slow=7.6,SNR=5.1						
AKASG	Malin Array Be	72.19	327	P	P	14 45 36.6	+1.1
	0.3nm,0.4s,baz=33,slow=6.1,SNR=2.7						
ASAR	Alice Springs	73.07	201	P	P	14 45 40.7	-0.3
	0.3nm,0.6s,baz=23,slow=6.6,SNR=5.5						

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*IDC **31** 14:38:21.1±0.7, 15°.34N×147°.11E, h0^{km}, mb4.1/19, mb1 4.2/19, mb1mx4.0/51, mbtmp4.1/19, Error ellipse: s-maj=23.8km s-min=14.4km az=103.0*

*NEIC **31** 14:38:24.7±2.3, 15°.28N±0°.09×147°.30E±0°.06, h28^{km}±6^{km}, mb4.4/16, Error ellipse: s-maj=13.2km s-min=8.0km az=180.0*

ISC 31 14:38:22.8±0.6, **15°.34N**±0°.08×**147°.1E**±0°.1, **h10**^{km}, **n61**, σ**1^{s}.05**/55, **mb4.2**/32, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	1.69	306		Pg	14 38 55.1	-0.2
PATS	Pohnpei	13.84	126	Pn	Pn	14 41 33.5	-5.7
H11S3	WAKE ISLAND Hy	18.97	78	T	T	15 02 08.9	
	baz=263,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	18.98	78	T	T	15 02 12.6	
	baz=263,slow=74,SNR=12						
H11S2	WAKE ISLAND Hy	18.99	78	T	T	15 02 10.7	
	baz=263,slow=74,SNR=14						
SIJI	Sorong	22.48	226	P	P	14 43 24.7	+2.1
	16nm,1.0s,baz=34,slow=15,SNR=6.7						
MAJO	Matsushiro	22.56	341	P	P	14 43 27.7	+4.4
FAKI	Fak Fak	23.37	220	P	P	14 43 33.6	+1.8
PMG	Port Moresby	24.59	180	P	P	14 43 43.1	-0.2
	9.7nm,0.9s,baz=349,slow=7.9,SNR=1.9						
PMG	Port Moresby	24.59	180	P	P	14 43 43.3	0.0
PMG				IAmb	IAmb	14 43 60.0	
	comp=Z,17nm,0.9s						
JTM	Tenmabayashi	25.90	349	P	P	14 43 54.7	-0.2
SSLB	Suanglung	26.02	293	P	P	14 43 57.0	+0.7
KSRS	Korea Array	27.84	326	P	P	14 44 11.9	-0.5
	comp=Z,0.8nm,0.8s,baz=142,slow=8.7,SNR=1.9						
KLR	Kul'dur	36.06	343	P	P	14 45 23.4	-1.0
	comp=Z,0.8nm,0.6s,baz=180,slow=7.1,SNR=2.5						
WB0	Warramunga Arr	37.07	200	P	P	14 45 32.5	-0.9
WB0				IAmb	IAmb	14 45 38.9	
	comp=Z,3.1nm,0.8s						
WR0	Warramunga Arr	37.20	200	P	P	14 45 33.7	-0.7
WR0				IAmb	IAmb	14 45 47.3	
	comp=Z,3.3nm,1.1s						
WRAB	Tennant Creek	37.24	200	P	P	14 45 34.0	-0.8
WRAB				IAmb	IAmb	14 45 49.6	
	comp=Z,4.3nm,1.0s						
WB2	Warramunga Arr	37.25	200	P	P	14 45 34.9	0.0
WB2				IAmb	IAmb	14 45 44.5	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	37.25	200	P	P	14 45 34.2	-0.7
	comp=Z,2.0nm,0.9s,baz=22,slow=9.3,SNR=9.7						
WRA	Warramunga Arr	37.25	200	P	P	14 45 33.0	-1.9
FITZ	Fitzroy Crossi	39.40	213	P	P	14 45 52.6	-0.5
	comp=Z,1.2nm,0.6s,baz=24,slow=12,SNR=1.2						
FITZ	Fitzroy Crossi	39.40	213	P	P	14 45 47.5	-5.6
AS31	Alice Springs	40.87	199	P	P	14 46 05.1	-0.1
ASAR	Alice Springs	40.87	199	P	P	14 46 05.0	-0.1
	comp=Z,0.4nm,0.6s,baz=26,slow=6.6,SNR=9.1						
ASAR	Alice Springs	40.87	199	P	P	14 46 05.9	+0.7
CMAR	Chiang Mai Arr	46.11	281	P	P	14 46 48.3	+0.7
	comp=Z,1.5nm,0.7s,baz=80,slow=6.5,SNR=9.9						
SONM	Songino Array	46.62	323	P	P	14 46 51.9	+0.5
	comp=Z,0.8nm,0.6s,baz=126,slow=7.3,SNR=2.8						
SONM	Songino Array	46.62	323	P	P	14 46 52.1	+0.7
SEY	Seymchan	47.68	3	P	P	14 46 59.9	+0.7
	comp=Z,1.6nm,0.9s,baz=191,slow=10.0,SNR=4.2						
YAK	Yakutsk	48.26	349	P	P	14 47 04.1	+0.5
	comp=Z,4.4nm,0.5s,baz=125,slow=1.8,SNR=4.2						
GUN	Gumba	57.78	293	eP	P	14 48 14.9	-0.1
	comp=Z,19nm,0.8s						
PKI	Pulchoki	58.21	293	eP	P	14 48 17.1	-0.9
	comp=Z,2.7nm,0.4s						
KKN	Kakani	58.32	293	eP	P	14 48 17.9	-0.7
DMN	Daman	58.48	293	eP	P	14 48 19.3	-0.5
	comp=Z,8.0nm,0.5s						
GKN	Gorkha	58.88	294	eP	P	14 48 21.9	-0.6
ZALV	Zalesovo Beam	61.51	323	P	P	14 48 38.9	-0.9
	comp=Z,0.9nm,0.6s,baz=124,slow=7.2,SNR=3.3						
ZALV	Zalesovo Beam	61.51	323	P	P	14 48 38.4	-1.4
MKAR	Makanchi Array	61.78	315	P	P	14 48 41.7	-0.1
	comp=Z,0.8nm,0.4s,baz=90,slow=8.8,SNR=27						
MAKZ	Makanchi	61.99	315	P	P	14 48 43.3	0.0
MAKZ				IAmb	IAmb	14 48 49.0	
	comp=Z,3.6nm,1.1s						
KPKS	Kokpek	64.00	311	eP	P	14 48 56.3	-0.5
	baz=311						
SATY	Saty	64.19	311	eP	P	14 48 57.8	-0.3
	baz=310						
KURK	Kurchatov	64.68	319	P	P	14 49 00.3	-0.6
MDOK	Medeo	65.18	311	eP	P	14 49 04.7	+0.1
	baz=310						
TNSS	Tian-Shan	65.25	311	eP	P	14 49 05.1	-0.2
	baz=310						
KUU	Kurty	65.72	312	eP	P	14 49 07.3	-0.7
	comp=Z,1.9nm,0.6s,baz=311						

HDA	**Harding Lake**	**65.93**	**26**	P	**P**	**14 49 08.2**	**-0.7**
HDA				IAmb	IAmb	14 49 18.5	
	comp=Z,5.6nm,1.0s						
IL31		**66.06**	**25**	P	**P**	**14 49 08.1**	**-1.5**
IL31				IAmb	IAmb	14 49 26.7	
	comp=Z,5.1nm,0.9s						
ILAR	**Eielson Array**	**66.06**	**25**	P	**P**	**14 49 08.8**	**-0.8**
	comp=Z,2.4nm,1.0s,baz=252,slow=5.9,SNR=13						
BTLS	**Baital**	**67.39**	**313**	*e*P	**P**	**14 49 17.8**	**-0.8**
	baz=312						
HYT	**Haines Junctio**	**69.60**	**30**	P	**P**	**14 49 33.5**	**+1.3**
INK	**Inuvik**	**71.92**	**23**	P	**P**	**14 49 46.2**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=255,slow=6.8,SNR=9.0						
DLBC	**Dease Lake**	**73.33**	**33**	P	**P**	**14 49 55.6**	**+0.9**
	comp=Z,3.6nm,1.0s,baz=306,slow=10,SNR=4.5						
YKA	**Yellowknife Ar**	**80.30**	**28**	P	**P**	**14 50 33.6**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=287,slow=4.9,SNR=18						
NVAR	**Mina Array Bea**	**84.12**	**52**	P	**P**	**14 50 55.9**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=257,slow=8.0,SNR=5.6						
ARCES	**ARCESS Array B**	**86.09**	**343**	P	**P**	**14 51 03.3**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=76,slow=6.8,SNR=6.2						
FINES	**FINESS Array B**	**90.49**	**336**	P	**P**	**14 51 23.9**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=73,slow=6.6,SNR=4.4						
NB2	**NORSAR Subarra**	**96.18**	**340**	PKP	P	14 51 59.7	+8.7
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
DBIC	**Dimbokro**	**144.66**	**306**	PKP	**PKPab**	**14 57 59.0**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=36,slow=4.2,SNR=6.7						
KIC	**Kosan Boka**	**144.76**	**306**	*e*PKP1	**PKPab**	**14 57 58.8**	**-1.1**
	comp=Z,6.3nm,0.8s						
TIC	**Toumodi**	**144.81**	**306**	*e*PKP1	**PKPab**	**14 57 58.7**	**-1.3**
LIC	**Lamto**	**145.07**	**306**	*e*PKP1	**PKPbc**	**14 57 59.7**	**-1.2**
	comp=Z,20nm,0.8s						

IDC ***31*** *14:45:34.8±2.1, 37°.33N×142°.10E, h0^{km}, mb3.3/2, mb1 3.4/4, mb1mx3.2/40, mbtmp3.3/4, ML2.6/2, Error ellipse: s-maj=39.7km s-min=32.0km az=106.0*

JMA ***31*** *14:45:38.4±0.2, 37°.39N×141°.92E, h34^{km}±3^{km}, M3.4*

ISC 31 14:45:36.6±1.9**, 37°.44N**±0°.05×**141°.96E**±0°.07**, h10**^{km}±10^{km}**, n23, σ0^{s}.78**/31**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.87**	**265**	P	**Pb**	**14 45 54.0**	**+0.2**
JFK				*e*S	**Sg**	**14 46 04.4**	**-0.2**
JMST	**Minamisoumatoc**	**0.90**	**289**	P	**Pb**	**14 45 54.7**	**+0.4**
JMST				S	**Sg**	**14 46 05.6**	**0.0**
JIKH	**Ishinomakikobu**	**0.95**	**336**	P	**Pn**	**14 45 56.0**	**-0.1**
JIKH				S	**Sb**	**14 46 08.1**	**+0.2**
ONAJ	**Iwakimizuishiy**	**0.99**	**250**	P	**Pg**	**14 45 55.3**	**-0.3**
ONAJ				S	**Sg**	**14 46 07.0**	**-1.4**
JMM	**Marumori**	**1.02**	**295**	P	**Pg**	**14 45 56.7**	**+0.5**
JMM				S	**Sb**	**14 46 09.2**	**-0.6**
JIO	**Ouri**	**1.12**	**335**	P	**Pg**	**14 45 58.6**	**+0.4**
JIO				S	**Sb**	**14 46 12.1**	**-0.6**
JFT	**Otama**	**1.29**	**274**	P	**Pb**	**14 46 01.1**	**+0.1**
JFT				S	**Sb**	**14 46 16.8**	**-0.9**
JOU	**Okura**	**1.38**	**312**	P	**Pb**	**14 46 02.9**	**+0.4**
JOU				S	**Sn**	**14 46 20.0**	**-0.3**
JMK	**Ichinoseki**	**1.62**	**339**	P	**Pb**	**14 46 06.3**	**-0.2**
JMK				*e*S	**Sn**	**14 46 25.0**	**-1.1**
JYS	**Shirataka**	**1.69**	**298**	P	**Pb**	**14 46 07.4**	**-0.4**
JYS				S	**Sb**	**14 46 29.3**	**+0.2**
JFY	**Yanaizu**	**1.79**	**270**	P	**Pn**	**14 46 08.3**	**+0.6**
JFY				S	**Sn**	**14 46 30.0**	**-0.5**
JYK	**Kaneyama**	**1.94**	**320**	P	**Pb**	**14 46 11.3**	**-0.8**
JYK				*e*S	**Sn**	**14 46 34.4**	**+0.3**
MJAR	**Matsushiro Arr**	**3.13**	**254**	Pn	**Pn**	**14 46 27.1**	**+1.0**
	0.2nm,0.3s,baz=69,slow=11,SNR=8.9						
MJAR				Sn	**Sn**	**14 47 05.0**	**+1.4**
	0.3nm,0.3s,baz=66,slow=28,SNR=2.1						
MAT	**Matsushiro**	**3.13**	**255**	P	**Pn**	**14 46 27.8**	**+1.7**
MAT				S	**Sn**	**14 47 03.1**	**-0.5**
ASAJ	**Asahikawa**	**6.69**	**4**	Pn	**Pn**	**14 47 16.1**	**+1.3**
	0.2nm,0.3s,baz=204,slow=15,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**27.99**	**122**	T	T	15 20 56.4	
	baz=315,slow=75,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**28.00**	**122**	T	T	15 20 59.8	
	baz=315,slow=75,SNR=2.9						
H11N3	**WAKE ISLAND Hy**	**28.01**	**122**	T	T	15 20 54.4	
	baz=315,slow=75,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**28.72**	**124**	T	T	15 21 47.7	
	baz=317,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**28.72**	**124**	T	T	15 21 43.8	
	baz=317,slow=76,SNR=93						
H11S2	**WAKE ISLAND Hy**	**28.74**	**124**	T	T	15 21 46.1	
	baz=317,slow=76,SNR=33						
MKAR	**Makanchi Array**	**44.27**	**302**	P	**P**	**14 53 46.8**	**+0.4**
	0.3nm,0.7s,baz=92,slow=8.7,SNR=4.4						
WRA	**Warramunga Arr**	**57.52**	**189**	P	**P**	**14 55 25.2**	**-1.0**
	0.3nm,0.8s,baz=7.4,slow=7.3,SNR=1.6						

NEIC ***31*** *14:45:53.0±1.3, 56°.87N±0°.04×168°.75W±0°.10, h20^{km}±7^{km}, ML3.7(AEIC), Error ellipse: s-maj=8.0km s-min=4.5km az=111.0*

IDC ***31*** *14:45:53.4±1.6, 56°.70N×168°.94W, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/44, mbtmp3.7/9, ML3.2/3, Error ellipse: s-maj=51.9km s-min=18.3km az=178.0*

AEIC ***31*** *14:45:53.8±1.5, 56°.63N±0°.07×169°.22W±0°.07, h34^{km}±8^{km}, Error ellipse: s-maj=10.8km s-min=4.2km az=203.0*

ISC 31 14:45:54.3±0.7**, 56°.68N**±0°.09×**168°.86W**±0°.07**, h10**^{km}**, n27, σ1^{s}.45**/27**, mb3.6**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	**Saint Paul Isl**	**0.91**	**304**		**Pg**	**14 46 10.0**	**-1.9**
AKGG	**Akutan Green G**	**2.98**	**146**		**Pn**	**14 46 41.3**	**-0.3**
AKRB	**Akutan Reef Bi**	**3.01**	**147**		**Pn**	**14 46 41.3**	**-0.7**
MSW	**Makushin Switc**	**3.02**	**156**		**Pn**	**14 46 41.7**	**-0.4**
MNAT	**Makushin Natee**	**3.07**	**155**		**Pn**	**14 46 42.7**	**-0.1**
AKBBA	**Akutan Broad B**	**3.08**	**146**		**Pn**	**14 46 42.2**	**-0.7**
MAPS	**Pakushin South**	**3.08**	**158**		**Pn**	**14 46 42.8**	**-0.2**
AKUT	**Akutan**	**3.10**	**144**		**Pn**	**14 46 43.0**	**-0.2**
UNV	**Unalaska Valle**	**3.15**	**154**		**Pn**	**14 46 43.4**	**-0.5**
OKWE	**Okmok W'ng Wal**	**3.24**	**173**		**Pn**	**14 46 43.0**	**-2.1**
OKSP	**Okmok Steeple**	**3.45**	**174**		**Pn**	**14 46 47.8**	**-0.4**
FALS	**False Pass**	**3.58**	**118**	Pn	**Pn**	**14 46 50.3**	**+0.5**
NIKH	**Nikolski High**	**3.72**	**180**		**Pn**	**14 46 53.5**	**+1.8**
ATKA	**Atka Island**	**5.46**	**217**		**Pn**	**14 47 14.8**	**-0.9**
CNBA	**Chernabura Isl**	**5.56**	**106**	Pn	**Pn**	**14 47 13.3**	**-3.6**
ADK	**Adak**	**6.64**	**227**	Pn	**Pn**	**14 47 32.6**	**+0.8**
SII	**Sitkinak Islan**	**8.10**	**85**	Pn	**Pn**	**14 47 48.6**	**-3.2**
AMKA	**Amchitka**	**8.76**	**238**		**Pn**	**14 48 01.8**	**+0.9**
KDAK	**Kodiak Island**	**8.90**	**76**	Pn	**Pn**	**14 48 05.7**	**+2.9**
	0.2nm,0.3s,baz=193,slow=16,SNR=1.1						
PETK	**Petropavlovsk-**	**19.45**	**274**	P	**Pn**	**14 50 21.9**	**0.0**
	0.1nm,0.3s,baz=79,slow=16,SNR=7.4						
INK	**Inuvik**	**19.69**	**40**	P	**Pn**	**14 50 25.4**	**+0.7**
	0.1nm,0.3s,baz=252,slow=11,SNR=3.8						
SEY	**Seymchan**	**20.21**	**304**	P	**P**	**14 50 29.3**	**+0.3**
	2.0nm,0.8s,baz=89,slow=20,SNR=5.8						
YKA	**Yellowknife Ar**	**27.34**	**55**	P	**P**	**14 51 40.1**	**+1.2**
	0.6nm,0.9s,baz=282,slow=8.7,SNR=2.6						
SONM	**Songino Array**	**49.44**	**298**	P	**P**	**14 54 44.5**	**+0.2**
	0.5nm,0.7s,baz=60,slow=5.7,SNR=2.3						
TXAR	**Lajitas Array**	**52.51**	**93**	P	**P**	**14 55 07.6**	**+0.1**
	0.2nm,0.3s,baz=294,slow=4.8,SNR=3.7						
AKASG	**Malin Array Be**	**71.94**	**348**	P	**P**	**14 57 16.6**	**-0.8**
	0.2nm,0.2s,baz=12,slow=5.9,SNR=7.1						
CMAR	**Chiang Mai Arr**	**75.98**	**282**	P	**P**	**14 57 42.1**	**+0.7**
	0.3nm,0.4s,baz=12,slow=4.9,SNR=5.2						

IDC ***31*** *14:56:42.5±12.0, 24°.40S×179°.53E, h657^{km}±157^{km}, mb3.0/4, mb1 3.2/4, mb1mx2.9/26, mbtmp4.1/4, Error ellipse: s-maj=68.7km s-min=48.8km az=92.0*

ISC 31 14:56:42.0±1.2**, 24°.4S**±0°.3×**179°.5E**±0°.2**, h650**^{km}**, n8, σ0^{s}.41**/8**, mb3.5**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.15**	**249**	P	**P**	**15 02 36.0**	**-0.1**
	0.9nm,0.7s,baz=85,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**41.54**	**261**	P	**P**	**15 03 36.0**	**+0.1**
	1.0nm,0.5s,baz=93,slow=7.3,SNR=56						
SIJI	**Sorong**	**52.20**	**289**	P	**P**	**15 04 55.4**	**0.0**
	5.5nm,0.6s,baz=120,slow=18,SNR=4.5						
SNAA	**Sanae**	**84.19**	**179**	P	**P**	**15 08 06.4**	**-0.1**
VNA3	**Neumayer Olymp**	**84.41**	**177**	P	**P**	**15 08 07.7**	**+0.1**
VNA2	**Neumayer--Watz**	**84.82**	**178**	P	**P**	**15 08 10.3**	**+0.7**
	baz=195,slow=4.8						
TXAR	**Lajitas Array**	**91.04**	**58**	P	**P**	**15 08 39.4**	**0.0**

	0.4nm,0.7s,baz=218,slow=5.7,SNR=2.0						
TORD	**Torodi Ar. Bea**	**168.63**	**191**	PKPab	**PKPab**	**15 16 50.8**	**-0.5**
	0.5nm,0.6s,baz=184,slow=3.9,SNR=2.2						

JMA ***31*** *14:59:19.5±0.2, 24°.55N×122°.43E, h77^{km}±3^{km}, M1.9*

TAP ***31*** *14:59:20.1, 24°.60N×122°.43E, h66^{km}±1^{km}, ML3.0, D*

ISC 31 14:59:20.5±1.4**, 24°.58N**±0°.04×**122°.45E**±0°.03**, h66**^{km}±10^{km}**, n69, σ0^{s}.80**/126**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.47**	**106**	P	**Pn**	**14 59 33.0**	**+0.3**
JYNG				*e*S	**Sn**	**14 59 42.4**	**+0.9**
YOJ	**Yonaguni jima**	**0.52**	**103**	P	**Pn**	**14 59 33.6**	**+0.4**
YOJ				*e*S	**Sn**	**14 59 43.4**	**+0.9**
YOJ	**Yonaguni jima**	**0.52**	**103**	*e*P	**Pn**	**14 59 33.6**	**+0.4**
	baz=103						
YOJ				*e*S	**Sn**	**14 59 43.6**	**+1.1**
	baz=103						
TWC	**Suao**	**0.55**	**273**	P	**Pn**	**14 59 33.1**	**-0.3**
	baz=271						
TWC				*e*S	**Sn**	**14 59 42.6**	**-0.4**
	baz=271						
NTC	**Toucheng**	**0.63**	**296**	*e*P	**Pn**	**14 59 33.9**	**-0.5**
	baz=295						
NTC				*e*S	**Sn**	**14 59 43.5**	**-0.9**
	baz=295						
ENA	**Nanau**	**0.67**	**257**	*e*P	**Pn**	**14 59 34.9**	**+0.1**
	baz=254						
ILA	**Ilan**	**0.67**	**286**	*e*P	**Pn**	**14 59 34.9**	**+0.2**
	baz=285						
ILA				*e*S	**Sn**	**14 59 45.9**	**+0.7**
	baz=285						
TIPB	**Shuangxi**	**0.69**	**304**	*e*P	**Pn**	**14 59 34.6**	**-0.4**
	baz=304						
TIPB				*e*S	**Sn**	**14 59 44.6**	**-1.2**
	baz=304						
NWF	**Wu-fen Shan**	**0.78**	**309**	*e*P	**Pn**	**14 59 36.0**	**-0.2**
	baz=309						
NWF				*e*S	**Sn**	**14 59 47.3**	**-0.4**
	baz=309						
WFSB	**Wu-fen Shan**	**0.78**	**309**	*e*P	**Pn**	**14 59 35.9**	**-0.2**
	baz=308						
WFSB				*e*S	**Sn**	**14 59 47.0**	**-0.6**
	baz=308						
ENTT	**Nioudou**	**0.81**	**274**	*e*P	**Pn**	**14 59 36.8**	**+0.4**
	baz=273						
ENTT				*e*S	**Sn**	**14 59 48.6**	**+0.4**
	baz=273						
NDT	**Datong Townshi**	**0.86**	**271**	*e*P	**Pn**	**14 59 37.5**	**+0.5**
	baz=270						
NDT				*e*S	**Sn**	**14 59 49.8**	**+0.6**
	baz=270						
NACB	**Ninganchiao**	**0.88**	**243**	*e*P	**Pn**	**14 59 36.5**	**-0.8**
	baz=240						
NACB				*e*S	**Sn**	**14 59 49.3**	**-0.5**
	baz=240						
TWA	**Mucha**	**0.88**	**297**	*i* P	**Pn**	**14 59 37.1**	**-0.3**
	baz=296						
TWA				S	**Sn**	**14 59 49.6**	**-0.3**
	baz=296						
NWLT	**Wulai**	**0.89**	**283**	*e*P	**Pn**	**14 59 37.1**	**-0.3**
	baz=282						
NWLT				*e*S	**Sn**	**14 59 49.7**	**-0.2**
	baz=282						
NHDH	**Xindian Distri**	**0.92**	**294**	*e*P	**Pn**	**14 59 37.4**	**-0.5**
	baz=294						
NHDH				*e*S	**Sn**	**14 59 50.8**	**+0.1**
	baz=294						
TWD	**Chiawan**	**0.93**	**237**	*e*P	**Pn**	**14 59 37.6**	**-0.3**
	baz=235						
TWD				*e*S	**Sn**	**14 59 50.4**	**-0.4**
	baz=235						
TAP1	**Taipei**	**0.96**	**298**	*e*P	**Pn**	**14 59 38.5**	**+0.2**
	baz=297						
TAP1				*e*S	**Sn**	**14 59 51.6**	**+0.2**
	baz=297						
TATO	**Taipei**	**0.96**	**294**	*e*P	**Pn**	**14 59 37.9**	**-0.4**
	baz=294						
TATO				*e*S	**Sn**	**14 59 50.6**	**-0.9**
	baz=294						
ETLH	**Xiulin Townshi**	**0.96**	**247**	*e*P	**Pn**	**14 59 38.1**	**-0.3**
	baz=245						
ETLH				*e*S	**Sn**	**14 59 51.5**	**-0.2**
	baz=245						
YM01	**YM01**	**0.98**	**305**	*e*P	**Pn**	**14 59 37.3**	**-1.3**
	baz=305						
YM01				*e*S	**Sn**	**14 59 50.9**	**-1.1**
	baz=305						
YHNB	**Yeheng**	**0.98**	**275**	*e*P	**Pn**	**14 59 38.7**	**0.0**
	baz=274						
YHNB				*e*S	**Sn**	**14 59 52.2**	**0.0**
	baz=274						
YM11	**YM11**	**0.99**	**306**	*e*P	**Pn**	**14 59 38.5**	**-0.3**
	baz=306						
YM11				*e*S	**Sn**	**14 59 52.1**	**-0.1**
	baz=306						
NNSB	**Datong**	**0.99**	**261**	*e*P	**Pn**	**14 59 38.5**	**-0.3**
	baz=260						
NNSB				*e*S	**Sn**	**14 59 53.4**	**+1.0**
	baz=260						
NNSH	**Datong**	**0.99**	**261**	*e*P	**Pn**	**14 59 38.6**	**-0.1**
	baz=260						
NNSH				*e*S	**Sn**	**14 59 53.3**	**+1.0**
	baz=260						
YM08	**YM08**	**0.99**	**308**	*e*P	**Pn**	**14 59 37.8**	**-0.9**
	baz=307						
YM08				*e*S	**Sn**	**14 59 51.7**	**-0.5**
	baz=307						
YM10	**YM10**	**0.99**	**305**	*e*P	**Pn**	**14 59 38.5**	**-0.2**
	baz=305						
YM10				*e*S	**Sn**	**14 59 52.5**	**+0.2**
	baz=305						
YM05	**YM05**	**0.99**	**306**	*e*P	**Pn**	**14 59 38.6**	**-0.2**
	baz=305						
YM05				*e*S	**Sn**	**14 59 52.5**	**+0.2**
	baz=305						
NNS	**Nan Shan**	**0.99**	**262**	*e*P	**Pn**	**14 59 38.7**	**-0.2**
	baz=260						
NNS				*e*S	**Sn**	**14 59 52.4**	**-0.1**
	baz=260						
NSK	**Sanguang**	**1.00**	**275**	*e*P	**Pn**	**14 59 39.0**	**+0.1**
	baz=274						
NSK				*e*S	**Sn**	**14 59 52.7**	**+0.1**
	baz=274						
YM04	**YM04**	**1.01**	**304**	*e*P	**Pn**	**14 59 38.5**	**-0.4**
	baz=304						
YM04				*e*S	**Sn**	**14 59 51.8**	**-0.8**
	baz=304						
YM03	**YM03**	**1.02**	**306**	*e*P	**Pn**	**14 59 38.8**	**-0.3**
	baz=305						
YM03				*e*S	**Sn**	**14 59 53.2**	**+0.3**
	baz=305						
ANP	**Anpu**	**1.04**	**306**	*e*P	**Pn**	**14 59 38.8**	**-0.6**
	baz=305						
TWS1	**Kuangyinshan**	**1.07**	**299**	*e*P	**Pn**	**14 59 39.5**	**-0.2**
	baz=298						
TWS1				*e*S	**Sn**	**14 59 54.5**	**+0.4**
	baz=298						
NTST	**Danshui**	**1.08**	**303**	*e*P	**Pn**	**14 59 39.5**	**-0.3**
	baz=302						
NTST				*e*S	**Sn**	**14 59 54.8**	**+0.6**
	baz=302						
FUSS	**Fushou**	**1.15**	**253**	*e*P	**Pn**	**14 59 41.0**	**-0.1**
	baz=252						
WHF	**Hehuan Shan**	**1.17**	**248**	*e*P	**Pn**	**14 59 41.2**	**-0.2**
	baz=246						
WHF				*e*S	**Sn**	**14 59 56.4**	**-0.5**
	baz=246						
IRIF	**Iriomote-Funau**	**1.19**	**102**	P	**Pn**	**14 59 41.0**	**-0.3**
IRIF				S	**Sn**	**14 59 57.1**	**+0.3**
ESL	**Shilin**	**1.21**	**231**	*e*P	**Pn**	**14 59 40.7**	**-0.7**
	baz=228						
ESL				*e*S	**Sn**	**14 59 56.3**	**-0.9**
	baz=228						
TWT	**Tachien**	**1.21**	**254**	*e*P	**Pn**	**14 59 42.6**	**+0.9**
	baz=253						
TWT				*e*S	**Sn**	**14 59 57.5**	**0.0**
	baz=253						
TDCB	**Techi**	**1.23**	**255**	*e*P	**Pn**	**14 59 41.9**	**0.0**
	baz=253						
TDCB				*e*S	**Sn**	**14 59 57.2**	**-0.7**
	baz=253						
CHGB	**Renai**	**1.28**	**246**	*e*P	**Pn**	**14 59 42.6**	**-0.1**
	baz=244						
CHGB				*e*S	**Sn**	**14 59 58.8**	**-0.3**
	baz=244						
LIOB	**Emei**	**1.31**	**273**	*e*P	**Pn**	**14 59 43.0**	**+0.2**
	baz=272						
LIOB				*e*S	**Sn**	**15 00 00.3**	**+0.7**
	baz=272						
WHP	**Taichung City**	**1.41**	**258**	*e*P	**Pn**	**14 59 45.2**	**+1.0**
	baz=256						
WHP				*e*S	**Sn**	**15 00 03.1**	**+1.1**
	baz=256						
HGSD	**Ruisui**	**1.44**	**221**	*e*P	**Pn**	**14 59 45.0**	**+0.5**
	baz=219						
HGSD				*e*S	**Sn**	**15 00 01.1**	**-1.5**
	baz=219						
JKRS	**Kuro-shima**	**1.46**	**103**	P	**Pn**	**14 59 45.0**	**+0.2**
EHY	**Hungye**	**1.49**	**224**	*e*P	**Pn**	**14 59 44.2**	**-1.0**
	baz=222						
EHY				*e*S	**Sn**	**15 00 02.3**	**-1.5**
	baz=222						
DPDB	**Guoxing**	**1.50**	**249**	*e*P	**Pn**	**14 59 45.7**	**+0.3**
	baz=247						
NMLH	**Miaoli**	**1.51**	**269**	*e*P	**Pn**	**14 59 45.8**	**+0.3**
	baz=267						
TWQ1	**Liyutan**	**1.55**	**262**	*e*P	**Pn**	**14 59 47.5**	**+1.5**
	baz=260						
JIJ	**Ishigaki jima**	**1.56**	**98**	P	**Pn**	**14 59 45.8**	**-0.3**
JIJ				*e*S	**Sn**	**15 00 04.9**	**-0.5**
SMLT	**Sun Moon Lake**	**1.58**	**244**	*e*P	**Pn**	**14 59 47.8**	**+1.3**
	baz=242						
SMLT				*e*S	**Sn**	**15 00 07.7**	**+1.5**
	baz=242						
SSLB	**Suanglung**	**1.58**	**240**	*e*P	**Pn**	**14 59 46.4**	**-0.1**
	baz=239						
SSLB				*e*S	**Sn**	**15 00 07.3**	**+1.2**
	baz=239						
YULB	**Yu-li**	**1.59**	**222**	*e*P	**Pn**	**14 59 45.5**	**-1.0**
	baz=220						
YULB				*e*S	**Sn**	**15 00 04.3**	**-2.0**
	baz=220						
EYUL	**Yuli**	**1.61**	**220**	*e*P	**Pn**	**14 59 46.8**	**-0.1**
	baz=219						
EYUL				*e*S	**Sn**	**15 00 07.1**	**+0.4**
	baz=219						
TWF1	**Yuli**	**1.62**	**221**	*e*P	**Pn**	**14 59 46.1**	**-0.9**
	baz=219						
JISG	**Ishigakijimahi**	**1.69**	**90**	P	**Pn**	**14 59 47.2**	**-0.7**
WHYT	**Xinyi Township**	**1.71**	**239**	*e*P	**Pn**	**14 59 49.7**	**+1.5**
	baz=238						
WHYT				*e*S	**Sn**	**15 00 10.7**	**+1.6**
	baz=238						
FULB	**Fuli**	**1.74**	**218**	*e*P	**Pn**	**14 59 48.7**	**+0.1**
	baz=216						
FULB				*e*S	**Sn**	**15 00 09.5**	**-0.3**
	baz=216						
WJS	**Zhushan**	**1.75**	**245**	*e*P	**Pn**	**14 59 49.7**	**+1.0**
	baz=243						
WJS				*e*S	**Sn**	**15 00 12.2**	**+2.1**
	baz=243						
YUS	**Yu-Shan**	**1.75**	**232**	*e*P	**Pn**	**14 59 49.0**	**-0.2**
	baz=230						
YUS				*e*S	**Sn**	**15 00 10.4**	**-0.5**
	baz=230						
ALS	**Alishan**	**1.85**	**235**	*e*P	**Pn**	**14 59 51.0**	**+0.7**
	baz=233						
ALS				*e*S	**Sn**	**15 00 14.6**	**+1.7**
	baz=233						
CHN5	**Tsauling**	**1.90**	**239**	*e*P	**Pn**	**14 59 51.6**	**+0.9**
	baz=238						
CHN5				*e*S	**Sn**	**15 00 15.6**	**+1.9**
	baz=238						
ELDTW	**Lidau**	**1.91**	**224**	*e*P	**Pn**	**14 59 50.2**	**-0.8**
	baz=222						
ELDTW				*e*S	**Sn**	**15 00 12.5**	**-1.7**
	baz=222						
EDH	**Donghe**	**1.92**	**213**	*e*P	**Pn**	**14 59 50.6**	**-0.4**
	baz=212						
EDH				*e*S	**Sn**	**15 00 11.9**	**-2.3**
	baz=212						
WTK	**Tuku**	**2.09**	**245**	*e*P	**Pn**	**14 59 53.5**	**+0.3**
	baz=244						
WTK				*e*S	**Sn**	**15 00 17.2**	**-1.0**
	baz=244						
CHN4	**Tsaushan**	**2.10**	**235**	*e*P	**Pn**	**14 59 54.9**	**+1.5**
	baz=233						
TPUB	**Ta-pu**	**2.10**	**233**	*e*P	**Pn**	**14 59 53.9**	**+0.4**
	baz=231						
TWK	**Hsinying**	**2.23**	**234**	*e*P	**Pn**	**14 59 56.2**	**+1.0**
	baz=233						

ECX ***31*** *14:59:36.1±0.5, 30°.70N×114°.13W, h20^{km}±11^{km}, MD3.1, ML3.3*

MEX ***31*** *14:59:38.3±0.3, 31°.31N×114°.20W, h5^{km}, MD3.9*

ISC 31 14:59:36.0±1.8**, 30°.9N**±0°.1×**114°.21W**±0°.05**, h13**^{km}±12^{km}**, n12, σ1^{s}.11**/15**, 3C-2D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.56**	**282**	*e*P	**Pb**	**14 59 48.8**	**+1.2**
SFX				*e*S	**Sn**	**14 59 58.3**	**-0.4**
SFX				⇑*e*		14 59 59.8	
SFX				IAML		14 59 59.8	
	comp=E,979nm,0.6s						
ECBX	**El Chinero**	**0.90**	**308**	*e*P	**Pg**	**14 59 53.5**	**0.0**
ECBX				*e*S	**Sn**	**15 00 08.2**	**+1.0**
PIX	**Pinacate**	**0.91**	**45**	⇓*e*P	**Pb**	**14 59 53.8**	**+0.2**
SPX	**San Pedro Mart**	**1.08**	**276**	*e*P	**Pg**	**14 59 56.7**	**-0.2**
SPX				IAML		15 00 31.4	
	comp=N,652nm,0.6s						
SPX				IAML		15 00 31.8	
	comp=E,494nm,0.7s						
SPX				⇓*e*		15 00 31.8	
SPIG	**San Pedro Mart**	**1.08**	**277**	*e*P	**Pg**	**14 59 56.9**	**0.0**
	baz=76,slow=18						
SPIG				*e*S	**Sb**	**15 00 11.8**	**+0.9**
SPIG	**San Pedro Mart**	**1.08**	**277**	*e*P	**Pg**	**14 59 56.6**	**-0.3**
SPIG				*e*S	**Sn**	**15 00 13.1**	**+1.0**
SQX	**San Quintin**	**1.47**	**257**	*e*P	**Pn**	**15 00 01.6**	**-0.6**
SQX				*e*S	**Sn**	**15 00 20.7**	**-0.5**
214A	**Organ Pipe Nat**	**1.58**	**49**	*e*P	**Pn**	**15 00 04.3**	**+0.5**
CPBX	**Cerro Prieto**	**1.76**	**328**	IAML		15 00 58.8	
	comp=N,656nm,1.0s						
CPBX				*e*		15 00 58.8	
CPBX				⇑*e*		15 01 17.3	
CPBX				IAML		15 01 17.3	
	comp=E,709nm,0.6s						
CBX	**Cerro Bola**	**2.51**	**304**	IAML		15 01 10.4	
	comp=N,192nm,0.7s						
CBX				⇑*e*		15 01 10.4	
TJIG	**Tijuana**	**2.58**	**306**	*i* P	**Pn**	**15 00 14.9**	**-2.6**
TUC	**Tucson**	**3.24**	**64**	*i* P	**Pn**	**15 00 25.4**	**-1.2**

NOU ***31*** *15:02:38.1, 19°.78S×133°.79E, h0^{km}, mb3.9, Northern Territory, Australia*

IDC ***31*** *15:02:39.7±1.5, 19°.84S×133°.89E, h0^{km}, mb3.7/1, mb1 3.7/3, mb1mx3.5/31, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=9.8km s-min=4.3km az=104.0*

AUST ***31*** *15:02:39.0±1.1, 19°.68S×133°.95E, h10^{km}, Error ellipse: s-maj=23.2km s-min=7.7km az=48.0*

ISC 31 15:02:38.2±0.8**, 19°.88S**±0°.06×**133°.81E**±0°.05**, h10**^{km}**, n11, σ2^{s}.21**/17**, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**0.50**	**98**	Pg	**Pg**	**15 02 48.3**	**+0.4**
	15nm,0.3s,baz=283,slow=18,SNR=1055						
WRA				Lg	Lg	15 02 53.9	
	70nm,0.3s,baz=284,slow=31,SNR=41						
WB2	**Warramunga Arr**	**0.51**	**98**	P	**Pg**	**15 02 48.2**	**0.0**
	baz=0.5						
WB2				S	**Sg**	**15 02 54.6**	**-0.3**
	baz=0.5						
ASAR	**Alice Springs**	**3.77**	**179**	Pn	**Pb**	**15 03 41.8**	**-3.2**
	5.0nm,0.3s,baz=5.1,slow=15,SNR=63						
ASAR				Sn	**Sn**	**15 04 20.6**	**-0.4**
	2.6nm,0.3s,baz=2.1,slow=28,SNR=6.9						
ASAR				Lg	Lg	15 04 37.5	
	12nm,0.3s,baz=4.5,slow=30,SNR=18						
KDU	**Kakadu**	**7.26**	**350**	P	**Pn**	**15 04 25.0**	**+0.6**
	baz=7.1,SNR=19						
KDU				S	**Sn**	**15 05 44.0**	**-3.1**
	baz=7.1						
MTN	**Manton Dam**	**7.45**	**339**	P	**Pn**	**15 04 27.2**	**+0.2**
	baz=7.4,SNR=4.9						
FITZ	**Fitzroy Crossi**	**7.93**	**282**	P	**Pn**	**15 04 35.8**	**+2.1**
	baz=8.0,SNR=6.9						
FITZ				S	**Sn**	**15 06 01.2**	**-2.4**

	baz=8.0						
FITZ	**Fitzroy Crossi**	**7.93**	**282**	Pn	**Pn**	**15 04 35.7**	**+2.1**
	0.8nm,0.3s,baz=98,slow=8.6,SNR=20						
FITZ				Sn	**Sn**	**15 06 00.0**	**-3.6**
	2.1nm,0.3s,baz=126,slow=19,SNR=11						
FITZ				Lg	Lg	15 06 49.6	
	1.9nm,0.3s,baz=188,slow=21,SNR=5.6						
OOD	**Oodnadatta**	**8.07**	**168**	P	**Pn**	**15 04 38.5**	**+3.0**
	baz=8.3,SNR=3.3						
INKA	**Innaminka**	**10.07**	**142**	P	**Pn**	**15 05 04.1**	**+1.1**
	baz=10,SNR=3.6						
STKA	**Stephens Creek**	**13.84**	**151**	Pn	**Pn**	**15 05 53.4**	**-1.2**
	0.2nm,0.3s,baz=328,slow=15,SNR=5.3						
STKA				Sn	**Sn**	**15 08 28.7**	**+0.2**
	0.2nm,0.3s,baz=0.0,slow=20,SNR=1.6						
MKAR	**Makanchi Array**	**80.98**	**327**	P	**P**	**15 14 56.0**	**+3.0**
	0.4nm,0.7s,baz=134,slow=6.7,SNR=5.0						

JMA ***31*** *15:25:30.0±0.2, 29°.08N×128°.70E, h20^{km}±2^{km}, M3.6*

NIED ***31*** *15:25:30.1, 29°.08N×128°.70E, h20^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.46; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-0.12; $M_{r\theta}$-0.82; $M_{\theta\phi}$0.87; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.32000×10^{15} NP1:ϕ_s93.00000°, δ76.00000°, λ-46.00000°. NP2:ϕ_s197.00000°, δ45.00000°, λ-160.00000°.*

IDC ***31*** *15:25:35.3±1.4, 28°.91N×128°.86E, h46^{km}±17^{km}, mb3.1/5, mb1 3.4/9, mb1mx3.3/43, mbtmp3.4/9, ML3.2/4, MS3.2/2, Ms1 3.3/2, ms1mx2.8/22 Error ellipse: s-maj=38.1km s-min=11.2km az=101.0*

ISC 31 15:25:31.9±1.6, **28°.95N**±0°.05×**128°.85E**±0°.08, **h15**^{km}±11^{km}, **n23**, σ**1^{s}39**/28, **mb3.5**/4, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTAJ	**Takarajima**	**0.37**	**56**	P	**Pg**	**15 25 38.9**	**-0.6**
JTAJ				S	**Sg**	**15 25 45.0**	**+0.3**
JAMN	**Amaminishikomi**	**0.76**	**158**	P	**Pb**	**15 25 47.0**	**+0.2**
JAMN				S	**Sn**	**15 25 59.7**	**+0.5**
JAM	**Amami Oshima**	**0.85**	**129**	P	**Pb**	**15 25 49.1**	**+0.7**
JAM				S	**Sn**	**15 26 03.1**	**+1.6**
JTK	**Tokunoshima**	**1.16**	**176**	P	**Pn**	**15 25 52.7**	**-0.9**
JTK				S	**Sn**	**15 26 09.8**	**+0.6**
JZK	**Kikaishima**	**1.17**	**122**	P	**Pb**	**15 25 54.7**	**+0.9**
JNN	**Nakanoshima**	**1.26**	**45**	P	**Pn**	**15 25 52.7**	**-2.3**
JOKE	**Okinoerabujima**	**1.60**	**189**	P	**Pn**	**15 25 59.0**	**-0.6**
JKC	**Kuchinoerabu**	**1.91**	**37**	P	**Pn**	**15 26 01.6**	**-2.3**
JYAK	**Yakushimahirau**	**1.94**	**48**	P	**Pn**	**15 26 02.3**	**-2.0**
JYRO	**Yoronjima**	**1.95**	**191**	P	**Pn**	**15 26 04.4**	**0.0**
JIH	**Iheya**	**2.06**	**202**	P	**Pn**	**15 26 05.6**	**-0.3**
JOW	**Kunigami**	**2.17**	**194**	P	**Pn**	**15 26 07.0**	**-0.4**
	27nm,0.3s,baz=7.4,slow=11,SNR=20						
JOW				S	**Sn**	**15 26 34.3**	**+0.3**
	17nm,0.3s,baz=14,slow=16,SNR=3.9						
JOW	**Kunigami**	**2.17**	**194**	P	**Pn**	**15 26 07.7**	**+0.2**
JOW				S	**Sn**	**15 26 34.7**	**+0.7**
JMTN	**Minamitane**	**2.30**	**50**	P	**Pn**	**15 26 08.7**	**-0.5**
JNU	**Nakatsue**	**4.51**	**22**	P	**Pn**	**15 26 43.0**	**+3.3**
	2.4nm,0.3s,baz=210,slow=8.1,SNR=11						
KSRS	**Korea Array**	**8.52**	**355**	P	**Pn**	**15 27 37.3**	**+2.6**
	0.1nm,0.3s,baz=180,slow=14,SNR=3.3						
KSRS				S	Sn	15 29 00.5	-10
	0.1nm,0.3s,baz=174,slow=25,SNR=1.2						
KSRS				LR	LR	15 31 03.2	
	comp=Z,152nm,18.4s,baz=0.0,slow=38						
MJAR	**Matsushiro Arr**	**10.92**	**44**	P	**Pn**	**15 28 09.6**	**+1.9**
	0.0nm,0.3s,baz=232,slow=14,SNR=1.3						
KLR	**Kul'dur**	**20.38**	**5**	P	**P**	**15 30 07.2**	**-0.7**
	0.4nm,0.4s,baz=175,slow=12,SNR=2.1						
CMAR	**Chiang Mai Arr**	**29.23**	**256**	LR	LR	15 43 27.0	
	comp=Z,46nm,18.4s,baz=180,slow=37						
MKAR	**Makanchi Array**	**40.19**	**309**	P	**P**	**15 33 07.6**	**0.0**
	0.4nm,0.8s,baz=92,slow=9.3,SNR=3.0						
WRA	**Warramunga Arr**	**48.89**	**173**	P	**P**	**15 34 16.5**	**-0.8**
	0.9nm,0.7s,baz=354,slow=8.2,SNR=8.3						
ASAR	**Alice Springs**	**52.53**	**174**	P	**P**	**15 34 44.4**	**-0.3**
	0.4nm,0.8s,baz=1.2,slow=15,SNR=4.6						
ILAR	**Eielson Array**	**61.80**	**29**	P	**P**	**15 35 48.2**	**-1.5**
	0.3nm,0.8s,baz=270,slow=7.2,SNR=2.2						

BJI ***31*** *15:42:45.2±0.0, 36°.92N×137°.51E, h10^{km}, mB4.8/10, mb4.3/13, Ms4.2/8, Ms7 4.0/8*

IDC ***31*** *15:42:48.4±0.4, 37°.23N×137°.07E, h0^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/50, mbtmp4.1/27, ML3.2/3, MS3.5/15, Ms1 3.5/15, ms1mx3.3/47, Error ellipse: s-maj=12.9km s-min=8.7km az=57.0*

NIED ***31*** *15:42:51.2, 37°.26N×137°.14E, h15^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.18; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-1.07; $M_{r\theta}$-1.23; $M_{\theta\phi}$-1.32; $M_{\phi r}$0.41; Fault plane solution: $M_0$2.16000×10^{15} NP1: ϕ_s249.00000°, δ64.00000°, λ135.00000°. NP2:ϕ_s3.00000°, δ51.00000°, λ35.00000°.*

JMA ***31*** *15:42:51.1, 37°.26N×137°.14E, h15^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: ϕ_s78.00000°, δ19.00000°, λ38.00000°. NP2:ϕ_s311.00000°, δ79.00000°, λ105.00000°. Principal axes: T Plg54.0000°, Azm239.0000°; N Plg14.0000°, Azm128.0000°; P Plg32.0000°, Azm29.0000°;*

JMA Felt IV J1.

NEIC ***31*** *15:42:53.1±2.9, 37°.25N±0°.05×137°.18E±0°.07, h33^{km}±6^{km}, mb4.6/12 Error ellipse: s-maj=8.0km s-min=6.2km az=116.0*

ISC 31 15:42:51.1±1.1, **37°.24N**±0°.03×**137°.17E**±0°.04, **h16**^{km}±7^{km}, **n79**, σ**1^{s}12**/96, **mb4.5**/32, **MS3.2**/9, **2C-3D**, **Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	**0.26**	**37**	⇑P	**Pg**	**15 42 56.6**	**-0.2**
JSZ				S	**Sb**	**15 43 00.7**	**-0.9**
JJH	**Hakui**	**0.44**	**225**	⇑P	**Pg**	**15 43 00.0**	**0.0**
JHG	**Hegura jima**	**0.64**	**342**	P	**Pg**	**15 43 03.1**	**-0.6**
JHG				S	**Sg**	**15 43 11.7**	**-0.5**
JTT	**Ttatey**	**0.65**	**168**	⇓P	**Pb**	**15 43 03.7**	**-0.3**
JTT				S	**Sb**	**15 43 13.3**	**+0.6**
JJN	**Nakama**	**0.81**	**99**	⇓P	**Pb**	**15 43 06.8**	**+0.1**
JGN	**Niukaw**	**1.02**	**173**	⇓P	**Pb**	**15 43 09.7**	**-0.7**
JGN				S	**Sb**	**15 43 23.6**	**0.0**
MJB9	**Matsu-Tunnel**	**1.08**	**130**		**Pn**	**15 43 11.3**	**-0.2**
MAJO	**Matsushiro**	**1.08**	**130**		**Pb**	**15 43 11.0**	**-0.5**
MAT	**Matsushiro**	**1.08**	**130**	P	**Pb**	**15 43 10.9**	**-0.6**
MAT				S	**Sn**	**15 43 26.0**	**-0.3**
MAT	**Matsushiro**	**1.08**	**130**	P	**Pb**	**15 43 10.9**	**-0.6**
MJAR	**Matsushiro Arr**	**1.09**	**130**	Pg	**Pg**	**15 43 11.6**	**-0.5**
	83nm,0.3s,baz=310,slow=16,SNR=2983						
MJAR				Lg	Lg	15 43 26.8	
	98nm,0.3s,baz=302,slow=34,SNR=11						
MJAR	**Matsushiro Arr**	**1.09**	**130**		**Pb**	**15 43 11.3**	**-0.2**
JSD	**Sado**	**1.18**	**47**		**Pn**	**15 43 11.5**	**-1.3**
JGF	**Kuroka**	**1.64**	**175**		**Pn**	**15 43 19.1**	**-0.2**
INU	**Inuyama**	**1.89**	**184**		**Pn**	**15 43 22.2**	**-0.5**
JWT	**Wachi**	**2.42**	**217**		**Pn**	**15 43 30.4**	**+0.5**
JMM	**Marumori**	**2.95**	**77**		**Pn**	**15 43 37.8**	**+0.6**
JHS	**Saijyo**	**3.97**	**237**		**Pn**	**15 43 51.9**	**+0.6**
JMN	**Monobe**	**4.41**	**218**	Pn	**Pn**	**15 43 58.6**	**+1.2**
JHJ	**Hachijo jima 2**	**4.63**	**152**	Pn	**Pn**	**15 44 00.3**	**-0.1**
	11nm,0.3s,baz=274,slow=19,SNR=1.3						
JTM	**Tenmabayashi**	**4.67**	**39**		**Pn**	**15 44 02.6**	**+1.8**
JNU	**Nakatsue**	**6.59**	**233**	Pn	**Pn**	**15 44 28.8**	**+1.5**
	2.7nm,0.3s,baz=63,slow=7.4,SNR=16						
JNU				Lg	Lg	15 46 14.2	
	0.8nm,0.3s,baz=38,slow=19,SNR=1.0						
JNU				LR	LR	15 47 03.8	
	comp=Z,422nm,20.4s,baz=28,slow=39						
JNU	**Nakatsue**	**6.59**	**233**		**Pn**	**15 44 29.3**	**+2.0**
KSRS	**Korea Array**	**7.37**	**274**	Pn	**Pn**	**15 44 39.9**	**+1.9**
	3.5nm,0.3s,baz=88,slow=14,SNR=53						
KSRS				Sn	**Sn**	**15 45 59.2**	**-2.0**
	2.4nm,0.3s,baz=87,slow=25,SNR=10						
KSRS				LR	LR	15 47 23.4	
	comp=Z,274nm,18.4s,baz=9.5,slow=38						
KSAR	**Wonju Array Be**	**7.40**	**274**		**Pn**	**15 44 39.4**	**+1.0**
KS19	**Wonju Array Si**	**7.41**	**275**		**Pn**	**15 44 40.1**	**+1.6**
JSU	**Suzuyama**	**7.97**	**226**		**Pn**	**15 44 48.0**	**+1.8**
USA0B	**Ussuriysk Arra**	**7.99**	**332**	Pn	**Pn**	**15 44 45.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**7.99**	**332**	Pn	**Pn**	**15 44 45.7**	**-0.7**
	baz=144,slow=13,SNR=12						
USRK				Sn	**Sn**	**15 46 13.8**	**-2.6**
	baz=147,slow=22,SNR=2.1						
ASAJ	**Asahikawa**	**8.01**	**29**	Pn	**Pn**	**15 44 50.5**	**+3.8**
	0.9nm,0.3s,baz=245,slow=11,SNR=13						
ASAJ				LR	LR	15 48 10.5	
	comp=Z,326nm,18.8s,baz=332,slow=40						
JKA	**Kamikawa-asahi**	**8.01**	**29**		**Pn**	**15 44 48.9**	**+2.2**
JCJ	**Chichijima**	**10.97**	**156**	LR	LR	15 49 59.6	
	comp=Z,277nm,19.0s,baz=34,slow=39						
CN2	**Changchun**	**11.06**	**310**	*e*P	**Pn**	**15 45 30.0**	**+1.5**
CN2				*e*PP	**PnPn**	**15 45 38.5**	**+2.3**
CN2				*e*S	**Sn**	**15 47 34.3**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				LR	LR		
	comp=N,230nm,14.0s						
CN2				LR	LR		
	comp=E,650nm,14.0s						
CN2				LR	LR		
	comp=Z,440nm,15.0s						
DL2	**Dalian**	**12.36**	**282**	P	**P**	**15 45 58.8**	**+0.4**
DL2				S	Sn	15 48 23.8	+20
DL2				pmax	pmax		
	comp=Z,100nm,9.6s						
DL2				LR	LR		
	comp=N,250nm,8.3s						
DL2				LR	LR		
	comp=E,500nm,12.7s						
DL2				LR	LR		
	comp=Z,590nm,14.6s						
KLR	**Kul'dur**	**12.61**	**344**	Pn	**Pn**	**15 45 49.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=157,slow=15,SNR=2.9						
KLR				LR	LR	15 50 35.9	
	comp=Z,332nm,18.4s,baz=160,slow=37						
JOW	**Kunigami**	**12.82**	**219**	LR	LR	15 51 26.2	
	comp=Z,94nm,18.1s,baz=216,slow=41						
PETK	**Petropavlovsk-**	**21.36**	**35**	P	**P**	**15 47 37.9**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=204,slow=3.2,SNR=2.6						
PETK				LR	LR	15 56 06.3	
	comp=Z,71nm,18.3s,baz=210,slow=37						
ENH	**Enshi**	**23.99**	**261**	P	**P**	**15 48 01.3**	**-3.6**
ENH				IAmb	IAmb	15 48 06.1	
	comp=Z,13nm,0.7s						
MA2	**Magadan**	**24.01**	**17**	LR	LR	15 56 48.7	
	comp=Z,78nm,18.1s,baz=235,slow=35						
SONM	**Songino Array**	**24.87**	**305**	P	**P**	**15 48 12.8**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=99,slow=8.9,SNR=3.5						
SONM				PcP	**PcP**	**15 51 48.9**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=135,slow=2.3,SNR=4.2						
SONM				LR	LR	15 58 09.7	
	comp=Z,74nm,19.9s,baz=10,slow=37						
YAK	**Yakutsk**	**25.25**	**352**	P	**P**	**15 48 15.7**	**-0.3**
	comp=Z,5.5nm,0.5s,baz=159,slow=18,SNR=9.4						
YAK				LR	LR	15 57 53.6	
	comp=Z,145nm,20.8s,baz=218,slow=36						
SEY	**Seymchan**	**27.36**	**15**	P	**P**	**15 48 35.5**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=197,slow=19,SNR=2.7						
TLY	**Talaya**	**27.66**	**312**	LR	LR	16 00 06.4	
	comp=Z,63nm,20.9s,baz=105,slow=38						
TIXI	**Tiksi**	**34.75**	**355**	P	**P**	**15 49 39.9**	**-0.1**
TIXI				IAmb	IAmb	15 49 44.6	
	comp=Z,6.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.30**	**251**	P	**P**	**15 50 11.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=46,slow=9.1,SNR=4.8						
CMAR				PcP	**PcP**	**15 52 25.6**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=354,slow=2.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**39.27**	**312**	P	**P**	**15 50 19.2**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=93,slow=7.9,SNR=2.5						
ZALV				PcP	**PcP**	**15 52 26.4**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=89,slow=2.2,SNR=5.5						
ZALV				LR	LR	16 08 29.4	
	comp=Z,23nm,21.6s,baz=84,slow=39						
MK31	**Makanchi Array**	**41.12**	**301**	P	**P**	**15 50 34.9**	**+0.7**
MKAR	**Makanchi Array**	**41.12**	**301**	P	**P**	**15 50 32.8**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=94,slow=13,SNR=4.1						
MKAR				PcP	**PcP**	**15 52 32.3**	**-1.1**
	comp=Z,0.8nm,1.0s,baz=70,slow=3.0,SNR=3.5						
NRIK	**Noril'sk**	**41.68**	**336**	PcP	**PcP**	**15 52 34.5**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=118,slow=4.4,SNR=3.9						
NRIK				LR	LR	16 08 50.9	
	comp=Z,229nm,19.0s,baz=100,slow=38						
KURK	**Kurchatov**	**43.12**	**308**	P	**P**	**15 50 49.0**	**-1.4**
KURK				IAmb	IAmb	15 51 01.1	
	comp=Z,3.5nm,0.8s						
KURBB	**Kurchatov Arra**	**43.19**	**307**	P	**P**	**15 50 49.5**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=85,slow=8.8,SNR=13						
KURBB				PcP	**PcP**	**15 52 38.6**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=88,slow=3.8,SNR=4.3						
IMAR	**Indian Mountai**	**48.21**	**31**	P	**P**	**15 51 31.4**	**+0.9**
IMAR				PcP	**PcP**	**15 52 58.7**	**+1.4**
SOEI	**Soe**	**48.29**	**197**	P	**P**	**15 51 30.4**	**-1.3**
BATI	**Baumata**	**48.87**	**198**	P	**P**	**15 51 34.7**	**-1.4**
	comp=Z,28nm,0.5s,baz=322,slow=1.4,SNR=8.1						
PSI	**Prapat**	**49.06**	**235**	P	**P**	**15 51 37.4**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=0.3,slow=3.7,SNR=3.7						
GSI	**Gunungsitoli**	**51.06**	**235**	P	**P**	**15 51 53.3**	**+0.5**
ILAR	**Eielson Array**	**51.13**	**32**	P	**P**	**15 51 52.3**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=269,slow=4.6,SNR=9.6						
BCAR	**Beaver Creek A**	**53.63**	**34**	P	**P**	**15 52 12.3**	**+1.0**
INK	**Inuvik**	**55.74**	**27**	P	**P**	**15 52 26.9**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=286,slow=8.7,SNR=2.1						
INK				LR	LR	16 18 48.5	
	comp=Z,43nm,20.1s,baz=248,slow=39						
FITZ	**Fitzroy Crossi**	**56.10**	**193**	P	**P**	**15 52 29.8**	**+0.2**
	comp=Z,5.2nm,0.8s,baz=0.0,slow=6.1,SNR=7.5						
WB0	**Warramunga Arr**	**56.76**	**183**	P	**P**	**15 52 33.7**	**-0.6**
WB0				IAmb	IAmb	15 52 33.9	
	comp=Z,7.3nm,1.1s						
WRAB	**Tennant Creek**	**56.93**	**183**	P	**P**	**15 52 34.9**	**-0.5**
WRAB				IAmb	IAmb	15 52 35.1	
	comp=Z,8.4nm,1.1s						
WRAB				PcP	**PcP**	**15 53 31.6**	**+0.9**
WB2	**Warramunga Arr**	**56.94**	**183**	P	**P**	**15 52 34.9**	**-0.6**
WB2				IAmb	IAmb	15 52 35.2	
	comp=Z,6.3nm,0.9s						
WB2				PcP	**PcP**	**15 53 31.3**	**+0.6**
WRA	**Warramunga Arr**	**56.94**	**183**	P	**P**	**15 52 34.6**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=359,slow=7.7,SNR=63						
WRA				PcP	**PcP**	**15 53 31.1**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=357,slow=4.3,SNR=9.4						
WRA	**Warramunga Arr**	**56.94**	**183**	P	**P**	**15 52 34.2**	**-1.3**
WRA				PcP	**PcP**	**15 53 31.1**	**+0.4**
WR0	**Warramunga Arr**	**56.95**	**183**	P	**P**	**15 52 34.9**	**-0.6**
WR0				IAmb	IAmb	15 52 35.8	
	comp=Z,5.7nm,0.9s						
WR0				PcP	**PcP**	**15 53 31.1**	**+0.4**
AS31	**Alice Springs**	**60.66**	**183**	P	**P**	**15 53 00.9**	**-0.4**
ASAR	**Alice Springs**	**60.66**	**183**	P	**P**	**15 53 00.9**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=359,slow=6.6,SNR=52						
ASAR				PcP	**PcP**	**15 53 46.0**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=15,slow=5.0,SNR=5.0						
ARCES	**ARCESS Array B**	**62.58**	**338**	P	**P**	**15 53 13.6**	**-0.3**
	comp=Z,5.8nm,1.0s,baz=45,slow=9.0,SNR=2.0						
RES	**Resolute Bay**	**63.22**	**14**	P	**P**	**15 53 17.8**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=306,slow=8.8,SNR=3.6						
YKA	**Yellowknife Ar**	**65.31**	**29**	P	**P**	**15 53 32.0**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=311,slow=5.9,SNR=4.5						
FINES	**FINESS Array B**	**67.02**	**331**	P	**P**	**15 53 42.2**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=116,slow=8.7,SNR=7.8						
STKA	**Stephens Creek**	**68.88**	**176**	P	**P**	**15 53 54.9**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=349,slow=5.2,SNR=10						
AKASG	**Malin Array Be**	**72.02**	**321**	P	**P**	**15 54 14.8**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=53,slow=6.3,SNR=5.6						
NB2	**NORSAR Subarra**	**72.64**	**336**	P	**P**	**15 54 17.0**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**72.64**	**336**	P	**P**	**15 54 17.1**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=41,slow=6.0,SNR=4.4						
NOA				LR	LR	16 29 38.6	
	comp=Z,36nm,18.5s,baz=20,slow=39						
NVAR	**Mina Array Bea**	**77.54**	**51**	P	**P**	**15 54 47.4**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=298,slow=5.2,SNR=8.1						
PDAR	**Pinedale Array**	**79.89**	**43**	P	**P**	**15 54 59.5**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=321,slow=2.1,SNR=6.4						
TXAR	**Lajitas Array**	**92.63**	**50**	P	**P**	**15 56 02.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=316,slow=5.0,SNR=2.5						

IDC ***31*** *16:13:49.1±5.5, 36°.59N×141°.72E, h34^{km}±45^{km}, mb3.2/3, mb1 3.5/6, mb1mx3.2/41, mbtmp3.6/6, ML3.0/3, MS2.7/2, Ms1 2.7/2, ms1mx2.4/19, Error ellipse: s-maj=37.8km s-min=23.6km az=87.0*

JMA ***31*** *16:13:49.4±0.2, 36°.70N×141°.35E, h50^{km}±3^{km}, M3.1*

ISC 31 16:13:48.5±1.2, **36°.69N**±0°.05×**141°.45E**±0°.08, **h26**^{km}, **n24**, σ**1^{s}19**/22, **mb3.4**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.66**	**308**	P	**Pn**	**16 14 01.7**	**-0.6**
ONAJ				*e*S	**Sb**	**16 14 10.4**	**0.0**
JHO	**Hitachi**	**0.71**	**264**	P	**Pn**	**16 14 02.3**	**-0.6**
JHYU	**Hitachinakayam**	**0.78**	**243**	P	**Pn**	**16 14 03.2**	**-0.6**
JHYU				*e*S	**Sb**	**16 14 13.1**	**-0.4**
JFFD	**Fukushimafurud**	**0.81**	**299**	P	**Pn**	**16 14 03.9**	**-0.4**
JFK	**Kawauchi**	**0.81**	**326**	P	**Pb**	**16 14 03.7**	**-0.4**
JFT	**Otama**	**1.21**	**313**	P	**Pb**	**16 14 10.7**	**-0.1**
JMM	**Marumori**	**1.28**	**336**	P	**Pn**	**16 14 10.4**	**-0.3**
JFY	**Yanaizu**	**1.57**	**298**	P	**Pb**	**16 14 16.6**	**-0.2**
JAG	**Ashikaga**	**1.63**	**261**	P	**Pn**	**16 14 15.6**	**+0.1**
MJAR	**Matsushiro Arr**	**2.61**	**268**	Pn	**Pn**	**16 14 30.8**	**+1.8**
	0.9nm,0.3s,baz=89,slow=15,SNR=67						
MJAR				Sn	**Sb**	**16 15 03.8**	**-2.5**
	0.7nm,0.3s,baz=77,slow=23,SNR=3.1						
MAT	**Matsushiro**	**2.61**	**268**	P	**Pn**	**16 14 30.9**	**+1.9**
MAT				*e*S	**Sn**	**16 14 59.4**	**-0.5**
JHJ	**Hachijo jima 2**	**3.82**	**201**	Pn	**Pn**	**16 14 46.8**	**+1.2**
	9.5nm,0.3s,baz=61,slow=19,SNR=1.5						
JHJ				Sn	**Sn**	**16 15 29.4**	**-0.3**
	13nm,0.3s,baz=344,slow=20,SNR=1.1						
ASAJ	**Asahikawa**	**7.47**	**6**	Pn	**Pn**	**16 15 36.3**	**+0.6**
	0.2nm,0.3s,baz=237,slow=26,SNR=1.1						
ASAJ				Sn	**Sn**	**16 16 58.7**	**-0.8**
	0.2nm,0.3s,baz=198,slow=20,SNR=1.4						
KSRS	**Korea Array**	**10.84**	**278**	LR	LR	16 20 40.8	
	comp=Z,22nm,18.6s,baz=80,slow=37						
YAK	**Yakutsk**	**26.41**	**348**	LR	LR	16 32 07.3	
	comp=Z,21nm,19.3s,baz=246,slow=41						
H11N2	**WAKE ISLAND Hy**	**27.95**	**120**	T	T	16 48 57.1	
	baz=313,slow=75,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**27.96**	**120**	T	T	16 48 53.3	
	baz=313,slow=75,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**27.97**	**120**	T	T	16 48 56.1	
	baz=313,slow=75,SNR=6.0						
SONM	**Songino Array**	**28.00**	**304**	P	**P**	**16 19 39.1**	**+1.9**
	0.4nm,0.5s,baz=114,slow=9.6,SNR=2.2						
H11S1	**WAKE ISLAND Hy**	**28.65**	**122**	T	T	16 49 49.9	
	baz=315,slow=76,SNR=3.8						
H11S3	**WAKE ISLAND Hy**	**28.65**	**122**	T	T	16 49 49.5	
	baz=315,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**28.67**	**122**	T	T	16 49 49.4	
	baz=315,slow=76,SNR=3.5						
MKAR	**Makanchi Array**	**44.32**	**302**	P	**P**	**16 21 58.1**	**+1.8**
	0.3nm,0.8s,baz=87,slow=9.5,SNR=2.2						
WRA	**Warramunga Arr**	**56.73**	**188**	P	**P**	**16 23 28.4**	**-1.6**
	0.5nm,1.0s,baz=6.7,slow=7.5,SNR=2.5						

IDC 31 16:39:15.1±14.0, **22°.41S**×**176°.11W**, **h0**^{km}, **mb3.7**/2, **mb1 4.1**/2, **mb1mx3.7**/28, **mbtmp3.7**/2, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.7**/41, **Error ellipse: s-maj=630.8km s-min=50.1km az=148.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.83**	**258**	LR	LR	17 05 47.4	
	comp=Z,36nm,19.2s,baz=98,slow=35						
WRA	**Warramunga Arr**	**46.11**	**263**	P	P	16 47 41.5	+0.1
	0.8nm,0.7s,baz=102,slow=8.1,SNR=3.6						
ILAR	**Eielson Array**	**89.79**	**12**	P	P	16 52 15.4	+0.4
	0.4nm,0.9s,baz=223,slow=5.5,SNR=5.1						
AKASG	**Malin Array Be**	**145.53**	**331**	PKPbc	PKPdf	16 58 53.5	-1.6
	1.0nm,0.6s,baz=39,slow=3.9,SNR=4.2						

IDC ***31*** *16:43:40.3±2.1, 7°.50S×129°.25E, h135^{km}±28^{km}, mb3.1/1, mb1 3.4/6, mb1mx3.2/37, mbtmp3.8/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/13, Error ellipse: s-maj=36.0km s-min=21.0km az=96.0*

ISC 31 16:43:37.9±0.9, **7°.59S**±0°.06×**129°.37E**±0°.10, **h100**^{km}, **n7**, σ**2^{s}86**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.21**	**245**	P	**Pn**	**16 45 09.7**	**+2.6**
	4.2nm,0.3s,baz=71,slow=4.1,SNR=4.8						
BATI				S	**Sn**	**16 46 15.0**	**-1.8**
	3.5nm,0.3s,baz=126,slow=22,SNR=11						
SIJI	**Sorong**	**6.94**	**16**	P	**Pn**	**16 45 18.8**	**+1.7**
	1.0nm,0.3s,baz=174,slow=19,SNR=12						
SIJI				S	**Sn**	**16 46 31.3**	**-3.3**
	1.2nm,0.3s,baz=230,slow=22,SNR=7.4						
FITZ	**Fitzroy Crossi**	**11.06**	**199**	P	**Pn**	**16 46 13.8**	**+0.8**
	0.4nm,0.3s,baz=18,slow=14,SNR=13						
FITZ				S	**Sn**	**16 48 11.3**	**-3.5**
	0.3nm,0.3s,baz=90,slow=18,SNR=1.6						
WRA	**Warramunga Arr**	**13.19**	**159**	P	**Pn**	**16 46 43.5**	**+2.1**
	0.5nm,0.3s,baz=341,slow=13,SNR=24						
WRA				S	**Sn**	**16 49 03.9**	**-2.7**
	0.5nm,0.3s,baz=337,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.57**	**165**	P	**P**	**16 47 27.6**	**+2.5**
	0.2nm,0.3s,baz=338,slow=10,SNR=25						
ASAR				S	**Sn**	**16 50 25.7**	**-2.5**
	0.1nm,0.3s,baz=331,slow=22,SNR=2.9						
STKA	**Stephens Creek**	**26.72**	**156**	LR	LR	17 01 42.1	
	comp=Z,64nm,18.1s,baz=195,slow=40						
MKAR	**Makanchi Array**	**68.38**	**327**	P	**P**	**16 54 26.4**	**-2.3**
	0.3nm,0.5s,baz=127,slow=6.8,SNR=3.9						

JMA 31 16:49:31.7, **35°.81N**×**136°.21E**, **h10**^{km}±1^{km}, **M2.9**, **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	**Mihama**	**0.34**	**213**	P	Pg	16 49 38.5	+0.1
JFM				S	Sg	16 49 43.1	+0.2
JKG	**Kaga**	**0.48**	**12**	P	Pg	16 49 41.3	+0.3
JKG				S	Sg	16 49 47.9	+0.6
JYTA	**Yamagatataniai**	**0.48**	**117**	P	Pg	16 49 40.8	-0.2
JYTA				S	Sg	16 49 47.1	-0.3
JWT	**Wachi**	**0.84**	**232**	P	Pg	16 49 47.7	-0.3
JKY	**Yasaka**	**0.92**	**259**	P	Pg	16 49 49.1	-0.3
JKY				S	Sg	16 50 01.4	+0.1
MAT	**Matsushiro**	**1.77**	**65**	P	Pn	16 50 03.1	+0.6
MAT				S	Sg	16 50 29.4	+0.7

IDC ***31*** *16:55:49.6±8.6, 56°.67N×168°.41W, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.3/50, mbtmp3.6/3, ML2.6/1, Error ellipse: s-maj=237.7km s-min=55.4km az=148.0*

NEIC ***31*** *16:55:51.5±1.7, 56°.67N±0°.06×169°.24W±0°.06, h10^{km}±2^{km}, ML3.4/16(AEIC), Error ellipse: s-maj=10.9km s-min=5.0km az=13.0*

AEIC ***31*** *16:55:51.5±2.8, 56°.55N±0°.05×169°.22W±0°.06, h18^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=3.6km az=211.0*

ISC 31 16:55:52.4±0.8, **56°.66N**±0°.07×**169°.06W**±0°.08, **h10**^{km}, **n19**, σ**0^{s}88**/23, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	**Saint Paul Isl**	**0.83**	**309**		**Pg**	**16 56 07.9**	**-0.4**
SPIA					**Sb**	**16 56 20.4**	**+0.3**
AKGG	**Akutan Green G**	**3.03**	**143**		**Pn**	**16 56 40.2**	**-0.1**
MSW	**Makushin Switc**	**3.05**	**154**		**Pn**	**16 56 40.1**	**-0.5**
MSW					**Sn**	**16 57 18.1**	**+1.0**
AKRB	**Akutan Reef Bi**	**3.06**	**145**		**Pn**	**16 56 41.7**	**+1.0**
AKRB					**Sn**	**16 57 17.4**	**+0.1**
AKLV	**Akutan Long Va**	**3.07**	**143**		**Pn**	**16 56 41.4**	**+0.5**
MNAT	**Makushin Natee**	**3.10**	**153**		**Pn**	**16 56 41.3**	**0.0**
MAPS	**Pakushin South**	**3.11**	**156**		**Pn**	**16 56 41.2**	**-0.2**
MAPS					**Sn**	**16 57 17.2**	**-1.4**
AKBBA	**Akutan Broad B**	**3.13**	**144**		**Pn**	**16 56 41.2**	**-0.6**
AKUT	**Akutan**	**3.15**	**142**	Pn	**Pn**	**16 56 41.4**	**-0.6**
UNV	**Unalaska Valle**	**3.18**	**152**		**Pn**	**16 56 41.6**	**-0.8**
OKWE	**Okmok W'ng Wal**	**3.23**	**171**		**Pn**	**16 56 41.8**	**-1.3**
WESP	**Westdahl Peak**	**3.29**	**130**		**Pn**	**16 56 45.1**	**+1.1**
NIKH	**Nikolski High**	**3.70**	**178**		**Pn**	**16 56 49.9**	**+0.3**
MDM	**Murphy Dome**	**13.07**	**42**	Pn	**Pn**	**16 58 56.3**	**-1.6**
ILAR	**Eielson Array**	**13.49**	**44**	Pn	**Pn**	**16 59 03.6**	**+0.1**
GLB	**Gilahina Butte**	**13.80**	**59**	Pn	**Pn**	**16 59 08.1**	**+0.3**
PETK	**Petropavlovsk-**	**19.33**	**273**	P	**Pn**	**17 00 20.1**	**+1.4**
	0.1nm,0.3s,baz=72,slow=8.0,SNR=5.6						
AKASG	**Malin Array Be**	**71.94**	**348**	P	**P**	**17 07 14.6**	**-0.8**
	0.5nm,0.5s,baz=12,slow=6.2,SNR=2.4						
CMAR	**Chiang Mai Arr**	**75.87**	**282**	P	**P**	**17 07 39.9**	**+0.9**
	0.2nm,0.7s,baz=27,slow=6.1,SNR=2.5						

IDC 31 17:12:14.8±4.5, **18°.92S**×**176°.94W**, **h0**^{km}, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.8**/46, **mbtmp4.0**/3, **MS4.5**/2, **Ms1 4.5**/2, **ms1mx3.1**/49, **Error ellipse: s-maj=270.7km s-min=40.3km az=151.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	44.52	286	LR	LR	17 36 34.6	
	comp=Z,845nm,21.3s,baz=206,slow=33						
WRA	Warramunga Arr	45.83	260	P	P	17 20 38.7	-0.2
	0.5nm,0.3s,baz=96,slow=7.3,SNR=24						
ASAR	Alice Springs	45.87	255	P	P	17 20 39.1	-0.1
	2.1nm,0.6s,baz=93,slow=7.9,SNR=43						
ASAR				LR	LR	17 37 52.5	
	comp=Z,464nm,20.8s,baz=0.5,slow=34						
FITZ	Fitzroy Crossi	54.24	261	P	P	17 21 42.9	0.0
	1.4nm,0.7s,baz=96,slow=9.2,SNR=2.6						
ARCES	ARCESS Array B	127.55	350	PKP	PKPdf	17 31 20.6	-0.7
	3.5nm,1.0s,baz=20,slow=1.4,SNR=3.9						
GERES	GERESS Array B	148.93	346	PKPbc	PKPbc	17 32 04.5	-0.3
	0.6nm,0.6s,baz=20,slow=3.1,SNR=4.8						

IDC ***31*** *17:16:14.7±0.4, 56.°63N×169.°03W, h0^{km}, mb4.4/35, mb1 4.6/38, mb1mx4.5/57, mbtmp4.5/38, ML4.1/3, MS3.9/13, Ms1 3.9/13, ms1mx3.5/66, Error ellipse: s-maj=15.1km s-min=8.7km az=1.0*

AEIC ***31*** *17:16:14±2.0, 56.°69N±0.°04×169.°01W±0.°09, h31^{km}±3^{km}, Error ellipse: s-maj=7.0km s-min=5.4km az=69.0*

MOS ***31*** *17:16:14.6±0.9, 56.°68N×169.°05W, h11^{km}, mb5.0/53, Error ellipse: s-maj=9.5km s-min=5.6km az=94.5*

GCMT ***31*** *17:16:17.5±0.3, 56.°78N±0.°02×169.°05W±0.°07, h12^{km}±1^{km}, MW4.8/82, Moment Tensor Solution. s23,c26; s82,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.00±.15; M$_{\theta\theta}$1.73±.10; M$_{\phi\phi}$0.26±.09; M$_{r\theta}$0.37±.25; M$_{\theta\phi}$-0.60±.07; M$_{\phi r}$-0.34±.39; Best double couple: M$_0$2.03400×10^{16} NP1:φ$_s$105.00000°, δ39.00000°, λ-98.00000°. NP2: φ$_s$295.00000°, δ52.00000°, λ-84.00000°. Principal axes: T 1.9980, Plg7.0000°, Azm20.0000°; N 0.0700, Plg5.0000°, Azm111.0000°; P -2.0700, Plg82.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***31*** *17:16:17.4±1.8, 56.°66N±0.°06×169.°04W±0.°09, h19^{km}±1^{km}, mb4.8/149, ML4.5(AEIC) Error ellipse: s-maj=8.8km s-min=6.5km az=214.0*

ISC 31 17:16:16.7±0.7**, 56.°67N**±0.°04×**169.°05W**±0.°03**, h13**^{km}±4^{km}**, n585, σ1^{s}25**/594**, mb4.8**/173**, MS4.1**/18**, 27C-27D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.83	308		Pg	17 16 31.7	-1.1
SPIA	Saint Paul Isl	0.83	308		Sb	17 16 44.0	-0.1
AKGG	Akutan Green G	3.02	144		Pn	17 17 02.5	-1.8
MSW	Makushin Switc	3.05	154		Pn	17 17 03.2	-1.4
AKRB	Akutan Reef Bi	3.06	145		Pn	17 17 03.7	-1.0
AKLV	Akutan Long Va	3.07	144		Pn	17 17 03.9	-1.0
MNAT	Makushin Natee	3.10	153		Pn	17 17 03.9	-1.3
MAPS	Pakushin South	3.11	156		Pn	17 17 04.5	-0.9
AKBBA	Akutan Broad B	3.13	144		Pn	17 17 03.2	-2.5
MGOD	Makushin Gods	3.14	156		Pn	17 17 04.6	-1.2
AKUT	Akutan	3.15	142		Pn	17 17 05.1	-0.8
AKSA	Akutan Strait	3.18	142		Pn	17 17 05.4	-0.9
AKSA					Sn	17 17 43.9	-0.2
UNV	Unalaska Valle	3.18	152		Pn	17 17 05.7	-0.7
UNV	Unalaska Valle	3.18	152		Sn	17 17 43.1	-1.0
OKRE	Okmok R'deer P	3.19	170		Pn	17 17 04.2	-2.3
WEBT	Westdahl Beart	3.20	129		Pn	17 17 05.5	-1.2
WESP	Westdahl Peak	3.28	130		Pn	17 17 06.3	-1.5
OKFG	Magazine Ridge	3.33	168		Pn	17 17 06.9	-1.5
OKFG					Sn	17 17 44.8	-3.0
OKSP	Okmok Steeple	3.45	172		Pn	17 17 08.3	-1.9
SSLS	Shishaldin Sou	3.46	122		Pn	17 17 08.3	-2.0
FALS	False Pass	3.66	117		Pn	17 17 12.5	-0.5
NIKH	Nikolski High	3.70	178		Pn	17 17 12.9	-0.6
NIKH	Nikolski High	3.70	178		Sn	17 17 56.9	-0.1
DT1	Dutton Round H	4.12	109		Pn	17 17 17.2	-2.1
SDPT	Sand Point	4.99	102	Pn	Pn	17 17 29.6	-1.6
KOFP	Korovin Flat P	5.29	216		Pn	17 17 35.2	-0.2
ATKA	Atka Island	5.39	216		Pn	17 17 37.4	+0.7
VNHG	Veniaminof 1	5.50	91		Pn	17 17 37.2	-1.1
CNBA	Chernabura Isl	5.66	105	Pn	Pn	17 17 41.4	+1.0
CHGN	Chignik	5.91	89		Pn	17 17 42.4	-1.3
ADK	Adak	6.55	226	P	Pn	17 17 51.1	-1.5
ADK	Adak	6.55	226		Pn	17 17 51.1	-1.5
GAMB	Gambell	7.25	351		Pn	17 18 01.3	-1.0
KVTA	Katmai Vly 10	7.60	71		Pn	17 18 06.6	-0.5
ANM	Nome	8.13	11	P	Pn	17 18 13.1	-1.1
ANM	Nome	8.13	11		Pn	17 18 13.1	-1.1
OHAK	Old Harbor	8.64	80	Pn	Pn	17 18 20.9	-0.3
AMKA	Amchitka	8.66	237	Pn	Pn	17 18 23.0	+1.4
KDAK	Kodiak Island	9.00	76	Pn	Pn	17 18 27.0	+0.8
	2.2nm,0.3s,baz=283,slow=8.6,SNR=24						
KDAK				Sn	Sn	17 20 06.2	-1.2
	baz=14,slow=19,SNR=1.1						
KDAK				Lg	Lg	17 21 02.4	
	0.3nm,0.3s,baz=23,slow=15,SNR=1.3						
KDAK				LR	LR	17 21 39.2	
	comp=Z,549nm,21.5s,baz=274,slow=36						
KDAK	Kodiak Island	9.00	76	⇓*e*P	Pn	17 18 27.8	+1.6
KDAK	Kodiak Island	9.00	76	Pn	Pn	17 18 27.4	+1.1
TTA	Tatalina	9.08	41	P	Pn	17 18 26.0	-1.3
TTA	Tatalina	9.08	41	Pn	Pn	17 18 26.0	-1.3
RSO	Redoubt South	9.32	59		Pn	17 18 30.5	-0.3
CNPM	China Poot	9.85	66	Pn	Pn	17 18 39.0	+1.1
BRLK	Bradley Lake	10.07	65	Pn	Pn	17 18 40.7	-0.1
SKT	Skwentna	10.40	52		Pn	17 18 45.8	+0.4
SMY	Shemya	10.51	255	P	Pn	17 18 46.5	-0.4
SMY	Shemya	10.51	255	Pn	Pn	17 18 46.5	-0.4
PPLA	Purkeypile	10.52	47		Pn	17 18 46.5	-0.7
SUA	Susitna One	10.56	55		Pn	17 18 50.2	+2.5
O22K	Cooper Landing	10.78	61	P	Pn	17 18 55.2	+4.7
	baz=258						
O22K	Cooper Landing	10.78	61		Pn	17 18 52.7	+2.2
SEW	Seward	10.84	63	Pn	Pn	17 18 51.8	+0.5
RC01	Rabbit Creek A	10.92	58	P	Pn	17 18 54.5	+2.0
	baz=255						
CUT	Chulitna	11.11	51	P	Pn	17 18 58.1	+3.1
	baz=247						
PMR	Palmer	11.34	56		Pn	17 18 58.8	+0.6
KTH	Kantishna Hill	11.34	45		Pn	17 18 57.6	-0.7
GHO	Glory Hole Cre	11.48	55		Pn	17 19 02.8	+2.5
TRF	Thorofare Moun	11.54	46		Pn	17 19 01.7	+0.6
BPAW	Bear Paw Mtn.	11.60	43		Pn	17 19 00.3	-1.4
KNK	Knik Glacier	11.60	57		Pn	17 19 01.7	-0.1
SML	Sawmill	11.76	55		Pn	17 19 04.3	+0.3
RDOG	Red Dog Mine	11.77	11		Pn	17 19 04.0	-0.1
IMAR	Indian Mountai	11.85	32		Pn	17 19 05.1	0.0
RND	Reindeer	12.11	48	P	Pn	17 19 10.6	+1.9
RND	Reindeer	12.11	48	Pn	Pn	17 19 09.8	+1.1
GLI	Glacier Island	12.12	61	Pn	Pn	17 19 12.5	+3.6
MLY	Manley	12.20	39	P	Pn	17 19 09.2	-0.8
	baz=235,SNR=11						
BWN	Browne	12.21	44		Pn	17 19 12.0	+1.9
MCK	McKinley	12.21	46	P	Pn	17 19 12.1	+2.0
	baz=244,SNR=21						
SCM	Sheep Creek Mo	12.23	56	P	Pn	17 19 10.5	0.0
SCM	Sheep Creek Mo	12.23	56		Pn	17 19 10.4	0.0
HIN	Hinchinbrook I	12.34	63	Pn	Pn	17 19 12.6	+0.7
FID	Port Fidalgo	12.40	61	Pn	Pn	17 19 11.7	-1.0
NEA2	Nenana	12.57	43	P	Pn	17 19 17.4	+2.4
	baz=240						
DHY	Denali Highway	12.59	50	Pn	Pn	17 19 17.6	+2.1
EYAK	Cordova Ski Ar	12.72	63	Pn	Pn	17 19 18.0	+0.9
KLU	Klutina	12.80	58		Pn	17 19 18.3	+0.1
M24K	Tolsona, Glenn	12.83	55	P	Pn	17 19 21.2	+2.7
	baz=255						
M24K	Tolsona, Glenn	12.83	55		Pn	17 19 20.5	+1.9
WRH	Wood River Hil	12.88	44		Pn	17 19 20.1	+0.9
MDM	Murphy Dome	13.06	42		Pn	17 19 23.5	+1.8
CCB	Clear Creek Bu	13.07	44		Pn	17 19 22.2	+0.4
TCOL	CIGO, UAF Yank	13.16	43	P	P	17 19 28.7	-4.4
	baz=241						
TCOL	CIGO, UAF Yank	13.16	43		Pn	17 19 23.6	+0.6
COLA	College	13.16	43	⇓*e*P	Pn	17 19 24.4	+1.4
COLA	College	13.16	43		Pn	17 19 24.0	+1.0
RAGM	Ragged Mountai	13.23	64	Pn	Pn	17 19 29.0	+4.9
HDA	Harding Lake	13.29	45	P	Pn	17 19 26.2	+1.3
	baz=245						
HDA	Harding Lake	13.29	45		Pn	17 19 25.6	+0.7
PAX	Paxson	13.38	52	P	Pn	17 19 27.3	+1.2
PAX	Paxson	13.38	52		Pn	17 19 27.3	+1.2
POKR	Poker Plat Res	13.43	42	P	Pn	17 19 29.8	+3.0
	baz=241						
POKR	Poker Plat Res	13.43	42		Pn	17 19 27.4	+0.6
N25K	Chitina, Valde	13.45	58	P	Pn	17 19 27.2	+0.2
	baz=259,SNR=5.7						
N25K	Chitina, Valde	13.45	58		Pn	17 19 27.7	+0.7
IL31		13.48	44		Pn	17 19 28.4	+1.1
ILAR	Eielson Array	13.48	44	Pn	Pn	17 19 28.4	+1.0
	0.3nm,0.3s,baz=246,slow=12,SNR=17						
ILAR				Lg	Lg	17 23 23.9	
	baz=274,slow=23,SNR=0.7						
ILAR	Eielson Array	13.48	44		Pn	17 19 27.9	+0.5
COLD	Coldfoot	13.73	32	P	Pn	17 19 33.5	+2.6
	baz=229,SNR=9.3						
COLD	Coldfoot	13.73	32	Pn	Pn	17 19 31.7	+0.9
GLB	Gilahina Butte	13.79	59	Pn	Pn	17 19 31.8	+0.2
RIDG	Independent Ri	13.89	49		Pn	17 19 32.8	-0.3
VRDI	Verde Repeater	13.93	60		Pn	17 19 32.3	-1.4
CRQM	Cirque	14.03	62		Pn	17 19 35.1	0.0
MENT	Mentasta	14.14	53	P	Pn	17 19 38.4	+2.0
MCARA	McCarthy VSAT	14.15	60		Pn	17 19 36.3	-0.3
TGL	Tana Glacier	14.18	62		Pn	17 19 37.0	0.0
DOT	Dot Lake	14.19	50	P	Pn	17 19 38.0	+0.8
PRP	Porcupine Dome	14.33	42		Pn	17 19 39.0	-0.2
SCRK	Sand Creek	14.33	49	P	Pn	17 19 39.2	0.0
	baz=251						
ISLE	Juniper Island	14.40	63		Pn	17 19 38.1	-2.1
BALM	Baldy	14.44	61		Pn	17 19 39.5	-1.1
MESA	MESA	14.58	65		Pn	17 19 43.1	+0.5
YAH	Yahtse	14.69	64		Pn	17 19 43.6	-0.5
BARN	Barnard Glacie	14.77	61	P	Pn	17 19 43.8	-1.5
CTGM	Chitina Glacie	14.93	62		Pn	17 19 46.0	-1.3
FYU	Fort Yukon	14.94	39		Pn	17 19 47.7	+0.5
TABL	Table Mountain	14.99	64		Pn	17 19 47.5	-0.6
BCAR	Beaver Creek A	15.03	54		Pn	17 19 46.9	-1.6
PCA	Pinnacle	15.42	65	Pn	Pn	17 19 52.8	-0.9
PCA				IAmb	IAmb	17 20 20.8	
	comp=Z,96nm,1.5s						
BMAR	Burnt Mountain	15.61	36		Pn	17 19 54.7	-1.4
A21K	Barrow	15.63	15	P	P	17 20 01.0	+0.6
	baz=206						
A21K	Barrow	15.63	15	P	Pn	17 19 56.0	-0.2
A21K				IAmb	IAmb	17 20 16.1	
	comp=Z,75nm,1.1s						
EGAK	Eagle	15.75	48	P	Pn	17 19 58.7	+0.8
BILL	Bilibino	16.00	325	⇓*e*P	Pn	17 20 01.4	+0.2
BILL				*e*S	Sn	17 22 58.8	+0.6
BILL				MLR	MLR		
	comp=Z,285nm,13.0s						
BILL	Bilibino	16.00	325		Pn	17 20 02.2	+1.0
HYT	Haines Junctio	16.79	63	P	Pn	17 20 10.9	-0.4
HYT				IAmb	IAmb	17 20 19.9	
	comp=Z,97nm,1.6s						
SKAG	Skagway	17.94	67	P	P	17 20 26.7	+0.6
EPYK	Eagle Plains	17.99	44	P	P	17 20 26.9	+0.2
	baz=253						
EPYK	Eagle Plains	17.99	44	P	P	17 20 26.5	-0.2
WHY	Whitehorse	18.08	63	P	Pn	17 20 27.1	-0.3
BESE	Bessie Mountai	18.30	70		Pn	17 20 29.6	-0.4
BESE				IAmb	IAmb	17 20 37.7	
	comp=Z,61nm,0.9s						
SIT	Sitka	18.34	75	P	P	17 20 31.4	+0.9
SIT				IAmb	IAmb	17 20 38.3	
	comp=Z,70nm,0.9s						
JIS	Juneau Island	18.59	71	P	P	17 20 31.5	-1.7
PET	Petropavlovsk	18.85	273	*e*P	Pn	17 20 38.1	+1.4
PET				*e*S	Sn	17 24 04.2	-3.0
PET				pmax	pmax		
	comp=Z,500nm,5.7s						
PET				pmax	pmax		
	comp=Z,53nm,0.9s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
PET	Petropavlovsk	18.85	273	P	P	17 20 33.6	-2.6
PEA0B	Petropavlovsk-	19.34	273	*d* *i*P	Pn	17 20 43.5	+0.9
PEA0B	Petropavlovsk-	19.34	273	P	Pn	17 20 42.6	-0.1
PEA0B				IAmb	IAmb	17 20 45.6	
	comp=Z,105nm,1.2s						
PETK	Petropavlovsk-	19.34	273	P	Pn	17 20 43.4	+0.8
	comp=Z,1.5nm,0.3s,baz=84,slow=12,SNR=78						
PETK				LR	LR	17 28 44.2	
	comp=Z,82nm,18.6s,baz=81,slow=39						
PETK	Petropavlovsk-	19.34	273	P	Pn	17 20 42.8	+0.1
INK	Inuvik	19.77	40	P	P	17 20 46.8	+0.8
	comp=Z,0.7nm,0.3s,baz=234,slow=8.3,SNR=34						
INK				LR	LR	17 29 17.8	
	comp=Z,639nm,18.5s,baz=244,slow=40						
INK	Inuvik	19.77	40	P	P	17 20 46.3	+0.2
INK				IAmb	IAmb	17 20 52.1	
	comp=Z,26nm,0.6s						
CRAG	Craig	19.95	78	P	P	17 20 48.9	+0.7
WRAK	Wrangell Islan	20.09	75	P	Pn	17 20 50.6	-0.8
WRAK				IAmb	IAmb	17 20 56.6	
	comp=Z,56nm,1.2s						
SEY	Seymchan	20.13	304	P	Pn	17 20 51.4	-0.6
	comp=Z,28nm,0.8s,baz=99,slow=8.3,SNR=78						
SEY	Seymchan	20.13	304	⇑*i*P	Pn	17 20 51.7	-0.3
DLBC	Dease Lake	20.82	69	P	P	17 20 58.0	+0.4
	comp=Z,6.1nm,1.0s,baz=295,slow=9.6,SNR=7.3						
DLBC				LR	LR	17 28 36.1	
	comp=Z,145nm,18.4s,baz=259,slow=36						
DLBC	Dease Lake	20.82	69	P	P	17 20 58.5	+0.8
DLBC				IAmb	IAmb	17 21 07.6	
	comp=Z,37nm,1.1s						
MA2	Magadan	21.19	295	*d* *i*P	P	17 21 03.0	+1.4
MA2				pmax	pmax		
	comp=Z,51nm,1.6s						
MA2	Magadan	21.19	295	P	P	17 21 01.1	-0.4
SKR	Severo-Kuril's	21.32	269	*e*P	P	17 21 03.6	+0.7
SKR				*e*		17 21 22.0	
SKR				*e*S	Sn	17 25 04.9	-1.7
SKR				pmax	pmax		
	comp=Z,107nm,0.7s						
SKR				pmax	pmax		
	comp=Z,300nm,2.4s						
SKR				MLR	MLR		
	comp=Z,200nm,16.0s						
C36M	Paulatuk	23.35	39	P	P	17 21 24.0	-0.3
	baz=260						
C36M	Paulatuk	23.35	39	P	P	17 21 23.8	-0.5
C36M				IAmb	IAmb	17 21 30.1	
	comp=Z,38nm,1.2s						
BBB	Bella Bella	23.96	83	P	P	17 21 35.0	+4.6
	comp=Z,17nm,1.1s,baz=360,slow=4.7,SNR=3.4						
BBB				LR	LR	17 30 08.1	
	comp=Z,220nm,19.7s,baz=304,slow=35						
YKA	Yellowknife Ar	27.44	55	P	P	17 22 02.0	+0.3
	comp=Z,7.1nm,1.0s,baz=280,slow=8.6,SNR=31						
YKA				PcP	PcP	17 25 19.7	-0.2
	comp=Z,1.7nm,0.7s,baz=310,slow=1.1,SNR=6.2						
YKA				LR	LR	17 33 12.5	
	comp=Z,335nm,18.4s,baz=0.0,slow=37						
D03D	Eldon	29.16	88	P	P	17 22 18.2	+0.9
	baz=306						
TIXI	Tiksi	29.22	325	⇑*i*P	P	17 22 17.6	0.0
TIXI				pmax	pmax		
	comp=Z,22nm,1.3s						
TIXI	Tiksi	29.22	325	P	P	17 22 16.0	-1.6
B05A	Bryant	29.29	86	P	P	17 22 19.1	+0.7
	baz=305						
D05A	Enumclaw	29.97	88	P	P	17 22 25.1	+0.6
D05A				IAmb	IAmb	17 22 31.4	
	comp=Z,26nm,1.0s						
LON	Longmire	30.33	89	P	P	17 22 28.3	+0.5
YAK	Yakutsk	30.64	306	P	P	17 22 30.0	-0.1
	comp=Z,5.9nm,0.6s,baz=236,slow=1.8,SNR=2.9						
YAK				PcP	PcP	17 25 26.0	-1.9
	comp=Z,1.9nm,0.4s,baz=101,slow=5.2,SNR=2.8						
YAK				LR	LR	17 35 58.3	
	comp=Z,228nm,18.3s,baz=98,slow=39						
YAK	Yakutsk	30.64	306	*e*P	P	17 22 29.7	-0.5
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
YAK	Yakutsk	30.64	306	P	P	17 22 28.9	-1.3
YAK					PcP	17 25 25.6	-2.4
H04A	Detroit Lake	31.39	92	P	P	17 22 37.1	0.0
E07A	Sunnyside	31.52	87	P	P	17 22 38.7	+0.5
E07A				IAmb	IAmb	17 22 44.5	
	comp=Z,12nm,1.0s						
D08A	Wollman Farm,	31.74	86	P	P	17 22 40.4	+0.3
D08A				IAmb	IAmb	17 22 45.9	
	comp=Z,12nm,1.1s						
HAWA	Hanford	31.80	87	P	P	17 22 41.2	+0.6
HAWA				IAmb	IAmb	17 22 46.8	
	comp=Z,17nm,1.1s						
I04A	Tendick Farm,	31.84	94	P	P	17 22 45.2	+4.1
	baz=311						
NEW	Newport	32.02	83	P	P	17 22 41.9	-0.7
	comp=Z,4.7nm,0.9s,baz=297,slow=7.7,SNR=5.0						
NEW				LR	LR	17 34 29.2	
	comp=Z,181nm,20.1s,baz=292,slow=34						
NEW	Newport	32.02	83	P	P	17 22 42.0	-0.6
	baz=305						
NEW	Newport	32.02	83	P	P	17 22 41.9	-0.7
J04D	Umpqua Nationa	32.37	94	P	P	17 22 46.5	+0.7
	baz=311						
RES	Resolute Bay	32.45	28	P	P	17 22 48.8	+2.8
	comp=Z,2.1nm,1.1s,baz=268,slow=14,SNR=3.1						
RES				PcP	PcP	17 25 32.2	-0.4
	comp=Z,1.7nm,0.7s,baz=272,slow=4.0,SNR=6.2						
RES	Resolute Bay	32.45	28	P	P	17 22 47.2	+1.2
RES				pmax	pmax		
	comp=Z,6.0nm,3.0s						
E09A	Wood Farm, Sta	32.49	86	P	P	17 22 46.6	0.0
E09A				IAmb	IAmb	17 22 52.3	
	comp=Z,15nm,1.0s						
PINE	Pine Mountain	32.65	92	P	P	17 22 48.8	+0.5
PINE				IAmb	IAmb	17 22 55.2	
	comp=Z,25nm,1.4s						
G08A	Pilot Rock	32.79	89	P	P	17 22 49.2	-0.2
G08A				IAmb	IAmb	17 22 55.3	
	comp=Z,15nm,1.3s						
J05D	Fort Rock, OR	32.82	93	P	P	17 22 51.0	+1.2
	baz=311						
L04D	Klamath Falls	32.94	96	P	P	17 22 52.0	+1.1
	baz=312						
YBH	Yreka Blue Hor	33.05	97	P	P	17 22 53.0	+1.3
	comp=Z,1.0nm,0.5s,baz=280,slow=6.1,SNR=3.1						
YBH				LR	LR	17 34 18.9	
	comp=Z,217nm,19.0s,baz=306,slow=33						
I07A	Izee	33.26	91	P	P	17 22 53.7	+0.2
I07A				IAmb	IAmb	17 22 59.9	
	comp=Z,13nm,1.2s						
WALA	Waterton Lakes	33.32	79	P	P	17 22 55.0	+0.9
WALA				IAmb	IAmb	17 22 59.5	
	comp=Z,34nm,1.8s						
F10A	Beach Ranch, E	33.33	86	P	P	17 22 53.9	-0.2
F10A				IAmb	IAmb	17 22 59.7	
	comp=Z,14nm,1.1s						
K05A	Summer Lake	33.38	94	P	P	17 22 56.0	+1.3
N02D	Trinity Center	33.57	98	P	P	17 22 56.6	+0.3
	baz=314						
JTMT	Jette	33.88	81	P	P	17 22 58.5	-0.4
JTMT				IAmb	IAmb	17 23 04.4	
	comp=Z,17nm,1.2s						
BMO	Blue Mountains	33.98	88	P	P	17 22 59.7	-0.1
MOD	Modoc Plateau	34.26	94	P	P	17 23 01.6	-0.7
MOD				IAmb	IAmb	17 23 08.8	
	comp=Z,11nm,0.9s						
O03E	Paynes Creek	34.54	98	P	P	17 23 04.5	-0.1
	baz=314						
WVOR	Wild Horse Val	34.82	92	P	P	17 23 06.0	-1.1
WVOR				pmax	pmax		
	comp=Z,15nm,1.2s						
WVOR	Wild Horse Val	34.82	92	P	P	17 23 06.2	-0.9
WVOR				IAmb	IAmb	17 23 13.4	
	comp=Z,15nm,1.1s						
ORV	Oroville	35.22	98	P	P	17 23 10.2	-0.3
ORV				pmax	pmax		
	comp=Z,15nm,1.6s						
ORV	Oroville	35.22	98	P	P	17 23 10.2	-0.3
ORV				IAmb	IAmb	17 23 15.2	
	comp=Z,15nm,1.6s						
ZEA	Zeya	35.31	293	*e*P	P	17 23 11.2	+0.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KLR	Kul'dur	35.42	284	⇑*e*P	P	17 23 11.8	-0.2
KLR				pmax	pmax		
	comp=Z,11nm,1.8s						
BEKR	Beckworth	35.62	97	P	P	17 23 14.5	+0.4
KIP	Kipapa	36.13	162	⇓*e*P	P	17 23 19.7	+1.3
KIP				pmax	pmax		
	comp=Z,187nm,2.5s						
PAHR	Pah Rah Range	36.27	96	IAmb	IAmb	17 23 25.8	
	comp=Z,20nm,1.2s						
HLID	Hailey	36.40	87	P	P	17 23 20.3	-0.5
	baz=311						
HLID	Hailey	36.40	87	P	P	17 23 20.2	-0.5
HLID				IAmb	IAmb	17 23 25.6	
	comp=Z,23nm,1.8s						
MCMT	McKenzie Canyo	36.45	84	P	P	17 23 20.7	-0.6
BCYI	Bear Canyon	36.48	86	P	P	17 23 20.9	-0.6
FFC	Flin Flon	36.49	64	P	P	17 23 21.3	+0.1
FFC				pmax	pmax		
	comp=Z,42nm,2.0s						
FFC	Flin Flon	36.49	64	P	P	17 23 21.3	+0.1
FFC				IAmb	IAmb	17 23 26.9	
	comp=Z,42nm,2.0s						
PNTR	Pine Nut	36.59	97	P	P	17 23 23.0	+0.6
BOZ	Bozeman (W)	36.63	82	P	P	17 23 22.8	+0.1
	baz=309						
CMB	Columbia Colle	36.91	99	P	P	17 23 25.0	0.0
CMB				IAmb	IAmb	17 23 36.5	
	comp=Z,20nm,1.6s						
WAKR	Walker	37.10	98	P	P	17 23 26.3	-0.5
QLMT	Earthquake Lak	37.23	83	P	P	17 23 27.5	-0.3
YHL	Hebgen Lake	37.35	83	P	P	17 23 27.5	-1.5
RYN	Ryan	37.51	97	P	P	17 23 30.7	+0.5
YHH	Holmes Hill	37.57	83	P	P	17 23 30.5	-0.4
YMR	Madison River	37.59	83	P	P	17 23 30.6	-0.3
NVAR	Mina Array Bea	37.77	97	P	P	17 23 32.8	+0.3
	comp=Z,2.6nm,0.8s,baz=296,slow=9.0,SNR=10						
NVAR				PcP	PcP	17 25 49.8	+0.8
	comp=Z,1.7nm,0.7s,baz=276,slow=3.1,SNR=5.7						
NVAR				LR	LR	17 37 42.5	
	comp=Z,172nm,18.1s,baz=278,slow=34						
NV11	Mina Array Sit	37.85	97	P	P	17 23 33.0	-0.1
NV11				IAmb	IAmb	17 23 38.5	
	comp=Z,18nm,1.6s						
YNE	Yellowstone No	37.90	82	P	P	17 23 33.0	-0.5
YPP	Pitchstone Pla	37.93	84	P	P	17 23 34.0	+0.2
H17A	Grant Village	37.98	83	P	P	17 23 35.2	+1.0
	baz=310						
H17A	Grant Village	37.98	83	P	P	17 23 35.2	+1.0
H17A				IAmb	IAmb	17 23 41.1	
	comp=Z,16nm,1.3s						
FCC	Fort Churchill	38.16	55	P	P	17 23 34.5	-0.7
FCC				pmax	pmax		
	comp=Z,22nm,1.1s						
FCC	Fort Churchill	38.16	55	P	P	17 23 34.5	-0.7
FCC				IAmb	IAmb	17 23 42.5	
	comp=Z,22nm,1.1s						
RLMT	Red Lodge	38.23	81	P	P	17 23 36.0	-0.3
MOOW	Moose Ponds	38.30	84	P	P	17 23 37.7	+0.8
LOHW	Long Hollow	38.47	84	P	P	17 23 38.6	+0.2
REDW	Red Top Meadow	38.50	85	P	P	17 23 38.9	+0.4
TPH	Tonopah	38.62	96	P	P	17 23 39.9	+0.3
R11A	Troy Canyon, C	39.32	94	P	P	17 23 45.4	-0.1
	baz=316,SNR=12						
R11A	Troy Canyon, C	39.32	94	P	P	17 23 44.9	-0.6
R11A				IAmb	IAmb	17 23 51.2	
	comp=Z,20nm,1.4s						
BOD	Bodaibo	39.55	305	*e*P	P	17 23 46.5	-0.4
BOD				pmax	pmax		
	comp=Z,17nm,1.8s						
SPR3	Spring Creek 3	39.55	93	P	P	17 23 48.0	+0.4
SPR3				IAmb	IAmb	17 23 53.4	
	comp=Z,30nm,1.7s						
DUG	Dugway, Tooele	39.55	90	P	P	17 23 47.7	+0.3
DUG				pmax	pmax		
	comp=Z,21nm,1.4s						
DUG	Dugway, Tooele	39.55	90	P	P	17 23 47.3	-0.1
	baz=314						
DUG	Dugway, Tooele	39.55	90	P	P	17 23 47.7	+0.3
DUG				IAmb	IAmb	17 23 53.0	
	comp=Z,21nm,1.4s						
BW06	Boulder Array	39.60	84	P	P	17 23 48.5	+0.6
PD31	Pinedale Array	39.60	84	P	P	17 23 48.3	+0.5
PDAR	Pinedale Array	39.60	84	P	P	17 23 46.9	-0.9
	comp=Z,0.5nm,0.8s,baz=311,slow=5.9,SNR=2.3						
PDAR	Pinedale Array	39.60	84	P	P	17 23 48.6	+0.7
TCUT	Toone Canyon	39.69	88	P	P	17 23 49.0	+0.3
MPMC	Manual Prospec	39.94	99	P	P	17 23 51.2	+0.6
	baz=318						
TPNV	Topopah Spring	39.96	97	P	P	17 23 50.8	-0.1
	baz=317						
TPNV	Topopah Spring	39.96	97	P	P	17 23 50.3	-0.5

TPNV				IAmb	IAmb	17 23 56.9	
	comp=Z,23nm,1.1s						
PSUT	**Pine Spring**	**40.14**	**93**	P	**P**	**17 23 51.3**	**-1.1**
MJAR	**Matsushiro Arr**	**40.23**	**263**	P	**P**	**17 23 53.4**	**+0.5**
	comp=Z,12nm,1.2s,baz=35,slow=7.1,SNR=7.1						
MAJO	**Matsushiro**	**40.23**	**263**	⇓eP	**P**	**17 23 53.5**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,63nm,2.4s						
PRN	**Pahroc Range**	**40.29**	**95**	P	**P**	**17 23 53.6**	**+0.1**
PRN				IAmb	IAmb	17 23 59.5	
	comp=Z,22nm,1.1s						
MPU	**Maple Canyon**	**40.33**	**89**	P	**P**	**17 23 53.3**	**-0.6**
GSC	**Goldstone, Bar**	**40.87**	**99**	P	**P**	**17 23 59.0**	**+0.7**
	baz=318						
GSC	**Goldstone, Bar**	**40.87**	**99**	P	**P**	**17 23 58.1**	**-0.2**
GSC				IAmb	IAmb	17 24 04.3	
	comp=Z,26nm,1.4s						
SHPR	**Sheep Range**	**40.88**	**96**	P	**P**	**17 23 58.8**	**+0.3**
MVU	**Marysvale**	**41.07**	**91**	P	**P**	**17 23 59.7**	**-0.4**
RDMU	**Red Mountain**	**41.08**	**87**	P	**P**	**17 23 59.9**	**-0.2**
MSU	**Marysvale**	**41.08**	**91**	P	**P**	**17 23 59.6**	**-0.5**
CCUT	**Cedar City**	**41.12**	**93**	P	**P**	**17 23 59.8**	**-0.6**
P17A	**Butcher Ranch,**	**41.20**	**89**	P	**P**	**17 24 00.5**	**-0.6**
SZCU	**Shurtz Canyon**	**41.24**	**93**	P	**P**	**17 24 00.8**	**-0.6**
Q16A	**Castle Valley**	**41.35**	**90**	P	**P**	**17 24 01.9**	**-0.5**
MTPU	**Mount Pierson**	**41.41**	**92**	P	**P**	**17 24 02.4**	**-0.6**
HEC	**Hector,Ludlow**	**41.48**	**99**	P	**P**	**17 24 03.0**	**-0.3**
	baz=319						
LCMT	**Little Creek M**	**41.57**	**94**	P	**P**	**17 24 03.5**	**-0.5**
SRU	**San Rafael Swe**	**41.57**	**89**	P	**P**	**17 24 03.5**	**-0.6**
RSSD	**Black Hills**	**41.72**	**79**	P	**P**	**17 24 04.3**	**-1.0**
	baz=311						
RSSD	**Black Hills**	**41.72**	**79**	P	**P**	**17 24 04.0**	**-1.3**
GMRC	**Granite Mounta**	**41.88**	**98**	P	**P**	**17 24 06.5**	**-0.1**
	baz=319						
ULM	**Lac du Bonnet**	**42.11**	**66**	P	**P**	**17 24 07.5**	**-0.6**
	comp=Z,6.0nm,0.8s,baz=306,slow=6.3,SNR=4.1						
ULM	**Lac du Bonnet**	**42.11**	**66**	P	**P**	**17 24 09.4**	**+1.3**
ULM				IAmb	IAmb	17 24 12.6	
	comp=Z,21nm,1.4s						
O20A	**White River Ci**	**42.12**	**86**	P	**P**	**17 24 07.5**	**-1.0**
	baz=314						
O20A	**White River Ci**	**42.12**	**86**	P	**P**	**17 24 08.1**	**-0.5**
CN2	**Changchun**	**42.20**	**281**	eP	**P**	**17 24 08.0**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PFO	**Pinyon Flats O**	**42.33**	**100**	P	**P**	**17 24 10.1**	**-0.2**
	comp=Z,3.6nm,0.9s,baz=288,slow=7.0,SNR=3.6						
PFO	**Pinyon Flats O**	**42.33**	**100**	⇑eP	**P**	**17 24 10.5**	**+0.3**
PFO				pmax	pmax		
	comp=Z,19nm,1.3s						
PFO	**Pinyon Flats O**	**42.33**	**100**	P	**P**	**17 24 09.9**	**-0.3**
	baz=320						
PFO	**Pinyon Flats O**	**42.33**	**100**	P	**P**	**17 24 10.1**	**-0.2**
IRM	**Iron Mountain**	**42.63**	**98**	P	**P**	**17 24 13.0**	**+0.4**
	baz=319,SNR=14						
NRIK	**Noril'sk**	**42.77**	**329**	P	**P**	**17 24 13.7**	**+0.4**
	comp=Z,5.8nm,1.0s,baz=66,slow=9.0,SNR=7.8						
NRIK	**Noril'sk**	**42.77**	**329**	⇓eP	**P**	**17 24 13.3**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,13nm,1.2s						
NRIK	**Noril'sk**	**42.77**	**329**	P	**P**	**17 24 12.8**	**-0.5**
BC3	**Big Chuckawall**	**42.84**	**99**	P	**P**	**17 24 14.3**	**-0.2**
	baz=319						
PV14	**Lion Creek, Pa**	**42.92**	**89**	PcP	**PcP**	**17 26 03.1**	**-2.5**
PV22	**Blue Mesa, Par**	**42.94**	**88**	P	**P**	**17 24 14.7**	**-0.6**
PV22				IAmb	IAmb	17 24 21.1	
	comp=Z,34nm,1.6s						
PV04	**Paradox Valley**	**42.98**	**89**	IAmb	IAmb	17 24 20.5	
	comp=Z,20nm,1.2s						
PV20	**West Nyswonger**	**42.98**	**89**	P	**P**	**17 24 14.8**	**-0.7**
PV19	**Morning Glory**	**42.99**	**89**	P	**P**	**17 24 15.3**	**-0.4**
PV19				PcP	**PP**	**17 26 00.4**	**+5.1**
PV17	**East Wray Mesa**	**43.02**	**89**	P	**P**	**17 24 15.6**	**-0.4**
PV16	**Nyswonger Mesa**	**43.03**	**89**	P	**P**	**17 24 15.0**	**-1.0**
PV16				IAmb	IAmb	17 24 20.9	
	comp=Z,19nm,1.3s						
PV18	**Skein Mesa, Pa**	**43.08**	**89**	P	**P**	**17 24 14.7**	**-1.7**
PV18				IAmb	IAmb	17 24 21.3	
	comp=Z,20nm,1.3s						
PV07	**Paradox Valley**	**43.09**	**88**	IAmb	IAmb	17 24 21.4	
	comp=Z,27nm,1.4s						
PV12	**Saucer Basin,**	**43.09**	**89**	IAmb	IAmb	17 24 21.5	
	comp=Z,21nm,1.3s						
PV03	**Paradox Valley**	**43.10**	**89**	IAmb	IAmb	17 24 21.4	
	comp=Z,18nm,1.2s						
PV13	**Radium Mtn., P**	**43.19**	**89**	IAmb	IAmb	17 24 22.2	
	comp=Z,28nm,1.2s						
SWSC	**Sam W. Stewart**	**43.19**	**100**	P	**P**	**17 24 17.4**	**+0.3**
	baz=320						
PV02	**Paradox Valley**	**43.20**	**89**	P	**P**	**17 24 16.6**	**-0.8**
PV02				IAmb	IAmb	17 24 22.3	
	comp=Z,19nm,1.2s						
PV15	**Paradox Valley**	**43.24**	**88**	IAmb	IAmb	17 24 22.6	
	comp=Z,24nm,1.2s						
PV01	**Paradox Valley**	**43.34**	**89**	P	**P**	**17 24 18.1**	**-0.4**
PV01				IAmb	IAmb	17 24 23.5	
	comp=Z,19nm,1.3s						
GLA	**Glamis**	**43.64**	**99**	P	**P**	**17 24 21.2**	**+0.4**
	baz=320						
WUAZ	**Wupatki**	**43.69**	**94**	P	**P**	**17 24 21.2**	**-0.1**
	baz=318						
MVCO	**Mesa Verde**	**44.05**	**90**	P	**P**	**17 24 23.4**	**-0.9**
	baz=316						
S22A	**4UR Ranch, Cre**	**44.58**	**88**	P	**P**	**17 24 28.2**	**-0.4**
	baz=316						
W18A	**Petrified Fore**	**44.89**	**93**	P	**P**	**17 24 30.7**	**-0.3**
	baz=318						
KSRS	**Korea Array**	**45.24**	**273**	P	**P**	**17 24 33.8**	**+0.4**
	comp=Z,6.6nm,1.1s,baz=46,slow=7.6,SNR=9.8						
KSAR	**Wonju Array Be**	**45.27**	**273**	P	**P**	**17 24 32.3**	**-1.4**
SDCO	**Great Sand Dun**	**45.31**	**87**	P	**P**	**17 24 33.7**	**-0.7**
	baz=316						
SDCO	**Great Sand Dun**	**45.31**	**87**	IAmb	IAmb	17 24 38.5	
	comp=Z,21nm,1.8s						
DAG	**Danmarks Havn**	**45.51**	**9**	iP	**P**	**17 24 38.0**	**+2.9**
DAG	**Danmarks Havn**	**45.51**	**9**	iP	**P**	**17 24 38.0**	**+2.9**
	comp=Z,5.4nm,1.1s						
DAG	**Danmarks Havn**	**45.51**	**9**	iP	**P**	**17 24 38.0**	**+2.9**
DAG				IAmb	IAmb	17 24 40.0	
	comp=Z,5.4nm,1.1s						
PIX	**Pinacate**	**45.52**	**99**	P	**P**	**17 24 34.5**	**-1.2**
PIX				IAmb	IAmb	17 24 41.1	
	comp=Z,11nm,1.3s						
214A	**Organ Pipe Nat**	**45.58**	**98**	P	**P**	**17 24 36.0**	**-0.2**
	baz=320						
214A	**Organ Pipe Nat**	**45.58**	**98**	IAmb	IAmb	17 24 41.9	
	comp=Z,13nm,0.9s						
EYMN	**Ely**	**45.80**	**66**	P	**P**	**17 24 37.3**	**-0.4**
	baz=311						
EYMN	**Ely**	**45.80**	**66**	P	**P**	**17 24 38.2**	**+0.5**
TUC	**Tucson**	**46.42**	**96**	P	**P**	**17 24 42.9**	**0.0**
	baz=320						
TUC	**Tucson**	**46.42**	**96**	P	**P**	**17 24 42.8**	**-0.1**
SUMG	**Summit**	**46.62**	**18**	iP	**P**	**17 24 44.0**	**-0.4**
SUMG	**Summit**	**46.62**	**18**	P	**P**	**17 24 44.5**	**+0.1**
SUMG	**Summit**	**46.62**	**18**	iP	**P**	**17 24 44.0**	**-0.4**
	comp=Z,23nm,0.9s						
SUMG	**Summit**	**46.62**	**18**	iP	**P**	**17 24 44.0**	**-0.4**
SUMG				IAmb	IAmb	17 24 46.2	
	comp=Z,23nm,0.9s						
JNU	**Nakatsue**	**46.80**	**266**	P	**P**	**17 24 45.2**	**-0.6**
	comp=Z,20nm,1.0s,baz=4.6,slow=5.1,SNR=3.2						
ANMO	**Albuquerque**	**46.83**	**90**	P	**P**	**17 24 45.7**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=354,slow=4.9,SNR=4.1						
ANMO				PcP	**PcP**	**17 26 20.1**	**+1.0**
	comp=Z,4.7nm,0.9s,baz=280,slow=3.1,SNR=11						
ANMO	**Albuquerque**	**46.83**	**90**	⇓eP	**P**	**17 24 46.2**	**0.0**
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	**Albuquerque**	**46.83**	**90**	P	**P**	**17 24 45.8**	**-0.4**
	baz=318						
ANMO	**Albuquerque**	**46.83**	**90**	P	**P**	**17 24 45.9**	**-0.4**
ANMO					**PcP**	**17 26 20.0**	**+0.9**
ANMO				IAmb	IAmb	17 26 26.8	
	comp=Z,10.0nm,1.0s						
DBG	**Daneborg**	**47.64**	**11**	iP	**P**	**17 24 50.8**	**-1.1**
DBG				IAmb	IAmb	17 24 52.4	
	comp=Z,6.8nm,1.0s						
121A	**Cookes Peak, D**	**47.90**	**93**	P	**P**	**17 24 54.4**	**-0.1**
	baz=319						
121A	**Cookes Peak, D**	**47.90**	**93**	IAmb	IAmb	17 25 00.3	
	comp=Z,11nm,1.1s						
TLY	**Talaya**	**48.04**	**303**	eP	**P**	**17 24 56.4**	**+1.1**
TLY				pmax	pmax		
	comp=Z,38nm,1.3s						
TLY				MLR	MLR		
	comp=Z,789nm,16.0s						
ULN	**Ulaanbaatar**	**49.01**	**297**	d iP	**P**	**17 25 03.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	**Ulaanbaatar**	**49.01**	**297**	P	**P**	**17 25 03.1**	**+0.1**
ULN				IAmb	IAmb	17 25 04.7	
	comp=Z,13nm,1.1s						
ICESG	**Greenland Ices**	**49.28**	**21**	iP	**P**	**17 25 04.7**	**-0.3**
ICESG				IAmb	IAmb	17 25 05.7	
	comp=Z,7.9nm,0.7s						
SONM	**Songino Array**	**49.35**	**298**	P	**P**	**17 25 06.9**	**+1.3**
	comp=Z,5.5nm,0.9s,baz=54,slow=7.9,SNR=22						
SONM				PcP	**PcP**	**17 26 28.3**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=50,slow=2.5,SNR=5.0						
SONM	**Songino Array**	**49.35**	**298**	P	**P**	**17 25 05.3**	**-0.2**
SONM					**PcP**	**17 26 27.5**	**-0.4**
BJI	**Beijing**	**49.79**	**284**	P	**P**	**17 25 10.0**	**+1.2**
BJI				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI				LR	LR		
	comp=N,680nm,11.6s						
BJI				LR	LR		
	comp=E,230nm,9.6s						
BJI				LR	LR		
	comp=Z,520nm,31.3s						
MNTX	**Cornudas Mount**	**49.85**	**92**	P	**P**	**17 25 09.4**	**0.0**
	baz=320,SNR=12						
MNTX	**Cornudas Mount**	**49.85**	**92**	IAmb	IAmb	17 25 14.9	
	comp=Z,18nm,1.2s						
E46A	**Sault Ste Mari**	**50.46**	**63**	P	**P**	**17 25 16.1**	**+2.2**
P38A	**Dawn**	**50.49**	**76**	IAmb	IAmb	17 26 50.4	
	comp=Z,20nm,1.4s						
MATQ	**Matagami**	**51.26**	**56**	P	**P**	**17 25 18.6**	**-1.1**
	baz=315						
HHC	**Hu-ho-hao-te**	**51.66**	**288**	eP	**P**	**17 25 25.0**	**+2.0**
LSQQ	**Lebel-sur-Quev**	**52.06**	**56**	P	**P**	**17 25 24.3**	**-1.4**
	baz=316						
M44A	**Midewin, Midew**	**52.11**	**70**	P	**P**	**17 25 26.9**	**+0.7**
ABTX	**Abilene, Hawle**	**52.32**	**86**	P	**P**	**17 25 26.6**	**-1.3**
TX31	**Lajitas Ar. Si**	**52.61**	**92**	P	**P**	**17 25 29.0**	**-1.2**
TX32	**Lajitas Array**	**52.61**	**92**	P	**P**	**17 25 29.7**	**-0.5**
TX32				IAmb	IAmb	17 25 35.3	
	comp=Z,20nm,1.3s						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**17 25 29.6**	**-0.7**
	comp=Z,3.3nm,0.9s,baz=299,slow=5.6,SNR=16						
TXAR	**Lajitas Array**	**52.61**	**92**	P	**P**	**17 25 29.1**	**-1.1**
ARCES	**ARCESS Array B**	**53.66**	**354**	P	**P**	**17 25 38.6**	**+1.3**
	comp=Z,4.7nm,1.0s,baz=9.3,slow=12,SNR=1.7						
JCT	**Junction City**	**53.87**	**88**	P	**P**	**17 25 37.9**	**-1.5**
	baz=320						
JCT	**Junction City**	**53.87**	**88**	IAmb	IAmb	17 26 50.8	
	comp=Z,11nm,0.8s						
SADO	**Sadowa**	**54.14**	**62**	LR	LR	17 50 27.3	
	comp=Z,214nm,19.6s,baz=332,slow=38						
D55A	**Sainte-Anne-du**	**54.23**	**57**	P	**P**	**17 25 40.8**	**-1.0**
	baz=317						
NJ2	**Nanjing**	**54.23**	**275**	eP	**P**	**17 25 42.3**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZALV	**Zalesovo Beam**	**54.42**	**316**	P	**P**	**17 25 42.0**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=53,slow=5.7,SNR=5.5						
ZALV				PcP	**PcP**	**17 26 46.6**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=28,slow=6.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**54.42**	**316**	P	**P**	**17 25 43.3**	**+0.3**
D58A	**Chemin du LacG**	**55.37**	**56**	P	**P**	**17 25 51.6**	**+1.6**
	baz=318						
ERPA	**Erie**	**55.68**	**64**	P	**P**	**17 25 52.4**	**+0.1**
	baz=318						
M53A	**WI Miller and**	**55.84**	**65**	P	**P**	**17 25 53.2**	**-0.3**
	baz=318						
ALLY	**Alegheny Colle**	**55.95**	**65**	P	**P**	**17 25 54.0**	**-0.3**
M54A	**Oil Creek Stat**	**56.29**	**65**	P	**P**	**17 26 01.2**	**+4.5**
	baz=319						
D60A	**Saint Jean D'O**	**56.39**	**55**	P	**P**	**17 26 00.4**	**+3.1**
	baz=319						
O53A	**New Philadelph**	**56.46**	**67**	P	**P**	**17 26 01.2**	**+3.3**
	baz=319						
HKT	**Hockley**	**56.46**	**86**	⇑eP	**P**	**17 25 59.7**	**+1.8**
HKT				pmax	pmax		
	comp=Z,7.0nm,1.5s						
N54A	**Moraine State**	**56.54**	**65**	P	**P**	**17 25 57.5**	**-1.0**
	baz=319						
DGZ	**Jazzator, Alta**	**56.61**	**311**	d iP	**P**	**17 25 59.9**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,12nm,1.2s						
CLTN	**Cedars of Leba**	**56.93**	**73**	P	**P**	**17 25 59.9**	**-1.4**
M57A	**Sunshine Farm,**	**57.68**	**63**	P	**P**	**17 26 09.8**	**+3.3**
	baz=319						
TMCR	**Tamitsa**	**57.72**	**346**	eP	**P**	**17 26 05.9**	**-0.5**
TMCR				pmax	pmax		
	comp=Z,20nm,1.1s						
O56A	**Blue Knob Stat**	**57.77**	**65**	P	**P**	**17 26 10.7**	**+3.4**
	baz=319						
R54A	**Victor**	**58.13**	**68**	P	**P**	**17 26 08.3**	**-1.5**
	baz=320						
P56A	**Dayton Farm, R**	**58.22**	**66**	P	**P**	**17 26 10.1**	**-0.2**
	baz=320						
O57A	**Amberson**	**58.28**	**64**	P	**P**	**17 26 10.9**	**+0.1**
	baz=320						
TKL	**Tuckaleechee C**	**58.61**	**72**	LR	LR	17 53 04.7	
	comp=Z,209nm,19.5s,baz=324,slow=38						
GTA	**Gaotai**	**58.75**	**295**	⇓P	**P**	**17 26 14.5**	**+0.3**
GTA				pP	sP	17 26 19.5	-0.3
GTA				sP	pP	17 26 23.3	+5.0
GTA				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA				pmax	pmax		
	comp=Z,88nm,4.9s						
GTA				LR	LR		
	comp=N,290nm,16.4s						
GTA				LR	LR		
	comp=E,380nm,16.0s						
GTA				LR	LR		
	comp=Z,260nm,17.1s						
M60A	**Port Jervis**	**58.91**	**61**	P	**P**	**17 26 19.3**	**+4.2**
	baz=320						
SEM	**Semipalatinsk**	**58.94**	**316**	eP	**P**	**17 26 14.6**	**-0.9**
	baz=316						
SEM	**Semipalatinsk**	**58.94**	**316**	eP	**P**	**17 26 14.6**	**-0.9**
U54A	**Nelsons Funny**	**58.97**	**70**	P	**P**	**17 26 19.6**	**+3.9**
	baz=320						
BLA	**Blacksburg**	**59.16**	**68**	P	**P**	**17 26 20.7**	**+3.7**
	baz=320						
Q58A	**Fox Den Farm,**	**59.23**	**65**	P	**P**	**17 26 16.8**	**-0.5**
	baz=320						
LZH	**Lanzhou**	**59.23**	**290**	eP	**P**	**17 26 18.5**	**+0.8**
LZH				pP	sP	17 26 24.3	+1.0
LZH				sP	pP	17 26 26.5	+4.8
LZH				PP	**PP**	**17 28 29.8**	**+1.7**
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				pmax	pmax		
	comp=Z,97nm,5.4s						
LZH				LR	LR		
	comp=N,540nm,14.1s						
LZH				LR	LR		
	comp=E,550nm,15.2s						
LZH				LR	LR		
	comp=Z,440nm,17.3s						
S56A	**Natural Bridge**	**59.24**	**67**	P	**P**	**17 26 17.1**	**-0.4**
	baz=320						
KURK	**Kurchatov**	**59.32**	**317**	⇓eP	**P**	**17 26 18.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURK	**Kurchatov**	**59.32**	**317**	P	**P**	**17 26 17.3**	**-0.5**
ZSN	**Zaisan**	**59.43**	**311**	eP	**P**	**17 26 19.1**	**+0.3**
	comp=Z,9.4nm,1.1s,baz=311						
ZSN	**Zaisan**	**59.43**	**311**	eP	**P**	**17 26 19.0**	**+0.3**
ZSN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SVE	**Sverdlovsk**	**59.99**	**331**	⇓eP	**P**	**17 26 23.5**	**+1.2**
SVE				pmax	pmax		
	comp=Z,18nm,1.1s						
V56A	**Mocksville**	**60.20**	**69**	P	**P**	**17 26 23.7**	**-0.4**
	baz=321						
U57A	**Blanch**	**60.31**	**68**	P	**P**	**17 26 24.7**	**-0.2**
	baz=321						
BRVK	**Borovoye**	**60.34**	**323**	deP	**P**	**17 26 25.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,22nm,1.3s						
BRVK	**Borovoye**	**60.34**	**323**	P	**P**	**17 26 24.7**	**-0.1**
KLMR	**Klimovskoe**	**60.68**	**344**	eP	**P**	**17 26 24.9**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
KLMR	**Klimovskoe**	**60.68**	**344**	eP	**P**	**17 26 24.9**	**-2.1**
KLMR				AMP		17 26 33.0	
	comp=Z,20nm,1.5s						
ARU	**Arti**	**60.89**	**332**	c iP	**P**	**17 26 28.3**	**-0.2**
ARU						17 27 13.2	
ARU						17 28 40.1	
ARU				S	**S**	**17 34 49.5**	**+4.0**
ARU				SS	**SS**	**17 38 46.0**	**+2.3**
ARU				pmax	pmax		
	comp=Z,16nm,0.9s						
ARU	**Arti**	**60.89**	**332**	P	**P**	**17 26 28.3**	**-0.2**
V58A	**Windy Hill, Pi**	**60.92**	**68**	P	**P**	**17 26 28.6**	**-0.5**
	baz=321						
MK31	**Makanchi Array**	**61.02**	**312**	⇓eP	**P**	**17 26 29.2**	**-0.4**
MKAR	**Makanchi Array**	**61.02**	**312**	P	**P**	**17 26 29.6**	**0.0**
	comp=Z,3.4nm,0.9s,baz=46,slow=5.2,SNR=21						
MKAR	**Makanchi Array**	**61.02**	**312**	P	**P**	**17 26 29.1**	**-0.5**
KIRV	**Kirov**	**61.06**	**338**	⇑eP	**P**	**17 26 29.8**	**+0.2**
WMQ	**Urumqi**	**61.08**	**306**	eP	**P**	**17 26 31.5**	**+1.4**
WMQ				pP	sP	17 26 36.5	+0.8
WMQ				sP	pP	17 26 47.3	+13
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,72nm,4.1s						
WMQ				LR	LR		
	comp=N,740nm,28.8s						
WMQ				LR	LR		
	comp=E,850nm,29.0s						
WMQ				LR	LR		
	comp=Z,12µm,29.3s						
MAKZ	**Makanchi**	**61.14**	**312**	P	**P**	**17 26 29.9**	**-0.5**
V59A	**Middlesex**	**61.39**	**68**	P	**P**	**17 26 31.7**	**-0.4**
	baz=321						
W58A	**Raeford**	**61.46**	**69**	P	**P**	**17 26 32.2**	**-0.5**
	baz=321						
FINES	**FINESS Array B**	**61.63**	**352**	P	**P**	**17 26 32.3**	**-1.1**
	comp=Z,4.5nm,0.9s,baz=258,slow=9.5,SNR=5.0						
NB2	**NORSAR Subarra**	**62.63**	**360**	P	**P**	**17 26 40.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=357,slow=6.5						
NOA	**NORSAR Array B**	**62.63**	**360**	P	**P**	**17 26 40.1**	**-0.1**
	comp=Z,4.6nm,1.1s,baz=360,slow=6.3,SNR=4.5						
CD2	**Chengdu**	**63.29**	**286**	P	**P**	**17 26 46.0**	**+0.9**
CD2				pP	sP	17 26 50.8	+0.1
CD2				pmax	pmax		
	comp=Z,60nm,1.0s						
TDK	**Taldyqorghan**	**64.06**	**313**	eP	**P**	**17 26 50.2**	**+0.2**
	comp=Z,9.5nm,1.3s,baz=313						
TDK	**Taldyqorghan**	**64.06**	**313**	eP	**P**	**17 26 50.1**	**+0.2**
TDK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VSU	**Vasula**	**64.53**	**351**	⇓eP	**P**	**17 26 52.8**	**+0.1**
VSU				pmax	pmax		
	comp=Z,117nm,1.6s						
SHLS	**Shalkode**	**65.15**	**311**	eP	**P**	**17 26 56.2**	**-0.9**
	comp=Z,15nm,1.2s,baz=311						
SHLS	**Shalkode**	**65.15**	**311**	eP	**P**	**17 26 56.2**	**-0.9**
SHLS				pmax	pmax		
	comp=Z,15nm,1.2s						
KPKS	**Kokpek**	**65.21**	**312**	eP	**P**	**17 26 57.5**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=312						
KPKS	**Kokpek**	**65.21**	**312**	eP	**P**	**17 26 57.4**	**-0.1**
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GYA	**Guiyang**	**65.24**	**281**	⇑P	**P**	**17 26 59.5**	**+1.5**
GYA				pP	sP	17 27 04.8	+1.2
GYA				pmax	pmax		
	comp=Z,25nm,1.4s						
GYA				pmax	pmax		
	comp=Z,180nm,3.5s						
CHKK	**Chushkaly**	**65.58**	**313**	eP	**P**	**17 26 59.7**	**-0.1**
	baz=313						
CHKK	**Chushkaly**	**65.58**	**313**	eP	**P**	**17 26 59.7**	**-0.1**
SATY	**Saty**	**65.67**	**312**	eP	**P**	**17 27 00.8**	**+0.3**
	baz=312						
SATY	**Saty**	**65.67**	**312**	eP	**P**	**17 27 00.8**	**+0.3**
BTLS	**Baital**	**65.74**	**316**	eP	**P**	**17 27 00.9**	**+0.1**
	comp=Z,6.5nm,1.2s,baz=316						
BTLS	**Baital**	**65.74**	**316**	eP	**P**	**17 27 00.9**	**+0.1**
BTLS				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KUU	**Kurty**	**65.81**	**314**	eP	**P**	**17 27 00.8**	**-0.6**
	comp=Z,5.1nm,1.2s,baz=314						
KUU	**Kurty**	**65.81**	**314**	eP	**P**	**17 27 00.7**	**-0.6**
KUU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDOK	**Medeo**	**66.13**	**313**	eP	**P**	**17 27 03.4**	**-0.2**
	baz=313						
MDOK	**Medeo**	**66.13**	**313**	eP	**P**	**17 27 03.3**	**-0.2**
AAA	**Alma-Ata**	**66.15**	**313**	eP	**P**	**17 27 04.2**	**+0.7**
	comp=Z,8.1nm,0.8s,baz=313						
AAA	**Alma-Ata**	**66.15**	**313**	eP	**P**	**17 27 04.2**	**+0.7**
AAA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
OBN	**Obninsk**	**66.65**	**344**	⇑eP	**P**	**17 27 06.0**	**-0.4**
OBN				i		17 27 10.9	
OBN				e		17 29 33.4	
OBN				pmax	pmax		
	comp=Z,28nm,1.7s						
SGDS	**Sogindy**	**66.85**	**315**	eP	**P**	**17 27 08.1**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=315						
SGDS	**Sogindy**	**66.85**	**315**	eP	**P**	**17 27 08.1**	**+0.1**
SGDS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ABKAR	**Akbulak array**	**66.89**	**327**	P	**P**	**17 27 08.1**	**0.0**
ABKAR	**Akbulak array**	**66.89**	**327**	P	**P**	**17 27 08.5**	**+0.5**
ABKAR				IAmb	IAmb	17 27 09.6	
	comp=Z,15nm,0.9s						
TKM2	**Tokmak 2**	**66.92**	**314**	P	**P**	**17 27 09.4**	**+0.8**
	SNR=6.2						
USP	**Ospenovka**	**67.06**	**315**	P	**P**	**17 27 09.8**	**+0.4**
	SNR=9.5						
CHMS	**Chumysh**	**67.19**	**314**	P	**P**	**17 27 11.7**	**+1.5**
	SNR=6.4						
BELG	**Belogornoye**	**67.20**	**337**	deP	**P**	**17 27 09.6**	**-0.4**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBK	**Karagaybulak**	**67.40**	**314**	P	**P**	**17 27 13.2**	**+1.6**
	SNR=7.8						
AAK	**Ala-Archa**	**67.59**	**314**	P	**P**	**17 27 14.3**	**+1.5**
	SNR=6.9						
AAK	**Ala-Archa**	**67.59**	**314**	⇑iP	**P**	**17 27 13.4**	**+0.5**
AAK				pmax	pmax		
	comp=Z,41nm,1.3s						
AAK	**Ala-Archa**	**67.59**	**314**	P	**P**	**17 27 12.9**	**+0.1**
AAK				IAmb	IAmb	17 27 15.1	
	comp=Z,9.9nm,1.0s						
EKS2	**Erkin-Say**	**67.85**	**315**	P	**P**	**17 27 15.6**	**+1.1**
	SNR=11						
NACGM	**Naroch**	**68.04**	**350**	iP	**P**	**17 27 13.2**	**-2.0**
NACGM				iP	**P**	**17 27 13.2**	**-2.0**
NACGM				iP	**P**	**17 27 13.2**	**-2.0**
NACGM				iPcP	**PcP**	**17 27 41.6**	**+0.3**
NACGM				iPP	PP	17 29 34.1	-11
NACGM				iPPP	PPP	17 31 22.7	
NACGM				iS	**S**	**17 36 07.6**	**-6.3**
NACGM				iSS	**SS**	**17 40 31.2**	**-3.7**
NACGM				iSSS	SSS	17 44 03.0	
NACGM				iLQ	LQ	17 52 17.5	
NACGM				iLR	LR	17 57 27.5	
MNK	**Minsk**	**68.33**	**349**	iP	**P**	**17 27 14.7**	**-2.4**
	comp=E,2.0nm,0.8s						
MNK				iP	**P**	**17 27 14.7**	**-2.4**
	comp=N,5.0nm,0.8s						
MNK				iP	**P**	**17 27 14.7**	**-2.4**
	comp=Z,7.0nm,0.8s						
MNK				iPcP	**PcP**	**17 27 40.0**	**-2.6**
MNK				iPP	**PP**	**17 29 45.2**	**-2.0**
MNK				iPPP	PPP	17 31 23.7	
MNK				iS	**S**	**17 36 15.3**	**-2.1**
MNK				iScS	**SKSac**	**17 37 14.1**	**-1.1**
MNK				iSS	**SS**	**17 40 40.5**	**+1.1**
MNK				iSSS	SSS	17 43 56.4	
MNK				iLQ	LQ	17 52 23.4	
MNK				iLR	LR	17 57 35.4	
MNK				iLRM	MLR	17 59 38.5	
	comp=E,13nm,12.2s						
MNK				iLRM	MLR	17 59 53.3	
	comp=N,200nm,16.4s						
MNK				iLRM	MLR	17 59 57.2	
	comp=Z,91nm,14.8s						
AML	**Almayashu**	**68.33**	**315**	P	**P**	**17 27 18.6**	**+0.8**
	SNR=11						
KMI	**Kunming**	**68.43**	**283**	⇑eP	**P**	**17 27 14.3**	**-4.1**
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						

DZA	Taraz	68.60	317	eP	P	17 27 19.6	+0.5
	comp=Z,4.2nm,0.6s,baz=317						
DZA	Taraz	68.60	317	eP	P	17 27 19.5	+0.5
DZA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KK31	Karatay Array	68.73	317	P	P	17 27 20.2	+0.4
KKAR	Karatay Array	68.73	317	P	P	17 27 19.5	-0.3
KSH	Kashi	69.63	312	P	P	17 27 30.0	+4.4
KSH				pP	sP	17 27 34.0	+2.8
KSH				S	S	17 36 32.3	-1.2
KSH				sS	sS	17 36 44.5	+4.2
KSH				pmax	pmax		
	comp=Z,34nm,1.1s						
KSH				pmax	pmax		
	comp=Z,330nm,5.7s						
KSH				LR	LR		
	comp=N,490nm,5.6s						
KSH				LR	LR		
	comp=E,510nm,5.6s						
KSH				LR	LR		
	comp=Z,400nm,9.1s						
IUG	Iuzhnay	69.73	317	eP	P	17 27 26.4	+0.3
	comp=Z,7.5nm,0.9s,baz=317						
IUG	Iuzhnay	69.73	317	eP	P	17 27 26.4	+0.3
IUG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LSA	Lhasa	70.78	295	P	P	17 27 34.8	+1.6
LSA				pmax	pmax		
	comp=Z,96nm,1.1s						
AKASG	Malin Array Be	71.94	348	P	P	17 27 38.5	-0.7
	comp=Z,12nm,0.8s,baz=15,slow=5.9,SNR=29						
AKASG	Malin Array Be	71.94	348	P	P	17 27 38.5	-0.7
AKBB	Malin Array Si	71.94	348	⇓iP	P	17 27 38.2	-1.0
AKBB	Malin Array Si	71.94	348	P	P	17 27 38.3	-1.0
CLL	Collm	72.38	359	eP	P	17 27 42.0	+0.1
	comp=Z,21nm,1.4s						
CLL	Collm	72.38	359	eP	P	17 27 42.0	+0.1
CLL				pmax	pmax		
	comp=Z,21nm,1.4s						
BRG	Berggiesshubel	72.80	358	eP	P	17 27 44.8	+0.4
BRG				Amp		17 27 46.3	
	comp=Z,5.0nm,1.1s						
BRG				ex	x	17 27 49.0	
BRG				Amp		17 27 50.5	
	comp=Z,14nm,1.3s						
MEM	Membach	73.01	3	dpP	pP	17 27 50.5	+0.7
CHVC	Chvalec	73.03	357	eP	P	17 27 40.4	-5.4
CHVC				ex	x	17 27 45.9	
BTNL	Ternell	73.04	3	dpP	pP	17 27 50.7	+0.7
OSTC	Ostas	73.05	356	eP	P	17 27 46.3	+0.3
OJC	Ojcow	73.23	354	P	P	17 27 46.0	-1.0
OJC				pmax	pmax		
	comp=Z,16nm,1.2s						
OJC	Ojcow	73.23	354	P	P	17 27 47.0	0.0
OJC				IAmb	IAmb	17 27 53.2	
	comp=Z,16nm,1.2s						
DPC	Dobruska-Polom	73.26	356	eP	P	17 27 47.5	+0.3
DPC				e		17 27 52.7	
DPC	Dobruska-Polom	73.26	356	eP	P	17 27 47.5	+0.3
DPC				epP	sP	17 27 52.7	-0.2
NKC	Novy Kostel	73.46	359	eP	P	17 27 49.0	+0.6
NKC	Novy Kostel	73.46	359	eP	P	17 27 49.0	+0.6
PRU	Pruhonice	73.67	358	eP	P	17 27 50.0	+0.4
PRU				e		17 27 55.0	
PRU	Pruhonice	73.67	358	eP	P	17 27 50.0	+0.4
PRU				epP	sP	17 27 55.0	-0.2
MORC	Moravsky Berou	73.78	356	⇑P	P	17 27 50.9	+0.6
MORC	Moravsky Berou	73.78	356	eP	P	17 27 51.4	+1.1
PBCC	Pribram	73.98	358	eP	P	17 27 51.8	+0.4
VRAC	Vranov	74.29	356	⇑P	P	17 27 54.1	+0.8
VRAC	Vranov	74.29	356	eP	P	17 27 53.4	+0.2
VRAC	Vranov	74.29	356	P	P	17 27 54.0	+0.8
LANS	Liptovska Anna	74.31	354	eP	P	17 27 54.7	+1.3
LANS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LANS	Liptovska Anna	74.31	354	eP	P	17 27 54.7	+1.3
KOLS	Kolonicke sedl	74.35	352	eP	P	17 27 54.3	+0.7
KOLS				pmax	pmax		
	comp=Z,18nm,1.6s						
KOLS	Kolonicke sedl	74.35	352	eP	P	17 27 54.3	+0.7
TAPN	Taplejung	74.42	296	eP	P	17 27 55.4	+0.7
	comp=Z,188nm,1.7s						
KRUC	Moravsky	74.54	356	eP	P	17 27 54.7	0.0
KHC	Kasperske Hory	74.55	358	⇑eP	P	17 27 55.8	+1.0
KHC				pmax	pmax		
	comp=Z,53nm,1.7s						
KHC	Kasperske Hory	74.55	358	eP	P	17 27 55.5	+0.7
KHC				epP	sP	17 28 00.1	-0.3
SORM	Soroca	74.56	348	⇑P	P	17 27 54.1	-0.7
SWI	Sorong	74.57	244	P	P	17 27 55.5	+0.3
	comp=Z,40nm,1.1s						
SIJI	Sorong	74.57	244	P	P	17 27 54.1	-1.2
	comp=Z,24nm,0.9s,baz=0.6,slow=8.2,SNR=8.7						
UZH	Uzhgorod	74.65	352	eP	P	17 27 52.6	-2.7
UZH				e		17 28 11.6	
JAVC	Velka Javorina	74.69	355	eP	P	17 27 57.0	+1.4
GERES	GERESS Array B	74.83	358	P	P	17 27 56.8	+0.3
	comp=Z,1.4nm,0.8s,baz=355,slow=4.6,SNR=8.7						
GUN	Gumba	74.86	298	eP	P	17 27 57.6	+0.3
	comp=Z,40nm,0.9s						
UBPT	Khong Chiam	74.91	275	P	P	17 27 57.1	-0.1
PMG	Port Moresby	75.06	225	P	P	17 27 58.1	+0.1
	comp=Z,14nm,1.0s,baz=216,slow=19,SNR=2.5						
PMG	Port Moresby	75.06	225	⇓eP	P	17 27 58.2	+0.2
PMG				pmax	pmax		
	comp=Z,18nm,1.0s						
GOF	Gofitskoye	75.13	337	⇑eP	pP	17 28 03.2	+0.9
MODS	Modra-Piesok	75.20	356	eP	P	17 27 58.6	+0.1
MODS				pmax	pmax		
	comp=Z,25nm,1.4s						
MODS	Modra-Piesok	75.20	356	eP	P	17 27 58.6	+0.1
MODS				e		17 46 31.2	
KKN	Kakani	75.25	298	eP	P	17 27 59.6	+0.2
	comp=Z,40nm,1.2s						
PKI	Pulchoki	75.37	298	eP	P	17 28 00.3	+0.1
	comp=Z,62nm,1.2s						
BUR08	Bucovina Ar. S	75.38	350	IAmb	IAmb	17 28 08.0	
	comp=Z,13nm,1.3s						
ZST	Bratislava	75.38	356	eP	P	17 28 00.4	+0.9
ZST				pmax	pmax		
	comp=Z,74nm,1.5s						
ZST	Bratislava	75.38	356	eP	P	17 28 00.4	+0.9
BURAR	Bucovina Array	75.41	350	⇑P	P	17 27 59.9	+0.1
CM34	Chiang Mai Arr	75.44	282	P	P	17 28 01.0	+0.7
DMN	Daman	75.49	298	eP	P	17 28 01.4	+0.6
	comp=Z,71nm,1.3s						
PSZ	Piszkesteto	75.52	354	eP	P	17 28 02.5	+2.0
DANN	Dangsing	75.52	300	eP	P	17 28 01.6	+0.6
	comp=Z,88nm,0.8s						
CM33	Chiang Mai Arr	75.58	282	P	P	17 28 01.0	-0.1
CM35	Chiang Mai Arr	75.58	282	P	P	17 28 01.0	-0.1
CMMT	Chiang Mai	75.58	282	P	P	17 28 01.0	-0.1
	comp=Z,0.0nmcomp=Z,4.1nm,1.6s						
CHTO	Chiang Mai	75.58	282	P	P	17 28 01.1	0.0
CHTO				IAmb	IAmb	17 28 08.2	
	comp=Z,22nm,1.6s						
CONA	Conrad Observa	75.69	357	iP	P	17 28 01.5	+0.1
	comp=Z,5.9nm,0.9s,SNR=6.3						
PPT	Papeete	75.73	161	P	P	17 28 02.1	+0.3
	comp=Z,30nm,1.0s,baz=72,slow=19,SNR=2.0						
CM36	Chiang Mai Arr	75.74	282	P	P	17 28 03.5	+1.4
CM32	Chiang Mai Arr	75.77	282	P	P	17 28 04.0	+1.8
NIL	Nilore	75.77	310	P	P	17 28 01.7	-0.3
NIL				pmax	pmax		
	comp=Z,37nm,1.3s						
NIL	Nilore	75.77	310	P	P	17 28 01.7	-0.3
MOA	Molln	75.82	358	eP	P	17 28 01.3	-0.7
	comp=Z,2.8nm,1.1s						
CM09	Chiang Mai Arr	75.86	282	P	P	17 28 04.0	+1.3
	comp=Z,0.0nmcomp=Z,76nmcomp=Z,6.8nm,1.3s						
CM31	Chiang Mai Arr	75.88	282	P	P	17 28 04.2	+1.4
	comp=Z,0.7nmcomp=Z,2µmcomp=Z,204nm,1.2s						
CMAR	Chiang Mai Arr	75.88	282	P	P	17 28 03.5	+0.7
	comp=Z,6.2nm,1.0s,baz=17,slow=5.7,SNR=41						
CMAR	Chiang Mai Arr	75.88	282	P	P	17 28 03.4	+0.6
CM15	Chiang Mai Arr	75.89	282	P	P	17 28 04.0	+1.1
	comp=Z,0.0nmcomp=Z,74nmcomp=Z,8.5nm,1.1s						
CM02	Chiang Mai Arr	75.89	282	P	P	17 28 04.0	+1.1
	comp=Z,0.0nmcomp=Z,87nmcomp=Z,9.6nm,1.1s						
CM01	Chiang Mai Arr	75.90	282	P	P	17 28 04.3	+1.4
	comp=Z,0.0nmcomp=Z,88nmcomp=Z,9.8nm,1.1s						
CM04	Chiang Mai Arr	75.90	282	P	P	17 28 04.1	+1.1
	comp=Z,0.0nmcomp=Z,97nmcomp=Z,11nm,1.2s						
SOP	Sopron	75.91	356	eP	P	17 28 04.8	+2.2
CM05	Chiang Mai Arr	75.92	282	P	P	17 28 04.0	+0.9
	comp=Z,0.0nmcomp=Z,83nmcomp=Z,8.0nm,1.1s						
CM13	Chiang Mai Arr	75.92	282	P	P	17 28 04.0	+0.9
	comp=Z,0.0nmcomp=Z,75nmcomp=Z,8.9nm,1.1s						
BIZ	Bicaz	75.99	349	⇑P	P	17 28 03.6	+0.6
CSKK	Cskako	76.16	355	eP	P	17 28 05.6	+1.6
RETA	Reutte	76.22	0	eP	P	17 28 03.3	-1.1
	comp=Z,14nm,1.8s						
KIV	Kislovodsk	76.25	337	eP	P	17 28 05.8	+1.1
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
KIV				MLR	MLR		
	comp=Z,407nm,18.0s						
MOTA	Moosalm	76.36	360	eP	P	17 28 04.4	-0.9
	comp=Z,9.6nm,1.6s						
WATA	Walderalm	76.37	360	eP	P	17 28 04.3	-1.0
	comp=Z,12nm,1.4s						
ARSA	Arzberg	76.38	357	eP	P	17 28 03.7	-1.6
	comp=Z,9.2nm,1.2s						
MPLH	Magyarpolny	76.39	355	eP	P	17 28 04.8	-0.5
KBZ	Khabaz	76.43	337	P	P	17 28 06.5	+1.0
	comp=Z,6.4nm,0.9s,baz=86,slow=2.0,SNR=9.7						
KBZ	Khabaz	76.43	337	deP	P	17 28 06.2	+0.7
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SQTA	Sankt Quirin	76.48	360	eP	P	17 28 05.4	-0.6
	comp=Z,7.5nm,0.9s						
NCK	Nalchik	76.49	336	⇓eP	P	17 28 06.1	+0.1
NCK				pmax	pmax		
	comp=Z,20nm,1.0s						
KBA	Koelnbreinsper	76.61	358	eP	P	17 28 05.6	-1.1
	comp=Z,7.0nm,1.0s						
FETA	Feichten	76.68	0	iP	P	17 28 05.9	-1.3
	comp=Z,10nm,1.8s,SNR=6.1						
KBL	Kabul	76.72	314	P	P	17 28 06.9	-0.8
OZUR		76.86	349	⇑P	P	17 28 08.3	+0.3
ABTA	Abfaltersbach	76.95	359	eP	P	17 28 08.7	+0.2
	comp=Z,8.4nm,1.1s						
SOKA	Soboth	76.97	357	iP	P	17 28 08.7	0.0
	comp=Z,9.1nm,1.0s,SNR=5.1						
DOPR	Dopca	77.02	350	⇑P	P	17 28 09.8	+0.9
MYKA	Terra Mystica	77.05	358	eP	P	17 28 08.5	-0.6
	comp=Z,6.1nm,1.0s						
ZEI	Tsey	77.10	336	eP	P	17 28 08.0	-1.7
ZEI				pmax	pmax		
	comp=Z,19nm,1.4s						
OBKA	Obir	77.15	357	iP	P	17 28 08.8	-0.9
	comp=Z,16nm,0.9s,SNR=7.7						
MORH	Mrgy, Hungar	77.29	355	⇑P	P	17 28 10.8	+0.5
MORH	Mrgy, Hungar	77.29	355	eP	P	17 28 04.4	-5.9
MLR	Muntele Rosu	77.44	349	⇓P	P	17 28 10.5	-0.9
MLR	Muntele Rosu	77.44	349	P	P	17 28 10.5	-0.9
CFR	Carcaliu	77.50	348	⇑P	P	17 28 11.7	+0.1
VOIR		77.58	350	⇑P	P	17 28 12.2	0.0
GEYT	Alibeck	77.67	324	P	P	17 28 13.9	+1.2
	comp=Z,8.6nm,0.9s,baz=300,slow=3.3,SNR=16						
BZS	Buzias	77.69	352	⇑P	P	17 28 12.4	-0.3
GZR	Gura Zlata	77.83	352	⇑P	P	17 28 13.8	+0.3
RAR	Rarotonga	77.97	171	LR	LR	17 55 26.0	
	comp=Z,83nm,21.1s,baz=258,slow=30						
MRSI	Marisa	78.19	253	P	P	17 28 16.3	+0.5
FRGS	Fruska Gora	78.27	354	⇓P	P	17 28 15.0	-1.0
HERR	Herculane	78.36	352	⇑P	P	17 28 16.5	+0.1
MDVR	Moldovita	78.52	352	⇑P	P	17 28 17.5	+0.1
MPSI	Mapaga	79.39	254	P	P	17 28 22.8	+0.4
BRTR	Keskin Array B	82.07	343	P	P	17 28 37.5	+0.9
	comp=Z,3.2nm,0.8s,baz=70,slow=1.4,SNR=9.3						
BRTR	Keskin Array B	82.07	343	P	P	17 28 36.6	-0.1
MARD	Mardin	83.03	336	P	P	17 28 41.5	-0.1
ESDC	Sonseca Array	83.20	12	P	P	17 28 42.3	-0.1
	comp=Z,4.2nm,1.0s,baz=352,slow=7.3,SNR=5.8						
HYB	Hyderabad	87.29	298	iP	P	17 29 03.0	-0.2
WRAB	Tennant Creek	89.81	232	⇓eP	P	17 29 13.1	-1.7
WRAB				pmax	pmax		
	comp=Z,17nm,2.5s						
WRA	Warramunga Arr	89.82	232	P	P	17 29 13.8	-1.0
	comp=Z,1.3nm,1.0s,baz=38,slow=5.1,SNR=5.2						
WRA	Warramunga Arr	89.82	232	iP	P	17 29 14.6	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	89.82	232	P	P	17 29 15.1	+0.2
FITZ	Fitzroy Crossi	92.18	240	P	P	17 29 25.7	-0.1
	comp=Z,3.9nm,1.0s,baz=62,slow=8.1,SNR=4.2						
ASAR	Alice Springs	93.29	230	P	P	17 29 30.8	-0.1
	comp=Z,1.3nm,0.9s,baz=30,slow=3.5,SNR=7.3						
PLCA	Paso Flores	127.16	109	PKP	PKPdf	17 35 19.9	-0.1
	comp=Z,2.8nm,1.0s,baz=0.2,slow=7.7,SNR=5.0						
LBTB	Lobatse	146.64	335	PKPbc	PKPbc	17 35 58.4	+0.5
	comp=Z,12nm,1.0s,baz=53,slow=4.5,SNR=10						
LBTB	Lobatse	146.64	335		PKPbc	17 35 58.0	+0.2
BOSA	Boshof	150.18	334	PKPbc	PKPbc	17 36 06.2	-0.8
	comp=Z,4.7nm,0.7s,baz=69,slow=2.1,SNR=5.8						
MAW	Mawson	154.24	224	PKPbc	PKiKP	17 36 14.8	0.0
	comp=Z,1.1nm,0.3s,baz=315,slow=2.9,SNR=1.9						

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*AEIC **31** 17:21:29±1.5, 56°.67N±0°.05×168°.88W±0°.08, h20^{km}±1^{km}, Error ellipse: s-maj=8.1km s-min=5.5km az=216.0*

*NEIC **31** 17:21:30.8±1.5, 56°.65N±0°.05×168°.97W±0°.08, h7^{km}±4^{km}, mb4.6/77, ML4.2(AEIC), Error ellipse: s-maj=8.4km s-min=5.2km az=215.0*

*IDC **31** 17:21:30.7±0.7, 56°.75N×168°.96W, h0^{km}, mb4.1/22, mb1 4.3/25, mb1mx4.2/63, mbtmp4.1/25, ML3.8/3, Error ellipse: s-maj=23.5km s-min=11.4km az=5.0*

ISC 31 17:21:31.5±0.4**, 56°.63N**±0°.06×**168°.95W**±0°.04**, h10**^{km}**, n212, σ1**^{s}**14**/215**, mb4.5**/66**, 2C-1D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.90	308		Pg	17 21 47.1	-1.6
SPIA	Saint Paul Isl	0.90	308		Sg	17 21 59.4	-0.9
AKGG	Akutan Green G	2.96	144		Pn	17 22 17.3	-1.3
MSW	Makushin Switc	2.99	155		Pn	17 22 18.9	-0.1
MSW					Sn	17 22 53.6	-1.2
AKRB	Akutan Reef Bi	3.00	146		Pn	17 22 18.9	-0.1
AKLV	Akutan Long Va	3.01	144		Pn	17 22 18.5	-0.6
MNAT	Makushin Natee	3.04	154		Pn	17 22 19.4	-0.3
MAPS	Pakushin South	3.06	157		Pn	17 22 19.6	-0.1
AKBBA	Akutan Broad B	3.07	145		Pn	17 22 19.3	-0.7
AKUT	Akutan	3.09	143		Pn	17 22 19.6	-0.6
UNV	Unalaska Valle	3.12	152		Pn	17 22 22.3	+1.6
UNV	Unalaska Valle	3.12	152		Sn	17 22 57.8	-0.3
OKRE	Okmok R'deer P	3.15	171		Pn	17 22 19.9	-1.2
WESP	Westdahl Peak	3.22	130		Pn	17 22 21.5	-0.6
OKFG	Magazine Ridge	3.28	169		Pn	17 22 22.6	-0.3
FALS	False Pass	3.60	117	Pn	Pn	17 22 28.8	+1.6
NIKH	Nikolski High	3.67	179	Pn	Pn	17 22 28.6	+0.5
DT1	Dutton Round H	4.06	109		Pn	17 22 32.1	-1.4
SDPT	Sand Point	4.93	102	Pn	Pn	17 22 45.3	-0.2
ATKA	Atka Island	5.39	217	Pn	Pn	17 22 52.5	+0.7
CNBA	Chernabura Isl	5.59	105	Pn	Pn	17 22 52.9	-1.7
CHGN	Chignik	5.85	89	Pn	Pn	17 22 57.8	-0.3
ADK	Adak	6.57	227	Pn	Pn	17 23 07.2	-0.7
PLK3	Peulik 3	6.98	76		Pn	17 23 13.4	-0.2
ANM	Nome	8.15	11	Pn	Pn	17 23 28.9	-0.8
OHAK	Old Harbor	8.59	80	Pn	Pn	17 23 36.8	+1.1
AMKA	Amchitka	8.69	238	Pn	Pn	17 23 38.6	+1.5
KDAK	Kodiak Island	8.96	76	Pn	Pn	17 23 42.3	+1.5
	0.9nm,0.3s,baz=298,slow=7.6,SNR=9.4						
KDAK				Sn	Sn	17 25 23.1	+1.5
	baz=288,slow=20,SNR=1.5						
KDAK	Kodiak Island	8.96	76	Pn	Pn	17 23 42.7	+1.9
TTA	Tatalina	9.07	41	Pn	Pn	17 23 41.5	-0.8
RSO	Redoubt South	9.29	59	Pn	Pn	17 23 44.4	-1.1
CNPM	China Poot	9.82	65	Pn	Pn	17 23 54.6	+2.1
BRLK	Bradley Lake	10.03	64	Pn	Pn	17 23 55.9	+0.5
SKT	Skwentna	10.38	52	Pn	Pn	17 24 00.4	+0.3
PPLA	Purkeypile	10.51	46	Pn	Pn	17 24 02.5	+0.5
SUA	Susitna One	10.54	55	Pn	Pn	17 24 03.7	+1.3
SMY	Shemya	10.56	255	Pn	Pn	17 24 00.7	-1.9
O22K	Cooper Landing	10.74	61	Pn	Pn	17 24 03.2	-1.9
SEW	Seward	10.80	63	Pn	Pn	17 24 08.3	+2.3
PMR	Palmer	11.31	56	Pn	Pn	17 24 13.8	+0.9
KTH	Kantishna Hill	11.33	45	Pn	Pn	17 24 16.5	+3.2
TRF	Thorofare Moun	11.53	46	Pn	Pn	17 24 17.0	+1.0
KNK	Knik Glacier	11.57	57	Pn	Pn	17 24 16.8	+0.3
BPAW	Bear Paw Mtn.	11.59	42	Pn	Pn	17 24 15.2	-1.5
SML	Sawmill	11.74	55	Pn	Pn	17 24 17.8	-1.0
RND	Reindeer	12.09	48	Pn	Pn	17 24 24.4	+0.8
SCM	Sheep Creek Mo	12.20	56	Pn	Pn	17 24 24.9	-0.3
KLU	Klutina	12.77	58	Pn	Pn	17 24 33.2	+0.3
M24K	Tolsona, Glenn	12.80	55	Pn	Pn	17 24 35.0	+1.6
WRH	Wood River Hil	12.87	44	Pn	Pn	17 24 35.8	+1.7
MDM	Murphy Dome	13.05	42	Pn	Pn	17 24 36.5	-0.1
CCB	Clear Creek Bu	13.06	43	Pn	Pn	17 24 35.1	-1.6
HDA	Harding Lake	13.28	45	Pn	Pn	17 24 42.5	+2.7
PAX	Paxson	13.36	52	Pn	Pn	17 24 42.5	+1.5
N25K	Chitina, Valde	13.42	58	Pn	Pn	17 24 41.1	-0.7
IL31		13.46	44	Pn	Pn	17 24 42.0	-0.3
ILAR	Eielson Array	13.46	44	Pn	Pn	17 24 44.9	+2.6
	0.1nm,0.3s,baz=238,slow=9.8,SNR=1.1						
ILAR				Lg	Lg	17 28 32.7	
	baz=258,slow=25,SNR=1.6						
GLB	Gilahina Butte	13.76	59	Pn	Pn	17 24 45.1	-1.3
RIDG	Independent Ri	13.87	49	Pn	Pn	17 24 48.2	+0.2
VRDI	Verde Repeater	13.90	60	Pn	Pn	17 24 48.1	-0.3
CRQM	Cirque	13.99	62	Pn	Pn	17 24 50.5	+0.8
MENT	Mentasta	14.12	53	P	P	17 24 56.7	-2.3
MCARA	McCarthy VSAT	14.12	60	Pn	Pn	17 24 55.2	+3.8
TGL	Tana Glacier	14.14	62	Pn	Pn	17 24 54.2	+2.5
DOT	Dot Lake	14.17	50	Pn	Pn	17 24 52.6	+0.5
ISLE	Juniper Island	14.37	63	Pn	Pn	17 24 52.3	-2.6
BALM	Baldy	14.41	61	Pn	Pn	17 24 53.3	-2.0
MESA	MESA	14.54	65	Pn	Pn	17 24 54.8	-2.4
YAH	Yahtse	14.65	64	Pn	Pn	17 24 54.6	-4.2
BARN	Barnard Glacie	14.74	61	Pn	Pn	17 24 58.9	-1.0
CTGM	Chitina Glacie	14.89	62	Pn	Pn	17 25 01.1	-0.8
FYU	Fort Yukon	14.93	39	Pn	Pn	17 25 00.1	-2.2
HYT	Haines Junctio	16.76	62	P	P	17 25 28.2	-0.1
SKAG	Skagway	17.91	67		Pn	17 25 39.8	-0.4
EPYK	Eagle Plains	17.98	44	P	Pn	17 25 41.2	0.0
EPYK				IAmb	IAmb	17 26 26.9	
	comp=Z,124nm,1.8s						
WHY	Whitehorse	18.05	63	P	Pn	17 25 42.4	+0.2
BESE	Bessie Mountai	18.26	70		Pn	17 25 44.4	-0.3
BESE				IAmb	IAmb	17 25 52.4	
	comp=Z,41nm,1.0s						
SIT	Sitka	18.30	75		Pn	17 25 44.3	-0.7
SIT				IAmb	IAmb	17 25 49.4	
	comp=Z,30nm,1.0s						
PEA0B	Petropavlovsk-	19.40	274	P	Pn	17 25 58.0	-0.5
PEA0B				IAmb	IAmb	17 26 04.0	
	comp=Z,85nm,1.6s						
PETK	Petropavlovsk-	19.40	274	P	Pn	17 25 58.7	+0.3
	comp=Z,0.3nm,0.3s,baz=80,slow=11,SNR=15						
PETK	Petropavlovsk-	19.40	274	P	Pn	17 25 57.8	-0.6
INK	Inuvik	19.76	40	P	Pn	17 26 02.2	-0.4
	comp=Z,0.9nm,0.3s,baz=217,slow=8.9,SNR=15						
INK	Inuvik	19.76	40	P	Pn	17 26 02.0	-0.6
CRAG	Craig	19.91	78	P	P	17 26 03.2	+0.4
CRAG				IAmb	IAmb	17 26 19.7	
	comp=Z,50nm,1.2s						
SEY	Seymchan	20.20	304	P	Pn	17 26 06.5	-1.3
	comp=Z,9.8nm,0.9s,baz=96,slow=8.6,SNR=17						
DLBC	Dease Lake	20.78	69	P	P	17 26 13.7	+1.3
	comp=Z,4.4nm,0.9s,baz=246,slow=26,SNR=4.4						
DLBC	Dease Lake	20.78	69		P	17 26 13.7	+1.3
C36M	Paulatuk	23.34	39	P	P	17 26 38.3	-1.1
C36M				IAmb	IAmb	17 27 00.4	
	comp=Z,21nm,1.2s						
YKA	Yellowknife Ar	27.41	55	P	P	17 27 16.6	-0.2
	comp=Z,2.6nm,0.9s,baz=280,slow=9.4,SNR=12						
YKA				PcP	PcP	17 30 35.1	0.0
	comp=Z,1.4nm,0.9s,baz=292,slow=2.1,SNR=6.8						
YAK	Yakutsk	30.70	306	P	P	17 27 46.3	+0.4
	comp=Z,1.5nm,0.4s,baz=86,slow=2.7,SNR=1.3						
YAK	Yakutsk	30.70	306	IAmb	IAmb	17 27 47.3	
	comp=Z,11nm,1.1s						
HAWA	Hanford	31.75	87	P	P	17 27 55.1	-0.3
HAWA				IAmb	IAmb	17 28 00.6	
	comp=Z,6.7nm,1.2s						
RES	Resolute Bay	32.45	28	P	P	17 28 01.2	-0.1
	comp=Z,1.2nm,0.5s,baz=103,slow=6.0,SNR=8.7						
RES				PcP	PcP	17 30 47.9	0.0
	comp=Z,0.8nm,0.7s,baz=338,slow=6.3,SNR=3.6						
RES	Resolute Bay	32.45	28	P	P	17 28 01.1	-0.1
RES				IAmb	IAmb	17 28 13.6	
	comp=Z,7.4nm,1.5s						
PINE	Pine Mountain	32.60	92	P	P	17 28 04.0	+0.9
PINE				IAmb	IAmb	17 28 05.7	
	comp=Z,12nm,1.4s						
G08A	Pilot Rock	32.74	89	P	P	17 28 03.8	-0.4
JCC	Jacoby Creek,	32.90	99	P	P	17 28 07.7	+2.3
YBH	Yreka Blue Hor	32.99	97	P	P	17 28 07.4	+1.0
YBH				IAmb	IAmb	17 28 15.1	
	comp=Z,11nm,1.5s						
I07A	Izee	33.20	91	P	P	17 28 07.5	-0.8
F10A	Beach Ranch, E	33.27	86	P	P	17 28 08.8	-0.1
F10A				IAmb	IAmb	17 28 16.1	
	comp=Z,18nm,1.8s						
WALA	Waterton Lakes	33.28	79	P	P	17 28 08.4	-0.4
WALA				IAmb	IAmb	17 28 10.8	
	comp=Z,12nm,1.6s						
K05A	Summer Lake	33.32	94	P	P	17 28 10.9	+1.5
K05A				IAmb	IAmb	17 28 39.4	
	comp=Z,11nm,1.3s						
EUNU	Eureka	33.57	18	P	P	17 28 11.4	+0.4
EUNU				IAmb	IAmb	17 28 48.6	
	comp=Z,8.2nm,1.8s						
JEM	Erimo	33.70	265	P	P	17 28 03.9	-8.6
JTMT	Jette	33.83	81	P	P	17 28 13.7	0.0
JTMT				IAmb	IAmb	17 28 50.2	
	comp=Z,5.7nm,1.1s						
WDC	Whiskeytown Da	33.88	98	P	P	17 28 14.6	+0.6
BMO	Blue Mountains	33.93	88	P	P	17 28 15.0	+0.5
BMO				IAmb	IAmb	17 28 21.3	
	comp=Z,10nm,1.6s						
MOD	Modoc Plateau	34.20	94	P	P	17 28 16.9	-0.1
MOD				IAmb	IAmb	17 28 20.1	
	comp=Z,18nm,1.6s						
HOPS	Hopland Field	34.70	101	P	P	17 28 21.2	-0.1
WVOR	Wild Horse Val	34.76	92	P	P	17 28 21.2	-0.7
WVOR				IAmb	IAmb	17 28 23.9	
	comp=Z,9.7nm,1.3s						
ORV	Oroville	35.16	99	P	P	17 28 25.4	+0.2
ORV				IAmb	IAmb	17 28 26.6	
	comp=Z,12nm,1.7s						
BEKR	Beckworth	35.57	97	P	P	17 28 29.1	+0.3
PAHR	Pah Rah Range	36.22	96	P	P	17 28 34.6	+0.2
PAHR				IAmb	IAmb	17 28 36.4	
	comp=Z,7.5nm,1.1s						
YHL	Hebgen Lake	37.30	83	P	P	17 28 43.6	-0.2
YHH	Holmes Hill	37.52	83	P	P	17 28 45.0	-0.6
NVAR	Mina Array Bea	37.71	97	P	P	17 28 48.8	+1.6
	comp=Z,1.9nm,0.9s,baz=289,slow=7.9,SNR=6.5						
NVAR				PcP	PcP	17 31 05.4	+1.3
	comp=Z,1.2nm,0.7s,baz=301,slow=3.1,SNR=5.4						
ELK	Elko	37.78	91	P	P	17 28 47.8	0.0
FCC	Fort Churchill	38.14	55	P	P	17 28 50.4	+0.1
TPH	Tonopah	38.56	96	P	P	17 28 54.4	+0.1
R11A	Troy Canyon, C	39.26	94	P	P	17 29 00.3	+0.1
SPR3	Spring Creek 3	39.49	93	P	P	17 29 03.4	+1.1
PDAR	Pinedale Array	39.55	84	P	P	17 29 02.6	0.0
	comp=Z,0.2nm,0.4s,baz=323,slow=6.9,SNR=2.5						
PRN	Pahroc Range	40.23	95	P	P	17 29 08.4	+0.1
PRN				IAmb	IAmb	17 29 10.6	
	comp=Z,12nm,1.2s						
MJAR	Matsushiro Arr	40.28	263	P	P	17 29 08.8	+0.4
	comp=Z,3.8nm,1.1s,baz=38,slow=5.4,SNR=4.2						
GSC	Goldstone, Bar	40.81	99	P	P	17 29 13.0	+0.1
MVU	Marysvale	41.02	91	P	P	17 29 14.8	0.0
MSU	Marysvale	41.03	91	P	P	17 29 14.9	0.0
SZCU	Shurtz Canyon	41.18	93	P	P	17 29 16.3	+0.1
SRU	San Rafael Swe	41.52	89	P	P	17 29 19.4	+0.5
PKCU	Pink Cliffs	41.72	93	P	P	17 29 21.5	+0.9
PFO	Pinyon Flats O	42.27	100	P	P	17 29 25.7	+0.7
	comp=Z,2.5nm,0.9s,baz=288,slow=6.4,SNR=2.6						
U15A	North Rim	42.46	94	P	P	17 29 26.8	+0.1
U15A				IAmb	IAmb	17 29 28.5	
	comp=Z,9.9nm,1.2s						
NRIK	Noril'sk	42.83	329	P	P	17 29 29.5	+0.6
	comp=Z,0.8nm,0.3s,baz=51,slow=11,SNR=2.8						
PV22	Blue Mesa, Par	42.89	89	P	P	17 29 30.3	+0.3
PV17	East Wray Mesa	42.97	89	P	P	17 29 30.5	-0.2
PV17				IAmb	IAmb	17 29 32.1	
	comp=Z,19nm,1.5s						
PV16	Nyswonger Mesa	42.97	89	P	P	17 29 30.5	-0.3
PV16				IAmb	IAmb	17 30 10.2	
	comp=Z,12nm,1.5s						
PV12	Saucer Basin,	43.03	89	P	P	17 29 31.2	0.0
PV12				IAmb	IAmb	17 29 32.6	
	comp=Z,12nm,1.2s						
PV03	Paradox Valley	43.05	89	P	P	17 29 31.4	0.0
WUAZ	Wupatki	43.64	94	P	P	17 29 35.9	-0.2
WUAZ				IAmb	IAmb	17 29 38.3	
	comp=Z,15nm,1.7s						
X16A	Lo Mia Camp, P	44.41	95	P	P	17 29 42.7	+0.3

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X16A                                  IAmb    IAmb     17 29 44.4
        comp=Z,7.9nm,1.1s
X18A  Snowflake          45.15  93    P       P        17 29 48.0 -0.2
KSRS  Korea Array        45.29 273    P       P        17 29 50.6 +1.6
        comp=Z,2.0nm,1.0s,baz=55,slow=9.5,SNR=5.2
KSAR  Wonju Array Be     45.32 273    P       P        17 29 49.2 -0.1
214A  Organ Pipe Nat     45.52  98    P       P        17 29 51.5 +0.5
214A                                  IAmb    IAmb     17 29 52.4
        comp=Z,7.0nm,1.0s
SUMG  Summit             46.64  18    P       P        17 29 59.8 +0.1
ANMO  Albuquerque        46.77  90    PcP     PcP      17 31 35.8 +1.7
        comp=Z,3.7nm,1.0s,baz=257,slow=2.9,SNR=6.6
JNU   Nakatsue           46.85 266    P       P        17 30 02.2 +0.7
LENM  Lemitar            47.06  91    P       P        17 30 02.7 -0.6
ULN   Ulaanbaatar        49.07 298            P        17 30 17.2 -1.4
ULN                                   IAmb    IAmb     17 30 23.0
        comp=Z,5.9nm,1.1s
SONM  Songino Array      49.41 298    PcP     PcP      17 31 43.4  0.0
        comp=Z,1.1nm,0.6s,baz=64,slow=3.4,SNR=3.9
SONM  Songino Array      49.41 298            P        17 30 20.9 -0.3
MNTX  Cornudas Mount     49.80  92            P        17 30 24.1 -0.1
MNTX                                  IAmb    IAmb     17 30 25.6
        comp=Z,5.5nm,1.1s
HHC   Hu-ho-hao-te       51.72 288   eP       P        17 30 39.5 +0.8
HHC                                   pmax    pmax
        comp=Z,8.0nm,0.8s
HHC                                   pmax    pmax
        comp=Z,200nm,7.6s
TXAR  Lajitas Array      52.56  93    P       P        17 30 44.9 -0.1
        comp=Z,3.4nm,1.0s,baz=308,slow=6.2,SNR=12
TXAR                                  PcP     PcP      17 31 57.1 +1.8
        comp=Z,0.4nm,0.6s,baz=288,slow=3.6,SNR=1.6
TXAR  Lajitas Array      52.56  93    P       P        17 30 44.4 -0.7
NJ2   Nanjing            54.29 275   eP       P        17 30 57.0 -0.6
NJ2                                   pmax    pmax
        comp=Z,9.0nm,0.5s
ZALV  Zalesovo Beam      54.48 316    P       P        17 30 58.5 -0.2
        comp=Z,0.5nm,0.5s,baz=9.2,slow=11,SNR=1.9
ZALV                                  PcP     PcP      17 32 01.6 -0.4
        comp=Z,0.2nm,0.3s,baz=29,slow=3.4,SNR=4.1
GTA   Gaotai             58.82 295   ⇓P       P        17 31 30.0 +0.1
GTA                                   pP      sP       17 31 34.8 +0.5
GTA                                   sP      pP       17 31 37.0 +3.9
GTA                                   pmax    pmax
        comp=Z,6.0nm,1.1s
GTA                                   pmax    pmax
        comp=Z,110nm,4.2s
GTA                                   LR      LR
        comp=N,220nm,17.1s
GTA                                   LR      LR
        comp=E,200nm,16.4s
GTA                                   LR      LR
        comp=Z,300nm,15.6s
LZH   Lanzhou            59.30 290   eP       P        17 31 33.3  0.0
LZH                                   pP      sP       17 31 36.8 -0.9
LZH                                   sP      pP       17 31 38.3 +1.8
LZH                                   pmax    pmax
        comp=Z,21nm,1.3s
LZH                                   pmax    pmax
        comp=Z,68nm,7.3s
KURK  Kurchatov          59.38 317    P       P        17 31 33.0 -0.5
KURK                                  IAmb    IAmb     17 31 35.4
        comp=Z,5.7nm,1.1s
BRVK  Borovoye           60.40 323    P       P        17 31 40.7 +0.2
ARU   Arti               60.95 332    P       P        17 31 43.7 -0.4
MK31  Makanchi Array     61.09 312    P       P        17 31 44.9 -0.4
MKAR  Makanchi Array     61.09 312    P       P        17 31 45.0 -0.3
        comp=Z,1.8nm,1.0s,baz=64,slow=5.6,SNR=7.6
MKAR  Makanchi Array     61.09 312    P       P        17 31 44.9 -0.3
WMQ   Urumqi             61.14 306   eP       P        17 31 48.5 +2.8
FINES FINESS Array B     61.67 352    P       P        17 31 48.9  0.0
        comp=Z,4.2nm,1.1s,baz=10,slow=8.5,SNR=5.1
FINES FINESS Array B     61.67 352    P       P        17 31 48.6 -0.3
NOA   NORSAR Array B     62.67 360    P       P        17 31 56.0 +0.3
        comp=Z,1.7nm,1.0s,baz=358,slow=6.7,SNR=3.7
CD2   Chengdu            63.35 286    P       P        17 32 01.5 +0.8
CD2                                   pmax    pmax
        comp=Z,20nm,1.0s
GYA   Guiyang            65.30 281   ⇑P       P        17 32 14.5 +0.9
GYA                                   pP      sP       17 32 19.0 +1.0
GYA                                   pmax    pmax
        comp=Z,12nm,1.1s
ABKAR Akbulak array      66.95 328    P       P        17 32 23.5 -0.2
AAK   Ala-Archa          67.65 314    P       P        17 32 28.9 +0.4
KMI   Kunming            68.49 283   ⇑P       P        17 32 37.0 +3.0
KMI                                   pmax    pmax
        comp=Z,14nm,0.8s
KK31  Karatay Array      68.79 317    P       P        17 32 35.4  0.0
KKAR  Karatay Array      68.79 317    P       P        17 32 35.5 +0.1
KKAR  Karatay Array      68.79 317    IAmb    IAmb     17 32 36.7
        comp=Z,7.0nm,1.1s
KSH   Kashi              69.69 312    P       P        17 32 45.3 +4.1
KSH                                   pP      sP       17 32 49.0 +3.4
KSH                                   pmax    pmax
        comp=Z,10.0nm,1.0s
KSH                                   pmax    pmax
        comp=Z,260nm,4.5s
LSA   Lhasa              70.84 295    P       P        17 32 50.0 +1.2
LSA                                   pmax    pmax
        comp=Z,44nm,1.0s
SLVN  Son La             70.91 280    P       P        17 32 49.6 +0.9
AKASG Malin Array Be     71.98 348    P       P        17 32 53.8 -0.9
        comp=Z,5.5nm,0.8s,baz=14,slow=6.0,SNR=12
BRG   Berggiesshubel     72.83 358   eP       P        17 33 00.3 +0.4
BRG                                   Amp              17 33 05.0
        comp=Z,5.9nm,1.2s
DPC   Dobruska-Polom     73.29 356   eP       P        17 33 03.5 +0.9
PRU   Pruhonice          73.71 358   eP       P        17 33 05.3 +0.3
KHC   Kasperske Hory     74.58 358   eP       P        17 33 11.2 +1.0
GERES GERESS Array B     74.87 358    P       P        17 33 11.4 -0.5
        comp=Z,0.9nm,0.9s,baz=302,slow=2.5,SNR=6.3
GERES GERESS Array B     74.87 358    P       P        17 33 11.5 -0.4
GUN   Gumba              74.92 298   eP       P        17 33 12.8 -0.1
KKN   Kakani             75.31 298   eP       P        17 33 15.2 +0.2
PKI   Pulchoki           75.44 298   eP       P        17 33 16.1 +0.3
BURAR Bucovina Array     75.45 350    P       P        17 33 15.0 -0.3
DMN   Daman              75.55 298   eP       P        17 33 17.1 +0.7
DANN  Dangsing           75.58 300   eP       P        17 33 17.2 +0.6
        comp=Z,41nm,0.9s
CONA  Conrad Observa     75.73 357   eP       P        17 33 15.5 -1.4
        comp=Z,6.1nm,1.4s
NIL   Nilore             75.83 310    P       P        17 33 17.1 -0.5
MOA   Molln              75.85 358   eP       P        17 33 15.1 -2.4
        comp=Z,5.5nm,1.5s
CMAR  Chiang Mai Arr     75.94 282    P       P        17 33 19.1 +0.7
        comp=Z,2.8nm,0.9s,baz=17,slow=6.2,SNR=17
CMAR  Chiang Mai Arr     75.94 282    P       P        17 33 18.4  0.0
RETA  Reutte             76.25   0   eP       P        17 33 18.1 -1.8
        comp=Z,8.2nm,1.9s
MOTA  Moosalm            76.39 360   eP       P        17 33 21.0 +0.2
        comp=Z,8.9nm,1.4s
ARSA  Arzberg            76.42 357   eP       P        17 33 20.3 -0.5
        comp=Z,5.7nm,1.2s
KBZ   Khabaz             76.48 337    P       P        17 33 22.1 +1.0
        comp=Z,2.5nm,0.9s,baz=355,slow=2.9,SNR=3.8
SQTA  Sankt Quirin       76.52 360   eP       P        17 33 18.2 -3.2
        comp=Z,9.1nm,1.4s
KBA   Koelnbreinsper     76.64 358   eP       P        17 33 21.9 -0.3
        comp=Z,17nm,1.3s
KBL   Kabul              76.78 314    P       P        17 33 22.3 -0.9
KBL                                   IAmb    IAmb     17 33 23.6
        comp=Z,8.0nm,1.1s
ABTA  Abfaltersbach      76.98 359   eP       P        17 33 23.7 -0.3
        comp=Z,4.6nm,1.4s
SOKA  Soboth             77.00 357   eP       P        17 33 22.5 -1.6
        comp=Z,6.3nm,1.0s
OBKA  Obir               77.19 358   eP       P        17 33 25.5 +0.3
GEYT  Alibeck            77.73 324    P       P        17 33 29.1 +0.9
        comp=Z,4.7nm,0.9s,baz=321,slow=1.9,SNR=7.2
BRTR  Keskin Array B     82.12 343    P       P        17 33 51.9 -0.2
        comp=Z,1.5nm,0.8s,baz=305,slow=37,SNR=4.6
LBTB  Lobatse           146.70 335    PKPbc   PKPbc    17 41 13.2  0.0
        comp=Z,4.7nm,0.9s,baz=24,slow=7.9,SNR=4.5
BOSA  Boshof            150.24 334    PKPbc   PKPbc    17 41 21.5 -0.9
        comp=Z,4.6nm,1.0s,baz=119,slow=4.1,SNR=3.1
```

JMA ***31*** *17:23:33.1$\pm$0.2, 24°.68N$\times$122°.38E, h109$^{km}\pm$3^{km}, M2.2*

TAP ***31*** *17:23:33.3, 24°.76N$\times$122°.41E, h108^{km}, ML3.1, C*

ISC 31 17:23:34.1$\pm$1.5**, 24°.73N**$\pm$0°.04$\times$**122°.41E**$\pm$0°.02**, h101**$^{km}\pm$8^{km}**,**
n98, σ0ˢ.80/183**, Taiwan region**

```
Code  Station Name         Δ°  AZ°   Phase ID             Time     Res
                                     Op      ISC        h  m  s    ISC
TWB1  Santiao Chiao       0.48 306   eP      Pn       17 23 49.8   0.0
        baz=295
TWB1                                 eS      Sn       17 24 01.5  -0.1
        baz=295
TWC   Suao                0.53 257    P      Pn       17 23 49.8  -0.3
        baz=250
TWC                                   S      Sn       17 24 02.0  -0.2
        baz=250
NTC   Toucheng            0.55 284   eS      Sn       17 24 02.5   0.0
        baz=276
JYNG  Yonagunijimaku      0.56 119    P      Pn       17 23 50.5  +0.1
JYNG                                  S      Sn       17 24 03.3  +0.7
TIPB  Shuangxi            0.59 295   eP      Pn       17 23 50.8  +0.1
        baz=289
TIPB                                 eS      Sn       17 24 02.3  -0.8
        baz=289
ILA   Ilan                0.60 274   eP      Pn       17 23 51.3  +0.5
        baz=265
ILA                                  eS      Sn       17 24 03.5  +0.2
        baz=265
YOJ   Yonaguni jima       0.60 116    P      Pn       17 23 50.8   0.0
YOJ                                   S      Sn       17 24 03.8  +0.5
YOJ   Yonaguni jima       0.60 116    P      Pn       17 23 51.0  +0.2
        baz=124
YOJ                                  eS      Sn       17 24 04.1  +0.8
        baz=124
WFSB  Wu-fen Shan         0.67 301   eP      Pn       17 23 51.4   0.0
        baz=291
WFSB                                 eS      Sn       17 24 04.4  +0.1
        baz=291
TWE   Neicheng            0.68 270    P      Pn       17 23 51.6  +0.2
        baz=270
TWE                                  eS      Sn       17 24 04.2  -0.1
        baz=270
ENA   Nanau               0.68 244    P      Pn       17 23 51.7  +0.3
        baz=241
ENA                                   S      Sn       17 24 04.9  +0.4
        baz=241
ENTT  Nioudou             0.77 264   i P     Pn       17 23 52.8  +0.5
        baz=262
ENTT                                  S      Sn       17 24 07.1  +1.1
        baz=262
TWA   Mucha               0.80 289   eP      Pn       17 23 52.4  -0.1
        baz=286
TWA                                  eS      Sn       17 24 05.8  -0.5
        baz=286
NDT   Datong Townshi      0.83 262    P      Pn       17 23 53.7  +0.9
        baz=260
NDT                                   S      Sn       17 24 07.6  +0.7
        baz=260
NWLT  Wulai               0.83 274    P      Pn       17 23 52.6  -0.2
        baz=275
NWLT                                  S      Sn       17 24 06.8  -0.2
        baz=275
NHDH  Xindian Distri      0.84 287   eP      Pn       17 23 52.8  -0.2
        baz=283
NHDH                                 eS      Sn       17 24 06.2  -0.9
        baz=283
YM01  YM01                0.87 299    P      Pn       17 23 52.2  -1.1
        baz=289
YM01                                  S      Sn       17 24 06.3  -1.5
        baz=289
YM08  YM08                0.88 302   eP      Pn       17 23 53.0  -0.3
        baz=292
YM08                                 eS      Sn       17 24 07.9  +0.1
        baz=292
YM11  YM11                0.88 300   eP      Pn       17 23 53.4  -0.1
        baz=290
YM11                                 eS      Sn       17 24 07.4  -0.5
        baz=290
YM05  YM05                0.88 300   eP      Pn       17 23 52.3  -1.1
        baz=290
YM05                                 eS      Sn       17 24 07.3  -0.7
        baz=290
YM10  YM10                0.88 299    P      Pn       17 23 53.4   0.0
        baz=289
YM10                                 eS      Sn       17 24 07.3  -0.7
        baz=289
YM04  YM04                0.90 298   eP      Pn       17 23 53.5  -0.1
        baz=289
YM04                                 eS      Sn       17 24 07.2  -1.1
        baz=289
YM03  YM03                0.91 300   eP      Pn       17 23 53.6  -0.2
        baz=290
YM03                                 eS      Sn       17 24 08.1  -0.5
        baz=290
NACB  Ninganchiao         0.93 234    P      Pn       17 23 53.5  -0.4
        baz=227
NACB                                 eS      Sn       17 24 07.6  -1.1
        baz=227
YHNB  Yeheng              0.94 267    P      Pn       17 23 54.4  +0.3
        baz=269
YHNB                                  S      Sn       17 24 09.4  +0.2
        baz=269
NSK   Sanguang            0.96 267   i P     Pn       17 23 54.4  +0.1
        baz=271
NSK                                   S      Sn       17 24 09.4   0.0
        baz=271
TWS1  Kuangyinshan        0.98 293   eP      Pn       17 23 54.3  -0.1
        baz=284
TWS1                                 eS      Sn       17 24 09.6   0.0
        baz=284
NNSH  Datong              0.98 253    P      Pn       17 23 54.8  +0.2
        baz=246
NNSH                                  S      Sn       17 24 10.3  +0.3
        baz=246
NNSB  Datong              0.98 253    P      Pn       17 23 54.8  +0.3
        baz=246
NNSB                                  S      Sn       17 24 10.4  +0.5
        baz=246
TWD   Chiawan             0.98 229   eP      Pn       17 23 54.2  -0.2
        baz=227
TWD                                  eS      Sn       17 24 09.7   0.0
        baz=227
NNS   Nan Shan            0.99 254    P      Pn       17 23 54.9  +0.3
        baz=246
NNS                                   S      Sn       17 24 10.0   0.0
        baz=246
ETLH  Xiulin Townshi      0.99 239    P      Pn       17 23 54.5  -0.1
        baz=236
ETLH                                  S      Sn       17 24 09.8  -0.3
        baz=236
HWA   Hwalien             1.05 225   eP      Pn       17 23 55.1   0.0
        baz=215
HWA                                  eS      Sn       17 24 11.5  +0.6
        baz=215
NTY   Taoyuan             1.05 285   eS      Sn       17 24 12.1  +1.1
        baz=285
NCU   National Centr      1.14 283   eS      Sn       17 24 13.5  +0.7
        baz=286
FUSS  Fushou              1.17 246   eP      Pn       17 23 57.0  +0.3
        baz=239
FUSS                                 eS      Sn       17 24 13.6  -0.1
        baz=239
WHF   Hehuan Shan         1.19 241    P      Pn       17 23 57.2   0.0
        baz=233
WHF                                  eS      Sn       17 24 14.2  -0.5
        baz=233
TWT   Tachien             1.22 248    P      Pn       17 23 58.0  +0.8
        baz=240
TWT                                   S      Sn       17 24 15.3  +0.5
        baz=240
TDCB  Techi               1.23 248    P      Pn       17 23 58.0  +0.6
        baz=240
TDCB                                  S      Sn       17 24 15.1  +0.1
        baz=240
IRIF  Iriomote-Funau      1.26 108    P      Pn       17 23 57.3  -0.2
IRIF                                  S      Sn       17 24 15.1  -0.2
HSN1  Hsinchu             1.27 273   eS      Sn       17 24 15.5  +0.1
        baz=270
ESL   Shilin              1.27 225   eP      Pn       17 23 57.0  -0.7
        baz=230
ESL                                  eS      Sn       17 24 14.0  -1.6
        baz=230
LIOB  Emei                1.27 267   eP      Pn       17 23 57.6  -0.1
        baz=264
LIOB                                 eS      Sn       17 24 15.6   0.0
        baz=264
NSTT  Nanjuang            1.29 266   eP      Pn       17 23 58.1  +0.2
        baz=264
NSTT                                 eS      Sn       17 24 15.3  -0.5
        baz=264
CHGB  Renai               1.31 240   eP      Pn       17 23 58.6  +0.3
        baz=232
CHGB                                 eS      Sn       17 24 16.9  +0.2
        baz=232
WHP   Taichung City       1.41 252   eP      Pn       17 24 00.2  +0.8
        baz=258
WHP                                  eS      Sn       17 24 19.2  +0.7
        baz=258
HATJ  Hateruma jima       1.43 117    P      Pn       17 23 59.9  +0.3
HATJ                                 eS      Sn       17 24 20.3  +1.4
NMLH  Miaoli              1.49 263   eP      Pn       17 23 59.8  -0.5
        baz=261
NMLH                                 eS      Sn       17 24 20.1   0.0
        baz=261
WPL   Puli Township       1.50 242   eP      Pn       17 24 01.3  +0.9
        baz=236
WPL                                  eS      Sn       17 24 20.9  +0.4
        baz=236
DPDB  Guoxing             1.52 243   eP      Pn       17 24 01.7  +1.0
        baz=237
DPDB                                 eS      Sn       17 24 22.0  +1.0
        baz=237
HGSD  Ruisui              1.52 217   eP      Pn       17 24 00.3  -0.5
        baz=209
HGSD                                 eS      Sn       17 24 20.6  -0.3
        baz=209
JKRS  Kuro-shima          1.53 108    P      Pn       17 24 01.0  +0.2
JKRS                                  S      Sn       17 24 21.9  +0.8
TWQ1  Liyutan             1.54 256   eP      Pn       17 24 01.1  +0.2
        baz=254
TWQ1                                 eS      Sn       17 24 20.3  -0.9
        baz=254
EHY   Hungye              1.57 220   eP      Pn       17 24 00.2  -1.1
        baz=225
EHY                                  eS      Sn       17 24 20.7  -1.3
        baz=225
SMLT  Sun Moon Lake       1.61 239   eP      Pn       17 24 03.0  +1.0
        baz=232
SMLT                                 eS      Sn       17 24 24.7  +1.6
        baz=232
JIJ   Ishigaki jima       1.62 102    P      Pn       17 24 01.6  -0.2
JIJ                                   S      Sn       17 24 22.5  -0.4
SSLB  Suanglung           1.62 235   eP      Pn       17 24 02.9  +0.9
        baz=230
SSLB                                 eS      Sn       17 24 23.9  +0.7
        baz=230
TYC   Yuchr               1.64 240   eP      Pn       17 24 03.2  +1.1
        baz=235
TYC                                  eS      Sn       17 24 25.1  +1.7
        baz=235
WDJ   Dajia District      1.66 257   eS      Sn       17 24 23.7  -0.1
        baz=255
YULB  Yu-li               1.67 218   eP      Pn       17 24 01.3  -1.3
        baz=216
YULB                                 eS      Sn       17 24 22.5  -1.8
        baz=216
TCU   Taichung            1.68 250   eS      Sn       17 24 25.0  +0.5
        baz=248
EYUL  Yuli                1.70 216   eP      Pn       17 24 02.3  -0.6
        baz=223
EYUL                                 eS      Sn       17 24 24.1  -0.7
        baz=223
WWF   Wufeng              1.70 247   eS      Sn       17 24 24.9   0.0
        baz=253
TWF1  Yuli                1.71 217   eP      Pn       17 24 01.9  -1.1
        baz=222
TWF1                                 eS      Sn       17 24 23.1  -1.9
        baz=222
JISG  Ishigakijimahi      1.73  94    P      Pn       17 24 03.1  -0.2
JISG                                  S      Sn       17 24 25.1  -0.4
WHYT  Xinyi Township      1.75 235   eP      Pn       17 24 04.8  +1.2
        baz=227
WHYT                                 eS      Sn       17 24 27.8  +1.7
        baz=227
WNT1  Nantou City         1.78 243   eP      Pn       17 24 02.6  -1.3
        baz=241
WNT1                                 eS      Sn       17 24 26.5  -0.1
        baz=241
WJS   Zhushan             1.78 240   eP      Pn       17 24 05.2  +1.3
        baz=247
WJS                                  eS      Sn       17 24 27.6  +1.0
        baz=247
WNT   Mingjian            1.79 242   eP      Pn       17 24 04.7  +0.7
        baz=240
WNT                                  eS      Sn       17 24 28.0  +1.2
        baz=240
YUS   Yu-Shan             1.81 228   eP      Pn       17 24 05.0  +0.1
        baz=220
YUS                                  eS      Sn       17 24 28.1   0.0
        baz=220
FULB  Fuli                1.83 214   eP      Pn       17 24 04.3  -0.3
        baz=207
FULB                                 eS      Sn       17 24 27.1  -0.8
        baz=207
ALS   Alishan             1.90 231   eP      Pn       17 24 06.5  +0.7
        baz=223
ALS                                  eS      Sn       17 24 31.3  +1.5
        baz=223
CHN5  Tsauling            1.94 235   eP      Pn       17 24 07.0  +0.9
        baz=243
CHN5                                 eS      Sn       17 24 31.2  +0.7
        baz=243
WGK   Gukeng              1.98 239   eP      Pn       17 24 07.4  +1.0
        baz=237
WGK                                  eS      Sn       17 24 31.9  +0.7
        baz=237
ELDTW Lidau               1.99 220   eP      Pn       17 24 06.0  -0.8
        baz=218
ELDTW                                eS      Sn       17 24 30.5  -1.1
        baz=218
WDLH  Douliu              2.00 239   eP      Pn       17 24 06.6  -0.1
        baz=238
WDLH                                 eS      Sn       17 24 31.3  -0.3
        baz=238
EDH   Donghe              2.02 210   eP      Pn       17 24 06.1  -0.9
        baz=205
EDH                                  eS      Sn       17 24 30.1  -1.9
        baz=205
JTJ   Tarama              2.08  92    P      Pn       17 24 07.9  +0.1
JTJ                                   S      Sn       17 24 33.6   0.0
WTK   Tuku                2.12 241   eP      Pn       17 24 08.2   0.0
        baz=239
WTK                                  eS      Sn       17 24 33.7  -0.6
        baz=239
CHN4  Tsaushan            2.15 231   eP      Pn       17 24 09.3  +0.6
        baz=239
CHN4                                 eS      Sn       17 24 36.3  +1.1
        baz=239
LONT  Longtian            2.16 213   eP      Pn       17 24 07.5  -1.3
        baz=211
TPUB  Ta-pu               2.16 229   eP      Pn       17 24 09.4  +0.5
        baz=238
TPUB                                 eS      Sn       17 24 36.0  +0.6
        baz=238
STYT  Tauyuan             2.17 225   eP      Pn       17 24 09.7  +0.7
        baz=216
STYT                                 eS      Sn       17 24 36.7  +1.0
        baz=216
WTP   Ta-pu               2.21 229   eP      Pn       17 24 10.0  +0.5
        baz=239
WTP                                  eS      Sn       17 24 36.9  +0.4
        baz=239
LDUT  Ludao               2.22 203   eP      Pn       17 24 08.6  -1.0
        baz=202
LDUT                                 eS      Sn       17 24 36.0  -0.7
        baz=202
TWGBT Beinan              2.26 213   eP      Pn       17 24 08.1  -2.0
        baz=212
TWGBT                                eS      Sn       17 24 35.9  -1.7
        baz=212
TWG   Pinlang             2.26 213   eP      Pn       17 24 08.9  -1.2
        baz=211
WSF   Szhu                2.27 242   eS      Sn       17 24 37.5  -0.5
        baz=240
TWK   Hsinying            2.28 231   eP      Pn       17 24 10.8  +0.3
        baz=229
TWK                                  eS      Sn       17 24 38.6  +0.3
        baz=229
WLGB  Puzi                2.29 238   eS      Sn       17 24 38.2  -0.3
        baz=236
CHN1  Nanshi              2.31 229   eP      Pn       17 24 11.5  +0.8
        baz=227
CHN1                                 eS      Sn       17 24 39.9  +1.1
        baz=227
SGST  Jiashian            2.34 226   eP      Pn       17 24 11.3  +0.1
        baz=224
SGST                                 eS      Sn       17 24 39.3  -0.3
        baz=224
SLGT  Liugui              2.36 224   eP      Pn       17 24 12.6  +1.1
        baz=230
SLGT                                 eS      Sn       17 24 41.9  +1.8
        baz=230
SSD   Sandimen            2.56 220   eP      Pn       17 24 14.7  +0.7
        baz=229
SSD                                  eS      Sn       17 24 46.4  +1.8
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=229						
TSMG	Majia	2.58	219	*e*P	Pn	17 24 14.9	+0.6
	baz=218						
TSMG				*e*S	Sn	17 24 46.7	+1.5
	baz=218						
MASBT	Mashibuluo	2.66	218	*e*P	Pn	17 24 15.9	+0.5
	baz=217						
MASBT				*e*S	Sn	17 24 47.3	+0.2
	baz=217						
EAST	Anshuo	2.74	212	*e*P	Pn	17 24 16.8	+0.3
	baz=206						
PHUB	P'eng-hu	2.86	246	*e*S	Sn	17 24 49.0	-2.9
	baz=244						

AEIC ***31*** *17:29:28±3.6, 56°.55N±0°.04×168°.91W±0°.09, h1^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=4.3km az=52.0*

NEIC ***31*** *17:29:32.2±2.9, 56°.61N±0°.05×169°.08W±0°.10, h13^{km}±5^{km}, mb4.3/10, ML3.6/20(AEIC), Error ellipse: s-maj=8.9km s-min=6.7km az=47.0*

IDC ***31*** *17:29:33.4±2.1, 57°.09N×169°.32W, h0^{km}, mb3.8/7, mb1 4.1/11, mb1mx3.7/68, mbtmp4.0/11, ML3.4/4, MS3.8/2, Ms1 3.8/2, ms1mx3.1/60, Error ellipse: s-maj=61.2km s-min=16.0km az=3.0*

ISC 31 17:29:31.6±0.6, **56°.59N**±0°.06×**169°.15W**±0°.05, **h10**^{km}, **n101**, σ**1^{s}62**/101, **mb4.0**/8, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.84	315		Sb	17 30 00.1	+0.5
SPIA	Saint Paul Isl	0.84	315		Pg	17 29 47.4	-0.5
AKGG	Akutan Green G	3.00	142		Pn	17 30 17.3	-1.8
MSW	Makushin Switc	3.00	152		Pn	17 30 18.3	-0.9
MSW					Sn	17 30 53.3	-1.9
AKRB	Akutan Reef Bi	3.03	143		Pn	17 30 18.8	-0.8
AKRB					Sn	17 30 56.3	+0.5
AKLV	Akutan Long Va	3.04	142		Pn	17 30 19.0	-0.7
MNAT	Makushin Natee	3.06	151		Pn	17 30 19.4	-0.6
MNAT					Sn	17 30 58.7	+2.2
MAPS	Pakushin South	3.06	155		Pn	17 30 19.4	-0.6
AKBBA	Akutan Broad B	3.10	142		Pn	17 30 19.5	-1.0
AKUT	Akutan	3.12	140		Pn	17 30 19.8	-1.0
AKUT				Sn	Sn	17 30 55.3	-2.9
UNV	Unalaska Valle	3.14	150		Sn	17 30 59.0	+0.4
UNV	Unalaska Valle	3.14	150		Pn	17 30 20.2	-0.8
OKWE	Okmok W'ng Wal	3.17	170		Pn	17 30 19.5	-1.9
SSLS	Shishaldin Sou	3.47	121		Pn	17 30 23.0	-2.7
NIKH	Nikolski High	3.63	177		Pn	17 30 27.4	-0.4
FALS	False Pass	3.68	116	Pn	Pn	17 30 27.2	-1.2
SDPT	Sand Point	5.03	101	Pn	Pn	17 30 47.3	+0.3
ATKA	Atka Island	5.29	216		Pn	17 30 51.5	+0.9
CHGN	Chignik	5.96	88		Pn	17 30 59.8	0.0
CHGN				Sn	Sn	17 32 04.3	-3.7
ADK	Adak	6.46	226	Pn	Pn	17 31 06.7	0.0
ADK	Adak	6.46	226	Sn	Sn	17 32 16.8	-3.5
ANM	Nome	8.21	11	Pn	Pn	17 31 29.4	-1.3
AMKA	Amchitka	8.57	237		Pn	17 31 36.5	+0.9
OHAK	Old Harbor	8.71	79	Pn	Pn	17 31 37.6	+0.2
KDAK	Kodiak Island	9.08	76	Pn	Pn	17 31 46.7	+4.2
	1.3nm,0.3s,baz=286,slow=8.9,SNR=14						
KDAK	Kodiak Island	9.08	76		Pn	17 31 45.1	+2.6
TTA	Tatalina	9.17	41	Pn	Pn	17 31 44.2	+0.3
RSO	Redoubt South	9.41	59	Pn	Pn	17 31 48.3	+1.1
CNPM	China Poot	9.93	65	Pn	Pn	17 31 52.4	-1.9
BRLK	Bradley Lake	10.15	64	Pn	Pn	17 31 57.5	+0.3
SKT	Skwentna	10.49	52	Pn	Pn	17 32 01.2	-0.6
PPLA	Purkeypile	10.62	46	Pn	Pn	17 32 03.0	-0.7
SUA	Susitna One	10.65	55	Pn	Pn	17 32 01.6	-2.6
O22K	Cooper Landing	10.86	61	Pn	Pn	17 32 06.1	-0.9
KTH	Kantishna Hill	11.44	45	Pn	Pn	17 32 13.4	-1.5
TRF	Thorofare Moun	11.64	46	Pn	Pn	17 32 15.7	-2.0
KNK	Knik Glacier	11.69	57	Pn	Pn	17 32 16.6	-1.6
BPAW	Bear Paw Mtn.	11.69	42	Pn	Pn	17 32 19.5	+1.2
SML	Sawmill	11.85	55	Pn	Pn	17 32 18.3	-2.3
RDOG	Red Dog Mine	11.86	11	Pn	Pn	17 32 17.5	-3.0
IMAR	Indian Mountai	11.94	32	Pn	Pn	17 32 23.3	+1.7
RND	Reindeer	12.20	48	Pn	Pn	17 32 27.6	+2.4
SCM	Sheep Creek Mo	12.32	56	Pn	Pn	17 32 26.9	0.0
HIN	Hinchinbrook I	12.42	63	Pn	Pn	17 32 28.5	+0.2
FID	Port Fidalgo	12.48	61	Pn	Pn	17 32 27.9	-1.2
EYAK	Cordova Ski Ar	12.81	62	Pn	Pn	17 32 31.7	-1.9
KLU	Klutina	12.89	58	Pn	Pn	17 32 33.6	-1.1
M24K	Tolsona, Glenn	12.92	55	Pn	Pn	17 32 34.3	-0.8
WRH	Wood River Hil	12.97	44	Pn	Pn	17 32 35.5	-0.3
MDM	Murphy Dome	13.16	42	Pn	Pn	17 32 37.7	-0.6
CCB	Clear Creek Bu	13.16	43	Pn	Pn	17 32 38.3	0.0
HDA	Harding Lake	13.39	45	Pn	Pn	17 32 41.8	+0.4
KAIM	Kayak Island	13.41	65	Pn	Pn	17 32 42.3	+0.6
PAX	Paxson	13.47	52	Pn	Pn	17 32 41.5	-1.2
HMT	Hamilton	13.52	64	Pn	Pn	17 32 43.8	+0.5
N25K	Chitina, Valde	13.53	58	Pn	Pn	17 32 44.2	+0.7
IL31		13.57	44	Pn	Pn	17 32 45.7	+1.8
ILAR	Eielson Array	13.57	44	Pn	Pn	17 32 45.1	+1.2
	0.1nm,0.3s,baz=230,slow=11,SNR=9.0						
ILAR	Eielson Array	13.57	44	Pn	Pn	17 32 46.6	+2.7
SUCK	Suckling Hills	13.74	65	Pn	Pn	17 32 48.2	+2.0
GLB	Gilahina Butte	13.88	59	Pn	Pn	17 32 49.0	+0.9
RIDG	Independent Ri	13.98	49	Pn	Pn	17 32 52.4	+2.7
VRDI	Verde Repeater	14.02	60	Pn	Pn	17 32 50.2	0.0
CRQM	Cirque	14.11	62	Pn	Pn	17 32 54.0	+2.5
MENT	Mentasta	14.23	53	Pn	Pn	17 32 56.6	+3.6
MCARA	McCarthy VSAT	14.24	60	Pn	Pn	17 32 55.9	+2.8
TGL	Tana Glacier	14.26	62	Pn	Pn	17 32 55.0	+1.5
DOT	Dot Lake	14.29	50		P	17 32 57.8	-3.2
ISLE	Juniper Island	14.49	63	Pn	Pn	17 32 57.9	+1.3
YAH	Yahtse	14.77	64	Pn	Pn	17 33 02.3	+1.8
BARN	Barnard Glacie	14.86	61	Pn	Pn	17 33 02.5	+0.8
CTGM	Chitina Glacie	15.01	62	Pn	Pn	17 33 04.9	+1.3
FYU	Fort Yukon	15.04	39	Pn	Pn	17 33 05.6	+1.8
BCAR	Beaver Creek A	15.12	53	Pn	Pn	17 33 06.6	+1.6
PCA	Pinnacle	15.50	65	Pn	Pn	17 33 11.4	+1.3
BMAR	Burnt Mountain	15.70	36	P	P	17 33 15.6	-1.1
HYT	Haines Junctio	16.87	62	P	P	17 33 30.0	+0.2
WHY	Whitehorse	18.16	63	P	Pn	17 33 42.2	-1.6
SIT	Sitka	18.41	74	P	P	17 33 48.0	+1.4
SIT				IAmb	IAmb	17 34 01.5	
	comp=Z,36nm,1.2s						
PEA0B	Petropavlovsk-	19.29	274	P	Pn	17 33 57.4	+0.1
PEA0B				IAmb	IAmb	17 34 19.9	
	comp=Z,27nm,1.3s						
PETK	Petropavlovsk-	19.29	274	P	Pn	17 33 58.9	+1.6
	comp=Z,0.2nm,0.3s,baz=84,slow=11,SNR=10						
INK	Inuvik	19.86	40	P	P	17 34 02.1	-0.4
	comp=Z,0.1nm,0.3s,baz=243,slow=11,SNR=5.2						
INK	Inuvik	19.86	40	P	P	17 34 02.0	-0.4
INK				IAmb	IAmb	17 34 07.0	
	comp=Z,5.9nm,0.7s						
CRAG	Craig	20.02	78	Pn	P	17 34 05.3	+1.1
SEY	Seymchan	20.13	304	P	P	17 34 06.5	+1.1
	comp=Z,0.1nm,0.3s,baz=105,slow=9.3,SNR=17						
DLBC	Dease Lake	20.89	69	P	Pn	17 34 16.8	+0.5
	comp=Z,1.8nm,0.9s,baz=270,slow=8.1,SNR=3.6						
DLBC	Dease Lake	20.89	69	IAmb	IAmb	17 34 22.7	
	comp=Z,8.8nm,1.1s						
YKA	Yellowknife Ar	27.53	55	P	P	17 35 20.0	+2.0
	comp=Z,1.8nm,0.7s,baz=282,slow=7.4,SNR=14						
ELK	Elko	37.89	91	LR	LR	17 52 31.5	
	comp=Z,66nm,18.3s,baz=182,slow=36						
PDAR	Pinedale Array	39.66	84	P	P	17 37 07.0	+3.3
	comp=Z,0.2nm,0.5s,baz=336,slow=4.2,SNR=2.4						
SFJD	Kangerlussuaq	48.54	27	LR	LR	17 59 57.6	
	comp=Z,223nm,21.8s,baz=121,slow=38						
KURK	Kurchatov	59.34	317	P	P	17 39 34.3	+1.0
KURK	Kurchatov	59.34	317	IAmb	IAmb	17 40 06.3	
	comp=Z,2.8nm,0.9s						
KURBB	Kurchatov Arra	59.45	317	P	P	17 39 34.3	+0.2
	comp=Z,1.2nm,0.9s,baz=34,slow=7.0,SNR=7.8						
MKAR	Makanchi Array	61.03	312	P	P	17 39 45.9	+0.8
	comp=Z,1.0nm,1.1s,baz=36,slow=4.5,SNR=4.4						
MKAR	Makanchi Array	61.03	312	P	P	17 39 45.0	0.0
AKTO	Aktyubinsk	66.43	329	P	P	17 40 20.8	+0.3
	comp=Z,2.0nm,0.7s,baz=28,slow=8.2,SNR=5.7						
ABKAR	Akbulak array	66.92	327	P	P	17 40 23.7	+0.1
ABKAR				IAmb	IAmb	17 40 24.5	
	comp=Z,1.9nm,0.8s						
ABKAR	Akbulak array	66.92	327	P	P	17 40 23.2	-0.5
KKAR	Karatay Array	68.75	317	P	P	17 40 34.7	-0.6
AKASG	Malin Array Be	72.00	348	P	P	17 40 53.5	-1.5
	comp=Z,0.8nm,0.5s,baz=15,slow=6.0,SNR=5.6						

BJI ***31*** *17:30:05.7±0.0, 6°.97S×127°.90E, h343^{km}, mB4.9/53, mb4.8/76*

MOS ***31*** *17:30:08.3±1.0, 6°.76S×127°.49E, h341^{km}, mb5.2/45, Error ellipse: s-maj=8.4km s-min=4.7km az=114.2*

NEIC ***31*** *17:30:09.7±1.8, 6°.83S±0°.06×127°.55E±0°.05, h346^{km}±2^{km}, mb5.2/99, Error ellipse: s-maj=9.2km s-min=6.7km az=145.0*

GCMT ***31*** *17:30:09.7±0.2, 6°.85S±0°.02×127°.36E±0°.02, h344^{km}±1^{km}, MW5.5/110, Moment Tensor Solution. s110,c190; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02±.03; $M_{\theta\theta}$1.21±.05; $M_{\phi\phi}$-0.19±.06; $M_{r\theta}$-1.24±.05; $M_{\theta\phi}$0.80±.05; $M_{\phi r}$0.74±.05; Best double couple: $M_0$1.98900×10^{17} NP1:ϕ_s216.00000°, δ38.00000°, λ-149.00000°. NP2:ϕ_s100.00000°, δ71.00000°, λ-56.00000°. Principal axes: T 1.8680, Plg19.0000°, Azm165.0000°; N 0.2360, Plg32.0000°, Azm268.0000°; P -2.1110, Plg51.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***31*** *17:30:09.3±0.4, 6°.83S×127°.51E, h336^{km}±3^{km}, mb4.5/40, mb1 4.5/45, mb1mx4.4/56, mbtmp5.2/45 Error ellipse: s-maj=7.8km s-min=5.7km az=72.0*

DJA ***31*** *17:30:09.9±0.1, 7°S±2°×12°8E±°, h331^{km}±2^{km}, M5.2/94, mb5.3/94, mB5.7/70, MLv6.0/21, Mw(mB)5.2/70, MwMwp5.1/24, Mwp5.4/24*

NOU ***31*** *17:30:10.3, 6°.98S×127°.49E, h337^{km}, ML5.2, Banda Sea*

KLM ***31*** *17:30:12, 6°.62S×127°.53E, h352^{km}, mb5.4*

ISC 31 17:30:09.4±0.2, **6°.86S**±0°.03×**127°.51E**±0°.03, **h343**^{km}±2^{km}, **h344**^{km}**:pP-P, n735,** σ**1^{s}53**/881, **mb5.0**/165, **84C-57D, Fault plane solution: NP1:**ϕ_s258.45606°, δ17.83883°, λ-133.15244°. **NP2:**ϕ_s123.01878°, δ77.08610°, λ-77.58706°. **Principal axes:** T Plg31.0029°, Azm202.8045°; N Plg12.0942°, Azm300.2027°; P Plg56.2160°, Azm48.8821°; **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	3.33	46	P	Pn	17 31 12.1	+0.8
BNDI				S	S	17 32 02.4	+1.4
NLAI	Namlea	3.62	353	P	Pn	17 31 16.3	+2.1
MSAI	Masohi	3.77	22	P	Pn	17 31 15.7	+0.1
SAUI	Saumlaki	3.92	107	Pn	Pn	17 31 17.0	-0.1
SAUI	Saumlaki	3.92	107	P	Pn	17 31 17.0	-0.1
SOEI	Soe	4.31	228	Pn	Pn	17 31 22.1	+0.7
SOEI	Soe	4.31	228	P	Pn	17 31 22.2	+0.8
SANI	Sanana	5.02	342	P	Pn	17 31 29.5	+0.6
	9.3nm14μm33μm2μm,0.8s						
BATI	Baumata	5.05	229	P	Pn	17 31 30.5	+1.2
	15μm,0.3s,baz=67,slow=1.9						
BATI				S	S	17 32 33.1	-0.8
	5μm,0.3s,baz=292,slow=4.9,SNR=16						
BATI	Baumata	5.05	229	P	Pn	17 31 30.5	+1.2
	154nm15μm454μm19μm,0.6s						
MMRI	Maumere	5.52	251	Pn	Pn	17 31 33.4	-1.1
MMRI	Maumere	5.52	251	P	Pn	17 31 33.4	-1.1
	18nm9μm38μm3μm,0.9s						
EDFI	Ende, Flores	6.07	252	P	Pn	17 31 40.0	-0.9
	6.0nm3μm12μm884nm,0.8s						
FAKI	Fak Fak	6.13	51	Pn	Pn	17 31 39.6	-2.0
FAKI	Fak Fak	6.13	51	P	Pn	17 31 39.1	-2.4
	4.0nm3μm7μm709nm,0.7s						
MTN	Manton Dam	6.93	149	P	Pn	17 31 50.9	+0.1
	baz=7.0,SNR=1000						
MTN	Manton Dam	6.93	149	Pn	Pn	17 31 51.0	+0.1
KMPI	Kaimana, Papua	6.94	63	P	Pn	17 31 49.2	-1.7
	9.7nm10μm775nm,0.6s						
BSSI	Bau Bau, Buton	7.01	275	P	Pn	17 31 53.3	+1.5
	3.2nm10μm1μm,1.0s						
SIJI	Sorong	7.03	32	P	Pn	17 31 50.1	-1.9
	25nm,0.3s,baz=240,slow=22,SNR=151						
SIJI				S	S	17 33 07.9	-7.5
	19nm,0.3s,baz=190,slow=14,SNR=23						
SWI	Sorong	7.03	32	P	Pn	17 31 49.4	-2.6
	2.6nm4μm4μm305nm,0.8s						
LUWI	Luwuk	7.47	321		Pn	17 31 58.5	+1.3
LUWI	Luwuk	7.47	321	P	Pn	17 31 58.4	+1.2
	5.7nm9μm20μm1μm,1.3s						
BKSI	Bulukumba	7.51	281	P	Pn	17 31 59.3	+1.7
	1.5nm3μm5μm423nm,1.0s						
KDU	Kakadu	7.57	140	P	Pn	17 31 58.3	-0.1
	baz=7.6,SNR=967						
TNTI	Ternate	7.58	359	Pn	Pn	17 31 58.3	-0.3
TNTI	Ternate	7.58	359	P	Pn	17 31 58.6	0.0
	1.1nm5μm4μm226nm,1.1s						
BASI	Baing, Sumba	7.63	244	P	Pn	17 31 57.4	-1.6
	29nm7μm27μm2μm,0.7s						
WSI	Waingapu	7.67	248	P	Pn	17 31 57.7	-1.8
	108nm70μm5μm,0.6s						
BNSI	Bone	7.77	288	P	Pn	17 32 02.3	+1.6
	1.8nm75μm3μm227nm,0.7s						
KAPI	Kappang	7.94	283	P	Pn	17 32 04.9	+2.2
	13nm,0.3s,baz=112,slow=5.9,SNR=12						
KAPI				S	S	17 33 36.1	+1.0
	9.4nm,0.3s,baz=191,slow=16,SNR=1.7						
KAPI	Kappang	7.94	283	P	Pn	17 32 02.7	0.0
KAPI				S	S	17 33 36.1	+1.0
KAPI	Kappang	7.94	283	Pn	Pn	17 32 02.7	0.0
KMSI	Cibinong	8.19	334	P	P	17 32 07.5	-1.5
	771nm13μm2μm,1.3s						
SPSI	Sidrap Palu	8.23	290	P	Pn	17 32 07.7	+1.5
	2μm170nm,0.8s						
APSI	Ampana	8.32	315	P	P	17 32 09.4	-1.0
	4μm10μm1μm,1.1s						
TTSI	Tana Toraja	8.55	296	P	P	17 32 12.7	-0.4
	5μm341nm,1.1s						
GTOI	Gorontalo	8.70	329	P	P	17 32 16.1	+1.4
	8μm711nm,0.9s						
KNRA	Kununurra	8.85	172	P	Pn	17 32 14.4	+0.9
	baz=8.9,SNR=6.2						
KNRA	Kununurra	8.85	172		Pn	17 32 13.7	+0.2
MRSI	Marisa	9.17	322	P	P	17 32 19.2	-0.8
	5μm21μm2μm,1.0s						
PLAI	Plampang	9.84	258	P	Pn	17 32 23.5	-2.0
	17μm830nm,0.7s						
SRPI	Serui, Papua	10.01	61	P	Pn	17 32 27.7	+0.1
	6μm493nm,0.9s						
BAKI	Biak	10.26	57	P	P	17 32 31.7	-0.3
	26μm2μm,1.6s						
TOLI2	Tolitoli	10.39	319		P	17 32 33.7	+0.2
MPSI	Mapaga	10.44	313	P	P	17 32 34.8	+0.8
	5μm13μm788nm,1.4s						
SGSI	Sangihe	10.66	349	P	P	17 32 41.7	+5.1
TWSI	Taliwang, Sumb	10.70	259	P	Pn	17 32 33.3	-2.5
	3μm193nm,0.8s						
FITZ	Fitzroy Crossi	11.32	189	P	Pn	17 32 43.1	0.0
	baz=11,SNR=1000						
FITZ	Fitzroy Crossi	11.32	189	P	Pn	17 32 43.0	0.0
	153nm,0.3s,baz=24,slow=9.7,SNR=667						
FITZ				S	S	17 34 45.1	-4.7
	15nm,0.3s,baz=271,slow=23,SNR=6.4						
FITZ	Fitzroy Crossi	11.32	189		Pn	17 32 42.8	-0.3
WAMI	Wamena	11.53	76	P	P	17 32 49.9	+3.7
	8μm21μm1μm,0.9s						
KBKI	Kotabaru	11.84	287	P	P	17 32 52.4	+2.7
	946nm89nm,0.8s						
BKB	Balikpapan	11.96	297		P	17 32 55.5	+4.5
BKB	Balikpapan	11.96	297	P	P	17 32 55.9	+4.9
	4μm16μm1μm,1.5s						
SMPI	Sarmi	12.16	67	P	Pn	17 32 53.6	+0.3
	4μm6μm335nm,1.3s						
SRBI	Singaraja	12.26	264	P	P	17 32 52.9	-1.3
	3μm229nm,1.1s						
DNP	Denpasar	12.32	261	P	Pn	17 32 55.1	-0.1
	26μm553nm,0.6s						
MMPI	Merauke	12.85	98	P	Pn	17 33 02.8	+1.4
	11μm21μm2μm,0.6s						
BBKI	Banjar Baru	13.06	284	P	Pn	17 33 06.3	+2.4
	4μm408nm,1.1s						
ABJI	Asem Bagus	13.21	265	P	Pn	17 33 06.8	+1.2
	3μm219nm,0.9s						
GENI	Genyem	13.30	72	P	Pn	17 33 07.1	+0.3
	8μm16μm981nm,1.2s						
JAGI	Jajag, Banyuwa	13.34	262	P	P	17 33 04.4	-1.8
JAGI	Jajag, Banyuwa	13.34	262	P	P	17 33 06.6	+0.4
	4μm140nm,1.1s						
KMMI	Kalianget	13.45	268	P	Pn	17 33 13.9	+5.4
SKMP	Bagumbayan, Su	13.62	347	*e*P	P	17 33 09.4	+0.1
MATI	Mati	13.77	355	*e*P	P	17 33 11.4	+0.4
MATI				*e*S	S	17 35 42.6	+1.0
JAY	Jayapura	13.84	72	P	Pn	17 33 13.1	0.0
	17nm,0.3s,baz=265,slow=7.0,SNR=41						
JAY				S	S	17 35 44.6	+1.7
	baz=130,slow=23,SNR=6.6						
JAY	Jayapura	13.84	72	P	Pn	17 33 14.0	+0.9
	7μm409nm,1.4s						
MTKI	Muara Teweh, K	13.89	295	P	Pn	17 33 14.8	+1.1
	3μm232nm,1.0s						
DAV	Davao City (W)	13.97	352	P	P	17 33 13.6	+0.4
	78nm,0.3s,baz=258,slow=0.5,SNR=3.5						
DAV				S	S	17 35 45.7	0.0
	60nm,0.3s,baz=225,slow=16,SNR=2.2						
KCP	Kidapawan	13.99	350	⇑ *i*P	Pn	17 33 14.8	-0.1
KCP				*i* S	S	17 35 55.5	+9.4
WB0	Warramunga Arr	14.46	153	P	P	17 33 18.9	+0.4
I07AU	WARRAMUNGA INF	14.58	154	P	P	17 33 20.0	+0.2
	baz=323,slow=14,SNR=17						
WRAB	Tennant Creek	14.59	154	*c i*P	P	17 33 20.5	+0.6
WRAB	Tennant Creek	14.59	154	P	P	17 33 20.4	+0.5
WRA	Warramunga Arr	14.59	154	P	P	17 33 20.7	+0.8
	406nm,0.3s,baz=331,slow=12,SNR=1904						
WRA				S	S	17 35 52.8	-5.3
	17nm,0.3s,baz=325,slow=19,SNR=14						
WRA	Warramunga Arr	14.59	154	P	P	17 33 19.4	-0.6
WB2	Warramunga Arr	14.60	154	P	P	17 33 20.5	+0.5
WR0	Warramunga Arr	14.70	153	P	P	17 33 21.8	+0.7
BUKP	Musuan	14.85	350	*e*P	P	17 33 23.3	+0.5
BUKP				*e*S	S	17 36 05.0	+1.8
MYLDM	Lahad Datu	14.97	323	P	Pn	17 33 26.7	+0.5
CGP	Cagayan de Oro	15.47	349	⇓*e*P	Pn	17 33 32.3	+0.3
BUTP	Butuan	15.84	353	*e*P	Pn	17 33 35.2	-1.1
BUTP				*e*S	S	17 36 24.6	+1.6
SPMM	Sapulut	15.93	316	P	Pn	17 33 37.0	-0.4
PBKI	Pangkalan Bun	16.32	284	P	Pn	17 33 42.2	+0.3
	322nm,1.0s						
PSA00	Pilbara Seismi	16.39	206	P	P	17 33 40.2	+0.7
PSA00	Pilbara Seismi	16.39	206	P	P	17 33 40.0	+0.5
PSA00				IAmb	IAmb	17 33 41.3	
	comp=Z,436nm,0.9s						
GLSP	General Luna,	16.59	355	*e*P	P	17 33 42.4	+0.6
GLSP				*e*S	S	17 36 34.4	-3.5
UGM	Wanagama	16.88	265	P	Pn	17 33 46.8	-1.7
UGM				IAmb	IAmb	17 34 44.4	
	comp=Z,220nm,1.1s						
COEN	Coen	16.93	116	P	P	17 33 45.7	+0.3
SMRI	Semarang	16.95	268	P	Pn	17 33 48.3	-0.9
SMRI				IAmb	IAmb	17 34 42.8	
	comp=Z,267nm,1.3s						
KKM	Kota Kinabalu	17.07	318	P	P	17 33 48.0	+0.9
KKM				IAmb	IAmb	17 34 02.7	
	comp=Z,166nm,1.2s						
MSLP	Maasin	17.09	351	*e*P	P	17 33 47.5	+0.4
MSLP				*e*S	S	17 36 48.5	+0.9
CNOP	Candoni, Negro	17.28	344	*e*P	P	17 33 47.9	-1.2
STKI	Sintang	17.42	293	P	Pn	17 34 00.1	+5.7
AS31	Alice Springs	17.80	160	P	P	17 33 55.3	+0.6
ASAR	Alice Springs	17.80	160	P	P	17 33 56.2	+1.6
	comp=Z,197nm,0.3s,baz=344,slow=12,SNR=9792						
ASAR				S	S	17 36 59.7	-1.8
	comp=Z,9.1nm,0.3s,baz=342,slow=20,SNR=12						
ASAR	Alice Springs	17.80	160	P	P	17 33 55.3	+0.6
SBUM	Sibu	17.85	301	P	P	17 33 56.4	+1.2
SBUM				IAmb	IAmb	17 34 00.8	
	comp=Z,100nm,1.2s						
SBUM	Sibu	17.85	301	P	P	17 33 57.0	+1.7
QIS	Mount Isa	17.96	140	P	P	17 33 57.0	+0.6
	baz=18,SNR=484						
OCLP	Ormoc	18.03	351	*e*P	P	17 33 56.8	-0.4
KSM	Kuching	19.06	295	P	P	17 34 08.3	+0.1
KSM				IAmb	IAmb	17 34 13.8	
	comp=Z,222nm,1.5s						
KSM	Kuching	19.06	295	P	P	17 34 09.0	+0.8
JCJI	Jatiwangi	19.12	270	P	P	17 34 11.1	+2.4
	comp=Z,6μmcomp=Z,517nm,1.1s						
CISI	Cisompet, Garu	19.55	267	P	P	17 34 12.0	-1.5
CISI	Cisompet, Garu	19.55	267	P	P	17 34 13.6	+0.1
	comp=Z,6μmcomp=Z,698nm,0.8s						
PMG	Port Moresby	19.61	99	P	P	17 34 14.8	+0.8
	comp=Z,7.5nm,0.3s,baz=277,slow=5.9,SNR=46						
PMG				S	S	17 37 36.3	+0.9
	baz=338,slow=16,SNR=1.4						
PMG				ScP	ScP	17 41 22.9	+2.6
	comp=Z,0.4nm,0.3s,baz=231,slow=7.6,SNR=3.6						
PMG	Port Moresby	19.61	99	*d i*P	P	17 34 14.2	+0.2
PMG				pmax	pmax		
	comp=Z,306nm,0.9s						
PMG	Port Moresby	19.61	99	P	P	17 34 14.1	+0.2
PMG	Port Moresby	19.61	99	P	P	17 34 15.4	+1.4
LEM	Lembang	19.75	269	P	P	17 34 14.7	-1.0
	comp=Z,6.8nm,0.3s,baz=62,slow=10,SNR=31						
LEM				S	S	17 37 37.8	-0.4
	comp=Z,1.1nm,0.3s,baz=322,slow=18,SNR=2.0						
MTSU	Mount Surprise	19.84	126	P	P	17 34 16.5	+0.1
	baz=20,SNR=218						
BUSP	Coron	20.10	339	*e*P	P	17 34 18.6	-0.4
TPI	Tanjungpandan	20.20	281	P	P	17 34 23.4	+3.5
	comp=Z,1μmcomp=Z,132nm,1.1s						
GIRL	Giralia	20.25	218	P	P	17 34 20.8	+0.6
	baz=20,SNR=65						
GIRL	Giralia	20.25	218	P	P	17 34 20.6	+0.4
MANU	Manus Island	20.36	77	P	P	17 34 21.1	-0.3
MANU				IAmb	IAmb	17 34 24.0	
	comp=Z,341nm,1.2s						
CBJI	Citeko	20.53	270	P	P	17 34 21.7	-1.3
	comp=Z,7μmcomp=Z,688nm,1.0s						
DBJI	Dramaga	20.62	270	P	P	17 34 23.5	-0.3
	comp=Z,595μmcomp=Z,8μmcomp=Z,130nm,0.9s						
MEEK	Meekatharra	21.41	202	P	P	17 34 30.8	-0.1
	baz=22,SNR=368						
LQP	Lukban	21.66	344	⇑*e*P	P	17 34 33.5	+0.1
PPBI	Pangkal Pinang	21.81	281	P	P	17 34 38.9	+4.3
	comp=Z,7μmcomp=Z,120nm,0.9s						
TGY	Tagaytay City	21.83	343	P	P	17 34 32.7	-2.1
	comp=Z,127nm,0.4s,baz=293,slow=1.7,SNR=5.0						
XMI	Christmas Isla	21.86	259	P	P	17 34 35.2	+0.1
	comp=Z,187nm,0.9s						
XMIS	Christmas Isla	21.91	259	P	P	17 34 34.4	-1.1
XMIS				IAmb	IAmb	17 34 38.7	
	comp=Z,80nm,0.8s						
XMIS	Christmas Isla	21.91	259	P	P	17 34 35.1	-0.4
	comp=Z,133nm,0.7s						
KLSI		22.77	274	P	P	17 34 52.3	+9.0
KASI	Kota Agung	22.92	272	P	P	17 34 45.5	+0.8
	comp=Z,61nm,0.8s						
PMBI	Palembang	22.99	279	P	P	17 34 49.5	+4.1
PMBI	Palembang	22.99	279	P	P	17 34 51.3	+6.0
MDSI	Maura Dua	23.34	275	P	P	17 34 50.3	+1.8
	comp=Z,682nmcomp=Z,37nm,0.9s						
LWLI	Liwa	23.40	273	P	P	17 34 50.8	+1.6
	comp=Z,159nm,0.5s						
FORT	Forrest	23.80	179	P	P	17 34 53.1	+0.7
	baz=24,SNR=88						
FORT	Forrest	23.80	179	P	P	17 34 52.5	+0.1
SMPP	San Manuel, Pa	23.84	344	*e*P	P	17 34 51.1	-1.9
LHSI	Lahat	24.07	276	P	P	17 34 57.9	+2.8
	comp=Z,1μmcomp=Z,63nm,0.9s						
JMBI	JAMBI	24.36	281	P	P	17 35 06.7	+9.0
MNAI	Manna	24.56	275	P	P	17 35 02.6	+3.0
MNAI				IAmb	IAmb	17 35 53.2	
	comp=Z,190nm,1.0s						
MORW	Morawa	24.60	205	P	P	17 34 59.6	-0.1
	baz=25,SNR=32						
MORW	Morawa	24.60	205	P	P	17 34 59.1	-0.6
RABL	Rabaul	24.68	85	P	P	17 35 00.7	+0.1
RABL				IAmb	IAmb	17 35 04.9	
	comp=Z,125nm,0.9s						
KMBL	Kambalda	24.94	191	P	P	17 35 03.2	+0.5
	baz=25,SNR=118						
KSI	Kapahiang	25.02	276	P	P	17 35 08.3	+4.6
	comp=Z,60nm,0.6s						
MYKOM	Kota Tinggi	25.13	289	P	P	17 35 06.5	+1.9
QLP	Quilpie	25.26	143	P	P	17 35 06.2	+0.6
	baz=25,SNR=15						
BLDU	Ballidu	25.71	202	P	P	17 35 09.7	+0.1
	baz=26,SNR=88						
KLBR	Kellerberrin	26.24	199	P	P	17 35 14.5	+0.2
	baz=26,SNR=100						
SDSI	Sungai Dareh	26.67	282	P	P	17 35 20.5	+2.2
	comp=Z,34nm,1.5s						
BBOO	Buckleboo	27.01	164	P	P	17 35 21.8	+0.7
	baz=27,SNR=83						
BBOO	Buckleboo	27.01	164	P	P	17 35 21.6	+0.5
BBOO				pP	pP	17 36 20.1	-4.4
BBOO				IAmb	IAmb	17 36 29.1	
	comp=Z,172nm,0.8s						
MUN	Mundaring	27.12	201	P	P	17 35 22.4	+0.3
	baz=27,SNR=38						
BKNI	Bangkinang	27.36	284	P	P	17 35 32.7	+8.2
NWAO	Narrogin (SRO)	27.64	199	P	P	17 35 27.2	+0.5

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         baz=28,SNR=115
NWAO  Narrogin (SRO)     27.64 199    P      P        17 35 27.1 +0.5
         comp=Z,173nm,0.6s,baz=29,slow=8.1,SNR=129
NWAO                                  pP     pP       17 36 26.1  -4.1
         comp=Z,99nm,0.7s,baz=33,slow=15,SNR=5.0
NWAO  Narrogin (SRO)     27.64 199    P      P        17 35 26.8 +0.1
NWAO                                  IAmb   IAmb     17 35 28.1
         comp=Z,204nm,0.8s
NWAO                                  pP     pP       17 36 26.3  -3.8
NWAO  Narrogin (SRO)     27.64 199    P      P        17 35 26.8 +0.1
NWAO                                  IAmb   IAmb     17 35 28.1
         comp=Z,162nm,0.8s
NWAO  Narrogin (SRO)     27.64 199    P      P        17 35 27.3 +0.6
RMQ   Roma               28.11 136    P      P        17 35 31.7 +0.8
         baz=28,SNR=12
STKA  Stephens Creek     28.15 154    P      P        17 35 31.9 +0.7
         baz=28,SNR=110
STKA  Stephens Creek     28.15 154    P      P        17 35 31.9 +0.7
         comp=Z,60nm,0.6s,baz=334,slow=8.7,SNR=138
STKA                                  pP     pP       17 36 34.3  -0.7
         comp=Z,91nm,0.6s,baz=321,slow=13,SNR=3.8
STKA                                  S      S        17 39 50.3  -0.5
         comp=Z,83nm,0.9s,baz=118,slow=17,SNR=4.0
STKA  Stephens Creek     28.15 154    P      P        17 35 31.5 +0.3
STKA                                  pP     pP       17 36 32.5  -2.4
HTT   Hallett            28.48 160    P      P        17 35 35.1 +1.0
         baz=29,SNR=71
IPM   Ipoh               28.74 292    P      P        17 35 37.5 +0.9
IPM   Ipoh               28.74 292    P      P        17 35 38.0 +1.4
MNSI  Mandailing Nat     28.89 284    P      P        17 35 39.2 +1.2
         comp=Z,78nm,0.9s
EIDS  Eidsvold           29.08 132    P      P        17 35 39.3  -0.2
KULM  Kulim              29.40 294    P      P        17 35 42.8 +0.4
KULM                                  ScP    ScP      17 41 47.7  -0.1
KULM  Kulim              29.40 294    P      P        17 35 43.0 +0.5
CMSA  Cobar Meteorol     29.86 148    P      P        17 35 47.1 +1.0
         baz=30,SNR=102
PSI   Prapat             30.11 288    P      P        17 35 49.0 +0.2
         comp=Z,26nm,0.8s,baz=171,slow=0.2,SNR=21
PSI                                   pP     pP       17 36 52.5  -0.4
         comp=Z,13nm,0.9s,baz=180,slow=5.5,SNR=1.7
PSI                                   S      S        17 40 18.2  -3.9
         comp=Z,8.8nm,1.0s,baz=180,slow=21,SNR=6.2
TWG   Pinlang            30.17 348    P      P        17 35 47.5  -1.5
TWG                                   IAmb   IAmb     17 36 14.8
         comp=Z,168nm,1.8s
H01W3 Cape Leeuwin H     30.49 202    P      P        17 35 53.6 +2.2
         baz=28,slow=8.0,SNR=3.5
H01W1 Cape Leeuwin H     30.49 202    P      P        17 35 53.7 +2.3
         baz=28,slow=8.0,SNR=5.2
H01W2 Cape Leeuwin H     30.50 202    P      P        17 35 53.7 +2.2
         baz=28,slow=8.0,SNR=4.7
YULB  Yu-li              30.68 349    P      P        17 35 51.2  -2.3
YULB                                  IAmb   IAmb     17 37 01.4
         comp=Z,124nm,1.7s
COCO  West Island        30.70 258  i P      P        17 35 55.7 +1.9
TPUB  Ta-pu              30.72 348    P      P        17 35 52.8  -1.1
TPUB                                  IAmb   IAmb     17 37 06.3
         comp=Z,411nm,2.0s
GSI   Gunungsitoli       30.96 284    P      P        17 35 55.6  -0.5
GSI   Gunungsitoli       30.96 284    P      P        17 35 56.4 +0.3
         comp=Z,42nm,1.1s
UBPT  Khong Chiam        31.00 315    P      P        17 35 57.2 +0.8
QIZ   Qiongzhong         31.07 326    P      P        17 35 58.0 +1.1
QIZ                                   S      S        17 40 38.5 +1.9
QIZ                                   sS     sS       17 42 35.5 +2.8
SSLB  Suanglung          31.13 348    P      P        17 35 56.2  -1.2
SSLB                                  IAmb   IAmb     17 36 59.6
         comp=Z,99nm,1.6s
NACB  Ninganchiao        31.38 350    P      P        17 35 58.4  -1.2
YOJ   Yonaguni jima      31.44 352    P      P        17 35 59.5  -0.6
YOJ   Yonaguni jima      31.44 352    P      P        17 35 59.5  -0.6
TPTI                     31.91 287    P      P        17 36 06.0 +1.7
         comp=Z,17nm,0.7s
YHNB  Yeheng             31.91 349    P      P        17 36 02.8  -1.4
YHNB                                  IAmb   IAmb     17 36 17.6
         comp=Z,194nm,1.7s
HNR   Honiara            32.20  97    P      P        17 36 05.5  -1.3
         comp=Z,119nm,0.8s,baz=333,slow=11,SNR=1.3
ARPS  Mount Arapiles     32.52 158    P      P        17 36 10.6 +1.4
         baz=33,SNR=28
ARMA  Armidale           32.58 139    P      P        17 36 11.7 +1.7
         baz=33,SNR=19
ARMA  Armidale           32.58 139    P      P        17 36 11.6 +1.5
LHMI  Lhok Sumawe        32.79 291    P      P        17 36 11.8  -0.1
LHMI                                  IAmb   IAmb     17 36 18.3
         comp=Z,80nm,0.8s
QZH   Quanzhou           32.79 345    P      P        17 36 10.8  -0.9
QZH                                   pmax   pmax
         comp=Z,62nm,1.6s
YNG   Young              33.43 148    P      P        17 36 18.8 +1.6
         baz=34,SNR=27
JOW   Kunigami           33.50   1    P      P        17 36 17.4  -0.4
         comp=Z,30nm,0.5s,baz=183,slow=9.6,SNR=5.3
MGCD  Mangrove Creek     34.15 143    P      P        17 36 25.6 +2.3
         baz=34,SNR=9.3
CAN   Canberra           34.53 148    P      P        17 36 26.9 +0.3
CAN                                   pmax   pmax
         comp=Z,72nm,0.9s
CAN   Canberra           34.53 148    P      P        17 36 26.9 +0.3
CAN                                   ScP    ScP      17 42 04.4  -0.5
TOO   Toolangi           34.66 154    P      P        17 36 29.9 +2.2
         baz=35,SNR=14
TOO   Toolangi           34.66 154    P      P        17 36 29.0 +1.3
TOO                                   pmax   pmax
         comp=Z,138nm,1.3s
TOO   Toolangi           34.66 154    P      P        17 36 29.0 +1.3
TOO                                   IAmb   IAmb     17 36 31.2
         comp=Z,138nm,1.2s
CNB   Canberra Magne     34.71 148    P      P        17 36 29.7 +1.5
         baz=35,SNR=7.3
SLVN  Son La             36.36 321    P      P        17 36 42.6 +0.4
LAMP  Lampang            37.32 313    P      P        17 36 51.5 +1.3
PAYA  Payao              37.69 314    P      P        17 36 54.8 +1.5
CM36  Chiang Mai Arr     37.71 312    P      P        17 36 54.0 +0.6
CM04  Chiang Mai Arr     37.72 312    P      P        17 36 54.0 +0.5
CM09  Chiang Mai Arr     37.74 312    P      P        17 36 54.9 +1.2
CM05  Chiang Mai Arr     37.74 312    P      P        17 36 54.8 +1.0
CM01  Chiang Mai Arr     37.75 312    P      P        17 36 54.9 +1.1
CM02  Chiang Mai Arr     37.76 312    P      P        17 36 55.0 +1.1
CM35  Chiang Mai Arr     37.77 313    P      P        17 36 54.0 +0.1
CM31  Chiang Mai Arr     37.78 312    P      P        17 36 55.2 +1.1
CM31  Chiang Mai Arr     37.78 312    P      P        17 36 54.3 +0.2
CM31                                         pwP      17 38 04.6 +1.1
CMAR  Chiang Mai Arr     37.78 312    P      P        17 36 54.9 +0.8
         comp=Z,11nm,1.0s,baz=146,slow=7.4,SNR=80
CMAR                                  pP     pP       17 38 01.3 +1.4
         comp=Z,2.3nm,0.8s,baz=141,slow=6.5,SNR=1.6
CMAR                                  PcP    PcP      17 39 04.6 +1.7
         comp=Z,6.9nm,0.7s,baz=179,slow=2.1,SNR=14
CMAR                                  ScP    S        17 42 18.9  -0.2
         comp=Z,15nm,1.1s,baz=161,slow=3.3,SNR=16
CMAR  Chiang Mai Arr     37.78 312    P      P        17 36 53.4  -0.6
CMAR                                         pwP      17 38 04.9 +1.3
CMAR                                         S        17 42 18.3  -0.7
CM13  Chiang Mai Arr     37.78 312    P      P        17 36 55.1 +1.0
CM15  Chiang Mai Arr     37.79 312    P      P        17 36 55.0 +0.9
CM34  Chiang Mai Arr     37.88 313    P      P        17 36 55.0 +0.1
CM32  Chiang Mai Arr     37.97 312    P      P        17 36 56.0 +0.3
CMMT  Chiang Mai         38.00 313    P      P        17 36 55.6  -0.3
CHTO  Chiang Mai         38.01 313    P      P        17 36 56.0 +0.1
CHTO                                                  17 42 19.6
CHTO                                  pmax   pmax
         comp=Z,46nm,1.3s
CHTO  Chiang Mai         38.01 313    P      P        17 36 56.0 +0.1
CHTO                                  ScP    ScP      17 42 19.6 +1.5
CHTO  Chiang Mai         38.01 313    P      P        17 36 56.5 +0.6
CM33  Chiang Mai Arr     38.01 313    P      P        17 36 56.0 +0.1
JSU   Suzuyama           38.26   4    P      P        17 36 57.2  -0.6
JSU                                   IAmb   IAmb     17 36 59.2
         comp=Z,201nm,1.5s
MHMT  Maesarieng         38.36 311    P      P        17 36 59.0 +0.2
         comp=Z,0.1nmcomp=Z,10nm,1.1s
GYA   Guiyang            38.81 329 ⇓P      P        17 37 02.8 +0.2
GYA                                   pmax   pmax
         comp=Z,26nm,1.4s
WHN   Wuhan              39.28 342 ⇓P      P        17 37 06.8 +0.6
WHN                                   PP     PP       17 38 47.3 +2.3
WHN                                   S      S        17 42 38.5  -2.4
WHN                                   pmax   pmax
         comp=Z,510nm,1.6s
WHN                                   LR     LR
         comp=Z,1μm,10.3s
NJ2   Nanjing            39.57 348⇓i P      P        17 37 09.0 +0.5
NJ2                                   S      S        17 42 48.5 +3.3
NJ2                                   pmax   pmax
         comp=Z,80nm,1.2s
NJ2                                   pmax   pmax
         comp=Z,370nm,3.5s
SANVU Saraoutou          39.80 106    P      P        17 37 10.3  -0.4
SANVU                                 IAmb   IAmb     17 37 12.7
         comp=Z,173nm,0.8s
JNU   Nakatsue           39.89   4    P      P        17 37 11.3 +0.1
         comp=Z,46nm,1.1s,baz=189,slow=6.0,SNR=6.0
JNU   Nakatsue           39.89   4    P      P        17 37 11.1  -0.2
KMI   Kunming            39.90 324⇓i P      P        17 37 13.0 +1.3
KMI                                   pP     pP       17 38 16.8  -1.4
KMI                                   PP     sP       17 38 56.3  -0.4
KMI                                   PcP    PcP      17 39 11.8 +2.0
KMI                                   S      S        17 42 51.5 +0.7
KMI                                   sS     sS       17 44 52.0 +1.7
KMI                                   pmax   pmax
         comp=Z,45nm,1.4s
KMI                                   pmax   pmax
         comp=Z,220nm,4.7s
DZM   Mont Dzumac        40.46 116    P      P        17 37 16.8 +0.7
         comp=Z,12nm,0.8s,baz=272,slow=12,SNR=6.4
JMN   Monobe             40.82   8    P      P        17 37 18.7   0.0
JMN                                   IAmb   IAmb     17 37 20.6
         comp=Z,246nm,1.4s
JHS   Saijyo             41.97   7    IAmb   IAmb     17 37 29.9
         comp=Z,280nm,1.4s
JWT   Wachi              42.57  10    IAmb   IAmb     17 37 34.4
         comp=Z,358nm,1.5s
TJN   Taejon             43.01 360d i P      P        17 37 36.7 +0.5
JGF   Kuroka             43.24  12    P      P        17 37 36.6  -1.5
CD2   Chengdu            43.91 330    P      P        17 37 43.3  -0.2
CD2                                   ScP    ScP      17 42 41.3   0.0
CD2                                   S      S        17 43 46.0  -2.7
CD2                                   pmax   pmax
         comp=Z,70nm,1.3s
CD2                                   pmax   pmax
         comp=Z,190nm,4.6s
KSAR  Wonju Array Be     44.08   0    P      P        17 37 44.3  -0.3
KSAR                                                  17 39 23.4
KSAR  Wonju Array Be     44.08   0    P      P        17 37 44.3  -0.3
KSAR                                  PcP    PcP      17 39 23.4 +0.3
KSRS  Korea Array        44.09   0    P      P        17 37 45.4 +0.7
         comp=Z,12nm,0.5s,baz=182,slow=9.4,SNR=94
KSRS                                  PcP    PcP      17 39 23.9 +0.8
         comp=Z,10nm,1.0s,baz=184,slow=4.8,SNR=9.2
KSRS                                  ScP    ScP      17 42 42.5 +0.8
         comp=Z,1.5nm,0.7s,baz=178,slow=3.1,SNR=4.3
INCN  Inchon             44.12 359    P      P        17 37 45.0   0.0
INCN                                  pmax   pmax
         comp=Z,125nm,1.5s
INCN  Inchon             44.12 359    P      P        17 37 45.0   0.0
INCN                                  IAmb   IAmb     17 37 47.0
         comp=Z,125nm,1.4s
KS19  Wonju Array Si     44.13   0    IAmb   IAmb     17 37 47.0
         comp=Z,99nm,1.2s
MJAR  Matsushiro Arr     44.33  12    P      P        17 37 45.3  -1.2
         comp=Z,63nm,1.1s,baz=187,slow=8.6,SNR=31
MJAR                                  PcP    PcP      17 39 24.5 +0.5
         comp=Z,10nm,1.1s,baz=208,slow=4.8,SNR=4.9
MJAR                                  ScP    ScP      17 42 43.5 +0.7
         comp=Z,7.2nm,1.1s,baz=195,slow=5.7,SNR=4.4
MJAR  Matsushiro Arr     44.33  12    P      P        17 37 45.4  -1.2
MJAR                                  pmax   pmax
         comp=Z,20nm,1.2s
MJAR  Matsushiro Arr     44.33  12    P      P        17 37 45.4  -1.2
MAJO  Matsushiro         44.33  12deP    P        17 37 45.4  -1.2
MAJO                                  pmax   pmax
         comp=Z,89nm,1.2s
MAJO  Matsushiro         44.33  12    P      P        17 37 44.9  -1.7
MAJO                                  IAmb   IAmb     17 37 46.8
         comp=Z,130nm,1.4s
MAT   Matsushiro         44.33  12    P      P        17 37 45.4  -1.2
XAN   Xi'an              44.33 338    P      P        17 37 45.8  -0.9
XAN                                   pP     pP       17 38 50.5  -4.6
XAN                                   pmax   pmax
         comp=Z,58nm,1.4s
XAN                                   LR     LR
         comp=Z,1μm,15.2s
XAN                                   LR     LR
         comp=Z,620nm,14.8s
XAN                                   LR     LR
         comp=Z,1μm,14.3s
SAIH  SAIHA              44.65 312  eP     P        17 37 49.5   0.0
KOHI  KOHIMA             45.85 316  eP     P        17 37 58.2  -0.7
KOHI                                  IAmb   IAmb     17 37 59.9
         comp=Z,102nm,1.0s
DL2   Dalian             45.86 354 ⇓P      P        17 37 58.3  -0.2
DL2                                   PcP    PcP      17 39 30.0 +0.7
DL2                                   S      S        17 44 15.3  -0.8
DL2                                   pmax   pmax
         comp=Z,67nm,1.1s
DL2                                   pmax   pmax
         comp=Z,280nm,3.6s
MOKO  MOKOCHONG          45.97 317  eP     P        17 37 59.7  -0.1
MOKO                                  IAmb   IAmb     17 38 01.4
         comp=Z,269nm,1.7s
JMM   Marumori           46.19  15    IAmb   IAmb     17 38 02.4
         comp=Z,114nm,1.1s
ZIRO  ZIRO               47.21 318  eP     P        17 38 09.4 +0.1
ZIRO                                  IAmb   IAmb     17 38 11.0
         comp=Z,76nm,1.2s
SHL   Shillong           47.31 314    P      P        17 38 09.4  -0.7
SHL                                                   17 39 35.3
SHL   Shillong           47.31 314  eP     P        17 38 09.7  -0.5
SHL                                   IAmb   IAmb     17 38 11.2
         comp=Z,32nm,1.1s
SHL   Shillong           47.31 314    P      P        17 38 09.4  -0.7
SHL                                          PcP      17 39 35.3 +0.3
TEZP  TEZPUR             47.33 316  eP     P        17 38 09.6  -0.4
TEZP                                  IAmb   IAmb     17 38 11.2
         comp=Z,43nm,1.3s
BJI   Beijing            47.83 348    P      P        17 38 12.3  -1.2
BJI                                   PcP    PcP      17 39 37.8 +1.5
BJI                                   ScP    ScP      17 42 59.0 +1.7
BJI                                   S      S        17 44 45.3 +1.6
BJI                                   ScS    ScS      17 47 32.0 +2.6
BJI                                   pmax   pmax
         comp=Z,39nm,1.1s
BJI                                   pmax   pmax
         comp=Z,300nm,6.0s
BJI                                   LR     LR
         comp=Z,400nm,5.2s
BJI                                   LR     LR
         comp=Z,280nm,5.1s
BJI                                   LR     LR
         comp=Z,180nm,28.4s
GUWA  GUWAHATI           47.84 315  eP     P        17 38 13.5  -0.4
GUWA                                  IAmb   IAmb     17 38 15.2
         comp=Z,78nm,1.1s
LZH   Lanzhou            48.16 334 ⇓P      P        17 38 17.0 +0.6
LZH                                   PcP    PcP      17 39 39.8 +1.9
LZH                                   sP     sP       17 40 01.3  -2.1
LZH                                   ScP    ScP      17 43 00.8 +1.7
LZH                                   S      S        17 44 43.5  -5.4
LZH                                   sS     sS       17 46 54.5 +2.1
LZH                                   SS     SS       17 48 20.5  -3.0
LZH                                   pmax   pmax
         comp=Z,120nm,1.3s
LZH                                   pmax   pmax
         comp=Z,300nm,5.6s
PALK  Pallekele          48.76 286    P      P        17 38 21.7 +0.5
         comp=Z,6.5nm,0.7s,baz=210,slow=8.8,SNR=4.4
PALK  Pallekele          48.76 286    P      P        17 38 21.5 +0.4
MSHR  Mys Shultsa        49.32   4⇓i P      P        17 38 24.4  -0.3
MSHR                                  pmax   pmax
         comp=Z,84nm,1.4s
HHC   Hu-ho-hao-te       49.69 344  eP     P        17 38 27.8 +0.1
HHC                                   S      S        17 45 09.0  -0.8
HHC                                   pmax   pmax
         comp=Z,33nm,1.0s
HHC                                   pmax   pmax
         comp=Z,110nm,6.6s
LSA   Lhasa              50.42 318    P      P        17 38 34.7 +0.9
LSA   Lhasa              50.42 318    P      P        17 38 34.8 +0.9
LSA   Lhasa              50.42 318    Pn     P        17 38 35.0 +1.2
CN2   Changchun          50.46 358  eP     P        17 38 32.3  -1.0
CN2                                 eS     S        17 45 21.3 +1.3
CN2                                   pmax   pmax
         comp=Z,30nm,1.0s
GTK   Tadong             50.71 314  eP     P        17 38 36.0 +0.4
GTK                                   IAmb   IAmb     17 38 37.6
         comp=Z,48nm,1.1s
OUZ   Omahuta            50.80 130    P      P        17 38 37.4 +1.4
USA0B Ussuriysk Arra     50.98   4d i P      P        17 38 37.4 +0.3
USA0B Ussuriysk Arra     50.98   4    IAmb   IAmb     17 38 39.0
         comp=Z,132nm,1.3s
USRK  Ussuriysk Ar.      50.98   4    P      P        17 38 37.5 +0.4
         comp=Z,15nm,0.6s,baz=188,slow=6.9,SNR=36
USRK  Ussuriysk Ar.      50.98   4    P      P        17 38 36.8  -0.3
JEW   Eniwo              51.07  13    IAmb   IAmb     17 38 40.2
         comp=Z,387nm,1.4s
MDJ   Mudanjiang         51.27   2    P      P        17 38 39.5 +0.2
MDJ                                   S      S        17 45 32.8 +1.7
MDJ                                   pmax   pmax
         comp=Z,120nm,1.4s
MDJ                                   LR     LR
         comp=Z,1μm,14.9s
MDJ                                   LR     LR
         comp=Z,1μm,15.5s
MDJ                                   LR     LR
         comp=Z,720nm,13.2s
TAPN  Taplejung          51.37 313  eP     P        17 38 40.9 +0.2
         comp=Z,32nm,0.5s
TEY   Ternei             52.30   8⇓i P      P        17 38 47.0 +0.3
TEY                                   pmax   pmax
         comp=N,30nm,1.5s
TEY                                   pmax   pmax
         comp=Z,80nm,1.3s
QRZ   Quartz Range       52.41 137    P      P        17 38 49.3 +1.5
QRZ                                   IAmb   IAmb     17 38 50.9
         comp=Z,40nm,0.6s
ASAJ  Asahikawa          52.54  14    P      P        17 38 48.8 +0.3
         comp=Z,14nm,0.5s,baz=243,slow=9.0,SNR=18
JKA   Kamikawa-asahi     52.54  14    IAmb   IAmb     17 38 50.3
         comp=Z,106nm,1.4s
GTA   Gaotai             52.70 333 ⇓P      P        17 38 50.5 +0.6
GTA                                   PcP    PcP      17 39 55.5 +0.9
GTA                                   pP     pP       17 39 58.8  -1.7
GTA                                   sP     sP       17 40 36.0  -1.9
GTA                                   ScP    ScP      17 43 20.0 +1.5
GTA                                   PcS    PcS      17 43 53.3  -0.5
GTA                                   S      S        17 45 49.5  -1.3
GTA                                   ScS    ScS      17 48 02.3  -1.1
GTA                                   SS     SS       17 49 37.0 +2.0
GTA                                   pmax   pmax
         comp=Z,52nm,1.3s
GTA                                   pmax   pmax
         comp=Z,250nm,4.5s
RPZ   Rata Peaks         52.87 141    P      P        17 38 52.4 +1.4
         comp=Z,34nm,0.5s,baz=288,slow=2.3,SNR=26
RPZ   Rata Peaks         52.87 141    P      P        17 38 52.1 +1.0
RPZ                                   IAmb   IAmb     17 38 53.0
         comp=Z,39nm,0.6s
GUN   Gumba              53.02 313  eP     P        17 38 52.8   0.0
         comp=Z,69nm,0.6s
PKI   Pulchoki           53.18 312  eP     P        17 38 53.7  -0.2
         comp=Z,34nm,0.5s
KKN   Kakani             53.40 312  eP     P        17 38 55.3   0.0
         comp=Z,244nm,1.6s
DMN   Daman              53.42 312  eP     P        17 38 55.8 +0.2
         comp=Z,165nm,1.3s
HYB   Hyderabad          54.05 297  i P      P        17 38 59.0  -1.0
HYB   Hyderabad          54.05 297  eP     P        17 38 58.4  -1.6
URZ   Urewera            54.56 133    P      P        17 39 03.2   0.0
         comp=Z,19nm,0.5s,baz=256,slow=4.9,SNR=14
DANN  Dangsing           54.83 312  eP     P        17 39 05.6   0.0
         comp=Z,250nm,1.6s
YSS   Yuzh-Sakhalins     55.26  13d i P      P        17 39 08.1 +0.1
YSS                                   pmax   pmax
         comp=Z,81nm,1.4s
YSS   Yuzh-Sakhalins     55.26  13    P      P        17 39 07.8  -0.1
YSS                                   IAmb   IAmb     17 39 08.8
         comp=Z,90nm,1.4s
KLR   Kul'dur            55.98   3    P      P        17 39 12.6  -0.4
         comp=Z,3.9nm,0.4s,baz=188,slow=5.7,SNR=24
KLR                                   PcP    PcP      17 40 07.5 +0.7
         comp=Z,12nm,1.0s,baz=175,slow=3.7,SNR=7.4
KLR   Kul'dur            55.98   3d i P      P        17 39 12.7  -0.3
KLR                                   pmax   pmax
         comp=Z,87nm,1.6s
HIA   Hailar             56.30 354d i P      P        17 39 15.6 +0.3
HIA                                   pmax   pmax
         comp=Z,64nm,1.8s
UGL   Uglegorsk          57.15  11⇓i P      P        17 39 22.0 +0.9
UGL                                   pmax   pmax
         comp=E,90nm,1.1s
UGL                                   pmax   pmax
         comp=N,50nm,1.3s
UGL                                   pmax   pmax
         comp=Z,190nm,1.3s
ULN   Ulaanbaatar        57.41 344    P      P        17 39 23.9 +0.7
ULN                                                   17 40 13.0
ULN                                   *SP    sP       17 41 09.3  -2.9
ULN                                   pmax   pmax
         comp=Z,117nm,1.3s
ULN   Ulaanbaatar        57.41 344    P      P        17 39 23.9 +0.7
ULN                                   IAmb   IAmb     17 39 25.6
         comp=Z,117nm,1.3s
ULN                                   PcP    PcP      17 40 13.0 +0.3
ULN                                          pwP      17 40 41.3 +0.7
ULN                                   sP     sP       17 41 09.3  -2.9
ULN   Ulaanbaatar        57.41 344    P      P        17 39 24.1 +0.9
SONM  Songino Array      57.56 343    P      P        17 39 25.0 +0.7
         comp=Z,33nm,1.0s,baz=165,slow=7.0,SNR=103
SONM                                  PcP    PcP      17 40 13.7 +0.3
         comp=Z,8.3nm,0.9s,baz=167,slow=4.5,SNR=5.4
SONM                                  sP     sP       17 41 10.8  -2.5
         comp=Z,8.4nm,0.8s,baz=172,slow=7.2,SNR=5.3
SONM  Songino Array      57.56 343    P      P        17 39 24.9 +0.7
SONM                                  PcP    PcP      17 40 13.6 +0.2
SONM                                         pwP      17 40 42.8 +1.1
SONM                                  sP     sP       17 41 10.1  -3.2
GRNR  Gornyy             57.91   7⇓i P      P        17 39 27.2 +0.8
GRNR                                  pmax   pmax
         comp=N,20nm,0.9s
GRNR                                  pmax   pmax
         comp=Z,20nm,1.3s
GRNR                                  MLR    MLR
         comp=E,550nm,15.0s
GRNR                                  MLR    MLR
         comp=N,410nm,12.0s
GRNR                                  MLR    MLR
         comp=Z,500nm,12.0s
POO   Poona              58.62 296  eP     P        17 39 30.0  -2.0
TYV   Tymovskoe          58.96  11  eP     P        17 39 35.0 +1.4
TYV                                 eS     S        17 47 14.9 +2.7
TYV                                   pmax   pmax
         comp=Z,52nm,1.3s
TYV                                   pmax   pmax
         comp=Z,500nm,3.4s
TYV                                   smax   smax
         comp=E,800nm,8.6s
ZEA   Zeya               60.37 360  eP     P        17 39 43.5 +0.4
ZEA                                 eS     S        17 47 32.6 +2.6
ZEA                                   pmax   pmax
         comp=N,20nm,1.1s
ZEA                                   pmax   pmax
         comp=Z,30nm,1.3s
ZEA                                   smax   smax
         comp=N,200nm,5.0s
CASY  Casey              60.48 188    P      P        17 39 44.2 +0.6
CASY                                  IAmb   IAmb     17 39 45.6
         comp=Z,55nm,1.1s
ZAK   Zakamensk          60.76 342  eP     P        17 39 45.9   0.0
ZAK                                   pmax   pmax
         comp=Z,21nm,1.4s
SMLA  Simla              61.16 311  eP     P        17 39 48.9 +0.1
SMLA                                  IAmb   IAmb     17 39 50.7
         comp=Z,133nm,1.2s
TLY   Talaya             61.81 343    P      P        17 39 53.9 +1.1
         comp=Z,4.5nm,0.6s,baz=176,slow=6.6,SNR=18
TLY   Talaya             61.81 343d i P      P        17 39 53.8 +1.1
TLY                                 eS     S        17 47 50.1 +2.0
TLY                                   pmax   pmax
         comp=Z,92nm,1.5s
TLY   Talaya             61.81 343    P      P        17 39 53.5 +0.7
WMQ   Urumqi             61.96 328  eP     P        17 39 54.3 +0.4
WMQ                                   PcP    PcP      17 40 31.5 +0.5
WMQ                                   pmax   pmax
         comp=Z,63nm,1.5s
WMQ                                   pmax   pmax
         comp=Z,290nm,3.7s
WMQ                                   LR     LR
         comp=Z,340nm,23.7s
WMQ                                   LR     LR
         comp=Z,1μm,29.0s
WMQ                                   LR     LR
         comp=Z,6μm,29.1s
IRK   Irkutsk            62.14 344  eP     P        17 39 55.3 +0.4
IRK                                   pmax   pmax
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	comp=Z,139nm,2.5s						
DHRM	**DHARAMSHALA**	62.35	312	eP	P	17 39 55.6	-1.4
DHRM				IAmb	IAmb	17 39 57.2	
	comp=Z,58nm,0.6s						
SKR	**Severo-Kuril's**	62.42	20	eP	P	17 39 52.4	-4.3
SKR				pmax	pmax		
	comp=Z,400nm,4.2s						
SKR				pmax	pmax		
	comp=Z,30nm,0.6s						
PEA0B	**Petropavlovsk-**	64.99	20	P	P	17 40 14.2	+0.9
PEA0B				pmax	pmax		
	comp=Z,361nm,1.5s						
PEA0B	**Petropavlovsk-**	64.99	20	P	P	17 40 14.2	+0.9
PETK	**Petropavlovsk-**	64.99	20	P	P	17 40 14.3	+0.9
	comp=Z,40nm,0.5s,baz=170,slow=2.8,SNR=317						
PETK	**Petropavlovsk-**	64.99	20	P	P	17 40 13.8	+0.4
PET	**Petropavlovsk**	65.24	20	i P	P	17 40 15.6	+0.7
PET				pmax	pmax		
	comp=Z,227nm,1.4s						
PET	**Petropavlovsk**	65.24	20	P	P	17 40 15.4	+0.5
NIL	**Nilore**	65.27	312	P	P	17 40 15.4	-0.2
NIL				pmax	pmax		
	comp=Z,97nm,1.6s						
NIL	**Nilore**	65.27	312	P	P	17 40 15.4	-0.2
NIL				IAmb	IAmb	17 40 17.0	
	comp=Z,97nm,1.6s						
NIL	**Nilore**	65.27	312	P	P	17 40 15.7	+0.1
BOD	**Bodaibo**	65.39	352	eP	P	17 40 16.0	+0.2
BOD				pmax	pmax		
	comp=Z,89nm,1.7s						
ZSN	**Zaisan**	65.89	330	eP	P	17 40 17.8	-1.4
	baz=329						
ZSN				eS	S	17 48 37.9	-0.4
	baz=329						
ZSN	**Zaisan**	65.89	330	eP	P	17 40 17.8	-1.4
ZSN				eS	S	17 48 37.8	-0.4
SHLS	**Shalkode**	66.12	323	eP	P	17 40 18.3	-2.7
	comp=Z,45nm,1.4s,baz=323						
SHLS				eS	S	17 48 38.2	-3.2
	baz=323						
SHLS	**Shalkode**	66.12	323	eP	P	17 40 18.2	-2.7
SHLS				eS	S	17 48 38.2	-3.2
SHLS				pmax	pmax		
	comp=Z,45nm,1.4s						
PDGK	**Podgornoye**	66.21	324	i P	P	17 40 21.9	+0.5
DGZ	**Jazzator, Alta**	66.23	333	d iP	P	17 40 22.2	+0.7
DGZ				pmax	pmax		
	comp=Z,63nm,1.1s						
KSH	**Kashi**	66.27	319	P	P	17 40 23.0	+1.1
KSH				S	S	17 48 44.0	+0.7
KSH				ScS	ScS	17 49 44.8	+0.2
KSH				sS	sS	17 50 58.0	+3.3
KSH				pmax	pmax		
	comp=Z,110nm,1.4s						
KSH				pmax	pmax		
	comp=Z,580nm,4.8s						
KSH				LR	LR		
	comp=Z,610nm,8.6s						
KSH				LR	LR		
	comp=Z,320nm,5.8s						
KSH				LR	LR		
	comp=Z,500nm,15.8s						
SATY	**Saty**	66.69	323	eP	P	17 40 23.3	-1.3
	comp=Z,44nm,1.4s,baz=323						
SATY				eS	S	17 48 48.2	-0.1
	baz=323						
SATY	**Saty**	66.69	323	eP	P	17 40 23.2	-1.3
SATY				eS	S	17 48 48.1	-0.1
SATY				pmax	pmax		
	comp=Z,44nm,1.4s						
KPKS	**Kokpek**	66.76	323	eP	P	17 40 23.4	-1.5
	comp=Z,69nm,1.4s,baz=323						
KPKS				eS	S	17 48 48.5	-0.6
	baz=323						
KPKS	**Kokpek**	66.76	323	eP	P	17 40 23.4	-1.5
KPKS				eS	S	17 48 48.4	-0.6
KPKS				pmax	pmax		
	comp=Z,69nm,1.4s						
MK31	**Makanchi Array**	66.78	328	d iP	P	17 40 25.1	+0.3
MK31	**Makanchi Array**	66.78	328	P	P	17 40 24.8	0.0
MK31				IAmb	IAmb	17 40 26.8	
	comp=Z,52nm,1.2s						
MK31				PcP	PcP	17 40 50.9	+0.1
MKAR	**Makanchi Array**	66.78	328	P	P	17 40 25.4	+0.6
	comp=Z,12nm,0.4s,baz=119,slow=8.6,SNR=185						
MKAR				PcP	PcP	17 40 51.2	+0.4
	comp=Z,7.5nm,0.5s,baz=138,slow=4.6,SNR=12						
MKAR				pP	pP	17 41 41.5	+2.2
	comp=Z,2.7nm,0.6s,baz=126,slow=8.0,SNR=1.4						
MKAR				S	S	17 48 48.4	-0.5
	comp=Z,1.7nm,1.0s,baz=142,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	66.78	328	i P	P	17 40 25.3	+0.5
MKAR				pmax	pmax		
	comp=Z,13nm,0.4s						
MKAR	**Makanchi Array**	66.78	328	P	P	17 40 24.7	-0.2
MKAR				PcP	PcP	17 40 50.8	-0.1
MAKZ	**Makanchi**	66.95	328	P	P	17 40 25.9	0.0
MAKZ				*PP	pP	17 41 42.3	+1.9
MAKZ				pmax	pmax		
	comp=Z,62nm,1.3s						
MAKZ	**Makanchi**	66.95	328	P	P	17 40 25.9	0.0
MAKZ				IAmb	IAmb	17 40 27.7	
	comp=Z,62nm,1.2s						
MAKZ				pP	pP	17 41 42.3	+1.9
TNSS	**Tian-Shan**	67.56	322	eP	P	17 40 29.6	-0.7
	baz=322						
TNSS	**Tian-Shan**	67.56	322	eP	P	17 40 29.5	-0.7
MDOK	**Medeo**	67.57	322	eP	P	17 40 28.7	-1.3
	baz=322						
MDOK	**Medeo**	67.57	322	eP	P	17 40 28.7	-1.3
AAA	**Alma-Ata**	67.68	322	eP	P	17 40 30.2	-0.4
	comp=Z,24nm,1.3s,baz=322						
AAA				eS	S	17 49 00.3	+0.5
	baz=322						
AAA	**Alma-Ata**	67.68	322	eP	P	17 40 30.1	-0.4
AAA				eS	S	17 49 00.2	+0.5
AAA				pmax	pmax		
	comp=Z,24nm,1.3s						
TDK	**Taldyqorghan**	67.82	325	eP	P	17 40 31.8	+0.4
	comp=Z,140nm,1.5s,baz=324						
TDK	**Taldyqorghan**	67.82	325	eP	P	17 40 31.7	+0.4
TDK				pmax	pmax		
	comp=Z,140nm,1.5s						
MTBS	**Maitube**	67.93	322	eP	P	17 40 32.3	+0.1
	baz=322						
MTBS	**Maitube**	67.93	322	eP	P	17 40 32.2	+0.1
CHKK	**Chushkaly**	67.99	323	eP	P	17 40 31.9	-0.6
	baz=323						
CHKK	**Chushkaly**	67.99	323	eP	P	17 40 31.8	-0.6
TKM2	**Tokmak 2**	68.33	322	P	P	17 40 35.7	+0.9
	SNR=20						
TKM2	**Tokmak 2**	68.33	322	i P	P	17 40 34.1	-0.6
TKM2				pmax	pmax		
	comp=Z,53nm,1.5s						
KUU	**Kurty**	68.41	323	eP	P	17 40 33.8	-1.2
	comp=Z,113nm,1.3s,baz=322						
KUU				eS	S	17 49 07.9	-0.3
	baz=322						
KUU	**Kurty**	68.41	323	eP	P	17 40 33.7	-1.2
KUU				eS	S	17 49 07.9	-0.3
KUU				pmax	pmax		
	comp=Z,113nm,1.3s						
KBK	**Karagaybulak**	68.59	321	P	P	17 40 37.4	+1.1
	SNR=19						
UCH	**Uchtor**	68.63	320	P	P	17 40 38.1	+1.2
	SNR=18						
YAK	**Yakutsk**	68.71	1	P	P	17 40 36.6	+0.2
	comp=Z,11nm,0.3s,baz=156,slow=1.7,SNR=39						
YAK				PcP	PcP	17 40 59.1	+0.6
	comp=Z,2.8nm,0.3s,baz=256,slow=1.8,SNR=1.1						
YAK				S	S	17 49 11.4	+0.5
	comp=Z,1.8nm,0.4s,baz=166,slow=0.2,SNR=1.7						
YAK	**Yakutsk**	68.71	1	d iP	P	17 40 36.4	0.0
YAK				e		17 40 58.1	
YAK				e*PP	pwP	17 41 56.4	+0.8
YAK				eS	S	17 49 07.9	-3.0
YAK				e		17 49 54.8	
YAK				eSS	SS	17 53 37.6	-6.0
YAK				pmax	pmax		
	comp=Z,118nm,1.1s						
YAK				pmax	pmax		
	comp=N,57nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax	smax		
	comp=E,229nm,3.0s						
YAK				smax	smax		
	comp=N,133nm,2.6s						
YAK	**Yakutsk**	68.71	1	P	P	17 40 36.4	0.0
YAK				PcP	PcP	17 40 59.5	+1.0
YAK					pwP	17 41 56.7	+1.1
MA2	**Magadan**	68.77	12	d iP	P	17 40 37.5	+0.7
MA2				pmax	pmax		
	comp=Z,142nm,1.4s						
MA2	**Magadan**	68.77	12	P	P	17 40 37.1	+0.3
KBL	**Kabul**	68.80	311	P	P	17 40 37.1	-0.7
KBL				*PP	pP	17 41 52.2	-0.5
KBL	**Kabul**	68.80	311	P	P	17 40 37.1	-0.7
KBL				pP	pP	17 41 52.2	-0.5
KBL	**Kabul**	68.80	311	P	P	17 40 38.2	+0.3
	SNR=13						
AAK	**Ala-Archa**	68.86	321	P	P	17 40 39.1	+1.2
	comp=Z,9.6nm,0.7s,baz=129,slow=5.2,SNR=42						
AAK				PcP	PcP	17 41 01.6	+1.7
	comp=Z,4.4nm,0.6s,baz=113,slow=5.2,SNR=5.1						
AAK				S	S	17 49 14.5	+0.6
	comp=Z,2.5nm,1.1s,baz=312,slow=21,SNR=11						
AAK				PKPPKP	P'P'df	18 08 46.2	-3.9
	comp=Z,2.1nm,0.9s,baz=293,slow=3.0,SNR=9.0						
AAK	**Ala-Archa**	68.86	321	P	P	17 40 39.2	+1.2
	SNR=22						
AAK	**Ala-Archa**	68.86	321	d iP	P	17 40 39.0	+1.0
AAK				pmax	pmax		
	comp=Z,159nm,1.3s						
AAK	**Ala-Archa**	68.86	321	P	P	17 40 38.8	+0.8
AAK				IAmb	IAmb	17 40 40.6	
	comp=Z,39nm,1.1s						
AAK	**Ala-Archa**	68.86	321	P	P	17 40 39.2	+1.2
CHMS	**Chumysh**	68.89	321	P	P	17 40 38.5	+0.5
	SNR=8.8						
AML	**Almayashu**	69.10	320	P	P	17 40 40.9	+1.1
	SNR=31						
USP	**Ospenovka**	69.19	321	P	P	17 40 40.5	+0.7
	SNR=55						
SGDS	**Sogindy**	69.21	322	eP	P	17 40 39.0	-0.9
	comp=Z,23nm,1.6s,baz=321						
SGDS	**Sogindy**	69.21	322	eP	P	17 40 39.0	-0.9
SGDS				pmax	pmax		
	comp=Z,23nm,1.6s						
EKS2	**Erkin-Say**	69.32	321	P	P	17 40 42.1	+1.3
	SNR=29						
SEM	**Semipalatinsk**	70.13	330	eP	P	17 40 43.5	-2.0
	comp=Z,65nm,1.5s,baz=330						
SEM	**Semipalatinsk**	70.13	330	eP	P	17 40 43.5	-2.0
SEM				pmax	pmax		
	comp=Z,65nm,1.5s						
ZALV	**Zalesovo Beam**	70.39	335	P	P	17 40 46.5	-0.3
	comp=Z,18nm,0.4s,baz=126,slow=4.2,SNR=126						
ZALV				PKPPKP	P'P'df	18 08 42.2	-5.3
	comp=Z,1.1nm,0.8s,baz=305,slow=5.2,SNR=4.7						
BTLS	**Baital**	70.41	323	eP	P	17 40 45.7	-1.4
	comp=Z,30nm,1.6s,baz=322						
BTLS	**Baital**	70.41	323	eP	P	17 40 45.6	-1.4
BTLS				pmax	pmax		
	comp=Z,30nm,1.6s						
DZA	**Taraz**	71.00	320	eP	P	17 40 50.6	-0.2
	baz=320						
DZA	**Taraz**	71.00	320	eP	P	17 40 50.5	-0.2
KURBB	**Kurchatov Arra**	71.12	329	P	P	17 40 51.6	+0.5
	comp=Z,82nm,1.1s,baz=131,slow=4.9,SNR=170						
KURBB				pP	pP	17 42 08.0	+1.3
	comp=Z,2.4nm,0.7s,baz=130,slow=4.8,SNR=1.1						
KURK	**Kurchatov**	71.13	330	d iP	P	17 40 51.8	+0.5
KURK				pmax	pmax		
	comp=Z,192nm,1.2s						
KURK	**Kurchatov**	71.13	330	P	P	17 40 51.2	0.0
KURK	**Kurchatov**	71.13	330	P	P	17 40 52.0	+0.7
IUG	**Iuzhnay**	71.48	319	eP	P	17 40 52.9	-0.8
	comp=Z,27nm,1.3s,baz=318						
IUG	**Iuzhnay**	71.48	319	eP	P	17 40 52.9	-0.8
IUG				pmax	pmax		
	comp=Z,27nm,1.3s						
KK31	**Karatay Array**	71.62	320	IAmb	IAmb	17 40 56.4	
	comp=Z,66nm,1.4s						
KKAR	**Karatay Array**	71.62	320	P	P	17 40 54.5	+0.1
KKAR	**Karatay Array**	71.62	320	P	P	17 40 54.5	+0.1
KKAR	**Karatay Array**	71.62	320	IAmb	IAmb	17 40 56.4	
	comp=Z,66nm,1.4s						
BRLS	**Borolday**	72.03	319	eP	P	17 40 56.6	-0.2
	comp=Z,26nm,1.3s,baz=319						
BRLS	**Borolday**	72.03	319	eP	P	17 40 56.6	-0.2
BRLS				pmax	pmax		
	comp=Z,26nm,1.3s						
SEY	**Seymchan**	72.15	12	P	P	17 40 58.0	+1.0
	comp=Z,48nm,0.7s,baz=203,slow=4.5,SNR=249						
JLN	**Jalan Bani Buh**	72.61	296	P	P	17 41 00.9	+0.2
	SNR=5.5						
VNDA	**Vanda**	72.89	173	P	P	17 41 01.7	+0.5
	comp=Z,4.3nm,0.9s,baz=302,slow=7.3,SNR=14						
VNDA				pP	pP	17 42 18.4	+0.8
	comp=Z,3.0nm,0.6s,baz=308,slow=9.3,SNR=2.8						
WBK	**Wadi Bani Khal**	73.13	296	P	P	17 41 04.2	+0.6
	SNR=6.3						
MHTO	**MHTO**	73.62	294	P	P	17 41 06.5	0.0
	SNR=8.5						
DQM	**DQM**	73.76	293	P	P	17 41 07.6	+0.3
	SNR=6.3						
JMDO	**Jabal Madar**	73.84	296	P	P	17 41 08.0	+0.2
	SNR=6.8						
SMDO	**Samad**	74.06	296	P	P	17 41 09.5	+0.4
	SNR=5.6						
BIDO	**Bidbid**	74.11	297	P	P	17 41 10.1	+0.8
	SNR=22						
MAW	**Mawson**	74.18	201	P	P	17 41 10.3	+1.6
	baz=74,SNR=6.9						
MAW	**Mawson**	74.18	201	P	P	17 41 10.4	+1.6
	comp=Z,21nm,1.0s,baz=66,slow=8.1,SNR=10						
MAW				pP	pP	17 42 26.5	+0.2
	comp=Z,10nm,0.9s,baz=55,slow=8.3,SNR=3.3						
MAW	**Mawson**	74.18	201	P	P	17 41 09.9	+1.1
MAW				*PP	pP	17 42 26.8	+0.5
MAW				pmax	pmax		
	comp=Z,11nm,1.3s						
MAW	**Mawson**	74.18	201	P	P	17 41 09.9	+1.1
MAW					pP	17 42 26.8	+0.5
BSY	**Bisya**	74.74	296	P	P	17 41 13.2	+0.3
	SNR=5.5						
HOQ	**Hoqain**	74.85	297	P	P	17 41 14.0	+0.5
	SNR=18						
SHAO	**Shalim**	75.10	291	i P	P	17 41 15.3	+0.3
	SNR=11						
SHAO	**Shalim**	75.10	291	P	P	17 41 15.4	+0.4
ARQ	**Araqi**	75.49	296	P	P	17 41 17.5	+0.3
SOCY	**Socotra**	75.50	284	P	P	17 41 17.3	-0.2
SOCY				pP	pP	17 42 35.5	+1.8
SOCY				IAmb	IAmb	17 42 39.8	
	comp=Z,51nm,1.0s						
SOCY	**Socotra**	75.50	284	P	P	17 41 17.8	+0.3
DMTO	**DMTO**	75.66	290	P	P	17 41 18.4	+0.3
SOHO	**SOHO**	75.68	297	i P	P	17 41 18.3	+0.1
	SNR=14						
SOHO	**SOHO**	75.68	297	P	P	17 41 18.5	+0.4
UOSS	**Minazif**	76.17	298	i P	P	17 41 20.6	-0.3
	SNR=7.5						
UOSS	**Minazif**	76.17	298	P	P	17 41 20.0	-0.9
UOSS				IAmb	IAmb	17 41 22.1	
	comp=Z,52nm,1.3s						
UOSS	**Minazif**	76.17	298	P	P	17 41 20.9	0.0
HATD	**Hatta, Dubai**	76.20	298	i P	P	17 41 21.7	+0.6
	SNR=7.7						
HATD	**Hatta, Dubai**	76.20	298	P	P	17 41 21.7	+0.6
	SNR=7.8						
ASHO	**Ashiyiah**	76.23	297	i P	P	17 41 21.5	+0.2
	SNR=9.7						
ASHO	**Ashiyiah**	76.23	297	P	P	17 41 21.8	+0.5
	SNR=6.1						
MSFE	**Esma-Masafi**	76.31	298	i P	P	17 41 22.5	+0.8
	SNR=13						
RBK	**Rabkut**	76.31	290	P	P	17 41 21.9	+0.1
MASF	**Masafi**	76.31	298	P	P	17 41 22.7	+1.0
	SNR=8.1						
BANOM	**Banah**	76.33	299	i P	P	17 41 22.6	+0.8
	SNR=15						
BANOM	**Banah**	76.33	299	P	P	17 41 22.6	+0.8
	SNR=5.9						
ALNE	**Al Ain**	76.35	297	P	P	17 41 22.0	+0.1
ALNE	**Al Ain**	76.35	297	P	P	17 41 22.4	+0.5
	SNR=10						
SHME	**Shamm**	76.50	299	i P	P	17 41 23.0	+0.2
	SNR=6.2						
SHME	**Shamm**	76.50	299	P	P	17 41 23.2	+0.5
DOK	**Doka**	76.61	291	P	P	17 41 23.3	-0.1
BVAR	**Borovoye Array**	76.65	329	P	P	17 41 23.0	+0.1
	comp=Z,39nm,1.1s,baz=235,slow=32,SNR=74						
NAZ	**Nazwa, Dubai**	76.66	298	P	P	17 41 23.7	+0.1
NAZ	**Nazwa, Dubai**	76.66	298	P	P	17 41 24.0	+0.4
	SNR=6.5						
FAQ	**Al Faqa, Dubai**	76.66	297	i P	P	17 41 24.1	+0.5
	SNR=9.6						
FAQ	**Al Faqa, Dubai**	76.66	297	P	P	17 41 24.1	+0.5
	SNR=7.5						
BRVK	**Borovoye**	76.72	329	d iP	P	17 41 23.8	+0.5
BRVK				pmax	pmax		
	comp=Z,117nm,1.3s						
BRVK	**Borovoye**	76.72	329	P	P	17 41 23.3	0.0
BRVK				IAmb	IAmb	17 41 25.2	
	comp=Z,119nm,1.2s						
BRVK	**Borovoye**	76.72	329	P	P	17 41 24.1	+0.7
WHFO	**Wadi Hawf**	76.80	290	P	P	17 41 24.4	-0.2
ASUD	**Al Ashush, Dub**	76.86	297	i P	P	17 41 25.5	+0.8
	SNR=9.6						
ASUD	**Al Ashush, Dub**	76.86	297	P	P	17 41 25.5	+0.8
ABTO	**Aybut**	77.13	289	P	P	17 41 26.7	+0.3
GEYT	**Alibeck**	78.25	311	P	P	17 41 33.0	+0.8
	comp=Z,6.9nm,0.5s,baz=123,slow=5.5,SNR=27						
TIXI	**Tiksi**	78.36	0	d iP	P	17 41 31.0	-0.9
TIXI	**Tiksi**	78.36	0	P	P	17 41 31.1	-0.9
OPO	**Ambohidratompo**	78.71	252	P	P	17 41 34.7	-0.5
	comp=Z,2.1nm,0.5s,baz=90,slow=8.1,SNR=2.3						
BILL	**Bilibino**	79.56	14	c eP	P	17 41 38.4	-0.1
BILL				pmax	pmax		
	comp=Z,31nm,1.6s						
BILL	**Bilibino**	79.56	14	P	P	17 41 38.1	-0.4
SLWR	**Sila**	79.97	296	P	P	17 41 42.2	+0.6
MWH	**Moku‘aweowe**	80.03	69	P	P	17 41 42.3	-0.4
HMH	**Humu‘ula Sheep**	80.16	69	P	P	17 41 44.2	+1.1
MLH	**Mauna Loa**	80.23	69	P	P	17 41 44.3	+0.9
NRIK	**Noril'sk**	80.84	347	P	P	17 41 46.0	+0.8
	comp=Z,16nm,0.5s,baz=138,slow=4.9,SNR=53						
NRIK				pP	pP	17 43 03.3	+0.1
	comp=Z,6.9nm,1.0s,baz=114,slow=4.3,SNR=2.1						
NRIK	**Noril'sk**	80.84	347	d iP	P	17 41 45.8	+0.6
NRIK				pmax	pmax		
	comp=Z,105nm,1.4s						
PAE	**Paea**	81.22	107	eP	P	17 41 48.2	-0.1
	comp=Z,11nm,1.1s						
PPT2	**Papeete2**	81.22	107	eP	P	17 41 48.7	+0.2
	comp=Z,58nm,1.2s						
AKTO	**Aktyubinsk**	82.46	323	P	P	17 41 54.5	+0.4
	comp=Z,32nm,0.9s,baz=106,slow=5.7,SNR=44						
AKTO				pP	pP	17 43 12.4	+0.4
	comp=Z,5.0nm,0.9s,baz=112,slow=9.4,SNR=2.0						
SYO	**Syowa Base**	82.89	201	⇑ eP	P	17 41 57.0	+1.1
SYO	**Syowa Base**	82.89	201	⇓ epP	pP	17 43 16.0	+1.5
SVE	**Sverdlovsk**	83.38	329	c eP	P	17 41 59.0	+0.4
SVE				pmax	pmax		
	comp=Z,151nm,1.5s						
ARU	**Arti**	84.29	329	P	P	17 42 03.1	0.0
	comp=Z,6.1nm,0.4s,baz=90,slow=5.6,SNR=16						
ARU	**Arti**	84.29	329	d iP	P	17 42 02.6	-0.6
ARU				*PP	pP	17 43 19.3	-2.1
ARU				S	SKSac	17 51 53.4	+0.2
ARU				SS	SS	17 57 37.4	-0.5
ARU				pmax	pmax		
	comp=Z,122nm,1.4s						
ARU	**Arti**	84.29	329	P	P	17 42 02.6	-0.6
KBD	**Kabd**	84.50	300	eP		17 42 03.6	
UMR	**Umm Al-Rimmam**	84.55	301	eP		17 42 04.8	
RDF	**Al-Radifah**	84.57	300	eP		17 42 04.1	
MIB	**Mutribah**	84.92	301	eP		17 42 05.7	
RST	**Umm Al-Ruwaisa**	85.15	300	eP		17 42 07.0	
RAYN	**Ar Rayn**	85.44	294	i P	P	17 42 10.0	+0.4
	SNR=50						
RAYN	**Ar Rayn**	85.44	294	P	P	17 42 10.2	+0.6
RAYN				pmax	pmax		
	comp=Z,68nm,1.3s						
RAYN	**Ar Rayn**	85.44	294	P	P	17 42 09.8	+0.1
RAYN				IAmb	IAmb	17 42 11.4	
	comp=Z,68nm,1.2s						
RAYN				pP	pP	17 43 26.9	-1.0
GROC	**Groznyy**	88.65	314	eP	P	17 42 21.3	-3.1
GROC				e*PP	pP	17 43 41.3	-1.9
GROC				e		17 45 54.1	
BELG	**Belogornoye**	89.25	323	P	P	17 42 26.3	-0.7
	comp=Z,20nm,0.8s,baz=250,slow=3.6,SNR=8.5						
BELG				pP	pP	17 43 46.9	+0.5
	comp=Z,17nm,1.0s,baz=304,slow=4.8,SNR=2.0						
KIRV	**Kirov**	89.65	329	P	P	17 42 27.4	-1.2
	comp=Z,6.6nm,0.5s,baz=164,slow=3.8,SNR=7.2						
GEVA	**Gevas**	89.87	308	P	P	17 42 30.9	+0.4
GEVA				pP	pP	17 43 50.0	+0.5
ZEI	**Tsey**	89.94	313	eP	P	17 42 30.2	-0.6
ZEI				pmax	pmax		
	comp=Z,25nm,1.4s						
AKH	**Akhalkalaki**	90.02	312	P	P	17 42 32.3	+1.2
AKH				*PP	pP	17 43 51.3	+1.2
AKH	**Akhalkalaki**	90.02	312	P	P	17 42 32.3	+1.2
AKH				pP	pP	17 43 51.3	+1.2
KMBO	**Kilima Mbogo**	90.13	269	P	P	17 42 32.9	+0.6
	comp=Z,1.5nm,0.6s,baz=74,slow=2.8,SNR=4.2						
NCK	**Nalchik**	90.28	314	⇑ eP	P	17 42 32.9	+0.8
NCK				pmax	pmax		
	comp=Z,53nm,1.6s						
KBZ	**Khabaz**	90.81	314	P	P	17 42 34.6	+0.2
	comp=Z,8.5nm,1.0s,baz=73,slow=1.2,SNR=8.4						
KBZ	**Khabaz**	90.81	314	d iP	P	17 42 34.5	+0.1
KBZ				pmax	pmax		
	comp=Z,17nm,1.2s						
NEY	**Neytrino**	90.87	313	⇑ eP	P	17 42 35.5	+0.5
NEY				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KIV	**Kislovodsk**	91.00	314	eP	P	17 42 36.3	+0.8
KIV				pmax	pmax		
	comp=Z,24nm,1.1s						
A21K	**Barrow**	91.96	18	P	P	17 42 39.1	0.0
	baz=254						
VRH	**Novokhopyorsk**	92.66	321	eP	P	17 42 41.2	-1.6
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	**Divnogorie**	94.16	321	eP	P	17 42 48.2	-1.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	94.26	321	eP	P	17 42 48.9	-1.2
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LPSR	**Galich'ya Gora**	94.54	322	eP	P	17 42 50.6	-0.8
LPSR				pmax	pmax		
	comp=Z,40nm,1.5s						
ANN	**Anapa**	94.84	314	eP	P	17 42 48.0	-4.9
ANN				e*PP	pP	17 44 09.5	-2.7
ANN				e		17 46 43.5	
ANN				eS	SKSac	17 52 49.8	-5.0
ANN				eSS	SS	18 00 06.6	-3.5
ANN				pmax	pmax		
	comp=Z,71nm,1.4s						
KLMR	**Klimovskoe**	94.96	331	eP	P	17 42 50.4	-2.7
KLMR				e		17 46 43.4	
KLMR				pmax	pmax		
	comp=Z,23nm,0.8s						
KLMR	**Klimovskoe**	94.96	331	eP	P	17 42 50.4	-2.7
KLMR				AMP		17 42 52.6	
	comp=Z,23nm,0.8s						
KLMR				ePP	PP	17 46 43.5	-4.0
SNAA	**Sanae**	95.21	194	d eP	P	17 42 55.7	+1.5
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SNAA	**Sanae**	95.21	194	P	P	17 42 55.2	+1.0
SNAA				pP	pwP	17 44 18.1	+1.4
SNAA				IAmb	IAmb	17 45 20.6	
	comp=Z,14nm,1.2s						
MOS	**Moscow**	95.56	325	eP	P	17 42 52.6	-3.3
MOS				e		17 46 48.3	
TMCR	**Tamitsa**	95.90	334	eP	P	17 42 53.3	-4.0
TMCR				pmax	pmax		
	comp=Z,34nm,1.3s						
MATP	**Matopo**	96.01	249	P	P	17 42 59.3	+0.3
	comp=Z,1.6nm,0.9s,baz=198,slow=5.7,SNR=2.7						
OBN	**Obninsk**	96.12	325	c iP	P	17 42 58.1	-0.4
OBN				i		17 44 22.3	
OBN				e		17 46 55.2	
OBN				pmax	pmax		
	comp=Z,26nm,0.8s						
BRTR	**Keskin Array B**	97.31	309	P	P	17 43 03.8	-0.7
	comp=Z,1.7nm,0.9s,baz=114,slow=3.0,SNR=4.1						
BRTR	**Keskin Array B**	97.31	309	i P	Pdif	17 43 05.3	+0.8
BRTR				pmax	pmax		

	comp=Z,2.0nm,0.9s						
EPYK	Eagle Plains	98.56	24	P	P	17 43 09.3	0.0
	baz=272						
INK	Inuvik	99.65	22	P	Pdif	17 43 13.7	-0.3
	comp=Z,16nm,1.2s,baz=262,slow=5.2,SNR=12						
AKASG	Malin Array Be	100.52	320	P	Pdif	17 43 17.2	-1.1
	comp=Z,1.9nm,0.7s,baz=72,slow=4.7,SNR=8.1						
AKASG				pP	pPdif	17 44 36.2	-1.8
	comp=Z,1.0nm,0.8s,baz=68,slow=3.6,SNR=2.7						
AKASG				PP	PP	17 47 30.1	+0.1
	comp=Z,0.1nm,0.3s,baz=75,slow=7.1,SNR=1.7						
AKASG				PKiKP	PKiKP	17 47 43.5	+0.7
	comp=Z,0.4nm,0.4s,baz=82,slow=2.4,SNR=4.5						
AKBB	Malin Array Si	100.52	320⇓	*e*P	Pdif	17 43 16.7	-1.6
AKBB				pmax	pmax		
	comp=Z,16nm,1.8s						
ARCES	ARCESS Array B	100.59	340	P	Pdif	17 43 17.3	-0.9
	comp=Z,8.0nm,0.9s,baz=71,slow=5.6,SNR=17						
ARCES				PKiKP	PKiKP	17 47 43.0	+0.6
	comp=Z,5.3nm,1.1s,baz=54,slow=6.2,SNR=8.1						
KIS	Kishinev	100.91	316	*e*P	Pdif	17 43 28.0	+7.9
KIS				*e*L	L	18 26 37.0	
KIS				LRM	MLR	18 29 24.0	
	comp=Z,450nm,17.5s						
KIS	Kishinev	100.91	316	*e*P	Pdif	17 43 28.0	+7.9
KIS				MLR	MLR		
	comp=Z,450nm,17.5s						
MNK	Minsk	101.14	324	*i* P	Pdif	17 43 18.2	-2.8
	comp=E,1.0nm,0.6s						
MNK				*i* P	Pdif	17 43 18.2	-2.8
	comp=N,2.0nm,0.6s						
MNK				*i* P	Pdif	17 43 18.2	-2.8
	comp=Z,12nm,1.2s						
MNK				*i* PP	PP	17 47 31.2	-3.3
MNK				*i* PPP	PPP	17 49 42.4	
MNK				*i* S	SKSac	17 53 24.5	-1.7
MNK				*i* SS	SS	18 01 32.5	-4.9
MNK				*i* SSS	SSS	18 05 31.4	
MNK				*i* LRM	MLR	18 30 22.5	
	comp=N,394nm,22.4s						
MNK				*i* LRM	MLR	18 30 22.5	
	comp=Z,297nm,18.5s						
MNK				*i* LRM	MLR	18 30 32.7	
	comp=E,10.0nm,13.1s						
FINES	FINESS Array B	101.46	331	P	Pdif	17 43 20.6	-1.5
	comp=E,0.9nm,0.4s,baz=46,slow=5.5,SNR=8.8						
FINES				PKiKP	PKiKP	17 47 45.1	+0.9
	comp=E,1.5nm,0.7s,baz=86,slow=3.4,SNR=9.7						
C36M	Paulatuk	102.84	20	P	Pdif	17 43 29.3	+1.1
	baz=285						
BURAR	Bucovina Array	103.33	317	Pdif	Pdif	17 43 30.8	-0.2
RES	Resolute Bay	108.01	11	Pdiff	Pdif	17 43 51.9	+0.8
	comp=E,3.4nm,1.1s,baz=307,slow=6.1,SNR=6.4						
NOA	NORSAR Array B	108.53	333	Pdiff	Pdif	17 43 52.9	-0.8
	comp=E,0.4nm,0.8s,baz=102,slow=6.4,SNR=1.5						
NOA				PKiKP	PKiKP	17 47 57.5	+0.1
	comp=E,0.9nm,0.9s,baz=296,slow=14,SNR=2.3						
YKA	Yellowknife Ar	108.71	26	Pdiff	Pdif	17 43 53.9	-0.5
	comp=E,0.2nm,0.7s,baz=303,slow=4.1,SNR=5.9						
YKA				PKiKP	PKiKP	17 47 57.3	-0.3
	comp=E,1.9nm,0.6s,baz=312,slow=1.2,SNR=10						
YKA				PKKPbc	PKKPbc	17 59 07.2	-3.0
	comp=E,0.4nm,0.4s,baz=111,slow=4.4,SNR=4.0						
DPC	Dobruska-Polom	108.73	321	*e*PKP	PKiKP	17 47 59.5	+1.4
OSTC	Ostas	108.75	321	*e*PKP	PKiKP	17 47 58.7	+0.6
J04D	Umpqua Nationa	109.49	47	P	PKiKP	17 48 01.1	+1.2
	baz=279						
L04D	Klamath Falls	109.51	48	P	PKiKP	17 48 00.9	+0.9
	baz=279						
ARSA	Arzberg	109.89	318	*e*P	PKiKP	17 48 00.8	+0.4
	comp=E,2.8nm,1.1s						
J05D	Fort Rock, OR	110.11	46	P	PKiKP	17 48 02.6	+1.5
	baz=280						
SOKA	Soboth	110.33	317	*e*P	PKiKP	17 48 01.9	+0.7
	comp=E,11nm,1.5s						
PBCC	Pribram	110.34	321	*e*PKP	PKiKP	17 48 01.5	+0.4
CLL	Collm	110.55	322	*e*PKiKP	PKiKP	17 48 01.0	-0.4
CLL				*e*PP	PP	17 48 41.0	-2.3
MOA	Molln	110.59	319	*e*P	PKiKP	17 48 01.2	-0.5
	comp=E,1.7nm,0.9s						
OBKA	Obir	110.70	317	*e*P	PKiKP	17 48 04.3	+2.4
	comp=E,7.1nm,1.4s						
GERES	GERESS Array B	110.73	320	PKiKP	PKiKP	17 48 02.2	+0.2
	comp=E,1.9nm,0.6s,baz=63,slow=1.8,SNR=15						
GERES	GERESS Array B	110.73	320		PKiKP	17 48 01.9	-0.1
KHC	Kasperske Hory	110.74	320	*e*PKP	PKiKP	17 48 02.4	+0.5
KBA	Koelnbreinsper	111.38	318	*e*P	PKiKP	17 48 01.3	-2.1
	comp=E,4.9nm,0.9s						
ABTA	Abfaltersbach	112.01	318	*e*P	PKiKP	17 48 04.1	-0.3
	comp=E,12nm,1.4s						
WATA	Walderalm	112.48	319	*e*P	PKiKP	17 48 05.1	-0.3
	comp=E,2.5nm,0.5s						
SQTA	Sankt Quirin	112.75	318	*e*P	PKiKP	17 48 06.2	+0.3
	comp=E,12nm,1.3s						
MOTA	Moosalm	112.79	319	*e*P	PKiKP	17 48 05.8	-0.3
	comp=E,7.3nm,0.9s						
RETA	Reutte	112.98	319	*e*P	PKiKP	17 48 08.2	+1.9
	comp=E,5.8nm,1.2s						
FETA	Feichten	113.12	318	*e*P	PKiKP	17 48 06.9	+0.2
	comp=E,6.4nm,0.9s						
NVAR	Mina Array Bea	113.14	51	PKiKP	PKiKP	17 48 08.4	+1.3
	comp=E,4.6nm,1.0s,baz=286,slow=3.4,SNR=2.4						
DAVA	Damuels	113.61	319	*e*P	PKiKP	17 48 07.7	+0.2
	comp=E,7.2nm,0.8s						
EDW2	Edwards Air Fo	113.95	55	P	PKiKP	17 48 10.2	+1.7
	baz=279						
MPMC	Manual Prospec	114.18	54	P	PKiKP	17 48 10.7	+1.7
	baz=280						
MSO	Missoula	114.33	41	P	PKiKP	17 48 09.4	+0.5
	baz=287						
HLID	Hailey	114.91	45	P	PKPdf	17 48 11.9	+1.6
	baz=285						
ELK	Elko	115.00	48	PKP	PKPdf	17 48 11.5	+0.9
	comp=E,4.1nm,0.7s,baz=252,slow=2.6,SNR=6.1						
PFO	Pinyon Flats O	115.40	56⇓	*i*PKIKP	PKiKP	17 48 12.4	+1.0
TPFO	Pinon Flats	115.41	56	P	PKiKP	17 48 12.7	+1.3
	baz=279						
GMRC	Granite Mounta	115.86	55	P	PKiKP	17 48 13.3	+1.0
	baz=280						
SWSC	Sam W. Stewart	116.05	57	P	PKiKP	17 48 14.1	+1.6
	baz=279						
BC3	Big Chuckawall	116.22	56	P	PKiKP	17 48 14.7	+1.7
	baz=280						
EGMT	Eagleton	116.64	39	P	PKiKP	17 48 14.1	+0.8
	baz=291						
KEST	Kesra	116.77	307	PKP	PKiKP	17 48 14.4	+0.4
	comp=E,4.1nm,0.5s,baz=326,slow=1.5,SNR=6.1						
BW06	Boulder Array	118.54	45	P	PKiKP	17 48 17.9	+0.5
	baz=288						
PDAR	Pinedale Array	118.54	45	PKP	PKiKP	17 48 17.6	+0.2
	comp=E,3.3nm,0.8s,baz=222,slow=2.0,SNR=6.3						
WUAZ	Wupatki	119.16	53	P	PKiKP	17 48 19.6	+0.9
	baz=283						
LAO	LASA Array	119.37	40	P	PKiKP	17 48 19.5	+0.8
	baz=293						
DGMT	Dagmar	119.87	37	P	PKiKP	17 48 20.3	+0.8
	baz=296						
SFJD	Kangerlussuaq	119.95	359	PKP	PKPdf	17 48 18.7	-0.3
	comp=E,6.8nm,0.5s,baz=175,slow=5.0,SNR=5.5						
O20A	White River Ci	120.30	47	P	PKiKP	17 48 21.7	+0.8
	baz=288						
TUC	Tucson	120.33	57	P	PKiKP	17 48 22.3	+1.3
	baz=282						
W18A	Petrified Fore	120.55	53	P	PKiKP	17 48 22.7	+1.2
	baz=284						
K22A	Casper	120.69	44	P	PKiKP	17 48 21.6	+0.1
	baz=291						
RSSD	Black Hills	121.81	42	P	PKiKP	17 48 23.8	+0.1
	baz=294						
FRB	Frobisher Bay	122.05	8	PKP	PKPdf	17 48 23.0	0.0
	comp=E,4.0nm,0.4s,baz=104,slow=1.8,SNR=7.0						
S22A	4UR Ranch, Cre	122.09	49	P	PKiKP	17 48 26.2	+1.7
	baz=288						
ISCO	Idaho Springs	122.32	47	P	PKiKP	17 48 26.1	+1.1
	baz=290						
SDCO	Great Sand Dun	123.08	49	P	PKiKP	17 48 28.0	+1.4
	baz=289						
ANMO	Albuquerque	123.19	53	PKP	PKiKP	17 48 27.6	+0.9
	comp=E,13nm,1.1s,baz=212,slow=1.8,SNR=8.4						
ANMO	Albuquerque	123.19	53	P	PKiKP	17 48 28.1	+1.3
	baz=286						
ULM	Lac du Bonnet	123.66	32	PKP	PKPdf	17 48 26.2	-0.4
	comp=E,10.0nm,0.7s,baz=331,slow=2.2,SNR=7.2						
MNTX	Cornudas Mount	124.94	56	P	PKiKP	17 48 31.1	+1.1
	baz=285						
ESDC	Sonseca Array	125.66	315	PKP	PKiKP	17 48 31.4	+0.2
	comp=E,5.9nm,1.2s,baz=14,slow=2.8,SNR=9.8						
TORD	Torodi Ar. Bea	126.36	281	PKP	PKiKP	17 48 33.1	-0.2
	comp=E,5.5nm,0.4s,baz=57,slow=1.8,SNR=26						
TORD				pPKP	pPKPdf	17 49 55.7	-0.6
	comp=E,0.8nm,0.3s,baz=108,slow=1.8,SNR=1.5						
TORD	Torodi Ar. Bea	126.36	281		PKPdf	17 48 32.8	+0.1
MSTX	Muleshoe	126.39	53	P	PKiKP	17 48 33.9	+0.9
	baz=288						
MSTX	Muleshoe	126.39	53	PKPdf	PKPdf	17 48 32.4	-0.1
ECSD	EROS Data Cent	126.75	39	P	PKiKP	17 48 33.2	-0.1
	baz=300						
BGNE	Belgrade	126.88	42	P	PKiKP	17 48 33.8	+0.2
	baz=298						
CBKS	Cedar Bluff	126.92	46	P	PKiKP	17 48 34.6	+0.8
	baz=294						
AMTX	Amarillo	126.94	51	P	PKiKP	17 48 35.0	+1.0
	baz=290						
F36A	Milaca	127.46	35	PKPdf	PKPdf	17 48 33.9	-0.1
SPMN	Marine on St.	128.24	36	P	PKiKP	17 48 36.6	+0.4
	baz=305						
KSU1	Kansas State U	128.99	44	P	PKiKP	17 48 38.6	+0.8
	baz=297						
PLCA	Paso Flores	129.81	162	PKP	PKiKP	17 48 39.9	+0.2
	comp=E,4.7nm,0.9s,baz=207,slow=4.0,SNR=7.9						
PLCA				SKPbc	SKPbc	17 51 28.5	+0.1
	comp=E,21nm,1.1s,baz=189,slow=5.0,SNR=18						
PLCA	Paso Flores	129.81	162	PKIKP	PKPdf	17 48 38.3	-0.5
PLCA	Paso Flores	129.81	162	PKPdf	PKPdf	17 48 38.3	-0.5
PLCA				SKPbc	SKPab	17 51 27.8	-0.6
PLCA	Paso Flores	129.81	162	*e*P	PKPdf	17 48 39.0	+0.2
PLCA	Paso Flores	129.81	162	*e*P	PKiKP	17 48 40.2	+0.6
833A	Chaparral WMA,	130.85	58	P	PKiKP	17 48 43.4	+1.5
	baz=287						
TUL1	Leonard	130.99	48	P	PKiKP	17 48 42.9	+0.9
	baz=296						
HHAR	Hobbs	132.16	46	SKPbc	SKPbc	17 51 36.8	-0.3
237A	Washetta, Mont	132.56	52	SKPbc	SKPab	17 51 40.2	0.0
KIC	Kosan Boka	132.59	272	*e*PKIKP	PKPdf	17 48 44.9	+0.2
	comp=E,6.7nm,0.7s						
DBIC	Dimbokro	132.72	273	PKP	PKPdf	17 48 45.4	+0.5
	comp=E,4.0nm,0.6s,baz=56,slow=2.1,SNR=9.6						
DBIC				SKPbc	SKPbc	17 51 39.4	-0.2
	comp=E,32nm,1.1s,baz=96,slow=4.0,SNR=11						
DBIC	Dimbokro	132.72	273	SKPbc	SKPbc	17 51 39.0	-0.6
W39A	Magazine	132.77	47	P	PKiKP	17 48 45.3	-0.3
	baz=297						
LIC	Lamto	132.86	272	*e*PKIKP	PKPdf	17 48 45.4	+0.2
	comp=E,16nm,0.7s						
TIC	Toumodi	132.88	273	*e*PKIKP	PKPdf	17 48 45.5	+0.3
U40A	Yellville	132.90	46	P	PKPdf	17 48 45.0	+0.4
	baz=299						
U40A	Yellville	132.90	46	PKPdf	PKPdf	17 48 44.1	-0.6
U40A				SKPbc	SKPbc	17 51 39.7	+0.1
LSQQ	Lebel-sur-Quev	133.14	22	P	PKiKP	17 48 45.4	-0.5
	baz=326						
CCM	Cathedral Cave	133.16	43	PKIKP	PKPdf	17 48 44.9	-0.2
CCM	Cathedral Cave	133.16	43	P	PKiKP	17 48 45.9	-0.4
	baz=302						
CCM	Cathedral Cave	133.16	43	PKPdf	PKPdf	17 48 44.9	-0.2
CCM				SKPbc	SKPbc	17 51 40.3	-0.1
BI02	San Fabin de	133.26	159	PKPdf	PKPdf	17 48 45.4	-0.1
BI02				SKPbc	SKPbc	17 51 39.2	-1.7
HKT	Hockley	133.29	55⇑	*i*PKIKP	PKiKP	17 48 47.7	+1.0
FCAR	Ozark Folk Cen	133.64	46	PKPdf	PKPdf	17 48 46.6	+0.6
T42A	Van Buren	133.80	44	PKPdf	PKPdf	17 48 46.5	+0.2
T42A				SKPbc	SKPbc	17 51 42.4	-0.1
N47A	Urbana	135.02	36	SKPbc	SKPbc	17 51 45.5	-0.8
SADO	Sadowa	135.68	27	PKP	PKiKP	17 48 50.6	-0.6
	comp=E,8.8nm,0.5s,baz=317,slow=4.4,SNR=9.0						
SADO				SKPbc	SKPbc	17 51 47.2	-1.0
	comp=E,5.3nm,1.0s,baz=299,slow=4.0,SNR=3.7						
N49A	Columbus Grove	135.86	35	SKPbc	SKPbc	17 51 48.6	-0.3
WCI	Wyandotte Cave	136.29	39	SKPbc	SKPbc	17 51 50.5	+0.2
PEL	Peldehue	136.62	158	SKPbc	SKPbc	17 51 50.8	-0.7
344A	Westbrook Farm	136.72	51	PKPdf	PKPdf	17 48 51.4	-0.5
PLAL	Pickwick Lake	136.95	44	PKPdf	PKPdf	17 48 50.7	-1.5
PLAL				SKPbc	SKPbc	17 51 51.9	-0.4
CMIG	Matias Romero	137.39	72	PKP	PKPdf	17 48 52.1	-1.4
	comp=E,3.6nm,0.8s,baz=12,slow=3.2,SNR=3.7						
CMIG				SKPbc	SKPbc	17 51 55.6	+1.5
	comp=E,10nm,1.0s,baz=340,slow=2.7,SNR=4.7						
U49A	Red Boiling Sp	137.64	41	PKPdf	PKPdf	17 48 52.8	-0.6
P53A	Whipple	138.41	34	SKPbc	SKPbc	17 51 56.4	0.0
LRAL	Lakeview Retre	138.74	46	PKPdf	PKPdf	17 48 55.9	+0.4
LRAL				SKPbc	SKPbc	17 51 57.6	+0.1
CPCT	Cooper Cave	139.09	41	SKPbc	SKPbc	17 51 58.8	+0.4
GO04	Tololo Observa	139.20	155	SKPbc	SKPbc	17 51 58.6	-0.6
M57A	Sunshine Farm,	139.26	29		PKPpre	17 48 47.6	
TKL	Tuckaleechee C	139.46	41	PKhKP	PKPpre	17 48 48.9	
	comp=E,5.5nm,0.9s,baz=297,slow=6.8,SNR=2.2						
TKL				PKP	PKPdf	17 48 57.2	+0.4
	comp=E,13nm,0.6s,baz=176,slow=5.1,SNR=13						
TKL				SKPbc	SKPbc	17 51 59.5	+0.1
	comp=E,20nm,1.1s,baz=286,slow=5.3,SNR=5.7						
TKL	Tuckaleechee C	139.46	41		SKPbc	17 51 59.1	-0.3
V52A	Sevierville	139.46	40	PKPdf	PKPdf	17 48 54.5	-2.3
V52A				SKPbc	SKPbc	17 51 59.5	0.0
R55A	Marlinton	139.95	35		PKPdf	17 48 49.7	-8.0
N59A	State Game Lan	140.23	28	P	PKPdf	17 48 51.6	-6.5
	baz=322						
LCO	Las Campanas	140.25	155		SKPdf	17 51 59.7	-0.8
P58A	Pank, Wackersv	140.59	31	P	PKPdf	17 48 51.9	-6.8
	baz=319						
T56A	Rocky Mt	140.87	36	P	PKPdf	17 48 53.0	-6.3
	baz=313						
O60A	Telford	140.88	28	P	PKPdf	17 48 53.4	-5.8
	baz=322						
V55A	Taylorsville	140.95	38		PKPdf	17 48 52.8	-6.7
P60A	Greenville	141.16	29	P	PKPdf	17 48 54.1	-5.7
	baz=322						
KMSC	Kings Mountain	141.33	39	P	PKPdf	17 48 54.6	-5.6
	baz=310						
V56A	Mocksville	141.41	38	P	PKPdf	17 48 55.1	-5.3
	baz=312						
V57A	Coltrane Farms	141.80	37	P	PKPdf	17 48 56.1	-4.9
	baz=313						
W56A	Indian Trail	141.81	39	P	PKPdf	17 48 56.3	-4.8
	baz=311						
U58A	Oxford	142.17	35	P	PKPdf	17 48 57.6	-4.1
	baz=315						
V58A	Windy Hill, Pi	142.25	37	P	PKPdf	17 48 58.2	-3.6
	baz=314						
T59A	Double "B" Far	142.31	34	P	PKPdf	17 48 58.4	-3.4
	baz=317						
W58A	Raeford	142.71	38	P	PKPdf	17 48 59.9	-2.8
	baz=313						
V59A	Middlesex	142.79	36	P	PKPdf	17 49 00.6	-2.2
	baz=315						
CPSB	Cacapava Do Su	142.93	179	*e*P	PKiKP	17 49 05.4	-1.2
V60A	Jim Taylor Roa	143.35	35	P	PKPbc	17 49 02.3	+0.3
	baz=316						
NHSC	New Hope	143.37	41	P	PKPdf	17 49 03.0	-0.8
	baz=310						
NHSC	New Hope	143.37	41	PKPdf	PKPbc	17 49 01.8	-0.3
X59A	McDuffie Farm,	143.39	38	P	PKPbc	17 49 02.0	-0.1
	baz=313						
ITQB	Itaqui	143.46	174	*e*P	PKPbc	17 49 03.1	+0.7
W60A	Pink Hill	143.59	36	P	PKPbc	17 49 02.7	+0.1
	baz=315						
V61A	Roper	143.71	34	P	PKPbc	17 49 02.8	-0.2
	baz=317						
X60A	Albert Glenn T	143.76	37	P	PKPbc	17 49 03.1	-0.1
	baz=314						
Z59A	Georgetown, SC	143.86	40	P	PKPdf	17 49 04.2	-0.5
	baz=311						
W61A	Ground Anchor	143.92	35	P	PKPbc	17 49 03.9	+0.4
	baz=316						
GO02	Mina Guanaco	144.08	153	PKPdf	PKPbc	17 49 04.8	+0.1
PB14	IPOC Station P	144.16	151		PKPbc	17 49 05.2	+0.3
PB14				SKPbc	SKPbc	17 52 12.1	+0.1
TGUH	Tegucigalpa,Un	145.09	75		PKPab	17 49 08.0	-0.2
DWPF	Disney Wildern	145.40	49	P	PKPab	17 49 08.8	-0.1
	baz=302						
ITAB	Concordia	146.10	181	*e*P	PKPbc	17 49 09.9	-0.4
LVC	Limon Verde	146.59	152	PKIKP	PKPdf	17 49 11.0	+0.8
LVC	Limon Verde	146.59	152		PKPdf	17 49 11.0	+0.8
LVC	Limon Verde	146.59	152	*e*P	PKPdf	17 49 10.4	+0.2
CPUP	Villa Florida	146.67	172	PKPbc	PKPdf	17 49 10.8	+1.1
	comp=E,30nm,0.9s,baz=188,slow=2.1,SNR=49						
CPUP				pPKPbc	pPKPdf	17 50 32.4	-1.0
	comp=E,4.6nm,0.6s,baz=166,slow=2.2,SNR=2.5						
CPUP				SKPbc	SKiKP	17 52 17.8	+0.3
	comp=E,11nm,1.0s,baz=188,slow=3.9,SNR=3.1						
CPUP	Villa Florida	146.67	172		PKPdf	17 49 10.6	+0.9
CPUP					SKPbc	17 52 17.0	-0.2
TA01	Diego Aracena	147.67	148		PKPbc	17 49 15.2	+0.5
PSGCX	Pisagua	148.49	147		PKPbc	17 49 16.9	-0.1
PTGB	Pitanga	148.61	181	*e*P	PKPbc	17 49 17.8	+0.6
PTGB	Pitanga	148.61	181	*e*P	PKPdf	17 49 14.6	+1.5
NNA	Nana	149.38	128	PKPdf	PKPdf	17 49 15.1	+0.6
NNA				PKPbc	PKiKP	17 49 20.2	-0.1
CAM01	Campos-RJ	149.58	200	*e*P	PKPdf	17 49 14.8	+0.2
DUB01	Friburgo-RJ	149.58	199	*e*P	PKPdf	17 49 16.1	+1.5
VAO	Valinhos	149.83	190	*e*P	PKPdf	17 49 17.0	+1.9
FRTB	Fartura	149.84	185	*e*P	PKPdf	17 49 16.8	+1.7
PB16	IPOC Station P	149.85	146	PKPdf	PKPdf	17 49 14.6	-1.2
PB16				PKPbc	PKiKP	17 49 21.9	+0.1
LCCY	Blossom Villag	150.34	62		PKiKP	17 49 21.8	-0.2
TRCB	Terra Rica	150.53	180	*e*P	PKPdf	17 49 16.8	+0.7
SACV	Santiago Islan	150.55	288		PKiKP	17 49 23.3	+0.7
CBCY	The Bluff, Cay	150.60	62		PKiKP	17 49 22.6	+0.1
RIB01	Linhares ES	151.39	204	*e*P	PKPdf	17 49 18.3	+0.8
PCMB	Pacaembu	151.68	182	*e*P	PKPdf	17 49 19.7	+1.8
BB19B	Bebedouro	151.97	188	*e*P	PKPdf	17 49 18.2	-0.2
SJMB	Sao Joao De Ma	152.26	204	*e*P	PKPdf	17 49 19.8	+1.0
OTAV	Otavalo	153.28	103	*e*P	PKPdf	17 49 22.3	+1.4
OTAV	Otavalo	153.28	103	*e*P	PKPdf	17 49 22.4	+1.4
DIAM	Diamantina, MG	153.53	199	*e*P	PKPdf	17 49 22.2	+1.4
GCUF	Volcan Galeras	154.59	102	*e*P	PKPdf	17 49 20.6	-2.3
CZSB	Cruzeiro do Su	155.17	125	*e*P	PKPdf	17 49 23.7	+0.7
YOTC	Yotoco, Valle	156.08	96	*e*P	PKPdf	17 49 24.1	-0.3
PLMC	San Jos del P	156.25	93	*e*P	PKPdf	17 49 24.4	-0.2
MARP	Paez Belalcaza	156.28	99	*e*P	PKPdf	17 49 25.1	+0.2
DBBC	Dabeiba	156.45	88	*e*P	PKPdf	17 49 25.3	+0.5
CBOC	Ciudad Bolivar	156.60	91	*e*P	PKPdf	17 49 23.1	-2.0
MOTC	Monteria, Cord	156.96	84	*e*P	PKPdf	17 49 25.7	+0.4
ANIL	Santa Ana	157.08	95	*e*P	PKPdf	17 49 26.1	+0.2
HELC	Santa Helena	157.10	90	*e*P	PKPdf	17 49 24.8	-1.2
ORTC	Ortega, Tolima	157.15	96	*e*P	PKPdf	17 49 25.0	-0.7
TOLC	Tolima	157.17	94	*e*P	PKPdf	17 49 26.7	+0.7
RREF	El Recreo	157.18	94	*e*P	PKPdf	17 49 28.0	+1.6
GUY2C	Guyana, Caldas	157.19	93	*e*P	PKPdf	17 49 26.5	+0.2
BDFB	Brasilia	157.21	191	PKP	PKPdf	17 49 25.7	0.0
	comp=E,0.9nm,0.3s,baz=149,slow=12,SNR=2.3						
BDFB				PKPab	PKPab	17 49 59.3	+1.1
	comp=E,1.5nm,0.4s,baz=44,slow=13,SNR=3.8						
ARAG	Araguaiana, MT	157.57	182	*e*P	PKPdf	17 49 26.9	+0.8
ZARC	Zaragoza, Cauc	157.79	87	*e*P	PKPdf	17 49 25.7	-0.7
ROSC	El Rosal	158.19	94	PKP	PKPdf	17 49 27.5	+0.2
	comp=E,5.0nm,0.4s,baz=73,slow=8.7,SNR=3.8						
ROSC				PKPab	PKPab	17 50 05.1	+1.8
	comp=E,5.3nm,0.3s,baz=85,slow=17,SNR=4.5						
MACC	Macarena, Meta	158.20	101	*e*P	PKPdf	17 49 27.1	+0.2
SPBC	San Pablo de B	158.51	92	*e*P	PKPdf	17 49 27.2	-0.2
ETMB	Extrema	158.52	140	*e*P	PKPdf	17 49 27.1	-0.2
CHIC	Chingaza	158.75	95	*e*P	PKPdf	17 49 27.7	-0.4
VILB	Vilhena	158.88	159	*e*P	PKPdf	17 49 29.0	+1.3
RUSC	La Rusia	159.51	92	*e*P	PKPdf	17 49 28.3	-0.8
DR12	Loma Pena Alta	159.73	53	PKPab	PKPab	17 50 08.7	-0.6
SAML	Samuel	161.02	146	PKIKP	PKPdf	17 49 28.8	-1.3
SAML				PKP	PKPab	17 50 14.3	-0.5
SAML	Samuel	161.02	146	PKPdf	PKPdf	17 49 28.8	-1.3
SAML				PKPab	PKPab	17 50 14.3	-0.5
SDV	Santo Domingo	161.91	82	PKPdf	PKPdf	17 49 30.7	-0.6
SDV				PKPab	PKPab	17 50 19.6	+0.2
SDV	Santo Domingo	161.91	82	*e*P	PKPdf	17 49 30.9	-0.4
SDV	Santo Domingo	161.91	82	*e*P	PKPdf	17 49 31.7	+0.4
SDV	Santo Domingo	161.91	82	*e*P	PKPdf	17 49 31.2	0.0
OBIP	Obispado Ponce	162.31	50		PKPdf	17 49 30.5	-0.7
OBIP				PKPab	PKPab	17 50 19.5	-1.0
SJG	San Juan	162.61	49	PKP	PKPdf	17 49 31.3	-0.2
	comp=E,4.3nm,0.3s,baz=113,slow=2.9,SNR=3.6						
SJG				PKPab	PKPab	17 50 21.8	0.0
	comp=E,9.3nm,0.4s,baz=269,slow=2.0,SNR=6.5						
NPGB	Novo Progresso	165.89	168	*e*P	PKPdf	17 49 35.0	+0.4
PRPB	Parauapebas	166.78	192	*e*P	PKPdf	17 49 35.5	+0.2
MACA	Manacapuru-AM	167.11	140	*e*P	PKPdf	17 49 37.9	+2.4
ROSB	Rosrio	167.21	221	*e*P	PKPdf	17 49 35.9	+0.3
ITTB	Itaituba	168.38	164	*e*P	PKPdf	17 49 36.3	-0.1
TMAB	Tom-Au,PA,Br	169.84	206	*e*P	PKPdf	17 49 38.0	+0.7

JMA ***31*** *17:31:42.8±0.1, 37°.33N×141°.65E, h31^{km}±2^{km}, M3.6*
IDC ***31*** *17:31:42.6±1.7, 37°.54N×141°.55E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.7/64, mbtmp3.8/11, ML2.9/2, Error ellipse: s-maj=40.0km s-min=20.4km az=164.0*
NIED ***31*** *17:31:42.8, 37°.33N×141°.65E, h31^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.65; $M_{\theta\theta}$2.20; $M_{\phi\phi}$1.44; $M_{r\theta}$-1.47; $M_{\theta\phi}$1.94; $M_{\phi r}$-2.60; Fault plane solution: $M_0$4.78000×10^{14} NP1:ϕ_s38.00000°, δ65.00000°, λ-102.00000°. NP2:ϕ_s243.00000°, δ28.00000°, λ-67.00000°.*
ISC 31 17:31:41.5±2.0**, 37°.36N**±0°.05×**141°.69E**±0°.07, **h2**^{km}±11^{km}**, n30,** σ**1^{s}04**/31**, mb3.7**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.65	271	P	Pg	17 31 54.8	+0.9
JFK				S	Sg	17 32 03.3	+1.0
JMST	Minamisoumatoc	0.73	300	P	Pg	17 31 56.4	+0.8
JMST				S	Sg	17 32 06.1	+1.0
ONAJ	Iwakimizuishiy	0.76	250	P	Pg	17 31 56.2	+0.2
ONAJ				*e*S	Sg	17 32 05.5	-0.3
JMM	Marumori	0.87	306	P	Pg	17 31 58.6	+0.4
JMM				S	Sg	17 32 10.2	+0.7
JFFD	Fukushimafurud	0.94	254	P	Pg	17 31 59.0	-0.5
JFFD				*e*S	Sg	17 32 11.1	-0.6
JFT	Otama	1.09	279	P	Pb	17 32 02.2	-0.8
JFT				S	Sb	17 32 16.8	-0.9
JIO	Ouri	1.12	346	P	Pb	17 32 02.7	-1.0
JIO				*e*S	Sb	17 32 17.4	-1.3
JHO	Hitachi	1.17	230	P	Pb	17 32 02.1	-2.3
JOU	Okura	1.29	321	P	Pn	17 32 06.0	-0.6
MJAR	Matsushiro Arr	2.90	255	Pn	Pn	17 32 28.8	+0.1
	0.6nm,0.3s,baz=74,slow=16,SNR=38						
MJAR				Sn	Sb	17 33 10.8	+0.8
	0.6nm,0.3s,baz=275,slow=13,SNR=5.1						
MAT	Matsushiro	2.90	255	P	Pn	17 32 29.1	+0.3
MAT				*e*S	Sn	17 33 04.4	+0.1
ASAJ	Asahikawa	6.78	6	Pn	Pn	17 33 21.8	-0.2
	0.4nm,0.3s,baz=211,slow=12,SNR=2.0						
ASAJ				Sn	Sn	17 34 36.9	-3.0
	0.2nm,0.3s,baz=180,slow=20,SNR=1.2						
SONM	Songino Array	27.79	303	P	P	17 37 32.0	+0.1
	0.8nm,0.6s,baz=93,slow=7.8,SNR=5.2						
H11N2	WAKE ISLAND Hy	28.13	122	T	T	18 06 57.8	
	baz=315,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	28.14	122	T	T	18 06 58.0	
	baz=315,slow=75,SNR=58						
H11N3	WAKE ISLAND Hy	28.15	122	T	T	18 06 59.2	
	baz=315,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	28.86	124	T	T	18 07 55.6	
	baz=316,slow=76,SNR=49						
H11S3	WAKE ISLAND Hy	28.86	124	T	T	18 07 55.6	
	baz=316,slow=76,SNR=52						
H11S2	WAKE ISLAND Hy	28.87	124	T	T	18 07 55.2	
	baz=316,slow=76,SNR=55						
ZALV	Zalesovo Beam	41.86	312	P	P	17 39 32.7	0.0
	2.1nm,0.8s,baz=81,slow=9.5,SNR=6.9						
MKAR	Makanchi Array	44.13	302	P	P	17 39 51.2	-0.1
	1.5nm,0.7s,baz=88,slow=10,SNR=18						
KURBB	Kurchatov Arra	45.97	308	P	P	17 40 05.2	-0.7
	2.0nm,0.6s,baz=83,slow=8.2,SNR=17						
ILAR	Eielson Array	49.10	33	P	P	17 40 30.8	+0.8
	0.6nm,0.7s,baz=265,slow=6.4,SNR=6.7						
YKA	Yellowknife Ar	63.42	30	P	P	17 42 12.9	+0.7
	0.3nm,0.6s,baz=305,slow=6.1,SNR=4.4						
FINES	FINESS Array B	68.63	332	P	P	17 42 45.1	-0.6
	4.1nm,1.1s,baz=39,slow=9.1,SNR=2.1						
PDAR	Pinedale Array	77.28	46	P	P	17 43 38.8	+1.1
	0.4nm,0.6s,baz=258,slow=4.5,SNR=3.9						
TXAR	Lajitas Array	89.75	53	P	P	17 44 43.1	+1.3
	0.3nm,0.6s,baz=318,slow=4.9,SNR=1.9						
H03N2	Juan Fernandez	146.84	96	T	T	20 35 35.2	
	baz=291,slow=76,SNR=7.8						
H03N3	Juan Fernandez	146.85	96	T	T	20 35 31.7	
	baz=291,slow=76,SNR=10.0						
H03N1	Juan Fernandez	146.86	96	T	T	20 35 36.0	
	baz=291,slow=76,SNR=10						

AEIC ***31*** *17:39:09.6±1.6, 56°.62N±0°.05×169°.03W±0°.09, h20^{km}±3^{km}, Error ellipse: s-maj=8.5km s-min=6.2km az=219.0*
MOS ***31*** *17:39:11.7±1.2, 56°.65N×169°.07W, h17^{km}, mb5.5/63, MS4.9/36, Error ellipse: s-maj=7.1km s-min=4.3km az=94.1*

IDC ***31*** *17:39:11.4±0.4, 56°.69N×169°.02W, h0^{km}, mb5.0/50, mb1 5.0/53, mb1mx5.0/64, mbtmp5.0/53, ML4.4/3, MS4.6/39, Ms1 4.6/39, ms1mx4.6/46, Error ellipse: s-maj=13.3km s-min=7.1km az=8.0*

NEIC ***31*** *17:39:11.5±1.6, 56°.64N±0°.05×169°.12W±0°.09, h6^{km}±3^{km}, mb5.3/374, Ms_20 5.0/386, Mwb5.4/11, ML5.1(AEIC), Mwc5.4(GCMT), Error ellipse: s-maj=8.4km s-min=6.0km az=220.0*

NEIC ***31*** *17:39:12.5, 56°.64N×169°.06W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.47; $M_{\theta\theta}$1.76; $M_{\phi\phi}$-0.29; $M_{r\theta}$0.72; $M_{\theta\phi}$0.03; $M_{\phi r}$-0.29; Fault plane solution: $M_0$1.81000×10^{17} NP1:ϕ_s280.43000°, δ58.00000°, λ-76.49000°. NP2:ϕ_s76.05000°, δ34.45000°, λ-110.50000°. Principal axes: T 1.9125, Plg12.0000°, Azm1.0000°; N -0.2318, Plg11.0000°, Azm93.0000°; P -1.6808, Plg73.0000°, Azm225.0000°;*

BJI ***31*** *17:39:12.0±0.0, 56°.82N×169°.67W, h10^{km}, mB5.5/52, mb5.2/75, Ms5.3/52, Ms7 4.9/50*

GCMT ***31*** *17:39:14.5±0.1, 56°.77N±0°.01×169°.07W±0°.02, h12^{km}, MW5.4/156, Moment Tensor Solution. s110, c167; s156, c312; Duration: 1^s.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.40±.01; $M_{\theta\theta}$1.40±.01; $M_{\phi\phi}$0.00±.01; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$-0.18±.01; $M_{\phi r}$0.19±.05; Best double couple: $M_0$1.42400×10^{17} NP1:ϕ_s270.00000°, δ44.00000°, λ-101.00000°. NP2:ϕ_s105.00000°, δ47.00000°, λ-80.00000°. Principal axes: T 1.4240, Plg1.0000°, Azm187.0000°; N 0.0070, Plg7.0000°, Azm278.0000°; P -1.4240, Plg83.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***31*** *17:39:14.7±0.0, 56°.54N×169°.13W, h10^{km}, mb5.4, Ms4.4*

NEIC ***31*** *17:39:15, 56°.76N×169°.05W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.46; $M_{\theta\theta}$1.47; $M_{\phi\phi}$-0.01; $M_{r\theta}$-0.28; $M_{\theta\phi}$-0.23; $M_{\phi r}$0.03; Fault plane solution: $M_0$1.51000×10^{17} NP1:ϕ_s279.00000°, δ40.00000°, λ-89.00000°. NP2:ϕ_s98.00000°, δ50.00000°, λ-91.00000°. Principal axes: T 1.5312, Plg5.0000°, Azm189.0000°; N -0.0437, Plg1.0000°, Azm99.0000°; P -1.4875, Plg85.0000°, Azm2.0000°;*

ISC 31 17:39:12.5±0.9**, 56°.66N**±0°.04×**169°.12W**±0°.03**, h10**^{km}±5^{km}**, n1248,** σ**1^s.17**/1097**, mb5.3**/349**, MS5.0**/271**, 40C-65D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.81	311	Pg	Pg	17 39 26.0	-2.1
AKUT	Akutan	3.16	142	Pn	Pn	17 39 59.8	-2.5
AKUT				Sn	Sn	17 40 38.7	-1.4
UNV	Unalaska Valle	3.19	151	Pn	Pn	17 40 00.4	-2.3
FALS	False Pass	3.69	117		Pn	17 40 09.0	-0.5
NIKH	Nikolski High	3.69	178		Pn	17 40 08.6	-1.0
SDPT	Sand Point	5.02	101	Pn	Pn	17 40 25.9	-1.9
ATKA	Atka Island	5.36	216	Pn	Pn	17 40 32.2	-0.2
CNBA	Chernabura Isl	5.69	105	Pn	Pn	17 40 37.5	+0.6
CHGN	Chignik	5.94	89		Pn	17 40 37.8	-2.6
ADK	Adak	6.52	226	P	Pn	17 40 45.5	-2.9
ADK	Adak	6.52	226	Pn	Pn	17 40 45.5	-2.9
ANM	Nome	8.14	11	P	Pn	17 41 09.9	-0.7
ANM	Nome	8.14	11	Pn	Pn	17 41 09.9	-0.7
SII	Sitkinak Islan	8.24	84	Pn	Pn	17 41 10.4	-1.5
AMKA	Amchitka	8.62	237	Pn	Pn	17 41 16.9	-0.4
OHAK	Old Harbor	8.67	80	Pn	Pn	17 41 17.4	-0.5
KDAK	Kodiak Island	9.04	76	Pn	Pn	17 41 23.9	+1.0
	5.0nm,0.3s,baz=291,slow=7.0,SNR=33						
KDAK				Sn	Sn	17 43 04.1	-0.5
	baz=300,slow=16,SNR=1.2						
KDAK				Lg	Lg	17 43 54.3	
	2.1nm,0.3s,baz=336,slow=20,SNR=2.2						
KDAK	Kodiak Island	9.04	76	⇓eP	Pn	17 41 24.2	+1.3
KDAK	Kodiak Island	9.04	76	Pn	Pn	17 41 23.3	+0.4
TTA	Tatalina	9.11	41	P	Pn	17 41 23.1	-0.8
TTA	Tatalina	9.11	41	Pn	Pn	17 41 21.6	-2.3
RSO	Redoubt South	9.36	59		Pn	17 41 26.3	-1.1
CNPM	China Poot	9.89	66	Pn	Pn	17 41 35.2	+0.6
BRLK	Bradley Lake	10.10	64	Pn	Pn	17 41 36.0	-1.5
CAPN	Captain Cook N	10.20	59	P	Pn	17 41 41.0	+2.3
	baz=254						
SKT	Skwentna	10.43	52		Pn	17 41 42.1	+0.2
SMY	Shemya	10.47	255	P	Pn	17 41 41.2	-1.4
SMY	Shemya	10.47	255	Pn	Pn	17 41 41.2	-1.4
PPLA	Purkeypile	10.56	47		Pn	17 41 43.0	-0.8
SUA	Susitna One	10.60	55		Pn	17 41 44.7	+0.4
O22K	Cooper Landing	10.81	61	P	Pn	17 41 49.9	+2.7
	baz=258						
O22K	Cooper Landing	10.81	61		Pn	17 41 48.8	+1.7
SEW	Seward	10.87	63	Pn	Pn	17 41 47.5	-0.5
RC01	Rabbit Creek A	10.95	58	P	Pn	17 41 51.1	+2.0
	baz=254,SNR=22						
CUT	Chulitna	11.14	51	P	Pn	17 41 52.6	+1.0
	baz=247						
PMR	Palmer	11.37	56	P	Pn	17 41 55.8	+1.0
PMR	Palmer	11.37	56		Pn	17 41 55.8	+1.0
KTH	Kantishna Hill	11.38	45		Pn	17 41 55.6	+0.7
GHO	Glory Hole Cre	11.52	55		Pn	17 41 57.3	+0.4
TRF	Thorofare Moun	11.58	46		Pn	17 41 58.2	+0.4
BPAW	Bear Paw Mtn.	11.63	43		Pn	17 41 56.5	-1.8
KNK	Knik Glacier	11.63	57		Pn	17 41 59.6	+1.2
RDOG	Red Dog Mine	11.79	11		Pn	17 42 01.8	+1.3
SML	Sawmill	11.80	55		Pn	17 42 02.0	+1.3
IMAR	Indian Mountai	11.87	32		Pn	17 42 01.7	0.0
RND	Reindeer	12.14	48	P	Pn	17 42 04.8	-0.6
RND	Reindeer	12.14	48	Pn	Pn	17 42 04.8	-0.6
GLI	Glacier Island	12.16	61	Pn	Pn	17 42 03.9	-1.7
MLY	Manley	12.23	39	P	Pn	17 42 06.4	-0.2
	baz=235,SNR=21						
BWN	Browne	12.24	44		Pn	17 42 07.1	+0.4
MCK	McKinley	12.25	46	P	Pn	17 42 09.1	+2.4
	baz=244,SNR=50						
SCM	Sheep Creek Mo	12.27	56	P	Pn	17 42 07.0	-0.1
SCM	Sheep Creek Mo	12.27	56		Pn	17 42 07.0	-0.1
Q23K	Middleton Isla	12.36	68		Pn	17 42 08.0	-0.2
MID	Middleton Isla	12.36	68	P	Pn	17 42 08.1	-0.2
MID	Middleton Isla	12.36	68	Pn	Pn	17 42 08.1	-0.2
HIN	Hinchinbrook I	12.37	63		Pn	17 42 08.2	-0.3
FID	Port Fidalgo	12.44	61		Pn	17 42 08.0	-1.3
NEA2	Nenana	12.60	43	P	Pn	17 42 12.3	+0.7
	baz=240,SNR=19						
DHY	Denali Highway	12.63	50		Pn	17 42 09.7	-2.4
EYAK	Cordova Ski Ar	12.76	63	Pn	Pn	17 42 11.7	-2.1
KLU	Klutina	12.84	58		Pn	17 42 14.1	-0.8
M24K	Tolsona, Glenn	12.86	55	P	Pn	17 42 16.1	+0.8
	baz=255,SNR=11						
M24K	Tolsona, Glenn	12.86	55		Pn	17 42 15.3	+0.1
WRH	Wood River Hil	12.91	44		Pn	17 42 15.8	0.0
MDM	Murphy Dome	13.09	42		Pn	17 42 18.0	-0.3
CCB	Clear Creek Bu	13.10	44		Pn	17 42 18.6	+0.2
TCOL	CIGO, UAF Yank	13.19	43	P	Pn	17 42 21.9	+2.3
	baz=241						
TCOL	CIGO, UAF Yank	13.19	43		Pn	17 42 21.1	+1.5
COLA	College	13.19	43	P	Pn	17 42 21.6	+2.0
COLA	College	13.19	43		Pn	17 42 21.6	+2.0
RAGM	Ragged Mountai	13.27	64		Pn	17 42 21.6	+0.8
HDA	Harding Lake	13.33	45	P	Pn	17 42 22.1	+0.6
	baz=244						
HDA	Harding Lake	13.33	45		Pn	17 42 21.7	+0.2
KAIM	Kayak Island	13.36	66		Pn	17 42 21.5	-0.5
PAX	Paxson	13.42	52	P	Pn	17 42 22.9	+0.1
PAX	Paxson	13.42	52		Pn	17 42 22.9	+0.1
POKR	Poker Plat Res	13.47	42	P	Pn	17 42 25.7	+2.3
	baz=241,SNR=24						
POKR	Poker Plat Res	13.47	42		Pn	17 42 23.4	0.0
N25K	Chitina, Valde	13.48	58	P	Pn	17 42 24.1	+0.4
	baz=259,SNR=16						
N25K	Chitina, Valde	13.48	58		Pn	17 42 23.7	+0.1
IL31		13.51	44		Pn	17 42 24.2	+0.3
ILAR	Eielson Array	13.51	44	Pn	Pn	17 42 24.6	+0.7
	0.3nm,0.3s,baz=244,slow=12,SNR=45						
ILAR				Lg	Lg	17 46 21.5	
	baz=256,slow=25,SNR=2.4						
ILAR	Eielson Array	13.51	44	P	Pn	17 42 24.4	+0.4
ILAR	Eielson Array	13.51	44		Pn	17 42 24.4	+0.4
COLD	Coldfoot	13.76	32	P	Pn	17 42 29.5	+2.1
	baz=228,SNR=39						
COLD	Coldfoot	13.76	32		Pn	17 42 28.5	+1.1
GLB	Gilahina Butte	13.83	59		Pn	17 42 27.6	-0.8
RIDG	Independent Ri	13.93	49		Pn	17 42 29.2	-0.5
VRDI	Verde Repeater	13.96	60		Pn	17 42 29.4	-1.0
CRQM	Cirque	14.06	62		Pn	17 42 31.4	-0.3
MENT	Mentasta	14.18	53		Pn	17 42 33.2	+0.1
MCARA	McCarthy VSAT	14.19	60		Pn	17 42 32.2	-1.1
TGL	Tana Glacier	14.21	62		Pn	17 42 33.6	-0.2
DOT	Dot Lake	14.23	50		Pn	17 42 32.0	-1.8
PRP	Porcupine Dome	14.36	42		Pn	17 42 34.4	-1.4
SCRK	Sand Creek	14.37	49	P	Pn	17 42 35.0	-0.8
	baz=251,SNR=20						
BALM	Baldy	14.48	61		Pn	17 42 35.2	-2.1
YAH	Yahtse	14.72	64		Pn	17 42 38.9	-1.9
BARN	Barnard Glacie	14.81	61		Pn	17 42 40.6	-1.3
CTGM	Chitina Glacie	14.96	62		Pn	17 42 41.7	-2.2
FYU	Fort Yukon	14.97	39		Pn	17 42 44.0	+0.2
TABL	Table Mountain	15.03	64		Pn	17 42 43.7	-1.1
TABL				IAmb	IAmb	17 43 26.7	
	comp=Z,78nm,1.0s						
BCAR	Beaver Creek A	15.06	54		Pn	17 42 43.8	-1.4
PCA	Pinnacle	15.46	65		Pn	17 42 50.7	+0.2
PCA				IAmb	IAmb	17 43 01.5	
	comp=Z,126nm,1.0s						
A21K	Barrow	15.65	15	P	Pn	17 42 53.9	+1.2
	baz=206,SNR=7.1						
A21K	Barrow	15.65	15		Pn	17 42 52.9	+0.2
A21K				IAmb	IAmb	17 42 58.6	
	comp=Z,138nm,1.1s						
BCPM	Bancas Point	15.77	66	P	Pn	17 42 53.4	-1.0
EGAK	Eagle	15.79	48	P	Pn	17 42 52.9	-1.7
BILL	Bilibino	15.99	325	⇑eP	P	17 43 00.0	-0.7
BILL				eS	Sn	17 45 57.6	+3.3
BILL				pmax	pmax		
	comp=Z,153nm,1.2s						
BILL				MLR	MLR		
	comp=Z,6µm,15.0s						
BILL	Bilibino	15.99	325	P	Pn	17 42 58.5	+1.3
HYT	Haines Junctio	16.83	63	P	Pn	17 43 06.5	-1.5
HYT				IAmb	IAmb	17 43 15.2	
	comp=Z,317nm,1.6s						
SKAG	Skagway	17.98	67	P	P	17 43 22.8	0.0
EPYK	Eagle Plains	18.03	44	P	Pn	17 43 22.8	-0.1
	baz=253						
WHY	Whitehorse	18.12	63	P	Pn	17 43 21.9	-2.2
BESE	Bessie Mountai	18.34	70	P	P	17 43 27.1	+0.3
BESE				IAmb	IAmb	17 43 34.2	
	comp=Z,151nm,1.0s						
SIT	Sitka	18.38	75	P	P	17 43 28.2	+1.1
SIT				pmax	pmax		
	comp=Z,197nm,1.2s						
SIT	Sitka	18.38	75	P	P	17 43 28.2	+1.1
SIT				IAmb	IAmb	17 43 33.7	
	comp=Z,197nm,1.2s						
JIS	Juneau Island	18.63	70	P	Pn	17 43 30.6	+0.4
PET	Petropavlovsk	18.81	273	d iP	Pn	17 43 34.1	+1.7
PET				pmax	pmax		
	comp=Z,97nm,1.5s						
PET				pmax	pmax		
	comp=Z,2µm,6.6s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
PET	Petropavlovsk	18.81	273	P	P	17 43 31.5	-0.4
PEA0B	Petropavlovsk-	19.30	273	P	P	17 43 37.1	-0.3
PEA0B				pmax	pmax		
	comp=Z,148nm,1.1s						
PEA0B	Petropavlovsk-	19.30	273	P	P	17 43 37.1	-0.3
PEA0B				IAmb	IAmb	17 43 42.0	
	comp=Z,148nm,1.1s						
PETK	Petropavlovsk-	19.30	273	P	Pn	17 43 39.1	+0.7
	comp=Z,1.5nm,0.3s,baz=84,slow=12,SNR=33						
PETK				S	S	17 47 19.5	+3.8
	baz=102,slow=11,SNR=1.1						
PETK				LR	LR	17 51 21.3	
	comp=Z,594nm,18.2s,baz=84,slow=38						
PETK	Petropavlovsk-	19.30	273	P	P	17 43 37.7	+0.3
PETK	Petropavlovsk-	19.30	273	P	P	17 43 37.7	+0.3
INK	Inuvik	19.80	40	P	P	17 43 43.1	+0.5
	comp=Z,1.9nm,0.3s,baz=223,slow=9.8,SNR=78						
INK				LR	LR	17 52 04.3	
	comp=Z,6µm,18.4s,baz=244,slow=39						
INK	Inuvik	19.80	40	P	P	17 43 42.0	-0.6
INK				pmax	pmax		
	comp=Z,109nm,1.0s						
INK	Inuvik	19.80	40	P	P	17 43 42.0	-0.6
INK				IAmb	IAmb	17 43 49.2	
	comp=Z,109nm,1.0s						
CRAG	Craig	19.99	78	P	P	17 43 44.7	-0.1
CRAG				IAmb	IAmb	17 43 50.4	
	comp=Z,224nm,1.2s						
SEY	Seymchan	20.11	304	P	Pn	17 43 47.4	-0.5
	comp=Z,87nm,1.0s,baz=101,slow=9.3,SNR=25						
SEY				LR	LR	17 51 00.8	
	comp=Z,1µm,21.9s,baz=92,slow=35						
SEY	Seymchan	20.11	304	⇑eP	Pn	17 43 47.9	0.0
WRAK	Wrangell Islan	20.13	75	P	P	17 43 46.2	0.0
DLBC	Dease Lake	20.85	69	P	P	17 43 55.1	+0.9
	comp=Z,127nm,1.3s,baz=284,slow=12,SNR=22						
DLBC				LR	LR	17 51 57.5	
	comp=Z,2µm,20.9s,baz=284,slow=37						
DLBC	Dease Lake	20.85	69	P	P	17 43 53.9	-0.3
DLBC				IAmb	IAmb	17 44 03.1	
	comp=Z,134nm,1.2s						
MA2	Magadan	21.16	295	P	P	17 43 58.1	+0.6
	comp=Z,36nm,0.9s,baz=83,slow=12,SNR=6.3						
MA2	Magadan	21.16	295	c iP	P	17 43 59.8	+2.3
MA2				pmax	pmax		
	comp=Z,166nm,1.7s						
MA2	Magadan	21.16	295	P	P	17 43 57.5	+0.1
MA2				IAmb	IAmb	17 44 05.0	
	comp=Z,112nm,1.1s						
DIB	Dawson Inlet,	21.17	84	P	P	17 43 58.0	+0.4
SKR	Severo-Kuril's	21.28	268	eP	P	17 43 57.1	-1.7
SKR				eS	S	17 47 54.5	-0.4
SKR				pmax	pmax		
	comp=Z,400nm,8.5s						
SKR				pmax	pmax		
	comp=Z,199nm,0.9s						
SKR				pmax	pmax		
	comp=Z,600nm,2.9s						
SKR				MLR	MLR		
	comp=Z,400nm,13.0s						
C36M	Paulatuk	23.38	39	P	P	17 44 20.5	-0.3
	baz=260,SNR=38						
C36M	Paulatuk	23.38	39	P	P	17 44 20.1	-0.8
C36M				IAmb	IAmb	17 44 24.8	
	comp=Z,108nm,1.1s						
C36M				IAMs_20	IAMs_20	17 54 18.9	
	comp=Z,5µm,18.0s						
BBB	Bella Bella	24.00	83	P	P	17 44 27.2	+0.3
	comp=Z,18nm,1.0s,baz=343,slow=5.9,SNR=4.5						
BBB				LR	LR	17 52 53.4	
	comp=Z,1µm,20.2s,baz=316,slow=34						
BBB	Bella Bella	24.00	83	P	P	17 44 27.0	0.0
YKA	Yellowknife Ar	27.47	55	P	P	17 44 58.7	+0.3
	comp=Z,21nm,1.0s,baz=280,slow=8.3,SNR=58						
YKA				PcP	PcP	17 48 16.1	-0.2
	comp=Z,5.1nm,0.8s,baz=298,slow=1.5,SNR=7.7						
YKA				LR	LR	17 57 01.3	
	comp=Z,5µm,18.5s,baz=0.0,slow=39						
YKA	Yellowknife Ar	27.47	55	ceP	P	17 44 58.7	+0.3
YKA				pmax	pmax		
	comp=Z,22nm,1.0s						
PGC	Sidney	28.36	87	P	P	17 45 07.5	+1.1
PGC				IAmb	IAmb	17 46 06.7	
	comp=Z,60nm,1.8s						
TYV	Tymovskoe	28.59	279	eP	P	17 45 09.3	+0.8
TYV				pmax	pmax		
	comp=Z,300nm,4.4s						
TYV				pmax	pmax		
	comp=Z,28nm,1.5s						
A04D	Lummi Island	28.74	86	P	P	17 45 10.8	+1.1
	baz=304						
NLWA	Neilton Lookou	28.85	89	P	P	17 45 11.7	+0.8
NLWA				IAmb	IAmb	17 45 16.4	
	comp=Z,62nm,1.4s						
MIDW	Midway	29.02	195	P	P	17 45 12.1	-0.3
MIDW				IAmb	IAmb	17 46 00.8	
	comp=Z,107nm,1.2s						
D03D	Eldon	29.20	88	P	P	17 45 14.9	+1.0
	baz=305,SNR=11						
TIXI	Tiksi	29.21	325	d iP	P	17 45 13.3	-0.4
TIXI	Tiksi	29.21	325	P	P	17 45 14.0	+0.3
B05A	Bryant	29.33	86	P	P	17 45 15.7	+0.7
	baz=304,SNR=10						
E03A	Lebam	29.52	90	P	P	17 45 17.2	+0.4
E03A				IAmb	IAmb	17 45 20.6	
	comp=Z,46nm,1.0s						
B06A	Marblemount	29.52	85	P	P	17 45 16.8	+0.1
D04E	Lakebay	29.58	89	P	P	17 45 19.3	+2.0
	baz=306						
UGL	Uglegorsk	29.86	276	eP	P	17 45 20.9	+1.2
UGL				eS	S	17 50 12.7	-3.7
UGL				pmax	pmax		
	comp=Z,200nm,1.6s						
UGL				pmax	pmax		
	comp=Z,60nm,1.4s						
UGL				MLR	MLR		
	comp=E,1µm,15.0s						
UGL				MLR	MLR		
	comp=N,1µm,15.0s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
D05A	Enumclaw	30.01	88	P	P	17 45 21.0	-0.1
D05A				IAmb	IAmb	17 45 26.6	
	comp=Z,40nm,1.2s						
E04D	Cinebar	30.06	90	P	P	17 45 23.2	+1.6
	baz=307,SNR=12						
LON	Longmire	30.37	89	P	P	17 45 24.3	0.0
LON				pmax	pmax		
	comp=Z,29nm,1.6s						
LON	Longmire	30.37	89	P	P	17 45 24.3	0.0
YAK	Yakutsk	30.61	306	P	P	17 45 26.6	+0.4
	comp=Z,35nm,0.9s,baz=94,slow=2.4,SNR=20						
YAK				PcP	PcP	17 48 24.9	+0.7
	comp=Z,11nm,0.9s,baz=62,slow=2.5,SNR=5.0						
YAK	Yakutsk	30.61	306	eP	P	17 45 25.7	-0.5
YAK				e		17 48 23.8	
YAK				eS	S	17 50 27.4	-0.5
YAK				eSS	SnSn	17 52 01.9	-2.6
YAK				pmax	pmax		
	comp=Z,88nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,43nm,1.0s						
YAK				smax	smax		
	comp=E,141nm,3.4s						
YAK				smax	smax		
	comp=N,115nm,4.3s						
YAK				MLR	MLR		
	comp=Z,2µm,18.0s						
YAK				MLR	MLR		
	comp=E,1µm,17.0s						
YAK	Yakutsk	30.61	306	P	P	17 45 25.2	-1.0
YAK				PcP	PcP	17 48 24.2	+0.1
LTY	Liberty	30.70	87	P	P	17 45 26.9	-0.3
YSS	Yuzh-Sakhalins	30.70	272	⇓eP	P	17 45 30.1	+3.0
YSS				pmax	pmax		
	comp=Z,57nm,1.9s						
COR	Corvallis	30.88	93	P	P	17 45 29.1	+0.4
COR				pmax	pmax		
	comp=Z,113nm,1.7s						
COR	Corvallis	30.88	93	P	P	17 45 29.1	+0.4
COR				IAmb	IAmb	17 46 03.8	
	comp=Z,112nm,1.7s						
H04D	Lebanon	31.23	93	P	P	17 45 33.5	+1.7
	baz=310						
I03D	Drain, OR	31.42	95	P	P	17 45 34.6	+1.1
	baz=311						
KEBM	Edson Butte	31.42	97	P	P	17 45 34.2	+0.5
H04A	Detroit Lake	31.43	92	P	P	17 45 33.9	+0.2
H04A				IAmb	IAmb	17 45 38.8	
	comp=Z,57nm,1.3s						
G05D	Wamic, OR	31.56	91	P	P	17 45 35.1	+0.3
	baz=309						
E07A	Sunnyside	31.56	87	P	P	17 45 34.5	-0.3
E07A				IAmb	IAmb	17 45 39.6	
	comp=Z,47nm,1.4s						
C09A	Chrisman Ranch	31.70	84	P	P	17 45 35.8	-0.2
D08A	Wollman Farm,	31.78	86	P	P	17 45 35.9	-0.8
D08A				PcP	PcP	17 48 28.0	+0.5
HAWA	Hanford	31.84	87	P	P	17 45 36.0	-1.2
HAWA				IAmb	IAmb	17 45 41.2	
	comp=Z,87nm,1.7s						
I04A	Tendick Farm,	31.88	94	P	P	17 45 38.9	+1.2
	baz=310,SNR=8.4						
K02D	Willamette Mer	31.91	96	P	P	17 45 38.8	+0.8
	baz=312						
GRNR	Gornyy	32.02	283	⇓iP	P	17 45 39.3	+0.5
GRNR				pmax	pmax		
	comp=E,3.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,390nm,16.0s						
NEW	Newport	32.06	83	P	P	17 45 38.3	-0.9
	comp=E,11nm,1.0s,baz=302,slow=6.6,SNR=14						
NEW				LR	LR	17 57 55.3	
	comp=E,1µm,19.1s,baz=298,slow=35						
NEW	Newport	32.06	83	P	P	17 45 39.1	-0.1
NEW				pmax	pmax		
	comp=Z,25nm,1.3s						
NEW				MLR	MLR		
	comp=Z,1µm,20.0s						
NEW	Newport	32.06	83	P	P	17 45 39.6	+0.4
	baz=305,SNR=11						
NEW	Newport	32.06	83	P	P	17 45 39.1	-0.1
HUMO	Hull Mountain	32.36	96	P	P	17 45 42.0	+0.2
J04D	Umpqua Nationa	32.40	94	P	P	17 45 44.4	+1.9
	baz=311,SNR=8.3						
RES	Resolute Bay	32.48	28	P	P	17 45 42.4	-0.1
	comp=Z,10.0nm,1.1s,baz=247,slow=12,SNR=10.0						
RES				PcP	PcP	17 48 29.4	+0.4
	comp=Z,7.2nm,0.7s,baz=270,slow=4.3,SNR=6.4						
RES	Resolute Bay	32.48	28	P	P	17 45 42.2	-0.3
RES				pmax	pmax		
	comp=Z,24nm,1.3s						
RES				MLR	MLR		
	comp=Z,2µm,20.0s						
RES	Resolute Bay	32.48	28	P	P	17 45 42.2	-0.3
RES				IAMs_20	IAMs_20	18 00 20.3	
	comp=Z,2µm,20.0s						
E09A	Wood Farm, Sta	32.53	86	P	P	17 45 42.8	-0.5
E09A				IAmb	IAmb	17 45 46.8	
	comp=Z,72nm,1.6s						
KRMB	Red Mountain	32.57	98	P	P	17 45 44.0	+0.2
KRMB				IAmb	IAmb	17 45 52.0	
	comp=Z,34nm,1.3s						
PINE	Pine Mountain	32.69	92	P	P	17 45 44.9	0.0
PINE				IAmb	IAmb	17 45 49.6	
	comp=Z,86nm,1.8s						
G08A	Pilot Rock	32.83	89	P	P	17 45 44.9	-1.2
G08A				IAmb	IAmb	17 45 49.8	
	comp=Z,35nm,1.4s						
J05D	Fort Rock, OR	32.86	93	P	P	17 45 48.0	+1.6
	baz=311,SNR=20						
L04D	Klamath Falls	32.98	96	P	P	17 45 48.9	+1.5
	baz=312,SNR=9.7						
JCC	Jacoby Creek,	32.99	99	P	P	17 45 47.4	+0.1
JCC				IAmb	IAmb	17 46 15.8	
	comp=Z,80nm,1.3s						
K04D	Chiloquin, OR	33.01	95	P	P	17 45 49.4	+1.8
	baz=312						
YBH	Yreka Blue Hor	33.08	97	P	P	17 45 48.3	0.0
	comp=Z,6.8nm,0.9s,baz=326,slow=5.5,SNR=8.5						
YBH				PcP	PcP	17 48 32.4	+1.0
	comp=Z,2.6nm,0.8s,baz=10,slow=4.0,SNR=2.4						
YBH				LR	LR	17 57 35.0	
	comp=Z,1µm,18.2s,baz=306,slow=33						
YBH	Yreka Blue Hor	33.08	97	P	P	17 45 47.8	-0.5
YBH				pmax	pmax		
	comp=Z,20nm,1.2s						
YBH				MLR	MLR		
	comp=Z,1µm,20.0s						
YBH	Yreka Blue Hor	33.08	97	P	P	17 45 47.8	-0.5
KHMM	Horse Mountain	33.11	99	P	P	17 45 49.1	+0.5
KHMM				IAmb	IAmb	17 46 36.1	
	comp=Z,50nm,1.4s						
M02C	Callahan	33.24	97	P	P	17 45 51.3	+1.7
	baz=313						
I07A	Izee	33.30	91	P	P	17 45 49.1	-1.0
I07A				IAmb	IAmb	17 45 57.3	
	comp=Z,42nm,1.5s						
WALA	Waterton Lakes	33.36	79	P	P	17 45 49.2	-1.4
WALA				IAmb	IAmb	17 45 53.4	
	comp=Z,34nm,1.4s						
WALA				IAMs_20	IAMs_20	18 00 19.8	
	comp=Z,2µm,18.0s						
F10A	Beach Ranch, E	33.36	86	P	P	17 45 49.3	-1.4
F10A				IAmb	IAmb	17 45 57.7	
	comp=Z,37nm,1.3s						
K05A	Summer Lake	33.41	94	P	P	17 45 51.1	-0.2
K05A				IAmb	IAmb	17 45 55.4	
	comp=Z,53nm,1.2s						

M04C	Macdoel	33.53	96	P	P	17 45 53.7	+1.5
	baz=313,SNR=11						
EUNU	Eureka	33.57	18	P	P	17 45 52.6	+0.5
EUNU				IAmb	IAmb	17 46 44.5	
	comp=Z,52nm,1.9s						
EUNU				IAMs_20	IAMs_20	18 00 44.7	
	comp=Z,4µm,20.0s						
N02D	Trinity Center	33.60	98	P	P	17 45 54.4	+1.6
	baz=314						
ERM	Erimo	33.62	265	P	P	17 45 51.8	-1.0
ERM				pmax	pmax		
	comp=Z,641nm,2.0s						
ERM	Erimo	33.62	265	P	P	17 45 51.8	-1.0
JTMT	Jette	33.92	81	P	P	17 45 54.5	-1.0
JTMT				IAmb	IAmb	17 45 58.1	
	comp=Z,33nm,1.4s						
WDC	Whiskeytown Da	33.97	98	P	P	17 45 55.8	-0.1
WDC				pmax	pmax		
	comp=Z,30nm,1.5s						
WDC				MLR	MLR		
	comp=Z,1µm,20.0s						
WDC	Whiskeytown Da	33.97	98	P	P	17 45 55.8	-0.1
BMO	Blue Mountains	34.02	88	P	P	17 45 56.1	-0.3
BMO				pmax	pmax		
	comp=Z,70nm,2.0s						
BMO				MLR	MLR		
	comp=Z,700nm,22.0s						
BMO	Blue Mountains	34.02	88	P	P	17 45 56.1	-0.3
BMO				IAmb	IAmb	17 45 59.5	
	comp=Z,70nm,1.9s						
O02D	Mt. Diablo Mer	34.11	99	P	P	17 45 57.9	+0.7
	baz=315						
MOD	Modoc Plateau	34.29	94	P	P	17 45 58.4	-0.4
MOD				IAmb	IAmb	17 46 03.2	
	comp=Z,41nm,1.4s						
O03E	Paynes Creek	34.57	98	P	P	17 46 02.3	+1.1
	baz=314,SNR=12						
MSO	Missoula	34.65	82	P	P	17 46 01.1	-0.8
	baz=307						
MSO	Missoula	34.65	82	P	P	17 46 01.3	-0.6
WVOR	Wild Horse Val	34.85	92	P	P	17 46 03.3	-0.4
WVOR				pmax	pmax		
	comp=Z,57nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,700nm,18.0s						
WVOR	Wild Horse Val	34.85	92	P	P	17 46 03.3	-0.4
WVOR				IAmb	IAmb	17 46 18.6	
	comp=Z,57nm,1.5s						
GDXM	Geysers	35.08	101	P	P	17 46 05.6	-0.1
GDXM				IAmb	IAmb	17 47 16.6	
	comp=Z,42nm,1.2s						
ORV	Oroville	35.26	98	P	P	17 46 06.2	-0.8
ORV				PcP	PcP	17 48 38.0	+0.5
ZEA	Zeya	35.28	293	*e*P	P	17 46 06.5	-0.6
ZEA				pmax	pmax		
	comp=E,10.0nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=E,900nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,13.0s						
KLR	Kul'dur	35.38	284	P	P	17 46 07.7	-0.3
	comp=Z,6.1nm,1.1s,baz=66,slow=9.8,SNR=7.8						
KLR				LR	LR	18 00 06.3	
	comp=Z,475nm,21.1s,baz=48,slow=35						
KLR	Kul'dur	35.38	284	⇑*i*P	P	17 46 08.1	+0.1
KLR				pmax	pmax		
	comp=Z,19nm,1.4s						
HRY	Holter Researc	35.87	81	P	P	17 46 11.8	-0.6
KIP	Kipapa	36.13	162	⇑*e*P	P	17 46 17.1	+2.5
KIP				pmax	pmax		
	comp=Z,283nm,1.5s						
EGMT	Eagleton	36.21	78	P	P	17 46 14.0	-1.2
	baz=306						
EGMT	Eagleton	36.21	78	IAMs_20	IAMs_20	18 02 16.2	
	comp=Z,2µm,19.0s						
HON	Honolulu	36.23	162	P	P	17 46 16.2	+0.7
HON				pmax	pmax		
	comp=Z,209nm,1.2s						
HON	Honolulu	36.23	162	P	P	17 46 16.1	+0.7
PAHR	Pah Rah Range	36.31	96	P	P	17 46 15.4	-0.8
PAHR				IAmb	IAmb	17 46 19.4	
	comp=Z,45nm,1.3s						
HLID	Hailey	36.44	87	P	P	17 46 16.9	-0.4
	baz=311,SNR=14						
HLID	Hailey	36.44	87	P	P	17 46 16.3	-1.1
BCYI	Bear Canyon	36.51	85	P	P	17 46 17.3	-0.7
FFC	Flin Flon	36.53	64	P	P	17 46 16.9	-0.9
FFC				pmax	pmax		
	comp=Z,54nm,1.8s						
FFC				MLR	MLR		
	comp=Z,2µm,19.0s						
FFC	Flin Flon	36.53	64	P	P	17 46 16.9	-0.9
FFC				IAmb	IAmb	17 46 24.0	
	comp=Z,54nm,1.8s						
FFC	Flin Flon	36.53	64	IAMs_20	IAMs_20	18 02 12.5	
	comp=Z,2µm,19.0s						
PNTR	Pine Nut	36.62	97	IAmb	IAmb	17 46 28.3	
	comp=Z,51nm,1.1s						
BOZ	Bozeman (W)	36.67	82	P	P	17 46 18.7	-0.6
	baz=309						
CMB	Columbia Colle	36.95	99	P	P	17 46 21.0	-0.6
CMB				PcP	PcP	17 48 42.7	+0.1
YHL	Hebgen Lake	37.39	83	P	P	17 46 25.4	-0.1
GCMT	Greycliff	37.62	81	P	P	17 46 27.1	-0.2
NVAR	Mina Array Bea	37.80	97	P	P	17 46 28.8	-0.2
	comp=Z,12nm,1.1s,baz=300,slow=8.5,SNR=22						
NVAR				PcP	PcP	17 48 45.7	+0.2
	comp=Z,6.0nm,0.8s,baz=288,slow=2.3,SNR=8.4						
NVAR				LR	LR	18 00 21.6	
	comp=Z,954nm,18.2s,baz=279,slow=34						
NVAR	Mina Array Bea	37.80	97	P	P	17 46 28.6	-0.5
ELK	Elko	37.87	91	P	P	17 46 29.7	+0.1
	comp=Z,14nm,1.1s,baz=314,slow=7.0,SNR=26						
ELK				PcP	PcP	17 48 46.8	+1.1
	comp=Z,4.4nm,1.0s,baz=333,slow=2.3,SNR=2.7						
H17A	Grant Village	38.01	83	P	P	17 46 32.1	+1.3
	baz=310,SNR=18						
H17A	Grant Village	38.01	83	P	P	17 46 30.7	-0.1
TULEG	Thule	38.06	22	IAmb	IAmb	17 46 34.1	
	comp=Z,66nm,1.6s						
TULEG				IAMs_20	IAMs_20	18 04 44.7	
	comp=Z,2µm,18.0s						
TULEG	Thule	38.06	22	*i* P	P	17 46 30.3	-0.2
TULEG				IAmb	IAmb	17 46 32.1	
	comp=Z,32nm,1.2s						
MLAC	Mammoth, Mammo	38.09	98	P	P	17 46 33.7	+2.2
	baz=317						
FCC	Fort Churchill	38.20	55	IAMs_20	IAMs_20	18 01 38.6	
	comp=Z,3µm,20.0s						
RLMT	Red Lodge	38.26	81	P	P	17 46 33.4	+0.6
	baz=310,SNR=9.1						
RLMT	Red Lodge	38.26	81	IAMs_20	IAMs_20	18 03 38.6	
	comp=Z,1µm,18.0s						
USRK	Ussuriysk Ar.	38.34	277	PcP	PcP	17 48 46.9	+0.2
	comp=Z,6.0nm,0.9s,baz=52,slow=2.7,SNR=5.9						
USRK				LR	LR	18 03 25.3	
	comp=Z,264nm,18.9s,baz=38,slow=38						
HMH	Humuʻula Sheep	38.37	159	IAmb	IAmb	17 46 39.6	
	comp=Z,145nm,1.2s						
HVU	Hansel Valley	38.53	88	P	P	17 46 34.9	-0.1
HVU				pmax	pmax		
	comp=Z,98nm,1.8s						
HVU	Hansel Valley	38.53	88	P	P	17 46 34.9	-0.1
TPH	Tonopah	38.65	96	P	P	17 46 35.8	-0.3
TPH				pmax	pmax		
	comp=Z,175nm,1.3s						
TPH	Tonopah	38.65	96	P	P	17 46 35.8	-0.3
PAGB	Antelope Grade	38.71	102	IAmb	IAmb	17 46 40.1	
	comp=Z,64nm,1.5s						
DGMT	Dagmar	38.92	74	IAMs_20	IAMs_20	18 03 02.8	
	comp=Z,2µm,19.0s						
LAO	LASA Array	38.93	77	IAMs_20	IAMs_20	18 02 13.1	
	comp=Z,2µm,20.0s						
VES	Vestal, Richgr	39.26	100	P	P	17 46 41.1	+0.1
	baz=318						
GRAC	Grapevine Rang	39.35	97	P	P	17 46 43.2	+1.3
	baz=317						
R11A	Troy Canyon, C	39.36	94	P	P	17 46 42.1	+0.1
	baz=316,SNR=16						
R11A	Troy Canyon, C	39.36	94	P	P	17 46 41.5	-0.5
CWC	Cottonwood Cre	39.37	99	P	P	17 46 42.3	+0.2
	baz=318						
MDJ	Mudanjiang	39.38	279	P	P	17 46 40.5	-1.4
MDJ				pP	sP	17 46 50.8	+4.6
MDJ				sP	pP	17 46 54.5	+10
MDJ				ScP	ScP	17 52 34.8	-3.5
MDJ				PcS	PcS	17 52 37.5	-2.2
MDJ				S	S	17 52 41.3	-1.7
MDJ				sS	sS	17 52 55.8	+7.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,310nm,5.1s						
MDJ				LR	LR		
	comp=Z,1µm,16.2s						
MDJ				LR	LR		
	comp=Z,850nm,14.7s						
BOD	Bodaibo	39.53	305	*e*P	P	17 46 42.7	-0.3
BOD				pmax	pmax		
	comp=Z,42nm,1.3s						
DUG	Dugway, Tooele	39.59	90	P	P	17 46 42.4	-1.5
DUG						17 48 51.8	
DUG				pmax	pmax		
	comp=Z,55nm,1.5s						
DUG				MLR	MLR		
	comp=Z,400nm,20.0s						
DUG	Dugway, Tooele	39.59	90	P	P	17 46 43.6	-0.3
	baz=314,SNR=18						
DUG	Dugway, Tooele	39.59	90	P	P	17 46 42.4	-1.5
DUG				PcP	PcP	17 48 51.8	+0.9
BW06	Boulder Array	39.64	84	P	P	17 46 43.3	-1.1
	baz=312						
PDAR	Pinedale Array	39.64	84	P	P	17 46 43.7	-0.7
	comp=Z,1.3nm,0.6s,baz=320,slow=4.4,SNR=9.7						
PDAR				LR	LR	18 03 26.7	
	comp=Z,497nm,19.3s,baz=330,slow=37						
PDAR	Pinedale Array	39.64	84	P	P	17 46 43.4	-1.0
PDAR				PP	PP	17 48 16.4	+1.2
ISA	Isabella, Lake	39.73	100	P	P	17 46 44.4	-0.6
	baz=318						
CTU	Camp Tracy	39.83	88	P	P	17 46 45.4	-0.6
MPMC	Manual Prospec	39.97	99	P	P	17 46 47.5	+0.3
	baz=318,SNR=9.3						
TPNV	Topopah Spring	40.00	96	P	P	17 46 47.1	-0.2
	baz=317,SNR=12						
FURC	Furnace Creek,	40.01	98	P	P	17 46 48.6	+1.3
	baz=317						
NLU	North Lily Min	40.16	90	P	P	17 46 48.3	-0.5
MJAR	Matsushiro Arr	40.19	263	P	P	17 46 49.6	+0.8
	comp=Z,13nm,1.1s,baz=22,slow=6.8,SNR=9.9						
MJAR				LR	LR	18 01 59.3	
	comp=Z,197nm,22.0s,baz=55,slow=34						
MJAR	Matsushiro Arr	40.19	263	P	P	17 46 49.6	+0.8
MJAR				pmax	pmax		
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	40.19	263	P	P	17 46 49.6	+0.8
MAJO	Matsushiro	40.19	263	⇑*i*P	P	17 46 49.5	+0.7
MAJO				pmax	pmax		
	comp=Z,76nm,1.7s						
MAJO	Matsushiro	40.19	263	P	P	17 46 49.1	+0.3
MAJO				IAmb	IAmb	17 46 51.0	
	comp=Z,108nm,1.6s						
MAT	Matsushiro	40.19	263	P	P	17 46 48.6	-0.2
MAT				*e*S	S	17 52 57.2	+1.8
PRN	Pahroc Range	40.33	95	IAmb	IAmb	17 46 53.8	
	comp=Z,64nm,1.2s						
EDW2	Edwards Air Fo	40.57	100	P	P	17 46 51.8	-0.2
	baz=319						
SHOC	Shoshone, Teco	40.75	98	P	P	17 46 54.5	+1.0
	baz=318						
SHPR	Sheep Range	40.92	96	P	P	17 46 54.7	-0.3
SHPR				IAMs_20	IAMs_20	18 02 10.1	
	comp=Z,1µm,18.0s						
P17A	Butcher Ranch,	41.24	89	P	P	17 46 57.3	-0.3
BFSC	Mount Baldy Ra	41.24	101	P	P	17 46 58.0	+0.4
	baz=319						
K22A	Casper	41.38	82	P	P	17 46 57.7	-1.0
	baz=312						
K22A	Casper	41.38	82	P	P	17 46 57.8	-1.0
HEC	Hector,Ludlow	41.51	99	P	P	17 46 59.6	-0.1
	baz=318,SNR=7.1						
HIA	Hailar	41.68	291	*c i*P	P	17 47 01.2	+0.2
HIA				pmax	pmax		
	comp=Z,28nm,1.2s						
MDND	Maddock	41.72	71	IAMs_20	IAMs_20	18 04 28.9	
	comp=Z,1µm,19.0s						
RSSD	Black Hills	41.76	79	P	P	17 47 01.0	-0.9
RSSD				pmax	pmax		
	comp=Z,38nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,1µm,21.0s						
RSSD	Black Hills	41.76	79	P	P	17 47 00.9	-0.9
	baz=311						
RSSD	Black Hills	41.76	79	P	P	17 47 01.0	-0.9
KNB	Kanab	41.84	93	P	P	17 47 01.9	-0.6
KNB				pmax	pmax		
	comp=Z,72nm,1.4s						
KNB	Kanab	41.84	93	P	P	17 47 01.9	-0.6
GMRC	Granite Mounta	41.92	98	P	P	17 47 03.5	+0.4
	baz=318,SNR=22						
E28A	Huff	41.96	74	IAMs_20	IAMs_20	18 04 17.6	
	comp=Z,1µm,18.0s						
MURC	Murrieta	41.97	101	P	P	17 47 03.9	+0.4
	baz=320						
ULM	Lac du Bonnet	42.15	66	P	P	17 47 03.6	-1.0
	comp=Z,7.1nm,0.7s,baz=303,slow=8.2,SNR=12						
ULM				LR	LR	18 05 42.3	
	comp=Z,2µm,18.3s,baz=314,slow=38						
ULM	Lac du Bonnet	42.15	66	P	P	17 47 04.5	-0.2
ULM				pmax	pmax		
	comp=Z,36nm,1.3s						
ULM				MLR	MLR		
	comp=Z,2µm,19.0s						
ULM	Lac du Bonnet	42.15	66	P	P	17 47 04.5	-0.2
ULM				IAMs_20	IAMs_20	18 05 43.1	
	comp=Z,2µm,19.0s						
O20A	White River Ci	42.15	86	P	P	17 47 05.0	-0.1
	baz=314,SNR=14						
O20A	White River Ci	42.15	86	IAmb	IAmb	17 48 22.9	
	comp=Z,45nm,1.1s						
CN2	Changchun	42.16	281	*e*P	P	17 47 03.5	-1.4
CN2				*e*PP	PP	17 48 44.3	+2.0
CN2				*e*S	S	17 53 21.5	-3.0
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				LR	LR		
	comp=Z,750nm,18.0s						
CN2				LR	LR		
	comp=Z,990nm,18.0s						
CN2				LR	LR		
	comp=Z,650nm,18.0s						
BELC	Belle Mtn. Jos	42.32	99	P	P	17 47 06.4	0.0
	baz=319						
PFO	Pinyon Flats O	42.36	100	P	P	17 47 06.9	+0.1
	comp=Z,21nm,1.2s,baz=305,slow=5.7,SNR=9.6						
PFO				PcP	PcP	17 49 01.2	+1.2
	comp=Z,5.1nm,1.0s,baz=294,slow=1.1,SNR=2.6						
PFO	Pinyon Flats O	42.36	100	P	P	17 47 05.7	-1.1
PFO				pmax	pmax		
	comp=Z,37nm,1.4s						
PFO				MLR	MLR		
	comp=Z,1µm,19.0s						
PFO	Pinyon Flats O	42.36	100	P	P	17 47 06.6	-0.2
	baz=319,SNR=9.9						
PFO	Pinyon Flats O	42.36	100	P	P	17 47 05.7	-1.1
NEE2	Needles Airpor	42.50	97	P	P	17 47 08.8	+1.0
	baz=318						
109C	Camp Elliot, M	42.56	101	P	P	17 47 09.6	+1.4
	baz=320						
109C	Camp Elliot, M	42.56	101	IAmb	IAmb	17 47 12.2	
	comp=Z,68nm,1.4s						
W13A	Hualapai Mount	42.66	96	IAmb	IAmb	17 47 12.9	
	comp=Z,64nm,1.6s						
IRM	Iron Mountain	42.67	98	P	P	17 47 09.8	+0.7
	baz=319,SNR=38						
NRIK	Noril'sk	42.76	329	P	P	17 47 10.3	+0.9
	comp=Z,23nm,0.9s,baz=69,slow=7.5,SNR=19						
NRIK				LR	LR	18 07 36.4	
	comp=Z,2µm,18.2s,baz=54,slow=40						
NRIK	Noril'sk	42.76	329	*d i*P	P	17 47 09.4	0.0
NRIK				pmax	pmax		
	comp=Z,48nm,1.1s						
NRIK	Noril'sk	42.76	329	IAMs_20	IAMs_20	18 07 25.4	
	comp=Z,2µm,18.0s						
BC3	Big Chuckawall	42.88	99	P	P	17 47 10.9	0.0
	baz=319,SNR=9.4						
N23A	Red Feather La	42.89	84	P	P	17 47 10.8	-0.4
	baz=314						
MONP2	Monument Peak	42.93	101	P	P	17 47 12.4	+0.9
	baz=320						
PV10	Paradox Valley	42.95	89	IAmb	IAmb	17 48 22.8	
	comp=Z,49nm,1.3s						
PV14	Lion Creek, Pa	42.96	89	IAmb	IAmb	17 48 22.9	
	comp=Z,48nm,1.2s						
UPNV	Upernavik	42.98	24	*i* P	P	17 47 12.2	+1.1
UPNV				IAmb	IAmb	17 47 12.9	
	comp=Z,40nm,0.9s						
PV04	Paradox Valley	43.01	89	P	P	17 47 11.4	-0.7
PV04				IAmb	IAmb	17 47 14.2	
	comp=Z,52nm,1.3s						
PV16	Nyswonger Mesa	43.06	89	P	P	17 47 12.0	-0.5
PV11	David Mesa, Pa	43.10	89	IAmb	IAmb	17 48 23.8	
	comp=Z,55nm,1.2s						
PDMCI	Parker Dam,Lak	43.11	97	P	P	17 47 13.1	+0.5
	baz=319,SNR=7.3						
PV12	Saucer Basin,	43.12	89	P	P	17 47 12.3	-0.8
PV05	Paradox Valley	43.13	89	IAmb	IAmb	17 47 15.2	
	comp=Z,46nm,1.2s						
PV03	Paradox Valley	43.14	89	IAmb	IAmb	17 47 15.8	
	comp=Z,56nm,1.5s						
PV13	Radium Mtn., P	43.23	89	IAmb	IAmb	17 47 16.5	
	comp=Z,77nm,1.3s						
SWSC	Sam W. Stewart	43.23	100	P	P	17 47 14.0	+0.4
	baz=320						
PV02	Paradox Valley	43.24	89	P	P	17 47 13.2	-0.8
PV15	Paradox Valley	43.28	88	IAmb	IAmb	17 47 16.9	
	comp=Z,57nm,1.4s						
IKP	In-Ko-Pah, Jac	43.28	101	P	P	17 47 14.8	+0.6
	baz=320						
RMX	La Rumorosa	43.34	101	P	P	17 47 14.7	0.0
AGMN	Agassiz Nation	43.38	69	P	P	17 47 14.5	-0.2
	baz=310						
AGMN	Agassiz Nation	43.38	69	IAMs_20	IAMs_20	18 06 02.7	
	comp=Z,2µm,19.0s						
D32A	Dogwood Acres,	43.53	71	IAMs_20	IAMs_20	18 05 22.7	
	comp=Z,2µm,19.0s						
GLA	Glamis	43.67	99	P	P	17 47 18.0	+0.7
	baz=320,SNR=5.8						
GLA	Glamis	43.67	99	IAmb	IAmb	17 47 20.9	
	comp=Z,89nm,1.7s						
WUAZ	Wupatki	43.73	94	P	P	17 47 18.1	+0.3
	baz=318,SNR=16						
WUAZ	Wupatki	43.73	94	IAmb	IAmb	17 47 21.5	
	comp=Z,44nm,1.4s						
ISCO	Idaho Springs	43.83	85	P	P	17 47 20.0	+1.2
	baz=314						
MVCO	Mesa Verde	44.08	90	P	P	17 47 20.4	-0.4
	baz=316,SNR=11						
MVCO	Mesa Verde	44.08	90	P	P	17 47 20.0	-0.8
B35A	Bob, Littlefor	44.43	67	IAmb	IAmb	17 47 26.0	
	comp=Z,58nm,1.4s						
B35A				IAMs_20	IAMs_20	18 07 45.5	
	comp=Z,2µm,18.0s						
NUUG	Nuugaatsiaq	44.49	24	*i* P	P	17 47 24.0	+0.7
NUUG				IAmb	IAmb	17 47 24.9	
	comp=Z,26nm,1.0s						
S22A	4UR Ranch, Cre	44.62	88	P	P	17 47 24.0	-1.1
	baz=316,SNR=9.9						
KBS	Kingsbay	44.67	360	IAMs_20	IAMs_20	18 08 10.9	
	comp=Z,2µm,18.0s						
Q24A	Divide	44.68	85	P	P	17 47 25.0	-0.6
	baz=315						
F33A	5 Mile Ranch,	44.75	72	IAMs_20	IAMs_20	18 07 37.1	
	comp=Z,2µm,19.0s						
W18A	Petrified Fore	44.92	93	P	P	17 47 27.1	-0.4
	baz=318						
W18A	Petrified Fore	44.92	93	P	P	17 47 27.2	-0.4
W18A				IAmb	IAmb	17 48 23.7	
	comp=Z,34nm,1.1s						
KSRS	Korea Array	45.20	273	P	P	17 47 30.5	+1.1
	comp=Z,17nm,1.1s,baz=46,slow=7.6,SNR=21						
KSRS				PcP	PcP	17 49 09.6	+0.2
	comp=Z,5.8nm,0.9s,baz=54,slow=4.0,SNR=6.9						
KSRS				LR	LR	18 05 55.0	
	comp=Z,246nm,21.7s,baz=66,slow=35						
KSAR	Wonju Array Be	45.23	273	P	P	17 47 29.2	-0.4
KSAR						17 49 09.3	
KSAR	Wonju Array Be	45.23	273	P	P	17 47 29.2	-0.4
KSAR					PcP	17 49 09.3	-0.2
SDCO	Great Sand Dun	45.35	87	P	P	17 47 30.4	-0.6
	baz=316,SNR=14						
FRB	Frobisher Bay	45.44	38	P	P	17 47 30.1	-0.9
	comp=Z,32nm,1.1s,baz=313,slow=8.7,SNR=29						
DAG	Danmarks Havn	45.52	9	*i* P	P	17 47 31.0	-0.5
DAG	Danmarks Havn	45.52	9	*i* P	P	17 47 31.0	-0.5
	comp=Z,37nm,1.2s						
DAG	Danmarks Havn	45.52	9	*i* P	P	17 47 31.1	-0.5
DAG				IAmb	IAmb	17 47 32.7	
	comp=Z,37nm,1.2s						
214A	Organ Pipe Nat	45.61	98	P	P	17 47 32.7	-0.1
	baz=320,SNR=16						
K31A	O'Neill	45.61	77	IAMs_20	IAMs_20	18 08 38.0	
	comp=Z,2µm,18.0s						
EYMN	Ely	45.83	66	P	P	17 47 34.3	0.0
	baz=311,SNR=12						
EYMN	Ely	45.83	66	P	P	17 47 33.4	-0.9
EYMN	Ely	45.83	66	IAMs_20	IAMs_20	18 07 43.6	
	comp=Z,2µm,18.0s						
ECSD	EROS Data Cent	46.00	74	P	P	17 47 33.6	-2.1
	baz=313						
F36A	Milaca	46.18	70	IAmb	IAmb	17 48 35.8	
	comp=Z,59nm,1.4s						
F36A				IAMs_20	IAMs_20	18 06 52.4	
	comp=Z,2µm,19.0s						
TJN	Taejon	46.29	272	⇓*e*P	P	17 47 38.8	+0.8
T25A	Trinidad	46.39	86	P	P	17 47 39.1	0.0
	baz=316						
TUC	Tucson	46.45	96	P	P	17 47 39.4	-0.1
TUC				pmax	pmax		
	comp=Z,38nm,1.4s						
TUC	Tucson	46.45	96	P	P	17 47 39.8	+0.3
	baz=320						
TUC	Tucson	46.45	96	P	P	17 47 39.4	-0.1
TUC				IAmb	IAmb	17 47 43.2	
	comp=Z,38nm,1.4s						
SUMG	Summit	46.64	18	P	P	17 47 40.6	-0.2
SUMG				pmax	pmax		
	comp=Z,78nm,1.0s						
SUMG	Summit	46.64	18	P	P	17 47 40.6	-0.2
SUMG	Summit	46.64	18	*i* P	P	17 47 41.0	+0.2
	comp=Z,202nm,1.0s						
SUMG	Summit	46.64	18	*i* P	P	17 47 41.0	+0.2
SUMG				IAmb	IAmb	17 47 43.6	
	comp=Z,202nm,1.0s						
ILULI	Ilulissat	46.67	26	IAMs_20	IAMs_20	18 06 28.4	
	comp=Z,3µm,22.0s						
BGNE	Belgrade	46.78	77	IAMs_20	IAMs_20	18 07 09.8	
	comp=Z,1µm,18.0s						
ANMO	Albuquerque	46.86	90	P	P	17 47 42.4	-0.4
	comp=Z,15nm,1.2s,baz=324,slow=9.6,SNR=12						
ANMO				PcP	PcP	17 49 17.3	+1.7
	comp=Z,26nm,1.2s,baz=215,slow=2.3,SNR=10						
ANMO	Albuquerque	46.86	90	*d i*P	P	17 47 41.2	-1.6
ANMO				pmax	pmax		
	comp=Z,22nm,1.3s						
ANMO	Albuquerque	46.86	90	P	P	17 47 42.7	-0.1
	baz=318						
ANMO	Albuquerque	46.86	90	P	P	17 47 41.9	-0.9
ANMO				PcP	PcP	17 49 16.7	+1.1
ANMO				IAmb	IAmb	17 49 20.4	
	comp=Z,53nm,1.4s						
SPMN	Marine on St.	46.98	70	IAMs_20	IAMs_20	18 07 19.2	
	comp=Z,1µm,21.0s						
IRK	Irkutsk	47.35	303	*e*P	P	17 47 46.3	+0.1
IRK				pmax	pmax		
	comp=Z,87nm,2.0s						
BNM	Barren Site	47.36	91	P	P	17 47 46.3	-0.4
BNM				PcP	PcP	17 49 18.3	+1.0
N33A	J Bar K, Exete	47.63	78	IAMs_20	IAMs_20	18 08 11.3	
	comp=Z,1µm,18.0s						
DBG	Daneborg	47.66	11	*i* P	P	17 47 47.7	-0.6
DBG				IAmb	IAmb	17 47 49.4	
	comp=Z,57nm,1.1s						
CBKS	Cedar Bluff	47.75	81	IAMs_20	IAMs_20	18 07 51.6	
	comp=Z,1µm,18.0s						
121A	Cookes Peak, D	47.93	93	P	P	17 47 51.7	+0.5
	baz=319,SNR=9.3						
121A	Cookes Peak, D	47.93	93	IAmb	IAmb	17 47 53.9	
	comp=Z,20nm,1.1s						
121A				IAMs_20	IAMs_20	18 06 22.7	
	comp=Z,1µm,20.0s						
319A	Douglas	47.99	96	IAmb	IAmb	17 48 26.8	
	comp=Z,44nm,1.1s						
TLY	Talaya	48.02	303	P	P	17 47 52.2	+0.8
	comp=Z,18nm,0.9s,baz=22,slow=7.9,SNR=15						
TLY	Talaya	48.02	303	*e*P	P	17 47 52.7	+1.4
TLY				*e*		17 49 50.8	

TLY				eS	S	17 54 50.6	+1.6
TLY				eSSS	SSS	17 59 23.9	
TLY				pmax	pmax		
	comp=Z,93nm,1.0s						
TLY				MLR	MLR		
	comp=Z,3µm,15.0s						
TLY	Talaya	48.02	303	P	P	17 47 51.5	+0.2
TLY				IAmb	IAmb	17 47 53.8	
	comp=Z,36nm,1.0s						
TLY				IAMs_20	IAMs_20	18 07 01.8	
	comp=Z,1µm,18.0s						
TLY	Talaya	48.02	303	P	P	17 47 52.1	+0.8
G40A	Rib Lake	48.30	68	IAmb	IAmb	17 47 56.9	
	comp=Z,62nm,1.4s						
G40A				IAMs_20	IAMs_20	18 09 20.9	
	comp=Z,2µm,19.0s						
SFJD	Kangerlussuaq	48.47	27	P	P	17 47 54.7	+0.1
	comp=Z,32nm,1.2s,baz=241,slow=3.6,SNR=5.9						
SFJD	Kangerlussuaq	48.47	27	i P	P	17 47 53.9	-0.6
SFJD	Kangerlussuaq	48.47	27	i P	P	17 47 53.9	-0.6
SFJD	Kangerlussuaq	48.47	27	i P	P	17 47 53.9	-0.6
N35A	Tabor	48.51	76	P	P	17 47 54.0	-1.3
N35A				IAmb	IAmb	17 49 11.1	
	comp=Z,76nm,1.5s						
R32A	Long Quarter,	48.59	81	IAMs_20	IAMs_20	18 09 34.8	
	comp=Z,1µm,19.0s						
K38A	Parkersburg	48.78	72	IAMs_20	IAMs_20	18 09 01.7	
	comp=Z,2µm,18.0s						
ULN	Ulaanbaatar	48.98	297	P	P	17 47 59.1	+0.1
ULN				pmax	pmax		
	comp=Z,33nm,1.0s						
ULN				MLR	MLR		
	comp=Z,2µm,18.0s						
ULN	Ulaanbaatar	48.98	297	P	P	17 47 59.1	+0.1
ULN				IAmb	IAmb	17 48 01.8	
	comp=Z,33nm,0.9s						
ULN	Ulaanbaatar	48.98	297	IAMs_20	IAMs_20	18 09 44.8	
	comp=Z,2µm,18.0s						
ULN	Ulaanbaatar	48.98	297	P	P	17 47 59.6	+0.6
ULN				P	P	17 47 59.6	+0.6
F42A	Maple Grove Fa	49.01	66	IAMs_20	IAMs_20	18 09 57.7	
	comp=Z,2µm,20.0s						
I40A	Norwalk	49.04	70	IAMs_20	IAMs_20	18 08 32.4	
	comp=Z,1µm,20.0s						
ZAK	Zakamensk	49.06	302	eP	P	17 47 59.2	-0.3
ZAK				e		17 49 23.1	
ZAK				pmax	pmax		
	comp=Z,14nm,1.3s						
SCIA	State Center	49.07	73	IAMs_20	IAMs_20	18 08 56.3	
	comp=Z,1µm,18.0s						
E43A	Lone Tree Farm	49.16	65	IAmb	IAmb	17 48 01.0	
	comp=Z,26nm,0.8s						
E43A				IAMs_20	IAMs_20	18 09 53.6	
	comp=Z,2µm,21.0s						
EPT	El Paso	49.21	93	IAMs_20	IAMs_20	18 07 26.6	
	comp=Z,1µm,20.0s						
KSU1	Kansas State U	49.24	78	IAMs_20	IAMs_20	18 10 08.1	
	comp=Z,1µm,18.0s						
ICESG	Greenland Ices	49.30	21	i P	P	17 48 00.8	-0.5
ICESG				IAmb	IAmb	17 48 02.7	
	comp=Z,54nm,0.8s						
SONM	Songino Array	49.32	298	P	P	17 48 01.9	+0.4
	comp=Z,18nm,0.9s,baz=54,slow=7.0,SNR=58						
SONM				PcP	PcP	17 49 25.2	+1.1
	comp=Z,8.0nm,0.9s,baz=52,slow=3.2,SNR=5.8						
SONM				LR	LR	18 10 04.7	
	comp=Z,1µm,19.7s,baz=44,slow=38						
SONM	Songino Array	49.32	298	P	P	17 48 01.1	-0.5
SONM						17 49 24.8	
SONM				pmax	pmax		
	comp=Z,22nm,1.0s						
SONM	Songino Array	49.32	298	P	P	17 48 01.1	-0.5
SONM				PcP	PcP	17 49 24.8	+0.8
AMTX	Amarillo	49.54	86	P	P	17 48 02.6	-0.8
	baz=318						
AMTX	Amarillo	49.54	86	IAmb	IAmb	17 48 35.6	
	comp=Z,32nm,1.4s						
MSTX	Muleshoe	49.62	88	P	P	17 48 03.5	-0.5
	baz=318,SNR=7.7						
MSTX	Muleshoe	49.62	88	IAmb	IAmb	17 48 34.8	
	comp=Z,45nm,1.3s						
MSTX				IAMs_20	IAMs_20	18 10 01.3	
	comp=Z,724nm,19.0s						
BJI	Beijing	49.76	284	P	P	17 48 05.3	+0.5
BJI				S	S	17 55 15.0	+1.3
BJI				pmax	pmax		
	comp=Z,12nm,1.4s						
BJI				pmax	pmax		
	comp=Z,250nm,5.2s						
BJI				LR	LR		
	comp=Z,510nm,18.6s						
BJI				LR	LR		
	comp=Z,480nm,16.7s						
BJI				LR	LR		
	comp=Z,540nm,35.0s						
BJT	Baijiatuau	49.78	284	IAmb	IAmb	17 48 07.5	
	comp=Z,46nm,1.6s						
MNTX	Cornudas Mount	49.89	92	P	P	17 48 06.1	+0.1
	baz=320,SNR=35						
MNTX	Cornudas Mount	49.89	92	IAMs_20	IAMs_20	18 08 00.5	
	comp=Z,988nm,19.0s						
JFWS	Jewell Farm	49.91	70	P	P	17 48 04.6	-1.4
	baz=315						
JFWS	Jewell Farm	49.91	70	IAmb	IAmb	17 48 42.5	
	comp=Z,45nm,1.4s						
JFWS	Jewell Farm	49.91	70	IAMs_20	IAMs_20	18 10 44.7	
	comp=Z,1µm,20.0s						
I42A	Draeger Farm,	49.92	69	IAMs_20	IAMs_20	18 10 31.7	
	comp=Z,2µm,18.0s						
L40A	Anamosa	50.01	72	IAMs_20	IAMs_20	18 11 42.2	
	comp=Z,1µm,18.0s						
GDL2	Guadalupe Moun	50.07	91	P	P	17 48 06.1	-1.3
GDL2					PcP	17 49 27.3	+0.3
H43A	Windswept, Lux	50.09	67	IAMs_20	IAMs_20	18 10 24.4	
	comp=Z,2µm,19.0s						
E46A	Sault Ste Mari	50.50	63	IAMs_20	IAMs_20	18 06 53.1	
	comp=Z,2µm,20.0s						
P38A	Dawn	50.52	76	P	P	17 48 09.1	-1.5
P38A				IAmb	IAmb	17 48 42.8	
	comp=Z,27nm,0.8s						
P38A				IAMs_20	IAMs_20	18 11 44.9	
	comp=Z,950nm,18.0s						
L42A	Oliver, Polo	50.86	71	IAMs_20	IAMs_20	18 10 33.8	
	comp=Z,2µm,18.0s						
T35A	Sooner Cattle	50.88	80	P	P	17 48 11.3	-2.1
T35A				IAmb	IAmb	17 48 41.6	
	comp=Z,65nm,1.4s						
T35A				PcP	PcP	17 49 30.2	+0.4
T35A				IAMs_20	IAMs_20	18 10 56.5	
	comp=Z,1µm,18.0s						
SCO	Scoresbysund	51.01	14	i P	P	17 48 14.1	+0.3
SCO	Scoresbysund	51.01	14	IAmb	IAmb	17 48 16.0	
	comp=Z,30nm,1.0s						
SCO	Scoresbysund	51.01	14	i P	P	17 48 14.1	+0.3
	comp=Z,35nm,1.1s						
SCO	Scoresbysund	51.01	14	i P	P	17 48 14.2	+0.3
SCO				IAmb	IAmb	17 48 15.2	
	comp=Z,35nm,1.1s						
K43A	Burlington	51.06	69	IAmb	IAmb	17 48 14.3	
	comp=Z,102nm,1.4s						
N41A	Harden Midland	51.17	73	IAMs_20	IAMs_20	18 10 10.9	
	comp=Z,1µm,19.0s						
OK029	Liberty Lake	51.19	82	IAMs_20	IAMs_20	18 10 01.7	
	comp=Z,933nm,18.0s						
WMOK	Wichita Mounta	51.25	84	P	P	17 48 15.2	-1.0
WMOK				pmax	pmax		
	comp=Z,24nm,1.3s						
WMOK				MLR	MLR		
	comp=Z,600nm,20.0s						
WMOK	Wichita Mounta	51.25	84	P	P	17 48 15.4	-0.8
	baz=318						
WMOK	Wichita Mounta	51.25	84	P	P	17 48 15.2	-1.0
MATQ	Matagami	51.29	56	P	P	17 48 15.2	-1.0
	baz=315,SNR=8.7						
OK031	S. Brethren Rd	51.41	81	IAMs_20	IAMs_20	18 11 04.5	
	comp=Z,1µm,18.0s						
OK025	Westminster Rd	51.41	82	IAMs_20	IAMs_20	18 10 09.6	
	comp=Z,988nm,18.0s						
GLMI	Grayling	51.44	65	P	P	17 48 17.8	+0.3
	baz=315						
GLMI	Grayling	51.44	65	IAmb	IAmb	17 48 18.7	
	comp=Z,72nm,1.1s						
GLMI				IAMs_20	IAMs_20	18 11 14.8	
	comp=Z,2µm,22.0s						
OK030	Cody Creek RV	51.46	81	IAMs_20	IAMs_20	18 13 56.8	
	comp=Z,1µm,21.0s						
OKCFA	Oklahoma City	51.47	82	IAMs_20	IAMs_20	18 10 17.2	
	comp=Z,962nm,19.0s						
HHC	Hu-ho-hao-te	51.62	288	eP	P	17 48 20.3	+1.3
HHC				pP	sP	17 48 24.8	+1.4
HHC				S	S	17 55 34.3	-5.6
HHC				SS	SS	17 59 09.3	-6.2
HHC				pmax	pmax		
	comp=Z,39nm,1.1s						
HHC				pmax	pmax		
	comp=Z,240nm,6.6s						
HHC				LR	LR		
	comp=Z,1µm,14.7s						
HHC				LR	LR		
	comp=Z,800nm,11.7s						
HHC				LR	LR		
	comp=Z,1µm,15.5s						
HQIL	Hanson Quary C	51.95	70	IAMs_20	IAMs_20	18 11 07.6	
	comp=Z,2µm,18.0s						
TUL1	Leonard	52.01	81	IAMs_20	IAMs_20	18 14 25.5	
	comp=Z,1µm,19.0s						
S39A	Bolivar	52.04	77	IAMs_20	IAMs_20	18 10 24.1	
	comp=Z,1µm,19.0s						
LSQQ	Lebel-sur-Quev	52.09	56	P	P	17 48 21.1	-1.2
	baz=316						
HDIL	Hopedale	52.10	72	IAMs_20	IAMs_20	18 11 03.5	
	comp=Z,2µm,18.0s						
M44A	Midewin, Midew	52.15	70	P	P	17 48 21.3	-1.4
M44A				IAmb	IAmb	17 48 27.1	
	comp=Z,89nm,1.4s						
M44A				IAMs_20	IAMs_20	18 10 27.9	
	comp=Z,1µm,20.0s						
R40A	Maddies Statio	52.17	76	IAMs_20	IAMs_20	18 12 44.5	
	comp=Z,1µm,19.0s						
ABTX	Abilene, Hawle	52.36	86	P	P	17 48 23.3	-1.2
	baz=319,SNR=9.2						
U38A	Gravette	52.39	79	IAmb	IAmb	17 48 44.7	
	comp=Z,36nm,1.2s						
U38A				IAMs_20	IAMs_20	18 11 57.3	
	comp=Z,1µm,18.0s						
ISOG	Isortoq, Green	52.42	24	i P	P	17 48 23.5	-0.9
ISOG				IAmb	IAmb	17 48 25.2	
	comp=Z,38nm,1.0s						
J47A	Sunmer	52.47	66	P	P	17 48 24.6	-0.6
J47A				IAmb	IAmb	17 48 27.1	
	comp=Z,60nm,1.2s						
VLDQ	Val d'Or	52.55	58	P	P	17 48 22.8	-2.9
VLDQ				IAmb	IAmb	17 48 26.2	
	comp=Z,38nm,1.1s						
P43A	Skaggs, Pawnee	52.64	73	P	P	17 48 25.1	-1.4
P43A				IAmb	IAmb	17 48 26.3	
	comp=Z,63nm,1.6s						
P43A				IAMs_20	IAMs_20	18 10 56.0	
	comp=Z,997nm,18.0s						
TX31	Lajitas Ar. Si	52.65	92	P	P	17 48 25.5	-1.2
TX31				IAmb	IAmb	17 48 29.0	
	comp=Z,66nm,1.1s						
TXAR	Lajitas Array	52.65	92	P	P	17 48 26.6	-0.2
	comp=Z,21nm,1.1s,baz=302,slow=4.1,SNR=37						
TXAR				PcP	PcP	17 49 37.6	+1.0
	comp=Z,2.3nm,0.7s,baz=302,slow=2.4,SNR=4.1						
TXAR				LR	LR	18 10 08.3	
	comp=Z,623nm,18.8s,baz=0.0,slow=35						
ANGG	Ammassalik, Gr	52.66	23	P	P	17 48 25.3	-0.9
ANGG	Ammassalik, Gr	52.66	23	i P	P	17 48 24.5	-1.6
ANGG				IAmb	IAmb	17 48 26.8	
	comp=Z,68nm,0.9s						
O44A	Mansfield	52.83	72	IAMs_20	IAMs_20	18 11 37.8	
	comp=Z,1µm,20.0s						
CCM	Cathedral Cave	52.89	75	IAMs_20	IAMs_20	18 13 31.5	
	comp=Z,980nm,18.0s						
MGMO	Mountain Grove	53.00	77	IAMs_20	IAMs_20	18 11 45.6	
	comp=Z,1µm,19.0s						
X37A	Clayton	53.23	81	IAMs_20	IAMs_20	18 14 52.6	
	comp=Z,1µm,18.0s						
U40A	Yellville	53.28	78	P	P	17 48 29.1	-2.1
	baz=318						
U40A	Yellville	53.28	78	IAmb	IAmb	17 48 46.9	
	comp=Z,41nm,1.3s						
U40A				IAMs_20	IAMs_20	18 11 10.9	
	comp=Z,1µm,21.0s						
KEV	Kevo	53.35	353	IAMs_20	IAMs_20	18 10 26.5	
	comp=Z,1µm,22.0s						
SFIN	Lafayette	53.38	70	P	P	17 48 31.2	-0.7
	baz=317						
SFIN	Lafayette	53.38	70	IAMs_20	IAMs_20	18 11 16.3	
	comp=Z,2µm,21.0s						
TIY	Taiyuan	53.45	285	eP	P	17 48 35.0	+2.4
TIY				pmax	pmax		
	comp=Z,43nm,0.7s						
TIY				pmax	pmax		
	comp=Z,180nm,5.6s						
TIY				LR	LR		
	comp=Z,220nm,11.2s						
TIY				LR	LR		
	comp=Z,630nm,13.4s						
TIY				LR	LR		
	comp=Z,790nm,12.4s						
L48A	N Adams	53.60	67	P	P	17 48 32.6	-0.9
W39A	Magazine	53.64	80	P	P	17 48 32.6	-1.3
	baz=318						
SSE	Sheshan	53.64	273	P	P	17 48 33.5	-0.4
SSE				IAmb	IAmb	17 48 36.3	
	comp=Z,64nm,1.3s						
ARCES	ARCESS Array B	53.67	354	P	P	17 48 32.3	-1.3
	comp=Z,25nm,1.1s,baz=12,slow=6.2,SNR=7.7						
ARCES				PcP	PcP	17 49 40.2	+0.4
	comp=Z,5.3nm,0.8s,baz=28,slow=4.1,SNR=2.1						
ARCES				LR	LR	18 12 57.9	
	comp=Z,468nm,19.5s,baz=10.0,slow=38						
ARCES	ARCESS Array B	53.67	354	P	P	17 48 33.6	0.0
ARCES				pmax	pmax		
	comp=Z,24nm,1.1s						
ARCES	ARCESS Array B	53.67	354	P	P	17 48 33.5	0.0
T42A	Van Buren	53.73	76	IAMs_20	IAMs_20	18 12 07.7	
	comp=Z,1µm,19.0s						
N47A	Urbana	53.74	69	IAMs_20	IAMs_20	18 12 22.8	
	comp=Z,2µm,22.0s						
ALGO	Algonquin Park	53.83	60	P	P	17 48 34.1	-1.0
	baz=317						
P46A	Rosedale	53.88	71	P	P	17 48 34.5	-1.0
P46A				IAmb	IAmb	17 48 38.6	
	comp=Z,60nm,1.2s						
P46A				IAMs_20	IAMs_20	18 11 45.6	
	comp=Z,1µm,21.0s						
JCT	Junction City	53.90	88	P	P	17 48 34.9	-1.0
	baz=320,SNR=13						
K50A	Casco	53.91	65	IAmb	IAmb	17 48 36.4	
	comp=Z,43nm,1.0s						
I51A	Listowel	53.96	63	P	P	17 48 36.7	+0.5
	baz=317,SNR=6.6						
FCAR	Ozark Folk Cen	54.02	78	IAmb	IAmb	17 48 41.9	
	comp=Z,21nm,1.3s						
FCAR				IAMs_20	IAMs_20	18 11 36.5	
	comp=Z,1µm,22.0s						
WHTX	Lake Whitney,	54.04	85	IAMs_20	IAMs_20	18 11 18.3	
	comp=Z,1µm,18.0s						
OLIL	Olney	54.06	73	IAmb	IAmb	17 48 51.3	
	comp=Z,42nm,1.0s						
OLIL				IAMs_20	IAMs_20	18 11 04.4	
	comp=Z,1µm,21.0s						
SADO	Sadowa	54.17	61	P	P	17 48 37.4	-0.3
	comp=Z,6.7nm,0.6s,baz=295,slow=3.7,SNR=9.4						
NJ2	Nanjing	54.20	275	⇑P	P	17 48 38.5	+0.5
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
S44A	Carbondale	54.22	74	IAMs_20	IAMs_20	18 12 05.6	
	comp=Z,909nm,20.0s						
SIUC	Southern Illin	54.22	74	IAMs_20	IAMs_20	18 14 22.6	
	comp=Z,1µm,20.0s						
G54A	Lake Saint Pet	54.22	60	P	P	17 48 37.3	-0.7
	baz=317						
MIAR	Mount Ida	54.24	80	P	P	17 48 37.8	-0.4
MIAR				pmax	pmax		
	comp=Z,40nm,1.3s						
MIAR				MLR	MLR		
	comp=Z,1µm,19.0s						
MIAR	Mount Ida	54.24	80	P	P	17 48 37.2	-1.0
	baz=319						
MIAR	Mount Ida	54.24	80	P	P	17 48 37.8	-0.4
MIAR				PcP	PcP	17 49 41.5	-0.9
MIAR				IAmb	IAmb	17 49 45.5	
	comp=Z,40nm,1.3s						
MIAR				IAMs_20	IAMs_20	18 13 19.3	
	comp=Z,1µm,19.0s						
D55A	Sainte-Anne-du	54.27	57	P	P	17 48 37.2	-1.1
	baz=317,SNR=9.4						
WHAR	Wooly Hollow	54.38	78	IAMs_20	IAMs_20	18 12 24.0	
	comp=Z,982nm,19.0s						
ZAA0	Zalesovo Array	54.40	316	IAMs_20	IAMs_20	18 13 07.4	
	comp=Z,1µm,19.0s						
ZALV	Zalesovo Beam	54.40	316	P	P	17 48 39.2	0.0
	comp=Z,4.8nm,0.7s,baz=36,slow=6.0,SNR=11						
ZALV				PcP	PcP	17 49 43.8	+1.1
	comp=Z,8.8nm,0.9s,baz=29,slow=3.3,SNR=7.1						
ZALV				LR	LR	18 13 27.7	
	comp=Z,1µm,18.9s,baz=34,slow=38						
ZALV	Zalesovo Beam	54.40	316	P	P	17 48 39.7	+0.5
ZALV						17 49 42.2	
ZALV	Zalesovo Beam	54.40	316	P	P	17 48 39.7	+0.5
ZALV				PcP	PcP	17 49 42.2	-0.5
LCAR	Lake Charles	54.41	77	P	P	17 48 38.6	-0.8
LCAR					PcP	17 49 42.4	-0.7
LCAR				IAmb	IAmb	17 49 44.1	
	comp=Z,41nm,1.5s						
LCAR				IAMs_20	IAMs_20	18 12 19.8	
	comp=Z,939nm,21.0s						
E55A	Montcerf-Lytto	54.41	58	P	P	17 48 38.9	-0.4
	baz=317						
Z38A	Mt. Pleasant	54.44	82	IAMs_20	IAMs_20	18 16 03.7	
	comp=Z,1µm,18.0s						
N49A	Columbus Grove	54.48	68	IAMs_20	IAMs_20	18 13 00.5	
	comp=Z,2µm,18.0s						
LVZ	Lovozero	54.52	349	d iP	P	17 48 40.8	+0.9
LVZ				pmax	pmax		
	comp=Z,57nm,1.3s						
LVZ	Lovozero	54.52	349	P	P	17 48 39.2	-0.6
LVZ				IAmb	IAmb	17 48 42.1	
	comp=Z,58nm,1.0s						
BLO	Bloomington	54.56	71	IAMs_20	IAMs_20	18 12 04.7	
	comp=Z,2µm,20.0s						
D56A	ZEC Mazanza, M	54.58	57	P	P	17 48 39.4	-1.2
	baz=318						
H53A	Bobcaygeon	54.59	61	P	P	17 48 40.1	-0.6
	baz=317						
X40A	Basin Creek Fa	54.68	80	IAMs_20	IAMs_20	18 14 08.2	
	comp=Z,1µm,18.0s						
M50A	Fremont	54.71	67	IAmb	IAmb	17 48 42.5	
	comp=Z,32nm,1.1s						
PARMO	Parma	54.72	75	IAMs_20	IAMs_20	18 14 50.9	
	comp=Z,1µm,20.0s						
UALR	University of	54.73	79	IAMs_20	IAMs_20	18 11 58.5	
	comp=Z,1µm,20.0s						
E56A	St. Veronique	54.82	57	P	P	17 48 40.3	-2.0
	baz=318						
HENM	Henderson Moun	54.83	75	IAMs_20	IAMs_20	18 14 59.8	
	comp=Z,1µm,18.0s						
P48A	Milroy	54.92	70	IAMs_20	IAMs_20	18 12 24.2	
	comp=Z,1µm,20.0s						
PVMO	Portageville	54.93	76	IAMs_20	IAMs_20	18 13 03.6	
	comp=Z,943nm,18.0s						
237A	Washetta, Mont	54.94	84	IAMs_20	IAMs_20	18 14 17.0	
	comp=Z,894nm,19.0s						
PENMO	Penman	54.94	76	IAMs_20	IAMs_20	18 13 04.9	
	comp=Z,802nm,18.0s						
APA	Apatity	54.97	350	⇓iP	P	17 48 38.5	-4.5
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,19.0s						
T45A	Paducah	55.04	74	IAMs_20	IAMs_20	18 12 30.6	
	comp=Z,813nm,19.0s						
HBAR	Harrisburg	55.06	77	IAMs_20	IAMs_20	18 14 35.0	
	comp=Z,1µm,21.0s						
PEBM	Pemiscott Bayo	55.07	76	IAMs_20	IAMs_20	18 10 38.3	
	comp=Z,905nm,19.0s						
HICK	Hickman	55.09	75	IAMs_20	IAMs_20	18 10 39.7	
	comp=Z,996nm,19.0s						
GNAR	Gosnell	55.10	76	IAMs_20	IAMs_20	18 12 60.0	
	comp=Z,951nm,18.0s						
WLAR	White Oak Lake	55.14	80	IAMs_20	IAMs_20	18 13 58.1	
	comp=Z,1µm,19.0s						
M51A	Elyria	55.20	66	P	P	17 48 44.7	-0.4
	baz=318						
LPAR	Lepanto	55.22	77	IAMs_20	IAMs_20	18 14 42.2	
	comp=Z,814nm,18.0s						
P49A	Miami Univ. Ec	55.23	70	P	P	17 48 41.4	-4.0
	baz=318						
P49A	Miami Univ. Ec	55.23	70	IAMs_20	IAMs_20	18 13 05.4	
	comp=Z,2µm,21.0s						
LATQ	La Tuque	55.23	55	P	P	17 48 43.6	-1.7
LATQ				IAmb	IAmb	17 49 52.5	
	comp=Z,22nm,0.4s						
GLAT	Glass	55.26	75	IAMs_20	IAMs_20	18 12 11.3	
	comp=Z,1µm,19.0s						
LNXT	Lenox	55.28	76	IAMs_20	IAMs_20	18 15 08.8	
	comp=Z,1µm,20.0s						
E57A	Chemin Saint G	55.33	57	P	P	17 48 45.3	-0.8
	baz=318,SNR=7.3						
WCI	Wyandotte Cave	55.38	72	P	P	17 48 46.5	0.0
	baz=318						
D58A	Chemin du LacG	55.40	56	P	P	17 48 45.7	-0.8
	baz=318						
N51A	Ashland	55.41	67	IAmb	IAmb	17 48 47.1	
	comp=Z,46nm,0.9s						
M52A	Chesterland	55.46	66	IAmb	IAmb	17 48 50.6	
	comp=Z,62nm,1.4s						
HALT	Halls	55.50	76	IAMs_20	IAMs_20	18 13 30.7	
	comp=Z,1µm,20.0s						
J54A	Appleton	55.52	62	IAMs_20	IAMs_20	18 08 42.9	
	comp=Z,2µm,22.0s						
ACSO	Alum Creek Sta	55.61	68	P	P	17 48 47.8	-0.3
	baz=318						
ACSO	Alum Creek Sta	55.61	68	P	P	17 48 47.1	-1.0
ACSO				IAmb	IAmb	17 48 55.2	
	comp=Z,34nm,1.1s						
ACSO				IAMs_20	IAMs_20	18 13 44.3	
	comp=Z,1µm,18.0s						
Z41A	Richland Creek	55.63	81	P	P	17 48 49.3	+1.0
	baz=320						
L53A	Girard	55.70	65	P	P	17 48 49.1	+0.4
	baz=318,SNR=6.2						
ERPA	Erie	55.72	64	P	P	17 48 49.2	+0.3
	baz=318,SNR=8.6						
ERPA	Erie	55.72	64	IAMs_20	IAMs_20	18 11 48.1	
	comp=Z,1µm,19.0s						
NATX	Nacogdoches	55.75	83	IAMs_20	IAMs_20	18 17 00.5	
	comp=Z,1µm,18.0s						
E58A	La Victoria	55.76	56	P	P	17 48 50.3	+1.2
	baz=318						
MET	Memphis--Engin	55.77	77	IAMs_20	IAMs_20	18 13 21.0	
	comp=Z,1µm,20.0s						
PECO	Prince Edward	55.83	61	IAmb	IAmb	17 48 51.1	
	comp=Z,30nm,1.1s						
M53A	WI Miller and	55.88	65	P	P	17 48 50.3	+0.3
	baz=318,SNR=10						
T47A	Sharon Grove	55.88	73	P	P	17 48 48.3	-1.8
T47A				IAmb	IAmb	17 48 53.8	
	comp=Z,46nm,1.5s						
T47A				IAMs_20	IAMs_20	18 13 05.7	
	comp=Z,2µm,19.0s						
G57A	Newington	55.91	59	P	P	17 48 49.5	-0.7
	baz=318						
R49A	Shelbyville	55.92	71	IAmb	IAmb	17 48 54.2	
	comp=Z,38nm,1.4s						
R49A				IAMs_20	IAMs_20	18 12 57.7	
	comp=Z,2µm,22.0s						
D59A	Saint-Raymond	55.95	55	P	P	17 48 50.5	+0.1
	baz=319						
ALLY	Alegheny Colle	55.99	65	P	P	17 48 50.5	-0.3
ALLY				IAMs_20	IAMs_20	18 09 32.2	
	comp=Z,1µm,22.0s						
P51A	Williamsport	56.13	68	IAmb	IAmb	17 48 55.8	
	comp=Z,48nm,1.1s						
P51A				IAMs_20	IAMs_20	18 14 45.1	
	comp=Z,1µm,18.0s						
WVT	Waverly	56.14	74	P	P	17 48 51.6	-0.4
WVT				pmax	pmax		
	comp=Z,56nm,1.9s						
WVT				MLR	MLR		
	comp=Z,1µm,18.0s						
WVT	Waverly	56.14	74	P	P	17 48 51.6	-0.4
	baz=319						
WVT	Waverly	56.14	74	P	P	17 48 51.5	-0.4
WVT				IAmb	IAmb	17 48 53.1	
	comp=Z,56nm,1.9s						
WVT	Waverly	56.14	74	IAMs_20	IAMs_20	18 15 31.6	
	comp=Z,1µm,18.0s						
W45A	Hickory Valley	56.15	76	IAmb	IAmb	17 48 55.4	
	comp=Z,46nm,1.1s						
H57A	Richville	56.20	59	P	P	17 48 51.7	-0.6
	baz=318						
N53A	Lisbon	56.27	66	IAmb	IAmb	17 48 54.8	
	comp=Z,84nm,1.5s						
O52A	Adamsville	56.28	67	P	P	17 48 51.2	-1.7
O52A				IAmb	IAmb	17 48 53.5	
	comp=Z,43nm,0.9s						

G58A	**Ormstown**	56.32	58	P	**P**	**17 48 52.5**	**-0.6**
	baz=319						
M54A	**Oil Creek Stat**	56.33	64	P	**P**	**17 48 53.0**	**-0.3**
	baz=318,SNR=9.3						
M54A	**Oil Creek Stat**	56.33	64	IAmb	IAmb	17 48 56.9	
	comp=Z,59nm,1.1s						
M54A				IAMs_20	IAMs_20	18 08 52.4	
	comp=Z,898nm,20.0s						
R50A	**Paris**	56.37	70	P	**P**	**17 48 52.7**	**-0.8**
R50A				IAmb	IAmb	17 48 57.4	
	comp=Z,65nm,1.4s						
R50A				IAMs_20	IAMs_20	18 13 08.5	
	comp=Z,1µm,21.0s						
F59A	**Saint Guilaume**	56.38	57	P	**P**	**17 48 52.8**	**-0.7**
	baz=319						
J56A	**Wolcott**	56.39	61	P	**P**	**17 48 53.8**	**+0.2**
	baz=318						
D60A	**Saint Jean D’O**	56.43	55	P	**P**	**17 48 52.9**	**-0.9**
	baz=319						
LONY	**Lake Ozonia**	56.47	59	P	**P**	**17 48 53.3**	**-0.9**
	baz=319						
LONY	**Lake Ozonia**	56.47	59	IAmb	IAmb	17 48 56.7	
	comp=Z,74nm,1.4s						
I57A	**Carthage**	56.47	60	P	**P**	**17 48 53.2**	**-1.0**
	baz=319						
P52A	**Corning**	56.49	68	P	**P**	**17 48 55.1**	**+0.7**
	baz=319,SNR=6.5						
P52A	**Corning**	56.49	68	IAmb	IAmb	17 48 56.8	
	comp=Z,67nm,1.2s						
O53A	**New Philadelph**	56.49	67	P	**P**	**17 48 53.3**	**-1.2**
	baz=319						
HKT	**Hockley**	56.50	85	IAMs_20	IAMs_20	18 13 60.0	
	comp=Z,1µm,19.0s						
OXF	**Oxford**	56.52	77	IAMs_20	IAMs_20	18 13 51.6	
	comp=Z,985nm,19.0s						
D61A	**St Aubert, Com**	56.54	54	P	**P**	**17 48 52.4**	**-2.3**
	baz=319,SNR=5.5						
N54A	**Moraine State**	56.58	65	P	**P**	**17 48 54.5**	**-0.6**
	baz=319,SNR=9.4						
DGZ	**Jazzator, Alta**	56.59	311	*d i*P	**P**	**17 48 56.1**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,46nm,1.2s						
K56A	**Middlesex**	56.59	62	P	**P**	**17 48 54.3**	**-0.8**
	baz=319						
E60A	**Ste Agathe de**	56.60	55	P	**P**	**17 48 54.0**	**-1.1**
	baz=319						
F60A	**Warwick**	56.67	56	P	**P**	**17 48 53.5**	**-2.1**
	baz=319						
J57A	**Williamstown**	56.70	61	P	**P**	**17 48 55.3**	**-0.6**
	baz=319						
J57A	**Williamstown**	56.70	61	P	**P**	**17 48 55.2**	**-0.6**
J57A				IAmb	IAmb	17 48 57.2	
	comp=Z,66nm,1.3s						
G59A	**Clarenceville**	56.78	57	P	**P**	**17 48 55.8**	**-0.6**
	baz=319						
H58A	**Gabriels**	56.81	59	P	**P**	**17 48 55.9**	**-0.7**
	baz=319						
H59A	**Cadyville**	56.87	58	P	**P**	**17 48 55.6**	**-1.4**
	baz=319						
PLAL	**Pickwick Lake**	56.88	76	IAMs_20	IAMs_20	18 16 11.1	
	comp=Z,987nm,18.0s						
L56A	**Greenwood**	56.90	63	P	**P**	**17 48 55.9**	**-1.5**
	baz=319,SNR=5.1						
Y45A	**Yeager Farm, C**	56.94	78	IAMs_20	IAMs_20	18 13 23.7	
	comp=Z,1µm,21.0s						
U49A	**Red Boiling Sp**	56.94	73	IAMs_20	IAMs_20	18 14 38.7	
	comp=Z,1µm,19.0s						
K57A	**Scipio Center**	56.96	61	P	**P**	**17 48 57.8**	**+0.1**
	baz=319						
CLTN	**Cedars of Leba**	56.97	73	IAmb	IAmb	17 48 59.0	
	comp=Z,20nm,0.8s						
CLTN				IAMs_20	IAMs_20	18 13 40.4	
	comp=Z,1µm,20.0s						
O54A	**Avella**	56.97	66	P	**P**	**17 48 55.2**	**-2.6**
V48A	**Smith Brothers**	56.97	74	IAMs_20	IAMs_20	18 15 14.6	
	comp=Z,1µm,18.0s						
I58A	**Old Forge**	56.98	60	P	**P**	**17 48 55.5**	**-2.4**
	baz=319						
E61A	**Lac Etchemin**	56.99	55	P	**P**	**17 48 53.8**	**-4.1**
	baz=319						
T50A	**Nancy**	57.05	72	IAMs_20	IAMs_20	18 13 45.6	
	comp=Z,1µm,19.0s						
J58A	**Remsen**	57.08	60	P	**P**	**17 48 57.2**	**-1.4**
	baz=319						
NCB	**Newcomb**	57.13	59	IAmb	IAmb	17 48 56.6	
	comp=Z,103nm,1.9s						
S51A	**Beattyville**	57.23	70	IAMs_20	IAMs_20	18 14 19.4	
	comp=Z,2µm,20.0s						
342A	**Flagon Creek P**	57.33	82	IAMs_20	IAMs_20	18 15 20.2	
	comp=Z,1µm,18.0s						
L57A	**Andrews Acres**	57.35	62	P	**P**	**17 48 57.7**	**-2.8**
	baz=319						
K58A	**Earlville**	57.36	61	P	**P**	**17 48 56.3**	**-4.3**
	baz=319						
J59A	**Piesco**	57.38	60	P	**P**	**17 48 56.7**	**-4.0**
	baz=319						
Q53A	**Leroy**	57.38	68	P	**P**	**17 49 00.4**	**-0.3**
	baz=319						
N56A	**West Decatur**	57.46	64	P	**P**	**17 49 01.5**	**+0.2**
	baz=319,SNR=5.1						
R53A	**Hurricane**	57.56	69	IAMs_20	IAMs_20	18 11 43.0	
	comp=Z,1µm,18.0s						
D63A	**Stockholm**	57.59	53	P	**P**	**17 49 01.9**	**-0.1**
	baz=320						
BINY	**Binghamton**	57.62	61	P	**P**	**17 49 02.9**	**+0.5**
	baz=319						
BINY	**Binghamton**	57.62	61	P	**P**	**17 49 02.1**	**-0.3**
MCWV	**Mont Chateau**	57.63	66	P	**P**	**17 49 02.5**	**0.0**
	baz=319,SNR=5.1						
MCWV	**Mont Chateau**	57.63	66	IAmb	IAmb	17 49 04.5	
	comp=Z,42nm,1.3s						
MCWV				IAMs_20	IAMs_20	18 14 03.8	
	comp=Z,860nm,19.0s						
Q54A	**Coxs Mills**	57.64	67	IAmb	IAmb	17 49 03.3	
	comp=Z,41nm,1.1s						
VBMS	**Vicksburg**	57.66	80	IAMs_20	IAMs_20	18 15 29.0	
	comp=Z,1µm,18.0s						
M57A	**Sunshine Farm,**	57.72	63	P	**P**	**17 49 02.5**	**-0.5**
	baz=319						
TMCR	**Tamitsa**	57.72	346	*e*P	**P**	**17 49 01.4**	**-1.3**
TMCR				pmax	pmax		
	comp=Z,45nm,1.0s						
L58A	**Harry Jones Me**	57.80	61	P	**P**	**17 49 03.4**	**-0.3**
	baz=319						
O56A	**Blue Knob Stat**	57.81	65	P	**P**	**17 49 03.4**	**-0.4**
	baz=319						
WHN	**Wuhan**	57.83	278	⇑P	**P**	**17 49 04.5**	**+0.6**
WHN				pmax	pmax		
	comp=Z,62nm,1.1s						
X48A	**Hartselle**	57.83	75	IAMs_20	IAMs_20	18 12 10.3	
	comp=Z,894nm,19.0s						
SWET	**Sewanee**	57.84	74	IAMs_20	IAMs_20	18 14 15.6	
	comp=Z,1µm,19.0s						
G62A	**West of Eustis**	57.89	56	P	**P**	**17 49 03.8**	**-0.4**
	baz=320						
E63A	**Oxbow**	57.92	53	P	**P**	**17 49 03.7**	**-0.7**
	baz=320						
N57A	**Milroy**	57.95	64	P	**P**	**17 49 04.1**	**-0.6**
	baz=319						
M58A	**Price’s Panora**	58.02	62	P	**P**	**17 49 05.1**	**-0.1**
	baz=320						
J60A	**Lant Hill Farm**	58.06	59	P	**P**	**17 49 05.3**	**-0.1**
	baz=320						
L59A	**Walton**	58.08	61	P	**P**	**17 49 04.8**	**-1.0**
	baz=320						
L59A	**Walton**	58.08	61	P	**P**	**17 49 04.7**	**-1.0**
TZTN	**Tazewell**	58.09	71	P	**P**	**17 49 04.7**	**-1.1**
	baz=320						
TZTN	**Tazewell**	58.09	71	IAmb	IAmb	17 49 13.1	
	comp=Z,53nm,1.3s						
TZTN				IAMs_20	IAMs_20	18 14 17.0	
	comp=Z,1µm,22.0s						
XAN	**Xi'an**	58.09	284	P	**P**	**17 49 06.0**	**+0.2**
XAN				pP	sP	17 49 17.0	+6.8
XAN				pmax	pmax		
	comp=Z,43nm,0.5s						
H62A	**Milan**	58.10	56	P	**P**	**17 49 05.4**	**-0.3**
	baz=320						
I61A	**Oroboro, Fairl**	58.10	58	P	**P**	**17 49 03.6**	**-2.1**
	baz=320						
146A	**Union**	58.13	78	IAMs_20	IAMs_20	18 14 04.5	
	comp=Z,1µm,19.0s						
344A	**Westbrook Farm**	58.13	80	IAMs_20	IAMs_20	18 14 49.5	
	comp=Z,892nm,18.0s						
F63A	**Nahmakanta, Br**	58.17	54	P	**P**	**17 49 06.0**	**-0.2**
	baz=320						
R54A	**Victor**	58.17	68	P	**P**	**17 49 06.2**	**-0.2**
	baz=320,SNR=6.9						
W50A	**Signal Mountai**	58.18	73	IAMs_20	IAMs_20	18 15 09.6	
	comp=Z,1µm,19.0s						
E64A	**Bridgewater**	58.18	53	P	**P**	**17 49 05.9**	**-0.4**
	baz=320,SNR=5.1						
V51A	**Loudon**	58.23	72	IAMs_20	IAMs_20	18 15 32.8	
	comp=Z,2µm,22.0s						
Z47A	**Carrollton**	58.24	77	IAMs_20	IAMs_20	18 14 45.2	
	comp=Z,777nm,20.0s						
P56A	**Dayton Farm, R**	58.25	65	P	**P**	**17 49 06.9**	**0.0**
	baz=320,SNR=6.1						
BATG	**Bathurst New B**	58.29	51	IAMs_20	IAMs_20	18 11 33.9	
	comp=Z,2µm,22.0s						
S54A	**Dingess, Beckl**	58.29	69	P	**P**	**17 49 07.0**	**-0.2**
	baz=320						
S54A	**Dingess, Beckl**	58.29	69	IAMs_20	IAMs_20	18 16 02.4	
	comp=Z,1µm,19.0s						
N58A	**Sunbury**	58.30	63	P	**P**	**17 49 07.5**	**+0.4**
	baz=320						
N58A	**Sunbury**	58.30	63	IAMs_20	IAMs_20	18 14 28.3	
	comp=Z,1µm,22.0s						
O57A	**Amberson**	58.32	64	P	**P**	**17 49 07.4**	**0.0**
	baz=320						
F64A	**Sherman**	58.38	54	P	**P**	**17 49 07.0**	**-0.6**
	baz=320						
M59A	**Waymart**	58.39	62	P	**P**	**17 49 07.8**	**0.0**
	baz=320						
CPCT	**Cooper Cave**	58.41	73	IAMs_20	IAMs_20	18 15 40.6	
	comp=Z,1µm,19.0s						
Q56A	**Snyder Ridge,**	58.43	66	P	**P**	**17 49 08.2**	**+0.1**
	baz=320						
Q56A	**Snyder Ridge,**	58.43	66	IAMs_20	IAMs_20	18 14 28.0	
	comp=Z,2µm,22.0s						
FPAL	**Fort Paine**	58.53	74	IAMs_20	IAMs_20	18 14 46.7	
	comp=Z,1µm,19.0s						
R55A	**Marlinton**	58.53	67	P	**P**	**17 49 08.8**	**-0.1**
	baz=320						
V52A	**Sevierville**	58.60	72	IAMs_20	IAMs_20	18 14 32.5	
	comp=Z,1µm,20.0s						
Y49A	**Blount Mountai**	58.62	75	IAMs_20	IAMs_20	18 16 11.3	
	comp=Z,1µm,18.0s						
L60A	**Shokan**	58.63	60	P	**P**	**17 49 09.3**	**-0.1**
	baz=320						
G64A	**Maxfield**	58.67	54	P	**P**	**17 49 09.5**	**-0.1**
	baz=320						
P57A	**Homestead Farm**	58.68	65	P	**P**	**17 49 10.0**	**+0.1**
	baz=320						
N59A	**State Game Lan**	58.70	62	P	**P**	**17 49 09.8**	**-0.2**
	baz=320						
GTA	**Gaotai**	58.72	295	P	**P**	**17 49 09.5**	**-0.8**
GTA				pP	sP	17 49 17.8	+3.1
GTA				sP	pP	17 49 22.0	+8.5
GTA				PP	**PP**	**17 51 20.3**	**+0.5**
GTA				pmax	pmax		
	comp=Z,44nm,1.5s						
GTA				pmax	pmax		
	comp=Z,400nm,5.5s						
GTA				LR	LR		
	comp=Z,920nm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,18.2s						
O58A	**Lewisberry**	58.74	64	P	**P**	**17 49 10.5**	**+0.2**
	baz=320						
PAGS	**Pennsylvania G**	58.76	63	IAmb	IAmb	17 49 11.0	
	comp=Z,48nm,1.1s						
R56A	**Bull Pasture M**	58.80	67	P	**P**	**17 49 10.1**	**-0.8**
	baz=320						
Q57A	**Strasburg**	58.83	66	P	**P**	**17 49 10.1**	**-0.7**
	baz=320						
346A	**Big Creek Wild**	58.87	79	IAMs_20	IAMs_20	18 15 35.1	
	comp=Z,963nm,18.0s						
X51A	**Calhoun**	58.91	74	IAMs_20	IAMs_20	18 16 54.8	
	comp=Z,1µm,18.0s						
SEM	**Semipalatinsk**	58.93	316	*e*P	**P**	**17 49 10.2**	**-1.5**
	comp=Z,9.4nm,1.4s,baz=316						
SEM	**Semipalatinsk**	58.93	316	*e*P	**P**	**17 49 10.1**	**-1.5**
SEM				pmax	pmax		
	comp=Z,9.0nm,1.4s						
LRAL	**Lakeview Retre**	58.94	76	IAMs_20	IAMs_20	18 17 17.7	
	comp=Z,1µm,18.0s						
M60A	**Port Jervis**	58.94	61	P	**P**	**17 49 11.6**	**0.0**
	baz=320						
O59A	**Robesonia**	58.96	63	P	**P**	**17 49 12.1**	**+0.3**
	baz=320,SNR=6.9						
W52A	**Murphy**	58.99	72	IAMs_20	IAMs_20	18 15 52.1	
	comp=Z,1µm,20.0s						
U54A	**Nelsons Funny**	59.00	70	P	**P**	**17 49 12.1**	**-0.1**
	baz=320,SNR=5.7						
U54A	**Nelsons Funny**	59.00	70	P	**P**	**17 49 11.1**	**-1.1**
U54A				IAMs_20	IAMs_20	18 15 22.3	
	comp=Z,2µm,22.0s						
N60A	**Cedar Hill Far**	59.06	62	P	**P**	**17 49 12.2**	**-0.2**
	baz=320						
LUPA	**Lehigh Univers**	59.14	62	IAmb	IAmb	17 49 13.9	
	comp=Z,36nm,0.9s						
V53A	**Saluda**	59.14	71	IAMs_20	IAMs_20	18 14 58.9	
	comp=Z,1µm,18.0s						
ODNJ	**Ogdensburg**	59.14	61	IAMs_20	IAMs_20	18 11 11.6	
	comp=Z,1µm,18.0s						
BLA	**Blacksburg**	59.20	68	P	**P**	**17 49 13.1**	**-0.4**
	baz=320						
BLA	**Blacksburg**	59.20	68	IAmb	IAmb	17 49 14.0	
	comp=Z,34nm,0.9s						
LZH	**Lanzhou**	59.20	290	⇓P	**P**	**17 49 14.5**	**+0.8**
LZH				pP	sP	17 49 17.8	-0.3
LZH				sP	pP	17 49 19.3	+2.4
LZH				pmax	pmax		
	comp=Z,51nm,1.3s						
LZH				pmax	pmax		
	comp=Z,450nm,6.9s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,18.1s						
Q58A	**Fox Den Farm,**	59.26	65	P	**P**	**17 49 14.1**	**+0.2**
	baz=320,SNR=6.5						
S56A	**Natural Bridge**	59.28	67	P	**P**	**17 49 14.1**	**+0.1**
	baz=320,SNR=8.8						
KURK	**Kurchatov**	59.30	317	P	**P**	**17 49 13.9**	**-0.1**
KURK				pmax	pmax		
	comp=Z,73nm,1.4s						
KURK				MLR	MLR		
	comp=Z,2µm,18.0s						
KURK	**Kurchatov**	59.30	317	P	**P**	**17 49 13.9**	**-0.1**
KURK	**Kurchatov**	59.30	317	P	**P**	**17 49 14.7**	**+0.7**
KURK				P	**P**	**17 49 14.7**	**+0.7**
SDMD	**Soldier’s Deli**	59.33	64	IAmb	IAmb	17 49 16.4	
	comp=Z,49nm,1.3s						
R57A	**Stanardsville**	59.33	66	P	**P**	**17 49 14.6**	**+0.3**
	baz=320						
O60A	**Telford**	59.34	63	P	**P**	**17 49 13.9**	**-0.5**
	baz=320						
P59A	**Jarrettsville**	59.37	64	P	**P**	**17 49 14.4**	**-0.2**
	baz=320						
KURBB	**Kurchatov Arra**	59.41	317	P	**P**	**17 49 15.3**	**+0.6**
	comp=Z,32nm,1.1s,baz=32,slow=6.9,SNR=59						
KURBB				PP	**PP**	**17 51 23.4**	**-2.0**
	comp=Z,2.5nm,0.9s,baz=47,slow=10,SNR=4.6						
ZSN	**Zaisan**	59.41	311	*e*P	**P**	**17 49 14.0**	**-0.8**
	comp=Z,22nm,1.1s,baz=311						
ZSN	**Zaisan**	59.41	311	*e*P	**P**	**17 49 14.0**	**-0.8**
ZSN				pmax	pmax		
	comp=Z,22nm,1.1s						
S57A	**Dark Hollow, R**	59.53	67	P	**P**	**17 49 15.9**	**+0.2**
	baz=320						
WUPA	**West Chester U**	59.53	63	IAmb	IAmb	17 49 18.8	
	comp=Z,35nm,1.4s						
WUPA				IAMs_20	IAMs_20	18 15 07.3	
	comp=Z,1µm,21.0s						
T56A	**Rocky Mt**	59.54	68	P	**P**	**17 49 15.7**	**-0.1**
	baz=320						
BG3	**Lake Jocassee**	59.59	72	IAmb	IAmb	17 50 05.2	
	comp=Z,21nm,1.3s						
BG3				IAMs_20	IAMs_20	18 15 14.5	
	comp=Z,1µm,18.0s						
R58A	**Rapidan**	59.59	66	P	**P**	**17 49 16.0**	**-0.2**
	baz=320						
CPNY	**Central Park**	59.68	61	IAmb	IAmb	17 49 18.3	
	comp=Z,44nm,1.0s						
Z51A	**Franklin**	59.70	75	IAMs_20	IAMs_20	18 16 50.7	
	comp=Z,1µm,18.0s						
V55A	**Taylorsville**	59.83	70	P	**P**	**17 49 17.0**	**-0.8**
V55A				IAMs_20	IAMs_20	18 15 58.1	
	comp=Z,1µm,20.0s						
Y52A	**Lilburn**	59.87	73	IAMs_20	IAMs_20	18 17 40.2	
	comp=Z,1µm,19.0s						
U56A	**King**	59.88	69	P	**P**	**17 49 18.4**	**+0.2**
	baz=320,SNR=7.1						
R58B	**Mineral**	59.91	66	P	**P**	**17 49 18.5**	**+0.1**
	baz=320						
R58B	**Mineral**	59.91	66	P	**P**	**17 49 18.0**	**-0.3**
R58B				IAmb	IAmb	17 49 21.6	
	comp=Z,45nm,1.3s						
T57A	**Hurt**	59.96	68	P	**P**	**17 49 18.6**	**-0.1**
	baz=320						
T57A	**Hurt**	59.96	68	IAmb	IAmb	17 49 19.4	
	comp=Z,25nm,0.8s						
CBN	**Corbin Frederi**	59.98	65	IAMs_20	IAMs_20	18 16 23.1	
	comp=Z,2µm,20.0s						
SVE	**Sverdlovsk**	59.98	331	⇓*e*P	**P**	**17 49 19.7**	**+1.1**
SVE				pmax	pmax		
	comp=Z,73nm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,19.0s						
S58A	**Poland Farm, P**	60.10	66	P	**P**	**17 49 18.8**	**-0.9**
	baz=320						
R59A	**King George, V**	60.12	65	P	**P**	**17 49 20.4**	**+0.7**
	baz=320						
Q60A	**Greensboro**	60.13	64	IAMs_20	IAMs_20	18 13 31.0	
	comp=Z,1µm,22.0s						
250A	**Grady**	60.15	76	IAMs_20	IAMs_20	18 16 13.6	
	comp=Z,872nm,21.0s						
DRLN	**Deer Lake**	60.23	45	P	**P**	**17 49 20.1**	**-0.2**
V56A	**Mocksville**	60.23	69	P	**P**	**17 49 19.8**	**-0.8**
	baz=321,SNR=7.8						
KMSC	**Kings Mountain**	60.31	70	P	**P**	**17 49 20.4**	**-0.7**
	baz=321						
BVAR	**Borovoye Array**	60.32	323	P	**P**	**17 49 21.0**	**0.0**
	comp=Z,14nm,0.8s,baz=21,slow=21,SNR=79						
BRVK	**Borovoye**	60.33	323	P	**P**	**17 49 21.5**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,56nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,1µm,20.0s						
BRVK	**Borovoye**	60.33	323	P	**P**	**17 49 21.5**	**+0.5**
BRVK	**Borovoye**	60.33	323	IAMs_20	IAMs_20	18 20 13.0	
	comp=Z,1µm,20.0s						
BRVK	**Borovoye**	60.33	323	P	**P**	**17 49 21.7**	**+0.7**
BRVK				P	**P**	**17 49 21.7**	**+0.7**
U57A	**Blanch**	60.35	68	P	**P**	**17 49 21.5**	**+0.1**
	baz=321,SNR=11						
S59A	**Mechanicsville**	60.37	66	P	**P**	**17 49 20.7**	**-0.7**
	baz=321						
T58A	**Grand View Acr**	60.37	67	P	**P**	**17 49 21.1**	**-0.3**
	baz=321						
152A	**Waverly Hall**	60.44	75	IAMs_20	IAMs_20	18 16 00.4	
	comp=Z,1µm,19.0s						
GOGA	**Godfrey**	60.53	73	P	**P**	**17 49 22.1**	**-0.6**
	baz=321						
GOGA	**Godfrey**	60.53	73	IAMs_20	IAMs_20	18 17 58.8	
	comp=Z,1µm,18.0s						
HODGE	**Hodges**	60.53	72	IAmb	IAmb	17 49 24.9	
	comp=Z,25nm,1.1s						
V57A	**Coltrane Farms**	60.55	69	P	**P**	**17 49 21.8**	**-0.9**
	baz=321						
KLMR	**Klimovskoe**	60.68	344	*e*P	**P**	**17 49 21.3**	**-2.0**
KLMR				*e*		17 50 04.9	
KLMR				pmax	pmax		
	comp=Z,73nm,1.3s						
KLMR	**Klimovskoe**	60.68	344	*e*P	**P**	**17 49 21.3**	**-2.0**
KLMR				AMP		17 49 24.8	
	comp=Z,73nm,1.3s						
KLMR				*e*PcP	**PcP**	**17 50 04.9**	**-2.4**
KLMR				LQ	LQ	18 11 22.0	
KLMR				LQ	LQ	18 11 22.0	
KLMR				LR	LR	18 15 29.5	
W56A	**Indian Trail**	60.71	70	P	**P**	**17 49 23.6**	**-0.2**
	baz=321						
U58A	**Oxford**	60.78	68	P	**P**	**17 49 26.2**	**+1.9**
	baz=321						
T59A	**Double "B" Far**	60.84	66	P	**P**	**17 49 24.3**	**-0.4**
	baz=321						
T59A	**Double "B" Far**	60.84	66	IAMs_20	IAMs_20	18 17 28.9	
	comp=Z,2µm,20.0s						
ARU	**Arti**	60.88	332	LR	LR	18 18 58.0	
	comp=Z,771nm,19.6s,baz=18,slow=39						
ARU	**Arti**	60.88	332	*d i*P	**P**	**17 49 25.1**	**+0.4**
ARU						17 50 09.7	
ARU				S	**S**	**17 57 43.6**	**+1.6**
ARU				SS	**SS**	**18 01 36.2**	**-3.9**
ARU				pmax	pmax		
	comp=Z,59nm,0.9s						
ARU				MLR	MLR		
	comp=Z,803nm,17.0s						
ARU	**Arti**	60.88	332	P	**P**	**17 49 24.6**	**-0.1**
V58A	**Windy Hill, Pi**	60.96	68	P	**P**	**17 49 25.1**	**-0.4**
	baz=321,SNR=9.8						
MK31	**Makanchi Array**	61.00	312	*c i*P	**P**	**17 49 26.1**	**+0.4**
MKAR	**Makanchi Array**	61.00	312	P	**P**	**17 49 25.4**	**-0.3**
	comp=Z,14nm,1.0s,baz=47,slow=5.3,SNR=29						
MKAR				PP	**PP**	**17 51 37.2**	**-2.3**
	comp=Z,3.3nm,0.9s,baz=38,slow=4.6,SNR=3.6						
MKAR				LR	LR	18 15 45.1	
	comp=Z,534nm,20.6s,baz=24,slow=36						
MKAR	**Makanchi Array**	61.00	312	*ce*P	**P**	**17 49 26.2**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
MKAR	**Makanchi Array**	61.00	312	P	**P**	**17 49 25.8**	**+0.1**
JSC	**Jenkinsville**	61.02	71	IAmb	IAmb	17 49 28.5	
	comp=Z,30nm,1.5s						
JSC				IAMs_20	IAMs_20	18 16 14.6	
	comp=Z,934nm,20.0s						
WMQ	**Urumqi**	61.05	306	*e*P	**P**	**17 49 27.8**	**+1.6**
WMQ				pP	sP	17 49 30.8	+0.2
WMQ				PcP	**PcP**	**17 50 10.5**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,43nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,650nm,4.1s						
WMQ				LR	LR		
	comp=Z,660nm,17.1s						
WMQ				LR	LR		
	comp=Z,940nm,23.9s						
WMQ				LR	LR		
	comp=Z,3µm,29.0s						
WMQ	**Urumqi**	61.05	306	IAmb	IAmb	17 49 28.8	
	comp=Z,58nm,1.2s						
WMQ	**Urumqi**	61.05	306	IAMs_20	IAMs_20	18 15 30.6	
	comp=Z,802nm,20.0s						
KIRV	**Kirov**	61.06	338	P	**P**	**17 49 25.2**	**-0.6**
	comp=Z,37nm,0.8s,baz=15,slow=2.9,SNR=15						
KIRV	**Kirov**	61.06	338	*c i*P	**P**	**17 49 26.3**	**+0.5**
MAKZ	**Makanchi**	61.12	312	P	**P**	**17 49 26.4**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,700nm,20.0s						
MAKZ	**Makanchi**	61.12	312	P	**P**	**17 49 26.4**	**-0.2**
MAKZ				IAmb	IAmb	17 49 27.9	
	comp=Z,16nm,1.0s						
BIRD	**Birdtown, Kers**	61.15	70	IAmb	IAmb	17 49 28.6	
	comp=Z,54nm,1.2s						
VALR	**Valaam**	61.28	349	P	**P**	**17 49 27.5**	**+0.2**
V59A	**Middlesex**	61.43	68	P	**P**	**17 49 27.6**	**-1.1**
	baz=321,SNR=6.5						
U60A	**Pendleton**	61.43	67	P	**P**	**17 49 28.7**	**0.0**
	baz=321						
W58A	**Raeford**	61.50	69	P	**P**	**17 49 28.7**	**-0.4**
	baz=321,SNR=8.6						
FINES	**FINESS Array B**	61.64	352	P	**P**	**17 49 29.7**	**0.0**
	comp=Z,43nm,1.1s,baz=16,slow=8.1,SNR=28						
FINES				LR	LR	18 19 16.2	
	comp=Z,668nm,18.0s,baz=19,slow=39						
FINES	**FINESS Array B**	61.64	352	*i* P	**P**	**17 49 30.3**	**+0.6**
FINES				pmax	pmax		
	comp=Z,43nm,1.0s						
FINES	**FINESS Array B**	61.64	352	P	**P**	**17 49 29.5**	**-0.2**
U61A	**Possum Corner**	61.90	66	P	**P**	**17 49 34.6**	**+2.7**
	baz=321						
X59A	**McDuffie Farm,**	62.17	69	P	**P**	**17 49 34.0**	**+0.3**
	baz=321						
255A	**Hazlehurst**	62.21	74	IAMs_20	IAMs_20	18 17 55.2	
	comp=Z,1µm,21.0s						
X60A	**Albert Glenn T**	62.49	68	P	**P**	**17 49 34.9**	**-1.0**
	baz=322						
NHSC	**New Hope**	62.50	71	P	**P**	**17 49 36.5**	**+0.6**
	baz=322						
NHSC	**New Hope**	62.50	71	IAMs_20	IAMs_20	18 16 53.8	
	comp=Z,1µm,20.0s						
W61A	**Ground Anchor**	62.52	67	P	**P**	**17 49 37.3**	**+1.2**
	baz=322						
NC405	**NORSAR Array S**	62.57	360	P	**P**	**17 49 36.0**	**0.0**
NB2	**NORSAR Subarra**	62.65	360	P	**P**	**17 49 36.8**	**+0.2**
	comp=Z,4.9nm,0.8s,baz=359,slow=6.5						

NOA	**NORSAR Array B**	**62.65**	**360**	P	**P**	**17 49 36.8**	**+0.2**
	comp=Z,21nm,1.1s,baz=359,slow=6.5,SNR=22						
NOA				LR	LR	18 18 06.4	
	comp=Z,572nm,18.3s,baz=0.0,slow=37						
PUL	**Pulkovo**	**62.90**	**349**	⇓*e*P	**P**	**17 49 39.5**	**+1.3**
PUL				pmax	pmax		
	comp=Z,64nm,0.9s						
257A	**Skidaway Islan**	**62.94**	**73**	IAMs_20	IAMs_20	18 17 07.4	
	comp=Z,1µm,20.0s						
CD2	**Chengdu**	**63.26**	**286**	P	**P**	**17 49 41.0**	**-0.1**
CD2				pP	pP	17 49 43.0	-1.3
CD2				pmax	pmax		
	comp=Z,130nm,1.0s						
CD2				LR	LR		
	comp=Z,750nm,9.5s						
CD2				LR	LR		
	comp=Z,900nm,14.5s						
CD2				LR	LR		
	comp=Z,510nm,14.3s						
UPP	**Uppsala**	**63.71**	**356**	*e*P	**P**	**17 49 43.4**	**-0.2**
KONO	**Kongsberg**	**64.04**	**1**	⇓*e*P	**P**	**17 49 47.0**	**+1.3**
KONO				pmax	pmax		
	comp=Z,55nm,1.3s						
KONO	**Kongsberg**	**64.04**	**1**	P	**P**	**17 49 45.6**	**-0.1**
TDK	**Taldyqorghan**	**64.04**	**313**	*e*P	**P**	**17 49 45.2**	**-0.9**
	comp=Z,30nm,1.2s,baz=313						
TDK				LR	LR	18 18 21.7	
	comp=Z,737nm,14.6s,baz=313						
TDK	**Taldyqorghan**	**64.04**	**313**	*e*P	**P**	**17 49 45.1**	**-0.9**
TDK				pmax	pmax		
	comp=Z,30nm,1.2s						
TDK				MLR	MLR		
	comp=Z,737nm,15.0s						
656A	**Willston**	**64.18**	**75**	IAMs_20	IAMs_20	18 18 17.5	
	comp=Z,1µm,19.0s						
VSU	**Vasula**	**64.53**	**351**	*c i*P	**P**	**17 49 48.6**	**-0.4**
VSU				pmax	pmax		
	comp=Z,180nm,0.9s						
SHLS	**Shalkode**	**65.13**	**311**	*e*P	**P**	**17 49 51.5**	**-1.9**
	comp=Z,42nm,1.0s,baz=311						
SHLS	**Shalkode**	**65.13**	**311**	*e*P	**P**	**17 49 51.4**	**-1.9**
SHLS				pmax	pmax		
	comp=Z,42nm,1.0s						
KPKS	**Kokpek**	**65.19**	**312**	*e*P	**P**	**17 49 52.5**	**-1.2**
	comp=Z,21nm,1.0s,baz=312						
KPKS	**Kokpek**	**65.19**	**312**	*e*P	**P**	**17 49 52.5**	**-1.2**
KPKS				pmax	pmax		
	comp=Z,21nm,1.0s						
GYA	**Guiyang**	**65.21**	**281**	⇑P	**P**	**17 49 55.8**	**+1.7**
GYA				sP	sP	17 50 01.3	+2.8
GYA				pmax	pmax		
	comp=Z,55nm,1.5s						
GYA				pmax	pmax		
	comp=Z,570nm,5.3s						
GYA				LR	LR		
	comp=Z,490nm,15.6s						
GYA				LR	LR		
	comp=Z,410nm,14.6s						
GYA				LR	LR		
	comp=Z,540nm,17.2s						
CHKK	**Chushkaly**	**65.56**	**313**	*e*P	**P**	**17 49 55.1**	**-0.9**
	baz=313						
CHKK	**Chushkaly**	**65.56**	**313**	*e*P	**P**	**17 49 55.0**	**-0.9**
SATY	**Saty**	**65.64**	**312**	*e*P	**P**	**17 49 55.5**	**-1.2**
	comp=Z,9.6nm,1.2s,baz=312						
SATY	**Saty**	**65.64**	**312**	*e*P	**P**	**17 49 55.4**	**-1.2**
SATY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BTLS	**Baital**	**65.72**	**316**	*e*P	**P**	**17 49 55.5**	**-1.5**
	comp=Z,12nm,1.1s,baz=316						
BTLS	**Baital**	**65.72**	**316**	*e*P	**P**	**17 49 55.4**	**-1.5**
BTLS				pmax	pmax		
	comp=Z,12nm,1.1s						
DWPF	**Disney Wildern**	**65.77**	**75**	IAMs_20	IAMs_20	18 20 12.5	
	comp=Z,1µm,19.0s						
KUU	**Kurty**	**65.79**	**314**	*e*P	**P**	**17 49 55.6**	**-1.8**
	comp=Z,17nm,1.2s,baz=314						
KUU	**Kurty**	**65.79**	**314**	*e*P	**P**	**17 49 55.6**	**-1.8**
KUU				pmax	pmax		
	comp=Z,17nm,1.2s						
MOS	**Moscow**	**65.88**	**344**	*e*P	**P**	**17 49 55.6**	**-2.2**
MOS				pmax	pmax		
	comp=Z,61nm,0.9s						
MDOK	**Medeo**	**66.11**	**313**	*e*P	**P**	**17 49 58.3**	**-1.5**
	baz=313						
MDOK				LR	LR	18 19 39.7	
	comp=Z,552nm,14.6s,baz=313						
MDOK	**Medeo**	**66.11**	**313**	*e*P	**P**	**17 49 58.2**	**-1.5**
MDOK				MLR	MLR		
	comp=Z,552nm,15.0s						
AAA	**Alma-Ata**	**66.13**	**313**	*e*P	**P**	**17 49 58.2**	**-1.6**
	comp=Z,40nm,1.9s,baz=313						
AAA				LR	LR	18 19 22.6	
	comp=Z,388nm,17.1s,baz=313						
AAA	**Alma-Ata**	**66.13**	**313**	*e*P	**P**	**17 49 58.1**	**-1.6**
AAA				pmax	pmax		
	comp=Z,40nm,1.9s						
AAA				MLR	MLR		
	comp=Z,388nm,17.0s						
TNSS	**Tian-Shan**	**66.26**	**313**	*e*P	**P**	**17 49 60.0**	**-1.0**
	baz=313						
TNSS	**Tian-Shan**	**66.26**	**313**	*e*P	**P**	**17 49 59.9**	**-1.0**
AKTO	**Aktyubinsk**	**66.38**	**329**	P	**P**	**17 50 01.6**	**+0.4**
	comp=Z,46nm,0.8s,baz=38,slow=7.0,SNR=107						
OBN	**Obninsk**	**66.65**	**344**	LR	LR	18 21 39.5	
	comp=Z,163nm,20.7s,baz=10,slow=38						
OBN	**Obninsk**	**66.65**	**344**	*c i*P	**P**	**17 50 02.6**	**-0.1**
OBN				*e*		17 52 27.8	
OBN				*e*S	**S**	**17 58 58.5**	**+4.9**
OBN				pmax	pmax		
	comp=Z,65nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,19.0s						
OBN	**Obninsk**	**66.65**	**344**	P	**P**	**17 50 02.0**	**-0.7**
SGDS	**Sogindy**	**66.83**	**315**	*e*P	**P**	**17 50 03.1**	**-1.2**
	comp=Z,10.0nm,1.3s,baz=315						
SGDS	**Sogindy**	**66.83**	**315**	*e*P	**P**	**17 50 03.0**	**-1.2**
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ABKAR	**Akbulak array**	**66.88**	**327**	P	**P**	**17 50 03.4**	**-0.9**
ABKAR	**Akbulak array**	**66.88**	**327**	IAmb	IAmb	17 50 06.8	
	comp=Z,54nm,0.9s						
TKM2	**Tokmak 2**	**66.90**	**314**	P	**P**	**17 50 06.2**	**+1.4**
	SNR=17						
TKM2	**Tokmak 2**	**66.90**	**314**	*i* P	**P**	**17 50 04.4**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,43nm,1.3s						
USP	**Ospenovka**	**67.04**	**315**	P	**P**	**17 50 06.7**	**+1.2**
	SNR=23						
CHMS	**Chumysh**	**67.17**	**314**	P	**P**	**17 50 07.8**	**+1.5**
	SNR=27						
BELG	**Belogornoye**	**67.19**	**337**	P	**P**	**17 50 06.8**	**+0.6**
	comp=Z,99nm,0.9s,baz=118,slow=1.9,SNR=23						
BELG	**Belogornoye**	**67.19**	**337**	*c i*P	**P**	**17 50 06.8**	**+0.6**
BELG				pmax	pmax		
	comp=Z,24nm,1.0s						
CMIG	**Matias Romero**	**67.23**	**93**	P	**P**	**17 50 06.0**	**-1.0**
	comp=Z,5.9nm,1.0s,baz=330,slow=7.1,SNR=3.4						
MUD	**Monsted U'grnd**	**67.24**	**1**	*i* P	**P**	**17 50 06.4**	**0.0**
MUD	**Monsted U'grnd**	**67.24**	**1**	*i* P	**P**	**17 50 06.4**	**0.0**
	comp=Z,46nm,0.9s						
MUD	**Monsted U'grnd**	**67.24**	**1**	*i* P	**P**	**17 50 06.5**	**0.0**
MUD				IAmb	IAmb	17 50 08.1	
	comp=Z,46nm,0.9s						
TGY	**Tagaytay City**	**67.32**	**261**	P	**P**	**17 50 09.6**	**+2.0**
	comp=Z,92nm,0.5s,baz=278,slow=3.6,SNR=4.3						
KBK	**Karagaybulak**	**67.38**	**314**	P	**P**	**17 50 09.3**	**+1.5**
	SNR=28						
ISAL	**Salakas**	**67.45**	**351**	*e*P	**P**	**17 50 08.3**	**+0.6**
AAK	**Ala-Archa**	**67.57**	**314**	P	**P**	**17 50 10.5**	**+1.4**
	comp=Z,23nm,0.9s,baz=86,slow=3.9,SNR=26						
AAK	**Ala-Archa**	**67.57**	**314**	P	**P**	**17 50 10.1**	**+1.1**
	SNR=19						
AAK	**Ala-Archa**	**67.57**	**314**	P	**P**	**17 50 10.1**	**+1.1**
AAK				pmax	pmax		
	comp=Z,44nm,1.1s						
AAK				MLR	MLR		
	comp=Z,1µm,20.0s						
AAK	**Ala-Archa**	**67.57**	**314**	P	**P**	**17 50 10.1**	**+1.1**
AAK				IAmb	IAmb	17 50 11.7	
	comp=Z,44nm,1.1s						
AAK	**Ala-Archa**	**67.57**	**314**	P	**P**	**17 50 10.1**	**+1.1**
ESK	**Eskdalemuir**	**67.80**	**9**	P	**P**	**17 50 09.9**	**-0.1**
ESK				pmax	pmax		
	comp=Z,316nm,2.0s						
ESK	**Eskdalemuir**	**67.80**	**9**	P	**P**	**17 50 09.9**	**-0.1**
061Z	**Ochoppi**	**67.83**	**77**	IAMs_20	IAMs_20	18 18 15.3	
	comp=Z,711nm,18.0s						
EKS2	**Erkin-Say**	**67.83**	**315**	P	**P**	**17 50 12.2**	**+1.6**
	SNR=29						
UCH	**Uchtor**	**67.91**	**314**	P	**P**	**17 50 13.2**	**+1.7**
	SNR=12						
NACGM	**Naroch**	**68.05**	**350**	*i* P	**P**	**17 50 10.9**	**-0.6**
NACGM				*i* P	**P**	**17 50 10.9**	**-0.6**
NACGM				*i* P	**P**	**17 50 10.9**	**-0.6**
NACGM				*i* PcP	PcP	17 50 53.4	+16
NACGM				*i* PP	PP	17 52 50.2	+9.3
NACGM				*i* PPP	PPP	17 54 21.5	
NACGM				*i* S	**S**	**17 59 11.2**	**+0.7**
NACGM				*i* SS	SS	18 03 47.1	+16
NACGM				*i* SSS	SSS	18 07 01.2	
NACGM				*i* LQ	LQ	18 13 33.2	
NACGM				*i* LR	LR	18 21 20.3	
AML	**Almayashu**	**68.32**	**315**	P	**P**	**17 50 15.5**	**+1.5**
	SNR=35						
MNK	**Minsk**	**68.34**	**349**	*i* P	**P**	**17 50 12.0**	**-1.4**
	comp=E,1.0nm,1.0s						
MNK				*i* P	**P**	**17 50 12.0**	**-1.4**
	comp=N,41nm,1.0s						
MNK				*i* P	**P**	**17 50 12.0**	**-1.4**
	comp=Z,66nm,1.0s						
MNK				*i* PcP	**PcP**	**17 50 37.4**	**-1.5**
MNK				*i* PP	**PP**	**17 52 42.5**	**-0.9**
MNK				*i* PPP	PPP	17 54 21.0	
MNK				*i* S	**S**	**17 59 12.3**	**-1.7**
MNK				*i* ScS	**SKSac**	**18 00 11.4**	**-0.4**
MNK				*i* SS	**SS**	**18 03 37.8**	**+1.8**
MNK				*i* SSS	SSS	18 06 53.7	
MNK				*i* LQ	LQ	18 15 20.5	
MNK				*i* LR	LR	18 20 32.5	
MNK				*i* LRM	MLR	18 24 00.7	
	comp=Z,755nm,22.6s						
MNK				*i* LRM	MLR	18 24 07.2	
	comp=N,828nm,20.0s						
MNK				*i* LRM	MLR	18 24 23.9	
	comp=E,28nm,21.9s						
MNK	**Minsk**	**68.34**	**349**	⇑*i*P	**P**	**17 50 14.0**	**+0.6**
MNK				pmax	pmax		
	comp=Z,230nm,1.0s						
KMI	**Kunming**	**68.39**	**283**	⇑*i*P	**P**	**17 50 16.5**	**+2.0**
KMI				pP	sP	17 50 20.0	+1.1
KMI				S	**S**	**17 59 20.5**	**+4.5**
KMI				pmax	pmax		
	comp=Z,37nm,1.5s						
KMI				pmax	pmax		
	comp=Z,460nm,5.3s						
KMI				LR	LR		
	comp=Z,350nm,20.8s						
KMI				LR	LR		
	comp=Z,380nm,19.4s						
KMI				LR	LR		
	comp=Z,410nm,23.8s						
DZA	**Taraz**	**68.58**	**317**	*e*P	**P**	**17 50 14.3**	**-0.9**
	comp=Z,14nm,1.1s,baz=317						
DZA	**Taraz**	**68.58**	**317**	*e*P	**P**	**17 50 14.3**	**-0.9**
DZA				pmax	pmax		
	comp=Z,14nm,1.1s						
LPSR	**Galich'ya Gora**	**68.69**	**342**	*e*P	**P**	**17 50 15.5**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
KKAR	**Karatay Array**	**68.71**	**317**	P	**P**	**17 50 15.9**	**-0.1**
KKAR	**Karatay Array**	**68.71**	**317**	P	**P**	**17 50 15.9**	**-0.1**
SUW	**Suwalki**	**69.23**	**352**	*e*P	**P**	**17 50 19.3**	**+0.3**
SUW	**Suwalki**	**69.23**	**352**	*e*P	**P**	**17 50 18.8**	**-0.2**
QIZ	**Qiongzhong**	**69.42**	**273**	P	**P**	**17 50 20.0**	**-0.6**
QIZ				S	**S**	**17 59 29.8**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,35nm,2.2s						
QIZ				LR	LR		
	comp=Z,420nm,21.1s						
QIZ				LR	LR		
	comp=Z,770nm,18.6s						
QIZ				LR	LR		
	comp=Z,340nm,16.7s						
VRH	**Novokhopyorsk**	**69.53**	**340**	*e*P	**P**	**17 50 20.0**	**-0.9**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
KSH	**Kashi**	**69.61**	**312**	P	**P**	**17 50 26.3**	**+4.6**
KSH				pP	sP	17 50 30.0	+3.8
KSH				S	**S**	**17 59 29.0**	**-0.8**
KSH				ScS	**ScS**	**18 00 23.3**	**0.0**
KSH				pmax	pmax		
	comp=Z,120nm,1.1s						
KSH				pmax	pmax		
	comp=Z,750nm,4.6s						
KSH				LR	LR		
	comp=Z,2µm,14.5s						
KSH				LR	LR		
	comp=Z,2µm,14.3s						
KSH				LR	LR		
	comp=Z,2µm,16.2s						
IUG	**Iuzhnay**	**69.71**	**317**	*e*P	**P**	**17 50 21.4**	**-0.9**
	comp=Z,34nm,1.1s,baz=317						
IUG	**Iuzhnay**	**69.71**	**317**	*e*P	**P**	**17 50 21.4**	**-0.9**
IUG				pmax	pmax		
	comp=Z,33nm,1.1s						
BSEG	**Bad Segeberg**	**69.77**	**0**	*e*P	**P**	**17 50 23.3**	**+1.0**
	comp=Z,70nm,1.1s,baz=0.2,slow=5.9						
VSR	**Storozhevoye**	**69.98**	**342**	*e*P	**P**	**17 50 23.3**	**-0.4**
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VORD	**Divnogorie**	**70.20**	**341**	*e*P	**P**	**17 50 24.4**	**-0.6**
VORD				pmax	pmax		
	comp=Z,30nm,0.8s						
HNR	**Honiara**	**70.63**	**213**	LR	LR	18 15 43.5	
	comp=Z,490nm,21.6s,baz=26,slow=31						
LSA	**Lhasa**	**70.75**	**295**	P	**P**	**17 50 30.3**	**+1.0**
LSA				pmax	pmax		
	comp=Z,260nm,1.0s						
LSA	**Lhasa**	**70.75**	**295**	P	**P**	**17 50 30.9**	**+1.6**
LSA				P	**P**	**17 50 30.9**	**+1.6**
SLVN	**Son La**	**70.81**	**280**	P	**P**	**17 50 30.3**	**+1.1**
RUE	**Ruedersdorf**	**71.20**	**358**	*e*P	**P**	**17 50 31.8**	**+0.8**
	comp=Z,85nm,1.2s,baz=0.2,slow=5.9						
NRDL	**Niedersach Rie**	**71.21**	**1**	*e*P	**P**	**17 50 34.4**	**+3.4**
	comp=Z,45nm,1.2s,baz=0.2,slow=5.9						
IBBN	**Ibbenburen**	**71.37**	**2**	*e*P	**P**	**17 50 33.1**	**+1.0**
	comp=Z,67nm,1.1s,baz=0.2,slow=5.9						
FLTG	**Flechtingen**	**71.38**	**360**	*e*P	**P**	**17 50 32.5**	**+0.4**
	comp=Z,36nm,1.1s,baz=0.2,slow=5.9						
JAY	**Jayapura**	**71.52**	**234**	P	**P**	**17 50 37.8**	**+4.3**
	comp=Z,25nm,1.2s						
BEL	**Belsk**	**71.56**	**354**	*e*P	**P**	**17 50 34.6**	**+1.4**
ASSE	**Asse, Remlinge**	**71.58**	**0**	*e*P	**P**	**17 50 34.0**	**+0.8**
	comp=Z,46nm,1.3s,baz=0.2,slow=5.9						
CLZ	**Clausthal**	**71.87**	**0**	*e*P	**P**	**17 50 36.2**	**+1.0**
	comp=Z,66nm,1.1s,baz=0.2,slow=5.9						
AKASG	**Malin Array Be**	**71.94**	**348**	P	**P**	**17 50 34.4**	**-1.1**
	comp=Z,52nm,0.8s,baz=15,slow=6.0,SNR=96						
AKASG				LR	LR	18 26 20.2	
	comp=Z,637nm,18.6s,baz=5.0,slow=39						
AKASG	**Malin Array Be**	**71.94**	**348**	*ce*P	**P**	**17 50 34.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,52nm,0.8s						
AKBB	**Malin Array Si**	**71.94**	**348**	⇓*e*P	**P**	**17 50 34.8**	**-0.7**
AKBB				pmax	pmax		
	comp=Z,80nm,1.0s						
AKBB	**Malin Array Si**	**71.94**	**348**	IAMs_20	IAMs_20	18 23 01.1	
	comp=Z,999nm,20.0s						
GTTG	**Gottingen**	**72.16**	**1**	*e*P	**P**	**17 50 37.8**	**+1.0**
	comp=Z,67nm,1.1s,baz=0.2,slow=5.9						
BUG	**Bochum--Univer**	**72.23**	**2**	*e*P	**P**	**17 50 37.6**	**+0.4**
	comp=Z,41nm,1.1s,baz=0.2,slow=5.9						
CLL	**Collm**	**72.39**	**359**	*i* P	**P**	**17 50 38.0**	**-0.2**
	comp=Z,33nm,1.0s						
CLL				*i*		17 50 42.1	
CLL				*e*S	**S**	**18 00 01.0**	**-0.4**
CLL				*e*		18 02 06.0	
CLL				*e*SS	SS	18 04 52.0	+14
CLL				*e*SSS	SSS	18 08 00.0	
CLL				*e*		18 08 41.0	
CLL				*e*SSSS		18 09 30.0	
CLL				Lm	MLR	18 24 00.0	
	comp=Z,600nm,18.3s						
CLL	**Collm**	**72.39**	**359**	*i* P	**P**	**17 50 38.0**	**-0.2**
CLL				*i*		17 50 42.1	
CLL				*e*S	**S**	**18 00 01.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,33nm,1.0s						
CLL				MLR	MLR		
	comp=Z,600nm,18.3s						
CLL	**Collm**	**72.39**	**359**	IAmb	IAmb	17 50 39.5	
	comp=Z,26nm,1.0s						
CLL	**Collm**	**72.39**	**359**	*e*P	**P**	**17 50 38.9**	**+0.6**
	comp=Z,33nm,1.1s,baz=0.2,slow=5.9						
KASTN	**Kahler Asten**	**72.49**	**2**	*e*P	**P**	**17 50 39.5**	**+0.6**
	comp=Z,26nm,1.1s,baz=0.2,slow=5.9						
NEUB	**Neuenburg**	**72.50**	**359**	*e*P	**P**	**17 50 39.8**	**+1.0**
	comp=Z,57nm,1.0s,baz=0.2,slow=5.9						
KSP	**Ksiaz**	**72.77**	**356**	*e*P	**P**	**17 50 41.5**	**+0.9**
BRG	**Berggiesshubel**	**72.81**	**358**	*i* P	**P**	**17 50 41.2**	**+0.5**
BRG				Amp		17 50 42.9	
	comp=Z,31nm,1.1s						
BRG	**Berggiesshubel**	**72.81**	**358**	*e*P	**P**	**17 50 41.0**	**+0.3**
	comp=Z,31nm,1.1s,baz=0.2,slow=5.9						
MEM	**Membach**	**73.03**	**3**	*d*pP	**P**	**17 50 42.6**	**+0.6**
MEM				*d*sP	**P**	**17 50 43.1**	**+1.1**
MEM				*d*x	x	17 50 53.0	
BSTI	**Sart Tilman**	**73.04**	**4**	*d*pP	**P**	**17 50 42.8**	**+0.7**
CHVC	**Chvalec**	**73.04**	**357**	*e*P	**P**	**17 50 43.4**	**+1.3**
BTNL	**Ternell**	**73.05**	**3**	*d*pP	**P**	**17 50 42.5**	**+0.3**
SNF	**Seneffe**	**73.06**	**4**	*d*pP	**P**	**17 50 42.4**	**+0.2**
OSTC	**Ostas**	**73.06**	**356**	*e*P	**P**	**17 50 43.7**	**+1.4**
MOX	**Moxa**	**73.06**	**360**	*e*P	**P**	**17 50 42.9**	**+0.6**
	comp=Z,39nm,1.0s,baz=0.2,slow=5.9						
MOX				*e*L	L	18 17 40.9	
	comp=Z,198nm,20.1s						
UPC	**Upice**	**73.12**	**357**	*e*P	**P**	**17 50 43.6**	**+1.0**
UPC	**Upice**	**73.12**	**357**	*e*P	**P**	**17 50 43.6**	**+1.0**
AHRW	**Bad Neuenahr-A**	**73.12**	**3**	*e*P	**P**	**17 50 43.3**	**+0.7**
	comp=Z,29nm,0.9s,baz=0.2,slow=5.9						
PVCC	**Panska Ves**	**73.14**	**358**	*e*P	**P**	**17 50 44.0**	**+1.3**
PVCC				MLR	MLR		
	comp=Z,600nm,20.9s						
PVCC	**Panska Ves**	**73.14**	**358**	*e*P	**P**	**17 50 44.0**	**+1.3**
PVCC				AMS	AMS	18 28 30.0	
	comp=Z,600nm,20.9s						
BCLA	**Clavier**	**73.19**	**4**	*d*pP	**P**	**17 50 43.5**	**+0.5**
BGES	**Gesves**	**73.22**	**4**	*d*pP	**P**	**17 50 43.6**	**+0.4**
PLN	**Plauen**	**73.22**	**359**	*e*P	**P**	**17 50 44.1**	**+0.9**
	comp=Z,19nm,1.0s,baz=0.2,slow=5.9						
OJC	**Ojcow**	**73.23**	**354**	*e*P	**P**	**17 50 44.2**	**+0.9**
OJC	**Ojcow**	**73.23**	**354**	IAmb	IAmb	17 50 45.7	
	comp=Z,40nm,1.1s						
WERD	**Werda**	**73.26**	**359**	*e*P	**P**	**17 50 44.0**	**+0.6**
	comp=Z,28nm,1.3s,baz=0.2,slow=5.9						
DPC	**Dobruska-Polom**	**73.27**	**356**	*e*P	**P**	**17 50 44.8**	**+1.3**
DPC	**Dobruska-Polom**	**73.27**	**356**	*e*P	**P**	**17 50 44.8**	**+1.3**
BMRD	**Maredsous**	**73.29**	**4**	*d*pP	**P**	**17 50 44.1**	**+0.6**
TANN	**Tannenbergstha**	**73.29**	**359**	*e*P	**P**	**17 50 44.5**	**+0.8**
	comp=Z,33nm,1.3s,baz=0.2,slow=5.9						
LVV	**L'vov**	**73.33**	**351**	*e*P	**P**	**17 50 44.5**	**+0.6**
WERN	**Wernitzgruen**	**73.42**	**359**	*e*P	**P**	**17 50 45.3**	**+0.9**
	comp=Z,34nm,1.1s,baz=0.2,slow=5.9						
TNS	**Taunus Mts**	**73.47**	**2**	*e*P	**P**	**17 50 45.3**	**+0.5**
	comp=Z,34nm,1.0s,baz=0.2,slow=5.9						
NKC	**Novy Kostel**	**73.47**	**359**	*e*P	**P**	**17 50 45.8**	**+1.1**
NKC	**Novy Kostel**	**73.47**	**359**	*e*P	**P**	**17 50 45.8**	**+1.1**
DOU	**Dourbes**	**73.49**	**4**	*d*P	**P**	**17 50 43.0**	**-1.8**
DOU				*d*PcP	**PcP**	**17 50 60.0**	**-0.8**
KRLC	**Kraliky**	**73.52**	**356**	*e*P	**P**	**17 50 46.6**	**+1.5**
KRLC	**Kraliky**	**73.52**	**356**	*e*P	**P**	**17 50 46.6**	**+1.5**
KWP	**Kalwaria Pacla**	**73.63**	**352**	*e*P	**P**	**17 50 46.6**	**+1.0**
PRU	**Pruhonice**	**73.68**	**358**	*e*P	**P**	**17 50 47.0**	**+1.1**
PRU				MLR	MLR		
	comp=Z,900nm,23.1s						
PRU	**Pruhonice**	**73.68**	**358**	*e*P	**P**	**17 50 47.0**	**+1.1**
PRU				AMS	AMS	18 25 00.0	
	comp=Z,900nm,23.1s						
OKC	**Ostrava-Krasne**	**73.70**	**355**	*e*P	**P**	**17 50 47.3**	**+1.3**
OKC	**Ostrava-Krasne**	**73.70**	**355**	*e*P	**P**	**17 50 47.3**	**+1.3**
MANZ	**Manzenberg**	**73.72**	**359**	*e*P	**P**	**17 50 46.8**	**+0.6**
	comp=Z,55nm,2.0s,baz=0.2,slow=5.9						
SHL	**Shillong**	**73.75**	**292**	P	**P**	**17 50 46.2**	**-0.7**
	SNR=7.4						
MORC	**Moravsky Berou**	**73.79**	**356**	⇑P	**P**	**17 50 47.4**	**+0.7**
MORC	**Moravsky Berou**	**73.79**	**356**	*e*P	**P**	**17 50 47.0**	**+0.4**
MORC	**Moravsky Berou**	**73.79**	**356**	P	**P**	**17 50 47.0**	**+0.4**
MORC				pmax	pmax		
	comp=Z,32nm,1.1s						
MORC	**Moravsky Berou**	**73.79**	**356**	P	**P**	**17 50 47.0**	**+0.4**
MORC				IAmb	IAmb	17 50 48.4	
	comp=Z,32nm,1.1s						
ROTZ	**Rotzenmuhle**	**73.94**	**359**	*e*P	**P**	**17 50 48.4**	**+1.0**
	comp=Z,32nm,1.3s,baz=0.2,slow=5.9						
WLF	**Walferdange**	**73.97**	**3**	*d*pP	**P**	**17 50 48.1**	**+0.5**
WLF	**Walferdange**	**73.97**	**3**	IAmb	IAmb	17 50 50.0	
	comp=Z,27nm,0.9s						
PBCC	**Pribram**	**73.99**	**358**	*e*P	**P**	**17 50 48.7**	**+0.9**
GRA1	**Grafenberg Arr**	**74.02**	**360**	IAmb	IAmb	17 50 50.6	
	comp=Z,49nm,1.1s						
GRF	**Grafenberg Arr**	**74.02**	**360**	*e*P	**P**	**17 50 49.3**	**+1.4**
	comp=Z,58nm,1.1s,baz=0.2,slow=5.9						
GRF				*e*L	L	18 18 05.2	
	comp=Z,208nm,21.9s						
GRFO	**Grafenberg**	**74.02**	**360**	P	**P**	**17 50 48.7**	**+0.8**
GRFO				pmax	pmax		
	comp=Z,47nm,1.1s						
GRFO	**Grafenberg**	**74.02**	**360**	P	**P**	**17 50 48.7**	**+0.8**
GRFO				IAmb	IAmb	17 50 50.6	
	comp=Z,47nm,1.1s						
VRAC	**Vranov**	**74.30**	**356**	LR	LR	18 25 22.8	
	comp=Z,296nm,18.4s,baz=12,slow=37						
VRAC	**Vranov**	**74.30**	**356**	⇓P	**P**	**17 50 49.7**	**+0.1**
VRAC	**Vranov**	**74.30**	**356**	*e*P	**P**	**17 50 50.3**	**+0.8**
LANS	**Liptovska Anna**	**74.32**	**354**	*e*P	**P**	**17 50 52.0**	**+2.3**
LANS				pmax	pmax		
	comp=Z,33nm,1.1s						
LANS	**Liptovska Anna**	**74.32**	**354**	*e*P	**P**	**17 50 52.0**	**+2.3**
KOLS	**Kolonicke sedl**	**74.35**	**352**	*e*P	**P**	**17 50 51.0**	**+1.1**
KOLS				pmax	pmax		
	comp=Z,27nm,1.0s						
KOLS	**Kolonicke sedl**	**74.35**	**352**	*e*P	**P**	**17 50 51.0**	**+1.1**
TAPN	**Taplejung**	**74.39**	**296**	*e*P	**P**	**17 50 51.2**	**+0.4**
	comp=Z,142nm,1.2s						
SWI	**Sorong**	**74.53**	**244**	P	**P**	**17 50 51.3**	**0.0**
	comp=Z,1µmcomp=Z,82nm,1.1s						
KRUC	**Moravsky**	**74.55**	**356**	*e*P	**P**	**17 50 51.6**	**+0.6**
WET	**Wettzell**	**74.56**	**359**	*e*P	**P**	**17 50 52.0**	**+0.9**
	comp=Z,31nm,1.2s,baz=0.2,slow=5.9						
KHC	**Kasperske Hory**	**74.56**	**358**	*ce*P	**P**	**17 50 51.5**	**+0.4**
KHC				pmax	pmax		
	comp=Z,106nm,1.3s						
KHC	**Kasperske Hory**	**74.56**	**358**	*e*P	**P**	**17 50 51.8**	**+0.7**
KHC				*e*PCP	**PcP**	**17 51 04.5**	**-1.0**
KHC				AMS	AMS	18 29 40.0	
	comp=Z,800nm,18.0s						
KHC	**Kasperske Hory**	**74.56**	**358**	IAmb	IAmb	17 50 53.9	
	comp=Z,48nm,1.2s						
SORM	**Soroca**	**74.57**	**348**	⇓P	**P**	**17 50 51.0**	**-0.1**
UZH	**Uzhgorod**	**74.65**	**352**	*e*P	**P**	**17 50 49.0**	**-2.6**
UZH				*e*		17 50 53.2	
UZH				*i*		17 50 54.3	
UZH				*e*		17 51 02.5	
UZH				*e*PPP	PPP	17 55 23.0	
UZH				*e*S	**SKiKP**	**18 00 19.9**	**+3.3**
UZH				*e*PS	**PnS**	**18 01 08.3**	**+7.8**
UZH				*e*SSS	SSS	18 08 34.5	
JAVC	**Velka Javorina**	**74.70**	**355**	*e*P	**P**	**17 50 53.7**	**+1.7**
GUN	**Gumba**	**74.83**	**298**	*e*P	**P**	**17 50 54.1**	**+0.7**
	comp=Z,299nm,1.4s						
GEC2	**GERESS Array S**	**74.84**	**358**	IAmb	IAmb	17 50 55.1	
	comp=Z,27nm,1.2s						
GEC2	**GERESS Array S**	**74.84**	**358**	*e*P	**P**	**17 50 53.6**	**+0.8**
	comp=Z,28nm,1.2s,baz=0.2,slow=5.9						
GERES	**GERESS Array B**	**74.84**	**358**	P	**P**	**17 50 53.4**	**+0.5**
	comp=Z,9.6nm,0.9s,baz=2.4,slow=3.2,SNR=31						
GERES				LR	LR	18 24 59.2	
	comp=Z,283nm,18.3s,baz=24,slow=37						
GERES	**GERESS Array B**	**74.84**	**358**	P	**P**	**17 50 53.2**	**+0.4**
GERES	**GERESS Array B**	**74.84**	**358**	P	**P**	**17 50 53.2**	**+0.4**
KECS	**Kecovo**	**74.92**	**353**	*e*P	**P**	**17 50 54.9**	**+1.7**
KECS				pmax	pmax		
	comp=Z,23nm,1.0s						
KECS	**Kecovo**	**74.92**	**353**	*e*P	**P**	**17 50 54.9**	**+1.7**
STU	**Stuttgart**	**74.93**	**1**	IAmb	IAmb	17 50 55.2	
	comp=Z,31nm,0.9s						
STU	**Stuttgart**	**74.93**	**1**	*e*P	**P**	**17 50 54.1**	**+0.9**
	comp=Z,39nm,1.1s,baz=0.2,slow=5.9						
PMG	**Port Moresby**	**75.02**	**225**	⇑*i*P	**P**	**17 50 56.1**	**+2.0**
PMG				pmax	pmax		
	comp=Z,64nm,1.7s						
PMG	**Port Moresby**	**75.02**	**225**	P	**P**	**17 50 53.9**	**-0.2**
PMG				IAmb	IAmb	17 50 58.5	
	comp=Z,33nm,0.9s						
SMOL	**Smolenice**	**75.06**	**356**	*e*P	**P**	**17 50 55.8**	**+1.8**

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SMOL                                 pmax    pmax
      comp=Z,19nm,1.0s
SMOL  Smolenice           75.06 356 eP       P        17 50 55.8 +1.8
GOF   Gofitskoye          75.12 337⇑iP       P        17 50 56.0 +1.6
GOF                                  pmax    pmax
      comp=Z,204nm,0.9s
MODS  Modra-Piesok        75.20 356 eP       P        17 50 55.5 +0.7
MODS                                 pmax    pmax
      comp=Z,52nm,1.1s
MODS  Modra-Piesok        75.20 356 eP       P        17 50 55.5 +0.7
KKN   Kakani              75.22 298 eP       P        17 50 55.9 +0.4
      comp=Z,140nm,1.3s
PKI   Pulchoki            75.34 298 eP       P        17 50 56.5 +0.2
      comp=Z,186nm,1.3s
BFO   Black Forest        75.36   2  P       P        17 50 55.9 +0.2
BFO                                  pmax    pmax
      comp=Z,20nm,1.0s
BFO   Black Forest        75.36   2  P       P        17 50 55.9 +0.2
BFO                                  IAmb    IAmb     17 50 57.7
      comp=Z,20nm,1.0s
BFO   Black Forest        75.36   2 eP       P        17 50 56.3 +0.5
      comp=Z,28nm,1.1s,baz=0.2,slow=5.9
BUR08 Bucovina Ar. S      75.38 350  IAmb    IAmb     17 50 57.5
      comp=Z,16nm,0.9s
ZST   Bratislava          75.39 356 eP       P        17 50 57.4 +1.6
ZST                                  pmax    pmax
      comp=Z,133nm,1.1s
ZST   Bratislava          75.39 356 eP       P        17 50 57.4 +1.6
BURAR Bucovina Array      75.41 350 ⇓P       P        17 50 55.3 -0.9
BURAR Bucovina Array      75.41 350  P       P        17 50 55.3 -0.9
ECH   Echery              75.45   3  IAmb    IAmb     17 50 58.2
      comp=Z,28nm,1.0s
DMN   Daman               75.46 298 eP       P        17 50 57.4 +0.5
      comp=Z,147nm,1.3s
DANN  Dangsing            75.49 300 eP       P        17 50 57.1 -0.1
      comp=Z,248nm,0.9s
BMR   Baia Mare           75.51 351 ⇓P       P        17 50 56.4 -0.2
PSZ   Piszkesteto         75.52 354 eP       P        17 50 57.0 +0.3
PSZ   Piszkesteto         75.52 354  IAmb    IAmb     17 50 59.8
      comp=Z,42nm,1.1s
PSZ                                  IAMs_20 IAMs_20  18 29 54.3
      comp=Z,643nm,20.0s
FUR   Furstenfeldbru      75.55 360 eP       P        17 50 57.7 +0.9
      comp=Z,50nm,1.2s,baz=0.2,slow=5.9
CHTO  Chiang Mai          75.55 282  P       P        17 50 56.7 -0.5
CHTO                                 pmax    pmax
      comp=Z,23nm,1.2s
CHTO                                 MLR     MLR
      comp=Z,400nm,20.0s
CHTO  Chiang Mai          75.55 282  P       P        17 50 56.6 -0.5
CHTO                                 IAmb    IAmb     17 50 59.2
      comp=Z,23nm,1.1s
CHTO  Chiang Mai          75.55 282  P       P        17 50 57.5 +0.3
CONA  Conrad Observa      75.70 357 i P      P        17 50 59.0 +1.2
      comp=Z,44nm,1.1s,SNR=16
MILM  Milestii Mici       75.71 347 ⇑P       P        17 50 57.7  0.0
SRO   Srobarova           75.72 355 eP       P        17 51 00.0 +2.3
SRO                                  pmax    pmax
      comp=Z,35nm,0.8s
SRO   Srobarova           75.72 355 eP       P        17 51 00.0 +2.3
PPT   Papeete             75.74 161  LR      LR       18 16 13.3
      comp=Z,619nm,21.5s,baz=352,slow=29
NIL   Nilore              75.75 310  P       P        17 50 58.2  0.0
NIL                                  pmax    pmax
      comp=Z,71nm,1.1s
NIL                                  MLR     MLR
      comp=Z,900nm,20.0s
NIL   Nilore              75.75 310  P       P        17 50 58.2  0.0
NIL   Nilore              75.75 310  IAMs_20 IAMs_20  18 27 21.3
      comp=Z,910nm,20.0s
NIL   Nilore              75.75 310  P       P        17 50 59.1 +0.9
NIL                                  P       P        17 50 59.1 +0.9
PPT2  Papeete2            75.76 161 eLR      LR       18 14 11.0
      comp=Z,3µm,28.5s,baz=347
SRO2  Moca                75.76 355 eP       P        17 50 59.6 +1.6
SRO2                                 pmax    pmax
      comp=Z,45nm,0.8s
SRO2  Moca                75.76 355 eP       P        17 50 59.6 +1.6
FAKI  Fak Fak             75.83 242  P       P        17 50 58.5 -0.2
FAKI                                 IAmb    IAmb     17 51 00.7
      comp=Z,43nm,0.9s
MOA   Molln               75.83 358 i P      P        17 50 59.2 +0.8
      comp=Z,32nm,1.2s,SNR=9.2
CMAR  Chiang Mai Arr      75.84 282  P       P        17 51 00.8 +2.0
      comp=Z,18nm,0.9s,baz=17,slow=6.0,SNR=89
CMAR                                 LR      LR       18 28 40.3
      comp=Z,209nm,18.4s,baz=63,slow=39
CMAR  Chiang Mai Arr      75.84 282  P       P        17 50 58.5 -0.4
LTVH  Ltavrtes, Hu        75.92 352 eP       P        17 50 59.5 +0.6
SOP   Sopron              75.92 356 eP       P        17 51 00.5 +1.6
BIZ   Bicaz               75.99 349 ⇓P       P        17 50 58.8 -0.5
BUD   Budapest            76.01 354 eP       P        17 51 00.2 +0.9
ARCR  ARCALIA             76.02 351 ⇓P       P        17 51 00.1 +0.6
UBR   Ueberruh            76.03   1 eP       P        17 51 00.1 +0.5
      comp=Z,49nm,1.1s,baz=0.2,slow=5.9
MAK   Makhachkala         76.07 333 eP       P        17 50 56.8 -3.0
MAK                                 e                 17 53 45.9
MAK                                 eS       S        18 00 39.2 -3.7
MAK                                  pmax    pmax
      comp=Z,359nm,1.5s
MAK                                  MLR     MLR
      comp=Z,942nm,16.0s
VASR  Vaslui              76.10 348 ⇓P       P        17 50 59.9 -0.1
CSKK  Cskako              76.17 355 eP       P        17 51 01.8 +1.5
RETA  Reutte              76.23   0 eP       P        17 51 02.2 +1.4
      comp=Z,29nm,1.5s
KIV   Kislovodsk          76.25 337 ⇑P       P        17 51 01.3 +0.3
KIV   Kislovodsk          76.25 337 eP       P        17 51 02.5 +1.5
KIV                                  pmax    pmax
      comp=Z,127nm,1.1s
KIV                                  MLR     MLR
      comp=Z,2µm,18.0s
KIV   Kislovodsk          76.25 337  P       P        17 51 00.6 -0.3
KIV                                  IAmb    IAmb     17 51 03.8
      comp=Z,38nm,1.0s
KIV                                  IAMs_20 IAMs_20  18 26 53.9
      comp=Z,775nm,21.0s
KIV   Kislovodsk          76.25 337  P       P        17 51 02.3 +1.3
KIV                                  P       P        17 51 02.3 +1.3
GROC  Groznyy             76.26 334 eP       P        17 50 59.0 -1.9
GROC                                e                 17 51 11.6
GROC                                e                 17 53 50.2
GROC                                 pmax    pmax
      comp=Z,26nm,0.9s
MOTA  Moosalm             76.37 360 i P      P        17 51 03.2 +1.5
      comp=Z,47nm,1.1s,SNR=8.4
WATA  Walderalm           76.38 360 i P      P        17 51 02.8 +1.1
      comp=Z,37nm,1.1s,SNR=10.0
ARSA  Arzberg             76.39 357 i P      P        17 51 02.6 +0.9
      comp=Z,30nm,1.3s,SNR=10
MPLH  Magyarpolny         76.39 355 eP       P        17 51 02.1 +0.5
KBZ   Khabaz              76.42 337  P       P        17 51 03.6 +1.9
      comp=Z,24nm,0.9s,baz=356,slow=3.9,SNR=35
KBZ                                  LR      LR       18 28 19.6
      comp=Z,804nm,20.5s,baz=10.0,slow=39
KBZ   Khabaz              76.42 337d iP      P        17 51 02.6 +0.8
KBZ                                  pmax    pmax
      comp=Z,38nm,1.0s
DAVA  Damuels             76.42   1 eP       P        17 51 03.1 +1.1
      comp=Z,10nm,1.1s
DRGR                      76.45 352 ⇓P       P        17 51 01.6 -0.4
CJR   Cluj-Napoca         76.45 351 ⇓P       P        17 51 02.1 +0.1
ANN   Anapa               76.48 341 eP       P        17 50 55.0 -7.1
ANN                                 e*PP     pP       17 50 59.2 -6.2
ANN                                 e                 17 51 10.9
ANN                                 eS       S        18 00 35.5  -12
ANN                                 eSS      SS       18 05 41.0 +0.3
ANN                                  pmax    pmax
      comp=Z,63nm,1.0s
NCK   Nalchik             76.49 336⇑iP       P        17 51 04.2 +1.9
NCK                                  pmax    pmax
      comp=Z,96nm,1.1s
SQTA  Sankt Quirin        76.49 360 i P      P        17 51 03.3 +1.0
      comp=Z,50nm,1.1s,SNR=13
KBA   Koelnbreinsper      76.61 358 i P      P        17 51 04.5 +1.4
      comp=Z,55nm,1.2s,SNR=17
TIH   Tihany              76.65 355 eP       P        17 51 04.5 +1.5
FETA  Feichten            76.69   0 i P      P        17 51 04.8 +1.2
      comp=Z,48nm,1.0s,SNR=9.1
KBL   Kabul               76.70 314  P       P        17 51 02.1 -1.7
KBL                                  pmax    pmax
      comp=Z,61nm,1.1s
KBL                                  MLR     MLR
      comp=Z,1µm,22.0s
KBL   Kabul               76.70 314  P       P        17 51 02.1 -1.7
KBL                                  IAMs_20 IAMs_20  18 27 01.6
      comp=Z,970nm,22.0s
KBL   Kabul               76.70 314  P       P        17 51 03.6 -0.2
      SNR=17
KBL                                  P       P        17 51 03.6 -0.2
      SNR=17
OZUR                      76.86 349 ⇓P       P        17 51 04.1 -0.2
NEY   Neytrino            76.92 337⇓eP       P        17 51 06.4 +1.5
NEY                                  pmax    pmax
      comp=Z,4.0nm,1.1s
ABTA  Abfaltersbach       76.96 359 i P      P        17 51 06.2 +1.2
      comp=Z,34nm,1.1s,SNR=7.2
SOKA  Soboth              76.98 357 i P      P        17 51 06.3 +1.2
      comp=Z,37nm,1.1s,SNR=18
VRI   Vrincioaia          76.99 349 ⇓P       P        17 51 05.2 +0.2
PLOR  Plostina            77.01 349 ⇓P       P        17 51 04.7 -0.5
DOPR  Dopca               77.03 350 ⇓P       P        17 51 05.5 +0.2
SIRR  Siria               77.05 352 ⇑P       P        17 51 05.8 +0.4
MYKA  Terra Mystica       77.06 358 eP       P        17 51 06.2 +0.8
      comp=Z,16nm,1.0s
ZEI   Tsey                77.09 336 eP       P        17 51 04.3 -1.6
ZEI                                  pmax    pmax
      comp=Z,44nm,1.1s
ZOU   Zoufplan            77.14 359  IAmb    IAmb     17 51 10.6
      comp=Z,66nm,1.6s
OBKA  Obir                77.16 357 i P      P        17 51 07.8 +1.7
      comp=Z,71nm,0.9s,SNR=15
GROS  Grobnik             77.18 357 i P      P        17 51 07.2 +1.1
MORH  Mrgy, Hungar        77.29 354 ⇑P       P        17 51 06.4 -0.3
MORH  Mrgy, Hungar        77.29 354 eP       P        17 51 07.7 +1.0
MORH  Mrgy, Hungar        77.29 354 eP       P        17 51 01.8 -4.9
BISRR Bisoca              77.30 349 ⇓P       P        17 51 07.5 +0.6
SENIN Lac Senin/Sane      77.31   3  IAmb    IAmb     17 51 08.6
      comp=Z,22nm,1.2s
DEV   Deva                77.33 351 ⇓P       P        17 51 07.3 +0.3
TLCR                      77.42 347 ⇑P       P        17 51 07.3 -0.1
MLR   Muntele Rosu        77.44 349 ⇓P       P        17 51 08.4 +0.7
MLR   Muntele Rosu        77.44 349  IAmb    IAmb     17 51 10.4
      comp=Z,24nm,1.2s
CADS  Cadrg               77.46 358 i P      P        17 51 07.9 +0.2
CFR   Carcaliu            77.51 348 ⇑P       P        17 51 07.2 -0.7
ASHT  Ashkhabad           77.56 323  IAMs_20 IAMs_20  18 30 15.8
      comp=Z,676nm,20.0s
VOIR                      77.58 350 ⇓P       P        17 51 08.4 -0.1
LJU   Ljubljana           77.62 357 eP       P        17 51 06.0 -2.6
GEYT  Alibeck             77.66 324  P       P        17 51 10.3 +1.3
      comp=Z,32nm,0.9s,baz=336,slow=3.3,SNR=62
GEYT                                 LR      LR       18 27 58.3
      comp=Z,663nm,21.4s,baz=265,slow=38
CTI   Castel Tesino       77.66 359  IAmb    IAmb     17 51 15.1
      comp=Z,23nm,1.3s
ARR   Arges               77.69 350 ⇑P       P        17 51 09.7 +0.6
BZS   Buzias              77.70 352 ⇑P       P        17 51 09.2 +0.2
TPGR  Topolog             77.79 347 ⇓P       P        17 51 09.1 -0.4
MTUR  Matau               77.79 350 ⇓P       P        17 51 10.3 +0.7
CRES  Cresnjev            77.82 357 eP       P        17 51 09.7 +0.1
GZR   Gura Zlata          77.83 351 ⇓P       P        17 51 10.0 +0.2
CEY   Cerknica            77.93 357 eP       P        17 51 09.9 -0.4
BANR  Banloc              77.97 353 ⇑P       P        17 51 10.3 -0.2
HARR  Harsova             78.01 348 ⇓P       P        17 51 10.5 -0.2
MRSI  Marisa              78.15 252  P       P        17 51 11.9  0.0
      comp=Z,978nmcomp=Z,50nm,1.2s
TIRR  Tirgusor            78.18 347 ⇑P       P        17 51 11.9 +0.2
TOLI2 Tolitoli            78.23 254  P       P        17 51 11.2 -1.2
TOLI2                                IAmb    IAmb     17 51 16.2
      comp=Z,58nm,1.3s
FRGS  Fruska Gora         78.28 354 ⇑P       P        17 51 12.5 +0.2
FRGS  Fruska Gora         78.28 354 eP       P        17 51 12.6 +0.4
SSB   Saint Sauveur       78.30   5  IAmb    IAmb     17 51 14.4
      comp=Z,30nm,1.1s
RIY   Rijeka              78.34 357 eP       P        17 51 12.9 +0.4
HERR  Herculane           78.37 352 ⇓P       P        17 51 13.0 +0.3
HUMR  Humele              78.49 350 ⇓P       P        17 51 13.1 -0.2
AKH   Akhalkalaki         78.50 336 ⇓P       P        17 51 14.3 +0.6
AKH   Akhalkalaki         78.50 336  IAmb    IAmb     17 51 16.5
      comp=Z,53nm,1.0s
MDVR  Moldovita           78.52 352 ⇓P       P        17 51 13.9 +0.2
SDDR  Presa de Saban      78.56  73  IAmb    IAmb     17 51 15.7
      comp=Z,36nm,0.8s
BNI   Bardonecchia        78.60   3  IAmb    IAmb     17 51 17.6
      comp=Z,29nm,1.1s
COPA  Copaceanca          78.86 350 ⇓P       P        17 51 15.7 +0.3
TEKS  Tekeris             78.90 354 eP       P        17 51 16.4 +0.7
LUWI  Luwuk               79.00 251  P       P        17 51 15.1 -1.4
MGRS  Mrkonjic Grad       79.16 355 eP       P        17 51 17.6 +0.5
ZIMR                      79.31 349 ⇓P       P        17 51 17.6 -0.3
DIVS  Divibare            79.32 353 eP       P        17 51 18.6 +0.5
DIVS  Divibare            79.32 353  IAmb    IAmb     17 51 20.2
      comp=Z,30nm,1.0s
GNI   Garni               79.40 334d iP      P        17 51 20.3 +1.6
GNI                                  pmax    pmax
      comp=Z,57nm,1.2s
GNI   Garni               79.40 334  IAMs_20 IAMs_20  18 33 17.5
      comp=Z,625nm,19.0s
GNI   Garni               79.40 334  P       P        17 51 18.8 +0.1
GNI                                  P       P        17 51 18.8 +0.1
BBLS  Lazi&#263;i         79.59 354 eP       P        17 51 21.0 +1.5
PLVB  Pleven              79.66 350 ⇓P       P        17 51 20.3 +0.5
BOVS  Bovan               79.66 352 ⇓P       P        17 51 20.3 +0.5
KTUT  Trabzon             79.71 338 ⇓P       P        17 51 20.3 +0.2
MURB  Monte Urbino        80.44 359  P       P        17 51 24.9 +0.7
VTS   Vitosha             80.55 351 ⇑P       P        17 51 25.3 +0.5
BRY   Bratogost           80.60 354 eP       P        17 51 25.4 +0.3
STON  Ston                80.67 355 eP       P        17 51 24.3 -1.0
PDG   Podgorica           81.03 354 ⇓P       P        17 51 27.0 -0.2
PDG   Podgorica           81.03 354 eP       P        17 51 26.6 -0.6
HCY   Herceg Novi         81.06 354 eP       P        17 51 28.0 +0.6
DZM   Mont Dzumac         81.09 203  P       P        17 51 27.7  0.0
      comp=Z,20nm,1.1s,baz=121,slow=18,SNR=3.0
DZM   Mont Dzumac         81.09 203 eLR      LR       18 16 49.0
      comp=Z,2µm,31.7s
LATE  Laterza             81.10 359  IAmb    IAmb     17 51 32.1
      comp=Z,31nm,1.1s
SKO   Skopje              81.34 352 i P      P        17 51 30.4 +1.5
TBI   Tubuai              81.41 162 eLR      LR       18 16 52.6
      comp=Z,2µm,31.5s,baz=340
GEVA  Gevas               81.55 335  IAmb    IAmb     17 51 33.7
      comp=Z,58nm,1.2s
STIP  Stip                81.55 351 i P      P        17 51 30.2 +0.2
INTR  Introdacqua         81.67 358  P       P        17 51 30.8 +0.1
INTR                                 IAmb    IAmb     17 51 33.8
      comp=Z,33nm,0.8s
INTR                                 IAMs_20 IAMs_20  18 25 13.0
      comp=Z,663nm,20.0s
VAY   Valandovo           81.89 351 i P      P        17 51 33.4 +1.6
SJG   San Juan            81.97  69  P       P        17 51 33.1 +0.6
      comp=Z,8.7nm,0.5s,baz=318,slow=6.5,SNR=1.8
BR131 Keskin Array S      82.07 342  IAmb    IAmb     17 51 35.1
      comp=Z,29nm,0.9s
BRTR  Keskin Array B      82.07 342  P       P        17 51 34.2 +1.3
      comp=Z,15nm,0.9s,baz=41,slow=2.0,SNR=37
BRTR                                 LR      LR       18 31 44.2
      comp=Z,418nm,21.4s,baz=12,slow=38
BRTR  Keskin Array B      82.07 342ceP       P        17 51 34.7 +1.7
BRTR                                 pmax    pmax
      comp=Z,15nm,0.9s
BRTR  Keskin Array B      82.07 342  P       P        17 51 33.5 +0.6
BR231 Keskin MP Arra      82.10 343  IAmb    IAmb     17 51 35.6
      comp=Z,36nm,1.1s
OHR   Ohrid               82.24 352 i P      P        17 51 34.3 +0.6
MTP   Monte Pirata        82.29  69  IAmb    IAmb     17 51 38.9
      comp=Z,40nm,1.1s
FNA   Florina             82.52 352  IAmb    IAmb     17 51 36.2
      comp=Z,19nm,0.9s
MATE  Matera              82.94 356 ⇑P       P        17 51 37.6 +0.4
ESDC  Sonseca Array       83.22  11  P       P        17 51 39.5 +0.8
      comp=Z,14nm,1.0s,baz=346,slow=5.1,SNR=18
ESDC                                 LR      LR       18 27 25.3
      comp=Z,382nm,21.8s,baz=350,slow=35
ESDC  Sonseca Array       83.22  11  P       P        17 51 39.2 +0.4
EVO   Evora               83.83  15 eP       P        17 51 42.4 +0.5
      comp=Z,58nm,2.0s
PNCL  Nicolau / Gran      84.17  15 eP       P        17 51 44.6 +1.0
PBAR  Barrancos           84.32  14 eP       P        17 51 45.0 +0.6
TIP   Timpagrande         84.40 355  IAmb    IAmb     17 51 46.6
      comp=Z,34nm,1.2s
RKT   Rikitea             84.53 149 eLR      LR       18 18 09.9
      comp=Z,2µm,30.0s
MOTC  Monteria, Cord      84.63  82 eP       P        17 51 44.8 -1.5
MTN   Manton Dam          85.00 238  IAmb    IAmb     17 51 49.8
      comp=Z,28nm,0.9s
SMLC  San Martn de        85.48  81 eP       P        17 51 50.3 -0.2
CORL  Corleone            85.79 358  P       P        17 51 52.5 +0.7
DBBC  Dabeiba             85.79  84 eP       P        17 51 52.1 -0.1
IPM   Ipoh                86.21 272  IAmb    IAmb     17 51 56.1
      comp=Z,35nm,1.1s
IPM                                  IAMs_20 IAMs_20  18 32 32.8
      comp=Z,392nm,18.0s
OCAC  Ocana               86.36  81 eP       P        17 51 55.2 +0.1
LEF   Lefka               86.69 342 ⇓P       P        17 51 57.4 +1.2
CSS   Mathiatis           86.77 342  IAMs_20 IAMs_20  18 36 06.0
      comp=Z,600nm,21.0s
BRRC  Barranca, Sant      87.08  82 eP       P        17 51 57.4 -1.0
PTBC  PUERTO BERRIO,      87.15  83 eP       P        17 51 57.6 -1.2
HYB   Hyderabad           87.27 298 i P      P        17 51 58.0 -1.3
SDV   Santo Domingo       87.28  78  P       P        17 51 59.7 +0.1
SDV                                  IAmb    IAmb     17 52 03.0
      comp=Z,47nm,1.6s
SDV                                  IAMs_20 IAMs_20  18 35 17.7
      comp=Z,609nm,20.0s
SDV   Santo Domingo       87.28  78 eP       P        17 51 58.2 -1.4
SDV   Santo Domingo       87.28  78 eP       P        17 52 00.6 +0.9
PAMC  Pamplona, Colo      87.44  81 eP       P        17 52 00.0 -0.7
NORC  Norcasia            87.73  83 eP       P        17 51 59.9 -1.7
GUY2C Guyana, Caldas      87.74  84 eP       P        17 52 01.1 -1.0
BARC  Barichara           87.80  81 eP       P        17 52 01.8 -0.4
RREF  El Recreo           88.02  84 eP       P        17 52 03.7  0.0
SPBC  San Pablo de B      88.09  83 eP       P        17 52 02.2 -1.2
YOTC  Yotoco, Valle       88.23  86 eP       P        17 52 03.0 -1.1
MMAI  Mount Meron Ar      88.28 340  LR      LR       18 38 33.5
      comp=Z,264nm,18.3s,baz=335,slow=40
TOLC  Tolima              88.29  84 eP       P        17 52 05.1 +0.5
RUSC  La Rusia            88.44  82 eP       P        17 52 04.1 -1.4
ROSC  El Rosal            88.63  83  P       P        17 52 07.0 +0.6
      comp=Z,6.0nm,0.4s,baz=354,slow=7.4,SNR=3.8
PSI   Prapat              88.76 273  P       P        17 52 07.5 +0.9
      comp=Z,70nm,1.3s,baz=360,slow=3.5,SNR=18
ORTC  Ortega, Tolima      88.89  85 eP       P        17 52 05.6 -1.6
CHIC  Chingaza            89.13  83 eP       P        17 52 07.0 -1.6
SHME  Shamm               89.17 320  P       P        17 52 08.1 -0.1
PCON  Cinco Dias          89.57  86 eP       P        17 52 09.8 -1.1
WRAB  Tennant Creek       89.77 232⇑iP       P        17 52 11.0 +0.1
WRAB                                 pmax    pmax
      comp=Z,18nm,1.7s
WRA   Warramunga Arr      89.79 232  P       P        17 52 10.8 -0.2
      comp=Z,5.1nm,1.2s,baz=34,slow=5.5,SNR=9.4
WRA                                  LR      LR       18 30 53.9
      comp=Z,159nm,20.1s,baz=30,slow=34
WRA   Warramunga Arr      89.79 232  P       P        17 52 09.8 -1.2
WRA   Warramunga Arr      89.79 232  P       P        17 52 09.8 -1.2
MASF  Masafi              89.79 320  P       P        17 52 10.9 -0.3
MASF                                 P       P        17 52 10.9 -0.3
WC4   Warramunga Arr      89.80 232  IAMs_20 IAMs_20  18 25 28.2
      comp=Z,589nm,22.0s
BETC  Betania             89.81  85 eP       P        17 52 11.4  0.0
MDH   Madha               89.81 320  P       P        17 52 09.6 -1.7
MDH                                  P       P        17 52 09.6 -1.7
GCUF  Volcan Galeras      89.96  88 eP       P        17 52 13.7 +1.0
UOSS  Minazif             90.16 320  IAMs_20 IAMs_20  18 30 56.8
      comp=Z,463nm,20.0s
UOSS  Minazif             90.16 320  P       P        17 52 12.3 -0.7
GARC  Garzon, Huila       90.19  86 eP       P        17 52 10.8 -2.6
HATD  Hatta, Dubai        90.30 320  P       P        17 52 12.4 -1.1
HATD                                 P       P        17 52 12.4 -1.1
NAZ   Nazwa, Dubai        90.32 320  P       P        17 52 13.2 -0.4
NAZ                                  P       P        17 52 13.2 -0.4
ASHO  Ashiyiah            90.45 320  P       P        17 52 14.1 -0.3
ASHO                                 P       P        17 52 14.1 -0.3
FAQ   Al Faqa, Dubai      90.56 320  P       P        17 52 14.3 -0.4
FAQ                                  P       P        17 52 14.3 -0.4
TOSP  Speyside            90.59  68  IAMs_20 IAMs_20  18 33 03.9
      comp=Z,584nm,21.0s
ASUD  Al Ashush, Dub      90.77 320  P       P        17 52 15.2 -0.5
ASUD                                 P       P        17 52 15.2 -0.5
SOHO  SOHO                90.79 319  P       P        17 52 15.1 -0.7
SOHO                                 P       P        17 52 15.1 -0.7
HOQ   Hoqain              91.01 318  P       P        17 52 16.5 -0.4
HOQ                                  P       P        17 52 16.5 -0.4
MACC  Macarena, Meta      91.13  84 eP       P        17 52 15.9 -1.6
ALNE  Al Ain              91.14 320  P       P        17 52 17.4 -0.1
ALNE                                 P       P        17 52 17.4 -0.1
SMDO  Samad               91.21 318  P       P        17 52 18.1 +0.2
      SNR=5.6
SMDO                                 P       P        17 52 18.1 +0.2
      SNR=5.6
WBK   Wadi Bani Khal      91.27 317  P       P        17 52 18.1  0.0
WBK                                  P       P        17 52 18.1  0.0
ARQ   Araqi               91.52 319  P       P        17 52 19.1 -0.1
      SNR=7.7
ARQ                                  P       P        17 52 19.1 -0.1
      SNR=7.7
JLN   Jalan Bani Buh      91.52 316  P       P        17 52 19.3  0.0
JLN                                  P       P        17 52 19.3  0.0
BSY   Bisya               91.81 318  P       P        17 52 20.9 +0.2
      SNR=6.1
BSY                                  P       P        17 52 20.9 +0.2
      SNR=6.1
JMDO  Jabal Madar         91.82 317  P       P        17 52 20.5 -0.1
      SNR=6.8
JMDO                                 P       P        17 52 20.5 -0.1
      SNR=6.8
FITZ  Fitzroy Crossi      92.15 240  IAmb    IAmb     17 52 26.3
      comp=Z,29nm,1.4s
MHTO  MHTO                93.13 317  P       P        17 52 27.0 +0.3
      SNR=6.6
MHTO                                 P       P        17 52 27.0 +0.3
      SNR=6.6
ASAR  Alice Springs       93.26 230  P       P        17 52 26.6 -0.4
      comp=Z,2.8nm,0.9s,baz=29,slow=4.5,SNR=10
ASAR                                 LR      LR       18 30 58.6
      comp=Z,233nm,19.7s,baz=28,slow=33
ASAR  Alice Springs       93.26 230  P       P        17 52 26.2 -0.9
ASAR  Alice Springs       93.26 230  P       P        17 52 26.2 -0.9
RAYN  Ar Rayn             94.95 328  P       P        17 52 34.9 -0.2
RAYN                                 pmax    pmax
      comp=Z,11nm,1.1s
RAYN                                 MLR     MLR
      comp=Z,1µm,21.0s
RAYN  Ar Rayn             94.95 328  P       P        17 52 34.9 -0.2
RAYN                                 IAmb    IAmb     17 52 36.9
      comp=Z,11nm,1.1s
STKA  Stephens Creek      97.57 221  LR      LR       18 32 19.9
      comp=Z,502nm,21.9s,baz=24,slow=33
SAML  Samuel             106.18  82  IAMs_20 IAMs_20  18 44 28.6
      comp=Z,453nm,20.0s
ATD   Arta Tunnel        107.08 327  IAMs_20 IAMs_20  18 50 47.6
      comp=Z,297nm,18.0s
TORD  Torodi Ar. Bea     110.04  10  Pdiff   Pdif     17 53 47.2 +4.7
      comp=Z,1.6nm,1.1s,baz=359,slow=6.5,SNR=3.7
TORD                                 PKiKP   PKiKP    17 57 44.5 +0.3
      comp=Z,0.7nm,0.8s,baz=339,slow=3.7,SNR=3.7
RCBR  Riachuelo          117.41  55  IAMs_20 IAMs_20  18 41 20.9
      comp=Z,428nm,20.0s
IPMB  Ipameri, GO        121.72  74 eP       PKiKP    17 58 09.6 +3.0
MBAR  Mbarara            121.88 336  IAMs_20 IAMs_20  18 50 29.5
      comp=Z,316nm,22.0s
CPUP  Villa Florida      123.48  88  PKP     PKPdf    17 58 09.2 -0.4
      comp=Z,1.6nm,0.8s,baz=346,slow=7.7,SNR=3.3
LC01  Cunco              125.15 109  PKPdf   PKPdf    17 58 12.1 -0.3
PLCA  Paso Flores        127.19 109  PKP     PKiKP    17 58 17.1 +0.3
      comp=Z,9.7nm,1.0s,baz=308,slow=1.8,SNR=14
PLCA  Paso Flores        127.19 109 eP       PKiKP    17 58 19.9 +3.0
PARB  Paraibuna          127.48  75 eP       PKiKP    17 58 19.7 +1.8
LBTB  Lobatse            146.64 335  PKP2    PKPdf    17 58 52.3 -0.2
LBTB  Lobatse            146.64 335  PKPdf   PKPdf    17 58 52.3 -0.2
LBTB                                 PKPbc   PKPab    17 58 55.0 -0.2
BOSA  Boshof             150.17 334  PKPbc   PKPbc    17 59 03.6 +0.3
      comp=Z,18nm,0.9s,baz=23,slow=2.0,SNR=16
BELA  Belgrano 2         153.72 160          PKPbc    17 59 07.4 -2.4
MAW   Mawson             154.21 224  PKPbc   PKPbc    17 59 10.7 -0.3
      comp=Z,6.6nm,0.8s,baz=95,slow=3.3,SNR=7.0
SYO   Syowa Base         162.22 215⇓epPKPab  pPKPab   18 00 03.9 +0.9
```

AEIC ***31*** *17:46:48±2.6, 56.°58N±0.°03×169.°3W±0.°1, h32km±7km,*
Error ellipse: s-maj=9.1km s-min=3.0km az=66.0

NEIC 31 17:46:49.6±2.6**, 56.°69N**±0.°05×**169.°15W**±0.°09**, h18**km±5km**,**
mb4.2/3**, ML3.6**/14(AEIC)**, Error ellipse: s-maj=9.9km**
s-min=2.8km az=223.0, Pribilof Islands

```
Code  Station Name          Δ°  AZ°   Phase ID          Time      Res
                                      Op      ISC       h  m  s   ISC
SPIA  Saint Paul Isl      0.77 310            Pb        17 47 04.6 +0.1
SPIA                                          Sn        17 47 16.6 -0.1
MCIR  Makushin Cirqu      3.04 154            Pn        17 47 36.6 -0.1
AKGG  Akutan Green G      3.08 143            Pn        17 47 36.6 -0.7
MSW   Makushin Switc      3.10 153            Pn        17 47 37.8 +0.3
AKRB  Akutan Reef Bi      3.11 144            Pn        17 47 37.9 +0.2
```

AKRB					Sn	17 48 14.6	+0.2
MNAT	Makushin Natee	3.15	152		Pn	17 47 38.0	-0.3
MAPS	Pakushin South	3.15	155		Pn	17 47 36.9	-1.4
MAPS					Sn	17 48 14.1	-1.4
AKBBA	Akutan Broad B	3.18	143		Pn	17 47 38.1	-0.6
AKUT	Akutan	3.21	142	Pn	Pn	17 47 38.1	-0.9
AKUT				Sn	Sn	17 48 18.6	+2.0
UNV	Unalaska Valle	3.23	151		Pn	17 47 39.1	-0.3
AKSA	Akutan Strait	3.23	141		Pn	17 47 39.2	-0.2
AKSA					Sn	17 48 17.7	+0.4
FALS	False Pass	3.73	117	Pn	Pn	17 47 46.6	+0.5
NIKH	Nikolski High	3.73	177	Pn	Pn	17 47 47.0	+0.8
SDPT	Sand Point	5.05	102	Pn	Pn	17 48 05.3	+1.0
ATKA	Atka Island	5.37	215	Pn	Pn	17 48 10.7	+1.9
CHGN	Chignik	5.96	89	Pn	Pn	17 48 18.6	+1.8
GAMB	Gambell	7.22	351	Pn	Pn	17 48 35.3	+1.3
AMKA	Amchitka	8.62	237		Pn	17 48 54.0	+0.7
OHAK	Old Harbor	8.69	80	Pn	Pn	17 48 55.3	+1.0
KDAK	Kodiak Island	9.05	76	Pn	Pn	17 49 01.5	+2.3
TTA	Tatalina	9.10	41	Pn	Pn	17 49 00.5	+0.6
RSO	Redoubt South	9.36	59	Pn	Pn	17 49 02.2	-1.3
PPLA	Purkeypile	10.55	47	Pn	Pn	17 49 17.8	-2.0
SUA	Susitna One	10.59	56	Pn	Pn	17 49 20.4	0.0
O22K	Cooper Landing	10.81	61	Pn	Pn	17 49 22.1	-1.2
GLI	Glacier Island	12.16	61	Pn	Pn	17 49 40.9	-0.8
DHY	Denali Highway	12.62	51	Pn	Pn	17 49 45.6	-2.6
KAIM	Kayak Island	13.37	66	Pn	Pn	17 49 57.1	-1.1
N25K	Chitina, Valde	13.48	58	Pn	Pn	17 49 57.6	-2.2
BCPM	Bancas Point	15.78	66	Pn	Pn	17 50 30.9	+0.4
BCPM				IAmb	IAmb	17 51 07.3	
	comp=Z,16nm,0.9s						
HYT	Haines Junctio	16.83	63	P	P	17 50 47.7	+1.5
HYT				IAmb	IAmb	17 51 05.4	
	comp=Z,18nm,1.5s						
PEA0B	Petropavlovsk-	19.28	273	P	Pn	17 51 16.1	+1.9
PEA0B				IAmb	IAmb	17 51 16.6	
	comp=Z,21nm,1.2s						
PETK	Petropavlovsk-	19.28	273	P	Pn	17 51 15.6	+1.4
INK	Inuvik	19.79	40	P	Pn	17 51 19.7	-0.3

*IDC **31** 17:49:28.1±0.5, 56°.63N×168°.98W, h0km, mb4.2/30, mb1 4.3/32, mb1mx4.3/59, mbtmp4.2/32, ML4.3/2, Error ellipse: s-maj=18.9km s-min=10.2km az=1.0*

*AEIC **31** 17:49:28±2.3, 56°.57N±0°.07×169°.2W±0°.1, h20km±1km, Error ellipse: s-maj=11.5km s-min=9.9km az=175.0*

*NEIC **31** 17:49:29.3±2.6, 56°.58N±0°.06×169°.3W±0°.1, h11km±4km, mb4.6/96, ML4.3(AEIC), Error ellipse: s-maj=9.5km s-min=6.6km az=222.0*

ISC 31 17:49:30.2±1.0, **56°.60N**±0°.07×**169°.18W**±0°.04, **h12**km±5km, **n243**, σ**1s.49**/248, **mb4.6**/89, **3C, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.83	315	Pg	Pg	17 49 44.6	-1.5
AKUT	Akutan	3.14	140		Pn	17 50 17.9	-1.5
UNV	Unalaska Valle	3.15	150	Pn	Pn	17 50 17.3	-2.3
NIKH	Nikolski High	3.64	177	Pn	Pn	17 50 24.7	-1.6
FALS	False Pass	3.70	116		Pn	17 50 26.6	-0.4
ATKA	Atka Island	5.29	216	Pn	Pn	17 50 47.3	-1.6
CHGN	Chignik	5.98	88	Pn	Pn	17 50 59.7	+1.4
ADK	Adak	6.45	226	Pn	Pn	17 51 04.1	-0.8
ANM	Nome	8.21	12	Pn	Pn	17 51 28.2	-0.8
AMKA	Amchitka	8.56	237	Pn	Pn	17 51 33.7	-0.1
OHAK	Old Harbor	8.72	79	Pn	Pn	17 51 37.9	+2.0
KDAK	Kodiak Island	9.09	76	Pn	Pn	17 51 44.9	+3.9
	6.2nm,0.3s,baz=293,slow=10.0,SNR=1.3						
KDAK	Kodiak Island	9.09	76	Pn	Pn	17 51 43.2	+2.2
TTA	Tatalina	9.18	41	Pn	Pn	17 51 41.2	-1.1
SKT	Skwentna	10.49	52		Pn	17 51 59.0	-1.3
PPLA	Purkeypile	10.62	47	Pn	Pn	17 52 01.0	-1.1
SUA	Susitna One	10.66	55	Pn	Pn	17 52 02.9	+0.3
SEW	Seward	10.93	63	Pn	Pn	17 52 05.9	-0.3
KTH	Kantishna Hill	11.44	45	Pn	Pn	17 52 14.8	+1.5
GHO	Glory Hole Cre	11.58	55	Pn	Pn	17 52 18.3	+3.1
TRF	Thorofare Moun	11.64	46	Pn	Pn	17 52 16.1	-0.1
BPAW	Bear Paw Mtn.	11.70	43	Pn	Pn	17 52 14.3	-2.4
KNK	Knik Glacier	11.70	57	Pn	Pn	17 52 18.4	+1.7
RDOG	Red Dog Mine	11.85	12		Pn	17 52 17.3	-1.5
SML	Sawmill	11.86	55	Pn	Pn	17 52 21.1	+2.1
RND	Reindeer	12.21	48	Pn	Pn	17 52 26.9	+3.2
GLI	Glacier Island	12.22	60	Pn	Pn	17 52 25.4	+1.6
BWN	Browne	12.31	44	Pn	Pn	17 52 25.9	+0.8
SCM	Sheep Creek Mo	12.33	56	Pn	Pn	17 52 26.3	+0.9
HIN	Hinchinbrook I	12.43	63	Pn	Pn	17 52 28.8	+2.0
FID	Port Fidalgo	12.49	61	Pn	Pn	17 52 29.0	+1.4
DHY	Denali Highway	12.69	50	Pn	Pn	17 52 30.7	+0.3
KLU	Klutina	12.90	58	Pn	Pn	17 52 35.2	+2.0
M24K	Tolsona, Glenn	12.93	55	Pn	Pn	17 52 32.8	-0.8
WRH	Wood River Hil	12.98	44	Pn	Pn	17 52 32.6	-1.6
MDM	Murphy Dome	13.16	42	Pn	Pn	17 52 36.7	0.0
CCB	Clear Creek Bu	13.17	44	Pn	Pn	17 52 33.8	-3.0
RAGM	Ragged Mountai	13.33	63	Pn	Pn	17 52 41.6	+2.6
HDA	Harding Lake	13.39	45	Pn	Pn	17 52 39.6	-0.2
KAIM	Kayak Island	13.42	65	Pn	Pn	17 52 39.1	-1.1
PAX	Paxson	13.48	52		Pn	17 52 41.2	+0.1
POKR	Poker Plat Res	13.53	42	Pn	Pn	17 52 42.0	+0.2
N25K	Chitina, Valde	13.54	58	Pn	Pn	17 52 43.7	+1.8
IL31		13.58	44	Pn	Pn	17 52 42.7	+0.4
ILAR	Eielson Array	13.58	44	Pn	Pn	17 52 42.0	-0.4
	0.2nm,0.3s,baz=231,slow=15,SNR=8.0						
ILAR	Eielson Array	13.58	44	Pn	Pn	17 52 41.3	-1.0
COLD	Coldfoot	13.83	32	Pn	Pn	17 52 45.1	-0.7
GLB	Gilahina Butte	13.89	59	Pn	Pn	17 52 48.5	+1.9
RIDG	Independent Ri	13.99	49	Pn	Pn	17 52 51.2	+3.2
VRDI	Verde Repeater	14.03	60	P	P	17 52 54.1	-2.5
CRQM	Cirque	14.12	62		P	17 52 56.7	-0.9
MENT	Mentasta	14.24	53		P	17 52 57.2	-1.6
MCARA	McCarthy VSAT	14.25	60	P	Pn	17 52 55.2	+3.6
TGL	Tana Glacier	14.27	62		Pn	17 52 54.1	+2.1
DOT	Dot Lake	14.29	50		P	17 52 57.7	-1.6
PRP	Porcupine Dome	14.43	42	Pn	Pn	17 52 54.4	+0.3
BALM	Baldy	14.54	61		Pn	17 52 57.8	+2.3
YAH	Yahtse	14.78	64		Pn	17 52 59.1	+0.1
BARN	Barnard Glacie	14.87	61		Pn	17 53 02.0	+1.8
CTGM	Chitina Glacie	15.02	62		Pn	17 53 04.6	+2.5
CTGM				IAmb	IAmb	17 53 25.8	
	comp=Z,46nm,1.3s						
FYU	Fort Yukon	15.04	39	Pn	Pn	17 53 02.6	+0.4
PCA	Pinnacle	15.52	65		P	17 53 12.7	-0.3
PCA				IAmb	IAmb	17 53 35.2	
	comp=Z,32nm,1.2s						
A21K	Barrow	15.71	15		Pn	17 53 10.3	-0.7
A21K				IAmb	IAmb	17 53 29.3	
	comp=Z,31nm,1.0s						
BCPM	Bancas Point	15.83	65	Pn	Pn	17 53 13.9	+1.3
BCPM				IAmb	IAmb	17 53 42.5	
	comp=Z,77nm,1.6s						
BILL	Bilibino	16.02	326	Pn	Pn	17 53 13.9	-1.1
HYT	Haines Junctio	16.88	62		P	17 53 27.4	-0.8
SKAG	Skagway	18.04	67		P	17 53 42.5	+1.7
WHY	Whitehorse	18.18	63	P	Pn	17 53 42.4	+0.2
BESE	Bessie Mountai	18.39	69	P	Pn	17 53 46.0	+1.2
BESE				IAmb	IAmb	17 53 51.0	
	comp=Z,54nm,1.1s						
SIT	Sitka	18.43	74	P	Pn	17 53 47.2	+2.1
PET	Petropavlovsk	18.78	273		P	17 53 49.1	+0.1
PET				IAmb	IAmb	17 53 58.1	
	comp=Z,59nm,1.4s						
PEA0B	Petropavlovsk-	19.27	274		P	17 53 53.7	-0.8
PEA0B				IAmb	IAmb	17 53 58.7	
	comp=Z,32nm,0.8s						
PETK	Petropavlovsk-	19.27	274	P	Pn	17 53 56.9	+1.4
	comp=Z,1.4nm,0.3s,baz=85,slow=12,SNR=64						
PETK	Petropavlovsk-	19.27	274	P	Pn	17 53 56.1	+0.7
INK	Inuvik	19.87	40	P	P	17 54 00.3	-0.5
	comp=Z,1.8nm,0.3s,baz=237,slow=8.8,SNR=19						
INK				PcP	PcP	17 58 16.7	-0.7
	comp=Z,0.1nm,0.3s,baz=270,slow=3.7,SNR=3.7						
INK	Inuvik	19.87	40	P	P	17 54 00.2	-0.5
CRAG	Craig	20.04	78	P	P	17 54 03.2	+0.5
SEY	Seymchan	20.11	304	P	Pn	17 54 04.7	-0.7
	comp=Z,15nm,0.8s,baz=105,slow=9.4,SNR=45						
WRAK	Wrangell Islan	20.18	75	P	P	17 54 05.0	+0.8
WRAK				IAmb	IAmb	17 54 24.9	
	comp=Z,81nm,1.7s						
DLBC	Dease Lake	20.91	69	P	P	17 54 12.2	0.0
	comp=Z,11nm,1.1s,baz=275,slow=10,SNR=4.9						
DLBC	Dease Lake	20.91	69	P	P	17 54 12.0	-0.2
DLBC				IAmb	IAmb	17 54 21.0	
	comp=Z,43nm,1.2s						
MA2	Magadan	21.15	295	P	P	17 54 16.0	+1.2
	comp=Z,9.1nm,0.8s,baz=84,slow=12,SNR=6.1						
MA2	Magadan	21.15	295	P	P	17 54 15.5	+0.7
C36M	Paulatuk	23.45	39	P	P	17 54 40.1	+1.2
C36M				IAmb	IAmb	17 54 53.2	
	comp=Z,44nm,1.4s						
YKA	Yellowknife Ar	27.54	55	P	P	17 55 15.5	-0.8
	comp=Z,3.0nm,0.9s,baz=282,slow=8.4,SNR=11						
YKA				PcP	PcP	17 58 33.2	-0.5
	comp=Z,1.1nm,0.7s,baz=294,slow=1.4,SNR=8.3						
D05A	Enumclaw	30.05	88	P	P	17 55 42.1	+3.3
LON	Longmire	30.40	88	P	P	17 55 43.6	+1.6
LON				IAmb	IAmb	17 55 47.2	
	comp=Z,11nm,1.6s						
YAK	Yakutsk	30.62	306	P	P	17 55 43.1	-0.5
	comp=Z,3.3nm,0.5s,baz=210,slow=0.5,SNR=3.1						
YAK	Yakutsk	30.62	306	P	P	17 55 41.3	-2.3
YAK				IAmb	IAmb	17 55 44.1	
	comp=Z,14nm,1.0s						
H04A	Detroit Lake	31.46	92	P	P	17 55 51.7	+0.3
H04A				IAmb	IAmb	17 55 57.0	
	comp=Z,18nm,1.3s						
E07A	Sunnyside	31.60	87	P	P	17 55 55.7	+3.2
E07A				IAmb	IAmb	17 56 38.0	
	comp=Z,4.9nm,0.8s						
C09A	Chrisman Ranch	31.74	84	P	P	17 55 56.1	+2.3
HAWA	Hanford	31.88	87	P	P	17 55 57.1	+2.2
HAWA				IAmb	IAmb	17 56 00.1	
	comp=Z,11nm,1.2s						
KBO	Bosley Butte	31.95	97	P	P	17 55 59.9	+4.2
NEW	Newport	32.10	83	P	P	17 55 55.7	-1.2
	comp=Z,2.4nm,0.9s,baz=348,slow=6.5,SNR=3.6						
HUMO	Hull Mountain	32.39	96	P	P	17 56 02.4	+2.9
HUMO				IAmb	IAmb	17 56 49.3	
	comp=Z,24nm,1.8s						
RES	Resolute Bay	32.54	28	P	P	17 56 02.4	+1.9
RES				IAmb	IAmb	17 56 10.5	
	comp=Z,16nm,1.6s						
E09A	Wood Farm, Sta	32.57	86	P	P	17 56 04.0	+3.0
E09A				IAmb	IAmb	17 56 05.7	
	comp=Z,7.1nm,1.0s						
PINE	Pine Mountain	32.72	92	P	P	17 56 04.9	+2.3
PINE				IAmb	IAmb	17 56 08.5	
	comp=Z,13nm,1.4s						
G08A	Pilot Rock	32.87	88	P	P	17 56 03.5	-0.3
YBH	Yreka Blue Hor	33.11	97	P	P	17 56 04.5	-1.4
	comp=Z,1.9nm,0.8s,baz=288,slow=2.2,SNR=3.7						
I07A	Izee	33.33	91	P	P	17 56 10.5	+2.7
I07A				IAmb	IAmb	17 56 13.2	
	comp=Z,8.4nm,1.2s						
F10A	Beach Ranch, E	33.40	86	P	P	17 56 07.3	-1.1
F10A				IAmb	IAmb	17 56 13.1	
	comp=Z,6.7nm,1.1s						
K05A	Summer Lake	33.45	94	P	P	17 56 09.0	+0.1
JTMT	Jette	33.96	81	P	P	17 56 15.9	+2.6
JTMT				IAmb	IAmb	17 56 17.7	
	comp=Z,14nm,1.5s						
MOD	Modoc Plateau	34.32	94	P	P	17 56 16.5	0.0
MOD				IAmb	IAmb	17 56 22.2	
	comp=Z,9.0nm,1.1s						
MSO	Missoula	34.69	82	P	P	17 56 20.9	+1.3
WVOR	Wild Horse Val	34.89	92	P	P	17 56 21.0	-0.4
WVOR				IAmb	IAmb	17 56 26.0	
	comp=Z,18nm,1.6s						
ORV	Oroville	35.28	98	P	P	17 56 24.0	-0.7
ORV				IAmb	IAmb	17 56 29.5	
	comp=Z,8.8nm,1.4s						
KLR	Kul'dur	35.36	284	P	P	17 56 24.6	-0.6
	comp=Z,1.4nm,0.8s,baz=350,slow=7.1,SNR=3.5						
PAHR	Pah Rah Range	36.34	96	P	P	17 56 33.7	-0.2
HLID	Hailey	36.48	87	P	P	17 56 34.3	-0.8
PNTR	Pine Nut	36.65	97	P	P	17 56 36.7	0.0
YHL	Hebgen Lake	37.43	83	P	P	17 56 42.0	-1.3
YHB	Horse Butte	37.49	83	P	P	17 56 42.8	-0.9
YHH	Holmes Hill	37.65	83	P	P	17 56 44.0	-1.2
YMR	Madison River	37.67	83	P	P	17 56 43.9	-1.3
NVAR	Mina Array Bea	37.83	97	P	P	17 56 46.1	-0.6
	comp=Z,0.9nm,0.5s,baz=304,slow=8.3,SNR=5.4						
NVAR				PcP	PcP	17 59 01.9	-1.0
	comp=Z,1.2nm,0.7s,baz=309,slow=2.9,SNR=5.6						
NVAR	Mina Array Bea	37.83	97	P	P	17 56 45.9	-0.8
ELK	Elko	37.91	91	P	P	17 56 46.4	-0.8
NV11	Mina Array Sit	37.91	96	P	P	17 56 49.0	+1.7
NV11				IAmb	IAmb	17 56 52.6	
	comp=Z,12nm,1.6s						
FCC	Fort Churchill	38.26	54	P	P	17 56 49.5	-0.2
FCC				IAmb	IAmb	17 56 54.2	
	comp=Z,16nm,1.3s						
TPH	Tonopah	38.68	96	P	P	17 56 52.7	-1.1
R11A	Troy Canyon, C	39.39	94	P	P	17 56 58.6	-1.1
SPR3	Spring Creek 3	39.62	92	P	P	17 57 01.4	-0.4
DUG	Dugway, Tooele	39.62	90	P	P	17 57 00.6	-1.0
DUG				IAmb	IAmb	17 57 07.3	
	comp=Z,16nm,1.6s						
PDAR	Pinedale Array	39.68	84	P	P	17 57 00.4	-1.7
	comp=Z,0.4nm,0.5s,baz=339,slow=2.4,SNR=6.5						
TPNV	Topopah Spring	40.03	96	P	P	17 57 04.2	-0.8
MJAR	Matsushiro Arr	40.15	263	P	P	17 57 07.4	+1.6
	comp=Z,6.4nm,1.2s,baz=21,slow=7.5,SNR=4.5						
PSUT	Pine Spring	40.21	93	P	P	17 57 05.7	-0.8
PRN	Pahroc Range	40.36	95	P	P	17 57 07.0	-0.7
PRN				IAmb	IAmb	17 57 13.5	
	comp=Z,10nm,1.1s						
MVU	Marysvale	41.14	91	P	P	17 57 13.8	-0.5
MSU	Marysvale	41.15	91	P	P	17 57 13.4	-0.9
CCUT	Cedar City	41.18	93	P	P	17 57 13.6	-1.0
Q16A	Castle Valley	41.42	90	P	P	17 57 15.9	-0.6
LCMT	Little Creek M	41.64	94	P	P	17 57 17.5	-0.8
SRU	San Rafael Swe	41.65	89	P	P	17 57 17.5	-0.9
KNB	Kanab	41.87	93	P	P	17 57 19.7	-0.5
ULM	Lac du Bonnet	42.20	66	P	P	17 57 21.1	-1.4
	comp=Z,1.2nm,0.5s,baz=316,slow=7.9,SNR=4.7						
NRIK	Noril'sk	42.79	329	P	P	17 57 26.9	-0.1
	comp=Z,3.0nm,0.8s,baz=46,slow=12,SNR=4.1						
NRIK	Noril'sk	42.79	329	P	P	17 57 26.6	-0.4
PV22	Blue Mesa, Par	43.01	88	P	P	17 57 28.6	-0.9
PV22				IAmb	IAmb	17 57 32.9	
	comp=Z,22nm,1.7s						
PV04	Paradox Valley	43.05	89	P	P	17 57 28.7	-1.1
PV04				IAmb	IAmb	17 57 33.7	
	comp=Z,29nm,1.6s						
PV17	East Wray Mesa	43.10	89	IAmb	IAmb	17 57 34.1	
	comp=Z,22nm,1.6s						
PV16	Nyswonger Mesa	43.10	89	P	P	17 57 29.9	-0.3
PV11	David Mesa, Pa	43.13	89	P	P	17 57 28.8	-1.7
PV12	Saucer Basin,	43.16	89	P	P	17 57 29.6	-1.2
PV12				IAmb	IAmb	17 57 34.7	
	comp=Z,12nm,1.2s						
PV03	Paradox Valley	43.18	89	P	P	17 57 29.1	-1.7
PV13	Radium Mtn., P	43.26	89	P	P	17 57 30.1	-1.4
PV13				IAmb	IAmb	17 57 35.6	
	comp=Z,21nm,1.4s						
PV13				PcP	PcP	17 59 19.1	-1.4
PV01	Paradox Valley	43.42	89	P	P	17 57 31.3	-1.5
PV01				IAmb	IAmb	17 57 37.5	
	comp=Z,14nm,1.4s						
KSRS	Korea Array	45.17	273	P	P	17 57 47.7	+1.2
	comp=Z,3.4nm,0.9s,baz=52,slow=7.0,SNR=8.4						
KSAR	Wonju Array Be	45.20	273	P	P	17 57 46.1	-0.6
KSAR				PcP	PcP	17 59 25.4	-1.3
FRB	Frobisher Bay	45.51	38	P	P	17 57 48.2	-0.7
	comp=Z,2.4nm,0.9s,baz=336,slow=10.0,SNR=3.0						
DAG	Danmarks Havn	45.59	9	*i* P	P	17 57 51.8	+2.5
	comp=Z,3.5nm,0.7s						
DAG	Danmarks Havn	45.59	9	*i* P	P	17 57 51.8	+2.5
DAG				IAmb	IAmb	17 57 53.8	
	comp=Z,3.5nm,0.7s						
TUC	Tucson	46.48	96	P	P	17 57 56.3	-0.7
SUMG	Summit	46.71	18	*i* P	P	17 58 02.4	+3.7
	comp=Z,29nm,1.0s						
SUMG	Summit	46.71	18	*i* P	P	17 58 02.5	+3.7
SUMG				IAmb	IAmb	17 58 06.1	
	comp=Z,29nm,1.0s						
ANMO	Albuquerque	46.90	90	PcP	PcP	17 59 33.6	+0.6
	comp=Z,3.2nm,1.0s,baz=301,slow=3.7,SNR=6.5						
DBG	Daneborg	47.73	11	*i* P	P	17 58 09.2	+3.1
DBG				IAmb	IAmb	17 58 10.2	
	comp=Z,6.1nm,0.9s						
ULN	Ulaanbaatar	48.98	297	P	P	17 58 15.8	-0.6
ULN				IAmb	IAmb	17 58 17.8	
	comp=Z,8.2nm,1.0s						
SONM	Songino Array	49.32	298	P	P	17 58 20.1	+1.2
	comp=Z,3.7nm,0.8s,baz=43,slow=7.3,SNR=14						
SONM				PcP	PcP	17 59 41.5	+0.1
	comp=Z,0.7nm,0.7s,baz=65,slow=2.5,SNR=4.1						
SONM	Songino Array	49.32	298	P	P	17 58 18.8	-0.1
SONM					PcP	17 59 41.0	-0.4
ICESG	Greenland Ices	49.37	21	*i* P	P	17 58 20.8	+1.6
ICESG				IAmb	IAmb	17 58 23.3	
	comp=Z,8.0nm,0.8s						
MNTX	Cornudas Mount	49.92	92	P	P	17 58 22.2	-1.4
MNTX				IAmb	IAmb	17 58 28.3	
	comp=Z,11nm,1.3s						
HHC	Hu-ho-hao-te	51.61	288	*e*P	P	17 58 37.3	+1.0
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.6s						
TXAR	Lajitas Array	52.68	92	P	P	17 58 42.8	-1.6
	comp=Z,2.1nm,0.8s,baz=303,slow=5.3,SNR=10						
TXAR	Lajitas Array	52.68	92	P	P	17 58 42.5	-1.9
ARCES	ARCESS Array B	53.72	354	PcP	PcP	17 59 56.9	-0.4
	comp=Z,3.8nm,0.9s,baz=341,slow=2.6,SNR=4.1						
NJ2	Nanjing	54.17	275	*e*P	P	17 58 55.3	+0.2
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	54.42	316	P	P	17 58 56.6	0.0
	comp=Z,0.4nm,0.4s,baz=56,slow=8.9,SNR=2.5						
ZALV				PcP	PcP	18 00 00.1	-0.1
	comp=Z,1.2nm,0.6s,baz=51,slow=4.7,SNR=4.8						
XAN	Xi'an	58.07	284	P	P	17 59 23.5	+0.4
XAN				pP	sP	17 59 29.5	+1.3
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA	Gaotai	58.72	295	⇑P	P	17 59 28.3	+0.7
GTA				pP	pP	17 59 31.8	+0.4
GTA				sP	sP	17 59 35.3	+2.5
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,180nm,5.3s						
GTA				LR	LR		
	comp=N,220nm,14.2s						
GTA				LR	LR		
	comp=E,620nm,15.3s						
GTA				LR	LR		
	comp=Z,330nm,15.6s						
LZH	Lanzhou	59.19	290	*e*P	P	17 59 32.0	+1.0
LZH				pP	sP	17 59 38.3	+2.1
LZH				sP	pP	17 59 41.3	+6.6
LZH				PP	PP	18 01 44.5	+3.1
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,7.6s						
KURK	Kurchatov	59.32	317	P	P	17 59 30.9	-0.5
KURK				IAmb	IAmb	17 59 32.7	
	comp=Z,4.4nm,0.8s						
BRVK	Borovoye	60.36	323	P	P	17 59 38.3	-0.3
ARU	Arti	60.92	332	P	P	17 59 41.2	-1.1
MK31	Makanchi Array	61.02	312	P	P	17 59 42.3	-0.9
MKAR	Makanchi Array	61.02	312	P	P	17 59 42.6	-0.6
	comp=Z,1.6nm,0.9s,baz=39,slow=4.7,SNR=11						
MKAR	Makanchi Array	61.02	312	P	P	17 59 42.3	-0.9
WMQ	Urumqi	61.06	306	*e*P	P	17 59 46.3	+2.7
MAKZ	Makanchi	61.13	312	P	P	17 59 43.1	-0.9
FINES	FINESS Array B	61.69	352	P	P	17 59 47.1	-0.4
	comp=Z,4.1nm,1.0s,baz=21,slow=11,SNR=5.7						
NOA	NORSAR Array B	62.70	360	P	P	17 59 53.2	-1.2
	comp=Z,1.1nm,0.9s,baz=0.2,slow=6.9,SNR=3.1						
GYA	Guiyang	65.19	281	⇑P	P	18 00 12.5	+1.2
GYA				pP	sP	18 00 17.5	+1.0
GYA				pmax	pmax		
	comp=Z,17nm,1.3s						
ABKAR	Akbulak array	66.91	327	P	P	18 00 21.4	-0.4
ABKAR	Akbulak array	66.91	327	P	P	18 00 21.0	-0.8
ABKAR				IAmb	IAmb	18 00 27.4	
	comp=Z,8.8nm,1.0s						
AAK	Ala-Archa	67.59	314	P	P	18 00 26.7	+0.2
AAK				IAmb	IAmb	18 00 28.3	
	comp=Z,7.7nm,1.1s						
KMI	Kunming	68.37	283	⇑*e*P	P	18 00 38.5	+6.8
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KK31	Karatay Array	68.73	317	P	P	18 00 32.9	-0.5
KKAR	Karatay Array	68.73	317	P	P	18 00 33.2	-0.3
KKAR	Karatay Array	68.73	317	P	P	18 00 33.5	0.0
KKAR				IAmb	IAmb	18 00 34.5	
	comp=Z,7.4nm,0.9s						
KSH	Kashi	69.62	312	P	P	18 00 43.3	+4.1
KSH				pP	sP	18 00 48.5	+4.1
KSH				pmax	pmax		
	comp=Z,19nm,1.0s						
LSA	Lhasa	70.74	295	P	P	18 00 48.3	+1.7
LSA				pmax	pmax		
	comp=Z,68nm,0.9s						
SLVN	Son La	70.79	280	P	P	18 00 47.7	+1.2
AKASG	Malin Array Be	71.99	348	P	P	18 00 51.8	-1.4
	comp=Z,5.5nm,0.6s,baz=15,slow=6.0,SNR=21						
AKASG	Malin Array Be	71.99	348	P	P	18 00 51.4	-1.8
AKBB	Malin Array Si	71.99	348	P	P	18 00 51.4	-1.8
CLL	Collm	72.44	359	*e*(P)	pP	18 01 00.0	+0.3
BRG	Berggiesshubel	72.86	358	*e*P	pP	18 01 02.7	+0.5
BRG				Amp		18 01 04.2	
	comp=Z,9.8nm,1.4s						
DPC	Dobruska-Polom	73.32	356	*e*P	P	18 01 01.0	-0.2
DPC				*e*pP	pP	18 01 05.8	+0.8
LANS	Liptovska Anna	74.37	354	*e*P	pP	18 01 12.5	+1.3
TAPN	Taplejung	74.39	296	*e*P	P	18 01 08.4	+0.3
KOLS	Kolonicke sedl	74.41	352	*e*P	pP	18 01 12.6	+1.2
SIJI	Sorong	74.47	243	P	P	18 01 08.9	+0.5
	comp=Z,19nm,0.8s,baz=16,slow=4.4,SNR=8.7						
KHC	Kasperske Hory	74.61	358	*e*P	P	18 01 08.4	-0.4
KHC				*e*pP	pP	18 01 13.4	+0.8
GUN	Gumba	74.83	298	*e*P	P	18 01 11.3	+0.5
	comp=Z,20nm,0.7s						
GERES	GERESS Array B	74.90	358	P	P	18 01 09.8	-0.7
	comp=Z,0.9nm,0.9s,baz=352,slow=5.0,SNR=4.7						
KKN	Kakani	75.22	298	*e*P	P	18 01 13.3	+0.4
	comp=Z,12nm,0.7s						
MODS	Modra-Piesok	75.26	356	*e*P	P	18 01 16.9	+4.4
PKI	Pulchoki	75.34	298	*e*P	P	18 01 13.8	+0.1
DMN	Daman	75.46	298	*e*P	P	18 01 14.6	+0.3
BURAR	Bucovina Array	75.46	350	P	P	18 01 12.3	-1.4
DANN	Dangsing	75.49	300	*e*P	P	18 01 15.2	+0.7
	comp=Z,69nm,0.7s						
CHTO	Chiang Mai	75.53	282	P	P	18 01 13.3	-1.1
CHTO				IAmb	IAmb	18 01 21.5	
	comp=Z,12nm,1.6s						
CONA	Conrad Observa	75.76	357	*e*P	P	18 01 15.5	0.0
	comp=Z,8.5nm,1.0s						
NIL	Nilore	75.76	310	P	P	18 01 16.0	+0.4
CMAR	Chiang Mai Arr	75.82	282	P	P	18 01 16.8	+0.6
	comp=Z,4.2nm,1.0s,baz=17,slow=6.1,SNR=31						
MOA	Molln	75.88	358	*e*P	P	18 01 15.1	-1.0
	comp=Z,5.2nm,1.1s						
RETA	Reutte	76.28	0	*e*P	P	18 01 19.5	+1.1
	comp=Z,9.2nm,1.5s						
MOTA	Moosalm	76.43	360	*e*P	P	18 01 19.8	+0.4
	comp=Z,15nm,1.4s						
WATA	Walderalm	76.43	359	*e*P	P	18 01 19.0	-0.4
	comp=Z,7.1nm,0.9s						
ARSA	Arzberg	76.45	357	*e*P	P	18 01 18.6	-0.7
	comp=Z,6.4nm,1.5s						
KBZ	Khabaz	76.46	337	P	P	18 01 19.8	+0.5
	comp=Z,3.5nm,0.8s,baz=52,slow=4.2,SNR=6.7						
SQTA	Sankt Quirin	76.55	360	*e*P	P	18 01 19.2	-0.8
	comp=Z,9.1nm,1.1s						
KBA	Koelnbreinsper	76.67	358	*e*P	P	18 01 20.2	-0.6
	comp=Z,11nm,1.2s						
KBL	Kabul	76.72	314	P	P	18 01 20.4	-0.9
FETA	Feichten	76.75	0	*e*P	P	18 01 20.7	-0.5
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	77.02	359	*e*P	P	18 01 20.2	-2.4
	comp=Z,9.6nm,1.4s						
SOKA	Soboth	77.03	357	*e*P	P	18 01 23.0	+0.3
	comp=Z,6.2nm,1.0s						
MYKA	Terra Mystica	77.11	358	*e*P	P	18 01 22.2	-0.9
	comp=Z,3.9nm,0.9s						
OBKA	Obir	77.22	357	*e*P	P	18 01 19.0	-4.7
	comp=Z,17nm,0.9s						
GEYT	Alibeck	77.68	324	P	P	18 01 27.2	+0.7
	comp=Z,6.0nm,0.9s,baz=306,slow=5.3,SNR=12						
TEOL	Teolo	78.41	359	P	P	18 01 30.1	-0.2
GEVA	Gevas	81.59	335	P	P	18 01 48.0	+0.2
GEVA				IAmb	IAmb	18 01 54.3	
	comp=Z,12nm,1.3s						
BRTR	Keskin Array B	82.12	342	P	P	18 01 50.9	+0.4
	comp=Z,3.1nm,0.9s,baz=38,slow=5.4,SNR=5.9						
BRTR	Keskin Array B	82.12	342	P	P	18 01 50.1	-0.4

MARD	Mardin	83.06	336	P	P	18 01 55.9	+0.4
ESDC	Sonseca Array	83.28	11	P	P	18 01 55.8	-0.7
	comp=Z,3.9nm,1.1s,baz=342,slow=4.6,SNR=4.2						
WRA	Warramunga Arr	89.72	232	P	P	18 02 27.2	-0.8
	comp=Z,0.8nm,0.9s,baz=40,slow=5.5,SNR=4.5						
ASAR	Alice Springs	93.19	230	P	P	18 02 44.0	-0.1
	comp=Z,1.1nm,0.9s,baz=17,slow=5.1,SNR=7.5						
PLCA	Paso Flores	127.20	109	PKP	PKPdf	18 08 33.4	-0.3
	comp=Z,1.1nm,0.7s,baz=316,slow=11,SNR=3.4						
BOSA	Boshof	150.21	334	PKPbc	PKPbc	18 09 20.5	-0.2
	comp=Z,4.0nm,0.8s,baz=8.5,slow=3.8,SNR=7.7						

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*NEIC **31** 17:49:41.0±1.8, 56°.27N±0°.07×157°.6W±0°.1, h75^{km}±12^{km}, Error ellipse: s-maj=13.5km s-min=5.1km az=136.0*

AEIC 31 17:49:42±2.1**, 56°.26N**±0°.06×**157°.51W**±0°.07**, h56**^{km}±8^{km}**, ML3.6, ML3.6**/16(NEIC)**, Error ellipse: s-maj=8.6km s-min=5.4km az=156.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGN	Chignik	0.51	275		Pn	17 49 54.1	+0.4
CHGN				Sn	Sn	17 50 02.6	+0.5
VNSG	Veniaminof 6	0.89	262		Pn	17 49 58.7	+0.2
VNHG	Veniaminof 1	0.93	268		Pn	17 49 59.2	+0.3
VNHG					Sn	17 50 12.3	+0.8
PLBL	Peulik Blue Cr	1.49	14		Pn	17 50 06.3	-0.2
PLK3	Peulik 3	1.58	25		Pn	17 50 08.4	+0.7
PLK3					Sn	17 50 28.1	+1.0
PLK1	Peulik 1	1.62	17		Pn	17 50 08.2	0.0
PLK5	Peulik 5	1.77	11		Pn	17 50 10.1	-0.2
CNBA	Chernabura Isl	1.87	220	Pn	Pn	17 50 09.5	-2.0
SII	Sitkinak Islan	1.87	79	Pn	Pn	17 50 13.7	+2.1
SII				IAML		17 50 48.4	
	comp=E,825nm,0.7s						
SDPT	Sand Point	1.91	243		Pn	17 50 12.0	-0.1
SDPT	Sand Point	1.91	243		Sn	17 50 35.0	0.0
SDPT	Sand Point	1.91	243	IAML		17 50 40.7	
	comp=N,313nm,0.6s						
SDPT				IAML		17 50 43.8	
	comp=E,340nm,0.8s						
KABR	Katmai Barrier	2.33	35		Pn	17 50 17.9	0.0
KVTA	Katmai Vly 10	2.44	29		Pn	17 50 19.6	+0.2
OHAK	Old Harbor	2.52	66		Pn	17 50 20.8	+0.4
OHAK				Sn	Sn	17 50 49.0	-0.9
OHAK				IAML		17 51 06.9	
	comp=N,158nm,2.4s						
PVV	Pavlof Volcano	2.58	252		Pn	17 50 21.7	+0.5
PN6	Pavlof North-6	2.62	254		Pn	17 50 22.6	+0.8
PS4A	Pavlof South-4	2.62	251		Pn	17 50 22.3	+0.5
HAG	Hague Volcano	2.66	251		Pn	17 50 22.9	+0.6
DT1	Dutton Round H	2.94	249		Pn	17 50 26.3	+0.1
KDAK	Kodiak Island	3.09	58		Pn	17 50 28.4	+0.1
KDAK				IAML		17 50 53.1	
	comp=N,88nm,4.4s						
KDAK				Sn	Sn	17 51 00.9	-3.1
FALS	False Pass	3.64	250	Pn	Pn	17 50 34.0	-1.8
AUCH	Augustine Cone	3.79	33		Pn	17 50 38.4	+0.5
OPT	Oil Point	4.09	32		Pn	17 50 42.7	+0.8
IVE	Iliamna Volcan	4.46	30		Pn	17 50 47.5	+0.5
CNPM	China Poot	4.68	43	Pn	Pn	17 50 50.0	0.0
CNPM				IAML		17 52 31.5	
	comp=N,70nm,5.0s						
RED	Redoubt Volcan	4.86	29		Pn	17 50 53.0	+0.5
RSO	Redoubt South	4.90	29		Pn	17 50 53.8	+0.6
NCT	North Crescent	4.94	27		Pn	17 50 54.1	+0.5
BRLK	Bradley Lake	4.97	42	Pn	Pn	17 50 53.5	-0.5
BRLK				IAML		17 51 51.6	
	comp=E,56nm,3.0s						
BRLK				IAML		17 51 55.3	
	comp=N,65nm,4.8s						
BRSE	Bradley Lake S	5.01	43		Pn	17 50 54.0	-0.5
DFR	Drift River	5.03	28		Pn	17 50 55.2	+0.4
UNV	Unalaska Valle	5.71	249	Pn	Pn	17 51 03.7	-0.4
SLKM	Skilak Lake	5.73	39		Pn	17 51 03.6	-0.8
SPCP	Crater Peak Br	5.74	27		Pn	17 51 05.4	+0.8
SEW	Seward	5.74	45	Pn	Pn	17 51 03.1	-1.4
STLK	Strandline Lak	6.02	27		Pn	17 51 08.8	+0.4
SUA	Susitna One	6.28	31	Pn	Pn	17 51 11.9	-0.2
RC01	Rabbit Creek A	6.31	37		Pn	17 51 11.2	-1.2
SKT	Skwentna	6.51	26	Pn	Pn	17 51 14.0	-1.0
PWL	Port Wells	6.65	42		Pn	17 51 15.7	-1.3
TTA	Tatalina	6.73	6	Pn	Pn	17 51 17.0	-1.2
Q23K	Middleton Isla	6.75	57	Pn	Pn	17 51 17.7	-0.6
MID	Middleton Isla	6.75	57	Pn	Pn	17 51 17.5	-0.9
PMR	Palmer	6.88	36	Pn	Pn	17 51 18.5	-1.5
KNK	Knik Glacier	6.98	39	Pn	Pn	17 51 20.4	-1.0
GHO	Glory Hole Cre	7.08	35	Pn	Pn	17 51 21.6	-1.3
HIN	Hinchinbrook I	7.12	50	Pn	Pn	17 51 22.8	-0.6
GLI	Glacier Island	7.14	45	Pn	Pn	17 51 20.2	-3.5
PPLA	Purkeypile	7.18	20	Pn	Pn	17 51 25.9	+1.6
SML	Sawmill	7.30	37	Pn	Pn	17 51 24.8	-1.1
FID	Port Fidalgo	7.32	48	Pn	Pn	17 51 24.0	-2.1
EYAK	Cordova Ski Ar	7.52	50	Pn	Pn	17 51 28.0	-0.8
SCM	Sheep Creek Mo	7.66	39	Pn	Pn	17 51 30.1	-0.8
KAIM	Kayak Island	7.84	57	Pn	Pn	17 51 32.8	-0.5
RAGM	Ragged Mountai	7.92	53	Pn	Pn	17 51 33.6	-0.8
KLU	Klutina	7.96	44		Pn	17 51 34.3	-0.7
KTH	Kantishna Hill	8.02	22	Pn	Pn	17 51 34.6	-1.2
WAT6	Susitna Watana	8.05	34		Pn	17 51 33.9	-2.4
TRF	Thorofare Moun	8.07	24	Pn	Pn	17 51 35.3	-1.3
HMT	Hamilton	8.08	54	Pn	Pn	17 51 35.9	-0.7
WAT2	Susitna Watana	8.10	30		Pn	17 51 34.2	-2.6
SUCK	Suckling Hills	8.20	57	Pn	Pn	17 51 38.7	+0.5
M24K	Tolsona, Glenn	8.25	40	Pn	Pn	17 51 38.4	-0.5
BERG	Berg Lake	8.36	55		Pn	17 51 39.2	-1.1
RND	Reindeer	8.38	28	Pn	Pn	17 51 38.9	-1.8
BPAW	Bear Paw Mtn.	8.50	20	Pn	Pn	17 51 40.0	-2.4
DHY	Denali Highway	8.53	33	Pn	Pn	17 51 40.8	-2.1
N25K	Chitina, Valde	8.55	46	Pn	Pn	17 51 41.5	-1.6
CRQM	Cirque	8.76	53	Pn	Pn	17 51 45.2	-0.8
GLB	Gilahina Butte	8.79	48	Pn	Pn	17 51 44.7	-1.6
VRDI	Verde Repeater	8.83	50	Pn	Pn	17 51 45.6	-1.4
BWN	Browne	8.88	23	Pn	Pn	17 51 46.1	-1.3
TGL	Tana Glacier	8.90	54	Pn	Pn	17 51 47.1	-0.7
ISLE	Juniper Island	9.06	55	Pn	Pn	17 51 49.5	-0.5
PAX	Paxson	9.07	37	Pn	Pn	17 51 48.6	-1.5
MCARA	McCarthy VSAT	9.09	50	Pn	Pn	17 51 49.5	-0.8
MESA	MESA	9.09	58	Pn	Pn	17 51 50.9	+0.3
KIAG	Kiagna River	9.18	53		Pn	17 51 50.9	-0.8
ANM	Nome	9.19	338	Pn	Pn	17 51 50.2	-1.4
BALM	Baldy	9.23	53	Pn	Pn	17 51 51.4	-1.0
PTPK	Patty Peak	9.24	52		Pn	17 51 51.7	-0.8
YAH	Yahtse	9.25	57	Pn	Pn	17 51 52.0	-0.7
GRNC	Granite Creek	9.38	55		Pn	17 51 53.8	-0.6
WRH	Wood River Hil	9.45	26	Pn	Pn	17 51 52.4	-2.8
BARN	Barnard Glacie	9.54	53	Pn	Pn	17 51 56.2	-0.5
TABL	Table Mountain	9.56	57	Pn	Pn	17 51 57.0	0.0
CTGM	Chitina Glacie	9.65	54	Pn	Pn	17 51 57.9	-0.3
MENT	Mentasta	9.66	41	Pn	Pn	17 51 56.4	-1.8
CCB	Clear Creek Bu	9.67	26	Pn	Pn	17 51 55.0	-3.2
HDA	Harding Lake	9.69	28	Pn	Pn	17 51 55.8	-2.7
RIDG	Independent Ri	9.80	35	Pn	Pn	17 51 58.7	-1.4
MDM	Murphy Dome	9.83	24	Pn	Pn	17 51 57.2	-3.3
TCOL	CIGO, UAF Yank	9.84	25	Pn	Pn	17 51 58.7	-1.9
COLA	College	9.85	25	Pn	Pn	17 51 58.3	-2.3
PCA	Pinnacle	9.88	60	Pn	Pn	17 52 00.9	-0.2
IMAR	Indian Mountai	9.92	9	Pn	Pn	17 52 00.7	-1.0
DOT	Dot Lake	10.00	37	Pn	Pn	17 52 01.4	-1.4
IL31		10.00	27		Pn	17 51 59.4	-3.3
ILAR	Eielson Array	10.00	27	Pn	Pn	17 51 59.6	-3.1
BCPM	Bancas Point	10.15	61	Pn	Pn	17 52 04.0	-0.8
POKR	Poker Plat Res	10.15	25	Pn	Pn	17 52 01.9	-2.8
HYT	Haines Junctio	11.39	58	Pn	Pn	17 52 20.8	-1.0
FYU	Fort Yukon	11.86	24	Pn	Pn	17 52 24.8	-3.3
WHY	Whitehorse	12.61	60	Pn	Pn	17 52 39.0	+0.6
CRAG	Craig	13.70	83	Pn	Pn	17 52 52.4	-0.8
AMKA	Amchitka	14.51	260	Pn	Pn	17 53 02.1	-1.8
DLBC	Dease Lake	14.95	70	P	Pn	17 53 11.0	+1.3
INK	Inuvik	16.28	33	P	Pn	17 53 25.1	-1.5

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*JMA **31** 17:57:36.7±0.1, 24°.04N×122°.27E, h26^{km}±3^{km}, M1.9*

*TAP **31** 17:57:37.5, 24°.17N×122°.20E, h22^{km}±1^{km}, ML2.5, D*

ISC 31 17:57:36.6±1.1**, 24°.10N**±0°.02×**122°.26E**±0°.02**, h23**^{km}±13^{km}**, n68,** σ**0^{s}.71**/126**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.57	305	P	Pb	17 57 47.7	-0.4
	baz=311						
ENA				*e*S	Sb	17 57 54.7	-1.1
	baz=311						
TWD	Chiawan	0.60	268	*e*P	Pn	17 57 49.5	-0.3
	baz=245						
TWD				*e*S	Sb	17 57 57.3	+0.7
	baz=245						
NACB	Ninganchiao	0.61	277	*e*P	Pb	17 57 49.0	+0.3
	baz=271						
NACB				*e*S	Sn	17 57 58.4	-0.6
	baz=271						
TWC	Suao	0.63	324	P	Pb	17 57 48.1	-0.9
	baz=325						
TWC				S	Sb	17 57 55.8	-1.6
	baz=325						
ETLH	Xiulin Townshi	0.71	279	P	Pb	17 57 50.6	+0.1
	baz=263						
ETLH				*e*S	Sb	17 58 00.6	+0.7
	baz=263						
JYNG	Yonagunijimaku	0.72	61	P	Pb	17 57 50.3	-0.2
JYNG				S	Sb	17 57 59.8	-0.2
YOJ	Yonaguni jima	0.78	62	P	Pb	17 57 52.0	+0.5
YOJ				S	Sb	17 58 01.4	-0.3
YOJ	Yonaguni jima	0.78	62	*e*P	Pb	17 57 52.0	+0.5
	baz=67						
YOJ				*e*S	Sb	17 58 02.0	+0.4
	baz=67						
ESL	Shilin	0.80	250	*e*P	Pn	17 57 52.7	+0.2
	baz=232						
ESL				*e*S	Sn	17 58 03.1	-0.6
	baz=232						
ILA	Ilan	0.81	325	*e*P	Pb	17 57 52.0	0.0
	baz=326						
ILA				*e*S	Sb	17 58 02.0	-0.6
	baz=326						
TWE	Neicheng	0.82	319	P	Pb	17 57 51.9	-0.3
	baz=324						
TWE				*e*S	Sb	17 58 02.0	-0.9
	baz=324						
ENTT	Nioudou	0.83	311	*i* P	Pb	17 57 52.4	0.0
	baz=316						
ENTT				*e*S	Sb	17 58 02.7	-0.4
	baz=316						
NDT	Datong Townshi	0.84	307	P	Pb	17 57 53.0	+0.4
	baz=311						
NDT				*e*S	Sb	17 58 03.6	+0.1
	baz=311						
NTC	Toucheng	0.85	333	*e*P	Pb	17 57 51.7	-1.0
	baz=334						
NNSB	Datong	0.86	293	*e*P	Pb	17 57 53.1	+0.1
	baz=290						
NNSB				*e*S	Sn	17 58 05.2	-0.2
	baz=290						
NNSH	Datong	0.86	293	*e*P	Pb	17 57 53.2	+0.2
	baz=295						
NNSH				*e*S	Sn	17 58 04.7	-0.6
	baz=295						
NNS	Nan Shan	0.87	293	*e*P	Pb	17 57 53.5	+0.2
	baz=290						
NNS				*e*S	Sb	17 58 04.9	+0.3
	baz=290						
WHF	Hehuan Shan	0.91	273	*e*P	Pb	17 57 53.8	-0.1
	baz=268						
WHF				*e*S	Sn	17 58 07.6	+0.7
	baz=268						
FUSS	Fushou	0.94	279	*e*P	Pn	17 57 54.7	+0.1
	baz=275						
TIPB	Shuangxi	0.95	336	P	Pb	17 57 54.4	-0.1
	baz=338						
TIPB				*e*S	Sb	17 58 06.1	-0.7
	baz=338						
NWLT	Wulai	0.96	315	P	Pb	17 57 54.9	+0.2
	baz=314						
NWLT				*e*S	Sb	17 58 07.2	+0.1
	baz=314						
HGSD	Ruisui	0.97	232	*e*P	Pn	17 57 55.7	+0.8
	baz=214						
HGSD				*e*S	Sb	17 58 07.3	+0.1
	baz=214						
YHNB	Yeheng	0.98	306	P	Pb	17 57 55.2	+0.2
	baz=309						
YHNB				*e*S	Sb	17 58 07.5	-0.1
	baz=309						
CHGB	Renai	0.99	268	*e*P	Pb	17 57 54.9	-0.3
	baz=250						
CHGB				*e*S	Sn	17 58 08.3	-0.4
	baz=250						
TWT	Tachien	1.00	279	*e*P	Pn	17 57 56.1	+0.8
	baz=275						
TWT				*e*S	Sb	17 58 08.4	+0.3
	baz=275						
NSK	Sanguang	1.00	305	*e*P	Pn	17 57 55.4	+0.1
	baz=314						
NSK				*e*S	Sb	17 58 08.2	+0.1
	baz=314						
TDCB	Techi	1.01	279	*e*P	Pn	17 57 55.5	-0.1
	baz=275						
TDCB				*e*S	Sn	17 58 09.1	-0.1
	baz=275						
EHY	Hungye	1.04	236	*e*P	Pn	17 57 55.5	-0.3
	baz=221						
EHY				*e*S	Sb	17 58 08.2	-1.0
	baz=221						
NWF	Wu-fen Shan	1.06	336	*e*P	Pn	17 57 56.1	-0.1
	baz=353						
NWF				*e*S	Sb	17 58 10.1	+0.3
	baz=353						
WFSB	Wu-fen Shan	1.06	336	*e*P	Pn	17 57 56.1	+0.1
	baz=353						
WFSB				*e*S	Sb	17 58 10.0	+0.2
	baz=353						
TWA	Mucha	1.07	325	*e*P	Pb	17 57 56.9	+0.4
	baz=334						
TWA				*e*S	Sb	17 58 09.7	-0.4
	baz=334						
NHDH	Xindian Distri	1.09	322	*e*P	Pb	17 57 57.2	+0.4
	baz=323						
NHDH				*e*S	Sb	17 58 10.7	+0.1
	baz=323						
TATO	Taipei	1.12	321	*e*P	Pb	17 57 58.1	+0.8
	baz=322						
TATO				*e*S	Sn	17 58 11.6	0.0
	baz=322						
YULB	Yu-li	1.12	232	*e*P	Pn	17 57 56.3	-0.6
	baz=215						
YULB				*e*S	Sb	17 58 10.6	-1.0
	baz=215						
EYUL	Yuli	1.14	229	*e*P	Pn	17 57 57.1	0.0
	baz=211						
EYUL				*e*S	Sn	17 58 11.7	-0.3
	baz=211						
TWF1	Yuli	1.15	230	*e*P	Pn	17 57 57.2	-0.1
	baz=211						
TWF1				*e*S	Sn	17 58 11.3	-1.0
	baz=211						
WHP	Taichung City	1.21	279	*e*P	Pb	17 57 60.0	+1.1
	baz=263						
WHP				*e*S	Sb	17 58 14.9	+0.8
	baz=263						
DPDB	Guoxing	1.22	267	*e*P	Pn	17 57 58.7	+0.5
	baz=253						
DPDB				*e*S	Sn	17 58 12.9	-1.2
	baz=253						
YM01	YM01	1.22	329	*e*P	Pb	17 57 58.9	-0.1
	baz=344						
YM01				*e*S	Sn	17 58 14.2	+0.2
	baz=344						
YM10	YM10	1.23	329	*e*P	Pn	17 57 58.5	+0.1
	baz=347						
SSLB	Suanglung	1.23	256	*e*P	Pb	17 57 59.9	+0.7
	baz=239						
SSLB				*e*S	Sb	17 58 14.7	0.0
	baz=239						
YM11	YM11	1.23	330	*e*P	Pb	17 58 00.6	+1.4
	baz=331						
YM11				*e*S	Sb	17 58 16.0	+1.3
	baz=331						
YM05	YM05	1.23	330	*e*P	Pn	17 57 58.3	-0.2
	baz=345						
YM05				*e*S	Sn	17 58 12.8	-1.7
	baz=345						
YM04	YM04	1.24	328	*e*P	Pn	17 57 58.9	+0.3
	baz=347						
LIOB	Emei	1.25	296	*e*P	Pb	17 58 00.3	+0.6
	baz=294						
FULB	Fuli	1.26	225	*e*P	Pn	17 57 59.3	+0.5
	baz=204						
FULB				*e*S	Sn	17 58 15.2	+0.2
	baz=204						
YM03	YM03	1.26	329	*e*P	Pn	17 57 59.3	+0.5
	baz=330						
NSTT	Nanjuang	1.26	295	*e*P	Pb	17 58 00.7	+1.0
	baz=293						
NSTT				*e*S	Sb	17 58 17.3	+1.8
	baz=293						
ANP	Anpu	1.27	328	*e*P	Pb	17 58 00.3	+0.3
	baz=330						
TYC	Yuchr	1.29	262	*e*P	Pb	17 58 00.5	+0.3
	baz=249						
TYC				*e*S	Sb	17 58 16.6	+0.1
	baz=249						
YUS	Yu-Shan	1.34	243	*e*P	Pn	17 58 00.9	+0.5
	baz=238						
YUS				*e*S	Sn	17 58 17.6	0.0
	baz=238						
IRIF	Iriomote-Funau	1.37	80	P	Pn	17 58 00.6	+0.3
IRIF				S	Sn	17 58 17.7	0.0
HATJ	Hateruma jima	1.42	91	P	Pn	17 58 01.4	+0.4
HATJ				*e*S	Sn	17 58 19.8	+0.9
EDH	Donghe	1.42	218	*e*S	Sn	17 58 16.7	-2.3
	baz=201						
WJS	Zhushan	1.42	259	*e*S	Sb	17 58 23.3	+3.1
	baz=255						
ALS	Alishan	1.45	247	*e*P	Pb	17 58 02.9	-0.2
	baz=241						
ALS				*e*S	Sn	17 58 19.7	-0.5
	baz=241						
ELDTW	Lidau	1.45	232	*e*P	Pn	17 58 01.0	-0.5
	baz=226						
ELDTW				*e*S	Sn	17 58 19.4	-0.6
	baz=226						
CHN5	Tsauling	1.53	251	*e*P	Pb	17 58 04.3	0.0
	baz=234						
CHN5				*e*S	Sb	17 58 23.6	+0.3
	baz=234						
LONT	Longtian	1.57	221	*e*P	Pn	17 58 03.3	+0.2
	baz=205						
LONT				*e*S	Sn	17 58 23.5	+0.7
	baz=205						
JKRS	Kuro-shima	1.61	85	P	Pn	17 58 04.6	+1.0
JKRS				S	Sn	17 58 24.0	+0.4
STYT	Tauyuan	1.66	236	*e*P	Pb	17 58 06.0	-0.5
	baz=221						
STYT				*e*S	Sb	17 58 26.4	-0.6
	baz=221						
TWGBT	Beinan	1.67	220	*e*P	Pn	17 58 04.6	+0.1
	baz=215						
TWGBT				*e*S	Sn	17 58 24.1	-1.1
	baz=215						
TWG	Pinlang	1.67	221	*e*S	Sn	17 58 23.9	-1.3
	baz=215						
TPUB	Ta-pu	1.69	242	*e*P	Pb	17 58 06.6	-0.4
	baz=238						
TPUB				*e*S	Sb	17 58 27.8	0.0
	baz=238						
CHN4	Tsaushan	1.69	244	*e*P	Pb	17 58 07.3	+0.2
	baz=228						
CHN4				*e*S	Sb	17 58 29.1	+1.0
	baz=228						
WTP	Ta-pu	1.73	241	*e*P	Pb	17 58 07.4	-0.3
	baz=236						
WTP				*e*S	Sb	17 58 30.2	+1.2
	baz=236						
JIJ	Ishigaki jima	1.74	81	P	Pn	17 58 05.7	+0.2
JIJ				*e*S	Sn	17 58 26.1	-0.9
JISG	Ishigakijimahi	1.94	75	P	Pn	17 58 07.5	-0.6
JISG				S	Sn	17 58 30.3	-1.4

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*AEIC **31** 18:03:12±4.5, 56°.48N±0°.04×169°.1W±0°.1, h4^{km}±6^{km}, Error ellipse: s-maj=9.6km s-min=5.9km az=67.0*

*NEIC **31** 18:03:13.6±2.6, 56°.62N±0°.05×169°.12W±0°.08, h7^{km}±3^{km}, ML3.6/20(AEIC), Error ellipse: s-maj=8.5km s-min=5.4km az=216.0*

*IDC **31** 18:03:14.1±2.9, 56°.51N×168°.97W, h0^{km}, mb3.4/2, mb1 3.8/6, mb1mx3.3/62, mbtmp3.6/6, ML3.2/4, Error ellipse: s-maj=68.5km s-min=21.0km az=171.0*

ISC 31 18:03:14.4±0.7**, 56°.63N**±0°.06×**168°.98W**±0°.06**, h10**^{km}**, n64,** σ**1^{s}.32**/69**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.89	309		Pg	18 03 30.2	-1.3
SPIA					Sg	18 03 43.4	+0.4
AKGG	Akutan Green G	2.97	144		Pn	18 04 00.7	-0.9
MSW	Makushin Switc	3.00	154		Pn	18 04 01.6	-0.4
MSW					Sn	18 04 40.3	+2.5
AKRB	Akutan Reef Bi	3.00	145		Pn	18 04 02.2	+0.2
AKLV	Akutan Long Va	3.01	144		Pn	18 04 01.1	-1.1
AKMO	Akutan Morgan	3.06	145		Pn	18 04 02.9	+0.2
AKMO					Sn	18 04 39.6	+0.3
MAPS	Pakushin South	3.06	157		Pn	18 04 02.9	+0.1
MGOD	Makushin Gods	3.08	156		Pn	18 04 03.2	0.0
MGOD					Sn	18 04 39.5	-0.6
AKUT	Akutan	3.10	142	Pn	Pn	18 04 03.8	+0.5
UNV	Unalaska Valle	3.13	152		Pn	18 04 03.2	-0.5
UNV					Sn	18 04 40.3	-0.8
WEBT	Westdahl Beart	3.15	129		Pn	18 04 03.7	-0.4
OKWE	Okmok W'ng Wal	3.19	172		Pn	18 04 03.0	-1.6
OKSP	Okmok Steeple	3.41	173		Pn	18 04 06.1	-1.5
FALS	False Pass	3.61	117	Pn	Pn	18 04 11.8	+1.5
NIKH	Nikolski High	3.66	179		Pn	18 04 10.5	-0.6
SDPT	Sand Point	4.95	101	Pn	Pn	18 04 28.8	+0.1
ATKA	Atka Island	5.38	217		Pn	18 04 35.4	+0.8
CNBA	Chernabura Isl	5.61	105	Pn	Pn	18 04 39.6	+1.8
CHGN	Chignik	5.87	89	Pn	Pn	18 04 41.4	+0.1
ADK	Adak	6.55	227	Pn	Pn	18 04 49.2	-1.5
GAMB	Gambell	7.30	350	Pn	Pn	18 04 59.0	-1.9
ANM	Nome	8.16	11		Pn	18 05 12.7	-0.1
OHAK	Old Harbor	8.61	79	Pn	Pn	18 05 19.5	+0.6
AMKA	Amchitka	8.67	238		Pn	18 05 22.0	+2.2
KDAK	Kodiak Island	8.98	76	Pn	Pn	18 05 26.3	+2.4
	0.8nm,0.3s,baz=270,slow=10,SNR=8.7						
KDAK	Kodiak Island	8.98	76		Pn	18 05 26.1	+2.1
TTA	Tatalina	9.08	41	Pn	Pn	18 05 25.6	+0.1
RSO	Redoubt South	9.31	59	Pn	Pn	18 05 30.3	+1.6
CNPM	China Poot	9.83	65	Pn	Pn	18 05 38.3	+2.5
SPU	Mount Spurr	9.86	55	Pn	Pn	18 05 37.6	+1.4
BRLK	Bradley Lake	10.05	64	Pn	Pn	18 05 39.3	+0.6
SKT	Skwentna	10.39	52	Pn	Pn	18 05 45.0	+1.6
PPLA	Purkeypile	10.52	46	Pn	Pn	18 05 46.9	+1.7
KTH	Kantishna Hill	11.35	45	Pn	Pn	18 05 55.8	-0.6
TRF	Thorofare Moun	11.55	46	Pn	Pn	18 05 58.3	-1.0
KNK	Knik Glacier	11.59	57	Pn	Pn	18 06 01.6	+1.9
BPAW	Bear Paw Mtn.	11.60	42	Pn	Pn	18 06 00.6	+0.7
IMAR	Indian Mountai	11.86	32	Pn	Pn	18 06 02.9	-0.5
SCM	Sheep Creek Mo	12.22	56	Pn	Pn	18 06 07.2	-1.2
DHY	Denali Highway	12.59	50	Pn	Pn	18 06 10.8	-2.7
KLU	Klutina	12.79	58	Pn	Pn	18 06 15.8	-0.4
M24K	Tolsona, Glenn	12.82	55	Pn	Pn	18 06 16.1	-0.4
WRH	Wood River Hil	12.88	44	Pn	Pn	18 06 18.5	+1.2
MDM	Murphy Dome	13.07	42	Pn	Pn	18 06 19.4	-0.5
ILAR	Eielson Array	13.48	44	Pn	Pn	18 06 25.9	+0.3
	0.0nm,0.3s,baz=229,slow=9.5,SNR=1.8						
GLB	Gilahina Butte	13.78	59	Pn	Pn	18 06 30.4	+0.8
RIDG	Independent Ri	13.89	49	Pn	Pn	18 06 30.3	-0.8
DOT	Dot Lake	14.19	50		Pn	18 06 37.0	+1.7
ISLE	Juniper Island	14.39	63	Pn	Pn	18 06 37.7	-0.4
BALM	Baldy	14.43	61	Pn	Pn	18 06 39.1	+0.5
MESA	MESA	14.56	65	Pn	Pn	18 06 40.5	0.0
YAH	Yahtse	14.67	64	Pn	Pn	18 06 40.3	-1.7
BARN	Barnard Glacie	14.76	61	Pn	Pn	18 06 39.9	-3.3
CTGM	Chitina Glacie	14.91	62	Pn	Pn	18 06 42.5	-2.7
BCAR	Beaver Creek A	15.02	53		Pn	18 06 46.9	+0.4
BMAR	Burnt Mountain	15.62	36	P	P	18 06 57.5	-1.0
HYT	Haines Junctio	16.77	62		Pn	18 07 10.7	+1.4
WHY	Whitehorse	18.07	63	P	P	18 07 26.7	+1.0
PETK	Petropavlovsk-	19.38	274	P	Pn	18 07 42.8	+1.6
	0.1nm,0.3s,baz=85,slow=13,SNR=6.1						
PETK	Petropavlovsk-	19.38	274	P	P	18 07 38.9	-1.2
INK	Inuvik	19.77	40	P	P	18 07 45.4	+1.1
	0.2nm,0.3s,baz=226,slow=9.0,SNR=10						
CRAG	Craig	19.93	78	P	P	18 07 46.7	+0.7
SEY	Seymchan	20.19	304	P	P	18 07 49.3	+0.5
	1.5nm,0.8s,baz=84,slow=15,SNR=5.3						
YKA	Yellowknife Ar	27.43	55	P	P	18 09 01.3	+1.4
	0.5nm,0.8s,baz=282,slow=7.9,SNR=4.1						

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*THR **31** 18:06:00.2±0.3, 37°.31N×54°.51E, h18^{km}±9^{km}, ML4.0*

*TEH **31** 18:06:03.0, 37°.28N×54°.46E, h19^{km}, ML4.1*

*IDC **31** 18:06:05.5±1.0,36°.97N×54°.61E,h37^{km}±6^{km},mb3.5/13,mb1 3.6/18,mb1mx3.5/44,mbtmp3.6/18,ML2.9/4,Error ellipse: s-maj=20.1km s-min=13.1km az=11.0*

ISC 31 18:06:03.0±0.5,37°.30N±0°.05×54°.47E±0°.04,h10^{km},n77,σ2^{s}01/81,mb3.5/13,Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.95	213	ePg	Pg	18 06 20.8	-0.4
IGLO				e		18 06 39.3	
	comp=Z,99nm,0.4s						
ISHM	Shahmirzad	1.77	213	ePn	Pn	18 06 35.2	+1.3
ISHM				e		18 07 03.2	
	comp=Z,99nm,0.3s						
IANJ	Anjilo	1.89	194	ePn	Pn	18 06 36.8	+1.3
IANJ				e		18 07 03.9	
	comp=Z,99nm,0.2s						
IPRN	Peran	2.01	239	ePn	Pn	18 06 37.2	+0.1
IFIR	Firoozkooh	2.16	220	ePn	Pn	18 06 40.6	+1.4
ILAS	Lasjerd	2.27	213	ePn	Pn	18 06 42.1	+1.3
ILAS				e		18 07 13.5	
	comp=Z,99nm,0.3s						
DAMV	Damavand	2.61	231	eSg	Sb	18 07 23.1	+0.7
DAMV				IAML		18 07 33.2	
	comp=E,440nm,0.2s						
SBZV	Sabzevar	2.68	109	ePn	Pn	18 06 47.0	+0.6
TEH	Tehran	2.94	239	e	Sb	18 07 47.4	+16
	comp=Z,99nm,0.6s						
GEYT	Alibeck	2.97	77	Pn	Pn	18 06 51.4	+1.3
	comp=Z,1.9nm,0.3s,baz=242,slow=15,SNR=26						
GEYT				Lg	Lg	18 07 45.4	
	comp=Z,4.5nm,0.3s,baz=343,slow=40,SNR=1.7						
CHTH	Charan	3.03	244	eSg	Sb	18 07 35.8	+1.6
QALM	Alamut, Qazvin	3.18	255	ePn	Pn	18 06 53.6	+0.2
IVRN	Varamin	3.19	225	ePn	Pn	18 06 53.9	+0.5
THKV	Tehran--Karaj	3.20	245	IAML		18 07 52.0	
	comp=N,303nm,0.3s						
IAKL	Akhelmad	3.51	100	ePn	Pn	18 06 58.4	+0.6
IAKL				e		18 07 41.3	
	comp=Z,99nm,0.5s						
IGZV	Ghazvin	3.53	256	ePn	Pn	18 06 59.4	+1.3
IGZV				e		18 08 05.4	
	comp=Z,99nm,0.3s						
IQOM	Qom	3.69	229	ePn	Pn	18 07 01.0	+0.7
IQOM				e		18 08 07.5	
	comp=Z,99nm,0.5s						
IPAY	Payeh	3.73	102	ePn	Pn	18 07 00.4	-0.5
TNSJ	Nastanj	3.76	152	ePn	Pn	18 07 01.7	+0.5
TNSJ				e		18 08 02.4	
	comp=Z,99nm,0.5s						
GHVR	GHOM	3.81	223	ePn	Pn	18 07 00.9	-1.0
GHVR	GHOM	3.81	223	ePn	Pn	18 07 00.9	-1.0
KRSH	Karshahi	3.83	210	ePn	Pn	18 07 02.2	0.0
IKRD	Kardeh	4.07	96	ePn	Pg	18 07 07.5	+1.6
IRAZ	Razeghan	4.12	244	ePn	Pn	18 07 07.8	+1.6
IRAZ				e		18 08 22.6	
	comp=Z,99nm,0.5s						
ANAR	Anarak	4.15	189	ePn	Pn	18 07 06.7	+0.2
TABS	Tabas	4.24	149	ePn	Pn	18 07 06.2	-1.6
TABS	Tabas	4.24	149	ePn	Pn	18 07 06.2	-1.6
QABG	Abgarm-Qazvin	4.24	249	ePn	Pn	18 07 07.7	-0.2
TKDS	Koohdasht(Taba	4.27	149	ePn	Pn	18 07 08.4	+0.2
TKDS				e		18 08 31.6	
	comp=Z,99nm,0.6s						
QAM	Ghamsar	4.31	216	ePn	Pn	18 07 09.0	+0.2
IKLH	Kolahrood	4.62	212	ePn	Pn	18 07 13.0	-0.1
IMYA	Miami	4.62	100	ePn	Pn	18 07 13.9	+0.8
NASN	Na'in	4.69	197	ePn	Pn	18 07 12.8	-1.4
NASN	Na'in	4.69	197	ePn	Pn	18 07 12.8	-1.4
LKRN	Lenkeran, Azer	4.71	289	ePn	Pn	18 07 13.8	-0.2
IZEF	Zefreh	4.73	202	ePn	Pn	18 07 14.7	0.0
YZKH	Yazd	4.90	179	ePn	Pn	18 07 15.5	-1.4
YZKH	Yazd	4.90	179	ePn	Pn	18 07 15.5	-1.4
LRK	Lerik	5.02	287	ePn	Pn	18 07 18.4	-0.1
ICHK	Chekchek	5.05	181	ePn	Pn	18 07 19.4	+0.5
GLBA	Clilabad	5.16	294	ePn	Pn	18 07 20.7	+0.5
IGAR	Gharneh	5.28	203	ePn	Pn	18 07 24.1	+2.0
AFRZ	Afriz	5.36	135	ePn	Pn	18 07 23.8	+0.6
ISRB	Sarab	5.43	278	ePn	Pn	18 07 25.1	+0.9
IPIR	Pirpir	5.46	214	ePn	Pn	18 07 27.2	+2.5
ITEG	Tejag	5.62	140	ePn	Pn	18 07 27.0	+0.1
IRAM	Ramesheh	5.74	198	ePn	Pn	18 07 29.2	+0.7
PQL	Pirkuli	5.75	309	ePn	Pn	18 07 30.3	+1.8
IBAF	Bafgh	5.77	171	ePn	Pn	18 07 29.4	+0.6
SHK1	Shahrekord	5.77	212	ePn	Pn	18 07 29.4	+0.5
IMEH	Mehriz	5.90	179	ePn	Pn	18 07 31.2	+0.5
IHRS	Heris	5.96	282	ePn	Pn	18 07 32.4	+0.8
IKOO	Kooshah	6.13	141	ePn	Pn	18 07 34.3	+0.4
BSRN	Basiran	6.56	143	ePn	Pn	18 07 38.2	-1.5
BSRN	Basiran	6.56	143	ePn	Pn	18 07 38.2	-1.5
KLNJ	Kolanjah	6.71	202	ePn	Pn	18 07 43.4	+1.4
IMRD	Marand	7.06	284	ePn	Pn	18 07 49.1	+2.5
NHDN	Nehbandan	7.49	140	ePn	Pn	18 07 53.0	+0.6
GNI	Garni	8.12	293	Pn	Pn	18 08 08.2	+7.2
	comp=Z,0.3nm,0.3s,baz=197,slow=19,SNR=1.9						
GNI				Sn	Sn	18 09 38.0	+5.1
	comp=Z,1.0nm,0.3s,baz=90,slow=21,SNR=1.7						
KBZ	Khabaz	10.89	310	Pn	Pn	18 08 40.2	+1.3
	comp=Z,0.2nm,0.3s,baz=152,slow=12,SNR=5.5						
KBZ				Sn	Sn	18 10 36.4	-4.3
	comp=Z,0.3nm,0.3s,baz=287,slow=23,SNR=2.2						
AKTO	Aktyubinsk	13.37	10	Pn	Pn	18 09 13.4	+0.7
	comp=Z,0.3nm,0.3s,baz=193,slow=13,SNR=9.2						
AKTO				Sn	Sn	18 11 33.3	-8.1
	comp=Z,0.6nm,0.3s,baz=75,slow=22,SNR=6.1						
BELG	Belogornoye	15.84	344	Pn	Pn	18 09 44.3	-1.6
	comp=Z,0.6nm,0.3s,baz=26,slow=5.0,SNR=4.2						
BELG				Sn	Sn	18 12 32.9	-8.5
	comp=Z,0.9nm,0.3s,baz=29,slow=23,SNR=6.7						
BVAR	Borovoye Array	19.25	30	P	P	18 10 28.5	+1.2
	comp=Z,0.1nm,0.3s,baz=188,slow=9.0,SNR=4.2						
ARU	Arti	19.33	7	P	Pn	18 10 31.7	+2.4
	comp=Z,0.0nm,0.3s,baz=231,slow=12,SNR=3.7						
KIRV	Kirov	21.55	353	P	P	18 10 53.1	+0.9
	comp=Z,4.1nm,0.5s,baz=275,slow=10,SNR=2.6						
KURBB	Kurchatov Arra	21.73	45	P	P	18 10 55.9	+1.7
	comp=Z,0.2nm,0.3s,baz=244,slow=11,SNR=6.4						
AKASG	Malin Array Be	22.43	315	P	P	18 11 04.7	+3.0
	comp=Z,0.8nm,0.4s,baz=108,slow=10,SNR=5.8						
MKAR	Makanchi Array	22.63	56	P	P	18 11 04.9	+0.9
	comp=Z,0.8nm,0.7s,baz=255,slow=8.7,SNR=8.3						
MKAR				ScP	ScP	18 18 27.6	-6.7
	comp=Z,0.3nm,0.8s,baz=242,slow=2.6,SNR=3.6						
MLR	Muntele Rosu	22.82	300	P	P	18 11 08.5	+2.4
	comp=Z,2.3nm,0.8s,baz=82,slow=3.8,SNR=3.6						
ZALV	Zalesovo Beam	26.69	42	P	P	18 11 42.2	+0.2
	comp=Z,0.4nm,0.5s,baz=265,slow=13,SNR=2.1						
CMAR	Chiang Mai Arr	43.12	103	P	P	18 13 60.0	-3.7
	comp=Z,0.3nm,0.6s,baz=297,slow=8.1,SNR=3.3						
CMAR				pP	sP	18 14 11.8	+3.8
	comp=Z,0.6nm,0.7s,baz=300,slow=8.5,SNR=4.7						
ESDC	Sonseca Array	45.10	292	P	P	18 14 18.8	-0.6
	comp=Z,1.3nm,1.0s,baz=74,slow=8.4,SNR=2.2						
TORD	Torodi Ar. Bea	52.67	257	P	P	18 15 16.7	-1.1
	comp=Z,0.6nm,0.6s,baz=46,slow=8.3,SNR=2.4						
ILAR	Eielson Array	76.88	9	P	P	18 17 55.3	+0.4
	comp=Z,0.3nm,0.7s,baz=284,slow=2.3,SNR=4.5						
ILAR				pP	PcP	18 18 06.3	+0.2
	comp=Z,0.5nm,1.0s,baz=347,slow=7.7,SNR=3.3						
YKA	Yellowknife Ar	80.16	355	P	P	18 18 12.3	-0.6
	comp=Z,0.3nm,0.6s,baz=14,slow=6.4,SNR=6.8						
YKA				pP	PcP	18 18 23.8	+3.5
	comp=Z,0.9nm,0.7s,baz=11,slow=6.4,SNR=5.4						
WRA	Warramunga Arr	94.17	112	P	P	18 19 19.9	-2.4
	comp=Z,0.9nm,1.1s,baz=306,slow=6.1,SNR=2.5						
ASAR	Alice Springs	96.13	115	P	P	18 19 28.8	-2.4
	comp=Z,0.9nm,1.1s,baz=310,slow=4.5,SNR=2.6						

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*TIF **31** 18:26:11.0,41°.75N×46°.02E,h46^{km}*
*MOS **31** 18:26:12.2±0.0,41°.94N×45°.78E,h24^{km},MPVA3.3*
*NORS **31** 18:26:14.0±0.0,41°.92N×45°.78E,h23^{km},MPVA3.3*

ISC 31 18:26:12.5±1.1,41°.89N±0°.03×45°.75E±0°.02,h11^{km}±10^{km},n21,σ0^{s}71/41,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.37	99	P	Pg	18 26 19.4	-0.4
LGD				S	Sg	18 26 25.3	+0.5
DDFL	Dedoflistskaro	0.53	148	P	Pn	18 26 25.7	-0.3
BTNK	Botanikuri	0.74	254	P	Pn	18 26 28.9	0.0
BTNK				S	Sn	18 26 41.9	+1.6
BTLR	Botlikh	0.84	24	ePg	Pb	18 26 28.1	-1.1
BTLR				eSg	Sg	18 26 39.2	-0.6
DVE	Vedeno	1.10	14	ePg	Pb	18 26 33.3	-0.2
DVE				eSg	Sb	18 26 47.7	-0.1
ARKR	Arakani	1.16	52	ePg	Pn	18 26 34.3	-0.4
ARKR				eSg	Sn	18 26 50.4	-0.3
KRNR	Karanay	1.27	42	ePg	Pb	18 26 36.9	+0.5
KRNR				eSg	Sb	18 26 52.7	0.0
DMNI	Dmanisi	1.30	245	P	Pn	18 26 35.3	-1.4
DMNI				S	Sb	18 26 53.9	+0.1
GROC	Groznyy	1.31	1	ePg	Pb	18 26 37.3	+0.2
GROC				eSg	Sg	18 26 55.8	+1.2
DBC	Dubki	1.38	35	ePg	Pg	18 26 39.9	+1.0
DBC				eSg	Sg	18 26 56.9	+0.1
LACR	Lac	1.43	311	ePg	Pn	18 26 37.3	-1.2
LACR				eSg	Sn	18 26 56.5	-0.8
AKT	Akhty	1.54	105	ePg	Pb	18 26 40.7	-0.3
AKT				eSg	Sg	18 27 02.0	+0.1
ZEI	Tsey	1.64	304	ePg	Pn	18 26 41.9	+0.4
ZEI				eSg	Sb	18 27 03.7	+0.2
BKRG	Bakuriani	1.67	266	P	Pn	18 26 42.1	+0.3
BKRG				S	Sb	18 27 05.8	+1.2
ARNR	Ardon	1.68	320	ePg	Pb	18 26 43.5	+0.1
ARNR				eSg	Sg	18 27 06.0	-0.5
KORR	Kora	1.72	314	ePg	Pb	18 26 43.7	-0.5
KORR				eSg	Sg	18 27 07.3	-0.6
BGD	Bogdanovka	1.73	249	P	Pb	18 26 44.2	-0.3
BGD				S	Sb	18 27 06.9	+0.6
AKH	Akhalkalaki	1.76	255	P	Pn	18 26 43.0	-0.1
AKH				S	Sb	18 27 06.6	-0.5
ONI	Oni	1.84	293	P	Pb	18 26 45.4	-0.7
ONI				S	Sb	18 27 10.4	+1.1
ONI	Oni	1.84	293	ePg	Pb	18 26 45.5	-0.7
ONI				eSg	Sb	18 27 10.2	+0.8
DIGR	Digorskoe uzhe	1.90	303	ePg	Pb	18 26 46.3	-0.9
DIGR				eSg	Sb	18 27 11.2	+0.2

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*IDC **31** 18:55:41.8±0.6,7°.74N×82°.84W,h0^{km},mb4.1/17,mb1 4.3/22,mb1mx4.2/41,mbtmp4.2/22,ML3.4/5,MS4.7/15,Ms1 4.7/15,ms1mx4.5/26,Error ellipse: s-maj=23.8km s-min=12.4km az=51.0*

*UCR **31** 18:55:41.6±2.1,7°.64N×82°.90W,h9^{km}±11^{km},ML4.4,MW4.9,mb5.3(NEIC)*

*NEIC **31** 18:55:44.0±2.2,7°.72N±0°.06×82°.95W±0°.07,h16^{km}±4^{km},mb4.8/68,Mwb5.3/16,Mwc5.2(GCMT),Error ellipse: s-maj=10.9km s-min=8.2km az=52.0*

*UPA **31** 18:55:44.0±2.1,7°.74N×82°.85W,h20^{km}±21^{km},MW5.6*

*NEIC **31** 18:55:45.4,7°.75N×82°.96W,h20^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.16; $M_{\theta\theta}$-2.79; $M_{\phi\phi}$-0.37; $M_{r\theta}$1.68; $M_{\theta\phi}$9.27; $M_{\phi r}$0.31; Fault plane solution: $M_0$9.89000×10^{16} NP1:ϕ_s355.59000°,δ76.16000°,λ172.13000°. NP2:ϕ_s87.49000°,δ82.36000°,λ13.97000°. Principal axes: T 8.1303, Plg15.0000°, Azm312.0000°; N 2.8738, Plg74.0000°, Azm116.0000°; P -11.0042, Plg4.0000°, Azm221.0000°;*

*GCMT **31** 18:55:46.0±0.2,7°.68N±0°.01×82°.93W±0°.01,h12^{km},MW5.2/131,Moment Tensor Solution. s74,c97; s131,c221; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.02±.17; $M_{\theta\theta}$-1.63±.17; $M_{\phi\phi}$3.65±.19; $M_{r\theta}$1.85±.44; $M_{\theta\phi}$7.59±.14; $M_{\phi r}$-0.57±.43; Best double couple: $M_0$8.35500×10^{16} NP1:ϕ_s352.00000°,δ75.00000°,λ-169.00000°. NP2:ϕ_s259.00000°,δ80.00000°,λ-15.00000°. Principal axes: T 9.0800, Plg3.0000°, Azm306.0000°; N -1.4490, Plg71.0000°, Azm45.0000°; P -7.6310, Plg18.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **31** 18:55:48,7°.68N×82°.92W,h12^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-2.54; $M_{\theta\theta}$-1.42; $M_{\phi\phi}$3.96; $M_{r\theta}$1.88; $M_{\theta\phi}$7.85; $M_{\phi r}$-2.17; Fault plane solution: $M_0$9.05000×10^{16} NP1:ϕ_s258.00000°,δ70.00000°,λ-16.00000°. NP2:ϕ_s354.00000°,δ75.00000°,λ-159.00000°. Principal axes: T 9.6069, Plg3.0000°, Azm125.0000°; N -1.2367, Plg64.0000°, Azm28.0000°; P -8.3702, Plg26.0000°, Azm217.0000°;*

ISC 31 18:55:43.0±1.4,7°.73N±0°.04×82°.90W±0°.04,h9^{km}±8^{km},n278,σ1^{s}72/270,mb4.7/40,MS4.6/17,18C-9D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCOL	Caracol de Cor	0.67	354	eP	Pg	18 55 56.0	-0.1
CCOL				eS	Sn	18 56 08.7	-0.7
PIRO	Carate, Puerto	0.79	327	⇑iP	Pg	18 55 57.8	-0.5
PIRO	Carate, Puerto	0.79	327	eP	Pg	18 55 57.7	-0.6
PIRO				eS	Sn	18 56 11.0	-1.3
PEDE3	Pedregal, Chir	0.80	36	⇓iP	Pb	18 55 59.8	+0.7
BAGA3	Bagala, Chiriq	0.82	27	⇑iP	Pb	18 55 58.5	-0.9
LOCO3	Loma Colorada,	0.83	35	⇑iP	Pb	18 55 58.2	-1.3
CDITO	Canoas	0.83	2	⇑iP	Pb	18 55 58.5	-1.2
CDITO				eS	Sb	18 56 07.7	-3.3
LOMA3	Las Lomas, Chi	0.86	36	eP	Pb	18 55 58.9	-1.2
CHIR3	Chiriqui UPA,	0.87	41	⇑iP	Pb	18 55 58.6	-1.6
CHIR3				i S	Sb	18 56 04.5	-7.5
GUAL3	Gualaca, Chiri	0.99	37	i P	Pb	18 56 01.1	-1.3
GUAL3				i S	Sb	18 56 07.5	-8.2
PTAR3	Potrerillos Ar	1.03	23	⇑eP	Pb	18 56 01.9	-1.3
BCO2	Palmira	1.05	21	⇑eP	Pb	18 56 01.9	-1.5
BCO2				eS	Sb	18 56 17.1	-0.2
MLIR3	Monte Lirio, C	1.06	4	⇑eP	Pb	18 56 02.9	-0.7
MLIR3				eS	Sb	18 56 16.0	-1.5
BRU2	Volcan	1.07	11	⇑iP	Pb	18 56 02.6	-1.3
BRU2				i S	Sb	18 56 17.8	-0.3
BRU2				eS	Sg	18 56 19.0	+1.3
BRU2	Volcan	1.07	11	eP	Pb	18 56 02.5	-1.3
BRU2				eS	Sb	18 56 17.8	-0.3
EDSV	San Vito	1.08	356	eP	Pb	18 56 03.0	-1.0
PSOM3	Paja de Sombre	1.11	31	⇓eP	Pn	18 56 02.4	-2.4
BC3P	Paso Ancho	1.11	15	⇑iP	Pb	18 56 03.0	-1.6
BC3P				i S	Sb	18 56 17.8	-1.5
RIOS	Rincon, Osa	1.14	328	eP	Pb	18 56 02.8	-2.0
LNBQ3	Los Naranjos,	1.15	23	⇓eP	Pn	18 56 03.3	-2.1
NANC3	Nancito, Chiri	1.26	66	⇓eP	Pn	18 56 04.0	-2.9
PVID3	Puerto Vidal,	1.32	76	eP	Pn	18 56 04.8	-2.8
POTG	Potrero Grande	1.33	351	eP	Pn	18 56 06.6	-1.2
EDPN	Palmar Norte	1.34	336	eP	Pn	18 56 06.3	-1.6
EDPN				eS	Sb	18 56 26.0	+0.4
CHGR2	Aguacate	1.41	32	eP	Pn	18 56 07.8	-1.1
EDBA	Buenos Aires	1.47	345	eP	Pn	18 56 09.0	-0.7
DRK0	Durika	1.56	347	⇑eP	Pn	18 56 09.8	-1.3
DRK0	Durika	1.56	347	eP	Pn	18 56 09.8	-1.3
GMAL	Guarumal, Vera	1.66	89	⇑eP	Pn	18 56 08.4	-3.9
GMAL	Guarumal, Vera	1.66	89	eP	Pn	18 56 08.7	-3.6
EDLM	Las Mercedes	1.68	336	eP	Pn	18 56 12.0	-0.6
CNI2	El Empalme, Bo	1.73	14	⇓eP	Pn	18 56 12.7	-0.6
RSUS3	Rio de Jesus,	1.74	82	⇑eP	Pn	18 56 11.5	-2.0
MESA3	La Mesa, Verag	1.75	76	⇑iP	Pn	18 56 11.9	-1.6
EDDO	Dominical	1.78	328	eP	Pn	18 56 12.8	-1.2
EDDO				eS	Sb	18 56 38.9	+0.5
CNAZ3	Canazas, Verag	1.79	70	eP	Pn	18 56 12.4	-1.6
PEZE	Perez Zeledon,	1.81	335	eP	Pn	18 56 13.6	-0.9
RGM0	Gandoca	1.87	9	eP	Pn	18 56 16.6	+1.5
RGM0	Gandoca	1.87	9	eP	Pn	18 56 16.4	+1.2
MARI3	Mariato, Verag	1.90	92	eP	Pn	18 56 13.5	-2.1
STIA3	Santiago, Vera	1.95	79	⇓eP	Pn	18 56 14.7	-1.6
SFRA3	San Francisco,	1.98	75	⇓eP	Pn	18 56 15.4	-1.3
CACAO	El Cacao, Vera	2.06	101	eP	Pn	18 56 14.4	-3.4
OCU3	Ocu, Herrera	2.12	84	⇓eP	Pn	18 56 16.8	-1.8
CALO3	Calobre, Verag	2.12	74	⇓eP	Pn	18 56 12.4	-6.3
RIMA	Rio Macho	2.23	335	eP	Pn	18 56 19.7	-0.7
LCR2	La Lucha 2	2.27	331	eP	Pn	18 56 20.2	-0.7
BATAN	Batan	2.40	349	i P	Pn	18 56 22.9	+0.4
CVTR	Volcan Turrial	2.42	340	eP	Pn	18 56 23.2	0.0
SJS	Escuela Geolog	2.47	333	eP	Pn	18 56 23.3	-0.3
CHIT3	Chitre	2.47	85	eP	Pn	18 56 23.4	-0.1
HDC	Heredia	2.55	332	⇑iP	Pn	18 56 24.9	+0.2
HDC	Heredia	2.55	332	eP	Pn	18 56 24.6	-0.1
HDC	Heredia	2.55	332		Pn	18 56 24.6	-0.1
HDC				Sn	Sn	18 56 56.6	+0.6
HDC3	Heredia 3	2.55	332	eP	Pn	18 56 24.6	-0.1
JACO	JACO, Garabito	2.59	318	eP	Pn	18 56 23.4	-1.7
AZU	Azuero	2.60	89	⇑eP	Pn	18 56 23.4	-2.0
	baz=261,slow=16						
AZU	Azuero	2.60	89	eP	Pn	18 56 22.9	-2.4
AZU	Azuero	2.60	89	eP	Pn	18 56 23.2	-2.1
PNME	Penonome	2.66	73	eP	Pn	18 56 26.1	+0.1
PNME	Penonome	2.66	73	eP	Pn	18 56 24.7	-1.4
PCRI3	Pocri, Los San	2.76	91	eP	Pn	18 56 27.8	+0.3
SRA1	San Ramn	2.81	326	eP	Pn	18 56 27.3	-1.0
LAFE	Finca La Fe, P	2.86	316	eP	Pn	18 56 27.4	-1.5
VTON	El Valle, Cocl	2.90	72	eP	Pn	18 56 26.0	-3.4
CASO	Castillo	3.24	326	i P	Pn	18 56 36.1	+2.1
ZANG	Zanguenga, Cho	3.24	68	eP	Pn	18 56 38.1	+4.1
JTS	Las Juntas de	3.25	322		Pn	18 56 33.1	-1.1
ARE1	Arenal 1	3.25	327	eP	Pn	18 56 34.5	+0.2
CEDE	Laguna Cedeo	3.26	327	eP	Pn	18 56 34.3	-0.2
CHOR3	La Chorrera	3.31	69	eP	Pn	18 56 39.2	+4.1
BCIP	Isla Barro Col	3.35	65	eP	Pn	18 56 38.1	+2.5
BCIP	Isla Barro Col	3.35	65	Pn	Pn	18 56 38.1	+2.5
BCIP	Isla Barro Col	3.35	65	eP	Pb	18 56 42.7	+0.1
MLIR	Monte Lirio	3.37	63	⇑eP	Pb	18 56 43.2	+0.3
ARRA3	Arraijan, Pana	3.44	69	eP	Pb	18 56 44.0	-0.1
DUNO	Dulce Nombre,	3.46	313	eP	Pn	18 56 36.2	-0.9
FRIJ	El Hiral	3.47	65	eP	Pn	18 56 39.0	+1.7
TABO3	Taboga, Panama	3.48	72	eP	Pb	18 56 44.3	-0.5
PLVR	Palo Verde	3.55	317	eP	Pn	18 56 36.6	-1.8
UPA	Univ. de Panam	3.56	69	eP	Pb	18 56 44.9	-1.2
UPA	Univ. de Panam	3.56	69	eP	Pn	18 56 42.9	+4.5
GUAI	GUAI	3.60	315	i P	Pn	18 56 38.5	-0.6
GUAI				i S	Sn	18 57 21.6	-0.2
CUI	Cuipilapa	3.66	323	eP	Pn	18 56 39.5	-0.4
COLC	Colonia	3.69	322	i P	Pn	18 56 40.9	+0.6
LIM1	Limonal	3.75	322	i P	Pn	18 56 41.3	+0.2
LAPC	Finca la Perla	3.92	321	i P	Pn	18 56 42.6	-0.8
GB1A	Borinquen Arri	3.93	321	i P	Pn	18 56 42.5	-1.2
BUAI	Buenos Aires	3.94	323	i P	Pn	18 56 42.8	-0.9
CNTA3	Canitas, Panam	4.24	69	eP	Pn	18 56 50.4	+2.6
ESPN	Las Esperanzas	4.64	343	eP	Pn	18 56 52.5	-0.8
ESPN	Las Esperanzas	4.64	343		Pn	18 56 53.0	-0.3
ACON	Acoyapa	4.77	332	eP	Pn	18 56 54.8	-0.2
ACON	Acoyapa	4.77	332		Pn	18 56 54.8	-0.2
UPD2	Meteti	4.91	80	eP	Pn	18 57 00.7	+3.7
UPD2	Meteti	4.91	80	eP	Pn	18 57 03.7	+6.7
PTAC	Punta Ardita,	5.08	96	eP	Pn	18 56 58.9	-0.6
SOLC	Bahia Solano	5.66	105	eP	Pn	18 57 03.6	-3.7
CRIN	San Cristobal	6.40	321		Pn	18 57 16.3	-1.3
DBBC	Dabeiba	6.68	96	eP	Pn	18 57 19.3	-2.1
CBOC	Ciudad Bolivar	7.09	105	eP	Pn	18 57 24.3	-2.9
PLMC	San Jos del P	7.15	113	eP	Pn	18 57 22.7	-5.3
MOTC	Monteria, Cord	7.24	81	eP	Pn	18 57 35.1	+6.1
LCND	La Caada	7.40	319	eP	Pn	18 57 32.9	+1.6
LCND				IAML		19 00 11.4	
	comp=Z,158nm,0.4s						
LCND	La Caada	7.40	319	eP	Pn	18 57 32.9	+1.6
LCND				IAML		19 00 11.4	
	comp=Z,158nm,0.4s						
HELC	Santa Helena	7.48	101	eP	Pn	18 57 32.8	+0.2
YOTC	Yotoco, Valle	7.51	119	eP	Pn	18 57 31.5	-1.4
TGUH	Tegucigalpa,Un	7.61	326	Pn	Pn	18 57 31.9	-2.4
GUY2C	Guyana, Caldas	7.89	108	eP	Pn	18 57 37.8	-0.7
ZARC	Zaragoza, Cauc	7.98	91	eP	Pn	18 57 37.3	-1.9
RREF	El Recreo	8.02	110	eP	Pn	18 57 40.9	+0.5
ANIL	Santa Ana	8.12	113	eP	Pn	18 57 42.1	+0.6
TOLC	Tolima	8.16	112	eP	Pn	18 57 46.2	+4.2
NORC	Norcasia	8.27	105	eP	Pn	18 57 41.4	-1.8
PCON	Cinco Dias	8.41	129	eP	Pn	18 57 45.3	-0.4
MARP	Paez Belalcaza	8.45	125	eP	Pn	18 57 45.9	-0.1
PTBC	PUERTO BERRIO,	8.46	98	eP	Pn	18 57 49.0	+3.1
ORTC	Ortega, Tolima	8.51	116	eP	Pn	18 57 46.0	-0.6
GCUF	Volcan Galeras	8.51	139	eP	Pn	18 57 48.3	+1.3
SNET	Serv Nac Est T	8.58	314	Pn	Pn	18 57 45.0	-2.5
PMON	Piamonte	8.66	314	eP	Pn	18 57 51.6	+2.9
PMON	Piamonte	8.66	314	eP	Pn	18 57 51.6	+2.9
OTAV	Otavalo	8.67	149		Pn	18 57 50.5	+1.4
OTAV	Otavalo	8.67	149	eP	Pn	18 57 49.1	0.0
OTAV	Otavalo	8.67	149	eP	Pn	18 57 50.1	+1.0
CEVE	Cerro Verde	8.96	313	eP	Pn	18 57 55.8	+2.9
CEVE				IAML		19 00 43.6	
	comp=Z,307nm,0.6s						
CEVE	Cerro Verde	8.96	313	eP	Pn	18 57 55.8	+2.9
CEVE				IAML		19 00 43.6	
	comp=Z,307nm,0.6s						
BETC	Betania	8.96	124	eP	Pn	18 57 53.2	+0.4
ROSC	El Rosal	9.00	108	Pn	Pn	18 57 54.0	+0.4
	comp=Z,4.6nm,0.3s,baz=137,slow=13,SNR=2.8						
ROSC				LR	LR	19 01 17.1	
	comp=Z,7µm,21.4s,baz=264,slow=38						
SPBC	San Pablo de B	9.01	103	eP	Pn	18 57 55.8	+2.3
MTO3	Montecristo	9.17	317		Pn	18 57 54.3	-1.4
ESQI	Esquipulas	9.27	318		Pn	18 57 57.9	+0.9
CHIC	Chingaza	9.62	108	eP	Pn	18 58 03.8	+1.6
BARC	Barichara	9.71	96	eP	Pn	18 58 01.4	-1.8
IXG	Ixpaco	9.78	311	eP	Pn	18 58 06.3	+2.2
IXG	Ixpaco	9.78	311	eP	Pn	18 58 06.3	+2.2
MRL	Marmol	9.87	318	eP	Pn	18 58 06.0	+0.6
MRL	Marmol	9.87	318	eP	Pn	18 58 06.0	+0.6
MACC	Macarena, Meta	10.59	121	eP	Pn	18 58 13.9	-1.2
RTAL	Retalhuleu	10.95	309		Pn	18 58 22.1	+2.1
PTLC	Puerto Leguiza	11.03	133	eP	Pn	18 58 24.4	+3.3
PAYG	Puerto Ayora	11.13	222	Pn	Pn	18 58 23.4	+0.9
HUEH	Huehuetenango	11.30	313		Pn	18 58 27.6	+2.6
SDV	Santo Domingo	12.20	84	Pn	Pn	18 58 35.8	-1.5
	comp=Z,1.1nm,0.3s,baz=285,slow=15,SNR=2.3						
SDV				LR	LR	19 03 51.7	
	comp=Z,5µm,19.8s,baz=264,slow=40						
SDV	Santo Domingo	12.20	84	Pn	Pn	18 58 38.3	+1.1
SDV	Santo Domingo	12.20	84	eP		18 58 51.3	
CCIG	Comitan	12.39	314		Pn	18 58 37.2	-2.8
CMIG	Matias Romero	14.94	310	Pn	Pn	18 59 15.1	+0.6
	comp=Z,0.4nm,0.3s,baz=23,slow=8.5,SNR=2.5						
ATAH	Atahualpa	15.44	163	Pn	Pn	18 59 23.2	+1.6
	comp=Z,0.1nm,0.3s,baz=338,slow=19,SNR=5.5						
SDDR	Presa de Saban	15.88	44	P	P	18 59 33.1	+2.4
SDD	Santo Domingo	16.53	49		P	18 59 38.7	+0.9
DR12	Loma Pena Alta	17.13	49		P	18 59 46.8	+2.3
PCRV	Puerto La Cruz	18.21	81	LR	LR	19 08 41.8	
	comp=Z,3µm,18.5s,slow=43						
CZSB	Cruzeiro do Su	18.42	146	eP	Pn	19 00 00.9	+2.1
CRPR	Cabo Rojo, PR	18.46	55	P	P	18 59 58.9	-0.2
CRPR				IAmb	IAmb	19 00 07.2	
	comp=Z,101nm,1.6s						
MLPR	Magueyes Islan	18.49	55	P	P	18 59 59.4	-0.1
MLPR				IAmb	IAmb	19 00 09.7	
	comp=Z,56nm,1.1s						
AGPR	Aguadilla, PR	18.70	54	P	P	19 00 01.8	0.0
ICMP	Isla Caja de M	18.87	56	P	P	19 00 03.7	0.0
ICMP				IAmb	IAmb	19 00 17.4	
	comp=Z,38nm,0.7s						
OBIP	Obispado Ponce	18.89	56		P	19 00 04.6	+0.7
OBIP				IAmb	IAmb	19 00 12.4	
	comp=Z,102nm,1.5s						
AOPR	Arecibo Observ	18.92	55	P	Pn	19 00 06.1	+1.1
AOPR				IAmb	IAmb	19 00 26.3	
	comp=Z,61nm,1.1s						
IGPR	InterUniversit	19.26	57	P	P	19 00 07.8	-0.1
SJG	San Juan	19.29	56	P	P	19 00 08.8	+0.4
	comp=Z,1.1nm,0.3s,baz=248,slow=8.0,SNR=5.1						
SJG	San Juan	19.29	56	P	P	19 00 08.8	+0.4
SJG				IAmb	IAmb	19 00 18.7	
	comp=Z,33nm,0.8s						
PDPR	Patillas Dam,	19.35	56	P	P	19 00 09.4	+0.4
GCPR	Guaynabo City	19.45	56	P	P	19 00 10.2	+0.1
HUMP	Col San Antoni	19.56	56	P	P	19 00 11.5	+0.3
HUMP				IAmb	IAmb	19 00 30.2	
	comp=Z,34nm,0.9s						
CBYP	Canovanas	19.62	56	P	P	19 00 12.7	+0.7
CBYP				IAmb	IAmb	19 00 36.6	
	comp=Z,47nm,1.2s						
MTP	Monte Pirata	19.78	57	P	P	19 00 13.7	0.0
MTP				IAmb	IAmb	19 00 33.9	
	comp=Z,68nm,1.1s						
CUPR	Culebra, Puert	20.11	57	P	P	19 00 16.8	-0.4
CUPR				IAmb	IAmb	19 00 41.1	
	comp=Z,56nm,1.1s						
CDVI	St. Croix	20.28	59	P	P	19 00 19.4	+0.2
NNA	Nana	20.50	163	P	P	19 00 21.8	+0.2
	comp=Z,11nm,0.7s,baz=350,slow=9.2,SNR=6.1						
NNA	Nana	20.50	163	P	P	19 00 21.1	-0.4
MOIG	Morelia	21.34	306	P	P	19 00 28.4	-2.5
MOIG				IAmb	IAmb	19 01 11.6	
	comp=Z,37nm,0.8s						
SKI	Saint Kitts	21.85	62	P	P	19 00 37.6	+1.4
SKI				IAmb	IAmb	19 01 00.1	
	comp=Z,41nm,0.9s						
SVB	Belmont	21.98	74	P	P	19 00 36.7	-0.8
255A	Hazlehurst	24.07	1	P	P	19 00 59.5	+0.7
ZAIG	Zacatecas	24.10	310	P	P	19 00 59.9	+0.3
PTGA	Pitinga	24.37	109	P	P	19 01 01.7	0.0

	comp=Z,19nm,1.2s,baz=289,slow=13,SNR=9.6						
PTGA				LR	LR	19 11 29.8	
	comp=Z,2µm,18.7s,baz=284,slow=39						
PTGA	Pitinga	24.37	109	P	P	19 00 59.9	-1.9
PTGA				IAmb	IAmb	19 01 17.7	
	comp=Z,29nm,1.1s						
MACA	Manacapuru-AM	24.67	115	eP	P	19 01 10.8	+6.4
344A	Westbrook Farm	24.70	344	P	P	19 01 03.8	-0.8
152A	Waverly Hall	24.87	356	P	P	19 01 06.0	0.0
152A				IAmb	IAmb	19 01 16.0	
	comp=Z,15nm,0.8s						
342A	Flagon Creek P	25.11	341	P	P	19 01 08.2	0.0
342A				IAmb	IAmb	19 01 44.8	
	comp=Z,29nm,1.0s						
NHSC	New Hope	25.37	5	P	P	19 01 11.8	+1.2
146A	Union	25.43	348	P	P	19 01 11.7	+0.6
LRAL	Lakeview Retre	25.46	352	P	P	19 01 11.8	+0.4
LRAL				IAmb	IAmb	19 01 30.4	
	comp=Z,18nm,1.1s						
GOGA	Godfrey	25.56	359	P	P	19 01 13.7	+1.5
GOGA				IAmb	IAmb	19 01 49.0	
	comp=Z,18nm,1.2s						
SAML	Samuel	25.70	130	P	P	19 01 13.1	-0.7
SAML				IAmb	IAmb	19 01 30.7	
	comp=Z,26nm,1.1s						
Y52A	Lilburn	26.03	358	P	P	19 01 17.4	+0.9
Y52A				IAmb	IAmb	19 01 58.7	
	comp=Z,17nm,1.1s						
JSC	Jenkinsville	26.46	3	P	P	19 01 20.1	-0.4
Y45A	Yeager Farm, C	26.72	348	P	P	19 01 22.9	+0.2
X51A	Calhoun	26.76	356	P	P	19 01 22.8	-0.4
X51A				IAmb	IAmb	19 01 31.1	
	comp=Z,40nm,1.4s						
JCT	Junction City	27.62	327	P	P	19 01 32.6	+1.6
TKL	Tuckaleechee C	27.80	358	LR	LR	19 13 29.1	
	comp=Z,2µm,18.1s,baz=183,slow=38						
TKL	Tuckaleechee C	27.80	358	P	P	19 01 34.9	+2.4
TKL				IAmb	IAmb	19 02 12.0	
	comp=Z,16nm,1.1s						
WHAR	Wooly Hollow	28.75	344	P	P	19 01 43.2	+2.2
TXAR	Lajitas Array	29.04	320	P	P	19 01 44.7	+1.0
	comp=Z,0.3nm,0.3s,baz=41,slow=45,SNR=1.9						
TXAR				LR	LR	19 15 03.1	
	comp=Z,1µm,21.8s,baz=0.0,slow=40						
LCAR	Lake Charles	29.20	346	P	P	19 01 46.0	+1.1
H06E1	SOCORRO T-PHAS	29.35	295	T	T	19 32 35.0	
	SNR=17						
ITTB	Itaituba	29.65	113	eP	P	19 01 55.6	+6.3
T42A	Van Buren	30.10	347	P	P	19 01 52.2	-0.7
T42A				IAmb	IAmb	19 02 07.2	
	comp=Z,30nm,1.8s						
S57A	Dark Hollow, R	30.11	6	P	P	19 01 55.0	+2.0
S57A				IAmb	IAmb	19 01 56.7	
	comp=Z,25nm,1.3s						
MALB	Monte Alegre	30.11	107	eP	P	19 02 00.2	+6.9
CCM	Cathedral Cave	31.12	347	P	P	19 02 01.5	-0.4
P51A	Williamsport	31.61	360	P	P	19 02 08.0	+1.8
MNTX	Cornudas Mount	31.74	322	P	P	19 02 07.7	+0.2
MNTX				IAmb	IAmb	19 02 49.7	
	comp=Z,15nm,1.8s						
SIV	San Ignacio	31.98	138	P	P	19 02 08.8	-1.0
	comp=Z,3.4nm,1.0s,baz=320,slow=11,SNR=7.5						
LVC	Limon Verde	33.12	156	P	P	19 02 21.4	+1.3
	comp=Z,4.2nm,0.8s,baz=253,slow=8.1,SNR=2.4						
LVC	Limon Verde	33.12	156	IAmb	IAmb	19 02 38.6	
	comp=Z,14nm,1.2s						
121A	Cookes Peak, D	33.80	320	P	P	19 02 24.9	-0.8
121A				IAmb	IAmb	19 02 40.9	
	comp=Z,9.3nm,0.9s						
ANMO	Albuquerque	34.66	325	P	P	19 02 33.4	+0.2
	comp=Z,1.2nm,0.7s,baz=132,slow=7.2,SNR=4.7						
TUC	Tucson	35.62	317	P	P	19 02 42.1	+0.7
TUC				IAmb	IAmb	19 02 50.6	
	comp=Z,13nm,1.3s						
214A	Organ Pipe Nat	36.81	315	P	P	19 02 51.1	-0.4
WUAZ	Wupatki	38.00	321	P	P	19 03 00.9	-0.8
GLA	Glamis	38.83	315	P	P	19 03 09.6	+0.9
PFO	Pinyon Flats O	40.28	314	P	P	19 03 21.9	+1.0
	comp=Z,2.5nm,0.8s,baz=185,slow=9.2,SNR=2.2						
CO02	Combarbal	40.36	164	P	P	19 03 21.0	-0.4
CO02				IAmb	IAmb	19 03 22.3	
	comp=Z,26nm,1.1s						
SHPR	Sheep Range	41.03	319	P	P	19 03 26.4	-0.6
ZON	Zonda	41.36	161	P	P	19 03 29.2	-0.4
ZON				IAmb	IAmb	19 03 47.7	
	comp=Z,20nm,1.3s						
ROC1	El Roble	42.03	165	P	P	19 03 34.2	-1.1
SPR3	Spring Creek 3	42.04	323	P	P	19 03 35.9	+0.5
PDAR	Pinedale Array	42.04	330	P	P	19 03 35.4	+0.2
	comp=Z,0.6nm,0.8s,baz=129,slow=12,SNR=2.8						
R11A	Troy Canyon, C	42.40	321	P	P	19 03 39.1	+0.9
TPH	Tonopah	43.28	320	P	P	19 03 45.9	+0.5
ELK	Elko	43.69	324	P	P	19 03 48.8	+0.1
ULM	Lac du Bonnet	43.74	348	P	P	19 03 47.4	-1.2
	comp=Z,4.0nm,0.5s,baz=156,slow=8.6,SNR=11						
ULM				LR	LR	19 23 24.7	
	comp=Z,449nm,18.7s,baz=156,slow=38						
NVAR	Mina Array Bea	44.18	319	P	P	19 03 54.2	+1.6
	comp=Z,1.3nm,0.7s,baz=129,slow=7.9,SNR=7.3						
NVAR				LR	LR	19 23 24.4	
	comp=Z,1µm,19.7s,baz=128,slow=38						
ITQB	Itaqui	44.97	147	eP	P	19 03 58.1	-0.6
HLID	Hailey	45.09	328	P	P	19 04 00.1	+0.3
BI02	San Fabin de	45.49	167	P	P	19 04 01.7	-1.1
PAHR	Pah Rah Range	45.59	320	P	P	19 04 03.9	+0.1
PAHR				IAmb	IAmb	19 04 30.5	
	comp=Z,21nm,1.6s						
DIAM	Diamantina, MG	46.56	124	eP	P	19 04 16.3	+4.6
WVOR	Wild Horse Val	46.73	324	P	P	19 04 11.7	-1.0
ORV	Oroville	46.88	319	P	P	19 04 14.6	+0.9
LC01	Cunco	47.51	168	P	P	19 04 17.2	-1.3
PINE	Pine Mountain	48.90	324	P	P	19 04 29.6	0.0
PINE				IAmb	IAmb	19 04 46.8	
	comp=Z,8.2nm,1.2s						
PLCA	Paso Flores	49.55	168	P	P	19 04 33.6	-0.7
	comp=Z,7.0nm,0.8s,baz=345,slow=9.1,SNR=15						
BBB	Bella Bella	57.64	329	LR	LR	19 32 46.6	
	comp=Z,456nm,21.4s,baz=128,slow=39						
YKA	Yellowknife Ar	59.34	344	P	P	19 05 43.2	-1.9
	comp=Z,0.4nm,0.7s,baz=129,slow=8.4,SNR=8.2						
TAOE	Nuku Hiva Isla	59.37	255	eLR	LR	19 23 03.2	
	comp=Z,318nm,27.6s						
RKT	Rikitea	59.43	238	eLR	LR	19 22 47.3	
	comp=Z,595nm,23.8s						
DLBC	Dease Lake	62.07	334	LR	LR	19 37 58.8	
	comp=Z,1µm,18.1s,baz=118,slow=41						
INK	Inuvik	69.03	342	P	P	19 06 49.4	+0.7
PPT2	Papeete2	70.48	248	eLR	LR	19 27 59.8	
	comp=Z,554nm,24.5s						
TBI	Tubuai	71.96	242	eLR	LR	19 28 47.5	
	comp=Z,581nm,28.8s						
ILAR	Eielson Array	72.12	336	P	P	19 07 07.3	-0.3
	comp=Z,0.7nm,0.8s,baz=113,slow=4.8,SNR=7.7						
RND	Reindeer	72.47	334	P	P	19 07 09.8	-0.1
RND				IAmb	IAmb	19 07 21.4	
	comp=Z,11nm,1.0s						
KDAK	Kodiak Island	72.71	328	LR	LR	19 41 47.1	
	comp=Z,303nm,19.7s,baz=107,slow=38						
ESDC	Sonseca Array	76.60	51	P	P	19 07 35.0	+0.7
	comp=Z,1.5nm,1.0s,baz=76,slow=0.6,SNR=3.8						
TIC	Toumodi	77.17	85	eP	P	19 07 36.5	-1.5
LIC	Lamto	77.21	85	eP	P	19 07 38.1	-0.1
	comp=Z,40nm,1.2s						
DBIC	Dimbokro	77.33	85	P	P	19 07 37.1	-1.7
	comp=Z,5.8nm,1.0s,baz=227,slow=6.6,SNR=3.1						
KOWA	Kowa	77.39	77	P	P	19 07 38.9	-0.2
KOWA				IAmb	IAmb	19 07 47.9	
	comp=Z,6.6nm,0.8s						
KIC	Kosan Boka	77.48	85	eP	P	19 07 38.9	-0.8
	comp=Z,18nm,1.1s						
TOA0	Torodi Ar. Sit	83.04	78	P	P	19 08 09.6	-0.1
TORD	Torodi Ar. Bea	83.04	78	P	P	19 08 08.8	-0.9
	comp=Z,2.4nm,0.9s,baz=290,slow=4.4,SNR=4.5						
TORD	Torodi Ar. Bea	83.04	78	P	P	19 08 08.6	-1.0
NOA	NORSAR Array B	85.29	29	LR	LR	19 46 40.3	
	comp=Z,242nm,18.8s,baz=270,slow=36						
HFS	Hagfors	86.63	30	P	P	19 08 28.5	+1.7
	comp=Z,1.8nm,0.7s,baz=288,slow=5.9,SNR=1.9						
CLL	Collm	87.70	39	eP	P	19 08 33.0	+0.8
GERES	GERESS Array B	88.56	41	P	P	19 08 38.1	+1.6
	comp=Z,0.4nm,0.6s,baz=231,slow=6.2,SNR=3.1						
GERES				LR	LR	19 41 47.5	
	comp=Z,330nm,21.7s,baz=248,slow=31						
FINES	FINESS Array B	92.16	27	LR	LR	19 51 09.8	
	comp=Z,278nm,18.6s,baz=326,slow=36						
AKASG	Malin Array Be	97.71	36	LR	LR	19 51 32.3	
	comp=Z,206nm,21.1s,baz=320,slow=34						
SYO	Syowa Base	108.45	161	⇑ePdiff	Pdif	19 10 02.5	-3.3
DZM	Mont Dzumac	111.97	249	eLR	LR	19 47 20.0	
	comp=Z,195nm,23.6s						
KURK	Kurchatov	119.63	13		PKiKP	19 14 38.0	+4.5
KURBB	Kurchatov Arra	119.69	14	PKP	PKiKP	19 14 38.0	+4.3
	comp=Z,0.4nm,0.7s,baz=332,slow=2.1,SNR=3.1						
MKAR	Makanchi Array	124.14	12	PKP	PKiKP	19 14 43.5	+0.9
	comp=Z,0.2nm,0.5s,baz=343,slow=3.8,SNR=2.6						
WMQ	Urumqi	127.98	9	eP	PKPdf	19 14 49.5	-0.3
HHC	Hu-ho-hao-te	129.85	346	eP	PKPdf	19 14 50.3	-3.2
NJ2	Nanjing	135.32	333	eP	PKPdf	19 15 02.0	-1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LZH	Lanzhou	135.95	352	ePKP	PKPdf	19 15 00.8	-4.4
LZH				pPKP	PKiKP	19 15 08.0	+1.1
LZH				sPKP		19 15 10.5	
ASAR	Alice Springs	141.34	242	PKhKP	PKPpre	19 15 08.3	
	comp=Z,0.6nm,0.8s,baz=111,slow=3.6,SNR=7.9						
ASAR				PKP	PKPdf	19 15 14.4	-0.8
	comp=Z,0.7nm,0.7s,baz=102,slow=2.6,SNR=5.5						
WRA	Warramunga Arr	141.96	247	PKhKP	PKPpre	19 15 10.3	
	comp=Z,0.9nm,0.3s,baz=288,slow=22,SNR=38						
WRA				PKP	PKPdf	19 15 17.4	+1.0
	comp=Z,1.7nm,0.7s,baz=107,slow=3.2,SNR=8.7						
GYA	Guiyang	144.77	345	eP	PKiKP	19 15 26.0	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HYB	Hyderabad	149.01	36	i PKP	PKPdf	19 15 26.0	-2.6
CMAR	Chiang Mai Arr	153.91	356	PKPbc	PKPbc	19 15 43.1	-0.8
	comp=Z,0.6nm,0.7s,baz=322,slow=2.9,SNR=5.3						
CMAR	Chiang Mai Arr	153.91	356		PKPbc	19 15 42.6	-1.3

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*IDC **31** 18:57:47.0±0.5, 5°.22N×82°.62W, h0^{km}, mb4.7/22, mb1 4.9/27, mb1mx4.8/39, mbtmp4.8/27, ML4.1/5, Error ellipse: s-maj=19.9km s-min=10.3km az=51.0*

*MOS **31** 18:57:47.5±1.1, 5°.34N×82°.53W, h14^{km}, mb5.1/5, Error ellipse: s-maj=10.9km s-min=6.0km az=111.7*

*NEIC **31** 18:57:48.4±1.9, 5°.29N±0°.02×82°.59W±0°.06, h11^{km}±3^{km}, mb5.1/388, Error ellipse: s-maj=9.4km s-min=2.3km az=102.0*

*UCR **31** 18:57:49.8±1.7, 5°.34N×82°.77W, h35^{km}±369^{km}, MW4.8, mb5.1(NEIC)*

*GCMT **31** 18:57:51.4±0.2, 5°.30N±0°.01×82°.67W±0°.01, h17^{km}, MW5.3/138, Moment Tensor Solution. s67,c95; s138,c200; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-0.80±.21; M$_{\theta\theta}$0.48±.21; M$_{\phi\phi}$0.31±.24; M$_{r\theta}$0.74±.47; M$_{\theta\phi}$9.59±.19; M$_{\phi r}$0.60±.46; Best double couple: M$_0$9.63200×10^{16} NP1:ϕ_s0.00000°, δ86.00000°, λ177.00000°. NP2:ϕ_s90.00000°, δ87.00000°, λ4.00000°. Principal axes: T 10.0720, Plg5.0000°, Azm315.0000°; N -0.8810, Plg85.0000°, Azm127.0000°; P -9.1920, Plg1.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 18:57:49.1±0.3, **5°.30N**±0°.04×**82°.66W**±0°.05, **h15^{km}, n788, σ1^{s}27**/692, **mb5.1**/231, **MS4.8**/11, **7C-11D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMAL	Guarumal, Vera	2.83	30	eP	Pn	18 58 31.2	-2.6
PIRO	Carate, Puerto	3.16	348	eP	Pn	18 58 34.9	-3.5
AZU	Azuero	3.43	44	eP	Pn	18 58 40.0	-2.0
RIOS	Rincon, Osa	3.49	346	eP	Pn	18 58 40.2	-2.7
RIOS				eS	Sn	18 59 21.2	-2.7
EDSV	San Vito	3.52	355	eP	Pn	18 58 41.4	-2.0
EDPN	Palmar Norte	3.73	348	eP	Pn	18 58 44.0	-2.2
EDPN				eS	Sn	18 59 27.8	-2.1
POTG	Potrero Grande	3.76	353	eP	Pn	18 58 45.5	-1.2
EDBA	Buenos Aires	3.89	351	eP	Pn	18 58 47.6	-0.9
DRK0	Durika	3.99	352	eP	Pn	18 58 47.9	-2.0
EDLM	Las Mercedes	4.07	347	eP	Pn	18 58 49.2	-1.7
EDDO	Dominical	4.11	343	eP	Pn	18 58 49.1	-2.3
PEZE	Perez Zeledon,	4.19	346	eP	Pn	18 58 50.6	-2.0
RIMA	Rio Macho	4.60	345	eP	Pn	18 58 57.1	-1.3
LCR2	La Lucha 2	4.62	343	eP	Pn	18 58 56.9	-1.7
BCIP	Isla Barro Col	4.75	36	Pn	Pn	18 59 00.2	-0.2
BCIP				Sn	Sn	18 59 53.7	-1.6
JACO	JACO, Garabito	4.77	336	eP	Pn	18 58 58.1	-2.5
SJS	Escuela Geolog	4.82	343	eP	Pn	18 59 00.2	-1.1
CVTR	Volcan Turrial	4.82	347	eP	Pn	18 59 00.7	-0.9
BATAN	Batan	4.83	352	eP	Pn	18 59 00.9	-0.4
HDC	Heredia	4.89	343	eP	Pn	18 59 01.5	-0.9
HDC	Heredia	4.89	343		Pn	18 59 00.8	-1.6
HDC				Sn	Sn	18 59 56.4	-2.4
LAFE	Finca La Fe, P	5.01	334	eP	Pn	18 59 02.0	-1.9
SRA1	San Ramn	5.09	339	eP	Pn	18 59 03.5	-1.5
PTAC	Punta Ardita,	5.16	69	eP	Pn	18 59 06.1	+0.2
SOLC	Bahia Solano	5.30	80	eP	Pn	18 59 07.1	-0.8
MALC	Bahia Malaga	5.45	103	eP	Pn	18 59 09.8	-0.2
DUNO	Dulce Nombre,	5.52	330	eP	Pn	18 59 09.2	-1.8
ARE1	Arenal 1	5.53	338	eP	Pn	18 59 10.4	-0.5
CEDE	Laguna Cedeo	5.54	339	eP	Pn	18 59 09.8	-1.4
PLVR	Palo Verde	5.69	332	eP	Pn	18 59 10.5	-2.8
CUI	Cuipilapa	5.88	335	eP	Pn	18 59 14.5	-1.3
GPS2	Hotel Rincn d	6.04	334	eP	Pn	18 59 18.7	+0.6
HZTE	Horizontes, Gu	6.12	332	eP	Pn	18 59 18.3	-0.8
GB1A	Borinquen Arri	6.12	334	eP	Pn	18 59 20.0	+0.8
CAPC	Capurgana	6.22	57	eP	Pn	18 59 21.2	+0.7
PLMC	San Jos del P	6.36	93	eP	Pn	18 59 21.4	-1.1
YOTC	Yotoco, Valle	6.42	101	eP	Pn	18 59 21.9	-1.5
OTAV	Otavalo	6.55	140	P	Pn	18 59 23.3	-2.1
OTAV	Otavalo	6.55	140	Pn	Pn	18 59 23.3	-2.1
OTAV	Otavalo	6.55	140	eP	Pn	18 59 24.0	-1.4
OTAV	Otavalo	6.55	140	eP	Pn	18 59 23.2	-2.1
DBBC	Dabeiba	6.63	75	eP	Pn	18 59 28.7	+2.4
CBOC	Ciudad Bolivar	6.64	85	eP	Pn	18 59 27.6	+1.3
CCUFI	Cufio, Nario	6.66	127	eP	Pn	18 59 26.8	-0.3
GCUF	Volcan Galeras	6.67	127	eP	Pn	18 59 27.0	-0.1
CPAS1	Pasto	6.71	127	eP	Pn	18 59 27.1	-0.5
PCON	Cinco Dias	6.91	115	eP	Pn	18 59 31.4	+1.0
ESPN	Las Esperanzas	7.05	347	Pn	Pn	18 59 31.0	-0.8
ACON	Acoyapa	7.08	340	Pn	Pn	18 59 31.2	-1.1
MARP	Paez Belalcaza	7.11	110	eP	Pn	18 59 34.7	+1.7
HELC	Santa Helena	7.15	82	eP	Pn	18 59 34.7	+1.2
GUY2C	Guyana, Caldas	7.26	90	eP	Pn	18 59 36.8	+1.6
ANIL	Santa Ana	7.27	96	eP	Pn	18 59 36.1	+0.9
RREF	El Recreo	7.29	93	eP	Pn	18 59 36.4	+0.6
TOLC	Tolima	7.34	95	eP	Pn	18 59 37.1	+0.9
UREC	San Jos de Ur	7.49	71	eP	Pn	18 59 39.2	+1.3
ORTC	Ortega, Tolima	7.51	100	eP	Pn	18 59 39.5	+1.2
BETC	Betania	7.65	110	eP	Pn	18 59 42.2	+2.0
MOTC	Monteria, Cord	7.75	63	eP	Pn	18 59 43.5	+2.0
NORC	Norcasia	7.76	88	eP	Pn	18 59 44.2	+2.5
NORC				eP	Pn	18 59 44.2	+2.5
GARC	Garzon, Huila	7.79	113	eP	Pn	18 59 42.2	-0.1
ZARC	Zaragoza, Cauc	8.05	74	eP	Pn	18 59 46.6	+1.0
ROSC	El Rosal	8.31	93	Pn	Pn	18 59 52.3	+2.7
	25nm,0.3s,baz=116,slow=14,SNR=17						
ROSC				Sn	Sn	19 01 27.9	+4.3
	baz=215,slow=21,SNR=1.1						
ROSC	El Rosal	8.31	93	P	Pn	18 59 48.1	-1.5
ROSC	El Rosal	8.31	93		Pn	18 59 48.1	-1.5
CRIN	San Cristobal	8.54	330		Pn	18 59 52.9	+0.4
SPBC	San Pablo de B	8.55	87	eP	Pn	18 59 55.3	+2.7
CHIC	Chingaza	8.91	94	eP	Pn	19 00 00.3	+2.5
SMLC	San Martn de	9.20	67	eP	Pn	19 00 03.1	+1.6
MACC	Macarena, Meta	9.33	109	eP	Pn	19 00 03.8	+0.6
ARGC	Ariguani, Magd	9.49	61	eP	Pn	19 00 08.2	+2.8
PAYG	Puerto Ayora	9.65	232	Pn	Pn	19 00 10.1	+2.4
OCAC	Ocana	9.72	72	eP	Pn	19 00 09.8	+1.1
TGUH	Tegucigalpa,Un	9.82	333	Pn	Pn	19 00 11.8	+1.7
PAMC	Pamplona, Colo	10.10	78	eP	Pn	19 00 16.6	+2.4
SNET	Serv Nac Est T	10.56	323	Pn	Pn	19 00 22.6	+2.4
MTO3	Montecristo	11.20	324		Pn	19 00 30.5	+1.5
ESQI	Esquipulas	11.32	325		Pn	19 00 31.4	+0.9
SDV	Santo Domingo	12.45	73	Pn	Pn	19 00 47.7	+1.6
	2.6nm,0.3s,baz=238,slow=9.4,SNR=44						
SDV				Sn	Sn	19 03 02.0	-2.8
	1.3nm,0.3s,baz=31,slow=13,SNR=3.3						
SDV	Santo Domingo	12.45	73	Pn	Pn	19 00 46.8	+0.6
SDV	Santo Domingo	12.45	73	eP	Pn	19 00 46.7	+0.6
SDV	Santo Domingo	12.45	73	eP	Pn	19 00 47.1	+1.0
ATAH	Atahualpa	13.06	161	Pn	Pn	19 00 55.3	+0.7
	3.0nm,0.3s,baz=4.4,slow=7.9,SNR=17						
HUEH	Huehuetenango	13.22	320	Pn	Pn	19 00 58.6	+1.9
PETF	Flores	13.54	329		Pn	19 01 01.7	+0.9
CCIG	Comitan	14.34	320	P	P	19 01 16.8	-2.3
LCCY	Blossom Villag	14.51	10	Pn	Pn	19 01 16.7	+2.7
CBCY	The Bluff, Cay	14.63	11	Pn	Pn	19 01 18.0	+2.2
TEIG	Tepich	15.82	340	P	P	19 01 33.6	-1.6
JAKH	Jacmel	16.23	37	P	P	19 01 38.7	-1.2
GTBY	Guantanamo Bay	16.29	26	P	P	19 01 39.2	-1.3
GTBY				IAmb	IAmb	19 01 45.7	
	comp=Z,190nm,1.3s						
CZSB	Cruzeiro do Su	16.31	142	eP	Pn	19 01 36.7	-1.1
LGNH	Logne	16.40	36	P	P	19 01 41.1	-0.5
CMIG	Matias Romero	16.76	315	Pn	Pn	19 01 44.2	+0.7
	comp=Z,0.3nm,0.3s,baz=120,slow=11,SNR=5.9						
SDDR	Presa de Saban	17.55	38	P	P	19 01 54.5	0.0
BANI	BANI	17.71	42	P	P	19 01 57.2	+0.8
NNA	Nana	18.12	161	P	Pn	19 02 00.4	-0.1
	comp=Z,1.7nm,0.3s,baz=337,slow=9.7,SNR=29						
NNA	Nana	18.12	161	deP	P	19 02 01.1	+0.3
NNA				pmax	pmax		
	comp=Z,343nm,1.1s						
SC01	Santiago de lo	18.23	39	P	P	19 02 04.4	+2.5
PCRV	Puerto La Cruz	18.50	74	P	Pn	19 02 05.4	+0.2
	comp=Z,0.9nm,0.3s,baz=232,slow=3.6,SNR=10						
DR12	Loma Pena Alta	18.64	43		Pn	19 02 07.8	+0.9
GRTK	Grand Turk	19.61	34		Pn	19 02 19.5	+1.0
TLIG	Tlapa	19.77	309	P	Pn	19 02 21.1	+0.6
061Z	Ochoppi	20.52	4	P	Pn	19 02 30.1	+0.9
SJG	San Juan	20.55	50	P	Pn	19 02 28.6	-1.0
	comp=Z,106nm,0.9s,baz=239,slow=6.7,SNR=28						
SJG	San Juan	20.55	50	P	Pn	19 02 28.6	-1.0
SJG				pmax	pmax		
	comp=Z,1µm,1.8s						
SJG	San Juan	20.55	50	P	Pn	19 02 28.6	-1.0
ETMB	Extrema	22.22	132	eP	P	19 02 44.8	-0.6
SVB	Belmont	22.55	68	P	P	19 02 49.5	+0.5
SABA	Saba	22.60	56	P	P	19 02 51.7	+2.3
SABA				IAmb	IAmb	19 02 57.3	
	comp=Z,93nm,0.9s						
DWPF	Disney Wildern	22.72	3	P	P	19 02 53.2	+2.6
	baz=183						
SEUS	St. Eustatius	22.75	56	P	P	19 02 51.5	+0.5
SKI	Saint Kitts	22.87	57	P	P	19 02 51.6	-0.7
SKI	Saint Kitts	22.87	57		P	19 02 51.6	-0.7
MCLT	Moule a Chique	22.97	67	P	P	19 02 57.0	+3.6
MOIG	Morelia	23.02	310	P	P	19 02 56.9	+2.8
MOIG				IAmb	IAmb	19 02 59.8	
	comp=Z,45nm,1.0s						
FDF	Fort de France	23.14	65	P	P	19 02 54.9	-0.3
FDF				pmax	pmax		
	comp=Z,116nm,1.1s						
FDF	Fort de France	23.14	65	P	P	19 02 54.9	-0.3
FDF				IAmb	IAmb	19 03 06.6	
	comp=Z,116nm,1.1s						
PTGA	Pitinga	23.44	104	P	P	19 02 57.8	-0.3
	comp=Z,28nm,0.9s,baz=296,slow=14,SNR=8.0						
MACA	Manacapuru-AM	23.50	110	eP	P	19 02 58.2	-0.5
SAML	Samuel	24.02	126	P	P	19 03 02.2	-1.5
SAML				pmax	pmax		
	comp=Z,138nm,0.9s						
SAML	Samuel	24.02	126	P	P	19 03 02.2	-1.5
SAML	Samuel	24.02	126	eP	P	19 03 02.4	-1.4
553A	Crawfordville	24.82	356	P	P	19 03 12.3	+1.5
451A	Vernon	25.36	354	P	P	19 03 16.5	+0.8
ZAIG	Zacatecas	25.92	314	P	P	19 03 22.7	+1.5
BRAL	Brewton	26.07	351	P	P	19 03 23.0	+0.9
352A	Blakely	26.14	356	P	P	19 03 23.2	+0.4
KVTX	Kingsville	26.46	328	P	P	19 03 27.2	+1.4
255A	Hazlehurst	26.50	0	P	P	19 03 26.1	0.0
255A				IAmb	IAmb	19 03 49.9	
	comp=Z,42nm,1.0s						
346A	Big Creek Wild	26.73	347	P	P	19 03 29.1	+0.9
250A	Grady	26.76	353	P	P	19 03 28.8	+0.4
PB16	IPOC Station P	26.82	151	P	P	19 03 30.4	+0.6
344A	Westbrook Farm	27.10	345	P	P	19 03 31.9	+0.4
344A				IAmb	IAmb	19 03 33.9	
	comp=Z,50nm,0.9s						
154A	Montrose	27.18	359	P	P	19 03 32.4	+0.2
152A	Waverly Hall	27.30	356	P	P	19 03 31.8	-1.5
152A				IAmb	IAmb	19 03 34.9	
	comp=Z,40nm,1.2s						
MNMC	Minye Minye	27.47	152	P	P	19 03 35.5	+0.2
MNMC				IAmb	IAmb	19 03 41.7	
	comp=Z,66nm,1.0s						
735A	Kenedy	27.48	330	P	P	19 03 36.4	+1.4
342A	Flagon Creek P	27.49	342	P	P	19 03 35.9	+1.0
342A				IAmb	IAmb	19 03 38.8	
	comp=Z,27nm,0.9s						
HKT	Hockley	27.50	335	⇑eP	P	19 03 35.3	+0.3
HKT				pmax	pmax		
	comp=Z,45nm,1.9s						
HKT	Hockley	27.50	335	P	P	19 03 35.2	+0.2
PSGCX	Pisagua	27.64	154	P	P	19 03 36.3	-0.2
PSGCX				IAmb	IAmb	19 03 58.6	
	comp=Z,55nm,1.4s						
CSU	Charleston Sou	27.66	5	P	P	19 03 37.4	+0.9
NHSC	New Hope	27.77	4	P	P	19 03 39.9	+2.5
	baz=185						
NHSC	New Hope	27.77	4	P	P	19 03 38.2	+0.8
VBMS	Vicksburg	27.78	346	P	P	19 03 38.4	+0.8
VBMS				IAmb	IAmb	19 03 50.0	
	comp=Z,40nm,1.2s						
146A	Union	27.85	348	P	P	19 03 38.4	+0.2
LRAL	Lakeview Retre	27.89	352	P	P	19 03 39.2	+0.6
	baz=171,SNR=10						
LRAL	Lakeview Retre	27.89	352	P	P	19 03 38.8	+0.2
LRAL				IAmb	IAmb	19 03 40.1	
	comp=Z,31nm,1.0s						
Z51A	Franklin	27.98	356	P	P	19 03 39.3	0.0
GOGA	Godfrey	27.98	359	P	P	19 03 39.0	-0.4
GOGA				pmax	pmax		
	comp=Z,14nm,0.8s						
GOGA	Godfrey	27.98	359	P	P	19 03 40.2	+0.8
	baz=178						
GOGA	Godfrey	27.98	359	P	P	19 03 39.0	-0.4
Z47A	Carrollton	28.22	350	P	P	19 03 41.5	+0.1
Y52A	Lilburn	28.46	358	P	P	19 03 43.7	+0.1
Y52A				IAmb	IAmb	19 03 59.0	
	comp=Z,43nm,1.4s						
143A	Socs Landing,	28.47	344	P	P	19 03 44.0	+0.3
TA01	Diego Aracena	28.47	155	P	P	19 03 44.0	+0.2
TA01				IAmb	IAmb	19 03 47.5	
	comp=Z,22nm,0.9s						
ITTB	Itaituba	28.55	109	eP	P	19 03 44.8	+0.1
PB08	IPOC Station P	28.55	153	P	P	19 03 45.0	0.0
PB08				IAmb	IAmb	19 04 12.5	
	comp=Z,29nm,1.1s						
NATX	Nacogdoches	28.63	338	P	P	19 03 45.7	+0.5
NATX				IAmb	IAmb	19 04 38.4	
	comp=Z,89nm,1.7s						
Y49A	Blount Mountai	28.63	353	P	P	19 03 44.6	-0.6
VILB	Vilhena	28.75	129	eP	P	19 03 46.6	+0.2
HODGE	Hodges	28.80	1	P	P	19 03 46.4	-0.2
HODGE				IAmb	IAmb	19 03 48.8	
	comp=Z,56nm,1.3s						
JSC	Jenkinsville	28.87	2	P	P	19 03 48.1	+0.8
JSC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JSC	Jenkinsville	28.87	2	P	P	19 03 48.1	+0.8
435B	Jarrell	28.98	333	P	P	19 03 47.9	-0.4
435B				IAmb	IAmb	19 04 03.7	
	comp=Z,15nm,0.6s						
Y45A	Yeager Farm, C	29.14	348	P	P	19 03 50.2	+0.5
PB01	IPOC Station P	29.19	154	P	P	19 03 50.4	0.0
X51A	Calhoun	29.20	356	P	P	19 03 50.3	+0.1
FPAL	Fort Paine	29.23	355	P	P	19 03 50.2	-0.4
FPAL				IAmb	IAmb	19 03 51.6	
	comp=Z,28nm,1.1s						
MALB	Monte Alegre	29.23	103	eP	P	19 03 50.1	-0.7
BIRD	Birdtown, Kers	29.28	4	P	P	19 03 51.0	+0.1
BIRD				IAmb	IAmb	19 03 53.1	
	comp=Z,51nm,1.5s						
237A	Washetta, Mont	29.29	337	P	P	19 03 51.2	+0.2
X48A	Hartselle	29.30	353	P	P	19 03 50.8	-0.3
Z41A	Richland Creek	29.38	342	P	P	19 03 52.0	+0.2
	baz=159						
PAULI	Pauline	29.39	1	P	P	19 03 51.9	0.0
PAULI				IAmb	IAmb	19 03 54.9	
	comp=Z,25nm,1.0s						
BG3	Lake Jocassee	29.55	360	P	P	19 03 54.3	+1.0
BG3				IAmb	IAmb	19 03 56.9	
	comp=Z,24nm,0.9s						
PB07	IPOC Station P	29.63	155	P	P	19 03 55.1	+0.8
PB07				IAmb	IAmb	19 04 34.8	
	comp=Z,43nm,1.4s						

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W52A  Murphy            29.68 358  P     P      19 03 54.8 +0.3
CCAR  Cane Creek        29.71 345  P     P      19 03 54.9 +0.1
KMSC  Kings Mountain    29.73   2  P     P      19 03 55.6 +0.7
      baz=182,SNR=7.7
KMSC  Kings Mountain    29.73   2  P     P      19 03 55.1 +0.3
KMSC                               IAmb  IAmb   19 03 57.2
      comp=Z,25nm,0.9s
OXF   Oxford            29.74 349  P     P      19 03 54.8 -0.2
OXF                                pmax  pmax
      comp=Z,50nm,1.1s
OXF   Oxford            29.74 349  P     P      19 03 54.8 -0.2
      baz=166
OXF   Oxford            29.74 349  P     P      19 03 54.8 -0.2
OXF                                IAmb  IAmb   19 04 09.2
      comp=Z,50nm,1.1s
W56A  Indian Trail      29.76   3  P     P      19 03 55.7 +0.5
      baz=184
JCT   Junction City     29.81 329  P     P      19 03 55.4 -0.3
JCT                                pmax  pmax
      comp=Z,17nm,1.2s
JCT   Junction City     29.81 329  P     P      19 03 56.3 +0.6
      baz=144
JCT   Junction City     29.81 329  P     P      19 03 55.4 -0.3
W50A  Signal Mountai    29.86 356  P     P      19 03 55.8 -0.4
NPGB  Novo Progresso    29.87 114 eP     P      19 03 55.6 -0.8
WLAR  White Oak Lake    29.88 342  P     P      19 03 55.1 -1.1
MDP   Montagnes des     29.89  89  P     P      19 03 56.5 -0.1
      comp=Z,14nm,1.0s,baz=246,slow=22,SNR=1.8
SWET  Sewanee           29.93 355  P     P      19 03 56.4 -0.3
SWET                               IAmb  IAmb   19 03 57.7
      comp=Z,38nm,1.2s
WHTX  Lake Whitney,     29.96 334  P     P      19 03 55.7 -1.3
WHTX                               IAmb  IAmb   19 04 50.4
      comp=Z,36nm,0.8s
PB09  IPOC Station P    29.96 154  P     P      19 03 57.4 +0.1
PB09                               IAmb  IAmb   19 05 03.4
      comp=Z,84nm,1.7s
PLAL  Pickwick Lake     29.96 351  P     P      19 03 56.5 -0.5
PLAL                               IAmb  IAmb   19 03 57.7
      comp=Z,26nm,1.1s
CPCT  Cooper Cave       30.06 357  P     P      19 03 58.3 +0.5
CPCT                               IAmb  IAmb   19 03 59.6
      comp=Z,28nm,1.1s
SIV   San Ignacio       30.06 135  P     P      19 03 57.7 -0.3
      comp=Z,19nm,1.0s,baz=312,slow=9.2,SNR=17
Z38A  Mt. Pleasant      30.10 339  P     P      19 03 57.7 -0.5
V53A  Saluda            30.23 360  P     P      19 03 59.3  0.0
V53A                               IAmb  IAmb   19 04 04.5
      comp=Z,32nm,1.3s
TKL   Tuckaleechee C    30.23 358  P     P      19 03 59.2 -0.1
      comp=Z,15nm,0.9s,baz=160,slow=11,SNR=5.9
TKL   Tuckaleechee C    30.23 358  P     P      19 03 58.9 -0.5
TKL                                pmax  pmax
      comp=Z,26nm,1.2s
TKL   Tuckaleechee C    30.23 358  P     P      19 03 58.9 -0.5
TKL                                IAmb  IAmb   19 04 00.8
      comp=Z,26nm,1.1s
W45A  Hickory Valley    30.32 349  P     P      19 03 59.4 -0.8
V51A  Loudon            30.40 357  P     P      19 04 00.6 -0.2
V51A                               IAmb  IAmb   19 04 02.5
      comp=Z,48nm,1.1s
V52A  Sevierville       30.41 358  P     P      19 04 00.4 -0.5
V52A                               IAmb  IAmb   19 04 02.5
      comp=Z,29nm,1.2s
V56A  Mocksville        30.43   3  P     P      19 04 02.6 +1.5
      baz=184
V55A  Taylorsville      30.44   2  P     P      19 04 01.4 +0.3
V58A  Windy Hill, Pi    30.53   6  P     P      19 04 02.4 +0.4
      baz=187,SNR=6.0
V58A  Windy Hill, Pi    30.53   6  P     P      19 04 01.8 -0.2
V58A                               IAmb  IAmb   19 04 05.1
      comp=Z,27nm,0.9s
V48A  Smith Brothers    30.54 353  P     P      19 04 02.2 +0.1
V48A                               IAmb  IAmb   19 04 03.1
      comp=Z,49nm,1.1s
V57A  Coltrane Farms    30.56   5  P     P      19 04 02.9 +0.7
      baz=186,SNR=7.2
V59A  Middlesex         30.59   7  P     P      19 04 03.6 +1.1
      baz=188
PB06  IPOC Station P    30.63 156  P     P      19 04 04.1 +1.0
H06E1 SOCORRO T-PHAS30.66 298      T     T      19 36 12.0
      SNR=30
UALR  University of     30.68 344  P     P      19 04 02.7 -0.5
UALR                               IAmb  IAmb   19 04 03.9
      comp=Z,32nm,1.2s
V60A  Jim Taylor Roa    30.73   9  P     P      19 04 02.4 -1.3
V62A  Hyde County Ai    30.75  11  P     P      19 04 02.5 -1.3
MIAR  Mount Ida         30.82 342  P     P      19 04 04.1 -0.4
MIAR                               pmax  pmax
      comp=Z,37nm,1.6s
MIAR  Mount Ida         30.82 342  P     P      19 04 04.1 -0.4
      baz=158
MIAR  Mount Ida         30.82 342  P     P      19 04 04.1 -0.4
MIAR                               IAmb  IAmb   19 04 07.4
      comp=Z,37nm,1.6s
LVC   Limon Verde       30.82 155  P     P      19 04 05.6 +0.5
      comp=Z,8.9nm,0.7s,baz=308,slow=6.7,SNR=7.5
LVC   Limon Verde       30.82 155  P     P      19 04 05.4 +0.3
LVC                                pmax  pmax
      comp=Z,91nm,1.6s
LVC   Limon Verde       30.82 155  P     P      19 04 05.4 +0.3
LVC   Limon Verde       30.82 155 eP     P      19 04 04.4 -0.7
CLTN  Cedars of Leba    30.84 354  P     P      19 04 04.2 -0.4
CLTN                               IAmb  IAmb   19 04 05.8
      comp=Z,36nm,1.2s
LPAR  Lepanto           30.97 348  P     P      19 04 05.3 -0.6
PB10  IPOC Station P    30.97 158  P     P      19 04 06.5 +0.5
U56A  King              30.98   4  P     P      19 04 07.0 +1.1
      baz=184,SNR=5.8
U56A  King              30.98   4  P     P      19 04 06.2 +0.2
U56A                               IAmb  IAmb   19 04 10.1
      comp=Z,30nm,0.9s
HBAR  Harrisburg        31.00 347  P     P      19 04 04.8 -1.4
W41B  Gary Mavity, V    31.03 345  P     P      19 04 05.3 -1.0
      baz=161,SNR=7.6
Z35A  Perchaven, San    31.03 336  P     P      19 04 05.6 -0.9
Z35A                               IAmb  IAmb   19 04 10.7
      comp=Z,25nm,0.7s
WVT   Waverly           31.05 352  P     P      19 04 05.4 -1.2
WVT                                pmax  pmax
      comp=Z,26nm,0.9s
WVT   Waverly           31.05 352  P     P      19 04 05.9 -0.7
      baz=170
WVT   Waverly           31.05 352  P     P      19 04 05.4 -1.2
WVT                                IAmb  IAmb   19 04 06.8
      comp=Z,26nm,0.9s
MCPB  Macapa, AP        31.07  99 eP     P      19 04 07.8 +0.8
HALT  Halls             31.08 349  P     P      19 04 05.8 -1.0
U54A  Nelsons Funny     31.09   1  P     P      19 04 07.9 +0.9
      baz=181,SNR=5.3
U54A  Nelsons Funny     31.09   1  P     P      19 04 05.9 -1.0
TXAR  Lajitas Array     31.09 323  P     P      19 04 08.2 +1.1
      comp=Z,1.3nm,0.8s,baz=134,slow=11,SNR=6.5
TXAR  Lajitas Array     31.09 323  P     P      19 04 07.2 +0.1
TXAR  Lajitas Array     31.09 323  P     P      19 04 07.2 +0.1
TX31  Lajitas Ar. Si    31.09 323  P     P      19 04 07.4 +0.2
TX31                               IAmb  IAmb   19 04 36.2
      comp=Z,54nm,1.6s
TX32  Lajitas Array     31.09 323  P     P      19 04 07.5 +0.4
TZTN  Tazewell          31.11 359  P     P      19 04 07.6 +0.5
      baz=178,SNR=5.1
TZTN  Tazewell          31.11 359  P     P      19 04 07.2  0.0
TZTN                               IAmb  IAmb   19 04 22.2
      comp=Z,34nm,1.1s
PB15  IPOC Station P    31.12 156  P     P      19 04 07.3 -0.2
PB15                               IAmb  IAmb   19 04 52.4
      comp=Z,34nm,1.3s
U57A  Blanch            31.14   5  P     P      19 04 07.1 -0.2
      baz=186,SNR=8.0
WHAR  Wooly Hollow      31.15 345  P     P      19 04 06.5 -1.0
WHAR                               IAmb  IAmb   19 04 08.0
      comp=Z,20nm,0.9s
U58A  Oxford            31.18   6  P     P      19 04 08.5 +0.8
      baz=188
U49A  Red Boiling Sp    31.20 355  P     P      19 04 07.6 -0.3
U49A                               IAmb  IAmb   19 04 09.1
      comp=Z,57nm,1.2s
GNAR  Gosnell           31.27 348  P     P      19 04 07.6 -0.9
LNXT  Lenox             31.30 349  P     P      19 04 08.7 -0.1
PEBM  Pemiscott Bayo    31.38 349  P     P      19 04 09.2 -0.2
GLAT  Glass             31.42 350  P     P      19 04 09.6 -0.2
X37A  Clayton           31.44 340  P     P      19 04 09.1 -0.9
X37A                               IAmb  IAmb   19 05 05.0
      comp=Z,25nm,1.3s
ABTX  Abilene, Hawle    31.48 332  P     P      19 04 09.7 -0.7
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W39A  Magazine          31.48 342  P     P      19 04 10.4 +0.1
      baz=158
W39A  Magazine          31.48 342  P     P      19 04 10.1 -0.3
W39A                               IAmb  IAmb   19 04 14.0
      comp=Z,61nm,1.8s
LCAR  Lake Charles      31.61 347  P     P      19 04 10.9 -0.6
T50A  Nancy             31.64 357  P     P      19 04 11.3 -0.5
T50A                               IAmb  IAmb   19 04 12.9
      comp=Z,42nm,1.3s
PENMO Penman            31.66 349  P     P      19 04 12.1 +0.2
FCAR  Ozark Folk Cen    31.67 345  P     P      19 04 11.2 -0.8
FCAR                               IAmb  IAmb   19 04 12.4
      comp=Z,23nm,1.0s
T56A  Rocky Mt          31.68   4  P     P      19 04 12.6 +0.5
      baz=185
HICK  Hickman           31.68 350  P     P      19 04 11.6 -0.5
T57A  Hurt              31.71   5  P     P      19 04 13.1 +0.7
      baz=186,SNR=6.4
T57A  Hurt              31.71   5  P     P      19 04 12.2 -0.2
T57A                               IAmb  IAmb   19 04 15.0
      comp=Z,34nm,1.1s
T58A  Grand View Acr    31.73   6  P     P      19 04 13.4 +0.9
      baz=188
T47A  Sharon Grove      31.81 353  P     P      19 04 12.7 -0.5
BLA   Blacksburg        31.83   3  P     P      19 04 13.4 -0.1
BLA                                pmax  pmax
      comp=Z,42nm,1.2s
BLA   Blacksburg        31.83   3  P     P      19 04 14.9 +1.4
      baz=184,SNR=5.5
BLA   Blacksburg        31.83   3  P     P      19 04 13.4 -0.1
BLA                                IAmb  IAmb   19 04 16.0
      comp=Z,42nm,1.1s
T59A  Double "B" Far    31.87   8  P     P      19 04 13.7  0.0
T59A                               IAmb  IAmb   19 04 43.6
      comp=Z,62nm,1.8s
HENM  Henderson Moun    31.89 350  P     P      19 04 13.6 -0.3
PARMO Parma             31.89 349  P     P      19 04 13.2 -0.7
PB14  IPOC Station P    32.04 159  P     P      19 04 14.3 -1.5
T45A  Paducah           32.05 351  P     P      19 04 14.5 -0.8
PBMO  Poplar Bluff      32.13 348  P     P      19 04 15.1 -1.0
PBMO                               IAmb  IAmb   19 04 16.7
      comp=Z,39nm,1.4s
T60A  Surry             32.16   9  P     P      19 04 14.5 -1.7
S51A  Beattyville       32.20 359  P     P      19 04 16.1 -0.6
U40A  Yellville         32.30 344  P     P      19 04 17.0 -0.6
      baz=161,SNR=7.5
U40A  Yellville         32.30 344  P     P      19 04 16.6 -1.0
S56A  Natural Bridge    32.35   5  P     P      19 04 19.3 +1.3
      baz=186
X34A  Smith Ranch, M    32.37 336  P     P      19 04 18.6 +0.3
X34A                               IAmb  IAmb   19 04 19.9
      comp=Z,45nm,1.2s
S54A  Dingess, Beckl    32.38   2  P     P      19 04 19.5 +1.2
      baz=182
S54A  Dingess, Beckl    32.38   2  P     P      19 04 18.8 +0.5
S54A                               IAmb  IAmb   19 04 23.2
      comp=Z,32nm,1.1s
S58A  Poland Farm, P    32.44   7  P     P      19 04 20.3 +1.6
      baz=188
S58A  Poland Farm, P    32.44   7  P     P      19 04 19.1 +0.3
S58A                               IAmb  IAmb   19 04 21.1
      comp=Z,43nm,1.4s
W35A  Tecumseh          32.49 338  P     P      19 04 18.0 -1.2
S57A  Dark Hollow, R    32.49   5  P     P      19 04 20.3 +1.1
      baz=187
S57A  Dark Hollow, R    32.49   5  P     P      19 04 19.4 +0.2
S57A                               IAmb  IAmb   19 04 20.7
      comp=Z,35nm,1.3s
T42A  Van Buren         32.52 347  P     P      19 04 18.4 -1.0
T42A                               IAmb  IAmb   19 04 19.7
      comp=Z,33nm,1.1s
R54A  Victor            32.77   2  P     P      19 04 22.8 +1.1
      baz=183,SNR=6.5
FNO   Franklin          32.78 337  P     P      19 04 20.9 -0.9
TUL1  Leonard           32.78 340  P     P      19 04 20.7 -1.1
TUL1                               IAmb  IAmb   19 05 19.5
      comp=Z,34nm,1.4s
U38A  Gravette          32.81 342  P     P      19 04 21.3 -0.8
GO02  Mina Guanaco      32.83 158  P     P      19 04 22.5 -0.2
R50A  Paris             32.87 358  P     P      19 04 22.3 -0.3
R50A                               IAmb  IAmb   19 04 23.8
      comp=Z,42nm,1.1s
WMOK  Wichita Mounta    32.88 335  P     P      19 04 22.6 -0.1
      baz=149,SNR=6.3
R53A  Hurricane         32.89   1  IAmb  IAmb   19 04 25.6
      comp=Z,30nm,0.8s
MGMO  Mountain Grove    32.91 346  IAmb  IAmb   19 04 23.7
      comp=Z,37nm,1.1s
R55A  Marlinton         32.92   4  P     P      19 04 24.0 +1.0
      baz=184
R55A  Marlinton         32.92   4  P     P      19 04 23.6 +0.5
R55A                               IAmb  IAmb   19 04 43.3
      comp=Z,30nm,1.1s
WCI   Wyandotte Cave    32.95 355  P     P      19 04 22.4 -0.8
WCI                                pmax  pmax
      comp=Z,50nm,1.1s
WCI   Wyandotte Cave    32.95 355  P     P      19 04 22.8 -0.4
      baz=173
WCI   Wyandotte Cave    32.95 355  P     P      19 04 22.4 -0.8
R57A  Stanardsville     33.06   6  P     P      19 04 24.9 +0.7
      baz=187
R56A  Bull Pasture M    33.09   5  P     P      19 04 25.8 +1.2
      baz=186
R58A  Rapidan           33.12   7  P     P      19 04 25.7 +0.9
      baz=188,SNR=5.8
Q53A  Leroy             33.43   2  P     P      19 04 27.9 +0.6
      baz=182,SNR=14
CCM   Cathedral Cave    33.53 348  P     P      19 04 27.3 -1.0
CCM                                pmax  pmax
      comp=Z,38nm,1.0s
CCM   Cathedral Cave    33.53 348  P     P      19 04 27.6 -0.7
      baz=164
CCM   Cathedral Cave    33.53 348  P     P      19 04 27.3 -1.0
CCM                                IAmb  IAmb   19 04 28.6
      comp=Z,38nm,0.9s
Q54A  Coxs Mills        33.58   3  IAmb  IAmb   19 04 30.2
      comp=Z,30nm,1.1s
S39A  Bolivar           33.68 345  P     P      19 04 28.9 -0.7
S39A                               IAmb  IAmb   19 04 30.1
      comp=Z,22nm,0.9s
Q56A  Snyder Ridge,     33.74   5  P     P      19 04 31.9 +1.8
      baz=186,SNR=6.7
Q56A  Snyder Ridge,     33.74   5  IAmb  IAmb   19 04 33.1
      comp=Z,39nm,1.1s
Q58A  Fox Den Farm,     33.80   7  P     P      19 04 32.0 +1.4
      baz=189
Q57A  Strasburg         33.81   6  P     P      19 04 32.0 +1.3
      baz=187
MNTX  Cornudas Mount    33.81 324  P     P      19 04 31.9 +1.0
      baz=136,SNR=14
MNTX  Cornudas Mount    33.81 324  IAmb  IAmb   19 04 33.5
      comp=Z,22nm,1.3s
SLM   Saint Louis       33.90 349  P     P      19 04 30.8 -0.7
SLM                                pmax  pmax
      comp=Z,81nm,1.1s
SLM   Saint Louis       33.90 349  P     P      19 04 30.8 -0.7
BLO   Bloomington       33.91 355  IAmb  IAmb   19 04 32.0
      comp=Z,38nm,0.9s
Q44A  Meyer Farm, Va    33.95 351  P     P      19 04 31.3 -0.6
P51A  Williamsport      34.04 359  IAmb  IAmb   19 04 35.1
      comp=Z,19nm,0.8s
P53A  Whipple           34.06   2  IAmb  IAmb   19 04 36.1
      comp=Z,33nm,0.9s
MSTX  Muleshoe          34.10 329  P     P      19 04 34.4 +1.0
      baz=142
P48A  Milroy            34.10 356  P     P      19 04 32.2 -1.1
P49A  Miami Univ. Ec    34.14 357  P     P      19 04 33.2 -0.3
      baz=176,SNR=6.0
P49A  Miami Univ. Ec    34.14 357  P     P      19 04 32.9 -0.7
P49A                               IAmb  IAmb   19 04 34.4
      comp=Z,49nm,1.2s
P52A  Corning           34.19   1  P     P      19 04 34.4 +0.4
      baz=181
P52A  Corning           34.19   1  IAmb  IAmb   19 04 35.9
      comp=Z,61nm,1.4s
P56A  Dayton Farm, R    34.23   5  P     P      19 04 34.6 +0.2
      baz=187,SNR=6.1
P57A  Homestead Farm    34.29   6  P     P      19 04 36.0 +1.1
      baz=188
P57A  Homestead Farm    34.29   6  P     P      19 04 35.1 +0.2
P57A                               IAmb  IAmb   19 04 40.7
      comp=Z,33nm,1.2s
MCWV  Mont Chateau      34.30   4  P     P      19 04 35.9 +0.8
      baz=185
MCWV  Mont Chateau      34.30   4  P     P      19 04 34.3 -0.7
MCWV                               IAmb  IAmb   19 04 37.9
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      comp=Z,31nm,1.4s
P58A  Pank, Wackersv    34.38   7  P     P      19 04 36.6 +1.0
      baz=189
P46A  Rosedale          34.42 354  IAmb  IAmb   19 04 36.1
      comp=Z,38nm,1.0s
P59A  Jarrettsville     34.62   8  P     P      19 04 39.1 +1.3
      baz=191
O49A  Covington         34.77 358  IAmb  IAmb   19 04 40.6
      comp=Z,21nm,0.9s
ACSO  Alum Creek Sta    34.78 360  P     P      19 04 39.1 -0.1
      baz=179,SNR=10.0
ACSO  Alum Creek Sta    34.78 360  IAmb  IAmb   19 04 41.8
      comp=Z,36nm,0.8s
O54A  Avella            34.79   3  P     P      19 04 39.5 +0.2
O54A                               IAmb  IAmb   19 04 42.6
      comp=Z,44nm,1.1s
O53A  New Philadelph    34.83   2  P     P      19 04 39.7 +0.2
      baz=182
O53A  New Philadelph    34.83   2  IAmb  IAmb   19 04 42.4
      comp=Z,31nm,1.1s
GO03  Copiap            34.83 160  P     P      19 04 40.1 +0.3
GO03                               IAmb  IAmb   19 04 41.0
      comp=Z,38nm,1.4s
O56A  Blue Knob Stat    35.01   5  P     P      19 04 42.2 +1.0
      baz=187
O56A  Blue Knob Stat    35.01   5  IAmb  IAmb   19 04 44.4
      comp=Z,37nm,1.2s
MVL   Millersville      35.02   8  P     P      19 04 41.5 +0.3
MVL                                IAmb  IAmb   19 04 50.1
      comp=Z,44nm,1.3s
O57A  Amberson          35.05   7  P     P      19 04 43.0 +1.5
      baz=189
O58A  Lewisberry        35.06   8  P     P      19 04 42.6 +1.1
      baz=190
P40A  Paris             35.12 347  P     P      19 04 40.7 -1.3
P40A                               IAmb  IAmb   19 04 42.4
      comp=Z,42nm,1.1s
SFIN  Lafayette         35.16 354  P     P      19 04 41.0 -1.4
      baz=172,SNR=5.3
SFIN  Lafayette         35.16 354  IAmb  IAmb   19 04 42.2
      comp=Z,36nm,1.1s
PAGS  Pennsylvania G    35.19   8  IAmb  IAmb   19 04 44.7
      comp=Z,53nm,1.2s
O59A  Robesonia         35.34   9  P     P      19 04 45.3 +1.3
      baz=191
N51A  Ashland           35.47   0  IAmb  IAmb   19 04 47.3
      comp=Z,28nm,0.9s
O60A  Telford           35.47  10  P     P      19 04 45.6 +0.5
      baz=192
N49A  Columbus Grove    35.50 358  P     P      19 04 44.1 -1.2
N49A                               IAmb  IAmb   19 04 45.8
      comp=Z,34nm,1.2s
P38A  Dawn              35.56 345  IAmb  IAmb   19 04 47.6
      comp=Z,57nm,1.6s
N54A  Moraine State     35.59   3  P     P      19 04 46.6 +0.4
      baz=184
N54A  Moraine State     35.59   3  IAmb  IAmb   19 05 37.0
      comp=Z,73nm,1.6s
HDIL  Hopedale          35.61 351  P     P      19 04 45.5 -0.8
      baz=168,SNR=7.1
HDIL  Hopedale          35.61 351  P     P      19 04 44.9 -1.4
N56A  West Decatur      35.68   6  P     P      19 04 48.6 +1.6
      baz=187
N58A  Sunbury           35.79   8  P     P      19 04 48.9 +1.1
      baz=190
121A  Cookes Peak, D    35.84 322  P     P      19 04 51.7 +3.1
      baz=134,SNR=13
121A  Cookes Peak, D    35.84 322  IAmb  IAmb   19 04 55.0
      comp=Z,58nm,1.2s
M51A  Elyria            35.88   1  P     P      19 04 48.7 +0.1
      baz=181
KSU1  Kansas State U    35.95 341  P     P      19 04 48.8 -0.4
      baz=156
KSU1  Kansas State U    35.95 341  IAmb  IAmb   19 04 52.7
      comp=Z,18nm,0.8s
M50A  Fremont           35.95 360  IAmb  IAmb   19 04 50.4
      comp=Z,66nm,1.5s
AC05  El Transito       35.97 161  IAmb  IAmb   19 04 58.8
      comp=Z,44nm,1.1s
LCO   Las Campanas      35.99 162  P     P      19 04 48.6 -1.4
LCO                                pmax  pmax
      comp=Z,15nm,0.9s
LCO   Las Campanas      35.99 162  P     P      19 04 48.6 -1.4
N59A  State Game Lan    36.00   9  P     P      19 04 49.7 +0.1
      baz=192
N59A  State Game Lan    36.00   9  IAmb  IAmb   19 04 52.0
      comp=Z,23nm,1.0s
M53A  WI Miller and     36.03   3  P     P      19 04 50.2 +0.3
      baz=183
R32A  Long Quarter,     36.06 338  P     P      19 04 50.4 +0.2
M54A  Oil Creek Stat    36.16   4  P     P      19 04 51.1 +0.1
      baz=185
M54A  Oil Creek Stat    36.16   4  IAmb  IAmb   19 04 55.1
      comp=Z,42nm,1.3s
M57A  Sunshine Farm,    36.23   7  P     P      19 04 52.8 +1.2
      baz=189,SNR=8.2
M57A  Sunshine Farm,    36.23   7  P     P      19 04 51.5 -0.1
M57A                               IAmb  IAmb   19 04 54.8
      comp=Z,61nm,1.2s
M56A  Emporium          36.26   6  P     P      19 04 52.3 +0.5
      baz=187
M58A  Price's Panora    36.35   8  P     P      19 04 55.6 +3.0
      baz=190
L53A  Girard            36.57   3  P     P      19 04 54.6 +0.1
      baz=184
VCA   Vinchina          36.58 158 eP     P      19 04 56.8 +1.9
M60A  Port Jervis       36.59  10  P     P      19 04 55.6 +0.9
      baz=193
N38A  Joes South For    36.60 346  P     P      19 04 53.5 -1.2
HQIL  Hanson Quary C    36.64 353  P     P      19 04 54.2 -0.9
M59A  Waymart           36.66   9  P     P      19 04 57.1 +1.8
      baz=192
CBKS  Cedar Bluff       36.79 337  P     P      19 04 57.2 +0.8
      baz=151
CBKS  Cedar Bluff       36.79 337  IAmb  IAmb   19 04 58.1
      comp=Z,30nm,1.0s
ANMO  Albuquerque       36.80 326  P     P      19 04 58.1 +1.3
      comp=Z,14nm,1.1s,baz=143,slow=11,SNR=18
ANMO  Albuquerque       36.80 326⇓eP     P      19 04 58.4 +1.6
ANMO                               pmax  pmax
      comp=Z,30nm,1.2s
ANMO  Albuquerque       36.80 326  P     P      19 04 59.2 +2.4
      baz=138
ANMO  Albuquerque       36.80 326  P     P      19 04 57.2 +0.4
L57A  Andrews Acres     36.91   7  P     P      19 04 58.2 +0.8
      baz=190
L56A  Greenwood         36.97   6  P     P      19 04 58.8 +0.9
      baz=188
ARAG  Araguaiana, MT    36.99 125 eP     P      19 04 57.4 -0.9
GO04  Tololo Observa    37.05 163  IAmb  IAmb   19 05 02.3
      comp=Z,62nm,1.1s
L42A  Oliver, Polo      37.08 351  P     P      19 04 57.5 -1.4
L42A                               IAmb  IAmb   19 04 59.6
      comp=Z,56nm,1.0s
L58A  Harry Jones Me    37.09   8  P     P      19 04 58.2 -0.7
      baz=191
WVNY  West Valley, N    37.13   5  IAmb  IAmb   19 05 03.9
      comp=Z,60nm,1.2s
BINY  Binghamton        37.23   8  P     P      19 05 01.3 +1.2
      baz=191
CYA   Choya             37.27 155 eP     P      19 05 01.5 +0.9
L40A  Anamosa           37.40 349  IAmb  IAmb   19 05 01.5
      comp=Z,63nm,1.1s
T25A  Trinidad          37.42 331  P     P      19 05 04.4 +2.3
      baz=143,SNR=5.9
AROD  Rodeo             37.46 161 iP     P      19 05 04.7 +2.1
K56A  Middlesex         37.55   6  P     P      19 05 03.0 +0.2
      baz=189
TUC   Tucson            37.59 319  P     P      19 05 04.1 +0.7
TUC                                pmax  pmax
      comp=Z,13nm,1.1s
TUC   Tucson            37.59 319  P     P      19 05 05.5 +2.1
      baz=130
TUC   Tucson            37.59 319  P     P      19 05 04.1 +0.7
K43A  Burlington        37.59 353  IAmb  IAmb   19 05 03.1
      comp=Z,64nm,1.1s
L61A  Hillsdale 1, H    37.63  11  P     P      19 05 04.9 +1.4
      baz=195
SCIA  State Center      37.65 347  P     P      19 05 03.0 -0.7
      baz=163,SNR=5.3
SCIA  State Center      37.65 347  IAmb  IAmb   19 05 04.1
      comp=Z,72nm,1.3s
ACLC  CERRO LA CRUZ     37.67 157 iP     P      19 05 05.2 +1.0
K57A  Scipio Center     37.68   7  P     P      19 05 04.4 +0.5
      baz=190
SMTB  Santa Maria do    37.68 112 eP     P      19 05 04.0 -0.3
CO03  El Pedregal       37.71 163  IAmb  IAmb   19 05 07.8
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	comp=Z,40nm,1.0s						
K58A	**Earlville**	**37.83**	**8**	P	**P**	**19 05 06.2**	**+1.1**
	baz=191						
K59A	**Cooperstown**	**37.96**	**9**	P	**P**	**19 05 06.7**	**+0.4**
	baz=192						
ACCO	**Cerro Coronel**	**37.98**	**161**	*i* P	**P**	**19 05 08.4**	**+1.5**
JFWS	**Jewell Farm**	**38.06**	**351**	P	**P**	**19 05 06.0**	**-1.1**
	baz=168,SNR=5.7						
JFWS	**Jewell Farm**	**38.06**	**351**	IAmb	IAmb	19 05 07.0	
	comp=Z,72nm,1.4s						
KSCO	**Kaye Shedlock'**	**38.13**	**334**	P	**P**	**19 05 09.4**	**+1.5**
	baz=147,SNR=5.5						
KSCO	**Kaye Shedlock'**	**38.13**	**334**	P	**P**	**19 05 08.4**	**+0.5**
KSCO				IAmb	IAmb	19 05 10.4	
	comp=Z,61nm,1.4s						
J56A	**Wolcott**	**38.17**	**7**	P	**P**	**19 05 08.5**	**+0.5**
	baz=189						
J56A	**Wolcott**	**38.17**	**7**	IAmb	IAmb	19 05 09.6	
	comp=Z,37nm,1.1s						
PEXB	**Peixe**	**38.28**	**117**	*e*P	**P**	**19 05 08.7**	**-0.7**
I51A	**Listowel**	**38.38**	**2**	P	**P**	**19 05 09.9**	**+0.1**
	baz=182						
J57A	**Williamstown**	**38.41**	**8**	P	**P**	**19 05 10.4**	**+0.4**
	baz=191						
SDCO	**Great Sand Dun**	**38.43**	**330**	P	**P**	**19 05 12.6**	**+1.9**
	baz=142,SNR=28						
SDCO	**Great Sand Dun**	**38.43**	**330**	IAmb	IAmb	19 05 14.2	
	comp=Z,39nm,1.2s						
J58A	**Remsen**	**38.47**	**9**	P	**P**	**19 05 11.3**	**+0.7**
	baz=192						
J58A	**Remsen**	**38.47**	**9**	IAmb	IAmb	19 05 16.5	
	comp=Z,37nm,1.1s						
AVFE	**Valle Fertil**	**38.60**	**159**	*e*P	**P**	**19 05 12.6**	**+0.7**
J60A	**Lant Hill Farm**	**38.67**	**11**	P	**P**	**19 05 13.6**	**+1.4**
	baz=195						
H03N2	**Juan Fernandez**	**38.68**	**175**	T	T	19 46 15.5	
	baz=354						
H03N1	**Juan Fernandez**	**38.69**	**175**	T	T	19 46 19.7	
	baz=354,slow=74						
J59A	**Piesco**	**38.69**	**10**	P	**P**	**19 05 13.2**	**+0.8**
	baz=193						
H03N3	**Juan Fernandez**	**38.70**	**175**	T	T	19 46 17.2	
	baz=354,slow=74						
APLL	**PUNTA DE LOS L**	**38.70**	**157**	*i* P	**P**	**19 05 13.4**	**+0.7**
214A	**Organ Pipe Nat**	**38.72**	**317**	P	**P**	**19 05 14.5**	**+1.6**
	baz=127,SNR=10						
214A	**Organ Pipe Nat**	**38.72**	**317**	P	**P**	**19 05 14.3**	**+1.4**
214A				IAmb	IAmb	19 05 16.4	
	comp=Z,69nm,1.8s						
W18A	**Petrified Fore**	**38.80**	**323**	P	**P**	**19 05 16.2**	**+2.6**
	baz=134,SNR=9.4						
W18A	**Petrified Fore**	**38.80**	**323**	IAmb	IAmb	19 05 20.3	
	comp=Z,49nm,1.1s						
RTLL	**Cerro Villicun**	**38.85**	**160**	*e*P	**P**	**19 05 14.9**	**+0.9**
J61A	**Chester**	**38.93**	**12**	P	**P**	**19 05 15.9**	**+1.5**
	baz=196						
PIX	**Pinacate**	**38.93**	**316**	P	**P**	**19 05 15.1**	**+0.4**
I57A	**Carthage**	**38.98**	**8**	P	**P**	**19 05 15.2**	**+0.5**
	baz=191,SNR=5.5						
ZON	**Zonda**	**38.99**	**161**	IAmb	IAmb	19 05 19.4	
	comp=Z,33nm,1.1s						
I40A	**Norwalk**	**39.08**	**351**	IAmb	IAmb	19 05 15.4	
	comp=Z,60nm,1.4s						
S22A	**4UR Ranch, Cre**	**39.10**	**329**	P	**P**	**19 05 18.2**	**+1.9**
	baz=140,SNR=15						
Q24A	**Divide**	**39.23**	**332**	P	**P**	**19 05 19.1**	**+1.8**
	baz=143						
I60A	**Shoreham**	**39.27**	**11**	P	**P**	**19 05 18.0**	**+0.7**
	baz=195						
H43A	**Windswept, Lux**	**39.28**	**354**	IAmb	IAmb	19 05 17.0	
	comp=Z,71nm,0.9s						
H53A	**Bobcaygeon**	**39.28**	**5**	P	**P**	**19 05 17.2**	**-0.1**
	baz=186						
RTCV	**Cerro Valdivia**	**39.32**	**161**	*e*P	**P**	**19 05 18.9**	**+1.0**
AUSP	**Uspallata**	**39.39**	**162**	*i* P	**P**	**19 05 20.6**	**+1.9**
H57A	**Richville**	**39.53**	**8**	P	**P**	**19 05 19.5**	**+0.2**
	baz=191						
VA03	**San Esteban**	**39.56**	**164**	IAmb	IAmb	19 05 21.8	
	comp=Z,47nm,0.8s						
MVCO	**Mesa Verde**	**39.58**	**327**	P	**P**	**19 05 21.6**	**+1.4**
	baz=137,SNR=16						
MVCO	**Mesa Verde**	**39.58**	**327**	P	**P**	**19 05 20.8**	**+0.5**
MVCO				IAmb	IAmb	19 05 23.6	
	comp=Z,53nm,1.2s						
ROC1	**El Roble**	**39.63**	**165**	*e*P	**P**	**19 05 21.2**	**+0.5**
H58A	**Gabriels**	**39.67**	**10**	P	**P**	**19 05 21.1**	**+0.5**
	baz=193						
LONY	**Lake Ozonia**	**39.80**	**9**	P	**P**	**19 05 22.2**	**+0.5**
	baz=192						
VT1	**Waterbury**	**39.84**	**11**	IAmb	IAmb	19 05 24.4	
	comp=Z,77nm,1.3s						
MT02	**Curacav**	**39.87**	**165**	P	**P**	**19 05 22.6**	**+0.2**
PEL	**Peldehue**	**39.88**	**164**	IAmb	IAmb	19 05 26.2	
	comp=Z,63nm,1.3s						
CPUP	**Villa Florida**	**39.89**	**143**	P	**P**	**19 05 20.9**	**-1.6**
	comp=Z,8.4nm,0.9s,baz=330,slow=9.2,SNR=16						
ASAL	**Salagasta**	**39.90**	**162**	*i* P	**P**	**19 05 24.4**	**+1.6**
H59A	**Cadyville**	**39.98**	**10**	P	**P**	**19 05 23.7**	**+0.6**
	baz=194						
WUAZ	**Wupatki**	**40.05**	**322**	P	**P**	**19 05 26.3**	**+2.2**
	baz=132						
ISCO	**Idaho Springs**	**40.11**	**332**	P	**P**	**19 05 26.1**	**+1.4**
	baz=143,SNR=7.6						
BDFB	**Brasilia**	**40.12**	**122**	P	**P**	**19 05 23.7**	**-1.1**
	comp=Z,3.4nm,0.6s,baz=315,slow=14,SNR=5.1						
BDFB	**Brasilia**	**40.12**	**122**	P	**P**	**19 05 23.3**	**-1.5**
BDFB				pmax	pmax		
	comp=Z,15nm,1.1s						
BDFB	**Brasilia**	**40.12**	**122**	P	**P**	**19 05 23.3**	**-1.5**
G54A	**Lake Saint Pet**	**40.14**	**5**	P	**P**	**19 05 24.2**	**-0.3**
	baz=187						
ECSD	**EROS Data Cent**	**40.21**	**344**	P	**P**	**19 05 24.0**	**-1.1**
	baz=158						
G57A	**Newington**	**40.22**	**8**	P	**P**	**19 05 25.2**	**+0.2**
	baz=192						
ITRB	**Iturama**	**40.33**	**129**	*e*P	**P**	**19 05 25.6**	**-0.8**
G40A	**Rib Lake**	**40.36**	**352**	P	**P**	**19 05 24.5**	**-1.8**
AAGR	**Agrelo**	**40.36**	**162**	*i* P	**P**	**19 05 28.0**	**+1.4**
PV15	**Paradox Valley**	**40.41**	**328**	IAmb	IAmb	19 05 30.6	
	comp=Z,44nm,1.1s						
PV02	**Paradox Valley**	**40.44**	**328**	IAmb	IAmb	19 05 30.7	
	comp=Z,38nm,1.1s						
PV13	**Radium Mtn., P**	**40.45**	**328**	P	**P**	**19 05 27.6**	**+0.1**
PV13				IAmb	IAmb	19 05 30.6	
	comp=Z,40nm,1.0s						
G59A	**Clarenceville**	**40.49**	**10**	P	**P**	**19 05 27.8**	**+0.5**
	baz=194						
TRCB	**Terra Rica**	**40.51**	**135**	*e*P	**P**	**19 05 26.7**	**-1.2**
PV12	**Saucer Basin,**	**40.56**	**328**	P	**P**	**19 05 30.0**	**+1.7**
PV12				IAmb	IAmb	19 05 31.6	
	comp=Z,50nm,1.1s						
PV18	**Skein Mesa, Pa**	**40.56**	**328**	IAmb	IAmb	19 05 32.9	
	comp=Z,30nm,0.9s						
PV07	**Paradox Valley**	**40.57**	**328**	IAmb	IAmb	19 05 31.7	
	comp=Z,33nm,1.1s						
PV11	**David Mesa, Pa**	**40.58**	**328**	IAmb	IAmb	19 05 35.0	
	comp=Z,50nm,1.2s						
PV16	**Nyswonger Mesa**	**40.62**	**328**	IAmb	IAmb	19 05 31.9	
	comp=Z,44nm,1.3s						
PV17	**East Wray Mesa**	**40.62**	**328**	P	**P**	**19 05 30.1**	**+1.4**
PV19	**Morning Glory**	**40.65**	**328**	P	**P**	**19 05 29.8**	**+0.7**
G60A	**Masonville**	**40.66**	**11**	P	**P**	**19 05 29.6**	**+0.8**
	baz=196						
PV04	**Paradox Valley**	**40.67**	**328**	IAmb	IAmb	19 05 35.8	
	comp=Z,39nm,1.2s						
ALGO	**Algonquin Park**	**40.70**	**5**	P	**P**	**19 05 28.6**	**-0.5**
	baz=187						
PV22	**Blue Mesa, Par**	**40.71**	**328**	P	**P**	**19 05 30.3**	**+0.7**
H63A	**New Sharon**	**40.74**	**14**	P	**P**	**19 05 32.4**	**+2.9**
	baz=199						
GLA	**Glamis**	**40.74**	**317**	P	**P**	**19 05 31.0**	**+1.3**
	baz=126,SNR=6.9						
SPMN	**Marine on St.**	**40.75**	**349**	P	**P**	**19 05 28.0**	**-1.6**
	baz=164,SNR=9.2						
SPMN	**Marine on St.**	**40.75**	**349**	IAmb	IAmb	19 05 30.1	
	comp=Z,32nm,0.9s						
PCMB	**Pacaembu**	**40.76**	**132**	*e*P	**P**	**19 05 28.7**	**-1.3**
MRA	**San Martin**	**40.82**	**158**	*e*P	**P**	**19 05 30.7**	**+0.4**
G61A	**St-Isidore-de-**	**41.00**	**12**	P	**P**	**19 05 32.9**	**+1.3**
	baz=197						
PDMCI	**Parker Dam,Lak**	**41.03**	**319**	P	**P**	**19 05 34.2**	**+2.2**
	baz=128						
E43A	**Lone Tree Farm**	**41.10**	**355**	IAmb	IAmb	19 05 33.1	
	comp=Z,44nm,1.2s						
IPMB	**Ipameri, GO**	**41.11**	**125**	*e*P	**P**	**19 05 31.5**	**-1.4**
N23A	**Red Feather La**	**41.13**	**333**	P	**P**	**19 05 34.6**	**+1.5**
	baz=143						
G62A	**West of Eustis**	**41.15**	**13**	P	**P**	**19 05 34.3**	**+1.4**
	baz=198						
SWSC	**Sam W. Stewart**	**41.35**	**316**	P	**P**	**19 05 37.2**	**+2.6**
	baz=124						
IKP	**In-Ko-Pah, Jac**	**41.40**	**315**	P	**P**	**19 05 37.3**	**+2.1**
	baz=124						
BO02	**Sierra Bellavi**	**41.41**	**165**	P	**P**	**19 05 35.2**	**0.0**
BO02				IAmb	IAmb	19 05 43.6	
	comp=Z,27nm,0.8s						
SDBA	**SAO DESIDERIO**	**41.44**	**115**	*e*P	**P**	**19 05 35.0**	**-0.7**
BC3	**Big Chuckawall**	**41.52**	**317**	P	**P**	**19 05 38.1**	**+1.9**
	baz=126,SNR=6.9						
IRM	**Iron Mountain**	**41.60**	**318**	P	**P**	**19 05 39.1**	**+2.3**
	baz=126,SNR=6.5						
E56A	**St. Veronique**	**41.62**	**8**	P	**P**	**19 05 36.9**	**+0.3**
	baz=191						
E57A	**Chemin Saint G**	**41.62**	**9**	P	**P**	**19 05 36.9**	**+0.2**
	baz=193,SNR=6.9						
O20A	**White River Ci**	**41.63**	**330**	P	**P**	**19 05 39.4**	**+2.2**
	baz=140,SNR=7.7						
E58A	**La Victoria**	**41.72**	**10**	P	**P**	**19 05 38.3**	**+0.9**
	baz=194						
MONP2	**Monument Peak**	**41.75**	**315**	P	**P**	**19 05 40.4**	**+2.2**
	baz=124						
PKCU	**Pink Cliffs**	**41.91**	**324**	P	**P**	**19 05 41.1**	**+1.6**
KNB	**Kanab**	**41.92**	**323**	P	**P**	**19 05 41.0**	**+1.5**
KNB				pmax	pmax		
	comp=Z,34nm,1.4s						
KNB	**Kanab**	**41.92**	**323**	P	**P**	**19 05 41.0**	**+1.5**
D55A	**Sainte-Anne-du**	**42.03**	**7**	P	**P**	**19 05 40.1**	**+0.1**
	baz=191						
RFA	**San Rafael**	**42.04**	**162**	*e*P	**P**	**19 05 41.2**	**+0.9**
E60A	**Ste Agathe de**	**42.05**	**12**	P	**P**	**19 05 40.9**	**+0.7**
	baz=197						
F33A	**5 Mile Ranch,**	**42.09**	**346**	IAmb	IAmb	19 05 40.3	
	comp=Z,52nm,1.5s						
PTGB	**Pitanga**	**42.14**	**136**	*e*P	**P**	**19 05 40.3**	**-1.1**
TPFO	**Pinon Flats**	**42.17**	**316**	P	**P**	**19 05 43.6**	**+2.0**
	baz=124						
PFO	**Pinyon Flats O**	**42.18**	**316**	P	**P**	**19 05 42.6**	**+1.0**
	comp=Z,6.6nm,1.1s,baz=122,slow=11,SNR=5.1						
PFO	**Pinyon Flats O**	**42.18**	**316**⇓	*e*P	**P**	**19 05 44.2**	**+2.6**
PFO				pmax	pmax		
	comp=Z,30nm,1.6s						
PFO	**Pinyon Flats O**	**42.18**	**316**	P	**P**	**19 05 42.9**	**+1.2**
	baz=124						
PFO	**Pinyon Flats O**	**42.18**	**316**	P	**P**	**19 05 43.1**	**+1.4**
GMRC	**Granite Mounta**	**42.32**	**318**	P	**P**	**19 05 44.8**	**+2.0**
	baz=126,SNR=5.1						
RWWY	**Rawlins**	**42.34**	**332**	IAmb	IAmb	19 05 45.0	
	comp=Z,31nm,1.1s						
D58A	**Chemin du LacG**	**42.49**	**10**	P	**P**	**19 05 44.0**	**+0.3**
	baz=194						
BB19B	**Bebedouro**	**42.51**	**129**	*e*P	**P**	**19 05 43.5**	**-0.9**
RDMU	**Red Mountain**	**42.63**	**329**	P	**P**	**19 05 45.7**	**+0.4**
D60A	**Saint Jean D'O**	**42.68**	**12**	P	**P**	**19 05 45.8**	**+0.5**
	baz=197,SNR=6.6						
MURC	**Murrieta**	**42.68**	**316**	P	**P**	**19 05 47.8**	**+2.2**
	baz=124						
HEC	**Hector,Ludlow**	**42.79**	**318**	P	**P**	**19 05 48.9**	**+2.3**
	baz=126						
K22A	**Casper**	**42.80**	**334**	P	**P**	**19 05 48.2**	**+1.6**
	baz=144,SNR=6.5						
ITQB	**Itaqui**	**42.81**	**146**	*e*P	**P**	**19 05 46.7**	**+0.1**
RSSD	**Black Hills**	**43.00**	**337**	P	**P**	**19 05 49.4**	**+1.2**
RSSD				pmax	pmax		
	comp=Z,72nm,1.6s						
RSSD	**Black Hills**	**43.00**	**337**	P	**P**	**19 05 50.0**	**+1.8**
	baz=148						
RSSD	**Black Hills**	**43.00**	**337**	P	**P**	**19 05 49.4**	**+1.2**
RSSD				IAmb	IAmb	19 05 51.1	
	comp=Z,72nm,1.6s						
JANB	**Januaria**	**43.04**	**119**	*e*P	**P**	**19 05 47.7**	**-1.1**
BI02	**San Fabin de**	**43.08**	**167**	P	**P**	**19 05 48.8**	**0.0**
BI02				IAmb	IAmb	19 05 53.9	
	comp=Z,32nm,0.9s						
D61A	**St Aubert, Com**	**43.11**	**12**	P	**P**	**19 05 50.2**	**+1.4**
	baz=198,SNR=7.5						
EYMN	**Ely**	**43.17**	**351**	P	**P**	**19 05 48.0**	**-1.2**
	baz=167						
BFSC	**Mount Baldy Ra**	**43.36**	**316**	P	**P**	**19 05 53.1**	**+1.9**
	baz=124						
GSC	**Goldstone, Bar**	**43.38**	**318**	P	**P**	**19 05 53.3**	**+1.9**
	baz=126,SNR=5.5						
D63A	**Stockholm**	**43.44**	**14**	P	**P**	**19 05 53.1**	**+1.7**
	baz=201						
JLU	**Jordanelle**	**43.62**	**328**	P	**P**	**19 05 53.2**	**-0.1**
ITAB	**Concordia**	**43.78**	**139**	*e*P	**P**	**19 05 53.6**	**-0.9**
LSQQ	**Lebel-sur-Quev**	**43.87**	**5**	P	**P**	**19 05 53.8**	**-1.1**
	baz=188						
EDW2	**Edwards Air Fo**	**43.94**	**317**	P	**P**	**19 05 56.6**	**+0.8**
	baz=124,SNR=5.0						
TPNV	**Topopah Spring**	**44.00**	**320**	P	**P**	**19 05 57.8**	**+1.4**
	baz=128,SNR=5.6						
TPNV	**Topopah Spring**	**44.00**	**320**	IAmb	IAmb	19 06 01.4	
	comp=Z,48nm,1.8s						
LRMC	**Laurel Mtn Rad**	**44.07**	**318**	P	**P**	**19 05 58.6**	**+1.7**
	baz=125						
DUG	**Dugway, Tooele**	**44.07**	**326**	P	**P**	**19 05 58.5**	**+1.6**
	baz=134						
FURC	**Furnace Creek,**	**44.10**	**319**	P	**P**	**19 05 59.2**	**+2.3**
	baz=126						
MPMC	**Manual Prospec**	**44.27**	**318**	P	**P**	**19 06 00.0**	**+1.4**
	baz=126						
BW06	**Boulder Array**	**44.28**	**331**	P	**P**	**19 05 59.6**	**+1.0**
	baz=140,SNR=5.3						
BW06	**Boulder Array**	**44.28**	**331**	P	**P**	**19 05 58.7**	**+0.1**
PDAR	**Pinedale Array**	**44.28**	**331**	P	**P**	**19 05 58.9**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=137,slow=9.9,SNR=10						
PDAR				PcP	**PcP**	**19 07 43.7**	**+0.8**
	comp=Z,2.2nm,1.1s,baz=132,slow=2.7,SNR=3.3						
AGMN	**Agassiz Nation**	**44.31**	**347**	P	**P**	**19 05 57.7**	**-0.7**
	baz=161						
R11A	**Troy Canyon, C**	**44.45**	**322**	P	**P**	**19 06 01.7**	**+1.7**
	baz=129,SNR=8.6						
MATQ	**Matagami**	**44.51**	**5**	P	**P**	**19 05 59.1**	**-0.9**
	baz=187						
ISA	**Isabella, Lake**	**44.71**	**317**	P	**P**	**19 06 03.3**	**+1.4**
ISA				pmax	pmax		
	comp=Z,20nm,1.5s						
ISA	**Isabella, Lake**	**44.71**	**317**	P	**P**	**19 06 03.7**	**+1.8**
	baz=124						
ISA	**Isabella, Lake**	**44.71**	**317**	P	**P**	**19 06 03.3**	**+1.4**
MDND	**Maddock**	**44.82**	**344**	P	**P**	**19 06 03.0**	**+0.5**
	baz=156						
CWC	**Cottonwood Cre**	**44.88**	**319**	P	**P**	**19 06 04.8**	**+1.4**
	baz=125						
LC01	**Cunco**	**45.09**	**168**	P	**P**	**19 06 04.4**	**-0.4**
CPSB	**Cacapava Do Su**	**45.19**	**144**	*e*P	**P**	**19 06 05.3**	**-0.5**
PKM	**Mcpherson Peak**	**45.20**	**316**	P	**P**	**19 06 08.0**	**+2.0**
	baz=122						
VES	**Vestal, Richgr**	**45.22**	**317**	P	**P**	**19 06 07.6**	**+1.7**
	baz=124,SNR=5.5						
REDW	**Red Top Meadow**	**45.35**	**331**	IAmb	IAmb	19 06 09.6	
	comp=Z,47nm,1.2s						
SNOW	**Snow King Moun**	**45.38**	**331**	IAmb	IAmb	19 06 12.2	
	comp=Z,38nm,1.4s						
SMMC	**Simmler**	**45.56**	**316**	P	**P**	**19 06 10.4**	**+1.8**
	baz=122						
MOOW	**Moose Ponds**	**45.59**	**331**	P	**P**	**19 06 09.6**	**+0.6**
RLMT	**Red Lodge**	**45.97**	**334**	P	**P**	**19 06 13.0**	**+1.1**
	baz=142,SNR=8.3						
RLMT	**Red Lodge**	**45.97**	**334**	IAmb	IAmb	19 06 16.2	
	comp=Z,47nm,1.6s						
LAO	**LASA Array**	**45.99**	**337**	P	**P**	**19 06 13.1**	**+1.2**
	baz=146						
H17A	**Grant Village**	**46.00**	**332**	P	**P**	**19 06 14.4**	**+2.1**
	baz=140						
H17A	**Grant Village**	**46.00**	**332**	P	**P**	**19 06 13.2**	**+1.0**
H17A				IAmb	IAmb	19 06 31.4	
	comp=Z,35nm,1.6s						
LKWY	**Lake**	**46.05**	**332**	IAmb	IAmb	19 06 21.4	
	comp=Z,39nm,1.9s						
PLTB	**Pedras Altas**	**46.09**	**145**	*e*P	**P**	**19 06 12.7**	**-0.2**
NV11	**Mina Array Sit**	**46.10**	**321**	IAmb	IAmb	19 06 18.3	
	comp=Z,42nm,1.6s						
ULM	**Lac du Bonnet**	**46.16**	**348**	P	**P**	**19 06 11.3**	**-1.8**
	comp=Z,13nm,0.8s,baz=157,slow=6.8,SNR=8.6						
ULM	**Lac du Bonnet**	**46.16**	**348**⇑	*e*P	**P**	**19 06 10.5**	**-2.6**
ULM	**Lac du Bonnet**	**46.16**	**348**	IAmb	IAmb	19 06 16.9	
	comp=Z,18nm,0.9s						
NVAR	**Mina Array Bea**	**46.19**	**321**	P	**P**	**19 06 15.3**	**+1.5**
	comp=Z,8.4nm,0.8s,baz=129,slow=7.1,SNR=23						
NVAR	**Mina Array Bea**	**46.19**	**321**	P	**P**	**19 06 15.2**	**+1.4**
YNE	**Yellowstone No**	**46.21**	**333**	P	**P**	**19 06 14.0**	**+0.1**
LHV	**Little Huntoon**	**46.21**	**320**	IAmb	IAmb	19 06 20.8	
	comp=Z,28nm,1.1s						
MDPB	**Devils Postpil**	**46.22**	**319**	IAmb	IAmb	19 06 17.1	
	comp=Z,20nm,1.0s						
YHH	**Holmes Hill**	**46.42**	**332**	P	**P**	**19 06 16.5**	**+0.9**
RYN	**Ryan**	**46.45**	**321**	IAmb	IAmb	19 06 18.6	
	comp=Z,28nm,1.6s						
GCMT	**Greycliff**	**46.67**	**334**	P	**P**	**19 06 18.2**	**+0.8**
PLCA	**Paso Flores**	**47.13**	**167**	P	**P**	**19 06 19.3**	**-1.6**
	comp=Z,15nm,0.8s,baz=345,slow=8.9,SNR=15						
PLCA	**Paso Flores**	**47.13**	**167**	P	**P**	**19 06 20.6**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,19nm,0.9s						
PLCA	**Paso Flores**	**47.13**	**167**	P	**P**	**19 06 20.6**	**-0.3**
PLCA				IAmb	IAmb	19 06 23.5	
	comp=Z,19nm,0.9s						
PLCA	**Paso Flores**	**47.13**	**167**	*e*P	**P**	**19 06 21.2**	**+0.3**
HLID	**Hailey**	**47.28**	**329**	P	**P**	**19 06 23.6**	**+1.4**
	baz=134						
HLID	**Hailey**	**47.28**	**329**	IAmb	IAmb	19 06 25.0	
	comp=Z,31nm,1.9s						
SJMB	**Sao Joao De Ma**	**47.31**	**121**	*e*P	**P**	**19 06 22.1**	**-0.4**
BOZ	**Bozeman (W)**	**47.40**	**332**	P	**P**	**19 06 24.5**	**+1.5**
	baz=139,SNR=18						
BOZ	**Bozeman (W)**	**47.40**	**332**	IAmb	IAmb	19 06 25.7	
	comp=Z,31nm,1.3s						
MCMT	**McKenzie Canyo**	**47.40**	**331**	P	**P**	**19 06 23.1**	**-0.1**
BSFB	**Barra de Sao F**	**47.66**	**121**	*e*P	**P**	**19 06 25.6**	**+0.4**
MFID	**Camas Ranch**	**47.92**	**328**	IAmb	IAmb	19 06 29.8	
	comp=Z,20nm,1.3s						
RIB01	**Linhares ES**	**48.25**	**122**	*e*P	**P**	**19 06 29.7**	**-0.1**
EGMT	**Eagleton**	**48.47**	**336**	P	**P**	**19 06 32.3**	**+1.1**
	baz=143,SNR=7.1						
EGMT	**Eagleton**	**48.47**	**336**	IAmb	IAmb	19 06 35.7	
	comp=Z,38nm,1.3s						
WVOR	**Wild Horse Val**	**48.84**	**325**	IAmb	IAmb	19 06 36.6	
	comp=Z,38nm,1.2s						
GO07	**Milladeo Hill,**	**48.87**	**171**	P	**P**	**19 06 34.2**	**0.0**
ORV	**Oroville**	**48.87**	**320**	P	**P**	**19 06 35.6**	**+1.2**
ORV				pmax	pmax		
	comp=Z,19nm,1.1s						
ORV	**Oroville**	**48.87**	**320**	P	**P**	**19 06 35.6**	**+1.2**
ORV				IAmb	IAmb	19 06 39.5	
	comp=Z,19nm,1.1s						
MSO	**Missoula**	**49.39**	**332**	P	**P**	**19 06 39.3**	**+0.9**
	baz=137,SNR=7.9						
MSO	**Missoula**	**49.39**	**332**	IAmb	IAmb	19 06 40.4	
	comp=Z,21nm,1.3s						
O03E	**Paynes Creek**	**49.48**	**321**	P	**P**	**19 06 39.8**	**+0.7**
	baz=124						
M04C	**Macdoel**	**50.35**	**322**	P	**P**	**19 06 46.8**	**+1.0**
	baz=125						
I07A	**Izee**	**50.37**	**326**	P	**P**	**19 06 46.5**	**+0.6**
J05D	**Fort Rock, OR**	**50.87**	**324**	P	**P**	**19 06 51.0**	**+1.3**
	baz=127						
KHMM	**Horse Mountain**	**51.02**	**320**	P	**P**	**19 06 52.0**	**+1.1**
E09A	**Wood Farm, Sta**	**51.23**	**329**	IAmb	IAmb	19 06 54.0	
	comp=Z,35nm,1.6s						
J04D	**Umpqua Nationa**	**51.36**	**324**	P	**P**	**19 06 54.7**	**+1.3**
	baz=126						
FFC	**Flin Flon**	**51.70**	**346**	P	**P**	**19 06 55.6**	**+0.1**
FFC				pmax	pmax		
	comp=Z,22nm,1.4s						
FFC	**Flin Flon**	**51.70**	**346**	P	**P**	**19 06 55.6**	**+0.1**
I04A	**Tendick Farm,**	**51.86**	**324**	P	**P**	**19 06 57.3**	**+0.3**
	baz=126						
NEW	**Newport**	**51.92**	**331**	P	**P**	**19 06 58.2**	**+0.8**
	baz=134						
K02D	**Willamette Mer**	**51.98**	**322**	P	**P**	**19 06 59.0**	**+1.0**
	baz=124						
G05D	**Wamic, OR**	**52.10**	**326**	P	**P**	**19 07 01.1**	**+2.4**
	baz=128						
I03D	**Drain, OR**	**52.36**	**323**	P	**P**	**19 07 04.0**	**+3.4**
	baz=125						
J01E	**Myrtle Point**	**52.41**	**322**	P	**P**	**19 07 02.4**	**+1.4**
	baz=124						
LTY	**Liberty**	**53.02**	**328**	P	**P**	**19 07 06.8**	**+1.2**
D05A	**Enumclaw**	**53.68**	**328**	IAmb	IAmb	19 07 13.1	
	comp=Z,38nm,1.2s						
FCC	**Fort Churchill**	**54.06**	**353**	IAmb	IAmb	19 07 14.1	
	comp=Z,25nm,1.1s						
D03D	**Eldon**	**54.48**	**327**	P	**P**	**19 07 17.1**	**+1.0**
	baz=128						
RKT	**Rikitea**	**58.36**	**239**	*e*S	**S**	**19 15 44.5**	**-2.2**
	comp=Z,518nm,31.0s						
RKT				*e*LQ	LQ	19 22 25.7	
	comp=Z,544nm,35.0s						
RKT				*e*LR	LR	19 24 54.7	
	comp=Z,1µm,27.0s						
TAOE	**Nuku Hiva Isla**	**59.01**	**256**	*e*LR	LR	19 25 13.6	
	comp=Z,665nm,26.0s						
YKA	**Yellowknife Ar**	**61.74**	**344**	P	**P**	**19 08 07.0**	**+0.3**
	comp=Z,16nm,0.8s,baz=137,slow=7.1,SNR=50						
YKA	**Yellowknife Ar**	**61.74**	**344**	P	**P**	**19 08 07.0**	**+0.3**
DLBC	**Dease Lake**	**64.36**	**335**	P	**P**	**19 08 26.0**	**+1.6**
DLBC				IAmb	IAmb	19 08 29.3	
	comp=Z,21nm,1.1s						
ICESG	**Greenland Ices**	**69.70**	**15**	*i* P	**P**	**19 08 57.0**	**-1.4**
ICESG				IAmb	IAmb	19 08 58.6	
	comp=Z,20nm,1.0s						
RES	**Resolute Bay**	**69.70**	**357**	IAmb	IAmb	19 08 58.5	
	comp=Z,14nm,1.2s						
PPT2	**Papeete2**	**69.83**	**249**	*e*S	**S**	**19 18 06.7**	**-2.7**
	comp=Z,133nm,24.8s						
PPT2	**Papeete2**	**69.83**	**249**	*e*LR	LR	19 30 13.8	
	comp=Z,551nm,24.5s						
TBI	**Tubuai**	**71.08**	**243**	*e*LR	LR	19 30 48.5	
	comp=Z,1µm,26.5s						
INK	**Inuvik**	**71.41**	**342**	P	**P**	**19 09 09.6**	**+1.2**
	comp=Z,5.6nm,0.9s,baz=124,slow=8.3,SNR=9.0						
INK	**Inuvik**	**71.41**	**342**	IAmb	IAmb	19 09 11.1	
	comp=Z,32nm,1.5s						
TULEG	**Thule**	**71.60**	**3**	*i* P	**P**	**19 09 09.8**	**+0.3**
TULEG				IAmb	IAmb	19 09 11.3	
	comp=Z,35nm,1.2s						
GLB	**Gilahina Butte**	**71.87**	**334**	IAmb	IAmb	19 10 00.6	
	comp=Z,21nm,1.4s						
EGAK	**Eagle**	**72.20**	**337**	IAmb	IAmb	19 10 28.9	
	comp=Z,26nm,1.4s						
SUMG	**Summit**	**72.39**	**13**	P	**P**	**19 09 14.3**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,47nm,1.3s						
SUMG	**Summit**	**72.39**	**13**	P	**P**	**19 09 14.3**	**-0.5**
SUMG	**Summit**	**72.39**	**13**	*i* P	**P**	**19 09 14.6**	**-0.1**
	comp=Z,98nm,1.2s						
SUMG	**Summit**	**72.39**	**13**	*i* P	**P**	**19 09 14.7**	**-0.1**
SUMG				IAmb	IAmb	19 09 18.1	
	comp=Z,98nm,1.2s						
KLU	**Klutina**	**72.82**	**333**	IAmb	IAmb	19 09 19.4	
	comp=Z,30nm,1.4s						
SCRK	**Sand Creek**	**72.96**	**336**	P	**P**	**19 09 18.7**	**+0.8**
	baz=114						
RIDG	**Independent Ri**	**73.22**	**336**	IAmb	IAmb	19 09 23.9	
	comp=Z,15nm,1.1s						
KNK	**Knik Glacier**	**73.94**	**333**	IAmb	IAmb	19 09 27.5	
	comp=Z,20nm,0.9s						
SML	**Sawmill**	**74.01**	**333**	IAmb	IAmb	19 09 28.3	
	comp=Z,33nm,1.2s						
MORF	**Marmelete**	**74.09**	**53**	*e*P	**P**	**19 09 26.4**	**+1.3**
GHO	**Glory Hole Cre**	**74.27**	**333**	IAmb	IAmb	19 09 29.6	
	comp=Z,27nm,1.0s						
HDA	**Harding Lake**	**74.33**	**336**	P	**P**	**19 09 26.8**	**+0.9**
	baz=111						
HDA	**Harding Lake**	**74.33**	**336**	P	**P**	**19 09 26.6**	**+0.8**
RC01	**Rabbit Creek A**	**74.42**	**332**	P	**P**	**19 09 27.3**	**+0.9**
	baz=108						
ILAR	**Eielson Array**	**74.43**	**336**	P	**P**	**19 09 27.3**	**+0.8**
	comp=Z,4.7nm,0.9s,baz=113,slow=3.6,SNR=13						
FYU	**Fort Yukon**	**74.49**	**338**	IAmb	IAmb	19 09 39.1	
	comp=Z,16nm,1.1s						
PCAS	**Casmilo, Conde**	**74.49**	**50**	*e*P	**P**	**19 09 28.2**	**+0.9**
	comp=Z,179nm,1.6s						
PMTG	**Montargil**	**74.60**	**51**	*e*P	**P**	**19 09 26.9**	**-1.0**
	comp=Z,75nm,1.6s						
PBDV	**Barranco-do-Ve**	**74.66**	**53**	*e*P	**P**	**19 09 27.9**	**-0.4**
	comp=Z,104nm,1.7s						
EVO	**Evora**	**74.71**	**52**	*e*P	**P**	**19 09 29.6**	**+1.0**
EUNU	**Eureka**	**74.75**	**359**	IAmb	IAmb	19 10 04.7	
	comp=Z,24nm,0.8s						
RND	**Reindeer**	**74.77**	**335**	P	**P**	**19 09 29.5**	**+1.0**
RND				pmax	pmax		
	comp=Z,22nm,0.9s						
RND	**Reindeer**	**74.77**	**335**	P	**P**	**19 09 29.5**	**+1.0**
RND				IAmb	IAmb	19 09 32.5	
	comp=Z,22nm,0.9s						
COLA	**College**	**74.86**	**336**⇑	*e*P	**P**	**19 09 28.3**	**-0.5**
COLA				pmax	pmax		
	comp=Z,23nm,2.6s						
MCK	**McKinley**	**74.91**	**335**	P	**P**	**19 09 30.0**	**+0.8**

	baz=109						
PESTR	Estremoz	75.07	51	IAmb	IAmb	19 09 34.5	
	comp=Z,34nm,1.4s						
PCBR	Castelo Branco	75.25	50	eP	P	19 09 32.4	+0.7
NEA2	Nenana	75.25	336	P	P	19 09 31.9	+0.8
	baz=109,SNR=8.3						
PMRV	Marv??o	75.28	51	eP	P	19 09 31.7	-0.2
TRF	Thorofare Moun	75.39	335	IAmb	IAmb	19 09 39.1	
	comp=Z,14nm,0.9s						
PBAR	Barrancos	75.44	52	eP	P	19 09 33.9	+1.1
SKT	Skwentna	75.51	333	IAmb	IAmb	19 09 36.7	
	comp=Z,21nm,1.0s						
KTH	Kantishna Hill	75.70	335	P	P	19 09 33.9	0.0
KTH				IAmb	IAmb	19 09 37.6	
	comp=Z,14nm,0.9s						
BPAW	Bear Paw Mtn.	75.89	335	IAmb	IAmb	19 09 38.7	
	comp=Z,19nm,1.0s						
PPLA	Purkeypile	76.06	334	IAmb	IAmb	19 09 48.5	
	comp=Z,37nm,1.4s						
MLY	Manley	76.07	336	P	P	19 09 36.7	+0.7
	baz=108						
COLD	Coldfoot	76.56	338	P	P	19 09 40.4	+1.8
	baz=109,SNR=8.0						
COLD	Coldfoot	76.56	338	IAmb	IAmb	19 09 41.7	
	comp=Z,19nm,1.4s						
TIC	Toumodi	77.15	84	eP	P	19 09 45.0	+2.0
LIC	Lamto	77.17	85	eP	P	19 09 42.7	-0.4
	comp=Z,111nm,1.6s						
DBIC	Dimbokro	77.31	84	P	P	19 09 44.4	+0.5
	comp=Z,7.8nm,0.8s,baz=219,slow=5.1,SNR=5.7						
DBIC	Dimbokro	77.31	84	P	P	19 09 44.4	+0.5
DBIC				pmax	pmax		
	comp=Z,23nm,1.3s						
DBIC	Dimbokro	77.31	84	IAmb	IAmb	19 09 56.8	
	comp=Z,23nm,1.3s						
KIC	Kosan Boka	77.45	85	eP	P	19 09 44.9	+0.2
	comp=Z,19nm,0.8s						
KOWA	Kowa	77.71	76	P	P	19 09 46.6	+0.5
KOWA				IAmb	IAmb	19 09 55.3	
	comp=Z,15nm,0.7s						
TTA	Tatalina	77.76	333	IAmb	IAmb	19 09 46.8	
	comp=Z,18nm,1.3s						
ESDC	Sonseca Array	77.94	51	P	P	19 09 47.6	+0.6
	comp=Z,7.9nm,1.1s,baz=268,slow=5.1,SNR=10						
ESDC	Sonseca Array	77.94	51	IAmb	IAmb	19 09 50.6	
	comp=Z,42nm,1.2s						
DAG	Danmarks Havn	79.06	12	i P	P	19 09 51.0	-1.4
DAG	Danmarks Havn	79.06	12	i P	P	19 09 51.0	-1.4
	comp=Z,7.4nm,1.0s						
DAG	Danmarks Havn	79.06	12	i P	P	19 09 51.0	-1.4
DAG				IAmb	IAmb	19 09 53.7	
	comp=Z,7.4nm,1.0s						
TORD	Torodi Ar. Bea	83.33	77	P	P	19 10 16.7	+0.4
	comp=Z,7.0nm,1.0s,baz=281,slow=3.9,SNR=12						
NB2	NORSAR Subarra	87.28	29	P	P	19 10 35.1	-0.1
	comp=Z,1.3nm,0.8s,baz=271,slow=4.8						
NOA	NORSAR Array B	87.28	29	P	P	19 10 35.4	+0.2
	comp=Z,4.4nm,1.1s,baz=274,slow=4.7,SNR=4.9						
DAVA	Damuels	87.87	43	eP	P	19 10 38.5	+0.1
	comp=Z,13nm,1.1s						
RETA	Reutte	88.45	43	eP	P	19 10 39.9	-1.2
	comp=Z,9.5nm,1.3s						
FETA	Feichten	88.47	43	eP	P	19 10 40.6	-0.7
	comp=Z,8.1nm,1.2s						
MOTA	Moosalm	88.69	43	eP	P	19 10 41.2	-1.1
	comp=Z,16nm,2.4s						
SQTA	Sankt Quirin	88.78	43	eP	P	19 10 43.3	+0.6
	comp=Z,5.9nm,1.0s						
WATA	Walderalm	89.01	43	eP	P	19 10 44.6	+0.7
	comp=Z,10nm,1.4s						
CLL	Collm	89.44	39	eP	P	19 10 44.0	-1.6
	comp=Z,9.0nm,1.3s						
CLL				LmH		19 43 00.0	
	comp=Z,500nm,21.5s						
CLL				LmV		19 46 00.0	
	comp=Z,400nm,19.7s						
CLL	Collm	89.44	39	eP	P	19 10 44.0	-1.6
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL				MLR	MLR		
	comp=Z,400nm,19.7s						
VNA3	Neumayer Olymp	89.57	162	P	P	19 10 45.4	-0.3
KHC	Kasperske Hory	90.11	41	eP	P	19 10 49.2	+0.4
KHC	Kasperske Hory	90.11	41	eP	P	19 10 49.2	+0.4
VNA2	Neumayer--Watz	90.19	161	P	P	19 10 48.2	-0.4
	baz=297,slow=6.0						
GERES	GERESS Array B	90.23	41	P	P	19 10 48.9	-0.5
	comp=Z,1.3nm,0.9s,baz=300,slow=2.6,SNR=6.9						
KBA	Koelnbreinsper	90.24	43	eP	P	19 10 52.3	+2.7
	comp=Z,7.0nm,1.2s						
OSTC	Ostas	91.57	39	eP	P	19 10 56.6	+1.1
DPC	Dobruska-Polom	91.67	39	eP	P	19 10 58.0	+2.0
DPC				e		19 11 06.8	
DPC	Dobruska-Polom	91.67	39	eP	P	19 10 58.0	+2.0
DPC				ex	x	19 11 06.8	
SNAA	Sanae	91.79	162	P	P	19 10 55.7	-0.4
SNAA	Sanae	91.79	162	⇓eP	P	19 10 55.8	-0.3
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CONA	Conrad Observa	91.80	42	eP	P	19 10 58.9	+2.2
	comp=Z,6.6nm,1.2s						
BILL	Bilibino	92.85	339	⇓eP	P	19 11 01.5	+0.5
BILL				i		19 11 11.0	
BILL				e		19 14 42.8	
BILL				eSS	SS	19 28 15.7	-3.0
BILL				pmax	pmax		
	comp=Z,15nm,1.5s						
BILL				MLR	MLR		
	comp=Z,335nm,18.0s						
LANS	Liptovska Anna	93.91	40	eP	P	19 11 10.2	+3.8
LANS	Liptovska Anna	93.91	40	eP	P	19 11 10.2	+3.8
MNK	Minsk	97.43	33	i P	P	19 11 20.3	-1.9
	comp=E,2.0nm,1.3s						
MNK				i P	P	19 11 20.3	-1.9
	comp=N,5.0nm,1.3s						
MNK				i P	P	19 11 20.3	-1.9
	comp=Z,8.0nm,1.3s						
MNK				i PP	PP	19 15 16.3	-2.7
MNK				i PPP	PPP	19 17 20.2	
MNK				i S	SKSac	19 21 57.4	-1.8
MNK				i SS	SS	19 29 22.2	-2.1
MNK				i SSS	SSS	19 33 07.8	
MNK				i SKKS	SKKSdf	19 35 11.4	-2.9
MNK				i LQ	LQ	19 49 14.2	
MNK				i LR	LR	19 53 33.0	
MNK				i LRM	MLR	19 55 31.6	
	comp=N,232nm,23.8s						
MNK				i LRM	MLR	19 56 03.1	
	comp=Z,262nm,19.3s						
MNK				i LRM	MLR	19 56 26.3	
	comp=E,23nm,13.2s						
SEY	Seymchan	100.34	338	⇑eP	Pdif	19 11 33.7	-1.4
TIXI	Tiksi	100.48	350	⇑eP	Pdif	19 11 35.6	+0.1
SKR	Severo-Kuril's	104.93	326	i P	Pdif	19 11 52.6	-3.1
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
H11N3	WAKE ISLAND Hy	107.27	292	T	T	21 12 03.7	
	baz=79,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	107.27	292	T	T	21 12 07.1	
	baz=79,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	107.28	292	T	T	21 12 10.7	
	baz=79,slow=75,SNR=9.8						
H11S2	WAKE ISLAND Hy	107.71	291	T	T	21 12 41.5	
	baz=77,slow=75,SNR=6.4						
H11S1	WAKE ISLAND Hy	107.71	291	T	T	21 12 40.0	
	baz=77,slow=75,SNR=5.9						
H11S3	WAKE ISLAND Hy	107.73	291	T	T	21 12 43.8	
	baz=77,slow=75,SNR=4.9						
KIV	Kislovodsk	110.65	39	i PKIKP	PKiKP	19 16 19.2	-2.5
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
BRVK	Borovoye	117.53	18	⇑iPKIKP	PKiKP	19 16 34.9	+0.4
ZALV	Zalesovo Beam	120.04	9	PKP	PKiKP	19 16 39.5	+0.1
	comp=Z,1.3nm,0.9s,baz=0.0,slow=2.9,SNR=3.9						
KURK	Kurchatov	121.92	14	⇓iPKIKP	PKPdf	19 16 42.4	-0.6
KURK	Kurchatov	121.92	14		PKiKP	19 16 43.3	+0.1
KURBB	Kurchatov Arra	121.99	14	PKP	PKiKP	19 16 43.3	0.0
	comp=Z,1.3nm,0.9s,baz=334,slow=2.4,SNR=6.1						
DGZ	Jazzator, Alta	124.56	8	⇓iPKIKP	PKPdf	19 16 47.9	-0.4
ULN	Ulaanbaatar	126.38	352	⇓iPKIKP	PKPdf	19 16 50.8	-1.1
MK31	Makanchi Array	126.45	13	⇓iPKIKP	PKPdf	19 16 51.5	-0.4
MKAR	Makanchi Array	126.45	13	PKP	PKPdf	19 16 51.7	-0.2
	comp=Z,1.0nm,0.9s,baz=356,slow=3.6,SNR=6.0						
SONM	Songino Array	126.50	352	PKP	PKiKP	19 16 52.5	-0.1
	comp=Z,1.0nm,0.7s,baz=318,slow=0.9,SNR=5.6						
SONM				PP	PP	19 18 50.9	+4.3
	comp=Z,1.2nm,1.1s,baz=27,slow=6.8,SNR=2.7						
AAK	Ala-Archa	127.97	21	PKP	PKiKP	19 16 56.6	+0.9
	comp=Z,2.5nm,1.0s,baz=210,slow=4.4,SNR=5.3						
AAK	Ala-Archa	127.97	21	⇑iPKIKP	PKiKP	19 16 56.8	+1.1
AAK	Ala-Archa	127.97	21		PKiKP	19 16 57.0	+1.3
KSRS	Korea Array	128.81	329	PKP	PKiKP	19 16 57.9	+0.7
	comp=Z,1.2nm,0.9s,baz=206,slow=38,SNR=3.2						
WMQ	Urumqi	130.34	9	ePKP	PKiKP	19 17 00.5	+0.2
WMQ				LR	LR		
	comp=Z,800nm,29.2s						
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
WMQ				LR	LR		
	comp=Z,2µm,29.2s						
KSH	Kashi	131.24	22	PKP	PKiKP	19 17 04.3	+2.0
KSH				PP	PP	19 19 26.0	+8.1
KSH				AMB	AMB		
	comp=Z,280nm,5.1s						
HHC	Hu-ho-hao-te	132.26	345	ePKP	PKPdf	19 16 59.0	-4.2
NJ2	Nanjing	137.59	333	ePKP	PKPdf	19 17 13.0	-0.3
LZH	Lanzhou	138.39	352	ePKP	PKPdf	19 17 13.3	-1.6
LZH				sPKP		19 17 17.8	
LZH				LR	LR		
	comp=Z,130nm,17.9s						
LZH				LR	LR		
	comp=Z,120nm,18.1s						
LZH				LR	LR		
	comp=Z,170nm,20.2s						
ASAR	Alice Springs	140.35	239	PKhKP	PKPpre	19 17 12.3	
	comp=Z,0.8nm,0.9s,baz=108,slow=3.0,SNR=4.0						
ASAR				PKP	PKPdf	19 17 18.0	-0.6
	comp=Z,1.7nm,0.9s,baz=130,slow=3.4,SNR=6.0						
ASAR	Alice Springs	140.35	239	PKIKP	PKPdf	19 17 18.0	-0.6
WRAB	Tennant Creek	141.19	245	⇓iPKIKP	PKiKP	19 17 23.8	+0.9
WRA	Warramunga Arr	141.20	245	PKhKP	PKPpre	19 17 15.8	
	comp=Z,1.3nm,1.1s,baz=101,slow=3.3,SNR=3.4						
WRA				PKP	PKPdf	19 17 20.6	+0.4
	comp=Z,3.4nm,1.0s,baz=102,slow=2.0,SNR=7.4						
WRA	Warramunga Arr	141.20	245	PKIKP	PKPdf	19 17 19.2	-1.0
WRA	Warramunga Arr	141.20	245		PKPdf	19 17 19.2	-1.0
CD2	Chengdu	143.48	351	ePKP	PKPdf	19 17 23.0	-1.0
H01W1	Cape Leeuwin H	146.70	206	T	T	22 02 03.4	
	baz=150,slow=76,SNR=6.6						
H01W2	Cape Leeuwin H	146.70	206	T	T	22 02 03.6	
	baz=150,slow=76,SNR=6.4						
H01W3	Cape Leeuwin H	146.71	206	T	T	22 02 04.7	
	baz=150,slow=76,SNR=7.5						
POO	Poona	146.88	44	eP	PKPdf	19 17 26.0	-4.2
GYA	Guiyang	147.17	344	ePKPbc	PKPbc	19 17 33.3	+0.6
KMI	Kunming	149.31	350	⇓ePKPbc	PKPbc	19 17 38.0	-0.6
KMI				LR	LR		
	comp=Z,240nm,20.8s						
KMI				LR	LR		
	comp=Z,280nm,21.9s						
KMI				LR	LR		
	comp=Z,340nm,19.2s						
HYB	Hyderabad	150.78	39	i PKP	PKPdf	19 17 38.0	+1.5
CMAR	Chiang Mai Arr	156.35	356	PKP	PKPdf	19 17 45.5	+1.1
	comp=Z,1.1nm,0.9s,baz=346,slow=1.7,SNR=4.8						
CMAR				PKPab	PKPab	19 18 12.2	-0.1
	comp=Z,3.9nm,1.1s,baz=340,slow=4.8,SNR=8.1						
CMAR				PP	PP	19 21 45.0	-3.1
	comp=Z,0.4nm,0.7s,baz=342,slow=5.7,SNR=2.8						
CMAR	Chiang Mai Arr	156.35	356	PKIKP	PKPdf	19 17 44.6	+0.2
CMAR	Chiang Mai Arr	156.35	356		PKPdf	19 17 44.6	+0.2

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*TIF **31** 19:20:28.1, 42°.45N×40°.93E, h29^{km}±3^{km}*

*MOS **31** 19:20:29.1±0.9, 42°.37N×40°.92E, h8^{km}, mb3.7/1, Error ellipse: s-maj=6.2km s-min=5.6km az=78.4*

*MOS **31** 19:20:29.6±0.0, 42°.48N×41°.04E, h3^{km}, MPVA4.2*

*ISK **31** 19:20:29.5, 42°.44N×41°.10E, h9^{km}, ML3.0/6*

*NORS **31** 19:20:30.4±0.0, 42°.46N×41°.39E, h0^{km}, MPVA3.9*

ISC 31 19:20:29.0±1.2, **42°.44N**±0°.02×**41°.04E**±0°.02, **h0**^{km}±10^{km}, **n82,** σ**0^{s}.99**/148, **1C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVG	Ch'k'valeri	0.82	70	P	Pg	19 20 45.5	+0.8
CHVG				S	Sb	19 20 57.7	+0.1
BATM	Batumi	0.97	150	P	Pg	19 20 48.1	+0.6
BATM				S	Sb	19 21 02.3	+0.5
BATM	Batumi	0.97	150	PG	Pg	19 20 48.3	+0.7
BATM				SG	Sb	19 21 01.7	-0.2
BATM	Batumi	0.97	150	ePg	Pg	19 20 48.2	+0.7
BATM				i Sg	Sb	19 21 02.2	+0.3
BATM	Batumi	0.97	150	ePG	Pg	19 20 48.2	+0.7
BATM				i S	Sb	19 21 02.2	+0.3
ARXR	Arkhyz	1.13	9	i Pg	Pg	19 20 51.1	+0.3
ARXR				i Sg	Sg	19 21 05.2	-0.3
ARXR	Arkhyz	1.13	9	d iPG	Pg	19 20 51.0	+0.3
ARXR				i S	Sn	19 21 09.3	+0.7
ARXR				pmax	pmax		
	comp=Z,458nm,0.9s						
ARXR				smax	smax		
	comp=Z,629nm,0.5s						
VSLR	Vesyoloye	1.26	324	i Pg	Pn	19 20 53.2	-0.6
VSLR				i Sg	Sn	19 21 10.5	-1.0
VSLR	Vesyoloye	1.26	324	i PG	Pn	19 20 53.2	-0.6
VSLR				i S	Sn	19 21 10.5	-1.0
RPOR	Krasnaya Polya	1.38	336	i Pg	Pn	19 20 55.0	-0.5
RPOR				i Sg	Sn	19 21 13.5	-1.0
RPOR	Krasnaya Polya	1.38	336	i PG	Pn	19 20 55.0	-0.5
RPOR				i S	Sn	19 21 13.5	-1.0
TKB	Tkibuli	1.45	93	P	Pn	19 20 55.8	-0.7
TKB				S	Sb	19 21 15.5	-0.3
TKB	Tkibuli	1.45	93	PG	Pn	19 20 55.7	-0.7
NEY	Neytrino	1.48	56	i Pg	Pb	19 20 56.9	-0.5
NEY				i Sg	Sn	19 21 16.1	-1.0
NEY	Neytrino	1.48	56	ePG	Pb	19 20 57.1	-0.3
ABS	Abastumani	1.48	117	P	Pn	19 20 56.2	-0.9
ABS				S	Sg	19 21 17.1	+0.4
SOC	Sochi	1.50	320	i Pg	Pn	19 20 56.6	-0.6
SOC				i Sg	Sb	19 21 16.9	-0.3
SOC	Sochi	1.50	320	ePG	Pn	19 20 56.6	-0.6
SOC				e		19 21 17.2	
SOC				pmax	pmax		
	comp=Z,38nm,0.1s						
SOC				smax	smax		
	comp=N,204nm,0.2s						
SOC				smax	smax		
	comp=E,918nm,0.3s						
GUZR	Guzeripl'	1.69	337	i Pg	Pb	19 21 00.4	-0.7
GUZR				i Sg	Sb	19 21 22.8	-0.2
GUZR	Guzeripl'	1.69	337	i PN	Pb	19 21 00.4	-0.7
GUZR				i S	Sb	19 21 22.8	-0.2
AHMR	Akhmetovskaya	1.72	0	ePg	Pb	19 21 01.0	-0.4
AHMR				eSg	Sb	19 21 23.2	-0.4
KTUT	Trabzon	1.74	214	PN	Pn	19 21 00.8	+0.4
ONI	Oni	1.79	84	P	Pn	19 21 00.7	-0.5
ONI				S	Sb	19 21 25.8	+0.2
ONI	Oni	1.79	84	i Pg	Pb	19 21 01.7	-0.9
ONI				i Sg	Sb	19 21 25.8	+0.2
ONI	Oni	1.79	84	⇑iPN	Pb	19 21 01.7	-0.9
KBZ	Khabaz	1.87	46	i Pg	Pb	19 21 04.4	+0.4
KBZ				i Sg	Sg	19 21 28.9	-0.3
KBZ	Khabaz	1.87	46	i PN	Pb	19 21 04.4	+0.4
DIGR	Digorskoe uzhe	1.93	75	ePg	Pb	19 21 04.5	-0.5
DIGR				eSg	Sb	19 21 29.5	-0.2
DIGR	Digorskoe uzhe	1.93	75	ePN	Pb	19 21 04.6	-0.5
LZRR	Lazarevskoye	1.93	321	ePg	Pn	19 21 03.6	+0.6
LZRR				eSg	Sb	19 21 28.9	-0.6
LZRR	Lazarevskoye	1.93	321	ePN	Pn	19 21 03.6	+0.6
LZRR				eS	Sb	19 21 28.9	-0.6
KIV	Kislovodsk	1.93	38	ePg	Pb	19 21 05.2	+0.1
KIV				eSg	Sb	19 21 30.2	+0.4
KIV	Kislovodsk	1.93	38	ePN	Pb	19 21 05.2	+0.1
BKRG	Bakuriani	1.97	109	P	Pn	19 21 03.7	0.0
BKRG				S	Sg	19 21 31.7	-0.5
BKRG	Bakuriani	1.97	109	PN	Pn	19 21 03.7	0.0
BEYR	Belyy Ugol+	2.04	39	ePg	Pb	19 21 07.3	+0.4
BEYR				eSg	Sb	19 21 33.4	+0.7
BEYR	Belyy Ugol+	2.04	39	ePN	Pb	19 21 07.3	+0.4
BEYR				eS	Sb	19 21 33.4	+0.7
AKH	Akhalkalaki	2.10	119	P	Pb	19 21 06.7	-1.2
AKH				S	Sb	19 21 34.0	-0.7
AKH	Akhalkalaki	2.10	119	PN	Pn	19 21 05.3	-0.2
AKH	Akhalkalaki	2.10	119	ePg	Pb	19 21 06.8	-1.2
AKH				eSg	Sb	19 21 33.9	-0.7
AKH	Akhalkalaki	2.10	119	ePN	Pb	19 21 06.8	-1.2
AKH				eS	Sb	19 21 33.9	-0.7
SENK	Senkaya-Erzuru	2.12	152	PN	Pn	19 21 05.7	-0.1
SENK				SN	Sn	19 21 32.5	-0.4
ZEI	Tsey	2.14	80	ePg	Pb	19 21 07.5	-1.2
ZEI				eSg	Sb	19 21 36.1	+0.3
ZEI	Tsey	2.14	80	ePN	Pb	19 21 07.9	-0.8
ZEI				eS	Sb	19 21 36.1	+0.3
NCK	Nalchik	2.15	60	ePg	Pb	19 21 08.4	-0.4
NCK				eSg	Sb	19 21 34.9	-1.1
NCK	Nalchik	2.15	60	ePN	Pb	19 21 08.4	-0.4
NCK				eS	Sb	19 21 34.9	-1.1
BAYT	Aydıntepe-Bayb	2.15	199	PN	Pn	19 21 06.9	+0.6
TPSR	Tuapse	2.17	320	ePg	Pb	19 21 07.4	-1.7
TPSR				eSg	Sb	19 21 36.1	-0.4
TPSR	Tuapse	2.17	320	ePN	Pb	19 21 07.4	-1.7
TPSR				eS	Sb	19 21 36.1	-0.4
PYA1	Pyatigorsk	2.21	42	ePg	Pb	19 21 09.2	-0.6
PYA1				eSg	Sb	19 21 36.9	-0.8
PYA1	Pyatigorsk	2.21	42	ePN	Pb	19 21 09.2	-0.6
PYA1				eS	Sb	19 21 36.9	-0.8
LSNR	Lesken	2.21	67	ePg	Pb	19 21 09.7	-0.1
LSNR				eSg	Sn	19 21 35.6	+0.6
LSNR	Lesken	2.21	67	ePN	Pb	19 21 09.7	-0.1
LSNR				eS	Sn	19 21 35.6	+0.6
KBTC	Kuba-Taba	2.21	51	ePg	Pb	19 21 09.0	-0.8
KBTC				eSg	Sb	19 21 37.6	-0.2
KBTC	Kuba-Taba	2.21	51	ePN	Pb	19 21 09.0	-0.8
KBTC				eS	Sb	19 21 37.6	-0.2
LABN	Labinsk	2.21	354	ePg	Pb	19 21 10.3	+0.4
LABN				eSg	Sb	19 21 38.0	+0.2
LABN	Labinsk	2.21	354	ePN	Pb	19 21 10.3	+0.4
LABN				eS	Sb	19 21 38.0	+0.2
BRNG	Burnasheti	2.23	111	P	Pb	19 21 10.0	-0.3
BRNG				S	Sg	19 21 40.2	-0.4
BGD	Bogdanovka	2.24	121	PN	Pb	19 21 09.9	-0.6
KORR	Kora	2.32	73	ePn	Pb	19 21 11.0	-0.7
KORR				eSn	Sb	19 21 40.7	-0.2
KORR	Kora	2.32	73	ePN	Pb	19 21 11.0	-0.7
KORR				eS	Sb	19 21 40.7	-0.2
STDR	Stavd-Durt	2.40	66	ePn	Pb	19 21 11.7	-1.4
STDR				eSn	Sb	19 21 41.6	-1.6
STDR	Stavd-Durt	2.40	66	ePN	Pb	19 21 11.7	-1.4
STDR				eS	Sb	19 21 41.7	-1.6
LACR	Lac	2.43	80	ePn	Pb	19 21 12.2	-1.5
LACR				eSn	Sb	19 21 44.0	-0.2
LACR	Lac	2.43	80	ePN	Pb	19 21 12.2	-1.5
LACR				eS	Sb	19 21 43.5	-0.7
ARNR	Ardon	2.50	72	ePn	Pb	19 21 12.6	-2.1
ARNR				eSn	Sn	19 21 43.0	+1.0
ARNR	Ardon	2.50	72	ePN	Pb	19 21 12.6	-2.1
ARNR				eS	Sn	19 21 43.0	+1.0
KOPR	Koprukoy-ERZUR	2.52	166	PN	Pn	19 21 11.6	+0.3
DMNI	Dmanisi	2.60	114	P	Pn	19 21 13.7	+1.3
DMNI				S	Sb	19 21 48.2	-0.8
BTKR	Batakoyurt	2.73	69	PN	Pb	19 21 18.5	-0.3
KMGR	Komgaron	2.88	76	ePn	Pb	19 21 19.4	-1.9
KMGR				eSn	Sb	19 21 54.4	-2.7
KMGR	Komgaron	2.88	76	ePN	Pb	19 21 19.4	-1.9
KMGR				eS	Sb	19 21 54.4	-2.7
GOF	Gofitskoye	2.99	28	ePn	Pn	19 21 18.1	+0.5
GOF				eSn	Sn	19 21 55.0	+0.9
GOF	Gofitskoye	2.99	28	ePN	Pn	19 21 18.1	+0.5
GOF				eS	Sn	19 21 55.0	+0.9
AGRB	Hanur-Agry	3.22	152	PN	Pn	19 21 21.5	+0.5
ANN	Anapa	3.53	313	ePn	Pn	19 21 26.8	+1.9
ANN				eSn	Sn	19 22 09.2	+1.9
ANN	Anapa	3.53	313	ePN	Pn	19 21 26.8	+1.9
ANN				eS	Sn	19 22 09.2	+1.9
GNI	Garni	3.61	128	PN	Pn	19 21 26.7	+0.5
LGD	Lagodekhi	3.91	97	ePn	Pn	19 21 33.2	+2.9
LGD				eSn	Sn	19 22 18.0	+1.1
LGD	Lagodekhi	3.91	97	ePN	Pn	19 21 33.2	+2.9
LGD				eS	Sn	19 22 18.0	+1.1
ALU	Alushta	5.32	297	ePN	Pn	19 21 48.9	-0.7
ALU				eS	Sn	19 22 48.4	-3.1
SEV	Sevastopol'	5.76	294	eP	Pn	19 21 57.4	+1.7
SEV				eS	Sn	19 23 02.9	+0.5

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*AEIC **31** 19:25:51±2.6, 56°.45N±0°.04×169°.3W±0°.1, h16^{km}±6^{km}, Error ellipse: s-maj=10.6km s-min=4.5km az=63.0*

*IDC **31** 19:25:52.7±2.4, 56°.64N×169°.30W, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.6/36, mbtmp3.9/6, ML3.6/2, Error ellipse: s-maj=78.9km s-min=20.0km az=176.0*

*NEIC **31** 19:25:53.9±1.7, 56°.48N±0°.01×169°.1W±0°.1, h10^{km}±2^{km}, mb3.9/3, ML3.5(AEIC), Error ellipse: s-maj=9.9km s-min=3.1km az=98.0*

ISC 31 19:25:53.5±0.8, **56°.53N**±0°.09×**169°.14W**±0°.07, **h10**^{km}, **n43,** σ**1^{s}.23**/43, **mb3.6**/3, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.89	317		Pg	19 26 08.8	-1.8
AKGG	Akutan Green G	2.95	141		Pn	19 26 39.0	-1.4
MSW	Makushin Switc	2.95	152		Pn	19 26 39.4	-1.0
AKRB	Akutan Reef Bi	2.98	143		Pn	19 26 40.6	-0.2
AKLV	Akutan Long Va	2.99	141		Pn	19 26 40.4	-0.5
MGOD	Makushin Gods	3.04	154		Pn	19 26 39.1	-2.5
AKBBA	Akutan Broad B	3.05	142		Pn	19 26 41.1	-0.6
AKUT	Akutan	3.08	140	Pn	Pn	19 26 41.2	-0.8
UNV	Unalaska Valle	3.09	150		Pn	19 26 42.2	0.0
OKWE	Okmok W'ng Wal	3.11	170		Pn	19 26 41.3	-1.3
WESP	Westdahl Peak	3.24	127		Pn	19 26 43.5	-0.8
NIKH	Nikolski High	3.57	177	Pn	Pn	19 26 48.9	0.0
FALS	False Pass	3.65	115	Pn	Pn	19 26 49.9	0.0
SDPT	Sand Point	5.01	100	Pn	Pn	19 27 09.7	+1.1
ATKA	Atka Island	5.25	216	Pn	Pn	19 27 13.6	+1.7
CHGN	Chignik	5.96	88	Pn	Pn	19 27 22.1	+0.5
ADK	Adak	6.42	227	Pn	Pn	19 27 28.9	+0.9
GAMB	Gambell	7.38	351		Pn	19 27 42.0	+1.0
ANM	Nome	8.27	11		Pn	19 27 53.1	-0.2
AMKA	Amchitka	8.55	238		Pn	19 27 59.8	+2.6
KDAK	Kodiak Island	9.08	75	Pn	Pn	19 28 07.5	+3.1
	2.0nm,0.3s,baz=274,slow=11,SNR=23						
KDAK	Kodiak Island	9.08	75		Pn	19 28 06.5	+2.0
TTA	Tatalina	9.21	40	Pn	Pn	19 28 07.2	+0.9
RSO	Redoubt South	9.43	59	Pn	Pn	19 28 09.1	-0.3
PPLA	Purkeypile	10.65	46	Pn	Pn	19 28 26.0	0.0
KTH	Kantishna Hill	11.47	45	Pn	Pn	19 28 36.9	-0.3
TRF	Thorofare Moun	11.67	46	Pn	Pn	19 28 40.6	+0.6
BPAW	Bear Paw Mtn.	11.73	42		Pn	19 28 40.9	+0.2
IMAR	Indian Mountai	11.98	32	Pn	Pn	19 28 45.5	+1.4
MDM	Murphy Dome	13.19	42	Pn	Pn	19 29 01.3	+0.7
ILAR	Eielson Array	13.61	44	Pn	Pn	19 29 07.7	+1.4
	0.1nm,0.3s,baz=227,slow=13,SNR=6.1						
BARN	Barnard Glacie	14.88	61	Pn	Pn	19 29 22.4	-1.4
BCAR	Beaver Creek A	15.15	53	Pn	Pn	19 29 28.1	+0.9
BMAR	Burnt Mountain	15.74	36		Pn	19 29 36.0	+0.9
HYT	Haines Junctio	16.89	62	Pn	Pn	19 29 50.6	+0.7
HYT				IAmb	IAmb	19 29 56.6	
	comp=Z,8.4nm,1.2s						
WHY	Whitehorse	18.18	63		P	19 30 06.7	+0.6
WHY				IAmb	IAmb	19 30 22.8	
	comp=Z,10nm,1.3s						
PEA0B	Petropavlovsk-	19.30	274	P	Pn	19 30 19.9	+0.6
PEA0B				IAmb	IAmb	19 30 27.7	
	comp=Z,26nm,1.3s						
PETK	Petropavlovsk-	19.30	274	P	Pn	19 30 19.7	+0.4
	comp=Z,0.3nm,0.3s,baz=84,slow=10,SNR=14						
PETK	Petropavlovsk-	19.30	274	P	Pn	19 30 20.4	+1.0
SEY	Seymchan	20.17	304	P	P	19 30 27.9	+0.3
	comp=Z,3.7nm,0.8s,baz=100,slow=8.8,SNR=11						
YKA	Yellowknife Ar	27.55	55	P	P	19 31 41.7	+1.7
	comp=Z,0.8nm,0.6s,baz=277,slow=8.3,SNR=8.6						
AKASG	Malin Array Be	72.05	348	P	P	19 37 15.4	-1.8
	comp=Z,0.9nm,0.6s,baz=12,slow=5.6,SNR=3.7						
CMAR	Chiang Mai Arr	75.86	282	P	P	19 37 39.6	-0.3
	comp=Z,0.3nm,0.8s,baz=27,slow=7.1,SNR=2.5						

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*AEIC **31** 19:33:08±2.9, 56°.65N±0°.05×169°.07W±0°.06, h24^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=4.8km az=191.0*

*IDC **31** 19:33:09.0±0.7, 56°.56N×169°.21W, h0^{km}, mb3.8/17, mb1 4.1/21, mb1mx4.0/38, mbtmp3.9/21, ML4.2/3, Error ellipse: s-maj=23.7km s-min=12.7km az=175.0*

*NEIC **31** 19:33:11.2±2.0, 56°.63N±0°.04×169°.08W±0°.10, h15^{km}±4^{km}, mb4.4/24, ML4.0(AEIC), Error ellipse: s-maj=8.9km s-min=3.2km az=61.0*

ISC 31 19:33:10.6±0.4, **56°.64N**±0°.06×**169°.05W**±0°.05, **h10**^{km}, **n124,** σ**1^{s}.37**/127, **mb4.3**/39, **Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.85	310		Pg	19 33 25.8	-1.2
SPIA					Sg	19 33 38.0	0.0
AKGG	Akutan Green G	3.01	143		Pn	19 33 57.1	-1.1
MSW	Makushin Switc	3.03	154		Pn	19 33 57.7	-0.8
AKRB	Akutan Reef Bi	3.04	145		Pn	19 33 58.5	-0.2
AKLV	Akutan Long Va	3.05	143		Pn	19 33 57.9	-1.0
MNAT	Makushin Natee	3.08	153		Pn	19 33 57.9	-1.4
MAPS	Pakushin South	3.09	156		Pn	19 33 58.9	-0.5
AKUT	Akutan	3.13	142	Pn	Pn	19 33 59.5	-0.5
UNV	Unalaska Valle	3.16	151	Pn	Pn	19 34 00.3	0.0
UNV	Unalaska Valle	3.16	151		Sn	19 34 37.0	-1.0
WEBT	Westdahl Beart	3.19	128		Pn	19 34 00.0	-0.8
OKWE	Okmok W'ng Wal	3.21	171		Pn	19 33 59.2	-1.9
WESP	Westdahl Peak	3.27	129		Pn	19 34 01.0	-0.9
OKFG	Magazine Ridge	3.30	168		Pn	19 34 01.9	-0.4
OKSP	Okmok Steeple	3.42	172		Pn	19 34 02.4	-1.6
NIKH	Nikolski High	3.68	178	Pn	Pn	19 34 07.2	-0.2
SDPT	Sand Point	4.99	101	Pn	Pn	19 34 26.6	+1.2
ATKA	Atka Island	5.37	216	Pn	Pn	19 34 31.9	+1.2
VNHG	Veniaminof 1	5.50	90		Pn	19 34 31.5	-1.1
CHGN	Chignik	5.91	89		Pn	19 34 38.3	+0.3
ADK	Adak	6.53	226		Pn	19 34 46.9	+0.2
GAMB	Gambell	7.28	351		Pn	19 34 55.2	-1.7
ANM	Nome	8.15	11	Pn	Pn	19 35 08.3	-0.5
OHAK	Old Harbor	8.64	80	Pn	Pn	19 35 18.1	+2.5
AMKA	Amchitka	8.64	237	Pn	Pn	19 35 16.8	+1.2
KDAK	Kodiak Island	9.01	76	Pn	Pn	19 35 23.2	+2.6
	2.7nm,0.3s,baz=284,slow=8.5,SNR=12						
KDAK				Sn	Sn	19 37 00.6	-1.4
	baz=218,slow=8.0,SNR=1.4						
KDAK	Kodiak Island	9.01	76	Pn	Pn	19 35 22.2	+1.7
TTA	Tatalina	9.10	41	Pn	Pn	19 35 20.7	-1.1
CNPM	China Poot	9.86	66	Pn	Pn	19 35 32.8	+0.6
BRLK	Bradley Lake	10.08	64	Pn	Pn	19 35 35.2	-0.1
PPLA	Purkeypile	10.54	47	Pn	Pn	19 35 40.5	-1.2
SEW	Seward	10.85	63	Pn	Pn	19 35 46.8	+1.0
BPAW	Bear Paw Mtn.	11.62	43	Pn	Pn	19 35 54.4	-1.8
SCM	Sheep Creek Mo	12.24	56	Pn	Pn	19 36 05.2	+0.3
KLU	Klutina	12.81	58		Pn	19 36 14.6	+1.9
WRH	Wood River Hil	12.90	44		Pn	19 36 15.2	+1.5
MDM	Murphy Dome	13.08	42		Pn	19 36 17.1	+0.9
CCB	Clear Creek Bu	13.09	44		Pn	19 36 14.5	-1.8
TCOL	CIGO, UAF Yank	13.18	43	Pn	Pn	19 36 18.6	+1.1
COLA	College	13.18	43	Pn	Pn	19 36 18.5	+1.0
HDA	Harding Lake	13.31	45		Pn	19 36 20.6	+1.3
PAX	Paxson	13.40	52		Pn	19 36 21.4	+0.8
N25K	Chitina, Valde	13.46	58	Pn	Pn	19 36 21.4	-0.1
IL31		13.50	44		Pn	19 36 23.7	+1.9
ILAR	Eielson Array	13.50	44	Pn	Pn	19 36 21.8	-0.1
	0.0nm,0.3s,baz=350,slow=26,SNR=2.3						
ILAR	Eielson Array	13.50	44	Pn	Pn	19 36 23.2	+1.3
GLB	Gilahina Butte	13.80	59	Pn	Pn	19 36 25.9	-0.3
VRDI	Verde Repeater	13.94	60	Pn	Pn	19 36 28.4	+0.3
CRQM	Cirque	14.04	62	Pn	Pn	19 36 31.1	+1.6
MCARA	McCarthy VSAT	14.17	60	Pn	Pn	19 36 31.1	+0.1
TGL	Tana Glacier	14.19	62	Pn	Pn	19 36 32.0	+0.5
DOT	Dot Lake	14.21	50	Pn	Pn	19 36 30.5	-1.2
BALM	Baldy	14.45	61	Pn	Pn	19 36 36.3	+1.2
BARN	Barnard Glacie	14.79	61		Pn	19 36 40.5	+0.8
CTGM	Chitina Glacie	14.94	62		Pn	19 36 40.8	-0.9
FYU	Fort Yukon	14.96	39		Pn	19 36 41.4	-0.4
BCAR	Beaver Creek A	15.04	53		Pn	19 36 42.1	-0.9
BMAR	Burnt Mountain	15.63	36		Pn	19 36 50.9	+0.3
HYT	Haines Junctio	16.80	62	P	P	19 37 08.1	+0.1
EPYK	Eagle Plains	18.01	44	P	Pn	19 37 20.9	+0.1
WHY	Whitehorse	18.09	63	P	Pn	19 37 21.9	0.0
PEA0B	Petropavlovsk-	19.34	274	P	P	19 37 35.9	0.0
PEA0B				IAmb	IAmb	19 37 50.1	
	comp=Z,27nm,1.2s						
PETK	Petropavlovsk-	19.34	274	P	P	19 37 35.3	-0.5
	comp=Z,0.6nm,0.3s,baz=79,slow=13,SNR=21						
PETK	Petropavlovsk-	19.34	274	P	P	19 37 36.0	+0.1
INK	Inuvik	19.79	40	P	P	19 37 41.0	+0.4
	comp=Z,1.5nm,0.3s,baz=254,slow=7.3,SNR=30						
INK	Inuvik	19.79	40	P	P	19 37 40.2	-0.4
INK				IAmb	IAmb	19 37 46.0	
	comp=Z,10nm,0.6s						
SEY	Seymchan	20.15	304	P	P	19 37 44.3	-0.2
	comp=Z,3.1nm,0.8s,baz=104,slow=9.4,SNR=12						
DLBC	Dease Lake	20.82	69	P	Pn	19 37 54.6	+0.2
	comp=Z,6.7nm,0.8s,baz=280,slow=11,SNR=7.5						
DLBC	Dease Lake	20.82	69	P	P	19 37 53.3	+1.2
DLBC				IAmb	IAmb	19 38 01.8	
	comp=Z,10nm,0.9s						
C36M	Paulatuk	23.37	39	P	P	19 38 19.7	+0.9
C36M				IAmb	IAmb	19 38 24.5	
	comp=Z,8.4nm,0.8s						
YKA	Yellowknife Ar	27.45	55	P	P	19 38 56.0	-0.3
	comp=Z,0.3nm,0.7s,baz=283,slow=8.6,SNR=3.5						
YKA				PcP	PcP	19 42 14.5	+0.2
	comp=Z,0.4nm,0.6s,baz=293,slow=2.0,SNR=3.6						
NVAR	Mina Array Bea	37.77	97	P	P	19 40 26.7	-0.1
	comp=Z,0.4nm,0.5s,baz=322,slow=12,SNR=2.3						
NVAR				PcP	PcP	19 42 42.8	-0.7
	comp=Z,0.6nm,0.6s,baz=320,slow=2.4,SNR=4.6						
NVAR	Mina Array Bea	37.77	97	P	P	19 40 26.4	-0.4
FCC	Fort Churchill	38.18	55	P	P	19 40 28.7	-1.1
FCC				IAmb	IAmb	19 40 35.3	
	comp=Z,7.0nm,1.1s						
HVU	Hansel Valley	38.49	88	P	P	19 40 33.9	+1.1
PDAR	Pinedale Array	39.60	84	P	P	19 40 43.2	+1.0
	comp=Z,0.2nm,0.5s,baz=335,slow=4.1,SNR=2.3						
ULM	Lac du Bonnet	42.12	66	P	P	19 41 04.7	+2.2
	comp=Z,2.0nm,0.8s,baz=335,slow=8.1,SNR=4.2						
ULM	Lac du Bonnet	42.12	66	P	P	19 41 04.2	+1.6
SUMG	Summit	46.65	18	P	P	19 41 41.0	+2.0
ULN	Ulaanbaatar	49.02	298	P	P	19 41 56.6	-0.7
ULN				IAmb	IAmb	19 41 58.5	
	comp=Z,4.1nm,1.2s						
SONM	Songino Array	49.36	298	P	P	19 42 00.1	+0.1
	comp=Z,0.7nm,0.5s,baz=46,slow=8.5,SNR=3.8						
SONM				PcP	PcP	19 43 23.0	+0.6
	comp=Z,0.5nm,0.6s,baz=28,slow=3.9,SNR=1.7						
SONM	Songino Array	49.36	298	P	P	19 41 59.9	0.0
HHC	Hu-ho-hao-te	51.66	288	*e*P	P	19 42 19.3	+1.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
TXAR	Lajitas Array	52.61	92	P	P	19 42 24.0	-0.6
	comp=Z,0.8nm,0.8s,baz=296,slow=4.1,SNR=7.8						
TXAR	Lajitas Array	52.61	92	P	P	19 42 24.0	-0.6
GTA	Gaotai	58.76	295	*e*P	P	19 43 08.8	+0.1
GTA				pP	sP	19 43 13.8	+0.7
GTA				sP	pP	19 43 16.5	+4.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	59.34	317	P	P	19 43 11.9	-0.4
MKAR	Makanchi Array	61.04	312	P	P	19 43 22.2	-1.8
	comp=Z,0.2nm,0.7s,baz=64,slow=6.6,SNR=2.7						
WMQ	Urumqi	61.09	306	*e*P	P	19 43 27.0	+2.5
FINES	FINESS Array B	61.66	352	P	P	19 43 27.1	-0.8
	comp=Z,2.5nm,0.8s,baz=113,slow=5.0,SNR=3.6						
NOA	NORSAR Array B	62.66	360	P	P	19 43 36.0	+1.2
	comp=Z,1.2nm,0.8s,baz=15,slow=9.8,SNR=4.3						
ABKAR	Akbulak array	66.91	327	P	P	19 44 02.4	-0.1
ABKAR	Akbulak array	66.91	327	P	P	19 44 02.3	-0.3
ABKAR				IAmb	IAmb	19 44 08.0	
	comp=Z,5.6nm,1.1s						
KK31	Karatay Array	68.74	317	P	P	19 44 14.3	0.0
KK31				IAmb	IAmb	19 44 19.7	
	comp=Z,4.4nm,1.1s						
KKAR	Karatay Array	68.74	317	P	P	19 44 14.3	+0.1
KKAR				IAmb	IAmb	19 44 19.7	
	comp=Z,4.4nm,1.1s						
KKAR	Karatay Array	68.74	317	P	P	19 44 14.5	+0.2
KSH	Kashi	69.64	312	P	P	19 44 24.0	+3.9
KSH				pP	sP	19 44 29.0	+4.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,190nm,5.6s						
LSA	Lhasa	70.79	295	P	P	19 44 26.5	-1.1
AKASG	Malin Array Be	71.96	348	P	P	19 44 32.2	-1.5
	comp=Z,1.1nm,0.6s,baz=14,slow=6.1,SNR=3.9						
AKBB	Malin Array Si	71.96	348	P	P	19 44 33.5	-0.2
BUR08	Bucovina Ar. S	75.40	350	P	P	19 44 54.6	+0.4
BUR08				IAmb	IAmb	19 44 59.1	
	comp=Z,3.0nm,0.9s						
BURAR	Bucovina Array	75.43	350	P	P	19 44 54.8	+0.4
CONA	Conrad Observa	75.72	357	*e*P	P	19 45 00.7	+4.7
	comp=Z,3.7nm,0.8s						
MOA	Molln	75.84	358	*e*P	P	19 45 02.8	+6.2
	comp=Z,5.7nm,1.4s						
CM31	Chiang Mai Arr	75.88	282	P	P	19 44 57.9	+0.7
CM31				IAmb	IAmb	19 44 59.0	
	comp=Z,6.6nm,1.2s						
CMAR	Chiang Mai Arr	75.88	282	P	P	19 44 57.6	+0.4
	comp=Z,1.7nm,0.9s,baz=22,slow=6.3,SNR=12						
MOTA	Moosalm	76.38	360	*e*P	P	19 45 03.7	+3.9
	comp=Z,9.2nm,1.7s						
ARSA	Arzberg	76.41	357	*e*P	P	19 44 58.2	-1.6
	comp=Z,3.3nm,1.2s						
DAVA	Damuels	76.44	1	*e*P	P	19 44 57.4	-2.8
	comp=Z,4.5nm,1.1s						
SQTA	Sankt Quirin	76.51	360	*e*P	P	19 44 59.3	-1.2
	comp=Z,6.4nm,1.2s						
KBA	Koelnbreinsper	76.63	358	*e*P	P	19 44 58.3	-2.9
	comp=Z,5.7nm,1.1s						
FETA	Feichten	76.71	0	*e*P	P	19 45 00.7	-1.0
	comp=Z,6.1nm,0.9s						
KBL	Kabul	76.74	314	P	P	19 45 00.8	-1.3
KBL				IAmb	IAmb	19 45 06.7	
	comp=Z,5.2nm,1.2s						
ABTA	Abfaltersbach	76.97	359	*e*P	P	19 45 01.5	-1.6
	comp=Z,4.0nm,1.1s						
SOKA	Soboth	76.99	357	*e*P	P	19 45 01.3	-1.9
	comp=Z,3.7nm,1.5s						
MYKA	Terra Mystica	77.07	358	*e*P	P	19 45 00.9	-2.7
	comp=Z,10nm,1.6s						
OBKA	Obir	77.17	357	*e*P	P	19 45 08.7	+4.5
	comp=Z,9.1nm,0.9s						
HRA	Herat	79.46	319	P	P	19 45 16.8	-0.4
HRA				IAmb	IAmb	19 45 22.4	
	comp=Z,4.0nm,1.4s						
BRTR	Keskin Array B	82.10	343	P	P	19 45 32.7	+1.5
	comp=Z,1.4nm,0.7s,baz=30,slow=1.4,SNR=2.7						
ESDC	Sonseca Array	83.22	12	P	P	19 45 37.9	+1.0
	comp=Z,0.8nm,0.9s,baz=330,slow=2.6,SNR=2.1						
WRA	Warramunga Arr	89.81	232	P	P	19 46 09.2	0.0
	comp=Z,0.2nm,0.6s,baz=52,slow=4.8,SNR=4.7						
ASAR	Alice Springs	93.28	230	P	P	19 46 24.4	-0.9
	comp=Z,0.2nm,0.6s,baz=20,slow=5.3,SNR=5.0						
PLCA	Paso Flores	127.15	109	PKP	PKPdf	19 52 13.6	-0.8
	comp=Z,1.4nm,0.9s,baz=330,slow=3.6,SNR=2.9						
BOSA	Boshof	150.20	334	PKPbc	PKPbc	19 53 01.4	-0.1
	comp=Z,1.3nm,0.6s,baz=11,slow=5.2,SNR=1.4						

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*IDC **31** 19:45:27.6±0.7, 51°.31N×177°.38E, h0^{km}, mb4.0/18, mb1 4.1/19, mb1mx4.0/37, mbtmp3.9/19, ML3.8/2, MS4.0/2, Ms1 4.1/2, ms1mx3.1/53, Error ellipse: s-maj=22.6km s-min=13.6km az=170.0*

*AEIC **31** 19:45:32±2.0, 51°.19N±0°.08×177°.45E±0°.06, h26^{km}±5^{km}, ML3.9, mb4.4/66(NEIC), Error ellipse: s-maj=12.3km s-min=5.9km az=182.0*

*NEIC **31** 19:45:33.8±2.0, 51°.27N±0°.07×177°.41E±0°.07, h39^{km}±7^{km}, Error ellipse: s-maj=10.7km s-min=6.2km az=176.0*

ISC 31 19:45:34.2±0.5**, 51°.28N**±0°.08×**177°.48E**±0°.04**, h43**^{km}**, n145,** σ1§**15**/143**, mb4.3**/54**, MS4.3**/3**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.93	44		Pn	19 45 50.1	-0.8
LSNW	Little Sitkin	0.95	43		Pn	19 45 50.2	-0.9
LSPA	Little Sitkin	0.96	45		Pn	19 45 50.6	-0.7
LSPA					Sn	19 46 04.4	+0.6
AMKA	Amchitka	1.15	84	Pn	Pn	19 45 52.0	-1.8
AMKA				Sn	Sn	19 46 07.2	-1.2
CESW	Semis' Southwe	1.44	64		Pn	19 45 57.9	0.0
CEAP	Semis' Anvil P	1.50	60		Pn	19 45 58.9	+0.3
CEAP					Sn	19 46 19.6	+2.7
CERAA	Semis' Rag'd T	1.51	65		Pn	19 45 59.0	+0.2
SMY	Shemya	2.54	306	Pn	Pn	19 46 11.7	-1.1
SMY					Sn	19 46 43.7	+1.1
ADK	Adak	3.69	78	Pn	Pn	19 46 29.0	+0.3
ADK	Adak	3.69	78		Sn	19 47 11.1	+0.2
ATKA	Atka Island	5.26	77		Pn	19 46 51.2	+1.1
KOFP	Korovin Flat P	5.33	76		Pn	19 46 52.8	+1.6
NIKH	Nikolski High	8.58	73	Pn	Pn	19 47 36.8	+1.1
SPIA	Saint Paul Isl	9.30	46		Pn	19 47 46.7	+1.3
MAPS	Pakushin South	9.83	69		Pn	19 47 55.1	+2.3
MGOD	Makushin Gods	9.86	69		Pn	19 47 55.3	+2.0
MSW	Makushin Switc	9.94	68		Pn	19 47 56.3	+2.0
UNV	Unalaska Valle	10.09	69	Pn	Pn	19 47 58.2	+1.9
AKBBA	Akutan Broad B	10.46	68		Pn	19 48 03.7	+2.3
AKUT	Akutan	10.56	68	Pn	Pn	19 48 04.7	+2.0
PEA0B	Petropavlovsk-	12.27	286	Pn	Pn	19 48 26.6	+0.4
PETK	Petropavlovsk-	12.27	286	Pn	Pn	19 48 25.9	-0.2
	0.1nm,0.3s,baz=95,slow=18,SNR=6.5						
PETK				Sn	Sn	19 50 30.7	-11
	0.1nm,0.3s,baz=91,slow=19,SNR=1.4						
PETK	Petropavlovsk-	12.27	286		Pn	19 48 26.2	+0.1
SDPT	Sand Point	13.78	64	Pn	Pn	19 48 45.0	-1.6
ANM	Nome	16.05	27	Pn	Pn	19 49 17.4	+0.9
SEY	Seymchan	17.79	321	P	Pn	19 49 35.8	-2.5
	0.0nm,0.3s,baz=131,slow=17,SNR=1.9						
TTA	Tatalina	18.36	40	P	Pn	19 49 45.8	+0.5
KDAK	Kodiak Island	18.44	58	P	P	19 49 43.6	-2.2
	3.2nm,0.3s,baz=293,slow=8.0,SNR=33						
KDAK	Kodiak Island	18.44	58	P	P	19 49 44.3	-1.5
KDAK				IAmb	IAmb	19 49 52.4	
	comp=Z,60nm,1.5s						
RSO	Redoubt South	18.91	49	P	Pn	19 49 52.3	+0.3
RDOG	Red Dog Mine	19.36	22	P	Pn	19 49 57.0	-0.1
RDOG				IAmb	IAmb	19 49 58.0	
	comp=Z,24nm,0.6s						
CNPM	China Poot	19.43	53	P	P	19 49 56.2	-0.4
CNPM				IAmb	IAmb	19 49 57.4	
	comp=Z,17nm,0.7s						
BRLK	Bradley Lake	19.65	52	P	P	19 49 57.7	-1.4
BRLK				IAmb	IAmb	19 50 04.0	
	comp=Z,30nm,1.2s						
PPLA	Purkeypile	19.95	43	P	Pn	19 50 03.6	-0.7
PPLA				IAmb	IAmb	19 50 07.8	
	comp=Z,28nm,1.2s						
SEW	Seward	20.42	52	P	P	19 50 06.3	-1.1
IMAR	Indian Mountai	20.72	34	P	P	19 50 10.7	+0.1
KTH	Kantishna Hill	20.72	42	P	P	19 50 11.2	+0.5
KTH				IAmb	IAmb	19 50 14.7	
	comp=Z,18nm,1.0s						
BPAW	Bear Paw Mtn.	20.90	40	P	P	19 50 13.1	+0.5
BPAW				IAmb	IAmb	19 50 28.1	
	comp=Z,9.1nm,0.7s						
TRF	Thorofare Moun	20.95	42	P	P	19 50 13.3	0.0
TRF				IAmb	IAmb	19 50 28.8	
	comp=Z,14nm,0.6s						
RND	Reindeer	21.54	43	P	P	19 50 20.4	+0.8
RND				IAmb	IAmb	19 50 36.3	
	comp=Z,21nm,1.4s						
BWN	Browne	21.55	41	P	P	19 50 20.9	+1.4
DHY	Denali Highway	22.08	44	P	P	19 50 25.8	+0.4
DHY				IAmb	IAmb	19 50 39.8	
	comp=Z,12nm,0.6s						
WRH	Wood River Hil	22.21	40	P	P	19 50 26.9	+0.3
MDM	Murphy Dome	22.33	39	P	P	19 50 27.5	-0.4
MDM				IAmb	IAmb	19 50 33.3	
	comp=Z,15nm,1.3s						
M24K	Tolsona, Glenn	22.39	47	P	P	19 50 29.1	+0.5
CCB	Clear Creek Bu	22.39	40	P	P	19 50 27.1	-1.4
COLD	Coldfoot	22.57	33	P	P	19 50 29.8	-0.6
POKR	Poker Plat Res	22.70	39	P	P	19 50 31.0	-0.9
POKR				IAmb	IAmb	19 50 33.0	
	comp=Z,9.4nm,0.8s						
IL31		22.80	40	P	P	19 50 31.9	-1.0
ILAR	Eielson Array	22.80	40	P	P	19 50 31.2	-1.7
	comp=Z,1.9nm,0.6s,baz=251,slow=9.4,SNR=28						
ILAR	Eielson Array	22.80	40	P	P	19 50 32.0	-0.9
PAX	Paxson	22.90	45	P	P	19 50 32.0	-2.0
PAX				IAmb	IAmb	19 50 51.0	
	comp=Z,20nm,1.3s						
N25K	Chitina, Valde	23.03	49	P	P	19 50 34.5	-0.8
N25K				IAmb	IAmb	19 50 51.7	
	comp=Z,7.5nm,0.8s						
A21K	Barrow	23.27	21	P	P	19 50 36.4	-1.0
RIDG	Independent Ri	23.36	43	P	P	19 50 37.5	-1.0
RIDG				IAmb	IAmb	19 50 52.6	
	comp=Z,6.9nm,0.6s						
FYU	Fort Yukon	24.07	36	P	P	19 50 44.6	-0.4
BARN	Barnard Glacie	24.36	50	P	P	19 50 47.9	-0.2
BARN				IAmb	IAmb	19 50 54.2	
	comp=Z,8.7nm,0.9s						
BCAR	Beaver Creek A	24.56	46	P	P	19 50 49.9	+0.2
EGAK	Eagle	25.17	42	P	P	19 50 55.5	+0.5
EGAK				IAmb	IAmb	19 51 11.8	
	comp=Z,10nm,0.7s						
HYT	Haines Junctio	26.38	51	P	P	19 51 06.9	+0.7
HYT				IAmb	IAmb	19 51 10.7	
	comp=Z,17nm,1.2s						
YAK	Yakutsk	27.73	311	P	P	19 51 17.0	-1.1
	comp=Z,1.0nm,0.3s,baz=143,slow=3.0,SNR=4.5						
YAK	Yakutsk	27.73	311	P	P	19 51 16.9	-1.2
YAK				IAmb	IAmb	19 51 26.3	
	comp=Z,7.2nm,0.8s						
INK	Inuvik	28.89	36	P	P	19 51 28.2	-0.2
	comp=Z,0.9nm,0.4s,baz=310,slow=8.6,SNR=3.8						
INK	Inuvik	28.89	36	P	P	19 51 28.2	-0.2
KLR	Kul'dur	28.95	284	P	P	19 51 28.0	-1.1
	comp=Z,1.1nm,0.7s,baz=43,slow=11,SNR=3.6						
C36M	Paulatuk	32.42	34	P	P	19 51 59.1	-0.4
C36M				IAmb	IAmb	19 52 04.0	
	comp=Z,11nm,1.4s						
H11N2	WAKE ISLAND Hy	32.57	199	T	T	20 27 22.4	
	baz=11,slow=76,SNR=19						
H11N3	WAKE ISLAND Hy	32.58	199	T	T	20 27 13.1	
	baz=11,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	32.59	199	T	T	20 27 14.7	
	baz=11,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	33.80	199	T	T	20 29 02.7	
	baz=11,slow=74						
H11S2	WAKE ISLAND Hy	33.81	199	T	T	20 29 03.5	
	baz=11						
H11S3	WAKE ISLAND Hy	33.81	199	T	T	20 28 45.1	
	baz=11,slow=74						
YKA	Yellowknife Ar	36.98	46	P	P	19 52 38.6	-0.3
	comp=Z,1.0nm,0.7s,baz=285,slow=7.7,SNR=13						
YKA				PcP	PcP	19 55 00.1	+1.0
	comp=Z,0.1nm,0.4s,baz=301,slow=2.9,SNR=3.9						
YKA				LR	LR	20 08 45.8	
	comp=Z,137nm,19.3s,baz=0.0,slow=38						
H04A	Detroit Lake	39.91	75	P	P	19 53 03.9	+0.1
H04A				IAmb	IAmb	19 53 18.8	
	comp=Z,8.0nm,1.4s						
HAWA	Hanford	40.62	71	P	P	19 53 10.2	+0.6
RES	Resolute Bay	40.79	24	P	P	19 53 10.4	-0.2
KHMM	Horse Mountain	41.06	81	P	P	19 53 14.7	+1.2
K05A	Summer Lake	41.76	77	P	P	19 53 20.7	+1.5
K05A				IAmb	IAmb	19 53 37.7	
	comp=Z,7.3nm,1.3s						
ULN	Ulaanbaatar	44.19	294	P	P	19 53 38.6	-0.2
SONM	Songino Array	44.58	295	P	P	19 53 41.8	-0.1
	comp=Z,0.5nm,0.4s,baz=69,slow=7.9,SNR=2.6						
SONM	Songino Array	44.58	295	P	P	19 53 41.2	-0.7
PNTR	Pine Nut	44.67	80	P	P	19 53 43.9	+1.1
MCMT	McKenzie Canyo	45.41	70	P	P	19 53 48.3	-0.4
HHC	Hu-ho-hao-te	45.45	284	*e*P	P	19 53 50.0	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,7.6s						
NVAR	Mina Array Bea	45.88	80	P	P	19 53 52.8	+0.4
	comp=Z,1.9nm,0.8s,baz=291,slow=7.8,SNR=11						
NVAR	Mina Array Bea	45.88	80	P	P	19 53 51.6	-0.8
ELK	Elko	46.35	76	P	P	19 53 56.4	+0.3
NJ2	Nanjing	46.48	269	*e*P	P	19 53 56.5	-0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
R11A	Troy Canyon, C	47.60	78	P	P	19 54 06.7	+0.9
R11A				IAmb	IAmb	19 54 07.4	
	comp=Z,3.9nm,1.1s						
TPNV	Topopah Spring	48.07	80	P	P	19 54 09.4	0.0
PD31	Pinedale Array	48.55	70	P	P	19 54 13.7	+0.5
PDAR	Pinedale Array	48.55	70	P	P	19 54 12.2	-1.0
	comp=Z,0.5nm,0.4s,baz=332,slow=3.7,SNR=8.2						
PDAR	Pinedale Array	48.55	70	P	P	19 54 12.6	-0.6
U15A	North Rim	50.85	78	P	P	19 54 31.7	+0.9
U15A				IAmb	IAmb	19 54 32.6	
	comp=Z,3.2nm,0.7s						
ULM	Lac du Bonnet	51.67	55	P	P	19 54 34.4	-1.9
	comp=Z,1.0nm,0.6s,baz=311,slow=9.3,SNR=1.7						
PV13	Radium Mtn., P	51.85	74	P	P	19 54 38.3	+0.1
SUMG	Summit	53.93	13	P	P	19 54 54.5	+1.3
121A	Cookes Peak, D	56.21	79	P	P	19 55 10.0	0.0
121A				IAmb	IAmb	19 55 11.8	
	comp=Z,3.7nm,0.8s						
KURK	Kurchatov	57.37	312	P	P	19 55 17.3	-0.4
KURK				IAmb	IAmb	19 55 33.7	
	comp=Z,3.6nm,0.8s						
WMQ	Urumqi	57.41	301	*e*P	P	19 55 20.3	+2.1
MK31	Makanchi Array	58.24	306	P	P	19 55 22.4	-1.5
MKAR	Makanchi Array	58.24	306	P	P	19 55 22.2	-1.7
	comp=Z,0.3nm,0.5s,baz=49,slow=6.2,SNR=6.1						
MKAR				ScP	ScP	20 00 13.1	+1.8
	comp=Z,0.3nm,0.8s,baz=50,slow=2.3,SNR=2.5						
MKAR	Makanchi Array	58.24	306	P	P	19 55 22.8	-1.1
MNTX	Cornudas Mount	58.26	78	P	P	19 55 24.2	0.0
MNTX				IAmb	IAmb	19 55 39.9	
	comp=Z,4.8nm,1.1s						
MAKZ	Makanchi	58.38	307	P	P	19 55 23.7	-1.2
BRVK	Borovoye	59.44	318	P	P	19 55 32.2	+0.1
BRVK				IAmb	IAmb	19 55 32.8	
	comp=Z,2.4nm,0.7s						
TX31	Lajitas Ar. Si	60.97	78	P	P	19 55 43.7	+0.6
TXAR	Lajitas Array	60.97	78	P	P	19 55 43.6	+0.5
	comp=Z,1.4nm,0.7s,baz=295,slow=4.7,SNR=17						
TXAR	Lajitas Array	60.97	78	P	P	19 55 43.2	+0.2
ARU	Arti	61.42	326	P	P	19 55 45.6	+0.1
QIZ	Qiongzhong	61.42	265	P	P	19 55 47.0	+0.9
QIZ				S	S	20 04 06.5	+2.5
QIZ				LR	LR		
	comp=N,380nm,18.6s						
QIZ				LR	LR		
	comp=E,400nm,17.6s						
QIZ				LR	LR		
	comp=Z,360nm,19.6s						
AAK	Ala-Archa	65.10	308	P	P	19 56 10.2	-0.1
AAK				IAmb	IAmb	19 56 19.8	
	comp=Z,1.8nm,0.8s						
FINES	FINESS Array B	65.32	345	P	P	19 56 10.6	-0.7
	comp=Z,5.2nm,0.9s,baz=16,slow=8.1,SNR=7.5						
FINES	FINESS Array B	65.32	345	P	P	19 56 10.1	-1.1
ABKAR	Akbulak array	66.57	321	P	P	19 56 19.7	+0.2
ABKAR	Akbulak array	66.57	321	P	P	19 56 19.6	+0.2
ABKAR				IAmb	IAmb	19 56 28.5	
	comp=Z,3.9nm,1.4s						
KSH	Kashi	66.65	304	P	P	19 56 24.5	+4.2
KSH				sP	sP	19 56 38.5	+2.2
KSH				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KSH				pmax	pmax		
	comp=Z,300nm,5.3s						
KKAR	Karatay Array	66.70	310	P	P	19 56 19.9	-0.5
KKAR	Karatay Array	66.70	310	P	P	19 56 20.2	-0.2
KKAR				IAmb	IAmb	19 56 33.1	
	comp=Z,1.7nm,0.8s						
NB2	NORSAR Subarra	67.49	353	P	P	19 56 24.8	-0.4
	comp=Z,1.1nm,0.6s,baz=9.2,slow=6.5						
NOA	NORSAR Array B	67.49	353	P	P	19 56 24.8	-0.4
	comp=Z,2.3nm,0.7s,baz=9.0,slow=6.3,SNR=7.2						
CMAR	Chiang Mai Arr	68.69	273	P	P	19 56 32.6	-0.6
	comp=Z,0.6nm,0.6s,baz=28,slow=7.4,SNR=6.1						
CMAR				LR	LR	20 29 05.9	
	comp=Z,180nm,20.4s,baz=54,slow=38						
CMAR	Chiang Mai Arr	68.69	273	P	P	19 56 33.4	+0.1
AKASG	Malin Array Be	74.88	340	P	P	19 57 09.4	-0.5
	comp=Z,4.1nm,0.7s,baz=22,slow=6.5,SNR=10						
AKASG	Malin Array Be	74.88	340	P	P	19 57 09.6	-0.3
AKBB	Malin Array Si	74.88	340	P	P	19 57 09.6	-0.3
CTAO	Charters Tower	76.17	210	P	P	19 57 17.6	0.0
KOLS	Kolonicke sedl	77.94	344	*e*P	P	19 57 34.0	+6.7
BUR08	Bucovina Ar. S	78.62	341	P	P	19 57 32.0	+0.8
BURAR	Bucovina Array	78.64	341	P	P	19 57 31.9	+0.6
GERES	GERESS Array B	79.29	349	P	P	19 57 34.9	0.0
	comp=Z,0.2nm,0.3s,baz=10,slow=6.0,SNR=2.3						
CONA	Conrad Observa	79.92	348	*e*P	P	19 57 44.1	+5.8
	comp=Z,0.2nm,0.2s						
MOA	Molln	80.20	349	*e*P	P	19 57 44.2	+4.4
	comp=Z,0.5nm,0.6s						
WR0	Warramunga Arr	80.30	221	P	P	19 57 39.3	-1.1
WR0				IAmb	IAmb	19 57 51.8	
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	80.37	221	P	P	19 57 40.0	-0.8
	comp=Z,0.8nm,0.5s,baz=30,slow=5.8,SNR=7.6						
WRA	Warramunga Arr	80.37	221	P	P	19 57 39.5	-1.4
ARSA	Arzberg	80.63	348	*e*P	P	19 57 43.5	+1.5
	comp=Z,0.6nm,0.4s						
KBA	Koelnbreinsper	81.07	349	*e*P	P	19 57 45.4	+0.8
	comp=Z,4.6nm,0.6s						
SQTA	Sankt Quirin	81.17	351	*e*P	P	19 57 45.1	0.0

	comp=Z,1.3nm,0.5s						
SOKA	Soboth	81.25	348	*e*P	P	19 57 45.7	+0.3
	comp=Z,0.4nm,0.4s						
FETA	Feichten	81.42	351	*e*P	P	19 57 47.0	+0.5
	comp=Z,2.5nm,0.9s						
OBKA	Obir	81.48	348	*e*P	P	19 57 46.5	-0.2
	comp=Z,3.1nm,0.7s						
ABTA	Abfaltersbach	81.50	350	*e*P	P	19 57 51.8	+5.0
	comp=Z,0.5nm,0.4s						
FITZ	Fitzroy Crossi	82.60	229	P	P	19 57 52.8	+0.2
FITZ				IAmb	IAmb	19 58 11.4	
	comp=Z,5.9nm,1.2s						
ASAR	Alice Springs	83.88	219	P	P	19 57 59.0	-0.1
	comp=Z,0.8nm,0.7s,baz=22,slow=4.1,SNR=7.4						

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*JMA **31** 19:50:07.6±0.4, 46.°37N×140.°93E, $h0^{km}$, M2.8*
*SKHL **31** 19:50:08.6±0.5, 46.°45N×140.°97E, $h5^{km}±2^{km}$, mb3.7/1*
ISC 31 19:50:07.6±2.4**, 46.°36N**±0.°07×**140.°9E**±0.°2**, $h10^{km}$, n6, $\sigma 0^{s}.23$**/9**, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRBN	Rebuntou	0.94	172	P	Pg	19 50 26.0	+0.3
KHLM	Kholmsk	1.07	49	*e*Pg	Pn	19 50 28.6	0.0
KHLM				AMB	AMB	19 50 29.0	
	60nm,0.4s						
KHLM				*e*Sg	Sb	19 50 42.4	+0.2
KHLM				A	A	19 50 43.1	
	500nm,0.7s						
KHLM				A	A	19 50 43.1	
	330nm,0.7s						
JWK2	Keihoku	1.26	145	P	Pn	19 50 31.2	-0.1
JWK2				*e*S	Sg	19 50 48.3	+0.1
YSS	Yuzh-Sakhalins	1.43	65	*e*P	Pn	19 50 33.7	+0.2
YSS				*e*S	Sn	19 50 52.1	-0.2
YSS				A	A	19 50 55.4	
	70nm,0.5s						
YSS	Yuzh-Sakhalins	1.43	65	P	Pn	19 50 33.5	0.0
JSS	Shosan	2.07	160	P	Pb	19 50 45.0	-0.3

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*IDC **31** 20:03:29.6±1.5, 56.°54N×169.°05W, $h0^{km}$, mb3.7/6, mb1 3.9/9, mb1mx3.5/74, mbtmp3.8/9, ML3.1/3, Error ellipse: s-maj=48.8km s-min=18.6km az=179.0*
*AEIC **31** 20:03:31±1.7, 56.°64N±0.°06×169.°26W±0.°09, $h37^{km}±9^{km}$, Error ellipse: s-maj=10.5km s-min=5.0km az=215.0*
*NEIC **31** 20:03:32.1±1.4, 56.°63N±0.°06×169.°16W±0.°09, $h20^{km}±5^{km}$, mb4.0/2, ML3.6/19(AEIC), Error ellipse: s-maj=10.0km s-min=5.4km az=219.0*
ISC 31 20:03:31.3±0.6**, 56.°64N**±0.°06×**169.°06W**±0.°06**, $h10^{km}$, n39, $\sigma 0^{s}.96$**/41**, mb3.9**/5**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.84	310		Pg	20 03 46.9	-0.6
SPIA	Saint Paul Isl	0.84	310		Sg	20 03 58.7	+0.1
AKGG	Akutan Green G	3.01	143		Pn	20 04 18.4	-0.5
AKGG					Sn	20 04 55.0	0.0
MSW	Makushin Switc	3.03	154		Pn	20 04 19.1	-0.1
AKLV	Akutan Long Va	3.05	143		Pn	20 04 19.1	-0.4
MNAT	Makushin Natee	3.08	153		Pn	20 04 20.0	0.0
MNAT					Sn	20 04 55.6	-1.2
MAPS	Pakushin South	3.09	156		Pn	20 04 20.5	+0.5
AKBBA	Akutan Broad B	3.11	144		Pn	20 04 20.5	+0.2
AKUT	Akutan	3.13	142		Pn	20 04 20.5	-0.1
UNV	Unalaska Valle	3.16	151		Pn	20 04 20.9	-0.2
UNV	Unalaska Valle	3.16	151		Sn	20 04 58.6	-0.1
OKWE	Okmok W'ng Wal	3.21	171		Pn	20 04 20.6	-1.2
WECS	Westdahl Cape	3.22	129		Pn	20 04 21.7	-0.2
OKWR	Okmok West Rim	3.25	171		Pn	20 04 21.6	-0.8
WESP	Westdahl Peak	3.27	129		Pn	20 04 22.8	+0.2
NIKH	Nikolski High	3.68	178		Pn	20 04 29.2	+1.1
SDPT	Sand Point	4.99	101	Pn	Pn	20 04 46.6	+0.6
ATKA	Atka Island	5.36	216		Pn	20 04 52.1	+0.9
CHGN	Chignik	5.91	89	Pn	Pn	20 04 58.7	0.0
ADK	Adak	6.53	226	Pn	Pn	20 05 06.0	-1.3
AMKA	Amchitka	8.64	237		Pn	20 05 38.5	+2.3
KDAK	Kodiak Island	9.01	76	Pn	Pn	20 05 43.1	+1.9
	0.3nm,0.3s,baz=251,slow=8.6,SNR=1.3						
TTA	Tatalina	9.10	41	Pn	Pn	20 05 43.2	+0.7
BPAW	Bear Paw Mtn.	11.62	43	Pn	Pn	20 06 17.0	+0.1
N25K	Chitina, Valde	13.46	58	Pn	Pn	20 06 42.1	0.0
ILAR	Eielson Array	13.50	44	Pn	Pn	20 06 45.8	+3.3
	0.0nm,0.3s,baz=237,slow=12,SNR=5.8						
BCAR	Beaver Creek A	15.05	53		Pn	20 07 04.1	+0.4
BMAR	Burnt Mountain	15.63	36	P	P	20 07 13.8	-1.8
HYT	Haines Junctio	16.80	62	Pn	Pn	20 07 27.1	+0.6
HYT				IAmb	IAmb	20 07 31.2	
	comp=Z,8.5nm,1.2s						
PEA0B	Petropavlovsk-	19.34	274	Pn	P	20 07 57.0	+0.5
PEA0B				IAmb	IAmb	20 08 10.6	
	comp=Z,24nm,1.3s						
PETK	Petropavlovsk-	19.34	274	P	P	20 07 57.1	+0.6
	comp=Z,0.1nm,0.3s,baz=89,slow=14,SNR=5.8						
PETK	Petropavlovsk-	19.34	274	P	P	20 07 56.1	-0.3
INK	Inuvik	19.79	40	P	Pn	20 08 01.9	-0.9
	comp=Z,0.1nm,0.3s,baz=214,slow=5.4,SNR=4.3						
SEY	Seymchan	20.14	304	P	P	20 08 05.1	-0.1
	comp=Z,1.4nm,0.8s,baz=82,slow=20,SNR=4.1						
YKA	Yellowknife Ar	27.45	55	P	P	20 09 17.6	+0.6
	comp=Z,1.1nm,1.0s,baz=276,slow=8.9,SNR=5.6						
TXAR	Lajitas Array	52.62	92	P	P	20 12 44.7	-0.6
	comp=Z,0.7nm,0.8s,baz=300,slow=5.7,SNR=6.3						
AKTO	Aktyubinsk	66.41	329	P	P	20 14 20.6	+0.6
	comp=Z,1.1nm,0.6s,baz=54,slow=8.7,SNR=2.9						
AKASG	Malin Array Be	71.96	348	P	P	20 14 54.1	-0.3
	comp=Z,0.6nm,0.6s,baz=10,slow=5.7,SNR=2.7						
CMAR	Chiang Mai Arr	75.88	282	P	P	20 15 18.4	+0.6
	comp=Z,0.7nm,0.7s,baz=14,slow=4.6,SNR=5.8						

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*IDC **31** 20:12:16.6±1.0, 27.°92N×51.°85E, $h0^{km}$, mb3.9/16, mb1 4.0/20, mb1mx3.8/61, mbtmp3.9/20, ML3.7/4, Error ellipse: s-maj=22.6km s-min=16.6km az=178.0*
*NEIC **31** 20:12:18.7±0.8, 28.°03N±0.°07×51.°85E±0.°08, $h10^{km}±1^{km}$, Error ellipse: s-maj=14.1km s-min=9.2km az=130.0*
*THR **31** 20:12:20.8±0.4, 28.°14N×52.°06E, $h41^{km}±13^{km}$, ML3.7*
*TEH **31** 20:12:20.6, 28.°10N×51.°94E, $h20^{km}$, ML4.0*
*DSN **31** 20:12:22.4±1.5, 27.°78N×51.°98E, $h10^{km}$, ML3.7/9, Error ellipse: s-maj=21.5km s-min=8.8km az=0.0*
*OMAN **31** 20:12:24.3±2.1, 27.°87N×52.°12E, $h18^{km}$, mb5.1/8, ml3.6/7, ms2.7/1, Error ellipse: s-maj=72.5km s-min=27.4km az=311.0*
ISC 31 20:12:18.6±0.5**, 28.°02N**±0.°05×**51.°88E**±0.°05**, $h10^{km}$, n127, $\sigma 1^{s}.21$**/145**, mb4.1**/30**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	0.99	329	*e*Pg	Pn	20 12 39.6	+1.0
LMD1	Lamerd	1.32	120	*e*Pg	Pg	20 12 45.6	+1.6
LMD1				*e*		20 13 16.5	
	comp=Z,99nm,0.5s						
JHRM	Jahrom	1.57	72	*e*Pg	Pb	20 12 48.4	+0.5
JHRM				*e*		20 13 18.2	
	comp=Z,99nm,0.5s						
KAZ1	Kazerun	1.62	353	*e*Pg	Pb	20 12 48.9	+0.3
KAZ1				*e*		20 13 25.9	
	comp=Z,99nm,0.7s						
SHI	Shiraz	1.71	19	*e*Pg	Pb	20 12 50.7	+0.4
LAR1	LAR	2.24	98	*e*Pn	Pn	20 12 57.3	+1.5
LAR1				*e*		20 13 54.7	
	comp=Z,99nm,0.5s						
KLNJ	Kolanjah	2.99	355	*e*Pn	Pn	20 13 07.9	+1.5
IRAM	Ramesheh	3.80	6	*e*Pn	Pn	20 13 18.9	+1.4
BNDS	Bandar-Abbas	3.85	98	*e*Pn	Pn	20 13 17.5	-0.6
BNDS	Bandar-Abbas	3.85	98	*e*Pn	Pn	20 13 17.5	-0.6
IMEH	Mehriz	4.12	35	*e*Pn	Pn	20 13 24.1	+2.3
SHME	Shamm	4.28	116	P	Pn	20 13 24.5	+0.7
SHME	Shamm	4.28	116	P	Pn	20 13 24.9	+1.1
SHME				S	Sn	20 14 11.8	-2.0
AMIS	Naft Sefid	4.28	329	*e*Pn	Pn	20 13 25.3	+1.5
MIB	Mutribah	4.36	295	*e*P		20 13 26.9	
IGAR	Gharneh	4.38	2	*e*Pn	Pn	20 13 26.6	+1.3
BANOM	Banah	4.46	117	P	Pn	20 13 27.5	+1.1
	SNR=25						
BANOM				S	Sn	20 14 16.1	-2.3
RST	Umm Al-Ruwaisa	4.53	290	*e*P		20 13 29.2	
NAZ	Nazwa, Dubai	4.54	131	*i* P	Pn	20 13 29.4	+2.0
	SNR=7.1						
NGRK	Negar Kerman	4.55	68	*e*Pn	Pn	20 13 29.4	+1.5
ASUD	Al Ashush, Dub	4.58	137	P	Pn	20 13 29.1	+1.1
ASUD	Al Ashush, Dub	4.58	137	P	Pn	20 13 30.1	+2.2
	SNR=13						
ASUD				S	Sn	20 14 21.9	+0.7
MASF	Masafi	4.65	124	P	Pn	20 13 30.6	+1.6
	SNR=6.3						
MASF				S	Sn	20 14 21.7	-1.3
MSFE	Esma-Masafi	4.65	124	*i* P	Pn	20 13 30.2	+1.2
	SNR=6.3						
KHGB	Koh Gabri	4.66	59	*e*Pn	Pn	20 13 31.2	+2.0
KHGB				*e*		20 14 27.8	
	comp=Z,99nm,1.0s						
TVBK	TV Kerman	4.70	64	*e*Pn	Pn	20 13 32.6	+2.6
TVBK				*e*		20 13 37.9	
	comp=Z,99nm,0.4s						
IPIR	Pirpir	4.73	350	*e*Pn	Pn	20 13 31.0	+0.7
ICHK	Chekchek	4.75	27	*e*Pn	Pn	20 13 31.9	+1.4
IBAF	Bafgh	4.79	41	*e*Pn	Pn	20 13 33.1	+2.1
MDH	Madha	4.79	123	P	Pn	20 13 32.6	+1.7
MDH	Madha	4.79	123	P	Pn	20 13 33.1	+2.3
MDH				S	Sn	20 14 25.3	-1.2
NASN	Na'in	4.83	9	*e*Pn	Pn	20 13 31.1	-0.6
NASN	Na'in	4.83	9	*e*Pn	Pn	20 13 31.2	-0.6
IZEF	Zefreh	4.88	4	*e*Pn	Pn	20 13 34.1	+1.8
UOSS	Minazif	4.94	127	P	Pn	20 13 33.5	+0.6
UOSS	Minazif	4.94	127	Pn	Pn	20 13 33.5	+0.6
UOSS	Minazif	4.94	127	P	Pn	20 13 34.1	+1.2
UOSS				S	Sn	20 14 28.6	-1.5
YZKH	Yazd	4.95	28	*e*Pn	Pn	20 13 32.0	-1.1
HATD	Hatta, Dubai	4.96	129	*i* P	Pn	20 13 34.8	+1.6
	SNR=6.7						
HATD				S	Sn	20 14 29.1	-1.7
HATD	Hatta, Dubai	4.96	129	P	Pn	20 13 35.3	+2.0
	SNR=6.7						
HATD				S	Sn	20 14 33.5	+2.7
ASHO	Ashiyiah	5.01	131	*i* P	Pn	20 13 34.5	+0.7
	SNR=6.8						
ASHO	Ashiyiah	5.01	131	P	Pn	20 13 35.6	+1.7
	SNR=9.5						
ASHO				S	Sn	20 14 31.0	-0.8
CHMN	Cheshme madani	5.29	68	*e*Pn	Pn	20 13 40.0	+2.0
IKLH	Kolahrood	5.29	357	*e*Pn	Pn	20 13 39.4	+1.4
SOHO	SOHO	5.70	132	*i* P	Pn	20 13 44.1	+0.8
	SNR=6.0						
SOHO	SOHO	5.70	132	P	Pn	20 13 44.5	+1.2
SOHO				S	Sn	20 14 49.0	+0.2
QAM	Ghamsar	5.74	356	*e*Pn	Pn	20 13 45.2	+1.1
KRSH	Karshahi	5.94	2	*e*Pn	Pn	20 13 47.6	+0.8
IKMR	Kamar-syah	6.25	332	*e*Pn	Pn	20 13 52.4	+1.5
ARQ	Araqi	6.26	137	P	Pn	20 13 52.1	+1.0
	SNR=12						
ARQ				S	Sn	20 15 01.2	-1.6
GHVR	GHOM	6.46	356	IAML		20 15 09.3	
	comp=N,14nm,0.3s						
IKFM	Kafar-mosalman	6.49	329	*e*Pn	Pn	20 13 53.8	-0.4
IDOB	Doab	6.57	332	*e*Pn	Pn	20 13 56.2	+0.7
HOQ	Hoqain	6.59	131	P	Pn	20 13 57.0	+1.3
	SNR=5.9						
HOQ				S	Sn	20 15 09.3	-1.6
BSY	Bisya	7.12	136	P	Pn	20 14 04.4	+1.5
	SNR=9.6						
BSY				S	Sn	20 15 23.1	-0.8
TKDS	Koohdasht(Taba	7.17	38	*e*Pn	Pn	20 14 04.8	+1.1
TABS	Tabas	7.20	37	*e*Pn	Pn	20 14 02.9	-1.1
TABS	Tabas	7.20	37	*e*Pn	Pn	20 14 02.9	-1.1
RAYN	Ar Rayn	7.28	234	*i* P	Pn	20 14 05.8	+0.7
	SNR=9.7						
RAYN	Ar Rayn	7.28	234	Pn	Pn	20 14 05.2	+0.1
BSRN	Basiran	7.41	56	*e*Pn	Pn	20 14 06.0	-1.0
BSRN	Basiran	7.41	56	*e*Pn	Pn	20 14 06.0	-1.0
SMDO	Samad	7.44	130	P	Pn	20 14 08.8	+1.3
	SNR=7.1						
SMDO				S	Sn	20 15 29.6	-2.4
KCHF	Cheshme Sefid,	7.49	328	*e*Pn	Pn	20 14 09.7	+1.6
KER	Kermanshah	7.54	329	*e*Pn	Pn	20 14 10.3	+1.6
WSAR	Wadi Sarin	7.73	126	Pn	Pn	20 14 10.7	-0.6
	comp=N,1.6nm,0.3s,baz=301,slow=11,SNR=23						
WSAR				Sn	Sn	20 15 35.3	-3.6
	comp=N,0.6nm,0.3s,baz=122,slow=20,SNR=2.2						
IGHG	Ghaleghazi	7.76	325	*e*Pn	Pn	20 14 12.6	+0.7
JMDO	Jabal Madar	7.96	134	P	Pn	20 14 16.4	+2.0
IDHR	Dehrash	8.15	326	*e*Pn	Pn	20 14 17.6	+0.4
WBK	Wadi Bani Khal	8.37	128	P	Pn	20 14 21.3	+1.2
WBK				P	Pn	20 14 21.3	+1.2
WBK				S	Sn	20 15 55.0	+0.2
WBK				S	Sn	20 15 55.0	+0.2
QALM	Alamut, Qazvin	8.46	353	*e*Pn	Pn	20 14 22.1	+0.7
MHTO	MHTO	8.93	140	P	Pn	20 14 28.3	+0.6
	SNR=14						
JLN	Jalan Bani Buh	8.98	129	P	Pn	20 14 30.8	+2.3
DQM	DQM	9.57	146	P	Pn	20 14 35.9	-0.6
GEYT	Alibeck	11.18	26	Pn	Pn	20 14 59.2	+0.6
	comp=N,0.2nm,0.3s,baz=241,slow=15,SNR=2.9						
GEVA	Gevas	12.64	327	Pn	Pn	20 15 17.5	-1.1
MMAI	Mount Meron Ar	15.05	293	Pn	Pn	20 15 49.8	-1.6
	comp=N,0.3nm,0.3s,baz=100,slow=17,SNR=1.7						
BR131	Keskin Array S	19.09	312		Pn	20 16 42.9	+0.6
BR131				IAmb	IAmb	20 16 43.7	
	comp=Z,4.3nm,0.7s						
BRTR	Keskin Array B	19.09	312	P	P	20 16 41.4	-0.1
	comp=Z,0.4nm,0.3s,baz=143,slow=14,SNR=5.2						
NIL	Nilore	19.18	68	P	P	20 16 43.0	+0.6
NIL				IAmb	IAmb	20 16 48.3	
	comp=Z,8.9nm,1.1s						
ELL	Elmali	20.46	301	P	P	20 16 56.4	-0.1
KK31	Karatay Array	21.29	40	P	P	20 17 04.9	-0.4
KKAR	Karatay Array	21.29	40	P	P	20 17 05.2	-0.1
KKAR	Karatay Array	21.29	40	P	P	20 17 05.4	+0.1
KKAR				IAmb	IAmb	20 17 12.4	
	comp=Z,5.0nm,1.2s						
ABKAR	Akbulak array	22.10	14	P	P	20 17 13.8	-0.1
ABKAR	Akbulak array	22.10	14	P	P	20 17 13.8	-0.1
AKTO	Aktyubinsk	22.87	10	P	P	20 17 23.8	+1.7
	comp=Z,0.9nm,0.5s,baz=207,slow=16,SNR=2.9						
BELG	Belogornoye	24.56	354	P	P	20 17 38.8	+0.4
	comp=Z,12nm,0.6s,baz=35,slow=1.6,SNR=4.8						
MLR	Muntele Rosu	26.95	317	P	P	20 18 01.5	+1.1
	comp=Z,1.5nm,0.6s,baz=60,slow=5.0,SNR=4.5						
MLR	Muntele Rosu	26.95	317	P	P	20 18 00.6	+0.2
MLR				IAmb	IAmb	20 18 12.3	
	comp=Z,9.9nm,1.3s						
FNA	Florina	28.06	305	P	P	20 18 09.7	-0.6
AKASG	Malin Array Be	28.42	329	P	P	20 18 13.0	-0.3
	comp=Z,0.4nm,0.5s,baz=129,slow=7.3,SNR=2.3						
BURAR	Bucovina Array	28.52	321	P	P	20 18 14.5	+0.1
BUR08	Bucovina Ar. S	28.55	321	P	P	20 18 15.0	+0.4
BUR08				IAmb	IAmb	20 18 31.0	
	comp=Z,8.5nm,1.5s						
MAKZ	Makanchi	30.12	43	P	P	20 18 28.8	+0.3
MAKZ				IAmb	IAmb	20 18 30.0	
	comp=Z,1.5nm,0.9s						
KURBB	Kurchatov Arra	30.28	35	P	P	20 18 30.4	+0.6
	comp=Z,0.4nm,0.7s,baz=238,slow=9.0,SNR=4.9						
MK31	Makanchi Array	30.30	44	P	P	20 18 30.1	0.0
MKAR	Makanchi Array	30.30	44	P	P	20 18 30.8	+0.7
	comp=Z,0.4nm,0.5s,baz=242,slow=8.4,SNR=7.1						
MKAR				PcP	PcP	20 21 29.5	-0.8
	comp=Z,0.2nm,0.7s,baz=262,slow=2.2,SNR=1.9						
MKAR	Makanchi Array	30.30	44	P	P	20 18 30.2	+0.1
KURK	Kurchatov	30.39	34	P	P	20 18 31.1	+0.4
KURK				IAmb	IAmb	20 18 53.0	
	comp=Z,3.3nm,1.4s						
CONA	Conrad Observa	34.23	315	*e*P	P	20 19 04.2	-0.4
	comp=Z,3.9nm,1.3s						
OBKA	Obir	34.57	312	*e*P	P	20 19 05.0	-2.5
	comp=Z,10nm,1.5s						
ZAA0	Zalesovo Array	35.36	34	P	P	20 19 13.9	-0.2
ZAA0				IAmb	IAmb	20 19 22.6	
	comp=Z,3.6nm,1.3s						
ZALV	Zalesovo Beam	35.36	34	P	P	20 19 14.0	-0.2
	comp=Z,1.5nm,0.5s,baz=242,slow=9.9,SNR=8.5						
ZALV	Zalesovo Beam	35.36	34	P	P	20 19 14.0	-0.2
KBA	Koelnbreinsper	35.53	313	*e*P	P	20 19 16.1	+0.1
	comp=Z,4.2nm,1.1s						
GERES	GERESS Array B	35.91	316	P	P	20 19 18.9	-0.2
	comp=Z,0.2nm,0.5s,baz=97,slow=8.0,SNR=2.3						
KHC	Kasperske Hory	36.09	316	*e*P	P	20 19 21.2	+0.7
SQTA	Sankt Quirin	36.97	312	*e*P	P	20 19 27.0	-1.1
	comp=Z,5.2nm,0.8s						
MOTA	Moosalm	37.07	313	*e*P	P	20 19 28.3	-0.8
	comp=Z,2.3nm,0.6s						
FETA	Feichten	37.23	312	*e*P	P	20 19 30.5	+0.1
	comp=Z,3.2nm,0.9s						
RETA	Reutte	37.33	313	*e*P	P	20 19 29.7	-1.5
	comp=Z,5.6nm,1.0s						
FIA1	FINESS Array S	37.60	340	P	P	20 19 33.1	0.0
FINES	FINESS Array B	37.60	340	P	P	20 19 33.1	-0.1
	comp=Z,2.4nm,0.4s,baz=144,slow=10,SNR=35						
DAVA	Damuels	37.85	312	*e*P	P	20 19 35.5	-0.2
	comp=Z,7.8nm,0.5s						
BNI	Bardonecchia	39.54	308	P	P	20 19 49.3	-0.5
BNI				IAmb	IAmb	20 19 52.3	
	comp=Z,9.9nm,1.2s						
NC405	NORSAR Array S	42.56	332	P	P	20 20 14.3	0.0
NB2	NORSAR Subarra	42.73	332	P	P	20 20 15.3	-0.4
	comp=Z,1.2nm,0.4s,baz=122,slow=8.6						
NOA	NORSAR Array B	42.73	332	P	P	20 20 15.5	-0.3
	comp=Z,1.1nm,0.4s,baz=122,slow=8.3,SNR=9.0						
CMAR	Chiang Mai Arr	44.05	92	P	P	20 20 26.1	-0.8
	comp=Z,0.8nm,0.4s,baz=282,slow=9.1,SNR=2.4						
ARCES	ARCESS Array B	44.27	347	P	P	20 20 28.2	+0.2
	comp=Z,0.6nm,0.3s,baz=141,slow=6.2,SNR=9.6						
ESDC	Sonseca Array	47.14	299	P	P	20 20 50.5	-0.7
	comp=Z,0.9nm,0.9s,baz=86,slow=8.1,SNR=1.6						
TOA0	Torodi Ar. Sit	48.92	263	P	P	20 21 05.1	-0.2
TOA0				IAmb	IAmb	20 21 09.4	
	comp=Z,2.0nm,1.0s						
TORD	Torodi Ar. Bea	48.92	263	P	P	20 21 05.2	0.0
	comp=Z,0.9nm,0.6s,baz=62,slow=8.1,SNR=6.1						
TORD	Torodi Ar. Bea	48.92	263	P	P	20 21 05.1	-0.1
TORD				IAmb	IAmb	20 21 23.3	
	comp=Z,1.3nm,1.1s						
KOWA	Kowa	53.39	268	P	P	20 21 39.0	+0.2
DBIC	Dimbokro	57.62	260	P	P	20 22 08.0	-1.2
	comp=Z,1.9nm,0.6s,baz=68,slow=5.4,SNR=4.8						
DBIC	Dimbokro	57.62	260	P	P	20 22 07.8	-1.4
YKA	Yellowknife Ar	89.16	354	P	P	20 25 14.6	+0.4
	comp=Z,0.6nm,0.7s,baz=15,slow=4.3,SNR=6.5						

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*IDC **31** 20:12:37.0±3.4, 5.°43S×151.°95E, $h19^{km}±20^{km}$, mb4.4/25, mb1 4.5/26, mb1mx4.3/55, mbtmp4.5/26, ML3.2/1, MS3.8/10, Ms1 3.8/10, ms1mx3.6/35, Error ellipse: s-maj=22.5km s-min=12.8km az=118.0*
*NEIC **31** 20:12:39.2±1.6, 5.°55S±0.°06×152.°05E±0.°07, $h35^{km}±1^{km}$, mb4.8/40, Error ellipse: s-maj=14.4km s-min=2.9km az=130.0*
*NOU **31** 20:12:41.6, 5.°39S×151.°98E, $h66^{km}$, mb4.9, New Britain Region, P.N.G.*
*DJA **31** 20:12:45.0±0.9, 6°S±4°×15°2E±°, $h79^{km}±8^{km}$, M5.1/18, mB5.4/4, mb4.8/18, MLv5.3/2, Mw(mB)4.8/4*
ISC 31 20:12:40.4±0.4**, 5.°54S**±0.°05×**152.°02E**±0.°08**, $h45^{km}$, n107, $\sigma 1^{s}.12$**/105**, mb4.6**/51**, MS3.7**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.34	6		Pn	20 13 03.0	+0.3
RABL				Sn	Sn	20 13 21.8	+2.3
RABL	Rabaul	1.34	6	P	Pn	20 13 02.7	-0.1
PMG	Port Moresby	6.16	231	Pn	Pn	20 14 09.3	+0.4
	32nm,0.3s,baz=50,slow=6.5,SNR=95						
PMG				Sn	Sn	20 15 17.0	-1.1
	5.7nm,0.3s,baz=343,slow=23,SNR=1.7						
PMG	Port Moresby	6.16	231	Pn	Pn	20 14 10.5	+1.6
PMG	Port Moresby	6.16	231	P	Pn	20 14 11.2	+2.3
HNR	Honiara	8.76	117	LR	LR	20 18 36.7	
	comp=Z,351nm,18.9s,baz=293,slow=40						
COEN	Coen	12.08	226	Pn	Pn	20 15 29.2	-0.7
PATS	Pohnpei	13.80	27	Pn	Pn	20 15 54.0	+0.4
CTAO	Charters Tower	15.51	201	P	P	20 16 20.6	+0.7
SANVU	Saraoutou	17.87	125	P	Pn	20 16 44.0	-1.9
SANVU				IAmb	IAmb	20 17 12.9	
	comp=Z,82nm,1.2s						
EIDS	Eidsvold	19.74	183		P	20 17 06.5	0.0
EIDS				IAmb	IAmb	20 17 11.3	
	comp=Z,40nm,0.8s						
SIJI	Sorong	21.23	282	P	P	20 17 22.4	-0.3
	comp=Z,5.2nm,0.6s,baz=91,slow=21,SNR=2.0						
DZM	Mont Dzumac	21.56	141	LR	LR	20 24 58.2	
	comp=Z,435nm,20.4s,baz=266,slow=34						
MTN	Manton Dam	21.84	249	P	P	20 17 29.7	+0.4
MTN				IAmb	IAmb	20 17 33.3	
	comp=Z,22nm,0.7s						
WB0	Warramunga Arr	22.23	229	P	P	20 17 33.3	-0.2
WB0				IAmb	IAmb	20 17 36.2	
	comp=Z,41nm,0.8s						
WB2	Warramunga Arr	22.37	229	P	P	20 17 34.7	-0.2
WB2				IAmb	IAmb	20 17 37.6	
	comp=Z,37nm,0.8s						
WRA	Warramunga Arr	22.38	229	P	P	20 17 34.3	-0.7
	comp=Z,29nm,0.7s,baz=53,slow=9.9,SNR=80						
WRA				S	S	20 21 37.0	-1.3
	comp=Z,4.1nm,1.1s,baz=55,slow=18,SNR=4.7						
WRA				ScP	ScP	20 25 05.9	+2.7
	comp=Z,2.3nm,1.1s,baz=55,slow=2.7,SNR=5.7						
WRA				LR	LR	20 26 15.9	
	comp=Z,326nm,21.4s,baz=85,slow=37						
ARMA	Armidale	24.75	181	P	P	20 17 58.1	+0.1
ARMA				IAmb	IAmb	20 18 12.2	
	comp=Z,31nm,1.3s						
AS31	Alice Springs	25.08	222	P	P	20 18 01.1	+0.1
AS31				IAmb	IAmb	20 18 04.1	
	comp=Z,22nm,0.9s						
ASAR	Alice Springs	25.08	222	P	P	20 18 00.7	-0.3
	comp=Z,62nm,0.8s,baz=55,slow=9.3,SNR=35						
ASAR				ScP	ScP	20 25 14.1	+3.6
	comp=Z,0.6nm,0.8s,baz=56,slow=3.1,SNR=4.5						
ASAR				LR	LR	20 27 02.9	
	comp=Z,264nm,21.0s,baz=109,slow=34						
ASAR	Alice Springs	25.08	222	P	P	20 18 00.6	-0.4
STKA	Stephens Creek	27.96	199	P	P	20 18 26.9	+0.1
	comp=Z,7.6nm,0.8s,baz=28,slow=14,SNR=9.8						
STKA				LR	LR	20 29 53.9	
	comp=Z,219nm,18.2s,baz=24,slow=37						
STKA	Stephens Creek	27.96	199	P	P	20 18 26.8	+0.1
BATI	Baumata	28.46	259	P	P	20 18 31.4	0.0
	comp=Z,21nm,0.5s,baz=6.8,slow=0.9,SNR=5.6						
BATI	Baumata	28.46	259	P	P	20 18 33.9	+2.4
	comp=Z,21nm,1.0s						
FITZ	Fitzroy Crossi	28.62	242	P	P	20 18 32.3	-0.5
	comp=Z,12nm,0.7s,baz=58,slow=7.1,SNR=34						
FITZ	Fitzroy Crossi	28.62	242	P	P	20 18 32.5	-0.3
DAV	Davao City (W)	29.21	295	LR	LR	20 29 50.5	
	comp=Z,150nm,18.8s,baz=116,slow=36						
BBOO	Buckleboo	30.95	207	P	P	20 18 53.3	0.0
BBOO				IAmb	IAmb	20 19 21.9	
	comp=Z,30nm,1.4s						
FORT	Forrest	33.73	219	P	P	20 19 17.4	-0.3
PSA00	Pilbara Seismi	34.99	240	P	P	20 19 28.1	-0.6
PSA00				IAmb	IAmb	20 19 50.0	
	comp=Z,17nm,1.1s						
GIRL	Giralia	40.23	241	P	P	20 20 13.0	0.0
TUWZ	Tuamarina	40.75	155	P	P	20 20 17.3	+0.3
STKI	Sintang	40.86	276	P	P	20 20 34.7	+16
MORW	Morawa	41.28	231	P	P	20 20 21.3	-0.3
MORW				IAmb	IAmb	20 20 24.9	
	comp=Z,38nm,1.5s						
YULB	Yu-li	41.55	315	P	P	20 20 22.7	-1.1
MLZ	Mavora Lakes	42.08	163	P	P	20 20 27.7	-0.2
MLZ				IAmb	IAmb	20 20 30.0	
	comp=Z,20nm,1.0s						
JMN	Monobe	42.66	337	P	P	20 20 35.7	+2.9
MJAR	Matsushiro Arr	43.81	344	LR	LR	20 37 43.5	
	comp=Z,52nm,21.1s,baz=195,slow=34						
JHS	Saijyo	44.08	338	P	P	20 20 46.5	+2.3
KSRS	Korea Array	48.31	334	P	P	20 21 18.0	+0.6
	comp=Z,1.0nm,0.6s,baz=153,slow=7.2,SNR=3.2						
KSRS				LR	LR	20 41 20.0	
	comp=Z,35nm,18.1s,baz=265,slow=36						
NJ2	Nanjing	48.93	322	*e*P	P	20 21 23.5	+1.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	Kul'dur	57.34	344	P	P	20 22 22.4	-1.4
	comp=Z,1.2nm,0.7s,baz=172,slow=4.9,SNR=4.3						
CMAR	Chiang Mai Arr	57.49	296	P	P	20 22 25.9	+0.4
	comp=Z,2.3nm,0.9s,baz=120,slow=5.0,SNR=15						
CMAR	Chiang Mai Arr	57.49	296	P	P	20 22 25.5	0.0
PETK	Petropavlovsk-	58.62	4	P	P	20 22 32.2	-0.5
	comp=Z,4.0nm,1.0s,baz=135,slow=5.9,SNR=6.0						
PETK	Petropavlovsk-	58.62	4	P	P	20 22 32.9	+0.2
HHC	Hu-ho-hao-te	59.20	325	*e*P	P	20 22 37.5	+0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,6.6s						
LZH	Lanzhou	61.22	316	*e*P	P	20 22 51.8	+0.7
LZH				pP	pP	20 22 57.8	-6.5
LZH				sP	sP	20 23 00.8	-8.8
LZH				PP	PP	20 25 03.0	-3.4

LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,82nm,7.7s						
GTA	Gaotai	65.67	318	*e*P	P	20 23 30.5	+10
GTA				pP	PcP	20 23 47.8	-3.8
GTA				sP	sP	20 23 54.5	+16
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SHL	Shillong	66.01	301	P	P	20 23 21.9	-1.1
SHL				IAmb	IAmb	20 23 23.9	
	comp=Z,5.5nm,0.7s						
ULN	Ulaanbaatar	66.21	329	P	P	20 23 23.9	+0.1
ULN				IAmb	IAmb	20 23 25.1	
	comp=Z,6.1nm,1.1s						
SONM	Songino Array	66.53	328	P	P	20 23 25.9	+0.1
	comp=Z,3.1nm,0.6s,baz=143,slow=4.5,SNR=13						
SONM	Songino Array	66.53	328	P	P	20 23 25.5	-0.3
LSA	Lhasa	68.02	305	P	P	20 23 35.9	-0.1
YAK	Yakutsk	69.54	349	P	P	20 23 43.0	-1.2
	comp=Z,1.2nm,0.3s,baz=4.6,slow=0.9,SNR=1.4						
YAK	Yakutsk	69.54	349	P	P	20 23 45.4	+1.2
YAK				IAmb	IAmb	20 23 57.2	
	comp=Z,7.8nm,1.0s						
GUN	Gumba	71.84	302	*e*P	P	20 23 59.1	-0.3
	comp=Z,26nm,1.1s						
VNDA	Vanda	72.13	178	P	P	20 24 00.5	+0.8
	comp=Z,4.1nm,0.9s,baz=284,slow=4.2,SNR=4.1						
VNDA	Vanda	72.13	178	P	P	20 23 59.6	-0.2
VNDA				IAmb	IAmb	20 24 01.6	
	comp=Z,12nm,1.1s						
PKI	Pulchoki	72.14	301	*e*P	P	20 24 00.4	-0.8
	comp=Z,7.6nm,0.9s						
KKN	Kakani	72.31	301	*e*P	P	20 24 01.3	-0.8
	comp=Z,17nm,1.1s						
DMN	Daman	72.41	301	*e*P	P	20 24 02.4	-0.3
	comp=Z,20nm,1.0s						
DANN	Dangsing	73.76	301	*e*P	P	20 24 09.6	-1.1
	comp=Z,17nm,1.1s						
WMQ	Urumqi	75.76	318	*e*P	P	20 24 23.5	+1.9
CNPM	China Poot	78.71	26	P	P	20 24 38.8	+1.0
BRLK	Bradley Lake	78.99	26	P	P	20 24 39.7	+0.4
MK31	Makanchi Array	80.37	319	P	P	20 24 46.5	-0.6
MKAR	Makanchi Array	80.37	319	P	P	20 24 46.4	-0.7
	comp=Z,2.8nm,0.9s,baz=105,slow=5.9,SNR=18						
MKAR	Makanchi Array	80.37	319	P	P	20 24 46.7	-0.4
MAKZ	Makanchi	80.58	319	P	P	20 24 48.2	0.0
ZAA0	Zalesovo Array	81.33	327	P	P	20 24 51.5	-0.5
ZALV	Zalesovo Beam	81.33	327	P	P	20 24 50.5	-1.5
	comp=Z,1.4nm,0.5s,baz=106,slow=5.4,SNR=9.5						
ZALV	Zalesovo Beam	81.33	327	P	P	20 24 50.8	-1.2
IMAR	Indian Mountai	81.33	20	P	P	20 24 52.4	+0.5
RND	Reindeer	81.70	23	P	P	20 24 53.7	-0.2
RND				IAmb	IAmb	20 24 55.4	
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	82.73	22	P	P	20 24 58.4	-0.8
KSH	Kashi	82.82	311	P	P	20 25 02.0	+1.6
KSH				pP	sP	20 25 19.5	+0.8
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
KSH				pmax	pmax		
	comp=Z,390nm,5.8s						
GLB	Gilahina Butte	82.86	26	P	P	20 24 60.0	0.0
GLB				IAmb	IAmb	20 25 01.9	
	comp=Z,11nm,1.1s						
IL31		83.13	22	P	P	20 25 00.6	-0.6
IL31				IAmb	IAmb	20 25 18.0	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	83.13	22	P	P	20 25 00.5	-0.7
	comp=Z,2.1nm,0.8s,baz=249,slow=5.5,SNR=20						
ILAR	Eielson Array	83.13	22	P	P	20 25 00.2	-1.0
NIL	Nilore	83.75	305	P	P	20 25 04.5	-0.6
KURK	Kurchatov	83.87	322	P	P	20 25 04.5	-0.8
KURK				IAmb	IAmb	20 25 05.5	
	comp=Z,5.7nm,1.0s						
KURBB	Kurchatov Arra	83.90	322	P	P	20 25 04.5	-1.0
	comp=Z,2.2nm,0.9s,baz=112,slow=4.3,SNR=15						
BCAR	Beaver Creek A	84.40	25	P	P	20 25 08.6	+0.8
MAW	Mawson	84.59	203	LR	LR	21 02 01.4	
	comp=Z,90nm,18.3s,baz=63,slow=35						
AAK	Ala-Archa	84.61	314	P	P	20 25 07.4	-2.0
	comp=Z,2.9nm,0.9s,baz=152,slow=3.9,SNR=11						
AAK	Ala-Archa	84.61	314	P	P	20 25 08.9	-0.6
HYT	Haines Junctio	85.44	28	P	P	20 25 14.8	+1.6
HYT				IAmb	IAmb	20 25 25.0	
	comp=Z,6.3nm,0.8s						
NRIK	Noril'sk	86.41	341	P	P	20 25 15.9	-1.7
	comp=Z,1.1nm,0.5s,baz=125,slow=8.6,SNR=1.9						
KK31	Karatay Array	87.57	314	P	P	20 25 23.5	-0.4
KK31				IAmb	IAmb	20 25 26.4	
	comp=Z,3.9nm,1.1s						
KKAR	Karatay Array	87.57	314	P	P	20 25 23.5	-0.4
EPYK	Eagle Plains	87.64	22	P	P	20 25 24.6	+0.9
DLBC	Dease Lake	88.41	31	P	P	20 25 28.1	+0.4
	comp=Z,4.5nm,0.9s,baz=245,slow=10,SNR=5.1						
BVAR	Borovoye Array	89.36	323	P	P	20 25 29.9	-2.2
	comp=Z,1.7nm,0.8s,baz=86,slow=11,SNR=3.0						
INK	Inuvik	89.42	21	P	P	20 25 31.9	-0.1
	comp=Z,1.8nm,1.0s,baz=280,slow=8.4,SNR=3.1						
BRVK	Borovoye	89.43	323	P	P	20 25 31.8	-0.6
NVAR	Mina Array Bea	93.15	52	P	P	20 25 51.8	+1.4
	comp=Z,1.2nm,0.8s,baz=247,slow=5.2,SNR=6.3						
NVAR	Mina Array Bea	93.15	52	P	P	20 25 49.9	-0.4
YKA	Yellowknife Ar	96.44	28	P	P	20 26 05.2	+0.7
	comp=Z,0.7nm,0.7s,baz=272,slow=4.1,SNR=8.8						
ARU	Arti	96.49	326	LR	LR	21 12 09.6	
	comp=Z,136nm,19.2s,baz=142,slow=37						
PDAR	Pinedale Array	99.92	48	P	Pdif	20 26 21.8	+0.8
	comp=Z,0.7nm,0.9s,baz=222,slow=1.8,SNR=4.0						
CLL	Collm	123.11	331	*e*PKPdf	PKiKP	20 31 32.0	-0.3
GERES	GERESS Array B	124.27	328	PKP	PKiKP	20 31 35.1	+0.3
	comp=Z,0.7nm,0.6s,baz=55,slow=2.5,SNR=8.6						
GERES	GERESS Array B	124.27	328		PKiKP	20 31 36.0	+1.2
TORD	Torodi Ar. Bea	149.78	287	PKPbc	PKPbc	20 32 26.5	0.0
	comp=Z,8.7nm,0.8s,baz=64,slow=2.7,SNR=32						

IDC ***31*** *20:17:33.6±3.0, 38°.58N×142°.64E, h0^{km}, mb3.6/3, mb1 3.6/4, mb1mx3.2/53, mbtmp3.5/4, ML2.3/1, Error ellipse: s-maj=70.1km s-min=35.6km az=72.0*

JMA ***31*** *20:17:43.1±0.1, 38°.31N×141°.88E, h46^{km}±1^{km}, M3.5*

ISC 31 20:17:40.9±2.0**, 38°.31N**±0°.05×**142°.03E**±0°.10**, h32**^{km}±11^{km}**, n24,** σ**1^{s}48**/29**, mb3.7**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.45	270	P	Pn	20 17 52.0	+0.9
JIKH				S	Sb	20 17 58.3	+1.1
JIO	Ouri	0.56	285	P	Pn	20 17 53.4	+0.8
JIO				S	Sb	20 18 00.6	+0.5
JKMT	Kesennumamotoy	0.66	319	P	Pn	20 17 55.3	+1.2
JKMT				S	Sn	20 18 03.7	+0.3
OFUJ	Ofunato	0.82	340	P	Pn	20 17 57.7	+1.4
OFUJ				S	Sn	20 18 07.9	+0.6
JMK	Ichinoseki	0.90	315	P	Pn	20 17 58.6	+1.2
JMK				S	Sn	20 18 09.6	+0.3
JMM	Marumori	1.07	246	P	Pn	20 17 59.8	0.0
JMM				*e*S	Sn	20 18 11.1	-2.5
JOU	Okura	1.08	273	P	Pn	20 18 00.4	+0.6
JOU				S	Sn	20 18 13.3	-0.4
JOM	Ohasama	1.29	334	P	Pb	20 18 04.4	-0.3
JOM				*e*S	Sb	20 18 19.8	-1.2
JFK	Kawauchi	1.32	224	P	Pn	20 18 03.5	+0.3
JFK				*e*S	Sn	20 18 18.0	-1.6
JYK	Kaneyama	1.44	295	P	Pb	20 18 05.7	-1.5
JRG	Rokugo	1.54	315	P	Pb	20 18 07.7	-1.1
JYS	Shirataka	1.55	267	P	Pn	20 18 07.1	+0.8
JFT	Otama	1.56	240	P	Pn	20 18 07.2	+0.7
MJAR	Matsushiro Arr	3.52	241	Pn	Pn	20 18 36.9	+3.5
	0.2nm,0.3s,baz=57,slow=9.2,SNR=7.8						
MJAR				Sn	Sn	20 19 17.1	+3.1
	0.1nm,0.3s,baz=76,slow=17,SNR=2.0						
MAT	Matsushiro	3.52	241	P	Pn	20 18 35.6	+2.2
MAT				*e*S	Sn	20 19 16.0	+2.0
H11N2	WAKE ISLAND Hy	28.41	124	T	T	20 53 44.9	
	baz=316,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	28.42	124	T	T	20 53 47.1	
	baz=316,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	28.43	124	T	T	20 53 47.8	
	baz=316,slow=75,SNR=13						
H11S1	WAKE ISLAND Hy	29.17	126	T	T	20 54 42.4	
	baz=318,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.17	126	T	T	20 54 42.0	
	baz=318,slow=76,SNR=31						
H11S2	WAKE ISLAND Hy	29.19	126	T	T	20 54 45.9	
	baz=318,slow=76,SNR=21						
MKAR	Makanchi Array	43.87	301	P	P	20 25 43.4	-0.9
	0.4nm,0.8s,baz=82,slow=8.3,SNR=1.4						
KURBB	Kurchatov Arra	45.61	307	P	P	20 25 57.3	-0.7
	1.3nm,0.8s,baz=82,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	58.40	189	P	P	20 27 33.1	-0.2
	0.5nm,0.8s,baz=7.1,slow=6.7,SNR=2.4						

IDC 31 20:18:27.0±3.6**, 5°.56S**×**152°.40E, h0**^{km}**, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.5**/42**, mbtmp3.9**/3**, ML2.1**/1**, Error ellipse: s-maj=154.8km s-min=48.4km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.46	233	Pn	Pn	20 20 05.1	+1.8
	2.3nm,0.3s,baz=51,slow=8.5,SNR=8.6						
WRA	Warramunga Arr	22.65	229	P	P	20 23 29.2	-0.8
	1.3nm,0.7s,baz=54,slow=11,SNR=3.1						
ASAR	Alice Springs	25.33	223	P	P	20 23 55.5	-0.2
	2.9nm,0.8s,baz=55,slow=8.8,SNR=11						
TORD	Torodi Ar. Bea	150.16	287	PKPbc	PKPbc	20 38 20.8	-0.2
	0.2nm,0.3s,baz=87,slow=2.4,SNR=1.4						

AEIC ***31*** *20:39:35±3.4, 56°.97N±0°.09×168°.8W±0°.1, h30^{km}±8^{km}, Error ellipse: s-maj=14.2km s-min=7.9km az=206.0*

NEIC 31 20:39:37.6±2.2**, 56°.62N**±0°.06×**169°.36W**±0°.07**, h10**^{km}±1^{km}**, mb3.9**/1**, ML3.3**(AEIC)**, Error ellipse: s-maj=10.9km s-min=5.9km az=197.0, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.74	320		Pg	20 39 51.8	-0.1
MSW	Makushin Switc	3.08	150		Pn	20 40 25.4	-1.0
AKGG	Akutan Green G	3.09	140		Pn	20 40 25.5	-1.0
AKRB	Akutan Reef Bi	3.12	142		Pn	20 40 27.1	+0.3
MNAT	Makushin Natee	3.14	150		Pn	20 40 26.9	-0.2
MGOD	Makushin Gods	3.17	152		Pn	20 40 25.8	-1.7
AKUT	Akutan	3.22	139	Pn	Pn	20 40 27.0	-1.2
UNV	Unalaska Valle	3.22	148		Pn	20 40 27.3	-0.9
NIKH	Nikolski High	3.66	175	Pn	Pn	20 40 34.4	+0.1
ATKA	Atka Island	5.24	215	Pn	Pn	20 40 57.0	+1.0
CHGN	Chignik	6.08	88	Pn	Pn	20 41 08.2	+0.7
ADK	Adak	6.39	225	Pn	Pn	20 41 14.3	+2.6
AMKA	Amchitka	8.49	237	Pn	Pn	20 41 42.8	+2.4
TTA	Tatalina	9.23	41	Pn	Pn	20 41 51.0	+0.3
BRLK	Bradley Lake	10.24	64	Pn	Pn	20 42 04.4	-0.1
PPLA	Purkeypile	10.68	47	Pn	Pn	20 42 09.9	-0.8
BPAW	Bear Paw Mtn.	11.75	43	Pn	Pn	20 42 25.1	0.0
IMAR	Indian Mountai	11.98	32	Pn	Pn	20 42 29.1	+0.9
YAH	Yahtse	14.86	64	Pn	Pn	20 43 07.6	-0.1
BARN	Barnard Glacie	14.95	61	Pn	Pn	20 43 09.2	+0.2
CTGM	Chitina Glacie	15.10	62	Pn	Pn	20 43 10.2	-0.7
CTGM				IAmb	IAmb	20 43 17.9	
	comp=Z,6.5nm,1.2s						

IDC ***31*** *20:43:30.6±3.1, 56°.03N×168°.92W, h0^{km}, mb3.4/3, mb1 3.7/6, mb1mx3.4/55, mbtmp3.6/6, ML2.9/3, Error ellipse: s-maj=74.4km s-min=22.0km az=170.0*

AEIC ***31*** *20:43:31±2.5, 56°.57N±0°.07×169°.0W±0°.1, h20^{km}±2^{km}, Error ellipse: s-maj=15.0km s-min=7.9km az=50.0*

NEIC ***31*** *20:43:33.4±2.6, 56°.60N±0°.04×169°.0W±0°.1, h10^{km}±1^{km}, ML3.5(AEIC), Error ellipse: s-maj=13.4km s-min=5.4km az=65.0*

ISC 31 20:43:33.8±0.9**, 56°.58N**±0°.09×**169°.03W**±0°.07**, h10**^{km}**, n21,** σ**1^{s}27**/21**, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.90	313		Pg	20 43 49.0	-2.0
AKGG	Akutan Green G	2.95	143		Pn	20 44 18.5	-2.1
MSW	Makushin Switc	2.96	153		Pn	20 44 20.6	-0.2
AKRB	Akutan Reef Bi	2.98	144		Pn	20 44 20.2	-0.9
AKLV	Akutan Long Va	2.99	143		Pn	20 44 19.9	-1.3
MNAT	Makushin Natee	3.01	153		Pn	20 44 20.9	-0.6
MAPS	Pakushin South	3.02	156		Pn	20 44 21.1	-0.5
AKUT	Akutan	3.07	141	Pn	Pn	20 44 20.4	-1.9
UNV	Unalaska Valle	3.10	151		Pn	20 44 22.3	-0.3
ATKA	Atka Island	5.32	217	Pn	Pn	20 44 54.4	+1.2
CHGN	Chignik	5.90	88	Pn	Pn	20 45 02.1	+1.1
ADK	Adak	6.50	227	Pn	Pn	20 45 09.8	+0.5
GAMB	Gambell	7.35	351	Pn	Pn	20 45 21.6	+0.7
ANM	Nome	8.21	11	Pn	Pn	20 45 32.6	-0.3
AMKA	Amchitka	8.62	238	Pn	Pn	20 45 40.7	+2.3
KDAK	Kodiak Island	9.02	75	Pn	Pn	20 45 45.5	+1.6
	0.3nm,0.3s,baz=344,slow=13,SNR=0.9						
ILAR	Eielson Array	13.54	44	Pn	Pn	20 46 46.8	+1.2
	0.0nm,0.3s,baz=242,slow=11,SNR=2.3						
PETK	Petropavlovsk-	19.36	274	P	Pn	20 48 00.6	+0.3
	0.1nm,0.3s,baz=82,slow=13,SNR=5.6						
INK	Inuvik	19.83	40	P	Pn	20 48 06.7	+0.9
	1.7nm,0.7s,baz=228,slow=8.3,SNR=5.1						
SEY	Seymchan	20.19	304	P	P	20 48 08.4	+0.2
	0.6nm,0.7s,baz=91,slow=21,SNR=2.1						
YKA	Yellowknife Ar	27.48	55	P	P	20 49 19.2	-0.5
	0.8nm,1.0s,baz=279,slow=9.2,SNR=4.4						

AEIC ***31*** *20:47:09±1.4, 56°.55N±0°.05×169°.13W±0°.08, h13^{km}±3^{km}, Error ellipse: s-maj=8.1km s-min=5.0km az=225.0*

IDC ***31*** *20:47:09.7±0.5, 56°.64N×169°.06W, h0^{km}, mb4.5/34, mb1 4.6/37, mb1mx4.5/57, mbtmp4.5/37, ML4.2/3, MS4.3/44, Ms1 4.3/44, ms1mx4.3/58, Error ellipse: s-maj=17.3km s-min=8.5km az=3.0*

MOS ***31*** *20:47:10.1±0.8, 56°.60N×169°.11W, h15^{km}, mb5.3/48, MS4.7/7, Error ellipse: s-maj=7.7km s-min=4.6km az=95.2*

BJI ***31*** *20:47:10.3±0.0, 56°.81N×169°.56W, h10^{km}, mB5.4/46, mb4.8/61, Ms5.1/45, Ms7 4.7/44*

NEIC ***31*** *20:47:11.5±1.7, 56°.61N±0°.05×169°.13W±0°.08, h12^{km}±3^{km}, mb5.1/143, ML4.8(AEIC), Error ellipse: s-maj=8.1km s-min=5.0km az=222.0*

GCMT ***31*** *20:47:13.5±0.1, 56°.81N±0°.01×169°.11W±0°.02, h12^{km}, MW5.2/152, Moment Tensor Solution. s87,c119; s152,c251; Duration: 0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.71±.01; M$_{\theta\theta}$0.71±.01; M$_{\phi\phi}$0.00±.01; M$_{r\theta}$0.08±.03; M$_{\theta\phi}$-0.13±.01; M$_{\phi r}$0.03±.03; Best double couple: M$_0$0.72800×10^{17} NP1:φ$_s$104.00000°, δ42.00000°, λ-84.00000°. NP2:φ$_s$276.00000°, δ48.00000°, λ-95.00000°. Principal axes: T 0.7380, Plg3.0000°, Azm10.0000°; N -0.0220, Plg4.0000°, Azm280.0000°; P -0.7180, Plg85.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 20:47:10.7±0.7**, 56°.55N**±0°.04×**169°.08W**±0°.03**, h7**^{km}±3^{km}**, n717,** σ**1^{s}27**/733**, mb5.1**/166**, MS4.5**/67**, 36C-32D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.89	315	Pg	Pg	20 47 26.3	-1.6
SPIA	Saint Paul Isl	0.89	315		Sg	20 47 38.2	-1.2
AKGG	Akutan Green G	2.95	142		Pn	20 47 57.8	-0.1
MSW	Makushin Switc	2.96	153		Pn	20 47 58.0	0.0
AKRB	Akutan Reef Bi	2.98	143		Pn	20 47 58.8	+0.5
AKRB					Sn	20 48 35.4	+1.2
AKLV	Akutan Long Va	2.99	142		Pn	20 47 59.1	+0.6
MNAT	Makushin Natee	3.01	152		Pn	20 47 58.8	+0.1
MAPS	Pakushin South	3.01	155		Pn	20 47 59.6	+0.9
MGOD	Makushin Gods	3.04	154		Pn	20 47 60.0	+0.7
MGOD					Sn	20 48 35.5	-0.4
AKBBA	Akutan Broad B	3.05	143		Pn	20 47 59.5	+0.2
AKUT	Akutan	3.07	141	Pn	Pn	20 48 00.1	+0.5
UNV	Unalaska Valle	3.09	150	Pn	Pn	20 48 01.0	+1.2
UNV	Unalaska Valle	3.09	150		Sn	20 48 39.2	+2.3
AKSA	Akutan Strait	3.10	140		Pn	20 48 00.7	+0.7
WEBT	Westdahl Beart	3.15	127		Pn	20 48 01.1	+0.4
OKER	Okmok East Rim	3.16	169		Pn	20 48 00.9	0.0
WECS	Westdahl Cape	3.18	128		Pn	20 48 01.1	0.0
OKFG	Magazine Ridge	3.22	167		Pn	20 48 00.6	-1.0
WESP	Westdahl Peak	3.23	128		Pn	20 48 01.8	0.0
OKSP	Okmok Steeple	3.34	172		Pn	20 48 03.3	0.0
SSLS	Shishaldin Sou	3.42	121		Pn	20 48 05.0	+0.5
NIKH	Nikolski High	3.59	178	Pn	Pn	20 48 08.5	+1.7
FALS	False Pass	3.63	116		Pn	20 48 08.2	+0.9
DT1	Dutton Round H	4.10	108		Pn	20 48 13.0	-0.7
SDPT	Sand Point	4.99	100	Pn	Pn	20 48 25.3	-0.5
KOFP	Korovin Flat P	5.19	216		Pn	20 48 29.9	+1.1
ATKA	Atka Island	5.28	217	Pn	Pn	20 48 29.8	-0.2
VNHG	Veniaminof 1	5.52	89		Pn	20 48 32.6	-0.8
CNBA	Chernabura Isl	5.64	104	Pn	Pn	20 48 34.0	-0.9
CHGN	Chignik	5.93	88		Pn	20 48 38.0	-0.7
ADK	Adak	6.46	227	P	Pn	20 48 45.6	-0.5
ADK	Adak	6.46	227	Pn	Pn	20 48 45.6	-0.5
GAMB	Gambell	7.36	351		Pn	20 48 57.0	-1.4
ANM	Nome	8.24	11	P	Pn	20 49 10.3	-0.2
ANM	Nome	8.24	11		Pn	20 49 10.3	-0.2
AMKA	Amchitka	8.58	238	Pn	Pn	20 49 17.4	+2.2
OHAK	Old Harbor	8.68	79	Pn	Pn	20 49 14.9	-1.5
KDAK	Kodiak Island	9.05	75	Pn	Pn	20 49 22.8	+1.3
	4.3nm,0.3s,baz=287,slow=6.4,SNR=22						
KDAK				Sn	Sn	20 51 02.9	-0.7
	1.1nm,0.3s,baz=206,slow=8.2,SNR=1.0						
TTA	Tatalina	9.17	40	P	Pn	20 49 23.9	+0.5
TTA	Tatalina	9.17	40		Pn	20 49 23.9	+0.5
CNPM	China Poot	9.91	65		Pn	20 49 34.3	+0.9
BRLK	Bradley Lake	10.13	64		Pn	20 49 36.2	-0.3
CAPN	Captain Cook N	10.24	58	P	Pn	20 49 37.8	0.0
	baz=254						
SMY	Shemya	10.47	256	P	Pn	20 49 41.1	+0.1
SMY	Shemya	10.47	256	Pn	Pn	20 49 41.0	+0.1
SKT	Skwentna	10.48	52		Pn	20 49 42.9	+1.7
PPLA	Purkeypile	10.61	46		Pn	20 49 43.3	+0.2
SUA	Susitna One	10.64	55		Pn	20 49 45.4	+1.9
O22K	Cooper Landing	10.85	61	P	Pn	20 49 48.4	+2.3
	baz=257						
SEW	Seward	10.90	63		Pn	20 49 49.6	+2.6
RC01	Rabbit Creek A	10.99	58	P	Pn	20 49 49.9	+1.7
	baz=254						
PMR	Palmer	11.42	56	P	Pn	20 49 54.7	+0.8
PMR	Palmer	11.42	56	Pn	Pn	20 49 54.6	+0.8
KNK	Knik Glacier	11.67	57		Pn	20 49 58.2	+0.7
BPAW	Bear Paw Mtn.	11.69	42		Pn	20 49 55.5	-2.2
SML	Sawmill	11.84	55		Pn	20 49 59.3	-0.5
MLY	Manley	12.30	39	P	Pn	20 50 06.0	-0.1
	baz=235,SNR=6.8						
MCK	McKinley	12.30	46	P	Pn	20 50 07.8	+1.7
	baz=244,SNR=38						
SCM	Sheep Creek Mo	12.31	56	P	Pn	20 50 06.9	+0.7
SCM	Sheep Creek Mo	12.31	56		Pn	20 50 06.9	+0.7
FID	Port Fidalgo	12.47	61		Pn	20 50 07.2	-1.2
NEA2	Nenana	12.66	42	P	Pn	20 50 14.4	+3.5
	baz=240,SNR=7.6						
KLU	Klutina	12.88	58		Pn	20 50 13.7	-0.3
M24K	Tolsona, Glenn	12.91	55	P	Pn	20 50 16.1	+1.7
	baz=255,SNR=8.0						
M24K	Tolsona, Glenn	12.91	55		Pn	20 50 15.0	+0.6
MDM	Murphy Dome	13.16	42		Pn	20 50 16.8	-0.9
CCB	Clear Creek Bu	13.16	43	Pn	Pn	20 50 17.8	0.0
TCOL	CIGO, UAF Yank	13.25	42	P	Pn	20 50 23.4	+4.4
	baz=241,SNR=5.2						
COLA	College	13.26	42	⇑*e*P	Pn	20 50 21.4	+2.4
HDA	Harding Lake	13.39	45	P	Pn	20 50 22.6	+1.7
	baz=244						
HDA	Harding Lake	13.39	45		Pn	20 50 21.4	+0.6
PAX	Paxson	13.46	52	P	Pn	20 50 24.1	+2.1
PAX	Paxson	13.46	52		Pn	20 50 24.1	+2.1
HMT	Hamilton	13.50	63	Pn	Pn	20 50 23.4	+0.9
N25K	Chitina, Valde	13.52	58	P	Pn	20 50 22.4	-0.4
	baz=259						
N25K	Chitina, Valde	13.52	58		Pn	20 50 22.1	-0.7
POKR	Poker Plat Res	13.53	42	P	Pn	20 50 25.6	+2.8
	baz=241,SNR=14						
ILAR	Eielson Array	13.57	44	Pn	Pn	20 50 23.9	+0.5
	0.2nm,0.3s,baz=235,slow=11,SNR=30						
ILAR	Eielson Array	13.57	44	P	Pn	20 50 24.5	+1.1
ILAR	Eielson Array	13.57	44		Pn	20 50 24.5	+1.1
COLD	Coldfoot	13.84	32	P	Pn	20 50 28.6	+1.6
	baz=229,SNR=7.9						
COLD	Coldfoot	13.84	32		Pn	20 50 30.3	+3.3
RIDG	Independent Ri	13.98	49		Pn	20 50 31.2	+2.2
VRDI	Verde Repeater	14.00	60		Pn	20 50 29.7	+0.2
CRQM	Cirque	14.10	62		Pn	20 50 29.7	-1.0
TGL	Tana Glacier	14.25	62	Pn	Pn	20 50 33.5	+0.8
SCRK	Sand Creek	14.42	49	P	Pn	20 50 34.3	-0.8
	baz=251,SNR=11						
PRP	Porcupine Dome	14.43	42	Pn	Pn	20 50 34.2	-0.9
BALM	Baldy	14.51	61		Pn	20 50 34.5	-1.8
MESA	MESA	14.64	64		Pn	20 50 37.1	-1.1
FYU	Fort Yukon	15.04	39		Pn	20 50 43.3	0.0
BCAR	Beaver Creek A	15.11	53		Pn	20 50 43.0	-1.4
BMAR	Burnt Mountain	15.71	36		Pn	20 50 52.1	0.0
A21K	Barrow	15.74	15	P	Pn	20 50 54.3	+1.8
	baz=206,SNR=16						
A21K	Barrow	15.74	15		Pn	20 50 53.8	+1.3
A21K				IAmb	IAmb	20 51 00.1	
	comp=Z,172nm,1.4s						
BCPM	Bancas Point	15.80	65	Pn	Pn	20 50 53.6	+0.2
EGAK	Eagle	15.84	47	Pn	Pn	20 50 53.9	+0.1
EGAK				IAmb	IAmb	20 51 01.8	
	comp=Z,105nm,1.3s						
BILL	Bilibino	16.09	326	*de*P	P	20 50 59.6	-0.8
BILL				*e*S	Sn	20 54 00.3	+5.0
BILL				pmax	pmax		
	comp=Z,103nm,1.4s						
BILL				MLR	MLR		
	comp=Z,3µm,15.0s						
BILL	Bilibino	16.09	326		Pn	20 50 57.0	0.0
EPYK	Eagle Plains	18.09	44	P	Pn	20 51 21.9	-0.3
	baz=253						
WHY	Whitehorse	18.15	63		Pn	20 51 22.8	-0.3
WHY				IAmb	IAmb	20 51 29.7	
	comp=Z,171nm,1.4s						
SIT	Sitka	18.39	74	P	P	20 51 26.5	+0.7
SIT				pmax	pmax		
	comp=Z,171nm,1.4s						
SIT	Sitka	18.39	74		P	20 51 26.5	+0.7
SIT				IAmb	IAmb	20 51 38.2	
	comp=Z,171nm,1.4s						
JIS	Juneau Island	18.65	70	P	P	20 51 27.8	-0.9
PET	Petropavlovsk	18.84	273	*e*P	Pn	20 51 32.3	+1.0
PET				*e*S	Sn	20 54 56.7	-5.3
PET				pmax	pmax		
	comp=Z,1µm,6.6s						
PET				pmax	pmax		
	comp=Z,2µm,5.8s						
PET				pmax	pmax		
	comp=Z,76nm,1.3s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s						
PET	Petropavlovsk	18.84	273	P	Pn	20 51 31.8	+0.5
PET				IAmb	IAmb	20 51 37.0	
	comp=Z,90nm,1.3s						
PEA0B	Petropavlovsk-	19.33	274	*d i*P	Pn	20 51 37.7	+0.4
PEA0B	Petropavlovsk-	19.33	274		P	20 51 36.7	+0.4
PEA0B				IAmb	IAmb	20 51 39.7	
	comp=Z,205nm,1.5s						
PETK	Petropavlovsk-	19.33	274	P	Pn	20 51 38.2	+0.9
	comp=Z,1.5nm,0.3s,baz=81,slow=14,SNR=60						
PETK				LR	LR	20 59 28.9	
	comp=Z,273nm,19.3s,baz=83,slow=38						
PETK	Petropavlovsk-	19.33	274	P	P	20 51 36.7	+0.4
PETK	Petropavlovsk-	19.33	274	P	P	20 51 36.7	+0.4
INK	Inuvik	19.87	40	P	P	20 51 41.4	-0.6
	comp=Z,0.8nm,0.3s,baz=231,slow=8.2,SNR=27						
INK	Inuvik	19.87	40	P	P	20 51 42.3	+0.3
INK				pmax	pmax		
	comp=Z,80nm,0.9s						
INK	Inuvik	19.87	40	P	P	20 51 42.3	+0.3
INK				IAmb	IAmb	20 51 47.1	
	comp=Z,80nm,0.8s						
CRAG	Craig	19.99	78	P	Pn	20 51 44.6	-0.5
CRAG				IAmb	IAmb	20 51 45.9	
	comp=Z,57nm,0.8s						
WRAK	Wrangell Islan	20.14	75	P	Pn	20 51 46.3	-0.5
WRAK				IAmb	IAmb	20 52 06.8	
	comp=Z,116nm,1.3s						
SEY	Seymchan	20.18	304	P	P	20 51 45.8	+0.3
	comp=Z,22nm,1.0s,baz=88,slow=10,SNR=28						
SEY				LR	LR	21 00 18.6	
	comp=Z,764nm,19.0s,baz=92,slow=39						
SEY	Seymchan	20.18	304	⇓*i*P	P	20 51 45.0	-0.4
DLBC	Dease Lake	20.87	68	P	P	20 51 54.1	+1.0
	comp=Z,9.6nm,0.8s,baz=281,slow=11,SNR=13						
DLBC				LR	LR	20 59 56.5	
	comp=Z,919nm,21.2s,baz=282,slow=37						
DLBC	Dease Lake	20.87	68	P	P	20 51 53.1	0.0

MA2	**Magadan**	**21.22**	**295**	P	**P**	**20 51 57.8**	**+1.0**
	comp=Z,26nm,1.0s,baz=84,slow=9.8,SNR=8.4						
MA2	**Magadan**	**21.22**	**295**	*de*P	**P**	**20 51 57.6**	**+0.9**
MA2				pmax	pmax		
	comp=Z,108nm,2.5s						
MA2	**Magadan**	**21.22**	**295**	P	**P**	**20 51 56.2**	**-0.5**
SKR	**Severo-Kuril's**	**21.29**	**269**	*d i*P	**P**	**20 51 57.6**	**+0.1**
SKR				*i* S	Sn	20 56 01.7	+0.5
SKR				pmax	pmax		
	comp=Z,84nm,1.2s						
SKR				pmax	pmax		
	comp=Z,700nm,7.1s						
SKR				pmax	pmax		
	comp=Z,300nm,6.4s						
SKR				MLR	MLR		
	comp=Z,200nm,14.0s						
C36M	**Paulatuk**	**23.45**	**39**	P	**P**	**20 52 19.6**	**-0.5**
	baz=260,SNR=11						
BBB	**Bella Bella**	**24.00**	**83**	P	**P**	**20 52 27.3**	**+1.7**
	comp=Z,11nm,1.0s,baz=245,slow=5.2,SNR=3.3						
BBB				LR	LR	21 00 52.6	
	comp=Z,795nm,20.6s,baz=311,slow=34						
YKA	**Yellowknife Ar**	**27.52**	**55**	P	**P**	**20 52 57.4**	**0.0**
	comp=Z,6.7nm,0.8s,baz=281,slow=8.8,SNR=32						
YKA				PcP	**PcP**	**20 56 14.1**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=292,slow=1.4,SNR=7.0						
D03D	**Eldon**	**29.18**	**88**	P	**P**	**20 53 13.2**	**+0.8**
	baz=305						
TIXI	**Tiksi**	**29.30**	**325⇑**	*e*P	**P**	**20 53 11.7**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,143nm,2.5s						
TIXI	**Tiksi**	**29.30**	**325**	P	**P**	**20 53 13.3**	**+0.1**
B05A	**Bryant**	**29.32**	**86**	P	**P**	**20 53 14.6**	**+1.0**
	baz=304						
B06A	**Marblemount**	**29.51**	**85**	P	**P**	**20 53 15.6**	**+0.3**
D04E	**Lakebay**	**29.57**	**89**	P	**P**	**20 53 16.5**	**+0.7**
	baz=306						
E04D	**Cinebar**	**30.05**	**89**	P	**P**	**20 53 21.7**	**+1.6**
	baz=307,SNR=6.4						
YAK	**Yakutsk**	**30.69**	**306**	P	**P**	**20 53 24.6**	**-0.9**
	comp=Z,10nm,0.7s,baz=87,slow=2.8,SNR=15						
YAK				LR	LR	21 06 33.5	
	comp=Z,1µm,20.5s,baz=80,slow=38						
YAK	**Yakutsk**	**30.69**	**306**	*e*P	**P**	**20 53 24.9**	**-0.6**
YAK				*e*		20 56 20.9	
YAK				*e*S	**S**	**20 58 27.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,20nm,1.3s						
YAK				smax	smax		
	comp=N,169nm,4.4s						
YAK				smax	smax		
	comp=E,181nm,3.3s						
YAK				MLR	MLR		
	comp=Z,1µm,14.0s						
YAK				MLR	MLR		
	comp=E,1µm,16.0s						
YAK	**Yakutsk**	**30.69**	**306**	P	**P**	**20 53 24.1**	**-1.5**
YAK				IAmb	IAmb	20 53 29.4	
	comp=Z,37nm,0.9s						
H04D	**Lebanon**	**31.20**	**93**	P	**P**	**20 53 31.3**	**+1.0**
	baz=309						
H04A	**Detroit Lake**	**31.41**	**92**	P	**P**	**20 53 33.1**	**+0.9**
H04A				IAmb	IAmb	20 53 34.3	
	comp=Z,34nm,1.2s						
G05D	**Wamic, OR**	**31.54**	**90**	P	**P**	**20 53 34.5**	**+1.3**
	baz=308						
D08A	**Wollman Farm,**	**31.77**	**86**	P	**P**	**20 53 35.2**	**-0.1**
I04A	**Tendick Farm,**	**31.85**	**93**	P	**P**	**20 53 36.9**	**+0.8**
	baz=310,SNR=6.0						
NEW	**Newport**	**32.06**	**83**	P	**P**	**20 53 37.3**	**-0.6**
	comp=Z,4.0nm,0.9s,baz=298,slow=7.1,SNR=5.0						
NEW	**Newport**	**32.06**	**83**	P	**P**	**20 53 37.9**	**+0.1**
	baz=305						
I05D	**Terrebonne, OR**	**32.10**	**92**	P	**P**	**20 53 39.2**	**+1.0**
	baz=310						
J04D	**Umpqua Nationa**	**32.38**	**94**	P	**P**	**20 53 42.1**	**+1.2**
	baz=311,SNR=6.9						
E09A	**Wood Farm, Sta**	**32.52**	**86**	P	**P**	**20 53 41.8**	**0.0**
E09A				IAmb	IAmb	20 53 47.0	
	comp=Z,32nm,1.4s						
ASAJ	**Asahikawa**	**32.56**	**268**	LR	LR	21 08 12.5	
	comp=Z,221nm,18.8s,baz=344,slow=39						
RES	**Resolute Bay**	**32.56**	**28**	P	**P**	**20 53 41.3**	**-0.6**
	comp=Z,5.8nm,1.2s,baz=254,slow=14,SNR=8.5						
RES				PcP	**PcP**	**20 56 27.4**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=288,slow=2.3,SNR=6.2						
RES	**Resolute Bay**	**32.56**	**28**	P	**P**	**20 53 41.8**	**-0.1**
RES				pmax	pmax		
	comp=Z,15nm,1.5s						
RES	**Resolute Bay**	**32.56**	**28**	P	**P**	**20 53 41.8**	**-0.1**
J05D	**Fort Rock, OR**	**32.83**	**93**	P	**P**	**20 53 46.4**	**+1.6**
	baz=311,SNR=15						
L04D	**Klamath Falls**	**32.95**	**96**	P	**P**	**20 53 46.4**	**+0.6**
	baz=312,SNR=5.5						
YBH	**Yreka Blue Hor**	**33.05**	**97**	LR	LR	21 05 34.0	
	comp=Z,653nm,18.1s,baz=310,slow=33						
YBH	**Yreka Blue Hor**	**33.05**	**97**	P	**P**	**20 53 47.1**	**+0.4**
YBH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YBH	**Yreka Blue Hor**	**33.05**	**97**	P	**P**	**20 53 47.1**	**+0.4**
M02C	**Callahan**	**33.20**	**97**	P	**P**	**20 53 49.6**	**+1.6**
	baz=313						
WALA	**Waterton Lakes**	**33.36**	**79**	P	**P**	**20 53 48.6**	**-0.8**
WALA				IAmb	IAmb	20 53 53.2	
	comp=Z,28nm,1.7s						
M04C	**Macdoel**	**33.50**	**96**	P	**P**	**20 53 51.0**	**+0.4**
	baz=313,SNR=5.3						
N02D	**Trinity Center**	**33.57**	**98**	P	**P**	**20 53 52.9**	**+1.7**
	baz=314						
EUNU	**Eureka**	**33.66**	**18**	P	**P**	**20 53 51.3**	**-0.3**
WDC	**Whiskeytown Da**	**33.94**	**98**	P	**P**	**20 53 54.6**	**+0.3**
WDC				pmax	pmax		
	comp=Z,36nm,1.8s						
WDC	**Whiskeytown Da**	**33.94**	**98**	P	**P**	**20 53 54.5**	**+0.3**
WDC				IAmb	IAmb	20 54 04.1	
	comp=Z,36nm,1.8s						
BMO	**Blue Mountains**	**34.00**	**88**	P	**P**	**20 53 54.6**	**-0.3**
BMO				pmax	pmax		
	comp=Z,44nm,1.7s						
BMO	**Blue Mountains**	**34.00**	**88**	P	**P**	**20 53 54.6**	**-0.3**
BMO				IAmb	IAmb	20 54 00.6	
	comp=Z,44nm,1.6s						
O02D	**Mt. Diablo Mer**	**34.08**	**99**	P	**P**	**20 53 57.3**	**+1.6**
	baz=314						
O03E	**Paynes Creek**	**34.54**	**98**	P	**P**	**20 53 60.0**	**+0.4**
	baz=314						
WVOR	**Wild Horse Val**	**34.83**	**92**	P	**P**	**20 54 01.6**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	**Wild Horse Val**	**34.83**	**92**	P	**P**	**20 54 01.6**	**-0.6**
ORV	**Oroville**	**35.22**	**98**	P	**P**	**20 54 05.0**	**-0.4**
ORV				pmax	pmax		
	comp=Z,13nm,1.3s						
ORV	**Oroville**	**35.22**	**98**	P	**P**	**20 54 05.0**	**-0.4**
ZEA	**Zeya**	**35.34**	**293**	*e*P	**P**	**20 54 05.9**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLR	**Kul'dur**	**35.43**	**284**	P	**P**	**20 54 05.9**	**-1.1**
	comp=Z,1.6nm,0.9s,baz=28,slow=12,SNR=3.1						
KLR	**Kul'dur**	**35.43**	**284⇑**	*e*P	**P**	**20 54 09.2**	**+2.2**
KLR				pmax	pmax		
	comp=Z,24nm,2.5s						
KIP	**Kipapa**	**36.03**	**162⇑**	*e*P	**P**	**20 54 12.9**	**+0.5**
KIP				pmax	pmax		
	comp=Z,453nm,2.5s						
HLID	**Hailey**	**36.43**	**87**	P	**P**	**20 54 15.8**	**-0.1**
	baz=311,SNR=9.7						
MCMT	**McKenzie Canyo**	**36.48**	**84**	P	**P**	**20 54 16.1**	**-0.3**
BCYI	**Bear Canyon**	**36.50**	**85**	P	**P**	**20 54 16.5**	**-0.1**
FFC	**Flin Flon**	**36.56**	**64**	P	**P**	**20 54 16.7**	**0.0**
FFC				pmax	pmax		
	comp=Z,30nm,1.5s						
FFC	**Flin Flon**	**36.56**	**64**	P	**P**	**20 54 16.7**	**0.0**
FFC				IAmb	IAmb	20 54 21.5	
	comp=Z,30nm,1.5s						
BOZ	**Bozeman (W)**	**36.67**	**82**	P	**P**	**20 54 17.4**	**-0.5**
	baz=309						
QLMT	**Earthquake Lak**	**37.26**	**83**	P	**P**	**20 54 22.8**	**-0.2**
YHL	**Hebgen Lake**	**37.38**	**83**	P	**P**	**20 54 24.0**	**-0.2**
YHB	**Horse Butte**	**37.44**	**83**	P	**P**	**20 54 24.1**	**-0.5**
RYN	**Ryan**	**37.51**	**97**	P	**P**	**20 54 25.4**	**+0.2**
NVAR	**Mina Array Bea**	**37.77**	**97**	P	**P**	**20 54 27.9**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=298,slow=8.2,SNR=28						
NVAR				PcP	**PcP**	**20 56 45.4**	**+1.3**
	comp=Z,2.7nm,0.7s,baz=295,slow=2.6,SNR=9.1						
NVAR				LR	LR	21 08 11.6	
	comp=Z,481nm,18.6s,baz=304,slow=33						
NVAR	**Mina Array Bea**	**37.77**	**97**	P	**P**	**20 54 27.9**	**+0.5**
NVAR				PcP	**PcP**	**20 56 44.6**	**+0.5**
ELK	**Elko**	**37.85**	**91**	LR	LR	21 09 01.7	
	comp=Z,242nm,18.4s,baz=312,slow=35						
NV11	**Mina Array Sit**	**37.85**	**96**	P	**P**	**20 54 28.5**	**+0.4**
NV11				PcP	**PcP**	**20 56 45.7**	**+1.5**
H17A	**Grant Village**	**38.01**	**83**	P	**P**	**20 54 30.6**	**+1.2**
	baz=310						
MLAC	**Mammoth, Mammo**	**38.06**	**98**	P	**P**	**20 54 31.7**	**+1.8**
	baz=316						
TULEG	**Thule**	**38.15**	**22**	P	**P**	**20 54 31.4**	**+1.5**
FCC	**Fort Churchill**	**38.24**	**54**	P	**P**	**20 54 30.4**	**-0.5**
FCC				pmax	pmax		
	comp=Z,74nm,1.4s						
FCC	**Fort Churchill**	**38.24**	**54**	P	**P**	**20 54 30.4**	**-0.5**
FCC				IAmb	IAmb	20 54 36.4	
	comp=Z,74nm,1.4s						
RLMT	**Red Lodge**	**38.26**	**81**	P	**P**	**20 54 31.3**	**-0.2**
	baz=310						
USRK	**Ussuriysk Ar.**	**38.37**	**277**	LR	LR	21 09 44.6	
	comp=Z,150nm,19.4s,baz=47,slow=35						
PUH	**Pauahi**	**38.55**	**159**	P	**P**	**20 54 35.5**	**+1.6**
PUH				IAmb	IAmb	20 54 41.0	
	comp=Z,60nm,0.9s						
PAGB	**Antelope Grade**	**38.68**	**101**	P	**P**	**20 54 35.9**	**+1.1**
PAGB				IAmb	IAmb	20 54 37.2	
	comp=Z,31nm,1.4s						
R11A	**Troy Canyon, C**	**39.33**	**94**	P	**P**	**20 54 40.3**	**-0.1**
	baz=316,SNR=12						
CWC	**Cottonwood Cre**	**39.34**	**99**	P	**P**	**20 54 41.2**	**+0.7**
	baz=317						
DUG	**Dugway, Tooele**	**39.57**	**90**	P	**P**	**20 54 41.9**	**-0.6**
	baz=314,SNR=7.8						
BOD	**Bodaibo**	**39.60**	**305**	*e*P	**P**	**20 54 41.2**	**-1.0**
BOD				pmax	pmax		
	comp=Z,28nm,1.9s						
BW06	**Boulder Array**	**39.63**	**84**	P	**P**	**20 54 42.1**	**-0.9**
	baz=312						
PD31	**Pinedale Array**	**39.63**	**84**	P	**P**	**20 54 42.5**	**-0.5**
PDAR	**Pinedale Array**	**39.63**	**84**	P	**P**	**20 54 42.2**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=332,slow=2.1,SNR=6.6						
PDAR				LR	LR	21 11 25.2	
	comp=Z,342nm,18.6s,baz=328,slow=37						
PDAR	**Pinedale Array**	**39.63**	**84**	P	**P**	**20 54 41.9**	**-1.1**
ISA	**Isabella, Lake**	**39.69**	**100**	P	**P**	**20 54 43.6**	**+0.2**
	baz=318						
MPMC	**Manual Prospec**	**39.94**	**98**	P	**P**	**20 54 45.6**	**0.0**
	baz=318,SNR=9.5						
TPNV	**Topopah Spring**	**39.97**	**96**	P	**P**	**20 54 46.2**	**+0.4**
	baz=317,SNR=7.1						
FURC	**Furnace Creek,**	**39.98**	**97**	P	**P**	**20 54 46.7**	**+1.0**
	baz=317						
PSUT	**Pine Spring**	**40.16**	**93**	P	**P**	**20 54 47.2**	**-0.1**
MJAR	**Matsushiro Arr**	**40.20**	**263**	P	**P**	**20 54 47.9**	**+0.4**
	comp=Z,7.7nm,1.1s,baz=20,slow=7.9,SNR=7.7						
MJAR				LR	LR	21 11 58.3	
	comp=Z,108nm,20.0s,baz=330,slow=37						
MJAR	**Matsushiro Arr**	**40.20**	**263**	P	**P**	**20 54 48.0**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MJAR	**Matsushiro Arr**	**40.20**	**263**	P	**P**	**20 54 48.0**	**+0.5**
MAJO	**Matsushiro**	**40.20**	**263⇓**	*e*P	**P**	**20 54 47.8**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,42nm,1.4s						
MAT	**Matsushiro**	**40.20**	**263**	P	**P**	**20 54 47.9**	**+0.4**
MAT				*e*S	**S**	**21 00 49.0**	**-5.5**
OSI	**Osito Audit: C**	**40.34**	**101**	P	**P**	**20 54 49.5**	**+0.8**
EDW2	**Edwards Air Fo**	**40.54**	**100**	P	**P**	**20 54 50.6**	**+0.2**
	baz=319						
GSC	**Goldstone, Bar**	**40.87**	**99**	P	**P**	**20 54 53.5**	**+0.3**
GSC				pmax	pmax		
	comp=Z,38nm,1.5s						
GSC	**Goldstone, Bar**	**40.87**	**99**	P	**P**	**20 54 53.9**	**+0.7**
	baz=318,SNR=13						
GSC	**Goldstone, Bar**	**40.87**	**99**	P	**P**	**20 54 53.5**	**+0.3**
GSC				IAmb	IAmb	20 54 58.0	
	comp=Z,38nm,1.4s						
MWC	**Mount Wilson**	**40.99**	**101**	P	**P**	**20 54 54.4**	**+0.1**
MWC				pmax	pmax		
	comp=Z,18nm,1.2s						
MWC	**Mount Wilson**	**40.99**	**101**	P	**P**	**20 54 54.4**	**+0.1**
BFSC	**Mount Baldy Ra**	**41.20**	**100**	P	**P**	**20 54 56.8**	**+0.9**
	baz=319						
HEC	**Hector,Ludlow**	**41.48**	**99**	P	**P**	**20 54 58.9**	**+0.7**
	baz=318						
HIA	**Hailar**	**41.74**	**291**	P	**P**	**20 54 59.4**	**-0.7**
HIA				pmax	pmax		
	comp=Z,12nm,1.3s						
HIA	**Hailar**	**41.74**	**291**	P	**P**	**20 54 59.4**	**-0.7**
RSSD	**Black Hills**	**41.76**	**79**	P	**P**	**20 54 59.6**	**-1.0**
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RSSD	**Black Hills**	**41.76**	**79**	P	**P**	**20 54 59.5**	**-1.0**
	baz=311						
RSSD	**Black Hills**	**41.76**	**79**	P	**P**	**20 54 59.6**	**-1.0**
GMRC	**Granite Mounta**	**41.88**	**98**	P	**P**	**20 55 02.0**	**+0.5**
	baz=318,SNR=11						
JHJ	**Hachijo jima 2**	**41.89**	**258**	LR	LR	21 12 06.6	
	comp=Z,180nm,19.9s,baz=86,slow=36						
O20A	**White River Ci**	**42.14**	**86**	P	**P**	**20 55 03.1**	**-0.6**
	baz=314						
ULM	**Lac du Bonnet**	**42.17**	**66**	P	**P**	**20 55 02.8**	**-0.8**
	comp=Z,2.7nm,0.4s,baz=306,slow=9.7,SNR=8.7						
ULM				LR	LR	21 13 51.2	
	comp=Z,1µm,19.3s,baz=316,slow=38						
ULM	**Lac du Bonnet**	**42.17**	**66**	P	**P**	**20 55 02.6**	**-0.9**
ULM				pmax	pmax		
	comp=Z,38nm,1.5s						
ULM	**Lac du Bonnet**	**42.17**	**66**	P	**P**	**20 55 02.6**	**-0.9**
ULM				IAmb	IAmb	20 55 07.1	
	comp=Z,38nm,1.4s						
CN2	**Changchun**	**42.20**	**281**	*e*P	**P**	**20 55 01.5**	**-2.3**
CN2				*e*PP	**PP**	**20 56 42.0**	**+0.7**
CN2				*e*S	**S**	**21 01 20.5**	**-3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.7s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,380nm,20.0s						
CN2				LR	LR		
	comp=Z,320nm,20.0s						
PFO	**Pinyon Flats O**	**42.33**	**100**	P	**P**	**20 55 04.9**	**-0.3**
	comp=Z,5.4nm,1.0s,baz=355,slow=8.4,SNR=6.4						
PFO				LR	LR	21 10 38.5	
	comp=Z,395nm,18.4s,baz=304,slow=33						
PFO	**Pinyon Flats O**	**42.33**	**100**	*de*P	**P**	**20 55 05.1**	**0.0**
PFO				pmax	pmax		
	comp=Z,34nm,1.5s						
PFO	**Pinyon Flats O**	**42.33**	**100**	P	**P**	**20 55 05.2**	**0.0**
	baz=319,SNR=5.7						
IRM	**Iron Mountain**	**42.63**	**98**	P	**P**	**20 55 08.1**	**+0.5**
	baz=319,SNR=19						
BC3	**Big Chuckawall**	**42.84**	**99**	P	**P**	**20 55 09.0**	**-0.3**
	baz=319						
NRIK	**Noril'sk**	**42.86**	**329**	P	**P**	**20 55 08.4**	**-0.5**
	comp=Z,3.1nm,0.4s,baz=60,slow=7.2,SNR=8.5						
NRIK				LR	LR	21 15 34.7	
	comp=Z,951nm,18.2s,baz=56,slow=40						
NRIK	**Noril'sk**	**42.86**	**329**	*de*P	**P**	**20 55 08.4**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,65nm,1.8s						
NRIK	**Noril'sk**	**42.86**	**329**	P	**P**	**20 55 08.7**	**-0.2**
MONP2	**Monument Peak**	**42.89**	**101**	P	**P**	**20 55 10.6**	**+0.7**
	baz=320						
PDMCI	**Parker Dam,Lak**	**43.08**	**97**	P	**P**	**20 55 11.2**	**+0.2**
	baz=318						
PV12	**Saucer Basin,**	**43.11**	**89**	P	**P**	**20 55 11.0**	**-0.6**
SWSC	**Sam W. Stewart**	**43.19**	**100**	P	**P**	**20 55 12.4**	**+0.4**
	baz=320						
IKP	**In-Ko-Pah, Jac**	**43.25**	**101**	P	**P**	**20 55 12.9**	**+0.4**
	baz=320						
AGMN	**Agassiz Nation**	**43.40**	**69**	P	**P**	**20 55 13.5**	**-0.1**
	baz=310						
GLA	**Glamis**	**43.64**	**99**	P	**P**	**20 55 16.5**	**+0.8**
	baz=320						
WUAZ	**Wupatki**	**43.70**	**94**	P	**P**	**20 55 16.6**	**+0.3**
	baz=318,SNR=6.6						
MVCO	**Mesa Verde**	**44.06**	**89**	P	**P**	**20 55 18.3**	**-1.0**
	baz=316						
B35A	**Bob, Littlefor**	**44.45**	**67**	P	**P**	**20 55 20.5**	**-1.5**
B35A				IAmb	IAmb	20 55 25.3	
	comp=Z,52nm,1.6s						
S22A	**4UR Ranch, Cre**	**44.60**	**88**	P	**P**	**20 55 23.6**	**-0.1**
	baz=316,SNR=8.3						
SPX	**San Pedro Mart**	**44.84**	**101**	P	**P**	**20 55 25.6**	**0.0**
SPX				IAmb	IAmb	20 55 30.4	
	comp=Z,55nm,1.8s						
W18A	**Petrified Fore**	**44.90**	**93**	P	**P**	**20 55 25.6**	**-0.4**
	baz=318						
KSRS	**Korea Array**	**45.22**	**273**	P	**P**	**20 55 29.3**	**+1.1**
	comp=Z,10nm,1.1s,baz=47,slow=7.7,SNR=12						
KSAR	**Wonju Array Be**	**45.25**	**273**	P	**P**	**20 55 28.8**	**+0.3**
KSAR	**Wonju Array Be**	**45.25**	**273**	P	**P**	**20 55 28.8**	**+0.3**
SDCO	**Great Sand Dun**	**45.34**	**86**	P	**P**	**20 55 29.4**	**-0.2**
	baz=316,SNR=7.3						
SDCO	**Great Sand Dun**	**45.34**	**86**	P	**P**	**20 55 29.2**	**-0.4**
FRB	**Frobisher Bay**	**45.51**	**38**	LR	LR	21 15 33.2	
	comp=Z,1µm,21.6s,baz=324,slow=38						
214A	**Organ Pipe Nat**	**45.58**	**98**	P	**P**	**20 55 31.6**	**+0.5**
	baz=320,SNR=8.6						
DAG	**Danmarks Havn**	**45.62**	**9**	*i* P	**P**	**20 55 30.7**	**-0.2**
DAG	**Danmarks Havn**	**45.62**	**9**	*i* P	**P**	**20 55 30.7**	**-0.2**
DAG	**Danmarks Havn**	**45.62**	**9**	*i* P	**P**	**20 55 30.8**	**-0.2**
EYMN	**Ely**	**45.86**	**66**	P	**P**	**20 55 31.8**	**-1.4**
	baz=311						
TJN	**Taejon**	**46.31**	**272⇓**	*i*P	**P**	**20 55 37.2**	**+0.4**
T25A	**Trinidad**	**46.38**	**86**	P	**P**	**20 55 37.6**	**0.0**
	baz=316						
TUC	**Tucson**	**46.42**	**96**	P	**P**	**20 55 38.3**	**+0.4**
	baz=320						
SUMG	**Summit**	**46.73**	**18**	P	**P**	**20 55 39.7**	**-0.5**
SUMG				pmax	pmax		
	comp=Z,42nm,1.0s						
SUMG	**Summit**	**46.73**	**18**	P	**P**	**20 55 39.7**	**-0.5**
SUMG	**Summit**	**46.73**	**18**	*i* P	**P**	**20 55 39.0**	**-1.2**
	comp=Z,104nm,1.0s						
SUMG	**Summit**	**46.73**	**18**	*i* P	**P**	**20 55 39.0**	**-1.2**
SUMG				IAmb	IAmb	20 55 44.9	
	comp=Z,104nm,1.0s						
JNU	**Nakatsue**	**46.77**	**266**	LR	LR	21 16 07.7	
	comp=Z,198nm,19.6s,baz=61,slow=37						
ANMO	**Albuquerque**	**46.84**	**90**	P	**P**	**20 55 40.4**	**-0.9**
	comp=Z,3.2nm,1.0s,baz=344,slow=9.7,SNR=6.8						
ANMO				LR	LR	21 14 07.3	
	comp=Z,120nm,19.7s,baz=318,slow=34						
ANMO	**Albuquerque**	**46.84**	**90⇓**	*e*P	**P**	**20 55 40.8**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,15nm,1.7s						
ANMO	**Albuquerque**	**46.84**	**90**	P	**P**	**20 55 40.8**	**-0.5**
	baz=318						
ANMO	**Albuquerque**	**46.84**	**90**		**P**	**20 55 40.7**	**-0.5**
SPMN	**Marine on St.**	**47.00**	**70**	P	**P**	**20 55 42.4**	**+0.2**
	baz=313						
BNM	**Barren Site**	**47.34**	**91**		**P**	**20 55 45.3**	**+0.1**
DBG	**Daneborg**	**47.76**	**11**	*i* P	**P**	**20 55 46.8**	**-0.9**
DBG				IAmb	IAmb	20 55 51.1	
	comp=Z,55nm,1.3s						
121A	**Cookes Peak, D**	**47.91**	**93**	P	**P**	**20 55 49.3**	**-0.3**
	baz=319						
TLY	**Talaya**	**48.09**	**303**	*e*P	**P**	**20 55 50.2**	**-0.3**
TLY				*e*S	**S**	**21 02 56.0**	**+7.0**
TLY				pmax	pmax		
	comp=Z,33nm,1.4s						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s						
TLY	**Talaya**	**48.09**	**303**	P	**P**	**20 55 50.7**	**+0.1**
TLY				IAmb	IAmb	20 55 57.1	
	comp=Z,25nm,1.4s						
ULN	**Ulaanbaatar**	**49.04**	**298**	*d i*P	**P**	**20 55 58.0**	**-0.2**
ULN				pmax	pmax		
	comp=Z,22nm,1.7s						
ULN	**Ulaanbaatar**	**49.04**	**298**	P	**P**	**20 55 57.9**	**-0.2**
ULN				IAmb	IAmb	20 56 02.5	
	comp=Z,15nm,1.1s						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**20 56 01.5**	**+0.8**
	comp=Z,4.2nm,0.9s,baz=43,slow=7.8,SNR=17						
SONM				PcP	**PcP**	**20 57 23.1**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=44,slow=3.7,SNR=3.6						
SONM				LR	LR	21 19 38.6	
	comp=Z,634nm,18.2s,baz=37,slow=40						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**20 56 00.7**	**0.0**
SONM				pmax	pmax		
	comp=Z,15nm,1.4s						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**20 56 00.7**	**0.0**
ICESG	**Greenland Ices**	**49.39**	**21**	*i* P	**P**	**20 55 59.8**	**-0.9**
ICESG				IAmb	IAmb	20 56 05.0	
	comp=Z,29nm,0.7s						
MSTX	**Muleshoe**	**49.61**	**88**	P	**P**	**20 56 01.9**	**-0.7**
	baz=318						
BJI	**Beijing**	**49.80**	**284**	P	**P**	**20 56 04.3**	**+0.5**
BJI				S	**S**	**21 03 12.8**	**-0.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BJI				pmax	pmax		
	comp=Z,380nm,5.5s						
BJI				LR	LR		
	comp=Z,430nm,15.1s						
BJI				LR	LR		
	comp=Z,230nm,17.7s						
BJT	**Baijiatuau**	**49.82**	**284**	P	**P**	**20 56 04.6**	**+0.6**
BJT				pmax	pmax		
	comp=Z,16nm,1.4s						
BJT	**Baijiatuau**	**49.82**	**284**	P	**P**	**20 56 04.6**	**+0.6**
MNTX	**Cornudas Mount**	**49.87**	**92**	P	**P**	**20 56 04.5**	**0.0**
	baz=320,SNR=17						
SCO	**Scoresbysund**	**51.10**	**14**	P	**P**	**20 56 13.5**	**+0.3**
SCO				pmax	pmax		
	comp=Z,40nm,1.3s						
SCO	**Scoresbysund**	**51.10**	**14**	P	**P**	**20 56 13.5**	**+0.3**
SCO				IAmb	IAmb	20 56 17.7	
	comp=Z,40nm,1.3s						
SCO	**Scoresbysund**	**51.10**	**14**	*i* P	**P**	**20 56 14.1**	**+0.9**
	comp=Z,40nm,1.3s						
SCO	**Scoresbysund**	**51.10**	**14**	*i* P	**P**	**20 56 14.2**	**+0.9**
SCO				IAmb	IAmb	20 56 17.5	
	comp=Z,40nm,1.3s						
WMOK	**Wichita Mounta**	**51.24**	**84**	P	**P**	**20 56 12.9**	**-1.9**
	baz=318						
MATQ	**Matagami**	**51.33**	**56**	P	**P**	**20 56 13.9**	**-1.3**
	baz=315						
GLMI	**Grayling**	**51.46**	**65**	P	**P**	**20 56 16.4**	**+0.1**
HHC	**Hu-ho-hao-te**	**51.67**	**288**	*e*P	**P**	**20 56 18.8**	**+0.7**
HHC				pP	sP	20 56 23.3	+2.3
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,340nm,6.6s						
HHC				LR	LR		
	comp=Z,640nm,14.3s						
HHC				LR	LR		
	comp=Z,510nm,12.0s						
HHC				LR	LR		
	comp=Z,710nm,12.1s						
HDIL	**Hopedale**	**52.11**	**72**	P	**P**	**20 56 19.7**	**-1.5**
	baz=316						
HDIL	**Hopedale**	**52.11**	**72**	P	**P**	**20 56 20.6**	**-0.6**
HDIL				IAmb	IAmb	20 56 49.6	
	comp=Z,18nm,0.7s						
LSQQ	**Lebel-sur-Quev**	**52.13**	**56**	P	**P**	**20 56 20.0**	**-1.3**
	baz=316						
ABTX	**Abilene, Hawle**	**52.35**	**86**	P	**P**	**20 56 21.9**	**-1.2**
	baz=319						
TX31	**Lajitas Ar. Si**	**52.63**	**92**	P	**P**	**20 56 25.0**	**-0.3**
TXAR	**Lajitas Array**	**52.63**	**92**	P	**P**	**20 56 24.7**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=302,slow=5.2,SNR=38						
TXAR				LR	LR	21 17 47.5	
	comp=Z,323nm,20.1s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**52.63**	**92**	P	**P**	**20 56 24.3**	**-1.0**
TXAR	**Lajitas Array**	**52.63**	**92**	P	**P**	**20 56 24.3**	**-1.0**
ANGG	**Ammassalik, Gr**	**52.74**	**23**	P	**P**	**20 56 24.5**	**-1.0**
ANGG				IAmb	IAmb	20 56 28.9	
	comp=Z,40nm,0.9s						
JOW	**Kunigami**	**53.04**	**263**	LR	LR	21 18 18.1	
	comp=Z,76nm,21.9s,baz=338,slow=35						
LPIG	**La Paz**	**53.10**	**102**	LR	LR	21 17 24.1	
	comp=Z,146nm,20.0s,baz=348,slow=34						
SFIN	**Lafayette**	**53.39**	**70**	P	**P**	**20 56 29.9**	**-0.7**
	baz=317						
SFIN	**Lafayette**	**53.39**	**70**	P	**P**	**20 56 29.6**	**-1.1**
SFIN				IAmb	IAmb	20 56 30.6	
	comp=Z,14nm,0.8s						
TIY	**Taiyuan**	**53.49**	**285**	*e*P	**P**	**20 56 32.8**	**+1.3**
TIY				LR	LR		
	comp=Z,300nm,11.5s						
TIY				LR	LR		
	comp=Z,230nm,7.2s						

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TIY                                LR      LR
      comp=Z,400nm,14.8s
SLBS  Sierra La Lagu   53.63 102   P       P       20 56 32.3  -0.3
SLBS                               IAmb    IAmb    20 56 42.0
      comp=Z,17nm,1.1s
SSE   Sheshan          53.66 273   P       P       20 56 32.7  -0.1
SSE                                IAmb    IAmb    20 56 34.6
      comp=Z,31nm,1.1s
ARCES ARCESS Array B   53.77 354   P       P       20 56 32.2  -0.9
      comp=Z,8.2nm,1.1s,baz=16,slow=7.0,SNR=2.3
ARCES                              LR      LR      21 19 18.6
      comp=Z,377nm,22.0s,baz=5.0,slow=36
JCT   Junction City    53.89  88   P       P       20 56 33.2  -1.2
      baz=320
SADO  Sadowa           54.21  61   LR      LR      21 20 07.0
      comp=Z,725nm,19.2s,baz=336,slow=36
NJ2   Nanjing          54.23 275  eP       P       20 56 36.3  -0.5
NJ2                                pmax    pmax
      comp=Z,6.0nm,0.5s
G54A  Lake Saint Pet   54.26  60   P       P       20 56 35.9  -1.0
      baz=317
D55A  Sainte-Anne-du   54.31  57   P       P       20 56 36.2  -1.1
      baz=317
ZAA0  Zalesovo Array   54.49 316   P       P       20 56 38.6  +0.2
ZALV  Zalesovo Beam    54.49 316   P       P       20 56 38.8  +0.3
      comp=Z,1.1nm,0.7s,baz=19,slow=9.2,SNR=3.7
ZALV                               PcP     PcP     20 57 41.8   0.0
      comp=Z,2.6nm,0.9s,baz=64,slow=3.1,SNR=4.6
ZALV                               LR      LR      21 21 16.5
      comp=Z,595nm,18.8s,baz=38,slow=38
ZALV  Zalesovo Beam    54.49 316   P       P       20 56 38.5  +0.1
ZALV  Zalesovo Beam    54.49 316   P       P       20 56 38.5  +0.1
D56A  ZEC Mazanza, M   54.62  57   P       P       20 56 37.7  -1.9
      baz=318
H53A  Bobcaygeon       54.62  61   P       P       20 56 38.7  -0.9
      baz=317
LVZ   Lovozero         54.62 349⇓eP       P       20 56 39.7  +0.4
LVZ                                pmax    pmax
      comp=Z,43nm,1.2s
P49A  Miami Univ. Ec   55.25  69   P       P       20 56 42.8  -1.4
      baz=318
TRQ   Mont Tremblant   55.32  57   P       P       20 56 43.5  -1.2
E57A  Chemin Saint G   55.37  57   P       P       20 56 43.5  -1.5
      baz=318
WCI   Wyandotte Cave   55.40  72   P       P       20 56 44.4  -0.9
      baz=318
D58A  Chemin du LacG   55.45  56   P       P       20 56 43.7  -1.9
      baz=318
ACSO  Alum Creek Sta   55.63  68   P       P       20 56 46.0  -1.0
      baz=318
L53A  Girard           55.73  64   P       P       20 56 46.9  -0.7
      baz=318
ERPA  Erie             55.74  64   P       P       20 56 47.5  -0.2
      baz=318
M53A  WI Miller and    55.90  65   P       P       20 56 48.5  -0.4
      baz=318,SNR=5.9
M53A  WI Miller and    55.90  65   P       P       20 56 48.3  -0.6
M53A                               IAmb    IAmb    20 56 49.2
      comp=Z,28nm,0.8s
J55A  Hilton           55.96  62   P       P       20 56 48.6  -0.7
J55A                               IAmb    IAmb    20 56 50.2
      comp=Z,19nm,0.8s
WVT   Waverly          56.15  74   P       P       20 56 49.9  -0.8
      baz=319
Q51A  Peebles          56.34  69   P       P       20 56 50.9  -1.1
M54A  Oil Creek Stat   56.36  64   P       P       20 56 51.6  -0.6
      baz=318
J56A  Wolcott          56.42  61   P       P       20 56 52.0  -0.5
      baz=318
HKT   Hockley          56.49  85⇓eP       P       20 56 54.4  +1.3
HKT                                pmax    pmax
      comp=Z,24nm,1.8s
D61A  St Aubert, Com   56.59  54   P       P       20 56 52.0  -1.6
      baz=319
N54A  Moraine State    56.60  65   P       P       20 56 52.6  -1.3
      baz=319
K56A  Middlesex        56.63  62   P       P       20 56 53.5  -0.5
      baz=319
E60A  Ste Agathe de    56.65  55   P       P       20 56 52.4  -1.7
      baz=319
DGZ   Jazzator, Alta   56.67 311⇓eP       P       20 56 54.7  +0.3
DGZ                                pmax    pmax
      comp=Z,38nm,1.7s
F60A  Warwick          56.72  56   P       P       20 56 53.5  -1.0
      baz=319
J57A  Williamstown     56.74  60   P       P       20 56 52.9  -1.9
      baz=319
L56A  Greenwood        56.93  63   P       P       20 56 55.3  -1.0
      baz=319
L56A  Greenwood        56.93  63   P       P       20 56 55.5  -0.8
MOQ   Mont Orford      57.07  57   P       P       20 56 56.5  -0.7
M56A  Emporium         57.11  63   P       P       20 56 57.1  -0.4
      baz=319
L57A  Andrews Acres    57.38  62   P       P       20 56 58.7  -0.7
      baz=319
Q53A  Leroy            57.40  68   P       P       20 56 58.7  -0.9
      baz=319,SNR=5.2
J59A  Piesco           57.41  59   P       P       20 56 58.2  -1.4
      baz=319
J59A  Piesco           57.41  59   P       P       20 56 58.5  -1.1
J59A                               IAmb    IAmb    20 57 02.7
      comp=Z,39nm,1.4s
N56A  West Decatur     57.48  64   P       P       20 56 59.4  -0.8
      baz=319
D63A  Stockholm        57.63  53   P       P       20 57 02.1  +1.1
      baz=320
BINY  Binghamton       57.65  61   P       P       20 57 00.1  -1.2
      baz=319
MCWV  Mont Chateau     57.66  66   P       P       20 57 00.7  -0.7
      baz=319
TMCR  Tamitsa          57.82 346  eP       P       20 57 00.6  -1.5
TMCR                               pmax    pmax
      comp=Z,13nm,1.1s
L58A  Harry Jones Me   57.84  61   P       P       20 57 02.3  -0.3
      baz=319
O56A  Blue Knob Stat   57.84  65   P       P       20 57 01.8  -0.9
      baz=319
WHN   Wuhan            57.86 278  ⇓P       P       20 57 02.5  -0.3
SSPA  Standing Stone   57.90  64   P       P       20 57 02.7  -0.3
G62A  West of Eustis   57.94  56   P       P       20 57 02.4  -0.9
      baz=320
G62A  West of Eustis   57.94  56   P       P       20 57 02.6  -0.7
E63A  Oxbow            57.97  53   P       P       20 57 02.0  -1.4
E63A                               IAmb    IAmb    20 57 49.1
      comp=Z,31nm,1.4s
TZTN  Tazewell         58.10  71   P       P       20 57 02.8  -1.7
      baz=320
R54A  Victor           58.19  68   P       P       20 57 04.3  -0.9
      baz=320,SNR=5.8
W50A  Signal Mountai   58.19  73   P       P       20 57 05.6  +0.4
W50A                               IAmb    IAmb    20 57 09.7
      comp=Z,28nm,1.5s
E64A  Bridgewater      58.23  53   P       P       20 57 04.1  -1.2
      baz=320
P56A  Dayton Farm, R   58.28  65   P       P       20 57 05.0  -0.7
      baz=320
S54A  Dingess, Beckl   58.31  68   P       P       20 57 04.6  -1.4
      baz=320
N58A  Sunbury          58.33  63   P       P       20 57 05.6  -0.4
      baz=320
O57A  Amberson         58.35  64   P       P       20 57 05.8  -0.4
      baz=320
FPAL  Fort Paine       58.54  74   P       P       20 57 06.7  -0.9
FPAL                               IAmb    IAmb    20 57 06.9
      comp=Z,8.2nm,0.8s
N59A  State Game Lan   58.73  62   P       P       20 57 08.3  -0.6
      baz=320
GTA   Gaotai           58.78 295  ⇓P       P       20 57 09.3  -0.1
GTA                                pP      sP      20 57 13.5  +1.1
GTA                                sP      pP      20 57 16.0  +4.5
GTA                                pmax    pmax
      comp=Z,18nm,1.4s
GTA                                pmax    pmax
      comp=Z,250nm,5.5s
GTA                                LR      LR
      comp=Z,430nm,17.1s
GTA                                LR      LR
      comp=Z,640nm,17.4s
GTA                                LR      LR
      comp=Z,580nm,18.2s
Q57A  Strasburg        58.85  65   P       P       20 57 09.0  -0.7
      baz=320
M60A  Port Jervis      58.98  61   P       P       20 57 09.6  -1.0
      baz=320
O59A  Robesonia        58.99  63   P       P       20 57 09.9  -0.7
      baz=320
SEM   Semipalatinsk    59.01 316  eP       P       20 57 08.9  -2.0
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      baz=316
SEM                               eS       S       21 05 16.3  -1.4
      baz=316
SEM   Semipalatinsk    59.01 316  eP       P       20 57 08.9  -2.0
SEM                               eS       S       21 05 16.2  -1.4
U54A  Nelsons Funny    59.02  70   P       P       20 57 10.5  -0.5
      baz=320
U54A  Nelsons Funny    59.02  70   P       P       20 57 10.7  -0.4
N60A  Cedar Hill Far   59.09  62   P       P       20 57 10.9  -0.5
      baz=320
BLA   Blacksburg       59.22  68   P       P       20 57 11.4  -0.9
      baz=320
LZH   Lanzhou          59.26 290  eP       P       20 57 12.8   0.0
LZH                                pP      sP      20 57 19.0  +3.3
LZH                                sP      pP      20 57 22.0  +7.1
LZH                                PP      PP      20 59 24.3  +1.1
LZH                                sS      sS      21 05 26.8  +2.2
LZH                                pmax    pmax
      comp=Z,29nm,1.3s
LZH                                pmax    pmax
      comp=Z,160nm,6.8s
LZH                                LR      LR
      comp=Z,750nm,15.2s
LZH                                LR      LR
      comp=Z,890nm,16.3s
LZH                                LR      LR
      comp=Z,630nm,17.9s
Q58A  Fox Den Farm,    59.29  65   P       P       20 57 11.8  -1.0
      baz=320
S56A  Natural Bridge   59.30  67   P       P       20 57 12.4  -0.4
      baz=320
O60A  Telford          59.37  62   P       P       20 57 13.6  +0.4
      baz=320
KURK  Kurchatov        59.39 317 deP       P       20 57 13.1  -0.2
KURK                               pmax    pmax
      comp=Z,65nm,2.5s
KURK  Kurchatov        59.39 317   P       P       20 57 13.0  -0.2
KURK                               IAmb    IAmb    20 57 17.4
      comp=Z,25nm,1.2s
P59A  Jarrettsville    59.40  64   P       P       20 57 12.0  -1.5
      baz=320
ZSN   Zaisan           59.49 311  eP       P       20 57 14.0  -0.1
      comp=Z,18nm,1.9s,baz=311
ZSN   Zaisan           59.49 311  eP       P       20 57 13.9  -0.1
ZSN                                pmax    pmax
      comp=Z,18nm,1.9s
S57A  Dark Hollow, R   59.55  67   P       P       20 57 14.0  -0.5
      baz=320
T56A  Rocky Mt         59.56  68   P       P       20 57 14.0  -0.7
      baz=320
U56A  King             59.90  69   P       P       20 57 16.4  -0.6
      baz=320,SNR=5.1
T57A  Hurt             59.98  68   P       P       20 57 16.6  -0.9
      baz=320
SVE   Sverdlovsk       60.08 331⇓eP       P       20 57 18.3  +0.4
SVE                                pmax    pmax
      comp=Z,72nm,1.7s
V56A  Mocksville       60.25  69   P       P       20 57 18.6  -0.9
      baz=320,SNR=7.5
KMSC  Kings Mountain   60.33  70   P       P       20 57 19.5  -0.5
      baz=321,SNR=7.2
U57A  Blanch           60.37  68   P       P       20 57 19.6  -0.7
      baz=321,SNR=7.6
T58A  Grand View Acr   60.39  67   P       P       20 57 19.1  -1.3
      baz=321
BRVK  Borovoye         60.42 323   P       P       20 57 20.2  -0.1
BRVK                               pmax    pmax
      comp=Z,34nm,1.3s
BRVK  Borovoye         60.42 323   P       P       20 57 20.2  -0.1
BRVK                               IAmb    IAmb    20 57 26.3
      comp=Z,34nm,1.2s
V57A  Coltrane Farms   60.57  69   P       P       20 57 20.1  -1.5
      baz=321
ENH   Enshi            60.72 281   P       P       20 57 22.5  -0.3
ENH                                IAmb    IAmb    20 57 24.0
      comp=Z,38nm,1.4s
W56A  Indian Trail     60.73  70   P       P       20 57 21.8  -0.8
      baz=321
KLMR  Klimovskoe       60.78 344  eP       P       20 57 20.7  -1.9
KLMR                              e                20 58 04.6
KLMR                              e                20 59 38.5
KLMR                               pmax    pmax
      comp=Z,53nm,1.4s
KLMR  Klimovskoe       60.78 344  eP       P       20 57 20.8  -1.9
KLMR                               AMP             20 57 27.3
      comp=Z,53nm,1.4s
KLMR                              ePcP     PcP     20 58 04.6  -1.8
KLMR                              ePP      PP      20 59 38.5  +2.6
KLMR                               LQ      LQ      21 19 14.0
KLMR                               LQ      LQ      21 19 14.0
KLMR                               LR      LR      21 23 38.7
U58A  Oxford           60.81  68   P       P       20 57 21.8  -1.4
      baz=321
T59A  Double "B" Far   60.87  66   P       P       20 57 22.8  -0.8
      baz=321
T59A  Double "B" Far   60.87  66   P       P       20 57 23.0  -0.6
T59A                               IAmb    IAmb    20 57 23.9
      comp=Z,38nm,1.2s
ARU   Arti             60.98 332c iP       P       20 57 23.7  -0.3
ARU                                                20 58 08.2
ARU                                S       S       21 05 44.8  +2.5
ARU                                SS      SS      21 09 44.1  +3.5
ARU                                pmax    pmax
      comp=Z,27nm,0.9s
ARU   Arti             60.98 332   P       P       20 57 23.4  -0.7
ARU                                IAmb    IAmb    20 57 28.3
      comp=Z,21nm,0.8s
V58A  Windy Hill, Pi   60.98  68   P       P       20 57 23.6  -0.8
      baz=321,SNR=7.1
MK31  Makanchi Array   61.09 312   P       P       20 57 24.1  -0.9
MK31                               pmax    pmax
      comp=Z,4.0nm,1.1s
MK31  Makanchi Array   61.09 312   P       P       20 57 24.1  -0.9
MKAR  Makanchi Array   61.09 312   P       P       20 57 24.5  -0.5
      comp=Z,2.9nm,0.9s,baz=52,slow=7.9,SNR=15
MKAR                               PP      PP      20 59 38.5  -0.4
      comp=Z,1.7nm,0.8s,baz=50,slow=8.0,SNR=4.9
MKAR                               LR      LR      21 24 35.0
      comp=Z,271nm,18.1s,baz=22,slow=37
MKAR  Makanchi Array   61.09 312   P       P       20 57 24.0  -1.0
MKAR  Makanchi Array   61.09 312   P       P       20 57 24.0  -1.0
WMQ   Urumqi           61.13 306  eP       P       20 57 26.3  +0.9
WMQ                                pP      sP      20 57 29.5  +1.2
WMQ                                sP      pP      20 57 35.5  +8.0
WMQ                                pmax    pmax
      comp=Z,26nm,2.1s
WMQ                                pmax    pmax
      comp=Z,590nm,3.7s
WMQ                                LR      LR
      comp=Z,390nm,19.1s
WMQ                                LR      LR
      comp=Z,700nm,20.7s
WMQ                                LR      LR
      comp=Z,330nm,25.3s
WMQ   Urumqi           61.13 306   P       P       20 57 25.8  +0.4
WMQ                                pmax    pmax
      comp=Z,9.0nm,0.8s
WMQ   Urumqi           61.13 306   P       P       20 57 25.8  +0.4
WMQ                                IAmb    IAmb    20 57 26.6
      comp=Z,8.9nm,0.8s
KIRV  Kirov            61.16 338⇑eP       P       20 57 24.9  -0.3
MAKZ  Makanchi         61.20 312   P       P       20 57 25.0  -0.8
MAKZ                               pmax    pmax
      comp=Z,4.0nm,1.1s
MAKZ  Makanchi         61.20 312   P       P       20 57 25.0  -0.8
V59A  Middlesex        61.45  68   P       P       20 57 26.4  -1.2
      baz=321,SNR=5.8
W58A  Raeford          61.52  69   P       P       20 57 27.2  -0.8
      baz=321
FIA1  FINESS Array S   61.74 352   P       P       20 57 29.3  +0.2
FINES FINESS Array B   61.74 352   P       P       20 57 28.4  -0.7
      comp=Z,6.2nm,0.9s,baz=3.6,slow=5.2,SNR=10
FINES                              LR      LR      21 27 14.2
      comp=Z,342nm,18.1s,baz=18,slow=39
FINES FINESS Array B   61.74 352   P       P       20 57 28.8  -0.3
FINES FINESS Array B   61.74 352   P       P       20 57 28.8  -0.3
W60A  Pink Hill        62.27  68   P       P       20 57 32.5  -0.6
      baz=321
NHSC  New Hope         62.51  71   P       P       20 57 34.3  -0.4
      baz=322
NC405 NORSAR Array S   62.67 360   P       P       20 57 34.8  -0.6
NB2   NORSAR Subarra   62.75 360   P       P       20 57 35.3  -0.6
      comp=Z,207nm,2.5s,baz=359,slow=6.9
NB2   NORSAR Subarra   62.75 360   P       P       20 57 35.3  -0.6
      baz=359,slow=6.9
NOA   NORSAR Array B   62.75 360   P       P       20 57 35.4  -0.6
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      comp=Z,2.6nm,0.6s,baz=359,slow=6.4,SNR=11
NOA                                LR      LR      21 25 55.8
      comp=Z,315nm,18.4s,baz=340,slow=37
CD2   Chengdu          63.31 286   P       P       20 57 40.8  +0.7
CD2                                pmax    pmax
      comp=Z,40nm,1.1s
CD2                                pmax    pmax
      comp=Z,290nm,5.6s
CD2                                LR      LR
      comp=Z,510nm,9.2s
CD2                                LR      LR
      comp=Z,570nm,12.7s
CD2                                LR      LR
      comp=Z,400nm,12.8s
TDK   Taldyqorghan     64.12 313  eP       P       20 57 44.6  -0.7
      comp=Z,19nm,1.6s,baz=313
TDK                               eS       S       21 06 22.4  +0.2
      baz=313
TDK                                LR      LR      21 26 18.6
      comp=Z,414nm,15.0s,baz=313
TDK   Taldyqorghan     64.12 313  eP       P       20 57 44.5  -0.7
TDK                               eS       S       21 06 22.3  +0.2
TDK                                pmax    pmax
      comp=Z,19nm,1.6s
TDK                                MLR     MLR
      comp=Z,414nm,15.0s
VSU   Vasula           64.64 351⇑eP       P       20 57 48.8  +0.5
VSU                                pmax    pmax
      comp=Z,110nm,0.9s
SHLS  Shalkode         65.21 311  eP       P       20 57 51.0  -1.5
      comp=Z,20nm,1.3s,baz=311
SHLS                              eS       S       21 06 34.0  -1.9
      baz=311
SHLS  Shalkode         65.21 311  eP       P       20 57 51.0  -1.5
SHLS                              eS       S       21 06 33.9  -1.9
SHLS                               pmax    pmax
      comp=Z,21nm,1.3s
GYA   Guiyang          65.25 281  ⇑P       P       20 57 54.3  +1.3
GYA                                pP      sP      20 57 57.5  +1.5
GYA                                S       S       21 06 35.0  -1.7
GYA                                pmax    pmax
      comp=Z,27nm,1.5s
GYA                                pmax    pmax
      comp=Z,240nm,3.5s
GYA                                LR      LR
      comp=Z,360nm,13.8s
KPKS  Kokpek           65.28 312  eP       P       20 57 52.5  -0.5
      baz=312
KPKS  Kokpek           65.28 312  eP       P       20 57 52.4  -0.5
SATY  Saty             65.73 312  eP       P       20 57 55.3  -0.6
      comp=Z,5.7nm,1.4s,baz=312
SATY  Saty             65.73 312  eP       P       20 57 55.3  -0.6
SATY                               pmax    pmax
      comp=Z,6.0nm,1.4s
BTLS  Baital           65.81 316  eP       P       20 57 55.3  -0.9
      baz=316
BTLS  Baital           65.81 316  eP       P       20 57 55.2  -0.9
KUU   Kurty            65.87 314  eP       P       20 57 55.5  -1.2
      comp=Z,13nm,1.9s,baz=314
KUU   Kurty            65.87 314  eP       P       20 57 55.4  -1.2
KUU                                pmax    pmax
      comp=Z,13nm,1.9s
MOS   Moscow           65.98 344  eP       P       20 57 57.4  +0.3
MOS                                pmax    pmax
      comp=Z,35nm,0.8s
MDOK  Medeo            66.19 313  eP       P       20 57 58.2  -0.7
      baz=313
MDOK                               LR      LR      21 27 58.0
      comp=Z,333nm,13.0s,baz=313
MDOK  Medeo            66.19 313  eP       P       20 57 58.2  -0.7
MDOK                               MLR     MLR
      comp=Z,333nm,13.0s
AAA   Alma-Ata         66.21 313  eP       P       20 57 58.6  -0.3
      comp=Z,24nm,1.3s,baz=313
AAA                                LR      LR      21 27 19.9
      comp=Z,211nm,14.1s,baz=313
AAA   Alma-Ata         66.21 313  eP       P       20 57 58.6  -0.3
AAA                                pmax    pmax
      comp=Z,24nm,1.3s
AAA                                MLR     MLR
      comp=Z,211nm,14.0s
TNSS  Tian-Shan        66.34 313  eP       P       20 57 59.8  -0.4
      baz=313
TNSS  Tian-Shan        66.34 313  eP       P       20 57 59.7  -0.4
OBN   Obninsk          66.75 344 deP       P       20 58 00.7  -1.3
OBN                               i                20 58 32.6
OBN                               e                21 00 30.2
OBN                                pmax    pmax
      comp=Z,60nm,1.7s
OBN                                MLR     MLR
      comp=Z,494nm,18.0s
SGDS  Sogindy          66.92 315  eP       P       20 58 03.2  -0.2
      comp=Z,8.9nm,1.6s,baz=315
SGDS  Sogindy          66.92 315  eP       P       20 58 03.2  -0.2
SGDS                               pmax    pmax
      comp=Z,9.0nm,1.6s
ABKAR Akbulak array    66.97 327   P       P       20 58 03.5  -0.1
ABKAR                              IAmb    IAmb    20 58 09.5
      comp=Z,20nm,0.9s
ABKAR Akbulak array    66.97 327   P       P       20 58 03.0  -0.5
USP   Ospenovka        67.12 315   P       P       20 58 05.5  +0.8
      SNR=11
CHMS  Chumysh          67.25 314   P       P       20 58 06.6  +1.1
      SNR=8.9
BELG  Belogornoye      67.30 337⇑eP       P       20 58 05.2  -0.3
BELG                               pmax    pmax
      comp=Z,8.0nm,0.9s
KBK   Karagaybulak     67.46 314   P       P       20 58 08.1  +1.1
      SNR=8.0
ISAL  Salakas          67.55 351  eP       P       20 58 07.3  +0.2
AAK   Ala-Archa        67.66 314   LR      LR      21 28 55.4
      comp=Z,742nm,20.8s,baz=28,slow=37
AAK   Ala-Archa        67.66 314   P       P       20 58 09.2  +1.0
      SNR=9.5
AAK   Ala-Archa        67.66 314d iP       P       20 58 08.6  +0.4
AAK                                pmax    pmax
      comp=Z,65nm,1.6s
AAK   Ala-Archa        67.66 314   P       P       20 58 08.2  -0.1
AAK                                IAmb    IAmb    20 58 14.9
      comp=Z,28nm,1.2s
IDID  Didziasalis      67.75 350  eP       P       20 58 08.5  +0.1
EKS2  Erkin-Say        67.92 315   P       P       20 58 10.3  +0.5
      SNR=11
NACGM Naroch           68.15 350  i P      P       20 58 09.7  -1.2
NACGM                             i P      P       20 58 09.7  -1.2
NACGM                             i P      P       20 58 09.7  -1.2
NACGM                             i PcP    PcP     20 58 43.0  +6.2
NACGM                             i PP     PP      21 00 04.8   -36
NACGM                             i PPP    PPP     21 02 50.5
NACGM                             i S      S       21 07 13.6  +2.8
NACGM                             i SS     SS      21 11 41.1  +9.1
NACGM                             i SSS    SSS     21 15 48.5
NACGM                             i LQ     LQ      21 23 43.3
NACGM                             i LR     LR      21 28 59.1
AML   Almayashu        68.40 315   P       P       20 58 14.3  +1.1
      SNR=16
KMI   Kunming          68.44 283  ⇓P       P       20 58 14.0  +0.6
KMI                                pP      sP      20 58 18.5  +2.1
KMI                                sP      pP      20 58 21.0  +5.4
KMI                                S       S       21 07 17.0  +1.5
KMI                                pmax    pmax
      comp=Z,25nm,1.1s
KMI                                LR      LR
      comp=Z,290nm,13.2s
KMI                                LR      LR
      comp=Z,270nm,22.5s
KMI                                LR      LR
      comp=Z,240nm,24.1s
MNK   Minsk            68.44 349  eP       P       20 58 13.0  +0.3
BSD   Bornholm Skovb   68.64 358  eP       P       20 58 09.2  -4.7
DZA   Taraz            68.67 317  eP       P       20 58 14.1  -0.3
      comp=Z,12nm,1.7s,baz=317
DZA   Taraz            68.67 317  eP       P       20 58 14.1  -0.3
DZA                                pmax    pmax
      comp=Z,12nm,1.7s
KK31  Karatay Array    68.80 317   P       P       20 58 15.2   0.0
KK31                               pmax    pmax
      comp=Z,16nm,1.1s
KK31  Karatay Array    68.80 317   P       P       20 58 15.2   0.0
KK31                               IAmb    IAmb    20 58 21.2
      comp=Z,16nm,1.1s
KKAR  Karatay Array    68.80 317   P       P       20 58 15.2   0.0
KKAR  Karatay Array    68.80 317   P       P       20 58 15.2   0.0
LPSR  Galich'ya Gora   68.80 342  eP       P       20 58 12.9  -2.1
LPSR                               pmax    pmax
      comp=Z,20nm,0.8s
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SUW   Suwalki           69.34 352  eP       P         20 58 17.7 -0.7
SUW   Suwalki           69.34 352  eP       P         20 58 17.6 -0.7
SUW   Suwalki           69.34 352   P       P         20 58 17.6 -0.7
SUW                                 pmax    pmax
      comp=Z,49nm,0.8s
SUW   Suwalki           69.34 352   P       P         20 58 17.6 -0.7
TAOE  Nuku Hiva Isla    69.42 149  eLR      LR        21 19 04.9
      comp=Z,918nm,29.3s
QIZ   Qiongzhong        69.44 274   P       P         20 58 18.5 -1.0
QIZ                                 S       S         21 07 27.3 +0.2
QIZ                                 pmax    pmax
      comp=Z,400nm,4.5s
QIZ                                 LR      LR
      comp=Z,320nm,18.1s
QIZ                                 LR      LR
      comp=Z,490nm,18.1s
QIZ                                 LR      LR
      comp=Z,250nm,20.1s
VRH   Novokhopyorsk     69.63 340  eP       P         20 58 17.5 -2.7
VRH                                 pmax    pmax
      comp=Z,20nm,0.8s
KSH   Kashi             69.69 312   P       P         20 58 25.0 +4.1
KSH                                 pP      sP        20 58 30.0 +6.1
KSH                                 PP      PP        21 01 02.0 +7.6
KSH                                 pmax    pmax
      comp=Z,46nm,1.4s
KSH                                 pmax    pmax
      comp=Z,370nm,5.3s
IUG   Iuzhnay           69.80 317  eP       P         20 58 21.2 -0.3
      comp=Z,16nm,1.4s,baz=317
IUG   Iuzhnay           69.80 317  eP       P         20 58 21.2 -0.3
IUG                                 pmax    pmax
      comp=Z,16nm,1.4s
VSR   Storozhevoye      70.09 342  eP       P         20 58 25.4 +2.4
VSR                                 pmax    pmax
      comp=Z,60nm,1.7s
VORD  Divnogorie        70.31 341  eP       P         20 58 23.3 -1.0
VORD                                pmax    pmax
      comp=Z,40nm,1.8s
TAS   Tashkent          70.79 317   P       P         20 58 27.9 +0.4
TAS                                 pmax    pmax
      comp=Z,43nm,0.3s
TAS   Tashkent          70.79 317   P       P         20 58 27.9 +0.4
LSA   Lhasa             70.81 295   P       P         20 58 29.5 +1.2
LSA                                 pmax    pmax
      comp=Z,110nm,1.4s
LSA   Lhasa             70.81 295   P       P         20 58 29.1 +0.8
LSA                                 pmax    pmax
      comp=Z,38nm,1.2s
LSA   Lhasa             70.81 295   P       P         20 58 29.1 +0.8
SLVN  Son La            70.85 280   P       P         20 58 28.5 +0.3
SLVN                                IAmb    IAmb      20 58 30.7
      comp=Z,30nm,1.1s
JAY   Jayapura          71.47 234   LR      LR        21 24 28.5
      comp=Z,192nm,21.0s,baz=9.0,slow=31
BEL   Belsk             71.67 354  eP       P         20 58 36.7 +4.1
AKASG Malin Array Be    72.04 348   P       P         20 58 33.5 -1.4
      comp=Z,13nm,0.6s,baz=15,slow=5.9,SNR=27
AKASG                               LR      LR        21 34 19.0
      comp=Z,388nm,18.8s,baz=15,slow=39
AKASG Malin Array Be    72.04 348   P       P         20 58 33.6 -1.2
AKBB  Malin Array Si    72.04 348d iP       P         20 58 33.3 -1.5
AKBB                                pmax    pmax
      comp=Z,26nm,0.8s
AKBB  Malin Array Si    72.04 348   P       P         20 58 33.9 -0.9
AKBB                                IAmb    IAmb      20 58 38.4
      comp=Z,21nm,0.8s
CLL   Collm             72.49 359  i P      P         20 58 36.5 -1.0
      comp=Z,70nm,1.9s
CLL                                eS       S         21 07 54.0 -7.6
CLL                                eSS      SS        21 12 42.0 +3.2
CLL                                e                  21 16 45.0
CLL                                 Lm      MLR       21 32 00.0
      comp=N,300nm,20.9s
CLL                                 Lm      MLR       21 32 00.0
      comp=E,200nm,20.9s
CLL   Collm             72.49 359  i P      P         20 58 36.5 -1.0
CLL                                 pmax    pmax
      comp=Z,70nm,1.9s
CLL   Collm             72.49 359   P       P         20 58 39.4 +1.9
KSP   Ksiaz             72.88 356  eP       P         20 58 42.7 +2.9
BRG   Berggiesshubel    72.91 358  eP       P         20 58 39.2 -0.9
BRG                                 Amp               20 58 44.7
      comp=Z,63nm,1.8s
BRG                                 Amp               21 25 14.6
      comp=Z,5.7nm,0.7s
BRG                                ex       x         21 25 37.5
OSTC  Ostas             73.17 356  eP       P         20 58 41.5 -0.1
OJC   Ojcow             73.34 354  eP       P         20 58 46.4 +3.8
OJC   Ojcow             73.34 354   P       P         20 58 43.0 +0.4
OJC                                 pmax    pmax
      comp=Z,18nm,1.3s
OJC   Ojcow             73.34 354   P       P         20 58 43.0 +0.4
OJC                                 IAmb    IAmb      20 58 44.4
      comp=Z,18nm,1.3s
DPC   Dobruska-Polom    73.37 356  eP       P         20 58 43.0 +0.2
DPC                                e                  20 58 47.1
DPC   Dobruska-Polom    73.37 356  eP       P         20 58 43.0 +0.2
DPC                                epP      sP        20 58 47.1 +1.3
LVV   L'vov             73.44 351  eP       P         20 58 49.9 +6.7
NKC   Novy Kostel       73.57 359  eP       P         20 58 46.2 +2.2
NKC   Novy Kostel       73.57 359  eP       P         20 58 46.2 +2.2
KWP   Kalwaria Pacla    73.73 352  eP       P         20 58 49.1 +4.2
KWP   Kalwaria Pacla    73.73 352   P       P         20 58 44.9  0.0
KWP                                 pmax    pmax
      comp=Z,54nm,1.1s
KWP   Kalwaria Pacla    73.73 352   P       P         20 58 44.9  0.0
PRU   Pruhonice         73.78 358  eP       P         20 58 44.9 -0.3
PRU                                e                  20 58 49.3
PRU   Pruhonice         73.78 358  eP       P         20 58 44.9 -0.3
PRU                                epP      sP        20 58 49.3 +1.1
OKC   Ostrava-Krasne    73.81 355  eP       pP        20 58 51.4 +3.9
OKC   Ostrava-Krasne    73.81 355  epP      pP        20 58 51.4 +3.9
SHL   Shillong          73.81 292   P       P         20 58 45.0 -0.9
SHL                                 pmax    pmax
      comp=Z,27nm,1.3s
SHL   Shillong          73.81 292   P       P         20 58 45.0 -0.9
SHL                                 IAmb    IAmb      20 58 49.4
      comp=Z,26nm,1.3s
MORC  Moravsky Berou    73.89 356  ⇑P       P         20 58 44.9 -1.0
MORC  Moravsky Berou    73.89 356  eP       P         20 58 45.8 -0.1
MORC  Moravsky Berou    73.89 356   P       P         20 58 45.6 -0.3
MORC                                pmax    pmax
      comp=Z,7.0nm,1.1s
MORC  Moravsky Berou    73.89 356   P       P         20 58 45.6 -0.3
PBCC  Pribram           74.10 358  eP       P         20 58 46.7 -0.4
NIE   Niedzica          74.11 354  eP       P         20 58 48.4 +1.2
VRAC  Vranov            74.40 356  ⇓P       P         20 58 48.1 -0.8
VRAC  Vranov            74.40 356  eP       P         20 58 49.1 +0.3
VRAC  Vranov            74.40 356  ⇓P       P         20 58 48.1 -0.8
LANS  Liptovska Anna    74.42 354  eP       P         20 58 49.9 +0.9
LANS                                pmax    pmax
      comp=Z,32nm,1.7s
LANS  Liptovska Anna    74.42 354  eP       P         20 58 49.9 +0.9
KOLS  Kolonicke sedl    74.46 352  eP       P         20 58 49.2  0.0
KOLS  Kolonicke sedl    74.46 352  eP       P         20 58 49.2  0.0
SIJI  Sorong            74.50 244   P       P         20 58 50.2 +0.4
      comp=Z,23nm,0.8s,baz=14,slow=5.9,SNR=9.3
KRUC  Moravsky          74.65 356  eP       P         20 58 50.3  0.0
KHC   Kasperske Hory    74.66 358⇑eP        P         20 58 50.9 +0.5
KHC                                 pmax    pmax
      comp=Z,91nm,1.7s
KHC   Kasperske Hory    74.66 358  eP       P         20 58 50.3 -0.1
KHC                                ex       x         20 58 54.5
KHC   Kasperske Hory    74.66 358   P       P         20 58 50.5 +0.1
UZH   Uzhgorod          74.75 352  eP       P         20 58 50.3 -0.6
UZH                                i                  20 58 57.3
UZH                                i                  20 59 08.4
JAVC  Velka Javorina    74.81 355  eP       P         20 58 52.5 +1.2
UBPT  Khong Chiam       74.90 275   P       P         20 58 52.6 +0.4
GEC2  GERESS Array S    74.94 358   P       P         20 58 51.8 -0.3
GERES GERESS Array B    74.94 358   P       P         20 58 51.4 -0.8
      comp=Z,2.5nm,1.0s,baz=1.9,slow=4.0,SNR=10
GERES                               LR      LR        21 33 07.2
      comp=Z,98nm,18.1s,baz=16,slow=37
PMG   Port Moresby      74.96 225   LR      LR        21 27 37.5
      comp=Z,80nm,20.2s,baz=34,slow=32
PMG   Port Moresby      74.96 225d iP       P         20 58 52.3 -0.1
PMG                                 pmax    pmax
      comp=Z,78nm,2.3s
STU   Stuttgart         75.03   1   P       P         20 58 52.7 +0.2
STU                                 pmax    pmax
      comp=Z,24nm,1.2s
STU   Stuttgart         75.03   1   P       P         20 58 52.6 +0.2
STU                                 IAmb    IAmb      20 58 57.0
      comp=Z,24nm,1.2s
SMOL  Smolenice         75.16 356  eP       P         20 58 54.1 +0.9
SMOL                                pmax    pmax
      comp=Z,32nm,1.7s
SMOL  Smolenice         75.16 356  eP       P         20 58 54.1 +0.9
MODS  Modra-Piesok      75.31 356  eP       P         20 58 53.7 -0.4
MODS                                pmax    pmax
      comp=Z,96nm,1.8s
MODS  Modra-Piesok      75.31 356  eP       P         20 58 53.7 -0.4
BUR08 Bucovina Ar. S    75.49 350   P       P         20 58 55.0 -0.3
ZST   Bratislava        75.49 356  eP       P         20 58 55.6 +0.5
ZST                                 pmax    pmax
      comp=Z,251nm,1.9s
ZST   Bratislava        75.49 356  eP       P         20 58 55.6 +0.5
BURAR Bucovina Array    75.52 350  ⇑P       P         20 58 55.4  0.0
BURAR Bucovina Array    75.52 350  ⇑P       P         20 58 55.4  0.0
BURAR Bucovina Array    75.52 350   P       P         20 58 54.5 -1.0
ECH   Echery            75.55   3   P       P         20 58 55.5  0.0
ECH                                 pmax    pmax
      comp=Z,30nm,1.3s
ECH   Echery            75.55   3   P       P         20 58 55.5  0.0
ECH                                 IAmb    IAmb      20 58 59.9
      comp=Z,30nm,1.3s
CHTO  Chiang Mai        75.59 282   P       P         20 58 56.0 -0.1
CHTO                                pmax    pmax
      comp=Z,13nm,1.3s
CHTO  Chiang Mai        75.59 282   P       P         20 58 56.0 -0.1
CHTO                                IAmb    IAmb      20 58 56.9
      comp=Z,13nm,1.3s
PSZ   Piszkesteto       75.63 354  eP       P         20 58 57.6 +1.6
PSZ   Piszkesteto       75.63 354   P       P         20 58 55.2 -0.8
PSZ                                 pmax    pmax
      comp=Z,51nm,1.4s
PSZ   Piszkesteto       75.63 354   P       P         20 58 55.2 -0.8
PPT   Papeete           75.64 161   LR      LR        21 23 59.4
      comp=Z,410nm,20.5s,baz=348,slow=29
PPT2  Papeete2          75.66 161  eLR      LR        21 22 10.9
      comp=Z,1µm,28.5s
CONA  Conrad Observa    75.81 357  i P      P         20 58 56.2 -0.8
      comp=Z,42nm,1.7s,SNR=5.3
NIL   Nilore            75.83 310   P       P         20 58 57.5 +0.1
NIL                                 pmax    pmax
      comp=Z,21nm,1.1s
NIL   Nilore            75.83 310   P       P         20 58 57.5 +0.1
NIL                                 IAmb    IAmb      20 58 59.9
      comp=Z,21nm,1.1s
SRO2  Moca              75.86 355  eP       P         20 58 56.8 -0.4
SRO2                                pmax    pmax
      comp=Z,12nm,1.3s
SRO2  Moca              75.86 355  eP       P         20 58 56.8 -0.4
CM31  Chiang Mai Arr    75.88 282   P       P         20 58 57.6 -0.2
CMAR  Chiang Mai Arr    75.88 282   P       P         20 58 57.2 -0.6
      comp=Z,12nm,1.1s,baz=16,slow=6.0,SNR=42
CMAR                                LR      LR        21 36 28.6
      comp=Z,147nm,18.1s,baz=59,slow=39
CMAR  Chiang Mai Arr    75.88 282  i P      P         20 58 58.7 +0.9
CMAR                                pmax    pmax
      comp=Z,12nm,1.1s
CMAR  Chiang Mai Arr    75.88 282   P       P         20 58 57.0 -0.8
MOA   Molln             75.93 358  eP       P         20 58 57.4 -0.3
      comp=Z,20nm,1.9s
LTVH  Ltavrtes, Hu      76.02 352  eP       P         20 59 01.6 +3.4
SOP   Sopron            76.03 356  eP       P         20 59 00.2 +2.1
BIZ   Bicaz             76.10 349  ⇑P       P         20 58 59.0 +0.4
BUD   Budapest          76.11 354  eP       P         20 59 00.8 +2.1
CSKK  Cskako            76.27 355  eP       P         20 59 01.0 +1.4
RETA  Reutte            76.33   0  eP       P         20 58 58.7 -1.3
      comp=Z,15nm,1.3s
KIV   Kislovodsk        76.35 337  ⇑P       P         20 59 01.3 +1.0
KIV   Kislovodsk        76.35 337  eP       P         20 59 00.5 +0.3
KIV                                 pmax    pmax
      comp=Z,46nm,1.0s
KIV                                 MLR     MLR
      comp=Z,917nm,18.0s
KIV   Kislovodsk        76.35 337   P       P         20 58 59.8 -0.5
KIV                                 IAmb    IAmb      20 59 05.5
      comp=Z,14nm,0.9s
MOTA  Moosalm           76.47 360  i P      P         20 59 00.6 -0.4
      comp=Z,32nm,1.3s,SNR=5.2
WATA  Walderalm         76.48 360  eP       P         20 59 00.4 -0.5
      comp=Z,28nm,1.5s
ARSA  Arzberg           76.49 357  eP       P         20 59 00.8 -0.1
      comp=Z,25nm,1.7s
MPLH  Magyarpolny       76.50 355  eP       P         20 58 59.5 -1.4
KBZ   Khabaz            76.52 337   P       P         20 59 01.5 +0.5
      comp=Z,4.2nm,0.8s,baz=330,slow=6.6,SNR=8.0
KBZ                                 LR      LR        21 35 12.9
      comp=Z,429nm,21.0s,baz=10.0,slow=38
KBZ   Khabaz            76.52 337⇓eP        P         20 59 01.3 +0.3
KBZ                                 pmax    pmax
      comp=Z,25nm,1.6s
DAVA  Damuels           76.53   1  eP       P         20 59 01.3  0.0
      comp=Z,15nm,1.7s
DRGR                    76.55 352  ⇑P       P         20 59 00.9 -0.4
DRGR                    76.55 352  ⇑P       P         20 59 00.9 -0.4
CJR   Cluj-Napoca       76.56 351  ⇑P       P         20 59 01.1 -0.2
CJR   Cluj-Napoca       76.56 351  ⇑P       P         20 59 01.1 -0.2
NCK   Nalchik           76.59 336⇑eP        P         20 59 02.6 +1.1
NCK                                 pmax    pmax
      comp=Z,115nm,1.8s
SQTA  Sankt Quirin      76.59 360  i P      P         20 59 01.0 -0.6
      comp=Z,39nm,1.6s,SNR=7.1
KBA   Koelnbreinsper    76.72 358  i P      P         20 59 02.4  0.0
      comp=Z,45nm,1.4s,SNR=6.3
TIH   Tihany            76.75 355  eP       P         20 59 03.2 +0.9
KBL   Kabul             76.78 314   P       P         20 59 02.1 -0.9
KBL                                 pmax    pmax
      comp=Z,39nm,1.5s
KBL   Kabul             76.78 314   P       P         20 59 02.1 -0.9
KBL                                 IAmb    IAmb      20 59 06.3
      comp=Z,39nm,1.4s
FETA  Feichten          76.79   0  i P      P         20 59 02.8  0.0
      comp=Z,24nm,1.1s,SNR=5.0
OZUR                    76.96 349  ⇑P       P         20 59 03.3 -0.3
ABTA  Abfaltersbach     77.06 359  eP       P         20 59 04.1 -0.1
      comp=Z,28nm,1.9s
SOKA  Soboth            77.08 357  i P      P         20 59 03.6 -0.7
      comp=Z,42nm,1.6s,SNR=15
VRI   Vrincioaia        77.09 349  ⇑P       P         20 59 03.8 -0.5
VRI   Vrincioaia        77.09 349  ⇑P       P         20 59 03.8 -0.5
PLOR  Plostina          77.11 349  ⇑P       P         20 59 04.0 -0.4
PLOR  Plostina          77.11 349  ⇑P       P         20 59 04.0 -0.4
PERS  Pernice           77.12 357  i P      P         20 59 07.9 +3.5
DOPR  Dopca             77.13 350  ⇓P       P         20 59 03.0 -1.5
MYKA  Terra Mystica     77.16 358  eP       P         20 59 02.5 -2.2
      comp=Z,26nm,1.6s
ZEI   Tsey              77.19 336  eP       P         20 59 04.2 -1.0
ZEI                                 pmax    pmax
      comp=Z,30nm,1.5s
OBKA  Obir              77.26 357  eP       P         20 59 05.6 +0.3
      comp=Z,26nm,0.9s
GROS  Grobnik           77.28 357  i P      P         20 59 08.6 +3.2
MORH  Mrgy, Hungar      77.40 355  ⇑P       P         20 59 04.1 -1.9
MORH  Mrgy, Hungar      77.40 355  eP       P         20 59 01.6 -4.4
MLR   Muntele Rosu      77.55 349  ⇑P       P         20 59 07.0  0.0
MLR   Muntele Rosu      77.55 349  ⇑P       P         20 59 07.0  0.0
VOIR                    77.69 350  ⇑P       P         20 59 06.6 -1.1
VOIR                    77.69 350  ⇑P       P         20 59 06.6 -1.1
GEYT  Alibeck           77.75 324   P       P         20 59 08.2 +0.1
      comp=Z,7.5nm,0.9s,baz=35,slow=5.4,SNR=16
GEYT                                LR      LR        21 35 56.5
      comp=Z,400nm,21.4s,baz=250,slow=38
ARR   Arges             77.80 350  ⇑P       P         20 59 07.3 -1.0
BZS   Buzias            77.80 352  ⇑P       P         20 59 07.4 -0.8
BZS   Buzias            77.80 352  ⇑P       P         20 59 07.4 -0.8
GZR   Gura Zlata        77.94 351  ⇓P       P         20 59 08.7 -0.4
GZR   Gura Zlata        77.94 351  ⇓P       P         20 59 08.7 -0.4
TOLI2 Tolitoli          78.22 254   P       P         20 59 10.0 -1.0
TEOL  Teolo             78.45 359   P       P         20 59 11.5 -0.4
HERR  Herculane         78.47 352  ⇓P       P         20 59 11.1 -0.9
AKH   Akhalkalaki       78.60 336   P       P         20 59 13.1 +0.1
AKH                                 pmax    pmax
      comp=Z,20nm,1.2s
AKH   Akhalkalaki       78.60 336   P       P         20 59 13.1 +0.1
AKH                                 IAmb    IAmb      20 59 34.3
      comp=Z,20nm,1.2s
LUWI  Luwuk             78.99 251   P       P         20 59 14.0 -1.2
DIVS  Divibare          79.43 353   P       P         20 59 17.2 -0.2
DIVS                                IAmb    IAmb      20 59 48.7
      comp=Z,20nm,1.5s
GNI   Garni             79.50 334⇑eP        P         20 59 19.8 +1.9
GNI                                 pmax    pmax
      comp=Z,51nm,2.0s
HRA   Herat             79.52 319   P       P         20 59 17.7 -0.4
HRA                                 IAmb    IAmb      20 59 22.6
      comp=Z,24nm,1.4s
PLVB  Pleven            79.76 350  ⇑P       P         20 59 18.3 -0.8
MURB  Monte Urbino      80.54 359   P       P         20 59 23.9 +0.6
KOPT  Kop Dagi          80.59 337   P       P         20 59 24.2 +0.2
VTS   Vitosha           80.65 351  ⇓P       P         20 59 22.0 -2.1
VTS   Vitosha           80.65 351  ⇓P       P         20 59 22.0 -2.1
COEN  Coen              80.68 227   P       P         20 59 24.4 +0.2
COEN                                IAmb    IAmb      21 00 13.1
      comp=Z,16nm,1.2s
DZM   Mont Dzumac       81.00 203  eLR      LR        21 24 51.6
      comp=Z,955nm,31.6s
TOKA  Tokat             81.09 340   P       P         20 59 26.8 +0.4
TOKA                                IAmb    IAmb      20 59 33.4
      comp=Z,37nm,1.5s
TBI   Tubuai            81.30 162  eLR      LR        21 24 38.7
      comp=Z,864nm,31.5s,baz=341
GEVA  Gevas             81.65 335   P       P         20 59 29.8 +0.4
GEVA                                IAmb    IAmb      20 59 35.3
      comp=Z,40nm,1.3s
GCPR  Guaynabo City     81.86  69   P       P         20 59 30.7 +0.1
BRTR  Keskin Array B    82.17 343   P       P         20 59 32.3 +0.1
      comp=Z,3.5nm,0.9s,baz=46,slow=8.8,SNR=8.1
BRTR                                LR      LR        21 39 42.9
      comp=Z,219nm,21.3s,baz=13,slow=38
BRTR  Keskin Array B    82.17 343  i P      P         20 59 32.7 +0.5
BRTR                                pmax    pmax
      comp=Z,4.0nm,0.9s
BRTR  Keskin Array B    82.17 343   P       P         20 59 31.8 -0.4
BKB   Balikpapan        82.29 256   P       P         20 59 32.4 -0.4
MTP   Monte Pirata      82.31  69   P       P         20 59 32.4 -0.5
MTP                                 IAmb    IAmb      20 59 37.6
      comp=Z,31nm,1.1s
ESDC  Sonseca Array     83.31  12   P       P         20 59 37.5 -0.5
      comp=Z,4.5nm,1.1s,baz=344,slow=6.1,SNR=6.6
ESDC                                LR      LR        21 35 23.8
      comp=Z,218nm,21.7s,baz=325,slow=35
ESDC  Sonseca Array     83.31  12   P       P         20 59 38.1 +0.1
GAZ   Gaziantep         84.00 339   P       P         20 59 41.7 +0.1
RKT   Rikitea           84.44 149  eLR      LR        21 26 08.8
      comp=Z,896nm,26.0s
TIP   Timpagrande       84.50 355   P       P         20 59 44.1  0.0
MTN   Manton Dam        84.96 238   P       P         20 59 46.1 -0.4
CTAO  Charters Tower    85.07 222   P       P         20 59 46.6 -0.3
CTAO                                pmax    pmax
      comp=Z,28nm,1.3s
CTAO  Charters Tower    85.07 222   P       P         20 59 46.6 -0.3
CTAO                                IAmb    IAmb      20 59 48.6
      comp=Z,28nm,1.2s
KULM  Kulim             85.77 273   P       P         20 59 50.0 -0.7
IPM   Ipoh              86.24 272   P       P         20 59 52.7 -0.3
CSS   Mathiatis         86.87 342   P       P         20 59 55.9  0.0
SDV   Santo Domingo     87.28  78   P       P         20 59 57.4 -0.9
SDV                                 IAmb    IAmb      21 00 02.3
      comp=Z,32nm,1.4s
HYB   Hyderabad         87.33 298  i P      P         20 59 58.0 -0.4
EIDS  Eidsvold          88.29 215   P       P         21 00 03.3 +0.8
EIDS                                IAmb    IAmb      21 00 04.0
      comp=Z,14nm,1.2s
ROSC  El Rosal          88.63  83   LR      LR        21 44 41.6
      comp=Z,133nm,18.6s,baz=42,slow=39
ROSC  El Rosal          88.63  83   P       P         21 00 05.2 +0.2
ROSC                                pmax    pmax
      comp=Z,23nm,1.2s
ROSC  El Rosal          88.63  83   P       P         21 00 05.2 +0.2
ROSC                                IAmb    IAmb      21 00 28.5
      comp=Z,23nm,1.1s
PSI   Prapat            88.79 273   P       P         21 00 05.4  0.0
      comp=Z,8.1nm,0.6s,baz=360,slow=3.7,SNR=12
RPSI  Rantau Prapat     88.87 273   P       P         21 00 05.4 -0.2
WRA   Warramunga Arr    89.74 232   P       P         21 00 09.1 -0.3
      comp=Z,2.3nm,0.8s,baz=33,slow=4.7,SNR=5.7
WRA   Warramunga Arr    89.74 232  i P      P         21 00 09.6 +0.1
WRA                                 pmax    pmax
      comp=Z,3.0nm,0.9s
WRA   Warramunga Arr    89.74 232   P       P         21 00 09.0 -0.4
FITZ  Fitzroy Crossi    92.11 240   LR      LR        21 38 33.9
      comp=Z,74nm,20.0s,baz=46,slow=34
ASAR  Alice Springs     93.21 230   LR      LR        21 36 36.4
      comp=Z,163nm,21.6s,baz=45,slow=32
RAYN  Ar Rayn           95.05 328   P       P         21 00 33.1 -1.1
RAYN                                pmax    pmax
      comp=Z,5.0nm,1.3s
RAYN  Ar Rayn           95.05 328   P       P         21 00 33.1 -1.1
STKA  Stephens Creek    97.50 221   LR      LR        21 40 28.9
      comp=Z,253nm,21.6s,baz=31,slow=33
COCO  West Island      102.31 267  i P      Pdif      21 01 04.9 -1.8
PLCA  Paso Flores      127.14 109   PKP     PKiKP     21 06 15.2 -0.2
      comp=Z,3.3nm,0.9s,baz=300,slow=5.1,SNR=5.7
PLCA  Paso Flores      127.14 109   PKIKP   PKPdf     21 06 14.5 -0.4
PLCA  Paso Flores      127.14 109           PKPdf     21 06 14.5 -0.4
LBTB  Lobatse          146.74 335   PKP2    PKPbc     21 06 53.2 +0.1
LBTB  Lobatse          146.74 335           PKPbc     21 06 53.2 +0.1
BOSA  Boshof           150.27 334   PKPbc   PKPbc     21 07 02.1 -0.1
      comp=Z,7.2nm,0.9s,baz=357,slow=0.6,SNR=8.0
SYO   Syowa Base       162.14 214⇑ePKPab    PKPab     21 08 01.1 +3.1
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IDC ***31*** *20:51:25.1±0.8, 1°.92S×133°.14E, h0^{km}, mb4.2/14, mb1 4.3/18, mb1mx4.1/48, mbtmp4.3/18, ML4.1/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/40, Error ellipse: s-maj=22.1km s-min=17.7km az=62.0*

DJA ***31*** *20:51:28.3±1.1, 2°S±3°×13°3E±°, h11^{km}±10^{km}, M4.8/11, mb5.1/7, mB5.3/6, MLv4.8/11, Mw(mB)4.7/6*

NEIC ***31*** *20:51:30.0±0.9, 1°.89S±0°.06×133°.23E±0°.07, h33^{km}±5^{km}, mb4.4/23, Error ellipse: s-maj=9.7km s-min=8.3km az=95.0*

ISC 31 20:51:30.1±0.4,**2°.01S**±0°.04×**133°.19E**±0°.05,**h35**^{km}**,n84,** σ**1**^{s}**73**/86,**mb4.3**/29,**MS3.5**/5,**Irian Jaya region**

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Code  Station Name         Δ°  AZ°    Phase ID                 Time     Res
                                     Op       ISC           h  m  s    ISC
FAKI  Fak Fak             1.30 226   Pn       Pn          20 51 52.6 +0.8
FAKI                                 Sn       Sn          20 52 11.0 +3.0
FAKI  Fak Fak             1.30 226   P        Pn          20 51 52.4 +0.6
FAKI                                 S        Sn          20 52 11.4 +3.4
KMPI  Kaimana, Papua      1.72 162   P        Pn          20 51 58.7 +1.1
SIJI  Sorong              2.23 301   Pn       Pn          20 52 02.4 -2.2
      77nm,0.3s,baz=112,slow=9.7,SNR=281
SIJI                                 Sn       Sn          20 52 29.9 -1.1
      102nm,0.3s,baz=171,slow=23,SNR=6.2
SIJI                                 LR       LR          20 52 48.3
      comp=Z,407nm,18.7s,baz=90,slow=39
SWI   Sorong              2.24 301   P        Pn          20 52 02.5 -2.2
BAKI  Biak                3.03  74   P        Pn          20 52 15.6  0.0
BNDI  Bandanaira          4.12 233   P        Pn          20 52 31.6 +1.0
BNDI                                 S        Sn          20 53 21.2 +3.7
MSAI  Masohi              4.45 253   P        Pn          20 52 38.5 +3.3
NLAI  Namlea              6.20 259   P        Pn          20 52 59.4 +0.2
      0.7nm3µm63nm,0.5s
SAUI  Saumlaki            6.22 198   Pn       Pn          20 53 01.3 +1.8
TNTI  Ternate             6.44 295   Pn       Pn          20 53 03.7 +1.2
GENI  Genyem              7.00  95   P        Pn          20 53 13.2 +3.0
      1.1nm3µm102nm,0.6s
SANI  Sanana              7.19 270   P        Pn          20 53 11.8 -1.1
      0.1nm28nm,0.6s
JAY   Jayapura            7.53  94   Pn       Pn          20 53 18.9 +1.4
      3.1nm,0.3s,baz=216,slow=12,SNR=8.9
JAY                                  Sn       Sn          20 54 40.9 -0.9
      baz=123,slow=20,SNR=1.6
LUWI  Luwuk              10.46 275            Pn          20 53 56.0 -1.6
MTN   Manton Dam         10.95 191   Pn       Pn          20 54 03.4 -1.0
APSI  Ampana             11.59 275   P        Pn          20 54 11.9 -1.2
SOEI  Soe                11.74 229            Pn          20 54 16.4 +1.1
BATI  Baumata            12.48 229   Pn       Pn          20 54 23.9 -1.4
      1.0nm,0.3s,baz=205,slow=7.9,SNR=4.1
BATI                                 Sn       Sn          20 56 40.9 -2.4
      0.8nm,0.3s,baz=309,slow=20,SNR=1.5
BATI                                 LR       LR          20 59 03.3
      comp=Z,243nm,20.2s,baz=56,slow=37
TOLI2 Tolitoli           12.78 284   Pn       Pn          20 54 29.7 +0.2
KAPI  Kappang            13.73 257   Pn       Pn          20 54 42.7 +0.2
      1.0nm,0.3s,baz=95,slow=11,SNR=3.9
KAPI  Kappang            13.73 257   Pn       Pn          20 54 43.7 +1.2
COEN  Coen               15.44 141   Pn       Pn          20 55 04.0 -1.5
PMG   Port Moresby       15.72 118   LR       LR          21 03 20.6
      comp=Z,196nm,19.0s,baz=306,slow=45
FITZ  Fitzroy Crossi     17.62 204   P        Pn          20 55 29.5 -3.5
      1.6nm,0.3s,baz=30,slow=11,SNR=18
FITZ                                 S        Sn          20 58 31.3  -17
      0.4nm,0.3s,baz=63,slow=18,SNR=1.4
WB0   Warramunga Arr     17.69 176   Pn       Pn          20 55 33.4 -0.4
WRA   Warramunga Arr     17.86 176   P        Pn          20 55 33.5 -2.4
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	2.3nm,0.3s,baz=355,slow=12,SNR=78						
WRA				S	Sn	20 58 45.3	-8.8
	0.3nm,0.3s,baz=355,slow=24,SNR=5.4						
WRA				LR	LR	21 03 42.7	
	comp=Z,286nm,18.9s,baz=280,slow=41						
AS31	Alice Springs	21.54	178	P	P	20 56 17.5	+1.0
AS31				IAmb	IAmb	20 56 21.1	
	comp=Z,8.6nm,0.6s						
ASAR	Alice Springs	21.54	178	P	P	20 56 18.0	+1.5
	comp=Z,24nm,0.6s,baz=360,slow=8.6,SNR=148						
ASAR				S	S	21 00 10.1	-3.4
	comp=Z,0.3nm,0.5s,baz=2.2,slow=27,SNR=3.3						
ASAR				LR	LR	21 05 37.6	
	comp=Z,164nm,20.0s,baz=348,slow=39						
ASAR	Alice Springs	21.54	178	P	P	20 56 17.8	+1.3
CTAO	Charters Tower	22.04	146	P	P	20 56 24.0	+2.1
PSA00	Pilbara Seismi	23.38	213	P	P	20 56 37.1	+1.3
LEM	Lembang	25.93	259	LR	LR	21 09 18.0	
	comp=Z,158nm,18.9s,baz=124,slow=41						
EIDS	Eidsvold	28.93	145	P	P	20 57 27.0	+0.8
STKA	Stephens Creek	30.75	166	P	P	20 57 42.1	-0.1
	comp=Z,0.6nm,0.3s,baz=349,slow=10,SNR=1.9						
STKA				LR	LR	21 12 36.9	
	comp=Z,100nm,18.4s,baz=337,slow=41						
STKA	Stephens Creek	30.75	166	P	P	20 57 43.1	+0.9
IPM	Ipoh	32.78	281	P	P	20 58 00.2	-0.1
ARMA	Armidale	33.23	150	P	P	20 58 05.1	+1.0
BJT	Baijiatuau	44.64	341	P	P	20 59 38.6	-0.7
BJT				IAmb	IAmb	20 59 40.3	
	comp=Z,8.7nm,1.0s						
HHC	Hu-ho-hao-te	46.99	338	eP	P	20 59 58.5	+0.5
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
LSA	Lhasa	51.05	311	P	P	21 00 29.8	+0.1
LSA				IAmb	IAmb	21 00 31.3	
	comp=Z,3.5nm,0.9s						
GTA	Gaotai	51.35	327	eP	P	21 00 34.8	+3.3
GTA				pP	pP	21 00 40.3	-1.7
GTA				sP	sP	21 00 42.8	-3.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
PALK	Pallekele	53.17	281	LR	LR	21 24 14.6	
	comp=Z,39nm,20.4s,baz=262,slow=37						
SONM	Songino Array	54.88	338	P	P	21 00 57.6	+0.3
	comp=Z,1.1nm,1.0s,baz=153,slow=6.4,SNR=2.7						
PETK	Petropavlovsk-	58.64	17	P	P	21 01 24.2	+0.4
	comp=Z,2.1nm,0.8s,baz=212,slow=5.1,SNR=2.8						
WMQ	Urumqi	61.12	324	eP	P	21 01 43.5	+2.5
MA2	Magadan	62.95	10	LR	LR	21 26 55.6	
	comp=Z,631nm,21.8s,baz=355,slow=34						
YAK	Yakutsk	63.93	358	P	P	21 01 59.3	0.0
	comp=Z,5.0nm,0.7s,baz=166,slow=1.7,SNR=6.3						
YAK	Yakutsk	63.93	358	P	P	21 01 59.0	-0.3
SHLS	Shalkode	65.86	320	eP	P	21 02 10.7	-1.7
MK31	Makanchi Array	65.94	324	P	P	21 02 12.6	-0.2
MK31				IAmb	IAmb	21 02 14.1	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	65.94	324	P	P	21 02 13.2	+0.4
	comp=Z,3.4nm,0.7s,baz=114,slow=8.1,SNR=29						
MKAR	Makanchi Array	65.94	324	P	P	21 02 12.4	-0.3
MAKZ	Makanchi	66.13	324	P	P	21 02 14.0	0.0
MAKZ				IAmb	IAmb	21 02 15.2	
	comp=Z,4.7nm,0.8s						
SEY	Seymchan	66.38	9	P	P	21 02 15.0	-0.2
	comp=Z,2.2nm,0.6s,baz=202,slow=4.5,SNR=8.3						
SATY	Saty	66.50	319	eP	P	21 02 16.9	+0.3
KPKS	Kokpek	66.51	320	eP	P	21 02 16.8	+0.2
KSH	Kashi	66.64	315	P	P	21 02 19.5	+2.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,250nm,4.2s						
MDOK	Medeo	67.44	319	eP	P	21 02 22.4	-0.1
TNSS	Tian-Shan	67.45	319	eP	P	21 02 23.6	+0.7
CHKK	Chushkaly	67.78	320	eP	P	21 02 24.4	-0.2
KUU	Kurty	68.22	319	eP	P	21 02 26.9	-0.4
ZAA0	Zalesovo Array	68.63	332	P	P	21 02 29.0	-0.6
ZAA0				IAmb	IAmb	21 02 33.9	
	comp=Z,3.7nm,1.2s						
ZALV	Zalesovo Beam	68.63	332	P	P	21 02 28.8	-0.9
	comp=Z,1.2nm,0.7s,baz=114,slow=6.5,SNR=5.1						
ZALV	Zalesovo Beam	68.63	332	P	P	21 02 29.1	-0.6
KURK	Kurchatov	70.04	327	P	P	21 02 38.5	+0.1
KURBB	Kurchatov Arra	70.04	326	P	P	21 02 38.5	+0.1
	comp=Z,3.2nm,0.8s,baz=125,slow=5.5,SNR=20						
KBL	Kabul	70.11	308	P	P	21 02 39.3	-0.2
KBL				IAmb	IAmb	21 02 40.3	
	comp=Z,3.6nm,0.8s						
BTLS	Baital	70.19	320	eP	P	21 02 39.1	-0.3
IUG	Iuzhnay	71.80	316	eP	P	21 02 36.6	-13
KK31	Karatay Array	71.80	317	P	P	21 02 48.5	-0.8
KK31				IAmb	IAmb	21 02 57.5	
	comp=Z,3.1nm,1.1s						
KKAR	Karatay Array	71.80	317	P	P	21 02 49.5	+0.1
TIXI	Tiksi	73.59	359	P	P	21 02 58.8	-0.5
TIXI				IAmb	IAmb	21 03 06.8	
	comp=Z,5.0nm,1.4s						
BVAR	Borovoye Array	75.63	326	P	P	21 03 11.6	+0.1
	comp=Z,1.0nm,0.6s,baz=135,slow=57,SNR=5.7						
NRIK	Noril'sk	77.56	345	P	P	21 03 21.8	-0.3
	comp=Z,1.6nm,0.3s,baz=116,slow=4.2,SNR=6.8						
ABKAR	Akbulak array	80.65	321	P	P	21 03 39.5	+0.1
ABKAR				IAmb	IAmb	21 03 42.0	
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	82.14	321	P	P	21 03 47.4	+0.1
	comp=Z,1.7nm,0.9s,baz=126,slow=9.4,SNR=3.7						
ARU	Arti	83.21	327	P	P	21 03 51.5	-1.2
	comp=Z,0.6nm,0.5s,baz=181,slow=6.0,SNR=5.3						
ARU	Arti	83.21	327	P	P	21 03 51.8	-0.9
ARU				IAmb	IAmb	21 03 52.4	
	comp=Z,4.4nm,1.1s						
IMAR	Indian Mountai	84.99	23	P	P	21 04 02.0	+0.4
CCB	Clear Creek Bu	87.10	25	P	P	21 04 11.6	-0.5
CCB				IAmb	IAmb	21 04 12.0	
	comp=Z,2.7nm,0.7s						
IL31		87.51	25	P	P	21 04 13.3	-0.7
IL31				IAmb	IAmb	21 04 22.5	
	comp=Z,3.4nm,1.4s						
ILAR	Eielson Array	87.51	25	P	P	21 04 13.2	-0.9
	comp=Z,0.9nm,0.5s,baz=256,slow=4.8,SNR=16						
ARCES	ARCESS Array B	98.01	340	P	Pdif	21 05 02.5	0.0
	comp=Z,7.5nm,1.2s,baz=78,slow=6.5,SNR=1.6						

IDC 31 21:11:13.4±4.3**,24°.11N**×**94°.49E,h83**km±37km**,mb3.0**/4**,**
mb1 3.2/5**,mb1mx2.9**/58**,mbtmp3.2**/5**,Error ellipse:**
s-maj=77.7km s-min=19.6km az=66.0,Myanmar-India
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.99	143	P	Pn	21 12 53.6	+0.5
	0.4nm,0.3s,baz=316,slow=12,SNR=6.1						
CMAR				S	Sn	21 14 11.3	+0.1
	0.1nm,0.3s,baz=24,slow=28,SNR=1.2						
MKAR	Makanchi Array	24.66	340	P	P	21 16 26.4	0.0
	0.2nm,0.5s,baz=148,slow=9.7,SNR=4.5						
SONM	Songino Array	25.50	19	P	P	21 16 33.9	-0.2
	0.2nm,0.5s,baz=205,slow=9.5,SNR=1.8						
WRA	Warramunga Arr	58.51	135	P	P	21 21 01.3	-0.1
	0.3nm,0.6s,baz=321,slow=7.7,SNR=4.6						
ASAR	Alice Springs	60.97	138	P	P	21 21 18.4	+0.1
	0.3nm,0.6s,baz=322,slow=6.5,SNR=5.3						

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*IDC **31** 21:18:40.9±1.3,28°.68N×131°.53E,h0km,mb3.3/5,*
mb1 3.4/8,mb1mx3.3/51,mbtmp3.4/8,ML3.2/3,Error
ellipse: s-maj=31.5km s-min=20.1km az=88.0
*JMA **31** 21:18:45.2±0.1,28°.87N×131°.46E,h77km,M3.5*
ISC 31 21:18:47.3±0.9**,28°.84N**±0°.03×**131°.51E**±0°.06**,h71**km**,n28,**
σ**2ˢ82**/43**,mb3.3**/5**,Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	Minamitane	1.64	341	P	Pn	21 19 12.0	-2.2
JMTN				S	Sn	21 19 32.0	-2.4
JYAK	Yakushimahirau	1.64	328	P	Pn	21 19 12.2	-2.0
JYAK				S	Sn	21 19 32.2	-2.3
JAM	Amami Oshima	1.73	256	P	Pn	21 19 13.3	-2.0
JAM				S	Sn	21 19 34.4	-2.2
JNN	Nakanoshima	1.74	305	P	Pn	21 19 13.6	-1.9
JNN				S	Sn	21 19 34.7	-2.2
JTN	Tanegashima 3	1.86	346	S	Sn	21 19 37.3	-2.5
JKC	Kuchinoerabu	1.98	325	P	Pn	21 19 17.0	-1.7
JKC				S	Sn	21 19 40.6	-1.9
JTAJ	Takarajima	2.04	279	P	Pn	21 19 17.6	-2.0
JTAJ				S	Sn	21 19 41.6	-2.6
JAMN	Amaminishikomi	2.14	254	P	Pn	21 19 19.1	-1.8
JAMN				S	Sn	21 19 44.0	-2.5
JTSR	Tashiro 2	2.37	348	S	Sn	21 19 49.5	-2.6
JTK	Tokunoshima	2.49	246	P	Pn	21 19 24.3	-1.3
JTK				S	Sn	21 19 53.1	-1.9
JKDJ	Kitadaitoujima	2.89	184	S	Sn	21 20 00.9	-3.8
JOKE	Okinoerabujima	2.99	241	S	Sn	21 20 04.4	-2.7
JMZ	Minamidaito 2	3.02	185	S	Sn	21 20 04.3	-3.7
JTZ	Takazaki	3.07	353	S	Sn	21 20 06.3	-2.8
JSJ	Shimokoshiki	3.22	332	P	Pn	21 19 33.3	-2.3
JSJ				S	Sn	21 20 08.5	-4.3
JYRO	Yoronjima	3.26	237	P	Pn	21 19 34.2	-1.8
JYRO				S	Sn	21 20 10.0	-3.7
JOW	Kunigami	3.50	236	Pn	Pn	21 19 37.0	-2.3
	14nm,0.3s,baz=102,slow=30,SNR=33						
JOW				Sn	Sn	21 20 16.2	-3.3
	13nm,0.3s,baz=115,slow=28,SNR=8.9						
JOW	Kunigami	3.50	236	P	Pn	21 19 37.4	-1.9
JOW				S	Sn	21 20 17.3	-2.2
JIH	Iheya	3.62	241	P	Pn	21 19 39.0	-1.9
JIH				S	Sn	21 20 18.6	-3.8
JNTH	Nagotoyohara	3.86	234	P	Pn	21 19 42.5	-1.8
JNTH				S	Sn	21 20 26.1	-2.4
JTO	Tosashimizu	4.16	15	eS	Sn	21 20 28.7	-6.9
JNU	Nakatsue	4.30	353	Pn	Pn	21 19 49.0	-1.3
	0.9nm,0.3s,baz=204,slow=16,SNR=7.9						
JNU				Sn	Sn	21 20 36.3	-2.9
	1.6nm,0.3s,baz=348,slow=20,SNR=7.6						
MJAR	Matsushiro Arr	9.53	35	Pn	Pn	21 21 03.0	+1.3
	0.1nm,0.3s,baz=246,slow=15,SNR=1.9						
SONM	Songino Array	27.14	321	P	P	21 24 27.1	+3.1
	0.2nm,0.4s,baz=136,slow=12,SNR=1.6						
MKAR	Makanchi Array	42.06	309	P	P	21 26 36.0	+4.0
	0.2nm,0.7s,baz=87,slow=11,SNR=2.0						
KURBB	Kurchatov Arra	45.05	314	P	P	21 26 58.5	+2.5
	0.3nm,0.4s,baz=96,slow=8.8,SNR=4.1						
WRA	Warramunga Arr	48.58	176	P	P	21 27 26.7	+2.9
	0.2nm,0.6s,baz=354,slow=7.6,SNR=1.1						
ASAR	Alice Springs	52.26	177	P	P	21 27 51.1	-0.4
	0.6nm,0.8s,baz=3.4,slow=7.8,SNR=6.2						

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*IDC **31** 21:22:01.1±1.6,59°.24N×152°.52W,h106km±28km,mb3.0/1,*
mb1 3.1/4,mb1mx2.9/49,mbtmp3.3/4,Error ellipse:
s-maj=39.8km s-min=21.4km az=126.0
*NEIC **31** 21:22:03.0±1.2,59°.24N±0°.04×151°.59W±0°.06,h41km±6km,*
Error ellipse: s-maj=7.0km s-min=3.8km az=153.0
*AEIC **31** 21:22:03±1.0,59°.23N±0°.05×151°.57W±0°.05,h41km±8km,*
ML2.7,ML3.1/66(NEIC),Error ellipse: s-maj=7.3km
s-min=2.6km az=159.0
ISC 31 21:22:02.5±1.1**,59°.22N**±0°.04×**151°.52W**±0°.03,
h46km±11km**,n102,**σ**0ˢ85**/99**,Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNPM	China Poot	0.34	26		Pn	21 22 11.5	-0.1
CNPM					Sn	21 22 18.3	+0.2
CNPM	China Poot	0.34	26	IAML		21 22 18.6	
	comp=N,1μm,0.5s						
CNPM				IAML		21 22 19.2	
	comp=E,2μm,0.4s						
HOM	Homer	0.44	352		Pn	21 22 12.6	-0.2
BRLK	Bradley Lake	0.63	31		Pn	21 22 14.9	-0.3
BRSE	Bradley Lake S	0.66	37		Pn	21 22 15.7	+0.2
BRSE					Sn	21 22 25.4	+0.6
AU22	Augustine Moun	0.95	280		Pn	21 22 19.3	-0.1
AU22					Sn	21 22 32.2	+0.3
OPT	Oil Point	0.97	297		Pn	21 22 19.6	-0.2
AUL	Augustine Lava	0.99	280		Pn	21 22 20.1	+0.1
AUL					Sn	21 22 33.6	+0.8
AUCH	Augustine Cone	1.00	279		Pn	21 22 20.2	+0.1
AUCH					Sn	21 22 33.6	+0.6
ILS	Iliamna Low So	1.08	314		Pn	21 22 20.8	-0.5
ILIM	Iliamna	1.13	320		Pn	21 22 21.4	-0.5
RED	Redoubt Volcan	1.36	333		Pn	21 22 24.5	-0.6
RED					Sn	21 22 41.5	-0.4
SEW	Seward	1.37	49		Pn	21 22 25.3	+0.2
RSO	Redoubt South	1.39	334		Pn	21 22 25.2	-0.4
SLKM	Skilak Lake	1.45	26		Pn	21 22 26.5	+0.3
SLKM					Sn	21 22 44.9	+0.9
DFR	Drift River	1.50	337		Pn	21 22 26.3	-0.6
DFR					Sn	21 22 45.0	-0.3
NCT	North Crescent	1.52	333		Pn	21 22 26.8	-0.5
KDAK	Kodiak Island	1.55	202	P	Pn	21 22 27.8	+0.3
	comp=E,3.6nm,0.3s,baz=47,slow=14,SNR=44						
KDAK				S	Sn	21 22 46.6	+0.2
	comp=E,6.7nm,0.3s,baz=48,slow=10,SNR=7.2						
KDAK	Kodiak Island	1.55	202		Pn	21 22 27.6	+0.1
O22K	Cooper Landing	1.56	35		Pn	21 22 28.0	+0.3
CAPN	Captain Cook N	1.56	7		Pn	21 22 29.5	+1.7
KAHC	Katmai Hardscr	1.90	254		Pn	21 22 32.6	+0.2
SPCN	Chakachatna No	2.04	351		Pn	21 22 35.0	+0.7
RC01	Rabbit Creek A	2.08	25		Pn	21 22 35.5	+0.7
RC01					Sn	21 22 59.7	+0.3
SPCP	Crater Peak Br	2.08	352		Pn	21 22 35.6	+0.7
SPCP					Sn	21 23 01.4	+1.8
SPCG	Spurr Capps Gl	2.09	353		Pn	21 22 35.6	+0.5
SPWE	Spurr West	2.12	346		Pn	21 22 36.3	+0.7
KVTA	Katmai Vly 10	2.14	248		Pn	21 22 35.9	+0.2
OHAK	Old Harbor	2.21	206		Pn	21 22 36.4	-0.3
OHAK	Old Harbor	2.21	206	IAML		21 23 22.9	
	comp=N,145nm,1.0s						
OHAK				IAML		21 23 58.5	
	comp=E,76nm,4.2s						
SUA	Susitna One	2.28	9		Pn	21 22 38.5	+0.8
STLK	Strandline Lak	2.29	356		Pn	21 22 38.9	+1.1
PWL	Port Wells	2.29	43		Pn	21 22 38.1	+0.3
PWL					Sn	21 23 04.1	-0.7
PMR	Palmer	2.66	25		Pn	21 22 42.8	+0.1
KNK	Knik Glacier	2.68	33		Pn	21 22 43.2	+0.2
KNK	Knik Glacier	2.68	33	IAML		21 23 28.2	
	comp=E,48nm,0.9s						
SKT	Skwentna	2.77	360		Pn	21 22 45.1	+0.8
GLI	Glacier Island	2.77	51		Pn	21 22 43.9	-0.4
GLI					Sn	21 23 15.2	-1.4
GLI	Glacier Island	2.77	51	IAML		21 23 28.8	
	comp=E,65nm,0.8s						
GLI				IAML		21 23 31.9	
	comp=N,53nm,0.8s						
HIN	Hinchinbrook I	2.80	63		Pn	21 22 45.4	+0.7
HIN	Hinchinbrook I	2.80	63	IAML		21 23 37.1	
	comp=N,68nm,1.8s						
GHO	Glory Hole Cre	2.86	26		Pn	21 22 46.2	+0.5
FID	Port Fidalgo	2.96	57		Pn	21 22 46.1	-0.8
FID					Sn	21 23 18.5	-2.7
FID	Port Fidalgo	2.96	57	IAML		21 23 22.2	
	comp=E,43nm,2.1s						
EYAK	Cordova Ski Ar	3.20	63	Pn	Pn	21 22 50.7	+0.5
SCM	Sheep Creek Mo	3.34	37		Pn	21 22 52.9	+0.7
SCM	Sheep Creek Mo	3.34	37	IAML		21 23 32.9	
	comp=E,36nm,0.6s						
SCM				IAML		21 23 33.0	
	comp=N,38nm,0.7s						
KLU	Klutina	3.59	48		Pn	21 22 56.2	+0.5
PPLA	Purkeypile	3.70	355	Pn	Pn	21 22 57.6	+0.4
WAT1	Susitna Watana	3.90	20		Pn	21 23 00.5	+0.7
M24K	Tolsona, Glenn	3.91	40		Pn	21 23 01.2	+1.2
WAT2	Susitna Watana	4.02	20		Pn	21 23 02.3	+0.9
BERG	Berg Lake	4.12	70		Pn	21 23 03.7	+0.9
N25K	Chitina, Valde	4.18	52		Pn	21 23 04.2	+0.5
N25K	Chitina, Valde	4.18	52	IAML		21 24 12.0	
	comp=E,16nm,2.7s						
TRF	Thorofare Moun	4.29	7		Pn	21 23 06.5	+1.3
TRF	Thorofare Moun	4.29	7	IAML		21 24 26.1	
	comp=E,24nm,3.6s						
TRF				IAML		21 24 34.4	
	comp=N,24nm,4.1s						
TT01	Tatalina	4.29	331		Pn	21 23 05.6	+0.4
TTA	Tatalina	4.31	332	Pn	Pn	21 23 05.8	+0.3
TTA				IAML		21 24 56.8	
	comp=E,16nm,4.9s						
TTA				IAML		21 25 22.0	
	comp=N,19nm,4.2s						
DHY	Denali Highway	4.36	26	Pn	Pn	21 23 07.4	+1.2
DHY				IAML		21 23 41.7	
	comp=E,15nm,4.4s						
DHY				IAML		21 24 08.9	
	comp=N,18nm,3.9s						
KTH	Kantishna Hill	4.36	4		Pn	21 23 07.4	+1.3
KTH	Kantishna Hill	4.36	4	IAML		21 23 55.4	
	comp=E,16nm,4.9s						
KTH				IAML		21 24 06.8	
	comp=N,22nm,3.4s						
RND	Reindeer	4.39	16		Pn	21 23 07.4	+0.8
RND	Reindeer	4.39	16	IAML		21 24 17.2	
	comp=E,17nm,4.0s						
RND				IAML		21 24 24.2	
	comp=N,16nm,4.3s						
GLB	Gilahina Butte	4.43	57	Pn	Pn	21 23 07.7	+0.6
GLB				IAML		21 24 10.2	
	comp=N,21nm,3.5s						
CRQM	Cirque	4.48	66		Pn	21 23 08.6	+0.6
CRQM	Cirque	4.48	66	IAML		21 24 21.5	
	comp=E,22nm,3.1s						
VRDI	Verde Repeater	4.50	60		Pn	21 23 08.1	-0.1
VRDI	Verde Repeater	4.50	60	IAML		21 23 54.2	
	comp=E,15nm,3.9s						
VRDI				IAML		21 23 55.1	
	comp=N,17nm,3.0s						
TGL	Tana Glacier	4.63	67		Pn	21 23 10.6	+0.7
TGL	Tana Glacier	4.63	67	IAML		21 24 58.1	
	comp=E,19nm,3.8s						
TGL				IAML		21 25 18.5	
	comp=N,20nm,3.1s						
MCK	McKinley	4.69	14		Pn	21 23 11.8	+1.1
MCARA	McCarthy VSAT	4.75	59	Pn	Pn	21 23 11.8	+0.4
MCARA				IAML		21 24 41.9	
	comp=N,20nm,3.0s						
MCARA				IAML		21 25 12.9	
	comp=E,20nm,3.3s						
PAX	Paxson	4.77	35		Pn	21 23 12.7	+0.9
ISLE	Juniper Island	4.83	69		Pn	21 23 13.6	+0.9
KIAG	Kiagna River	4.90	66		Pn	21 23 14.0	+0.4
BPAW	Bear Paw Mtn.	4.90	3		Pn	21 23 14.0	+0.5
BPAW	Bear Paw Mtn.	4.90	3	IAML		21 24 35.2	
	comp=N,14nm,4.5s						
BPAW				IAML		21 25 04.6	
	comp=E,16nm,4.3s						
BALM	Baldy	4.94	64		Pn	21 23 14.5	+0.4
BALM	Baldy	4.94	64	IAML		21 24 46.7	
	comp=E,12nm,4.9s						
BALM				IAML		21 25 29.8	
	comp=N,17nm,3.1s						
MESA	MESA	4.94	75	Pn	Pn	21 23 16.3	+2.0
BWN	Browne	5.06	10	Pn	Pn	21 23 16.8	+1.1
YAH	Yahtse	5.07	73	Pn	Pn	21 23 17.9	+1.8
CTGM	Chitina Glacie	5.39	67		Pn	21 23 21.8	+1.5
WRH	Wood River Hil	5.51	16		Pn	21 23 22.2	+0.3
RIDG	Independent Ri	5.55	32	Pn	Pn	21 23 23.4	+1.0
HDA	Harding Lake	5.64	21	Pn	Pn	21 23 24.5	+0.9
CCB	Clear Creek Bu	5.72	16		Pn	21 23 25.0	+0.3
PCA	Pinnacle	5.78	76	Pn	Pn	21 23 27.0	+1.4
MLY	Manley	5.84	3		Pn	21 23 27.1	+0.7
MDM	Murphy Dome	5.96	14		Pn	21 23 28.4	+0.4
IL31		5.98	19		Pn	21 23 28.5	+0.3
ILAR	Eielson Array	5.98	19	P	Pn	21 23 28.7	+0.4
	comp=N,0.5nm,0.3s,baz=202,slow=14,SNR=20						
ILAR				S	Sn	21 24 33.0	-2.4
	comp=N,0.4nm,0.3s,baz=205,slow=5.6,SNR=7.3						
ILAR	Eielson Array	5.98	19		Pn	21 23 28.5	+0.2
BC03		6.09	47		Pn	21 23 31.0	+1.3
BCAR	Beaver Creek A	6.09	47	Pn	Pn	21 23 30.9	+1.1
PNL	Peninsula	6.20	81		Pn	21 23 31.9	+0.5
IM03		6.87	352		Pn	21 23 40.9	+0.5
IMAR	Indian Mountai	6.87	352	Pn	Pn	21 23 40.5	+0.1
DLBC	Dease Lake	11.16	85	P	Pn	21 24 44.8	+5.5
	comp=N,0.7nm,0.3s,baz=223,slow=14,SNR=4.1						
YKA	Yellowknife Ar	18.11	64	P	P	21 26 09.2	-0.9
	comp=N,0.1nm,0.3s,baz=276,slow=9.2,SNR=2.6						
MKAR	Makanchi Array	65.51	322	P	P	21 32 30.4	-10
	comp=N,0.2nm,0.5s,baz=46,slow=6.6,SNR=4.8						

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*IDC **31** 21:34:56.7±0.8,31°.49S×177°.70W,h0km,mb4.6/10,*
mb1 4.9/11,mb1mx4.6/31,mbtmp4.6/11,ML4.4/1,MS4.1/15,
Ms1 4.1/15,ms1mx3.8/47,Error ellipse: s-maj=28.2km
s-min=19.4km az=144.0
*NOU **31** 21:34:58.0,31°.78S×176°.96W,h32km,mb4.9,Kermadec*
Islands Region
*BJI **31** 21:34:59.5±0.0,31°.15S×177°.46W,h24km,mB5.6/8,*
mb5.1/15,Ms4.9/2,Ms7 4.6/2
*NEIC **31** 21:35:00.1±1.5,31°.44S±0°.07×177°.8W±0°.1,h19km±4km,*
mb4.9/32,Error ellipse: s-maj=18.3km s-min=9.8km
az=104.0
ISC 31 21:35:02.2±0.5**,31°.53S**±0°.06×**177°.81W**±0°.09**,h35**km**,**
n123,σ**1ˢ45**/123**,mb5.0**/29**,MS4.1**/16**,9C-2D,Kermadec**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.27	358	Pn	Pn	21 35 34.5	-2.8
	104nm,0.3s,baz=93,slow=18,SNR=7.3						
RAO				Sn	Sn	21 36 04.5	+0.4
	310nm,0.3s,baz=129,slow=23,SNR=10.0						
URZ	Urewera	7.90	210	Pn	Pn	21 36 50.6	-3.9
	3.0nm,0.3s,baz=76,slow=14,SNR=16						
URZ				Sn	Sn	21 38 20.1	-2.7
	9.9nm,0.3s,baz=231,slow=18,SNR=9.9						
BKZ	Black Stump Fm	8.92	210	Pn	Pn	21 37 07.6	-1.0
MSVF	Nonsavu	14.24	344	Pn	Pn	21 38 19.4	-2.1
RPZ	Rata Peaks	15.01	213	Pn	Pn	21 38 26.7	-5.0
	1.3nm,0.3s,baz=109,slow=8.9,SNR=2.5						
RPZ				Sn	Sn	21 41 01.8	-15
	0.5nm,0.3s,baz=183,slow=18,SNR=2.2						
DZM	Mont Dzumac	16.91	300	LR	LR	21 44 36.8	
	comp=Z,2μm,18.4s,baz=166,slow=34						
DZM	Mont Dzumac	16.91	300	ePn	P	21 39 02.4	+4.4
	157nm,1.4s						
DZM				eLR	LR	21 43 02.0	
	comp=Z,1μm,22.4s						
DZM	Mont Dzumac	16.91	300	Pn	Pn	21 38 55.4	-0.9
AFI	Afiamalu	18.39	19	P	P	21 39 11.8	-2.6
AFI				IAmb	IAmb	21 39 13.6	
	comp=Z,96nm,1.0s						
RAR	Rarotonga	19.12	62	LR	LR	21 46 26.5	
	comp=Z,229nm,18.8s,baz=253,slow=36						
ARMA	Armidale	26.19	264	P	P	21 40 35.9	+2.2
TBI	Tubuai	26.39	79	eLR	LR	21 47 15.5	
	comp=Z,348nm,22.2s						
TBI	Tubuai	26.39	79	eT	T	22 07 47.4	
	comp=Z,11nm,0.3s						
EIDS	Eidsvold	27.98	275	P	P	21 40 51.0	+1.3
EIDS				IAmb	IAmb	21 41 04.3	
	comp=Z,16nm,1.0s						
PAE	Paea	29.04	68	eT	T	22 11 06.6	
	comp=Z,2.2nm,0.3s						
PPT2	Papeete2	29.08	68	eLR	LR	21 48 32.3	
	comp=Z,249nm,21.0s						
PPT	Papeete	29.10	68	LR	LR	21 52 17.4	
	comp=Z,235nm,18.3s,baz=200,slow=36						
TOO	Toolangi	30.69	249	P	P	21 41 15.0	+1.3
TOO				IAmb	IAmb	21 41 16.9	
	comp=Z,26nm,1.1s						
VAH	Vaihoa	31.96	66	eT	T	22 14 45.2	
	comp=Z,6.7nm,0.3s						
CTAO	Charters Tower	34.16	281	P	P	21 41 46.1	+1.9
STKA	Stephens Creek	34.40	259	P	P	21 41 47.8	+1.6
	comp=Z,7.6nm,0.8s,baz=96,slow=13,SNR=12						
STKA				LR	LR	21 55 29.7	
	comp=Z,438nm,18.0s,baz=48,slow=36						
STKA	Stephens Creek	34.40	259	P	P	21 41 47.1	+0.9
BBOO	Buckleboo	38.83	256	P	P	21 42 24.0	+0.1
BBOO				IAmb	IAmb	21 42 39.7	
	comp=Z,27nm,1.1s						
PMG	Port Moresby	39.25	296	LR	LR	21 56 37.0	
	comp=Z,145nm,19.5s,baz=104,slow=33						
COEN	Coen	39.75	287	P	P	21 42 32.6	+0.9
AS31	Alice Springs	43.22	268	P	P	21 43 00.6	+0.4
AS31				IAmb	IAmb	21 43 16.2	
	comp=Z,13nm,0.7s						
ASAR	Alice Springs	43.23	268	P	P	21 43 00.7	+0.4
	comp=Z,12nm,0.8s,baz=110,slow=7.7,SNR=92						
ASAR				PcP	PcP	21 44 50.1	+0.9
	comp=Z,1.6nm,0.7s,baz=121,slow=4.4,SNR=1.5						
ASAR				ScP	ScP	21 48 40.7	+3.0
	comp=Z,1.3nm,1.1s,baz=136,slow=4.5,SNR=2.8						
ASAR				LR	LR	22 00 59.7	
	comp=Z,292nm,18.1s,baz=102,slow=36						
ASAR	Alice Springs	43.23	268	P	P	21 43 00.2	-0.1
WR0	Warramunga Arr	44.14	273	P	P	21 43 07.9	+0.3
WRA	Warramunga Arr	44.32	273	P	P	21 43 09.5	+0.5
	comp=Z,37nm,0.8s,baz=113,slow=7.6,SNR=158						

WRA				PcP	PP	21 44 52.7	0.0
	comp=Z,3.0nm,1.0s,baz=122,slow=3.5,SNR=1.7						
WRA				ScP	ScP	21 48 46.0	+3.8
	comp=Z,1.9nm,1.1s,baz=110,slow=3.7,SNR=5.1						
WRA				LR	LR	22 01 23.2	
	comp=Z,607nm,18.3s,baz=120,slow=36						
JAY	Jayapura	48.57	298	LR	LR	22 02 06.5	
	comp=Z,120nm,21.9s,baz=147,slow=34						
MTN	Manton Dam	50.33	280	P	P	21 43 56.0	+0.1
MTN				IAmb	IAmb	21 44 09.0	
	comp=Z,22nm,1.3s						
FITZ	Fitzroy Crossi	52.53	271	P	P	21 44 12.4	+0.1
	comp=Z,12nm,0.8s,baz=146,slow=4.9,SNR=17						
FITZ	Fitzroy Crossi	52.53	271	P	P	21 44 12.4	+0.1
FITZ				IAmb	IAmb	21 44 13.8	
	comp=Z,17nm,0.9s						
MORW	Morawa	56.37	254	P	P	21 44 39.5	-0.7
MORW				IAmb	IAmb	21 44 43.0	
	comp=Z,9.9nm,1.0s						
SOEI	Soe	57.69	279	P	P	21 44 49.3	-0.4
QSPA	South Pole Qui	58.58	180	P	P	21 44 56.9	+1.6
GIRL	Giralia	60.31	260	P	P	21 45 07.5	-0.3
LEM	Lembang	73.32	272	LR	LR	22 19 31.2	
	comp=Z,100nm,19.5s,baz=246,slow=36						
SNAA	Sanae	77.02	178	P	P	21 46 51.9	+0.8
BKNI	Bangkinang	82.62	275	P	P	21 47 21.5	-0.9
KSRS	Korea Array	85.31	320	P	P	21 47 36.0	+0.6
	comp=Z,1.8nm,0.8s,baz=138,slow=5.9,SNR=5.1						
KSRS				LR	LR	22 22 02.2	
	comp=Z,55nm,18.0s,baz=112,slow=33						
KSAR	Wonju Array Be	85.33	320	P	P	21 47 35.9	+0.4
GSI	Gunungsitoli	86.08	274	P	P	21 47 39.9	0.0
MONP2	Monument Peak	86.40	48	P	P	21 47 42.7	+1.4
	baz=229						
BFSC	Mount Baldy Ra	86.52	46	P	P	21 47 43.2	+1.5
	baz=228						
EDW2	Edwards Air Fo	86.75	45	P	P	21 47 44.1	+1.4
	baz=228						
PEA0B	Petropavlovsk-	86.95	346	P	P	21 47 43.7	+0.6
PEA0B				IAmb	IAmb	21 47 44.2	
	comp=Z,15nm,1.0s						
PETK	Petropavlovsk-	86.95	346	P	P	21 47 43.3	+0.2
	comp=Z,10nm,0.8s,baz=134,slow=6.4,SNR=16						
PETK	Petropavlovsk-	86.95	346	P	P	21 47 43.1	0.0
ISA	Isabella, Lake	86.99	45	P	P	21 47 45.6	+1.7
	baz=227						
ISA	Isabella, Lake	86.99	45	P	P	21 47 43.5	-0.3
ISA				IAmb	IAmb	21 47 46.4	
	comp=Z,6.2nm,1.1s						
NJ2	Nanjing	87.11	311	*e*P	P	21 47 46.0	+1.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMB	Columbia Colle	87.49	42	P	P	21 47 46.0	-0.2
CMB				IAmb	IAmb	21 47 48.2	
	comp=Z,6.5nm,1.2s						
BC3	Big Chuckawall	87.51	48	P	P	21 47 48.3	+1.8
	baz=229						
O02D	Mt. Diablo Mer	87.67	39	P	P	21 47 49.0	+1.9
	baz=224						
HEC	Hector,Ludlow	87.73	46	P	P	21 47 49.1	+1.6
	baz=228						
GSC	Goldstone, Bar	87.75	46	P	P	21 47 49.0	+1.4
	baz=228						
MPMC	Manual Prospec	87.84	45	P	P	21 47 49.1	+1.0
	baz=228						
IRM	Iron Mountain	88.03	47	P	P	21 47 51.0	+2.1
	baz=229						
USRK	Ussuriysk Ar.	88.19	326	P	P	21 47 49.0	-0.3
	comp=Z,2.6nm,0.7s,baz=90,slow=5.8,SNR=5.4						
USRK	Ussuriysk Ar.	88.19	326	P	P	21 47 48.9	-0.4
WAKR	Walker	88.36	42	P	P	21 47 50.1	-0.4
WAKR				IAmb	IAmb	21 47 52.9	
	comp=Z,6.6nm,1.2s						
NVAR	Mina Array Bea	88.96	43	P	P	21 47 54.0	+0.6
	comp=Z,2.5nm,1.0s,baz=223,slow=6.5,SNR=11						
NVAR				LR	LR	22 24 04.7	
	comp=Z,155nm,18.1s,baz=256,slow=33						
NVAR	Mina Array Bea	88.96	43	P	P	21 47 53.6	+0.2
L04D	Klamath Falls	89.38	38	P	P	21 47 55.5	+0.4
	baz=225						
W13A	Hualapai Mount	89.43	47	P	P	21 47 56.3	+0.6
HPIG		90.04	58	P	P	21 47 58.4	-0.3
HPIG				IAmb	IAmb	21 48 10.7	
	comp=Z,9.8nm,0.9s						
J04D	Umpqua Nationa	90.21	37	P	P	21 47 59.1	0.0
	baz=225						
X16A	Lo Mia Camp, P	90.56	49	P	P	21 48 01.3	+0.3
J05D	Fort Rock, OR	90.69	38	P	P	21 48 02.4	+1.1
	baz=225						
CN2	Changchun	91.14	323	*e*P	P	21 48 02.0	-1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H04A	Detroit Lake	91.19	36	P	P	21 48 03.5	+0.1
H04A				IAmb	IAmb	21 48 09.0	
	comp=Z,12nm,1.3s						
PINE	Pine Mountain	91.20	37	P	P	21 48 04.2	+0.5
PINE				IAmb	IAmb	21 48 05.9	
	comp=Z,8.6nm,1.2s						
WUAZ	Wupatki	91.29	48	P	P	21 48 05.6	+1.4
	baz=231						
WUAZ	Wupatki	91.29	48	P	P	21 48 03.8	-0.4
WUAZ				IAmb	IAmb	21 48 06.3	
	comp=Z,9.6nm,1.4s						
KNB	Kanab	91.32	47	P	P	21 48 04.4	0.0
TXAR	Lajitas Array	92.86	57	P	P	21 48 12.1	+0.5
	comp=Z,0.3nm,0.6s,baz=221,slow=5.0,SNR=3.9						
NNA	Nana	92.95	106	LR	LR	22 20 39.1	
	comp=Z,57nm,21.2s,baz=224,slow=30						
LVC	Limon Verde	93.25	119	LR	LR	22 21 46.6	
	comp=Z,81nm,19.3s,baz=252,slow=30						
G08A	Pilot Rock	93.26	37	P	P	21 48 12.9	-0.1
G08A				IAmb	IAmb	21 48 19.6	
	comp=Z,10.0nm,1.5s						
HLID	Hailey	94.55	41	P	P	21 48 20.2	+1.1
	baz=230						
PDAR	Pinedale Array	96.84	44	P	P	21 48 29.2	-0.4
	comp=Z,0.8nm,1.0s,baz=238,slow=5.2,SNR=1.0						
PDAR				LR	LR	22 27 05.2	
	comp=Z,96nm,18.6s,baz=284,slow=32						
HHC	Hu-ho-hao-te	97.14	314	*e*P	P	21 48 30.0	-0.9
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
CPUP	Villa Florida	99.15	128	LR	LR	22 28 35.3	
	comp=Z,54nm,19.6s,baz=122,slow=32						
LZH	Lanzhou	99.53	306	*e*P	Pdif	21 48 42.0	+0.2
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
LZH				pmax	pmax		
	comp=Z,89nm,9.5s						
WMQ	Urumqi	114.05	308	*e*PKP	PKiKP	21 53 38.5	+1.0
WMQ				sPKP		21 53 51.5	
WMQ				LR	LR		
	comp=Z,510nm,29.2s						
WMQ				LR	LR		
	comp=Z,190nm,29.0s						
MKAR	Makanchi Array	118.62	310	PKP	PKPdf	21 53 45.6	-0.6
	comp=Z,0.9nm,0.8s,baz=66,slow=2.9,SNR=6.8						
MKAR	Makanchi Array	118.62	310		PKPdf	21 53 45.5	-0.7
KURK	Kurchatov	121.95	313		PKPdf	21 53 51.8	-0.6
KURBB	Kurchatov Arra	121.98	313	PKP	PKPdf	21 53 52.0	-0.5
	comp=Z,1.7nm,0.9s,baz=122,slow=1.9						
AAK	Ala-Archa	122.87	303	PKP	PKPdf	21 53 54.2	-0.4
	comp=Z,1.2nm,0.8s,baz=270,slow=7.0,SNR=6.2						
AAK	Ala-Archa	122.87	303		PKPdf	21 53 54.0	-0.6
KBL	Kabul	124.81	292	PKPdf	PKiKP	21 53 59.1	+0.1
KKAR	Karatay Array	125.83	303	PKPdf	PKPdf	21 53 59.5	-0.6
GEYT	Alibeck	134.18	294	PKP	PKiKP	21 54 17.4	-0.1
	comp=Z,0.4nm,0.4s,baz=134,slow=4.2,SNR=2.4						
ARCES	ARCESS Array B	139.73	348	PKhKP	PKPpre	21 54 20.9	
	comp=Z,2.8nm,0.9s,baz=35,slow=2.2,SNR=1.4						
AKH	Akhalkalaki	145.64	298	⇑P	PKPab	21 54 38.1	+0.5
AKH	Akhalkalaki	145.64	298		PKPab	21 54 37.9	+0.3
KBZ	Khabaz	145.87	303	PKPbc	PKPbc	21 54 37.5	-0.2
	comp=Z,14nm,1.0s,baz=141,slow=1.1,SNR=13						
KIV	Kislovodsk	145.99	303	⇑P	PKPab	21 54 39.1	+0.4
OBN	Obninsk	146.19	324	⇑P	PKPbc	21 54 38.4	+0.2
FINES	FINESS Array B	146.26	339	PKPbc	PKPbc	21 54 37.8	-0.5
	comp=Z,27nm,0.8s,baz=64,slow=4.4,SNR=34						
FINES	FINESS Array B	146.26	339		PKPbc	21 54 38.0	-0.3
NB2	NORSAR Subarra	149.89	351	PKP	PKPbc	21 54 47.7	-0.3
	comp=Z,1.5nm,0.8s,baz=13,slow=2.7						
NOA	NORSAR Array B	149.89	351	PKPbc	PKPbc	21 54 47.7	-0.3
	comp=Z,3.3nm,0.9s,baz=14,slow=4.2,SNR=7.7						
MNK	Minsk	150.64	329	*i* PKP	PKPdf	21 54 45.8	+1.4
	comp=E,2.0nm,0.9s						
MNK				*i* PKP	PKPdf	21 54 45.8	+1.4
	comp=N,34nm,1.3s						
MNK				*i* PKP	PKPdf	21 54 45.8	+1.4
	comp=Z,14nm,0.9s						
MNK				*i* SKP		21 58 16.7	
MNK				*i* PKS	PKSdf	21 58 20.7	+1.7
MNK				*i* PP	PP	21 58 25.3	-1.3
MNK				*i* PPP	PPP	22 01 48.7	
MNK				*i* SKS	SKSdf	22 01 51.1	+1.8
MNK				*i* SKKS	SKKSdf	22 10 42.5	+1.0
MNK				*i* SS	SS	22 17 45.7	+1.9
MNK				*i* SSS	SSS	22 23 27.5	
MNK				*i* LQ	LQ	22 54 43.3	
MNK				*i* LR	LR	23 06 10.6	
NACGM	Naroch	150.84	330	*i* PKP	PKPbc	21 54 50.0	-0.4
NACGM				*i* PKP	PKPbc	21 54 50.0	-0.4
NACGM				*i* PKP	PKPbc	21 54 50.0	-0.4
NACGM				*i* PP	PP	21 58 03.6	-24
NACGM				*i* PPP	PPP	22 02 01.1	
NACGM				*i* SKS	SKSdf	22 02 12.8	+23
NACGM				*i* SKKS	SKKSac	22 05 10.2	-5.4
NACGM				*i* SS	SS	22 18 27.8	+42
NACGM				*i* SSS	SSS	22 23 30.6	
NACGM				*i* LQ	LQ	22 40 08.3	
NACGM				*i* LR	LR	22 46 11.9	
AKASG	Malin Array Be	152.29	322	PKPbc	PKPbc	21 54 53.6	-0.3
	comp=Z,3.8nm,0.8s,baz=45,slow=2.7,SNR=12						
BRTR	Keskin Array B	153.27	297	PKPbc	PKPbc	21 54 56.0	-0.6
	comp=Z,1.8nm,0.8s,baz=54,slow=2.7,SNR=6.2						
BRTR	Keskin Array B	153.27	297		PKPbc	21 54 56.6	-0.1
BIZ	Bicaz	156.06	317	⇑P	PKPab	21 55 15.4	-4.7
ODBI	Odobesti	156.06	313	⇑P	PKPab	21 55 22.1	+2.0
DOPR	Dopca	156.98	315	⇑P	PKPab	21 55 24.7	+0.6
ARR	Arges	157.74	315	⇓P	PKPab	21 55 28.1	+0.6
HUMR	Humele	157.94	312	⇑P	PKPab	21 55 28.1	-0.1
BRG	Berggiesshubel	158.80	339	Amp		21 55 32.8	
	comp=Z,9.5nm,0.9s						
BRG	Berggiesshubel	158.80	339	*i* PKP	PKPab	21 55 31.5	-0.2
HERR	Herculane	159.33	316	⇑P	PKPab	21 55 34.4	+0.1
BZS	Buzias	159.38	318	⇓P	PKPab	21 55 33.8	-0.6
MDVR	Moldovita	159.80	316	⇑P	PKPab	21 55 35.3	-1.1
TORD	Torodi Ar. Bea	161.70	178	PKPab	PKPab	21 55 44.5	-0.6
	comp=Z,2.0nm,0.8s,baz=192,slow=3.0,SNR=5.5						
TORD	Torodi Ar. Bea	161.70	178		PKPab	21 55 45.2	+0.1

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*STR **31** 21:54:01.5±0.3, 47°N±1°×°±°, h3^{km}, MLv3.1/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*ZUR **31** 21:54:01.8, 47°.15N×7°.15E, h10^{km}, MLh3.1/82, Error ellipse: s-maj=1.5km s-min=0.4km az=179.0*
*BGR **31** 21:54:02.3±0.4, 47°.20N×7°.14E, h10^{km}, ML3.3/17, Error ellipse: s-maj=4.4km s-min=2.2km az=39.0*
*BNS **31** 21:54:02.6±0.2, 47°.19N×7°.39E, h5^{km}, ML2.7*
*LDG **31** 21:54:02.5±0.0, 47°.15N×7°.19E, h10^{km}, Md3.4/1, Ml3.4/36, Error ellipse: s-maj=0.9km s-min=0.7km az=133.0*
*PRU **31** 21:54:03.6±0.0, 47°.14N×7°.27E, h0^{km}*
ISC 31 21:54:01.1±0.8**, 47°.156N**±0°.010×**7°.15E**±0°.01**, h18**^{km}±2^{km}**,**
n330, σ1§22/621**, 145C-56D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBIK	Biel, Kongress	0.07	109	Pg	Pg	21 54 04.1	-0.4
	33nm,SNR=107						
SBIK				Pg	Pg	21 54 04.1	-0.4
SBIK				Sg	Sg	21 54 05.9	-1.0
SNES2	Neuenburg, Obs	0.21	221	⇓Pg	Pb	21 54 06.2	+0.3
SNES2				⇓Pg	Pb	21 54 06.2	+0.3
	1.8nm,SNR=17						
SNES2	Neuenburg, Obs	0.21	221	⇓Pg	Pb	21 54 06.2	+0.3
SNES2				⇓Pg	Pb	21 54 06.2	+0.3
	1.8nm,SNR=17						
MTI03	Mont Terri (fr	0.22	3	⇑Pg	Pg	21 54 06.8	+0.4
MTI03				⇑Pg	Pg	21 54 06.8	+0.4
	4.2nm,SNR=10						
MTI03	Mont Terri (fr	0.22	3	⇑Pg	Pg	21 54 06.8	+0.4
	4.2nm,SNR=10						
MTI03				⇑Pg	Pg	21 54 06.8	+0.4
MTI01	Mont Terri (ME	0.22	2	⇑Pg	Pg	21 54 06.8	+0.4
	2.4nm,SNR=13						
MTI01				⇑Pg	Pg	21 54 06.8	+0.4
MTI01	Mont Terri (ME	0.22	2	⇑Pg	Pg	21 54 06.8	+0.4
MTI01				⇑Pg	Pg	21 54 06.8	+0.4
	2.4nm,SNR=13						
MTI02	Mont Terri, (H	0.22	2	⇑Pg	Pg	21 54 06.8	+0.4
MTI02				⇑Pg	Pg	21 54 06.8	+0.4
	2.9nm,SNR=17						
MTI02				Sg	Sg	21 54 10.2	+0.1
MTI02	Mont Terri, (H	0.22	2	⇑Pg	Pg	21 54 06.8	+0.4
MTI02				⇑Pg	Pg	21 54 06.8	+0.4
	2.9nm,SNR=17						
MTI02				Sg	Sg	21 54 10.2	+0.1
BOURR	Bourrignon	0.24	13	⇑Pg	Pg	21 54 07.3	+0.5
	2.3nm,SNR=15						
BOURR				⇑Pg	Pg	21 54 07.3	+0.5
BOURR	Bourrignon	0.24	13	⇑Pg	Pg	21 54 07.3	+0.5
	2.3nm,SNR=15						
BOURR				⇑Pg	Pg	21 54 07.3	+0.5
SOLB	Solothurn Schu	0.25	78	⇑Pg	Pg	21 54 07.3	+0.4
	2.1nm,SNR=11						
SOLB				⇑Pg	Pg	21 54 07.3	+0.4
SOLB	Solothurn Schu	0.25	78	⇑Pg	Pg	21 54 07.3	+0.4
SOLB				⇑Pg	Pg	21 54 07.3	+0.4
	2.1nm,SNR=11						
SOLZ	Solothurn, Zeu	0.27	79	⇑Pg	Pg	21 54 07.5	+0.4
SOLZ				⇑Pg	Pg	21 54 07.5	+0.4
	1.7nm,SNR=10						
SOLZ	Solothurn, Zeu	0.27	79	⇑Pg	Pg	21 54 07.5	+0.4
SOLZ				⇑Pg	Pg	21 54 07.5	+0.4
	1.7nm,SNR=10						
LOMF	Lomont	0.29	312	Pg	Pb	21 54 08.2	+0.5
LOMF				Sg	Sg	21 54 12.0	-0.1
SCOU	Cournillens	0.30	186	⇑Pg	Pg	21 54 08.0	+0.3
	1.3nm,SNR=8.3						
SCOU				⇑Pg	Pg	21 54 08.0	+0.3
SCOU				Sg	Sg	21 54 12.5	+0.3
SCOU	Cournillens	0.30	186	⇑Pg	Pg	21 54 08.0	+0.3
	1.3nm,SNR=8.3						
SCOU				⇑Pg	Pg	21 54 08.0	+0.3
SCOU				Sg	Sg	21 54 12.5	+0.3
CHMF	Charmoille	0.35	285	⇑Pg	Pg	21 54 09.0	+0.4
	1.8nm,SNR=15						
CHMF				⇑Pg	Pg	21 54 09.0	+0.4
CHMF				Sg	Sg	21 54 14.0	+0.3
CHMF	Charmoille	0.35	285	⇑Pg	Pg	21 54 09.0	+0.4
	1.8nm,SNR=15						
CHMF				⇑Pg	Pg	21 54 09.0	+0.4
CHMF				Sg	Sg	21 54 14.0	+0.3
CHMF	Charmoille	0.35	285	Pg	Pg	21 54 09.0	+0.4
CHMF				Sg	Sg	21 54 13.9	+0.3
STAF	Tafers	0.35	173	⇑Pg	Pg	21 54 09.0	+0.4
	1.1nm,SNR=6.1						
STAF				⇑Pg	Pg	21 54 09.0	+0.4
STAF				Sg	Sg	21 54 14.1	+0.5
STAF	Tafers	0.35	173	⇑Pg	Pg	21 54 09.0	+0.4
STAF				⇑Pg	Pg	21 54 09.0	+0.4
	1.1nm,SNR=6.1						
STAF				Sg	Sg	21 54 14.1	+0.5
TORNY	Torny/Romont	0.41	199	⇑Pg	Pg	21 54 10.0	+0.5
	0.9nm,SNR=8.1						
TORNY				⇑Pg	Pg	21 54 10.0	+0.5
TORNY				Sg	Sb	21 54 15.9	+0.2
TORNY	Torny/Romont	0.41	199	⇑Pg	Pg	21 54 10.0	+0.5
TORNY				⇑Pg	Pg	21 54 10.0	+0.5
	0.9nm,SNR=8.1						
TORNY				Sg	Sb	21 54 15.9	+0.2
BALST	Balsthal	0.41	64	⇑Pg	Pb	21 54 10.2	+0.3
BALST				⇑Pg	Pb	21 54 10.2	+0.3
	0.8nm,SNR=7.1						
BALST	Balsthal	0.41	64	⇑Pg	Pb	21 54 10.2	+0.3
	0.8nm,SNR=7.1						
BALST				⇑Pg	Pb	21 54 10.2	+0.3
BALST	Balsthal	0.41	64	*e*Pg	Pb	21 54 10.2	+0.3
BALST				*e*Sg	Sb	21 54 16.1	+0.2
SBIS2	Binningen	0.48	37	⇑Pg	Pb	21 54 11.9	+0.8
SBIS2				⇑Pg	Pb	21 54 11.9	+0.8
	1.8nm,SNR=7.7						
SBIS2	Binningen	0.48	37	⇑Pg	Pb	21 54 11.9	+0.8
SBIS2				⇑Pg	Pb	21 54 11.9	+0.8
	1.8nm,SNR=7.7						
SBAT	Basel-Tropenha	0.50	36	⇑Pg	Pb	21 54 12.1	+0.8
	2.2nm,SNR=2.9						
SBAT				⇑Pg	Pb	21 54 12.1	+0.8
SBAT	Basel-Tropenha	0.50	36	⇑Pg	Pb	21 54 12.1	+0.8
SBAT				⇑Pg	Pb	21 54 12.1	+0.8
	2.2nm,SNR=2.9						
SBAW	Basel, Wirtsch	0.50	38	⇑Pg	Pb	21 54 12.1	+0.8
	1.2nm,SNR=4.7						
SBAW				⇑Pg	Pb	21 54 12.1	+0.8
SBAW	Basel, Wirtsch	0.50	38	⇑Pg	Pb	21 54 12.1	+0.8
SBAW				⇑Pg	Pb	21 54 12.1	+0.8
	1.2nm,SNR=4.7						
SBAM2	Basel, Mnster	0.50	37	⇑Pg	Pb	21 54 12.2	+0.9
SBAM2				⇑Pg	Pb	21 54 12.2	+0.9
	2.4nm,SNR=6.7						
SBAM2	Basel, Mnster	0.50	37	⇑Pg	Pb	21 54 12.2	+0.9
SBAM2				⇑Pg	Pb	21 54 12.2	+0.9
	2.4nm,SNR=6.7						
SBAP	Basel-PUK	0.50	34	⇑Pg	Pb	21 54 12.1	+0.8
SBAP				⇑Pg	Pb	21 54 12.1	+0.8
	1.2nm,SNR=4.3						
SBAP	Basel-PUK	0.50	34	⇑Pg	Pb	21 54 12.1	+0.8
	1.2nm,SNR=4.3						
SBAP				⇑Pg	Pb	21 54 12.1	+0.8
SBAJ2	Basel, St Joha	0.51	35	⇑Pg	Pb	21 54 12.2	+0.8
	1.5nm,SNR=0.5						
SBAJ2				⇑Pg	Pb	21 54 12.2	+0.8
SBAJ2	Basel, St Joha	0.51	35	⇑Pg	Pb	21 54 12.2	+0.8
	1.5nm,SNR=0.5						
SBAJ2				⇑Pg	Pb	21 54 12.2	+0.8
SBAV	Basel, Vogelsa	0.51	37	⇑Pg	Pb	21 54 12.4	+0.9
	1.6nm,SNR=4.1						
SBAV				⇑Pg	Pb	21 54 12.4	+0.9
SBAV	Basel, Vogelsa	0.51	37	⇑Pg	Pb	21 54 12.4	+0.9
SBAV				⇑Pg	Pb	21 54 12.4	+0.9
	1.6nm,SNR=4.1						
BRANT	Les Verrieres	0.51	245	⇑Pg	Pb	21 54 12.0	+0.5
	0.5nm,SNR=3.2						
BRANT				⇑Pg	Pb	21 54 12.0	+0.5
BRANT	Les Verrieres	0.51	245	⇑Pg	Pb	21 54 12.0	+0.5
	0.5nm,SNR=3.2						
BRANT				⇑Pg	Pb	21 54 12.0	+0.5
SBAK	Basel, Klybeck	0.51	36	Pg	Pb	21 54 12.3	+0.8
SBAK				Pg	Pb	21 54 12.3	+0.8
	1.8nm,SNR=4.1						
SBAK	Basel, Klybeck	0.51	36	Pg	Pb	21 54 12.3	+0.8
	1.8nm,SNR=4.1						
SBAK				Pg	Pb	21 54 12.3	+0.8
SBIF2	Birsfelden, Fr	0.51	39	Pg	Pb	21 54 12.3	+0.8
SBIF2				Pg	Pb	21 54 12.3	+0.8
	1.2nm,SNR=5.4						
SBIF2	Birsfelden, Fr	0.51	39	Pg	Pb	21 54 12.3	+0.8
	1.2nm,SNR=5.4						
SBIF2				Pg	Pb	21 54 12.3	+0.8
SMZW	Muttenz-Waldha	0.52	41	Pg	Pb	21 54 12.2	+0.7
SMZW				Pg	Pb	21 54 12.2	+0.7
	3.0nm,SNR=16						
SMZW	Muttenz-Waldha	0.52	41	Pg	Pb	21 54 12.2	+0.7
	3.0nm,SNR=16						
SMZW				Pg	Pb	21 54 12.2	+0.7
SBAF	Basel-Friedhof	0.52	35	Pg	Pb	21 54 12.5	+0.9
	1.2nm,SNR=3.3						
SBAF				Pg	Pb	21 54 12.5	+0.9
SBAF	Basel-Friedhof	0.52	35	Pg	Pb	21 54 12.5	+0.9
	1.2nm,SNR=3.3						
SBAF				Pg	Pb	21 54 12.5	+0.9
SAUR	Augst-Roemermu	0.54	46	⇑Pg	Pg	21 54 12.5	+0.6
	1.6nm,SNR=11						
SAUR				⇑Pg	Pg	21 54 12.5	+0.6
SAUR	Augst-Roemermu	0.54	46	⇑Pg	Pg	21 54 12.5	+0.6
SAUR				⇑Pg	Pg	21 54 12.5	+0.6
	1.6nm,SNR=11						
SBEG	Bettingen Gewe	0.54	40	⇑Pg	Pg	21 54 12.6	+0.7
	1.3nm,SNR=6.7						
SBEG				⇑Pg	Pg	21 54 12.6	+0.7
SBEG	Bettingen Gewe	0.54	40	⇑Pg	Pg	21 54 12.6	+0.7
SBEG				⇑Pg	Pg	21 54 12.6	+0.7
	1.3nm,SNR=6.7						
SKAF	Kaiseraugst-Fr	0.54	45	⇑Pg	Pg	21 54 12.5	+0.6
	0.7nm,SNR=4.2						
SKAF				⇑Pg	Pg	21 54 12.5	+0.6
SKAF	Kaiseraugst-Fr	0.54	45	⇑Pg	Pg	21 54 12.5	+0.6
	0.7nm,SNR=4.2						
SKAF				⇑Pg	Pg	21 54 12.5	+0.6
SRHH	Riehen, Zur Ho	0.54	39	Pg	Pg	21 54 12.7	+0.7
SRHH				Pg	Pg	21 54 12.7	+0.7
	0.7nm,SNR=3.9						
SRHH	Riehen, Zur Ho	0.54	39	Pg	Pg	21 54 12.7	+0.7
SRHH				Pg	Pg	21 54 12.7	+0.7
	0.7nm,SNR=3.9						
WIMIS	Wimmis	0.59	146	⇓Pg	Pg	21 54 13.2	+0.4
WIMIS				⇓Pg	Pg	21 54 13.2	+0.4
	0.6nm,SNR=4.7						
WIMIS	Wimmis	0.59	146	⇓Pg	Pg	21 54 13.2	+0.4
	0.6nm,SNR=4.7						
WIMIS				⇓Pg	Pg	21 54 13.2	+0.4
DAGMA	Lutertal, Dagm	0.59	82	⇑Pg	Pg	21 54 13.4	+0.5
	1.1nm,SNR=7.5						
DAGMA				⇑Pg	Pg	21 54 13.4	+0.5
DAGMA	Lutertal, Dagm	0.59	82	⇑Pg	Pg	21 54 13.4	+0.5
	1.1nm,SNR=7.5						
DAGMA				⇑Pg	Pg	21 54 13.4	+0.5
ROTHE	Rothenfluh	0.61	58	⇑Pg	Pg	21 54 14.0	+0.7
ROTHE				⇑Pg	Pg	21 54 14.0	+0.7
	1.3nm,SNR=9.9						
ROTHE	Rothenfluh	0.61	58	⇑Pg	Pg	21 54 14.0	+0.7
ROTHE				⇑Pg	Pg	21 54 14.0	+0.7
	1.3nm,SNR=9.9						
EMMET	Emmethof	0.65	64	⇑Pg	Pg	21 54 14.6	+0.7
	1.9nm,SNR=19						
EMMET				⇑Pg	Pg	21 54 14.6	+0.7
EMMET	Emmethof	0.65	64	⇑Pg	Pg	21 54 14.6	+0.7
EMMET				⇑Pg	Pg	21 54 14.6	+0.7
	1.9nm,SNR=19						
HINF	Hinteralfeld	0.69	343	*e*Pg	Pg	21 54 15.2	+0.5
HINF	Hinteralfeld	0.69	343	*e*Pn	Pn	21 54 17.0	+1.0
HINF				*e*Sg	Sg	21 54 25.4	+1.5
	527nm,0.3s						
MOF	Molkenrain	0.70	359	Pg	Pg	21 54 15.7	+0.9
MOF				Sg	Sg	21 54 24.9	+0.8
SULZ	Cheisacher	0.75	60	⇑Pg	Pg	21 54 16.4	+0.6
SULZ				⇑Pg	Pg	21 54 16.4	+0.6
	1.7nm,SNR=16						
SULZ	Cheisacher	0.75	60	⇑Pg	Pg	21 54 16.4	+0.6
SULZ				⇑Pg	Pg	21 54 16.4	+0.6
	1.7nm,SNR=16						
SULZ	Cheisacher	0.75	60	*e*Pg	Pg	21 54 16.5	+0.6
SULZ				*e*Sg	Sg	21 54 26.7	+0.9
HAMIK	Hmikon, Dlik	0.77	83	⇑Pn	Pg	21 54 16.7	+0.6
	1.2nm,SNR=6.7						
HAMIK				⇑Pn	Pg	21 54 16.7	+0.6
HAMIK	Hmikon, Dlik	0.77	83	⇑Pn	Pg	21 54 16.7	+0.6
	1.2nm,SNR=6.7						
HAMIK				⇑Pn	Pg	21 54 16.7	+0.6
HASLI	Hasliberg/Brie	0.79	120	Pn	Pg	21 54 17.1	+0.5
	1.3nm,SNR=8.8						
HASLI				Pn	Pg	21 54 17.1	+0.5
HASLI	Hasliberg/Brie	0.79	120	Pn	Pg	21 54 17.1	+0.5
HASLI				Pn	Pg	21 54 17.1	+0.5
	1.3nm,SNR=8.8						
SENIN	Lac Senin/Sane	0.80	173	⇑Pn	Pb	21 54 16.9	+0.4
SENIN				⇑Pn	Pb	21 54 16.9	+0.4
	1.0nm,SNR=9.7						
SENIN	Lac Senin/Sane	0.80	173	⇑Pn	Pb	21 54 16.9	+0.4
SENIN				⇑Pn	Pb	21 54 16.9	+0.4
	1.0nm,SNR=9.7						
AIGLE	Aigle	0.83	190	⇑Pn	Pg	21 54 17.4	+0.2
	1.0nm,SNR=12						
AIGLE				⇑Pn	Pg	21 54 17.4	+0.2
AIGLE	Aigle	0.83	190	⇑Pn	Pg	21 54 17.4	+0.2
	1.0nm,SNR=12						
AIGLE				⇑Pn	Pg	21 54 17.4	+0.2
ACHB	Acheberg	0.86	60	⇑Pn	Pn	21 54 18.4	+0.1
ACHB				⇑Pn	Pn	21 54 18.4	+0.1
	2.1nm,SNR=23						
ACHB	Acheberg	0.86	60	⇑Pn	Pn	21 54 18.4	+0.1
ACHB				⇑Pn	Pn	21 54 18.4	+0.1
	2.1nm,SNR=23						
BOBI	Bbikon, Wasse	0.90	64	⇑Pn	Pn	21 54 19.3	+0.5
	1.0nm,SNR=2.8						
BOBI				⇑Pn	Pn	21 54 19.3	+0.5
BOBI	Bbikon, Wasse	0.90	64	⇑Pn	Pn	21 54 19.3	+0.5
BOBI				⇑Pn	Pn	21 54 19.3	+0.5
	1.0nm,SNR=2.8						
GRYON	Gryon	0.91	182	⇑Pn	Pb	21 54 18.8	+0.5
	1.1nm,SNR=8.8						

GRYON				⇑Pn	Pb	21 54 18.8	+0.5
GRYON	**Gryon**	**0.91**	**182**	⇑Pn	**Pb**	**21 54 18.8**	**+0.5**
	1.1nm,SNR=8.8						
GRYON				⇑Pn	Pb	21 54 18.8	+0.5
BNALP	**Bannalp**	**0.92**	**108**	Pn	**Pn**	**21 54 19.6**	**+0.4**
BNALP				Pn	Pn	21 54 19.6	+0.4
	0.4nm,SNR=2.8						
BNALP	**Bannalp**	**0.92**	**108**	Pn	**Pn**	**21 54 19.6**	**+0.4**
	0.4nm,SNR=2.8						
BNALP				Pn	Pn	21 54 19.6	+0.4
BNALP	**Bannalp**	**0.92**	**108**	⇓P	**Pn**	**21 54 19.7**	**+0.5**
BNALP				S	Sn	21 54 31.8	-0.1
BNALP				AML	AML		
	comp=N,416µm,0.2s						
BNALP				AML	AML		
	comp=E,524µm,0.4s						
BNALP	**Bannalp**	**0.92**	**108**	⇓P	**Pn**	**21 54 19.7**	**+0.5**
FELD	**Feldberg im Sc**	**0.92**	**38**	⇑Pn	**Pg**	**21 54 19.3**	**+0.3**
	comp=E,1.0nm,SNR=13						
FELD				⇑Pn	Pg	21 54 19.3	+0.3
FELD	**Feldberg im Sc**	**0.92**	**38**	⇑Pn	**Pg**	**21 54 19.3**	**+0.3**
FELD				⇑Pn	Pg	21 54 19.3	+0.3
	comp=E,1.0nm,SNR=13						
EWZT2	**Wettswil, ZR**	**0.93**	**78**	Pn	**Pn**	**21 54 19.7**	**+0.4**
	comp=E,2.6nm,SNR=8.1						
EWZT2				Pn	Pn	21 54 19.7	+0.4
EWZT2	**Wettswil, ZR**	**0.93**	**78**	Pn	**Pn**	**21 54 19.7**	**+0.4**
EWZT2				Pn	Pn	21 54 19.7	+0.4
	comp=E,2.6nm,SNR=8.1						
METMA	**Mettma DE**	**0.93**	**53**	⇑Pn	**Pg**	**21 54 19.5**	**+0.3**
	comp=E,1.2nm,SNR=13						
METMA				⇑Pn	Pg	21 54 19.5	+0.3
METMA	**Mettma DE**	**0.93**	**53**	⇑Pn	**Pg**	**21 54 19.5**	**+0.3**
	comp=E,1.2nm,SNR=13						
METMA				⇑Pn	Pg	21 54 19.5	+0.3
METMA	**Mettma DE**	**0.93**	**53**	ePg	**Pg**	**21 54 19.6**	**+0.3**
METMA				eSg	Sg	21 54 31.6	0.0
KIZ	**Kirchzarten**	**0.95**	**33**	Pn	**Pn**	**21 54 19.6**	**0.0**
KIZ				Pn	Pn	21 54 19.6	0.0
	comp=E,1.2nm,SNR=12						
KIZ	**Kirchzarten**	**0.95**	**33**	Pn	**Pn**	**21 54 19.6**	**0.0**
KIZ				Pn	Pn	21 54 19.6	0.0
	comp=E,1.2nm,SNR=12						
KIZ	**Kirchzarten**	**0.95**	**33**	Pg	**Pn**	**21 54 19.8**	**+0.3**
KIZ				Sg	Sg	21 54 32.2	0.0
FIESA	**Fiescheralp**	**0.98**	**137**	⇓Pn	**Pg**	**21 54 20.5**	**+0.4**
	comp=E,0.7nm,SNR=6.3						
FIESA				⇓Pn	Pg	21 54 20.5	+0.4
FIESA	**Fiescheralp**	**0.98**	**137**	⇓Pn	**Pg**	**21 54 20.5**	**+0.4**
	comp=E,0.7nm,SNR=6.3						
FIESA				⇓Pn	Pg	21 54 20.5	+0.4
GRIMS	**Grimsel Gerste**	**0.99**	**125**	Pn	**Pg**	**21 54 20.6**	**+0.3**
	comp=E,0.3nm,SNR=2.1						
GRIMS				Pn	Pg	21 54 20.6	+0.3
GRIMS	**Grimsel Gerste**	**0.99**	**125**	Pn	**Pg**	**21 54 20.6**	**+0.3**
	comp=E,0.3nm,SNR=2.1						
GRIMS				Pn	Pg	21 54 20.6	+0.3
ZUR	**Degenried**	**1.00**	**77**	Pn	**Pg**	**21 54 20.9**	**+0.4**
ZUR				Pn	Pg	21 54 20.9	+0.4
	comp=E,1.3nm,SNR=10						
ZUR	**Degenried**	**1.00**	**77**	Pn	**Pg**	**21 54 20.9**	**+0.4**
ZUR				Pn	Pg	21 54 20.9	+0.4
	comp=E,1.3nm,SNR=10						
BERGE	**Lenzkirch (DE)**	**1.00**	**44**	ePg	**Pn**	**21 54 20.3**	**+0.1**
BERGE				eSg	Sn	21 54 34.0	+0.2
HAU	**Haudompre**	**1.01**	**328**	ePn	**Pg**	**21 54 21.0**	**+0.3**
HAU	**Haudompre**	**1.01**	**328**	ePg	**Pg**	**21 54 21.5**	**+0.8**
HAU	**Haudompre**	**1.01**	**328**	eP	**Pg**	**21 54 23.0**	**+2.3**
HAU				eSg	Sg	21 54 34.6	+0.7
	comp=E,222nm,0.2s						
ELFMC	**Lycee**	**1.01**	**76**	Pn	**Pg**	**21 54 21.1**	**+0.4**
ELFMC				Pn	Pg	21 54 21.1	+0.4
	comp=E,1.6nm,SNR=6.3						
ELFMC	**Lycee**	**1.01**	**76**	Pn	**Pg**	**21 54 21.1**	**+0.4**
	comp=E,1.6nm,SNR=6.3						
ELFMC				Pn	Pg	21 54 21.1	+0.4
SALAN	**Lac Salanfe**	**1.02**	**187**	Pn	**Pn**	**21 54 20.8**	**+0.2**
	comp=E,0.7nm,SNR=6.4						
SALAN				Pn	Pn	21 54 20.8	+0.2
SALAN	**Lac Salanfe**	**1.02**	**187**	Pn	**Pn**	**21 54 20.8**	**+0.2**
SALAN				Pn	Pn	21 54 20.8	+0.2
	comp=E,0.7nm,SNR=6.4						
MUO	**Muotathal**	**1.03**	**100**	Pn	**Pg**	**21 54 21.7**	**+0.5**
	comp=E,0.5nm,SNR=4.4						
MUO				Pn	Pg	21 54 21.7	+0.5
MUO	**Muotathal**	**1.03**	**100**	Pn	**Pg**	**21 54 21.7**	**+0.5**
MUO				Pn	Pg	21 54 21.7	+0.5
	comp=E,0.5nm,SNR=4.4						
FLACH	**Flaach**	**1.05**	**66**	Pn	**Pg**	**21 54 21.6**	**+0.2**
	comp=E,2.9nm,SNR=26						
FLACH				Pn	Pg	21 54 21.6	+0.2
FLACH	**Flaach**	**1.05**	**66**	Pn	**Pg**	**21 54 21.6**	**+0.2**
	comp=E,2.9nm,SNR=26						
FLACH				Pn	Pg	21 54 21.6	+0.2
ECH	**Echery**	**1.06**	**0**	Pn	**Pn**	**21 54 21.4**	**+0.3**
ECH				Pn	Pn	21 54 21.4	+0.3
	comp=E,0.8nm,SNR=13						
ECH	**Echery**	**1.06**	**0**	Pn	**Pn**	**21 54 21.4**	**+0.3**
ECH				Pn	Pn	21 54 21.4	+0.3
	comp=E,0.8nm,SNR=13						
ECH	**Echery**	**1.06**	**0**	Pg	**Pb**	**21 54 21.0**	**+0.1**
ECH				Sg	Sn	21 54 35.4	+0.1
ECH	**Echery**	**1.06**	**0**	ePg	**Pn**	**21 54 21.4**	**+0.3**
ECH				eSg	Sb	21 54 34.9	+0.5
DIX	**Grande Dixence**	**1.09**	**171**	P	**Pg**	**21 54 23.3**	**+1.0**
DIX				S	Sg	21 54 37.2	+0.6
DIX				AML	AML		
	comp=E,621µm,0.4s						
DIX				AML	AML		
	comp=N,386µm,0.8s						
DIX	**Grande Dixence**	**1.09**	**171**	P	**Pg**	**21 54 23.3**	**+1.0**
SLE	**Schleitheim**	**1.09**	**56**	Pn	**Pn**	**21 54 21.8**	**+0.3**
	comp=N,2.3nm,SNR=25						
SLE				Pn	Pn	21 54 21.8	+0.3
SLE	**Schleitheim**	**1.09**	**56**	Pn	**Pn**	**21 54 21.8**	**+0.3**
	comp=N,2.3nm,SNR=25						
SLE				Pn	Pn	21 54 21.8	+0.3
SLE	**Schleitheim**	**1.09**	**56**	ePg	**Pn**	**21 54 21.8**	**+0.3**
SLE				eSg	Sg	21 54 36.6	-0.1
WILA	**Wila**	**1.22**	**77**	Pn	**Pg**	**21 54 24.4**	**-0.4**
WILA				Pn	Pg	21 54 24.4	-0.4
	comp=N,1.1nm,SNR=7.3						
WILA	**Wila**	**1.22**	**77**	Pn	**Pg**	**21 54 24.4**	**-0.4**
WILA				Pn	Pg	21 54 24.4	-0.4
	comp=N,1.1nm,SNR=7.3						
WILA	**Wila**	**1.22**	**77**	ePn	**Pg**	**21 54 24.4**	**-0.4**
WILA				ePg	Pb	21 54 25.6	+1.9
WILA				eSn	Sg	21 54 40.2	-0.5
WILA				eSg	Sn	21 54 42.2	+2.8
MMK	**Mattmark**	**1.24**	**153**	P	**Pg**	**21 54 25.4**	**+0.4**
MMK				S	Sg	21 54 41.3	0.0
MMK				AML	AML		
	comp=N,238µm,0.7s						
MMK				AML	AML		
	comp=E,140µm,1.1s						
MMK	**Mattmark**	**1.24**	**153**	P	**Pg**	**21 54 25.4**	**+0.4**
FUSIO	**Fusio**	**1.25**	**123**	⇓P	**Pg**	**21 54 25.6**	**+0.3**
FUSIO	**Fusio**	**1.25**	**123**	⇓P	**Pg**	**21 54 25.6**	**+0.3**
FUSIO				S	Sg	21 54 42.0	+0.3
FUSIO				AML	AML		
	comp=N,312µm,0.2s						
FUSIO				AML	AML		
	comp=E,308µm,0.7s						
CDF	**Champ du Feu**	**1.26**	**4**	ePn	**Pn**	**21 54 24.1**	**+0.3**
CDF	**Champ du Feu**	**1.26**	**4**	ePg	**Pg**	**21 54 26.1**	**+0.7**
CDF				eSn	Sn	21 54 40.6	+0.3
	comp=E,166nm,0.3s						
CDF				eSg	Sg	21 54 42.5	+0.6
WLS	**Welschbruch**	**1.27**	**6**	P	**Pn**	**21 54 24.2**	**+0.3**
WLS				Pg	Pg	21 54 25.8	+0.3
WLS				S	Sb	21 54 40.0	-0.3
WLS				Sg	Sg	21 54 42.5	+0.4
LLS	**Linth-Limmern**	**1.31**	**103**	Pn	**Pg**	**21 54 26.3**	**0.0**
	comp=E,0.5nm,SNR=5.0						
LLS				Pn	Pg	21 54 26.3	0.0
LLS	**Linth-Limmern**	**1.31**	**103**	Pn	**Pg**	**21 54 26.3**	**0.0**
LLS				Pn	Pg	21 54 26.3	0.0
	comp=E,0.5nm,SNR=5.0						
EMING	**Emmingen-Lipti**	**1.36**	**57**	Pn	**Pn**	**21 54 25.5**	**+0.3**
EMING				Pn	Pn	21 54 25.5	+0.3
	comp=E,0.8nm,SNR=9.1						
EMING	**Emmingen-Lipti**	**1.36**	**57**	Pn	**Pn**	**21 54 25.5**	**+0.3**
EMING				Pn	Pn	21 54 25.5	+0.3
	comp=E,0.8nm,SNR=9.1						
EMING	**Emmingen-Lipti**	**1.36**	**57**	ePn	**Pn**	**21 54 25.5**	**+0.3**
EMING				ePg	Pg	21 54 27.7	+0.3
EMING				eSn	Sb	21 54 43.3	+0.2
EMING				eSg	Sg	21 54 45.6	+0.4
SATI	**Passo dei Sala**	**1.37**	**159**	P	**Pg**	**21 54 28.4**	**+0.7**
SATI				S	Sg	21 54 45.8	+0.2
SATI				AML	AML		
	comp=E,356µm,0.9s						
SATI				AML	AML		
	comp=N,277µm,0.4s						
PANIX	**Pigniu (Panix)**	**1.38**	**103**	⇓Pn	**Pg**	**21 54 27.4**	**-0.3**
	comp=N,0.6nm,SNR=11						
PANIX				⇓Pn	Pg	21 54 27.4	-0.3
PANIX	**Pigniu (Panix)**	**1.38**	**103**	⇓Pn	**Pg**	**21 54 27.4**	**-0.3**
PANIX				⇓Pn	Pg	21 54 27.4	-0.3
	comp=N,0.6nm,SNR=11						
MRGE	**Morge**	**1.39**	**183**	P	**Pb**	**21 54 27.3**	**+0.8**
MRGE	**Morge**	**1.39**	**183**	P	**Pb**	**21 54 27.3**	**+0.8**
MRGE				S	Sg	21 54 46.3	+0.3
MRGE				AML	AML		
	comp=N,617µm,0.7s						
MRGE				AML	AML		
	comp=E,609µm,0.4s						
SGT03	**Degersheim**	**1.41**	**81**	Pn	**Pb**	**21 54 27.2**	**+0.3**
	comp=E,3.0nm,SNR=27						
SGT03				Pn	Pb	21 54 27.2	+0.3
SGT03	**Degersheim**	**1.41**	**81**	Pn	**Pb**	**21 54 27.2**	**+0.3**
SGT03				Pn	Pb	21 54 27.2	+0.3
	comp=E,3.0nm,SNR=27						
BFO	**Black Forest**	**1.42**	**34**	Pn	**Pn**	**21 54 25.7**	**-0.2**
BFO	**Black Forest**	**1.42**	**34**	Pn	**Pn**	**21 54 25.7**	**-0.2**
BFO	**Black Forest**	**1.42**	**34**	ePn	**Pn**	**21 54 25.7**	**-0.2**
BFO				ePg	Pg	21 54 28.7	+0.3
BFO				eSn	Sn	21 54 43.7	-0.4
BFO				eSg	Sg	21 54 46.7	-0.2
WALHA	**Wallhausen, DE**	**1.47**	**65**	ePn	**Pn**	**21 54 27.2**	**+0.6**
WALHA				ePg	Pg	21 54 29.4	+0.1
WALHA				eSn	Sb	21 54 46.1	+0.1
WALHA				eSg	Sg	21 54 49.3	+0.9
SGT04	**Schlatt-Haslen**	**1.51**	**82**	Pn	**Pb**	**21 54 28.6**	**+0.1**
SGT04				Pn	Pb	21 54 28.6	+0.1
	comp=E,0.9nm,SNR=5.5						
SGT04	**Schlatt-Haslen**	**1.51**	**82**	Pn	**Pb**	**21 54 28.6**	**+0.1**
	comp=E,0.9nm,SNR=5.5						
SGT04				Pn	Pb	21 54 28.6	+0.1
PLONS	**Plons/SG**	**1.53**	**93**	⇓Pn	**Pb**	**21 54 29.2**	**+0.3**
	comp=E,1.1nm,SNR=11						
PLONS				⇓Pn	Pb	21 54 29.2	+0.3
PLONS	**Plons/SG**	**1.53**	**93**	⇓Pn	**Pb**	**21 54 29.2**	**+0.3**
PLONS				⇓Pn	Pb	21 54 29.2	+0.3
	comp=E,1.1nm,SNR=11						
PLONS	**Plons/SG**	**1.53**	**93**	eSn	**Sb**	**21 54 47.7**	**-0.2**
PLONS				eSg	Sg	21 54 51.1	+0.7
PLONS	**Plons/SG**	**1.53**	**93**	⇓P	**Pb**	**21 54 29.2**	**+0.3**
PLONS	**Plons/SG**	**1.53**	**93**	⇓P	**Pb**	**21 54 29.2**	**+0.3**
PLONS				S	Sg	21 54 51.0	+0.6
PLONS				AML	AML		
	comp=N,1070µm,0.4s						
PLONS				AML	AML		
	comp=E,482µm,1.1s						
PLONS	**Plons/SG**	**1.53**	**93**	S	**Sg**	**21 54 51.0**	**+0.6**
OG35	**Corcelles**	**1.56**	**225**	Pn	**Pg**	**21 54 31.0**	**-0.1**
OG35				Sn	Sg	21 54 51.1	-0.2
LPL	**La Plagne**	**1.67**	**190**	ePn	**Pb**	**21 54 30.7**	**-0.6**
LPL	**La Plagne**	**1.67**	**190**	ePg	**Pg**	**21 54 33.5**	**+0.4**
LPL				eSg	Sg	21 54 55.4	+0.6
	comp=E,82nm,0.3s						
LPG	**La Plagne**	**1.68**	**190**	ePn	**Pb**	**21 54 31.1**	**-0.5**
LPG	**La Plagne**	**1.68**	**190**	ePg	**Pg**	**21 54 34.0**	**+0.5**
LPG				eSg	Sg	21 54 56.1	+0.7
	comp=E,96nm,0.3s						
TRAV	**Traversella**	**1.69**	**166**	⇑P	**Pb**	**21 54 32.5**	**+0.8**
TRAV	**Traversella**	**1.69**	**166**	⇑P	**Pb**	**21 54 32.5**	**+0.8**
TRAV				AML	AML		
	comp=E,383µm,0.2s						
TRAV				AML	AML		
	comp=N,367µm,0.2s						
LSD	**Lago del Serru**	**1.70**	**180**	⇓P	**Pg**	**21 54 33.5**	**-0.3**
LSD	**Lago del Serru**	**1.70**	**180**	⇓P	**Pg**	**21 54 33.5**	**-0.3**
LSD				AML	AML		
	comp=E,240µm,1.5s						
LSD				AML	AML		
	comp=N,175µm,1.5s						
PAGF	**Fort de Pagny**	**1.70**	**326**	ePn	**Pn**	**21 54 31.0**	**+1.3**
PAGF	**Fort de Pagny**	**1.70**	**326**	ePg	**Pg**	**21 54 34.3**	**+0.6**
	baz=137						
PAGF				eSn	Sn	21 54 51.6	+0.6
PAGF				eSg	Sg	21 54 56.8	+1.0
	comp=N,86nm,0.2s						
VARE	**Varese**	**1.71**	**138**	⇓P	**Pb**	**21 54 32.4**	**+0.5**
VARE	**Varese**	**1.71**	**138**	⇓P	**Pb**	**21 54 32.4**	**+0.5**
VARE				AML	AML		
	comp=N,346µm,0.2s						
VARE				AML	AML		
	comp=E,335µm,0.3s						
SFTF	**Sexfontaines**	**1.77**	**307**	ePn	**Pn**	**21 54 31.8**	**+1.0**
	baz=134						
SFTF	**Sexfontaines**	**1.77**	**307**	eP	**Pb**	**21 54 34.2**	**+1.2**
	baz=135						
SFTF	**Sexfontaines**	**1.77**	**307**	ePg	**Pg**	**21 54 36.3**	**+1.2**
	baz=133						
SFTF				eSn	Sn	21 54 53.7	+0.9
	comp=E,69nm,0.2s						
SFTF				eSg	Sg	21 54 59.8	+1.6
	comp=E,51nm,0.2s,baz=130						
MUGIO	**Muggio**	**1.80**	**133**	⇓P	**Pb**	**21 54 33.4**	**0.0**
MUGIO	**Muggio**	**1.80**	**133**	⇓P	**Pb**	**21 54 33.4**	**0.0**
MUGIO				AML	AML		
	comp=N,300µm,0.9s						
MUGIO				AML	AML		
	comp=E,340µm,0.5s						
OGSM	**Saint Maurice**	**1.85**	**214**	Pn	**Pn**	**21 54 32.7**	**+0.9**
OGSM				Sn	Sb	21 54 59.0	+2.0
DAVA	**Damuels**	**1.86**	**85**	ePn	**Pb**	**21 54 33.8**	**-0.8**
	comp=E,9.0nm,0.3s						
DAVA				eSn	Sg	21 55 01.7	+0.5
	comp=E,78nm,0.2s						
DAVA	**Damuels**	**1.86**	**85**	eSn	**Sn**	**21 54 56.5**	**+1.2**
DAVA				eSg	Sg	21 55 01.6	+0.5
DAVOX	**Davos/Dischmat**	**1.91**	**100**	⇓P	**Pb**	**21 54 35.3**	**-0.1**
DAVOX	**Davos/Dischmat**	**1.91**	**100**	⇓P	**Pb**	**21 54 35.3**	**-0.1**
DAVOX				AML	AML		
	comp=E,160µm,0.4s						
DAVOX				AML	AML		
	comp=N,434µm,0.3s						
MEZF	**Maizieres J'vi**	**1.95**	**314**	ePn	**Pn**	**21 54 34.8**	**+1.6**
	baz=136						
MEZF	**Maizieres J'vi**	**1.95**	**314**	eP	**Pb**	**21 54 36.8**	**+0.8**
	baz=138						
MEZF	**Maizieres J'vi**	**1.95**	**314**	ePg	**Pg**	**21 54 39.0**	**+0.4**
	baz=132						
MEZF				eSn	Sn	21 54 57.9	+0.6
	comp=N,135nm,0.4s						
MEZF				eSg	Sg	21 55 05.4	+1.5
	baz=130						
OGMO	**Fort Saint-Gob**	**1.98**	**190**	Pn	**Pb**	**21 54 35.9**	**-0.6**
SAVF	**Savonnieres en**	**2.00**	**318**	ePn	**Pn**	**21 54 35.1**	**+1.2**
	baz=132						
SAVF	**Savonnieres en**	**2.00**	**318**	ePg	**Pg**	**21 54 40.2**	**+0.8**
	baz=139						
SAVF				eSn	Sn	21 54 58.8	+0.4
	comp=N,64nm,0.3s						
SAVF				eSg	Sg	21 55 06.6	+1.2
RSP	**Reno Superiore**	**2.01**	**178**	P	**Pb**	**21 54 36.6**	**-0.5**
RSP				AML	AML		
	comp=E,226µm,0.8s						
RSP				AML	AML		
	comp=N,178µm,1.4s						
UBR	**Ueberruh**	**2.08**	**74**	ePg	**Pg**	**21 54 41.0**	**+0.1**
UBR				eSn	Sn	21 55 00.3	-0.1
UBR				eSg	Sg	21 55 08.3	+0.4
GDM	**Grand'Maison**	**2.08**	**201**	Pn	**Pn**	**21 54 36.1**	**+1.0**
STU	**Stuttgart**	**2.12**	**40**	ePg	**Pg**	**21 54 41.2**	**-0.5**
STU				eSg	Sg	21 55 08.8	-0.5
MONC	**Moncucco Torin**	**2.15**	**165**	⇓P	**Pb**	**21 54 39.9**	**+0.4**
MONC				AML	AML		
	comp=E,218µm,1.6s						
MONC				AML	AML		
	comp=N,193µm,1.6s						
MONC	**Moncucco Torin**	**2.15**	**165**	⇓P	**Pb**	**21 54 39.9**	**+0.4**
OBER	**Oberstdorf**	**2.15**	**82**	eSn	**Sn**	**21 55 02.5**	**+0.2**
OBER				eSg	Sg	21 55 10.6	+0.2
LOR	**Lormes**	**2.25**	**274**	ePn	**Pn**	**21 54 38.7**	**+1.4**
	baz=98						
LOR	**Lormes**	**2.25**	**274**	eP	**Pb**	**21 54 41.1**	**0.0**
	baz=93						
LOR	**Lormes**	**2.25**	**274**	ePg	**Pg**	**21 54 45.2**	**+1.0**
	baz=96						
LOR				eSn	Sn	21 55 05.3	+0.7
	comp=N,43nm,0.2s,baz=103						
LOR				eSg	Sg	21 55 14.6	+1.3
	comp=N,53nm,0.2s,baz=97						
KTD	**Kalmit**	**2.25**	**16**	eSg	**Sg**	**21 55 13.8**	**+0.2**
BHB	**Bricherasio**	**2.32**	**178**	P	**Pn**	**21 54 39.6**	**+1.4**
SMF	**Signal de Mont**	**2.33**	**259**	ePn	**Pn**	**21 54 38.9**	**+0.5**
SMF	**Signal de Mont**	**2.33**	**259**	eP	**Pb**	**21 54 41.9**	**-0.5**
SMF	**Signal de Mont**	**2.33**	**259**	ePg	**Pg**	**21 54 45.2**	**-0.5**
SMF				eSn	Sn	21 55 06.6	+0.1
	comp=N,67nm,0.3s						
SMF				eSg	Sg	21 55 17.0	+1.1
ORIF	**Oris-en-Rattie**	**2.41**	**202**	ePn	**Pn**	**21 54 40.5**	**+0.9**
ORIF	**Oris-en-Rattie**	**2.41**	**202**	ePg	**Pg**	**21 54 46.4**	**-0.8**
ORIF				eSg	Sg	21 55 18.4	-0.1
	comp=N,83nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.41**	**202**	S	**Sg**	**21 55 18.0**	**-0.5**
ORIF	**Oris-en-Rattie**	**2.41**	**202**	S	**Sg**	**21 55 18.0**	**-0.5**
MBDF	**Montbardon**	**2.44**	**186**	ePn	**Pn**	**21 54 41.6**	**+1.5**
MBDF	**Montbardon**	**2.44**	**186**	ePg	**Pg**	**21 54 48.0**	**0.0**
MBDF				eSn	Sn	21 55 08.6	-1.0
MBDF				eSg	Sg	21 55 19.5	-0.2
	comp=N,70nm,0.5s						
FETA	**Feichten**	**2.45**	**92**	ePn	**Pb**	**21 54 42.8**	**-1.8**
	comp=N,0.1nm,0.1s						
FETA				eSn	Sg	21 55 20.4	+0.6
	comp=N,7.7nm,0.3s						
RETA	**Reutte**	**2.48**	**81**	ePg	**Pg**	**21 54 48.6**	**-0.1**
	comp=N,4.9nm,0.2s						
RETA				eSn	Sg	21 55 20.1	-0.7
	comp=N,5.1nm,0.1s						
SSF	**Saint Saulge**	**2.49**	**269**	ePn	**Pn**	**21 54 42.1**	**+1.4**
SSF	**Saint Saulge**	**2.49**	**269**	eP	**Pb**	**21 54 44.9**	**-0.3**
SSF	**Saint Saulge**	**2.49**	**269**	ePg	**Pg**	**21 54 49.4**	**+0.6**
SSF				eSn	Sn	21 55 10.9	+0.3
SSF				eSg	Sg	21 55 22.3	+1.1
	comp=N,28nm,0.2s						
RIVT	**Riveris**	**2.57**	**354**	eSg	**Sg**	**21 55 22.1**	**-1.5**
WLF	**Walferdange**	**2.60**	**346**	dPnPn	**Pg**	**21 54 50.5**	**-0.4**
WLF				dSnSn	Sg	21 55 23.5	-1.0
WLF				dSbSb	SnSn	21 55 25.1	+0.6
WLF	**Walferdange**	**2.60**	**346**	ePg	**Pg**	**21 54 50.5**	**-0.4**
WLF				eSg	Sg	21 55 23.9	-0.6
AVF	**Avril sur Loir**	**2.63**	**263**	ePn	**Pn**	**21 54 43.3**	**+0.8**
AVF	**Avril sur Loir**	**2.63**	**263**	eP	**Pb**	**21 54 46.6**	**-0.9**
AVF	**Avril sur Loir**	**2.63**	**263**	ePg	**Pg**	**21 54 52.0**	**+0.6**
AVF				eSn	Sn	21 55 14.5	+0.6
	comp=N,24nm,0.3s						
AVF				eSg	Sg	21 55 26.4	+0.9
MOTA	**Moosalm**	**2.70**	**85**	ePn	**Pn**	**21 54 45.8**	**+2.1**
	comp=N,1.4nm,0.1s,SNR=5.6						
MOTA				eSn	Sg	21 55 26.8	-1.0
	comp=N,12nm,0.2s						
PART	**Garmisch-Parte**	**2.72**	**81**	eSg	**Sg**	**21 55 27.9**	**-0.5**
OGAG	**Argentiere**	**2.74**	**189**	Pn	**Pn**	**21 54 41.9**	**-2.2**
ABH	**Alteburg**	**2.74**	**5**	Pn	**Pn**	**21 54 45.1**	**+1.0**
ABH	**Alteburg**	**2.74**	**5**	ePn	**Pn**	**21 54 45.1**	**+1.0**
ABH				ePg	Pg	21 54 52.8	-0.8
ABH				eSg	Sg	21 55 28.0	-1.1
SQTA	**Sankt Quirin**	**2.77**	**87**	ePn	**Pn**	**21 54 47.0**	**+2.5**
	comp=N,3.3nm,0.1s,SNR=9.5						
SQTA				eSn	Sg	21 55 29.8	-0.2
	comp=N,19nm,0.2s						
MAGA	**Magasa**	**2.77**	**119**	⇑P	**Pn**	**21 54 47.3**	**+2.7**
MAGA				AML	AML		
	comp=N,250µm,1.2s						
MAGA				AML	AML		
	comp=E,320µm,0.6s						
MAGA	**Magasa**	**2.77**	**119**	⇑P	**Pn**	**21 54 47.3**	**+2.7**
NORI	**Noerdlinger Ri**	**2.81**	**55**	ePg	**Pg**	**21 54 54.7**	**-0.3**
NORI				eSg	Sg	21 55 30.8	-0.6
BE1	**Monatshausen**	**2.86**	**73**	ePg	**Pg**	**21 54 55.2**	**-0.7**
BODE	**Bodenheim**	**2.86**	**15**	eSg	**Sg**	**21 55 31.2**	**-1.7**
VIVF	**Saint-Julien-l**	**2.88**	**218**	ePn	**Pn**	**21 54 46.0**	**0.0**
VIVF	**Saint-Julien-l**	**2.88**	**218**	ePg	**Pg**	**21 54 55.4**	**-0.8**
VIVF				eSn	Sn	21 55 19.8	-0.3
VIVF				eSg	Sg	21 55 33.3	-0.2
	comp=E,72nm,0.3s						
APPI	**Appiano**	**2.88**	**102**	P	**Pb**	**21 54 50.1**	**-1.8**
ROSI	**Rosskopf**	**2.92**	**93**	⇓P	**Pn**	**21 54 49.7**	**+2.9**
ROSI				AML	AML		
	comp=E,204µm,1.0s						
ROSI				AML	AML		
	comp=N,188µm,0.5s						
ROSI	**Rosskopf**	**2.92**	**93**	⇓P	**Pn**	**21 54 49.7**	**+2.9**
BOSI	**Bolzano**	**2.94**	**101**	S	**Sg**	**21 55 41.0**	**+5.6**
BOSI	**Bolzano**	**2.94**	**101**	S	**Sg**	**21 55 41.0**	**+5.6**
FUR	**Furstenfeldbru**	**2.96**	**69**	ePg	**Pg**	**21 54 57.3**	**-0.6**
FUR				eSg	Sg	21 55 35.3	-1.0
BGF	**Bois d'Agland**	**3.01**	**260**	ePn	**Pn**	**21 54 48.9**	**+1.1**
BGF	**Bois d'Agland**	**3.01**	**260**	eP	**Pb**	**21 54 51.8**	**-2.3**
BGF	**Bois d'Agland**	**3.01**	**260**	ePg	**Pg**	**21 54 58.4**	**-0.4**
BGF				eSn	Sn	21 55 23.5	0.0
	comp=N,45nm,0.3s						
BGF				eSg	Sg	21 55 38.2	+0.3
WATA	**Walderalm**	**3.02**	**85**	i Pn	**Pn**	**21 54 51.0**	**+3.0**
	comp=N,1.5nm,0.2s,SNR=9.1						
WATA				eSn	Sn	21 55 25.4	+1.6
	comp=N,2.6nm,0.2s						
BGG	**Burgeitz**	**3.06**	**2**	ePn	**Pn**	**21 54 49.6**	**+1.2**
HYF	**Humbligny**	**3.08**	**274**	ePn	**Pn**	**21 54 50.2**	**+1.5**
HYF	**Humbligny**	**3.08**	**274**	eP	**Pb**	**21 54 53.1**	**-2.1**
HYF	**Humbligny**	**3.08**	**274**	ePg	**Pg**	**21 55 00.6**	**+0.6**
HYF				eSn	Sn	21 55 24.9	-0.1
HYF				eSg	Sg	21 55 40.4	+0.5
HILG	**Hillesheim**	**3.15**	**354**	ePn	**Pn**	**21 54 51.5**	**+1.7**
BRES	**Bressanone**	**3.17**	**97**	⇑P	**Pb**	**21 54 54.0**	**-3.1**
SAOF	**Saorge**	**3.18**	**175**	Pn	**Pn**	**21 54 52.1**	**+1.9**
TNS	**Taunus Mts**	**3.19**	**15**	ePn	**Pn**	**21 54 50.6**	**+0.4**
TURF	**col de Turini**	**3.19**	**177**	Pn	**Pn**	**21 54 51.9**	**+1.6**
SBF	**Sospel**	**3.30**	**176**	ePn	**Pn**	**21 54 53.9**	**+2.1**
SBF	**Sospel**	**3.30**	**176**	ePg	**Pg**	**21 55 03.2**	**-1.1**
SBF				eS	Sb	21 55 35.6	-3.3
SBF				eSg	Sg	21 55 45.9	-1.1
	comp=N,16nm,0.3s						
GIVF	**Givet**	**3.33**	**333**	ePn	**Pn**	**21 54 54.0**	**+1.9**
GIVF	**Givet**	**3.33**	**333**	ePg	**Pg**	**21 55 04.2**	**-0.6**
GIVF				eSn	Sn	21 55 30.3	-0.9
GIVF				eSg	Sg	21 55 47.7	-0.2
	comp=N,14nm,0.3s						
ESCA	**l'Escarene**	**3.33**	**177**	Pn	**Pn**	**21 54 54.7**	**+2.5**
SMRF	**Simiane la Rot**	**3.37**	**200**	ePn	**Pn**	**21 54 53.5**	**+0.8**
SMRF	**Simiane la Rot**	**3.37**	**200**	eP	**Pn**	**21 54 56.5**	**+3.8**
SMRF	**Simiane la Rot**	**3.37**	**200**	ePg	**Pg**	**21 55 05.3**	**-0.3**
SMRF				eSn	Sn	21 55 31.4	-0.8
SMRF				eSg	Sg	21 55 48.6	-0.6
	comp=N,15nm,0.4s						
RISI	**Rein**	**3.38**	**92**	⇑P	**Pn**	**21 54 56.0**	**+3.1**
RISI	**Rein**	**3.38**	**92**	⇑P	**Pn**	**21 54 56.0**	**+3.1**
RISI				AML	AML		
	comp=E,89µm,0.6s						
RISI				AML	AML		
	comp=N,219µm,0.5s						
DOU	**Dourbes**	**3.40**	**331**	dPn	**Pn**	**21 54 55.2**	**+2.2**
DOU				dSn	Sn	21 55 32.6	-0.2
DOU				dSg	Sg	21 55 49.7	-0.4
BCLA	**Clavier**	**3.49**	**340**	dPn	**Pn**	**21 54 56.6**	**+2.3**
BCLA				dSn	Sn	21 55 33.7	-1.4
BCLA				dSg	Sg	21 55 52.0	-1.0
BTNL	**Ternell**	**3.50**	**349**	dPn	**Pn**	**21 54 56.2**	**+1.7**
BGES	**Gesves**	**3.51**	**338**	dPn	**Pn**	**21 54 57.0**	**+2.4**
BGES				dSn	Sn	21 55 36.1	+0.5
TCF	**Toulx Ste Croi**	**3.51**	**257**	ePn	**Pn**	**21 54 54.7**	**0.0**
TCF	**Toulx Ste Croi**	**3.51**	**257**	ePg	**Pg**	**21 55 07.5**	**-0.8**
TCF				eSn	Sn	21 55 35.2	-0.5
	comp=N,19nm,0.4s						
TCF				eSg	Sg	21 55 54.4	+0.7
BMRD	**Maredsous**	**3.52**	**334**	dPn	**Pn**	**21 54 57.1**	**+2.3**
BMRD				dSg	Sg	21 55 52.4	-1.7
KLL	**Kalltalsperre**	**3.54**	**351**	ePn	**Pn**	**21 54 56.5**	**+1.5**
MEM	**Membach**	**3.54**	**348**	dPn	**Pn**	**21 54 57.0**	**+2.0**
DREG	**Dreilaegerbach**	**3.56**	**351**	ePn	**Pn**	**21 54 57.1**	**+1.7**
DREG				eSn	Sn	21 55 38.6	+1.7
	comp=N,7.2nm,0.3s						
FRF	**La Foret Royal**	**3.61**	**186**	ePn	**Pn**	**21 54 56.8**	**+0.7**
FRF	**La Foret Royal**	**3.61**	**186**	eP	**Pn**	**21 54 59.8**	**+3.7**
FRF	**La Foret Royal**	**3.61**	**186**	ePg	**Pg**	**21 55 09.1**	**-1.2**
FRF				eSn	Sn	21 55 36.8	-1.4
FRF				eSg	Sg	21 55 55.9	-1.2

	comp=N,5.5nm,0.2s						
PLMA	Palmaria, Port	3.64	148	⇓P	Pn	21 54 55.4	-1.0
ABTA	Abfaltersbach	3.69	94	*e*Pn	Pn	21 55 00.4	+3.1
ABTA				*e*Sn	Sn	21 55 44.4	+4.1
	comp=N,3.4nm,0.2s						
GRFO	Grafenberg	3.71	45	*e*Pg	Pg	21 55 11.4	-0.7
GRF	Grafenberg Arr	3.71	45	*e*Pg	Pg	21 55 11.5	-0.7
GRF				*e*Sn	Sn	21 55 38.6	-2.0
GRF				*e*Sg	Sg	21 55 59.4	-0.8
LMR	La Mourre	3.85	187	*e*Pn	Pn	21 54 59.5	+0.2
LMR	La Mourre	3.85	187	*e*Pg	Pg	21 55 13.4	-1.4
LMR				*e*Sn	Sn	21 55 42.7	-1.3
LMR				*e*Sg	Sg	21 56 03.6	-1.0
	comp=N,4.5nm,0.2s						
LASF	Ste Croix	3.85	218	*e*Pn	Pn	21 54 59.1	-0.3
LASF	Ste Croix	3.85	218	*e*Pg	Pg	21 55 13.5	-1.3
LASF				*e*Sn	Sn	21 55 43.2	-0.9
LASF				*e*Sg	Sg	21 56 04.3	-0.4
	comp=N,29nm,0.3s						
SNF	Seneffe	3.85	332	*d*Pn	Pn	21 55 01.4	+2.0
MTCR	Monte La Croce	4.13	138	⇓P	Pn	21 55 06.8	+3.5
CAF	Calviac	4.19	240	*e*Pn	Pn	21 55 04.8	+0.8
CAF	Calviac	4.19	240	*e*Pg	Pg	21 55 20.7	-0.5
CAF				*e*Sn	Sn	21 55 51.3	-1.1
CAF				*e*Sg	Sg	21 56 15.3	-0.1
	comp=N,4.8nm,0.2s						
KBA	Koelnbreinsper	4.23	89	*i* Pn	Pn	21 55 07.6	+2.9
	comp=N,2.5nm,0.3s,SNR=5.7						
KBA				*e*Sn	Sn	21 55 53.8	+0.2
	comp=N,0.9nm,0.1s						
KBA	Koelnbreinsper	4.23	89	*e*Pn	Pn	21 55 07.6	+2.9
KBA				*e*Sn	Sn	21 55 53.9	+0.2
ROTZ	Rotzenmuhle	4.26	50	*e*Pg	Pg	21 55 20.6	-2.0
ROTZ				*e*Sn	Sn	21 55 52.1	-2.0
ROTZ				*e*Sg	Sg	21 56 14.7	-3.0
WET	Wettzell	4.32	60	*e*Sn	Sn	21 55 54.7	-1.0
WET				*e*Sg	Sg	21 56 18.8	-0.9
RJF	Les Rejaudoux	4.33	247	*e*Pn	Pn	21 55 06.9	+1.0
RJF	Les Rejaudoux	4.33	247	*e*P	Pn	21 55 10.5	+4.6
RJF	Les Rejaudoux	4.33	247	*e*Pg	Pg	21 55 22.0	-1.9
RJF				*e*Sg	Sg	21 56 18.9	-1.0
	comp=N,17nm,0.4s						
MANZ	Manzenberg	4.34	47	*e*Pg	Pg	21 55 22.5	-1.7
MANZ				*e*Sn	Sn	21 55 54.2	-2.0
MANZ				*e*Sg	Sg	21 56 17.3	-3.1
ACOM	Acomizza, Ital	4.41	96	⇑P	Pn	21 55 10.9	+3.8
ACOM	Acomizza, Ital	4.41	96	⇑P	Pn	21 55 10.9	+3.8
MYKA	Terra Mystica	4.48	94	*e*Pn	Pn	21 55 11.1	+3.0
	comp=N,0.8nm,0.2s						
MYKA				*e*Sn	Sn	21 56 00.5	+0.8
	comp=N,1.5nm,0.3s						
MOX	Moxa	4.57	38	*e*Pg	Pg	21 55 26.4	-2.1
MOX				*e*Sn	Sn	21 55 58.9	-2.8
MOX				*e*Sg	Sg	21 56 26.2	-1.3
NKC	Novy Kostel	4.67	47	*e*PG	Pg	21 55 28.7	-1.7
NKC				*e*SG	Sg	21 56 29.0	-1.8
	comp=N,11nm,0.3s						
GEC2	GERESS Array S	4.71	67	*e*Pn	Pn	21 55 12.2	+1.0
GEC2				*e*Pg	Pg	21 55 29.4	-1.8
GEC2				*e*Sn	Sn	21 56 02.7	-2.7
GEC2				*e*Sg	Sg	21 56 30.2	-2.0
KHC	Kasperske Hory	4.73	63	*e*PN	Pn	21 55 13.0	+1.5
KHC				*e*PG	Pg	21 55 29.4	-2.3
KHC				*e*SN	Sn	21 56 02.5	-3.4
KHC				*e*SG	Sg	21 56 30.9	-2.1
	comp=N,9.1nm,0.3s						
MOA	Molln	4.87	79	*e*Pn	Pn	21 55 14.8	+1.4
	comp=N,0.2nm,0.1s						
MOA				*e*Sn	Sn	21 56 06.6	-2.7
	comp=N,3.9nm,0.1s,SNR=5.5						
MOA	Molln	4.87	79	*e*Sg	Sg	21 56 36.6	-0.7
LFF	La Frestale	4.98	246	*e*Pn	Pn	21 55 15.1	+0.2
LFF				*e*Sn	Sn	21 56 11.1	-0.9
LFF				*e*Sg	Sg	21 56 39.4	-1.5
	comp=N,24nm,0.6s						
MFF	Saint Martin d	5.04	266	*e*Pn	Pn	21 55 16.5	+0.9
MFF	Saint Martin d	5.04	266	*e*Pg	Pg	21 55 36.5	-0.9
MFF				*e*Sn	Sn	21 56 11.9	-1.3
	comp=N,3.6nm,0.3s						
MFF				*e*Sg	Sg	21 56 41.3	-1.3
LDF	La Druitiere	5.10	289	*e*Pn	Pn	21 55 17.6	+1.1
LDF				*e*Sn	Sn	21 56 13.4	-1.5
LDF				*e*Sg	Sg	21 56 43.6	-1.1
	comp=N,3.7nm,0.2s						
OBKA	Obir	5.12	95	*e*Pn	Pn	21 55 19.2	+2.4
	comp=N,0.7nm,0.2s						
OBKA				*e*Sn	Sn	21 56 18.0	+2.5
	comp=N,2.2nm,0.4s						
MTLF	Montolieu	5.17	224	*e*Pn	Pn	21 55 18.2	+0.8
MTLF	Montolieu	5.17	224	*e*Pg	Pg	21 55 38.8	-1.1
MTLF				*e*Sn	Sn	21 56 15.5	-1.0
MTLF				*e*Sg	Sg	21 56 45.8	-1.0
	comp=N,9.0nm,0.3s						
FLN	La Foliniere	5.37	290	*e*Pn	Pn	21 55 21.1	+0.9
	baz=112						
FLN	La Foliniere	5.37	290	*e*Pg	Pg	21 55 42.5	-1.4
	baz=108						
FLN				*e*Sn	Sn	21 56 19.9	-1.7
FLN				*e*Sg	Sg	21 56 52.9	-0.5
	comp=N,12nm,0.3s						
SOKA	Soboth	5.42	92	*e*Pn	Pn	21 55 23.0	+2.0
	comp=N,0.3nm,0.2s						
SOKA				*e*Sn	Sn	21 56 22.9	0.0
	comp=N,1.0nm,0.3s						
GRR	Gorron	5.54	286	*e*Pn	Pn	21 55 23.4	+0.9
GRR	Gorron	5.54	286	*e*Pg	Pg	21 55 46.5	-0.5
GRR				*e*Sn	Sn	21 56 23.9	-1.7
GRR				*e*Sg	Sg	21 56 57.4	-1.3
	comp=N,7.0nm,0.2s						
CLL	Collm	5.65	41	*e*Pg	Pg	21 55 48.0	-1.2
CLL				*e*Sg	Sg	21 57 00.0	-2.3
	comp=Z,14nm,1.1s						
PRU	Pruhonice	5.66	57	*e*PG	Pg	21 55 46.1	-3.3
PRU				*e*SG	Sg	21 57 00.0	-2.7
	comp=Z,6.7nm,0.6s						
ARSA	Arzberg	5.71	86	*e*Pn	Pn	21 55 27.3	+2.5
	comp=Z,0.6nm,0.3s						
ARSA				*e*Sn	Sn	21 56 25.9	-4.0
	comp=Z,1.7nm,0.4s						
SSM1	San Severino M	5.79	131	P	Pb	21 55 45.1	+3.6
BRG	Berggiesshubel	5.81	48	Pg	Pg	21 55 51.9	-0.4
BRG				Sg	Sg	21 57 06.3	-1.2
BRG				Amp		21 57 16.7	
	comp=Z,5.6nm,0.7s						
CONA	Conrad Observa	5.95	79	*e*Pn	Pn	21 55 29.4	+1.2
	comp=Z,0.2nm,0.1s						
CONA				*e*Sn	Sn	21 56 31.5	-4.3
	comp=Z,4.3nm,0.3s						
EPF	Esparros	6.34	232	*e*Pn	Pn	21 55 33.9	+0.3
EPF	Esparros	6.34	232	*e*Pg	Pg	21 56 00.4	-2.0
EPF				*e*Sn	Sn	21 56 43.2	-2.4
EPF				*e*Sg	Sg	21 57 22.6	-1.9
	comp=Z,6.8nm,0.5s						
KRUC	Moravsky	6.48	69	*e*PN	Pn	21 55 35.7	+0.3
KRUC				*e*PG	Pg	21 56 03.2	-1.8
KRUC				*e*SN	Sn	21 56 44.5	-4.3
KRUC				*e*SG	Sg	21 57 26.0	-2.8
VRAC	Vranov	6.67	68	*e*PN	Pn	21 55 39.4	+1.4
VRAC				*e*PG	Pg	21 56 05.6	-3.0
VRAC				*e*SN	Sn	21 56 49.2	-4.2
VRAC				*e*SG	Sg	21 57 31.5	-3.3

IDC ***31*** *21:55:21.8±1.6, 32°.58N×73°.69E, h0^{km}, mb3.7/8, mb1 3.8/11, mb1mx3.5/79, mbtmp3.7/11, ML3.1/3, Error ellipse: s-maj=36.2km s-min=26.5km az=71.0*

NDI ***31*** *21:55:21.2±2.1, 32°.67N×73°.54E, h10^{km}, ML3.6*

ISC 31 21:55:22.6±1.0**, 32°.47N**±0°.08×**73°.54E**±0°.09**, h10^{km}, n18, σ1^{s}.41**/23**, mb3.8**/7**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	Jammu	1.18	78	*e*P	Sn	21 56 05.0	+3.9
THN	Thein Dam	1.84	91	*e*P	Pn	21 55 54.5	+0.3
THN				*e*S	Sn	21 56 17.0	-0.6
DHRM	DHARAMSHALA	2.35	95	*e*P	Pn	21 56 00.7	-0.8
DHRM				*e*S	Sn	21 56 29.5	-1.0
DHRM				IAML		21 56 31.5	
	comp=N,516nm,0.6s						
DHRM				IAML		21 56 32.3	
	comp=E,897nm,0.6s						
BHK	Bhakra	2.67	112	*e*P	Pn	21 56 05.0	-0.6
BHK				*e*S	Sn	21 56 39.4	+1.5
SMLA	Simla	3.37	112	*e*P	Pn	21 56 15.6	+0.4
SMLA				*e*S	Sn	21 56 53.4	-1.8
SMLA				IAML		21 57 00.9	
	comp=N,176nm,0.5s						
SMLA				IAML		21 57 02.0	
	comp=E,225nm,0.4s						
DDI	Dehra Dun	4.42	118	*e*P	Pn	21 56 30.5	+0.8
DDI				IAML		21 57 42.5	
	comp=E,104nm,0.3s						
DDI				IAML		21 57 43.2	
	comp=N,143nm,0.4s						
NDI	New Delhi	4.93	139	*e*P	Pn	21 56 36.0	-0.7
AAK	Ala-Archa	10.18	4	Pn	Pn	21 57 50.2	+1.3
	comp=N,0.3nm,0.3s,baz=188,slow=12,SNR=8.5						
AAK				Sn	Sn	21 59 41.5	-1.6
	comp=N,0.1nm,0.3s,baz=130,slow=3.8,SNR=1.5						
MKAR	Makanchi Array	15.80	23	Pn	Pn	21 59 03.6	-1.4
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=3.0						
KURBB	Kurchatov Arra	18.51	10	P	P	21 59 36.5	-2.4
	comp=N,0.0nm,0.3s,baz=205,slow=9.8,SNR=5.8						
BVAR	Borovoye Array	20.67	355	P	P	22 00 02.6	+0.1
	comp=N,0.6nm,0.4s,baz=139,slow=7.3,SNR=9.3						
AKTO	Aktyubinsk	21.31	332	P	P	22 00 10.0	+0.7
	comp=N,2.7nm,0.7s,baz=103,slow=12,SNR=9.7						
ZALV	Zalesovo Beam	22.93	17	P	P	22 00 25.4	-1.3
	comp=N,0.8nm,0.3s,baz=212,slow=9.6,SNR=8.3						
FINES	FINESS Array B	42.00	328	P	P	22 03 14.3	+0.8
	comp=N,2.3nm,0.7s,baz=126,slow=8.8,SNR=5.6						
ARCES	ARCESS Array B	45.66	339	P	P	22 03 43.1	+0.1
	comp=N,1.5nm,0.8s,baz=111,slow=7.6,SNR=7.0						
HFS	Hagfors	47.54	324	P	P	22 03 58.4	+0.6
	comp=N,1.2nm,0.4s,baz=93,slow=10,SNR=15						
NOA	NORSAR Array B	48.86	325	P	P	22 04 08.1	0.0
	comp=N,0.5nm,0.5s,baz=97,slow=7.7,SNR=1.7						
WRA	Warramunga Arr	78.07	123	P	P	22 07 22.7	+0.9
	comp=N,0.3nm,0.9s,baz=315,slow=7.3,SNR=1.4						

JMA ***31*** *21:59:24.8±0.1, 35°.99N×140°.21E, h42^{km}±1^{km}, M2.8*

IDC ***31*** *21:59:30.8±4.9, 35°.66N×139°.54E, h66^{km}±25^{km}, mb3.0/3, mb1 3.2/4, mb1mx2.8/77, mbtmp3.4/4, Error ellipse: s-maj=99.5km s-min=8.7km az=64.0*

ISC 31 21:59:25.2±1.0**, 36°.01N**±0°.05×**140°.25E**±0°.06**, h43^{km}**±8^{km}**, n11, σ1^{s}.37**/19**, mb3.3**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.22	347	P	Pn	21 59 32.6	-0.3
JYT				S	Sn	21 59 38.0	-0.4
JIHU	Itakohorinouch	0.23	102	P	Pn	21 59 32.9	-0.1
JIHU				S	Sn	21 59 39.2	+0.8
JSMT	Sammumatsuo	0.40	157	P	Pn	21 59 34.5	-0.3
JSMT				S	Sn	21 59 42.0	+0.4
JHO	Hitachi	0.65	23	P	Pn	21 59 37.4	-0.6
JHO				S	Sn	21 59 46.2	-1.0
JAG	Ashikaga	0.77	303	P	Pn	21 59 39.0	-0.6
JAG				*e*S	Sn	21 59 49.3	-0.7
MJAR	Matsushiro Arr	1.73	288	P	Pn	21 59 53.0	+0.2
	1.0nm,0.3s,baz=90,slow=12,SNR=38						
MJAR				S	Sn	22 00 11.1	-2.7
	0.8nm,0.3s,baz=18,slow=32,SNR=5.7						
MAT	Matsushiro	1.73	288	P	Pn	21 59 53.4	+0.5
MAT				S	Sn	22 00 15.3	+1.5
JHJ	Hachijo jima 2	2.91	188	P	Pn	22 00 09.2	+0.2
	16nm,0.3s,baz=63,slow=21,SNR=1.5						
JHJ				S	Sn	22 00 41.0	-1.8
	9.7nm,0.3s,baz=76,slow=20,SNR=2.0						
MKAR	Makanchi Array	43.88	303	P	P	22 07 27.8	+0.5
	0.2nm,0.7s,baz=83,slow=6.2,SNR=1.8						
KURBB	Kurchatov Arra	45.90	309	P	P	22 07 46.3	+3.1
	0.2nm,0.5s,baz=84,slow=7.9,SNR=4.3						
WRA	Warramunga Arr	55.93	187	P	P	22 08 57.5	-1.5
	0.2nm,0.5s,baz=0.9,slow=7.5,SNR=1.6						

IDC 31 22:04:44.4±2.5**, 30°.50N**×**138°.94E, h371^{km}**±32^{km}**, mb2.8**/4**, mb1 2.9**/6**, mb1mx2.6**/60**, mbtmp3.5**/6**, Error ellipse: s-maj=87.6km s-min=15.9km az=80.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	6.05	354	P	Pn	22 06 15.9	-0.6
	0.1nm,0.3s,baz=170,slow=11,SNR=4.8						
KLR	Kul'dur	19.48	346	P	P	22 08 46.3	+0.7
	0.1nm,0.3s,baz=128,slow=20,SNR=2.1						
MKAR	Makanchi Array	46.13	307	P	P	22 12 33.0	-0.1
	0.2nm,0.7s,baz=84,slow=7.9,SNR=2.4						
WRA	Warramunga Arr	50.35	186	P	P	22 13 05.0	-0.2
	0.3nm,0.3s,baz=360,slow=7.7,SNR=11						
ASAR	Alice Springs	54.08	186	P	P	22 13 32.3	+0.1
	0.2nm,0.5s,baz=358,slow=5.9,SNR=6.9						
ARCES	ARCESS Array B	69.38	340	P	P	22 15 12.6	-0.1
	18nm,1.4s,baz=45,slow=9.0,SNR=1.6						
FINES	FINESS Array B	73.63	333	P	P	22 15 37.5	-0.4
	2.7nm,0.9s,baz=95,slow=5.9,SNR=3.9						

IDC ***31*** *22:06:58.6±1.9, 12°.88S×66°.90E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.5/48, mbtmp3.9/4, MS3.5/3, Ms1 3.6/3, ms1mx3.0/34, Error ellipse: s-maj=80.9km s-min=29.1km az=52.0*

ISC 31 22:06:60.0±2.1**, 12°.9S**±0°.4×**66°.9E**±0°.5**, h10^{km}, n17, σ1^{s}.09**/8**, mb4.1**/4**, MS3.4**/3**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	7.59	47	T	T	22 17 08.2	
	baz=226,slow=76,SNR=62						
H08S2	Diego Garcia H	7.61	47	T	T	22 17 17.8	
	baz=226,slow=76,SNR=94						
H08S3	Diego Garcia H	7.61	47	T	T	22 17 10.7	
	baz=226,slow=76,SNR=122						
PALK	Pallekele	24.30	35	LR	LR	22 19 14.6	
	comp=Z,122nm,20.6s,baz=308,slow=30						
CMAR	Chiang Mai Arr	44.40	46	LR	LR	22 32 16.1	
	comp=Z,81nm,19.8s,baz=204,slow=34						
H01W3	Cape Leeuwin H	47.93	126	T	T	23 06 50.3	
	baz=285,slow=75,SNR=7.6						
H01W2	Cape Leeuwin H	47.93	126	T	T	23 06 54.3	
	baz=285,slow=75,SNR=8.1						
H01W1	Cape Leeuwin H	47.94	126	T	T	23 06 51.2	
	baz=285,slow=75,SNR=8.9						
FITZ	Fitzroy Crossi	56.69	103	LR	LR	22 40 39.3	
	comp=Z,28nm,18.2s,baz=237,slow=36						
MKAR	Makanchi Array	61.00	12	P	P	22 17 12.7	-0.9
	0.6nm,0.8s,baz=204,slow=7.1,SNR=5.3						
ASAR	Alice Springs	64.08	110	P	P	22 17 34.6	-0.1
	0.9nm,0.7s,baz=271,slow=6.3,SNR=12						
WRA	Warramunga Arr	64.75	106	P	P	22 17 39.3	+0.1
	1.3nm,0.7s,baz=271,slow=5.9,SNR=12						
ZALV	Zalesovo Beam	68.31	11	P	P	22 18 02.2	+1.1
	0.9nm,0.7s,baz=205,slow=6.6,SNR=4.5						
ILAR	Eielson Array	123.22	17	PKP	PKPdf	22 25 55.8	-0.9
	0.3nm,0.7s,baz=347,slow=3.7,SNR=2.2						
YKA	Yellowknife Ar	130.46	1	PKP	PKPdf	22 26 09.4	-1.1
	0.2nm,0.6s,baz=351,slow=2.3,SNR=3.8						
PDAR	Pinedale Array	150.07	355	PKPbc	PKPbc	22 26 51.9	+0.3
	1.1nm,0.7s,baz=72,slow=2.2,SNR=9.3						
NVAR	Mina Array Bea	154.15	9	PKPbc	PKiKP	22 27 02.3	+1.4
	0.3nm,0.6s,baz=291,slow=0.8,SNR=2.0						

AEIC ***31*** *22:33:03±2.9, 56°.56N±0°.06×169°.4W±0°.1, h27^{km}±5^{km}, Error ellipse: s-maj=9.9km s-min=8.6km az=53.0*

IDC ***31*** *22:33:03.5±1.0, 56°.60N×169°.25W, h0^{km}, mb3.9/13, mb1 4.1/16, mb1mx3.9/61, mbtmp4.0/16, ML3.7/3, MS3.5/8, Ms1 3.5/8, ms1mx3.1/43, Error ellipse: s-maj=30.7km s-min=12.1km az=178.0*

NEIC ***31*** *22:33:06.1±2.0, 56°.64N±0°.06×169°.16W±0°.09, h16^{km}±4^{km}, mb4.5/23, ML4.0/22(AEIC), Error ellipse: s-maj=9.1km s-min=7.1km az=186.0*

ISC 31 22:33:05.2±0.4**, 56°.64N**±0°.06×**169°.14W**±0°.05**, h10^{km}, n129, σ1^{s}.17**/129**, mb4.5**/35**, MS3.6**/6**, 1D, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	Saint Paul Isl	0.81	312	Pg	Pg	22 33 19.5	-1.4
AKGG	Akutan Green G	3.03	142		Pn	22 33 52.6	-0.6
MSW	Makushin Switc	3.04	153		Pn	22 33 53.0	-0.3
AKRB	Akutan Reef Bi	3.06	144		Pn	22 33 53.6	0.0
AKLV	Akutan Long Va	3.07	142		Pn	22 33 53.0	-0.7
MNAT	Makushin Natee	3.10	152		Pn	22 33 53.5	-0.6
MNAT					Sn	22 34 30.7	-0.4
MGOD	Makushin Gods	3.13	155		Pn	22 33 54.4	-0.2
AKUT	Akutan	3.16	141		Pn	22 33 54.7	-0.1
OKRE	Okmok R'deer P	3.17	169		Pn	22 33 52.8	-2.3
UNV	Unalaska Valle	3.18	151	Pn	Pn	22 33 55.1	-0.1
UNV	Unalaska Valle	3.18	151		Sn	22 34 32.4	-0.6
OKWE	Okmok W'ng Wal	3.21	170		Pn	22 33 54.0	-1.6
WEBT	Westdahl Beart	3.22	128		Pn	22 33 55.5	-0.3
OKFG	Magazine Ridge	3.31	167		Pn	22 33 55.1	-1.8
OKSP	Okmok Steeple	3.43	171		Pn	22 33 56.9	-1.7
NIKH	Nikolski High	3.68	177	Pn	Pn	22 34 03.4	+1.4
FALS	False Pass	3.69	117	Pn	Pn	22 34 02.8	+0.6
SDPT	Sand Point	5.03	101	Pn	Pn	22 34 19.8	-0.8
ATKA	Atka Island	5.33	216		Pn	22 34 25.5	+0.7
CHGN	Chignik	5.95	89		Pn	22 34 32.1	-1.1
ADK	Adak	6.50	226	Pn	Pn	22 34 38.9	-1.8
GAMB	Gambell	7.28	351		Pn	22 34 49.9	-1.4
ANM	Nome	8.16	12	Pn	Pn	22 35 02.2	-1.4
AMKA	Amchitka	8.60	237	Pn	Pn	22 35 10.5	+0.9
KDAK	Kodiak Island	9.06	76	Pn	Pn	22 35 16.8	+1.0
	1.8nm,0.3s,baz=259,slow=5.7,SNR=14						
KDAK				Sn	Sn	22 36 57.5	-0.2
	0.8nm,0.3s,baz=146,slow=8.7,SNR=1.6						
KDAK	Kodiak Island	9.06	76	Pn	Pn	22 35 17.3	+1.5
TTA	Tatalina	9.13	41	Pn	Pn	22 35 15.9	-0.9
CNPM	China Poot	9.91	66		Pn	22 35 28.7	+1.3
BRLK	Bradley Lake	10.12	64		Pn	22 35 30.8	+0.4
SKT	Skwentna	10.45	52	Pn	Pn	22 35 36.7	+1.8
PPLA	Purkeypile	10.58	47	Pn	Pn	22 35 37.1	+0.4
SEW	Seward	10.89	63	Pn	Pn	22 35 42.3	+1.5
KTH	Kantishna Hill	11.40	45		Pn	22 35 49.1	+1.2
GHO	Glory Hole Cre	11.54	55	Pn	Pn	22 35 50.5	+0.6
BPAW	Bear Paw Mtn.	11.65	43	Pn	Pn	22 35 51.3	0.0
SML	Sawmill	11.82	55	Pn	Pn	22 35 54.3	+0.7
IMAR	Indian Mountai	11.90	32		Pn	22 35 55.4	+0.8
BWN	Browne	12.26	44		Pn	22 36 01.4	+1.8
KLU	Klutina	12.86	58		Pn	22 36 07.8	0.0
WRH	Wood River Hil	12.93	44	Pn	Pn	22 36 09.1	+0.3
MDM	Murphy Dome	13.12	42		Pn	22 36 12.4	+1.1
CCB	Clear Creek Bu	13.12	44	Pn	Pn	22 36 11.7	+0.4
HDA	Harding Lake	13.35	45		Pn	22 36 16.2	+1.8
PAX	Paxson	13.44	52		Pn	22 36 17.4	+1.7
POKR	Poker Plat Res	13.49	42		Pn	22 36 17.6	+1.2
IL31		13.53	44		Pn	22 36 18.4	+1.5
ILAR	Eielson Array	13.53	44	Pn	Pn	22 36 17.0	0.0
	0.1nm,0.3s,baz=236,slow=12,SNR=17						
ILAR				LR	LR	22 41 41.3	
	comp=Z,168nm,20.9s,baz=254,slow=38						
ILAR	Eielson Array	13.53	44		Pn	22 36 19.2	+2.2
RIDG	Independent Ri	13.95	49	Pn	Pn	22 36 24.2	+1.5
VRDI	Verde Repeater	13.98	60	Pn	Pn	22 36 23.4	+0.1
MENT	Mentasta	14.20	53	P	P	22 36 31.9	-1.6
MCARA	McCarthy VSAT	14.21	60		Pn	22 36 26.8	+0.6
DOT	Dot Lake	14.25	50	Pn	Pn	22 36 29.1	+2.3
PRP	Porcupine Dome	14.38	42	Pn	Pn	22 36 29.2	+0.5
ISLE	Juniper Island	14.46	63		Pn	22 36 30.2	+0.4
BALM	Baldy	14.50	61		Pn	22 36 30.9	+0.6
YAH	Yahtse	14.74	64		Pn	22 36 32.8	-0.9
BARN	Barnard Glacie	14.83	61		Pn	22 36 33.3	-1.6
CTGM	Chitina Glacie	14.98	62		Pn	22 36 35.8	-1.1
FYU	Fort Yukon	14.99	39		Pn	22 36 36.6	-0.2
BCAR	Beaver Creek A	15.09	54	Pn	Pn	22 36 37.3	-0.9
BMAR	Burnt Mountain	15.66	36		Pn	22 36 46.0	+0.4
EGAK	Eagle	15.81	48		Pn	22 36 48.5	+1.0
HYT	Haines Junctio	16.84	62	Pn	Pn	22 37 01.2	+0.3
EPYK	Eagle Plains	18.05	44	P	Pn	22 37 15.0	-0.7
WHY	Whitehorse	18.14	63	P	Pn	22 37 16.6	-0.3
PEA0B	Petropavlovsk-	19.29	273	Pn	Pn	22 37 31.4	+0.5
PETK	Petropavlovsk-	19.29	273	P	Pn	22 37 31.9	+1.0
	0.6nm,0.3s,baz=79,slow=14,SNR=16						
PETK	Petropavlovsk-	19.29	273		Pn	22 37 31.5	+0.6
INK	Inuvik	19.82	40	P	P	22 37 35.7	+0.2
	0.3nm,0.3s,baz=252,slow=7.8,SNR=15						
INK				LR	LR	22 45 57.7	
	comp=Z,145nm,21.2s,baz=230,slow=39						
INK	Inuvik	19.82	40	P	P	22 37 35.1	-0.4
SEY	Seymchan	20.11	304	P	P	22 37 38.7	0.0
	9.5nm,0.9s,baz=96,slow=10,SNR=24						
DLBC	Dease Lake	20.87	69	P	P	22 37 46.6	-0.5
	1.5nm,0.8s,baz=53,slow=3.4,SNR=2.0						
DLBC	Dease Lake	20.87	69	P	P	22 37 47.0	-0.1
DLBC				IAmb	IAmb	22 37 56.2	
	comp=Z,46nm,1.5s						
MA2	Magadan	21.16	295	P	P	22 37 48.5	-1.6
	comp=Z,4.1nm,0.9s,baz=354,slow=24,SNR=2.6						
MA2	Magadan	21.16	295		P	22 37 48.9	-1.2
MA2				IAmb	IAmb	22 37 59.7	
	comp=Z,9.7nm,0.9s						
C36M	Paulatuk	23.40	39	P	P	22 38 13.9	+0.1
C36M				IAmb	IAmb	22 38 17.5	
	comp=Z,14nm,1.2s						
YKA	Yellowknife Ar	27.49	55	P	P	22 38 51.0	-0.1
	comp=Z,0.8nm,0.7s,baz=283,slow=9.1,SNR=7.7						
YKA				LR	LR	22 50 54.2	
	comp=Z,150nm,19.1s,baz=0.0,slow=39						
YAK	Yakutsk	30.61	306	P	P	22 39 17.5	-1.4
	comp=Z,1.5nm,0.3s,baz=356,slow=0.3,SNR=5.7						
YAK	Yakutsk	30.61	306	P	P	22 39 17.7	-1.2
H04A	Detroit Lake	31.44	92	P	P	22 39 27.2	+0.8
YBH	Yreka Blue Hor	33.09	97	LR	LR	22 51 08.8	
	comp=Z,58nm,19.8s,baz=302,slow=33						
NVAR	Mina Array Bea	37.81	97	P	P	22 40 21.9	+0.1
	comp=Z,0.5nm,0.7s,baz=297,slow=8.0,SNR=2.6						
NVAR				PcP	PcP	22 42 38.2	0.0
	comp=Z,0.5nm,0.7s,baz=300,slow=4.0,SNR=3.6						
ULM	Lac du Bonnet	42.16	66	LR	LR	22 59 43.6	
	comp=Z,97nm,19.5s,baz=336,slow=38						
SUMG	Summit	46.66	18	P	P	22 41 34.4	+0.8
SUMG				IAmb	IAmb	22 41 38.8	
	comp=Z,7.7nm,1.0s						
SUMG	Summit	46.66	18	*i* P	P	22 41 33.5	-0.1
	comp=Z,37nm,1.1s						
SUMG	Summit	46.66	18	*i* P	P	22 41 33.5	-0.1
SUMG				IAmb	IAmb	22 41 38.3	
	comp=Z,37nm,1.1s						
ULN	Ulaanbaatar	48.98	297	P	P	22 41 51.5	-0.2
ULN				IAmb	IAmb	22 41 52.8	
	comp=Z,4.4nm,1.1s						
SONM	Songino Array	49.32	298	P	P	22 41 54.2	0.0
	comp=Z,2.2nm,0.9s,baz=51,slow=7.9,SNR=9.5						
SONM				PcP	PcP	22 43 17.0	+0.3
	comp=Z,0.7nm,0.5s,baz=64,slow=3.4,SNR=2.4						
SONM	Songino Array	49.32	298	P	P	22 41 53.9	-0.3
HHC	Hu-ho-hao-te	51.62	288	*e*P	P	22 42 13.5	+1.9
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,7.6s						
TXAR	Lajitas Array	52.66	92	P	P	22 42 20.3	+0.8
	comp=Z,0.8nm,0.8s,baz=310,slow=5.9,SNR=4.7						
TXAR	Lajitas Array	52.66	92	P	P	22 42 20.0	+0.5
NJ2	Nanjing	54.19	275	*e*P	P	22 42 29.8	-0.7
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SADO	Sadowa	54.19	61	LR	LR	23 06 49.2	
	comp=Z,62nm,19.3s,baz=327,slow=37						
GTA	Gaotai	58.72	295	P	P	22 43 02.8	-0.1
GTA				pP	sP	22 43 07.3	0.0
GTA				sP	pP	22 43 10.0	+3.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRVK	Borovoye	60.34	323	P	P	22 43 13.2	-0.5
BRVK				IAmb	IAmb	22 43 14.8	
	comp=Z,5.7nm,1.1s						
MK31	Makanchi Array	61.01	312	P	P	22 43 17.6	-0.8
MK31				IAmb	IAmb	22 43 27.8	
	comp=Z,6.7nm,1.8s						
MKAR	Makanchi Array	61.01	312	P	P	22 43 17.4	-1.1
	comp=Z,1.0nm,1.0s,baz=65,slow=6.8,SNR=5.8						
MKAR				LR	LR	23 11 15.6	
	comp=Z,36nm,18.2s,baz=24,slow=38						
MKAR	Makanchi Array	61.01	312	P	P	22 43 17.5	-1.0
WMQ	Urumqi	61.05	306	*e*P	P	22 43 21.5	+2.7
NOA	NORSAR Array B	62.66	360	LR	LR	23 10 46.9	
	comp=Z,20nm,19.4s,baz=285,slow=36						
CD2	Chengdu	63.25	286	P	P	22 43 34.5	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA	Guiyang	65.20	281	*e*P	P	22 43 47.8	+1.2
GYA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ABKAR	Akbulak array	66.89	327	P	P	22 43 56.8	-0.2
ABKAR				IAmb	IAmb	22 44 02.8	
	comp=Z,3.9nm,1.1s						

ABKAR	Akbulak array	66.89	327	P	P	22 43 56.5	-0.5
AAK	Ala-Archa	67.58	314	P	P	22 44 01.9	+0.2
KMI	Kunming	68.39	283⇓	eP	P	22 44 06.0	-1.1
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KK31	Karatay Array	68.71	317	P	P	22 44 08.2	-0.5
KK31				IAmb	IAmb	22 44 09.7	
	comp=Z,5.0nm,1.1s						
KKAR	Karatay Array	68.71	317	P	P	22 44 08.2	-0.4
KSH	Kashi	69.61	312	P	P	22 44 18.5	+4.1
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
KSH				pmax	pmax		
	comp=Z,340nm,4.7s						
LSA	Lhasa	70.75	295	P	P	22 44 22.0	+0.1
AKASG	Malin Array Be	71.95	348	P	P	22 44 26.8	-1.5
	comp=Z,2.0nm,0.6s,baz=15,slow=6.2,SNR=5.3						
KOLS	Kolonicke sedl	74.37	352	eP	P	22 44 45.0	+2.4
GERES	GERESS Array B	74.86	358	P	P	22 44 45.9	+0.4
	comp=Z,0.6nm,0.8s,baz=153,slow=1.5,SNR=6.0						
GERES	GERESS Array B	74.86	358	P	P	22 44 46.5	+0.9
CONA	Conrad Observa	75.72	357	eP	P	22 44 50.3	-0.2
	comp=Z,5.0nm,1.4s						
NIL	Nilore	75.75	310	P	P	22 44 50.8	0.0
NIL				IAmb	IAmb	22 44 52.0	
	comp=Z,4.8nm,0.9s						
CMAR	Chiang Mai Arr	75.83	282	P	P	22 44 52.2	+0.7
	comp=Z,2.6nm,0.9s,baz=18,slow=6.4,SNR=16						
CMAR	Chiang Mai Arr	75.83	282	P	P	22 44 51.8	+0.3
MOA	Molln	75.84	358	eP	P	22 44 52.3	+1.1
	comp=Z,11nm,1.9s						
MOTA	Moosalm	76.39	360	eP	P	22 44 52.7	-1.7
	comp=Z,9.1nm,1.6s						
ARSA	Arzberg	76.41	357	eP	P	22 44 54.7	+0.3
	comp=Z,7.5nm,1.6s						
KBA	Koelnbreinsper	76.63	358	eP	P	22 44 58.6	+2.8
	comp=Z,13nm,1.5s						
KBL	Kabul	76.71	314	P	P	22 44 55.5	-1.0
KBL				IAmb	IAmb	22 44 56.7	
	comp=Z,5.0nm,1.1s						
FETA	Feichten	76.71	0	eP	P	22 44 54.2	-2.0
	comp=Z,11nm,1.7s						
SOKA	Soboth	77.00	357	eP	P	22 45 01.2	+3.4
	comp=Z,6.0nm,1.2s						
OBKA	Obir	77.18	357	eP	P	22 45 01.1	+2.2
	comp=Z,9.9nm,1.0s						
GEYT	Alibeck	77.66	324	P	P	22 45 02.1	+0.4
	comp=Z,1.7nm,0.8s,baz=24,slow=4.0,SNR=5.7						

AEIC ***31*** *22:38:31±2.4, 56°.52N±0°.04×169°.14W±0°.09, h9^{km}±3^{km}, Error ellipse: s-maj=9.3km s-min=3.7km az=50.0*

IDC ***31*** *22:38:32.4±0.8, 56°.72N×169°.01W, h0^{km}, mb3.9/14, mb1 4.1/17, mb1mx3.9/60, mbtmp4.0/17, ML3.8/3, Error ellipse: s-maj=30.6km s-min=12.4km az=2.0*

NEIC ***31*** *22:38:34.6±1.6, 56°.64N±0°.05×169°.09W±0°.09, h16^{km}±4^{km}, mb4.3/19, ML4.0/19(AEIC), Error ellipse: s-maj=9.2km s-min=5.2km az=220.0*

ISC 31 22:38:33.6±0.4**, 56°.63N**±0°.06×**169°.05W**±0°.05**, h10^{km}, n83, σ0^{s}97**/88**, mb4.2**/19**, 1C, Pribilof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPIA	Saint Paul Isl	0.86	310		Pg	22 38 48.7	-1.3
SPIA	Saint Paul Isl	0.86	310		Sg	22 39 01.6	+0.4
AKGG	Akutan Green G	3.00	143		Pn	22 39 21.2	+0.1
AKGG					Sn	22 39 57.8	+0.8
MSW	Makushin Switc	3.01	154		Pn	22 39 20.9	-0.4
AKRB	Akutan Reef Bi	3.03	145		Pn	22 39 22.0	+0.5
AKRB					Sn	22 39 58.3	+0.5
MNAT	Makushin Natee	3.07	153		Pn	22 39 22.1	+0.1
AKMO	Akutan Morgan	3.08	145		Pn	22 39 22.8	+0.6
AKUT	Akutan	3.12	142		Pn	22 39 22.5	-0.3
UNV	Unalaska Valle	3.15	151		Pn	22 39 23.1	0.0
UNV	Unalaska Valle	3.15	151		Sn	22 39 59.8	-0.9
WEBT	Westdahl Beart	3.18	128		Pn	22 39 23.6	-0.1
OKER	Okmok East Rim	3.23	169		Pn	22 39 23.9	-0.5
OKFG	Magazine Ridge	3.29	168		Pn	22 39 24.3	-0.8
FALS	False Pass	3.64	117	Pn	Pn	22 39 30.9	+0.9
NIKH	Nikolski High	3.67	178		Pn	22 39 29.9	-0.5
SDPT	Sand Point	4.98	101		Pn	22 39 47.2	-1.1
ATKA	Atka Island	5.36	216		Pn	22 39 55.0	+1.5
VNHG	Veniaminof 1	5.50	90		Pn	22 39 54.9	-0.6
CHGN	Chignik	5.90	89	Pn	Pn	22 39 59.5	-1.4
ADK	Adak	6.53	226	Pn	Pn	22 40 08.7	-0.9
GAMB	Gambell	7.29	351		Pn	22 40 19.0	-0.9
ANM	Nome	8.16	11	Pn	Pn	22 40 33.3	+1.4
AMKA	Amchitka	8.64	237	Pn	Pn	22 40 39.4	+0.8
KDAK	Kodiak Island	9.01	76	Pn	Pn	22 40 45.3	+1.7
	0.9nm,0.3s,baz=277,slow=9.4,SNR=10						
KDAK				Sn	Sn	22 42 23.8	-1.1
	baz=17,slow=23,SNR=1.0						
KDAK	Kodiak Island	9.01	76		Pn	22 40 44.6	+1.0
TTA	Tatalina	9.10	41	Pn	Pn	22 40 45.3	+0.5
CNPM	China Poot	9.86	66	Pn	Pn	22 40 57.4	+2.1
BRLK	Bradley Lake	10.08	64	Pn	Pn	22 40 58.0	-0.3
PPLA	Purkeypile	10.54	47	Pn	Pn	22 41 07.2	+2.5
BPAW	Bear Paw Mtn.	11.62	43	Pn	Pn	22 41 20.2	+0.9
MDM	Murphy Dome	13.09	42	Pn	Pn	22 41 42.0	+2.8
N25K	Chitina, Valde	13.46	58	Pn	Pn	22 41 44.4	-0.1
ILAR	Eielson Array	13.50	44	Pn	Pn	22 41 45.9	+1.0
	baz=237,slow=12,SNR=1.8						
GLB	Gilahina Butte	13.80	59	Pn	Pn	22 41 50.9	+1.7
CRQM	Cirque	14.04	62	Pn	Pn	22 41 54.0	+1.5
MCARA	McCarthy VSAT	14.17	60	Pn	Pn	22 41 54.2	+0.1
TGL	Tana Glacier	14.19	62	Pn	Pn	22 41 55.4	+1.0
DOT	Dot Lake	14.21	50	Pn	Pn	22 41 56.5	+1.8
CTGM	Chitina Glacie	14.94	62		Pn	22 42 07.1	+2.4
BCAR	Beaver Creek A	15.05	53		Pn	22 42 06.6	+0.6
BMAR	Burnt Mountain	15.63	36		Pn	22 42 14.9	+1.2
HYT	Haines Junctio	16.80	62		P	22 42 30.7	-0.3
EPYK	Eagle Plains	18.02	44	P	P	22 42 44.7	+0.5
WHY	Whitehorse	18.09	63	P	P	22 42 46.5	+1.3
PEA0B	Petropavlovsk-	19.34	274	Pn	Pn	22 42 59.9	0.0
PEA0B				IAmb	IAmb	22 43 09.6	
	comp=Z,20nm,1.1s						
PETK	Petropavlovsk-	19.34	274	P	Pn	22 43 00.7	+0.8
	comp=Z,0.3nm,0.3s,baz=84,slow=13,SNR=14						
PETK	Petropavlovsk-	19.34	274	P	Pn	22 43 00.4	+0.4
INK	Inuvik	19.79	40	P	P	22 43 03.9	+0.3
	comp=Z,0.9nm,0.3s,baz=233,slow=9.0,SNR=19						
INK	Inuvik	19.79	40	P	P	22 43 04.2	+0.6
INK				IAmb	IAmb	22 43 09.2	
	comp=Z,13nm,0.7s						
CRAG	Craig	19.96	78	P	P	22 43 06.4	+0.9
SEY	Seymchan	20.16	304	P	P	22 43 08.0	+0.4
	comp=Z,4.8nm,0.9s,baz=110,slow=9.6,SNR=12						
DLBC	Dease Lake	20.82	69	P	P	22 43 15.4	+0.3
	comp=Z,2.8nm,0.9s,baz=99,slow=13,SNR=2.9						
YKA	Yellowknife Ar	27.45	55	P	P	22 44 19.0	-0.2
	comp=Z,4.5nm,0.9s,baz=281,slow=8.5,SNR=8.3						
YKA				PcP	PcP	22 47 37.0	-0.2
	comp=Z,0.6nm,0.7s,baz=300,slow=1.6,SNR=5.8						
K05A	Summer Lake	33.37	94	P	P	22 45 12.6	+0.6
K05A				IAmb	IAmb	22 45 14.9	
	comp=Z,3.3nm,0.9s						
PNTR	Pine Nut	36.58	97	P	P	22 45 40.1	+0.3
PNTR				IAmb	IAmb	22 45 47.9	
	comp=Z,6.7nm,1.0s						
NVAR	Mina Array Bea	37.76	97	P	P	22 45 50.0	+0.3
	comp=Z,1.0nm,0.7s,baz=293,slow=8.4,SNR=7.4						
NVAR				PcP	PcP	22 48 07.4	+1.0
	comp=Z,0.9nm,0.7s,baz=292,slow=1.9,SNR=6.1						
NVAR	Mina Array Bea	37.76	97	P	P	22 45 50.2	+0.5
PDAR	Pinedale Array	39.60	84	P	P	22 46 04.7	-0.5
	comp=Z,0.2nm,0.4s,baz=337,slow=4.4,SNR=2.5						
TPNV	Topopah Spring	39.96	97	P	P	22 46 08.8	+0.7
SRU	San Rafael Swe	41.57	89	P	P	22 46 21.6	+0.2
ULM	Lac du Bonnet	42.12	66	P	P	22 46 24.8	-0.7
	comp=Z,1.2nm,0.6s,baz=28,slow=13,SNR=2.2						
SONM	Songino Array	49.37	298	P	P	22 47 23.8	+0.8
	comp=Z,1.2nm,0.8s,baz=57,slow=5.5,SNR=4.3						
TXAR	Lajitas Array	52.61	92	P	P	22 47 47.3	-0.2
	comp=Z,1.1nm,0.8s,baz=309,slow=6.0,SNR=6.1						
KURK	Kurchatov	59.35	317	P	P	22 48 35.1	-0.2
KURK				IAmb	IAmb	22 48 37.0	
	comp=Z,3.7nm,1.2s						
DRLN	Deer Lake	60.22	45	P	P	22 48 40.9	-0.5
BRVK	Borovoye	60.37	323	P	P	22 48 42.2	-0.1
BRVK				IAmb	IAmb	22 48 47.1	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	61.05	312	P	P	22 48 46.1	-1.0
	comp=Z,0.5nm,0.8s,baz=51,slow=5.2,SNR=4.8						
MKAR	Makanchi Array	61.05	312	P	P	22 48 46.5	-0.6
FINES	FINESS Array B	61.67	352	P	P	22 48 49.9	-1.1
	comp=Z,2.1nm,0.9s,baz=359,slow=11,SNR=3.4						
ABKAR	Akbulak array	66.92	327	P	P	22 49 25.6	0.0
ABKAR	Akbulak array	66.92	327	P	P	22 49 25.5	-0.1
AAK	Ala-Archa	67.62	314	P	P	22 49 30.8	+0.4
AAK				IAmb	IAmb	22 49 36.6	
	comp=Z,3.2nm,1.1s						
KK31	Karatay Array	68.75	317		P	22 49 37.2	-0.1
KK31				IAmb	IAmb	22 49 38.3	
	comp=Z,2.1nm,0.8s						
KKAR	Karatay Array	68.75	317	P	P	22 49 37.1	-0.2
KKAR	Karatay Array	68.75	317	P	P	22 49 37.2	-0.2
KKAR				IAmb	IAmb	22 49 38.3	
	comp=Z,2.1nm,0.8s						
LSA	Lhasa	70.79	295	P	P	22 49 51.4	+0.8
AKASG	Malin Array Be	71.97	348	P	P	22 49 55.8	-1.0
	comp=Z,2.8nm,0.6s,baz=16,slow=6.2,SNR=6.5						
BURAR	Bucovina Array	75.44	350	P	P	22 50 17.3	-0.1
CMAR	Chiang Mai Arr	75.89	282	P	P	22 50 21.3	+1.1
	comp=Z,0.7nm,0.3s,baz=16,slow=6.4,SNR=10.0						
GEYT	Alibeck	77.70	324	P	P	22 50 30.6	+0.3
	comp=Z,1.8nm,0.8s,baz=82,slow=2.1,SNR=5.4						
ASAR	Alice Springs	93.27	230	P	P	22 51 47.1	-1.1
	comp=Z,0.6nm,1.1s,baz=130,slow=40,SNR=2.7						
BOSA	Boshof	150.21	334	PKPbc	PKPbc	22 58 24.5	0.0
	comp=Z,2.0nm,0.9s,baz=326,slow=3.7,SNR=3.9						
SYO	Syowa Base	162.22	214⇑	ePKPab	PKPab	22 59 18.4	-2.3

DJA 31 22:44:44.6±0.4**, 10°S**±8°×**12°0E**±°**, h51^{km}**±6^{km}**, M3.6**/7**, MLv3.6**/7**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	0.19	75	P	Pn	22 44 53.9	+0.9
WSI				S	Sn	22 45 02.0	+3.0
BASI	Baing, Sumba	0.68	137	P	Pn	22 44 58.5	+0.4
EDFI	Ende, Flores	1.83	58	P	Pn	22 45 12.7	-1.1
MMRI	Maumere	2.36	63	P	Pn	22 45 20.8	-0.1
PLAI	Plampang	2.47	291	P	Pn	22 45 22.5	+0.1
PLAI				S	Sn	22 45 51.6	+0.2
TWSI	Taliwang, Sumb	3.33	287	P	Pn	22 45 33.9	-0.4
BATI	Baumata	3.53	98	P	Pn	22 45 37.6	+0.6
SOEI	Soe	4.10	91	P	Pn	22 45 45.3	+0.4

IDC ***31*** *23:15:41.4±1.2, 12°.97N×89°.51W, h0^{km}, mb3.8/6, mb1 4.2/8, mb1mx3.9/32, mbtmp4.0/8, ML3.6/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/34, Error ellipse: s-maj=40.7km s-min=20.4km az=47.0*

SNET ***31*** *23:15:44.7±1.1, 12°.90N×89°.70W, h23^{km}±7^{km}, ML4.3*

UCR ***31*** *23:15:44.7±1.1, 12°.90N×89°.70W, h23^{km}±7^{km}, ML4.3, mb5.1(NEIC)*

INET ***31*** *23:15:46.9, 12°.95N×89°.57W, h15^{km}, MW4.0*

NEIC ***31*** *23:15:47.3±1.7, 12°.94N±0°.06×89°.63W±0°.06, h41^{km}±10^{km}, Error ellipse: s-maj=8.7km s-min=7.9km az=63.0*

GCG ***31*** *23:16:00.0±0.3, 14°.69N×90°.62W, h104^{km}±32^{km}, MD4.1*

ISC 31 23:15:45.3±1.5**, 12°.91N**±0°.05×**89°.66W**±0°.04**, h26^{km}**±10^{km}**, n108, σ0^{s}80**/122**, mb4.1**/10**, MS3.1**/5**, 2C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.66	30	eP	Pb	23 15 58.4	+0.1
LALI				eS	Sb	23 16 07.4	+0.3
LALI	Alcalda de L	0.66	30	eP	Pb	23 15 58.4	+0.1
LALI				eS	Sb	23 16 07.4	+0.3
JAYA	Jayaque - finc	0.77	16⇑	eP	Pb	23 15 59.8	-0.3
JAYA				eS	Sn	23 16 11.1	-0.4
JAYA				IAML		23 16 12.3	
	comp=Z,22µm,0.2s						
JAYA	Jayaque - finc	0.77	16⇑	eP	Pb	23 15 59.8	-0.3
JAYA				eS	Sn	23 16 11.1	-0.4
JAYA				IAML		23 16 12.3	
	comp=Z,22µm,0.2s						
ITCA	Escuela Especi	0.84	26	eP	Pb	23 16 01.0	-0.4
ITCA				eS	Sn	23 16 13.4	+0.1
ITCA	Escuela Especi	0.84	26	eP	Pb	23 16 01.0	-0.4
ITCA				eS	Sn	23 16 13.4	+0.1
MAGS	Ministerio de	0.85	26	eP	Pb	23 16 01.4	-0.2
MAGS				eS	Sn	23 16 13.4	0.0
MAGS				IAML		23 16 19.9	
	comp=Z,7µm,0.2s						
PMON	Piamonte	0.86	23	eP	Pb	23 16 01.2	-0.6
PMON	Piamonte	0.86	23	eP	Pb	23 16 01.2	-0.6
SNET	Serv Nac Est T	0.88	29	eP	Pb	23 16 01.3	-0.7
SNET				eS	Sb	23 16 13.8	+0.4
SNET				IAML		23 16 19.9	
	comp=Z,7µm,0.3s						
SNET	Serv Nac Est T	0.88	29	eP	Pb	23 16 01.3	-0.7
SNET				eS	Sb	23 16 13.8	+0.4
SNET				IAML		23 16 19.9	
	comp=Z,7µm,0.3s						
SNET	Serv Nac Est T	0.88	29		Pb	23 16 01.4	-0.5
SNET				Sn	Sb	23 16 13.0	-0.3
BOQS	Boqueron	0.90	25	eP	Pb	23 16 01.9	-0.6
BOQS				eS	Sn	23 16 16.4	+1.6
BOQS	Boqueron	0.90	25	eP	Pb	23 16 01.9	-0.6
BOQS				eS	Sn	23 16 16.4	+1.6
CEVE	Cerro Verde	0.91	2⇓	eP	Pb	23 16 01.8	-0.8
CEVE				IAML		23 16 16.8	
	comp=Z,25µm,0.3s						
CEVE	Cerro Verde	0.91	2⇓	eP	Pb	23 16 01.8	-0.8
CEVE				IAML		23 16 16.8	
	comp=Z,25µm,0.3s						
OPAM	Oficina de Pla	0.92	30	eP	Pb	23 16 01.9	-0.7
OPAM				eS	Sn	23 16 15.8	+0.8
OPAM	Oficina de Pla	0.92	30	eP	Pb	23 16 01.9	-0.7
OPAM				eS	Sn	23 16 15.8	+0.8
LFRS	El Faro	0.92	40	eP	Pb	23 16 02.2	-0.5
LFRS	El Faro	0.92	40	eP	Pb	23 16 02.2	-0.5
SBLS	San Blas	0.92	2	eP	Pb	23 16 01.7	-1.1
SBLS	San Blas	0.92	2	eP	Pb	23 16 01.7	-1.1
CEDA	San Andres	0.92	16	eP	Pb	23 16 02.1	-0.6
CEDA				IAML		23 16 25.8	
	comp=Z,12µm,0.4s						
CEDA	San Andres	0.92	16	eP	Pb	23 16 02.1	-0.6
CEDA				IAML		23 16 25.8	
	comp=Z,12µm,0.4s						
IGN	Direccin Gen	0.93	31	eP	Pb	23 16 02.4	-0.4
IGN	Direccin Gen	0.93	31	eP	Pb	23 16 02.4	-0.4
UDBS	Universidad Do	0.94	32	eP	Pb	23 16 02.5	-0.5
UDBS	Universidad Do	0.94	32	eP	Pb	23 16 02.5	-0.5
AEIL	Aeropuerto Ilo	0.94	34	eP	Pn	23 16 03.0	0.0
AEIL				eS	Sn	23 16 16.2	+0.5
AEIL				IAML		23 16 21.4	
	comp=Z,14µm,0.4s						
AEIL	Aeropuerto Ilo	0.94	34	eP	Pn	23 16 03.0	0.0
AEIL				eS	Sn	23 16 16.2	+0.5
AEIL				IAML		23 16 21.4	
	comp=Z,14µm,0.4s						
SNJE	San Jose	0.95	3	eP	Pb	23 16 02.2	-1.1
SNJE	San Jose	0.95	3	eP	Pb	23 16 02.2	-1.1
RTR	El Retiro	0.98	1	eP	Pb	23 16 02.8	-1.0
RTR	El Retiro	0.98	1	eP	Pb	23 16 02.8	-1.0
LFU	La Fuente	0.99	33⇓	eP	Pn	23 16 03.6	-0.1
LFU				eS	Sn	23 16 17.2	+0.4
LFU	La Fuente	0.99	33⇓	eP	Pn	23 16 03.6	-0.1
LFU				eS	Sn	23 16 17.2	+0.4
QUEZ	Alcaldia de Qu	0.99	23	eP	Pn	23 16 03.4	-0.2
LBRS	Las Brisas	1.02	36	eP	Pn	23 16 03.9	-0.1
LBRS	Las Brisas	1.02	36	eP	Pn	23 16 03.9	-0.1
COEG	Centro de Oper	1.04	47	eP	Pn	23 16 03.9	-0.4
COEG				IAML		23 16 24.0	
	comp=Z,4µm,0.3s						
COEG	Centro de Oper	1.04	47	eP	Pn	23 16 03.9	-0.4
COEG				IAML		23 16 24.0	
	comp=Z,4µm,0.3s						
UNIC	Universidad Ca	1.07	6	eP	Pn	23 16 04.1	-0.6
UNIC	Universidad Ca	1.07	6	eP	Pn	23 16 04.1	-0.6
TACO	Tacachico	1.09	16	eP	Pn	23 16 04.7	-0.3
TACO				IAML		23 16 22.1	
	comp=Z,4µm,0.4s						
TACO	Tacachico	1.09	16	eP	Pn	23 16 04.7	-0.3
TACO				IAML		23 16 22.1	
	comp=Z,4µm,0.4s						
PQSS	Presa 15 de Se	1.29	57⇓	eP	Pn	23 16 07.8	+0.1
PACA	Pacayal	1.42	67	eP	Pn	23 16 10.1	+0.6
PACA	Pacayal	1.42	67	eP	Pn	23 16 10.1	+0.6
JUCU	Jucuar¡n	1.42	76	eP	Pn	23 16 08.8	-0.7
JUCU				IAML		23 16 39.0	
	comp=Z,2µm,0.5s						
JUCU	Jucuar¡n	1.42	76	eP	Pn	23 16 08.8	-0.7
JUCU				IAML		23 16 39.0	
	comp=Z,2µm,0.5s						
LLGN	La Laguna	1.43	29	eP	Pn	23 16 10.3	+0.7
LLGN				IAML		23 16 32.5	
	comp=Z,4µm,0.4s						
LLGN	La Laguna	1.43	29	eP	Pn	23 16 10.3	+0.7
LLGN				IAML		23 16 32.5	
	comp=Z,4µm,0.4s						
RANC	El Ranchito	1.44	69	eP	Pn	23 16 09.8	0.0
RANC	El Ranchito	1.44	69	eP	Pn	23 16 09.8	0.0
MTO3	Montecristo	1.51	11	eP	Pn	23 16 11.5	+0.6
MTO3	Montecristo	1.51	11	eP	Pn	23 16 11.5	+0.6
MTO3	Montecristo	1.51	11	Pn	Pn	23 16 11.4	+0.6
MTO3				Sn	Sn	23 16 30.3	+0.5
ESQI	Esquipulas	1.67	11		Pn	23 16 14.0	+1.0
FAGO	Alcalda de S	1.70	63	eP	Pn	23 16 13.5	+0.1
FAGO	Alcalda de S	1.70	63	eP	Pn	23 16 13.5	+0.1
PCG	Pacaya	1.73	328	eP	Pb	23 16 16.1	-0.5
LCND	La Caada	1.77	77	eP	Pn	23 16 14.7	+0.3
LCND				IAML		23 16 45.0	
	comp=Z,3µm,0.5s						
LCND	La Caada	1.77	77	eP	Pn	23 16 14.7	+0.3
LCND				IAML		23 16 45.0	
	comp=Z,3µm,0.5s						
NBG	Las Nubes	1.79	338	eP	Pb	23 16 16.1	-1.6
CNCH	Conchagua	1.82	78	eP	Pn	23 16 15.1	0.0
CNCH	Conchagua	1.82	78	eP	Pn	23 16 15.1	0.0
FUG	Fuego 3	1.91	323	eP	Pn	23 16 15.9	-0.5
MRL	Marmol	2.16	359	eP	Pn	23 16 21.5	+1.7
RTAL	Retalhuleu	2.54	309	Pn	Pn	23 16 24.8	-0.2
CRIN	San Cristobal	2.56	94	Pn	Pn	23 16 26.0	+0.8
TGUH	Tegucigalpa,Un	2.59	64	Pn	Pn	23 16 26.2	+0.5
HUEH	Huehuetenango	2.98	323	Pn	Pn	23 16 32.2	+1.1
PETF	Flores	3.98	357	Pn	Pn	23 16 44.7	0.0
CCIG	Comitan	4.12	325	Pn	Pn	23 16 47.8	+1.1
ACON	Acoyapa	4.49	102	Pn	Pn	23 16 51.8	+0.2
ESPN	Las Esperanzas	5.29	97	Pn	Pn	23 17 03.9	+1.2
JTS	Las Juntas de	5.30	119		Pn	23 17 04.4	+1.5
HDC	Heredia	6.16	117	Pn	Pn	23 17 16.4	+1.6
CMIG	Matias Romero	6.53	310	Pn	Pn	23 17 21.4	+1.6
	comp=Z,2.7nm,0.3s,baz=102,slow=10,SNR=21						
CMIG				Sn	Sn	23 18 36.7	+3.1
	comp=Z,2.8nm,0.3s,baz=67,slow=22,SNR=4.6						
TEIG	Tepich	7.39	10		Pn	23 17 32.7	+1.1
TLIG	Tlapa	9.76	299	Pn	Pn	23 18 05.0	+0.9
SDV	Santo Domingo	19.11	100	P	P	23 20 06.5	-0.2
	comp=Z,0.7nm,0.3s,baz=307,slow=4.4,SNR=20						
SDV	Santo Domingo	19.11	100		P	23 20 06.8	+0.2
SDV				IAmb	IAmb	23 20 08.4	
	comp=Z,13nm,0.7s						
TXAR	Lajitas Array	20.88	324	P	Pn	23 20 27.4	-1.0
	comp=Z,1.2nm,0.4s,baz=148,slow=11,SNR=12						
TXAR				LR	LR	23 29 58.1	
	comp=Z,31nm,18.6s,baz=0.0,slow=41						
TXAR	Lajitas Array	20.88	324	P	Pn	23 20 26.7	-1.6
TX31	Lajitas Ar. Si	20.89	324	P	Pn	23 20 26.7	-1.6
GOGA	Godfrey	21.18	14	P	P	23 20 29.8	+1.1
GOGA				IAmb	IAmb	23 20 43.7	
	comp=Z,17nm,1.4s						
MIAR	Mount Ida	21.83	351	P	P	23 20 36.7	+0.9
PLAL	Pickwick Lake	22.02	3	P	P	23 20 39.4	+1.6
JSC	Jenkinsville	22.60	18	P	P	23 20 43.9	-0.2
JSC				IAmb	IAmb	23 20 56.8	
	comp=Z,10nm,1.4s						
ATAH	Atahualpa	22.85	150	LR	LR	23 27 41.8	
	comp=Z,73nm,20.4s,baz=2.6,slow=32						
TKL	Tuckaleechee C	23.26	12	P	P	23 20 50.4	-0.5
	comp=Z,1.6nm,0.6s,baz=161,slow=10,SNR=5.7						
TKL				LR	LR	23 30 19.1	
	comp=Z,70nm,18.4s,baz=194,slow=38						
TKL	Tuckaleechee C	23.26	12	P	P	23 20 50.2	-0.7
MNTX	Cornudas Mount	23.63	325	P	P	23 20 54.6	+0.1
S44A	Carbondale	24.68	1	P	P	23 21 05.2	+1.1
PTGA	Pitinga	32.43	113	P	P	23 22 13.4	-0.2
PTGA				IAmb	IAmb	23 22 20.9	
	comp=Z,4.5nm,1.2s						
SAML	Samuel	34.11	128	P	P	23 22 27.3	-1.0
SAML				IAmb	IAmb	23 22 28.4	
	comp=Z,4.4nm,1.1s						
NVAR	Mina Array Bea	35.95	320	P	P	23 22 45.6	+1.4
	comp=Z,0.7nm,0.6s,baz=132,slow=9.3,SNR=7.6						
NVAR	Mina Array Bea	35.95	320	P	P	23 22 44.8	+0.7
LHV	Little Huntoon	35.97	320	P	P	23 22 45.5	+1.6
LHV				IAmb	IAmb	23 22 55.7	
	comp=Z,2.7nm,0.8s						
ULM	Lac du Bonnet	37.58	353	LR	LR	23 41 05.5	
	comp=Z,64nm,18.1s,baz=128,slow=41						
YKA	Yellowknife Ar	52.62	346	P	P	23 24 54.8	-2.0
	comp=Z,1.2nm,0.6s,baz=141,slow=8.3,SNR=16						
FRB	Frobisher Bay	52.89	12	LR	LR	23 47 12.6	
	comp=Z,53nm,19.5s,baz=224,slow=36						
PLCA	Paso Flores	56.24	163	P	P	23 25 23.3	-0.2
	comp=Z,2.0nm,0.9s,baz=16,slow=6.0,SNR=3.1						
PLCA	Paso Flores	56.24	163	P	P	23 25 23.6	+0.2
PLCA				IAmb	IAmb	23 25 29.3	
	comp=Z,2.1nm,1.1s						
ILAR	Eielson Array	64.73	337	P	P	23 26 20.3	-0.8
	comp=Z,0.4nm,0.9s,baz=180,slow=4.0,SNR=4.6						
ILAR	Eielson Array	64.73	337	P	P	23 26 20.2	-0.9
CMAR	Chiang Mai Arr	147.69	345	PKPbc	PKPbc	23 35 28.1	-0.5
	comp=Z,0.5nm,0.3s,baz=352,slow=2.7,SNR=2.3						

IDC ***31*** *23:45:40.5±2.6, 29°.43S×68°.31W, h82^{km}±21^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.6/26, mbtmp3.8/10, Error ellipse: s-maj=30.4km s-min=19.4km az=81.0*

SJA ***31*** *23:45:42.4±0.6, 29°.39S×68°.20W, h120^{km}±3^{km}, ML4.1, MW3.9*

GUC ***31*** *23:45:43.5±0.5, 29°.37S×68°.29W, h121^{km}±15^{km}, ML3.7*

NEIC ***31*** *23:45:43.2±1.8, 29°.42S±0°.02×68°.2W±0°.1, h106^{km}±7^{km}, mb4.5/14, Md4.0(SJA), Error ellipse: s-maj=13.1km s-min=1.3km az=98.0*

ISC 31 23:45:43.2±0.7**, 29°.36S**±0°.04×**68°.20W**±0°.03**, h110^{km}**±6^{km}**, n96, σ1^{s}34**/111**, mb4.2**/12**, 6C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.62	359	i P	Pn	23 46 01.7	+0.5
VCA				eS	Sn	23 46 15.4	+0.8
VCA				IAML		23 46 18.1	
	comp=E,5µm,0.5s						
VCA	Vinchina	0.62	359	eP	Pn	23 46 02.4	+1.2
VCA				eS	Sn	23 46 17.0	+2.4
VCA				IAML		23 46 19.1	
	comp=Z,4µm,0.3s						
ACLC	CERRO LA CRUZ	1.09	94	eP	Pn	23 46 06.5	+0.9
ACLC				eS	Sn	23 46 23.4	+1.0
ACLC				IAML		23 46 24.2	
	comp=Z,4µm,0.6s						
ACDV	Cuesta del Vie	1.14	225	eS	Sn	23 46 24.5	+1.1
ACDV				IAML		23 46 24.8	
	comp=Z,2µm,0.7s						
ACCO	Cerro Coronel	1.44	211	eS	Sn	23 46 31.2	+1.6
ACCO				IAML		23 46 31.9	
	comp=Z,2µm,1.7s						
CO01	Juntas del Tor	1.76	249⇑	iP	Pn	23 46 15.4	+1.9
CO01				eS	Sn	23 46 38.5	+2.1
CO01				IAML		23 46 41.2	
	comp=N,449nm,0.5s						
CO01	Juntas del Tor	1.76	249		Pn	23 46 15.3	+1.9
APLL	PUNTA DE LOS L	1.78	126	eP	Pn	23 46 14.4	+0.9
APLL				eS	Sn	23 46 37.4	+0.8
APLL				IAML		23 46 45.7	
	comp=Z,5µm,2.7s						
AC05	El Transito	1.89	286⇑	iP	Pn	23 46 16.5	+1.5
AC05				i S	Sn	23 46 41.2	+2.0
AC05				IAML		23 46 43.0	
	comp=E,483nm,0.3s						
AC05	El Transito	1.89	286		Pn	23 46 16.6	+1.7
LCO	Las Campanas	2.22	278	Pn	Pn	23 46 20.1	+0.9
ZON	Zonda	2.22	191		Pn	23 46 19.8	+0.8
CYA	Choya	2.29	67	eP	Pn	23 46 20.7	+0.7
CYA				eS	Sn	23 46 49.2	+1.1
GO04	Tololo Observa	2.40	250⇑	iP	Pn	23 46 22.4	+0.7
GO04				i S	Sn	23 46 52.8	+1.8
GO04	Tololo Observa	2.40	250	Pn	Pn	23 46 22.3	+0.7
GO04	Tololo Observa	2.40	250	eP	Pn	23 46 22.2	+0.7
RTCV	Cerro Valdivia	2.51	187	eP	Pn	23 46 23.4	+0.6
RTCV				IAML		23 46 57.7	
	comp=Z,362nm,0.6s						
GO03	Copiap	2.51	314	i P	Pn	23 46 23.8	+0.9

GO03				*i* S	Sn	23 46 54.0	+0.6
GO03				IAML		23 46 55.4	
	comp=N,331nm,0.3s						
GO03	Copiap	2.51	314		Pn	23 46 23.6	+0.7
GO03	Copiap	2.51	314	*e*P	Pn	23 46 23.8	+0.9
CO03	El Pedregal	2.61	235	⇑*i*P	Pn	23 46 25.1	+0.9
CO03				*i* S	Sn	23 46 56.6	+0.9
CO03				IAML		23 47 01.7	
	comp=E,666nm,0.5s						
CO03	El Pedregal	2.61	235	Pn	Pn	23 46 24.8	+0.6
AC02	Maricunga	2.65	342	*i* P	Pn	23 46 27.4	+2.4
AC02				*i* S	Sn	23 47 00.6	+3.5
AC02				IAML		23 47 06.5	
	comp=N,146nm,0.5s						
AC02	Maricunga	2.65	342		Pn	23 46 27.3	+2.2
AC04	Llanos de Chal	2.78	294	⇑*i*P	Pn	23 46 26.4	+0.2
AC04				*e*S	Sn	23 46 57.5	-1.9
AC04				IAML		23 47 01.3	
	comp=E,175nm,0.1s						
AC04	Llanos de Chal	2.78	294		Pn	23 46 26.7	+0.4
CO02	Combarbal	3.04	232	⇑*i*P	Pn	23 46 29.8	0.0
CO02				*e*S	Sn	23 47 06.0	+0.2
CO02	Combarbal	3.04	232		Pn	23 46 29.9	0.0
ARCO	CERRO ARCO	3.53	190	*e*P	Pn	23 46 37.2	+0.9
ARCO				IAML		23 47 21.6	
	comp=Z,345nm,0.4s						
AHML	Horco Molle	3.60	45	*e*P	Pn	23 46 37.9	+0.6
TCA	Tanti	3.68	123	*e*P	Pn	23 46 38.4	-0.1
TCA				IAML		23 47 39.3	
	comp=Z,208nm,0.5s						
AAGR	Agrelo	3.75	188	*e*P	Pn	23 46 40.2	+0.8
AAGR				*e*S	Sn	23 47 26.1	+3.3
AAGR				IAML		23 47 44.6	
	comp=Z,177nm,0.8s						
FSA	Cafayete	3.79	32	*e*P	Pn	23 46 42.0	+2.1
AC01	Pan de Azucar	3.84	326	Pn	Pn	23 46 41.2	+0.7
VA03	San Esteban	3.95	210		Pn	23 46 42.1	+0.2
PEL	Peldehue	4.33	209	Pn	Pn	23 46 46.5	-0.5
PEL	Peldehue	4.33	209	*e*P	Pn	23 46 47.0	0.0
ROC1	El Roble	4.34	213		Pn	23 46 45.9	-1.4
ROC1	El Roble	4.34	213	*e*P	Pn	23 46 46.1	-1.2
GO02	Mina Guanaco	4.36	343	Pn	Pn	23 46 48.9	+1.2
MT05	Renca	4.57	208	*e*P	Pn	23 46 49.7	-0.6
MT05	Renca	4.57	208		Pn	23 46 49.6	-0.6
MT03	Universidad Ad	4.57	205	*e*P	Pn	23 46 50.4	+0.1
MT03				*i* S	Sn	23 47 43.5	+1.0
MT02	Curacav	4.63	212	*e*P	Pn	23 46 49.4	-1.6
MT02	Curacav	4.63	212	Pn	Pn	23 46 49.8	-1.2
PB14	IPOC Station P	5.11	337		Pn	23 46 58.8	+0.9
VA05	Santo Domingo	5.18	213	*e*P	Pn	23 46 55.6	-2.8
RFA	San Rafael	5.40	182	*e*P	Pn	23 47 00.9	-0.6
RFA				IAML		23 48 46.2	
	comp=Z,82nm,0.7s						
LAMA	Las Malvinas	5.62	189	*e*P	Pn	23 47 03.8	-0.6
BO02	Sierra Bellavi	5.84	201	Pn	Pn	23 47 05.9	-1.5
COIS	El Sosneado	5.85	191	*e*P	Pn	23 47 07.1	-0.4
PB10	IPOC Station P	6.20	340	*e*P	Pn	23 47 11.4	-0.9
PB10				IAML		23 48 35.1	
	comp=Z,25nm,0.5s						
PB15	IPOC Station P	6.23	349		Pn	23 47 13.5	+0.5
PB05	IPOC Station P	6.73	344	*e*P	Pn	23 47 17.9	-1.6
PB05				IAML		23 48 49.1	
	comp=Z,28nm,0.5s						
PB06	IPOC Station P	6.74	349	*e*P	Pn	23 47 20.2	+0.4
LVC	Limon Verde	6.75	354	P	Pn	23 47 20.0	-0.1
	comp=Z,3.4nm,0.3s,baz=171,slow=7.8,SNR=23						
LVC				S	Sn	23 48 33.7	-2.1
	comp=Z,2.6nm,0.3s,baz=191,slow=22,SNR=6.6						
LVC	Limon Verde	6.75	354	Pn	Pn	23 47 20.3	+0.1
LVC	Limon Verde	6.75	354	*e*P	Pn	23 47 20.2	+0.1
PB09	IPOC Station P	7.59	353		Pn	23 47 30.7	-0.6
PB09	IPOC Station P	7.59	353	*e*P	Pn	23 47 31.1	-0.3
PB09				IAML		23 49 14.7	
	comp=Z,21nm,2.7s						
BI02	San Fabin de	7.73	199	Pn	Pn	23 47 30.6	-2.4
PB01	IPOC Station P	8.36	352		Pn	23 47 40.0	-1.7
LC01	Cunco	9.99	197	Pn	Pn	23 47 60.0	-3.6
CPUP	Villa Florida	10.08	75	P	Pn	23 48 03.7	-1.2
	comp=Z,0.3nm,0.3s,baz=262,slow=12,SNR=5.1						
CPUP	Villa Florida	10.08	75		Pn	23 48 03.5	-1.5
MNMC	Minye Minye	10.26	353	Pn	Pn	23 48 05.7	-2.0
PLCA	Paso Flores	11.51	189	P	Pn	23 48 20.7	-3.4
	comp=Z,0.2nm,0.3s,baz=23,slow=9.2,SNR=3.2						
SIV	San Ignacio	14.84	28	P	Pn	23 49 06.1	-1.4
	comp=Z,0.1nm,0.3s,baz=281,slow=12,SNR=2.1						
SAML	Samuel	20.84	14	P	Pn	23 50 18.6	-1.2
BDFB	Brasilia	23.06	58	P	P	23 50 40.3	+0.9
PTGA	Pitinga	29.53	17	P	P	23 51 38.0	+0.6
	comp=Z,1.1nm,0.5s,baz=148,slow=19,SNR=2.0						
PTGA	Pitinga	29.53	17	P	P	23 51 37.7	+0.2
MLPR	Magueyes Islan	47.07	1	P	P	23 54 04.2	+0.3
OBIP	Obispado Ponce	47.15	2	P	P	23 54 05.1	+0.5
TEIG	Tepich	52.97	336	P	P	23 54 49.6	+1.1
V53A	Saluda	66.13	347	P	P	23 56 19.4	+0.7
V53A				IAmb	IAmb	23 56 32.5	
	comp=Z,17nm,1.4s						
V52A	Sevierville	66.46	346	P	P	23 56 20.9	+0.2
V52A				IAmb	IAmb	23 56 21.9	
	comp=Z,7.7nm,1.1s						
CLTN	Cedars of Leba	67.30	344	P	P	23 56 26.9	+0.9
CLTN				IAmb	IAmb	23 56 38.4	
	comp=Z,4.6nm,1.0s						
TXAR	Lajitas Array	67.48	327	P	P	23 56 28.3	+0.9
	comp=Z,0.4nm,0.6s,baz=145,slow=6.6,SNR=2.4						
WVT	Waverly	67.71	343	P	P	23 56 29.3	+0.7
WVT				IAmb	IAmb	23 56 29.9	
	comp=Z,8.5nm,0.8s						
LCAR	Lake Charles	68.58	340	P	P	23 56 35.2	+1.2
LCAR				IAmb	IAmb	23 56 35.6	
	comp=Z,3.0nm,0.6s						
FVM	French Village	70.15	341	P	P	23 56 44.5	+0.8
FVM				IAmb	IAmb	23 56 45.4	
	comp=Z,6.8nm,0.8s						
TOA0	Torodi Ar. Sit	79.51	68	P	P	23 57 38.8	+0.7
TOA0				IAmb	IAmb	23 57 40.1	
	comp=Z,2.2nm,0.7s						
TORD	Torodi Ar. Bea	79.51	68	P	P	23 57 38.8	+0.7
	comp=Z,1.9nm,0.7s,baz=266,slow=5.0,SNR=3.6						
TORD	Torodi Ar. Bea	79.51	68	P	P	23 57 39.3	+1.2
PDAR	Pinedale Array	81.23	331	P	P	23 57 48.4	+1.3
	comp=Z,0.4nm,0.5s,baz=129,slow=7.2,SNR=5.9						
PDAR	Pinedale Array	81.23	331	P	P	23 57 48.1	+1.0
NVAR	Mina Array Bea	82.08	323	P	P	23 57 50.5	-1.1
	comp=Z,0.2nm,0.3s,baz=178,slow=3.7,SNR=3.6						
YKA	Yellowknife Ar	98.78	340	P	Pdif	23 59 10.4	+0.6
	comp=Z,0.2nm,0.7s,baz=139,slow=5.2,SNR=3.1						
ASAR	Alice Springs	123.15	204	PKP	PKiKP	00 04 27.1	-0.7
	comp=Z,0.2nm,0.5s,baz=121,slow=1.4,SNR=4.4						
ASAR	Alice Springs	123.15	204		PKiKP	00 04 27.3	-0.5
WRA	Warramunga Arr	126.38	207	PKP	PKiKP	00 04 33.5	-0.7
	comp=Z,0.6nm,0.7s,baz=160,slow=1.6,SNR=6.8						
WRA	Warramunga Arr	126.38	207		PKiKP	00 04 33.8	-0.4
ZALV	Zalesovo Beam	148.57	31	PKPbc	PKPab	00 05 18.3	-2.3
	comp=Z,1.9nm,0.5s,baz=312,slow=3.6,SNR=13						
MKAR	Makanchi Array	151.21	45	PKPbc	PKiKP	00 05 24.7	+0.7
	comp=Z,0.9nm,0.7s,baz=290,slow=1.9,SNR=9.4						
MKAR	Makanchi Array	151.21	45		PKiKP	00 05 24.6	+0.6
MKAR				PKPab	PKPab	00 05 33.2	+1.5

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